THE

LONDON ENCYCLOPÆDIA,

OR

UNIVERSAL DICTIONARY

OF

SCIENCE, ART, LITERATURE, AND PRACTICAL MECHANICS,

COMPRISING A

POPULAR VIEW OF THE PRESENT STATE OF KNOWLEDGE.

ILLUSTRATED BY

NUMEROUS ENGRAVINGS, A GENERAL ATLAS,
AND APPROPRIATE DIAGRAMS.

Sic oportet ad librum, præsertim miscellanei generis, legendum accedere lectorem, ut solet ad convivium comiter civilis. Convivator omnibus satisfacere; et tamen si quid apponitur, quod hujus aut illius palato non respondeat, et hic et ille urbane dissimulant, et alia ferculs probant, ne quid contristent convivatorem.

Erasmus.

A reader should sit down to a book, especially of the miscellaneous kind, as a well-behaved visitor does to a banquet. The master of the feast exerts himself to satisfy his guests; but if, after all his care and pains, something should appear on the table that does not suit this or that person's taste, they politely pass it over without notice, and commend other dishes, that they may not distress a kind host.

Translation.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPÆDIA METROPOLITANA,

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

IN TWENTY-TWO VOLUMES.

VOL I.

LONDON:

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R. GRIFFIN & Co., GLASGOW; T. T. & H. TEGG, DUBLIN; ALSO J. & S. A. TEGG, SYDNEY AND HOBART TOWN.

1837.

Volume I (A - America)

The London Encyclopedia

X

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LONDON ENCYCLOPEDIA.

A is the first letter, and first vowel of the al- phabet, in all the modern, and in most of the ancient languages ; which place of eminence has been assigned to it on account of its simplicity, being little more than an opening of the mouth. It corresponds in order and power to the Hebrew ulcph and the Greek alpha, signifying an ox or a leader, and expressing extensive usefulness, ex- cellence and propriety ; for which reason, accord- ing to Plutarch, it was placed at the head of all the letters of the Phoenician language. In the earlier ages of the Hebrews, Greeks, and Ro- mans, before the introduction of arithmetical figures, this letter was used for the numeral 1 ; and its value in this respect is even yet retained in the calendar, where it is the first of the do- minical letters, and in the commercial character for perfect and sea- worthy vessels, which are marked with the sign A 1. In Scripture the Greek alpha is applied to Christ as the beginner or first, in connexion with the omega, or last letter, to shew that he is also the finisher of all things. Rev. i. 8, 11, xxi. 6, xxii. 13. Another mystical sense of the Greek A was to express the word AirtiXi, or a declaration of denouncing ; but the Latin letter is called by Cicero a health- ful character, because, in capital cases, a tablet covered with wax and marked with it denoted absolvo, I absolve, in contradistinction to C, which signified condemno, I condemn, and which the orator therefore terms a sorrowful character. An A was very extensively used as an abbrevia- tion by the Romans, for which purpose it is also still employed ; as in heraldry for argent, or silver ; in algebra for a known quantity ; in chemistry for amalga-ma, when treble ; in medi- cine for ana, equal parts of each, and in several other instances, both in the arts and sciences.

1 . A, taken materially, or for itself, is a noun ; as, a great A, a little a.

Truly were I great A, before I would be willing to be so abused, I should wish myself little a- a thou- sand times. Wallis's Corrections of Hobbes.

2. A, an article set before nouns of the singu- lar number ; a man, a tree, denoting the number one ; as a man is coming, that is, no more

than one ; or an indefinate indication, as, a man may come this way, that is, any man. This article has no plural signification. Before a word be- ginning with a vowel it is written an ; as, an ox, an egg, of which a is the contraction.

3. A is placed before a participle, or participial

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noun ; and is considered by Wallis as a con- traction of ut, when it is put before a word de- noting some action not yet finished ; as, I am a walking. It also seems to be anciently con- tracted from at when placed before local sur- names ; as, Thomas a Becket In other cases, it seems to signify to, like the French a.

A hunting Chloe went. Prior,

They go a begging to a bankrupt's door. Dryden.

May peace still slumber by these purling fountains, Which we may every year Find, when we come a fishing here, Wotton.

Now the men fell ►► rubbing of armour which a great while had lain oiled. Id.

He will knap the spears a pieces with his teeth.

More's Antid. Athm.

Another falls a ringing a Pescennius Niger, and judiciously distinguishes the sound of it to be mo- dern. Addison on Medals.

4. A is used in burlesque poetry to lengthen out a syllable, without adding to the sense.

For cloves and nutmegs to the liue-a And even for oranges to China. Dryden.

5. A is sometimes, in provincialisms, and in familiar writings, used by a barbarous corruption for he ; as, will a come, for will ht come.

6. A, in composition., seems to have sometimes the power of the French a in these phrases, a droit, a gauche, &c., and sometimes to be con- tracted from at ; as aside, aslope, afoot, asleep, athirst, aware.

I 'gin to be a-weary of the sun ; And wish the state o' the world were now undone.

Shakspeare.

7. A is sometimes redundant ; as, arise, arouse, awake ; the same with rise, rouse, wake.

A, with the addition of ftie two Latin words per se, meaning by itself, is used by our elder writers to denote a nonesuch. It may have been adopted from the custom of the child's school, in which every letter, we may presume, was taught to be expressed per se.

AA (Peter Vander), a celebrated bookseller of Leyden, nourished in the beginning of the last century, and compiled many useful geographical works. He published an Atlas of 290 Charts, (Galerie Agreable du Monde, 66 vols. folio), editions of the Thesaurus Antiquitatum Graecorum and of the Thesaurus Antiquitatum Italia, and a Collection of Travels in Europe, 30 vols, 12mo. &c.

AA, a river of Samogitia, Courland, which runs into the Gulf of Riga.

AA, a river of France, whicli rises in the de- partment of Pas de Calais, beyond Rumilly le Comte, near Taeroune, runs N. E. through Artois, and becomes navigable near St. Omers ; ###whence it passes N. to Gravelines, below which it falls into the English Channel. At St. Omers, the Colme and an inferior branch separate from it. A A, a river in Westphalia, which rises near Munster, waters that city, and falls into the river Ems.

AA, a river of Switzerland, which rises in Underwalden, and empties itself into the Lake of Lucerne : also a river of Underwalden, which falls into the Lake of Waldstadten opposite Ger- sau. This is likewise the name of a third river of Switzerland, which rises N. W. of Lucerne, and unites itself with the Aar, three miles S. W. of Brugg ; and of a fourth in the canton of Zurich, which rises near Gruningen, and empties itself in the Greiffen.

AA, a river of Dutch Brabant, rising on the borders of Guelderland, and running into the Dommel, near Bois le Due. Also, a river of Overyssel, in Holland, falling into the Lake of Giter.

AABAM, or AABAN, a term used by some alchemists to signify lead.

AACH, a river in Suabia, which falls into the Lake of Constance.

AACH, a town in the circle of Suabia, situated near the source of the above river, and almost equidistant from the Danube, and the lake Con- stance. Also another river of Suabia, joining the Iller.

AAHUS, a small district of Germany, in the circle of Westphalia, and bishopric of Munster, containing twenty parishes and four towns. AAHUS, the capital, has a good castle, and lies N. E. of Coesfeldt.

AAKIRKE, a town in the island of Bornholm, Denmark, with the rank and privileges of a city. The provincial court and synod are held in it.

AALBORG, or AALBOURG, a bishopric of Denmark, in North Jutland, length and breadth about 75 miles. It occupies the whole northern part of the peninsula, and contains several flou- rishing towns and noble manors. Population about 90,000.

AALBORG, the capital of the bishopric of that name, lies on the south coast of Lymfurt, on the confines of the bishopric of Wiburg. Next to Copenhagen and Odensee, it is the richest and most populous town in Denmark. The name signifies Eel-town, great quantities of eels being caught here. It has an exchange for merchants, a safe and deep harbour, (though the entrance near Hals is somewhat dangerous,) a consider- able trade in corn, and herrings, and manufac- tories of soap, train oil, guns, pistols, saddles, and gloves. It was taken by the Swedes, in the years 1643 and 1658. Lon. 9. 46. E. lat. 57. N. AALEN. See AHLEN. AALTEN, a town of Breedevort, in Dutch Guelderland, near Munster, containing 3500 inhabitants.

AAM, or HAAM, a liquid measure, used by the Dutch, containing 128 mingles, (a measure weighing nearly 36 ounces avoirdupois,) or 288 > English, or 148| Paris measure.

AAR

AANCHE, in music, a name sometimes gi ven to wind instruments and organ pipes, with reeds or tongues, as the clarionet, hautboy, &c.

AANES, in music, the tones and modes of the modern Greeks.

AAR, a small island in the Baltic.

AAR, a river of Germany, falling into the Rhine, near Sintzig.

AAR, a large river of Switzerland, which has its source in a lake, near Mount Schreckhorn, in the south of the canton of Berne, and running N. W. through the whole extent of the lakes of Brientz and Thun to

Berne, takes a circuitous course to Soleure ; whence it flows E. to Arburg, and N. E. to Brugg ; below which, being joined by the Reuss and Limmat, it falls into the Rhine, opposite Waldschut.

AARASSUS, in ancient geography, a town of Pisidia, in Asia, supposed to be the Anassus of Ptolemy.

AARCHET, in music, instruments played with a bow, as the violin and violincello.

AARGAU, ARGOVIA, or ARGOU, anciently one of the 45 districts or divisions of Switzerland, receiving its name from the Aar, and composing the German part of the canton of Berne, with part of Solothurn, Lucerne, and Underwalden. It now includes only that part of Berne which in 1798 was formed into a separate canton, having Arau for its capital; but received in 1803 the whole of Baden and the Frickthal, in addition to its territory. It is bounded by Zug and Zurich on the N. has the Rhine for its boundary E. the cantons of Solothurn and Basil W. and Zug S. containing 11 districts, and 48 jurisdictions. Population 132,763.

AARHUUS, a large diocese in N. Jutland, which extends from that of Wiburg to Categat, about 65 miles in length, and 33 in breadth. It is intersected by many excellent rivers, and lakes, abounding with fish, and adorned with a variety of large forests. It contains five towns, eight royal bailiwicks, and six counties. Population

135,000.

AARHUUS, or ARHUSEN, the capital of the bishopric of that name, lies between the sea and a lake, from which water is conveyed by a broad canal, that divides the town into two un- equal parts. It is large and populous, and has six gates, two principal churches, two market places, an university, a free school, and a well endowed hospital. It carries on a good trade in corn. The cathedral, which was begun in 1201, is 150 paces in length, 96 in breadth, and nearly 45 German ells in height.

AARON, Heb. a mountaineer, the brother of Moses, and first high priest of the Israelites, was great-grand-son of Levi by the father's side, and grandson by the mother's. His history being fully narrated in the Pentateuch, it needs only to be added here, that he died upon Mount Hor, in the 123d year of his age, being the 40th after the departure from Egypt; A. M. 2522, of the Julian period, 3262, and before the Christian sera, 1452. See MOSES and MAGICIAN.

AA RON,(St.) a British martyr, who suffered along with St. Julius, another native of Britain, under Dioclesian, about the same time with St. Alban, the British proto-martyr.

A15

AARON, of Alexandria, a learned presbyter and physician of the seventh century, in whose works ihe small-pox is first mentioned.

AARON, a market town of France, in the de- partment of Mayenne, having extensive iron works.

AARON HARISCHON. See HARISCHON.

AARON, or HAROUN, AL RASCHio,a celebrated khalif of the Saracen empire, of whom many fabulous legends are told.

AARSENS, (Francis,) Lord of Someldyck and Spy ck, was one of the greatest statesmen the United Provinces ever produced. Having been some years under M. Mornay, at the court of William I. prince of Orange, Barneveldt sent him, as agent for the States, to Paris, where he acquired for himself great reputation under Henry IV. Villeroi, &c. Being soon after invested with the character of ambassador, Henry gave him precedence next to the Venetian minister. He resided at the court of France 15 years, and was created a knight and a baron by the king; was after- wards ambassador at Venice; and to several princes in Germany and Italy : and in 1620, was appointed the first of three extraordinary ambas- sadors to England, where, in 1641, he settled the marriage between the princess Mary and prince William, the father of our William III. He died at a very advanced age.

AARSENS, (Peter,) a painter, called Long Peter, on account of his stature, born at Amsterdam in 1519. He was eminent in altar and kitchen pieces. A lady of Alckmaer offered 200 crowns to preserve one of his altar pieces, that was destroyed in the insurrection, in 1566.

AARTGEN, or AERTGENS, a painter of merit, the son of a wool-comber of Leyden, born in 1498. He studied painting under Engelbrechtz, but was devoted to the bottle, and was drowned in 1564.

AASAR, in ancient geography, a town of Ju- daea, in the tribe of Judah, between Azotus and Ascalon. In St. Jerome’s time it was a hamlet.

AAVORA, in natural history, the fruit of a large species of the palm

tree, that grows in Africa and the West Indies. It is of the size of a hen's egg, and several are included in one shell.

AB, in the Hebrew calendar, the llth month of the civil year and the 5lh of the ecclesiastical. It answers to the moon, which begins in July and ends in August, and consists of 30 days. The Jews fast on the 1st of this month in memory of Aaron's death ; on the 9th, because on that day, both the first and second temples were burnt ; and on the 18th, because the sacred lamp in the sanctuary was that night extinguished, in the reign of Ahaz. The 9th of this month was also remarkable for the publication of Adrian's edict, ❓❓❓which prohibited that unfortunate people, not only from continuing in Judcea, but even from looking back to Jerusalem to lament its desolation.

AB, in the Syriac Calendar, is the last of the summer months. The eastern Christians called the first day of this month Suum Miriam, the fast of Mary, and fasted from that to the 15th, which they called Fathr-Miriam, the cessation of the fast of the Virgin.

AB, at the beginning of the names of places,

generally shews that they have some relation to an abbey, as Abingdon.

ABA, or ABAU, HANIFAH. See HANIFAII.

ABA, ABAS, ABOS, or ABUS, in ancient geogra- phy, a mountain of Greater Armenia; Strabo says, the Euphrates and Araxes both rose in it, the former running eastward and the latter west- ward.

ABA, or ABJE, in ancient geography, a town of Phocis in Greece, near Helicon, famous for an oracle of ApoUo, older than that at Delphi ; as well as for a rich temple, plundered and burnt by the Persians. See ABANTIS.

ABABDE, in geography, a tribe of the Be- douin Arabs, inhabiting, according to M. Burck- hardt, that part of the west shore of the Arabian Gulf, which is south of the Kosseir, and in about the latitude of Derr. The country is mountainous, and the people faithless and barbarous.

ABABILO, or AsABiL,in mythology, a fabu- lous bird mentioned in the Koran, who, according to the Mahometan doctors, has a foot like that

of a dog.

ABACA, in botany, an Indian plant, a native of the Philippine Islands. There are two spe- cies, the white and the grey. The former pro- duces lint, of which very fine linen is made ; the latter hemp, which is used for nothing but cor-

ABACj?ENUM, or ABACENE, in ancient geo- graphy, a town of Sicily, whose ruins are supposed to be those still lying near Trippi, a citadel on a high mountain, near Messina.

ABACAY, in natural history, a species of par- rot in the Philippine Islands, called also Calan-

gay-

ABACH, or WELTENBURG, a market town in Lower Bavaria, seated on the Danube ; nine miles from Ratisbon. It is defended by a citadel, and is remarkable for Roman antiquities, as well as for its mineral waters, which are celebrated for curing various diseases. Lon. 11.56. E. lat. 48. 53. N.

ABACINARE, in archaeology, Ital. from bacino, a basin, or bacio, a dark place, a pun- ishment, described by writers of the middle age, wherein the criminal was blinded, by holding a red hot basin, or hot irons before his eyes.

ABACISCUS, in ancient architecture, the. square compartments of Mosaic pavements.

ABACISTA, O. L. an arithmetician.

ABACK', on back, backwards.

So that the white was aboue, as the folk y seye, And drof the rede al abak out of the put ney The rede, as for sorinesse, by turnede hym atten ende, And asailede the wyte, and made hym abac wende.

R. Gloucester, p. 131.

But when they came where thou thy skill didst show, They drew abacke, as half with shame confound.

Spenser's Pastorals, June. A noble heart ought not the sooner yield, Not shrink abacke for any weal or woe.

Mir. for May. p. 359. Yet Albert new resources still prepares, Conceals

his grief, and doubles all his cares ; ” Away there ! lower the mizen-yard on deck,” He calls, ” and brace the foremost-yards aback !”

Falconer’s Shipwreck.

ABACK, or ABAKE, in sea-language signifies B2

the situation of the sails, when their surfaces are flatted against the mast by the force of the wind. This may be either by a sudden change of the wind, or an alteration in the ship’s course to avoid some imminent danger.

ABACO, one of the most considerable of the Bahama islands, lying in N. Lat. 26. 22. W. Long. 77. 14. Some writers have conjectured that this was the first spot of the western world upon which Columbus touched. See BAHAMA. ABACOOCHE, or COOSEE, a river of N. America, which rising in the S. W. territory, and flowing through Georgia, unites with the Oakfus- kee, and forms the Alabama.

ABACOT, a cap of state, worn in ancient limes by the kings of England, the upper part of which was in the form of a double crown.

AB ACT ED, from abactus, L. drawn away by stealth or violence.

ABACTUS, or ABIGEATUS, among ancient medical writers, an abortion procured by the foice of medicines. See MIDWIFERY.

ABACUS, among the ancients, was a kind of cup-board or buffet. Livy, describing the luxury into which the Romans degenerated after the conquest of Asia, says they had their abaci, beds, &c. plated over with gold. See also Juv. Sat. in. 203.

ABACUS, signified also a table covered with dust on which mathematicians drew their dia- grams, and a draft or chess board, on which the ancients played games of chance. Macrob. . Stuck. Ant. Conviv. xi. 16.

The ABACUS, in architecture, Vitruvius tells us, was originally intended to represent a square tile laid over an urn, or rather over a basket. ††† An old woman of Athens happening to place a basket covered thus, over the root of an acanthus, the plant, shooting up the following spring, encom- passed the basket all around, till meeting with the tile, it curled back in a kind of scroll. Cal- limachus, an ingenious sculptor, passing by, took the hint, and immediately

executed a ca- pital on this plan ; representing the tile by the abacus, the leaves by the volutes, and the basket by the vase, or body of the capital.❓❓❓ The form of the abacus is not the same in all orders : in the Tuscan, Doric, and Ionic, it is generally square; but in the Corinthian and Composite, its four sides are arched inwards, and embellished in the middle with some ornament, as a rose or other flower. Scammozzi uses abacus for a con- cave moulding on the capital of the Tuscan pedestal ; and Palladio calls the plinth above the echinus, or boultin, in the Tuscan and Doric orders, by the same name.

ABACUS is also the name of an ancient instru- ment for facilitating operations in arithmetic. It is variously contrived. That chiefly used in Eu- rope is made by drawing any number of parallel lines at the distance of two diameters of one of the counters used in the calculation. A counter placed on the lowest line, signifies 1 ; on the 2d 10 ; on the 3d, 100 ; on the 4th, 1000, &c. In the intermediate spaces, the same counters are es- timated at one half of the value of the line im- mediately superior, viz. between the 1st and 2d 5 ; between the 2d and 3d, 50, &c. ABACUS, the Chinete. See SWANPAN.

I ABA

ABACUS Pythagoricus, the multiplication table of Pythagoras, similar to the common one, which has also been attributed to him.

ABACUS Logisticus, is a rectangled triangle, whose sides, forming the right angle, contain the numbers from 1 to 60 ; and its area, the facta of each two of the numbers perpendicularly oppo- site. This is also called a canon of sexagesimals.

ABACUS & Palmula, in the ancient music, de- note the machinery, whereby the strings of Poly- plectra, or instruments of many strings, were struck with a plectrum made of quills.

ABACUS Harmonicas, is used by Klrcher for the structure and disposition of the keys of a musical instrument, whether to be touched with the hands or the feet.

ABACUS Major, in metallurgic operations, the name of a trough used in the mines, wherein the ore is washed.

ABACUS, a/3a?, Gr. Ben Jonson uses aback to denote simply a square surface.

In the centre or midst of the Pegm, there Mras an aback or square in

which this elegy was written.

Jonson's Coronation Pageant.

ABADDON, the name which St. John in the Revelation gives to the angel of the bottomless pit. The inspired writer says, this word is Hebrew, and in Greek signifies ATroXXvwv, i. e. a destroyer. See Rev. ix. 11.

ABADE, or SCHECK ABADE, a small town in

Egypt-

ABADEH, a town of Persia, in the district of Fars., which is celebrated in the Persian civil wars of the last century. Its fortifications are in decay, but the neighbourhood is fruitful. Po- pulation 5000.

ABADIR, a title which the Carthaginians gave to gods of the first order. In the Roman mythology, it is the name of a stone which Saturn swallowed, by the contrivance of his wife Ops, believing it to be his new born son Jupiter: hence it ridiculously became the object of re- ligious worship.

AB/E, or ABA. See ABA.

ABATT, adv. abajtan, Sax. behind. From the fore part of the ship, towards the stern ; in opposition to afore.

ABAFT THE BEAM, in maritime affairs, signifies the position of an object somewhere between a line at right angles with the keel, and the points to which the ship's stern is directed.

ABAGI, a silver coin of Persia, worth about 36 sols, French money. Four chaouris, which are also called sains, make one abagi.

ABAGUN, in ornithology, an Ethiopian bird of great beauty, having a crested horn on its head, adding much to its appearance and giving it perhaps its name, which signifies lordly abbot. Lobo. 71.

ABAI'SANCE, ►►. *. from the French abaiser, to depress, to bring down. An act of reverence, a bow. Obeysance is considered by Skinner as a corruption of abeitance, but is now universally used.

ABAISIR, in chemistry, a name sometime.. given to spodumene

ABAIS'SED, ABAISSE', in heialdry, an epi- thet applied to the wings of eagles, &c. when the

tip looks downwards to the point of the shield, or when the wings are shut.

ABAISSED, or ABAISSE, in heraldry. See HERALDRY.

ABAlTE, a river of Brazil in the Minas Geraes province, falling into the Francisco, near which was found the largest diamond ever discovered in the country.

ABAKA khan, the 18th emperor of the Mo- guls, a wise and clement prince, who is said to have been so far a Christian, as to have joined in keeping the feast of Easter, a short time before his death. He reigned 17 years.

ABAKANSKOI, or ABANKANSK, a town of Siberia, on the river Abakan. It was founded in 1707, and rebuilt in 1725. It has a garrison, and is provided with artillery. Population 1250. Lon. 91.5. E. Lat. 53. 5. N.

ABALAK, a town in Siberia, sixteen miles from Tobolsk, celebrated for an image of the Virgin, which is visited by many pilgrims. Lon. 08. 20. E. Lat. 58. 11. N.

ABALIENATUS, in medicine, signifies that the part spoken of is in a state that requires amputation ; and, when applied to the mind, denotes its total derangement.

ABALLABA, the ancient name of Appleby, in Westmoreland, remarkable as having been a Roman station. See APPLEBY.

ABALUS, in ancient geography, supposed to be an island in the German Ocean, called by Timseus, Basilio, and by Xenophon Lampsacenus, Baltiu. Here, according to Pliny, amber dropped from the trees ; and sacrifices were offered to the manes of the drowned if the body were lost.

ABALUS, the peninsula of Scandinavia.

ABANA, or AMANA, in ancient geography, a river of Phoenicia, called Chrysorrhsea, by the Greeks, which, rising from mount Hermon, washed the south and west sides of Damascus, and fell into the Phoenician sea, north of Tripolis.

Scripture supplies a fine instance of the expres- sion of disdain, in the

reply of the Syrian General, Naaman, to the prophet Elisha, respecting this river : ” Are not Abana and Pharpar, rivers of Damascus, better than all the waters of Israel ? may I not wash in them and be clean ?” 2 Kings v. 12.

ABANCAY, or AVANCAY, a province of Peru, bounded on the E. by the city of Cuzco ; S. by the provinces of Cochabamba & Aimarez ; W. by Andahuelas ; and N. by Calcayleres. It is the jurisdiction of a corregidor, containing 17 settlements or towns, and a noble chain of moun- tains, which diversify the climate to almost every degree of temperature. Silver mines are found here ; the sugar cane flourishes, as well as wheat, maize, and all grain, which, together with the hemp manufactured into cloth, is conveyed by the Apurimac to the Amazons. Abancay has also a fine breed of horned cattle.

ABAND’, v. ~\ Sax. Bannan, Abannau,

ABAN’DON, v. n. I past. part. Abanned. From

ABAN’DONER, \ this past participle is form-

ABAN’DONING, i ed the verb abandon, sig-

ABAN’DONMEST, J nifying primarily to band or bind, or put in bondage. From this original

sense are derived to resign, quit, desert, forsake, reject, and repel.

And Vortigern enforc’d the kingdom to aland.

Spenser’s Faerie Queene, II. x. 65. All pleasures quite and joys he did aband, Pursuing war Mir. for May. p. 172.

The barons of this land,

For him trauailed sore, and brought him out of band. R. Brunne, p. 201. For he that

Yaue whole his hart, in will and thought, And to himselfe kepeth right nought, After this swift it is good reason He yaue his good in abandon.

Chaucer, The Romaunt of the Rose. Moris hir soune was coroned, Which so fer forth was abandoned, To Christes feith, that men hym calle Moris the christnest of all. Gower, b. II.

With women, which were abandoned To werche Gower, Conf. Am. h. 7.

If she be so abandoned to her sorrow, As it is spoke, she never will admit me.

Shakspeare's Twelfth Night. The passive Gods behold the Greeks defile Their temples, and abandon to the spoil Their own abodes. Dryden's fiSneid.

Must he, whose altars on the Phrygian shore, With frequent rites, and pure, avow'd thy power, Be doom'd the worst of human ills to prove, Unbless'd, abandon'd to the wrath of Jove ?

Popes Odyssey.

Oh ! sacred, shadowy, cold, and constant queen, Abandonner of revels, mute, contemplative !

Beaumont and Fletcher's two Noble Kinsmen. See how he lies at random, carelessly diffused, With languish'd head unpropt, As one past hope, abandon'd, And by himself given over.

Milton's Samson Agonistet. She loses all her influence. Cities then Attract us, and neglected nature pines Abandon'd, as unworthy of our love.

Camper's Task.

When thus the helm of justice is abandoned, an universal abandoning of all other posts will succeed.

Burke.

ABANDUM, in old law, any thing that is se- questrated, confiscated, or forfeited.

ABANGA, the name given by the black na- tives of the Island of St. Thomas, to the fruit of the ady or palm tree. The Portuguese call it caryoces and cariosse. See ADY.

ABANNEG, or ABNET, Heb. a girdle worn by the priests of the Jews.

ABANNITION, n. s. Lat. abannitio, an old punishment, of one or two year's banishment for manslaughter.

ABANO, a town of Italy near Padua, famous in ancient as well as

modern times, for its hot .baths. Population 3000.

ABANTIS or ABANTIAS, in ancient geo- graphy, an island in the .ZEgean sea, extending along the coast of Greece from the promontory Sunium in Attica, to Thessaly; and separated from Bceotia by a narrow strait called Euripus. It is known in history by the different names of Chalcis, Ellopia, Aonia, &c. It was afterwards called Euboza, from a famous cave on the eastern coast of the island; and Macris from its length. Its present name is Negropont. It derived the name Abantis from the* ABASTES, a people

oricimdly of Thrace, although some historians suppose they were Arabians who followed Cad- mus. The Abantes are well known in history ; Homer calls them oviaQiv Ko/iowvr*c from their .vearing the hair long behind. They are also called Curetes, from cutting their hair short before.

ABANTIS, a country of Epirus. Pans. lib. v. c. 22.

ABAPTISTON, or ANABAPTISTON, in sur- gery, an ancient name for the perforating part of the instrument called a (repan.

ABARCA, or ABAREA, an ancient kind of shoe, used by the Spaniards, in travelling over mountains.

ABARIM, mountains which separated the territory of the Moabites and Ammonites from Canaan. Nebo and Pisgah were among them. Josephus says, they stood opposite to Jericho, and were the last station but one of the Israelites, before they took possession of Canaan.

ABARIS, the Hyperborean, a celebrated sage of antiquity, of whom a great number of fabu- lous stories are told ; such as, that he received a present of a miraculous arrow from Apollo, with which he travelled without taking food ; that he could foretel earthquakes, allay tempests, drive away the pestilence, &c. &c. Harpocration tells us, that the whole earth being infested with a deadly plague, Apollo ordered, that the Athe- nians should offer up prayers in behalf of all other nations ; upon which, ambassadors were sent to Athens from different countries. Among these was Abaris, who, during this journey, re- newed the alliance between his countrymen, and the inhabitants of the Isle of Delos. He also went to Lacedaemon, where he built a temple to Proserpine the Salutary. It is said that there is a Greek MS. of his epistles to Phalaris in the library of Augsburg.

AB’ARNARE, Sax. in Law. To discover to a magistrate any secret crime.

ABARNUS, ABARNIS, or APARNIS, in ancient geography, a city, country, and promontory of Pariana, near the Hellespont. Milesius calls it a promontory of Lampsacus. The Phocians are said to have given it the name of Abarnis from one of their countrymen, who built Lamp- sacus.

ABARTAMEN, in chemistry, a name for lead.

ABARTICULATION. n. s. from ab, from, and artiadus, a joint, Lat. A good and apt con- ❖❖❖ struction of the bones, by which they move strongly and easily ; or that species of articula- tion that has manifest motion.

ABARTICULATION, in anatomy, that species of articulation, that takes place in the joints of the arras, hands, thighs, &c. which is called also Dfiirticiilutw, and Diarthro$ii, to distinguish it from that sort of articulation, which admits of a very obscure motion, and is called Synarthrosis.

ABAS, a small weight used in Persia, for weighing pearls. It is one eighth less than the European carat.

ABAS, in the heathen mythology, the son of Hypothoon and Metanira, who entertained the goddess Ceres, and offered a sacrifice to her ; but Abas, ridiculing the ceremony, and giving her

opprobrious language, she turned him into a wa- ter lizard. Also in ancient history, the llth king of Argos, who built Abae. A son of Eury- demus, killed by TEneas near Troy ; a companion of TEneas killed in Italy ; another lost in the storm which drove him to Carthage ; a Latian chief who befriended him, and was killed by Lausus ; and an author, quoted by Servius, who described Troy. Virg. Mneid.

ABAS, in ancient geography, a river of Arme- nia, near which Pompey routed the Albani ; also a mountain of Syria, near the sources of the Euphrates.

ABAS, in medicine, a name sometimes given to the epilepsy. See TINEA.

ABAS or ABASIA, in entomology, a species of the Bombyx of Fabricius,

and of the Phalsena of Linnaeus, found in Surinam. It has brown, spreading wings, the hinder wings cinereous, and the ocellus of a reddish colour.

ABAS, Schah, the Great, 7th Sophi, or em- peror of Persia, succeeded his father in 1585, at eighteen. The empire having been much reduced by the conquests of the Turks and Tartars, he recovered most of the provinces they had taken ; but death put a period to his victories, in 1626, in the 62nd year of his age, and 44th of his reign. He transferred the seat of empire to Ispahan.

ABAS, II. Schah, the 9th Sophi of Persia, the son of Sefi, and grandson of Abas the Great, succeeded his father at thirteen, and was only eighteen years of age, when he retook the city of Candahar, and the whole province around it, from the Great Mogul, who had seized it in his father's reign; and he afterwards defended it against him, though he besieged it more than once, with an army of 300,000 men. He was a merciful prince, and openly protected the Chris- tians. He died at thirty-seven years of age, in 1666.

ABASE', ~) Fr. abaisser ; Lat. basis or

ABAS'ING, n. ybassus; Ital. abbassare ; Span.

ABASE'MENT, jabaxar. These are all to be referred to the Gr. /Jounc, the foot of a pillar. Hence it signifies, to lessen or keep under, to depress, to bring low, to degrade, to disgrace in a figurative and personal sense, says Johnson, which is the common use.

Our kynge hath do this thing amissc, So to abesse his roialtee. And will she yet abase her eyes on me, That cropt the golden prime of this sweet prince, And made her widow to a wofull bed ?

Shaktpeare's Rich. III. act i, sc. 2. It is a point of cunning to wait upon him with whom you speak with your eye ; yet with a demure abating of it sometimes.

Lord Bacon's Essaf on Cunning. Her cither cheek resembled blushing morn ; Or roses gules in field of lilies borae ; T \vixt which an ivory wall so fair is raised, That it is but abased when it's praised.

Dntmtnond. Behold every one that is proud, and abase him.

Job Til. 11.

If the mind be curbed and humbled too much in children ; if their

spirits be abased and broken much, by loo strict an hand over them ; they lose all their vigour and industry. Locke on Education.

ABA

There is an abasement because of glory ; and there is that lifteth up his head from a low estate.

Ecclesiatticus, xx. 11.

Heaven was to be earned only by penance and mortification ; by the austerities and abasement of a monk, not by the liberal, generous, and spirited con- duct of a man. Smith's Wealth of Nation*.

ABASCIA, or ABCAS, a country in Asia, tri- butary to Russia, surrounded by Mingrelia on the E. and S. by Circassia on the N. and W. and the Black Sea on the S.W. It has few towns, and they are of little consequence. Anacopia, Dandar, and Czekorni, are the chief. Great and Little Abcas are both included in the government of Caucasus, but the Russian authority in the heart of the country is but nominal.

The inhabitants called ABASCIANS, or ABKHAS, have the name of Christians, but nothing else. The men are robust and strong, and the women beautiful; but they are so poor, thievish, and treacherous, that there is no trading with them, without the utmost caution. They even live in continual dread of each other, for the most powerful seize as many as they can of the poorer sort, especially the females, and sell them to the Turks. The tribe of Natukasch is the principal. Their commodities are furs, buck and tiger skins, linen yarn, box-wood and bees'wax ; but their chief traffic lies in selling their own children. An Abascian prince lately (1807) carried his de predations far into the neighbouring governments, and was sometime captive in Russia, but he escaped. Their customs resemble those of the MJNGRELIANS, which see.

ABASH', v.) of the same derivation as abase, ABASH'MENT, } unless it comes from abaw, a verb peculiar to Chaucer, and which Barret translates, to be abashed or astonied. Abash is used by Gower as a substantive. It is to be distinguished, however, from the preceding arti- cle, as it is applied to the feelings of those who are abased, depressed, disgraced. It generally implies a sudden impression of shame which ge- nerates painful surprise and confusion. The substantive is used to signify the state of being confused, and the cause of confusion. He stode al abashed, with colour wan and pale.

Chawer's 2nd Tale.

The town restlesse with furie as I sought Th' unlucky figure of Creusae's ghost, Of stature more than wont, stood fore mine eyen Abashed then I waxe : therewith my heare Gan start right up : my voice stuck in my throte.

Surrey.

Why, then, (you princes)

Do you with cheeks abashed behold our -vorkes, And think them shame, which are (indeed) nought

else,

But the protractiue trials of great Joue, To find persistiue constancy in men.

Shakspeare's Tro. and Cressida . They heard, and were abasht, and up they sprung, Upon the wing. Milton's Paradise Lost.

Silence was in the court at this rebuke : Nor could the gods, abash'd, sustain their sovereign's look. Dryden's Fable*.

She was afrayde ;

The ruddy shamefastness in her vysage fyll, Which manner of abashement became her not yll.

Skelton's Poems, p. 38. Methinks it may be some abashment to reason, and

that vast perfection to which some men would extol it, that it scarce knows what man or itself is.

Ellis's Knowledge of Divine Things.

ABASITIS, in ancient geography, a tract of Asiatic Mysia, in which the city of Ancyra was situated. Strabo.

ABASK.I, a town of Circassia, 40 miles S. E. of Kopiel.

ABASSI, or ABASSIS, a silver com, current in Persia, so named after Schah Abbas, II. equal to about a shilling of English money.

ABASSUS, in ancient geography, a town of the Greater Phrygia, on the confines of Galalia.

ABAT-CHAUVEE, a name given in Poitou, and other parts of France, to a species of very coarse wool.

ABATE, (A.) a Neapolitan painter of some eminence, who was employed in the Escurial. His boldness of colouring and shade was highly, praised by Luca Giordano. Abate died in 1732.

ABATE', v. “) a. s. beatan, to beat. The word

ABATE'MEST, Sexists without the prefix a, as

AB A'TE R, j bate ; but, in modern usage, it is more limited in its application. The verb is both active and neuter. It not only signifies to beat down, but to subtract, as in arithmetic. Thus it has grown to mean to lessen, diminish, contract, deject, and depress. It is employed technically in law and in horsemanship. In the one it is used in reference to a nuisance, ††† to get rid of it ; to a castle, ††† to beat it down or remove it ; to a writ ††† to defeat and overthrow it : in horseman- ship, it implies the exact performance of any downward motion. Its general and popular usage is set forth in the following specimens.

The kyng did samen his men, to abate Gryflyn's pride, And Harald tham betaught ageyn the Walsch to ride. Chaucer'* Personnel Tale, p. 63. And when the sunne hath eke the darke opprest, And brought the day, it doth nothing abate The trauailes of mine endlesse smart and paine.

Surrey.

Who can tell whether the divine wisdom, to abate the glory of those kings, did not reserve this work to be done by a queen, that it might appear to be his own immediate work. Sir John Davies on Ireland.

This iron world

Brings down the stoutest hearts to lowest state : For misery doth bravest minds abate.

Spenser. M. 'Hubberd's Tale. Till at length

Your ignorance deliver you, As most abated captives to some nation That won you without blows.

Shakspeare's Coriolanut. HEL. O weary night, O long and tedious night,

Abate thy houres, shine comforts from the East, That I may backe to Athens by day-light, From these that my poore company detest.

Shakspeare's Mid. N. Dream, act iii, sc. 2. Will come a day (hear this, and quake ye potent

great ones)

When you yourselves shall stand before a judge, Who in a pair of scales will weigh your actions, Without abatement of one grain.

Beaumont and Fletcher's Plays. Impiety of times, chastity's abator.

Daniel's Complaint of Rosamond.

If we could arrest time, and strike off the nimble

wheels of his chariot, and like Joshua, bid the sun

stand still, and make opportunity tarry as long as

ABB

we had occasion for it ; this were something to ex- cuse our delay, or at least to mitigate or abate the folly and unreasonableness of it. Tittotson's Works. The law of works is that law, which requires per- fect obedience, without remission or abatement.

Locke.

ABATELEMENT, in commerce, a sentence of prohibition from trade, issued by the French consuls against those who would not stand to their bargains, or who refused to pay their delns. It was required to be taken off before they could sue any person for payment.

ABATEMENT, in heraldry, a certain mark of degradation, inserted in the bearings of particu- lar persons or families, called also diminutiones, vel discernula armorum. Authors on this subject mention nine of these marks. See SELDEN, and GUILL. DISP. HERALD.

ABATEMENT, in commerce. See DISCOUNT and REBATE.

ABATIS, or ABBATIS, from batum, an old measure for corn, an ancient term for an officer of the stables, who had the care of the pro- vender.

ABATIS, or ABBATIS, from Abuttre to pull down, Fr. in fortification, a heap of large trees thrown together, to guard intrenchments, ob- struct roads, and prevent the approaches of an enemy.

ABATOS, from a priv. and f3aivw to go, i. e. inaccessible, in ancient geography, an island in the Lake Moeris, famous for its papyrus, and for being the burial place of Osiris. Hence sacred from profane intrusion.

ABATUTTA, or ABUTUTTA, in music, an Italian direction for continuing to beat the time as before.

ABAUZIT, (F.) a modern French writer and philosopher of some celebrity. He was born at Rezes, 1679; but sent off to Geneva, at two years of age, by his mother, a zealous protestant, to secure his education in that religion. He well rewarded her solicitude, becoming after- wards in this country the friend of Sir Isaac Newton, who complimented him by observing that he was ” a fit judge between Leibnitz and himself.” William III. wished him to re- main in England, but he returned to become the librarian of the city of Geneva, in 1726. In 1730 he republished Spon’s History of Geneva, with notes and dissertations, which was his chief work. Voltaire and Rousseau compliment him. He died 1767.

ABA-U J VAR, a palatinate of Upper Hungary, on the W. of Thorn. It contains the four circles of Futzer, Kaschau, Siepschow, and Tscherchat : There are 40 catholic, and 41 reformed parishes ; 18 of the Greek church, and 3 Lutheran, com- prised in this palatinate, which is about 50 miles in length, and from 12 to 15 in breadth. Popu- lation 125,000.

ABAVI, or ABAY. i. c. the Father of waters, an Abyssinian name for the Bahr-el-Azergue, which they consider as the head of the Nile.

ABAVI, ABAVO, or ABAVUM, in botany, p. large tree in Ethiopia, that bears a fruit like a gourd. It is a synonime of the ADANSONIA, which see.

ABB, or ABB-YARN, n. x. the yarn on a weaver’s warp ; a term among clothiers.

A.BB

ABBA, in ancient geography, a town of Africa, near Carthage.

AB’BA, n. ~\ In Chaldee and Syriac ;JK,

AB’BACY, | Father. Titles of honour and

AB’BESS, ˆ-authority, first derived from the

AB’BEY, | literal signification of the word.

AB’BOT. J In scripture Abba is once used

by Jesus Christ in prayer, and twice in the

epistles, having in each place the explanation

Trarqp annexed to it. In the eastern churches,

it was given at a very early date to their bishops ;

❖❖❖ and Baba, Papa, Pope, had their origin from

the same root.

ABBAT, or ABBOT, in the fourth and fifth cen- turies was gradually, and at last distinctively, applied to the heads of those religious orders who then began to exclude themselves from the world. For a particular account of these we refer our readers to the history of Monachism at large.❖❖❖ Mosheim’s Eccles. His. &c.

And anon, after this abbot Then spaken another ; I wode that thyn hede were of, Though thou were my brother.

Chaucer’s Coke’s Tale of Gamelyn,

ABBACY, n. s. Lat. abbatia, the rights or privileges of an ABBOT, which see.

ABBADIE, (James,) an eminent protestant divine, born at Nay in Beam, in 1654; educated under the famous La Placette, and afterwards at the university of Sedan; from whence he went into Holland and Germany, and became minis- ter of the French church at Berlin. In 1690, he came into England, was minister of a French church in London, and was made dean of Killaloe in Ireland. He died at St. Mary- le-bone, 1727, aged 75. His writings, pub- lished in French, were, A Treatise on the Truth of the Christian Religion; The Art of Knowing one’s Self; A Defence of the British Nation; The Deity of Jesus Christ essential to the Christian Religion ; The History of the last Conspiracy in England, written by order of King William III.; and the Triumph of Provi- dence and Religion, or the opening the Seven Seals by the Son of God.

ABBAISSEUR, in anatomy, a name given by Winslow and the French writers to one of the muscles of the eye, called by others the deprimens and humilis ; and by Fabricius the rectus inferior.

ABBAS, the son of Abdalmothleb, and Maho- met's uncle. He at first opposed his nephew, but being taken prisoner at the battle of Bedir, in 623, (the 2d of the hegira,) and a great ransom being demanded, he represented that so large a sum would reduce him to poverty: but Maho- met, reminded him of the gold he had left with his mother at Mecca: whereupon Abbas, be- lieving him to be really inspired, embraced his religion, became one of his chief officers, and saved his life, when in the utmost danger, at the battle of Honain. He afterwards commenced a doctor of the Mussulman law, and read lectures upon the Koran.

ABBATHY. See ABBACY and ABBOT.

ABBE, n. s. 1. In a monastic sense, the same with Abbot, which see. This was also, before the revolution, the name of a kind of

secular clergyman, popular in France. The Abbe had many privileges in the church, with- out any fixed station : and rose occasionally to eminence both in the literary and political world.

The ABBESS has the same rights and au- thority over her nuns, that the Abbots regular have over their monks. Her sex does not allow her to perform the spiritual functions, annexed to the priesthood, wherewith the abbot is usually invested; but there are instances of some ab- besses who commission a priest to act for them, and possess a kind of episcopal jurisdic- tion, exempt from the visitation of their diocesan. Martene, in his treatise on the rights of the church, observes, that some abbesses have for- merly confessed their nuns. But he adds, that their excessive curiosity carried them such lengths, that there arose a necessity for checking it. How- ever, St. Basil, in his Rule, allows the abbess to be present with the priest at the confession of her nuns.

ABBE-BOYLE. See BOYLE.

ABBERFORD, or ABERFORD, a parish and market-town, in the wapintake of Skyrack, W. Riding of Yorkshire, on the Cook, where the Roman highway crossed it. It is 16 miles S. W. from York, and 186 N. of London: market on Wednesday.

ABBEVILLE, a considerable town of France, the chief of an arrondissement, in the de- partment of Somme, and late province of Picardy, seated in a pleasant valley, where the river Somme divides into several branches, and separates the town into two parts. It has 14 parish churches, and a collegiate one ; the princi- pal churches are St. George's and St. Giles's. It is partially fortified, being flanked with bastions, and surrounded by large ditches. Here is a good woollen manufactory, which was erected in 1665, by Van Robais, a Dutchman, whose family retain it. The cloths are said to be little inferior to those of England and Holland. They also manufacture sail cloth, coarse linens, and black and green soap, and carry on a good trade. It lies 15 miles E from the British channel, 20 N.W. from Amiens, 22 S. of Calais, and 85 N. by W. of Paris. Population 30,000.

The arrondissement of ABBEVILLE extends to the English Channel, the Somme watering its whole extent, and falling into the sea near Crotoy. It contains the old counties of Ponthieu, and Vimeux and 114,000 inhabitants.

ABBEYS, priories and monasteries, differ little but in name. FAUCHET observes, that, in the early days of the French monarchy, dukes and counts were called abbots, and duchies and counties abbeys. Even some of their kings are mentioned in history under the former title. Monasteries were at first nothing more than re- ligious houses, whither persons retired from the bustle of the world, to spend their time in solitude and devotion. But they soon degene- rated from their original institution, and procured large privileges, exemptions, and riches. They prevailed greatly in Britain before the reforma- tion ; particularly in England : and as they in- creased in riches, so the state became poor : for the lands which these regulars possessed, were

in mortuo manu, i. e. could never revert to the lords who gave them. This inconvenience gave rise to the statutes against gifts in mortmaine, which prohibited donations to these religious houses : and Lord Coke tells us, that several lords, at their creation, had a clause in their grant, that the donor might give or sell his land to whom he would, (exceptis viris religiosis et Judxis) excepting monks and Jews. Henry VIII. having appointed visitors to enquire into the lives of the monks and nuns, which were found in some places very disorderly : the abbots, perceiving their dissolution unavoidable, were induced to resign their houses to the king, who by that means became invested with the abbey lands : these were afterwards granted to different persons, whose descendants enjoy them at this day : they were then

valued at ––2,853,000 per annum. Though the suppression of religious houses, even considered in a political light only, was a great national benefit, it must be owned, that, at the time they flourished, they were not entirely useless. Abbeys or monasteries were then the repositories as well as the semi- naries of learning; many valuable books and national records, as well as private evidences, have been preserved in their libraries; the only places wherein they could have been safely lodged in turbulent times. See MONASTERY.

ABBEY-HOLM, a town in Cumberland, on the Waver, so called from an abbey built in it by David I., king of Scots. Abbey-holm stands on an arm of the Irish Sea, near Solway Firth, 309 miles from London, and 16 S. W. from Carlisle. t contains four townships, i. e. the Abbey, East Waver, Low Waver, and St. Cuthberts. The ab- bots of Holm Cultram, (the ancient name of this foundation) built a castle about 5 miles from the sea, as a depository for their books and papers in the border wars : considerable ruins of which remain.

ABBEY-LUBBER, n. s. See LUBBER. A slothful loiterer in a religious house, under pre- tence of retirement and authority.

This is no father Dominic; no huge overgrown abbey-lubber ; this is but a diminutive sucking friar.

Vryd. Sp. Fr.

ABBIATI, (F.) an Italian historical painter of eminence, who was born in 1640, and died in 1715. He studied under Nouvolone.

ABBOT (Charles), from 1802 till 1817 speaker of the British house of commons ; born 1755, studied at Westminster. He was the son of Dr. Abbot, minister of All Saints' church, at Col- chester. Impelled by the desire of distinction, lie devoted himself to the study of the law, though possessed of a considerable fortune. His object, however, was not professional reputation, though he had an extensive practice in the court of chancery. In 1790 he entered the house of commons. He was successively first secretary of state in Ireland, and lord commissioner of the treasury ; was made privy counsellor, and in) 802 speaker of the house of commons. In 1817 he resigned his office of speaker, on ac- count of weakness in his eyes, and entered the liouse of lords, having been created viscount Colchester. He died May 8, 1829.

ABBOT, or ABBAT, and ARCHIMANDRITE.

were titles at first indifferently assumed by the governors of the primitive monasteries. They were really distinguished from the clergy ; though frequently confounded with them, because a degree above laymen. In those early days, the abbots were subject to the bishops and the ordi- nary pastors. Their monasteries being remote from cities, built in the farthest solitudes, they had no share in ecclesiastical affairs. They went on Sundays to the parish church with the rest of the people ; or, if they were too remote, a priest was sent them to administer the sacraments; till at length they were allowed to have priests of their own. The abbot or archimandrite him- self was usually the priest : but his function ex- tended no farther than to the spiritual assistance of his monastery ; and he remained still in obedi- ence to the bishop. There being among the abbots several persons of learning, they made a vigorous opposition to the rising heresies of those times ; which first occasioned the bishops to call them out of their deserts, and fix them about the suburbs of cities, and at length in the cities them- selves : from which aera their degeneracy is to be dated. The abbots, now, soon wore off their former plainness and simplicity, and began to be looked on as prelates. They aspired at being independent of the bishops; and became so in- supportable, that some severe laws were made against them at the council of Chalcedon ; not- withstanding this, in time many of them carried the point of independency, and got the appella- tion of lord, with other badges of the episcopate, particularly the mitre. Hence arose a new species of distinction between the abbots. Those were termed mitred abbots, who were privileged to wear the mitre, and exercised episcopal au- thority within their respective precincts, being exempted from the jurisdiction of the bishop. Others were termed crosiered abbots, from their bearing the crosier or pastoral staff. Others were styled ecumenical or universal abbots, in imitation of the patriarch of Constantinople : while others were termed cardinal abbots, from their superiority over all other abbots. Among us, the mitred abbots were lords of parliament ; and called abbots sovereign, and abbots general. And as there were lords abbots, so there were also lords priors, who had exempt jurisdiction, and were likewise lords of parliament. Some reckon 26 of these lords abbots and priors that sat in par- liament. Sir EDWARD COKE says, that there were 27 parliamentary abbots, and two priors. In the parliament, 20 Rich. II. there were but 25 abbots and two priors ; but in the summons to parliament, anno 4, Ed. III. more are named. At present, in the Roman catholic countries, the principal distinctions observed between abbots are those of regular and commendatory. The former take the vow and wear the habit of their order; whereas the latter are seculars, though they are obliged by their bulls to take orders when of proper age. Anciently the ceremony

of creating an abbot consisted in clothing him with the habit, called cuculus, or cowl; putting the pastoral staff into his hand, and the shoes called //< dales on his feet ; but at present it is only a simple benediction, improperly called, by some, consecration.

ABB

ABBOT, (George,) archbishop of Canterbury ⁂was born 29th Oct. 1562, atGuildford in Surrey. He studied at Oxford, was chosen principal of University College in 1597, installed dean of Winchester in 1599, and thrice elected vice-chan- cellor of the University of Oxford, in 1600, 1603, and 1605. The translation of the Bible, now in use, bemg begun in 1604, by order of K. James, dean Abbot was one of the eight divines to whom the New Testament was committed. In 1608, he went to Scotland, to assist in bringing about an union between the kirk of Scotland and the church of England ⁂ a business which he conducted with so much moderation, as well as address, that the origin of all his after pre- ferment may be traced to it. In December, 1609, he was consecrated bishop of Litch- field and Coventry; in January, 1610, bi- shop of London; and on the 2d November following, appointed to the archiepiscopal see. His enemies have ascribed this rapid accumula- tion of honours less to his merits, than to the flattering compliments he paid the king; by equalling him with several of the wisest and best monarchs of antiquity. In 1613, however, he opposed that favourite object of the king's, the divorce between lady Frances Howard, and Robert, earl of Essex; and in 1618, the royal declaration permitting Sunday sports, which he prohibited being read in the church. When his health began to decline, he went to Hampshire for recreation, and being invited to a hunting match by Lord Zouch, he had the misfortune to kill the game-keeper by an arrow, which he shot at one of the deer from a cross bow. This ac- cident affected the archbishop so much, that, be- sides settling an annuity of 201. on the widow, he kept a monthly fast on Tuesday, the day when the misfortune happened, all his life afterwards. His enemies endeavouring, on this account, to lessen him in the king's favour, James smartly observed, that, " an angel might have miscarried in this sort." Ten commissioners were appoint- ed to inquire into the matter, whose report en- tirely exculpated the archbishop from crime, but it was thought proper that a dispensation of par- don and restoration should pass the great seal. After this he seldom assisted at the council, but attended it during the king's last illness very con- stantly. And, although troubled with the gout, he performed the ceremony of crowning king Charles I. He was never, however, greatly in this monarch's favour, and the duke of Bucking- ham and Laud being his enemies, he was sus- pended from all his

functions as primate, upon his refusing to license a sermon of Dr. Sibthorpe's, justifying a loan which the king had demanded. At the meeting of parliament he was restored, and died at Croydon, the 5th of August, 1633, aged 71. Archbishop Abbot was a man of great moderation, and wished that the clergy should attract esteem, by the purity of their manners, rather than by the dignity of their function. He partook of the stern Calvinism that so largely pervaded the .minds of most of the protestant reformers; but was more remarkable in early life than afterwards for his high-churchmanship. Being, at the former period, asked ' Whether a protestant prince night assist the subjects of u

neighbouring state in resisting tyranny and op- pression?' he answered ••• 'No; for even tyranny was God's authority.' In latter life, he manfully opposed those extreme measures of Laud and his misguided sovereign, which brought the lat- ter to the block. Dr. Southey, in his Book of the Church, speaks of him as " inclining to the puritans ;" and as bringing the court of High Commission into disgrace by his great severity. We cannot reconcile these charges. Lord Cla- rendon, also, in the evident spirit of party, thtows out some severe reflections against him, but Dr. Wellwood has done justice to his merits, in his Memoirs. He endowed a hospital at Guildford (where he was buried) with an in- come of ••300 a year. He wrote various tracts of temporary interest, and " Six Latin Lectures on Divinity, at Oxford," 1598, 4to. ; " Expo- sition of the prophet Jonah," 4to. 1600; "A Brief Description of the whole World," 12mo. 1634; " Treaties on the Perpetual Visibility and Succession of the True Church," 4to. 1 624 ; and a " History of the Massacre in the Valteliue," inserted in Fox's Book of Martyrs.

ABBOT (Robert), Bishop of Salisbury, elder brother to the archbishop, was born at Guildford, in 1560, studied at Oxford, took his degree of A. M. in 1582, and became a celebrated preacher. Upon his first sermon at Worcester, he was chosen lecturer in that city, soon after rector of All-saints; and John Stanhope, Esq. happening to hear him preach, immediately presented him to the rich living of Bingham, in Nottinghamshire. In 1597, he took the degree of D. D., and was appointed soon after, chaplain in ordinary to king James ; who had such an opinion of him, that he ordered hts book, De AntichristoAo be print- ed along with his own Commentary upon part of the Apocalypse. In 1609 he was elected master of Baliol College, a trust which he discharged with the utmost care. In 1615, he was appoint-

ed to the see of Salisbury, in which he exercised primitive diligence, visiting his diocese person- ally, and preaching weekly. He died of the stone, on the 2d of March, 1618, being one of the five bishops which Salisbury had in six years. Dr. Fuller, speaking of the two brothers, says••• " that George was the more plausible preacher, Robert the greatest scholar ; George the abler statesman ; Robert the deeper divine : gravity did frown in George, and smile in Robert." He published several pieces ; he also left behind him sundry manuscripts, which Doctor Corbet, his son-in-law, made a present of to the Bodleian library.

ABBOTS-BROMLEY, or FACET'S BROMLEY, a town in the hundred of South Pirchil, Stafford- shire, 6 miles E. from Stafford, and 129 N. W. from London. It has a weekly market on Tues- day, and three annual fairs for horses and catlle. On the dissolution of the monasteries it was given to Lord Paget, whence its modern name, which it bears in the county map, though it still retains its old names with regard to the fairs, and in the king's books.

ABBOTSBURY, a market-town in Dorset- shire, so named from the abbey near it, founded as some say, by a steward of Canute the Great, others, by a Norman lady, about 1026 ; to which

Edward the Confessor, and William ^. were both benefactors. It has a market on Thursday, a fair on the tenth of July, and lies eight miles S. W. of Dorchester, and 127 W. by S. from London.

ABBOTS-CASTLE, or APEWOOD CASTLE, an old fortification in Staffordshire, seven miles from Wolverhampton, on the north side of the road from Shrewsbury to London, situated on a lofty round promontory, and a steep ridge of hills; which extend a mile in length, and are supposed to have been one continued fortification of the ancient Britons.

ABBOTSFORD, a most romantic and pic- turesque estate, on the banks of the Tweed, about an hour's ride from Selkirk, of recent cele- brity, but given henceforth to everlasting fame, both as the creation and the residence of the greatest writer of his age, and one of the most considerable in point of genius among all the distinguished men of Scotland. Abbotsford and Sir Walter Scott are associated for ever. This beautiful ' romance in stone and lime,' as it has been quaintly denominated, will exhibit him to future generations in the most striking peculiarities of his mind and character. It will be visited by many a pilgrim of nature and poetry. It will become, nay, it has become already, the sanctuary and the shrine of enthu- siastic

adoration. It may be truly affirmed that no man, by the exercise of his mental powers alone, in the quiet pursuit of literature and lite- rary eminence, ever awakened so deep, so strik- ing, so universal an interest, as well to himself as to his works, as the departed laird of Abbots- ford ; an interest which is so far from diminu- tion, that its sphere is perpetually extending, so that it may be truly affirmed, his name is gone forth to the ends of the earth.

Sir Walter became first generally known by what has been with goreat propriety described as an attempt to transfer the refinements of modern poetry to the matter and the manner of the an- cient metncal romance. Enamoured of the lofty visions of Chivalry, and partial to the strains in which they were formerly embodied, the author of ‘ The Lay of the Last Minstrel’ employed all the resources of his genius in endeavouring to recal them to the favor and admiration of the public, and in adapting to the taste of modern readers a species of poetry which was once the delight of the courtly, but which had long since ceased to gladden any other eyes than those of the scholar and the antiquary. In this difficult undertaking, if he did not succeed to the full satisfaction of the critics, he secured the favor of the whole reading population. His next great work, which made its appearance so soon after the first, established his fame in the species of composition to which he had at that time dedi- cated his genius, and which may fairly be consi- dered as original ; this was ‘ Marmion.’ Then came, in all the fascinations of unrivalled beauty, < The Lady of the Lake.' The Edinburgh Re- view, in noticing this most finished of Mr. Scott's productions, justly observed 'that, though living in an age unusually prolific of original poetry, he had manifestly outstripped all his competitors

race of uopularity, and that he stood even melted him into tenderness, with regard to

a eight which no other writer had diction and imagery, too it is quite obvious that

aUaineH the memory of any one then alive.’ Sir Walter has not aimed at writing ma pure, or

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of ‘The Lay’ had been disposed of in anxious only to strike, and to be

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this country and that the demand for ‘ Marmion ‘ universally understood ; and for this purpose to

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nore considerable. This was in the year 1810. expressions of the most popular authors, and to

three ereat poems, intended to work out have interwoven them in splendid confusion with

lt b his own nervous diction and irregular versification.

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the same principles and the same results by his own nervous dictK

similar means, though sufficiently distinguished There is nothing in Sir VV alter Scott of the severe from each other led to a critical investigation and majestic style of Milton, orof the terse and fine of Mr. Scott’s peculiar and extraordinary merit, composition of Pope, or of the elaborate elegance and to an analysis of his poetical character. It is evident that the charm of Sir Walter Scott’s poetry is not in the story, or in a judicious and dextrous management of his materials, but in the inspira- tions of genius, which are every where breathed through his not very well compacted narrations ; in the variety and brilliancy, rather than in the exquisite finish in its images and descriptions ; and in its touching lightly on many passions, without raising any so high as to transcend the comprehension of ordinary mortals, or dwelling on it so long as to exhaust their patience. Con- fident in the force and originality of his own

and melody of Campbell, or even of the flowing and redundant diction of Southey. But there is a medley of bright images and glowing words set carelessly and loosely together ; a diction tinged successively with the careless richness of Shakspeare, the harshness and antique simplicity of the old romances, the homeliness of vulgar ballads and anecdotes, and the sentimental glitter of the most modern poetry. Passing from the borders of the ludicrous to those of the sublime ; alternately minute and energetic : sometimes artificial, and frequently negligent ; but always full of spirit and vivacity, abounding in images

genius, he does not seem afraid to avail himself that are striking, at

first sight, to minds of every

of common-places both of diction and sentiment, ××× ”” ××× -1 ”””” ××× -××× ×× ×××;××××××××

whenever they appeared to be beautiful or impres- sive. Using these however with the skill and spirit of an in ventor,he has made use of thatgreat treasury of characters, images, and expressions, which had been accumulated by the most celebrated of his

contexture; and never expressing a sentiment which it can cost the most ordinary reader any exertion to comprehend.

Such seem to be the leading qualities that contribute to Sir Walter Scott’s popularity as a. poet, and we may safely affirm that, where these

predecessors ; at the same time that the rapidity are wanting, poetry is necessarily divested of of his transitions, the novelty of hv? combf- much of its great aim ××× to please, to please the

nations, and the spirit and variety of his own thoughts and inventions, show plainly that he was a borrower from any thing but poverty, and took only what he could have given, if he had been born in an earlier generation , The great secret of his popularity, however, and the leading characteristics of his poetry, appear to consist

greatest number and for ever. But as some of the qualities we have enumerated, as peculiarly characteristic of Sir W. Scott, are obviously of a kind to diminish his merit, in the eyes of some fas- tidious judges, it is but fair to complete this view of his peculiarities, by a hasty notice of such of them as entitle him to unqualified admiration. And

evidently in this, that he has made more use of here it is impossible not to be struck with that

common topics and expressions than any ori- ginal poet of later times ; and at the same time displayed more genius and originality than any recent author, who has worked on the same materials. In the choice of his subjects, for example, he does not attempt to interest merely by fine observation or pathetic sentiment, but takes the assistance of a story, and enlists

vivifying spirit of strength and animation which pervades all the inequalities of his composition, and keeps constantly in the mind of the reader the impression of great power, spirit, and intre- pidity.

There is nothing cold, creeping, or feeble, in all Sir Walter Scott's poetry : no laborious littleness, or pulling classical affecta- tion. Allied to this inherent vigor and animation,

the reader's curiosity among his motives, for at- and in a great degree derived from it, is that air of

tention. Thus his characters are all selected from facility and freedom which adds so peculiar a

the most common dramatis persona of poetry ••• grace to most of Sir Walter Scott's compositions,

kings, warriors, knights, outlaws, nuns, minstrels, There is certainly no living poet whose works secluded damsels, wizards, and true lovers. He

never ventures to carry us into the cottage of the peasant, like Crabbe or Cowper ; nor into the bosom of domestic privacy, like Campbell ; nor among creatures of the imagination, like Southey or Darwin. In the management of the passions, again, Sir Walter Scott appears to us to have pursued the same popular and comparatively easy course. He has raised all the most familiar and poetical emotions, by the most obvious aggravations, and in the most compendious and judicious way. He has dazzled the reader with the splendour, and even warmed him with the transient heat of various affections ; but he has no where fairly kindled him with ent -"siasm, or

seem to come from him with so much ease, or who so seldom appears to labour, even in the most burdensome parts of his performance. It is owing partly to these qualities, and partly to the great variety of his style, that Sir Walter Scott is much less frequently tedious than any other bulky poet with whom we are acquainted. His store of imagery is so copious that he never dwells upon one long enough to produce weariness in the reader ; and, even when he deals in borrowed or in tawdry wares, the rapidity of his transitions, and the transient glance with which he is satisfied as to each, leave the cretic no time to be offended, and hurry him forward along with the enchanted multitude.

A B B O T S F O R D.

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These we think are the general characteristics of Sir Walter Scott's

poetry. Among his main peculiarities, we might notice his singular talent for description, and especially for the description of scenes abounding in motion or action of any kind. In this department, indeed, we conceive him to be almost without a rival, either among modern or ancient poets ; and the character and process of his descriptions are as extraordinary as their effects are astonishing.

Another very striking peculiarity of Sir Walter Scott's poetry is the air of freedom and nature which he has contrived to impart to most of his distinguished characters, and with which no poet more modern than Shakspeare has ventured to represent personages of such dignity. We do not allude here merely to the genuine familiarity and homeliness of many of his scenes and dialogues, but to that air of gaiety and playfulness in which persons of high rank seem from time immemorial to have thought it necessary to array, not their courtesy only, but their generosity and their hos- tility. This tone of good society Sir Walter has shed over his higher characters with great grace and effect ; and has in this way not only made his representations much more faithful and true to nature, but has very agreeably relieved the monotony of that tragic solemnity which or- dinary writers appear to think indispensable to the dignity of poetical heroes and heroines.

The Lady of the Lake was probably the last of Sir Walter Scott's poems that was worthy of his genius and unparalleled reputation. It is de- scribed, and we think justly, as combining more attractions than either the Lay or Marmion, and as being a far more regular and finished work. The vision of Don Roderick ••• Rokeby, and the Lord of the Isles ••• added nothing to Sir Walter Scott's reputation ; they exhibit in succession fainter and fainter manifestations of the author's talents, and the world felt little regret when his muse ceased her biennial announcement of an increase in her very prolific family. Yet any one of the poems we have referred to would have set up an ordinary poet ; nay, it would have placed him very nearly at the head of his brightest and most successful contemporaries; and, when taken together as the rapid creation of a single mind, they afford an astonishing illustration of its power. Of the four, though Rokeby was the last, and indicated a lamentable falling off, a critic truly remarked, ' after all the hyperbolical praises and hypercritical censures which have been lavished on Mr. Scott's talents, that mind must be indeed of extraordinary capacity which could in the course of about eight years produce four such poems as the Lay of the Minstrel, Marmion, The Lady of the Lake, and Rokeby.' The periodical minstrel who paid his regular visits and charmed all ears and all hearts, from John a Groat's house to the Land's end, at length suddenly disappeared.

One morn I missed him on the custom ‘d hill ;

Along the heath and near his favorite tree ;

Another rame, nor yet beside the rill,

Nor up the lawn, nor at the wood was he.

The harp of the north was silent ; and men wondered what had become of the mitrhty ma- gician who had so long entranced them with his melody. Those who were intimately acquainted

with the bard well knew the irrepressible acti- vity of his spirit, and that he could not repose in voluptuous indolence amidst the fragrant in- cense of the fame he had acquired ††† that it was impossible for his mirrd to relax its labor, which was in truth its highest enjoyment ; and there- fore they felt assured that, having renounced the lighter pursuits of literature, he was bending his power to the achievement of some noble per- formance that should rank his name among the loftiest of the sons of immortality. For many years this continued to be the general impression. In the mean time, the vacuum occasioned by Sir Walter’s retirement was mysteriously filled up by a writer of novels and romances, who seemed destined in prose to outstrip all the poets of the age, ††† whose creations only wanted rhythm and the appropriate forms of versification to surpass the Southeys and the Scotts in their own particular walk of excellence, while he threw into shade and forgetful ness the class of authors whose province he had invaded with a success which made him at once the admiration and the envy of the world. The buzz went round ††† Who is he ? A Scotsman certainly ††† but, beyond this, curiosity was utterly at fault ; the s††cret was so well kept that the author of ‘ the Waverly novels,’ as this most rich and marvellous series of works has since been denominated, was only talked of as ‘ the Great Unknown.’ Some indeed imagined that performanoes of such transcendant merit, following each other in breathless succes- sion, so that one was scarcely read before another was in circulation, must have been the joint production of two or three kindred minds. It seemed almost physically impossible that they could have been the labor of one. Yet this has since been proved to be the case ††† and that one, to the delight and pride of his admirers, is Sir Walter Scott.

The remarks which we have ventured to offer on the peculiarities of his poetry apply gene- rally to his novels, only that in these he takes a wider range, and in addition developes other powers altogether so extraordinary in their com- bination that Sir Walter Scoot will never

have a rival in his own times; and it is questionable whether posterity will ever produce in all re- spects his equal. Speaking of the wonderful success of Waverly, the review before quoted observes ••• ‘ the secret of this success, we take it, is merely that the author is a person of genius, and that he has, notwithstanding, had virtue enough to be true to nature throughout, and to content himself, even in the marvellous parts of his story, with copying from actual existences rather than from the phantasms of his own imagination. The charm which this communicates to all works that deal in the representation of human actions and characters is more readily felt than understood, and operates with unfailing efficacy even upon those who have no acquaintance with the originals from which the picture has been borrowed. There is a consistency in na- ture and truth, the want of which may always be detected in the happiest combinations of fancy, and the consciousness of their support gives a confidence and assurance to the artist which en- courages him occasionally to risk a strength of coloring, and a boldness of drawing, upon which

he would scarcely have ventured in a sketch that was purely ideal.’ The article concludes with something like an intimation that the un- known was at least suspected.

‘ There has been much speculation, says the critic, at least in this quarter of the island, about the author of this singular performance, and certainly it is not easy to conjecture why it is still anonymous. Judging by internal evidence, to which alone we pretend to have access, we should not scruple to ascribe it to the highest of those authors to whom it has been assigned by the sagacious conjectures of the public ; and this at least we will venture to say, that, if it be indeed the work of an author hitherto unknown, Mr. Scott will do well to look to his laurels, and to rouse himself for a sturdier competitor than any he has yet had to encounter.’

Guy Mannering and The Antiquary followed, and sustained the high reputation of the author of Waverly, then known only under that envia- ble character ; then were announced The Tales of my Landlord ; then Rob Roy, which was im- mediately succeeded by the splendid and un- rivalled performance, Ivanhoe; and then a multitude to which additions are made during tho progress of each succeeding year ; so that to enumerate, much less to notice them, would extend this article beyond – all reasonable limits, and answer no good purpose, as they have been read in both hemispheres, and in every spot where the English tongue is written and under- stood. From this useless task we

shall therefore refrain, and content ourselves with a discriminat- ing view of the talents of Sir Walter in this new and delightful sphere of his labors and his fame. The first thing that cannot fail to astonish every body is the wonderful fertility of the writer, and the unexampled continuousness of his exertions. In the year 1822 the Edinburgh Review, in its article on the Fortunes of Nigel, takes occasion to say, ‘ our last particular notice we think was of Ivanhoe, in the end of 1819 ; and, in the two years that have since elapsed, we have had the Monastery, the Abbot, Kenilworth, the Pirates, and Nigel ; one, two, three, four, five, large original works from the same fertile and inex- haustible pen. It is a strange manufacture ! and, though depending entirely on invention and original fancy, really seems to proceed with all the steadiness and regularity of a thing that was kept in operation by industry and applica- tion alone ; our whole fraternity, for example, with all the works of all other writers to supply them with materials, are not half so sure of bringing out their two volumes in the year as this one author, with nothing but his own genius to depend on, is of bringing out his six or seven.’

The same authority in various other articles furnishes us with the very best exhibitions of the characteristic features of that genius whose fertility and perseverence it pronounces to be so wonderful. ‘ In the period of little more than five years, the author has founded a new school of invention, and established and en- dowed it with nearly thirty volumes (this was in 1819) of the most animated and original com- position that have enriched English literature for a century,❑❑❑ volumes that have cast sensibly into the shade all contemporary prose, and even

all recent poetry (except perhaps that inspired by the genius or the demon of Byron) ; and by their force of coloring and depth of feeling, by their variety, vivacity, magical facility, and living presentiment of character, have rendered conceivable to this later age the miracles of the mighty dramatist.’ The critic had before al- luded to the thirty-eight plays of Shakspeare, written in the brief space of his early manhood ; and he goes on to observe, ‘ Shakspeare, to be sure, is more purely original ; but it should not be forgotten that in his time there was much less to borrow, and that he too has drawn freely and largely from the sources that were open to him ❑❑❑ at least for his Fable, and graver sentiments ; for his wit and humor, as well as his poetry, are always his own.’

We subjoin the following, which is more comprehensive, and at the same time more de- finite, than any thing we have met with on the subject of this author’s peculiar merits as a novelist. ‘ The author,

whoever he is, has a truly graphic and creative power in the invention and delineation of characters, which he sketches with an ease, and colors with a bril liancy, and scatters about with a profusion which reminds us of Shakspeare himself; yet, with all this force and felicity in the representa- tion of living agents, he has the eye of a poet for all the striking aspects of nature; and usually contrives, both in his scenery and in the groups with which it is enlivened, to combine the picturesque with the natural with a grace that has rarely been attained by artists so co- pious and rapid. His narrative in this way is kept constantly full of life, variety, and color ; and is so interspersed with glowing descriptions, and lively allusions, and flying traits of sagacity and pathos, as not only to keep our attention continually awake, but to afford a pleasing ex- ercise to most of our other faculties. The prevailing tone is very gay and pleasant ; but the author's most remarkable, and perhaps his most delightful talent, is that of representing kindness of heart in unison with lightness of spirits and great simplicity of character, and of blending the expression of warm and generous and exalted affections with scenes and persons that are in themselves both lowly, and ridiculous. It is very honorable, we think, both to the author and to the readers among whom he is so extremely popular, that the great interest of his pieces is for the greater part a moral in- terest, that the concern we take in his characters is less on account of their adventures than of their amiableness, and that the great charm of his works is derived from the kindness of heart, the capacity of generous emotions, and the lights of native taste, which he ascribes so lavishly, and at the same time with such an air of truth and familiarity, even to the humblest of his favorites. With all his relish for the ridiculous, accordingly, there is no tone of misanthropy or even of sarcasm in his representations ; but, on the contrary, a great indulgence and relenting towards those who are to be the objects of our disapprobation. There is no keen or cold-blooded satire, no bitterness of heart or fierce- ness of resentment, in any part of his writings. His love of ridicule is little else than a lo.ye of

mirth, and savours throughout of the joyous tem- perament in which it appears to have its origin, while the buoyancy of a raised and poetical imagination lifts him continually above the region of mere jollity and good humour, to which a taste, by no means nice and fastidious, .seems constantly in danger of sinking him. He is evidently a person of a very sociable and liberal spirit, with great habits of observation, who has ranged pretty extensively through the varieties

of human life and character, and mingled with them all, not only with intelligent familiarity, but with a free and natural sym- pathy for all the diversity of their tastes, plea- sures, and pursuits, ??? one who has kept his heart as well as his eyes open to all that has offered itself to engage them, and learned indulgence for human faults and follies, not only from find- ing kindred faults in their most intolerant cen- sors, but also for the sake of the virtues by which they are often redeemed, and the sufferings by which they have still oftener been taught. The temper of his writings, in short, is precisely the reverse of those of our Laureates and Lakers, who, being themselves the most whim- sical of mortals, make it a conscience to loathe and detest all with whom they happen to dis- agree, and labor to promote mutual animosity, and all manner of uncharitableness, among man- kind, by referring every supposed error of taste, or peculiarity of opinion, to some hateful corruption of the heart and understanding. With all the in- dulgence, however, which we so justly ascribe to him, we are far from complaining of the writer before us for being too neutral and undecided on the great subjects which are most apt to en- gender excessive zeal and intolerance, and we are almost as far from agreeing with him as to most of these subjects. In politics it is suffi- ciently manifest that he is a decided tory ; and we are afraid something of a latitudinarian both in morals and religion. It is rather remarkable, how- ever, that with propensities decidedly aristo- cratical, the ingenious author has succeeded by far the best in the representation of rustic and homely characters ; and not in the ludicrous or contemptuous representation of them, but by making them at once more natural and more in- teresting than they had ever been made before in any work of fiction ; by showing them, not as clowns to be laughed at, or wretches to be pitied and despised, but as human creatures, with as many pleasures, and fewer cares than their superiors, with affections not only as strong, but often as delicate as those whose lan- guage is smoother, and with a vein of humor, a force of sagacity, and very frequently an ele- vation of fancy as high and as natural as can be met with among more cultivated beings.

‘ Next to these we think he has found his hap- piest subjects, or at least displayed his greatest powers, in the delineation of the grand and gloomy aspects of nature, and of the dark and fierce passions of the heart. The natural gaiety of his temper does not indeed allow him to dwell long on such themes ; but the sketches he occasionally introduces are executed with ad- mirable force and spirit, and gave a strong im- pression both of the vigor of his imagination and the variety of his talents. It is only in the

third rank that we would place his pictures of chivalry and chivalrous

character, his traits of gallantry, nobleness, and honor, and that be-witching assemblage of gay and gentle manners, with generosity, candor, and courage, which has long been familiar enough to readers and writers of novels, but has never before been represented with such an air of truth and so much ease and happiness of execution.'

It will be seen that the Edinburgh Reviewers, on more than one occasion, insinuated very strong suspicions of their knowledge of the author, from the internal evidence furnished by his works ; they associated the name of Scott, both in their notice of Waverly and in that of Ivan- hoe, in such a way with the productions under review, that no reader could possibly misunder- stand what were their convictions on the subject. Still public curiosity was kept alive by positive assurances that Mr. Scott had repeatedly dis- claimed the henor so earnestly and officiously thrust upon him. It was said that there was a kind of secret manufactory established in the north for getting up an annual story for the literary market under the presidency of a master mind ; yet the secret was still profoundly kept, and conjecture was almost wearied, when disastrous events occurred in the commercial, and especially in the literary 'commercial world, that tore off the veil that had so long concealed the writer from the gaze of the public. The intelligence ran and rung from ' side to side ' that it was no other than Sir Walter Scott : at the very moment when the accumulations of his life, and which placed him in a situation of almost noble inde- pendence, were reduced to nothing, he became the object of universal sympathy, wonder, and admiration.

The story of Abbotslord, as it existed in the lifetime of its gifted proprietor, will probably be read with a deeper interest than that of Abbotsford in subsequent years, bereft of its brightest ornament : and this consideration has induced us to preserve the fol owing description of this interesting seat, written by one of the poet's transatlantic admirers, in the very same tense that it originally appeared, whereby per- haps a sacrifice of its spirit and feeling will also be avoided, and an additional degree of interest excited.

' Some fifteen or sixteen years ago, as my friend informed me, there was not a more unlovely spot,ic this part of the world, than that on which Abbots- ford now exhibits all its quaint architecture and beautiful accompaniment of garden andwoodland. A mean farm house stood on part of the site of the present edifice ; a ' kale yard ' bloomed where the stately embattled court yard now spreads it- self ; and for many thousand acres of flourishing plantations, half of which have all the appearance of being twice as old as they really are, there was but a single long straggling stripe of unthriv- ing firs. The river, however,

must needs remain in statu quo ; and I will not believe that any place so near those clearest and sweetest of all waters could ever have been quite destitute of charms. The scene, however, was no doubt wild enough, ††† a naked moor ††† a few little turnip fields painfully reclaimed from it ††† a Scotch cottage ††† a Scotch farm yard, and some Scotch firs. It is

difficult to imagine a more complete contrast to the Abbotsfordof 1825.

‘ Sir W. is, as you have no doubt heard, a most zealous agriculturist, and arboriculturist especial- ly ; and he is allowed to have done things with this estate, since it came into his possession, which would have been reckoned wonders, even if they had occupied the whole of a clever and skilful man’s attention, during more years than have elapsed since he began to write himself Laird of Abbotsford. He has some excellent arable land on the banks of the Tweed, and to- wards the little town of Melrose, which lies some three miles from the mansion ; but the bulk of the property is hilly country, with deep narrow dells interlacing it. Of this he has planted fully one half, and it is admitted on all hands that his rising forest has been laid out, arranged, and managed with consummate taste, care, and suc- cess††† so much so, that the general appearance of Tweedside, for some miles, is already quite altered and improved by the graceful ranges of his woodland ; and that the produce of these plantations must, in the course of twenty or thirty years more, add immensely to the yearly rental of the estate. In the mean time, the shel- ter afforded by the woods to the sheep walks re- served amidst them has prodigiously improved the pasturage, and half the surface yields already double the rent the whole was ever thought capable of affording, while in the old unprotected condition. All through those woods there are broad riding-ways, kept in capital order, and con- ducted in such excellent taste that we might wan- der for weeks amidst their windings without ex- hausting the beauties of the Poet’s lounge. There are scores of charming waterfalls in the ravines, and near every one of them you find benches or bowers at the most picturesque points of view. There are two or three small mountain lakes in- cluded in the domain ††† one of them not so small neither, being, I should suppose, nearly a mile in circumference ††† and of these also every advan- take has been taken. On the whole, it is already a very beautiful scene ; and, when the trees have gained their

proper dignity of elevation, it must be a very grand one. Amidst these woods, Mr. * tells me, the proprietor, when at home, usually spends many hours daily, either on his pony, or on foot, with axe and pruning knife in hand. Here is his study; he, it seems, like Jaques, is never at a loss to find ‘ books in trees.’

‘ The Muse nae poet ever fand her Till by hiinscl’ he learned to wander Adown some trotting burn’s meander, An’ no think lane.’

OI

As Burns says ; and one of his burns, by the by, is Huntley Bum, where Thomas of Erceldoune met the queen of Faery. The rencontre, according to the old Rhymer himself, occurred beside ‘The Eildon Tree.’ That landmark has long since disappeared, but most of Sir Walter’s walks have the Eildon Hills, in some one or other of their innumerable aspects, for background. But I am keeping you too long away from ‘The Rooftree of Monkbarns,’ which is situated on the brink of the last of a series of irregular hills, descending from the elevation of the Eidons stepwise, to the Tweed. On all sides, except towards the river, the house connects itself with

the gardens (according to the old fashion, now generally condemned) ; so that there is no want of air and space about the habitation. The building is such a one, I dare say, as nobody but he would ever have dreamed of erecting ; or, if he had, escaped being quizzed for his pains. Yet it is eminently imposing in its general effect ; and, in most of the details, not only full of his- torical interest, but of beauty also. It is no doubt a thing of shreds and patches, but they have been combined by a masterly hand ; and if there be some whimsicalities, that in an ordinary case might have called up a smile, who is likely now or hereafter to contemplate such a monument of such a man’s peculiar tastes and fancies, without feelings of a far different order ? Borrowing outlines and ornaments from every part of Scot- land, a gateway from Linlithgow, a roof from Roslin, a chimneypiece from Melrose, a postern from the ‘ Heart of Midlothian,’ &c. &c. &c., it is totally unlike any other building in the king- dom, as a whole ; and that hole is, I have said, a beautiful and a noble whole ××× almost enough so to make me suspect that, if Sir Walter had been bred an architect, he might have done a? much in that way as he has, de facto, in the wood- man’s craft, or (which they swear he is less vain of) the novelist’s.

‘ By the principal approach you come very sud- denly on the edifice ××× as the French would say, ‘ Vous tombez sur le chateau ;’ but

this evil, if evil it be, was unavoidable, in consequence of the vicinity of a public road which cuts off the chateau and its plaisance from the main body of park and wood, making it a matter of necessity that what is called, in the improvement men's slang, ' the avenue proper,' should be short. It is but slightly curved, and you find yourself, a very few minutes after turning from the road, at the great gate already mentioned. This is a lofty arch rising out of an embattled wall of consider- able height ; and the jougs, as they are styled, those well known emblems of feudal authority, hang rusty at the side ; this pair being dit on relics from that great citadel of the old Doug- lasses, Thrieve Castle, in Galloway. On enter- ing, you find yourself within an enclosure of per- haps half an acre or better, two sides thereof being protected by the high wall above mentioned, all along which, inside, a trellissed walk extends itself ००० broad, cool, and dark overhead with roses and honeysuckles. The third side,to the east,shows a serene of open arches of Gothic stonework, filled between with a net-work of iron, not visible until you come close to it, and affording therefore de- lightful glimpses of the gardens, which spread up- wardswith many architectural ornaments of turret, porch, urn, vase, and what not, after a fashion that would make the heart of old Price of the Picturesque to leap within him : this screen is a feature of equal novelty and grace, and, if ever the old school of gardening come into vogue again, will find abundance of imitators. It abutts on the eastern extremity of the house, which runs along the whole of the northern side (and a small part of the western) of the great enclo- sure. And, by the way, nothing can be more de- lightful than the whole effect of the said enclosure, m the still and solitary state in which I chanced to see it. There is room for a piece of the most

elaborate turf within it, and rosaries of all man- ner of shapes and sizes generally connect this green pavement with the roof of the trellis walk, a verdant cloister, over which appears the gray wall with its little turrets ; and over that, again, climb oak, elm, birch, and hazel, up a steep bank ००० so steep that the trees, young as they are, give already all the grand effect of a sweeping am- phitheatre of wood. The back ground on that side is wholly forest ; on the east, garden loses itself in forest by degrees ; on the west there is wood on wood also, but with glimpses of the Tweed between ; and in the distance (some half a dozen miles off) a complete sierra, the ridge of the mountain between Tweed and Yarrow, to wit ००० its highest peak being that of Newark hill, at the bottom of which the old castle, where the '

latest Minstrel sang,' still exhibits some noble ruins.

' Not being skilled in the technical tongue of the architects, I beg leave to decline describ- ing the structure of the house, farther than merely to say that it is more than 150 feet long in front, as I paced it ; was built at two different onsets ; has a tall tower at either end, the one not in the least like the other ; presents sundry crowfooted, alias zigzagged, gables to the eye ; a myriad of indentations and parapets and machicolated eaves ; most fantastic waterspouts ; labelled windows, not a few of them of painted glass ; groups of right Elizabethan chimneys ; balconies of divers fashions, greater and lesser ; stones carved with heraldries innumerable let in here and there in the wall ; and a very noble pro- jecting gateway, a fac simile, I am told, of that appertaining to a certain dilapidated royal palace, which long ago seems to have caught in a parti- cular manner the Poet's fancy, as witness the ctanza, ###

Of all the palaces so fair,

Built for the royal dwelling, Above the rest, beyond compare,

Linlithgow is excelling.

From the porchway, which is quite open to the elements in front,and adorned with some enormous petrefied staghorns overhead, you are admitted by a pair of folding doors at orce into the hall, and an imposing coup d'tril the first glimpse of the Poet's interior does present. The lofty windows, only two in number, being wholly covered with coats of arms, the place appears as dark as the twelfth century, on your first entrance from noon- day ; but the delicious coolness of the atmosphere is luxury enough for a minute or two ; and by de- grees your eyes get accustomed to the effect of those ' storied panes,' and you are satisfied that you stand in one of the most picturesque of apartments. The hall is, I should guess, about forty feet long, by twenty in height and breadth. The walls are of richly carved oak, most part of it exceedingly dark, and brought, it seems, from the old palace of Dunfermline : the roof, a se- ries of pointed arches of the same, each beam presenting, in the centre, a shield of arms richly blazoned : of these shields there are sixteen, enough to bear all the quarterings of a perfect pedigree, if the Poet could show them ; but on the material side (at the extremity) there are two or three blanks (of the same sort which made Louis le Grand unhappy) which have been co- vered with sketches of Cloudland, and equipped VOL. I.

with the appropriate motto, ' Nox alia cetat. The shields properly

filled up are distinguished ones ; the descent of Scott and Harden on one side, and Rutherford of that ilk on the other ; all which matters, are they not written in the book of the chronicles of Douglas andNisbet ? There is a doorway at the eastern end, over and round which the baronet has placed another series of escutcheons, which I looked on with at least as much respect : they are the memorials of his im mediate personal connexions, the bearings of his friends and companions. All around the cor- nice of this noble room there runs a continued series of blazoned shields, of another sort still ; at the centre of one end, I saw the bloody heart of Douglas ; and, opposite to that, the royal lion of Scotland, ††† and between the ribs there is an inscription in black letter, which I, after some trials, read, and of which I wish I had had sense enough to take a copy. To the best of my re- collection, the words are not unlike these : ‘ These be the coat armories of the clannis and chief men of name, wha keepit the marchys of Scotlande in the auld tyme of the Kinge. Trewe ware they in their tyme, and in there defense God them defendyt.’ There are from thirty to forty shields thus distinguished ††† Douglas, Soulis, Buccleugh, Maxwell, Johnstoune, Glendoning, Herries, Ru- therford, Kerr, Elliott, Pringle, Home, and all the other heroes, as you may guess, of the border minstrelsy. The floor of this hall is black and white marble,from the Hebrides, wrought lozenge- wise ; and the upper walls are completely hung with arms and armour. Two full suits of splen- did steel occupy niches at the eastern end by themselves ; the one an English suit of Henry the Fifth’s time, the other an Italian, not quite so old. The variety of cuirasses, black and white, plain and sculptured, is endless ; helmets are in equal profusion ; stirrups and spurs, of every fantasy, dangle about and below them ; and there are swords of every order, from the enor- mous two-handed weapon with which the Swiss peasants dared to withstand the spears of the Austrian chivalry, to the claymore of the ‘ Forty- five,’ and the rapier of Dettingen. Indeed, I might come still lower; for, among the other spoils, I saw Polish lances, gathered by the author of Paul’s Letters on the field of Waterloo, and a complete suit of chain mail taken off the corpse of one of Tippoo’s body-guard at Seringapatam. A series of German executioners’ swords was inter alia pointed out to me ; on the blade of one of which I made out the arms of Augsburg, and a legend which may be thus rendered : ††† Dust, when I strike, to dust : From sleepless grave. Sweet Jesu, stoop, a sin-staiued soul to save

I am sorry there is no catalogue of this curious collection. Sir Walter ought to make one him- self ; for my .cicerone informs me there is some particular history attached to almost every piece in it, and known in detail to nobody but himself. ‘ Stepping westward,’ as

Wordsworth says, from this hall, you find yourself in a narrow, low, arched room, which runs quite across the house, having a blazoned window again at either extre- mity, and filled all over with smaller pieces of ar- mour, and weapons, such as swords, firelocks, spears, arrows, darts, daggers, &c. &c. &c. Here are the pieces esteemed most precious by reason

of their histories respectively. I saw, among the rest, Rob Roy's gun, with his initials, R. M. C i e Robert Macgregor Campbell, round the touch-hole : the blunderbuss of Hofer, a present to Sir Walter from his friend Sir Humphry

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ABBOTSFORD.

as

both by Jervas ; and the head of Mary ˆ Scots, in a charger, painted by Amias Canrood the day after the decapitation at Fothermgay, and sent some years ago as a present to Sir Walter from a Prussian nobleman, in whose i mly it had

greai JLVAUUUUˆ, □□i.vi ";□□□B /del> f nlj navaiier mentioned in one of the epistles

Henry worked on the hilt ; the hunting bottle of old ˆcava her mem ˆ ˆ

bonnie King Jamie; Buonapartes pistols (found □□ Ma□□□□□ˆ J□□□ˆ, the First |nd who here

in his carriage at Waterloo, I believe) cum ˆˆ'ordingly, with a most venerable ap-

nndti, alii*. I should have mentioned that stag- appears Jˆ□□□ˆ even JT

horns and bull's horns (the petnfied relics of the jendag ot sUver w ˆ ˆ fe ˆ

old mountain monster, I mean), and so forth, are his girdle . ims . 0 5

□□□ˆˆˆˆˆ□□□SˆlSSr &c, I should have taken it for a likeness of Sir

ways of these armories ; and that in one<.orner □□c., common

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which Cardinal Carstairs did not flinch, and the more terrific iron crown of Wisheart the Martyr, being a sort of barred head-piece, screwed on the victim at the stake, to prevent him from crying aloud in his agony. In short, there can be no doubt that, like Grose of merry memory, the mighty Minstrel

Has a fourth o* auld nick-nackets,

Rusty aim caps and jiiiglin' jackets, Wad baud the Lothians three in tackets, A towmnont' guid.

These relics of other, and for the most part darker, years, are disposed, however with so much grace and elegance, that I doubt if Mr. Hope himself would find any thing to quarrel with in the beautiful apartments which contain them. The smaller of these opens to the drawing room on one side and the dining room on the other, and is fitted up with low divans rather than sofas ; so as to make, I doubt not, a most agreeable sitting room when the apartments are occupied, as for my sins I found them not. In the hall, when the weather is hot, the baronet is accustomed to dine ; and a gallant refectory no question it must make. A ponderous chan- delier of painted glass swings from the roof; and the chimneypiece (the design copied from the stonework of the Abbot's Stall at Melrose) would hold rafters enough for a Christmas fire of the good old time. Were the company suitably attired, a dinner party here would look like a scene in the Mysteries of Udolpho.

' Beyond the smaller, or rather, I should say, the narrower armory, lies the dining parlour proper, however ; and, though there is nothing Udolphoish here, yet I can well believe that, when lighted up and the curtains drawn at night, the place may give no bad notion of the private snuggery of some lofty lord abbot of the time of the Canterbury Tales. The room is a very hand- some one, with a low and very richly carved roof of dark oak again ; a hugh projecting bow win- dow, and the dais elevated more majorum ; the ornaments of the roof, niches for lamps, &c.&c., in short, all the minor details, are, I believe, fac similes after Melrose. The walls are hung in crimson, but almost entirely covered with pic- tures, of which the most remarkable are ††† the parliamentary general, Lord Essex, a full length on horseback ; the Duke of Monmouth, by Lely ; a capital Hogarth, by himself; Prior and Gay,

try's bust.' There is also a very splendid full length of Lucy Waters,

mother of the Duke of Monmouth ; and an oval, capitally painted, of Anne Duchess of Buccleugh, the same who, In pri'de of youth, in beauty's bloom, Had wept o'er Monmouth's bloody tomb.

All the furniture of this room is massy Gothic oak ; and, as I said before, when it is fairly lit up, and plate and glass set forth, it must needs have a richly and luxuriously antique aspect. Be- yond and alongside are narrowish passages,which make one fancy one's self in the penetralia of some dim old monastery ; for roofs and walls and windows (square, round, and oval alike), are sculptured in stone, after the richest relics of Melrose and Roslin Chapel. One of these leads to a charming breakfast room, which looks to the Tweed on one side, and towards Yarrow and Ettricke, famed in song, on the other : a cheerful room fitted up with novels, romances, and poetry, I could perceive, at one end; and the other walls covered thick and thicker with a most valuable and beautiful collection of water-color drawings, chiefly by Turner, and Thompson of Dudding- stone : the designs, in short, for the magnificent work entitled ' Provincial Antiquities of Scot- land.' There is one very grand oil-painting over the chimneypiece, Fastcastle, by Thompson, alias the Wolfs Crag of the Bride of Lammer- moor, one of the most majestic and melancholy sea pieces I ever saw ; and some large black and white drawings of the Vision of Don Roderick, by Sir James Steuart of Allenbank (whose illustra- tion of Marmion and Mazeppa you have seen or heard of), are at one end of the parlour. The room is crammed with queer cabinets and boxes, and in a niche there is a bust of old Henry Mackenzie, by Joseph of Edinburgh. Returning towards the armory, you have, on one side of a most re- ligious looking corridor, a small greenhouse with a fountain playing before it ►►► the very fountain that in days of yore graced the cross of Edin- burgh, and used to flow with claret at the coro- nation of the Stuarts ►►► a pretty design, and a standing monument of the barbarity of modern innovation. From the small armory you pass, as I said before, into the drawing room, a large, lofty, and splendid salon, with antique ebony furniture and crimson silk hangings, cabinets, china, and ihirrors quantum suff., and some por- traits ; among the rest the glorious John Dryden,

A B B O T S F 0 R D.

by Sir Feter Lely, with his gray hairs floating about in a most picturesque style, eyes full of vvildness, presenting the old bard, I take it, in one of those ' tremulous moods' in which we have it on record he appeared when interrupted in the midst of his Alexander's Feast. From this you pass into the largest of all the apart- ments, the library, which. I must say, is really a noble room. It is an oblong of some fifty

feet by thirty, with a projection in the centre, oppo- site the fire-place, terminating in a grand bow window, fitted up with books also, and. in fact, constituted a sort of chapel to the church. The roof is of carved oak again ••• a very rich pattern, I believe chifly a la Roslin, ••• and the book- cases, which are also of richly carved oak, reach high up the walls al-1 round. The collection amounts, in this room, to some fifteen or twenty thousand volumes, arranged according to their subjects ; British history and antiquities filling the whole of the chief wall. English poetry and drama, classics and miscellanies, one end, fo- reign literature, chiefly French and German, the other The cases on the side opposite the fire are wired, and locked, as containing articles very precious and very portable. One consists en- tirely of books and MSS. relating to the insur- rections of 1715 and 1745; and another (within .the recess of the bow window) of treatises de re nia••ica, both of these being (I am told, and can well believe), in their several ways, collections of the rarest curiosity. My cicerone pointed out, in one corner, a magnificent set of Montfaucon, ten volumes folio, bound in the richest manner in scarlet, and stamped with the royal arms, the gift of his present Majesty. There are few living authors of whose works presentation copies are not to be found here. My friend showed me in- scriptions of that sort in, I believe, every Euro- pean dialect extant. The books are all in prime condition, and bindings that would satisfy Mr. Dibdin. The only picture is Sir Walter's eldest son is hussar uniform, and holding his horse, by Allen of Edinburgh, a noble portrait, over the fire place ; and the only bust is that of Shakspeare, from the Avon monument, in a small niche in the centre of the east side. On a rich stand of porphyry, in one corner, reposes a tall silver urn filled with bones from the Pii;eus, and bearing the inscription, ' Given by George Gordon, Lord Byron, to Sir Walter Scott, Bart.' It contained the letter which accompanied the gift till lately : it has disappeared ; no one guesses who took it, but whoever he was, as my guide observed, he must have been a thief for thieving's sake truly, as he durst no more exhibit his autograph than tip himself with a bare bodkin. Sad, infamous tourist indeed ! Although I saw abundance of comfort- able looking desks and arm chairs, yet this room seemed rather too large and fine for work, and I found accordingly, after passing a double pair of doors, that there was a sanctum within and beyond this library. And here you may believe was not to me the least interesting, though by no means the most splendid, part of the suit.

' The lion's own den proper, then, is a room of about five-and-twenty feet square by twenty feet high, containing of what is properly called furni- ture nothing but a small writing table in the centre, a plain arm chair covered with black lea-

ther ❀❀❀ a very comfortable one though, for I trif <(❀❀❀ it ❀❀❀ and a single chair besides, plain symptoms that this is no place for company. On either side of the fire-place there are shelves filled with duodecimos, and books of reference, chiefly, of course, folios ; but except these there are no- books rave the contents of a light gallery which runs round three sides of the room, and is reached by a hanging stair of carved oak in one corner. You have been both at the Elisee Bourbon and Malmaison, and remember the library at one or other of those places, 1 forget which ; this gallery is much in the same style. There are only two portraits, an original of the beautiful and melan- choly head of Claverhouse, and a small full length of Rob Roy. Various little antique cabinets stand round about, each having a bust on it : Stothard's Canterbury Pilgrims are on the man- telpiece ; and in one corner I saw a collection of really useful weapons, those of the forest- craft, to wit ❀❀❀ axes and bills and so forth of every cali- bre. There is only one window pierced in a very thick wall, so that the place is rather som- bre ; the light tracery work of the gallery over- head harmonises with the books well. It is a very comfortable looking room, and very un- like any other I ever was in. I should not forget some Highland claymores, clustered round a target over the Canterbury people, nor a writing box of carved wood, lined with crimson velvet, and furnished with silver plate of right venerable aspect, which looked as if it might have been the implement of old Chaucer himself, but which from the arms on the lid much have belonged to some Italian prince of the days of Leo the Mag- nificent at the farthest.

In one corner of this sanctum there is a little holy of holies, in the shape of a closet, which looks like the oratory of some dame of old ro- mance, and opens into the gardens ; and the tower, which furnishes this below, forms above a private staircase, accessible from the gallery and leading to the upper regions. Thither also I pe- netrated, but I suppose you will take the bed rooms and dressing rooms for granted.

The view to the Tweed from all the principal apartments is beautiful. You look out from among bowers, over a lawn of sweet turf, upon the clearest of all streams, fringed with the wildest of birch woods, and backed with the green hills of Ettricke Forest, The rest you must imagine. Altogether, the place destined to receive so many pilgrimages contains within itself beauties not unworthy of its associations. Few poets ever inhabited such a place ; none, ere now, ever created one. It is the realization of dreams. See SCOTT-

ABBOTS-LANGLEY, a village in Herts, four miles from St. Alban’s (and formerly belonging to the abbey there), famous for being the birth- place of the Pope Adrian IV.

ABBOTT (Charles), lord Tenterden. This learned and amiable judge was born on the 7th of October, 1762, in the ancient city of Canterbury, where he also received the elements of his education at the free grammar school in that place. Having continued at school beyond the usual period of youthfyl studies, he was entered of Corpus Christi College, Oxford, where he evinced the same vigor and perseverence in the

acquisition of knowledge that had induced him to outstay the customary period at Canterbury echool. In the year 1784 he obtained the chancellor's prize for his poem entitled ►► Aerostaticus," and a second prize in 1786 for an essay on "the Use and Abuse of Satire. Having enjoyed one of the foundation scholar- ships, he became a 'fellow and tutor, and, in the discharge of the duties of the latter occupation, formed an acquaintance with the family of Mr. Justice Buller, a circumstance that led him sub- sequently to select and pursue the legal pro- fession, and to which, therefore, he is in some degree indebted for the fame and fortune he ultimately reached, and his country for the benefit of his great and well-remembered services. Having entered the Inner Temple, Mr. Abbot gave himself up to the study of the law with the same intenseness of devotion that characterised his progress both at school and college; and succeeded, ultimately, in acquiring those vast stores of legal information which he afterwards displayed both as counsel and as judge. In 1796 he was called to the bar, and having joined the Oxford circuit, advanced almost immediately into respectable practice, and acquired an early popularity. Before he was elevated to the bench, his practice was unusually extensive ; it is asserted that his fees exceeded ►►10,000 per annum. Mr. Abbot's merit was of an order so conspicuous, that, upon the death of his friend and patron, Sir Francis Buller, he was instantly adopted into the friendship of lord Ellenborough, to whom he was mainly indebted for his pro- motion to a puisne-judgeship, in the Court of Common Pleas, in the Michaelmas term of 1816, upon the decease of Mr. Justice Heath. The following Easter, on the death of Sir Simon Le Blanc, Mr. Abbot was appointed his successor in the Court of King's Bench, and received on the occasion the honor of knighthood. He was then happily and proudly seated at the side of his great patron ; and, upon the retirement of that learned judge, in November, 1818, was himself appointed Lord Chief Justice of the Court of King's Bench. Here he displayed, in a forcible manner, the difference of those qualities that constitute the advocate and the judge : as the former he was always unable to distinguish him- self; in the latter capacity he has seldom been excelled, either in the despatch of

business, or correctness of his rulings. His own pithy and affectionate observation on the character of his departed friend, lord Ellenborough, is with great justice applied to himself, ††† “that the wonder is, not that he was sometimes wrong, but that he was so often right.” On the 30th of April, 1 827, he was raised to the peerage by the title of baron Tenterden, of Hendon, in the county of Middlesex, and during his career as legislator, was not undistinguished. Never having sat in the commons, his political bias was unknown when introduced into the upper house, where, without any tinge of partizanship, he usually appeared upon the ministerial side, or rather was a great respecter of existing authorities. Besides many important bills brought into the house by his lordship, he published ” A Treatise on the

Law relating to Merchant-ships and Seamen,” a work of high authority, and which has passed through several editions. His lordship’s last ap- pearance on the judgment-seat was on Friday, the 26th of October, 1832, being the second day of the trial of the mayor and magistrates of Bristol. On this public occasion, although his faculties seemed as sound and healthy as ever, his frame was obviously weak and incapable of farther effort. Upon returning from the bench, he became alarmingly ill, and after a short illness, expired on the morning of Sunday, November 4th, 1832, in the 70th year of his age. His lordship married the daughter of J. S. Lamotte, Esq., by whom he left issue two sons and two daughters. He is succeeded in his titles and estates by his eldest son, John Henry, a barrister at law.

ABBREVIATE, v. n.ˆ Ital. Abbremare, ABBREVIATION, n. s. (from Lat. brevis, ad. ABBRE’VIATOR, i breve agere, which is

ABBRE’VIATURE. J from tlie Gr. ppa%oo.

Anglo-Saxon, braecan, to break. To make short, to shorten by contraction or cutting off, retain- ing the substance of the original ; to make an epitome, or compendium ; to abridge ; curtail. The derivatives correspond.

ABBREVIATE, or ADJUDICATIONS, in Jscots law, an abstract or abridgment of a decree of adju- dication, which is recorded in a register kept for that purpose.

ABBREVIATIOK, in archaiology, is a short method of expressing words by initials, or other letters. Ancient MSS.,and early-printed Greek books, are frequently identified and classed ac- cording to the mode of

the abbreviations that abound in them. These are sometimes made by putting the first and last, and sometimes the middle letter of a word, tfnder a line; thus 0C, KG, IC,_XC, Y2”,_2HP, IRA, ISHA, HNA, 11HP, MHP, OYNOS, ~ANOS, IAHM, AAA, signify re- spectively, Otoc, God ; Kt/pwe, Lord ; IJJITOVC, Jesus ; XptTog, Christ ; Yw>e, a Son ; 2wr►►jp, a Saviour ; I►►rpajj\, Israel ; Trvtvpa, spirit ; Trarijp, father, /i►►jr►►jp, mother ; ovpavos, heaven ; av6>pw7roc, man ; ItpovffaXrjp, Jerusalem ; Aav►►5, David. But, of all people, the Jewish Rabbins are the most remarkable for this practice ►►► With- out a key to their abbreviatures their writings are unintelligible. They not only abbreviate words like the Greeks and Latins, by retrench- ing letters or syllables, but they often take away all except the initials ; and, what is still worse, they frequently join the initials of several words together, and, adding vowels to them, make a barbarous sort of a word representative of all the words thus abridged. Thus Rabbi Schdemoh Jarchi, in the Jargon of Hebrew abbreviatures, is called Rasi, and Rabbi Moses Ben Malemon is Rambam. Mercerus, David de Pomis, Schind- ler, Buxtorf, &c. have given explanations of the Hebrew abbreviatures. We subjoin the most useful abbreviations commonly found in English writings : ►►► A. B. or B. A., Artium Baccalaureus, Bachelor

of Arts. A. C., Ante Christum, Before Christ.

ABB

A. D., Anno Domini, In the year of our Lord. A. M., Ante meridiem, Before noon, or Anno mundi, In the year of the world.

A. U. C., Anno urbis condits, in the year of the city, i. e. the building of Home.

Bart., Baronet.

B. C., Before Christ.

B. C. L., Bachelor of civil law.

B. D., Baccalaureus divinitatis, Bachelor of

divinity. B. L., Baccalaureus legum, Bachelor of laws.

B. M., Baccalaureus medicinse, Bachelor of me- dicine.

C. or Cent., Centum, A hundred. C. B., Companion of the Bath.

C. P. S., Custos Privati Sigilli, Keeper of the privy seal.

C. S., Custos Sigilli, Keeper of the seal.

D. D., Divinitatis Doctor, Doctor of divinity. Dec., December.

D. F., Defensor fidei, Defender of the faith.

D. G., Dei gratia, By the grace of God.

Dr., Doctor.

D. T., Doctor Theologize, Doctor of divinity.

F., Fiat, Let it be done.

F. A. S., Frateraitatis Antiqvrorum Socius, Fel- low of the Antiquarian Society.

Feb.. February.

F. L. S. Fraternitatis Linneanae Socius.

F. R. S. and A. S., Fraternitatis Regiae Socius et Associatus, Fellow and Associate of the Royal Society.

F. S. A., Fellow of the Society of Arts.

G. C. B., Knight of the Grand Cross of the Bath.

Gent., Gentleman

G.‘R., Georgius Rex, King George.

H. M. S., His Majesty’s Ship.

Ib. or Ibid., Ibidem, In the same place.

I. e., Id est, That is.

J. H. S., Jesus Hominum Salvator, Jesus the Saviour of men.

Incog., Incognito, Unknown, As a stranger.

Inst., Instant, Of this month.

Itin. Itinerary.

K. B., Knight of the Bath.

K. C. B., Knight Commander of the Bath.

K. P., Knight of St. Patrick.

Kt., Knight.

K. T., Knight of the Thistle.

L. or Lib., Libra, Pound, or Liber, Book.

Lieut. Lieutenant.

LL. D., Legum Doctor, Doctor of Laws.

L. S., Locus Sigilli, The Place of the Seals.

M. A., Artium Magister, Master of Arts.

M. B., Medicinze Baccalaureus, Bachelor of Phy- sic, or Musicae Baccalaureus,Bachelor of Music.

M. D., Medicinae Doctor, Doctor of Physic.

Mem., Memento, Remember.

Messrs. Messieurs, Gentlemen.

M. P., Member of Parliament.

Mr., Mister.

Mrs., Mistress.

M. S., Manuscriptum, Manuscript.

MSS., Manuscripta, Manuscripts.

N. B., Nota bene, Observe, Take notice.

Nem. con., or Nem. diss., Nemine contradicente, orNemine dissentiente, Unanimously.

Nov., November.

N. S., New Style.

Obt. Obedient.

Oct., October.

O. S., Old Style.

Oxon., Oxford.

Per. Cent., Per Centum, By the hundred.

P. M., Post meridiem, Afternoon.

Prob., Problem.

Prof., Professor.

P. S., Post scriptum, Postscript.

Q. D., Quasi dictum, As if it were said.

Q. E. D., Quod erat demonstrandem, Which.

was to be demonstrated. Q. E. F., Quod erat faciendum, Which was to

be done.

Q. P. L., Quantum placet, As much as you please Q. S., Quantum sufficit, A sufficient quantity. Q. V., Quantum vis, As much as you wish. R., Rex, King. Reg. pref. Regius professor. R. N., RoyalNavy. Rt. Hon., Right Honorable. Rt. Wpful., Right Worshipful. Sept., September. St., Saint or Street. Viz., Videlicit, That is to say, Namely.

ABBROCHMENT, in law, the forestalling a fair or market.

ABBUTALS, or ABUTTALS. See ABUTTAL.

ABB-WOOL, among clothiers, the wool of a weaver's warp.

ABCAS. See ABASCIA.

ABCEDE, or ABSCEDE, from abcedo, in sur- gery, to suppurate ; an abceded surface, being that whose texture has been vitiated or separated by the formation of pus or purulent matter.

ABCEDARY, or ABCF.DARIAN, an epithet given to compositions whose parts are arranged in the order of the alphabet, chiefly applied

to Hebrew writings.

ABDA a district of Morocco, on the west coast, famous for its grain and for its breed of horses.

ABDALAVI, or AEDELAVI, in botany, an Egyptian plant, very like a melon, except that the fruit is more oblong, and acute at the extremities.

ABDALLA, the son of Abdalmothleb, the father of the prophet Mahomet. This parent of the prophet, though a slave, is clothed with such personal attractions by the Arabian historians, that after he had passed the age of 75 his hand was solicited by the fairest and most virtuous women of his tribe; and on the night of his nuptials, we are told, 100 young females expired with grief.

ABDALLATIF, or ABDOLLATIPH, an Arabian physician and author, born at Bagdad, in the year 1161. A hundred and fifty works have been ascribed to this author : one only, an account of Egypt, now remains. Dr. Pococke brought it to Europe in MS., and deposited it in the Bodleian library. Dr. White published it with a Latin translation, in 1800, and a French translation, by Silvestre de Sacy, appeared at Paris, in 1810. Abdallatifs book on Egypt supplies a valuable link between ancient and modern history, giving us the only account extant of that country in the middle ages.

ABDALMALEK, the 5th khalif of the race of

the Ommiades, called the skinner of a stone, be- cause of his extreme avarice; as also Aboulzebah, because his breath was said to be so poisonous as to kill all the flies which rested on his face. He surpassed all his predecessors in power and dominion ; penetrating to India in the east, and Spain in the west : he likewise made himself master of Medina and Mecca. His reign began in the 65th of the hegira, A. D. 685, and con- tinued twenty-one years.

ABDALMELEK, (Ben Zohar,) an eminent Spanish physician, of the l‘2th century, called by the Europeans AVENZOR, which see.

ABDALONYMUS, or ABDOLONYMUS, (in classic history,) of the royal family of Sidon, and descended from king Cyniras. Alexander the Great having deposed Strato, inquired whether any of the race of Cyniras was living, that he might set him on the throne ; and found this prince happy in his poverty : ” I wish,” said Abdalonymus, ” I may

bear my new condition as well ; these hands have supplied my necessi- ties : I have had nothing, and I have wanted nothing.” This answer pleased Alexander so much, that, besid es giving him all that was Strato’s, he augmented his dominions, and presented him with a large portion of the Persian spoils.

ABDALS, in the eastern countries, fanatics, supposed to be inspired to a degree of madness. The word comes, perhaps, from the Arabic, Ab- dullah, the servant of God. The Persians call them devaneh khoda, q- d. furentes deo, raging ###with the God. They have been known in India to run about the streets, and kill all they meet of a different religion.

ABDARA, or ABDEKA, in ancient geography, a (own of Bcetica in Spain, a Phoenician colony ; now called Adra, to the west of Almeria, in Gra- nada,

ABDELAVI. See ABDALAVI.

ABDEHA, in ancient geography, a maritime town of Thrace, near the mouth of the Nessus, on the east. Timesius the Clazomenian attempted to found it, but was forced to give it up by the Thracians. The Teians, however, succeeded, and settled in it to avoid the Persians. Pliny and Justin report that the grass of Abdera was so strong that such horses as ate of it ran mad. It is famous for being the birth-place of Protagoius, Democritus, Anaxarchus, Hecataeus the historian ISicenaetus the poet, &c. Many accounts are given of its unwholesome atmosphere, and of the pride of its inhabitants. Hence the phrases, ab- dentica men, and abderian laughter.

ABDERAHMA, a Saracen viceroy in Spain who revolted and set up an independent princi- pality at Cordova. He had several successors of the same name.

ABDEST, a Persian word literally signifying the water placed in a basin for washing the hands, but used to express the purifications practised by the Mahometans before they enter on their religious ceremonies.

ABDEVENAM, in astrology, the head of the 12th house in the scheme of the heavens.

ABDI, n3N, Heb. i. e. my servant. The lather of Kish, and grand-father of king Saul.

ABDICARIA proposito, in logic, a negative proposition.

ABDICATIO, airoKtjpvZtG, a Grecian custom of renouncing children, prohibited by the Roman laws. Lucian.

AB’DlCATE,-\ Ab : dico, SIKTI, right, to go

ABDICA’TION, f from a right ; to go from, quit.

AB’DICATIVE. i or leave, put away from, or

ABDICAN’T. J deprive of that which has been

possessed by law and right. To resign, disclaim,

renounce, dispossess.

ABDITARIUM, O. L. A chest in which relics were kept, or a place to hide goods, plate, or money.

ABDOLLATIPH. See ABDALLATIF. ABDOMEN, n.s. Lat. from abdo, to hide; a cavity commonly called the lower venter, 01 belly : it contains the stomach, guts, liver, spleen, and bladder, and is within lined with a mem- brane, called the peritonaeum. SEE ANATOMY. ABDOMINAL, adj. relating to the abdomen. ABDOMINALES, in ichthyology, fish which have the ventral fins placed behind the pectoral in the abdomen, and constitute the order of the fourth class of animals in the Linnsean System. See ICHTHYOLOGY and ZOOLOGY.

ABDON, one of the Papuan isles, N. of Wageoo, in N. Lat. 0►► 30’, E. long- 131►► 15’. ABDUCE’, v. ^ Ab : duco, to lead from ; to ABDUC’TION. J draw, bring or take away from; to withdraw ; chiefly a scientific word applied in physic and in logic; in the one, it signifies flexion or extension of the muscles; in the other, a particular kind of argument. ►►► Abduc- tion is also used in law, and is the act of carrying off a woman and marrying her against her will; ►►► it refers also to the forcible taking away a wife or child, and to common kidnapping.

ABDUCENS, labiorwn, in anatomy, a name given by Spigellius to a muscle, which is the levator unguli oris of Albinus, and the cuninus elevator of others.

ABDUCENTES NERVI, that part of the sixth pair of nerves, which is lost on the abductores oculi.

ABDUCTION, in logic, by the Greeks called apugogue, is an argument from the conclusion to the demonstration of the proposition assumed.

ABDUCTION, in law, the forcible carrying away of a person, as of an heiress, &c. To enter a woman's house forcibly, carry off, and marry her without her own consent, has in Scot- land been punished with death.

ABDUCTION, in surgery, a species of fracture, wherein the broken parts of the bone recede from each other, after the manner of a stalk.

ABDUCTOR AURIS, called also posterior auris, by Winslow, a muscle that pulls the ear backwards.

ABDUCTOR AURICULARIS, or of the little fin- ger, called by Winslow, hypothenar, arises from the angular ligament, and the third and fourth bones of the carpus in the second rank ; and is inserted externally into the first bone of the little finger : it serves to draw that finger from the rest, and also to bend it a little.

ABDUCTORES FEMORIS. Anatomists reckon four of these. Their use is to move the thigh bone, according to their different directions.

ABDUCTOR INDICES, or of the fore-finger, arises from the inside of the bone of the thumb,

and is inserted into the first bone of the fore-finger, which it draws from the rest towards the thumb.

ABDUCTOR MINIMI DIGITI MANUS. See AB- DUCTOR AURICULARIS.

ABDUCTOR MINIMI DIGITI PEDIS, or of the little toe, arises from the outside of the os calcis, near the exterior bone of the metatarsus, and is inserted laterally into the outside of the second bone of that toe, whu-h it pulls from the rest.

ABDUCTOR OCULI, or of the eye, is one of the four recti, or straight muscles, arising from the bottom of the orbit, and spread over the first proper tunic ; serving to draw the eye towards the outer canthus. It is also called the scornful muscle.

ABDUCTOR POLLICIS MANUS, called also The- nar, springs from the annular ligament and first bone of the carpus ; whence passing the

thumb, it makes that fleshy body called mons lunze : it draws the thumb from the fingers.

ABDUCTOR POLLICIS PEDIS, or of the great toe, springs from the inside of the os calcis, and the greater os cuneiforme ; and is inserted into the outside of the exterior os sesamoideum polli- cis ; it serves to draw the great toe from the rest.

ABEAR', v. (Applied to the behaviour or

ABEAR'IXG. S conduct ××× The word abearance, instead of abearyng, is used by modern writers in English law. See BEAR.

Upon assurance takyn of the said Hunyldus, that there after he shulde be of good abearynge to warde the king, he clerely forgaue vnto hym all his former offence. Fabyan, repr. 1811, p. 141.

So did the Faery Knight himself abeare,

And stouped oft, his head from shame to shield.

Spenser's Faerie Queene.

The other species of recognizance with sureties is for the good abearance, or good behaviour.

Blackftone's Commentaries.

Not to be "released, till they found sureties for their good abearing.

Lord Herbert 's Hist, of Hen. VIII. p. 381.

ABED', adv. On bed. See BED. Some radde, that hir ssoide wende in at on hepe, To habbe inome horn vnarmed, and somme abedde aslepe. R. Gloucester, p. 547.

Hir kyrtells, and hir mantell eke, Abrode vpon his bedde he spredde, And thus thei slepen both abedde.

Gower, Con. A. b. v.

ABEDNEGO, the name given by Nebuchad- nezzar to one of the three captive Jewish chil- dren, who were miraculously delivered from the fiery furnace. Dan. iii. .

ABEILLE (Gasper), an eminent wit of the sixteenth century, was born at Reiz in 1648, and died at Paris in 1718. He wrote several dra- matic

pieces, but his genius was not equal to the wit of his conversation, which appears to have been singularly aided by an unseemly wrinkled countenance, susceptible of the most ludicrous expression.

ABEILLE (L. P.), a writer on agriculture and natural history, inspector general of the manu- factures of France, and secretary to the council of trades before the revolution ; born at Tou- louse, 1719; died at Paris 1807.

ABEL, San, Heb. Vanity, the second son of Adam and Eve, who was a shepherd, and was

killed by his brother Cain, from envy of the superior mark of divine favor bestowed on. him. Though he was the first martyr, his name is not to be found iu any catalogue of saints or martyrs, cither in the Greek or Roman church, earlier than the tenth century. Several Roman litanies however contain prayers to him for persons at the point of death.

ABEL (Charles Frenerick), an eminent mu- sician and composer, was by birth a German. He came to England in 1759, and was soon ap- pointed chamber-musician to the queen. He died at London in 1787. Burney, in his history of music, says, ‘ The knowledge Abel had ad- quired in Germany, in every part of musical science, rendered him the umpire in all difficult points. His concertos and other peices were very popular, and frequently played on public occasions.’ He excelled on the viol di Gamba. ABEL (Clarke), M. D., is well known as the historian of Lord Amherst’s embassy to China, which he accompanied as chief medical officer and naturalist. Although at the most interesting period of that expedition he was disabled, by a most serious attack of sickness, from following up his observations with the closeness and re- gularity he had anticipated, his Narrative suf- ficiently testifies his masculine understanding, his various yet sound knowledge, his high talents, and benevolent bent of mind. Indeed, had Dr. Abel never written any thing besides his Essay on the Geology of the Cape of Good Hope, contained in the work alluded to, he would have sufficiently proved his claim to the title of a deep and philosophical thinker, and of an acute observer of the mysteries of nature. He died December 12th, 1826.

ABELA (J. F.), commander of the Order of Malta, born 1622, was the author of Malta Illustrata, an able work on the topography and history of the island.

ABELARD (Peter), a famous doctor of the twelfth century, born at

Palais in Britany. He was eminent for his acuteness in logic, of which he gave proofs wherever he travelled, by disput- ing with and baffling all who would enter the lists with him. He read lectures with great ap- plause at Paris, where he lodged with one Ful- bert, a canon, who had a beautiful neice, called Eloise. Abelard was appointed her preceptor ; but seduced her instead of teaching her the sciences, and, Eloise proving with child, he sent her to a sister of h;s in Britany, where she was delivered of a son. To soften the canon's anger, he offered to marry Eloise privately ; and the old man was better pleased with the proposal than the neice, who, from a singular excess of passion, chose to be Abelard's mistress rather than his wife. She married, however ; but used often to protest upon oath that she was single, which provoked the canon to use her ill. Upon this, Abelard sent her to the monastery of Argenteuil; where she put on a religious habit, but did not take the veil. Eloise's relations, considering this as a second treachery, hired ruffians, who, forcing into his chamber in the dead of night, emascu- lated him. This infamous treatment made him fly to the gloom of a cloister. He assumed the

habit of St. Dennis : but the disorders of the iionse soon drove him from thence. He was afterwards charged with heresy ; and having en- dured several persecutions for his religious senti- ments, he settled in a solitude in the diocese of Troies, where he built an oratory, to which he gave the name of the Paraclete. He was after- wards chosen superior of the abbey of Iluis, in the diocese of Vannes ; when the nuns being ex- pelled from the nunnery in which Eloise had been placed, he gave her his oratory ; where she settled with some of her sister nuns, and became their prioress. Abelard mixed the philosophy of Aristotle with his divinity, and in 1140 was condemned by the council of Rheims and Sens. Pope Innocent II. ordered him to be imprisoned, his books to be burnt, and forbade him ever teach- ing again. However, he was soon after par- doned, at the solicitation of Peter the Venerable, who received him into his abbey of Cluni, where he led an exemplary life. He died in the priory of St. Marcel, at Chalons, April 21, 1142, aged 63. His corpse was sent to Eloise, who buried it in the Paraclete. He left seve- ral works; the most celebrated of which are the letters that passed between him and Eloise, with the account of their misfortunes prefixed ; which have been translated into English, and immortalised by the harmony of Mr. Pope's

numbers.

ABEL-BETHMAACAH, or ABEL-MAIM, a city of Judea, south of Mount Lebanon. Tig- lathpileser, king of Assyria, took it, and carried the inhabitants captive. It was afterwards rebuilt, and became the capital of Abilene in Syria.

ABELIANS, or ABELINS, in church history, a sect of heretics mentioned by St. Austin, who pretended to regulate marriage after the example of Abel ; allowing each man to marry one wo- man, but enjoined them to live in continence.

ABELIN, a large hamlet in Palestine, con- taining a castle of the same name, eight miles from Acre. Some have conjectured that the ruins in the vicinity are those of the ancient Zabulon.

ABELL, (John,) an English musician, and celebrated singer of the 17th century, who quitted this country, at the revolution, for his attachment to popery. Being at Warsaw, he was summoned to court to display his talents, but refused to go : the king then sent for him peremptorily ; and on Abell's appearance, he was drawn up in a chair to the top of a spacious hall, at one end of which sat the king and his nobles in a gallery. Some wild bears were now turned into the apartment, and Abell was called upon to sing or be let down amongst them, lie preferred, of course, the former, and said that he never made a better use of his voice. In 1701, he published a collection of songs in several languages.

ABELLA, an ancient town of Campanin, near the river Clanis, now called AVELLA. Its nuts, called avellanae, were very famous, as also its apples.

ABEL-MIZRAIM, a place between Jordan and Jericho; supposed to have been near Hebron, where the Egyptians celebrated Jacob's funeral. It was also called the threshing floor of Atad.

ABEL-MOSCH, or ABEl>MpsCH, in botany, a species of the HIBISCHUS, which see.

ABELOITES, or ABELONIANS. See ABE- LIANS.

ABEN-EZRA, (Abraham,) a celebrated rsbt*, born at Toledo, in 1099. He was much admired for his learning, being not only skilled in philo- sophy, astronomy, medicine, and poetry, but a complete master of the Arabic. He was styled by his brethren, the wise and admirable Doc- tor. His principal works are, Commentaries on the Old Testament,

which are printed in Bom- berg's and Buxtorf 's Hebrew Bibles, and Jesud Mora, a work (now very scarce,) intended to recommend the study of the Talmud. His style is elegant and concise. He died in 1 1 74, aged 75.

ABENRADE, or APENRADE, a jurisdiction, and town of Denmark in Sleswick. It is seated on a spacious open bay, in the Baltic, surrounded on three sides by high mountains. Just without the town stands the castle of Brunbend. Lon. 9►► 24', E. Lat. 55►► 6', N.

ABENS, or ABENTZ, a river of Upper Bava- ria, joining the Danube 4 mi. below Abensberg.

ABENSBERG, or ABENSPURG, a district and town of Bavaria, circle of Regen, seated on the Abens, near the Danube, S. W. of Ratisbon. Lon. 11►► 15', E. Lat. 48►► 46', N.

ABER, an old British or Welsh word, signify ing the fall of a lesser water into a greater, as o(a brook into a river, or of a river into the sea : also, the mouth of the river. In both these senses, it makes part of the names of many towns in Britain. See the following articles.

ABERAVON, a borough town of Glamor- ganshire, governed by a port-reeve, seated on the mouth of the Avon, 19 miles W. of Cow- bridge, and 195 W. from London. The iron and copper works contiguous, have given it some importance. The delightful seat of Lord Vernon stands in the neighbourhood.

ABERBROTHOCK, or ARBROATH, a small neat town, on the E. coast of Scotland, in the county of Angus, 15 miles N. E. of St. Andrew's, and 56 N. N. E. from Edinburgh. It is situated on the mouth of the small river Brothock, is a royal burgh, and is well built and nourishing. The number of its inhabitants has greatly increased within these last 40 years, and they are now esti- mated at upwards of 9000. Their chief manu- factures are brown linens or Osnaburghs, sail-cloths, and white and brown thread. The foreign imports are flax, flax-seed, and timber from the Baltic. The coasting trade consists of coals from Borrowstounness, and lime from Fife. At this place, in default of a natural harbour, an artificial one of piers has been formed, where, at. spring-tides, which rise here 15 feet, ships of two hundred tons can come, and of 80 at neap tides ; but they must lie dry at low water. The port is of great antiquity : there is an agreement yet extant, between the abbot and the burghers of Aberbrothock, in 1194, concerning the making of the harbour. Both parties were bound to contribute their proportions ; but the largest fell to the share of the former, for which he was to receive an annual tax payable out of every rood of land lying within the borough. The glory of the town was the abbey, whose very ruins give

some idea of its former magnificence. It was founded by William the Lion in 1178, and dedi- cated to Thomas a Becket. The founder was buried here.

ABERCONVVAY, or CONWAY, an ancient borough and market-town in the county of Caer- narvon, 223 miles north-west of London, situated upon the western bank of the river Conway, which is here crossed by a chain suspension bridge, erected after the designs of Mr. Telford. The town is enclosed by the ancient fortifica- tions, erected by Edward I., the founder of the noble castle which overlooks them. It is one of three stately palaces, reared by that monarch upon the final extinction of independence in Wales. The town consists of a few irregular streets, with one broad avenue forming part of the new line carried round the base of Penmaen- mawr. Here is one of the ancient houses called the Plas Mawr, a venerable Church, meeting- houses of Dissenters, and two spacious inns. Ship-building occupies the greater portion of the inhabitants, and the mouth of the river affords a safe asylum for vessels navigating the Conway river up to Trefriw, as well a shipping place for the produce of Llandudno mines.

ABE11CORN, the ABERCURRING of Bede, a romantic little town of Scotland, in Linlithgow, on the Frith of Forth, 12 miles W. of Edinburgh. Antoninus's Roman wall commenced here. The Earl of Hopetoun has a magnificent seat at a small distance.

ABERCROMBY, (Sir Ralph,) K. B. the son of George A. Esq. of Tullibody, Clackmannan- shire, was born in 1738. In 1756 he became a cornet of the 3d Dragoon Guards. In 1781 he was colonel of the 103d, or King's Irish Infantry; and in 1783 went on half-pay. In 1787 he obtained the command of the 7th Dragoons; and acquired great experience in his profession in the seven years war, and in the war of the American revolution. That of the French re- volution furnished him with an opportunity of eminently displaying his talents and experience. Iii two campaigns on the continent he gave dis- tinguished proofs of his skill and intrepidity ; and though the last, in the end of 1794, was singularly disastrous, his character both abroad and at home was in the highest es- timation. In the autumn of 1795, he received the Order of the Bath, and succeeded Sir Charles Gray in the West Indies. In this command he was eminently successful, having carried every island and port which he attempted. Early in

1797 he took the Spanish island of Trinidad, and returned soon after to England. In No- vember the same year he went commander-in- ch ief to Ireland ; but this situation he held not fong, the civil and military command being united in the person of Marquis Cornwallis. In

1798 he was made commander of the forces in Scotland; and in the autumn of 1799 was em- ployed under the Duke of York in the

unfortu- nate expedition to Holland. No failure ever pro- duced a stronger sensation in the public mind

han this ; but Sir R. Abercromby was always mentioned with respect, and with an undisguised confidence, that he nobly performed his duty. At the close of 1800, he took the command

of the army destined to deliver Egypt from the French. He landed his troops 8th of March, 1801, in Aboukir bay, facing the French army. On the 13th he fought the battle of Alex- andria, and was nearly made prisoner by the French, through a defect in his sight. The 21st was marked by a more decisive and general en- gagement, when after an obstinate struggle, the enemy retreated. Sir Ralph was wounded and unhorsed in one of the first charges, but wrested the sabre from his antagonist, and gave it to Sir Sidney Smith. He afterwards received a musket ball in the thigh, which proved a mortal wound, notwithstanding which, he would not suffer himself to be removed from the field until the victory was declared to be his. He died on board the Admiral's ship in the bay a week afterwards, and was interred at Malta. On the account of the victory reaching England, Lady Abercromby was immediately raised to the peer- age, with reservation to the sons of the deceased general ; and a noble monument was erected to his memory soon after in St. Paul's.

ABERDEEN, or ABERDEN, a principal city in the north of Scotland, which comprehends two towns under that denomination, viz. OLD and NEW ABERDEEN. The Old Town is a place of great antiquity, and was of some importance so long ago as 893, when, tradition says, king Gregory conferred upon it some particular privi- leges. A bishopric, founded at Mortlicn by Malcolm II. was translated to Aberdeen by David I, and in 1163, Malcolm IV. granted a new charter to the bishop of Aberdeen : there is still extant a charter of Alexander II, dated 1217, granting to Aberdeen the same privileges he had granted to his town of Perth. Both towns are situated on the coast of the German Ocean; 127 miles N. E. from Edinburgh. Lon. 1►► 50', W. Lat. 57►► 6', N.

Old Aberdeen lies about a mile N. from the new town, at the mouth of the Don, over which is a fine Gothic bridge, of a single arch, greatly admired, which rests on both sides on two rocks. This arch, said to have been built by a bishop of Aberdeen, about the year 1 290, is 67 feet wide at the bottom, and 34J feet high above the surface of the river, which at ebb-tide here is 19 feet deep. The old town was formerly the seat of the bishop, and had a large cathedral commonlj called St. Mocker's. Two very antique spires and one aisle, which is

used as a church, are now the only remains of it. The cathedral had an- ciently two rows of stone pillars across the church, and three turrets, the steeple which was the largest of these turrets, rested upon an arch, supported by four pillars. In this cathedral there was a fine library ; but, about the year 1560, it was almost totally destroyed. On the south side of the town, is the King's college, which is a large and stately fabric. It is built round a square, with cloisters on the south side. The chapel is very ruinous within ; but there still remains some exquisite workmanship. This was preserved by the spirit of the principal at the time of the reformation, who armed his peo- ple, and checked the blind zeal of the barons ot the Mearns, when about to violate this seat of learning. A ship, freighted with their sacri-

legious booty bound to Holland, had scarcely gone out of port, when it perished in a storm with all its lading. The college was founded in 1494, by William Elphinston, bishop of this place, lord chancellor of Scotland in the reign of James III, and lord privy seal in that of James IV. But James IV. claimed the patron- age of it, and it has since been called the King's College. Together with the Marischal college in the new town, it forms one university, called the University of King Charles. The library is large, but not remarkable for many curiosities. Hector Boethius was the first prin- cipal ; and sent for from Paris for that purpose, on an annual salary of 40 Scots marks, at 13 pence each. The square tower on the side of the college was built for the reception of stu- dents, by contributions from General Monk, and the officers under him, when quartered at Aberdeen. There are now about 150. There are several bussaries for poor students, professor- ships of humanity, Greek, philosophy (three) Oriental languages, civil law, divinity, and medicine ; annual revenue about ––700. Here is also a neat town-house ; a trades' hospital for decayed freemen and their widows ; and an hos- pital for 12 poor men. Old Aberdeen has its own government, of a provost, three bailies, a treasurer, and council, with the deacons of six incorporated trades.

ABERDEEN, New, the capital of the shire of Aberdeen. It is built on a hill or rising ground, and lies on a small bay formed by the Dee, deep enough for a ship of 200 tons, and above two miles in circumference. The town is approached from the N. and S. by two elegant streets, the latter passing over an arch, the span of which is 132 feet, and its

width between the parapet 40 feet. The buildings, which are of granite from the neighbouring quarries, are generally four stories high ; and have, for the most part, gardens be- hind them, which give them a beautiful appear- ance. In the high street is a large church, formerly belonging to the Franciscans, which was begun by bishop William Elphinston, and finished by Gavin Dunbar, bishop of Aberdeen, about 1500. Bishop Dunbar is said likewise to have built the bridge over the Dee, which con- sists of seven arches. In the middle of Castle- street is an octagon building, with neat bas- relievos of the kings of Scotland, from James I. to James VII. The town-house has a handsome spire in the centre. Opposite, is the Aberdeen bank, a fine building of polished granite. The grammar-school is a low but neat building. Gordon's hospital is handsome; in front is a good statue of the founder: it maintains forty boys, who are apprenticed at proper ages. The infirmary is a large plain building, sending out be- tween eight and nine hundred patients. But the chief public building in the new town is the Marischal college, founded by George Keith, carl of Marischal, in the year 1593 ; and since greatly augmented with additional buildings. There are about 150 students belonging to it. In both the Marischal and King's college, the languages, mathematics, natural philosophy, di- vinity, &c., are taught by able professors. In the former is a good observatory. In new Aber-

deen are also a lunatic asylum, erected in 1800, by subscription; three dispensaries, which in 1816, relieved 2700 patients; and a bridewell, which has been recently finished at an expense of ––10,000. The convents in Aberdeen were: One of Mathurines, or of the order of the Trinity, founded by William the Lion, who died in 1214; another of Dominicans, by Alexander II. a third of Observantines, a building of great length in the middle of the city, founded by the citizens; and a fourth of Carmelites, or White Friars, founded by Philip de Arbuthnot, in 1350. Aberdeen, including the old town, is supposed to contain 88,000 people. Its trade is consider- able, but might be greatly extended by an atten- tion to the white fisheries. The ancient harbour was narrow at the mouth, having the easterly rocky point of the Grampian mountains on the south, and a flat blowing sand on the north, extending along the coast for many miles. This was driven in a long ridge across the harbour's mouth at the bar, where the depth of water at low tide was sometimes not above three feet. The town at last came to the resolution of erect- ing a strong pier on the north side of the harbour. This pier is 1200 feet in length, and gradually increases in thickness and height, as it approaches to the sea, where the head or rounding is 60 feet diameter at the base, and the perpendicular ele- vation 38 feet. The whole is built of granite, and was under the

direction of Mr. Smeaton ; the expense amounting to above ––17,000. A little to the south of the bar, they have now a depth of 17 fathoms at low water; and, at the harbour mouth, from 8 to 9 fathoms. Two bat- teries defend the pier ; which has lately been extended to the N. so as to form a wet dock. There is also a navigable canal fiom New Aber- deen to the Don at Inverney. Aberdeen once enjoyed a good tobacco trade. At present, its imports are from the Baltic, and the merchants trade to the Mediterranean, the West Indies, and North America. Its exports are stockings, thread, salmon, pickled-pork, and oat-meal. Large quantities of granite are also sent to Lon- don. The cotton manufactories of the vicinity employ nearly 1000 persons; and an extensive flax manufactory stands on the Don. Linen and woollen goods of most kinds are wrought here, as well as nails, cordage, and all ship- building articles. Vessels to the burthen of about 40,000 tons, belong to the port which is exten- sively engaged in the whale and other fisheries. The salmon exported, averages 2000 barrels annually. New Aberdeen has a provost, four bailies, a dean of guild, treasurer, town-council, and seven deacons of trades, incorporated for its civil government; and with Aberbrothock, Bre- chin, Montrose, and Inverbervie, returns one member to parliament. Its fairs are on the 3 1st of January, 3d Wednesday in June, and 18th of July.

ABERDEENSHIRE, a county of Scotland, bounded on the N. W. by Banffshire, and the Deveron ; on the N. and N. E. by the German Ocean ; on the S. by the counties of Kincardine, Angus, and Perth ; and on the W. by Inverness- shire. Its length from N. E. to S.W. is about 85 miles ; its breadth not quite 40. It compre- hends the districts of Mar, Garioch, Formartin,

Strathbogie, and the greater part of Buchan ; and sends one member to parliament. It abounds in sea ports, from whence there is a safe and ready passage to the Orkney and Shetland isles, the Greenland fisheries, Norway, and the regions round the Baltic, the German coast, Holland, Flanders, and France ; and is watered by nu- merous streams, as the Don, thepYthan, the Ugie, &c., all of them the resort of salmon, and whose banks display the most extensive plantations, as well as natural woods. Cattle are sent to the south in great numbers. In the Ythan is a pearl fishery, which has yielded single pearls of from two to three pounds value. Several beautiful lakes also diversify the face of this country; Loch Murick, Loch Kander, Loch Builg, and Callader, are

the principal. The granite quarries yield the most valuable mineral of Aberdeenshire, sending annually to London upwards of 12,000 tons ; mill stone, blue slate, and lime stone also abound : as well as the asbetos, talc, schistus, and mica. On the coast of Buchan amber is found in considerable quantities, and in Lesley parish, a beautiful green and variegated amian- thus, of which snuft' boxes and ornamental arti- cles are made. Some of the mountains (as in the district of Mar) retain evident proofs of volcanic origin ; and Peterhead, Aberdeen, Pan- nanach, or Glendye, are celebrated mineral waters. The whole county is tolerably fertile, but ill cultivated ; the improvements introducing by spirited proprietors being but slowly adopted. Here are 87 parishes, three royal boroughs, and one city ; several handsome towns and noble- men's and gentlemen's seats. The valued rent of the county is ––241,931.

ABERDOUEY, a sea-port town in the parish of Towyn, hundred of Yotumaner, county of Merioneth, North Wales ; possessing many na- tural advantages, and likely to become the prin- cipal port in the shire. It stands at the mouth of the river Dyfi, across which there is a regular ferry; consists of one street enclosing a quay, in front of which vessels of 500 tons may ride, and extending half a mile in length. Here are some excellent houses built for the accommodation of summer visitants, besides a spacious and noble inn. A new post road connects this place with Towyn, four miles distant, and an improved and level line extends through Pennel village, to the market town of Mashyullaeth.

ABERDOUR, a town and parish in Fifeshire, Scotland, on the Frith of Forth, about 10 miles N. W. of Edinburgh, resorted to in summer as a sea bathing-place. William, lord of Liddesdale, surnamed the Flower of Chivalry, in the reign of David II., conveyed it by charter to James Douglas, ancestor of the present owner, the earl of Morton. The old castle of Aberdour stands on the bank of a rivulet, falling into the Frith. The poor Clares had a convent at this place. In the neighbourhood are found free-stone, iron- stone, lime-stone, and coal of a superior quality. Here is also a muslin manufactory of some re- pute ; and a manufactory of coarse cloths. The neighbouring island of Inch Colm, belongs to the parish.

ABERE-MURDER, Sax. from ebere, proved, and morth, killing. In old law, murder that has been proved by a judiciary process. It was

a crime that could not be expiated by money, as most others could be.

ABERFORD, or ABERFDHTH. See ABBER- FORD.

ABERFOYLE, a parish in the county of Perth,

11 miles in length and five in breadth, in the western extremity of which the Forth has its rise. It is remarkable for its fine lakes and numerous streams, and the marked direction taken by the Grampions through the lower part of it ; as well as for producing a great variety of rare plants, and excellent pasturage. The hills abound with oak; and granite, coarse marble, limestone, and slate, compose their bases.

ABERFRAW, a village in the isle of Angle- sey, formerly a place of note, the princes of N. Wales baring had a palace in it. It has still a good harbour, navigable for vessels of 30 or 40 tons, and the Ffraw runs up to it. It is 20 miles W. of Holyhead.

ABERGAVENNY, a well built market-town of Monmouthshire, the Gibbanium of Antoninus, 16 miles W. of Monmouth, and 142 W. by N. from London, having two churches and an old castle. It stands on the confluence of the Usk and Gavenny, having a fine bridge of 15 arches over the former ; and is surrounded by a wall in ruins. The neighbourhood yields abundance of coal and iron ore. Market on Tuesday.

ABERGEMENT LE DUC, a market-town of Burgundy, France, in the arrondissement of Beaune, and department of the Cote d'Or, near the Saone, and eight leagues S. of Dijon.

ABERGUILLY, a parish of Carmarthenshire,

12 miles W. of Carmarthen, and 216 N. W. of London, and remarkable as containing the only palace belonging to the bishop of St. David's.

ABERNETHY, (John), an eminent surgeon, was born in 1763-4, in the city of Derry, in Ireland ; or, according to others, in the town of Abernethy, in Scotland, and at a very early age removed to London. He received the rudiments of his education at a day-school in Lothbuiy. After the completion of his scholastic studies, he was apprenticed to Mr. Charles Blick, surgeon, and, under the tuition of this eminent prac- titioner, as well as from the experience derived from the infinite variety of cases witnessed at St. Bartholomew's hospital, attained that extraor- dinary knowledge of the diseases and decays to which the human frame is subject, on which his fame in after life was erected. He early exhi- bited an eccentricity of character, and from the singularity of his dress, was nicknamed " The Hostler " by his fellow students ; but this neither interrupted the seriousness of his professional studies, nor retarded his rapid progress to repu- tation

and wealth. Mr. Abernethy was the pupil and friend of the celebrated Hunter. His first promotion was to be assistant surgeon of St. Bartholomew's hospital ??? his second to be lec- turer on anatomy and surgeiy in the same bene- volent institution. He struggled for fame as a public teacher against the learned and popular Dr. Marshal, and finally succeeded Sir Charles Blick as the senior surgeon of the hospital. His reputation as an author is deservedly spread, and the ability displayed in some of his early publications was liberally and loudly acknow- ledged by the French surgeons. His published

works, amounting to eight volumes, contain dis- putations on the Origin and Treatment of Local Diseases; on Aneurisms; Disorders of the Digestive Organs; Lumba Abscesses; Physi- ological Lectures, &c. &c. After a protracted illness, which he bore with true philosophy, he expired at Enfield, on the 20th of April, 1831 ; having expressed his conviction that a disordered stomach, a disease most fatal to the majority of mankind, would occasion his own dissolution. It is an extraordinary truth, that he exacted a solemn promise from his friends that they would secure to his remains an undisturbed repose within the tomb, and on no account submit them to a post mortem examination.

ABERNETHY, a village in Strathern, a district of Perthshire, in Scotland, seated on the Tay, a little below its junction with the Erne. It is said to have been the seat of the Pictish kings, as well as the see of an archbishop. Here was a cathedral, which became a collegiate church in 854, an university being established in the place. This in 1273 became a priory of regular canons. Here is a good manufacture of household linen and silesias ; the church has been lately re-built. In the church-yard is a tower of a circular con- struction, 48 feet in circumference, and 74 feet in height. There is only another of this description (at Brechin) in Scotland.

ABERNETHY, (John), an eminent dissenting clergyman of Dublin, born 1680, and author of sermons on the Divine Attributes, which have been much admired.

ABERRATION, in astronomy, a small appa- rent motion of the fixed stars discovered by the late Dr. Bradley, astronomer royal. It is oc-

casioned by the progressive motion of light, and tiie earth's annual motion in its orbit. For the hibtory of its discovery, see Philosophical Trans. March, 1728, No. 406.

ABER'RANCE, } Ab: erro, to stray or

ABERRA'TION, > wander; primarily applied

ABER'RING. j to the errors or mistakes of the mind, and to irregularity of conduct.

ABERRATION, in optics, is used to denote that error or deviation of the rays of light, when in- flected by a lens or speculum, whereby they are hindered from meeting or uniting in the same point. There are two species of the aberrations of rays, distinguished by their different causes ; one arising from the spherical form of the re- fracting and reflecting surfaces ; the other from the unequal refrangibility of the rays of light. This last species is sometimes called the New- tonian, from the name of its discoverer. See OPTICS.

ABERYSTWYTH, a borough, market, and sea-port town, in the hundred of Genaur-GIyn, and county of Cardigan, South Wales, situated' on an eminence overhanging the confluence of the Ystwyth and Rhydal rivers. It is 208 miles from London, 39 from Cardigan, contains a po- pulation of 3556, and is the most frequented watering-place in the principality. The old town consists of steep streets, enclosed by houses cased with black slate. 'The new town is regular handsome, and adorned with an assembly room' market-house, theatre, and three large inns ; and the parade, called the " Marine Terrace," contains

several excellent houses, in a situation both salu- brious and agreeable. Besides the chapel of ease, there are four meeting-houses of dissenters. The town is governed by a mayor, recorder, and com- mon council, and is contributary with Cardigan, Lampeter, and Aptar, in returning one member to parliament. Lead and silver ores, calamine, black lead, slates, and agricultural produce, constitute the chief exports, in which 8000 tons of shipping are annually engaged. The ruins of the castle occupy the summit of a rocky eminence, com- manding a view of Cardigan Bay, and of the North Wales coast ; it was built by Edward I., who in- corporated the town; and the walks surrounding it form delightful promenades for the numerous parties who visit this agreeable watering-place in the summer season. Races are held here in the month of August. Markets on Mondays and Saturdays ; and fairs four times in each year.

ABESTA, or AVESTA, the name of one of the sacred books of the Persian magi, which they ascrrbe to their great founder, Zoroaster. It is a commentary on the Zend and Pazend; the three together including the whole system of the Igni- colffi, or worshippers of fire. ABESTON. See ASBESTOS. ABESUM, in chemistry, unslacked, or quick lime. See CALX.

ABET', v. n. 3 Anglo Sax. Betan, (meliorare, ABET'MENT, / melius reddere, says Skinner.) ABET'TER, J To better, to make better. It primarily signifies to enkindle or animate.

It is applied to encouraging, inciting, assist- ing, supporting, aiding. 'It was once indifferent/ says Johnson, 'but is almost always taken by modern writers in an ill sense.'

ABEVACUATION, in medicine, a partial evacuation, either by nature or art.

ABEX,aname sometimes given to that country of Africa which bounds Abyssinia on the east, and the Red Sea west. It is mountainous, and so barren as to offer little to the notice of travel- lers. It is 500 miles in length, and 100 in breadth. The inhabitants are Mahometans.

ABEY'ANCE, n. Abaiance, or en abeiance, old Fr. Expectation. ••• A term of law, but sometimes of more general application.

ABGAR, or ABGARUS, a name given to seve- ral kings of Edessa in Syria; the most celebrated of whom is said by Eusebius to have sent a letter to Jesus Christ, requesting him to come and re- move a distemper in bis feet. The Saviour is stated to have returned an answer, accompanied by his portrait. Some great names in ecclesias- tical history support the authenticity of these let- ters, as they are still extant in Eusebius ; Mo- sheim rejects the letters, but sees "no reason of sufficient weight to destroy the credibility of the story." The general opinion of learned men, however, is decidedly against the whole.

ABHOR', v. ~\ Ab : horreo. Vossius con- ABHOR'RER, fceives the word, "horreo" ABHOR'RENCE, ••to express the effect produced ABHOR'RENT. J by the determination of the breath (or rather the blood) to the heart, occa- sioned by a sudden and painful emotion, which causes a general rigidity, and convulsive shud- dering of the body, so that the hair is said to stand on end.

ABI :

Justly thou aWwrr'st

Thai sou, who on the quiet state of men Such trouble brought, affecting to subdue Rational liberty.

Milton's Paradise Lost, xii. 79. The self-same thing they will abhor One way, and long another for.

Hudibr. p. i . cant. 1 .

The first tendency to any injustice that appears, must he suppressed with a show of wonder and 06- horrency in the parents and govcrnours.

Locke on Education. For if the worlds,

In worlds inclosed, could on his senses burst, He would abhorrent turn. Thomson's Sum. 1. 310. The legal, and as it should seem, injudicious pro- *"anation, so abhorrent to our stricter principles, was received with a very faint murmur, by the easy nature of polytheism. Gibbon, vol. i. p. 112.

Lands intercepted by a narrow frith, Abhor each other. Cotvper.

But peace abhorreth artificial joys, And pleasure, leagued with pomp, the zest of both destroys. Lord Byron's Childe Harold.

ABHORRERS, a name which was given to a political party in England, in distinction from the petitioners of the same period, (1680.) The name and the party soon ceased ; but Hume gives an account of their origin and principles. They paid excessive court to the king, by expressing their abhorrence against those who petitioned for redress of grievances, or who presumed to pre- scribe or dictate to his majesty any period for as- sembling parliament.

ABI A, or IRE, in ancient history, a maritime town of Messinia, so called after Abia, a daughter of Hercules, and one of the seven cities promised by Agamemnon to Achilles.

ABIAD, a river of Africa, descending, accord- ing to Mr. Brown, from the Mountains of the Moon, several hundred miles south of Darfour. ABI ANS, or AB 1 1 , anciently a people of Th race, or, according to some authors, of Scythia. They led a wandering life, living on the flesh of their herds and flocks ; on milk and cheese. They cultivated little intercourse with their neighbours, but boldly maintained their own independence, and were a people of great integrity, according to Homer, II. xiii. 5, 6.

ABIB, 3‘3X, Heb. i. e. a ripe ear of corn. The first month of the ecclesiastical, and the seventh of the civil year, among the Jews. It answers to our moon that begins in March and ends in April ; and contains the feast of the pass- over and of unleavened bread.

ABIDE’, -\ Bidian, or abidian, Sax. To

ABI’DER, f stay, remain, tarry, dwell or con-

ABI’DING, ftinue in a place or state; also,

ABO’DE, J to stay under, or support ; to

bear up against, or endure with fortitude, good

temper, or the contrary. In the latter senses,

however, the words are nearly obsolete.

The pacient abyding of the righteous shal be turned to gladnesse, but the hope of the vngodiy shall perish. Bible, Land. 1539. Prm. chap. x.

DEM. Abide me, if thou dar’st : for well I wot Thou runn’st before me, shifting every place, ˆThou dar’st not stand, nor look me in the face.

Shakspeare’s Midsummer Night’s Dream. MRS. FORD. I would my husband would meet

U) ABI

him in this shape ; he cannot abide the old woman of Brainford ; he swears she is a witch, forbad her my house, and hath threatened to beat her.

Shakspeare’s Merry Wives of Windsor.

Ah me ! they little know How dearly I abide that boast so vain Under what torments inwardly I groan, While they adore me on the throne of Hell.

Milton.

To remain in sin and abide in death is all one.

Bishop Taylor’s Sermons.

Why do we abide our thoughts and affections scat- tered from thee,

from thy saints, from thine anointed. Hall's Contemplations.

He (God) does not inflict sensible judgment upon all his enemies, lest the wicked should think there were no punishment abiding for them elsewhere.

Idem.

Thy servant became surety for the lad unto my father, saying, If I biing him not unto thee, then I shall bear the blame to my father for ever. Now therefore, I pray thee, let thy servant abide instead of the lad, a bondman to my lord : and let the lad go up with his brethren. Gen. xliv. 32, 33.

The marquis Dorset, as I hear, is fled To Richmond, in the parts where he abides.

Shakspeare's Richard III.

Those who apply themselves to learning, are forced to acknowledge one God, incorruptible and unbegotten ; who is the only true being, and abides for ever above the highest heavens, from whence He beholds all the things that are done in heaven and earth. Stillingjl. Defence of Disc, on Rom. Idolat.

ABIES, in botany, the fir tree. See PINUS.

ABIGA, in botany, the ground pine, or Cha- mapitys.

ABILA, or ABYLA, a mountain of Africa, one of the pillars of Hercules, as they were anciently called, being directly opposite to Calpe, in Spain, from which it is only 18 miles distant

ABILENE, a small canton in Syria, between Lebanon and Antilibanus, west of Damascus. See ABEL-MAIM.

ABINEAU POINT, a neck of land projecting into Lake Erie, Canada, and forming a fine bay On each side of the point. It runs out about 10 miles west of Fort Erie. The northern bay is most commonly called Abineau Port.

ABINGDON, the chief town of Washington county, in Virginia, North America, 310 miles S. W. of Richmond. Also a town of Maryland, North America, 20 miles N. E. of Baltimore; and a township of Plymouth county, Massachu- setts, 22 S. E. of Boston.

ABINGDON, or ABINGTON, a market town of Berks, in the hundred of Hormer, on the Isis, so named from an abbey formerly built in it, six miles S. of Oxford, and 56 W. from London. The streets are well paved, and have a spacious area in the centre, where the markets are held on Monday and Friday, and where an elegant market-house is built, supported on lofty pillars, with a handsome Town-house of free-stone above it, where the assizes, sessions, and county meet- ings are held. It has two churches, dedicated to St. Nicholas and St. Helena, and two hospi- tals, the one for 12 persons, six of each sex, the other for 26, viz. 1 3 of each ; besides a charity and a free grammar school. This town is sup- posed by Bp. Gibson to be the Saxon Clove- shoo, where synods were held, in A. D. 742 and

822. It was incorporated by Queen Mary I. and sends one member to parliament, elected by the suffrages of the inhabitants generally. It is a considerable malting town.

ABIPONIANS, a decayed tribe of S. Ame- rican Indians, inhabiting the banks of the Plata. The whole nation does not exceed 5000 in num- ber. They are naturally fair ; but, by exposure to the air and smoke, become of a brown colour. They are a strong and hardy race of people ; which is attributed to their marrying late ; and are greatly celebrated on account of their chastity and other virtues ; though, according to some writers, they have no knowledge of a Deity, or name to express his existence : but they believe in an evil principle whom they call ” Uncle.” They are but slightly acquainted with agricul- ture, living by hunting and fishing, and holding the flesh of their jaguars in great repute. They have a kind of order of chivalry for their warriors ; and are so formidable, that 100 of their enemies will Hy before ten of these horsemen, armed with the long spears of the country. The caciques in war are their judges in time of peace ; but the whole people have long ceased to be of any con- sideration in the neighbourhood.

ABISCA, a province of Peru of considerable extent, between the Yetan and Amarumain to the S. of Cuzco. It is little known to Euro- peans, being principally the resort of expelled barbarous tribes.

ABISHERING, an ancient law-term, denoting a being free, or exempt,

from all amercements.

ABITELLO, in ecclesiastical affairs, a sort of penitential garment, in the Romish church. Eym. Direct. Inquisit. iii. 332.

ABITIBBE LAKE, a lake of Upper Canada, ip N. lat. 48►► 35’, W. long. 82►► 0’, near the set- tlement of Frederic.

ABITIBBE RIVER, a river of Upper Canada, flowing out of the lake of that name, and empty- ing itself into the Moose river, near James’s Bay. The Abitibbes are a native tribe of this neigh- bourhood.

ABJECT > .&►►.\ Ab . .ad to cast Qr throw

ABJECTEDNESS-f away from; to be reduced

t0 a low rank or Condition ; o be degraded.

The audacite and bolde speeche of Daniel signi- fy eth the abiection of the kynge and his realme.

The Exposition of Daniel, by Geo. Joye, p. 75.

I deemed it better so to die, Than at my foemen’s feet an abject lie.

Mirr. for Mag. p. 20.

Rebellion

Came like itself in base and abject routs, Led on by bloody youth goaded with rage, And countenanc’d by boys and beggary.

Shakspeare’s Henry IV. I was at first, as other beasts that graze The trodden herb, of abject thoughts and low.

Milt. Paradise Lost. b. ix. 1. 571. The rarer thy example stands, By how much from the top of wond’rous glory. Strongest of mortal men, To lowest pitch of abject fortune thou art fall’n.

Milton’s Sampson Agonistes. By humility I mean not the abjectness of a base

mind ; but a prudent care not to ovcr-valun oursclvoa upon any account. Grew’s Cosmoluyiu Sacra, b. ii. c. 7.

Let mean princes

Of abject souls, fear to reward great actions. I mean to show,

That whatsoe'er subjects, like you, dare merit, A king, like me, dares give.

Dry den's Marriage a la Mode. To what base ends, and by what abject ways, Are mortals urg'd through sacred lust of praise !

Pope's Essay on Criticism. How poor, how rich, how abject, how august, How complicate, how wonderful is man ! How passing wonder, He who made him such.

Young,

ABJURE', (Ab : juro, to swear from, to ABJURA'TION. (forswear; to swear; to go

away from, or leave ; to disown, to disclaim, to

renounce upon oath.

By our ancient customs felons were allowed to fly to a sanctuary, and on swearing to leave the kingdom forthwith, and for ever were exempted from farther punishment. Vide Rastall's Collection of Statutes.

In this season were banished out of Southwarke, twelve Scottes whiche had dwelt there a long season, and werconveied fro parishe toparishe by the consta- ble, like men yt had abiured the realme, and on their vttermost garment a white crosse before, and another behynd them. Thus were they conueyed through London northwarde till they came to Scotlande.

Hall, repr. 1809, p. 648. Either to die the death, or to abjure For ever the society of man.

Shakspeare's Midsum. Night's Dream.

No man, therefore, that hath not abjured his reason and sworn allegiance to a preconceived fantastical hypothesis, can undertake the defence of such a supposition. Hale.

A Jacobite, who is persuaded of the pretender's right to the crown, cannot take the oath of allegiance ; or, if he could, the oath of abjuration follows, which contains an express renunciation of all opinions in favour of the claim of the exiled family.

Paley’s Moral Philosophy.

ABJURATION, in ancient customs. The following oath taken by a person guilty of felony ; who, having fled to a place of sanctuary, engages to leave the kingdom for ever, will furnish a cu- rious illustration of this subject : ” This heare, thou sir Coroner, that I, M. of H. am a robber of sheepe, or of any other beast, or a Murderer of one, or of mo, and a felon of our Lord the king of Englad; and because I haue done many such euilles or robberies in his land, I do abjure the land of our Lord Edward, king of England, and I shall haste me towards the Port of such a place, which thou hast given me, and that I shal not go out of the high way, and if I doe, I wil that I be taken as a robber, and a felon of our Lorde the king : And that at such a place I will diligently seeke for passage, and I will tarie there but one flud and ebbe, if I can have passage, and unlesse I can haue it in such a place, I wil goe euery day into the Sea up to my knees, assaying to passe ouer, and unlesse I can do this within fortie dayes, I wil put my selfe againe into the Church, as a robber and a felon of our L9rd the king, so God me helpe & his holie iudgement,” ××,c. Rastatt’s Collect. ofStat. p. 2.

ABJURATION, in English law, signifies the renouncirg and disclaiming upon oath, any right

of the late Pretender to the crown of these king- doms; also, according to 25 Charles II. an oath abjuring particular doctrines of the church of Rome.

ABLA’CTATE, > Ab : from, and lacto, to

ABLACTA’TION, J feed with milk. To wean a child.

ABLAIQUET, or ABLAIKET, a town of Rus- sian Tartary, 540 miles S. E. of Tobolsk, remark- able only for the remains of a great temple and other antiquities.

ABLANCOURT, (PERROT, D’,) See PERROT.

ABLANIA, in botany, the trichocarpus genus of Linnaeus.

ABLAQUEATION, in horticulture, the art or practice of opening the ground about the roots of trees, to let the air and water operate upon them.

ABLATIVE, in grammar, the 6th case of the Latin nouns, pronouns, participles, and gerunds. Priscian calls it the comparative case, as it serves for comparing as well as taking away. It is op- posed to the dative, as the latter expresses the action of giving. In English, French, &c. there is no precise mark whereby to distinguish the ablative from other cases ; and we only use the term in analogy to the Latin. Thus, in the two phrases, ” the importance of the question,” and ” he spoke much of the question,” we say, that of the question in the first is genitive, and in the latter ablative ; because it would be so, if the two phrases were expressed in Latin. The question concerning the Greek ablative has been the sub- ject of a famous literary war between two great grammarians, Frischlin and Crusius ; the former of whom maintained, and the latter opposed, the reality of it. The dispute still subsists among their respective followers.

ABLATIVE ABSOLUTE, in the Latin grammar, is a clause or phrase detached from, and indepen- dent of the rest of the sentence, and answering to the genitive absolute of the Greek gramma- rians.

ABLAZE’, a. On blaze. See BLAZE.

A’BLE, v. & adj.-\ Abal, Goth. Strength,

A’BLENESS, f power, force, skill, are the

ABIL’ITY, Heading ideas. The verb,

A’BLY. / to able, had two other sig-

nifications, now obsolete : first, to make able, or to give power for any purpose, of the same im- port as to enable ; and, secondly, to warrant, or answer for.

God tokeneth and assigneth the times Ming hem to her proper offices.

Chaucer’s Boecius, b. i. fol. 215, col. 1.

And ye, my ladies, that ben trewe and stable, By -way of kinde ye oughtin to ben able To haue pitie of folke that ben in paine, Now haue ye cause to clothin you in sable.

Chaucer, the Complaint of Mars, fol. 326, col. 4. Lytel Lowys, my

Sonne, I perceive well by cer- taine evidences thyne abylyte to lerne scyences, touching nombres and proporcions, and also will consydre I thy besye prayer in especyal to lerne the tretyse of the Astrolabye.

Chaucer's Conclusion of the Aitrolabie.

That if God willinge to schewe his wraththe, and

to make his power knownn, hath suffrid in greet pa-

cience vessels of wrathhe able into deeth, to schewe

the richossis of his glorie into vessels of mcrci whiche he made redi into glorie.

Wiclif. Romayns. chap. ix.

For no doute to dreade to ofifende God and to loue to please him, in all thing quyckeneth and sharpeneth all the wittes of Cristes chosen people : and ableth them so to grace, that they joy greatly to withdrawe their eares, and all their wittes and mem- bres frome all worldly delyte, and frome all fleschely solace.

Howell's State Trials, vol i. p. 202. Trial of Master William Thorpe for Heresy, 8, Henry IV. A. D. 1407, written by himself. A noble crew about them waited round Of sage and sober peeres all gravely gownd, Whom farre before did marche a goodly band Of tall young men all able armes to sound, But now they laurell-branches bore in hand ; Glad signe of victory and peace in all their land. Spenser's Faerie Qveene, b. i. canto, xii.

Love all ; trust a few ;

Do wrong to none : be able for thine enemy Rather in power than use, and keep thy friend Under thy own life's key. Shakspeare.

Cuts. They say all louers sweare more perfor- mance than they are able, and yet reserue an ability that they neuer perform ; vowing more than the per- fection of ten, and discharging lesse than the tenth part of one. Shakspeare's Troi. fy Cres. act iii. sc. 1. To sell away all the powder in the kingdom, To prevent blowing up. That's safe, ile able it.

Middl. Game at Chess. D. ii. b. act 2 Of singing thou hast got the reputation, Good Thyrsis, mine I yield to thy ability ××× My heart doth seek another estimation.

Sidney , b. i.

If aught in my ability may serve To lighten what thou suffer'st, and appease Thy mind with what amends is in my pow'r.

Milton's Sampson Agonistes, 1. 744. They gave after their ability unto the treasure.

Ezra, ii. 69.

If any man minister, let him do it as of the ability which God giveth : that God in all things may be glorified through Jesus Christ. 1 Peter, iv. 11.

Wherever we find our abilities too weak for the per- formance, he assures us of the assistance of his Holy Spirit. Rogers'* Sermons.

And novels (witness every month's review,) Belie their name, and offer nothing new. The mind, relaxing into needful sport, Should turn to writers of an abler sort, Whose wit well manag'd, and whose classic stylej Give truth a lustre, and make wisdom smile.

Cowper's Retirement.

ABLECTI, in Roman antiquity, a select body of soldiers chosen from among those called ex- traordinarii. Polyb. vi. 31.

ABLEGMINA, in Roman antiquity, those parts of the entrails of victims, which were offered in sacrifice. They were sprinkled with flour, and burnt upon the altar ; the priests pouring wine on them.

ABLET, or ALBLEN, in ichthyology, the com- mon bleak, a small fresh-water fish, called in Latin alburnus. See ALBURNUS and CYPRINUS.
ABLIS, a market town of France, in Orleans, department of the Seine and Oise, arrondissement of Etampes, six leagues E. N. E. of Chartres.

ABLUTION, Ab: luo, to wash from. The act of washing, or the water used in cleansing or purifying. Also the ceremonial purification ob-

served under most systems of religion, ancient and modern, true and false. Lastly, the cup oi wine and water, formerly given to the people in the Romish church after the host.

SOB. Sirrah, my varlct, stand you forth and

speak to him,

Like a philosopher. Answer i'the language. Name the vexations, and the martyrizations Of metals, in the work.

FAC. Sir, Putrefaction.

Solution, ablution, sublimation, Cohobation, Calcination, Ceration, and Fixation. Jonson's Alchemist, act ii. sc. 4.

Hearts may be found, that harbour at this hour That love of Christ, and all its quick'ning pow'r And lips unstain'd by folly or by strife, Whose wisdom, drawn from the deep well of life. Tastes of its healthful origin, and fiows A Jordan for the ablution of our woes.

Cowper's Conversation.

ABLUTIONS, in religion, appear to be as old as any ceremonies, or even external worship itself. Moses enjoined them; the heathens adopted them ; and Mahomet and his followers have continued them : they thus make a consi- derable part of the most ancient religions. The Egyptian priests had their diurnal and nocturnal ablutions; the Grecians their sprinklings; the Romans their lustrations and lavations ; the Jews their washing of hands and feet, besides their baptisms. The ancient Christians practised ab- lution before communion ; which the Romish church still retains before mass, and sometimes after. The attachment of the Hindoos for the Ganges is such, that ablution in its streams is placed amongst the first duties of their reli- gion ; and when, from necessity, they cannot reach that river, if in bathing they use the exclamation, " O Ganges, purify me !" the Brahmins assure them that the service is equally efficacious.

ABLUTION, in pharmacy, is applied both to a preparation which divers remedies undergo, by washing them in water, to cleanse them or increase their power, and to medicines which carry off impurities flora the system.

ABO, a seaport, an ancient capital of Finland, which lies upon the point where the gulphs of Bothnia and Finland unite, 120 miles N. E. of Stockholm. It stands on the estuary of the Aura- jocki, is a good port, and is the see of a bishop ; the seat of a governor, and of a high court of justice for S. Finland. The city became incorporated with the Russian empire in 1809. It is well built, and carries on a thriving trade with Eng- land, Holland, and the Mediterranean, in its manufactures of silk, cotton, cloth, paper, rope, &c. It has an extensive glass-house, a sugar refinery of good repute, and two excellent dock yards. Its

external trade in iron, timber, fur and corn is also considerable. It has an university, founded by queen Christina in 1640, and endowed with the same privileges as that of Ups'L Long. 22►►, 13'. E. Lat. 60►►, 27'. N. Population about i AOOO.

which differs among our older writers, corres im- mediately from the French dbord, as alter abord, to enter a ship, to go aboard.

And afterwards a great wynde arrising iu y sea, by meane whereof their shippes might no longar tarry there, for that, that it was a place wt out porte ; one part of the embarqued theself, and passing bifore a rockky place call'd Ithis, they came to aborde in the porte of Philie.

Thucidides, by Tttomas Nicolls, Lond. 1550, fo. 53, p. 1. But there it resteth and abode This great shyp on anker rode ; The lorde came forth, and when he sigh ; That other ligge on borde so nighe ; He wondreth, what it might bee, And bad men to go in and see.

Gower, Con. A. book ii. And how the tempest all began, And how he lost his steersman Which that the sterne, or he tooke keepe, Smote ouer the hard as he slepe,

Chaucer's, Fame, b. i. fol. 277. c. 2.

And wha we had gotte a shippe y' wolde sayle

vnto Phenices, we went aborde into it, and set forth.

Bible, Lond. 1539, Actes xxi.

We left this place about eleven in the morning,

and were again conveyed, with more sunshine than

wind, aboard our ship. Fielding's Voyage to Lisbon.

ABODE', -\ Bodian, Sax. to portend;

ABOD'ANCE, (to abode, bode, and forbode,

ABODE'MENT, fare synonymous, and signify

ABOD'ING. 3 to show, or exhibit some ap- pearance, sign, or token, from which good or evil is inferred.

Nay, nay, it may nat stonden in this wise For nece mine, this writen clerkes wise That percii is with dretching in draw Nay, such abodes

ben nat worth an haw. Chaucer, third Booke of Troilus, fol. 171. col. 2.

For he (bishop Felix) brought all the province unto the faith, and workos of iustice, and in the end to rewarde of perpetuall blessednesse, according to the abodement of his name, which in Latine is called Felix, and in our English tongue, Happie.

Stowe's Chronicle, Howe's ed. 1614, p. 61.

ABO-HUS, or ABO-SLOT, an ancient fort in Finland, on a peninsula, near the mouth of the river Aura-jocki, which has often suffered from enemies, and by fire.

ABOI-VENTS, in fortification, lodgments con- structed in a oveted way to protect soldiers from the weather.

ABOLISH,) Ab : oleo. to emit an odour.

ABOLISHMENT, > Hence aboleo, to lose an

ABOH'TION, j odour. To extinguish the very odour ; to destroy, to annul, to abrogate, tc annihilate.

Now to th' entent that ye may yet farther perceive and se, that they by the distruccion >f the clergy, meane the clere abolycion of Christes faith : it may like you to conferre, and compare together ii places of hys beggars bill. Sir Thomas More's Works, p. 311

The plain and direct way had been to prove, that all such ceremonies, as thev require to be abolished are retained by us with the hurt of the church, or with less benefit than the abolishment of them would bring. Hooker, b. iv

BORU.

familiar 3 sea-term, the orthography of

For him, hat for th } thou hast made ?

Jlfito,b. Hi. 1. 163.

ABO 3r

Nor could Vulranian flame The stench abolish, or the savour tame.

Dryd. Virg. Geo. iii.

An apoplexy is a sudden abolition of all the senses ⬜⬜nd of all voluntary motion, by the stoppage of the flux and reflux of the animal spirits through the nerves destined for those motions. Arbuthnot on Diet.

ABOLITION OF SLAVERY. The Society for mitigating and gradually abolishing the state of Slavery throughout the British Dominions, some- times called the ANTI-SLAVERY SOCIETY, has been recently formed.

His Royal Highness, the Duke of Gloucester is president of the society. In the list of vice- presidents, are the names of many of the most distinguished philanthropists of the day, and among them, that of the never to be forgotten champion of the negro's cause, Mr. Wilber- force.

The society has already published several works illustrative of the state of slavery, and pointing out its atrocious evils, in a commercial and political, as well as a religious point of view; and which, by apparently unanswerable arguments tend to hold up the system to merited detestation, by every class of society, from the statesman to the peasant. The following sum- mary of the evils to which the slaves in the British colonies are subject, may serve to give some idea of their miserable and degraded con- dition : ⬜⬜⬜

There are, in the colonies of Great Britain, upwards of 800,000 human beings in a state of degrading personal slavery.

These unhappy persons are the absolute property of their master, who may sell or trans- fer them at his pleasure, and who may also re- gulate, according to his discretion, (within certain limits) the measure of their labour, their food, and their punishment.

Many of the slaves are (and all may be) branded like cattle, by means of a hot iron, on the shoulder or other conspicuous part of the body, with the initials of their master's name ; and thus bear about them, in indelible characters, the proof of their debased and servile state.

The slaves, whether male or female, are driven to labour by the impulse of the cart- whip, for the sole benefit of their owners, from whom they receive no wages ; and this labour is continued (with certain intermissions for break- fast and dinner,) from morning to night through- out the year.

In the season of crop, which lasts for four or five months of the year, their labour is pro- tracted, not only throughout the day, as at other

times, but during either half the night, or the whole of every alternate night.

Besides being generally made to work under the lash, without wages, the slaves are further obliged to labour for their own maintenance on that day which ought to be devoted to repose and religious instruction. And as that day is also their only market-day, it is of necessity a day of worldly occupation, and much bodily exertion.

The colonial laws arm the master, or any one to whom he may delegate his authority, with a power to punish his slaves to a certain extent,

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without the intervention of the magistrate, and without any responsibility for the use of this tremendous discretion; and to that extent he may punish them for any offence, or lor no ot- fence. These discretionary punishments are usually inflicted on the naked body with the cart-whip, an instrument of dreadful severity, which cruelly lacerates the flesh of the sufferer. Even the unhappy females are equally liable with the men to have their persons thus shame- lessly exposed and barbarously tortured at the caprice of their master or overseer.

The slaves being regarded in the eye of the law as mere chattels, they are liable to be seized in execution for their master's debts ; and, with- out any regard to the family ties which may be broken by this oppressive and merciless process, to be sold by auction to the highest bidder, who may remove thtin to a distant part of the same colony, or even exile them to another colony.

Marriage, that blessing of civilized, and even of savage life, is protected in the case of the slaves by no legal sanction. It cannot be said to exist among them. Those, therefore, who live together as man and wife, are liable to be sepa- rated by the caprice of their master, or by sale for the satisfaction of his creditors.

The slaves in general have little or no access to the means of Christian instruction.

The effect of the want of such instruction, as well as of the absence of any marriage tie, is, that the most unrestrained licentiousness (ex- hibited in a degrading, disgusting, and depopu- lating promiscuous intercourse,) prevails almost universally among the slaves ; and is encouraged no less universally by the example of their superiors the

whites.

The evidence of slaves is not admitted by the colonial courts, in any civil or criminal case affecting a person of free condition. If a white man, therefore, perpetrates the most atrocious acts of barbarity, in the presence of slaves only, the injured party is left without any means of legal redress.

In none of the colonies of Great Britain have those legal facilities been afforded to the slave to purchase his own freedom, which have produced such extensive beneficial effects in the colonial possessions of Spain and Portugal. On the con- trary, in many of our colonies, even the volun- tary manumission of slaves by their masters has been obstructed, and in some rendered nearly im possible, by large fines.

It is an universal principle of colonial law, that all black or coloured persons are presumed and taken to be slaves, unless they can legally prove the contrary. The liberty, therefore, even of free persons, is thus often greatly endangered, and sometimes lost. They are liable to be ap- prehended as run-away slaves, and to be sold into endless bondage as such, if they fail to do that which though free, nay, though born perhaps in Great Britain itself, they may be unable to do ००० namely, to establish the fact of their freedom by such evidence as the colonial laws require.

Many thousand infants are annually born within the British dominions to no inheritance but that of the hapless, hopeless servitude which has been described ; and the general oppressive*

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ness of which might be inferred from this strik- ing and most opprobrious fact alone, that while in the United States of America the slaves in- crease rapidly ००० so rapidly as to double their number in 20 years ००० there is, even now, in the British colonies, no increase, but on the con- trary a diminution of their numbers.

The more immediate objects of the society are, to ameliorate the condition of the slaves, and to facilitate the means by which they may obtain their freedom, and for the accomplish- ment of these intentions : To remove all the existing obstructions to the

manumission of slaves ; ००० To cause the slaves to cease to be chattels in

the eye of the law ; ⁂

To prevent their removal, as slaves, from colony to colony, and, under certain modifications, their sale or transfer, except with the land to which they might be attached ; ⁂ To abolish markets and compulsory labour on the Sunday ; and to make that day a day of rest, as well as of religious worship and in- struction ; and also to secure to the slaves equivalent time in each week, in lieu of Sun- day, and in addition to any time which in- dependently of Sunday is now afforded them, for cultivating their provision grounds ; ⁂ To protect the slaves, by law, in the possession and transmission of the property they may thus, or in any other way, acquire ; ⁂ To enable the slave to purchase his freedom, by the payment at once of a fair price for his re- demption, or of a fifth part of that price at a time, in return for an additional day in the week to be employed for his own bene- fit;⁂

To make the testimony of slaves available in courts of justice, both in civil and criminal cases ; ⁂

To relieve all negros and persons of colour from the burden of legally proving their free- dom, when brought into question, and to throw on the claimant of their persons the burden of legally proving his right to them ; ⁂ To provide the means of religious instruction for the black and coloured population, and of Christian education for their children ; ⁂ To institute marriage among the slaves ; and to protect that state from violation, and from either forcible or voluntary disruption ; ⁂ To put an end to the driving system ; ⁂ To put an end also to the arbitrary punishment of slaves, and to place their persons as well as

property under the guardianship of the law ;

To provide that all children born after a certain dav shall be free, ⁂ care being taken of their education and maintenance until they shall be capable of acting for themselves ; ⁂ To provide that no colonial governor, judge attorney-general, or fiscal, shall be a pos- sessor of slaves, or shall have a direct and obvious reversionary interest in such property, or shall be the agent of the proprietors of slaves.

The society has further proposed, that the final extinction of slavery should be accom- plished, by the redemption of all females from tlie lowest age, to about 40 ; by which means,

all their posterity would be born free. The cost of this measure is estimated at ––300,000 ; but should parliament refuse to accede to this, or some other effective plan, the society trust that their object will nevertheless be obtained, by bringing free labour into competition with slave labour ; so that the latter shall become of so little value as to be not worth retaining. The parent society is supported by many auxiliaries, not fewer than 250 of which are in active opera- tion in various parts of the kingdom ; and if they continue to proceed with the energy that has hitherto marked their progress, there can be little doubt but that they will finally succeed in a cause, in which, truth, justice, and every noble principle of human nature, as well as the dic- tates of religion, are arrayed on their side.

ABOLLA, from the Lat. bulla, Roman or- naments, or from the Gr. a/ i/3o\jj ava/3o\?j, cloth- ing, a warm kind of garment, lined or doubled, worn by the Greeks and Romans, chiefly out of the city, in following the camp. ––– Abolla seems to have stood opposed to the toga, which was a garment of peace, as the abolla was of war. Kings appear to have used it, and Caligula was jealous of the notice attracted by king Ptolemy for appearing at the shows in a purple one. It was also worn by judges in the execution of their office, whence the phrase of Juvenal : 'Facinora majores abolla.' Mart, viii. 46. v. 1.
ABOMASUM, or ABOMASIUM, names of the fourth stomach of ruminating animals. It is in the abomasus of calves and lambs, that the runnet, or earning, is formed, wherewith milk is curdled. See COMPARATIVE ANATOMY.

ABOMEY, the capital of Dahomey, on the Slave Coast of Africa, E. of Ashantee, about 100 miles from the sea. It consists of mud houses and huts scattered over a large area, and surrounded by a broad and deep ditch. The king's palaces, of which he has two within the town and one in the suburbs, are said to be ornamented in various parts with human skulls. Cotton is manufactured here with some success, and the colours used in dying it, are both bright and permanent.

ABOMINATE, v.\ Ab : ominor, to turn ABOM'INABLE, / away from, as from an ABOM'INABLENESS, \evil omen; to deprecate ABOM'INABLY, i an ill omen ; to turn ABOMINA'TION. j away from, with loath ing and detestation ; to hate utterly, to execrate.

Thei knowlochen that thei knowen God ; but bi dedis thei denyen whanne thei ben abominable, and unbileeful, and reprenable to all good werk.

Widif. Tyte. chap. 1.

Al whom therfore by the whole thousande on an heape (for no fewer he nombreth them) dothe thys dywelyshe dronken soule abomynably blaspheme, and calleth them lyars and falsefiers of scripture, maketh them no better then draffe.

Sir Thomas Mwe's Work, p. 679

I abhor such phanatical phantasms, such insoci- able and point-devise companions, such rackers of orthography, as do speak dout fine, when he should say doubt ; det, when he should pronounce debt ; d, e, b, t, not d, e, t. He clepcth a calf, cauf, half, hauf : neighbour, vocatur nebour ; neigh abbre- viated ne ; this is abhominable, which he would call

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abtiominable : it insinuateth me of insanie. Ne in- telligis Domine, to make frantick,lunatick ?

Shakspeare's Love's Labour Lost. Where all life dies, death lives, and nature breeds, Perverse, all monstrous, all prodigious things, Abominable, inutterable, and worse Than fables yet have feign'd, or fear conceiv'd, Gorgons, and hydras, and chimeras dire.

Milton's Paradise Lost, b. ii. This infernal pit Abominable, accurs'd, the house of woe. Milton.

Pride goes hated, cursed, and abominated by all.

Hammond.

And the high places that were before Jerusalem, which were on the right hand of the mount of Cor- ruption, which Solomon, the king of Israel, had builded for Ashtoreth the abomination of the Zidonians, and for Chemosh the abomination of the Moabites, and for Milcom the abomination of the children of Ammon, did the king defile. 2 Kings, xxiii. 13.

The queen and ministry might easily redress this abominable grievance, by endeavouring to choose men of virtuous principles.

Swift's Project for the Advancement of Religion.

Covetousness is idolatry, that the love of money is the root of -all evil, that it has occasioned in some even the shipwreck of their faith, and is always, in whomsoever it obtains, an abomination.

ABON, ABONA, or ABOXIS, from abbon, or avon, Celt, a river, the ancient name of a river :n Britain, supposed to be the Avon ; also a town in Albion, supposed by Camden to be Abingdon, and by others, who argue from the distance, (9 miles from Venta Silurum) to be Porshut, upon Avon, opposite Bristol.

ABONY, a flourishing Hungarian settlement, in the Ketskemet and county of Pest.

ABORIGINES. The term aborigines, though now an appellative, was originally a proper name given only to a people of Italy, who inhabited ancient Latium. St. Jerome says, they were so called, as being, absque origine, the primitive planters of the country after the flood ; Aurelius Victor, that they were called Aborigines, q. d. Aberrigines, from ab, from, and errare, to wander ; as ha’ving been before a wandering people. The term in fact signifies, of unknown origin ; and has therefore in ancient and modern times described the oldest inha- pitants of any country.

ABORT’, a. & n. Ab : orior, to rise from ;

ABOR’TIOX, ˆ to arise out of season;

ABORSE’MEXT, f to bring forth premature-

ABOR’TIVE, { ly, or before the time ; to

ABOR’TIVELY, \ miscarry ; to fail in bring-

ABORT MEXT. ing to perfection.

Of these words abortion and abortive only are in present use. They are all applied to animal and vegetable productions, and to imperfect or unsuccessful mental operations.

Thou eluish mark’d abortive rooting hogge,

Thou that wast seal’d in thy natiuitie

The slaue of nature, and the sonne of hell.

Shakspeare’s Richard III. act i. sc. 3. How often hast thou waited at my cup, Remember it, and let it make thee crest-fall’n ; Ay, and allay this thy abortive pride.

Shakspeare’s Henry VI. p. ii.

All tli’ unaccomplished works of nature’s hand, Abortive, monstrous, or unkindly mix’d, Dissolv’d on earth, fleet hither.

Milton’s Paradise Lett, b. iii. 1. 456. The void profound

Of unessential night receives him next, Wide-gaping ; and with utter loss of being Threatens him, plung’d in that abortive gulf.

Idem, b. ii. 1. 451.

Concealed treasures, now lost to mankind, shall be brought into use by the industry of converted peni- tents, whose wretched carcases the impartial laws dedicate, as untimely feasts, to the worms of the earth, in whose womb those deserted mineral riches must ever lie buried as lost abortments, unless those be made the active midwives to deliver them.

Bacon’s Physical Remains.

Many politic conceptions, so elaborately formed and wrought, and grown at length ripe for delivery, do yet, in the issue, miscarry and prove abortive.

South’ s Sermons Nor will his fruit expect

Th’ autumnal season, but, in summer’s pride ; When other orchards smile, abortive fail. Phillips. Behold my arm thus blasted, dry, and wither’d, Shrunk like a foul abortion, and decay’d, Like some untimely product of the seasons. Howe,

ABORTION, in midwifery, the exclusion of a foetus before it has acquired a sufficient de- gree of perfection to enable it to perform respira- tion and the other vital functions. See MID- WIFERY.

ABORTIVE CORN, a distemper of corn men- tioned by M. Gillet, and suspected to be occa- sioned by insects. It appears long before harvest, and may be known by a deformity of the stalk, the leaves, the ear, and even the grain.

ABORTIVE VELLUM, is made of the skin of an abortive calf.

ABOU-HANIFET, in Mahometan theology, a doctor and founder of a sect in the 8th century, who was imprisoned and died at Bagdad, A.D.

757, for his denial of predestination. His fol- lowers became numerous, and a mausoleum was built by one of the caliphs to his memory.

ABOUILLONA, or ABELLIONTE, a lake, is- land, and town of Asiatic Turkey, at the foot of Olympus, and supposed to contain the scite of the ancient Apollonia. Itis distant eight miles, and a stream called Lupat communicates from the W. of the lake to the sea of Marmora.

ABOUKIR, a town of Egypt, 10 miles N.E. of Alexandria, between the sea, and the lake Mareotis. It is the ancient Canopus, according to M. Savary, and stands upon a ridge of rocks which communicates with Aboukir, a small island, about a league from the town, mentioned by Pliny and Strabo.

ABOUKIR BAY, formed by the same ridge of rocks, offered the best landing place which Sir Ralph Abercrombie could select for the disem- barkation of the British army in 1801, (see Abercrombie,) and is distinguished in the British annals as the scene of the memorable battle of the Nile, (or of Aboukir,) fought by our intrepid NELSOX, 1st of August, 1798.

ABOULFEDA, (Ismael,) prince of Hamah in Syria, one of the most celebrated of the Arabian geographers and historians. He was born at Damascus in 1 273, and soon became distinguished

by his learning. In 1321 he wrote an important geographical work, which Graevius published in London, in 1660. He wrote also the lives of Mahomet and Saladin ; the former was printed at. Oxford in 1723, and the latter at Ley den in 1 732. His Annals of Mahometanism, a work in high estimation, was published with a Latin ver- sion at Copenhagen, in 5 vols. 4to. in 1789 ××× 1794. He was a soldier as well as a scholar, and served in several expeditions with his father; was present at the storming of Tripoli in 1289, and in 1291 at the capture of Acre, distinguishing himself as well by his skill as his bravery. He died in 1331. Professor White gives several chapters of extracts from Abulfeda in his Pocock's Specimen Hist. Arabum, Oxon. 1806. ABOULOLA, (Ahmed,) an eminent Arabian poet, blind, like our great Milton ; but esteemed one of the principal ornaments of his country. He was born A.D. 973, and died 1057.

ABOUTIGE, or ABUTIGE, a market-town in Upper Egypt, near the Nile, where quantities of poppies grow, of which the natives make the best opium in the Levant. It was formerly the abotis of Stephanas.

ABOVE', prep, and adv. Ang. Sax. bufan, be-ufan ; top or head. Written variously by our older writers. It designates the upper or uppermost, and is much used as a prefix in composition.

And God sent him tokenyng on nyght als he slepe, Dat he suld fynd a palmere orly at morn, At pe south zate, alone as he was born, And if he wild praie him, for Jhesu Crite's loue, He wild dope bataile, and pe suld be aboue.

R. Brunne, p. 32.

But one thing yet there is aboue all other I gaue him winges, wherewith he might up flie To honour and fame ; and if he would to hygher Then mortal things aboue the starry skye. Wyatt. Descend from Heav'n, Urania, by that name If rightly thou art call'd, whose voice divine Following, above th' Olympian hill I soar Above the flight of Pegasean wing. Milton.

The inhabitants of Tirol have many privileges above those of the other hereditary countries of the emperor. Addison.

True dignity is his, whose tranquil mind Virtue has raised above the things below ; Who, every hope and fear to heaven resigned, Shrinks not, though Fortune aim her deadliest blow.

Seattle's Minstrel.

ABOUND', v.-v Abundo, ab: from undo,

ABOUND'ING, fa wave. A metaphor derived

ABUN'DANCE, \fromwaterwhenit exceeds

ABUN'DANT. I the bounds which should

ABUN'DANTLY,.) contain its stream. Hence,

to overflow ; to be rich ; to have in great plenty.

And, brethren, we preien ghou, that ghe knowe

hem that traucilen among ghou, and ben souereyns to

ghou in the lord, and techen ghou that ghe haue hem

aboundauntli in charite, and for the werk of hem

haue ghe pees with hem. Wiclif. 1 Tessal. chap. v.

For well I wot, most mighty sovereign,

That all this famous antique history,

Of some th' abundance of an idle brain

Will judged be, and painted forgery. Spemer.

Good, the more

Communicated, more abundant grows ; The author not impair'd ; but honour'd more.

Paradise Lost, b. v.

God on thee

Abundantly his gifts hath also pour'd . Inward and outward both, his image fair.

Paradise Lost, b. vnt,

Let the waters bring forth abundantly the moving creature that hath life. Genesis i. 20.

Their chief enterprise was the recovery of the Holy Land ; in which worthy, but extremely diffi- cult action, it is lamentable to remember what abun- dance of noble blood hath been shed, with very small benefit unto the Christian state.

Sir Walter Raleigh'i Essays. At the whisper of thy word, Crown 'd abundance spreads my board. Craihaw

Circles are prais'd, not that abound In largeness, but the' exactly bound : So life we praise that does excel, Not in much time, but acting well. Waller

'1'ne doubled charge his subjects' love supplies ; Who, 'in that bounty, to themselves are kind : So glad Egyptians see their Nilus rise ; And, in his plenty, their abundance find.

Dryd. Ann. tfvr.

Heroic poetry has ever been esteemed the greatest work of human nature. In that rank has Aristotle placed it ; and Longinus is so full of the like expres- sions, that he abundantly confirms the other's testi- mony. Dryd. State of Innocence, pref. The river Inn is shut up between mountains covered with woods of fir-trees. Abundance of peasants are employed in hewing down the largest of these trees ; that, after they are barked and cut into shape, are tumbled down. Addis, on Italy. If the Prophecies have been fulfilled (of which there is abundant demonstration) the Scripture must be the word of God ; and if the Scripture is the w.ord of God, Christianity must be true. Cowper's Letters.

ABOUT', prep, and adv. Saxon abuba, on bu-ja, or on bot>a. The first limit or boundary of any thing. It also implies approximation to other things. About was also used like a verb in the imperative mood, and is so still in nautical phraseology. In this sense it is derived imme- diately from the French a-bout, a verb being understood.

Goggomagog was a geand swibe grete and strong, Aboute four and twenti fet me seib he was long.

R. Gloucester, p. 22.

Gold hath these natures : greatness of weight ; closeness of parts ; fixation ; pliantness, or softness ; immunity from rust ; colour, or tincture of yellow : Therefore the sure way (though most about) to make gold, is to know the causes of the several natures before rehearsed. Bacon's Natural Hist. No. 328.

About him all the sanctities of Heav'n Stood thick as stars, and from his sight receiv'd Beatitude past utt'rance. Milton.

My brain, about again ; for thou hast found New projects now to work upon. Iron Age. 1632. Children should always be heard, and fairly and kindly answered, when they ask after any thing they would know, and desire to be informed about. Cu- riosity should be as carefully cherished in children, as other appetites suppressed. Locke.

Even in the hour of death, he (the good man) considers the pains of his dissolution to be nothing else than the breaking down of that partition which stands betwixt his soul, and the sight of that being who is always present, and is about to display himself to him in fulness of joy. Spectator.

ABRA, a silver coin of Poland, formerly

worth about one shilling sterling, also a coin of Poland of the value of three half-pence.

ABRA, an island of the Southern Ocean, in the straits of Magellan, at the entrance of the passage, as it is called.

ABRABANEL, ABARBANEL, or AVRAVANEL, (Isaac,) a celebrated rabbi, born at Lisbon, in 1437, and said to be descended from king David. He was counsellor to Alphonso V, and after- wards to Ferdinand I. but was obliged to leave Portugal along with his brethren Jews, in 1492. Though he was an avowed enemy to Christianity in his writings, yet he treated Christians with politeness. The Jews called him the sage, the prince, and the great politician. He wrote a commentary on the Old Testament, which is scarce ; a Treatise on the Creation, wherein he refutes Aristotle's notion of the eternity of the world ; another on the prophecies relating to the Messiah, against the Christians ; with a work concerning articles of Faith, and some others of less importance. He died at Venice in 1508, aged 71.

ABRACADABRA, is said to have been the name of a god worshipped by the Syrians, and was recommended as a magical antidote against agues and fevers. It was written in a kind of inverted cone, omitting the last letter of the former every time it was repeated : thus, a/3paica

afip

Saft

a ft p a K a S

a ft p a K a

a ft p a K

a ft p a

ABRADATES, in ancient history, a king of Susa who surrendered himself to Cyrus, and was killed in battle for the Persian cause. Xenoph. Cyrop. v.

ABRAHAM, GPTDK, Heb. i. e. Father of a great multitude, the youngest son of Terah, and the 10th in descent from Noah, founder of the Jewish nation. One fourth of the book of Genesis i►► occupied with his history ; and to its ample and authentic details we refer the reader. In the first ages of Christianity, the Sethians dispersed a work entitled Abraham's Revelation; and a work on the Creation, ascribed to him, which is mentioned in the Talmud, was printed at Paris in 1552 : Rittangel, a converted Jew, professor at Konigsberg, published it with re- marks, in 1642.

ABRAHAM, (Nicholas,) a learned Jesuit, of Lor- rain, born in 1589, and seventeen years professor of Divinity in the university of Pont-a-Mousson. He wrote a Collection of Theological pieces in folio, entitled Pharus Veteris Testamenti ; Notes on "V irgil and Nonnius ; a Commentary on some of Cicero's Orations, in 2 vols. folio, and other works.

ABRAHAMIANS, or ABRAHAMITES, a sect of monks, in the 9th century, who were exter- minated by Theophilus for worshipping images ; Jso a sect which, in the 8th century, renewed

the errors of Pau JLS ; but were suppressed by Cyriacus, patriarch of Antioch.

ABRAM'S CREEK, a river of North America, entering the Hudson, about 4 miles from the city of that name, in the state of New York.

ABRAMIS, in ichthyology, the Cyprinus latus, or bream.

ABRANTES, a town of Portugal, in Estre- madura, seated on the Tajus, and giving name to a marquisate. It is surrounded with gardens and olive yards, and occupies a most romantic situation. Distant 45 miles E. of Lisbon.

ABRASA, in medicine, ulcers attended with abrasion of part of the substance, or where the skin is so tender as to be subject to ABRASION.

ABRASAX, or ABRAXAS, the name given to the Deity by the Basilidian heretics, and com- posed of Greek numerals, which amount to the number 365. For Basilides taught that there were 365 heavens between the Empyrean heaven and the earth ; each of which had its angel that created it, and each of whom again was created by the next superior angel, thus ascending by a scale to the supreme Creator. Some authors allege that the Basilidians concealed the doctrine of the Trinity, under this word, and that the initials a, ft, p, stand for the

Hebrew words Ab, Ben, Rouah, i. e. Father, Son, and Spirit. Windelin, of Tournay, improving upon this, explains the whole word thus,

A Ab Pater 1

B Ben Filius 2

P Rouah Kakadosh Spiritus Sanctus 100

A AvflpwTrec homines 1

S 2u>►►wv salvans 200

A Ayiw per sacrum ►►► 1

S EfXw lignum 60

365

It is also frequently put for the stone, or medal, on which the word was engraved.

ABRASION, in medicine, the wearing away, or paring off, superficial ulcerations.

ABRAUM, in natural history, a popular name for a species of red clay, used in England by the cabinet-makers, &c. to give a red colow to new mahogany wood.

ABREAST, a maritime phrase, signifying side by side, or even opposite to ; and used to denote ships lying, or sailing, with their sides parallel to each other. It has a more particular reference to the line of battle at sea. When the line is formed abreast, the whole squadron ad- vances uniformly and evenly ; the commander-in- chief being always stationed in the centre, and the ships equi-distant from each other. Abreasc of any place, signifies being opposite to it. In the interior of the ship, abreast means to be on. the starboard or larboard side of the main hatch- way, in opposition to afore or abaft the hatch way.

ABREAST. See BREAST. ABREIRO, a market-town of Trast-los-Montes, in Portugal, comprehending a district of ten parishes, belonging “to the Villa-Real family.

ABRENTIUS, in ancient history, the govern c r of Tarentum, appointed by Hannibal, who gave up that city to the Romans at the instigation of a beautiful woman.

ABRETTINE, in ancient of Mysia, in Asia, from whidTthe epithet Abrettenus was given to Jupiter. Strabo.

ABREUVOIR, in military affairs, a tank to receive water in the case of encampment; also, small trenches in stone quarries to carry off the

ABRI, in military affairs, shelter, or protec- tion, as that derived from a wood, &c. ABRIDGE', v.) Abreger, Fr. from the G ABRIDG'ER, > man Brechen, to break.❀❀❀ Sax. ABRIDGMENT. 3 Abraeccan, nearly synommous with abbreviate; to shorten, to lessen, to give the same substance, or that portion of it which may be considered necessary in less compass than the original, to make an abstract.

Largesse it is, whose .priuilege There maie no auarice abrege.

Gower Con. A. b. vii.

Surely this commandment containeth the law and the prophets ; and, in this one word, is the abridge- ment of all volume* of Scripture. Hooker, b. ii. sec. 5. THES. Say, what abridgment have you for this

evening ?

What mask ? what musick ? how shall we beguile The lazy time, if not with some delight ? PHILOST. There is a brief, how many sports are

ripe ;

Make choice of which your highness will see first. Shakspeare's Midsummer Night's Dream. I have disabled mine estate, By shewing something a more swelling port, Than my faint means would grant continuance ; Nor do I now make moan, to be abridg'd From such a noble rate. Shaksp. Merchant of Venice. After thou hadst drawn that large and real map of the world, thou didst thus abridge it into this little table of man : he alone consists of heaven and earth, soul and body. Hall's Contemplations.

They were formerly, by the common law, dis- charged from pontage and murage ; but this privilege has been abridged them since, by several statutes.

Ayliffe's Parergon Juris Canonici. It is not barely a man's abridgment

in his exter- nal accommodations which makes him miserable ; but when his conscience shall tell him that it was his sin and his folly which brought him under that abridgment.

South.

Idolatry is certainly the first-born of folly, the great and leading paradox ; nay the very abridgment and sum total of all absurdities. South's Sermons.

All trying, by a love of littleness, To make abridgments, and to draw to less Even that nothing, which at first we were. Donne. The constant desire of happiness, and the con- straint it puts upon us, no body (I think) accounts an abridgment of liberty ; or at least an abridgment of liberty to be complained of. Locke.

ABROACH', v. and adv. Sax. Abrtzcan, to break. To abroach, or broach a vessel, is to break into it, to tap it, to prepare to draw off its contents. Hence figuratively, to commence, to set any thing going. Broach has also a different signification, which see under the word.

From when had you this doctrine M. Hardinge ? who set it first abrochc ? who taught it ? who conrm- ed it ? who allowed it ?

Jewel's Defence of the Apologie.

Let but some upstart heresy be set abroach, and

presently there are some out of a curious hnmour ;

others, as if they watched ap occasion of singularity,

ABR

will take It up for canonical, and make it part of their creed and profession.

Bishop Wilkins's Discovery of a new WorM.

The jars of gen'rous wine He set abroach, and for the feast prepar'd

Dryd. Virgil.

Hast thou no friend to set thy mind abroach ? Good sense will stagnate. Thoughts shut up want

air And spoil, like bales unopen'd to the sun.

Young's Complaint, night ii.

ABROAD', adv. Broad from the Ang. Sax. Broedan, Abrcedan, to broaden, enlarge, extend. The orthography of this word differs among ancient writers. See the following authorities. Opposed to home, or at home.

With thulke stroc he smot al of the scolle and ek

the croune,

That the brain orn al abrod in the pauiment their doune. -R. Gloucester, p. 476.

Ane felloun rusche it maid and sound withal] And large on brede ouer Grekis routes did fal.

Douglas, b. ii. p. 54.

Crowns in my purse I have, and goods at home And so am come abroad to see the world.

Shakspeare's T. Shrew.

On cherubim and seraphim full royally he rode, And on the wings of mighty winds came flying all abroad. Sternhold.

Intermit no watch

Against a wakeful foe ; while I abroad, Thro' all the coasts of dark destruction, seek Deliverance. Milton's Par. Lost, b. ii. 1. 463. Again the lonely fox roams far abroad, On secret rapine bent, and midnight fraud ; Now haunts the cliff, now traverses the lawn, And flies the hated neighbourhood of man. Prior.

Welcome, Sir !

This cell's my court ; here have I few attendants, And subjects none abroad. Shaksp. Tempest.

Lady walked a whole hour abroad, without

dying after it. Pope's Letters.

What learn our youth abroad, but to refine The homely vices of their native land ?

Dryd. Span. Friar.

He who sojourns in a foreign country, refers what he sees and hears abroad, to the state of things at home. Atterb. Serm.

We have no slaves at home. Why then abroad ?

Cowper.

ABROCHMENT, or ABROCAMENTUM, in old law. See ABBROCHMENT.

AB'ROGATE,) Ab rogo : Rogare legem,

ABROGATION, $ or facere rogationem populi, among the Romans, to propose a new law to the people in order to obtain their sanction to its passing. A successful application to the same authority was essential to the repeal of a law ; hence also, abrogare legem ; conformably to the latter usage, to unmake, repeal, annul, or make void, are the significations in English.

Besides this all estatutes made by king Edward were clerely reuoked, abrogated, and made frustrate.

Hall, p. 286.

I do not abrogate the grace of God, for if righteous- ncsse be by the law, then Christ died without a cause. Geneva Bible, 1561. Gal. chap. ii. v. 21.

Laws have been made, upon special occasions ; which occasions ceasing, laws of that kind do abro- gate themselves. Hooker, b. iv. sec. 14. The negative precepts of men may cease by many instruments , by contrary customs, by public disrelish.

by long omission : but the negative precepts of God never can cease, but when they are expressly abro- gated by the same authority.

Taylor's Rule of Living Holy.

The commissioners from the confederate Roman catholics demanded

the abrogation and repeal of all those laws, which were in force against the exercise of the Roman religion. Clarend. b. viii.

ABROHANNI, ABROANI, or MALLEMOLLI, a kind of muslin, or clear, white, fine cotton cloth, brought from the East Indies, particularly from Bengal.

ABROLHOS, or ABROI.KOS, dangerous shoals about fifty miles from the coast of Brazil, and near the Island of St. Barbe. Their centre is in lat. 17►►, 51'. S. Long. 39►►, 18'. W,

ABROMA, in botany, a genus of the class polyadelphia, and order dodecandria. It has been denominated Indian flax, as being excellent for making cordage. The fibres are interwoven with the bark, and are remarkably beautiful, fine, and strong. To procure their separation from the parenchymatous substance, they are mace- rated in water from four to eight days. The world owes to Dr. Roxburgh this important dis- covery. See his paper on the subject in Memoirs of the Society of Arts for 1804.

ABRON, a river of France, entering the Loire, between Avril and Lamotte.

ABRONO, or ABRUGI, in botany, a name given by Serapion and others to the hearts ease.

ABROTANUM, in botany. See ARTEMISIA and SANTOLINA.

ABROTANOIDES, in natural history, a coral in the form of the abrotanum.

ABROTONUM, in ancient geography, a town on the Mediterranean, in the district of Syrtis Parva, in Africa.

ABRUG-BANYA, a populous town in Tran- sylvania, on the river Ompay, 21 miles above Alba Julia. There are mines of gold and silver near it, and the mine court was formerly held in it. It is the chief of what are called the Metal towns.

ABRUGI. See ABRONO.

ABRUPT', adj.-\ Ab : rumpo, ruptum, to

ABRUP'TION, (break off, or away from.

ABRUPT'LY, ►► Broken off from. These

ABRUPTNESS J words express or imply sud- den, violent, or unexpected separation of a part from the whole.

Pardon, if my abruptnnse breed disease ; ” He merits not t’ offend that hastes to please.”

Jonson.

The devel he is a spirit, and hath means and op- portunitie to mingle himselfe with our spirits, and sometimes more slily, sometimes more abruptly and openly, to suggest devellish thoughts into our hearts. Burton’s Anatomy of Melancholy. Abrupt, with eagle-speed, she cut the sky ; Instant invisible to mortal eye.

Pope’s Homer’s Odyssey, b. i. Abrupt and horrid as the tempest roars, Thunder and flash upon the steadfast shores, Till he, that rides the - whirlwind, checks the

rein, Then all the world of waters sleeps again.

Cowper’s Retirement.

AHRUS, in botany, the trivial name of the GLYCIXE. See GLYCINE.

ABRUZZO, a mountainous province of Na- ples, bounded on the E. by the gulph of Venice ; on the N. and W. by Ancona, Umbria and the Campagna of Rome; and on the S. by the Terra di Lavora and Molise. It is divided into two parts by the river Pescara, called Ulteriore and Citeriore. The former has Aquila, and the latter Sulmona, for its capital. The country, though cold, is fertile in corn, rice, fruits, saffron, vines and olives. The rice of Teramo is little inferior to that of Lombardy. A great deal of it is exported, as well as of oil, wines, and Turkey wheat; but the staple commodity is wool, the greatest part of which is sent off unwrought, there being no woollen manufactures in the pro- vince, except two small ones of coarse cloth. The sheep, after spending the summer on the mountains, are brought down to pass the winter in the warm plains of Puglia, and some other places on the coast, where the snow does not lie. This whole coast, one hundred miles in length, is utterly destitute of sea-ports ; and the only spots where the produce can be embarked are dangerous inconvenient roads, at the mouths of rivers and along a lee shore. Villages, castles, and feudatory estates, are to be met with in abundance ; but the numbers of their inhabitants are to be reckoned by hundreds, not thousands : the political and social system being here wholly in decay. Monte-corno and Mayallo are among the most interesting natural features of the pro- vince ; the first evidently contains many valuable

veins of metallic ore ; but the great difficulty of access renders the search of them almost im- practicable. Mayallo has other merits, and of a gayer kind. ??? Nature has clothed its declivities and elevated fields with an infinite variety of her most precious plants ; vulnerary herbs grow there in as great perfection as on the Alps of Switzer- land, and are applied by the natives to wounds with equal success. The warlike nations, who descended hither from the north, have left many traces of their customs and languages, as well as numerous monumental inscriptions ; and the in- habitantsˆ are said to differ remarkably from the more southern Neapolitans.

ABSCESS, in surgery, from abscedo, to depart : a cavity containing pus, or, a gathering of matter ; so called, because the parts which were joined are now separated; one part receding from another, to make way for the collected matter. See SURGERY.

ABSCIND', v.) Ab : scindo, to cut off or

ABSCIS'SION. $ away from. Applied na- turally, and to operations in surgery, &c. figuratively in medicine, astrology, rhetoric, and divinity.

Fabricius ab Aquapendente renders the abscission of them difficult enough, and not without danger.

Wiseman's Surgery.

By cessation of oracles, with Montacutius, we may understand this intercision, not abscission or consum- mate desolation. 'Brown's Vulgar Errours, b. vi. c. 12.

When two syllables likewise are abscinded from the rest, they evidently want some associate sounds to make them harmonious Rambler.

ABSCISSE, or ABSCISSA, m mathematics, part of the diameter or transverse axis of a conic section, intercepted between the vertex, or some

other fixed point and a semiordinate.

In a more Ireland who reside in England or on the conti-

of land-

, ××× exagge-

ABS ION m asttology, is when one planet rated ; they ‘have been said to contribute nothing oumrins anomer, and joins a third before it, and to the good government or prosperity, and to consti- ff th 1 ht of the first tutealtogetheranunnaturalandoppressive burden !××AU×× n rhetoric a ‘figure of speech on the resources of a country. Taxes on absen- wherebv the o’rator stopping short in the middle teeship trom Ireland were, for a length of time, of Ms dscouL leaves the audience to draw therefore, popular in that country. In 1715, a me inference e g. ×× He started from me, toward tax of four shillings in the pound was levied on edTe of ‘the precipice, and my attention all profits employments fees, and pensions, de- being caUt for the moment by another voice rived from Ireland, in all cases where the persons Tn the next I heard a plunge in the receiving them should not reside in that country

water . I need add no more.” for six months of the year ; power to grant leave

ABSCISSION in surgery, the act of taking away of absence being reserved to the crown,

something morbid or unsound in the fleshy or dispensing power, however was brought so much

membraneous parts of the body. Sometimes into exercise, as to render th .ct of little pra

ABScOND^AbsrToHrfo, to hide from, to Mr. Flood, the great Irish orator, proposed in

×××P to a r,lace of secrecy. 1773, a more general measure, i. e a tax of two

I- v i j shillings m the pound on the emoluments of ab-

Jr In ××××××! sentees, without exception ; and the bill was at

remove to a place of secrecy.

The marmotte, or mus alpinus,

all winter lives on its own fat: for in autumn, ^ ^ ^ nm

wlipn it shuts itself UD in its hole, it is very iai . rr . ►►►>. _p ....'.

bttL the spring-time, when it comes forth again, some communications from England inducing

very lean R"y ►►► the Creation, the lord lieutenant to withdraw his support, the

Outlawry always supposes a precedent right of measure was lost in a division of 122 to 102. In

arresting, which has been defeated by the parties 1 783 the question was renewed in the Insh House

absconding Blackstone's Commentaries, of Commons, by Mr. Molineux, but again lost by

a division of 184 to 122.

ABSCONSIO, in anatomy, a hiding or con- ►►uch ig ˆ history of a direct tax upon ab-

cealing of the head of one bone in the cavity of sentees> and the different attempts at taxing them

another. ►►► ►►► ►►► i in Ireland ; which, as proceeding upon the theory

AB'SENT, v. adj.-\ Ab : esse. Participial of their being wholly a burden to the country,

AB'SENCE, / adj. Absens. To be away mugt be unjugt . they can enjoy but the surpius

ABSENTEE', Vfrom, to withdraw Ap- prontofthat capital and labour which employ

ABSENT-ER, i plied more particularly to humblerj andj it may be granted, more useful

ABSENT'MENT.) persons, and intimates ra- dasges of the community. still their capital so

ther a temporary removal than final departure jn operation must be a benefit ˆ far ˆ it goes, to

The archebisshop desirying the duke (Henry of the country in which it

is working, and not an

Lancaster) to absent all other persons than suche as injury. As a punishment, such a tax is mani-

were his co-panions saied these or like wordes of festly impolitic, and calculated only to inflame

niin' HaU- animosity, and inspire contempt of the legislature

Persons who can afford to live en-

So, badde is nothing els but absence or negatiue of good, as darkness is absence or negatiue of light. Chaucer's third Booke of the Test of. Love, folio 309, col. 1.

Night with her will bring

Silence, and sleep ; listening tothee will watch, Or we can bid bis absence till thy song End, and dismiss thee ere the morning shine.

Milton's Paradise Lost, b. vii.

Our Lord being absent in body from us (sitting in Heaven at God's right hand), to supply that absence that we should not be apt to forget him, and thereby become wholly estranged from him, is pleased to order this occasion of being present, and conversing with us in such a manner as may retain in our memories his gracious performances for us ###, may impress in our hearts a kindly sense of them J may raise us up in

imposing it.

tirely out of the country, are generally those of superior rank and influence : they would wholly withdraw their capital from it, in many instances, and will despise that attempt to control their movements which they have unusual power of resenting. The justice of this reasoning, accord- ing to Mr. Hardy, the biographer of Lord Char- lemont, led to the rejection of the absentee tax in 1773. It was felt that a general land tax was likely to result from this partial one proposed upon the absentees. " If the powerful interest of that body," argued the great commoner, " had hitherto been able to secure interest against such a tax, the same interest would be sufficient, and would be exerted to introduce it, in order that

mind and affections. Barrow,

. e ††† T i j j i_ tne other inhentors of landed property should,

A great part of estates in Ireland are owned by u u

absentee, ; and such, as draw over the profit* raised M, SUC,1J' Tbe made. l†† Pa? a tax as Wel1 aS them-

out of Ireland, refunding nothing. selves- In opposition to this, Dr. Smith argues,

Child't Discourse on Trade. ††† Those who live in another country contribute

nothing by their consumption, towards the support

AUbEW I EL, m political ceconomy, may de- of the government of that country in which is si-

scribe those who are systematically absent from tuate the source of their revenue. If,in this latter

any country, or, indeed, any particular station ; country, there should be no land tax nor any consi –

but has been in modern times more particularly dcrable duty on the transference either of moveable

npphed to those land-owners and churchmen of or immovable property, as is the case in Ireland,

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††uch absentees may derive a great revenue from the protection of a government, to the support of which they do not contribute a shilling. This inequality' is likely to be greatest in a country of which the government is, in some respects, subordinate or dependent on that of some other. The people who possess the most extensive pro- perty in the dependent, will in this case generally choose to live in the governing country. Ireland is precisely in this situation, and we cannot there- fore wonder that the proposal of a tax upon ab- sentees, should be so very popular in that coun- try. It m

But while we hold legislation, or at least com- pulsory laws on such a subject impolitic, and even unjust; freedom of intercourse throughout all the parts of an extended, civilized empire, being one of the best portions of our birthrights in it ; and while the evils of absenteeship

may have been exaggerated, we also*re

That unhappy country suffers from such a withdrav/ment of her proper supporters and go- vernors, in the curse of middle men ; in the noto- rious want of influence and example to stimulate improvement; and in the practical discouragement of all attempts to form a respectable yeomanry, which follow in its train. It is not merely the money spent in the neighbourhood of a gentle- man's seat in England, any more than it is his ill-painted coat of arms, or effigy, as the sign of the neighbouring village ale-house, that constitutes the most beneficial tie between the resident proprietor and the neighbouring country ; it is his presence, as the chief of a system, at the head of authority, of property, of all improve- ments, public spectacles, and even of all the public amusements, that diffuses order, pros- perity, and happiness.

As to churchmen, we understand that the gross evil of their late notorious absenteeships has en- gaged the attention of the government, both in its civil and ecclesiastical administration. For who can be surprised at the increase of the Ca- tholics in numbers, property, and every kind of local influence when the appointed lights of the land are withdrawn ? Or when they are exhi- bited to an impoverished peasantry only in the character of voracious consumers of tythe ?

Writers of all parties agree in the difficulty of estimating the mischiefs that arise from the great prevalence of middle men in Ireland, and that necessarily attend the existence of absenteeship in every country. Letting and sub-letting, thus, has multiplied without end.

Now, that the rent of land, as well as that of other real property, should be fairly secured by any produce that may be derived from it, seems on the face of things to be as reasonable in Ire- land as in England or elsewhere. But the al- most incredible number of persons that are inter- posed between the absentee proprietor and the cultivator of the soil in that country, grinds the

actual farmer to the earth ; involves the whole business of agricultural property in legal subtle- ties ; and makes the taking of land by a plain and sober small capitalist the height of presump- tion and folly. He is, in fact, never secure ; he may repay his rent again and again to half a do- zen claimants. This has banished practical men of this class, and produced an endless subdivision of excellent farms among desperate adventurers that have nothing to lose.

ABSINTHITES, ABSINTHIAS, or ABSINTHI- ATED, tinged or impregnated with the virtues of absinthium, or wormwood. In Bariholin's Act, Med. (torn, ii.) we read of a woman whose milk was become absinthiated, and rendered as bitter as gall, by the too liberal use of wormwood. Vinum absinthites, or poculum absinthiatum, wormwooa win.e, is much spoken of among the ancients, as a wholesome drink, and even an antidote against drunkenness. Fehr. shews that it should be pre- pared by fermentation, in order to correct crudi- ties, and call forth a volatile salt.

ABSINTHIUM, in botany, from a. priv. and \jjivQoe, pleasure, wormwood. See ARTEMISIA. ABSIS, ABSES, or APSIDES. See APSIS. ABSOLVE', v. ~\ Ab : solvo, to loose, to ABSOLV'ER, I untie, to set free. Figura- AB'SOLUTE, | lively to release from the

ABSOLUTELY,)- penal consequences of crime, ABSOLUTENESS, to pardon, acquit, or de- ABSOLU'TION, clare innocent. The ad- ABSOLU'TORY. J jective and words imme- diately derived from it express freedom, indepen- dence, perfection of state, or existence.

But let the sonne of perdicion perishe, and absolue we the chapter, the angel yet speking with Daniel. Ttte Exposition of Daniel, by George Joye, p. 146. We must know what is to be meant by absolute, or absolutenes ; whereof I find two main significations. First, absolute signifieth perfect, and absolutenesse perfection ; hence we have in Latin this expression, Perfectum est omnibus, numeris absolutum. And in our vulgar language we say, a thing is absolutely good, when it is perfectly good. Next, absolute sig- nifieth free from tye or bond.

Knox's History of the Reformation. Preface. DUKE. So then you hope of pardon from Lord

Angelo ?

CLAUD. The miserable have no other medicine But only hope : I've hope to live, and ata pre- pared to die.

DUKE. Be absolute for death : or death or life Shall thereby be the sweeter.

Shakspeare's Measure for Measure. And of that nature (for the most part) are things, absolutely unto all men's salvation necessary, either to be held or denied, either to be done or avoided.

Hooker's Preface.

A monarchy, where there is no nobility at all, is ever a pure and absolute tyranny ; as that of the Turks. For nobility attempers sovereignty, and drawes the eyes of the people somewhat aside from the line royal. Lord Bacon's Essays.

Being as I am, why didst not thou Command me absolutely not to go, Going into such danger, as thou saidst ?

Parad. Lost. b. ix.

The absoluteness and illimitedness of his commission was generally much spoken of. Clarendon, b. viii.

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My crown is absolute, and holds of none : I cannot in a base subjection live ; Nor suffer you to take, though I would give.

Dryd. Ind. Emp.

The absolution pronounced by a priest, whether Dapist or protestant, is not a certain infallible ground to give the person, so absolved, confidence towards God. South's Sermons.

Although it runs in form absolute, yet it is indeed conditional ; as depending upon the qualification of the person, to whom it is pronounced.

Idem.

The prince long time had courted fortune's love ; But, once possess'd, did absolutely reign ; Thus, with their Amazons, the heroes strove ; And conquer'd first those beauties they would gain.

Dryden's Annus Mirabilis. Chief, let devotion to the sovereign mind, A steady, cheerful, absolute dependence On his best, wisest government, possess thee.

Mallet.

I see still the distinctions of sovereign and inferior, of absolute and relative worship, will bear any man out in the worship of any creature with respect to God j as well at least, as it doth in the worship of images. Stilingfl. Def. of Disc, on Rom. Idol.

An absolute mode is that, which belongs to its subject, without respect to any other beings whatso ever ; but a relative mode is derived from

the re- gard, that one being has to others. Watts's Logic. A firm persuasion of the superintendence of Providence over all our concerns is absolutely neces- sary to our happiness. Cowper'i Letters.

ABSOLUTE, in metaphysics, denotes that being whose essence does not consist in a mere habitude or relation to another, and stands op- posed to relative or respective. It is more parti- cularly understood of that which does not proceed from any cause, and is independent of any other being, considered as its cause ; in which sense, God alone is absolute.

ABSOLUTE EQUATION, in astronomy, is the aggregate of the optic and eccentric equations. See ASTRONOMY.

ABSOLUTE ESTATE, in law, one free of all con- ditions and incumbrances.

ABSOLUTE GOVERNMENT, that wherein the government is above the law, and not, as in this country, a creature of the law.

ABSOLUTE GRAVITY, among philosophers, that property in bodies, by which they are said to weigh so much, with regard to circumstances of modification, and which is, in that respect, dis- tinct from specific gravity.

ABSOLUTE NUMBER, in Algebra. See ALGE- BRA.

ABSOLUTE SPACE, PLACE, MOTION, &c. See the Substantives.

ABSOLUTION, in civil law, is a sentence whereby the party accused is declared innocent of the crime laid to his charge. Among the Ro- mans, the ordinary method of pronouncing judg- ment was this : after the cause had been pleaded on both sides, the praetor used the word atxerunt, q. d. they have said what they have to say; then three ballots were distributed to each judge marked as should be previously arranged ; and, us the majority appeared of either mark, the ac- cused was absolved or condemned, &c. If he was absolved, the prater dismissed him with i-idetur nonfecisse, orfure vidctur Jcciu>e.

ABSOLUTION, in the canon law, is a juridical act, whereby the priest declares the sins of peni- tents remitted. The Romanists hold absolution a part of the sacrament of penance, and the council of Trent, sess. xiv. cap. 3. declares the essence of the sacrament to lie in the words of absolution. The formula of absolution, in the Romish

church, has been said to be absolute ; in the Greek church deprecatory ; and in the churches of the reformed, declarative. But this is a matter strongly contested between protestants at large and the Romanists ; as well as between the dis- senters of England and the Anglican church. Dissenters object, generally, to all forms of ab- solution which suppose a power residing in mor- tals to appease the conscience, or purify the cha- racter of a sinner. The church of England, and all protestants, oppose the Absolute claims of the Romish hierarchy (as they at least understand them,) to forgive sins on earth. The form that Tetzel used in vending the indulgences which first awoke the indignation and resistance of LUTHER, has been often quoted, but is said by Catholics to be unauthentic. They have thus stated their opinions upon this subject: ••• " Catholics be- lieve, that when a sinner repents of his sins frcmhis heart, and acknowledges his transgressions to God and his ministers, the dispensers of the mysteries of Christ, resolving to turn from his evil ways and to bring forth fruits worthy of penance; there is then (and not otherwise) an authority left by Christ to absolve such a penitential sinner from his sins : which authority we believe Christ gave to his apostles and their successors, the bi- shops and priests of his church, in these words, when he said, " Receive ye the Holy Ghost," &c.

The foregoing is an extract from an authentic catholic work, entitled, " The Faith }f Catholics confirmed by Scripture, and attested by the Fa- thers of the first five centuries of the Church," by the Rev. Messrs. Berrington and Kirk, Lond. 1813. The same work confirms the proposition stated by these assertions of St. Ephrem of Edessa: ••• " The exalted dignity of the priesthood is far above our understanding and the power of speech ! The remission of sins is not granted to mortals, but through the ministry of the priest." De Sacerdatio, i. p. 1 : and these observationsof Chrysostom; ••• "Temporal princes have a power to bind but the body only ; whereas the power of the priesthood binds the soul, and reaches to heaven. In this sense, that God ratifies above what the priests do here below, and the master confirms the sentence of his servants. And what is this but that all power, even the concerns of heaven, has been entrusted to them." De Sacerd. iii. c. 5.

ABSONIARE, in old records, to shun, avoid or detest ; a term introduced in the Anglo-Saxon oaths of allegiance.

ABSORB', v. ~\ Ab : sorbeo, to drink up ;

ABSORB'ENT, 'to swallow; to imbibe; to

ABSORB'ING, ? devote one's whole time and

ABSORP'TION. J attention to a pursuit, so as to be insensible to others; to contemplate in- tensely.

The rays of the sun are reflected from a white body, but absorbed by a black one.

Bacon’s Distribution of .

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It was below the dignity of those sacred penmen, or the Spirit of God that directed them, to shew us the causes of this disruption, or of this absorption : this is left to the enquiries of men.

Bur net’s Tlieory of the Earth.

Moses imputed the deluge to the disruption of the abyss ; and St. Peter to the particular constitution of that earth, which made it obnoxious to be absorpt in water. Idem.

Some tokens shew

Of fearless friendship, and their sinking mates Sustain ; vain love, though laudable, absorpt By a fierce eddy, they together found The vast profundity. Phillips.

An earthquake reel’d unheededly away ! None felt stern Nature rocking at his feet, And yawning forth a grave, for those that lay Upon their bucklers for a winding sheet ; Such is the absorbing hate when warring nations meet !

Lord Byron’s Childe Harold.

ABSORBENT VESSELS, a name given pro- miscuously to the lacteal vessels, lymphatics, and inhalent arteries. See ANATOMY. Plants are also said to possess absorbent vessels in their fibrous and hairy roots.

ABSORBENTS, in medicine. The term abso’ Lent was introduced into chemistry by physicians, on the erroneous supposition that the faculty of withdrawing moisture from the air was confined to substances which freely unite with water ; and hence applied to such as seemed to check diar- rhoea, by the absorption of the redundant liquids. The substance, says Dr. Ure, whose absorbent power is to be chemically examined, after thorough desiccation before a fire, is immediately transferred into a phial, furnished with a well ground stopper. When it is cooled, a portion of it is put into a large wide-mouthed bottle,

where it is closely confined for some time. A delicate hygrometer being then introduced, indicates on its scale the dryness produced in the enclosed air, which should have been previously brought to the point of extreme humidity, by suspending a moistened rag within the bottle.”

The following are the results of experiments made by Professor Leslie : ###

Alumina causes a dryness of 84 degrees. Carbonate of magnesia – 75 Carbonate of lime 70

Silica – – – – 40 Carbonate of barytes – 32 Carbonate of strontites – 23 Pipe clay 85

Greenstone, or trap in powder 80 Shelly sea sand – – – 70 Clay indurated by torrefaction 35 Clay strongly ignited – 8

Greenstone do – – 23 Quartz do. – – 19

Decomposed greenstone – 86 Greenstone resolved into soil 92 Garden mould 95

The more a soil is comminuted by labour and vegetation, the greater is ;ts absorbent power. This ingenious philosopher infers, that the fertility of soils depends chiefly on their disposition to imbibe moisture ; and illustrates this idea by recent and disintegrated lava. May not the finely divided state most penetrable by the deli-

cate fibres of plants, derive its superior power of acting on atmospherical vapour from the aug- mentation of its surface, or the multiplication ol the points of contact ?

In similar circumstances, 100 gr. of the follow- ing organic substances absorb the following quan- tities of moisture: ivory 7 gr. boxwood 14, down 16, wool 18, beech 28. Charcoal, and other porous solids of a fibrous texture, have the faculty of absorbing gases in a remarkable de- gree. See Leslie on Heat and Moisture; and Ure’s Dictionary of Chemistry.

ABSORPTION. By this term modern chemists understand the conversion of a gaseous fluid into a liquid or solid, on being united with some other substance. It differs from condensation in being the effect of mechanical pressure, or the abstrac- tion of caloric. Thus, if muriatic acid gas be introduced into water, it is absorbed, and muriatic acid is formed ; if carbonic acid gas and ammo- niacal gas be

brought into contact, absorption takes place, and some carbonate of ammonia is produced by the union of their ponderable bases. lire's Dictionary.

ABSORPTIONS OF THE EARTH, a phrase used by Kircher and other geologists, for the sinking in of large tracts of land, by subterranean commo- tions or other accidents. Pliny tells us of the mountain Cymbotus, with the town of Curites, which stood on its side, being thus wholly ab- sorbed into the earth. He records the like fate of the city of Tantalis in Magnesia, and after it of the mountain Sypelus. Galanis and Garnatus, towns once famous in Phoenicia, are said to have met the same fate. But the fact is, no fair dis- tinction can be drawn between these remarkable incidents, and what have been more generally call- ed earthquakes.

ABSORUS, or APSORUS, in ancient geogra- phy. See ABSYRTIDES.

ABSTAIN', v. ~\ Ab or Abs : teneo, to hold

ABSTEN'TION, I or keep from ; to forbear, to

AB'STINENCE, > refrain from. In this verb

AB'STINENT, \ a middle or reflected action

AB'STINENTLY. j is distinguishable, and a re- semblance between the Latin and English de- rivatives preserved.

Among some religious persons, abstinence is forbearance from certain kinds of prohibited food, as well as the almost total absence of nou- rishment experienced for an extraordinary period by individuals, many of whose cases are au- thentically recorded.

Moost dere, I biseche you as comelingis and pil- gryms to absteine you fro fleischli desires thot figten agens the soule. Wiclif, Peter i, chap. 2.

Say, can you fast ? your stomachs are too young, And abstinence engenders maladies.

Shaky. Love's Labour Lost.

Abstain

To ask : nor let thine own inventions hope Things not revealed, which the invisible King Only omniscient hath suppressed in night, To none communicable in earth, in heaven : Enough is left besides to search

and know.

Milton.

A little wisdom, and an easie observation were enough to make all men that love themselves, wisely to abstain from such diet which does not nourish.

Taylor’s Dissuasive from Popery.

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Abstinence merits not ††† for religion consists not in sual pleasure, to render themselves mere hardy

in the public games. The Jews were also com- manded to observe various kinds of abstinence by their laws. Many of the primitive Christians denied themselves the use of particular meats, as we learn from St. Paul’s Epistle to the Romans, (chap, xiv.) And the council assembled at Je- rusalem, which the Apostles superintended, en- joined the Christian converts to abstain from things strangled, and from blood. Not that the reception of these things was, in itself a moral evil, but because the Jews were so offended by it, that it was the source of perpetual discord

Jewish and Gentile converts.

abstinence is however still retained

the belly either full or empty

Hall’s Contemplations.

Ksligious men, who hither must be sent,

As awful guides of heavenly government ;

To teach you penance, fasts, and abstinence,

To punish bodies for the soul’s offence.

Dry den’s Indian Emp.

Because the abstinence from a present pleasure, that offers itself, is a pain -, nay, oftentimes a very great one : it is no wonder that, that operates after the same manner pain does ; and lessens, in our thoughts, what is future ; and so forces us, as it were, blindfold into its embraces. Locke.

ABSTE'MIOUS, adj.) Ab or abs : temetum,

ABSTEMIOUSLY. * from strong wines. communities, and is prescribed by rules

To be abstemious is to refrain with more than or- ˆ J^^ of ;he Roim-sh church: The dinary caution from the inebriating liquids. church ►►of England has also enforced abstinence

The instances of longevity are chiefly amongst the from meats on certain days, and since the re- abstemious. Abstinence in extremity will prove a formatjon> the practice has been enforced by mortal disease ; but the experiments of it are very statute Injunctions of general abstinence were ""►►► , Arbuthnot on Aliments renewed under n Elizabeth, not out of

The pearch is not only _ valiant to defend hrmself, · of religk)n> u was said> but to encourage

and to increase the num-

winter. Walton's Angler.

ABSTEMIOUS, properly signifies a person who refrains from all use of wine. So particular were the ancient Romans in exacting this virtue

ABSTINENCE, in medicine, is used to sig- ' nify a suppression. Thus in Ccelius'Aurelianus, abstinentia sudoris, signifies a suppression of , sweat. Sometimes in this author it means a

from their ladies, that they were willing, it would ression . as s iritus ob abstinentiam clausus,

seem, to put some others to hazard. In the first ages ^^ ˆ wind ghut in the intestines by of the commonwealth, it was expected that they c ession thereby causing the iliac passion, should kiss their friends and relatives whenever ular sense of t

they accosted them, that it might be known by their breath whether they had been indulging in

wine- ,,,j .u u ⁂

ABSTENSION, in law, a withholding the heir

from taking possession of his estate. Among ec- clesiastical writers, the word is also used for a

ABSTINENCE in a more popular sense of the signifies a spare and parsimonious diet, which has been recommended medicinally, ob- served through superstition, or practised to impose on the credulity or benevolence of man- kind. The Venetian Cornaro, after his life was despaired of, betook himself to a regular but abstinent life, revived his health, though almost ABSTERGENTS, or abstersive medicines in hi e a't 40 and lived to'the protracted

a mnrliˆMTioc r\i a carˆrtnQf⁂pmia ncitiirp Pmnmvpci ⁂ rrˆi i

period of nearly 100 years of age. Ihe early Christians of the east, driven by persecution into the deserts of Arabia, lived on very spare food, in health and cheerfulness. St. Anthony is said to have taken only 12 ounces of bread and water in 24 hours, and on this slender subsistence, to have lived to the age of 105 years. In like manner, James the hermit, lived 104 years; Arsenius, tutor of the emperor Arcadius, 120; St. Epiphanius, 115; Simeon the Sty lite, 112; and Romauld, 120. By temperance and labour, one Laurence, mentioned by Buchanan, attained the age of 140 ; and Kentigern, commonly called St. Mungah or Mungo, mentioned by Spottis- wood, lived to 185, by the same means. Lon- gevity appears to have been frequently connected with remarkable cases of abstinence, a considera- tion which led Dr. Cheyne to affirm, that most of the chronical diseases prevalent in luxurious cli- ABSTINENCE, from abs, from, and tenere, mates, the common infirmities of old age, and the to hold, signifies the act or the habit of refrain- short lives of Englishmen, are the common effects ing from something to which there is a strong of repletion; and might be prevented or cured by propensity. Pythagoras earnestly enforced upon abstinence. Sudden and immediate abstinence his followers the necessity of abstaining from all is however, extremely detrimental to the con- animal food, except the remains of sacrifices, and stitution ; and many persons who have attempted to drink nothing but water, except in the evening, it, have never afterwards enjoyed health. when they might take a little wine ; and the Some animals seem to possess extraordinary ancient Athletae abstained from all kinds of sen- powers of abstinence. The dormouse tortoise,

are medicines of a saponaceous nature, employed for removing inward obstructions, by dissolving concretions. They are also called Detergents. ABSTERGE’,ˆ Ab : stergo, to wipe off, to ABSTERGE’NT, I cleanse by wiping or scour- ABSTERSE’, Vii’g- The latter words are ABSTER’SION, i not so analogical, and still ABSTER’SIVE. J less in use than the preced- ing.

Abstersion is plainly a scouring off, or incision of the more viscous humours, and making the humours more fluid, and cutting between them and the part ; as is found in nitrous water, which scoureth linen cloth speedily from the foulness.

Bacon’s Nat. Hist. No. 42. The seats with purple clothe in order due ; And let th’ abstersive sponge the board renew ; Let some refresh the vase’s sullied mould, Some bid the goblets boast their native gold.

Pope’s Homer’s Odyssey, b. xx.

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bear, serpent, &c. pass four, five, or six months in the year without eating or drinking. Several species of birds, and almost the whole tribe of insects, live throughout the winter without food. Rattle-snakes atter many months’ abstinence, have retained their vigour and fierceness. Two ceras- tes, a sort of Egyptian serpent, mentioned by Dr. Shaw, lived five years in a bottle closely corked, without any thing in the bottle, except a small quantity of sand. When he saw them, they had just cast their skins, and appeared as brisk and lively as ever. Vipers again, seem to live occasionally on those well-knowrn nutritious substances floating in the atmosphere, and which are continually taken in by animal respiration : their young kept from every thing but air, will grow considerably in a few days. The eggs of lizards are observed to increase in bulk after they are produced, and seem to be nourished in the air in the same way as the spawn of fishes is in the water.

Pliny says, a man may live seven days, and that many have been known to continue more than eleven days, without either meat or drink. Hist. Nat. lib. ii. c. 54. ††† Alexander Benedictus, that a person at Venice lived without food for 46 days. Pract. lib. xii. c. 2. ††† Clausius et Garcia ab Horto, that some rigid Banians in India, frequently abstain from food ‘for 20 days together; ††† and Guaguinus states, that Louis the Pious, emperor and king of France, who died 840, existed the last 40 days of his life without food or drink. Hist. Francor. lib. v. ††† Albertus Magnus saw a woman at

Cologne, who often fasted 20, and sometimes 30 days ; and a hypo-chondriacal man,who drank nothing but a draught of water every other day, for seven weeks. De Animalibus, lib. vii. ††† Democritus is said to have lived to the age of 109 years, and that in the latter part of his life he subsisted for 40 days at one time, by smelling honey and hot bread. ††† ††† Petrus de Abano gives an account of a woman in Normandy, who lived without food for 18 years. Exposit. Ult. prob. x. ††† Joubertus, of a woman that lived in good health three years; and of another, who to her tenth year, subsisted without either food or drink : and when she was of proper age, married and had children, and lived like other people. Decad. 1, paradox 2. ††† Albertus Krantzius says, that a hermit in the mountains of the canton of Schwitz, lived 20 years without food. Hist . Eccles. lib. xii. c. 21 . ††† Hildanus relates the case of a girl who lived many years without food or drink. The abdo- men had wasted and retracted toward the spine, and she neither voided urine nor faces. Cent. 5, Obs. Chirurg. 33. ††† Sylvius says, there was a young woman in Spain, 22 years of age, who never ate any food, but lived entirely on water. And that there was a girl in Narbonne, and another in Germany, who lived three years in good health without meat or drink. We shall now subjoin a few modern cases of abstinence, which have been given more at large : †††

” Gilbert Jackson, of Carse-Grange, Scotland, about 15 years of age, was seized in February, 1716, with a violent fever, which returned in April for three weeks, and again on the 10th of Tune. He then lost his speech, his appetite, and

the use of his limbs, and took no food whatever. On June 30, he was seized with a fever again, and the next day recovered his speech, but with- out eating or drinking, or the use of his limbs. On the llth of October, he recovered his healtu with the use of one of his legs, but neither eat nor drank, only sometimes washed his mourn with water. On the 18th of June, 1718, the fever returned and lasted till September. He then recovered, and continued in pretty good health, and fresh coloured, but took no kind of meat nor drink. On the 6th of June, 1719, he was again seized with a severe fever; and on the 10th, at night, his father prevailed on him to take a spoonful of milk, boiled with oatmeal ; it stuck so long in his throat, that his friends feared he had been choked ; but ever since that time he took food, though so little, that a halfpenny loaf lasted him eight days. All the time he fasted, he had no evacuation, and it was 14 days after he began to eat, before he had any. He still con- tinued in pretty good health”

” In the year 1724, John Ferguson, of Kill- melfoord, in Argyleshire, overheated himself in the pursuit of some cattle on the mountains, then drank largely of cold water, and fell asleep. He slept for 24 hours, and awoke in a high fever, and ever since, his stomach loathed, and could retain no kind of aliment but water. Mr. Campbell, a neighbouring gentleman, to whom his father was tenant, locked him up for 20 days, supplying him only with water, and taking care that he should have no other food ; but it made no difference either in his look or strength ; at the age of 36, (when the account was sent to the Philosophical Society,) he was of a fresh com- plexion, and as strong as any common man.” Phil. Trans. 1742, vol. xlii. page 240.

PENNANT says of his second visit to Barmouth, in 1770, ” My curiosity was excited to examine into the truth of a surprising relation of a wo- man in the parish of Cylynin, who had fasted a most supernatural length of time. I took boat and had a most pleasant passage up the harbour, charmed with the beauty of the shores intermixed with woods, verdant pastures, and corn fields. I landed, and after a short walk, found in a farm called Tydden Back, the object of my excursion, Mary Thomas. She was of the age of 47, of a good countenance, very pale, thin, but not so much emaciated as might be ex- pected from the strangeness of the circumstances I am going to relate. Her eyes were weak, her voice low, and deprived of the use of her lower ex- tremities, and quite bed-ridden ; her pulse rather strong, her intellects clear and sensible. On examining her, she informed me that at the age of seven, she had some eruptions like the measles, which grew confluent and universal ; and she became so sore that she could not bear the least touch : she received some ease by the application of a sheep’s skin just taken from the animal, After this she was seized at the spring and fall, with swellings and inflammations, during which time she was confined to her bed ; but in the intervals she could walk about. When she was about 27 years of age she was attacked with the same complaint, but in a more violent manner ; and during two years and a half remained in-

sensible, and took no mannei of nourishment, although her friends forced open her mouth with a spoon to pet something down, but the moment the spoon was taken away, her teeth met and closed with snapping violence ; during that time she flung up vast quantities of

blood. She well remembers the return of her senses, and her knowledge of every body about her. She thought she had slept but a night, and asked her mother whe- ther she. ‘had given her any thing the day before, as she found herself hungry. Meat was brought to her, but so far from being able to take any thing solid, she could scarcely swallow a spoon- ful of thin whey. From this, she continued seven years and a half without any food or liquid, excepting sufficient of the latter to moisten her lips. At the end of this period she fancied herself again hungry, and desired an egg, of which she got down the quantity of a nut kernel. She requested to receive the sacrament, which she did, by having a crumb of bread steeped in wine. She now eats a bit of bread about two penny weights seven grains daily, and drinks a glass of water, and sometimes a spoonful of wine; but frequently abstains whole days to- gether from food and liquids. She sleeps very indifferently ; the ordinary functions of nature are seldom performed, and are very small ; her temper is even, her disposition mild ; she is re- ligious, and prays fervently ; the natural effect of the state of her body unembarrassed by food, and a constant alienation of thought from all worldly affairs.” Journey to Snowden, vol. ii. p. 105.

A very curious instance of nearly four years’ abstinence from all food and drink, is related in two numbers of Hufeland’s Practical Journal, Vols. viii. and ix. No 2. And a pamphlet has been since published respecting this fact by Dr. Schmidtmann of Melle, in the bishopric of Osnabruck.

” A country girl, 16 years old, in a village near Osnabruck, had enjoyed a good state of health, during her childhood ; but, at about 10 years of age she was seized with epileptic fits against which a number of remedies were em- ployed in vain ; since that time she was mostly confined to her bed, particularly in winter, but in summer she found herself a little better. From February 1798, the alvine and urinary excretions began to cease; though she took now and then a little nourishment. But from the beginning of April the same year, she abstained entirely from all food and drink, falling into an uninterrupted slumber, almost senseless, from which she only awoke from time to time for a few hours. Her sensibility during this time was so great that the slightest touch on any part of her body brought on partial convulsive motions. In this state she had continued for nearly 10 months, when Dr. Schmidtmann saw her first, in 1799. Though she had not taken the least nourishment during all this time, Dr. S. found her to his great astonishment, fresh and blooming. For the last two months only the in- tervals of sleep began to be longer, her senses of sight and hearing were in perfect order ; but her feelings, she seemed to have quite lost, as she could suffer pinching of the arms and legs with- out

pain; her gums bled frequently, and the

pulse was scarcely perceptible in the arms, but beat strong and full in the carotids, about 120 in a minute. Dr. S. attempted to make her drink a little milk, but she protested she could not swallow it. The alvine and urinary excretions had quite ceased. Although there could hardly be a suspicion of imposition, the parents being honest people, yet to remove all doubt, six sworn men were appointed from different places in the neighbourhood to watch her day and night, and instructions given them accordingly. This being continued about a fortnight, the men were dismissed, having given evidence upon oath that the patient had never taken any food or drink whatever during that time, nor had any excretion, alvine or urinary ; she had become very ill, and nearly dying, seized w;th convul- sions, feverish, and sometimes in a great sweat, which had the extraordinary property of turning water black. When Dr. S. saw her again, he found her quite recovered, not in the least emaciated ; but rather looking lustier ; her gums however, still frequently bled, and her feeling was not yet returned ; but her memory was not impaired, and she amused herself sometimes with reading and writing. No alvine or urinary excretions had taken place. Some- times she was attacked with sudden weakness, particularly after having bled at the mouth. During the last seveie winter she could not endure the heat of the stove, because she felt then faint and oppressed. Dr. Schmidtmann then enters into an enquiry by what means the patient in this case was nourished and maintained in that state in which she was found. And hav- ing discussed the matter at large, he is of opinion, that she drew by resorption such elementary particles from the atmosphere as were sufficient for the nutrition of the body, and that the ex- cretions were likewise replaced by the skin.”

Instances of the like kind might be multiplied from Haller, in his Elements Physiology, torn, vi. sec. 2 ††† 6 ; Conf. Memoires del’ Academic des Sciences de Toulouse, torn. i. 1783. Prichter’s Li- brary devoted to Surgery, (in German,) vol. xii. p. 184. Swieten Comments in Boerhaave, Aph. torn. iii. p. 508 ; Histoire de V Academic Royale des Sciences, I’ an 1769; and in Huf eland’s Art of Prolonging Life, I ed. p. 67 ; Halpart Van der Wiel Observat, rar Centur Poster. In the London Magazine for August 1769, there is an account of a young woman, 24 years of age, who had fasted for two years, and whose excretions were entirely suppressed. London Medical and Physical Journal, vol. iv. p. 87.

In the Philosophical Transactions, we have an account of four colliers who were confined 24 days in a coal pit at Herst 1, near Leige, with

nothing to support them but water. A French officer of infantry, who had retired from service, and became deranged, took it into his head to refuse food, and persisted in that deter- mination from the 25th of December, till the 9th of February, drinking only about a pint and a half of water daily, with a few drops of aniseed liquor in each glass, till 39th day, from which time till the 47th day he remained out of bed , but weakness at length obliged him to lie down. The return to food was followed by a temporary

cure of his insanity. Hist, de VAcademie des Sciences, 1769.

In the Medical Commentaries, December, vol. iv. p. 360, there is a history of a girl who lost her way, and remained 18 days on a barren moor in the island of Lewis, vhere she could have had no other sustenance than water. Mr. Miller saw her two hours after she was found, and describes her as much emaciated. We infer, from these instances, the possibility of maintain- ing life for a considerable time on small quantities of water and other liquids. The feeling of hunger, if not appeased by food, often ceases entirely ; but the feeling of thirst becomes increasingly urgent, and where it is attended with bodily heat, be- comes aggravated and insupportable.

ABSTINENTES, in ecclesiastical history, a party who appeared in France and Spain, in the third century, and who enjoined abstinence from the use of marriage, and particular foods, especially wine. Some consider them to have been a branch of the Gnostics.

AB’STRACT, n. v. & adj. ~) Abs : traho, trac- ABSTRACT’ED, turn, to draw away

ABSTRACT’EDLY, from ; to sepa-

ABSTRACT’EDXESS, I rate. Hence, by

ABSTRACT’ER, i an easy transition,

ABSTRACTION, to refine, to puri-

ABSTRACT’LY, fy. Also, to con-

ABSTRACT'NESS. J sider any thing in

its essence, or simple being, independently of modes or accidents.

PAL. But man, the abstract Of all perfection which the -workmanship Of Heaven hath modell'd, in himself contains Passions of several qualities.

Ford's Lover's Melancholy, act iv. sc. 3. He -whose understanding is prepossest with the doctrine of abstract general ideas, may be persuaded that extension in abstract is infinitely divisible.

Berkley's Principles of Human Knowledge. Precepts of morality, besides the natural corruption of our tempers which makes us averse to them, are so abstracted from ideas of sense, that they seldom give an opportunity for those beautiful descriptions and images which are the spirit and life of poetry.

Addison.

To abstract the mind from all local emotions would be impossible if it were endeavoured ; and would be foolish if it were possible. Dr. Johnson. Abstract terms signify the mode or quality of a being, without any regard to the subject in which it is ; as whiteness, roundness, length, breadth, wisdom, mortality, life, death. Watts's Logic.

He may be justly driven out from the commerce of mankind, who has so far abstracted himself from it as to neglect the endearments of his wife and the ca- resses of his children, to count the drops of rain, note the changes of the wind, and calculate the eclipses of the moons of Jupiter". Rambler.

ABSTRACT IDEA, in metaphysics, is a partial idea of a complex object, limited to one or more of the component parts or properties, laying aside the rest.

ABSTRACT MATHEMATICS, otherwise called Pure Mathematics, treat of magnitude or quan- tity, absolutely and generally considered, with- out regard to any species of particular magnitude, such are arithmetic and geometry.

ABSTRACT NUMBERS, are assemblages of units,

considered in themselves, without denoting any particular and determined articles. Thus six is an abstract number, when not applied

to any thing ; but if we say six feet, six becomes a con- crete number. See NUMBER, and ARITHMETIC. ABSTRACTI, a name given to a sect among the Lutherans.

ABSTRACTITIOUS, in pharmacy, a term used to distinguish that spirit which is drawn from plants, naturally abounding with it. Bailey. ABSTRUSE', ###} AV> , ,

ABSTRUSF'LY ' : d##' trudum> to

ISnuSEk j thrust or push away.

To cast away from the sight. ### Cicero. Hence, not obvious, plain, nor evident.

Let the Scriptures be hard : Are they more harsh? are they more hard, more crabbed, more abstruse than the fathers ? Milton on the Reformation in England. Yet it must be still confessed that there are some mysteries in religion both natural and revealed, as well as some abstruse points in philosophy, wherein the wise as well as the unwise must be content with obscure ideas. Watts's Logic.

ABSURD', adj. ~\ Ab : surdus. Supposed to ABSURD'ITY, (be formed from ab and sur- ABSURD'LY, fdus, a deaf person, who

ABSURD'JJESS. J from not hearing, frequent- ly replies altogether unsuitably to the question proposed. Foolish, nonsensical, not to the pur- pose.

There was never proud man thought so absurdly well of himself, as the lover doth of the person loved : and therefore it was well said, That it is im- possible to love, and to be wise. Lord Bacon's Essays. The capital things of nature generally lie out of the beaten paths, so that even the absurdness of a thing sometimes proves useful. Idem.

But grant, that those can conquer, these cau

cheat ;

Tis phrase absurd to call a villain great ; Who wickedly is wise, or madly brave, Is but the more a fool, the more a knave.

Pope's Essay on Man.

How clear soever this idea of the infinity of num- ber be, there is nothing more evident, than the ab- surdity of the actual idea of an

infinite number.

Locke.

That satisfaction we receive from the opinion of some pre-eminence in ourselves, when we see . the absurdities of another, or when we reflect on any past absurdities of our own. Addison.

But man, we find the only creature ; Who, led by folly, combats nature ; Who, when she loudly cries, Forbear, With obstinacy fixes there ; And where his genius least inclines, . Absurdly bends his whole designs.

Swift's Miscel.

We may proceed yet further with the atheist ; and

convince him, that not only his principle is absurd,

but his consequences also as absurdly deduced from

it. Bentley's Sermons.

Truth indeed needs no ornament, neither does a

beautiful person ; but to clothe it therefore, in rags

when a decent habit was at hand, would be esteemed

preposterous and absurd. Cowper's Letters,

ABSUS, the Egyptian LOTUS.

ABSYNTHIUM, or .ABSINTHIUM. See AR-

TEMESIA.

ABSYRTES, or ABSYRTUS, in ancient mythp logy, the infant son of .ZEetes, king of Colchu>, and Hypsea, who was torn to pieces by his sister

ABU

and his limbs scattered

. , .

the road m

40 miles S. of Damietta ; also, two fortified towns lilesW. of Alexandria, and for.n-

in ancient geography, islands

gulf of

there by his sister. They and Osero.

ABUARISCK, a town and principality of Arabia, on the Red Sea, extending from 15►►, 2'. to 17►►, 40'. N. Lat. ; yielding little more than salt from its arid hills, although watered by several streams. The principal sea port is Gesar.

ABUBEKER, the immediate successor of Mahomet, succeeded him A.D. 632, taking the title of caliph, vicar or successor, to show his inferiority, it is said, to the prophet, a title which all his successors have since adopted.

ABUKESKO, orAsLANi in commerce, Turk- ish names given to the Dutch dollar.

ABULFARAGIUS, (Gregory,) the son of Aaron, a physician and prelate of Armenia, born at Malatia, in 1226. He was elected primate of

Carlyle selects some of his most elegant mens of Arabian poetry from this author.

ABUSE', v. & n.

ABU'SER,

ABU'SIVE,

ABU'SIVELY,

ABU'SIVENESS,

ABU'SAGE,

ABUSE'FUL,

ABU'SION,

I see how thine abuse hath wrested so thy wittes,

That all it yeldes to thy desire, and followes thee by fittes. Surrey.

Was it not enough for him, to have deceived me ; and, through the deceit, abused me ; and, after the abuse, forsaken me : but, that he must now, of all the company, lay want of beauty to my charge.

Sidney, b. ii.

ROS. No : I will not cast away my physick but

Ab: utor, usus, to use from ; to put to a con- trary use ; to use ill in any way ; to insult, to take an unfair advantage of; to violate, or defile ; to misapply, to mispend.

the Jacobites in 1266, an office which he held on those that are sick. There is a young man haunts

for 20 years He wrote, an Epitome of Universal the forests, that abuses our young plants with carving

History, which was published, with a Latin Rosalind on their barks ; hangs odes upon hawthorns,

translation by Dr. Pocock, in 1663. and ele/;es on “”] * * “►► forso►►^ ff^ the

ABULFAZEL, Vizier and historiographer name of R►►^lmd. ►►► ‘►►► I ►►►►►►►W meet that fancy-mon-

to Akber, the great mogul, and author of Ayeen Akberry. Few particulars are known of his life, but he bears a high character for learning and elegance as a writer ; he was assassinated in 1664, on his return from a mission to the Deccan. ABULGHAZI, (Bayatur,) khan of Tartary de- scended from Jenghiz khan, was born in 1 605 at Urgens. He endured a long series of misfor- tunes before his accession to the throne of Kha- razn in 1645, in which he continued twenty years, having by his courage rendered himself formidable to all his enemies. In 1665, he resigned his sceptre in favour of his son, and undertook a genealogical history of the Turks, which was completed by his successor, and is considered the most authentic history extant of the Turks and Tartars. It was procured by Count Strahlenberg when a captive in Siberia, and has been very generally translated into the European languages. ABUNDANTIA, or COPIA, a heathen god- dess generally crowned with garlands of flowers, and pouring all sorts of fruit out of a horn which

ger, I would give him some good counsel, for he seems to have the quotidian of love upon him.

Shakspeare's As You like it.

Happy are those persons who use the world and abuse it not, who possess a part of it, and love it ior no other ends but for necessities of nature, and con- veniences of persons, and discharge of all their duty and the offices of religion, and charity to Christ, and all Christ's members. Jeremy Taylo" ,

They that use this world, as not abusing it; for the fashion of this world passeth away. 1 Cor. vii. 31. He has fixed and determined the time for our re- pentance, beyond which he will no longer await the perverseness of men, no longer suffer his compassion to be abused. Rogers's Sermons.

The world hath been much abused by the opinion, of making ; the work itself I judge to be possible ; but the means, hitherto propounded, are in practise full of error. Brown's Natural History, No. 126.

Nor be with all these tempting words abused ; These tempting words were all to Sappho us'd. Pope. ABUT', } Abuttan, from Boˆa. The ABUT'MENT, > first, outward extremity of any ABUTT'AL, j thing; to border on the sui

she holds in her right hand. On a medal of face or ?dge of, to touch the boundary of any Trajan, she is represented with two cornucopia?. tning in juxta-position.

Two mighty monarchies, Whose high, upreared, and abutting fronts The narrow perilous ocean parts asundor.

Shakspeare's Henry V The Looes are two several corporations, di

ABUNDANT NOTION, in logic, that which includes more marks and characteristics, than are absolutely necessary for distinction.

ABUNDANT NUMBER, in arithmetic, a number,

.. t* i .. . iuc JUUUCB arc L\ u several L'uri.'uraiiuii►►, uiani:.

the sum of whose aliquot parts is greater than gu;shed by thc addition of east an'd west, abuttinjf

the number itself. Thus the aliquot parts of 12, upon a navigable creek, and joined by a fair bridge of

being 1, 2, 3, 4, and 6, they make, when added many arches. Ca'rew.

together, 16. It is opposed to a deficient number. . ABUT1LON, in botany, a genus of mallows

ABUS, in ancient geography, a name for the called by Linnaeus SIDA, which see.

confluence of the Ure, the Derwent, the Trent, ABYDOS, in ancient geography, a town built

&c. forming the mouth of the Humber. by the Milesians in Asia, on the narrowest part

ABU* IK, or BUSIR, a town of Egypt, the of the Hellespont, opposite to Sestos on the

Ancient Busiris on the right bank of the Nile, European side. Here Xerxes constructed his

famous bridge, and Ovid makes it the scene of the loves of Leander and Hero. The inhabitants are called by some writers a soft and effeminate people, much given to detraction ; hence the pro- verb, ' Ne temere Abydum/ We need hardly re- mind our readers of the celebrity given to this place by the admirable poem of Lord Byron.

ABYDOS, in ancient geography, a town of Egypt, between Ptolemais and Diospolis Parva, towards Cyrene ; famous for the palace of Mem- non and the temple of Osiris ; into which singers and dancers were forbid to enter. This city, re- duced to a village under the empire of Augustus, now presents to our view only an heap of ruins without inhabitants; but to the west of these ruins is still found the celeb rated tomb of Osy- mandes. The entrance is under a portico 60 feet high, and supported by two rows of massy columns, loaded with hieroglyphics. Beyond it, is a temple 300 feet long and 155 wide. Upon entering the monument we meet with an im- mense hall, the roof of which is supported by 28 columns, 60 feet high, and 19 in circumference at the base. They are 12 feet distant from each other. The enormous stones that form the ceiling, perfectly joined, and

incrusted, as it were, one in the other, offer to the eye nothing but one solid platform of marble, 126 feet long, and 26 wide. Monsieur Chevalier, formerly governor of Chandernagore, who resided 20 years in that country, carefully visited , this monument on his return from Bengal. He re- marked here the gods Jaggrcnat, Gonez, and Vechnou or Wistnou, such as they are repre- sented in the temples of Indostan. ††† A great gate opens at the bottom of the first hall, which leads to an apartment, 46 feet long by 22 wide. Six square pillars support the roof of it ; and at the angles are the doors of four other chambers, but so choaked up with rubbish that they cannot now be entered. The last hall, 64 feet long by 24 wide, has stairs by which one descends into the subterraneous apartments of this grand edifice. The Arabs, in searching after treasure, have piled tip heaps of earth and rubbish. The walls, the roof, and the columns of this edifice, have suf- fered so little from the injuries of time, that did not the hieroglyphics mark its antiquity, it would appear to have been newly built. To the left of this great building we meet with another much smaller, at the bottom of which is a sort of altar, probably the sanctuary of the temple.

ABYLA. See ABILA.

ABYO, or ABUYO, one of the Philippine is- lands in the E. Indies, E.oi Layla. Lon. 124††, 15'. E. Lat. 10††, 6'. N.

ABYSM', n. \ a./3i>

character of an abyss is unfathomable depth, profundity.

And brutish ignorance, ycrept of late Out of drad darkness of the deep abysm.

Sp. Tears of Muses, 188.

O ! the unfathomable abyss of eternity ! how are our imaginations lost in the conceptions of it !

Stillingfleet's Sermons. Nor second he that rode sublime Upon the seraph wings of ecstacy, The secrets of the abyss to spy.

Gray's Progress of Poetry.

ABYSS, in the Septuagint, denotes the water which God created at the beginning along with the earth, which encompassed it round, and which our translators render by deep, Gen. i. 2. Abyss is also used for an immense cavern in the earth, wherein God is supposed to have collected all those waters on the third day, which in our version, is

rendered the seas , and elsewhere the great deep. Dr. Woodward and others, suppose that there is a mighty collection of waters in the bowels of the earth, communicating with those of the ocean, by means of certain hiatuses or chasms, passing between them and the bottom pf the sea ; but so, that the ordinary surface of the abyss, is never level with that of the ocean. The existence of such abyss or receptacle of sub- terraneous waters, is controverted by Camera— rius ; but the arguments on each side of this con- troversy may be seen collected and amplified, in Cockbum's Inquiry into the Truth and Cer- tainty of the Mosaic Deluge, p. 271, &c. Vid. also, WhitehursCs Inquiry into the Original Formation of the Strata, &c. ; also Journal des S$avans, Iviii. Mem. of Literature, viii. and Jamieson's Mineralogy, v. iii.

ABYSS, in antiquity, the temple of Proser- pine ; so called on account of the immense fund of gold and riches deposited there, and as some say, hidden under ground.

ABYSS, in heraldry, denotes the centre of an escutcheon ; in which sense, a thing is said to be borne in abyss/en abysme,)vi\ien placed in tho middle of the shield, clear from any other bearˆ ing : He bears azure, a fleur-de-lis, in abyss.

ABYSSINIA.

ABYSSINIA, ABASSIA, HABESH, or UPPER ETHIOPIA, an extensive kingdom of Africa, lying between the 7th and 16th degrees of N. lat. and 30►► and 40►► E. long. It is bounded on the east by the Red Sea, on the north by Senaar, on the west and south by Senaar and Kordofan, together with some vast barbarous regions, the names of which are scarcely known to Euro- peans. Mr. Pinkerton computes the superficial area at 770 miles in length, by 550, its medial breadth, in which perhaps he has not erred

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egregiously ; although from the indefinite nature and shifting demarcation of its boundaries, the true dimensions of this country are difficult to ascertain.

The ancients knew nothing accurately of this extensive region, and therefore included it, to- gether with the adjacent territories, under the comprehensive name of Ethiopia ; a term which they applied indiscriminately to all nations of a black complexion, and even to Arabia, Persia, Chaldea, and Assyria. Ethiopia Proper, called

E

the

by the Jews Cush and Ludim, was bounded on land in Abyssinia, running N. and S. about 80 the N by Egypt, extending to the Lesser cataract miles, with a medial breadth of about 30. of the Nile/and the Elephantine island ; on the 9. Shire is the most picturesque part ot W by Libya Interior ; on the E. by the Red Abyssinia, abounding with fine landscapes, flow- Sea, and on the S. by unknown parts of ery meadows, and shady groves.] t lies to the Africa. The Africans were divided into the eastern and the western Ethiopians, the latter of whom were also called Hesperians.

The Ethiopian kingdoms, of which the ancients had any knowledge, were two, the first Meroe, situated on a peninsula, which they erroneously supposed to be an island, formed by the union of the Nile with the Astaboras and the Astapus, (Blue River and Tacazze.) Its metropolis of the same name stood upon the Nile, in lat. 16►►. 26'. Mr. Bruce in passing through Senaar, saw near Chendi immense ruins, which probably belonged to this celebrated capital of Ethiopia. The second kingdom, un- known until the Greeks under Alexander had extended their navigation along the eastern coast of Africa, was that of the Axumitae, situated upon the Red Sea, and occupying part of the Abys-

west of Axum, and connects itself with contiguous regions of

10. Zetnben, a valuable district between Sa- men and Tigrfe Proper.

1 1 . The eleventh and last division of Tigre is called the kingdom of Baharnogash.

AMHARA, the second independent state, is, according to Bruce, a mountainous region, 120 miles long, and 40 broad, containing the rock Geshen, once the residence of the royal family. This province is now almost entirely in pos- session of the Galla, whose chief Guxo is the enemy of Ras Welud Selasse, and enjoys an absolute power on the W. side of the Tacazze, and is strengthened in a considerable degree by his connexion with the southern Galla : the cavalry of this prince has been estimated at 20,000, and is derived chiefly from the district

sinian province of Tigre?" Its capital Axum, in a of Begemder; Gondar is under his jurisdic- state of decay, remains to exhibit the ruins of its

tion. The men in this part of the country were

reputed formerly the handsomest in Abyssinia.

former greatness. It was from the port Adulis, in this territory, that the ancients derived the finest ivory.

When Mr. Salt was last in Abyssinia, it was divided into three distinct and independent states.

TIGRE the most powerful was tinder the do- minion of Ras Welud Selasse, who claimed the monopoly of all the muskets imported, and like- wise of the salt. This division of Abyssinia comprehends about four degrees of lat. and the same of long, bounded by a strong sea-coast, and inhabited by a warlike people.

1. Tigre the first sub-division of this region, bounded by the territories of the Baharnegash, the river Mareb and the Tacazze is a wealthy province, measuring 200 miles from N. to S. and 120 from E. to W. It consists of a range ot hills intersected by deep vallies and cultivated plains.

2. Agame, E. of Tigre, consists of a rich and fertile level, at considerable altitude, enjoying a favourable climate. It is remarkable for the

salt plain in its vicinity, also for the strength of and courageous.

The third division of this country, now entirely separated from the before mentioned by the Galla, consists of the united provinces of SIIOA and EFAT, and is supposed to contain a larger portion of Ethiopian literature and manners, than any other part of Abyssinia.

Efat, a fine district between the ninth and eleventh degrees of lat., consists principally of high land, running N. and S., and declining on each side to an extensive plain. Numerous rivers flow on both sides from the lofty regions, and fall into the Nile and Hawash, of which latter, two branches, sweeping round to a con- siderable extent, nearly encircle the province. The present ruler residing at Ankobar the capital, is the grandson of Yasous, whom Bruce mentions (as Dofter Esther told Mr. Salt in- correctly,) as having visited Gondar while he was there. The chief dependence of this pro- vince is upon its cavalry, who are both skilful

its eastern frontier, near the Taltal.

Shoa lies on a lower level than Efat, and is

3. Enderta, a mountainous province S. of extremely rich in pasturage. Its vallies are deep Agame, is celebrated for its capital, Antalo, in and beautiful, well watered by streams and

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which the Ras resides for the sake of protecting rivers. The districts of Walaka and Gondar,

dependent on these united provinces, are of no inconsiderable importance.

Walaka, between the rivers Geshen and Samba, is memorable as the province where the only

the southern provinces from the Galla.

4. Wojjerat, S. of the preceding, is a wild district full of forests, in which the lion, ele- phant, and rhinoceros are frequent.

5. Wofila, contiguous to Wojjerat, is a small surviving prince of the family of Solomon was low division, bordering on the lake Ashangee, preserved after the massacre by Judith, in con- where the Galla profess Christianity, and min- sideration of which, great privileges were con- gle with the native Abyssinians. ferred upon the inhabitants. It is also memora-

6. iMsta is a rugged and mountainous dis- ble for the monastery of Demba Libanos, where

trict, the heights of which are almost inacces- sible. To the north are two mountainous dis- tricts, between which and the Tacazze, are two low ones, inhabited by Christian Agows.

the saint Tecla Haimanout was bred, the famous founder of the power of the clergy.

The Macrobii of the ancients, according to Bruce, the present Kuara, S. of Dembea, is

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larther to the north lies Avergale, remarkable for a colony of Pagan blacks in its

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a. narrow region stretching for about fifty miles N. and S. along the Tacazze, and inhabited like the preceding by the Agows.

8. Samen. E. of the Tacazze, is the highest

lower region, derived from the black slaves, who accompanied the Arabs after the invasion of Mahomet. One of the great officers of state has kettle drums of silver, which he alone

has the privilege ot beating through the streets of Gondar.

The general appearance of Abyssinia is wild and magnificent, overspread with forests, mo- rasses, deep vallies, and beautiful rivers. Tra- velling is exceedingly difficult, but delightful from the charms of romantic variety, ever open- ing upon the eye. The mountains are remarka- ble for their elevation, and in the opinion of some, exceed the Alps and Pyrenees. Some of them appear like obelisks and pyramids, while others are flat and square, grouped with the utmost irregularity, and exhibiting an almost infinite diversity of forms.

The mountains of Abyssinia generally are arranged in three ridges, of which the middle is the loftiest, and at the same time the most rugged and barren. E. of the kingdom are the heights of Taranta, which Bruce represents as so bare, that he found no possibility of pitching a tent there. On the lower part of the mountain he found the tree called kolquail in a state of high perfection, on the middle olives, which had no fruit, and on the upper part, the Oxycedras or Virginia cedar, called Arze by the natives. On the top is a small village named Halai, inhabited by poor shepherds, who keep the flocks of the rich people in the town of Dixan below. They are of dark complexion, and have black hair, curled artificially ; they wear a girdle of coarse cotton cloth, swathed six times round their middle, and carry with them two lances and a shield made of tulls' hides; besides these weapons they com- monly carry in their girdles a crooked knife with a blade about 16 inches in length, and near the lower part three in breadth. Here are also abundance of cattle; milk-white cows with wide horns, fine hair like silk, with dewlaps down to the knees ; and black sheep with soft hair instead of wool. On the top of the mountain is a plain, which, at the period mentioned by our traveller, was sown with wheat. The air

seemed ex- cessively cold, although the thermometer was not below 59►► in the evening, and on the western declivity, the cedars had degenerated into shrubs and bushes.

Towards the centre of the kingdom, on the north west part of the mountains of Samen, is the celebrated Lamalmon, which Bruce tells us, he ascended by a winding path, not quite two feet broad, on the brink of a dreadful precipice, and frequently intersected by the beds of torrents which lay in vast irregular chasms of the moun- tains ; the summit from below had the appear- ance of being sharp pointed, but was in reality, a large plain full of springs, and containing the sources of almost all the rivers in this part of the empire. These springs boil out of the earth, sending forth such quantities of water as would be sufficient to turn a mill. A perpetual verdure prevails upon the mountains ; and Bruce thought that, with moderate industry, three harvests might be reaped annually. The Gauza lies in the south of the kingdom ; beside which, the mountains of Adowain Tigre", Amda Gideon, or Jews' Rock, in Samen, and the triple ridge of Afon- nasha, Litchambard, and Amid Amid, supposed by the traveller already named, to be the Moun- tains of the Moon, are the most celebrated.

From all the Abyssinian mountains gold is washed down by the torrents in the rainy seasons.

Of the mineralogy of Abyssinia little is known, although from its mountainous character, but one opinion upon the subject has hitherto been formed. Near Weach are low hills of granite rocks, resting on beds of micaceous earth. In Tigr►► the soil is sandy, and the rocks composed of slate, schistus and grani*e lie in perpendicular strata, although in Geralta and Enderta, the strata are horizontal. But the great salt plain, fifty miles west of Amphila, on the road to Massowa, forms one of the most wonderful phe- nomena in Abyssinia. It is crossed in sandals made from the leaves of a species of the palm, and is four days' journey from N.W. to S. E. The plain is perfectly flat, and for the first half- mile the salt is soft, at a greater distance it be- comes hard and crystallized, like ice on which snow has fallen after it has been partially thawed ; branches of pure salt occasionally rising above the surface. For about two feet immediately under the earth it is hard and pure ; at a greater depth it becomes coarse and soft, till exposed to the air. It is cut with an adze into pieces of the shape of a whetstone, and passed among the natives as money. The Galla frequently attack the workmen employed in cutting the salt from the plain ; and Balgudda, a protector of the salt caravans, derives his emolument from the duty imposed on its exportation. A camel, the usual load of which is 200 pieces, pays 11 ; a mule, carrying 80, pays

nine ; an ass, pays six ; but when it is brought away by men, no duty is paid.

The principal river of Abyssinia is the Bahr- el-Azrek, or Blue River. It originates in two springs, arising from a small hillock, in a marsh, of Sacala, near Geesh, and flows into the lake Dembea ; emerging from which, it sweeps its semicircular course round the provinces of Damot and Gojam ; after which, taking a north- erly direction through Senaar, as far as Wed Hogela, in the 16th degree of latitude, it unites with the Bahr-ei-Abiad, or principal branch of the Nile, originating in the mountains of the Moon. The Tacazze rises W. of Antalo, from three small springs in the plains of Magilla, and joined by the river Arequa, runs through Senaar to the Nile, carrying with it nearly one-third of the water which falls in the whole empire. This river is extremely pleasant, being shaded with fine lofty trees, and the water remarkably clear. At the ford, where Bruce crossed, this river was 200 yards over, running very swiftly over a bottom of pebbles. At the very edge of the water the banks were covered with tamarinds, beautifully supported by a back ground of tall and stately trees, that never lose the charms of their foliage. It is however, in- fested with crocodiles and hippopotami, and the neighbouring woods are full of lions and hyaenas. Two rivers of Abyssinia, the Hanazo and the Hawash, flow towards the entrance of the Red Sea, and the Jemma. The Maleg, a large and important stream, after a parallel course on the* W. joins the Abyssinian Nile. The March forms the boundary between Tigre, and the kmg

dom of the Baharnagosh. The principal lakes are the Dembea, commonly called Tzana, having in the midst of it an island of the same name. That of Lawasa in the southern region, together with Ashangeeand Haik, near the rocks of Geshen and Ambazel.

The climate is cold, and for six months of the year, viz. from April to September inclusive, constantly rainy. During the other six months, the sun being vertical, and the sky cloudless, the heat is excessive through the day ; but, still the nights are so cold, owing to the length of the rainy season, and the perpetual equality of the days and nights, that the ground feels disagreeable to the soles of the feet. The mountainous nature of the provipce generally, nevertheless exposes different situations to the various effects of heat and cold, dryness and humidity, and of a free circulation and stagnation of the atmosphere ;

those of the natives who live upon the hills, are healthy and sprightly, whilst those who live in the vallies, marshes, or sandy deserts, experience an excessive heat, with a humid suffocating atmosphere. To avoid the inconvenience occasioned by the overflowing of the rivers, during the rainy season, the inhabi- tants have built many of their towns and villages upon mountains; they are, however, generally mean and slight, consisting of only one story. On Lamalmon, one of the highest of these hills, Mr. Bruce observed the thermometer stood at 32►► in the depth of winter; the wind N.W. clear and cold. A light hoar frost fell with the wind, which vanished a quarter of an hour after sun- rise, but there appeared no sign of congelation ; but upon Amid Amid, he remarked that hail lay for three hours in the forenoon. One of the natives describing a fall of snow, for which no term had been previously invented, uses the following language : " This village (Zinzenam) has its name from an extraordinary circumstance that once happened in these parts ; a shower of rain fell, which was not properly of the nature of rain, as it did not run upon the ground, but remained very light, having scarce the weight of feathers, of a beautiful white colour like flour ; it fell in showers, and darkened the air more than rain, and liker to mist. It covered the face of the whole country for several days, retaining its whiteness the whole time, then went away like dew, without leaving any smell or unwhole- some effect behind it." Mr. Salt, nevertheless in his visit to Abyssinia, found snow upon the mountains of Samen; and Mr. Pearce, in his passage over them, experienced a heavy fall. The thermometer in March, April, and May, averaged, according to the former gentleman, 70►► at Chelicut, 65►► at Antalo, 95►► on the banks of the Tacazze", and upon the mountains of Samen, was below the freezing point.

The inhabitants of Abyssinia are especially subject to fevers of different kinds, which are commonly fatal on the third day; after which period, those who survive, commonly recover. The tertian fever is particularly common. Fevers in Abyssinia not unfrequently terminate in in- termittents ; and if long continued, in dysenteries, which are often mortal. That species of dysentery beginning with a constant diarrhoea

if it commence with the rainy season, is seldom cured. Bark, ipecacuanha, water, and fruit not over ripe, are sometimes administered with suc- cess ; ipecacuanha in particular, provided the season be favourable, either removes it, or changes it to an intermitting fever, which yields to the bark. Another endemial disease is the ' hanseer,' (the hogs or swine) a swelling of the glands of the throat, and the parts under the arms ; which by unsuccessful attempts to produce suppuration, and opening the tumours, becomes a running

sore resembling the evil. Swellings of the whole body, especially the arms, thighs, and legs, accompanied by ulcers in the nose and mouth, are common in this country. These dis- eases sometimes yield to mercurials, and the last is speedily cured by antimonials. Farenteit, or the worm of Pharaoh, commonly attacks those who are in the habit of drinking stagnant water. It appears in all parts of the body, and is a worm with a small black head, and a white hooked beak, and a white body of a silky texture, re semb.mg a small tendon. The natives seize it by the head, and wind it gently round a piece of silk, or on a bird's feather, and then extract it with- out much inconvenience. But the most terrible of all diseases, is the elephantiasis ; for which, no cure has ever been discovered. See ELE- PHANTIASIS. To the alternations of scorching heat and chilling cold, thin clothing, the use of stag- nant putrid water, for four months in the year, &c. the endemial diseases of Abyssinia are at- tributed.

The variety of elevation in different parts of the country, occasions a proportionate variety of soil and productions. Corn is produced in great abundance. Teff is their chief article for bread ; and where the grounds are unfit for the produc- tion of this, the tocusso plant is raised, yielding a black bread for the lowest classes. Although wine is not made in more than one or two places, there is every where the greatest profusion of fruits. Sena, cardamom, ginger, and cotton, are produced in great quantities. A species of rose grows upon large trees, and is in fragrance much superior to those which grow on bushes. The Balessan balm, or balsam plant, which produces the balm of Gilead mentioned in scripture, is found among the myrrh trees, on the coast of the Red Sea, all the way toBabelmandel. Sassa, myrrh, and opocalpasum are common in the same region. The ensete is an herbaceous plant, in Narea, which thrives chiefly in swampy places, and forms a considerable part of the vegetable food of the natives. The kolquall is a tree of which the lower part alone is woody, the upper being her- baceous and succulent; it makes a beautiful appearance, bearing a fine golden coloured flower, which ripens to a deep crimson fruit. The geshe-el-aube is a kind of grass, about Ras-el-Feel, which grows to the height of nearly three feet and a half. The gaguedi tree, running to the height of about nine feet, is a native of Lamalmon, and produces beautiful yellow flowers, which like the helianthus, are turned towards the sun. The wansey tree, com- mon throughout the whole of Abyssinia, flowers the first day on which the rains cease ; it grows to the height of 18 or 20 feet, and is highly

esteemed by the Abyssinians, and by the Galla even worshipped. Kuara, a beautiful tree grow- ing in the southern and western parts of Abys- sinia ; producing a fruit resembling a red bean, which in the early ages was used as a weight for gold. From this circumstance, Mr. Bruce imagines the imaginary weight carat, is derived. The wooginoos, or brucea antidysenterica, com- mon in valleys throughout the whole country, is an antidote to the dysentery. Cusso, or banksia anthelmintica, is a beautiful tree, so called from its being a strong anthelmintic. Nook, or nuk, resembling our marigold, produces abundance of oil. The lehem, or toberne montana, a tree common near the lake of Dembea, is remarkable for its beauty and fragrance ; it grows to a con- siderable size, the extremities of its branches trailing on the ground, covered with flowers from top to bottom, each cluster containing between 85 and 90 ; open or shut the fruit is taken, but has rather a harsh taste. The anguah, found near the Tacazze, produces a gum resembling frankincense. The leaves of the geesh, are put by the natives into their maize, and sometimes reduced to powder, and mixed with other ma- terials, of which they make sowa. The mergom- bey, a species of solanum, is used as a cathartic ; and, from the niche, or niege, a species of the sesanum, they extract vegetable oil. A species of narrow ficus, near Shela, called by the natives chekunit, of which the inner bark is converted into matches for fire arms. Near Adowa, Mr. Salt found a new and beautiful species of amaryllis, bearing 10 or 12 spikes of bloom on each stem, emerging from one receptacle, as large as those of the belladonna. It is sweet scented, like the lilly of the valley, and has a white corolla, each petal being marked down the middle with a slight streak of bright purple. The bulbs are frequently two feet under ground.

Numerous plants and trees of Abyssinia, are however, yet undescribed ; although Mr. Salt in his two recent journies added eight genera, and 1 28 species, to our vocabulary. The process of fructification is, in many instances, very singular. Although the same part of the tree flowers only once in 12 months, the blossoms appear and the fruit ripens, first, on the western boughs, next on the southern, then on the northern, and finally, on the eastern ; which continues to pro- duce blossoms and fruit, till the commencement of the rainy season. The leaves of the trees being generally of a rough texture, and varnished, are admirably adapted to resist the rains.

The quadrupeds of Abyssinia are among the most remarkable in the world; and have, ac- cordingly, attracted the attention of travellers. Many of the cow species have no horns, but are distinguished by bosses on their backs ; others, have horns of a prodigious size, as the galla, or sanga, whose horns are capable of holding ten quarts each.

The horns of one of these animals are in the Museum of the College of Surgeons, in London. They are however, by no means common, being brought only by the Cafilas, or salt caravans, as valuable presents from the south. The sheep are small and black; the horses strong and beautiful ; goats, mules, asses, and camels, are common. Of dogs there are two

species, one of which lives in packs in the villages, like the paria dog in India ; the other, is kept for game, especially guinea fowl, in taking which it is very expert. Cats are found in every house, and rats are numerous in the fields.

Of wild animals, Abyssinia furnishes vast numbers. There is a great variety of antelopes, one of which is supposed to be allied to the chamois. Several species of the monkey, wild boar, porcupine, cavy, (nearly allied to that of the Cape) hares, and squirrels, are plentiful, but are thought unclean ; also, an undescribed spe- cies of lemur, the size of a cat, with a long tail, faintly striped with black and white, and white bushy hair at the end ; and clear white hair all over the body, except on the back, where there is a large oval spot covered with short deep black hair, of which every man in Tigre is proud to have a piece on his shield. Elephants are hunt- ed by the Shangalla for their teeth. The cawe leopard is rare and very shy, being only found in the interior districts. The two-horned rhino- ceros is also rare, being found only in the forests of Wojjerat, and the low country, near the Funge. Of its horns, the foremost is two feet long, having no connexion with the bone of the head. The opinion of Sparrman is not improbable, namely, that the animal can raise or depress them at pleasure. The skin of this rhinoceros has no folds in it, as that of the one-horned species has, but is of sufficient strength to be made into shields ; as is also that of the buffalo. Zebras are com- mon in the southern regions, and their manes are used to decorate the collars of the horses belong- ing to the most distinguished chiefs on days of state. Wild asses and lions, are found in the sandy districts, near the Tacazze", and the skin of the latter richly ornamented, forms a dress like that worn by the Caffre chiefs. Whoever kills one of these animals, wears the paw on his shield. Of the leopard there are several species, one of which is black, and extremely rare, whose skin is worn only by governors of provinces. The lion-cat, tiger-cat, or grey lynx, and wild cat, are not uncommon. Civet is procured from the Civet, and is an article of commerce. Wolves, foxes, sea foxes, and jackals, are numerous in every part of the country. But of all the quad- rupeds of Abyssinia, none exceed the merciless hyaena. " They were a plague" says Mr. Bruce, " in every situation, both in the city and in the field, and surpassed the sheep in number. Gon- dar was full of them, from the

time it turned dark, till dawn of day ; seeking the different pieces of slaughtered carcases, which this cruel and unclean people expose in the streets without burial.” The hyrena, Mr. Salt remarks, has a singular cry, consisting of three distinct deep- toned cries, then silence for a few minutes, suc- ceeded by the same kind of noise. The hippopo- tami are chiefly found in the deep pits, like lochs between the fords of the Tacazzl; where they roll and snort like a porpus, but are not able to remain longer than five or six minutes at a time under water. Their colour is a dusky brown, like the elephant, and their usual length 15 feet. Whips, to brush away the flies in hot weather, are made of their skins, the butt-ends of which,

are adorned with hair from the tail of the camel- leopard.

The birds of Abyssinia exhibit every variety of appearance and plumage. Many species of the eagle, vulture and hawk, are found, especially after the tropical rains. These carnivorous birds feed at first upon the fish washed from the salt- springs, where they had been nourished by the force of the inundation, and left after the sub- siding of the waters : when these fail, they turn their attention to the bodies of elephants and other beasts, slain by the hunters in the low- lands; rats and field-mice become their next prey, to which maybe added the cattle slaughtered by the Abyssinian armies, and the dead bodies which remain upon the field of battle. Many of the birds of Abyssinia feed upon insects, others upon grain, seeds, and fruits. It is an advantage of granivorous birds, that, as the country is crossed by mountains that divide the seasons, and the rains in different parts fall at different periods, they have but a short passage from time to time to supply themselves with food. Of the numerous species of pigeons, all except one, which occupies the eaves of houses, &c. ; are migratory. The owls are large and beautiful. The swallows, common in Europe, appear in passage at the very season when they leave that continent: numerous other kinds however are found, which are unknown in Europe. The large birds, resident in the mountains of Samen and Taranta, have tubular feathers, the hollow part being filled with yellow dust, which, agitated by the motion of the animal, issues out in great abundance. The dust expressed from the wing of a nisser, or golden eagle, appeared, says Mr. Bruce, through a microscope with a strong mag- nifying power, like fine feathers. One of these birds measured eight feet four inches from wing to wing, and nearly five feet from the tip of his tail to the termination of his beak. The racha-

mah, or black eagle, with several other species, called erkoom, moroc, sheregrig, and waalia, are particularly described by Mr. Bruce, to which Mr. Salt has added a new species, call'ed goodie- goodie, about the size of a falcon, the colour deep brown, and the breast a clear white ; the crows have nearly an equal proportion of black and white. . The black feathers of the raven are intermixed with brown ones, the tip of his beak white, and a tuft of white feathers on his head, somewhat resembling a chalice or cup. Web- footed water-fowl are generally scarce, but storks and snipes are numerous. There is but one species of goose, called the golden goose, or goose of the Nile, which is common through all the South of Africa. A new species of the vul- ture has been recently discovered. Ostriches are sometimes met with in the low districts to the north. The hern inhabits marshy ground. The solitary hornbill is often seen in the district of Tigre. The Egyptian goose, allied to the Anas Lybica, is seen in some parts occasionally. Quails, guinea fowls, and partridges, abound. Amongst other rare birds brought home by Mr. Salt from Abyssinia, may be mentioned the fol- lowing : A new species of bucco, since called Rucco Saltii, which clings to the branches of trees, like the woodpecker; a variety of the upupa

erythrorhynchos, with a black tail ; it feeds on the figs of the ficus sycamorus ; a nondescript species of the merops ; a new species of tanapa, which perches on the backs of cattle, and feeds upon the grubs which live upon them in hot weather; the columba Abyssinica, which flies wild among the daro trees ; the Erodia ampni- lorsis, supposed to be a new genus of the Arodea Pondiceriana ; also the Cursorius Europaeus, an extremely rare bird, shot on the sandy plains traversed by the rimer Tacazze1.

Of the insects produced in Abyssinia, the most dreadful is the tsaltsalya, a species of the fly somewhat larger than a bee, with colourless wings of pure gauze, placed separately, like those of a fly. This insect is distinguished by a large head and sharp upper jaw, armed at the end with a strong pointed hair, about a quarter of an inch in length, the lower jaw being furnished with two of these hairs, whilst the legs are serrated in the inside and covered with down. Its motion is rapid, like that of a gad-fly, pro- ducing a jarring noise, accompanied by a hum- ming, which is no sooner heard than the utmost consternation prevails amongst the cattle, who use every effort to escape his attack. The thick skin of the camel is no security against the pro- boscis of this dreadful insect, which, whenever it wounds, injects a venom which causes the part to swell, break, and mortify, to the certain destruc- tion of the animal. Of the ravages of the Abys- sinian locust, Mr. Salt gives a most dreadful account. Bees are

domesticated in the province of Wojjerat, and white honey is produced in great quantities, and sold at Antalo.

The large snake called boa, about the thick- ness of a man's thigh, and upwards of twenty feet in length, is frequent in Abyssinia. The grassy verge of large pools affords him an agree- able resort; his chief subsistence is antelopes and deer, which he swallows piece-meal after crushing their bones. The cerastes, or horned viper, is commonly about thirteen or fourteen inches in length, and its poison is contained in a bag under its canine teeth. This reptile moves in all directions with great rapidity, springing suddenly upon its victim after approaching with its head averted to a proper distance. The reality of the incantation of serpents and scor- pions, which in some is natural, and in others produced by medical preparations, is asserted by Mr. Bruce.

The torpedo and binny are amongst the most remarkable fishes, the latter of which is good for food. It grows to a considerable size, and its body is covered all over with beautiful scales resembling silver spangles.

The agriculture of Abyssinia is not in a state of great perfection ; the worst grain is used for seed ; and as almost every man cultivates for the support of his own family, it is seldom sold. The ploughs are rudely formed from the root or branch of a tree, and drawn by oxen ; although in some cases iron ploughshares are employed. The land is twice ploughed, and afterwards the clods broken by women : the corn, when half ripe, is weeded by men, women, and children, singing as they work. The harvests are reaped by females, who, when strangers pass, utter a

sharp shrill ciy, the Liralect of Syria, where the after which divine service was celebrated, and same custom is in vogue. It is produced by he returned to the camp, where 14 days were

spent in feasting and rejoicing.

The king is saluted like the ancient Persian

monarch with the title of " king of kings ;" and

trilling the tongue against the roof of the mouth, and i* in effect, a

constant repetition of the syllable al, uttered with the utmost rapidity

The grain, when gathered, is in most places the royal person is approached with every exter- secured from the weather by a covering of nal sign of adoration ; nor in his presence does tanned kid skins. The plain of Larai, near any one venture to rise from the ground till he Dixan, is in a state of high cultivation, and is receives orders to that effect. When he resides rendered eminently productive by the constant abroad or gives audience, his head is perfectly practice of irrigation. In appearance, it greatly covered, and his eyes only are seen, while one resembles the vale of Evesham. hand is placed upon his mouth. He communi-

With respect to the government of this cates with his subjects by means of an officer country, nothing can be more despotic, there named Kal-Hatze, the voice or word of the king, being no legal control over the absolute will When in council he sits enclosed in a balcony of the sovereign ; and yet, from the want of with lattice windows and curtains, through a adequate military force, his authority is cap- hole in the side of which he speaks to the Kal- able of being set at defiance, in any of the Hatze. When in the field he is attended by an districts, by the inferior governors ; so that officer called Lika Magwass, who carries his hereditary succession, in Abyssinia, imposes but shield and lance. Such formerly was the respect a feeble restraint on those civil wars and com- paid to him, that no king ever fell in battle, and motions, which continue to barbarize the people.

The ceremony of coronation consists in anoint- ing the king with plain oil of olives, which, when poured upon the crown of his head, he rubs into his long hair with both his hands. In former times it was of a more splendid description. The king, arrayed in crimson

even now he is often secured by arraying him- self in his royal insignia.

The administration of justice in Abyssinia is dep’orable, and complainants stand before the palace from day-break to evening, uttering loud cries in their respective languages. So accus- tomed is the king to these querulous tones of

damask, with a great chain of gold about his sorrow, that when the rains prevent such as are neck, his head bare, and mounted on a horse really distressed from repairing to the capital, a richly caparisoned, advanced at the head of his set of vagrants are provided whose object it is to nobility, passed the outer court of his palace as far raise the cry

of artificial sorrow, lest he should as the paved way before the church, where he was feel a lonely quietness. The phrase adopted on met by a number of young girls, daughters of the all occasions is, Rete Ojau hat, Do me justice, ambares, or supreme judges, with many other O king !

noble virgins, standing on the right and left of No satisfactory information has at present been the court. Of these, the two most distinguished obtained with respect to the population of Abys- in point of rank held in their hands a crimson sinia. The account of Alvarez is, that it is one of cord of silk, stretched across from one company the most populous regions of the globe. From to another, about breast high, as if to prevent Mr. Bruce, on the other hand, it appears that the king's passing into the church. When this although in so barbarous a state, it may be sup- was prepared, the sovereign advanced at a posed that every tenth person joins the army, yet moderate pace, displaying, as he passed, his skill it is d ifficult to raise a force of more than 30,000. in horsemanship ; and being stopped by the The most recent authorities estimate the number string, the damsels asked who he was ; to which of inhabitants at 4,000 000. he replied, "I am your king, the king of Ethiopia." The virgins then answered him, " You shall not pass, you are not our king." Retiring some paces, he again presented himself, and the same question was repeated, when he

answered, " I am your king, the king of Israel ;"

The devastations committed by the Abys- sinian army in their march, says a celebrated traveller are such that they leave nothing living behind them, not " even the vestige of an habitation, but fire and the sword reduce every thing to a wilderness and solitude. The beasts

the same .reply was still given by the girls. But and birds, unmolested, have the country to

the third time, on being asked who he was, he replied, " I am your king, the king of Zion,"

themselves, and increase beyond all possible conception. The slovenly manners of this peo-

and drawing his sword, cut the string asunder, pie, who, after a battle, bury neither friends nor Upon this, the damsels cried out, " It is a truth, enemies ; the quantity of beasts of burthen you are our king ; truly you are the king of that die perpetually under the load of baggage, Zion." Upon this, they began to sing hallelujahs, and variety of mismanagement ; the offal and in which they were joined by the

army and the half-eaten carcases of cows, goats, and sheep, whole concourse of the king's attendants. The which they consume on their march : all fur- king, in the mean time, advanced to the foot of nish a stock of carrion sufficient to occasion the church stair, dismounted and sat down upon contagious distempers, were there not such a a stone resembling the altar of Anubis or the dog- prodigious number of voracious attendants star. A number of priests approached in proces- who consume them almost before putrefaction, sion. The king was then anointed, crowned, and There is no giving the reader any idea of their accompanied half up the stairs by ecclesiastics, number, unless by comparing them to the sands singing as they ascended. At an aperture made of the sea. While the army is in motion, they in one of the steps he remained stationary, and are a black canopy, which extends over it for was frmigated with myrrh, aloes, and cassia ; leagues. When encamped, the ground is dis-

ABYSSINIA.

ght of the eye, are of stone, ••

the sources of the Nile, and come

h poce

begins cracking and down to the number of 1000 or 1500 at a time, tw?nty French pos- loaded with wheat, honey, butter, cattle, hides, lions at the door of the palace before the dawn wax, &c. to the capital.

of day This chales away the hyamas and The natives of this country are of a dark other wild beits: this too is the signal for the olive complexion, and are so averse to white, , who sits in judgment every morn- that they dislike white grapes on account of the : and after thai, about eight o'clock, colour. Their dress consists of a large folding breakfast " mantle with a blue and yellow border' wraPPed

The houses of Abyssinia are in general round them and bound with a sash Close thatched and mean; those of the grandees are drawers are also common, to which the priest spacious, but the only approach to architectural add a vest of white linen next the skin. They Jrandeur is to be seen in their churches, which are commonly girt with a belt of white cloth ; are built on commanding eminences of a circular or among the higher orders, of red Indu form with conical thatched roofs, surrounded cotton with girdles of silk or worsted, brought with 'pillars of cedar; within which is com- from the Levant. On the head they wear a monly a refreshing arcade. small shawl of white cotton,

with the crown

Gondar, the metropolis of Abyssinia, is built exposed. Their pnncipal liquor is called maize, upon a hill of considerable height, the top of made with honey, fermented with barley, and which is flat. It consists of about 10,000 fami- strengthened with the root of the Rhanmus lies. The houses are mostly of clay, and inebrians, called sadoo. The liquor is drank the roofs thatched in the form of cones. The out of Venetian decanters, called brulhes. The king's palace at the west end of the town, common drink amongst the lower classes is consists of four stories, flanked with square made of the bread left at their feasts, and parched towers, commanding a fine view of the country barley : it is called sowa, and is drank out of southward as far as the lake Tzana. It was horns.

formerly a considerable edifice; but having Marriage amongst the Abyssinians is generally been often burnt, most of it is now in ruins, a civil contract, and for the most part imper- The audience chamber is 120 feet long. The fectly observed. The female, who is seldom con- palace and its contiguous buildings are sur- suited on the occasion, is carried to the house of rounded by a stone wall 30 feet high, with her husband, either on his shoulders or those of

his friends. The bride and bridegroom are sometimes seated on a throne of turf, shaded with boughs, round which the relations vociferate and dance. Marriage by civil contract, can be dissolved at pleasure, and requires for this pur- pose, nothing more than the assent of one or

which is a mile in circumference, including the other of the parties. It is renewed again as richest church in the kingdom. Higher on the often as it is agreeable to both parties ; who, hill are the houses of the people of rank, who after they have been divorced, and connected are for the most part relations of the Iteghe. with others, cohabit together as before. " I re- Axum, the ruins of which are very extensive, member," says Bruce, " to have been once at was the ancient capital of Abyssinia, supposed Koscam, in the presence of the Iteghe, when in to have been constructed in the time of Abraham, the circle there was a woman of great quality, Among the ruins are 40 obelisks of granite; but and seven men who had all been her husbands, without hieroglyphics ; also the traces of a mag- none of whom was the happy spouse at that nificent temple, originally 110 feet in length, time." Ladies of rank retain their estates and with two wings on each side, a double porch, maiden names, and assume great superiority and an ascent of 12 steps. Sire is larger than over their husbands. There is no

distinction Axum, and is situated on the brink of a steep between legitimate and illegitimate children ; narrow valley. The houses are built of clay, and in case of separation, they are equally d covered with thatch. Adowa, a town of divided ; the eldest son falls to the mother's first great importance in the province of Tigre", does choice, the eldest daughter to the father, &c. If contain more than 300 houses ; although by the numbers are unequal after the first election, reason of the mclosures of a tree, called the the rest are divided by lot. The dowry which wanzey, surrounding each of the houses, it oc- consists of gold, cattle, musquets, and cloth, is cupies a spacious area. It stands on the declivity also returned in case of separation. Princesses i west side of a small plain, of the royal blood are not permitted to marry I by mountains and is watered by foreigners; and when they take the air, they go ms, jr. ,,ch never become dry, even in in great state, with 400 or 500 women attendants.

TanT In, ipT"8′ ? l*"□□□^ □□? "? In S□□me Cases marria*e □□ entered into by reli-

flund, and the houses, except about 20, which giou. contract, and the sacrament taken imme-

battlements and a parapet roof, from which the street is seen to great advantage. Koscam the palace of the Iteghe, is situated on the southern side of the Mountains of the Sun. It is a square tower of three stories, with flat roof and battlements, encompassed by a wall

diately after the ceremony ; but these occasions are seldom. The king himself only sends a message to the lady he chooses. The usual period of marriage is, in males about ten years old, in females younger ; and although in some parts the same man cohabits with several wo- men, and provides them with separate residences ; one only is deemed his lawful wife. The women are of a healthy constitution, active, and mo- derately handsome, having neither flat noses nor thick lips like the negroes. They stand in little need of midwives, which is indeed the case in most countries of the torrid zone. They appear in public, the same as in Europe, with- out being forbidden the conversation of the men.

When a person is diseased, especially if his disease be the Tigre-ter, his relations shew him all the gold and silver ornaments, fine clothes,

&c. which they can collect, making at the same time, a dreadful noise with drums and musical instru- ments, to drive out the devil, who, as they im- agine, produces the disease. As death ap- proaches, the drums, &c. are silent, and are succeeded after the decease by howling, and tearing the hair and skin from the temples. The body is immediately washed, fumigated with incense, sewed up in its former apparel, and buried in great haste. After the burial, com- mences the toscar, or feast of the dead. An image of the deceased in rich garments, is set upon his favourite mule, and carried through the city, accompanied by other mules, &c. in gay apparel, together with a number of hired female mourners, crying out, as in Ireland, ” Why did you leave us ? had you not houses and land ?” On the return of the procession, an immense number of the people are feasted, and a repetition of this feast at intervals, is given by the different relations ; who vie with each other in profusion and liberality. The property of the deceased then descends to his children and rela- tions; and if these are wanting, is divided between the priests and the poor.

In case of murder, the criminal is generally given up to the relations of the deceased, who take him to the market-place, and shortly des- patch him with their knives and spears. A per- son accused of any crime, is immediately on his apprehension, tied by his garments to another, and if he runs away and leave his garments behind him, it is thought a certain proof of guilt. Disputes are commonly decided by the Ras, before whom each party stakes a mule, together with a considerable quantity of gold, slaves, salt, &c. on the veracity of his statement ; and these, should his assertion be controverted, are forfeited to the Ras.

The cruel custom of cutting the shulada, the mention of which subjected Mr. Bruce to the imputation of romance, has been confirmed on the testimony of subsequent travellers in Abys- sinia. It consists in cutting pieces of flesh or raw steaks from the living animal, and eating them raw, and even while yet quivering with life ; after which the wound is closed and the animal driven forward. Mr. Bruce relates, that near Axum he fell in with three soldiers ” driv- ing a cow. They halted at a brook, threw down the beast, and one of them cut a pretty large

collop of flesh from its buttock; after which they drove the cow gently on as before.” In another place he tells us that the flesh was taken from the upper part of the buttock, after which the skin was flapped over the wound, fastened with a skewer, and a cataplasm of clay put over all The following description of one of their feasts will throw a great light upon Abyssinian man- ners : ” A number of people of the best fashion in the villages, of both sexes, courtiers in the pa- lace, or

citizens in the town, meet together to dine between twelve and one o'clock. A long table is set in the middle of a large room, and benches beside it," for the accommodation of the guests. " A cow or bull is brought to the door, and his feet strongly tied. The skin that hangs down under his chin and throat," called the dew- lap in England, " is cut only so deep as to arrive at the fat, of which it totally consists;" and is managed with such dexterity, that by the sepa- ration of a few small blood vessels, six or seven drops of blood only fall upon the ground. Having satisfied, as they imagine, the Mosaic law, by pouring these six or seven drops of blood upon the ground : " two or more of them fall to work : on the back of the beast, and on each side of the spine they cut skin deep, then put- ting their fingers between the flesh and the skin, they begin to strip the hide of the animal half way down his ribs, and so on to the buttock, cutting the skin whenever it hin- ders them commodiously to strip the poor ani- mal bare. All the flesh on the buttock is cut off then, and in solid square pieces, without bones or much effusion of blood; and the pro- digious noise the animal makes, is a signal for the company to sit down to table. There are then laid before every guest, instead of plates, round cakes about twice as thick as a pancake, and something thicker and tougher. It is un- leavened bread of a sourish taste, far from being disagreeable, and very easily digested, made of a grain called teff. Three or four of these are generally put uppermost for the food of the per- son opposite to whose seat they are placed. Beneath these are four or five of ordinary bread, and of a blackish kind. These serve the master to wipe his fingers on, and afterwards the servant for bread to his dinner. ??? Two or three servants then come, each with a square piece of beef in his bare hands, laying it upon the cakes of teff placed like dishes down the table. By this time all the guests have knives in their hands, and the men have large crooked ones, which they put to all sorts of uses during the time of war : the women have small clasp knives. The company are so ranged that one man sits between two women ; the man with his long knife cuts a thin piece, which would be thought a good beef-steak in England ; while you see the motion of the fibres yet perfectly distinct and alive in the flesh. No man in Abyssinia of any fashion whatever feeds himself, or touches his own meat. The women take the steak and cut it length ways like strings, about the thickness of your little finger, then cross-ways into square pieces, some- thing smaller than dice. This they lay upon a piece of the teff bread, strongly powdered with black pepper or cayenne, and fossil salt;

it ui n they then wran it up

cartridge '- down his knife,

the teff bread like a by Demetrius, the twelfth patriarch of Alexandria-
ten j ˆ compute time, by calling their yearg

after the names of the Evangelists, whose writins

Sng upon his tmg P

own is , order gy m their church

neighbour's knee j put. h, "forward and opening his mouth turns to ˆ
tne o cartridge is first ready, wh(stuffs tM wnoie

turns to the one whose _ ••• who stuffs the whole of

ˆ&&SZttA~ &~**tt.~&••'i*

ˆ

, happened in the days of Saint Matthew," r F Qf

Their computation of the day is very The beginning of the day compre-

rf"•••to7;tf,e g*.••r. man would seem to churches.

fe tSJˆˆSt V•• ••••?*. —. of > ,w,Ugh, ,hey 'caU

polite he is thought to be.

neighbour holds

From the beginning of evening twilight, to the rising of the stars, they call iˆset Mid-

goes the same day is called kater, or culmination; and every

and oon tU he is satisfied. He never other part of the day is described by pomtmg

rinks mi he has finished eating; and before he out the place in the heavens where the sun was

nSdetothefaironeswhofedhim, at the time of which they are speaking.

he makes up two small rolls of the same kind and The use of money being unknown, the re-

each of his neighbours opening their mouth venue is paid in bullion gold . Agowrmdre pays

kin 1000 ounces of old 1000

time while with each hand he puts

annually to the king 1000 ounces of gold, 1000

ortion into'their mouths. He then falls to dabres of honey, and 1000 or 1500 cattle. Da- out of a large handsome horn. The mel pays 800 ounces of gold, and thus the m- ladies eat till they are satisfied, then all drink come of government is levied in different propor- Hrether ►► Vive la ioye et lajeunesse.' A great tions all over the country. Fossil salt supplies deal of ioke and mirth goes round, very seldom the want of money, and passes current in square

. MI i. pieces. At Masuah several coins have been in- troduced. The Venetian sequin is equal to two

with any mixture of acrimony or ill-humour At this time the unfortunate victim at the door is bleeding, indeed, but bleeding little. As long

and a quarter pataka; the pataka, or imperial

as they can cut off the flesh from his bones, dollar to 28 harts ; one harf to four diwani ; one

they do not meddle with the thighs or the parts diwani to tenkibur; and one kiburto three boor-

where the great arteries are. At last they fall joorke or grains, which latter consists of small

upon the thighs likewise, and soon after the ani- glass beads of all descriptions and colours, broken mal bleeding to death, becomes so tough that the cannibals who have the rest of it to eat, find

or entire. The wakea, or ounce, is equal to ten derims or drachms, and twelve ounces make a

very hard work to separate the flesh from the liter, ratal, or Abyssinian pound. A gondar or bones with their teeth like dogs." Such is Bruce's wekea is equal to six drachms forty grains troy

description of an Abyssinian feast ; and although that of Mr. Salt in

some respects softens the impressions produced by his predecessor, he ne- vertheless represents the barbarity of the inha- bitants in a light almost equally degrading.

The languages spoken in Abyssinia and the neighbouring districts are a corruption of the Geez called Tigre, Gafat, Amharic, Agow, Fala- shan, Teheretch, Agow, Galla, and Shangalla. The Amharic, the modern language of Abyssinia, is an Arabic dialect, more simple than the Geez in the form of its verbs. The Falasha is spoken by the tribes professing the religion of the Jews, who formerly ruled in Dembea, Samen, and near the Augrab ; and Kahha is one of the ancient Ethiopian tongues. The people of Gafat speak a corrupt dialect of the Amharic.

The Abyssinians compute their time by the solar year, after the manner of the ancient Egyptians. Their month consists of thirty days, to which, in the month of August, is added five days and a quarter to complete the year. The year commences with the 29th or the 30th of August, which is the 1st of their month

weight, and is divided into ten drachms of forty grains each. The ordinary value of a wakea is about 76 of the salt pieces mentioned above. The grain measure used in Abyssinia is the ardeb, containing ten measures called madaga, each equal to twelve ounces Cairo weight. An ardeb of grain costs two derims, or two patakas, An ardeb of teff is the same, and six or eight ardeb of tocusso are equal to an ounce, or ten derims of gold.

The commerce of Abyssinia is confined mostly to the shores of the Arabian gulf, and its manu- factures are few and insignificant. They unravel the threads of the blue cloth of Surat, and weave them into their own webs; and procure a black dye from earth, and red, light blue, and yellow, from vegetables. Fine cloth is manufactured at Gondar, and coarse at Adowa, and the latter, be- sides its common use, circulates as money. The natives of Abyssinia tan hides to great perfection, through the use of the plant merjombey, a species of the solanum, and the juice of the kolquall tree.

The Abyssinians appear in every respect greatly

Maxaram ; and to every fourth year they add a below the rank of civilized nations. They seem in- deed, by their churches and other ruined places, to have had a knowledge of architecture. But the workmen were sent for from other countries $ so that when these fabrics were reared, especially the imperial palace built by Fr. Paez, a

Spanish Mis-

sixth day. Their common epoch is from the creation of the world, from which they reckon 5500 years to the birth of Christ, rejecting the odd eight years of the Greeks, who made that period. They have other epochs, as from the

councils of Nice and Ephesus, but in ecclesiasti- sionary, the people flocked from all parts of Ethi- cal computations, they follow the golden num- opia to view it, and admired it as a new wonder of ber and epact, invented m the reign of Severus the world. Gold, silver, copper, and iron, are the

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principal ores with which their mines abound in this extensive part of Africa : but not above one- third part is made use of by way of merchandize, or converted into money ; of which they have little or no use in Abyssinia. They cut their gold indeed into small pieces for the pay of their troops, and for the expences of the court ; but this is a modern custom among them ; the king's gold, before the end of the 17th century, was laid up in his treasury in ingots, with intent to be never carried out, nor ever used in any thing but vessels or trinkets for the service of the palace.

Mr. Bruce informs us, from the annals of Abyssinia, that, in the reign of Solomon, the Abyssinians were converted to Judaism, and the government, ecclesiastical and civil, modelled according to what was then in use at Jerusalem. Some ecclesiastical historians affirm, that the con- version of the Abyssinians to Christianity, took place in the days of the Apostles, and was effect- ed by the Ethiopian eunuch, whom Philip bap- tized. Whatever truth may be in that tradition, it appears that Frumentius, who was ordained about the year 333, was their first bishop, and in- structed them in the religion of the Greek church of Alexandria. At present they are a mixture of Moors, Pagans, Jews, arid Christians. This last was the reigning and established reli- gion, but in a very low state of degradation, when father Jerome Lobo visited it in 1624, as well as when Mr. Bruce travelled through it. This diversity of people and religion is the rea- son, that the kingdom in different parts, is under different forms of government, and that their laws and customs are extremely various.

The Abyssinians are described as a branch of the Copts or Jacobites,

with whom they agree in admitting but one nature in Jesus Christ, and re- jecting the council of Chalcedon, on which ac- count they are called Eutychians and Monophy- sites. The church is governed by a bishop or metropolitan, styled Abuna, appointed by the Coptic patriarch of Alexandria, residing at Cairo. Next in dignity is the Komos, or Hegumenos, a sort of arch-presbyter, who has the inferior clergy, toge- ther with the secular affairs of the parish, under his inspection. The deacons are of the lowest order of priesthood. The canons never marry. The monks, at their admission, vow aloud before their superiors to keep chastity, but they add, in a whispering tone, ‘as you keep it.’ The deb- tarahs, or chanters, who assist in the musical parts of the service, are in higher esteem than the Komos, though not of equal rank. The emperor confers all benefices except that of Abuna, and takes cognizance of all ecclesiastical causes. The monks are extremely ignorant, and are of two kinds, viz, those of De*bra Libanos, and those of St. Eustathius. Their superior in the north west of the country, is the Itchegae. He is or- dained by two chief priests holding a veil or white cloth over his head, and a third repeating a prayer; after which they all join together in singing psalms.

Though the Abyssinians profess Christianity, they practise circumcision, which they extend to both sexes. They observe Saturday and Sunday for sabbaths ; oblige women to perform the legal purifications, and abstain from meats forbidden in the law of Moses. Their Lent continues 52 days, during which they never taste food till after sunset. On the feast of Epiphany, which, ac- cording to the Abyssinians, is the llth of Ja- nuary, they assemble near brooks, into which, after receiving the priest’s blessing, they jump, leaping, dancing, and shouting. In the perform- ance of baptism, their priests are engaged, one with incense, another with a golden cross, and a third with the consecrated oil from the pa- triarch of Alexandria. The candidate is first washed over with water, then crossed on the forehead with some of that water, over which the incense has been waved, and the consecrated oil dropped into. If the candidate be a Mahometan, every joint and limb is crossed with the conse- crated oil ; he is then wrapped in a white linen cloth, and partakes of the sacrament. No unbap- tized person may enter a church. Great numbers of pilgrims, in a yellow dress, with cords round their waists, resort to the beautiful plains of Wa- lasse. The Christians near Dixan, are dis- tinguished by a cross on their breast, arm, &c. They say prayers over whatever they eat, drink, receive, or give, and then blow on it, turning their heads to the east. When they kill animals they turn their backs to the west. They never kill the goodie-goodie falcon, and when a traveller meets one he watches it, ××× if it sit still with its breast

towards him till he is past, it is a good omen, ††† if its back be towards him, it is unpro- pitious, ††† if it fly away, he returns. It is gene- rally believed that every worker in iron at night, transforms himself into an hyaena, and devours human flesh. One of their saint's days is conse- crated to Balaam's ass, another to Pilate and his wife, because Pilate washed his hands before he condemned Christ, after the message received from his wife. They at least equal the church of Rome in miracles and legends of saints, which greatly embarrassed the Jesuits ; to whom they told such miracles in proof of their religion, that the missionaries were obliged to deny miracles to be any proof at all. Prayers for the dead, invo- cation of saints and angels, &c. &c. are common. Images in painting decorate their churches, but they abhor all images in relievo except the cross. They admit the apocryphal'books with the aposto- lic canons and constitutions to be genuine, but consider the Canticles a love-song of Solomon to Pharaoh's daughter. The Jews in this country re- tain their ancient distinction, Caraites and Tal- mudists. Ludolf mentions another sect upjn the frontiers, between them and the Caffres, sup- posed to have descended from the captives taken by the kings of Assyria and Babylon. They were never incorporated with other Jews, but have al- ways been salaxa, or strangers. Their Bible is in the corrupt Talmudic dialect.

ACACIA, aKaKia or arn††w, to sharpen; in Arabicum. In the Linnsean system it is the botany, a name given by Pliny to a thorny tree of mimosa nilotica. Egypt, supposed to have yielded .the gummi The common acacia of this country is the

ˆ††_o†††ia of Linnsus- and the has since been used to designate a literary cr

Robimu-rsuedo-acacia of ˆ††††*††††' * d scientific society, university, or school.

rosa acacia (so called irom i†† i rose c withdrowen frome this man, that he hath

flowers) is the Robmia hispida of that writer. nourished in my studies or scholes of eleatices,

In the Materia Medica an inspissated juice of ˆJ2††L††, * GreeCe.

the first of them is used as an astringent : and is Chaucer's Baciws, b. i.

sometimes successfully imitated by the juice ot Qur court shall be a liule academe,

sloes boiled to the same consistence. StiU ana contemplative in living arts.

ACACIANS, in ecclesiastical history, a sect Shakspeare's Love's Labour Lost.

of heretics of the fourth century, so named from Amongst the academies, which were composed by

Acacius bishop of Caesarea, who denied the Son the rare genius of those great men, these four are

to be of the same substance with the Father. Their reckoned as the principal, namely the Athenian

founder wi successor to Eusebius, and sur school that of Sicyon, that of

C

pouma, in 220, dUgUed by his piety and charity, sold the plate belonging to his church, to redeem seven thousand Persian slaves, an< i giving each of them some money, sent them home. Their king, Veranius, was so affected with this instance of benevolence, that he desired to see the bishop : and the interview resulted in a peace between that prince and Theodosius I.

AC'ADEME,

ACAD'EMY,

ACADE'MIAN,

ACADEM'ICAL,

ACADEMICALLY,

AcADEMl'ciAN,

ACADEM'ICK,

ACADE’MIST.

Academia, a grove in the suburbs of Athens, deriving its name trom the proprietor Academus, who adorned it with spa- cious walks, SO that it became the resort of the Socratic or Platonic sect

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of philosophers, since called academics. Academy

readmg and

A young academic shall dwell upon a journal, that treats of trade, and be lavish in the praise of the author ; while persons, skilled in those subjects, hear the tattle with contempt.

Watts’s Improvement of the Mind.

While through poetic scenes the genius roves,

Or wanders wild in academic groves.

Dunciad, b. iv.

lie drew him first into the fatal circle, from a kind of resolved privateness ; where, after the aca- demical life, he had taken such a taste of the rural ; as I have heard him say, that he could well have bent his mind to a retired course. Wotton.

It is observed by the Parisian academists, that, some amphibious quadrupeds, particularly the sea- calf or seal, hath his epiglottis extraordinarily large. Ray on the Creation.

ACADEMY.

ACADEMY, originally intended a villa or grove, situated about six stadia, or three quarters of a mile from Athens, the seat of literature and the arts, where Plato taught the substance of hrs philosophy. The origin of the name is by some derived from Cadmus, commonly called the Phoenician, because he introduced the learning of Egypt into Greece, and brought the sixteen simple letters of the Greek alphabet from Phoe- nicia. Its origin, however, is more properly as- cribed to Academus, or Ecademus, to whom it at first belonged, and who bequeathed it to the citizens for a gymnasium. It was diversified by Cimon with fountains, trees, and walks, for the convenience of philosophers in their private meditations, surrounded with a wall built

by Hipparchus, and rendered more solemn by be- coming the burial place of illustrious men.

Plato purchased a small garden for 3000 drachmas, equal to ––116. 10s. 6d. of our money, and delivered lectures for the benefit of all who attended. In allusion to this circumstance, all public places for the association and resort of learned men have been since called academies. Cicero had a small villa near Puzzuoli, called Academia, in which he entertained his friends, and composed his book De Natura Deorum, also his academical questions. Academy is now used in a general sense, to signify a society of learned men, formed for their own improvement, and the promotion of the arts. Ptolemy Soter, it

is said, founded an academy at Alexandria/or the encouragement of learning and the sciences, pro- vided with a collection of books, which afterwards became the finest library in the world, com- monly called the “Alexandrian Library;” and Theodosius established an academy at Constan- tinople, furnished with a number of professors in every department of science and knowledge, intended to rival the institution of Rome de- stroyed by the Goths at the close of the fourth century.

An academy is different from an university. The latter consists of graduates in the several faculties ; of professors who teach in the public schools ; of regents or tutors, and students who learn under them ; whereas the former is not intended to teach, but to improve. It is not strictly for students to learn in, but for distin- guished proficients to confer in, and communi- cate their lights and discoveries to each other for the general improvement. The first academy of which we read was that of Charlemagne, es- tablished at the request of Alcuin his preceptor, to improve the language of the country, as well as elicit a general attention to literature and the arts. During their academical conferences, each member delivered a statement of the ancient authors he had read, and a short commentary upon them, assuming at the same time, the name of the ancient author which gave him most satis- faction. Alcuin took the name of Flaccus,

Augilbert, of Homer; Adelard, bishop of Corbile, was called Augustin ; and the king himself, Uavid. The institution perished at the death of Alcuin, and literature seemed as if banished from the world. Although many eminent characters arose, in the dark ages that followed, resembling meteors that dart through the midnight gloom, there was

no union of effort, no combination of genius, no interchange of thought, no associations that could promote or even protect knowledge ; and had not the muses on their banishment from the academic haunts of public patronage, retired into the private cells of monastic superstition, and there preserved the compositions of antiquity, every spark of light must have been extinguished. After the overthrow of the Roman empire by the Turks aboutthe year 1453, several eminent Greek scholars settled in the West of Europe, chiefly in Italy, under the sanction of Pope Nicholas and the Medicean family. These imported with them the treasures of Grecian knowledge and antiquity, and forming themselves into academies, and intellectual societies, schools, libraries, and museums, began to spread over the face of Europe. Of these useful institutions we shall at present merely attempt an enumeration. The first class of them comes under the head of

ACADEMIES OF ANTIQUITIES. ••• The Academy of Cortonu is designed for the study of Etrurian Antiquities, which are very numerous and ex- tensive. The principal is called Lucomon, a name derived from the ancient governors of Hetruria, and the institution imposes a tax of a dissertation on each member in his turn.

The Academy of Antiquities at Upsal, is de- signed for the ‘illustration of Swedish antiquities, as also the cultivation and improvement of the Northern languages.

In the 15th century, under the pontificate of Paul II. an attempt was made at Rome to es- tablish a similar institution, but it was defeated by the persecuting spirit of the papal hierarchy. And although resumed by Leo X. with apparent success, it gradually dwindled to insignificance, aud some others that arose from its ruins were shortly extinguished.

The Academy of Inscriptions and Medals atParis commenced in the generous exertions of M. Col- bert in 1663, under the patronage of Louis XIV; it was designed for the study and explanation of antique monuments, also for the perpetuation of memorable events (especially those of the French monarchy) by coins, relievos, inscriptions, &c. The number of members at first did not exceed four, from which circumstance it acquired the name of Petite Academy. But on July 16, 1701, the institution was greatly enlarged, and consisted of 10 honorary members, 10 pen- sioners, 10 associates, (each of whom had two declarative voices,) and 10 eleves, or pupils. Shortly after the class of eleves was suppressed, and added to the associates ; then a yearly president and vice president were appointed by the king, and

other inferior managers whose offices were perpetual. The earliest and most considerable attempt of this academy, was a complete history of the most important events of the reign of Louis, accomplished by means of medals. This they effected as far as the elevation of the Duke

of Anjou to the crown of Spain, besides which they published several volumes of essays in the form of memoirs. The motto of the society was ‘ vetat mori,’ and Mercury is represented on one of their medals, sitting and writing with an antique style on a table of brass, leaning with his left hand upon an urn full of medals, whilst others on a board are lying at his feet, the legenc ” Rerum gestarum fides,” and on the exergue ” Academia regia inscriptionum et numismatum, instituta M.DC.LXIII. intimating that the Royal Academy of Medals and Inscriptions ought to give to future ages a faithful testimony of great actions. The usefulness of this and other French Academies has been prevented by the political changes and events connected with the late revolution.

The Academy of Herculaneumvtas established at Naples in 1755, when a museum was formed for the bestowment and preservation of the antiqui- ties excavated from the ruins of Herculaneum and Pompeia, by the marquis Tanucci, minister of state. The primary object of the society was, to explain the paintings discovered at these places, for which purpose the members met every fortnight, when the paintings were sub- mitted to a corresponding number of Academi- cians, who made a report upon them at the next sitting. In 1775, the first volume appeared, and has been succeeded by several others under the title of Antichita di Ercolano, exhibiting engrav- ings of the most valuable paintings, statues, marble figures, bronzes, medals, utensils, &c. accom- panied by explanations from the society.

The Neapolitan Academy of History and An~ tiquities was established at Naples by Joseph Buonaparte in 1807, consisting of 40 members, 20 appointed by nomination from the king, who were individually to present him for his choice, names of three candidates for every one wanted to complete the number. A grand meeting was to be held every year, when prizes were to be awarded, and analyses of the works read. Eight thousand ducats were to be annually allotted for the current expences, ‘and two thousand for prizes to the authors of four works, at the discretion of the society. The subsequent revolutions in the political state of Naples prevented the permanent usefulness of this institution.

A Parisian Academy for the Discovery of Celtic Antiquities, was established in 1807. It contem- plated, first, The elucidation of history,

customs, antiquities, and monuments of the Celts, particu- larly in France. Secondly, the etymology of all the European languages by the Celto-Briton, Welsh, and Erse ; and third Druidical remains. Fourth The history and settlements of the Galatae in Asia. Lenoir, the keeper of the museum of French monuments was president. A Fasciculus, contain- ing 150 or 160 pages, was to be printed monthly. The engravings, &c. under the direction of Lenoir. The devices are, Gloria majorwn, and Sermonem patrium, moresque requiret.

Academy for the Illustration of Tuscan Anti- quities, established at Florence, was founded in 1807, &c. has published volumes of essays and researches.

ACADEMIES OF MEDICINE. ××× The Leopoldine Academy, or the Academia Nature Curiosum

ACADEMY.

was founded in Germany, in the year 1652 by I L. Bauchius, a celebrated physician of Sweinfurt, in the circle of Franconia, who in- vited other physicians to meet for the purpose of communicating extraordinary cases that had fallen under their observation, and was afterwards elected president of a society formed upon the basis of such communications. In January 1652, they held their first meeting. The president proposed subjects for discussion, and their works were, at first, published sepa- rately; but, in the year 1670, they agreed to pub- lish a volume of memoirs every year. The first of these, called ” Ephemerides,” appeared in 1684, and was followed by others under different titles. In 1687 the emperor Leopold took this society under the royal protection, endowed it with cer- tain privileges and immunities, dignified the pre- sidents with the title of ” Counts palatine of the holy Roman empire,” and honoured it with the title ” C&sareo Leopoldina Naturte Curiosorum Academia ;” or the ” Leopoldine Academy.” The institution has no fixed residence, or regular assemblies, but a bureau or office, established first at Breslau, and afterwards at Nuremberg, where all communications are received. The Academy consists of one president, two adjuncts or secretaries, and colleagues or members. The colleagues, at their admission, oblige themselves first, to give in a written treatise upon some sub- ject out of the animal, vegetable, or mineral kingdom, not previously handled by any mem- ber of the society; and, secondly, to wear as a symbol of the academy, a gold ring on which is a book open with an eye on the front, and on the opposite side the motto of the Academy, ” Nunquam otiosus,” never idle. See Buchaeri Hist. Acad. Natures Curiosorum, Hal. 1 756. So- cieties of the same name have been established on the

Continent, as at Palermo in 1645, Venice in 1701, Geneva in 1715, Spain in 1652.

The Royal Academy of Surgeons at Paris, was instituted in 1731. The members of which pub- lish their own observations and discoveries, in which they endeavour to lay down a complete system of surgery. The institution proposes a question annually, and awards a gold medal, value 500 livres, to the best dissertation upon the subject.

The Academy of Surgery at Vienna, instituted in 1783, originated in Francis II. and was placed under the direction of Brambilla. The institution formerly consisted of two professors and 130 pupils, but is now considerably enlarged. Con- tiguous is an extensive botanical garden, and a splendid edifice provided by the emperor, af- fording accommodation to professors, students, pregnant women, patients for clinical lectures, servants, &c. ; also a voluminous library, com- plete set of chirurgical instruments, philosophical apparatus, specimens for illustrations of natural history, preparations in wax, &c. together with a comprehensive variety of anatomical and patho- logical preparations. Medals, each of 40 florins value, are annually bestowed on those students, who return the best answers to certain chirur- gical questions.

COSMOGRAPHICAL ACADEMIES. The Cosmo-

grapkical Academy at Venice, called the Argo-

nauts, was instituted about the eighteenth cen- tury, by means of Vincent Coronelli, for the improvement of geography. The device is, the globe, accompanied with the motto “plus ultra.” The primary object of the institution is the pub- lication of correct maps, celestial and terrestrial, accompanied with geographical, historical, and astronomical descriptions, definitions, &c. Each member subscribes to defray the expences, and -receives one or more copies of each piece. All the globes, maps, writings, &c. are published by the society. To facilitate the objects of the institution, three societies were settled, one under F. Mons, provincial of the Minorites in Hungary ; another under F. Baldigiani the Jesuit, professor of mathematics in the Roman college ; a third under Abb. Laurence, au rue Payenne au Marais.

SCIENTIFIC ACADEMIES. ××× The Neapolitan Academia Secretorum Nature was instituted at Naples in 1560, to advance the knowledge of mathematical and physical science ; but was soon crushed by an interdict from the church of Rome.

The Academia Lyncei which succeeded the former, was established at Rome, by prince Frederick Cesi, to promote the improvement of natural philosophy. It became eminent in con- sequence of the discoveries made by its mem- bers, as in the case of Galileo.

The Academy del Cimento flourished in the seventeenth century under the auspices of Prince Leopold, afterwards Cardinal de Medicis. To this institution belonged Paul de Buono, who, in 1657, invented an instrument consisting of a globular shell of gold, to demonstrate the incom- pressibility of water. To the same Academy belonged Vincent Vivani, Francis Redi, Count Laurence Magalotti, (who published "Saggi di Naturali Esperienze," a curious work, translated into our language by Waller,) and Alphonso Borelli, who wrote " De Motu Animalium."

The Academy degV Inquieti at Bologna, after- wards incorporated into that of Delia Tracia, met in the house of Eustachio Manfredi in 1690 ; hence, that gentleman is often represented as the founder. Their badge was a representation of of the planetary system, surrounded by a serpent with a tail in its mouth. Their motto was "Mens agitat," hence their name Inquieti. Their very admirable discourses were collected and given to the world in 1667, under the title of Pensieri Fisico-Matematici. In 1714 it was new modelled, and united with the Bononian in- stitute, richly endowed by the Popes, and de- fended by the civil power. The director was also dignified with the title of president; the so- ciety itself called the Academy of the Institute and afterwards Academia Clementina, from the patronage of Clement. Ladies were admitted into the society, and several of them elevated to pro- fessorships. Anna Manzolini was professor ot anatomy, &c. The library contains 120,000 volumes, a cabinet of natural history, numerous manuscripts, &c. ; and the building consists ot 40 rooms, besides halls underneath.

La Societa Scientifica Rossunensa degV Incu- riosi, 'was established at Rossano, in Naples, in 1540. On its establishment, it was an academy

of belles lettres, and became an academy of sciences in 1695, when Don Giacinto Gimma the abbot, divided the members into grammarians, rhetoricians, poets, historians, physicians, mathe maticians, philosophers, lawyers, and divines. The greatest honour the academy can confer is, giving a written permission from the president

to assume the title of academist, which is not granted till the proposed publication has been sanctioned and approved by all the academy. From this law even the president is not exempt. No academist may publish against the writings of another without the consent of the academy.

Italy has been celebrated for its academies. Jarckius reckons 550, and 25 in the city of Milan. Some of these are gone to ruin ; many have acquired lasting fame : the Academy of Filarmo- nici at Verona, the Academy of Ricovaltro at Padua, and others. In the latter Sig. Vallisnieri wrote his ingenious dissertation.

The Royal Academy of Sciences at Paris was founded by Louis XIV. in 1666, who, after the peace of the Pyrennees, ordered M.Colbert to asso- ciate a few men of learning to communicate their discoveries to each other for the promotion of the general improvement. The minister accordingly formed a society of gentlemen, in high repute for philosophy and mathematics, history, and belles lettres. Gentlemen of different departments as- sembled in different days of the week. History and rhetoric were soon after united to another French academy, which proposed the improve- ment of the language ; and the royal academy consisted of two great divisions, philosophy, and mathematics. The king, in 1669, appointed a new set of regulations, by which he made four kinds of members, honorary, pensionary, associates, and eleves. The last three were to con- tain each 20 persons, the first only 10. The honorary members were to be all inhabitants of France ; the pensionaries to reside in Paris. Of the associates, eight only might be foreigners, and the eleves to be resident in Paris. A presi- dent was to be named by the king from the ho- norary members, the secretary and treasurer to be perpetual. Of the pensionaries, three were to be astronomers, three chemists, three geometri- cians, three botanists, and three anatomists. The remaining two were intended for secretary and treasurer. Of the associates, two were to apply to geometry, two to botany, and two to chemistry. The eleves applied themselves to the same sciences as their pensionaries, and might not speak except when called on by the president. No person might be admitted for associate or pensionary, unless known to the world by author- ship, or the invention of some machine, &c. &c. The society's motto was, Invenit et perfecit.

The Duke of Orleans in 1716 very much ex- tended the institution, suppressed the class of eleves and introduced two other classes, one consisting of twelve adjuncts and six free asso- ciates, who were not obliged to pursue any par- ticular study. A vice-president was to be chosen annually by the king from the honorary class, with a director

and sub-director from the pen- sionaries. In 1785, the king superadded several other classes, as natural history, agriculture, mi- neralogy, and phys\cs. He likewise introduced

several political changes into the constitution The society consisted of eight classes, viz. astro- nomy, geometry, physics, mechanics, chemistry, and metallurgy, anatomy, botany, and agricul- ture, natural history, and mineralogy.

This institution, by computing the meridian, and sending out persons to make observations, has been of great service to the world. Numerous interesting memoirs of the society have been pub- lished since its establishment in 1666. To each volume is prefixed an abstract of the history of the academy, and eulogiums on such members as have died within the year. M. Rouille de Meslay, counsellor to the parliament of Paris, founded two prizes, one of 2500, the other of 2000 livres, to be alternately distributed by parliament every year; the subject for the first to be physical astronomy, for the second navigation and com- merce.

The history of the academy to the year 1697, was published by Du Hamel. After that period it was continued by Fontenelle in his " Histoire de 1'Academie Royal des Sciences ; avec les Me- moires de Mathematique et de Physique, tirez des Registres de 1'Academie, Histoire de 1'Acade- mie Royale des Sciences depuis son Etablisse- ment en 1666, jusqu'en 1699," en 13 tomes, 4to.

In 1793, the convention dissolved the institu- tion, on the ground of its being a supposed bul- wark of royalty, and established another under the name of the National Institute. The memoirs to this period are published in 129 quarto vo- lumes. Other academies of considerable im- portance are established in the principal cities of France, as the Academie des jeux Floraux, at Toulouse ; Royal Academy of Sciences, at Tou- louse, Academy at Caen, Rouen, and many others. That at Dijon contains, in a handsome saloon, the busts of eminent men, natives of the city, as Buffon, Bossuet, Piron, Crebillon, De Brasses, Freret, &c.

The Royal Academy of Sciences at Berlin, established in 1700, was formed by Frederic II. king of Prussia, after the model of that of Eng- land, with the addition of belles lettres. In 1710 some alterations took place, and the president became one of the counsellors of state. The members consisted of four classes, the first in- cluding physics, medicine, and chemistry. The second, mechanics, astronomy, and mathematics ; the third, history, particularly German history and

language ; the fourth, oriental learning, which was adopted as a means of facilitating the spread of the gospel among the heathen. The first business of every class was to choose a director, who held his station for life : of these Leibnitz was the first director. The classes had free communion with one another.

Though the society originated in Frederic II. at so early a period, it was not till 1743 that it enjoyed any considerable share of the royal fa- vour ; when Frederic III. took upon himself in person, the entire management, chose a proper president, invited the most distinguished scholars on the continent to Berlin, and adopted the most vigorous measures to raise the institute into ce- lebrity. In gratitude for these distinguishing marks of favour, the society agreed to hold their

two public assemblies, one in January, on the king's birth-day, and the other in May, on the day of his accession to the throne. On the latter occasion, a gold medal is awarded for the Lest dissertation, the subject of which is to be succes- sively philosophy, metaphysics, mathematics, and general erudition. The Berlin cabinet of curiosi- ties, and the public library were added by an act of the crown ; and in order to expand the views of the academy, and promote among the people a more general attention to the arts, the king, in 1798, appointed a directory consisting of four members to undertake the entire manage- ment of the funds, a president, and two additional members, to be chosen from among men of busi- ness. Each class had a director of its own, elect- ed for life; and the appointment of officers was at the nomination of the academy, subject however to the confirmation of the king. A number of volumes have been published by the names of " Memoires de V Academic Rot/ale des Sciences et Belles Lettres a Berlin." A history of the in- stitution has also been given to the public. The regulations of 1798 have greatly tended to libe- ralize the views of the academy, and to direct their attention to subjects of general utility.

The Imperial Academy of Sciences at Peters- burgh, originated with the Czar, Peter the Great, who, during his travels on the continent, having observed the manifold advantages aris- ing from literary institutions, resolved on form- ing an academy in his own dominions. With the assistance of Wolf and Leibnitz, he had pro- jected the plan of the proposed institution, and invited several learned foreigners to become members, when death put an end to all his de- signs, and extinguished all the hopes, expecta- tions, and solicitudes of that great and distin- guished man. Czarina Catherine I. nevertheless, adopted

his views, and approving the plan already laid down, put it into execution in 1725, when the society held their first meeting before the duke of Holstein, and many other persons of rank and eminence. In the ensuing August the czarina herself attended the meeting, on which occasion the celebrated Bulfinger, a German na- turalist, delivered an oration on the utility of the loadstone and needle for the discovery and calcu- lation of longitude. Impressed yet more deeply with the importance and excellence of the institu- tion, she immediately devoted ––4982 per annum to its support, admitted fifteen members, eminent for literature and science; and under the title of pro- fessors, honoured them with pensions. The most distinguished of these individuals were Nicholas and Daniel Bernoulli, the two De Lisles, Bulfinger, and Wolf. In 1721, a gymnasium was added to the academy, and afterward an uni- versity, the professors of which gave lectures in the various branches of learning.

Peter II. disapproved of the society, and pro- ceeded to stop the salaries of its members. By his example, the institution was neglected by per- sons of rank, and languished for want of support. It revived, however, under the empress Anne, and flourished during the successful presidency of the celebrated Baron Korfe, but after his death, an ignorant person being appointed to the office, the most eminent members quitted the kingdom.

A second revival took place upon the acces- sion of czarina Elizabeth, when the original plan was enlarged, the internal government im- proved, and most of the eminent members, who had relinquished, were induced to return ; and two natives of genius and ability, who had pro- secuted their studies in foreign universities, Lo- monosoffand Rumor sky, attached themselves to the institution. Catherine II. took the institution under her auspices. An Academy of Arts was added (but afterwards separated in 1764). The influx of learned and ingenious foreigners in- spired new vigour : expeditions were sent over the whole empire, for the purpose of obtaining knowledge, and as the funds were inadequate to this large scale of expenditure, the empress made an immediate donation of ––2000, to be renewed as often as circumstances might require. The annual income of the society, was now calcu- lated at –– 10,659, and its annual sale of books, maps, almanacks, memoirs, &c. nearly 80,000 rubles.

The scientific expeditions were to enquire into the quality of earth and waters ; the most success- ful mode of cultivating the barren spots of land ; the diseases of men and cattle, together with me- thods of cure ; the breeding of cattle, more espe- cially sheep ; the management of bees and silk- worms ; the properties of minerals, plants, and every

species of botany, of which they were to bring collections illustrative of the science, ac- cording to the most approved system, so as to form a complete ” Russica Flora.” Besides these, they were also to investigate the most pro- per places for fishing, hunting, &c. ; to rectify the longitude and latitude of places, and to make geographical, astronomical, and meteorological observations ; to trace the course of rivers ; make exact charts ; observe the customs, dress, man- ners, language, religion, history, traditions, and antiquity of different nations, with which they were to combine every other species of information that might tend to enlighten the institution, and discover the internal state of their native empire. The existence of such a society proves, that learn- ing had not vanished from the North ; and the number of excellent publications which have since dawned upon the world, evince that the hopes inspired by the wide perambulations of the society were not disappointed. In these Pallas, Gmelin, Stolberg, Guldenstaedt, and others, have immortalized their names.

The academy is at present composed of a presi- dent, director, fifteen professors, and four adjuncts. The professors receive an annual stipend of from ––200 to ––600 : the adjuncts are pensioned. The meetings are twice a-week, and the public assemblies are held thrice a-year. Belonging to this society, and immediately contiguous, is a fine library, containing upwards of 36,000 curious volumes and manuscripts : also a museum, rich in native productions, and containing a choice cabinet of coins, antiquities, &c. The various branches of natural history have their corres- ponding apartments into which they are scien- tifically distributed. The motto of the society is Paulatim, and their device a tree, bearing unripe fruit. Their transactions were first published in 1728, entitled, ” Comrnentai-ii Acu-

de,mi

The academy has been often torn by dissen- sions, and a few years ago, was almost annihilated ; but by an edict of the empress, it was immediate- ly re-modelled, arose and shone forth afresh upon the world, in a late series of publications, “Nova Acta,” &c. ; and still continues to spread its light over the dark region of this extensive empire.

The Academy of Sciences at Bologna, com- monly called the Institute

of Bologna, was origi- nally founded by count Marsigli in 1712; for the better cultivation of physics, mathematics, ana- tomy, medicine, chemistry, and natural his- tory. Its history was written by M. D. Limiers, from memoirs furnished from the founder him- self, and printed at Amsterdam in 1723; from which it appears that an academy for architec- ture and painting, previously founded by pope Clement XI. was incorporated with this, and that the city purchased, and appropriated to its use the palazzo Celesi, for the convenience of having the library, museum, observatory, schools, and professors' apartments under the same roof. At the entrance is the following inscription ××× Bononiense Scientiarum et Artium Institutum, ad publicum totius orbis mum.

The Academy, Imperial and Royal, of Sciences and Belles Lcttres at Brussels, was founded in 1773, and has published many volumes of in- teresting memoirs.

The Royal Academy at Stockholm, or Royal Swedish Academy, originated in six persons of .learning, among whom may be mentioned the celebrated Linnaeus. These gentlemen met on the 2d of June, 1739, and formed themselves into a private society, for communicating to each other the result of their literary investigations. This society soon drew a considerable share of the public attention ; and in 1741, on the 31st of March, was incorporated by the king, under the title of the Royal Swedish Academy. The society receives no pension from the crown ; but its funds have been gradually augmented by sub- scriptions, legacies, and private donations. Of its professors, three persons only receive sala- ries, viz. a professor of experimental philosophy, and two secretaries. Those professors, who re- side at Stockholm, become presidents by rota- tion, each continuing in office for three months. The election of native members is held in April ; that of foreign members in July : ooth classes of members are admitted without fees. The dissertations are all written in the Swedish language, and published four times in tfie year. The annual publications compose an octavo volume. The first 40 volumes, published in 1779, are called the Old Transactions : the next

year commencing a series of New Transactions. Any person who sends a treatise worthy of pub- lication, receives the Quarterly Transactions gratis, and a small silver medal. Agricultural dis-

sertations are published separately, under the title of CEcojiomicuAcla. Premiums and medals are awarded annually by the

society, for the en- couragement of agriculture, &c. The public meetings of the institution are sometimes ho- noured with the royal presence. In 1799, the academy was divided into seven distinct classes. First, general and rural ceconomy, containing 15 members. Second, commerce and mechanics, con- taining 15 members. Third, exterior physics and natural history. Fourth, interior physics and na- tural philosophy, each containing 15 members. Fifth, mathematics, containing eighteen mem- bers. Sixth, medicine, containing 15 members. Seventh, belles lettres, language, and history, containing 12 members. Into such repute had the society arisen, by the eminence and devoted- ness of its members, that in 1800 the sale of al- manacks alone brought in the sum of ►►400.

The Royal Academy of Sciences at Copenhagenˆ originated in the occasional meetings of six learned men, whom Christian VI. in 1742, or- dered to arrange his cabinet of medals ; and who, enlarging their plan by degrees, at length formed a regular institution, under the patronage of the count of Holstein, whose primary object was, to make researches into the history and antiquities of their country, and to explain them. In the year 1743, his Danish majesty, at the instigation of the count, took the academy under his patron- age, and endowed it with a fund ; directing die members to add to the number of their former pursuits those of history, physics, and mathema- tics. The institution has published 15 volumes in the Danish language, a great proportion of which have been translated into Latin.

The American Academy of Arts and Sciences, was established in 1780, by the council and house of representatives in the province of Massachusetts Bay, designed to promote the study of American antiquities and history ; also to determine the uses to which its natural productions might be applied; together with the study of medicine, mathematics, philosophy, astronomy, meteoro- logy, geography, agriculture, manufactures, com- merce, with every other art and science tha; might tend to enlighten the population, and to advance the interest, honour, and happiness of an independent people. The members were never to be more than 200, or fewer than 40. Since the year 1785, when they published their first volume of memoirs at Boston, the academy has been progressively improving.

The Royal Academy of Sciences at Lisbon, was founded in the year 1779, by the duke DeLa- foens, uncle to the queen. It contained 24 ef- fective members, divided into three classes occu- pying the departments of natural sciences, ma- thematics, and national literature ; 36 free mem- bers, a few literary foreigners, with many scientific correspondents. The sovereign himself became president, and the

revenue allowed by government enabled them to establish a museum, observatory, and printing-office. The first volume of their me- moirs appeared in 1797; and in addition to their

Memorias At Litteratura Portugueza ; Memorias Economical, and other literary transactions, they have published Colleccao de Livros ineditot de Historia Portugueza.

A Geographical Academy, established at Lis- bon, in 1 799, principally with a view to illustrate the ⁂geography of Portugal, has provided the world with an accurate map of this country, so long a desideratum in literature.

The Royal Neapolitan Academy was establish- ed in 1779, and has published valuable ma- thematical researches and memoirs.

The Royal Academy of Turin was established by the late king, when duke of Savoy. The first volume of memoirs appeared in 1759, pub- lished in Latin, with the title of Miscellanea Philosophica Mathematica Societates privates Tau- rinensis. The continuations of which have been since published in French. Le Grange, the most celebrated Oriental member of this academy, astonished the scientific world by the novelty and profoundness of his papers, in the first volume of these Transactions and Memoirs.

The Academy of Sciences, Belles Lettres, and Arts, was established at Padua, by the senate, near the close of the 18th century; consisting of 24 pensionaries, 12 free associates, 24 pupils, 16 associates from the Venetian states, 24 foreigners and honorary members. A few volumes of Me- moirs have been published in Italian.

The Academy of Sciences and Belles Lettres of Genoa, was established in 1783, consisting of 32 members; poetry seems to be the point to ⁂which they have directed their attention.

The Academy of Milan originated in the con- tracted efforts of a literary society, who published a sheet of observations weekly, on scientific sub- jects, general criticism, belles lettres, &c. About 1767, a regular society was formed, whose tran- sactions are published, under the title of Scelta d'Opuscoli Scientifica.

The Academy of Sciences at Sienna, was in- stituted in 1691. Their

first volume of transac- tions was published in 1761 ; and their publications under the name of Atti dell' Academia di Siena, have appeared occasionally, ever since.

The Academy of Sciences at Verona, was esta- blished about 1780, by M. Longua, whose chief object was to form an association of the principal scientific men in all parts of Italy, for the pur- pose of literary communication and publishing memoirs. The first volume of which, accord- ingly appeared in 1782, under the title of Memorie di Matematica e Fisica, della Societa Italiana, containing the celebrated names of Boscovich, the two Fontanas, and Spallanzani. Academies of a similar description are also estab- lished at Mantua, Pisa, and Pavia.

An Academy of Sciences was established at Manheim, by Charles Theodore, elector pala- tine, in the year 1755. It is divided into two classes, historical and physical, according to the ˆian originally furnished by Schcepflin. The tttter was subjected in 1780, to a subdivision into the physical and meteorological. The his- torical and physical memoirs are published, under the title of Acta Academia Theodoro Pala- tine. The meteorological observations are pub- lished separately, under the title of Ephemerides Socictutis Meteorologies Palatines.

The Electoral Bavarian Academy of Sciences, at Munich, was established in 1759, and pub- lished memoirs under the title of Abhandlungen der Baierischen Akadernie. When the elector became king, he new-organized the society, with a view to give it the precedence over all the literary institutions of Europe. After which, he placed it under the immediate superintendence of the mirastry ; the privy-counsellor Jacobi, a man of excellent scientific and literary attain ments, being president.

The Electoral Academy at Erfurt, was insti- tuted by the elector of Mentz, in 1754, consisting of protector, president, director, assessors, ad- juncts, and associates. Their memoirs are now published in German, although they originally appeared in Latin.

The Hessian Academy of Sciences at Giessen, have also published memoirs, under the title of Acta Philosophica Medica Academia, Scientiarum Principalis Hessiaca. Likewise in the Nether- lands, at Flushing, and Brussels, there are sci- entific academies which have publisnea Memoirs.

The Royal Irish Academy arose 1782, from an association of gentlemen, most of them connected with the university, who held

weekly meetings for the purpose of reading dissertations on literary and scientific subjects. Indulging the hope of advancing the interests of literature on a more extensive scale, they soon after widened their plan, admitting only such names as were already illustrious, and might do honour to their new in- stitution. This re-organization became the basis of the Royal Irish Academy, which professes to unite the advancement of the arts and sciences, antiquities, and every species of literature. Their papers have been numerous ; and from 1787 to 1825 they have published fourteen volumes.

A Society was formed in Dublin, similar to the Royal Society in London, as early as 1683, but it declined ; and although the plan was revived, under the presidency of the earl of Pembroke, then lord-lieutenant, it was still unsuccessful.

In 1731, a Society for scientific purposes was formed by Dr. Prior, and, being sustained by subscriptions for eighteen years, was incorporated in 1749, since which it has received parlia- mentary aid. It has proved eminently useful, and in the latter end of the reign of George IV., was denominated ” The Itoyal Dublin Society.”

An Ecclesiastical Academy was instituted at Bologna, in Italy, 1687, chiefly with a view of examining the discipline, doctrine, and history, of the different ages of the church.

ACADEMIES OF ARTS. ••• The Royal Academy of Arts in London, established in 1768, was instituted for the encouragement of designing painting, sculpture, &c. This society is under the patronage of the king, and under the direction of 40 eminent artists of the first rank, in their several professions ; who paint from living models, and of whom, nine are annually elected, to attend by rotation, for the purpose of setting the figures, and of examining the performances of the stu- dents. There are also a president, a council, and other officers, besides separate professors of painting, architecture, anatomy, and perspective, who annually deliver public lectures on the sub- ject of their respective departments. The aca- demy is open to all students who are desirous

of cultivating the studies to which it is directed ; of the most eminent members were selected, eacTi and, there is an annual exhibition of paintings, of whom attended in rotation for a month, for sculptures,

and designs, many of which have the purpose of setting a living model in the pro- distinguished merit. per lights and attitudes, for the imitation of the

The Academy of Arts at Petersburg, was in- students, employed in taking draughts and carv-

stituted by the empress Elizabeth, in 1758, and ing images. For this purpose, he provided a

annexed to the Academy of Sciences; but in naked man, of tall figure and good proportions,

1764 was formed into a ‘separate institution by whom he placed before them in the most easy

the empress Catherine, at the suggestion of count and natural positions, this was called setting the

Shuvalof; and the number of scholars increased model; on some occasions, he provided two,

from 40 to 300. The annual revenue was aug- and formed a juxta position of models; this was

mented from ––4000, its original income, to called setting the group. He likewise employed

––12,000. The scholars are admitted at the age a woman of a graceful appearance, and propor-

of six, and continue until they have attained the tionate stature, whom he placed before tne stu-

age of 18 ; during which time they are instructed dents in the same manner. It is to this careful

in reading, writing, arithmetic, the French and selection of subjects, and to the copying from the

German languages, and drawing. At the age of life, more than to an extraordinary measure or

14, they are at liberty to choose any of the warmth of genius, that we attribute the formation

following arts, which are branched out into four of those elegant

models, and the draught of those

classes. First, painting in all its branches, his- beautiful sketches and designs, for which this

tory, portraits, battles, landscapes, architecture, academy for a considerable period, has been so

mosaic, enamelling, Sec. Second, engraving on highly celebrated ; and which, have tended not

copper-plates, seal-cutting, &c. Third, carving on a little to call forth the emulation of kindred

wood, ivory, and amber. Fourth, watch-making, societies, and to have awakened in many places

turning, instrument-making, casting statues in on the continent, a relish for those ancient arts,

bronze and other metals, gilding, varnishing, which had so long lain dormant. Three prizes,

imitating gems and medals in paste and other for designs, were distributed among the eleves

compositions. Prizes are annually distributed every three months, and four others for painting

to those who excel, and from the aggregate num.- and sculpture, annually.

ber of those who have attained four prizes, 12 are A similar Institution was established at Rome,

selected and sent abroad, at the public charge, by Louis XIV, wherein those who had won the

their travelling expenses defrayed ; and, on their annual prizes at Paris were supported three

settlement in any town, a salary of ××60 conferred years, with a view to their further improve-

upon them for the first four years. inent.

The Royal Hibernian Academy of Arts at An Academy of Drawing and

Sculpture, was

Dublin, was incorporated in the year 1821. Its established at Manheim, in 1775, by Charles

exhibitions consist of the works of living artists, and the noble edifice called ” the Academy House,” was erected at the sole cost of F. Johnston, Esq., the first president.

The Academy of Painting and Sculpture at

Theodore, elector palatine, with a view of pro- moting the fine arts.

An Academy of Painting and Sculpture has been founded at Stockholm, containing nine professors, and about 400 scholars. The institu-

Paris, is known to have been instituted at a very tion annually distributes three large and three early period. The academy of St. Luke, was small medals, awarded for the encouragement ot popular in the 14th century, and in 1430, re- rising genius. Those students who most dis- ceived many privileges from Charles VII. ; sub- tinguish themselves are also indulged with per- sequently confirmed in 1584, by Henry III. ; mission to travel into France and Italy, at the after which, it became united with the society of expence of the society. In the hall of this insti- sculptors, who met near St. Denys. In conse- tution are the ancient figures of plaster, presented quence of the continual disputes which arose by Louis XIV. to Charles XI. between the sculptors and painters, the academy The Academy of Painting, Sculpture, Sfc. at

Vienna, was founded in 1705, on principles

nearly similar.

An Academy of the Fine Arts was established

fessions, who obtained in favour of it, an arr►►t at Turin in 1778, who held their meetings in the of council in 1648. In 1655, they obtained from king’s palace, cardinal Mazarine, a brevet and letters patent, registered in parliament; in return for which they chose the cardinal for their protector, and the chancellor for their vice-protector ; and, by the friendly interposition of another minister

languished ; but, was afterwards revived by M. Le Brun, Sarazin, Corneille, and other gen- tlemen of distinguished eminence in their

pro-

An Academy of Architecture was established at Milan, about the year 1380, by Galeas Visconti; and about the middle of the last century, an acadamy of the fine arts was established there, in which the pupils were furnished with originals

M.Colbert, obtained in 1683, a pension of 4000 and models: prizes were also distributed an- livres, which enabled them to widen their plan, nually. This institution, before the effects of and tended greatly to facilitate the objects of the the French revolution reached Italy, was one of society. The academy, shortly after, was made the best establishments of that kind in the king- to consist of a protector, vice-protector, director, dom. In the hall were some admirable pieces chancellor, four rectors, a treasurer, four ad- of Corregio, and several other ancient paintings juncts, four professors, two of whom lectured on and statues of distinguished merit, amongst anatomy and geometry, honorary counsellors, a his- which we may mention the small bust of Vitel- toriographer, two ushers, and a secretary. Twelve lius, and a statue of Agrippina of most exqm

site beauty, although it wanted the head and arms which have since been restored.

The Academy of the Fine Arts at Florence had long fallen into decay, but was restored by the late Grand Duke. It contained halls for plaster figures, and nudities for the sculptor and painter. In the hall for plaster figures, were models of all the finest statues in Italy, arranged in two rows; but this, and all similar institutions in Italy, have suffered greatly by the French.

An Academy of the Fine Arts was established at Modena, in which was an extensive saloon, con- taining many casts of antique statues. It con- tains also the skull of Corregio ; but since it was plundered by the French, it has dwindled into a petty school for drawing from living models. Venice and Mantua contain academies of a similar description.

An Academy for Painting, Sculpture, and Archi- tecture was founded at Madrid, by Philip V. of which the minister for foreign affairs is presi- dent: prizes are distributed every three years. At Cadiz is a petty institution, in which a few students are supplied by government with

the means of drawing, modelling, &c.

An Academy of Architecture in Paris was es- tablished by M. Colbert, in 1671, consisting of ‘a. company of skilful architects.

MUSICAL ACADEMIES. ††† The Academy of An- cient Music in London was instituted in 1710, by several eminent performers and gentlemen, to promote the study of vocal harmony. A li- brary was attached, consisting of the best com- positions in MS. and print. The gentlemen of the chapel-royal, the choir of St. Paul’s, with the boys, assisted in the design. In 1731, a charge of plagiarism against Bononcini, one of the members, nearly destroyed the institution. Dr. Green, Bononcini’s friend, withdrew, taking with him the boys of St. Paul’s; and, in 1734, Mr. Gates, master of the children of the royal chapel, withdrew. Afterwards it became a musi- cal seminary for the instruction of youth ; and by the activity of Dr. Pepusch, the academy con- tinued to subsist.

The Royal .Academy of Music in London, arose from the principal’ of the nobility and gentry uniting to promote the performance of operas, composed by Handel, and performed under his conduct at the theatre in the Hay-mar- ket. So extensive was the attention and patronage called forth in favour of the society, that the subscriptions amounted to ††50,000. The king conferred upon it the title rf Royal Academy, and made a donation of ††1000. It consisted of a governor, deputy-governor, and 20 directors. A contest between Handel and Senesino, one of the performers, in which the directors favoured the latter, dissolved the institution. A Royal Society for IVIusic still exists.

An Academy of Dancing was erected by Louis XIV. endowed with great privileges.

An Academy of the Law once existed at Berytusjand another of the Sitientes at Bo- logna.

AcADEMiESOFHiSTORY.††† The Royal Academy of Portuguese History at Lisbon, was instituted in 1720, by John V.; consisting of a director, four censors, a secretary, and 50 members, each

of whom is expected to discuss some point of the civil or ecclesiastical history of the nation, either in Latin or Portuguese. In ecclesiastical history the prelates, synods, councils, churches, monas- teries, eminent characters, relics, places famovj for miracles, &c. within the diocese under dis- cussion, are to be distinctly related in twelve chapters. The civil history extends from the invasion of the Romans to the present

time, to improve their knowledge of which, each country member is obliged to search the registers where he lives, and make copious extracts, and original observations. They meet once every 15 days. The academy struck a medal in honour of their prince, containing, on the front, his effigy, with the inscription, ‘ Johannes V. Lusitanorum Rex ;’ and on the reverse, he was represented as raising tip History, which appeared almost prostrate be- fore him, with the legend, ‘ Historia Resurges.’ Underneath is an abbreviature of the following words: ‘REG ia ACAD emia HIST oriae, LUSIT anas INSTITUTA VI. Idus, Decembris, MDCCXX.’

The Academy of Suabian History at Tubingen, was formed for the purpose of publishing the best historical writings, compiling memoirs, writing the lives of eminent historians, &c.

The Academy of History at Madrid, was formed, about 1730, by a few individuals, who agreed to assemble occasionally for the purpose of preserving and illustrating the historical monu- ments and memoirs of Spain. They drew up a few simple rules, which, in 1738, were con- firmed by a royal cedula of Philip V. The society consists of 24 members, who have already published editions of Mariana, Sepulveda, Solis, and the Ancient Chronicles relative to Castile, several of which were before unknown. All the diplomas, charters, &c. belonging to the prin- cipal cities and towns from the earliest period, are in their possession. The device of the institution is, a river at its source ; the motto ‘ In patriam populumque fluit.’ The academy has long been employed in preparing a Geographical Dictionary of Spain.

ACADEMIES OF BELLES LETTRES, LANGUAGE, &c. ††† The Academy of Umidi, at Florence, after- wards called Academia la Florentina, or the Florentine Academy, was instituted in 1549, by the grand duke, Cosmo I., and has always been composed of the most eminent men in Italy. It has paid particular attention to Italian poetry, and has given excellent Italian transla- tions of the Greek and Latin historians.

The Academy of Humourists originated at the marriage of Lorenzo Marcini, a Roman gentle- man, on which occasion many persons of rank were present. It being the time of carnival, the gentlemen, to afford diversion for the ladies, recited verses, sonnets, speeches, and comedies, at first extemporaneously, but afterwards by memory and premeditation. The invention of this species of amusement gave them the denomi- nation of Belli Humori. At length, acquiring a relish for these exercises, they resolved to form an academy of Belles Lettres, and altered their title to that of Humoristi, taking for their device a

cloud, which, after being formed of the salir* exhalations from the sea, falls upon the eartn in a gentle shower, refreshing and fertilizing

wherever it comes. Their motto was selected from Lucretius, ‘ Redit agmine dulci.’

The Academy of Arcadi was instituted in the same city about 1690, to promote the study of poetry and the belles lettres. It is composed of princes, cardinals, and other ecclesiastic*, as well as wits of both sexes. It is called Arcadian because, to avoid disputes about pre-eminence, they obliged themselves by a regulation to ap- pear masked as Arcadian shepherds. The num- ber of members, within ten years from its es- tablishment, amounted to 600. They hold seven meetings a year in a field, a grove, or in some gentleman’s garden. Six of these meetings are employed in reciting the poems of the Arcadi residing in Rome ; all of whom, except ladies, and cardinals, read their own compositions. The seventh meeting is devoted to the composi- tions of absent members, the recitation of which commonly affords great entertainment, the pieces being written in all the different dialects of Italy. The government of the institution is entirely de- mocratical, allowing of no prince or protector, but only a custos, elected every olympiad, (or fourth year) with the power of appointing 12 others to assist him in the administration, whom he may change yearly at. discretion. Under these, for the sake of order, are two sub-custodes, one vicar, or pro-custos, and four deputies, or superintendents annually chosen. The modes of election are five. The first by acclamation, ###when princes, cardinals, &c. are admitted. The second is by annumeration, used in favour of ladies and academical colonies, where votes are taken privately. The third representation, es- tablished in favour of universities, where the young gentry are educated, who can recommend one or two members to be ballotted for privately. The fourth, surrogation, whereby new shepherds are introduced in the room of those that are deceased or expelled. The seventh, destination, ###whereby, when there is no immediate vacancy, persons of merit are destined to succeed the first vacancy, and receive the title of Arcadi, before an opportunity shall occur for their final admission. All the members at their initiation receive new pastoral names, in imitation of the ancient Arcadians. There are colonies of Arcadians in many other cities in Italy, which are branches of the original institution.

The Royal Academy at Caen was established by letters patent in 1705, though held in private 50 years before that period, in the house of M

de Brieux. In 1707, M. Foucault, intendant of the generality of Caen, procured the king's letters patent, by which the society was raised into a perpetual Academy.

An Assembly of men of letters, formed at Lyons in 1712, wanted only letters patent, to consti- tute a royal academy inferior to few in France.

The Academia dellu Crusca at Florence, or Academia Furfur atorum, though formed in 1582, obtained no celebrity till 1584, when it attracted the public attention by reason of a dispute be- tween Tasso and several of its members. It has produced an Italian Dictionary of great merit. In this institution Torricelli, the disciple of Ga- lileo, delivered his discourses on the wind, the power cf percussion, mathematics, and military

architecture. It is sometimes called the Bran Academy, oti account of its sifting out words, and rejecting barbarisms, with a view to the refine- ment of the Italian language. It is now united with the Fiorentina and Apatista, under the gene- ral name of Reali Academia Fiorentina.

The Academy of Fructiferi arose in 1617, from an assembly of princes and persons of distinction, who met to refine and perfect the German lan- guage. It flourished long under the princes of the empire, who were commonly chosen presi- dents. The number of members, in 1668, amounted to no fewer than 900. A history of the institution has been written in German by George Neumarck.

The Academic Franˆoise, or the French Aca- demy, arose from the private meeting of a few men of letters, in the house of M. Conrart, in 1629; and six years afterwards was formed into an academy by cardinal Richelieu, intended for refining and ascertaining the French language and style ; comprehending at the same time in its plan, grammar, poetry, and eloquence. Origi- nally the number of members was limited to 40, out of whom a director, chancellor, and secretary, were to be chosen ; the latter for life, the former for two months only. The members enjoyed many privileges, one of which was the droit de committimus, by which they might refuse to an- swer or appear before any court, except that of the king's household. At first they met in car- dinal Richelieu's apartment, then in that of chancellor Seguier, and afterward, three times a-week in an apartment of the Louvre, now called 1'Academie Francoise. At their separation, 40 silver medals were distributed among them, having on one side the head of the king of France, and on the reverse protecteur de I'academie, with a laurel

and this motto, a Vimmortalite.. Th\ proved an excellent means to secure attendance those who were present receiving the overplus otherwise intended for those who were absent. Religious orders were deemed inadmissible, and expulsion was resorted to only in case of heinous malefaction. To compass their primary object, they not only gave rules, but examples of good writing ; and no fewer than 20 of their orations have been printed; but the style has been ridi- culed as having a tendency to enervate rather than refine the language. They have produced, nevertheless, a variety of publications; and their speculations, if not exceedingly profound, are however, very beautiful and entertaining; and will be read with pleasure by every one who has cultivated a lively relish for the beauties of rhetoric and belles lettres. The publication of a complete Dictionary of the French Language constitutes their highest celebrity ; the derivation of words, the settling of phrases was an employ ment of 50 years, and was at length completed in 1694. The history of the institution has been written by M. Pelisson, and M. 1'Abbe d' Olivet.

A similar institution was founded at Peters- burg in 1 783, on a plan at first suggested by the princess Dashkof. It wa? established and en- dowed by the late empress, and consists of 60 members.

The Royal Swedish Academy, founded in 1780, was 'intended for the improvement of the

iaKe purifying it of barbarisms, ascertain- In many of them, they attend six years ; havp ine its extent and reducing it under nine fixed public examinations once every year; and, dif- and definite laws ; also for the cultivation of the ferent from the universities, the students are higher graces of poetry and eloquence. It was expected to attend the whole of the time, with formed on the plan of the French Academy, and the exception of a few weeks allowed after the pensions have been granted to some of its'mem- vacation, to visit different congregations, in the bers by Gustavus III. A medal is struck by the capacity of ministers.

institution every year, in honour of some illuS- The importance of these institutions to so trious Swede. " large a Part of tne community as the protestant

The Royal Spanish Academy at Madrid, was dissenters, must be obvious ; and their support, founded by the duke d'Escalona. The first entirely by voluntary subscriptions, evinces a de- meeting was held in

his palace in 1713, and in gree of public feeling, worthy of the cause in 1714 the king became protector. It consists of behalf of which they are established. 24 members, including the director and secre- The oldest of these academies is Homerton. tary, whose object is to improve the language by In this institution two foundations are united ; a careful selection of those terms and phrases, one as old as the restoration, the other as recent ###which have been employed by the best Spanish as 1730. It was removed from Mile End, and writers, and expunging all low, obsolete expres- had at that time three professorships, filled by sions and barbarisms; also to distinguish the Dr. D. Fisher, as classical tutor; Dr. Conder as

divinity tutor ; and Dr. T. Gibbons, the biogra- pher of Dr. Watts, as professor of rhetoric and belles lettres. The classical chair of this institu- tion has always stood high. It is filled at pre- sent by Dr. Pye Smith, author of some excellent classical publications. The academy receives 20 students, and has furnished some of the most valuable ministers and able theologians that have appeared amongst protestant dissenters.

The Old College at Hoxton, or as it was originally called, The Evangelical Academy, was founded in 1783, and removed to its present situation in 1791. It has professors in lan- guages, logic, mathematics, rhetoric, and belles lettres, divinity, elocution, &c. Mr. Halley, is the resident tutor. At present it receives about 40 students, who are examined every year before a public assembly of ministers and literary gen- tlemen, in the Latin, Greek, Hebrew, Samaritan, Arabic, and Chaldee languages and other de- partments of literature, science, and theology; after which three of the students deliver orations in the academy chapel adjoining the institution; and a report is made accordingly of the meeting.

about the 16th century, public schools or aca- Some of the most eminent men of the present day demies were formed all over Europe; at Padua, were educated at this institution. This institu- Modena, Naples, Capua, Toulouse, Salamanca, tion has recently been enlarged ; and a handsome Cologne, and Lyons. The academy of Paris building, for the purposes of it, has been erected surpassed all the rest in its extended scale of at Highbury, near Islington. The general education, the ability of its professors, and the plan of the institution is common to all dissent- multitude of students by whom it was attended ; ing academies, particularly the public exami- and was hence distinguished by the title of Uni- nations.

versity, to denote its embracing the whole circle The New College at

Hackney was formed on of science. Soon after which, other schools of Arian and Unitarian principles. High hopes of learning formed themselves upon the same literary eminence were entertained frorp the model, and obtained the same title. In the 16th names attached to its original foundation, century, academies were founded by the Luthe- Dr. Kippis, editor of the Biographia Britannica, ransat Jena, Helmstadt, and Altorf ; and by the Gilbert Wakefield, who seceded from the na- Calvinists in Traneker, Leyden, Geneva, and tional church, and Mr. Belsham presided over many other places. its concerns. Dissensions however prevailed, and

The dissenters of England, in consequence of it dwindled away. It is now revived on Cal- the introduction of certain oaths after the resto- vinistic principles, and is become an important ration of Charles II. to which they cannot con- and useful institution ; Rev. T. Collison, A.M. scientiously subscribe, have been excluded from is the resident tutor.

the Universities, and have formed academies Rotheram, near ‘Sheffield, is famous for an

among themselves. Success hasamply rewarded Academy of considerable eminence, that flourished

their exertions; and the dissenting ministers in as early as 1756. The late Dr. Williams presided

;e institutions are not only educated and sup- for many years, and was a man of eminent

on the foundation, but in some respects attainments. His reply to Bishop Tomline’s

enjoy advantages not found in the universities, publication, entitled, A Refutation of Calvinism,

former from the latter in a dictionary for that purpose. To encourage this undertaking, the academicians are allowed ail the immunities and

frivileges enjoyed by tne domestic officers in the ing’s service, even those in the royal palace. The academy is not to put any thing to the press wthout permission from the council. Their de- vice is a crucible on the fire, with this motto, ” Limpia, fya, da esplendor.” ” It purifies, fixes, and gives brightness.”

ACADEMY is also a term for schools and other seminaries of learning. Of these institutions the Jews had several ; the most celebrated are

those of Tiberias and Babylon, in which the Jewish Doctors instructed the youth in the He- brew language, and explained to them the Tal- mud, and the secrets of the Cabbala. The Romans had two institutions of this kind, where youth were instructed in general literature and science ; one at Rome founded by Adrian, the other atBerytus in Phoenicia. The former ###was famous for the sciences, the latter for the law.

In consequence of the revival of literature,

is considered by eminent judges to be the best defence of modern Calvinism. The academy has no connexion with the original one of Heckmondwicke; but was pronounced a new institution by a committee of the founders held at Halifax on the llth of September, 1794. It has sup- plied many able theologians and useful ministers.

An Academy of considerable eminence subsists at Gosport, and was lately under the presidency of Dr. Bogue, an eminent theologian recently deceased. In this institution missionary stu- dents are educated by the London Missionary Society, by which they are sent to every part of the world. The general laws and regulations are similar to those of other dissenting institu- tions.

At Newport Pagnel is an Academy for the education of dissenting ministers under the su- perintendence of T. P. Bull, A. M.

At Axminster also is a similar important insti- tution, under the superintendence of the Rev. Mr. Small, a gentleman of ability and erudition. Both these institutions have furnished many useful and excellent ministers.

The Academy at Wymondly is an extensive and liberal institution, originally established by the late Dr. Doddridge. This establishment has been justly celebrated for classical learning. It is under the direction of the Rev. Mr. Morell.

The Academy at Idle is under the superinten- dence of the Rev. W. Vint and other gentlemen of eminence, whose labours have contributed, in no ordinary degree to the extensive usefulness and success of the institution.

The Academy at Blackburn, lately under the superintendence of the

Rev. J. Fletcher, A. M. occupies a very conspicuous place amongst dissenting institutions, and is in a prosperous con- dition. It has furnished many useful ministers. The academies already named belong to the Cal- vinistic denomination of independent dissenters.

The York Academy, established 1786, on the basis of the original academy at Warrington, is an English presbyterian institution, and has been as- sociated with the celebrated names of Dr. J.Taylor, Hugh Farmer, Job Orton, &c. Dr.Aikin also, fa- ther of Mrs. Barbauld, Dr. Priestley, and Dr. Enficld were successively tutors at this place. Dr. Thomas Barnes presided in this establishment at its removal to Manchester in 1786 ; and was one of the principal founders of the Manchester Literary and Philosophical Society. The classical and mathematical chairs have been justly celebrated. In 1803, it was removed to York. The number of students educated is 20.

The Baptist denomination have several institu- tions, conducted on an extensive scale, and their usefulness cannot be too highly appreciated.

The first of these is at Bristol, and was lately under the superintendence of Dr. Ryland, whose erudition and talents were well known to the country. The number of students is consider- able. Missionary students are educated here.

Stepney Academy is of respectable rank as a dissenting institution, and is under the presidency of Rev. Dr. Newman. The number of students is considerable.

The Academy at Bradford is an institution on the same scale a that at Idle. It is under the

care of Dr. Steadman, whose labours in it have been very important. The general laws of these institutions are similar to those of the independent denomination. There are other similar dissent- ing institutions at Abergavenny, Exeter, Carmar- then, Wrexham, and others which our limits compel us to omit.

A Political Academy was formed at Paris before the revolution, consisting of six gentlemen, who met on certain days of the week, where they perused political papers, &c. the more effectually to qualify themselves for his majesty's service.

An Academy was formed at Berlin, in 1703, by Frederic I. to educate the nobility of the court suitably to their extraction. The king paid all extraordinaries, which rendered the expence mo- derate. It was called the Academy of Princes, but is now much decayed.

MILITARY ACADEMIES. ××× The Romans had military academies established all over Italy, which they called Campi Martii, where the youth were trained for war at the public expence.

These institutions were not uncommon in Greece, and were superintended by Tactici, who taught the higher offices of war.

We have three seminaries of this description : the Naval Academy at Portsmouth, the Royal Military Academy at Woolwich, and the Royal Military College at Farnham and Sandhurst.

The Naval Academy at Portsmouth, was founded by George I. in 1722, although the offi- cial warrant is dated 1729. Originally the war- rant specified but 40 young gentlemen, fifteen of whom were to be the sons of commissioned offi- cers in the navy. The navy commissioner ol Portsmouth was ex-officio governor. Two mas- ters were appointed to instruct the students in navigation and the introductory sciences ; and

an additional master for writing and drawing. The annual expence was about ––1169. In 1806, an order was issued for a new and enlarged esta- blishment, denominated, The Royal Naval Col- lege at Dock Yard, Portsmouth, of which the first lord of the admiralty was to be governor ; and a lieutenant governor and inspector was to be pro- vided, who should be a post-captain in the navy. A professor of mathematics is appointed, who re- ceives ––8 annually from each student. There is also a master, a graduate of one of the universi- ties, who teaches classics, moral philosophy, geo- graphy, history, &c. ; and a writing-master, who teaches, besides writing, arithmetic, algebra, and geometry. There are masters who teach French, drawing, dancing, fencing, &c. The master attendant of the dock-yard gives lessons on rautics, &c. illustrated by vessels in the har- bour. The master shipwright of the dock-yard attends the students once a-week, through the dock-yard, illustrates to them the principles on which ships are built, &c. The gunner teaches gunnery, the use of the firelock, &c. The stu- dents remain three years, and before they are admitted, their friends give a bond of ––200 that they shall enter the sea service. The three years that they remain stands for two of the six years they are required to serve as midshipmen before advancement. The first year they are at sea, they keep journals,draw head-lands, &c. &c. ; and when the ship comes into port, thev are to attend the

professor, who examines them. The institu- tion, by an act of parliament, 1806, was extended beyond the original design of educating cadets for the navy. A school for shipwrights was established. The professor of the Naval Academy instructs them ; and before an apprentice can be taken, he must pass an ‘examination in the first six books of Euclid, and in French, and is then bound to the dock-yard seven years; six of which he spends at the academy, and one at sea. The salary of the apprentices is ––60, increasing yearly to ––140. They spend half the day with the pro- fessor, and half with the master shipwright. From this class, officers and superintendents of naval architecture are commonly chosen.

The Royal Military Academy at Woolwich, established by George II. in the year 1741, was intended to instruct ” raw and inexperienced people belonging to the military ordnance in the several parts of the mathematics, necessary for the service of the artillery,” &c. In 1776,

the number of cadets amounted to 48, and in 1798 to 140. The building in the royal arsenal being in an unhealthy situation, the academy was removed to buildings erected for that purpose on Woolwich Common; 128 cadets were lodged, and 60 were received at the royal arsenal. In 1810, the East India Company withdrew their cadets, who amounted to 40, and the extra cadets who, for want of room were placed chiefly at Marlow, were taken into the college. The aca- demy now consists of 200 cadets, 72 of whom reside in the arsenal. There is one master for evepy 16 cadets. The whole number may be enumerated as follows: a professor of fortification, with two assistants ; a professor of mathematics, with six assistants ; two French masters ; three drawing masters, one for figures, one for land- scapes, and one for ground ; the latter has an assistant. There is also a dancing-master, a fencing master, two modellers, and a lecturer on chemistry. Lectures are also given on philoso- pny. The inferior parts of education are taught at the arsenal, the higher branches on the Com- mon. The cadets are the sons of noblemen, gen- tlemen, or military officers. They are considered as the 1st Company of the Royal Regiment of Artillery, and are divided into companies, with proper officers, &c. Each cadet receives 25. 6d. per day, which covers his expences. Monthly re- ports are given of the advancement of each in his respective studies, and commissions are dis- tributed according to their merit.

The Royal Military College at Farnkam, in Surrey, and at Sandhurst, near Bagshot, was originally settled at High Wycombe and Great Marlow. That at High Wycombe commenced :n 1799, when there were 34 cadets. In 1801 it was denominated the Royal Military College by his majesty's warrant, and a supreme board of commissioners appointed to superintend its con- cerns. In 1802, by his majesty's warrant, a

junior department was formed. Anotner warrant issued in 1808, places both departments, forming one college, under the governor and lieutenant- governor. The number of cadets of the juniot department was to be 412; and to be divided into four distinct companies, each 103. They are, first, orphan sons of officers who have died or been disabled in the service. They are to be admitted free of expense, but to bring their first suit of uni- form, and to be provided with linen,&c. Secondly, the sons of officers serving, who pay a sum an- nually, according to their rank, of from ––10 to ––60; and, thirdly, sons of noblemen and gentlemen who pay each not less than ––100 per annum. The studies are mathematics, philosophy, history, geography, fortification, military drawing and landscape, arithmetic, classics, French, German, writing, &c. There are four masters of fortifica- tion,

five of military drawing, three of landscape drawing, four of history, geography, and classics, six of French, one of German, seven of mathematics, three of fencing. This course lasts from three and a half to four years. The candidate before admission, must pass examination, and must be between 13 and 15 years of age. There are monthly and half-yearly examinations previous to any of the cadets receiving commissions from the college, on which occasion, if the examiners approve their proficiency, they have certificates of qualification to serve as officers in the army. The ###third class may purchase commissions at anytime, but cannot obtain them from the college till their proficiency is approved. The senior department is intended for the instruction of officers in the higher parts of their profession. For this purpose they study mathematics, gunnery, fortification, military drawing, castramentation, surveying, reconnoitring of ground, the disposition and the movement of troops, and all the rules and principles requisite in different circumstances of offen- sive and defensive war, &c. &c. together with the French and German languages. There are six professors : one for mathematics, one for forti- fication, two for military drawing, one for French, and one for German. The number of students is 37. No officer is admitted till he is 21 years of age, and has served with his regiment three or four years. Each student pays thirty guineas annually ; and is obliged, the latter part of the time, to keep a horse. If an officer concludes his studies, and passes his examination with credit, he receives a certificate signed and sealed that he is fit for a staff appointment. The students wear uniforms, are subject to the articles of war, and receive 2s. 6d. per day. In 1801, 500 acres of land being purchased at Sandhurst near Bagshot, spacious buildings were erected, and the junior department removed there, the senior department remaining still at Farnham. The East India Company, having withdrawn their cadets from the institution already mentioned, have esta- blished one at Hertford, for which see HERTFORD.

ACADEMY FIGURE, in painting, is atechnical name for an outline of the numan subject taken from the life. Also the copy of such a draught.

ACADIA, or ACADIE, a country in N. Ame- rica, so called by the French, while they had pos- session of it, now NOVA SCOTIA, which see. It is

still the name of a small picturesque settlement ot the French, on the river Montreal, Lower Canada.

AC/ENA, in antiquity, aicaiva, Gr. a Grecian decemped, or ten-foot rod, used in measuring their lands.

AC^ENA, in botany, a genus of plants belong-

ing to the class tetrandria, order, monogyma. There is only one species, a native of Mexico. ACAJAIBA, or ACAJOU, in botany, a name given by some authors, to the tree that produces the Cashew nuts. It is the ANACARDIUM OCCI- DENTALS of Linnaeus, which see.

ACALANDRUS, in ancient geography, a river falling into the bay of Tarentum, near Me- tapontum. Pliny iii. 2.

ACALEPHE, in botany, the nettle of The- ophrastus and Dioscorides.

ACALEPHE, in ornithology, a water-fowl, men- tioned by Nicander ; also in zoology, a sea animal, mentioned by Aulus Gellius.

ACALYPHA, in botany, the three-seeded mercury, a genus of plants belonging to the class monoecia, order monodelphia. There are five species, all natives of Virginia.

ACAMAS, in ancient history, the son of Theseus, who followed his father to the siege of Troy, and being sent along with Diomedes to the Trojans, to solicit the restoration of Helen, Laodice, one of Priam's daughters, had a son by him, called Munitus. He was one of the Grecians who afterwards concealed themselves in the wooden horse ; also a son of Antenor, the Tro- jan ; and a Thracian monarch, who assisted king Priam in the Trojan war. ACAMANTIUM, a city of Phrygia. ACAMATOS, from a negative (ca/ivw, to be wearied. In medicine that position of a limb, which is equally distant from flexion and extension.

ACANACEOUS. See ACANTHACEOUS. ACANAPHORA, in botany, a name given by some, to the jacea, or common knap-weed.

ACANGIS, adventurers, or ravagers ; a name given by the Turks to their hussars, who are sent out to procure intelligence, and ravage the enemy's country.

ACANOR, a particular kind of chemical fur- nace.

ACANTHA, from AicavQa, Gr. a thorn, in anatomy, the protuberances

of the vertebra of the back, commonly called spinte dorsi, or the spine. ACANTHA, in botany, the prickle of a plant. ACANTHA, in zoology, the spine, or prickly fins of fish.

ACANTHABOLUS,in surgery, from AicavOa, a thorn, and /SaXXw, to cast away. An instru- ment for extracting prickles, thorns, &c. In figure it resembles a pair of pincers ; but is sometimes made crooked for more conveniently entering the fauces.

ACANTHACEOUS, from asavQa, aculeiim, prickly, a term sometimes applied to plants of the thistle kind.

ACANTHALZUCA, in botany, the echinopus, or globe thistle.

ACANTHE, in botany, a name formerly given to the artichoke.

ACANTHIAS, in ichthyology, a name given by some authors to the thorn-back, a fish, the skin of which is used by our artificers in polishing, and called by them simply fish-skin.

ACANTHICE, mastich, a gum, yielded by the herb helxine.

ACANTHINUM LIGNUM, is used by some writers for Brazil wood.

ACANTHION, among naturalists, a plant of the thorn, or rather of the thistle kind : whose down, being cleansed from the prickles, was manufactured into a kind of stuff, not unlike silk.

ACANTHIS, in ornithology, a bird men- tioned by Virgil, Georg. iii. supposed to be the linnet.

ACANTHONOTUS, or NASUS, in ichthy- ology, a genus of fish of the Indian seas, de- scribed by Black as characterised by an elongated body, dorsal fins with spines on the back and abdomen.

ACANTHOPTERYGII, in ichthyology, from AicavQa, a thorn, and irrtpvyiov, a fin. A class of fishes, in the Linnaean system, the character of which is, that the rays of the fins are bony, and some of them prickly at the extremities. This class contains 17 genera.

ACANTHOS, or ACANTHUS, a town of Egypt, near Memphis, now Bisalta or Dafoitr.

ACANTHOS, a maritime town of Macedonia, W. of mount Athos, now called Erisso. Near this was Xerxes's ditch, or canal, whereby he attempted to separate Athos from the continent, to convey his ships

without doubling the mount into the Singitic bay. Also a town of Epirus, and an island mentioned by Pliny, v. 32.

ACANTHUS, bearVbreech, or brank-ursine, in botany, a genus of the angiospermia order, belonging to the didynamia class of plants ; and ranking in the 40th natural order, personatae. See BOTANY.

ACANTHUS, in architecture, an ornament re- presenting the leaves of the acanthus, used in the capitals of the Corinthian and Composite orders. To the Corinthian capital this orna- ment adds its characteristic beauty : ” The whole plant,” as Mr. Elmes elegantly observes, “sur- rounds with its aspiring leaves, the vase or ball of the capital, as if attempting to lift up the abacus that covers the whole ; they then turn down and form themselves into graceful volutes.”

ACANTHUS, a name given by Theophrastus to the acacia tree.

ACANTHURUS, in ichthyology, a sub- division of the Linnaean genus, chaetodon, con- taining 15 species, according to Dr. Shaw.

ACANTICONE, in mineralogy, of the genus of flint. It was formerly considered as a variety of common actinolite; but Werner and Haiiy have proved it a distinct species, nearly allied to agate, it is the pistacite of Werner, the arandilite of D’Andrada, and the thallite of La Metherie.

ACANZII, Turkish light horse, the avant guard of the grand signior’s army.

ACAPATLI, in botany, the piper longum of Linnaeus, or the plant which produces lone; pep- per.

ACAPELLA, in church music, denotes that the instrumental and vocal are to continue iii unison.

ACAPNON, aicairvov, in botany, a name of the sampsuchum, or marjoram : also of dry wood.

ACAPULCO, or Los REYES, a considerable town and port in Mexico, on the South Sea, the capital of New Spain. A ship annually sails hence to Manilla, in the Philippine Islands, near the coast of China, laden with precious metals

and other goods to the value of ††350 or 400,000 : the metals alone being generally worth ††250,000 ; and another returns in July or August, with diamonds, rubies, and other precious stones ; the carpets of Persia ; the camphire of Borneo ; benjamin and ivory from Pegu and Cambodia ; muslins, waste cottons, gold dust, tea, China †††ware, silk, and cabinets of China and Japan ; besides cinnamon, cloves, mace, nutmegs, and pepper. The goods brought to Acapulco are carried to the city of Mexico by mules and pack- horses ; and from thence to Vera Cruz on the North Sea, in order to be shipped for Europe. Acapulco itself is an inconsiderable place, con- taining not more than 4000 inhabitants, except at the annual fair on the arrival of the Manilla galleon. Ships arrive at the port by two inlets, separated from each other by a small island, the entrance into them in the day time is by means of a sea-breeze, and the sailing out by night is effected by a land-breeze. A passage has been recently cut through the mountains to give in- creased circulation to the air; but its unhealthi- ness, as a residence, seems incurable, and the inhabitants are the constant prey of the cholera morbus and bilious fevers. Earthquakes are also common; and the insects that choke the atmosphere intolerable to Europeans. A wretch- ed fort, 30 pieces of cannon, and a small gar- rison defend it. But the harbour is equally ex- tensive, safe, and commodious ; surrounded by lofty mountains, which are so dry, that they are destitute of water. The air here is hot, heavy, and unwholesome ; to which none can habituate themselves, except certain negroes that are born under a similar climate, or mulattoes. Lon. 100††. W. kt. 16††, 50’. N.

ACARA, in ichthyology, the name of a fish caught in the fresh waters of the Brazils, and es- teemed a very delicate and well-tasted one. It seldom exceeds three or four inches in length, and has a high back like the perch.

ACARAAYA, or GARANHA, in ichthyology, the name of a fish caught on the Brasilian shores, which grows to three feet in length, and is the shape of our carp. It is eaten in Brasil, both fresh and salted.

ACARAI, or ACARIA, a town of Paraguay in South America, built by the Jesuits in 1624. Lon. 51††, 5’. W. Lat. 26††, 0’. S. Also a river of Paraguay.

ACARAMUCU, in ichthyology, the balistes monoceros of Linnaeus. See MONODON.

ACARAPEBA, in ichthyology, the name of a small American fish, called also braseme. It seems a kind of Smaris.

ACARAPINIMA, in ichthyology, the name of a Brasilian fish, of the Cantharus kind. .

ACARAPITAMBA, in ichthyology, the name of a fish caught in the Brasilian seas, of an oblong figure, resembling the mullet, and growing to two feet or more in length. Its mouth and teeth are very small.

ACARAPUCU, in ichthyology, the name of a well-tasted fresh-water fish, of Brasil growing to eighteen inches in length.

ACARAUNA, in ichthyology, an American fish, of which there are two species ; the one called Acarauna, without any additicn ; and the

other Acarauna Quadrats, or the Square Ac a- rauna ; and by our sailors the old wife.

ACARI, or ACARIS, in natural history, an animalcule bred in wax ; said by Aristotle to be the least object of human sight.

ACARI, a cape, river, and settlement, Ion. 75►►, 8'. W. Lat. 15►►, 15'. S. in the province of Cumana, Peru. Also a river in Para, Brazil, which enters the Amazon at its mouth.

ACARIGUA, a river and settlement in the province of Venezuela, South America. The former rises near the town of Araure, and discharges itself into the La Portuguesa.

ACARNA, in botany, a name given by Theophrastus and others to the artichoke.

ACARNAN, in ichthyology, the name of a small sea fish very common in the Mediterranean, and called by the fishermen fravolino or phragolino. It differs little from the erythrinus, ex- cept in colour.

ACARNANIA, anciently Curetis, the first country of Free Greece, or Greece Proper, bounded on the W. by the Sinus Ambracius, and separated from .ZEtolia by the river Achelous, on the E. and by the Sinus Ambracius from Epirus. The people were called Acarnanes, denoting per- sons unshorn ; other ./Etolians, to the E. of the Achelous, being called Curetes, by Homer, from being shorn. According to Lucian, they were noted for effeminacy and incontinence ; hence the proverb, Porcellus Acarnanius. This coun- try was famous for an excellent breed of horses ; so that Aicapvivos ITTTTOC, is a

proverbial saying for a thing excellent in its kind. It is now called la Carnia and il Despotato.

ACARNAR, ACHARNAR, or ACHERNER, a star of the first magnitude, in Eridanus, invisible in our latitude.

ACARON, or ACCARON, called Ekron in Scripture, which see.

ACARTUM, in chemistiy, red lead.

ACARUS, in entomology, the tick, or mite, a genus of insects belonging to the order of aptera, or such as have no wings. They are of the chsetodon genus of Linnoeus; which includes also the black acarauna and the acarauna altera major of Willoughby ; and the acarauna macu- lata of others.

ACASTUS, in classic history, the son of Pelias, king of Thessaly, and a famous hunter, married Hippolyta, who being disappointed in her passion for Peleus her step-son, she accused him to her husband of attempting her virtue; for which he was exposed to wild beasts. But Vul- can, by Jupiter's order, rescuing Peleus, he made successful war on Thessaly, and slew Acastus and Hippolyta. Also, the second Athenian Ar- chon.

ACATALECTIC, n. S. aicaraXˆierucoc, Gr. A verse which has the complete number of syllables, without defect or superfluity.

ACATALEPSIA, ACATALEPSY, from a pri- vative, and ××caraX××jˆef, comprehension. In phi- losophy, incomprehensibility ; that which cannot be conceived.

ACATALUS, in botany, the juniper berry.

ACATAPEC, a settlement of the province ot Tehuaca, New Mexico; also the name of seve- ral small settlements of South America.

ACC ×××;

ACATERY, or ACATRY, anciently an officer of the king's household, designed for a check between the clerks of the kitchen and the pur- veyors.

ACATHARSIA, in medicine, an impurity of the blood or humours.

ACATHISTUS, n ecclesiastical affairs, a hymn anciently sung in the Greek church, aica0i

ACATIUM, in ancient navigation, a boat or pinnace used for military purposes. Also the large sail placed in the middle of a ship. Poll. Onon. ii. 81.

ACATLAN, the name of six small native set- tlements, in New Mexico.

ACAULIS, or ACAULOUS, in botany, terms applied to plants, the flowers of which have no pedicle or stalk to support them, but rest imme- diately on the ground, such as the carline thistle, &c.

ACAYUCA, a town and district of New Mexico, on the coast of the North Sea, 100 leagues S. E. of Mexico. Also a settlement in New Spain, containing 100 Indian families.

ACBAR, in mythology, an idol of enormous size, which the Arabians are said formerly to have worshipped ; an idolatry from which, with diffi- culty, Mahomet restrained them.

ACBAR. See AKBAR,

ACBERPOOR, or ACBERPURA, a town in the province of Oude, Hindostan, and one of the remaining possessions of the Nabob. It stands in N. lat. 26►►, 27'. and E. long. 82►►, 35'. South of Fyzabad about 30 miles.

ACBERPOOR, also called AJETMUE, a town in the district of Etaweh, province of Agra, Hin- dostan, 25 miles N. of Caunpoor. N,. lat. 26►►, 23'. E. long. 82►►, 30'.

ACCA LAURENTIA, the nurse of Romulus and Remus, and wife of Faustulus, the shepherd of king Numitor. She was called Lupa from her loose character ; whence the fable of their king being suckled by a wolf. To her honour the Accalia were dedicated ; though some writers suppose them to have been instituted in honour of another courtezan. Plut. Qu

ACCA, (St.) bishop of Hagustaldt, or Hexam, in Northumberland, in 709. He ornamented his cathedral magnificently, and erected a library. Acca was famous for his skill in church music, and wrote Pussioncs Sanctorum, and Pro illus- trandis Scripturis, ad Bedam. He died in 740, having enjoyed the see of Hexam 31 years.

ACCABA, a chain of mountains between Pa- lestine and Arabia Petraea, N. E of the Red Sea, immediately by the Mount Hor of Scripture, northward. It is a range which the Mecca pil- grims are constantly passing, and on which many of their camels are lost. Also a

fortress of this neighbourhood, 150 miles E.S. E. of Suez. It was the Ezion-geber of Scripture, used by Solomon ; and the Beienice of Ptolemy.

ACCADEMIA, among musicians, a concert.

ACCAPITARE, ACCAPTARE, or ACAPTARE, from ad, to, and caput, the head, because vassals

own their lords for their head. In old law, the act of becoming vassal to a lord, or yielding ho- mage to him. Accapitum, or Accapitamentum was the money paid by the vassal.

ACCAWAW, INDIANS, one of the aboriginal tribes of Guiana. They lived amicably with the Dutch settlers ; but were much addicted to the use of vegetable poisons on their arrows and spears. ACCEDAS AD CURIAM in the English law, a writ of the court of Chancery, where a man has received, or fears, false judgment in an infe rior court.

ACCEDAS AD VICE-COMITEM. a writ directed to the coroner, commanding him to deliver a writ to the sheriff, who having a Pone delivered to him, suppresses it.

ACCEDONES, or ACCENDONES, homaccedo, to accede. In Roman antiquity, a species of gladiators, who excited or animated the comba- tants in the public games.

ACCEDE, v. “►► Ad. cedo ; to go

ACCESS’, to or towards, sup-

ACCESS’ARINESS, posingafixed point

ACCESS’ARY, or ˆ ►► ,. - to which we are ad- ACCESS’ORY, 5 “* .1 vancing; to come

ACCESSIBLE, near to, or ap-

ACCESSION. J proach, in order

to render assistance, or to confer a benefit. Hence, to assist, to agree to, to bestow a favour, Accession also signifies addition, increase. Beside all this, he was ful greuously ; For vpon nim he had an hote accesse, That day by day him shooke full petously.

Chaucer, of tlte Blacke Knight, When we are wrong'd, and would unfold our griefs ; We are deny'd access unto his person, Ev'n by those men that most have done us wrong.

Shakspeare Away, I prythee,

Do as I bid thee. There's no more to say, Accessible is none but Milford way.

Shakspeare's Cymbeline. He grants what they besought ; Instructed, that to God is no access Without Mediator ; whose high office now Moses in figure bears.

Milton, b. xii. 1. 239 They anon,

With hundreds and with thousands, trooping came, Attended : all access was throng'd : the gates And porches wide j but chief the spacious hall Thick swarm'd.

Milton's Paradise Lost, b. ii.

As for those things, that are accessary hereunto ; those things, that so belong to the way of salvation, &c. Hooker, b. iii. sec. 3.

For, as relapses make diseases More desperate than their first accesses. Hudibras.

The reputation

Of virtuous actions past, if not kept up With an access and fresh supply of new ones, Is lost and soon forgotten. Denham's Sophy.

He, (the Earl of Strafford,) had taken upon him the government of Hull, without any apprehension or imagination that it would ever make him accessary to rebellion. Clarendon's History of Rebellion,

And here th' access a gloomy grove defends j And here th' unnavigable lake extends ; O'er whose unhappy waters, void of hgnt, No bird presumes to steer his airy flight.

Dryiett't JEneid, vi.

They go, commissioned to require a peace ; And carry presents, to procure access.

Dryden's Mneid, viii. 209. And vain were reason, courage, learning ; all, Till power accede ; till Tudor's wild caprice Smile on their cause.

Shenstone’s Ruined Abbey. With longing eyes, and agony of mind, The sailors view their refuge left behind; Happy to bribe with Indies richest ore, A safe accession to that barren shore.

Falconer’s Shipwreck.

Ad : celero, celer, to hasten to ; to move with increased speed

ACCENDENTES. or ACCENSORES, in eccle- siastical writings, a lower order of ministers in the church of Rome, whose office is to light and trim the candles, or tapers.

ACCENDO, v.) Ad : cendo. To set fire to; to ACCENSION. J light up. Obsolete. ACCENSI, in the Roman armies, a resei-ve of soldiers, thus denominated, quia accensebantur, ad censum adjiciebantur. They were sometimes also called velites and velati, because they fought clothed but not in armour ; sometimes adscripti- cii, and adscriptivi ; sometimes rorarii. The ac- censi, Livy observes, were placed at the rear of the army, because little was expected from them ; they were taken out of the fifth class of citizens. Also an inferior order of officers appointed to attend the Roman magistrates, whose office it was to call assemblies of the people, before the judges, and at the public games. They also used to cry the hour.

AC’CENT, n. & v. -\ Ad: cano, accino, ACCENT’UAL, > accentum ; to sing to ;

ACCENTUA’TION, J to sing in concert ; to sound according to prescribed rules of utterance. Accentuation applies to the marks in books, di- recting the accent.

How many ages hence Shall this, our lofty scene, be acted o’er, In states unborn, and accents yet unknown ‘.

Shakspeare’s Julius Caesar.

Winds ! on your wings to heav’n her accents bear ! Such words, as heav’n alone is fit to hear.

Dry. Virg. past. 3. The tender accent of a woman’s cry Will pass unheard, will unregarded die ; ??? When the rough seamen’s louder shouts prevail, When fair occasion shews the springing gale.

Prior .

‘Tis the clime of the east, ‘tis the land of the sun, Can he smile on such deeds as his children have

done?

Oh ! wild as the accents of lovers’ farewell Are the hearts which they bear, and the tales -which they tell. Lord Byron’s Bride of Abydoi.

ACCENT, among grammarians, is a certain ACCELERANDE, in music, a direction to mark or character placed over a syllable, to di- performers to quicken the time. rect the stress of its pronunciation. We gene-

For ACCELERATION of the gravitation of rally reckon three grammatical accents in ordinary bodies. See MECHANICS. use, all borrowed from the Greeks : viz. the acute

For ACCELERATION of the motion of com- accent (‘), which shows when the tone of the voice pressed bodies. See ELASnciTY. is to be raised. The grave accent (ˆ}, when the

For ACCELERATION of the motion of pendu- note or tone of the voice is to be depressed lums. See MECHANICS. The circumflex accent (*), is composed of both

For ACCELERATION of the motion of projec- the acute and grave, and points out a kind of tiles. See PROJECTILE. undulation of the voice. The Latins have made

ACCELERATION of the fixed stars, in astrono- the same use of these three accents.

my, the difference between the revolution of the ACCENTS, among the Hebrews, have a gram-

primum mobile, and the solar revolution ; which matical, a rhetorical, and musical effect : though

has been computed at three minutes and 56 se- the firs-t and last seem, indeed, to be the same ,

conds. both being comprised under the general name ot

ACCELERATION of a planet. The increase of tonic accents, because they give the proper tone

its real diurnal motion, above its mean diurnal to syllables ; as the

rhetorical accents are said to

motion. be euphonic, because they tend to make the pro-

ACCELERATION of the moon, is a term used to nunciation more sweet and agreeable. There are

express the increase of the moon's mean motion four euphonic accents, and 25 tonic ; of which

from the sun, compared with the diurnal motion some are placed above, and others below the syl-

of the earth. See ASTRONOMY. lables; the Hebrew accents serving not only to

ACCELERATORES URINˆE, in anatomy, regulate the risings and fallings of the voice, but

muscles which serve for rejecting or expediting also to distinguish the sections, periods, and num-

the passage of the urine. See ANATOMY. bers of periods, in a discourse ; and to answer the

ACCEL'ERATE, v.

ACCELERATION, ACCEL'ERATIVE. or quickness.

TaKe new beet, and put in some quantity of stale beer into it ; and see whether it will not accelerate the clarification, by opening the body of the beer, whereby the grosser parts may fall down into lees.

Bacon's Natural History, No. 307.

By a skilful application of those notices, may be

gained the accelerating and bettering of fruits, and

the emptying ►►f mines, at much more easy rates,

than by the common methods. Glanville, Scepsis.

If the rays endeavour to recede from the densest

part of the vibration ; they may be alternately ac-

celerated and retarded, by the vibrations overtaking

them. Newton’s Optics.

Spices quicken the pulse, and accelerate the motion

of the blood, and dissipate the fluids ; from whence

leanness, pains in the stomach, loathings, and fevers.

Arbuthnot on Aliments.

The degrees of acceleration of motion, the gravita- tion of the air, the existence or non-existence of empty space, either coacervate or interspersed, and many the like, have taken up the thoughts and time of men in disputes concerning them.

Hole’s Origin of Mankind. Lo! from the dread immensity of space, Returning, with accelerated course, The rushing comet to the sun descends, And, as he sinks below the shading earth, With awful train projected o’er the heavens, The guilty nations tremble.

Thomson’s Autumn.

same purposes with the points in other languages. Their accents are divided into emperors, kings, dukes, &c. each bearing a title answerable to the importance of the distinction it makes. Their emperor rules over a whole phrase, and termi- nates the sense completely ; answering to our point. Their king answers to our colon ; and their duke to our comma. The king, however, occasionally becomes a duke, and the duke a king, as the phrases are more or less short. The ma- nagement and combination of these accents differ in Hebrew poetry from what they are in prose. The use of the tonic or grammatical accents has been much controverted : some holding that they distinguish the sense ; while others maintain that they are only intended to regulate the music, or singing ; alleging that the Jews sing, rather than read, the Scriptures in their synagogues. The best supported opinion is, that they were invent- ed about the sixth century, by the Jewish doc- tors of the school of Tiberias, called the Masso- retes.

ACCENTS, among the Greeks, now seen both in manuscripts and printed books, have occasion- ed no less dispute about their antiquity and use, than those of the Hebrews. Isaac Vossius en- deavours to prove them of modern invention ; others contend, that the right pronunciation of their language being natural to the Greeks, it was needless to mark it by accents in their writ- ings ; and that, they only began to make use of them so late as the period in which the Romans, being curious to learn the Greek tongue, sent their children to study at Athens ; a little before Cicero's time. Wetstein, Greek professor at Basil, in a learned dissertation, endeavours to prove the Greek accents of an older standing. He owns that they were not always formed in the same manner by the ancients ; but thinks that difference owing to the different pronunciation which obtained in the different parts of Greece. He brings several reasons a priori, for the use of accents, even in the earliest days : as, that they then wrote all in capital letters equidistant from each other, without any distinction either of words or phrases, which without accents could scarce be intelligible ; and that accents were necessary to distinguish ambiguous words, and to point out their proper meaning ; which he confirms from a dispute on a passage in Homer, mentioned by Aristotle in his Poetics, chap. v. Accordingly, he observes that the Syrians, who have tonic, but no distinctive accents, have yet invented certain points, placed either below or above the words, to show their mood, tense, person, or sense.

The Chinese are said to have but 330 spoken words in their language ; but these being multiplied by the different accents or tones, which affect the vowels, furnish a language tolerably copious. Magalhon makes the lan- guage tut easie- to learn on this account. The Siamese are also observed to sing rather than talk. Their alphaoet begins with six characters, all only equivalent to a K, but differently accent- ed For though in the pronunciation the accents a;c naturally on the vowels, yet they have some to diversify such of their consonants as are in other respects the same.

ACCENT, in music, is a certain enforcement of

particular sounds, whether by the voice or in- struments, generally used at the beginning of bars.

The ACCENTS OF SENTENCES seem to have been almost totally overlooked, while those of words have been studied most minutely ; it is indeed re- markable, that all mankind seem to agree in low- ering the voice at the end of a period, and elevat- ing it in interrogations, and the like. See Bacon de Aug. Scient. vi. 1. and Elem. Crit. ii.

ACCENTOR, in music, he that sings the lead- ing part in a choir.

ACCEPT', v.

ACCEPTABLE,

ACCEPT'ABLENESS,

ACCEPTABILITY,

ACCEPT' A ELY,

ACCEPTANCE,

ACCEPTATION,

ACCEPT'ER,

ACCEP'TION,

ACCEP'TIVE,

ACCIP'IENT.

Ad : capio ; accipio, ac- ceptum, to take to, to take j to one's self; to receive > what is offered, generally with pleasure or satisfac- tion : sometimes merely expressing assent.

t J

The same epithete in several places accepts sundry interpretations. Fuller's Worthies.

What will God accept from us, if not prayers?

Hall's Contemplation*.

If it be little, he -will accept it into grace and make

it bigger. Jeremy Taylor.

Neither do ye kindle fire on my altar for nought.

I have no pleasure in yon, saith the Lord of hosts,

neither will I accept an offering at your hand.

Malachi, i. 10.

God is no respecter of persons ; but, in every na- tion, he that feareth him, and worketh righteousness, is accepted with him. Acts x. 34, 35.

This is a faithful saying, and worthy of all accep- tation, that Jesus Christ came into the world to save sinners. St. Paul, 1 Tim. iv. 15.

Do not omit thy prayers, for want of a good ora- tory ; for, he that prayeth upon God's account, cares not what he suffers, so he be the friend of Christ ; nor where nor when he prays, so he may do it fre- quently, fervently, and acceptably. Taylor. By that acceptance of his sovereignty, they also accepted of his laws ; why then should any other laws now be used amongst them ?

Spenser's State of Ireland.

If he tells us his noble deeds, we must also tell him our noble acceptance of them.

Shahspeare's Coriolanus. Thus I imbolden'd spake, and freedom us'd Permissive, and acceptance found.

Paradise Lost, b. viii. 1. 435.

You have been graciously pleased to accept this tender of my duty. Dryden's Dedication to his Fables.

Charm by accepting, by submitting sway ; Yet have your humour most, when you obey.

Pope.

ACCEPTANCE, in commerce, is the subscrib- ing, signing, and making one's self debtor for the sum contained in a bill of exchange or other obligation. It is also applied in law, to such a receiving of rent as acknowledges a te- nant, &c.

ACCEPTILATION, n. s. acceptilatio, Lat. A term of the civil law, importing the remission of a debt by an acquittance from the creditor, testifying the receipt of money which has never been paid.

ACCEPTOR, in commerce, the person who accepts a bill, and is bound to pay it.

ACC

ACCEPTORIUS MODIOLUS, in antiquities, the vessel employed in aqueducts for holding water, distinguished from the erogatonius,

which was to deal it out.

ACCESSION, in law, is a method of acquir- ing property, by which, in things that have a close connection or dependence upon one ano- ther, the property of the principal thing draws after it the property of the accessory : Thus, the owaer of a cow becomes likewise the owner of the calf. It sometimes likewise signifies consent or acquiescence.

ACCESSION, in medicine, denotes a fit, or re- turn of some periodical disease. It is sometimes confounded with paroxysm : but they are differ- ent ; an accession being the beginning of a disease, a paroxysm the height of it.

An ACCESSARY, in law, is of two kinds, i. e. an accessary before and after the fact. Acces- sories before the fact, are those who, though absent, yet procure, command, or encourage, another to commit a crime. Accessaries after the fact, those who receive or relieve the felon, knowing his felony. The latter are always con- sidered as less criminal than the principal, (as in murder particularly,) the former equally so.

An ACCESSARY in felony shall have judgment of life and member, as well as the principal who did the felony ; but not till the principal be first attainted, and convicted, or outlawed thereon. When the principal is pardoned without attain- der, the accessary cannot be arraigned. Such was the law till lately; but now accessaries may be convicted without the principal. In the low- est and highest offences all are principals ; as in riots, routs, forcible entries and other trespasses, which are the lowest offences. So also in the highest offence, which is high treason, there are no accessaries. It is the same as art and part in Scots law.

ACCESSORY NERVES, ACCESSORII, or PAR Ac- CESSORIUM WILLISII, so called from Dr. Willis, the discoverer; in anatomy, a pair of nerves, which, arising from the medulla in the vertebra of the neck, ascend, and enter the skull, and pass out of it again with the par vagum, wrapped up in the same common integument; and after quitting them, are distributed into the muscles of the neck and shoulders. See ANATOMY.

ACCHO, a city of Galilee, on the coast of the Mediterranean, which formerly belonged to the tribe of Asher. It stood on the scite of the cele- brated ACRE of ancient and modern times. See ACRE.

ACCI, or ACTI, in ancient geography, a town

Tarraconensis; supposed to be Guadix, to the east of the city of Granada, now greatl” decayed. It is the Colonia Accitana of some repute among the Roman colonies. The people were called Gemellenses, because the colony was formed from the third and sixth legions.

ACCIACATURA, in music, is struck simul- taneously with the whole harmony; and is thus opposed to the Appoggiatura. It is used with great effect in basses.

ACCIAIOLI, (Donata,) a man famous for his learning, and the honourable employments lie possessed in Florence, his native country, in the 15th century, He wrote a Latin translation of

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some of Plutarch’s Lives; Commentaries on Aristotle’s Ethics and Politics; and the life of Charlemagne. He was sent to France by the Florentines, to sue for succour from Louis XI. against. Pope Sextus IV, but died on his journey at Milan. His body was carried to Florence, and buried in the church of the Carthusians. The small fortune he left his children is a proof of his probity and disinterestedness. His daugh ters, like those of Aristides, were married at the public expence, as an acknowledgment of his services.

ACCIAIOLI, (ZANOBIO and JOHN,) were learned men of the same family, with the fore- going. The first was born at Florence, 1461 ; and patronized by Lorenzo the Magnificent, of whose son, when Leo X. he received the office of librarian to the Vatican. He published the Greek Epigrams of Politian; translations of Eusebius, Olympiodorus and Theodoret; and Orations, in praise of Naples and of Rome. He died in 1519. JOHN ACCIAIOLI was bred to the bar, at Florence, and lectured at Pacrua with great applause. He published ‘ Multa Doctissimo- rum Problematum Monumenta,’ &c. and died at the close of the 16th century. AC’CIDENCE, n.~\ Ad : cado, accedo, ac- AC’CIDENT, f cidens, to fall to or at;

ACCIDENTAL, {to befall, to happen to; ACCIDENTALLY. J usually including sur-r prise, chance, or unnecessary, that is, non-essen- tial addition.

Thise cokes how they stamp, and strein, and grind, (And turnen substance into accident, To fulfill all thy likerous talent ; ???)

Chaucer, Pardonere’s Tale. If all the yeare were playing holidaies, To sport, would be as tedious as to worke ; But when they seldom come,

they wisht-for come, And nothing pleaseth but rare accidents.

Shahspeare's 1st Henry IV. p. 50 y act i. sc. 2. Thy sin's not accidental, but a trade.

Shahspeare's Measure for Measure. So shall you hear

Of accidental judgments, casual slaughters ; Of deaths, put on by cunning and forc'd cause.

Shakspeare's Hamlet.

Look upon things of the most accidental and mu- table nature ; accidental, in their production ; and mutable, in their continuance : yet God's prescience of them is as certain in him, as the memory of them is, or can be in us. South's Sernumt.

Ay, such a minister as wind to fire ; That adds an accidental fierceness to Its natural fury. Denham's Sophy.

Although virtuous men do sometimes accidentally make their way to preferment; yet the world is so ij corrupted, that no man can reasonably hope to be re- warded in it, merely upon account of his virtue.

Swift's Miscellanieˆ

ACCIDENS, in philosophy, denotes what does not follow from the nature of a thing, but from some accidental qualities thereof in which sense it stands opposed to per se, which denotes the nature and essence of a thing. Thus, fire is said to burn per se, or considered as fire, and , not per acddens ; as a piece of iron, though red hot, only burns per acddens, by a quality acci- dental to it, and not considered as iron.

ACCIDENT, in grammar, a property attached to a word, without entering into its essential

VDL.XPACE79.

ACCIPITRES

GEN.1. Vulture

definition. A word is said to be primitive, when it is taken from no

other word in the language : n which it is used : thus, heaven, king, good, are primitive words; but heavenly, kingdom, good- ness, &c, are derivatives. Besides these accidents, which are common to all sorts of words, each particular species has its accidents : thus the ac- cidents of the noun substantive are the gender, declension, and number; and the adjective has the accident of comparison. See the articles GRAMMAR and LANGUAGE.

ACCIDENT, in heraldry, an additional point or mark in a coat of arms, which may be either omitted or retained without altering the essence of the armour, such as abatement, difference, and tincture.

ACCIDENT, among physicians, is sometimes used for what is more generally called symptom.

ACCIDENT ABSOLUTE is a term used in the Roman Catholic theology for an accident, which subsists, or may possibly subsist, at least miracu- lously, and by some supernatural power, without a subject; such as the colour, flavour, figure and taste of the bread and wine in the eucharist, which remain after these elements, as it is stated, are changed into flesh and blood ! The Cartesian Catholics, whose philosophy leads them to deny the existence of absolute accidents, have laboured hard, but in vain, to reconcile their philosophical with their religious tenets.

ACCIDENTS, in astrology, denote the most extraordinary occurrences in the course of a man's life: such as, a remarkable instance of good fortune, a signal deliverance, a great sick- ness, &c. Also certain casual dispositions, and affections, of the planets, whereby they are sup- posed to be either strengthened, or weakened, by their being in such a house of the figure.

ACCIDENTAL COLOURS, in optics, are those which depend upon the affections of the eye, in contradistinction to those which belong to the light itself. The impressions made upon the eye, by looking steadfastly at a particular colour, are various, according to the single colour, or combination of colours in the object ; and they continue for some time after the eye is with- drawn, and give a false colouring to other objects. The Count de Buffon has endeavoured to trace the connections, which these accidental colours have with such as are natural, in a variety of in- stances. The subject has also been considered by De la Hire and M. Epenus : and M. d'Arcy has contrived a machine for determining the dura- tion of the effects of light, and after several trials, finds that it continues about eight thirds of a minute. See OPTICS.

ACCIDENTAL POINT, in perspective, is that point in the horizontal line where the projections of two lines parallel to each other meet the per- spective plane.

ACCIPENSER, in ichthyology, a genus of fishes, belonging to the order of Nantes, and class Amphibia, in the Linnaean system. It has a single linear nostril : the mouth in the under part of the head, contains no teeth ; and the cirri are below the snout, and before the mouth. There are three species of this genus, viz. the

1. ACCIPENSER HUO. 2. ACCIPENSER Ru-

THENUS, this has been called also ACCIPESIUS,

and ON iscos by Greek writers. 3. ACCIPENSER STURIO, or the sturgeon.

ACCIPITER, in ichthyology, a name given by Gellius, and some authors, to the fish milvus and lucerna. It is a species of the trigla; with the head a little acculeated, and with a singular fin, placed near the pectoral fins.

ACCIPITER, in the Linnaean system of zoology, the name of the first order of birds, the distin- guishing character of which, is, their having a crooked beak. Of this order there are four genera : the vultur, falco, strix, and lanius, and seventy- two species.

ACCIPITER, in Roman antiquity and ornitho- logy, the hawk, which, from its carnivorous nature, and its frequenting fields of battle, they considered as a bird of bad omen. Pliny, how- ever, tells us, that in some cases, particularly in marriage, it was esteemed a bird of good omen, because it never eats the hearts of other birds ; intimating thereby, that no differences in a mar- riage state ought to reach the heart. The accipiter was worshipped as a divinity by the in- habitants of Tentyria, an island in the Nile, being considered by them, from the sharpness of its sight, as the image of the sun ; and hence we find that luminary represented, in hiero- glyphics, under the figure of a hawk.

ACCIP1TRINA, in botany, the hawk-weed, called also flax-weed, and sophia chirurgorum.

ACCISMUS, aicjcKrjioc, a feigned refusal of something which a person earnestly desires: supposed to be formed from Acco, the name of a foolish old woman, famous in antiquity for an affectation of this kind.

Accismus is sometimes considered as a virtue, sometimes as a vice, which Augustus and Tiberius practised with great suc- cess. Cromwell's refusal of the crown of Eng- land may be brought as an instance of an accis- mus. It is used in rhetoric,, as a spe'cies of irony.

ACCITE', v. Ad : cito, anciently cito citum,to move to stir, to summon. Obsolete. See CITE.

When the place was redy, the kyng and the queene were accited, by Docter Sampson, to appere before the legates, at the forenamed place, the twentie and eight day of May. Hall, p. 756.

A nobler man, a brauer warrior, Liues not this day within the city walles. He by the senate is accited home From weary warres against the barbarous Gothes. Shakspeare's Tit. And. p. 31, act i. sc. 2. Our coronation done, we will accite (As I before remember'd) all our state ; And ˆheav'n consigning to my good intents) "Vo prince, no peer, shall have just cause to say, Heav'n shorten Harry's happy life one day.

Shakspeare's Henry IV.

ACCIUS, the surname of a patrician family, at Rome, the ancestors of Azo, E. of Este, from whom the various princes of the Brunswick family, and the illustrious house of Hanover, are lineally descended. See Azo.

Acciub, (Lucius,) a Latin tragic poet, born, according to St. Jerome, A. U. C. 583. He adopted the most celebrated subjects of the Gre- cian stage ; as Andromache, Andromeda, Atreus, Clytemnestra, Medea, Meleager, Philoctetes, &c. and one dramatic piece, entirely Roman, entitled Brutus. Two comedies, the Wedding and the

Merchant, have also been ascribed to him. His style has been censured as harsh ; but he was so much esteemed by the public, that a comedian was punished for only mentioning his name on the stage.

Accius, an orator, of Pisaurum, against whom Cicero defended Cluentius. ••• Also a poet of the sixteenth century, on whom Julius Scali- ger bestows great ecomiums.

ACCLAIM', v.~) Ad: damo, to cry aloud ACCLAIM', n. MO; to give a shout of en- ACCLAMA'TION. J couragement and approba- tion.

It l.ath been the custom of Christian men, in token of the greater reverence, to stand, to utter certain ###words of acclamation ; and, at the name of Jesus, to bow. Hooker, b. v. sec. 29.

Gladly then he mix'd

Among those friendly pow'rs, who him receiv'd With joy and acclamation* loud, that one That (of so many myriads fall'n) yet one Return'd, not lost. Milt. Farad. Lost, b. vi. 1. 23. Such an enchantment is there in words ; and so fine a thing does it seem to some, to be ruined plausibly, and to be ushered to their destruction with panegyrick and acclamation. South.

Back from pursuit thy pow'rs, with loud acclaim, Thee only extoll'd. Milton's Par. Lost, b. iii. 1. 397.

The herald ends ; the vaulted firmament With loud acclaims and vast applause is rent.

Dryden's Fables.

ANGUS. Thou shall be crowned : ### An iron crown, intensely hot, shall gird Thy hoary temples ; while the shouting crowd Acclaims thee king of traitors.

Smollet's Regicide, act v. sc. 8.

ACCLAMATION, ACCLAMATIO, in Roman antiquity, a shouting of certain words in a loud chant or peculiar and regulated tone, by way of praise or dispraise. The acclamations have been distinguished from applauses, as the former were given by the voice, the latter, by the hands ; ac- clamation also was bestowed on persons absent, applause only on those present. They were of various kinds: ecclesiastical, military, nuptial, senatorial, synodical, scholastic, theatrical, &c. besides musical and rythmical acclamations ; ac- clamations of joy and respect, and even of reproach and contumely. Sometimes the former were Laudationes et bona vota, or good wishes; the latter, Execrationes et convicia. Suetonius fur- nishes an instance of this last in the Roman senate, on occasion of the decree for demolishing the statues of Domitian, when the senators could not refrain from contumelious acclama- tions against the deceased. The like were uttered after the death of Commodus. Ac- clamations were repeated sometimes a greater, sometimes a lesser, number of times. On the theatres, in the earliest ages of the common- wealth, tney were simple and little more than confused shouts. Afterwards they became a sort of regular concerts. That mentioned by Phjedrus which was made for

Augustus, and proved the occasion of a pleasant mistake of a flute-player called Princeps, shows that musical acclamations were in use in that emperor's reign. Nero, pas- sionately fond of music, took special care to improve and perfect the music of acclamations. When he played on the theatre, at the signal by

clapping, 5000 soldiers began to chant his praise, which the spectators were obliged to re- peat. The whole was conducted by a music-master. The honour of acclamations was chiefly rendered to emperors, their children and favourites ; and to the magistrates who presided at the games. Persons of distinguished merit also sometimes received them, of which Quin- tilian gives us instances in Cato and Virgil. The most usual forms were, Feliciter ! Longi- orem vitam ! Annas felices ! The actors them- selves, and they who gained the prizes in the games of the circus, were not excluded the honour of acclamations.

Military acclamations were those of the sol- diers and the people in the time of triumph. The victorious army accompanied the general to the capital ; and, among the verses they sung in his praise, frequently repeated lo TRIUMPHE, which the people answered in the same strain. They also gave their general the title of Impera- tor after some notable victory ; a title which he only kept till his triumph was over. Those of the senate were usually given after a report made by some senator, to which the rest expressed their consent crying OMNES! OMNES! or else, ˆF.QUUM EST ! JUSTUM EST ! Sometimes they began with acclamations, and sometimes ended with them without any debate. It was in this manner that all the elections and proclamations of emperors were conducted ; something of which practice is still retained in the Vivat Rex! Vive le Roi ! and Long live the King ! of mo- dern times.

The Greeks borrowed the custom of receiving their emperors in the public places from the Romans. Their form was Aya0[illegible]j rv\i] ! good luck. Luitprand relates, that at a procession where he was present, they sung to the emperor Nicephorus, iro\a tri) \ that is, many years. Plutarch mentions an acclamation so loud, upon occasion of Flaminius's restoring liberty to Greece, that the very birds fell from heaven with the shout. The Turks practise something like this on the sight of their emperors and grand viziers to this day. The form among the Jews, was, hosannah.

As for the acclamations wherewith authors, poets, &c. were received, who recited their works in public, among the Romans ; the assemblies

were held with great parade in the capitol, tem- ples, the Athenaeum, or the houses of great men. Invitations were sent every where, to get the greater appearance. Men of fortune, who pre- tended to wit, kept able applauders in their ser- vice, and lent them to their friends. Others endeavoured to gain them by presents and treats. Philostratus mentions one, who lent money to men of letters, and forgave the interest to such as applauded his exercises. These acclamations were conducted much after the same manner as those on the theatre ; but, they were suited both to the subject and to the person. There were particular ones for philosophers, for orators, fof historians, and for poets. One of the most usual forms was Sophos, repeated three times. Martia. comprehends several other forms in this verse ###.

Graviter! Cito! Nequiter! Euge! Beate ‘

Acclamations were, in process of time, received

into the acts of councils, and the ordinary assem- blies of the church. The bishops, it is clear, were long elected by acclamation. The people expressed their approbation of the preacher va- riously, calling him, Orthodox ! Third Apostle ! &c. These acclamations being sometimes car- ried to excess, and often misplaced, were fre- quently prohibited by the ancient doctors, and at length abrogated ; though they appear to have been in some use as late as the time of St. Bernard.

ACCLAMATION MEDALS, among antiquaries, such as represent the people expressing their joy .n the posture of acclamation.

ACCLIV’ITY, Ad : clivus, to the hill-top. The slope of the hill reckoned upwards, opposed to the declivity. Figuratively, that which takes an ascending course.

The men (of tbe Alps,) leaving their wives and younger children below, do (not without some diffi- culty) clamber up the acclivities, dragging their kine with them ; where they feed them, and milk them, and make butter and cheese, and do all the dairy- work. Ray on the Creation,

ACCLIVITY, in fortification, the talus of a rampart ; or, more strictly, the steepness or slope of any work reckoned upwards. James.

ACCLIVUS, in anatomy, a muscle, otherwise called obliquus ascendens abdominis.

ACCLOY' or CLOY. See CLOY.

But better is, that a wights long rest,

Than entermete him of soch doing,

Of which he neither rede can nor sing,

And who so it doth, full foule him self acloyeth,

For office, uncommitted, oft anoyeth.

Chaucer, fol. 247, col. 3. As then, no winde at all there blew, No swelling cloude accloid the aire ; The skie, like grasse (glasse) of watchet hew, Reflected Phosbus golden hair.

Spenser's Elegy upon Astrophile. At the well-head the purest streams arise : 3ut mucky filth his branching arms annoys, And with uncomely weeds the gentle wave accloyt.

Faerie Queene. The mouldy moss which thee accloyeth.

Spent. Shep. Kal. Feb. 135.

ACCLOYED, among farriers, a horse's foot pricked in shoeing.
ACCOIL', or COIL. See COIL.

About the cauldron many cooks accoil'd, With hooks and ladles, as need did require ; The while the viands in the vessel boil'd, They did about their business sweat, and sorely toil'd.

Faerie Queene.

ACCOLA, in antiquities, a person who lived near a place ; in distinction from incola, the in- habitant of a place. Thus the verse : Accola non propriam, propriam colit incola terrain.

ACCOLADE, Lat. from ad, to, and collum, the neck. A ceremony used in the conferring of knighthood. Some suppose it to have been the embrace, or kiss, which princes anciently gave the new knight, as a token of their affestion ; q. d. a clasping, or taking round the neck. An ingenious author will rather have it to be a blow en the neck ; in imitation of that practised among the Romans, in the manumission of their slaves,

when it is known a blow was given. John of Salisbury assures us, the blow was used among the Normans ; and that William the Conqueror, thus conferred the honour of knighthood on his son Henry. At first, it was given with the naked fist, but was afterwards changed into a stroke with the flat of the sword, on the shoulder of the knight.

ACCOLADE, or ACCOLE'E, is also used in he- raldry, to express the position of two things joined together, as two shields divided at the flanks ; or lions, dogs, and other animals, which have collars or crowns about their necks. English heralds ordinarily say, collared, or gorged with an open crown, instead of accolee. Others use the term accole'e, when two keys, battoons, maces, swords, &c. are saltier-wise, behind the shields.

ACCOLADE, in music, a line drawn perpen- dicularly next the margin, by which all the dif- ferent parts of a composition are joined together in score. See Music.

ACCOLTI, (Bernardo,) secretary to the re- public of Florence, surnamed L'Unico, or the Nonsuch, from the great extent of his genius and learning, and the excellency of his poetic vein ; which not only gained him a seat among the academicians of the court of Urbino, but made Pope Leo X. in 1520, create him prince of the state of Nepi. He wrote a comedy, Vir- ginie, and other beautiful poems, which were pi in ted at Venice, in 1519. His father was an eminent civilian of Arezza, who wrote De Bello n Christianis contra Barbaros gesto, &c. from which Tasso is said to have derived the plot of his Jerusalem Delivered.

ACCOMACK, a county of Virginia, North America, on the Chesapeake Bay, bounded N. by Maryland, and E. by the Atlantic. It contains a population of about 14,000.

ACCOM'MODATE, v. & adj. *| Ad : com-

ACCOM'MODATELY, | modum, to

ACCOM'MODATENESS, ˆ>the ad-vant-

ACCOMMODA'TION, | age; to as-

ACCOM'MODATOR. J sist, oblige,

supply, reconcile, adapt, adjust, or lend. The

indefinite use of this word is thus ridiculed by

Shakspeare.

Accommodated, that is, when a man is, as they say, accommodated ; or when a man is being, whereby he may be thought to be accommodated ; which is an excellent thing. 2 Hen. IV. act iii. sc. 2.

But sithens it, [sc. speaking in praise of the dead] hath bene approued and allowed of a long tyme, that it ought to be this done, it becommeth me obeyuje to the lawe, to accommodate and apply my spekynje to the opynyo and wille of every one of you, the most that I maye.

Thucidides, by Tho. Nicollt, Lon. 1550.

Will you present and accommodate it to the gentleman.

Poetaster, iii. 4.

In these cases we examine the why, the what, and the how, of things ; and propose means, accommodate to the end. L'Estrange.

God did not primarily intend to appoint this way of worship ; and to impose it upon them as that, which was most proper and agreeable to him ; but that he condescended to it, as most accommodate to their pre- sent state and inclination. Tillot.

Heaven ! speed the canvass, gallantly unfurl'd,

To furnish and accommodate a world ;

To give the pole the produce of the sun,

And knit th' unsocial climates into one.

Camper's Charity.

ACCOMMODATION, the application of one thing, by analogy, to another: in theology, it relates chiefly to the application of prophecy : thus, a prophecy is said to be fulfilled properly, when a thing foretold

comes to pass; and by way of accommodation, when an event happens to any other place or people, in a similar way. Some writers have maintained that circumcision, the tabernacle, brazen serpent, &c. were origi- nally of Egyptian use, and only accommodated by Moses to the purposes of Judaism. It ap- pears much more probable, however, that the neighbouring nations borrowed such customs from the Jews.

The principle of an accommodated interpre- tation of prophecy, was strenuously opposed by Dr. Owen, who maintained that there could be only a directly literal, or a typical signification. It seems indeed, liable to great abuse. See MARSH'S Michaelis, v. i. p. 200, and Notes p. 470 ××× 479.

ACCOM'PANY,r.) See COMPANY. To

ACCOM'PANIMENT. $ go or come with; to as- sociate with, or attend upon in going or coming. Go visit her, in her chaste bower of rest, Accompany'd with angel-like delights.

Spenser's Sonnet iii.

So shall mine eyes in payne accompany my hart, That were the guides, that did it lead of loue to feel the smart.

Wyatt's Complaint of the Absence of his Loue.

No man in effect doth accompany with others, but he learneth, ere he is aware, some gesture, voice, or fashion. Bacon's Nat. Hist.

Nobility is to be considered only as an imaginary distinction, unless accompanied with the practice of those generous virtues by which it ought to be ob- tained. Tatler.

By our traffic into foreign countries, though we many times bring home light and frivolous toys, yet they are often accompanied with gold and silver, both in coin and bullion. Spelman'i Dialogue concerning the Coin of the Kingdom.

The great business of the senses being to make us take notice of what hurts or advantages the body, it is wisely ordered by nature, that pain should accom- pany the reception of several ideas. Locke.

As folly is usually accompanied with perverseness, ×××o it is here. Swift's Short View of Ireland.

The Persian dames

So were accustom'd, all the eastern fair, In sumptuous cars, accompany' A his march ; A beauteous train by Arvana grac'd.

Glover's Leonidas, b. viii.

All pretences of conscience are vehemently to be suspected, which are accompanied with turbulent pas- sion, and a furious zeal. Tillotson's Sermons.

In a mind truly virtuous, the scorn of vice is always accompanied with the pity of it.

Spectator, No. 79.

ACCOMPANIMENT, the adding of one thing to another by way of ornament.

ACCOMPANIMENT, in heraldry, any thing add- ed to a shield by way of ornament ; as the belt, mantling, supporters, &c. It is applied to se- veral bearings about a principal one; as a saltier, bend, fess, cheveron, &c.

ACCOMPANIMENT, in music, the instrumental parts which accompany a voice. The ancients had their accompaniments on the theatre ; they had even different kinds of instruments to ac- company the chorus, from those which accom- panied the actors in the recitation. It is generally supposed, that their accompaniments went no farther than the playing in octave, or in antiphony to the voice. Modern organists apply it to those pipes which they occasionally touch to accompany the treble. See Music.

ACCOMPANIMENT, in painting, denotes such objects as are added, either by way of ornament, or probability ; as dogs, guns, game, &c. in a hunting piece.

ACCOM'PLICE, Ad : complex, icis,homplico. to fold ; complice, Fr. knit together ; one who is connected with another in a discreditable under- taking; a complice is used by our elder writers. Hir complicis al samyn in this nede; Stert to thare lady in affray and drede ; And sone they claucht and lappit in thare armes, This Quene that founderant was for hir smert hannes. Douglas, b. xi. p. 394.

If a tongue would be talking, without a mouth j what could it have done, when it had all its organs of speech, and accomplices of sound about it ?

Addison’s Spectator, No. 247.

The prince who refuses to be judge, instructs his people to consider him as the accomplice of his minis, ters. Gibbon’s Roman Empire,

ACCOMPLICE. The council of Sens, and several other synodical statutes, expressly pro- hibit the revealing accomplices. See ACCESSARY. The law of Scotland, in regard to accomplices, is exactly as there stated. ACCOM’PLISH, v. -} Ad: compleo, to ACCOMPLISHED, > fill up to ; accomplir,

ACCOMPLISHMENT, j to fill up the measure; to fulfil, complete, finish ; to adorn ; to succeed in, or to obtain an object.

To whom our general ancestor repli’d,

” Daughter of God and man, acˆomplish’d Eve.”

Milton’s Par. Lost, b. iv_ 111 make a proof, how I advance in My new accomplishment of Dancing.

Churchill’s Ghost, b. iii.

By whatever art you may at first attract the at- tention, you can hold the esteem, and secure the hearts of others, only by amiable dispositions, and the accomplishments of the mind. Blair.

From the tents,

The armourers accomplishing the knights, With busy hammers closing rivets up, Give dreadful note of preparation.

Shakspeare’s Henry V.

So shall my word be that goeth forth out of my mouth ; it shall not return unto me void, but it shall accomplish that which I please. Isaiah Iv. 11.

ACCOMPT’, n. -N Ad: con: puto.

ACCOUNT’, v. & n. i Compter, anciently

ACCOUNTABLE, \Accompter; Fr. to

ACCOUNT’ANT, n. &. adj. i reckon up with. ??? ACCOUNTING. J To cast up all the

parts into a sum, or amount ; to number or cal- culate ; to register facts relating to money. To notice, observe, think, consider, generally with regard and approbation ; to explain, or unfold, to assign the cause, reason, or motive. ††† The

noun account often expresses advantage, or profit ; when otherwise it is qualified by an adjective.

Men pat ben ryche,

Aren a countable to Crist, and to the kyng of hevern. Vision of Piers Plouhman, repr. 1813, p. 218. Liste and I salle rede the parcelles what amountes, If any man in dede wille keste in accountes.

R. Brurme, p. 135.

For this cause chiefly we thought it good to yelde up an accoumpte of our faith in writing.

Jewefs Defence.

At many times I brought in my account*, Laid them before you : you would throw them off ; And say, you found them in mine honesty.

Shakspeare's Timon.

Therefore is the kingdom of heaven likened unto a certain king, which would take account of his ser- vants ; and, when he had begun to reckon, one was brought unto him, which owed him ten thousand ta- lents. Matt. xix. 23, 24. The soul may have time to call itself to a just accompt of all things past ; by means whereof re- pentance is perfected. Hooker, b. v. sec. 46. To whom thou much dost owe, thou much must pay ; Think on the debt against th' accompting day.

Sir J. Denham.

The opinion of more worlds than one has in ancient times been accounted a heresy.

Bp. Wilkins's Mat. and Pltil. Works.

The true ground of morality can only be the will

and law of a God, who sees men in the dark, has in

his hands rewards and punishments, and power

enough to call to account the proudest offender. Locke.

There is such a peculiarity in Homer's manner of apostrophizing Eumaeus : it is generally applied, by that poet, only to men of account and distinction.

Pope's Odyssey ; notes.

We would establish our souls in such a solid and substantial virtue, as will turn to account in that great day, when it must stand the test of infinite wisdom and justice. Add. Spect. No. 399.

I am therefore much delighted with reading the accounts of savage nations, and in contemplating those virtues which are wild and uncultivated ; to see courage exerting itself in fierceness, resolution in obstinacy, wisdom in cunning, patience in sullenness and despair. Spectator.

We are held

Accountable ; and God, some future day,

Will reckon with us roundly for th' abuse

Of what he deems no mean or trivial trust.

Cowper's Task, b. 6.

ACCOUNT, in chronology, is taken some- times for the computation of time : thus, we say, the Julian Account, the Gregorian Account, &c. in which sense it is equivalent to style.

ACCOUNT, current, general, open, personal, real, imaginary, &c. See BOOK-KEEPING.

ACCOUNTANT-GENERAL, in law, an officer in the court of Chancery, appointed by act of par- liament to receive all monies lodged in the court, instead of the masters, and convey the same to the bank of England for security.

ACCOUNTˆ or ACCOMPT BOOKS, in commerce, is used to express the

books which merchants, traders, bankers, &c. use for recording their transactions in business. See BOOK-KEEPING.

ACCOUNTS, CHAMBER of, in the late French policy, was a sovereign court of great antiquity, which took cognizance of, and registered the accounts of the king's revenue. It was nearly the same with the English Court of Exchequer.

Ad : cor. to the heart. Accorder, Fr. Some de- duce it from chorda, a string, when it refers to harmony, and from cor when unity is intended. Possibly both words

ACCORD', v. & n.

ACCORD'ABLE,

ACCORD'ANCE,

AOCORD'ANCY,

ACCORD'ANT,

ACCORD'ING, adj.

ACCORDINGLY. J

may have the same origin. To be of one heart, to agree or act cordially, to concur, to unite, to suit each other, to conform, to harmonize, to grant a request.

For in the dai suynge he apperide to hem chydynge, and he accordide hem in pees and seide men ghe ben britheren, whi noyen ghe ech othire ?

Wiclif. Dedis, chap. vii.

But natheles while I have time and space,

Or that I forther in this tale pace ;

Me thinketh it accordant to reason

To tellen you alle the condition,

Of eche of hem so as it semed me,

And whiche they weren and of what degre,

And eke in what araie that they were inne,

And at a knight than wol I firste beginne.

Prologue of the Canterbury Tales. At last such grace I found, and means I wrought, That I that lady to my spouse had won ;

Accord of friends, consent of parents sought, Affiance made, my happiness begun.

Spencer's Faerie Queene.

Things are often spoke, and seldom meant : But (that my heart accordeth with my tongue, Seeing the deed is meritorious, And to preserve my sovereign from his foe) Say but the word, and I will be his priest.

Shakspeare's Henry VI.

Sirrah, thou'rt said to have a stubborn soul, That apprehends no further than this world ; And squar'st thy life accordingly.

Shakspeare's Measure for Measure.

As the actions of men are of sundry distinct kinds, so the laws thereof must accordingly be distinguished.

Hooker, b. i.

There was no means for him to satisfy all obliga- tions to God and man : but to offer himself for a mediator of an accord and peace between them.

Bacon's Hen. VI f.

Men would not rest upon bare contracts, without reducing the debt into a speciality ; which created much certainty, and accorded many suits.

Sir M. Hale.

Several of the main parts of Moses's history, as concerning the flood, and the first fathers of the several nations of the world, do very well accord with the most ancient accounts of profane history.

TiUotson, Serm. i.

If both are satisfyM with this accord, Swear by the laws of knighthood on my sword.

Dryden's Fables.

Jarring int'rests of themselves create Th' according music of a well-mixt state. Pope.

Her hands accorded the lute's musick to the voice ; her paining heart danced to the musick. Sidn. b. ii.

The lights and shades, whose well accorded strife Gives all the strength and colour of our life.

Pope's Epist.

ACCORD, in common law, an agreement be- tween two or more persons, to give and accept satisfaction for an offence or trespass committed, which becomes a bar to any suit.

ACCORD, in music, the production, mixture, and harmonious relation of two or more sounds It is synonymous with concord, or harmony.

ACCOST,orl) Ad: costa. To the rib, the simple office of love, but in all the accotumnt/n, ACCOAST',] > side, or coast ; to approach complement, and ceremony of it.

ACCOST'ABLE, J the side in order to gain the ear ; to speak to ; to commence a discourse with ; in obsolete sense, to sail coast wise. Ne is there hauke which mantleth her on pearch, Whether high towering or accoasting low, But I the measure of her flight doe search, And all her pray, and all her diet know.

Spenser's Faerie Queene, b. vi. can. ii.

Lapland hath since been often surrounded, (so much as accosts the sea) by the English.

Fuller's Worthies, in Derbyshire.

The French are a free, debonnair, acc6stable peo- ple ; both men and women. Howell's Letters.

At length, collecting all his serpent wiles, With soothing words renew'd him thus accosts.

Farad. Reg.

I first accosted him : I su'd, I sought ; And, with a loving force, to Pheneus brought.

Dryden's JEneid.

They were both indubitable, strong, and high-

Shakspeare's Merry Wives of Windsor. Is it for this, they study? to grow pale, And miss the pleasures of a glorious meal ? For this, in rags accoutred, are they seen, And made the May-game of the public spleen.

Dryden,

Christianity is lost among them, in the trappings and accoutrements of it ; with which, instead of adorn- ing religion, they have strangely disguised it ; and quite stifled it, in the crowd of external rites and ceremonies. Tillotson, Sermon xxviii.

I have seen the pope officiate at St. Peter's ; where, for two hours together, he was busied in putting on or off his different accoutrements, according to the different parts he was to act in them.

Addison, Spectator, No. 201. How gay with all th' accoutrements of war, The Britons come, with gold well fraught, they come !

Phil.

ACCREDIT, v. Ad: credo. Fr. Accrediter,

minded men, yet of sweet and accostable nature, to trust to ; to put or get into credit, as the result almost equally delighting in the press and affluence of confidence or esteem.

Wotton.

of dependents and suitors.

ACCOSTED, in heraldry, of ac, and costa, a rib. Side by side, as in the

phrase, ‘ Chevron between six rams accosted.’ See HERALDRY, Plate I.

ACCOUCHEMENT, in medicine, or rather in modern Gallicised delicacy, the delivery or lying-in of a woman in child-bed. Hence the practitioner is called the accoucheur.

ACCOUP’LE, or COUPLE. See COUPLE.

The yong galands of Fraunce had coates garded with one colour, cut in ten or twelve parties verie richely to beholde : and so all the Englishe men ac-

I am better pleased indeed, that he (the Analytical Reviewer,) censures some things, than I should have been with unmixed commendation ; for his censure will (to use the new diplomatic term) ac- credit his praises. C< >urper’s Letters.

ACCRES’CENT, v -) Ad : cresco, to grow

ACCRE’TION, > to ; growing to ; an out-

ACCRE’TIVE.) ward addition by ad- hesion.

Infants support abstinence worst, from the quantity of aliment consumed in accretion.

Arbuthnot on Aliments.

If the motion be very slow, we perceive it not : we

coupled themselues with the French men louingly have no sense of the accretive motion of plants and togather, and so roade to London. animals ; and the sly shadow steals away upon the

Grafton repr. 1809. vol. ii. p. 296. dial ; and the quickest eye can discover no more, He sent a solemn embassage, to treat a peace and but that it is gone. Glanville’s Scepsis.

league with the king ; decoupling it with an article in the nature of a request. Bacon’s Henry VII.

ACCOUR’AGE. See ENCOURAGE. Aftir two yeres Philometer obtayned helpe of the Romas to recouer his lost cities, and thus accouraged of the Romans, he expelled his auuncles syriake

hoste and armye.

ACCROACH’ v. See ENCROACH.

In semblant (as men sayne,) is gile, And that was,proued thilke while; The ship whiche wende his helpe accroche, Drofe all to peces on the rochej Gotrer.

ACCROCHE, in heraldry, Fr. accrocher.

Exposicion of Daniel, by George Joye, p. 198. denotes a thing being hooked into another.

That froward pair she ever would assuage, When they would strive due reason to exceed ;

But that same froward twain would accourage, And of her plenty add unto her need.

Faerie Queene, b. ii. c. 2.

ACCOUTRE’,^ ❓❓❓> Accoutrer: Fr. To

ACCOU’TREMENT. \ provide with suitable arms; to equip ; to appoint, primarily in a mili- tary sense, then generally.

ORLA. What were his marks?

Ros. A lean cheek, which you have not; a blue eye, which you have not; an unquestionable spirit,

ACCROCHING, in old law, the act of en- croaching or usurping on another’s right ; and, particularly the attempt to exercise royal power, which as a very vague charge, led to a multitude of constructive treasons.

ACCRUE’, or ❓❓❓) Fr. accroitrc, p. p. accru ;

ACCREW’, v. >to grow larger; to increase;

ACCRU’MENT. j to augment; to obtain bene- fit ; to derive advantage.

Do you not feel your torments to accrew ?

Spens. Ruines of Rome, 207.

The yearly benefit that, of these his works, ac-

wtnch you have not ; a beard neglected, which you crueth to her

majesty, amounteth to one thousand

have not ; but I pardon you for that ; for simply pounds. Carew's Survey.

j,our having no beard is a younger brother's revenue; The great profits which have accrued to the duke

then your hose should be ungartered ; your bonnet of Florence from his free port, have set several of

unhanded ; your sleeve, your shoe untied ; and every the states of Italy on the same project,

thing about you demonstrating a careless desolation ; Addison on Italy.

but you are no such man, you are rather poitt device From which compact there .arising an obligation

in your accoutrements, as loving yourself, than seem- upon every one, so to convey his meaning; there

►►ng the lover of any other. accrues also a right to every one, by the same signs,

Shakspeare's As Yen, Like it. to judge of the sense or meaning of the person, so

I profess requital to a hair's breadth, no! only in obliged to express himself. South's Sermont.

ACC 85

ACCUSATION, J Ad: cumbo, to lie

ACCUM'BENT. J down to ; referring to

the custom of reclining at table, as practised by the ancients.

It will appear, that occupation, or lying down at meals, was a gesture used by very many nations.

Brown's Vulgar Errours.

" Now there was leaning on Jesus' bosom one of his disciples whom Jesus loved ►►►" which gesture will not so well agree unto position

of sitting, but is natu- rall, and cannot be avoided in the laws of accubation.

Idem.

ACCUBATION, in antiquity, was the table posture of the Greeks and Romans ; between sitting and lying down to meat. The Greeks introduced this posture : having in their turn borrowed it from the eastern nations ; for we find Homer representing their primitive heroes seated round the wall, with a table before each, on which his food was placed. The Romans, du- ring the frugal ages of the republic, were strangers to it ; but as luxury obtained, this posture was adopted, at least by the men ; for as to women, it was long reputed a,n indecency for them to use it; though afterwards, this too was over- looked. But children did not lie down, nor servants, nor soldiers, nor persons of meaner condition. The Roman manner of disposing themselves at table, was this : a low round table was placed in the coenaculum, or dining-room, and about this, usually three, sometimes only two beds, or couches; according to the number of which, it was called biclinium, or triclinium. These were covered with a sort of bed- cloaths, richer or plainer, according to the quality of the person, and furnished with quilts and pillows, that the guests might lie the more commodiously. There were ordinarily three persons on each bed ; to crowd more, was esteemed sordid. In eating they lay down on their left sides, with their heads resting on their elbows. The first lay at the head of the bed, with his feet extended behind the back of the second ; the second lay with the back of his head towards the navel of the first, only separated by a pillow, his feet behind the back of the third ; and so of the third, or fourth. The middle place was esteemed the most honourable. Before they came to table, they changed their cloaths, putting on what they called ctenatoria vestis, the dining-garment, and pulled off their shoes, to prevent soiling the bed.

Horace thus describes the order of sitting : ???

Summus ego & prope me ViscusThurinas & infra, Si memini, Varius : cum Servilio Balatrone Vibidius, quos Mecsnas adduxerat umbras. Nomentanus erat super ipsum, Porcius infra.

Lib. ii. Sat. 8.

Guests, from the period of the heroic ages, were arranged at table according to their rank ; so that persons of distinction had the uppermost seats, and subsequently a nomendator was em- ployed at public entertainments, to call every guest by name to his proper place.

The heroes seem to have been ranged in long ranks, and the chief personages at the top of each row on bolh sides of the table.

In Persia, the middle place was accounted the most honourable, and always given to the king ;

in Greece, the nearest to the table ; at Rome, the last or uppermost part of the middle bed, or couch, was the place of greatest distinction.

Among the Jews, the Pharisees and others, loved the uppermost rooms at feasts. (Matthew xxiii. 6.) Plutarch records a singular instance of this feeling, which illustrates our Saviour's reproof. At a splendid entertainment given by Timon, in which every one was desired to re-cline in whatever place he pleased, a certain person came in a very elegant dress and attended by a numerous retinue ; but no sooner had he approached the door, and taken a view of the guests, who had already arranged themselves in the room, than he suddenly withdrew ; and being followed by several of the company, who eagerly inquired the cause of this proceeding, he re- marked, " there was no fit place left for him." Lying on one's bosom, a phrase of St. John's Gospel, respecting the posture of that beloved disciple, is also illustrated by the above customs ACCUM'BER. See ENCUMBER. He sette not his benefice to hire, And lette his shepe acombred in the mire.

Chaucer's Prol. to the Personnes Tale. Alas, the clear christall, the bright transplendant

glasse, Doth not bewray the colours hid whictt vnderneath

it hase ; As doth th' accumbred sprite the thoughtfull* throues

discouer, Of feares del-ite of feruent loue that in hartes we

couer. Wyatt.

ACCUM'ULATE, \ Ad : cumulus, a heap ; ACCUMULATION, f to heap, or place toge ACCUM'ULATI VE, t ther, but not to unite ; to ACCUMULATOR. ./pile up; to collect; to increase.

By thys meanes and pollecy, thys Alexander gat accumulated, and heaped vp a great summe of money.

Hall.

The greatness of sins is, in most instances, by ex- tension and accumulation.

Taylor's Polemical Discourses.

Injuries may fall upon the passive man ; yet, without revenge, there would be no broils and quarrels, the great accumulators and multipliers of injuries. Decay of Piety.

Great Strafford ! worthy of that name, though all Of thee should be forgotten, but thy fall, Crush'd by imaginary treason's weight, Which too much courage did accumulate. Denham, on the Earl of Straffvrd's Trial and Death. The miser who accumulates his annual income, and lends it out at interest, has really spent it in the gra- tification of his avarice. Hume's Essays.

AC'CURACY, \ Ad : cura. Care, atten AC'CURATE, f tion, freedom from error, AC'CURATELY, ˆexactness, nicety, correct-

Ac'CURATENESS. J nCSS.

Those conceive the celestial bodies have more accurate influences upon these things below, than indeed they have but in gross. Bacon.

The sine of incidence is either accurately, or very nearly, in a given ratio to the sine of refraction.

Newton.

That all these distances, motions, and quantities of matter, should be so accurately and harmoniously adjusted in this ###great variety of our system, is above tlu fortuitous Lints of blind material causes ; aiiu

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must certainly flow from that eternal fountain of wisdom. Benllcy.

No man living has made more accurate trials than Rheaumure, that brightest ornament of France.

Col-son.

ACCURSE'. See CURSE.

Ilii myjte acors be fole quene, fiat Seynt Edward slou. R. Gloucester, p. 296.

Drede ys at be laste,

Lest Crist in hus constorie of jow a corse menye. Vision of Piers Plouhman, repr. 1813, p. 7.

But whan he sawe y' he myght not reconsyle them by fayre meanys, he than vsed copulsares, and de- noused them accursed, but if they restored the goodes of the Churche by a serteyn day. Fabyan, p. 275.

F. I am accurst to rob in that theefe's company ; that rascall hath remoued my horse, and tied him I know not where.

Shakspeare, 1 Hen. IV, p. 54, act ii. sc. 2.

The chief part of the misery of wicked men, and those accursed spirits, the devils, is this ; that they are of a disposition contrary to God. Tillot.

ACCURSED, in the Jewish idiom, was syno- nymous with hanged, or crucified, or dying on a tree. Deut. xxi. 22, 23; which has been thought to explain Rom. ix. 3, where the apostle Paul wishes himself accureed after the manner of Christ, i. e. crucified, if happily he might by such a death save his countrymen. Compare 2 Tim. i. 3.

ACCURSIUS, a law-professor in the 12th century, born in Florence. His authority was for some time so great, that he was called the Idol of the Lawyers. He left a valuable digest of the decisions of the Old Jurists, published at Lyons, in 1589, in 6 vols. folio.

ACCURSIUS, (Mariangelus,) a famous critic of the 16th century, born at Aquila, in the king- dom of Naples. His Diatribes, printed at Rome, in folio, in 1524, on Ovid and Solinus, are a proof of his abilities. In his edition of Ammianus Marcellinus, there are five books more than in any of the preceding ones : and he affirms he had corrected 5000 errors in that his- torian. His predominant passion was collating old manuscripts ; yet he made Latin and Italian verses; was complete master of the French, German, and Spanish tongues ; and understood optics and music.

ACCUSE', v.

Ad : causa, accuso. To charge a fault upon a person, 'either in a court of law or l otherwise.

ACCU'SER, ACCUSA'BLE, ACCUSA'TION, | ACCUSATIVE, ACCUSATORY."

O cruell day, accuser of the ioy

That night and loue haue stole and fast ywrien,

Accursed be thy comming into Troy.

Chaucer, Third booke of Troilus, fol. 174, col. 2.

Therfore Pilat wente out without forth to hem,

and seide, what accusyng bringen ghe aghens this

man ? Thei answerden and seiden to him, If this were

not a mysdoere we hadden not bitaken him to thee.

Wiclif. Jon. chap, xviii.

To which I answeride, that it is not custom to Romayns to dampne ony man bifore that he that is accused haue his accuteris present, and take place of defending to putte awei the crimes that ben putt aghens him. Wiclif, Dedis, chap. 25.

And now they beyng bent of bothe sydes, with

burnynge hartes they prepare theyr accusements they runne to y⸗⸗ iudges.

Erasmus, Para, of N. T. by P. UdaU,

Mat. chap. v. p. 22, col. 2.

MOWB. Let not my. cold words here accuse my

zeal,

‘Tis not the tryal of a woman’s war, The bitter clamour of two eager tongues, Can arbitrate this cause betwixt us twain ; The blood is hot that must be cool’d for this.

Shakspeare’s King Richard II. And dogged Yorke, that reaches at the moone, Whose ouer-weening arme I haue pluckt back, By false accuse doth leuell at my. life.

Shakspeare, 2 H. VI. p. 131, act iii. sc. 1.

You read

These accusations ; and these grievous crimes, Committed by your person and your followers.

Shakspeare.

Thus they in mutual accusations spent The fruitless hours, but neither self-condemning ; And of their vain contest, appear’d no end.

Milton.

Innocency is no shelter from ill tongues ; malice never regards how true any accusation is, but how spiteful. Hall’s Contemplations.

All accusation, in the very nature of the thing, still supposing, and being founded upon some law : for, where there is no law, there can be no trans- gression ; and, where there can be no transgression, I am sure there ought to be no accusation.

South.

Never send up a leg of a fowl at supper, while there is a cat or dog in the house, that can be ac- cused for running away with it : but, if there hap- pen to be neither, you must lay it upon the rats, or a strange

greyhound. Swift.

ACCUSATIO, in medicine. See INDICATIO.

ACCUSATION, Lat. from ad, to, and causare, to plead. In law, the charging any person with a criminal action, that exposes him to public punishment. Writers on politics treat of the benefits and the inconveniences of accusations. Various arguments are alleged, both for and against, the public accusation of great men. Nothing, according to Machiavel, tends more to the preservation of the state. This, accordingly, was strictly observed by the Romans, in the in- stance of Camillus, accused of corruption by Manlius Capitolinus, &c. Accusations, however, are not more beneficial than calumnies are per- nicious ; which is also confirmed by the practice of the Romans. Manlius, not being able to make good his charge against Camillus, was cast into prison. ??? By the Roman law, there was no public accuser for public crimes ; every private person might accuse another of them, and prose- cute to punishment, or absolution. Cato, the most innocent person of his age, had been ac- cused forty-two times, and as often absolved. But the accusation of private crimes was never received, but from the mouths of those who were immediately interested in them. None (e. g.) but the husband could accuse his wife of adultery.

The ancient Roman lawyers distinguish be- tween postulatio, delatio, and accusatio. For, first, leave was desired to bring a charge against one, which was called postulare ; then he against whom the charge was laid, was brought before the judge ; which was called det'ui re or dominis

delatio: lastly, the charge was drawn up and presented, which was" properly the accusation. The accusation commenced, according to Paedi- anus, when the reus, or party charged, being interrogated, denied he was guilty of the crime, and subscribed his name to the delatio made by his opponent.

13y the laws of the Inquisition, a person is necessitated to accuse himself of whatever crime may be imputed to him. On the slightest report that a person is a heretic, or even that he is sus- pected of heresy, an inquisitor will receive the denunciation of a stranger, who generally abjures the office of accuser, because if he should fail in his

proof, he is exposed to the law of retaliation. The unhappy culprit is now visited with all the terrors of the institution, to induce him to self- crimination, which has urged the confession of whatever has been imputed, and even the vo- luntaiy invention of crimes that had no existence. In England, by Magna Charta, no man shall be imprisoned, or condemned on any ac- cusation, without trial by his peers, or the law; none shall be vexed with any accusation, but according to the law of the land ; and, no man may be molested by petition to the king, &c. unless it be by indictment, or presentment of lawful men, or by process at common law. The office of attorney-general, and ex-ofncio in- formations, constitute the only exception to these noble provisions. Promoters of accusations are to find surety to pursue them ; and, if they do not make them good, shall pay damages to the party accused, and also a fine to the king. No person is obliged to answer upon oath to a question whereby he may accuse himself of any crime. But the institution of grand juries is perhaps, our best practical barrier against false accusa- tions.

ACCUSATIVE, in Latin and Greek grammar, the fourth case of nouns, pronouns, and partici- ples ; so named, probably, from its being used, when an action passes a causa ad aliquem vel allquid, from some active cause, or agent, to some person, or thing ; others derive it at once from accusamus, because we predicate something of some one. See Varro de Ling. Lat. vii. ACCUSTOM,

ACCUS'TOMABLE, ˆ Accoutumer, Fr. See ACCUS'TOMABLY, f CUSTOM. To repeat fre- ACCUS'TOMANCE, {quently the same act. ACCUS'TOMARILY, \ ACCUS'TOMARY.

The queene than askis of gold, for the nanis, Ane wechly cuwp, set all with precius stanis Bad fill it full of the richt Hypocras, Into the quhilk grete Belas accustumit was To drink vmquhile, and fra him euery king Discend of his geneology and ofsprying.

Douglas, b. i.

And then as he (Henry V.) was ever accustomed to do, he went on foote to the chief churche in the toune, and rendred to God his most heartie thankes for his prosperous successe and fortunate chauce.

HaU.

After which murder fynyshed, ye sayde syr Rafe, ###with his adherentys fled unto ye place of ye Erie of Artoys, where the Duke of Burgoyne vsyd accustom ably to resorte. Fabyun. I shall always fear

that he who accustoms himself

to fraud in little things, wants only opportunity in greater. Adventurer, No. 119.

How shall we breathe in other air Less pure, accustotn'd to immortal fruits. Milton.

It Las been some advantage, to accustom one's self to books of the same edition.

Watts's Imp. of the Mind.

Air and exercise are necessary to all men, but par- ticularly so to the man whose mind labours, and to him who has been all his life accustomed to much of both, they are necessary in the extreme.

Cowper's Letter*.

ACE', n. ⬜⬜c, Gr. as Fr. one, an integer, unity. The side of a die, or a card marked with one point.

A small quantity; a particle; an atom.

OEM. No die, but an ace for him, for he is but one.

Lis. Lesse than an ace, man ; for he is dead, he is nothing. Shakspeare, Mid. Night's Dream, p. 161, act v. sc. 1.

GET. Then will I,

(For wise men must be had to prop the republick) Not bate ye a single ace of a sound senator.

Beaumont and Fletcher's Prophetess act i. sc. 3.

When lots are shuffled together in a lap, urn, or pitcher ; or if a man blindfold casts a die ; what rea- son in the world cau he have to presume, that he shall draw a white stone rather than a black, or throw an ace rather than a sise. South.

He will not bate an ace of absolute certainty ; but, however doubtful or improbable the thing is, coming from him it must go for an indisputable truth.

Government of the Tongue.

Ill not wag an ace farther : the whole world shall not bribe me to it. Dryden's Spanish Friar.

ACELDEMA, Heb. a field of blood, for- merly called the Potter's, and some think, the Fuller's field, situated S. of Jerusalem, and N. of the rivulet Siloam : the field purchased by the Jewish rulers, with the 30 pieces of silver, which Judas returned to them, in despair, after betraying our Saviour ; and which they allotted as a burial place for strangers. The place, which is still shewn to travellers, is small, and covered with an arched roof. The bodies depo- sited in it are, it is said, consumed in three or four days, or even less. Drutmar, a monk of Corbie, says, that in his time there was a hospital here for the entertainment of French pilgrims.

ACENTETUM, or ACANTETA, in natural his- tory, a name given by the ancients to the purest and finest rock crystal, which was much used and admired in the formation of cups and vases.

ACEPHALI, in civil history, certain levellers, in the reign of king Henry I. who were not be- lieved to possess even a tenement to entitle them to have the right of acknowledging a superior lord. In our ancient law books, it is also used for persons who held nothing in fee.

ACEPHALI, or ACEPHALITX, in ecclesiastical history, the denomination of various sects : who refused to follow a leader, or head : as, 1 . Those who, in the fifth century, refused to follow either St. Cyril, or John of Antioch 2. Certain Chris- tians who abandoned Peter Mongus, upon his submission to the council of Chalcedon; being generally of the opinion of Eutyches, that there was only one nature in Christ. 3. The adherents of Scverus of Antioch ; and of all in general who

refused to admit the council of Chalcedon. 4. Bishops, exempt from the jurisdiction of their patriarch, were also thus named.

ACEPHALI, in ancient history, certain nations, or people, represented by ancient naturalists and cosmographers, as formed without heads ; their eyes, mouths, &c. being placed in their breast, shoulders, &c. Such were the Blemmyes, a na- tion of Africa mentioned by Pliny and Solinus. Ctesias and Solinus mention others in India near the Ganges. Mela also speaks of a people, quibus capita et vultus in peclore sunt. And Suidas, Stephanus Byzantinus, Vopiscus, relate the like. Different

opinions have been formed as to the origin of these fables. Bartholin, who turns the whole into a metaphor, says, that the name, Acephali, was anciently given to such as had less brain, or conducted themselves less by the rules of prudence, than others. Olearius sup- poses, that the ancient voyagers, viewing certain barbarous people from the coasts, had been im- posed upon by their uncouth dress. Wepfer gives a catalogue of such acephalous births, from Schenckius, Licetus, Panaeus, Wolfius, Mauri- ceau, &c. See also Philos. Transact. Ixv. p.

311.

ACEPHALOUS WORMS, or what are supposed such, are frequent. The lumbricus latus, or joint-worm, and the taenia or tape worm, were long taken to be acephalous : the first who sup- posed them to have a head was Tulpius, and after him Fehr : the former even makes them biceps, or two-headed. SeeTˆNiA. Crabs and such animals as have their chief senses about the breast or heart, have also been called acephali. Gal. de Usu. part viii. 4.

ACEPHALUS, in poetry, a verse which is lame or defective by wanting a beginning. Some also give the name a►►0a\oc to all verses which begin with a short, instead of a long syllable.

ACER, the MAPLE or SYCAMORE TREE : a genus of the monoecia order, belonging to the polygamia class of plants; and ranking under the 23d natural order, trifilatae.

ACERATOS, cuctparoG, Gr. from a, negative, and Kspiiu, or Kipavvvpi, to mix : unmixed, uncor- rupted. It is applied sometimes to the humours of the body by Hippocrates. Paulus TEgineta mentions a plaster under this name, but proba- bly means aceron. See ACERIPES.

ACERB’ l Acerbitas, sourness. De-

ACER’BITY, adj. i rived from the taste of un- ripe fruit; sharpness, roughness.

It is true that purgatory (at least as is believed) cannot last a hundred thousand years ; but yet God may by the acerbitie of the flames in twenty years equal the canonical penances of twenty thousand years. Taylor’s Dissuasive from Popery.

ACERENZA, a small town of the province of Basilicata, in the kingdom of Naples, formerly the see of an archbishop It is eighty miles E. of the capital.

ACERIC ACID, in chemistry, an acid found in the juice of the maple, and decomposed by heat

ACERIDES, aKjjpt&c, from a negative, and ►►f> wax. Plasters made without wax.

AC ERIN A, in ichthyology, a name given by Pliny and others of the old naturalists, to the fish we now call the ceruna, and aurata fluviatilis, and in England the ruff. It is a genuine species of perch, and is distinguished by Artedi from all the other fish of that genus, by having the back fin single, and the head cavernous. See PERCA.

ACERNO, a town of Italy, in the citerio principality of Naples, with a bishop's see ; si- tuated fourteen miles N. E. of Salerno.

ACEROSUS, an epithet of Hippocrates for a coarse kind of bread, made of chaff.

ACERRA, or ACERRA, a town in the kingdom of Naples, in the Terra di Levoro, seated on the river Agno, eight miles N. E. of Naples.

ACERRA, in antiquity, an altar erected among the Romans, near the bed of a person deceased, on which his friends daily offered incense till his burial. The original intention probably was to overcome any offensive smell that might arise about the corpse. Also a little pot, wherein were put the incense and perfumes to be burnt on the altars of the gods, and before the dead. It ap- pears to have been the same wrth what was other- wise called thuribulum and pyxis. Thus Horat. lib. 3. Od. viii. v. 2 i

Quid velint flores et acerra thuris Plena, miraris.

The Chinese have still a custom like this : they erect an altar to the deceased in a room hung with mourning ; and place an image of the dead per- son on the altar, to v.hich every one that approaches it bows four times, and offers oblations and per fumes. By the laws of the XII. tables, the erection of Acerrae, was prohibited among the Romans. We find mention of acerros in the ancient church. The Jews had also their acerrae, in our version rendered censers ; and the Romanists still retain them under the name of incense pots.

ACESCENT, in chemistry, applied to liquids and other substances, which readily run into the acid fermentation, or in which it has already commenced.

ACESTA, in ancient geography, a town of Sicily, named after Acestes,

and built by ./Eneas ; called also Segesta. Virg. Mn. 746.

ACESTES, in ancient history, a king of Sicily, who assisted Priam in the Trojan war, and after- wards entertained .-Eneas. Idem.

ACESTIDES, in chemistry, chimneys of fur- naces for making brass, narrow at top to receive and collect the fumes of the metal, that cadinia may be produced in greater quantities.

ACESTORIS, or AcESTRiDES,from aicof, heal- ing, female physicians; midwives so called among the Greeks.

ACETABULUM, in anatomy, 1 . A deep ca- vity, in certain bones, appointed for the reception of the large head of other bones, in order to their articulation, such as that of the ischium, which receives the head of the thigh-bone. See AI?A- TOMY. The acetabulum is lined, and capped round with a cartilage, whose circular margin is called supercilium. In its bottom lies a large mucilaginous gland. 2. The same with Cotyledon. 3. A glandular substance, found in the placenta of some animals.

ACETABULUM, in antiquity, 1. A little vase, or cup, used at table to serve up things proper for sauce, or seasoning; similar to our vinegar cruets. Hence Agricola takes it to have been named from acetum, vinegar. 2. A Roman measure, used both for liquid and dry things, chiefly in medicine. It contained a cyathus and a half, or fifteen drachms, equal to about one-eighth of a pint.

ACETABULUM, in botany, navel-wort, a species of the peziza, or cup-peziza, a genus belonging to the cryptogamia fungi of Linnaeus. It is named acetabulum, fiom the resemblance its leaves bear to a cup. See PEZIZA.

ACETARIA, from acetum, vinegar, sallad.

ACETIC ACID, in chemistry, the acid which in a more diluted state is called vinegar. For its chemical properties, see ACID and CHEMISTRY, and for its mode of manufacture into that article, see VINEGAR.

ACETIFICATION is used by some chemists to denote the operation

whereby vinegar is made. It is a species of fermentation, arising from ex- posing vinous liquors in open vessels, in a warm place, which turns them acid. Acetification chiefly differs from the fermentation whereby wine is made in this, that the latter is effected by a gentler heat, sufficient only to raise, and rarify the sulphurous parts ; whereas, in acetification, there is what is sufficient to raise and rarefy the saline parts.

ACETI SPIRITUS, in chemistry, spirit of vinegar. It is made by drenching copper filings with dis- tilled vinegar and repeatedly evaporating it.

ACETOSA, sorrel; by Linnaeus joined to the genus of dock, under the title of Rumex. See

‘RUMEX.

ACETOSELLA, in botany, wood sorrel, a species of OXALIS, which see.

ACETOUS JETHER, an aether made by means of vinegar.

ACETOUS FERMENTATION, that by which vine- gar is produced. See DISTILLATION.

ACETUM, Latin, from acere, to be sharp, in medicine, chemistry, &c. vinegar; the vegetable acid. See VINEGAR. There are several medi- cines of which it is the basis ; as,

1. ACI:TUM ALKALIZATUM, alkalized vinegar; distilled vinegar, with the addition of some alka- line or volatile salt.

2. ACETUM DISTILLATUM, distilled vinegar, chiefly used in preparations for dissolution and precipitation.

3. ACETUM ESURIENS, appetitive vinegar, the richest acid, according to Boerhaave, that can by any art be prepared from vinegar. It is made by dissolving verdigrise in distilled vinegar, eva- porating the solution, and after recovering the chrystalized verdigrise, distilling the acid spirit by a retort.

4. ACETUM PHILOSOPHORUM, philosophers vi- negar, a sour kind of liquor; made by dissolving a little butter of antimony in a great deal of water.

5. ACETUM ROSA RUM, vinegar of roses; this is made of rose buds infused in vinegar 40 or 50 days ; the roses are then pressed out, and

the vinegar preserved. It is chiefly used by way of embrocation on the head and temples, in the head-ach

6. ACETUM SAMBUCINUM, vinegar of elder .

7. ACETUM SCILLITICUM, vinegar of squills, &c. For these and other medicated vinegars, see \ IXEGAR. They are much used in Germany as antidotes against pestilential diseases.

ACH, or ACHEN, (J. V.) a painter of the six- teenth century, born at Cologne. He imitated Spranger, and travelling to Venice and Rome, painted in the latter city a celebrated Nativity for the church of the Jesuits. Returning home, he was much patronized by the German princes, and died in 1621.

ACHA, in geography, the name of three smaller rivers of Bavaria, one flowing into the Danube, near Donawerth, and another into the same river, near Ingolstadt; the third falling into the Inn, near the mouth of the Saltza.

ACHABYTUS, in ancient geography, a high mountain in Rhodes, on the top of which stood a temple of Jupiter.

ACHAC, in ornithology, a bird of the par- tridge kind, common in the Philippine islands.

ACH7EA, in ancient geography, a town of the island of Rhodes, in the district of Jalysus, and the first and most ancient of all ; said to be built by the Heliades, or grandsons of Apollo.

ACH.EA, a hamlet of Asiatic Sarmatia, on the Euxine. The inhabitants were called Achaei, and were a colony of the Orchomenians.

ACH7EANS, the inhabitants of ACHAIA Pro- pria, a Peloponnesian state. This republic was not considerable in early times, for the number of its troops, its wealth, or the extent of its ter- ritories ; but it was famed for its probity, its jus- tice, and its love of liberty. Its high reputation for these virtues was very ancient. The Croto- nians and Sybarites, to re-establish order in their towns, adopted the laws and customs of the Achaeans. After the famous battle of Leuctra, a difference arose between the Lacedemonians and Thebans, who held the virtue of this people in such veneration, that they terminated the dispute by their decision. The government of the Achaeans was democratical. They preserved their liberty till the time of Philip and Alex- ander : but in the reigns of those princes, and afterwards, they were either subject to the Macedonians, who had made themselves

masters of Greece, or oppressed by cruel tyrants. The Achaean commonwealth consisted of twelve in- considerable towns in Peloponnesus. Its first annals are not marked by any great action, for they are not graced with one eminent character. After the death of Alexander, this little republic was a prey to all the evils which flow from political discord. A zeal for the good of the community was now extinguished. Each town was only attentive to its private interest. There was no longer any stability in the state ; for it changed its masters with every revolution in Macedonia. Towards the 124th Olympiad, about the time when Ptolemy Soter died, and whem Pyrrhus invaded Italy, the republic of the Achasans recovered its old institutions and unanimity. The inhabitants of Patae and of Dymae were the first asserters of ancient libeity. The tyrants were banished; and the league com- ††† prised at length the whole of Greece, with the single exception of the Lacedemonians. The

ACH

fundamental constitution of this confederacy was as follows: ††† A public council was held, in which affairs of importance were determined, and a register appointed to record its transac- tions. It was convened once a year, and at first had two presidents, who were nominated alter- nately by the different towns and states: but they soon elected only one, who presided in the council, and commanded the army. By the Greeks he was called strategos, and by the Romans preetor. He continued in his office two successive years. Next in authority to the praetor, were the ten demiurgi, who were ap- pointed to act as his privy council, and were empowered on extraordinary occasions to sum- mon a general assembly. The Achaan leagur was formidable to all the surrounding countries for upwards of 120 years; but internal dissen- sions became at last more fatal to it than the arms of Rome, to which, in the year B. C. 147, this people finally submitted.

The arms which the Achaeans chiefly used were slings, with which, by long practice, they took so nice an aim, that they were sure, not only to hit their enemies on the head, but on any part of the face they chose. Their slings were of a different kind from those of the Balearians, whom they far surpassed in dexterity.

Livy and Homer use the term.AcH.Ki for the whole people of Greece.

ACH.ˆMENES, the first king of Persia, said to have been the grandson of Perseus. The whole royal family were called after him

AcHjEMENIDES.

ACHˆMENES, another king of Persia, the father of Cambyses, and grandfather of Cyrus the Great. He is mentioned by Horace, lib. ii. ode xii.

ACH.EMENES, the son of Darius I. and brother of Xerxes, who commanded the Egyptian fleet in the celebrated expedition which proved so fatal to all Greece.

ACHjEORUM-PORTUS, in ancient geogra- phy, the name of a harbour near Sigaeum ; into which the Xanthus falls, after being joined by the Simois ; also a port of the Taurica Chersonesus, on the Euxine sea, now called Porto Buon.

ACH/EUS, in ancient history ; first, a king of Lydia, deposed and hung for extortion. Ovid. Second, the founder of the Achaean state, in the Peloponnesus, son of Xuthus, king of Thessaly. Third, a tragic poet of Eretria, who lived some time after Sophocles. Fourth, another poet of Syracuse. Fifth, a cousin-german to Seleucus Ceraunus and Antiochus the Great, kings of Syria, who enjoyed the dominions he had usurped from Antiochus for many years ; but at last was betrayed by a Cretan, in the 140th year of Rome ; and his limbs being cut off, his body was sewed in the skin of an ass, and gib- betted.

ACHAGUA, in geography, an Indian tribe, of the kingdom of New Granada, formed into settlements by the Jesuits, in 1661. They are said to be of kind disposition ; very expert in the use of the dart and spear, and very brave.

ACHAIA, in ancient geography, that part of Greece which Ptolemy calls Hellas, and th*

younger Pliny, Graecia. It is now called Livadia. See LIVADIA.

ACHAIA EROPRIA, in ancient geography, a small district, N. of Peloponnesus, running west- ward along the bay of Corinth,, and bounded on the W. by the Ionian Sea, on the S. by Elis and Arcadia, and on the E. by Sicyonia : its metropo- lis was called Patrts. It is now the Romania Alta, of the Morea.

ACHALALACTLI, in ornithology, an Ameri- can bird, described by Nieremberg, of the size of a pigeon; is common about the lakes and rivers of Mexico, and feeds on small fish. It is remarkable for a beautiful silvery ring round its neck.

ACHAMELLA, or ACMELLA, in botany, a plant that grows in the island of Ceylon, of which there are three species. It is recommended in nephritic disorders ; and is the verbesina acmella of Linnaeus.

ACHANDES, in ichthyology, a name given by some to the remora, or sucking fish.

ACHANE, axavq, Gr. an ancient Persian corn measure, containing 45 Attic medimni.

ACHANIA, in botany, a genus of plants of the class monodelphia, order polyandria.

ACHAOVA, in the materia medica of the ancients, an Egyptian herb, nearly resembling chamomile, but lower, and with broader leaves, approaching to those of feverfew, and of a faint, but not disagreeable smell. Avicenna, however, seems to have called the herb we call marum, by this name.

ACHARACA, in ancient geography, a town of Lydia, between Tralles and Nysa ; in which were the temple of Pluto, and die cave Cha-ronium, where patients slept in order to obtain a cure. Strabo.

ACHARISTON, from a, without, and xap►►C> value, a name of Galen's for some medicines, which cured so quickly, that they were under- valued ; as the Greek name implies.

ACHAT, in law, a contract, or bargain, especially in the way of purchase.

ACHATES, the companion of TEneas, and his most faithful friend, celebrated in Virgil.

ACHATES, in natural history, the AGATE, which see.

ACHATES, in ancient geography, a river of Sicily, now the Drillo ; which is said to have given name to the Achates, or Agate, first found there.

ACHATORS, purveyors, ordained to be so called, by Act Par. 36 Edw. III.

ACHAZIB, or ACHZIB, in ancient geography, first, a town of Galilee, in the tribe of Asher, nine miles from Ptolemais ; second, a town on the southern parts of the tribe of Judah.

ACHE'. Ace, Saxon, to eke, to lengthen out ; applied to continued pain.

I know in heate and cold, the louer how he shakes, In singing how he doth complaine, in sleping how he

wakes,

To languish without ache, sicklesse for to consume ; A thousand things for to deuise, resoluing all in fume.

Surrey.

I'll rack thee with old cramps ; Fill all thy bones with aclies, make thee roar, That beasts shall tremble at thy din. Shakes}>

A coming show'r your shooting corns presage, Old aches throb, your hollow tooth will rage. Swift. Upon this account, our senses are dulled and spent bv any extraordinary at'ention; and our very eyes will ache, if long fixed upon any difficultly discerned object. Glanville.

Visions of glory ! spare my aching sight, Ye unborn ages crowd not on my soul ! Gray.

ACHEEN, ACHE', or ACHEN, a kingdom of Sumatra, on the N. W. of that island, extending fifty miles along the coast, and said by some to tontain 26.000 superficial miles. So powerful was this kingdom in the beginning of the six- teenth century, as to expel the Portuguese in- vaders entirely from the island.

Acheen is divided into 193 parishes, forming three general governments, each under the juris- diction of a paugleemo and subordinate officers. Some parts of the kingdom are subject to fre- quent and sudden inundations; and the inhabi- tants can have no intercourse except through the medium of boats : but as there are few swamps and bogs, the air is healthy, and fevers, dysenteries, &c. are said to be uncommon. The soil that prevails is light and fertile, producing rice, cotton, and fine fruits. It is a layer of black mould, on a substratum of reddish clay, on which many culinary vegetables come to great perfection ; and is so extremely rich and exuberant, that culinary roots, onions, limes, citrons, and nearly all the fruits and

plants of the frigid and torrid zones grow here. Very fine gold dust is found in the mountains, and still more is supplied from the southern parts of Nalaboo and Soosoo. A volcano, in the vicinage of Acheen the capital, yields an abundance of sul- phur, both for home consumption and exporta- tion. Acheen was formerly the great mart of eastern commodities, and still carries on a flou- rishing trade, both with European and eastern nations. They export fruits, gold, jewels, dia- monds, sulphur, camphor, pepper, benzoin, sapan-wood, betel-nut, patch-leaf, or colsos bidicus ; and import cotton, cloth, silk, opium, gunpowder, arms, glass, and cutlery. The king is the chief merchant, and claims a duty of twelve per cent, upon all goods imported into his do- minions. He also entirely monopolizes the sale of opium, and farms the retailing of it among the people.

All matters relative to the commerce and the customs of the port, come under the jurisdiction of the shabandar, who performs the ceremony of lifting chap, or giving a license for trade, by lifting a golden-hafted creese over the head of the merchant, without which he dares not land his goods. Presents are then sent to the king and his officers. If the stranger be an ambassa- dor, the royal elephants are sent down to carry him and his letters to the monarch's presence. After some general discourse, he is conducted to a separate building, and entertained by the offi- cers of state, with all the delicacies of the country. In the evening he departs in the manner he came, airrounded by a prodigious number of lights. Their trading is chiefly carried on by gold-dust; and every tradesman carries about with him scales and bags. The people are taller and more

swarthy than the other inhabitants of the island; and from their comparative skill in mechanics, it would appear that they are more intelligent They have a curious method of casting small brass guns. The chief dress is of blue and white cloth, made, among the higher classes, from cotton of their own growth ; their silk is now on the decline. They are said to be a base and treacherous people. The chief animals are pas- ture cattle, horses, and elephants. The horses are much prized at Madras.

The religion of Acheen is Mahometanism ; and the government despotic, admitting females to reign. The king usually maintains a guard of 1 00 seapoys about his palace. He appoints a Pauglee- noo to each district, and under him a twaum, and four paugeeches, to each mosque. The grand council of the nation, consists of the king, or sul- tan, four oolooballangs, eight of a lower degree, and sixteen cajoorangs. At the king's feet sits a woman, to whom he makes known his pleasure. She communicates it to an officer, who proclaims it to

the assembly. The throne was formerly of ivory and tortoise, protected by a curtain of gauze, which did not obstruct the audience, but prevented perfect view. The criminal laws are uncommonly severe. Theft is punished by sus- pending the criminal from a tree, with a gun or weight tied to his foot ; in some cases by cutting off a finger, a hand, or a foot, &c. according to the heinousness of the crime; ??? house-breaking by drowning. If a man robs a priest he is burnt alive. Adultery is punished by placing the adulterer in a spacious area, environed by the friends of the injured husband, where he is pro- vided with a weapon ; and if he can force his way through them, he escapes condign punishment ; but in general he is cut to pieces in a few mo- ments, and the body is refused funeral rites.

The king confers a title of honour, the ensign of which is a small golden sword suspended round the neck, as a badge of distinction : this is seldom conferred on any of the natives. The resident for the East India Company was with- drawn in 1785 ; but the traffic still continues.

ACHEL, a celebrated place and cave in Hindostan, four miles from Patiala, district of Sisheril. Here a cold flame is said to issue from the earth, and is regarded as a manifesta- tion of the Deity. Pilgrims crowd hither, and a great fair is held at the place annually.

ACHELOUS, a hero, in the ancient mytho- logy, who wrestled with Hercules, for Deianira, daughter to king CEneus : but as Achelous had the power of assuming all shapes, the contest was long dubious : at last, as he took that of a bull, Hercules tore off one of his horns ; so that he was forced to submit, and to redeem it by giving the conqueror the horn of Amalthea,, or plenty ; which Hercules and the Nymphs having filled with a variety of fruits, consecrated to Jupiter. Some explain this fable, by saying, that Achelous is a winding river of Greece, whose stream was so rapid, that it roared like a bull, and overflowed its banks ; but Hercules, by bringing it into two channels, broke off one of the horns, and so restored plenty to the country. See next article.

ACHELOUS, a river of Acarnania, which rises in mount Pindus, and dividing /Etolia from Acarnania, falls from N. to S. into the Sinus Co-

rinthiacus. It was formerly called Thoas, from its impetuosity, and, by Homer, King of rivers. It is now called Aspro Potamo.

ACHEM, or ACHEN. See ACHEEN.

ACHEMENIS, an herb mentioned by Pliny; supposed by the ancients to have the property of exciting terror.

ACHEPE BAY, a small inlet near North Cape, on the eastern coast of the island sf Cape Breton, British North America.

ACHERI, (Luke d',) a learned Benedictine, of the congregation of St. Maur, bom at St. Quintin, in Picardy, in 1609, and famous for printing several works, till then only in MS. viz. : the epistle attributed to St. Barnabas ; the works of Lanfranc, archbishop of Canter- bury ; a collection of scarce and curious pieces, entitled Spicilegium ; i. e. Gleanings, in 13 volumes quarto, &c. After a very retired life, he died at Paris, in 1685, in the abbey of St. Germain, where he had been librarian.

ACHERNA, in astronomy, a star of the first magnitude, in the sign of Eridanus.

ACHERON, Axtpwv, Gr. in ancient mytho- logy, the son of Ceres, whom she hid in hell, for fear of the Titans, and turned into a river, over which departed souls were ferried in their way to Elysium.

ACHERON, a river of Thesprotia, in Epirus ; which, after forming the lake Acherusia, falls into the sea to the west of the Sinus Ambracius. It is now called Delichi.

ACHERON, or ACHEROS, a river of the Brutii in Italy, running from E. to W. where Alexan- der, king of Epirus, was slain by the Lucani, being deceived by the oracle of Dodona, bidding him beware of Acheron, which he supposed to mean the Acheron in his own kingdom.

ACHERSET, an ancient measure of corn, conjectured to be the same with our quarter, or eight bushels.

ACHERUSIA, in ancient geography, first, a lake in Egypt, near Memphis, over which, ac- cording to Diodorus, the bodies of the dead were conveyed for judgment, in the boat Baris, the property of Charon. And thus arose the Grecian fable of Charon and the Styx. Second, a lake between Cumae and the promontory Misenum, now II Lugo Delia Collucia. Some confound it with the Locus Lucrinus, and

others with the Lucus Averni. Third, a lake of Epirus, through which the Acheron runs. Fourth, a peninsula of Bithynia on the Euxine, near Heraclea.

ACHERUSIA, in ancient mythology, a cave, through which Hercules was fabled to have de- scended to hell, to drag forth Cerberus.

ACH ETA, in entomology, a name by which the ancients called the larger species of cicada, or the third family of the Linnsean gryllus.

ACHIA, or ACHIAR, a kind of cane which grows in the East Indies, and is pickled there while green, with strong vinegar and spices. It is a Malayan word for all kinds of pickled fruits and roots.

ACHL/ENUS,or AcHaeiNUS,in natural history, a word used by the ancients to express a stag

or deer, in his second year. In the first it was called nebrus, in the third dicrotus, and always after that cerastes.

ACHICOLUM, or ARCHITHOLUS, in anti- quity, the fornix, tholus, or sudatorium of the ancient baths ; which was a hot room where they used to sweat.

ACHIEVE', v. ~\ AcMver, Fr. to carry ACHIEV'ABLE, / forward to the head, chief ACHIEV'ANCE, V point, or end; to accom- ACHIEV'ER, i plish an enterprize; to ACHIEVE'MENT. ,/ finish; complete a design satisfactorily; to acquire.

The protectour sore thristed for the acheuynge of his pretensed enterpryse, and thought euery daye a yere tyll it were perfourmed. Hall, p. 350.

And for to speke in other waie, Full ofte tyme I have herde him saie, That he, which hath no loue acheaued, Hym thinkcth that he is not relieued.

Gower, Con. A. b. vi,

And after that her thought gan for to clere, And saied, he which yt nothing vndertaketh, Nothing acheueth, be him loth or dere.

Chaucer, Troilus, b. ii. fol. 162, col. 1 William tok his leue, his way to Scotland ches, Wele mot William cheue, and alle fjat lufes pes.

R. Brunne, p. 146

From every coast, that heaven walks about, Have thither come the noble martial crew, That famous hard achievements still pursue.

Faerie Queene.

LEON. A victorie is twice itself, when the atchieiter brings home full numbers. Shaks. Much Adoe about Nothing, p. 101, act i. sc. 1.

And now great deeds

Had been achiev'd, whereof all hell had rung, Had not the snaky sorceress that sat Fast by Hell's gate, and kept the fatal key, Ris'n with hideous outcry, rush'd between.

Milton's Paradise Lost, b. ii.

It is an unworthy thing to plead hardness of atchiev- ing, where the benefit will more than requite the endeavour. Hall's Contemplations.

Then shall the war, and stern debate, and strife Immortal, be the bus'ness of my life ; And in thy fame, the dusty spoils among, High on the bumish'd roof, my banner shall be hung, Rank'd with my champion's bucklers ; and below, With arms revers'd, th' achievements of the foe

Dryden.

No exploits so illustrious, as those which have been achieved by the faith and patience, by the cour- age and prudence of the ancient saints : they do far surpass the most famous achievements of Pagan heroes. Barrow's Sermons.

The baths were not much frequented, being rareiv used but after the accomplishment of some very great work which required abundance of labour and toil ; as the ending of a war, achieving any great and painful enterprise. Potter's Antiq.

ACHIGAN RIVER, a tributary stream to the river Assumption in Lower Canada, North America, which it joins about twelve miles from its mouth in the St. Lawrence. It is a conside- rable outlet for the timber of the upper forests of the country.

ACIIILL, an island on the west coast of the county of Mayo, Ireland, from which it is sepa- rated by a narrow channel. It is about thirty miles in circumference. N. Lat. 53►►, 38'. V^' Long. 9►►, 52'.

ACHILI-HEAD, a cape on the west of the above island.

ACHILLAS, in ancient history, an Egyptian general, who murdered Pompey the great. Plut. in Pomp.

ACHILLEA, in ancient geography, an island, containing the tomb of Achilles, near the mouth of the Ister. Second, a peninsula near the mouth of the Boristheues. Third, a fountain of Miletus, whose water rose salt and afterwards freshened.

ACHILLˆEA, YARROW, MILFOIL, NOSE- BLEED, or SNEEZEWORT ; a genus of the order of the polygamia superflua, belonging to the syngenesia class of plants. The natural order to which it belongs is the forty-ninth compositae discoides.

ACHILLEIS, in literature, a celebrated poem of Statius, in honour of Achilles. See STA- TICS.

ACHILLES, in ancient history, the son of king Peleus by the goddess Thetis, and the celebrated hero of Homer's Illiad, is said to have been born at Phthia in Thessaly. ' The fabulous part of his history is, that his mother, in order to render him immortal, by consuming the mortal parts of his body, which he derived from his father, laid him, when a child, every night under live coals, anointing him at the same time with ambrosia, which preserved him from burning, except one of his lips which he had licked; that, to render him invulnerable, she dipped him in the river Styx, excepting the heel by which she held him, a story not even credited by Homer, who mentions his being wounded in the right arm; that she afterwards entrusted him to the care of Chiron the Centaur, who fed him with the marrow of wild beasts, to strengthen him for the toils of war; and that to prevent him from going to the siege of Troy, she disguised him in the dress of a young woman, and attempted to conceal him among the daugh- ters of king Lycomedes, one of whom he made the mother of Neoptolemus. The authentic part of his story seems to be, that Ulysses persuaded him to accompany the other Grecian chiefs in their crusade against Troy; that he there dis- tinguished himself by his valour, till Agamemnon by taking from him Briseis a female captive, pro- voked him to withdraw himself in disgust: but, that his friend Patroclus being killed by Hector, in order to avenge his death he returned to the camp, slew the

prince, and barbarously dragged his dead body round the walls of Troy at his chariot's wheels ; that afterwards, falling in love with Philoxena, one of Hector's sisters, he was mortally wounded with an arrow in the heel, by her brother Paris, while treating about the marriage ; and, in fine, that he was buried on the promontory of Sigaeum, where the Greeks sacri- ficed the unfortunate princess, on his tomb; according to the barbarous custom of that age, and agreeably to his dying request, that he might enjoy her company in the Elysian Fields. His death is supposed to have happened about A. C. 1183. Alexander the Great is said to have visited his tomb, and placed a crown upon it, saying that "Achilles was happy, in having such a friend as Patroclus in his life, and such

a poet as Homer, to celebrate him, after his death."

ACHILLES, in logic, a name given to the prin- cipal argument alleged by each sect of philoso- phers in behalf of their system. In this sense, we say, this is his Achilles ; that is, his master proof. ACHILLES (Tatius,) See TATIUS. ACHILLINI, (Alexander,) born at Bologna in 1463, was one of the most celebrated anato- mists and philosophers of the fifteenth and six- teenth centuries. He first discovered some of the smaller bones in the ear; and filled in-1506 his professorship at Padua, with such dis- tinction, that a vast influx of students came to that university from all parts of Europe. In 1508, his philosophical works were published in one volume, folio ; besides which, he wrote Annotationes Anatomicse, 1520, quarto: De Humani Corporis Anatomis, 1521, quarto; and various other anatomical works.

ACHILLINI, (J. Philotheus,) brother of the above, who was born at Bologna, in 1466, and died there 1558, was also a distinguished scholar and poet.

ACHILLINI, (Claudius,) grandson of the last Achillini, read lectures at Bologna, Ferrara, and Parma, at the beginning of the seventeenth cen- tury, where he was much esteemed as a philo- sopher, a divine, an orator, mathematician, and poet. He accompanied cardinal Ludovisio, afterwards Gregory XV. when he went as legate into Piedmont : but being neglected by him, when he became pope, he left Rome in disgust, and retired to Parma, where the duke appointed him professor of law, with a good salary. He published a volume of Latin letters, and another of Italian poems, which gained him great repu- tation, and died in 1640, aged sixty-six.

ACHILLIS TENDO, in anatomy, is a strong tendinous cord, formed by the union of the ten- dons of the four extensor muscles of the foot, and

inserted into the os calcis. It has its name from the fatal wound Achilles is said to have received in that part, from Paris the son of Priam.

ACHILLIS, a small lake in the county of Ross, Scotland, whose waters are supposed to have a subterranean outlet.

ACHIOTE, in botany, a name given by some authors to the uraca, or arnotto, called orleata, and orellana, by others. It is the BIXA ou- LEANA of Linnaeus.

ACHIOTTE, or ACHIOTE, a foreign drug, used in dyeing, and in the preparation of choco- late. It is the same with the substance more usually known by the name of arnotto.

ACHIROPCLTOS, from a, without, x►►n, hand, and TTOMW, to make, a name given by an- cient writers to certain pictures of Christ and the Virgin, said to have been made without hands. The most celebrated of these, is a Christ in the church of St. John Lateran at Rome, begun by St. Luke, but finished by angels.

ACHIVI, the Greeks, so called by the Roman poets.

ACHLEUTHEN, a lordship, town, and castle of Austria, on the Crems, ten miles E. S. E. of Ems.

ACHLYS, axˆvc ; Gr. a cloud, in medicine, first a darkness or dimness of sight, arising from

a small cicatricula on the pupil, occasioned bv a superficial ulcer on the cornea. Second, a dis- order of the womb ; answering to what Latin writers call suffusio uteri.

ACHMET', the son of Seerim, lived in the ninth century, and wrote a book concerning the interpretation of dreams according to the doctrine of the Indians, Persians, and Egyptians, which ►►►was translated out of Greek into Latin by Leo Tuscus, in 1160, and republished at Paris, 1603, with Artemidorous on Dreams.

ACHMIM, a large town of Upper Egypt, 200 miles south of Cairo, situated on the eastern bank of the Nile. " One admires there (says Abulfeda, as quoted by Mr. Savary,) a temple, which is equal to the most celebrated monu- ments of antiquity. It is constructed with stones of a surprising size, on which are sculptured innumerable figures." Though this town is fallen from its ancient splendour, it is still one of the most beautiful of Upper Egypt ; and the country around

is remarkably fertile, producing the finest corn of this part of Africa, as well as sugar and cotton The streets are wide and clean, and commerce and agriculture flourish. It has a manufactory of cotton, stuffs, and pottery, which are conveyed over all Egypt. Achmim is the Ckemmis of Herodotus, and the Panopolis of Strabo, or the city of Pan, who was worshipped there. Herodotus says, that Perseus was a native of this city, and that his descendants had established festivals there in his honour. It has lost its ancient edifices, and much of its extent ; the ruins of the temple, described by A4 > ulfeda, being without its limits, to the north. Nothing remains of it but some stones, of such magnitude, that the Turks have not been able to move them. On one of them are traced four concentric cir- cles, in a square. The innermost of these con- tains a sun. The two next, divided into twelve parts, contain, the one, twelve birds, the other, animals almost effaced, which appear to be the signs of the zodiac. The fourth has no divisions, and presents twelve human figures, which Mr. Savary imagines to represent the twelve gods, the twelve months of the year, and the twelve signs of the zodiac. The four seasons occupy the angles of the square, on the side of which may be distinguished a globe with wings. The columns of this temple have been partly broken, to make lime and mill-stones. Some of them have been transported into one of the mosques of Achmim, where they are placed without taste ; others are heaped up in the square of the town. Mr. Savary tells us of a serpent which is wor- shipped here, and the wonder of the country. See HARIDI. Here also is a church of some antiquity.

ACHMUNEIN, a town of Upper Egypt, 120 miles S. of Cairo, supposed to be the ancient Hermopolis, and containing the portico of a tem- ple covered with hieroglyphics, which Denon considers the most superb remaining monument of Egyptian architecture.

ACHNE, AXVJJ, Gr. chaff, froth, lint, smoke, or any thing light. It is used by Hippocrates to denote a white mucilage, observable in the eyes of patients who have fevers ; and also a white mucus in the fauces, thrown up from the lungs.

ACHOR, a valley of Jericho, lying along the Jordan, not far from Gilgal.

ACHOR, in medicine, the third species of tinea, or scald-head. It is a sort of small running ulcer on the face and head, chiefly of children while they suck ; by which the skin is broken into a number of little holes, out of which issues a viscid humour, like ichor, whence its

name. ††† Achor differs from the favus and tinea only in the degree of virulence.

ACHRADINA, in ancient geography, one of the four divisions of Syracuse, and the strongest, largest, and most beautiful part of it ; separated by a very strong wall from the outer town, Tycha and Neapolis. It was adorned with a very large forum, with beautiful porticos, a most elegant prytaneum, a spacious senate house, and a superb temple of Jupiter Olympius.

ACHRAS, or SAPOTA PLUM : a genus of the monogynia order, belonging to the hexandria class of plants; and ranking in the forty-third natural order, dumosap.

ACHROI, axpoi, Gr. from a negative, and Xpo

ACHROMATIC, Gr. of a, primitive, and xpw/ta, colour, an epithet expressing want of colour.

ACHROMATIC TELESCOPES, are telescopes con- trived to remedy the aberrations in colours ; See ABERRATION. ††† A particular account of the in- vention and construction of these instruments will be found under OPTICS.

ACHRONICAL. See ACRONYCHAL.

ACHSHAPH, a city, originally a kingdom, near the foot of mount Tabor, taken by Joshua, and given to the tribe of Asher. In St. Jerome's time, it was reduced to a small village, and called Chasalus.

ACHTELING, a measure for liquids used in Germany, thirty-two achtelings make a heemer ; four sciltems or sciltins, make an achteling.

ACHTIRKA, a well-built town of Russia, capital of a district, in the government of Charko, on a river of the same name. Population 12,000. 40 miles W. S. W. of Charkov.

ACHY, a species of cassia, that grows in Arabia.

ACHYRANTHUS, in botany, a genus of the pentandria order, belonging to the monogynia class of plants, and associating with the miscel- laneae, in the thirty-fourth natural order.

ACHZIB. See ACHAZIB.

ACIA, a term in the Roman surgery, con- cerning the meaning of which physicians and commentators are much divided. Celsus, speaking of the healing of wounds either by suture, or the fibula, says, each is best effected by means of a soft acia, not too much twisted, that it may sit the easier on the body. Boxornius will have the acia to be the acus of the fibula, or that part which is pinched : in which view acia mollix only imported, that it was not set so as to pinch too much.

ACICANTIIERA, in botany, the trivial name of a species of RHEIXIA, which see.

ACICOCA, an herb of Peru, and is sometimes used instead of the herb paraguay, of which it is said to have all the properties.

ACID Sr

ACICULA, the small pikes or prickles of the hedge-hog, echinus marinus, &c.

AC ID ALIA, an epithet given to Venus by Virgil, from ACIDALUS, which see.

ACIDALIUS, Valens, a critic of the sixteenth century, born at Witstock, in Brandenburgh. Having visited several academies in Germany, Italy, &c. he took up his residence at Breslaw, where he became a Roman catholic, and was chosen rector of a school at Niesse. Thuanus says that his sitting up at night, to compose his conjectures on Plautus brought upon him a dis- vemper, which carried him off in three days, on the 25th of May, 1595, being just twenty-eight years of age. He wrote a commentary on Quin-

ACID

tus Curtius ; Notes on Tacitus ; besides speeches, letters, and poems, which last are inserted in the Delicite of the German poets. A little piece, printed in 1595, under the title of Mulieres non esse Homines, was falsely ascribed to him. Mr. Bailletha s given him a place among his Enfans Celebres ; and says, that he wrote his comment upon Plautus when he was but seventeen or eighteen years old, and that he composed several Latin poems at the same age.

ACIDALUS, a fountain in Ofchomenus, a city of Baotia, in which the Graces are said to have bathed.

ACIDOTON, in botany, the trivial name of a species of ADELIA.

ACID.

Acide, Fr. That which cuts or corrodes; having the quality of sourness.

AC’ID, n.

ACID’ITY,

ACID’ULATE,

ACES’CENCY,

ACES’CENT.

The smoke of sulphur will not black a paper, and is commonly used by women to whiten tiffinies, which it perfonneth by an acide, vitriolis, and penetrating spirit ascending from it. Brown’s Vulgar Errours..

The same persons (perhaps) had enjoyed their health as well, with a mixture of animal diet, qua- lified with a sufficient quantity of acescent* ; as bread, vinegar, and fermented liquors. A rbuthnot on Aliments. In spring-like youth it yields an acid taste ; But summer doth, like age, the sourness waste ; Then cloth’d with leaves from heat and cold secure, Like virgins, sweet and beauteous when mature.

Denham’s Old Age, part iii.

ACID, from acesco, to sharpen, a name given to a very extensive and important class of sub- stances, from their prominent quality of sharp- ness or sourness. Sourness of taste, however, is merely one of the sensible properties of these substances, and they possess some others equally if not more characteristic. Of acids there is a large number and great variety, so that were we to devote the present article to the history of them individually, we should be under the ne- cessity of amplifying it to an extent inconsistent with our plan of arrangement. It is merely then our design in the present instance to treat on the general principle of acidity, referring an account of the particular acids to the article CHEMISTRY, and to the alphabetical order into which they may fall. Thus for acetous or acetic acid, let the reader turn to the word acetous or acetic, and so on through the whole series of adjective designations.

The properties of acids are,

1. Sourness of taste, amounting in some of the species to a corrosive quality.

2. A general, though not invariable power of combining with water in any proportion, with a condensation of volume, and evolution of heat. (For the most part indeed, acids are found in a state of fluidity ; but not so without exception, some being met with in a solid form.)

3. They are mostly susceptible of volatiliza- tion, or are decomposed by heat.

4. They change the purple or blue colour of vegetables to a bright red.

5. They combine in definite proportions with alkalis, (see alkali) earths, andmetals;andby this combination is constituted that important class of bodies called salts.

" This last (says Dr. Ure) may be reckoned their characteristic and indispensable property. The powers of the different acids were originally estimated by their relative causticity and sour- ness ; afterwards by the scale of their attractive force towards any particular base ; and next by the quantity of the base that they could respectively neutralize. But Berthollet proposed the converse of this last criterion as the measure of their powers, ' The power by which they can exercise their acidity,' he estimates 'by the quantity of each of the acids which is required to produce the same effect, viz. to saturate a given quantity of the same alkali.' It is therefore the capacity of saturation of each acid which, in ascertaining its acidity according to him, gives the compara- tive force of the affinity to which it is owing. Hence he infers, that the affinity of the different acids for an alkaline base, is in the inverse ratio of the producible quantity of each of them, which is necessary to neutralize an equal quan- tity of the same alkaline base; an acid is there- fore, in this view, the more powerful, when an equal weight can saturate a greater quantity of an alkali. Hence, all those substances which can saturate an alkali, and cause their properties to disappear, ought to be classed among the acids ; in like manner among the alkalis, should be placed all those which, by their union can sa- turate acidity, and the capacity of saturation being the measure of this property, it should be em- ployed to form a scale of the comparative power of alkalis as well as that of acids."

" However plausible," continues Dr. Ure, " ;\ priori, the opinion of this illustrious philosopher may be, that the smaller the quantity of an acid or alkali required to saturate a given quantity of its antagonist principle, the higher should it rank in the scale of power and affinity ; it will not however accord with chemical phenomena : 100 parts of nitric acid are saturated by about 36ˆ of magnesia, and 52J of lime."

“Hence by Berthollet’s rule, the power of these earths ought to be as the inverse of their quantities: viz. ∼* and ˆ yet the very oppo site effect takes place, for lime separates mag- nesia from nitric acid, and in the present example the difference of effect cannot be imputed to the difference of force with which the substances tend o assume the solid state.

“We have, therefore, at present, no single acidifying principle, nor absolute criterion of the scale of powers among the different acids ; nor is the want of this of great importance. Experiment furnishes us with the order of de- composition of one acido-alkaline compound, by another acid, whether alone or aided by temperature ; and this is all that practical che- mistry seems to require.”

The question respecting the principle of acidity will be found to involve a great deal of what is very important in its bearing upon the doctrines of chemistry generally, and it is a question, which perhaps may be regarded as open to still further investigation than that which it has received from the extraordinary ingenuity and industry of modern chemists. A disposi- tion to generalize beyond the warrants of fact, has pervaded the speculations of individuals in reference to the rationale of acidity from very early times. Paracelsus conceived that there was only one acid principle in nature. Becher maintained the same doctrine, and modified it by the supposition, that this acid principle is a compound of earth and water, both of which, were regarded as two distinct elements. Stahl adopted the same theory, and imagined the sulphuric acid to constitute the general principle of acidification ××× a supposition, svhich upon the authority of Stahl, was for a long time held in the schools ; but was at length openly com- bated by Bergmann and Scheele. Still, however, the hypothesis of acidity, being the result of some pervading principle, continued to obtain; and Wallirius, Megar, Sage, and others in their ‘ turns advanced several speculations on the essential nature and mode of this principle, when at length the French chemists, with La- voisier at their head, propounded a doctrine entirely new, and of most extensive application : viz, “That acids result from the union of a pecu- liar combustible base, called the radical, with a common principle, technically called oxygen, or acidifier ;” the radical or base giving the specific or peculiar property to the respective substances, and oxygen being the essence of acidity in the whole.

” I have already shewn,” says Lavoisier, ” that phosphorus is changed by combustion into an extremely light white flaky matter. Its pro-

perties are likewise entirely altered by this transformation : from being insoluble in water, it becomes not only soluble, but so greedy of moisture, as to attract the humidity of the air ‘vith astonishing rapidity. By this means it is rorverted into a liquid considerably more dense, ́́́́́id of more specific gravity than water. In ihe state of phosphorus, before combustion, it had scarcely any sensible taste; by its union oxygen, it acquires an extremely sharp and

sour taste ; in a word, from one of the class of combustible bodies, it is changed into an incom- bustible substance, and becomes one of those bodies called acids.

“Sulphur also, in burning, absorbs oxygen gas ; the resulting acid is considerably heavier than the sulphur burnt ; its weight is equal to the sum of the weight of the sulphur which has been burnt, and of the oxygen absorbed; and lastly, this acid is weighty, incombustible, and miscible with water in all proportions.”

” The examples, above cited,” continues La- voisier, ” may suffice for giving a clear and ac- curate conception of the manners in which acids are formed. By these it may be clearly seen that oxygen is an element common to them all, and which constitutes or produces their acidity ; and that they differ from each other according to the several natures of the oxygenated or acidified substances.” ” Although,” he further adds, ” we have not been able either to compose or to de- compound the acid of sea-salt, we cannot have the smallest doubt that it, like all other acids, is composed by the union of oxygen with an acidi- fiable base. We have therefore called this un- known substance, the muriatic base, or muriatic radical.”

The above communication of Lavoisier was generally received, and accepted as the founda- tion of a new system of chemical doctrine ́́́ both inflammability and acidity were thought to be fully explained by the oxygenous theory; and it was expected that every new development of fact would harmonize with the new theory of causation.

The nomenclature of acids was now altered to suit the new theory ; the terminations ous, ic, and the prefix cxy being employed to denote the different measures in which the acidifiable base was combined with oxygen.

In the first state, or that in which acid bodies were supposed to exist,

with the least possible quantity of oxygen, their names terminated in ous, as sulphurous, nitrous, phosphorous, or acetous.

The second state, or that in which they con- tained a saturating quantity of oxygen was ex- pressed by the termination ic, as sulphuric, or nitric : and when imagined to contain an excess of oxygen the term oxy was prefixed, as oxy- muriatic.

But it was soon suggested that Lavoisier in thus conceiving oxygen to be the universal principle of acidity, had run into a hasty gene- ralization which was unwarrantable by nature. " It is carrying the limits of analogy too far (observed Berthollet) to infer that all acidity, even that of the muriatic, fluoric, and boracic acids arises from oxygen, because it gives acidity to a great number of substances. Sulphuretted, hydrogen, which really possesses the property of an acid, proves directly that acidity is not in all cases owing to oxygen. There is no better foundation for concluding that hydrogen is the principle of alkalinity, not only in the alkah, properly so called, but also in magnesia, lime, strontian and barytes, because ammonia appears to owe its alkalinity to hydrogen. We must not, therefore, always infer from the acidity of a sub-

stance that it contains oxygen, although this may be an inducement to suspect its existence in it."

Sir H. Davy, was however, the first to shew in a systematic manner, that the French chemists had been in error when they assumed oxygen to be the absolute essence of acidity ; and, he at length propounded those highly interesting principles concerning acidification, which have shaken the Lavoisierian system to its foundation. He demonstrated that oxy-muriatic acid is, as far as our knowledge extends, a simple substance, which may be classed in the same order of natural bodies as oxygen gas, being determined like oxygen, to the positive surface in voltaic com- binations ; and, like oxygen, combining with in- flammable substances, producing light and heat. The combinations of oxymuriatic acid with in- flammable bodies were shewn to be analogous to oxides and acids in their properties and powers of combination, but to differ from them in being, for the most part decomposable by water ; and finally, that oxymuriatic acid has a

stronger attraction for most inflammable bodies than oxygen. His preceding decomposition of the alkalis, (see ALKALI) and the earths, having evinced the absurdity of that nomenclature which gives to the general and essential consti- tuent of acid nature, the term oxygen or acidi- fier ; his new discovery of the simplicity of oxy- muriatic acid shewed the theoretical system of chemical language to be equally vicious in an- other respect. Hence, this philosopher most judiciously discarded the appellation oxymu- riatic acid, and introduced in its place the name chlorine, which merely indicates an obvious and permanent character of the substance, its green- ish yellow colour. See CHLORINE and CHE- MISTRY.

Succeeding chemists have brought powerful analogies in support of the new theory of Davy, by shewing that hydrogen alone has the power of changing certain undecompounded bases into real acids ; and that this is effected without the presence or assistance of oxygen. Dr. Murray has indeed argued with a good deal of ingenuity against the unqualified reception of Davy's prin- ciples, and has suggested that acidity may in most, if not in all cases, consist of a species, so to say, of oxy-hydrogenation.

" When," says Dr. Murray, " a series of com- pounds exist, which have certain common cha- racteristic properties, and when these compounds all contain a common element, we conclude with justice, that these properties are derived more peculiarly from the action of this element. On this ground, Lavoisier inferred, by an ample in- duction, that oxygen is a principle of acidity. Berthollet brought into view, the conclusion, that it is not universally so, from the examples of prussic acid and sulphurated hydrogen. In the latter, acidity appeared to be produced by the action of hydrogen. The discovery of Gay Lussac of the compound radical cyanogen, and its conversion into prussic acid by the addition of hydrogen, confirmed this conclusion ; and the discovery of the relations of iodine still further established it. And now the system must be still further modified. While each of these conclu- sions is just, to a certain extent, each of them

requires to be limited in some of the cases to which they are applied ; and while acidity is sometimes exclusively connected with oxygen sometimes with hydrogen, the principle must also be admitted, that it is more frequently the result of their combined operations."

" There appears," continues Dr. Murray. " even sufficient reason to infer, that from the united action of these elements, a higher degree of

acidity is acquired, than from the action of either alone. Sulphur affords a striking example of this. With hydrogen it forms a weak acid : with oxygen it also forms an acid, which though of superior energy, still does not display much power : with hydrogen and oxygen, it seems to receive the acidifying influence of both, and its acidity is proportionably exalted."

These speculative objections of Dr. Murray to the simplicity of chloridic theory, go, it will be seen, partly upon the supposition, that the agency of media is not sufficiently appreciated in that theory ; and that the elements, at least of water, are always at work in modifying the com- binations of substances upon which the experi- ments are made. " He thinks it doubtful," says Dr. Ure, " whether nitrogen and oxygen can alone form an insulated acid. Hydrogen he conceives essential to its energetic action. What, may we ask then, exists in dry nitre, which contains no hydrogen ? Is it nitric acid ? or merely two of its elements in want of a little water to furnish the requisite hydrogen ? The same question may be asked relative to the sulphurate of potash. Since he conceives hydrogen necessary to com- municate full force to the sulphuric and nitric acids, the moment they lose their water they should lose their saturating power, and become incapable of retaining caustic potash in a neu- tral state. Out of this dilemma he may indeed try to escape, by saying, that moisture or hydro- gen is equally essential to alkaline strength, and that therefore the same desiccation or hydrogena- tion which impairs the acid power, impairs also that of its alkaline antagonist. The result must evidently be, that in a saline hydrate or solution, we have the reciprocal attractions of a strong acid and alkali ; while in a dry salt, the attractive forces are those of relatively feeble bodies. On this hypothesis the difference ought to be great between dry and moistened sulphate of potash. Carbonic acid is admitted to be destitute of hy- drogen, yet its saturating po%ver is very conspi- cuous in neutralizing dry lime. Now, oxalic acid, by the last analysis of Berzelius, as well as my own, contains no hydrogen. It differs from the carbonic only in the proportion of its two con- stituents, and oxalic acid is appealed to by Dr. Murray, as a proof of the superior acidity be- stowed by hydrogen."

" On what grounds," continues Dr. Ure, " he decides carbonic acid to be a feebler acid than oxalic, it is difficult to see. By Berthollet's test of acidity, the former is more energetic than the latter, in the proportion of 100 to about 58, for these numbers are inversely as the quantity of each requisite to saturate a given base. If he be inclined to reject this rule, and appeal to the decomposition of the carbonate by oxalic acid, as a criterion of relative power, let us adduce

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liis own commentary on the statical affinities of 4. Ferroprussic. Herthollet, where he ascribes such changes not to 5. Hydroselenic. a superior attraction in the decomposing sub- 6. Hydroprussic, or stance, but to the elastic tendency of that which Hydrocyanic,

is evolved. Ammonia separates magnesia from its muriatic solution at common temperatures : at the boiling heat of water, magnesia separates ammonia. Carbonate of ammonia, at tempera- tures under 230►►, precipitates carbonate of lime from the muriate : at higher temperatures, the inverse decomposition takes place with the same ingredients. If the oxalic be a more energetic !►►► Aceric acid than the carbonic, or rank higher in the 2. Acetic, scale of acidity, then, on adding to a given 3. Amniotic. weight of liquid muriate of lime, a mixture of 4. Benzoic. oxalate and carbonate of ammonia, each in equi- 5. Boletic. valent quantity to the calcareous salt, oxalate of 6. Butyric, lime ought alone to be separated. It will be 7. Camphoric, found, on the contrary, by the test of acetic acid, 8. Caseic. that as much carbonate of lime will precipitate as 9- Cevadic, is sufficient to unsettle these speculations. 10. Cholesteric.

“Finally, dry nitric acid and dry sulphate of H- Citric, potash, are placed, by this supposition, in as 12. Delphinic. mysterious a predicament as dry muriate of soda 13. Ellagic. in the chloridic theory. Deprived of hydrogen, 14. Formic, their acids and alkali are enfeebled or totally 15. Fungic. changed. With a little water, both instantly re- 16. Gallic, cruit their powers. In a word, the solid sulphu- 17. Igasuric. ric acid of Nordhausen, and the dry potash of 18. Kinic. potassium, are alone sufficient to subvert this 19. Lactic, whole hypothesis of hydrogenation.” 20. Lactic.

The able chemist whom we have last quoted 21. Lampic. proposes the following distribution of acids ” to 22. Lithic or Uric. give general views to beginners in the study.” 23. Malic.

7. Hydrosulphmous.

8. Hydrotellurous.

9. Sulphuroprussic.

Family 3d. ××× Acids without oxygen or hydrogen.

1. Chloriodic. 3. Fluoboric

2. Chloroprussic, or 4. Fluosilicic.

Chlorocyanic.

II. Division Zd.Acids of organic origin.

24. Meconic.

25. Menispermic.

26. Margaric.

27. Melassic?

28. Mellitic.

29. Moroxylic.

30. Mucic.

31. Nanceic.

32. Nitro-leucic.

33. Nitro-saccharic.

34. Oleic.

35. Oxalic.

36. Purpuric.

37. Pyrolithic.

38. Pyromalic.

39. Pyrotartaric.

40. Rosacic.

41. Saclactic.

42. Sebacic.

43. Suberic.

44. Succinic.

45. Sulphovinic?

46. Tartaric.

We treat them, as before stated, in their alpha- The acids of the last division are all decompos-

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betical order : ⁂

I. Division 1st, Acids from inorganic nature, or which are procurable without having recourse to animal or vegetable products.

II. Division 2d, Acids elaborated by means of organization.

The first group is subdivided into three families : 1st, Oxygen acids; 2d, Hydrogen acids; 3d, Acids destitute of both these supposed acidifiers.

I. Division \ . Inorganic Acids.

Family 1st. ⁂ Oxygen acids.

Section 1st, Non-metallic.

1. Boracic. 11. Hypophosphorous.

2. Carbonic. 12. Phosphorous.

3. Chloric. 13. Phosphatic.

4. Perchloric? 14. Phosphoric.

5. Chloro-Carbonic. 15. Hyposulphurous.

6. Nitrous. 16. Sulphurous.

7. Hyponitric. 17. Hyposulphuric.

8. Nitric. 18. Sulphuric.

9. lodic. 19. Cyanic? 10. lodo-Sulphuric.

Section 2d, Oxygen acids. ††† Metallic.

1. Arsenic. 6. Columbic.

2. Arsenious. 7. Molybdic.

3. Antimonious. 8. Molybdous.

4. Antimoniac. 9. Tungstic.

5. Chromic.

Family 2d. ††† Hydrogen acids.

1. Fluoric. 3. Hydrochloric, or

2. Hydriodic Muriatic.

able at a red heat, and afford generally carbon, hydrogen, oxygen, and in some few cases also nitrogen. The mellitic is found like amber in wood, coal, and, like it, is undoubtedly of organic origin.

ACIDIMETRY, in chemistry, the measure- ment of the power or strength of acids ; gene- rally effected by saturating a given weight of them with an alkaline base, when the quantity of alkaline is required in the measure of their power.

ACIDUL./E, as natural history, a species of mineral waters, distinguished by a latent acidity in their nature. When they are unaccompanied with heat, they are called acidula ; but if heat be added to their brisk spirit, they are denominated thermx. Acidulte are native waters, impregnated with particles of some acid mineral, as vitriol, alum, nitre, or salt, and contain a considerable quantity of fixed air. Water may readily be im- pregnated with carbonic gas, but an air-tight vessel must be employed. The physicians also frequently include chalybeate wnd aluminous or ferruginous waters, under the class of acidule. An analysis of mineral waters may be made, either by evapo- ration, which will discover both the quantity of solid matter contained in the water, and by sub- sequent trials, the peculiar nature of it ; or by distillation, whence it may be known, whether the water contain any volatile matter, saline or bitu- minous; or again, by the mixture of certain li- quors. The most common for this purpose are the infusion of galls, syrup of violets, oil of tartar, volatile alkaline salts, tincture of sulphur and aqu-

afortis. A small quantity of the infusion ol galls will discover whether the water be impregnated with iron. If it contain a coarse oker, the colour struck by the galls is very dark ; the finer iron pro- duces an inky purple ; but the finest, such as the pyrmont water contains, gives a perfect black. A dram of syrup of violets, mixed with a small wine glass of the mineral water, will produce a green colour, if there be any alkaline salt, or alum in it ; though, it is said, that if the spirit be new, alum will turn it red. This green colour is also observed, when a solution of iron is met with ; with an acid, the syrup produces a red. Volatile alkaline salt precipitates the contents of hard water, and disco- vers mercury, or any of its preparations, by turn- ing the liquor whitish, and coagulating part of it. It discovers copper, by producing a blue colour. Volatile tincture of sulphur discovers lead in water, by turning it into a dusky brown colour, nitric acid turns the water into a green colour, if it contains a solution of copper.

ACIDULATED, an epithet applied to me- dicines that have an acid in their composition.

ACIDULOUS, in chemistry, expresses either generally a slight degree of acid, or in particular an excess of acid in a compound salt ; thus acidu- lous sulphate of potash is the sulphate of potash with an excess of acid.

ACIDULUM, in chemistry, a genus of native vegetable salts, consisting of potash saturated with an excess of acid, and comprising two species, tartareous acidulum, or the acidulous tartrite of potash, and the oxalic acidulum, or acvdulous oxalat of potash.

ACIERNO. See ACERNO.

ACILIA LEX, in Roman antiquity, a cele- brated law, enacted by Acilius the tribune, for the plantation of five colonies in Italy. 2. Ano- ther law, called also Calpurnia, enacted A. U.C. 684, against bribing elections. 3. A law against extortion.

ACILIUS, (M. Balbus) a consul withPortius Cato, A. U. 640 ; during whose consulship, according to Pliny, milk and blood fell from heaven.

ACILIUS, (Glabrio) a tribune who put down an insurrection amongst the slaves of Etruria. He was consul with P. Corn. Scipio Nasica, and conquered Antiochus A. U. C. 563, for which he obtained the honour of a triumph. He was a candidate for the censorship in opposition to Cato. Also, a son of the preceding, who erected a temple to Piety, and the first golden statue that was ever seen in Italy, to the memory of his father. The temple was erected on the scite where a Roman female had fed her aged father with her milk. There was also a consul of this name in Domitian's time whose son was put to death by the tyrant for exhibiting more strength than him- self in a contest with wild beasts.

ACII.IUS, the surname of a Roman family, which produced several great men. See GLA- BRIO.

ACINACIFORMIS in botany, from aKivdˆQ, a scimitar, scimitar-shaped, an epithet for a leaf: Folium acinaciforme, a leaf which has one edge convex and sharp, the other straight and thick, as in the Mysembryanthemum. Linn. Phil. Bot.

ACINACES in antiquity, a kind of cutlass or scimetar; in use among the Persians.

AC IN ARIA, in botany, a name given by some to the marsh wortle-berries, or vaccinia palustria.

ACINESIA, aKivˆfta, from a, negative, and Kivtw, to move. In medicine, the immobility of the whole body or any part of it, as in a palsy, apoplexy, &c. Also, applied by Galen to the suspension of the pulse.

ACINI, in botany, small grains, or berries, growing in bunches, after the manner of grapes ; also the stones or seeds of grapes. The berries of the elder, privet, ivy, &c are of this kind, and so called.

ACINI GRANDULOSI, in anatomy, some glands, so called from their formation.

ACINIFORMIS TUNICA, the same with the tunica uvea of the eye. It is also called acinosa tunica.

ACINODENDRON, in botany, the name given by Burman, to a species of plants, called melastoma, belonging, in the Linnaean system, to the genus thymus, and to the class and order didynamia gymnospermia.

ACINOS, in botany, stone, or wild basil. See THYMUS.

ACINUS, in botany, properly signifies the grape. See ACINI. It is also the name of the staphyloma.

ACIPENSER. See ACCIPENSER.

ACIS, in fabulous history, the son of Faunus and Simetheis, was a beautiful shepherd of Sicily, who being beloved by Galatea, Polyphemus the giant was so enraged, that he dashed out his brains with a piece of rock ; after which Gala- tea turned him into a river, which was called by his name : now the Aci or liaci.

ACITLI, in ornithology the common Mexi- can name of the great cres ? d diver, common to Europe and America, and more usually called by authors, the lepus aqueus or water hare.

AC KEN, a small town in *he duchy of Mag- deburg, situate on the Elbe,

ACKLAND'S ISLAND, sometimes called South Crooked Island, one of the Bahamas, lying ir. N. lat. 23►►, 20'. and E. long. 73►►, 30'. It is about 50 miles in length ; and seven in breadth, at its northern extremity, but very narrow south- ward. Atwood's harbour, to the north, has good anchorage for small vessels. The flamingo roosts here in great numbers.

ACKLIN'S KEYS is a name sometimes given to a groupe of islands, of which the above and Long- key or Fortune's Island are the principal.

ACKNOW', -\ Composed of the

ACKNOWLEDGE, (ˆ prefix a ►►► subsequent-

ACKNOWL'EDGEMENT, (ly ac, cnawan, to know,

ACKNOWLEDGING. J and lecgan, to lay, Ang. Sax. To lay open to, to make known to, to discover to ; to confess, to make a conces-

So ech that denyeth the sone hath not the fadir, but he that knowlechith the sone hath the fadir.

Wtclif, 1 Jon. chap. ii.

That their hearts might be comforted, being knit together in love, and unto all riches of the full assur.

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ance of understanding, to the acknowledgement of God, and of the Father, and of Christ.

Colossians, chap. ii. v. 2.

But is it credible, that the very acknowledgment of our unworthiness to obtain, and in that respect, our professed fearfulness to ask any thing, otherwise than only for his sake to whom God can deny nothing ; that this should be termed baseness, abjection of mind, or servility ??? is it credible ? Hooker's EC. Pol.

My people do already know my mind ; And will acknowledge you and Jessica, In place of lord Bassanio and myself. Shaks.

Thou sun of this great world both eye and soul, Acknowledge him thy greater ; sound his praise In thy eternal course, both when thou climbest And when high noon hast gain'd, and when thou fallest. Milton.

None, that acknowledge God or providence, Their soul's eternity did ever doubt. Dailies.

There can be no more forcible motive to patience, than the acknowledgement of the divine hand that strikes us. Hall's Contemplations.

As teaching bringeth us to know that God is our supreme good ; so prayer testifieth that we acknowledge him our sovereign good. Bishop Taylor's Sermons. ALMANZ. Accept this diamond, till I can present Something more worthy my acknowledgment.

Dryden's Conquest of Granada, part ii. We are the subjects of the Almighty ; and whe- ther we acknowledge it or not, we live, and cannot but live under his government. Bishop Porteus.

ACKNOWLEDGMENT MONEY, a sum paid by tenants, in several parts of England, on the death of their landlords, as an acknowledgment of their new lords.

ACKWORTH, a village, near Pontefract in Yorkshire ; distinguished by a benevolent insti- tution for the education of the children of Qua- kers. This school belonged originally to the Foundling Hospital,

London ; but in the year 1777, being offered for sale, with eighty-five acres of adjoining land, the respectable society of Friend* bought the property, and endowed it at an expense of ––7000 tor the education of their own youth of both sexes. The edifice is built entirely of stone ; and part of the eastern wing has been converted into a meeting house.

ACLIDES, in Roman antiquity, a kind of missile weapon, having a thong fixed to it, by which, after casting it out of the hand, it might be drawn back again. Servius describes the aclides as full of spiculae.

ACLOWA, in botany, a barbarous name of a species of colutea. It is used by the natives of Guinea to cure the itch : They rub it on the body as we do unguents.

ACMASTICA, in medicine, a continued fever. See SYNOCHUS.

AC'ME, ae/ijj, Gr. the highest point of any thing ; the crisis.

ACMELLA. See ACHAMELLA

ACMONIA. See AGMONIA.

ACNE, in medicine, a name given to a small pimple, or hard tubercle, on the face.

ACNIDA, VIRGINIAN HEMP, in botany, a genus of the dioecia order, belonging to the pentandria class of plants ; and, in the natural order, associating with the scabrida?.

ACNUA, in Roman antiquity, a measure of ––nd, about equal to the English rood.

AGO, a fish found in the lake Como, Italy and in the Mediterranean, called also aquo and sarachus.

ACOBAMBA, a settlement of Peru, in the province of Argaraes, forming the capital, buf. now decayed. Also, the name of two smaller Peruvian settlements.

ACOEMETˆ,, or ACOEMETI, from a priva- tive, and Koipau, to sleep, in church history, cer- tain monks, who flourished in the East, in the fifth century; and who had divine service per- formed, without interruption, in their churches. The religious of the Holy Sacrament, in the church of Rome still keep up a perpetual ado- ration : some one or other of them praying before the sacrament, day and night. The ancient acoemetae are supposed, by Wetstein and others, to have

written the Codex Alexandrinus, as it contains a catalogue of the psalms to be snng every hour of the day and night.

ACOLCHICHI, in ornithology, the Mexican name for the oriolus phcenicus of Linnaeus.

ACOLD', or COLD. See COLD. And as it shulde so betide, A poure lazar upon a tide Came to the gate and axed meate : But there might he nothing geate, Thus laie this poure in great distresse, A colde and hongred at the gate.

Gower, Con. A. book vi. v. 9.

Prick my hand

And it will bleed ; a fever shakes me,

And the self-same wind that makes the young lambs shrink,

Makes me acold.

Beaumont and Fletcher's Faithful Shepherdesi, acti. sc. 1.

ACOLIN, in zoology, the name of a bird of the partridge kind, common in the Spanish West Indies.

ACOLYTHI, in ecclesiastical history was first applied to young people, who continually attended the bishops, and were generally candi- dates for the ministry. In the Romish church their functions became different. They were such as had only received the first of the four lesser orders, and whose business was to light the tapers, carry the candlesticks, and the in- cense-pot, and prepare the wine and water.

ACOLYTHUS, a title in the Grecian empire, given to the captain or commander of theVa- rangi, a body of guards appointed for the secu- rity of the emperor's palace.

ACOMAC. See ACCOMAC.

ACOMINATUS, (Nicetas,) was secretary to Alexius Comnenus and to Isaacus Angelus suc- cessively ; he wrote a history from the death of Alexius Comnenus in 11 18, where Zonaras ended his, to the year 1203, which has undergone many impressions, and is much applauded by the best critics in history.

ACON, an instrument used in the ancient ex- ercises, like the discus. Also an ancient order of knights, who joined the Hospitallers.

ACONCAGUA, a province of Chili, South America, bounded on the north and west by Quillosa, on the east by the Andes, and south by Santiago. The mountains furnish immense quantities of copper ore ; and the neighbourhood

abounds with greens and fruits. There is a royal road through this province, across the Cordil- leras to Mendoza and Santiago, by which the mails of Europe are regularly received once a month. The treasures which pass by this road in winter, are frequently interrupted by means of snow falling down from the mountains, and provisions for continual stoppages are a necessary part of the equipage. The territory itself is level, and contains a population of 8000 souls.

ACONCAGUA, a trading town of Chili, the an- cient capital of a province, now reduced.

ACONCAGUA, a considerable river of Chili, which, rising in the Cordilleras, and passing through Quilot, Cirvon, &c. enters the Pacific at about 33►► S. lat.

ACONCROBA, in botany, a plant that grows wild in Guinea, and is much esteemed for its virtue in the small-pox. It is given infused in wine.

ACONE, in antiquity, 1. A stone used as a whetstone, and more usually known among the Romans by the name coticula. 2. A mortar for the purpose of levigation.

ACONITA, in chemistry, a vegetable poison recently extracted from the aconitum Napellus, or wolf's bane. It is of an alkaline character, and we are indebted to Mr. Brande for its dis- covery.

ACONITI, ctKoviToe, without dust, in anti- quity, an appellation given to some of the Athle- tas, but differently interpreted : i.e. 1. Of those who only anointed their bodies with oil, but did not smear themselves over with dust, which was the usual practice. 2. Of those who conquered easily without dust, q. d. O.KOVITI a/►►ax►►, with little trouble.

ACONITON,in medicine, signifies not plas- tered, and is applied to

vessels not lined within.

ACONITUM, ACONITE, WOLFSBANE, or MONKSHOOD ; a genus of the trigynia order, be- longing to the polyandria class of plants. In the natural order, it associates with the multisi- liquas.

ACONQUIJA, a lofty mountain of Tucuman, in the vice-royalty of Buenos Ayres, covered with perpetual snow, and said to be very pro- ductive of the precious metals.

ACONTIAS, from AKOVTIOV, Gr. a name with Pliny and others, for a sort of comet, or meteor. Also a serpent of Calabria and Sicily, whose bite is very poisonous. It is an obsolete name of the anguis jaculus, or dart-snake. See AN- GUIS.

ACONTIUM, atcovriov, in Grecian antiquity, a kind of dart or javelin resembling the Roman pilum.

ACONTIUS, (James,) a philosopher, civilian, and divine, born at Trent: in 1.557, he embraced the reformed religion ; and coming into England in the reign of queen Elizabeth, was much ho- noured by her, which he acknowledges in his celebrated Collection of the Stratagems of Satan, dedicated to that queen. He also wrote De Methodo sive recta Investigandarum, 1558, which

is considered his best work : and Ars Muuien- dorum Oppidorum, 1585.

ACOOTAN, one of the Aleutian or Fox- islands, containing some very lofty mountains.

ACOPA or ACOPICA, in botany, a name given by Dioscorides, and some authors, to the meny- anthes trifoliata, or buck-bean.

ACOPA, Gr. from a privative, and KOTTOC, wea- riness, in medicine, remedies against lassitude or weariness, such as tensions, pains in the bones, &c. Acopis, is a fossile salt, described by Pliny, and used by the ancients, mixed with oil for this purpose.

ACOPON, ACOPUM, or ACOPOS. See ACOPA.

ACOR, in medicine, sourness or acrimony, as in the stomi.cn, &c.

ACORDINA, in chemistry, Indian tutty.

ACORI, in natural history, BLUE CORAL. The true acori is very scarce ;

some, however, is obtained on the coasts of Africa, near the river Camarones. That of the kingdom of Benin is also much esteemed. It is also a name for the greater Galangal root.

A'CORN, | Ang. Sax. Ac: oak: corn.

A'CORNED. } The corn, grain, or fruit of the oak.

Cornels and bramble-berries gave the rest ; And falling acorns furnish'd out a feast.

Dryden's Ovid.

The ACORN, in early ages, was a common arti- cle of food, and so late as 1709, was extensively used in France during a scarcity. It was divested of its husk and then boiled. In Spain, it is said in former times to have been served at table as a delicacy. It has often been substituted for coifee when roasted.

ACORN, in medicine, the seed of the oak, used as an astringent.

ACORN, in maritime affairs, a little piece of wood, fashioned like a cone, and fixed on the uppermost point of the spindle, above the vane, on the mast head, to keep the vane on.

ACORUS, CALAMUS AROMATICUS, SWEET FLAG, or SWEET RUSH : a genus of the mono- gynia order, belonging to the hexandria class of plants ; and ranking in the second natural order, piperitse.

ACORUS, in natural history. See ACORI.

ACOSTAN, a mountainous island in the north seas between Asia and America, observed by Captain Cook.

ACOTYLEDENES,of a, priv. and KOTV\TI$OV, lobeless, in botany, a class of plants without lobes, or seminal leaves. It is the first class in the natural order of Jussieu.

ACOUS, or Accous, a town of France, in the province of Beam, department of the Lower Pyrenees, and arrondissement of Oleron. Population 1600. It is about nine leagues south- west of Pau.

ACOUSMATICI, from UKSU, to hear, such of the disciples of Pythagoras, as had not com- pleted their five' years' probation. They are sometimes called by Latin writers, acoustici.

ACOUSTICS.

ACCOUSTIC DISCIPLES. SeeAcousMATici.

ACOUSTIC DUCT, in anatomy, the meatus audi- torius, or external passage of the ear. See ANA- TOMY.

ACOUSTIC INSTRUMENT, or auricular tube, See ACOUSTICS.

ACOUSTIC MEDICINES, remedies against im- perfections and disorders of the ear.

ACOUSTIC NERVE, the auditory nerve. See ANATOMY.

ACOUSTIC VESSELS, in the ancient theatres, were a kind of vessels, made of brass, shaped in the bell-fashion, which being of all tones within the pitch of the voice or even of instru- ments, rendered the sounds more audible, so that the actors could be heard through all parts of the theatres, when they were even 400 feet in diameter.

ACOUSTICA, or ACOUSTICS, from aicovw, audio ; called also, PHONICS, from tavt), vox, vel sonus, a voice, or sound, is the doctrine or science of sounds. Some authors divide it into two branches, and entitle thai which treats of the properties of sounds that come directly to the ear, DIACOUSTICS, and that which illustrates the nature of reflected sounds, CATACOUSTICS ; but these distinctions do not appear to be of any real importance. In treating of this subject, we pro- pose to give a concise view,

I. OF THE DIFFERENT THEORIES of SOUND.

II. OF THE DIFFUSION of SOUND.

III. OF ITS VELOCITY, and

IV. OF ITS REVERBERATION : closing our arti- cle with a few familiar experiments that will il- lustrate the laws of this science.

SECT. I. OF THE THEORY of SOUND. ††† Strange it is, that upon a topic which has ex- ercised the powers of a Bacon, a Newton, and a Boyle, and to which some of our most accurate modern experimenters have also directed their attention, so little that is satisfactory in theory can be produced. There is, in fact, hardly any doctrine of acoustics, that can be offered with confidence to the reader. Embracing phenomena, which must have attracted the attention of man- kind from the earliest period of history, and which in its connection with

music, and every modulation of the human voice, offers much that is in the highest degree essential to the pleasure of social intercourse, a philosophical theory of sound seems as yet to have eluded research. We shall, in this article, therefore only attempt a record of the best opinions upon the subject that have been given by our predecessors : fairly avowing to our readers, that we look to a better digest of past experiments, and many future ad- ditional ones, for a more satisfactory theory than any that has yet been offered : every one that we have yet seen being in many important points, inconsistent with well-recorded facts and observations. And the progress of our work will give us an opportunity (under EAR, ECHO, HARMONY, HEARING, Music, PNEUMATICS, SouND,&c.)of recording any thing that may then

be added to the philosophical materials c? the subject.

Sound then has been said to be strictly a sen- sation or perception of the mind, communicated by the ear ; or the effect of some external col- lision of bodies which has produced a tremulous motion or vibration, communicated to the ear. In popular language, the surrounding air or at- mosphere, is generally understood to be the me- dium of sound, but a slight observation of facts will shew that air is by no means the only con- ductor of sound ; fluids generally, and bodies of all degrees of hardness and of elasticity are also mediums of its diffusion.

Philosophers, in attempting to find the imme- diate cause of sonorous motion, tell us that all bodies consist of an infinite number of invisible parts or corpuscles perfectly hard and incom- pressible ; that these are surrounded by particles differing according to the different union and figures of their component parts ; and that these last being compressed by an external power or impulse, have a constant tendency to restore themselves to their settled and former state. It is this motion of the latter particles which M. Perrault and others consider as the proximate cause of sound. So that if we rightly under- stand this theory, it is simply the struggle of the elastic portion of bodies which produces the phenomenon in question. But what proof has ever been offered of the existence of these hard and incompressible portions ?

Other writers have contended that all bodies are essentially elastic, and are composed of parts connected throughout by a system of mutual attraction and repulsion. When this arrange- ment is disturbed, a force, of infinite variety in its degrees of power, is exerted to restore the equilibrium, and that hardness and softness, solidity and fluidity, are but relative and compa- rative, and not absolute qualities of

bodies. When, therefore, we strike a substance thua composed, the particles immediately proximat- ing yield to the impression, but press against the next particles in the series, and thus convey a vibratory motion like the oscillations of a spring or pendulum along the whole chain ; the rapidity of the transmission depending upon the relative elasticity of the body. In some bodies, in a bell, glasses, &c. when struck, this sympathetic move- ment of parts is very evident, and the manner in which, with the finger, we can deaden or stop the sound, by assisting to set the particles at rest, seems to confirm this view of the subject.

Professor Leslie has examined with some care, the laws of this interior mechanism of bodies to which he attributes sound. He says, we may determine the celerity of transmission, by the elasticity of the medium compared with its gra- vity ; or by obtaining the height of a column of the same density as the conducting substance, whose weight would measure its elasticity. This he terms the modulus of its elasticity, and serves that it may be demonstrated upon

principles of Dynamics, that the rapidity of the transmission of sound through any medium, is equal to what a descending body would acquire in falling through half the height of the modulus of elasticity ; and that this celerity for any second of time may be obtained in English feetˆ by mul- tiplying the square root of half the modulus by eight. One easy method which he suggests for ascertaining the modulus of elasticity in solid rods or planks is, to observe their swag or cur- vature when laid in an horizontal position on props. He found by experiments of this kind, that the modulus of Memel fir was equal to 671,625 feet; and that its particles would there- fore convey a vibratory impulse with a velocity of 4636 feet in a second, nearly four times the rapidity with which sound travels through the air.

Several foreign philosophers have directed their attention to the velocity with which the tremor of sound passes through various bodies. M. Biot ascertained that sound was conveyed through a train of iron pipes of 2550 feet in length, in 2.79 sec. ; through the air, it would have pass- ed the same distance in 2.5 sec. M. Hassen- fratz has attempted to make similar calculations, in the subterranean quarries of Paris, upon the transmission of sound through brick and stone ; but no precise results have as yet been given to the world.

Professor Chladni has endeavoured to obtain data upon this curious point, from a very dif- ferent source: viz. the musical note which a bar of a given substance would emit when struck ; and he thus contends that sound may be reckoned to pass through glass and iron at the prodigious rate of 1 7,500 feet, or upwards of three miles in each second.

Through fresh water, sound is propagated at a velocity of about 4475 feet in a second, or at a rate four times swifter than through the atmos- phere. The waters of the ocean convey sound, about a seventeenth more rapidly. Ice is said to possess the power of transmission about equally with water ; an easy proof of which is supplied by the tremor that may be felt underfoot on a frozen river or lake struck, at a distance, long before the sound of the blow reaches the ear. That fishes are endued with auricular or- gans, has been demonstrated by the late great anatomist, Mr. John Hunter. They have a strong perception of sound, even at the bottom of deep rivers ; though it was not until modern times that the seat of their auricular organs was discovered.

While the theory of sound thus involves some singular questions as to its origin and first trans- mission, its connexion with the auditory nerves of man is also curious. The ear is the immediate and most direct instrument of this perception ; but the whole of the skull bone, the palate, the teeth, and even the nostrils, assist in its func- tions ; thus the deaf have been made sensible of sounds by holding a piece of metal between their teeth.

We should not omit to state that the extraor- dinary rapidity with which sound passes through solid bodies, induced philosophers to suppose, even to a very late period, that its transmission

was instantaneous; and that Sir Isaac Newlon himself seems to have coincided with this. It appears now, however, perfectly clear, that its motion is in all cases progressive, and subject to regular, however mysterious, laws.

SECT. II. OF THE DIFFUSION OF SOUND. ††† The theories and experiments to which we have ad- verted, trace the transmission of sound in various important ways. Regarding the air, however, now, as the great ordinary medium of sound, we devote this section to the consideration of its functions in this respect.

Sonorous bodies seem to communicate to the air their own tremulous impression, which is then further propagated according to the laws of

pneumatics. A few particles being driven from the surface of the sonorous body, propet their contiguous particles into a less space. The medium thus rarefied in one place, becomes condensed in the other ; while the air thus com- pressed in the second place, is restored by elas- ticity to its former one ; and the air contiguous to that becomes compressed. The air less com- pressed, again expanding itself, a new compres- sion is made, and the motion arising from each agitation, produces an undulation of air, analo- gous to a wave upon the surface of the water, carrying with great velocity all the articulate distinctions and divisions of sound.

In the formation of these waves of air, the particles go and return through very short and equal spaces, after the manner of a pendulum, while it vibrates two oscillations ; the velocity of the whole undulation, in the mean time, de- termining the force and other qualities of every simple sound.

That air is the principal vehicle of sound is universally allowed ; and, that, without the medium of it, or some other fluid, we should ordinarily have no sounds at all, is proved by the experiment of a receiver, exhausted of its air, in an air-pump, when a bell, rung in the vacuum, makes no sound whatever : the fact is also now confirmed, that the force of the pulsa- tions depend considerably upon the degree of density, or rarefaction of the air. Dr. Priestley, to ascertain whether the intensity of sound is affected by any other property of the air besides its density, provided an apparatus, with which he performed several experiments, and at last came to the conclusion that the intensity oi sound depends solely upon the density of tne surrounding air, and not in any measure upon any chemical principle in its constitution. In inflammable air of ten times the rarefaction ot common air, the bell could be scarcely heard. In fixed air, the sound could be heard about half as far again as in common air, owing to the superior density of that air. In dephlogisticated air, the sound was sensibly louder than common air. See Experiments and Observations, vol. v. p. 296, &c. Mr. Hauksbee, also, made many experiments of a similar nature, in air of differ- ent degrees of condensation, in the course of which, a bell was heard at the distance of thirty yards in common air, at sixty with the force of two atmospheres, and as far as ninety with the forcn of three. (Phil. Trans. 1709, xxiv. 1904, xxvi. 367, 371.)

Philosophers, however, are much divided in opinion, respecting the manner in which sound is conveyed to the ear ; i. e. whether it is diflused in the air, in a circular or undulatory manner, like the waves occasioned in a smooth water, by throwing in a stone; or, whether it runs in straight lines, like the rays of light dif- fused from a centre, in the manner that the electrical fluid runs along a rod of iron. Sir Isaac Newton adopted the former theory, and illustrated the propagation of sound by an un- dulatory, or rather vermicular motion in the particles of the air, drawn from the familiar instance of the crawling of a worm, which first carries its contractions from the hinder part, to throw its fore part to the proper distance, and then carries them back to bring the hinder part forward. Something similar to this takes place in the air, when agitated by the percussion of a sounding body : and thus he supposes there is an alternate rondensation and relaxation of the air during one vibration : and as the air in its progress for- ward strikes an opposing body with greater force, than in its retrogradation, Sir Isaac entitles each of these accelerated progressions a PULSE of SOUND : and as all motion upon fluids, in any direction, operates more or less, in a circular or spherical manner all around, so these sounds will be driven in all directions, forward, backward, upward, downward, and on every side, like cir- cles in disturbed water. An idea of the rules ff sound, according to this hypothesis, may be formed from observing the tone of a church bell, while its sounds are dying away, and which are owing to the alternate progression and recession of the. air; for as each of these pulsations is formed by a single vibration of the string, they must be equal to each, as these vibrations are known to be.

With regard to the velocity of sound, (which will be more particularly treated of in Sect. III.) Newton has determined it by a very intricate calculation, to be in proportion to the density of the parts of the air, and the distance of these parts from each other; proving that each part moves like a pendulum ; from whence he infers, that if the density of the atmosphere were the same every where as on the surface of the earth, a pendulum, reaching from its highest surface down to that of the interval, is thus lost to sense : just as a flame in proportion to the velocity. And he shows, that the velocity of each pulse would as much exceed, that of such a pendulum, swinging with one complete vibration, as the circumference of a circle exceeds the diameter. From all this he calculates that the motion of sound should be 979 feet in a second ; but, upon taking an additional consideration of vapours in the air, he finds the exact velocity of sound to be 1 1 42 feet in a second, or about thirteen miles in a minute, a proportion established by ex- perience.

This theory of Sir Isaac Newton's met with many opposers. Even Bernoulli, his disciple, and one of nis principal followers, owned he did not understand this part of his Principia. He attempted therefore to give a more perspicuous demonstration of his own, that he might confirm and illustrate the Newtonian theory. The sub-

ject seemed to reject elucidation : his theory is obviously wrong, as D'Alembert has proved in his Theory of Fluids. Various objections have been made to the Newtonian system of sounds. It is urged, that this theory can only agree with the motion of sound in an elastic fluid, whereas sounds are known to move forward through water that is not elastic. To explain their pro- gress therefore through water, a second theory must be formed : so that two theories must be made to explain a similar effect ; which is equally contrary to the simplicity of true philosophy, and of nature. It is further argued, that the slow vermicular motion, but ill represents the velocity with which sounds travel. In short, it is urged, that such undulations as have been described, when coming from several sonorous bodies at once, would cross, obstruct, and con- found each other ; so that, if they were conveyed to the ear by such means, we should hear nothing but a medley of discordant and broken articula- tions. But this is equally with the rest, contra- dictory to experience, since we hear the fullest concert, not only without confusion, but with the highest pleasure. These objections, have given rise to another theory : which we shall likewise lay before the reader ; though it appears also liable to objections, which shall be after- wards noticed.

Every sound may be considered as driven off from the sonorous' body in straight lines, and impressed upon the air in one direction only : but whatever impression is made upon a fluid in one direction, is diffused upon its surface into all directions ; so that the sound first driven di- rectly forward, soon fills up a wide sphere, and is heard on every side. Thus, as it is impressed, it instantaneously travels forward with a very swift motion, resembling the velocity with which we know electricity flies from one end of a line to another. Now, as to the pulses, or close shakes as the musicians express it, which a sounding body is known to make, each pulse is itself a distinct and perfect sound, and the interval be- tween every two pulses is profoundly silent. Continuity of sound from the same body, is only a deception of the hearing ; for as each distinct sound succeeds at very small intervals, the au- ditory nerves have no time to transmit its dis- tinct images to the mind, and the interval is thus lost to sense : just as a flaming torch, flared round in a circle, appears to be a ring of fire. In this manner, a beaten drum, at some small distance, presents us with the idea of a continuing sound; and, when a child runs with his stick along a piece of railing, a

continuing sound is heard, though the stroke against each rail is perfectly- distinct and insulated. According to this theory, therefore, the pulses are nothing more than dis- tinct sounds repeated by the same body, the firsi stroke or vibration being always loudest, and travelling farther than those that follow; while each succeeding vibration gives a new sound but with diminished force, till at last the pulses die away totally, as the force decays that giv s them existence. All bodies whatsoever that are struck, return more or less a sound : but some, wanting elasticity, give back no repetition of tho sound ; the noise is at once begotten and dies

while other bodies, being more elastic and capa- ble of vibration, give back a sound, and repeat it several times successively. These last are said to have a tone ; the others are not allowed to have any. The tone of the elastic string, or bell, is notwithstanding nothing more than a similar sound of what the former bodies produced, but with the difference of being many times repeated while their notes are but single. So that, if we would give the former bodies a tone, it will be necessary to maˆe them repeat their sound, by repeating our blows swiftly upon them. This will effectually give them a tone ; and even an unmusical instrument has often had a fine effect by its tone in our concerts.*

Let us then suppose, that by swift and equally continued strokes, we give any non-elastic body its tone : it is very obvious, that no alterations will be made in this tone by the quickness of the strokes, though repeated ever so fast. These will only render the tone more equal and continuous, but will make no alteration in it. On the con- trary, if we make an alteration in the force of each blow, a different tone will then undoubtedly be excited. The difference will be small, it must be confessed ; for the tones of these indexible bodies are capable of but small variation, how ever, there will certainly be a difference. A table will return a different sound when struck with a club, from what it will do if struck with a whip. Thus non-elastic bodies return a difference of tone, not in proportion to the swiftness with which their sound is repeated, but in proportion to the greatness of the blow which produced it ; for in two equal non-elastic bodies, that body produced the deepest tone which was strucn by the greatest blow. Mr. Euler is of opinion, that no sound making fewer vibrations than thirty, or more than 7520 in % second, is distinguishable by the human ear ; according to which principle, the extremes of our sense of

hearing with respect to acute and grave sounds, is an interval of eight octaves. Tentam. Novum Theor. Mus. cap. i. sect. 13.

We now then come to the critical question, What is it that produces the difference of tone in two elastic sounding bells or strings? Or, what makes the one deep and the other shrill? This question has always been hitherto answered by saying, that the depth or height of the note proceeded from the slowness or swiftness of the ibrations. The slowest vibrations, it has been said, are qualified for producing the deepest tones, while the swiftest produce the highest tones. In this case, an effect has been given for a cause. It is in fact the force with which the sounding string strikes the air, that makes the true distinction in the tones of sounds ; and which, with greater or less impressions, resembling the greater or less force of the blows upon a non- elastic body, produces correspondent affections of sound. The greatest forces produce the deepest sounds : the high notes are the effect of small efforts. Much also depends upon the con- stitution, figure, and quantity of the sonorous body, the manner of percussion, &c. ; to say nothing of the intervening obstacles, distance, and disposition of the auricular organ. Thus a bell, wide at the mouth g'ives a grave sound ;

but if it be very massy, that will render it still graver ; but if massy, wide, and long or high, that will make the tone deepest of all. Thus, then, will elastic bodies give the deepest sound, in proportion to the force with which they strike the air : but if we attempt to increase their force by giving them a stronger blow, this will be in vain ; they will still return the same tone ; for such is their formation, that they are sonorous only because they are elastic, and the force of this elasticity is not increased by our strength, as the period of a pendulum's vibration will not be increased by falling from a greater height.

From the above considerations, the most accu- rate distinctions of sound have been resolved into loud and low, grave and acute, long and short. With respect to the vibration necessary to produce the various concatenations of sound, particularly in the ascending series , it has been found from the nature of elastic strings, that the longest strings have the widest vibrations, and consequently go backward and forward slowest ; while, on the contrary, the shortest strings vibrate the quickest, or come and go in the shortest in- tervals. Hence it has been asserted, that the tone of the string depends upon the length or shortness of the vibrations. This, however, is not the case. The same string, when struck upon, must always, like the same pendulum, return precisely similar vibrations ; but it is well known, that the same

string does not always return pre- cisely the same tone : so that in this case, the vibrations follow one rule, and the tone another. The vibrations must be invariably the same in the same string, which does not return the same tone invariably, as is well known to musicians in general. In the violin, for instance, we easily alter the tone of the string an octave, or eight notes higher, by a softer method of drawing the bow ; and, some are known thus to bring out the most charming airs imaginable ; or, those peculiar tones called flute notes. The only reason, it has been alleged, that can be assigned for the same string thus returning different tones, must certainly be the different force of its strokes upon the air. In one case, it has double the tone of the other ; because upon the soft touches of the bow, only half its elasticity is put into vibration. Thus, say the authors of this theory, we shall be able clearly to account for many things re- lating to sounds that have hitherto been inex- plicable. For instance, if it be asked, when two strings are stretched together of equal lengths, tensions, and thickness, how does it happen, that one of them being struck, and made to vibrate throughout, the other shall vi- brate throughout also ? The answer is obvious : the force that the string struck receives, is com- municated to the air, and the air communicates the same to the similar string ; which therefore receives all the force of the former ; and the force being equal, the vibrations must be so too. Again, if one string be but half the length of the other, and be struck, how will the vibrations be The answer is, the longest string will receive all the force of the string half as long as itself, and therefore it will vibrate in proportion, that is. through half its length. In the same manner

if the longest string were three times as long as the other, it would only vibrate in a third of its length ; or if four times, in a fourth of its length. In short, whatever force the smaller string impresses upon the air, the air will im- press a similar force upon the longer string, and partially excite its vibrations. Hence also we may account for those gradations of sound in the TEolian lyre ; an instrument (says Sir John Hawkins) lately obtruded upon the public as a new invention, though described above a cen- tury ago by Kircher. (ACOUSTICS, PI. I. fig- 1.) This instrument is easily made, being nothing more than a long narrow box of thin deal, about thirty inches long, five inches broad, and one inch and three fourths deep, with a circle in the middle of the upper side or belly about one inch and a half in diameter, pierced with small holes. On this side are seven, ten, or (accord- ing to Kircher) fifteen or more strings of very fine gut, stretched over bridges

at each end, like the bridge of a fiddle, and screwed up or relaxed with screw-pins. The strings are all tuned to one note, and the instrument is placed in a current of air, where the wind can brush over its strings with freedom. A window, with the sash just raised, to give the air admission, will answer this purpose exactly. When the air blows upon these strings with different degrees of force, there will be excited different degrees of sound ; sometimes the blast brings out all the tones in full concert: sometimes it sinks them to the softest murmurs ; it produces every tone, and by its gradations of strength solicits those gradations of sound, which art has taken differ- ent methods to produce. See ./EOLIAN HARP. The same observations may be applied to the loudness and lowness, or, as musicians speak, the strength and softness of sound. In vibra- ting elastic strings, the loudness of the tone is in proportion to the deepness of the note ; that is, in two strings, all things in other circum- stances alike, the deepest tone will be loudest. In musical instruments, upon a different princi- ple, as in the violin, it is otherwise ; the tones are made in such instruments, by a number of small vibrations crowded into one stroke. The resined bow, for instance, being drawn along a string, its roughnesses catch the string at very small intervals, and excite its vibrations. In that instrument, therefore, to excite loud tones, the bow must be drawn quick, and this will produce the greatest number of vibrations. But it must he observed, that the more quickly the bow passes over the string, the less apt will the roughness of its surface be to touch the string at every instant ; to remedy this, therefore, the bow must be pressed the harder as it is drawn quicker, and tnus its full sound will be brought out from the instrument. If the swiftness of the vibrations, in an instrument thus excited, exceed the force of the deeper sound in another, then the swift vibrations will be heard at a greater distance, and as much farther off as the swiftness in them exceeds the force in the other. By this theory, it is alleged, may all the phenomena of musical sounds be easily explained. It \vas an ancient opinion that music was first discovered by the beating of different hammers upon the

smith's anvil, Without pursuing the fable, let us suppose an anvil, or several simi.'ir anvils, to be struck upon by several hammers of differ- ent weights or forces. The hammer, which is of double weight, upon striking the anvil, will produce a sound, double that of another, of half its weight: this double sound musicians have agreed to call an octave. The ear can judge of the difference or resemblance of these sounds, with great ease, the numbers being as one and two, and therefore very readily com- pared. Suppose a hammer, three times less than the first, strikes the anvil, the sound pro- duced by this will be three times less

than the first : so that the ear, in judging the similitude of these sounds, will find somewhat more diffi- culty ; because it is not so easy to tell how often one is contained in three, as it is to tell how often it is contained in two. Again, suppose the hammer four times less, or five time less, the dificulty of judging will be still greater. If the hammer be six or seven times less, the diffi- culty still increases, insomuch, that the ear can- not readily determine the precise gradation. Now, of all comparisions those which the mind makes most easily, and with least labour, are the most pleasing. And as the ear is but an instru- ment of the mind, it is therefore most pleased with the combination of two sounds, the differ- ence of which it can most readily distinguish. It is more pleased with the concord of two sounds, which are to each other as one and two, than of two sounds which are as one and three, or one and four, or one and five, or one and six or seven. Upon this pleasure which the mind takes in comparison, all harmony depends. The variety of sounds is infinite ; but because the ear cannot compare two sounds so as readily to dis- tinguish their discriminations when they exceed the proportion of one and seven, musicians have been content to confine all harmony within that compass, and have allowed but seven notes in musical composition.

Let us now then suppose a stringed instru- ment fitted up in the order mentioned above. For instance : let the first string be twice as long as the second ; let the third string be three times shorter than the first; let the fourth be four times, the fifth string five times, and the sixth six times as short as the first. Such an instru- ment would probably give us a representation of the lyre, as it came from the hands of the inven- tor. This instrument will give us all the seven notes following each other, in the order in which any two of them will accord together most pleasingly ; but yet it will be a very inconve- nient and disagreeable instrument ; for iu a compass of seven strings only, the first must be seven times as long as the last ; and also seven times as loud ; so that when the tones are to be played in a different order, loud and soft sounds would be intermixed with most disgusting alter- nations. In order to improve the first instru- ment, therefore, succeeding musicians very judiciously threw in all the other strings between the two first, or, in other words, between the two octaves, giving to each, the same proportion it would have had in the first natural instrument. This nr.de the instrument more portable, and

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the sounds more even and pleasing. They therefore disposed the sounds between the octave in their natural order, and gave each its own proportional dimensions. Of these sounds, where the proportion between any two of them is most obvious, the concord between them will oe most pleasing. Thus octaves, which are as two to one, have a most harmonious effect : the fourth and fifth also, sound sweetly together, and they will be found, upon calculation, to bear the same proportion to each other that octaves do. The true cause why concord is pleasing, must arise from our power, in such a case, of mea- suring more easily the differences of the tones. In proportion as the note can be measured with its fundamental tone by large and obvious dis- tinctions, then the concord is most pleasing; on the contrary, when the ear measures the dis- criminations of two tones by very small parts, or cannot measure them at all, it loses the beauty of their resemblance : the whole is discord and pain.

There is another property in the vibration of musical strings which is held to confirm the foregoing theory. If we strike the string of a harpsichord, or any other elastic sounding chord it returns a continuing sound. This till of late, was considered as one simple uniform tone ; but all musicians now confess, that it constantly re- turns four tones. The notes are, besides the fundamental tone, an octave above, a twelfth above, and a seventeenth. One of the bass notes of the harpsichord has been dissected in this manner by Rameau, and the actual existence of these tones proved beyond a possibility of being controverted. The experiment is easily tried : for if we smartly strike one of the lower keys of a harpsichord, and then take the finger briskly away, a tolerable ear will be able to dis- tinguish, that, after the fundamental tone has ceased, three other shriller tones will be dis- tinctly heard ; first, the octave above, then the twelfth, and lastly the seventeenth ; the octave above is in general almost mixed with the fun- damental tone, so as not to be easily perceived, except to an ear long habituated to the minute discriminations of sounds. Thus, the smallest tone is heard last, and the deepest and largest one first : the two others in order. In the whole theory of sounds, nothing has given greater room for speculation, conjecture, and disappointment, than this amazing property in elastic strings. The whole string is universally acknowledged to be in vibration in all its parts ; yet this single vibration returns no less than

four different sounds. They who account for the tones of strings by the number of their vibra- tions, are here at the greatest loss. Daniel Bernoulli supposes, that a vibrating string divides itself into a number of curves, each of which has a peculiar vibration ; and though they all swing together in the common vibration, yet each vibrates within itself. This opinion, which was supported, as most geometrical speculations are, with the parade of demonstration, was only born to die soon after. Others have ascribed this to an elastic difference in the parts of the air, each of which, at different intervals, thus re- ceived different impressions from the string, in

proportion to their elasticity. This is absurd. If we allow the difference of tone to proceed from the force, and not the frequency, of the vi- brations, this difficulty will admit of an easy solution. These sounds, though they seem to exist together in the string, actually follow each other in succession : while the vibration has greatest force, the fundamental tone is brought forward ; the force of the vibration decaying, the octave is produced, though only for an in- stant ; to this succeeds, with diminished force, the twelfth ; and, lastly, the seventeenth is heard to vibrate with great distinctness, while the three other tones are always silent. These sounds, thus excited, are all of them the har- monic tones, whose differences from the funda- mental tone are, as was said, strong and dis- tinct. On the other hand, the discordant tones cannot be heard. Their differences being but small, they are overpowered, and in a manner drowned in the tones of superior difference. Yet not always ; for Daniel Bernoulli has been able, from the same stroke, to make the same string bring out its harmonic and its discordant tones also. So that from hence we may infer, that every note whatsoever is only a succession of tones ; and that those are most distinctly heard, whose differences are most easily perceivable.

Against this theory, however, though of plausi- ble appearance, some strong and insuperable ob- jections seem to offer themselves : the funda- mental principle of it is incorrect. No body whatever, whether elastic or non-elastic, yields a different note by being struck by a larger in- strument, unless either the sounding body, or that part of it which emits the sound is enlarged. In this case the largest bodies always return the gravest sounds. In speaking of elastic and non-elastic bodies in a musical sense, we are not to push the distinction so far as when we speak of them philosophically. A body is musically elastic, all of whose parts are thrown into vibrations so as to emit a sound when only a part of their surface is struck. Of this kind are bells, musical strings, and all bodies whatever that are considerably hollow. Musical non-elastic bodies are such bo- dies as emit a sound

only from that particular place which is struck : thus, a table, a plate of iron nailed on wood, a bell sunk in the earth, are all of them non-elastics in a musical sense, though not philosophically so. When a solid body, such as a log of wood, is struck with a switch, only that part of it emits a sound which comes in contact with the switch ; the note is acute and loud, but would be no less so though the adjacent parts of the log were removed. If, instead of the switch, a heavier or larger instrument is made use of, a larger portion of its surface then returns a sound, and the note is consequently more grave ; but it would not be so, if the large in- strument struck it with a sharp edge, or a sur- face only equal to that of the small one. In sounds of this kind, where there is only a single stroke, without any repetition, the immediate cause of the gravity or acuteness seems to be the quantity of air displaced by the sounding body ; a large quantity displaced, produces a grave sound, and a smaller quantity a more acute one, the force wherewith the air is displaced signify-

ing very little. This is confirmed by some ex- periments made by Dr. Priestley, concerning the musical tone of electrical discharges. His remarks are : ” As the course of my experiments has re- quired a great variety of electrical explosions, I could not help observing a great variety in the musical tone made by the reports. This excited my curiosity to attempt to reduce this variation to some measure. Accordingly, by the help of a couple of spinets, and two persons who had good ears for music, I endeavoured to ascertain the tone of some electrical discharges ; and ob- served, that every discharge made several strings, particularly those that were chords to one ano- ther, to vibrate : but, one note was always pre- dominant, and sounded after the rest. As every explosion was repeated several times, and three of us separately took the same note, there re- mained no doubt but that the tone we fixed upon was at last the true one. The result was as follows : A jar containing half a square foot of coated glass sounded F sharp, concert pitch. Another jar of a different form, but equal surface, sounded the same. A jar of three square feet sounded C below F sharp. A battery consisting of sixty- four jars, each containing half a square foot, sounded F below the C. The same battery, in conjunction with another of thirty-one jars, sounded C sharp. So that a greater quantity of coated glass always gave a deeper note. Dif- ferences in the degree of a charge in the same jar made little or no difference in the tone of the explosion : if any, a higher charge gave rather a deeper note.”

These experiments prove how much the gravity or acuteness of sounds depend on the quantity of air put in agitation by the sounding body. We know that the noise of the electric explosion arises from the return of the air into the vacuum produced by the electric flash. The larger the vacuum, the deeper the note : for the same reason, the discharge of a musket produces a more acute note than that of a cannon ; and thunder is deeper than either. Other circumstances also concur to produce different degrees of gravity or acuteness in sounds. The sound of a table struck with a piece of wood, will not be the same with that produced from a plate of iron struck by the same piece of wood, even if the blows should be ex- actly equal, and the iron perfectly kept from vibrating. Here the sounds are generally said to differ in their degrees of acuteness, according to the specific gravities or densities of the substances which emit them. Thus gold, which is the most dense of all metals, returns a much graver sound than silver ; and metalline wires, which are more dense than strings return a proportionably graver sound. But neither does this appear to be a general rule in which we can put confidence. Bell metal is denser than copper, but it by no means appears to yield a graver sound ; on the contrary, it seems very probable, that copper will give a graver sound than bell-metal, if both are struck upon in their non-elastic state ; and we can by no means think that a bell of pure tin, the least dense of all the metals, will give a more acute sound than one of bell-metal which is greatly more dense. ××× In some bodies hardness seems to have a corsiderable effect.

Glass, which is considerably harder than any metal, gives a more acute sound ; bell-metal is harder than gold, lead, or tin, and therefore sounds much more acutely ; though how far this holds with regard to different substances, there are not a sufficient number of experiments for us to judge. In bodies musically elastic, the whole substance vibrates with the slightest stroke, and therefore they always give the same note, whether they are struck with a large or with a small instrument ; so that striking a part of the surface of any body musically elastic is equivalent, in it, to striking the whole surface of a non-elastic one. If the whole surface of a table was struck with another table, the note produced would be neither more nor less acute whatever force was employed ; because the whole surface would then yield a sound, and no force could increase the surface : the sound would indeed be louder in proportion to the force employed, but the gravity would remain the same. In like manner, when a bell, or mu- sical string, is struck, the whole substance vi- brates, and a greater stroke cannot increase the substance. ××× Hence we see the fallacy of what is said concerning the Pythagorean anvils. An anvil is a body

musically elastic, and no differ- ence in the tone can be perceived whether it is struck with a large or with a small hammer; because either of them are sufficient to make the whole substance vibrate, provided nothing but the anvil is struck upon : smiths, however, do not strike their anvils, but red hot iron laid upon their anvils ; and thus the vibrations of the an- vil are stopped, so that it becomes a non-elastic body, and the differences of tone in the strokes of different hammers proceed only from the sur- face of the large hammers covering the whole surface of the iron, or at least a greater part of it than the small ones. If the small hammer is sufficient to cover the whole surface of the iron as well as the large one, the note produced will be the same, whether the large or the small hammer is used. The argument for the preceding theory, grounded on the production of what are called flute notes on the violin, is also built on a false foundation ; for the bow being lightly drawn on an open string, produces no flute notes, but only the harmonics of the note to which the string is tuned. The flute notes are produced by a particular motion of the bow, quick and near the bridge, and by fingering very gently. By this management, the same sounds are pro- duced, though at certain intervals only, as if the vibrations were transferred to the space between the end of the finger-board and the finger, in- stead of that between the finger and the bridge. Why this small part of the string should vibrate in such a case, and not that which is under the immediate action of the bow, we are ignorant ; nor dare we affirm that the vibrations really are transferred in this manner, only the same sounds are produced as if they were.

Though these objections seem sufficiently to overturn the foregoing theory, with regard to acute sounds being the effects of weak strokes and grave ones of stronger impulses, we cannot admit that longer or shorter vibrations are the occasion of gravity or acuteness in sound. A

musical sound, however lengthened, either by string or bell, is only a repetition of a single one, whose duration by itself is but for a mo- ment, and is therefore inappretiable like the smack of a whip, or the explosion of an elec- trical battery. The continuation of the sound is nothing more than a repetition of this instanta- neous inappretiable noise after the manner of an echo, and it is this echo that makes the sound agreeable. For this reason, music is much more agreeable, when played in a large hall where the sound is reverberated, than in a small room where there is no such reverberation ; and for the same reason,

the sound of a string is more agreeable when put on a hollow violin than when fastened to a plain board, &c. ††† In the sound of a bell we cannot avoid observing this echo very distinctly. The sound appears to be made up of distinct pulses, or repetitions of the same note produced by the stroke of the hammer. It can by no means be allowed, that the note would be more acute though these pulses were to succeed one another more rapidly ; the sound would indeed become more simple, but would still preserve the same tone. In misical strings the reverberations are vastly ††ore quick than in bells, and therefore their sound is more uniform or simple, and consequent- ly more agreeable than that of bells. In musical glasses, the vibrations must be inconceivably quicker than in any bell, or stringed instrument : and hence they are of all others the most simple and the most agreeable, though neither the most acute nor the loudest. As far as we can judge, quickness of vibration contributes to the unifor- mity, or simplicity, but not to the acuteness, nor to the loudness, of a musical note. See HAR- MONICA.

It may here be objected, that each of the dif- ferent pulses of which we observe the sound of a bell to be composed, is of a very perceptible length, and far from being instantaneous ; so that it is not fair to infer that the sound of a bell is only a repetition of a single instantaneous stroke, seeing it is evidently the repetition of a length- ened note. To this it may be replied, that the inappretiable sound, which is produced by strik- ing a bell in a non-elastic state, is the very same which, being first propagated round the bell, forms one of these short pulses, that is afterwards re-echoed as long as the vibrations of the metal continue, and it is impossible that the quickness of repetition of any sound can either increase or diminish its gravity.

The writers on sound have been betrayed into many difficulties and obscurities, by rejecting Ihe 47th proposition, B. ii. of Newton, as incon- tlusive reasoning. Of this proposition, however, the ingenious Mr. Young of Trinity College, Dublin, published some time since a clear, explanatory defence. He concedes that the demonstration is obscurely stated, and takes the liberty of varying, in some degree, from the method of Newton. ” 1 . The parts of all sound- ing bodies (he observes,) vibrate according to the law of a cycloidal pendulum : for they may be considered as composed of an indefinite num- ber of elastic fibres; but these fibres vibrate according to that law. 2. Sounding bodies pro-

pagate their motions on all sides in directum, by successive condensations and rarefactions and successive goings forward and returning back- ward of the particles. 3. The pulses are those parts of

the air which vibrate backwards and for- wards; and which, by going forward, strike pulsant against obstacles. The latitude of a pulse is the rectilineal space through which the motion of the air is propagated during one vibra- tion of the sounding body. 4. All pulses move equally fast. This is proved by experiment : and it is found they describe 1070 Paris feet, or 1142 London feet in a second, whether the sound be loud or low, grave or acute. 5. To deter- mine the latitude of a pulse : Divide the space which the pulse describes in a given time by the number of vibrations performed in the same time by the sounding body, the quotient is the latitude.

” M. Sauveur, by some experiments on organ pipes, found that a body, which gives the gravest harmonic sound, vibrates twelve times and an half in a second, and that the shrillest sounding body vibrates 51,100 times in a second. At a medium, let us take the body which gives what Sauveur calls his fixed sound: it performs 100 vibrations in a second, and in the same time the pulses describe 1070 Parisian feet; therefore the space described by the pulses whilst the body vibrates once, that is, the latitude, or interval of the pulse will be 107 feet. See SOUND.

6. To find the proportion whicn the greatest space, through which the particles of the air vibrate, bears to the radius of a circle, whose perimeter is equal to the latitude of the pulse. During the first half of the progress of the elastic fibre, or sounding body, it is continually getting nearer to the next particle ; and during the latter half of its progress, that particle is getting farther from the fibre, and these portions of time are equal : therefore we may conclude, that at the end of the progress of the fibre, the first particle of air will be nearly as far distant from the fibre as when it began to move ; and in the same man- ner we may infer, that all the particles vibrate through spaces nearly equal to that run over by the fibre. Now, M. Sauveur has found by ex- periment, that the middle point of a chord which produces his fixed sound, and whose diameter is one sixth of a line, runs over in its smallest sen- sible vibrations one eighteenth of a line, and in its greatest vibrations seventy-two times that space ; that is seventy-two x one eighteenth of a line, or four lines, that is, one third of an inch. The latitude of the pulses of this fixed sound is 10‘7 feet; and since the circumference of a circle is to its radius as 7‘10 is to 113, the greatest space described by the particles will be to the radius of a circle, whose periphery is equal to the latitude of the pulse, as one-third of an inch is to 1-7029 feet, or 20-4348 inches, that is, as one to 61-3044. If the length of the siring be increased or diminished in any proportion cieteris paribus,l\ie greatest space described by its middle point will vary in the same proportion . For the inflecting force is, to the tending force, as the distance of the string from the middle

point of vibration to half the length of the string ; and therefore the inflecting and tending forces being given, the string will vibrate thrr igh spaces pro-

;;ortionate to its length; but the latitude of the pulse is inversely as the number of vibrations performed by the string in a given time; that is, directly as the time of one vibration, or directly as the length of the string ; therefore the greatest space, through which the middle point of the string vibrates, will vary in the direct ratio of the latitude of the pulse, or of the radius of a circle whose circumference is equal to the lati- tude ; that is, it will be to that radius as one to 61 ‘3044. ??? 7. If the particles of the aerial pulses, during any part of their vibration, be successively agitated, according to the law of a cycloidal pen- dulum; the comparative elastic forces arising from their mutual action, by which they will afterwards be agitated, will be such as will cause the particles to continue that motion, according to the same law, to the end of their vibration. 8. If a particle of the medium be agitated ac- cording to the law of a cycloidal pendulum, the comparative elastic force, acting on the adjacent particle, from the instant in which it begins to move, will be such as will cause it to continue its motion according to the same law ; that is, the comparative elastic force of the second particle, at the instant in which it begins to move, will “be to the force with which it is agitated in any other moment of time, before the subsequent particle has yet been set in motion, directly as its distance from the middle point of vibration. Now this compara- tive elastic force, with which the second particle is agitated in the very moment in which it begins to move, arises from the preceding particle’s ap- proaching it according to the law of a pendulum ; and therefore, if the preceding particle approaches it in this manner, the force by which it will be agitated, in the very moment it begins to move, will be exactly such as should take place in order to move it according to the law of a pen- dulum. It therefore sets out according to that law, and consequently the subsequent elastic forces, generated in every successive moment, will also continue to be of the just magnitude which should take plape, in order to produce such a motion. 9. The pulses of the air are propagated from sounding bodies, according to the law of a cycloidal pendulum. All the par- ticles of air in the pulses successively set out from their proper places, according to the law of a pendulum, and therefore will finish their entire vibrations according to the same law. Cor. 1. The number of pulses propagated is the same with the number

of vibrations of the tremulous body, nor is it multiplied in their progress. Cor. 2. In the extreme points of the little space through which the particle vibrates, the expan- sion of the air is in its natural state. 10. To find the velocity of the pulses, the density and elastic force of the medium being given. This is the 49th prop. B. 2. Newton, in which he shows, that whilst a pendulum, whose length is equal to the height of the homogeneous atmos- phere, vibrates once forwards and backwards, the pulses will describe a space, equal to the periphery of a circle described with that altitude as its radius. Cor. 1. He thence shows, that the velocity of the pulses is equal to that which a heavy body would acquire, in falling down half the altitude in the homogeneous atmosphere : and

therefore that all pulses move equally fast, whether the tone be loud or low, grave or acute. Cor. 2. And also, that the velocity of the pulses is in a ratio compounded of the direct subduplicate ratio of the elastic force of the medium, and the inverse subduplicate of its density. Hence sounds move somewhat faster in summer than in winter. 11. The strength of a tone is as the moment of the particles of air. The moment of these particles (the medium being given) is as their velocity ; and the velocity of these particles is as the velo- city of the string which sets them in motion : The velocities of two different strings are equal, when the spaces which they describe in their vibrations are to each other as the times of these vibrations : therefore two different tones are of equal strength, when the spaces, through which the strings producing them vibrate, are directly as the times of their vibration. Hence we should suppose, that in this case, an equal number of equal impulses would generate equally powerful tones in these strings. But we are to observe, that the longer the string, the greater, c&teris paribus, is the 3pace through which a given force inflects it ; and therefore whatever diminution is produced in the spaces through which the strings move in their successive vibrations, arising either from the want of perfect elasticity in the strings, or from the resistance of the air, this diminution will bear a greater proportion to the less space, through which the shortest string vibrates. And this is confirmed by experience ; for we find that the duration of the tone and motion of the whole string exceeds that of any of its subordinate parts. Therefore, after a given interval of time, a greater quantity of motion will remain in the longer string; and consequently, after the successive equal impulses have been made, a greater degree of motion will still subsist in it. That is, a given number of equal impulses being made on various strings, differing in length only, a stronger sound will be produced.”

These propositions Mr. Young has illustrated by mathematical

demonstrations at considerable length ; for which, as our room permits us not to insert them completely, and they would not bear to be abridged, we must refer our readers to his work.

SECT. III. OF THE VELOCITY, &c. OF SOUND. ××× Experience has taught us that sound travels at the rate of more therfi one thousand feet in a second, nor do any obstacles materially hinder its progress, a contrary wind only a small matter diminishing its velocity. The method of calculating its progress is easily made known. When a gun is discharged at a distance, we see the fire long before we hear the sound. If then we know the distance of the place, and know the time of the interval between our first seeing the fire and then hearing the re- port, this will show us exactly the time the sound has been travelling to us. For instance, if the gun is discharged a mile off, the moment the flash is seen, you take a watch and count the seconds till you hear the sound ; the number of seconds is the time the sound has been travelling a mile. ××× Again, by the above axiom, we are enabled to find the distance between objects that would be otherwise immeasurable. For example,

suppose we see the flash of a gun, in the night, at sea, and tell seven seconds before we hear the re- port, it follows therefore, that the distance is seven times 1 142 feet, that is, 24 yards more than a mile and a half. In like manner if we observe the num- ber of sounds between the lightning and the re- port of the thunder, we know the distance of the cloud from whence it proceeds.

Wind, blowing in the direction of sound, has been supposed to increase its velocity; but owing to the superior rapidity of the latter, its accelera- tion by this means must be very inconsiderable ; hence the chief effect observable from the wind is, that, by increasing and diminishing the space of the waves, it carries the sound to a greater distance. The velocity of sound in liquids has never been distinctly ascertained, although it might be easily calculated by measuring the compressibility of the medium : in gases it bears proportion to their relative densities ; and is ob- served in pure hydrogen to be three times that of common air. In the ordinary medium, it is much influenced by the elevation or depression of temperature, occasioned by the condensation or rarefaction of air ; also by the proportion of humidity contained in it. Cold fogs, by in- creasing the density of air without changing its elasticity, diminish the velocity of sound ; whilst

warm vapours, which tend to make it lighter, naturally increase it.

Sound being capable of transmission through material substances, the hardest and least com- pressible, with a velocity much greater than that with which it is conveyed through the air, the motion of a troop of cavalry is perceived at a greater distance, by listening with the head in contact with the ground, than by waiting while the sound travels through the atmosphere ; and the furniture of a house is agitated by the ap- proach of a waggon before those in the room near the sound. Mr. Wunsch observed that a series of deal rods, closely united, communi- cated an instantaneous impulse of sound, while a sensible interval elapsed before he heard it in the air. He also found that the blow of a hammer on the upper part of a great building, is heard twice by a person standing near it on the ground ; the first sound descending through the wall, and the second through the ordinary medium.

The decay of sound is the natural conse- quence of its diffusion through a larger quantity of matter, as it diverges every way from its cen- tre ; the velocity of the particles of the trans- mitting medium, diminishing in proportion to the increased distance from the centre ; their motion, therefore, which measures the strength of the sound, must vary as the square of the distance ; hence, at the distance of ten feet from the sounding body, the velocity of the particles in the medium is only one tenth as great as at the distance of one foot, and the impetus of sound one hundredth only. Young's Nat. Phil. vol. i. lect. 31 .

Dr. Derham has proposed and answered the following important queries relative to the laws of sound, which condense most of our existing information on the subject. ???

" How far does sound move in a second of time? Sound moves 1142 feet, or 380 yards, in a second, which is after the rate of an English

mile in 9j, or 9.25 half seconds ; two miles in 18}; three miles in 27J ; and about thirteen miles in one minute.

Does the report of a gun, discharged with its mouth towards us, come sooner than when the muzzle is in a contrary direction ? There is no difference in the velocity of sound from this dif- ferent direction.

Do the winds affect the motion of sounds? By repeated experiments it appears that there is some, though a very small difference, according as the sounds are with or against the wind, and as the wind is strong or soft.

Do a great and intense sound, and a soft and languid one, move with the same velocity ? They do ; for by experiments, a cannon, fired with a half-pound charge of powder, was heard at the distance of 17 miles in the same time after the flash was seen, as when fired with a charge of six pounds.

Does the sound of a gun move equally swift at all elevations? It does.

Do different quantities or strength of gun- powder, occasion any difference as to the ve- locity of sound ? None.

Does sound move, in a right line, the nearest way, or does it sweep along the earth's surface ? and is there any difference in the time, if the piece be discharged in an acclive or declive position ? Sound moves the nearest way ; and the velocity appears to be the same in acclivities as in declivities.

Have all kinds of sounds, as those of guns, bells, &c. the same velocity ? and are sounds equally swift in the beginning of their motion and the end ? There appears no inequality in either of these respects ; and, therefore, the times in which sounds are heard, are proportional to their distance, that is, at a double distance, they are heard in twice the time, &c. It appears from the above experiments and observations, that all sounds whatever travel at the same rate. The sound of a gun, and the striking of a ham- mer, are equally swift in their motions ; the softest whisper flies as swiftly, as far as it goes, as the loudest thunder. To these axioms may be added, that, smooth and clear sounds proceed from the bodies that are homogeneous, and of an uniform figure ; and harsh or obtuse sounds, from such as are of a mixed matter and irregular figure : that the velocity of sound is to that of a brisk wind as fifty to one : that the strength of sounds is greatest in cold and dense air, and least in that which is warm and rarefied : that every point against which the pulses of sound strike, becomes a centre from which a new series of pulses are propagated in every direction : and that sound describes equal spaces in equal times.

SECT. IV. OF THE REVERBERATION OF SOUNDS. Sound, like light, after it has been reflected from several places, may be collected into one point, as in a focus ; and it will be there more audible than in any other part, even than at the place from whence it proceeded. On this prin- ciple it is, that a whispering gallery is con- structed. The form of this gallery must be that of a concave hemisphere, as ABC ; (See Plate I. fig. 2.) and if a low sound or whisper be uttered at A, the vibrations expanding themselves every

way, will impinge on the points DDD, &c. and from thence be reflected to EEE, and from thence to the points F and G, till at last they all meet in C, where the sound will be the most distinctly heard.

THE AUGMENTATION of sound by SPEAKING TRUMPETS, is illustrated in the following man- ner: (See Plate I. fig. 3.) Let ABC be the tube, BD the axis, and B the mouth-piece for convey- ing the voice to the tube. It is evident, when a person speaks at B in the trumpet, the whole ibrce of his voice is spent upon the air contained in the tube, which will be agitated through the whole length of the tube ; and, by various re- flections from the side of it to the axis, the air along the middle will be greatly condensed, and its momentum proportionably increased, so that when it comes to agitate the air at the orifice of the tube AC, its force will be as much greater, ###.han it would have been without the tube, as the surface of a sphere, whose radius is equal to the length of the tube, is greater than the surface of ###he segment of such a sphere, whose base is the orifice of the tube. For a person speaking at B, without the tube, will have the force of his voice spent in exciting concentric pulses of air all around the point B ; and when the pulses are diffused as far as D every way, it is plain the force of the voice will there be diffused through the whole superficies of a sphere, whose radius is BD ; but in the trumpet it will be so confined, that, at its exit it will be diffused through so much of that spherical surface of air, as corresponds to the orifice of the tube. But since the force is given, its intensity will be always inversely as the num- ber of particles it has to move ; and therefore in the tube it will be to that without, as the superfi- cies of such a sphere to the area of the large end of the tube nearly. But it is obvious, Mr. Young observes, that the confinement of the voice can have little effect in increasing the strength of the sound, as this strength depends on the velocity with which the particles move. Were this rea- soning conclusive, the voice should issue through the smallest possible orifice; cylindrical tubes would be preferable to any that increased in diameter; and the less the diameter, the greater would be the effect of the instrument ; because the mass of air to be moved would, in that case, be less, and consequently the effect of the voice greater ; all which is contradicted by ex- perience.

The CAUSE of the INCREASE of SOUND in these tubes must therefore be derived from some other principles : and amongst these we shall probably find, that what the ingenious Kircher has sug- gested, in his

Phonurgia, is the most deserving of our attention. He tells us, that “the augmen- tation of the sound depends on its reflection from the tremulous sides of the tube; which reflections, conspiring in propagating the pulses in the same direction, must increase its intensity.” Newton also seems to have considered this as the principal cause, in the scholium of prop. 50. B. 2. Princip. when he says, “we hence see why sounds are so much increased in stentorophonic tubes ; for every reciprocal motion is, in each return, increased by the generating cause.”

When we speak in the open air, the effect on

the tympanum of a distant auditor is produced merely by a single pulse. But when we use a tube, all the pulses propagated from the mouth, except those in the direction of the axis, strike against the sides of the tube, and every point of impulse becoming anew centre, from whence the pulses are propagated in all directions, a pulse will arrive at the ear, from each of these points ; thus, by the use of a tube, a greater number of pulses are propagated to the ear, and consequently the sound increased. The confinement too of the voice may have some effect, though not such as is ascribed to it by some ; for the condensed pulses produced by the naked voice, freely ex- pand every way ; but in tubes, ‘the lateral expan- sion being diminished, the direct expansion will be increased, and consequently the velocity of the particles, and the intensity of the sound. The substance also of the tube has its effect ; for it is found by experiment, that the more elastic the substance of the tube, and consequently the more susceptible it is of these tremulous motions, the stronger is the sound. If the tube be laid on any non-elastic substance, it deadens the sound, because it prevents the vibratory motion of the parts. The sound is increased in speaking trumpets, if the tube be suspended in the air ; because the agitations are then carried on with- out interruption. These tubes should increase in diameter from the mouth-piece, because the parts, vibrating in directions perpendicular to the surface, will conjoin in impelling forward the particles of air, and consequently, by in- creasing their velocity, will increase the intensity of the sound ; and the surface also increasing, the number of points of impulse and of new propagations, will increase proportionally. The several causes, therefore, of the increase of sound in these tubes, Mr. Young concludes to be, first, the diminution of the lateral, and consequently the increase of the direct, expansion and velocity of the included air. Second, The increase of the number of pulses, by increasing the points of new propagation. Third, the reflections of the pulses from the tremulous sides of the tube, which impel the particles of air forward, and thus increase their velocity. The same reasoning applies vice

versa, to the hearing trumpet.

An echo is a reflection of sound striking against some object, as an image is reflected in a glass : but it has been disputed what are the proper qualities in a body for thus reflecting sounds. It is in general known, that caverns, grottoes, mountains, and ruined buildings, return this image of sound. There is a very extraordi- nary echo, at a ruined fortress near Louvain, in Flanders. If a person sung, he only heard his own voice, without any repetition : on the con- trary, those who stood at some distance, heard the echo but not the voice ; but then they heard it with surprising variations, sometimes louder, sometimes softer, now more near, then more distant. There is an account in the Memoirs of the French Academy, of a similar echo near Rouen. As every point against which the pulses of sound strike, becomes the centre of a new series of pulses, and sound describes equal dis- tances in equal times; therefore, when any sound is propagated from a centre, and its pulses strike

against a variety of obstacles, if the sum of the right lines drawn from that point to each of the obstacles, and from each obstacle to a second point, be equal, then will the latter be a point in which an echo will be heard. Hence all the points of the obstacles which produce an echo, must lie in the surface of the oblong sphaeroid, generated by the revolution of the ellipse round its major axis,

” As there may be several sphaeroids of dif- ferent magnitudes, so there may be several dif- ferent echoes, of the same original sound. And as there may happen to be a greater number of reflecting points in the surface of an exterior sphzeroid, than in that of an interior, a second or third echo may be much more powerful than the first, provided that the superior number of reflecting points, that is, the superior number of reflected pulses propagated to the ear, be more than sufficient to compensate for the decay of sound which arises from its being propagated through a greater space. This is finely illustrated in the celebrated echoes at the lake of Killarney, in Kerry, where the first return of the sound is much inferior in strength to those which immedi- ately succeed it. From what has been laid down, it appears, that for the most powerful echo, the sounding body should be in one focus of the ellipse, which is the section of the echoing sphae- roid, and the hearer in the other. However, an echo may be heard in other situations, though not so favourably : as such a number of reflected

pulses may arrive at the same time at the ear, as may be sufficient to excite a distinct percep- tion. Thus a person often hears the echo of his own voice ; but for this purpose he should stand at least sixty-three or sixty-four feet from the reflecting obstacle, according to what has been said before. At the common rate of speaking, we pronounce not above three syllables and a half, that is, seven half syllables in a second ; therefore, that the echo may return just as soon as three syllables are expressed, twice the distance of the speaker from the reflecting object, must be equal to 1000 feet ; for, as sound describes 1142 feet in a second, six sevenths of that space, that is, 1000 feet nearly, will be described, while six half, or three whole syllables are pronounced : that is, the speaker must stand near 500 feet from the obstacle. And in general, the distance of the speaker from the echoing face, for any num- ber of syllables, must be equal to the seventh part of the product of 1142 feet multiplied by that number. In churches we never hear a dis- tinct echo of the voice, but a confused sound when the speaker utters his words too rapidly ; because the greatest difference of distance, be- tween the direct reflected courses of such a num- ber of pulses, as would produce a distinct sound, is never in any church equal to 12 T feet, the limit of echoes.

” But though the first reflected pulses may produce no echo, both on account of their being too few in number, and too rapid in their return to the ear ; yet it is evident, that the reflecting surface may be so formed, as that the pulses which come to the ear after two reflections or more, may, after having described 127 feet or more, arrive at the ear in sufficient numbers, and

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also so nearly at the same instant, as to produce an echo, though the distance of the reflecting surface from the ear be less than the limit of echoes. This is confirmed by a singular echo ill a grotto on the banks of the little brook, called the Dinan, about two miles from Castlecomber, in the county of Kilkenny. As you enter the cave, and continue speaking .loud, no return of the voice is perceived ; but, on your arriving at a certain point, which is not above fourteen or fifteen feet from the reflecting surface, a very distinct echo is heard. Now this echo cannot arise from the first course of pulses that are re- flected to the ear, because the breadth of the cave is so small, that they would return too quickly to produce a distinct sensation from that of the original sound : it therefore is produced by those pulses, which, after having been reflected several times from one side of the grotto to the other, and having run over a greater space than 127 feet, arrive at the ear in considerable num- bers, and not more distant from each other,

in point of time, than the ninth part of a second.”

The following are familiar experiments with sound. ??? I. Let a concave mirror of about two feet diameter, be placed in a perpendicular di- rection. The focus of this mirror may be fifteen or eighteen inches from its surface. At the dis- tance of about five or six feet let there be a par- tition, in which there is an opening, equal to the size of the mirror ; against this opening must be placed a picture, painted in water colours, on a thin cloth, that the sound may easily pass through it. Behind the partition, at the distance of two or three feet, place another mirror, of the same size as the former, and let it be diametrically opposite to it. Place the figure of a man seated on a pedestal, with his ear exactly in the focus of the first mirror : his lower jaw must be made to open by a wire, and shut by a spring ; and there may be another wire to move the eyes ; these wires must pass through the figure, go under the floor, and come up be- hind the partition. A person, properly instructed, should be placed behind the partition near the mirror. Then propose to any one to speak softly to the statue, by putting his mouth to the ear of it, assuring him that it will answer instantly. You then give the signal to the person behind the partition, who, by placing his ear to the focus of the mirror, will hear distinctly what the other said ; and, moving the jaw and eyes of the statue by the wires, will return an answer directly ; which, will in like manner, be distinctly heard by the first speaker. This experiment appears to be taken from the Century of Inventions of the marquis of Worcester : whose designs, at the time they were published, were treated with ridicule and neglect, as being impracticable, but are now known to be generally, if not universally, practicable. The words of the marquis are, ” How to make a brazen or stone head in the midst of a great field, or garden, so artificial and natural, that though a man speak ever so softly, and even whisper into the ear thereof, it will presently open its mouth and resolve the question in French, Latin, Welsh, Irish, or English, in good terms, uttering it out of its mouth, and then shut it until the next question be asked.” ??? T.ie

two following, of a similar nature, appear to have been inventions of Kircher, by means of which, he used to ” utter feigned and ludicrous con- sultations, with a view to show the fallacy and imposture of ancient oracles.”

II. Let there be two heads of plaster of Paris placed on pedestals, on the opposite sides of a room. There must be a tin tube of an inch diameter, that must pass from the ear of one head, through the pedestal, under the floor, and go up to the mouth of the other. Observe, that the end of the tube, which is next the ear of the one head, be considerably larger than that end which comes to the mouth of the other. Let the whole be so disposed that there may not be the least suspicion of a communication. When a person speaks, quite low, into the ear of one bust, the sound is reverberated through the length of the tube, and will be distinctly heard by any one who shall place his ear to the mouth of the other. It is not necessary that the tube should come to the lips of the bust. ††† If there be two tubes, one going to the ear, and the other to the mouth, of each head, two persons may converse together, by applying their mouth and ear reciprocally to the mouth and ear of the busts ; and at the same time, other persons that stand in the middle of the chamber, between the heads, will not hear any part of their conversation.

III. Place a bust on a pedastal in the corner of a room, and let there be two tubes, as in the foregoing amusement, one of which must go from the mouth, and the other from the ear of the bust, through the pedestal, and the floor, to an under apartment. There may be likewise wires that go from the under jaw and the eyes of the bust, by which they may easily be moved. A person being placed in the under room, and, at a signal given, applying his ear to one of the tubes, will hear any question that is asked, and immediately reply ; moving at the same time, by means of the wires, the mouth and eyes of the bust, as if the reply came from it.

IV. In a large case, such as is used for dials and spring-clocks, the front of which, or at least the lower part of it, must be of glass, covered on the inside with gauze, let there be placed a barrel organ, which, when wound up, is prevented from playing, by a catch that takes a toothed wheel at the end of the barrel. To one end of this catch there must be joined a wire, at the end of which there is a flat circle of cork, of the same dimension with the inside of a glass tube, in which it is to rise and fall. This tube must communicate with a reservoir that goes across

the front part of the bottom of the case, which is to be filled witli spirits, such as is used in thermometers, but not coloured, that it may bs the better concealed by the gauze. This case being placed in the sun, the spirits will be rare- fied by the heat ; and rising in the tube, will lift up the catch or trigger, and set the organ in play : which it will continue to do as long as it is kept in the sun ; for the spirits cannot run out of the tube, that part of the catch, to which the circle is

fixed, being prevented from rising be- yond a certain point, by a check placed over it. When the machine is placed against the side of a room on which the sun shines strong, it may constantly remain in the same place, if inclosed in a second case, made of thick wood, and placed at a little distance from the other. When you want it to perform, it will be only necessary to throw open the door of the outer case, and expose it to the sun. But if the machine be move- able, it will perform in all seasons by being placed before the fire ; and in winter it will more readily stop when removed into the cold.

V. Under the keys of a common harpsichord let there be fixed a barrel, something like that in a chamber organ, with moveable stops corresponding to the tunes you would have it play. From each of the keys let a wire descend perpendicularly : the ends of these wires must be turned up for about one fourth of an inch. Behind these wires let there be an iron bar, to prevent them from going too far back. Now, as the barrel turns round, its pins take the ends of the wires, which pull down the keys, and play the harpsichord. The barrel and wires are to be all enclosed in a case. In the chimney of the same room where the harpsichord stands, or one adjacent, let a smoke-jack be placed ; with a wire or cord, that, passing behind the wainscot adjoining the chimney, goes under the floor and up one of the legs of the harpsichord, into the case, and round a small wheel fixed on the axis of that first mentioned. There should be pullies at different distances, behind the wainscot and under the floor, to facilitate the motion of the cord. This machinery may be applied to any other keyed instrument, as well as to chimes, and to many other purposes where a regular continued motion is required. An instrument of this sort may be considered as a perpetual motion, according to the vulgar acceptation of the term ; for it will never cease going till the nre be extinguished, or some parts of the ma- chinery be worn out. See PNEUMATICS.

ACQS, a small town at the foot of the Py- renees, in the department of Arriege, France, famous for its hot springs.

ACQS, AQUE or DAX, an old city of France on the Adour. See DAX.

ACQUA, a town of Italy, in Tuscany, famous for warm baths, 15 miles E. of Leghorn.

ACQUAINT’, v.~\ Accointer: Old Fr. to ACQUAINT’ABLE, ‘go to; to makes one’s self ACQUAINTANCE, t known to ; to frequent the ACQUAINT’ANT. J society of; to be intimate with ; to inform.

And he was a quointe muche, to the quene of Fraunce, And somdel to muche, as me wenae, so that in som

thing

The quene louede, as me wende, more him than the

king. R. Gloucetter.

Sothelye dulle witte and a thoughtfulle soule so sore

have mined and grafied in my spirites that soche craft

of enditinge woll nat bin of mine acquaintaunce.

Chaucer's Testament of Love* We, that acquaint ourselves with ev'ry zone,

And pass the tropicks, and behold each pole ; When we come home, are to ourselves unknown, And unacquainted still with our own soul. Duties,

Brave soldier, pardon me, That any accent, breaking from my tongue, Should ‘scape the true acquaintance of mine ear.

Skakspeare.

This keeps the understanding long in converse with an object, and long converse brings acquaintance.

South.

I hope, I am pretty near seeing you ; and there- fore I would cultivate an acquaintance : because, if you do not know me, when we meet j you need only keep one of my letters, and compare it with my face ; for my face and letters are counterparts of my heart.

Swift to Pope.

A long noviciate of acquaintance should precede the vows of friendship. Bolingbroke.

CARDINAL G. For souls just quitting earth, peep

into heaven ;

Make swift acquaintance with their kindred forms, And partners of immortal secrets grow.

Dryden’i Duke of Guise.

Our admiration of a famous man lessens, upon our nearer acquaintance with him ; and *re seldom hear of a celebrated person, without a catalogue of some notorious weaknesses and infirmities.

Addison.

Acquaint yourselves with things ancient and mo- ‘lern, natural, civil,

and religious, domestic and national, things of your own and foreign countries; and, above all, be well acquainted with God and your-selves ; learn animal nature, and the workings of your own spirits. Watu's Logick.

He that becomes acquainted, and is invested with authority and influence, will in a short time be con- vinced, that in proportion as the power of doing well is enlarged, the temptations to do ill are multiplied and enforced. Johnson.

Acquaint thyself with God, if thou would'st taste His works. Cotoper.

ACQUAPENDENTE, an ancient town of Italy, in the patrimony of St. Peter, with a bishop's see, and lately containing sixteen churches and convents. It is seated on a hill near the Paglia, 50 miles, N. by W. from Rome, and 10 miles W. from Orvieto.

AC QU ARIA, a town of Italy, in Frigana, a district of Modena, remarkable for its medicinal waters. It lies 18 miles S. from the city of Modena,

ACQUERIO, a decayed city, once of some note, in the province of Terra de Lavora, Naples.

ACQUEST, in law, goods acquired by purchase or donation, not by heritage.

ACQUI, a town and district of Italy, in the duchy of Montferrat, with a bishop's see, and commodious baths. It was taken by the Spaniards in 1745, re-taken by the Piedmontese in 1746, and afterwards dismantled by the French. It is seated on the river Bormio, or Bormida, on the high way from Finale to Alessandria, 17 miles S.S.W. of the latter. It is famous for a silk manufactory, which employs the greater portion of its inhabitants, reckoned (1802) at 6600. Lon. 8►►, 35′ E. Lat. 44►►, 40′ N.

ACQUIESCE', v. ˆ Ad : quiesco : to rest

ACQUIES'CENCE, ►►. > in, to be still ; to submit

ACQUIES'CENT. j to what is proposed by conformity ; to accept, receive or bear without dissatisfaction, or with pleasure and delight.

Others will, upon account of the receivedness of the proposed opinion, think it rather worthy to be ex- amined, than acquiesced in. Boyle.

A nation, cast in the happy medium between the

spiritless acquiescence of submissive poverty, and the

sturdy credulity of pampered wealth ; cool and

ardent ; adventurous and persevering ; winging her

eagle flight against the blaze of every science, with

an eye that never winks, and a wing that never tires.

Curran's Eulogy of Scotland.

ACQUIETANDIS, PLEGIIS, a writ of justices

lying for a surety against the creditor who refuses

to acquit a debtor after the debt is paid.

ACQUIETANDIS IN SHIRIS ET HUNDREDIS, the being free from suits and services in shires and hundreds.

ACQUIETARE, in law, to discharge, or pay the debts of a person deceased ; as the heir those of his father, &c.

ACQUI'RE, ") Ad : qiuero : acquiro : to ACQUI'RER, ask, or seek for ; to obtain

ACQUI'RABLE, as the result of power, or ACQUIREMENT, labour; to derive advan- ACQUI'RY, stages not conferred by na-

AC'QUISITE, [ture or inheritance. ??? Acqui- ACQUISI'TION, sition is applied to material ACQUIS'ITIVE, and physical, and acquire- ACQUI'SITOR, ment to mental and spiritual ACQUEST'. J attainments.

The greatest goodnesse of all goodness, is when tirannies are put under by virtues acquired, or to find remedy against accustomed vices with good inclina- tions. Golden Bcoke, c. xv.

A lower place, not well,

May make too great an act. For learne this, Sillius, Better to leaue vndone, than by our deed Acquire too high a fame, when him we serue's

away.

Shakspeare's Ant. and Cle. p. 351, act iii. sc. 1.

The human genius, with the best assistance, and

the finest examples, breaks forth but slowly ; and the

greatest men have but gradually acquired a just taste,

and chaste simple conceptions of beauty. Usher.

His servant he, with, new acquest Of true experience from this great event, With peace and consolation hath dismist. Milton.

ACQUIT' v. -\ Acquitter: Fr. to

ACQUIT'MENT, ˆdeliver from; to give

ACQUIT'TAL, f quiet to one accused,

ACQUIT'TANCE, v. n. J or held responsible ;

to release from a charge or obligation of auy

kind ; to discharge the claims of duty ; to act a

part suitable to character or reputation.

Ne do I wish (for wishing were but vainˆ To be acquit from my continual smart ;

But joy, her thrall for ever to remain, And yield for pledge my poor captived heart.

Spenser.

PRIM. We arrest your word, Boyet you can produce acquittances For such a sum from special officers Of Charles his father.

Shakspeare's Love's Labour bat. But if black scandall and foule-fac'd reproach Attend the sequell of your imposition j Your meere enforcement shall acquittance me From all tb.e impure blots and staynes thereof.

Shakspeare. But soon shall find

Forbearance, no acquittance, ere day end Justice shall not return, as beauty, scorn'd.

Millim.

It is a great mercy that signiries a final and universal acquittance. Bishop Taylor's Sennonf.

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Steady to my principles, and not dispirited with my afflictions, I have, by the blessing of God on my endeavours, overcome all difficulties ; and, in some measure, acquitted myself of the debt, which I owed the publick, when I undertook this work. Dryden.

He that judges without informing himself to the utmost that he is capable, cannot acquit himself of judging amiss. Locke.

ACQUITTAL is of two kinds: in law, and in fact. When two are indicted of felony, the one as principal the other as accessory ; the princi- pal being discharged, the accessory is, by conse- quence, also freed : in which case, as the accessory is acquitted by law, so is the principal in fact.

ACQUITTAL is also used, where there is a lord mesne and a tenant, and the tenant holds lands of the mesne, and the mesne holds over the lord paramount ; here, the mesne ought to acquit the tenant of all services claimed by any other for the same lands.

ACQUITTANCE, in law, a release or discharge in writing for a sum of money, or a receipt for the same.

ACRA, or ACARA, a small independent state and town, on the Gold Coast of Africa, where the English, Dutch, and Danes, formerly had strong forts, and each fort its particular village. The whole district is about twenty-six miles in length, and varying in breadth from twelve to twenty miles. The English settlement is called Fort James, which is capable of mounting twenty cannon. It is generally ill-manned, and the Dutch Fort is gone wholly to decay. Acra was once dependent on the government of Aquam- boe, but has of late years shaken off the yoke. The language is said to be unknown to any other district on the coast. Its situation is healthy, and its trade very extensive. The government is much more democratic than is generally known in this

part of the world, and but little if any gold is now found in the neighbourhood. The inhabitants are more civilised than most of the other nations of this coast, and keep up a freer intercourse with the interior. In busy parts of the year, the town is crowded with Ashantees, Fantees, Akims, Aquamboes, &c.

ACRA, in ancient geography, a promontory of Calabria, called Salenia, by Ptolemy : now Capo di San Maria di Leuca

ACRA and ACRO, as a prefix to Greek names of places, imply their situation on an eminence ; as Acragas, Acroceraunia. Also one of the hills on which stood that part of Jerusalem which formed the old and lower city.

ACR/E, an ancient Sicilian town, twenty- four miles south of Syracuse, near the present monastery of Santa Maura d'Arcia, between Nolo and Avula. Medals of this city, which appears to have been built on an eminence (Sil. Ital. lib. xiv.) are found in gold, silver and Bronze.

ACRJE, a fabulous daughter of the river As- verian, who gave her name to a mountain of Argolis, a country of Peloponnesus ; ??? it was also used as a surname of Diana from a temple erected to her honour by Melampus on a moun- tain near Argos. Pans. ii. c. 17.

ACRAGAS, or AGRAGAS, in ancient geogra- phy, so called by the Greeks, and sometimes by

the Romans, but more generally Agngentum, by the latter; a town of Sicily, two miles from the sea, at the confluence of the Acragas anil Hypsa ; built by the people of Gela, A. A. C 584. It was a sea-port of great strength, stand- ing on the top of a very steep rock, washed on two sides by rivers, and having a citadel to the S.E. surrounded by a deep gulf, which made it inaccessible but on the side next the town. It was famous for the tyrant Phalaris and his brazen bull. The country around it was laid out in vine and olive yards, in the produce of which they carried on a great and profitable commerce with Carthage. See AGRIGENTUM.

ACRAPULA, or ACRAIPULA, AicpaTriAa, Gr. medicines to prevent the bad effects of eating and drinking to excess, or surfeits.

ACRAS, or rather ACHRAS, the wild pear. See SAPOTA.

ACRASIA, Gr. from a privative, and ntpavvvfii to mix, in medicine, implies the predominancy of one quality above another, either with regard to artificial mixtures, or the humours of the human body, when

not mixed in a just proper tion. It was also used to express excess of any kind, which was called Acrasia, or the drinking of unmixed wines.
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ACRASUS, in ancient geography, a town of Asia Minor, in Lydia. Some imperial Greek medals of this city still exist, which were struck under the praetors, in honour of Severus, and several other emperors.

ACRATH, in ancient geography, a place in Mauritania Tingitania, now felez de Gomare : a citadel and commodious harbour on the Mediterranean in the kingdom of Fez.

ACRATISMA, in antiquity, a breakfast among the ancient Greeks, consisting of a morsel of bread soaked in pure unmixed wine, which was supposed to possess peculiar virtues.

A'CRE. Saxon Acepe; Latin aˆer, a field, A measure of land ; formerly applied to land of indefinite extent.

And ten alters of vynes shal geue but a quarte, and xxx bushels of sede shal geue but an cpha.

E*ay,c.v.❓❓❓ BlUe, 153Q

Heathcote himself, and such large acred men, Lords of fat Esham, or of Lincoln fen.

Pope's Imit. Horace.

ACRE, or ACRA a city of Palestine, the chief town and sea-port of a pachalic, of the same name, otherwise denominated, the pachalic of Saida, and extending from the Mediterranean on the west, to Jordan on the east ; and from Nahr- el-kelb to the south of Caesarea. It has been known by a variety of names. The Jews called it Acco or Accho. See Judges, ch. i. 31. The Arabians Akka. It was afterwards called Ptole- mais, from the Ptolemies of Egypt; and St. John d'Acre, from the knights of Jerusalem. But its most ancient name was AKH, a name often seen on small bronze medals that have been found in the country.

Early travellers have said much about the splendour of this place ; but Dr. Clarke assures us that it is like most other Turkish cities, mean and dirty, full of wretched shops and wretcritd people. The streets are so narrow, that but one

camel can pass at a time. The town, however, possesses some advantages of situation. On the north and east, is a fertile plain ; on the west the breezes blow warm and fresh from the ocean. It stands on a bay, the coast of which is a per- fect curve, and stretches three leagues, in a semicircular direction from the city to mount Carmel. But the marshes that lie contiguous, render it very unhealthy ; it is ravaged by fre- quent distempers ; and in the summer of 1 760, no fewer than 7000 persons fell victims to the plague within the short space of five months. The harbour though bad, is the best the coast furnishes, and is said to be the key of Palestine ; being the only avenue through which the inhabi- tants receive rice, the staple commodity. So that the pacha who holds Acre, has the power of drying up all the resources of Syria. It is sheltered from the north and north-west winds by the town : but has been greatly choked up in modern times. European vessels principally resort to Caifa, at the extremity of the bay opposite Acre.

Until recently, there were but a few wretched towers near the sea, on which cannon were mounted, which burst nearly as often as they were fired ; but since the French attack on this place, they have been considerably im- proved. The city was anciently encompassed with a wall, within which Djezzar pacha con- structed two others, filled the intermediate spaces with earth, and surrounded the whole with a moat or ditch ; the outer wall being prolonged to the shore, and communicating with a fort built in the sea. The town itself has considera- bly diminished from its ancient extent, and stands at least a mile within the old wall. Few of its ancient buildings remain except the iron castle, so called from the side next the sea having been covered with a composition of that metal, and which is in a state of extreme decay. There is a mosque built by Djezzar pacha, a Greek church, an Armenian church, a Franciscan mo- nastery, a Jewish synagogue, three khans or inns, and two bazaars or market places. The houses are principally of stone, flat-roofed, and with terraces. The palace of the knights of Saint John of Jerusalem is the present habitation of the pacha, in one of the halls of which is a foun- tain of various coloured marble, built by Daher, the son of Omar. Nearly adjoining the palace is another beautiful fountain, which was built of white marble, from the ruins of the ancient Cae- sarea, and in the garden are some pillars of yel- low variegated marble from the same place. The population of Acre in 1797 was computed at 20,000, who are a mixture of Turks and Arabs.

Josephus states this city to have belonged to the tribe of Ashur. It was

held by Demetrius, son of Seleucus : it afterwards fell to Antio- chus Epiphanes, was captured by the Hebrew Alexander, ceded to Ptolemy, and passed from him to Cleopatra. It was conquered by the Persians, and at last fell into the hands of Rome. Acre was the chief theatre of the crusades. Under the dominion of the Moors, it sustained many sieges ; but on the 12th June, 1 191 , yielded to Philip of France and Richard I. of England,

100,000 Christians being said to perish in the siege, besides great numbers who were lost by shipwreck and disease. After this, nearly all the Christian powers in Europe and Asia en- joyed authority here ; and in the thirteenth century, the town was filled with churches and convents, of which nothing is at present to be seen. In 1291 it was retaken by the Saracens, and as some say, was sacked and demolished ; 60,000 Christians perishing on that occasion. This siege was rendered memorable by the following in- stance of female resolution. A number of beau- tiful young nuns, terrified at the prospect of be- ing exposed to the lust of the Infidels, cut off their noses, and mangled their faces, to render themselves objects of aversion. The Saracens, inflamed with resentment, put them all to the sword. In the seventeenth century, Faccardin, prince of Druses, took possession of it; and choked up the harbour to defend himself from the Turkish vessels. The Turks, however, took it, and the pacha of Saide appointed an annual governor. Daher, the son of Omar, an Arab chief, now captured Acre by a sudden assault. He restored the importance of the place, built a palace, and mounted cannon. He was, however, attacked by a Turkish fleet ; was taken and his head sent to Constantinople. To him succeeded Ahmed pacha, a Bosnian by birth, who in con- sequence of his barbarity was called Djezzar, or butcher, and who murdered several of his wives with his own hand. In his reign Buona- parte landed in Egypt ; and the celebrated siege of Acre, in which Djezzar was so gallantly as- sisted by Sir Sydney Smith, commenced on the 18th of March, 1799. After a most dreadful carnage, in which prodigies of valour were exhi- bited on all sides, the French abandoned the place. On the death of Djezzar, Ismael pacha, his successor, was defeated by Suleiman, on whom the Porte conferred the pachalic ; and this man, by his mild and pacific manners, has con- ciliated the country, and much improved the re- sources of the place. Acre is distant 27 miles S. of Tyre; 23 from, and to the N.N.W. of, Jerusalem. N. long. 32►► 4(/. E. lat. 39►► 25’.

ACRE, in commerce, the same with lack, and signifying the sum of 100,000 Mogul rupees ; a pound sterling being equal to about eight ru- pees.

ACRE, did not originally signify a determined quantity of land, but any open ground, especially a wide campaign; and in this antique sense it seems to be preserved in the names of places, as Castle-acre, West-acre, &c. In England, it contains four square roods ; a rood being forty perches or poles, of sixteen feet and a half each by statute. Yet the length of the pole varies in dif- ferent counties, from sixteen feet and a half to twenty-eight. The acre is also divided into ten square chains of twenty-two yards each, that is, 4840 square yards. An acre in Scotland con- tains four square roods : one square rood is forty square falls ; one square fall, thirty-six square ells ; one square ell, nine square feet ana seventy-three inches : one square foot, 144 square inches. The Scots acre is also divided into ten square chains ; the measuring chain should be t \vvnty-four ells in length, divided into 100 links.

ACR

each link 8ˆ, inches; and so one square chain will contain 10,000 square links. The English statute acre is about three roods and six falls standard measure of Scotland. The French acre, arpent, contains one English acre and a fourth, or 54,450 square English feet, whereof the English acre contains only 43,560. The Strasburg acre is about half an English acre. The Welsh acre contains commonly two English ones. The Irish acre is equal to one acre, two roods, and nine- teen perches fa7T, English.

ACRE FIGHT, an old sort of duel fought by English and Scottish combatants, upon the fron- tiers of the kingdoms, with sword and lance ; it was also called camp-fight, and the comba- tants champions, from the open field being the stage of trial.

ACRE TAX, a tax laid on land at so much per icre ; called also acre-shot.

ACREME, a term sometimes used in ancient law-books, for ten acres.

ACRESPIRE. See PLUMULE

ACRIBEIA, Gr. aicpifitia, in medicine, a tarm literally denoting an exquisite or delicate accuracy ; as in describing diseases, &c.

AC’RID, adj. ~\ jˆKpr), a point, at once,

ACRIMO’NIOUS, f sharp > bitter > pungent, and

AC’RIMONY, < corrosive.

The malignity of soldiers and sailors against each ether, has been often experienced at the cost of their country ; and perhaps no order of men have an enmity of more acrimony, or longer continuance.

Rambler.

Most satyrists are indeed a public scourge,

Their mildest physic is a farrier’s purge ;

Their acrid temper turns as soon as stirred

The milk of their good purpose all to curd.

Couyper’s Charity.

ACRID, in natural history, denotes any thing sharp or pungent to the taste. Ancient natural- ists distinguish two kinds of acrid taste ; the first proceed from hot and dry, as that of pepper ; the second from hot and moist substances, as that of garlic. According to Grew, it properly belongs to the class of compound tastes. It is not simply sour or pungent, there being bodies not acrid, which yet are pungent, e. g. arum ; nor is it simply hot ; for there are many hot bodies which are not acrid, as the roots of zedoary, yarrow, and contrayerva. The characteristic, therefore, of acritude consists in pungency joined with heat. Acrids have been classed according as they yield their acrimony. First, by distillation ; secondly, by infusion ; and thirdly, by neither.

ACRIDOPHAGI, Gr. from aicptc, a locust, and Qayia, to eat, in ancient geography, an Ethiopian people, who are said to have fed on locusts, as their name imports. Diodorus Siculus and Strabo give marvellous details of their habits, and particularly their diseases. They seldom lived, they say, more than forty years, and were then attacked internally by winged lice, in such numbers, that it was impossible to ex- terminate them. It is well known, that to this day, the inhabitants of Ethiopia, Arabia, &c. frequently use locusts as food. Dr. Hasel- quist, whc travelled in Syria and Egypt so late as the year 1752, speaks of the inhabitants

of Arabia, Ethiopia, &c. using locusts as fhod. He was told, by a learned sheik at Cairo, who had lived six years in Mecca, that a famine fre- quently r□□.gi;s, at the latter place, when there is a scarcity of

corn in Egypt, and obliges the inhabi- tants to live upon coarser food than ordinary. That the Arabians then grind locusts in hand- mills, or stone mortars, and bake them into cakes. Sometimes they boil them, stew them with butter, and make them into a kind of fri- casee; which is not disagreeably tasted. A later traveller, Dr. Sparrman, informs us, ” That locusts afford a high treat to the more unpolished and remote hordes of the Hottentots ; when, as sometimes happens, after an interval of eight, ten, fifteen, or twenty years, they make their appear- ance in incredible numbers.” The Abbe Poiret, also, in his ‘ Memoir on the Insects of Barbary and Numidia,’ informs us, “That the Moors make locusts a part of their food ; that they go to hunt them ; fry them in oil and butter ; and sell them publicly at Tunis, at Bonne, &c.” “The Jews,” as Dr. Shaw observes, “were allow- ed to eat them. When sprinkled with salt, and fried,” he adds, “their taste resembles that of our fresh-water cray-fish.” Russel also says, the Arabs salt and eat them as a delicacy. These accounts sufficiently explain the Scriptural statement re- specting the food of John the Baptist in the wilderness, Matt. iii. 4. For while some main- tain, that the original word signifies ‘ the tops of certain herbs,’ or ‘ the fruits ‘ of trees ; and others have supposed it means quails ; Shaw contends it is applied to the locust on account of its ap- petite for such food. The word is used by Aris- totle, and other historians, in the same sense, and therefore the literal interpretation of it may be received. See Strabo, lib. xvi. Athenaus, lib. xlix. Pirn. Nat. Hist. lib. vi. and xi. Hie- ronymis Opera, torn. iv. Sorrow’s Travels, vol. i. Drake’s Voyages. Buffbn, Nat. Hist. vol. vi. Bryant on the Plagues of Egypt, art. Locusts. Harmer’s Observations, vol. ii., &c.

ACRIS, in natural history, a name given to the locust, because it is said to feed TUQ aicpag Tiav tyvTuv, on the tops of trees.

ACRIS, in surgery, the extremity of a fractured bone.

ACRISIUS, in mythology, a king of Argos, who being told by the oracle that he should be killed by his grandchild, shut up his only daugh- ter Danae in a brazen tower ; but Jupiter came down to her in a golden shower, and Perseus, who afterwards killed Acrisius, was the fruit of their amour.

ACRISY, Aicpteia, Gr. from a, negative, and Kpivta, to judge of, in medicine, that state of a disease in which no rfght judgment canbe formed of its issue.

ACRITAS, in ancient geography, a promon- tory of Messenia, now Capo di Gallo, between Methone to the W. and Corone to the ⬜⬜.

where the Sinus Coronaeus begins.

ACRI VIOLA, in botany, the nasturtium In- dicum, or Indian cress.

ACROAMA, aicpoao/iai, to hear, in philoso- phy, theology, &c. any thing sublime, profound, or abstruse; henee ACROAMATICI, was a deno- mination given to those disciples of Aristotle,

&c. wlio were admitted into the secrets of the inner or acroamatic philosophy.

ACROATHON, or ACROATHOUM, in ancient geography, a town on the top of mount Athos, whose inhabitants, according to Mela, lived much longer than in any other country : it is now La Cima di Monte Santo.

ACROBALYT./E, of aepoc, and /3aXXw, to throw, a name given to the soldiers of Tarentum, who were famous for throwing the javelin to great distances, while on horseback.

ACROBATICA, or ACROBATICUM, from aiepog, high, and fiaivia, I go ; an ancient climb- ing engine, among the Greeks, similar to the scansorium among the Latins. Vitruvius and Aquinus suppose it to have been used for both civil and military purposes.

ACROCERAUNIUM,in ancient geography, a promontory of Epirus, on which are situated the ACROCERAUNIA, or MONTES CERAU.MI, aepo►► high, icepavvoz thunder ; so called from their being often thunder-struck. They ran be- tween the Ionian sea and the Adriatic ; where Illyria ends, and Epirus begins ; and are the modern Monti della Chimera. They are called by Horace, Infernes scopulos.

ACROCHIRISMUS, aicpoxapiff/toe, among the ancient Greeks, a kind of gymnastic exercise, wherein only the hands and fingers were em- . ployed. Hippocrates ascribes to it a virtue of extenuating the rest of the body, and making the arms fleshy.

ACROCHOLIA, aicpoicwXia from arpoc, ex- treme, and KwXov, a limb. Those extremities of animals, which are used in food, or of which jellies are made. Also an ancient name for the pensile wart. See

WART.

ACROCORINTHUS, in ancient geography, a steep hill, over hanging the city of Corinth, famous for an acropolis, or citadel. On its top stood a temple of Venus ; and lower down issued the fountain of Pyrene.

ACRODRYA, from Aepov, and fyuc, an oak, in natural history, all fruits, that have rinds, or shells, such as acorns, almonds, &c.

ACROK'E. On Crook. See CROOK.

ACROMION, or ACROMIUM, from Arpoc, and unog, shoulder, in anatomy, the upper part of the scapula or shoulder-blade. See ANA-TOMY.

ACROMONOGRAMMATICUM, from a- k-poc, P.OVOQ, ypaˆ/ia, letter, among poets, a kind of poem, or composition, wherein each subse-quent verse commences with the letter with which the verse preceding terminates.

ACROMPHALIUM, or ACROMPALON, aepoe, and o[Hj>a\og, the navel ; the tip of the navel.

ACRON, a physician of Agrigentum, who re- commended lighting large fires, and purifying the air with perfumes, to stop the pestilence that raged at Athens, about A. A. C. 473. Also a king of the Ceninenses, whom Romulus slew.

ACRON, a district of the Fantee territory, on the Gold Coast of Guinea, Africa. Its capital is Assam, or Apam, a commodious sea-port, where the Dutch have a small fort. This place was destroyed with most of the inhabitants, inl811r by the Ashantees. A week after it was plun- dered and laid in ruins by Altai), hte king of

Akim ; it is about Sfy miles E. N. E. of Cape Coast. GREAT ACRON is a kind of republic, farther inland.

ACRON, or ACROS, in botany, among the an- cients, the capitulum, top, or flower of a plant. Also in medicine, that which is most excellent Likewise the height, or crisis of a disease.

ACRONIUS LACUS, in ancient geography, a lake formed by the Rhine, soon after its rise out of the Alps, and after passing the greater lake at Constance, called Venetus, and now the Bodensee, or Lesser Lake of Constance.

ACRONYCHAL, or ACRONICHUS. See ACRON. This appellation was particularly ap- plied to the superior planets, when they were come to the meridian of midnight.

ACRONYCTJE, in astronomy, stars, rising in the twilight, about sun-setting.

ACROPOLIS, in ancient geography, the ci- tadel, and one of the divisions of Athens ; the citadel standing on a rock or eminence was in- accessible, except on one side. At the foot was the temple of Minerva.

ACROPOLITA, (George,) one of the Byzan- tine historians, was born at Constantinople, in 1220, and employed in some of the most impor- tant affairs of the empire ; being sent ambassa- dor to Larissa, to establish a peace with Michael of Epirus ; and constituted judge to try Michael Comnenus, suspected of engaging in a conspi- racy. He wrote a continuation of the Greek history, from the taking of Constantinople by the Latins, till it was recovered by Michael Palaeo- logus, (to whom he was chancellor,) in 1261, a treatise concerning Faith, Virtue, and the Soul ; an Exposition of the Sermons of St. Gregory Nazianzen, &c.

ACROPOSTHIA, from mepoc, extreme, and iroaQr], the prepuce, the extremity of the prepuce, which is cut off in circumcision.

ACROSPELOS, in botany, the wild oat grass, or bromus.

ACROSPIRE, in natural history, &c. the same with PLUMULE, which see.

ACROSS'. On Cross. See

When other loners in armes acroste,

Reioice their chiefe delight ;

Drowned in teares to mourne my losse.

I stand the bytter nyght

In my window. Surrey.

It was anciently the manner for the bishop to lay both his hands across on the head of the confirmed, not only in imitation of Jacob, but in allusioii to the death of Christ in whom we believe, and from whom we receive the Holy Ghost. Comber's Companion.

ACROSTICK, from aicpoQ, extremity, and anxoQ, verse, a poetical composition, in which the initial letters of the lines or the verses form the name of some person or thing. The acrostic is obviously an artificial and adventitious arrange- ment of poetry ; and has been very fancifully and even fantastically cultivated. Sometimes the acrostic has been formed of the first letters of the lines, sometimes of the last, and some- times it is to be read downwards, and at others upwards.

The appellation has been applied by some au►► thors to two ancient epigrams in the Anthology! in Fionour of Bacchus and Apollo. Each con►►

siits of twenty-five verses, the first whereof is the argument of the whole, and the other twenty- four composed of four epithets, beginning each with the same letter, and thus following in the order of the twenty-four letters of the Greek al- phabet, from A to Q ; each comprehending four epithets, which makes ninety-six in all for each god.

The most curious of these fanciful acrosticks ►►►which we have seen, occurs in the ” De Laude Virginum,” of the celebrated Aldhelm. It con- sists of thirty-eight lines, each beginning and ending with the successive letters of the words of the first line, and thus the first and last lines, and the initial and final letters of each line con- sist of the same words. Only in the last line the words occur backwards, and the final letters are to be read upwards throughout the piece.

M etrica Tirones nunc promant carmina casto S E t laudem capiat quadrato carmine virg O T rinus in arce Deus, qui pollens secla creavi T R egnator mundi regnans in sedibus alti S I ndigno conferre inihi dignetur in aethr A C um sanctis requiem, quos laudo versibus isti C A rbiter altithronus qui servat sceptra supern A T radidit his coeli per ludum scandere lime N I nter sanctorum cuneos qui laude perenn I R ite glorificant moderantem regna tonante M O mnitenens dominus, mundi formator et aucto R N obis pauperibus confer suffragia cert A E t ne concedas trudendos hostibus istin C S ed magis exiguos defendens dextera tanga T N e praedo pellax coelorum claudere lime N V el saiictos valeat noxarum fallere seen A N e fur strophosus foveam detrudat in atra M C onditor a summo quos Christus servat Olymp O P

astor ovile tuens ne possit tabula rapto R R egales vastans caulas bis dicere pup pu P

0 ninia sed custos defendat ovilia jam nun C

M axima proecipuum qu* gestat numine nome N A ddere presidium mater dignare precat U N am tu perpetuum promisisti lumine lume N. T itan quern clamant sacro spiramine vate S C ujus per mundum jubar alto splendet ab Ax E A tque polos pariter replet vibramine fulmen N R ex regum et princeps populorum dictus ab aev O M agnus de magno de rerum regmine recto R

1 Hum nee mare nee possunt cingere cojl I

N ec mare navigerum spumoso gurgite valla T

A ut zonae mundique stipant asthera eels A

C laromur vitam qui castis moribus isti C

A uxiliante Deo vernabant flore perenn I

S anctis aggrediar studiis dicere paupe R

T anta tamen digne si pauper proemia proda T

O mnia cum nullus verbis explanat apert E

S otsac animrac tnamorp cnun senorit acirte M.

Aldhelm quaintly calls this quadratum carmen, a square verse.

But the acrostick form of verse, which has been called alphabetical poetry, has clearly been em- ployed for useful purposes. When books were few, and writing could but rarely be resorted to as a record, the acrostic form of poetry pre- sented an easy method of assisting the memory to retain detached sentences : and thus moral maxims and forms of devotion were preserved from age to age, which might otherwise have been lost. We have upon this principle seven of the psalms of the Hebrew old Testament, a poem, Proverbs xxxi. 10 ••• 31, and four chapters of Jeremiah's Lamentations, regular acrosticks,

i. e. three of them perfectly alphabetical, in which every line is marked by its initial letter, and the other nine in which the stanzas are so distinguished. For other peculiarities of these singular poems, we refer the reader to " Bishop Lowth's Lectures on the Hebrew Poetry."

ACROSTICS, among ecclesiastical writers, de- note the end of verses of psalms, which the peo- ple sang by way of chorus, or response, to the prtscentor, or leader of the psalm.

ACROSTICUM, RUSTYBACK, WALL-RUE, or FORK-FERN, in botany, a genus of plants of the class cryptogamia, order filices. The fructi- fications are accumulated on the whole inferior surface of the frond, so that they every where cover it.

ACROSTOLIUM, in ancient naval architec- ture, the extreme part of the ornament on the prows of ships ; which it was usual to tear off from vanquished vessels, and fix them to the conqueror's, as a token of victory.

ACROTELEUTIC, from aicooe and reXoe, end, among ecclesiastical writers, the end of a verse or psalm ; or something added thereto, to be sung by the people, as the Gloria Patri, &c.

ACROTERIA, among ancient physicians, signified the larger extremities of the body, as the head, hands, and feet, and their extremities.

ACROTERIA, in architecture, little pedestals without bases, placed at the middle and the two extremes of pediments, sometimes serving to support statues ; also the statues themselves in such situations.

ACROTERIASM, in old surgery, was the act of cutting off the extreme parts of the body, i. e. the amputation of any extremity.

ACROTHYMIA, or ACROTHYMION, from aicpoc, extreme, and Qvpoe, thyme, a sort of wart, described by Celsus as hard, and rough, with a narrow basis and broad top ; the top is of the colour of thyme ; it easily splits and bleeds. It is also called thymus.

ACT,v.n.

AC'TION,

AC'TIONABLE,

AC'TION LESS,

ACT'IVATE,

ACT'IVE,

AC'TIVELY,

ACTI’VENESS,

ACTIV’ITY,

ACT’LESS,

AC’TOR,

AC’TRESS,

AC’TUAL,

ACTUAL’ITY,

AC’TUALLY,

AC’TUATE,

ACTUA’TION.

And this way is cleped penance ; of which man shuld gladly herken and enqueren with all his hirte, to wete, what is penance, and whennes it is cleped pe- nance, and how many maneres ben of actions or work- ings of penance. Chaucer Personnes Tale

You, that are king, though he do wear the crown, Have caus’d him, by new act of parliament, To blot out me. Sfiakspewe’s Henry VI.

EOT. Are we all met ?

Q ‘J I N . Pat, Pat, and here’s a marvellous convenieui

Ago, actum, to do ; to ex- ercise any power or faculty ; to perform, to assume a cha- racter or part, used extensive- ly in a judicial and legislative ###sense. ### Act signifies a thing done. Action a doing; the former expressing an incident, the latter a habit or process. To actuate, is to influence the act of another.

place for our rehersal. This green plot shall be our stage, this hawthorn brake our typing house, and we will do it in action, as we will do it before the duke. Shakspeare’s Midsummer Night’s Dream.

YORK. As in a theatre, the eyes of men, After a well grac'd actor leaves the stage, Are idly bent on him that enters next, Thinking his prattle to be tedious : Even so, or with much more contempt, men's eyes Did scowle on Richard.

Shakspeare's K. Richard II.

The world hath had in these men fresh experi- ence, how dangerous such active errors are.

Hooker.

Active and stirring spirits live alone, Write on the others, Here lies such a one.

Herbert.

As wounds once healed leave a scar behind them,

so remitted injuries leave commonly in the actors a

guilty remembrance. Hall's Contemplations.

This earth is only made for action, not for fruition.

Idem.

Only the actions of the just, Smell sweet and blossom in the dust. Shirley.

It is an act of profanation for any unholy person to handle holy things, and holy offices.

Bishop Taylor's Sermons.

Some bend the stubborn bow for victory ; And some with darts their active sinews try.

Dry den.

Tis virtuous action, that must praise bring forth;

Without which, slow advice is little worth :

Yet they, who give good counsel, praise deserve ;

Tho', in the active part they cannot serve. Denham.

Honour and shame from no condition rise :

Act well your part ; there all the honour lies.

Pope.

The frequent contemplation of death, as it shows the vanity of all human good, discovers likewise the lightness of all terrestrial evil, which certainly can last no longer than the subject upon which it acts.

Rambler.

If we consider him in his omnipresence ; his being passes through, actuates, and supports the whole frame of nature. Spectator.

A lively / faith is able to anticipate in some mea- sure, the joys of that heavenly society, which the soul shall actually possess hereafter.

Cowper's Letters.

ACT, Actus, in physics, an effective exercise or application of some power or faculty. In this sense, act stands opposed to power, potentia, which is only the capacity of acting, not the exertion of that capacity. ††† Metaphysicians give various divisions of act ; viz. into infinite, as the act of creating ; and finite, as the act of moving : ††† transient, or those exercised in other beings, as heating; and immanent, which remain in their own subject, as thinking.

ACTA COXSISTORJI, the edicts or declara- tions of the council of state of the Roman em- perors, upon which the senate and soldiers often swore, either through flattery or compulsion, as we do upon the Bible.

ACTA DIURNA, and ACTA POPULI, were a sort of Roman gazette, containing an authorized narrative of the transactions worthy of notice which happened at Rome. They differed from Aiinals in that only the greater and more im- portant matters were recorded in the latter, ˆnti

those of less note in the former. Their origin is attributed to Julius Caesar ; but some trace them to Servius Tullius.

ACTA SENATUS, acts of the senate, were minutes of what passed and was debated in the senate house. These were also called Com- inentarii and viroˆivnfiaTa.

ACT, in law, an instrument in writing, for de- claring or justifying the

truth of any thing. In which sense, records, decrees, sentences, reports, certificates, &c. are called acts.

ACT, in logic, is particularly understood of an operation of the human mind. Thus to discern and examine, are acts of the understanding ; t►► judge and affirm, are acts of the will, &c.

ACT, in the universities, signifies a thesis maintained in public by a candidate for a de- gree. The candidates for a degree of bachelor and master of arts are to hold philosophical acts ; and those for bachelor of divinity, theological acts, &c. At Oxford, thejime when masters or doctors complete their degrees is also called the act ; which is held with great solemnity. At Cambridge, they call it the commencement.

ACT OF FAITH, Auto da Fe, in the Romish church, is, or rather was, a solemn day held by the Inquisition, for the punishment ef heretics, and the absolution of the innocent. See INQUI- SITION.

They usually contrived the Auto to fall on some great festival, that the execution might im- press the greater awe. A competent number of prisoners in the Inquisition being convicted of heresy, either by their own voluntary or extorted confession, or on the evidence of witnesses, they were, in the morning of the day, brought into the great hall, where they were attired for the procession. This was generally led by Domi- nican friars ; after which came the penitents, some with san-benitoes, and some without, ac- cording to the nature of their crimes ; being all in black coats without sleeves, and bare-footed, with a wax candle in their hands. Then fol- lowed the penitents who had narrowly escaped being burnt, who over their black coats had flames painted with their points turned down- wards. Next came the negative and relapsed, who were to be burnt, having flames on their habits pointing upwards. After these, such as professed doctrines contrary to the faith of Rome, who, besides flames pointing upwards, had their picture painted on their breasts, with dogs, ser- pents, and devils, all open-mouthed, about it : each prisoner attended with a familiar of the In- quisition : and those to be burnt having a Jesuit on each hand, who was continually exhorting them to abjure. After the prisoners, came a troop of familiars on horseback ; then the in- quisitors, and officers of the court, oti mules ; and last of all, the inquisitor-general on a white horse, led by two men with black hats and green hatbands. At the place of execution, the pri- soners were placed at one end of a large scaffold, the inquisitors at the other. A sermon was preached, and a priest ascended a desk near the middle of the scaffold, to take the abjuration of the penitents, and recite the final sentence of those who were to be put to death. These were now formally and most

hypocritically delivered

to the secular magistrates, who were at the same time besought not to touch their blood, or put their lives in danger '. The prisoners were now carried to the secular gaol loaded with chains, and brought thence in an hour or two before the civil judge ; who, after asking in what religion they intended to die, sentenced such as professed the religion of, Rome, to be first strangled, and then burnt to ashes ; and such as died in any other faith, to be burnt alive. Both classes then returned to the place of execution, where stakes were prepared, for such as persisted in their heresy, about four yards high, having a small board towards the top for the prisoner to be seated on. The negative and relapsed being first strangled and burnt, the professed mounted their stakes by a ladder; and the Jesuits, after exhort- ing them to be reconciled to the church, left them with the assurance that the devil was standing at their elbow to receive their souls, and carry them with him into hell. On this, the cry was, let the dogs' beards be made ; which was done by thrusting flaming furzes, fastened to long poles, against the prisoners' faces, till they were burnt to a coal. At last, fire was set to the furze at the bottom of the stake, and the flame seldom reaching higher than the seat they sat on, they were rather roasted than burnt to death, amidst the most savage exclamations of joy !

We have narrated these horrid scenes in the past tense, sincerely hoping and believing they are for ever past, as pretended acts of religion, even in the most devoted popish countries. The inquisition is, in Portugal and Spain, at this time, rather an irregular and badly conducted court for the punishment of civil offences. But the record of these atrocities had need remain awhile before us, that those countries who are most entirely emancipated, may never more re- turn to that domination of the priesthood that originated them.

ACT OF GRACE, in English law, an extraordi- nary act of the king in council, whereby, at the beginning of a new reign, or on other great occasions, a free pardon has been sometimes granted to criminals.

ACTS OF THE APOSTLES, one of the sacred books of the New Testament, containing the his- tory of the infant church, during the space of twenty-nine or thirty years, from the ascension of our Lord to

the year of Christ 63. ††† It was written by St. Luke, and addressed to Theophilus, the person to whom the evangelist had before dedicated his gospel. The style of this work, which was originally composed in Greek, is much purer than that of the other canonical writers; and it is observable, that St. Luke, in his quotations from the Old Testament, always makes use of the Septuagint version . It may like- wise be remarked, that less critical attention has been paid to this book in our own country, than to any other part of the New Testament.

ACTS OF THE APOSTLES, SPURIOUS : Of these tnere were several, particularly ; 1 . Acts, sup- posed to be written by Abdias, the pretended bishop of Babylon, who gave out that he was ordained bishop by the apostles themselves, when they were upon their journey into Persia. 2. The Acts of Si, Peter ; from the school of the

Ebiomtes. 3. The Acts of St. Paul. Euscbia?, who had seen it, pronounces it of no authority. 4>. The Acts of St. John the Evangelist; 5. The Acts of St. Andrew; 6. The Acts of St. Thomas the Apostle ; received particularly by the Mani- chaeans. 7. The Acts of St. Philip; 8. The Acts of St. Matthias.

ACTS OF COUNCILS, in ecclesiastical affairs, contain the proceedings, debates, motions, &c. as well as the canons delivered. Hence we have two kinds of synodical collections, one contain- ing all the acts, or transactions, relating to matters of faith and doctrine ; the other, containing only the canons relating to discipline, called the Book of Canons.

ACTS OF PILATE, in ecclesiastical history, a relation said to have been sent by Pilate to the emperor Tiberius, concerning Jesus Christ, his death, resurrection, &c. as testified by Tertullian, in his Apol. cap. 5. and 20, 21. The heretics forged Acts in imitation of them, but both the genuine and the spurious are lost.

ACT./EA, in botany, the Aconitum Racemosum, Herb Christopher, or Bane-berry ; a genus of the monogynia order, belonging to the polyandria class of plants. Its characters are : CAL. a perianthium consisting of four roundish, obtuse, concave leaves, which fall off. COR. four petals, larger than the calyx, pointed at both ends, and falling off. STAM. numerous capillary filaments; the antherae roundish, erect, and didymous. PIST. an ovate germen; no stylus; the stigma thickish and obliquely depressed. The seeds are very numerous, semiorbicular, and incum- bent in a double order. There are four species; viz.

1 . Actxa Alba, the American herb Christopher, a native of North America.

2. Acttea Cimicifuga, a native of Siberia.

3. Acteea Japonica, the Japanese herb Christo- pher, a shrub, native of Japan.

4. Act tea Racemosa, or American black or wild snakeroot, a native of North America.

5. Act(zaSpicata,or common herb Christopher, a native of several parts of Britain.

ACTJEON, in fabulous history, the son of Aristseus and A utonoe, a great hunter. He was turned by Diana into a stag, for looking on her while bathing ; and was torn to pieces by his own dogs. Also, a Corinthian youth, killed by Archias, one of the Heraclidae, in an attempt to carry him off from his father's house. Plut. in Amat. Narrat.

ACTANIA, in ancient geography, an island in the North Sea, west of Holstein, "and not far from the mouth of the Eyder and Elbe; now Heligoland.

ACTE, in botany, the elder. See SAMBUCUS.

ACTE, in mythology, one of the Horae. 2. In history, a mistress of Nero, of the family of Attalus.

ACTIAN GAMT-.S, in Roman antiquity, solemn games instituted oy Augustus, in memory of his victory over Marc Anthony at Actium, A. U. C. 714, B. C. 37. They were celebrated every fifth year. Virgil insinuates them to have been instituted by ˆEneas. jEn. iii. v. 280.

Actiaque Iliacis celebramus littora ludis, By way of compliment to Augustus ; attributing

that to the hero from whom he descended, which was done by the emperor himself. ACTILIA, military utensils. ACTINE, ctK-rivn, in botany, a name of the herb bunias, or napus ; the brassica napus of Linnaeus.

ACTINIA, in zoology, a genus belonging to the order of vermes molluscae. Its genuine characters are, the body oblong and smooth, attaching itself firmly by its basis* to rocks or other solid substances, having a dilatable apex hooked within. The mouth furnished with crooked teeth, the rostrum cylindrical and ra- diated. There are five species, some of which make a beautiful appearance and are called Animal Flowers, Sea Anemonies, and Urtica Marina. They are viviparous, and form one of those wonderful links in the chain of creation, that connect the animal and vegetable kingdoms, by partaking of the nature of both. See ANIMAL FLOWER.

ACTINOBOLISM, from aicnv, a sun beam, and /3oXtc, a plumb line, in physics, diffusion, or the diradiation of light or sound,by which it flows every way from its centre. Also, applied in medicine, to the diffusion of the animal spirits, by which they convey the dictates of the mind to the organs of voluntary motion.

ACTINOLITE, in mineralogy, the actinotus vitreous of Linnarus, strahlstein of Werner, and amphibole actinote hexaedre of Haiiy ; having three varieties, the crystallized, the asbestous, and the glassy. It is principally found in pri- mitive districts, with a magnesian basis, never in secondary mountains. It accompanies talc, and some micaceous rocks, and abounds in the Tyrol, Mount St. Gothard, in Saxony, Norway, and Piedmont. It is also found in Cornwall and Wales, and some of the Scottish isles.

ACTIO, in Roman antiquities, an action at law, in a court of justice. The formalities were generally these : The injured person proceeded in jus reum vocare, to summon the offending party to the court, who was obliged' to go, or give bond for his appearance. He could be summoned viva voce, by the plaintiff. If he would not go willingly, he might compel him, calling any by-standers to bear witness, by asking them visne antestari; the by-standers upon this turned their ear towards him in token of their consent. To this Horace alludes, lib. i. sat. 9. See ANTESTARI. The parties having met before the praetor, or other magistrate, the plaintiff stated his case, termed edere actionem, commonly performed by writing it on a tablet, and offering it to the defendant. Next came the postulatio tictionis, or the plaintiff's petition to the praetor, for leave to prosecute. This was granted by writing at the bottom of it actionem do, or refused by writing non do. The petition being granted, the plaintiff vadabatur reum, i. e. obliged the de- fendant to give sureties for his future appearance in court. Meantime, the difference was often made up, either transactione, by letting the cause fall as dubious ; orpactione, by composition. On the day appointed, the parties were summoned by an accensus. (See

ACCEXSI.) Upon the non- appearance of either, the defaulter lost his cause : ??? if they both appeared, the plaintiff proceeded

litem sive actionem intendere, i. e. to prefer his suit; and desired judgment of the praetor, that is, to be allowed a index or arbiter, or else the recupe- ratores or ceiitumviri ; which the praetor having as- signed by the consent of both parties, and deter- mined the number of witnesses to be admitted ; the judges took a solemn oath to be impartial ; and the parties the juramentum calumnitE. Then the trial began, which was called disceptatio causa.

ACTION, iu commerce, is a term used abroad for a certain part or share of a public company's capital stock : which is sold and transferred much in the same manner as stocks are with us. The proprietor is called an actionary

ACTION, in ethics, denotes the external signs or expressions of the sentiments of amoral agent. ACTION, in farriery, is spoken of ahorse, and expresses the general character of his motion. It is particularly applied to actions of his mouth.

ACTION, in oratory, is the outward deportment of the orator, or the accommodation of his coun- tenance, voice, and gesture, to the subject of which he is treating. See ORATORY.

ACTION, in painting and sculpture, is the attitude or position of the several parts of the face, body, and limbs of such figures as are represented, and whereby they seem to be really actuated by passions. Thus we say, the action of such a figure finely expresses the passions with which it is agitated : we also use the same expression with regard to animals.

ACTION, in poetry, the same with subject or fable. Critics generally distinguish two kinds, the principal and the incidental. The principal action is what is generally called the fable; and the incidental an episode. See POETRY.

ACTIONS, among merchants, sometimes sig- nify moveable effects ; and we say the merchant's creditors have seized on all his actions, when we mean that they have taken possession of all his assets.

ACTIONARE, in law, to prosecute. ACTIVE, in chemistry, is sometimes applied to those principles which are supposed to act of themselves, and do not need to be put in action by others : thus salt, sulphur, and mercury, are usually considered as active principles; and phlegm, earth, &c. as passive ones.

ACTIVE POWER, in metaphysics, the power of executing any work or labour : in contradis- tinction to speculative powers, as those of seeing, hearing, reasoning, &c. See METAPHYSICS. ACTIVE PRINCIPLES. See ACTIVE in chemistry. ACTIVE VERBS, are such as do not only sig- nify doing, or acting, but have also nouns fol- lowing them to be the subject of the action or impression. Thus to love, to teach, are verbs active ; because we can say ; to love a thing, or teach a man. See VERB.

ACTIUM, in ancient geography, a town situated on the coast of Acarnania, famous for a temple of Apollo, a safe harbour, and an ad- joining promontory of the same name, in the mouth of the Sinus Ambracius over against Nicopolis. It afterwards became still more famous by Augustus's victory over Antony and Cleopatra ; and for quinquennial games in- stituted there, called Ac tia. See ACTIAM GAMES.

ACTIUM, the promontory of, now called Capo di Figalo, or Figo.

ACTIUS, in mythology, a surname of Apollo, from Actium, where he was worshipped.

ACTON BURNEL, a village in Shropshire, eight miles from Shrewsbury, so named from the Burnels, who had a castle in it, once a mag- nificent structure, and now a fine ruin. A par- liament was held here, in the reign of Edward I. wherein a statute, called the Statute Mer- chant, was made for the recovery and assurance of debts.

ACTON, EAST, a small town, 5 miles W. of London, once a place of considerable resort for its mineral waters, which have now fallen into disuse. The Uxb ridge canal passes close by. It is a hamlet of.

ACTON, WEST ; and both places derive their names from the Saxon Ac, or Aac, i. e. oak, which once abounded here.

ACTOR, among civilians, the proctor or ad- vocate in civil courts or causes; as, Actor ecclesice, the advocate of the church ; actor doml- nicus, the lord's attorney, &c.

ACTOR, in fabulous history, a warrior among the Aurunci, described

by Virgil as a hero of the first rank. JEn. xii. Also, a son of Myrmidon and Physidice, the father of Mencetius. Patro- clus was called, after him, Actorides.

ACTORUM TABULA, in Roman antiquity, tables in which the births of children were regis- tered. They were commenced by Servius Tul- lius, and kept in the treasury of Saturn.

ACTRESSES, in the drama, appear to have been wholly unknown to the ancients, men or eunuchs always performing the female parts. Charles II. is said to have first encouraged their public appearance in England ; but there is evidence that the queen of James I. performed in a court theatre. Originally the drama con- sisted of nothing more than a simple chorus, who sung hymns in honour of Bacchus. Thespis was the first that, in order to relieve this uniform chorus, introduced a declaimer who repeated some heroic or comic adventure. ./Eschylus intro- duced a second, changed the ancient recitals into dialogues, and improved the dresses of his actors. To him is attributed the addition of the cothur- nus or buskin. Sophocles added a third, in or- der to represent the various incidents in a natural manner; and we do not find in any of the Greek tragedies above three persons in the same scene ; a rule Horace thus alludes to,

Nee quarto, loqui persona laboret. This, however, did not prevent their increasing the number of actors in a comedy. Before the opening of a play, they named their actors in full theatre, together with the part they were to perform. The ancient actors were generally masked. Horace speaks of a kind of secondary actors in his time, whose business it was to imi- tate the first ; and by their inferior performances, become foils to their principal. At Athens, actors were highly honoured. At Rome they were despised, and not only denied all rank among the citizens, but even when any one appeared upon the stage, he was expelled his tribe, and deprived of the right of suffrage. Ci- cero, indeed, esteems the talent of Iloscius ; but

he values his virtues still more; virtues which distinguished him so remarkably above all others of his profession, that they seemed to have ex- cluded him from the theatre.

ACTUAL, in philosophy and medicine, is op- posed to potential, and is applied to any thing endued with a quality which operates by an im- mediate power inherent in it. For example, hot iron is called an actual cautery, in contradistinc- tion from chemical caustics, which have a power of producing the same effects on animal solids, as actual fire; and which are called potential. Boiling water is actually hot, and

brandy is po- tentially hot, as it heats the body, though of itself cold.

ACTUARIˆE NAVES, a kind of ships among the ancient Romans, chiefly designed for swift sailing.

ACTUARIUS, (J.) a celebrated Greek physi- cian of the eleventh, or as some think, of the thirteenth century. Though commonly known by this appellation, (his title, in fact, as the chief medical attendant on the imperial court,) his name was Zacharias. He is distinguished by first introducing and recommending mild cathar- tics. His works were printed in one volume folio, by Henry Stephens, in 1567; and reprinted at Leyden in 3 vols. 12mo. 1556.

ACTUARIUS, in antiquity, a title of dignity, in the court of Constantinople, peculiar to physi- cians. See above.

ACTUARIUS, or ACTARIUS, in Roman anti- quity, an officer appointed to write down the pro- ceedings of a court, assembly, or the like. In the Eastern empire, he keptthe military accounts, received the corn from the susceptores or store- keepers, and distributed it among the soldiers, to whom he acted as a kind of broker, or army agent.

ACTUATIO, actuation, in medicine, signifies the change wrought on a medicine, or any thing else taken into the body, by the vital heat, which is necessary to make it act, and produce its effect.

ACTUS, in ancient architecture, a measure in length equal to 120 Roman feet. In ancient agriculture, the word signified the length of one furrow, or the distance the plough goes before it turns.

ACTUS INTERVICENALIS, a space of ground four feet in breadth, left between the lands as a path.

ACTUS MAJOR, or ACTUS QUADRATUS, a piece of ground in a square form, whose sides were 120, and contents 14,400 feet being equal to half the jugerum. It was also called modius and mina.

ACTUS MINIMUS, a quantity of land 120 feer. in length, and four in breadth ; equal to the sex- tans, or sixth part of a jugerum.

ACTUANITES, in ecclesiastical history, a name sometimes given to the MANICHEES, from Acua, an alleged disciple of the apostle Thomas.

ACUBENE, in astronomy, a star of the third magnitude, on the southern claw of Cancer; called by Ovid labia ; and by other writers aceta- bulum.

ACUHYATLI, in zoology, a large and vene- mous serpent of America, more usually known by the name of cucurucu, or cucuruca, which see.

ACUITION, in grammar, medicine, and pro- sody. See ACUTITIOX.

ACUL, a sea-port on the north coast of St. Domingo, whence the French were expelled in 1794, by the English, who took it by storm, S. S. W. of Cape Franfois, distant eight miles. Also a small town of St. Domingo, on the south coast, sixteen miles S. W. of Les Cayes.

ACULEATED FINS, in ichthyology, a term applied by naturalists to the fins of fishes, which are armed with prickles. Those which want them are called, non-aculeated. Hence the pug- nitius marinus, or stickle-back, a small prickly fish in the West Indies, is called also the Ac-

CUI.EATUS LONGUS.

ACULEOSA, in botany, the Cardans polya- canthos, or Gorteria cibaris of Linnaeus.

ACULER, in the menage, is the motion of a horse, when in working upon volts, he does not go far enough forward at every motion.

ACULEUS, in zoology, a name sometimes given to the sting of a bee, scorpion, or the like. AC'UMEN, n. \ Acuo, to sharpen; acu
ACU'MIXATE, [?nen, sharpness. Express- Ai I'MIXATED, { ing or
referring to keenness ACUMINA'TION. 3 of the intellectual powers.

The word was much affected by the learned Aristarchus in common conversation, to signify genius or natural acumen. Pope.

This is not acuminated and pointed as in the rest ; but seemeth, as it were, cut off.

Brown's Vulgar Erraurs.

As it is reasonable, and even scriptural, to suppose that there is music in heaven, in those dismal re- gions perhaps the reverse of it is found ; tones so dismal as to make even woe itself more insupportable, and to acuminate even despair. Cowper's Letters.

ACUMEN, in ancient music, was used to signify a sound produced by the intension or raising of the voice.

ACUMINA, in antiquity, a' kind of military omen, or auspice, taken from the points, or edges of darts, swords, or other weapons, by examining whether they were bright or solid, sharp or blunted, and predicting the issue of a battle accordingly.

ACUMULO, a small town in Abruzzo Ul- terior, seventeen miles N. W. of Aquila.

ACUNA, (Christopher de,) a Spanish Jesuit, born at Burgos, 1587. Having devoted some years to study, he went to make proselytes in Chili and Peru; and to make discoveries re- specting the river of the Amazons. He is prin- cipally known as the author of a curious work, entitled Nuevo Descumbrimiento de Gran Rio dc los Amazones, i. e. " A new Description of the Great River of the Amazons." This was published at Madrid, in four parts, in 1641; but all the copies, except two, were destroyed. From one of them a translation was made of the work, into French, and published in 4 vols. 12mo. 1682.

ACUPUNCTURE, in surgery, the operation, common among the Chinese and Japanese, of pricking diseased parts of the body with a gold or silver needle. It is also employed in some parts of America, but rather as an ornament than as a remedy. See Philosophical Trans, vol. xiii. No. 148

ACURON, in botany, a name of the ALISMA, of LINN.EUS, which see.

ACUS, in ichthyology, a species of SYNGXA- THUS, of which there are two varieties, viz. the acus of Aristotle, or tobacco-pipe fish, and the acus of Oppian, or gar fish. See SYNG.NA- THUS.

Acus, in ichthyology, the Ammodytes, or Sand-eel.

Acus MOSCHATA, in botany, a name for the Geranium muschatum. Also a name of the Scandix.

ACUSILAUS and Damagetus, in history brothers of Rhodes, and celebrated conquerors in the Olympic games. The Greeks strewed flowers over their father, Dtegoras, complimenting him for having two such sons.

ACUSILAUS, a Greek historian, who lived, ac- cording to Josephus, before the expedition of Darius into Greece. He wrote a work entitled Tltpi rtav TfviaXoyiwv, which the Jewish historian often quotes. Also

an Athenian, who taught – rhetoric at Rome, in Galba's reign.

ACUTE', adj. ˆ Acuo, to sharpen : made

ACUTE'LY, " > sharp, whetted, ingenious,

ACUTE'NESS. j piercing, penetrating, cun- ning.

PA ROLL. I am so full of businesses, I cannot answer thee acutely. Shaitxpeare's All's Well, fol. 231, act i. sc. 1.

He, that will look into many parts of Asia and America, will find men reason there, perhaps as acutely as himself, who yet never heard of a syl- logism. Locke,

M. Coloert, the famous minister of Louis XIV. was a man of probity, of great industry, and know- ledge of detail, of great experience, and acuteness in the examination of public accounts.

Smith's Wealth of Nations.

ACUTE ACCENT. See ACCEXT.

ACUTE ANGLE, in geometry, is that which is less than a right angle, or which does not subtend ninety degrees.

ACUTE-ANGLED COXE, is according to the an- cients, a right cone, whose axis makes an acute angle with its side.

ACUTE-ANGLED TRIANGLE, is a triangle whose three angles are all acute.

ACUTE-AXGULAII SECTION of a cone, is a term sometimes used by the ancient geometricians for the ellipsis.

ACUTE DISEASES, in medicine, are such as come suddenly to a crisis. It is used in distinc- tion from chronic diseases.

ACUTE, in music, is applied to a sound or tone that is sharp or high, in comparison of some other tone. In this sense, acute stands opposed to grave.

ACUTELLA, in botany, the common ononis, or rest-harrow, a small prickly plant, with red or white flowers, and a tough spreading root.

ACUTIATOR, or ACUTOR, in old writers, a person that whets or grinds cutting instruments.

ACUTITION, or ACUITION, in medicine and chemistry, is used for sharpening or increasing the force of any medicine.

ACYROLOGIA, Gr. from aKvpog, improper, and Xoyof, speech, an improper acceptation, or expression, wherein a word or phrase is used in

some unusual or oblique sense, hardly reducible to the rules of language. Such is the word spero, sometimes used in Roman writers for timeo.

AD BESTIAS, in antiquity, a punishment of criminals, condemned to be thrown to wild beasts. It was also applied to gladiators hired to fight with wild beasts, otherwise called Bes- tiurii.

AD EXTRA, in theology, a term used in speak- ing of the external operations of God ; such as, creation, preservation, renovation, &c. See AD INTRA.

AD HOMINEM, in logic, an argument drawn from the principles or prejudices of those with whom we argue, and which of consequence must be conclusive to them, though disbelieved by us.

AD INTRA, in theology, is understood of those acts of the Divine Being, whose term and effect is within his own essence : in which sense, acts or operations, ad intra, stand opposed to those ad extra.

AD LIBITUM, is sometimes used in music, for at discretion, and is opposed to ‘ obligate.’

AD LUDOS, in antiquity, a Roman sentence, whereby criminals were condemned to entertain that barbarous people, either by fighting with beasts, or with each other, and thus executing justice on themselves.

AD METALLA, in antiquity, the punishment of being doomed to work in the mines : the cri- minals were called metallici.

AD VALOREM, in commerce, is used in speak- ing of the duties, or customs, paid for certain commodities; rated according to the value or worth sworn to by the owner.

ADAES, the name of a lake, river, and town of Los Texas, New Mexico, not faj- from Loui- siana. The lake is five leagues broad, ten in circumference, and of great depth. It abounds with fish. The river runs in a south east course, joining the Mexicano.* The town of Adaes is 450 miles N. W. of New Orleans.

AD' AGE, TZ.~) Etymologists are perplexed

AD'AGY, >with regard to the derivation

ADAO'ICAL. j of this word. It comes im- mediately from the Latin adagium ; a saying handed down from antiquity ; an antique pro- verb.

The trite and common adage saith, Leaue not the

certain for the vncertain. Hall.

HUGH. But thus you see the old adage verified,

Multa cadunt inter ••• you can guess the rest,

Many things fall between the cup and lip.

Jonson's Tale of a Tub, act iii. sc. 4.

The antithetic parallelism gives an acuteness and force to adages and moral sentences j and, therefore, abounds in Solomon's Proverbs.

Lowth's Isaiah, Prelim. Diss.

ADAGIO, ADAGEO. ado, Ital. in music, softly, leisurely. When repeated, it signifies the slowest of all movement, sometimes called ADAGISSIMO.

ADAJA, a river of Spain, which enters the Douro, between Torderillas and Simancas.

ADARE, an ancient town of Ireland, on the river Maig, over which is a fine old bridge of nine arches. Here also are the remains of two religious houses, and of an ancient castle belong- ing to the Earl of Desmond. It is eight miles S. W. of Limerick.

ADALIDES, in Spanish history, officers of justice, in military matters. In the laws of king Alphonsus, they are spoken of as officers ap- pointed to direct the marching of the forces in time of war.

ADAM, DIN, Heb. red earth, the first of the human race, and the progenitor of all man- kind. The particulars of his creation, of his being placed in the garden of Eden, of the trial of his obedience, of his review and nomination of the animals, of the creation and introduction of his wife, of their disobedience, apologies, and punishment, of the birth of three of their children, with the murder of one of them, and Adam's own death, in his 930th year, are briefly narrated by Moses, in the first five chapters of Genesis ; and as they are, or ought to be well known to every Christian, need not be here enlarged upon,

ADAM (Melchior.; See MELCHIOR.

ADAM, or AnoM, a town in the Peraea, or on the other side the Jordan, over against Jericho, where the Jordan began to be dried up on the passage of the Israelites. Josh. iii. 16.

ADAM (Alexander), LL. D. This singularly accomplished scholar was destitute of all the ad- ventitious appendages of fortune, title, or con- nexion. He was the son of a poor farmer, in the county of Moray, and born on the 6th of June, 1714. When a boy, he followed the oc- cupation of a ' neatherd,' and it is interesting to trace the steps of the rector of the high school of Edinburgh from so humble a calling. When young Adam first visited Edinburgh, his income did not for a considerable time exceed four guineas per annum. This would at first view appear incredible, even in the Scottish capital ; Out we have taken some pains to ascertain his principal items of expenditure, and they afford so curious a specimen of scholastic economy that we present the whole document to our readers. He lodged in a small room at llestal- rig, and for this accommodation paid four pence per week. All his meals, except dinner, uni- formly consisted of oat-meal made into porridge. For dinner he usually purchased a penny loaf at the nearest baker's shop; and, if the day was fine, he would despatch his meal in the course of a short walk ; and, when this was impracticable, he had recourse to some ' long and lonely stair,' which he would climb, eating his dinner, step by step. By this means all expense for cookery or firing was avoided, and his health preserved by the necessary exercise. Dr. Adam received his diploma in 1780, and continued to hold his office of rector till his death, which occurred in December 1809. He was the author of a Latin Grammar, first ed. Edin., 1772 ; Summary ol Geopraphy and History, 1 vol. 8vo. ; Classical Biography, Edin. 1800 ; Lexicon Linguae Latince Compendiarum, Edin. 1805.

AU'AMANT, n. s. 1 A, not, and ⁂a/xaw, to ADAMANTE'AN,^'. S

tame. Not to be tamed, ADAMAN'TINE. J impressed, or broken; applied by the ancients to hard substances, par- ticularly the loadstone or magnet, the diamond, and most probably the granite: adamantean, impenetrable; extremely hard: adamantine, made of adamant, like adamant; hard.

Away

We'll be as differing as two adamants, ••• The one shall shun the other.

White Devil 0. PI. vi. 315. Wide is the fronting gate ; and, rais'd on high With adamantine columns, threats the sky.

Dryden.

In adamantine chains shall death be bound, And hell's grim tyrant feel th' eternal wound.

Pope.

Tho' adamantine bonds the chief restrain, The dire restraint his wisdom will defeat, And soon restore him to his regal seat. Idem

AD AM ANT /E A, in mythology, the nurse of Jupiter in Crete, who suspended his cradle to a tree, that he might not be found either in heaven, earth, or sea, and had drums beat to drown his cries. She is supposed to be the Amalthea of Lactantius,andthe Adrasteia of other writers. ADAMANTII, in church history, a name given by some historians to the followers of Origen.

ADAMANTINE SPAR, in mineralogy, a stone of peculiar hardness, (approaching to that of the diamond) which has lately attracted the attention of chymists. It is found in China and Hither India, and as M. Pini alleges, in Italy; and exhibits two principal varieties.

The first, found in China, is of a grey colour of different shades, the larger pieces opaque ; its frac- ture very brilliant, and its texture spathose, which causes its surface to appear striated. Its crystals are covered with a very fine crust of plates of silvery mica, mixed with

particles of red felspar : sometimes sulphate of iron has been found on them. It is crystallized in six-sided prisms without pyramids, the length of which varies from half an inch, to an inch ; and their thickness is about three-quarters of an inch. This stone will cut glass easily, and mark rock crystal. Its specific gravity is 3.710.

The second variety is the Corundum of Bom- bay, of a more spathose texture, whiter colour, and having fewer grains of magnetic iron.

‘ From its hardness,’ says Dr. Ure, ‘ this stone is extremely difficult to analyze. M. Chenevix, by repeatedly heating it red hot, and then plunging it into cold water, caused it to appear fissured in every direction. He then put it into a steel mortar, about three quarters of an inch in dia- meter, and three inches deep, to which a steel pestle was closely fitted. A few blows of the pestle caused it to crumble, and the fragments were then easily reduced to an impalpable pow- der by an agate pestle and mortar. This powder was fused in a crucible of platinum with twice its weight of calcined borax; and the glass was dissolved by boiling in muriatic acid about twelve hours. The precipitates from this solu- tion being examined, a specimen from China was found to give from 100 parts, 86.50 of alu- mina, 5.26 of silex, 6.50 of iron : one from Ava, alumina 87, silex 6.5, iron 4.5 : one from Ma- labar, alumina 86.5, silex 7, iron 4 : one from the Carnatic, alumina 91, silex 5, iron 1.5. The Rev. Mr. W. Gregor analyzed a specimen from Thibet, in the collection of Mr. Rashleigh, which gave him alumina 81.75, silex 12.125, oxide of titanium 4, water 0.937, but no iron.’

ADAMAS, in natural history, a name given

by Pliny to the spume or scoria of gold ; which is cast away as not being malleable.

ADAMAS, ADAMANT, in mineralogy, die diamond, is a genus of siliceous earth, composed of carbon and silica ; found generally in sand or light earth. It is extremely hard, so as to be the best material for cutting glass, 3cc., retains the sun’s rays in the dark, and consumes altogether as an inflammable substance. It is brought into Europe from Golconda and Brazil.

ADAMBEA, in botany, a genus of plants of the class polyandria and order monodelphia, of which but two species are known. CAL. hemispheric, containing five or seven cells. COR. from five to seven petals. CAP. poly- spermous fleshy, covering the calyx. It grows on the coast of Malabar, on stony and moun- tainous parts.

AD AMI POMUM, in anatomy, a protuberance in the fore part of the throat, the convex part of the thyoid cartilage. Also, in botany, the citrus aurantium of Linnaeus.

ADAMIT7E, ADAMITES, in ecclesiastical his- tory, the name of a sect of the second century, supposed to have been a branch of the Basili- dians and Carpocratians. Epiphanius tells us, that they pretended to re-establish the state of innocence, in which Adam was at the moment of his creation, and imitated him in going naked. That they detested marriage ; maintaining, that the conjugal union would never have taken place upon earth had sin been unknown, &c. Dr. Lardner wholly denies the existence of such a sect. See Works, v. ix. Similar absurdities are charged in the twelfth century, upon Tanda- mus, since known by the name of Tanchelin, of Antwerp, who was constantly attended by 3000 profligates in arms. His sect did not, however, continue long ; but a similar one arose shortly after,under the name of Turlupins, in Savoy and Dauphine, where they committed the most brutal actions in open day. And in the beginning of the 15th century, one Picard, a native of Flanders, spread these notions in Germany, and Bohemia, particularly in the army of the famous Zisca. Some partizans of Picard, in Poland, Holland, and England, assembled in the night, and one of the fundamental maxims of their society, was said to be contained in the following verse :

Jura, perjura, secretum prodere noli. But see ADAMITISM.

ADAMITISM, the opinions and practices of the Adamites. Beausobre, has shown, that the Adamitism, i. e. the nakedness of these people, is a mere calumny, forged by their adversaries, the Calixtines and Papists, at the time when the Vaudois first appeared. Jovet and Moreri speak of Adamites in England ; and indeed the Romanists and reformed mutually reproach each other with having Adamites among them.

ADAMITUM, and ADIMITA, the hardest white stones, and stones in the bladder. The former, Paracelsus says, aie a species of tartar. AD AMP E, in geography, a territory on tho Gold Coast of Africa, adjoining Acra, and ex- tending to the Volta, and similar in its general character and appearance, but not so fertile.

ADAMPORE, a town of Bengal, in the dis- trict of Burdwan.

ADAM'S PEAK, or Hammaled, a lofty moun- tain of Ceylon, said to be visible 150 miles off, and so named from a tradition of the natives, that Adam here obtained his last view of Para- dise. It is sixty miles north-east of Columbo.

ADAM'S APPLE, in botany. See ADAMI POMUM.

ADAM'S BRIDGE, a reef of rocks, which runs be- tween Ceylon and the continent. SeeADAM's PEAK.

ADAM'S NEEDLE. See YUCCA.

ADAMS (Joseph), M. D., was born in 1756 and died June 20th, 1818. He was one of the great supporters of vaccine inoculation, and we are assured that in this respect he effected by his published writings as much as the great Dr. Jenner, its original advocate. Dr. Adams pub- lished, 1. Observations on Morbid Poisons, 8vo., 1795, 4to., 1807. 2. A Guide to Madeira, 8vo., 1801. 3. A Popular View of Vaccine Inocu- lation. 4. A Life of John Hunter, 8vo., 1816 ; and a new edition of his Treatise on the Venereal Disease, 8vo. He was also for many years editor of the Medical and Physical Journal.

ADAMSON (Patrick), archbishop of St. Andrew's, was born in 1543 at Perth. In 1566 VIP set out for Paris as tutor to a young ˆentle- nr an ; and, Mary queen of Scots being that year delivered of a son, Mr. Adamson wrote a Latin poem on the occasion, hailing the royal infant as king of England and France, for which he was confined in France for six months. As soon as he recovered his liberty, he retired with his pupil to Bourges; and there wrote a Latin poetical version of the Tjook of Job, and the Tragedy cf Herod in the same language. In 1573 he returned tc Scotland, and became mi- nister of Paisley. He was afterwards one of the commissioners for settling the jurisdiction and policy of the church ; and chaplain to the earl of Morton, then regent. On the death of bishop Douglas, he was promoted to the archiepiscopal see of St. Andrew's, a dignity which brought upon him great trouble. In 1578 he submitted to the general assembly, which procured him peace for a short time, but the year following they brought fresh accusations against him. Being attacked with a disease, in which the physicians could give him no relief, he happened to take a simple medicine from an old woman which did him service, and who, being charged with witchcraft, he was accused of dealing with witches. In 1583 king James sent him ambas- sador to queen Elizabeth, at whose court he re- sided for some years : but, returning

to Scotland in 1584, the Presbyterian party was very violent against the archbishop, and excommunicated him. Accused of various frivolous crimes, the king deserted him, and granted the revenue of his see to the duke of Lennox, until, goaded by poverty And oppression, he submitted to the wretched humiliation of recanting his opinions upon church government publicly ; which, however, availed him nothing. He died in abject poverty in 1599. His works are contained in a 4to. volume, London, 1619.

ADAMSTOWN, a parish and town in the county of Wexford, Ireland, lamentably memo- rable on account of Scullabogue Barn, in which 195 Protestants were burnt alive, at the time of the Irish rebellion, in 1798. The remains of this

building are still to be seen. ??? Also a small town of Pennsylvania, North America. ADAMUS,a name for the philosopher's stone.

ADANA, an ancient town of Asia, in Natolia, the capital of the province of Aledulia, and seated on the river Choquen or Adana, on the banks of which stands a strong little castle, built on a rock. It has a great number of beautiful foun- tains, brought from the river by means of water- works. Over the river there is a stately bridge of fifteen arches. The climate is very pleasant and healthy, and the winter mild and serene ; but the summer is so hot as to oblige the principal inhabitants to retire into the neighbouring moun- tains, where they spend six months among shady trees and grottoes, in a most delicious manner The adjacent country is rich and fertile, both in corn and fruits. Adana is also a considerable wine market. It is thirty miles north-east of Tarsus on the road to Aleppo.

ADANAD, a town of Hindostan, in the dis- trict of Shirnada, and province of Malabar, twenty-five miles south-east of Calicut. It is remarkable as the principal residence or throne of the Alvangheri Tamburacul, the chief of the Namburies. a very proud class of Brahmins, who will take their meals with no other class, and only suffer the elder branches of their families to marry, lest the distinction should lie rendered loo common.

ADANSONIA, in botany, Ethiopian sour- gourd, or monkey bread, a genus of plants of the order monodelphia, class polyandria; and the characters of which are : CAL. a perianthium one- leaved, half five-cleft, cup form (the divisions revolute), deciduous: COR. five petals, roundish, nerved, revolute, growing reciprocally with the claws and stamina: STAM. of numerous filaments, coalesced beneath into a tube, and crowning it, expanding horizontally ; the antherae kidney form,

incumbent : PIST. an egged germ ; the stylus very long, tubular, variously intorted ; the stig- mata numerous (ten), prismatic, villous, ray expanded : PER. an oval capsule, woody, not gaping, two celled, with farinaceous pulp, the partitions membraneous : the seeds are numerous, kidney-shaped, rather bony, and involved in a friable pulp. There is at present but one known species belonging to this genus, the baobab, abavi, abevo, arbu, or guanabanus, which is perhaps the largest production of the whole vegetable kingdom, and is a native of Africa. r-

ADAPT, v. a. ~\ Lat. adapto. To fit or suit

ADAPTATION, n. $ (one thing to another:

ADAP'TION, ►► adaptation and adaption

ADEPT', ra. s. & adj. 3 mean suitability ; the act

of fitting or suiting : an adept is one who possesses

the qualifications suitea to a specific purpose or

employ: as an adjective, skilful; well versed.

'Tis true, but let it not be known, My eyes are somewhat dimmish grown j For nature, always in the right, To your decays adapts my sight. tfwift.

It is not enough that nothing offends the ear ; but a good poet will adapt the very sounds, as well as words, to the things he treats of. Pope's Lettert. From stucco'd walls smart arguments rebound, And beaux, adept in every thing profound, Die of disdain, or whistle off the sound. Cuwper

A DAMS (John), a distinguished patriot in the American revolution,was descended from English ancestors, who, with other puritans, settled in the territory of Massachusetts. Having evinced a taste for learning, he was educated for the legal profession, under the able tuition of Mr. Gridley, but only used his extensive learning in this branch as accessory to the accomplishment of his higher ambition. His

eloquence, knowledge, and perseverance, soon acquired for him that re- putation to which he early aspired ; and being elected representative for the town of Boston, he devoted all the energies of his mind, during the remainder of his life, to the completion of that political system, for the attainment of which, he, in common with the noblest of his fellow- countrymen, encountered so many perils. He was engaged in the negotiation of treaties be- tween Holland, England, and France, and the United states ; was the friend of Mr. Jefferson, who thus speaks of him in a public address : ××× ” that the great pillar of support to the declara- tion of independence, and its ablest advocate and champion on the floor of the house, was John Adams.” Upon his return from England, where he resided as first minister to London, he was elected the first vice-president of the United States, under the new constitution, and re- elected in 1793. The duties of this office he discharged with ability and integrity until the 4th day of March, 1797, when he succeeded to the presidency, then vacated by general Wash- ington. Four years he filled the high situation of president, and only lost his re-election by a majority of one, which Jefferson, his rival, at- tained over him. But the equanimity of his great mind was not to be shaken by any mere human events, and Mr. Adams was found still the champion of his country’s rights, still the upright senator, still the obedient citizen. The 4th of July, 1826, was the day appointed by the Wise Dispenser of events for the removal of this honest statesman from the theatre of this world ; and while he lay extended on the couch of death, his attendants asked him ” whether he knew what day it was, or what the ringing of bells and other rejoicings meant?” “O yes,” he replied, ” it is the glorious 4th of July ; and again,” said he, “Jefferson survives.” But Jefferson had already, at one o’clock that same day, rendered his spirit into the hands of his Redeemer. See AMERICA, NORTH.

ADAPTERS, or ADOPTERS. See CHEMISTRY.

ADAR, TlK, Heb. mighty, the name of a Hebrew month, answering to the end of Feb- ruary and beginning of March, the 12th of their sacred, and 6th of their civil year. On the 7th day of it, the Jews celebrate the death of Moses ; on the 13th, they have the feast of Esther ; and on the 14th, the feast of Purim, for their deliver- ance from Haman’s conspiracy. See VEADAR.

ADARCE, iu the materia medica of the an- cients, a saltish humour concreting about the stalks of reeds, and other vegetables, in Cappa- docia and Galatia : we also read of it in Italy ; and of a native kind produced in Indian reeds, as sugar in the cane. It was used as a topic to rub the skin in leprosy, sun-burning, freckles, &c.

mentioned in Scripture, usually of gold, derived, as some think, from the gold pieces coined by Darius, called ˆapax01- They are valued variously; according to Dr. Bernard, they weighed two grains more than our guinea, but the gold being very fine and little alloyed, it may be taken at worth about twenty-five shillings sterling. There was one in lord Pembroke's cabinet a few years since, which weighed 129 grains.

ADARIDGE, or ADAHICESˆ in chemistry, sal-ammoniac.

ADARME, in commerce, a small Spanish weight, the sixteenth part of an ounce troy.

ADARNECH, in chemistry, auripigmentum, or orpiment.

ADARTICULATION, in medicine, is used by some physicians for apdpwSia, by others, for Stap9pwffig. See ARTHRODIA and DIARTHROSIS.

ADATAIS, ADATSI, or ADATYS, in commerce, a fine muslin or cotton cloth, made in Bengal.

ADAUNT, to discourage, subdue. See DAUNT.

ADAW. of uncertain derivation and obso- lete ; to daunt, keep under, abate.

ADAYS', on days.

ADCIIER, or ADHER, in the materia medica, a name given by Avicenna and Serapion, to the Scaenanth, or camel's hay ; as well as to the common rush.

ADCORDABILES DEHAKII, in old law books, money paid by the vassal to his lord, upon the selling or exchanging of a feud.

ADCOR'PORATE, or) Ad: corpus. See

ADCOR'PORATE, v. $ INCORPORATE.

ADCREDULITARE, in law, to purge one's self of an offence by oath.

ADCRESCENTES, among the Romans, sol- diers entered in the army, but not yet put on duty; from these the standing forces were recruited. See ACCEKSI.

ADD,’ c. 1

AD’DIBLE,

ADDIBIL’ITY,

ADDIT’AMENT,

ADDI’TION,

ADDITIONAL, n. ft a.

ADDITIONALLY,

ADDI’TIONARY,

AD’DITORY.

ADDEEM’, or 1 From deem and doom. See

ADDOOM’. > DEEM.

ADDA, in geography, a river of Switzerland and Italy, which rises in the mount Braulio, in the country of the Grisons, and passes through the Valteline, traverses the lake Como, and the Milanese, and falls into the Po, near Cremona. Its navigation was much improved by a canal, dug in 1771.

The ADDA gave name, in part, to that portion of the Italian republic, and kingdom of Italy, (now subject to Austria,) called the department of the Adda and Oglio, and which contained the northern part of the Bergamasco, and the whole of the Valteline.

ADDA-EL, in zoology, the Arabian name of a small species of lizard, described by Bruce, as found at Atbana, beyond the ruins, near the site of the ancient Mene, and to which many me- dicinal virtues are ascribed by the natives.

K

Ad : do, to give to ; to put together ; to in- crease a number, or quantity.

ADDACE, in natural history, a name by which the Africans call the common antelope. See GAZELLA.

ADDEPHAGIA, from Addt), much, and 0ayw, I eat, in medicine, a term sometimes used to express greediness or voraciousness as a disease. AD'DER, TEtteri Na'o&ne, Saxon, a viper, a poisonous reptile ; formerly applied to serpents in general.

Or is the adder better tban the eel, Because his painted skin contents the eye ?

Shakspeare.

An adder did it ; for, with doubler tongue Than thine, thou serpent, never adder stung.

Idem.

The adder teaches us where to strike, by her curious and fearful defending of her head. Taylor.

ADDER, in zoology, a venemous reptile of the serpent kind, more usually called a viper. It is sometimes confounded with the asp : thus, the deaf adder, spoken of in the Bible, is not pro- perly the adder, but the asp.

ADDER-BOLT, the dragon fly. See LIBLILLA.

ADDER-NOWED, or KNOTTED, in heraldry, is a particular twisting of the adder in a coat of arms.

ADDER CURLING ERECTED, in heraldry. See HERALDRY.

ADDER, SEA, in ichthyology, the English name of the sygnathus typhle, which see.

ADDER'S-TONGUE, in botany, the ophioglossum of Linnaeus, a medicinal plant, so called, either from its resembling the tongue, or curing the bite of a viper. Skinner says, from its serving as a lurking place for adders. No part of the fruc- tification is visible, except the fruit, which is an oblong, double capsule, divided into a gre

ADDER, WATER, in zoology, a name given to the coluber

ADDER-WORT, in botany, snakewood. See POLYGONUM.

ADDEXTRATORES, or ADDEXTRARII, in the court of Rome, the pope's mitre-bearers; thus called, on account of their walking at the pope's right hand, when he rides out.

AD'DICE, or i ^ A>ene, a kind of axe,

ADZE, J > a crooked instrument used

AXE. j by carpenters, coopers, &c.

for cutting wood under the foot.

The addice hath its blade made thin, and some- what arching. Moxon's Mecltanical Exercises.

I had thought I had rode upon addices between this and Canterbury. Lyly. Moth. Bomb. c. 10.

ADDICT/, v. -} Ad : dico, to say to ; not

ADDICT'EDNESS, >used in English agreeably
ADDIC'TION. j to its obvious rendering; rather to give one's self up to, to devote, to con- secrate. Contrary to the assertion of Johnson, it is used in a good as well as in a bad sense. To studies good addict of comely grace.

Mir. for Mag. p. 175.

It is a wonder how his grace should glean it j Since his addiction was to courses vain \

His companies unletter'd, rude, and shallow ;

His hours fill'd up with riots, banquets, sports.

Shaktpeara

Aso. Yours entirely, addicted Madame.

ARC. I require no more, dearest Asotus ; hence- forth let me call you mine.

Jonxon's Cynthia's Revelt.

Ye know the house of Stephanus ; that they have addicted themselves to the ministry of the saints.

1 Cor. xvi. 15.

I am neither author or fautor of aay sect : I will have no man addict himself to me ; but, if I have any thing right, defend it as truth's.

Ben Jonson.

Those know how little I have remitted of my former addictedness to make chymical experiments.

Boyle.

ADDICO. See ADDICTIO.

ADDICTI, in Roman antiquity, insolvent debtors, who were adjudged by the twelve tables to a kind of temporary servitude to the creditor.

ADDICTIO, ADDICTION, in the Roman law, the making over goods to another, either by sale or by legal sentence ; the goods so delivered were called bona addicta.

ADDISON, (Launcelot,) D.D. son of a clergy- man of the same name, was born at Maulds Meaburne, in the parish of Crosby, Ravensworth, Westmoreland, and educated at Queen's College, Oxford. He was chosen one of the Terra Filii, in 1658; when his attachment to the exiled royal family, excited him to make some severe reflec- tions in an oration, on the pride and ignorance of his superiors, and exposed him to so strong a feeling of censure, that he could only obtain forgiveness, by recanting the obnoxious expres- sions publicly, on his knees.

At the restoration, he quickly rose in the royal favour, was made chaplain of Dunkirk, chaplain in ordinary to the king, rector of Milston, in Wiltshire, prebendary of Sarnm, dean of Litch- field, and archdeacon of Coventry. His life and writings reflect honour upon his memory, as a Christian, a gentleman, and a clergyman.

He expired on the 20th of April, 1703, leaving three sons : Joseph Addison, Gulston, afterwards governor of Fort St. George; Launcelot, mas- ter of arts, and fellow of Magdalen College, Oxford ; and one daughter, married first to Dr. Sartre, prebendary of Westminster, and afterwards to Daniel Combes, Esq.

ADDISON, (Joseph,) son of Dr. Launcelot Addison, was born May 1, 1672, at Milston, near Ambresbury, in Wiltshire ; of which place his father was rector. As he was from his infancy intended for orders, his domestic culture, he tells us, was judiciously calculated to leave upon his mind the most powerful impressions of religion.

He acquired the rudiments of education under private tutors ; but, in his thirteenth year was removed to the Charter-House, then under the care of Dr. Ellis ; and, where he first contracted his memorable acquaintance with sir Richard Steele. In 1687, he was entered of Queen's College, Oxford, where some Latin verses which he composed procured him the patronage of Dr. Lancaster, afterwards provost of the College; through whose interest, he was, in 1689, elected demy of Magdalen. All his powers were now

directed to the cultivation of his mind, and his fondness for Latin compositions prevailing, he produced his celebrated Musae Anglicanse, a col- lection of poems, from -winch Boileau, according to Tickel, ever afterwards conceived a high opinion of English genius : and observed that, " he would not have written against Perrault, had he before seen such excellent pieces by a modern hand."

In his twenty-second year, Addison first ap- peared as an English writer, in verses addressed to Dryden ; and published shortly afterwards a translation of part of Virgil's Georgic on the Bees, of which Dryden spoke highly. About the same time he composed

the arguments prefixed to the several books of Dryden's Virgil. His next paper of verses contained the character of English poets, of the first rank, inscribed to Henry Sacheverell, who if not himself a poet, was, at least, a writer of verses. In this poem, is a very confident and discriminating character of Spenser, whose works, it afterwards appeared, he had never read. About this time, he was diverted from his intention of entering into holy orders, by the influence of Mr. Montague, then chancellor of the Exchequer, to whose friendship he had been introduced by Mr. Congreve. It is evident, that he was now learning the trade of a courtier. Montague had written verses with- out the slightest claim to excellence; and, Addison joined his name with those of Cowley and Dryden. In 1695, he addressed a poem to king William, with an introductory dedication to lord Somers ; and in 1697, produced his Latin poem, on the celebrated peace of Ryswick, dedi- cated to his friend Montague. This, beside paving the way to a pension of ►►300 per annum, has been pronounced the best Latin poem sine0 the .ZEneid. Upon receiving his pension, he resolved upon an excursion to the Continent, and having staid a year at Blois to learn the French language, he proceeded into Italy, where he beheld with the eyes of a classic, and the rapture of a poet, the ancient monuments and remains of Pagan Rome.

His poetical epistle to Lord Halifax, descrip- tive of this journey, is considered amongst the most elegant of his productions. In Italy, he wrote his Dialogues on Medals, and some acts of his Cato ; and after an absence of two years returned to England in pecuniary embarrassment, through the non-payment of his pension. He had also been deprived, by the death of king William, of a small appointment about the per- son of prince Eugene. Shortly after his return he published his travels, dedicated to Lord Somers ; and so great was the popularity of the first edition, that it was enhanced to five times its original price before a reprint could be obtained. Of many parts of this book, however, Dr. John- son

thinks it no severe censure to say, they might have been written at home ; but the bold, yet delicate delineations, the elegant language, and charming variety of his style rendered it the favourite of the public, and soon established its fame as a standard English classic.

On the victory of Blenheim, Lord Godolphin lamented to Lord Halifax, that it had not been sufficiently celebrated ; and desired him to men-

tion some superior poet who was capable of doing justice to the theme. Halifax named Addison ; and no sooner had the poet read to his patron what he had written as far as the simile of the angel, than he was appointed commis- sioner of appeals. On the following year, ac- companying Lord Halifax to Hanover, he was made under secretary of state About this time, to divert the public from the rage for Italian operas, he endeavoured to introduce a musical drama in our own language, and produced his Rosamond, which on its first appearance was hissed from the stage. Shortly after, the duke of Wharton being appointed Lord Lieutenant of Ireland, Addison became his secretary, arid was presented with the additional honour of ” keeper of the Records in Birmingham’s Tower, with a salary of ––300 per annum. Swift observes of him, with respect to this office, that he made it a rule never to return fees to his friends out of politeness ! Dunng his residence in Ireland, the publication of the Tatler was commenced by Steele, without any communication of his design ; but the insertion of a remark which Addison had given him with respect to a passage in Virgil, discovered the author : and the subject of our memoir became an invaluable auxiliary in this first series of our familiar classics. The Tatler was succeeded in about two months by the Spectator, a series of essays published early every day ; designed to guide the flow of daily conversation, and to improve the manners of the fashionable world. In short the Spectator may be considered as a sort of ” Arbiter Eleganti- arum,” as Johnson terms it ; pouring its small rays and short imperfect strokes of light upon the common walks of familiar life, and

is no less calculated to please the imagination by its sprightly and instructive style, than to improve the affections by its refinement and delicacy. The descriptions of living characters which it contained were numerous, and were drawn to such perfection, that many of them were known by the spirit and expression of their portraits, and pointed out by the world. The papers, thus rapidly produced, display considerable depth of literature and criticism, maintained with great justness of thought and dignity of language; and the miscellanies are happily varied with elegant fictions and refined allegories. Addison how- ever, seems not to have completely prosecuted his original design ; and this admired work ter- minated abruptly on the 16th of September, 1712. His Cato, produced in 1713, raised Addison's reputation still higher. As an his- torical play, it was at first considered to have peculiar political views ; and England being then distracted with strong party opinions, it is not to be wondered that it was variously received, or that its performance created some confusion. It had, however, so much merit, that the queen solicited the honour of a dedication of it to her- self; it has also been introduced upon foreign stages, and translated into almost all the lan- guages of Europe. Steele took advantage of the fame of Cato, to commence the publication of the Guardian, to which Addison contributed ; distinguishing all his papers with a small hand, as in the Spectator by one of the letters in K 2

the name of the muse CLIO. Steele also attri- butes to Addison the comedy of the Drummer, which he carried for him about this time to the play-house, and of which he afterwards sold the copy for fifty guineas.

Being largely engaged with public affairs, Addison frequently entered with warmth into political discussions, and wrote several pamphlets of which

The present State of the War, The Whig Examiner, and The Trial of Count Tariff,
ववwere the most remarkable. On the death of Queen Anne, Addison was made secretary to the Regency, and was required to write to the Elector of Hanover, announcing the vacancy of the throne ; but he was so long seeking for choice expressions that the Lords grew impatient, and called to Mr. Southwell, a clerk, to dispatch the message, which he immediately did, and not a little valued himself on the occasion.

December 23rd, 1715, he published the ववFreeholder, in defence of government, a work full of convincing arguments, singular pleasantry, and considerable embellishment. He also gave the world about this time his Tory Fox Hun- ter, a matchless performance, which can scarcely fail of delighting even bigotry itself. In August, 1716, he married the Countess dowager of Warwick, a union which as it neither found nor made the parties equal, afforded very little or no addition to their happiness. The lady re- membering her rank, treated him with a son of condescending ceremony, and appeared never to forget him as the tutor of her son. Howe’s ballad of the Despairing Shepherd, is said to have been written upon this match.

In 1717, he was made one of the principal secretaries of state, an office for which he was altogether ill adapted, as he could neither speak with boldness nor eloquence; nor had any portion of the readiness of a man of business. He was therefore useless in the house of Com- mons, and in the office he could not issue an ouler without wasting his time in search of fine expressions. At last he obtained his dismission wrth a pension of वववववव

In the decline of his life, apolitical dispute arose between the subject of our memoir and his friend Steele. It was occasioned by Lord Sunderland's having attempted to introduce a bill for limiting the creation of peers. This being warmly sup- ported by the former and opposed by the latter, produced several pamphlets on both sides, heated with acrimonious expressions ; nor could a per- fect reconciliation ever afterwards be effected.

At length after an useful but chequered life, Addison felt his end sensibly approaching, and forgetting all human affairs, endeavoured to pre- pare for hjji ast moments. With a natural wish to die in pfeace with the world, he sent for Mr. Gay, ar^l told him he had injured him : but if he lived to recover, he would make him ample

recompence. The latter was not sensible of any injury, but Supposed he might have been the means of withholding some preferment from him. Lord Warwick, his son-in-law,was a young man of loose opinions and irregular habits, whom Addison had used every effort to reclaim. One experiment however, remained to be tried, the effect of a last interview. He sent for the young nobleman in his dying moments, and on his desiring with great tenderness to know his last injunction, said to him, " I have sent for you, that you may see with what peace a Christian can die." Whether this touching interview had any effect upon the young earl, is not known. He died himself shortly after. Tickel alludes to this circumstance in the following lines of his elegy :

He taught us how to live, and oh ! too high

The price of knowledge, taught us how to die.

After having given directions to Mr. Tickel respecting the publication of his works, and dedi- cated them to his friend Mr. Craggs, Addison expired June 17th, 1719, at Holland House in the 47th year of his age, leaving an only child, a daughter.

In the habits and external manners of Mr. Addison,

there was a timorous or sullen taci- turnity ; by some attributed to an extreme, native modesty. Steele mentions, with regret, this re- markable bashfulness. Chesterfield calls him the most timorous and awkward man that he ever saw : and Addison himself, speaking of his defi- ciency in conversation, used to observe, that with respect to intellectual wealth, he could draw bills to a thousand pounds, though he had not a guinea in his pocket.

Of Addison's life before marriage, Pope has given some details. He had in his house with him Budgel, and perhaps Philips, besides whom, his chief companions were Steele, Gary, Dave- nant, and Colonel Brett. With some one of these he always breakfasted, afterwards studied all the morning ; then dined at a tavern, and went to Button's coffee-house, in the evening. Button had been servant in the countess of Warwick's fa- mily ; and now, under the patronage of Addison, kept a coffee-house on the south side of Russel- street, two doors from Covent-garden, where the wits of the day used to assemble. From the coffee-house he went again to the tavern, where he often sat late and drank too much wine.

On the whole, the fame of Addison, though never entitling him to exalted rank as a politi- cian or a man of public business, and considera- bly on the wane perhaps, as a poet, and even as a critic, compared to the estimation his pieces enjoyed at the period of their publication, rests on the solid basis of that real excellence in the style and manner, as well as in the whole tendency of his writings, which will render it all-enduring while the language of his country survives. He can be satirical without being in- vidious, and witty but not malevolent : calling back the wanderer from the path of virtue, rather by exhibiting new attractions in her charms, than following him with frowns, and threats, and anathemas ; and must be ever regarded by impartial history, as one of the soundest patriots and best public writers that our annals can boast.

ADDISON, a county of the state of Vermont, Worth America, intersected by the Green Moun- tains : it is bounded on the E. by lake Champlain smd divided into two parts by Otter Creek, being thirty miles long, and thirty-seven broad ; and contains twenty-one townships and 7000 inhabi- tants. The capital is Middlebury. Also, a town of the above county on lake Champlain.

ADDITAMENTS, in chemistry and phar- macy, ingredients added to medicines already compounded. It is also an heraldic te 'm signify- ing any remarkable addition to a coat of arms.

ADDITION, in algebra. See ALGEBRA.

ADDITION, CHARACTER OF, is +, which is usually expressed by plus. Thus 3+4, denotes the sum of 3 and 4 ; and is read 3 plus 4. See ARITHMETIC.

ADDITION, in music, a dot marked on the right side of a note, signifying that it is to be sounded or lengthened half as much as it would have been without such a mark.

A DDITION OF DECIMALS, fractions, whole num- bers, &c. See ARITHMETIC.

ADDITIONS, in distilling, such things as are added to the wash, or liquor, while in a state of fermentation, in order to improve the vinosity of the spirit. See DISTILLING.

ADDITIONS, in heraldry, some things added to a coat of arms, as marks of honour ; and therefore directly opposite to abatements. As BORDURE, CANTON, GYRON, PILE, QUARTER, 8cc. See these articles.

ADDITIONS OF DEGREES, are those we call names of dignity ; as knight, lord, earl, marquis, &c.

ADDITIONS OF ESTATE, or QUALITY, are yeo- man,

gentleman, esquire, and such like.

ADDITIONS OF PLACE, are the names of the places where persons reside added to their name, such as of Thorpe, of Dale, or of Wood- stock. Where a man hath household in two places, he shall be said to dwell in both ; so that his addition in either may suffice. By statute 1 Henry V. cap. 5, it was ordained, that in such suits or actions, where process of outlawry lies, such addition should be made to the name of the defendant, to show his estate, mystery, and place where he dwells ; and that the writs not having such additions shall abide if the defendant take ex- ception thereto ; but not by the office of the court.

ADDITIVE,something to be added to another.

ADDITIVE RATIO, in geometry, is, that whose terms are disposed to addition, that is, to compo- sition, in opposition to subtractive ratio, whose terms are disposed to subtraction, i. e. to division.

ADDITIVE EQUATIONS, in astronomy, those which are to be added to the sun’s mean anomaly, in order to find the true one.

AD’DLE, v. & adj. Aidlian : Ang. Sax. To be sick or ill ; to be useless, to answer no good purpose, to be empty. Applied to eggs, putrid or diseased.

Could your mouldy brain be so addle, to imagine I would marry a stale widow at six and forty ?

Ford’s Love’s Sacrifice. There’s one with truncheon, like a ladle ; That carries eggs too fresh or addle ; Ana still at random, as he goes, Among the jabble rout bestows. Hudibras.

Bare trees, and shrubs, but ill you know m Could shelter them [the birds] from rain or snow Stepping into their nests, they paddled, Themselves were chill’d, their eggs were addled.

Cowper’s Pairing Time Anticipated^

ADDORSEE’, in heraldry, or endorsed, back to back, as lions rampant. Leigh gives a coat of arms of this kind to Achilles, at the siege of Troy.

ADDOUBORS, in law. See REDUBBORS.

ADDRESS’, v. & 7i.) Addresser. Fr. Dere-

ADDRESS’ER.) car, Span, to approach

in a straight line, to attend to ; to employ time in ; to apply to, either by speaking or writing ; the noun also signifies a person’s exterior de- meanour.

Uprose from drowsie couche, and him addrest,

Unto the journey which he had dehight.

Sp. F. Q. iii. 8.

It is a most high privilege and advantage to ns that we are allowed to pray, and address our devotions to God. Borrow.

The young hero had addressed his prayers to him for his assistance. Dryden.

The prince himself, with awful dread posscss’d,

His vows to great Apollo thus addressed. Idem. His suit was common ; but, above the rest,

To both the brother-princes thus addrest. Idem.

The difficulty of the first address on any new occa- sion, is felt by every man in his transactions with the world ; and confessed by the settled and regular forms of salutation which necessity has introduced into al►►. languages. Rambler

How shall I speak thee, or thy power address,

Thou god of our idolatry ►►► the press ? Cowper:

ADDUA, in ancient geography, a river of Cisalpine Gaul, now ADDA, which see. ADDUBBED, dubbed, created. Bailey. ADDUCE’, v.-l Ad: duco ; to had to;

ADDUC’TION, Mo bring forward, to urge, U ‘
ADDUC’TIVE. j allege.

The price had, it seems, before the tax, been & monopoly price ; and the argument adduced to shew that sugar was an improper subject for taxation, demonstrated, perhaps, that it was a proper one.

Smith’s Wealth of Nations.

ADDUCENT MUSCLES, or ADDUCTORS, from ad, to, and ducere, to draw, those which bring forward, close, or draw together, the parts of the body, whereto they are annexed.

ADDUCTION, in anatomy, the motion or action of the adducent muscles. Thus the AD- DUCTOR BRACHII serves to draw the arm toward the trunk of the body ; though Winslow finds its office more complicated, and that it acts in con- currence with the flexors and extensors, in bending and extending the arm.

ADDUCTOR INDICIS, is a muscle of the fore- finger, arising from the inside of the bone of the thumb, and inserted into the first bone of the fore-finger, which it draws towards the thumb

ADDUCTOR MINIMI DIGITI PEDIS; the same as transversalis pedis.

ADDUCTOR OCULI, a muscle of the eye, so called, because it inclines its pupil towards the nose. It is also called bibitorius ; because it directs the eye toward the cup in drinking.

ADDUCTOR POLLICES, a muscle of the thumb, which arises tendinous, and ascends obliquely towards a broad termination, at the superior part

of the first bone of the thumb. Its office is to bring the thumb near the fore-finger.

ADDUCTOR POLLICIS PEDIS, called also anti- thenar, is a muscle of the great toe, which arises from the inferior part of the os cuneiforme ter- tium, and is inserted into the internal part of the ossa sessamoidea of the great toe; which it draws nearer the rest.

ADDUCTOR PROSTATE, a name by which San- torini describes a muscle, called by Winslow, prostaticus superior. Albinus, from its office, has called it compressor prostate.

ADDULCE’, v. Ad : dulcis, to sweeten ; to render sweet or agreeable to the palate.

Thus did the French ambassadors, with great shew of their king’s affection, and many sugared words, seek to addulce all matters between the two kings.

Bacon’s Henry VII.

ADEB, in commerce, an Egyptian weight, used principally for rice, and generally consisting of 210 okes, each of three rotolos. The adeb is altogether equal to about two drams less than the English pound.

AD EC, in chemistry, sour milk. ADECTOS, a medicine that allays the sense of pain, or the uneasiness created by stimulants. ADEL, or ADAIEL, a kingdom on the .eastern coast of Africa, extending, according to Mr. Salt, from the town of Zeila to the straits of Babel-mandel. This country produces corn, and feeds a great number of cattle. The inhabi- tants carry on a trade in gold, silver, ivory, oil, frankincense, pepper, and other merchandises of Arabia and the Indies. The king was formerly a vassal of Abyssinia : but the Adelites being Mahometans, and the Abyssinians a sort of Christians, in 1535 they came to an open rup- ture, and the Adelites threw off the yoke of their neighbours, seeking protection from the Grand Seignior. They are represented by modern tra- vellers as a very warlike race, and the most formidable enemies of the Abyssinian tribes- The principal towns mentioned by travellers, are Adela, Zeila, and Barbara ; the last two being flourishing seaports.

ADEL, in ichthyology, the lavearetus, or albula nobilis. These are generally treated of by au- thors as two different kinds of fish. But Artedi contends that they are the same species, and dis- tinguishes them by the name of the coregenus, with the upper jaw flat, and longer than the under; and with fourteen rays in the back fin.

ADELA, a principal town of the kingdom of A.DEL, which see.

ADELANTADO, Span, the deputy of a pro- vince.

ADELFORS, a town and gold mine in the parish of Alsheda, and district of Jonkioping, in the province of Smaland, Sweden. It was first discovered in 1738, but is not very productive. ADELIA, in botany, a genus of plants of the order monadelphia, class dioecia ; the characters of which are : CAL. a perianthium, one-leaved, three parted ; the florets sublanced and concave. The female calyx is a five-leaved perianthium ; the leaflets sublanced, concave, persistent: no COR. : STAM. many capillary

filaments the length of the calyx, conjoined at the base; the antherae roundish : PIST. a roundish germen ; the seeds

solitary and roundish. In the natural method, this genus belongs to the 38th order, tncoccae. There are three species; the bernardia, the ricinella, and acidoton, for which we have no proper names in English. They are natives of Jamaica.

ADELIANS,the inhabitants of ADEL,which see. ADELING. See ATHELING. ADELME, or ALDIIELME, son to Kenred, and nephew to Ina, king of the West Saxons ; after having been educated abroad, he was abbot of Malmsbury thirty years. He is said to have been the first Englishman who wrote in Latin, and who brought poetry into England; and the first bishop of Sherburn. He lived in great esteem till his death, which happened in 709. He was canonized, and is mentioned with great honour by Camden and Bayle; William of Malmsbury wrote his life. The last writer says, that Aldhelme, anxious to instruct his country- men, then semi-barbarous, and half heathens, frequently took his station on the public roads or bridges, and by mixing sacred with lighter topics, won their attention, and meliorated their minds. Malmsbury, 3 Gale, 339.

ADELPHI, otherwise FRATELLI ISLANDS, four isles of the Grecian Archipelago, E. of Scopelo, in N. lat. 39►►, 22.' E. long. 24►►, 4'.

ADELPHIANI, in church-history, a sect of ancient heretics, who fasted always on Sundays. ADELPHIUS, the founder of the sect of Adelphiani.

ADELUNG, (John Christopher,) a distin- guished German grammarian, philologist, and general scholar, was born in 1734, at Spantekow, in Pomerania. His education was begun at the public schools of Anclam and Closterbergen, and finished at the University of Halle. In 1759, he was appointed professor of the Academy at Erfurt, which office he relinquished, and settled at Leipsic in 1761. Here he was made librarian to the elector of Saxony in 1787, a

situation which he held, with the honorary title of Aulic counsellor, until his death in 1806.

Adelung, as well as a great scholar, was also a bon vivant, and boasted of his cellar as a bibliotheca selectissima. It is said to have con- tained forty kinds of wine. But his literary day consisted regularly of fourteen hours. He was the author of a Grammatical and Critical Dic- tionary, Leipsic, 1774-1786, 5 vols. 4to; of which work new enlarged editions appeared in 1793-1801. Glossarium Manuale ad Scrip- tores medii et Infimse Latinitatis, Halle, 1772- 1784; three German Grammars; a Treatise on German Style, 2 vols. 8vo; Supplements to Jcecher's Dictionary of Literary Men, 2 vols. 4 to ; History of Human Folly, or Lives of the most celebrated Necromancers, Alchymists, Ex- orcists, Diviners, &c. ; a Cyclopaedia in four parts, a work of great merit ; Essay on the History of the Civilization of Mankind; The History of Philosophy, 3 vols.; Treatise on German Orthography, 8vo; The History of the Teutones, their Language and Literature, before the general Migration, 8vo ; Mithri- date, or a Universal Table of Languages, with the Lord's Prayer in one hundred Languages, 8vo.

ADEMPTION, in civil law, implies the revo- cation of a grant, donation, or the like.

ADEN, formerly a rich and considerable town of Arabia Felix. It is seated by the sea side, a little eastward of the straits of Babel- mandel, and is the capital of a district, or small state, of the same name ; but the principal trade it carried on formerly, is now transferred to Mocha. It was taken by the Turks in 1538, and by the Persians in 1605. This district was de- clared an independent state in 1735, and is governed by its own magistracy. Long. 4►►, 0'. E. Lat. 13►►, 0'. N.

ADEN, in anatomy, aSrjv, Gr. a gland, glan- dule, or glandular swelling.

ADEN ANTHERA, in botany,BASTARD FLOW- ER FENCE, a genus of plants of the order monogy- nia, and class decandria. In the natural method, it belongs to the thirty-third order, Lomentaceee. The characters are : CAL. a perianthium of one very small five-toothed leaf: COR. five, bell- shaped, lanceolate, sessile petals, convex within and concave under : STAM. ten erect subulated filaments, shorter than the corolla ; the antherae roundish, incumbent, bearing a globular gland on the exterior top : PIST. a long gibbous ger- men ; the stylvis subulated the length of the sta- mina ; the stigma simple : PER. a long com- pressed membraneous legumen. The seeds very numerous, roundish, and remote.

Only one species of this plant is known in Britain; but there is a variety) with scarlet seeds, which is rare, and grows slowly. It is a native of India.

ADENANTHOS, in botany, a genus of plants of the order monogynia, and class tetrandria, found in New Holland, and so named by Labil- lardiere.

Its general characters are, CAL. Involucrum, single flower, from four to eight short leaves. COR. One petal, inferior, tubular, cut round near the base, nectary four glands united with the permanent base of the corolla inside. STAM. four short filaments. ANTHERS, oblong, and erect. PIST. Germen superior, round : style thread- shaped, longer than the corolla : stigma thicker than the style. PER. Not turned, one cell, single seed. There are four species of this genus.

ADENAU, a market-town and bailiwic of Neuburg, in the Prussian grand duchy of the Lower Rhine.

ADENBURGH, or ALDENBURGH, a town of Westphalia, in the duchy of Berg, 12 miles N. E. of Cologne, and 17 W. of Bonn.

ADENODUS, in botany, a genus of plants of the order

monogynia, and class dodecandria, so named by Loureiro, but in fact a species of the ELJECAHPUS, which see. It is a native of Cochin China.

ADENOIDES, in anatomy, glandulous, or of a glandular form ; an epithet applied to the PROSTATJE.

ADENORF, a lordship belonging to Prussia, in the grand duchy of the Lower Rhine.

ADENOSMA, in botany, a New Holland species of the acanthi, or acantbacese, with a backed capsulse. See ACAKTHUS.

ADENOS, in commerce, a kind of marine cotton, which comes from Aleppo.

ADENOSUS ABCESSUS, in medicine, a crude hard tubercle, proceeding from obstructions, dif- ficult of discussion, and resembling the appear- ance of a gland.

ADEONA, in mythology, a goddess invoked by the Romans when they undertook a journey.

ADEPHAGIA, in mythology, the goddess of gluttony, to whom the Sicilians paid religious worship. fiLlian i. 5. 11. c. 27.

ADEPS, in anatomy, fat ; an animal oil, se- creted from the blood and contained in the mem- brana adiposa, or, as Boerhaave calls it, the membrana cellulosa ; which is a congeries of a great number of membranous leminse, joined ir- regularly to each other at different distances, so as to form numerous interstices which communi- cate with each other. Neumann divides fats, from their consistence, into three kinds ; the first called pinguedo is soft and thin ; and is found in birds, reptiles, and fishes. The second is thick, liquefies less readily, and is denomi- nated axungia. The third is more hard and firm ; when taken from the animal it is called adeps, and when freed from the skins, &c. sevum. The two last kinds of fat are chiefly found in quadrupeds. Animal fats are useful in external applications, for softening and suppling, for

abating pains and spasms, and for promoting maturation.

ADEPTI, ADEPTS, from adipisci, to obtain, a denomination given to the proficients in al- chemy ; as Ripley, Lully, Paracelsus.

ADEPTISTS. See ADEPTI.

AD'EQUATE, v. & adj. > Ad : xquus, to lay

ADEQUATELY, J flat or even to ; to

equalize, to make equal.

" To fear God that is wisdom ," that is, is the proper and adequate wisdom suitable to human nature, and to the condition of mankind.

Hole's Contemplations,

Those are adequate ideas, which perfectly represent their archetypes or objects. Inadequate are but a partial or incomplete representation of the archetypes, to which they are referred. Watts's Logick.

Gratitude consists adequately, in these two things : first, that it is a debt ; and secondly, that it is such a debt, as is left to every man's ingenuity, whether he will pay or no, Sintth.

Piety is the necessary Christian virtue, propor- tioned adequately to the omniscience and spirituality of that infinite Deity. Hammond's Fundam.

ADEQUATE, in logic, is applied to the objects of science. The adequate object of a science includes the material and formal object; the material object of a science, is that part which is common to it with other sciences ; the formal is that which is peculiar to itself.

ADEQUATE IDEAS, or notions, in metaphysics, are such images or conceptions of an object, as perfectly

represent it, or answer to all the parts and properties of it.

ADERAIMIN. See ALDERAIMIN.

ADERNO, a town of the Val di Demona, in Sicily, at the foot of Mount ^Etna : anciently ADRANUM, 17 miles W. N.W. of Catania.

ADES, or HADES, aflijc, from a and ictiv, to see, the invisible state. In the heathen mytho-

logy, it comprehends all those regions that lie beyond the river Styx, viz. Erebus, Tartarus, and Elysium. See HELL. Strictly, Ades was the god of hell among the Greeks, as Pluto among the Latins.

Dr. Campbell has a long and interesting dis- sertation on the use of this word, prefixed to his Gospels, in which he contends, that it never means either simply the grave, the place of de- parted bodies, or a place of punishment for souls, in the New Testament : but solely the interme- diate state, or abode of departed spirits generally. Thus, according to his view, both the rich man and Lazarus, in the parable, Luke xvi. 19 ††† 23, were in aSrjf, only in very different situations.

ADESSENARII, ADESSENARIANS, from a- desse, to be present, in church history, a sect of 'Jie Reformation, who held Jesus Christ really present in the eucharist ; but in a manner dif- ferent from transubstantiation. They were greatly divided amongst themselves.

ADFECTED EQUATION, in algebra, is that where the unknown quantity is found in two or more different degrees, or powers.

ADFILIATIO,ADFiLiATiON, a Gothic cus- tom, where a

person who has children by a for- mer wife, renders them capable of inheriting equally with the children of the second. This is called, by some, adoptio per matrimonium ; and is still retained in Germany, under the name emdkindschafft, and uni prolium.

AD FINES, a town of Swisserland, supposed to be the modern Pfin, not far from the borders of Suabia, about half way between Constance and Frauenfield. It was so called, because after Cecinna, general of Vitellius, had defeated the Helvetii, it formed the border of the Roman empire in this quarter.

AD HA, in mythology, a festival which the Ma- hometans celebrate on the 10th day of the month Dhoulhegiat, which is the 12th and last of their year. It signifies the month of pilgrimage, be- cause on that day they sacrifice with great so- lemnity, at Mecca, and no where else, a sheep, which is called by the same name as the festival itself. The Turks call this festival the Great Beiram. SeeBEiRAM.

ADHATODA, in botany, the Malabar nut, the justicia of Linnaeus. Tournefort enumerates four species. t,

ADHELM, or ALDHELME. See ADELME.

ADHELME’S HEAD, (St.) a lofty promontory on the coast of Dorset, 440 feet in altitude, nearly perpendicular to the sea, and exhibiting the ruins of a small chapel.

ADHERE’, v. S

ADHE’RENCE, Ad: /??zreo:to stick

ADHE’RENCY. I to, to be fixed to ; to

ADHE’RENT, n. & adj. Deleave to, hold and

ADHE’RER, j maintain ; to be attach-

ADHE’SION, i ed to.

ADHE’SIVE.

Good gentlemen, he hath much talk'd of you ; And sure I am, two men there are not living, To whom he more adheres. Shaksp. Hamlet,

Every man of sense will agree with me, that singularity is laudable ; when, in contradiction to a multitude, it adheres to the dictates of conscience, morality, and honour. Boifle.

Princes must give protection to their subjects and adherent* when worthy occasion shall require it.

Raleigh.

The firm adherence of tho Jews to their religion is no less remarkable than their dispersion j considering it as persecuted or contemned over the whole earth. Adduon.

If slow, yet sure, adhesive to the tract, Hot steaming up. Thornton.

ADHERENCE, ACTION OF, in Scots law; an action competent to a husband or wife, to compel either party to adhere, in case of de- sertion.

ADHESION, in anatomy, a term for one part sticking to another, which in a natural state are separate. For the most par*, if any of those parts in the thorax or belly lie in contact, and inflame, they grow together. The lungs very frequently adhere to the pleura. The dura mater al- ways adheres to the cranium, and there have been instances of adhesion of the intestines.

ADHESION, in philosophy. See COHESION.

ADHI'BIT, Ad : habeo, adhibeo, to have to or near ; to make use of; to pay attention to ; to accredit.

To which counsel there were adhibit very few, and they very secret. Sir T. More's Works, p. 52.

Salt, a necessary ingredient in all sacrifices, was adhibited and required in this view only, as an emblem of purification.

President Forbes's Letter to a Bishop.

ADHIL, in astronomy, a star of the sixth magnitude, upon the garment ffvppa, of Andromeda, under the last star in her foot.

ADJA'CENCY, n. J Ad : jaceo, to lie near

ADJA'CENT, n. & adj.] to ; lying beside ; bordering on something.

And gif thy mynd be ferine therto with me,

I sal this mekil eik to my werke, quod sche

For til induce the cieties adjacent,

Vnto the bargane. Douglas, book vii. p. 227

It may corrupt within itself, although no part of it issue into the body adjacent. Baeon

Uniform pellucid mediums, such as water, have no sensible reflection but in their external superficies, where they are adjacent to other mediums of a different density. Newton.

He, with Palemon, oft recorded o'er j

The tales of hapless love in ancient lore,

ReealJ'd to memory by th' adjacent shore.

Falconer's Shipwreck.

ADIANTHUM, in botany, maiden-hair ; a genus of plants of the order filices, and class, cryptogamia. The GEN. CHAR, is, fructifications collected in oval spots under the reflected tops of the fronds. Botanical writers enumerate forty-four species. They are perennials and the following are the most remarkable :

1. ADIANTHUM CAPILLUS VENERIS, or true maiden-hair, is a native of the southern parts of France ; likewise said to grow plentifully in Cornwall.

2. ADIANTHUM PEDATUM, or American mai- den-hair, a native of Canada.

3. ADIANTHUM TRAPEZIFORME, or black Ame rican maiden-hair, a native of Jamaica. Others are the Adianthum reniforme, or monophyllum, the hemionitis, or felix hemionitis, adiauthum radia- tum, lonchitis radiata, or trichomanes Amori- canum radiatum, &c.

ADIAPHORISTS, or ADIAPHORIST.E. from

a, privative, and tfia^opoc, different, a name given in the sixteenth century to the moderate Lu- therans who adhered to the sentiments of Me- lancthon ; and afterwards to those who subscribed the Interim of Charles V.

ADIAPHOROUS, ADIAPHORUS, in chemis- try, a name given by Mr. Boyle to a kind of spirit distilled from tartar and some other vege- table bodies ; and which is neither acid, vinous nor urinous; but in many respects different from any other sort of spirit.

ADIAPNEUSTIA, from a, Sia, and irvtw, I breathe, in medicine, signifies defective respira- tion, from dense pores, &c.

ADIAPTOTOS ASicnrTOTog, firm, a name given by physicians to a remedy for the cholic, consisting of stone parsley, henbane-seed, white pepper, &c. made into an electuary.

ADIARRHCEA, from a, Sia, and p►►w, I flow, in medicine, a total suppression of all the neces- sary evacuations.

ADIATORIX, in history, the Roman governor of Galatia, in the time of Anthony, who, to re- commend himself to the favour of that general, put to death

in one night the whole of the in- habitants of Heraclea, in Pontus, for which Augustus caused him to be strangled. Strabo. xii.

ADJAZZO, or AJACCIO. See AJACCIO.

ADJECT’, v. ~\ Ad : jacio, adjicio, adjec-

ADJEC’TION, I turn, to cast or throw to ; to

ADJECTI’TIOUS, V throw in additionally; to

AIMBVJI H unuw in ;

AD’JECTIVE, I super-add. ADJEC’TIVELY. J

That unto every pound of sulphur, an adjection of one ounce of quicksilver ; or unto every pound of peter, one ounce of sal-ammoniac, will much intend the force, and consequently the report, I find no verity. Brown’s Vulgar Errours.

It is probable that they made the child’s name by adjecting the syllable son to the appellation of the father. Fuller’s Worthies.

There is a gross mistake made between an adjected and an adjective word ; that is, between a word laid close to another word, and a word which may lye close to another word. Tooke’s Die. of Parley.

An ADJECTIVE, in grammar, is defined by Harris, as having no assertion, and denoting only such an attribute as has not its essence either in motion or its privation. It is clearly a word adjected or adjoined to another to exhibit its qualities be they what they may. We reserve to the article GRAMMAR, the more full consideration of its functions.

ADIEU’, a dieu, Fr. to God ; I commend you to God; Farewell.

Ne gave him leave to bid that aged sire

Adieu ! but nimbly ran her wonted course.

Faerie Queene.

Use a mor6 spacious ceremony to the noble lords ; you restrained yourself within the list of too cold an adieu ‘ be more expressive to them.

Shakspeare’s All’s Well that ends Well. While now I take my last adieu,

Heave tbiou no sigh, nor shed no tear ; Lest yet my half-clos’d eye may view

On earth an object worth its care. Prior.

ADIGE, a considerable river of Italy, which taking its rise south of the lake Glaro among the Alps, runs south bv Trent, then east by Verona, in the territory of Venice, and falls into the’gulph

AD’JUNCT, n. &. adj. ADJUNC’TION.

of Venice, north of the mouth of the Po ; passing in its course, Tyrol, Brixen, Trent, Verona, and Rovigo.

ADILABAD, a town of Hindostan, in th►► Mahratta dominions, and province of Khandest, on the Poornah river, twenty miles south of Boorhampoor, near which is a lake, held in great veneration by the Hindoos.

ADIMANTUS, in history, 1. a commander of the Athenian fleet taken by the Spartans, whose life alone was spared by the captors. 2. A brother of Plato, mentioned by Diogenes. 3. A Corinthian general who taunted Themistocles. 4. A king struck with thunder, for mocking Jupiter. Ovid.

AD INQUIRENDUM,in law, a judicial writ, commanding inquiry to be made of any thing touching a cause depending in the king’s court. ADJOIN’, v. -\ Ad : jungo, junctus,

ADJOIN’EDLY / Lat.joindre joint, Fr. to

ADJOIN’ANT, n. & a. \ join to ; to connect one with another, to fasten, to place near, or con- tiguous.

Also I bequeth unto as many godchildern as I have

lyving in the countie of Essex, and specially in the parrishes to my mansion adioynant, to every of them viiid. Fabian’s Will.

Here with these grave adjoynts (These learned maisters,) they were taught to see, Themselves to read the world, and keep their points. Dan. Civ. Wan. iv. 89

As one, who long in populous city pent, Forth issuing on a summer’s morn to breathe Among the pleasant villages and farms Adjoin’d, from each thing met conceives delight.

Milton.

Learning is but an adjunct to ourself, And where we are, our learning likewise is.

Shakspeare’s Love’s Labour Lost. As a massy wheel,

Fixt on the summit of the highest mount, To whose huge spoke ten thousand lesser things Are mortis’d and adjoined. Shakspeare.

Th’ adjoining fane the assembled Greeks ex-

press’d.

And hunting of the Caledonian beast. Dryden In learning any thing, as little should be proposed to the mind at once as is possible ; and, that being understood and fully mastered, proceed to the next adjoining, yet unknown, simple, unperplexcd proposition, belonging to the matter in hand, and tending to the clearing what is principally designed.

Locke.

Corrections or improvements should be as remarks adjoined, by way of note or commentary, in their proper places ; and superadded to a regular treatise.

Watts,

ADJOINING ANGLES, in geometry. See GEOMETRY.

ADJOURN’ ^ Ad : jour, day, ujourner ADJOURNMENT, $ Fr. to separate, in order to put off the consideration of business to another day, or time specified, or understood ; to another part of the same day ; also to refer indefinitely to postpone, to delay.

To maynteii his partie pei hete to help him wele He aiorned f>am to relie in f?e north at Carlele, After Midesomer’s tide ►►>orgh comon ordinance No lenger sulc bei bide, bote forth and s’and to chance. R. BruniK.

ADI

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ADI

And vpon y►► viii day of July, kynge [Henry VI.] this yere began his parlyament at Westmynster, and eo contynued it tyll Lammas, and then it was aioumed vnto Seynt Edwardes daye. Fabyan.

Or how the sun shall, in mid heaven, stand still

A day entire, and night’s due course adjourn,

Man’s voice commanding.

Milton’s Paradise Lost.

During the adjournments of that awful court, a neighbour of mine was telling me, that it gave him a notion of the English hospitality to see West- minster hall a dining-room. Tatler.

ADJOURNMENT, in law, from ad, to, Lat. and jour, day, Fr. The putting off a court, or other meeting till another day. Adjournment and prorogation of the parliament are to be dis- tinguished ; the former being an act of each house itself; whereas the latter is an act of royal au- thority.

ADIPOCIRE, from adeps, fat, and cera, wax, a chemical substance of a light brown colour, formed by the soft parts of animal bodies after death, and when kept for some time from the atmospheric air, or exposed to water. It is ge- nerally formed when a considerable quantity of human bodies have been interred together, and was first noticed in the burial ground of the In- nocents at Paris; where the poor had been in- terred in pits of thirty feet deep, and twenty broad, with nothing but thin planks between them. There have, however, been instances of bodies interred separately, being changed into this substance.

Mary Howard, aged forty-four, died on the 12th May, 1790, and was buried in a grave, ten feet deep, at the east end of Shoreditch church- yard, ten feet to the east of the great common sewer, which runs from north to south, and has always a current of water in it, the usual level of which is eight feet below the level of the ground, and two feet above the level of the coffins in the graves. In August 1811, the body was taken up, with some others buried near it, for the purpose of building a vault, and the flesh in all of them was converted into adipocire or spermaceti. At the full and new moon the tide raises water into the graves, which at other times are dry. To explain the extraordinary quantities of fat or adipocere formed by animals of a cer- tain intestinal construction, Sir E. Home observes, that the current of water which passes through their colon, while the loculated lateral parts are full of solid matter, places the solid contents in somewhat similar circumstances to dead bodies in the banks of a common sewer. ††† Philosophical Transactions, 1813.

Grave diggers assert that near three years are required to change a body into this curious sub- stance. But Dr. Gibbes of Bath, found, that lean beef secured in a running stream was con- verted into this fatty matter at the end of a month. He judges from facts, that running water is most favourable to this process.' He took three lean pieces of mutton, and poured on each a quantity of

the three common mineral acids. At the end 3f three days, each was much changed : that in the nitric acid was very soft, and converted into the fatty matter ; that in the muriatic acid was not in that time so much altered ; the sulphuric acid had turned the other black. M. Lavoisier

thinks that this process may hereafter prove of great use in society.

The chemical properties of adipocire have attracted some attention, since its discovery on so large a scale, at Paris : and the principal facts established, seem to be, that a true ammoniacal soap is first yielded, composed of ammonia, a concrete oil, and water. An analysis of the oil may be obtained pure from this substance, and to that more strictly, the name adipocire is given.

One French chemist gives the result of the exposure of a human liver to the common air, as terminating in a similar substance. It partly putrified, he says, when first exposed in his laboratory, without emitting any very noisome smell. Larvae of the dermestes and bruchus, attacked and penetrated it in various directions : at iast it became dry, and after more than ten years' suspension, it was converted into a white friable substance, resembling dried agaric, which might have been taken for an earthy substance. In this state it had no perceptible smell. M. Poulletier was desirous of knowing the state of this animal matter, and experiment soon con- vinced him and M. F. that it was very far from being in the state of an earth. It melted by heat, and exhaled in the form of vapour, which had the smell of a very fetid fat ; spirit of wine se- parated a concrescible oil, which appeared to possess all the properties of spermaceti. Each of the three alkalis converted it into soap ; and, in a word, it exhibited all the properties of the fatty matter of the burial-ground of the Innocents exposed for several months to the air.

For the following abridgment of M. Fourcroy's experiments on this matter, we are indebted to Dr.

Ure.

1. This substance is fused at a less degree of heat than that of boiling water, and may be pu- rified by pressure through a cloth, which disen- gages a portion of fibrous and bony matter. 2. The process of destructive distillation by a very graduated heat was begun, but not completed on account of its tediousness, and the little promise of advantage it afforded. The products which came over were water charged with volatile alkali, a fat oil, concrete volatile alkali, and no elastic fluid during the time the operation was con- tinued. 3. Fragments of the fatty matter expo- sed to the air during the hot and dry summer of 1 786, became dry, brittle, and almost pulverulent at the surface. On a careful examination, certain portions were observed to be semi-transparent, and more brittle than the rest. These possessed all the apparent properties of wax, and did not afford volatile alkali by distillation. 4. With water this fatty matter exhibited all the appear- ances of soap, and afforded a strong lather. The dried substance did not form the saponaceous combination with the same facility or perfection, as that which was recent. Ab6ut two-thirds of this dried matter separated from the water by cooling, and proved to be the semi-transparent substance, resembling wax. This was taken from the surface of the soapy liquor, which being then passed through the filter, left a white soft shining matter, which was fusible and combustible. 5. Attempts were made to ascertain the quantity of

volatile alkali in this substance, by the applica- cation of lime, and of the fixed alkalis, but with- out success : for it was difficult to collect and appreciate the first portions which escaped, and likewise to disengage the last portions. The caustic volatile alkali, with the assistance of a gentle

heat, dissolved the fatty matter, and the solution became perfectly clear and transparent at the boiling temperature of the mixture, which was at 18.5►► F. 6. Sulphuric acid, of the spe- cific gravity of 2.0, was poured upon six times its weight of the fatty matter, and mixed by agitation. Heat was produced, and a gas effluvium of the most insupportable putrescence was emitted, which infected the air of an extensive laboratory for several days. M. Fourcroy says, that the smell cannot be described, but that it is one of the most horrid and repulsive that can be ima- gined. It did not, however, produce any indis- position either in himself, or his assistants. By dilution with water, and the ordinary processes of evaporation and cooling, properly repeated, the sulphates of ammonia and of lime were ob- tained. A substance was separated from the liquor, which appeared to oe the waxy matter, somewhat altered by the action of the acid. 7. The nitrous and muriatic acids were also applied, and afforded phenomena worthy of remark, but which for the sake of conciseness are here omit- ted. 8. Alcohol does not act on this matter at the ordinary temperature of the air. But by boiling it dissolves one-third of its own weight, which is almost totally separable by cooling as low as 55►►. The alcohol, after this process, affords by evaporation a portion of that waxy matter which is separable by acids, and is there- fore the only portion soluble in cold alcohol. The quantity of fatty matter operated on was four ounces, or 2304 grains, of which the boiling spirit took up the whole except twenty-six grains, which proved to be a mixture of twenty grains of ammoniacal soap, and six or eight grains of the phosphates of soda and of lime. From this experiment, which was three times repeated with similar results, it appears that alcohol is well suited to afford an analysis of the fatty matter. It does not dissolve the neutral salts ; when cold, it dissolves that portion of concrete animal oi) from which the volatile alkali had flown off ; and when heated, it dissolves the whole of the truly saponaceous matter, which is afterwards com- pletely separated by cooling. And accordingly it was

found, that a thin plate of the fatty matter, which had lost nearly the whole of its volatile alkali, by exposure to the air for three years, was almost totally dissolved by the cold alcohol. The concrete oily or waxy substance obtained in these experiments, constitutes the leading object of research, as being the peculiar substance with which the other well known matters are com- bined. See Journal de Physique, torn, xxxviii. &c. Nicholsons Journal, vol. iv. p. 135. Phil. Trans. 1794, vol. Ixxxiv. vol. Ixxxv.

ADIPOSA MEMBRANA, in anatomy, a mem- brane that incloses the Cellults Adiposte.

ADIPOSA VENA, in anatomy, a vein, arising from the descending trunk of the cava, which spreads itself on the coat and fat of the kidneys

ADIPOSE, a term used by anatomists for any cell, membrane, &c., that is remarkable for its fatness. See ADEPS.

ADIPOSI Ducxus, in anatomy, vessels which convey the fat into the interstices of the muscles, or part between the flesh and the skin.

ADIPSON, from the privative a, and Sitya, thirst, in medicine, a name given by Hippocrates, to oxymel, the ptissana, and other medicines, administered for allaying thirst.

ADIPSOS, in botany, the Egyptian palm tree; also, an epithet for the glycerrhiza or liquorice tree of Linnaeus. Likewise, in medi- cine, a catapotium, or pill, composed by Ascle- piades, and mentioned by Galen.

ADIRBEITSAN, in geography. See AZER-

BIJAN.

ADIRGE, in chemistry, sal ammoniacum.

ADIT OF A MINE, the hole or aperture, where- by it is entered and dug, and by which the water and ores

are carried away. The term amounts to the same with cuniculus or drift, and is dis- tinguished from air-shaft. See MINING.

ADIT OF A SHIP, in antiquity, was a space in the upper part, where the ship was widest, at which people entered, anciently called agea.

ADITS OF A THEATRE, aditus theatri, in anti- quity, were doors on the stairs, whereby persons entered from the outer porticos, and descended into the seats.

ADITIS, in history, an ancient tribe of Arabs, frequently mentioned in the Koran, and said to have been descended from Ace, the son of Acos, or Uz, Gen. x. 22, 23. Incredible accounts are given of their stature ; but see Sales's Introduc- tion to the Koran, and Kor. chap. vi.

ADIVE, in zoology, a small jackal, the canis aureus of Linnaeus, and resembling, according to Buffon, a small fox.

ADJUDGE', v,-) Ad : judico, to judge, or

ADJUDG'MENT, > sentence to; to express a

ADJUDICATION, j judicial decision; to deter- mine an affair.

Then the kynge made a promyse by othe, that he wolde be obedyent vnto the court of Rome, and stand and obey all things y' the court woll adiuge hym.

Fabian.

To her therefore The fayrest lady was adjudg'd for paramore.

Spencer's Faerie Queene.

I have shewed sir Kenelm Digby both our transla- tions of Martial's Vitam quas faciunt beatiorem, &c. and to tell you true, he adjudged your's the better.

Hmcell’s Letters.

ADJUDICATION, in Scots law, the name of that action by which a creditor attaches the herit- able estate of his debtor, or his debtor’s heir, in order to appropriate it to himself, either in pay- ment or security of his debt ; or, that action by which the holder of an heritable right, labouring under any defect of form, may supply that de- fect.

ADJUNCT, in metaphysics, some quality belonging to either body or mind, whether natu- ral or acquired. Thus thinking is an adjunct of the mind, and growth of the body.

ADJUNCT, in music, a word employed to deno- minate the connection or relation between, the

principal mode arid the modes of its two-fifths, which, from the intervals that constitute the re- lation between them and it, are called its ad- juncts.

ADJUNCT, in philosophy, something added to another, without being any necessary part of it. Thus water absorbed by cloth or a sponge, is an adjunct, but no necessary part of either of these substances.

ADJUNCTS OF THE GODS, or ADJUNCT GODS, among the Romans, were a kind of inferior deities, added as assistants to the principal ones. Thus, to Mars was adjoined Bellona and Nemesis ; to Neptune, Salacia ; to Vulcan, the Cabin, &c.

AD JURA REGIS, in ecclesiastical affairs, a writ brought by the king’s clerk, against him who endeavours to eject him presented to a living, and thus to prejudice the king’s right of presentation.

ADJURE’, v.) Ad : juro, to swear to ; to JURA’TION,

$ put upon oath ; to prescribe the solemnity of an oath; to charge earnestly, or solemnly.

But Jesns held his peace. And the high priest answered and said unto him, I adjure thee by the living God, that thou tell us whether thou be the Christ, the Son of God. Matt. ch. xxvi. v. 63.

SPIRIT. She will be swift To aid a virgin, such as was herself, ‘ In hard besetting need ; this will I try, And add the power of some adjuring verse.

Milton’s Comut.

A Persian humble servant of the sun, Who though devout, yet bigotry had none, Hearing a lawyer grave in his address, With adjurations every word impress ; Supposed the man a bishop, or at least, (God’s name so much upon his lips,) a priest, Bowed at the close with all his graceful airs, And begged an interest in his frequent prayers.

Camper.

ADJUST, v. ###) Ajuster, Fr. to dispose; to

ADJUST’ER, > set in order; fit, adopt, me-

ADJUST’MENT. j thodize,accommodate.

For these ne been yet no remedies of the malady,

but they ben a manner norishing of thy sorrows, that

rebell ayenst thy curacion. For whan time is I shal

moue and aiust soch things, that percen hem ful depe.

Chaucer, ii. b. of Boeciui.

It is a vulgar idea we have of a watch or clock, when we conceive of it, as an instrument made to shew the hour ; but it is a learned idea, which the ###watch-maker has of it ; who knows all the several parts of it, together with the various connections and adjustments of each part. Watts’s

Logick.

What; but God?

Inspiring God ! who, boundless spirit all j And unremitting energy pervades, Adjusts, sustains, and agitates the whole ?

Thomson.

It is observable, that, either by nature or by habit, our faculties are fitted to images of a certain extent, to which we adjust great things by division, and little things by accumulations. Rambler.

Promises of friendship are, like all others, useless and vain, unless they are made in some known sense, adjusted and acknowledged by both parties.

Rambler, No. 13.

ADJUTAGE. See AJUTAGE. & HYDRAULICS. ADJUTANT, in the military art, is an officer, whose duty is to assist the major, by distributing the pay, and overseeing the punishment of the

common men : besides which, he is to receive orders every night from the brigade major; which, after carrying to the colonel, he delivers out to the Serjeants. When detachments are to be made, he gives the number to be furnished by each com- pany or troop, and assigns the hour and place of rendezvous. lie also places the guards, receives, and distributes the ammunition to the companies, &c.►► and, by the major's orders, regulates the price of bread, beer, and other provisions.

ADJUTANT-GENERAL, is an officer of distinc- tion, who aids and assists the general. He forms the several details of duty of the army, with the brigade majors,and keeps an exact state of each brigade and regiment, with a roll of the lieu- tenant generals, major generals, colonels, lieu- tenant colonels, and majors. Every day at head quarters, he "receives orders from the general

officer of the day, and distributes them to the majors of brigades, from whom he receives the number of men they are to furnish for the duty of the army, and informs them of any de- tails which concern them. On marching days, he accompanies the general to the ground of the camp. He makes a daily report of the situation of all the posts placed for the safety of the army, and of any changes made in their posts. In a day of battle, the adjutant-general sees the in- fantry drawn up, after which he places himself by the general to receive orders. In a siege, he visits the several posts and guards of the trenches, and reports their situation, and how circum- stanced ; he gives and signs all orders for skir- mishing parties, (if time permit,) and has a ser- jeant from each brigade, to carry any orders which he may have to send.

ADJUTANTS-GENERAL, among the Jesuits, a select number of fathers, who resided with the general of the order, each of whom had a pro- vince or country assigned him, as England, Holland, &c., and their business was to inform the father general of state occurrences in such countries. To this end they had their corres- pondents delegated, emissaries, visitors, regents, provincials, &c.

ADJUTE',

ADJ'UTANCY,^ Ad :juro ??? -jutum, to help to ;

ADJ'UTANT, f to assist ; to succour ; to promote

ADJUV'ANT, {the advantage of. Adjute is

ADJU'MENT, \ now obsolete.

ADJU'TORS.

Whereon the king a parliament procur'd, To fix some things whose fall he else might fear,

Whereby he hop'd the queen to have abjur'd, His son, and such as their adjutors were.

Drayton's Baron's War*.

ACC. For there be Sixe batchelers, as bold as he, Adjuting to his companee, And each one hath his liverie.

Jonson’s King’s Entertainment at Welbcck.

I have only been a careful adjuvant, and was sorry I could not be the efficient. Sir H. Yelverton, 1609.

He had a due regard for his person ###, for in great battles he would set in his pavilion, and man.ige all by adjutants. Bacon’s Bioy.

As nerves are adjuments to corporal activity, so are laws the hinges OH which policique bodies act ana move. Waterhmtsc.

It was no doubt disposed with all the adjutancy of definition and division. Burke.

ADJUTORIUM, in anatomy, the humerus shoulder bone. Also, a term used by physi- cians for any medicine in a prescription but the capital one.

ADJYGHUR, or the impregnable fortress, as the word signifies, an ancient fortress of Hin- dostan, in the province of Bundelcund, which commands the mountain-pass between Callinger and Pannah. It resisted the British arms for some time in 1809, and cost the besiegers a great number of troops before it was evacuated by the zemindar. On this occasion, the father-in-law of that chieftain, was sent into the female apart- ments by the British, to announce to the wives of the zemindar the necessity of their leaving the place ; when he cut the throats of all the women and children, eight in number, and after- wards his own, without the slightest disturbance being heard without.

ADLE-EGGS. See ADDLF.

ADLEGATION, in the public law of the German empire, a right claimed by certain states of the empire of adjoining plenipotentiaries, in public treaties and negociations, to those of the emperor, for the transacting of matters which re- late to their common interests. Several princes and states of the empire, enjoy the right of lega- tion, (or sending ambassadors on their own parti- cular affairs,) who have not that of adlegation, and vice versa.

ADLERBERG, or ARLBERG, one of the Suabian territories, of the Tyrolese Alps, sepa- rating the Tyrol from the country of the Grisons. It gives name to the adjacent lordships of Voral- berg, and is covered with pines and brushwood. Joseph II. cut a fine road across these hills in

1786.

ADLOCUTION, ADLOCUTIO, in Roman an- tiquity, the address made by generals to their armies, to encourage them before a battle ; often expressed on medals by the abbreviature ADLO- CUT. COH. ••• The general is represented as seated on a tribunal, or on a bank or mount of turf, with the cohorts ranged orderly round him.

ADLONGUM, in music, ancient church music written in square notes and semibreves.

ADMAH, the most easterly of the four cities that were destroyed by fire from heaven with Sodom.

ADMANUENSES, in ancient law books, denote persons who swore by laying their hands on the book, and thus stood opposed to clerks, whose word was, according to Ducange, reputed as their oath.

ADMEA’SURE,

ADMEASUREMENT.

E, >

NT. $

See MEASURE.

The antient and most effectual method of proceed- ing is by writ of admeasurement of pasture.*****And upon this suit all the commoners shall be admeasured. Blackitone's Commentaries.

ADMETUS, in mythology, a king of Phera in Thessaly, whose cattle Apollo kept for nine years, and obtained from the Fates, a dream, that -idmetus should never die, if any one could be

found to sacrifice life in his behalf, which Alcestas his wife, did. Ovid de Art. Am. iii Pont. iii. &c.

ADMINICLE, in Scots law, signifies any writing or deed referred to by a party, in ar action of law, for proving his allegations.

ADMINICULATOR, an ancient officer of

the church, whose business it was to attend to,

and defend the cause of the widows and orphans.

ADMIN'ISTER, v.-\ Ad : ministro, from

ADMINISTRATE, v. t minus, or minor, to serve

ADMINISTRATION, I to; to act as servant,

ADMINISTRATOR. J agent, or deputy ; to

officiate under the sanction of law or otherwise ;

to give, to help, to supply.

Power me thought y* I had to keep from mine enemies, and mee seemed to shine in glory of re- noume, as manhood asketh in mean, for no wight in mine administration, coud none yuels ne trechery by soth cause on me putte.

Chaucer, Test, of L. b. ii. f. 304. There are dyuersites of gyftes, yet but one sprete. And ther are differences of admynystracyos, and yet but one

Lorde. Bible, 1539. 1 Cor. ch. x-‘

For forms of government let fools contest ; What’er is best adminuter’d, is best.

Pope’s Essay on Man He [the king] is ours, T’ administer, to guard, t’ adorn the state, But not to warp or change it. We are his, To serve him nobly in the common cause, True to the death, but not to be his slave.

Cowper’s Task.

ADMINISTRATION, in anatomy, a name given by Galen and Harvey to the manner of dis- secting the human body, particularly the muscles. In which sense, administration is synonymous with enchtiresis, exercise, &c.

ADMINISTRATOR, in law, he to whom the or- dinary commits the administration of the goods of a person deceased, in default of an executor. An action lies for, or against an administrator, as for, or against an executor ; and he shall be ac- countable to the value of the goods of the de- ceased, and no farther : unless there be waste, or other abuse chargeable on him. If the adminis- trator die, his executors are not administrators ; but the court is to grant a new administration. ††† ††† If a stranger, who is neither administrator nor executor, take the goods of tie deceased, and ad- minister, he shall be charged and sued as an executor, and not as an administrator. The ad- ministrator, in Scot’s law, is a person legally empowered to act for another whom the law pre sumes incapable of acting for himself. Thus tutors or curators are sometimes styled adminis- trators in law to pupils, minors, or fatuous per- sons. But more generally the term is used to imply that power, which is conferred by the law upon a father, over the persons and estates of his children during their minority.

ADMIRABILIS SAL, the same with Glaxt- ber’s salt. See CHEMISTRY.

ADMIRAL, amiral, Fr. of doubtful etymology. The chief commander of a greater or smaller number of ships of war, or of the whole naval force of a country.

He also, in battle in sea, overthrew Rodericus Rotundus, admiral of Spain, in which fight the admi- ral with his son were both slain, and seven of his gallies taken. Knolks.

Make the sea shine with gallantry, and all The English youth flock to their admiral.

Waller.

ADMIRAL, in naval politics, an officerwho takes the command of a fleet or squadron, or the general government of the king’s navy ; together with the hearing and determining all causes that may arise, civil or criminal, within the circle of ma- ritime affairs.

With respect to the origin of this title, authors are divided, although the office itself has been established in almost all maritime countries. Some have traced it to the oriental languages; others to the Greek; but the most probable opinion, is that of Spelman, who thinks, that both the name and dignity were derived from the Saracens, and, by reason of the holy wars, brought amongst us ; for admiral, in the Arabian language, signifies a prince, or chief ruler, and was the ordinary title of the governors of cities, provinces, &c. and therefore they called the commander of the navy by that name, as a name of dignity and honour. And indeed there are no instances of admirals in this part of Europe, before the year 1284, when Philip of France, who had attended St. Louis in the wars against the Saracens, created an admiral. Du Cange assures us, that the Sicilians were the first and the Genoese the next,

who gave the denomina- tion of admiral to the commanders of their naval armaments ; and that they took it from the Sara- cen or Arabic Emir, a general name for every commanding officer.

The name also occurs once in the history of France, in the year 558. And. Com. vol. i. p. 23. The exact time when this word was introduced among us, is uncertain ; some think it was in the reign of Edward I. before whose time, the chief naval officer was distinguished by the name of ‘ custos maris.’ But Sir Henry Spelman is of opinion that it was first used in the reign of Hen. III. because neither the laws of Oleron, made in 1266, nor Bracton, who wrote about that time, make any mention of it; and that the term admi- ral was not used in the charter of the eighth of Hen. HI. wherein he granted this office toRichard de Lacey, by these words, Maritimam AngliIII. when one William Latimer was styled admiralis quinque

portuum ; and we sometimes find that one per son has been admiral of the fleets to the south- ward, northward, and westward, at the same time.

From the reign of Edward II. a regular suc- cession of admirals may be distinctly traced, and in the thirty-fourth of Edward III. John de Beauchamp, lord warden of the Cinque Ports, was created high-admiral of England. There was, however, a title above this, viz. ‘ locum tenens regio super mare,’ the king’s lieutenant- general of the seas. The office of high-admiral was soon after divided for a few years into that of the northern and western admiral. Richard Fitz Alain, son of the earl of Arundel. being made admiral of England, by patent of Richard II. was succeeded by the duke of Albermarle, under the title of high-admiral of the north and west ; but the title of admiralis Angliae, was resumed in the reign of Henry IV. and conferred upon the king’s brother; and the office itself invested with most of its present powers. Persons of high rank, frequently unacquainted with naval con- cerns, were placed in it, as a post of honour ; and thus it continued until 1632, when it was put into commission, as it

remained during the protectorate of Cromwell. James II. while yet duke of York, exercised the functions of lord high-admiral for several years, during the reign of his predecessor, and had the merit of making it a most effective and useful office : some of his naval regulations being still observed. In the time of William and Mary, the powers of lord high-admiral were committed, by stat. ii. cap. 2. to the lords commissioners of the admiralty. Prince George of Denmark enjoyed this office a short time, in the reign of queen Anne ; and during his commission, a change took place in its perquisites, which, with the exception of ►►2500 per annum, he alienated to the crown. After his relinquishment, the office returned to seven lords-commissioners, according to the ori- ginal statute of William and Mary, and the annual income was augmented to ►►1000 for each ; although, at present, that of the first lord is equal to ►►5000 per annum. The surplus re- venue, so deviated, forms what are called thedroits of admiralty, and is applied at the pleasure of government.

To the office of Lord HIGH ADMIRAL, or Lords Commissioners of the Admiralty of Eng- land, belong the universal government and ma- nagement of the Royal Navy, the decision of all maritime cases, whether civil or criminal, a ju- risdiction upon or beyond the sea in all parts of the world ; upon the sea coasts in all ports, ha- vens, or harbours, and upon all rivers below the nearest bridge to the sea. According to the terms of the patent, he is empowered ” To pre- serve all public streams, ports, rivers, fresh waters and creeks, whatsoever, within his jurisdiction, as well for the preservation of the ships as of the fishes ; to reform too strait nets and unlawful engines, and punish offenders ; to arrest ships, mariners, pilots, masters, gunners, bombadiers, and any other persons whatsoever, able and fit for the service of ships, as often as occasion shall require, and wheresoever they shall be met with ; to appoint vice-admirals, judges, and other offi- cers, durante bene placito; to remove, suspend,

or expel them, and put ethers in their places ; to take cognizance of civil and maritime laws, and of death, murder, or maim." The Lord Warden of the Cinque Ports has, nevertheless, a juris- diction exempt from the control of the Admiralty within these ports. The jurisdiction of the Lord High Admiral is confined to the sea; for instance, if a man be killed in any ship riding in great rivers, beneath the lowest bridge towards the sea, he has legal cognizance ; but, if a man be killed above the lowest bridge, or upon any arm of the sea where the land can be seen on both sides, the coroner of the county is the proper person to enquire into it, and where a coroner may enquire the admiral has no jurisdiction. Between high and low water mark, also, the common law and the Admiralty have jurisdiction by turns ; one upon the water, the other upon the land. The High Admiral is empowered to grant commissions to inferior admirals, enabling them to enforce obedience in all branches of the service, to institute courts martial, to take cogni- zance of all maritime transgressions committed against the articles of war, under the direction of a deputy Judge Advocate.

The perquisites given to this office by the patent, consist of " treasure, deodands, derelicts, found within his jurisdiction ; all goods picked up at sea; all fines, forfeitures, ransoms, re- cognizances, and pecuniary punishments; all sturgeons, whales, porpusses, dolphins, rigs, and grampusses, and all such large fishes ; all ships and goods of the enemy coming into any creek, road, or port, by stress of weather, mistake, or ignorance of the war ; all ships seized at sea, salvage, &c. together with his shares of prizes." This officer anciently carried a gold whistle, set with precious stones, at the end of a gold chain ; and the office itself is of so great power, honour, and profit,

that it has been conferred mostly on princes of the blood. All officers, commanders, and soldiers of ships of war, are bound to observe the commands of the High Admiral, on pain of death, or other punishment. Considering the great power and influence of the office, there is, perhaps, a degree of prudence in its having been put for some years past under the administration of commissioners, who, by W. and M. stat. ii. c. 2. are declared to have the same authority, jurisdiction, and power, as the Lord High Ad- miral.

ADMIRAL OF SCOTLAND, THE LORD HIGH, was anciently one of the great officers of the crown, and supreme judge in all maritime cases that occurred within that part of Great Britain. In the year 1651 this great officer was dignified with the title of ” The King’s Lieutenant and Justice General upon the Seas.” But since the Union, the powers of this office have been vested in the Admiralty of Great Britain, who appoints a Vice Admiral, or Judge, who executes the duties of it, and presides over an Admiralty court in Scotland.

ADMIRAL OF THE FLEET is the highest naval officer under the British High Admiralty office, distinguished when he embarks by hoisting the union flag at the main top gallant mast head. This office is of considerable authority, and has lately been filled by a member of the royal family.

ADMIRALS being coniinanders in chief of any fleet, or squadron, rank with field marshal sin the army, and always carry their flags at the main top gallant mast head, from which they are designated admirals of the red, of the white, of the blue.

The VICE ADMIRAL is a civil officer, appointed by Lords Commissioners of the High Admiralty. There are several of them established in different parts of Great Britain, with judges and marshalls under them, exercising their respective juris- dictions within certain limits. The Vice Ad- miral of England was formerly the Deputy of the Lord High Admiral, but the place being now a sinecure, is commonly

conferred on some officer of distinction. Scotland has one Vice* Admiral, Ireland has four, and the Governors of colonies are commonly empowered by a com- mission to preside over Vice Admiralty Courts The Vice Admiral carries his flag at the fore top mast head, takes rank with lieutenant generals in the army, and, within his jurisdiction, main- tains considerable dignity and influence. His decisions, however, are not final, a right of appeal lying to the High Court of Admiralty in London.

ADMIRAL is also an appellation given to the most considerable ship of a fleet of merchantmen, or of the vessels employed in the cod-fishery of Newfoundland. The vessel that first arrives is also entitled to this appellation, and the com- mander has the privilege of choosing what place he pleases on the shore to dry his fish ; gives proper orders and appoints the fishing-places to those who come after him ; and as long as the fishing season continues, carries a flag on his main mast.

ADMIRAL, in zoology, or rather conchology, the name given by authors to a very beautiful and very precious shell fish of the valuta genus, belonging to the order of vermes testacea. See VOLUTA. Of these the -curious reckon four species. 1. The grand-admiral. 2. The vice- admiral. 3. The orange-admiral. And, 4. The extra-admiral. The first of these is the most esteemed, and a single shell has been sold in Holland for five hundred florins. It is of a very elegant and bright white enamel, and is variegated with bands of yellow, representing in some de- gree the colours of the flags of a man of war at sea ; hence it obtained its name. It is of a very curious shape, and formed with particular ele- gance about the head; the clavicle being ex- erted. There runs along the centre of the large yellow band in this shell, a fine denticulated line, which is its distinguishing character. The vice-admiral is an elegant shell, but its head is - less beautifully wrought than in the admiral, and its broad band wants the denticulated line, so remarkable in that. The orange-admiral has more yellow than either of the others. The extra-admiral has the same bands

with these, but they run one into another, aud form a more mixed clouding.

ADMIRALTY. The power, or officers ap- pointed to administer the naval affairs of a state. Also the place where they assemble for business.

They requested liberty to cite Jobn Paith to appear by his proctor in the English court of admiralty.

Milton’s Stute Letters.

abo

Having consulted with Mr. Whitlock, the lawyer, rally. Courts of this description were established out the validity of a commission drawn from a re- during the late war, at Antigua, the Bahamas, search into the office of the admiralty. Barbadoes, Bermuda, Bombay, Calcutta, the Sir H. Wotton, Rem. p. 418. Cape of Good Hope, Ceylon, Gibraltar, Halifax, ADMIRALTY properly signifies the office of Jamaica, Malta, Madras, Newfoundland, and lord high admiral, whether discharged by one Tortola. Instance Courts are intended to en- single person, or by joint commissioners called quire into all misdemeanours in merchant ships, lords of the admiralty. &c. and have been established at Berbice, St. ADMIRALTY, COURT OF, is a sovereign court, Croix, St. Christopher’s, Dominica, Demerara, instituted by Edward III. and held by the lord high admiral, or lords of the admiralty, where cognizance is taken in all maritime affairs,

whether civil or criminal. ??? All crimes committed nally established in 1640, and filled for the most

on the high seas, or on great rivers below the part, by two or three persons. At the revolution

first bridge next the sea, are cognizable in this a considerable change took place in it; since

court only, and before which they must be tried which it has been restricted to an individual,

by judge and jury. But in civil cases the mode whose salary is now ►►2500 per annum. The

is different, the decisions being all made accord- Judges of the Vice Admiralty courts in the

ing to the civil law. By statute 39. Geo. III. colonies are allowed in some places ►►2000 a

all offences whatsoever committed on the high year from the consolidated fund, besides other

seas, shall be liable to the same punishments as perquisites.

if committed on shore, and shall be tried and ADMIRALTY, REGISTRAR OF THE, holds an office adjudged in the same manner as felonies ; and of great pecuniary importance by patent of the persons wilfully casting away any vessel, or pro- High Admiral, or the Lords Commissioners, in curing it to be done, are by the 43d of the king virtue of which he assists in the judicial pro- declared to be felons, without benefit of clergy : ceedings of the Admiralty courts, if the offence be committed in the body of a ADMIRALTY, MARSHAL OF THE, is an officer county, they shall be tried as other felons ; if upon who bears the mace before the Admiralty Judge, the seas, under stat. 28 Henry VIII. which attends naval executions, arrestsships and per- gives the criminal jurisdiction to the Admiralty sons, and commits offenders to the Marshal- regular Admiralty

Essiquibo, Granada, Martinique, Trinidad, and St. Vincents.

ADMIRALTY, JUDGE OF THE, an office origi-

Court. Of late years a regular Admiralty sea. Sessions of Oyer and Terminer has been held twice in

the year at the Old Bailey, London. The commission includes the members of the Privy Council, Lords of the Treasury, the Secre- tary of the Admiralty, some of the City Alder- men, &c. and with the exception that it is limited to maritime causes, is similar to that granted to the judges on other occasions.

ADMIRALTY, PROCURATORS OF THE, in all the High Admiral's affairs, and suits of the crown, act as solicitors in the High court of Admiralty ; since both the Counsel of the Admiralty, and the diplomatic solicitor of the Admiralty, are chiefly occupied about the military parts of their official duty.

ADMIRALTY BAY, a large bay on the west

An appeal lies from the inferior Courts of coast of Cooke's Straits, New Zealand, S. Lat. Admiralty to the HIGH COURT OF ADMIRALTY OF 40►►, 37'. E. Long. 176►►, 54'. ENGLAND, also by 8 Eliz. c. 5. appeal lies from ADMIRALTY INLET, an entrance to the sup- the latter court to commissioners appointed by the posed straits of Juan de Fuca, on the west court of Chancery ; and in case of prize decisions, coast of New Georgia, in N. Lat. 48►►, 30', an appeal lies to commissioners of the Privy W. Long. 124►►. 15'.

Council. And this by virtue of divers treaties ADMIRALTY ISLANDS, a cluster of islands to with foreign nations, by which particular courts the north of New Britain, in the south Pacific are established in the maritime countries of Ocean, in about 2►►, 18' S. Lat. and 116►►, 44 Europe for the decision of this question ; E. Long. These islands were visited by Morello,

►►►whether lawful prize or not? for this being a in 1781, and again by the expedition in search question between subjects of different states, it belongs entirely to the law of nations, and not to die municipal laws of either country, to determine it. When sentence has been given

of La Perouse, in 1793, when the natives appeared

very friendly. They are blacks, and of large stature.

ADMIRALTY ISLAND, a large island on the

by a foreign Admiralty, the party may libel for west coast of North America, between the shore execution here, without the process of another of that continent and George the Third’s Archi- trial; since all Admiralty courts are supposed pelago. It is about 180 miles in circumference. to be established upon the same general basis, and is inclosed with numerous noble bays, and

the decisions of those belonging to other nations, are admitted here, and shall not be examined, that ours may be credited there.

VICE ADMIRALTY COURTS are established in all the dependencies of Great Britain, and are of two kinds, Prize Courts and Instance Courts. The affair of Prize Courts, is to enquire into all cases of vessels condemned as prizes, detained by neutrals or enemies, lawfully or unlawfully,

and all things that affect cases of capture gene-
134►► to 135►►

covered with fine timber, especially of the pine tribe. This island presents strong evidence of the encroachment of the Pacific on the western shores of the neighbourhood ; Vancouver’s men having traced the remains of a vast rorest of trees into the sea. But the inhabitants were of a very hostile disposition, and prevented the French navigator from much close inspection of their domain. N. Lat. 57►►, to 58►►. W. Long.

ADM

.45

ADM

ADMIRE’, v. -x Ad : miror, to wonder AD’MIRABLE, ! at, in a good or bad sense, AD’MIRABLEXESS, but more

frequently in AD’MIRABLY, I the former; to look at,
ADMIR’ANCE, fobserve, or regard with ADMIRA’TION, j
surprise,wonder, pleasure, ADMIR’ER, delight, or
veneration, as

ADMIR’INGLY. J extraordinary or singular; agreeable,
or the contrary.

LA. You haue displac’d the mirth, Broke the good
meeting with most admir’d dis- order. Shakspeare’s
Macbeth. It is very remarkable to see the
manufactures in England, not knowing whether more to
admire the rarity or variety thereof. Fuller’s
Worthies. As such we lov’d, admired, almost ador’d,
Gave all the tribute mortals could afford, Perhaps
we gave so much, the pow’rs above Grew angry at our
superstitious love ; For when we more than human
homage pay, The charming cause is justly snatched
away.

Dryden’s Elegies.

Enthusiastick admiration seldom promotes know-
ledge. Sir Joshua Reynold’s Discourses. Throughout
the whole, the author appears to have been a most
critical reader ; and a most passionate ad- mirer of
the Holy Scriptures.

Bishop Newton on Paradise Lostf

ADMIT, v. Ad : mitto, to let in; to re-

ADMIS’SIBLE, y ceive into a place where one
ADMIS’SION, f is ; to introduce ; to allow or
ADMIT’TABLE, /“suffer to be brought in or
ADMITTANCE, \forward; to give credit to; to
ADMIT’TER. assent to a statement; to acknowledge the
force of an argument.

Let all kyngs beware how, aftir they haue once
tasted of God’s trewth, they admitte siche popish
Catterers into their court and counsaill.

Expos, of Daniel, by G. Joye, c. ii. fol. 41 . I
admit the case as possible, but yet as such a rase,
as I trust in God, this good man shall see the ekye

fall firste, and catche larkes ere it happe.

Sir Thomas More’i Works, p. 22.

What,

If I do line one of their hands ? ??? tis gold
Which buys admittance.

Shakspeare’s Cymbeline. And, if I give thee honour due, Mirth, admit me of thy crew. To live with her, and live with thee, In unreproved pleasures free.

Milton’s L’ Allegro.

There’s news from Bertran : he desires Admittance to the king ; and cries aloud, This day shall end our fears. Dryden.

My father saw you ill designs pursue ; And my admission shew’d his fear of you.

Idem.

Blindness being a privative term unto sight, this appellation is not admittable in propriety of speech, and will overthrow the doctrine of privations.

Brown’s Vulgar Errours.

Suppose that this supposition were admissible, this would not any way be inconsistent with the eternity ???of the divine nature and essence.

Hole’s Contemplations.

ADMISSION, in ecclesiastical affairs, the bishop’s acknowledgment that he approves the parson presented to a cure, which he gives on examination, by saying admitto te habilem. ADMITTENDO CLERICO, is a writ granted VOL. I.

to him who hath recovered his right of piesenifi-tion against the bishop in the common pleas.

ADMITTENDO IN SOCIUM, in law, is a writ for the

association (of certain persons to Justices of Assize formerly appointed.

ADMIX’, v.~\ Ad : Ang. Sax. miscan, by ADMIX’TION, > contraction mics, to mix; to ADMIX’TURE. 3 mingle or blend. My son Pallas, this zoung lusty syre, Exhort I wald to tak the stere on hand, Ne war that of the blude of this ilk land Admyxt standis he, takand sum strynd, Apoun his moderis syde of Sabyne kynd.

Douglas, b. viii. p. 260.

Though many waies may be found to light this powder, yet is there none I know to make a strong and vigorous powder of salt-peter; without the admixtinn of sulphur.

Brown’s Vulgar Errours.

All metals may be calcined by strong waters ; or by admixtion of salt, sulphur, and mercury.

Bacon.

The corruption of philosophy, from the admixture of superstition and theology, is much more extensive and pernicious, either to whole bodies of philosophy or their parts. Idem.

Possibly all metals may be of one species, and the diversity may proceed from the admixture of different bodies with the principles of the metal.

Ray’s Wisdom of God in the Creation.

ADMONISH, v.-> ....

ADMON’ISHER, Ad-.moneo. In Wichf

ADMON’ISHMENT, w* read ###neste, m other
ADMONI’TION, I of ##ur e^ writers> in##-
ADMONI’TIONER, f n’sh : to Putm mum ‘ to
ADMOX’ITIVE, advise> aPP”ze> exho^’ to ADMOK’ITOR, reProve %###il?> ### order to

ADMON’ITORY. J Prevent evi1 conduct. And euery

orakyl of Goddis admonist eik, That we the realme of Italy suld seik.

Douglas, b. iii. p. 80.

God sayth : Love thy neighbour as thyself ; that is to say, to salvation both of lif and soule. And more- over, thou shall love him in word, and in benigne admo- nesting, and chastising, and comfort him in his anoyes, and praye for him with all thy herte.

Chaucer Personnes Tale,V. 2. p. 325. But yet be wary in thy studious care. ••• Thy grave admonishments prevail with me.

Shakspeare's Henry V. p. 1 .

Ambition of great and famous auditories, I leave to those whose better gifts and inward endowments are admonitionert unto them of the great good they can do, or otherwise thirst after popular applause,

H ale's Golden Remains. Yet take heed, worthy Maximus, all ears Hear not with that distinction mine do ; few You'll find admonishers, but urgers of your actions.

Beaumont and Fietcher's Valentinian. To the infinitely Good we owe Immortal thanks ; and his admonishment Receive, with solemn purpose to observe Immutably his sovereign will, the end Of what we are. Milton,

Horace was a mild admcmiiher ; a court satirist, fit for the gentle times of Augustus.

Drydetk Me fruitful scenes and prospects waste ,

Alike admonish not to roam ; These tell me of enjoyments past And those of sorrows yet to come.

Cowper' Shrubbery L

ADO

ADMOVE’ v.

ADMONITIO FUSTIUM, among the Romans, a military punishment, not unlike our whipping, but performed with vine branches.

ADMONITION, in ecclesiastical affairs, apart of discipline much used in the ancient church. It was the first act, or step, towards the punish- ment, or expulsion of delinquents. In case of private offences, it was performed, according to the evangelical rule, privately : in case of public offence, openly, before the church. If either of those sufficed for the recovery of the fallen per- son, all further proceedings in the way of censure ceased : if they did not, recourse was had to excommunication.

ADMONT, a market-town, in the circle of Judenbirg, Upper Syria, between the Ens and Bella, six miles N.N.E. of Rottenman.

ADMORTIZATION, in the feudal customs, the reduction of the property of lands or tene- ments to mortmain. See MORTMAIN.

Ad: IBOIKO, to move to- wards, to approach.

If, unto the powder of loadstone or iron, we admme the north pole of the loadstone; the powders or small divisions will erect and conform themselves thereto : but if the south pole approach, they will subside, and inverting their bodies, respect the loadstone with the other extream. Brown’s Vulgar Errours.

Ad : Tiascor, natus, to

to ‘ v[illegible]’[illegible]* to> or

upon.

Moss, which is an adnascent plant, is to be rubbed and scraped off with some instrument of wood which may not excorticate the tree. Evelyn’s Sylva.

Osteologers have very well observed, that the parts appertaining’to the bones, which stand out at a distance from their bodies, are either the adnate or the enate parts, either the epiphyses, or the apophyses of the bones. Smith’s Old Age.

ADNATA, in anatomy, a thick white mem- brane, investing the ball of the eye ; and forming its outermost coat; called also circumossalis and circumcalvalis. It is the tunica adnata, that makes what we commonly call the white of the eye : whence it is also called the albuginea. It springs from the pericranium, and grows to the exterior part of the tunica cornea, serving to connect the whole eye both to the palpebrae, and the adjacent bones, and thus keep it fast in the socket. A little round aperture is left in the forepart, called the sight, through which the iris and pupilla appear. The adnata abounds with veins and arteries, which, though ordinarily not visible, are conspicuous in ophthalmies, which are properly inflammations of this part.

ADNATA is also a term used for such things as grow upon animal or vegetable bodies, whether inseparably, as hair, wool, horns, &c. or acci- dentally, as the several epistical plants. Among gardeners, it denotes those off-sets, which by a new germination under the earth, proceed from the lily, narcissus, hyacinth, and other flowers, and afterwards grow to true roots ; what the French call cayeux, or stalks.

ADNOUN, ADNOMEN, or ADNAME, in gram- mar, another name for an adjective.

ADO*, n. See Do.

And when he was come in, he saith unto them* why make ye this ado, and weep ? the damsel is no1 dead but sleepeth. Mark v. 39.

A man that is inquisitive is commonly envious, for to know much of other men’s matters cannot be, because all that ado may concern his own estate.

Bacon’s Essay on Envy.

They moved, and in the end persuaded, with much ado, the people to bind themselves by solemn oath.

Hooker. Let’s follow, to see the end of this ado.

Shakspeare.

I made no more ado, but took all their seven points in my target.

Shakspeare’ t Henry IV. With much ado, he partly kept awake ; Not suff’ring all his eyes repose to take.

Dry den.

AD OCTO, q. d. to the eighth number ; a term used by some ancient philosophers, to de- note the highest, or superlative degree.

ADOLES’CENCE, n > Ad : olesco, to

ADOLES’CENCY. } grow perceptibly ; to

advance to adult age or maturity ; usually the time of life between twelve and twenty-one , The Romans extended the period to forty years. Livy calls the Tarquins adolescentes, although they were above thirty years of age. Caesar is styled adolescens, when six and thirty.

Those times which we term vulgarly the old world, were indeed the youth or adolescence of it.

Howell’s Letten.

He was so far from a boy, that he was a man bom, and at his full stature, if we believe Josephus, who places him in the last adolescency, and makes him twenty-five years old. Brown.

ADOLESCENTIA, ADOLESCENCE, from ado- lescere, to grow, the state of growing youth ; which has been understood to last as long as the fibres continue to grow, either in magnitude or firmness. It is commonly computed to be between fifteen and twenty-five, or even thirty years of age ; though in different constitutions, its terms are very different. ††† The Romans usually reckoned it from twelve to twenty-five in boys ; and, to twenty-one in girls, &c. ††† And yet, among their writers, juvenis and adolescens are fre- quently used indifferently, for any person under forty-five years.

ADOLPHUS FREDERICK SCHACHT, a silver mine in Sweden, which produced a great deal of silver between 1742 and 1747. ADOLLAM. See ADULLAM. ADOM, a territory lying toward the interior of the Gold Coast of Africa. It is of small ex- tent and little known.

ADONAI, TIK, Heb. i. e. the Lord, one of the names of the Supreme Being in the Scrip- tures. The proper meaning of which is, lords, in the plural number ; as Adoni is lord, in the singular. The Jews, who either out of respect, or superstition, do not pronounce the name ot Jehovah, read Adonai in the room of it, as often as they meet with Jehovah in the Hebrew text. Leigh, (in his Crit. Sacr.) observes, that ” the word Kvpios, [synonimous with ‘JlK, Adonai,] is in the writings of the Apostles simply and absolutely ascribed to Christ saith Zanchius, a thousand times. In the Old and New Testaments

this title is attributed to GOD, more than a thou- their mourning, sung his praises, and made re- sand times, saith Gerhard. The Hebrew word joicings as if he were raised to life again. Or Jn††, Adonai, springs from pK, Adon, and rather, according to

Meursius, the two offices that from Eden, which signifieth a base or pillar, of mourning and rejoicing made two distinct which sustaineth any thing ; the Greek [icupioe,] feasts, which were held-.at different times of the one who hath ride or dominion, being a word of year, the one six months after the other; Adonis relation. Our English word Lord, hath much being supposed to pass half the year with Proser- like force with the Hebrew U1K, being contracted Pine> . and half with Venus. The Egyptian of our old Saxon word Laford, which is by in- Adonia are said to have been held in memory of terpretation, a sustainer.” Leigh’s Crit. Sacr. the death of ►►liris 5 bl others, of his sickness

in verb

ADONI, a district of Hindostan, in the pro- vince of Bejapoor, on the south side of the

and recovery. Bishop Patrick dates their origin from the slaughter of the first-born in the time of Moses. The Abbe Banier wrote a Memoir

Toombuddra. It extends between the 15th and on the subject ; and among Shakspeare’s poems,

16th degree of N. Lat. and has the Nizam’s 1S a long one on Venus’s affection for Adonis,

dominions to the north, and the Gooty hills south- The text of the Vulgate in Ezekiel vii. 14. says,

ward. This is a portion of the Balaghaut dis- that tms prophet saw women sitting in the tem-

tricts, part of the Nizam’s territory, which he definitively ceded to the British in 1800, and is included in the Bellary collectorship of the government of BOMBAY.

ADONI, a city of Hindostan, in the province of Bejapoor, the capital of the above district. It stands in N. Lat. 15►►, 32’. and E. Long. 77►►, 16’. 145 miles S.W. of Hyderabad, (175 travel- ling miles) 243 from Seringapatam, and 310 from Madras.

This town is falling to decay, but is finely and strongly situated on a hill, where nu- merous fountains of water are found, and the relics of several magnificent structures. It fell to the Mahomedan princes of the Decan, in the sixteenth century, at which period (1568) it was esteemed almost impregnable by its former mas- ters, the rajahs of Bijanagur. A temporary in- dependent state was created in the neighbourhood by the Patans during the last century ; to this succeeded the dominion of Bazalet Jung, the brother of Nizam Ali ; that of Tippoo, who be- sieged, and almost destroyed Adoni, in 1787 ; and finally, that of the British, to whom the city was ceded with the province in 1800.

ADONIA, in antiquity, solemn feasts inhonour of Venus and of her beloved Adonis. The Adonia were observed with great solemnity by most nations ; Greeks, Phoenicians, Lycians, Syrians, Egyptians, &c. From Syria, they are supposed to have passed into India. They were observed at Alexandria in the time of St. Cyril ; and at Antioch, in that of Julian the Apostate, who happened to enter the city during the solem- nity, which was taken for an ill- omen. The Adonia lasted two days : on the first of which, certain images of Venus and Adonis were carried, with all the pomp and ceremonies practised at funerals : the women wept, tore their hair, beat their breasts, &.c. imitating the cries and lamenta- tions of Venus for the death of her paramour. This lamentation they called A

pie, and weeping for Adonis : according to the reading of the Hebrew text, they are said to weep for Tammuz, or the hidden one. Now among the Egyptians, Adonis was adored under the name of Osiris, who was sometimes called Ammuz, or Tammuz, the concealed, to denote probably his death or burial. The Hebrews also, in derision, call him the dead, Psalm cvi. 28. and Lev. xix. 28 ; and at other times, the image of jealousy, Ezekiel viii. 5, because he was the object of the god Mars’s jealousy. F. Calmet is of opinion, that the Ammonites and Moabites gave him the name of Baal-

peor. See BAAL-PEOR.

ADONIC, in poetry, a short kind of verse, consisting of a dactylus and a spondeus, or a trocheus ; such as rara juventus. It is so named from Adonis, having been originally used in the Threnae, or lamentations for that favourite of Venus.

ADONIDES, in botany, authors who have given descriptions, or catalogues, of the plants cultivated in some particular place. Linntsus.

ADONIDIS HORTI, Adonis’s gardens, an appellation for gardens beautifully arranged, and more intended for pleasure than profit.

ADONION, among the ancient botanists, a species of southernwood, according to Gorraeus, which used to be set in pots, and served as an ornament for gardens.

ADONIS, or ADONIUS, in ancient geography, a river of Phoenicia, rising in mount Lebanon, and falling into the sea, after a north-west course, at Byblos.

ADONIS, in antiquity, a drink made of wine, mixed with flour of roasted ador ; otherwise called Cyceon.

ADONIS, in botany, BIRD’S-EYE, or PHEA- SANT’S EYE; a genus of the class polyandria, order polygynia. It is associated with the multi- sliquae, or twenty-sixth natural order. The cha- racters are, CAL. a perianthium, consisting of five obtuse concave leaves, somewhat coloured, and deciduous ; COR. from five to fifteen oblong petals obtuse and glossy; STAM. very numerous, short, subulated filaments ; the anthene oblong and in ††† fleeted : PIST. numerous germina collected in a head ; no styli ; the stigmata acute and reflected ; no pericarpium; the receptacle is oblong and spiked. The seeds numerous, irregular, angular,

sea, which (it was pretended) did not fail punctu- gibbous at the base, reflected at the top, somewhat ally to convey it to Byblos in seven days; upon

prominent, and awnless. The most remarkable the receipt of which, the Byblian women ceased species are :

L2

ADO

1. ADONIS ANNUA, a native of Kerrf

2. ADONIS #STIVALIS.

3. ADONIS APENNINA.

4. ADONIS VERNALIS, or perennial adonis. ADONIS, in the heathen mythology, the son of

Cinyras, king of Cyprus, and the favourite of the goddess Venus. He was said to have been killed by a wild boar, to the inconsolable grief of the goddess, in the Idalian wood. The fables, re- specting his fate, after his dealh, are very con- tradictory ; some representing him as having been turned into a blood-coloured flower ; others into a river, which, at certain seasons, flowed with Wood ; and a third tradition stating, that Venus having applied to Jupiter for his restoration to life, he was allowed to spend one half of the year with her, and the other with Proserpine. See ADONIA.

ADONIS, in zoology, a small fish, of the an- guilliform kind, -of a cylindric shape, and about six inches long. Ray supposes this fish, which is also called exoc&tus to be the same with the exocoetus, of Bellonius, or the gattorugine. It is remarkable for sleeping on the surface of the water, and near the shores ; and Rondeletius affirms, that he has seen them sleeping upon the dry rocks.

ADONISTS, a party among divines and cri- tics, who contend against the Hebrew points.

ADONIUM. See ADONION.

ADONIUS. See ADONIS.

ADONI-ZEDEK, pnV'JIK, Heb. i. e. the Lord's Justice, or the Lord of Justice, a heathen king of Jerusalem, who, jealous of the Israelites under Joshua, formed an alliance with four neighbouring princes, to stop their progress. ††† Joshua x.

ADOORS', Adv : At doors, at the door. But what, Sir, I beseech ye, was that paper, Your Lordship was so studiously employed in, When you came out adoors.

Beaumont and Fletcher's Woman Pleased.

If I. get in adoors, not the power o' th' country, nor all my aunt's curses shall disembogue me.

Idem, Little Thief.

The other of them came to another of like condi- tion in like manner, as desiring her company, but so as she would go out at doors.

Gataker'* Spiritual Watch.

ADOPT', v. \ Ad : opto, to choose ; to ex
ADOPT'EDLY, f ercise the will and the judg-
ADOP'TION, f ment with regard to an object ;
ADOP'TIVE. J to prefer ; particularly to se- lect the child of another person, and to provide for it as one's own. The Roman customs abound with instances of this practice. See our GENERAL ARTICLE.

For when Rene, Duke of Angeou, last king of Sci- cile, departed without any heire male of hys wyfe lawfully begotten, he did adopt to his-heyre of all his realmes and dominios, Lewes the Eleventh, father to the third kyng Charles. Hall, p. 457.

To all the duties of evangelical grace, instead of the

adoptive and cheerful boldness which our new alliance

with God requires, came servile and thrall-like fear.

Milton of Ref. in Eng. b. i.

Tythe is not simply a Levitical duty, but respectively ; not the natural child of Moses's law, but the adoptive. Spslman'i Larger Work of Tythes.

ADO

Adoptedly, as school-maids change their names, By vain (though apt) affection. Shahspeare,

Were none of all my father's sisters left ; Nay, were I of my mother's kin bereft ; None, by an uncle's or a grandame's side ; Yet I could some adopted heir provide. Dryden. Whether, adopted to some neighbouring star,

Thou roll'st above us in thy wand'ring race j Or, in procession fix'd and regular,

Mov' st with the heaven's majestic pace ; Or call'd to more celestial bliss, Thou tread'st with seraphims the vast abyss.

Ibid.

We are seldom at ease from the solicitation of our natural or adopted desires ; but a constant succession of uneasinesses (out of that stock which natural wants or acquired habits have heaped up) take the will in their turns. Locke.

Spontaneous joys, where nature has its play, The soul adopts, and owns their first-born sway ; Lightly they frolic o'er the vacant mind, Unenvy'd, unmolested, unconfin'd.

Goldsmith's Deserted Village.

I have adopted the Roman sentiment, that it is more honourable to save a citizen, than to kill an enemy, and have been more careful to protect than to attack. Johnson's Preface to Shakspeare.

ADOPTER, in chemistry. See RECEIVER.

ADOPTIANI, in church history, a sect of heretics of the eight century, who advanced the notion, that Jesus Christ, is the Son of God, not by nature, bat by adoption.

ADOPTION, in antiquity, was a common custom among the ancient Greeks and Romans, yet not practised, but for certain causes expressed in the laws, and with certain prescribed for- malities. It was a sort of imitation of nature, intended for the comfort of those who had no children : wherefore he that was to adopt was to have no children of his own, nor to be likely to have children; yet eunuchs were not allowed to adopt ; neither was it lawful for a young man to adopt an elder, because that would have been contrary to the order of nature. It was even re- quired that the person who adopted should be eighteen years older than his adopted son, that there might at least appear a probability of his being the natural father.

Among the Greeks it was called viorrig filia- tion ; and was allowed to such as had no issue of their own ; excepting those who were not their own masters, e. g. slaves, women, madmen, in- fants, or persons under twenty years of age. Foreigners being incapable of inheriting at Athens, if any were adopted, it was necessary first to make them free of the city. The adopted had his name enrolled in the tribe and ward of his new father ; for which entry a peculiar time was allotted, viz. the festival SapyrjXia. To pre- vent rash and inconsiderate adoptions, the Lacedaemonians insisted that adoptions should be confirmed in the presence of their kings Adopted children were invested with all the pri. vileges, and were obliged to perform the duties of natural children ; they ceased” to have any claim of inheritance or kindred in the. family which they had left, unless they first renounced their adoption ; and by the laws ot Solon, they were not allowed to do this, until they had children, to bear the name of the person who had adopted them : If they died without children, the inhe-

ntance could not be alienated from the family into which they had been adopted. It should seem, that by the Athenian law, a person, after having adopted another, was not allowed to marry without permission from the magistrate : in effect, there are instances of persons, who, being ill used by their adoptive children, peti- tioned for such leave. But it is certain some men married after they had adopted sons : and then their estates were equally shared between the adopted, and the children, if any, of such marriage.

The Romans had two forms of adoption ; one before the praetor ; the other at an assembly of the people, in the times of the commonwealth, and afterwards by a rescript of the emperor. In the former, the natural father addressed himself to the pnetor, declaring that he emancipated his son, resigned all his authority over him, and consented he should be translated into the family of the adopter. The latter was practised, where the party to be adopted was already free ; and this was called adrogation. The person adopted changed all his names ; assuming the prename, name, and suniame of the persons who adopted him. ??? Among the Turks, the ceremony of adop- tion is performed by obliging the person adopted to pass through the shirt of the adopter. Hence, among that people, to adopt, is expressed by the phrase, to draw another through one's shirt. Some- thing like this was anciently observed among the Hebrews ; as the prophet Elijah adopted Elisha for his son and successor, and communicated to him the gift of prophecy, by letting fall his cloak or mantle on him. But adoption, properly so called, does not appear to have been practised among the ancient Jews : Moses says nothing of it in his laws ; and Jacob's adoption of his two grandsons, Ephraim and Manasseh, is not so properly an adoption, as a kind of substitution, whereby those two sons of Joseph were allotted an equal portion in Israel with his own sons. Besides the formalities prescribed by the Ro- man law, various other methods have taken place ; which have given denominations to dif- ferent species of

adoption, among the Gothic nations, in different ages ; such as,

ADOPTION BY ARMS was when a prince made a present of arms to a person, in consideration of his merit and valour. Thus it was that the king of the Ileruli was adopted by Theodoric. The obligation here laid on the adoptive son was, to protect and defend the father from inju- ries, affronts, &c. And hence according to Selden, the ceremony of dubbing knights took its origin as well as name.

ADOPTION BY BAPTISM was introduced into the Greek church, and came afterwards into use among the ancient Franks. The god-father was so far considered as the adoptive father, that his god-children were supposed to be entitled to a share, in the inheritance of his estate. The term r.as sometimes been employed generally to the spiritual affinity contracted between children and their sponsors, in baptism.

ADOPTION BY HAIR was performed by cutting off the hair of a person, and giving it to the adoptive father. Pope John VIII. is said thus to have adopted Boson, king of Aries.

ADOPTION BY MATRIMONY, is the taking the children of a wife or husband by a former mar- riage, into the condition of proper or natural children ; and admitting them to inherit on the same footing with those of the present marriage This is a practice peculiar to the Germans; among whom, it is more particularly known, by the name of einkindschaft ; among their writers in Latin, by that of unio prolium, or union of issues. But the more accurate writers observe, that this is no adoption. See ADFILIATION.

ADOPTION INTO HOSPITALS, is used for the admission of persons into certain hospitals, par- ticularly that of Lyons ; the administrators whereof have all the power and rights of parents over the children

admitted.

ADOPTION OF ACADEMIES, is the reception of a new academy into the body of an old one ??? Thus the French Academy of Marseilles was adopted by that of Paris ; on which account, we find a volume of speeches extant, made by several members of the academy of Marseilles, deputed to return thanks to that of Paris for the- honour.

ADOPTIVE ARMS, are those which a person enjoys by the gift or concession of another, and to which he was not otherwise entitled. They stand contradistinguished from arms of alliance. ADOPTIVE GODS, were the gods of other nations, adopted by the ancient Romans, and so styled in contradistinction to domestic ones. They were taken chiefly from the Egyptians : such as Isis, Osiris, Anubis, Apis, Harpocrates, Cano- pus, &c.

ADOPTIVE WOMEN, in ecclesiastical writers, we find adoptive women, or sisters, (adoptive feminte, or sorores,) used for those handmaids of the ancient clergy, otherwise called sub intro- ducte.

ADOR, aflop, in botany, a species of corn, called also, Spelta and Zea.

ADORAIM, a city belonging to the tribe of Judah, near Maresa, on the confines of Idumea. It was taken by Hyrcanus, in his expedition into Syria, to destroy the temple of the Samaritans on Mount Gerezim. Joseph. Antiq.

ADORAT, in chemistry, a weight of four pounds.

ADORATION, among the ancients, literally signified, to apply the hand to the mouth ; Ma- num ad os admovere, q. d. to kiss the hand: this being, in the eastern countries, one of the great marks of respect and submission. Nothing can more plainly illustrate this primitive mode of adoration than the protestation of Job, chap, xxxi. 26, 27, ‘ If I beheld the sun when it shined, or the moon walking in brightness, and my mouth hath kissed my hand,

this also were iniquity.’ In the Hebrew idiom, kissing, (from such a upgge perhaps,) commonly signifies adora- tion.

Herodotus considers the custom of kissing the hand in adoration, to have been adopted by the Greeks from the Persians : it certainly obtained at an early period all over the East.

The Romans practised adoration at sacrifices, and other solemnities ; in passing by their tem- ples, altars, groves, &c. : at the sight of statues, images, or the like, whether of stone or wood

whereiiany thing of divinity was supposed to reside. Usually there were images of the gods placed at the gates of cities, to remind those who went in or out, of the homage due to them. The Roman ceremony of adoration has been thus described : The devotee having his head covered, applied his right hand to his lips, the fore finger resting on his thumb, which was erect, and thus bowing his head, turned himself round from left to right. The kiss given, was called osculum labratum ; for ordinarily they were afraid to touch the images of their gods them- selves with their profane lips. Sometimes, how- ever, they would kiss their feet, or even knees, it being held an incivility to touch their mouths, so that the adoration passed at some distance. Saturn, however, and Hercules, were adored with the head bare : whence the worship of the last was called institution peregrinum, and ritut Gracanicus, as departing from the cus- tomary Roman method, which was to sacrifice and adore with the face veiled, and the clothes drawn round the head, to prevent any interruption in the ceremony, from the sight of external objects.

The primitive Christians adopted the Grecian rather than the Roman method, and adored always uncovered. Their ordinary posture of prayer was kneeling, but

on Sundays standing ; and a superstitious regard to praying towards the east was introduced at an early period. Hence some of their Pagan opponents alleged, that they adored the sun.

STANDING was an early eastern attitude of adoration; the body being inclined forward, and the eyes cast down to the earth ; with the hands probably resting on the knees. Thus Solo- mon ” stood before the altar of the Lord, in the presence of all the congregation of Israel, and spread forth his hands toward heaven, 1 Kings viii. 22. This was a posture practised both by the Greeks and Romans.

SITTING, with the under part of the thighs resting on the heels, was an ancient Egyptian practice of this kind ; and most, if not all, the figures of Egyptian worshippers in their sacred edifices, are represented in this attitude. See also, 1 Chron. xvii. 16.

KNEELING, common in all ages and countries as a posture of adoration, we need hardly enume- rate. It seems naturally to import a person’s endeavouring to lessen his own self importance, and his consciousness of intercourse with a superior being.

PROSTRATION, or the casting down of the whole person on the ground, accompanied some- times by kissing the ground, ~was amongst the Persians the common mode of expressing re- verence for their kings. If the party admitted to the royal presence, were a vanquished prince, he kissed, according to Herbelot, the prints of the horse-shoe of his conqueror, repeating this formula : ‘ The mark that the foot of your horse has left upon the dust, serves me now for a crown. The ring, which I wear as the badge of my slavery, is become my richest ornament. While I have ‘the happiness to kiss the dust of your feet, I shall think that fortune favours me with her tcnderest caresses, and her sweetest kisses.’ The Jewish commander, Joshua, thus

adored by prostration, Josh. vii. 6, 10., as did Manoah and his wife, Judges xiii 20. David and his

princes, 1 Chron. xxi. 16. ; the prophets frequently. Ezek. i. 28 ; iii. 23, &c. ; and Jesus Christ himself, Matt. xxvi. 39. Amongst the Romans, the sick were always directed to lie down in the temple of TEsculapius.

Kissing the feet, walking bare-footed, and pull ing off the shoes in a ceremonious way from the feet, are other tokens of adoration practised both in ancient and modern times. For the last, see Exod. iii. 5. The Mahometans always observe this practice when they enter their mosques ; and travellers report that there are seen as many slippers and sandals at the doors of an Indian pagoda, as there are hats hanging up in our churches. Mr. Wilkins mentions, upon his ex- pressing a wish to enter the inner hall of the college of seiks, at Patna, he was informed, ” it was a place of worship, and it was necessary for him to take off his shoes.” Kissing the feet is a token of homage well known to be paid to the pope, and said by some writers to have been borrowed from a custom of the primitive church, in which the bishops were thus honoured ; the people exclaiming as they offered this mark of respect, Trpoccvw, I adore thee. Others derive it from a custom of the imperial court. His holiness is said to wear a crucifix on his slipper, that scrupulous consciences may transfer the homage to Christ. It is recorded of Diocletian, that he had gems affixed to his shoes, that the people might the more readily offer him the honour of adoration in this way.

The following curious account of the modes of Hindoo adoration, which they call POOJA, is given by Mr. Ward in his “View of the history, literature, and religion of that people.” ” Previously to entering on this act of idolatry, the person bathes : returning home he washes his feet, spreads a blanket, or some other proper thing to sit upon, and then sits down before the idol, having the articles neces- sary for worship before him : a kosha or metal bason, and a koshee, or smaller one; a small wooden stand, a metal plate, an iron stand to hold five lamps, a censer, a brass stand with a small shell placed on it, a metal plate on which to place

flowers, a metal bowl into which the water and flowers are thrown after they have been presented to the idol, a metal jug for holding water, a metal plate to be used as a bell ; a shell, or sacred conch, which sounds like a horn ; with a number of dishes, cups, and other utensils for holding rice, paint, incense, betel, water, milk, butter, curds, sweetmeats, flowers, clarified butter, &c. Having all these articles ready, the worshipper takes water from the kosha with the koshee ; and, letting it fall into his hand, drinks it ; he then takes a drop more, and then a drop more, repeating incantations. After this, with the finger and thumb of his right hand, he touches his mouth, nose, eyes, ears, navel, breast, shoulders, and the crown of his head, repeating certain forms. He then washes his hands, makes a number of motions with his fingers, and strikes the earth with his left heel three times, repeating incantations. When this is done, he flirts the first finger and thumb of his right hand, waving

his hand toward the ten divisions of the earth ; closes his eyes, and repeats incantations to purify his mind, his body, the place where he sits, as well as the offerings about to be pre- sented (which it is supposed may have become unclean by having been seen or touched by a cat, a dog, a shackal, a shoodru, or a Mussulman.) Next, he takes a flower, which he lays on his left hand, and putting his right hand upon it, re- volves in his mind the form of the god he is wor- shipping. He then lays the flower on his head, recites the outward forms of worship in his mind, and presents the offerings : ××× first, a square piece of gold or silver, as a seal for the god, in- viting him to come and sit down, or visit him ; and then, asking the god if he be happy, re- peats for him ” very happy.” After this, he presents water to wash the feet ; then rice, a vilwu leaf, eight blades of doorva grass, paint, and water, with incantations. He then presents water to wash the mouth, curds, sugar, honey, water to bathe in; then cloth, jewels, gold, silver, ornaments, bedsteads, curtains, a bed,

pillow, cloth, printed cloth; clothes for men, women, or children ; shoes, brass drinking cups, candlesticks, and whatever would be proper presents to the brahmuns, &c. &c. &c. ††† At last the person prostrates himself before the object of worship, and then retires to feast on the offer- ings with other brahmuns. This is a detail of the form of worship on a large scale, at which time it occupies the officiating brahmun two hours." Vol. ii. p. 64, et seq. Ovo.

The reader will observe from the foregoing historical collections, how various are, and have been, the objects of human adoration. Every gradation of respect and homage has been indi- cated by it ; and its religious character is of course to be estimated entirely by our views of the being or object to whom it is addressed. It can scarcely need to be added that the second commandment seems expressly given to regulate our views of this subject, and to warn all sincere believers in Divine Revelation, of the guilt and danger of transferring any of the honours of ' a jealous God.'

ADORE', v. Ad : oro, from os, the

ADOR'ABLE, ^ mouth, properly to address ADOR'ANT, f oral prayers, but used more ADOUA'TION, †† generally, to acknowledge ADORE'MENT, \ the existence and power of ADOR'ER. the supreme Being ; to reve-

rence, with sentiments of awe and love ; to wor- ship ; to invoke ; to supplicate ; to intreat. With that my fader vincust stert on fute, And to the goddis carpis to be our bute, The haly sterne adorit he rycht thare, Now, now, quod he, I tary no langare, I follow, and quhidder ze gide me sail I wend. Douglas, book ii. p. 62, JSneid. And miche more execrable is it to serue or worship the [images] with any rcuerent behauiour, ether by adoracion, prostracion, knelyng, or kissing.

The Exposition of Daniel by Ceo. Joye, fol.

35. col. 2.

\ otum in the scriptures hath not one only sygnyfy-cacyon, but many. Some where it is a knowledgyng if Gods benefyghtes, some where a faythe in hys proniyses, some whcr an adoracyon, a worshypp.

Bale’s Apology, fol. 52, col. 1.

151 ADO

Dye rather, die, and dying doe her scrue, Dying her serue, and liuing, her adore ; Thy life shee gave, thy life she doth deserue : Dye rather, die, than euer from her seruice swerue. Spencer’s Faerie Queene,

Rejoicing, but with awe,

In adoration at his feet I fell Submiss. Milton’s Paradise Lott.

The priests of elder times deluded their apprehen-sions with soothsaying, and such oblique idolatries ; and even their credulities to the literal and down- right adorcment of cats, lizards, and beetles.

Brown’s Vulgar Errours.

The God of nature ordained from the beginning that he should be worshipped in various and sundry forms of adorations, which, nevertheless, like so many lines, should tend all to the same centre.

Howell’s Letters.

‘Tis adoration, some say, makes the God, And who would pay it, where would be their altars, Were no inferior creatures ?

Dryden’s Troilus and Cressida. The mountain nymphs and Themis they adore, And, from their oracles, relief implore. Dryden. The people appear adoring their prince, and their prince adoring God. Toiler^ No. 57.

Make future times thy equal act adore ; And be, what brave Orestes was before.

Pope’s Odyssey.

Whilst as th’ approaching pageant does appear, And echoing crowds speak mighty Venus near ; I, her adorer too, devoutly stand, Fast on the utmost margin of the land. Prior.

ADOREA, in Roman antiquity, grain, or a kind of cakes made of fine flour, and offered in sacrifice ; or a dole or distribution of corn, as a reward for some service ; whence by metonymy it is put for praise or rewards in general..

ADORN’, v. and n. ~) Ad : orno. Orno is of
ADORN’ING, adj. > doubtful origin. Vossius
ADORN’MENT. _) derives it from Gr. Qpa,

time in general or any specific period, as Spring. In Greek authors, it also bears the signification of beauty, maturity; and may be applied to whatever is pleasing or agreeable. Wicklif uses ourn ; to beautify, decorate, dress, or set off to the best advantage ; to embellish.

Quham till this was the latter dulefull day, With festuall flouris, and bewis as in May, Did wele adorne, and feist and riot maid, Throwout the toun, and for myscheif was glaid.

Douglas, b. ii. p. 47.

At his first settyng foote on land, the garter of thorder was set and made faste aboute his [Philip of Spain] legge, whiche was sent vnto hym by the quene, richly adorned with precious iewelles.

Fabyan, p. 715,

The holie senate was adorned with olde prudent persons : And not without teares I sale, it is at this houre ful of iaglers and liers. The Golden Booke. He hath ►►lothed me with the garments of salva- tion ; he hath covered me with the robe of

righte- ousness j as a bridegroom decketh himself with or- naments, and as a bride adorneth herself with her jewels. Isaiah, c. Ixi v. 16.

This attribute was not given to the earth, while it was confused : nor to the heavens, before they had motion and adornment. Raleigh's History of the World , Her breast all naked, as net iuory, Without adorne of gold or silver bright, Wherewith the craftes-man -wonts it beautifie, Of her dew honour, was despoyled quight.

Spencer's Faerie Queene, b. iii. c. 12

She held the very garment of Postnumus in more respect, than my noble and natural person, to- gether with the adornment of my qualities.

Shakspeare's Cymbeline. She'll to realities yield all her shows ; Made so adorn, for thy delight the more.

Milton.

Thousands there are, in darker fame that dwell, Whose name some nobler poem shall adorn ; For, though unknown to me they sure fought well.

Dryden. How negligently graceful he [the noble Montague]

unreins

His verse, and writes in loose familiar strains ; How Nassau's god-like acts adorn his lines'. And all the hero in full glory shines '

Addison's Account of the greatest English Poets, Yet 'tis not to adorn and gild each part That shews more cost than art ; Jewels at nose and lips, but ill

appear.

Cowley. Let vanity adorn the marble tomb

With trophies, rimes, and scutcheons of renown ; In the deep dungeon of some Gothic dome, Where night and desolation ever frown.

Beattie.

The task of an author is, either to teach what is not known, or to recommend known truths by his manner of adorning them. Rambler.

ADOS, in chemistry, water in which red hot iron has been cooled.

ADOSCULATION, in botany, a term that has been used to express the impregnation of plants by the falling of the farina foecundans on the pistil.

ADOSSEE, probably from ad, to, and dorsa, backs, in heraldry, two figures or bearings, placed back to back. ADOTED. See DOTE.

It falleth that the most wise Ben other while of loue adoted.

Gower, Con. A. b. vi.

ADOUR, a river of France, which rises in the mountains of Bigorre, in the upper Pyrenees, and running N. by Tarbes through Gascony, afterwards turns E., and passing by Dax, falls into the bay of Biscay, about three miles below Bayonne.

ADOUY, a market town of Hungary, in the county palatine of Stuhlweissenburg, on the Danube ; also the name of several small towns in the counties of Bihar, Beregh, and Saboltsch,

ADOWA, a city of Abyssinia, the capital of the province of Tigre, and residence of the sovereign; situated partly on the side, and partly at the foot of a hill, and commanding a magnificent view of the adjacent mountains. The houses are pretty regularly

disposed into streets or al- leys, and of a conical form, interspersed with trees and small gardens. The population cannot fall short of 8000. Here is a remarkable manu- facture of cotton cloths, both coarse and fine, but particularly the former, which are considered to excel those made in any other part of Abys- sinia, and which circulate like money. Adowa is the principal commercial town E. of the Ta- cazze, and the channel by which the commun- cation between the coast and the interior is almost exclusively carried on. The provinces to the south abound in cattle and corn, which, with

salt, constitute their chief articles of barter. About a thousand slaves pass through Adowa, to be shipped at Massuah and other po-ts on the Red Sea. A considerable number of Mahome- tans are resident, and visitors here, and are the only class of the population at all animated by the spirit of trade. The inhabitants are more civilized than is usual in Abyssinia. Long. 39►►, 5. E. Lat. 14►►, 12’, 30”. N.

ADOWN’WARD. \ See DowN; And stones adonwafd slonge vp hem y nowe, And myd speres and myd flon vaste of hem slowe, And myd suerd and myd ax.

R. Gloucester, p 362.

Whan Phebus dwelled here in erth adoun, As olde bookes maken mentioun, He was the moste lusty bacheler. Of all this world, and eke the best archer.

Chaucer. The Manciple’! Tale. Thrice did she sink adown in deadly sound ; And thrice he her revived, with busy pain.

Spencer’s Faerie Queene. In this remembrance, Emily, ere day Arose, and dress’d herself in rich array j Fresh as the month, and as the morning fair Adown her shoulders fell her length of hair.

Dryden. Her hair

Unty’d, and ignorant of artful aid, Adown her

shoulders loosely lay display'd, And in the jetty curls ten thousand cupids play'd. Prior's Solomon.

Adown Augusta's pallid visage flow The living pearls with unaffected woe. Discons'late, hapless, see pale Britain mourn, Abandon'd isle ! forsaken and forlorn !

Falconer's Ode on the Duke of York. ADOXA, tuberous moschatel, hollow-root, or inglorious; in botany, a genus of the tetra- gynia order, belonging to the octandria class of plants ; and in the natural method ranking under the thirteenth order, succulentae.

The characters of this genus are : CAL. a peri- anthium beneath, divided into two segments, flat, persistent: COR. composed of one flat petal, divided into four ovate acute segments longer than the calyx : STAM. eight subulated filaments the length of the calyx ; with roundish antherae : PIST. has a germen beneath the recep- tacle of the corolla ; four simple, erect, persistent styli, the length of the stamina; and simple stigmata : PER. a globular four- celled berry be- tween the calyx and corolla. The seeds solitary and compressed. There is but one species, which is a native of the woods in Britain, and Europe.

ADPERCEPTION, in metaphysics, a term used by Leibnitz, to denote the act whereby the mind becomes conscious to itself of a perception. AD PONDUS OMNIUM, to the weight of the whole; an abbreviation among physicians, signifying, that the last prescribed ingredient is to weigh as much as all the others put together. AD QUOD DAMNUM, in the English law, a writ directed to the sheriff, commanding him to enquire into the damage which may befal the king, or other person, by granting certain privi- leges to a place, such as a fair, a market, or tl> like ; or by granting lands in fee-simple to a body politic ; or by turning or changing high

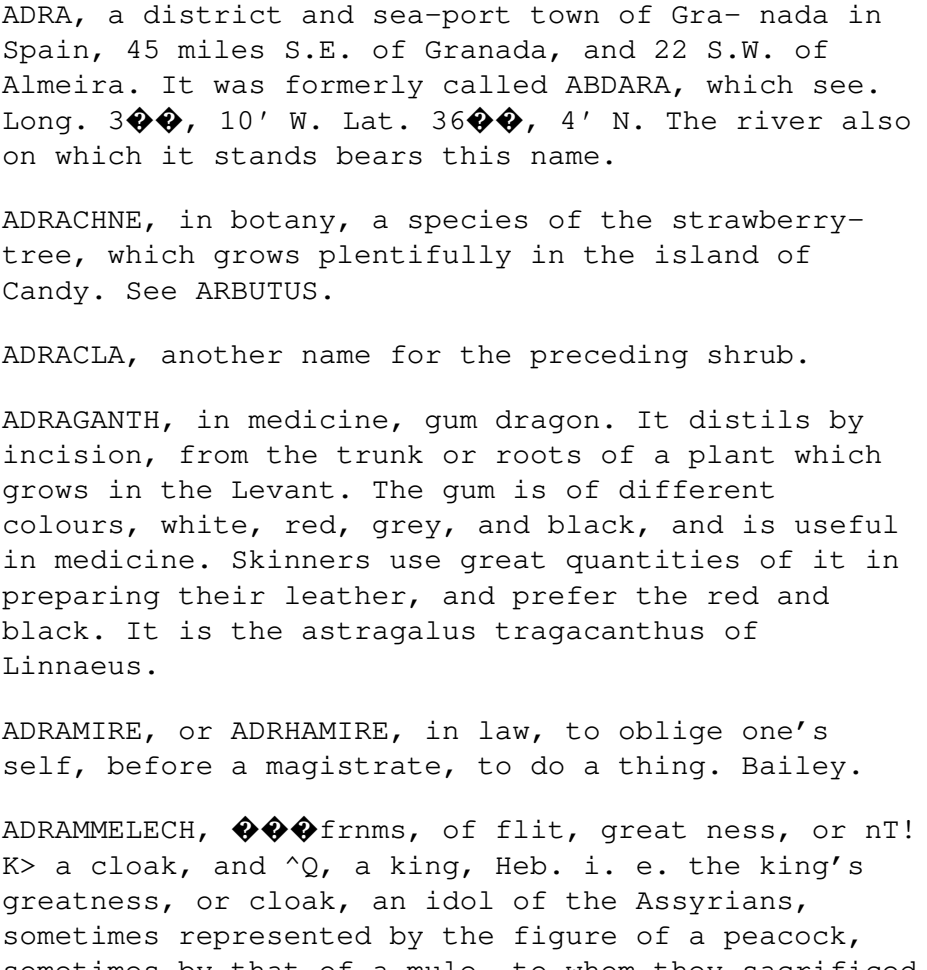

ways ; in which cases, the party aggrieved may complain to the justices, at next quarter session; failing which complaint, the inquisition is re-corded and becomes binding.

ADRA, a district and sea-port town of Gra- nada in Spain, 45 miles S.E. of Granada, and 22 S.W. of Almeira. It was formerly called ABDARA, which see. Long. 3, 10′ W. Lat. 36, 4′ N. The river also on which it stands bears this name.

ADRACHNE, in botany, a species of the strawberry-tree, which grows plentifully in the island of Candy. See ARBUTUS.

ADRACLA, another name for the preceding shrub.

ADRAGANTH, in medicine, gum dragon. It distils by incision, from the trunk or roots of a plant which grows in the Levant. The gum is of different colours, white, red, grey, and black, and is useful in medicine. Skinners use great quantities of it in preparing their leather, and prefer the red and black. It is the astragalus tragacanthus of Linnaeus.

ADRAMIRE, or ADRHAMIRE, in law, to oblige one’s self, before a magistrate, to do a thing. Bailey.

ADRAMMELECH, frnms, of flit, great ness, or nT! K> a cloak, and ^Q, a king, Heb. i. e. the king’s greatness, or cloak, an idol of the Assyrians, sometimes represented by the figure of a peacock, sometimes by that of a mule, to whom they sacrificed their children, by fire, in the most cruel manner. See MOLOCH. Also the name of one of the sons of Sennacherib, king of Assyria.

ADRAMYTTENUS CONVENTUS, assizes or sessions, held at Adramyttium, being the eighth in order of the nine Conventus Juridici of the province of Asia.

ADRAMYTTENUS SINUS, in ancient geography, a part of the Egean Sea, on the coast of Mysia.

ADRAMYTTIUM, in ancient geography, now Adramiti ; a town of Mysia Major, at the foot of Mount Ida. It was an Athenian colony, with a harbour and dock near the Caicus. Strabo, 1. xiii.

ADRAMYTTIUM, a city on the N. coast of Africa, westward of Egypt.

ADRANA, a river of Germany ; now the Eder, rising on the borders of the country of Nassau, to the north-east of Dillenburg, and running through tire landgraviate of Hesse into the Fulda. See EDER.

ADRANIT^E, or HADRANITANI, the inhabi- tants of Adranum.

ADRANUM, or HADRANUM, in ancient geo- graphy, now Aderno ; a town of Sicily, built by the elder Dionysius, at the foot of mount /Etna, 400 years before Christ, and so called from the temple of ADRANUS. which see.

ADRANUS, or HADRANUS, an idol wor- shipped by the ancient Sicilians.

ADRANUS, a river of Sicily, now called Fiume d' Aderno.

ADRASTEA, in antiquity, a name given to Nemesis, the goddess of revenge, or the punisher of injustice. The Egyptians placed her above the moon, that she might the more easily observe human actions. King Adrastus fiist erected a

temple to this goddess, and some suppose gave her this name.

ADRASTIA CERTAMINA, in antiquity, pub- lic games,

instituted by Adrastus king of Argos, at Sicyon, A. M. 2700, in honour of Apollo.

ADRASTIA, in botany, a name given by De Candolle, to a plant of New Holland, called also oceana, of the class decandria, order digynia. Natural order, magnolia, according to Jussieu.

Its characters are, CAL. inferior, of five per- manent pointed leaves. PET, five oval, shorter than the calyx. STAM. filaments flat, anthers linear, of two cells. PIST. Germens two, glo- bose. Styles straight and close together, awl- shaped. Seed solitary.

ADRASTUS, king of Argos, son of Talaus and Lysimache, acquired great honour in the fa- mous war of Thebes, in support of Polynices his son-in-law, who had been excluded the sove- reignty of Thebes by Eteocles his brother. Adras- tus, followed by Polynices and Tydeus anothei son-in-law, Capaneus, Hippomedon his sister's son, Amphiaraus his brother-in-law, and Par- thenopaeus, marched against the city of Thebes ; and this is the expedition of the Seven Worthies, which the poets have so often sung. All seven of them lost their lives in this war except Adrastus, who was saved by his horse called Arion. The war was revived ten years after, by the sons of the deceased warriors, and called the war of the Epigones, which ended with the taking of Thebes. In this contest fell ^Egialeus, son of Adrastus ; which afflicted him so much that he died of grief. Also a Phrygian prince, who fled to the court of Cro3sus, and being made guardian to his son Atys, inadvertently slew him while hunting, and afterwards killed himself. Herod, i. 35.

ADRAZZO, the same with ADJAZZO, or AJACCIO.

ADREAD'. See DREAD.

Ther n'as baillif, ne herde, ne other bine, That he ne knew his sleight and his covine : They were adradde of him, as of the deth.

Chaucer. The Prologue. The Reve, And on that o side of the towne The kynge let make Ilion, That high toure, that stronge place Which was adrad of no manace Of quarele, nor of none engyne.

Gower Con. A. b. v.

ADRETS, (Francis de Beaumont, baron des,) one of the chiefs of the Huguenots in France, who in 1562, signalised himself by many brave exploits, tarnished, however, by detestable cruel- ties. At some places he obliged his prisoners to throw themselves from the battlements, upon the pikes of his soldiers. When reproaching one of them for shrinking back twice from the fatal leap. ” Sir, (replied the man,) I defy you, with all your bravery, to take it in three leaps.” This witticism saved the soldier’s life. After the peace the baron turned Catholic, and died deservedly hated in 1587. A son of his was concerned in the massacre of Paris. ††† Nouv. Diet. Hist.

ADRIA, an episcopal town in Italy, situated on a peninsula formed by the river Tartaro and an arm of the Po, in that part of the Venetian territory called the Polesino di Rovigo, now belonging to Austria. This once flourishing town, the Atria of Pliny and Ptolemy, and the

Adrias of Strabo ; and which gave name to the Adriatic sea, is now greatly decayed, and has not above 7200 inhabitants. 15 miles E. of Ilovigo. Long. 12††, 2′ E. Lat 45††, 2′ N.

ADRIAMPATAM, a town on the coast of Tanjore, Hindostan, 37 miles S. by E. of Tanjore. N.Lat. 10††, 20′. E. Long. 79††, 30′.

ADRIAN, or HADRIAN, PUBLIUS vELius, the fifteenth emperor of Rome. He was born at Rome, A. D. 76, and

left an orphan, at ten years of age, under the guardianship of Trajan, and Ccelius Tatianus, a Roman knight. He be- gan to serve very early in the armies, was tribune of a legion before the death of Domitian, and was chosen by the army, to carry the news of Nerva's death to Trajan, his successor. He ac- companied Trajan in most of his expeditions, distinguished himself in the second war against theDacii,and was successively appointed quaestor, tribune of the people, praetor, governor of Pan- nonia, consul, and governor of Syria. After the siege of Atra was raised, Trajan left him the command of the army, and when he found death approaching, adopted him. Adrian, who was then in Antioch, as soon as he heard of Trajan's death, declared himself emperor, A. D. 117, made peace with the Persians, and from genero- sity or policy, remitted the debts of the Roman people, which, according to the calculation of those who have reduced them to modern money, amounted to 22,500,000 golden crowns : and that the people might be under no apprehension of being called to an account for them after- wards, burnt all the bonds and obligations relat- ing to those debts. There are medals still extant, in commemoration of this fact, in which he is represented holding a flambeau in his hand, setting fire to the bonds. He visited all the provinces, and did not return to Rome till the year 118, when the senate decreed him a triumph, a'nd honoured him with the title of Father of his country ; but he refused both, and desired that Trajan's image might triumph. No prince travelled more than Adrian ; there being hardly a province in the empire, which he did not visit. In 120 he went into Gaul ; from thence to Britain, in order to subdue the Cale- donians, who were making continual inroads into the provinces. Upon his arrival, they re- tired towards the north : when he advanced as far as York, but was diverted from his intended conquest by the description which some soldiers, who had served under Agricola, gave him of the country. In hopes, therefore, of keeping them quiet, by enlarging their bounds, he delivered up to the Caledonians, all the lands lying be- tween the two Friths and the Tyne ;

and at the same time, to secure the Roman province from their future incursions, built the famous wall which still bears his name. See ADRIAN'S WALL. Having thus settled matters in Britain, he returned to Rome, where he was honoured ###with the title of Restorer of Britain, as appears by some medals. Adrian soon after went into Spain, to Mauritania, and at length into the East, wheie he quieted the commotions raised by the Parthians. Having visited all the pro- vinces of Asia, he returned to Athens, in 125 where he was initiated in the myste-ies of

Eleusinian Ceres. From thence he went to Sicily, to view the phenomena of Mount ^Etna, and enjoy the extensive prospect from its top. He returned to Rome in 129 ; and again visited Africa and the East ; was in Egypt in 132, revi- sited Syria, in 133, returned to Athens in 134, and to Rome in 135. The persecution against the Christians was very violent under his reign ; but it was at length suspended, in consequence of the remonstrances of Quadratus, bishop of Athens, and Aristides, two Christian philoso- phers, who presented the emperor with some books in favour of the Christian religion. He conquered the Jews; and, by way of insult, erected a temple to Jupiter on Calvary, placed a statue of Adonis in Bethlehem, and caused images of swine to be engraven on the gates of Jerusalem. At last he was seized with a dropsy, of which he died at Baiae, in the sixty-third year of his age, and the twenty-first of his reign. The Latin verses he addressed to his soul, not long before he breathed his last, are a fine instance of self-possession at such a moment, Animula, vagula, blandula, Hospes, comesque corporis, Quse nunc abibis in loca Pallidula, rigida, nudula? Nee, ut soles, dabis jocos.

Thus given by Pope, and probably supplying to him some of the finest thoughts of his celebrated Ode.

Ah ! fleeting spirit ! wandering fire,

That long has warmed my tender breast, Must thou no more this frame inspire ? No more a pleasing, cheerful guest ! Whither, ah ! whither art thou

flying ?

To what dark undiscovered shore ? Thou seem’st all trembling, shiv’ring, dying,

And wit and humour are no more ! There are some fragments of other Latin poems of his extant, and some of his Greek verses in the Anthology. He also wrote the his- tory of his own life : to which, however, he did not put his name, but that of Phlegon, one of his freed-men. He had great wit, and an extensive memory ; and understood the sciences, but was jealous of others who excelled in them. One of the friends of Favorinus asked the latter, who knew the emperor’s foible, why he improperly yielded to Adrian in an argument : ” Wouldst thou not have me yield to the master of thirty legions ? ” he replied. He was also cruel, en- vious, and lascivious. Antoninus his successor obtained his apotheosis ; and prevented the re- scission of his acts, which the senate once in- tended.

ADRIAN, the African, abbot of St. Peter’s, Can- terbury, in die 7th century, accompanied Theo- dore, archbishop of Canterbury to England. The united efforts of these learned ecclesiastics, diffused no small degree of light over this dark period of Anglo-Saxon history. Adrian was the preceptor of Aldhelm, and Bede extols the happy time when the island enjoyed his tuition : and Kent ” was the fountain of knowledge to the rest of England.”

Turner s Anglo-Saxons, v. ii. 381.

ADRIAN IV. (Pope) the only Englishman

who ever had the honour of sitting in the papal

chair. His name was Nicholas Brekespere ; and

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he was bora at Langley, near St. Alban’s, in Hertfordshire. His father having taken the ha- bit of the monastery of St. Alban’s, Nicholas was obliged to submit to the lowest offices in that house, for daily support. He desired to take the habit of the monastery, but being rejected by the abbot, resolved to try his fortune in Paris, where, though very poor, he applied himself to his studies with great assiduity, ut having still a strong inclination .to a reli- ious life, he left Paris, and removed to Provence, here he became a regular clerk in the monastery of St. Rufus. Here, after some time, he recom- mended himself to the monks by a strict attention to their concerns ; which, with the beauty of his person, and his prudent conversation, rendered him so acceptable an inmate, that they entreated him to take the canonical habit. He now dis- tinguished himself by his learning and strict ob- servance of the monastic discipline ; and upon the death of the abbot, was chosen superior of the house. Pope Eugenius III. being apprised in 1 146 of the great merit of Nicholas, and think- ing he might be serviceable to the church in a higher station, created him cardinal bishop of Alba, and in 1148, sent him legate to Denmark and Norway; where, by his fervent preaching, ne is said to have converted those nations to the Christian faith ; and erected Upsal into an ar- chiepiscopal see. Upon his return to Rome, he was received with great marks of distinction ; and on the death of Pope Anastasius, who had suc- ceeded Eugenius, was in 1154, unanimously chosen to the papal chair, when he took the name of Adrian.

The news of his election reaching England, Henry II. sent Robert, abbot of St. Alban’s, and three bishops, to Rome, with congratulations ; upon which occasion Adrian granted large privi- leges to the monastery of St. Alban’s, particularly an exemption from all episcopal jurisdiction, ex- cepting to the see of Rome. In the beginning of his pontificate, he

withstood the attempts of the Romans to recover their ancient liberty under the consuls, and obliged those magistrates to leave the government of the city to the Pope. In 1155, he drove Arnaud of Brescia, and his followers, out of Rome, excommunicated William king of Sicily, who had ravaged the territories of the church, and absolved his subjects from their allegiance. About this time, Frederic king of the Romans, having entered Italy with a powerful army, Adrian met him near Sutrium, and concluded a peace. At their interview, Frederic consented to hold the Pope's stirrup, whilst he mounted on horseback : after which his holiness conducted that prince to Rome, and in St. Peter's church placed the imperial crown on his head, to the great mortification of the Ro- mans. The next year a reconciliation was brought about between the Pope and the Sicilian king, that prince taking an oath to do nothing farther to the prejudice of the church, and Adrian granting him the title of king of the tu- o Sicilies. This pontiff built and fortified several castles, and left the papal dominions and papal domination considerably improved and in- creased. But notwithstanding all his prosperity ne is said to have been extremely sensible of the

disquietudes of his high station ; and declared to his countryman, John of Salisbury, that all the former hardships of his life were mere amuse, ment to the perplexities of the popedom : that he looked upon St. Peter's chair to be the most uneasy seat in the world ; and that he constantly felt as if his crown were burning his temples. Some writings, which remain in MS. are attri- buted to this pope, and various letters and homi- lies. His letter of licence to Henry II. to con- quer Ireland, is in Wilkin's Concil. Britan. ; and the treaty of peace which so concerns the Sicilian monarchy, may be seen in Baronius' Annals. Adrian's death is, by some writers, attributed to poison ; but is more generally said to have been occasioned by a fly settling accidentally in his throat, and suffocating him. He died in 1 156, in the fifth year of his pontificate ; and was buried in St. Peter's church.

ADRIAN VI. (Pope,) was born at Utrecht, in 1459. His father was not able to maintain him at school, but entered him at Louvain, in a college in which a certain number of scholars were maintained gratis. It is reported that he used to read in the night by the light of the lamps in the churches or streets. He made a considerable progress in all the sciences ; led an exemplary life ; and never was a man who rose to eminence, less intriguing. He took his degree of D. D. at Louvain ; was soon after made canon of St. Peter's, and professor of divinity at Utrecht, and then dean of St. Peter's and vice-chancellor of the university. His academical life he resigned to become tutor to the then archduke Charles V. who, however, made no great progress under him : but never was a tutor more gratefully remembered ; for by Charles's influence Adrian was raised to the papal throne. Leo X. had given him the cardinal's hat in 1517. After this pope's death, several cabals in the conclave ended in the election of Adrian; and though many popes have been more popular at Rome, few have been so liberal, and so truly conscientious. He would not change his name, and in every thing shewed a great dislike for ostentation and sensual pleasure; lamented much the inconsistencies of the clergy, and the want of reformation in the church. Having written in early life against the infallibility of the holy see, he reprinted his work without alteration, when pope ; and is said steadily to have resisted various persecuting measures to which he was advised against the Lutherans. He died in

1523.

ADRIAN DE CASTELLO, a cardinal priest, was a native of Cornetto in Tuscany. Innocent VIII. sent him nuncio into Scotland and France ; and after he had been clerk and treasurer of the apos- tolic chamber, pope Alexander VI. whose secre- tary he had been, honoured him with the cardi- nal's hat. His life was a continued scene of odd incidents. He narrowly escaped death the day Alexander VI. poisoned himself by mistake ; that pontiff and his son having, in fact, mingled a poisonous potion for Adrian, which

they them- selves drank. Afterwards he incurred the hatred of Julius II. so that he was obliged to hide him- self in the mountains of Trent. Having been recalled by Leo X. he was so ungrateful, that he

engaged in a conspiracy against him ; which Leo detecting, Adrian was amerced in a fine of 12,500 ducats, and forbidden to quit the papal territory. This order, however, he disobeyed, and all his ecclesiastical honours and preferments were, in consequence, taken from him by public sentence. Whither he fled has never been with certainty ascertained. Castello was one of the first that effectually reformed the Latin style. He studied Cicero with great success, and made many excellent observations on the Roman tongue, in his treatise De Sermone Latino. He had begun a Latin translation of the Old Testa- ment : and wrote a treatise De vera philosophia, which was printed at Cologne, in 1548.

ADRIAN, ST. the name of several towns in the Netherlands ; one three miles N. E. of Bruges, another ten miles S. E. of Ghent, &c.

ADRIANI, (Joanni Battista,) was born of a patrician family at Florence, in 1511. He wrote a History of his own Times in Italian ; which is a continuation of Guicciardini, from 1536; and fu- neral orations on the Emperor CharlesV. and other noble personages. He died at Florence in 1579.

ADRIANISTS, in ecclesiastical history, dis- ciples of Simon Magus, who flourished about the year 34. Theodoret is the only person who has preserved their name and memory ; but he gives us no account of their origin. Probably this sect, and the others which sprung from the Simonians, took their names from the particular disciples of Simon. Also followers of Adrian Hampstead, an anabaptist, who

taught in Eng- land and Zealand in the 16th century ; and held some particular opinions respecting the person of Christ.

ADRIANNA, a town in the province of Gu- jerat, much molested by the robbers of Ma'llia, and frequently deserted on that account, though containing upwards of 1000 houses. It is nomi- nally subject to the Coolies of Jhingwarra, and is distant from that place about eight miles, but owes its present existence to the protection of the British.

ADRIANO A SIERRA, or mountain of Adriano, in Guipuscoa, a subdivision of the province of Biscay, in Spain. There is a road over it to Old Castile, which is difficult of access. At the beginning is a dark path of 40 or 50 paces cut through a rock. This mountain is one of the highest of the Pyrenees.

ADRIANOPLE, ADRANAH, or EDRENEH, a city of Turkey in Europe, in the province of Romania, and the see of an archbishop under the patriarch of Constantinople, from which it is distant 130 miles N. W. It is about eight miles in circumference, including the old city and some gardens. The houses are low, mostly built of mud and clay, and some of brick : and the streets exceedingly dirty. Here is a beauti- ful bazaar, or market, half a mile long, called AH Bassa, having six gates, and 365 well fur- nished shops; and another, about a mile in length, also full of shops, which contain all kinds of commodities. Gold and silver articles, jewels, pistols, scimetars, &c. are sold in another parts of the city, in the Bizestein, differing little from a bazaar. This contains about 200 shops. The number of inhabitants of all nations and re-

ligions may be about 100,000. The air is whole- some, and the country very pleasant in the sum- mer time, on account of the rivers and streams that run near the city ; the chief of which is the Marizza, which is navigable to the Archipelago. These promote and preserve the verdure of the gardens, meadows, and fields, for a considerable part of the year. In winter there is plenty of game : and wine and fine

fruits are large articles of commerce. Sultan Selim’s mosque is a noble building in the centre of the city, and to be seen on all sides of it. The grand vizier’s palace is nothing more than a convenient house, built after the Turkish manner. The emperor’s seraglio is a regular structure, in a plain near the river Tungia. It is two miles in compass, and has seven gates, besides those of the gardens, which are several miles in circumference. The city is governed by a mullah cadi, who has an absolute authority both in civil and criminal matters. In the time of the plague, or war, the grand seignior frequently resides here. The Turks took this city from the Greeks in 1362, and made it the capital of the empire till Ma- homet II. took Constantinople, in 1453. It suffered considerably by fires in 1754, and 1778. Lon. 26►►, 27′ E. Lat. 41►►, 45′ N.

ADRIANOTHERA, in ancient geography a city of Mysia, originally founded by Adrian in a district whither he resorted for the pleasures of the chace. It is the Adriani, probably, where Aristides the sophist was born. See Dion. Cuss. torn. ii. ed. Keim.

ADRIAN’S WALL, a celebrated Roman work in the North of England. This work, though called by the Roman historians mums, which signifies a wall of stone, was only composed of earth covered with green turf. It was carried from the Solway Frith, a little west of the village of Burgh on the Sands, in as direct a line as possible, to the river Tyne on the east, at the place where the town of Newcastle now stands : so that it must have been above 60 English, and near 70 Roman miles in length. It consisted of four parts : 1 . The principal agger, mound of earth, or rampart, on the brink of the ditch.

2. The ditch on the north side of the rampart.

3. Another rampart on the south side of the principal one, about five paces distant from it.

4. A large rampart on the north side of the ditch ►►► This last was probably the military way to the

line of forts on this work. The south rampart might serve for an inner defence in case the enemy should beat them from any part of the principal rampart, or it might be de- signed to protect the soldiers from any sudden attack of the provincial Britons. ••• For many ages, this work hath been in so ruinous a con- dition, that it is impossible to discover its origi- nal dimensions with certainty. But from theii appearance, it seems probable that the principal rampart was at least ten or twelve feet high, and the south one not much less ; but the north one was considerably lower. The ditch taken as it passes through a lime-stone quarry near Harlow hill, appears to have been nine feet deep, and eleven wide at the top, but somewhat narrower at the bottom. The north rampart was about twenty feet distant from the ditch.

ADRIANSEN, (A.) a Flemish painter of con- siderable celeority in fruits, flowers, and fish. He was born at Antwerp, in 1625. Pilkington. ADRIANUM, or ADRIATICUM MARE, the Adriatic sea, in ancient geography, now- the gulf of Venice, a large bay in the Mediterranean, between Dalmatia, Sclavonia, Greece, and Italy. It is called by the Greeks Afyiae Ko\7roc; and idria by the Romans, at Arbiter Adriee notus, lor. Cicero calls it Hadrianwn Mare ; Virgil Hadriacas Undas. It is commonly called Mare Adriaticum, without an aspiration ; but whether it ought to have one, is a dispute : if the appellation is from Hadria, the town of the Piceni, it must be written Hadriaticum, because the emperor’s name, who thence derives his origin, is on coins and stones Hadrianus ; but if from the town in the territory of Venice, as more ancient, and of which that of the Piceni is a colony, this will justify the common appellation Adriaticum.

ADRIATIC SEA. See last article, and VENICE, GULF OF.

ADRIETARE, or ADRECTARE, in law, to satisfy ; to make amends , or set right.

ADRIFT.’ Ang. Sax. drifan, adrifan, to drive : part, past, adrifted, adrift.

And quhat aventure has the hidder driffe ?

Douglas, b. iii. p. 79. Then shall this mount Of Paradise, by might of waves, be moved Out of his place ; push’d by the horned flood (With all his verdure spoil’d, and trees adrift, ~) Down the great river, to the opening gulf ; And there take root.

Milton’s Paradise Lost. Be put alone into a boat, With bread and water only for three days j So on the sea she shall be set adrift, And who relieves her, dies.

Dryden’s Marriage H la Mode. It seem’d a corpse adrift, to distant sight ; But, at a distance, who could judge aright.

Dryden.

Having fallen in with a reef of rocks in their re- turn to the ship, they had been obliged to cut Mr. Banks ‘s little boat adrift. Cook’s Voyages.

ADRIUNE, in botany, the Arabian name for the plant called Cyclamen, or sow-bread.

ADROBOLON, in chemistry, the Indian bdellium.

ADROGATION, in Roman antiquity, a spe- cies of adoption, whereby a person who was capable of choosing for himself was admitted by another into the relation of a son. The word is compounded of ad, 16, and rogare, to ask ; on account of a question put in the ceremony of it, Whether the adopter would take such a person for his son? and another to the adoptive, Vhether he consented to become such a person’s *on?

ADROIT adj. ^ Directus, Lat. Dritto, Ital.

ADROIT’LY, \ Adroit, Fr. ••• applied to one

ADROIT’NESS. 3 who aims directly at his

mark, and hits it; right-handed; dexterous,

opposed to clumsy : used of both bodily and

mental cleverness.

An adroit stout fellow, would sometimes destroy a whole family, with justice apparently against him tLe whole time. Don Quixote.

The stoic and the libertine, the sinner and the saint, are equally adroit in the application of *he telescope and the quadrant. Horsley’s Sermons.

The skill and adroitness of the artist, acquired, as yours has been, by repeated acts, and continual practice. Home.

ADROP, among alchemists, denotes either that precise matter, as lead, out of which the mercury is to be extracted for the philosopher’s stone ; or the philosopher’s stone itself, which is also called saturn, and plumbum, or lead, azar, azane, and lapis ipse.

ADROTERON. See ALICA.

ADRUMETUM, or HADRUMETUM, in ancient geography, a town of Africa, the capital of Byzacium. It is variously called in ancient authors, Adrume, Adrumetus, or Adrumettus ; Adrymettus, Hertius, and Hadrito. It was the Justiniana of the middle empire, and the Heraclea of the lower. According to Sallust, it was founded by the Phoenicians, and derived its name from two Phoenician words, signifying the country that yielded a hundred-fold. It was a fortified city in the third year of the 117 olym- piad. Diod. Sic.

ADRY/ See DRY.

He never told any of them, that he was his hum- ble

servant, but his well-wisher ; and would rather be thought a malcontent, than drink the king's health when he was not adry. Spectator.

ADSCITITIOUS. Ad : and sciscere, scitus, to call for ; to admit ; to associate ; hence, taken; assumed to answer a purpose ; counterfeit.

All which are additional labour, and take up much room in discourses and books, and are performed by different authors, upon different subjects, and in dif- ferent kinds of writing, with an infinite variety of methods and forms, according to men's different views and capacities ; and many times not without a necessity of some condescensions, adscititiout advan- tages, and even applications to the passions.

Wottaston's Religion of Nature.

You apply to your hypothesis of an adscititioiu spirit what he, [Philo,] says concerning this irtrtpa SeTov, divine spirit or soul, infused into man by God's breathing. Clarke's Letter to Dodwett.

ADSCRIPTS, or ADSCRIPTA, a term used by some mathematicians, for the natural tangents, called also, by Vieta, prosifies.

ADSIDELLA, in antiquity, the table at which the priests sat during the sacrifices.

ADSIGNIFICATION, among schoolmen, the act of noting or signifying a thing, with the ad- dition of the time when it happened.

ADSTRICTION, in medicine, a term used to denote the too great rigidity and closeness of the emunctories of the body; particularly the pores of the skin ; also to signify the styptic quality of medicines. See MEDICINE.

AD TERMINUM QCI PR^TERIIT, in law, a writ of entry, which lies where a man, having leased lands or tenements for terms of life, or years, is, after the time expired, held from them by the tenant, or other

stranger who enjoys il^ and deforceth the lessor. The same writ also lies for the lessor’s heir.

ADUACA, or ATUACA, anciently a large and famous city of the Tungri, in Belgic Gaul ; now a small town, called Tongre, in the bishoprick

of Liege, to the north-west Liege.

ADVANCE’, v. & n.“i

ADVANCEMENT,

ADVAN’CEB,

AVAUNCE’,

AVAUNCE’MENT,

AVAUNT’, v. n. & ad.

AVAUNT’ANCE,

AVAUNT’OUR,

AVAUNT’RY.

of the city of

Advancer, Old Fr. au devant, i. e. be- fore, formerly written avunce in English, agreeably to the usual French avancir ; to bring forward, or into the van’s front, or fore- J ground ; to promote, prefer, propose ; to offer to notice, assert, pro- pound. Avaunt, and its correlatives, are from the Fr. avant, an adverb, with a verb, understood in the imperative, signifying go forward, or away. To vaunt, is from the Fr. vanter, to boast; be luper traytor, hys sone auanced was jut bet, Vor hys robe and hys dygnyte was al wel byset, He jef hym such auancement, as he wolde, he suor

ysob,

bat he ne dorste neueref carye of mete ne of dob. R. Gloucester, p. 312.

be vaunt wardes hem mette vorst, as ryjte was to done. Id. p. 437.

borgh ^onseile of som of hise, refused he bat present, bei said, on ober wise he salle haf auancement.

R. Brunne, p. 103.

And thus of o thing I may avaunten me, At th' ende 1 had the better in eche degree, By sleight or force, or by som maner thing.

Chaucer. The Wif of Bathes. Prologue. Avauntour, is he that bosteth of the harme or of the bountee that he hath don.

Id. The Personnel Tale. And thus for that there is no dele, Wherof to make mine auaunt, It is to reason accordaunt, That I maie neuer, but I lie Of loue make auauntrie.

Gower, Con. A.\>. I, And of none other auantaunce : Thus nedeth me no repentaunce. Id.

Shal no lewednesse lette. be clerk bat ich lovye, That he ne worth ferst aranced.

Vision of Piers Plouhman, p. 39.

In heaue, how highly so euer any man is aduaUced,

therewith is none offended, but rather euerye one

(so well they loue eche other) reioyseth, and hath his

part in eche others aduaucement.

Sir Thos. More's Works, p. 1369. Avaunt ! begone ! thou'st set me on the rack : I swear 'tis better to be much abus'd, Than but to know a little.

Shakspeare’s Othello, act. iii.

A cherub tall ;

Who forthwith from the glittering staff unfurl’d Th’ imperial ensigu, which, full high advanc’d, Shone like a meteor, streaming to the wind, With gems and golden lustre rich emblaz’d, Seraphic arms and trophies.

Milton’s Par. Lost, b. i. Hence, avaunt ! ‘tis holy ground.

Gray’s Installation Ode.

ADVANCE, in commerce, denotes money paid before goods are delivered, work done, or busi- ness performed.

ADVANCE DITCH, or FOSSE, in fortification, denotes a ditch of water round the esplanade, or glacis of a place ; to prevent its being surprised by the besiegers. See FOSSE.

ADVANCE-GUARD, or VAN-GUARD, avant garde, Fr. in the military art, is the first line, or division,

of any army ranged, or marching in battle-array; or that part of it which is next the enemy, or marches first towards them. The whole body of an army is divided into advance-guard, rear- guard, and main body. The word is sometimes also applied to a small party of horse, viz. fifteen or twenty, commanded by a lieutenant, beyond, and in sight, of the main guard.

ADVAN’TAGE, v. & .-\ Old Fr. advantage,
ADVANTAG’EOUS, I now avantage ; derived ADVANTAG
EOUSLY, > from the same source ADVANTAG’EOUSNESS, i
as advance. Hence to ADVANTAG’EABLE. J benefit, profit, promote the interests of.

That I haue fought with beastes at Ephesus after ye maner of me, what auauntageth it me, yf ye deed ryse not agayne.

Bible. 1539. 1 Corinthians, ch. xv. As sooth is sayd, elde hath grct avantage, In elde is bothe wisdom and usage : Men may the old out-rcnne, but not out-rede.

Chaucer. The Knightes Tale. Therefore attemper thy Courage : Foolhast doth none auantage, But ofte it set a man behynde, In cause of loue, and I finde By olde ensamples, as thou shall here - Touchend of loue in this matere.

Gower, Con. A. b. iii.

For as the darke is in thys matter all hys auauntayc : cue so is verely the light in likewise myne.

Sir Thus. More's Works, p. 931. Frende and foo was muche what indifferent, where his aduauntage grew, he spared no man's deathe, whose life withstoode his purpose.

Sir Thos. More's Description of Richard HI. We owe thee much : within this wall of flesh, There is a soul, counts thee her creditor ; And, with advantage, means to pay thy love.

Shakspeare.

You said, you neither lend nor borrow Upon advantage. Shahesp. Merck, of Venice.

Here perhaps

Some advantageous act may be achiev'd

By sudden onset ; either with hell-fire

To waste his whole creation, or possess

All as our own. Milton.

Since every painter paints himself in his own

works, 'tis advantageous to him to know himself; to

the end, that he may cultivate those talents, which

make his genius. Dryden.

It was advantageously situated ; there being an

easy passage from it to India, by sea. Arbuthmit.

The time of sickness or affliction is, like ‘he cool of

the day to Adam, a season of peculiar propriety for

the voice of God to be heard ; and may be improved

into a very advantageous opportunity of begetting or

increasing spiritual life,. Hammond.

Like jewels to advantage set, Her beauty by the shade does get. Watter.

A face, which is over-flushed, appears to advantage in the deepest scarlet ; and the darkest complexion is not a little alleviated, by a black hood. Addison.

True wit is nature, to advantage dress’d ; What oft was thought, but ne’er so well express’d.

Pope.

There would be few enterprizes of great labour or hazard undertaken, if we had not the power of magnifying the advantages which we persuade ourselves to expect from them. Rambler.

ADUAR, a kind of ambulatory village, where- in Arab families lodge, in moveable tents, as

forage and provison suit. Some write the word aaouar, and adouard. It is said there are 30,000 aduars in the kingdom of Algiers

ADVENE’, v. –] Ad : venio, from

ADVEN’IENT, I /3aivw, to come to.

AD’VENT, 1 Of these words, Ad–

ADVEXTINE’, ^vent, generally ap–

ADVENTI’TIOUS,

ADVENT’IVE, n. & adj. ADVFNT’UAI..

plied to the coming of Christ, and Ad– j ventitious, are of the

most frequent occurrence.

So gret frost ber com in aduent, bat ben mygte agryse bat men mygte bobe ryde and go in Temese vpe yse. R. Gloucester, p, 463.

A cause, considered in judicature, is styled an ac– cidental cause ; and the accidental of any act is said to be, whatever advenes to the act itself already sub– stantiated. . Ayliffe’s Parergon. Being thus divided from truth in themselves, they are yet farther removed by advenienl deception ; for they are daily mocked into errour, by subtler devisers. Brown’s Vulgar Errours.

If, to suppose the soul a distinct substance from the body, and extrinsically advenient, be a great error in philosophy ; almost all the world hath been mistaken. Glanville’s Vanity of Dogmatism, As for the peregrine heat, it is thus far true ; that if the proportion of the adventine heat be greatly pre– dominant to the natural heat and spirits of the body, it tendeth to dissolution or notable alteration.

Bacon.

Diseases of continuance get an adventitious strength from custom, besides their material cause from the humours. Bacon.

I do also daily use one other collect ; as, namely, the collects adventual, quadragesimal, paschal, or pentecostol, for their proper seasons.

Bishop Saunderson.

Though we may call the obvious colours natural, and the others adventitious; yet such changes of colours, from whatever cause they proceed, may be properly taken in. Boyle.

If his blood boil, and the adventitious fire (Rais'd by high meats, and higher wines) require To temper and allay the burning heat ; Waters are brought, which by decoction get New coolness. Dryden.

In the gem kind, of all the many sorts reckoned op by lapidaries, there are not above three or four that are original ; their diversities, as to lustre, colour, and hardness, arising from the different ad- mixture of other adventitious mineral matter.

Woodward.

Death's dreadful advent is the mark of man j And every thought that misses it, is vain. .

Young's Night Thoughts. Thy saints proclaim thee king, and thy delay Gives courage to their foes, who, could they see The dawn of thy last advent, long desir'd, Would creep into the bowels of the hills, And flee for safety to the falling rocks.

Cowper's Tosh, b. vi.

ADVENT, in the calendar, properly signifies the approach of the feast of the nativity. It in- cludes four Sundays, which begin on St. An- drew's day, or the Sunday before or after it. Dunng advent, and to the end of the octaves of epiphany, the solemnizing of marriage is for- bid without express licence. It is appointed to employ the thoughts of Christians on the first advent or coming of Christ in the flesh, and his second advent or coming to judge the world.

The primitive Christians practised great austerity

during this season.

ADVENTAILE. > A surcoat worn over

ADVENTAL. f the armour. Chauc.

ADVENTITIA COENA, in antiquity, an en- tertainment made by the friends of a person who had been travelling, by way of welcome at his re- turn ; also called coma adventoria. Pit incus.

ADVENTITIOUS FOSSILS, in natural history, are foreign or extraneous ones, found incorporated with others, to which they do not properly belong; such as sea shells, &c.

ADVENTITIOUS, in civil law, is applied to such goods as fall to a man, either by mere fortune, or by the liberality of a stranger, or by collateral, not direct succession. In this sense, it stands opposed to profectitious ; by which are signified such goods as descend in a direct line, from father to son.

AD VENTREM INSPICIENDUM, in-law, a writ by which a woman is to be searched whether she be with child by a former husband, on her withholding of lands from the next heir, failing issue of her own body.

ADVENTURE, v and n.\ Ad : venio, ven ADVEN'TURER, I turn, venturus. To

ADVEN'TUROUS, > expose one's self

ADVEN'TUROUSLY, i to whatever may

ADVEN'TRY. J be about to come,,

in consequence of adopting any particular con- duct ; implying hazard and chance of success.

Now is he in be see with saile on mast vpsette. Toward bis lond bei drouh, to auenture his chance, With Normandes inouh, of Flanders and of France. R. Brunne, p. 70.

And whan this jape is tald another day I shal be

halden a daffe or a cokenay : I wol arise, and auntre it by my fay : Unhardy is unsely, thus men say.

Chaucer. The Reve* Tale, v. i. p. 166. Thus can I nought my selfe counsaile, But all I set on aunture, And am, as who saith, out of cure.

Gower, Con. A. b. TV. He is a great adventurer, said he, That hath his sword through hard assay foregone.

Spenser.

The kings of England did not make the conquest of Ireland : it was begun, by particular adventurers, and other voluntaries, who came to seek their fortunes.

Sir J. Davies.

He intended, to hazard his own action ; that so the more easily he might win adventurers, who else were like to be less forward. Raleigh.

Had it not been for the British, which the late wars drew over; and adventurers or soldiers, seated here ; Ireland had, by the last war and plague, been left destitute. Temple.

Their wealthy trade from pirate’s rapine free, Our merchants shall no more advent’rers be.

Dryden.

It is good to guard adventures with certainties that may uphold losses. Lord Bacon’s Essayt.

At land and sea, in many a doubtful fight, Was never known a more advent’rous knight ; Who oftner drew his sword, and always for the right.

Dryden,

They are both hanged ; and so would this be, if hft durst steal any thing adventurously.

Shafupeare’s Henry V.

ADV

IfiO

ADV

Be not angry,

Most mighty princess, that I have adoentur’d To try your taking of a false report.

Shakspeare.

The tender and delicate woman among you, which would not adventure to set the sole of her foot upon the ground, for delicateness and tenderness.

Deut. xxviii. 26.

But I’ve already troubled you too long ; Nor dare attempt a more advent’rous song : My humble verse demands a softer theme ; A painted meadow, or a purling stream.

Addisnn.

Some bold adventurers disdain The limits of their little reign, And unknown regions dare descry.

Gray’s Ode to Eton Col.

ADVENTURE BAY, of Van Diemen’s land, on the east side of Bruny’s isle. It is at the mouth, about six miles wide, and offers between Benguin Island and Cape Frederic Henry, ex- cellent and well-sheltered anchorage for shipping. Captain Cooke says that there is a beautiful sandy beach, about two miles long, at the bottom of Adventure Bay, formed to all appearance by the particles which the sea washes from a fine white sand stone. That behind it is plain, ###with a brackish lake, which produces bream and trout. The parts adjoining the bay are mostly hilly ; and form an entire forest of tall trees, ren- dered almost impassable by brakes of fern, shrubs, &c. The soil on the flat land, and on the lower part of the hills, is sandy, or consists

of a yellowish earth, and in some parts of a reddish clay; but further up the hills, it is of a grey tough cast. The country is dry, and the beat intense. No vegetables that afford subsist- ence for man, were observed here : and the only quadruped seen, was a species of opossum, about twice the size of a large rat ; but some of the in- habitants had pieces of the skin of the kangooroo about them. The inhabitants are mild and cheer- ful, with little of the wild appearance of savages ; but seem almost totally devoid of personal ac- tivity, and were remarkably indifferent to pre- sents. Their complexion is a dull black, which they sometimes heighten by smutting their bodies. Their hair is woolly, and clotted with grease and red ochre ; their noses broad and full, and the lower part of the face projects consider- ably. But they are upon the whole well propor- tioned. Adventure Bay is dangerous of access in winter, from the surf created by the prevalence of southerly winds. ††† Captain Furneaux first visited it in 1778; then captain Blight in 1788; but the most complete survey of it was made by the French Expedition, that went in search of La Perouse. It is in E. Long. 147††, 30.' S. Lat. 42,†† 20'.

ADVENTURE, BILL OF, in commerce, a writing signed by a merchant, testifying the goods men- tioned in it to be shipped on board a certain vessel belonging to another person, who is to run all hazards; the merchant only obliging himself to account to him for the produce.

ADVENTURE ISLAND, a small island in the South Sea, so called from the ship Adventure, in †††which Captain Furneaux, the discoverer sailed. Lon. 147,†† 29' W. Lat. 43,†† 21' S. See ADVEN- TURE BAY.

ADVENTURERS, THE SOCIETY OF, an ancient

company of merchants and traders, erected for the discovery of lands, territpries, trades, &c. un- known. This society had its rise in Burgundy, and its first establishment from John, t&ke of Brabant,

in 1296, being since known by the name of the Brotherhood of St. Thomas a Becket. It was afterwards translated into England, and successively confirmed by Edward III. and IV. Richard II. Henry IV. V. VI. and VII. who gave it the appellation of Merchant-adventurers ; by Henry VIII. and queen Elizabeth, who, in 1564, formed it into an English corporation ; and by succeeding kings. Formerly, adven- turers making settlements in any part of America belonging to the enemy, might obtain a charter from the king. 13 Geo. II. c. 4. sec. 13.

At one time (1550,) the English Merchant Adventurers had sufficient influence at Antwerp to prevent the establishment of the Inquisition there. They bore for arms, Nebule of urpicus, argent and azure ; a chief quarterly or and gules; in the first and fourth, two red roses ; and in the second and third, a lion of England.

AD'VERB, n. ~\ So called from their signifi-
ADVER'BIAL, > cation and connexion with
ADVER'BIALLY. j verbs.

For thys woorde nouum [Mark, xiv. 25,] seemeth. not there to be putte for an aduerbe, but is a nowne adiectiue ; and therefore it signifieth some kynde of newenesse in the drincke it selfe.

Sir T. More's Works, p. 1328. col. 2. An adverb is a word without number, that is joynetl to another word : as

Well-learned.

Hee disputeth very subtlety.

B. Jonson's English Grammar. Adjectives compared, when they are used adver- bially, may have the article the going before. Id. I should think, alta was joined adverbially with tremit ; did Virgil make use of so equivocal a syntax,

Addison,

ADVERBS, are not purely, or solely additions to

verbs. They are frequently joined with adjectives, and even with substantives; thus, we say, he is truly king; he is very sick. Some- times adverbs modify the meaning of each other, as, very excellently, very justly, they ane very numerous, and have been variously classi- fied ; as adverbs of time, place, order, distance, motion, relation, quantity, both continuous and discrete ; quality, manner, affirmation, negation, demonstration, interrogation, diminution, doubt- ing, exception, and comparison.

Dr. Lowth contends that in English, they admit of no variation, except some few of them, which have the degrees of comparison, as soon, sooner, soonest ; and those irregulars, derived from adjectives in this respect likewise irregular, as very much, not very prudently. He observes, however, that the formation of adverbs in general with the comparative and superlative termina- tions, seems to be improper ; at least, that it is now become almost obsolete, as easilier, strong- Her, hardliest, highliest, rightest, though used by Hooker, Raleigh, Hobbes, and Shaftesbury, Grammar, p. 112.

In his Hermes,they are called by Mr. Hairis attributes of attributes, or attributives of the soconr' ..rder : and he defines an adverb, a part of speech, the natural appendage of verbs, ex- tending the signification of the word verb, pro- perly so called, to participles and adjectives. After explaining the general nature of adverbs as attiibutes of attributes, and enumerating their principal forms, amongst which he rectons in- tension and remission, he shews that adverbs may be derived from almost every part of speech, from prepositions, as afterwards, from participles, as knowingly, from adjectives, as virtuously, from substantives, as apishly, and from proper names, as

Socratically. Adverbs, according to Gaza, in his grammar, may be found in every one of the predicaments, and he thinks that the readiest way to reduce their infinitude, is to refer them by classes to those ten universal genera. The Stoics called the adverb by the name of HavSt/crns, with a view to its multiform nature. Hermes, p. 192, 210.

But Mr. Tooke, in his Diversions of Purley, warmly and with great success, contends that the adverb is ordinarily a corruption of some other word or phrase. Thus ly is a corruption of like ; as honestly, is honest-like ; alone is all- one : only, one-like : awhile, a compound of the article a, and the noun, while, a time. We refer the reader to that valuable work for ample illustrations of this view of the adverb.

ADVERBIAL NUMBERS, sometimes denote the numerals once, twice, thrice, &c.

ADVERSARIA, among the ancients, was a book of accounts, like our journal or day-book ; and was sometimes synonymous 'with opisthographia, virofivnuara, or memoriale, and stands opposed to codex ; the former being for occasional matters which were taken down hastily, to be afterwards transcribed into the latter, in a fair regular manner. It is likewise a title given to divers books, containing collections of miscellaneous observations, remarks ; varits lectiones, varia observationes, loci communes, geniales dies, vespera, selecta, miscellanea, &c. The word is also used for a commentary on some text or writing ; because the notes were written on the adverse or opposite page.

ADVERSARIE. adv. Contrary. Chauc. ADVERSATOR, in antiquity, a servant who attended rich men in returning from supper, to give them notice of any obstacles in the way, at which they might be apt to stumble.

AD'VERSE, v. & adj.-\ Ad : verto, versus, to
AD'VERSARY, turn to, towards, or

ADVERS’ATIVT.^ I against. The verb is

AD’VERSELY, r obsolete. Adverse the

ADVERSE’NESS, | adjective, signifies

ADVERS’ITY. J turning to or against,

in an attitude of resistance or hostility : opposed lo-adversity, is the ill effect of an adverse posi-tion, i. e. pain, affliction, misery.

At Wyiicehestre he held his parlement ilk jere, And jjer men him teld, who was his aduersere.

R. Brunne, p. 92.

Be ye sobre and wake ye, for your aduersarie the deuel, as a rorynge lioun, goith about sechinge whom he schal deuoure. Wiclif. 1 Petir, c. v.

For slain is man, right as another beest, And dwelleth eke in prison, and arrest, VOL. I.

And hath siknesee, and gret adveriite, And oftentimes gilteles parde.

Chaucer. The Knightes Tale, v. i. p. 53.

MOWB. Never did captive with a freer heart Cast off his chains of bondage, and embrace His golden uncontrouPd enfranchisement, More than my dancing soul doth celebrate This feast of battel, with mine adversary.

Shaktpeare’i Richard II-, Sweet are the uses of adversity ; Which, like the toad, ugly and venomous, Wears yet a precious jewel in his head.

Shakspeare.

A remembrance of the great use he had made of prosperity, contributed to support his mind under the heavy weight of adversity, which then lay upon him. Atterbury.

Prosperity is the blessing of the Old Testament,

adversity is the blessing of the New, which carries the greater benediction, and the clearer revelation of God’s favour. Bacon’s Essays.

As, when two polar winds, blowing advene, Upon the Cronian sea, together drive Mountains of ice. Hilton.

A cloud of smoke envelopes either host ; And, all at once, the combatants are lost ; Darkling, they join adverse, and shock unseen ; Coursers with coursers justling, men with men.

Dryden.

For friendship, of itself an holy tie, Is made more sacred by adversity.

Dryden. Hind and Panther.

Let nothing adverse, nothing unforeseen, Impede the bark that ploughs the deep serene ; Charg’d with a freight, transcending in its worth The gems of India, nature’s rarest birth, That flies, like Gabriel on his Lord’s commands, A herald of God’s love to Pagan lands.

Cvwper. Charity.

Truth seems to be considered by all mankind, as something fixed, unchangeable, and eternal ; it may therefore be thought, that to vindicate the permanency of truth, is to dispute without an adversary.

Beattie’s Essay on Truth.

ADVERSATIVE, in grammar, is a term, that has been applied to particles, that express not only a difference, but some opposition, as it is said, between the ideas which precede and follow them : thus, in the sentence, ” It is spring, or, it is summer,” or simply disjoins ; while in the phrase, ” It is not summer, but it is winter.” but, opposes, or contrasts the ideas. It has been further said of adversative disjunctives, that, though they imply Opposition, there can be no opposition of the same

attribute in the same subject; but the opposition must be either of the same attribute in different subjects, as ” Brutus was a patriot, BUT Cesar was not ;” or of different attributes in the same subject, as ” Georgius was a sophist, BUT not a philosopher ;” or of different attributes in different subjects, as, ” Plato was a philosopher BUT Hippias was a sophist.” The conjunctions used for all these purposes may be called absolute adversatii-es , but besides these, there are several others, says Mr. Harris, such as adversatives of comparison, expressed by the words than and as, which mark not only opposition, but that equality or excess, which arises among subjects from their

being compared. Such also are adversatives adequate and inadequate, of which the principal are UNLESS and ALTHOUGH, e. g. ” Troy will te taken, UNLESS the Palladium be preserved.” * Troy will be taken ALTHOUGH Hector defend tt.” Every cause, says Mr. Harris, is either adequate, or inadequate, when it endeavours without being effectual, and so in like manner is every preventive. Adequate preventives are expressed by such adversatives as UNLESS : the inadequate are expressed by ALTHOUGH. Hermes p. 251###257.

Here again Mr. Home Tooke’ has afforded some very important light on an intricate subject. He examines with great ingenuity the supposed opposition in adversative disjunctives, and par- ticularly that which is thought to be expressed by the word BUT. This, he contends, has two different meanings ; one when occurring at the beginning, another and very different one in the middle of a sentence. In the former case it is a corruption of hot, the imperative of the Saxon verb baton, to boot,

superadd, or supply ; and in the latter it is a contraction of be-utan, the im- perative ofbeonutan, to be out. Thus Gawin in Douglas.

But thy work shall endure in laucle and glorie,

But spot or faulte condigne eterne memorie.

The meaning is ” superadd, (to something said, or supposed to be said before) thy work shall endure in laude and glorie, be out, (i. e. without) spot or fault.” And in the definite adversative, ” the number three is not an even number but an odd,” the opposition is not marked, at least directly, by the word but, but by the adjectives even and odd, which denote attributes in their own nature opposite ; and the preposition ac- cording to the first sense of the word but, will be synonymous with this, viz. “the number three is not an even number, superadd, (it is) an odd number.” In the indefinite adversative, ” the number of the stars is either even or odd,” the word either is a distributive pronoun, and or is a con- traction of the Saxon odor, q. d. other, i. e. something different, and often contrary. As to the adversatives denominated by Mr. Harris adequate and inadequate, and marked by the conjunctions unless and although, he leads us to conceive that the whole difference between them consists in this, that the expression of the one is more forcible than that of the other. Whereas, the meaning of UNLESS is directly op- posite to that of ALTHOUGH. They are both verbs in the imperative mood : the former signi- fying take away or dismiss; and the latter allow, permit, yield, assent. Accordingly the sentence, ” Troy will be taken UNLESS the palladium be pre- served,” is equivalent to “Remove the palladium be preserved,” i. e. taking the palladium be pre- served, as an abstract noun, the preservation of the palladium Troy will be taken. Again, ” Troy will be taken ALTHOUGH Hector defend it” is the same as ” Troy will be taken ALLOW Hector (to) defend it.” The idea, therefore, expressed by UNLESS is that of the removal of one thing to make way for another ; and the idea expressed by ALTHOUGH is that of allowing one thing to co-exist with

another, with which it is apparently

incompatible. The conjunction UNLESS (says Mr. Tooke,) even in the reign of queen Eliza- beth, was written oneless or onelesse, and more anciently onles and onlesse : and onles is the im- perative of the Anglo-Saxon verb onlesan, to dismiss, or remove, les the imperative of lesan, which is synonymous with onlesan, is also used by some old writers, instead of unless. And this imperative les has given to our language the adjectives hopeless, restless, &c. i. e. dismiss, hope, rest, &c. The conjunction ALTHOUGH (says the same writer) is compounded of al or all, and tho1 though, thah, or, in the vulgar pronunciation, thaf, thauf, and thof; the imperative thaf, or thafig of the verb t'hafian or thafigan, to allow, permit, &c. and thajig becomes thah, though, thoug, in a transition of the same kind, and as easy as that by which hafuc becomes hawk.

ADVERSE, in logic, is when two contraries have an absolute aiad perpetual opposition to each other.

ADVERT', v.~\ Ad : verto, to turn to. Of the

ADVERT'ENCE, (same origin as Adverse, &c.

ADVERT'ENCY, ►►but not necessarily implying

ADVERT'ENT. ./ opposition : simply turning

to, for the sake of observation, consideration, or

remark.

During this tyme Eneas gan advert, Within ane vail fer thens closit apart Quhare stude ane wod.

Douglas, b. vi. p. 189.

For God it wote, her harte on other thing is Although the body sat emong 'hem there Her aduertence is alway elis where, For Troilus full fast her soule sought, Withouten word, on him alway she thought.

Chaucer. Troilus, b. iv. f. 179, c. 4. In this life our understanding is weak, our atten- tion trifling, our advertency interrupted, our diver- sions many. Taylor. On the Doctrine and Practice of Repentance.

Is he rich, prosperous, great? yet he continues safe, because he continues humble, watchful, advertent, lest he should be deceived and transported.

Hale’t Contemplations.

The mind of man being not capable, at once to advert to more than one thing ; a particular view and examination of such an innumerable number of vast bodies, will afford matter of admiration,

Ray on the Creation.

Our low world is only one of those,

Which the capacious universe compose.

Now to the universal whole advert ;

The earth regard, as of that whole a part.

Blackmore’s Creation, b. iii.

Too much advertency is not your talent; or else

you had fled from that text, as from a rock. Swift.

AD’VERTISE, v.~\ Derived as above. Ad-

ADVER’TISEMENT, f vertisement , Fr. To turn

ADVERTIS’ER, Jor call the attention of

ADVERTISING, J another to asubjectwhich

has already been noticed by the advertiser ; to

publish in print ; inform ; to give intelligence.

And now beholde I go vnto my people : come, therfore and I will aduertise the, what this people shall do

to thy folke I the later dayes.

Bible, 1539, Numeri, c. xxiv. They were to advertise the chief hero, of the dis- tresses of his subjects occasioned by his absence.

Dryden.

As I was then

Advertising, and holy to your business, ^

Not changing heart with habit ; I am still Attornied at your service.

Shahxp. Measure for Measure. The bishop did require a respite, Wherein he might the king his lord advertise, Whether our daughter were legitimate. Shaksp.

As I by friends am well advertised ; Sir Edmund Courtney, and the haughty prelate, With many more confederates, are in arms.

The king was not so shallow, nor so ill advertised, as not to perceive the intention of the French king.

TUB. Let me advertize you ; Your daughter Audrey met I on the way, With Justice Bramble in her company ; Who means to carry her to Pancras church.

Ben Jonson’s Tale of a Tub, act iii. The great skill in an advertiser is chiefly seen in the style which he makes use of. He is to mention ” the universal esteem, or general reputation,” of things that were never heard of. Tatler, No. 224. Estates are landscapes gaz’d upon awhile, Then advertiz’d, and auctioneer’d away.

Cowper’s Task, b. iv.

With respect to his own coming, it seems to be one great object of his discourse, to advertise the Christian world, that it is quite a distinct event from the de- molition of the Jewish temple. Hartley's Sermons.

ADVERTISEMENT OF STOLEN GOODS. By the statute of 25 Geo. II. cap. 36, and 28 Geo. II. cap. 19. the penalty of fifty pounds is inflicted on persons advertising a reward with ' No questions to be asked,' for the return of things lost or stolen ; and likewise on the printer.

ADVIGARUM, a town of Hindostan, in the province of Coimbetoor, distant 52 miles S. E. from Seringapatam, in N. Lat. 12►►, 1'. E. Long. 77►►, 28'.

To ADVIGILATE, advigilare, Lat. To watch diligently.

ADVISE', v. -]

ADVICE',

ADVIS'ABLE,

ADVIS'EDLY,

ADVISE'MENT, ADVIS'ER, ADVIS'ING, ADVIS'O.

Probably from ad visum, to the sight. Unclassical La- tin, advisare, which Junius

ADVIS'EDNESS, Vwould derive from the Ger-

man wisen, to shew ; to in- struct; to inform; to coun- sel ; to deliberate with.

Sir Edwarde's ost, & opere al so nei, He avisede pe ost suipe wel, and poru Gode's grace, He hopede winne a day pe maistrie of pe place.

R. Gloucester, p. 558. Of werre & of batile he was fulle awse, per wisdom suld auaile was non so trewe als he.

R. Brunne, p. 188.

Amonge the proude there is euerstryfe,but amonge those that do all thynges with aduysment, there is ###svysdome. Bible, 1539. Prouerhes, c. xiii.

Mote I wote,

What strange adventure do ye now pursue ? Perhaps my succour or advisement meet, Mote stead you much. Faerie Queene.

I will, according to your advisement, declare the evils, which seem most hurtful.

Spenser's State of Ireland.

By that which we work naturally (as, when we breathe, sleep, and move) we set forth the glory of

God, as natural agents do ; albeit we have no ex-press purpose to make that our end ; nor any advised determination, therein to follow a law.

Hooker, b. i. p. 49.

In my school-days, when I lost one shaft, I shot his fellow of the self-same flight, The self-same way, with more advised watch, To find the other forth ; by vent'ring both, I oft found both. Shaksp. Mercht. of Venice.

You were advis'd, his flesh was capable Of wounds and scars ; and that his forward spirit Would lift him, where most trade of danger rang'd.

Shakspeare.

Such discourse bring on, As may advise him of his happy state ; Happiness in his power, left free to will. Par. Lost.

A posting messenger dispatch'd from hence, Of this fair troop advis'd their aged prince.

Dryden'g JEneid.

ZVL. The bold are but the instruments o' th' wise : They undertake the dangers' we advise.

Dry den’s Conquest of Granada, part i.

This book advisedly read, and diligently followed

but one year at home, would do more good, than

three years’ travel abroad. Ascham,

Surprise may be made by moving things, when tha

party is in haste ; and cannot stay, to consider ad-

visedly ol that which is moved. Bacon, Essay xxiii.

Let his travel appear rather in his discourse,

than in his apparel or gesture ; and in his discourse,

let him be rather advised in his answers, than for-

ward to tell stories. Bacon’s Essays.

Th’ Almighty Father, where he sits Shrin’d in his sanctuary of heav’n secure, Consulting on the sum of things foreseen This tumult, (and permitted all) advis’d.

Par. Lost, b. vi. Advise if this be worth Attempting ; or to sit in darkness here, Hatching vain empires. Idem, b. ii.

ADULA, in ancient geography, a mountain in Rhaetia, or the country of the Grisons, part of the Alps, in which are the fountains of the Rhine. It is now called St. Gothard.

ADULA, in modern geography, a mountain of Navarre, in Spain, lying between Pampeluna and St. Jean de Pied de Port.

ADULATION, n.) Adulor, to use sweet

ADULA’TORY. J words. Of uncertain de-

rivation; most probably from advXifo, dorick dialect for j)5v\t►►w, from jj5vc, sweet. Adulatoire, Fr. ;

to use fawning language ; to gloze ; to be excessively courteous and complimentary; to transgress the bounds of truth and justice, in bestowing praise.

When hee came to man’s estate, hee exercised feates of knighthood, hee loued discipline, and hated adulation. Golden Books, g. 3.

While eache partie laboureth too bee chiefe flatterer, adulacion shall thenhaue more place then plaine and faitheful aduise, of whiche he muste nedes ensue the eiuill bryngynge vp of the prince, whose mynde in tender youth infecte, shall redely fall to mischiefe and riote, and drawe downe this noble realme to mine. Hall, p. 344.

There he beheld how humbly diligent New adulation was, to be at hand ; How ready falsehood stept ; how nimbly went Base pick-thank flattery, and prevents command, Daniel’s Civil Wars, b. ii, O be sick, great Greatness ! And bid thy ceremony give thee cure. M 2

Think’st thou the fiery fever will go out W.iui titles blown from adulation?

Shahspeare’s Henry V.

They, who flattered him most before, mentioned him now vriti the greatest bitterness ; without imputing the least crime to him, committed since the time of that exalted adulation ; or that was not then as much known to them, as it could be now.

Clarendon.

Adulatory verses of this kind, however well written, deserve not to be transmitted to posterity.

Mason. Note on Gray’s Lett.

Spenser, in compliance with a disgraceful custom, or rather in obedience to the established tyranny of pa- tronage, prefixed to the Faerie Queene fifteen of these adulatory pieces [sonnets].

Warton. Hist. Eng. Poetry, iii. 445.

Flattery corrupts both the receiver and the giver ; and adulation is not of more service to the people than to kings. Burke on the French Revolution.

ADULE, or ADULIS, in ancient geography, a town of Egypt built by fugitive slaves, distant from its port on the Red Sea twenty stadia.

ADULICUS SINUS, a port of the Red Sea, so called from Adule.

ADULITJE, the inhabitants of Adule.

ADULITANUM, MONUMENTUM, the statue of Ptolemy Euergetes, the inscription on which

Ad : alteram, (f

ADULTER,

ADULTERATE, v. & adj.

ADULTERA’TION.

ADULT’ERER,

ADULT’ERESS,

ADULT’ERINE,

ADULT’EROUS,

ADULT’EROUSLY,

ADULT’ERY.

vowtrie, avoutrie, voutrer, voutresse, from the Norman French, are used by Chaucer, and others.

Spouse-breach, spouse-breaker, and wedlock-breaker, are old English terms, syno- nymous with those now in use. See the follow- ing illustrations. Adulterate, and its cognate words, are applied to that which is rendered im- pure, or counterfeited by debasing admixtures.

jef alle lujjer holers were y serued so,

Me schulde fynde be les such spouse bruche do.

R. Gloucester, p. 26.

An yvel kyndrede and a spouse Ireher sekith a tokene, and a tokene schal not be goven to it.

Wiclif. Matt. xii.

Was I not gouernour, and chief ledar thare, The time quhen that the Troiane adulterare Umbesegit the ciete of Spartha, And the quene Elene reft and brocht awa ?

Douglas, b. x. p. 316, Mneid. Therefore seing the punishment of aduotry

was published by Leo Allatius, at Rome, in meate that a me can not chew, let eury man consydre

1631.

ADULLAM, in scripture geography, a cave near the city of that name, belonging to the tribe of Judah, in which David hid himself to avoid the fury of Saul.

ADULLAM, originally a kingdom of Canaan, afterwards a city of Judah, situated south west of Jerusalem, near Jarmuth, and Azekah. It is styled by Micah, chap. i. ver. 14. the glory of Israel : and was a place of some consequence in the time of Judas Maccabeus, and even so late as the fourth century, though it is now in ruins.

ADULT’, n. & adj. > Ad : olesco, adultus, ADULT’ED. J grown up to ; past the

age of childhood, ??? having arrived at manhood, or attained years of maturity.

Now that we are not only adulted, hut ancient Christians, I believe the most acceptable sacrifice we can send up to heaven, is prayer, and praise ; and that sermons are not so essential as either of them to the true practice of devotion. Howett's Letters.

The earth (by these applauded schools 'tis said,) This single crop of men and women bred ; Who grown adult, so chance (it seems) enjoin'd, Did male and female, propagate their kind.

Blackmore.

So language in the mouths of the adult, (Witness its insignficant result,) Too often proves an implement of play, A toy to sport with, and pass time away.

Cowper's Conversation. ADULT BAPTISM. See BAPTISM. ADULT, m civil and Scots law, a youth be- tween fourteen and twenty-five years of age. In this sense, adultus is synonymous with juvenis, adolescens, or adulescens.

ADULT PLANTS, Terenzoni observes, differ from immature ones, in that they contain more oil, and less salt.

by hym selfe.how lothe another man wold be therof, and let him not touche another mas wyfe, so shal his also not be medled withall. Couerdale's Christen State of Matrymonye , fol. 38, col. 1 .

This staff was made to knock down sin. I'll look

There shall be no advowtry in my ward

But what is honest. O. PL x. 299.

At home, because Duke Humfrey aye repined,

Calling this match advoutrie, as it was.

Mirror for Mag. p. 342.

It was in that poynt like vnto the church yt the Jewes had agaynst the coming of Christ, infected by many false folke w* false doctrin, & the Scripture adulterate and vitiate with false gloses and wronge exposicions. Sir T. More's Works, p. 636, col. 2.

To make the compound pass for the rich metal simple, is an adulteration or counterfeiting.

Bacon's Nat. Hist.

He was the most perfidious man upon the earth ; and he had made a marriage compounded between an advoutry and a rape. Bacon' VII.

That incestuous, that adulterate beast.

Shaksp, The adulterous Antony, most large

TTI his abominations, turns you off;

And gives his potent regiment to a trull,

That noses it against us. Shaksp. Ant. and Cleop.

A knave apothecary, that administers the physick, and makes the medicine, may do infinite harm, by his old obsolete doses, adulterine drugs, bad mixtures, &c. Burton's Anatomy of Melancholy.

An adulterous person is tied to restitution of the injury, so far as it is reparable ; and to make provision for the children, that they may not injure the legiti- mate. Taylor.

The Spartan lady replied, when she was asked, What was the punishment for adultresses? There are no such things here. Govern, of the Tongue, sect. 3.

Think on whose faith th' adult'rous youth rely'd j
Who promis'd, who procur'd the Spartan bride.

Dryden's Mneid. All thy domestic griefs at home be left,

The wife's adult'ry, with the servant's theft ;

And (the most racking thought which can intrude) Forget false friends, and their ingratitude.

Dryden’s Juvenal. Helen’s rich attire,

From Argos by the fam’d adult’ress brought, With golden flowers and winding foliage wrought. Dryden’s Virgil.

ADULTERATION, in law, from adulterate, to corrupt ; mingling something foreign to any ?abstance. We have laws against the adul- teration of coffee, tea, tobacco, snuff, wine, beer, bread, wax, hair-powder, &c.

ADULTERATION, in pharmacy, denotes a frau- dulent corruption of medicines, by substituting ingredients of less value, for the sake of greater gain. This practice the dealers are but too well acquainted with. Pharmaceutical authors give numerous instances of adulterations, both in sim- ple and compound medicines.

ADULTERATION OF COIN, properly imports the making of it, with too much alloy. This is effected by forging another stamp, by mixing impure metals with the gold or silver, by an undue alloy, or too great an admixture of the base metals. Evelyn gives rules both for adul- terating and detecting adulterated metals, 8cc. ††† Adulterating as well as debasing, which includes diminishing, clipping, &c. are capital crimes in all nations. ††† The ancients punished them with great severity : among the Egyptians both hands were cut off; and by the civil law, the offender was thrown to wild beasts. The emperor Tacitus enacted, that counterfeiting the coin should be capital; and under Constantine, it was made treason, as it is also among us. Women have, in modern times, been burnt for coining shillings; but, to the honour of our present

legislators, this barbarous punishment has been abolished by Act of Parliament.

ADULTERATION OF GEMS, is a curious art, and the methods of detecting it no less curious than useful ; fcr which, See Nichol’s Lapidary, p. 18.

An ADULTERESS, by our law, undergoes no temporal punishment whatever, except the loss of her dower ; and she does not lose even that, if her husband is weak enough to be reconciled to her, and cohabit with her after the offence is committed. 13 Edward I. cap. 34. But it is to be observed, that adulteresses are such, either by the canon or civil law. According to the former, a woman is an adulteress who, either being herself married, converses carnally with another man ; or, being single herself, converses wifn a man that is married. According to the latter, she is not an adulteress, if she be not herself in the married state, though she converses with a man that is. The crime, in this case, was more properly called stuprum than adulterium. Hence, among the Romans, the word adultera, adulteress, differed from pellex, which denoted a single woman who cohabited with a married man : and pellex differed from concubina, which signified her who had only intercourse with an unmarried man. The former was reputed infamous, and the latter innocent. See ADULTERY.

ADULTERINE, in the civil law, is particularly applied to a child, the issue of an adulterous amour. Adulterine children are more odious than the illegitimate offspring of single persons.

❖❖❖ The Roman law even refused them the title of natural children : as if nature disowned them. ❖❖❖ Adulterine children are not easily dispensed with for admission to orders.

ADULTERINE MARRIAGES, in St. Augustine’s sense, denote second marriages, contracted after a divorce.

ADULTERY, and fornication, are sometimes used synonymously in scripture ; and the former is

applied in a more extensive sense, to any species of impurity or crime, against the virtue of chastity. In this sense divines understand the seventh commandment. The word is also used in ancient customs, for the punishment or fine imposed for that offence, or die privilege of prosecuting for it. In which sense, adulterium amounts to the same with what the Saxons call legerwita.

The crime of adultery has been punished in most ages and nations, though with different de- grees of severity. In many it has been capital ; in others venal, and only attended with slight pecuniary mulcts. Some of the penalties are serious, and even cruel ; others, of a jocose and humorous kind. Even contrary laws have been enacted as punishments for adultery. By some, the criminals were forbid marrying in case they became single ; by others, they were forbid to marry any besides each other; by some, they have been incapacitated from ever committing the like crime again ; by others, they were glutted with it till it became quite nauseous. Among the Egyptians, adultery in the man was punished by 1000 lashes ; and in the woman, by the loss of her nose. By the Jewish law, it was punished by death in both parties, whether the woman was married, or both. The Jews had a parti- cular method of trying an adulteress, or a woman suspected of the crime, by making her drink the bitter waters of jealousy : which, if she was guilty, made her swell. For the most probable solution of this curious point of biblical criticism, see JEALOUSY. In Arabia Felix, according to Strabo, death was also the punishment of adul- tery. Homer speaks of adulterers being stoned to death, a punishment denominated Xatvofi x►►7WV►► a stone coat. Solon, as well as Draco, placed the offenders when caught, at the mercy of the party injured. Adulterers were not suffered to enter the theatres of Greece, nor to wear showy garments at any time. Among the rich Greeks, adulterers were allowed to redeem themselves by a pecuniary fine ; the woman’s father, in such cases, returned the dower he had received from her husband, . which some think was re- funded by the

adulterer. Another punishment among those paople was, putting out die eyes of adulterers. See ZALEUCUS.

The Spartans, indeed, may be said to have tolerated adultery, since they laughed at those who thought the violation of the marriage bed an insupportable affront ; and the crime became disgracefully common. At Gortyna, in Crete, adulterers were covered with wool, an emblem of the softness and effeminacy of their disposition, and in that dress carried through the city to the magistrate’s house, who sentenced them to be deprived of all their civil privileges.

There has been some controversy respecting the ancient punishment of adultery among the

Romans. Some consider it to have been made capital by a law of Romulus, and again by the twelve tables. Others, that it was first made capital by Augustus; and others again, not before the emperor Constantine. The truth is, the punishment in early ages was very various, much being left to the discretion of the husband and parents of the adulterous wife; who exercised it differently, rather with the silence and countenance of the magistrate, than by any formal authority from him. Thus we are told, the wife’s father was allowed to kill both parties, when caught in the fact, provided he did it immediately, killing both together, and as it were with one blow. The same power ordi- narily was not indulged the husband, except the crime were committed with some mean or infa- mous person ; though, in other cases, if his rage carried him to put them to death, he was not punished as a murderer. On many occasions, however, revenge was not carried so far : but mutilating, cutting off the ears, noses, &c. fol- lowed. The punishment allotted by the lex Julia, was not, as many have imagined,

death ; but rather banishment, or being interdicted fire and water : though Octavius appears, in several instances, to have gone beyond his own law, and to have put adulterers to death. Under Macrinus, many were burnt at a stake. Con- stantine, by law, made the crime capital. Under Constantius and Constans, adulterers were burnt or sewed in sacks and thrown into the sea. Under Leo and Marcian, the penalty was abated to perpetual banishment, or cutting off the nose. Justinian, granted a further mitigation, at least in favour of the wife, who was only to be scourged, lose her dower, and be shut up in a monastery : after two years, the husband was at liberty to take her back again; if he refused, she was shaven, and made a nun for life : but it still re- mained death for the husband. The reason alleged for this difference was, that the woman is the weaker vessel. Matthaeus declaims against the empress Theodora, who is supposed to have been the cause of this law, as well as of others procured fn favour of that sex from the emperor. Under Theodosius, women convicted of this crime were punished after a very singular man- ner, viz. by a public constupration ; being locked up in a narrow cell, and forced to admit to their embraces, all the men that would offer them- selves. This custom was again abolished by the same prince. In Spain, adultery in men was punished by castration, or amputation of the offending member. In Poland, before Christianity was established, they carried the criminal to the market-place, and there fastening him by the testicles with a nail, placed a razor within his reach, and left him under a necessity either of doing justice upon himself, or of perish- ing in that condition. The Saxons formerly burnt the adulteress, and over her ashes erected a gibbet, whereon the adulterer was hanged. King Edmund ordered adultery to be punished in the same manner as homicide ; and Canute, that a man who committed adultery, should be ban- ished, and that the woman should have her nose and ears cut off. In the time of Henry I. it was punished with the loss of eyes and genitals.

Alfred introduced a modification of the law of adultery, which he punished wholly by fines, according to the rank of the husband injured. If he was a twelf-hyndman, the offender paid one hundred and twenty shillings ; if a six-hynd- man, one hundred shillings ; if a ceorl, forty shillings. ” But the most curious part of Alfred’s regulations, on this subject,” says Mr. Turner, ” was the refinement with which he distinguished the different steps of the progress towards the completion of the crime. To handle the neck of a ceorl’s wife incurred a fine of five shillings. To throw her down without further consequences, a penalty of ten shillings ; and for a subsequent commission of the crime, sixty shillings.’’ ††† Anglo Sax. c. xi. p. 254.

Among the Mingrelians, according to Chardin, adultery is punished with the forfeiture of a hog, which is usually eaten in good friendship between the gallant, the adulteress, and the husband. In some parts of India, it is said any man’s wife is permitted to prostitute herself for an elephant; and it is reputed no small glory to have been rated at so high a price. Adultery is so fre- quent at Ceylon, according to some writers, that there is not a woman who does not practise it, notwithstanding its being punishable with death. Among the Japanese, and divers other nations, adultery is only penal in the woman. Among the Abyssinians, the crime of the husband is punished on the innocent wife. In the Marian islands, on the contrary, the woman is not punishable for adultery ; but if the man go astray he pays severely : the wife and her rela- tions waste his lands, turn him out of his house, &c. Among the Chinese, there is reason to con- clude that adultery is not capital ; for it is said that fond parents will make a contract for the future husbands of their daughters, to allow them the indulgence of a gallant. In Britain, adultery is reckoned a spiritual offence, and is cognizable by the spiritual courts, where it is punished by fine and penance. The common law takes no farther notice of it, than to allow the party grieved an action and damages. This practice is often censured by

foreigners, as making too light of a crime, the bad consequences of which, public as well as private, are so great. It has been an- swered, that perhaps this penalty, by civil action, is more wisely calculated to prevent the frequency of the offence, which ought to be the end of all laws, than a severer punishment. He that by a judgment of law is, according to circumstances, stripped of great part of his fortune, thrown into prison till he can pay it, or forced to fly his coun- try, will no doubt, in most cases, own that he pays dearly for his disgraceful pleasures.

ADULTERY, morally considered, is a crimft certainly of the deepest dye ; involving on tne part of a man, who violates the marriage bed of his neighbour, as Dr. Paley has obser>ed, seduction; injury incurable to the innocent husband ; and en the part of the wretched wife, if a mother, shame and countless miseries for her children. In all cases, too, attended with little short of perjury, breaking a vow undertaken with the sanction of religion, and of the nature of an oath. Moral Philosophy, vol.

That learned writer has devoted a consider- able portion of his chapter on this subject, (and some of our predecessors have copied him) to prove that our Saviour did not consider this a venial offence ; although he dismissed the woman taken in adultery, without judicially condemn- ing her. Christ’s own phrase would seem a sufficient answer to this supposition. ††† He ex- pressly brands her action as a ” sin ;” only he declines to act judicially in it. The Saviour did, perhaps, condemn the crime more exten- sively and decidedly than our authorised ver- sion would convey to the reader. Knowing the prevalence of that crime, and similar ones, at that period, he said to her accusers. ‘ He that is without sin avafiaprrjTog, the same kind of sin

among you, let him first cast a stone at her.' Kypke has proved the best Greek writers to use the verb o/ xapravtiv, in this sense, ' And they, being convicted by their own conscience, went out,' &c.

ADULT ERIA ARBORUM, in botany, adul- teries of trees, an expression used by ancient naturalists, for the act of ingrafting one plant upon another. In this sense, Pliny speaks of the adulteries of trees, as contrary to nature, and a piece of luxury, or needless refinement.

AIXUMBRATE, v. > Ad : umbra, adumbro ;

ADUMBRA'TION. > to shadow forth to ; to communicate a faint and superficial knowledge, by obscure signs and' symbols; to typify.

To make some adumbration of that we mean ; it is rather an impulsion or contusion of the air, that an elision or section of the same.

Bacon's Natural History, No. 187.

The observers view but the backside of the hang- ings ; the right one is on the other side the grave : and our knowledge is, but like those broken ends j at best, a most confused adumbration.

Glanville's Scepsis Scientifica.

Those of the first sort have some adumbration of the rational nature, as vegetables have of the sensible.

Hole's Origin.

Heaven is designed for our reward, as well as rescue ; and therefore is adumbrated by all those positive excellencies, which can endear or recommend.

Decay of Piety,

ADUMBRATION, 'in heraldry, is the shadow of any beast or charge, outlined, and painted of a darker colour than the field. It is often men- tioned by French and German authors.

ADUMMIM, a mountain and city near Jeri- cho, in the tribe of Benjamin, which lay in the road from Jerusalem, and was much infested with robbers ; whence our Saviour has been sup- posed to lay the scene of his parable here, of the man that fell among the thieves. Its name is re- tained by a village in the same direction, and signifies the place of blood, from the frequent assassinations committed at it ; and the ruins of a spacious khan or inn are shown in the neigh- bourhood, called the Samaritan's khan, whither it is supposed the Samaritan conducted the sufferer of the parable. Not far from the khan are the remains of a castle, surrounded by a ditch ex- cavated from the solid rock, also called the Sa- maritan's castle. Adummim, and the neighbour- hood, are still very dangerous to travellers who do not obtain a sufficient escort. A decayed chapel is in the vicinity.

voco, vocatus : called upon for assis- tance : Advocatus, among the Romans, he that was pre-

ADUNATION. Ad: unus. To one.

When by glaciation, wood, straw, dust, and water, are supposed to be united into one lump, the cold does not cause any real union or adunation; but, only hardening the aqueous parts of the liquor into ice. the other bodies (being accidentally present in that liquor) are frozen up in it, but not really united.

Boyle.

ADUN CITY,) Ad : uncus, (quasi uncus ad

ADUN'QUE. > nos, versus nos.) Hooked to- wards us ; shaped like a hook ; crooked.

There can be no question, but the aduncity of the pounces and beaks of the hawks, is the cause of the great and habitual immorality of those animals.

Arbuthnot and Pope's Mart. Scrib.

The birds, that are speakers, are parrots, pies,

lays, daws, and ravens ; of which, parrots have an adunque bill, but the rest not.

Bacon’s Nat. Hist. No. 238.

ADVOCARIA, in old law, a tax paid the lord for his protection; sometimes also called salvamentum.

AD’VOCATE, v. & n.~\ Ad :

AD’VOCACY,

AD’VOCATESHIP,

AD’VOCATESS,

ADVOCA’TION.

sent at the trial of a cause, to assist his friend with his presence and counsel.

This sense is retained in the English word, which besides its mere forensic application, is applied to one, who on any occasion espouses the interests, and pleads the cause of another. In a sacred sense, it designates the offices sus- tained by the Redeemer.

O thou that art so faire and ful of grace,

Bin thou min advocat in that high place,

Ther as withouten ende is songe Osanne,

Thou Cristes mother, doughter dere of Anne. Chaucer. The Second Nonnes Tale, v. ii. p. 204.

But if ony man synneth, we han an advocat anentis the fadir Jesu Crist, and he is the forgifnesse for cure synnes. Wiclif, 1 Jon. ii.

An advocate, in the general import of the word, is that person who has the pleading and management of a judicial cause. In a strict way of speaking, only that person is styled advocate, who is the patron of the cause, and is often, in Latin, termed togatus, and, in English, a person of the long robe.

Ayl. Par.

Be thou an aduocate, and stande in Judgment thy selfe, to speakeforallsochas be domme and socourles. Bible, 1539. Proa. xxxi. If she dares trust me with her little babe,

I’ll shew’t the king, and undertake to be

Her advocate to th’ loudest.

Shahspeare .

It is a strange thing to see, that the boldness of advocates should prevail with judges ; whereas they should imitate God in whose seat they sit, who re- presseth the presumptuous, and giveth grace to the modest. Lord Bacon’s Essays .

PRO. Leave your advocateship, Except that we shall call you Orator Fly, And send you down to dresser, and the dishes. Ben Jonson. New Inn.

If any there are, who are of opinion, that there are no antipodes, or that the stars do fall ; they shall not want herein the applause or advocacy of Satan.

Brown’s Vulg. Errours, b. i

Of the several forms of government, that have been or are in the world, that cause seems commonly

the better, that has the better advocate, or is advan- taged by fresher experience.

Temple’s Miscellanies.

Learn, what thou ow’st thy country and thy friend ; What’s requisite to spare, and what to spend : Learn this, and after, envy not the store Of the greas’d advocate that grinds the poor.

Dryden’s P&rtiui.

Our poet, something doubtful of his fate, Made

choice of me to be his advocate ; Relying on my knowledge in the laws ; And I as boldly undertook the cause

Dryden’s Epil. to Maiden Queen.

ADVOCATE, from ad, to, and vocare, to call, among the Romans, a person skilled in the law, who undertook the defence of causes at the bar. The Roman advocates answered to one part of the office of a barrister in England, viz. the pleading part ; for they never granted counsel, that being the business of thejurisconsulti. The Romans, in the first ages of their state, held the profession of an advocate in great honour ; and the seats of their bar were crowded with senators and consuls ; they, whose voices commanded the people, thinking it an honour to be employed in defending them. They were styled comites ho- norati, darissimi, and even putroni ; as if their clients were no less obliged to them than freed men to their masters. The bar was not at that time venal. Those who aspired to honours and offices took this way of gaining an interest in the people, and always pleaded gratis. But no sooner were luxury and corruption introduced into the commonwealth, than the bar became a sharer in them. Then it was that the senators let out their voices for pay, and zeal and elo- quence were sold to the highest bidder. To put a stop to this abuse, the tribune Cincius procured a law to be passed, called from him Lex Cincia, whereby the advocates were forbid to take any money from their clients. They had been pro- hibited from taking any gratuities for pleading. The emperor Augustus added a penalty: not- v, :thstanding which, the advocates played their part so well, that the emperor Claudius thought it an extraordinary circumstance, when he obliged them not to take above eight great sesterces, ###which are equivalent to about sixty-four pounds sterling, for pleading each cause. Advocate is still used in countries and courts where the civil law obtains, for those who plead and defend the causes of clients entrusted to them.

ADVOCATE, in church history, a person ap- pointed to

defend the right of a church or reli- gious house. The word advocatus, or advowee, is still retained for what we usually call the patron, or him who has the advowson, or right of presen- tation in his own name.

ADVOCATE, in English courts, is more gene- rally called counsel. See COUNSEL.

ADVOCATE, FISCAL,^SCI advocatus, in Roman antiquity, an officer of state under the Roman emperors, who pleaded in all causes wherein the facus, or private treasury, was concerned.

ADVOCATE, KING'S, or LORD ADVOCATE, one of the eight great officers of state in Scotland, who as such sat in parliament without election. He is the principal crown lawyer in Scotland. His business is to act as a public prosecutor, and

to plead in all causes that concern the crown ; but particularly in such as are of a criminal na- ture. The office of king's advocate is not very ancient : it seems to have been established about the beginning of the sixteenth century. Origi- nally he had no power to prosecute crimes with- out the concurrence of a private party ; but in the year 1597, he was empowered to prosecute crimes at his own instance. He has the privi- lege of pleading in court with his hat on. This privilege was first granted to Sir Thomas Hope ; who having three sons lords of session, it was thought indecent that the father should plead uncovered before the sons, who as judges sat covered.

ADVOCATE OF A CITY, in the German polity, a magistrate appointed in the emperor's name to administer justice.

ADVOCATE, CONSISTORIAL, officers of the con- sistory at Rome, who plead in all oppositions to the disposal of benefices in that court ; they are ten in number.

ADVOCATES, ELECTIVE, chosen by the abbot, bishop, or chapter; a particular licence being had from the king or prince for that purpose. The elections were originally made in the pre- sence of the court of the province.

ADVOCATES, FACULTY OF, in Scotland, a re- spectable body of lawyers, who plead in all causes before the Courts of Session, Justiciary, and Exchequer. They ?.re also entitled to plead in the house of peers, and other supreme courts in England. ××× A candidate for the office of an advocate undergoes three several trials : The first is in Latin, upon the civil law, and Greek and Roman antiquities ; the second, in English, upon the municipal law of Scotland ; and in the third, he is obliged to defend a Latin thesis, which is impugned by three members of the faculty. Im- mediately before putting on the gown, the can- didate makes a short Latin speech to the lords, and then takes the oaths to the government and de Jideli. The faculty consists of about 240 or 250 members. As an advocate is esteemed the genteelest profession in Scotland, many gentle- men of fortune take the degree of advocate, without having any intention of practising at the bar. This circumstance greatly increases their number, gives dignity to the profession, and enriches their library and public fund. It is from this respectable body that all vacancies on the bench are generally supplied.

ADVOCATES, FEUDAL, these were of the mili- tary kind, who, to make them more zealous foi the interest of the church, had lands granted them in fee, which they held of the church, and did homage, and took an oath of fidelity to the bishop or abbot. They were to lead the vassals of the church to war, not only in private quar- rels of the church itself, but in military expedi- tions for the king’s service, in which they were the standard-bearers of their churches.

ADVOCATES, JURIDICAL, in the middle age, were those who, from attending causes in the court of the province, became judges themselves, and held courts

of their vassals thrice a-year, under the name of the tria placita generalia. In consideration of this further service, they had a particular allowance of one third part of all

fines, or mulcts, imposed on defaulters, &c. be- sides a proportion of diet for themselves and servants.

ADVOCATE'S LIBRARY. In the year 1660, the faculty of advocates, in Edinburgh, founded a library upon a very extensive plan, suggested by Sir George M'Kenzie of Rosehaugh, advocate to king Charles II. and king James II. who en- riched it with many valuable books. It has been daily increasing since that time, and now con- tains not only the best collection of law-books in Europe, but a very large collection of books on all subjects. It also possesses a great number of original manuscripts, and a vast variety of Jewish, Grecian, Roman, Scots, and English coins and medals.

ADVOCATES, MATRICULAR, were the advo- cates of the mother or cathedral churches.

ADVOCATES, MILITARY, were appointed for the defence of the church, rather by arms and authority than by pleading and eloquence. ??? These were introduced in the times of confusion, when every person was obliged to maintain his own property by force ; bishops and abbots not being permitted to bear arms, and the scholastic or gowned advocates being equally unacquainted with them, recourse was had to knights, noble- men, soldiers, and even to princes.

ADVOCATES, NOMINATIVE, those appointed by a king or pope. Sometimes the churches peti- tioned kings, &c. to appoint them an advocate ; at other times this was done of their own accord. By some regulations, no person was capable of being elected advocate,

unless he had an estate in land in the same county.

ADVOCATES, SUBORDINATE, those appointed by other superior ones, acting under them, and accountable to them. There were various rea- sons for the creation of these subordinate advo- cates ; as, the superior quality of the principal advocate, his being detained in war, or being involved in other affairs ; but chiefly the too great distance of some of the church lands, and their lying in the dominions of foreign princes.

ADVOCATES, SUPREME, or SOVEREIGN, were those who had the authority in chief ; but acted by deputies or subordinate advocates. These were called also principal, greater, and some- times genera! advocates. Such in many cases were kings, &c. when either they had been chosen advocates, or became such by being founders or endowers of churches. Princes had also another title to advocateship, some of them pretending to be advocati nati, born advocates, of the churches within their domi- nions.

ADVOCATION, BILL OF, in Scots law, a writing drawn up in the form of a petition ; whereby a party, in an action before the inferior court, applies to the supreme court, or court of session, for calling the action from the inferior court before itself.

ADVOCATION, LETTERS OF, in Scots law, the decree or warrant of the court of session upon cognisance of the facts set forth in the bill, drawn up in the form of a summons, and pass- ing under the signet, discharging the inferior judge and all others from further procedure in the cause, and advocating it to itself.

ADVOCATIA, in the feudal law, the procu- ration of some public business, committed by a superior to his substitute. It is also used for patronage and protection of a church, college, monastery, and the like. In this sense it is the same with advowson. It is likewise used for the defence of lay persons, estates, &c.

ADVOCATIONE DECIMARUM, in ecclesias- tical affairs, a writ which lies for the claim of the fourth part or upward, of the tithes that belong to any church.

ADVOCATISS^, female advowees. See ADVOWEE.

ADVOCATURA, in old law, an inferior kind of jurisdiction, exercised by advocates within the districts of their respective churches, &c. The word is sometimes synonymous with advocatia.

ADVOWEE, from avouer, to own, in ancient law, the advocate of a church, religious house, or the like. Thus, Charlemagne had the title of advowee of St. Peter's ; king Hugh, of St. Ri- quier ; and Bolandus mentions some letters of pope Nicholas, by which he constituted king Edward the Confessor, and his successors, ad- vowees of the monastery at Westminster, and of all the churches in England. These advowees were the guardians, protectors, and administra- tors of the temporal concerns of the churches, &c. Under their authority were passed all con- tracts which related to them, and the donations to churches were conferred on the persons of the advowees. They always pleaded the causes of the churches in court, and distributed justice for them, in the places under their jurisdiction. They also commanded the forces furnished by their monasterieSj &c. for war ; and even were their champions, and sometimes fought duels for them. This office is said to have been first in- troduced in the fourth century, in the time of Stillico ; though the Benedictines do not fix its origin before the eighth century. By degrees, men of the first rank were brought into it, either to defend with arms, or protect by authority. In some monasteries they were only called con- servators ; but these, without the name, had all the functions of advowees. There were also sometimes several sub-advowees, or sub-advo- cates, in each monastery, who officiated instead of the advowees themselves ; which, however, proved the ruin of monasteries; those inferior officers running into great abuses. Hence also, husbands, tutors, and every person who under- took the defence of another, were denominated advowees, or advocates. Thus,

several cities had their civil advowees ; which were established long after the ecclesiastical ones, and doubtless from their example ; such as the advowees of Augsburg, of Arras, &c. The vidames assumed the qualities of advowees; and hence several historians of the eighth century confound the two functions together. Several secular lords in Germany bear mitres for their crests, as having anciently been advowees of the great churches.

Spelman distinguishes two kinds of ecclesiasti cal advowees. The one, of causes or processes, advocati causarum ; the other, of territory or lands, advocati soli. The former were nominated by the king, and were usually lawyers, who un- dertook to plead the causes of the monasteries.

The other, which still subsist, and are sometimes called by their primitive name, advowees, though ►►iore usually patrons, were hereditary ; as being the founders and endowers of churches, &c. Women were sometimes advowees. The canon Jaw mentions some who had this title, and who had the same right of presentation, &c. in their churches, which the advowees themselves had. In a stat. 25, Edw. III. we meet with advowee paramount for the highest patron; that is, the king.

ADVOWSON, APPENDANT, that which depends upon the manor, as an appurtenance.

ADVOWSON IN GROSS, the right of presenta- tion, which is principal or absolute, and does not belong to any manor as part of its right.

ADVOWSON. Though the nomination of fit persons to officiate in the dioceses, was originally in the bishops, yet they were content to let the founders of churches have the nomination of the persons to the churches so founded, reserving to themselves a

right to judge of their fitness. Ad- vowsons formerly were most of them appendant to manors, and the patrons were parochial barons : the lordship of the manor, and patronage of the church, were seldom in different hands, until advowsons were given to religious houses. But of late the lordship of the manor, and ad- vowson of the church, have been divided. Ad- vowsons are presentative, collative, or donative : presentative, where the patron presents or offers his clerk to the bishop of the diocese, to be in- stituted in his church ; collative, where the bene- fice is given by the bishop, as original patron thereof, or by means of a right he has acquired by lapse ; donative, as where the king or other patron does, by a single donation in writing, put the clerk into possession, without presenta- tion, institution, or induction. Anciently, the patron had sometimes the sole nomination of the prelate, abbot, or prior ; either by investiture, (i. e. delivery of a pastoral staff,) or by direct presentation to the diocesan ; and if a free elec- tion was left to the religious, yet a conge d' elire, or licence of election, was first to be obtained of the patron, and the person elected was confirmed by him. If the founder's family became extinct, the patronage of the convent went to the lord of the manor. Unless the several colleges in the universities be restrained in the number of ad- vowsons they may receive, it is argued they will in time acquire such a stock, as to frustrate the design of their foundation, (the education of youth,) by creating too quick a succession of fellows ; so that there will not be in the colleges a sufficient number of persons of competent age, knowledge, and experience, to instruct and form the minds of the youth. In some colleges the number of advowsons is said to be already two thirds, or more, of the number of fellows. It is objected, on the other side, that the succession of fellows may be too slew as well as too quick ; whereby persons well qualified may be detained so long in colleges as not to have strength or ac- tivity enough left for the discharge of parochial functions. Colleges holding more advowsons in number than a moiety of the

fellows, are not capable of purchasing more. Grants of advow- sons by Papists are void. Advowsons are tem-

poral inheritances, and lay fees ; they may be granted by deed or will, and are assets in the hands of heirs or executors. Presentations to advowsons for money, or other reward, are void. In Scotland, this right is called patronage. See PATRONAGE.

ADVOWTRIE. See ADVOUTRY.

ADUN, in music, the key of A major ; one of the twenty-four keys in modern music, called by the French, la majeur, and the Italians, la maggiore.

ADURE’,u.-v A, rp,

. , ‘ I Ad : uro, ustus. 1 he verb is

ADUST, ►► obgolete . burnt scorcned, hot ; ADUST ED, idriedwithfire(ADUS TION. J

And althoughe, that to touche and se them wythoute, and throughe the bodyes ; they were not exceadinge hotte nor pale, but that thair skynne was as redde colour adusted, full of a lytle thynne blaynes.

Nicoll’s Thucidides, f. 57, col. 2. Such a degree of heat, which doth neither melt nor scorch, doth mellow, and not adure.

Bacon’s Nat. Hist. No. 319.

By this means, the virtual heat of the water will enter ; and such a heat, as will not make the body adust, or fragile. Bacon.

Which with torrid heat, And vapours, (as the Libyan air,) adust, Began to parch the temperate clime.

Milton’s Paradise Lost. Sulphurous and nitrous foam They found, they mingled; and, with subtle art, Concocted and adusted, they reduced To blackest grain, and into store convey’d.

Idem,

They are but the fruits of adusted choler, and the evaporations of a vindictive spirit. HowelL

Such humours are adust, as by long heat become of a hot and fiery nature ; as choler and the like.

Quiney.

To ease the soul of one oppressive weight, This quits an empire, that embroils a state. The same adust complexion has impell’d Charles to the convent, Philip to the field. Pope. This is ordinarily a consequent of a burning colli- quative fever; the softer parts being melted away, the heat continuing its adustinn upon the drier and fleshy parts, changes into a marcid fever.

Harvey on Consumption!.

ADUSTION, in medicine, an inflammation of the parts about the brain, and its membranes, attended with a hollowness of the sinciput and eyes, a pale colour, and dryness of the body. The yolk of an egg, with oil of roses, applied by way of cataplasm, is recommended for this dis- order ; or the leaves of turnsol, the parings of a gourd, or the pulp of a pompion, applied in the same manner with oil of roses.

ADY, in natural history, the palm tree of the island of St. Thomas. It is tall, with a thick, bare, upright stem, thin and light, growing sin- gle on its root, and full of juice. The head shoots into a vast number of branches, which being cut off, or an incision made, afford a great quantity of sweet juice, which fermenting, supplies the place of wine among the Indians. The fruit, which is called abanga, is of the size and shape of a lemon ; and is eaten roasted. The raw ker- nels are often mixed with mandioc meal, and are judged to be cordial. An oil is also pre- pared from this fruit, which answers the purpose

of butter, and is used for anointing stiff parts of the body. See ABANGA.

ADYNAMIA, from a privative, and Swa^iig, strength, in medicine, debility, or weakness, from sickness.

ADYNAMON, among ancient physicians, a kind of weak factitious wine, prepared from must boiled down with water ; to be given to patients to whom genuine wine might be hurtful.

ADYTUM, from a, not, and Svu or Svvw, to enter, in pagan antiquity, the most retired and sacred place of their temples, into which none but the priests were allowed to enter. They were sometimes in the rear of, and sometimes under the temple. The only well preserved adytum is that of the little temple at Pompeii. See POMPEII. The statue of Diana of Portici was found in its interior, elevated a few steps at die back of the temple, and was kept in perfect darkness. The Sanctum Sanctorum of the temple of Solomon, was of the nature of the pagan adytum, none but the high priest being admitted into it.

ADZENOTA, a small town of Valencia, in Spain, seated on the mountains Pegna Golosa, abounding with medicinal plants.

jEA, in ancient geography, a celebrated city and port of Colchis, fifteen miles from the sea, according to Pliny. It was famous for contain- ing the golden fleece of Jason at the time he reached this country. Some authors have con- sidered it as the^Eapolis of Ptolemy ; from the Greek aia, earth, or the Heb. 'K, island. From this city the Circe obtained the appellation of jEaea. Horn. Odyss. 1. i. v. 32. Virgil, 1. iii. v. 386.

jEACEA, in Grecian antiquity, solemn festi- vals and games celebrated at ^Lgina, in honour of yEacus.

7EACIDES, in ancient history, an appellation given to Pyrrhus, king of Epirus, as the descen- dant of ./Eacus, by the Oracle, in the famous equivocal response, which led that monarch to his destruction. See PYRRHUS.

jEACUS, in fabulous history, the son of Jupi- ter by ./Egina, and king of the island (Enopia, which he

named vEgina after his mother. When the isle was depopulated by a plague, his father, in compassion to his grief, changed all the ants upon it into men and women, who were called Myrmidons, from fivp^rj^, an ant. The founda- tion of the fable is said to be, that when the country had been depopulated by pirates, who forced the few that remained to take shelter in caves, ./Eacus encouraged them to come out, and by commerce and industry to recover what they had lost. His character for justice was such, that in a time of universal drought, he was nomi- nated by the Delphic oracle to intercede for Greece, and his prayer was answered. See ^EGINA. It was also imagined that TEacus, on account of his impartial justice, was appointed by Pluto one of the three judges of the dead ; and that it was his province to decide the fate of Europeans.

JEBUD.E. See HEBRIDES.

./EBURA, in ancient geography, a town of Spain in Estremadura, on the river Guadiana,

to the W. of Merida, now called Talavera. Long. 7►►, 15′ W. Lat. 38►►, 40′ N.

E.CHMALOTARCHA, in antiquity, aGreek term, signifying the chief or leader of the Jewish captives in Babylon. The Jews, who refused to follow Zerubbabel to Jerusalem, after the Babylonish captivity, elected a magistrate to govern them, whom they called irVra HTHI, rosch, guluth, q. d. chief of the captivity, which Origen and others translate by a Greek name of the like import, mx/ta\wrapx<>e, formed from aixoXwroj, captive, ai%/^, war, and apxwv, commander. The Jewish writers assure us, that the aechmalo tarchae were only chosen out of the tribe of Judah. The eastern Jews had their princes of the cap- tivity, as the western Jews had their patriarchs. The Jews are still said to have an cechmalotarch at Babylon, but without the authority of the ancient ones.

.&CIDIUM, in botany, of ateia, a wound or injury, (because, wherever this fungus attaches itself, the

plant becomes diseased and tumid,) a species of parasitical fungi. Class and order cryptogamia fungi.

The essential characters ate : head conspicuous, sessile,round, membraneous, and at length burst- ing with a teethed orifice. Seeds mealy, naked. Persoin defines twenty species, to which Mr. Sowerby makes several additions.

-[illegible]ECLANUM, or ^CUI.ANUM, in ancient geography, a town of the Hirpini in Italy, at the foot of the Apennines, to the E. of Abellinum, situated between Beneventum and Tarentum. It is now called Fricento, and lies 47 miles E. of Naples.

^ECLANENSES, or JECULANI, the inhabi- tants of JEculanum.

.iECLUS, in entomology, a species of papilio, found at Amboyna, of black wings above, cinerous beneath, waved with black, and having a yellow spot.

./ED, in ancient inscriptions, an abbreviature for ./EDILATUS, which see.

./EDES, in antiquity, a chapel or inferior kind of temple, distinguished by this, that it was not consecrated by the augurs, as those properly called temples were. Such was the aerarium, or treasury ; called .ZEdes Saturni.

7EDESSA. See^EGJEA.

./EDICULA, in ancient architecture, the inner part of the temple, where the altar and statue of the deity stood : it is merely, perhaps, a diminu- tive of aedes, sometimes it signifies a small house. jEdicula are often found on medals ; and ancient sculptures contain the figure of the prince or founder of a temple or church, holding in his hand an aedicula or model of the building. The Romans erected one which they called tedicula ridicula to the god of mirth, in commemoration of the repulse of Hannibal by severe weather after the battle of Cannae, when he was ad vancing upon Rome.

^DILATUS, ^DILATE, the office of aedile See next article.

AEDILE, ^EDILIS, from ades a house, i'i Roman antiquity, a magistrate whose business it was to superintend buildings of all kinds, espe- cially public ones, as temples, aqueducts,

bridges, &c. to take care of the highways, public places, weights and measures, &c. to fix the prices of provisions, take cognizance of de- bauchees, punish lewd women, and such as fre- quented gaming houses. They had the inspec- tion of comedies and other pieces of wit ; and were obliged to exhibit magnificent games to the people, at their own expence, whereby many of them were ruined. To them also belonged the custody of the plebiscita, and the examination and censure of books. They had the power, on certain occasions, of issuing edicts ; and, by de- grees, they obtained a considerable jurisdiction, file cognizance of various causes, &c. This office ruined numbers by its expensiveness ; so that, in Augustus's time, even senators declined it on that account.

All these functions, which rendered the aediles so considerable, belonged at first to the aediles of the people, aediles plebeii, or minores; these were only two in number, and were first created in the same year as the tribunes : for the tri- bunes, finding themselves oppressed with the multiplicity of affairs, demanded of the senate to have officers, with whom they might entrust matters of less importance ; and accordingly two sediles were created ; and elected every year at the same assembly as the tribunes. But these plebeian sediles having refused, on a particular occasion, to treat the people with shows, as being unable to support the expence, the patri- cians offered to do it, provided they would admit them to the honours of the aedilate ; which being agreed upon, two patrician aediles were cre- ated, in the year of Rome 588 ; who were called aediles curules, or majores ; as

having a right to sit on a curule chair, enriched with ivory, when they gave audience ; whereas the plebeian aediles only sat on benches. ††† Besides sharing all the ordinary functions with the plebeians, their chief employ was, to procure the celebration of the grand Roman games, and to exhibit comedies, shows of gladiators, &c. to the people ; and they were also appointed judges in all cases relating to the selling or exchanging estates. To ease these four first aediles, Caesar created a new kind, called sediles cereales, as being deputed chiefly to take care of the corn. These aediles cereales were also taken out of the order of patricians. In the municipal cities there were aediles, and with the same authority as at Rome. We also read of an aediles alimentarius, whose business seems to have been to provide diet for those who were maintained at the public charge, though others assign him a different office. ††† In an ancient inscription we likewise meet with aedile of the camp, aediles castrorum.

^ELDILIS, in entomology, a species of ceram- byx, found in the trunks of trees, and called also capricornus rusticus.

jEDILITAS. See ^††DILATUS.

&DILITIUM EDICTUM, among the Romans, was that whereby a remedy was given to a buyer, in case a vicious or unsound beast, or slave, was sold him. It was called aedilitium, because the preventing of frauds in sales and contracts be longed especially to the aediles.

, in antiquity, a female officer who

attended the temples of the goddesses. See next article.

7EDITUUS, from tedes, a temple, and tueor, to defend, in Roman antiquity, an officer be- longing to the temple, who had the charge of the offerings, treasure, sacred utensils, and records. His duty was somewhat similar to that of our verger or beadle,

but of superior trust and dis- tinction.

./EDON, in ancient mythology, a daughter of Pandarus, who being jealous of her sister Niobe, having more children than herself, attempted to kill the eldest of them, but in the attempt slew her own son ; and was changed into a goldfinch as she endeavoured to kill herself. Horn. Od. xix. 518.

7EDUI, in ancient history, a brave nation of Celtic Gaul, celebrated as the first allies of Caesar in hie invasion of Gaul. They were found between the 46►►. and 47►►. latitude.

^EGADES, three small islands, lying on the west side of Sicily, opposite to the main land be- tween Marsalla and Trapani. Their names are Levenzo, Favignana, and Maretimo.

.ZEGjEA, or JE^GJE, in ancient geography, the name of Odessa, so called from the following adventure : Caranus, the first king of Macedonia, being ordered by the oracle to seek out a settle- ment in Macedonia, under the conduct of a flock of goats, surprised the town of Odessa, during a thick fog and rainy weather, in following the goats that fled from the rain ; which goats ever after, in all his military expeditions, hp caused to precede his standard; and in memory of this he called JEdessa, Ai-yag, JEgaa. Hence probably, in the prophet Daniel's vision, the he-goat is the symbol of the king of Macedon.

JEG1EADM, the inhabitants of jEgae. See last article.

.ZEG-ZEON, in ancient mythology, a huge giant, the son of Titan and Terra, who was fabled to have had 100 hands, with which he threw 100 rocks at once, at Jupiter, who, when he had overcome him, bound him with 100 chains.

JEG^EUM MARE. See AEGEAN SEA.

./EGAGROPILA, or ^EGAGROPILUS, from aiyaypo►►, the rock goat, and TriXoc, a ball, in natural history, a

ball generated in the stomach of the rupicapra, or chamois goat, hard on the outside, and consisting of a substance like hair ; similar to those sometimes found in cows, hogs, &c. It is sometimes called bezoar Germanicum, or the German bezoar.

7EGEA, a queen of the Amazons, who was drowned in the ./Egean Sea.

.AEGEAN SEA, in ancient geography, now the Archipelago, a part of the Mediterranean, which separates Europe from Asia and Africa ; washing on the one hand, Greece and Macedonia ; on the other, Caria and Ionia. It is uncertain whether the name is derived from JEgea, queen of the Amazons, or JEgeus king of Athens, who both perished in it, or from its various isles appearing like a flock of goats at a distance. See ./EGEA and ^EGEUS.

.ffiGELETHRON, in botany, a name used by some authors for the common mercurialis, or English mercury, an eatable wild herb.

BGELSTAWICK, a good harbour, lying about half a mi’e from the town of Sodertledge, in Sudertorn, a district of Sudermania, in Sweden.

jEGERITA, in botany, from aiy►►pof, a poplar, or alder tree, because the first-discovered species of this genus grows on the wood of the alder, and was thence called Sderotium JEgerita, which last word, on the establishment of the present genus, was taken for its generic name. ►►► Class and order, Cryptogamia Fungi. Its Ess. CHAR, are sessile granulations solid, filled with a somewhat mealy powder.

JEGEUS in fabulous history, king of Athens, and father of Theseus. The Athenians having basely killed the son of Minos, king of Crete, for carrying away the prize from them, Minos made war upon them ; and being victorious, imposed this severe condition

on ^Lgeus, that he should annually send into Crete seven of the noblest Athenian youths, chosen by lot, to be devoured by the Minotaur. On the fourth year of this tribute, the choice fell on Theseus : or, as others say, he himself intreated to be sent. The king, at his son's departure, ordered that as the ship departed with black sails, it should return with the same in case he perished ; but, if he became victorious, he should change them into white. When Theseus returned to Athens, after killing the Minotaur, he forgot to change the sails, and his father, supposing him dead, cast himself headlong into the sea, which afterwards obtained the name of the jEgean Sea. The Athenians decreed /Egeus divine honours ; and sacrificed to him as a marine deity, the adopted son of Neptune,

JEGIALITIS, in botany, aiytaXTric, an inhabi- tant of the coast, alluding to its place of growth. ??? A genus of plants, of the class and order, pen- tandria pentagynia. Its Ess. CHAR. CAL. one leaf, coriaceous, five-toothed, with folded angles : PET. five, their claws combined at the base, bearing the stamens: STIG. capitate. Pericarp prominent, angular, nearly cylindrical, coriace- ous, without valves. Seed germinating, without albumen, and plumula conspicuous.

,/EGIAS, in medicine, a white speck on the pupil of the eye, which occasions a dimness of sight.

^EGICERAS, in botany, so called from ot|, a goat, and Ktpag, a horn, in allusion to the horn- like shape of the seed-vessel, a genus of plants of the class pentandria, and order monogynia. Its Ess. CHAR. CAL. five, deep imbricated segments : COR. salver-shaped, five-cleft, reflexed. Fila- ments joined at the base : STIG. simple. Follicle coriaceous, cylindrical. Seed solitary, with a hooded tunic. The last two plants are both na- tives of New Holland.

./EGIDA, in ancient geography, now Capo a" Istria, the principal town on the north of the territory of Istria, situated in a little island, joined to the

land by a bridge. In an old inscription, it is called JEgidis Insula. It was afterward called Justinopolis, after the emperor Justin. Lon. 14►►, 20′ E. Lat. 45►►, 50′ N.

DECIDES, in medicine, a disorder of the eyes mentioned by Hippocrates, occasioned by small white cicatrices in the eye, arising from an efflux of corrosive humour. See ALBUGO.

^LGIDION, in pharmacy, collynum for in- flammations and defluxions of the eyes.

jEGILOPS, aiyiXtoi//, Gr. signifying goat-eyed, the goat being subject to this ailment. A tuimmr or swelling in the great corner of the eye, by the root of the nose, either with or without an in- flammation. Authors frequently use the words tegilops, anchilops, and fistula lachrymalis, syno- nymously : but the more accurate, after TEgineta, make a difference. ►►► The tumour, before it be- comes ulcerous, is properly called anchilops ; and, after it has got into the lachrymal passages, and has rendered the os lachrymale carious, fistula lachrymalis. If the aegilops be accom- panied with an inflammation, it is supposed to take its rise from the abundance of blood, which a plethoric habit discharges on the corner of the eye. ►►► If it be without an inflammation, it is supposed to proceed from a viscous pituitous humour, thrown upon this part. The method of cure is the same as that of ophthalmia. But before it has reached the lachrymal passages, it is managed like other ulcers. If the aegilops be neglected, it bursts, and degenerates into a fistula, which eats into the bone.

/EGILOPS, in botany, the cerrus, or holm oak, a species of QUERCUS, which see.

./EGILOPS, WILD FESTUC, a genus of the mo- ncecia order, belonging to the polygamia class of plants, and ranking under the fourth natural order, Gramina. ►►► The characters are : CAL. hermaphrodite, a two-valved glume, triflorous : COR. a two-valved glume, the outermost valve terminated by three

aristae, or awns, the interior awnless : STAM. three capillary filaments, btyle, two : Seed, one, oblong. Male calyx and COB. each a glume as in the former ; and stamina, the same number. ??? There are seven species, natives of Italy, and some other parts of Europe. The flour of the ?egilops cerris, or festuca, has been reputed a remedy for the above-mentioned disease of the eye.

^EGIMURUS, in ancient geography, an island in the bay of Carthage, about thirty miles distant from that city, now Goletta. This island being afterwards sunk in the sea, two of its rocks re- mained above water, which were called Ar

^EGINA, in fabulous history, the daughter of ./ Esopus, king of Bceotia, was beloved by Jupiter, who debauched her in the form of a lambent flame, and carried her from Epidaurus, to a desart island called (Enope, which was named after her.

.&GINA, in geography, an island in the Saro- nic Bay, twenty miles from the Piraeus, formerly vying with Athens for naval power, and at the sea-fight of Salamis, disputing the palm of vic- tory with the Athenians. The Greeks had a common temple in it dedicated to Jupiter. It was surrounded by Attica, the territory of Me- gara, and the Peloponnesus, each distant about 100 stadia, or twelve miles and a half. In cir- cumference, it was reckoned 180 stadia, or twenty-two miles and a half. It was washed on the E. and S. by the Myrtoan and Cretan seas. It is now called F.yina, or Egina. The temple

above-mentioned, is situated on the summit of a mountain called Panhellenius, about an hour’s walk distant from the shore. The ,/Eginetans affirm it was erected by Mucus ; in whose time Hellas being terribly oppressed by drought, the Delphic oracle was consulted, and the response was, That Jupiter must be rendered propitious by Macus. The cities

entreated him to be their mediator : he sacrificed and prayed to Jupiter Panhelleuius, and procured rain. The temple was of the Doric order, and had six columns in front. Twenty-one of the exterior columns were lately standing, with two in the front of the pronaos and of the posticum, and five of the number which formed the ranges of the cell. The entablature, except the architrave, is fallen. The stone is of 'a light brownish colour, much eaten in many places, and indicating very great age. Some of the columns have been injured by boring to their centres for the metal. In several, the junction of the parts is so exact, that each seems to consist of one piece. This ruin Mr. Chandler considers as scarcely to be pa- mlleled in its claim to a remote antiquity. N0ar the shore is a barrow, raised, according to tradi- tion, in memory of Phocus, the son of .flLacus, who was killed by his brother Peleus. See PELEUS. This barrow in the second century, when seen by Pausanius, was surrounded with a fence, and had on it a rough stone. The terror of some dreadful judgment to be inflicted from neaven, had preserved it entire and unaltered to his time ; and in a country depopulated and neglected, it may still endure for many ages. The soil of this island, as described by Strabo, is very stony, especially the bottoms, but in some places, not unfertile in grain. Besides corn, it produces olives, grapes, and almonds; and abounds in pigeons and partridges. It has been related, that the TEginetans annually break their eggs, to prevent their multiplying, and occasion- ing a famine. They have no hares, foxes, or wolves. The rivers in summer are all dry. The vaiwode or governor farms the revenue of the grand seignior; of which, about half is paid by a caratch-money, or poll-tax.

./EGINA, was the capital of the above island. Its site has been long forsaken. A remnant of a temple of Venus, is situated near the port, which was principally frequented. The theatre resembled that of the Epidaurians both in size and workmanship. The walls belonging to the ports and arsenal were of excellent masonry, and may be traced to a

considerable extent, above, or nearly even with, the water. Here is a small chapel of St. Nicholas, several mean churches, and a square tower with a draw-bridge. This structure, was erected by the Venetians, while at war with the Turks in 1693. This island is generally garrisoned with about 800 men.

^EGINETA, in botany, a genus of plants, belonging to the class and order, didynamia angiospermia ; the characters of which are ; the cup an oval, inflated, and coloured spatha ; univalve; opening longitudinally near the top. The flower consists of one petal. Its base large, round, and inflated. The tube short, cylindric, and open ; and the mouth small, but expanded, and turns back at the edge. The STAM. four

crooked filaments ; two of them of the length of the flower, and the other two a little shorter. The antherae are oblong, and stand close to one another at their top. The germen of the pistil is oval ; the style is subulated, and of the length of the stamina ; and the stigma is large, round and bending. The Hortus Malabaricus is the only work in which we have a description of the plant.

^EGINETA, (Paulus,) a celebrated surgeon of the island of ^Egina, from whence he derived his name. According to M. Le Clerc's cal- culation, he lived in the fourth century ; but Abulpharagius, who is allowed to give the best account of those times, places him with more probability in the seventh. His knowledge in surgery was great, and his works are deservedly famous. Fabricius ab Aquapendente has tran- scribed his remarks in a variety of places. He is the first writer who takes notice of the cathartic quality of rhubarb ; and, according to Dr. Mil- ward, is the first in antiquity, who deserves the title of a man-midwife.

^EGINET 3E, or ^EGINENSES, the inhabitants of ^Lgina ; they applied early to commerce, and were the first who coined money, which from them was called No/ttg/ ia Aiytvatov, A'ginetan coin. From their industry, they got the title of Myr- midons, or the nation of

ants. See JEACUS and .rEGINA.

^GINETICUM /ES, the money of TEgina, which was much esteemed in ancient Greece.

JSGINHARD, the celebrated secretary and supposed son-in-law of Charlemagne. He is said to have been carried through the snow on the shoulders of the affectionate and ingenious Imma, to prevent his being traced from her apartments by the emperor her father : a story which the elegant pen of Addison has copied and embellished from an old German chronicle, and inserted in the third volume of the Spectator ××× This happy lover seems to have possessed a heart not unworthy of so enchanting a mistress, and to have returned her affection with the most faith- ful attachment; for there is a letter of ^.gin- hard's still extant, lamenting the death of his wife, which is written in the tenderest strain of connubial affection. He was a native of Ger- many, and was educated by the munificence of his imperial master, of which he has left the most grateful testimony in his preface to the life of that monarch. JEginhard, after the loss of his wife, is supposed to have passed the remainder of his days in religious retirement. His life of Charlemagne, his annals from 741 to 889, and his letters, are inserted in the second volume of Duchesne's Scriptores Francorum. There is an improved edition of this valuable historian, with the annotations of Hermann Schmincke, in 4to,

1711.

jEGIPAN, from Ai?, a goat, in heathen my- thology, a denomination given to the god Pan, because he was represented with the horns, legs, feet, &cc. of a goat.

^EGIPANES, in ancient history, a sort of monsters mentioned by Pliny, Solinus, and Pomp. Mela. Salmasius, in his notes on Soli- nus, takes Mgipan to have signified the same, in Libya, with Sylvanus among the Romany

Yossius rejects the opinion, and shews, that the JEpipanes had not faces like men, as the Sylvans had, but like goats. The whole upper part of the body resembled that animal ; and the lower, they painted with a fish’s tail. The monster represented on some medals of Augustus, by antiquaries called Capricornus, appears to be the true JEgipan.

JEGIPHILA, GOAT-FRIEND; in botany, a genus of the monogynia order, belonging to the tetrandria class of plants ; the characters of which are : CAL. a single-leaved perianthium, bell shaped, four-toothed, loose, very short, and per- sistent : COR. one petal ; the tubus cylindric, narrower and longer than the calyx ; the border divided into four segments, flat and equal ; the divisions oblong ; STAM. four erect capillary filaments ; the antherse incumbent and squared : PIST. a germen above ; a capillary, two-cleft, middle sized stylus ; and a simple stigma : the pericarpium is a roundish unilocular berry ; the seeds four. There is only one species, a native of Martinico.

./EGIPYROS, in botany, buck wheat.

jEGIS, in ancient mythology, the shield of Jupiter and Minerva. The goat Amalthea, which had suckled Jove, being dead, that god is said to have covered Irs buckler with the skin : whence the appellation Mgis, from ai►►, aiyog, a she-goat. Jupiter, afterwards restoring the beast tp life again, covered it with a new skin, and placed it among the stars ; and gave his buckler to Minerva ; whence her shield is also called

jEGISTHUS, in ancient fabulous history, the son of Thyestes, by his own daughter Pelopeia, who, to conceal her shame, exposed him in the woods ; where he was suckled by a goat, and hence called jEgisthus. He corrupted Clytem- nestra, the wife of Agamemnon ; and with her assistance, slew her husband, and reigned seven years in Mycenae. He was, together with Cly- temnestra, slain by Orestes.

^EGITHALLUS, in ancient geography, a pro- montory and citadel of Sicily, between Drepa- num and the Emporium Aegistanum, afterwards called Acellus ; corruptly written Aegitharsos, in Ptolemy, situated near Mount Erix, and now called Capo di Santo Theodora.

.ZEGIUM, in ancient geography, a town of Achaia Propria, five miles from the place where Helice stood, and famous for the council of the Achaeans, which usually met there on account either of the dignity or commodiousness of its situation. It was famous also for the worship of oi 0/Liayupioe Zn/c, Conventional Jupiter, that god having been supposed to be suckled here by the she-goat Amalthse, and of Panachasan Ceres. The territory of TEgium was watered by two rivers,

viz. the Phoenix and Meganites. The epithet is JEgiensis. There is a coin in the cabinet of the king of Prussia, with the inscription AILI, and the figure of a tortoise, which is the symbol of Peloponnesus, and leaves no doubt as to the place where it was struck.

yEGLEFINUS, in ichthyology, a name given, by the generality of authors, to the haddock, called by others, the onos.

-3SGLEUS, in botany, the white chamseleon thistle. It is derived from the Greek aiy\ntie of Galen ; by which he distinguishes the white chamaeleon, which was an esculent and medichuu plant, from the ►►p►►/3evvof or erebenus, which was what we call the black chamaeleon thistle, and was esteemed poisonous.

.&GLIA. See ^GIAS.

7EGOBOLIUM, in antiquity, the sacrifice of a goat offered to Cybele. The aegobolium was an expiatory sacrifice, which bore a near resem- blance to the taurobolium and criobolium, and seems to have been sometimes joined with them.

7EGOCEPHALUS, in ornithology, the name by which the generality of authors call the bird, known in England by the name of the god-wit, and in some places the stone-plover, the yerwhep, or yarwhip.

yEGOCERAS, in botany, a name given to fenugreek, and also to bouceras, because of their corniculated fruit, the word originally signifying goat's horn.

.&GOLETHRON, in botany, a plant men- tioned by Pliny ; which appears to be the same with what Tournefort describes under the name of cham&rododendros, pontica, maxima, mespili folio, floreo luteo. The ancients attribute dan- gerous qualities to it.

7EGOMANTIA, in antiquity, a species of divination performed by means of a goat.

^EGONYCHUS, Atyoc ovi>►►, the nail or hoof of a goat, in natural history, a plant men- tioned by Pliny, as a synonyme of the lithosper- mum, or gromwell. The ancients called this plant, exonychon; by which they expressed its being like the exterior parts of the nails on the fin- gers.

#:GOPHTHALMUS, in mineralogy, the goat's eye stone, a name given to those species of agate, or other semipellucid gems which have circular spots in them, resembling the eyes of that animal in colour, and in their round figure.

^.GOPODIUM, small wild angelica, gout- wort, goat's-foot, herb gerard, or ashweed; a genus of the digynia order, belonging to the pen- tandria class of plants ; the characters of which are : CAL. a manifold convex umbel ; the partial one, consimilar and flat; there is no involu- crum ; and the proper perianthium is scarcely discernible ; the COR. uniform, the florets all fer- tile ; the proper one has five inverse ovate, con- cave, equal petals, inflected at the top : STAM . five simple filaments twice the length of the corolla ; the antherae, roundish : PIST. a germen beneath ; two purple erect styli the length of the corolla ; the stigmata are headed : no pericar- pium : the fruit is ovate,

striated, and bipartite : the seeds are two, ovate, on one side convex and striated, and flat on the other. There is but one species, a native of Britain and other parts

of Europe. It is very common under hedges and about gardens.

,/EGOPOGON, in botany, a name used by Tragus and others, to express the ulmaria, or common meadow-sweet.

jEGOPRICON, a genus of the moncecia order, belonging to the diandria class of plants ; the characters of which are; CAL. both of male and female a tubula perianthium of one leaf divided into three segments ; COR. wanting : STAM. a single erect filament longer than the calyx, with an ovate anthera ; PIST. an ovate germen, three divaricated styli, the simple persistent stigmata : the pericarpium a globular berry, three-grained within, and three-celled : the seeds solitary and angular on one side. There is but one species, a native of Surinam.

^GOPROSOPON. See ^.GIDION.

j/EGOSPOTAMOS, in ancient geography, a river in the Thracian Chersonesus, falling into the Hellespont, to the north of Sestos.

./EGOSPOTAMOS, a town, station, or road for ships, at the mouth of the above river. Here the Athenians under Conon, through the fault of his colleague Isocrates, received a signal over- throw from the Lacedemonians, under Lysander, which was followed by the taking of Athens, and put an end to the Peloponnesian war. See LYSANDER.

^EGREFINUS. See ^EGLEFINUS.

.EGRITUDO BOVINA. See BOVINA AF-

FECTIO.

7EGYPT. See EGYPT.

^EGYPTIACA, the Papyrus.

,/EGYPTIACUM, in pharmacy, a name given to various ointments of the detergent, or corrosive kind ; such as the black, red, white, simple, compound, or magistral, TEgyptiacum. Of these the principal are :

^EGYPTIACUM ALBUM, a composition of lily roots mixed up with aromatics ; it is mentioned by Hippocrates, and is the same with what other ancients call cicinum. It was used by the ladies of those days to smear over their faces, to pre- serve their complexions. Hippocrates also speaks of another composition of the Egyptian thorn.

^EGYPTIACUM COMPOSITUM MAGISTRALE, wherein treacle, mithridate, camphor, &c. are ingredients. It is much used in the German dis- pensatories.

^EGYPTIACUM RUBRUM, and NITRUM, the red and black kind, are chiefly used by farriers, to soften the hoofs of horses, when too hard.

./EGYPTIACUM SIMPLEX, usually found in our shops, is a composition of verdigrise, vinegar, and honey, boiled to a consistence. It takes its name from its dusky colour, wherein it resembles that of the natives of Egypt. It is improperly called an unguent ; as there is no oil in it. Some call it Mel Egyptiacum. It is chiefly used in eating of rotten flesh, and cleansing foul ulcers ; particularly venereal ones in the throat, &c It also destroys those cancerous erosions apt to grow in children’s mouths.

/EGYPTILLA, in natural history, the name of a stone said, by the ancients, to have the re- markable quality of giving water the colour and taste of wine. This seems a very imaginary

virtue, as are indeed too many of those in former ages attributed to stones. This remarkable fossil

was described as variegated with veins of black, white, and bluish, with sometimes a vein of whitish red. The authors of these accounts seem to have understood by this name the stones of the onyx, sardonyx, and camasa kind ; all which we have at present common among us, but none of which possess any such strange properties.

jEGYPTIO’N, a tropical remedy used by the ancients in uterine disorders.

^.GYPTIUM PHARMACUMAD AURES. Aetius speaks of this as excellent for deterging foetid ulcers of the ears, which he says it cures, though the patient were born with them.

^GYPTUS, in fabulous history, the son of Belus, and brother of Danaus. See BELIDES.

./EHOITULLA, in zoology, the name of an East Indian species of serpent, found frequently in the island of Ceylon ; it is very long and slender, sometimes wholly of a fine green, some- times green and white, and lives principally on trees and among bushes.

./EICHRYSON, in botany, a name sometimes given to the Sedum majus.

-&INAUTJE, from Auvavrat, always mariners, in antiquity, senators of Miletus, who held their deliberations on board a ship, far from shore, and, till their business was decided, never returned to land.

jEIPATHY, from ae*, always, and affection, Gr. a passion of long continuance.

./EITHALES, in botany, another name for the Sedum majus.

JEIZOON, a????wov, from au, always, and fotj, life ; Sempervivum, sedum, houseleek. (

^ELF, (which according to various dialects, is pronounced ulf, welph, hulp, hilp, helfe, and, at this day help,’) implies assistance. So JElf- win,

is victorious, and JElfwold, an auxiliary governour : JElfgifa, a lender of assistance : with which Baotius, Syjnmachus, Epicurus, Sec. bear a plain analogy. Gibson’s Camden.

JELFRED. See ALFRED.

JELFRIC, archbishop of Canterbury in the tenth century, was the son of an earl of Kent, who, receiving the usual education, assumed the habit of the Benedictine order of monks in the monastery of Abingdon, over which Athelwold then presided, and the latter being subsequently made bishop of Winchester, took TElfric with him to aid in the education of the youth of his diocese. He composed a Latin Saxon Vocabu- lary, and some Latin colloquies, the former of which was printed by Somner, under the title of A Glossary, Oxon. 1659. ./Elfric also during his residence in Winchester, translated from the Latin into Saxon, most of the historical books of the Old Testament, and Canons for the regula lation of the Clergy, which are inserted in Spelman’s Councils. He afterwards became abbot of St. Albans, (where he composed a liturgy for the service of his abbey, which was used in Leland’s time,) bishop of Wilton, and, in 994, was translated to the see of Canterbury. He frequently assisted his country in a spirited resistance of the Danish invaders, and died highly venerated, Nov. 1005.

/ELIA CAPITOLINA. See JERUSALEM.

TELIA N, (Claudius,) born at Prseneste in Italy, taught rhetoric at Rome, under Alexander Severus. He was surnamed MtXtyXuxrffoc, Honey- mouth, on account of the sweetness of his style, and entitled Sophist, an appellation in his days given only to men of learning and wisdom. He loved retirement, and studied Plato, Aristotle, Isocrates, Plutarch, &c. and, though a Roman, gave the preference to the Greek authors. His most celebrated works are, his

Various History, and History of Animals ; though he also wrote a book on Providence, and another on Divine Appearances.

/ELII PONS, in ancient geography, one of the fortresses near Adrian's Wall, now called Port- land in Northumberland, between Newcastle and Morpeth.

JELIUS PONS, now il Ponte S. Angela, a stone bridge at Rome, over the Tyber, which leads to the Burgo and Vatican from the city, along Adrian's mole, built by the emperor Adrian.

/ELMEFOCH, in ecclesiastical affairs, the tribute of a penny from each house, anciently paid to the Pope, and thence called Peter-pence.

AELPUTE, AELMODER, and AELMUTTER, names of the Eelpout. See next article,

AELQUAPPE, in zoology, the common name, among the German nations, of a fish of the Mustela kind, the viviparous eelpout, called by Schonef'eldt mustela vivipara. It is usually a foot long or more. Its skin is perfectly smooth, and the colour of its back and head a brown- ish yellow, marked with blotches of black ; the colour of the back grows paler on the sides, and on the belly is whitish. It has four gills on each side, and the head is shaped like that of the eel ; the back fin reaches the whole length of the body, terminating near the tail. The belly fin begins at the anus, and reaches to the extremity of the fish, ending in a fine, slender, and some- what reddish tail. Beside these, it has two pairs of fins, one at the bottom of the gills, which are somewhat broad, and the other very fine and slender under the throat. The young of this species are often found alive, to the number of 300 in one individual : they are found of two fingers breadth long, and live sometimes after they are taken out.

AELST, (Evert Van,) a celebrated Dutch painter of still life, born at Delft, in 1602. He acquired a great reputation for delicacy of man- ner and exactitude in copying nature, as well as for the

beautiful lustre he gave to his representa- tion of metals.

7ELUROPO, in pharmacy, a syrup made of the herb cats-foot, a species of gnaphalium.

./ELURUS, in Egyptian mythology, the god of cats ; represented sometimes like a cat, and sometimes like a man with a cat’s head. The Egyptians had so superstitious a regard for this animal, that the killing it, whether by accident or design was punished with death ; and Diodo- rus relates, that, in the time of extreme fanrne, they chose rather to eat one another than touch those sacred animals.

AEM, AM, or AME, a liquid measure used in most parts of Germany : but different in different towns : the aem commonly contains twenty

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vertils, or eighty masses : that of Heidelberg!) is equal to forty-eight masses; and that of Wir- tembergto 160 masses. See AAM.

.&MILIANUS, TEMILIUS, or C. JULIUS, an obscure native of Mauritania, who by his valour and prudent conduct, raised himself to become successively first consul and emperor of Rome . He succeeded Decius, and marched against Gallus and Valerian, who were murdered by their own troops, a fate which he also shortly suffered.

^EMILIANUS. See SCIPIO.

./EMILIUS, (Paulus,) the son of Lucius .Smilius, who was killed at the battle of Cannae, was twice consul. In his first consulate, he triumphed over the Ligurians ; and in the second, subdued Perseus king of Macedonia, and re- duced that country to a Roman province, on which he obtained the surname of Macedonicus. He returned to Rome, loaded with glory, and triumphed for three days. He died 168 years before Christ.

Y~EMILIUS, (Paulus,) a celebrated historian, born at

Verona, who obtained such reputation in Italy, that he was invited into France by the cardinal of Bourbon, in the reign of Louis XII. to write the history of the kings of France in Latin, and was given a canonry in the cathedral of Paris. He was near forty years in writing that history, which has been greatly admired ; and died at Paris in 1529.

TEMOBOLIUM, in antiquity, the blood of a bull or ram offered in the sacrifices, called tauro- bolia and cribolia; in which sense the word occurs, in ancient inscriptions. Some read it JEgobolium, which see.

./ENARIA, in ancient geography, an island in the bay of Cumas, Italy, It was also called Inarime, and now Ischia ; and is twenty miles in compass. It is one of the Oenotrides, and fenced round by very high rocks, so as to be inaccessible but on one side : it was formerly famous for its earthenware. See ISCHIA.

./ENEAS, in fabulous history, a famous Trojan prince, the son of Anchises and Venus. At the destruction of Troy, he bore his aged father on his back, and saved him from the Greeks ; but being too solicitous about his son and household gods, lost his wife Creusa in the escape. Land- ing in Africa, he was kindly received by queen Dido, to whom he made a very ungrateful re- turn. Quitting her coast, he arrived in Italy, where he married Lavinia, the daughter of king Latinus, and defeated Turnus, to whom she had been contracted. After the death of his father- in-law, he was made king of the Latins, over whom he reigned three years : but joining with the Aborigines, he was slain in a battle against the Tuscans. See JLNEID,

./ENEAS SYLVIUS. See Pius II.

7ENEATORES, in antiquity, the musicians in an army ; including those who played trum- pets, horns, litui, buccinte, &c. The word is formed from teneas, on account of the brazen in- struments used by them.

.&NEID, the name of Virgil’s celebrated epic poem. The subject, the establishment of Mneaa in Italy, is

extremely happy. Nothing could be more interesting to the Romans, than to look

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back to their origin from so famous a .iero. While the object itself was splendid, the traditionary history of this country opened interesting fields to the poet; and he could glance at all the recent and really great exploits of the Romans, in its ancient and fabulous state. The unity of action is perfectly preserved in the Mneid. The settlement of &neas, by the order of the gods, is constantly kept in view ; and the episodes are linked properly with the main subject. The nodus, or intrigue of the poem, is also happily managed. The wrath of Juno, who opposes JEneas, gives rise to all his difficulties, and connects the human with the celestial operations, throughout the whole poem. One great imper- fection, however, is, that there are no strongly marked characters in the Mneid. Achates, Cloanthes, Gyas, and other Trojan heroes who accompanied jEneas into Italy, are insipid. Even JEneas himself is without interest. The character of Dido is the best supported in the whole JEneid. The principal excellency of the JEneid of Virgil is tenderness. His soul was full of sensibility. He must have felt himself all the affecting circumstances in the scenes he describes ; and he knew how to touch the heart by a single stroke. In an epic poem this merit is next to sublimity. The second book of the JEneid is one of the greatest master-pieces that ever was executed. The death of old Priam^ and the family-pieces of Mneas, Anchises, and Creusa, are as tender as can be conceived. In the fourth book, the unhappy passion and death of Dido are admirable. The episodes of Pallas and Evander, of Nisus and Euryalus, of Lausus and Mezentius, are superlatively fine. In his battles, Virgil is inferior to Homer. But, in the impor- tant episode, the descent into hell, he has sur- passed Homer by many degrees. There is nothing in antiquity, that equals the sixth book of the JEneid.

ANGINA, one of the islands of the Archi- pelago. See .&GINA.

./ENIGMA, alviyjia, a riddle. An obscure and difficult question.

The dark enigma will allow A meaning; which, if well I understand, From sacrilege will free the god’s command.

Dryden.

A custom was amongst the ancients of proposing an enigma at festivals, and adjudging a reward to him that solved it. Pope.

^ENIGMA. See ENIGMA.

./ENIGMA, Ati/iy^ta, formed of aivtmaQai, ob- scure innuere, to hint a thing darkly, and of aivog, an obscure speech, denotes any dark saying, wherein something is concealed under obscure language. The popular name is riddle ; from the Belgic raeden, or the Saxon araethun, to interpret. Fa. Bouhours, in the memoirs of Trevoux, defines an aenigma : A discourse, or painting, including some hidden meaning, which is proposed to be guessed.

./ENIGMAS, VERBAL, are witty, artful and ab- struse descriptions of any thing. In a general sense, every dark saying, every parable, may pass for an senigma. Hence, obscure laws are called JEnigmata Juris; and, the alchemists are great dealers in senigmatic language, their pro-

cesses for the philosopher’s stone being generally wrapt up in riddles: e. g. Fac ex mare etfmnin* cimilum, inde quadrangulum, hinc triangulum, fac circulum, et habebis lapidem philosophorum. F. Menestrier has attempted to reduce the com- position and resolution of senigmas to a kind of art, with fixed rules and principles, which he calls the philosophy of aenigmatic images. Puerile as, in modern times, the exercise of resolving enigmas may appear, it is certain that the practice of their proposition and explanation has existed in the most

remote, and the most learned ages of the world. The greater part of the Egyptian learning is said to have been comprised in aenig- mas ; and that of the sphinx, and the supposed discovery of its celebrated riddle by (Edipus, appears to be testified by the numerous Egyp- tian statues of that fabulous monster. The story is this : ††† a certain monster, having the head and breasts of a woman, the wings of a bird, the claws of a lion, arid the body of a dog, had long ravaged the country about Thebes, and could not be de- stroyed until this riddle was solved : What animal is that which walks on four legs in the morning, at noon on two, and at night on three ? The answer of CEdipus was, it is a man : when the monster, in despair, dashed out his brains against a rock. Sphinxes themselves, indeed, were ^enigmatical of the rising of the Nile ; the head of a woman, and the body of a lion, indicating the overflow of that river, when the sun passed through the signs of Virgo and Leo in August ; Gale thinks, the Jews borrowed their senigmatical forms of speech, (see Numbers xii. 8. Judges xiv. 12.) from the Egyptians. The New Testa- ment says, ” Now (in this state) we see through a mirror iv aiviyjian, in an enigmatical manner, but then (in an eternal state) face to face.” 1 Cor. xiii. 12.

Some oenigmas of antiquity have furnished considerable employment to critics. We sub- join : †††

1 . The celebrated sybilline senigma :

Evvia ypu/t/jar’ ††’%&>, rerpaffuXXa/Sof tipi, votipt. At TpiiQ ai TTpairai Svb ypa/zjudr’ ‘i\ncnv ††Kait)e.

Thus translated by M. Leibnitz.

Literulis noscor quadrisyllabus ipse novenis : Syllaba habet binas, nisi quod tenet ultima ternas. Vocales quatuor, quinis non propria vox est. Bis septem vicibus numerum centuria totum Ingreditur, decadesque novem, turn bis tria. Si me Noveris, hinc aditus ad sacra nostra patent.

A mystical solution has been given of this enigma. Moret will have it signify the name Jehovah, which, according to him, comprehends the number 1696, abating one, the number con- tained in the acnigma. Brentius maintains, that the whole sum amounts to 1711, and that it re- presents the word oa$opoq. The generality understand it of the word arsenic, or APSE- NIKON.

2. An ingenious senigma on the operation of cupping, by a machine of brass :

Avdp tlSov irvpi xa\icbv nr ai-tgi Ko

*’ I saw a man, who, unprovok’d with ire, Stuck brass upon another’s back by fire.” Arist. Rhetor. 1. iii. c. 2. t. 2. p. 586. ed. Duval. 3. The celebrated Spanish enigma from the Bologna marble, preserved in the Voltaian family, is perhaps, the most famous specimen of this kind of learning :

D. M.

jELIA L.CLIA CRISPIS.

Nee vir, nee mulier, nee androgyna. Nee puella, nee juvenis, nee anus. Nee casta, nee meretrix, nee pudica,

SED O.MNIA.

Sublata. Neque fame, neque ferro, neque veneno.

SED OMNIBUS.

Nec ccelo, nee aquis, nee terris.

SED UBIQUE JACET.

Nec maritus, nee amator, nee necessarius, Neque maerens, neque gaudens, neque flens,

Hanc, Nec molem, nee pyramidem, nee sepulchrum.

SED OMNI A.

Scit, et nescit cui posuerit ; Lucius AGATIIO PRISCIUS.

That is to say, ” To the gods’ manes. ^Elia Lelia Crispis, neither man, nor woman, nor herma- phrodite ; neither girl, nor young woman, nor old ; neither chaste, nor polluted, nor a mo- dest woman ; but all these : killed neither by hunger, nor steel, nor poison ; but by all these : rests neither in heaven, nor on the earth, nor in the waters; but every where. Lucius Agatho Priscius, neither her husband, nor lover nor friend ; nor sorrowful, nor joyful, nor weeping; certain, and uncertain, to whom he rears this monument, neither erects her a temple, nor a pyramid, nor a tomb, but all these.” In the MS. at Milan, instead of D. M. we find A. M. P. P. D. and at the end the follow- ing addition :

” Hoc est sepulchrum intus cadaver non habens, Hoc est cadaver sepulchrum extra non habens, Sed cadaver idem est et sepulchrum.”

Which signifies, ” This is the grave that has no corpse within : This is the corpse that has no grave without ; but the corpse and the grave are the same.”

We find near fifty several solutions of this aenigma advanced by learned men. Marius Michael Angelus maintains, ./Elia Lelia Crispis, to signify rain water falling into the sea. Ri. Vitus first explained it of Niobe turned to a stone, afterwards of the rational soul, and after- wards of the Platonic idea ; Jo. Turrius, of the materia prima; Fr. Schottus, of an eunuch, &c. &c. &c.

4. We cannot omit, lastly, this elegant little enigmatic epitaph :

ON FAIR ROSAMOND.

Hie jacet Rosa munda, non Rosa mundi, Non redolet, sed olet, quae redolere solet.

ENIGMATICAL, something that relates to, or partakes of, the nature of enigma. The phi- losophy of the

Druids was altogether enigma- tical. The ancient sages in general, affected an enigmatical way of writing, to conceal their doc- trines from the populace. The Romans in Nero's time, were obliged to have recourse to the like

method, though for different reasons. We read of an aenigmatical medal presented by the Hugue- nots to Henry III. Schott has published an explication of an enigmatical coin of the emperor Augustus, concerning which antiquaries have been long divided.

7ENIGMATOGRAPHER, or .^NIGMATIST, a maker or explainer of enigmas. Hardouin, Vander Hardt, &c. are great enigmatists.

from Aiviy/ta, and ypa^w, to describe, or Xoyoc, speech, the art of resolving or making Enigmas.

jENII, the inhabitants of Mnos.

JENITHOLOGIUS, in poetry, a kind of verse, consisting of two dactyls, and three trochei ; Such as,

Praelia dira placent truci juventae,

/ENOBARBUS, in ancient history, the agno men or surname of Domitius, who was so called from his beard, which, according to tradition, was changed by Castor and Pollux, from brown to red, because he did not believe them, when they revealed to him a victory that was obtained.

.52NONA, in ancient geography, a city of Liburnia, called by Pliny Civitas Prasini, the reason of which is unknown, ; also Enona, and now Nona ; on the Adriatic, by which it is for the greater part surrounded, over against the island Gissa, from which it is distant four miles to the west.

.ZENOS, ^ENUM, or JEuus, in ancient geogra- phy, a town of Thrace, situated on the east mouth of the Hebrus, and said to be built by the Cumeans. It was a free town, in which stood the tomb of Polydorus. Here the brother of Cato Uticensis died, and was

honoured with a monument of marble, in the forum of the Enii. Livy says, that the town was otherwise called Absynthus. It is now called Eno.

JSNUS, in ancient geography, now the Inn, a river of Germany, which rising in the country of the Grisons, out of the Rhoetian Alps, runs through the Grisons, the Tyrol, the duchy of Bavaria, and through Passau, into the Danube.

jEOLIA. See J&OLIS.

&OLI1E, INSULT, now hole di Lipari, in an- cient geography, seven islands, situated between Sicily and Italy, so called from ^Eolus, who reigned there about the time of the Trojan war. The Greeks call them Hepfuestiades ; and the Ro- mans Vulcanite, from their fiery eruptions. They are also called Lipaneorum Insults, from their principal island Lipara.

^SOLIAN, or ^EOLIC, in grammar, one of the five dialects of the Greek tongue. It was first used in Boeotia; whence it passed into yEolia, and was that in which Sappho and Alceus wrote. The ./Eolic dialect generally throws out the aspirate or sharp spirit, and agrees in so many things with the Doric, that the two are usually confounded together.

JEonAN HARP. In our article ACOUSTICS, we have mentioned an instrument of this kind, the invention of which has been generally attri- buted to Kircher. But the fact is, that it was known and used at a much earlier date, as Mr, Richardson has proved, (Dissertation on the Manners and Customs of the East ;) in various eastern countries. There is a Rabbinical story,

(Berach vi.) of the aerial harmony of the harp of David ; which when hung up at night, was played upon by the north wind. Kircher wrote a book describing his instrument, entitled Magia Phonotactica et Phonurgia.

In England, where it was introduced about the middle of the last century, it is generally a simple box of thin fibrous wood (often of deal,) to which are attached a certain number of fine catgut strings, sometimes to the number of fifteen, of equal size and length, and con- sequently unisons, stretched on low bridges at each end. Its length is made to correspond with the size of the window or aperture in which it is intended to be placed ; its width is about five or six inches, and its depth two or three. The sash must be raised to admit it with the strings uppermost, under which is a circular opening in the centre, as in the belly of the guitar. When the wind blows athwart the strings, it produces the effect of a choir of music in the air, sweetly mingling all the harmonic notes, and swelling or diminishing its sounds according to the strength or weakness of the blast.

A Mr. Crossthwaite has suggested a more simple instrument, having no sounding board ; but being in fact nothing but a number of strings introduced between two deal boards. From this he produced, he states, most delicious harmony.

Various improvements of the instrument have been suggested, but it is not in the whole suit- able to the changeable and humid climate of England ; and, its theory appears, as hitherto to have been but very imperfectly understood. Robert Bloomfield, the author of the Farmer's Boy, is said to have been a successful manufac- turer of this instrument, and published a col- lection of extracts and observations respecting it. He tried to cover the strings with silver wire, which appeared to deaden the sounds ; while a covering of oil wholly stopped them. Silk strings he says will give a most delicate note, but are with difficulty made to endure sufficient tension ; and advises that the instru- ment be so placed as to catch the wind rather in a vertical than a horizontal direction.

Mr. Young in his Enquiry into the Principal Phenomena of Sound and Musical Strings, (London, 1784, 8vo.) has furnished some in- genious

observations on the order of the notes produced by the ^.olian harp. To ascertain this, he took off all the strings but one ; and, placing it in a proper situation, was surprised to hear a great variety of notes, and frequently such as were not produced by any aliquot part of the string. Sometimes there was a chord of two or three notes from this single string. Per- plexed by these complex and extraordinary phenomena, he almost despaired of being able to account for them on the principle of aliquot parts. On farther examination, however, 'v,e found that they all flowed naturally and easily from this principle. He observed that a current of air rushing against the middle of a stretched elastic string, moved the whole of it from its rectilinear position ; and that the string, by its elasticity, returned to its former position, vibra-

ting and exciting pulses in the air, so as to pro- duce the tone of the entire string ; that if the current of air be too strong and rapid, when the string is bent, it will retain its curvature But though the whole string cannot perform its vibrations in this case, the subordinate aliquot parts may ; and these will be of different lengths according to the rapidity of the blast. Thus, when the velocity of the current increases so as to prevent the vibration of the whole string, those particles which strike against the middle points of the halves of the string agitate those halves, as in the case of sympathetic and secon- dary tones : and as these halves vibrate in half the time of the whole string, though the blast may be too rapid to admit of the vibration of the whole, yet it can have no more effect in pre- venting the motion of the halves than it would have on the whole string if its tension were quadruple : for the times of vibration in strings of different lengths, and agreeing in other cir- cumstances, are directly as the lengths ; and in strings differing in tension, and agreeing in other circumstances, inversely, as the square roots of the tensions : and, therefore, their vibrations may become strong enough to excite such pulses as will affect the drum of the ear : and the same may

be said of other aliquot divisions of the string. Those particles which strike against such points of the string as are not in the middle of aliquot parts, will interrupt and counteract each other's vibrations, as in the case of sympathetic and secondary tones, and therefore will not pro- duce a sensible effect. See the work above mentioned.

^EOLIC DIGAMMA, is a name given to the letter F, which the ^.olians used to prefix to words beginning with vowels, as Totvog for oivog ; or to insert between vowels, as or 14 for OIQ.

.ZEoLic VERSE, in prosody, a verse consisting of an iambus, or spondee ; then of two anapests, separated by a long syllable ; and, lastly, of ano- ther syllable, either long or short, such as,0 stel- liferl conditor orbis. This is otherwise called c- ulogic verse ; and from the chief poets who used it Archilochian and Pindaric.

./EOLII, or J►►OLES, the inhabitants of ^Eolis.

.&OLIPILA, or .EOLIPILE, Lat. the ball of .ZEolus, in hydraulics, a hollow ball of metal for- merly used in courses of experimental philosophy, to demonstrate the possibility of converting water into an elastic steam or vapour by heat. The instrument consists of a slender neck, or pipe, having a narrow orifice inserted into the ball by means of a shouldered screw. The pipe being taken out, the ball was filled almost full of water, and the pipe being again screwed in, the whole was placed on a pan of kindled charcoal, where itwas well heated, and there issued from the ori- fice a vapour, with prodigious violence and great noise, which continued till all the included water was discharged. The stronger the fire, the more elastic and violent will be the steam ; but care must be taken that the small orifice of the pipe be not, by any accident, stopped up ; be- cause the instrument would in that case infallibly break in pieces, with such violence as would greatly endanger the lives of the persons near

it. Another way of introducing the water was to heat the ball red-hot when empty, which will drive out almost all the air ; and then by sud- denly immerging it in water, the pressure of the atmosphere forces in the fluid till it is nearly full. Des Cartes and others have used this instru- ment to account for the natural cause and ge- neration of the wind. Chauvin suggests some farther uses of the J&olipile. ??? He thinks it might be applied, instead of a bellows, to blow the fire, where a very intense heat is required. Dr. Lewis on the contrary condemns this use of the JEalipile, and says, that upon trial he al- ways found that instead of exciting, it extin- guished the fire. But it might serve to scent or fumigate a room, if filled with perfumed, instead of common water, and an Molipile has been sometimes placed in a chimney, where it can be heated, that the vapour may serve to drive the smoke up the chimney. Dr. Plott says, the lord of the manor of Essington is bound by his tenure to drive a goose every New-year's day three times round the hall of the lord of Hilton, while Jack of Hilton (a brazen figure having the structure of an Molipile) blows the fire ! In Italy it is said, that the JJLolipile is commonly made use of to cure smokey chimnies. Some authors have discovered a still more extraordinary use, to which the frauds of the heathen priest- hood applied the jEolipile, viz. the working of sham miracles. Besides Jack of Hilton, which had been an ancient Saxon idol, Mr. Weber shews, that Fluster, a celebrated German idol, is also of the JEolipile kind; and in virtue thereof, could do noble feats ; being filled with a fluid, and thus set on the fire, it would be covered with sweat ; and as the heat increased, would at length burst out into flames. There can be no doubt that much concealed knowledge of natural philosophy was artfully used in an- cient times, to palm the miracles of different priesthoods on the world.

.ZEOLIS, or ^EOLIA, in ancient geography, a country of Asia, settled by colonies of /Eolian Greeks. At large it comprehended all Troas, and the coast of

the Hellespont to the Propontis, because in those parts there are several jfeolian colonies : more strictly, it was situated between Troas to the north, and Ionia to the south.

./EOLIUM MARE, in ancient geography, the JEolian Sea, a part of the Egean Sea, washing /Eolis ; called also Mysium, from Mysia ; now called Golfo di Smyrna.

j'EOLOPYL^E, from AioXs irvXoi, the gates of ^Eolus, the same with JEOLIPILA, which see. AEOLUS, in heathen mythology, the god of the winds, was said to be the son of Jupiter by Acasta, or Sigesia, the daughter of Hippotus : or, according to others, the son of Hippotus by Me- neclea, daughter of Hyllus king of Lipara. He dwelt in the island Strongyle, now called Strom- bolv, one of the seven islands called Eolian from their being under the dominion of ^Eolus. Others say, that his residence was at Regium, in Italy ; and others again place him in the island Lipara. He is represented as having authority over the winds, which he held enchained in a vast cavern, to prevent their continuing the devastations they had been guilty of before they were put under

his direction. Mythologists explain the original of these fables, by saying, that he was a wise and good prince ; and, being skilled in astronomy, was able, by the flux and reflux of the tides, and the nature of the volcano in the island Strongyle, to foretel storms and tempests.

AEOLUS, in mechanics is also a name given to various mechanical contrivances for refreshing and changing the air in rooms.

YEON, AIQN, Gr. age ; the duration of any- thing.

The term auav, originally signified an age, the life or duration of any person or thing. " Possessing an immutable being," says Aristotle, speaking of the gods, " free from external im- pressions, happy and self-sufficient, they exist throughout all auavia, eternity." " This word," he adds, "has been divinely

spoken by the ancients : for the consummation containing the time of every life is called its age, (its period of duration.) For the same reason, the consum- mation of the whole heaven, and the consumma- tion containing the unlimited duration, and the immensity of all things is eternity, deriving its name from always being ××× immortal and divine.” Lib. i. Ccel. c. 10.

The term was, by a natural metonymy, trans- ferred at later periods to the beings spoken of themselves : and the early heretics, as we have seen, transferred these heathen fables into the Christian system. See Mosheim, vol. i.

1E.OW, among the followers of Plato, was used to signify any virtue, attribute, or perfection ; hence they represented the deity as an assem- blage of all possible aeons ; and called him Pleroma, a Greek term signifying fulness. The Valentinians, who, in the first ages of the church, blended the conceits of the Jewish cabalists, the Platonists, and the Chaldean philosophers, with the simplicity of the Christian doctrine, invented a kind of Theogony, or Genealogy of Gods, (not unlike that of Hesiod,) whom they called by several glorious names, and all by the general appellation of vEoxs : among whom they reckoned Evvoia, Thought, Styi;, Silence, Xaptc, Grace, N××c, Understanding, AXnOiuz, Truth, “ZiaQta, Wisdom, Zwq, Life, Ao-fog, Word, Movoytvijc, Only-begotten, IIX××jpwjia, Fulness, and many other divine powers and emanations, amounting in number to thirty : which they fancied to be successively derived from one another ; and all from one self-originated deity, named Bythus, i. e. profound or unfathomable ; whom they called likewise The most high and ineffable Father. See VALENTINIANS.

./EoN, in anatomy, the spinal marrow. ./EoN, in the Phoenician theology, was the first created woman.

^EORA, in ancient medical writings, is used for a species of exercise often prescribed by phy- sicians, wherein the limbs were at rest, while the

body was moved from place to place, in such a manner as the physician prescribed. Sometimes the patient was laid in a sort of hammock, sup- ported by ropes, and moved backward and for- ward ; sometimes his bed run nimbly on its feet. And besides these, the several ways of travelling were accounted species of the aeora, whether in the litter, in a boat or ship, or on even ground

in a chariot. Asciepiades was the first who brought this mode of exercise into practice, and used it as a means to recover strength after a fever, &c.

MQUA., or ./EQUANA, in ancient geography, a town of Naples, which, being destroyed, was rebuilt, and called Vicus, now Vicho di Sorrento. jEQUALIS POLYGAMIA, in botany, the first order in the class syngenesia, of Linnaeus, con- taining such compound flowers as have all their florets hermaphrodite and alike. The following are the genera it includes : ###

Scolymus, Golden Thistle,

Cichorium, Succory,

Catananche,

Seriola,

Hypocharis, Cat’s-ear,

Geropogon, Old Man’s beard.

Rothia,

Andryala,

Triptilion,

Tragopodon, Goat’s beard,

Hclmintia,

Picris, Ox-tongue,

Scorzonera, Viper’s-grass,

Leontodon, Dandelion.

Crepis, Hawk’s beard,

Chondrilla, Gum Succory

Prenathes,

Lactuca, Lettuce

Heracium, Hawk’s-weed

Sonchus, Sow-thistle,

Lacintha,

Lapsana, Nipple-wort,

Rhagadiolus,

Krigia,

Hyoseris, Swine’s Succory

Hedypnois, Hawkbit

Thrineia,

Tolpis,

Atractylis,

Acarna,

Serratula, Saw-wort,

Carthamus, Bastard Saffron

Carlina, Carline Thistle

Aretium, Burdock

Pteronia,

Stobasa,

Lachnospermum,

Barnadesia,

Cynara, Artichoke,

Johannia,

Cnicus,

Carduus, Thistle,

Onoseris,

Stokesia,

Leatris,

Vernonia,

Onopordon, Cotton Thistle,

Steh&lina,

Haynea,

Calea, Halbert-weed

Bidens, Bur Marygold,

Spilanthes,

Athanasia,

Santolina, Lavender-cotton,

Cxsulia,

Tarchonanthus, African,

Vlea-bane,

Kuhnia,

Eupatorium, Hemp,

Agrimony

Chrysocoma, Goldilocks

Mikania,

Kleinia,

Cacalia,

Lavenia,

Ageratum,

Stevia,

Hymenopappus,

Cephalophora,

Pentzia,

Ethulia,

Piqueria,

Balsamita.

^EQUANA JUGA, in ancient geography, mountains of Picenum, in the kingdom of Naples, now called Montagna di Sorrrento.

JEQUI, in ancient geography, a people of Italy who dwelt between the Sabines and Latins, having a capital called Bola.

.ZEQUIMILII AREA, or ^EQUIMELIUM, in an- tiquity, a place in Rome, where stood the house of Spurius Melius, who, by largesses corrupting the people, affected the supreme power, refusing to appear before the dictator Cincinnatus, he was slain by Servilius Ahala, master of the horse, and his house razed to the ground.

^ERA, supposed to be derived from Annus erat Augusti. The point of time at which Spain was conquered by the Romans, adopted as the period for computing the annals of the Spaniards.

From the blessings they bestow,

Our times are dated, and our eras move : They govern and enlighten all below,

As thou do’st all above. Pope.

./ERA, or ERA, a fixed point of time from whence any number of years is begun to be counted. The origin of the term is contested, though it is generally allowed to have had its rise in Spain. Sepulveda supposes it formed from A. ER. A. the notse or abbreviatures of the words, annus erat Augusti, occasioned by the Spaniards beginning their computation from the time their country came under the dominion of Augustus, or that of receiving the Roman calen- dar. This opinion, however ingenious, is re- jected by Scaliger, because in the ancient abbreviatures A never stood for annus, unless when preceded by V for vixit ; and it seems improbable they should put ER for erat, and the letter A, without any discrimination, both for annus and Augustus. Vossius nevertheless fa- vours the conjecture. From the plural tera, came by corruption CHRONOLOGY.

J►►RA, in botany, cockle or darnel.

./ERA, the Christian. It is generally allowed by chronologers, that the computation of time from the birth of Christ was not introduced till the sixth century, in the reign of Justinian, and is commonly ascribed to Dionysius Exiguus. This computation then came in use in deeds, &c. before which time either the Olympiads, the year of Rome, or that of the reign of the em- perors, were used.

/ERA, the Spanish, was introduced after the second division of the Roman provinces, be- tween Augustus, Anthony, and Lepidus, in the year of Rome 714, the 4676th year of the Julian period, and the 38th year before Christ. We find frequent mention of it in the

Spanish affairs ; their councils, and other public acts, being all dated according to it. Some say it was abolished under Peter IV. king of Arragon, in the year of Christ 1358, and the Christian sera substituted in its place. Mariana observes, that it ceased in the year of Christ 1383, under John I. king of Castile. The like was afterwards done in Portu- gal. If to the year of the Spanish sera we add the number 4675, the sum is the Julian year ; or .f from the same year we subtract 38, the re- mainder is the year of the Christain sera.

./ERARIUM, in history, the public treasury of the Roman state. The temple of Saturn at Home being the great treasury of the state, was first called aerarium ; from

./ERARIUM ILTHI.K, or of Juno Lucina, was erected by Servius Tullius, and composed of money paid by parents, for the birth of each child.

JERARIUM PRIVATUM, or the privy purse, contained the money and effects which the prince was master of before his accession to the empire. This was under the care of the Comes rerum privatarum.

./ERARIUM SANCTIUS, was an appendage to the public treasury, added on occasion of the growth of the Roman state, when there was not room enough for lodging all the public monies, and the public acts, which were deposited with it. It was called sanctius, i. e. more sacred, be- cause placed in an inner and safer part of the temple.

ERARIUM VENERIS, JUVENTUTIS, LIBITIN.E, and other lesser treasuries teraria minora, were established in the provinces.

/ERARIUM VICESIMARUM, the place where the money arising from the taxes levied from foreign countries was laid up, so called because it most commonly consisted of a twentieth part of the produce.

7ERARIUS, in antiquity, 1. An officer in-

stituted by Alexander Severus, for the distribu-

tion of the money given in largesses to the soldiery, or people. 2. A person whose name was struck out by the censors from the album, or list of his century, and was only considered as a citizen, so far as to make him subject to pay tera taxes, without being entitled to any privileges, or advantages from the commonwealth. Hence the phrases, terariumfacere, inter cerarios reforre, eerariis eximere, &c. ××× Not only plebeians, but knights and senators, were subject to this kind of degradation. The serarii were incapable of making a will, of inheriting, of voting in as- semblies, of enjoying any post of honour or profit : in effect, were only subject to the bur- dens, without the benefits of society ; yet they retained their freedom, and were not reduced to the condition of slaves. To be made an serarius was a punishment reputed one degree more severe than to be expelled a tribe, tribo moveri. 3. ./Erarius was likewise used for a person employed in coining, or working brass. These were some- times called

./ERATA AQUA, ziment water.

./EREOLUS, answering to the Greek ^aX/cof. was a weight according to Diodorus and Suidas equal to one-sixth, or according to others, one- eighth of the obolus, which was 923g grains.

AERIA, or EERIA, in ancient geography, Thessaly, Egypt, or Ethiopia. The scholiast on Apollonius Rhodius, says, that not only Thes- saly, but Egypt was called Aepta by the Greeks, which Eusebius confirms : and hence Appollina- rius, in his translation of the 114th psalm, uses it for Egypt. Hesychius applies this name to Ethiopia.

AERIAL PERSPECTIVE, is that which repre- sents bodies weakened and diminished, in pro- portion to their distance from the eye. It chiefly respects the colours of objects, whose force and lustre it more or less takes off, to make them appear as if more or less remote. The reason is, that the longer the column of air an object is seen through, the more feebly do the visual rays emitted from it affect the

eye.

AERIAL SUBSTANCE. The Essenes, the most refined and rational sect among the Jews, held that the human soul consisted of an serial sub- stance And the Rosicrucians, and other vision- aries, fill the atmosphere with serial inhabitants.

AERIANS, in church history, a sect of Arians, who to the doctrines of that party, added some peculiar dogmas of their own; and made no difference between bishops and priests. The sect received its denomination from AERIUS, who founded his doctrine upon certain passages in St. Paul : as 1 Tim. iv. 14. where the apostle exhorts him not to neglect ” the gift he had re- ceived by the laying on of the hands of the Presbytery,” &c. Here, observes Aerius, are no mention of bishops : on the contrary, Timothy evidently received his ordination from the pres- byters or priests. ××× Epiphanius zealously main- tains the superiority of bishops against the

Aerians. The word presbytery, used by the apostle, he observes, includes both bishops and priests ; the whole senate or assembly of the ec- clesiastics of the place.

./ERICA, or ERICA, in natural history, a name given by Gaza, and others, to the common her- ring.

./ERIRUSA, in mineralogy, the ancient name for the sky-coloured Jasper.

7ERIS FLOS, among alchemists, small scales procured from copper, melted by a strong heat ; it is sometimes used for aerugo or verdigrise.

AERIUS, an Armenian priest of the fourth century, the founder of the sect of AERIANS, ×××which see.

AEROGRAPHY, from enjp, air, and ypa^w, I describe, a description of the air, or atmos- phere, its limits,

dimensions, properties, &c. It is the same with aerology, unless we suppose the latter to enter into the rational, and the for- mer to confine itself to a description of the more obvious affections thereof. See ATMOSPHERE.

AEROLOGICA, that branch of medicine,

called by some disostica or the non-naturals, which treats of air, its properties and use in the animal ceconomy, and its efficacy in preserving and restoring health.

AEROLOGY, of a►►;p and Koyoi, the doctrine or science of AIR, is a term under which philoso- phers have sometimes- treated of the nature of that element, its various species, constituent parts, properties, and phenomena ; but, on in- vestigation, atmospheric air has been demon- strated to be an exceedingly heterogeneous sub- stance. It cannot therefore, be consistently treated as one integral element of nature ; and the more accurate modern writers have, in the investigation of GASES, analyzed all the consti- tuent parts of the atmosphere. To GAS, there- fore, we refer for a philosophical exhibition of the different kinds of air: and to AIR, and AT- MOSPHERE, for that particular combination of them, which surrounds our globe.

AEROMANCY.

AEROMANCY, n. s. a►►jp and pavrts Gr. in antiquity, included the business of augury and auspicia ; the rules of prediction from uncom- mon winds, storms, showers, and other changes of the atmosphere. Modern authors speak of a more rational eeromancy, meaning by it, the art of foretelling the changes and variations of the air and weather, by means of a regular series of meteorological observations. But though many have been instituted and recorded with much care ; very small progress has hitherto been made in this art. Barometers, thermometers, hygro meters, and anemometers, are of considerable use in this kind of aeromancy, under the title of /

EROMANTIA. Mizoldus has published a body

of rules for foretelling storms, &c. drawn partly from vulgar observations, and the experience of mariners, partly from astrological considerations.

Some philosophers of eminence have endea- voured to illustrate the observations of seamen, and other persons practically acquainted with the changes of weather. Lord Bacon supplies ‘ Rules for prognosticating the weather from the appearances of the moon ;’ and the following table, from the European Magazine, v. IX. has been ascribed to the late Dr. Herschel.

TABLE of the kind of weather which will most probably follow the moon’s entrance into her quarters.

NEW OR FULL MOON.

IN SUMMER.

IN WINTER.

If it be new or full moon, or the ~) moon enters into the first or >

Very Rainy

Snow and rain.

last quarters at the hour of 12.. j Or between the hours of 2 and 4

Changeable

Fair and mild

4 . .6

Fair

Fair

6 . .8

$ Fair, if wind N. W. . . >

Fair & frosty, if N. or N. E.

8 . .10

i Rainy, if S. or S. W. . J Ditto

Rainy, if S. or S. W. Ditto

10 . . Midnight ....

Fair

Fair and Frosty.

Midnight . . 2

Ditto

J Hard frost, unless Wind

2 . .4

1 S. or S. W.

4 . .6

Rain .

Ditto

6 . .8

Wind and rain

Stormy

8 . . 10

Changeable > . . .

Cold, Rain if W. Snow if E.

10 . . Noon

The rising and setting of the moon, says Mr. rain. These situations are called the moon’s

Taylor, in his Weather Guide, as well as its angles.

superior and inferior passage of the meridian, The times most exposed to rain are the rising

tnay serve as a rule for foretelling the times of and setting ; those most fevourable to good

weather, the passage of the meridian. It lias been remarked that, during rainy days, bad weather is always a little interrupted about the time when the moon passes the meridian. We must, however, make an exception to this rule as often as the angle of the moon does not coin- cide with that of the sun. As these observations may be very easily made, by means of astrono- mical tables, in which the angles of the moon and sun are marked, they are exceedingly well calculated to prove the truth of this system. No one, for instance, will refuse assent to it, when the daily changes correspond with the angles of the moon ; and when independently of the effects of the moon's situation, the horizontal effect of the moon at rising and setting is different from that produced by its passage over the meridian.

It rains oftener in the day time than in the night, and oftener in the evening than in the morning.

Linnaeus advised his countrymen to observe with care the opening of the buds, and the unfold- ing of the leaves of trees, as a method of judging the forth-coming weather. The ignorant farmer, says he, tenacious of the ways and customs of his ancestors, fixes his sowing-season generally to a month, and sometimes to a particular day, without considering whether the earth be duly prepared to receive the seed ; hence it frequently happens, that the fields do not yield a produce correspondent to his sanguine expectations. The wise economist should therefore fix certain signs by which to judge of the proper time for sowing. We look up to the stare, and,

without reason, suppose that the changes on earth will answer to the heavenly bodies : entirely neglect- ing the things which grow around us. We see trees open their buds, and their leaves expand, whence we conclude that the spring is approach- ing, and experience supports us in the conclusion; but no one has yet been able to shew what trees Providence intended should be our kalendar, so that we might ascertain on what day the country- man ought to sow his grain. Although it cannot be denied but that the same power, which brings forth the leaves of trees, will also cause the grain to vegetate : nor can any one justly assert that a premature sowing will uniformly accelerate a ripe harvest. No means therefore seem to promise success so much, as the taking of our rule for sowing from the leafing of trees. With this view it must be observed in what order every tree puts forth its leaves, according to its species, the heat of the atmosphere, and the quality of the soil. Afterwards by comparing together the observations of several years, it will not be difficult to determine, from the foliation of trees, (if not certainly, at least probably,) the time when annual plants ought to be sown. It will be necessary likewise to remark what sowings made in different parts of the spring produce the best crops, in order that by com- paring these with the leafing of trees, it may ap- pear which is the most proper time for sowing ; nor will it be amiss in like manner to note at ###what times certain plants, especially the most remarkable in every province or country, blow ; in order that it may be known whether the year makes a quicker or slower progress.

Pliny has similar observations, Why, says he, does the husbandman look up to the stars, of which he is ignorant, whilst every hedge and tree point out the season by the fall of their leaves? This circumstance will indicate the temperature of the air in every climate, and shew whether the season be early or late. This constitutes an universal rule for the whole world ; because trees shed their leaves in every country according to the difference

of the seasons. This gives a general signal for sowing; nature de- claring that she has then covered the earth against the inclemency of the winter, and enriched it with this manure. Nat. Hist. 1. xviii. c. 25. Virgil counsels us on this subject. Mark well the flowering almonds in the wood ; If od’rous blooms the bearing branches load, The glebe will answer to the sylvan reign, Great heats will follow, and large crops of grain. But if a wood of leaves o’ershade the tree, Such and so barren will thy harvest be. In vain the hind shall vex the threshing-floor, For empty chaff and straw will be thy store.

Dryden. Gevrgic, i. 1. 272. Mr. Kirwan, an ingenious contributor to the Transactions of the Royal Irish Academy, (vol. v. p. 20, &c.) has endeavoured to discover rules for prognosticating the different seasons in Great Britain and Ireland, from tables of observations alone. On comparing a number of observations taken in England from 1677 to 1789, (a period of 112 years) he found :

1. That when there has been no storm before or after the vernal equinox, the ensuing summer is generally dry, at least five times in six

2. That when a storm happens from an easterly point, either on the 19th, 20th, or 21st of May, the succeeding summer is generally dry at least four times in five.

9. That when a storm arises on the 25th, 26th, or 27th of March (and not before) in any point, the succeeding summer is generally dry, four times in five.

4. If there be a storm at south-west, or west-south-west, on the 19th, 20th, 21st, or 22d of March, the succeeding summer is generally wet, five times in six.

In this country winters and springs, if dry, are most commonly cold; if moist, warm: ??? On the contrary, dry summers and autumns are usually hot,

and moist summers cold ; so that, if we know the moistness or dryness of a season, we can form a tolerably accurate judgment of its temperature. In this country Mr. Kirwan re- marks, that it generally rains less in March than in November, in the proportion at a medium of seven to twelve. It generally rains less in April than October, in the proportion of one to two, nearly at a medium. It generally rains less in May than September; the chances that it does so, are, at least, four to three ; but, when it rains plentifully in May (as 1 .8 inches or more,) it generally rains but little in September; and when it rains one inch, or less in May, it rains plentifully in September.

From a table kept by Dr. Rutty, in Dublin, for forty-one years, this author endeavours to calculate the probabilities of particular seasons being followed by others : and although his rules chiefly relate to Ireland, as there exists but little

difference between that island and Great Britain in the general appearance of the seasons, we subjoin his conclusions.

In forty-one years there were

6 Wet springs, 22 dry, and 1 3 variable ;

20 Wet summers, 1 6 dry, and 5 variable :

11 Wet autumns, 11 dry, and 19 variable.

A season, according to Mr. Kirwan, is accounted wet, when it contains two wet months. In general, the quantity of rain, which falls in dry seasons, is less than five inches, in wet seasons more ; variable seasons are those, in which there falls between thirty and thirty-six pounds, a

pound being equal to -157639 of an inch.

The order in which the different seasons fol- lowed each other was, as in the following table, A dry spring has been followed by a dry summer 11 times wet 8

variable 3

A wet spring has been followed by a dry summer 0 wet 5

variable I

A variable spring has been followed by a dry summer 5 ###wet 7

variable 1

A dry summer has been followed by a dry autumn 5 wet 5

variable 6

A wet summer has been followed by a dry autumn 5 wet 3

variable 12

A variable summer has been followed by a dry autumn 1 wet 3

variable 1

Hence Mr. Kirwan deduced the probability of the kind of seasons that would succeed others, to be as follows.

In the beginning of any year.

x. The probability of a dry xpring is 22-41

of a wet 6-41

of a variable 13-41

U. The probability of a dry summer is 16-41

of a wet 20-41

of a variable 5-41

III. The probability of a dry autumn is 11-41

of a wet 11-41

of a variable 19-41

IV. After a dry spring, the probability of a

dry summer is 1-22

wet 8-22

variable 3-22

v. After a wet spring, the probability of a

dry summer is 0

wet 5-6

variable 1-6

VI. After a variable spring, the probability of

dry summer is 5-13

wet 7-13

variable 1-13

VII. After a dry summer, the probability of a

dry autumn is 5-16

wet 5-26

variable 6-16

VIII. After a wet summer, the probability of a

dry autumn is 5-20

wet 3-20

variable 12-20

IX. After a variable summer, the probability of a

dry autumn is 1-5

wet 3-5

variable 1-5

But the probability of the autumnal weather will be attained much more perfectly, by taking in the consideration of the preceding spring also; in order to which Mr. Kirwan observes that

A dry spring and dry summer were followed by a

dry autumn 3 times

wet 4

variable 4

A dry spring and wet summer were followed by a

dry autumn 2

wet 0

variable 6

A wet spring and dry summer were followed by a

dry autumn 0

wet 0

variable 0

A wet spring and wet summer were followed by a

dry autumn 2

wet 1

variable 1

A wet spring and variable summer were followed by a

dry autumn 1

wet 0

variable 0

A dry spring and variable summer were followed by a

dry autumn 0

wet 2

variable 1

A variable spring and dry summer were followed by a

dry autumn 2

wet 0

variable 1

A variable spring and dry summer were followed by a

dry autumn 2

wet 0

variable 2

A variable spring and wet summer were followed by a

dry autumn 1

wet 1

variable 5

A variable spring and variable summer were followed by a

dry autumn 0

wet 1

variable 0

X. Hence after a dry spring and dry summer, the

probability of a

dry autumn 3-11

wet 4-11

variable 4-1 1

AERONAUTICS.

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XI. After a dry spring and wet summer, the probability of a

dry autumn is 2-8

wet 0-11

variable 6-8

XII. After a dry spring and variable summer, the probability of a

dry autumn is 0-0

wet 2-3

variable 1-2

XIII. After a wet spring and dry summer, the probability of a

dry autumn is 0-41

wet 0-41

variable 0-41

XIV. After a wet spring and wet summer, the probability of a

dry autumn is 2-5

wet 1-5

variable 2-5

XV. After a wet spring and variable summer, the probability of a

dry autumn is 1-41

wet 0-41

variable 0-41

XVI. After a variable spring and dry summer, the probability of a

dry autumn is 2-4

wet 0-41

variable 2-4

XVII. After a variable spring and wet summer, the probability of a

dry autumn is 1-7

wet 1-7

variable 5-7

XVIII. After a variable spring and variable summer, the probability of a

dry autumn is 0-41

wet 0-41

variable 0-4

After all, some of our readers may think this subject hardly worth pursuing to such an extent ; but, we were not willing to omit so considerable a list of practical observations on facts, occasionally interesting to all men. See BAROMETER, CLOUDS, METEOROLOGY, and WEATHER.

jEROMELI, in natural history, a name given to honey, and also to manna. See DROSOMELI.

^EROMETRY, comprehends not only the doc- trine of

the air itself, considered as a fluid body ; but also its pressure, elasticity, rarefaction, and condensation. But the term is at present not much in use, this branch of natural philosophy being more frequently called PNEUMATICS, which see. C. Wolfius, professor of mathematics at Halle, having reduced many of the affections of this fluid to geometrical demonstration, first pub- lished Elements of ./ Erometry, at Leipsic, in 1709, in High Dutch, and afterwards, more largely in Latin. ??? Thus is the doctrine of the air incorporated into the mathematical sciences. AERONAUT, a person who mounts in, and guides an air balloon. See AEROSTATION AIR BALLOON and HYDROSTATICS.

AERONAUTICS.

1. AERONAUTICS, or ^ERONAUTICA, of ajjp, and vavTiicn, from vavg, a ship, the art of sailing in, or navigating the air. This term has super- seded that of aerostation in scientific treatises, as more correctly expressing the art of guiding aerostatic machines; aerostation more perfectly denoting the weighing of air, or of bodies sus- pended therein. Our plan, in treating of this art is,

I. To furnish a sketch of its PROGRESSIVE HISTORY, or the various early attempts of &ronauts.

II. Of attempts to improve the STRUCTURE of AERONAUTIC MACHINES.

III. Of the PRINCIPLES of their CONSTRUC- TION.

IV. Of the actual MAKING, and FILLING BALLOONS.

The principle of all aeronautic machines was no doubt, first suggested by fact. Certain bodies were seen to ascend. ??? Fact led to experiment. TErostatic machines ascend not because they are freed from the influence of gravitation, and there- fore have no weight, but because the gas with which they are filled, is specifically lighter than the surrounding air. It is a doctrine of Hydros- tatics, that if a body be lighter than a fluid, in equal

proportions, that fluid will bear it up, and it will float upon the surface, as the cork swims upon the water ; and, hence a body lighter than our atmosphere, will float upon the atmosphere

and ascend. If the higher and lower regions of the air were every where equally dense, a lighter body would ascend directly to the surface, and there remain perfectly quiescent, and would have no more tendency to descend into the inferior regions, than a blown bladder has to sink into the water ; which it cannot do, unless oppressed by the weight of some more solid adjunct : which together with itself, exceeds the gravity of the water. But the air is subject to two great prin- ciples. Compression and expansion, existing however in different proportions, at different de- grees of temperature and elevation above the earth. The vast body of air that lies in the su- perior regions, continually pressing its immense weight upon that below, thereby renders it ex- ceedingly dense, so that it becomes impossible for it to rarefy itself to any considerable extent, and therefore as we ascend the upper stratum of the firmament, the atmosphere becomes less dense by reason of the diminished pressure of the superincumbent air, and in the extreme regions is perfectly elastic and subtle ; a light body there- fore, instead of rising to the top, will only rise to a height where the air is of the same specific gravity with itself, and in that altitude will remain quiescent, in proportion as the air is more or less agitated : or, it will be carried before the winds and receive different motions, according as it is acted upon by surrounding currents of atmos- phere. It is exactly so with the balloon, which

being extended to a considerable bulk, and filled with air, considerably lighter than the common air, naturally ascends.

2. This invention, therefore, has in the course of the last century, become the popular substitute for the old attempts of mankind to construct wings, &c. for flight. It is somewhat curious to observe the pertinacity with which men, in all ages, have prosecuted some kind of bold attempt to ‘ rule in air.’ To say nothing of Icarus, and his fabled wings, or of the automata that have been made ingeniously self-moving, the preten- sions of magicians, and the long supposed achievements of witchcraft in this field, angels and daemons have been alike clothed by human credulity with the attribute of flying ; and while philosophy has exploded many of the pretensions of the latter, our pictorial illustrations of scripture, and even the finest paintings perpetuate the claims of angels to wings, with almost unquestioned uniformity.

3. Two of the latest attempts of mankind in this way, may be amusing to the reader. During the reign of James IV. of Scotland, a pseudo philosopher of Italy, presented himself at the court of that monarch with loud pretensions to science, and having been made abbot of Fury- land, to allow him learned leisure, offered in presence of the court, to start from the walls of Stirling Castle upon wings, of his own construc- tion, and pass through the air to France. This adventurer must have possessed some kind of sincere confidence of his success, for he actually manufactured an immense pair of wings, which he crowded with plumage of all sorts, and launched from the walls of the castle on the day appointed. Soon, however, he descended to parent earth, and broke his thigh in the fall. His apology to the disappointed spectators was full as bold as his attempt; but it seems to have been received. ‘ My wings/ said he, ‘ being composed partly of the feathers of dunghill fowls, they, by a certain sympathy, were attracted to the dung- hill : had they been composed of eagle’s feathers alone, the same principle of sympathy would have attracted and kept them upwards ‘.’

4. The second attempt of this kind we shall notice, was made at Tubingen, in Wirtemberg, in 1628. Here a

learned rector of the public school, named Keyder, had been for some years insisting upon the possibility of attaining the art of flying, but sagaciously confined himself to warmly lecturing on the theory. But a monk of the neighbourhood became a sincere disciple, constructed wings of the approved description, and from a high tower in the neighbourhood, started into air upon them. The wind is said in this case, first to have discomposed his machine, bringing down, also, this adventurer ; he fell precipitantly, broke both his legs, and died from the consequences.

5. To lord Bacon, the prophet of art, as Wai- pole calls him, has been attributed the first sugges- tion of the true theory of balloons. But the value of his remarks upon this subject has been overated. The only clear passage in his works speaks of ” flying in the air,” in the old plan of imitating birds ; or, spreading feathers thin and close, and in great breadth, which, he says, ‘ will bear up

a great weight, being even laid, without tilting upon the sides.” And adds, ‘ the further ex- tension of his experiment might be thought upon.’ In another passage of his Natural History, en- titled, Experiment Solitary, touching the flying of unequal bodies in air, he says, ” Let there be a body of unequal weight, (as of wood and lead, or bone and lead) if you throw it from you with the light end forward, it will turn, and the weightier end will recover to be forwards, unless the body be over long. The cause is, that the more dense body hath a more violent pressure of the parts from the first impulsion, which is the cause (though not heretofore found out, as hath been often said) of all violent motions : And when the hinder part moveth swifter (for that it less endureth pressure of parts) than the forward part can make way for it, it must needs be that the body turn over ; for (turned) it can more easily draw forward the lighter part.”

We see in this passage no hint at the scientific theory of aeronautics; it is simply an obscure speculation on the quantum of resistance which a

body meets with in passing through the air : ??? here is not a word of the power of rising in it.

6. But in the fourteenth century that theory is recorded in the writing of Albert of Saxony, an Augustin monk, and a commentator on Aristotle. Following the old notion of fire floating above the atmosphere of the earth ; he suggests, that if any being could bring down a quantity of that light ethereal air that swims above our atmos- phere, and inclose it in a ball or vessel, the vessel might be raised, and kept suspended in common air, at any height. This suggestion rested in perfect dormancy until the beginning of the seventeenth century, when Francis Men- doza, a Jesuit of Portugal, maintained that the combustibility of fire was no objection to its be- ing made to ascend in proper vehicles, as its ex- treme laxity and the exclusion of air would preserve it from inflammation. He died at Lyons A.D. 1626. At about the same period Caspar Schott, also a Jesuit, published this theory in Germany.

7. In 1670 all the ancient speculations about artificial wings whereby a man might fly as well as a bird, were refuted by Borelli in his treatise De Motu Animalium. In this work, from a comparison between the power of the muscles which move the wings of a bird, and those which move the arms of a man, he demonstrates, that the latter are utterly insufficient to strike the air with such force as to raise him from the ground.

8. In the year 1672, Bishop Wilkins pub- lished his Discovery of the New World, in which he certainly seems to have conceived the idea of raising bodies into the atmosphere by filling them with rarified air. This, however, he did not pursue, but rested his hopes upon mechanical motions, to be accomplished by human strength, or by springs, &c. which have been proved in- capable of answering any useful purpose.

9. The Jesuit, Francis Lana, his contemporary, proposed to exhaust hollow balls of metal, of their air, (See Plate I. AERONAUTICS,) and thus occasion

them to ascend. But though the theory was unexceptionable, the means he sug- gested were insufficient to the end : for a vessel

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of ejpper, made sufficiently thin to float in the atmosphere, would be utterly unable to resist the external pressure ; which being demonstrated, no attempt was made on the principle.

10. In 1709, Friar Guzman applied to the king of Portugal for his patronage of a flying machine constructed somewhat in the form of a bird or paper kite, but with tubes through which the wind was to pass to fill wings that were to elevate it : and absurd as this plan obviously was, he met with the royal patronage to such a degree, that he obtained a place in the college of Barcelos, with a professorship in the university of Boimbra, and a pension for life of 6000 reis. But excepting this metaphorical movement upwards to places and honours, we do not hear that the friar ever made any ascent ; though it is said, that in 1736, he constructed a large wicker basket covered with paper, seven or eight feet in diameter, which rose 200 feet in the air ; and thus came to be reputed a conjurer.

11. It is well remarked bv a valuable contem- porary, (Sup. Ency. Brit. Art. AERONAUTICS,) that the persons who had hitherto occupied themselves most with attempts at aerial naviga- tion, were all of them Catholic priests. And he enquires whether

such a pursuit may be ex- plained from their habits of seclusion, and igno- rance of the affairs of real life, or from their familiar acquaintance with the relations of mi- racles and legendary tales. There can be no question that it arose from these causes in great part, as well as from the fact of religious men during the dark ages, engrossing almost every pretension to knowledge ; thus some of the more artful of the priests, imposed on the vulgar the smatterings of natural philosophy as really miraculous facts : and then again in the dawn- ing of the new day of literature, others of their order largely redeemed its credit by nobly deal- ing forth of their secluded stores of literature and science, and leading on to a brighter day.

12. In 1766, Mr. Henry Cavendish ascertained that inflammable air was at least seven times lighter than common air, and suggested to Dr. Black, that perhaps a thin bag filled with the former might be buoyed up by the common atmosphere. The same thought occurred after- wards to Mr. Cavallo ; and he has the honour of being the first who made experiments on the subject. He first tried bladders ; but found them too heavy. He then tried Chinese paper; but that proved permeable to the vapour. His experiments, therefore, in 1782, proceeded no farther than blowing up soap bubbles with in- flammable air, which ascended rapidly to the ceiling.

13. While the true doctrine of aeronautics seemed thus on the point of being discovered in Britain, it was all at once announced in France, by two brothers, Stephen and John Montgolfier, natives ot Annonay, and masters of a consider- able, paper manufactory there, who had turned their thoughts to this subject, as early as the middle of the year 1782. Their idea was to form an artificial cloud, by enclosing smoke in a bag, and making it carry up the covering along with it. In that year, the experiment was made at Avignon with a fine silk bag ; and by apply-

ing burning paper to an aperture at the bottom, the

air was rarified, and the bag ascended to the height of 70 feet. ××× Various experiments were now tried upon a large scale, which greatly excited the public curiosity.

14. An immense bag of linen, lined with paper, and containing upwards of 23,000 cubit feet, was found to have the power of lifting about 500 pounds, including its own weight. Burning chopped straw and wool under the aperture of the machine, immediately occasioned it to swell ; and afterwards to ascend into the atmosphere. In ten minutes it had risen 6000 feet ; and when its force was exhausted, it fell to the ground at the distance of 7668 feet from the place it had left.

15. Not long after this, one of the brothers, invited by the Academy of Sciences to repeat his experiments at their expense, constructed a large balloon of an elliptical form. In a preliminary experiment, this machine lifted from the ground eight persons who held it, and would have car- ried them all off, if others had not quickly come to their assistance. Next day the machine was filled by the combustion of fifty pounds of straw, and twelve pounds of wool. The machine soon swelled, and sustained itself in the air, together with the charge of between 4 and 500 pounds weight. It was designed to repeat the experi- ment before the king at Versailles ; but a violent storm of rain and wind happening to damage the machine, it became necessary to prepare a new one; and such expedition was used, that this vast balloon, nearly sixty feet in height and forty- three in diameter, was made, painted within and without, and finely decorated, in ninety- six hours. Along with it was sent a wicker cage, containing a sheep, a cock, and a duck, which were the first animals ever sent on such a voyage. The full success of the experiment was, how- ever, prevented by a violent gust of wind, which tore ××the machine in two places near the top before it ascended. Still it rose 1440 feet; and after remaining in the air about eight minutes, fell to the ground at the distance of 10,200 feet from the place of its setting out. The animals were not in

the least hurt.

16. As the great power of these aerostatic machines, and their very gradual descent, now demonstrated they were capable of transporting peop'e through the air with safety, M. Pilatre de ftozier offered to be the first aerial adventurer in a new machine, constructed in a garden in the Fauxbourg of St. Antoine. It was of an oval shape, forty-eight feet in diameter, and seventy-four in height, elegantly painted with the signs of the zodiac, ciphers of the king's name, and other ornaments; a proper gallery, grate, &c. enabled the person who ascended to supply the fire with fuel, and thus keep up the machine as long as he pleased. The weight of the whole apparatus was upwards of 1 600 pounds. On the 15th October, 1783, M. Pilatre placing himself in the gallery, the machine was inflated, and permitted to ascend to the height of eighty- four feet, where he kept it afloat about four minutes and half; after which it descended very gently: and such was its tendency to ascend, that it rebounded to a considerable height after

touching the ground. On repeating the experi- ment, he ascended to the height of 210 feet. His next ascent was 262 feet; and in the descent a gust of wind having blown the machine over some large trees in an adjoining garden, M.Pilatre suddenly extricated himself by throwing straw and wool on the fire, which raised him at once to a sufficient height. On descending again, he once more raised himself to a proper height by the same means. The balloon was constructed by the Montgolfiers, and the spirited young naturalist who thus first ascended, seems to have caught at the moment of its filling, a sort of enthusiasm that prompted him to seat himself in the gallery, and to become the leader of these sublime experiments. Some time after, he ascended with M. Girand de Villette to the height of 330 feet ; hovering over Paris at least nine minutes

in sight of all the inhabitants, and the machine keeping all the while in a steady position.

17. It was now proved that aerostatic ma- chines might be raised or lowered at the plea- sure of the persons who ascended. On the 21st of November, 1783, therefore, M. Pilatre and the Marquis d'Arlandes undertook an serial voyage, which lasted about twenty-five minutes, and during which time, they passed over a space of five miles. From the account given by the Marquis, they met with several different cur- rents of air, the effect of which was, to give a very sensible shock to the machine, and the direction of the motion seemed to be from the upper part downwards. It appears also that they were in some danger of having the balloon burnt altogether ; as the Marquis observed se- veral round holes made by the fire in the lower part of it, which alarmed him considerably, and indeed not without reason. However, the pro- gress of the fire was easily stopped by the ap- plication of a wet sponge, and all appearance of danger ceased.

18. Speculations were now entertained as to the possibility of a more convenient method of fill- ing balloons, and instead of feeding a fire as it ascended, to inclose inflammable air at once in the machine; a plan which promised many advantages over the other. The first experiment upon it, was made by two brothers, M. Robert, and M. Charles, a professor of experimental phi- losophy. A bag composed of lutestring was varnished over with a solution of the elastic gum, called caoutchouc ; and was about thirteen English feet in diameter. Many difficulties oc- curred in filling it with inflammable air; but being at last set at liberty, after having been well filled, it was thirty-five pounds lighter than an equal bulk of common air. It remained in the atmosphere about three quarters of an hour, during which it travelled fifteen miles. Its sud- den descent was supposed to have been owing to a rupture, which had taken place when it ascended into the higher regions of the atmos- phere.

This experiment, and the successful voyage made by

M. Pilatre and the marquis, encou- raged the idea of undertaking something of the same kind with a balloon filled with inflam- mable air. The machine used on this occasion

was formed of gores of silk, covered with a var- nish of caoutchouc, of a spherical figure, and measuring twenty-seven feet and a half in diame- ter. A net was spread over the upper hemis- phere, and fastened to a hoop which passed round the middle of the balloon. To this a sort of car was suspended a few feet below the under part of the balloon ; and, in order to prevent the bursting of the machine, a valve was placed in it; by opening of which some or the inflammable air might be occasionally let out. The car was of basket work, covered with linen and beautifully ornamented ; being eight feet long, four broad, and three and half deep ; in weight 130 pounds. Great difficulties again occurred in filling the machine ; but these at last being removed, the two adventurers took their seats about two P.M. on the 1st December, 1783. Persons skilled in mathematics were sta- tioned with proper instruments, to calculate the height, velocity, &c. of the balloon. The weight of the whole apparatus, including that of the adventurers, was 604lb. and a half, and the power of ascent when they set out was 20lb. so that the whole difference betwixt the weight of this balloon and an equal bulk of common air, was 624lb. But the weight of the atmos- phere displaced by the inflammable gas was cal- culated to be 7711b. so that there remains 147 for the weight of the latter; and this calcula- tion makes it only five times and a fourth lighter than common air.

19. When the balloon rose, the thermometer stood at 9►►. of Fahrenheit, and the barometer at 30.18 inches; and, by means of the power of ascent with which it left the ground, it mounted upwards till the mercury fell to twenty-seven inches, from which they calculated their height to be about 600 yards. Throwing out ballast occasionally as they found the machine descend- ing by the escape of some of the inflammable air, they found it practicable to keep

at pretty near the same distance from the earth during the rest of their voyage ; the quicksilver fluctuating between 27 and 27‘65 inches, and the thermo- meter between 53►►. and 57►►. the whole tima They continued in the air an hour and three quarters, and alighted at the distance of twenty- seven miles from Paris ; having suffered no in- convenience during their voyage, nor experienced any contrary currents of air, as had been felt by M. Pilatre and the Marquis.

20. As the balloon still retained a great quan- tity of inflammable gas, M. Charles determined to continue the voyage by himself. M. Robert accordingly left the machine, which was now 1 30 pounds lighter, and arose with such velocity, that in twenty minutes it was almost 9000 feet from the earth, and entirely out of the sight of terrestrial objects. The globe, which had been rather flaccid, soon began to swell, and the in- flammable air escaped in great quantity. He now drew the valve to prevent the balloon from bursting ; and the inflammable gas, being con- siderably warmer than the external air, diffused itself all round, and was felt like a warm atmos- phere. In ten minutes, however, the thermome- ter indicated a great variation of temperature : his fingers were benumbed with cold, and he

felt a violent pain in his right ear and jaw, which he ascribed to the expansion of the air in these organs, as well as to the external cold. But the beauty of the prospect which he enjoyed, made amends for these inconveniences. At his departure the sun was set on the vallies ; but the height to which M. Charles was got in the at- mosphere, rendered him again visible, though only for a short time. He saw, for a few seconds, vapours rising from the vallies and rivers. The clouds seemsd to ascend from the earth, and collect one upon the other, still preserving their usual form ; only their colour was

grey and uni- form for want of sufficient light in the atmos- phere. By the light of the moon, he perceived that the machine was turning round with him in the air ; and he observed that there were con- trary currents which brought him back again. He observed also, with surprise, the effects of the wind, and that the streamers of his banners pointed upwards ; which, he says, could not be the effect either of his ascent or descent, as he was moving horizontally at the time. At last, recollecting his promise of returning to his friends in half an hour, he pulled the valve, and accele- rated his descent. When within 200 feet of the earth, he threw out two or three pounds of bal- last, which rendered the balloon again stationary; but, in a little time afterwards, he gently alighted in a field about three miles distant from the place whence he set out ; though, by making al- lowance for all the turnings and windings of the voyage, he supposes that he had gone through nine miles at least. By the calculations made, it appears that he rose at this time not less than 10,500 feet; a height somewhat greater than that of Mount ./Etna.

21. Many similar aerial voyages were now per- formed, of which a particular description would be superfluous. But as it had occurred to M. Charles, in his last flight, that there might be a possibility of directing the machine in the at- mosphere, this was attempted by M. Jean Pierre Blanchard ; who gives an account of the sensa- tions he felt during one of his aerostatic excur- sions, somewhat different from those of M. Charles ; having, in one part of it, found the atmosphere very warm, in another cold ; and having once found himself very hungry, and at another time almost overcome by a propensity to sleep. The height to which he arose, as mea- sured by mathematical instruments, was thought to be very little less than 10,000 feet; and he remained in the atmosphere an hour and a quarter.

22. Similar attempts to direct balloons through the atmosphere, were made in 1784, by Messrs. Morveau and Bertrand, at Dijon, who raised themselves with

an inflammable air balloon to the height, as was thought, of 13,000 feet; pass- ing through a space of eighteen miles in an hour and twenty-five minutes. M. Morveau had pre- pared oars for directing the machine through the air; but they were damaged by the wind, so that only two remained serviceable ; by working these, however, they were able to produce a sensible effect on the motion of the machine. In a third a;rial voyage performed by M. Blan- chard, he seemed to produce some effect by the

agitation of his wings, both in ascending, de- scending, moving sidewise, and even in some measure against the wind : however, this is sup- posed, with some degree of probability, to have been a mistake, as in no succeeding voyage could the effect of his machinery be perceived.

23. On the 28th of June, 1784, M. Flewrant and Madame Thible, (the first female who ever dared adventure upon these exploits,) ascended at Lyons before the king of Sweden, who then travelled under the name of Count Haga. On their entering the car, (which was 75 feet in height,) they ascended with great celerity, and in four minutes the noise of the multitude was no longer audible. Two minutes afterwards, the eye could not distinguish them. Their greatest altitude was 13,500 feet, (the highest yet reached) and the flag, with its staff of fourteen pounds weight, being thrown out, it was seven minutes descending to the ground. The thermometer had dropt to 43►► on Fahrenheit's scale; and the sensation of cold that they felt, was at- tended by a ringing in the ears. Different cur- rents were found to occupy the strata of the atmosphere, and when passing from one strata to another, the balloon received a sensible undu- lation. The travellers continued to feed their fire with vine loppings, till, having exhausted their fuel, they descended in a corn field, after remaining in the atmosphere three quarters of an hour. About a fortnight afterwards, a splen- did ascent was exhibited from the outer court of Versailles, by command of the French monarch, as a

compliment to the king of Sweden. Of this balloon, the naturalists, Rozier and Proust, undertook the management. On their stepping into the car, it rose in the most rapid manner to the height of 12,520 feet, and appeared to float in a vast congregation of towering white clouds. The thermometer stood at 21►►, and flakes of snow fell copiously on the voyagers, while it only rained below. Descending from this chaos of clouds, they were cheered and delighted by the aspect of the rich and populous district, spread out before them in the most lively man- ner, and finally alighted at the forest of Chantilly, thirty-six miles from the place of their ascent, after an excursion of one hour and five minutes.

24. In August, the Abbe Carnus, professor of philosophy, and M. Lauchet, professor of belles lettres, ascended at Rodez, a town of Guienne in France, to a height of 3920 yards above the level of the town. These aeronauts filled one or two bottles with air at their highest elevation, and found that they contained a quarter less air than if filled at the level of the sea, and that the air was much purer.

25. Messrs. Charles and Robert, from their success in their former experiments, were en- couraged to enlarge their balloon to the size of an oblong spheroid, 46 feet and a third long, and 27 and a half in diameter, made so as to float with its longest part parallel to the horizon. The wings were of the shape of an umbrella without the handle, to the top of which a stick was fastened parallel to the aperture of the umbrella. See Plate 1. fig- 2. Five of these were disposed round the car, which was near 17 feet in length. The balloon was filled in

three hours, and, with the addition of 450 Ibs. of ballast, remained in equilibria with the at- mosphere. About noon, on the 19th September 1784,

they began to ascend; and having risen to the height of 1400 feet, they perceived some thunder clouds near the horizon, which they took great pains to avoid. From this account, however, it should seem, that they had passed safely through the thunder clouds; as, about forty minutes after three, they heard a loud clap of thunder; and, three minutes after, another much louder ; at which time the thermometer sunk from 77 to 59 degrees. The sudden cold, occasioned by the approach of these clouds, con- densed the inflammable air, so that the balloon descended very low, and they were obliged to throw out forty pounds of ballast ; yet on ex- amining the heat of the air within the balloon, they found it to be 104►►, when that of the ex- ternal atmosphere was only 63. When they had got so hiyh that the mercury in the barometer stood only at 23.94 inches, they found them- selves becalmed ; so that the machine did not go even at the rate of two feet in a second, though it had before gone at the rate of 24 feei in a second. On this they determined to try the effect of their oars to the utmost ; and, by work- ing them for thirty-five minutes, and marking the shadow of the balloon on the ground, they found in that time, that they had described the segment of an ellipsis, whose longest diameter was 6000 feet. After having travelled about 150 miles, they descended, only on account of the approach of night, having still 200 pounds of ballast left.

26. The effect of their wings is described thus : ►►► ' Far from going against the wind, as is said by some persons to be possible in a certain manner, and some aeronauts pretend to have ac- tually done, we only obtained, by means of two oars, a deviation of 22►► : it is certain, however, that if we could have used our four oars, we might have deviated about 40►► from the direc- tion of the wind ; and as our machine would have been capable of carrying seven persons, it would have been easy for five persons to have managed and put in action eight oars, by means of which a deviation of about 80►► would have been obtained. We had already observed, (say they) that if we did not deviate more than

22►►, it was because the wind carried us at the rate of twenty-four miles an hour ; and it is natural to judge, that, if the wind had been twice as strong as it was, we should not have deviated more than one half of what we actually did ; and, on the contrary, if the wind had been only half as strong, our deviation would have been proportionably greater.’

27. One of the longest and most remarkable serial voyages ever performed in France, was un- dertaken at Paris, in June 1786, by M. Testu, with a balloon twenty-nine feet in diameter, of glazed tiffany, furnished with wings, and in- flated with gas. He ascended at four o’clock in the afternoon, the barometer standing at 29.68 inches, and the thermometer at 84►►, though the day was cloudy and lowering. The machine had been only ►► filled, but gradually swelled as it became drier and warmer, and acquired its

full distension at the height of 2800 feet ; when* to avoid the waste of gas, and the danger of a rupture, M. Testu attempted to lower the bal- loon by his wings. Not being able to succeed, he thought proper to descend, and alighted in a corn field in the plain of Montmorency, when he was surrounded by the proprietor of the field, and a troop of peasants, who seized him, and insisted on being indemnified for the mischiet occasioned by his idle and curious followers. He persuaded them that his wings were broken, and that he and the balloon were entirely at their mercy ; when they drew both along, in supposed triumph, by cords fixed to the car, till M. Testu, perceiving that the loss of wings, cloak, &c. had made the balloon much lighter, suddenly cut the string, and left the farmer and his peasants gazing below. He now arose to the region of the clouds, whence he saw small frozen particles floating in the atmosphere, and heard thunder rolling undei his feet. As the coolness of the evening advanced, the power of ascension di- minished, and he alighted on the ground near the abbey of Royaumont about seven o’clock. He afterwards threw out some ballast, and rose again to

a height of 2400 feet, when the ther- mometer was 66►►. He now heard the blast of a horn below, and saw a company of huntsmen in full chase. He immediately opened the valve, and descended between Etouen and Varville ; when rejecting his oars, he began to collect some ballast. While he did this, the huntsmen gal- lopped up to him. He then made another ascent, and passed through a dense body of clouds, awful by the frequent thunders, and flashes of lightning following each other in a rapid and vivid stream, illuminating the whole heavens at every explosion. The thermometer fell to 21►► ; but at the height of 3000 feet, rose as high as 56►►. At this altitude, he floated about till half past nine o'clock, when he witnessed the final setting of the sun ; a scene so grand, as to mock the richness of description. After this, he was involved in thick masses of thunder clouds, and lightnings flashing round him on all sides. The thermometer sunk to 21►►. Snow and sleet fell copiously; loud peals of thunder rolled around, and seemed to shake the very firmament. This tremendous scene continued three hours, during which time our aeronaut remained in the midst of the storm. The balloon was affected by a sort of undulating motion upward and down- ward, occasioned, as he supposed, by the elec- tric action of the clouds. The lightning was excessively vivid, and the thunder was preceded by a sort of crackling noise. A calm at last succeeding, the stars broke upon his sight as clear as ever, and the sky seemed perfectly serene. He then took some refreshment, and at half-past two o'clock the day began to open upon the world. He staid till tie had witnessed the rising of the sun, and afterwards descended to the earth, and alighted near the village of Cam- premie, sixty- three miles from Paris, having com- pleted a voyage of nearly twelve hours.

28. The first balloon seen in England, was con- structed by the ingenious Italian, Count Zam- beccari. It was ten feet in diameter, weighed eleven pounds, and consisted of oiled silk, gilt,

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by which means it became, not only more beau- tiful, but less permeable to the gas. It was launched from the Artillery ground, London, on the 25th of November, 1783 ; and was taken up at Petvvorth in Sussex, at the distance of forty- eight miles.

29. On the 21st of September, 1784, Vincent Lunardi, an Italian, is said to have made the first serial ascent in England. His balloon was of oiled silk, striped with blue and red, and thirty-three feet in diameter. There was no valve ; the neck, which was in the form of a pear, through which the gas was introduced, being the medium through which it might be emitted. He took with him a dog, a cat, and a pigeon ; and after remaining sometime, alighted, abou' twenty minutes after three, in a meadow in the neighbourhood of Ware, Hertfordshire.

30. Blanchard, who had performed numerous voyages before, on the 16th October ascended with Mr. Sheldon, professor of anatomy to the royal academy, from Chelsea, and after a short voyage of fourteen miles, brought his com- panion down, and re-ascended to so great an altitude, that he found great difficulty in breath- ing. The atmosphere at that height was so rare, that a pigeon sent off from the car, found great difficulty in supporting itself, and at length came and settled on the machine, afraid to ven- ture in the boundless ocean which he saw on every side.

31. On the 7th of January, 1785, the same gen- tleman ascended from Dover, with Dr. Jefferies of America, on the daring exploit of crossing the sea to Calais. The morning was clear and frosty, and a little wind, scarcely perceptible, NNVV. The balloon was stationed on the cliff, and at one o'clock, when all things were arranged, M. Blanchard ordered the boat to be pushed off, from the top of that celebrated precipice so finely described by Shakspeare. The balloon being scarcely sufficient to carry two men, (for in fact, Blanchard, though a

successful adven- turer, had little scientific knowledge as an aero- naut,) they were soon obliged to cast out all their ballast, except three bags of sand, weighing in the whole thirty pounds. After this, they rose a little, but moved very slowly, in conse- quence of the calmness of the atmosphere. In a short time the barometer which on the cliff stood at 29►►, 7'. had fallen to 27►►, 3'. The wea- ther being fine and warm, they had now a most beautiful view of the south of England. At ten minutes before two o'clock, when they were just in the midst of the strait, twelve miles from either shore, they found the balloon descending, and became alarmed at their situation. They threw out half their remaining ballast, but their descent was still more rapid than before ; they then threw out the remainder, but this was in- sufficient ; they next cast out a quantity of books. This caused the balloon again to ascend, but at a quarter past two, finding themselves again de- scending, they threw out the remainder of their books, and ten minutes after had a most delight- fttl view of the coast of France. Still, however, the balloon was falling, and having no more ballast, they cast out their provisions, cut off the

K^ings of their boat, and parted with every tiling

that was moveable, even to their only bottle which in its descent cast out a steam like smoke, accompanied by a rushing noise, and when it struck the water, the balloon felt the shock. All this not stopping the descent of the balloon they next threw out their anchors and cords' and at last stripped off their clothes, and fasten- ing themselves to certain slings, intended to cut away the boat as their last resource. The balloon, however, began to rise, and they finally descended in safety in the forest of Guiennes, not far from Calais. The magistrates of that town received them with great kindness, and the king presented M. Blanchard with 12,000 livres, and a pension of 1200.

32. It would be tedious to relate all the differ- ent serial voyages that have been performed in this

and other countries ; but we must not omit the ingenious Mr. Baldwin's excursion from Chester. This gentleman in September, 1785, ascended in Mr. Lunardi's balloon; and after traversing the air in a variety of directions, first alighted in the neighbourhood of Frodsham ; then re-ascending, and pursuing his excursion, he finally landed at Rixtonmoss, twenty-five miles from Chester. Mr. Baldwin published the observations he made during this voyage, and gives the following curious particulars of it : ††† The sensation of ascending, he compares to a strong pressure from the bottom of the car upwards against the soles of his feet. At the distance ot what appeared to him seven miles from the earth, though by the barometer, scarcely a mile and a half, he had a grand and most enchanting view of the city of Chester, and its adjacent places, below. The river Dee was of a red colour ; the city very diminutive, and entirely blue. The whole seemed a perfect plain, the highest building having no apparent height, but all reduced to the same level, and the whole terrestrial prospect appeared like a coloured map. The perspective appearance of things to him, was very remarkable. The lowest bed of vapour that first appeared as a cloud, was pure white, in detached fleeces, increasing as they rose : they presently coalesced, and formed, as he expresses it, a sea of cotton, tufting here and there by the action of the air in the undisturbed part of the clouds. The whole became an extended white floor of cloud, the upper surface being smooth and even. Above this white floor he observed, at great and unequal distances, a vast assemblage of thunder clouds, each parcel con- sisting of whole acres in the densest form : he compares their form and appearance to the smoke of pieces of ordnance, which had conso- lidated as it were into masses of snow, and penetrated through the upper surface or white floor of common clouds, there remaining invisible and at rest. Some clouds had motions in slow and various directions, forming an ap- pearance truly stupendous and majestic.

33. Mr. Baldwin endeavoured to convey some idea of

the scene by a sketch, for which, see Plate II. fig. 1. It represents a circular view he had from the car of the balloon, himselt being over the centre of the view, looking down on the white floor of clouds and seeing the city of Chester through au opening, which discovered

the landscape below, limited by surrounding vapour to less than two miles in diameter. The breadth of the outer margin defines his apparent height in the balloon (viz. four miles) above the white floor of clouds. These regions did not feel colder, but rather warmer, than below, and the sun felt hottest when the balloon was sta- tionary. The discharge of a cannon when the balloon was at a considerable height, was dis- tinctly heard ; and a second discharge, when at the height of thirty yards, so disturbed him as to oblige him for safety to lay hold firmly of the cords of the balloon. At a considerable height he emptied a pint bottle full of water ; and as the air did not oppose a resistance sufficient to break the stream into small drops, it mostly fell down in large ones. The balloon was much affected by the water (a circumstance observed by others,) and at one time was going directly towards the sea. The mouth of the balloon, however, being opened, it descended into an under current blowing from the sea, and Mr. B. at length landed at Bellair Farm, in Kinsley, twelve miles from Chester.

34. The first aerial voyage that was made in Scotland, was performed by Mr. Vincent Lu- nardi, who, in November and December 1785, ascended twice from Heriot’s Hospital-Gardens, Edinburgh. On both these occasions he went entirely out of sight, and the first day of his ex- hibition being remarkably fine and clear, his balloon, for a long time before it became quite invisible, by the reflection of the sun beams, appeared at first like a full moon, and after- wards like a star of the first magnitude. He alighted safely on that occasion in a field be-

tween Cupar and St. Andrews; but in his second voyage he was not so fortunate ; for, a strong wind blowing from the west, his balloon was carried in an easterly direction, and when the power of the inflammable air was exhausted, fell into the sea, near the Isle of May, where he was taken up by some fishermen ; after having, for a considerable time, experienced the cold bath in his basket : which was prevented from sinking altogether, by the small quantity of in- flammable air still remaining in the balloon. After this he repeated his serial voyages at Glas- gow, Kelso, and several other places. Previous to Mr. Lunardi's exhibitions, Mr. James Tytler had greatly excited the public curiosity by un- dertaking to ascend from Comely Gardens with a rarefied air balloon ; but, excepting one morn- ing, that he went up a few hundred yards, in a small basket, without his stove, every other at- tempt, to make the balloon carry up him and the whole necessary apparatus, proved fruitless. Had he filled his balloon with inflammable, in- stead of rarefied air, as his skill in chemical operations is undoubted, he would certainly have succeeded, and in that case might have claimed the honour of being the first aeronaut in Britain.

35. SECT. II. The attempts to improve the struc- ture of AERONAUTIC machines will now engage our attention ; and feeling that we have entered sufficiently into the details of preceding voyages, we shall only occupy our pages in the continua- tion 'of this article with such ascents as were made for scientific purposes. A first attempt

of this kind was connected with the desire to lessen the expence of balloons, by discovering some method of ascending without throwing out ballast, and of descending without losing any of the inflammable air. The balloon of the duke de Chartres, afterwards duke d'Orleans, who ascended with this view from Paris in 1784, was constructed upon somewhat new principles. It was of an oblong form, made to ascend with its longer diameter horizontally, and measured fifty-five feet in length, and twen- ty-four in breadth. It contained within it a smaller balloon

filled with common air; by blowing into which with a pair of bellows, and thus throwing in a considerable quantity of com- mon air, it was supposed that the machine would become sufficiently heavy to descend ; especially as, by the inflation of the internal bag, the in- flammable air in the external one would be con- densed into a smaller space, and thus become specifically heavier. The voyage, however, was attended with such circumstances as rendered it impossible to know what would have been the event of the scheme. The power of ascent, with which they set out, seems to have been very great ; as in three minutes after parting with the ground, they were lost in the clouds, and in- volved in such a dense vapour, that they could see neither the sky nor the earth. In this situa- tion they seemed to be attacked by a whirlwind, which, besides turning the balloon three times round from right to left, shook and beat it so about, that they were rendered incapable of using any of the means proposed for directing their course; and the silk stuff, of which the helm had been composed, was torn away. No scene can be conceived more terrible, than that in which they were now involved. An immense ocean of shapeless clouds rolled upon one another below them, and seemed to prevent any return to the earth, which still continued invisible, while the agitation of the balloon became greater every moment. In this extremity they cut the cords which held the interior balloon, and of consequence it fell down upon the aperture of the tube, that came from the large balloon into the boat, and stopped it up. They were then driven upwards by a gust of wind from below, which carried them to the top of that stormy vapour in which they had been involved. They now saw the sun without a cloud; but the heat of his rays, with the diminished density of the atmos- phere, had such an effect on the inflammable air, that the balloon seemed every moment ready to burst. To prevent this, they introduced a stick through the tube, in order to push away the inner balloon from its aperture ; but the expansion of the inflammable air pushed it so close, that all attempts of this kind proved ineffectual. It was now, however, become absolutely

necessary to give vent to a very considerable quantity of the inflammable air , for which purpose the duke de Chartres himself bored two holes in the balloon, which tore open for the length of seven or eight feet. On this they descended with great rapidity, and would have fallen into a lake, had they not hastily thrown out sixty pounds of ballast, which enabled them just to reach the water's edge.
36. This plan for navigating aerostatic machines

bv common air, being thus rendered dubious, another method was suggested : which was to put a small ./ Erostatic machine with rarefied air under an inflammable air balloon, but at such a distance that the inflammable air of the latter might be perfectly out of the reach of the fire used for inflating the former ; and thus, by in- creasing or diminishing the fire in the small ma- chine, the absolute weight of the whole would be considerably diminished or augmented. This scheme was unhappily put in execution by the celebrated M. Pilatre de Rozier and M. Ro- maine. Their inflammable air balloon was about thirty-seven feet in diameter, and the power of the rarefied air one, was equivalent to about sixty pounds. They ascended without any accident ; but had not been long in the atmosphere, when the inflammable air balloon was seen to swell very considerably, at the same time that the JEro nauts were observed, by telescopes, very anxious to get down, and busied in pulling the valve and opening the appendages to the balloon, in order to facilitate the escape of as much inflammable air as possible. Soon after this the machine took fire, at the height of about three quarters of a mile from the ground. No explosion was heard ; and the silk of the balloon seemed to resist the atmosphere for about a minute ; after which it collapsed, and descended along with the two unfortunate travellers so rapidly, that both of them were killed. Rozier seemed to have been dead before he came to the ground ; but M. Romaine was alive when some persons

came up to him, though he expired immediately after.

37. But the most striking improvement that has been attempted in the management of balloons is, the detaching a distinct vehicle for the safety or separate descent of the aeronaut. The first invention of this description, now denominated a]Ktrachute, (Fr. a guard for falling,) is attri- buted to Blanchard, who, in one of his excur- sions from Lisle, about the end of August, 1785, let down from a great height a dog, by means of a basket fastened to a parachute, and the animal reached the ground unhurt. Since that period, the practice and management of the parachute have been carried much farther by other aerial adventurers, and particularly by M. Garnerin, who has repeatedly descended from the region of the clouds by that very slender machine.

When he visited London in 1802, he made two ascents, in the second of which he threw himself from an amazing elevation in his para- chute, consisting of thirty-two gores of canvass, forming a complete hemisphere. When the balloon rose, the parachute hung like a curtain from the hoop, and below it was suspended a cylindrical basket, covered with canvass, four feet high and two and a quarter wide. In this basket the aeronaut placed himself, and rose from North Audley-street, on the evening of the 2d of September. After hovering five or six minutes in the air, he cut the rope, and precipitated him- self to the earth. Before the parachute opened he fell with great velocity, but as soon as it was expanded the descent was gradual : the whole apparatus, however, swung with the aeronaut from one direction to another, like the pendulum

of a clock, and made such tremendous oscilla- tions, that the basket was sometimes thrown in almost an horizontal position, and was borne along before the wind over Mary-le-Bone and Somer's-Town, till it alighted in a field of St. Pancras. M. Garnerin received some severe cuts, bled considerably, and trembled, and was greatly agitated on his release from the basket. He said that the accident had been

caused by one of the stays of the parachute having given way.

38. This voyage, and subsequent experiments of the same kind, gave rise to calculations on the rate and danger of the descent with a parachute. When it is first abandoned to the air, we see it fall with great celerity till the increasing velocity meets a resistance in the air equal, or nearly so, to the force of gravitation, after which it descends uniformly ; but as this equili- brium is not attained at once, the machine in the first instance shoots beyond the bounds of its terminal velocity, then contracts within its just limits, exciting great alarm both in the aeronaut and the spectators ; and thus continues for some time, subject to a sort of interior oscillation, alternately accelerating and retarding. If the surface were flat, its motion would be equal to the velocity which a heavy body must acquire in falling through the altitude of a column of air incumbent on that surface, and having the same gravity as the whole apparatus. But a cylinder of air of one foot diameter and height, weighs only ^ of a pound avoirdupoise. Where- fore if the square of the diameter of the parachute be divided by 17, the quotient will give the weight of an atmospheric column of one foot, and the weight of the apparatus being again divided by this quotient, will give the entire alti- tude of an equiponderant column ; the square root of which multiplied by 8, will express the final velocity with which the parachute will strike the surface of the earth : thus, if the di- ameter of the parachute were 25 feet, then 25×25►►►625, which, divided by 17=36$. If, then, the parachute and aeronaut weighed 36$, the shock would be equal to a fall of one foot ; had the weight been twice as great, the fall would have been twice as heavy, &c. the velocity being at least 8^4, or 16 feet a second.

39. The resistance of the air, however, is greater than theory supposes. In the higher regions of the air the parachute descends with a rapidity that is not maintained in a dense atmosphere ; and when the

momentary inconvenience of rush- ing through this part of the atmosphere is over- come, the mean descent may be calculated at the rate of 12 feet a second, or a mile in 7, minutes; a rate which will not make the shock at the earth considerable.

40. It being now supposed that balloons might be usefully employed in observing the state of the atm ►►sphere, and what circumstances attended the magnetic and electric actions in the upoer regions; as also the proportions of the com- ponent parts of air in different altitudes, more or less remote from the earth, Messrs. Robertson and Lhoest made an aerial voyage from Ham burgh about the middle of July, 1803, and rose to so great a height, that the elasticity of the air

alarmingly distended the balloon. They were forced to let out some gas ; after which they ascended to an altitude in which it was almost impossible to endure the cold. Their teeth chattered without ceasing. Mr. Robertson’s veins swelled, and blood came from his nose. Mr. Lhoest complained that his head swelled so much, that he could .not keep on his hat ; and they both felt a great degree of numbness, and inclination to sleep. This was at about the height of 2600 toises. Unable to continue any longer they descended, and would have alighted at Badenburg, near Winsen, on the Lube, but the inhabitants fled with the greatest alarm, and took them for spectres. They therefore conti- nued their voyage till they arrived at Wichten- beck, on the way to Zell. As they first arose the atmosphere was calm, but cloudy ; as they ascended, the heat decreased, and they could look at the sun without being dazzled. The barometer fell from 27 to 14 inches, and the thermometer to 4| below zero. As they still ascended, the barometer fell to 121 inches. ; but here the cold was insupportable,

although the thermometer was only one degree below the freezing point, and they respired very rapidly ; the pulsations, also, became greatly accelerated. Mr. Robertson made the following experiments, and observations :

i. He let fall a drop of ether on a piece of glass, and it evaporated in four seconds.

ii. He electrified glass and sealing-wax, but they gave no intimation of an accumulation of fluid that could be communicated to other bodies ; and the voltaic pile, which, when the balloon was free from the earth, acted with full force, yielded only one-tenth part of its electricity.

iii. The dipping needle lost its magnetic virtue, and could not be brought to that direction which it had at the surface of the earth.

iv. He struck with a hammer oxygenated muriate of potash. The explosion though it made not a very loud noise, was almost insuffer- able to the ear, and they moreover, observed that though they spoke very loudly, they could with great difficulty hear each other.

v. Water began to boil with a moderate degree of heat, maintained by quick lime.

vi. Mr. Robertson having carried two birds with him, the rarefaction of the air killed one of them, and the other could not fly, but lay extended on its back and fluttered with its wings. vii. Mr. Robertson could not extract any elec- tricity from the atmospheric electrometer and condenser.

viii. The clouds, Mr. R. observed, never rise above 2000 toises, and it was Only in ascending and descending through them that he ob- tained any positive electricity. The greatest altitude during this voyage was 2600 toises.

41 . Mr. Robertson also ascended from Peters- burg, on the 30th June, 1804, with the professor Sacharof, to make certain experiments proposed by the academy,

and took 12 exhausted flasks, a barometer, thermometer, two electrometers sealing wax, and sulphur, compass, a magnetic needle, a seconds watch, a bell, a speaking trumpet, a prism of crystal, unslacked lime, &c. To ascertain the position of the balloon, they

fixed perpendicularly an achromatic telescope, in an aperture in the bottom of the car, which showed terrestrial objects distinctly ; two sheets of black paper were also fixed at right angles, suspended from the car with a piece of thread to indicate any variation in the direction of the balloon, which contrivance they called the way-wiser. About a quarter past seven in the evening, the barometer being at thirty inches, and the centigrade thermometer at 19►►. they ascended, and at thirty-one minutes past seven, the barometer sunk to twenty-nine inches, and the thermometer to 18►►. The first cask was now filled with air, and when the barometer had fallen another inch, another cask was filled. The towns and villages being now obscured by a fog, the paper way -wiser was thrown out, and showed the direction of the balloon, for as the balloon fell, the way-wiser being lighter, and meeting more resistance in falling than the balloon, flew up, and when it rose, sunk down to the full length of its thread.

At other times it was seen in a diagonal direction, and pointed out with considerable accuracy the general direction and movements of the machine. At twenty-five minutes past eight, the barometer being at twenty-six inches, another cask was filled with air, and another, when it was twenty-five inches, and so on for every inch descent of the mercujy. At half-past nine o’clock, the barometer being at twenty-two inches the thermometer at 4►►, 30’, the voyagers saw the sun which was about half obscured by the fogs or the horizon or both. A piece of sealing wax rubbed with cloth, put in motion Bennet’s Elec- trometer. A magnetic needle placed by M. Sacharof on a pin, elevated its north end, and lowered its south end, making an angle of w, or 12►►, but ever after descending, the same

needle assumed an horizontal position. The aeronauts experienced no inconvenience except that their ears were benumbed with cold. There were white clouds a great way above the bal- loon, but the sky was in general clear and bright. They could however see no stars. As they were now floating over some towns and villages, M. Sacharof took his speaking trumpet and directed it toward the earth, and called as loud as he was able; after a lapse of ten seconds his words returned in echo, and sounded distinctly and clearly : calculating by the velocity of sound, he thought himself 5700 feet from the earth ! To render the descent as safe as possible, all the instruments, clothing, &c. with an anchor were let down by a rope, but the handle being drawn a considerable dis- tance along the ground, many of the instruments were destroyed, and of the eight casks that had been charged with air at different altitudes, four only were fit for experiment. These last two voyages may be said to be the first ever under- taken with the general view of investigating philosophy and science.

42. Besides the account given by Messrs, Robertson and Sacharof, with respect to the magnet, that there was a change in the dipping power of the needle.

M. Saussure, from experiments made on the Col du Geant, at the. height of 3435 metres

above the level of the sea, thought he observed a sensible decrease of the magnetic virtue. Some aeronauts had stated that at a certain height the power of magnetism entirely vanishes.

43. To ascertain the truth or fallacy of these assertions, and also to try the experiment of Saus- sure in isolated situations remote from the in- fluence of any local attractions; to explore the con- stitution of the higher atmosphere, its fitness or uufitness for respiration, &c. ; and also to make

electrical, chemical, and meteorological observations, M. Biot and Gay Lussac, two young philosophers, educated at the Polytechnic school m Paris, proposed taking an serial voyage. Their plan was patronised by the French government. The balloon which once visited Egypt, was ###delivered to these gentlemen, for the purpose of the excursion ; the artist who constructed it was appointed to repair it under their direction, and every facility was to be afforded them. Besides the usual provision of barometers, thermometers, hygrometers, and electrometers, they had two compasses, a dipping-needle, and another fine needle carefully magnetized, and suspended by a very delicate silk thread for ascertaining, by its vibrations, the force of attraction in the upper strata of the atmosphere. To examine the elec- tricity of the strata they carried up several metallic wires from sixty to 300 feet in length, and a small electrophorus slightly charged. For galvanic experiments, they had procured a few discs of zinc and copper, with some frogs, insects, and birds. It was also proposed to bring back air collected at as great a height as pos- sible, for chemical analysis, for which purpose they had a glass ball closely shut up, previously exhausted of air ; so that they had only to open and shut it up carefully, by means of the stopper.

44. They ascended from the Conservatoire des Arts, or repository of models, formerly the convent of St. Martin ; on 23rd of August, 1804, the baro- meter being 30, 10.’ inches; the thermometer 61##, 7’. on Fahrenheit’s scale, and Saussure’s hygrometer 80##, 8’. near the point of absolute humidity. In a few moments they entered the region of the clouds, which seemed like a thin fog, and communicated a slight sensation of humidity. The balloon becoming quite inflated, they let out part of their gas, and threw out some ballast to give a greater elevation. They now shot through the clouds, and reached an altitude of 6500 English feet. Viewed from above, the clouds had the usual whitish appearance, exhibiting an elegant variety of gentle swells and undulations,

resembling a wide plain of snow. At this alti- tude they commenced their experiments, and first of all employed the magnetic needle. This was attracted by iron; but owing to a slow rotatory motion of the balloon, they found it im- possible to determine its rate of oscillation. The rotation showed itself, when any of the ropes were brought in a straight line with the edge of the clouds on any terrestrial objects, the contours of which were sensibly distinguishable the one from the other. Electricity was excited by the contact of insulated metals, as upon the earth. An electric pile, prepared with twenty discs of copper, and as many of zinc, exhibited all the

usual symptoms, the pungent taste, the nervous shock, and the decomposition of water. This might have been expected, says M. Biot, since the action of this pile does not cease, even in i vacuum. They afterwards attained the altitude 01 8,940 feet, but afterwards settled at 8,600 feet. At this great elevation the animals seemed to suffer from the rarety of the air. They let off” a bee, which flew away making its usual humming noise. The thermometer had fallen to 56►►, 4’. by Fahrenheit ; yet so far were they from experiencing cold, that they were absolutely scorched by the rays of the sun, and were ob- liged to lay aside their gloves from the incon- venience occasioned by the heat. Their pulsa- tions were much accelerated, that of Gay Lus- sac was increased from sixty to eighty in a- minute, and his companion’s from 79 to 111, attended, however, with no difficulty of breath- ing ; Gay Lussac, whose frame was less robust, experienced the less acceleration. The balloon continued its rotatory motion, which rendered it still difficult to observe, with accuracy, the oscillations of the magnetic needle ; but on looking attentively down upon the surface of of the conglomerated clouds, they observed that the balloon revolved slowly, first in one di- rection, next in the contrary one. They there- fore, seized the few minutes of quiescence be- tween these opposite motions for their experi- ments and observations upon the needle

; but in these pauses, though they set the needle to vibrate, they were rarely able to count more than from five to ten oscillations. From a number of trials made between the altitudes of 9,500 and 13,000 feet, they calculated seven for the mean length of an oscillation, which at the earth is but 7^, and attributing so nice a distinction to the imperfection of the experiment, they concluded that the force of the magnetic attraction had in no degree diminished, at the greatest elevation they could possibly reach ; and the direction of this force, in their opinion, remained the same. M. Biot confesses that he was not able to observe the needle with accuracy, and therefore, cannot positively assert that it experiences no variation ; but he thinks it highly probable that it does not, its horizontal force having undergone no change, or if any, it must have been very inconsiderable, because the magnetic bars brought into equi- librium before their departure, retained their horizontality during the whole journey. The weather and the disposition of the apparatus, however, prevented their coming to any nice conclusion.

45. At the altitude of 11,000 feet, they liberated a green linnet, which flew away directly ; but soon feeling itself abandoned in the midst of an un- known ocean, returned and settled on the balloon, then collecting itself, took a second flight, and darted downward to the earth, describing a tortuous, yet almost perpendicular track. A pigeon which they sent off, offered a more curious spectacle : He rested a short time on the edge of the car, and looked down as if measuring the breadth of that unexplored sea before him, then launching into the abyss, fluttered irregu- larly, and after a few strokes, whirling in spiral like birds of prey, precipitated himself toward

the mass of extended clouds, and became in- visible. Our aeronauts had now arrived at the altitude of

13,385 feet, and had not yet made electrical experiments. In order to try the ap- paratus an insulated wire was let down 240 feet in length, and electricity was extracted from its upper extremity, which when applied to the electro- meter, appeared to be resinous, or negative, con- firming the observations of Saussure and Volta, respecting the increase of electricity, observed in ascending the atmosphere. The experiment was tried, first, by destroying the atmospheric electricity by means of the vitreous electricity, from the electrophorus ; and, secondly, by de- stroying the vitreous electricity, extricated from the electrophorus, by means of the atmospheric electricity. The latter must therefore, have been resinous. The inference drawn from these ex- periments was, that electricity increases as we ascend farther from the surface of the earth, agreeably to the experiments and observations of Volta and Saussure. The diminution of tem- perature in the higher regions, was not so great as might have been expected, and less than what is experienced in the same altitude on the tops of mountains, even at the elevation of 12,800 feet. The thermometer was at 51►►, by Fahrenheit, while it stood as low as 63$, at the observatory, being a decrement of one degree for every 1000 feet of ascent.

46. The hygrometer, or rather hygroscope of Saussure advanced regularly towards dryness in proportion to the altitude they attained. At the time of the ascent, this instrument indicated 80►►, 8′, at 16►►, 5′ of the centrigade thermometer, but at the elevation of 13,000 feet, it changed from 80►►, 8′, to 30►►, from which it would ap- pear that the air is much drier in the upper regions than at the earth, which was the conclu- sion of M. Biot. The rectitude of it however, has been questioned. It has been observed that the indications of the hygroscope depend on the relative attraction for humidity possessed by the substance employed, and the medium in which it is immersed. But air has its disposition to retain humidity, always augmented by rarefac- tion, and consequently such attraction must

materially affect the hygroscope. Such are the results of this voyage, which has been considered the most scientific of any that have been hitherto made. Having expended all their ballast they descended gradually till at about the altitude of 4000 feet, they entered the stratum of clouds extending horizontally with the surface of the earth, and at last reached the ground. There being no people near the spot to stop the machine, they were dragged in the car to some distance along the fields. M. Biot was so overpowered by the alarm of their descent as to lose entire possession of himself, and the only

way left of avoiding the dangers that threatened them, was, by discharging the remaining gas.

47. M. Biot afterwards presented himself to the Institute as a candidate for a second ascent. He did not however repeat his excursion ; but at the request of several Parisian philosophers M Gay Lussac made another voyage on the 15th of September, from the same place, at about forty- nine minutes past nine in the morning. He reduced his apparatus, and adapted it better to his circumstances. Aware that he could only observe the magnetic needle during the short periods of quiescence, intervening between the rotatory motions of the balloon, he preferred one of not more than six inches long, the oscillations of which were more rapid. The dipping needle was magnetized, and adjusted by M. Coulomb, and the thermometer was inclosed within two con- centric cylinders of pasteboard covered with gilt paper, proper to prevent the immediate action of the sun. The hygrometer, on Richer's principle, with four bodies, was sheltered in a similar manner. Two glass vessels were exhausted, with the intention of bringing down air from the higher regions, and the mercurial gauge stood at the twenty-fifth part of an inch. The barometer at the period of ascent, stood at 76,525 centimetres, or 30.66 English inches. The hygrometer at 57.5, and the thermometer at 27.50, of the cen- tigrade, or 82►► of Fahrenheit's thermometer. At the elevation of 3000 feet, he saw a light vapour dispersed through the whole atmosphere

below him, through which distant objects might be confusedly seen. At the height of 3032 metres, or about 9950 English feet, he commenced his experiments on the magnetic needle, which made twenty oscillations in 83⁇, the same as it would have made at the earth in 83⁇, 20′. At the height of 12,680 feet, the needle taking the mean ampli- tude of the oscillations was 31⁇ as at the obser- vatory. Owing to the wind and other difficulties, he was obliged to renounce any further observa- tions. In his experiments with the dipping needle, he was equally unsuccessful, for the dry-‘ ness formed by the sun in rarefied air, was so great, that the compass became damaged by the bending of the metallic circle on which the divisions were traced out, by which all his deductions were rendered uncertain : he there fore proceeded to his other experiments.

48. At the altitude of 14,000 feet, a key held in the magnetic direction repelled with one end, and attracted with the other the North Pole of the needle, and even at the increased altitude of 20,150 feet, he found no sensible difference ; whence, he concludes magnetism to be the same at the greatest elevation.

The table of observations will, perhaps, give the clearest view of the result of his experiments to the curious reader.

Table of the Observations of M. GAY LUSSAC. in his ascent on the 15th of September, 1804.

Tempera lure expres sed in de- grees of the centigrade thermome- ter.

Mean of the indications of the two hygrome- ters.

Mean height of the baro- meter, reducec to that of a barometer at : constant level

Corresponding heights in metres above Paris.

The same in toises.

e

60 a

“5 jg

I1

Duration of the oscil- lations in seconds.

Oscillations reduced to the common number 10.

rresponding time.

a

o

Z

u

Cent.

27⬜⬜-75

57-5

76-525

Surface.

Surface.

30

126-5

10

42-16

12-50

62–0

53–81

3032–01

1555–64

20

83–3

10

41–5

11–00

50–0

51–43

3412–11

1750–66

8–50

37–3

49–68

3691–32

1893–92

10–50

33–0

49–05

3816–79

1958–29

10

42–0

10

42–0

45–28

4511–61

2314–84

30

127–5

10

42–5

12–0

30–9

46–66

4264–65

2188–08

30

125–5

10

41–8

11–0

29–9

46–26

4327–86

2220–51

20

86–0

10

43–0

8–25

27–6

44.04

4725–90

2428–89

20

84–5

10

42–2

6–50

27–5

43–53

4808–74

2467–24

30

128–5

10

42–8

8–75

29–4

45–28

4511–61

2314–84

30

127–5

10

42–5

5–25

30–1

42–49

5001–85

2566–32

4–25

27–5

41–14

5267–73

2702–74

40

169

10

42–2

2–5

32–7

39–85

5519–16

2831–74

0–4

30–2

39–01

5674–85

2911–62

1–0

33–0

41–41

5175–06

2654–68

30

126–5

10

42–1

3–0

324

37–17

6040–70

3099–32

10

32–1

36–96

6107–19

3133–44

20

84–0

10

42–0

0–0

35–1

39–18

5631–65

2889–45

30

127–5

10

42–5

3–25

33–9

36–70

6143–31

5151–97

20

82–0

10

41–0

[illegible]7–0

34–5

33–39

6884–14

3532–07

20

83–5

10

41–7

[illegible]9–5

32–88

6977–97

3579–90

49– From this it appears, that the temperature is very irregular in corresponding heights, which “he supposed to arise from the observations being taken, some in ascending and some in descending, the thermometer obeying the variations too slowly. But regarding only the decreasing series of degrees in the thermometer, the law of temperature ap- pears more regular : thus, the temperature at the earth is 27[illegible], 75’, and at the height of 3691 metres, is 8[illegible], 5’, dividing the difference of the altitudes by that of the temperatures, we shall have 191.7 metres, or 98.3 toises of elevation for each lowering degree of temperature. Towards the surface of the earth, the heat follows a less de- creasing law than in the higher parts of the atmosphere. At

greater heights it follows arith- metical progression. The lowest temperature observed, was 9□□, 25′, corresponding to 14□□, 9′, of Fahrenheit’s thermometer ; and to an eleva- tion of 23,040 English feet. The gradation evidently is not uniform, as appears from facts already laid down by other observers, but pro- ceeds with augmented rapidity in the upper regions. The hygrometer was very irregular, but tended obviously toward dryness. At the earth, it was 57□□, 5′, but at the height of 3032 metres, changed to 62□□, and then declined till the balloon attained the height of 5267 metres, when it stood at 27□□, 5′. From this point it advanced again, with slight aberrations to 35□□, 1′, at an altitude of 5631metres, but above this, the varia-

tion was slight. Facts and observations, have, however, convinced us, that the higher strata of the atmosphere, are generally driven through the lower, and are capable of retaining at the same temperature, a larger share of moisture. The two air flasks were opened, one at the height of 21,460 feet, and the other at 21,790 feet, when the air rushed into them with a whistling noise. From that stupendous height, he still saw fleecy clouds at a great height above him, but none below. The atmosphere wanted transparency, and exhibited a dull misty ap- pearance. The different aspect of the sky, was owing, in his opinion, to the different direction of the winds. At this enormous elevation, he began to feel increasingly cold, great numbness, difficulty of breathing, while his throat was so parched from inhaling the dry attenuated air, that he could scarcely swallow a morsel of bread. His ballast being nearly gone, and his balloon completely distended, he began to descend at the rate of about a mile in eight minutes, and after a lapse of thirty-four minutes, alighted, at three-quarters past three o’clock, near the hamlet of St. Gourgon, sixteen miles north west of Rouen. On his arrival at Paris, he hasted to the laboratory of the polytechnic school, with his flasks of air, and proceeded to analyze it. On opening the flasks under

the water, the liquid rushed in, and half filled their capacity. It was found on analysis to be exactly the same in point

of proportions, as that at the surface of the earth ; each 1,000 parts containing 215 of oxygen*

50. The next voyage which we must notice by way of warning to future adventurers, was one of the few fatal ones. On the 7th April, 1806, M. Mosment ascended from Lisle, apparently under auspicious circumstances. During his ascent, he dropped a dog with a parachute, which came safely to the ground, and about one o'clock something was seen descending slowly through the air, and proved to be the flag of M. Mosment. Soon after, a murmur was circulated that the body of the aeronaut was found in one of the fosses of the city, lifeless and covered with blood, which proved in the end but too correct. The misfortune has been attributed to the shallowness of the car, by which, he is supposed to have lost his balance in throwing out the dog, and preci- pitated to die earth.

51. On the 4th of August, M. Garnerin, as- cended from Paris at eleven o'clock in the evening, for the purpose of making nocturnal observations, under the Russian flag. His bal- loon was illuminated by twenty lamps, and formed a very splendid appearance ; rockets let off at Tivoli, seemed to him scarcely to rise above the earth, and Paris appeared studded with numerous stars. In forty minutes he rose to an elevation of 13,200 feet: at twelve o'clock, when 3,600 feet from the earth, he heard the barking of dogs; at two o'clock, he saw several meteors flying around him ; at half past three, he beheld the sun rising in magnificence and grandeur above the ocean of clouds, and the gas expand- ing, he rose to the height of 15,000 feet, and after a lapse of more than seven hours, descended at Loges, forty-five leagues from Paris.

52. He took a second nocturnal voyage, on the 21st September, in which he was exposed to great danger. He commenced his voyage as before from Tivoli, and was at first carried with unex- ampled rapidity to an immense height, when he began to prognosticate a storm. The balloon dilated to an alarming degree, and having neg- lected his apparatus for conducting the gas away from the lamps in its escape, he could not manage the balloon : he therefore with one hand made an opening of two feet diameter, and with the other put out all the lamps he could, and was, without a regulating valve, tossed about from current to current ; his ballast was gone, and in this condition, the balloon rose through thick clouds, then sunk, then struck the earth and re- bounded to an amazing altitude : the storm dashed him against the mountains, and after many severe shocks he became for a time insen- sible. On recovering his senses, he found he had been carried to Tonnere, in a storm of thunder. His anchors shortly hooked in a tree, and he alighted in seven hours and a half from his ascension, 300 miles from Paris, having travelled a distance of forty miles in an hour. This, however, is not more than half the distance he travelled on one occasion in this country, when he went from London to Colchester, a distance of fifty miles, in three-quarters of an hour.

Green, Graham, and other adventurers have been connected with the ascent of balloons, for the purpose ot emolument, in England : sometimes exhibiting the triumphs, and sometimes tho paucity of scientific attainments in their con ►►► ductors. But we know of no further efforts thai; the above, to increase the materials of science itself, by these voyages.

54. The utility of ^Eronautic studies and experi- ments has been very much questioned even by philosophical minds. M. Cavallo, well known in the philosophical world, suggested long; age that small balloons, especially those made of paper, and raised

by means of spirit of wine may serve to explore the direction of the wind* in the upper regions of the atmosphere, pai- ticularly when there is a calm below ; and we see the French aeronauts adopted this idea, tha . they might serve also for signals in various cir- cumstances, in which no other means can be used ; and letters or other small things may be easily sent by them ; for instance, from ships that cannot safely land on account of storms ; from besieged places, islands, or the like. The larger aerostatic machines, he adds, may answer all the above mentioned purposes in a better manner ; and they may, besides, be used as a help to a person who wants to ascend a mountain, or a precipice, or to cross a river ; and perhaps one of the machines tied to a boat by a, long rope, may be, in some cases, a better son of sail than any that is used at present. Their conveying people from place to place with great swiftness, and without trouble, may be of essen- tial use, even if the art of guiding them in a direction different from that of the wind should never be discovered. By means of those ma- chines the shape of certain seas and lands may be better ascertained ; men may ascend to the tops of mountains they naver visited before ; they may be carried over marshy and dangerous grounds ; they may by that means come out of a besieged place, or an island ; they may, in hot climates, ascend to a cold region of the atmos- phere, either to refresh themselves, or to observe the ice which is never seen below ; and, in short, they may be thus taken to several places, to which human art hitherto knew of no con- veyance.

55. ‘ The philosophical uses, to which these machines may be subservient, are numerous in- deed ; and it may be sufficient to say, that hardly any thing which passes in the atmosphere is known with precision, and that, principally for want of a method of ascending into it. The formation of rain, of thunder storms, of vapours, hail, snow, and meteors in general, requires to be attentively examined and ascertained. The action of the barometer, the refraction and temperature of the air

in various regions, the descent of bodies, the propagation of sound, &c. are subjects which all require a series of observations and experiments, the performance of which could never have been properly expected, before the discovery of aero-static machines.’

56. Such speculations have been for years on record : the reader will see from our preceding detail that they have but partially been fulfilled.

But we should not omit to state, that the French applied balloons to military purposes during the late war, and ascribe to this in a great measure, the celebrated victory obtained over the Austrians, at Fleurus, 1794. A balloon was sent up under the direction of Mr. Coutel, accompanied by an adjutant and a general, who rose twice the same day to the height of 220 fathoms, and re- mained each time four hours suspended in the air, observing the movements of the enemy, and corresponding all the time by military signs with general Jourdan, commander of the French army. The enterprise was at last discovered, and a battery opened upon the aeronauts, but they soon gained an elevation beyond the reach of the fire. Afterwards the French commonly pre-pared balloons to go with their armies, as into Egypt, &c. but we have never heard of any other practical result. We would now direct the reader to

57. SECT. III. OF THE PRINCIPLES OP AERO- NAUTIC MACHINERY. ??? The general principles of jErostation are so little different from those of hydrostatics, .that it is almost superfluous to insist on them. It is a fact universally known, that when a body is immersed in any fluid, if its weight be less than an equal bulk of that fluid, it will rise to the surface ; but if heavier, it will sink ; and if equal, it will remain in the place where it is left. For this reason smoke ascends into the atmosphere, and heated air in that which is colder.

Upon this simple prin- ciple depends die whole theory of aerostation.

58. A cubic foot of air has been found to weigh about 554 grains, and to be expanded by every degree of heat, about 3^ part of the whole. By heating a quantity of air, therefore, to .500 degrees of Fahrenheit, we just double its bulk when the thermometer stands at fifty-four in the open air, and in the same proportion we diminish its weight ; and if such a quantity of this hot air be inclosed in a bag, and the excess of the weight of an equal bulk of common air weighs more than the bag with the air contained in it, both the bag and the air will rise into the atmosphere, and continue to do so until they arrive at a place where the external air is na- turally so much rarefied, that the weight be- comes equal ; and here the whole will float.

59. From the frequent exhibition of aerostatic machines, the power of hot air in raising weights, or rather that by which it is itself impelled up- wards, has been illustrated by a variety of ex- periments with which every one is familiar. From these it appears, that in the aerostatic ma- chines on Montgolfier's plan, it must be an ad- vantage to have them as large as possible ; be- cause a smaller quantity of fire will then have a greater effect in raising them, and the danger from that element, which in this kind of ma- chines is chiefly to be dreaded, will be in a great measure avoided. On this subject it may be remarked, that as the cubical contents of a globe, or any other figure of which balloons are made, increase much more rapidly than their surfaces, there must ultimately be a degree of magnitude at which the smallest additional heat would raise any weight whatever. Thus, supposing any aerostatic machine capable of containing 500

cubic feet, and the air within it to be only one degree hotter than the external atmosphere ; the tendency of this machine to rise, even without the application of artificial heat, would be near an ounce. Let its capacity be increased sixteen times, and the tendency to rise will be equiva- lent to a

pound ; and this may be done without making the machine sixteen times heavier than before.

60. It is certain, however, that all aerostatic machines have a tendency to produce or preserve heat within them, as Messrs Charles and Roberts found in their aerial voyage of 150 miles, when the external atmosphere was 63►►. and the ther- mometer within the balloon at 104►►. Such a difference of temperature affording a power of ascent equal to forty-one grains on every cubic foot, must, in a machine of 50,000 such feet, have amounted to almost 200 pounds. Hence we may easily account for Mr. Morveau's ac- cident at Dijon, when a balloon filled only with common air made its escape to some distance by the spontaneous rarefaction of the air within. This difference between the external and internal heat, being so very considerable, must have a great influence upon aerostatic machines, and will undoubtedly influence those filled with in- flammable air as well as the other kind. The rain, snow, and vapours, which condense upon them in the higher regions, may also occasion an evaporation, and consequently a very violent degree of cold, so as to make them specifically heavier than the atmosphere.

To this, probably, we may ascribe the descent of the balloon which carried M. Blanchard and Dr. Jeffries ; and which seemed so extraordinary, that many had recourse to an imaginary attrac- tion in the waters of the ocean, in order to solve the phenomenon. This supposition, however, is rejected by Cavallo ; who explains the matter, by remarking, that in two former voyages made with the same machine, it could not long support two men in the atmosphere, so that we had no reason to wonder at its weakness on this occa- sion. In fact, it does not appear that the air over the sea is at all warmer than that above land ; on the contrary, there is every reason to believe that the superior reflective power of the land renders the atmosphere above it warmer : but it is very natural to suppose, that the air above the sea is more moist than that above land ; and consequently, by letting fall its moisture upon the

balloon, must have occasioned an evaporation, that would deprive the machine of its internal heat; which it would partly re- cover after it entered the warmer and drier at- mosphere over land.

61. Much attention has been directed to the shape most proper for the balloon, an object in aeronautics of considerable importance. The early balloons appear to have been elliptical or oval, but the spherical is now generally preferred because this figure admits the greatest capacity under the least surface. The conical or oblong figure has been proposed as an experiment ; in which case the machine is supposed to proceed with its narrow end forward. This suggestion arose from the consideration that a round form , and that which is approximately so, presents a

greater surface to the opposition of air; and is, therefore, an insuperable obstacle to guiding it by the action of the oar, wings, or any other invention which might be contrived to turn it, either in the current of the atmosphere, or even in a perfect calm. Mr. Hoole, copying nature, suggests the shape of a fish, the head of which figure might serve to divide the fluid, and the tail as a rudder, to steer the course of the balloon. The traveller, he suggests, should sit in the centre of gravity of the whole mass ; and thus he would not only render it perfectly horizontal, but be able, from his situation, to give an impulse of sufficient force to move the whole body : he should also be provided with instru- ments analogous to the fins of fishes, says this author, and of sufficient texture to bear the whole force of his muscular strength. The oblong form is, however, attended with the disadvan- tage already named, as to its capacity being less under the same surface than the sphere ; and consequently, its power of buoyancy must be calculated at a proportional diminution, to say nothing of the positive augmentation necessarily incurred by such a

change of figure to its ponde- rosity, or the superadded consideration of the difficulty of balancing and governing such a figure in the open heavens, exposed to the action of violent winds and storms ; the first blast of which might roll it sideways, sweep it away upon its bosom, or perhaps turn it over. Other ad- vantages of the spherical form are as follow. The circumferences of spheres are as their dia- meters ; their surfaces as their squares ; their solid contents as the cubes of their diameters. The diameter of the circumference being as 7 to 22. If the diameter of a spherical balloon be 35 feet, the circumference will be 110: that diameter multiplied by the circumference, will give the surface of the sphere, and in the case above named 3850 feet. By knowing the weight of a given portion of the materials of which the balloon is formed, as of a square foot or yard, it is easy to calculate the whole ; and, in order to find the capacity, take |{ of the cube of the dia- meter, or multiply j of the surface by the entire diameter.

62. Having found the contents and surface of the balloon, we calculate its buoyancy. If the cubic foot of air weighs 1►► of an ounce, we take the number of cubic feet in the solid content of the balloon, and add to them ►► part of themselves, considering the feet as ounces ; and hence we have the weight of air displaced by the balloon. If the balloon contain 22,458 cubic feet, each of the weight of l^oz. we add to 22,458 ounces ►► of that quantity ; and hence have 26,949f ounces the weight of the whole, supposing the dimensions of the same weight as air. This, however, is not the case. From the aggregate, then, of the 26,949►► ounces, we deduct the weight of the materials of which the vehicle is made, and the remainder expresses the exact levity of the bal- loon, on the supposition that it contains common air. But inflammable air weighs from \ to -^ of the weight of common air only, and, supposed in the above case at J, will stand thus *J►►i►►► 280 ; also 1256 ►►► 280~976ths power of ascension. The same general reasonings may be applied in other cases for

calculating the buoyancy of

spherical balloons of all sizes, the levities being nearly as the cubes of the diameters, and consequently the diameters as the cube roots of the levities. But from the application of similar reasonings to the oblong figure, there appears, as wo should expect, an augment of weight, and a decrease of capacity, under the same extent of surface.

63. The power of ascension in balloons differs considerably, according to the means of aerostation or rarefaction employed. If a perfect vacuum could be procured, a globe of 10 feet in diameter would rise, with a force of 40 pounds ; one of 20 feel, 320 pounds; one of 30 feet, 1080 pounds, in the ratio of the cube of the diameter. We have already stated, the levities are as the cube of the diameters, and consequently diameters as the cube roots of the levities. But air expands by heat at least 450th part of its bulk ; and it is impossible to apply caloric in a sufficient degree to obtain its whole ascensional power. That air within a balloon or vehicle, heated 50 degrees, would dilate by elasticity till one-nintli part was driven out ; so that even then the tendency of the balloon to rise would be equal only to the ninth part of its whole buoyant force. That being the relation in which 50 stands to 450, and 50 degrees of heat is as much, perhaps, as could be supported. Humidity produces a dilation of air, amounting, in good weather to an eightieth part of the volume of fluid, and in the tropical regions would exceed one-twentieth : hence moist air thrown into a large bag, sufficiently waxed, would cause it to rise. But heat and moisture combined, produce a far greater rarefaction of the air than either of them is capable of producing alone. The smoke used by Mont- golfier with so great success, was nothing scarcely but air charged with vapour, produced by burn- ing of vine-twigs, chopped straw, &c. and was computed to be one-third specifically lighter than common air, and therefore must have pos- sessed a degree of rarefaction which it would require 150 degrees of

heat to produce operating alone. From these data it is evident that the force estimated at 12J pounds avoirdupoise in a globe of 10 feet diameter, would amount to 1562J pounds, if the diameter were 50 feet, and to 12,500, if it were a hundred, being as the cube roots of the levities, from which is to be deducted, the weight of the case, appendages, &c. which, estimated at two-fifths of a pound, for a sphere of one foot in diameter, demonstrates a balloon of 100 feet diameter, capable of exerting an ascending power of not less than 8500 pounds, independent of the cordage, car, ballast, &c. which still must be deducted; and one of 33|feet diameter would exert a power capable of pro- ducing a mere equilibrium between the weight of the canvass and the buoyant force of the rarefied air.

64. Balloons filled with gas remain to be consi- dered. Hydrogen gas obtained from sulphuric acid, acting on iron filings, is six times lighter than common air, but gas evolved by a solution of zinc in that acid, is twelve times lighter. We may, therefore, independently of accidents, &c. consider, that on a general scale the hydrogen ga.►► that fills a balloon, is six times specifically lighter than common air, the balloon must there-

fore exert of the buoyant force corresponding to its capacity, and will have an ascending power equal to 5g of a pound avoirdupois for a globe of one foot diameter, 11 2 J pounds for a balloon of 15 feet diameter, 900 pounds for one of 30 feet, and 7200 pounds for one of 60 feet, the ►►►weight of the balloon, &c. to be deducted, which allowing, as has been calculated 5‘0 part of a pound for a varnished silk globe of one foot dia- meter, would be in a balloon of 15 feet diameter, 11 J pounds, in one of 30 feet 45 pounds, in one of 60 feet 1 80 pounds, and the consequent power of ascension in such balloons would be 101 J, 855, and 7020 pounds, whilst a balloon of 1* feet would just float in the

atmosphere. There being in that case an exact equilibrium between the weight of the materials and the ascensional power of the gas. The weight of the appendages, it must be considered, has a tendency to com- press the gas embodied in the balloon, and there- by to render it more dense, but this effect is not considerable. A load of 6000 pounds in a bal- loon of 60 feet diameter, has been calculated to produce a compression amounting to f of a pound ; for a circle of one foot diameter in the horizontal section, the 979th part of the pressure of the atmosphere on a globe of those dimensions, and rating the weight of gas at 1200 pounds, there will be a diminution of buoyancy of 1^ pounds. The balloon, according to its power of ascension, would rise with a motion perpetually accelerating, were not this velocity checked by the resistance of the air through which it passes, which according to the theory of dynamics, is to that which a falling body acquires in the same space of time, as the ascensional power is to the weight of the apparatus and fluid. Still, not- withstanding the opposition it meets with from the atmosphere, it will attain its final velocity in about double the time which would be otherwise required for that purpose, after which its ascent will be uniform, the resistance of the air being just equal to the buoyancy of the balloon. The resistance of a circle moving through any given fluid in a direction perpendicular to its plane, is measured by the weight of a column of that fluid of equal base with the circle, and at an altitude from which a heavy body falling will acquire the same celerity ; a rule which arises out of the ge- neral principle that air presses equally every way. Near the level of the sea, at mean temperature, a column of air 17 feet high, incumbent on a circle of a single foot diameter, weighs a pound ; the consequent resistance which such a circle would suffer, propelled at the celerity of 33 feet each second. Newton calculates the resistance of the atmosphere to be just half that of its generating circle, and therefore a velocity of 46►► feet in a second, would create a resistance of one pound to a sphere of one foot diameter. In other

cir- cumstances the resistance will be proportionate to the squares of the velocities and densities. Consequently if the buoyant force were always the same, the velocity of ascent in a balloon would be inversely as its diameter. A balloon of 30 feet diameter and 100 pounds ascensional power, has the same effect as the ninth part of a pound for a globe of one foot diameter; and would therefore meet a resistance corresponding to the

velocity of 46►► divided by 3, the square root of 9 or 15| each second, consequently the balloon would rise a mile in six minutes.

65. To determine the height to which a balloon will rise, the rule is, to compute the contents of the globe in cubic feet, and divide its restraining weight in ounces by the content, and the quotient will be the difference in the density of the atmosphere at the surface of the earth, and at the point to which the balloon will rise. Subtract this quotient from 1], the density at the earth, ard the remainder will be the density at that height ; after which, the height may be found by comparing the density thus obtained, with philosophical tables for that purpose.” The balloon would in- deed, at first, rise above this altitude, by reason of the rapid celerity acquired in its ascent, and afterwards sink below it ; but this is the point at which it would ultimately settle and continue in the diffuse medium ; the density of air, at that degree of elevation, just balancing die ascen- sional power.

66. Its equipoise cannot be stable so long as it remains in a loose flaccid state ; but the circumstances of its ascent are to be determined by means of ballast, and the safety valve appointed for occasionally letting out a portion of the gas ; for although the balloon designed for any con- siderable altitude, is not more than half filled with gas at first, still, by the increased rarefaction of the air as it ascends, and the consequent diminished pressure on the exterior, the expan- sion sometimes becomes so great as to endanger the bursting of the machine.

67. The rarefied air balloons have been com- monly elevated or depressed by increasing or di- minishing the fire ; the inflammable air balloons by throwing out the ballast, or letting out the gas in suitable portions, through the valve. But these means will in time render the vessel inca- pable of floating ; for in the air they can have no supply of ballast, and with great difficulty can procure gas. They will also rise or fall by the rare- faction of the inclosed air ; and it has been pro- posed to effect these purposes, by means of an- nexing to the balloon a vessel of common air by condensing and rarefying which, the machine may be lowered or elevated at pleasure. M. Meuvier proposed to inclose one balloon of common air in another of inflammable air , by this means, as the balloon ascends, the gas becomes expanded, and compressing the balloon of common air, diminishes its weight ; and to in- crease the quantity of this air when needful, he suggested the use of bellows. Some propose to annex a small balloon with rarefied air, to one of inflammable air ; and by altering the fire of the lower one, to raise or depress the machine.

68. Several inventions have been offered for the purpose of conducting these machines through the air, and giving them a direction to whatever point the aeronaut should wish to travel. Some have proposed to govern them by sails and rudder, in the same manner as ships at sea; but this, as might have been expected, was found impracticable, the course of balloons and ships being so exceedingly different. A vessel upon the water moves with less velocity than the wind, and therefore the wind acts powerfully

upon the sails; but ballous, having the same velocity as the surrounding air, feel no wind, and consequently can derive no benefit from sails. Oars (and wings have been applied with as little success. The helm, indeed, was for some time encouraged, from

the motion of fishes in the water; but from this no practical benefits have been derived. Professor Dauzel is said to have contrived a machine for the direction of the balloon, an account of which may be seen in the Philosophical Magazine, vol. iv. p. 108 ; but it seems to have fallen into disuse ; and it is probable that these contrivances will never be brought to a state of perfection. The power which the aeronaut has of raising and lowering himself in the atmosphere, will, at present, best enable him to take advantage of the different currents of air, which are blowing at the same time in various directions ; and, by committing himself to the breeze he wants, to supersede the necessity of contrivances, which would tend at best to encumber the machine. The parachute, however, is a useful appendage, by means of which the voyager can, at any height, leave the balloon, in case of danger, and escape to the earth without incurring the inconvenience of a rapid fall. A machine on the same principle is said to have been long used in the east, by the Vaulters, to enable . them to jump from great heights. We have noticed its general principles of descent already.

69. Sec.V. OF MAKING AND FILLING BALLOONS. ??? With respect to the construction of the bal- loon or globe, the first thing to be considered, is the formation of the gores of which it is com- posed. In order to frame these, we must con- sider that the edges are not segments of circles, and cannot in consequence be described by compasses. To shape them, the following directions are necessary : first draw a right line AB, (see plate I. fig. 1.) equal to half the cir- cumference, which divide by the line C D into two, equal parts at the point E, each equal to the one-fourth of the circumference. Describe the line A Bin feet and decimals; divide the quarter circumference AE into eighteen equal parts, and to the points of division apply the lines fg, hi, kl, &c : divide the whole circum- ference into twice the given number of pieces, and make C E and E D each equal to the quo- tient of this division : so that C D may be equal to the breadth

of one of those pieces : multiply the above mentioned quotient by the decimals at the end of the lines f g, hi, kl, &c., and you have the length to which the line ought to be continued. Draw a curve along the extremities of these lines, and you have one quarter of the pattern complete, by which you may shape the rest. The reason of the rule is, that the several breadths of each slip, at the several distances from the point to the centre, are as the sines of those distances, the radius being the size of half the length of the slip. Having computed the circumference of the balloon, it is comparatively easy to form the gores after which nothing remains to complete the machine, but fitting them together, varnishing the exterior, and suspending the car, which is commonly of wicker work, covered with leather, to the balloon, by means

of ropes attached to a net, formed to fit the shape of the balloon. For the greater con- venience of aerostation, the ropes from the net are attached to the circumference of a circle about twenty feet below the balloon, whence other ropes go to the edge of the boat.

70. The material universally employed for aerostatic machines of a larger size, to be filled with inflammable air, is varnished silk ; and for those of the rarefied air kind, linen painted over with some size colour, or lined with paper ; the best varnish for an inflammable air balloon, is that made with birdlime, and recommended by M. Faujas de Saint Fond, in a treatise publish- ed on the subject: ‘Take one pound of bird- lime, put it into a new proper earthen pot that can resist the fire, and let it boil gently for about one hour, viz., till it ceases to crackle ; or, which is the same thing, till it is so far boiled, as that a drop of it being let fall upon the fire, will burn : then pour upon it a pound of spirits of turpentine, stirring it at the same time with a wooden spatula, and keeping the pot at a good distance from the flame, lest the vapour of this essential oil should take fire. After this, let it boil for about six minutes longer; then pour upon the whole, three pounds of boiling oil of

nuts, linseed, or poppy, rendered drying by means of litharge ; stir it well, let. it boil for a quarter of an hour longer, and the varnish is made. After it has rested for twenty-four hours, and the sediment has gone to the bottom, decant it into another pot ; and when you want to use it, warm and apply it with a flat brush upon the silk stuff, whilst that is kept well stretched. One coat of it may be sufficient, but if two are neces- sary, it will be proper to give one on each ××ide of the silk, and to let them dry in the open air, while the silk remains extended. ‘

On this subject, however, M. Cavallo ha? made some improvements, as may be seen in his printed publications. Much likewise has been said in France of the elastic gum varnish, and its composition, which was kept a secret ; but Mr. Baldwin, after many expensive trials, declares it to be made by melting in an iron ladle, properly heated, pieces of elastic gum, and afterwards stirring in a quantity of drying oil. M. Blan- chard’s method of making elastic gum varnish for the silk of a balloon, is the following : ‘ Dis- solve elastic gum, cut small, in five times its weight of spirit of turpentine, by keeping them some days together ; then boil one ounce of this solution in eight ounces of drying linseed oil for a few minutes ××× lastly strain it. It must be used warm. The pieces of silk, after the varnish is sufficiently dry, may be joined by lay- ing about half an inch of the edge of one piece, over the edge of the other, and sewing them by a double stitch.’

71. Having thus completed the structure of the balloon mechanically, the next consideration is that of filling it. This is commonly done with gas, which may be obtained in different ways, according as inclination and circumstances may direct. The best way is by applying acids to certain metals ; by exposing certain animal, vegetable, and mineral substances, to a strong rire, in a close vessel ; or by transmitting the

vapour of certain fluids through red hot tubes, from the boring of cannon, made the water boil Since it is impossible to obtain a sufficient with vehemence, and passing the steam through quantity in its natural state, latterly it has been this red hot tube, the iron yielded one half more

air than had ever been obtained from the action of vitriolic acid.

75. Balloons of small dimensions may be filled

employed by scientific aeronauts, are iron or with gas in the following manner. Let A, zinc, and vitriolic acid diluted with five or six (plate I. fig. 3.) be a bottle containing the re- quisite ingredients, B C a tube in the shape

found convenient and cheaper for balloons to be filled from the nearest gas works.

72. The materials that have been generally

parts of water. The chippings of iron, or the borings of cannon are more suitable to the pur- pose than iron filings, because the interstices admit the diluted acid more easily, and the heat attending the effervescence is much greater. Iron in this way is capable of producing 1700 times its bulk of gas, four ounces and a half of iron, the same weight of vitriol, and twenty-two and a half ounces and a half of water, will produce one cubic foot of inflammable air ; also six ounces

a

of a siphon, fastened at one end to the neck of the vessel or the bottle. Let E pass through an orifice in the stopper nearly to the bottom of the bottle, or vessel E, almost full of water. In another orifice in the stopper of E, place another tube, to which fix the bladder or balloon. Then the gas coming out of the end of the tube C, and passing through the water, will collect itself in the bottle

D, and be conveyed by the ad- ditional tube into the balloon.

76. It may also be done in the following man-

of zinc, six of oil of vitriol, and thirty of water,

will produce the same quantity, the inflammable

air thus obtained, weighing one seventh part of ner, (see fig. 4.) let A B C, represent a vessel of

clay or iron in the form of a Florence flask, con- taining the materials. To C, the neck of the vessel, let there be luted a tube of brass, and then a leaden tube, as the materials will swell during the action of the fire. Let the extremity

the weight of common air. By passing this air through water in which quick lime has been dis- solved, the elastic fluids generated with trie air, become absorbed with the water, and the in- flammable air is rendered cool and prevented from overheating the balloon. The gas is col- lected in casks lined with tin. M. Garnerin, in

of the tube pass through the water of the vessel H I, and terminate under the inverted vessel E F,

1802, used thirty-six casks, every twelve of to the upper aperture of which the balloon is

which communicated with a collar, and three tubes from three collars, conveyed the gas into one large tube which joined the balloon. Pro- fessor Robertson and Sacharof, had twenty-five vessels into each of which were put 120 pounds of iron filings, 600 pounds of water, and then poured in 120 pounds of sulphuric acid. M. Blanchard filled a balloon from only four casks, each 120 gallons. Lunardi employed only two casks, by which he filled a balloon in the shape of a pea, twenty-three feet in diameter, and thirty feet high, in the short space of half an hour. He employed 2000 pounds of each, and 12,000 pounds of water, a quantity which has been pronounced sufficient for a balloon thirty

fixed. The part A B of the vessel is then heated red hot, and the inflammable air proceeding from the tube C D, and passing through the water in the vessel H I, will empty itself into the balloon G. Two things, however, are to be observed, first that the aperture of the vessel E F, be one foot below the surface of the water in the vessel H I, and the fire at a sufficient distance from H I, that if any gas escape it may not explode. There should also be a stop cock K, in the vessel E F, through which the common air ought to be drawn out before the operation commences, after which the water will rise as far as the cock.

77. For filling a larger air balloon with gas, See plate II. fig. 2. where AA are two tubs, about

feet in diameter, having a capacity of 14,137 three feet in diameter and nearly two feet deep,

feet. Zinc is said to be superior to iron, in as much as the gas obtained from iron by the action

inverted in larger vessels. At the bottom of each of the inverted vessels there is a hole to which is

of vitriolic acid is computed to be six times lighter adapted a tin tube E seven inches in diameter, than atmospheric air ; whereas the gas evolved and seven or eight inches long, to which the during the solution of zinc in that acid, is not silken tubes of the balloon are to be tied ; each less than twelve times lighter than that fluid. of the tubs B is surrounded by several casks so

73. An inferior inflammable air is also ob- regulated as to be no less than half full when tainedby the action of fire upon various sub- the materials are equally distributed. In the stances as pit coal, asphaltum, wood, especially top of each cask are two holes, to one of which oak, camphor, oil, spirits of wine, &c. but is not a tin tube is adapted, so formed as to pass over so light as that obtained from iron or zinc. It the edge of the tub B and through the water, may also be observed that

animal substances terminating under the inverted tub A. The yield from six to ten times more inflammable air other hole designed to supply the cask with ma- when the fire is suddenly increased than when it terials, is to be secured with a wooden plug, is gently raised. The common way of obtain- nearly of the same diameter as the tubes are, ing it is, by enclosing the materials in iron vessels, about three inches and a half in diameter. The which are afterwards heated red hot, when the two masts, ropes, &c. are designed to elevate inflammable air immediately proceeds from the the balloon above the level of the tubs A A aperture of the vessels. and during the process of filling the balloon a

74. M.Lavoisier made inflammable air, by pas- net is to be put over it, suspended as in the sing the steam of boiling water through a red hot figure. When the common air is expelled the bal

_ gun barrel. Dr. Priestley, instead of this, took a loon, the silk tubes are fastened round the tin

"tube of brass, on which the steam of water has tubes E E, and by passing into the casks the vitri

no effect, and having filled it with iron obtained olic acid upon the other materials, the balloon

will soon be sufficiently inflated to support itself, and the rope G H will be unnecessary. The net is adjusted round the balloon, during its infla- tion the ropes are tied to the net and fastened to the hoop M N : the boat I K is suspended iom the hoop M N, all the necessaries depo- sited, and as soon as the sphere is three parts full the silk tubes are separated from the tin tubes, their extremities tied and placed in the boat, the aeronauts seated, the lateral ropes slipped off, and the balloon ascends.

78. To fill a balloon with rarefied air the com- mon

way is as follows : (see plate II. fig. 3.) A B C D is a scaffold, the breadth of which is two thirds the diameter of the machine elevated six or eight feet from the ground. In the middle is a well E F, made of brick or plastered wood, of less diameter than the balloon, rising two or three feet above the scaffold from the ground, and furnished with doors through which the fire is supplied with fuel. H I and K L are two masts erected one on each side the scaffold, each having a pulley at the top, rendered firm by means of the ropes K G, K P, H P, H N. The balloon is placed on the scaffold with its neck round the aperture of the well ; the rope pass- ing over the pullies of the two masts serves, by pulling its two ends, to lift the machine fifteen feet or more above the scaffold, as represented by dotted lines in the figure M N O. The ma- chine is kept steady and held down by ropes, passing through loops and holes about its equa- tor which are disengaged as soon as the machine can sustain itself. The materials burnt in the well are such as burn quick and clear, rather than those that produce much smoke. Hot air is what should be introduced into the balloon, not smoke; and to obtain which, small wood, straw, spirits of wine, &c. are most eligible. As the

hot air ascends, the machine dilates and lift? itself above the scaffold and gallery, making efforts to ascend. Its aperture is then brought, by ropes annexed to it, towards the side of the well, a little above the scaffold, the fire-place suspended in it, the fire lighted, the passenger's fuel, instruments and other necessaria placed in the gallery, the lateral ropes slipped off, and the machine abandoned to the atmosphere.

79. On reviewing the entire history and pro- gress of this imperfect science, we are naturally led to reflect, both on the restlessness and the as- tonishing capabilities of the human mind. ' Men would be angels,' says the poet ; and to ' ride on the wings of the wind' seems to be used by the highest authority, as an expression^ of sublime power. Our aeronauts, advancing from the feeble

conceptions of those who at first would have imitated the flight of birds, have done this. But they ride the wind as an inexperienced boy first vaults into the saddle, for his steed to be the teacher rather than he the governor of their new connexion.

80. Still that much has been gained for science by these aerial experiments, none can deny. The uniformity of some of the most important natural agencies has been established on a larger scale ; the sciences of meteorology, pneu- matology, &c. have been illustrated, and the at- tention of mankind awoke to the exploring new fields of nature. We only lament that of late the subject has been singularly neglected ; many years have now elapsed since men of real and accredited pretensions to science have concerned themselves with the management of aeronautic machines. We venture to recal their attention to them, that the past triumphs of phi- losophy may not degenerate into the rewards of ignorance, cupidity, and empiricism.

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AEROPHOBIA, of ano, and of3os, fear; a term that Dr. Franklin, and others, have applied to the dread of fresh air. He speaks of having indulged it for many years himself ; but was at last convinced that

almost any air is preferable to that of a close chamber which has been fre- quently respired ; and ridicules those valetudi- narians who, enclosing themselves in warm garments, and carefully wrapping about them as much of the noxious air of their close apartments as possible, carry it with them into a close carriage, from which the air is also carefully ex- cluded, and call this taking the air! He speaks of using the air as a tonic bath, by sitting in his chamber without clothes to wash or write, half an hour or an hour every morning, and that he never found any ill consequences from the prac- tice. See Posthumous and other works of Dr. Franklin, v. vi. p. 172.

AEROPHYLACEA, in natural history, sub- , terraneous receptacles of air or wind, from any, air, and (j>v \aKt), custodia, keeping. Rircher speaks much of aerophylacea, huge caverns, replete with air, disposed under ground, from whence, through numerous occult passages, that element is conveyed either to subterraneous re- ceptacles of water, which are raised into springs or rivers, or into the funds of subterraneous fire, which are hereby supposed to be fed for the re-

paration of metals, minerals, and the like. See ABYSS.

AEROSIS, among the ancient physicians, denotes the act whereby the blood is attenuated and converted into an aura, for the support of the vital spirits, and the m;iintenance of the flame of life.

AEROSTATIC, adj. belonging to aerostation.

AEROSTATICA, AEROSTATICS, from a►►jp, and ^ariKOQ, from i-rq/ui, statuo, is used by some authors for AEKOMJETRY. It is properly the doctrine of the weight, pressure, and balance of the air and atmosphere.

AERSCHOT, o r ARSCHOT, a town in the Netherlands, in Austiian Brabant, and capital of the duchy of Aenscho.‘t. It is seated on the river Demer, twenty

miles S. E. of Antwerp, and seven N. E. of Louvai ji.

JERVA, in botany, a genus of plants of the class monadelphia, o rder decandria. The cha- racters of which are,, that the flowers are poly- gamous : CAL. frve-l(5aved and patent: STAM. five, and barren : PIS r. a globulous ovary, hav- ing a filiform styk terminated by a bifid stigma; the fruit is a cap >sule, which is oblong, single- seeded, and encon ipas:>ed by the calyx. There is one common sj >ecios, viz. M. aegyptiaca, or tomentosa, which j ;row►► on sandy calcareous soil in Arabia.

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J2RUGINOUS, in chemistry, something par- taking of, or like the rust of copper. Authors do not seem perfectly agreed about the colour to be expressed by this word, some expressing by it green, others brown.

AERUGO, in natural history, the rust of cop- per, whether natural or artificial. The former is found in copper mines, and the latter, called verdigrise, made by corroding copper-plates with acids. See VERDIGRISE. Dr. Grew says, the turquoise stone is a kind of petrified aerugo. Ano- ther species of natural aerugo is a greenish mar- casite, like the drops of iron, found in copper mines. There is also, on some mountains in Moravia, a sort of grains, like sand, of a grass green colour, when used in painting, which are called the Hungarian, mountain, or sea verdigrise.

./ERUGO RASILIS, a rust formed on copper, by hanging a plate of it over the strongest vinegar for ten days, without suffering it to touch it.

^ERUGO SALIS, in natural history, a name given by Pliny, and several other ancient authors, to a reddish slimy matter, separated from the Egyptian salt, called natrum, in purifying it. ►►► We find this matter remain in the filter, on dis- solving and filtering the Egyptian nitre, at this time. It

seems to be a mixture of a bituminous matter, and a red earth, which had mingled among the cakes of the salt, during the time of their concreting from the water.

jERUSCATORES, in antiquity, a kind of strolling beggars, like our gypsies, who drew money from the credulous, by fortune-telling, &c. It was also a denomination given to griping collectors of the revenue. The priests of Cybele, were called aeruscatores magnae matris, on ac- count of their begging alms in the streets ; to which end they had little bells to draw people's attention to them, like some modern orders of mendicants abroad.

AERY, or AIRY, among sportsmen, the nest of hawks, or eagles.

./ES, among the ancient Romans, had various significations. It properly denoted brass or copper ; but as copper was the first metal used in coinage by the Romans, the word was used to signify money in general, as well as the particu- lar coin made of that metal.

.►►s CALDARICM, or CAST BRASS, otherwise called aes olorium, or pot brass, is mentioned by Pliny, as not capable of being hammered. This is likewise a term used by the German mineral- ists, for a substance which sometimes occurs to those who work upon cobalt, and is used for making the fine blue colour called smalt.

jEs CASDIDUM, among the ancients, was dif- ferent from that which we call white brass ; it was a purer and whiter kind of metal, found, it is said, under the veins of silver, somewhat ana- logous to Venetian talc. They had probably a method of making copper white, as well as yel- low, equal, if not superior, to that now in use. The phrases of orichalcum album in Virgil, and of \IVKOV icpa/ia, among the Greeks, strictly sig- nify white brass.

JEs CORINTHIUM, a precious metallic compo- sition, of a much finer colour th an common brass, and ?n

its beauty little inferior to gold. Pliny

says, that it was an accidental mixture of metals at the burning of Corinth, by L. Mummius, when the gold, silver, and brass statues, and all metal- lic substances, melting and mingling together formed this mass. But some refiners, who have strictly examined this metal, find no gold in it ; a circumstance which, if true, suggests one reason, among others, for concluding, that this account is fabulous. However, the fable has been interpreted by some to signify, that the art of making copper into brass was first discovered by the Corinthians, who found the calamine stone on the plains of Peloponnesus, or at least that they brought this art to perfection.

^Es CORNARIUM is used by Pliny, to denote brass worked into thin plates.

^Es FLAVUM, yellow copper. All the Roman authors have mentioned the method of making brass with calamine and copper; but their finest kind which they called orichalcum, or auriclial- cum, they distinguished from the inferior sorts which had only the name of aes flavum.

jEs GRAVE, denoted money among the Ro- mans, which was paid by weight, and not by tale. Others understand by aes grave, large pieces of copper coined, containing an as, or pound of that metal, such as we find current in Sweden. These they assert bore this name, till such time as they were reduced to a smaller standard.

JEs HEPATICUM was of a silverish colour, and probably what the moderns call bronze ; though some confound it with the aes Corinthium.

BL,S PAUPERUM, copper ore, divested of its silver.

l►►,s PER, ET LIBRAM, was a formula in the Roman law, whereby purchases and sales were ratified. Originally the phrase seems to have been used only in speaking of things sold by weight, or by the

scales ; but it afterwards was used on other occasions. Hence, even in adop- tions, there was a kind of imaginary purchase ; the formula whereof expressed,, that the person adopted was bought, per as et libram.

.ZEs RUDE, money unshaped, or not fashioned for any particular purpose. The money during the first ages of Rome was all of this kind. Others, by aes rude, understand metal unstamped ; in opposition to aes signatum, money stamped or coined.

JEs USTUM, a chemical preparation, made of thin leaves of copper, sulphur, and nitre, placed stratum super stratum in a crucible, and set in a charcoal fire till all the sulphur is consumed ; after which, the copper is taken out of the cru- cible, and reduced to powder. Some quench the leaves of copper in vinegar, and repeat the calcination. Its principal use is in colouring glass, to which it gives a beautiful tincture. The surgeons use it as a detersive, and some have given it internally ; but it is certainly a very dangerous medicine, and should be avoided.

./Es UXORIUM, in antiquity, a sum paid by bachelors, as a penalty for living single. This tax for not marrying seems to have been first imposed in the year of Rome 350, under the censorship of M. Furius Camillus and M. Post- humus. At the census, or review of the people, each person was asked, Et tu ex animae sententia

uxorerr. habes liberum qurerendorum causa ? He who had no wife, was hereupon fined, after a certain rate.

7ESACUS, in fabulous history, one of the sons of Priam, king of Troy, who is said to have thrown himself from a rock into the sea, because Hesperia, whom he was in love with, and had followed into the woods, was stung to death by a serpent; or, as others say, changed into a bird.

.’”ESALON, in ornithology, a species of hawk, called in English the merlin. It is the smallest of all the hawk kind, and about the size of the blackbird. It feeds on partridges and other birds.

/ESCH, in ichthyology, a name which some writers have given the grayling or tumbler, a fish of the trutaceous kind.

./ESCHINES, in ancient history, the son of Charinus, a disciple and admirer of Socrates ; who said of him (alluding to the trade of ./Eschi- nes’s father) that the sausage-maker’s son was the only person who knew how to pay a due re- gard to him. It is said that poverty obliged him to go to Sicily to Dionysius the Tyrant ; and that he met with contumelious treatment from Plato, but was extremely well received by Aristippus; to whom he showed some of his dialogues, and obtained from him a handsome reward. He would not venture to profess philosophy at Athens, Plato and Aristippus being in such high esteem ; but he set up a school to maintain him- self, and wrote orations for the Forum. Phryni- cus, in Photius, ranks him among the best orators, and mentions his orations as the standard of the pure Attic style. Hermogenes has also spoken very highly of him. He likewise wrote several dialogues, of which there are only three extant :

1. Concerning virtue, whether it can be taught.

2. Eryxias, or Erasistratus ; concerning riches, whether they are good. 3. Axiochus ; concern- ing death, whether it is to be feared. Mr. Le Clerc has given a Latin translation of them, with notes, Amst. 1711, 8vo.

./ESCHINES, one of the most celebrated orators of Greece, was the son of Atrometus, a gramma- rian and schoolmaster, and Glaucothea, who is said by Lucian and others, to have been a tim- brel-player. From this circumstance, perhaps, it was that Demosthenes upbraided him with being the son of a courtezan. Plutarch says, he was distinguished neither by his birth nor riches. Being in his youth,of a robust

constitution, he de- voted himself to the exercises of the gymnasium, and having a clear voice, performed a part in the exhibition of tragedies. Some say that he attended the lectures of Isocrates and Plato : but according to others, he received instruction from Alcidamas, the preceptor of Gorgias. His pro- gress, however, was rapid ; and he became so respectable a competitor with Demosthenes, that when the Athenians negociated a peace with Philip of Macedon, he was sent with him as an ambassador to that prince. Philip is said to have successfully attempted to corrupt our orator on this occasion, and that Vie in consequence per- suaded the Athenians, in opposition to the re- monstrances of Demosthenes, to confide in the

promises of the Macedonian prince, and gavc- him an opportunity to possess himself of Ther- mopylce. Philip, by further intrigues, engaged the support of ^schines, to prevail with the council of the Amphyctions, to elect him for their general, by which means he obtained pos- session of Elataa, the chief city of Phocis, and established himself in a favourable situation for his farther ambitious designs.' Demosthenes at last roused the Athenians, to unite with the Thebans in disconcerting the machinations of Philip ; and the two hostile armies encamped near Chcronaea, a city of Boeotia ; but his coun- trymen being discomfited, Athens received a shock, the effects of which she was never able to recover, and /Eschines took the lead in crimi- nating his rival. He, accordingly, drew up an accusation against Ctesiphon, or rather against Demosthenes. The conflict between the two orators excited very general attention ; and the attack and defence have been considered as the master-pieces of ancient oratory. Eschines lost his cause, and was sentenced to banishment for his rash accusation, ante Christi, 230; when he settled at Rhodes, and opened a school for elo. quence. Here he re- delivered the two orations, and when that of Demosthenes was received with redoubled plaudits, Eschines exclaimed, ' Had you heard him thunder out

the words him- self, what would you have thought of it?' De- mosthenes was so sensible of the liberal spirit of his rival, that when /Eschines left Athens, in order to embark for Rhodes, he ran after him and obliged him to accept a purse of money ; upon which ./Eschines remarked, ` How will it be possible for me not to regret a country, in which I leave an enemy more generous than I can hope to find friends in any other part of the world ! ` ./ Eschines finally removed to Samos, where he died at the age of 75 years. He is said to have been the first who delivered extempora- neous orations. Philostratus extols him for lu- minous perspicuity, decorous gravity, and dis- tinguished energy ; and he is denominated by Demosthenes /wyaXo^wvoraroc. Photius ascribes nine epistles, (according to the number of the muses), to ./Eschines; but there are twelve, which were addressed to the Athenians when he was in exile at Rhodes, in Wolfius's edition of Demosthenes and ./Eschines, p. 205 ; and Taylor has added them to his edition. The ancients acknowledge only three genuine orations, viz. 1. Adversus Timarchum, Wolf. ed. p. 259. 2. De falsa Legatione, Id. p. 395. 3. Adversus Ctesiphontem, Id. p. 425. Fabricius com- pares these orations to the Three Graces Another entitled A►►j\tajcoc vo/ioc, was formerly inscribed with the name of /Eschines ; but the ancients attribute it to another person of the same name. See Plutarch and Philostratus, ubi supra. Demosthtn. et JEchin. Opera, by Wolfius Franco/. 1604. Fabricius Bibl. Gr&c, torn. i. p. 412►►►928, &c. Several other persons called ./Eschines have been confounded both with the Socratic philosopher, and the Athenian orator. ./ESCHNA, in natural history, the name of a species of water fly, of an ash colour, with four wings, a long body, and hairy near the tail.

JESCHYLUS, the tragic poet, was born at Athens,

about the sixty-fifth or seventieth Olym- piad, Stanley says in the sixty-third ; he was the son of Euphorion, and brother to Cynegirus and Aminias, who distinguished themselves in the battle of Marathon, and the sea-fight of Salamis, at which engagements ^Eschylus was likewise present. In this last action, Aminias commanded a squadron of ships, attacked, and sunk the ad- miral of the Persian fleet, and signalized himself above all the Athenians : so that when TEschylus was charged by the Athenians with blasphemy, and condemned to be stoned to death, Aminias, throwing aside his cloak, showed his arm with- out a hand, which he had lost at the battle of Salamis. This sight made an impression on the judges, and, touched with his fraternal affection, they pardoned our poet; but he resented the in- dignity of this prosecution, and resolved to leave a place where his life had been in danger : he accord- ingly retired to the court of Hiero, king of Syra- cuse, where he soon after died at the age of sixty- nine. Some affirm, that ./Eschylus never com- posed but when he had drank liberally. He wrote a great number of tragedies of which there are but seven remaining, and appears to have been the father of the tragic art. In the time of Thespis, there was no public theatre, the players driving about from place to place in a cart. ./Eschylus furnished his actors with masks, dressed them suitably to their characters, and introduced the buskin, to make them appear like heroes. ??? The ancients gave him also the praise of having been the first who removed murders and shock- ing sights from the eyes of the spectators. He is said likewise to have lessened the number of the chorus. M. Le Fevre remarks, that .ZEschylus never represented women in love in his tragedies ; which, he says, was not suited to his genius; but, in representing a woman transported with fury, he was incomparable. Longinus says, that ^Eschylus has a noble boldness of expression ; and that his imagination is lofty and heroic. His works were held in great esteem by the Athenians, who made a public decree that his tragedies should be played after his death. He was killed by an eagle letting fall a tortoise upon his head as he was walking in

the fields : and had the honour of a pompous funeral from the Sicilians, who buried him near the river Gela ; where the tragedians of the country performed plays and theatrical exercises at his tomb'. One of the best editions of his plays is that of London, 1663, folio, with a Latin translation, and a learned commentary by Thomas Stanley : pro- fessor Person edited them in 2 vols. 8vo. 1805; Bishop Blomfield has also ably edited some of the plays, and Archdeacon Potter in 1777 fur- nished an able English translation of them.

^SCHYNOMENE, BASTARD SENSITIVE- PLANT : A genus of plants, of the decandria order, and diadelphia class ; the characters of which are : CAL. a one-leaved campanulated bilabiated perianthium ; the lips equal, but the superior one two-cleft, the inferior tridentate: coil, papillionaceous ; the banner cordated and aubringent; the alse ovate, obtuse, and shorter than the banner ; and the carina, lunated, pointed, arid the length of the alae. The STAM. consist, of

ten simple nine-cleft filaments ; the anthera are small : PIST. an oblong villous columnar ger- men ; the stylus subulated and ascending, the stigma simple and somewhat obtuse. The peri- carpium is along, compressed, unilocular jointed pod. The seeds are kidney shaped, and solitary within each joint. There are six species of this genus, all natives of warm countries, viz. the Americana, arborea, aspera, grandiflora, pumila, and sesbana.

^SCHYNOMENOUS PLANTS, a name some- times given to sensitive plants. See the"' last article.

^SCULANUS, J^RES, or jEs, in antiquity, are names given to the divinity who presided over the coinage of copper-money. .ZEsculanus, it is said, was the father of Argentinus, because copper money was employed before silver ; and Argentinus, the father of Aurinus, because gold money succeeded silver. Thus they had three divinities presiding over the coinage of the three principal metals, and some medals of the em- perors represent three goddesses,

with balances, a cornucopia, and near them a piece of the dif- ferent metals.

^ESCULAPII ANGUIS, in zoology, the name of a harmless species of serpent, common in Spain and Italy, called also paraea. The coluber sescu- lapii of Linnaeus has white and black bands, bi- sected by a white ring, and is found in both Indies. JLSCULAPIUS, in astronomy, the ancient name for the constellation Ophiuchus.

^SCULAPIUS, in the heathen mythology, the god of physic, was the son of Apollo and the nymph Coronis. He was educated by the cen- taur Chiron, who taught him physic ; by which means ./Esculapius cured the most desperate diseases: but Jupiter enraged at his restoring to life Hippolitus, who had been torn in pieces by his own horses, killed him with a thunder- bolt. According to Cicero, there were three deities of this name : 1 . The son of Apollo, in- ventor of the probe, and bandages for wounds, worshipped in Arcadia t 2. The brother of Mer- cury, killed by lightning : 3. The son of Aristip- pus and Arsinoe, who first taught the art of tooth drawing and purging. At Epidaurus vEscu- lapius's statue was of gold and ivory, with a long beard, his head surrounded with rays, holding in one hand a knotty stick, and the other en- twined with a serpent; he was seated on a throne of the same materials as his statue, and had a dog lying at his feet. The Romans crowned him with laurel, to represent his descent from Apollo ; and the Phaliasins represented him as beardless. The cock, the raven, and the goat, were sacred to this deity ; and serpents, more particularly, as symbols of the prudence and forethought neces- sary in the profession he patronised. His chief temples were at Pergamos, Smyrna, Trica, a city in Ionia, and the isle of Coos ; in all which votive tablets were hung up, showing the diseases cured by his assistance. But his famous shrine was at Epidaurus ; where, every five years, games were instituted to him, nine days after the Isthmian games at Corinth..

/ESCULUS, in botany, the IJoRSE-CHESNfT: A genus of

plants of the monogynia order, and heptandria class ; ranking in the natural method,

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under the thirty-ninth order, trihilatoe. The characters are: CAL. a small, single-leaved, bellied perianthium, divided into five segments : COR.

philosopher, Xanthus, or as Herodotus calls him, ladmon, from whom he obtained his liberty. Some curious anecdotes are told of his domes-

(except in the pavia, where it is four-petaled and tication with this philosopher, close,) five roundish, flat, expanding petals, un- Being exposed in an open market place for equally coloured, and with narrow claws inserted sale, Xanthus entering the area, w"as attracted by intotthe calyx : STAM. seven subulated declining the appearance of /Esop's companions, and en- filaments, the length of the corolla ; the antherae quired of the merchant his price for them, which ascending : PIST. a roundish germen, ending in he thought exorbitant ; and was on the point of a subulated stylus ; the stigma pointed : the quitting the market, when some of the pupils, pericarpium. a leathery, roundish, trilocular, three- by whom he was attended, pointed out TEsop to valved capsule. The seeds are two, and subglo- his notice. At their solicitation, and jocularly,

more than with any serious intention, he put the accustomed question to the despised captive, of What he could do? Nothing at all replied .ZEsop ; for I have just overheard my companions answer your question, by affirming they could do

bular. ??? In this genus Van Rozen and Miller

observe both male and hermaphrodite flowers.

There are two species ; viz.

1. ./ESCULUS HIPPOCASTANUM, or common

horse-chesnut, brought from the northern parts

of Asia, about the year 1550, and sent to Vienna

every thing ; therefore there is nothing left for me

to do. He afterwards boldly told Xanthus, that a philosopher like him should appreciate a man

about 1588; the nuts of which are reckoned good food for horses.

In Turkey, they are ground, and mixed with according to the vigour of his mind, and not to

the provender of these animals, especially those the appearance of his body ; and when the philo-

sopher's wife, (of a most furious and jealous tem-

which are troubled with coughs, or broken winded. Deer are also very fond of the fruit : and at the

per,) asked in scorn, of Xanthus, ' whether it

time of their ripening keep much about the trees, were a beast or a man he had brought home ?'

but especially in strong winds, when the nuts are blown down, which they carefully watch, and greedily devour as they fall.

2. /ESCULUS PAVIA, or scarlet flowering horse-chesnut, a native of Carolina, the Brasils, and the East.

yESHNA, in entomology, a sub-division of the unogata, or fifth class of insects, by Fabricius,

YEsop is said to have exclaimed, ' From the mer-

cies of fire, water, and a wicked woman, great gods deliver us !'

/Esop once accompanying his master to a gar- dener for the purpose of purchasing some herbs, the agriculturist enquired the reason why those plants which grew of themselves, and without any artificial aid, should come up so fast and

comprehending several species of the libellula of

thrive so well, whilst others, though never so Linnams, characterized by equal lacinae, or fringes carefully cultivated, could scarcely be preserved

from perishing ? Xanthus contented himself with saying, That so providence had ordered it to be. Here yEsop interfered ; and, after a sarcasm upon the imperfection of the school of philosophy

of the lip.

yESNECY, in law, priority of age, among co- partners.

yESON, in fabulous history, the son of Cre- theus, king of Thessaly, and father of Jason, the

in which Xanthus was bred, requested to be per-

famous Argonaut ; who was said to have been mitted himself to give the solution. ' For

restored to his youth, in his" old age, by the en- chantments of Medea, Jason's wife.

yESOP, the Phrygian, lived in the time of So- lon, about the 50th Olympiad, under the reign of Croesus, the last king of Lydia. For genius and abilities, he was greatly indebted to nature ; but in other respects he was not so fortunate,

what,' said the slave, 'signifies a general answer to a particular question, but an acknow- ledgment of complete ignorance on the subject proposed ? ' The earth then,' said yEsop, ' may be considered as in the nature of a real mother to that which she brings forth out of her own bowels; but she is only a step- dame in the

her care, by means of the sheer industry of another. It is natural for her to withdraw her nourishment from the one, and to lavish her

being born a slave and extremely deformed. St. production of those plants which are cultivated

Jerome, speaking of him, says he was unfortu- and assisted, nay, sometimes even forced under nate in his birth, condition in life, and death ; hinting thereby at his deformity, servile state, and tragical end. His great genius, however,

enabled him to support his misfortunes ; and to powers upon the other kind of plants.’ alleviate the hardships of servitude, he composed yEsop is said to have interpreted an obscure those entertaining and instructive fables which have inscription which had utterly foiled his master; acquired him so much reputation. He is gene- and, emboldened by his success, to have de- rally supposed to have been the inventor of that manded of him what reward he would offer, if kind of writing ; but this is contested by several, he were to point out to him a considerable hidden particularly Quintilian, who seems to think that treasure ? One half of it and your liberty, said Hesiod was the first author of fables ; and we Xanthus. Possessed of the property, however, are certain that Jotham, the son of Gideon, was the faithless Samian conveniently forgot the con- the author of a fable or parable, long before either ditions upon which he acquired it, and returned of them. /Esop, however, certainly improved to the defenceless yEsop menaces and blows, this art to a very great degree. The first master, On another occasion, the wife of Xanthus having whom ./Esop served, was Carasius Demarchus, of eloped from her husband, notwithstanding the Athens ; and there, in all probability he acquired acerbity of her disposition, he was desirous of his purity in the Greek tongue. After him he recalling her, and .Esop undertook the task of had several masters ; and at length came under a fulfilling his wishes. He prepared a plentiful

(‘east, and gave it publicly abroad, that his mas- ter’s first wife having separated from him, this entertainment was prepared for a second mar- riage. The effect was as he had imagined, the lady immediately ordered her chariot to be prepared, and returned to the house of her husband. At another time, Xanthus in a moment of inebriety, nad made a

considerable wager, that he would drink the sea dry ; and, on becoming sober, applied to /Esop to extricate him from the diffi- culty into which he had involved himself. Sir, said the slave, be careful of Bacchus, it is the humour of this god, first to make men cheerful, then to make them drunk, and lastly to make them mad. He exhorted him, however, to take courage, and pursue his advice. Xanthus, ac- cordingly, appeared next day on the sea shore, attended by the man with whom he had made the ridiculous agreement; and now, said he, am I ready to drink the sea dry, but it is you who must first stop all the rivers which run into it.

When he had obtained his liberty, he soon ac- quired a great reputation amongst the Greeks ; and the report of his wisdom having reached Croesus, he sent and engaged him in his service. He travelled through Greece soon after Pisistra- tus had usurped the sovereign power, and finding that the Athenians bore the yoke very impatiently, he told them the fable of the frogs who petitioned Jupiter for a king. Esop was put to death at Delphi. Plutarch tells us that he came there with a great quantity of gold and silver, being ordered by Croesus to offer a sacrifice to Apollo, and to give a considerable sum to each in- habitant : but a quarrel arising betwixt him and the Delphians,he sent back the moneyto Croesus; for he thought those for whom the prince de- signed it, had rendered themselves unworthy of it. The inhabitants of Delphi contrived an ac- cusation of sacrilege against him ; and pretending they had convicted him, threw him headlong from a rock. For this cruelty and injustice, we are told they were visited with famine and pestilence; and consulting the oracle, they received for answer, that the god designed this as a punishment for their treatment of Esop : they endeavoured to make an atonement, by raising a pyramid to his honour.

ESOPUS, (Clodius,) a celebrated actor, who flourished about the 670th year of Rome. He and Roscius were contemporaries, and the best performers who ever appeared upon the Roman stage, the former excelling in tragedy, the latter in comedy. Cicero

put himself under their direction to perfect his action. Esop lived in a most expensive manner, and at one entertain- ment is said to have had a dish which cost ►►800. It was filled, we are told, with singing and speaking birds, some of which cost near fifty pounds. The delight which Esop took in this sort of birds, proceeded, as Mr. Bayle observes, from the expence. He did not make a dish of them because they could speak, ac- cording to the refinement of Pliny upon this circumstance, this motive being only by acci- dent; but because of their extraordinary price. Esop's son was no less luxurious than his father, for he dissolved pearls for his guests to swallow. Horace speaks of one pearl of very great value, which he dissolved in vinegar and drank. Not-

withstanding his expences, Esop is said to have died worth above ►►160,000. When he was upon the stage, he entered into his part to such a degree, as sometimes to be seized with a per- fect ecstacy. Plutarch mentions it as reported of him, that whilst he was representing Atreus, deliberating how he should revenge himself on Thyestes, he was so transported beyond himself in the heat of action, that with his truncheon he smote one of the servants crossing the stage, and laid him dead on the spot.

ESPING, in zoology, a species of coluber.

ESQUILINUS, a hill in ancient Rome.

ESTHPHARA, incineration, or burning of any part of the body.

ESTIMATIO CAPITIS, in our ancient law books, a fine in proportion to the degree of the person against whom the offence was committed. King Athelstan, in a great assembly held at Exeter, declared what mulcts were to be paid pro &stimatione capitis; the estimation of the king's head, to be 30,000 thrymsae ; that of an archbishop or prince, 15,000 ; a bishop's or senator's, 8000 ; a priest's or thane's, 2000, &c.

ESTIVAL, in astronomy, of, or belonging to, summer ; as ./ESTIVAL POINT, is that whereby the sun’s ascent above the equator is determined.

./ESTIVAL SIGNS, are those extended from the sun’s greatest declination northward, to the in- tersection of the ecliptic and equinoctial south- ward, including Cancer, Leo, and Virgo.

ESTIVATION, in botany, expresses the state of the bud in summer, and is used by Lin- naeus to denote one of those circumstances which constitute the habit of plants.

ESTRUS, in entomology, a species of the beetle.

ESTUARY, in ancient baths, a secret pas- sage from the hypocaustum, or stove, into the chambers.

/ESTUARY, ESTUARIUM, in geography, an arm of the sea, running up a good way into the land, such as Bristol Channel, many of the friths in Scotland.

ESTUARY, in medicine, a vapour bath, or any thing that conveys heat to the body.

ESYMNETIC MONARCHY, among ancient writers on government, denotes a limited elec- tive monarchy. Arist. Pol. c. 10. The word is formed from aiarvfivaiw, regno, I govern. ••• An aesymnetic state stands opposed to a barbaric, or hereditary one.

ESYMNIUM, in antiquity, a monument erected “to the memory of deceased heroes, by Esymnus.

ESYMNUS, a native of Megara, who con- sulting the oracle in what manner the Megareans might be most happily governed, was answered, if they held consultation with the more nu- merous ; whom he taking for the dead, built a senate-house, with a monument to the dead within it.

ETATE PROBANDA, in law, a writ to enquire whether the king’s tenant, holding in chief by chivalry, were of full age to receive his lands into his own

hands. It was directed to the escheator of the county, but is now disused.

ETERNITAS, Eternity, in mythology, was worshipped as a god by the ancients, the Pytha~

goreans, Plato, and Hermes Trismegistus, made time to be the image of it. On medals, eternity was represented in various forms, sometimes under the figure of the sun and moon ; sometimes by that of the elephant, for its length of years, as on a medal of Faustina, fig. 1,

Fig. 2.

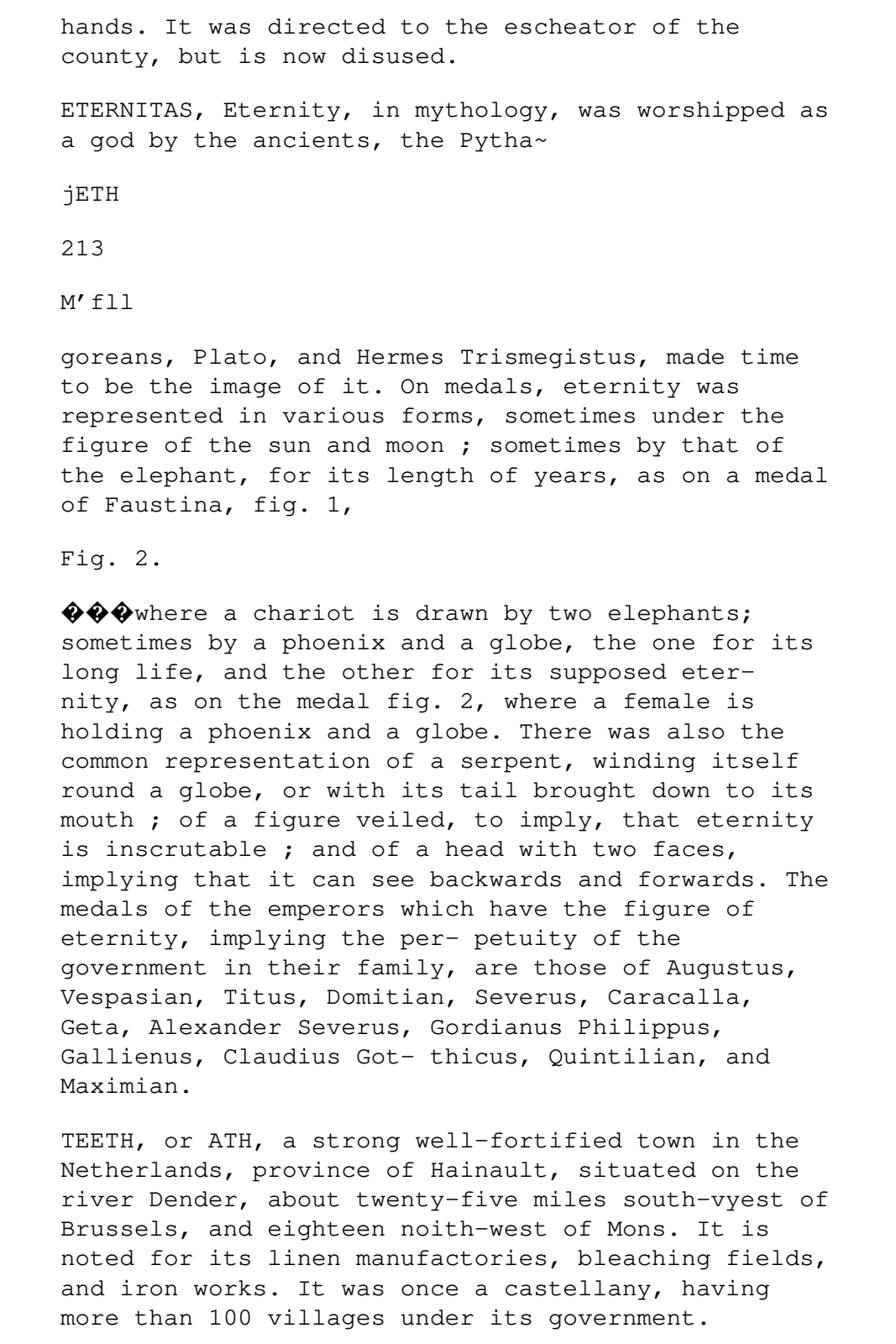

where a chariot is drawn by two elephants; sometimes by a phoenix and a globe, the one for its long life, and the other for its supposed eter- nity, as on the medal fig. 2, where a female is holding a phoenix and a globe. There was also the common representation of a serpent, winding itself round a globe, or with its tail brought down to its mouth ; of a figure veiled, to imply, that eternity is inscrutable ; and of a head with two faces, implying that it can see backwards and forwards. The medals of the emperors which have the figure of eternity, implying the per- petuity of the government in their family, are those of Augustus, Vespasian, Titus, Domitian, Severus, Caracalla, Geta, Alexander Severus, Gordianus Philippus, Gallienus, Claudius Got- thicus, Quintilian, and Maximian.

TEETH, or ATH, a strong well-fortified town in the Netherlands, province of Hainault, situated on the river Dender, about twenty-five miles south-vyest of Brussels, and eighteen noith-west of Mons. It is noted for its linen manufactories, bleaching fields, and iron works. It was once a castellany, having more than 100 villages under its government.

Population 7600.

.lETHALE, in natural history, a name given by some writers to the cadmia fornacum, or tutty, from its being the concreted soot of the lapis calaminaris and copper, melted together, in the making of brass.

^ETHALIA, or ILVA, in ancient geography, now Elba ; an island on the coast of Etraria, in compass 100 miles, formerly abounding in iron, as it still does. Stephanus calls it Aethale. The port of Aethalia was called Argous. See ELBA.

7ETHELSTAN. See ATHELSTAN.

JSTHER, in chemistry, the lightest, most volatile, and most inflammable of all liquids, is produced by distillation of acids with rectified spirit of wine. See the INDEXES to CHEMISTRY and PHARMACY.

/ETHER, in physiology, Gr. from AiQtiv, to burn or flame, the ancients supposing it of the nature of fire, a thin subtile matter, much finer and rarer than air ; which, commencing from the limits of our atmosphere, is supposed to possess the whole heavenly space. Mythologists speak of it as the origin of all things, an attenuation of fire, which, according to Hippocrates, was im- mortal ; knows all things ; sees, hears, and deter- mines whatsoever is, or shall hereafter be. From this fluid, (existing in perfection only in the highest

heavens, and encircling the whole of the ma- terial universe,) all grosser elements were said to be first derived, and from them the various productions of nature. Here the gods were enthroned, and the stars rolled along in ' divinest harmony.'

Philosophers cannot conceive that the largest part of the creation should be perfectly void; and therefore, they fill it with a species of mattev under the denomination of aether. But they vary extremely as to the nature and character of this aether. Some conceive it as a body sui generis, appointed only to fill up the vacuities between the

heavenly bodies ; and therefore, confined to the regions above our atmosphere. Others sup- pose it of so subtile and penetrating a nature, as to pervade the air, and other bodies, and possess the pores and intervals thereof. Others deny the existence of any such specific matter; and think the air itself, by that immense tenuity and expansion it is found capable of, may diffuse itself through the interstellary spaces, and be the only matter found therein. In fact, aether, being no object of our senses, but the mere work of imagination, brought only upon the stage for the sake of hypothesis, or to solve some phenomenon real or imaginary; authors take the liberty to modify it as they please. Some suppose it of an elementary nature, like other bodies ; and only distinguished by its tenuity, and the other affec- tions consequent thereon : which is the philo- sophical aether. Others will have it of another species, and not elementary ; but rather a sort of fifth element, of a purer, more refined, and spirituous nature, than the substances about our earth ; and void of the common affections thereof, as gravity, &c. Some represent it as 7200 times more rare than air ! Others make it more dense than gold itself ! Others argue, that the heavenly spaces being the supposed region or residence of a more exalted class of beings, the medium must be more pure and exalted in proportion. Such is the ancient and popular idea of aether, or aethereal matter. The term being thus em- barrassed with a variety of ideas, and arbitrarily applied to so many different things, later and severer philosophers set it aside, and in lieu thereof, substitute other more determinate ones. Thus, the Cartesians use the term materia sub- tilis, which is their aether: and Sir Isaac Newton, sometimes a subtile spirit, as in the close of his Principia; and sometimes a subtile, or aethereal medium, as in his Optics. The truth is, there are abundance of considerations, which seem to evince the existence of some matter in the air, much finer than air itself : an unknown some- thing, which remains behind when the air is taken away, as appears from certain effects which we see produced in vacuo. Heat, Sir Isaac Newton observes, is

communicated through a vacuum, almost as readily as through air ; but such communication cannot be without some inter- jacent body, to act as a medium. And such body may be subtile enough to penetrate the pores of glass ; and may be very well concluded to penetrate those of all other bodies, and con- sequently be diffused through all the parts of space which answers to the full character of an a.-ther. The existence of such an a-thcreal me.

diuni being settled, our philosopher proceeds to ;ts properties ; inferring it to be not only rarer and more fluid than air, but exceedingly more elastic and active : in virtue of which, he shows, that a great piu►► of the phenomena of nature may be produced by it. To the weight, e. g. of this medium, he attributes gravitation, or the weight of all other bodies ; and to its elasticity, the elastic force of the air and of nervous fibres, and the emission, rarefaction, reflection, and other phenomena of light ; as also, sensation, muscular motion, &c. In fine, according to his theory, tether seems to be the primum mobile, the first source or spring of physical action in the modern system. Dr. Hartley constructed upon the theory of a vibrating aether, the celebrated sys- tem of vibration, and vibratiuncles of the me- dullary substance of the nerves and brain ; by which, he accounts for all our sensations and ideas. He even thinks it a consequence of this theory, that could matter be endowed with the most simple kinds of sensation, it might arrive at all the intelligence of which the human mind is possessed ! The difficulties of Dr. Hartley’s system, are thus ably stated by Dr. Reid. Our sensations arise from vibrations, and our ideas from vibratiuncles, or miniature vibrations; and he (Dr. Hartley) comprehends, under these two words of sensations and ideas, all the operations of the mind. But how can we expect any proof of the connection between vibrations and thought, when the existence of such vibrations was never proved. The proof of their connection cannot be stronger than the proof of their existence. Por, as the author

acknowledges, that we cannot infer the existence of the thoughts from the ex- istence of the vibrations, it is no less evident, that we cannot infer the existence of vibrations from the existence of our thoughts. The existence of both must be known, before we can know their connection. As to the existence of our thoughts, we have the evidence of consciousness ; a kind of evidence, that was never called in question. But as to the existence of vibrations, in the me- dullary substance of the nerves and brain, no proof has yet been brought.

The Cartesian aether is supposed not only to pervade, but adequately to fill all the vacuities of bodies ; and thus to make an absolute plenum in the universe. But Sir Isaac Newton overturns this opinion, from divers considerations; by showing, that the celestial spaces are void of all sensible resistance: for the matter contained therein must be immensely rare, as the resistance of bodies is chiefly in proportion to their density ; so that, if the heavens were thus adequately filled with a medium or matter, how subtile soever, they would resist the motion of the planets and comets, more than quicksilver or gold. The late discoveries in electricity have thrown great light upon this subject, and rendered it extremely probable, that the aether so often talked of, is no other than the electric fluid, or solar light, which diffuses itself throughout the whole system of nature. See ELECTRICITY, FIRE, HEAT, LIGHT, MAGNETISM, &c.

jETHERA, in botany, eringo.

/ETHEREAL, /ETHF.REUS, something that 'M longs to, or partakes of, the nature of /ETHER.

Thus we read of the aethereal space, aethereal regions, &c. Some of the ancients divided the universe, with respect to the matter contained therein, into elementary and oethereal. Under the aethereal world, was included in that space above the uppermost element, viz, fire. This they supposed to be perfectly homogeneous, incorruptible, unchangeable, &c. See CORRUP- TION. The Chaldeans

placed an aethereal world between the empyreum and the region of the fixed stars. Besides which, they sometimes also speak of a second athereal world, meaning by it the starry orb : and a third aethereal world, by which was meant the planetary region.

^ETHEREAL OIL, is a fine, subtile, essential oil, approaching nearly to the nature of a spirit. Thus, the pure liquor rising next after the spirit, in the distillation of turpentine, is called the aethereal oil of turpentine. Some chemists dis- tinguish two principles in urine ; the one a vola- tile urinous salt, resembling spirit of nitre ; the other, an aethereal oil, or sulphur, partaking of the nature of spirit of wine.

^ETHEREAL PHOSPHORUS, is a name generally given, by Bernoulli, to that otherwise called mercurial, or barometrical phosphorus.

^LTHIONEMA, in botany, from oi0w, to scorch, and vi \n,a, a stamen, in allusion to some tawny or sun- burnt tinge in the stamens ; a genus of plants. ××× Class and order, tetradynamia sili- culosa. Natural order, siliquosae, linn ; cruci- ferae, Juss. Its characters are : pouch with boat- like winged valves, (sometimes not bursting.) Longer filaments either combined, or finely toothed towards the top. Insertion of the calyx unequal. There are two species. Brown.

^ETHIOPIA. See ETHIOPIA.

./ETHIOPIAN CROWN, in natural history, the name of a shell fish, of the genus of the doliuin, or concha globosa. It is of a brown colour ; but differs from the common shells of this genus, in having the top, or head, dentated, so as to repre- sent a crown.

JETHIOPIS, Ethiopian clary ; a decoction of its roots is recommended in pleurisies and rheu- matisms.

jETHIOPS, in entomology, a species of black Cerambyx, with a spinose thorax, and with two bands

of the elytra; ; the point of the apex yellow, and middle-sized antennae, found at the Cape of Good Hope. Also a species of the carabus, wholly black, found at Berlin, and of the cimex, black, with a ridge on the middle of the thorax, and black spinose tibiae, found at Cayenne.

./ETHIOPS is also a species of papilio, with black wings ; the primores marked with three white bands, and caerulean spots on the upper part ; the posterior with two longitudinal pale furrows at the base, and a transverse ridge, with five caerulean points; found out of Europe. Also a species of apis, or the black bee, with the margin of the segments of the abdomen white ; found in America : and of the hairy black musca, with black wings, white at the apex ; two points, and a silvery anus ; found in Italy.

HLraiOTS, in natural history, a species of the turbo, with the shell transversely furrowed and black ; the first windings are nearly striated ; the succeeding ones are of a silvery brightness,

with the lip and limb brown ; the aperture is dilated.

/ETHIOPS fulica, in ornithology, the wholly black fulica or coot of Sparrman.

./ETHIOPS Simia, in zoology, the white eye-lid ape of Pennant, and mangabey of Buffon.

^ETHIOPS ANTIMONIAL, MARTIAL, &c. See INDEX to PHARMACY.

./ETHOLICES, in medicine, from atQia, to in- flame, superficial pustules, or boils in the skin, occasioned by heat.

7ETHON, in mythology, of aiQw, to burn, one of the four horses of the sun, which caused the fall of Phaeton, according to Ovid. Clau- dian calls one of the horses of Pluto’s chariot by the same name.

/ETHRA, a river of Sweden, that rises in the lake Alsugan, and running by Falkenburg, in South Halland, falls into the sea. It is also called Falkenburg.

./ETHRA, in fabulous history, the daughter of Pittheus, king of Traezene, and mother of The- seus.

7ETHUSA, in botany, a genus of the pen- tandria digynia class; and, in the natural method, ranking under the forty-fifth order, umbellatae. The characters are : CAL. an uni- versal umbel expanding, the interior rays shorter by degrees ; with a partial umbel, small, and expanding. There is no universal involucrum; the partial one is dimidiated, with three or five leaflets, and pendulous ; the proper perianthium scarcely discernible : COR. uniform, with fer- tile florets; the partial one has five heart-in- flected unequal petals : STAM. five simple fila- ments, with roundish antherae : PIST. a germen beneath ; with two reflected styli ; the stigmata obtuse. There is no pericarpium ; the fruit is ovate, striated, and tripartite. The seeds are two, roundish and striated. There is but one species, viz. the aethusa cynapium, fools-parsley, or lesser hemlock, a native of Britain, which grows in corn fields and gardens. This plant, from its resemblance to common parsley, hath sometimes been mistaken for it ; and when eaten, it occasions sickness. If the curled leaved parsley only, were cultivated in our gardens, no such mistakes would happen. Cows, horses, sheep, goats, and swine, -eat it. It is noxious to geese.

yETHYIA, in ornithology, a name by which old authors have called one of the web-footed fowls, the Utamania of Crete, or the common auk, or razor-bill.

AETIANS, in church history, a branch of Arians, who maintained that the Son and Holy Ghost are in all things dissimilar to the Father. See AETIUS.

^ETIOLOGICA, ArioXoytKj;, Gr. that branch of physic which explains the causes and reasons of diseases, and their various symptoms in order to their cure.

Bailey.

/ETIOLOGICAL, something that assigns the cause of an effect, or appearance.

./ETIOLOGY, in medicine, from Aina, cause, and Xoyoe, discourse, a discourse of the cause of a disease. In this sense, we say, the aetiology of the small pox, of the hydrophobia, of the gout, the dropsy, &c.

/ETIOLOGY, in rhetoric, a figure, whereby, in relating an event, we assign also the cause of it. In this sense, aetiology differs from colour, as the former assigns the true cause, the latter only a feigned or specious one. The sceptics were professed opponents of all aetiology, or argumentation from causes.

./ETION, a celebrated painter, who has left us an excellent picture of Roxana and Alexander, which he exhibited at the Olympic Games: it represents a magnificent chamber, where Roxana is sitting on a bed of a most splendid appearance, rendered still more brilliant by her beauty. She looks downwards, in a kind of confusion, being struck with the appearance of Alexander standing before her. A number of little cupids flutter about, some holding up the curtain, others un- dressing the lady ; some pulling Alexander by the cloak, and presenting him to his mistress, others playing with his arms ; while his friend Haephestion, and the god Hymen, are represented attending with the matrimonial torch. This picture gained /Etion so much reputation, that the president of the games gave him his daughter in marriage.

^ETITES, is one of those curiosities, in na- tural history, which merits a more full descrip- tion than Br. Johnson has given it. It was formerly in repute for several extraordinary magical as well as medical powers ; such as pre- venting abortion, discovering thieves, and other ridiculous properties. The popular tradition is, that it is found in the eagle’s nest, whither it is supposed to be carried

while the female sits, to prevent her eggs from being rotten. These stones are found in several parts ; near Trevoux in France, one can scarcely dig a few feet deep, without finding considerable strata, of the coarser or ferruginous kind. ??? They are originally soft, and of the colour of yellow ochre. But the finest and most valued of all the eagle stones, are accidental states of one or other of our com- mon pebbles. These are so far from being a peculiar species of fossil, though usually ac- counted such, that they are not determinately of. any one species of pebble. Those, however, which most usually furnish them, are the brown centered pebbles, with whitish, bluish, and brown crusts. The plain history of this remark- able fossil is this : the central nucleus of many species of pebbles, particularly of this, is coarser than the rest of the stone, that is, it is made up of more earth and less crystal ; the natural conse- quence of which must be, that being of a more loose and rare texture, it is in drying more apt to shrink than such masses as are composed of a harder and purer matter. The central nu- cleus in this species is also surrounded with a whitish crust of a more loose texture, and more subject to shrink in drying, than even the nucleus itself; and being composed of more earth and less crystal, is also more friable and soft. The outer circles of this stone are of a much harder substance. When the earthy matter in the nu- cleus, and first crust of this pebble, exceeds its just proportion, the consequence will be, that the stone will become an aetites ; for the nucleus contracting itself to a small size, on the evapo- ration of its fluid matter, must separate from

its first crust, and that also shrinking must be drawn backward towards the other crusts ; whence the cavity will become larger between that and the nucleus, and consequently, the nucleus will rattle in it when the stone is shaken. The pebble in this state having been afterwards rolled about by the

waters, the nucleus has by rolling broken to pieces all the inner crust, and is usually found in the hollow of the stone, buried in a large quantity of a whitish powder. These eagle-stones are not uncommon in our gravel pits. The setites is also known by the names of eutocium, echites, lapis aquila:, aquileus, and lapis pregnans.

AETIUS, a famous physician, born at Amida, in Mesopotamia, and the author of a work en- titled Tetrabibles, a collection from the writings of former physicians. He lived about the end of the fifth, and beginning of the sixth century.

AETIUS, governor of Gallia Narbonensis in

the reign of Valentinian III. forced the Franks, who were passing into Gaul, to repass the Rhine. He defeated the Goths ; and routed Attila king of the Huns, who invaded Gaul with an army of 700,000 men. But the em- peror, jealous of the merit of this great man, ungratefully murdered him, in 454, with his own hand, under the pretence that he had per- mitted the invasion of the Huns, after Attila's defeat.

AETIUS, one of the most zealous defenders of Arianism, was born in Syria, and flourished about the year 336. After being a servant to a gram- marian, of whom he learned grammar and logic, he was ordained deacon, and at last bishop, by Eudoxus, patriarch of Constantinople. St. Epi- phanius has preserved forty-seven of his pro- positions against the doctrines of the Trinity His followers were called Aetians.

JE T N A.

./ETNA, or ./ETHANA, (as Bochart thinks from WJfiK Hebrew a furnace,) called also in mo- dern times Gibello, a burning mountain on the east of the island of Sicily, in the district of Val de Demone, or Demona: a name derived evidently from the superstitious notion of the ancients, that daemons resided here, and held their emporium in the caverns

of the mountain. In classic history, we learn that in this place were the forges of the Cyclops, who were en- gaged in making thunder-bolts for Jupiter, under the superintending care of Vulcan.

Fen-ant exercebant vasto Cyclopes in antro Brontesque Steropesque, et nudus membra Pyracmon. On their eternal anvils here he found The brethren beating and the blows go round.

Homer is altogether silent as to its eruptions, a circumstance which has been thought to imply, . that they were in his time not known ; or had been for ages suspended. There was a temple of Vulcan erected on the island, in which, ac- cording to MYian, a perpetual fire was main- tained : (De Animal. 1. xi. c. 3 :) and TEtna was the fabled prison in which the giant En- celadus was confined by Jupiter.

The dimensions of the mountain have never yet been ascertained with accuracy ; and there are no two travellers whose calculations on this subject exactly correspond. M.Houel, one of the most accurate observers of its phenomena, makes it forty miles in circumference at the base ; there are others that make it sixty ; others again' make it 100 : M. Brydone, who copies the cal- culations of Signior Recupero, affirms it to be i3 miles round ; Mentelle makes the diameter to be even thirty miles ; and Buffon gives 300 square leagues as the superficial extent of the entire mountain. As to Brydone, if we com- pare the account of Mount ^Etna's circumference, given by Recupero, with its apparent circum- ference on the map, prefixed to the 'Tour through Sicily and Malta,' we must at once be

struck with the prodigious disparity. It is plain, that in the map no room is found for any moun- tain of these dimensions ; while by comparing the distances of some of the Sicilian towns from one another, Signior Recupero's calculation will be found enormously, exaggerated. The geographer, for instance, lias placed Catania, which stands at the foot of Mount ./Etna, on one side no more than twenty-eight miles from the most distant point of

the river Alcantara, which forms the boundary on the opposite side ; so that a circle, whose radius is fourteen or fifteen miles, must encompass as much space as can possibly be occupied by the basis of Mount ./Etna. If then, we make the circumference of this famous mountain to be between eighty and ninety miles, we shall not be far perhaps from the truth, though our data are far from satisfying us. Nor do travellers differ less with respect to its height :

Above the level of the sea. Kircher makes it .... 4000 toises

Mentelle 1950

Recupero 2500

Buffon 2000 fath.

Faujas de St. Fond . . . 10,036 feet Sir G. Shuckburgh . . . 10,954

Saussure 10,963

Brydoue 12,000

Some affirm it to be six, some eight, and others even twelve miles high. Pindar, the first writer who mentions an eruption of j►►tna, calls it ' the pillared prop of heaven.' Pyth. Od. v. 36.

Presenting a picture of all the climates, ./Etna epitomizes also the history of the world. Its annals extend through all authentic history. The first eruption taken notice of by ancient and by no means contemporary authors, hap- pened before the Greeks landed on the island, and is supposed to have intimidated the Sicani from continuing in the east part of Sicily. Thu first recorded eruption was in the time of Py-

thagoras. Plato was invited by tlie younger Dionysius to examine the state of the mountain, after the sixih. It threw up flames and lava near

100 times between that period and the battle of Pharsalia ; and was particularly furious while Sextus Pompeius was adding the horrors of war to its devastations. Charlemagne hap- pened to be at Catania during one of its erup- tions ; and from his reign the chronicles mention fifteen down to that of the year 1669. Ascend- ing this mountain, therefore, the traveller treads on ground consecrated by the fears and reverence of all ages. Hither Adrian and Plato held their way and combated its difficulties before him ; and animated by the same hope, thought them- selves sufficiently rewarded by the unparalleled scenery of its brow.

./Etna from a distance has the appearance of an obtuse truncated cone, terminating at an immense altitude, in a bifurcated vertex, in which two separate eminences are distinctly visible. Aiound the great bulk of the mountain, are a number of conical hills, which appear to have bulged out of its sides in different eruptions, each having a crater at the top, and standing to the height of 300 or 400 feet. These hills adorned with verdure, darkened by a thick shade of trees, and scattered with villages and hamlets the abode of 100,000 inhabitants, agreeably diversify the scene; while a profusion of plants and herbs, and a green belt of oaks and pines, which seem planted by the hand of nature, give ###_o the whole a romantic and highly picturesque appearance. The mountain affords a specimen of all climates, and is commonly divided into three regions ; the fertile, the woody, and the desert or barren region; which some writers have not inaptly termed the torrid, the temperate, and the frigid zones of ./Etna.

The fertile region is lowest, encircled by the rivers Semetus and Alcantara, except where it is bounded by the sea. Here are found vines, and fruits of the most luxuriant variety ; the roots of trees shoot along above the surface of the soil, and the decomposition of the lava has given to the pastures and orchards, a richness and fertility rarely equalled. But Sir William Hamilton observes, they keep their vines low here, contrary to the custom of

those who inha- bit Mount Vesuvius ; and they produce a stronger wine, but not in such abundance. Here also, are the lavas of many terrible eruptions ; par- ticularly of that in 1669. At the foot of the moun- tain raised at that time, is a hole, through which Sir William descended, by means of a rope, into several subterraneous caverns, branching out, and extending much farther than he chose to ven- ture, the cold there being excessive, and a vio- lent wind extinguishing some of the torches. Many other caverns are known in this and the other regions of ./Etna; particularly one near this place, called La Spelonca della Palomba, from the wild pigeons building their nests there. Here Mr. Brydone was told that some people had lost their senses, from having advanced too far, imagining they saw devils and damned spirits. Some of these caverns are made use of as magaxmes for snow ; which they are well id-ipted for, on account of their extreme cold.

These are with great probability supposed by Sir William Hamilton, to be the hollows made by the issuing of the lava in eruptions. In this region the river Acis, so much celebrated by the poets in the fable of Acis and Galatea, takes its rise. It bursts out of the earth at once in a large stream, runs with great rapidity, and about a mile from its source throws itself into the sea. Its water is remarkably clear ; and so extremely cold, that it is reckoned dangerous to drink it ; it js said, however, to have a poisonous quality, from being impregnated with vitriol ; in con- sequence of which cattle have been killed by it. It never freezes, but is said often to contract a greater degree of cold than ice.

After travelling twelve miles from Catania, the traveller usually halts at Nicolosi, 2496 feet above the level of the sea. The heat here is not so fervent as at Catania, because it is higher up the mountain. Mount Rosso, or the Red Moun- tain, is near this station : so called from its colour, which is not however entirely red, but possesses an agreeable intermixture of other shades : a deep bed of black sand envelopes the bottom ; covered with a

sort of grey lava, and contains a multitude of openings which have never been explored to any considerable dis- tance in consequence of that excessive cold, of which Sir William Hamilton complained. The year 1669 was the period of its formation, when it rose from the midst of a plain, and discharged torrents of lava. It is one of those mouths through which ./Etna has in modern times dis- charged showers of ashes and flakes of flame.

The stream of lava reached, in 1669, from this place to the sea. To the extent of two miles Mount Rosso is surrounded with a black sand, which was thrown out in that eruption, and which then covered a space of fifteen miles, to such a depth as to bury the vines and shrubs that were scattered over the soil. Some of the finer particles of it were wafted by the wind as far as Calabria. The sand is very deep as you approach the mountain ; which is forked at the vertex. Sir William Hamilton estimates its height at a mile, and its circuit at three miles ; but Borelli makes its circumference at the base not to exceed two miles, and its perpendicular height not more than 150 paces : and with this account Spallanzani agrees. This naturalist bestowed some attention upon the formation of this singular production of nature, the only one out of the many similar eminences that sur- round the volcano, with whose origin and com- plete history we are acquainted. The base of the lava of this eminence is horn-stone, of a grey co- lour, rough to the touch, and of a moderately fine grain. It gives sparks with steel, and sounds when it is struck. It serves as a matrix to a great number of felt-spathose or shoerlaceous crystallizations. The scoriae, of which it is prin- cipally composed, have the same kind of base, containing shoerls and felt-spars ; but they are more light and friable than the lava, and have a kind of vitreous appearance. These and other differences are produced by the mutual colli- sion and pulverization of the scorise. The num- ber of detached shoerls found on and near Mount Rosso is very great. It has been thought

that they first entered into the body of lava, and were separated from it by means of the sulphur, which had scorified the lava, but had not pro- duced the same effect on the shoerls, because of the small quantity of iron which they con- tain ; and consequently they remained free and detached. Spallanzani rejects this hypothesis ; as upon experiments with the magnetic needle, he found that the martial principle was more abundant in the shoerls than in their base ; and he, therefore, accounts for their separation from the lava in another way. The volcanic fire, which melted the lava, was incapable of melting these shoerls, which are not only re- fractory to the fire, but of a different specific gravity from the lava. When this was melted, elevated to a great height, and separated into small particles in the progress of the eruption, a number of shoerls were detached from it, and fell, isolated, partly within the crater, and partly around it. Accordingly he found, that the shoerls detached from the lava are infusi- ble in the furnace ; but those which are incor- porated with the lava sustain a proper fusion. These shoerls are also found in many other mountains of /Etna. Spallanzani analyzed them, and from 100 docimastic pounds, he obtained the following results : viz.

Pounds.

Silex - 34.5

Lime - 18.7

Iron 7.6

Alum ??? - - - - 12.4 Magnesia - - - - 11

Sum

84.2

A crater on the summit of this sub- volcano is of an elliptical form, and was explored by Mr. Houel with torches, but he was soon obliged to return, from the

extreme cold he felt within it.

Niccolo del Arena, the next station, is a building which was once in the possession of the Benedictine friars, but they were compelled to forsake it in consequence of the devasta- tions of the lava. It is, however, extremely fruitful; the black sand thrown up in 1669 having been converted into vegetable earth. Contiguous to this place is another volcanic hill of the height of 300 feet, richly overspread with verdure, surrounded by other little eminences on every hand, possessing like itself all the charms of vegetable beauty, and rising like spots of verdure amid a dreary waste of lava. About three miles higher up the mountain is the woody region; here the air is cool and agreeable, the morning-breeze comes breathing over beds of spices surcharged with delicious and reviving odours. Trees shape their foliage and spread their boughs in apparent security, diffusing an air of magnificence and grandeur over the whole landscape. The chesnuts of the woody region are thought prodigies in nature ; one, which is particularly celebrated, measures 196 feet at the surface of the earth.

Mr. Hamilton says, he observed a gradual de- crease of the vegetation as he advanced up the mountain ; the under part being covered with - timber trees, which grew gradually less

as he approached the crater ; at last they de- generated into the small plants of the northern climates. lie also observed quantities of juni- per and tansey; and was informed by his guide, that later in the season (he visited ./Etna in June 1 769) there are a great many curious plants, and in some places rhubarb and saffron in great plenty. In Carrera’s history of Catania, there is a list of all the plants and herbs of ./Etna, in alpha- betical order. This region is extolled by Mr. Brydone as one of the most delightful spots on earth. He lodged for a night in a large cave near the middle, formed by one of the most ancient lavas. It is called La Spelonca del Ca- priole, or the goat’s cavern ; because it is fre- quented by those animals, which

take refugre there in bad weather. Here his rest was dis- turbed by a mountain thrown up in the erup- tion of 1766. It discharged great quantities of smoke, and made several explosions like heavy cannon fired at a distance; but they could observe no appearance of fire. This gentleman likewise visited the eastern side of Regione sylvosa, intending to have ascended that way to the summit, and descend again on the south side to Catania ; but found it impracticable ; though what the insurmountable difficulties were, he does not mention. On this side, part of the woody region was destroyed, in 1755, by an immense torrent of boiling water, which issued from the great crater. Its traces were still very visible, about a mile and a half broad, and in some places more. The soil was then only beginning to recover its vegetative power, which it seems this torrent had destroyed for four- teen years. ??? Near this place are some beautiful woods of cork, and evergreen oak, growing absolutely out of the lava, the soil having hardly filled the crevices ; and not far off, our traveller observed seven little mountains that seemed to have been formed by a late eruption. Each of these had a regular cup, or crater, on the top ; and, in some, the middle gulph, or Voragine, as the Sicilians call it, was still open. Into these gulphs Mr. Brydone rolled several stones, and heard the noise for a long time after. All the fields round, to a considerable distance, were covered with large burnt stones discharged from these smaller volcanoes. The woody region, par- ticularly the east side, called Carpinetto abounds with very large chesnut trees ; the most remarkable of which has been called, from its size, Castagno de Cento Cavalli, or chesnut tree of a hundred horse. Mr. Brydone was greatly disappointed at the sight of this tree, as it is only a bush of five large ones growing together ; but his guides assured him, that all these five were once united into one stem ; and Signior Ilecupero told him, that he himself had been at the expence of carrying up peasants with tools to dig round this bush of trees, and found all the stems united below ground in one root. The circumference, as measured by Messrs. Brydone and

Glover who accompanied him, amounted to 204 feet. Another of these, about a mile and a half higher on the mountain, is called Castagna de Galea : it rises from one solid stem to a considerable height, after which it branches out, and is a much finer object than the other ; this was measured

two feet above the ground, and found to be seventy-six feet in circumference. A third, called Castagna del Nave, is pretty nearly of the same size ; and Massa, one of the most esteemed Sicilian authors, affirms that he has seen solid oaks there upwards of forty feet round. All these grow on a thick rich soil, which seems originally to have been formed of ashes thrown out by the mountain. Here the barometer stood at twenty-six inches five lines and a half, indica- ting an elevation of near 4000 feet. The snow protto is 5054 feet above the level of the sea. There are two mountains in the vicinity, whose craters exceed in dimension that of Vesuvius.

The barren region includes all the higher part of the mountain. Here the scene is no longer woody : there is a flat expanse of snow and ice, the traveller shivers under some of the coldest blasts of the frigid zone ; sounds are heard in the centre of the mountain, sulphurous exhalations issue from its crevices ; at last the summit rears its awful head, pouring out volumes of smoke from its caverns.

The man who treads Mount ./Etna seems like a man above the world. He generally is advised to ascend before day-break; the stars now brighten, shining like so many gems of flames ; others appear which were invisible below. The milky-way seems like a pure flake of light lying across the firmament, and it is the opinion of some that the satellites of Jupiter might be dis- covered by the naked eye. But when the sun arises the prospect from the summit of ./Etna is beyond comparison the finest in nature. The eye rolls over it with astonishment and is lost.

The diversity of objects ; the extent of the horizon ; the immense height ; the country like a map at our feet ; the ocean around ; the heavens above ; all conspire to overwhelm the mind, and affect it with sensations of astonishment and grandeur. We must be allowed to extract Mr. Brydone's description of this scene. There is not, he says, on the surface of the globe, any one point that unites so many awful and sublime objects. The immense elevation from the surface of the earth, drawn as it were to a single point, without any neighbouring mountain for the senses and imagination to rest upon and recover from their astonishment in their way down to the world. This point or pinnacle, raised on the brink of a bottomless gulph, as old as the world, often dis- charging rivers of fire, and throwing out burning rocks, with a noise that shakes the whole island. Add to this the unbounded extent of the pros- pect, comprehending the greatest diversity, and the most beautiful scenery in nature, with the rising sun advancing in the east to illuminate the wondrous scene.

' The whole atmosphere by degrees kindled up, and shewed dimly and faintly the boundless prospect around. Both sea and land looked dark and confused, as if only emerging from their original chaos, and light and darkness seemed still undivided; till the morning by degrees advancing completed the separation. The stars are extinguished, and the shades disappear. The forests, which but now seemed black and bottomless gulphs, from whence no ray was re- flected to shew their form or colours, appear a

new creation rising to sight, catching life and beauty from every increasing beam. The scene still enlarges, and the horizon seems to widen and expand itself on all sides; till the sun, like the great Creator, appears in the east, and with his plastic ray completes the mighty scene. All appears enchantment : and it is with difficulty we can believe we are still on earth. The senses, unaccustomed to the sublimity of such a scene, are bewildered and confounded ; and it is not till after some time that they are capable of separating and

judging of the objects that compose it. The body of the sun is seen rising from the ocean, immense tracts both of sea and land intervening ; the islands of Lipari, Panari, Alicudi, Stromboli, and Volcano, with their smoking summits, appear under your feet; and you look down on the whole of Sicily as on a map ; and can trace every river through all its windings, from its source to its mouth. The view is absolutely boundless on every side ; nor is there any one object within the circle of vision to interrupt it, so that the sight is every where lost in the immensity ; and I am persuaded it is only from the imperfection of our organs, that the coasts of Africa, and even of Greece, are not discovered, as they are certainly above the horizon. The circumference of the visible horizon on the top of ./Etna, cannot be less than 2000 miles. At Malta, which is near 200 miles dis- tant, they perceive all the eruptions from the second region : and that island is often discovered from about one half the elevation of the moun- tain : so that at the whole elevation the horizon must extend to near double that distance, or 400 miles, which makes 800 miles for the diameter of the circle, and 2400 for the circum- ference : but this is by much too vast for our senses, not intended to grasp so boundless a scene. The most beautiful part of the scene is certainly the mountain itself, the island of Sicily, and the numerous islands lying round it. All these, by a kind of magic in vision, that I am at a loss to account for, seem as if they were brought close round the skirts of ./Etna; the distances appearing reduced to nothing. Perhaps this singular effect is produced by the rays of light passing from a rarer medium into a denser, which (from a well-known law in optics) to an observer in the rare medium, appears to lift up objects that are at the bottom of the dense one, as a piece of money placed in a bason appears lifted up as soon as the bason is filled with water.

' The Regione Deserta, or the frigid zone of j/Etna, is the first object that calls your attention. It is marked out by a circle of snow and ice, which

extends on all sides to the distance of about eight miles. In the centre of this circle, the great crater of the mountain rears its burning head, and the regions of intense cold, and of intense heat, seem for ever to be united in the same point The Regione Deserta is immediately succeeded by the Sylvosa, or the woody region, which forms a circle or girdle of the most beautiful green, which surrounds the mountain on all sides, and is certainly one of the most delightful spots on earth. This presents a remarkable contrast with the desert region. It is not smooth and even.

[redacted]ike the greatest part of the latter; but is finely variegated by an infinite number of those beauti- ful little mountains that have been formed by the different eruptions of ./Etna. All these have now acquired a wonderful degree of fertility, except a very few that are but newly formed, that is within these five or six hundred years ; for it certainly requires some thousands to bring them to their greatest degree of perfection. We looked down into the craters of these, and attempted, but in vain, to number them.

' This zone is every where succeeded by the vineyards, orchards, and corn-fields that com-

[redacted]ase the Regione Culta, or the fertile region, his zone makes a delightful contrast with the other two regions. It is bounded by the sea to the south and south-east, and on all its other sides by the rivers Semetus and Alcantara, which run almost round it. The whole course of these rivers is seen at once, and all their beau- tiful windings through these fertile vallies, looked upon as the favourite possession of Ceres her- self, and the very scene of the rape of her daughter Proserpine. Cast your eyes a little further, and you embrace the whole island ; all its cities, rivers, and mountains, delineated in the great chart of na- ture ; all the adjacent islands, and the whole coast of Italy, as far as your eye can reach ; for it is no where bounded, but

everywhere lost in the space. On the sun's first rising, the shadow of the mountain extends across the whole island, and makes a large track visible even in the sea and in the air. By degrees this is shortened, and in a little time is confined only to the neigh- bourhood of ./Etna.'

Brydone also speaks of observing several of those meteors, generally called by astronomers falling stars ; which appeared as much elevated as when viewed from the plain : a proof, says he, that these bodies move in regions much beyond the bounds that some philosophers have assigned to our atmosphere. To have a full and clear prospect from the summit of mount ./Etna, it is necessary to be there before sun-rise ; as the vapours raised by the sun, in the day time, obscure every object: and all agree, that the beauty of the prospect from thence cannot be expressed. Here Mr. Hamilton also had a view of Calabria in Italy, with the sea beyond it ; the Lipari Islands, and Stromboli, (seventy miles distance) appeared just under his feet ; the whole island of Sicily, with its rivers, towns, harbours, &c. appeared distinct as if seen on a map. Massa, a Sicilian author, affirms, that the African coast, as well as that of Naples, with many of its islands, have been discovered from the top of ./Etna. The visible horizon here is not less than 8 or 900 miles in diameter.

- Seated,' says Spallanzani, ' in the midst of this theatre of the wonders of nature, I felt an inde- scribable pleasure from the multiplicity and beauty of the objects I surveyed ; and a kind of internal satisfaction and exultation of heart. The sun was advancing to the meridian, unob- scured by the smallest cloud, and Reaumur's thermometer stood at the tenth degree above the freezing point ; I was therefore in that tempera- ture which is most friendly to man, and the re- fined air I breathed, as if it had been entirely

vital, communicated a vigour and agility to my limbs, and an activity and life to my ideas which appeared to be of a celestial nature.’

On the summit, Mr. Hamilton observes, that he was sensible of a difficulty in respiration, from the too great subtilty of the air, independ- ent of what arose from the sulphurous smoke of the mount. Mr. Brydone takes no notice of this ; which probably arose from the air being in a more rarefied state at the time of Mr. Hamil- ton’s observation, than of Mr. Brydone’s ; the barometer, as observed by the former, standing at eighteen inches and ten lines, by the latter at nineteen inches six lines and a half. In these high regions there is generally a very violent wind, which, as all our travellers found it con- stantly blowing from the south, may possibly be commonly directed from that point. Here Mr. Brydone’s thermometer fell.

Near the foot of the great crater, is the Philo- sopher's tower, called II Torre del Philosopho, supposed to have been constructed by the philo- sopher Empedocles while he was studying the phenomena of ./Etna ; by others these are sup- posed to be ruins of a temple of Vulcan. They are of brick, and seem to have been ornamented with marble. In this region Mr. D'Orville found a great oblong block of polished marble, eight or ten feet high, and three or four thick ; though how it came there was quite unaccountable to him. From Mr. D'Orville's and Mr. Brydone's accounts, we must reckon this part of the moun- tain steep ; but Mr. Hamilton says, the ascent was so gradual as not to be in the least fatiguing ; and had it not been for the snows, they might have rode on their mules to the very foot of the crater.

The great crater itself, may be described as a cup, or hollow at the top of a conical hill, rising equally on all sides. The hill is composed chiefly of sand and ashes, thrown up from the mouth at different periqds; and at present it is ten miles in circumference, and a quarter of a mile in height. The crater presents the appearance of an inverted cone the inside of which is covered with salts and sulphur of various colours ; it is oval in its figure, shelving down from the aper- ture. Sir W. Hamilton, 1769, calculated the circumference at two miles and a half; Mr. Brydone, 1770, at three miles and a half; Mr. D'Orville, 1727, at three or four miles. In 1788, Spalanzani, who visited this phenomenon, de- scribes the inner sides as terminating in a plain of half a mile in circuit, in the centre of which is a circular aperture of five poles in diameter ; contained within the cavity, apparently in a state of ebullition. Several stones that he threw in, fell dead as into a thick paste ; but those that did not fall into the matter, made quite a different sound, a circumstance which led him to conclude that the bottom was solid. Riedesel observes, that no sound at all was produced by throwing stones into the gulph ; but he heard a roaring like the sea. The crater stood to the east,

with, one opening, which no longer exists. Mr D'Orville tells us that he and his companion having fastened themselves by ropes, held by men at the top, went down the shelving sides to the very mouth of the gulph. They beheld a

conic mass of matter in the middle, to the height of about sixty feet, the base as far as they could trace it, nearly 800. feet, from which small lam- Dent flames and smoke issued in every direction. While they were there, the north side of the mountain began to throw out flames and ashes, accompanied by a bellowing noise, on which they retired. Strabo describes the top of the mountain as a level plain, with a smoking hill in the centre. Spallanzani as bifurcated, for he saw another eminence a quarter of a mile distant, with another crater, though not of equal dimen- sion. M. Ilouel speaks of three eminences, 1782, like an isosceles triangle, only two of which could be perceived from any distance, in the midst of which is the principal crater; in diameter about sixty feet. According to Fazello, there was a hill produced in 1444, which fell into the crater after an eruption, and mingled with the melted mass. Borelli writes that the summit of the mountain rose up like a tower ; and during the eruption of 1669, fell into the crater. The whole structure and appearance of the mountain is thus evidently subject to great changes.

The stones ejected from /Etna are granitic, or calcareous, surrounded with columns of Basalt, which M. Dolomieu terms ' prismatic lava.' Spalanzani supposes the shore to be volcanic for twenty-three miles. The same writer ob- serves that there is on / Etna a great scarcity of water, owing, as he imagines, to the rain's falling on scoriae, in which it sinks for want of those various argillaceous strata, which retain it in other mountains. Others affirm that the moun- tain is well watered ; that there are intermitting springs which flow during the

day only, and stop i’i the night, a fact which may arise from the melting of the snow, which ceases as the night comes on ; that there are streams always pouring from the side of the mountain, unquestionably originating in some permanent source; that there are poisonous springs, fine salt springs, &c.

An approaching eruption of mount /Etna is indicated various ways. There is at first an in- crease of the white smoke issuing from the top of the crater, intermingled with volumes of black smoke in the centre. These are attended by slight explosions, and followed by red flashes, or rather streams of fire perpetually increasing in number, and growing in dimension, till the whole becomes one entire black column, highly electrical, illu- minated by frequent lightnings, and attended by occasional thunder. These phenomena are fol- lowed by showers of red hot stones and ashes. The former projected often to a great distance, and the latter wafted sometimes by the winds, and carried 100 miles, setting fire to buildings, and destroying the face of vegetation. Recupero tells us, that, he had known rocks thrown up to the altitude of 7000 feet. M. Houel saw one of these stones which had been projected from the mouth of /Etna, whose weight was not less than sixteen tons. It is generally three or four months before the lava makes its appearance, boiling over the top, or bursting through the sides of the mountain ; a complete liquid mass of melted mineral matter, running like a river, and de- stroying the face of nature wherever it comes.

The explosions of /Etna have been recorded from a very early period. Diodorus Siculus mentions eruptions of it 500 years before the Trojan war, or 1693 years before the Christian asra. This is that which drove, he says, the Sicani from the eartern part of Sicily, which they then inhabited. Thucydides mentions three eruptions, of which, the second was the most remarkable. It happened the second year of the seventy-fifth Olympiad, when Phaedon was archon of Athens, and when the army of Xerxes was defeated by the Athenians, at Plataea.

Both the victory and eruption are recorded in an ancient inscription on the Oxford marble. Du- ring this eruption, Amphinomus and Anapis, two Sicilian youths, rushed into the midst of the flames, and saved the lives of their aged parents, at the imminent peril of their own ; on which account, a temple has been consecrated to their memory.

The third eruption mentioned by Thucydides, occurred in the year before Christ 425, in the eighty-eighth Olympiad, and desolated part of the Catanian territory. He mentions it in the third book on the Peloponnesian war, in these words : ××× ' About the spring of the year, a torrent of fire overflowed from mount /Etna, in the same manner as formerly, which destroyed part of the lands of the Catanians, who are situated at the foot of that mountain, which is the largest in all Sicily. It is said that fifty years intervened be- tween this flow and the last which preceded ; and that, in the whole, the fire has thus issued thrice since Sicily was inhabited by the Grecians.'

The fifth eruption, of authentic history, occur- red in the consulship of Sergius Fulvius Flaccus, and Quintus Calpurnius Piso, nearly 133 years before the Christian sera. It was of some im- portance ; but Julius Obsequius, and Orosius, by whom it is recorded, have not transmitted any details respecting it.

In the consulship of Lucius JEmilius Lepidus, and Lucius Aurelius Orestes, about 125 years before Christ, /Etna poured forth such a torrent of fire, that the adjoining sea is represented as absolutely hot, and immense numbers of fishes were destroyed. One historian declares, that the inhabitants of the isles of Lipari ate so many of those fishes as to occasion a distemper, which proved generally fatal.

Orosius states, that four years after the pre- ceding eruption, the city of Catania was desola- ted by another equally tremendous ; the roofs of the houses were demolished by the burning ashes, and so dreadful was the desolation, that the Romans

exempted the inhabitants from all taxes for the space of ten years, to afford them an opportunity for repairing the damages they had sustained.

Livy mentions an eruption of /Etna, just pre- vious to the death of Cassar, in the forty-third year before Christ. It was not very considerable in itself, but acquired importance from being after- wards considered as an omen of Csesar's death.

In the life of Caligula is mentioned, by Sueto- nius, an eruption that happened in the year forty, of the Christian aera; on the same night in which the emperor fled from Messina, where ne was at the time.

According to Carrera, there was an eruption of mount yF.tna, in the year of our Lord 253. The same author records another in the year 420; and Geoffrey of Viterbo, in his Chronicle, mentions an eruption in 812, in the reign of Charlemagne.

We cannot attempt to go into all the authentic details of those occurrences: but that of 1169, was the most tremendous eruption of ancient times ; it happened on the 4th of February. At day-break there was an earthquake in Sicily, felt across the Strait, as far as Reggio, Catania sunk in ruins, and 15,000 inhabitants perished in its fall. The roof of St. Agatha's church fell in, and killed the bishop ; new rivers burst forth, and several of the ancient rivers disappeared. The clear spring of Arethusa, so celebrated in an- tiquity, became muddy and brackish. The fountain of Ajo ceased two hours, and then poured out more copiously than before, but its waters became of a blood colour. At Messina, the sea retired ; and then returning, it whejmed the city walls, rolled through the town, and swept multitudes away, men, women, and chil- dren. The trees and vegetables were burnt up by the showers of hot ashes and stones that fell upon them.

In 1329, another awful visitation occurred, of which

a few particulars are furnished by Nicholas Specioli. It happened about vespers, on the 23rd of June. The mountain began to send forth dreadful sounds, and alarmed all the island, a volume of smoke encompassing a blaze of fire, arose from the mountain. Snow spread over Moyona. The flames in the evening touched the clouds ; many buildings were reduced to ruins ; many rocks on the shore dashed into the sea ; springs and streams of water were dried away. The sun was eclipsed from morning to evening, with clouds of smoke and ashes ; on the south side of the St. John's church, fire issued out from an opening made in the ground. Our historian drew near to see the wonders of nature : the earth tottered under his feet, and four volumes or showers of red hot stones issued in a very short space. The writer of this history affirms, that neither Babylon nor Sodom suffered so tre- mendous a visitation, and that many of the in- habitants died for fear ; many birds died in the heavens, and the fish in the surrounding seas.

In 1536, another terrible eruption took place, and one which is memorable, on account of the death of Francis Negro de Piazza, a celebrated physician of Lentini, who, from a desire to ex- amine the phenomenon, approached too near the crater, and was killed by a volley of ignited stones.

In 1537, the mountain was again disturbed. It was rent in several places, and the lava poured out with great violence, and destroyed Mont Pellieri and Fallica, together with the gardens, vineyards, and monastery of St. Nicholas D'Are- na, and nearly all the inhabitants. The wind tore up the trees, the river Simeto left its banks, and swept away both people and cattle. The summit of the mountain fell in with a noise so dreadful, that the people of the island believed it to be the last day, and prepared accordingly ; many of the people were struck deaf by the

noise, and the castle of Corltone, though nearly

eighty miles from the volcano, was demolished. No eruptions of ./Etna have been more terri- ble or destructive than that of 1669. Eighteen days before the commotion the sky was black and cloudy, agitated by frequent thunder and lightning. In the island of Stromboli, two vol- canoes, to the westward of Sicily, raged more than usual. Several houses were overturned bv earthquakes in the village of Nicolosi, and the crater seemed to exhibitsigns of great commotion. On the 8th of March, the sky darkened over La Pedara, and on the llth, a chasm of some miles in length was opened in the mountain, twenty miles from the crater towards the city of Catania On the following night, many new chasms opened in different places of the mountain, and from them all burst columns of smoke, tremen- dous thunders, accompanied by alarming earth- quakes. From the principal crater a stream of lava flowed towards the lake of La Hardia. On the following day, it proceeded to the territory of Mai Passo, and wasted it in twenty hours. It then turned on Mont Pellieri, and in some places the dreadful stream was two miles broad. A new and immense chasm appeared on the 23d, and produced a hill of stones, sand, and ashes two miles in circumference, covering the surrounding country for a distance of fifteen miles. On the morning of the 25th of March, the whole mountain was agitated by an earthquake, and the highest crater fell down into the focus with a tremendous noise. A wide gulph of a mile in extent, yawned in the place where it stood, pouring out large masses of ashes and stones, and among others the celebrated block of lava, now on mount Frumento. The lava turned its course towards Catania with a great noise accompanied by alarming earthquakes : it over- flowed the walls and desolated the gardens of the Benedictine Convent, and ran down into the sea. The stream of lava in forty days destroyed the habitations of 27,000 persons, and of the 20,000 inhabitants of Catania, only 3000 sur- vived. As the lava ran down the mountain, red hot stones of a pale red might be seen swimming along in it of the size of an ordinary table ; all the country was covered with it, smoking like a furnace of melted iron.

Sometimes large masses fell into the sea with a dreadful noise. But when the lava rolled into the sea, the sound was more dreadful than the most tremendous thunder, and was heard to an immense distance. The water retired, the sun was darkened, the fish were destroyed, and the colour of the sea itself was changed. A continued noise issued from the mouth of the cleft, which could be heard sixty, and sometimes 100 miles, and to this dis- tance the ashes were carried. The mouth whence this terrible inundation proceeded was only ten feet in diameter. Burning rocks, sixty palms in length, were thrown out of it to the distance of a mile. The sun did not appear for many weeks, and four months elapsed before the scene was altered. A vineyard in the possession of a convent, standing on ancient lava, was borne up by the melting of the lava beneath it ; and in- stead of being destroyed, the people with great astonishment saw the whole field begin to move

off. Some of this vineyard remains to this day.

A description of the scene in the neighbour- hood of jEtna at the time, was sent to the court of England by Lord Winchelsea, who happened then to be at Catania in his way home from an embassy at Constantinople. The account is not now to be procured ; but Sir W. Hamilton found a copy of it in Sicily, and gives an extract, part of which follows : ' When it was night, I went upon two towers in divers places, and I could plainly see, (at ten miles' distance, as we judged,) the fire begin to run from the mountain in a direct line, the flame to ascend as high and as big as one of the greatest steeples in your majesty's kingdoms, and to throw up great stones in the air; I could discern the river of fire to descend the mountain, of a terrible fiery or red colour, and stones of a paler red to swim thereon, and some to be as big as an ordinary table. We could see this fire move in several other places, and all the country covered with fire, ascending

with great flames in many places, smoking like a violent furnace of iron melted, making a noise with the great pieces that fell, especially those that fell into the sea. A cavalier of Malta, who lives there, and attended me, told me, that the river was as liquid, where it issues out of the mountain, as water, and came out like a torrent with great violence, and is five or six fathom deep, and as broad, and that no stones sink therein.' The account given in the Philo- sophical Transactions is to the same purpose.

Since 1669, there have been several eruptions, but none of them comparable to it. In that which happened in 1766, the lava sprung up into the air to a considerable height, twelve miles be- ow the summit ; but formed a stream only six miles in length, and one mile in breadth. Ano- ther eruption happened in 1787. From the 1st to the 10th of July, there were signs of its ap- proach. On the llth, after a little calm, there was a subterraneous noise, like the sound of a drum in a close place, and it was followed by a copious burst of black smoke. It was then calm till the 15th, when the same prognostics recurred. On the 17th, the subterraneous noise was heard again; the smoke was more abundant, slight shocks of an earthquake followed, and the lava flowed from behind one of the two little moun- tains which form the double head of JEtna. On the 18th, while the spectators were in anxious expectation of a more severe eruption, all was quiet, and continued so more than twelve hours : soon after they perceived some new shocks, ac- companied with much noise ; and the mountain threw out a thick smoke, which, as the wind ###was westerly, soon darkened the eastern horizon : two hours afterwards a shower of fine black bril- liant sand descended ; on the east side it was a storm of stones ; and, at the foot of the moun- tain, a deluge of flashes of fire, of scoriae and lava. These appearances continued the whole day ; at the setting of the sun, the scene changed. A number of conical flames rose from the volca- no; one on the north, and another on the south, were very

conspicuous, and rose and fell alter- nately. At three in the morning, the mountain appeared cleft, and the summit seemed a burning

mass. The cones of light which arose from the crater were of an immense extent, particularly the two just mentioned. The two heads seemed to be cut away : and at their separation was a cone of flame, seemingly composed of many les- ser cones. The flame seemed of the height of the mountain placed on the mountain : so that it was probably two miles high, on a base of a mile and a half in diameter. This cone was still co- vered with a very thick smoke, in which there appeared very brilliant flashes of lightning, a phenomenon which ^Etnahad not before afforded. At times, sounds, like those from the explosion of a large cannon were heard seemingly at u less distance than the mountain. From the cone, as from a fountain, a jet of many flaming volca- nic matters were thrown, which were carried to the distance of six or seven miles : from the base of the cone a thick smoke arose, which, for a mo- ment, obscured some parts of the flame, at the time when the rivers of lava broke out. This beautiful appearance continued three quarters of an hour. It began the next night with more force; but continued only half an hour. In the intervals, however, ./Etna continued to throw out flames, smoke, stones ignited, and showers of sand. ••• From the 20th to the 22d, the appearances gra- dually ceased. The stream of lava was carried towards Bronte and the plain of Lago. After the eruption, the top of the mountain on the western side was found covered with hardened lava, scoriae, and stones. The travellers were an- noyed by smoke, by showers of sand, mephitic vapours, and excessive heat. They saw that the lava which came from the western point divided into two branches, one of which was directed towards Libeccio ; the other, as we have already said, towards the plain of Lago. The lava on the western head of the mountain, had from its va- rious shapes been evidently in a state of fusion : from one of the spiracula, the odour was strongly that of liver of sulphur. The thermometer, in descending, was at 40 degrees of

Fahrenheit’s scale ; while near the lava, in the plain of Lago, it was 140 degrees. The lava extended two miles ; its width was from 13 feet and 3-4 ths to 21, and its depth 13 feet and 3-4ths.

A violent eruption took place on the 27th of March, 1809, which formed a row of craters within the space of about two miles. From the dark bosom of a wood of tall firs and huge oaks, says a British officer present, spread over steep craggy hills and close valleys, conceive twelve craters or mouths, two unceasingly, and the rest at intervals, with a noise like a tremendous chorus of several thousand cannons, muskets, and sky rockets, discharging flame, and showers of burning rocks of various forms and all magni- tudes, from several yards in diameter down to the smallest pebble, which, according to their weight and bulk, ascend from 200 to 1000 feet. The two fore-mentioned craters, (or rather double crater,) the lowest of the row down the moun- tain, formed the principal object of this awful and magnificent scene ××× they were the only cra- ters which did not seem to labour. Their joint emissions had encompassed them with a black oblong hill of ashes and lava stones ; thirty yards above the top of which, their mingling flames

furiously ascended, in one immense blaze, which seemed 100 yards in breadth. Amidst this blaze, vast showers of rocks, rising arid falling, ××vere continually passing each other. About the middle of the whole line of craters was situated one, which laboured the most, and made the loudest, the heaviest, the highest, and the most dangerous discharges ; from the rocks of which our party twice narrowly escaped one or two of very considerable size, falling within a pace of us : ××× I think the lava flowed only from a few of the chief craters, particularly the double one. During the emissions of rock and flame, the boil- ing matter was seen in slow undulating waves issuing through

the sides, close to the bottom of the black hills of ashes. The double crater ap- oeared completely isolated by the lava of the others. Just below it, all the lavas uniting, formed one grand stream of various breadths, from half a mile to fifty yards.

During the eruption, the images of the saints were brought from Castiglione, and placed a few yards in front of the fire, while mass was re- peated. The priests told the people it was in consequence of their sins, and exhorted them to entreat all the saints to pray for them ; and when the eruption stopped, they attributed it to the interference of sainis. Eruptions also occurred in the years 1811 and 1819, JDut less violent than that of 1809.

Captain Smyth, a late British traveller in these regions, estimates the whole altitude of ./Etna at 10,874 feet, giving about 150 miles for the radius of vision. The crater, as it at present appears, and which other writers, we see, have represented at from two miles and a half to even four miles in circumference, he describes as ' an oval, stretching from E. and by N. to W. and by S., with a conjugate diameter of 493 yards ; the transverse he was prevented from ascertaining by a dense cloud that arose before his operations were completed.' From the edge of the crater, the interior, he adds, ' through successive strata of volcanic substances, is incrusted with various coloured efflorescences of ammonia, sulphur, and martial vitriolic salts, to the depth of about a hundred yards on the east, but considerably less on the west side. The efflorescences of a beautiful^ orange yellow are the most predomi- nant. The bottom of the crater is plain, and tolerably hard ; though, from being composed of loose cinders, the feet sink in some places ; near the centre, are two mounds of scoria and ashes, each with a large aperture at the summit, and several fissures around, from whence, at inter- vals, issue volumes of thick smoke, with a rumb- ling noise and hissing sound. There is, also, a light thin vapour, occasionally oozing from the bottom and sides of the huge amphitheatre in every direction. I endeavoured to look into the principal

chasm, but the rapid ejection of the cinders, and the strong sulphureous vapours that exuded, prevented me from attaining my object ; and, indeed, I could not but feel appre- hensive that a nearer approach, where the foot- ing was so frail, might prove too hazardous ; be- sides which, the heat and smoke had increased to such a degree, that it was high time to regain thp summit ‘

Our traveller accordingly ascended, ‘ When on a sudden the ground trembled under our feet, a harsh rumbling with sonorous thunder was heard, and volumes of heavy smoke rolled over the side of the crater, while a lighter one ascended vertically with the electric fluid escap- ing from it in frequent flashes in every direction; The shortness of the time that had elapsed since I was in the crater, rendered me thankful for so providential an escape ; but even from the spot on which we stood it was necessary to remove with the utmost expedition, and before we could effect our retreat, we were overtaken by a dis- agreeable, cold, humid cloud that annoyed and retarded our progress.’ ††† p. 152.

This gentleman’s estimate and observations are the more entitled to regard, as he was an officer (R. N.) who has been for many years stationed in the Mediterranean by Government, to survey various parts of the coasts and islands of that sea.

An able writer, in the Quarterly Review, ven- tures to correct Captain S. however, upon one point. ‘ He errs,’ says this writer, ‘ in common with almost every traveller in Sicily, and indeed with the Sicilians themselves, in supposing that the ascent of /Etna is not practicable in winter. In defiance of the difficulties started by the people of Catania,’ continues our critic, * and repeated by the Nicolosi guide, we gained the summit of ./Etna on the 27th of January, 1819. That it is a work of severe labour at such a season, cannot be denied, the snow extending ten or twelve miles down the mountain, and mules being con- sequently so far useless. But the labour is no. such as need deter a

stout pedestrian from un- dertaking it ; and splendid indeed is the reward which awaits him when he seems to descry at once from that proud pinnacle, ‘ all the kingdoms of the world and the glory of them.’

We have stated this fact for the benefit of future travellers in Sicily, whose wanderings may fall out in the winter months. If they wish in earnest to ascend yEtna, we charge them not to be discom- posed by the ‘ e impossible, Signori,’ of every Sicilian they may meet; and we further advise them to signify to their guide that they shall gra- duate his pay by the altitude to which he leads them. With these provisos, we venture to pre- dict, that they will reach the summit. It is sin- gular enough, that it was on the 28th of January that Swinburne relinquished all thoughts of gaining the summit, in compliance with the idle counsel of his conductor. Possibly when the spring is further advanced, and the snow is be- ginning to melt, the ascent may not be feasible ; in January the surface of the snow is hard, (at least early in the morning) and will support the foot.’ Captain SMYTH’S Memoir on the Hi/ do graphy of Sicily, &c. 4 p. 1824 and Quarter k Review, Aug. 1824.

Many ingenious hypotheses have been framed relative to the causes of volcanic eruption. Some have attributed it to electricity ; some to the fer- mentation of sulphur and iron, which, mixed with water to a paste, and buried in the earth, will take fire, and produce, on a small scale, similar phenomena. Immense beds of pyrites have been thought to be deposited at the centra

base of the mountain, which occasionally ex- plode. Others imagine a central fire, to which Vesuvius, / Etna, and other volcanic mountains, are so many flues or chimneys, connecting them- selves with the atmosphere. Some important questions in mineralogy,

geognosy, and geology, connected with this topic, are asked by Humboldt, and as yet unanswered. ‘ Is the conical moun- tain of a volcano entirely formed of liquified matter, heaped together by successive eruptions ; or does it contain in its centre a nucleus of primitive rocks covered with lavas, which are the same rocks altered by fire ? What are the affinities which unite the productions of modern volcanoes with the basaltes, the phonolites, and those porphyries with basis of felspar, which are without quartz, and which cover the Cordilleras of Peru, and Mexico, &c. ? Has the nucleus of volcanoes been heated in its primitive position, and raised up in a softened state by means of elastic vapours, before these fluids communicated by means of a crater with the external air? What is the substance which for thousands of years keeps up this combustion, which at some umes is so active, and at others so slow ? Does this cause act at an immense depth, or does it ..ake place in secondary rocks lying on granite?” Buffon regards ^Etna as one of the primitive mountains, which subsisted as a volcano from the creation of the world. He considers that the eruptions ceased for a long period after the deluge, for want of sufficient fluid to occasion effervescence with the minerals it contained, and were not renewed till the bursting open of the straits of Gibraltar and the Bosphorus, when the ocean, mixing with the Mediterranean, inun- dated the territory between Italy and Sicily, and the base of TEtna itself, producing an eruption of the mountain, which, from a continuation of the cause, has been successively repeated to the present time. M. Dolomieu thinks that /Etna existed as a mountain previous to its becoming a volcano, shells having been found two thousand feet above the level of the sea, and calcareous strata beneath the lava, the deposition of which must have preceded the eruption of the lava. A more obvious conjecture respecting ^Etna is, that it has been formed by successive eruptions, each adding to its elevation and extent. New mountains and hills are seen springing up at every great eruption, and of these hills the moun- tain seems formed. It is therefore to be re- garded

as a compilation of volcanoes, the growth of many ages, and formed, by their own convul- sions, into that vast mass of mountains that has assumed so magnificent an appearance. Recently an opinion has been current, that ,?Etna sensibly diminishes, and it cannot be discerned to so great a distance as formerly. M. Houel con- siders the lower part of the mountain to consist entirely of marine substances, deposited in dif- ferent ages ; and the higher part, of matter that has been thrown up from the crater and has dropped upon the surface. He proposes in his Voyage Picturesque, a theory of the volcanic fire, which merits a particular detail. We can form no idea of fire subsisting alone, he observes, without any pabulum, and unconnected with $ny other principle. It is only seen in conjunc-

tion with some other body which nourishes it. ••• The matter in fusion, which issues from the focus, is but the incombustible part of that which nourishes the fire, into the bosom of which it penetrates in search of pabulum. But the bot- tom of the volcano is the only part on which it acts, because the fire can only operate in propor- tion to the facility with which it can dissolve and evaporate ; and its action extends no further than to keep the substances it has melted in a state of ebullition. The fusible matter which is ejected from the mouth of the volcano, hardens by degrees as it cools in the external air, and produces that species of stone which is commonly- denominated lava. Even in a state of fluidity, and when in the burning focus, lava, on account of its gravity and density, must possess some considerable degree of solidity ; in consequence of which it resists and irritates the fire into a state of ebullition. A quantity of matter, in such circumstances, must resemble generally any other thick substance or concreted mass in a boil- ing state, and small explosions are liable to be produced, from time to time, upon every part of the surface of this heated matter, by which means small particles or pieces are scattered around in every direction. A similar process is carried on,

this writer contends, though on a much larger scale, in the focus of a volcano, and the explo- sions there, though precisely of the same nature, produce proportionably greater effects, repelling with the utmost violence, whatever lies in the way, or offers any resistance.

An attempt has been made by some geolo-* gists to impeach the Mosaic testimony respect- ing the creation of the world, from some cir- cumstances connected with this. Recupero dis- covered a stratum of lava, which, he says, was discharged from the mountain during the second Punic war, and yet in his time was not covered with depth of soil sufficient to produce vege- tation. From this isolated part, which in it- self is extremely questionable, he ascends into the general principle, that it requires two thou sand years to cover a stratum of lava. He found, in digging into a pit, seven distinct strata, or layers of lava overspread with rich mould, an_i hence he attempts to infer that 14,000 years must have elapsed since the deposition of the lowest strata. Count Borch following the same defective mode of reasoning, concludes ./Etna to be eight thousand years old. In 1776 he examined several beds of lava; that produced in 1157 had twelve inches of earth ; that in 1329 had eight inches; that of 1669 had one inch; that of 1766 being totally bare. But the abbe Spallanzani observes, that the lava of 1329 had eight inches of earth; in 447 years after its deposition. Yet the lava of Arso in Ischia, emitted in 1302, was perfectly hard and sterile in 1788 ; and lava, near Catania, which has been used for the purpose of building upwards of two thousand years, is unconquerably barren, although cultivation has been attempted. Gioeni again in the year 1787, found lava covered with mould which had been produced little more than twenty years ; and others entirely barren, though of a much earlier date. The ruins of Herculaneum are enveloped in sevec

beds of strata, each covered with rich mould, so that the very process has taken place at Her- culaneum which in Recupero's opinion would require fourteen thousand years! It is clear that lavas of different degrees of density placed in various situations of altitude, and exposure to the action of the elements, require different periods of time to make them fertile, and that no general rule can be established from any one or even all of them, .ffitna being at the top perpetually covered with snow, the whole island is supplied from thence with that article, so necessary in a hot climate, and without which, the natives say, Sicily could not be inhabited. So great is the demand for this commodity, that

the bishop's revenues, which are considerable, arise from the sale of mount Etna's snow ; and he is said to draw ►►1000 a year from one small portion lying on the north side of the moun- tain. Great quantities of snow and ice are likewise exported to Malta and Italy, making a considerable branch of commerce. On the north side of this snowy region, Mr.Brydone was assured, that there are several small lakes which never thaw; and that the snow mixed with the ashes and salt of the mountain are accumulated to a vast depth. The quantity of salts contained in this mountain, with great pro- bability, he conjectures to be one reason of the preservation of its snow.

./ETN./E SAL, a nama given by some authors to the sal ammoniac, which is found on the sur- face and sides of the openings of ./Etna, and other burning mountains, after their eruptions ; and sometimes on the surface of the ferruginous matter which they throw out.

JETOLARCHA, in Grecian antiquity, the principal magistrate, or governor of the JEto- lians.

jETOLIA, in ancient geography, (receiving its name from Ltolus, the son of Endymion), was a province of Middle Greece, bounded on the east by Locris, on the west by Acarnania, from which the river Achelous divided it, on the north, by the country of the Perrhoebi, and Athamanes, and part of Epirus, and on the south, by

the gulf of Corinth. Its extent from north to south was about forty-eight miles ; and from east to west, above twenty miles. Strabo says, (1. x. torn. ii. p. 691,) it was customary to divide jEtolia into two districts, the one called the ancient ./Etolia, a level and fruitful country, which lay between the rivers Achelous and Calydon, on the Evenus ; and the other, en-iicrj/roc, of the acquired, which was craggy and barren, contiguous to the Lo- crians, towards Naupactu

and Eupalius; and extended northwards towards the mountain Oeta. The principal cities were Thermus, Calydon, and Pleuron, said to be named after sons of ^.tolus. Their only sea-port was Oenias, on the Corin- thian bay. Livy and other historians, describe the ^Etolians as warlike, proud, and arrogant ; and they are said to have fought with one shoe, whence the epithet /tovoicpjjiriSjjc, has been given to them. Turbulent, and accused by Polybius of faithlessness and treachery, so that the other states of Greece were obliged to consider and deal with them occasionally, as a horde of rob- bers, the people of this minor state, were tena- cious of liberty, and exercised in their struggles for it, considerable influence over the general affairs of Greece. To oppose the projects of Philip of Macedon, they entered into a treaty of alliance with the Romans, before Christ 211, (confirmed, before Christ 213,) which was or- dered by the Roman senate to be deposited in me capitol, as a monument of their first Greek alliance. The forces of Philip being employed in Macedon, the TEtolians entered Acarnania; but, though assured of assistance from Laevinus, tne Roman general, they were intimidated by the resolution of the Acamanians, returned home,

and directed their arms against Anticyra, a city of the Locri, which, aided by the Romans, they compelled to surrender. They now marched into Achaia, to oppose the forces of Philip; but were twice defeated, near Lamia, a city of Phthiotis. After this, an embassy from Ptolemy Philopater prevailed upon Philip to grant the .ZEtolians a trace of thirty days, and they were finally under a necessity of concluding a very unfavourable peace with him ; before Christ 204. An extraordinary diet being now held at Nau- pactus, in which the friendship of the JEtolians was solicited, not only by Philip, but also by the two powerful republics of

Athens and Rome ; the Romans prevailed, and ./Etolia was again involved in war with the Macedonian prince. This new ally was nobly assisted by them in the battle of Cynocephalae, in which, Philip was totally defeated. Peace, however, was afterwards concluded with Philip, before Christ 196, with- out their concurrence, and they turned their arms against Rome. Antiochus then became the leader of a formidable confederacy of the Greeks ; but, becoming enamoured at Chalcis, with the daughter of one of the citizens, he spent an idle winter in feasting and rejoicing ; of which the Romans availed themselves, and sent a powerful army into Greece, which drove him from the country. The ./Etolian strength was concen- trated at Heraclea, where they sustained a me- morable siege of forty days, against one of the best disciplined armies of Rome. The town fell at length by stratagem ; Lamia soon followed ; and Amtracia, before Christ 189. Here the ./Etolians invented a singular kind of machine, in order to drive the enemy out of a mine, which accidentally opened into one of theirs. It was a hollow vessel, with an iron bottom, bored with holes, and armed with spikes, for preventing the approach of the enemy. They filled this vesse with feathers, and having brought it to the place where the two mines met, set the feathers on fire ; and, by driving with bellows the smoke on the besiegers, obliged them to quit the mine : by this stratagem, they gained time for repairing the foundations of the walls. After this event, the Etolians sent ambassadors to Rome, and procured peace, on the humiliating condition of delivering to the magistrates of Corcyra all pri- soners and deserters, both of the Romans and their allies, except those who had been taken twice, or during her alliance with Rome; paying

to the Roman general in .Etolia 200 Euboic talents, of the same value with that of the Athe- nian

talents, and engaging to pay fifty talents more within six years; to secure which, they were to deliver to the consul forty hostages of his choice, none of whom should be under twelve, or above forty years of age ; the prater, general of the horse, and those who had been already hostages at Rome, excepted. After the conquest of Macedon by Paulus Emilius, the ./Etolian republic was further reduced. Five hundred and fifty of the chief persons of the na- tion were assassinated by the partisans of Rome, under a suspicion of wishing well to Perses : while those who had openly espoused his cause, and others who had secretly favoured him, were sent to Rome, and never allowed to return to their native country. On the destruction of Corinth, and the dissolution of the Achaean league, .flitolia, with the other free states of Greece, was reduced to a Roman province, commonly called the pro- vince of Achaia. See ACHAIA.

The government of /Etolia was republican, controlled by the Pantasolium, a general council held as occasion required. The prsetor, the general of horse, the public secretary, and the ephori, were the principal public functionaries. Livy states their cavalry was at one period es- teemed superior to that of any other of the Grecian states.

JEJTOS, in architecture, of auroe, an eagle, a name given by the Greeks, to the pediment or tympanum of an edifice. \Vinckelman suggests that the ancients originally placed a representa- tion of the bird of Jove in this situation, as being the summit of their buildings, and therefore in the earliest periods dedicated to Jupiter. Several ancient medals have been seen with this bird on the roof, particularly the coins of Tarsus and Per- gamos. Besides these authorities, in favour of the opinion that this custom gave this specific name to the pediment, may be added the authority of Shaw, who discovered the figure of an eagle on the pediment of a temple near Tunis, built in the time of the Antonines. Various basso relievos, which decorated the ^Etos of temples, are described and delineated in the eighty- eighth plate of the fourth volume of the Museo Pio

Clementine. The Corinthians seem first to have regularly formed this ornamented pediment, which some have imagined them to borrow from the Egyptians, who placed an ex- tended hawk, in a similar position over their temples. See Elmes' Dictionary of the Fine Arts.

AFAR'. Adv : Apertnan, to lengthen. Fajian, to go fare, to go. Gone hence, moved to a distance.

And the pupplican stood afer : and wolde not reise hise yghen to heuene, but smoot his breste and seyde : God be mersyful to me synner.

Wiclif. Ltik. xviii.

We are carelesse of that which is neer us, and follow that which is afarre off.

Burton's Anatomy of Melancholy. So shaken, as we are, so wan with care ;

Find we a time for frighted peace to pant,

And breathe short-winded accents of new broils,

To be commenc'd in stronds afar remote ?

Shaksp. Henry IV.

We hear better, when we hold our breath than contrary ; insomuch as, in listening to attain a sound afar off, men hold their breath.

Bacon's Nat. Hist. No. 284. Hector hastened to relieve his body. Dismiss'd his burnish'd helm that shone afar, The pride of warriours, and the pomp of war.

Dryden

The rough Vulturnus, furious in its course, With rapid streams divides the fruitful grounds, And from afar in hollow murmur sounds.

Addison on Italy.

Much suspecting his secret ends, he entertained a treaty of peace with France ; but secretly and afar off”; and to be governed as occasion should vary.

Sir John Hayward.

Ah, who can tell how hard it is to climb The steep where fame’s proud temple shines afar! Ah, who can tell Low many a soul sublime Has felt the influence of malignant star, And wag’d with fortune an eternal war !

Beattie’s Minstrel.

AFDELLES, in ichthyology, a name given by the Cretans to the fish called at Rome, don- zellina and zigurilla. It is the julis of others; and according to the Artedian system, is a spe- cies of the labrus. Artedi distinguishes it from the others, by the name of palmar labrus, with variegated sides, and two large teeth in the upper jaw.

AFER, (Domitius,) a famous orator, was born at Nismes, and flourished under Tiberius, Cali- gula, Claudius, and Nero. He disgraced his talents, by turning informer against some of the most distinguished personages in Rome. Having upon a statue he had erected in honour of Cali- gula, declared that this prince was a second time consul at the age of twenty-seven, Caligula re- garded it as a sarcasm upon his youth, and raised a process against him. Afer, instead of making a defence, repeated part of the emperor’s speech, with the highest marks of admiration ; after which, he fell upon his knees, and begging pardon, declared, that he dreaded more the eloquence of Caligula than his imperial power. This mean flattery succeeded so well, that the emperor not only pardoned, but raised him to the consulship. He died in the reign of Nero, in the year of our Lord, 59.

AFFA, a -weight used on the Gold Coast of Guinea. It is equal to an ounce, and the half of it is called eggeba. Most of the Africans on the Gold Coast give these names to those weights.

AF’FABLE, adj.~\ Ad : fari, to speak to.

AFFABIL’ITY, ” > Whence affabilis, easy to

AF’FABLY. j be spoken to, granting a

facility of access, courteous ; spoken of superiors,

He was prudent, comely, princely, affable, ientie. and amiable, he loued iustice, and punisshed the malefactors.

The Exposicion of Daniel, by George Joye, fo. 181.

He was affable, and both well and fair spoken ; and would use strange sweetness and blandishment of words, where he desired to affect or persuade any thing that he took to heart. Bacon.

Her father is An affable and courteous gentleman.

Stabsp. Tarn. Shrew.

Hearing of her beauty and her wit,

Her affability and bashful modesty,

Her wond’rous qualities, and mild behaviour.

Shaksp.

He was of a most flowing courtesy and affability to all men -, and so desirous to oblige them, that he did not enough consider the value of the obligation, or the merit of the person. Clarendon.

All instances of charity, sweetness of conversation. affability, admonition, all significations of

tenderness, sense care, and watchfulness, must be expressed towards children. Taylor.

Gentle to me and affable hath been

Thy condescension, and shall be honour’d ever

With grateful memory. Milton’s Par. Lost, b. viii.

A cheerful mind is not only disposed to be affable and obliging ; but raises the same good humour in those who come within its influence. Spectator.

Distinguished as he [Euphrates, the philosopher] is by the sanctity of his manners, he is no less so by his polite and affable address.

Melmoth’s Pliny, letter x.

AFFAIR, n. Fr. affaire, from afaire, to do ; deduced, says Menage, from adfacere. Whatever is, has been, or may be, the object of attention or pursuit ; business. Some of the Chroniclers have written efferis, effers.

With light thereof I doe myself sustayne, And thereon feed my love-affamisht hart.

Spenser. Sonnet Ixxxvi.

What can be more unjust, than for a man to endeavour to raise himself by the affamishing of others ‘ Hall’s Cases of Conscience.

AFFEAR’ v. See To FEAR. Hence the par- ticiple affear’d, now considered a vulgarism, but used by Shakspeare and Ben Jonson, in the same it is not however from the

To Joppyn whan he cam, be Soudan was not bere, be flom be Soudan nam, Richard forto affere.

R. Brunne, p. 187.

With scalled browes blake, and pilled herd : Of his visage children were sore aferd.

Chaucer. The Prologue. The Sompnour. This wif was not aferde ne affraide, But boldely she saide, and that anon ; Mary, I defie that false monk Dan John, I kepe not of his tokenes never a del.

Idem. The Shipmanne’s Tale. A foole, where was thyne herte tho, Whan thou thy worthie ladie sie ? Were thou afered of hir eie ? For of hir honde there is no dreade.

Gower. Con. A. b. iv.

Among monkes myght ich be. ac meny tyme ich spare Thauh jr,e come.by fore kynges. and clerkes of be lawe,

For pr beb meny folle frekus. myne afferes to aspye

Vision of Piers Plouhman, p. 95. No man that warreth, entangleth hym self with the affaires of this life, because he wolde please him that hathe chosen hym to be a souldier.

Geneva Bible, 2 Tim. iL 4.

0 douchty men, quod he, worthy in weris, The gretest parte of our werkis and efferis Bene endit now, sa that in tyme cumming All fere and drede ard passit of ony thing.

Douglas, b. xi. p. 359. Bot than percace, gif they behald or se Sum man, of grete auctorite and effers, Thay ceise, and all still standand, giffis him eris.

Idem, b. i. p. 17.

Css. I have eyes upon him, and his affaires come to me on the wind : where is he now ?

Shaksp. Ant. $ Cleap.

1 was not born for courts or great affairs ;

I pay my debts, believe, and say my prayers. Pope. A good acquaintance with method will greatly assist every one, in rauging, disposing, and manag- ing all

human affairs. Watts’s Logick.

What St. John’s skill in state affairs, What Ormond’s valour, Oxford’s cares, To aid their sinking country lent ; Was all destroy’d by one event. Swift.

The affairs of kingdoms, and the concerns of indi- viduals are variegated alike with the checker work of joy and sorrow. Cowper’s Letters.

AFFA1T’ v. Used by the Chroniclers for De- feat.

bo be kyng hem adde afayted so, bat hyi ne kepte

nanmore hym mete, jut he bo^te asayty be Scottes, arhe hem lete.

R. Gloucester, p. 177. My father ye shall well bcleue, The yonge whelpe, which is affaited, Hath not his maister better awaited, To couche. Gower. Can. A. b. i.

AFFAM’ISH, v.) See FAMISH. To starve AFFAM’ISHMENT, $ with hunger.

But the only image of that heavenly ray, Whereof some glance doth in mine eye remayne, Of which beholding the idea playne, Through contemplation of my purest part,

Beeb nat aferd of bat folke. for ich shal jeve

tonge Connynge and clergie. to conclude hem alle.

Vision of Piers Plouhman, p. 198. Each trembling leafe, and whistling wind they heare, As ghastly bug, does greatly hem affeare.

Sp. F. Q. 2, 3, 20. Chin as woolly as the peach, And his lip should kissing teach, Till he cherish’d too much beard, And made love or me afear’d.

Ben Jonson. Her Man Described. Bleed, bleed, poor country ! Great tyranny, lay thou thy basis sure ! For goodness dares not check thee : His title is

affear’d. Shakspeare’s Macbeth.

Be not affear’d, the isle is full of noises.

Shakspeare’s Temp. 3rd. 2nd.

AFFECT’, v. & n.^ Ad: Facio,factum, to AFFECT’ED, make to or towards. In

AFFECT’EDLY, a strict and philosophical

AFFECTA’TION, sense, to produce a pleas-

AFFEC’TION, ing or painful impression,

AFFEC’TIONED, (which, in mental opera-
AFFEC’TIONATE, ‘ tions, is more or less in-
AFFEC’TIONATELY, dulged by the object AFFEC’TIVE, acted upon, so as to oc-

AFFECT’ER, casion a re-action or mov-

AFFEC’TUOUS, ing towards another ob-

AFFEC’TUOUSLY. J ject, generally with kind- ness, tenderness and love ; to influence ; also t

To pat sollempnite com lordes of renoun, pat weddying for to se, for gret affectioun.

R.Brunne,p.l62.

Men schulen be louynge hemsilff, coueitouse, high of berynge, proude, blasfemeris; not obedient to fadir and modir, unkynde, cursed, withouten affee- eioun. -(Arepyoi.) Wiclif. 2Tymo. c. iki.

AFF

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AFF

Be mery ###with them that are mery. Wcpe also with tnemyt. wepc. Be of lyke affeccyon one towardcs another. Bible. 1539. Rom. xii.

Then gan the palmer thus : most wretched man, ‘ That to affections does the bridle lend ;

In their beginning they are weak and wan, , But soon through sufferance grow to fearful end.

Faerie Queene.

The duke of Brabande, named Antony, a man of great polycy and wysedome, forecastyng ye great shedyng of Cristen mannys bloode, with many other inconuenyencys lykely to haue ensuyd of this vari- aunce atwene theyse ii dukis, made such affectuouse labour, yt with great dyffycute he pacyfyed them agayn for that tyme. Fabyan. p. 561.

In things of their own nature indifferent, if either councils or particular men have at any time, with sound judgment, misliked conformity between the church of God and infidels ; the cause thereof hath been somewhat else, than only affectation of dissimi- litude. Hooker, b. iv. ►► 7.

These antick, lisping, affected phantasies, these new tuners of accents. Shahsp. Romeo and Juliet.

The passions that are enemies to the graces are, impudence, affectation, strong and harsh degrees of pride, malice, and austerity. Usher.

Certainly there be that delight in giddiness, and count it a bondage to fix a belief, affecting free- will in thinking as well as in acting.

Lord Bacon’s Essays.

It seemeth that, as the feet have a sympathy with the head, so the wrists have a sympathy with the heart j we see the affects and passions of the heart and spirits are notably disclosed by the pulse.

Bacon’s Nat. Hist. No. 97.

It is not possible a man should have any long con- ference with God, and be no whit affected.

Hall’s Contemplations. The sun

Had first his precept, so to move, so shine ; As might affect the earth with cold and heat, Scarce tolerable. Milton’s Par. Lost. b. x.

Didst thou pray with the same affection and la- bour as thou didst purchase thy estate ?

Bishop Taylor’s Sermons.

Some indeed have been so affectedly vain, as to counterfeit immortality ; and have stolen their death, in hopes to be esteemed immortal.

Brown’s Vulgar Errours, b. vii. c. 10.

Perhaps they are affectedly ignorant : they are so willing it should be true, that they have not at- tempted to examine it.

Government of the Tongue, ►► 5.

By talking so familiarly of one hundred and ten thousand pounds, by a tax upon a few commodities, it is plain, you are either naturally or affectedly ig- norant of our condition. Swift.

As a thinking man cannot but be very much affected with the idea of his appearing in the presence of that Being, whom none can see and live : he must be much more affected, when he considers, that this Being, whom he appears before, will examine the actions of his life, and reward or punish him accord- ingly. Addison, Spectator, No. 513.
Say,would’st thou conquer, have thy conquest crown’d By hands of seraphs ; triumphed with the sound Of heav’n’s loud trumpet ; warbled by the shrill Celestial choir ; recorded with a quill Plucked from the pinion of an angel’s wing ; Confirmed with joy by heaven’s eternal king Conquer thyself, thy rebel thoughts repel, And chase those false affections that rebel. Quarks.

Among the numerous stratagems by which pride endeavours to recommend folly to regard, there is

scarcclv cue that meets with less regard than affec-

tation, or a perpetual disguise of the real character by fictitious appearances. Rambler.

We are forbidden to murmur, but we are not for-bidden to regret ; and whom we loved tenderly while living, we may still pursue with an affectionate re-membrance, without having any occasion to charge ourselves with rebellion against the sovereignty that appointed a separation. Cowper's Letters.

AFFECTIO BOVINA, in agricultural affairs, a disease incident to black cattle, occasioned by a little worm bred between the flesh and the skin; which works its way over all parts of the body. This seems to be the same disease de- scribed by Mr. Loudon, in his excellent Ency- clopedia of Agriculture, recently published (1825,) as the wornals orpuckeridge ; or humours on the backs of cattle, occasioned by a dipterous insect which punctures their skin, and deposits its eggs in each puncture; but which is erroneously attributed to the fearn owl, or goat- sucker, (caprimulgus Europeus, L.) When the eggs are hatched, and the larvae or maggots are arrived at their full size, they make their way out, he observes, and leave a large hole in the back, to prevent which, the destruction of the egg should be attempted, by nipping the humour, or thrusting in a hot wire.

AFFECTION, in a philosophical sense, implies an attribute inseparable from its subject. Thus, magnitude, figure, weight, &c. are affections of all bodies ; and love, fear, and hatred, are affec-tions of the mind. Affection seems to express a settled bent of mind toward a particular being or thing, and occupies a middle space between disposition on the one hand, and passion on the other. According to some writers, it is distin-guishable from disposition, which being origi- nally seated in one's nature, must exist before there can be an opportunity to exert it upon any particular object, whereas affection can never be original, because, having a special relation to a particular

object; it cannot exist till the object has once at least been presented. It is also distinguishable from passion, which, depending on the real or ideal presence of its object, vanishes with it; whereas affection is a lasting connexion, and subsists even when we do not think of the person. A disposition to gratitude, has thus been said to exist in a virtuous mind, which through want of an object, may happen not to be exerted; but the disposition, meeting with a kindly office, makes a man grateful to his benefactor. An intimate connexion is now formed between them, termed affection : which has a permanent existence, though not always in view. The affection for the most part lies dor- mant, till an opportunity offers for exerting it : in that circumstance it is converted into a passion of gratitude ; and the opportunity is eagerly seized of testifying it in the warmest manner.

Dr. Cogan distinguishes between affection and passion; and discriminates between both these terms, and that feeling which is usually denominated emotion. The term affection, he says, has a different signification from either of the other two, and represents a less violent, and generally a more durable influence, which things have upon the mind. It is applicable to the manner in which we are affected by them.

for a continuance; and supposes a more de- affected with different disorders. Hippocrat.de liberate predilection and aversion, in consequence Epidem. Gal. Comm. 2. &c. of the permanent influence of some prevailing quality. This distinguishes it from the transient

AFFER'ERS, } Affier ; a kind of arbiters, or
AFFER'ORS. 5 referees appointed in courts

impulse of passion; nor is it so intimately con-
jeetj &c.

nected with any external signs, which distin-

Afferors are scch as are appointed in courts leet,

it from emotion. The affections some- &c. upon oath, to mulct those who have committed

times succeed to passions and emotions, because faults arbitrarily punishable, and have no express

these may have been excited by something that penalty set down by statute. Cowel.

becomes permanently interesting ; or they may AFFERERS, in law, afferatores ; those who

be gradually inspired, by a deliberate attention in courts-leet, settle and moderate the fines, upon

to the good or bad qualities of their objects. In Oath. Hawkins Pleas, C. 1. ii. c. 112.

this philosophic sense of the word, affection is To AFFERE, in law, signifies either ' as to af-

applicable to an unpleasant as well as pleasant fere an amercement,' to mitigate the rigour of a

state of the mind, when impressed by any object fine; or 'to affere an account,' i. e. to confirm it

or quality : it may be produced by any thing upon oath in the Exchequer,

that torments or corrodes the heart, as well as by AFFERI, in archseol, are cattle fit for hus-

that which charms and delights it. Custom, bandry, according to our old law writers.

however, chiefly appropriates the term to the AFFETTUOSO, affetto, Ital. in music, in an

Jcindly and benevolent affections. See Philoso-

affecting tender style ; a term employed in music-

vhical Treatise on t-he Passions. books at the beginning of a movement; it de-

Dr. Reid (Essays, p. 143, 167.) has applied notes a movement, says Mr. Dannely, between

in the same manner, the general name of affec- the adagio and the andante,

tions to those various principles of action in AFFIDATUS, or AFFIDIATTJS, a tenant by

man, which have persons for their immediate fealty. Affidati, are not properly vassals, but

object, and which imply, in their very nature, quasi vassals, or persons who vow fealty to, and

our being well or ill-affected to some person, or put themselves under the protection of another,

at least, to some animated being ; and whether They are otherwise called commendati and recom-

they dispose us- to do good or hurt to others, mendati.

He observes, however, that the word affection AFFIDA'VIT, Law : Lat. adfidare, affidavi,

seems, by custom, to be limited to good affec- to pledge faith ; a form of oath in writing, which

tions. Accordingly, when we speak of having Can be administered only by persons qualified.

affection for any person, it is always understood to be a benevolent affection. In the extensive

sense above stated, our affections are very natu- rally divided into benevolent and malevolent,

as they respectively imply our being well or ill

affected towards their object. The characters of

love and hatred, resulting from the infinitely

various situations and circumstances upon which

their developement and operations depend,

You said, if I return' d next size in Lent I should be in remitter of your grace ; In th' interim, my letters should take place Of affidavits. Donne.

Count Rechteren should have made affidavit, that his servants had been affronted ; and then Monsieur Mesnager would have done him justice.

Spectator, No. 481.

AFFIDAVIT OFFICE, in law, is an office in the

entitle them to the denomination of primary or court of Chancery, for taking an affidavit, or cardinal affections. oath in writing, sworn before a master in Chan-

Our benevolent affections, whilst they differ cery . and made use of, and read in court, upon in the feeling, or sensation, which is a common ingredient in all of them, and in the objects to which they are directed, agree in these two respects, viz, that the feeling which accompanies them is agreeable, and that they imply a desire of happiness to their object. The first of these

motions ; though not allowed upon trials.

AFFIDIARE, in law, to be enrolled for a sol- dier upon an oath of fidelity.

AFFIE', v or ^ Affier, Affidare ; to give or AFFY', > pledge faith ; to trust, credit,

AFFI'ANCE. _) confide in ; to plight troth, to

· _

affections is that of parents and children, and bind one>s self to &e performance of a promise, other near relations, commonly called natural or

particularly the marriage contract; to be-
affections : the second, is gratitude to benefac-
tors : the third, is pity and compassion towards the
distressed ; a fourth is esteem of the wise

Richard ansuered per tille, and said, ” it is foly,
To schewe counseil and skille, pat not is to affie,
And phit per owen writte per dede dos ccrtifie.

R. Brunne, p. 155.

She is Fortune verely

In whom no man should nffy, Nor in her yefts haue^/
wance She is so full of variaunce.

Chaucer. R. of Rose, tol. 141, col. 4.

AFFECTION, affe.ctus, in medicine, denotes any At
last such grace I found, and meanes I wrought,

disorder under which the whole body or any part That
I that lady to my spouse had wonne ;

of it suffers ; and it is generally defined by some
Accord of friends, consent of parents sought.

epithet, as ††† Affectio colica, the colic
affection, or Affiance made, my happinesse begoune.
simply the colic. ††† Affectio melancholica,
melan- Faerie Queene, b. ii.

choly.††† Affectus implicatus, a complicated
affec- The duke is virtuous, mild ; and too well
given,

††ion or disorder, or that in wliich many parts are
To dream on evil, or to work my downfall.†††

a

and good : the fifth is friendship : the sixth, is
love between the sexes : and the last, is patriotism
or public spirit; that is, an affection to any
community to which we belong. The malevo- lent
affections, (commonly called passions) in the

arrangement of Dr. Reid, are emulation and resentment.

AFF 2,

Chaucer. Prologue. The Pardonere, v. i. p. 29.

For whan he hath his tonge ajiled,

With softe speche, and with lesynge,

Forthwith his false pitous lokynge,

He wolde make a woman weene

To gone vpon the feire greene,

Whan that she fauleth in the myre.

Gower. Con. A. b. i.

AFFILIATION, ADFILIATIO, in writers of ⬚⬚he middle age, is the same with ADOPTION. See kDFiLiATioN. Among the ancient Gauls, it was a sort of adoption practised only among the great, and performed with military ceremonies. The tather presented a battle-axe to the person he was to adopt for his son, as an intimation that he was to preserve the effects he thus called him to succeed to, by arms.

An ORDER OF AFFILIATION, in modern usage, is that which a magistrate issues on the oath of a woman to compel the father of an illegitimate child, to provide for its maintenance. ,

AFFINED', part.) Ad : finis, end. Affinis

AFFIN'ITY. J is primarily a relative by

marriage; a relative of our relations; one who touches the boundary (finis,) of another's relationship ; ⬚⬚⬚ distinct from consanguinity. Applied to things, it signifies a relation arising from neighbourhood, association, real or supposed similarity, or resemblance.

For I am sure that Fryth and al his felowes, with al the friendes Jhat are of theyr affiniti, shal neither be able to quenche and put out that faith.

Sir Thos. Note's Works, p. 903. c. 2.

Osway assemblyd his knyghtes, and made towarde hym : and for affynite of maryage that was atwene theyr children, Oswy offeryd to hym many great offirs to thentent to have had peace with hym.

Fab yon, p. 118.

If partially affin'd, or leaguM in office, Thou dost deliver more or less than truth, Thou art no soldier. Shaksp. Othello.

The British tongue or Welsh was in use, only in this island ; having great affinity with the old Gallick.

Camden.

.1 AFF

All things, that have affinity with the heavens,

move upon the centre of another, which they benefit.

Bacon. Essay xxiv.

They had left none alive ; by the blindness of rage killing many guiltless persons, either for affinity to the tyrant, or enmity to the tyrant-killers.

Sidney, b. ii.

And Solomon made affinity with Pharaoh king of Egypt, and took Pharaoh's daughter.

1 Kings iu. 1.

The art of painting hath wonderful affinity with that of poetry. Dryd. Dufresnoy, Pref.

Man is more distinguished by devotion than by reason ; as several brute creatures discover some- thing like reason ; though they betray not any thing that bears the least affinity to devotion.

Addison. Sped. No. 201.

A breach was made with France itself, notwith- standing so strait an affinity, so lately

accomplished j as if indeed, (according to that pleasant maxim of state,) kingdoms were never married. Wotton,

AFFINITY, in law, preserving the sense of its etymology, ad to, and^m’s, a boundary, or limit, denotes the approach of two families by marriage to each other’s boundaries : ‘ Quod duae cogna- tiones per nuptias copulantur, et altera ad alterius cognationes finem accedit.’

The Jewish law prohibits marriages with re- gard to affinity, which seem not prohibited by the law of nature. On its basis generally, our own civil law, and that of most European countries, has been established, ‘ No person,’ says the ninety-ninth canon (1603), ‘shall marry within the degrees prohibited by the laws of God, and comprised in a table set forth by authority, in the year 1563 ; and all marriages so made and contracted shall be adjudged incestuous and un- lawful.’ A table of these degrees is therefore commanded by the ecclesiastical law, to be hung up in all the churches of England. The statutes that contain them are 18 Henry VIII. c. 7, and 25 Heu. VIII. u. 12

The Mosaic law positively enjoined, in some cases, one particular marriage, the lawfulness of which has often been discussed in modern times, i. e. that between a man and his brother’s widow. See Deut. XXT. 5.

Bishop Hall well remarks on this topic, ‘ I know no reason why you may not conclude it is not unlawful. The question of the expedience would require another debate. Doubtless, in all cases of this nature, it must needs be yielded that it were more meet and safe, since the world yields so large a latitude of choice, to look fur- ther off. A wise and good man will not wil- lingly transgress against the rules of just expe- dience, and be as careful to consider what is fit to be done, as what is lawful.’ Works, vol. 8. p. 493.

A question of affinity, real or pretended, it is

remarkable, became the exciting cause, in Eng- land, of our final deliverance from the domination of the see of Rome.

The canon law distinguishes three species of affinity : The first, contracted between the husband and the relations by blood of his wife ; and between the wife and the relations by blood of her husband. The second, between the hus- band and those related to his wife by marriage, and the wife, and those so related to her husband.

The third, between the husband and the relations of his wife's relations ; and the wife, and the re- lations of her husband's relations. By the fourth council of Lateran, held in 1213, it was decreed, that none but the first kind was any real affinity : the two last being mere refinements, which ought to be set aside. The degrees are reckoned after the same manner in affinity as in consan- guinity ; and therefore differently in the canon law, from what they are in the civil law. Thus, whatever line or degree of consanguinity the kindred of one of the parties married, are in, they are in the same line and degree of affinity to the other. And again, in whatever line or degree of affinity persons are, in the first kind, they are in *he same in the second and third kinds of affinity. Hence arise what we may call a direct and colla- teral, an ascending and descending line of affinity. Affinity does not found any real kinship ; it is a kind of fiction, introduced on account of the close relation between husband and wife. It is even said, in law, to cease when the cause of it ceases. Hence a woman who is not capable of being a witness for her husband's brother, during his life, is allowed to be a witness, when a widow, be- cause the affinity is dissolved. Yet with regard to the contracting marriage, affinity is not dissolved by death, though

it be in every thing else ; for a man is not allowed to marry the widow of his fa- ther, brother, or son; such connection being considered as incestuous, nearly as much as if they were formed with the blood relations of the the same degree.

The degrees and denominations of affinity are chiefly, First, father-in-law, i. e. husband's or wife's father, in Latin, socer; Second, step-father, i. e. mother's husband, vitricus ; Third, mother-in-law, i. e. husband's or wife's mother, socrus ; Fourth, step-mother, i. e. father's wife, noverca ; Fifth, son-in-law, i. e. daughter's husband, ge- ner ; Sixth, daughter-in-law, son's wife, nurus ; Seventh, step-son, i. e. husband's or wife's son by a former marriage, privignus ; Eighth, step-daughter, i. e. husband's or wife's daughter by a former marriage, privigna ; which two last, con- sidered in relation to each other, are called com- privigni. These four last degrees are often confounded, and mistaken for each other ; the step-son being called son-in-law, and the step- daughter, daughter-in-law, et vice versa, although no degrees of relationship are more distinct. Ninth, brother-in-law, i. e. husband's brother, sister's husband, levir, or wife's brother, uxoris frater; Tenth,sister-in-law, i. e. husband's or wife's sister, glos, or brother's wife, fratria. All these degrees are prohibited fiom intermarrying: to which may be added, Eleventh, the uncle-in-law, i. e. the aunt's husband ; Twelfth, the aunt-in-law, i. e. the uncle's wife ; Thirteenth, the nephew-in- law, i. e. the niece's husband ; and Fourteenth, the niece-in-law, i. e. the nephew's wife, on either side.

AFFINITY, in chemistry, is a term which cor- responds to attraction in mechanical philosophy, and denotes the tendency which the constituent parts of bodies have to unite, and the power by which they adhere when united. It has also fre- quently been called elective attraction. See CHEMISTRY, and ATTRACTION.

Otnei writers speak of compound affinity, the union of different bodies in one homogeneous mass.

Intermediate affinity, an union by the help of a medium ; as azote, with fixed alkalies, by the help of nitric acid. ††† Quiescent and divellent affinity ; the former of these terms, expresses,, according to Kirwan, the force exerted to pre- serve the old combination ; and the latter, that which tends to destroy it. ††† Reciprocal affinity, when a separation is caused between two sub- stances by a third, with which one of them is united, but afterward separated again by the in- fluence of the separating principle. ††† Compound elective affinity, or double elective attraction, when there are more than four substances ; as, if nitric acid be added to the sulphate of ammonia, decomposition takes place ; but if nitrate of pot- ash be added, then two new bodies are formed, that is, the potash attracts the sulphuric acid, and the nitric acid the ammonia.

AFFINITY, in civil law, is divided into civil, between free persons; and servile, between slaves.

AEFIXITY, LEGITIMATE, is contracted by a proper and legal matrimony ; or between slaves, by contubernium.

AFFINITY, QUASI, that subsisting either after the dissolution of a marriage, as between a hus- band and his wife's daughter, after divorce ; or before the marriage is solemnized, as that between a father and a daughter-in-law, not married but only betrothed to his son.

AFFINITY, SPIRITUAL, in the church of Rome, is contracted by the sacraments of baptism and confirmation ; according to which, a god-father may not marry with his god-daughter without a dispensation.

AFFINITY, KEYS OF, or relative keys, in music, regular pieces being composed in keys properly fixed and determined, with which they begin and end, and which are occasionally resumed, they are called primitive or principal keys, major or minor ; and these are, properly speaking, sur- rounded by five

others, to which they bear a strong affinity, or relationship ; for example : ???

C major, primitive key. D minor, first relative key ; E minor, second relative key ; F major, third relative key ; G major, fourth relative key; A minor, fifth relative key.

A minor, primitive key; C major, first relative key; D minor, second relative key ; E minor, third relative key; F major, fourth relative key; G major, fifth relative key.

‘ These six primitive keys offer, in their combination,’ says Mr. Dannely, ‘ 720 changes, and were those formerly used by the most celebrated composers, from the time of Palestrina to Sebastian Bach; but unfortunately for the cause of music, scarcely any mention is made of them in the present day. See ENCHAINING OF HAR- MONIES.

AFF1ON, in chemistry, a name given by the Arabians to opium ; and also to an electuaiy, in which opium is an ingredient.

Ad : firnto, to support ;

opposed to the word

I deny ; to certify, declare

^positively, avouch the

truth, assure, ratify > to

affirm is a solitary, to

confirm is an assisted

AFFIRM, v.

AFFIRM'ABLE, AFFIRM'ANCE, AFFIRMA'TION,

AFFIRM'ATIVE, adj. AFFIRM ATIVELY, AFFIRM'ER. asseveration, pc pape set pat tenne, for his hopyng was, pe pes pei suld afferme for drede of hardere kas.

R. Bnmne, p. 316.

And take this for a gcnerall reule, that every conseil that is affirmed so strongly, that it may not be rbaunged for no condition that may betide, I say that thilke conseil is wicked.

Chaucer. Tale of Melibeiu, vol. ii. p. 93. Dame Pertelote I say you trewely, Macrobius that writ the avision In Affrike of the worthy Scipion, Affirmeth dremes ; and sayth that they ben Warning of thinges that men after seen.

Chaucer. Nonnes Preeste's Tale. To appease the multytude, the kyuge toke the childe in his armys, and so bare hym into the place of th assemble of the people, and there shewed vnto theym, w' affirmance of great othes, that his entent was oonlv for the wele of the childe, and for defence of his countre.

Fabyan, p. 187.

Yet it is not euen so, so fieble as his owne, where he argueth in the negatiue, as I lay the sample for th affyrmatiue. Sir T. More's Works, p. 1131. c. 1.

For the affirmative, we are now to answer such proofs of theirs, as have been before alleged.

Hooker.

The common opinion of the Oestridge, struthio-camelus, or sparrow camel, conceives that it digests iron, and this is confirmed by the affirmations of many.

Brown’s Vulgar Errours.

It is as gross a paradox to hold there are no anti- podes, and that the negative is now as absurd as the affirmative seemed at first. Howel’s Letters.

Whether there are such beings or not, ‘tis suffi- cient for my purpose, that many have believed the affirmative. Dry den.

One may affirm, with all respect to the inspired writings, that the divine Spirit made use of no other words but what were intelligible and common to men at that time, and in that part of the world ; and as Homer is the author nearest to those, his style must of course bear a greater resemblance to the sacred books, than that of any other writer. Pope,

AFFIRMATION, in law, signifies the ratifying or confirming a former law, or judgment : Thus we say, the house of lords, on an appeal, affirmed a decree of the lord chancellor, or of the court of Session. Affirmation is also a solemn form of attesting the truth, allowed to be used by the Friends or Quakers, instead of an oath, which they hold absolutely unlawful to take.

The Friends have, from the earliest appearance of the society, been very steady in their objec- tions, and have submitted to all kinds of civil disadvantages and open persecution, on account of their repugnance to oaths. It is our plan to bring forward the opinions of all respectable parties, with their own way of stating them. The last, and one of their most respectable writers, Mr. Jos. John Gurney, says, that ‘ Such a line of conduct they deem to be both justified and required, first, by certain plain moral prin- ciples ; and secondly, by divine commands of the

most impressive and comprehensive character. For the moral principles concerned, he quotes James i. 12; Matt. v. 37 ; and adds, ‘ Since the law of truth in the verbal communications be- tween man and man, a

law strenuously sup- ported even by heathen moralists, and obviously essential to the well being of all human societies, is very frequently enjoined in the records of God’s revealed will ; since it is plainly of universal obli- gation on the followers of Jesus ; and since, on the other hand, there is nothing more decisively con- demned than the false tongue: it follows, that with true Christian? a deliberate and serious, yet simple affirmation, or negation, possesses a force so per- fect in its kind as to be incapable of any real augmentation. Hence there arises a plain moral obligation in conformity with the precept of the apostle James, that our yea should be yea, and our nay nay ××× that is to say, that our affirmations and our negations should be naked and simple, and wholly unaccompanied by any form of oath. For if, on any particular occasion, a man swear in addition to his yea and nay, in order to render them more obligatory and convincing, their force becomes comparatively weak at other times, when they receive no such confirmation. If such an one be a believer in the Lord Jesus Christ, and especially if he be a serious professor of religion, it is plain, that by his conduct he gives counte- nance to the false and dangerous notion that the oath of a Christian is more binding upon his conscience, and therefore more credible than his deliberate word, and thus he invariably lowers the standard of the law of truth.’ ××× Gurney on the Religious Peculiarities of the Friends, 8vo. 1024. The question of the admissibility of a Quaker to a seat in the house of commons, upon his so- lemn affirmation, first occurred in the year 1699, when John Archdale, of the society of Friends, was returned for the borough of Chipping Wy- combe. This gentleman presented his claim, by letter, to the speaker ; and, upon its being sub- mitted to the house, which was done without hesitation, it was met by an order directing the speaker to issue a new writ for that borough. The second instance of a member of this amiable sect being returned to parliament occurred in the person of Joseph Pease, Esq., who was duly elected for the southern division of the county of Durham, in 1832. The result of Mr.

Pease’s claim proved more fortunate than that of his pre- decessor ; for, upon the assertion of his privi- lege, a committee was appointed to report pre- cedents and enactments relative to the case. The report being laid before the house, a decision was come to, on the 14th of February, 1833, ” that Joseph Pease, Esq., was entitled to take his seat upon making his solemn affirmation and declaration, instead of taking the usual oaths.” And this is the first instance of a member of the society of Friends having been admitted to a seat in the commons’ house of parliament.

AFFIRMATION, in logic, a proposition asserting an argeement between the subject and predicate. In algebra, also, affirmative or positive quan- tities, terms introduced by Vieta, i. e. those which have their appropriate characters.

AFFIRMATIVE, in grammar. Authors distin- guish affirmative particles, such as yes, from ne-

u TK►► m affirmative k also row> or calamity ; to undo ; trouble, disquiet,

gatives, such as no. The term arnrmative is a . ►► t

used substantively, because we say, the affirma- d live is the more probable side of the question ; there were so many votes, or voices, for the affir-

mative, &c.

AFFIRMATIVE, in the Romish inquisition, is applied to such heretics as own the errors and opinions with which they are charged; and

Abbay and priorie, and ober religions, For vs salle pray and crie in per afflictions.

R. Brunne, p. 202. For as Salamon sayth : the hope that is differred id delaied, paineth and afflicteth the soule.

Sir T. More’s Works, p. 1080. c. 2. For as the afflictions of Christ are plenteous in vs,

maintain them in their examination with firmness cuen so is oure consalacion plenteous by Christ.

and resolution.

AFFIX’, v. & ►►. AFFIX’ION, n.

Bible, 1539, 2 Cor. i. , .. To the flesh (as the apostle himself granteth) all

Ad :figO,fixum; to taster. ajjnciim js naturally grievous; therefore nature, to; to unite to the end; sub- which causeth fear, teacheth to pray against all ad-

versity. Hooker, b. v. ►► 48.

We’ll bring you to one that you have cozened of think, to repay that money, will be a _ ion. Shakspeare.

If a man be gracioas and courteous to strangers.

join ; attach ; closely connect with.

AFFIX, in grammar, a particle added at the close of a word, either to diversify its form or

alter its signification ; in which sense affix is the an e ^ ^ wurieuui| io sira

same with suffix ; though affix is sometimes, but ft ghews he ig a citizen of the world . and that6 hig less properly, applied more generally, so as to heartis no island cutoff from other lands, but a con- include prefix articles. We meet with affixes tinent ^^ joins to them< If he be compassionate in the Saxon, the German, and other northern towards the afflictions of others, it shews that his

languages ; but more especially in the Hebrew, heart is like the noble tree, that is wounded itself, and other oriental tongues. The Hebrew affixes -when it gives the balm. Lord Bacon's Essays.

are single syllables, frequently single letters, Nothing does so powerfully call home the con- subjoined to nouns and verbs ; and contribute science, as affliction. Hall’s Contemplations. not a little to the brevity of that language. The Yet in *►► middes of this affliccio, and to make an oriental languages are much the same as to the end of *e same> Godof. tis ineffable goodnes, look- radicals ; and differ chiefly from each other as to ^ ►►n ►► **T**^ wrth hls > yes of Pme and aspect ►► , J of mercie hath sent me in the truth to restore again amxes and prefixes. . t, j. t ►►► u this decayed kyngdo to his auncient fame and olde

A-FLAT, in music, is the ninth diatomc-chro- renoune. HaUf p< 247>

matic note of the scale C.

A-FLAT MAJOR, one of the twenty-four keys in modern music, requiring a signature of four flats.

A-FLAT MINOR, one of the twenty-four keys in modern music, requiring a signature of seven flats.

AFFLATUS. Ad: flo, to breathe upon;

What ! when we fled amain, pursued and struck With heaven’s afflicting thunder, and besought The deep to shelter us ? This hell then seem’d A refuge from those wounds.

Milton’s Paradise Lost, b. ii.

And because affliction is of such a nature as to try the temper, disposition, and intentions of men, there- fore temptation often is used for affliction. Barrow. God deals with his children as a merciful father \

... - . . i ►►► VIULl UCal5 W1U1 1113 1.1111U1C11

tli tl 111C1L.11U1 1UL11U1 _

a dmne influence communicating to the receiver he doeg not> as he himself tells ^ afflict willi , > supernatural powers, particularly the gift ot pro- ^ sons of men

phecy.

The poet, writing against his genius, will be like a prophet without his afflatus.

Spence on the Odyssey.

Cowper's Letters.

AFFLUENCE, n.-\ Ad : fiuo, to flow to ; AF'FLUENT, 9 a metaphor derived from

AF'FLUX, ►►the flowing of water,

AFFLTJX'ION. J which announces speedy

abundance : hence, affluence is the forerunner AFFLATUS. Naturalists sometimes speak of the ►►f prosperity, and denotes wealth, plenty, exu-

afflatus of serpents. Tully uses the word figura- oerance.

lively, for a divine inspiration. In which sense,

he ascribes all great and eminent accomplish- ments to a divine afflatus. The Pythian priestess

being placed on a tripod or perforated stool, over

the sacred cave, received the divine afflatus,

and fell into phrenetic agitation ; during which,

she pronounced, in hollow groans and broken

sentences, the will of the deity. The afflatus is supposed by some, to have been a subterraneous gas, or exhalation, wherewith the priestess was

As they lived in great affluence and ease, we may presume that they enjoyed such pleasures as that condition afforded, free and uninterrupted.

Sydney’s Criticism on Pastoral Writing.

External or worldly prosperity, consists in an ac- comodate condition of man in this world, as health of body, comfort of friends and relations, affluence or at least competency of wealth, power, honour, ap- plause, good report, and the like.

Hole’s Contemplations.

An inflammation, either simple, consisting of a hot

literally inspired ; and that, it had the effects of and sanguineous affluxion ; or else denominate from

a real physical disease ; the paroxysm of which was so vehement, that Plutarch observes, it some- times proved mortal. But Van Dale, with more probability, supposes the pretended enthusiasm

other humours, according unto the predominancy of melancholy, phlegm, or choler.

Brown’s Vulgar Errours.

Though an unwieldly affluence may afford some empty pleasure to the imagination ; yet, that small pleasure is far from being able to countervail the im- bittering cares that attend an over-grown fortune.

Boyle’s Occasional Reflections, ►► 4. dis. 11.

, - - The cause hereof cannot be a supply by piocrea-

AFFLICTIVE, t deject; throw into a state tions; ergo, it must be, by new affluxet to Txmdoa AFFLIC’TIVELY.) of consternation, grief, sor- out of the country. Gravm.

aromatics, or perhaps of intoxicating liquors.

AFFLICT', v. ~\ Ad : Jligo, to throw to AFFLIC'TION, /the ground; to cast down;

The infant grow* bigger out of the womb, by ag- ” glutinating one afflux of blood to another.

Harvey on Consumptions.

An animal that must lie. still, receives the afflux of colder or warmer, clean or foul water, as it happens to come to it Locke ,

AFFLUX, in electricity, is opposed to efflux ; it was a term in general use previously to the discovery of positive and negative electricity. It was apprehended that in all electrical operations, there was both an afflux of electrical matter to the globe and the conductor, and an efflux of the same matter from them. Dr. Wat- son soon corrected this opinion ; but the Abbe” Nollet was more tenacious ; and was confirmed in his attachment to this theory, by observing, that bodies not insulated, plunged in electric atmospheres, showed signs of electricity; not perceiving, that the electricity of such bodies was in its nature and effects different from, and directly opposite to, that of the electrified body, in the atmosphere of which they were involved. See ELECTRICITY.

AFFORAGE, in the French customs, before the revolution, was a duty paid to the lord of a district, for permission to sell wine, or other liquors, within his seignory.

AFFORARE, in old law, to set a value on any thing.

AFFORCEMENT, or AFFORCIAMENT, in ancient charters, a fortress, or work of fortifica- tion and defence.

AFFORCIAMENTUM CURIJE, in law, the calling a court

on any extraordinary occasion.

AFFORCIARE, in law, to add, increase, or strengthen ; as in the case of a jury, cum in veri- tate dicenda sunt sibi contrarii ; i. e. when they are not agreed on their verdict.

AFFORD', v. The etymologies given of this word are unsatisfactory. It signifies to yield, produce, grant, give ; also, to furnish for a cer- tain price.

So soon, as Maunnon there arriv'd, the door

To him did open, and afforded way.

Faerie Queene.

MOWB. The purest treasure mortal times afford, Is spotless reputation ; that away, Men are but gilded loam or painted clay.

Shakspeare's Richard 77.

This is the consolation of all good men, unto whom his ubiquity affordeth continual comfort and security ; and this is the affliction of hell, to whom ^t affordeth despair and remediless calamity.

Broom's Vulgar Errours. KING. Why speakest thou not? HlER. What lesser liberty can kings afford, Than harmless science ? Then afford it me.

Spanish Tragedy, 2nd edit, act v. They fill their magazines, in times of the greatest plenty ; that so they may afford cheaper, and in- crease the public revenue, at a small expence of its members. Addison on Italy.

AFFORESTING, part, turning ground into forest. William the Conqueror, and his succes- sors, continued afforesting the lands of the sub- ject for many reigns ; till the grievance became so notorious, that the people of all degrees and denominations were brought to sue for relief; which was at length obtained, and commissions were granted

to survey and perambulate the

forest, and separate all the afforested lands, and re-convert them to the uses of their proprietors, under the name and quality of purlieu or pouralle land.

AFFRAP’ v. Ital. affrapare ; ?T.aflrapper, to strike ; to make a blow at ; encounter ; strike down. ††† Obsolete.

He gan to encounter him in equal race, They beene ymet, both ready to affrap, When suddenainly that warriour gan abase, His threatned speare, as if some new mishap Had him betide, or hidden danger did entrap.

Faerie Queene, b. ii. c. 1 .

I have been trained up in warlike stowre, To tossen speare and shield, and to affrap The warlike rider to his most mishap.

Idem. b. iii. c. 2.

‘ “††† & ”’

The verb is obsolete ; the noun signifies a tu multuous assault upon one or more persons in public.

pe stones were of Rynes, pe noyse dredefulle & grete It affraied pe Sarazins, as louen pe fire out schete. pe noyse was vnride, it lasted alle day, Fro morn till euentide, per of had many affray.

R. Brunne, p. 174. Me met thus in my bed al naked, And loked forthe, for I was waked With small foules a great hepe, That had afraied me out of my slepe, Through noise, and swetnesseof ther songe.

The Dreame of Chaucer, fol. 241, c. 1. I was out of my swowne affraide, Wherof I sigh my wittes straide, And gan to clepe hem home ageyne.

Gower. Con. A.b. viii.

Thys wourthy knycht the common wele Romane, In grete affray perturbit to rest agane And quiet sail restore.

Douglas, b. vi. p. 196.

God so affray ed me w* so terrible a dreame, that all things beganne to be to me suspecte, ferefull, un- sauory and redye to fall fro me. The Exposition of Daniel, by George Joye, f. 50. c. 2. Be not youre herte afrayed, ne drede it : ye bileuen in God, and beleeue ye in me. In the hous of mv fadir, ben manye dwellingis.

Wiclif. Jon. c. xiv.

And lightly started vp as one affray ‘d, Or as if one him suddenly did call. So, oftentimes he out of sleep abrayd, And then lay muzing long, on that him ill apay’d.

Spenser’s Faerie Queene, b. iv. cant. 6. To be afraid to die, or wish for death, Are words and passions of despairing breath ; Who doth the first, the day doth faintly yield, And who the second basely flies the field. ‘

Quartet

A goddess arm’d;

Out of thy head I sprung. Amazement seiz’d All the host of heaven ; back they recoil’d afraid At first, and call’d me Sin, and for a sign Portentous held me.

Milton’s Par. Lost. b. ii.

Be not of us afraid,

Poor kindred man ! thy fellow-creatures we, From the same parent-power our beings drew, The same our Lord, and laws, and great pursuit.

Thomson.

AFFRAY, in English law, from the French, effrayer, to affright, formerly was defined, to be

a public offence to the terror of the king's sub- 'ects,' as where persons appeared with armour or weapons, not usually worn, to the terror of others. Stat. 2 Edw. III. cap. 3. Its legal description is still best contained in the words of that statute : ' That no man of what condition soever, except the king's servants in his pre- sence, and his ministers in executing their office, and such as be in their company assisting them ; and also upon a cry made for arms to keep the peace, shall come before the king's justices, or other of the king's ministers doing their office, with force and arms, nor bring any force in affray of peace, nor go nor ride armed, by night or day, in fairs or markets, or in the presence of the king's justices, or other ministers else- where ; upon pain to forfeit their armour to the king, and their bodies to prison at the king's pleasure. And the king's justices in their pre- sence, sheriffs, and other ministers in their baili- wicks, lords of franchises and their bailiffs in the same, and mayors and bailiffs of cities and boroughs within the same, and borough-holders, constables, and wardens of the peace within their wards, shall have power to execute this act. And the judges of assize may punish such officers as have not done their duty therein.' But it now also implies a skirmish or fighting between two or more, in some public place, to the terror of his majesty's subjects ; and there must, it is said, be a stroke given or offered, or a weapon drawn, otherwise it is not an affray ; for if the fighting be in private it is no affray, but an assault. 3 Inst. 158. It is inquirable in the courts-leet, and punishable by justices of peace in their sessions, by fine and imprison- ment.

An affray differs from an assault, in that it is a wrong to the public ; whereas assault is of a private nature. Lamb. lib. ii. Affrays may be suppressed by any private person present, who is justifiable in endeavouring to part the com- batants, whatever consequences may ensue. But a constable, or other similar officer, may break open doors to suppress an affray, or apprehend the affrayers ; and he may either take them be- fore a justice, or imprison them by his own authority for a convenient time, till the heat is over ; and may then, perhaps, also make them find sureties for the peace. 3 Inst. 158. 1 Haw- kins P. C. 134. 136. 138.

Affrays admit of several degrees of aggravation, as when two persons deliberately engage in a duel, though no mischief has actually ensued ; or when the officers of justice are disturbed by an affray, in the due execution of their office, or where it occurs in the king's court and such places. All affrays again in a church or church- yard are deemed heinous offences ; and there- fore it is enacted, by Stat. 5 and 6. Edw VI. c. 4. that if any person shall, by words only, quarrel, chide, or brawl, in a church or church- yard, the ordinary shall suspend him, if a lay- man, ab ingressu ecclesig; and, if a clerk in orders, from the ministration of his office, during pleasure. And, if any person in such church or church-yard proceed to smite or lay violent hands upon another, he shall be excommunicated, ipso facto ; or if he strike him with a weapon,

or draw any weapon with intent to strike, ne shall, besides excommunication (being convicted by a jury,) have one of his ears cut off; or, having no ears, be branded with the letter F. in his cheek. Blackst. vol. iv. p. 146.

AFFREIGHTMENT, AFFRETAMENTUM, from the French fret, in law, signifies the freight of a ship.

AFFRET, v. See FRET.

A trumpet blew ; they both together met With

dreadfull force and furious intent, Careless of perill in their fierce affret.

Spencer’s Faerie Qiteene, b. iv. c. 3.

AFFRIEND’, v. See FRIEND.

Where when she saw that cruel war so ended,

And deadly foes so faithfully affrended,

In lonely wise she gan that lady greet,

Which had so great dismay so well amended.

Spencer’s Faerie Qiteene, b. iv. c. 3. AFFRIGHT, v. & w.-x A. S. Apynhtan, or AFFRIGHT’ER, / Apoenan, to frighten ;

AFFRIGHT’EDLY, \ to affect with sudden

AFFRIGHT’FUL, i fear ; to terrify.

AFFRIGHT’MENT. J

William was oglyft, his helm was fulle of myre, William was not paied, pat falle mad him a/right He stode alle dismaied R. Brumie, p. “0.

By God me mette I was in swiche mischefe Right now, that yet min herte is sore afright. Chaucer. The Nonnes Preeste’s Tale, v. ii. p. 178 When now the genius of this woeful place, Being the guide to his affrightful ghost, With hair dishevell’d, and a ghastly face, Shall haunt the prison where his life was lost.

Drayton. Baron’s Wan, As one affright

With hellish fiends, or furies mad uproar, He then uprose. Faerie Queene, b. ii. caut. 5. As the moon, cloathed with cloudy night, Does shew to him, that walks in fear and sad affright.

Idem. K. JOHN. Nay, but make haste, the better foot

before,

O let me have no subjects enemies, When adverse foreigners affright my towns With dreadful pomp of stout invasion.

Shakspeare'i K. John. Thy name affrights me, in whose sound is death.

Shakspeare's Henry VI f

Ev'n those who dwell beneath its very zone, Or never feel the rage, or never own, What happier natures shrink at with affright, The hard inhabitant contends is right.

Pope. Essay on Man.

AFFRONT', v. & n. Ad : frontem, stare : ad frontem contumeliam allidere, to insult a man to his face ; to present a hostile front to a person like opposing armies ; to meet face to face ; to face ; to encounter ; to offer an insult ; to offend designedly ; to treat contemptuously or rudely.

Forich ne wiste wher to etc. ne in what place

And neyhede ny pe noon, and with neode ich mette

That afrontede me foule. and faitour me calde.

Vuion of Pier's Plouhman,p. 392.

In this meane whyle king Philip and the French

king with two more puyssaunt armies, affronted echo

other neere vnto the water of Some, eyther of them

being obstinately bent to driue the other out of the

fielde, for which cause they entrenched their campcs.

Graf ton, v., ii. p. 565.

AFGHAUNISTAUN.

He highly leapt out of his place of rest,

And rushing forth into the empty field,

Against Cambello, fiercely him addrest ;

Who him affronting, soone to fight was ready prest. Faerie Queene, b. iv. c. 3.

Skilfull captaines in arraunging of their battailes, place first in the vantguard, thicke and strong squadrons to affront the ennemie, then light armed souldiors, afterwards the archers and darters, and last of all in the rereward, the companies of succours.

Holland’s Trans, of Ammianus Marcel.

Ho –scould often maintain Plantianus, in doing affronts to his son Bacon’* Essays.

I neer attempted aught against thy life, Nor ma’de least line of love to thy loose wife, Or in remembrance of thy affront and scorn, With clowns and tradesmen kept thee clos’d in horn^ Ben Jonson. Execration of Vulcan^ Did not this fatal war affront thy coast ?

Yet sattest thou an idle looker on Fairfax, i. 51.

But harm precedes not sin ; only our foe, Tempting, affronts us, with his foul esteem Of our integrity. Par. Lost, b. ix.

Ah ‘. spare your swords, where beauty is to blame ; Love gave th’ affront, and must repair the same.

Waller.

I would learn the cause, why Torrismond (Within my palace walls, within my hearing, Almost within my sight,) affronts a prince, Who shortly shall command him.

Dry. Span. Friar.

This brings to mind Faustina’s fondness for the

gladiator, and is interpreted as satire : but how cau one imagine, that the fathers would have dared to affront the wife of Aurelius ? Additan.

Yea, often plac'd

Within his sanctuary itself, their shrines, Abominations ; and with cursed things His holy rites, and solemn feasts profan'd, And with their darkness durst affront his light.

Milton.

AFFRONTEE, from ad, to, and frons, the forehead, in heraldry, an appellation given to animals facing one another on an escutcheon ; a kind of bearing which is otherwise called confron- tee, and stands opposed to adossee.

AFFUIAGE, AFFUIAGIUM, from ajfoer, q. d. uffocure, to make a fire, of ad and focus, in an- cient customs, a right of cutting fuel in a forest, for domestic fire.

AFFUSE',) Ad : fundo, fusum ; to pour

AFFUS'ION. \ one thing on another.

I poured acid liquors, to try if they contained any volatile salt or spirit; which would probably have discovered itself, by making an ebullition -with the affused liquor. Boyle.

Upon the affusion of a tincture of galls, it imme- diately became as black as ink. Grew's Museum

When the Jews baptized their children in order to circumcision, it seems to have been indifferent to them whether it was done by immersion or affusion. Wheatley on the Com. Prayer, p. 362.

AFGHAUNISTAUN.

AFGHAUNISTAUN or AFGHANISTAN, a kingdom of Asia, situated between Persia and Hindostan, and forming a considerable portion of Caubul, bounded on the E. by

the river Nib- lab or Indus, on the N. by Hindoo Coosh and the Paropamisan range of lofty mountains, sepa- rating it from Bulkh and Budukhshan, on the W. by Persia, on the S. by Baloochistan. It lies between 29 and 36 degrees of N. Lat. and 61 and 71 E. Long, including the ancient king- doms of Zabuliston, (Ghizne and Kandahar) and Kabuliston. All that lies west of the paral- lel of Mooklor, 68►►, 30′, is comprehended in the extensive province of Rhorassaun. The moun- tains are considerable. The peaks of Hindoo Coosh are said to be higher than the Andes. Lieutenant Macartney estimated one of the summits of this range of mountains at 20,493 feet. The elevation must be very great, since the Honourable Mountstuart Elphinstone could perceive no diminution of snow on any part of this lofty range in the midst of June, although in the plain of Peshawer, the thermometer was 113►►. The course of these mountains is W. from the Indus to L. 71►►, beyond which their direction is not accurately known.

The lower ranges are clothed with woods, and adorned with flowers. The range of Solimaun commencing from Suflaid Coh, or White Moun- tain, runs S. S. E. through Janjee, and then striking off afresh in a southerly direction, forms the country of the Jadrauns, extending as far as 31►► N. Lat. It is accompanied by two minor

ranges of beautiful hills in a parallel direction along its eastern side, reaching as far as latitude 32►► 20′, every where diversified with valleys, and intersected with rivers, beside several minor hills, which running E. and W. divide and beautify the landscape on both sides of the great chain. The first and loftiest range is chiefly composed of black stone; the two less chains consist, one of red stone, and the other of a friable grey sand stone. The Suffaid Coh is always covered with snow. The Paropamisan chain runs 350 miles E. and W., and extends 200 N. and S. the whole forming one rude mass of barren moun- tains, the interior of which has never been ex- plored by Europeans.

Of the rivers, the Indus is the most important, which, although it has been traced 1350 miles, its entire course is not known. The desolate condition of the country has prevented its springs from being correctly ascertained. It receives many rivers in its source, and fifty miles from Mullau, flows along an open country, and spreading upon the plain near the fort of Attock, forms a multitude of islands, receives the river Caubul, and then suddenly contracting, rushes through a narrow opening into the branches of the Solimaun. At the distance of fifteen miles from Neelaub, it is said to be only a stone's throw across, but very deep and rapid. It afterwards winds among the hills, passes through the Salt range in a clear quiescent stream, and then widening to its full extent, it flows along in grand and beautiful magnificence, till receiving the

river Punjund, H takes a south-west curve across the country of Sind, where it forms an island, dividing itself into two streams, the prin- cipal of which again divides, till at last the whole river disembogues itself by many mouths into the Arabian gulph.

The Helmund or Etymander, rises on the eastern side of the Parapamisan range, a few miles west of Caubul, after a course of 200 miles among mountains, enters the plain of Dooraunes, then enters a desert, and terminates in the lake of Seestaun, the whole length being about 400 miles. There are many other rivers, but of comparatively little importance.

The climate of Afghaunistaun is very various, in consequence of the different degrees of eleva- tion, direction of the winds, &c. The higher parts are hot, the middle temperate, and the lower cold. The average heat is inferior to that of India. The cold in the winter is not great, and when Mr. Elphinstone was at the plain Peshawer, snow had been seen but once in the memory of the oldest inhabitants. Some

Indian plants are in leaf all the year, and early in April the barley was in ear, which was cut the first week in May. The heat was often intense, but attained its height by the 23d pf June ; and in the middle of July, a cool wind set in from the east, which was succeeded by cool cloudy weather. The greatest height of the thermometer, during the year, was 120••, its greatest depression 25••.

The summer in Hindostan is intensely hot, so much so, that the inhabitants wet their clothes before they go to sleep, but south of the valley of Turnuk, the cold is as great as in any part of the country. Western winds are common, and generally bring rain. The easterly winds are hot and dry. In the warmest parts of the king- dom, the pestilential simoon is common. Al- though the climate is on the whole favourable to longevity, fevers and agues are common, and the small pox is extremely prevalent, notwithstand- ing the almost universal practice of inoculation. Opthalmia is also frequent, and the diseases of Afghaunistaun have been generally observed to be much more fatal than those of India.

The monsoon is attended with less violence than in the latter kingdom, and is exhausted near tne sea. In the N. E. however, it is more vio- lent ; and what is most remarkable is, that it comes from the east. What the Indians call the S. W. monsoon, commences on the Malabar coast in May ; but is later in Mysore, and in the north commences in June. The rains diminish toward the west, while the winter rains extend as far as the Hellespont. The spring rains are, generally speaking, short; in some places not more than a fortnight.

The animals of Afghaunistaun are not numer- ous. There are, nevertheless, tygers, lions, wolves, and bears, in the woods. The antelope is found in the plains. Buffaloes, dromedaries, and sheep, are in great abundance. The do••-s are similar to those of England, and the cats are so valuable as to be exported, Hevant and some other districts have been long celebrated for beautiful horses, and deer with long, curiously twisted, branching horns.

The birds are, generally, similar to our own.

There are however three kinds of eagles. The shauheen is taught to attend the falconer, and to strike the quarry in its attempt to escape. The chirk strikes on the antelope, and holds it till the greyhounds arrive.

Scorpions are found ; but their bite is seldom fatal. Bees and mosquitoes abound in every part of the empire. The locusts, which are the most terrible, come up over the face of the whole country, bringing famine and desolation. The chief fish are turtles and tortoise.

The trees greatly resemble those of Europe; they are, however, much finer, and more numer- ous : our finest fruits grow wild. Oaks, cedars, and cypresses, are common ; also the mulberry, tamarisk, willow, plane, and poplar. One species of pine flourishes here, called jelgoozeh; the cones of which are larger than artichokes, and contain seeds resembling pistachio nuts.

Gold is found in the rivers, especially those which flow from Hindoo Coosh. Silver is found in the country of Caufirs. In the country of Afreedes and Hazaurehs, and other places, are lead and antimony. Iron and copper are found in the country of Vizeeres ; alum in the clay of Callabaugh ; orpiment in the country of Hazau- rehs and Bulkh ; salt-petre is made from the soi”. all over the kingdom ; and sulphur is found in Bulkh and Seeweestaun.

The Afghauns trace their descent from Af- ghaun and Usbec, grandsons of Saul, king of Israel, whom they represent as the forty-fifth in descent from Abnah, raised from a shepherd to a king, because his stature was exactly the length of a reed which the angel Gabriel gave Samuel, by which to try the man who should be king ot Israel. Afghaun is also described as an extraor- dinary character.

Sir W. Jones, in his Asiatic Researches, thinks the chronology of the Afghauns highly probable. He

argues that the Afghauns are, by the best Persian writers, said to be descended from the Jews. ‘ We learn/ says he, ‘ from Esdras, that ten of the Jewish tribes came to Arzareth, where they settled. The Pushtoo language has a re- semblance to the Chaldaic ; and a district under their dominion is called Hazareh, or Hazaret, which is perhaps the very word intended by Esdras.’

This theory is overturned by the fact, that the Hazarehs have but recently occupied a part of Afghaunistaun. The Persian historians, it is true, grounded their histories upon the traditions extant; but nothing is more uncertain than the mere rumours of an uncivilized people, respect- ing their origin and chronology. The most arcient names bear no resemblance to the Jews, and the probability is, that they derived their name from the Arabs, in common with all other Mahomedan tribes. Some historians, neverthe- less, contend that they were descended from the Egyptians ; whilst others, refer them to the Hun or Scythian tribes. They are divided into numerous toomaus or clans, whose names are probably derived from the chief of the family at the time of their settlement. The principal in history are, Khulijy, Soory, Lody, Roh or Rohilla ••• GhiljaorGilyauce, Bunguish, Abdaly, and Hazareh, although the latter are said to be

of Persian origin. Their national name is Alkai; but by the Persians they are called Afghauns, and by the Hindoos Pataus. Kyse Abdoreshed, whom they acknowledge as their founder, is said to be the thirty-seventh from Saul.

The government consists of an assemblage of commonwealths, or tribes, each being a subor- dinate government, formed into one state through the supreme authority of one common sovereign. Their principal distinctions are said to spring from the four sons of Kyse Abdoreshed. A tribe is called

ooloos, and is placed under the jurisdic- tion of a chief, called a khaun, chosen from the oldest family, by an election of the people. The attachment is, however, rather to the community than to the chief. The fighting men receive no pay ; but if a horse is killed, the owner receives the value of him from government.

The general law of the kingdom is that of Mahomet; and, in most of the oolooses, is adopted in civil cases ; but the criminal code is the Pooshtoonwulle, or usage of the Afghauns ; and in some oolooses, the parties are compelled to submit to arbitration, or to quit the ooloos. Trifling offences are also settled occasionally by the jeerga of the sub-division. When the jeerga meet, they take their seats on the ground, and utter a short prayer before they proceed to business. A penalty is annexed to every offence among the Afghauns, with the exception of the Berdooraunees. It always includes a public sub- mission and acknowledgment ; and frequently a number of young women are consigned over in marriage to the injured party and his relations. After the prisoner has been delivered up to the accuser, the parties are directed to salute each other with the usual address of Salaum alaikum : ' Peace be unto thee.'

If a division quits its ooloos it is readily re- ceived into another, and the king is the head of the tribe Dooraune. One or two tribes are entirely independent.

The Afghaun language is called the Pushtoo, the alphabet is Persian and the Nushk cha- racter is generally employed in writing. The chief words relative to science, religion, &c. are derived from the Arabic through the Per- sian. They have several authors in poetry, law, and theology; and some of the kings have not only written poems themselves, but have given great encouragement to letters generally.

Ahmed Shauh held an assembly of the learned once a week, which practice is still continued. They study

the sciences and read their books in methodical order, so that if one person asks another what books he has read, he answers ‘ up to so and so,’ and the other perfectly under- stands him. Rehmaun is the most popular poet. Khooshhaul is, however, the best ; hav- ing spent his life in struggles against the Great Mogul, his intellectual associations have given a martial air and spirit to his composures.

In childhood the Afghauns commit the educa- tion of their children to a moollah or priest, by whom they are taught passages from the Koran, &c. Every village and town has its own schoolmaster, who is supported by cer- tain lands and contributions. AtPeshawer and

other places are establishments for finishing the education of youth for the higher profes- sions, &c.

They grow barley, corn, turnips, melons, cu- cumbers, pumpkins, gourds, rice, Indian corn, arzem, nukhod, peas, beans, &c. The assa- foetida plant runs wild in the western hills, and the palma christi, or castor oil-plant, commonly called budaugeer, is every where found. The lands are usually watered by irrigation through the means of embankments, channels, &c. and, except in the colder districts, they have two harvests in the year. They have five classes of cultivators ; proprietors who cultivate their own lands; tenants who rent lands; buzgurs, or farmers, like the metayers of France; hired labourers ; and villains, who cultivate their lord’s land without wages.

The Afghauns keep no shop, and follow no handicraft or trade. There are bankers, mer- chants, artizans and labourers. The Hindoos are the chief bankers, owing to the prohibition in the Koran, which forbids Mussulmen taking interest. There are some considerable mer- chants who are divided into thirty-two trades, each having its cudkhoda to manage all trans- actions with government; for though not taxed, they are nevertheless liable to exactions, when the king, for instance, marches to any considerable city, he sends to the cudkhodas to

find a shop of each trade to attend him to the next considerable city, town, &c., sending presents to the mer- chants, instead of regular payments by which means they sustain considerable loss.

They trade chiefly with India, Persia, and Toorkistaun, and from Tibet they obtain a cloth called ussul toos, manufactured of shawl wool. Their exports are horses, furs, shawls, Mooltaun chintz, madder, assafoetida, fruits, &c. Their imports are cloths, muslins, indigo, ivory, sandal wood, wax, spices, silk, cottons, gold and silrer. Their internal trade is considerable.

The people are generally divided into the inhabitants of houses, and the inhabitants o. tents. Their furniture commonly consists of a coarse woollen carpet, and pieces of felt to sit upon, which they usually do cross-legged ; and in case of ceremony the person kneels and then sinks back on his heels. They converse freely, and are fond of taking snuff. When a visitor is introduced, he salutes the party, by saying, 'Assalaum, Alaikoom,' peace be to thee. The company answer, ' O Alaik Assalaum,' and unto thee be peace. The master of the house then takes the stranger's hands and says, ' Shu Rauglee, &c.' you are welcome, may you often come; to which the reply is, ' Shupucheiree,' may you prosper. After dinner they sing songs and play music.

They are fond of the chace. Races are fre- quent, and at a wedding the bridegroom com- monly gives a camel to be run for. The higher ranks also tilt with lances, practise firing at a mark, with guns, bows and arrows, &c. They have, a great passion for the sail, or the enjoy- ment of fine prospects ; dancing, and a game called khossye or cubuddee, in which two men advance, each holds his left foot with his right hand, and hops forward to upset his adversary.

CnO

AFGHAUNISTAUN.

They commonly bathe twice a week, and al- ways on the Friday. The shops on that day are shut. The Afghaun goes to the bath, has his skin scrubbed till it is quite clean, his beard dyed, and superfluous hair burnt from off his body for an hundred dinars, or threepence-halfpenny ; after which, on leaving the bath, he joins a party for the day to some favourite hill or gar- den, defraying the expences by subscription; and for a trifling sum at the entrance, each per- son takes what fruit he pleases.

Their dress is not unlike the Persian, espe- cially in the upper classes of society, and con- sists of loose cotton trowsers, a low cap of black silk or satin, crowned with gold brocade, half boots reaching to the calf, a large frock shirt, with sleeves reaching below the knee, to which is superadded a large cloak reaching to the ancles, either of sheepskin tanned with the wool inside, or soft grey felt. The dress of women is not much unlike that of the men. Their shirts, however, are larger and of finer materials. They have a cap of silk interwoven with gold thread, to which is annexed a large sheet thrown over their heads, with which, in the presence of strangers, they cover their faces. They wear pendants in the nose, rings in their ears and on their fingers. They also wear tight trowsers commonly white; and those that are unmarried have their hair loose.

The people are less debauched than the Asiatics are in general, although their virtues are said to be on the decline. They have the same tendency to imitate the manners of the Persians, as European nations have to imitate the French. They are, however, at present laborious, generous, brave, and temperate, their chief vices being envy, revenge, and obstinacy.

Amongst the common people it is customary to rise before twilight, and go before break- fast to pray at the mosque. They lunch upon vegetables, curds, and flesh, but the shaumee, or great meal, is after the last prayers.

Sun-rise is the time when the great commonly rise, and after having read the Koran for an hour, and been at court, where there are apartments for their use and in which they receive commu- nications, and transact business ; they lunch and sleep ; and in the evening receive company and amuse themselves till a late hour.

Wives are purchased, and may be divorced at pleasure. The brother of a deceased person marries his widow, except she have children, in which case she commonly remains single. Those who cannot purchase a wife remain in a state of celibacy. The rich marry early, seldom exceed- ing twenty years of age in the man, and sixteen in the woman. Before marriage, the arrange- ment of all preliminary circumstances is managed by the relations on both sides, for after a lover has intimated his wishes, a deputation from his parents wait on the parents of the girl, and make the necessary provisions, sometime before the ceremony. Polygamy is allowed, but seldom practised, owing to the common poverty of the people : and the middle class consider two wives and two concubines a large establishment The women in general are not very cultivated, since it is thought immodest to write, as by that means

a woman might correspond with her gallants and admirers.

The Afghauns are hospitable, and the greatest affront you can offer a man is to carry off his guest. If a man become noted for want of hospitality, he is reproached with having no poosh toonwulle, ‘ Nothing of the customs of the Afghauns.’

They have a custom called nannawautee, in English, ‘ I have come in.’ When a man has to ask a favour he goes into the house of his friend, and refuses to take any refreshment cr eren to sit on his carpet till the request is granted, nor is it honourable to refuse it. A man in danger often goes nannawautee to another’s house, who must then take up his quarrel, especially if a woman sends her veil and implores

assist- ance, the claim in that case, is thought irresis- tible. The Afghauns, notwithstanding their hospitality often rob the stranger after his depar- ture, the rites of hospitality being considered as over. So that the only way to pass the country with safety is to agree with the chiefs, and pro- cure an escort for the journey.

In religion they are confirmed Mahommedans of the Soone sect, who hold the first three caliphs as the legitimate successors of Mahomed and believe their traditions. They consider that no infidels can be saved, but nevertheless they cherish no feelings of asperity toward them. They never speak of any thing they expect without adding Inshaulla, ' please God,' and often say ' please God I am so many years old.' They often count their beads in conversation ; and before they enter on any undertaking repeat the Fauteheh, or the commencement of the Koran. Their prayers are repeated five times a day, and every Mussulman prays with his face turned toward Mecca, to which every person performs a pilgrimage at least once in the course of his life. The hour of prayer is announced from the tops of the minarets by the shout of Allaho Akbar, ' God is most great.' The man who hears it, though in the midst of business, instantly with- draws. The first part of the prayer is said standing, the rest sitting on the heels, often bending forward and touching the ground with his forehead. Their oaths are very solemn, as' I swear by God and his prophet :' ' may I go an infidel out of this world if it is not true :' but the most solemn is the name of God, Allah, three times repeated in different forms ' Wullah, Billah, Tillah.'

There is an officer called Mooshtesib, who superintends the public morals, sometimes they inflict forty blows with a leather thong, and often send the culprit round the town on an ass, with his face toward the tail. The Moollahs, who have the title of Ulima, or learned, are greatly venerated ; they profess great austerity, and have the care of youth, the practice of the law, and the administration of justice. When two ooloo- ses are

about to meet in battle, they often rush between them holding out the Koran, and at- tempt a reconciliation, in which from their great sanctity, they commonly succeed. A Moollah cannot be injured with impunity ; they are in general capable of taking sufficient revenge by excommunicating, suspending worship, refusing to bury, &c. ; but when this does not succeed,

they take the green standard of the prophet, and parade the country with drums, uttering the war cry and inciting the people to take up arms in their cause. They are always known by a large loose white or black gown, and a peculiar sort of large turban. Their wives have nothing remark- able in their dress to distinguish them from other women.

Besides regular clergy, they have other orders, as Sijuds, the supposed descendants of Mahomet, Fuheers, Dervises, &c. One particular sect is exceedingly venerated, even the places where they are buried are sacred, and in war time the women are placed there during the absence of the tribe as a place of security. The people generally believe in ghosts, alchemy, magic, &c., reverence burial grounds, called ‘ cities of the silent’ ; con- sider every mountain and cavern inhabited by a daemon called the goule, or spirit of the waste. They believe the power of talismans, &c.

With respect to their history, the most early accounts we have, represent the Afghauns as inhabiting the mountains of Chore, in or about the ninth century, when they were established in all the north-east territories, although a con- siderable part of the nation was subject to the Arabians. The people who still dwelt in Ghore had their own kings. Their prince Mahomet was taken by Mahmood king of Ghazni, by

whom the people also were greatly oppressed. They rebelled in the twelfth century, dethroned the king, burnt the capital, and reduced alike Bulkh, India, Budukhshaun, part of Kharas- saun, and the kingdom of Caubul. They held India for the most part during the three follow- ing centuries, and even the provinces that were wrested from them, were retaken from the king of Khwarizm, by Jengheez Khaun, during whose government, and also that of his son Tamerlane, they maintained their independence. After his death Bauber, the father of the great Mogul, sub- dued Caubul, and made it his capital, in which one of his sons succeeded him. Sheer Shauh founded an Afghaun dynasty in India, and succeeded in driving the other son of Bauber entirely from the peninsula. The house of Timour, the father of Bauber, was at length established, and all Afghaunistaun, excepting the mountains, divided between Persia and Hindostan.

About 1720 the two tribes of Ghiljie shook off the Persian yoke, and extended their empire as far.west as the confines of Russia and Turkey. The Afghauns considered their authority an usurpation, and in 1737, Nadir Shauh conquered them, and annexed the greater part of the kingdom to the Persian dominions. The present Af- ghaunistaun monarchy was founded after his death.

AFIELD’. In or into the field. Tho was peers ful proude. and putte hem al to werke. In daubyng and in delvyng. in donge o/eWberynge. Vision of Piers Plouhman, p. 138.

We drove afield ; and both together heard, What time the grey fly winds her sultry horn ; Batt’ning our flocks, with the fresh dews of night.

Milton.

Afield I went, amid the morning dew, To milk my kine, for so should housewives do.

Gay.

Oft did their harvest to his sickle yield, His furrow oft the stubborn glebe hath broke ; How jocund did he drive the team afield! How bowed the woods beneath his sturdy stroke !

Gray’s Elegy.

AFINE . On fine. See FINE. For no man at the first stroke Ne may not fell doune an oke Nor of the reisins haue the wine, Till grapes be ripe and well ajine Before empressed, I you ensure And drawen out of the pressure.

Chaucer. R. of R. foil 133. col. 3. AFIRE’. On fire.

While there is oyle for to fire The lampe is lightly set afire.

Gower. Con. A. b. viii. Of Deiphobus the palace large and great Fell to the ground, all ouerspred with flash. His next neighbour Ucalegon afire : The Sygean seas did glister all with flame.

Surrey. JEneis, b. ii. Powder is ready, and enough to work it, The match is left afire.

Beaunwnt and Fletcher’s Island Princesi, ii. 1 . AFLAT’. On the flat.

When you would have many new roots of fruit trees, take a low tree ; and bow it, and lay all his VOL. I.

branches aflat upon the ground, and cast earth upon them, and every twig will t*ke root.

Bacon’s Natural History.

AFLIGHT’. A word in use till the time of Elizabeth ; applied to the want of courage, &c. at the approach of danger. See FLIGHT. Upon this worde hir herte aflight, Thynkende what was best to doone.

Gower. Con. A. b. ii.

And yet were they all in case safelye to escape ; whereas Judas on the other syde which nothing feared at all, but tooke a speciall pleasure to see them so aflyghted, lost hys lyfe for euer, and that in fewe howres after. Sir T. More's Works, p. 1389. col. 2.
AFLOAT'. On float.

Now er alle onflote, God gif pam grace to spede,
With douhty fo to note, whan bei com to dede.

R. Brunne, p. 169. There is a tide, in the affairs of men ; Which, taken at the flood, leads on to fortune ; Omitted, all the voyage of their life Is bound in shallows and in miseries : On such a full sea, are we now afloat ; And we must take the current when it serves, Or lose our ventures. Shaksp. Juliut Ceesar.

His legions, angel forms, who lay intranced Thick as autumnal leaves that strow the brooks In Vallombrosa, where the Etrurian shades, High over-arch'd imbower ; or scatter'd sedge Afloat, when, with fierce winds, Orion arm'd Hath vex'd the Red-sea coast. Par. Lost, b. i.

Take any passion of the soul of man, while it ig predominant and afloat, 'and, just in the critical height of it, nick it with some lucky or unlucky word ; and you may as certainly over-rule it to your own purpose, as a spark of fire falling upon gunpowder, will infallibly blow it up. South.

There are generally several hundred loads of timber afloat; for they cut, above twenty -five leagues up the river, and other rivers bring in their contributions.

Addisun't Italy. K

Whatever is afloat in the stream of time, may, when it is very near us, be driven away by any accidental

blast which shall happen to cross the general course of the current. Rambler.

AFOBA, in botany, a name given, by the na- tives of Guinea, to a kind of plant, of the phase- olus genus, or kidney-bean. They use it pounded and mixed with oil, to cure cutaneous disorders. It is more hairy than the common kinds, and its leaves are very small. AFOOT. On foot; implying action. And thei sayen hem go awey and manye knewen and thei wenten afoote fro al citees and runnen thidir and camen bifore hem.

Wiclif. Mark vi.

I see you stand like greyhounds in the slips, Strainingupon the start. The game's afoot: Follow your spirit ; and upon this charge, Cry, God for Harry, England, and St. George.

Shakspeare's Hen. V. act ii.

The king [Harolde] himselfe stoode afoote by the standarde, and his brethren Girthe and Leofwine with him, to the ende that in such a common perill and ieopardy no man should once thinke to flie or run awav. State's Chronicle.

AFORE', ad. &prep. On the fore part ; much used in composition. It has respect to time and

olace.

I meane this, tha^respace hight But reason concelieth of a sight Shame of that I speake aforne.

Chaucer. R. of R. fol. 130. col. 3. He, back returning by the yuorie dore, Remounted up as light as cheerfull larke, And on his little winges the dreame he bore In haste unto his lord, where he him left afore. Spenser's Faerie Queene, b. i. c. 1. Approaching nigh, he reared high afore His body monstrous, horrible, and vast.

Faerie Q.

Whosoever should make light of any thing afore spoken or written, out of his own house a tree shall be taken, and he thereon be hanged.

Esdras, vi. 22.

If he never drank wine afore, it will go near to remove his fit. Shakspeare. Tempest.

^Emilia, run you to the citadel ;

And tell my lord and lady what hath hap'd :

Will you go on afore ? Shakspeare. Othello.

AFORE, in maritime affairs, avant, Fr. fore Sax. all that part of a ship which lies forward, or near the stem ; it likewise implies farther, forward, or nearer the prow ; as, the manager stands afore the foremast, i. e. farther forward, or nearer the stem. In both these senses afore is used in contradistinction to abaft. See ABAFT.

AFRA, in natural history. See PINTADO.

AFRANIUS, a Roman comic poet, who lived about the 170th Olympiad, and wrote comedies in imitation of Menander. He is commended by Tully and Quintilian.

AFRESH'. On fresh.

But when y►► remnat of the wicked shal attempt afresh to raise vp again such abhominatios, the Lord shal sodainly without warning fal vpo them with his most fearfull tirrible last iudgment.

Bale's Image, second part, R. 5.

Never was there any thing more pitiful than to hear my master blame the dog for loving his master's murtherer, renewing afresh his complaints with the dumb counsellor. Sidney's Arcadia.

The faction still defying Edward's might,

Edmond of Woodstock, with the men of Kent,

Charging afresh, renew the doubtful fight

Upon the barons, languishing and spent.

Drayton. Barons’ Wan,

The Germans, serving upon great horses, and charged with heavy armour, received great hurt by light skirmishes ; the Turks, with their light horses, easily shunning their charge, and again (at their pleasure,) charging them afresh, when they saw the heavy horses almost weary.

Knolles’s History of the Turks.

When once we have attained these ideas, they may be excited afresh by the use of words.

Wattt’s Logick.

Bleat out afresh ye hills ; ye massy rocks, Retain the sound : the broad responsive low, Ye valleys raise ; for the great Shepherd reigns, And his unsuffering kingdom yet will come.

Thomson.

AFRICA.

AFRICA, one of the great divisions, com- monly called, ‘ the four quarters,’ of the earth, the third in magnitude and population, is rising in importance, though probably less known to Europeans than any other. It forms an imper- fect triangular peninsula, of which the north is the base, and is separated from Europe by the Mediterranean Sea, the eastern side from Asia, by the Isthmus of Suez, the Arabian gulph, and the Indian Ocean, whilst the Atlantic and Pacific wash the west and south. The length of Africa, calculated from Cape Serra to Cape Aguilhas, is about 4320 geographical miles, and its greatest breadth 4140, including an area lying between the 37th degree of north, and the 35th of south latitude, and the 18th degree of west, and 51st of east longitude.

NAME. ••• The present name of this continent, among the ancients, was exclusively applied to Africa Propria, a small province in the nor- thern part. Its origin has been traced by the

learned to different sources. Bochart deduces it from the Punic word feric, an ear of corn ; and supposes it employed to express the great fertility of those parts that were known to the ancients. Others derive it from the Phoenician word Ha- varca or Avreca, anciently applied to the country of Barca. Servius derives it from the Greek priva- tive a and 0piioj, cold, considering it to express the great heat of the climate. It has been also, with great probability, traced to the Hebrew ' phreka/ broken off, or separated, describing its geogra- phical figure, as detached from the continent of Asia.

DIVISIONS. ••• Africa, under the name of Lybia, was divided by the ancients into Africa Propria, and Africa Interior. AFRICA PROPRIA, com- monly called the territory of Carthage, had va- rious limits assigned to it. Mela and Ptolemy comprehended in this division, all the kingdoms situated between the river Ampsaga, and the borders of Cyrenaica, inhabited, according to

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.I'.'/trji,* ' v

Equator or Equinoctial Line

AFRICA.

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Pliny, by twenty-six different nations, Numidia and Regio Syrtica inclusive. Its true limits, however, were the river Tusca, or boundary of Numidia on the west; the Mediterranean or African Sea, on the north ; the frontiers of Ga- ramantes and the deserts of Libya interior, on the south, with the Lesser Syrtis

and the Medi- terranean, on the east. This portion of Africa v/as divided into two great provinces, Regio ZFUGITANA and BYZACIUM, with which the summer and winter circuits of the king- dom of Tunis, as exhibited in the travels of Dr. Shaw, nearly correspond. It was remark- able for the ancient lakes Hipponitis, Palus Sisara, Palus Tritonis, Palus Pallas, and Palus Libya; for the famous river Bagrada, and for the contiguous islands of Cossyra, Tarichiae, Lo- padusa, ./Egusa, Dracontia, Galatia, .ZEgimurus, and Larunesise. AFRICA INTERIOR, compre- hended those more remote southern countries, little known to the Greeks and Romans, other- wise than by report. ' Libya Interior,' the western point of this division was inhabited by the Hesperian ^Ethiopians, Nigritae, Gatuli, and Garamantes ; whilst the eastern part was deno- minated by Ptolemy, ' ^Ethiopia sub ^Egypto,' including several countries, too well known to need any specification. Restricted as the Ro- mans were, both in their conquests and com- merce by the tropic of cancer, they acquired scarcely the names of the more retired and southerly kingdoms ; whilst with Numidia, Gaetu- lia, and Mauritania, they were more immediately connected.

The modern DIVISIONS of Africa, are,

1. Northern Africa, a term which best ex- presses perhaps, the Barbary states and their dependencies, (exclusive of Egypt, which is principally an eastern country of this continent,) includes all that portion of the globe, extending from the great ' Desert of Sahara' to the Medi- terranean, and from Egypt to the Atlantic. It is inhabited by different nations, hostile to each other, but being overrun by the Mahommedans during the first aera of their power, has ever since

etained the religion, government, and manners, then impressed upon it. The configuration of the deserts S. and E. of this division, have led some historians to imagine that they were for- merly covered with sea ; and that Barbary, thus rendered insular by the rolling of the wide ocean wave over the deserts east and west of the Atlas, constituted the island of

Atlantis, so often mentioned by the ancients. The states of this territory are those of Morocco, Algiers, Barca, TuniSj and Tripoli.

2. Western Africa, including a spacious terri- tory and many countries, imperfectly known to Europeans, which may be arranged under three divisions. 1 . Those lying between the southern limits of Sahara and the mountains of Khong, refreshed by the magnificent streams of the Se- negal and Gambia. 2. The coast of Guinea, widening from the heights of Kong to the Equi- noctial line. 3. The wide region stretched on both sides of the Zaire or Congo, with the in- cluded kingdoms of Congo, Loango, Angola, Metamba, Benguela, &c. extending from the equator to 15►► of S. latitude, from which, down

as far as the southern promontory^ the internal geography is unknown.

3. Southern Africa, or Caffraria, is a term given to that division of the African continent which immediately surrounds the Cape of Good Hope, projecting more than 30►► south of the equator. On the south-east coast are the king- doms of Inhambane, Sabia, Manica, Sofala, and Monomotapa, or Mocaranga ; but the inhabi- tants, especially those in the immediate vicinity of the Cape, are very low in point of civili- zation.

4. Eastern Africa,in its approach to the vertex of the peninsula, is much less known than the western coast, being colonized only by the Por- tuguese. It includes Zanguebar, Ajan, and Adel, with their tributary kingdoms. In the higher regions, the kingdoms of Egypt, Ethiopia, and Abyssinia, are well known.

5. Central Africa, stretching on both sides the Niger, almost across the Continent, is an im- mense tract of country, including the interior of the peninsula; of which, vast regions remain undiscovered. The nations commonly included in this division are Timbuctoo, Houssa, Bor- nou, Durfur, Bergoo, Kordofan, Dabarku, ind Ranga.

6. A sixth division may include the numerous islands with which Africa is in a manner encir- cled, lying both in the Atlantic and Pacific oceans. These are commonly arranged in groups, as the Cape de Verd isles, the Canary isles, Porto Santo, and Madeiras. Madagascar is 840 geographical miles in length, and one-fourth that distance in breadth. St. Helena is famous as the late residence of Buonaparte. The St. Matthew, Ascension, and St. Thomas's islands, together with Zanzibar, Pemba, Mauritius, Bourbon, Monifa, and others, are included in this division.

GULFS AND STRAITS. ••• The gulfs belonging to Africa, are those of Guinea, Sofala, Sidra, Goletta, France, &c. The straits are those of Gibraltar, Babelmandel, and the Mozambique channel.

CAPES. ••• The capes are those of Good Hope, Bona, Spartel, Gibraltar, Geer, Bojador, Blanco, Verd, Guardafui, and others.

MOUNTAINS. ••• The mountains of Africa run in chains, and are scarcely inferior to any others in the known world. The Atlas mountains, fabled by the ancients to be the pillars of heaven, have in some places an elevation of more than 13,000 feet from the level of the sea, and stretch over more than half the Continent. This, which is the only African range fully explained, has been described by M. Desfontaines as running forward in two grand divisions; of which, the one toward the Desert is called the great Atlas, and the other toward the Mediterranean, the less. Their course is parallel from east to west, and the in- tervening space broken by hills and mountains, forms a number of deep and beautiful vallies, watered by numerous rivers and streams. The whole range is of primitive granite, and attains its loftiest height towards the western extremity, where it towers above the sultry plain of Morocco ; but even there, notwithstanding the heat of the climate, it is covered with perpetual snow. The Mountains of the Moon supposed to ex-

tend across the entire Continent, between the seventh and eleventh degrees of north latitude, must be of still more formidable magnitude, if we may judge of them by their fame throughout the Peninsula, and those mighty rivers, of which they contain the source.

The highest and most celebrated portions, are those immediately south of Abyssinia, and the country of Nigritia. On the opposite side of the Continent, and nearly in the same parallel, are the mountains of Kong, running in a course from west to east, and stretching from near the point of Cape Verd, as far as the meridian of Tombuctoo, where they are supposed to connect themselves with the Mountains of the Moon, and so to form one entire range, reaching across the whole breadth of the African Continent. Abys- sinia is almost entirely a country of mountains, intersected by deep and extensive vallies. The southern shores of Africa are also overlooked by lofty mountains. Those of Lupata surround the kingdom of Mocarana. The Chrystal moun- tains, the kingdoms of Congo, Angola, and Ben- guela. The numerous and large rivers that water Mozambique on the one side, and Congo on the other, indicate some extensive ranges intervening between these two regions, and accordingly, such have been reputed to exist ; but, as they have never been laid down with geographical accuracy, their directions and magnitude appear) to be unknown.

RIVERS. ††† The rivers of Africa are nume- rous and interesting, more remarkable, perhaps, than even its mountains, and their course wrapt in deeper mystery. The innumerable and vast streams poured down from the Atlas, and other lofty ranges, are many of them lost in the sands of the desert; others, circumvolving through the unknown interior, at last empty themselves into the ocean.

The Nile is the largest river at present en- tirely

discovered ; the source of this celebrated stream, after much speculation, is now satisfac- torily ascertained to be the mountains of the Moon, some hundred miles south of Darfur. The immense mass of waters poured down from those celebrated heights, swelled by large tributary accessions from Abyssinia, forces its way across the sands of Nubia, divides the vale of Egypt, and at last empties into the Mediterranean. It is at first called Bahr el Abiad or White River, and in the sixteenth degree of latitude forms an union with the Bahr el Azrek or Blue River, the latter of which, although mistaken by the Portuguese and other geogra- phers, for the Nile, was well known to the an- cients as a mere auxiliary. The whole course of this river is estimated at 2000 miles, abounding with magnificent cataracts, and exercising an unparalleled influence on the fertility of the sur- rounding country.

The Niger has been for many years an object of uncommon interest, and of speculative and practical research. Its source, as well as that of the Senegal, has been long since known to be in the mountains of Kong, in the west of the con- tinent, but its embouchure remained undis- covered, and exercised the conjecture of philo- sophic topographers for many years back. Some

imagined the Niger and Congo to be identical ; others believed that this great river united with the Nile ; while a third party conjectured that it evaporated in the warm districts of Central Africa. All future theories, however, have been rendered useless by the discovery of John and Richard Lander, in the year 1830. These en- terprising travellers, the former of whom had been a companion of captain Clapperton in his last journey, proceeded from the coast to Boora, on the Niger, and, pursuing the stream down- wards, reached the Atlantic Ocean in the month of November, 1830, through the channel of the river Nun, flowing into the Bight of Benin. This channel proves to be one of the numerous conduits by which the Niger discharges its waters into the ocean, and which intersect and enclose a delta, one side of which extends 240 miles along the coast.

The Zaire, or Congo, is the next in interest and importance to those already named, and pours into the ocean an extraordinary mass of waters. Of the rivers that flow into the Indian Ocean, may be mentioned the Zambeze, the Quillimanci, and the Magdasho, whose source and early flow are involved in equal ob- scurity. The last two are supposed to arise from the same source as the Nile. With respect to the first, although it has been ascended some hundreds of miles in search of gold, nothing satisfactory has been ascertained.

DESERTS. ××× One of the most striking features of Africa, is the immensity of its deserts. The great desert of Sahara alone reaching from the shores of the Atlantic, [to the confines of Egypt ; and covering a superficial area of more than 2500 miles in length, by 700 its average breadth. Over this immense world of desola- tion are scattered numerous oases, of which Fezzan is the most remarkable. These beau- tiful islands of verdure, rendered doubly delight- ful from their pointing up from such wide oceans of sand, furnished some of the most happy pictures of the ancients ; and formed their Hes- perian gardens, the Fortunate islands, and the islands of the Blest. Besides the great de- sert above mentioned, there are several smaller ones still of very considerable magnitude and geographical importance. Some of these lie near the European settlements ; and modern travellers have supposed another wide wilderness lying between the eastern and western ranges of mountains.

To cross these immense deserts is an under- taking attended with great danger and difficulty; hence travellers- commonly go in caravans, each consisting of a number of persons seldom fewer than 2000, for the purpose of mutual safety. They have no track to direct them ; and as the shifting sands soon obliterate any impression, they are guided by the sun and stars, a few rocks of peculiar form, heaps of stone piled up, Sec., and so great is the aridity of the climate, that should they miss their calculation, with respect ;to one of these stations, they frequently perish for want of water. So late as

1805, a whole caravan, consisting of 2000 persons, was lost in conse- quence of the drying up of a well, on which they depended for a supply. Water is carried

from station to station in skins, by means of camels, the same as other goods. A certain portion of their beasts of burden being set apart for that purpose ; the load of a camel is about three or four hundred weight, and the ex- pence of carriage a farthing a mile for every hundred weight.

The heat of the climate arises from its being almast equally intersected by the equator ; and is so intense that Mr. Park lying in his hut of reeds in the dry season, could not endure to hold his hand against the hot wind that blew through the crevices, and even the negroes, when the wind blew from E. or N. E. could not bear to touch the ground with their feet ; ne- vertheless, owing to a different elevation and other circumstances, the climate is in some parts agreeable. The southern side of the equator is milder than the north, though at an equal dis- tance; but near the Mediterranean, even the north is not disagreeable to Europeans refreshed as it is by its sea-breezes, and rendered cool by its vicinity to the mountains.

QUADRUPEDS. ••• The beasts of Africa are nume- rous, and are considered amongst the most ex- traordinary in the world, for strength, size, and ferocity. They reign undisturbed in the vast deserts of this amazing peninsula, fostered by the sultry heat of the climate, which seems more suit- able to them than to any other of its productions. The majestic lion roams at large, and there are but few tracts where the traveller is safe from his dreadful incursions. The tiger is never seen ; but the panther, the leopard, and the hyaena, are almost peculiar to this division of the globe ; as is also one species of the rhinoceros, distin- guished by

two horns on the nose ; and one of the elephant, remarkable for a round head, convex forehead, large ears, and only three toes on the hind feet. Baboons, apes, and monkies, leap in myriads through the woods, and many of them grow to an astonishing stature.

The simia troglodytes chimpanse, or ourang- outang, in appearance greatly resembling the human species, commonly running to the height of from five to six feet, is a native of Africa. Crocodiles and hippopotami abound in the rivers ; the black bear is a native of Barbary ; horses and asses run wild. The zebra and quagga are seen commonly by travellers : and there are no fewer than thirty kinds of antelopes, celebrated for their fleetness and beauty. The great Caf- frarian buffalo is very ferocious, and is said to be a species peculiar to Africa. The dromedary is emphatically called ' the ship of the desert ;' and is the most useful animal in that part of the world. His large flat hoof, the power of carry- ing water for himself and his master, together with his great strength to support burdens, ren- der him almost the only animal capable of travel- ling in the burning sands, and without him, many of these deserts would be totally impassable. The camel dromedary is more lightly formed than the camel, and is used when extraordinary swiftness is required. He will walk fifty miles ###i day, with ease, and when made to gallop will travel 200 miles for many days in succession, and frequently, in cases of extreme exigence, has been known to travel 300 miles in twenty hours. Dro-

medaries are trained by the Moors for the pur- poses of war and plunder. South of the Niger, the ass is commonly employed for travelling ; the ground being so irregular and mountainous, that the camel would not be of any service. But elephants are perhaps the most numerous of all the larger animals of Africa : they roam in vast herds, through the forests of the interior, and have been thought a species quite distinct from those of Asia. The inhabitants, -when they see an elephant, hunt him down, feast upon his

flesh, make sandals of his hide, and sell his teeth to Europeans. Their mode of attacking them is by fire-arms ; as soon as they have discharged their pieces at one of them, they fall flat on the ground to avoid the first effects of his resent- ment ; but no sooner is he become faint with the loss of blood, than they rise and make a second discharge, which commonly terminates his life. In some parts of Africa, elephants are caught in pits, in a manner similar to that prac- tised in the island of Ceylon.

BIRDS. ••• There have been calculated 643 species of birds, of which nearly 500 are pecu- liar to Africa ; and of eighty-seven genera, six or eight are peculiar. Parrots are generally scarce in Africa ; but insectivorous and frugivorous birds are very numerous. The guinea fowl, of which there are three species, is a native. The ostrich commonly rising to the height of six or eight feet, abounds in the sandy deserts, and is remarkable for swiftness. They flock together in large troops, at a distance resembling an army of soldiers, and in swiftness exceed the fleetest horse. The eggs of the ostrich frequently exceed three pounds in weight ; and these the bird de- posits in the sand to be hatched by the heat of the sun. The didus or dodo, formerly known in some parts of the continent, is supposed to be now entirely extinct, none of the species having been seen for a great length of time.

INSECTS. ••• Africa swarms with the most beautiful insects. The migratory locust is the most formid- able, marching forth in myriads, and spreading its ravages over the most fertile provinces ; they have been known to cover an area of 2000 square miles ; and hitherto no means have been able to prevent their progress. The ant is also nume- rous, building nests, each from ten to twenty feet in height ; not only destroying every thing in the houses, but even cutting through the trunks of trees in a few weeks. The tsaltsalya is a dreadful scourge, particularly in Abyssinia. The scorpion is a native : of spiders there are two kinds, the tarantula, which abounds in Barbary ; and the tendaraman, a native of Mo- rocco, whose bite is fatal. The great centipede is found in

every part of the interior regions. The conchologist meets innumerable varieties of the most beautiful shells, on the borders of all the coasts and rivers ; where are also found many species of zoophytes, in some places construct ing reefs and islands of immense magnitude and extent. The guinea worm is frequently met with ; and the famous nautilus of the ancients, is found in the African seas.

REPTILES. ••• Africa is full of reptiles and ser- pents of every description; of these the larger ones belong to the Python tribe. Crocodiles

abound in the large rivers ; but, happily for the people, one species of tortoise, called tyrse”, devours the young crocodiles in great numbers, the moment they are hatched. The ouaran of the Nile also, a species of lizard from three to six feet long, greatly venerated by the ancient Egyptians, devours the crocodile’s eggs. The boa constrictor is one of the most terrible snakes in Africa, both from its prodigious size, and habits. The haje, which the ancients called aspic, is taught by the Egyptian jugglers to dance ; this animal, from the practice of erecting itself ‘ on being approached, was adopted by the ancients as the emblem of protection, and sculptured as such on the portals of their temples. The came- Icon is a native of many parts of Africa.

PLANTS, &c. ••• The vegetable kingdom opens to the botanist a field untraversed, at present, by the foot of science ; containing a beautiful variety of all those plants that charm the eye, and adorn the fair face of nature. The baobab, or calabash tree, exhibits the most extraordinary dimensions. Its height, though commonly reaching sixty or seventy feet, bears no propor- tion to the trunk. Adanson is said to have found one in the island of Senegal, which mea- sured seventy-four feet in circumference; the branches of which, spreading in all directions,

were as large as common trees ; thus constituting, of itself, a species of forest. The mangrove, which grows on the banks of rivers, strikes root in its bed, forming a platform above the water, and a little arcade below the stream. The shea, or vegetable butter-tree, is curious and impor- tant to the natives ; whilst, on the borders of the desert, is found the celebrated lotus tree, the fruit of which, (a farinaceous berry,) when pre- pared, becomes very nutritious, and equal in taste to the sweetest gingerbread. The flora of Africa is not yet half explored : although it has already added to botany many new and interest- ing species, a great harvest yet remains in the interior.

MINERALS. ××× Various metals have been found in Africa, but none of them characteristic, ex- cepting gold. This metal is found on every part of the central mountains, occurs frequently in an alluvial soil, and is also found in the rivers. That which is brought to Egypt, Fez, Algiers, Morocco, &c. is commonly brought from Bambouk, north-west of the Kong mountains. Pure gold is said to be found in veins in the dis- trict opposite Madagascar. Africa produces besides the jasper, agate, emerald, topaz, nu- merous other precious stones. Copper is found in the Western Atlas ; also in the adjacent region about Fertit, Abyssinia, Mozambique, Congo, and the mountains beyond the Orange river. Mines of silver are found in the territory of Tunis: iron abounds in Morocco and other places.

INHABITANTS. ××× Africa is considered to have been first peopled by Ham and his immediate des- cendants. Mizraim peopled Egypt, (Gen. x. 6, 13.) The Pathrusim, Naphtalim, Cafluhim, and Ludim, took possession of other parts, but their relative situations are not accurately known. The Lehabim have been supposed to have Gcttle/1 in Libya; Phut, between Numidia and

Libya, along the Mediterranean ; and that many of the Canaanites retired into Africa when driven from their own country by Joshua. The Auses, whose chief city was Auza, the Maxyes, and Machlyes, (Libyan

nations) the Zaueces, and Zygantes, are supposed all to have been a mix- ture of the old Libyans and Phoenicians. The Garamantes, Gsetuli, Hesperiani, / Ethiopians, &c. inhabited the western regions. The Asta- curi, Dolopes, Blemmyes, Cadupi, Ichthyopagi, Lotophagi, Elephantophagi, &c. are feigned to have inhabited the southern regions. The present inhabitants of this peninsula are com- monly divided into Moors and Negroes. The former supposed to be the descendants of the ancient Arabs, blended with numerous other nations, who have settled in Africa. These have, for the most part, occupied the habitable parts, and driven the negroes into the southern regions, or beyond the great rivers. The Moors are piratical, treacherous, unsettled, roaming like their ancestors, from place to place ; and being superstitious Mahommedans, are generally very hostile to Europeans. The term is, however, vaguely applied, since, during the middle ages, all the Mahommedans were called Turks and Moors ; and all who were not of the former, were considered of the latter. At present the name is chiefly restricted to the inhabitants of the cities of Barbary. Their general character is rudeness and austere superstition. Their towns are gloomy, having narrow streets. Their houses have walls of earth, and are destitute of windows; and even their internal splendour is barbarous. Compared with the Turks, the Moors are gene- rally an inferior race. Jews exist in great num- bers in Barbary, where, as they exhibit their peculiarities and political distinctions, they are the objects of derision and contempt. * The in- habitants of Egypt are chiefly foreigners. The Copts are of a yellow dusky complexion ; the females elegant and interesting. They are said to be the only race descended from the original natives. The proper Arabians chiefly occupy the country districts, residing in tents woven of camels hair and the fibres of the palm ; forming a sort of moveable towns and villages. The government is under a sheik and emir, or patri- archal chiefs, tributary to the sovereign of the Moors. The mountains are occupied by inde- pendent tribes. The negroes are gentle, hospi- table, and affectionate ;

but, withal, improvident, thievish, and superstitious. They are divided into two classes, Foulahs and Mandingoes. The former hold Mahommedanism, divested of some of its gloomy features, and are esteemed one of the most respectable tribes in Africa. Their original country is situated east of Bam- bouk, and is denominated Fooladoo ; but their principal kingdom is that behind Sierra Leone, of which Temboo is the capital. Amidst all the different tribes and kingdoms occupying this great peninsula, the forms of government are almost infinitely diversified.

AGRICULTURE. ••• Agriculture and the arts are in a very imperfect state amongst all the native tribes of this continent. In none, with the ex- ception of Whydah, is landed property at all recognized, nor liave they the means of applying

the advantages which have resulted from Euro- pean skill, or even European implements to the cultivation of the earth. The hoe is the only instrument with which the ground is tilled ; and Park mentions it as a surprizing instance, no where else seen in Africa, that for a mile round Kirwanny the country was entirely cleared of wood. The labour of cultivating the earth is common to a whole village during two short seasons, seed, time, and harvest, when all the in- habitants go out headed by their chief, while their musicians attend and cheer the toil by the conjoined harmony of their different voices and instruments.

MANUFACTURES AND COMMERCE. ••• Manufac- tures are in a still less advanced state, the most extensive department of which is cotton cloths, and this is mostly carried on by each family for its own use. Dressing of leather alone, of all African manufactures, forms an article of export to Europe.

Meantime, commerce, except on the coasts of the

Mediterranean and Red Sea, has never been in a flourishing state ; the west of Africa having nothing but an immeasureable waste of ocean before it, wanted an opposite coast with which to trade Inland commerce has, however, been more extensive, and has overcome the mightiest obstacles ever presented to mutual communi- cation. Deserts full of shifting sands, where wide desolation seemed fatal to every thing endued with life, are traversed by large and numerous caravans. In these the camel, called 'the ship of the land', is almost exclusively employed ; and by his means the commercial Arabs have penetrated even to the depths of In- terior Africa.

CARAVAN ROUTES. ••• The number of camels composing a caravan is various, but generally from 500 to 2000. They travel at the rate of three miles an hour, and for six or seven hours in the day, from station to station till they have completed the entire route. The party are sup- ported by the milk of the camel, barley meal, Indian corn, dates, &c. ; and on arriving at the different stations commonly remain a few days to recruit their stock of provisions, and refresh themselves and cattle. Without professing to enumerate all the caravan tracts which stretch across the vast deserts of Africa, we shall specify the principal points from which they set out, and some of the places where they stop for re- freshment, occasionally making a short stay of two or three days. The points whence they generally set out are three, Morocco, Fezzan, and Egypt. The caravans from Morocco are very large, and proceed to Soudan, or Tom- buctoo, chiefly the latter. The principal sta- tions being the rendezvous Akka or Tatta, Tegaz- za, Taudeny and Arawdu or Arodu. The whole journey occupies 129 days, sixty-five of which are spent in rest. Another route to the same point is by Wedinoon, Cape Bojador, and Gualata, although many travellers prefer direct- ing their course to Bambarra, and the banks of the Senegal. Of late, a negro state has been established on the borders of Morocco, forming a species of entrepot for the commodities of Soudan,

which prevents many Moorish mer-

chants crossing the deserts. Mcurzouk, the capital of Fezzan, is a sort of central point for the trade of Interior Africa, and has several caravan routes of considerable importance ; one to Cairo which requires about forty days. The halting places being Seivah, Augila, and Te- missa ; another leads to Bornou, through the deserts of Bilma and Tibesti, a journey of fif- teen days. The principal halts of which are Temissa, Dourboo and Kavem. A third leads to Timbuctoo by Gadamis. Its longest, and perhaps most important route, is to Cashna, a jou'ney of sixty days, although the caravan frequently crosses the Niger, and turning west- ward proceeds over the mountains of Kong to Ashantee. Egypt sends out three caravans for the general rendezvous at Cairo, one to Seunaar, another to Darfur, and a third to Fezzan; the latter is annual, the two former once in two ,or three years. The caravan with which Mr. Browne travelled consisted of 500 camels but the number often amounts to as many as

2000.

INTERNAL COMMERCE. ××× Salt, the chief article of commerce from North Africa, is an article of luxury in the interior regions, where the inha- bitants suck it as children do sweetmeats. It is sold in its rocky state, in slabs of twenty- four feet long, each worth ××2 or ××2 10s. and is exchanged by the caravans for the gold of Nigritia.

Dr. Shaw assures us that the western Moors carry on a trade with the barbarous nations bordering upon the Niger, without ever seeing the persons they trade with. ' They make this journey,' says he, ' in a numerous caravan, carrying along with them coral and glass beads, bracelets of horn, knives, scissars, and such like trinkets. When they arrive at the place ap- pointed, which is on such a day of the moon,they find in die evening several different heaps of gold dust, lying at a small distance from each other, against which the Moors place so many of their trinkets as they judge will be taken in ex-

change for them. If the Nigritians the next morning approve of the bargain, they take up the trinkets and leave the gold dust, or else make some deductions from the latter. In this manner they transact their business without seeing one another, or without the least instance of dishonesty or perfidiousness.' The antiquity of this custom is at least as high as Herodotus, as appears from the following passage. * It is their custom,' speaking of the Carthaginians, 1 to unload their vessels, and dispose their goods along the shore. This done, they again embark, and make a great smoke from on board. The natives seeing this, come down to the shore, and placing a quantity of gold, by way of exchange for the merchandize, retire. The Carthaginians then land a second time ; and if they think the gold equivalent take it and depart, if not they go aboard their vessels again. The inhabitants return and add more till the crews are satisfied. The whole is conducted with the strictest in- tegrity, for neither will the one touch the gold till they have left the value in merchandize, nor the other remove the goods till the Carthagi- nians have taken the gold.' ` Herod. Melp. 196.'

The articles furnished for the internal com- merce of Africa, are chiefly sashes, silk hand- kerchiefs, carpets, woollen caps, and leather furnished by the Mediterranean states, gold, ivory, gums, hides, oil, skins, woods, &c. are derived from all parts of the peninsula, together with arms, agricultural implements, and orna- ments for the chiefs and the women.

EARLY GEOGRAPHY. ??? Little of the geography of this vast section of the earth was known to the ancients, and of what information they had ac- quired respecting it we are but imperfectly in- formed. Many voyages made in the early ages were never written; and others have perished in the lapse of time. Geography rose like the morning sun, first

breaking through the clouds of the east, and brightening most of all, that divi- sion of the hemisphere; but, as it arose, it widened its influence, and seemed to pour its broad sun-beams upon every portion of the world. Early attempts were made to explore the re- gion of Africa, as is evident from facts and evi- dences recorded in history. Eratosthenes notices the first division of the old world into continents. This began in the islands of the Cyclades, and was, no doubt, intended originally to dis- tinguish between the opposite shores of Greece and Caria. The latter of these, including a small district denominated Asia, has since given its name to that division of the globe. The coast of Lybia was called Africa, or Southland, from its position with respect to Greece. The north coast was known early to the European nations of the north, whose several districts are fre- quently mentioned in their writings ; and along the western coast, discovery proceeded with a more advanced step than on that directly oppo- site ; but all expeditions to effect its circumnavi- gation are considered to have failed.

Herodotus says, that Necho, king of Egypt, having desisted from his attempt to cut a canal from the Nile to the Arabian Gulph, fitted out an expedition under the direction of Phoenician navigators, to sail round this Continent. Their directions were, to take their course down the Red Sea, to sail down the Southern Ocean, to double the Columns of Hercules, and return by way of the Mediterranean. The navigators are said to have succeeded ; but Herodotus himself avows a degree of scepticism, because they said, that having sailed round Lybia, they had the sun on their right hand. Such, however, must have been their actual observation during their voyage down the regions south of the equinoctial line, according to the subsequent demonstrations of astronomy. The great and numerous obstacles they must have encountered in that rude period of navigation, have always rendered the long voyages of the ancients suspicious, especially those which relate to the circumnavigation of Africa. The

Portuguese experienced innumera- ble difficulties in doubling the Cape Bojador, and effected it at last only by means of the com- pass, which enabled them to stand out to sea : destitute of that instrument, M. Gosselin thinks they never could have succeeded. Huet, (Com- merce et Navigation des Anciens, 34, 275,) the Abbe" Paris, (Academic des Sciences, vii. 79,) Montesque, (Esprit des Lois, b. xxi. c. 10,) con-

tend that it was really performed, while Vossius, (in his Notes to Pomponius Mela,) D'Anville, and others, are very unbelieving. A discussion of the question has taken place between Major Rennell on the one side, and Dr. Vincent and M. Gosselin on the other. In the opinion of the last two gentlemen named, Gibbon, in an essay written upon that subject, appears to coincide; viz. that such an expedition exceeds all th means and resources of ancient navigation. Whatever disputants may advance with respect to this voyage, one fact is certain, viz. that if Africa was circumnavigated by the Phosnicians, all their discoveries have entirely perished. Subsequent to the attempt of Necho, Sataspcs made an attempt to sail round Africa. He was a Persian nobleman, whom Xerxes had con- demned to be crucified ; but afterwards altered the sentence to that of making a voyage round Africa. He commenced his undertaking, and passed the straits ; but sailing for months together down the western coast, and having no prospect before him but immense deserts on the one hand, and a trackless ocean on the other, his courage failed him, and he returned. Eudoxus, a native of Cyzicus, who made the next attempt, procured from surrounding states a pretty large expedition, with a view to the same object, but his intimidated crew, compelling him to keep near the shore, the ship ran aground. He then constructed a new vessel out of the old materials, and set out afresh, but was obliged to return, the vessel being too small to effect any useful pur- pose. Bocchus, king of Mauritania, afterwards engaged to send him out afresh ; but doubting the sincerity of his patron, he retired to Iberia, where

he fitted out an expedition superior to the former ; but the narrative, which was written by Strabo, closed about the time the expedition sailed, and we have nothing further of its success. Other voyages were undertaken with nearly the same success. Sixty vessels were sent out by the Carthaginians, containing 30,000 persons, under the conduct of Hanno, for the purposes of the bet- ter discovery and colonization of Africa ; they doubled the promontory of Lybia, erected the ce- lebrated temple of Neptune, and crossing the bay, came to the great river Lixus, and landed on the island of Cerne, where they planted a colony. They afterwards proceeded along the coast, and saw numerous islands ; but discouraged perhaps at the greatness of the undertaking, returned to Cerne. How far they went is not distinctly known. M. Gosselin considers they proceeded along the coast of Morocco, to the river Nun ; but Major Rennell thinks they went beyond Sierra Leone, whose mountains are the identical ones which they denominated the Chariot of the gods. Their descriptions correspond with the present features of the coast about the Gambia and Senegal. The Periplus of Hanno, contain- ing the journal of this voyage, has given rise to much learned and elaborate discussion, and was opposed by numerous objections by Dod- well, in the Oxford edition of the Minor Greek Geographers. The authenticity of this celebrated document, is now, nevertheless, acknowledged ; and the work itself thought one of the most curious and valuable memoirs of antiquity. As

to the portion of coast sailed over, different opinions are entertained ; and upon the detail of the voyage, three different systems have been advanced by Bougainville, Gosselin, and Rennell. The earliest voyages to the east, are those men- tioned in Bible history, viz. to Tarshish and Ophir. These evidently extended a consi- derable distance along the coast of the Indian Ocean. With regard to the

interior, remote an- tiquity is almost silent upon well attested facts of geographical exploration. Herodotus men- tions an adventurous journey of five young Nasamonians, who penetrated the great sandy Desert, and were taken by some little dark- coloured men, and carried to a city inhabited by people like themselves. This city is sup- posed by Rennell to be a city of Central Africa, and a river mentioned by the same author, to have been the river Niger. To the countries watered by the Niger, the knowledge of the an- cients was in a great measure confined. A dis- tinction stated by Herodotus between Ethiopians and Africans, appears to correspond with the mo- dern division of Moors and Negroes. He ap- pears to have adopted the error still popular in Africa, viz. that of confounding the Niger with the Nile. He supposed the river just mentioned to have been the western part of the Nile. But by his tracing the Nile four months sail from the lower extremity of Egypt, and considering it as flowing from the south- west, that he was ac- quainted with the true source of that river, to say the least, is probable. The expedition of two divisions of the army of Cambyses, (to the south and west of Egypt,) the latter of which is supposed to have perished in the desert, consti- tuted the next effort to explore the interior of Africa. Alexander, when at Memphis, visited the temple of Jupiter Ammon, but lost a great part of his troops in the attempt. War and commerce, however, gradually opened a way into these regions. Under the Ptolemies we may suppose many efforts were made, and by the Romans, expeditions were sent under Septi- mius Flaccus and Julius Maternus, as intimated by Ptolemy, b. i. c. 8. The best ancient descrip- tion of interior Africa is to be found in Ptolemy. Though unacquainted with the extent of Sahara, and the geographical scite of Nigritia, he has shown himself acquainted with the whole course of the Niger, and the general geogra- phy of the African rivers. His description of the Niger is, that it ‘ joins together Mount Thala and Mount Mandrus,’ lib. iv. c. 6. His predecessor, Eratosthenes, who is said to have formed the first regular geographical system, evinced considerable

knowledge of the African rivers. His theory respecting the Nile is cu- rious. Placing, in common with Strabo, Mela, and other writers, the southern extremity of Africa, on this side the equator, they supposed beyond the equator a great antichthonos or ba- lancing continent, and convinced that the true source of the Nile must be beyond what they then imagined the limit of the southern extremity of Africa, they placed the source of the Nile in the southern continent, and supposed its early course to be under the ocean till it emerged on the southern shore of Africa. The Arabians have given

some little information, which is correct and valuable, with much that is poetic and fabulous. The most copious of their writers is Edrisi. Nubia was little known to him. The Nubians and Egyptians being of different religions, even the merchants of each country, instead of travelling into the territories of the other, brought their com- modities to the opposite side of the great cataract; where, as soon as they had landed and made the exchange, they immediately re-embarked. In the absence of this medium, the Arabians opened for themselves another. They had penetrated at a remote period, across the great Desert, to the eastern shores of the Niger ; and through the fer- tility of its banks and the richness of its golden sands, they formed settlements. Emigration and revolution swelled the tide, till, in the course of two centuries, several great Mahommedan king- doms were established on the Niger. Of these new establishments Ghana or Gana, stood pre- eminent, bordering upon the Wangara, where the overflowings of the Niger impregnated the soil with gold. A regular system of commerce was established with other Mussulman states ; and ca- ravans were seen in all directions, traversing the vast expansire deserts. The position of Ulil, de- scribed by Edrisi as an island situated in the sea at one day's sail from the mouth of the ' Nile of the negroes,' or Niger, is not positively deter- mined. It is highly probable that this sea must have been an inland lake, which, supposition has extended much to the west of Tombuctoo. East of Gana lay

Wangara, the celebrated ‘ coun- try of gold,’ represented by the Arabs as nearly surrounded with the branches of the Nile, by which it is inundated during the rainy season ; and as containing two lakes near the cities of Semegonda and Reghehil. The Tocrur, and se- veral other kingdoms being founded, the Arabs extended themselves westward through Barbary. Flourishing settlements were also formed on the coast, colonized by Arabians. These were mostly at Melinda, Monbaza, and Sofala, called com- monly the Golden Sofala, Vakvak, or Ouac ; Ouac forms here the indistinct limit of knowledge. The Arabians had no idea of the existence of Good Hope Cape. It appears by the curious map of Edrisi, on the contrary, that, like Pto- lemy, he extended it to the east till it became conterminous with India and China : hence his placing the island Vakvak in the sea of China, which so perplexes Hartmann.

Subsequent to the flourishing aera of Ara- bian science, extending from the tenth to the fourteenth century, geographical discovery has been the exclusive boast of Europeans. In the fifteenth century Africa was circumnavigated, its figure was ascertained, its country colonized. The Portuguese one of the most insignificant states of Europe, influenced by curiosity, avarice, and a desire to detect, in the person of a rumoured Christian sovereign on the eastern coast, that real Prester John, whose abode they were most anxious to ascertain, penetrated at the two op- posite points of Abyssinia and Congo ; but, in- stead of making fresh discoveries, only darkened and perplexed what had been known before. The Nile for instance, was said to rise in Abys- sinia. Abyssinia itself was immensely extended.

even beyond the southern frontier of Congo and Monomotapa. Lake Zambre was placed 2000 miles south of its real position, and made the common source of the Nile, Congo, and Zambezi. The Niger was thought

to be a mighty river, emptying itself into the ocean by two mouths, the Gambia and Senegal. It is true they were divided in their opinions ; some fixed its source in the lake Dembea ; others, in a lake south of Boraou ; others thought it one of the branches of Gion, which took its sweep in this direction immediately after it issued from Paradise ; but the conjectures were no satisfaction to geographers.

John I. equipped a powerful armament to attack the Moors on the coast of Barbary; and several vessels appointed to precede it, in exploring the western coast, advanced as far as Bojador Cape, but were deterred from attempt- ing to double it, by the tremendous aspect of the sea at that point.

In the year 1415, Don Henry fitted out a vessel, under the command of Gonzalez Zarco, and Tristan Vaz, for the purpose of extending the line of maritime discovery. In this, the ex- pedition failed ; but, being driven back by the squalls from their intended course, they fell in with the island since called Porto Santo. In the following year, a fresh expedition under the com- mand of the same persons, deputed to take possession of the island, fell in with Madeira, so called from its being covered with wood; and in 1432, Gilianez, one of the prince's com- manders, venturing on a bolder navigation, pushed beyond Bojador in the open sea, and saw the Continent stretching down to the south. From this period the Portuguese continued ad- vancing from place to place, till they had explored the whole line between Cape Blanc, and Cape Verd. At one inlet of the sea, finding a few Moors with a small quantity of gold, they named the place ' Rio d'Oro,' the golden river. The island of Arguin, Cape Verd, Senegal, and Gambia, were shortly after colonized; a settlement was formed at Elmina, on the Gold Coast, the present capital of the Portuguese dominions in Africa ; the castle of Mina became the central point of fresh discoveries ; and the king assuming the title of ' lord of Guiana,' directed his com- manders in future to erect pillars of stone, dig- lified with the arms and escutcheons of Portugal, accompanied by appropriate inscriptions, to mark the

limit of their discoveries.

From Mina was sent Diego Cam, who soon after his departure fell in with a powerful cur- rent from the land, which led to the discovery of a river which, from the country through which it flowed, was called the Congo, by the Portuguese, and by the natives the Zaire. Sailing up the river he saw multitudes of black natives, and after having enticed some of them on board, he set sail for Portugal. In a few months he re- turned, and proceeded along the coast as far as 200 leagues. John II. successor of Alphonso, sent out a large fleet, which after discovering the kingdoms of Benin and Congo, sailed 1500 miles beyond the equinoctial line : in the course of which voyage, negotiations! were entered into, colonies planted, and forts erected. Covillan

and Payna being sent on an embassy to the court of Abyssinia, received orders to explore the Red sea, and the coasts of the Indian Ocean. Bartholomew Diaz was directed to proceed to the southern extremity of the peninsula, and to explore his projected passage to India; and after having discovered a thousand miles of new country, he at length saw the lofty southern promontory he called Cabo Tormentosa, or Storm Cape, which the king from the conviction that it was the prelude to more noble and in- teresting discoveries, afterwards changed to the Cape of Good Hope. Covillan visited Hin- dostan, sailed to Sofala, and proceeded northward along the eastern coast of Africa, and the favour- able accounts he transmitted from Abyssinia, induced the king once more to fit out a powerful squadron under the command of Vasquez de Gama. To this and the preceding voyage, is ascribed the discovery of the real form of the African continent.

INTERIOR AFRICA. ††† During all these impor- tant discoveries, the interior was little known, the peninsula being chiefly visited for the pur- pose of procuring slaves ; but in the eighteenth century, the French penetrated into the interior. Claude Jannequin in 1637, represented himself as having ascended the Senegal seventy leagues. Queen

Elizabeth granted a patent to certain merchants of Exeter, enabling them to carry on trade with the Senegal and Gambia. The latter created at the time a little jealousy with the Portuguese.

In the seventeenth century a report of the extreme riches of Africa, induced a number of English gentlemen to form themselves into a company, for the purposes of exploration and commerce. Several voyages were accordingly undertaken, in one of which, made by Jobson in 1620, an African king made a cession of Tenda and its vicinity for some bottles of brandy. Captain Stubbs went out by request of the Royal African Company, to ascend the Gambia, and ascertain the truth of the reports respecting the great quantity of gold found there. Other ex- peditions followed ; but little information was brought to England till the deputation of Mungo Park of whom we shall speak hereafter.

AFRICAN INSTITUTION. ••• In 1788, was formed the African Institution, and Ledyard was de- puted to that great continent, to ascertain if possible the geography of Interior Africa. He was of an enterprising spirit, had sailed round the world with Captain Cook, had formed the design of crossing the continent of America from the Atlantic to the Pacific; and having laid down a plan for travelling by land to Kams- chatka, had proceeded by Denmark and the Sound to Stockholm, and attempted to cross the Gulph of Bothnia, the middle of which being unfrozen he was prevented. His expedition to Africa produced much valuable knowledge respecting Egypt, and would no doubt have been equally successful in the central legions, but the delay of caravans, together with other difficulties and disappointments, operated so on his mind as to produce a bilious fever, of which he died.

Mr. Lucas, who was afterwards deputed by tne same society, resided three years in Morocco, out made

very little progress in the object of his mission ; and Major Houghton, the next geo- graphical missionary, was alike unfortunate.

About this time the society turned their atten- tion to the celebrated Mungo Park, a native of Scotland. He had been educated for the medical profession, and was all that the society could have desired. He sailed from Portsmouth, on the 22d of May, 1795, and reached Jillifree, on the Gambia, on the 21st of June, where he devoted himself to the study of the Mandingo language, in the house of Dr. Laidley,of Pisania; and at the commencement of the dry season, 2d of December, 1795, proceeded towards the in- terior. He advanced into the kingdom of Walli, and on the 5th, reached Medina, the capital. The chief earnestly prayed him not to attempt so dangerous an expedition ; but, nevertheless, offered him a guide if he resolved to proceed. On the llth, he reached the frontier town of Woolli, and hired three elephant hunters as companions through the wilderness. On the 18th, he reached Tallika, the frontier town of Bondou, and found an open fertile country, reaching to Koorkarany, in latitude 13►►, 53’, north. On the 21st, he reached Fatteconda, the capital of Bondou, where he conversed with the very king who ordered the plunder of Major Houghton, and presented to him the blue coat which he wore, for which he received in return, five drachms of gold. . The ladies of the seraglio derided the whiteness of his skin and the pro- minence of his nose ; and he complimented them on the glossy jet of their skins, and the lovely depression of their noses. On the 24th he reached Joag, the frontier town of Kajaaga. The house of the judge in which he slept, was, shortly after his arrival, surrounded by horsemen, who demanded duties for the king, which they said he ought to have paid on entering the kingdom, and hiving helped themselves to about half his property, departed. Shortly afterwards, he arrived at Teessee, where he was plundered of half his remaining property by his friend Demba. At Kooniary, the capital, N. lat. 14►►, 34’, and fifty- nine and a half geographical miles east of Joag, he was

favourably received by the king, and after- wards proceeded through Ludamar, and on the 27th of February, arrived at Deena. From this place he proceeded to Sampaka, and thence to Dalli and Goomba, where he was seized by a party of Moors, whom All ordered to convey him to Benown, that his wife Fatima might see a white man. At the latter place, he was treated with great brutality ; the people shut him up with a wild hog, and amused themselves with worrying and teazing him. They examined very curiously, his person and his clothes : some of them proposed putting him to death. The king's brother proposed putting out his eyes, which he said resembled those of a cat : the queen alone compassionated his distress, and sent him provi- sions ; at length however he effected his escape, and the next day arrived at Foulah, and on the 5th of July, at Wawra beyond Ludamar, and the king- dom of Ali. From this place he went to Dingyee, then to Moorja, and on the 21st, reached Sego,

where he saw the long sought Niger, as broad as the Thames at Westminster, rolling its mag- nificent stream from west to east; its banks crowned with the four townships which compose the city, including a population of 30,000 people. The king would not allow his entrance into the city ; but a poor woman took him to her hut and treated him with great kindness ; she and her daughters sung an extempore song on the occa- sion : < The winds roared and the rains fell, the poor white man faint and weary sat under our tree ; he has no mother to bring him milk, no wife to grind him corn.' ??? Chorus, < let us pity the poor white man : no mother has he.' The next day, Park was presented with 5000 cowries, 250 of which are worth one shilling, and ordered to quit the vicinity.

Africa has supplied many striking proofs of female kindness and hospitality. Ledyard's ' Praise of Women,' is well known to have been derived from facts that occurred in his African journeys. Mr. Park's testimony was equally de- cided on this subject. The above simple ex- pressions of kindness to a stranger have been formed into verse by the

late duchess of Devon- shire, and set to music by Ferrari ; the song ij as follows :

I.

The loud wind roar'd, the rain fell fast; The white man yielded to the blast; He sat him down, beneath our tree ; For weary, sad, and faint was he : And ah ! no wife or mother's care, For him, the milk or corn prepare :

The white man shall our pity share : Alas ! no wife no mother's care, For him the milk or corn prepare.

II.

The storm is o'er ; the tempest past : And mercy's voice has hushd the blast; The wind is heard in whispers low, The white man far away must go : ??? But ever in his heart will bear Remembrance of the negro's care.

Go, white man, go ; ??? but with thee bear The negro's wish, the negro's pray'r : Remembrance of the negro's care.

Leaving Sego, he then advanced to Sansand- ing, containing 10,000 inhabitants; thence to Sibili, Negara, Nyaneebo, Modiboo, Kea, and thence in a canoe to Moorzan ; after which, he crossed the Niger to Silla, nearly 1100 miles east of Cape Verd. Here, being exposed to violent tropical rains, and finding his advance would be attended with imminent peril, he returned by the same route, and after innumerable difficulties and privations, arrived at Pisania. In one part of his journey, he was robbed and stripped of his clothes, and left alone in the wilderness, in

the heavy rainy season/almost 500 miles distant from the nearest European settlement. The king of Bambarra had also sent a canoe in pur- suit of him, to bring him back to Sego. He nevertheless cheered

up his spirits, and pro- ceeded through swamps, bogs, and marshes ; sometimes swimming over creeks with his horse's bridle between his teeth, and his papers in his hat, and frequently subsisting on nothing else but the corn intended for his horse. This was, however, an important journey, during which, he fixed the boundaries of the Negroes and Moors; traced the resources of the Senegal, Gambia, and Niger ; confirmed the ancient ac- counts relative to the course of the last river, illustrated the history of the ancient Lotophagi, the mode of propagating the Mahommedan reli- gion by proselytism, and established a number of geographical positions in a direct line of 1100 miles from Cape Verd.

About this time Mr. Browne entered Dartur, with a view of crossing the entire continent from east to west ; but he could not proceed, and all his effects were seized for the use of the sultan. He nevertheless learned while at Darfur, that the sources of the White river, Bahr el Abiad, or Western Nile, are forty hills called Kumbri, or the Mountains of the Moon, that the stream flows north- west, exactly coinciding with the Gir of Ptolemy, and Nile of the Negroes ; that Azran west of Bornou, abounds with silver, the inhabitants having literally such an abundance of that metal, as to apply it to the most common purposes.

Dr. Blumenbach, in 1795, recommended to the African society, a person well qualified to un- dertake another expedition into Africa. He was the son of a clergyman, and had studied divinity at the university of Gottingen. Such was the re- commendation, that Sir Joseph Banks in making a reply, said, if Mr. Horneman is the person you describe, he is the identical person we are in pursuit of. In one night he laid out the plan of his entire journey, and after studying the oriental languages, in 1796 he went to London in the February of the following year, and immediately embarking, arrived on the 10th of September, in the bay of Caroube" ; and taking with him from Alexandria, an aged monk who spoke Arabic, ???went to Cairo,

where he studied the language of the Western Arabs. Buonaparte, who had just landed in Egypt, offering him every assistance, he set off with a caravan, on the 5th of September, and arrived shortly after at the borders of the Libyan desert, passed Ummesogeir, and came to Siwah, where he saw the ruined temple of Jupiter Ammon. He proceeded from this sta- tion to the territory of Fezzan, 300 miles in length, and 200 in breadth; here he visited Tripoli ; and in a letter addressed to the society, intimated that he was about to proceed in a caravan for Bornou; but unhappily this was the last intelligence they ever heard respecting him.

Next to him the society sent out Mr. Nicholls, whose career terminated fatally; and a young German deputed as his successor, shared the same fate.

Burckhardt, a Swiss, came to London at ibout this time, on a similar recommendation

from Gottingen, and proceeded on the 2nd of March, 1809, to Aleppo. In Syria, he devoted himself to the attainment of an intimate ac- quaintance with the Arabic language and man- ners, visited Palmyra, and Baalbec, and returned to Cairo through Arabia Petrasa, and across the great desert of El Ty. He afterwards made excursions to Mecca and Medina, ob- taining a full account of the powerful Mahom medan sect of Wahabees ; and to Mount Sinai, and the deserts passed by the Israelites in then journey from Egypt. Here studies and travels occupied him until the summer of 1817; and his papers, which have not yet been published, are spoken of highly by Mr. Salt, who gives an interesting account of his death, at Cairo, of a dysentery, in October of that year.

Mungo Park was shortly after sent out by government with an expedition ; and accordingly departed from Pisania, the 4th of the following May, and reached Medina on the llth, from which point he shortly after entered the woods of Simbani. Having crossed the woods, they ap- proached the Gambia, 100 yards in breadth ; entered the Tenda wilderness, and crossed Faleme, where they were overtaken by a tor-

nado. The ground was shortly covered with water three inches deep, and half the men were sick. They ascended the neighbouring hill with great difficulty, the natives following and plun- dering them all the time ; but when they reached the top, they found a serene atmosphere, and a sweep of prospect highly grand and romantic. Departing from this place they leached Kemi- noon, or Maniakarro, the best foitified town on the continent; on the 19th, crossing the Ba Woollina, they came to Bangassi, four or five times the extent of Maniakorro ; and shortly having ascended a ridge of mountains, they be- held the Niger rolling its vast stream along the plain nearly two miles in breadth.

Two days afterwards, he obtained a canoe foi present convenience, and embarked with Mr. Anderson on the way to Sego through Bam- barra. He received permission to build his boat any where in the country, and assurances of pro- tection. While he remained at Sansanding, col- lecting intelligence, and building a vessel, his friend and relative Mr. Anderson, died ; and his whole party consisted, at that time, of only four Europeans. Still, in writing to Lord Camden, 1 1 i s spirits seemed as ardentas ever ; ' I shall set sail/ says he, ' for the east, with the fixed resolution to discover the termination of the Niger, or perish in the attempt;' and perish he did. In con- sequence, however, of the uncertain rumours that agitated the public mind respecting him, lieutenant colonel Maxwell, then governor of Senegal, obtained permission from government to engage a proper person to institute an enquiry into the probability of Mr. Park's death. By this means he learnt that from Sansanding, our traveller went to Silla, and thence proceeded with his party, nine in number, towards Ginne ; but as they passed Sibbie, or Dibbie, they were attacked by three canoes full of armed men, which they repulsed. Afterwards they had to oppose sixty canoes, after defeating which, they passed Kaffau and Gourman, where they sup

plied themselves with provisions, and entered the kingdom of Haoussa ; but the king having learnt that the white men left without giving pre- sents, sent an army to oppose them at a village called Boussa, situated on a rock, in which there was a large opening that admitted the water to pass in a strong current ; in this place, therefore, Mr. Park, on his attempting to pass, was at- tacked with arrows and lances; and after fight- ing for some time, overpowered with numbers, and unable to keep up the canoe against the current, Mr. Park, and a Mr. Martyn, leaped into the water, to escape by crossing the stream, but were drowned in the attempt. This journey was full of adventures, and the unhappy manner in which it terminated will be long remembered.

Tombuctoo had long excited the attention of modern travellers, none of whom had been able to give any accurate description of it. Some interesting intelligence of it was about this time obtained by means of an American sailor. The American ship, Charles, on a voyage to the south of Africa, was wrecked near El Gazie, south of Cape Blanco, and the crew swam safe to land, but were shortly surrounded by Moors, stripped naked, and carried to the east, forty day's journey, as far as the village of Soudenny, north of Bambarra ; whence they were after- wards sent as slaves to Tombuctoo. A sailor of the name of Adams was taken as a curiosity to the palace, where he was well treated, and had every opportunity of enquiry. He thought the city about the size of Lisbon, although the houses were more scattered. The palace stands in a square of half an acre, encompassed by a mud wall. The houses of the higher classes are built with wood ; those of the lower orders with branches of trees overlaid with the palmetto, and covered with earth. It seemed altogether a negro city, from which Moors seemed to be ex- cluded. The government is despotic but mildly administered, the chief punishment being slavery. The people can neither read nor write, but keep their accounts by notching sticks, &c. Marriage is

performed in a very simple manner ; concu- bines are kept, and illicit intercourse prevalent among all classes. They hunt slaves once a month ; and exchange slaves, gold-dust, and ivory, with the Moors for tobacco, tar, nankeens, and other articles. About 200 yards S. E. of the town, flows a river called La mar Zarah, three quarters of a mile wide. Such are the general statements of this American sailor.

Mr. Jackson also gives a description of Timbuc- too, as he derived it from native Africans ; but he has evidently committed a perfect anachronism in stating, that, in 1800 it was subject to Woolo king of Bambarra ; since it appears from Park, that in 1796,and also in 1805 the king of Bambarra was Mansong, and Tombuctoo was independent. Isaden's journal, noticed by the editor, it is true, mentions thatWoolo, predecessor to Mansong, was a celebrated warrior ; so that it is not unlikely that at a certain period he might have possessed the sovereignty ; still this could not have been in 1800. The same gentleman also mentions an excellent police, managed by a divan of twelve Alemma, subject to an election every three years. He mentions the countries of Lamlam, and Melli,

in the geographical scite assigned them by the Arabs, and not in the position fixed by Leo. These countries are said to be inhabited by one of the lost tribes of Israel, who fled from the arms of the Saracens.

With respect to the Niger, Mr. Jackson seem of opinion that it loses itself in an inland lake, or sea, in the interior of Africa. He states that fifteen day's journey east of Tombuctoo, there is an immense lake, called the Bahar, or sea of Soudan, inhabited by a race of people who navigate it with large decked vessels, containing from 100 to 150 men. Mr. Park received no intelligence of any lake beyond the Dibbie during his first journey ; but in his second journey ob- tained the following intelligence at Sansanding : ' One month's journey S. of Baedoo, through the kingdom of Gotto, will

bring the traveller to the country of the Christians, who have their houses on the banks of the Ba Sea Feena, which is incomparably larger than the Dibbie, and flows sometimes one way, and sometimes another.' Now from Sansanding to Silla two days, thence to Tombuctoo fourteen, thence to the sea of Sandan fifteen, makes up Park's month, being in all thirty-one days. Amidst all the opinions at present given respecting the termi- nation of this river, none appear satisfactory. Some have supposed it to enter the Nile, others the sea of Sandan. The Congo, the Atlantic, Sands, Absorption, have been alike assigned, as the solution of the mysterious problem. Sidi Hamet, in Riley's Narrative of his Captivity, gives some interesting observations respecting the eastern part of this river. The above gen- tleman visited Timbuctoo; and while he re- mained there, the shegan, or king of the state sent a caravan to the city of Wassanah, and compelled him to accompany it. The journey was fifty-seven days to the south east; some- times on the banks, and at others in sight of the river in question, which about 1140 miles op- posite Wassanah is called Zadi, and is so broad that a man can scarcely be seen on the opposite bank. ' The king's brother told one of my Moo- selmin companions/ says he, that, ' he was going to set out in a few days, with sixty boats to carry 500 slaves down the river, first to the southward, and then to the westward, where they should come to the great water, and sell them to pale people, who came there in great boats, and brought muskets, and powder, and tobacco, and blue cloth, and knives, &c. He said it was a great way, and would take him three moons to get there, and he should be gone twenty moons before he could get back by land, but should be rich.' ' We saw,' he continues, ' a great many of these people who had been down the river, to see the great water, with slaves, teeth, &c. They said the pale people lived in great boats, and had guns as big as their bodies, that made a noise like thunder, and would kill all the people in a hundred negro boats, if they went too near them. See NIGER, p. 244.

Since the spirit of African exploration has been excited, and so effectively patronised by govern*- ment, many valuable accessions have been mada annually to our knowledge of this continent. The adventures of Riley, who, after encountering

a series of hardships, penetrated to Tombuctoo, sons to Cape Coast castle for education. The confirmed the previous intimations of Adams conductor of this mission, T. E. Bowditch, Esq. respecting that place and its inhabitants; but ^ ”””>” **Ko ””^ a” an►►►1(> <"""►►►"' ►►** are, from his total illiterateness, necessarily de- fective in all scientific information.

In 1816, Captain Tuckey sailed on an expe- dition to the Congo, but unhappily perished with most of his party, after ascending that river considerably beyond the first rapids. The gene- ral information which the survivors brought home, may be thus stated. ►►► This river com- mences about Point Padran, and runs to Inga, about forty miles distant; its breadth at that place not exceeding 400 yards. It afterwards leaves the mountains, and expands to the breadth of from two to four miles, around which the kingdom of Congo extends itself indefinitely ; and

has given the world an ample account of ‘Ashantee, with Geographical notices of other parts of the interior of Africa,’ in one vol. 4to. price 3/. 3s. which is now before us.

Ashantee, according to the information thus obtained, extends beyond the kingdoms of Fan- tee, Akim, Assin, and Wassaw, from about 0►►, 45′. to 3►►, 0′ W. long. ; and from about 7►►, 20′. to 6►►, 8′ N. lat. ; commanding a population of one million, and including an area of about 14,000 square miles. The line of Ashantee au- thority on the Gold Coast, is marked from the Assinee to the

Volta, including the once power- ful state of Aquamboo. The capital, Coomassie, stands in N. lat. 6⬚⬚, 30’., and VV. long. 2⬚⬚, 6’.,

is divided into chenooships, or petty states, held and contains about 1 5,000 regular inhabitants.

under some personage, real or fabulous, sup- It has daily markets, which are well supplied

posed to be in the interior. The population in- with provisions ; and regular streets, named after

creases as the traveller advances towards the the European manner, from fifty to a hundred

central regions : vegetables and fruits are both yards wide, and from half to three quarters of a

numerous and excellent, the winter being as mile long. See ASHANTEE.

In the latter end of the year 1818, Mr. Ritchie,

mild here as the spring in Italy. The inhabi- tants are said to be the lowest of the Negro class ; distinguished, on the male side by indolence, on the female, by degradation. The component parts of a tribe are, first, the chenoo, or chief; second, the branches of his family ; third, ma- fooks, or collectors of taxes ; fourth, foomos, who are the yeomanry, having houses and land of their own ; fifth, fishermen, and the labouring classes. The saleable slaves are those taken in war, or kidnapped in the interior. Every man has a charm or fetiche, which he carries with him, as a horn, a noof, a shell, &c. as a protection from lions, alligators, thunder, &c. The chief crimes are poisoning and adultery.

accompanied by Captain G. F. Lyon, arrived at Tripoli, for the purpose of proceeding from that place into the interior of Northern Africa, under the protection of the Bey of Fezzan. The party took a preparatory journey, (until the Bey was prepared to proceed to Benioleed,) over the Gharian

mountains. Captain Lyon, on this oc- casion, assumed the dress, and endeavoured in every way to qualify himself for passing as a good Mussulman. He even ventured into the streets of Tripoli in his new character, and on occasion of a solemn Mahommedan procession, when no person of another religion can with safety show himself. In March 1819, Mukni

fairs. She had the reputation of being the most beautiful woman in this part of Africa. Captain Lyon found her so fat that she could scarcely walk, and gives the following account of her ap- pearance.

‘ On my entrance, she so veiled herself as to

Major Peddie commanded a military expedi- Bey, with a caravan of about 200 men, and tion, which started from Senegal in October, camels, were ready to depart for the interior; 1816; but this gentleman died at Kacundy, on and again arriving at Benioleed, Captain Lyon

the river Nunez, and Lieutenant Campbell sue- had the honour of an introduction to the wife of

ceeded to the command, who proceeded up the Sheik Barood, a chief manager of the Bey’s af- country, by the head of the Rio Nunez, to a place called Pangettoe, on the road to Labay and Teembo, a hundred and fifty miles beyond Kacundy. Here he was detained for three months, in consequence of a war between the foulahs, (whose chiefs would not allow him to proceed,)

and a neighbouring tribe. His horses, camels, exhibit to “ad vantage’ her arm, with all its gay or- and the greatest part of his asses, being lost at naments ; and on my requesting to be favoured this place, our traveller felt disheartened at the with a view of her face, she, with very little re- prospect of proceeding ; and returning to Ka- luctance, gratified me. Her chin, the tip of he- cundy, is said to have died there of a broken nose, and the space between her eyebrows, were “eart- . marked with black lines; she was much rouged,

In April, 1817, the African Company de- her neck, arms, and legs, were covered with tat-

spatched a party, consisting of Mr. James Bow- tooed flowers, open hands, circles, the names of

dich, Mr. Hutchinson, and Mr. Tedlie, with God, and of her numerous male friends. She

other persons, amounting in the whole to 130, had a multitude of gold ear-rings and ornaments,

to Coomassie, the capital of Ashantee. Their set with very bad and counterfeit jewels, and

route was through Annamaboe, Abrah, and the weighing altogether, I should think, two or

lantee territory. Mr. James was recalled, and, three pounds. Her shirt was of striped silk;

Mr. Bowdich becoming chief of the embassy, a and she had a rich purple silk barracan, or man

formal treaty of perpetual ' peace and harmony ' tie, gracefully thrown round her, and fastened at

was made between Sal Totoo Quamina, king of the breast by a gold pin, with ornaments of the

Ashantee, Boitmnee Quama, king of Dwabin same metal suspended from it : all the other arti-

id its dependencies (his intimate ally), and the cles of finery which she possessed were displayed

tish government ; a resident was left at Coo- round the tent, whilst a multitude of poor thin

mussie; and both the kings agreed to send their wretches, resembling witches, sat round bar in

astonishment, never having in their lives seen such

a paragon of perfection. Like all other Arabs, they touched whatever pleased them most ; one admiring this object, another something near it, so that our poor belle was sometimes poked r>y a dozen fingers at once ; all, however, agree- ing on one point, that she was beautifully and excessively fat ; and, I must say, I never before beheld such a monstrous mass of human flesh. One of her legs, of enormous size, was uncovered as high as the calf, and every one pressed it, ad- miring its solidity, and praising God for blessing them with such a sight. I was received most graciously, and invited to sit close to her, when one of the first questions she asked me was, if in my country the ladies were as fat and handsome as herself. For the plumpness of my country- women, I owned, with shame, that I never had seen one possessed of half such an admirable rotundity, which she took as a great compliment; but I did not attempt to carry the comparison farther, though she was really very handsome in face and features. She amused herself, while speaking, with playing on a kind of drum made of clay, called derbooka, by beating with one hand, and playing with the fingers of the other ; and perceiving that I was amused by it, she or- dered an old man to get up and dance. The females sang and clapped their hands in good time, and the dancer went through a variety of figures, all equally indelicate. A woman then succeeded him, and in this respect quite threw him into the shade ; but as I knew it to be the general mode of dancing in this part of Barbary, I of course applauded it. Lilla Fatma herself then thought proper to honour us with a few graceful attitudes in the same style; but Mr. Ritchie's entrance into the tent soon put a stop to the exhibition, and the ceremony of veiling took place in the same manner as before.' ••• p. 62.

Their advance was now into a dreary country, and on the frontier of Fezzan they experienced one of those dreadful eastern storms called the sirocco, of which our traveller observes, that in addition to their excessive heat and dryness, they are so impregnated with sand, that the air is darkened by it, the sky

appears of a dusky yellow, and the sun is barely perceptible. The eyes become red, swelled, and inflamed ; the lips and skin, parched and chopped ; whilst severe pains in the chest are very generally felt, in conse- quence of the quantities of sand unavoidably inhaled.

The country of Fezzan is, for the greater part a vast desert, extending from about 30►►, 30 . to 24►►, north latitude; and from 13►► to 20►►, east longitude ; being about 450 miles in length, by 370 broad, and containing a population of about 75,000 souls ; of which Mourzouk, the capital, contains 2500. It stands in latitude, 25►► 54′ north ; longitude, 15►► 52′ east ; and, is sui- rounded by walls of mud, about 15 feet in height, having round buttresses, with loop-holes for musketry, rudely constructed. There are seven gates, four of which are built up in order to pre- vent the people from escaping when required to pay their taxes ; and the other three are guarded. The houses are mostly of one story ; and those of the poorer classes, have no other light than

they receive from the doors, which are so low as to require stooping nearly double to enter them. The streets are narrow; but there are many open spaces. The castle, compared with the other buildings, may be called immense, rising to the height of eighty or ninety feet, with battlements on the walls, which at the foundation are fifty or sixty feet in thickness. The rooms are small and mean ; the best of them are occu- pied by the women, of whom the number may be from fifty to sixty, half a dozen of which are considered superior to the rest. They are watched by five eunuchs, who have the privilege of beat- ing them, if necessary, to support their au- thority.

The burying-places are without their walls ; but many of the graves are so little below the surface, that in a strong wind the sand is dis- persed, and the bodies exposed ; such, however, is the dryness of the air, that no bad smell or putridity ensues. Within the town are sixteen mosques ; some of them, however, are very small. The Cadi is the head of the

whole, but each has its own imaum ; captain Lyon thus describes the dress of the Fezzan ladies.

‘ The dress of the women here differs materially from that of the Moorish females, and their ap- pearance and smell are far from being agreeable : they plait their hair in thick bobbins, which hang over their foreheads, nearly as low down as the. eyebrows, and are there joined at the bottom, as far round to each side as the temples. The hair is so profusely oiled, that it drops down over the face and clothes ; this is dried up by sprinkling it with plenty of a preparation made of a plant resembling wild lavender, cloves, and one or two more spices, pounded into powder, and called Atri’a ; it forms a brown, dirty looking paste, and, combined with perspiration and the flying sand, becomes in a few days far from savoury in appearance or odour. The back hair is less dis- gusting, as it is plaited into a long tress on each side, and is brought to hang over the shoulders ; from these tresses, ornaments of silver or coral are suspended. Black wool is frequently worked in with these back locks, to make them appear longer. In the centre of the forehead, an orna- ment of coral or beads is placed, hanging down to the depth of an inch or two. A woollen handkerchief is fastened on the back of the head; it falls over behind, and is tied by a leather strap under the chin. Each ear is perforated for as many rings as the woman possesses, some wear even six on one side ; the largest, which is about five inches in diameter, hanging lowest, sup- ported by a string from the head. Round the neck, a tight flat collar of beads, arranged in fancy patterns, is worn with coral necklaces, and sometimes a broad gold plate immediately in front. A large blue shirt is generally worn, the collar and breast ornamented with needle-work : the women also wear white shirts, and striped silk ones, called shami, which are brought from Egypt; ††† a jereed and red slippers complete their dress.’††† p. 170, 171.

On the 20th of November, Mr. Ritchie died at Mourzouk, after a protracted illness ; and cap- tain Lyon, and his only companion Belford, were in an

extremely weak state. * And now fcr the

first time,’ says captain Lyon, ‘ in all our dis- eastward, which singularly agree with the infer
???

fresses, my hopes did indeed fail me. At day- mation collected by Ilorneman, Burckhardt, &c.

ight I went out and informed our kind friends, There was almost an unanimity among the na-

fussuf, and Hadje Mahmoud, of our misfor- tives respecting the identity of the Niger and the

nines ; ‘at which, they were much affected, and Egyptian Nile. He thus sums up the information offered us all the assistance in their power. Belford, as well as he was able, hastened to

he obtained on this subject :

The Nil, Goulbi, Joliba or Kattagum, runs

form a rough coffin out of our chests ; and, a sad from Tombuctoo, through Melli, in the country

and painful task it was. The washers of the of the Fellata ; thence to Kebbi, which is three

dead came to us to perform their melancholy days north of Nooffy : past this place or country,

office, and Mr. Ritchie’s body was washed, per- it runs to Yaowri, which is seven days east ;

fumed, and rubbed with camphor; and I pro- from thence to Fendah, a Fellata country, S.W.

cured some fine linen, with which the grave- of Kashna, which latter kingdom it passes at

clothes were made. During our preparations thirteen

days south of the capital. It again

for the burial, the women, who are always hired makes its appearance at Kattagum, four days

to cry at the death of persons whose friends are W. S. W. of the capital of Bornou, where it runs

able to pay them, proposed to perform that dis- into a lake, called the Tsaad. Beyond this lake,

gusting office in our house ; but I would not a large river runs through Baghermee, and is

allow it, and very unceremoniously shut the door called the Gambarro and Kamadakoo ; the word

against them. While I was out of sight, either Nil being also used for the same stream. Thus

our servant, or some of our officious visitors, stole far are we able to trace the Nil, and all other

several of our effects, and I clearly saw that we accounts are merely conjectural. All agree,

were now considered as lawful plunder. The however, that, by one route or other, these waters

coffin being completed, I hired men to carry it join the great Nile of Egypt, to the southward of

with ropes, but one of them having suddenly Dongola.' ††† p. 148.

gone away, poor Belford was obliged to take his Coffles or caravans, conducting slaves from the

place; when, attended by our small party of interior, are frequently seen at Mourzouk. One

Mamelukes, we proceeded at a quick pace to of them conducting 1400 slaves, the greater part

the grave, at about ten o'clock. The clay below females, entered the place during Captain L.'s

the sand was white, which was considered as a good omen ; and, Belford and myself threw the

stay. They are said to remain here for some time to be fattened, when they are said to be

first earth into the grave. During the night we sent off for Tripoli, Benghazi, and Egypt : thus had, unknown to the people, read our protestant marching about for 1800 or 2000 miles before burial-service over the body : and now publicly they can be settled, and frequently passing through recited the first chapter of the Koran, which the the hands of eight or ten masters, most of whom most serious Christian would consider as a refuse to consider them as human beings. Yet,

says Captain Lyon,

‘ In justice to the poor unenlightened creatures whom they make their prey, I must say that I never witnessed such innocence, tenderness, and

beautiful, and applicable prayer, on such an occasion.’

When recovered a little from the effects of this dispiriting scene and his own illness, Captain L. proceeded under protection of the sultan’s tas- kera or order, on his journey southward ; and passed through Traghan and Zuela to the east- ward. The springs at the former place, Captain

mildness as most of them evince when brought to Mourzouk, particularly at the death of any of their companions in adversity. On these occa- sions, they do not, like their persecutors, scream

Lyon says, are the pride of Fez/an. They con- and make an insincere wailing ; but sit silent and sisted of four ponds of brackish water, each in tears, and often refuse to take their little al- thirty or forty feet in diameter, covered with a lowance of food. Should one of the females fall

green crust, and swarming with frogs. Near Zuela,

Captain Lyon observed a blacksmith

sick, the others nurse, feed, comfort, and very often give up the whole of their scanty meal to

burning the side of a patient with a red hot iron the sufferer.* I speak merely of the women, for

for the cure of the liver. Our travellers reached the men are not blessed with very kind hearts ;

Gatrone or Kattron, on the 30th of December ; and it would be considered by them as disgrace-

and on the 2d of January, arrived at Tegerry, ful to betray any soft and tender feeling. Should

which has a ruined mud castle, surrounded by a woman have an infant belonging to her, each

several pools of stagnant water. It stands in la- of her companions in turn will carry and endea-

titude 24►► 4′ N. being situated on the borders vour to amuse it. The women very seldom be-

of the great Desert, is a sort of resting-place for come sullen, and are lively without being at all

all the caravans from Soudan, Bornou, and Wa- boisterous or noisy ; they are clean in their per-

day ; and was once, in consequence, a flourish- sons, very fond of ornaments, tractable, and easily

ing place. The inhabitants here were found to taught ; but in acquiring knowledge they unfor

speak the language of Bornou : and here termi- tunately lose much of their native simplicity.′►►►

nated Captain Lyon’s travels southward. He p. 140.

was himself much exhausted by the climate, and Our traveller describes the young Tibboo girls

Belford had fallen from his camel from excessive as

of light and elegant forms, with expressive

weakness. eyes, aquiline noses, fine teeth, and lips like

At Mourzouk, Captain Lyon availed himself those of Europeans ; the colour of their skin is

of the constant arrival of caravans from other of the brightest black ; their gait graceful and ele-

parts of northern Africa, to obtain many notices gant ; their feet and ankles are delicately formed,

respecting the countries to the southward and and ornamented generally with copper or silver

anklets and neat red slippers. Their hair is plaited in a peculiar manner, and decorated with gold, silver, coral, agates, cowries, &c. according to the taste and ability of the wearer. They are fond of dancing, and sing and keep time remark- ably well ; some of their dances are not unlike those of the ancient Greeks. The men have in- telligent countenances ; are very active, but too slight in their make to be much esteemed as slaves, being unable to perform hard labour. These people are distributed over Bornou, Wa- day, Borgoo, and Bhagarmie, and many of them live in a free state in the southern parts of Fez- zan : numerous camels, horned cattle, asses, sheep, and goats, are found amongst those to the eastward.

Major Laing, who in the former part of the year 1822, penetrated into Africa, from Sierra Leone, as far as Soolimana, has published an in- teresting volume of travels. This gentleman describes the Timannee country, into which he first entered, particularly that part of it which is under the jurisdiction of BaSimera, as populous and. fertile, intersected by numerous rivers, and navigable creeks ; and possessing a soil, which with a little

attention would raise its inhabitants to opulence. It is bounded on the east by Kooranko, on the west by Sierra Leone, part of Bullom and the ocean, on the north by the coun- tries of Mandingo and Limba, and on the south by Bullom and Kooranko. Its length from east to west may be computed at ninety miles, and its breadth from north to south about fifty. At Toma, which is only sixty miles from Sierra Leone, no white man had ever before been seen ; and a woman who first descried the party, stood fixed like a statue in admiration of them, until they had passed ; ??? then ' she gave a loud halloo of astonishment, and covered her mouth with both her hands.' . The natives generally have very little clothing, and many of them none at all : but the dress of the females, near the water side is peculiar ; the young women wear ' a narrow piece of cloth, called a tutunge, or a covering of beads called a patie,' fastened to a few strings, or a narrow strip of cloth wrapped round their loins; whilst the married ???women adopt the more decent attire of two yards of blue baft, wrapped round the body like a petticoat./ Amongst other superstitions, those connected with the burial of their dead, are the most remarkable : when a death takes place, various methods are adopted to appease the wrath of the evil spirits, supposed to have been the agents in the decease, and much pagan cere- mony is exhibited. Whilst our traveller was at Bung, a girl died suddenly ; immediately upon the decease, a loud yell was uttered from about a hundred people assembled upon the occasion ; after which, several hundred women, some of them beating small drums, sallied through the town, confiscating every moveable article that they could find out of doors. The elders and Greegree men assembled a few hours afterwards, in the palaver hall, to ascertain, if possible, the cause of her death. They enquired whether any one had threatened her life; afterwards they queried whether she had been killed by witch- craft ; and at last, after a consultation of three

days, concluded, that she died by the agency of the

devil. The first two nights, during the time of this consultation, large parties of the inhabi- tants paraded the town, clapping their hands, yelling and shouting, to avert the wrath of the greegrees ; and on the third, the night of inter- ment, presents of rice, palm wine, cassada, and cloth, were deposited at the greegree houses, to satisfy the evil spirits that they might not kill any more people. Five or six men, strangely dressed, appeared about midnight, intimated that the evil spirits were satisfied, took away the pre- sents, telling the people that no other death should happen in the town for some time. The joy which this assurance diffused among the peo- ple, was celebrated by dancing and revelry, till after day break. The Timannees in common with numerous other tribes of Africa, before eat- ing or drinking, consign a portion to the dead, by throwing it upon the ground ; ' Charnel houses' says our traveller, ' in which the remains of the kings or head men are deposited, are never opened ; but small apertures are left in the walls, through which cooked provisions and palm wine, are at times introduced.' These the Timannees imagine, are needful for the dead ; ' of whose spiritual existence they seem to be satisfied.' Small houses containing skulls, images, &c. are to be found generally near^^ entrance of the towns ; the supposed residencwbf the greegees, and ' al- most every house has its protecting spirits, who are often invoked in a manner that is calculated to excite the commiseration of the European spectator.'

The Purrah, so much dreaded in this country, is an institution, or rather a confederation, whose power supersedes that of the head man of the districts, and whose deeds of darkness are as little enquired into in Africa, as were those of the inquisition in Europe. Its origin our traveller was not able to ascertain ; the head quarters of the Purrah are in enclosures, situated in the woods, and any man approaching them is ap- prehended, and seldom heard of after ; single travellers, and even whole parties are frequently carried off in the same way, and there is reason, to believe that a great number of

the slaves sold at the Gallinas are supplied by this association. On some occasions they make incursions into towns by night, and carry off every thing valuable, dead or alive. ‘ One night’ says our travellei, ‘ the town in which we slept, was visited by the purrah, and my sentinel remained firm at his post ; when the purrah came up an attack was made upon him, but the application of the bayonet, kept them at a distance, until I made my appearance, when the purrah uncertain of their power over a white man, scampered off; they were mostly naked and unarmed, but a few had,knives. The outward distinguishing marks of the purrah, are two parallel tattooed lines round the middle of the body, inclining upwards in front towards the breast, and meeting in the pit of the stomach.’ As a proof, however, that the slave trade is not entirely carried on by the rapacity of the purrah, major Laing was twice offered children for sale by the mothers them- selves, and might have bought them for ten bars or about thirty shillings sterling.

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The country of Kooranko from its mountains and picturesque appearance, as beheld from Ma Boom, excited Jn our traveller considerable in- terest. At Ma Biss, about two hours walk from the town of Ma Boom, to the north-west he found the river Rokelle flowing in a W. by S. direction, at the rate of nearly three miles an hour. The banks of the river were composed of argillaceous- schist, or clay slate, interspersed with stupendous blocks of granite, lifting their rugged heads on either side to the height of thirty or forty feet. The channel of the river appeared about three hundred feet across, and was deep in the centre. Down this river he was informed the inhabitants floated their canoes to Rokou, during the rains, in the space of four days ; but respecting the source of it, could ob- tain no intelligence.

The Mandingoes scattered over this district, are described by our author as a shrewd and well made people, superior to any who inhabit the wes- tern parts of Africa. Their costume is plain and neat ; the width of the trowsers is a consider- able mark of distinction, so much so, that ' Korte Abooniato,' i. e. large trowsers, a common ex- pression amongst them, is synonymous with ' great man.'

At Kooloofa, on the frontiers of Kooranko, our traveller was again hailed by the natives as the first white man who 'had ever set foot in these parts; and making enquiries respecting the Kabauka Pampana, he learned that it was not more than three miles to the southward ; after walking which distance he ' fell in with it, mean- dering along a deep channel about 200 feet in breadth in a mean direction from N. E. to S. W.' He describes the banks as lofty and pic- turesque, beautified with trees of luxuriant and various foliage in which he particularizes the camwood. On leaving Kooloofa the day fol- lowing, he traversed a delightful country open- ing fine views of the picturesque hills of Kooranko, streaked down their sides with the courses of numerous rivulets tributary to the Kabauka Pampana. The soil here is extremely fertile where properly cultivated, resembling in IT any parts the soil of Ma Boom and the circumjacent region, being a rich black loam, mixed with a little clay and fine sand, the debris of granite washed from the Kooranko hills. ' In many places,' says our traveller, ' we met with extensive beds of granite intersected with veins of quartz, and in others the rock was found in a rapid state of decomposition.' The civility which Major Laing received at Nyiniah reminds us of some features of the classic page, and at the same time shews that the embers of humanity are not quite extinguished in the native African. The head man of Nyiniah forced him by civility to remain at his town one day longer than he intended, and visited him early in the morning attended by his chiefs and principal griot, the latter of whom enter- tained him for some time, by vociferating (or as he considered it singing) the praises of his master.

Then he sung ‘of the white man who came out of the water to live among the Kooranko people; the white man ate nothing but fish when he lived in the water, and that

was the cause of his being so thin. If he came among black men he would get fat, for they would give him cows, goats, and sheep to eat ; and his thirst should be quenched with draughts of milk.’ The song being concluded, our tra- veller was presented with a fine young bull, which being thrown down, was encircled by a crowd of people. ‘ Those nearest the animal placed their hands upon him, and joined in a short prayer which a Mahommedan repeated aloud ; the purport of which,’ said our traveller, ××× was, that I might get safe to my journey’s end and home again among the white men, and that God might leng preserve my life.’ The Moslem immediately took the knife and re- peating aloud, ‘ Bissim Alia Hi,’ i. e. ‘ May God enable you to bear what is going to happen to you,’ severed with one cut the wind pipe of the victim. Every knife being now drawn and employed, so much execution was dis- played that in the course of ten minutes the animal was cut up and portioned off. On these occasions the maraboo, who kills the animal, is entitled to the head, neck, and feet; the guarauge expects the hide, liver, and other parts of the inside; the head man of the town re- ceives the right hind leg for his portion, and the blacks with fimo, and jelle, all come in for their share by right of ancient usage, so that the breast is all that is reserved for the person to whom the present is made. On leaving Nyiniah our author was charmed with the country, which he describes with a luxuri- ance and beauty characteristic of his volume ; he passed two rapid streams traversing the plain nearly in a N. E. direction, and at a short distance fell in with the source of another, the spring of which forms a bason of ten yards diameter, embanked in masses of granite, and becomes one of the tributary accessions to the Kamaranka. The contiguous mountains ap- peared to consist of micacious granite and mica slate, the strata running from E. to W. In the

valleys were found pebbles of red and white quartz, and flat stones of various dimensions, so strongly impregnated with iron as to draw and repel the needle at the distance of several inches. A few miles N. by E. from Neta Koota flows the river Ba Jafana, about fifteen yards in breadth. This river springs about three miles distant from this spot in the Belakonko moun- tain ; and after running about eighteen miles to the N. W. unites with the Rokelle. Be- tween Foodayia and Kaniagama is a noisy rapid stream, about thirty yards broad, tribu- tary to the same river. After passing the source of the Tongolelle, and overcoming considerable danger from the treachery of his carriers, our traveller arrived at Kania. He was not very much pleased here with the conduct of the women. Before he left the town their hus- bands returned from the war in which they had engaged, and the evening previous to his de- parture, dancing commenced, which was ac- companied by the songs of the females. ' They sung of the white man who had come to their town ; of the houseful of money which he had, such cloth, such beads, such fine things as had never been seen in Kooranko bt-foie. If

their husbands were men and wished to see their wives well dressed, they ought to take some of the money from the white man !' It was with difficulty and artifice that this was avoided. Tamba, one of his attendants, mixed with the singers, and 'sung of Sierra Leone, of houses a mile in length rilled with money, that the white man who was here had nothing compared to those in Sierra Leone ; if there- fore they wished to see some of the rich men from that country come into Kooranko they must not trouble this one ; whoever wanted to see a snake's tail must not strike it on the head.' The Koorankos, generally, greatly re- semble the Mandingoes both in language and costume. The women adorn each other's head with great skill, file their teeth to a point, and are ornamented on the breast and back with

various devices burnt into the skin. The prin- cipal vegetables produced in the country of Kooranko are rice, plantains, yams, white spin- age, ground nuts, cassada, delicious pines, and bananas.

Komato is the frontier town of the Kooranko country towards Soolimana ; and here, on the 4th of June, our traveller was met by a party from Falaba, with horses sent by the king of Sooli- mana, to conduct him to Falaba, his capital. Leaving the town, he crossed a river not far to the east, the Rokelle, upon what was called a Nyankata, a species of suspension bridge, which he thus describes. ' From the branches of two stupendous trees, which growing in an inclined direction, nearly embraced one another across the river, were suspended to numberless stays, composed of vine and twisted bark of trees, three strong ropes of well twisted figs, one to support the feet, and the other two (attached to the third by cords of bark) to enable the passenger to balance himself by holding on with both hands, who in this manner by cautious steps is enabled to gain the opposite side ; the twigs are not drawn tight, but are permitted to hang in a sort of curve, so that the effect is like that of walking on a slack rope, a ladder of cross branches is affixed to the trees at the extremities, so that the traveller mounts about forty feet before he steps upon the Nyankata, but when he reaches the centre of the river, he is not more than ten feet above its level. This Nyankata, for I must call it by its native name, having none of my own, was the first indication I had met with since I had left Sierra Leone of co-operation in works of public utility, and I hailed it with pleasure as a symptom of progressive improvement.' p. 214.

Major Laing thus describes his entrance into Falaba. ' About ten o'clock we came in sight of this long-looked for town, which covered a large extent of ground in a beautiful valley, hemmed in on all sides by gentle acclivities. We descended upon it by the south, but were conducted along to the northern gate, through which we were ushered into the capital of the Soolima nation. We passed along a street, or

defile, of about half a mile in length, to a spacious piece of open ground, which stands nearly in the centre of the town, in one corner of which we found seated upwards of 2000 men, armed with muskets, bows, and spears ; on my entrance

I was saluted by a heavy and irregular discharge of musketry, which, unfortunately, put my horse on his mettle, and as I had neither whip nor spur to teach him good manners, I was obliged to resort to jerking him with the curb, of the severity of which 1 was as yet ignorant ; in con- sequence he backed among the armed assem- blage, who were, by this retrograde movement^ thrown into some confusion, and certainly not impressed with much opinion of my horseman- ship. Being recovered from the awkwardness of my first appearance, I ordered the salute to be returned with three rounds from my party, and then alighting, shook hands with his xnajesty, who put into my hand two massive rings of gold, and made a motion for me to sit down beside him. I found him a good-looking man, about sixty years of age ; his countenance mild, agreeable, and inoffensive in its expression ; he is rather taller than the generality of Soosoos, being about five feet eleven inches in height; and his plain loose garment of black country cloth became him well. I was scarcely seated when my old friend, Yarradee, (habited in rather a more costly manner than when I first beheld him at the camp in the Mandingo country,) mounted on a fiery charger, crossed the parade at a full gallop, followed by about thirty warriors on horseback and 2000 on foot, the latter making a precipitous rush, and firing in all directions. After a lapse of a few minutes, the party on horseback returned, and performed various movements and evolutions for about half an hour, much to the amusement and admiration of my party, several of whom had been with the late unfortunate Major Peddie, and subsequently with Major Gray in Boondon; and who de- clared it to be a show passing any thing they had ever witnessed. Yarradee now alighted from his horse, and seizing his bow, pulled the string to the full extent, affecting to shoot an arrow at some distant object ;

he appeared to watch it on tiptoe with eager expectation till it reached its destination, when he gave a leap and a smile of satisfaction ; then striking his breast with his right hand, and distorting his naturally ugly visage into a most hideous grin, he beckoned his war-men to follow, which they did, with a shout that rent the skies : after advancing a few paces they stopt short, and watching Yarradee, who, with the eye of a hawk, was intent on the motions of the supposed enemy, waited his direction to discharge their arrows ; and having done so, each individual appeared to trace the flight of his own arrow, and betrayed signs of satisfaction or disappointment at its supposed execution or failure; a discharge of musketry followed the flight of arrows, after which the spears and cutlasses were put in requisition to hack and cut in pieces the discomfited foe, while those warlike movements were going for- ward, another set of people were by no means idle ; there were above one hundred musicians who playing upon divers instruments, drums, flutes, ballafoos, harps of rude workmanship, with many other kinds, which it would b<* tedious to enumerate, kept up a din sufficient almost to crack the tympanum of ordinary ear* and which compelled me to fortify mine with *

little cotton; two fellows, in particular, with crooked sticks, kept hammering with provoking perseverance, and with the violence of black- smiths at the anvil, upon two large drums which stood about four feet high, in shape similar to a chess-castle turned upside down; their only desire appeared to be that of making a noise, and in that I suppose the chief art consisted, for the harder they beat, the more applause they obtained. A nod from the king at length put a stop to this clang of steel and din of drums, and I was flattering myself with the hope of being permitted to retire to the apartment allotted

to me, but my motion was interrupted by the king ###who said 1 must hear something more. Being again seated, a jelle, or singing man, elegantly attired in the Mandingo costume ; his wrists and elbows ornamented with bells, and beating on a sweet-toned ballafoo, the notes of which he ran over with taste and velocity, stepped out, and after playing a sort of symphony, or prelude, commenced a dialogue in song with some per- sons who were to be invisble at first, but who afterwards joined him.' ### p. 228 ### 233.

During the residence of major Laing at the capital of Soolima, he frequently mentioned his solicitude to visit the source of the Niger, which he felt convinced was at no great distance. The king shook his head and said, ' White man, it is impossible, I am at war with the people of Kissi, the country from which the river comes ; and if they were to know you came from me they would that moment kill you.' Numerous obstacles were at different times thrown in his way, but he expresses the fullest confidence that had his time been at his own disposal, a longer stay would have enabled him to accomplish the desirable object. He held some conversation with a caravan of merchants who came to Falaba from Kowia, a town on the banks of Falico, a branch of the Niger, who gave him much infor- mation respecting the source of that celebrated river, assuring him that it might be reached from Falaba in three days. He ascended a sugar- loaf hill, called Konkodoogore, he states, four miles south of Falaba, from which he saw the hill Loma, whence the Niger springs ; also the source of the river Mungo, originating in three hills which stretch to the westward. The source of the Rokelle he visited, tracing its diminished stream to the foot of a hill where ' springing from under a rock, and shaded by a thick foliage of date trees, it bubbles up and scatters itself over a wide surface of red clay, in appearance Jike a stream formed by the bursting of a water pipe in the streets. About a hundred yards or more below the source, the water collects into a channel of about a foot in breadth, and runs off rapidly to the S.S.E.'

Afterwards it makes a circuitous sweep, shaping its course in a south- westerly direction, between Setacolia and Tigia- tamba, where receiving considerable accessions, it widens and deepens, till it assumes the mag- nificence of a noble river.

Our author lays down the source of the Niger from the best information he could obtain, as being in lat. 9►► 25′. N. and long. 9►►, 45. W. It is at its source, he says, called Tembie, and that it runs due north to Kang Rang, a dis-

tance of many miles, its course being marked by a ridge of hills breaking off at right angles from the chain, running easterly from Sierra Leone. Of this northerly branch, Loma forms a part; and the continuance, in the opinion of our author, of the mountains of Kong, the posi- tion of which has long been a subject of much speculation. On reaching Kang Kang, the river assumes an easterly direction, \ and exchanges the name Tembei, for Ba Ba, and Joli Ba, syno- nymous with each other, and signifying, ‘ Large River,’ which it carries to Sego, Jinne, and Tombuctoo, after which the name Joliba is lost amid a multiplicity of designations.

Numerous traditions are found amongst the negroes, respecting it, one particularly is remark- able ; ‘ that although not more than half a yard in diameter at its source, if any one was to at- tempt to leap over it, he would fall into the spring, and be instantly swallowed up ; but that a person may step over it quietly without any apprehension of danger.’ Another of these fictions relates, ‘ that it is forbidden to take water from the spring; and that any one who at- tempts it, will have the calabash wrested from his hands by an invisible power, and perhaps lose his arm.’

The limited success of preceding African ex- peditions, did not deter his majesty’s govern- ment from again (1821) endeavouring to extend the knowledge of the British name and character in this direction. We follow a species of demi- official account of the last expedition, dis- patched into

the interior of Africa, from a res- pectable periodical journal.

‘ The bashaw of Tripoli had signified to the British consul his readiness to escort as far as Bornou, with the sultan of which he was in strict alliance, any British travellers who might be accredited by their government. Of so good an opportunity Lord Bathurst readily availed himself; and three gentlemen, volunteers, were appointed for this service ??? Doctor Oudney, a well informed North Briton, and a navy sur- geon ; Mr. Clapperton, a lieutenant in the navy, and lieutenant (now major) Denham, who was educated at the Royal Military College, and served in the Peninsular war. To these was added a carpenter from the dock-yard at Malta, by name John Hilman. From the private correspondence of these gentlemen with their friends, we are able to glean some little account of their proceedings. They were kindly re- ceived by the bashaw ; and, after the usual delay in preparing for the journey, set out with an escort for Mourzouk. They had been advised by the bashaw to clothe themselves, as all for- mer travellers had done, in Moorish or Arab dresses ; but this disguise is so easily seen through, that they determined to wear their own dress, and openly to avow themselves English- men and Christians wherever they might go ; and the result has been, that they have never experienced the slightest insult or inconvenience among any of the numerous tribes with whom they have had intercourse. Another tedious delay of a whole year at Mourzouk had at least one good effect, that of inuring them to a still warmer climate ; while their frequent journeys

to various parts of Fezzan brought them ac- quainted with the manners, the language, and the disposition of the natives. During their long residence here, they experienced no ill effects either from climate, want of provisions, or badness of water. The

doctor’s fame spread rapidly into every part of Fezzan and beyond it ; and patients poured in from every side to enjoy the benefit of his advice and his physic.

‘ At length the time of their departure arrived ; and Boo Khaloom, a particular friend of the bashaw of Tripoli, was appointed to command the escort, consisting of 300 Arab horsemen ††† far more than were necessary, but ordered out of the abundant care of the bashaw for the sub- jects of his cousin of England. In the month of November, 1822, they left Mourzouk, follow- ing the route laid down by Captain Lyon, as far as Tegherry. From this place they crossed a dreary desert, occasionally somewhat enlivened by little hollows or valleys, in which wells were found for themselves and their cattle, consisting of a multitude of camels in addition to the horses. In the course of four or five hundred miles, they passed a few villages and several towns inhabited by the Tibbos, whose territories cover a large extent of this wild region, and who consider themselves entitled to a certain tribute for keeping the wells in repair. These people, the most harmless perhaps of the numerous tribes whom a life of precarious subsistence has thrown upon this miserable country, treated our travellers with great kindness, and in their whole conduct fully justified the character given of them by Captain Lyon. Yet they are not safe or un molested even in their deserts, being subject to the depredations of the Tuaricks, a fiercer race, who plunder the unprotected villages situated in the valleys, or little oases, but seldom venture to attack the larger towns, erected on the tops of detached and naked brown hills, which here and there rise out of the gray surface, like rocks out of the sea. Of these towns our travellers passed four, whose names are Kishbee, Ash- anumrna, Dirkee, and Bilma. ††† Bilma is the great mart of salt for a considerable part of Sou- dan, 30,000 camel loads of which are said to be carried away yearly by the trading part of the Tuaricks. This is not dug out of the earth in masses, as has been represented ; but manufac- tured

by a very simple process : shallow pits, banked round with sand and mud, are dug, after the rains, which soon fill by water oozing in from below. The heat of summer evaporates the water, and leaves behind an incrustation of good culinary salt. From Bilma to Agades one desert of sand succeeded another, with here and there ridges of dark sandstone peeping out of the dreary surface, exhibiting neither plant nor living creature, nor any other object to rest or relieve the wearied eye. One single wadey, or valley, near Bilma, about half way between Mourzouk and Bornou, produced grass and shrubs, and a few date trees. There was no want, indeed, of frequent wells, the water of which was tolerably good ; and near these gene- rally were found a few tufts of grass ; great numbers of their camels,5 however, perished for want of food.

On the 4th of February, twenty days after their departure from Bilma, they reached Lari, the frontier town of Bornou. Here the country suddenly changed for the better. Large herds of antelopes were bounding over the plains ; guinea fowls and turtle-doves were most abundant, and grass and accacia trees clothed in some degree the surface. Several villages also made their appearance, the houses of which, like those of Lari, consisted of bell-shaped huts, formed of the straw of dhurra. Lari is situated in about 14►►. 40'. north latitude, and nearly on the same meri- dian with Mourzouk. Here our travellers sud- denly got sight of the great lake of Bornou, called the Tsaad, which, extending easterly, receives the little streams of those northerly valleys in which most of the Kanem villages are situated. Hence they continued their route in a southerly direction for seven days, without leaving the Tsaad at any great distance, the road mostly ly- ing within sight of its waters or banks ; the former presenting numerous bays and inlets, and islands covered with thickets and tall reeds ; the latter were low, though a sandy embankment, of forty or fifty feet in height, ran parallel to the margin of the lake, at the distance of one and sometimes two miles from it, having

apparently formed, at one time, the bank of the lake, and still, perhaps, forming it in the rainy season ; as the ground between this and the lake was in many places observed to be overflowed, even from the effect, as it appeared, of the north-east wind. Several elephants were seen among the accacia woods, and two or three were observed browsing among the reedy islands. The whole neighbourhood was well stocked with villages, among which was one of a larger kind, named Burwa, with mud walls, whose houses and huts were observed to be neat and clean, and all its inhabitants decently clothed. ††† Leaving Lari, and at the distance from it of about sixty miles be- yond the commencement of the lake, they crossed the river Yaou, (the Zad of Horneman, and the Tsaad of Burckhardt,) flowing from the westward into the lake, being now a stream of about one hundred feet wide, and running at the rate of a mile an hour, between high sandy banks from two to three hundred feet apart. It is this river which is said to overflow in the rainy season, and into which Burckhardt says a female slave is thrown on the occasion by order of the king. At the ford where our traveller crossed, two rude ill-shapen boats were lying on the bank. Their gratification in meeting with such a river, after a thousand miles nearly of desert, will readily be imagined. In all their letters they speak warmly of its beauties, the calmness and sweetness of its waters, the comfort it seemed to add to the nu- merous little villages scattered along its banks, and the possibility of its being the far-famed Niger, ††† which it unquestionably is. A walled town of the same name, Yaou, stood on its banks. From this place to Kouka, the residence of the sheik, is a fine beaten track, covered with kofilas of bullocks transporting merchandize, and with foot passengers mostly armed with spears, and cheerfully trooping along Approaching within one day’s journey of the residence of the sheik, our travellers received a message from him, in

answer to one announcing their arrival, mat ne would receive them at Kouka the next day. The accounts of this personage had been so contra- dictory, that they appioached his capital in an interesting state of uncertainty, whether they should find him at the head of thousands, or whether he would receive them under a tree, surrounded by a few negroes.

They were soon, however, relieved from their suspense ; for, on arriving within a few miles of Kouka, they were astonished with the appear- ance of about four thousand cavalry drawn up to receive them, well armed with spears, and a body of negroes, called the sheik's guard ; these latter were clothed in coats of iron chain-work, closed at the neck, and drawn over the head like a Guernsey frock, which, dividing both before and behind, fell on each side of the horse, and protected the thighs also. On ††† their heads they wore skull-caps of iron or brass, fastened on with turbans, yellow, red, and white, and tied under the chin ; the horses' heads were also defended by plates of the same metal : their saddles were small and light ; their stirrups of brass, in which four toes of the foot only are placed ; a sandal of leather covers the foot, ornamented with the skin of a crocodile, and to this the spur is fixed. * They really,' says Major Denham, in one of his letters, ' rode beautifully, and charged ra- pidly to within a few feet of our horses' heads, without checking their speed, when they brought up, shaking the reversed spear at Boo Khaloom, with a cry of Barca, Barca ! welcome, welcome ! ' After this, he says, they closed their flanks and completely surrounded the travellers and their little party of Arabs ; ' they had nearly put an end to us,' he adds, ' by the dust alone which they raised ; and their spears rattled over our heads in rather discordant notes of welcome ††† all this, however, was managed with a skill and address that was any thing but savage.' Surrounded by this tumultuous escort they approached the town; and after about an hour's delay, were ordered to move on through several dark avenues of the sacred palace of the sheik of Spears, lined with his

guards, in plain blue Soudan shirts, and armed each with a spear and dagger. In the same garb the sheik received them, seated in an inner room, on a small carpet, but having on his head a Cashmere turban. Two slaves, with loaded pistols, were lying at his feet. Having read the letter of the bashaw of Tripoli, he merely said they were welcome, and ordered a negro to shew them to the huts that had been prepared for them. They were pleased with the cast of his countenance, and his affable and en- gaging manner : his age appeared to be about forty- five. The sultan's court at Birnie is de- scribed as one of fans, silks, and feathers, while the sheik's is one of spears. Dr. Oudney paid a visit to this mock sovereign, to whom he was conducted by a troop of horsemen of most gro- tesque appearance, dressed in high round-topped turbans and short thick stuff cotton jackets, looking < so thick and bunchy,' says the Doctor, ' that they sat on their horses as steady and un- moveable as if they had been so many well stuffed sacks of corn. The great horse of state, with a huge man upon him, headed the proces-

sion; (we are glad to find such respectable authority for the Lord Mayor's man in armour ;) but so swelled out was the horse with the cover- ing of a thick stuffed carpet, and so loaded wa$ the man with clothing and charms, that both oi them appeared incapable of moving. The sul- tan was perched in a kind of cage in the wall, from which he did not descend ; but sent his am- bassador to bid the strangers welcome; and in the mean time the drums beat, and the long wooden trumpet sounded, whilst a sort of herald under a tree, with a mace in his hand, was voci- ferating, with all his might, the genealogy, the titles, and the praises of the sultan.

Our travellers having satisfied their curiosity at Kouka, and the neighbouring towns, were desirous of prosecuting their discoveries beyond the dominions of Bornou ; Dr. Oudney and Lieutenant Clapperton wishing to proceed to Soudan, and Major Denham to the eastward ; but the sheik gave them to understand that his cousin, the bashaw of Tripoli, having strictly charged him with the care and protection of their persons, he considered himself responsible for their safety, and could not, therefore, allow them to depart on any service of danger. No- thing, indeed, could exceed his kindness to the strangers : and Major Denham entertained a sanguine hope that he might be allowed to accompany him on a projected expedition against Bagherme, after the rainy season. ' He is never tired,' says the Major, ' of asking questions about sieges; and gun-powder is his delight. Thirty or forty English muskets, and two camel-loads of good powder would be to him a more accept- able present than any other that could be given him. My rockets are here invaluable ; he has seen two, which have delighted and frightened the whole nation. I have given him a dozen, all that were left ; and they are preserved with the utmost care ; ' and he adds, ' by means of these alone I shall get to Bagherme, as they are to accompany an expedition to that country, which is in agitation, and they cannot as yet set them off; one of them bursting over the town, he assures me, will cause its immediate surrender by its inhabitants.' In the mean time, however, an occasion offered for this enterprising officer to proceed beyond the boundaries of Bornou. Boo Khaloom, who had attended our travellers from Tripoli, thought it no bad opportunity, be- fore his return, to avail himself of the advanced situation in the interior, to proceed on aGrazzie, a sort of marauding expedition which the native tribes of Africa are in the habit of making upon each other. At the earnest solicitation of Major Denham to accompany this expedition, the sheik reluctantly consented, but insisted on sending an old negro servant to take care of him. The number composing the Grazzie

consisted of about 3000 men, partly Arabs of Boo Khaloom, partly natives of Bornou, under the command of Barca Gana, his chief Mameluke and general, and some of the troops of the Sheik. They travelled south ; and after a march of six days reached Mora, the capital and residence of the Sultan of Man- dara, situated in,a valley at the foot of a noble chain of hills, at the distance of 170 miles from Kouka. These hills or mountains ("said to ex

tend to the distance of thirty or forty days to the south-west) are composed of granite, and their sides clothed with trees. In the valleys are many towns inhabited by Mussulmans ; but those who dwell in the mountains are Kindies, or savages, ho receive protection from the sultan of Man- ira, in consideration of furnishing him with a certain number of slaves. Boo Khaloom had expected that a portion of these would have been 'ven to him at Mara; but this was positively fused : he therefore proceeded still southerly against the Fellata, a very powerful nation, on the offer of the sultan to add to his forces. The Major's account of this enterprize, written to a friend of his at Malta, is so curious and full of in- terest, that we shall give it in his own words.

' On the 25th of April, the sheik's troops, the Arabs, and about 2000 horse of the sultan of Mandara, with himself, set forth for Musfeia, the capital of the Fellatas. Our road lay through extensive valleys, thickly planted with trees, and bounded by those beautiful hills, the sides of which presented here and there clusters of huts, and the height of which, sometimes exceeded 1500 feet. On the 28th, soon after daylight, we approached the Fellatas' towns, having marched nearly the whole night. Two of them were quickly burnt, and passing on we came upon a third, situated between two low hills, with a dry wadey in front. Here the Fellatas had mustered their forces, had carried a strong

fence of pointed stakes from one hill to the other, were themselves on a rising ground behind, and covered by the huts. The position was extremely strong and well chosen. The Arabs moved on with great gallantry, Boo Khaloom at their head; and, notwithstanding the showers of arrows (some poisoned and some not) that poured on them from behind the palisades, they carried them in less than half an hour, and pushing on, drove the Fellatas up the sides of the hills. A few of the Bornou spearmen now supported the Arabs, and pierced through and through about fifty un- fortunates whom the fire of the Arabs had obliged the Fellatas to leave wounded near the stakes. Had even a small part of either the Mandara troops, or those of the sheik, now moved up boldly, they must have carried the town, for the Fellatas did not exceed 1000 or 1200 men at the utmost ; but they still kept on the other side of the wadey, out of reach of the arrows. The Arabs advanced to the v-ary houses, and got pos- session of some of them, Barca Gana, myself, and about forty of his own people alone accom- panying them. Seeing the backwardness of their enemies, they now made an attack in their turn; the arrows were so thick, that there was no standing against them, and the Arabs quickly fell back. Barca Gana had two horses hit under him, that died almost immediately, the arrows being poisoned ; and, here poor Boo Khaloom received his death wound by an arrow of the same description, which struck him in the foot. My horse was badly wounded in the shoulder, and in his near hind leg; an arrow had struck me in the face as it passed, merely bringing the blood, and two others stuck in my bornouse ; most of the Arabs had two, and some three

wounds, and one dropped near me with five sticking in his head alone.

' No sooner did the Mandara and Bornou troops see the retreat of the Arabs, than they one and all took to flight in the most dastardly and confused manner possible ; and I now, for the first time, as I saw Barca Gana on a fresh horse, lamented my own folly in thus exposing myself, being badly provided

against accidents. If either of my horse's wounds were from poison- ed arrows, I felt that nothing could save me ; however, there was not much time for reflection. We instantly became a confused flying mass, and plunged, in the greatest disorder, into that wood which we had but a few hours before moved through with order and very different feelings.

' I had got a little to the west of Barca Gana's track, and was following one of the sultan of Mandara's eunuchs, mounted on a white horse, when the cries behind of the Fellata's horse pur- suing, made both him and me quicken our pace. The spur however had the effect of incapacitating my animal altogether. The arrow I found after- wards had reached the shoulder bone, and in passing over some rough ground he stumbled and fell. Almost as soon as I was on my legs, the Fellatas were on me. I had however, kept hold of the bridle, and seizing a pistol from the holster presented it at .two, who were pressing me with their spears. They instantly went off; but another, who came on me more boldly just as I was trying to remount, received the contents somewhere in his left shoulder, and again I was enabled to raise my foot to the stirrup. Once more mounted, I again pushed my retreat. I had not however, proceeded many hundred yards, when my horse again came down with more vio- lence than before, threw me to a considerable distance against a tree, and, alarmed at the horses behind him, he quickly started up, escaped, and left me on foot and unarmed. My life was now preserved by one of those wonderful interpositions of Divine Providence, which ought to fill the mind of man with gratitude and devotion.

' I was almost instantly surrounded, and, in- capable of making the least resistance, as speedily stripped. In an attempt first to save my shirt, and then my trowsers, one villain made two thrusts at me with a spear that badly wounded my hands in two places, and slightly my body, just under my ribs on the right side. Indeed I saw nothing before me but the death I had seen inflicted 'on those who had fallen into the hands of the enemies of the people,

in whose power I now was ••• but it was otherwise or- dained.

‘ Scarcely were my clothes torn off me, when my plunderers began to quarrel for the spoil. Without a moment’s reflection, I crept under the belly of the horse nearest to me, and started, as fast as my legs would carry me, for the thickest part of the wood. Two of them followed me, and I ran on towards the east, knowing that our stragglers would be in that direction, but still almost as much afraid of friends as foes. A deep mountain-stream obstructed my passage, which} by swimming a few strokes, I quickly got over.

and then felt myself quite safe from my pursuers. My feelings at this moment, (what could I do in the helpless state of nakedness in which I was,) cannot be described. I now saw horsemen through the trees still farther to the east, and I determined on reaching them if possible, whether friends or enemies ••• and my feelings will readily be imagined, when I discovered Boo Khaloom, •••with about six Arabs, and Barca Gana pressed by a party of Fellatas, whom they had halted to drive back, being the only people who carried guns.

‘ My voice however, would never have reached their ears had not Maranny, the sheik’s negro, who accompanied me from Kouka, seen and known me at a distance, and to this man am I indebted for my life. He rode up to me, assisted me to mount up behind him, while the arrows whistled over our heads, and he then galloped off to the rear as fast as his wounded horse could carry him. Boo Khaloom now rode up to me, and desired one of the Arabs to cover me with a bornouse ; these were the last words I heard him speak, and we had scarcely proceeded ten miles, when Maranny exclaimed, ‘ Look ! look ! Boo Khaloom is dead ! ‘ I turned my head round, almost as great an exertion as I was ca- pable of making, and saw

him fall into the arms of an Arab.' The major then proceeds to state, that, after riding forty-five miles, he reached the territories of Mandara in a most deplorable con- dition, and with some difficulty succeeded in borrowing a shirt, which had been worn eight or ten days. The Arabs had lost every thing ; forty-five of them were killed, and nearly all of them wounded. The sheik, on his return, re- ceived him with the greatest kindness ; and, his wounds were speedily healed.

' The distance from Kouka to the Fellata vil- lages in the mountains, the Major informs us, is about 230 miles nearly south, or 3►►. 20'. difference of latitude, which would make the latitude of these villages about 9►►. 30'. Assuming the lon- gitude to be the same as that of Mourzouk, 14►►. 10'. it will be seen, by inspecting the charts, that he was not more than about 300 miles from old Calabar; so that Captain Adams was unwittingly right in saying that the best, at least the nearest, way to the Niger, or its waters, would be across the country from that quarter. While the Major was absent, another important step in African geography was made by Dr. Oudney and Lieute- nant Clapperton. With the consent of the sheik they set out on an excursion to examine the river Shary, which, by proceeding southerly, they found at the distance of ninety miles from Kouka. It is a noble stream, nearly a mile broad, flow- ing gently at the rate of about a mile an hour, and containing a great number of flat islands. It flows from the southward, and is supposed to have its origin in the chain of granite mountains mentioned by Major Denham. They traced its stream to the northward, till it emptied itself by five or sixth mouths into the lake Tsaad; di- rectly in the face of the report which they had gleaned from all quarters, that this river flowed out of the lake. Our travellers had never had the lake fairly open to them before ; for it is so

studded near its banks with islands, and the country is so perfectly flat, that there is no seeing beyond them ; but here it presented a noble sheet of water, extending north, north-east, and east, farther than

the eye could reach. Some of the islands in the Tsaad are inhabited by a people called Buddooma, who carry off, on rafts, not only cattle which they find grazing near the shore, but frequently women and children ; yet the sheik has no canoes, nor any means of punishing these marauders. John Hillman, the carpenter, had made himself very useful in fabricating sofas and palanquins for the sheik, and had be- come of course a favourite ; the greatest service he could perform for the natives, however, would be that of instructing them in the art of boat-build- ing and of navigating the lake. There is no want of wood for this purpose, and their cotton would supply them with ropes and sails. We trust it will have occurred to our travellers, that the best and surest way of examining its eastern shores is by means of a boat. Our travel- lers first saw this lake at Lari, which is 130 miles to the northward of Kouka, and as Kouka is said to be ninety miles to the northward of the mouth of the Shary, the lake must be at least 200 miles in that direction ; and may be more, provided these two points should happen not to be its northern and southern extremities. A por- tion of it would appear to occupy the position assigned by major Rennell to the swamps of Wangara ; but our travellers had no better suc- cess in hearing any thing of this name than Burckhardt, Ritchie, Lyon and others ; and so little did it resemble a swamp, that in the month of April, at the end of the dry season, when not a drop of rain had in all probability fallen for six or seven months, it had all the appearance of being full and perfectly transparent. It is not stated, however, in any of the letters which we have seen, whether the water be fresh or salt, though the very omission may almost be as- sumed as a proof of its being fresh; a still stronger proof is that of its abounding with hippopotami and crocodiles ××× two animals that exist only in fresh water. Burckhardt, indeed, had positive information that the lake of Bornou was fresh. The probability is, that it is fresh and has an outlet ; and if any reliance can be placed on Arab authority, the Gambarroo, which flows by Bagherme and Fittri to the eastward, is that outlet.

‘ Some report,’ Doctor Oudney says, ‘ that the Shary gives off a large branch which falls to the southward of Bagherme two days, and runs to Fittri, and thence to the Nile ;’ and Ma- jor Denham learned from an Arab sheik of Waday, that a branch of the Shary, called the Bahr el Dago, goes into the Nile; tlrat it receives additional supplies from Lake Fittri, twelve days journey from those mouths of the Shary which flow into the Tsaad ; and that it then takes a course to the south-eastward, till, as before, it reaches the Nile. He was further informed, by the Sheik, of some Mourzouk merchants having spread a report that it was their (the travellers’) intention to come up that river (El Dago) from Misr (Egypt) with ships as large as elephants, loaded with guns and gunpowder. There must

be something, we think, in this universal belief that the waters, which we have now traced into the Tsaad, find their way to the Nile of Egypt. There is nothing whatever against their reaching the Bahr el Abiad, except the low level of the Tsaad, which is evidently the sink of North Africa ; yet the comparative difference of levels between it and the former river is not at all known ; nor do we find, in the letters of the travellers, any estimate of its level above that of the sea.

‘ But where/ asks Dr. Oudney, naturally enough, ‘ where is the celebrated Niger ? The Yaou is the only probable river coming from Soudan, and it is almost too small.’ Yet the wonder is, that in the dry season it was not smaller. Most rivers that have no feeders, and more especially African rivers, that lose so much by absorption and evaporation, diminish as they proceed in their course ; and if the Niger (for so will we not scruple to call it) had not been con- fined within very narrow banks, but had spread out a more considerable surface, the probability is, that the whole of its waters at this season, and at

this distance from its source, would have been evaporated. Major Denham, who went directly south, beyond the 10th degree of lati- tude, crossed no river between Kouka and the termination of his journey, and there is none between that city and the Yaou ; so that if this stream be not the Joliba, which has been pretty well ascertained to run into the lake Nyffe, about 300 miles to the westward of the Tsaad, and nearly on the same parallel, there certainly is no other in Bornou that can be considered as the Niger. If, indeed, the account of all travellers, and the Arab waiters, can be depended on, and particularly the result of Horneman's enquiries, no doubt whatever can remain that the Yaou is the Niger, which Major Rennell has traced satis- factorily into the swamps of Wangara, or (for they must be the same) the lake of Bornou ; what becomes of it afterwards, and whether it termi- nates in the lake, is a point which we trust our travellers will be able to determine.

' From the multitude of villages, observed by our travellers along the western shores of the lake, and the several large towns not very dis- tant from it, there can be no doubt that this part of Africa is well stocked with inhabitants. The town of Kouka, which may be called the sheik's head-quarters or military depot, has only about 80CO inhabitants. It is situated at the distance of fifteen miles from the western borders of the Tsaad, in lat. 12►►. 51'. N. and long. 13►►. 14'. E. being nearly twenty miles to the westward of the meridian of Mourzouk ; and the travelling dis- tance is about 1000 miles from the same place, which occupied the expedition ninety-two days. Bernie, the residence of the sultan, is eighteen miles S. S. E. of Kouka, and is said to contain 30,000 inhabitants ; and Engornou, sixteen miles S. E. by S. of Kouka, not less than 50,000. At this place there is a weekly market held on \ ednesdays, to which all the surrounding coun- tries, the people of Kanem and of Soudan resort; so that the numbers who occasionally attend are said to amount to eighty and sometimes a hundred thousand souls ! Major Denham made a visit to this place, and

was much pleased with

it. The currency appeared to consist of amber, coral, and glass beads; but dollars were well known and most in demand. A large diamond- cut drop of a glass chandelier, the Pitt diamond of central Africa, was, however, an object of con- test among the ladies of the court. How such a population is supported, it is not easy to ima- gine : the whole kingdom, on the western side at least, is one dead flat of sand and clay, with- out a single stone of any description. In the season of heat and drought, every vestige of verdure takes its departure, except from the various kinds of accacia trees and the tamarind : yet herds of elephants, giraffes, buffaloes, and antelopes of various kinds, are everywhere seen, and especially along the borders of the lake. Major Denham says he counted forty-seven large elephants in one group. Where and on what they feed at this season does not appear. Tame bullocks are met with in droves of a thousand or fifteen hundred, and flesh meat is very cheap : a fine ox might be bought for three dollars; and fowls at the rate of forty for a dollar. Of vege- tables, our travellers saw little but onions and a few yams ; and no fruit except the tamarind. In the sheik's garden is a single lime-tree. The quadrupeds above mentioned, and many smaller species, supplied our travellers with abundance of game, which were procured chiefly by Clap- perton,who is an excellent shot. The lake too, abounds with a great variety of water fowl, some of which are said to be of extraordinary beauty; and the ducks and geese were so tame, that he killed eight or ten at one shot. Snipes rise in thousands, like so many clouds.

The temperature in March and April was uniformly high, seldom lower than 100►►. and sometimes 104►►. at two or three o'clock ; yet the constant refreshing breeze prevented it from feel- ing oppressive. The barometer was steady at twenty-nine inches. So little did the heat ap- pear to affect Clapperton, that he used to go out for several days together, along the margin of the Tsaad, to kill game, and suffered nothing from the exertion : the

people were uniformly civil and obliging, A numerous tribe of Arabs had settled in the sheik's dominions. They came from the banks of the Shary, and are described as different from those of the north ; their complexions are of a light copper colour, with handsome aquiline noses, and large expressive eyes ; they are savage in their manners, and of undaunted courage. Major Denham says they resemble very much some of the best looking of our gipsy race, particularly the women, and their Arabic is nearly pure Egyptian.' ††† Quar- terly Review, No. L VIII.

We have detained the reader amongst these interesting details, with the greater pleasure, as they have certainly contributed to enhance our knowledge of this portion of Africa materially. ††† Major Denham, we are happy to learn from the public papers, has returned in safety, and we look forward for the publication of his journal and papers to enrich various future articles of our work.

Mr. Laing, to whom we have already alluded, started afresh from Tripoli, and joined a caravan to Timbuctoo. He survived a very dangerous

attack from the Fellatahs, in which he received twenty-eight sabre cuts, and reached Timbuctoo in safety. He resided there some months, but the Fallatah chiefs not only insisted on his leaving Africa, but assassinated him while- sleeping a short distance from that capital. He was accom- panied by several of his countrymen who were most anxious for his success. Had he succeeded according to his expectations, his next object would have been to fall down one of the streams, as far as the Tsaad of Bornou, where he expected to meet with our countrymen, who have been for some time domiciliated at Kouka.

Two of those countrymen, Dr. Oudney and lieutenant Toole, we are concerned to state, have paid the debt of nature ; the latter fell a victim to exertions which, in an African climate, were too severe for his youth, immediately afte. per- forming a fatiguing journey across the desert from Mourzouk; the other, to a complaint which he carried out with him, but to which he firmly persuaded himself an African climate would prove friendly ××× a disease of the lungs. We nave still to regret the absence of their journals, itineraries, geographical observations, and other documents, which however, are believed to be safe ; but various letters to the consul at Tripoli and to their friends in England supply, in some degree, the deficiency of these details by the ge- neral outline they give of their proceedings.

On the 21st of May 1823, Dr. Oudney, lieu- tenant Clapperton, and a confidential slave of the sheik's as a guide, set out on a journey into Soudan. They reached in four days, (travelling in a north by west direction,) Old Birnie, once the capital of Bornou, and formerly a city of great consequence : its walls were of brick, mixed with clay, thirty feet high, ten or twelve feet thick, and eight or nine miles in circumference ; but they were now in ruins, as was a magnificent palace of the sultan's of Bornou, which covered a vast extent of ground, the latitude of this place 13××. 4'. north long, about 1××. 15'. west of Kouka. Here they were joined by the sheik, who invited them to accompany him on an expedition against the Munga tribes, in which they passed succes- sively the towns of Kubshara, Biskour, Surgum, and Bailey, the latter being about a hundred and twenty miles from Kano, the capital of Hpussa, and a celebrated resort of merchants, in this part of Africa. From this place they re- turned to Kouka; but recommenced their jour- ney on the 14th of December, and in twelve days passed the western frontier of Bornou, and en- tered the Beder territory, the sudden change to severe cold, which they here experienced, proved fatal to Dr. Oudney.

- On the morning of the 12th,' says Lieutenant

Clapperton, ‘ when the camels were loaded, Doctor Oudney came out of his tent. I then saw but too plainly that the hand of death was Upon him, and that he had not an hour to live. I prevailed on him to return to his tent, and I sat down beside him : he expired about an hour afterwgurds. The only request he made was, that I would forward his papers to Lord Bathurst, and to say, that he wished Mr. Barrow might have the arrangement of them, if agreeable to his lordship. I sent i mmediately to the governor

of the town to acquaint him with what had hap- pened, and to request that he would point out a spot where I might be allowed to bury the re- mains of my friend, to hire some of his people to wash the body, and to dig a grave; all of which was immediately complied with; and, as we tra- velled in the character and habits of Englishmen, I considered it an indispensable duty to read the funeral service over the body in the tent and at the grave side, according to the rites of the church of England; and, so far from meeting with the least interruption, the. natives, on the contrary, took pains to show me every possible respect for having so done. Having killed two sheep, to be distributed among the poor, I caused a wall of clay to be built round the grave ; and the next morning, being extremely unwell from exposure to the sun, and grief for the loss of my friend and companion, to whose good and amia- ble qualities no language of mine can do justice, I left Murmur with a heavy heart, and on the 20th at noon arrived at the city of Kano, where I was received with great ceremony.’

It may be proper to add that lieutenant Clap- perton delivered the sheik’s letter, and a present, to tne sultan of Kano, who received him with great kindness, and promised to forward him in safety to his master Bello, the sultan of the Fellatas. The letter alluded to, is an extraordinary instance, both of the benevolence and cultivation of this chieftain’s mind After the usual formal saluta- tions, he says, Some distinguished persons,

Englishmen and Christians, between whom and Mussulmen an ancient friendship and brother- hood has existed, as is no secret but known to all the world, are about to visit your country. The love between these people and the followers of the true faith has continued for ages, and descends from one generation to another, even as the wealth of a father descends to his children ; and by this friendship, frequent amicable intercourse is kept up between them and Mussulmen. But this love is most observable in the ease with which Mussulmen now visit their countries, which are rich and extensive, going and return- ing without danger or molestation. And now these Christians have visited us, through the medium and love of our master Yussuif, Bashaw of Tripoli, at their own desire, to see the coun- try, which is by God's mercy ours, and what is wonderful in the land, its rivers, lakes, and peo- ple, all of which may differ from those of their own country. We have enabled them to see all the country of Bornou, even in the way they wished, with freedom ; and they ask of us a pas- sage to yours, in order that the wonders which are not here, may be seen by them there. We have granted their request, and have furnished them with letters of kindness and greeting, which letters will tell you how we esteem them : ###

' We remind you, but it is needless, for your great knowledge will inform you, that it is writ- ten, that even our prophet himself, our interposer and advocate, (praise be to God and his angels !) ordered, that these should not be molested nor injured when they came in peace, and did no harm. We throw them upon your care and pro- tection. You know that there are believers who strike down and trample upon the weak and un-

protected. You know, also, that justice is not always done to the good by the wicked. We trust therefore to you, and beg that you will sup- port

and protect these Englishmen and Chris- tians ; that you will not permit them to be buffeted or abused, nor allow them to be pained either by privations or blows, or even regarded with dis- dain, until such time as it shall please God that they shall return to their native land.

'They are people of a pure heart and true tongue; such we have found them; be you their supporter, and cause them to rejoice in our recommendation ; so may God reward you, and grant you what you hope for and desire ! and by his blessing may we together proceed on the road to heavenly bliss ! May all health, and happiness, and virtue, and faith, be to you and to those near you, and all that belong to you, and not to yourself alone ! Dated the evening, &c. (Signed) SLAMEES BEN KAXERRY,

Sheikh of the Koran.'

- On the 23d of January, Major Denham, ac- companied by Lieutenant Toole, left Kaouka, and arrived at the river Shary on the 30th, which they found, in lat. 12►►. 47*. above six hundred yards in breadth, and running N. E. at the rate of about five miles an hour. Here they em- barked for the lake Tsaad, before mentioned, with eight canoes, furnished them by the Raid of Showey, a small town in this neighbourhood, and found the whole course of the river highly interesting. On its banks, thickly clothed with trees and beautiful shrubbery, they saw numbers of crocodiles.

' The Shary was found to empty itself into the great lake by two branches formed by the island. Descending the western branch the following morning, for about two hours, our travellers found themselves on that sea of fresh water which, says major Denham, we called the Lake of Waterloo. They had not proceeded however, beyond two miles on the open lake, when the heavy swell from the north-east, caused the canoes to ship so much water, and the paddling became so laborious to the men, that they were obliged to return. They understood that the

nearest of the Beddoumy islands was a voyage of three days from the mouth of the Shary (about ninety miles) in the direction of north-east, during two of which they lose sight of land. These people carry on a piratical war with the borderers of the lake. It is said that they fre- quently muster from sixty to one hundred canoes. They make no slaves, but demand ransom for their prisoners, who, if it be refused, become islanders, take wives, and remain among them. The whole of the islands are said to be able to muster a thousand canoes, with fifteen to twenty men in each. In every other respect, but that of plundering, they are said to be a mild and inoffensive people, not given to cruelty, and never known to murder their prisoners. They say of themselves that ' they have a strong arm and a cunning head, a small country and poor cattle, and that they must take from those who are richer than themselves.'

' Returning up this stream, they saw a variety of water fowl, and other birds, abundance offish, and numbers of large hippopotami. Attempting

to cross the country from Showey to the Loggun territory, Mr. Toole seems to have received a cold that terminated his earthly career. The journey was through a succession of swamps and stagnated waters, ' where,' says major Donham, ' flies, bees, musquitoes and immense black toads, vie with each other in displaying their peace- destroying powers,' The inhabitants, are so molested by them that they construct within their houses nests of cells one within another, to the number of five or six, to secure a retreat from them. At Kissery, in the midst of these swamps Mr. Toole's sufferings became so great that he could no longer mount and dismount from his horse. They attempted to halt, and their situa- tion may be conceived from the circumstance of their being obliged to light fires at the entra ace of their tents, and constantly to supply them with weeds and wet straw, in order to procure a temporary relief from the millions of insects that hovered round them. Their horses refused all food, and naturally averse to flame and smoke, rushed to

the fire, and suffered their heads to -be actually scorched, in order to obtain a little respite from the stings of their persecutors.

‘ Painful as their condition was, the Shua Arabs, who guarded the frontier of the Loggun territory, refused to let them pass,’ until they had received permission from the sultan. On the 16th February this permission came, but poor Mr. Toole was now quite insensible, and was obliged to be lashed upon a camel. In this state they entered the town, and took pos- session of a decent hut which had been assigned to them. The next morning major Denham was summoned before the sultan, who, like him of Bornou, was caged up in a box, the front of which was lattice work of cane. This being removed, the major says, something alive was discovered on a carpet, wrapped up in silken robes with the head enveloped in shawls, nothing but the eyes being visible; the whole court prostrated themselves, and threw sand on their heads, while eight trumfrums and as many horns blew a loud and most tremendous blast. On re- ceiving a small present, he whispered welcome ! for speaking out, it seems, is considered extremely ill- bred in a Loggun gentleman. This old gentle- man in the box, on being asked for his per- mission to proceed up the Shary, enquired particularly if the major wished to purchase any siriahs, or handsome female slaves, ‘for if you do, he gently whispered, you need go no farther ; I have some hundreds, and will let you have them cheap.’ Finding however, that he was not likely to gain a customer, the sh?de was drawn and the audience finished.

‘ The name of this capital of Loggun is Kur- nuck, and it is situated on the banks of the Shary in Lat. 11►►. 7’. and contains about fifteen thousand inhabitants, who speak a language half Arabic and half Baghermie. They hare a con- siderable trade with the Shua Arabs, from whom they receive bullocks, milk, and fat, in exchange for blue striped cottons, which they manufacture well, and dye of a very clear and beautiful colour. The people are described as much handsomer than those of Bornou, and more intelligent ; the women

particularly so, possessing a superior

carriage and manner to those of any black nation begged, as his last request, that Lord Bathurst that major Denham had ever seen. He was would recommend his next brother to succeed to visited by the ladies of some of the principal his ensigncy in the 80th regiment, persons of the country, who examined every Major Denham now accompanied the sheik’s thing about his person, begged every thing, and army, on an expedition towards Fittre, round the stole every thing they could secrete, and when northern end of the lake. The major was more discovered, only laughed heartily, clapped their anxious to proceed to Kanem on the northern side, hands together, and exclaimed, ‘ why, how sharp and thence along the eastern shore of the lake, he is! only think, he has caught us!’ They have The sheik at first refused, but at length con- no pretensions, it would seem, to modesty, sented that he should go to the southward, cross Major Denham gives them the credit of being the the Shary, and take with him twenty horsemen, cleverest and the most immoral race he had ever with some of his best Arabs, all armed with met with, though they call themselves Moslem, guns, while he (the major) was only to have a There was no difficulty in getting permission couple of the fastest going maharies, the fleetest to proceed up the river, which was here about 400 animal that is known. He stipulated with the yards wide; and as the major’s colleague seemed sheik that he should encompass the lake, and re- a little better, he embarked for the purpose of turn by Laree, on the northern extremity, to exploring it higher up. The canoes were here Kouka. The wars between Bornou and the better than those lower down, measuring about neighbouring nations, however, prevented him fifty feet in length, and capable of carrying from from realizing his hopes. Both travellers twenty to twenty-five persons, built of a fine- reached England in safety, after accomplishing a grained red wood which grows plentifully on greater extent of travel than any of their prede- the banks of the

Shary; the planks were from cessors. Captain Clapperton left Europe a few two to three feet wide. He had only proceeded months after, on a second expedition. He started a few miles when a boat was seen rowing after from the Bight of Benin, and passing through them as quickly as possible, and on its coming many interesting countries, and meeting with up, the whole seven that were with him, made to comparatively few obstacles, he again established the shore at once in the utmost confusion. He himself with sultan Bello, intending to proceed soon discovered that the Baghermie were advanc- to Bornou, with presents to the sheik of that ing towards Loggun, and the sultan had sent word place. These presents, however, excited the that the sheik of Bornou's people should instantly cupidity of Bello, and our traveller was not per- quit the city. It was in vain for the major to mitted to advance. The treachery of this mon- plead the sickness of his friend and of his ser- arch, and the disappointment of his hopes, preyed vant; ••• ' go,' said he, ' go while you can, I can so heavily upon him, that he died at Soccatoo. give you no protection.' Finding there was no Lieutenant-colonel Denham went to the new alternative, poor Mr. Toole, unable to assist him- English settlement of Fernando Po, as inspector self, was again lashed on a camel, and they quitted general of the liberated Africans, and afterwards the walls of Kurnuk, when the three gates were became governor in chief of our settlements on shut upon them one after the other, with great the western coast ; he however fell a victim to satisfaction, by an immense crowd of people, the climate of Sierra Leone in a very few months. It was the fourth day before they reached Angala, The history of the discovery of Western Africa in Bornou, having enjoyed very little rest, and is here exhibited carefully, perhaps tediously ; scarcely any food ; the poor sick traveller being but it seemed a subject of deep interest to delirious the greater part of the time, lashed on inquire into the many persevering and even a camel, and exposed to the scorching rays of painful exertions made by brave Englishmen to the sun. On being told that they

had reached increase the store of scientific knowledge, and Angala, he said, ‘ thank God, then I shall not open an intercourse with almost a new world die !’ Every hope, however, vanished two days of fellow-creatures. Park, Laing, Denham, afterwards ; a ccld shivering seized him, and his and Clapperton, fell sacrifices either to the extremities were like ice; in this state he con- treachery of the ignorant natives, or the fatal tinued a few hours, and expired without a strug- character of a tropical climate ; but each acquired gle or a groan, being completely worn out some additional geographical information, or and exhausted. ‘ The same afternoon,’ says augmented, by some new discovery, our know- Major Denham, ‘ I followed his remains to their ledge of the natural productions of this vast last lodging place, where six of the sultan of portion of the globe. It was the more fortunate Angala’s slaves lowered them into a deep grave lot of Messrs. Richard and John Lander, to they had dug, overhung by a clump of mimosas survive the discovery of that great mystery, the in full blossom, ††† and a silent prayer breathed termination of the Niger, which proved but too over them was the best funeral service which fatal to their bold forerunners in this great at- circumstances allowed me to perform.’ Mr. tempt. Those gentlemen have ascertained that Toole had not completed his twenty-second year, the Niger discharges itself into the Atlantic and was in every sense a most amiable and pro- Ocean in the Bight of Benin, by many mouths, raising young officer. His manners are said to as the Ganges, Nile, and other large rivers; and have been extremely pleasing, and his disposi- they had the happiness to reach the sea through tion kind, gentle, and obliging. He was per- one of the channels, called the river Nun, in Nov. fectly resigned to his fate ; and when major Den- of the year 1830. See Niger, Africa, p. 244. ham, the day before his death, spoke of their AFRICAN SLAVE TRADE. See SLAVE TRADE. return to Kouka, he smiled, shook his head, and The AFRICAN INSTITUTION is a society in- said, ‘ No, no, it is all over ;’ and shortly after stituted for purposes of benevolence,

or rather

of reparation toward Africa ; its views cannot be better stated than in the resolutions which were adopted at the constituent meeting on the 14th of April,,1807, and which were circulated with the irst report, as the basis of the society.

1 \ . That this meeting is deeply impressed ?ith a sense of the enormous wrongs which the atives of Africa have suffered in their intercourse vith Europe ; and from a desire to repair those prongs, as well as from feelings of benevolence,

anxious to adopt such measures as are best cal- culated to promote their civilization and happiness.

‘2. That the approaching cessation of the slave trade, hitherto carried on by Great Britain, America, and Denmark, will, in a considerable degree, remove the barrier which has so long ob- structed the natural course of social improve- ment in Africa ; and that the way will be thereby opened for introducing the comforts and arts of a more civilized state of society .

- 3. That the happiest effects may be reasonably anticipated from diffusing useful knowledge and exciting industry amongst the inhabitants of Africa; and of obtaining and circulating through- out this country, more ample and authentic in- formation concerning the agricultural and com- mercial faculties of that vast continent ; and that, through the judicious prosecution of these benevolent endeavours, we may ultimately look forward to the establishment, in the room of that traffic by which Africa has been so long de- graded, of a legitimate and far more extended commerce, beneficial alike to the natives of Africa and to the manufacturers of Great Britain and

Ireland.

‘ 4. That the present period is eminently fitted for prosecuting these benevolent designs; since the suspension, during the war, of that large share of the slave trade, whicfe has commonly been carried on by France, Spain, and Holland, will, when combined with the effect of the abo- lition laws of Great Britain, America, and Den- mark, produce nearly the en tire- cessation of that traffic along a line of coast exterMing between two and three thousand miles in length ; and thereby afford a peculiarly favourable oppor- tunity for giving a new direction to the industry and commerce of Africa.

‘ That for these purposes a society be imme- diately formed, to be called ‘ The African Insti- tution.’ Disclaiming all colonial and mercantile speculations, and all direct aim at the propaga- tion of religion, which they deemed the sole and legitimate purpose of the Christian missionary, they further resolved to pursue their object by such means as the following. To collect and diffuse information respecting the natural pro- ductions of Africa, and respecting its agricultural and commercial capacities, its intellectual, moral, and political condition ••• to cultivate a friendly connexion with the natives, and promote their instruction in the art of reading, and in useful knowledge in general ••• to enlighten them with regard to their true interests, and the means by which they may improve the present oppor- tunity of substituting a beneficial commerce for the slave trade ••• to introduce amongst them the improvements and most useful arts of Europe ••• to promote the cultivation of the African soil.

by furnishing the natives with seeds, and plants, implements of husbandry, and agricul- tural instruction ••• to acquaint them with medical discoveries ••• to obtain a knowledge of the African languages, and reduce them to a writt n form, and to employ agents for establishing cor- respondences, &c. From its commencement the society has maintained a most jealous cir- cumspection with

regard to the execution of the abolition laws, communicating information to government, and aiding its measures with the wisdom of practical experience. We wish we could add, in respect to foreign nations, with a success proportionate to its zeal. In conse- quence of the scantiness of the society's funds, the latter purpose has hitherto been that to which its principal attention has been directed, as the primary step to improvement. The annual Reports of this society very ably detail its pro- ceedings, which are under the management of a patron and president, twenty vice-presidents, a treasurer, and a committee of management, con- sisting of thirty-six persons, annually chosen. The president is the duke of Gloucester.

AFRICAN COMPANY, a society of mer- chants, established by Charles II. for trading to Africa. An association of merchants of the city of Exeter gave rise to this company, and first received a patent in 1588, from queen Eliza- beth, which conferred on them the exclusive privilege of trading to the rivers Senegal and Gambia for ten years. A similar charter was granted by her successor James I. to certain merchants forming a joint stock company in 1618, but it was soon dissolved : a third com- pany created in 1631, by Charles I. shared a simi- lar fate. A demand for negroes for our West India islands began however to be pretly constant about this time, and the duke of York, with some other persons of distinction, in 1662, ob- tained a charter from Charles II. which secured to the English a monopoly of all commerce with Africa, from Cape Blanc to the Cape of Good Hope. Of this company also the direc- tors in a few years resigned their charter ; when in 1672 the last incorporation of this descrip- tion was formed by letters patent, and con- ducted for some time a flourishing trade. They raised a jdint capital of ►►111,000, and erected various forts on the coast, until the existence of these monopolies by grants from the crown, being considered at the Revolution inconsistent with the declaration of rights, the trade to Africa was thrown open. All private traders, how- ever, were

obliged, by stat. 9 and 10 William and Mary, to pay 10 per cent, towards main- taining the forts and factories already erected ; and in 1730, ►►l 0,000 was granted by parlia- ment in aid of this expence.

In 1750, the original company being com- pletely bankrupt, its forts and various establish- ments on the African coast were vested, by 23 Geo. II. cap. xxxi., in a new company of mer- chants trading to Africa. This company could not trade as a corporate body, nor possess transferrable stock ; its duties were to maintain all the forts and garrisons in good repair that lie between Cape Rouge and the Cape of Good Hope; any British subject might be admitted

into it on the payment of 40s.; and the manage- ment of its affairs are vested in nine commis- sioners, chosen annually, for London, Liverpool, and Bristol, in equal numbers. The commis- sioners appointed to enquire into the state of the African Settlements, in 1812, gave the fol- lowing as the annual expence of each of these forts: Appollonia ----- ►► 879 7 10 J

Dixcove ------- 926 2 .5

Succondee ------- 429 j 5J

Commenda ------- 842 2 3

Cape Coast Castle - - - - 4768

Annamaboe ------ 1885 1:

Tantumquery ------- 771 17 6t

Winnebah 776 8 11

Accra -------- 1328 1 0

Whydali ------- 587 16 6f

►►13195 2 5

The whole annual expenses of the company in Africa, for forts, salaries of officers, &c., was stated to be ►►25,327 Is. 5f

The company's annual expenditure at home consisted of ►►100 to each of the nine members of the committee ; and ►►300 to the secretary ; in all ►►1200. The number of persons in their tmploy, at Christmas 1813, consisted of forty- seven governors and subordinate officers, and 450 soldiers and menials. The company was dis- solved in 1820.

The AFRICAN ASSOCIATION, distinguished for its early patronage of travellers in Africa, originated witn gentlemen 01 various parties, wno in 1788, united themselves, to the number of about ninety-five, to promote the discovery of the interior of this great continent. Their affairs were conducted by a committee of five distin- guished individuals. Lord Rawdon (the pre- sent marquis of Hastings"), the late Dr. Watson, Bishop of Landaff, Sir Joseph Banks, H. Beau- foy, Esq. and Mr. Stuart ; who had the honour to dispatch the intrepid Ledyard on his first journey to Africa, in the year of their institu- tion ; and it was to Henry Beaufoy, Esq. that Ledyard made the memorable answer, on being asked, upon the first interview, when he would set out ? ►►► ' To-morrow morning.' The com- mittee assigned him, in conformity with his own desire, the course from east to west, in the sup- posed latitude of the Niger. In August he arrived at Cairo ; but died before entering upon the route proposed. Mr. Lucas was their next traveller, but with little more success. Embarking for Tripoli in October, (1788), he was instructed to penetrate the desert of Zaara to Fezzan, and to return by way of Gambia.

But at Mesurata, he found those difficulties which deterred him liom proceeding farther. In 1790 Major Houghton was engaged by the committee to ascend the Gambia eastward, ant] to continue on the same line of route over the continent. He reached the coast in November, and went up the river 900 miles, to Bambouk, and from thence to the adjoining province of Kasson, where he died in September, 1791. The

association now had the honour of engag- ing the celebrated Mungo Park, who in 1795 entered upon the same route as his predeces- sor ; explored the source of the Niger to Silla, and after almost incredible exertions returned in about two years. He was afterwards, it is but too well known, sent out by government, in 1805, to renew these labours, and never more returned.

To the individuals who first directed and en- couraged the enterprises of our countrymen in this direction, it is due thus to re-state the names and objects of their travellers, of whom Messrs. Horneman and Burckhardt were the last. Both these gentlemen perished in their ardent thirst for the diffusion of knowledge. The former embarked from London in 1797, and was heard of at Tripoli in April 1800, but since that period no intelligence whatever has been obtained respecting him. The latter, who particularly distinguished himself, after passing through Nubia, died at Grand Cairo. Latterly government has directed and equipped various expeditions to the interior of Africa, and nobly superseded those exertions of private societies.

AFRICA is represented on medals by the different symbols of the elephant, Pegasus, scorpion, lion, &c., as on a medal of Adrian, bearing on tne obverse the head of the empero HADRIANUS AUG. COwSwZ III. Pater Pa- trios, on the reverse the figure of a female crowned with the proboscis, &c. of an elephant, and holding a scorpion in her hand ; from the abundance of those animals in that coun- try, inscription AFRICA. The female has also a cor- nucopije in her arms, and a basket with ears of corn at her feet, emble- matical of its fertility. A medal of Severus bears on the obverse the head of Severus crowned with laurel, inscription SE- VERUS PIUS AUG. ; on the reverse a figure of Africa stand- ing, having ears of corn in her right hand, and a lion at her feet; inscription Ponlij'ex Max►►nws TRibunus Populi COnSul III. P. P.

AFRICANUS FLOS. Gerard mentions four species of this flower ; Miller enumerates and describes thirteen ;

but they are of no repute in medicine.

AFRICANUS, (Julius,) an historian of the third century, the author of a chronicle which was

greatly esteemed, and in which he reckons ooOO years from the creation of the world to Julius Caesar. This work, of which we have now no more than what is to be found in Eusebius, ended at the 221st year of the vulgar sera Africanus also wrote a letter to Origen on the

history of Susanna, which he regarded as sup- positions ; and we have a letter of his to Aris- tides, in which he reconciles the seeming con- tradictions in the two genealogies of Christ, recorded by St. Matthew and St. Luke. The emperor Heliogabalus at his request rebuilt the abbey of Nicopolis on the site of the ancient Emmaus. The remains of this author were printed among the Mathematici Veteres, Paris, folio, 1693, and were translated into French by M. Guischardt in his Memoires Militaires des Grecs et des Romains, Paris, 1774. The early part of his Chronology is supposed to be an abridgment of the work of Manetho, who lived 300 years B.C. The exact time of his death is doubtful. ••• Lardner says 'We may glory in Africanus as a Christian/

AFRICANUS, (Scipio.) See SCIPIO.

AFRICTA, a kind of wafers, which the an- cients used in their sacrifices.

AFRIQUE, St. a town of France m the department of the Aveyron, on the Sorgues, eleven leagues and a half S. S. E. from Rodez. Population 3580.

AFRICUS, a name sometimes given to the wind S.W. and by W. so called from its blow- ing from Africa.

Horace calls it protervus.

AFRONT'. In front.

AFSLAGERS, in commerce, persons appoint- ed by the burgomasters of Amsterdam to preside over the public sales made in that city. They must always have a clerk of the secretary's office with them, to take an account of the sale. They correspond to our brokers, or auctioneers.

AFT', -\ Gothic, aftaro, A. S.

AFT'ER, prep. & adv. 9 ^Eprtji : according to

AFT'EREYE, {Tooke, the compara-

AFT'ERWARDS. J tive of the noun aft ;

it is synonymous with hind, and back, and is a frequent prefix in compound words, but affects their signification no otherwise than its general acceptation imports ; i. e. succession in order of ime and place.

In be vyf hondred ger of Grace Seynt Austyn hyder

com.

And four score ^er and tuo, to prechy Cristendom. And aboute an hondred jer yt was and fyfty al so, After pat Saxons and Englysse verst come pys lond to. R. Gloucester, p. 230.

Help pi kynne Crist bit. for per by gynnep charite, And afterwards awhaite, hoo hap moost neede And per help yf pou hast.

Vision of Piers Plouhman, p. 288. Therfore kepe ye and do ye alle thingis, what- ever thingis thei seyen to you : but nyle ye do aftir hir werkis ; for thei seien and do not.

Wiclif, Matt, xxiii.

O ye sonnes of men, how longe wyll ye blaspheme myne honour? ad haue soch pleasure in vanyte, and seke

after lesyng ? Bible, Ps. iv.

And saw the fox toward the wode is gon And bare upon his back the cok away. They crieden, out ! harow and wala wa ! Aha the fox ! and after him they ran And eke with staves many another man.

Chaucer. Nonnes Preestes Tale, v. ii. p. 196. Uses, not thought upon before, may afterward spring up ; and be reasonable causes of retaining that, which former considerations did formerly pro- cure to be instituted Hooker.

Let go thy hold, when a great wheel runs dcwii a hill ; lost it oreak thy neck, with following it: but the great one, that goes upward, let him draw thee after. Shakspeare's King Lear.

Thou shouldst have made him. As little as a crow, or less ; ere left To after-eye him. Shaksp. Cymbelme*

Good after ill, and after pain delight ; Alternate, like the scenes of day and night.

Dryden's Fable*.

Those, (who from the pit of hell, Roaming to seek their prey on earth) durst fix Their seats long after, next the seat of God.

Paradise Lost.

Far be it from me, to justify the cruelties which were at first used towards them, which had their re- ward soon after. Bacon. When o'er the ship m undulation vast, A giant surge down rashes from on high, And fore and aft the severed ruins lie.

Falconer's Shipwreck.

AFT, in maritime affairs, abaft or behind, near the stern of the ship, as, 'To run out the guns afore and aft,' i. e. from one end to the other. ??? ' Right aft,' i. e. in a direct line with the stern when applied to any distant object. ??? 'To haul aft the fore sheet or maiu sheet,' i. e. to pull the

sails more towards the stern.

AFTER, in maritime affairs, the hinder part of the ship, as the after-hatchway, the after-cap- stan, after-sails, &c.

AFTER-GUARD, the seamen who are stationed on the poop and quarter-deck of vessels, to at- tend and work the after-sails, &c.

AFTER-BIRTH, in midwifery. See PLACENTA.-

AFTER-MATH, in agriculture, or after-grass, the second crop, or grass which springs up after mowing : or grass-math, that is cut after some kinds of corn. In cutting rowen or second crops of grass, says Mr. Loudon, more attention will be requisite than in the first, as the crops are mostly much lighter and more difficult to cut, the scythe being apt to rise and slip through the grass without cutting it fairly, except when in the hands of an expert workman. Crops of this sort should always be cut as much as possible when the dew is upon them- and as soon as ever there is a tolerable growth, as by waiting, the season is constantly getting more unfavour- able for making them into hay ; and when not well made this hay is of little or no value. When the grass has been decided to be in the proper condition for being cut down, a set of mowers proportioned to the extent of the crop should be immediately provided. In some dis- tricts, it is the custom to pay these labourers by the day ; but a better and more general practice is, to let the work at a certain price by the acre. The extent or proportion of ground that can be mown in any given space of time, must obvi- ously vary much according to the nature of the ground, the fulness of the crop, and the good- ness of the workman, but in general an acre is supposed a full day's work for an expert mower.

AFTER-KINDRED, a term used by some writers for remote kindred.

AFTER-NOON. The Romans professed to de- dicate their

mornings to business, and their after- noons to diversions, as at their game called pila, and other exercises of the body, especially walk-

ing or riding. These lasted till the eighth or ninth hour, answering to our three o'clock, which was the time for the baths. After bathing, they anointed and perfumed themselves; and about the tenth hour, went to coena, supper, about three hours before sun-set ; which done, the day was ended at the public spectacles, theatrical or am- phitheatrical sports; with music, singing, and the like.

AFTER-SAILS, in maritime affairs, comprehend all those which are extended on the mizen mast, and on the stays, between the mizen and main- masts : they are opposed to the head sails.

AFTER-THROES, or pains, enixus posteri, do- lores post partum, in midwifery, are pains re- sembling labour pains, though ordinarily less violent, and which occur after the expulsion of the placenta; being occasioned by the contraction of the uterus to expel foreign bodies from its ca- vity, as well as to reduce the capacity of the blood-vessels, which, during pregnancy acquire a considerable magnitude. They are more or less severe in different women, but are found very rarely to occur after first labour?. They are more frequent after the birth of large, than of small or middling-sized children; or after la- bours that have terminated in an unusually quick and rapid manner, particularly if the pla- centa has been extracted almost immediately after the birth of the child. After-pains, even when most severe, are seldom attended with dan- ger ; and are best relieved by the application of warm cloths, with gentle fric'tion; by giving inter- nally twenty-five or thirty drops of the tincture of opium, or by assiduously rubbing upon the re- gion of the uterus, a mixture composed of four parts volatile linament, and one of the tincture of opium; by administering

frequent draughts of warm gruel, or giving castor oil, or some other gentle purge on the following day. See LABOUR.

AFTER-SWARM, are secondary or posterior swarms of bees, frequently found to quit the hives within a fortnight after the first. Some writers distinguish the after swarms from the prime, in that the latter are directed by the vulgar, or crowd of bees, whose only rule is the fulness of the hive ; whereas the former are appointed by the ruling bees, and indicated by a noise or call, which these make for the space of two or three days, as it were, to give warning to the common herd to prepare for a march. Within eight or ten days after the prime swarm is gone, if the princess next in order find a competent number fledged and ready, she begins to tune her treble voice, in a mournful and begging note, as if she prayed the queen-mother to let them go ; to which voice, if she vouchsafe a reply, by tuning her base to the other's treble, it marks her consent ; in conse- quence of which, within a day or two after, if the weather allow, the new swarm appears. If the prime swarm be broken, the after will both call and swarm the sooner, perhaps the next day ; in which case a third, sometimes a fourth, succeeds in the same season ; but all usually within a fort- night after the prime swarm See SWA RM .

AFTO, in botany, a narna ^iven by the natives of Guinea, to a plant of the erysimum kind, which they grind to powder, and take as snuff, to cure toe head-ach. Petiver has called this plant the

woody and woolly erysimum, or hedge-mustard* of the coasts of Guinea.

AFUERA, an isle of Juan Fernandez, m the Pacific, on the coast of Chili. Its coasts abound with sea-fowl and wolves. W. long. 80►►. 4 1'. S. lat. 33►►. 47'.

AFWESTAD, a town of Sweden, in Dalecar- lia, seated on the Dala ; which has a copper work, a church, a post-office, and a 'mint for coining. In the middle

of the last century, a portion of the copper coinage of the country was here conducted, but this is now discontinued.

AFWIOWARA, a village and district of Kan- tokeino, in Lapland, situated on the mountains under Norway. It has a bailiwick and a court of law.

AFZELIA, in botany, a genus of the didyna- mia angiospermia class and order ; the characters of which are, CAL. quinque-partite, COR. campa- nulated, and the capsule rotundated, acuininated, double-celled, gaping at the apex and polysper- mous; with hemisphermic receptacles. There is one species, the Afzelia Cassioides, the Afzelia of Gmelin. Also anew species of the decandria monogynia class and order, near the Hymenaa, and of the natural order of leguminosae : the essential characters of which are, CAL. tubulose with a limb quadrifid, deciduous ; PET. four, unguiculated, with a very large head : the fila- ments two, superior, sterile ; the legumen many- celled ; the seeds arillated at the base. It is found in Africa, near the equinoctial. Linnaean Trans, vol. iv. p. 221.

AGA, in the Turkish language, signifies a great lord or commander. Hence the general of horse is denominated spahilar agassi ; and the aga of the Janissaries is the commander in chief of that corps. He is an officer of great import- ance ; and is the only person who is allowed to appear before the Grand Signior, without his arms across his breast, in the posture of a slave. Eunuchs at Constantinople are in possession of most of the principal posts of the seraglio, and the title aga is given to them all, whether in employment or out. It is also given to all such as are without employ, and especially to wealthy landholders. ??? We find also agas in other coun- tries. The chief officers under the Khan of Tartary are called by this name. And among the Algerines, we read of agas chosen from among the boluk bashis (the first rank of military officers), and sent to govern in the chief towns and garrisons of that state. The aga of Algiers is the president of the divan, or senate. For some years, the aga was

the supreme officer, and governed the state in place of bashaw, whose power dwindled to a shadow. But the soldiers rising against the boluk bashis, or agas, mas- sacred most of them, and transferred the sovereign power to the califf, with the title of Dey or king.

AGA, or ADJA, in geography, a village about half a mile from Anamaboa, on the gold coast of Africa, where the Dutch formerly had a fort. The landing is difficult and dangerous ; but the adjacent country produces several valuable com- modities, and among others a very fine cotton.

AGAAZI, or AGAGI, in geography, the Abys- sinian denomination of a class of shepherds, who are said to have been employed by the descend-

ants of Cush, the first inhabitants of the country, and by dispersing the produce of Arabia and the eastern coast of Africa over the continent, to nave acquired wealth and influence. Agag, says Mr. Bruce, denoted the nobles and chiefs of the armed shepherds, whence came their title King of kings ; and the plural of this is agagi, or, as it is written in the Ethiopic, agaazi. The king of Amalek, mentioned 1 Samuel, ch. xv. and slain by Samuel, was, according to this writer, a shepherd of this kind. Bruce’s Trav. v. i. 387.

AGA CRETENSIUM, in botany, the Spanish milk-thistle.

AGABUS, Aya/3oe, Gr. a grass-hopper, a pro- phet, who foretold the famine that happened in the reign of Claudius Caesar, A. D. 44, and the persecution of Paul by his countrymen at Jeru- salem. See Acts xi. 28, and xxi. 10. He is said to have suffered martyrdom at Antioch.

AGA DA, an Egyptian or Abyssinian wind instrument,

of the flute species, but with a mouthpiece, like a clarionet.

AGADEER, theGesert Ghessem of Leo Afri- canus, or SAXTA CRUZ, a noble port, and once a very flourishing town of Morocco. No port of the empire has so fine and secure a road for ves- sels. The town stands on the summit of a mountain, and is defended with batteries. Its inhabitants were transferred by Seedy Mahomet to Mogodor, and the place has never since reco- vered its original constitution.

AGADES, (Audagost, of Edrissi,) a flourish- ing town of central Africa, on the caravan route from Tripoli and Fezzan to Cassina. It is forty- seven days journey from Mourzouk, and many of the merchants from that quarter stop at Agades, to change their commodities for those of Soudan, and the countries to the south of the Niger. The merchants of this place are the sole carriers of the salt which is found on the banks of the lake of Domboo, in the desert of Bilma, though that territory belongs to Bornou. Senna of a very superior quality grows in the neighbouring mountains. The African Associa- tion (1792) states Agades to be one of the cities of Kashna, but Horneman reports it to be the capital of an independent kingdom called Asben. It is the centre of the trade of the interior of Africa.

AGADEEP, a town of Bengal, on the Bhaga- rutty, 14 miles south of Plassey. The word signifies 'The extreme Island,' and the Hindoos state that the sea originally reached this place.

AGAG, JJK, Heb. i. e. an upper room, a king of the Amalekites, equally cruel and effeminate, who was spared by Saul, notwithstanding the express command of the Almighty, and slain by Samuel, because ' his sword had made many women childless.' His cowardly dread of death, recorded in 1 Samuel, xv. affords one of num- berless proofs recorded in history, that those monsters, who put no value on the lives of others, are generally most anxious to preserve their own.

AGAG IT E, an epithet given to Haman, the proud prime minister of Persia, probably because he claimed, or deduced his descent from the ty-

rant mentioned in the last article ; an ancestor, worthy of such a descendant.

AGAGEER, a name given in Abyssinia to those who hunt and kill the wild elephants. Theii name is derived from the word Agar, which sig- nifies to hough or ham-string with a sharp wea- pon. These persons dwell constantly in the woods, and live entirely on the flesh of the beasts which they kill, which are chiefly the elephant and rhinoceros. They are light and agile, both on horseback and on foot ; of a swarthy com- plexion : and have European features. The manner in which they kill the elephant is as fol lows: two men, altogether naked, mount the same horse, which the foremost manages, and the hindmost has a broad sword, the handle of which he grasps with his left hand, whilst with his right he takes hold of a part of the blade, round which whip-cord is twisted. The edges of the sword are as sharp as a razor, and yet he carries it with- out a scabbard. When the elephant is found feeding, the horseman runs before him, making noises to irritate him ; the animal incensed by this, attempts to seize the horse and rider with his trunk, instead of endeavouring to make his escape. The horseman after some evolutions of this kind, rides up to the elephant and drops his companion on the off side ; and, whilst the rider engages the attention of the animal, the other person gives him a stroke above the heel, in that part which in the human subject is called the tendon of Achilles. After which, the horseman turns round and takes up his com- panion. Sometimes an expert Agageer will kill three out of one herd. The blow commonly se- parates the tendon, or at least wounds it to such a degree that the weight of the animal breaks it. In this state the horseman and his companion speedily dispatch the animal with their javelins and lances ; when he is slain, the flesh is cut off the bones into strings, and these are hung

on the branches of trees to dry, without salt ; and, are then laid by for their stock of provision in the season of the rains. AGAI. See AGIO.

AGAIN’, a. -\ Sax. ajen, from Onsejjen,

AGAINST,’ (to meet; to oppose; to en-

AGAIN’WARD, ►► counter: ►►► Tooke. Again,

AGAIN’SAY. J and its cognate words, denote

repetition, transition, opposition; in our earlier

literature, we find ayen, ayenst, agane ; agens,

agen, still later.

He gedere ys ost anon

To werre, and to stonde a%eyn pe Romaynes ys fou. R. Gloucester, p. 80.

Sir, said kyng Guyon, turne ageyn, I rede, Frankis and Burgoillon, els alle gos to, dede.

R. Brunne, p. 191.

For I schal gyue to you mouth and wisdom to

►►►whiche all youre aduersaries schulen not mowe agen-

ttonde and agenseye. Wiclif. Luke xxi.

Not yeldinge yuel for yuel, neither cursyng for

cursyng, but agenward blessynge.

Wiclif. Peter iii.

And therfore is I come, and eke Alein,

To grind our corn, and carry it home agein:

I pray you spede us heuen that ye may.

Chaucer. The Reeve’a Tale, v. i. p. 159. T

AGA

Long was I, lady Luckc, your snniing man, And now haue lost agayne all that I gat, Wherfore whan I thinke on you novre and than, And in my mynde remember this and that, Ye may not blame me though I beshrew your cat, But iM fayth I blesse you agayne a thousand times, For lending me now some laysure to make rymes. Sir T. More’s Davy the Dycer.

flow oft do they [angels] with golden pinions cleave

The flitting skies like flying pursuivant,

Against foul fiends to aid us militant. Spenser.

Thence she them brought into a stately hall, Wherein were many tables fair dispred, And ready dight with drapets festival, Against the viands should be ministred.

Faerie Queene. The like charge was given them against the time,

they should come to settle themselves in the land

promised unto their fathers. Hooker.

Some say, that ever, ‘gainst that season comes, Wherein our Saviour’s birth is celebrated, The bird of dawning singeth all night long : And then they say, no spirit walks abroad ; The nights are wholesome ; then no planets strike ; No fairy takes, no witch hath power to charm ; So hallow’d and so gracious is the time.

Shakspeare’s Hamlet.

Hope is a lover’s staff, walk hence with that, And manage it against despairing thoughts.

Shakspeare’s Two Gentlemen of Verona.

AGALACTIA, AGALAXY, from a and yoXa, Or. Want of milk.

AGALLOCHUM, from AyoXXojuai, I boast, alluding to its excellent odour, a medicinal wood imported from the East Indies, usually in small pieces, and of a very fragrant scent. See XYLO- ALOES.

AGALMA, AGALMATA, Gr. AyaX/za, in an- tiquity, a term originally used to signify any kind of ornament in a temple; but afterwards for the statues only, as being most conspicuous ; or the temple itself. >.

AGALMATOLITE, a soft mineral substance, capable of being cut with the knife, of a dull greenish, reddish, or yellowish-white color, and consisting of silex and alumine, with a little potash. It is chiefly found in China, where it is wrought into figures and various ornaments. It has lately been recommended as a substitute for the bricks made of Cornish porcelain clay, to measure high heats in the pyrometer of Wedge- wood ; it being capable of standing a great heat, and of contracting its dimensions very consider- ably and equably.

AGAMA, in zoology, a species of the lacerta, :n a long and round tail, under the head and above the neck aculeated with reverse scales It is the iguana cordylina.

AGAMA, in zoology, another variety, called guana salam andrina, is imbricated on the tail with large scales.

AG'AME. In game. See GAME. For by my trouth, I sa> it not in yame, To wend as now, it were to me a shame

Chaucer', Third Book of Troilut, fol. 170 I am right glad with you to dwellen here

'Ut agame I would go. jdem

AGAMEDES, in fabulous history, is said

along with his brother Trophonius, to have built

the chancel, or oracle, of the famous temple of Apollo, at Delphi, of five whole stones : and that when they had finished their work, they re- quested of the god that they might receive for their reward what he judged best : and within three days after, they were both found dead in bed!

AGAMEMNON, the son of Atreus and JErope, was captain-general of the Trojan ex- pedition. It was foretold to him by Cassandra, that his wife Clytemnestra would be his death ××× yet he returned to her, and accordingly was mur- dered by ^Egisthus, who had corrupted his wife in his absence, and by her means usurped the government. Homer calls him icpawv, and ava××

AGAMENTICUS, a mountain of north Ame- rica, in the province of Maine. Lat. 43××. 16'. It is about eight miles from the sea, and is a noted land-mark for mariners. Also a river of North America, in the centre of York county, and district of Maine. It receives its waters from the ocean through the bay of Pascataqua, and has only a scanty supply from streams of fresh water. Its mouth is about four miles south from Cape Neddie river, and admits small vessels.

AGAMESTER,the eleventh archon of Athens.

AGAMI, in ornithology, a name applied by Buffon to the psophia crepitans of Linnaeus, the grus psophia of Pallas, the Phasianus Antilla- rum of Brisson, and the gold-breasted trumpeter of Latham ; the specific character of n hich is, that its head and breast are smooth, green, and shining. The bird is about twenty-two inches long.

AGAN, one of the Ladrone islands, where Magellan, in search of the Moluccas, was assas- sinated.

AGANA, a large town of Guam, one of the Ladrones, built by the Spaniards when they colonized the island. It is pleasantly situated on the western coast, 12 miles N. E. of the harbour. The houses, which stand on posts about three feet from the

ground, are mostly composed of wood, and are laid out in straight and long streets. The Spaniards have a large government house, a royal magazine, and barracks for 500 men. These, together with a fine church in the Spanish style, and two convents or colleges, are of brick. The town has some beautiful gardens, and is very well defended. It stands in Lat. 13►►. 26′. N.

AGANIPPE, in antiquity, a fountain of Bce- otia, at mount Helicon, on the frontier of Phocis and Bceotia, sacred to the Muses, and running into the river Permessus ; Ovid seems to make Aganippe and Hippocrene the same. Solinus distinguishes them, and ascribes the blending them to poetical license.

AGANIPPIDES, in ancient poetry, a desig- nation given to the Muses, from Aganippe.

AGAOMA, or AGAMA, a district of Abyssinia, m the province of Tigre, to the south of Dixan. During the government of Ras Michael it paid a considerable tribute of gold and cattle; but since Shum Woldo became master of it, it has yielded but a small revenue.

AGAPANTHUS, quasi oyaTrjjroc av0oc, plea

sant flower, in botany, a genus of the hexandriu monogynia class and order, of the natural order Liliacese, the Spathaceaj of Linnaeus, and the Narcissi of Jussieu. Its characters are,CAL. aspathe common gaping at the side; COR. one-petalled, funnel-shaped and regular ; tube cornered, as if composed of six claws, border six-parted, with the parts oblong and spreading ; STAM. six fila- ments inserted in the throat, shorter than the co- rolla, declinate ; the anthers kidney-shaped and incumbent; PIST. a superior germ, oblong, three- cornered : the style filiform, of the length of the stamens -and

declinate ; the stigma simple, or trifid ; the pericarpium is an oblong capsule, three-sided, three-celled, three-valved : valves navicular, with contrary dissepiment; the seed numerous, oblong, compressed, and enlarged with a membrane. There is one species, viz. agapanthus umbellatus, the crinum Africanum of Linnaeus, or African blue lily. This is the African tuberose hyacinth, with a blue umbel- lated flower. The root of this plant is composed of thick fleshy fibres ; from the same head arises a cluster of leaves, and a stalk supporting an umbel of blue flowers, each flower standing on a pedicle, about an inch long, which make a fine appearance. They come out at the end of Au- gust, or beginning of September, and frequently continue in beauty till spring. The flowers are those of the hemerocallis, but this genus is dis- tinct from it in its spathe. It is a native of the Cape of Good Hope, from whence it was brought to Holland, and in 1692 it was cultivated at Hampton Court. AGAPE'. See GAPE.

In himself was all his state ; More solemn than the tedious pomp, that waits On princes ; when their rich retinue long, Of horses led, and grooms besinear'd with gold, Dazzles the crowd, and sets them all agape.

Paradise Lost. Dazzle the crowd, and set them all agape. Philips.

AGAPE, in ecclesiastical history, from Aya-irq, Gr. love, the love feast, or feast of charity, in use among the primitive Christians ; when a liberal contribution was made by the rich to feed the poor. St. Chrysostom gives the following account of this feast, which he derives from the apostolical practice. He says, ' The first Chris- tians had all things in common, as we read in the Acts of the Apostles ; but, when that equality of possessions ceased, as it did even in the Apos- tles time, the agape, or love feast, was substituted in the room of it. Upon certain days, after par- taking of the Lord's supper, they met at a com- mon feast ; the rich bringing provisions, and the poor, who had nothing, being invited.' It was always attended with

receiving the holy sacra- ment ; but, there is some difference between the ancient and modern interpreters as to the cir- cumstance of time, viz. ††† Whether this feast was held before, or after the communion. St. Chry- sostom is of the latter opinion ; the learned Dr. Cave of the former. ††† These love feasts, during the three first centuries, were held in the church without scandal or offence ; but, in after times, the heathens began to tax them with impurity. This gave occasion to a reformation of the agapse. The kiss of charity, with which the ceremony

used to end, was no longer given between dif- ferent sexes; and it was expressly forbidden to have any beds or couches, for the conveniency of those who should be disposed to eat more at their ease. Notwithstanding these precautions, the abuses committed in them became so noto- rious, that the holding of them, (in churches at least,) was solemnly condemned, at the council of Carthage, in the year 397. Some modern sects, as the Wesleyans, Sandemanians, &c. have attempted to revive this feast.

AGAPETyE, in ecclesiastical history, a aame given to certain virgins and widows, who, in the ancient church, associated themselves with, and attended on, ecclesiastics, from motives of piety and charity. In the primitive days there were women instituted deaconesses ; who, devoting themselves to the service of the church, took up their abode with the ministers, and assisted them in their functions. They afterwards degenerated into libertinism ; insomuch, that St. Jerome asks, with indignation, unde agapetarum pestis in ec- clesias introiit ? This gave occasion to councils to suppress them.

AGAPIS, in natural history, a stone of a dusky yellow, or the colour of a lion’s skin ; held in great esteem in many nations, on account of its supposed virtues, as an anodyne and vulnerary.

AGAR, Abraham’s concubine. See HAGAR.

AGARD, Arthur, a learned English antiqua- rian, born at Foston, in Derbyshire, in the year 1540. His fondness for English antiquities in- duced him to make many large collections ; and his office as deputy chamberlain of the exche- quer, which he held forty-five years, gave him great opportunity of acquiring skill in that study. Similarity of taste brought him acquainted with Sir Robert Cotton, and other learned men, who associated themselves under the name of The Society of Antiquaries ; of which society Mr. Agard was a conspicuous member. He made the Doomsday book his peculiar study; and com- posed a work to explain it, under the title of Tractatus de usu et obscurioribus verbis libri de Domesday : he also compiled a book for the ser- vice of his successors in office, which he de- posited with the officers of the king's receipt, as a proper index for succeeding officers. A selec- tion of his Enquiries into the polity and con- stitution of England, was published after his death by Mr. Hearne in the papers of the Anti- quarian Society. All the rest of his collections, consisting of at least twenty volumes, he be- queathed to Sir Robert Cotton : and died in 1615.

AGAREE, a station for caravans between, Cassena and Gadanus, in the great Desert of Sahara, one hundred and thirty miles S. E. of Gadanus.

AGARENI, or AGARENIANS, the followers of the religion of Mahomet. The word is derived from Agari, or Hagar, handmaid of Abraham and mother of Ishmael ; and properly denotes the Arabs, called also Ishmaelites, and more lately Saracens.

AGARIC, in botany. See AGARICUS.

AGARIC, in pharmacy, a kind of fungous ex- crescence, growing on the trunks and large branches of several trees ; but chiefly on the larch tree, and upon some kinds of oak, when

decayed. Three fourths of it consist of a re- sinous substance, and the remainder is a slimy mucilaginous earthy matter, so tenacious, as scarcely, by any method to be dissolved by water. It is easily cut with a knife, friable be- twixt the fingers, and has no hard, gritty, or roloured veins. It is an ingredient in the the- riaca Andromachi, where it is admitted in the quality of a cordial : though its cardiac virtue is excepted to as much as its purgative. It was in much esteem among the ancients, but has deservedly fallen into disrepute of later years, as it occasions insupportable nausea. Tourne- fort enumerates eighteen species of agaric. But it is more generally divided into three kinds; the male, the female, and the false or spurious agaric. The best comes from the Levant; that which comes from Savoy and Dauphiny being less esteemed. Holland also affords some, but that is reckoned the worst ; because it is grated, and whitened at the top with chalk. By a chemical solution it passes almost wholly into oil ; it yields no volatile salt, but abounds with a sort of flaky earth, and acid phlegm ; as to texture, it seems much to resemble colocynth.

AGARIC, FALSE, or bastard, or oak agaric, is that which grows on those trees. It is com- monly reddish, and very heavy, it is very little esteemed, which probably occasioned its being called the false agaric. The druggists look only upon that which grows on the larch tree to be the right sort.

AGARIC, FEMALE, is the most esteemed in medicine. To be good it ought to l►►e white, ‘arge, brittle, and bright, so as to be easily pul- verised ; of a lively and penetrating scent, and of a bitter taste. This was thought efficacious as a styptic, to restrain not only venal, but ar- terial haemorrhages without the use of liga- tures. Its reputation, however, did not long subsist ; and after repeated trials, the surgeons of London were obliged to discontinue it as in- efficacious and unsafe.

AGARIC, MALE, otherwise called the common or heavy agaric, is of a yellowish colour, and pretty solid.

It is commonly used in dyeing black, and is reckoned among the non-colouring drugs, which the dyers of the best woollen cloth and serges are obliged to use in France. It is called non-colouring, because it can produce no colour of itself, without being mixed with other ingredients.

AGARIC, MINERAL, a kind of stone, or marie which is found in the cliffs of rocks in different parts of Germany. It is very white and light whence, it is called milk of the moon. It s also named marrow of stone, or lithoma- gra, and stenomagra. Some tell us that the calcination of this stone is performed by the vapours of the metals within the rocks where J found. It is used internally against haemorr- hages, the stranguary, gravel, and especially dysenteries ; externally, to dry and heal old ul- cers, stop defluxions of the eyes, &c.

ON. See last and next articles

f►►ABICU8, or MUSHROOM, a genus of the mler of fungi, belonging to the cryptogamia dass of plants. Only the esculent kinds of nushrooms are cultivated; and the following

AGA

method is used by the gardeners who raise them for sale. ►►► If the young mushrooms cannot be procured from gardens, they must be looked for in rich pastures during August and Septem- ber: the ground must be opened about their roots, where it is frequently found full of small white knots ; which are the off-sets, or young mushrooms. These must be carefully gathered in lumps, with the earth about them : but as this spawn cannot be found m the pasture, ex- cept at that season when the mushrooms are naturally produced, it may be searched for at any time in old dung-hills, especially where there has been much litter, and it hath not been penetrated by wet so as to rot ; it may also be found very often in old hot-beds ; or it may be procured by mixing some long dung from the stable, which has not been thrown on a heap to ferment, with

strong earth, and put under cover to prevent wet getting to it. The spawn commonly appears in about two months after the mixture is made ; but proportionably the sooner the more effectually the air is excluded, provided the mixture is not kept so close as to heat. Old thatch, or litter which has lain long abroad so as not to ferment, is the best covering. The spawn has the appear- ance of white mould shooting out into long strings, by which it may be easily known where- ever it is met with. ††† The beds for receiving the spawn are now to be prepared. These should be made of dung in which there is plenty of litter, but which should not be thrown on a heap to ferment : that dung which has lain spread abroad for a month or longer is best. The beds should be made on dry ground, and the dung laid on the surface ; the width at the bottom should be two and a half or three feet, the length in proportion to the quantity of mushrooms desired; then lay the dung about a foot thick, covering it with strong earth about four inches deep. Upon this lay more dung, about ten inches thick; then another layer of earth, still drawing in the sides of the bed, so as to form it like the roof of a house ; which may be done by three layers of dung, and as many of earth. When the bed is finished, it must be covered with litter or old thatch, both to prevent its drying too fast and to keep out wet. In this situation it ought to remain eight or ten days, when it will be in proper temper- ature to receive the spawn ; for this is destroyed by too much heat; though, before planting, it may be kept very dry, not only without detri- ment, but with considerable advantage. ††† The bed being in a proper temperature for the spawn, the covering of litter should be taken off, and the sides of the bed smoothed; then a covering of light rich earth, about an inch thick, should be laid all over the bed ; but this should not be wet. Upon this the spawn must be thrust, laying the lumps two or three inches asunder : then gently cover this with the same light earth, above half an inch thick; and put the covering of litter over the bed, laying it so thick as to keep out wet, and prevent the bed from drying. In spring

or autumn the mushrooms will begin to appear, perhaps in a month after making; but when *he beds are

made in summer or winter, they are much longer before they produce. In any season, however, they ought not to be hastily destroyed ; since mushroom beds have been known to pro- duce very plentifully, even after the spawn has lain in them five or six months. When the beds are destroyed, the spawn should be care- fully preserved, and laid up in a dry place, at least five or six weeks before it is again planted. ††† The difficulty of managing mushroom beds is, to keep them always in a proper degree of moisture. In the summer season they may be uncovered to receive gentle showers of rain at proper times; and in long dry seasons the beds should now and then be watered, but much wet ought by no means to be suffered to come to them. During the winter season they must be kept as dry as possible, and so closely covered as to keep out cold. In frosty or very cold weather, if some warm litter, shaken out of a dung heap, is laid on, the growth of the mush- rooms will be promoted : but betwixt this and the bed, a covering of dry litter must be inter- posed ; which should be renewed as it decays ; and as the cold increases, the covering must be thickened. By attending to these directions, plenty of mushrooms may be produced all the year round. One bed will continue good for many months. For a particular, perhaps fabulous, method of producing mushrooms, see LYNCU- RIUS. Botanical writers enumerate fifty-five species belonging to this genus; of which the most remarkable are the following :

1. AGARICUS CAMPESTRIS, or common mush- room, which has the top or cape first of a dirty cream colour, convex, and if but just expand- ing, the under part,

or what is called the gills, is of a bright flesh red. It is found in woods, old pastures, and by road sides ; and is in the greatest perfection in September.

2. AGARICUS CHANTARELLUS, or chantarelle agaric, is rather a smaller fungus than the former. This plant broiled with salt and pepper has much the flavour of a roasted cockle ; and is esteemed a delicacy by the French, as is the Agaricus Pratensis. It is found in woods and high pastures, and is in perfection about the end of September.

3. AGARICUS CINNAMOMEUS, or brown mush- room, has a cap the colour of fresh tanned hides. At first it is hemispherical, firm, even, and fleshy, with mostly a small rising in the centre ; but when old is quite flat. The whole plant has a pleasant smell, and when broiled gives a good fla- vour. It is found in woods in September and October.

4. AGARICUS CLYPEATUS, or long-stalked mushroom, has a hemispherical hat tapering to a point, and clammy ; the pillar is long, cylin- drical, and white ; the gills are white, and not concave, dusted with a fine powdery substance on each side ; the root is bulbous, long, and hooked at the end. It is found in September, in woodlands and pastures.

4. AGARICUS DELICIOSUS, or orange agaric. This fungus, well seasoned and then broiled, has the exact flavour of a roasted muscle. Its prime time is September, and it is to be found in high dry woods.

6. AGARICUS MCSCARIUS, or reddish mush-

room. This is the moucho-more of the Russians, Kamtschadales, and Koriacs, who use it as an instrument of intoxication.

7. AGARICUS PRATENSIS, or champignon, very common upon heaths and dry pastures.

8. AGARICUS QUERCINUS, or agaric of the oak, as well as many other species of this genus, grow on dunghills, or rotten wood, in cellars, or on the

trunks of trees. It was formerly an article in the Materia Medica; but is now deservedly rejected.

9. AGARICUS VIOLACEUS, or violet musl}- room. It is found in woods in October. Hud- son's bulb sus is only a variety of this plant.

AGARICUS. Medical men have differed about the qualities of mushrooms ; some considering them as a rich nourishment and perfectly inno- cent, when properly chosen ; and others assert- ing them to be extremely deleterious. Most of the fungi are indeed of a hurtful quality; and with respect to the whole tribe, the esculent are very few. But esculent mushrooms are very nutritive, very readily alkalescent, and more so without immediate acescency than any other vegetable : they are therefore a rich nourishment, and much akin to animal food ; on which ac- count they may be indulged in considerable quantity to strong persons. It requires, how- ever, skill to distinguish this esculent kind ; and very few, especially of those who are commonly employed to gather them, viz. the servants, have studied Clusius, or other authors who have been at the pains to distinguish them. Perhaps our esculent mushrooms, when old, acquire a dan- gerous acrimony; and for these reasons Dr. Cullen is of opinion, that it is for the most part prudent to avoid them. In the warmer climates they may be used as light food ; but here it is preposterous to use them along with animal food, as they do not correct its alkaline tendency. The 1st, 2d, 3d, 5th, 7th, and 9th species above enu- merated, are the only species that can be safely recommended as edible. It is well known, that soil and situation have a great influence upon the properties of plants ; and these being of a singular nature, and absolutely between that of an animal and vegetable, may be more power- fully affected than a complete species of either- because they have neither leaves nor branches to carry off the noxious damps and vapours of a stagnant soil, as a perfect vegetable has ; nor have they any gross excremental discharges, like those of a living animal. The gills, no doubt, exhale some of their superfluous moisture ; but their situation is such, that any

thick steam from Ihe earth may lodge in them, and by clogging their excretory ducts, render the plants morbid. Thus they soon run into a state of putrefaction, and become a prey to worms, flies, and other insects. The common mushroom, which is in general esteem, though we have several others better, is not safely eaten when produced from a moist soil. Those who gather mushrooms for sale, should therefore have particular regard to the lands they collect them from, especially it they know they are to be broiled ; but if they be intended for catchup, perhaps they may be less cautious, as the salts and spices, with which the juice is boiled, may correct any evil dispo sition in the plants. But, even in this case

catchup made of mushrooms taken from a dry soil, has a more aromatic and pleasant flavour, than that which is made from those taken from a moist one, and it will always keep a great deal better.

AGASI, or AGASSI, in Turkey, a title of ho- nour, synonymous with AGA, which see.

' _

AST'o From A. S. Eer-ean, to see, to AGAZE', > look at ; or from the Gothic, agyan, AGAZED'. j to fear ; in our usage, the two roots are apparently combined, as it signifies to gaze with terror ; amazed ; frighted to astonishment. So com a tempest wilde. his schip had alle ouer

ronnen,

)>e maryner was agast, bat schip bat -wild not go. Lotes did pei kast, for whom pei had pat wo.

R. Brunne, p 124.

And he pat eete of pat seed, sholde beevene trywe With God and nat agatt. bote of gyle one.

Vision of Piers Plouhman, p. 381. So as they travell'd, so they 'gan espy An armed knight toward them gallop fast ; That seemed from some feared foe to fly, Or other grisly thing that him agast.

Faerie Queene. Hucdreds he sent to hell ; and none durst stand

him ???

Here, there, and every where, enrag'd he flew : The French exclaim'd, ' The devil was in arms ! ' All the whole army stood agased on him.

Shakspeare's Henry VI. Thus roving on,

In confus'd march forlorn, th' advent'rous bands (With shudd'ring horror pale, and eyes agast) View'd first their lamentable lot ; and found No rest. Paradise Lost.

Loud was the noise, aghast was every guest, The women shriek'd, the men forsook the feast.

Dryden's Theodore and Honoria. Stout Glo'stcr stood aghast in speechless trance : To arms ! cried Mortimer, and couch'd his quivering lance. Gray's Bard.

- The pilgrim oft, At dead of night, mid his Oraison hears Aghast the voice of time, disparting towr's Tumbling all precipitate down dash'd, Rattling around loud thund'ringto the moon.

Dyer's Ruins of Rome.

The church-bell tolls, deep sounding down the glade, The solemn hour for walking spectres made ; The simple plough-boy, wakening with the sound, Listens aghast, and turns him startled round, Then stops his ears, and strives to close his eyes, Lest at the sound some grisly ghost should rise.

Kirke White’s Poems.

AGASYLLIS, in the Materia Medica, a name given by some of the ancient Greek writers to gum ammoniac ; and by Dioscorides, to the tree which produced that gum. By their descrip- tions of this medicine, it appears not to have been the same which we know by this name.

AGATE, an instrument used by gold wire- drawers ; so called from the agate in the middle of it, which forms its principal part. See the following article.

AGATE, in mineralogy, a species of precious stone, or rather a silicious mixture of jasper, amethyst, quartz, opal, heliotrope, and cornelian! blended in variable proportions with a base of ralcedony. Its combinations, however complex, are distinguished by a characteristic speciality’ the component parts sliding into each other by such nice gradations, as show them to have been

all of simultaneous formation. In this respect it differs from silicious BRECCIA, in vhich angular fragments of silicious pebbles are cemented by a compost of quartz, calcedony, or flint, of a con- stitution wholly distinct from that of the invested parts. Differing according to the appearance and transparency of its component substances, the agate is never wholly opaque like the jasper, nor transparent like the quartz crystal. Its most common colours are yellow, red, blue, milk- white, honey- orange, an ochre yellow, flesh- blood, reddish brown, brownish green, violet- blue, &c. through which the opaquer parts appear like dots, eyes, zones, bands, with various other ramifications, and are sometimes variegated with clouds and veins of various colours, figures, and dimensions. This species of mineral is found in the form of irregular rounded nodules, from the size of a pin’s head, to more than a foot in dia- meter; sometimes in strata, and occasionally stalactitic. Several varieties of agate are dis- tinguished by the lapidaries : the finer semi- transparent kinds, consisting principally of chal- cedony, are called oriental :

in the banded agates the colours are disposed in straight parallel lines or bands; while in the fortification agate, the most beautiful of all the varieties, they are ar- ranged in waved and angular concentric zones : the landscape agate, by the name alone, suffici- ently declares its irregular appearance : the moss agate, or Mochoa stone, is filled with dendritical crystallizations of iron ore, so nearly resembling some kinds of moss as to have been actually mistaken for real vegetables by Daubenton. These semipellucid gems were originally found on the banks of the river AXHTTIG, in Sicily, whence their name is derived. They are now, neverthe- less, common in many parts of the world. The largest and most beautiful agates which this island produces are known by the name of Scotch pebbles, and are found chiefly in the neighbour- hood of Dunbar.

We enumerate the following varieties of this mineral as the most remarkable, arranged ac- cording to the different colours of the ground.

I. Of those with a white ground there are three species. 1. The dendrachates macoa stone, so called from that part of Arabia, whence it is derived, seems to be the same with what some authors call the achates with rosemary in the middle, and others achates with little branches of black leaves. It consists of translucent cal- cedony. Its dark outline of arborization, like vegetable filaments were formerly attributed to deposits of iron, and manganese ; but are now thought to arise from mineralized plants of the crypto gamus. 2. The dull milky-looking agate. This, though greatly inferior to the former, is a very beautiful stone. It is common on the shores of rivers in the East Indies and also in Germany and some other parts of Europe. Our lapidaries cut it into counters for card playing, and other toys of small value. 3. The lead-coloured agate, called the phassachates by the ancients.

II. Of the agates with a reddish ground there are four species. 1 . An impure one of a flesh co-

loured white, which is but of little beauty in comparison with other agates. The admixture of flesh-colour is but very slight; and it is often found without any clouds, veins, or other variega-

tions; but sometimes it is prettily veined or variegated with spots of irregular figures, having fimbriated edges. It is found in Germany, Italy, and some other parts of Europe; and is wrought into toys of small value, and into the German gun-flints. It has been sometimes found with evident specimens of the per- fect mosses bedded deep in it. 2. That of a pure blood-colour, called hasmachates, or the bloody agate, by the ancients. 3. The clouded and spotted agate, of a pale flesh-colour, called by the ancients the cornelian agate, or sardachates. 4. The red lead-coloured one, variegated with yellow, called the coral agate, or corolla achates, by the ancients. III. Of the agates with a yel- Imcish ground, there are only two known species ; the one of the colour of yellow wax, called cerachates by the ancients; the other a very elegant stone, of a yellow ground, variegated with white, black, and green, called the leonina, and leonteseres by the ancients. IV. Of the agates with a greenish ground, there is only one known species, called by the ancients jaspachates.

The Ribbon agate, which exhibits so elegant an appearance, occurs in porphyry and gneiss, and consists of alternate parallel layers of chalcedony with jasper, quartz, or amethyst. The brecciated a^ate, a beautiful variety containing fragments of the former, lies in a base of amethyst ; of both the most beautiful specimens are found in Saxony and Siberia. Fortification agate, found in nodules of various imitative shapes, occurs at Oberstein, on the Rhine, and in Scotland. It is imbedded in amygdaloid, and on cutting it across the interior

zig zag, parallel lines are found to re- semble the plan of a modern fortification. Even the centre contains a splintery mass of quartz and amethyst, surrounded by a jasper and chal- cedony. The moss agate, to which we have al- ready referred, appears to consist of chalcedony, arborized after the form of vegetable filaments; and on some occasions irregularly traversed with veins of red jasper. According to the con- jecture of Daubenton, Dr. M'Culloch discovered in mocha and moss agates, aquatic confervas, coated with iron oxyde; but exhibiting their natural form and colours. Mosses and lichens have been also detected along with chlorite, in vegetations. In the possession of the earl of Powis, is an onyx agate set in a ring which con- tains the chrysalis of a moth. Hollow nodules of agate, called geodes, present interiorly crystals of colourless or amethystine quartz, scattered occasionally with crystals of stilbite, chabasie, and capillary mesotype. In the interior of those found among the hills of Dauria, on the right bank of the Chilca, M. Patrin occasionally detected bitumen. The geodes found in volcanic districts occasionally contain water in their cavities; These are chiefly found in insulated blocks of a lava, distinguished by an eardiy fracture. When cracked the liquid escapes by evaporation, but may be restored by immersing them in hot water for a short time.

Agates are most prized when the internal figure nearly resembles some animal or plant ; and these are more numerous than might be ima- gined, some containing natural representations of men, lions, tigers, &;c. Yelschius had in his

custody a flesh-coloured agate, on one side of which appeared a half moon ii gre^ perfection, represented by a milky scm.circle ; on the other side, the phases of vesper, or the evening star : whence he denominated it an aphrodisian agate. An agate is mentioned by Kircher, on which was the representation of a heroine armed ; and one in the church of St. Mark in Venice, has the re- presentation of a king's head adorned with a diadem.

On another, in the museum of the prince of Gonzaga, was represented the body of a man, with all his clothes, in a running pos- ture. A still more curious one is mentioned by De Boot, wherein appears a circle struck in brown, as exactly as if done with a pair of com- passes, and in the middle of the circle the exact form of a bishop with a mitre on : but invert- ing the stone a little, another figure appears ; and if it is turned yet further, two others appear, the one of a man, and the other of a woman. But the most celebrated agate of that kind is that of Pyrrhus, wherein were represented the nine muses, each with their proper attributes, and Apollo in the middle playing on the harp. In the emperor's cabinet is an oriental agate of a surprising bigness, being fashioned into a cup, whose diameter is an ell, abating two inches. In the cavity is found delineated in black specks, b. xristor. s. xxx. Other agates have also been found, representing the numbers 4191, 191 ; whence they are called arithmetical agates, as those representing men or women have obtained the name of anthropomorphous. Agates may be stained artificially with solution of silver m spirit of nitre, and afterwards exposing the par: to the sun ; and though these artificial colours disappear on laying the stone for a night in aqua- fortis, yet a knowledge of the practicability of thus staining agates, must render those curious figures above mentioned strongly suspected of being the work, not of nature but of art. The oriental agates are all said to be brought from the river Gambay. A mine of agates was some- time ago discovered in Transylvania, of divers colours, and some of a large size, weighing se^ veral pounds. Considerable quantities of these stones are still found near the river Achates in Sicily. There are found in some of these the surprising representations above mentioned, or others similar to them. By a dexterous manage- ment of these natural stains, medals have been, produced, which seem master-pieces of nature : for this stone bears the graver well ; and ^as pieces of all magnitudes are found of it, they, make all sorts of work of it. The high altar of the cathedral of Messina is all

over encrusted with it. The lapidaries pretend that the Indian agates are finer than the Sicilian; but father Labat informs us, that in the same quarries, and even in the same block, there are found .pieces much finer than others, and these fine pieces are sold for Indian agates, in order to enhance their price. Antiquaries put no small value upon stones of this kind engraven by art. In this sense, agates make a species of antique gems, in the workmanship whereof we find eminent proofs of the great skill and dexterity of the sculptors. Several agates of exquisite beauty are preserved in the cabinets of the curious; but the facts re-?

presented on these antique agates, however well executed, are now become so obscure, and their explications so difficult, that several diverting mistakes and disputes have arisen among those who undertook to give their true meaning. The great agate of the apotheosis of Augustus, in the treasury of the holy chapel, when sent from Con- stantinople to St. Lewis, passed for a triumph of Joseph. An agate, in the fete French king's cabi- net, had been kept 700 years with great devo- tion, in the Benedictine abbey of St. Evre at Toul, where it passed for John the Evangelist carried away by an eagle, and crowned by an angel : but the heathenism of it having been fully detected, the religious would no longer give it a place among their relics, but presented it to the icing. The antiquaries found it to be the apo- theosis of Germanicus. In like manner the triumph of Joseph was found to be a representa- tion of Germanicus and Agrippina, under the figures of Ceres and Triptolemus. Another was preserved, fiom time immemorial, in one of the ancient churches of France, where it had passed for a representation of paradise and the fall of man ; there being on it two figures, representing Adam and Eve, with a tree, a serpent, and a Hebrew

inscription round it, taken from the third chapter of Genesis, ‘ The woman saw that the tree was good/ &c. The French academists, instead of our first parents, found Jupiter and Minerva represented by the two figures : the in- scription was of a modern date, written in a Rabbinical character, very incorrect, and poorly engraven. The prevailing opinion was, that this agate represented simply the worship of Jupiter and Minerva at Athens.

Some account for the phenomena observed in genuine agates from natural causes. Thus Kircher, who had seen a stone of this kind, in which were depicted the four letters usually in- scribed on crucifixes, I. N.R.I, apprehends that some real crucifix had been buried under ground, among stones and other rubbish, where the in- scription happening to be parted from the cross, and to be received among a soft mould or clay susceptible of the impression of the letters, came afterwards to be petrified ! In the same manner he supposes the agate of Pyrrhus to have been formed. Others resolve much of the wonder into fancy, and suppose those stones formed in the same manner with the camieux or Florentine stones. See CAMIEDX.

The agate is used for making cups, rings, seals, handles for knives and forks, hilts for swords and hangers, beads to pray with, smelling boxes, patch boxes, &c. being cut or sawed with no great difficulty. Great medicinal virtues were formerly attributed to the agate, such as resisting poisons, especially those of the viper, scorpion, and spider; but they are now very justly rejected from medicinal practice,

AGATHA, St. a town of Italy, in the ulterior principality of Naples, with a bishop’s see. It is six miles south-east of Reggio; of great natural strength, and has the title of a principality. Also a town with the title of a duchy, on the coast of Capitanata.

AGATHARCHIDES, or AGATHARCITJS of Cnidus, in biography, a Greek historian, and

grammarian, mentioned by Josephus, and other ancient writers, was contemporary with Eratos- thenes, and flourished under Ptolemy Philometer about 177 years before Christ. He was reader to Heraclida, president of the Alexandrian Library, and wrote several historical treatises ; of which Photius mentions forty-nine books, concerning the affairs of Europe, ten of Asia, five of the Red Sea, and an epitome of what had been written on this subject in one book. Some fragments of his writings may be found in Jose- phus and Photius. The testimony of Agathar- chides is alleged to prove, that in the reign of Ptolemy Philometer, the Greek sovereigns of Egypt had not yet traded directly to India, but imported the commodities of India, from Saba, the capital of Yemen. This ancient writer's description of the western coast of the Red Sea closes at Ptolemais, as if there were no regular commerce beyond that point.

AGATHIAS, or AGATHIUS, surnamed Scho- lasticus, a Greek Byzantine historian, of the sixth century under Justinian. He was born at Myrina, in Asia the less, at the mouth of the river Pythicus. He was an advocate at Smyrna, had a taste for poetry, and wrote a history which begins with the twenty-sixth year of Justinian's reign, where Procopius ends, and terminating with the ###slaughter of the Huns, 559. It was printed in Greek and Latin, with Bonaventure Vulcanius's, at Leyden, 1594, in quarto; and at Paris, 1660, in folio.

AGATHO, a tragic and comic poet, disciple of Prodicus and Socrates, applauded in Plato's dialogues for his virtue and beauty. His first tragedy obtained the prize ; and he was crowned in the presence of upwards of 30,000 spectators, in the fourth year of the ninetieth Olympiad, None of his works are extant, except a few quotations in Aristotle, Athenseus, and others. Agatho delighted so much in antitheses, as to give him occasion for saying to a person, who wished him to expunge them, 'you do not con- sider that you would rend Agatho from himself.' Athenseus (Deipnosophist, 1. v. p. 211. ed. Ca- saub.) cites the following, .'If I tell you the truth, I shall not please you ; and if I

please you, I shall not tell you the truth.' And Aris- totle gives us these, ' The only thing impossible to God, is to cause that not to be made that has been made ; ' ' fortune loves art, and- ;art loves fortune ; ' ' it is probable, that a great many im- probable things may happen to mortals.' There was also a pope of this name in the seventh cen- tury who was very active against the Monothelites.

AGATHOCLES, the famous tyrant of Sicily, was the son of a porter at Reggio. He was successively a common soldier, a centurion, a general, and a pirate. He defeated the Carthaginians several times in Sicily, and was once defeated himself. He first made himself tyrant of Syracuse, and then- of all Sicily: after which he vanquished the Carthaginians again, both in Sicily and Africa. But at length having ill success, and being in arrears with his soldiers, they mutinied, forced him to fly to his camp, and cut the throats of his children, whom he left behind. Recovering himself again he ###elieved Corfu, besieged by Cassander; burnt

the Macedonian fleet ; returned to Sicily ; mur- dered the wives and children of those who had murdered his ; afterwards meeting with the soldiers themselves, he put them all to the sword ; and ravaging the sea coast of Italy, took the city of Hipponium. He was at length poisoned oy his grandson, Archagathus, in the seventy- second year of his age, 290 years before Christ, after having reigned twenty-eight years.

AGATHOCLES, the unfortunate son of Lysima- chus king of Thrace and Macedon, who, after defeating and putting to flight Demetrius Poli- orcetes, was murdered by his father's orders, at the instigation of his step-moth##r Arsinoe, who was also his

wife’s sister, A. A. C. 282.

AGATHOD^EMON, from aya0oc, good, and ►►ainv *daemon, a beneficent genius. Among ancient writers, agathodaemon is a denomination given to a kind of serpents, bred up and revered by the Egyptians, from an opinion of some sanctity residing in them. They are also called dragons, and fabulously described as having wings. AGATHOPOLIS, the city of Montpelier in France. See MONTPELIEK.*

AGATHYRNA, or AGATHYRSA, in ancient geography, a town of Sicily, now St. Marco ; as old as the war of Troy.

AGATHYRNUS, in ancient history, the son of /Eolus, and founder of Agathyrna.

AGATTON, a town of Africa, seated near the mouth of the river Formosa, on the coast of Guinea, eighty miles south of Benin. It was formerly a considerable place ; and the neigh- bourhood is considered healthy; but frequent wars have depopulated it.

AGATTOO, one of the Aleutian islands, about sixteen miles long, with a lofty mountain in the middle. Distant from Attoo 20 miles. Long. 175►►. E. Lat. 52►►. 30'. N.

AGATY, a Malabar tree, bearing a fruit in taste and shape like the kidney-bean.

AGAVE, the common American aloe : a genus of the monogynia order, belonging to the hex- andria class of plants ; and in the natural method ranking under the tenth order, coronarite. The characters are : there is no calyx ; COR. monope- talous and funnel-shaped ; the border six-parted, with lancet erect divisions : STAM. six erect fila- ments, longer than the corolla ; the anthers are linear, shorter than the filaments, and versatile : FIST, an oblong germen ; the stylus is filiform, the length of the stamina, and triangular; the stigma headed and triangular : PER. an oblong triangular capsule, trilocular, and three valved : the seeds are numerous. Of this genus, botanical writers enumerate eight species.

AGAVE AMERICANA, or the great American aloe : the stems generally rise upwards of twenty feet high, and branch out on every side towards the top, so as to form a kind of pyramid : the slender shoots being garnished with greenish yellow flowers, which stand erect, and come out in thick clusters at every joint : these make a fine appearance, and continue long in beauty ; a succession of new flowers being produced for near three months in favourable seasons, if the plant is protected from the autumnal colds. The seeds do not ripen in England. It has been gene.- ally thought, that these plants do not

flower til! they are 100 years old; but this is a mistake, for the time of their flowering depends on their growth ; so that in hot countries, where they grow fast, and expand many leaves every season, they will flower in a few years ; but in colder climates, where their growth is slow, it will be much longer before they shoot up their stem. There is a variety

of this species with striped leaves, common in the English gardens. The other sorts are so tender, that they must constantly remain in the stove.

AGAUPE, in botany, a name used by some authors for the common white water-lily.

AGDE, a populous city of France, in Lower Languedoc, in the department of Herault, and arrondissement of Beziers. It trades in fine wool, wine, oil, corn, and silk. It is seated on the river Herault, a mile and a quarter from its mouth, where it falls into the gulph of. Lyons, on which there is a fort built to guard its en- trance. The houses are principally built of black stone, and there is an entrance into the city by four gales. The public buildings are not handsome. The city is extended along the river, where it forms a small port, which small craft may enter. There was formerly a great con- course of pilgrims here to the chapel of Notre Dame de Grace. It is a little without the city, between which and the chapel there are numerous oratories, which they used to visit with bare feet. Long. 3►►. 33'. E. Lat. 43►►. 19'. N. Population

7200.

AGDENAS, a district of Norway, in the ter- ritory of Drontheim, into which the bay runs. AGE, n. ~) -Age, Fr. deduced by Junius A'GED, >from aa, which in the Teutonic A'GEDLY. j dialect signified long duration; A. S. ajan past : time in general, or a particular period ; as human life, or any portion of it. Fro }? e by gynnyng of be world, to be tyme bat now

is, Sene ages ber habbeb y be, as sene tyme y wys.

R. Gloucester, p. 9.

Suld thou not first think quhare thou left, but leis, Thy wery fader the agit Anchises ?

Douglas' JEneid, b. ii. p. 58.

If the comparison do stand between man and man, the aged (for the most part) are best experienced, least

subject to rash and unadvised passions.

Hooker.

Novelty is only in request : and it is as dangerous to be aged in any kind of course ; as it is virtuous to be constant in any undertaking.

Shakspeare's Measure for Measure. One man in his time plays many parts, His acts being seven ages. ShaJtspeare.

And Jacob lived in the land of Egypt, seventeen years : so the whole age of Jacob was an hundred forty and seven years. Genesis xlvii. 28.

Hence lastly springs care of posterities ; For things, their kind would everlasting make : Hence is it, that old men do plant young trees, The fruit whereof another age shall take.

Sir J. Davit:. Next to the Son,

'Destin'd Restorer of mankind, by whom New heav'n and earth shall to the ages rise, Or down from heav'n descend.

Milton's Paradise Lost

And on this forehead (where, your verse has said, The loves delighted, and the graces play'd)

AGE

Insulting age will trace his cruel way,

And leave sad marks of his destructive sway.

No longer now the golden age appears,

When patriarch wits surviv'd a thousand ypars.

Prior.

He feeds yon alms-house, neat, but void of state, Where age and want sit smiling at the gate

Pope.

Idem.

Where age and

Immortal ! ages past, yet nothing gone ! Morn without eve ! a race without a goal ! Unshorten'd by progression infinite ! Futurity for ever future ! life Beginning still, where computation ends !

Young.

The love of retirement has in all ages adhered closely to those minds which have been most en- larged by knowledge, or elevated by genius.

Rambler.

His house was known to all the vagrant train, He chid their wand'rings, but relieved their pain ; The long-remembered beggar was his guest, Whose beard descending swept his aged breast.

Goldsmith's Deserted Village. And if no future age shall hear my name, I lurk the more secure from fortune's blast, And with more leisure feed this pious flame, Whose rapture far transcends the fairest hopes of fame. Seattle.

AGE, among the ancient poets, was used for ; the space of thirty years ; in which sense, age amounts to much the same with generation. Thus, Nestor is said to have lived three ages when he was ninety years old. The interval since the first formation of man they divided into four ages, distinguished by the epithets of golden, silver, brazen, and iron. During the golden age, Saturn reigned in heaven, and justice and innocence in this lower world. The earth then yielded her productions without culture ; men held all things in common, and lived in perfect friendship. This period was supposed to have lasted till the expulsion of Saturn from his king- dom. The

silver age commenced when men began to deviate from the paths of virtue ; and their lives became less happy. The brazen age commenced on a farther deviation, and the iron age took place in consequence of one still greater. The East Indian Brahmins seem to have adopted the idea of the Grecian poets, if the latter did not borrow it from them ; or rather, if both were not indebted for it, to the Mosaic account of the original paradisaical state of man. The Brahmins seem evidently to have had at least a traditional account of the longevity of the antediluvian patri- archs, from the description they give of the four ages of the world.††† The first, which they repre- sent as a sort of golden age, lasted, according to them, 1,728,000 years; in this period, the god Brahma was born, and men were all giants ; their manners were innocent ; they were exempt from diseases, and lived 400 years.††† In the second age, which lasted 1,296,000, their rajahs were born : vice now crept into the world ; men's lives were fallen to 300 years, and their size retrenched proportionally. ††† Under the third age, which lasted 8,064,000 years, vice being more in- creased, men only attained to 200 years. The

last age is that wherein we now live, of which 4,027,213 years are already gone ; and the life of nun is sunk to one fourth of its original dura-

tion. A late author, however, reflecting on the barbarism of the first ages, will have the order which the poets assign to the four ages inverted ; the first, being a time of rudeness and ignorance, would be more properly denominated an iron than a golden age. When cities and states were founded, the brazen age succeeded ; when they began to improve, the silver age commenced; and since arts and sciences, navigation and com- merce, have been cultivated, the golden age has taken place. The ingenious M. Merciep carries this idea still farther in his work entitled, Me- moirs of the year 2500 ; and supposes, that man- kind, when that period arrives, will be so much improved, that vice and folly of every kind will be totally extirpated from

the earth.

AGE, in history, is used to express certain periods, or divisions of time. Thus, among the ancient Greek historians, the time elapsed since the beginning of the world was divided into three ages. The first reached from the creation to the deluge, which happened in Greece during the reign of Ogyges ; this they called the obscure or uncertain age, because the history of mankind is altogether uncertain during that period. The second, they called the fabulous or heroic age, because it is the period in which the fabulous exploits of their gods and heroes are said to hare been performed. It began with the Ogygian deluge, and continued to the first Olympiad ; when the third, or historical age, commenced. ††† *This division, however, it must be observed, holds good only with regard to the Greeks and Romans, who had no histories earlier than the first Olympiad : the Jews, Egyptians, Phoenicians, and Chaldeans, (not to mention the Indians and Chinese, who pretend to much higher antiquity,) are not included in it. Among the Jews, the duration of the world is divided into three ages , First, the seculum inane, or void age, is the space of time from the creation to Moses. Second, the present age, denotes all the space of time from Moses to the coming of the Messiah ; and, third, the age to come, denotes the time from the coming of the Messiah to the end of the world . Various other divisions of the duration of the world into ages have been made by historians.* ††† *The Sibyl- line oracles, supposed to be written by Jews ac- quainted with the prophecies of the Old Testp- ment, divide the duration of the world into ten ages; and according to Josephus, each age contained 600 years. It appears, by Virgil's fourth eclogue, and other testimonies, that the age of Augustus was reputed the end of those ten ages, consequently as the period of the world's duration.* ††† *By some modern historians, the space of time commencing from Constan- tine, and ending with the taking of Constanti- nople by the Turks in the fifteenth century, is called the middle age.* ††† *Others*

choose rather to date the middle age from the division of the empire made by Theodosius at the close of the fourth century, and extend it to the time of the emperor Maximilian I. in the be- ginning of the sixteenth century, when the empire was first divided into circles. ??? The middle is by some styled the barbarous age, and the latter part of it the lowest age. Others divide it into the non- academical and acudemi-

cal ages. The first includes the space of time from the sixth to the ninth centuries, during which schools or academies were lost in Europe. The second from the ninth century, when schools were restored, and universities established, chiefly by the care of Charlemagne. The several ages of the world may be reduced to three grand epochas, viz. the age of the law of nature, called by the Jews the void age, from Adam to Moses : the age of the Jewish law, from Moses to Christ : and the age of grace from Christ to the present year.

AGE OF HEBREW AND GREEK manuscripts of the scriptures. The Hebrew Bible is placed be- fore us by critics as the most ancient book in the world. The truth of this pretension, involving its entire authority as an inspired book, is there- fore a point of the last importance ; and various criteria of the age of the Hebrew MSS. of the Old Testament have been given by different scholars. They may be divided into External Testimony and Internal Evidence. The former consisting of the subscriptions affixed by the transcribers, specifying the time when the manu- scripts were copied, cannot always be depended upon, since cases have occurred in which the earliest dates have been superadded to the pro- ductions of modern copyists, to enhance the value of their labours. With respect to the latter, the marks are more decisive. Of these the following are stated

by Dr. Kennicott and M. De Rossi as the principal. 1. The inelegance and rude- ness of the character, although Jablonski lays down the simplicity and elegance of the charac- ter as a criterion of antiquity. 2. The yellow colour of the vellum. 3. The total absence or rare occurrence of the Masora and of the Keri and Ketib. 4. The writing of the Pentateuch throughout in one book without any greater mark of distinction appearing at the beginning of books, than at the beginning of sections. 5. The absence of critical emendations and cor- rections. 6. The absence of vowel points. 7. Obliterated letters being written and re-written with ink. 8. The frequent occurrence of the name Jehovah in lieu of Adonai. 9. The in- frequency of capital and small letters. 10. The insertion of points to fill up blank spaces. 11. The non-division of some books of Psalms. 12. The poetical books not being distin- guished from those in prose by dividing them into hemistichs. 13. Readings frequently dif- fering from the Masoretic copies, but agreeing with the Samaritan text, with ancient versions, and with the quotations of the fathers. The conjunction of all or of several of these internal marks is said to afford certain evidence of the antiquity of Hebrew manuscripts.

*The Greek manuscripts of the New Testa- ment, which are extant, are written either on vellum or on paper, and their external form and condition vary like those of other ancient manu- scripts. The vellum is either purple coloured, <>:******* of its natural hue; and is either thick or thin. Manuscripts on very thin vellum are held in the highest esteem. The paper also is either made of cotton, or the common sort manufac- tured from linen, and is either glazed or vire- markcd, that is of the ordinary roughness. Not*

more than six manuscript fragments on purple vellum are known to be extant. The Codex Claromontanus is written on very thin vellum. All manuscripts on paper are of much later date, those on cotton paper being subsequent to the ninth century; those on linen to the twelfth. If the paper be of a very

ordinary quality, Wetstein pronounces them to have been written in Italy, in the fifteenth and sixteenth centuries. The letters again, especially the capitals, which in the time of St. Jerome were called uncial i. e. initial, are of two kinds, either unadorned and simple, and made with straight thin strokes ; or thicker, uneven, and angular. Some of these letters are supported on a sort of base, whilst others are decorated, or rather burthened with various tops. As letters of the former kind are those for the most part seen in ancient Greek manuscripts, whilst those of the latter resemble the paintings of semi-barbarous times ; manuscripts written with the former are supposed to be as ancient as the fifth century, whilst those in which the latter are employed are thought posterior to the ninth. Before the Seventh century, Greek manuscripts were usually written in capital let- ters, and most without any divisions of words. Capitals were also in great use in the eighth century, and even so late as the ninth, but there is a striking difference in the forms of the letters after the seventh century. Great alterations took place in the eight, ninth, and tenth centuries. The Greek letters copied in the ninth century by the Latins are by no means regular, the a, e, and r, being inflected like the a, e, and y, of the Latin alphabet. Towards the close of the tenth century, small or cursive letters were adopted generally, and Greek manuscripts written in the eleventh century, and after it are in small letters, and greatly resemble each other with some few exceptions. In the Greek manuscripts of the thirteenth, fourteenth, and fifteenth centuries flourished letters occur but seldom. The most ancient manuscripts are written without accents, spirits, or any separation of the words ; nor was it till after the ninth century that the copyists began to leave spaces between the words. Michaelis after Wetstein, ascribes the insertion of accents to Euthalius bishop of Sulca. in Egypt, A.D. 458.

Abbreviations are another evidence of the age of Greek manuscripts. See ABBREVIA- TIONS.

AGE, in law, that special time when men and women

are enabled to do what, for want of years, they are prohibited doing : thus, twelve is the age for taking the oath of allegiance in a leet ; fourteen, or for a woman twelve, the age of discretion, for consenting to a marriage, or choosing a guardian, twenty-one, the full age. A person under the age of twenty-one may make a purchase; but at his full age, he may agree or disagree to it. Fourteen is the age by law to be a witness, although a child of nine years of age has, in some cases, been admitted to give evidence. No one can be chosen member of parliament under the age of twenty-one ; ordained a priest before the age of twenty-four ; nor be a bishop before thirty. 1 Inst. 78.

AGE or A HORSE. See HORSE.

AGE or A TREE. Trees after a certain age waste. An oak at 100 years old ceases to grow. The usual rule for judging of the age of wood, is by the number of circles which appears in the substance of a trunk or stock cut perpendicularly, each circle being supposed the growth of a year ; though some reject this method as precarious, alleging that a simple circle is sometimes the produce of several years ; besides that, after a certain age, no new circles are formed.

AGE PRIOR, in law, is when an action being brought against a person under age, for lands descended to him, he, by motion or petition, shews the matter to the court, praying the action may be staid till his full age, which the court generally agrees to.

AGEDA, SYNOD of, in modern ecclesiastical history, an assembly of Jewish doctors, held A. D. 1650, so denominated from a plain on which they met, about thirty leagues distant from Buda in Hungary. On this occasion, no fewer than three hundred rabbies, with

multitudes of other Jews of different nations, publicly convened, in order to examine and debate the question, whether the Messiah had appeared ? R. Zacha- ria, of the tribe of Levi, was chosen president and speaker. The negative of the question was carried by a majority of voices, and it was agreed that the advent of the Messiah was delayed on account of their sins and impenitence. They agreed also in the circumstances that would at- tend his appearance ; and were of opinion, that as a great conqueror, he would deliver them from every foreign yoke ••• that he would alter nothing in the Mosaic religion ••• that he was to be born of a virgin ; and that his miraculous con- ception was to be a characteristic, by which he should be known to those who were strangers to the covenant. Some ecclesiastics, deputed from Rome, attended this meeting; and when they began to extol the worship, ceremonies, and au- thority of their church, a tumultuous outcry was excited of ' No Christ ! no intercession of saints ! no worship of images ! no prayers to the Virgin ! accompanied with loud clamours, rending of clothes, &c. Thus the conference of that day terminated ; but on the 8th day, they agreed to hold another council, three years after this, in Syria. Some of the Jewish doctors are said to have expressed a desire of conversing with pro- testant divines ; but the interference of so many monks deterred them, and made them fear some tragical conclusion of the assembly.

AGELASTUS, of a priv. and y••Xau>, to laugh, in ancient history, a surname of the grandfather of Crassus, who is said to have laughed only once in his life, at the wonderful event of seeing an ass eat thistles. It was also a surname of Pluto Cicero de Fin. v. Plin. vii. 19, &c. AGELASTIC, is an adjective of similar signification, i. e. mol rose, sullen.

AGELNOTH, or &THELNOTH, surnamed the Oood, Abp. of Canterbury, under Canute the Great, succeeded to that see in 1020 He was son of earl Agilmer, and when elected, dean of Canterbury. In going to Rome,

to receive his pall, he is said to have purchased St. Ausmstin's arm, which was kept at Pavia as a relic, and which he sent over to England as a present to

Leofric, earl of Coventry. He was much in favour with Canute, and Malmsbury observes, that this prince was excited to acts of piety, and re- strained from excesses, by his regard for the Archbishop. He has also the reputation of ma- nifesting a singular degree of British spirit on a memorable occasion : for when called upon to crown Canute's successor, Harold, in the absence of the legitimate claimant, Hardicanute, he alto- gether, according to some writers, refused to conduct the ceremony, alleging a promise which he had made to the late king, that he would place the crown only upon the head of the issue of queen Emma. Dr. Lingard represents him as appearing at the ceremonial, but refusing the episcopal benediction. He placed, according to to this writer, the royal insignia on the altar ; and addressing the king and his surrounding prelates, said, ' These are the crown and sceptre which Canute entrusted to my charge. To you I neithei give nor refuse them ; you may take them if you please ; but I strictly forbid any of my brother bishops to usurp an office, which is the preroga- tive of my see.' Agelnoth wrote, 1. A panegy- ric on the Virgin Mary ; 2. A letter to earl Leo- fric concerning St. Augustin; and other epistles, He died in 1038, in the 17th year of his archi- episcopate.

AGEM, in botany, a name sometimes given to the Persian lilac.

AGEMA, Aye/ia, vehemence, Gr. in Mace- donian antiquity, was a body of soldiers, not unlike the Roman legion. Livy speaking of the army of Antiochus, says, ' Addita his ala mille ferme equitum, agema earn vocabant,' 1. xxxvii. c. 40 ; and in another place, ' Delecta deinde et viribus, et robore setatis ex omni csetratorum numero duo erant agemata ; hanc ipsi legionem vocabant,' 1. xlii. c. 51. Some writers suppose it derived from

ayw, to lead, because the agema sometimes consisted of elephants, horse, and foot, who preceded generals and princes, as a sort ot body guard. Arrian speaks of it as a wing 01 horse. De Exped, Alex. 1. vii. p. 217, Gronor.

AGEMOGLANS, or AZAMOGLANS, from Q3K, agem, barbarous; and C-tihy, moglan, child; Arab, in the Turkish polity, are children purchased from the Tartars, or raised every third year, by way of tribute, from the Christians tole- rated in the Turkish empire ; who, after being circumcised and instructed in the religion and language of their tyrannical masters, are taught the exercises of war, till they are of proper age for carrying arms ; and from this corps, the janissaries are recruited. Those who are thought unfit for the army, are employed in the lowest offices of the seraglio. The troops so raised, it is well known, become in their turn the real masters of the grand Seignior, and have fre- quently effected the most important revolutions in the state : an ' even-handed' justice in pro- vidence, which thus seems to make the success of this tyranny its own punishment.

AGEN, a city of France, on the banks of the Garonne, formerly the capital of Agenois, now the chief town in the department of Lot and Garonne. Vestiges remain of very ancient for- tifications, but prove that its former circuit was not so great as the present. The palace

formerly called the castle of Montravel, was seated beyond the walls of the old city, on the ide of the fosse, near other ruins of a castle called La Sagne. The situation of Agen is very con- venient for trade, which here consists principally of corn, wine, brandy, and hemp. Prunes are also a considerable article of commerce with the Dutch, who

take great quantities for long voy- ages. The chief manufactures are linen, cam- blets, serges, and sail cloths. The city was the residence of Julius Scaliger, and the birth-place of his celebrated son, Joseph. It is seated in a plea- sant country ; but, is itself rather a disagreeable place, the houses being ill-built, and the streets narrow, crooked, and dirty. It is 100 miles S. E. of Bourdeaux, and 408 S. S. E. from Paris.

AGENDA, among divines and philosophers, signifies the duties which a man lies under an obligation to perform : thus the phrase, the agenda of a Christian, or the duties he ought to perform; in opposition to the credenda, or things he is to believe.

AGENDA, among ecclesiastical writers, also de- notes the service or offices of the church. We meet with agenda matutina and vespertina, ' morning and evening prayers;' agenda diei, ' the office of the day,' whether feast or fast day ; agenda mortuorum, called also simply agenda, ' the service of the dead.' It is also applied to church books, compiled by public authority, pre- scribing the order to be observed by the ministers and people, in the ceremonies and devotions of the church. In which sense agenda amounts to the same with what is otherwise called ritual, liturgy, acalouthia, missal, formulary, &c.

AGENDA, among merchants, a term sometimes used for a memorandum book, in which is set down all the business to be transacted during the day, at home or abroad.

AGENDICUM, the classical name for Sens, in France. See SENS.

AGENFRIDA, or AGENFRIGA, in ancient customs, Saxon ; from agen, own ; and fria, lord ; one who has the absolute property and dominion of a thing.

AGENHINE, in our old writers, signifies a guest that has lodged at an inn for three nights, after which

time he was accounted one of the family ; if he offended the king's peace, his host was answerable for him.

AGENOIS, a fertile district of France, in Guienne. It is twenty leagues long, and ten broad, and a portion of the department of the Lot and Garonne.

AGENOR, in fabulous history, a king of the Phoenicians, the son of Belus, and father of Cad- mus and Europa.

AGENOR, in natural history, a species of pa- pilio eques, with black wings, sanguineous at their base ; the posterior having a white disc with black spots. It is found in China.

AGENORIA, in mythology, ayj/vwp, Gr. strong, the goddess of courage and industry. A'GENT, n. & adj.~) -Ago, agens, from ayw A^GENTSHIP, Mo lead, or conduct;

A'GENCY. 3 usually applied to one

who conducts the affairs, or is entrusted with the commission of another.

The moral agency of the Supreme Being who acts

only i.s a Ruler tovards his creatures, differs from the moral agency of created intelligent beings.

Edwardt.

This success is oft truly ascribed unto the force of imagination upon the body agent ; and then, by a secondary means, it may upon a diverse body ; as, far example ; if a man carry a ring on some part of a beast, believing strongly that it will help him to obtain his love ; it may make him more industrious, and again more confident and persisting, than other- wise he would be. Bacon's Nat. Hut.

So goodie agent ! and you think there is no punish- ment due for your agentship.

Beaum. and Fl. Lover's Progress.

An agent is an acting being, some substance, not a manner of being. Wollaston's Religion of Nat.

It is the faculty of remembrance which may be said to place us in the class of moral agents. Rambler.

A few advances there are in the following papers, tending to assert the superintendence and agency of providence in the natural world.

Woodward's Preface to Nat. Hist.

Should God again,

As once in Gibeon, interrupt the race

Of the undeviating and punctual sun,

How would the world admire ! but speaks it less

An agency divine, to make him know

His moment when to sink, and when to rise ?

Cowper's Task.

AGENT, AGENS, in physics, that whereby a thing is done or effected ; or that which has a power to act on another thing or being ; or by its action induces some change in it. It is used in contradistinction to patient. The schools divide agents into natural and free.

AGENTS, natural or physical, are those im- mediately determined by the author of nature, to produce one sort of effect ; with an incapacity to produce the contrary. These are again divided into uni vocal, i. e. such as produce effects of the same kind and denomination with the agents themselves ; and equivocal, whose effects are of a different kind, &c. from the agents. The schoolmen reckon it necessary to the being of an agent, that it be contiguous to the object, dis- tinct from it, have a power over it, a sphere of activity, and a

proportion or rate of acting.

AGENT, free or voluntary, in metaphysics, is he who may equally do any thing, or its opposite ; as acting not from any pre-determination, but from choice. Such is the mind supposed to be, which has a spontaneous power of choosing or refusing.

Whether a man be a free, or a necessary agent? is a celebrated question among philosophers and divines. It may be thus stated : man is a neces- sary agent, if all his actions are so determined by the cause preceding each action, that no one past action could possibly not have come to pass, or have been otherwise than it was ; nor one future action can possibly not come to pass, or be otherwise than it shall be. On the contrary, man is a free agent, if he be able at any time, in certain circumstances, to do different things ; or, in other words, if he is not ever unavoidably determined in every point of time, by the circumstances he is in, to do that one thing he does, and not possibly to do any other. See LIBERTY, NECESSITY, and WILL.

According to Dr. Price, the term agent evi- dently implies a power of self determination ; and the epitbet necessary, applied to agent,

forms a solecism both in sense and language. Price's Review, &c. p. 315, &c.

An AGENT, in political affairs, is the minister of a prince or state, at another court. In which sense, agents are commonly reputed a species of public ministers, or ambassadors : but they differ from them essentially, as agents are not invested with any representative character, although en- trusted with the affairs and interests of their princes. See ENVOY.

In the exchequer, there are four agents for taxes.

AGENTS, in medicine, powers which act upon the body, in contradistinction from ali- ments, which are supposed rather to be acted on than to act.

AGENTS, of Bank and Exchange, are public officers, established in the trading cities of France, to negociate matters between merchants relating to bills of exchange, and the buying and selling of goods : the same with those who, among us, are called exchange-brokers.

AGENT, in military affairs, a person in the civil department of the army, between the pay- master-general, and the paymaster of a regi- ment, through whom every regimental concern of a pecuniary nature must be transacted. He gives security to government, or to the colonels of regiments, who are reponsible to government, for all monies which may pass through his hands, in the capacity of an agent, ††† and by the mutiny act it is provided, that if an agent shall with- hold the pay of officers or soldiers, for the space of one month, he shall be dismissed from his office, and forfeit ††100.(39th Geo. III. sec. 69.)

AGENT, navy, is a person employed on shore to manage the pecuniary and other concerns of navy officers and seamen : particularly to re- ceive their pay, prize-money. &c. and apply it to their use. By an act of parliament passed in the forty-ninth year of his late majesty, entitled an act to explain and amend an act made in the forty-fifth year of his late majesty, for the encouragement of seamen, and the more effectually manning his majesty's navy during the war, all agents, who act for petty officers, seamen, and others, serving in any of his majesty's ships, to receive their pay, wages, prize, and bounty money, are obliged to take out a license from the Navy Pay-office ; which license is liable to be immediately with-drawn, on any grounds being produced that they have abused the trust reposed in them.

AGENTS of the victualling office, are officers under the commissioners appointed to buy and contract for provisions, &c. Some of these are Jttled in the ports, where they have much the same office and authority as the commissioners in London.

AGENT and patient in common law, is where a person does, or gives, something to himself ???

that he is at the same time both the doer and giver, and the' receiver or party it is done to buch is a woman, when she endows herself with part of her husband's inheritance.

AGENT, in chemistry. Ancient chemists, re- irded all substances as composed of active and

sive principles ; the latter of which received im- pressions from, and were modified by the former

without exerting any reciprocal action. Spirits, oil, and salt, were active ; earth and water, pas- sive principles. This distinction evidently arose from the phenomena of solution, and the appa- rent energy which acids and other fluids exhi- bit in their combination with metals and solids in general. It is now however universally al- lowed, and indeed necessarily follows from the doctrine of affinity, that whenever two sub- stances combine together, it is in consequence of a mutual attraction, which belongs as much to one element as to the other of a compound; this definition therefore of chemical agent is no longer adhered to, and though we still continue to use the expression of one body having a powerful action on any other, it is by no means intended to deny the equal reciprocity of che- mical attraction. The general term agent sig- nifies, therefore, in strictness, any substance capable of producing chemical action; and when, in explaining a process, the quality of agent is attributed to a body, it is only used as a designation of the substance whose presence determines the combination or decomposition ; in which sense it is sometimes attributed to menstrua, or such bodies as in mixture have the greatest share of activity and motion : and

it is sometimes also used for what we more usually call instrument. Thus fire, water, air, earth, and menstrua, are chemical agents.

AGENTE, in music, a term given by the Italians to the note of percussion that occa- sions and accompanies a prepared discord upon a binding note ; which note was termed the patient.

=t

In the preceding example, C is the patient, E prepares the discord, D is the moving note or agent, and B its resolution.

AGENTES in rebus, one of the ranks of officers, in the court of the Constantinopolitan emperors, whose business it was to collect and convey the corn both for the army and household ; carry letters and messages from court to all parts of the empire ; regulate couriers, and their vehicles; to make frequent joutnies and expe- ditions through the provinces ; inspect any motions, disturbances, machinations tending that way, and give early notice thereof to the em- peror. Aquin. Lex. Mil. torn. i. Pitisc. Lex. Ant. torn. i. Cal. Lex. Jur. The agentes in rebus, are by some made synonymous with our post-masters, but their function was of great importance. They correspond to what the Greeks call Trvpo^opot, and the Latins veredarii.

There were divers orders or degrees of agentes in rebus, as tribuni, primicerii, senatores, duce- narii, biarchi, circitores, equites, tyrones, &c. through all which they rose gradatim. Their chief was denominated princeps, which was a post of great dignity, being reckoned on a level with that of proconsul.

The princeps agentmm in rebus resided at Constantinople, others of them were settled in

every part of the empire ; and are also said to have served as interpreters.

AGEMETRIA, a defect in point of geome- try, or a deviation from the strict principles and conclusions of that science.

AGERvectigalis privatus, in Roman antiquity, that whose property was granted to private per- sons on the reserve of a certain rent, or tribute.

AGER vectigalis publicus, that whose pro- perty was reserved to the public, and being let out to farm, the rents or profits accrued to the public treasury.

ACER is also used for a certain portion or measure of land, anciently allowed in the divi- sion of grounds to each citizen. In the early days of the Roman state, the ager was only two jugera, amounting to one English acre and a quar- ter. After the expulsion of the kings, seven ju- gera were allowed to a plebeian. ††† Under the tri- bunate of C. Licinius Stolo, in the year of Rome 379, a law was made to limit estates to 500 ju- gera, or 330 English acres, and to decree the distribution of the surplus in the possession of any individual amongst those who had no land. Under Julius Caesar another Agrarian law was published, by which, those who enlarged their pit- tance of land, were to pay 50 aurei to the public.

ACER, or ACRE, See ACRE.

ACER NATURE, a name sometimes given to the womb.

ACER Pic EX us, in ancient geography, a ter- ritory of Italy to the south-east of Umbria, reaching from the Apennine to the Adriatic : so called from the bird picus, under whose conduct the first settlers removed from the Sabines, of whom they were a colony.

AGERASY, from a, primitive, and ytpov, old age, a vigorous old age.

AGERATUM, from a primitive, and ytpac, old age

because the flowers do not easily wither, bastard hemp agrimony : A genus of the poly- gamia aequalis order, belonging to the syngene- sia class of plants ; and in the natural method, ranking under the forty-ninth order, compositae discoides. The characters are : common CAL. oblong, with many scales : the compoi ind COR. uniform; the corollets hermaphrodite, tubular, and numerous; the proper corolla is funnel- shaped ; the border four-cleft, and expanded : STAM. five capillary very short filaments; the anthera cylindric and tubular : FIST, an oblong germen ; with a filiform stylus, and two slender erect stigmata : there is no pericarpium ; the calyx unchanged : the seeds are solitary, oblong, and angular : the receptaculum is naked, convex, and very small. Of this genus there are three species; viz. 1. ageratum altissimum; 2. agera- tum conyzoides ; 3. ageratum houstonianum ; all nativesi of warm climates. The two last are an- nual plants, and consequently can be propagated only by seeds ; which, however, come to perfec- tion in this country. The first species will bear the severest cold of this country, but its seeds do not ripen in it.

AGERATUM, or MAUDLIN. See ACHILLA.

*AGERATUS lapis, in the ancient Materia Medica, a stone mentioned by Galen and others, said to be of the nature of the Phrygian stone, v>- * ***a-n astringent; and as that was used in***

dyeing, this wfts in dressing of leather. We have no account of its external appearance, but probably it contained vitriol, and perhaps alum. It is used by shoemakers to polish women's shoes.

AGERCITE, a sea-port town of Travancore, Hindostan, twenty miles north of Anjengo.

AGERIUM. See AGISTMENT.

AGESANDER, a sculptor of Rhodes, who lived about the fifth century, B.C. in the eighty- eighth Olympiad. In conjunction with his sons, Athenodorus and

Polydoros, he executed the celebrated Laocoon, which was discovered in the sixteenth century in the baths of Titus, where it attracted admiration in Pliny's time. Julius II. handsomely rewarded the discoverer of this invaluable work, which was carried away from Rome by the French army, but afterwards was restored. Lessing, from the exquisite finishing of 'this group, thinks it was executed under the Caesars ; but Borghini and Winkelman deem it a production of the finest sera of Grecian art. In any case it has immortalized its sculptors. Ages- ander's name stands first on the plinth of the groupe.

AGESILAUS, I. king of Lacedasmon, of the family of Agidae, and son of Dorysius, was con- temporary with Lycurgus, the famous Spartan legislator. Herod, vii. 204.

AGESILAUS, II. king of the Lacedaemonians, the son of Archidamus II. was raised to the throne notwithstanding the superior claim of Leotychides. Upon his promotion, he advised the Lacedaemonians to anticipate the king of Persia, who was making great preparations for war, and to attack him in his own dominions. Being himself chosen to command this expedi- tion, he gained so many advantages over the enemy, that if the league, which the Athenians and the Thebans formed against the Lacedaemo- nians, had not obliged him to return home, he would have carried his victorious arms into the heart of the Persian empire. He gave up, how- ever, all these triumphs, to come to the succour of his country, which he happily relieved by his victory over the allies in Boeotia. He obtained another near Corinth : but to his great mortifica- tion, the Thebans afterwards gained several suc- cessive battles against the Lacedaemonians. These misfortunes at first raised some clamour against him. He had been sick during the first advan- tages which the enemy gained ; but as soon as he was able to act in person, by his valour and prudence he prevented the Thebans from reap- ing the advantages of their victories ; insomuch that it was generally believed, had he been in health at the beginning, the

Lacedaemonians would have sustained no losses ; and that all would have been lost had it not been for his assistance. It cannot be denied but that he loved war moi►► than the interest of his country required ; for if he could have lived in peace, he would have saved the Lacedaemonians several losses, and thev would not have been engaged in many enterpriser, which in the end contributed much to weaken their power. In the decline of life, this prince accepted a command which reflected no credit on either himself or his country, i. e. that of the troops of Tachos, an adventurer who aspired to

the throne of Egypt : nor was his conduct in this expedition worthy his previous fame. For on being refused the supreme command in Egypt, he joined Nectaneb, the rival of Tachos ; and aided him in expelling his former associate. He died the third year of the 104th Olympiad, being the eighty-fourth year of his age, and forty-first of his reign. Agesilaus would never suffer any picture or sculpture to be made of him, and prohibited it also by his will : this he is supposd to have done from a consciousness of his own de- formity ; for he was of a short stature, and lame in one foot. His fame went before him into Egypt, where they had formed the highest idea of him. When he landed, the people ran in crowds to see him : but when they beheld an ill-dressed, slovenly, lame man lying upon the grass, they could not forbear laughing, and ap- plied to him the fable of the mountain in labour. He was, however, the first to jest upon his own person ; and such was the gaiety of his temper, and the strength with which he bore the roughest exercises, that these qualities made amends for his corporeal defects. He was re- markable for plainness and frugality in his dress and way of living. Cornelius Nepos says, that, ' although great presents were sent him by kings, governors, and states, he brought

none of them to his own house ; that he changed nothing of the diet, and apparel of the Lace- daemonians. He was contented with the same house in which Euristhenes, the founder of his family, had lived : and whoever entered there, could see no sign of debauchery, or luxury, but many of moderation and abstinence ; for it was furnished in such a manner, that it differed in nothing from that of any poor or private per- son.' Upon his arrival in Egypt, all kinds of provisions were sent to him ; but he chose only the most common, leaving the perfumes, the confections, and all that was esteemed most delicious, to his servants. Agesilaus was ex- tremely fond of his children, and would often amuse himself by joining in their diversions : one day when he was surprised riding upon a stick with them, he said to the person who had seen him in this posture, ' Forbear talking of it till you are a father.' ??? Hearing the king of Persia spoken of as the great king, on one oc- casion, he is reported to have said, < I cannot conceive wherein he is greater than I, unless he be more just.' His life and actions are the theme of Xenophon's praise ; and are recorded also by Diodorus Siculus, Plutarch, and Nepos. This was also the name of a brother of The- mistocles, who, being sent as a spy into the Per- sian camp, stabbed Mardonius instead of Xerxes : and a surname of Pluto.

AGESIPOLIS I. and II. reigned in Sparta, after Agesilaus II., the former fourteen years, and the latter only one year

AGESISTRATA, the wife of Eudamidas II

and mother of Agis III. kings of Sparta, who was

murdered in pnson, along with her son Agis and

tier mother, by the Ephori, about A. A. C. 300.

AGEUSTIA, or AGHEUSTIA, of a privative

and ytvouat, to taste, in medicine, a defect in the

Jnse of taste. This disease may arise from an

organic affection, or an atonic state of the organs;

from fur, mucus, apththae, ulcers, &c. on the .on

AGGA, AGONNA, or AGOONA, a country on the Gold Coast of Africa, extending about twenty miles from east to west, and fifteen north to south. The chief towns are Winnebah, Agoona, Beracoe, and Fettah. On the coast the ground is very light and sandy, but improves in the interior; and at six or eight miles inland, is fertile for a tropical region, and the climate is more healthy than on many other parts of the coast. Not a tenth part of the land is under cultivation ; the rest is the property of any one who chooses to cultivate it. The population has suffered severely from the inroads of the Ashantees, and cannot at present be estimated at more than 10,000 souls, of whom 7000 are women and children. The chief object of exportation is gold ; their mode of procuring which is not very exactly known. Gold and cowries form the medium of circula- tion ; 32,000 cowries go to the ounce of gold, valued at ►►4. The district is divided into a number of petty states, which are variously governed.

AGG AD A, in Jewish antiquity, an ingenious tale, of which there are many in the Talmud. Several books are extant among the Jews under this title. R. San Israel Ben Juda has published Novella Aggadarum, or new explanations of the stories in the Talmud, discovering their hidden meaning.

AGGELATION, n. Lat. ad : gelu, ice

It is round in hail, and figured in its guttulous des- cent from the air ; growing greater or lesser, accord- ing to the accretion or pluvious aggelation about the fundamental atoms thereof.

Brown's Vulgar Errours.

AGGENERATION, n. Ad : genera, genus ; yivo^ai, to produce.

To make a perfect nutrition, there is required a transmutation of nutriment : now, where this conver-

sion or aggeneratwn is made, there is also required, in the aliment, a similarity of matter.

Brown's Vulgar Errours.

AGGER, in ancient authors, denotes the middle part of a military road, raised into a ridge, with a gentle slope on either side, to make a drain for the water, and keep the way dry. The term was also used for the whole road, or military way. Where highways were to be made in low- grounds, as between two hills, the Romans used

to raise them above the adjacent land, so as to make them level with the hills. These banks they called aggeres. Bergier mentions several in Gallia Belgica, which were thus raised, ten, fif- teen, or twenty feet above ground. ??? They are sometimes also called aggeres calceati ; and are now generally known by the name choussees, or causeways.

AGGER, in the ancient military art, a work of fortification, used both for the defence and the attack of towns, camps, &c. In which sense it is the same with what was otherwise called val- lum, and in latter times aggestum ; and among the moderns, lines, cavaliers, terrasses, &c. The agger was usually a bank, or elevation of earth or other matter, bound and supported with tim- ber ; having sometimes turrets on the top, wherein the workmen, engineers, and soldiers, were placed. It was also accompanied with a ditch, which served as its chief defence. The usual materials of which it was made were earth, boughs, fascines, stakes, and even trunks of trees, ropes, &c. variously crossed, and interwoven somewhat in the figure of stars ; whence they were called stellati axes. Where these were wanting, stones, bricks, or tiles, supplied the office : on some occasions, arms, utensils, pack- saddles, were thrown in to fill it up. We even read of aggers formed of the carcases of the slain ; some- times of dead bones mixed with lime ; and even with the heads of slaughtered citizens. For want of

the due binding of solid materials, aggers have occasionally given way, with infinite mis- chief to the men. The besiegers used to carry on a work of this kind, gradually approaching the place, till at length they reached the very wall. The methods taken, on the other side, to defeat them, were by fire, especially if the agger were of wood ; by sapping and undermining, if of earth ; and in some cases, by erecting a counter agger. The height of the agger was frequently equal to that of the wall of the place. Caesar tells us of one he made, which was thirty feet high and 330 feet broad. Besides the use of aggers before towns, the generals used to fortify their camps with such works ; for want of this precau- tion, armies have often been surprised and ruined. There were vast aggers made in towns and places on the sea side, fortified with towers, castles, &c. Those made by Caesar and Pompey at Brundusinm, are famous. Sometimes aggers were even built across arms of the sea, lakes, and morasses ; as was done by Alexander before Tyre, and by M. Antony and Cassius. The wall of Severus, in the north of England, may be con- sidered as a grand agger, to which belonged several lesser ones. See SEVERUS'S WALL.

AGGER TARQUINII, Tarquin's agger, was a fa- mous one built by Tarquin II. on the east side. of Rome, to stop the incursions of the Latins. Criminals were thrown down from the top of this rampart. Juv. Sat. vi. 288: and Sueton. in Cal.

AGGER is also used for the earth dug out of a trench and thrown up on the brink of it. In which sense, Folard thinks the word to be under- stood, when used in the plural number, since we can hardly suppose they would raise a num- ber of cavaliers, or terrasses. It is also used for

a bank, or wall, erected against the sea, or son.e great river, to confine or keep it within bounds ;

called also a tumulus and moles ; the Dutch, dyke ; we, dam, and sea-wall.

AGGER also denotes a heap of earth, raised over the graves of the ancients. In which sense, it amounts to the same with what is sometimes called aggestum.

AGGER, in geography, a river of the circle of Westphalia, which waters the county of Marck and the duchy of Berg. It falls into the Sieg, below Siegberg.

AGGERHUUS, or CHRISTIANIA, the largest diocese or general government in the south part of Norway ; and the richest, as well as most con- siderable, in the whole kingdom. It was for- merly called Hammerslift, and Opseloe. It is bounded on the north by Drontheim, on the west by Bergen and Christiansand, on the south by the Skager-Rack, and on the east by Sweden ; and contains several towns, six royal bailiwics, and the counties of Jarlsburg and Larwig. In 1769, the number of inhabitants amounted to 315,144; but they are now supposed to exceed 400,000. Excellent timber for ship-building is furnished here ; and at Korsberg and Stroemsoe are some valuable silver mines ; iron mines at Lariveg and Lassoe, and a copper mine at Quickul. Opseloe yields upwards of 500 tons of alum per annum, from a sort of black slate ; and loadstones are found in several places.

This is also the name of a royal bailiwic, of several districts, and of a fortress in this diocese, on the west side of the bay, near which lies the city of Christiania. It is not known when it was built ; but it has been repeatedly besieged by the Swedes, viz. in 1310, in 1567, and in 1717, by Charles XII., without success. The governor of Aggerhuus is the chief governor of Norway : he presides in the high court of justice, called Over- noflet, which judges, in the last resort, all civil causes above a certain value. In all causes sur- passing that value, an appeal lies to the supreme court at Copenhagen. N. lat. 59►►. 6'. E. long. 10►►. 20'. The oldest church in this diocese, said

to have been built about 700 years ago, and called Aggers, is situated about a quarter of a Norway mile north of the castle.

AGGERS-HERRED, a fief of Aggerhuus, which comprises three districts, with as many courts of judicature, viz. Ascher, East and West Barum, and Ager. Christiania is situated in this district.

AGGEROUT, or AGGEROUD, supposed to be the ancient Arsinoe, is situated at the extremity of the Red Sea, about two leagues from the port of Suez. Here terminated the famous canal, be- gun by Necos and finished by Ptolemy Philadel- phus, for joining the Nile to the Red Sea. Since the time of Ptolemy, the Red Sea has retired two leagues, which is the distance of Aggeroud from Suez.

AGGLESTONE, otherwise called Stone Bar- row, and vulgarly the Devil's Cap, is a remark- able monument of antiquity, situated in the N.E, extremity of the isle of Purbeck. Its dimensions are sixty feet in circumference at the bottom, in the middle eighty, and at or near the top ninety ; and it is computed to contain 407 tons of stono

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AGG

The name seems

to have been derived from the named agglutinants ; but these remedies are now n~hafi2 ; or htelig, holy, and stoned, stan, known to act only by keeping the separated stone, which expresses its ancient use ; as it was parts inexact apposition. See Bell's Princi- probably a rock idol in the British age. AGGLOM'ERATE, J Ad : glomero, to roll

AGGLOMERA'TION. \ up thread. To gather together ; to assemble in a mass.

An excessive agglomeration of turrets, with their

fans, is one of the characteristick marks of the florid mode of architecture, which was now almost at its height.

Warton. History of English Poetry, ii. 223. Besides, the hard agglomerating salts, The spoil of ages, would impervious choke Their secret channels.

Thomson's Autumn.

Worlds ! systems ! and creations ! And creations

In one agglomerated cluster, hung,

Great vine ! on thee, on thee the cluster hangs.

Young. Night ix.

Thus we break the vast periods of time into centu- ries and years; and thus, if we would know the amount of moments, we must agglomerate them into days and weeks. Blair.

He seeks a favour'd spot ; that where he builds Th' agglomerated pile, his frame may front The sun's meridian disk, and at the back Enjoy close shelter, wall or reeds, or hedge Impervious to the wind. Cowper's Task.

AGGLUTINATE, v.

AGGLUTINA'TION,

AGGLU'TINANT,

AGGLU'TINATIVE.

To the nutrition of the body there are two essen- tials required, assumption and retention ; then there 'ollow two more, concoction and agglutination, or ad- h>ssion. Howell's Letters, i. 5.

The body has got room enough to grow into its full dimensions ; which is performed by the daily inges- tion of food that is digested into blood ; which, be- ing diffused through the body, is agglutinated to those parts, that were .immediately agglutinated

to the foun- dation parts of the womb.

Haney on Consumptions.

Rowl up the member, with the agglutinative rowler.

Wiseman.

AGGLUTINANTS, in pharmacy, more particu- larly comprehend that class of strengthening medicines, whose office and effect are to adhere

pies of Surgery ; and the article WOUNDS. An unnatural agglutination of the eyelids, constitutes the disease, anchyloblepharon.

AGGLUTINATION, in astronomy, the meeting of two or more stars in the same part of the zo- diac; also the seeming coalition of several stars,

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Ad : gluten, glus, glue. To stick or ad- here together.

to the solid parts of the body, and thus recruit and supply the place of what is wasted by the , animal exertions. They are such as are easily for devotlonal Purposes, formed into jellies, and the principal simples which come under this class, are isinglass, oliba- num, gum Arabic, dragon's blood, cassia, sago, vermicelli, pulse, comfrey, plaintain, &c. If the term, says Dr. Cullen, has any foundation at all, it must have the same meaning with that of nutrient; and there is no propriety in using a doubtful theoretical term. Nor is the term improperly applied to medicines that are

[, a healing or reducing the hairs of the eye-lids that grow in- wards, to their natural situation. This may be done by mastic applied with a probe, which bends the hairs back into their proper order. Bitumen, the slime of a snail taken off with a needle, the juice of hawk's weed, the liquor of agglutinants, or ammoniac, produce the same effect.

AGGRACE’, v. & n.) Ad : gratia, to treat AGC-RATE’. J with favour.

So goodly purpose they together fond

Of kindnesse and of courteous aggrace. Spenser’s Faerie Queene.

And iii the midst thereof, upon the floor, A lovely bevy of fair ladies sate,

Courted of ir>any a jolly paramour, The which them did in modest wise amate ; And each one sought his lady to aggrate. Idem

AGGRAMMES, in ancient history, a cruel king of the Gangarides. His father was a hair- dresser, of whom the queen was enamoured, and having been made governor of the king’s children by the queen, (in order the more easily to gra- tify her passion,) he killed them all, that Agram- mes, his son by the queen, might be raised to the throne. ††† Curtius, ix. 2.

AG’GRANDIZE, t>. i Ad : grandis,grandior,
AG’GRANDIZEMENT. J to advance; to ascend, Fr. aggrandir, to make greater ; to increase the power, rank, wealth, or reputation.

If the king should use it no better than the pope did, only to aggrandize covetous churchmen ; it cannot be called a jewel in his crown. Ayliffe’s Parerg.

These furnish us with glorious springs and me- diums ; to raise and aggrandise our conceptions, to warm our souls, to awaken the better passions ; and elevate them, even to a divine pitch, and that

suited to cement and reunite parts preternatu- Chaucer an rally separated, and therefore employed in wounds and ulcers. British surgeons neither know nor employ any such medicines : the bu- siness is the work of nature ; and their concern is to remove impediments to its operation. Mat Med. vol. i. 163.

AGGLUTINATION, in surgery, adhesion. The reunion of wounds was formerly supposed to be effected by means of certain applications,

Watts' s Improvement of the Mind.

It is true greatness that constitutes glory; and virtue is the cause of both : but vice and ignorance taint the blood ; and an unworthy behaviour degrades and disennobles a man, more than birth and fortune aggrandize and exalt him. Guardian.

AG'GRAVATE, v.^ Ad: grab's; Fr. ag-

AGGRAVA'TION, \grever, to make heavy ;

AGGREGE'. j to increase trouble, pain,

or sorrow. Agredge or aggrege are used by

And up he stertis in this ilk thraw

With thir wourdis Turnus to ouer charge,

Aggregeing on wraith and malice large.

Douglas, b. xi. p. 374.

She graunted ; and that knight so much agrostc That she him taught celestial discipline.

Spenser's Faerie Queene, ix. 18. I grant you, friends, if you should fright the ladies out of their wits, they would have no more discretion

*but to hang us ; but I will aggravate my voice so, that I will roar you as gently as any sucking dove ; I ***will roar you an 'twere any nightingale.***

Shahspeare's Midsummer Night's Dream. Sins are so much the greater as they are universal ; so far is

evil from being extenuated by the multitude of the guilty, that nothing can more aggravate it.

Hall's Contemplations.

Good turns aggravate unkindnesses, and our offences are increased with our obligations. Idem.

Till over head a sheet Of livid flame discloses wide ; then shuts, And opens wider ; shuts and opens still Expansive, wrapping ether in a blaze. Follows the loosen'd aggravated roar, Enlarging, deepening, mingling.

Thomson's Summer.

Oh! friendship's generous ardour then suppress, Nor hint the fatal cause of my distress ; Nor let each horrid incident sustain The lengthen'd tale to aggravate his pain.

Falconer's Shipwreck.

AGGRAVATION, in the Romish canon law, is particularly used for an ecclesiastical censure, threatening excommunication, after three ad-monitions used in vain. From aggravation they proceed to re-aggravation ; which is the last step to excommunication.

AG'GREGATE, v. & n. Ad : gregare.

AG'GREGATE, adj. ^ Adgregarc, says

AGGREGATELY, f Festus, est ad

AGGREGATION, ?" gregem ducere ;

AGGREGA'TIVE, \ to bring to the

AGGREGA'TOR. flock; to collect

into a company, or assemblage ; to amass.

The reason of the far greatest part of mankind, is but an aggregate of mistaken phantasms ; and, in things not sensible, a constant delusion.

Glanville's Scepsis Scientifica.

A great number of living and thinking particles could not possibly, by their mutual contact, and press- ing, and striking, compose one greater individual ani- mal, with one mind and understanding, and a vital conscension of the whole body ; any more, than a swarm of bees, or a crowd of men and women, can be conceived to make up one particular living crea ture, compounded and constituted of the aggregate of them all. Bentley.

The aggregated soil

Death, with his mace petrific, cold and dry, As with a trident, smote.

Milton's Paradise Lost.

Their individual imperfections being great, they are moreover enlarged by their aggregation ; and, be- ing erroneous in their single numbers, once huddled together, they will be errour itself.

Brown's Vulgar Err ours.

The water resident in the abyss, is (in all parts of it) stored with a considerable quantity of heat ; and more especially in those, where these extraordinary aggregations of this fire happen.

Woodward's Natural History.

They had, for a long time together, produced many other inept combinations, or aggregate forms of parti- cular things, and nonsensical systems of the whole.

Ray on the Creation.

AGGREGATE, in botany, is a term used to express those flowers, which are composed of parts or florets, so united, by means either of the receptacle or calyx, that no one of them can be taken away, without destroying the form of the whole. They are opposed to simple flowers, which

have no such common part, and are usually

divided into seven kinds, viz. the aggregate pro- perly so called, whose receptacle is dilated, and whose florets are supported by foot-stalks ; such are the blue daisy, thrift, or sea spink, &c. the compound ; the umbellati ; the cymose ; the amentaceous ; the glumose ; and the spadiceous. AGGREGATE, GLANDULE, in anatomy, the small glands in the cellular, which is next to the villous coat of the intestines ; as these glands are not visible in an uninjected gut, many ana- tomists suspect them to be only little bits of separated wax.

AGGREGATE TERR.E, in theLinnsean system of mineralogy, denotes the seventh order of earths, comprehending those that are formed of the ag- gregate earths of the preceding orders. To this order belong the six following genera, viz. granites, gneissum, porphyrias, amygdalites, breccia, and arenarius.

AGGREGATION, in physics, a species of union, whereby several things which have no natural dependence or connection with one another are collected together, so as in some sense to con- stitute one. Thus, a heap of sand, or a mass of ruins, are bodies by aggregation. AGGRESS', "} Ad : gredior, gressus, to step AGGRES'SION, > or go to ; to advance against ; AGGRES'SOR. 3 to begin a quarrel; to com- mence hostile proceedings, assault or fall upon.

The glorious pair advance, With mingled anger and collected might ;

To turn the war and tell aggressing France, How Britain's sons and Britain's friends can fight.

Prior.

There is no resisting of a common enemy, without an union for a mutual defence ; and there may be also, on the other hand, a conspiracy of common en- mity and aggression. L' Estrange.

Fly in nature's face ! But how if nature fly in my

face first ? Then nature's the aggressor. Let her look to't.

Dryden.

*It is a very unlucky circumstance to be obliged to retaliate the injuries of such authors ; whose worka are so soon forgotten, that we are in danger already of appearing the first aggressors. Pope and Swift**
AGGRESSES, in heraldry, pellets or balls.
AGGRESTEIN, in falconry, a disease of hawks.

AGGR1EVE>.) Lat. gravis, heavy; Fr. AGGRIEV'ANCE. } agrever, to weigh down with grief; to depress; to vex.

Grete was pat linage & many to pam cheued, & of pat ilk outrage pe fest pam sore agreued.

R. Brunne, p. 323.

For John, ther is a lawe that saieth thus, That if a man in o point be agreved That in another he shall be releved.

Chaucer. The Reeves Tale, vol. i. p. 165. The dredful figures gan appere to me And great Gods eke aggreued with our town.

Surrey's JEneiA.

I saw alas ! the gaping earth devour The spring, the place, and all clean out of sight : Which yet aggrieves my heart, even to this hour.

Spenser.

Sewell, archbishop of York, much aggrieved with some practices of the Dope's collectors, took all pa- tiently. Camden. Of injured fame, and mighty wrongs received, Chloe complains, and wondrously's aggrieved.

Granville , U 2

AGGROUPE'. See CROUPE.

AGHABOE, a parish in the barony of Upper Ossory, Queen's County, Ireland. It was an- ciently a bishop's see, and an abbey was founded here in the sixth century by St. Canice.

AGHADES. See AGADES.

AGHAL GORI, a small city of Georgia, m the province of Kartel, situated in a narrow valley in the neighbourhood of which are iron mines The inhabitants are chiefly weavers of cotton and hemp, and they manufacture hand- kerchiefs, as also stuffs that are rough on both sides. The neighbourhood is very fertile.

AGHER, a town of Ireland, in the southern part of Ulster, not far from Clogher, which sent two members to the Irish parliament.

AGHOGILL, or AHOGILL, a town of Ireland in the county of Antrim, and province of Ulster.

AGHRIM, a town of Ireland, in the county

The immediate and agile subservience of the spirits to the empire of the mind or soul.

Hole's Origin of Ufankhtil. With that he gave his able horse the head ; And, bending forward, struck his agile heels Against the panting sides of his poor jade, Up to the rowel head. Shakspeare's Henry IV. Once more, I said, once more I will inquir , What is this little, agile, pervious fire, This fluttering motion, which we call the mind ? How does she act? and where is she confined ?

Prior's Solumon.

To guide its actions with informing care, In peace to judge, to conquer in the war, Render it agile,

witty, valiant, sage ; As fits the various course of human age. Idem.

First he bids spread

Dry fern or littered hay, that may imbibe Th' ascending damps ; then leisurely impose, And lightly, shaking it with agUe hand, From the full fork, the saturated straw.

Cowper's Task. AGILITY. Among the ancient Greeks, the

*of Wicklow, and province of^Leinster, situated improving of agility "was one of the chief objects village, distant seventy-five miles from Dub- of cuitivating*and improving agility. Agility ot*

about thirteen miles S.W. of Wicklow.

of the institution of games and exercises. The

AGHRIM, or AUGHRIM, in Galway ; a small athietae made particular profession of the science

lin, and rendered memorable by a decisive battle boIII. and James the II. when St. Ruth, the general of the Irish army, with 7000 of his

men, were slain ; but of the English only 600 The victory was the more considerable, as the

their frame and structure, than to practice.

AGILENSY, in botany, a name used by some writers for the common hazel.

AGILLARIUS, in ancient law books, a keeper of cattle in a common field. The agilla- rius, or heyward of a town, or village, was to

English army consisted of not more than 18,000 SUpervise the cattle, and keep them within their men ; whereas the Irish were computed at 20,000 foot, and 5000 horse and dragoons. They lost likewise nine pieces of brass cannon ; and all

due bounds ; and was otherwise called bubulcus, q. d. cow-wards, whence the reproachful term coward. If he was a cottager, or other servile

their ammunition, tents, and baggage ; most of tenantj he was exempted from the customary their small arms, which they threw away to ex- services, as being presumed to be always attend-

*T, .1 ??? /IT 1_. !il 1 .-.,].,???.]. ,.,.,] P * it I ??? rt 1*

pedite their flight; with eleven standards, and thirty-two pairs of colours.

AGIADES, in the Turkish armies, a kind of

ing on his cattle, as a shepherd on his flock, who had therefore the like privileges. The agil- larius of the lord of the manor, or a religious

pioneers employed ^in fortifying camps, smooth- house, was an officer appointed to take care of the

tillage and harvest-work, to pay the labourers, and see there were no encroachments made, or trespasses committed: the same in effect with what has been othenvise called fieldsman, and tithing-man ; and among us bailiff.

AGIMERE, AGMEER, AJMEER, or RAJPOO- TANA, an extensive province of Hindostan, bounded on the north by the provinces of Moul- tan and Delhi ; on the south by Malwah and Gujrah ; on the east by Delhi and Agra ; and on the west by Sinde. It lies between 25?? and 30?? N. lat. and is about 350 miles long, by 220 in breadth. The province of Ajmeer is oc- casionally named Marwar ; but this appellation is properly restricted to the Joudpoor territories The northern division, comprehending Bicanere and neighbouring districts, is a barren plain, almost destitute of rivers and rivulets, and but very thinly inhabited; the central territory, which includes Joudpoor and Jyenagur, is more hilly, and better supplied with water, yet no in sufficient quantities for wet crops : the soil is*

remarkably saline, containing salt lakes and springs, and producing salt and salt-petre spon- taneously. The southern division is verybiiiy and of difficult access ; but, in general, well co-

ing roads, and the like offices.

AGIAHALID, in botany, an Egyptian tree, called also licio and lycium, which resembles the wild pear.

AGIASMA, from aywc, holy, among ancient writers, is sometimes used for the whole church, sometimes for the bema, or more sacred part, wherein mass was said.

AGID^E, the elder branch of the royal fa- mily of Sparta, so called from Agis, their second king.

AGILD, or AGILDE, from the Gr. a, privative, and the Sax. gildon, to pay, in our ancient cus- toms, a person so vile, that whoever kills him was to pay no mulct for his death.

AG'ILE, adj. 1 Ago, agilis, able to act; ac-

AGIL'ITY. J tive, brisk, nimble.

Yet God bathe suffered theym [the fiendes] to keepe their gyftes of nature styll, as wytte, betwye, strength?, ayylytie, and guche other lyke,

Sir That. Mare's Works, p. 863, col. 2.

He [the thief] was pursued close by a fierce mas-

►►iff dog, and was forced to save himself by leaping

over a hedge, which being of an agile body he effected.

Bacon' Apophthegm*.*

vered with trees and shrubs, and watered by many mountain streams, besides the Banass and Chumbul rivers.

The three great modern divisions of Ajmeer or Raj poo tana, are, 1st, The state of Odeypoor, named also Mewar, or the Rana of Chitore ; Sndly, Joudpoor, named also Marwar, and its sovereign occasionally described as the Rhatore Rajah, being of that tribe ; 3dly, Jyenagur, Jey- poor, or Ambeer.

The city of Ajmeer, and the forty-six surround- ing pergunnahs, belong to Dowlet Row Sindia, the Mahratta chief, and the district of Tonk Rampoorah, to the Holcar family.

The eastern quarter of the central division is occupied by the Jyenagur Rajah ; and the south-eastern division by the Rajahs of Kotah, Boonde, and other petty Rajpoot chiefs tributary to the Mahrattas, and engaged in a constant state of hostilities with each other.

The western parts of the central division are subject to the Rajah of Joudpoor, whose domi- nions are of great extent ; and the south-western are possessed by the Rana of Odeypoor.

From these principalities the Malwah Mahrat- tas, when they are strong enough, levy annual contributions, which is the easier effected, on ac- count of their disunion and unceasing internal warfare. The barren and desolate region to the north, is very little known, having, from its po- verty, attracted but little attention.

The constitution of these countries is feudal ; each district, town, and even village, being go- verned by petty chiefs, dignified with the title of thakoor, or lord, who frequently yield but a nominal obedience to the person who is reputed to be their superior or sovereign. The rents are very low ; but

every village is obliged to furnish a certain number of horsemen at the shortest notice. The Rajpoots are hardy and brave, and extremely attached to their respective chiefs ; they are much addicted to the use of opium ††† this destructive drug being produced by them on all occasions, and presented to visitors as betel is in other parts of India. They are usually divided into two tribes ††† the Rhatore, and the Chohan Seesodya Rajpoots.

The inhabitants, who are principally of the Rajpoot or military tribes of Hindoos, though oc- cupying a vast territory, do not exceed five mil- lions. The principal towns are Jyenagur, Joud- poor, Odeypoor, Ajmeer, Kotah, Boondee, Ran- tampoor, Chitore, Amber, and Shahpoorah. Both lead and copper mines are found in this province, which contains also a large salt-water lake, that yields a good revenue to the govern- ment.

Ajmeer, though extending over the centre of Hindostan, (its eastern frontier is within ninety miles of Delhi,) was never thoroughly subjugated either by the Patan or Mogul emperors. The Rajahs are mentioned by Ferishta so early as A. D. 1008 ; at which period they joined a combination of Hindoo princes against Mahmood ofGhizni, and in 1193, it was conquered, or rather overrun by Mahomet, the first Gauride sovereign of India. From this period it conti- nued tributary to the throne of Delhi ; and, on account of the refractory conduct of its princes,

was frequently invaded by the emperors, who took and destroyed their chief towns. Yet the province never became a regular organized pos- session, like Delhi, Agra, and many much more remote countries, but remained in a sort of half- independent state, paying a tribute, and furnish- ing the imperial armies with a certain number of Rajpoot mercenaries, who were always held in high estimation, on account of their bravery and fidelity, and formed a counterpoise to the Mo- guls and Afghans. On Aurengzebe's death, in 1707, and the dissolution of the Mogul empire, which ensued, it continued for

some time under a nominal subjection to the Delhi throne ; but about 1748, assumed total independence. The interval since that period has been filled up by internal warfare, and invasions by the Mahrattas and other hordes of plunderers. During the latter part of the reign of Madhajee Sindia, and the com- mencement of that of Dowlet Row Sindia, they were very nearly subdued by the disciplined troops under generals Du Boigne and Perron in the pay of those chiefs. They have since recovered a little, not by any intrinsic addition to their own strength, but by the depression of their most dangerous adversary, Dowlet Row Sindia. In 1807, the Rajahs of Jyenagur and Joudpoor con- tinued their mutual pretensions to marry the daughter of the Rana of Odeypoor, and engaged in hostilities, w hich were fermented and supported by Ameer Khan, Holkar, Sindia, and other depre- dators, who benefit by the dissensions among the Rajpoots. See AbulFazel, Rennel, Scott, Brough- ton, Maurice, MS. &>c.

AGIMEER, or AJMEER, the capital of the pro- vince of that name, is in Lat. 26►►. 35'. N. Long. 74►►. 48'. E. is situated in the centre of the Rajpoot states of Jyenagur, Joudpoor, and Odey- poor. In 1800 it was held by M. Perron. The boundary to the west is at the town of Meerta, which separates Ajmeer from Joudpoor. It is subject to Dowlet Row Sindia.

The fort of Ajmeer, named Taragur, (the house of the slaves,) is built on the north east end of a range of hills, and consists principally of a plain stone wall along the edge of the moun- tain, strengthened with a few round bastions. The city lies at the bottom of the hill, and is surrounded by a stone wall and ditch in bad re- pair. The streets are narrow and dirty, and most of the houses small, and in a state of de- cay. It possesses a palace, built in a garden by Shah Jehan ; besides which, there are scarcely any remains of magnificence to be seen, either internally or externally.*

The country round Ajmeer is a flat sandy amphitheatre, surrounded by low hills, in conse-

quence of which the place is uncommonly sultry ; but it is well supplied with water from two lakes, which are close under its walls. The most northern is six miles in circumference, and very deep; and, at particular seasons, both are co- vered with flocks of ducks and geese.

Ajmeer contains the tomb of Khaja Moyenud Deen, one of the greatest Mahommedan saints of Hindostan, who flourished about 600 years ago. It is of white marble, but remarkable neither for beauty nor style of architecture. Although the distance from this tomb to Agra be 230 raikf.

yet the great and wise emperor Acber made a pilgrimage on foot to the tomb of this saint, to implore divine blessings on his family, which consisted only of daughters ; but, after this pil- grimage received the addition of three sons. The peer zadas, or attendant priests, who subsist on the contributions at the tomb, exceed 1100 in number, and demand, or rather extort charity from all visitors. Madhajee and Dowlet Row Sindia, although Hindoos, were remarkable for their devotion to Mahommedan saints and cus- toms. The latter bestowed a superb pall and canopy of cloth and gold on the tomb, and is particularly bountiful to the devotees and peer zadas. Four miles from the city is also a re- markable place of Hindoo pilgrimage, named Pooshkur, or Pokur. It is distant from Delhi 230 miles ; from Bombay 680, and from Cal- cutta 1000 miles.

AGINCOURT, a village of the French Nether- lands, in the department of the straits of Calais. Lon. 2►►. 10'. E. Lat. 50►►. 31'. N. ; rendered famous by the battle fought near it in 1415, wherein Henry V. defeated the French, although the English army had to struggle with every disadvantage. After landing

in France, it had been by various accidents reduced to 10,000 men, of whom not a few were sick, or slowly recovering from sickness ; ††† they had to traverse a long tract of country, inhabited by exasperated enemies, from whom they were to procure pro- visions, lodgings, guides, intelligence, and every thing they wanted ; ††† that country was defended by many strong towns, intersected by deep rivers, and defended by an army of 100,000, or (accord- ing to some contemporary writers,) 140,000 men. Henry, undaunted by all these dangers and dif- ficulties, departed from Harfleur, marching his army in three lines, with bodies of cavalry on the wings. He proceeded by very easy journeys, that he might not fatigue his troops, or discourage them by the appearance of a flight; observing the strictest discipline, and paying generously for every thing he received ; which induced the country people to bring provisions to his camp, in spite of all the commands they had received to the contrary. To keep his army from repin- ing, the king fared as ill as the meanest soldier, always appearing with a cheerful countenance, and addressing them in the most friendly and encouraging language. They arrived at the vil- lage of Agincourt, in the county of St. Pol, on the evening of October 24th ; and there beheld the whole French army, at a small distance, directly in their route. The king took an at- tentive view of it from an eminence; and being fully convinced, that it was impossible to proceed any further on his way to Calais without a battle, and equally impossible to return to Harfleur with so great an army in his rear, he resolved to hazard an action next morning, as the only means of preserving himself and his little army from destruction. The English army lodged that night in the villages of Agincourt, Maisoncelle, and some others ; where they met with better accom-

odation than they had been accustomed to for some time past, and spent part of their time in mutual exhortations to fight bravely in the ap- proaching battle. The king, overhearing some

of his nobles expressing a wish, that the many brave

men, who were idle in England, were present to assist them, is said to have cried out

‘ No ! I would not have one man more : ††† if

we are defeated, we are too many ††† if it shall please God to give us the victory, as I trust he will, the smaller our number the greater our glory.’ The moon happening to shine very bright, Henry, with some of his best officers, care- fully examined the ground, and pitched upon a field of battle, admirably calculated to preserve a small army from being surrounded by a great one. It was a gentle declivity from the village of Agincourt, of sufficient extent for his small army, defended on each side by hedges, trees, and brush-wood. Having placed guards, and kindled fires on all sides, the king and his army betook themselves to rest ; except such as were of a more serious turn of mind, who, considering that as the last night of their lives, spent it in devotion. The French, exulting in their num- bers, confident of victory, and abounding in pro- visions, spent the night in noisy festivity, and in forming fanciful schemes about the disposal of their prisoners and their booty. It was in general resolved to put all the English to the sword, except the king and the chief nobility, who were to be taken prisoners for the sake of their ransoms. On the morning of the 25th of October, A. D. 1415, the English and French armies were ranged in order of battle, each in three lines, with bodies of cavalry on each wing. The constable D’Albret, who commanded the French army, fell into the snare that was laid for him, by drawing up his army in the narrow plain between the two woods. This deprived him, in a great measure, of the advantage he should have derived from the pro- digious superiority of his numbers ; obliged him to make his lines unnecessarily deep, about thirty men in file ; to crowd his troops, particularly his cavalry, so close together, that they could hardly move or use their arms ; and, in a word, was the chief cause of all the disasters that followed. The French, it is said, had a considerable number of cannon of different sizes in the field : but, we do not hear that they

did any execution, probably for want of room. The first line of the French army, which, consisting of 8000 men at arms on foot, mixed with 4000 archers, and 500 men at arms mounted on each wing, was commanded by the constable D'Albret, the dukes of Orleans and Bourbon, and many other nobles; the dukes of Alenpon, Brabant, and Bar, &c. conducted the second line ; and the earls of Marie, Damar- tine, and Fauconberg, were at the head of the third line. The king of England employed various arts to supply his defect of numbers. He placed 200 of his best archers in ambush, in a low meadow, on the flank of the first line of the French. His own first line consisted wholly of archers, four in file ; each of whom, besides his bow and arrows, had a battle-axe, a sword, and a stake pointed with iron at both ends, whicli he fixed before him in the ground, the point in- clining outwards, to protect him from the cavalry ; which was a new invention, and had a happy effect. That he might not be incumbered, he dismissed all his prisoners, on their word of honour to surrender themselves at Calais, if he

obtained the victory ; and lodged all his baggage in the village of Agincourt, in his rear, under a slender guard. The command of the first line was, at his earnest request, committed to Edward, duke of York, assisted by the lords Beaumont, Willoughby, and Fanhope ; the second was conducted by the king, with his younger brother Humphrey, duke of Gloucester, the earls of Oxford, Marshal, and Suffolk; and the third was led by the duke of Exeter, the king's uncle. The lines being formed, the king, in shining ar- mour, with a crown of gold adorned with precious stones on his helmet, mounted on a fine white horse, rode along them, and addressed each corps with a cheerful countenance and animating speeches. To inflame their resentment

against their enemies, he told them, that the French had determined to cut off three fingers of the right hand of every prisoner ; and, to rouse their love of honour, he declared, that every soldier who behaved well, should henceforth be deemed a gentleman, and entitled to bear coat-armour. When the two armies were drawn up in this manner, they stood a considerable time gazing at one another in solemn silence. But the king, dreading the French would discover the danger of their situation, and decline a battle, com- manded the charge to be sounded about ten o'clock in the forenoon. At that instant, the first line of the English kneeled down, and kissed the ground ; and then starting up, discharged a flight of arrows, which did great execution among the crowded ranks of the French. Immediately after, upon a signal being given, the archers in ambush arose, and discharged their arrows on the flank of the French line, and threw it into some dis- order. The battle now became general, and raged with uncommon fury. The English archers having expended all their arrows, threw away their bows, and, rushing forward, made dreadful havoc with their swords and battle-axes. The first line of the enemy was, by these means, defeated ; its leaders being either killed, or taken prisoners. The second line, commanded by the duke D'Alencon, (who had vowed either to kill, or take the king of England, or to perish in the attempt,) now advanced to the charge, and was encountered by the second line of the English, conducted by the king. This conflict was more close and furious than the former. The duke of Gloucester, wounded and unhorsed, was pro- tected by his royal brother till he was carried off the field. The duke D'Alencon forced his way to the king, and assaulted him with great fury ; but that prince brought him to the ground, where he was instantly dispatched. Discouraged by this disaster, the second line made no more re- sistance ; and, the third fled without striking a blow ; yielding a complete and glorious victory to the English, after a violent struggle of three hours. The king did not permit his men to pur- sue the fugitives to a great distance, but encou- raged them to take as many prisoners as

they could on or near the field ; in which they were so successful, that, in a little time, his captives were more numerous than his soldiers. A great proportion of these prisoners were men of rank and fortune ; for many of the French noblesse being on foot, and loaded with their heavy armour,

could not make their escape. Among these, were the dukes of Orleans, and Bourbon, the martial Boucicaut, the counts D'Eu, Vendome, Richemont, and Harcourt, and 7000 barons, knights, and gentlemen. The French left dead on the field of battle, the constable D'Albret, the dukes of Alencon, Brabant, and Bar, the arch- bishop of Sens, one marshal, thirteen earls, ninety-two barons, 1500 knights, and a vast num- ber of gentlemen, besides several thousands of common soldiers. Even the French historians acknowledge, that the loss of the English was inconsiderable : those of our own contemporary writers, who make it the greatest, affirm, that it did not exceed 100, and that the duke of York, and the earl of Suffolk, were the only great men who fell on that side, in this memorable action.

AGIO, in commerce, an Italian word, signi- fying aid, and used chiefly in Holland, and at Venice, for the difference between the value of bank money, and current money. So that if a merchant stipulates to be paid either 100 livres bank money, or 105 cash, or current money, in such case the agio, is said to be five per cent. The bank agio varies in almost every place, and is greater or smaller, according as the currency is supposed to be more or less degraded below the standard of the state. At Amsterdam it used to be generally about five per cent. ; and by a resolu- tion adopted not long before the late period of confusion, the bank sold bank-money for cur- rency, at five per cent, agio, and bought it again at four per cent, agio. In consequence of this resolution, the agio could never either rise above five, or sink below four per cent. ; and the pro- portion between the market-price of bank, and that of current money, was kept at all times very near to the proportion between their in- trinsic values. One part of the profit of the bank accrued from selling

bank-money at five per cent, agio, and buying it in at four. At Venice, the agio was twenty per cent, fixed ; at Genoa, from fifteen to sixteen per cent. The agio of the bank of Hamburgh, which is said tc. be commonly about fourteen per cent, is the sup- posed difference between the good standard money of the state, and the dipt, worn, and diminished currency poured into it from all the neighbouring states. See EXCHANGE.

AGIO is also used for the profit arising from discounting a note, bill, or the like. It is also used, though with some impropriety, for the rate of exchange of a sum negotiated, whether to profit or loss. It is also sometimes called AGAI.

AGIO of assurance is used, by some, for what we more usually call policy of assurance.

AGIOSYMANDRUM, from oy.oc, holy ; and ffrjfiaivh), to signify, or intimate; a wooden in- strument used by the Greeks and other churches under the dominion of the Turks, to call to- gether assemblies of the people. The agiosy- mandrum was introduced in die place of bells, which the Turks prohibited their Christian sub- jects the use of, lest they should make thera subservient to sedition.

AGIRU, a name by which some writers designate the western part of the island of Corfu in the gulf of Venice. It contains twenty vil

lages,and 8000 inhabitants. The most remarkable place in it is a convent, called Palleo Castrizza.

AGIS, the son of Eurystheus, the second king of Lacedaemon, of the race of the Heraclidce, was cotemporary with David, king of Israel, and Medon the first archon of Athens.

AGIS, I. of the Proclidae race, the son of Ar- chidamus II. and elder brother of Agesilaus II. kings of Sparta, reigned twenty-seven years, and was contemporary with Alcibiades ; who was suspected of being too familiar with his queen, Timaea, on which account her son Leo- tychides was set aside from the succession, and Agesilaus raised to the throne.

AGIS II. king of Sparta, son of Archidamus III. and grandson of the famous Agesilaus, reigned only nine years, being defeated by Antipater, one of Alexander's generals, in the second year of his universal empire.

Acis III. king of Sparta, the son of Euda- midas II. and the fifth in the direct line from Agesilaus II. He was a patriotic prince, and attempted the reformation of his kingdom, by restoring the laws of Lycurgus : but fell under the weight of an enterprize that could not but be disagreeable to all who had great possessions, and had been long accustomed to a voluptuous life. Agis however, in the flower of his age, set the example to his subjects, by practising the ancient discipline first in his own person : his clothes and his table being conformed to the primitive manners ; although he is said to have been brought up voluptuously. When he sound- ed the minds of the people, he found the younger classes opposed his plan less than those who had enjoyed a relaxation for several years. But the greatest difficulty was expected to arise from the women ; and Agis's mother did not at all approve of a reformation, by which she was to lose part of her beloved riches. However Agesi- laus her brother, whom Agis had engaged in his interests, obtained a promise from her to second the enterprize, and she endeavoured to gain the Spartan ladies. An opposing party then applied to Leonidas III. the other king of Lacedsemon, to frustrate the designs of his colleague. Leoni- das durst not oppose it openly, for fear of irrita- ting the people, with whom the reform was generally popular, because they found their account in it : but he countermined it by sowing suspicions, as if Agis had aspired to tyranny, by pulling down the rich and raising the

poor. Agis proposed his new laws to the senate, upon the discharge of debts, and a new division of the lands. Leonidas, being supported by the rich, opposed the measure so strongly, that there was a majority of one against it. But Lysander, one of the ephori, who had been a principal promoter of the reform, called him to account ; whereupon Leonidas took refuge in a temple, ^hither his daughter, Chilonis, wife of Cleom- brotus, followed him. He was summoned, but not appearing, was degraded of his dignity which was conferred on his son-in-kw Cleom- brotus, and Leonidas was banished to Tegsea

*e new ephori had Lysander and Mandrel
لidas tried for innovation ; who persuaded the two kings to unite and turn out the ephori ॐ was brought about; but not without diffi-*

culty. Agesilaus, one of the ephori that suc- ceeded those who were just turned out, would have caused Leonidas to be killed on the way to Tegaea, if Agis had not sent him a strong guard ; a favour which was repaid with the most shock- ing ingratitude. The reformation might then have been established, if Agesilaus had not found means to elude the good intentions of the two kings. Whilst this was transacting, the Achjeans asked assistance ; which was given them, and Agis had the command of the troops. He acquired a good deal of reputation in this campaign, but upon his return, found his affairs so embroiled by the ill conduct of Agesilaus, that it was impossible for him to maintain him- self. Leonidas was recalled to Lacedaemon : Agis retired into one temple and Cleombrotus into another. The wife of the latter behaved herself in such a manner that she became the admiration of every body. Leonidas was con- tented with banishing his son-in-law; but he applied himself entirely to the ruin of Agis. One of the ephori, who was unwilling to return what Agesistrata had lent him, was the diabolical instrument of the ruin of this family. Agis never went out of his sanctuary but to bathe One day, as he was returning from thence to the temple, he was seized by the ephorus, and carried to prison, brought to his

trial, condemned to death, and delivered to the executioner. His mother and grandmother used all possible im- portunity, that, as he was king of Lacedsemon, he might at least be permitted to plead his cause before the people. But the ephori were appre- hensive lest his words might make too great an impression, and they ordered him to be strangled on the spot. The ephorus, who was the un- grateful debtor to Agesistrata, permitted that princess to go into the prison, as well as Agis's grandmother; but he gave orders to strangle them both. Agesistrata died in a manner that was extremely to her honour. Perceiving the fate of her son and mother, she kissed the corpse of Agis, and exclaimed, ' My son, thy too great moderation and humanity have ruined both us and thee.' Being told that, as she approved his actions, she must also die, she immediately prepared for death, exclaiming, ' May all this be for the good of Sparta ! The wife of Agis who was a princess of great fortune and pru- dence, one of the finest ladies in Greece, and was passionately fond of her husband, was forcei away from her apartment by king Leonidas, and obliged to marry his son, Cleomenes, then very young, and was afterwards the last king of- Sparta. Thus failed the final attempt to restore the primitive virtue of the Spartans ; an evi- dence, amongst many others, how difficult it is to bring about a reform amongst a people, who are once enervated by luxury. Not long after this, Sparta became a Roman province ; and the son and grand-children of Leonidas perished miserably in Egypt. AGIS, in anatomy, the thigh. AGIST', v.) A law term, supposed to be AGIST'MENT. S derived from the old law Fr. gute, a lying place ; the lying or pasturing of cattle in another man's ground, on paying a cer- tain sum of money to the proprietor.

AGI

If a man take a liorso or other cattle to graze and depasture his grounds, which the law calls agistment, he takes them upon implied contract to return them safe to the owner. Blachstone.

A forest hath laws of her own, to take cognizance of

all trespasses ; she hath also her peculiar officers, foresters, verderers, regarders, agisters, &c. whereas a chase or park hath only keepers and woodwards.

Howell's Letters.

AGIST, in law, signifies to take in and feed the cattle of strangers in the king's forest, and to gather up the money due for the same. The officers appointed for this purpose are called agis- ters, or gistakers, and are made by the king's letters patent : there are four of them in every forest, wherein the king hath any pannage. The time for this is fifteen days before Michaelmas, and as many after, when the running of the cattle cannot prejudice the game. Manw. For. Laws, 8vo. Chart, de Foresta, 9 Henry, III. cap. 9.

AGISTMENT, from the French giste, a bed, or lying place : though Rennet derives it from ager, the field, or feeding-place for cattle ; ima- gining agistment to have originally been the same with agrarium, agerium, or agroticum, the profit of feeding cattle on such a piece of ground. The term is applied to taking other men's cattle into any ground at a certain rate per week. It is so called, because the cattle are suffered agiser, that is, to be levant and couchant there ; and many great farms are employed to this purpose, (2 Inst. 643.) Our graziers call cattle, which they thus take in to keep, gisements ; and to gise, or juice, the ground, is when the occupier thereof feeds it not with his own flock, but takes in the cattle of others, to agist or pasture it. Agist- ment is likewise the profit of such feeding in a ground or field : and extends to the depasturing of barren cattle of the owner, for which tythes shall be paid to the parson.

AGISTMEXT is also used metaphorically for a charge or burthen on any thing. In this sense we meet with terra ad custodiam maris agistata, i. e. charged with a tribute to keep out the sea. ??? So terrae agistatae, are lands whose owners are bound to keep up the sea-banks. Agistment denotes likewise the

duty or levy for repairing the banks and walls in Romney marsh, which was particularly called agistamen- tum : and the act of laying such a proportion of this duty on the several estates, was called agistatio. Spelmun.

AGISYMBA, in ancient geography, now Zanguebar, a district of Libia Interior, situated to the S.E. of the yEthiopes Anthropophagi ; the parallel passing through which, at 16►►. S. of the equator, was the utmost extent of the geographi- cal knowledge of the ancients to the south.

AGITATE,!;.-^ Agito: ago, to act often;

AGITATION, Mo move quickly, frequently,

AGITA'TOR. j and successively; to affect with a certain degree of violence ; to disturb ; to make a subject the matter of debate, and active examination ; to discuss a point.

Putrefaction asketh rest ; for the subtle motion, ►►►which putrefaction requireth, is disturbed by any Ration. Bacon.

A great perturbation in nature ! to receive at once the benefit of sleep, and do the effects of watching.

AGI

In this slumbry agitation, besides her walking, and other actual performances, what have you heard her say 1 Shakspeare. Macbeth.

Though this controversy be revived, and hotly agi- tated among the moderns ; yet I doubt, whether it be not, in a great part, a nominal dispute.

Boyle on Colours.

The project now in agitation, for repealing of the test act, and yet leaving the name of an establish- ment to the present national church, is inconsistent.

Swift's Miscellanies.

Where dwells this sov'reign arbitrary soul, Which does the human animal controul, Inform each part, and agitate the whole ?

Blackmore.

A kind of school question is started in this fable, upon reason and instinct ; this deliberative proceed- ing of the crow was rather a logical agitation of the matter. L'Estrange's Fables.

AGITATION, in medicine, exercise, and more particularly applied to that of swinging. Mau- rice, prince of Orange, found this method a re- lief against the severe pains of the gout and stone. Bartholine mentions fits of the tooth-ach, deafness, &c. removed by vehement agitations of the body. Dr. Sydenham attributes the great benefits of riding to agitation, which is very effica- cious in removing obstructions in the viscera.

AGITATION, in physics, is often used for an intestine commotion of the parts of a natural body. Fermentation and effervescence are at- tended with a brisk agitation of the particles ; and it is one of the chief causes or instruments of mixtion. By the agitation of the parts of the blood and chyle, in their continual circulation, sanguification is in a good measure effected. Butter is made out of milk by the same means ; in which operation, a separation is made of the oleous parts from the serous, and a conjunction of the oleous together. Digestion itself is only supposed to be an insensible kind of agitation. Agitation has been imputed as one of the symp- toms of inspiration.

AGITATO, in music, agitated; with emo- tion.

AGITATOR, in antiquity, a term sometimes used for a charioteer, especially those who drove in the circus at the curule games.

AGITATORS, in English history, were offi- cers appointed by the army in 1647, to take care of its

interests. Each troop or company furnished two private men or inferior officers under this title, who represented the army whilst a council of the principal officers was appointed after the model of the house of peers ; and thus a military parliament was formed in opposition to the parliament at Westminster. In their first institution Cromwell leagued himself with the agitators, whom he found to have greater interest than the council of war ; and who undertook to make proposals relating to the reformation of religion and the state. The agitators as well as the council of officers were altogether moved by his direction, and conveyed his wish to the whole army. By means of these instruments he over-awed the parliament, and reduced it to sub- mission; and having gained possession of the king's person, to whom for some time he and his officers paid attention and respect, he contrived to terrify him by the menaces of the agitators,

and thus induced him to make his escape from Hampton-court, and to take refuge at Carisbroke castle, in the Isle of Wight. Cromwell being entirely master of the parliament, and free from all anxiety with regard to the custody of the King's person, applied himself seriously to quell those disorders in the army, which he himself had artfully raised and successfully employed, against both king and parliament. With this view, besides other measures which he adopted, he issued orders for discontinuing the meetings of the agitators ; and pretended to pay entire obedience to the parliament, whom, being now fully reduced to subjection, he proposed to make, for the future, the instruments of his authority. But the levellers, (for so that party was called, because they wished to abolish royalty and nobility, to level all ranks of men, to introduce an universal equality both of pro- perty and of power, and who maintained that the meanest

sentinel, if enlightened by the Spirit, was entitled to equal regard with the greatest commander,) having tasted the sweets of dominion, would not easily be deprived of it. They secretly continued their meetings; they asserted, that their officers, as much as any part of the church or state, needed reformation ; and several regiments joined in seditious remon- strances and petitions. Separate rendezvouses were concerted; and every thing tended to anarchy and confusion. But this distemper was soon cured by the rough but dexterous hand of Cromwell. He chose the opportunity of a re- view, that he might display the greater boldness, and spread the terror the more widely. He seized the ring-leaders before their companions ; held in the field a council of war ; shot one mutineer instantly, and struck such dread into the rest, that they presently threw down the symbols of sedition, which they had displayed, and thenceforth returned to their discipline and obedience. Hume's Hist. vol. vii. p. 109. 8vo.

AGITATORS, MILIARIAN, were those who drove in the forum at Constantinople, a place adorned with statues, &c. after the manner of the circus at Rome, having a milium, or miliarium, in the middle.

AGLAIA, in mythology, the youngest of the three Graces.

AGLAIA, in botany, ayXawt, splendour and beauty, alluding to the shining verdure of the leaves, and elegance of the whole plant. ??? A genus of plants of the class and order, pentandria digynia, (rather perhaps pentandria monogy- nia.) Natural order trihilatae, Linn. Meliae, Juss. General character: CAL. Perianth, inferior, of one leaf, witn five notches, minute, permanent : COR. Petals five, ovate, concave, fleshy, converging almost closely into the form of a globe. Nectary tubular, with five plaits, rather shorter than the petals : STAM. filaments none; anthera five ovate, included in the folds of the nectary! PIST. Germen ovate, superior; style none; stigmas two, oblong, erect : PERIC. berry ovate, smooth, watery, of one cell. Seed

solitary, ovate, slightly compressed, with four furrows. Essential character: CALYX inferior, five-toothed! Petals five, converging in the form of a globe.

Berry with one seed. It is a native of China and Cochin China.

AG LAURA, or AGLAUROS, in mythology, the daughter of Cecrops, founder and king of Athens, who had two sisters, Hersa, and Pandrosa. Minerva having concealed Ericthonius after his birth, in a basket, committed him to the custody of these three princesses, forbidding them to open it. Hersa and Pandrosa observed the order, but Aglaura unable to restrain her curiosity, opened the basket and found the infant with feet like serpents. Minerva punished her by means of Envy, who made her jealous of Hersa, the favourite of Mercury. When she attempted to prevent the access of this deity to his mis- tress, he struck her with his caduceus, and con- verted her into a rock. ††† Nevertheless she was honoured after her death in a temple at Salamis with a yearly sacrifice of a human victim ; which Dephelus, king of Cyprus, in the time of Se- leucus, changed into an ox.

AGLOPHOTIS, in botany, a name used for Piony.

AGLUAS, in mythology, a poor Arcadian, whom Apollo pronounced more happy than Gyges, because he had never travelled beyond his own ground.

AGLEED, among florists, the same as AGLET, The pendants at the ends of the chives of flowers, as in tulips.

AGLIA, among ancient physicians, a whitish cicatrice, or spot in the eye, formed by a con- gestion of humours.

AGLIBOLUS, in mythology, a title under which the Palmyrenes worshipped the sun.

AGLIONBY, (John,) an English divine, chap- lain to king James I. a man of universal learn- ing, who had

a considerable share in translating the New Testament, in 1604.

AGLISH, a small town of Ireland, in the county of Waterford, where are the remains of an ancient fortification : the ruins of an abbey stand in the neighbourhood. Distant 179 miles from Dublin.

AGLITHES is used by Hippocrates for a clove of garlic.

AGMET, or AGMAT, a river, town, and dis- trict of Morocco, on the western declivity of the Atlas. The town is said to have been once considerable, and to have contained 6000 houses, but is now greatly declined; 18 miles S. E. of Morocco.

AGME, in surgery, a fracture.

AGMEN, in antiquity, a Roman army in march : in which sense, it stands contradistin guished from acies, which denoted the army in battle array ; though, on some occasions, we find the two words used indifferently for each other. The Roman armies, in their marches, were divided into primum agmen, answering to our van-guard ; medium agmen, our main battle ; and postremum agmen, the rear-guard. The order of their march was thus : At the first signal with trumpets, &c. the tents were taken down, and the baggage packed up ; at the second, the baggage was to be loaden on the horses and carriages; and at the third, they were to begin their march. First came the ex- traordinarii ; then the auxiliaries of the first

wins, with their baggage; these were followed by the legions. The cavalry marched either on each side or behind.

A—.MEN PILATUM, an army disposed in a narrow oblong

form, or column; being withal close and compact ; thus called, as resembling the figure of a pila or pier. This form was chiefly used in marching without their baggage, through bad ways, and close countries.

AGMEN QUADRATUM, an army arranged in a square form, the method ordinarily observed in the Roman armies. This was also called ag- men grave, by the Greeks Ttrpaywvos ra►►tp.. The three columns, in which the army usually marched, were considerably more in length, or breadth, than in depth; but as the baggage marched in the same order, the whole ap- proached to the figure of a square.

AGMONDESHAM. See AMERSHAM. AGMONIA, or ACMONIA, in ancient geo- graphy, a town of Phrygia Minor, (Cic. pro. Flacco, c. xv.) Also a city of Dacia upon the Danube, according to Ptolemy. The former town appears on many medals both of gold and silver.

AGNACAT, in botany, a species of pear tree, that grows in America, beyond the Terra de Labrador, toward the isthmus of Darien. It is of the figure and size of a pear tree, always covered with leaves, and of an extraordinary lustre. It bears a fruit like a pear, but green even when it is ripe ; the pulp is of the same colour, and tastes sweet and somewhat like but- ter.

AGNADELLO, or AQUADELLO, a town of Italy, in the duchy of Milan, district of Ghiera d'Adda, between Lodi and Bergamo, where Louis XII. of France obtained a victory over the Venetians in 1509, as did the duke of Veii- dome over Prince Eugene in 1706 ; it is twelve miles north of Lodi.

AGNAN, a town of France, in the depart- ment of the Cher, in the form of an amphitheatre, at the foot of which runs tne Cher, 60 miles from Bourges. It is in the arrondissement of St. Amand. AGNANO, a lake lying west of Naples. In its neighbourhood are the famous grotto del Cane and the baths of St. Januarius. The former is noted for tne suffocating vapors of carbonic acid gas, which ascend from its

bottom. The baths are beneficial in cases of gout, sy- phylis, &c. Their reputation has been increased, of late years, by the way in which they have been applied by Mr. Von Gimbernat to restore the weakened electricity of the sick.

AGNANTHUS, from ayvo, chaste, andavfloc, a flower, in botany, a genus of plants, called by Linnaeus, cornutia.

AG'NATE, adj } Ad : nascor, natus, (ori-

ACNAT'ICK, >ginally gnatus,) born to;

AGXA'TIOX. 5 a kin by the fatiier's side.

This I tale to be the true reason of the constant pivlrrence of the agnatick succession, or issue de- rived from the male ancestors through all the stnsres of collateral inheritance.

Blackstone's Law of Descent.

AGNATE, in law, any male relation by the father s side.

AGN EL, an ancient French gold coin, first

struck in the reign of St. Louis, worth twelve sols, six deniers. The angel is also called some- times mouton d'or, and agnel d'or. The deno- mination is supposed to have arisen from the figure of a lamb, struck on one side.

AGNELET, an ancient French silver coin, first struck under Philip the Fair, worth about twenty sols.

AGNELLUS, an archbishop of Ravenna, in the ninth century, who wrote the history of his predecessors in that see. This biography con- tains many curious facts, but is erroneous in re- gard to dates. It was published by Bacchini in 1708, and reprinted by Muratori in his col- lection of Italian historians. Moreri.

AGNEREINS, a small place in France, for- merly the

seat of a castellan, in the govern- ment of Dombes, now in the department of the Ain, arrondissement of Trevoux, from which it is distant 3 leagues to the N. E.

AGNES, St. one of the most considerable, and perhaps, the most fertile, of the Scilly Islands, lying in N. lat. 49□□. 53'. and W. long. 6□□. 20'. It is about three miles S. E. of St. Mary's, and nine leagues W. S. W. from the Land's End. The whole island contains about 300 acres of land, well cultivated both in corn and grass, but badly watered ; and from 250 to 300 regular inhabitants.

The light-house, after which it is sometimes called Light-house Island, is its most important feature, and is a noble column of stone, fifty- one feet from the foundation to the lantern, standing on an eminence. The gallery is four feet high ; and the lights rise eleven feet and a half above it. Twenty-one Argand lamps are placed in the respective centres of as many para- bolic reflectors of copper, disposed in three clusters of seven each, on a frame standing perpendicularly to the horizon; and so con- structed as to turn round on a common shaft or centre every two minutes; by which motion all parts of the horizon receive in succession, the benefit of these brilliant lights. This compara- tively recent disposition of them was suggested by Mr. Adam Walker, a well known lecturer on natural philosophy. Prior to this the light was that of a stationary fire, emitted through sixteen large sashed windows. Its white ap- pearance by day, and its well-regulated fire at night, make this light-house an invaluable sea mark. The care of it is vested in the Trinity- House, who appear to have erected the original light in 1680. The present was completed in

1790.

Leland mentions a chapel here, dedicated to St. Warna, an Irish saint, who is said to have come here in a wicker-boat covered with hides. There is a well called after her name, which was formerly much resorted to. He also mentions the destruction of all

the inhabitants of the island in his time, amounting to five thousand in- dividuals, who were drowned in returning from a feast at St. Mary's. At present there is a small church here, where divine service is per- formed at irregular intervals, by a clergy- man appointed by the Society for promoting Christian Knowledge. Other benevolent so- cieties among the Dissenters also occasionally

send a minister here. On the east is the mlet of Gue, which is only divided from St. Agnes by the flowing of the tide.

AGNES, ST. a parish and market town in the hundred of Pydar, Cornwall, five miles N. W. from Truro, 167 from London. It stands on the Bristol Channel, and is accessible only to fish- jig-boats. In the neighbourhood are some of ihe richest mines in Cornwall. It was formerly famous for St. Agnes's well, said to be of great sanative and restorative power. Market, Thurs- day.

AGNESI, (Maria Gaetana,) a lady of extraor- dinary genius, and most extensive acquirements, was born at Milan on the 16th of May, 1718. Her rather, Pietro Agnesi of Milan, was royal feudatory of Monteveglia and its dependencies ; and being a man of some rank and consequence, he was disposed, from paternal affection, to pro- vide suitably for the education of his infant daughter, who gave the most striking indications of talent. From her tenderest years she dis- covered a wonderful aptness, and a vehement desire, for acquiring languages. Under the di- rection of proper masters, she studied at the same time the Latin and Greek, the French and German ; and while the rapidity of her progress excited astonishment, such were the prodigious powers of her memory, that she could easily pursue those diversified objects without feeling the smallest

degree of confusion. When yet scarcely nine years old, this surprising child de- livered a Latin oration, to prove that the cultiva- tion of letters is not inconsistent with the female character, before an assembly of learned persons, invited to her father's house. At the age of eleven, the young Agnesi could not only read Greek, and translate it instantly into Latin, but could even speak that refined language, and with the same apparent ease and fluency as if it had been her native tongue. Nor did these acquisitions absorb her whole attention ; a nobler field was opened to the exercise of her mental faculties. She now began to read Euclid's Ele- ments, and proceeded in algebra as far as qua- dratic equations. Thus prepared, she advanced with ardour to the study of natural philosophy ; but not content with the sober truths there un- folded, she soared to the heights of metaphysics, and engaged in the most abstruse and intricate disquisitions of that contentious science. After this young lady had attained the age of fourteen, her father, anxious to forward her ardour for im- provement, and willing to gratify her ambition for literary distinction, invited occasionally to his house a number of persons, the most respectable in Milan by their rank and learning. In the midst of this grave auditory, Donna Agnesi made her appearance, and without resigning the native delicacy of her sex, she maintained a suc- cession of new theses on various difficult parts of philosophy, and handled the arguments with such dexterity and commanding eloquence, as singly to vanquish every opponent that entered the field of controversy. These disputations were all of them carried on in the Latin lan- guage, which she spoke with the utmost ease, purity, and copious elegance. Every thing con- spired to heighten the impression produced on

the admiring spectators. In the full bloom of youth, her person agreeable, her manner grace- ful, an air of gentleness and modesty gave ir- resistible charms to her whole demeanour. Such, for several years, was the great theatre of her glory. But having nearly completed the circle of philo- sophy, and exhausted

the chief topics of discus- sion, she resolved at length to close that career with a solemnity suitable to the occasion. In the year 1738, Agnesi made her last brilliant display, before an august assembly, composed of the most learned and illustrious of the Milanese nobility, the senators, and foreign ministers. with the most distinguished professors in all the branches of science and literature. The sub- stance of these philosophical conferences was afterwards published in a quarto volume, entitled Propositiones Philosophies, quas, crebris Dis- putationibus domi habitis, coram clarissimis viiis, explicabat extempore, et ab objectis vindicabat Maria Cajetana de Agnesiis Mediolanensis. Ag- nesi now bent her whole attention to the culture of mathematics ; and without guide or assistance, she composed a very useful commentary on L'Hopital's Conic Sections, which is said to exist still in manuscript. In the sublimer de- partments of that science, her studies were di- rected by the matured experience of Rampinelli, professor of mathematics in the university of Pisa ; but she soon gave proofs of her amazing proficiency, in digesting a complete body of the modern calculus. This excellent work, entitled, Analytical Institutions, for the use of the Italian Youth, appeared in 1748, in two volumes quarto, and was highly esteemed by the best judges, and justly regarded as exhibiting the fullest and clearest view of the state of the science at that period. She was, in consequence, elected by acclamation, a member of the Institute of Sciences of Bologna ; and the Pope farther con- ferred on her the title of Professor of Mathema- tics in the university of that city. But Agnesi was already sated with literary fame. That sun, which in its ascent had shone forth with such dazzling radiance, was, through the rest of its course, shrouded in clouds and darkness. The fever of genius had preyed on her mind, and the high fit of excitement was quickly succeeded by a hopeless depression of spirits. She repelled the seductions of human learning, and abandoned for ever her favourite mathematical pursuits. Re- nouncing the vanities of this world, she withdrew from society,

embraced a life of rigid seclusion, and sunk by degrees into the langour of religious melancholy. She studied nothing but Hebrew, and the rhapsodies of the Greek fathers of the church. For upwards of twenty years she de- nied all access to strangers. The famous La- lande complains, in his ' Travels through Italy,' that he was not allowed the honour of visiting this prodigy; and Father Boscovich himself, whose religious principles must have been unex- ceptionable, experienced, notwithstanding his repeated importunities, a similar refusal. In- dulging that gloomy temper, she retired into a convent, and assumed the habit of a Blue Nun. She sought to forget the world, and was herself for- gotten. Shedied about the year 1770, but we have not been able to discover the precise period of her

demise. The Instituzioni Analytiche of Agnesi were translated into English many years ago, by Mr. Col son. Lucasian professor of mathematics at Cambridge. The translation was discovered among the papers of that ingenious mathemati- cian, by the learned Baron Maseres, who put the manuscript into the hands of Mr. Hellins, as editor, and generously defrayed the expenses at- tending the publication.

AGNIFER, from agnus, a lamb, and ferre, to bring, an appellation applied, by some eccle- siastical writers, to John the Baptist, and used, in the same sense with precursor, or fore- runner.

AGNIL. See INDICUM.

AGNINA, in botany, lamb's tongue or plan- tain.

AGNINA LACTUTA. See LACTUTA.

AGNINA MEMBRANA, the same as the Amnios.

AGNO, a river of Naples, which, taking its rise in

the mountainous parts of Terra di Lavora, washes the town of Acerra ; and, passing between Capua and Aversa, falls into the Mediterranean, about seven miles north of Puzzuoli.

AGNODICE, in biography, an Athenian lady, who attended the lectures of Herophilus, in the disguise of a man, and acquired so much know- ledge of the treatment of diseases, as to be in great request among her own sex ; particularly in the practice of midwifery. At length the physicians, jealous of her fame, it is said, and ignorant of her sex, accused her of introducing herself to the women under the pretence of as- sisting them in their labours and complaints, but in reality from views of incontinence. Being cited to the areopagus, she made herself known : and the judges were so well satisfied with her conduct, and perhaps with the women for patro- nizing her, that they repealed a law then existing prohibiting women to practice any branch of me- dicine, and decreed that women of the rank of citizens might be allowed that liberty. A physi- cian, M. Hecqup, Eloy says, published a volume in the year 1 708, entitled, l)e 1'Indecence aux Hommes d'accoucher des Femmes, written with much ingenuity ; in which he attributes the looseness in the morals of the present age, to the custom of admitting men to the general practice of midwifery, for in particular cases he acknow- ledges their assistance to be necessary. The argument against admitting men into the general practice is, that in ordinary cases, women are perfectly competent ; but this is fully answered by the fact, that cases do, and must for ever occur, in which a kind of assistance is required that women are incapable of giving, if men were not to attend in ordinary cases, they would not acquire the expertness that is necessary to enable them to deliver in difficult ones.

AGNOET.SL, from ayvoew, to be ignorant of; in church history, a set of ancient heretics, who maintained that Christ, considered as to his human nature, was ignorant of certain things, and particularly of the time of the day of judg- ment. Eulogius, patriarch

of Alexandria, ascribes this heresy to certain solitaries in the neighbour- hood of Jerusalem, who built their opinion upon the text, Mark xiii. 32. ‘ Of that day and hour knoweth no man, no not the angels that are in

heaven, neither the Son, but the Father only.’ ??? The same passage was made use of by the Arians ; and hence the orthodox divines of those days were induced to give various explications of it. Some alleging that our Saviour here had no regard to his divine nature, but only spoke of his human : others, that the knowledge of the day of judgment does not concern our Saviour considered in his quality of Messiah, but as God only.

AGNOIA, in medicine, a word used by phy- sicians, when a person in a fever does not know his acquaintance. When a rigour accompanies this symptom, Hippocrates says, it is dangerous.

AGNOITES. See AGNOETJE.

AG’NOMEN, ^ Ad : nomen, Lat. a name

AGNOM’INATE, v. >in addition. A name given

AGNOMINA’TION. j by the Romans in conse- quence of adoption, some great action, or a par- ticular adventure ; as Lucius Cornelius, Scipio Africanus. It came last in the order of names. Agnomination is applied to the repetition of words of similar sound ; or to allusions founded on some other fanciful resemblance.

The British continueth yet in Wales, and some villages of Cornwall, intermingled with provincial Latin ; being very significative, copious, and plea- santly running upon agnominations, although harsh in aspirations. Camden.

White is there usurpt for her brow ; her forehead ; and then sleek, as the parallel to smooth, that went before. A kind of paranomasee, or agnomination : do you conceive, sir? Ben Jonson’s Poetaster, iii. 1.

Our bards hold agnominations, and enforcing of consonant words or syllables one upon the other, to be the greatest elegance : as for examples, in Welsh, Tewgeis, to dyrris, ty'r derryn, gwillt, &c. So have I seen divers old rhymes in Italian running so : Donne, Odenno, che Felo affronto aftronta : In selva salvo a me : Piu caro cuore, &c.

Howell's Letters, ii. 40.

AGNOMEN, in antiquity, an epithet given to a person, either by way of praise or dispraise, or from some remarkable event, which became, as it were, an additional tname, but peculiar to the person, and not descendible to his issue. ••• Thus, one of the Scipios obtained the agnomen of Africanus, and the other of Asiaticus, from the brave achievements which the one performed in Africa, and the other in Asia. The agnomen was generally the third in order, and sometimes the fourth of the Roman names ; but it was always ranked last, even when there were more of them. Thus, in Marcus Tullius Cicero, Mar- cus is the prsenomen, Tullius the nomen, and Cicero the agnomen. But in the case of the Scipios, who had previously three names each> viz. Publius Cornelius Scipio, the agnomen was the fourth, and the third, Scipio, was styled the cognomen, and was. heritable, like the nomen or family name. The emperor Antoninus, not to multiply instances, had five names, viz. Marcus ^.lius Aurelius Antoninus Boionius ; of which, he received the second by adoption, from his predecessor Adrian ; the third and fourth, by descent; and the fifth, was the agnomen, ob- tained by a victory over the Boionii.

AGNON, the Clanius of the ancients, a river of Campania, in Italy.

AGNOS, in ichthyology, a name given by

Athenspus, and other Greek writers, to the fish called callyonymus, or uranoscopus. It is a species of the trachynus, and is distinguished by Artedi, from the rest of that genus, by the name of the trachinus, with a great number of beards growing from the lower jaw.

AGNONA, a market-town of Italy, in Pied- mont, with 1100 inhabitants.

AGNOUE, a small town of Naples, in the province of Abruzzo Citra, nine miles S. S. E. of Civita Borella.

AGNUS, a lamb, in zoology, the young of the ovis, or sheep. See Ovis.

AGNPS CASTUS, in botany, the trivial name of a species of the vitex. See VITEX. The Greeks call it ayvoc, chaste ; to which, has since been added the reduplicative castus. The Athenian ladies, who made profession of chastity, lay upon leaves of agnus castus during the feasts of Ceres.

AGNUS DEI, in the church of Rome, a cake of wax, stamped with the figure of a lamb, sup- porting the banner of the cross. These being consecrated by the pope with great solemnity, and distributed among the people, are supposed to have great virtues ; such as, to preserve those who carry them worthily, and with faith, from all manner of accidents; to expel evil spirits, &c. The name literally signifies Lamb of God ; this being supposed an image, or representation of the Lamb of God, who took away the sins of the world. They cover it with a piece of stuff cut in form of a heart, and carry it very devoutly in their processions. ††† The Romish priests and religious, derive considerable pecuniary advan- tages from selling these agnus dei's to some, and presenting them to others. The pope provides a regular supply, by consecrating them once in seven years ; they are distributed by the master of the wardrobe, and received by the cardinals and other prelates, with great reverence, in their caps and mitres. ††† This ceremony they pretend to derive

from an ancient custom of the church, wherein part of the paschal taper, consecrated on Holy Thursday, was distributed among the people, to perfume their houses, fields, &c. ; in order to drive away devils, and to preserve them from storms and tempests. The agnus dei is forbidden to be brought into England, under pain of incurring apremunire; 13th Elizabeth, cap. 2. ††† Agnus dei is also a popular name for that part of the mass wherein the priest, striking his breast three times, rehearses, with a loud voice, a prayer beginning with the words agnus dei. ††† The masses of Giovanni Pietro Aloisio da Palestrina, are still the admiration of the world, although composed in the sixteenth century. The agnus dei is said to hare been first brought into the missal, by pope Sergius I.

AGNUS SCYTHICUS, in natural history, a kind of zoophite, or plant-animal, said to grow in Tartary, resembling the figure and structure of a lamb. See ZOOPHYTON. The Scythian lamb is also called agnus vegetabilis, agnus tartaricus, and by the people of the country, borometz, bo- rumetz, or boranetz. ††† The usual account given of this extraordinary production is, that the Tar- tars sow in their ground a seed resembling that. of a melon, but less oblong; from whence arises a

plant called by them borometz, i. e. lamb, growing almost to the height of three feet, and having feet, hoofs, ears, and the whole head, excepting horns, resembling that apimal. In lieu of horns, it has a peculiar sort of hair, not unlike horns ; it is covered with a fine thin skin, which being pulled off, is worn by the natives as a cover for the head. The pulp within resembles that of the gammarus; and when wounded, a liquor oozes out like blood. It lives as long as there is grass and herbage around it; but when these are consumed, it wastes and dies. They add that wolves are fond of it, while no other beasts will feed on it. Deusingius seems to have been the first who suspected this account to be fabu- lous ; and Kempfer, when in the country, made diligent enquiry concerning it, but could hear of nothing like it. As to the plants shewn under this

denomination, in some repositories of rarities, they appear to be originally the roots, orstalks of certain vegetables, probably of the capillary kind, covered with a woolly moss, which, naturally bearing re- semblance to the figure of a lamb, have been helped out and brought near to it by art, and the addition of new parts. Sir Hans Sloane, and Breynius, give us the figures and descriptions of such borometzes in their collections. It is from these plants that the Indian moss is gathered, famous for its use in staunching blood. Brey- nius and Libavius have written expressly on the agnus scythicus. AGO', ►►.-_

Participles more or less corrupted ►►► of the verb, to go. Those now used are employed adverbially.

AGON', AGONE', YGON', AGOING.

For in swiche cas wimmen have swiche sorwe,

Whan that hir housbons ben fro hem ago.

Chaucer. The Knightes Tale, v. i.

Hast thou not heard, how I haue ordeyned soch a thynge a great wtyle a goo, and haue prepared it from the beginnynge. Bible. 1539. 4 Kings xix.

For news the world is here turn'd upside down, and it hath been long a going so. Howell's Letters,

This, both by others and myself, I know :

For I have serv'd their sovereign, long ago ;

Oft have been caught, within the winding train.

Dryden's Fables.

I shall set down an account of a discourse, I chanced to have with one of them some time ago.

Addison's Freeholder.

AGOG', v. supposed to be derived from the Ang. Sax.

janjan, to gang, or go, and signifies alert, eager, elate.

And worst of all, the women that doe go with them, set them agog that doe tarrie. Golden Book, y. 5.

Neither am I come to please thee, or set thee agoa with a vain salutacion, but I am come vnto thee as a messagier of a matier bothe passyng ioyful, & al?o verai great. Udall. Luke, c. i. fol. 9. c. 2.

As for the sense and reason of it, that has little or nothing to do here : only let it sound full and round, and chime right to the humour, which is at present agog ; just as a big, long, rattling name is said to com- mand even adoration from a Spaniard : and no doubt, with this powerful senseless engine, the rabble-drivei shall be able to carry all before him.

Smith's Sermons,

The gawdy gossip, when she's set agog, In jewels drest, and at each ear a bob,

Goes flaunting out ; and, in her trim of pride, Thinks, all she says or does is justify 'd.

Dryd. Juv. Sat. vi.

This maggot has no sooner set him agog, but he pets him a ship ; freights her, builds castles in the air, and conceits both the Indies in his coffers.

L'Eitrange. So three doors off the chaise was stay'd,

Where they did all get in ; Six precious souls, and all agog To dash thro' thick and thin.

Cowper's John Gilpin.

AGOGA, a ditch or drain for carrying off the water from a mine.

AGOGE, ductus, guide ; in music, one of the sub-divisions of the ancient Melopseia which pre-scribed rules respecting the progress of a melody, by disjointed, or conjointed degrees, alternately, whether ascending or descending ; it also served to denote the degree of movement, as well as the character of the piece executed.

ACOGE RYTHMICA, the Greeks denoted by this term, what we now understand by tempo, time or measure.

AGOMPHASIS, or GOMPHIASIS, in medicine, a distemper in the teeth, consisting in their being loose in the sockets.

AGON’, ra. ~\ Gr. aytov, conflict, en- AGONIS’TICAL, I counter. A combat among AGONIS’TICK, Vthe ancients, particularly ap- AG’ONIZE, i plied to wrestlers and prize- AG’ONY. ./fighters. Agonize and agony

apply to mental suffering accompanied with ex-cessive pain.

And he was maad in agonye, and preiede the lenger►► and his swoot was maad as dropis of blood rennynge doun into the erthe. Wiclif. Luke xxii.

Betwixt them both, they have me done to dy, Thro’ wounds, and strokes, and stubborn handeling ;

That death were better, than such agony, As grief and fury unto me did bring.

Faerie Queene.

Thee I have missed, and thought it long deprived Thy presence ; agony of love ? till now Not felt, nor shall be twice.

Milton. Paradise Lost.

Never was there more pity in saving any, than in

ending me j because therein my agony shall end.

Sidney.

Thou, who for me didst feel such pain, Whose precious blood the cross did stain, Let not those agonies be vain. Roscommon.

To propose oup desires, which cannot take such effect as we specify, shall (notwithstanding) other- wise procure us his heavenly grace ; even as this very prayer of Christ obtained angels to be sent him, as comforters in his agony. Hooker.

Dost thou behold my poor distracted heart, Thus rent with agonixing love and rage j And ask me what it means ? Art thou not false ?

Howe's Jane Shore. Or touch, if tremblingly alive all o'er, To smart and agonise at every pore ?

Pope's Essay on Man. The lifted axe, the agonizing wheel, Luke's iron crown, and Damien's bed of steel To men remote from power but rarely known, Leave reason, faith, and conscience, all our own.

Goldsmith.

I see before me the gladiator lie ; He leans upon his hand ††† his manly brow Consents to death, but conquers agony.

Lord Byron's Childe Harold.

AGON, among the ancients, implied any dis pute or contest either in bodily exercises, or the accomplishments of the mind ; and therefore poets, musicians, painters, &c. had their agones, as well as the athletae. Games of this kind were celebrated at most of the heathen festivals, with great solemnity, either annually, or at certain pe- riods of years. Among the latter were celebrated at Athens, the agon gymnicus, agon Nemaeus, in- stituted by the Argives in the 43d Olympiad, and the agon Olympius, instituted by Hercules 430 years before the 1st Olympiad. The Romans also, in

imitation of the Greeks, instituted contests of this kind. The emperor Aurelian established one under the name of agon solis, the contest of the sun ; Dioclesian another, which he called agon Capitolinus, which was celebrated every fourth year after the manner of the Olympic games. ??? Hence the years, instead of lustra, are sometimes numbered by agones.

AGON also signified one of the ministers em- ployed in the heathen sacrifices, and whose business it was to strike the victim. The name is supposed to have been derived from hence, that, when standing ready to give the stroke, he asked, Agon ? or Agone ? Shall I strike ?

AGON, among physicians, the struggle of death. See AGONY OF DEATH.

AGONALES, in heathen mythology, an epi- thet given to the Salii, or priests of Mars.

AGONALIA, in Roman antiquity, festivals celebrated in honour of Janus, or Agonius, three times a year.

AGONALIS CIRCUS, now La Piazza Navona, a long, large, and beautiful street in the heart of Rome, adorned with fountains, and the obelisk of Caracalla, still retaining the form of that circus. The reason of the name Agonalis is doubtful. Ovid seems to derive it from the agones, or solemn games, there celebrated ; supposed to have been the Ludi Apollinares, or Actiaci, instituted by Augustus : whence the cir- cus was called Apollinaris : also Alexandrinus from the emperor Alexander Severus, who either enclosed or repaired the circus.

AGONATA, in entomology, the fourth class of insects in the system of Fabricius : comprehend- ing the cancer, the pagurus, the hippa, the scillarus, the astacus, the squilla, and the gam- marus. Linnaeus has included this class under the genus Cancer.

AGONICHE, a river of Nova Scotia, British North America, which enters the bay of Fundy, in a south-

east course, between the river Me- chicor and St. John.

AGONISMA, in antiquity, the prize given the victor in a game or combat.

AGONISTARCHA, from aywv, combat, and ►►PX►►C> chief, in antiquity, seems to have been much the same with agonotheta : though some suggest a difference, making it the office of the former to preside at and direct the private exer- cises of the athletae, which they went through by way of practice, before they made their appear- ance on the public theatres or amphitheatres.

AGONISTIC, AGONISTICA, the science of what relates to the combats or agones of the ancients. In which sense, agonistic amounts to much the same with athletic, and makes a branch of gymnastics

AGONISTICI, in church history, a name ^iven by Donatus to such of his disciples as he sent to fairs, markets, and other public places, to propagate his doctrine ; for which reason they were also called Circuitores, Circelliones, Catro- pitse, Coropita:, and at Rome Montenses. They were called Agonistici, from the Gr. ayov, com- bat, in regard they were sent as it were to fight and subdue the people to their opinions.

AGONIUM, in Roman antiquity, was used for the day on which the rex sacrorum sacrificed a victim, as well as for the place where the games were celebrated, otherwise called agon.

AGONIUS, a god whom the Romans invoked before they undertook any enterprize of import- ance.

AGONIZANTS, Roman friars, who assist those who are in agony. AGONNA. See AGGA. AGONOS, in physic, barren. Hippocrates applies it to women who have no children, though they might have them, if the

impediments were removed.

*AGONUS, in ichthyology, the fish called by 'some sarrachus, by others, chalcis and sardella. It is in many particulars very like the alausa, or shad, called the mother of herrings, but smaller,
 ळ ळ never arriving at more than a foot in length ; and is always lean and lank in spring, and fat in autumn. But the distinctions between it and the alausa, if real, are so very small, that Mr. Ray, and many of the most accurate naturalists, have suspected it to be the same fish, only in a different state.*

AGONOTHETA, or AGONOTHETES, in Gre- cian antiquity, was the president or superin- tendant of the sacred games; who not only de- frayed the expences attending them, but inspect- ed the manners and discipline of the athleta?, and adjudged the prizes to the victors.

AGONY OF DEATH. Much of the terror of death arises from the pangs and convulsions wherewith the agony seems attended ; though we have reason to believe that the pain in such cases is not extremely acute ; a course of pain and sickness having usually stupified and indis- posed the nerves for any quick sensations. However, various means have been thought of for mitigating the agony of death. Lord Bacon considers this as part of the province of a physi- cian ; and that not only when such a mitigation may tend to a recovery, but also when, there being no further hopes, it can only tend to make the passage out of life more calm and easy. Complacency in death, which Augustus so much desired, is certainly no small part of happiness. Accordingly the author last cited ranks eutha- nasia, or the art of dying easily, among the de- siderata of science ; and does not even seem to disapprove of the course Epicurus took for that end :

Hinc stygias ebrius hausit aquas.

Opium has been applied for this purpose, with the approbation of some, but the condemnation of more.

The agony of Jesus Christ in the garden of Gethsemane has perplexed several commenta- tors ; and some learned persons seem studiously to have avoided the term agony in their transla-

tions, as Beza, Le Clerc, and Lcnfant : in the translations of the Syriac version by Tremellius, Trostius, and others, we have timor, or fear, for agony. Lardner suggests that ytvo/jitvoc tv ayuva, (Luke xxii. 44.) might be translated, being under great concern. The effect of this agony has been differently explained. Many expositors have thought with M. Le Clerc, that the expression b idfxaiQ avra taffii Srponfioi ot/tarof, only implies, that the drops of sweat were large and clammy, like clots of gore. Grotius under- stands the expression metaphorically, as denoting excessive sweat; but Dr. Whitby (in loc.) ob- serves, that Aristotle (Hist. Anim. lib. iii. c. 19. Oper. torn. i. p. 809. De part. An. lib. iii. c. 5. Oper. torn. J. p. 1008.) and Diodorus Siculus (lib. xvii. Oper. torn. ii.p. 230.) mention bloody sweats, as attending some extraordinary agony of mind. Leti also, in his life of pope Sextus V. p. 200. and sir John Chardin, in his History of Persia, vol. i. p. 126, mention a similar phe- nomenon ; to which Dr. Jackson (Works, vol. ii. p. 819.) adds another from Thuanus, lib. x. p. 221. See Doddridge's Family Expositor, vol. ii. p. 517. Bartholinus (de Cruce, p. 184. 193.) produces examples of sweats that have been ac- tually mixed with blood. So does Maldonat in Mat. xxvi. 37. The possibility of this circum- stance is ascertained by a fact well known in history, viz. that Charles IX. of France died of a malady, in which his blood gushed out of all the pores of his body. Voltaire (Univ. Hist, chap. 142.) describes it thus : ' Charles IX. died in his twenty-fifth year, the malady being very extraordinary, the blood gushing out of all his pores.'

AGONYCLIT^E, or AGONYCMTES, from a, privative, yovv knee, and icXiyw, to bend, in church history, a sect of Christians, in the seventh century, who prayed always standing, as thinking it unlawful to kneel.

AGOOD', a. In good. See GOOD. At that time I made her weep agood, For I did play a lamentable part.

Shakspeare's Two Gent, of Verona.

AGOONA, or AGONNA. See AGGA.

AGOR/EUS, from ayopa, a market, in hea- then antiquity, an appellation given to such deities as had statues in the market places ; par- ticularly Mercury, whose statue was to be seen in almost every public place.

AGORANOMUS, from oyopa, a market, and vo/ioc, law, in Grecian antiquity, a magistrate of Athens, who had the regulation of weights and measures, the prices of provisions, &c. The agoranomi, at Athens, were ten in number, five belonging to the city, and as many to the Piraeus ; though others make them fifteen in all, of whom they assign ten to the city. To these a certain tribute was paid by all who brought any thing to sell in the market.

AGOSTA, or AUGUSTA, a maritime town on the south- east coast of the island of Sicily, on a peninsula at the bottom of a gulf, eighteen miles north of Syracuse. It was built originally by the emperor Frederic II. and was a place of con- siderable opulence previous to the earthquake of 1693, which spread havoc and devastation throughout its whole extent. The subterraneous

vapours, and the rapid motion of the earth, set fire to the powder magazine in the citadel, split the water-side forts to their foundation, and pre- cipitated the light-house into the sea. It has since been rebuilt on a regular plan, with low houses, in order to prevent such dreadful conse- quences on the recurrence of a similar calamity. The harbour also is now cleared, and forms one of the safest ports in

the island. Number of houses 1835; population 15,000. Long. 15□□. 14′. E. Lat. 37□□. 16.′ N.

AGOT, an island in the English channel, near the coast of France. Long. 2□□. 4′. W. Lat. 48□□. 38′. N.

AGOU, or AGOEN, a small island of Sweden, in the province of Ilelsingland, with a good har- bour. Long. 17□□. 14′. E. Lat. 61□□. 32′. N.

AGOU, a town and territory of Whydah, on the Slave Coast of Guinea.

AGOSTUS, aye-roc, in anatomy, the arm from the fingers to the elbow ; also the palm or hollow of the hand.

AGOUTI, or AGUTI. See Mus.

AGOVVS, in geography, the inhabitants of a province of Abyssinia, which is bounded by the mountains of Amid Amid on the east ; by Bure and Umbarma, and the country of the Gongas, on the west ; by Damot and Gafat on the south ; and by Dingleber on the north. They consist of two nations ; the one near the fountains of the Nile, called the Agows of Damot, from their vicinity to that province, the other near the head of the Tacazze, in the province of Lasta, called the Tcheretz Agows, from Tchera, a principal town, tribe, and district, near Lasta and Begem- der. They are described by Mr. Bruce as one of the most considerable people in Abyssinia.

The country of the Agows is in a very elevated situation, and forms a kind of amphitheatre of lofty mountains; the climate is tempe- rate and wholesome. In the shade, or in a house, the air is cool, as there is a constant breeze which mitigates the scorching heat of the sun, even at noon day, though the latitude is not much greater than 10□□. But notwithstanding the exceeding temperature of the climate, the Agows do not live to any great age, which is probably owing to the oppression they suffer. Their country abounds with all the

necessaries of life; and yet their taxes, tributes, and services, are so numerous, and their dependent condition so distressing, that they are only the manufac- turers of the commodities they sell, in order to satisfy the exorbitant demands of their oppres- sors ; and are constrained to live in a state of Snury and misery, that is scarcely conceivable, r. Brace informs us, that he saw a number of women, wrinkled and sun-burnt so as hardly to appear human, wandering about under a burning sun, each of whom had one and sometimes two children upon their back, and gathering the seeds of bent grass 1o make a kind of bread.

The Agows are said to be able to bring into the field 4000 horse, and a great number of foot ; nut their power has been much reduced by the incursions of the Gallas. Their riches, however, are still greater than their power; for though their province is hardly 60 miles long, and 30 miles broad, yet Gorular and the whole neigh-

bouring country, depend for the necessaries of life, cattle, honey, butter, wheat, hides, wax, and a number of such articles, upon the Agows, who frequent the capital to the amount of 1000 and 1500 at a time, in order to dispose of these com- modities. The Abyssinian princes have therefore compounded with them for an increase of tri- bute, in lieu of military service ; but when they have deviated from this prudent practice, the Agows have been great sufferers. The butter which they carry to a great distance in this hot climate, is prevented from putrefaction by a root called moc-moco, resembling a carrot; which they bruise and mix with it, and thus they preserve it fresh for a considerable time. This root answers the purpose more certainly than salt, which could not be conveniently appro- priated to this use, as it serves for money, and is used instead of silver coin as change for gold. Brides paint their feet, the palms of their hands, and their nails, with this drug. Mr. Bruce brought a considerable quantity of

the seed, re- sembling that of coriander, into Europe. The Agows dispose of their commodities, not only at the market of Gondar, but to the neighbouring black savages, the woolly-headed Shangalla, and receive in exchange elephants' teeth, horns of the rhinoceros, gold, and fine cotton. This trade, which might be materially beneficial, is very much interrupted by the barbarity and fraud of both nations. Besides what they sell, and what they pay to the governor of Damot, the Agows present a tribute to the king of 1000 dabra of honey, each dabra containing about 60lb. weight: 1500 oxen, and 1000 ounces of gold. The clothing of the Agows consists of hides, which they soften and manufacture in a manner peculiar to themselves. Of these they form a kind of skirt, which reaches down to their feet, and is girded with a belt about their middle. The lower part resembles a large double petti- coat, one fold of which they turn back over their shoulders, fastening it with a skewer across their breast before, and the married women carry their children in it behind. The younger sort are generally naked. The women are commonly thin, and, like the men, below the middle size. Barrenness is unknown among them. They are marriageable at nine years of age; at eleven they actually marry and bear children ; and con- tinue child-bearing to the age of thirty, and in some instances beyond that period.

The Agows are grossly idolatrous and super- stitious. The Nile, or the spirit residing in that river, is the object of their worship ; whom they address under the titles of ' the everlasting God, light of the world, eye of the world, God of peace, their Saviour, and father of the universe.' To this deity they present their supplications for seasonable rain, plenty of grass, and the preser- vation of a particular kind of serpents ; at the same time deprecating thunder ; and their prayers are pronounced very pathetically with a kind of tone or song. The shuro or priest of the river, with whom Mr. Bruce conversed, pretended to have intercourse with a spirit which occasionally appeared to him, and revealed to him future events. This spirit, he

said, was of the river, God. the father of mankind. Thunt'er was de-

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precated, as the priest informed him, because it interests, was hurtful to the bees, and their chief revenue divisi was honey and wax. They prayed for serpents

is one of the largest of the old of Ilindostan ; being 250 miles in length, and 180 in its average breadth. It is

beT-xu'seThey'taught the approach of good or bounded on the north by Delhi, on the south by

evu Serpents are kept in some of their houses ; Malwah, on the west by Ajmeer, and on the east and'they are fed with butter and milk, before by Oude and Allahabad.

It is watered by the Chumbul, and contains, besides Agra, the strong

ihey undertake a journey, or any affair of conse- branches of the Ganges, the Jumna, and the auence ; and if they do not eat, this is considered

as a bad omen. Before an invasion of the Gallas, fortresses of Bburtpoor and Deeg, and the town* they say these serpents disappear, and are no of Canoge, Kalpy, and Narwar Bhurtpoor re- where to be found. Fasil, a sagacious governor sisted the whole force of the British, under Lord

Lake, in the last Mahratta war : and the siege is said to have cost our army a greater loss of men than it ever sustained in three of our greatest battles in India. The rajah is independent. Doeg, or

Deeg, was defended by Holkar, at the

of the country, who was addicted to this species of divination, would never mount his horse, or go from home, if an animal of this kind, which he had in his custody, refused to eat. Once a year, on the first appearance of the dog-star, or.

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as others say, eleven days after, their devotion is same period, with ranges of batteries extending

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attended with circumstances of peculiar solemni- over two miles of ground ; but it fell before the

ty; on which occasion, they sacrifice a black British attack. The portions of Agra, finally

heifer, distribute parts of it to several clans, eat

the carcase raw, and drink the water of the Nile.

The bones are then burned to ashes ; and the

head is carried into a cavern, which they say

reaches below the fountains of the river, and

there they perform their secret worship, which

ceded to our arms, are part of the Bengal pre- sidency.

No part of Ilindostan contains a richer soil, or one that has been better cultivated, than por- tions of this province. The devastations of war, and its being divided among so many hostile

no one is allowed to divulge. The Agows of masters, has much checked its general prosperity ; Damot worship the Nile; and those of Lasta pay nearly the same worship to the Siris or Tacazze. These last

have a separate language, and are Troglodytes, who live in caverns. Mr. Bruce apprehends that Agow is a compound of two words, Ag-hoa, q. d. the shepherds of the river ; and that the species of idolatry introduced by them is a proof that they originally came from Canaan, where they imbibed materialism instead of the pure Sabaean worship of the shepherds of Agaazi, which was, at an early period, the only religion of this part of Africa. The mountains in all the districts or clans of Agows are per- forated in caves of a very large size, which some suppose were their ancient habitations when they were Troglodytes, or places of retreat when they were alarmed by the approach of their most formidable enemies, the Gallas. Others think it not improbable, that these caverns were used for religious purposes ; that of Geesh, in particu- lar, was without doubt, a place of secret worship paid to the river, as it is still appropriated to that use, not only by the inhabitants of the village, but by the assembly of the clans in general, who retire for the celebration of those rites, to which none but the heads of families in the Agows country are ever admitted. Bruce's Trav. vol. i. 401. vol. iii. 527.

AGRA, a kind of sweet scented wood, found in the island of Hainan, on the coast of China.

AGRA CARAMBA, another sweet scented wood, which also comes from the island of Hainan.

AGRA, a province of Hindostan Proper, situated between the twenty-fifth and twenty-

but grain of all kinds, sugar, indigo, and cotton, are yielded, with little labour, in all the British districts. At Futtehpore and Sikri, are marble quarries, and some inferior copper mines are said to have been opened in the same neighbour- hood ; but they were never worked with any success. The province was formerly celebrated for its silks. It yields superior horses, and con- tains about 6,000,000 of inhabitants.

AGRA, the chief city of the above province, is

situated on the S.W. bank of the Jumna, in N. lat. 27□□. 12′. and E. long. 77□□. 56′. This place is connected with the whole of the modern history of India, during which it has passed into the hands of various masters. In 1 509 it was first brought into notice, by the emperor of Hin- dostan, Secunder, the son of Balloli, transferring to this place, from Delhi, the seat of his govern- ment. In the reign of his successor, the nobles of Agra invited hither Baber, a Mogul prince of the house of Timur Bee, to take possession of the throne, and Ibrahim, their monarch, was killed on the plain of Paniput, with 16,000 of his followers. Acber, the grandson of Baber, was the ablest and most prosperous prince in the history of the Mahommedan empire in India. He divided Hindostan into soubahs, circars, and pergunnahs, and possessed an army of 600,000 men, horse and foot, with an annual revenue of upwards of □□30,000,000 sterling. After him, this capital was for a while called Akbarabad, and to this prince it was indebted for a noble castle, which is said to have cost him 2,000,500 rupees. The Ayeen Acberry was a

eighth degrees of north latitude, whose capital, compendium of jurisprudence, compiled at Agra Agra, is in the possession of the British, toge- by the enlightened minister of Acber, Abul

ther with a small tract in the vicinity, and all the country east of the Jumna. Several rajahs, allies of the British, possess the western and north-western districts. That portion of the province which is south of the Chumbul, is under the dominion of the Mahrattas.

The whole province, thus important to British

Fazul, under whose auspices it became the most considerable city of India, for extent and mag- nificence. The mausoleum of Acber is still to be seen here; but the chief ornament of the town is the Taje Mahal, or Crown of Edifices, an unrivalled tomb to the memory of the em- press of Shah Jehan, her grandson, who died in

the year 1632. This is wholly built of the finest white marble, inlaid with precious stones, and is said to have cost the emperor 60 lacks of rupees, or about ►►750,000 sterling. Just before this period, Sir Thomas Roe, the first English ambassador that was sent to the emperor of Hindostan, appeared at Agra ; and shortly after we read of a college of Jesuits, which was pro- tected and patronized here by the father of Aurengzebe. This monarch converted the castle of Agra into a prison for his father, and trans- ferred the seat of empire to its ancient capital, Delhi. During his reign, the Mogul empire reached its utmost limits of prosperity; and Agra has ever since been on the decline. The city is a long and narrow crescent, surrounded by the ruins of a strong wall of red stone, and a ditch one hundred feet wide. The houses are lofty, and well built of stone ; but the streets are so narrow, as to admit of no two carriages pass- ing. Its whole appearance is that of an empire which has been. From Agra to Lahore, a dis- tance of 500 miles, the road was completely shaded by lofty trees.

In 1784, Agra finally passed from the do- minion of the Moguls to that of the Mahrattas, from whom it was taken, in 1803, by general lord Lake. But our possession of it will ever be uncertain in the neighbourhood of the many rival states that divide the province, and par- ticularly while the Bhurtpoor rajah is so very equivocally inclined, as at present, toward the British interests. Agra is 137 miles from Delhi, and 830 from Calcutta.

AGRARIvE NAVES, was used for vessels placed to keep watch, or guard.

AGRARI.E STATIONES, in the ancient military art, corps of guards posted in the fields, and in the open air

AGRA’RIAN, adj.) Agrarius,agrestes, from

AGRE’STICK. > ager, a field.

Agrarian, relating to the fields, especially applied to the division of conquered lands ; agrestes, growing in the country, hence rural, rustic ; unpolished ; a word of doubtful authority.

He [Nimrod] was called a hunter, because he was so indeed ; but not so only, but an oppressor too ; his continual conversation with brute beasts, changed his humane disposition into a barbarous and agrestick behaviour.

Gregory, Posthuma, p. 222.

It appears that the jubilee could not be intended for an agrarian law.

Wren’s Monarchy Asserted, p. 137.

AGRARIAN LAWS, among the Romans, those relating to the division and distribution of lands ; of which there was a great number ; but the principal are, the lex Cassia, in the year of Rome 268 ; the lex Licinia, in 386 ; the lex Flaminia, in 525 ; two Sempronian laws, in the year 620 ; the lex Apuleia, in the year 653 ; the lex Bsebia ; the lex Cornelia, in 673 ; the lex Servilia, in 690 ; the lex Flavia ; the lex Julia, in the year 691 ; the lex TElia Liciuia, the lex Liria, the lex Marcia, the lex Roscia, made after the taking of Carthage ; the lex Floria, and the lex Tnia. See ACER.

That called the agrarian law, by way of emi- nence, was published by Spurius Cassius, about

the year of Rome 268, :or dividing the con- quered lands equally among all the citizens, and limiting the number of acres which each citizen might enjoy. ••• The Roman lands were of several kinds ; some conquered from the enemies, and not yet brought to the public account; others brought indeed to the public, but clandestinely usurped by private great men ; lastly, others pur- chased with the public

money in order to be divided. Agrarian laws, either for dividing lands from the enemy, or the public lands, or those purchased with the public money, were easily passed without disturbance ; but those whereby private rich men were to be deprived of their lands, and the common people put in possession of what had been held by the nobility, were never attempted without great commotions.

The agrarian law alluded to originated in the ambitious views of Cassius, who thus intrigued for gainingthe favour of the people, and for attain- ing absolute power. The law has the appearance of equity, and could not fail to be agreeable to the people, whose misery it relieved. But as the lands, which Cassius wished to have distri- buted among the poorer citizens, had been un- justly usurped by the rich, the proposal alarmed the senators, partly because they were perso- nally interested in it, and partly because they apprehended its dangerous consequences. The people were at first pleased ; but when they un- derstood that the Latins were to partake with them of the advantage, they wete disgusted. To conciliate the Latins, and to engage their concur- rence in his favour, were the objects which Cas- sius had in view ; but the jealousy and dissatis- faction of the Roman people disappointed his hopes, and terminated in his death. As soon as he was found guilty of aspiring to the sovereignty, and sentence was passed upon him, he was car- ried by the questors to the Tarpeian rock, which fronted the forum, and thrown down from the top to the bottom in the presence of the people; such was the customary punishment of this crime amongst the Romans. His house was also de- molished, and his estate sold by auction. With the money arising from it a statue of brass was erected to Ceres. The plebeians, when they afterwards found that the decree of the senate, for the distribution of lands, was not executed, nor any measures adopted for this purpose, re- proached themselves with the condemnation of Cassius, as an act of imprudence, and even of injustice. In the year of Rome 299, the subject of the agrarian laws, which had been

suspended for thirty years, was revived by the tribunes; and the people demanded, that as they shared with the patricians in the labours and dangers of the commonwealth, they might also share with them in the benefits accruing from them. But a new partition would have been attended with great difficulties; and it seemed impossible to proceed in this business, without manifest injus- tice to many persons in actual possession of the lands to be distributed, who had really bought them, and without occasioning great and univer- sal commotions in the commonwealth. For these reasons the senate firmly opposed the establishment of the agrarian law.

About the year 377, C. Licinius Stilo, a rich

*plebeian, and tribune of the people, attempted to restrain the overgrown power and wealth of the patricians, by proposing a law, which should restrict every Roman citizen to the possession of 500 acres, and oblige him to surrender the overplus, in order to be divided among the poorer citizens. His motion, though enforced by the influence of his colleague in the tri- buneship, L. Sextius, was over-ruled; and new commotions occasioned by the approach of the Gauls, having engaged the public attention, the business of the agrarian law was deferred for nine years ; and about the end of that time it
 was again revived, and the law was established : this was called the Licinian law ; and the mover of it was soon afterwards condemned by his own law. Having been found to possess more than 1000 acres, 500 of them were distributed among the poor citizens, and he was com- pelled to pay the fine, which he had annexed to the violation of the law. In consequence of this abuse, the law itself was abolished. In process of time, however, the great and rich possessed themselves of almost all the lands that belonged originally to the state, either*

*by purchase, or by paying a greater quit-rent, or by violence. Several regulations had been pro- posed for restraining these usurpations. At 'length, other measures having been found in- effectual, (A. U. C. 620 B. C. 134,) Tiberius Gracchus, urged by his mother Cornelia, pro- posed the revival of the Licinian law ; and that the rich should quit the lands which they held contrary to the laws, after having received from the public the value of them ; and that the citizens, whose circumstances required relief, should take possession of them. Many ob- jections were urged against this mild and hu- mane regulation, as Plutarch calls it : and the prosecution of it brought the commonwealth to the brink of destruction, and cost the two illus- trious brothers, the Gracchi, their lives. Their efforts were of little avail, as the laws they kboured to introduce were gradually abolished after their death. Cicero, in speaking of the partition of lands and the remittance of debts, says (Offi.l. 2. n. 78.) 'that to undertake to
लicharge debtors by the authority of the magis- trate, or to pass the law so often proposed for the distribution of lands, is to sap the two prin- cipal foundations of the commonwealth: of which the one is peace between the citizens, which could not subsist, if creditors were to lose their fortunes by the discharging of debtors; and the other justice, which is entirely sub- verted, from the instant no one can assure him-*

If of continuing peaceable possessor of his

The agrarian law of the tribune Satur-

ninus, which was carried with violence A. U. C.

652, was of very short duration, and that of

Rullus in the year 689, which was more ex-

sitant than any other ; and gave up to a small lumber of citizens, under the pretext of reliev- ing the poor, almost all the revenues of the commonwealth, afforded Cicero an admirable opportunity of displaying his eloquence in ex-

posing –t and inducing the people to resist it. 1 he exordium of his oration on this occasion has been much admired. Cic. II. in Rull The

ag–arian law of Caesar was presented to the senate in the beginning of his consulship, A. U. 693 ; and he urged in its favour, that a distribution of lands among the poor citizens was altogether useful, and necessary to deliver the city from a multitude of people with which it was overburdened, and often gave rise to seditions ; to re–people and cultivate several parts of Italy, which were abandoned ; to re– compense the soldiers who had served the com– monwealth, and to give subsistence to many citizens who wanted it. He proposed the ex– ecution of it in the mildest and most moderate manner ; and that twenty commissioners should preside at the distribution of the lands, except– ing himself out of the number. Notwithstand– ing these specious pleas, Cato inveighed loudly against the project of Caesar, alleging that he did not so much apprehend the division of the lands, as the wages that would be required of the people by those who sought to inveigle them by this present. Cato was imprisoned for his opposition; and when another senator was asked by Czesar why he departed before the senate broke up, he replied, ‘ because 1 had rather be with Cato in a prison, than with you in the senate.’ Caesar appealed to the people ; and having engaged the concurrence of Pompey and Crassus, the resistance of Bibulus, Csesar’s colleague in the consulship, and the vehement opposition of Cato were ineffectual. The law was authorised by the suffrages of the people. Cicero acquiesced in this measure, by observing a kind of neutrality; and argues to this pur– pose : ‘ Let us remain neuter, as if buried in a house in the country. Caesar hopes that I will second him and invites me to it. See the advantages I shall gain by taking this party ; the friendship of Pompey, and even that of Csesar, if I desired it ; a reconciliation with my enemies ; the peace of the multitude ; and the assurance of quiet in my old age ; but after the conduct I have maintained in nry consul– ship, and the principles which I have main–

tained in my writings, ought not my rule to be this maxim of Homer (II. M. 243), 'the best of all counsels is, to defend one's country ?' Cicero ad Attic, ii. 3. In persuading Cato to give up his resistance to this measure, he con- jures him to consider, ' that if Cato has no need of Rome, Rome has need of Cato.' Cir. pro. Sext. p. 61.

Niebhur, a modern writer, has shown satis- factorily that these Agrarian Laws, which have so long been considered as unjust attacks on private property, had for their object only the distribution of lands that belonged to the state, and that the troubles they occasioned were im- putable to those who had settled upon them without any title.

AGREDA, a frontier town of Spain, in Old Castile, near the borders of Arragon, and eight miles south- west of Taracona. It is enclosed with a good wall.

AGREDULA, is a name given to a species of the frog. Also, a city of South America, in the province of Popayan, forty-two leagues from Quito, and thirty- seven from the South Sea. It was founded in 1561.

AGREE', v.

AGREE'ABILITIE,

AGREE'ABLE,

*AGREE'ABLENESS^*

Fr. agreer, gre, from gralurn, to maintain friend- ship, sociability, or con- sistency ; to reconcile, suit,

AGREE'ABLY, ^-approve, allow, accept, AGREED'. consent, concur. A fa-

Ac REE'ING, vourable and pleasing sig-

AGREE'INGLY, nification characterizes the AGREE'MENT. J root and its derivatives. Whom I ne founde froward ne fell. But toke agree all whole my plaie.

Chaucer. R. of R. fol. 136, col. 3. All fortune is blisful to a man, by the agreability, or by the egality of hym that suffereth it.

Idem. Baecins, b. ii. fol. 218, col. 1. Than ilk man smertlie tastis the wyne at tabil, Pray and thare Goddis to be aggreabil.

Douglas, b. viii. p. 250.

And thus the couenant that ye made wt death shall be disannulled : and your agremente that ye made with Lell, shall not stande. Bible, 1539. Isaiah xxviii.

What agreement is there between the hyena and the dog ? and what peace, between the rich and the poor? Eccles. xiii. 18.

The delight, which men have in popularity ; fame, submission, and subjection of other men's minds ; seemeth to be a thing (in itself, without contemplation of consequence) agreeable and grateful, to the nature of man. Bacon's Nat. Hut.

What you do, is not at all agreeable, either with so good a Christian, or so reasonable and so great a person. Temple.

It is a peculiar excellency of our religion, that it doth not much employ men's care, pains, and time, about matters of ceremonial observance ; but doth chiefly (and in a manner wholly) exercise them in works of subtantial duty, agreeable to reason, perfective of man's nature, productive of true glory to God, and solid benefit to men. Barrow.

Must the whole man (amazing thought !) return To the cold marble and contracted urn ? And never shall those particles agree, That were in life this

individual he ? Prior.

It is very much an image of that author's writing ; who has an agreeabieaess that charms us, without cor- rectness ; like a mistress, whose faults we see, but love her with them all. Pope.

No object is more pleasing to the eye than the sight of a man whom you have obliged ; nor any music so agreeable to the ear, as the voice of one that owns you for his benefactor. Spectator.

AGREGAN, or AGRIGAN, or island of St. Xavier, one of the Ladrones or Marianne islands, in the South Pacific ocean, situated between Pagon and Assonsong. It is forty-eight miles in circuit, very mountainous, and contains seve- ral volcanoes. North lat. 19►►. 4'. East long. 14►►. 6'.

AGREVE, ST., a town of France, in the Vivarais. It is the head of a canton in the de- partment of the Ardeche, arrondissement of Tournon, and contains 2540 inhabitants. Seven leagues and a half north-west of Privas.

AGRESSES. See AGGRESSES.

AGRESTA, a name that has been sometimes given to the juice of unripe grapes.

AGRESTI DA FORLI, (Livio,) an histo- rical painter, the disciple of Pierino del Vaga. He is commended for the richness of his inven- tion, the goodness of his colouring, and the cor- rectness of his design. Many of his works, both in fresco and oil, are in the Vatican, where he

v.as employed by Gregory XIII. There are also at Rome, several altar-pieces of his hand. He died in that city, in 1580.

AGRIA, a river in Upper Hungary, on the banks of which is a town of that name.

AGRIA, called by the Germans Eger, a small but strong town in Upper Hungary, with a bishop's see :

is situated on the Agria, forty- seven miles, north-east of Buda, and fifty-five, west of Cossovia, has a citadel called Eriow. In 1552 it was besieged by the Turks, with 70,000 men : but they lost 8000 in one day ; and were obliged to raise the siege, though the garrison consisted only of 2000 Hungarians, assisted by the women, who performed wonders on this oc- casion. However, it was afterwards taken by Mahomet III. in 1596 ; but, was retaken by the emperor, in 1689; since which time, it has con- tinued under the dominion of the house of Aus- tria. Lon. 20►►. 10'. E. Lat. 48►►. 10'. N.

AGRIA, in botany, holly.

AGRIA, in medicine, a malignant pustule, of which there are two sorts. The one is small, with a roughness, redness, and slight corrosion of the skin ; it is of a round figure, its centre is smooth, and it spreads slowly. The other sort ulcerates with a violent redness and corrosion, so as to make the hair fall off ; it is of an unequal form, and turns leprous. It is cured by poultices of pelitory of the wall.

AGRIJE, in natural history, an order of quad- rupeds, which have no teeth, but have a very long cylindric tongue. Of this order, there are only two known genera, the myrmecophaga, and the manis.

AGRIAMPELOS, from ayptoc, wild, and apiriXoG, vine, the wild vine ; and, according tc Gerard, the black briony.*

AGRICOLA, (Cneius Junius,) born at Frejus Province, was, in Vespasian's time, made lieu- tenant to Vettius Bolanus, in Britain ; and, upon his return, was ranked by that emperor among the patricians, and made governor of Aquitania. This post he held three years ; was afterwards chosen consul, and at last appointed governor of Britain, where he greatly distinguished himself. He reformed many abuses occasioned by the avarice of former governors, put a stop to extor- tion, and caused justice to be

impartially ad- ministered. Vespasian dying about this time, his son Titus, knowing the great merit of Agricola, continued him in the government. In the spring he marched towards the north, where he made some new conquests, and ordered forts to be built for the Romans to winter in. He spent the following winter in concerting schemes to bring the Britons to conform to the Roman cus- toms. He considered that the best way of diverting them from rising and taking arms, was to soften their rough manners, by proposing to them new kinds of pleasure, and inspiring them with a desire of imitating the Roman manners. Accordingly, he adorned the country with mag- nificent temples, and many other fine buildings. The British nobles at length sought education for their sons ; and those, who before had the ut- most aversion to Roman language, now began to study it with great assiduity : they wore like- wise the Roman habit; and, as Tacitus observes,

they were brought to consider those things as marks of politeness, which were only so many badges of slavery. Agricola, in his third cam- paign, advanced as far as the Tweed ; and in his fourth, he subdued the nations betwixt the Tweed and the friths of Edinburgh and Dumbritton, into which the rivers Glotta and Bodotria, (the Clyde and the Forth,) discharge themselves ; and here he built fortresses to shut up the nations yet unconquered. In his fifth, he marched be- yond the friths ; whence he made some new acquisitions, and fixed garrisons along the western coasts, over against Ireland. In his sixth cam- paign, he passed the river Bodotria, ordering his fleet (the first which the Romans ever had in those parts,) to row along the coasts, and take a view of the northern parts. In the following spring, the Britons raised an army of 30,000 men ; and the command was given to Galgacus, who, according to Tacitus, made an excellent speech to his countrymen on this occasion. Agri- cola likewise addressed his men in strong and eloquent terms. The

Romans gained the victory, and 10,000 of the Britons are said to have been killed. This happened in the reign of the em- peror Domitian, who growing jealous of the glory of Agricola, recalled him, under pretence of making him governor of Syria. Agricola died soon after ; and his death was suspected to have been occasioned by poison given him by that emperor. Tacitus, the historian, married his daughter, wrote his life, and laments his death in the most pathetic manner.

AGRICOLA, (George,) a German physician fa- mous for his skill in metals, was born at Glaucha, in Misnia, in 1494. The discoveries which he made in the mountains of Bohemia, gave him so great a desire of investigating every thing relating to metals, that though he had engaged in the

practice of physic at Joachimstal, he still prose- cuted his study of fossils with great assiduity ; and at length removed to Chemnitz, where he entirely devoted himself to it, and spent in pur- suit of it, the pension he had received from Maurice, duke of Saxony, and part of his own estate ; so that he reaped more reputation than profit from his labours. He wrote several pieces on this and other subjects ; and died at Chem- nitz, in 1555, a firm papist. In his younger years, he seemed not averse to the Protestant doctrine ; and he highly disapproved of the scandalous traffic of indulgences, and other cor- ruptions of the church of Rome ; but in the latter part of his life he attacked the Protestant religion ; which rendered him so odious to the Lutherans, that they suffered his body to remain unburied for five days together ; so that it was obliged to be removed from Chemnitz to Zeits, to^be interred.

AGRICOLA, (John,) a Saxon divine, born at Eislebenin 1492. He was chaplain to count Mansfield, when he attended the elector of Saxony to the diet of Spire, in 1526, and that of Augsburg, in 1530. But he was of a restless ambitious temper, rivalled, and wrote against Melancthon, and gave count Mansfield occasion to reproach him severely. He obtained a

professor- ship at Wittenberg, where he became founder of the sect of Antinomians; which occasioned warm disputes between him and Luther, who had before been his friend. Though he was never able to recover the favour either of the elector of Saxony, or of Luther, he acquired great fame at Berlin, where he became a preacher at court ; and was chosen in 1548, in conjunction with Julius Phlug and Michael Heldingus, to compose the famous Interim, which made so much noise in the world. He died at Berlin, in 1566.

AGRICULTURE.

AGRICULTURE, n. } Ager, a field, colo, \cultum, to till; the

AGRICULTURAL, AGRICULTURIST.

J culture of the fields.

He strictly adviseth not to begin to sow before the etting of the stars ; which notwithstanding, without injury to agriculture, cannot be observed in England.

Brown's Vulgar Errours. The disposition of Ulysses inclined him to war

rtV^Vr 1 m►►re lucrative> but more secure, method of life, by agriculture and husbandry.

Broome, Notes on the Odyssey.

1 AGRICULTURE, properly defined, is ie art of cultivating and improving the territo-

duivs? v- so ?►►► lo render h fertile and Pro-

Si ►►►. ,1 m ltS m►►St extensive sense> " divides itself ,nto two great branches, TERRII-O-

cludUT►►►►"Y> ^ HUSBANnBY ; the formerin-

n ►► HT0►►►116"1 and Seneral manage- ment of landed property; the latter in a more limited sense

the manual practice of agriculture Combining both these divisions, which are ?n Aemsehres collateral, agriculture is the mart

ortant science to which the human inteHec directed- the parent of all other sci'nce

*and art ००० alike interesting all nations and all ages ००० born with the birth of time ००० given to man in the primeval state of his being, and spreading an influence over the whole circle of his wants, comforts, pleasures, passions, luxuries, arts, manufactures, commerce ; together with his phy- sical peculiarities of constitution, his natural, moral, political, and civil relations. From this view of its importance, we cannot wonder that it should have attracted the attention of mankind, in the earliest periods of the world, and have furnished employment for the highest classes of society; since this alone preserved them from all the miseries of famine, and af- forded a more permanent subsistence than either the bow or the chase. When God created man, and placed him in the garden to till the ground, it seemed to imply that the resources of animal Me were treasured up in the soil ; all nations have acted upon this general principle instinc- tively ; and the rich harvests that waved over the ancient site of Chaldeaand Phanicia, or adorned ie rich and fertile vale of Egypt, evinced that the soil when cherished by cultivation, was capable * producing in great abundance, not only the*

necessaries, but the luxuries of life. The Chal- deans and Phoenicians carried this valuable art to a pitch of improvement little short of excellence. The Chinese consider it as the most noble and honourable of all employments ; and have placed it from time immemorial, under the protection of their princes and nobility. The Egyptians were so sensible of its importance, that they wor- shipped even the animals that laboured in it. The Greeks thanked the gods for so unexpected a present; and those of Athens,

withdrawing their subjects from war, employed them solely in cultivation. Hesiod, contemporary with Homer, was the first who wrote on the subject, in his poem, entitled ‘ Weeks and Days;’ besides whom Democritus of Abdera, Xenophon, Taren- tinus, Architas, Aristotle, Theophrastus, and other eminent Greek writers have successively employed themselves upon the same interesting topic. So assiduous were the Carthaginians in the study of agriculture, that their general Mago wrote no fewer than twenty-eight books upon it , which, being translated, at the command of the senate, into the Roman language, are said to have been the model on which Virgil composed his Georgics. The estimation in which this art was held in Rome, is known to most of our readers ; the most illustrious citizens deem- ing it their most honourable employment. Ge- nerals, who put themselves at the head of her armies, pushed her conquests, and carried her eagles round the world, could handle the plough as well as the sword ; they retired from the conquest of kingdoms to the cultivation of their farms ; and thought it a reward for their labours, when they could obtain a manumission from the ser- vice of the state to enjoy the rural pleasures of the country. M. Cato, that illustrious censor, general, lawyer, orator, and politician, devoted to this subject a Latin volume, dedicated to his son. Varro composed an agricultural treatise, replete with Greek and Latin erudition, and his example was followed by other illustrious Ro- mans. Virgil adorned the subject with the language of the Muses ; and in the majesty of his verse, finely embellished those first principles of husbandry, which were laid down in the writings of Hesiod and Mago. Agriculture stood upon the Roman capitol in the robes of Ceres, and over- looked a considerable portion of the civilized world. 2. In modern times, however, agriculture has been carried to the greatest perfection, and as- sumes an aspect decidedly superior to what it did in Rome. The political advantages enjoyed by all classes in our free and commercial coun- try ; the recent discoveries in geology, chemistry, botany, &c. ; the establishment of agricultural societies in many of

the most important parts of Europe ; the endowment of professorships of rural economy, in many celebrated universities ; and the numerous publications that have issued from the press ००० all combining their influence, have awakened an unparalleled spirit of inquiry in all classes, have given a tone to the public mind, and directed it from science to art ; from objects purely intellectual, to their bearings upon other subjects of practical utility. The prepara- tion of land for tillage by means of enclosure, drainage, embanking, &c. requiring, as it does,

scientific investigation, have called into existence a new profession of artist agriculturists, under the name of land-surveyors, and land-engineers. The changes in occupancy, successive valuation, and transfer of landed property, have given birth to the professions of land valuators, and land agents. From the frequent wide dimensions of landed property, especially by estates which descend by right of primogeniture, have arisen the lower orders of agriculturists, as hinds, land- stewards, bailiffs, 8cc. under whom are placed the inferior or working classes, as ploughmen, carters, spades-men, shepherds, &c.

3. In this article we shall confine ourselves to three topics. First, a sketch of those sciences that are connected with agriculture ; a know- ledge of which is necessary to every farmer who would conduct his operations on the surest and most advantageous principles ; these are, botany, mineralogy, meteorology, physiology, &c. re- ferring our readers to these respective articles for complete treatises on them. Secondly, a general view of soil, and of jhe principles on which the farmer ought to proceed in ameliorating them by ploughing, manures, &c. and by a proper ro- tation of crops, in order to raise the fertility ot his land to the highest pitch : and here we add a slight sketch of those general principles of animal nature with which the scientific farmer will become acquainted. Thirdly, a brief history of agriculture, ancient and modern, with a rapid sketch of its present state.

4. With respect to the practical rules and details of agriculture, they will be found under the article HUSBANDRY. By far the largest portion of the territorial surface of the British empire is cultivated under, first, the arable system; secondly the grazing, for rearing and fattening cattle and sheep ; thirdly, the dairy for butter and cheese ; or fourthly, the modern and most improved system, called the convertible, in which the arable and grazing alternate. Under the article HUS- B AN DRY, all the rules and details necessary to carry on these respective systems in the best manner, and to the greatest advantage, will be given. There are, however, other products of the soil, which in some particular parts of the kingdom are the objects of the agriculturist; these, as not interesting to farmers in general, we shall notice, not under husbandry, but under their own heads ; such as orchards, including the manufacture of cider and perry ; cherry, filbert, &c. orchards : ××× hops, including their preparation for the market, as well as their culture ; carraway, coriander seed, &c. and woods and plantations.

5. In the present article, agriculture, and those we have just enumerated, the cultivator of the soil will learn all he requires to know. The proprietors of the soil we refer to the article LANDED PROPERTY for information respecting the valuation, sale, and purchase of estates ; the laws regarding them ; the duties of a land steward ; leases, &c. : and to the article LANDSCAPE GAR- DENING for information regarding the ornamental laying out of ground. The articles LAND-SUR- VETING and RURAL ARCHITECTURE, will complete the circle of agricultural information in all its branches.

6. SECT. I. SKETCH or THE SCIENCES CON

a base, apex, midrib, and lateral nerves ; and the frond, a compound incorporation of the leaf, leaf-

stalk, and branch or stem, apparently

WITH AGRICULTURE. ••• The object of agriculture in that view of it which we are now

presenting to the reader, is to augment the ieai, icm-siaiK, ••••u uiau^u ui sicm, a^pui-eimy

quantity, and to improve the quality of vege- forming one organ, the parts of which do not

table and animal substances, with the least possi- separate from each other by means of the frac

ble expenditure. To do this effectually, the ture of any natural joint, but adhere togethei

student ought to have a scientific initiation into even in a state of decay, as is the case in ferns

the leading principles on which his art is founded, and palms.

with all their collateral branches and relations. 11. CONSERVATIVE APPENDAGES. ••• Accessory He ought to have acquired mensuration and or supernumerary appendages, as gems, glands, algebra, a rapidity of sketching objects both tendrils, stipulse, ramenta, armature, and pu- animal and vegetable ; also of taking off and bescence, form an accompaniment to the con- forming geometrical plans, especially he ought servative organs, although not invariably ; they

to have studied chemistry, hydraulics, and other sciences ; without which he cannot proceed in the prosecution of his object on the basis of any fixed and established principles. It is true, agriculture in common with other arts, may be

are however permanent wherever they are found, and vary in different species. Gems or bulbs are organized substances ; the rudiments of new individuals detaching themselves from the parent plant, and fixing themselves in the soil. Glands

pursued without any philosophical knowledge are small and minute substances of various forms,

of its theory ; established practices may be imi- tated : but the mere routine practitioner cannot derive advantage from favourable occurrences, nor guard against the recurrence of others that are unfavourable ; for unforeseen events he will have no resource but ordinary expedients, no grammar but his own observations ; while the man of science, referring events to their true causes, has recourse to general principles, and meets every accident with scientific and appro- priate remedies.

7. A due acquaintance with systematical bo- tany, vegetable and animal anatomy, chemistry, physiology, and pathology, if united with prac- tical knowledge in the art of agriculture, will enable the farmer to derive the greatest advan- tages from his profession.

With respect to the first of these, viz. systematic botany.

protruding mostly from the leaf and petiole, and supposed to be the organs of secretion. The tendril is generally a thread-shaped spiral pro- cess, issuing from the stem, branch, or petiole ; and occasionally from the expansion of the leaf, by which plants of climbing disposition adhere to other plants, or adjacent substances, for their support. Stipulae are foliaceous appendages accompanying the leaves, of which they seem to present a new miniature species. Ramenta are oblong appendages issuing from the surface of the plant, strongly resembling the stipulae, al- though not necessarily accompanying the leaves. The armature consists of auxiliary parts adapted by nature to defend the plant. The pubescence includes all sorts of vegetable down, surround- ing the surface of the plant.

12. RE-PRODUCTIVE ORGANS. ••• The re-pro- ductive organs including the flower, flower-stalk,

8. CLASSIFICATION. ••• The vegetable kingdom receptacle, inflorescence, and ovary, are thos<; is divided into classes, orders, genera, species, and parts necessary to the propagation of the species varieties. A class is an assemblage of plants dis- by terminating the old individual, and beginning tinguished by some common peculiarity ; an the new. The flower, distinguished by the order is a division of a class known by some beauty of its colouring and odoriferous ex- character; a genus is formed by a still more cellence of its perfume, emerges from the ex- hmited coincidence ; and each individual which tremity of the branches, root, stem, and occa- remains unchanged when raised from seed, is sionally the leaves ; and forms the apparatus called a species ; any accidental deviation from which, forms a variety, and returns by seed to its original specific character.

*••• 9; . VEG:ETABI-E ANATOMY forms another lead- ~^ uul acMuC. ,••= **ic^putuic, i••c ••;,.** ^ iuc ach of botany necessary to be understood flower, is the point of union between its different 'cry intelligent agriculturist, before he can parts, or between the flower and the plant, whe- rry on cultivatic i upon any fixed and scientific ther it be sessible or mediate. The inflorescence*

destined by nature for the production of the fruit. The flower-stalk is a partial trunk or stem, supporting the flower or flowers, if they are not sessile. The receptacle, the seat of the

principle. The structure of plants has com- is monly been considered as EXTERNAL and IN- TERNAL. With respect to the former, the organs ovary or fruit is >t perfect plants are CONSERVATIVE and REPRO- the flower

DUCTIVE.

10. CONSERVATIVE ORGANS.••• The conserva- tive organs are those parts of a plant which are : to its growth ; as, the root alimentary juices of the soil ; which SDrinrinsr immediately from

the root, ascends in a vertical position "above It" the branches or divisions of the trunk, diverging

^numerous points toward the or the stem, and

the mode of aggregation, arrangement, or distribution of the flowers upon the plant. The the seed vessel that succeeds The appendages to the re- produc- tive -organs, besides being of a finer and more delicate texture than those proper to the parts conservative, are many of them peculiar, as the involucre, spathe, bracte, &c. proper to the flower, and others, as the persisting calyx, ex emplified in the pomegranate, to the fruit.

13. IMPERFECT PLANTS, EXTERNAL STRUC- TURE OF. ••• Imperfect plants are those that are

and are commonly distributed into filices, equi- sitaceae, lycopodime, musci, hepaticse,

b r , , pon, musc, epac*, a*

des an upper and under surface, lichen, and fungi. Of these the three former*

die down to the ground in winter ; but are fur- nished with a perennial root, from which issues annually a frond, producing fructification. The moss tribe are for the most part perennial, and herbaceous plants, approaching to shrubby, con- sisting of a root surmounted with a tuft of minute leaves, furnished with a stem and branches, on which the leaves are closely im- bricated ; and the fructification terminal or lateral. The hepaticte resemble the mosses ; but chiefly constituting fronds, and producing their fruit in a capsule that splits into longitudinal valves. The algae, commonly called sea weeds, include many plants that are not even aquatic ; whose herbage is nevertheless frondose, rarely admitting the distinction of root, stem, and leaf. This tribe with that of the

lichenae, are important to agriculture. The fungi, forming the con- necting link between the vegetable and animal kingdoms, are a tribe of plants whose herbage is a frond of a fleshy, pulpy texture, rapid in growth, and short lived in duration, producing seeds in an exposed membrane, or interspersed throughout its whole mass.

14. INTERNAL STRUCTURE. ††† The internal structure of plants, without a knowledge of which the agriculturist will neither understand well the process of vegetation, nor be able to apply remedies in cases of vegetable sickness, are reducible into component parts, which are again resolved into constituent and primary organs. These are subject to the three following divisions, the decomposite, composite, and ele- mentary.

*15. DECOMPOSITE ORGANS. ††† The decomposite organs, constituting the elementary parts of the individual are, l.The seed, distinguished into two primary divisions, viz. the integuments, and nucleus or embryo, and envelopes. The in- leguments are exterior and interior; the former of which, the original cuticle of the nucleus, is detachable on the maturity of the fruit ; the latter lining the exterior testa, immediately envelopes the nucleus, and in the ripe walnut, for instance, forms a fine net-like membrane. The nucleus †††within the tegument consists, for the most part, of the albumen, an organ like the white of an egg forming its exterior portion ; the vitellus, an organ of a fleshy, firm contexture, si*uate, when present, immediately within the albumen and the embryo, or germ of the future plant, occupy- ing the centre of the seed, of which it forms the most essential part. Of the embryo, the cotyde- lon, or seed lobe, is that portion which incloses and protects the plantlet, and springs up in the germinating process into what is called the seminal leaf, if the lobe is solitary, and the seed monocotyledonous ; and into seminal leaves, in the case of a plurality of lobes, and a dicotyle- donous seed, (exemplified in the garden bean), or a polycotyledonous seed, as in lepidium satirum, and genus pinus. The plantlet, or*

miniature of the future plant is the interior and essential part of the embryo, and the seat of vegetable life. 2. The pericarp, by a diversity of modification, rather than of substance, assumes numerous varieties of contexture in different hpeaes. The valves of the capsule, but par- ucuiar/y the partitions which divide it into cells,

are composed of a skinny membrane, or epi- dermis, covering a pulp, indurated, and covered with longitudinal fibres. The pome is composed of a fine double epidermis, enclosing a soft fleshy pulp, with numerous longitudinal fibres, passing through it in the direction of its longitu- dinal axis. The valves of the legume consist of an epidermis inclosing a pulp lined with a fine membrane, and of numerous longitudinal fibres, forming the seam. The nut-shell is composed of an indurated pulp, covered with an epidermis, and interspersed with longitudinal fibres. The drupe consists of an epidermis, surrounding a fleshy pulp, occasionally so interwoven with longitudinal fibres, as in the case of the cocoa- nut, to consist wholly of threads: the berry is an epidermis, which is a soft pulp. The scales of the strobile are a tough epidermis, with an in- terior pulp, spongy, and often highly indurated, interspersed with longitudinal fibres, pervading the axis. 3. The flower-stalk is a prolongation of the stem, for the support of the flower ; or it is a partial stem, striking out from the parent, and consists of an external envelope or epidermis, a soft pulpy mass, or parenchyma, and a contexture of longitudinal threads, originating in the stem, and passing along the interior of the parenchyma. The organs of the flower are in reality a prolonga- tion of the elementary parts of the stem on which it diverges and spreads its beauty under different modifications, although the longitudinal fibres are seldom found except in the calyx and co- rolla. 4. The leaf-stalk, or petiole, with respect to the leaf answers the same purpose as the former, with respect to the flower, exhibits the same or- ganization and component divisions. 5. Of germs there exists four species, the bud and bulb, pe-

culiar to perfect plants ; the propago and gongylus to those which are imperfect ; the former of which are denominated compound germs,beiug furnished with a single envelope, the latter simple germs, because provided with a plurality. The bud con- sists of scales, overlapping each other, and converging towards a point in the apex, cemented often by a mucilaginous substance, exuding from their surface. These scales, by dissection, under the microscope, consist, like the divisions of the calyx, of an epidermis enclosing a pulp, interspersed with a net- work of fibres, unaccom- panied, however, with longitudinal threads. On stripping off the scales of a leaf bud, the remain- ing part will be found to consist of the rudiments of a young branch, terminated by a bunch of incipient leaves, imbedded in a white species of down, complete in all their proportions, and curiously folded in the bud. Bulbs are either radical or caulinary, and exhibit several distinct varieties, solid, coated, or scaly ; protruding, after the natural order of their species, the stem, leaf, and flower. The propago, peculiar to certain genera of imperfect plants, consists, as exempli- fied in the lichens, of a pulpy mass, forming au irregular granule, either naked or enveloped with a fine epidermis. The gongylus simple like the former, and peculiar to certain genera of imperfect plants, consists, as exemplified in the fuci of a pulp slightly indurated, and moulded into a small globular granule of a firm contex- ture, surrounded with an epidermis, or envelope.

6. The caudtx includes the whole body of both it may be premised that all plants spring origi-

the trunk and root ; and is, with respect to its inward modification and external appearance, exceedingly different in different tribes. The

nally from seed, on the internal state, or out- ward

circumstances of which the conditions of germination depend. Seeds to germinate must

first general mode for its internal structure, is be mature. There are, nevertheless, some seeds that in which an epidermis encloses an homo- whose germination commences in the seed geneous pulp or mass of fibres, as exemplified vessels, while attached to the parent plant, and

particularly "in the algae and fungi. The second is that in which it encloses several heterogeneous substances. This mode is divided into several varieties ; as first, when an epidermis incloses

before the fruit is ripe, as the garden-radish, pea, lemon, agave vivipara of East Florida, the cyamus nelumbo, or sacred bean of India, &c. In general, seeds will retain the productive faculty

a soft pulpy mass, interspersed with longitudinal for years, if properly taken care of; and when

nerves and fibres, extending from the base to the apex, and disposed in a manner peculiar to a tnbe or genus. Another variety, when a

sown are properly defended from the immediate action of the rays of the sun. Warmth is a capital principle in germination. Seeds, though

strong bark surrounds a circular layer, or layers sown in winter, do not germinate till the return

of longitudinal fibres, interwoven with divergent layers of pulp ; thus forming a substance con- centrating a certain medulla, or pith.

16. COMPOSITE ORGANS. ••• The composite or- gans are the epidermis, pith, pulp, layers, cor- tical and ligneous, vegetable fibre, &c. The epidermis is the envelope of the whole plant, exhibiting a different appearance and tex- ture in proportion to the solidity of the parts which it encloses. The pulp is a soft juicy sub- stance, forming the principal mass of the succulent parts, and has been

compared to an accumulation of hexagonal cells formed of the doublings and foldings of a fine delicate membrane. The pith is a spongy substance, enclosed within the centre of the root, stem, and branches, in the direction of their longitudinal axis, forming the substance of the bark. The cortical layers lie immediately under the cellular integument, and, where that member is wanting, beneath the epi- dermis. In some cases they are themselves ex- ternal. They are composed of two elementary bundles of longitudinal fibres, constituting a net- work, and the meshes are supplied by a mass ot pulp more or less indurated. The innermost of

these layers, denominated the fibre, is extremely vacuum they will vivify on the admission of fine and delicate, and in some cases, beautifully air. It appears from experiments made by

of spring, when the temperature has been raised to a proper degree ; which, however, varies in different seeds, as is evident from observing the different periods at which they germinate as the summer progressively advances. Germination is accelerated in proportion to the degree of heat : seeds that will germinate in a cool climate in a given time, on being removed nearer the tropics, have their germination accelerated ; and seeds removed from a warmer to a colder climate, have their germination proportionably contracted. Seeds that usually require twelve hours to ger- minate in our ordinary degree of heat, by in- creasing the temperature, may be made to ger- minate in three ; but too powerful a degree of heat destroys the vital principle. Moisture is a necessary condition to germination, but there may be too much water or too little ; if too little, the seed dies for want of moisture; if too much; it rots in the earth. Different degrees of mois- ture are, however, necessary in different plants. The access of atmospheric air is a capital consi- deration in the germination of seed, which is evident from the fact, that 110 seeds will germi- nate in a vacuum, although after lying in a

reticulated and varied by bundles of longitudinal fibres. It was used by the ancients to write upon before the invention of paper ; that of the daphne lagetto is said to be as beautiful and deli- cate as the finest lace, and to be used by the in-

Achard, that no seed will germinate in nitro- gen, hydrogen, or carbonic acid, gas, except when mixed with oxygen ; whence it appears that oxygen is the only constituent part of the atmos- phere really essential to the vegetating process.

habitants of the countries where the tree is native, Humboldt found that seed, previously steeped

in the place of neck-cloths. On a right know- in water, impregnated with the oxymuriatic acid,

ledge of these layers depends the agriculturist's exhibits a more rapid germination. Cress-seed,

success, in grafting, which is effected by uniting the ordinary period of which is thirty-two hours,

**Kn Hlhdu. -►►r *1, A. J _. i mi ►►►►►► " V . ►►► . **

the liber of the graft and stock. The "ligneous layers concentric and divergent, constitute the

treated after this manner, germinated in three. 19. PERIOD OF GERMINATION. ►►► In germina-

wood, and are seated in the intermediate portion tion, generally speaking, grasses are the most

Kotll7►►jnn tV.0. V.1.J, ►►_J ^ :!- * . * V. JO*

between the baik and the pith.

17. VEGETABLE CHEMISTRY. ►►► For vegetable chemistry, including the various products of ve

rapid ; next to these, cruciform plants ; then legu- minous plants ; then labiate plants ; then umbel- liferous plants; to which succeed the last and

*getables, whether simple, as carbon, oxygen, hy- slowest in the series, viz. rosaceous plants. Of ;en, nitrogen and other elementary principles, the periods which the most common seeds re- nmg by their modifications, the peculiar cha- quire, the following may, for general purposes, racter and properties of plants; or compound, be sufficient :***

gluten, gum, tannin, acids, oils, resins, bal- Wheat, millet-seed 1 day

sams, alkalies, earths, metallic oxides, campha, Barley 7 days

charcoal, &c. which are capable of still further decompositions, we must refer to the article Chemistry; also to Dr.Thomson's Chemistry, &c.

*18. GERMINATION OF THE SEED. *** With re- spect to germination, the first part of vegetation,*

Wheat, millet-seed

Barley

Orache

Spinage

Beans

Mustard .

Lettuce

Aniseed Melon Cress-seed Cucumber Radish, beet-root Purslain . Cabbage . Farsley

and sometimes Hyssop Almond Chesnut Peach Rose Filbert Hawthorn

. 4 days

. 5 . 5 . 5 6

. 9 . 10 . 40 . 50 . 30

. 1 year

. 1 . 1 . 2 . 2 . 2

20. The first symptom of germination is the prolongation of the radicle, bursting through its hteguments, and shooting downwards in the soil. Some persons account for this on the prin- ciple of gravitation ; others from a sort of vege- table instinct, directing infallibly to that situation best suited to the acquisition of nutriment. The next stage of the process exhibits the evolution of the cotyledon or cotyledons, unless the seed is acotyledonous or the cotyledons hypogean, as in the acorn. In the case of seeds furnished with coty- ledons, the next visible step is the extrication of the plumelet, or first real leaf from cotyledons, and its expansion in the open air, after which, if congenial to the nature of the species, are deve- loped the rudiments of a stem, and the plant is complete ••• the radicle descending into the earth, the plumelet ascending into the air. For the philosophy of germination, we must refer the reader to BOTANY.

21. NOURISHMENT OF PLANTS. ••• The future nourishment of the plant may be considered as derived from the following sources, water, gases, vegetable extracts, salts, earths, manures.

22. WATER. ••• If plants are deprived of water the leaves become flaccid, and assume a withered appearance ; but if the roots are again supplied with water, the weight of the plant is increased and its freshness restored. And since many plants, as tulips, hyacinths, marine plants, and others, will thrive if the root be fixed in the water independent of the soil, it cannot be doubted but that water answers the purpose of a vegetable aliment. But it does not follow that water is the sole food of plants, as Van Hel- mont, Boyle, and others

supposed, or that it is sufficient to form all the substances contained in vegetables, without any other auxiliary. Over- flowing the ground with water greatly increases the fertility of any soil. It is well known how much Egypt owes to the annual overflowing of the Nile ; and even in this country the overflow- ing of any ground is found to be attended with great advantage. This was practised by Mr. Bakewell of Leicestershire, famous for his im- provements in the breed of cattle; and he found it fully answer an annual manuring of any other sort. It is also recommended by Dr. Anderson of Monkshill, in his Essays on Agriculture. The fertilizing quality of water will easily be accounted for on the same principles. When grown vegetables are covered with water, their growthj however vigorous before, is immediately

stopt, unless they be of the aquatic kind ; they die, are dissolved, and putrified ; in which case their finer parts are undoubtedly absorbed by the earth ; and thus the floating, as it is called, of fields with water, answers the purpose of fallow- ing with very little trouble. This is not all ; for stagnate water always deposits a sediment, which, mixing with the dissolved parts of the vegetables all over the field, forms an excellent manure ; and when the water is allowed to run off, the heat of the sun soon brings the highest degree of putrefaction on the dead vegetables : the effluvia of which mixing with the mud de- posited from the water, makes it exceedingly rich.

23. GASES. ††† Tliat atmospheric air is necessary to the life and vigour of the plant, may be seen by looking at the different appearance of those plants which are exposed to a free circulation of air, from those which are deprived of it. If a plant is placed even under a glass, to which no new supply of air can have access, it withers and dies. Of the component parts of air required by the plant, may be enumerated a portion of car- bonic acid gas, especially in the higher stages of vegetation ; and oxygen, which is of capital import- ance in every stage of the process. The flower- bud will not

expand if confined in an atmosphere deprived of oxygen, nor will the fruit ripen; nitrogen, though it constitutes by far the greater proportion of atmospheric air, is incapable of affording any nutriment to plants. Seeds will not germinate, neither will plants vegetate in it, except for a very limited time. Hydrogen gas is also unfavourable to vegetation, notwith- standing the opinion of Dr. Priestley, that it not only serves for vegetable food, but constitutes the true and proper pabulum of the plant. Al- though both these gases are found in the con- stitution of plants, by chemical analysis, they are derived in some other form than air, the former, nitrogen, perhaps on the extractive principles of vegetable mould, and hydrogen as an element of water.

24. VEGETABLE EXTRACT. ••• Another part of food for plants consists of vegetable extract or mould. When plants have attained the maturity of their species, they begin to decay : and after their dissolution, are converted into vegetable dust, with a probability of its being again converted into vegetable nourishment, and entering the plant. The whole of it however, cannot enter the plant, because not soluble in water; but the portion that is soluble, and therefore capable of being absorbed by the root, is what is called vegetable extract. There are two ways in which decayed animal and vegetable substances com- municate nourishment to the plant. By the first, floating in the atmosphere, they attach themselves and enter the plant in solution imbibed by the pores; by the second, they enter the root by means of the soil.

25. SALTS. ••• Salts form a considerable part of the food of plants, d fferent salts being requisite iu different species ; trefoil, lucerne, and clover, Lave their growth much accelerated by sulphate of lime, (gypsum) wheat by phosphate of lime ; barley by nitrate of soda, or potash. Salts, as nitrate, muriate, and sulphate of potash or soda,

are found in most plants. It is not however, determined in what way salts assist vegetation, whether by hastening the putrefaction of animal substances contained in the soil, or by attracting the humidity of the atmosphere.

26. EARTHS.••• Earths, as they are found in different proportions in plants, are derived chiefly from the soil, probably by solution in water, especially as all earths hitherto found in plants are known to be in a slight degree soluble. The experiments of Woodward tend to prove that they are absorbed by the root. Giobert mixed lime, alumina, silica, and magnesia in the same proportions as they are commonly found in fertile soils; and after moistening them with water, sowed different grains in them. These, although they germinated, did not thrive ; and perished when the nourishment of the cotyledons was exhausted. This, in his opinion, established the fact that though beneficial to the growth of some species, and requisite to the health of others, earths are not capable of affording any considerable nourishment to the plant. The supply of food received from the earth depends upon the mechanical or chemical constitution of the soils. The former may be altered by pulveri- zation, consolidation, watering, draining, &c. : the latter by the addition of earths, and other sub- stances, the supply of manures liquid and solid, by irrigation, distribution of dungs, &c. On the whole therefore, we may conclude that although vegetables will grow in any kind of earth, and flourish vigorously, if plentifully supplied with water, yet some kinds of soil are found much more proper for supplying them with nourish- ment than others. The inference which some would draw from experiments on plants set in mere sand, &c. are not quite fair : viz. that the earth is of no other use to vegetation, than to afford a proper support to the plant, that it be not easily moved out of its place ; because the experiments made on single vegetables are always performed in, or very near houses, where the air is not so pure as in the open fields, and

con- sequently where they have an opportunity of receiving as much nourishment from the air, as may compensate the want of what they would have derived from the earth, if planted in a rich soil.

27. Lord Kames, in the Gentleman Farmer, mentions an experiment wherein a pea was planted in some cotton spread on water, in a phial. It sprung up, and pushed roots through the cotton into the water. The plant grew vigorously, and, at the time of his writing, the experiment carried large pods full of ripe seed. From this experiment, or others of a similar kind, however, a fanner would not be thought to act very ju- diciously, who should conclude that nothing more was requisite to produce a plentiful crop, than to keep his fields constantly soaking with water, and apply his labour only for that purpose, with- out regarding either tillage, manure, or the dif- ference of soils. Experience has shown, that by certain operations performed on the earth itself it is rendered much more capable of supplying vegetables with plenty of nourishment, than if such operations were omitted ; and, that some kinds of soil cannot, without certain additions,

be rendered so fit for this purpose as otners; and this is what constitutes the difference between a rich, and a poor soil.

28. That species of earth which is capable of sup- plying the vegetable kingdom with nourishment in the greatest plenty, is found best in well culti- vated gardens. It is not, however, even in these, found in perfect purity ; being constantly mixed with greater or less proportions of sand, small stones, &c. It can be had by itself, and entirely separated from all other substances, only by suf- fering vegetable or animal bodies to putrefy. By undergoing this operation, they are at last resolved into a kind of earth, which appears perfectly the same, from whatever substance it is produced. Of this earth, Dr. Lewis gives us the following characters. It is indissoluble in acids, somewhat tenacious when moistened with water, friable when dry, and acquires no additional hardness in the fire. ??? The

chemistry of nature, and that of art, however, are so very dissimilar, that an ac- count of the chemical properties of this earth, can be but of very little service to the practice of agriculture ; however, to those above-men- tioned we may add, that when it is distilled with a violent fire, a volatile alkaline spirit, and foetid oil, similar to those of hartshorn, or other animal substances, are obtained.

29. As the volatile alkali is produced in great plenty by distilling putrid substances, either animal or vegetable : the obtaining an alkaline spirit from this kind of earth, is a strong argu- ment of its being much impregnated with the putrid effluvium, mentioned above, as the proper vegetable food contained in the air and water. Indeed, considering that this kind of earth is produced by putrefaction, it is next to an im- possibility that it should not be impregnated with putrid steams, as much as earth can be ; and, it' the earth which is most impregnated with these steams, is found to afford the greatest quantity of nourishment to vegetables, we have thence an addditional proof, that they live on the putrid matter emitted from dead animals and vegetables like themselves.

30. That we may be the more ascertained of this, it must be considered, that the earth, which is the greatest source of nourishment to vegetables, is capable of absorbing putrid effluvia in much greater quantity, before it is saturated, than either the air or water. The burying of dead bodies affords a proof of this. They are laid but a small depth under ground ; yet the abominable stench emitted by the carcase, is retained in the earth, and never penetrates so as to become offensive. That earth may be saturated with this putrid matter, as well as air or water, is certain ; and, in case of such a saturation, either of these will take up the superfluous quantity, and become noxious ; but unless the earth is fully saturated, both will deposit part of what they contain in the earth, and thus become more salutary than before.

31. That earth is capable of attracting putrid

effluvia from the air, perhaps, may not be readily granted ; but, if we consider the exceeding great salubrity of the air in the country, and the healthiness of those who follow the plough, or are employed in digging the ground, we must

al'ow, that when the ground is turned up, it communicates no kind of noxious quality to the air ; which it would certainly do, if it emitted a putrid effluvium. So far from this, the smell of moist earth is always agreeable and wholesome ; and, here our theory is confirmed, by the cele- brated Baron Van Swieten, late physician to the empress of Hungary. { Physicians,' says he, ' usually advise their patients to rustication, not only that they may enjoy a pure and freely cir- culating air, but that, as their strength increases, they may, disengaged from all care, exercise their body by the slighter labour of agriculture, and other country amusements.'

32. There may, perhaps, be another cause \vhy rustication will be of benefit in consump- tions. It is well known, that, after some days drought, on the falling of rain that moistens the earth, there arises a grateful smell, which we all are sensible of; and, this is commonly attributed to the vegetables, which, before sapless, but now refreshed by rain, perspire more copiously. Reaumur observed, that a like fragrancy is also perceptible after rain, when the corn has been cut down in the fields, where there only remains dry stubble. He further observed, that this fragrancy does not diffuse itself to any thing at a great distance, without being much diminished, and soon entirely gone.

33. This property of emitting a fragrant smell is likewise taken notice of by Dr. Home, in his Principles of Agriculture and Vegetation. Some physicians have prescribed a bath of earth for the cure of consumptive patients ; and Dr. Solano de

Luque was of opinion, that the earth had the property of absorbing contagious miasmata into it : but whether it can absorb these miasmata from living bodies or not, it certainly can absorb them from dead ones ; for a piece of putrid meat will be much sweetened by lying for a short time in the ground.

34. From all this we cannot indeed infer that putrid air is sweetened by mere earth ; but we discover what is more important, viz. that though earth is the common receptacle of all putrid matters, both animal and vegetable, there is a change made on both of them when in it, which cannot be made either by air or water. Thus, if the carcase of a small animal is left to putrefy in the air, it becomes exceedingly offensive, and con- tinues so from first to last. The same thing hap- pens if it is left to putrefy in water. But, in earth, the case is quite different. After the car- case is consumed, the earth which has imbibed all the putrid steams, instead of exhaling an offensive odour, diffuses an agreeable one ; and thus we may see that it is endued with a power no less remarkable than that of attraction or re- pulsion, and which we may call transmutation. With regard to water, the case is more evident ; for the most putrid water will be sweetened by percolation through earth, or even running in a channel for some time on its surface ; but, if it contains any impurities of the saline kind, they ###will not be separated.

35. We must admit the existence of this power of transmutation, whatever we imagine the vege- table food to consist of; for it is impossible to solve the phenomena of vegetation by attractions

and repulsions. If we suppose the vegetable food to be salt, let us attract and repel salt as we will, it remains salt from first to last. Let us suppose it water, the case is the same ; and, by mere attraction, nothing but masses of salt, 01 pools of water, could be produced. The case is the same on our own hypothesis ; for, supposing plants composed of the putrid effluvia of others, and of dead animals, if nature was endued wi'-i no other power

than attraction or repulsion, th vegetable would be a corrupted mass like that o\ which it was composed. ••• This power resides only in the earth and vegetables : air and water can indeed act as powerful solvents, but cannot transform or compound.*

36. PROCESS OF VEGETABLE NUTRITION. With regard to the process of vegetable nutrition we perceive a great similarity to what is observed in the animal economy ; the food whether im- bibed from the atmosphere or taken up from the soil, in the form of gases, or other fluids, passes into the body of the plant and forms what is, in popular language, called the sap. This ascending into the leaves is elaborated, like the blood of 'animals in the lungs, after •••which it enters the general circulation of the plant, and becomes the great instrument of circulation. The intro-susception (as it has been called) of plants is by absorption or in- halation, as chyle into the animal lacteals, or air into the lungs : the former expresses the reception of non-elastic fluids, the latter those which are gaseous. Non-elastic fluids are ab- sorbed by the epidermis. That leaves inhale air has been demonstrated; and the inhaling power which, according to Saussure, is the effect of their organization, in the opinion o Dr. Priestley is performed chiefly by the up- per surface. It has also been thought that other parts of the plant absorb moisture and inhale gases, by means of pores in the epider- mis. .*

37. DIFFUSION OF THE SAP. ••• The fluids ab- sorbed from the soil, as we have already shown, are called sap; a lymph which before it can distribute nourishment to the different parts of the plant must either be conveyed to some viscus by which its elaboration shall be pro- pelled upon some mechanical principle ; or be immediately diffused over the whole body of the plant. The sap is in motion at all seasons of the year more or less, even the severity of the winter not entirely suspending its opera- tions. Buds receive a gradual development throughout the whole winter; roots follow the same process; evergreens retain their leaves; and many of them, as the laurustinus, arbutus, and the tribe of

the mosses protrude their blossoms, thus affording infallible evidence that the mo- tion of the sap is not wholly suspended. Various opinions have been entertained with respect to the medium through which the sap ascends from the lower to the upper extremity ; some imagin- ing it to be by the bark, wood, and pith in- discriminately; others by the intervening medium between the bark and the wood. By steeping the extremities of branches of the fig, elder, honeysuckle, and filbert, in coloured infu- sions, the fact is now ascertained that the sap

with its leaves and seed-vessels, was in a decoction of madder-root. After remaining so for several days, the colour of the

ascends through the vessels of the longitu- to the plant what the blood is to the body,

diiuil fibres, and constitutes the woody part of the immediate principle of nourishment and

herbaceous 'plants. With respect to the man- life; in which state it is supposed to be con-

ner in which the sap enters into the leaves, it veyed to all parts of the plant by an ap-

was found, by means of the coloured infusion, propriate set of vessels. The most scientific

lhat its medium is through the centre of the experiment on this subject is that of Dr. Dar-

bundles of tubes or fibres extending in a Ion- win. A perfect stalk of the euphorbia helis-

gitudinal direction along the interior of the leaf- copia

stem, extending upwards to the extremity of placed

the leaves and in their direction downwards, remain

penetrating the bark and alburnum, the tubes decoction was distinctly seen passing through

of which they join, still proceeding obliquely each leaf. Many of the ramifications going

till they reach the pith. In case of the fruit- from the mid-rib towards the circumference on

stalk, the central vessels were detected as be- the upper side of the leaf, were observed to be

fore ; but the colouring infusion was found to tinged with red, and on the under side was

have penetrated the fruit also, diverging round observed a system of branching vessels, ori-

the cone, afterwards converging in the eye of ginating in the extremities of the leaf, and

the fruit, and terminating in the stamen. Thus carrying, not a red, but a pale milky fluid.

was discovered the mystery of the sap's course These, after uniting in two sets on each side of

in the nourishment of vegetable life. It is re- the mid-rib, descended with it into the leaf-

ceived by the pores of the epidermis into the stalk, and were the proper vessels for returning

longitudinal vessels of the root. It is con- the elaborated sap, distinguished by the appella-

ducted thence to the collar, conveyed by the tion of veins, as those on the upper surface by

longitudinal vessels of the alburnum to the base of the leaf, stalk, and peduncle, from which it receives its final transmission to the

that of arteries. Knight, in his subsequent ex- periments, detected in the leaf-stalk, besides the

vessels, which he calls central tubes, through

extremities of the leaves, flower, and fruit. It which, together with their appendages, the spiral

appears also from the fact of a branch continu- ing to live, when the tubes directly leading to it, were cut in the trunk; that the sap, though

tubes, the coloured infusion ascended, another set of vessels surrounding the former, which conveyed in one direction or other, a fluid that

propelled most copiously in the direct line of was not coloured, and which proved eventually

ascent, is at the same time circulated in a trans- verse direction. For the various theories re- specting the cause of the sap's motion, see VEGETABLE PHYSIOLOGY. 38. ELABORATION OF THE SAP. ††† *On boring a*

to be the descending juice. These vessels ex- tended upwards to the summit of the leaf; and downwards to the base of the leaf-stalk, pene- trating the inner bark, whence the sap descends through the channel of the bark, or rather he-

tree in the proper season, the sap that issues tween the bark and alburnum, by means of the

being different from the moisture of the soil, longitudinal vessels of the inner bark, down to

proves that the latter in its absorption has un- the root. The descent of the juice has been

dergone a change, either in passing through ascribed to gravitation. Gravitation certainly the glands of the cellular tissue, which it reaches through the medium of a lateral communica-

has its influence, as is evident in the practice of gardeners ; who to prevent the descent of sap in

tion ; or in mingling with the juices contained

young shoots of trees which have grown up-

in the cells, and being in its passage impreg- right, bend them down after being fully grown,

nated with a portion of them. The incipient by which means they produce larger buds, and

stage of this elaboration effected within the often blossoms instead of leaf-buds, interior of the plant, must remain a mystery, 40. ORDER OF DEVELOPMENT.••• The pro-

although its future progress and change may duction of the different parts or organs is not

e more evident. The process of elaboration the same in herbaceous and annual plants as it

•• -j the leaf' the Sap exhaling is in woody and perennial plants, the former

[ht fluid on the principle of perspiration, comprising apparently but one act of the vital

ith some of its substance, thus altering principle, the parts being unfolded in immediate

us proportions and consequently its properties, succession; whereas in the latter, the process is

itmous exudation found on the leaves of carried on by gradual and definite stages, from

pie, poplar, and lime tree, together with the opening of the spring, to the approach of

J watery fluid, m a high state of elabora- winter, when the functions of vitality are in a

lomerating into large drops and great measure suspended, till the spring next

down the leaves of the poplar and succeeding, rouses them again to action. The

viuow in ^ not calm weather, afford sufficient

embryo of the plant, when it first emerges from the

evidence of sensible perspiration. For further in-formation on the subject of elaboration we must refer the reader to BOTANY.

seed, consists of a root, plumelet, and incipient stem ; and in dissection exhibits an epidermis enveloping a soft pulpy substance, furnished

CENT OF THE JUICE When the sap perhaps with a central longitudinal fibre or perhaps duly elaborated in the leaf it assumes an accumulation of them.

41. UNFOLDING 01? COMPOSITE ORGANS. ###

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The unfolding of the composite organs requires

*II t0 be sePara*ly considered in reference to the*

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m '^ ### ,/ ? P6culiar annualPt, and the perennial. With respect

>ur, and was regarded by Malphurhi as being to the organization of the former plant, and the

AGRICULTURE.

original shoot of the latter, both proceed the the first year on the same general principle. A perennial of one year's growth, taken up in the beginning of winter, when the leaves have fallen away, is found to consist of root and trunk, the extremity of which is spotted with one or two buds. By being cut in two transversely, the trunk is found to consist of bark, wood, and pith. The pith seems merely a modification of the original pulp, but the pith and pulp are afterwards subject to a more

*complete conversion of their parts, and are organized in the several ramifications and divisions of the future plant. A perennial of two years is found to have in- creased in height by the addition of a perpen- dicular shoot, consisting like the former one, of bark, pith, and wood; and in circumference to have received the augment of a new layer of ***wood and bark, formed between the wood and bark of the former year. This covering of the original cone has excited considerable difference as to its origin. The same difficulty occurs each succeeding year, as long as the plant continues to live ; a new layer being formed exterior to the one preceding it, increasing the diameter of the parent stock, the outermost layer of bark and innermost layer of wood originally tangent, being the growth of the first year, the second layer of bark and second layer of wood, the produce of the second year, &c. The tree also insinuates itself in height by means of an ad- ditional shoot, or branch every year after the manner of the first. Malphigfu supposed the new layer of wood was formed from the fibre of the preceding year ; but it appeares from the dis- coveries and experiments of Knight, that the leaf gives the elaboration requisite to the form- ation of new parts. The medullary canal is filled with an interior layer, formed by a sort of cambium, deposited by the medullary tubes. These layers from the periods at which they are deposited, are of different degrees of solidity. The conversion of the alburnum into perfect wood, is attributed by some to the loss of sap which the tree sustains after it has exceeded the bounds of maturity : by Knight and others its induration in the winter is attributed to a de- posit left in the preceding summer, consisting of the proper juice of the tree in a state of conge- lation. Whether there be a circulation of veget- able juices in plants, analogous to that of the blood, is a question that has been repeatedly agitated, but has met with many supporters and many opposers.*

*42. DECOMPOSITE ORGANS. *** The progress and development of the decomposite organs, as the root,*

stem, branch, bud, leaf, flower, and fruit, comes next under consideration. The root, like the upper surface, is augmented an- nually by the addition of a new layer ; and by the accession of- a new shoot, f merging from the extremity of the preceding fibre. The root, provided it meets no obstacle, descends perpen- dicularly to a considerable depth. The root of some young oak trees taken up by Du Hamel, was found to be four feet, while the upper part did not exceed six inches. If the root in its de- scent meets with an obstacle, it takes an hori- zontal direction, by sending out lateral shoots.

When a root ceases to elongate itself, it shoots out lateral fibres, which are the more vigorous as they are nearer the trunk, which is attributed to the easy access of oxygen in the upper division ; although the reverse of this is the case, provided the roots are horizontal, owing, as has been thought, to the more ample supply of nutriment it receives from the earth. Roots when injured send out lateral branches ; and where the soil has been loosened, extend themselves to a considerable length. The strength acquired by roots, where difficulties are to be overcome, almost exceeds belief; they will penetrate through the hardest soil, to reach a soil that is more nutritive ; they will insinuate their fibres into crevices of walls and rocks, which they have been known to burst and overturn.

43. The stem, as we have already observed, re- ceives an augment of an additional layer, and a new shoot annually ; not produced like the in- crement of the root, by the super-addition of vegetable particles to th? extremity ; but by the principle of intro-susception. The extension of the shoot is also rapid during the period it re- mains herbaceous ; but slow after the time of its induration ; and the small cone, rising during the first year, increases no more after the first winter, when it is perfectly consolidated. Palms, how- ever, are to be regarded as an exception.

44. Branches, which in their development as- sume

all the varieties of position, originate in a bud, and form a cone consisting of pith, wood, and bark. The lower branches are parallel to the earth ; even though the tree itself stand obliquely on the slope of a hill ; a circum- stance which, for the most part, has been attri- buted to the forming of a greater proportion of buds on the side forming the obtuse angle with the base, from its greater exposure to the action of the atmosphere.

45. The bud is not common to all plants, nor to plants of all climates ; numerous shrubs, and all annuals being destitute of them ; also plants growing within the tropics, the leaf protruding immediately from the bark. But to the woody plants in cold climates, no new part is added but what emerges out of a pre- existent bud itself, clothed with new buds, each of which, sur- rounded with glutinous scales, forms the cradle of a new infant shoot, to burst its way the follow- ing spring. Of the natural origin of the bud much uncertainty ot opinion seems to exist; but its development is by the action of the proper juice of the plant elaborated in the pre- ceding buds, and originally in those of the plumelet.

46. The leaves, before they direrge from the expanding bud, are complete in all their parts, which proves that the infant individual, like the shoot itself, effects its final development by the intro-susception of new particles, augmenting at once the whole of its dimensions ; though this rule is not without exception, as in the case of the liliaceous plants, kc.

47. The flower, which, according to Knight, is a prolongation of the wood, pith, and bark, is complete in all its parts, like the leaves. Interest- ing anomalies, connecting themselves with all the above considerations, present an interesting

and instructive field of research to the practical agriculturist; but, referring the reader for the consideration of them to the science of agricul- ture, we shall proceed to make some observations on the sexuality of vegetables.

*43. VEGETABLE SEXUALITY, AND IMPREGNA- TION OF THE SEED.**** *The sexuality of plants was well known to the Greeks, from their mode of cul- tivating palms and figs. Aristotle, Theophrastus, Pliny, Galen, and Dioscorides, appear to have had some indistinct notions of the same subject. Pliny investigated all the various facts and evi- dences connected with this intricate subject, and at length established it upon the basis of logical induction. The male and female organs of vege- table generation are the stamens and pistils ; and the substance, by which the impregnation of the seed is effected, is the pollen. This, when the above organs are near to each other, is dispersed by the elastic spring with which the authera flies open. In many cases it is, however, conveyed from the anther to the stigma, by the instrumen- tality of insects, who, in their search for honey, settling upon a male flower, become covered with pollen, and afterwards fly to other plants of the same species ; by which, females, though remote, form plants of the opposite sex. The fecundation of the ovary has, nevertheless, given rise to a great diversity of opinion. One class of experimenters imagined that the embryo, pre-existent in the ovary, is quickened by the pollen, or trans- mitted through the stylus. Others, observing that the embryo never makes its appearance till after fecundation, imagined that it must pre- exist in the pollen of the anther, from which it passes through the styli into the ovary. Others consider the embryo exists neither in the pollen nor ovary ; but is produced by the generating union of the male and female organs ; the fecundating virtue of the former consisting in a fluid which issues from the pollen when it explodes ; and that of the latter, a fluid exuding from the sur- face of the stigma. Hybrid productions unite the properties of both the male and female, from which they originate.*

On impregnation, the flower declines ; the stamens, petals, and calyx, for the most part, decay ; whilst the ovary swells, and advances to perfection ; its colour is deepened and enriched, its appendages are added, and its figure ultimately conformed according to its respective species.

49. PROPAGATION. ††† Propagation is carried on by means of the seed, which when it has reached maturity, detaches itself from its parent plant; and dropping into the earth originates the germinating process of a new individual. Sometimes by the elasticity of the pericarp which opens with a sudden spring, it is thrown to a distance from the plant, after the seed has wen discharged from the original stem ; some species, as barley and wild oats, are provided with instruments for their dispersion, the awn of bailey, with its little teeth, by mere contraction and distension, the effects of drought and mois- ture, often travels many feet from the stalk on which it grew. Winds, birds, and ani- als, together with the streams, rivers, and cur- rents of the ocean††† all become instrumental .n effecting a still wider dispersion of the ger-

minating principle replenishing the earth with the numerous variety of plants for the per- petuating of the vegetable kingdom. The pro- pagating of plants by means of germs, includ- 'ng bulbs and buds, also by leaves, slips †††unners, layers, offsets or suckers, together with the scientific application of grafting and oudding, belong properly to the science of hor- ticulture.

50. PATHOLOGY. ††† Pathology, the next thing re- quisite for an extensive cultivator to understand, includes the injuries, diseases, and that natural decay to which plants are liable. Injuries, wounds, and accidents, may be considered in the following order : 1 . Incision ; this, if it merely affects the epidermis, heals up without leaving a scar ; if it penetrates the interior of the bark it heals, but leaves a scar ; but if it pe- netrates into the wood, it never heals properly ; but new wood and bark are formed Incisions are often requisite for

the vigour of the plant. 2. Boring, which is done to make them part with their sap ; and, like the former, closes up by the formation of new bark and wood. 3. Gird- ling ; a practice common in North America, especially when the farmer wishes to clear his land of timber. It is the practice of making parallel and horizontal notches in the trunk of the tree, penetrating through the alburnum ; and afterwards scooping out the intervening portion. 4. Fracture, which happens when a tree is bent far back by storms, hurricanes, or any other means. If bark only of the cortical, or woody fibres, are affected, and the stem but small, the parts will reunite by being put back in their natural position, and propped up; but if the stem is large, and the fracture attended with con- tusion, a cure is not to be expected, the herba- ceous substance exuding from between the wood and fibre, seldom sufficiently insinuating itself into the interstices to produce induration. 5. Prun- ing may be mentioned ; the only precaution ne- cessary to which, is, that of cutting the branch in a sloping direction, so as to prevent the rain from lodging on the exposed surface of the sec- tion. For more particulars upon which, as also upon grafting, which is a wound both of the stick and graft, uniting to each other by means of an herbaceous substance, exuding in the or- dinary manner, we refer to HORTICULTURE. The destruction of buds and leaves, inflorescence, failure in the produce of flowers, seeds, &c premature inflorescence, and decortication, are the effects of those general accidents to which trees are liable.

51. DISEASES OF PLANTS. ††† The common diseases of plants are ; 1 . Blight, arising from various causes, exceedingly detrimental to the interest of the farmer. It is often occasioned by the cold easterly winds of spring, which kill the infant shoots of the plant, by stopping the circu- lation of the juices. The juices thus stopped in their passage, swell and burst the vessels ; and supply nutriment to the numercv tribes of in- sects that make their speedv appearance, and are generated in them. These are commonly sup- posed to be the cause

of the disease, and in the farmer's opinion are wafted on the east wind. In the spring the blossoms, that so delitjht the be-

holder by their premature protrusion, are com- monly subject to a similar disease, by means of the spring frosts. Another species of blight originates in pestilential vapours, and commonly occurs in the middle of the summer, after heavy showers, succeeded by immediate sunshine. In hop grounds, the centre is the point at which it originates. It was this species which damaged the vineyards of ancient Italy, and at present greatly injures our agricultural produce. Wheat crops are often entirely destroyed by this means. Blight often arise from fungi ; and for the most part attacks our grains and grasses : this blight assumes the appearance of a rusty-looking powder, and soils the finger. The blades of some wheat attacked in 1807, exhibited the appearance of a number of rusty looking patches, dispersed over the surface, containing thousands of small globules collected in groupes under the epidermis. Sir J. Banks ascertained these to be patches of a small fungus, the seeds of which, floating in the air, enter the pores of the leafy envelope, or exist in the manure, and pass into the root by means of the pores. This blight, which the farmer calls red-rust, generally confines its attack to the stalk and the blade. " It is, however, to be distinguished from another species called red-gum, which attacks the ear only. 2. Smut; the next disease converts the farina of the grain with its integu- ments and a portion of the husk, into a species of fine sooty dust. It is seldom general in a crop ; and it is said may be prevented by steep- ing the seed, before it is sown, in a weak solution of arsenic. The disease called bags, or smut- balls is prevented in the same way. 3. Mil- dew, is a thin whitish coating, covering the kaves of vegetables, and causing their decay and death. On wheat it assumes the shape of a glutinous exudation ; and is

found particularly when the days are hot, and the nights without dew. Mildew is said, in cases of cultivated crops, to be prevented by manuring with soot; and sulphur was found by J. Robertson, the only specific cure. 4. Honey-dew is a sweet clammy substance, coagulating on the surface of leaves during hot weather. With respect to its origin, agriculturists are not agreed. 5. From long continued rain, or too much watering, plants and vegetables are subject to a disease called the dropsy, which is generally incurable. It consists of a preternatural swelling of particular parts, gives fruits a watery taste, and occasioning an immoderate protrusion of roots from the stem, prevents the ripening of seed. 6. Flux of juices is another disease to which vegetables are liable, as the tears of the vine, or spontaneous extravasation of sap, exudation of gum, chilblains, &c. 7. Gangrene, etiolation, contortion, suf- focation, and consumption, are calamities, in- cident to vegetables, to meet which every agricul- turist should be prepared. But although the plants should be subject to none of the before mentioned accidents and diseases, decay after a few years, according to the vigour of its species, is nevertheless certain. Many vegetable subjects die annually, others which are as to their com- posite organs perennial, are subject to a decay pf the temporary organs. The falling of the leaves, the fall of the flower, and the fall of the VOL. I.

fruit are sufficiently familiar, and are frequently compared in the animal economy to the moult- ing of birds, &c., because after sheddirg its foliage, by the powerful blasts of winter, the tree clothes itself as fresh as ever by the warmth of the succeeding spring. The temporary or- gans at last decay, old age creeps upon the sys- tem, the root no longer receives nourishment from the soil, or what it receives is feebly propelled ; elaboration is difficult, the descent of the juice is almost totally obstructed, the bark becomes thick, and covered with lichens, or moss, the shoots decay first, then the branches, the trunk, and last of all

the root; and nature hastens their decomposition till it crumbles away to mould.

52. As thesubjectof the diseases of plants is one of the utmost importance to the farmer, we shall add to this scientific arrangement of their nature, some miscellaneous remarks and facts.

53. Tournefort divides the diseases of plants into five classes : first, those which arise from too great an abundance of juice; second, from too little ; third, from its bad qualities ; fourth, from its unequal distribution ; and fifth from ex- ternal accidents.

54. Too great an abundance of juices causes at first a prodigiously luxuriant growth of the vegetable, so that it does not come to the requisite perfection in a due time. Wheat is subject, in some climates, to a disease of this kind ; it vege- tates excessively, without ever carrying ripe grain ; and the same disease may be artificially produced in any grain, by planting it in too rich a soil. Too much rain is apt likewise to do the same. When a vegetable is supplied too abundantly with juices, it is very apt to rot ; one part overshadowing another in such a manner as to prevent the access of fresh air ; upon which putrefaction soon ensues, as has been already observed.

55. In grass, or any herbaceous plant, where the leaves only are wanted, this over-luxuriancy cannot be called a disease, but is a very desirable property ; but in any kind of grain it is quite otherwise. Dr. Home, in his Principles of Agriculture and Vegetation, classes the smut in grain among the diseases arising from this cause. He says that too great an abundance of juices in a vegetable will produce diseases similar to those occasioned by repletion in animal bodies ; viz. stagnations, corruptions, varices, cariosities, &c. along with the too great luxuriancy just men- tioned, which he expresses by too great an abundance of water shoots. Hence he is in- duced to class the smut among diseases arising from this cause ; it

being a corruption happen- ing most in rainy seasons, and to weak grain. ••• Like other contagious diseases, he says, the smut may be communicated from the infected to healthful grain. As a preventative, he recom- mends steeping the grain in a strong pickle of sea-salt. Besides the effect which this has upon the grain itself, it is useful for separating the good from the bad ; the best seed falling to the bottom, and the faulty swimming on the top of the liquor.

56. Dr. Home says, dung is a preventative o diseases arising from too great moisture ; in proof of which he relates the following expert

merit. ' Two acres of poor ground, which had never got any manure, were fallowed, to be sown with wheat ; but the scheme being altered, some dung was laid on a small part of it, and the whole sowed, after it had got five furrows, with barley. A great quantity of rain fell. The bar- ley on that part which was dunged was very good; but what was on the rest of the field turned yellow after the rains, and when ripe was not worth the reaping.' .

57. The want of nourishment in plants may be easily known by their decay. The only re- medy is, to supply them with food, according to the methods above directed, or to remove from their neighbourhood such other plants as may draw off the nourishment from them. In the Memoirs of the Academy of Sciences for 1728, M. Du Hamel mentions a disease, which he calls le mort, that attacks saffron in the spring. It is owing to another plant, a species of trefoil, fixing some violet-coloured threads, which are roots, to the roots of the saffron, and sucking out its juice. This disease is prevented by digging a trench, which saves all the unaffected.

58. The bad qualities or unequal distributions of

the juices of plants, are the occasion of so few of the diseases to which vegetables in this country are subject, that we need not mention them. Most of the diseases of our plants are owing to external accidents, particularly to the depreda- tions of insects. The insects by which the greatest devastations are committed in this country are, snails, caterpillars, grubs, and flies. The snails and caterpillars feed on the leaves and young shoots, whereby they often totally destroy the ve- getable. Where the plants are of easy access, these vermin may be destroyed by sprinkling the vegetable with lime-water ; for quicklime is a mortal poison to these creatures, and throws them into the greatest agonies the moment they are touched with it. On trees, however, where this method cannot so well be followed, fumigation is the most proper ; and for this purpose nothing is better than the smoke of vegetables not perfectly dry. In some cases the eggs of these destroying creatures may be observed, and ought imme- diately to be taken away. On fruit trees, as apples, pears, medlars ; on some forest-trees, the oak and dwarf-maple especially, and the white and black thorn in hedges, a kind of little tufts are to be observed, resembling, at first sight, withered leaves twisted by a cobweb about the uppermost twigs or branches. These contain a vast number of little black eggs, that in the spring produce swarms of caterpillars which de- vour every thing. To prevent this, all the twigs on which these cobwebs appear should be taken off and burnt as soon as possible. This ought to be done before the end of March, that none of the eggs be allowed sufficient time for hatching.

59. The grubs are a kind of worms which de- troy the corn by feeding upon its roots ; they are transformed every fourth year into the beetles called cock-chaffers, may-bugs, &c. They are >ery destructive when in their vermicular state and cannot then be. destroyed, because they go leep in the ground. When become beetles/they conceal themselves under the leaves of trees where they seem asleep till near sun-set, when

they take their flight. It is only then that they can be destroyed, and by a very laborious me- thod, namely, by spreading pack-sheets below the trees in the day-time, when the beetles are in their torpid state, then shaking them off and burning them. Some time ago they made such devastations in the county of Norfolk, that several farmers were entirely ruined by them ; one gathered eighty bushels of these insects from the trees on his farm. In 1574, there fell such a multitude of these insects into the Severn, that they stopped and clogged the wheels of the water- mills.

60. Turnips, when young, are apt to be totally destroyed by a multitude of little black flies, thence called the turnip-fly. As a preventative of these, some advise the seed to be mixed with brimstone ; but this is improper, as brimstone is poisonous to vegetables. The best method seems to be the fumigation of the fields with smoke of half-dried vegetables. For this purpose weeds will answer. This fumigation must be often re- peated, to drive away the innumerable multitudes of these insects which are capable of destroying a large field of turnips. Some suppose that the fly is either engendered in new dung, or enticed by it ; and therefore advise the manure to be laid on in the autumn preceding, by which it loses all its noxious qualities, while its nutritive ones are retained, not being exhaled by the sun. This method is ascertained by experiments; and another material advantage accruing from autumn manuring for turnips is, that all the seeds con- tained in the dung, and which, being carried on the land with it, vegetate almost immediately, are mostly killed by the cold of winter, and the few that remain seldom escape destruction by the plough-share.

61. The following method of sowing has also been recommended as a preventative of the fly : ••• ' About midsummer, when it rains, or there is an apparent certainty of rain approaching, sow your turnip-seed ; if about the full moon, the better. In this case, neither harrow, brush, nor roll, after sowing. The natural heat of the ground at that

season, and the consequent fer- mentation occasioned by copious rain, will give an astonishingly quick vegetation to the seed, which in a few days will be up and out of all danger from the fly. At all events, sow not till it rains ; it is better to wait a month, or even longer, for rain, than to sow (merely for the sake of sowing about the usual time) when the ground is parched with heat. By the scorching of the sun, the oil and vegetative quality of the seed are exhausted; and the few weak plants that come up will be destroyed by the fly before they can attain strength to put forth their rough leaves. The fly infests the ground abundantly in dry hot weather, but does no injury in rain. The falling rain will sufficiently wash the turnip-seed into the ground without harrowing it in ; which, in- stead of merely covering, too often buries this small seed at so great a depth, as never after- wards to get above ground.'

62. The following remedies are also recom- mended as having often prored successful. A small quantity of soot sown over the land at their first appearance. Branches of eldei, with

the leaves bruised, drawn in a gate over them. Musk mixed with the seed before it is sown. And sulphur burnt, under it, after moistening it with water in which tobacco has been steeped. But showers on the plants as soon as they ap- pear above ground are esteemed the best pre- servatives. They enfeeble and kill the fly, and hasten the plants into the rough leaf, when they are out of danger. The sweet smell of turnip has been thought to attract the fly; upon which supposition, the remedy appeared to consist in overpowering that smell by one which is strong, fetid, and disagreeable. Hence it has been re- commended, that upon an acre of turnips sown in the usual way, a peck or more of dry soot be thrown after the ground is finished, and in as regular a way as the seed is sown.

63. Some years ago, an insect, called the corn butterfly, committed such ravages while in its vermicular state, in France, that upwards of 200 parishes were ruined by it; and the ministry oft'ered a reward to the discoverer of an effectual remedy against this destroying worm. The cure which was at last discovered, was, to heat the corn in an oven so much as not to destroy its vegetative power, but sufficiently to destroy the small worms which made their nest in the sub- stance of the grain, and at last ate the substance completely. Though insects can bear a great deal of cold, they are easily destroyed by a slight degree of heat ; nor is the vegetative power of corn easily destroyed, even kept for a long time in a pretty strong heat. This method must therefore be effectual for destroying all kinds of insects with which grain is infested : but care must be taken not to apply too great a heat ; and the ad- justing of the precise degree necessary to destroy the insect, without hurting the corn, will require attention.

64. The curled disease in potatoes has long been a subject of investigation and experiment among farmers ; and the knowledge of its cause and cure seem yet to remain a desideratum. See POTATOES. The ' Agriculture Society ' at Man- chester, a few years ago, offered a premium for discovering by actual experiment the cause of the disease in question j and many letters were, in consequence, addressed to them upon the sub- ject. As these contain some interesting remarks, though very little decisive on the subject, we shall give a short extract from them.

LETTER I. The writer of the first letter ascribes this disease to an insect produced by frost or bad keeping before setting. In autumn 1776, he got up a bed of potatoes to lay by in winter, leaving plenty in the ground as regular as possible; and, before the severity of winter came on, covered part of the bed with straw and peas-haulm, and left the other part of the bed uncovered. That part of the bed which was covered was quite free from curled ones ; but the uncovered part pro- duced many curled,

owing, as the writer says, to frost.

II. This writer had about a quarter of an acre of potatoes, well manured with cow and horse dung, and took great care in picking the fine smooth-skinned potatoes for sets ; yet nine out of ten were curled. He attributes the cause of this disease to a white grub which he found near the

root, about half an inch long, with eight or t?n legs, its head brown and hard ; as, upon examin ing a number of the curled roots, he found them all bitten, from the surface to the root, which stopped the progress of the sap, and threw the leaf into a curl. The uncurled were not bitten. First, he put soot to the insects in the rows for two days ; and after that, he pat lime to them for the same time, but they still kept lively ; next he put a little salt, which destroyed them in a few hours. From which he infers, that if coarse salt were put into the ground at the time the land is preparing for potatoes, it would cure this distemper.

III. In this letter, the cause of the disease is attributed to the method of earthing the stems while in cultivation ; and it is recommended to take the sets from those potatoes that have not bred any from the branch covered.

IV. According to this writer, the disorder proceeds from potatoes being set in old tilled or worn-out ground. Hence he says, that no sets ought to be used from such land ; and that, to have good sets, they should be procured from land that was purposely fallowed for them ; from fresh ley land, where they are not curled ; or from ley land that was burnt the preceding spring, To make certain of getting good sets, he re- commends crabs to be gathered from potatoes growing on fresh land free from curl, and the next spring to sow them on fresh ley land ; and continue to sow them on fresh ley land yearly. All the good potatoes he saw, either on fresh ley land or on old tilled land, were raised from sets that grew upon fresh ley land last year ; and where he has seen curled potatoes, he found, upon en- quiry,

that the potatoe sets grew upon old tilled and worn-out land last year.

V. In 1772, this writer planted some potatoes by accident full nine inches deep ; when taken up, many of the plan; ;vere rotted, and a few curled. He kept the whole produce for seed, and planted two acres with it in 1773, not quite six inches deep. The crop was amazingly great ; and he did not observe any curled plants among them. In 1774, many of these were planted in different soils ; yet they were so infected with the curled disease, that not one in twenty escaped. In 1775, the disease became general. In 1776, it occurred to him that the good crop of 1773 was owing to the accidental deep setting of 1772 ; and that the reason why the same seed became curled in 1774, was their being set so near the surface in 1773. In 1777, he took some potatoes from a crop that was curled the year before, and after cut ting the sets, left them in a dry room for a month. Half were planted in ground dug fourteen days before ; the other half having been steeped in a brine made of whitesters ashes for two hours, were also planted in the same land at the same time. The steeped ones came up ten days before the others, and hardly any missed or were curled. The un- steeped ones generally failed, and those few that came up were mostly curled. He therefore ad-vised, First, that the potatoes intended for next year's sets be planted nine inches deep. Secondly, that they remain in the ground as long as th- season will permit. Thirdly, That these sets be well defended from frost till the beginning of*

March. Fourthly, that the sets be cut a fortnight before planting. Fifthly, that they be steeped, as above, two hours in brine or ley. Sixthly, that the dung be put over the sets. And, seventhly, that fresh sets be got up every year from sandy soils

near the coast, or on the shore. At planting, the hard dry sets should be cast aside, for they will probably be curled. Curled potatoes always proceed from sets which do not putrefy in the ground.

VI. This writer had five drills of the old red potatoes, and four of the winter whites, growing at the same time in the same field. The drills were prepared exactly alike. Among the red not one was curled. The winter whites were nearly all curled. He says he has found by expe- rience, that the red never curl.

VII. Two of this writer's neighbours had their sets out of one heap of potatoes. They both set with the plough, the one early and the other late, in the season. Most of those set early proved curled, and most of those set late smooth ; the latter on clay land. A few roods of land were also planted with small potatoes, which had lain spread on a chamber floor all the winter and spring till the middle of May. They were soft and withered ; they proved smooth and a good crop. Middle sized potatoes, withered and soft, which had been kept in a large dry cellar, and the sprouts of which had been broken off three times, produced a smooth and good crop. Hence he was led to think a superfluity of sap, occa- sioned by the seed being unripe, might cause the disease. To be satisfied of this he asked the far- mer whether he had set any of the same pota- toes this year, and what was the nature of his land ? He told him, he had ; that they had been set on his farm fourteen years without ever ►►urling ; that the soil was a poor whitish sand of little depth; that he let those he designed for keeping grow till they were fully ripe. Hence he concludes, the only sure way to prevent the curl, is to let - the potatoes intended for seed stand till they are fully ripe, and to keep them dry all the winter.

VIII. This writer set a quantity of red pota- toes, without having a curled one amongst. them. His method is, when the sets are cut, to pick out such as are reddest in the inside. On digging them up at Michaelmas, he mixes none of the curled seed among

the others. The curled are easily distinguished by their stalks withering two months before the rest of the crop. The cause of the curled disease he attributes to potatoes be- ing of late years produced from seed instead of roots, as formerly. Such will not stand good more than two or three years, use what method you please. Last spring he set the old red and white russets, and had not a curled potatoe amongst ††† e†††' L††"r ^e lime- stone land about Denbigh in North Wales, they have no curled potatoes!

this be owing to the nature of that land, per- haps hme might prevent the disease.

IX. According to this writer all sorts of erain wear out and turn wild if sown too long on the same land; the same will hold good in all sorts >t pulse, peas, beans, and potatoes. Those who have most curled potatoes generally plant very small sets. Eleven years ago he bought a parcel

of fresh sets, oi the golden dun kind, and has used them without change to the present year, without any being curled. This he principally attributes to his haying always planted good large sets. To prevent the evil, cut the sets from clear and middle sized potatoes, gathered from places as clear of the curl as possible; preserve them till spring; if any are harder, or crash more in cutting than usual, cast them aside. He also recommends the raising a fresh sort from the crab produced on the sorts least affected, which in Lancashire are the long duns.

X. Set potatoes with the sprits broke off, and they will (says the writer of this letter) be curled ones ; if set with the sprits on, they will not be curled. Again, take a potatoe which is sprit, and cut an offset, with two sprits ; break one sprit off, and let the other stay on, and set it ; the former will be curled, and the latter will not. When the potatoes are holed, take th<;m out be- fore they sprit, and lay them dry until you set or sow them, and you will have none curled.

XI. This writer was at the expence of procur- ing sets from fifty miles distance, and where this disease was not known. The first year's trial was successful ; the year following he procured sets from the same place, but one fifth of his crop was infected. By way of experiment, he planted sets from roots which had been infected the year before, and some of these produced healthy plants, free from all infection. He supposed the cause to be some insect, which, living on the leaves, gave them that curled and sickly appear- ance,'as is the case in the leaves of many shrubs and trees ; he made the following experiments. On a piece of ground that had not been dug for twenty years, he planted four rows of sets, which he knew to be perfectly clear ; the drills were two feet distant, the sets one foot distant in each drill. He then planted on the same ground four rows with sets from curled potatoes, at equal distances ; in each row were about twenty sets. Lot I. the curled state. No. 1. Without manure , 2. In salt; 3. In soot; 4. In quicklime. Lot II. the clear sets. No. 1. Without manure; 2. In salt; 3. In soot; 4. In lime. Those planted in salt and soot in both lots were destroyed. In Lot I., No. 1. and 4., all curled. Lot II., No. 1. and 4., quite clear. This experi- ment was made on a supposition that the insect lodged in the set, and must be destroyed on planting. But of that he is not satisfied. He repeated salt, soot, and quicklime, on the branches of several curled potatoes. Salt destroyed all he touched with it. Lime and soot had a partial effect on the plants. After some time, they ap- peared almost as healthy as the rest. Thus, al- though he has done little towards the cure, he flatters himself he has pointed out the cause, the insects on the curled plants being not only very numerous, but visible to the naked eye.

XII. This writer ascribes the cause of the disease to the frost, and bad keeping in winter and spring before setting. They are liable to be damaged by frost after they are set, but this may be prevented by covering. If it be asked, why frost did not injure them formerly; he answers, it is only the new

kinds which are apt to curl, and less care is now taken of the seed

than formerly. Let them remain in the ground covered with haulm or litter till they are wanted for setting ; and, if no frost touches them after- wards, they will be free from the disease.

XIII. This writer says, the red potatoe was as generally planted as the winter white and the Lincolnshire kidney are now. The first, being a later potatoe, did not sprout so early as the others. The white sprout very early, and there- fore should first be moved out of the place where they have been preserved in winter. Instead of that, they often remain till their roots and sprouts are matted together. On separating them, the sprouts are generally rubbed off, and they are laid by till the ground is ready ; during which interval they sprout again ; but these second sprouts, being weak and languid, shrink, sicken, and die ; and the fruit at the roots will be small, hard, ill-shaped, and of a brown colour. Now, if pulling off the sprouts once or more, before the sets are put in the ground, be the cause (as he believes it is) of the curled disease, an easy remedy is at hand. When the potatoes intended for sets are dug up, lay them in a west aspect as dry as possible ; in such a situation they will not sprout so soon. The best time for removing most sorts is the first fine day after the 24th of February. Cut them into sets, and let them re- main covered with dry sand till the ground is prepared, which should be a winter fallow. Lay the sets in without breaking off any of the sprouts, for the second will not be so vigorous. This ac- counts for one sprout out of three from the same set being curled. The two stems not curled rose from two later eyes, and were first sprouts. The sprout curled was a second, the first having been nibbed off.

XIV. This writer says, that, last spring, one of his

neighbours cut and set, by drilling, some loads of the largest potatoes he could procure ; and more than half of them proved curled . Being a few sets short of the quantity wanted, he planted some very small potatoes which he had laid by for the pigs. These being fully ripe and solid, there was not a curled plant among them. He thinks the others being curled was owing to their not being folly ripe. A crop of potatoes, set in rows on ground that had borne a crop of them the preceding year, were mostly curled ; but many plants came up from seed left in the ground the former season, and there was not a curled one among them.

XV. Of late years, this writer says, great im- provements have been made in setting potatoes and cutting the sets. The ground is dressed cleaner and dunged stronger. Many people, in drilling, wrap up the sets entirely in the dung ; by which means, though their potatoes are larger, the disease seems to be increased. They also cut their sets out of the richest and largest pota- toes, which is perhaps another cause of this evil. In cold countries, where they set their own seed, which has grown on poor land, with less dung, they have no curled plants. On the contrary, when they bought rich and large potatoes for s:ed, they have been curled in great quantities. He believes the richness and largeness of the seed to be tb.e cause of the evil ; for he does not*

remember to have seen a curled stem which did not spring from a set of a large potatoe.

XVI. This writer apprehends the curled disease in potatoes to proceed from a defect in the planta seminalis, or seed-plant; and from comparing curled ones with others, there appeared to be a want of, or inability in the powers of expanding or unfolding the parts of the former ; which, from this defect, forms shrivelled, starved, curled stems. On examining some of the sets at the time of getting the crop, he found them hard and undecayed ; so hard, indeed, that some of them would not be soft with long boiling. Some have thought that the

fermentation is occasioned by too great quantities being heaped together; but this writer has seen an instance, wherein a single potatoe, preserved by itself, when set, pro- duced stems of the curled kind. He thinks the disease is occasioned by the potatoes being taken from the ground before the stamen, or miniature plant, is properly matured and ripened. For the potatoe, being a native of a warm climate, has there more sun, and a longer continuance in the ground, than in its exotic state ; consequently, it has not the same natural causes to mature the seed-plant as in its native state. We ought, therefore, to give all the opportunities our cli- mate will admit for nature to complete her work, and fit the stamen for the next state of vegetation, especially in those intended for seed. But if the potatoe be taken up before the seed plant be fully matured, or the air and sap vessels have acquired a proper degree of firmness or hardness, it must, when thus robbed of further nutrition, shrivel up ; and when the vessels, in this imma- ture state, come to act again in the second state of vegetation, they may produce plants which are curled. Before the present mode of setting them took place, people covered them, while in the ground, with straw, to protect them from frost. If it be asked, why one set produces both curled and smooth stems ? he answers, we suppose every eye to contain a planta seminalis ; that alt the embryos or seed plants, contained in one potatoe, are nourished by one root ; that, as in ears of corn, some of these seed plants may be nourished before others. One of his neighbours, last year, set two rows of potatoes, which proving all curled, he did not take them up ; and this year there is not a curled one among them. Such potatoes, therefore, as are designed for seed, should be preserved as long in the ground as possible.

XVII. This writer advises such sels to be planted as grow in moss land ; and, he says, there will not be a single curled one the first year. This is affirmed by the inhabitants of two townships, where they raise amazing quantities. A medical gentleman sowed the one year two bushels of sets from one of the

above places ; and had not one curled ; but on sowing them again the fol- lowing year he had a few.

65. Although there seems to be a diversity of opinions among the above writers, occasioned by the different appearances of their crops, and res- pecting the meajis proper to prevent or cure the disease, the following genemi propositions may be fairly drawn from the whole: 1. That some

kinds of potatoes are (caeteris paribus) more liable to be affected by the disease than the rest; and that the old red, the golden dun, and the long dun, are the most free from it. 2. That the disease is occasioned by one or more of the fol- lowing causes, either singly or combined : First, by frost, either before or after the sets are planted : Second, From planting sets out of large unripe potatoes : Third, From planting too near the surface, and in old worn-out ground: Fourth, From the first shoots of the sets being broken off before planting ; whence there is an incapacity in the planta seminalis to send forth others sufficiently vigorous to expand so fully as they ought. 3. That the most successful methods of preventing the disease are, cutting the sets from smooth middle-sized potatoes, that were fully ripe, and had been kept dry after they were taken out of the ground ; and, without rubbing off their first shoots, planting them pretty deep in fresh earth, with a mixture of quicklime, or ►►n lime-stone land.

66. A correspondent of the Bath Society is convinced, that, whatever may be its cause, the fault itself is inherent in the seed ; and has com- municated the following method of avoiding it : 'I made a hot bed in the following manner, which method I have used ever since: I laid horse dung, &c. as in making hot beds, about eighteen inches thick; over which I spread a layer of fine rich mould about four or five inches thick ; upon the top of this I laid,

in different divisions, a certain number of potatoes of various sorts, some of my own growth, and others brought from different parts, and covered these lightly over with more mould ; they soon came up. I then observed which was freest from the blight or curl ; for if there were not more than one defective in forty or fifty, I con- cluded I might set of that sort with safety. This method I have now practised near twelve years,

67. The principles of agriculture may be re- duced to a very small compass, viz. imitatino- the native habitations and propagating the species of the several plants. To improve their qual- ities, as also to increase their number, the chief thing requisite is, to facilitate their mode of nu- trition, by removing all obstacles, by drainin^ and numerous other operations above and below

the soil; also by supplying food, as by manuring. &c. The manure best adapted is decayed plants of their own species ; some containing peculiar substances in their composition, as wheat for in- stance, which contains gluten and phosphate of lime. It is also important to ameliorate the cli- mate, by increasing or diminishing its tempera- ture, according to the nature of the plant ; to shelter and shade some species of vegetables by means of walls, hedges, banks, or sloping sur- faces, to receive more directly or indirectly the solar rays, with numerous other iota, which a slight practice of agriculture will suggest ; as thinning away the leaves immediately over- shadowing fruits and flowers, blanching, shading, cuttings, seeds, &c. ; imitating, by artificial ap- plications of water, the dews and showers of heaven ; cutting ridges for surface drainage, conduits, &c. To improve the quality, and in- crease the number of particular parts of veget- ables, it is needful frequently to amputate all other parts that are unnecessary, as in pruning the vine ; and to form new varieties, we must take advantage of their sexual difference, and imi- tate the example of animal nature in crossing the breed.

68. PRESERVATION OF FRUITS. ††† In the pre- servation of the fruits, when produced, consider- able judgment is necessary. The great object is to prevent, as long as possible, the process of chemical de-composition. The air around de- priving them of their carbon, the moisture within enfeebling the affinity of their component elements ; and together with heat tending greatly to promote their de-composition ; potatoes, turnips, &c. are best preserved by drying them in the sun, and burying them in a dry soil, a few degrees above the freezing point of temperature. By drying in the sun, and afterwards burying in dry cool pits, closed, so as to shut out the air, some may be effectually preserved for many years ; the internal air becoming carbonic acid gas, in which no animal can live, and in which, without oxygen, no seed will vegetate.

69. Drying in ovens answers the same pur- pose as drying in the sun, and is one of the most obvious modes of preserving vegetables for use: it destroys, however, in most cases, the principle of life in seeds, as also in the roots and sections of the shoots of ligneous plants, and thus prevents the possibility of future germina- tion. It is of capital importance in preservation, after the vegetables are thoroughly dried, so to bury them, as effectually to exclude the atmos- pheric air, by which means, not only decompo- sition is prevented, but the ravages of insects, vermin, and even vegetation. It was no proof of the skill of our ancestors, when they changed this practice of the ancients, for the less success- ful mode of enclosing in granaries and store- houses. The Remans preserved their coro in chambers hewn out of dry rock, a practice, the advantages of which, set forth by their moR valuable writers, are justified by modern ex. perience. The Moors, from time immemorial, have been accustomed to bury their corn in the sides of hills, by which famines have been frequently prevented, and supplies readily obtained after the

most deleterious seasons. The Chinese at the unless in crevices where they have been carried present time bury their store-grain in deep pits by the rains. in dry soil, a practice which has distinguished them from the earliest history. The origin of

71. SECT. II. ??? A GENERAL VIEW OF SOILS, AND THEIR CULTIVATION. Soils are divided into

these expedients, are all obvious imitations of two grand classes, primitive and secondary ; what commonly takes place in nature : they are applications of natural principles of which the whole circle of sciences, with all the numerous modifications and practises founded upon them, are but a varied development, and as such, may be satisfactorily explained by chemistry and physiology. The instinct of animals has guided

the former consisting chiefly of inorganic matter, the latter of both organic and inorganic in mix- tures. These two classes may be subdivided into orders depending on the presence or ab- sence of saline, metallic, and carbonic matter. These orders form certain genera, calculated from the prevailing metals, earths, salts, car- men of genius in many cases to the discovery of bon, &c. The species, the next inferior to the them ; as in the winter store of the hedge-hog, in the repository of the ant, whilst the success- ful preservation of vegetable substances on this

inferior scale, has demonstrated their practical importance more effectually than a thousand arguments.

70. MINERALOGY. ??? Our next object in the

genera, is founded on their various mixtures. Varieties dependent upon colour or texture form component divisions of the species and sub- varieties of the varieties, according to the re-

lative dryness, richness, brightness, moisture, &c. To determine the genera of soil, the first thing is to ascertain the prevailing earth or

present article, will be to exhibit the science of earths, as clay, sand, lime, &c. or the particular

agriculture in its immediate connexion with the mineral kingdom, including all the primary ele- ments concerned in vegetation. Earths are the production of rocks, exposed on the earth's sur- face; and soils are earths mixed with certain proportions of the de-composed matter, arising from the bodies of dead plants and animals. With respect to its geological structure, the under surface of the earth presents four distinct species of rocky substances. The first, consisting chiefly of granite and marble, are called primitive ; and

rocks from which the soil has been produced, as basalt, granite, &c. The earths that prevail supply the generic name of the soil, as the cal- careous soil, clayey soil, &c., but when two prevail equally, the names of both must be con- joined, basalt and sand, clay and sand, &c. Precision in the application of the terms greatly facilitates a knowledge of the subject. No soil should be called sandy that does not contaiu seven-eighths of sand, and if effervesing with acids should be called calcareous sandy soil, in oppo-

are supposed to be co-eval with the formation of sition to that which is siliceous. Clayey soil

the world. The second series, sometimes called transition rocks, appear to be of more recent formation ; and are probably the result of some great catastrophe. Of these, clay-slate is the most remarkable, to which may be added, trap or whinstone, sandstone, &c. Secondary rocks,

should denominate land containing not less than one- sixth of impalpable earthy matter, freely effervescing with acids. Peaty soil should con- tain one-half or more of vegetable matter. Whea the soil

is composed of the decomposed matter from one particular rock, the name of that

as sandstones, limestones, conglomerations of rock may be applied. On this principle fine fragments of other rocks, &c. form a third series, red earth, found above decomposing basalt, They probably owe their formation to local re- volutions, and are indicated by their soft fragile

texture, superincumbent situation, and horizontal

may be called basaltic soil ; that in which quartz, and mica are abundant, 'may be denominated granitic soil, &c. Alluvial soil, or those formed

position. The fourth and last series consists of by the depositions of rivers, are commonly the irregular strata, of alluvial or earthy depositions most difficult to define, but may be for the

from water assuming the modification of immense beds of clays, sands, or marls. Earths are variously composed according to the rocks or strata from which their elementary particles have been derived. Those formed from slate-rocks commonly assume the modification of blue clays ; Those from sandstones are called siliceous Jhroughout their several varieties. The additions made by the decay of animal and vegetable sub-

most part designated by the terms siliceous, calcareous, argillaceous, &c., in some cases saline. The species of soil is determined by the mixture of matters rather than by the colour or texture, the latter being the characteristic distinctions of varieties. A clayey soil, with sand, is denominated a sandy, clayey species ; if yellow, it might be called a yellow sandy clay, which would express the genus, species,

stances, have given rise to the appellation of and variety. A soil containing equal parts of

soils, which differ from earths inasmuch as they clay, lime, and sand, would be called clay,

contain a greater or less portion of animal or lime, and sand entire; or to express at the

icgetable matter. They are also distinguished same time its varieties, it might be called a

By their friable texture, dark colour, and by the brown, stiff, free, fine, or coarse entire clay,

presence of some vegetable fibre or carbonaceous lime, and sand. The common genera, species,

matter. The depth of soil upon cultivated and varieties of soils, are enumerated in the fol-

grounds is only a few inches below the surface, lowing table.

Clots. Order

Earths.

Genut.

Clay. .

Species.

r

\ Lime (Sand

Entire

rClay. .

Earths and I salts, or / Lime . metals.]

I Sand .

Earths with

organic re- (

mains.

(–Clay . .

I Lime . Sand .

*–**

Basalt .

Clay. .

Coal. .

Granite

Lime .

Earths with organic re– mains, me– tals, salts, x and rocks.

Limestone

Sand

Sandstone

Schist .

Entire

Entire

f Cupreous

< Ferruginous . . ××× ×××

I Saline

C Cupreous and ferruginous

$ Saline

f Cupreous

< Ferruginous . ××× ×××

C Saline

f Limy .....

1 Loamy . . . ••• . 1 Mouldy .....

- *Peaty and sandy . . C Clayey*

< Loamy and mouldy

•• Peaty and sandy . . C Clayey and limy . .

< Loamy ..... f Mouldy and peaty . . C Columnar ....

< Ferruginous .... f Whinstone ....

'Cinerous, loamy, &c. . Cupreous, loamy, &c. . Ferruginous, limy, &c. Ferruginous, loamy, &c. Ferruginous, mouldy, &c. Ferruginous, peaty, &c. Ferruginous, sandy, &c. Saline, loamy, &c. .

r Pyritic, &c

) Slaty, &c

•• Stony, -woody, &c, . f Ferruginous, &c. . . •• Quartzose, &c. . . . Cinerous, limy, &c. Cinerous, loamy, &c. Cupreous, loamy, &c. . Cupreous, sandy, &c. . Ferruginous, loamy, &c. Ferruginous, sandy, &c. Saline, loamy, &c. . . -Saline, sandy, &c. . .

(-Chalky, &c

Cupreous, &c. . . . Argillaceous, &c. . . Ferruginous, &c. . . Magnesian, &c. . . .

Marble, &c

Shelly, &c

*Siliceous, &c. . . . "^Sulphuric, &c. 'Cinerous, limy, &c. Cinerous, loamy, &c. Cupreous, limy, &c. Cupreous, loamy, &c. Ferruginous, limy, &c. . Ferruginous, loamy, &c. Saline, limy, &c. Saline, loamy, &c. . . f Argillaceous, &c. . . 1 Calcareous, &c. . . 1 Cupreous, &c. V Ferruginous, &c. . C Chlorite, &c. . . . •• < Ferruginous, &c. * Micaceous, &c. . .*

Variety.

Black I

Red and yellow . . . Coarse and fine .... Black, red, yellow, fine, &c. Black, red, yellow, fine, &c.

Black, red, &c

Black, red, yellow, fine, &c. Black, red, &c. . , .

Black, red

Black, red, yellow, fine, &c.

Black

Black, red, yellow, fine, &c.

Black

Black

Black, red, yellow, &c. Black, red, yellow, &c.

Black

Black, red, yellow, &c.

Black

Black .....

Black

Black

Black

Black

Black, red, yellow, &c.

Black

Black

Black

Black

Black

Black

Black .

Black

Black

Black

Black, red, yellow, &c.

Black

Black, red, yellow, &c.

Black

Black .

Black .

Black . . .

Black . . .

Black . . .

Black . . .

Black . . .

Black . . .

Black, red, &c.

Black . . .

Black . . . Black .

Black Black Black

Black

Black

Black

Black

Black

Black

Black

Black

Black

Black

Black

Black

Black

Black, &c

Black

Black, red, yellow, &c. Black .

Sub-variety. Wet ††† dry ††† rich ††† poor ††† sterile. Wet, dry, &c. Wet, dry, &c. Wet, dry, rich, &c. Wet, dry, &c. Wet, dry, &c. Wet, dry, &c. Wet, dry, &c. Wet, dry, &c. Wet, dry, rich, &c. Wet.

Wet, dry, rich, &c. Wet, dry, &c. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet.

Wet, dry, &c. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet.

Wet, dry, rich, %r, Wet.

Wet, dry, &c. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet.

Wet, dry, &c. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet. Wet.

Wet.

Wet.

Wet,

Wet.

Wet, &c.

Wet.

Wet, &C.

Wet.

73. DISCOVERING QUALITIES OF SOILS. ??? The different qualities of soils and the conse- quent value to the cultivator, are discovered botanically by the natural plants produced upon them ; chemically by analysis ; and mechanically by handling them.

74. The plants that grow upon the soil decide, in the opinion of the farmer, its agricultural value with more popular certainty than even chemical analysis. The most valuable soils for the farmer distinguished by their several plants are the fol- lowing : Argillaceous, distinguished by thalic- trum flavum, carex, many species; juncus, various species; tussilago farfara, potentilla anserina, argentea, reptans, and others. The tussilago farfara is an universal symptom of an argillaceous soil. Calcareous soil produces gal- lium pusillum, veronica spicata, lithospermum officinale, purpuro- cseruleum, campanula glome- rata, and hybrida, cistus helianthemum, clematis vita alba, &c. Silicious soil bears the veronica tiriphyllus, and verna, arenaria rubra, &c. silena anglica, and other species. Ferruginous soil produces the rumex acetosa, and acetosella. Peaty soil bears vaccinium myrtillus, uligino- sum and oxycoccus : erica four

species, tormen- tilla officinalis. Saline soil produces the zostera marina, pulmonaria maritima, convolvulus sol- danella, arenaria maritima, &c. Aquatic soil bears caltha palustris, hippuris vulgaris, lythrum salicaria, samolus valerandi, &c. Dry soils are distinguished by the rumex aretosella, trifo- lium arvense, acinos vulgaris, thymus serpyllum, arenaria rubra, &c. Some of these plants afford, it is to be confessed, an evidence not always to be depended upon ; but the saintfoin is an evi- dence of a calcareous soil ; coltsfoot (Tussilago farfara) of blue clay ; arenaria rubra of poor sand; the small wood-sorrell of the presence of iron and peat ; arundo phragmites^Ae common reed grass), polygonum amphibium (the common pond weed), grow in good alluvial soil ; whilst the equisetum arvense (field horse tail), indicates a cold retentive subsoil. Anagallis arvensis, she- rardia arvensis, lithospemium arvense, and fedia olitoria, i. e. field pimpernell, field madder, corn gromwell, and lambs lettuce, grow in culti- vated black loamy soil, on a dry bottom. Soil of this description, when wet, produces the stachys palustris, or (clown's all heal). The presence of the red dead nettle (lamium purpu- reum) evinces a light sandy soil, as also the shepherd's pn

75. QUALITY OF SOIL EVINCED BY CUEMI- CAL ANALYSIS. ••• The discovery of the qualities of soils by chemical analysis is extremely diffi- cult, and is seldom performed successfully by the cultivator. In selecting specimens, care should be taken to procure them from different situations. When the field is in one part calca- reous, and in another silicious, the portion should be separately submitted to experiment. From two to four hundred grains is the proper quantity for a perfect analysis, which should be taken in fair weather, and when perfectly dry, preserved in phials, closed with ground glass stoppers, till the period of examination. The soil best for culture according to the analysis of Bergman, contains four parts of clay, three of sand, two of calcareous earth, and one of mag- nesia. Kirwan observes, that the fertility of the soil

depends much upon its capacity for retain- ing water. The ingredients of the soil, however, do not always correspond to the nature of the climate ; the quantity of rain that fertilizes a wet soil, cannot be equally suited to a dry one. Si- lica in the soil exists under the modification of sand, alumina under that of clay. Soils in which the sand preponderates, are called dry, retaining the least moisture : those in which clay preponderates, retaining the greatest portion, are called wet. Before either of them are capable of culture, the excess must be retrenched, or the defect supplied. Besides the above, the pro- perties of soil may be ascertained mechani- cally. Its specific gravity may be ascertained by introducing into a phial known to con- tain a certain weight of water, equal volumes of .water, and of soil ; to do which, it is neces- sary to pour in the water first, till the vessel is half full, and then put in earth till it reaches the brim. The difference between the weight of the soil and water will be the result. Thus, if a bottle which holds 400 grains of water, gains 200 grains when half filled with water, and half with soil ; the specific gravity of the soil is 2 ; that is, it will be twice as heavy as water. Clay in any soil may be known by its tenacity ; sand by its roughness. Calcareous matter in soil is known by its effervescing freely upon meeting with an acid. The presence of organized matter in soil, may be ascertained by weighing it when it is perfectly dry ; and after having subjected it to a red heat, weighing it again, which will give the proportion of organic matter. Metallic oxydes in soil may in general be known by their colour. Ferruginous soils are red and yellow ; cupreous soils are interspersed with greenish streaks ; salt, coals, sulphur, &c. may be known by the appearance of the water in such soils, and also by the peculiarity of vegetation.

76. USES OF SOIL. ??? Earths are of no further service to plants than providing them with a me- dium by which they fix themselves to the globe ; and even the portions of earth taken up into them by vegetation, are not convertible to any other

substance ; and are supposed to afford the plant nothing but firmness of organization, as wheat, oats, and many hollow stalked grasses, have an epidermis of earth to defend them from the attacks of insects and parasitical plants. Plants are nourished exclusively by means of water and

decomposing organic matter. Earths, neverthe- less, retain the water, and supply it to the roots ; they also afford the means of distributing the proper nutrimer ; supply, as they are wanted, those parts which are soluble, and prevent the too hasty decomposition. Notwithstanding soils are the genial aliment and support of plants, yet, from their numerous variety of roots, they require a corresponding variety of soil. Roots that are bulbous require a loose soil ; such as are fibrous, one more solid, and those possessing short fibrous radicles, a soil considerably more compact and firm than those that have extensive lateral roots. Finely divided matters not only give tenacity and coherence to the soil, but greatly promote vegetation, a small quantity be- ing sufficient to fit the soil for the production of barley or turnips. The latter have been produced upon a soil, eleven parts out of twelve of which, have been sand, and the remainder of vegetable or animal matters. Impalpable matters, however, must not be in too great a proportion. In order to promote the growth of vegetables friability and a looseness of texture are requisite in the soil ; so that the water, not lying in the soil in a state of aggregation, but being suspended in it, as water in a sponge, may have free access to the fibres of the root, communicated by capillary attraction. And since alumina possesses the properties of adhesiveness, and silex those of friability, in an eminent degree, it is evident that a due mixture of both is requisite to adapt the soil to the common purposes of cultivation. The absorbent power of soil by cohesive attraction, depends in some degree upon the division of its parts, and is*

highly necessary to fertility, because moisture absorbed from the atmosphere, counter- acts the effect of daily evaporation, and supplies the plant with moisture in the dryest seasons. ••• Stiff clays, which, like pipe-clays, take up the greatest quantity of water when poured upon them in a fluid form, are not the soils that in dry weather absorb the most from the atmosphere, because they cake, and present only a surface containing the absorbent power. To answer this purpose, a due mixture of sand, clay, carbo- nate of lime, and organized matter, are necessary to give that looseness and lightness that shall render it permeable to the atmospheric air. Re- gard is, however, to be had to the site and cli- mate in which the soil is situate ; the nature and contiguity of the inferior strata, declivity of po- sition, frequency of showers, moisture of cli- mates, &c. exerting considerable influence.

77. The division of soils into cold and hot is extremely natural : some are more heated by the sun than others; and others, though equally heated, cool in different times. Clayey soils, being clammy and moist, are heated with diffi- culty, and some cool chalks are difficultly heated but retain it longer. The soils most heated by exterior causes, are perhaps olack containing much soft organized matter ; coloured soils, un- der the same circumstances, absorb a greater degree of caloric than those of a pale complexion especially those possessing a considerable propor- tion of carbonaceous or ferruginous matter In dry soils, those that are heated with the greatest lacihty, cool the most rapidly; but the eldest

coloured dry soil, containing a considerable mixture of decomposed matter, cools much more slowly than a clammy, pale, earthy soil Besides, the above soils are often characterized from the relative proportion of chemical agency which they contain, earths and earthy carbonates having a degree of attraction for many of the principles of vegetable and animal substances. If an acid solution of alumina be mixed with a solution of soap, the oily matter and alumina

will unite, and forming a white powder, will sink to the bottom of the fluid. On the same principle, the extract from decomposing vegetable matter, boiled with pipe-clay or chalk, forms a combination by which vegetable matter is rendered more difficult of de- composition. Soils which contain considerable alumina and carbonate of lime, have considera- ble action of this kind, and from this chemical energy in the preservation of manures and other vegetable nourishment, are denominated rich soils. With siliceous sands, it is quite the re- verse. The vegetable and animal matters they contain, not subject to attraction as above, are more liable to decompositive evaporation. In the case of black and brown moulds, the earth is combined with an extractive matter, which, derived from the decomposition of vegetables, is of primary importance in vegetation.

78. The quality of the subsoil is often of as much importance as that of the soil itself: it may be classed under two heads; first, when it is of the same description as the upper soil, but differing from it only in not having been loosened by ploughing, &c. and enriched by manure; secondly, where it differs in its na- ture from the upper soil : in this case, it is almost always of inferior quality. The much- agitated question ††† whether deep ploughing, or ploughing beyond the usual depth, is beneficial or not, must depend for its solution on the nature of the subsoil, and of the climate. The imme- diate effect of deep ploughing in all cases, must be injurious ; but the injury will soon pass away, where the subsoil is of the same nature as the upper soil ; whereas, if the subsoil differs mate- rially in quality from the upper soil, especially where, as is generally the case, when it does differ, it is impregnated with the oxyde of iron ; there is great hazard in deep ploughing ; and the mischief can be eradicated only by much labour and expence, by frequent exposure to the air, the application of lime, &c. and by draining.

79. SOILS, IMPROVEMENT OF. ††† For the im- provement of soils numerous methods have been

devised. 1. Pulverization; this is needful in the best of soils, to facilitate the admission of air, rain, and the warmth of the atmosphere, &c. The first object of this is to give scope to the roots of vegetables, on the numerous fibres of which '.he prosperity of every plant in a great measure depends ; and also to increase the capillary at- traction of the soil by which its moisture is more uniformly applied. Water being essential to the growth of plants, not only by its immediate application as a fluid, but by that operation by which it facilitates the extraction of vegetable matters, the soil, if not naturally so, should be so constituted artificially, as to retain a re- quisite portion ; for the want of water will impede

the germinating principle, and render eren ma- nure an ineffective auxiliary. The different species of earths being among the worst con- ductors of heat, it is necessary to lay the land open, and by the free ingress of the warm air, and tepid rains of spring, artificially increase its temperature. Pulverization also contributes to the increase of vegetable food, conveys water, and with it carbonic acid gas, to the roots of vegetables ; accelerates the putrefaction of vege- table and animal substances by the combined action of heat, light air, and moisture ; buries a portion of the atmospheric air in the soil : in short, so numerous are its advantages, that Tull and others conceived no other assistance to be necessary. No principles, however, admit of in- discriminate application ; for while the pulveriza- tion of some lands contributes to their improve- ment, there are others that require consolidation.

80. The practice of fallowing is attended with numerous advantages to soils ; the weather has free admission to their interior parts ; the soil is thus heated to a degree which would be impos- sible, while covered with foliage : weeds are in a great

measure eradicated, and the top, bottom, and middle of the soil more effectually blended. Where fallows are judiciously applied, and the land, by frequent ploughing and narrowing, left for twelve months in a state of constant tillage and movement, the profits will amply repay both the trouble and expence. Soils are to be al- tered by the addition of those ingredients in which they are deficient ; and the subtraction of those in which they abound. Thus, a soil strongly impregnated with sulphate of iron, will be sterile ; but it is to be improved by the application of quick lime : also a soil containing too great a propor- tion of peat, drifted sand, gravel, &c. is to be improved by taking them away, as the most simple and effectual mode.

81. The soils improved by the burning process, are those which contain too much dead vegetable fibre; and which, in consequence, lose from one third to one half their weight by torrefaction ; and those which contain a super-abundance of stiff clays and marls ; but poor sandy soils are injured by this process. The common advan- tages of incineration are, that it renders the soil not only less compact, but less tenacious, and retentive of moisture ; affording considerable im- provement to such as are cold and damp. It di- minishes the coherence, and tenacity of clays, and destroys useless vegetable matter, converting it to manure. The water of the soil should be withdrawn when abundant, and when deficient should be supplied. Stagnant water is exceedingly pernicious to all classes of useful plants. Springs are more injurious than surface water, as being colder and generally permanent. Hence the pro- priety of under-draining, &c. as well as removing every obstacle that would prevent the percolation of water to the strata below. See HYDRAULICS.

82. The great art of irrigation is to imitate nature in all her various modes of communicat- ing moisture ; observing especially, to apply water in the morning and evening, at moderate intervals, and under a clouded sky. It may be applied by surface or subterraneous irrigation. Employed too often, it

would have the same

effects as attend stagnant water, land springs, or aquatic soils, and administered after hot sun- shine, or after violent heats, would check eva- poration, and destroy life. That water which breeds the best fish, is in general the best for watering meadows; and often the imitation of the overflowing of alluvial lands, may be in many cases successfully employed to manure and en- rich the soil. Shading, sheltering, &c. whether by walls, hedges, or plantations ; changing the condition of lands, with respect to solar influence, by erecting mounds, forming slopes, so that the surface may be more or less at right angles with the plane of the sun's rays, hare frequently a very beneficial influence upon the quality of the soil.

83. PRINCIPLES OF ROTATION. Growing dif- ferent crops in succession approves itself to the practical cultivator, however much its pro- priety may be questioned by the pertinacity of chemical refinement. The principles of this rotation, as laid down by the most eminent agriculturists, are : First. That every plant ex- hausts the soil. Second. That all plants do not ex- haust the soil equally. Third. Plants of different kinds do not exhaust the soil in the same manner. Fourth. All plants do not restore to the soil the same quality or quantity of manure. From these principles the following inferences have been drawn. 1 . That no soil, however well it may be prepared, can long nourish crops of the same kind in succession. 2. Every crop exhausts the soil more or less, as more or less is restored by the plant cultivated. 3. Such plants as root perpendicularly, and such as root horizontally ought to succeed each other. 4. Those plants favourable to the growth of weeds, ought not to succeed each other ; nor should plants of the same kind return too speedily in rotation. 5. Plants remarkable for exhausting the soil, as the grains and oil- plants, should be sown only when the land is in a proper state. 6. In proportion as a soil exhausts itself by successive crops, it should be sown with such plants as exhaust but little. The

application of these principles to practical farming will be given under the arti- cle Husbandry. A few general observations, however, on the two grand divisions of crops cultivated by the farmer may be added, as the due alternation of these, forms the most simple and fundamental principles on which every ro- tation ought to proceed. The crops raised by the farmer are of two kinds, culmiferous and leguminous, differing widely from each other Wheat, rye, barley, oats, rye-grass, are of the first kind ; of the other kind are, peas, beans, clover, cabbage, and many others.

84. Culmiferous plants, says Bonnet, have three sets of roots. The first issue from the seed, and push to the surface an upright stem ; the second set issue from a knot in that stem ; and a third from another knot, nearer the surface. Hence the advantage of laying seed so deep in the ground as to afford space for all the sets. Leguminous plants form their roots dif- ferently. Peas, beans, and cabbage, have a store of small roots, all lifting from the seed, like the outermost sets of culmiferous roots; and they have no other roots. A potatoe and a turnip

have bulbous roots. Red clover has a strong tap root. Some plants rob the soil, others are penial to it. Culmiferous plants, having small leaves and few in number, depend mostly on the soil for nourishment, and little on the air. During the ripening of the seed they draw their nourishment from the soil, as the leaves, by this time being dry and withered, must have lost their power of drawing nourishment from the air. Culmiferous plants are chiefly cultivated for their seed, and are not cut down till the seed be fully ripe. But such plants, while young, are all leaves ; and in that state draw most of their nourishment from the air. And the foggage, excluding the frost by cover- ing the ground, keeps the roots warm. A legu- minous plant, by its broad leaves, draws much of its nourishment

from the air. A cabbage, which has very broad leaves, and a multitude of them, owes its growth more to the air than to the soil. A cabbage cut and hung up in a damp place, preserves its verdure longer than other plants. A seed is that part of a plant which requires the most nourishment ; and for that nourishment a Culmiferous plant must be indebted entirely to the soil. A legu- minous crop, on the contrary, when cut green for food, must be very gentle to the ground. Peas and beans are leguminoiis plants ; but being cultivated for seed, they seem to occupy a middle station ; their seed makes them more severe than other leguminous crops cut green ; their leaves, which grow till reaping, make them less severe than a Culmiferous plant left to ripen. 85. These plants are distinguished no less re- markably by the following circumstance : All the seeds of a Culmiferous plant ripen at the same time. When they begin to form, the plant be- comes stationary, the leaves wither, the roots cease to push, and the plant when cut down is blanched and sapless. The seeds of a legumi- nous plant are formed successively ; flowers and fruit appear at the same time in different parts of the plant. This plant accordingly is con- tinually growing, and pushing its roots. Henc<5 the value of bean or peas straw above that of wheat or oats; the latter is withered and dry when the crop is cut ; the former green and suc- culent. The difference therefore, with respect to the soil, between a Culmiferous and leguminous crop, is great. The latter, growing till cut down, keeps the ground in constant motion, and leaves it to the plough loose and mellow. The former gives over growing long before reaping ; and the ground by want of motion, turns compact and hard. Nor is this all. Dew falling on a culmife- rous crop after the ground begins to harden, rests on the surface, and is sucked up by the next sun. Dew that falls on a leguminous crop, is shaded from the sun by the broad leaves, and sinks at leisure into the ground. The ground accord- ingly, after a Culmiferous crop, is not only hard, but dry ; after a leguminous crop, it is not only loose, but soft and unctuous.

86. Of all Culmiferous plants, wheat is the most severe, by the long time it occupies the ground without admitting a plough. And as the grain is heavier than that of barley or oats, it probably requires more nourishment. Culmiferous crops

are not robbers when cut green; the soil, far I from hardening, is kept in constant motion by j the pushing of the roots, and is left more tender 4 than if it had been left at rest without any bear- 1 ing crop. Bulbous-rooted plants are peculiarly useful in dividing and pulverizing the soil. I Potatoe roots grow six. eight, or ten inches under I the surface ; and by the size and number, they I divide and pulverize the soil better than the I plough ; consequently, whatever be the natural colour of the soil, it is black when a potatoe crop is taken up. The potatoe, however, with respect to its quality of dividing the soil, must ! yield to a carrot or parsnip ; which are large i roots, and pierce often to the depth of eighteen \ inches. The turnip, by its tap-root, divides the soil more than can be done by a fibrous-rooted plant ; but as its bulbous root grows mostly above ground, it divides the soil less than the potatoe, the carrot, or the parsnip. Red clover, in that respect, may be put in the same class with turnips.

87. Whether potatoes or turnips be the more gentle crop, is a puzzling question. The former bears seeds, and probably draws more nourish- ment from the soil ; potatoes divide the soil more than turnips, and leave it more loose and friable. It appears no less puzzling, to determine between cabbage and turnip ; the former draws more of its nourishment from the air, the latter leaves the soil more free and open. The result of the whole is that culmiferous plants are robbers ; some more, some less; they at the same time bind the soil ; some more, some less. Legumi- nous plants in both respects are opposite; if any of them rob the soil, it is in a very slight degree ; and all of them without exception loosen the soil. A culmiferous crop, however, is generally the more profitable ; but few soils can long bear the burden of such

crops, unless relieved by inter- jected leguminous crops. These, on the other hand, without a mixture of culmiferous crops, would soon render the soil too loose.

88. These preliminaries will carry the farmer some length in directing a proper rotation of crops. Where dung, lime, or other manure can be procured in plenty to recruit after severe cropping, no rotation is more proper or profit- able in a strong soil than wheat, peas or beans, barley, oats, fallow. The whole farm may be brought under this rotation, except so far as hay is wanted. But as such command of manure is rare, it is of more importance to determine what should be the rotation when no manure can be procured but the dung collected in the farm. Considering that culmiferous crops are the more profitable in rich land, it would be proper to make them more frequent than the other kind ; but as there are few soils in Scotland that will admit such frequent culmiferous crops without suffering, it may be laid down as a general rule, that alter- nate crops, culmiferous and leguminous, ought to form the rotation. Nor are there many soils that will stand good, even with this favourable rotation, unless relieved from time to tim►► by pasturing a few years. If such extended rotation be artfully carried on, crops without end may be obtained in a tolerably good soil, without any manure but what is produced in the farm. Clay answers best

for wheat, moist clay for beans, loam for barley and peas, light soil for turnip, sandy soil for rye and buck-wheat ; and oats thrive better in toarse soil than an) other grain. Now, in di- ecting a rotation it is not sufficient that a eul- miferous crop be always succeeded by a legumin- ous: attention must always be given that no crop be introduced that is unfit for the soil. Wheat, being a great binder, requires, more than any other crop, a leguminous crop to fol- low. But every such crop is not proper

; po- tatoes are the greatest openers of soil ; but they are improper in a wheat soil,neither will turnips answer, because they require a light soil. A very loose soil, after a crop of rye, requires rye grass to bind it, or the treading of cattle in pasturing ; but to bind the soil, wheat must not be ventured; for it succeeds ill in loose soil.

89. Another consideration of moment in di- recting the rotation, is to avoid crops that en- courage weeds. Peas are the fittest of all crops for succeeding to wheat, because it renders the ground loose and mellow, and the same soil agrees with both. But peas are improper, unless the soil be left by the wheat perfectly free from weeds ; because peas, if not an extraordinary crop, foster weeds. Barley may be ventured after wheat, if the farmer be unwilling to lose a crop. It is indeed a robber; better, however, any crop, than run hazard of poisoning the soil with weeds. But to prevent the necessity of barley ^fter wheatj the land ought to be fallowed before the wheat ; it cleans the ground thoroughly, and makes peas a secure crop after wheat. And after a good crop of peas, barley never fails. A horse-hoed crop of turnips is equal to fallow for rooting out weeds ; but turnips do not suit land that is proper for wheat, Cabbage does well in wheat soil ; and a horse-hoed crop of cabbage which eradicates weeds, is a good pre- paration for wheat to be succeeded by peas; and a crop of beans, diligently hand-hoed, is in that view little inferior. As red clover requires the ground to be perfectly clean, a good crop of it ensures wheat and next peas. In loam, a drilled crop of turnips or potatoes prepares the ground, equal to a fallow, for the same succession.

90. Another rule is, to avoid a frequent repe- tition of the same species; for to produce good crops, change of species is no less necessary than change of seed. The same species return- ing every second or third year, will infallibly degenerate, and be a scanty crop. This is re- markably the case with red clover. Nor will our fields bear pleasantly perpetual crops of wheat after fallow, which is the

practice of some English farmers. Hitherto we have treated of rotation in the same field ; which is, to avoid crowding crops one after another in point of time ; but to choose such as admit intervals sufficient for leisure dressing, which gives opportunity to manage all with the same hands, and with the same cattle ; e. g. beans in January or February, peas and oats in March, barley and potatoes in April, turnips in June or July, wheat and rye in October.

91 . It is of capital importance to have the whole of the manure employed, so that those parts which are not fitted for one crop may remain

as nourishment for another. If tuniip is in- troduced upon a soil, this crop, recently ma- nured, finds the soil kindly disposed towards germination. If barley, with grass seeds, be the next in succession, the land having been little exhausted by the turnips, finds sufficient nourishment for the grain, while the grasses or clover, requiring little aliment, probably de- rive the gypsum which would be useless to other crops. The roots and leaves of those plants ploughed in at the end of two years, afford manure for the wheat crop ; and as soon as the most exhausting crop is taken, recent manure is applied. Peas and beans always seem adapted to prepare the ground for wheat ; and in rich lands are sometimes raised in alternate crops for years together. On the whole, nothing can be more evident than that, though the general composition of plants is analogous, their specific difference in their pro- ducts, must be derived from different materials in the soil. Hence lands in a course of years cease to give good grasses; and strawberries^ and potatoes, although they flourish ex- ceedingly in virgin mould, degenerate in a few years and require fresh mould. The influ- ence of rotation of crops in destroying insects, is too important to be passed over in silence. The myriads of these creatures that live upon the collar or crown of the cereal grasses, are chiefly tipulre, and muses, which, when the soil pre- sents the same crop for several years in suc- cession, multiply themselves without end ; but when

a crop intervenes in which these insects cannot live, the whole race perish from the field. 92. MANURES. Our consideration will now be directed to the subject and proper use of manure, including every species of matter capa- ble of promoting the growth of vegetables. Since vegetables are composed of oxygen, hy- drogen, nitrogen, or azote, and carbon, with a portion of saline bodies, vegetable aliment re- quires to be composed of the same elements. Hence decaying animal and vegetable sub- stances form the most important class of ma- nures ; and when deposited in the soil are con- sumed during the process of vegetation. The great object in the application of manure is to make it afford as much soluble matter as possible to the roots of the plant, in a manner so slow and gradual that it may be entirely con- sumed in forming its sap and organization. Whenever manures consist principally of matter, soluble in water, as is the case with organic manures generally, their fermentation or putre- faction should be prevented as much as pos- sible, by preserving them dry, defending them from the contact of air, and keeping them as cool as possible. The different species of manures are extremely various ; containing dif- ferent proportions of the requisite elements of vegetation, and requiring a different treatment in their practical application. Plants which are green and succulent contain saccharine or mucilaginous matter ; and like sea-weed, when intended for manure, should be used as fresh as possible. Rape-cake, malt-dust, and lin- seed-cake make excellent manure when judi- ciously applied. Dry straw of wheat, barley,

oats, beans, peas, &c. are used with advan- tage, although, perhaps, too indiscriminately, they' are made to ferment before they are em- ployed. It may be doubted whether any vege-

nesia aro the only ones that have been employed in

their proper state. The most common form in which lime is found on the territorial surface, is in a state of combination with fixed air or

table substance except woody fibres and inert carbonic acid ; and if thrown into a fluid acid, peaty matter, which is of much the same na- ture," requires this process. In general vegeta-

will cause an effervescence by the emission of its carbonic acid gas. Quick lime, when first

ble manures ought, as much as possible, to be made, is caustic and burning to the tongue, is

applied to the nourishment of plants of their soluble in water, and renders vegetable blues

own species. Animal substances used as ma- green ; but when combined with carbonic acid

nure require no chemical preparation to fit them

for the soil ; and the only care requisite is, to

blend them with earthy constituents, and pre- same as chalk and lime-stone. Few limestones

gas, it loses these properties, regains its powers of effervescing, and becomes chemically the

vent their too rapid decomposition. Fish make excellent and powerful manure, though it can-

or chalks consist entirely of lime and carbonic acid ; but are mingled with alumine, or alumi-

*not be ploughed in too fresh. The effects of the nous earth, oxide of iron, magnesia, &c. But all refuse pilchards, thus employed in Cornwall, its different ingredients variously modify their ***were perceived for several years. Oily substances, properties, when limestone is used as manure.***

as blubber, have been applied with success. The

powerful effects of bones, when properly ground, are well known; and horn, as it contains a large quantity of decomposable acrid matter, is a still more powerful manure than even bone.

Quick-lime is injurious to plants, when adminis- tered in its pure state ; but in its state of com- bination with carbonic acid, becomes a useful ingredient in the soil ; and falling in contact with fibrous vegetable matter, forms a compost of

flair, woollen rags, feathers, the refuse of skins, which a part is soluble in water ; thus rendering

and leather chippings, putrid urine, and in short all the excrementitious animal substances, form excellent manures. Soot is also well fitted to be used in the dry state.

93. Organic manures, it is to be feared, are ge- nerally suffered to decompose too much before they are applied. An incipient fermentation is favourable; but rather than it should be carried too far, better if there were no fermen- tation at all. Manure to be preserved, should be kept under sheds, or at least be defended from the sun. This, though it would be an additional care and little more expence, would increase the harvest and enrich the farm. Animal

that matter nutritive which was before inert, Mild limes, marls, chalks, or powdered lime- stone, have no action of this kind. They have no tendency to form soluble matters ; but pre- vent the too rapid decomposition of substances already dissolved. Hence the operation of these differs from that of quick- lime, being useful only to improve the texture of soils in its power of absorption ; whereas the former converts hard vegetable matter into proper nutriment, by bring- ing it into a state of more rapid decomposition and solution. From these general principles, it follows that the propriety or impropriety of ap- plying quick-lime to a soil, depends upon the

substances decompose rapidly by being buried quantity of inert vegetable matter that it contains.

in the soil, and care should be taken in their proper application to the field. Organized forms are in the earth resolved into their chemical constituents ; and after having lived their day fall into dust, and become the food of others. From their fermentation and putrefaction forms of beauty and usefulness emerge; the fetid gas constitutes the aroma of the flower ; and what

The propriety of employing marl, mild lime, or powdered limestone, depends upon the quantity of calcareous matter already in the soil. One capital rule to be observed is, that all soils which do not effervesce with acids, and sands more than clays, are improved by the application of lime, and ultimately by quick-lime. Lime should ne.ver be applied with animal manures, except

might be poison, distilled over again, is formed they are too rich ; or for the purpose of prevent-

into nourishment. See CHEMISTRY.

94. MINERAL MANURES. ××× Mineral manures are of more recent invention and uncertain ap-

ing noxious effluvia. It possesses, however, two great advantages for vegetable nutrition. It forms certain insoluble bodies to soluble com-

plication than those of which we have already pounds, and also prolongs the nutritive action of

treated ; yet the propriety of their use depends substances beyond the term which they would not only upon laws of chemistry, but just induc- tions from facts. It seems a fair conclusion,

*bUUSld.Il CCS **××/pj.××i_cn,j,i_;ij, IAJ | ××i;ui;>. i uv; J_^ixetiu×× vjiic \JL n*t mwc*.*

id m the organs of plants, are supplied by fertile parts of Cornwall, has mild magnesian earth

s m which they grow. Thus compound forms mingled with the soil. Calcareous matter is

1 by the combination and chemistry also applied for agricultural purposes in other

imple air ; and the elements of the soil, the combinations, one of which is, gypsum or sul-

atmosnhere and the earth absorbed, and made to phate of lime. Plaster of Paris is of this nature.

.selves m different proportions, into the Gypsum was introduced into America with great

nostd.versmed and beautiful structures. Alkaline success by Dr. Franklin, on his return from Pa-

unmixed with the remains of any matter ris. The ashes of sainfoin, clover, and rye-grass

organ,zedbeings,aretheonlysubstanceS which afford considerable quantities of gypsum, which

rO y>K6 ed T ral manures; in all probability, forms a necessary part of their

*^J^1.^, ►►*k,the two wood/fibre. Gypsum is contained in stable*

U OCf510I}ally ln j0►►► of dung, and the dung .of all cattle fed on grass.

compounds; hme and mag- Hence, it is probable that gypsum might be sue-

retain them, independent of such combination. Magnesian limestone is used with good effect in application to peats. The Lizard, one of the most

ir

cessfully employed in the cultivation of these substances, and form an efficacious species of manure. Sulphate of iron or green vitriol, are

efficacious in calcareous soils ; otherwise all vi- triolic impregnations are injurious. Phosphate of lime, a combination of lime and phosphoric acid, is thought necessary to the cultivation of corn, and white crops in general. The saline com- pounds of magnesia and wood-ashes, are employ- ed in some cases by eminent agriculturists. Soda, or mineral alkali, is found in the ashes of sea- weed, and may be obtained from common salt; even salt itself being offensive to insects, and assisting the decomposition of animal or vegeta- ble matter, may be applied in small quantities in the form of manure. In Cornwall, a refuse salt, mingled with some of the oil and exuviae of fish, makes excellent manure. Sulphate of potassa, nitre, muriate, and carbonate of ammonia, are strongly recommended as manure. Soot owes a great measure of its efficacy to the ammoniacal salt it contains.

95. AEROLOGY. ††† The other agents in vegeta- tion are heat, light, electricity, water, &c. ; to †††which we may add the atmosphere, with its ele- ments and changes.

96. The heat radiated by the sun to the earth, would, if suffered to accumulate, speedily destroy its constitution; but its deleterious effects are pre- vented by the nocturnal radiation of heat to the heavens; when the surface of the terraqueous globe, having become colder than the contiguous fluid, condenses the watery vapour in the form of dews, falling where it is most wanted, on her- bage and low plants. Dense clouds, near the earth's surface, reflect back again the- heat they receive from it by radiation ; but if they lie at considerable elevation from the atmosphere, by radiating to it less heat than they receive from it, they admit of bodies on its surface becoming considerably colder than the contiguous air. Islands and continental regions, bordering im- mediately upon the ocean, subject as they are to a cloudy sky, will, from the reasons assigned, be less cold in winter than regions that are more re- mote. Fogs proceed upon the same principle as clouds, and serve to corroborate the general rule, that, whatever

impedes the passage of radiant heat, will tend to prevent bodies on the surface of the earth becoming colder than the contiguous atmosphere, the water deposited upon the earth during fogs at night, serving to bathe the vegetables, especially those that have the greatest attraction ; for humidity arises from two sources, viz. a precipitation of moisture from the atmosphere by means of its cold, and a real formation of dew arising from the ordinary principle of condensation. Heat and cold, then, by reason of their mechanical effects produced upon the atmosphere, exert a necessary and powerful influence upon the principles and pro- cess of vegetation.

97. The hurtful effects of cold occur chiefly in flollows ; and, in clear still nights, frosts are less severe upon the hills than in the plains. The tops of trees also are sometimes found dry when the grass upon the earth's surface is covered with dew, all which phenomena may be satisfactorily resolved into the philosophy of the before men-

tioned principles. Much cold is to be prevented by a slight covering, which Dr. Wells recom- mends to be placed at a little distance above tender plants and fruits which it is intended to shelter. He observed from experiments, that grass, slightly sheltered, was one night 8►►, and another night 11►►, warmer than grass fully ex- posed to the atmosphere, notwithstanding some disadvantages in the medium of experiment ; and that grass, sheltered by a cambric handkerchief, raised a few inches in the air, was 3►►, and on one occasion 4►►, warmer than grass covered with a similar handkerchief, but actually in contact. Walls, in addition to other purposes which they subserve mechanically, have the advantage that they prevent the loss of heat which the con- tiguous plants, were they perfectly exposed, would sustain by radiation. From the same principle arises the utility of snow as a covering for vegetables in the winter. The influence or the different solar rays on vegetation, though not made perhaps so much as it ought to be the sub- ject of study, is no doubt considerable. Plants kept in darkness, however

supplied with air, heat, moisture, and every requisite species of aliment, never obtain their natural colours ; nor acquire any other juices than such as are watery and saccharine.

98. Electricity has been thought to have a much greater influence on the germination of seeds than we are commonly aware ; although, in the opinion of Dr. Darwin, no profitable application of it to this purpose has ever yet been discovered. Compound bodies are capable of being decom- posed by it, and corn has been found to sprout much more rapidly in water negatively electrified, than when positively so. Experiments have already evinced that the clouds are usually nega- tive, the probable conclusion is that the earth is positive. This circumstance, with the electrical changes constantly taking place in the atmos- phere, and upon the terraqueous surface, de- mands a greater degree of attention than it has at present received.

99. The influence of the atmosphere is too well known to require any elaborate discussion. Composed of water, carbonic acid gas, azote, and oxygen, it forms a chemical compound which envelopes the earth, varies the weather, and is essential to the support and continuance of life. Its action on plants differs at different periods of their growth and development. In the exhausted receiver seeds moisten and swell, but shew no further signs of vegetation; and, if kept there, lose their living powers, and undergo putrefac- tion. The process is the same in pure azote, or carbonic acid. But if a healthy seed be moistened, and exposed to air of 45°° temperature, germina- tion commences, the radicle descends, and a plume is shot upward in the atmosphere. A seed examined before germination will be found to be more or less insipid ; but after germination it is sweet, its coagulated mucilage being con- verted into sugar. It is this, which rendered soluble, and carried through the cells or vessels of the cotyledons, forms the nourishment of the infant plant. The process is evidently effected by the direct action of the atmosphere, and hence semination, unless so conducted as to leave the

deposit exposed to the influence of the air, can nrvcr produce a vigorous and healthy plant.

100. Besides the above immediate action upon vegetables, the atmosphere is subject to nu- merous changes, all of which exert a nearer or more remote influence upon the general business of agriculture. The first of these variations is that of temperature, considered exclusive of the different seasons and climates. The rays of the sun concentrated, have no kind of effect on air ; but communicating the heat to the surface of our globe, the warmth is communicated to the atmosphere. Hence the temperature decreases in proportion to the height of the air from the earth's surface, varies according to the season, and becomes highest where the place is so si- tuated as to receive the rays of the sun with most effect. The air and the earth, which are most heated at the equator, where the rays fall perpendicularly, gradually diminish in temper- ature as they approach the poles, allowing for differences of geographical position, qualities of surface, &c. ; continents being colder than is- lands.

101. The ascent and descent of water, may be considered under the form of vapour or water, evaporated by means of rarefaction from the sur- face of the earth, and afterwards formed into clouds. When water is made to boil, evapora- tion flies off in the form of visible steam. The same process is observed, only on a much lower scale, in the daily evaporations that ascend the at- mosphere. In the maritime countries this is more considerable than in those which are inland; and is greater in the warmth of summer than in the cold of winter. Dew is moisture deposited by the atmosphere on the earth, and is precipi- tated in proportion to the humidity contained in the atmosphere, by means of the cold of the body on which it is seen. Dr, Wells lays down the principle, on the authority of

numerous facts, reasonings, and experiments, that bodies must of necessity become colder than the neighbour- ing air before they are bedewed. Rain is con- sequent upon evaporation, by which the clouds are charged with vapour. Dalton accounts for its phenomena in the following manner : - ' If two masses of air, of unequal temperatures, by the ordinary currents of the winds, are inter- mixed when saturated with vapour, a precipita- tion ensues.' In proportion as the masses are under saturation, is the extent and density of the shower ; and in warm air a greater quantity of vapour is precipitated under the same degree of saturation. Hail is considered as frozen rain, differing however in this respect, that hail stones are not formed of single pieces of ice, but of many Kttle spherules, of different degrees of consistence, agglutinated together. Frost pro- ceeding from the atmosphere commences upon the surface; and extends its influence downwards, into earths, waters, &c. Snow consists of the frozen vapours of the atmosphere, the particles of which proceeding down to the earth, are joined by numerous others of their own species, which form constant additions to their bulk! Its whiteness is the consequence of its division into an exceeding variety of little particles, as will appear trom the fact, that ice when finely

powdered will exhibit the same appearance. Ice is water in a state of congelation, increased one eighth part of its bulk by the process of transmu- tation. It remains at the temperament of thirty-two degrees of Fahrenheit, and acquires its increased dimensions with a force which would burst the strongest vessels, and even pieces of artillery. It freezes more rapidly than it thaws.

102. Wind is air in motion. It is necessary to carry off putrid exhalations, to purify the air and preserve it fit for respiration. The prevailing winds in our own country, as stated by the Royal Society of London, are

At London. At Glasgow.

North . . . 16 days. North West . 40 days. South . . .18 South East. . 47

East ... 26 North East . 104

South East .32 South West . 174

West ... 53 NorthWest . 50 North East . 58 SouthWest. 112

103. As the winds carry the clouds along with them, much depends on them with regard to the local and more general diffusion of rains. For pro- per acquaintance with their prevailing directions, for the phenomena of thunder, as also for curious and interesting information relative to the prog- nosticating of weather, 8cc. See METEOROLOGY AEROMANCY, &c.

104. We must now be allowed to offer, as supplementary to the general information con- tained in this section, a slight sketch of those general views and principles of the animal sys- tem, with which the scientific farmer should cer- tainly be acquainted. This system has much less engaged the attention of naturalists than botany. In describing animals they have followed the same rules as those commonly observed in the naming of plants ; but the classification of them is by no means established on so firm and philosophical a basis. The system of Linnaeus is founded on a particular system of organs. Another system has been founded on the joint consideration of all the systems of organs exter- nal and internal. On the basis of this has been established several natural methods, particularly that of Cuvier. But several naturalists have adopted a mixed method, as being, in their opinion, the most convenient. The male is understood in all cases to be the representative of the species ; and the female, although greatly differing in appearance from the male, presents, with the exception of the re-productive organs, a perfect agreement in structure. So long as the internal structure was entirely or partially over- looked, the classification of female individuals was a work of

great difficulty ; but by attending to the internal peculiarities, the arrangement is comparatively easy.

105. ANATOMY. ††† From these considerations the anatomy of animals becomes a primary object of consideration, and may be regarded as external and internal.

106. EXTERNAL ANATOMY. ††† That which is exterior, relates to the covering or skin of animals, which includes the cuticle, trie corpus mucosum, the corium, the panniculus, and the cellular web. The cuticle is destitute of nerves, fibres.

2nd blood vessels, and consists of a thin trans- parent membrane, in many cases so soft and delicate, that it appears like mucus. The corpus mucosum lies beneath the cuticle, and the true skin below. The corium, or true skin, is entirely destitute of colour, and in some animals consists of solid fibres, which cross one another in every possible direction, forming an extensible elastic substance, penetrated by a delicate net-work of blood-vessels and nerves. The muscular web consists of a layer of muscles, the extremities of 'vhose fibres are externally inserted in the corium. The use of this layer of the integument is to cor- ruerate the skin ; and may be observed in the human species in the upper parts, moving the skin of the face, cheeks, and head. The cellular web forms the innermost layer of the common integuments, and rests immediately on the flesh of the body. The appendices of the skin are hairs, feathers, horns, scales, shells, and crusts. Hair is the most permanent of all the substances consisting of animal matter, and resists putrefac- tion the longest. It grows by a root in the form of a bulb, taking its rise in the cellular web, from which it passes through the corium, mucus web, and cuticle. In some species the hair falls oflT, and is reproduced annually. Hairs are generally round, but sometimes flat, two-edged, and thick- est in the middle. Sometimes they are long

and straight, at others curled and crooked. When crisped they are called wool ; when stiff, they are called bristles ; and when inflexible, they are called spines. Feathers are of different colours, depending in some birds upon seasons, food, &c. They are readily reproduced, and renewed perio- dically. The parts of the feathers are, the quill, which takes its rise in the cellular membrane ; the central portion, a shaft of a texture resem- bling cork, and the web which clothes the sides, composed of barbes, each of which is again clothed with barbules. Horns are considered as hairs so agglutinated as to form a hollow cone ; and at the base where it unites with the skin, its fibrous texture may in many animals be seen. The apex of the cone is in this part push- ed out in proportion to the increase originating at the root. There is, however, this difference between horn and hair, that the former has its central cavity filled by a bony or other solid projection from the body ; whereas the central part of the latter is composed of medulla or pith. The different markings of horns, particularly the transverse ridges, indicate the different layers of gro%vth, and correspond in some cases with the years which the animal has lived. They do not experience those periodical renovations which are common to hairs and feathers ; and the case of the stag forms no real exception, inasmuch as the deciduous parts are not true horns. Va- rious appendices of the skin are included under this general denomination ; as beaks, which cover the maxillary bones of birds ; hoofs, which are peculiar to certain herbivorous quadrupeds; claws, having a bony centre and covering the extremities of the feet in animals ; nails, covering the fingers and toes of the human species, and differing from horns in the circumstance of their not being tubular, but consisting of a plate, con- rex on the exterior ; and spurs occurring upon the VOL. I.

legs of gallinaceous birds. The use of horns in every modification of them is to prevent the parts that are particularly tender from being injured by coming into immediate contact with hard bodies. From

the skin arise three different kinds of secretions; one lubricates the skin itself, another regulates the temperature of the body, and a third carries off superfluous carbon. Unctuous secretions are peculiar t6 warm-blooded animals, whose cellular web is filled with fat. Viscous secretions are peculiar to animals of cold blood, but answer the same purpose of de- fending the skin from the action of the surround- ing element.

107. INTERNAL ANATOMY. ??? The internal ana- tomy of animals, includes the entire structure, osseous, muscular, and nervous. The structure of the bones is the first consideration with respect to the strength and locomotion of animals. Bones are composed of the periosteum; the texture of which is obviously fibrous, serving the same purpose to the bone as the skin- with respect to the body ; the cartilaginous basis consisting of gelatine, and coagulated albumen ; earthy mat- ter, which is chiefly phosphate of lime, and fat, resembling fixed oils. Bones increase in size by the expansion of the cartilaginous basis ; which, when saturated with earthy matter, is capable of further extension. Bones are readily reproduced, especially in youth, as in case of fracture. In animals of the deer kind, the horns which are the true bones, are shed annually, and reproduced. The articulation of bones exhibit numerous va- rieties in respect to surface, connection, and mo- tion. The only two which we shall introduce into the present article, are motionless junctions, and joints. In the former, the connecting sur- faces of bones come into immediate contact, as in the serrated edges of the bones of the human skull ; or when a pit in one bone receives the extremity of another, like a wedge, as in the case of the human teeth. Sometimes one bone has a cavity with a protuberance at its centre, which receives another bone, as in the claws of cats, seals, &c. In the osseous structure of the human species, the ribs are united with the breast-bone by means of cartilage, as are the two sides of the lower jaw, with each other in vertebral animals. In joints, the articular surfaces are enveloped with

car- tilage, intimately united to the bone which they protect. Muscles are the organs by which mo- tion is executed. They appear in the form of large bundles, consisting of cords, which again are divided into smaller threads, capable of a still further subdivision with their primary filaments. The muscles with their component cords and filaments, are individually enveloped by a cover- ing of cellular membrane, supplied by nerves and blood-vessels; whilst at the extremities of the muscular fibres lie the sinews, of a silvery colour, possessing great tenacity, and exhibiting a firm, though fibrous texture, which forms a passive link from the muscle to the bone. The muscles possess the power of irritability, execute all the motions of the body, and are the most active members of the frame. Standing, walking, leap ing, flying, in short, every species of action being attributed to their instrumentality. The nervous system is that which contains the organs of sen-*

****tion or volition. It includes the brain, spinal and form important and useful additions to the marrow, and the nerves. The brain exhibits a farm. The chief employed, or retained on The spinal marrow origi-*

slightly viscous mass.

nates in the brain, and consists of four cords, united in one body. The nerves also originate in the brain, or spinal marrow, from different parts of which arise several filaments ; uniting, they form the trunk of a nerve, which sub- divides in various ways, spreading its rami- fications over the whole system, under the form of plexus or net-work ; between the dif-

British farms, are the horse, ox, sheep, swine, fowls, &c.

112. BREEDING. ❖❖❖ In the breeding of animals, an object of primary importance is the selection of the parents. Two theories have, however, obtained with respect to this subject, viz. breeding from individuals of the same parentage, called the in-and-in system ; and breeding from individuals of two .different offspring, called cross-breeding. It

ferent parts of which, a perfect connection is is a common mistake, that the breed of animals

maintained. is improved by the largest males ; and cross-

108. DIGESTIVE ORGANS. ❖❖❖ Of the digestive breeding has only succeeded, to any extent, in

system of animals, it will be necessary to take those instances where the females were larger

some notice. Animal appetite originates from than the usual proportion. The external form is

the activity of the organs of the stomach, and is to be studied only as an indication of internal

prompted by cold air applied to the skin ; by structure. The lungs are of the first importance ;

exercise ; or by cold, acid, or astringent fluids since on their size and soundness depend, in a

introduced into the system. Thirst is occasioned great measure, the health and strength of the ani-

by the excessive expenditure of the fluids, and mal. The chest, which indicates the size of the

originates in a variety of causes. Of hunger and lungs, should approximate to the figure of a

thirst, there are many remarkable varieties, cone, having its apex situated between the

Sometimes they are directed after the objects of shoulders, and its base towards the loins. The

the animal kingdom, when the subject of the sen- head should be small. This not only indicates a

sation is said to be carnivorous ; piscivorous, when good breed, but facilitates the birth. The length

directed towards fishes ; insectivorous, when di- of the neck should be proportioned to the height

reeled towards insects ; if directed towards seeds, of the animal. The muscles should be large.

gramvorous ; if towards grasses, graminivorous, &c. For the process of digestion and circulation, see ANATOMY.

109. REPRODUCTIVE SYSTEM. ††† In the repro-

Large bones generally indicate imperfection in the organs of nutrition. Of the external appear- ances, by which varieties of the same species are distinguished, those of the male parent most fre-

ductive system of animals, it is the business of quently predominate in the offspring : thus, if a

the female to prepare the germ, or ovum, and bring it to maturity ; whilst the office of the male is to impregnate the germ, by means of the spermatic fluid secreted in the testicles, and transmitted by its appropriate organs. The

hornless ram be put to horned ewes, almost ail the lambs will be hornless. In Norfolk, crossing with the Ryeland rams would effectually remove the horns, enlarge the chest, and improve the quality of the wool. The same may be said of

germ thus impregnated, is farther improved in Devonshire cattle, with respect to Galloway

the uterus, and eventually brought forth in the bulls. The good effects of cross-breeding are

ordinary way of nature. In viviparous animals evident in the improved state of English horses ;

the reproductive organs are in general similar ; by crossing with diminutive stallions, Barbs, and

but with the sexual organs of the oviparous tribes Arabians. But when it became fashionable in

it is otherwise; and the manner in which the eggs London to drive large bay horses, the farmers in

of birds are impregnated by the male has never Yorkshire, by putting their mares to very large

been properly determined. horses, produced a race of small-chested, large-

10. PATHOLOGY. ††† Animal life is exposed to boned, long-legged, worthless animals, and thus

numerous accidents, diseases, and casualties, exhibited the bad effects of cross-breeding, where

Health is precarious; which circumstance ren- injudiciously applied.

ders animal pathology an important subject to 113. REARING.††† Immediately after the birth of understand. The health and longevity of animals every animal, its immediate nourishment is sup- depend, in a great measure, upon the organs of plied by the mother, for which reason, the latter, respiration and digestion, and the manner in during her gestation and afterwards, should be nch they perform their various functions. In carefully attended to and well supplied. As the >s where the air of the atmosphere, or water animal increases in size and strength, it should ns noxious particles, it brings on epidemi- have abundance of food, air, and exercise, to lay il and endemical diseases, as the epizooty, or the foundation of a firm and vigorous constitu- ; murrain, which attacks horses, sheep, and tion. Food, however, though supplied in abund- ws, called by some farmers, the distemper, ance, ought not to be given to satiety: even scarcity is exceedingly detrimental to animals, animals feeding on a rich pasture have been found diseases; and for the diseases of to improve by

being taken from it once a day, and cattle, we have few effectual antidotes. There is put into a fold on inferior pasture. If rich food ar maintained all over the animal king- is supplied to young growing animals, and exer- ###m, tnbe ,s dmded against tribe; so that few cise withheld, diseases are generated, and growth imals comparatively, live to the period of is impeded. Good air and water are necessary , ### at to feeding all species of animals with success. ,e most important uses of animals to the Tranquillity, comfort, and cleanliness should be

IP?P ' ##L ' lrgj and f####d- attended t0' ^d where, in addition to these,

these views they are reared, domesticated, : ni , als are sheltered in sheds and houses, so

as to moderate the different extremes of weather, a good state of health will be the na- tural consequence. The feeding of animals for extraordinary labour or for long journeys, should oe effected by dry rich food; rubbing, clean- ing, and warmth in the intervals between labour and rest, will be found very powerful auxilia- ries.

114. SECT. III. ### HISTORY OF AGRICULTURE,

WITH A SKETCH OF ITS PRESENT STATE. We

shall now conclude our observations with a brief abstract of the history of agriculture from the earliest periods, and a rapid sketch of its present state. Chronologically, the science of agricul- ture may be traced to the period immediately succeeding the deluge, when it formed the prin- cipal occupation of Noah and his descendants. The plains of Shinar, no doubt, witnessed the earliest improvements ; Egypt, Greece, and Carthage, successively, the dawn, day-break, sun- rise, and ascensional development of this in- teresting

pursuit, whether viewed abstractedly as a theory of scientific principles, or in its applica- tion as a useful art. Through the above route agriculture has been conveyed to our part of the world, on the changing and crooked high-road of political revolution and emergency. In China and the eastern countries, whose antiquity is ce- lebrated as so justly sublime, it was, perhaps, coeval with their early plantation and government, and has been retained through all the periods of time ; has stood like the colossus of Rhodes, and lustred the hemisphere ; while the rapid and more aggrandized improvements of military re- publics, shaken by the earthquakes to which war- like nations are liable, have fallen to ruin and decay. Of the agriculture of the ancients little is known. That which is distant is always par- tially obscured, and presents little else than a covering of clouds ; and although books, like glasses, bring distant objects near, we have few glasses of sufficient focus to reach the stretch of time, not to say that through a glass vision is dark, and detail is not to be expected. The geographical situation of Egypt presented many advantages for cultivation. During the famines of Palestine there was corn in Egypt, to which Abraham and his descendants had frequent re- course. ' The plain of Jordan was every where as the garden of the Lord.' The aboriginal Greeks or Pelasgi, are supposed to have been taught the art in Egypt. Of the agriculture of the Phoenicians and Jews, little is known, except that it appears to have originated in the same source with that of other nations, viz. the family of Noah. Different nations have had their dif- ferent productions and modes of culture : their traditions ascribe the invention to different per- sonages, as Osiris, Ceres, Triptolemus, Janus, Chin- hong, &c.but this was the common origina- tion ; ??? this was the parent stream which came flowing out of even antediluvian antiquity ; and ???which, dividing like the rivers of Paradise, began to advance over the earth, and beautify the face of nature ; supplying innumerable myriads of creatures with the instruments and aliment of life; opening by mysterious development sources of the most rational

enjoy— mem ; and fulfilling, in an inferior sense, the sublime language of prophecy : ‘ I will make the

wilderness like Eden, and the desert as the gar- den of the Lord.’

115. Agriculture amongst the Romans, in its different modes and stages, is capable of being ascertained with a much greater degree of certainty. Roman authors on this subject are numerous; amongst whom may be enu- merated the names of Cato, Varro, Virgil, Pliny, Palladius, and Columella. The peculiar manner in which agriculture was carried on at Rome, was the primary cause of that notable success which attended it. Romulus having conquered a small part of Italy, divided the land among his followers, allowing, by an agrarian law, two jugera, or 1^ acre, to every citizen. Six centu- ries before the Christian sera, at the expulsion of the kings, seven yoke, or 3| acres, were allotted. The same custom, with respect to the distribu- tion of conquered lands, continued to be observed; and after every division, the remainder being sold in lots, any citizen might acquire as much land as he could purchase, till a new law passed by Stolo, the second plebeian consul, B. C. 377, enacted that no person should possess more than 500 jugera. In the first ages of the commonwealth, and for four or five centuries afterwards, the lands were cultivated by the pro- prietors themselves, whence corn became very abundant. But when Rome acquired an im- mense stretch of territory, and spread her con- quests far and near, rich individuals were allowed to purchase large estates, and to cultivate them by means of bailiffs and farmers. In the time of Columella, land was cultivated by farmers and servants, the latter including free servants and slaves. It was cultivated by slaves in the time of Pliny the elder. This change in the managers of the soil, produced a corresponding effect upon agriculture. Varro complains, that in his days the degree of attention bestowed upon this useful art had very much declined ; and Co- lumella tells us, that in his time it was almost entirely neglected.

116. The surface of Italy is irregular, broken by prominent hills, which pass through its whole length, forming numerous interior valleys of different dimensions, watered by lakes and rivers. The climate is dry, clear, regular, and of warm temperament. The soil is various; as yellow marley clay, blue clay, containing sulphur and alum, volcanic earth, rich black loam, deep, soft, moist earth, &c. The artificial appearance of Italy greatly resembles what it was in the time of the Romans. The cultivated lands and open enclosures, are to be seen only near the villas; and the landscape, (as Daniel Malthus observes,) which Pliny mentions, as seen from his villas two thousand years ago, does not appear to have been different from what it is at present. The Ro- mans selected those spots for their farms which were remarkable for their geographical advan- tages ; and employed themselves in the cultiva- tion of them from their youth. They built the villa in proportion to the size of the farm. The villa was divided into three parts. 1 . The urbana, consisting of the apartments of the landlord. 2. The rustiat, containing the kitchen, servants' houses, stables, piggeries, &c. adjoining to which was commonly the aviary or apiary, a place for dormice, a warren for hares and rabbits, a place

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for snails, and a large park for live deer, and beasts taken in the chase. 3. The Jructuaria, containing oil and wine cellars ; places for the

oil and wine presses, barns, store-houses, repo-
Georgics. sitories for fruit, corn-yards, granaries, &c. Par- ticular directions have been given as to the rela- tive situation and construction of these buildings,

have been invented about tne time of Pliny, and

attributes the invention to the Cisalpine Gauls ; but Virgil evidently refers to such ploughs in his

The ligo appears to have been a

spade, and the pala a shovel ; they were both made of oak, shod with iron, or a blade entirely of iron. The urpex or ripex, was a

"nothing" as" "to the materials of which they plank with several teeth, used as our brake or were composed. Pliny proportions the whole cultivator, to break rough ground, tear up roots, expence to the profits arising from the farm ; so &c. The crates was a kind of harrow, the ras-

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that if it were destroyed, one, or at most two years' rent, might be sufficient to rebuild it.

117. With respect to domestic management, a farmer fed and clothed his own servants ; and bailiffs were appointed, whose office it was to see

trum a rake, the sarculum a hand-hoe, the marra an inferior hoe, the bidens a two-pronged hoe, used in vineyards, with a hammer at the other end to break the clods. The securis was an although the same term was applied to the

that they were fed on wholesome provisions, and crescent-like blade of the pruning knife. Be-

made comfortable. The beasts employed were sides reaping hooks which resembled modern

chiefly the ox, the ass, and mule ; the horse but ones, they had invented a reaping machine,

seldom. Oxen were most commonly employed which appears to have resembled that used in

in the field, and were worked in pairs, whether in the cart or plough. Asses were chiefly used for the

burden/ the mill, or for ploughing, where the land was light. Of mules, they had two de- scriptions ; mules properly so called, and hinni, the first being the offspring of a mare and an ass, and the second of a horse and an ass. Both were commonly used for the road and the plough.

*118. The implements used in Roman agricul- ture are very little known. Cato mentions two kinds of ploughs, one for strong, the other for light soils. Varro mentions one with two mould boards, for the purpose, he observes, of ridging when they plough after sowing the seed. 'They had ploughs,' says the Rev. A. Dicksou, * with mould boards, and without mould boards, with and without coulters, with and without wheels, with broad and narrow pointed shares, and with shares, not only with sharp sides and points, but with high raised cutting tops.' ††† Hush, of An. Professor Martyn has given the figure of a mo- dern Italian plough to illustrate Virgil's descrip-*

Suffolk, for cropping the heads of clover left for seeds. Their threshing implements, and some for striking off the ears of corn, are imperfectly known.

120. The Romans did not bind their corn into sheaves, as was customary amongst the Jews, Egyptians, and Greeks. Threshing, for the most part, was performed in the open air, in a circular threshing-floor of forty or sixty feet diameter ; where the corn being spread to the depth of one or two feet, was either trod out by the hoofs of cattle, or by means of a dragging machine. That used in the Carthaginian territory, consisted of rollers, studded with iron knobs, and furnished with a seat for the driver. Rods or flails were also occasionally employed. Corn was winnowed by throwing it from one side of the floor to the other, in the wind, by means of a shovel called ventilarium ; but when the wind was inconsider- able, the fan was employed, (probably a kind of sieve.) After -the corn was deposited, the straw, when not laid aside for litter, was sprinkled with brine, then dried,

and rolled up in bundles,

tion. Rosier gives a figure of a Roman plough, as provision for the oxen. Pasturing and harrow-

which corresponds with those still used in the south of France. That used from time imme- morial in Valencia, is supposed to come nearest to the common implement of the Romans, and consists of the following parts : 1 . the buris, or head; 2. the temo, or beam; 3. the stiva, or handle ; 4. the dentales, or share head ; 5. the vomer, or share. The aura or mould board,

ing corn were practised, when too luxuriant, as soon as the blades equalled the furrow Fencing was carried only to a limited extent, and their other agricultural operations differ little from those of the ancients on the one hand, and the moderns on the other.

121. A great part of the Roman harvest ap- peared to depend upon fruits ; figs, pears, &cc.

and the culler or coulter, formed no part of the were grown "in gardens and orchards, and the

simple Roman plough. The plough staff, or vine was supported by a row of elms or poplars,

paddle, was also a detatched part. The manicu- &c.

la, which the ploughman took hold of, was a 122. Of animals reared by the Romans, the

hort bar fixed across ; and to the draught pole most common sort were the quadrupeds now in

the oxen were attached. The plough described by Virgil had a mould board, and was used for covering seed and ridging; but the common plough described above, instead of the mould board, required either a stick inserted in the share-head, or to be held obliquely. Circum-

use ; besides these, they reared snails, dormice,

bees, and fish. To the farmer's or bailiff's wife was committed the care of the poultry ; which, besides those common amongst the moderns, included thrushes, larks, turtle doves, and pea- cocks; but it was chiefly Rome and Naples

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.ving furrows, as employed by us, were not that were remarkable for rearing extensively

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practised among the Romans ; but the cattle re- turned in the same furrow.

the more delicate birds. In the time of the Csesars, when Rome was in the zenith of her

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,reek monuments of antiquity are splendour, fat birds, as thrushes, and blackbirds,

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four or five examples of wheel ploughs. Las- teyiiehas given figures of these implements from Caylus's Collection of Antiquities,, and from a Sicilian medal. He indeed imagines them to

sold at two shillings each, although 5000 of them were frequently sold in a year from one farm. Pea fowls were sold at ••l. 13s. 4d.; an egg was sold at 3s. 4d. Var. lib. iii. c. 2, A pair

of fine dover> were commonly of the same price as a peacock ; but, if very handsome, often sold as high

as ►►8. 6s. 8d. L. Anius, a Roman knight, refused to sell a pair under ►►13. 6s. 8d. Var. lib. iii. c. 7. Fishes of certain species in the time of Varro, were so valued by the ►►►Romans that his friend Hortensius would rather have parted with a pair of his best coach mules than with a bearded mullet, Var. lib. iii. c. 17, and according to Pliny, Nut. Hist. lib. ix. c. 55. Herrius's fish-ponds, from the quantity they contained, were sold for ►►33,333. 6s. 8d. and those of Lucullus at the same price, Idem. lib. ix. c. 54. One capital principle in all Roman agriculture was, ' to sow less and plough better,' since there is more gained by cultivating a small spot well, than a larger one indifferently. This they illustrated by many short sayings and stories. Pliny mentions a freed-man who made his vineyard produce crops so much larger than those of his neighbours, that they accused him of witchcraft, and accordingly brought him to trial. When he appeared in the forum, he produced a stout daughter, and some excellent implements, as iron spades, shears, &c. and presenting these, together with his oxen to the Senate, said, ' these, Romans, are my charms.' He was ac- quitted with honour. Nat. Hist. lib. xviii. c. 6. The following fact was also frequently advanced in favour of the above maxim. 'A vine dresser had two daughters, and a vineyard. When his eldest daughter was married, he gave her one third of his vineyard for a portion ; notwith- standing which, he had the same quantity of fruit as formerly. When his younger daughter was married, he gave her the half of what re- mained, and still the produce of his vineyard was not diminished.' Col. lib. iv. c. 3.

123. The profits of Roman agriculture are difficult to be ascertained. The returns of seed mentioned by the ancients, are remarkable. St. Mark the evangelist speaks of seed sown on good ground, bringing forth, some thirty, some sixty, and others an hundred fold. Varro in- forms us that an hundred fold was reaped about Grenada, in Syria; and Byzacium, in Africa. From the latter place, Pliny informs us, Augus- tus received from his factor

nearly 400 stalks, all of which originated in one single grain ; and to Nero were sent 340 stalks produced in the same manner. In Italy itself the returns were not so great ; good land in the time of Varro not producing more than ten, and in some places fifteen, for one ; or about twenty-one and thirty- two bushels to an English acre ; which, consider- ing the popular ignorance as to chemistry, physiology, and other branches of natural phi- losophy, will not be thought inconsiderable.

124. Agriculture, it has been thought, derived little improvement from the Romans, and it does not satisfactorily appear that they advanced in this science beyond the Egyptians, Jews, Babylo- nians, and Greeks. Even what they knew, ap- pears to have declined from the time of Varro to Pliny. The corruption and luxury of the period immediately succeeding the Christian sera, the civil wars at the end of the second cen- tury, the tyranny of the emperors in the third, and the removal of the seat of empire to Constan-

tinople in the middle of the fourth, prepared the way for ihe invasion of the Goths in the beginning of the fifth, when agriculture re- ceived a civil blight; swarms of intruder? gathering upon the leaves and foldings of every useful science, withered the intellectual face o►► the empire ; and all the arts, useful and orna mental, sunk to decay. The Romans had carried agriculture to considerable perfection in the several provinces of the empire. In Cartha- ginia, part of Spain, the southeast part of France, it had advanced nearly as far as Italy ; because the Greeks, who flourished before the Romans, had planted colonies in Carthage and Marseilles. In Helvetia, Britain, and Ger- many, its advance was not so considerable; but at the fall of the Roman empire it began to decline generally in Spain and Africa, by the invasion of the Moors ; in France, from the incursions of the Germans ; in Britain, from the Saxons, Picts, and Scots ; and in Germany, and Helvetia, from the predatory excursions in pur- suit of which the inhabitants left their lands t) the wild hand of nature.*

125. Agriculture, however, did not perish, but amid the darkness of the middle ages, began gradually to emerge, and was seen through the dense atmosphere, like the morning star, glim- mering upon the world, the peaceful harbinger of wealth and comfort.

126. In our own country the natives depended chiefly for their support upon, flocks and herds, which the Saxons seized and pastured for their own use. Where cultivation was followed, especially in Wales, the people were not suffered to plough with horses, mares, or cows, but only with oxen, Leges Walliceee, p. 228. No man might guide a plough who could not make one ; and the ropes with which it was drawn were to be made of twisted willows : it was usual for six or eight persons to form them- selves into a society, for fitting out one of these ploughs. The Anglo-Saxons, esteeming agri- culture too ignoble for a warlike people, com- mitted the cultivation of the earth to their women and slaves. The division of landed property into inlands and outlands, originated with the Saxon princes, who, after the distribution of conquered lands, denominated those parts con- tiguous to their respective residences, inlands, and let the outlands, or those which were more remote, to ceorls, or farmers. The rents were established by law. According to the laws of Ina, king of the West Saxons, at the beginning of the eighth century, the rent of a farm, consist- ing often hides, or plough-lands, was, 'ten casks of honey, three hundred loaves of bread, twelve casks of strong ale, thirty casks of small ale, two oxen, ten wethers, ten geese, twenty hens,, ten cheeses, one cask of butter, five salmon,, twenty pounds of forage, and one hundred eels.' Wilkins, Leges Saxon, p. 25.

127. A curious picture of a ploughman is found in Strutt's work, entitled Saxon Rarities of the Eighth Century, which shews the rude and imperfect state of agriculture during that period. The invasion of Britain by the Normans tended greatly to the improvement of agriculture, by bringing over many thousands of cultivators

from the fertile plains of France and Normandy, who introduced their own methods. Richard

128. IMPLEMENTS. ††† The implements in use at that period were nearly the same as those employed at present. Of the two species of ploughs then in common use, one appears from ancient pictures, which yet remain, to have been used for strong lands, and attended by an instru- ment in the right hand of the ploughman, for breaking the clods, &c. The other, without wheels, was used in light soils. The husbandry operations of this period are not very dis- tinctly known. In the thirteenth and fourteenth centuries, the Legum Angliae of Judge Fortes- cue shews, that agriculture was carried on with vigour. In the fifteenth century, England was engaged in civil wars, and agriculture declined. The prelates, barons, and other great proprietors, nevertheless, kept extensive tracts of land round their castles, called demesne lands, which they cultivated by means of their villains and hired servants. The dearths of Henry VII. still fur- ther evince the low state of agriculture ; for, in 1437 ††† 1438, wheat rose from 4s. or 4s. 6d. per quarter, to ††1 6s. 8d. equivalent to ††13 6s. 8d. of our money. In Scotland, cultivation was at a low ebb. In 1424 a law was passed, enacting, that every labourer of a simple estate should dig every day a piece of ground equal to seven square feet ; and in 1457, it was enacted, that every farmer who had eight oxen should sow as follows ††† one firlot, or bushel of wheat, half a firlot of peas, and forty of beans ; and in default should pay ten shillings to the baron, who, should he be deficient in the same with respect to his own lands, should pay the same sum to the king.

129. From the period of the accession of Henry VII. in 1485, to nearly the middle of the eighth century, cultivation began to pour upon the kingdom all its numerous advantages. The culture of hops was introduced, and the breed- ing of horses was much

encouraged. After the beginning of the sixteenth century, agri- culture partook ojf the general improvement that followed upon the invention of printing. ••• The first book upon this subject in England, was The Book of Husbandry, published in 1534, by Sir A. Fitzherbert, judge of the Common Pleas. After some excellent observations, the propriety of which posterity have seen, he describes the ad- vantage of ' quycksettynge,dychynge, and hedg- yng,' and lays down a line of conduct ' for a yonge gentylman that intendeth to thryve,' he afterwards points out the duty of a farmer's wife, distasteful, certainly, to the wives of modern far- mers, but applicable no doubt to the times in which he lived. He observes, 'she is to make clothes for her husband and herself; and she may have the lockes of the shepe either to make blankettes orcoverlettes, or both.' ' It is a wife's occupation,' still further ' to wynowe all manner of cornes, to make rnalte, to washe and wrynge, to make heye,

shere corn, and in time of node, to help her hus- bande to fyll the muckewayne or dounge carte, drive the ploughe, to load heye, come, and suche other; and to go or ride to the market to sel butter, chese, mylke, egges, chekyngs, capons, hennes, pygges, gese, and all manner of conies.' Many parts of this book have not been improved upon.

130. The state of agriculture, at this period, also receives additional illustration from the Book of Surveying, by the same author, published in 1539. ' Four manner of commens ' are de- scribed ; several sorts of mills, for corn and other purposes ; and also ' quernes that goo with hand ;' tenants of different orders, down to the ' boundmen,' who, he tells us, in some places ' continue as yet,' ••• ' and many tymes by colose thereof there be many freemen taken as bond- men, and their lands and goods is taken from them/ In the conclusion of his work he gives directions ' how to make a township that is worth xx marke a yere worth xx li ayere,' viz. by en- closing, and having the closes or fields alternately cropped with corn and ' let lye ' for

some time. In the reign of Elizabeth agriculture greatly ad- vanced, but was, according to Tusser, best under- stood in Essex and Suffolk. Harrison observed, Description of England, p. 188, a farmer ‘ will thinke his gaines very small towardes the end of his terme if he have not six or seven years rent lieing by him, therewith to purchase a new lease ; besides a fine garnish of pewter on his cupboard, with as much more in odd vessels going about the house; three or four feather beds ; so many coverlets and carpets of tapestrie; a silver salt ; a bowle for wine, if not a whole neast ; and a dozen of spoones to furnish oute the suite.’ The condition of a yeoman, at that period, is also exemplified in the following case of bishop Latimer’s father. ‘ My father,’ says Hugh Latimer, ‘ was a yeoman, and had no land of his own, only he had a farm of three or four pounds by the year at the utmost, and hereupon he tilled so much as kept half-a-dozen men. He had a walk for a hundred sheep, and my mother milked thirty kine, &c. He kept his son at school till he went to the university, and maintained him there : he married his daughters with five pounds or twenty nobles apiece: he kept hospitality with his neighbours ; and some alms he gave to the poor ; and all this he did out of the said farm.’ ••• Gilpin’s Latimer. Cattle were not plentiful, as appears from the exordium of an act passed in 1563, enacting that no person should eat flesh on the Wednesday and Friday in every week, under pain of forfeiting three pounds, cases of sickness and special licence ex- cepted, neither of which even then extended to beef or veal. Harrison complains of the number of parks kept in the kingdom, of which he says, ‘ there are not less than one hundred in Essex alone, where almost nothing is kept but a sorte of wilde and savage beasts, cherished for plea- sure and delight,’ and ‘ that if the world last a while after this rate, wheat and rie will be no graine for poore men to feed on.’ ••• Description of Britain, p. 168.

131. Great attention was still devoted to the breed of horses. Henry VIII. from his predilcc

tion for splendid tournaments, at this time the i>assion of the age, had greatly encouraged the promotion of a particular species, of great strength and stature ; which were indeed required to bear the weight of the complicated panoply, with which the knight and his courser were invested. Statutes were enacted for allotting to all parks a certain proportion of breeding mares, and en- joining not only nobles and prelates, but all per- sons whose wives wore velvet bonnets, to have stallions of a certain size for their saddle. The legal standard was fifteen hands in horses, and thirteen for mares ; but it now became necessary to lower this standard in the counties of Hunt- ingdon, Northampton, Cambridge, Lincoln, Suf- folk, and Norfolk, to thirteen hands for stallions, and no stallion of less stature might be turned out on commons and forests, for fear of diminish- ing the breed. The English draught horses were also very powerful and of great size ; five or six of them according to Harrison, being capable of drawing three thousand weight of the greatest tale for a long journey. Horses at that time, were so numerous in the kingdom, that Elizabeth, when she removed her residence, demanded a quota of 24,000 from the country, in the neighbourhood of her palace. Descrip. Brit. p. 220.

132. In the mean time the civil dissensions of Scotland, which continued nearly the whole of the sixteenth century, had almost crushed agri- cultural improvement in the bud ; when the ecclesiastical land-holders were totally expelled, the calamities of the farmers increased, and the nature of their misfortunes may be guessed at, from the statutes enacted in their favour. Stat. 110, Par/. 7, Jac. VI. The first of these was to the purport, that all ' slayers and houchers (houghers) of horses and uther cattel,' with their employers and maintainers, had ' incurred the paine of death, and confiscation of all their gudes movvabil.' A second act denounced

the same penalty on ali who maimed horses, oxen, or other cattle ; also on those who cut or destroyed ploughs, or plough-geers, (in time of tilling) injured trees, corn, 8cc. Stat. 83, Pa/7. 7, Jac. VI. Other acts were framed for the protection of the farmer against petulant and obnoxious tithe gatherers, &c. The Scots, like the English, used every effort to improve their breed of horses; but so great was the jealousy of the two king- doms, that it was made felony to export horses thither from England, lest they should improve their breed by our stallions. The Scottish go- vernment, about this period, condescended to consider the proper period for horses to be turned out to grass, so as most effectually to prevent the waste of corn ; and, were pleased to enact, that all horses should be put to grass from May 15th, till October 15th, on pain to the owner of forfeiting each horse, or its value, to the king ; gentlemen of 1000 marks yearly rent excepted. Stat. 122, Purl. 7, Jac. VI.

133. In England, the vine which had been for- merly cultivated for wine, declined with the sup- pression of the monasteries ; and was superseded by the more general cultivation of barley. Potatoes were introduced in this reign from Santa Fe, by captain Hawkins, about the year 1565; although

they did not come into general use for nearly two centuries afterwards. Several agricultural authors also flourished in this reign, particularly Thomas Tusser, born at Rivenhall, in Essex, in 1527, whose ' Five Hundred Points of Hus- bandry,' published in 1562, were recommended by lord Molesworth to be taught in schools. Barnaby Googe, a Lincolnshire gentleman, and Sir Hugh Platt; the Rev. W. Harrison, cotem- porary of Platt, and chaplain to Baron Cobham. This latter gentleman translated ' Boethius's His- tory of Scotland,' and wrote ' A Description of England,' in which he asserts, that the Spanish and Merino sheep were derived originally from this country.

1 34. In the seventeenth century many important improvements were introduced, particularly the

cultivation of clover and turnips ; for the adop- tion of which we are indebted to Sir Richard Weston, although the latter is commonly attri- buted to lord Viscount Townsend. The potatoe, Houghton describes ' as a bacciferous herb, with esculent roots, bearing winged leaves and a bell flower.' He observes, it was brought from Vir- ginia, by sir Walter Raleigh, who planted some first in Ireland ; afterwards, they were introduced into Lancashire, whence they began to spread all over the kingdom. When boiled or roasted, and eaten with butter and sugar, they form, says this author, a pleasant food. A sort brought from Spain of a larger form, (convolvulus batatas,) more luscious than ours, he adds, are much set by, and sold for sixpence or eight-pence the pound. The chief writers of the seventeenth century were Weston, Hartlib, Blythe, Evelyne, Norden, Gabriel Plattes, &c. The embank- ments, drainage of morasses, &c. the enclosures of land by act of parliament, and otherwise, to- gether with the establishment of tolls in 1663, are to the honour of the period; and have tended, greatly, to advance the agricultural interests of this kingdom.

135. The agriculture of Scotland, during the fifteenth and sixteenth centuries considerably lan- guished ; the reformation of religion having taken the husbandry out of the hands of the monks, by whom alone it was practised upon correct principles, and placed it in the hands of men unskilled in the art of cultivation. In the seven- teenth century the grounds in the south eastern countries were improved ; but even then appeared in a wretched condition. Ray, who made a tour along the eastern coast in 1660, observed that fallow grounds were few ; that the men were lazy, and frequently ploughed in their cloaks. The accession of James V. to the crown of England, was unfavourable to the agriculture of Scotland. The soldiers of Cromwell, who lay in Scotland for many years, and being mostly English yeoman, raised the low country districts into a higher state of improvement than had been known at any former period. The large fines exacted during the reign of Charles II. and his brother James,

tended greatly to im- poverish the proprietors and cultivators. Still, however, the laws passed in the seventeenth century paved the way for the present improved system. A Persian wheel, made by Worlidge, author of Si/stcma Agriadtura, capable of con-

vc\inc water more than twenty feet high, for the the rate of one forty-sixth part per annum. The watering of meadows, throws a light upon the state of tne people generally, is certainly that ot advancement of irrigation. On the whole, from extreme indigence, as must be the case in every the imperfect glimerings of the science, in this country where the increase of its inhabitants dark but interesting period, we may mark the exceeds the progress of its wealth and industry.

Their houses, furniture, clothing, provisions, in short, every thing relating to domestic economy, fully elucidate the above observation. The lower classes have no conception of the comforts of life, which even if they knew how to appreciate, they have not the means of obtaining. The ab- solute necessaries of life are, however, supplied

dawn of those vast improvements which have since been effected upon our island.

136. The general progress of agriculture, from the revolution to the middle of the eighteenth century, was not so considerable as might have been expected from the exportation of corn ; but the increase of population, and the wealth deriv- ed from manufactures, has at length augmented by the superabundant cultivation of potatoes, capital, and called forth a race of ingenious and which except in years of extraordinary calamity, enterprising cultivators. The inventions that have rarely been known to fail. To this is, in a

great measure, attributed that deep-rooted indo-

have been introduced for increasing produce, and economizing labour, the garden-like appear- ance of the country, together with the passing of more than three thousand bills of enclosure, during the late reign, more effectually illustrate the state of British agriculture, than any thing verbal that could be advanced on the subject.

137. The shock sustained by the agriculturists since the peace of 1815, by the fall of prices, originating in the diminished circulation of money, was so severe, that many farmers lost all their capital, whilst others retained just enough to enable them to emigrate to other countries. The replies sent to the circular of the ' Board of Agriculture,' exhibit a melancholy picture of the distress of cultivators generally. Rents are now, however, greatly lowered ; and things begin to assume a more promising appearance. The rapid improvement of agriculture is shown by nothing more clearly than the organization of agricultural societies, in nearly all the counties of the kingdom ; among which the Bath and West of England Society, in 1777; and the Highland Society of Scotland, in 1784, are the most important. The benefits of these institu- tions have never been appreciated, whether we look to those which are nearer or more remote. In their own immediate firmaments, they are the most distinguished orbs ??? shining upon surrounding in- stitutions, and pouring light, warmth, and fertility upon our native island. The Agricultural Board ceased in 1819, being thought no longer neces- sary ; but the effects produced by these institutions yet remain, and shall remain, when the original founders of them are forgotten, to ameliorate the state of man ??? to fulfil the great command ??? to imitate the Father of Lights ??? to pour their broad blessings on the earth; and when the clouds which overcast the southern hemisphere shall have cleared away, their instructions, like the rays of the sun, shall travel over the blue ocean wave, and dawn upon the Unenlightened Indian, and semi-civilized Hindostanee. Pro- fessorships of this science have

been established in Edinburgh, and several continental universi- ties; and are in contemplation for those of Oxford and Cambridge.

1 38. We cannot close the present article without a few observations on the general state and dis- tresses of Ireland with regard to agriculture. The primary cause of suffering amongst the Irish is ascribed by Young, and other writers, to the re- dundancy of population, which in 1791 amounted to 4,200,000, and has been ever since increasing at

lence, which forms the prominent characteristic of the people. Their wants limited to the mere sustenance of animal life without its comforts, destroy the sources of artificial desire ; and the usual mode in which the labourers are paid, viz. by giving them a piece of potatoe land by the year, whilst it supplies the cravings of animal necessity, neutralizes every collateral principle which would propel them to exertion. After the plantation of the esculent vegetable above-men- tioned, the Irish peasant has little to do till the digging season approach; and during the apyrexia intervening between these troublesome seasons, acquires those idle habits which the subsequent transfer to a more regular employ- ment is unable to eradicate. It is indeed re- markable, that Ireland, circumflowed by the same ocean whose warm vapours prove so refreshful to England ••• under the same genial diversity of climate ••• in the same average latitude ••• posses- sing a soil so singularly prolific, as to be able with little labour and manure to yield an alternate crop of wheat and potatoes for ever, combined with the natural advantages of mineralogy, and facilities for manufacture and commerce, should remain for so many centuries in a state of almost absolute barbarism, while the contiguous parent isle is increasing in wealth, advancing in mag- nificence, and flourishing in all the useful arts that civilize and polish human life.

139. We would, in conclusion, entreat our readers of other pursuits and professions, not tc look with

jealousy on the space now devoted, or which we shall continue to devote to the impor- tant topics of this paper. 'Though mines of gold and silver, (says Dr. Johnson in one of his minor pieces) should be exhausted, and the species made of them lost ; though diamonds and pearls should remain concealed in the bowels of the earth, and the womb of the sea ; though commerce with strangers be prohibited; though all arts, which have no other object than splendour and embellishment, should be abolish- ed ; yet the fertility of the earth alone would afford an abundant supply for the occasions of an industrious people, by furnishing subsistence for them, and such armies as should be mustered in their defence. We, therefore, ought not to be surprised that agriculture was in so much honour among the ancients ; for it ought rather to seem wonderful that it should ever cease to be so, and that the most necessary and mo^t indispensable of all professions should have

fallen into any contempt.' (Works, v. ii. p. 384, 5.) The same excellent writer has noticed the extraordinary demand for books on agri- culture under the peaceful sway of James I. 'It deserves to be remarked,' he observes, ००० be ००० cause it is not generally known, that the trea- tises of husbandry and agriculture which were published about that time are so numerous, that it can scarcely be imagined by whom they were written, or to whom they were sold.' (Origin and Importance of Fugitive Pieces, John- M-H'S Works, v. xi. p. 191.) On which an able contemporary thus comments ००० 'Nothing can illustrate more strongly the effects of a pacific system of policy, in encouraging a general taste for reading, as well as an active spirit r.f improvement. At all times, and in every

country, the extensive sale of books on agri- culture, may be regarded as one of the most pleasing symptoms of mental cultivation in the body of the

people.'

140. These (1826) are times of peace : states- men are more willing to learn how to govern mankind in times of peace than formerly, and seem sincerely directing their attention to every commercial topic. Let them not neglect agri- culture ; let the laws connected with it engage that share of parliamentary and general con- sideration which their importance demands ; let commercial men sympathize with the pecu- liar burdens of agriculturalists; and let the agriculturalist consider his own true interests best pursued in conjunction with those of the entire country.

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*AGRICULTURE, BOARDS and SOCIETIES, for the ENCOURAGEMENT of. The first society for the promotion of agriculture in the British isles, of whose history we have any account, was The Society of Improvers in the Knowledge of Agriculture in Scotland, instituted in 1723. This association exerted itself with considerable suc- cess, in introducing cultivated herbage and turnips, and improving on former modes of cul- ture. The earl of Stair, one of its active early members, is said to have been the first
वो who cultivated turnips in that country. But the example appeared to have little effect upon the practice of the common tenantry. Maxwell, who for one or two sessions, delivered lectures on agriculture, at Edinburgh, gives the first notice of a threshing machine, in his Transactions of the Society of Improvers. It appears to have been invented by Michael Menzies, advocate, who obtained a patent for it; and, according to the report of the above society, one man by the assis- tance of this machine, might do the work of six. One of the machines was ' moved by a great water-wheel and treddles ;' and another, ' by a wheel of three feet diameter, moved by a small quantity of water.' See Encyc. Brit, and Ed. Encyc. Art. Agr. and Brown's Rural Affairs. Draining, inclosing, summer-fallowing, sowing flax, hemp, grass seeds, turnip and rape, planting cabbages after, and potatoes with, the plough, in large fields, were now introduced ; and more corn was grown, where it was never known to grow before, by one sixth of the former pro- duce of the kingdom. Hope, of Rankeillor, a member of this society, among other patriotic exertions, drained the morass, near Edinburgh, formerly known as Straiton's Loch; and projected the walks over the grounds now known as the meadow walks, for some time a fashionable place of resort. Cockburn, of Ormiston, was a prin- cipal member and founder of this institution; and, the dukes of Hamilton, and Athol, Hopeton, and Irlay, exerted themselves to facilitate the objects of this society. At length, this excellent institution, at one time consisting of more than 300 members, became neglected, and was dis- solved, after about twenty*

years of valuable ser- vices to Scotland.

The establishment of the Dublin Agricul- tural Society, in 1749, gave a stimulus to agriculture in Ireland. Its origin may be traced as early as 1731 ; when Prior, of Rathdowney, Queen's County, and a number of other gentle- men, associated themselves for the improvement of agriculture and husbandry. In 1749, Prior, by means of the lord lieutenant, procured a grant of ►►1 0,000 per annum, from the Irish government, in aid of so desirable an object. This institution has changed its character ma- terially since its foundation. It more properly belongs to the arts and sciences at the present day, and is called the Royal Dublin Society.

COUNTY SOCIETIES, for the promotion of agriculture, which multiplied in every direction during the eighteenth century, evince the interest attached to that pursuit in England. Among them, the highest rank may certainly be claimed

the Bath and West of England, established

1777, and the Highland Society of Scol'and

founded in 1793. The Agricultural Reports of the different counties, many of them surveyed a second time, exhibit great ability, and have been followed by a General Report of the Agri- cultural State and Political circumstances of Scotland, of considerable value. Many of these county societies were in operation prior to the existence of the Board of Agriculture, and con- tributed to prepare the public mind for that national institution.

THE LONDON BOARD OF AGRICULTURE, was established by act of Parliament, 17th May, 1793, and constituted by royal charter, 22d of August following, for the encouragement of Agriculture and Internal Improvement. ' The circumstances/ says Sir J. Sinclair, the president and founder of this excellent institution, ' which led to the establishment of a board, so likely to be of material service both to this country and to society

at large, cannot fail to be interesting to the public.' ' In 1 786,' this gentleman informs us, ' he undertook an extensive journey through the most interesting parts of Europe, to obtain political information, to ascertain the state of other countries, and to discover every means which had been sanctioned by the experience of other nations, that could be successfully intro- duced for the improvement of Great Britain :' that, ' in the coiirse of that tour,' in which he travelled 7500 miles in seven months and a half, 'he became acquainted with the most distin- guished authors, the ablest statesmen, and the most zealous patriots, that Europe could then boast :' and ' returned full of ardour, to establish, in his own country, the beneficial institutions, which were scattered over others ; and to make this island the centre of the various improve- ments of which political society was capable, more especially those of an agricultural nature.' Circumstances, however, having occasioned a coldness with the minister, he found that any attempt, to carny such measures into effect, was not likely to be successful in parliament, and thence he was under the necessity of waiting for a more favourable opportunity.' Sir John Sinclair adds, that having published his History of the Revenue, which he had intended to have con- cluded with a chapter on the political circum- stances of the country ; he then saw the necessity of forming some institution for the ex- press purpose of collecting statistical information, the public having felt the most serious incon- veniences and losses, from information of that nature not being any where to be obtained. This suggested the idea of beginning that useful and extensive work, the Statistical account of Scotland, concluded in 21 vols. 8vo. and to the completion of which 900 individuals of intelli- gence and ability contributed their assistance. About the same time, Sir John, having received information respecting the celebrated wool of the Shetland isles, and of the dangers to which their flocks were exposed, was led to lay a statement of these facts before the Highland So- ciety, who gave every assistance in

their power, and to suggest the erection of a new Society, en- titled the British Wool Society, for the special purpose of improving British wool. The busi- ness of that Society was carried on with sucli

*energy and success, that in the summer of 1792, * the greater part of this island had been sur- veyed, by persons skilled in the management of sheep, whose observations were circulated over the kingdom.' It was in the preface to an ac- count published by that Society of one of these tours, that Sir John first hinted at the establish- ment of a Board of Agriculture. After stating that ' they had established many important facts ; that they had proved that the finest breeds of Spain or of England will thrive on the wildest of the Cheviot hills, and that very fine woollen breeds may be propagated in the most moun- tainous districts of Scotland,' he adds, 'but un- less a Board of Agriculture be constituted, for the purpose of superintending the improvements of the sheep and wool of the country, and other objects connected, either with the cultivation or pasturage of the soil, he should despair of any considerable success in those pursuits.' Im- pressed with these ideas, Sir John Sinclair went vo London in December 1792, resolving to at- tempt the establishment of such a Board.*

On the 15th of May, 1793, this gentleman made his motion in parliament for this pur- pose, ' It is supposed,' said he, ' that there are sixty-seven millions of acres in Britain, of which seven millions are occupied with houses, roads, rivers, lakes, &c. There remained sixty millions, of which five millions only were employed in raising grain ; twenty-five millions were appro- priated to pasturage, and there remained thirty millions either completely waste, or under a very defective system of husbandry. That was an ob- ject of astonishing importance. Disgraceful, in- deed it was, that nearly one half of the kingdom, which might furnish

subsistence to above ten millions of people, should remain in such a state.' By the efforts of the proposed institution, he considered the stock of the farmer might be ren- dered infinitely more valuable, without requiring a greater quantity of food, or any additional care or expense.' The additional value of black cattle, of which it is supposed there are five millions in the island, he estimated, at 20s. a head, would add five millions per annum to the national wealth. There are at least twenty mil- lions of sheep in Britain. By improving the fleece, Is. per sheep might be added to the value of the wool, which would produce one million : the manufacturer of the wool can treble the value ; hence an addition of other five millions per annum ; and the profits arising from improving the carcase would be still more considerable. Great improvements might also be made in other kinds of stock. Great savings would arise by the use of improved instruments of husbandry, while by following judicious systems adapted to the different soils, ground would be cultivated at much less expence and with greater advantage. These improvements would furnish the means of healthful occupations to many thousands, almost millions of people, who, from the integrity of their private conduct, and the vigour of their constitutions, should as much as possible be multiplied.' To secure these advantages a Board of Agriculture was absolutely neces- sary, 1. As a general magazine for agricultural knowledge. 2. As the best means of collecting

and circulating that knowledge, and exciting a spirit of experiment. 3. As the most certain method of establishing an extensive foreign cor- respondence, to procure the most speedy infor- mation of agricultural improvements and dis- coveries, in all quarters of the globe. 4. As a public body, capable of being entrusted with the privilege of franking, to render its corres- pondence less expensive. 5. As the only me- dium, through which any general improvement of stock could be expected, the authority and influence of a public board far surpassing the exertions of private

societies, however active, in removing deep-rooted prejudices, and concentrat- ing the knowledge of many individuals of dif- ferent professions. And, 6. As the best means of obtaining a statistical account of England, and giving a view of the real state of that country; such as had already been nearly completed in Scotland, and which might soon be universally followed in other countries : ' And thus the prin- ciples of political society, and the sources of national improvement, would be more completely ascertained, than in any former period of history.' For when persons talked with raptures of the great wealth brought into this country by com- merce, they did not consider that the nation in many cases lost as much by neglecting agricul- ture, as they gained by commerce. The Board was finally appointed to consist of a president, treasurer, secretary, under-secretary, two or more surveyors, one or more clerks, with such other officers as may be necessary, and thirty ordinary members : besides the archbishops of Canterbury and York, the lord chancellor, or lord keeper of the great seal, lord president, lord privy seal, lord treasurer, or first commissioner of the Trea- sury, lord high admiral, or first lord commis- sioner of the admiralty, the bishops of London and Durham, the two secretaries of state, the master of ordnance, the speaker of the house of commons, the president of the Royal Society, the surveyor general of woods and forests, and the surveyor of the crown lands, for the time being; who are all members ex officiis. The annual election of officers and members was ap- pointed for the 25th of March, when five of the ordinary members were to go out, and five others to be chosen. At all meetings of the Board, seven should be a quorum for doing business, the presi- dent or the deputy being always one : and the number of honorary members to be unlimited.

At first Sir J. Sinclair's friends had little hopes of his success, and when he informed Mr A. Young, that he had an appointment with Mr Pitt to explain the advantages of the measure, Mr. Young wrote, ' When you come from Mr. Pitt, I shall have won the

wager, (that he would not succeed.) Pray don't give ministers more credit than they deserve. In manufactures and commerce, you may bet securely, but they never did, and never will do any thing for the plough. Your board will be a Board in the Moon.' Sir John, however, took every prudent measure to insure success. M. Dundas early promised his assistance, notwithstanding their political dif- ferences; and Mr. Pitt assured him, 'that he would not oppose the measure, but that his sup- port would depe:..d on what he judged was the

sense of the house.' To satisfy the house of the beneficial tendency of such a measure, Sir John, previous to his motion in parliament, circulated a printed paper among the members, containing a plan of the board, its objects, advantages, and probable expenses. Still, however, a few mem- bers, suspecting some scheme of corruption or ministerial influence to be at the bottom, op- posed it vehemently ; but it was carried by a majority of seventy-five ; 101 voting for it and twenty-six against it. Mr. Sheridan and others, who then opposed it, have since very handsomely expressed their conviction of the utility of the measure, and their wishes for its success. The board was established by Act of Parliament, on the 17th May 1793, ––3000 per annum voted for its support, and the charter drawn up and ulti- mately sanctioned by the Great Seal, on the 23rd of August, although the high fees paid for it, which amounted to no less than ––1189. 12s. 2d. might, one would think, have expedited the business more quickly. The board could not be assembled till the 4th of September, and the regular meetings did not commence till January 23rd, 1794. One of the first objects of their attention was to collect materials for a statistical account of England. Accordingly specimens of parochial reports were printed, with a view of rousing the clergy of the church of England to exertions similar to those of their brethren in Scotland. But it was

afterwards thought proper on various accounts, to prefer general to par- ticular enquiries, and to procure county instead of parochial reports. Accordingly surveys were made and reports printed of the state of agri- culture, in all the counties of the United King- doms : and many gentlemen employed, executing their tasks gratis. The charge of collecting this mass of information, and surveying the whole island, did not exceed the sum of ►►2170. The expense of printing the reports, however, was great. As a specimen of the expedition with which the business of the board was carried on, it is worth mentioning, that no fewer than seventy-four of these reports were given in, and cither printed or in the press, within little mor►► than six months after its second meeting ; that during the first session above 80,000 papers were printed and circulated, of w^hich above 100 were returned with valuable hints and observa- tions written in the margins, before the 29th of July, 1794; and that by the end of the second session, the survey of the whole kingdom had been nearly completed, and the reprinting of some of the reports had actually commenced. Such a quantity of important business, begun and executed within so short a period, we are persuaded is not to be found paralleled in the annals of any public society. Nor were these the only exertions made by the board within that period. Through their recommendation and in- fluence extraordinary merit was rewarded, ►►1 000 being granted by parliament, to Mr. Joseph Elk- ington, who had carried the art of draining land to a degree of perfection hitherto unknown ; and the interests of a most useful class of the com- munity, viz. the common labourers, had been at- tended to, by introducing and passing the ' act for the more effectual prevention of the use of

defective weights, and false and unequal ba- lances.' And there is every reason to believe, that in consequence of the recommendations of the board, in January, 1795, 50,000 addi- tional acres were planted with potatoes, and a famine, consequently, prevented by thus pro- viding six months provisions

for about a mil- lion of people. The crop of wheat in 1795, how- ever, proving defective, the president recom- mended to the board, an extra cultivation of that necessary grain, in a letter which was sent to all the members, and to the quarter sessions of the counties, as well as inserted in fifty different newspapers, in consequence whereof a greater quantity of wheat was sown, and, with the ad- vantage of a favourable season, a more produc- tive and plentiful crop was reaped in autumn 1796, than perhaps at any former period in the annals of British agriculture.

We should protract this article beyond all bounds, were we to enumerate all the objects of this truly patriotic institution. We shall, there- fore, after giving the great outlines of investiga- tion, as stated by Sir J. Sinclair to the board, in his ' General View of the Inquiries essential for the internal improvement of the kingdom,' only mention one or two important objects of their attention. The former are thus ranked by the president. 1. The riches to be obtained from the surface of the national territory. 2. The mineral or subterraneous treasures of which the country is possessed. 3. The wealth to be derived from its streams, rivers, canals, inland navigations, coasts and fisheries; and 4. The means of promoting the improvement of the people in regard to their health, industry, and morals, founded on a statistical survey of every parochial district in the kingdom, and the cir- cumstances of its inhabitants. Under one or other of these heads, every point of real impor- tance, that can tend to promote the general hap- piness of a great nation, seems to be included Three objects of attention were pointed out ???

1. To ameliorate the condition of the lower or- ders of the people, by promoting improvements in the construction of cottages, and ascertaining the means of lessening the consumption of fuel.

2. To recommend the annexing of a large garden to each cottage ; and, 3. To encourage the ex- tension of friendly societies. Another important object of

the board was, to procure an act for the enclosure and cultivation of the waste lands in Great Britain : and thus to

Cut off those legal bars

Which crush the culture of our fruitful isle. In a word, the great objects of the board were to collect and condense every particle of infor- mation, that could be interesting either to indi- viduals or society.

In his address to the board, 24th of May, 1796, Sir John Sinclair justly observes, 'that a single additional acre, cultivated at home, is more truly valuable than the most extensive possessions acquired abroad, at an enormous expense of treasure and of blood, and retained with diffi- culty and danger.' And in a former address, on the 29th July, 1794, after stating that the proba- ble addition to the national capital by the im- provement of 22,351,000 acres of waste lands

*would amount at thirty years purchase to ►►905,215,500 ; besides ►►30,193,850 of additional national income. He allows an objection may be urged, that the improvement of these 22,351,000 acres at ►►4 per acre would occasion an expense of ►►89,404,000. To this, after replying, that * in a national account this expense is no object; ►►► that the public, instead of losing, gains by the expenditure ; and that the money thus laid out might have lain dormant ; might have been wasted, or destined for the cultivation of distant territories, with all the risk of being taken by an enemy, &c. ; ' he adds ►►► ' That here it is impossible not to advert to the astonishing differ- ence between spending eighty-nine millions in improvements at home, or in foreign conquest. After the expenditure of that sum in war, it would be accounted a most fortunate means of reimbursement,*

*if we could secure any territory, by a commercial intercourse with which, five millions per annum could be gained ; whilst, at the same time, it would be necessary to pay at least five millions of additional taxes. But if that money were laid out at home, or rather, if individuals were encouraged to expend a part of their wealth, in the internal improvement of the country, instead of new taxes being necessary, the old ones would become lighter and more easily paid ; and instead of dragging ►►5,000,000 per ann. from an enormous distance, with much risk and expense, thirty millions would be pro- duced within our own domain, and always at our command.' Sir John Sinclair closes his account of the board, with *his philanthropic proposal, that a ' Plan of an agreement be en- tered into among the powers of Lurope and the United States of America, for rewarding disco- veries of general benefit to society.' The general outlines are, ' that each power should agree to pay a sum according to its revenue, for reward- ing those who make any useful discovery in rural ceconomy, medicine, or the arts ; and that such discoveries should be rapidly extended to the dif- ferent countries ; and brought to their ultimate state of perfection. The attention of mankind being thus directed to such objects, it is impossi- ble to say, to what perfection the arts necessary for their comfort and sustenance might be carried. The desire for fame and emolument, and the emulation of many nations rivalling each other in such arts, would produce discoveries, the im- portance of which can hardly be estimated. And such an undertaking might have the effect of ren- dering wars less frequent and ferocious.' He concludes, ' If the measures above hinted at were adopted, a new scene in politics might be the happy consequence, and rulers of nations might in future boast, ►►► not of their numerous fleets, ►►► not of their gallant armies, ►►► not of extended com- merce,►►► of splendid or luxurious arts, or acqui- sitions by intrigue or conquest, ►►► but of this, ►►► that within their respective dominions, a greater number of human beings enjoyed all the bless- ings of political society, in greater*

perfection, than hitherto they had ever been enabled to attain in any former period of history.'

We have dwelt thus long on the formation and history of a society, now in fact, extinct, (for in 1819, the usual parliamentary vote for its

support, was withdrawn,) because, with some little prolixity, important agricultural details are included in it : and as a tribute of respect to the unwearied and public-spirited exertions of more than one excellent individual.

AGRIEL^EA, in botany, the wild olive.

AGRIFOLIUM, or AQUIFOLIUM, in botany. See ILEX and HOLLY.

AGRIGAN. See AGRIGNAN.

AGRIGENTUM, AGRAGAS, or ACRAGAS, in ancient geography, a celebrated city on the southern shore of Sicily, the site of which is now partially occupied by the town of Gir- genti. The ancient name (Acragas) was also that of a neighbouring stream; and both, ac- cording to Polybius, were so called (aicpayq) from the fertility of the surrounding country. The situation of this city was peculiarly strong and imposing, chiefly standing on a bare and precipitous rock, elevated 1100 feet above the level of the sea. Mr. Swinburne and M. Houelle contend that a considerable part of the ruins reach into the vale. It was protected on the southern side by the river Acragas, and on the western, by the Hypsas. A strong wall was erected along the margin of the rock, and in the eastern part of the town, on the site now occupied by Girgenti, was placed the citadel of Cocalus, so environed by a deep gulph, as to b e approachable only by a single narrow path.

Dedalus, the most famous mechanic of fabulous antiquity, fled to this spot for pro- tection against Minos, and built many splen- did edifices for Cocalus, king of the island. Long after his flight, A. A. C. 600, the people of Gela sent a

colony hither. These Greeks con- verted the ancient abode of the Siculi into a citadel, to guard the magnificent city, which they erected on the hillocks below. An ad- vantageous situation, a free government, with all its happy effects, exalted their common- wealth to a degree of riches and power, un- known to the Greek settlements, Syracuse alone excepted.

To its advantages as a place of great strength, the city added others of a commercial nature being within two miles and a half of the sea, by which an easy intercourse was afforded with the ports of Africa, and the south of Europe. The soil about Agrigentum being very fertile, was laid out chiefly in olive yards, the products of which were carried to Carthage, and brought immense wealth to the cultivators. This ena- bled them so splendidly to adorn the city with temples and other public works, that Polybius, 1. ix. says, it surpassed in grandeur of appear- ance most of its contemporaries. Among the more important of its buildings, were the tem- ples of Minerva, and of Jupiter Atabyris, (who was worshipped under this appellation in the island of Rhodes,) built on the highest ground in the city ; and the temples of Jupiter Olym- pius, and of Hercules.

The temple of Jupiter Olympius, which vied, in size and grandeur of design, with the fines edifices of Greece, is said by IJiodorus Sic. 1. xiii. to have been 340 feet long, sixty broad, and 120 high, the foundation not being included, which was itself remarkable for the immense archfij*

pon which it stood ; the walls of the building had half-columns let into them, measuring twenty feet round on the outside, and flutings of !epth sufficient to allow a man to stand in them. The

porticoes were very grand ; the eastern re- prejenting, in admirable sculpture, the battles of the giants; and the western the siege of Troy. A war prevented the completion of this temple, when the roof only remained unfinished. There was also an artificial lake, cut out of the solid rock, near the city, of about a mile in circuit, and thirty feet deep, from which fish were ob- tained in abundance for the public feasts, and which was rendered an object of pleasure to the citizens, by the number of swans and other water- fowl which frequented it. But the mud being suffered to accumulate in this basin, it was at length filled up, and vines being planted, it became a remarkably fruitful spot. This lake, and the temple just described, were the work of a number of Carthaginian captives, by whose la- bour were also built the public sewers, which were objects of admiration for their strength and size.

The inhabitants of Agrigentum were enfeebled by luxury and pleasure. Empedocles, as Dio- genes Laertius informs us, 1. 8. seg. 63. tome i. p. 532. ed. Meibom, reproached them ' with de- voting themselves every day to pleasure as if they were to die on the morrow, and yet building houses as if they were to live for ever.' They are, however, commended for their hospitality. Gellias, a rich citizen, is particularized by historians for his practice of setting porters at his gate for the purpose of inviting strangers to refresh them- selves in his house. On one occasion, when 500 horsemen applied to him for a lodging, they were all liberally entertained, and furnished during their stay with garments from his ward- robe. The Agrigentines were famous for their attention to the breeding of horses, Virgil, Mn. 1. iii. v. 705 ; and as an instance of their possessions in this way, Diodorus relates, that when a native had been crowned victor at the Olympic games, he was brought into the city with great pomp, attended by 300 chariots, each drawn by a pair of white horses, the property of the citizens.

With respect to the early history of this an- cient city, and even its founders, much obscurity

prevails. Strabo calls it an Ionian colony. Polybius says its first inhabitants were Rhodians. Thucydides, in his sixth book, relates that the Geloi, who were of Rhodian origin, built this city after having been about 100 years in Sicily. Some fabulous accounts even assign its erection to Daedalus, whose flight to this place we have already noticed.

*In the early period of their history the Agrigentines were formidable for their military enterprizes. In the fifty-second Olympiad, B. C. 571, the cruel Phalaris, whose name and brazen bull are familiar to most of our readers, usurped the sovereignty ; but after a reign of sw*een years shared the common fate of tyrants, and is supposed to have been put to death in his own bull. After his death, the people are said to have enjoyed their liberty about fifty years ; when Thero, a second usurper, ascended the throne ; who, by his justice, moderation, and valour, re-*

conciled the people to the obscurity of his origitv He joined his son-in-law Gelo, king of Syracuse, in a war against the Carthaginians; in the course of which, victory attended all his steps and Sicily saw herself for a time delivered from her African oppressors. Soon after his decease, his son Thrasydeus was deposed, and the old democratical government restored. Ducetius next disturbed the general tranquillity. He was a chief of the mountaineers, descendants of the Siculi ; and was an overmatch for the Agrigen- tines, while they were unsupported by alliances, but sank under the weight of their union with the Syracusans. Some trifling differences dis- solved this union, and produced a war, in which the Agrigentines were worsted, and compelled to submit to humiliating terms of peace. Re- sentment led them to embrace with joy the proposals of the Athenians, then meditating an attack upon Syracuse. Their new friends, how- ever, soon made them feel, that the sacrifice of liberty and fortune would be the price of their protection ; and this consideration brought them speedily back to their old connections. But this reconciliation and

its effects drew upon them the anger of the Carthaginians, by whom their armies were routed, their city taken, their race almost extirpated, and scarce a vestige of magnificence was left. Hannibal opened his campaign with the siege of this city, which lasted eight months. Many of the inhabitants removed during its continuance, and went to Gela ; those who remained were, by the orders of Himilcon, committed to the sword, and the riches of a city, containing 200,000 inhabitants, plun- dered by the conquerors.

Agrigentum lay fifty years buried under its own ruins; when Timoleon, after triumphing over the Carthaginians, and restoring liberty to Sicily, collected the descendants of the Agrigen- tines, and sent them to re-establish the dwellings of their forefathers. Their exertions were re- warded with astonishing success ; for Agrigentum rose from its ashes with such a renewal of vigour, that in a very short time we find it seizing a happy moment, when Agathocles and Cartilage had reduced Syracuse to the lowest ebb, and arrogating to itself supremacy over all the Sicilian republics. Xenodicus was appointed the leader of this arduous enterprize ; and had his latter operations been as fortunate as his first campaign, Agrigentum would have acquired such a pre- ponderance of reputation and power, that the rival states would not even have dared to attack it. But a few brilliant exploits were succeeded by a severe overthrow, and the Agrigentines were obliged to sue for peace to Agathocles. This commonwealth afterwards took part with Pyr- rhus, king of Epirus, in his attempt upon Italy ; and when he left Sicily to the mercy of het enemies, threw itself into the arms of Carthage. During the first Punic war, Agrigentum was the head-quarters of the Carthaginians, and was be- sieged by the Roman consuls, who after eight months' blockade, took it by storm, about the year B. C. 198. The chiefs of the Agrigentines were, by order of the consul Laevinus, first scourged with rods, and then beheaded. The common people were made slaves, and sold to

the best bidder. The spoils of the city were put up to sale, and the money returned to the public treasury. Livy, lib. xxvi. c. 40. torn. iii. p. 1138. ed Drakenb. Polybius, lib. i. p. 15 ??? 19. After this period, Agrigentum is seldom mentioned in history ; nor is it easy to ascertain the precise time of the destruction of the old city, and the building of the. new one.

The further history of this famous place, may oe reduced within a very short compass. From the best information, it appears that the inhabi- tants, or at least all that escaped the Roman severity, still adhered to their noble walls. The citadel still remained upon the mountain of Cocalus ; every requisite for defence, pleasure, and comfort of life still surrounded them ; a natural wall, formed by abrupt rocks, presented a strong barrier against assailants ; pleasant hills sheltered them on three sides without impeding the circulation of air ; before them a broad plain, watered by the Acrages, gave admittance to ihe sea-breeze, and to a fine prospect of that ele- ment ; the port, Emporium Agrigentinorum, lay in view at the mouth of the river, and pro- bably the road across the flat was lined with populous suburbs. Often, by means of its com- merce, the commonwealth was long able to re- sist the shocks of adversity, and to rise again with fresh splendour. It was, however, crushed in the general fall of Grecian liberty ; and the feeble remnants of its population were at length driven out of its walls by the Saracens.

The present town of Girgenti occupies the mountain on which the ancient citadel stood. At the north- east angle of the old limits, upon some foundations of large regular stones, a church has been erected ; a road appears hewn in the solid rock for the convenience of the votaries that visited this temple

in ancient days. It was then dedicated to Ceres and her daughter Proserpine, the peculiar patronesses of Sicily. Bishop Blaise has succeeded to their honours. ††† At the south-east corner, where the ground, rising gradually, ends in a bold eminence, which is crowned with majestic columns, are the ruins of a temple said to have been consecrated to Juno. To the west of this, stands the building com- monly called the Temple of Concord ; the stone of which, and the other buildings, is the same ns that of the neighbouring mountains and cliffs, a conglutination of sea-sand and shells, full of perforations, of a hard and durable texture, and a deep reddish brown colour. The Doric temple has many of its columns, entablature, pediments, and walls, entire; only part of the roof is wanting. It owes its preservation to the piety of some Christians, who have covered half the nave, and converted it into a church, consecrated under the invocation of St. Gregory, bishop of Gir- genti. In the same direction are rows of se- pulchres cut in the rock. Some masses of it are hewn into the shape of coffins; others drilled full of small square holes employed in a different mode of interment, and serving as receptacles of urns. One ponderous piece of it lies in an extraordinary position ; by the failure of jts foundation, or the shock of an earthquake it lias been loosened from the gene- ral quarry, and rolled down the declivity,

where it remains supine, with the cavities turned upwards. Only a single column marks the confused heap of moss-grown ruins be- longing to the temple of Hercules. It stood on a projecting rock above a chasm in the ridge, which was cut through for a passage to the port. In the same tract over some hills, is situated the Tomb of Thero. It is sur- rounded by aged olive-trees, which cast a wild irregular shade over the ruin. The edifice in- clines to the pyramidal shape, and consists at present of a triple plinth, and a base supporting a square pedestal : upon this plain solid founda- tion is raised a second order, having a window in each

front, and at each angle two Ionic pilasters crowned with an entablature of the Doric order. Its inside is divided into a vault, a ground room, and one in the Ionic story, communicating with each other by means of a small internal staircase. In the plain are seen the fragments of the tem- ple of TEsculapius ; part of two columns, and two pilasters, with an intermediate wall, support the end of a farm house, and were probably the front of the cells. Towards the west, are the gigantic remains of the temple of Jupiter Olym- pus, minutely described by Diodorus Siculus. It may literally be said that it has not one stone left upon another ; and it is barely possible, with the help of much conjecture, to discover the traces of its plan and dimensions. Diodorus calls it the largest temple in the whole island : but adds, that the calamities of war caused the work to be abandoned before the roof could be put on; and, that the Agrigentines were ever after reduced to such a state of poverty and de- pendence, that they never had it in their power to finish this superb monument of the taste and opulence of their ancestors. The length of this temple was 370 Greek feet ; its breadth, sixty ; and its height 120, exclusive of the foundations : the extent and solidity of its vaults and under- works, its spacious porticoes, and exquisite sculpture, were suited to the grandeur of the whole. ??? The next ruin belongs to the temple of Castor and Pollux ; vegetation has covered the lower parts of the building, and only a few frag- ments of columns appear between the vines. This was the point of the hill where the wall stopt on the brink of a large fish pond, spoken of by Diodorus : it was cut in the solid rock thirty feet deep, and water was conveyed to it from the hills. In it were bred a great quantity of fish, for the use of public entertainments ; swans, and various other kinds of wild fowl, swam along its surface, for the amusement of the citi- zens ; and the great depth of water prevented an enemy from surprising the town on that side. It is now dry, and used as a garden. On the opposite bank are two tapering columns, without their capitals, placed in a tuft of carob trees.

Monte Toro, where Hanno encamped with the Carthaginian army, before the Roman consuls drew him into an engagement that ruined his defensive plan, is a noble back ground to this picturesque group of objects. ••• The whole space, comprehended within the walls of this ancient city, abounds with traces of antiquity ; founda- tions, brick arches, and little channels for the conveyance of water; but in no part are any

ruins that can be presumed to liave belonged to places of public entertainment. This is the more extraordinary, as the Agrigentines were fond of shows and dramatic performances ; and the Romans never dwelt in any place long without introducing their savage games. See GIRGENTI. AGRIGINTINE SALT, in natural history, a kind of salt famous among the ancients for its not crackling in the fire as the common salt does.

AGRIGNAN, one of the Ladrone islands. It is mountainous, has a volcano, and is 50 miles in circumference. N. lat. 19•• 4', E. long. 146••.

AGRII, in ancient geography, a people of Ethiopia, called by the Greeks Cynamolgi.

AGRILIUM, in ancient geography, a town of Asia Minor, in Bithynia, to the south-east of Nicaea. AGRIMONIA, AGRIMONY, in botany, a genus of the dodecandria digynia class and order, of the natural order of senticosae, and of the rosaces of Jussieu; CAL. one-leafed, five cleft, acute, small, superior : PERIANTH, permanent, fenced with an outer calyx: COR. five, flat, emarginate petals, with the daws narrow, in- serted into the calyx ; STAM. capillary filaments, shorter than the corolla, inserted into the calyx ; ANTH. small, twin, and compressed ;

PIST. germ, inferior ; STYLES, simple, of the length of the stamina; STIGMAS, obtuse, no pericarpium; CAL. contracted at the neck, and hardened ; the seeds are two and roundish. The number of stamina is very uncertain, twelve, ten, seven. The agrimonia of Tournefort has the outer calyx growing to the inner ; two seeds ; stamina twelve to twenty ; fruit fenced with bristles. The agri- monoides T. has the outer calyx detached ; one seed ; stamina about seven. Of this genus there are five species.

AGRIMONOIDES, in botany, a species of agrimony. This plant flowers in April, and comes to perfection in May. It grows in some mountainous parts of Italy ; and is sometimes called pimpinella solio agrimonite.

AGRIMONY, HEMP. See EUPATORIUM. AGRIMONY, WATER HEMP. See BIDENS. AGRIOCARDAMUM, in botany, CAHDA- MINE, which see.

AGRIOCASTANUM, earth nut, pig nut. AGRIOCIN ARA, a species of wild artichoke. AGRIOCOCCIMELA, theprunus sylvestris, or plum tree.

AGRIOMELLA, the crab apple. AGRIOMELANZANION, in the botanical writings of the ancients, a word that has per- plexed many later botanists. The Arabian writers, Avicenna and Serapion, used the word bedengian, for the fruit of the pomum amoris, a kind of esculent nightshade, or solanum, called by the old Greek writers, as Theophrastus, &c. strychnus, and only distinguished from the other strychni, or nightshades, by its being described as wholesome, not poisonous. From this Arabic word bedengian, the Italians formed their word melanzaua, and the late Greek writers their me- lanzanion, which they used as the name of the same fruit. This, when the plant was cultivated in gardens, was probably larger and fairer than when it grew wild ; but, in this latter state, was not less used, and was distinguished by the term Sigriomelanzanion.

AGRION. See PEUCEDANVM

AGRIONARDUM, valerian.

AGRIONIA, in Grecian antiquity, festivals annually celebrated by the Bo3Otians in honour of Bacchus. At these festivals the women pre tended to search after Bacchus as a fugitive; and after some time, gave over their enquiry, saying, that he was fled to the Muses, and was concealed among them.

AGRIOPHAGI, from cryptoc, wild, and Qayu I eat ; in antiquity, a name given to those who were supposed to feed on wild beasts, such as lions, panthers, &c. Pliny and Solinus speak of Agriophagi in Ethiopia ; and Ptolemy of others in India on this side the Ganges.

AGRIOPHYLLON. See PEUCEDANUM.

AGRIORIGANUM, in botany, wild mar- joram.

AGRIOSELINUM, wild parsley.

AGRIPALMA, mother Wort.

AGRIPPA, an ancient nty of Apulia.

AGRIPPA, in midwifery, a name anciently ap- plied to children, born in an unusual or irregular manner ; particularly such as presented the feet instead of the head. This was, according to Pliny, because they were (aegre parti) born with dif- Jlculty. Salmasius derives it from the Greek aypav, venari, and VTTTTOC, equus, q. d. a hunter of horses, and Daventer has a particular chapter of agrippas, or infants coming with their feet foremost, which, according to him, is one of the most convenient and safe ways for a mature birth.

AGRIPPA, (Cornelius,) born at Cologne in 1486 a man of considerable learning, and by common report a great magician ; for the monks at that time suspected every thing to be heresy or sor- cery which they did not understand. He com- posed a Treatise on the Excellence of Women, to insinuate himself into the favour of Margaret of Austria, governess of the Low Countries : and accepted of the charge of historiographer to the emperor, which that princess gave him. The treatise on the Vanity of the

Sciences, which he published in 1550, enraged his enemies ex- tremely ; as did that of Occult Philosophy, which lie printed soon after at Antwerp. He was im- prisoned in France, for a satire he had written against the mother of Francis I. but was liberated, and went to Grenoble, where he died in 1534.

AGRIPPA, (Herod I.) the son of Aristobulus and Mariamne, and grandson to Herod the Great, was born A. M. 3997, three years before the birth of our Saviour, and seven years before the vulgar aera. After the death of Aristobulus his father, his grandfather took care of his edu- cation, and sent him to Rome to make his court to Tiberius The emperor conceived a great affection for him, and placed him near his son Drusus. Agrippa very soon won the graces of Drusus, and of the empress Antonia ; but Drusus dying suddenly, all those who had been much about him, were commanded by Tiberius to withdraw from Rome, lest the sight and presence of them should renew his afflic- tion. Agrippa, who had been extravagant, being thus obliged to leave Rome, overwhelmed with debt, retired to Massada, where he lived rather like a private person than a prince.

Herod, the Tetrarr.h, his uncle, who had married Herodias his s.stei-in-law, assisted him for some time, made him principal magistrate of Tiberius, and presented him with a large sum of money : but all this was not sufficient to answer the excessive expenses and profusion of Agrippa ; so that Herod growing weary of assisting him, and reproaching him with his bad O3conomy, Agrippa returned to Rome. Upon his arrival, he was received into the good graces of Tiberius, and commanded to attend Tiberius Nero, the son of Drusus. Agrippa, however, chose rather to attach himself to Caius Cali- gula, the son of Germanicus, as if he had some prophetic views

of the future elevation of Caligula, who at that time was universally beloved. The great assiduity and agreeable behaviour of Agrippa, so far engaged this prince, that he kept him constantly about him. But Agrippa being overheard one day by Eutyches, a slave whom he had made free, to express his wishes for Tiberius's death and the advancement of Caligula, the slave betrayed him to the emperor ; whereupon he was loaded with fetters, and committed to the custody of an officer. Tiberius soon after dying, and Caligula succeeding, he heaped many favours upon Agrippa ; changed his iron fetters into a chain of gold ; set a royal diadem on his head ; and gave him the tetrarchy which Philip, the son of Herod the Great, had been pos- sessed of, viz. Batanaea and Trachonitis. To this he added that of Lysanias ; and Philip returned into Judea to take possession of his new kingdom. ??? Caligula being soon after killed, Agrippa, who was then at Rome, contributed much by his advice to maintain Claudius in

Eossession of the imperial dignity, to which e had been advanced by the army. But in this affair Agrippa exhibited more cunning than honesty; for while he made a show of being in the interest of the senate, he secretly advised Claudius to be resolute, and not to abandon his good fortune. The emperor, as an acknow- ledgment for his kind offices, gave him Judea and the kingdom of Chalcis, which had been possessed by Herod his brother. Thus Agrippa became suddenly one of the greatest princes of the East ; and was possessed of as much, if not more territory than his grandfather. He returned to Judea, and governed it to the great satisfaction of the Jews. But the desire of pleasing them, and a mistaken zeal for their religion, induced him to commit an unjust ac- tion, which is recorded Acts xii. 1, 2, &c. for about the feast of the passover, A. D. 44. St. James the son of Zebedee, and brother ??? to St. John the Evangelist, was seized by his order and put to death. He also imprisoned St. Peter, till the festival was over, that he might then have him executed. But Peter being miraculously de- livered

the designs of Agrippa were frustrated. After the passover he went from Jerusalem to Caesarea, where he had games performed in honour of Claudius. Here the inhabitants of Tyre and Sidon waited on him to sue for peace. Agrippa being come early in the morning to the theatre, to give them audience, seated himself upon his throne, dressed in a robe of

silver tissue, worked in the most admirable manner. The rising sun darting full upon it, gave it an uncommon lustre, and therefore, when the king spoke to the Tynans and Sido- nians, the parasites around him began to say that it was the voice of a god, and not of a man., Instead of rejecting these impious flatteries, Agrippa received them with an air of compla- cency ; but the gratification of his vanity was disturbed by observing an owl above him. He had seen the same bird before, when he was in bonds by order of Tiberius ; and it was then told him that he should soon be set at liberty : but that whenever he saw the same bird a second time, he should not live above five days afterwards. He was therefore extremely ter- rified ; and died at the end of five days, racked with tormenting pains in his bowels, and de- voured with worms. Such was the death of Herod Agrippa, after a reign of seven years, in the year of Christ 44.

AGRIPPA, Herod, II. son of the preceding Herod Agrippa, was made king of Chalcis, but three or four years after, was deprived of his dignity by Claudius, who gave him other pro- vinces instead of it. In the war Vespasian car- ried on against the Jews, Herod sent him a succour of 2000 men; by which it appears, lhat though a Jew by religion, he was yet en- tirely devoted to the Romans, whose assist- ance indeed he wanted, to secure the peace of his own kingdom. He lived to the third year of Trajan, and died at Rome, A. C. 100. He was the seventh and last king of the family of Herod the Great. It was before him and Berenice his sister and wife, that St. Paul pleaded his cause at Caesarea.

AGRIPPA, (Marcus Vipsanius,) although of plebeian birth, was son-in-law to Augustus, and one of the

most considerable generals among the Romans. Augustus's victory over Pompey and Marc Antony was owing to his counsel. He adorned the city with the pantheon, baths, aqueducts, &c.

AGRIPPINA COLONIA UBIORUM, in ancient geography, now Cologne ; so called from Agrip- pina, who had a colony sent thither by the em- peror Claudius, to honour the place of her birth. See COLOGNE.

AGRIPPINA, the daughter of Germanicus, sister of Caligula, and mother of Nero ; a woman of wit, and of some learning, but excessively licen- tious. She was thrice married, the last time to Claudius, her uncle, whom she poisoned to make way for Nero her son. Nero afterwards caused her to be murdered in her chamber, when she bid the executioner stab her first in the womb, that had brought forth such a monster.

AGRIPPINIANS, in church history, the fol- lowers of Agrippinus, bishop of Carthage, in the third century, who first introduced and defended the practice of rebaptization.

AGRIPPINUS. See last article.

AGRISE', v. or > Ajruran, Sax. to crush ; by

AGGRISE'.] an easy transition, to af-

fright ; to astonish ; to make frightful ; to dread.

And powring forth their bloud in brutish wize,

That any iron eyes, to see, it would agrixe.

Spencer's Faerie Queen*, v. x. 28. 2 A 2

Yet not the colour of the troubled deep, Those spots supposed, nor the fogs that rise From the dull earth, me any whit agrue.

Draytoni Man in the Moon.

AGRIUM, in the materia medica of the an- cients, a name given to an impure sort of natrum. ?►► pure sort o’f this salt they called halmyrhaga

AGU

AGROT’ED. Cloyed, surfeited, saturated. Skinner and Tyrwhit. This honorable quene Philis doth him chere Her liketh wel his sport and his manere, But I am agroted here bcforne, To write of hem that inloue been forsworne.

Chaucer. The Legend of Good. Women. ancient geography, the most

The pure son ►►► - ►►► v~ o > AGBOTIRI, m ancient geograpuy, ►►►►►. ►►

and the coarse kind agrmm. The iormer they h promOntory of the island of Cyprus,

*, * THT_J:_ *l,rt li►►4*A►► ttvMYi I nrapp. j\j **>* ^- * ,_j ...i*u *u►► ►►~►►*

east of Limassol. by a very

It is connected with the con- tongue of land, now of th

nad from Media, the latter from Thrace

AGROM, in medicine, a disease frequent in

Bengal, and other parts of the Indies, wherein ^

the tongue chaps and cleaves in several places, . ►► t kept by the monks, who in the

is extremely rough, and sometimes covered with JUI►►►erc►►n ob►►ined permission to establish

*white soots. The Indians are much afraid o ^_IMO th*rej ^ well ►►s on mount Olympus,*

of keeping a great number of those

white spots.

this disease, which they attribute to extreme 1 conaiuon 01 ᵛ . 6.⬚⬚

of the stomach. Their remedy is, to dnnk some J^⬚⬚⬚⬚⬚⬚1^ huntin S8nakis, which had multi-*

chalybeate liquor, or the juice of mint. AGROP'E v. See GROPE.

For who so will it wel agtope, To hem belongeth all Europe, Whiche is the third parte euen Of all the worlde vnder the heuen.

Cower. Con. A. b. v.

AGROSTEMA, WILD LYCHNIS, or CAMPION, a genus of the pentagynia order, belonging to the decandria class of plants ; and in the natural method ranking under the twenty-second order, caryophyllei. The characters are: CALYX, a single leaved perianthium, leathery, tubular, quinquedentated, and persistent : COR. five un- gulated petals : STAM. ten subulated filaments ; the anthers simple : FIST, has an egg-shaped germen; the styli are five, filiform, erect, and the length of the stamina; the stigmata are simple : the pericarpium is an oblong covered capsule, having two cells and five valves : the

plied to an alarming degree ; and which, it is said, have no greater enemies than cats. See Sonnini's Travels in Greece and Turkey.

AGROUND' a. On ground. And headlong downe the master falles, and thrice

the keele aground,

The water whirld, and at the last the wilde sea swallow'd round.

Virgil's Mneitos, b. 1. By Thos. Phaer. With our great ships, we durst not approach the coast ; we having been all of us aground.

Sir W. Raleigh's Essays.

Say what you seek, and whither were you bound, Were you by stress of weather cast aground?

Drydens Mneid. The bear, presuming in his skill, Is here and there officious still, Till, striking on the dangerous sands ; Aground, the shattered vessel stands.

Gay. Fable 5.

A-GROUND, in maritime affairs, the situation a ship whose bottom, or any part of it, rests on the ground. AGRYLA, in ancient geography, a city of

seeds are numerous and kidney-shaped ; the re- of a ship whose bottom, or any part of it, rests

ceptacula are as many as the seeds, the interior upon the ground.

ones gradually longer. The most remarkable AGRYLA, in ►► " ►► ►►►►► T>*

species are: 1. The Agrostema coronaria, or Sardinia, founded, according to Stephen Byz, by

single-rose campion. 2. The agrostema githago, a colony from Athens.

hairy wild lychnis, or common campion, which AGRYPNIA, aypvTrvia, Gr. among physi-

Britain. And 3. The agrostema jovis, or um- torn of nervous and febrile diseases. It is other-

belliferous mountain campion, which grows na- wise called, vigilse, pervigilium, &c. In the

turally upon the Helvetian mountains. Greek church, it is used for the vigil of any of

AGROSTIS, BENT-GRASS, in botany, a genus the greater feast days, observed by the monks

of the triandria order, belonging to the digynia and

clergy, class of plants ; and in the natural method, ranking under the fourth order, gramina. The characters are : CAL. a one-flowered, two-valved, pointed gluma, rather less than the corollas COR. two-

AGUACAGUA, a town of Guiana, of South America, situated on the Caroni, which enters the Orinoco. Long. 62►►. 42'. W. lat. 8►►. 22'. N. AGUACATAL, a town of South America, in valved, and pointed. STAM. three capillary the province of Antioouia, on the river Cauca.

AGUACATENANGO, a town of South Ame- rica, in the kingdom of Guatemala. Long. 91►►. 57". W. Lat. 16►►. 18'. N.

AGUADA, a town of Porto-Rico, situated in a bay and on a river of its name. Long. 67►►. 6 . W. Lat. 18►►. 25'. N.

AGUADA', a river of Brazil, in the province of Rio Grande, which enters the sea close to Cape San Roque.

AGUADA, a point of the province ofCarthagena,

tion of grasses. John Schenchzer composed a which forms the mouth of the gulf of Darien, learned and laborious work under this title, con- South America, taining an exact description of about 400 differ- ent species of grass, and yet the subject is still

filaments, which are larger than the corolla. The antherae are forked. PIST. a roundish germen ; the styli are two, reflected and villous ; the stigmata hisped longitudinally. The pericarpium is the corolla growing to the seed, not gaping. The seed is one, globular, and pointed at both ends. There are fifteen species ; eight of them natives of Britain.

AGROSTOGRAPHIA, from aypuxru;, grass, and ypa^rj, description, the history or descrip-

See GRASS.

AGUADA, CAPE, a cape on the western coast of East Florida, in the gulf of Mexico. Long. 82□□. 15′. W. Lat. 26□□. 22′. N

AGUADILLA, a river of South America, in the province of Terra Firma, which enters Chagre near its estuary.

AGUAGUIN, in botany, the name of a shrub among the Africans, who regard it as a balsamic and anti- vulnerary. The leaves of this shrub re- semble those of our common lilac ; they grow alternately, and stand upon foot-stalks of half an inch long ; and when held up to the light, shew a fine texture of the smaller veins. Philosophical Transac. N. 232.*

AGUAPECACA, in ornithology, the name of a Brazilian bird of the moor-hen species. It is of the size of a pigeon, very long-legged, and has a beak like that of the gallinaceous kind. Its back and the upper part of its wings are brown, and in each wing is a sharp horn, or prickle, serving for defence.

AGUARA-PONDA, in botany, a plant other- wise called viola spicata Brasiliana. It grows to the height of a foot and a half, or more, with a smooth, round, green, and jointed stalk : the top of the stalk bearing an ear a foot long, smooth, and covered with flowers of a fine violet azure, or the colour of our viola martia, consist- ing of five roundish leaves. At each joint come forth four, five, or more, narrow, serrated, pointed, green, and unequal leaves. The whole flower is not unlike the viola martia, and has somewhat of its smell. The root is straight, of a moderate thickness, and shoots out into abun- dance of lesser ones, and these again into fila- ments. There is another kind, distinguished by the wideness of its ear of flowers, which repre- sents a helmet of a green colour. It is

marked with cubic pits, from whence proceed azure flowers.

AGUARA-QUIVA, in botany, a Brazilian plant, thought, by Ray, to be the solanum vul- gare, or common night-shade.

AGUARICO, a river in the province of Mai- nas, South America, which descends from the grand Cord:llera of the Andes, near the town of San Miguel de Ibarra, washes the territory of the Sucumbios Indians, and enters the Napo, in lat. 1►►. 23'. S. Its sands contain much gold.

AGUAS BELLAS, a town of Portugal, in Estremadura, with a district of two parishes. It is in the circle of Thomar. Also, a river of South America, which enters the Parana from the W.

AGUAS CALIENTES, a city of New Spain, South America, in the kingdom of New Gallicia. It contains three convents, and about 500 Spanish families, besides mulattoes, and those of a mixed breed. The natural curiosities belonging to this place are two warm springs, about ten yards apart, each affording an abundant supply of water, which is impregnated with copper, and is more than thirty-three degrees above blood heat. It is 140 leagues N. N. W. of Mexico, and thirty-five of Guadalaxara. Long. 101►►. 51 . 30". W. ; lat. 22►►. 2'. N. Also a settlement on the coast of Venezuela.

A^GUE, v. & n. ^ Gothic, agis, terror ; an

A'GUED, > intermitting fever, in which

A'GUISH. 3 cold fits are succeeded by

hot ; the cold fit is the ague, the hot the fever.

For I will bring vpon you fearfulnesse, swellyng of body, and the burnynge agew, to consume youre eyes and gendre sorrow of hert.

Bible, 1539, Leuit. xxvi.

This Alastor hath left nothing unsearched or nn- assailed by his impudent and licentious lying in his aguith writings, for he was in his cold quaking fit all the while. Ben Joruon'⬚⬚ Discoveries.

All hurt behind, backs red, and faces pale, With night and agued fear !

Shakipeare't Coriolanus. Our castle's strength

Will laugh a siege to scorn. Here let them lie, Till famine and the ague eat them up.

Shakspeare. Though

He feels the heats of youth, and colds of age, Yet neither tempers nor corrects the other ; As if there were an ague in his nature, That still inclines to one extreme. Den. Sophy. AGUE, in medicine, a disorder belonging strictly to the class of fevers, and consisting of paroxysms recurring at stated periods, with lon- ger or shorter intervals of apyrexia. It is in- cluded in the febres intermittentes of nosological writers. But with personal recollections of its cold embrace, we shall subjoin a popular descrip- tion of it ; and a few of the best remedies. ⬚⬚⬚

An ague paroxysm is divided into the cold, the hot, and the sweating stages. The cold stage is marked by yawning, lassitude, coldness of the surface of the body, shaking or trembling of the limbs, paleness of the countenance, and con- striction of the skin ; more or less nausea, and sometimes vomiting, a weak and small pulse, and not unfrequently a considerable degree of stupor ; together with an irresistible shaking of the teeth and jaws. We have sat shivering with this disorder before a large fire, in the height of summer. To this succeeds the hot stage, in which there is a preternatural degree of warmth over the whole body, accompanied by a redness and turgescence, together with a strong and full pulse, great irritation, and often some degree of delirium. These symptoms are followed by the sweating-stage, in which there is a profuse ex- halation from the

pores of the skin, with a flow of urine, depositing a copious sediment, of a lateritious or brick-dust appearance. By these evacuations of sweat and urine, the febrile symptoms are carried off, and the patient gene- nerally falls into a refreshing sleep, from which he awakes without any remains of indisposition, except a slight degree of languor and debility. He then continues capable of sitting up and going about, with tolerable appetite and spirits, until the next return of the paroxysm. Accord- ing to the length of the apyrexia, or intermission between one febrile paroxysm and another, agues are denominated quotidians, tertians, or quar- tans; which see under their respective titles. Sydenham distinguished them, from the season of the year in which they appeared, into vernal and autumnal agues ; the former of which are always more easily cured than the latter. By others they have been distinguished into simple and complicated, regular and irregular, mild and malignant, &c. Of all agues or intermittents, the quartans are the most obstinate, being gene- rally accompanied with more or less of visceral

obstruction. Hence they are apt to terminate in dropsy, and thus sometimes prove fatal. In general, however, it may be said of agues, that they are rather obstinate than dangerous dis- orders.

They occur chiefly in low situations, where there are shallow stagnant waters. Hence their frequency in Holland and Flanders, and in the flat marshy parts of some counties in England, such as Lincolnshire, Cambridgeshire, Kent, &c. For the same reason they are very common in America, the East and West Indies, &c. Within our personal knowledge,the drainage and improve- ment ot a district of this description, has almost banished the complaint. The exhalations which arise from stagnant muddy waters

(marsh mias- mata, as they are teimed) in these situations, are considered as the exciting cause of agues. Hence the prophylactic measures are obvious ; viz. to avoid or remove from such situations. Where this cannot be done, the body should be protected from damp by proper woollen cloth- ing ; fatigue, and sudden alternations of heat and cold should be avoided, and the whole system be fortified by proper exercise and a somewhat generous diet.

Agues are cured by medicines which, at the same time that they exert a tonic action, pro- duce and keep up an impression upon the sys- tem, greater than that communicated by the causes which occasioned the disease. Such medicines are the Peruvian bark, various bitter and astringent drugs (given alone or in combi- nation with opiates and aromatics,) certain me- tallic salts, such as vitriolated iron, vitriolated copper, vitriolated zinc, &c. See Lind on Diseasei of Hot Climates, Appendix, p. 308, et seq. But as these medicines are only em- ployed during the intermissions, it will be pro- per first to mention what should be done during the fits.

It will be sufficient in the cold stage, to cover the patient with bed-clothes, and to give some warm tea with a tea-spoonful of hartshorn drops ; or some weak warm wine and water, with the same quantity of hartshorn. In the hot stage, an antimonial, joined with saline medicines and opiates, will be proper, in order to bring on a perspiration, whereby the fit is carried off. The opiate, in conformity with Dr. Lind's directions, should be given in a full dose ; viz. fifteen or twenty drops of laudanum in some lightly aromatic draught, or in case of costiveness, in an ounce or two of aloetic wine. The sweating stage will thus be accelerated ; and as soon as it is over, the Peruvian bark should be freely ad- ministered, in doses of one or two drachms, every two hours. In some instances, however, it may be previously necessary to cleanse the stomach by an emetic, and the bowels by a gen- tle cathartic. The bark is then to be continued throughout the whole intervals of apyrexia, un- the next accession of the paroxysm. This method is to be persisted in until

the disorder is removed; and even for some time after, in order to prevent a relapse. The bark may be given in various vehicles, in combination with aromatics and other additions, according to circumstances.

For examples of which see Thesaur. Med. or New Collection of Medical Prescriptions, third edition, under the class of tonics.

If the Peruvian bark disagree with, or is re- fused by the patient, combinations of other tonics, and bitters may be given; such as pow- ders composed of dried chamomile flowers and myrrh, each a scruple ; prepared kali ten grains, or boluses composed of alum fifteen grains ; nut- meg and extract of gentian, each ten grains. These may be administered every five or six hours during the intermissions. Some agues have been cured by giving a quarter of a grain of the cuprum vitriolatum every three or four hours during the apyrexia ; this, however, is a very rough medicine, and commonly produces too much sickness to be persisted in. Vitriolated zinc has been employed with better success, in doses of three grains every fourth hour. Some practitioners recommend certain preparations of arsenic ; but while so many other powerful and safer remedies present themselves, arsenic (in our opinion) should rarely be resorted to. The best authors who, in this country, have written upon agues, are Sydenham, Morton, Cleghorn, Lind, Fordyce; also Wilson on Febrile Dis- eases. Among foreigners, Torti, Werlhof, Quaria, &c.

AGUE-CAKE, a name sometimes given to a hard tumor on the left side of the belly, lower than the false ribs, said to be the effect of inter- mitting fever.

AGUE-DROPS. See ARSENIC.

AGUE-TREE, sometimes written corruptly, AGUE-PER, is a name given by some to sassafras, on account of its febrifuge virtue.

AGUEPERSE. See AIGUEPERSE.

AGU'ERRY, v. Fr. aguerrir, to accustom to the hardships of war ; to discipline troops.

An army the best aguerried of any troops in Europe that have never seen an enemy. Lyttleton.

AGUESSEAU, (Henry Francis D'), chan- cellor of France, was born at Limoges in 1668, of an ancient family of Saintonge. Voltaire speaks of him as the most learned magistrate his country ever produced. He received the first rudiments of his education from his father, and his taste for poetry from the society of Boileau, Racine, and other eminent writers, with whom he associated at an early period of life. Having held the office of advocate-general of Paris for ten years, he was appointed procureur-general in 1700 ; and in this situation distinguished himself by introducing several excellent jurisprudential regulations. He also directed a particular at- tention to the hospitals, and to the hardships oc- casioned by the scarcity in 1709 ; and was the strenuous defender of the liberties of the Gallican church, in opposition both to Louis XIV. and the chancellor Voisin, who solicited his concur- rence in favour cf the bull Unigenitus. After the death of Voisin, and in the regency of the duke of Orleans, he was made chancellor ; and performed the duties of his office with eminent wisdom and success. In his resistance of the financial project of law, he prevailed for some time ; but when the regent determined to adopt

it, he was constrained to retire to his country seat at Fresnes ; but was recalled in 1 720. He was again deprived of his office in 1722, recalled by cardinal Fleury in 1727, and re-invested with tne seals in 1737, which he held till his death. From the year 1729 to 1749 he was sedulously employed in reforming the laws, and remedying the notorious abuses that disgraced and ob- structed their administration. But in this exten- sive and laborious employment his progress was slow, and his conflicts with opposing interests so great as to produce great apparent indecision in his judgment. His apology will remind our readers of what, it is possible, might be the lan- guage of a living and most upright English judge : ' When I recollect,' said he, ' that the decree of a chancellor is a law, I think myself permitted to take a long time for consideration.'

His life, though assiduously occupied, was pro- longed by his temperance and equanimity ; but in the year 1750 his increasing infirmities ad- monished him of the necessity of withdrawing from public employments; and in 1751, he closed his life at the advanced age of eighty-three years.

Besides' the languages of antiquity, Aguesseau was acquainted with all the principal modern ones ; and to his knowledge of the history of all ages and nations, he added that of jurisprudence in its most extensive sense. He never sought office ; but always manifested a disposition su- perior to the honours which his talents and merit claimed, and a desire to be useful rather than to aspire after power. Of his frugality, and of the various emoluments annexed to the dignities he possessed, the only fruit that remained was his library, in the improvement of which he limited himself to a certain annual expence. In the period of his retirement, which he called 'the fairest days of his life,' he devoted himself to the maturing of his plan of legislation, to the educa- tion of his children, and to a variety of literary pursuits, among which were mathematics and the belles leitres ; and these, together with agricul- ture, he deemed his recreations in the intervals of his severer occupations. When the public however demanded his services, he surrendered the satisfactions of retirement and the pleasures of domestic life. Having in 1694 married Anne le Febure d'Ormesson, it was said on this occa- sion, that virtue and the graces were now first seen in alliance ; but he had the misfortune to lose her in 1735. His grief corresponded to the affection that subsisted between them; but he hastened to devote himself to the functions of his office ; alleging, ' that his services were due to the public, and it is not just,' said he, ' that it should suffer by my domestic affliction.' It is said that he never passed a day, from his child- hood, without reading some parts of the scrip- tures ; and was heard to say, that this was the balm of his life. Of his works nine volumes 4to. have been published. In these, he is said to have thought like a

philosopher, and spoken as an orator. His style is chaste and harmonious, but deficient in warmth. When he once con- sulted his father on a discourse which he had taken pains to compose, and which he wished farther to improve, his father gave his opinion :

‘ the fault of your discourse is its being too ele- gant ; it will certainly be less so if you touch it again.’ Nouv. Diet. Hist. Biog. Diet.

AGUGLIA, in ichthyology, the name given by the Italians to the acus ofOppian, called in English the gar-fish.

AGUJA POINT, part of the land of Terra Firma, which projects farther into the sea, be- tween Santa Marta and Cape Chichibacoa. Also of a low point on the coast of the South Sea, in the province of Piura, Peru.

AGUIGNAN,,or island of Holy Angels, an island in the South Pacific Ocean, three miles in circuit, and a mile distant from the south- western point of Tinian. It was visited by Ser- vi tores, a Spanish priest, in the year 1669. Lat 14►►. 48’. N.

AGUILA, a town and river in the province of Habat, in the kingdom of Fez, subject to the emperor of Morocco.

AGUILA CAPE, a point or cape of one of the Falkland Isles, so named from having been dis- covered by the French frigate the Aguila.

AGUILA, VILLA GUTTIEREZ DE LA, a town of Mexico, in the intendancy of Guadalaxara, for- merly very considerable, but now much decayed. It is nine leagues E. of Xeres,

AGUILAR, a town of Spain, in the kingdom of Navarre, 24 miles W. of Estella.

AGUILAR-DEL-CAMPO, a town of Spain, ii? Old Castile, on the Alhama.

AGUILER, from aguille, a needle, French, t needle-case.

AGUILLANEUF, or AUGILLANEUF, a form of rejoicing used among the ancient Franks on the first day of the year. The word is com- pounded of the French a, to, gui, misleto, and I' an neuf, the new year. Its origin is traced from a ceremony of the druids, who used to go early in December, which with them was reputed a sacred month, to gather misleto of the oak in great solemnity. The prophets marched in the front, singing in honour of their deities ; after them came a herald with a caduceus in his hand ; these were followed by three druids a- breast, bearing the things necessary for sacrifice ; last of all came the chief or arch druid, accompa- nied with the train of people. The chief druid climb- ing the oak, cut off the misleto with a golden sickle, and the other druids received it with a white cloth ; on the first day of the year it was distri- buted among the people, after having blessed and consecrated it, by crying, a gui 1' an neuf, to proclaim the new year. This cry was conti- nued in Picardy, with the addition of plantez, plantez, to wish a plentiful year. The name aguillaneuf was also given to a sort of begging for church tapers, practised in some dioceses, on new year's day, by troops of young people of both sexes, having chiefs, &c. It was attended with various ridiculous ceremonies, as dancing in the church, &c. which occasioned the synods to suppress it.

AGUILLES, or AUGUILLES, cotton cloth, manufactured at Aleppo.

AGUILLON, or AGUILLONIUS, Francis, a Jesuit, born a►►t Brussels, at the close of the six- teenth century, was rector of the Jesuits college at Antwerp, and eminent for his skill in math-*

He was the first who introduced that writings^ be ranked along with those of Solo- science among the Jesuits in the low countries : entitled, '

Opticorum, lib.

His book on optics,

vi. Philosophicis juxta ac Mathematicis utiles,'

mon and Lemuel.

AGURAH, mUK, Heb. in Jewish antiquity the thirtieth part of a silver shekel. The agurab

was printed at Antwerp in 1613, fol. and he was is the same with gerah, and keshitah. The sep-

employed in finishing a treatise on ' Catoptrics tuagint renders it oj3o\oQ.

and Dioptrics,' at the time of his death, which AGURIUM, or AGYRIUM, in ancient geo-

happened at Antwerp in 1617, in the 50th year graphy, a town of Sicily, in the Val di Demona,

of his age. Aguillon is also said to have written near the river Semetus. It was the birth-place

a treatise on ' Projections of the Sphere.' He

understood several languages, and his judgment

was as accurate as his learning was extensive.

Under severe paroxysms of the asthma, to which

he was subject, he is reported to have often said :

' Let God's will be done ××× I submit to it ××× I am

willing to form myself absolutely upon the divine

of Diodorus Siculus, as he himself testifies ; but he calls it Argyrium. It is now called S. Phi- lippo d' Arginone.

AGUSADURA, in ancient customs, a fee due from vassals to their lord, for sharpening their plowing

tackle. Anciently, the tenants in some manors were not allowed to have their rural

pleasure I have now the torments'which I often implements sharpened by any but whom the lord

wished for, and desired of God.'

AGUIR, a small .town of Portugal, in the Provedoria of Beja, in Alentejo, containing about 450 inhabitants.

AGUIRRA, (Joseph Saenz de,) a Benedictine, and one of the most learned men of the seven- teenth century, was born in 1 630. He was censor

and secretary of the supreme counsel ofthelnqui- professor Tromsdorff has designated a supposed sition in Spain, and interpreter of the scriptures new earth, discovered by him in 1800. It bears in the university of Salamanca. He printed three volumes in folio upon philosophy, a com- mentary on Aristotle's ten books of Ethics, and

appointed ; for which an acknowledgment was to be paid, called agusadura, which some take to be the same with what was otherwise called reillage; from the ancient French reille, a plough- share.

AGUSAGE. See last article.

AGUSTINI, in mineralogy, a term by which

Annales de

other pieces. He died at Rome in 1699.

AGUIRRA, a river of Guiana, South America, which rises about fifty miles north of the great

a great resemblance to alumina. Chemic. xxxiv. p. 133.

AGUTI, in zoology, an American animal, much resembling the Guinea pig, having the characters of the rat kind, with the voice and hair of the hog.

The hairs are very hard, thick,

river Orinoco, in the territory of the missions of and glossy, and are of a mixed colour, of a reddish

the Capuchins, and descending by the mountains of Itamaca, falls into the Orinoco, on the south side, just at its mouth. Its navigation is greatly impeded by the tall trees which line its banks ; so that though formerly accessible to schooners and brigs, it can now hardly be navigated, ex- cept by small shallops.

AGUIRRE, a river of South America, in Ve- nezuela, which, rising near the city of Niura, runs south, and enters the Sarara. AGUISE', v. See GUISE. As her fantastic wit did most delight, Sometimes her head she fondly would aguise With gaudy garlands, or fresh flowers dight About her neck, or rings of rushes plight.

Faerie Queene.

Then gan this crafty couple to devise, How for the court they might themselves aguise,

Spenser's Mother Hubbard's Tale. AGUL, in botany, a synonime of the hedysa- rum. See HEDYSA.RUM.

AGUR, the son of Jakeh, the author of the thirtieth chapter of the Proverbs, a person of

and brown, with more or less black ; those on the belly, however, are yellowish ; its head and whiskers are like those of the rabbit kind, but that of the nose is sharper, and the upper ch^p longer than the under one, as in the hog ; the upper lip is split as in the hare, and the legs are naked, or have at the utmost only a few hairs on them; the fore feet have four toes, and the hinder ones six, and these are much longer than the fore legs ; its tail is very short, its eyes prominent, and its voice altogether resembles the grunting of a hog. It is a very voracious animal, devour- ing its food with extreme eagerness, and using its fore feet for hands, in the manner of the squir- rel. It runs very

swiftly, and is very expert at digging, so that it soon buries itself in the earth. When provoked, it raises all the hair of its back upright, and strikes the earth with its hinder feet.

AGUTIGUEPA obi Brasiliensibus, in medi- cine, the arrow-root, or sagittaria alexipharmaca of the West Indies.

AGUTI TREVA, insulte marignanae, in bo-

whom neither sacred nor profane history records tany, a plant mentioned by De Laet. It has the

any thing more than is contained in the first leaves of the orange-tree, only thinner, a dewy

verse of that chapter. On this account he has ” ‘ - ‘

become the subject of much fruitless conjecture

flower, a large fruit, with a greenish rind, which contains kernels like those of the pomegranate,

and idle controversy, among commentators; thin, sweet, and not ill-tasted, some of whom confound him with Solomon, AGYEI, in antiquity, a kind of obelisks con- while others make him altogether an ideal being, ‘ by telling us, that the word agur signifies a con- gregation. The emphatic and sublime queries in the fourth verse, and the much admired prayer for a moderate competency, equally removed from

secretated to Apollo, or Bacchus, or both, and placed in the vestibulus of houses, for their se- curity. They were generally huge stones, and sometimes timber, having either a circular or

ncy, equally removed from square basis, and terminating in a point at the the extremes of poverty and riches, in the eighth top and ninth, sufficiently prove the title of his AGYLLA, Cervateri, in ancient geography,

a town of Etruria, near the sea, so called by the Pelasgi, who came hither from Thessaly. Strabo says, it was afterwards called Caere, from the Lydians hearing the inhabitants frequently re- peating to them the Greek expression xatP►►> *►►► e- rejoice. Others, thinking this etymology more fanciful than just, deduce Agylla from gillah, water, as they had fountains in the neighbour- hood ; and Caere, might be formed from cari, or cariah, a town, in the language of the Lydians. Tarquin's family was banished to this town ; and hither the vestals retired, when, in the year 363, the Gauls laid siege to Rome. The laws and police of this city are much commended. It was one of the first cities which became muni- cipal. Tt was known only by its baths in Strabo's time.

AGYLL/EI, in ancient history, a denomina- tion given to the Pelasgi, in Etruria. Here they preserved, with little alteration, the manners and religion of the ancient inhabitants of Greece ; and furnished considerable fleets. They amassed a treasure at Delphi, by transmitting thither a tenth of their maritime profits ; and by their commerce, acquired a degree of power, which rendered them important allies, or formidable enemies to their neighbours. Herodotus says, that their power was considerable in his time ; and that, in consequence of an oracle, they had instituted funeral sacrifices and annual games, which they then celebrated. These people, who were sometimes called Tyrrhenians, sent succour to the Athenians in the Sicilian war, not long before the ruin of the Veii by the Romans. They formed an alliance with the Romans, which gave them all the advantages belonging to Roman citizens, without the charges attending them ; and they became, under the name of Ca;rites, the third order of the republic. The Caerites bore arms in the Roman army, and were almost always united to the Romans, as Livy, lib.

vii. c. xx. informs us ; being considered not merely as allies, but as a part of the nation. At length, deserted by the Roman marine, which found more spa- cious and convenient ports ; and losing its com- merce, Caere declined, and the inhabitants, who were Romans, were indiscriminately blended with the other citizens.

AGYNEIA, formed of a, priv. and yvvn, a wife, in botany, a genus of the monoecia mona- delphia class and order, according to Martyn ; but in Gmelin's Linnaeus, of the triandria mono- gynia, of the natural order of tricoccae, and the euphorbiae of Jussieu. Its generic characters are, that the male flowers are below the female ; CAL. six-leaved : the leaflets oblong, obtuse, equal, and permanent ; no corolla ; in the male, instead of filaments, a column shorter than the calyx ; three or four antherae, oblong, growing to the column below the top ; in the female flowers, the germ of the size of the calyx, sub-ovate, obtuse, perforated at top with a six notched hole ; neither style nor stigma ; the pericarpium sup- posed to be a tricoccous capsule. There are two species, viz. 1. A. impubes, with leaves smooth on both sides. 2. A. pubera, with leaves downy underneath ; both are natives of China.

AGYNIANI, AGYNII, or AGYNNENSES, from a, negative, and yvvij, a woman, in church his-

tory, a sect who condemned the use of flesh, and marriage, as not instituted by God, but intro- duced at the instigation of the devil. They are said to have appeared about the year 694.

AGYRINENSES, or AGYRINI, the inhabi- tants of Agurium.

AGYRIUM. See AGURIUM. AGYRT^E, aywproi, Gr. in antiquity, a kind of strolling impostors who, like our gypsies, wandered about the country, telling fortunes at rich men's doors, pretending to cure diseases by charms, sacrifices, and other religious mysteries ; and to expiate the crimes of their deceased an- cestors by the virtue of certain odours

and fumi- gations; to torment their enemies by the use of magical verses, &c. See .&RUSCATORES.

AH, interj. This may be denominated a word in the vocabulary of nature, common at least to several languages, and expressing sometimes dislike and censure, contempt and exultation, compassion and complaint.

A hi sinful nation, a people laden with iaiquity, a seed of evil doers, children that are corrupters, they have forsaken the Lord. Isaiah, i. 4.

Let them not say in their hearts, Ah! so we would have it : let them not say, we have swallowed him up. Psalm xxxv. 25.

Ah me ! the blooming pride of May, And that of heauty, are but one : At morn both flourish bright and gay, Both fade at evening, pale and gone. Prior. In youth alone, unhappy mortals live, But ah ! the mighty bliss is fugitive : Discolour'd sickness, anxious labour come, And age and death's inexorable doom.

Dry den. Virg. Gear. In goodness, as in greatness, they excel, Ah! that we lov'd ourselves but half so well.

Dryden. Juv.

Nymph of the grot, these sacred springs I keep, And to the murmurs of these waters sleep ; Whoe'er thou art, ah ! gently tread the cave, Ah ! bathe in silence, or in silence lave. Pope's Translation of a Latin Inscription on an an- cient Statue placed near a stream of water.

AHA, or AHU, in zoology, a name given by the Persians to the cervus pygargus of the Lin- naean system, or the tail-less roe of Pennant. It inhabits the lofty mountains of Hyrcania, Russia, and Siberia, beyond the Volga ; and at the approach of winter descends into the plains and becomes hoary : it is called by the Russians dikeja roza, and by the Tartars saiga. It resem- bles the roe, but is much

larger, being of the same deep red colour, with a large bed of white on the rump and btittocks, extending up the back: the fur is thick, in spring rough and erect, on the limbs and belly yellowish; the sides of the under lip and the space about the nose are black; but the point of the lip is white ; the hairs of the eye-lids and round the orbits are long and black ; the horns are very rugged at the bases, and full of knobs : the ears are covered on the inside with a very thick white fur.

AHAB, DSHK, Heb. i. e. the brother's father, the son of Omri, king of Israel, succeeded his father, A. M. 3086. Of this monarch, it is difli- cult to determine, whether his wickedness and impiety, in establishing idolatry, and persecuting

the true prophets of the Almighty, notwith- standing repeated warnings and extraordinary visitations both of judgment and mercy from heaven, or his weakness and folly, in being thus led to his destruction by the advices of a beautiful but abandoned woman, were greatest. His mar- riage with Jezebel, his multiplied idolatries; the repeated warnings of Elijah and other pro- phets ; the extraordinary famine of three years' continuance; the still more extraordinary cir- cumstances attending the restoration of fertility and plenty ; his discontent at Naboth's refusing to sell his patrimonial vineyard ; his wicked queen's iniquitous murder of that honest Israelite, under colour and form of law; his seizure of the forfeited vineyard, with the dreadful judgments denounced against the whole royal family in consequence; and the complete execution of the threatened vengeance by the extirpation of the whole race, are recorded in the I and II books of Kings, and II Chronicles, and are well known to every reader of the scriptures. ††† Ahab was slain at Ramoth Gilead, A. M. 3117, in the thirty-first

year of his reign, and A. A. C. 887.

AHAB, the son of Kolaiah, a false prophet, who, along with another, named Zedekiah, se- duced the Jewish captives at Babylon, with de- ceitful hopes of a speedy deliverance, and thus excited their enmity against Jeremiah. But their pretences to inspiration were severely punished, for Nebuchadnezzar gave them the death he intended for Shadrach, Meshach, and Abednego, or rather a more cruel one, for it is said. Jer. xxix. 22. that he roasted them in the fire.

AH.&TULA, the trivial name of a species of the coluber. See COLUBER.

AHALOTH, in the materia medica, a Hebrew name used by some writers for the lignum aloes, or aloes wood.

AHANIGER, in ichthyology, a name given by Albertus, and others, to the fish acus vulgaris, or gar fish. The shape of this fish, which is very long and slender, has caused it to be confounded with the syngnathus, or tobacco-pipe fish, called also acus ; but they differ extremely when ex- amined ; that being a true species of the syngna- thus, and this of the esox or pipe.

AHANTA, a kingdom on the Gold Coast of Africa, extending from the Ancobra to the Cha- mah ; bounded on the west by Appollonia, and on the east by the Fantee territories. It is the richest, and in every respect the most improved district upon this coast. The sugar cane in par- ticular grows to a great size. It produces also many kinds of excellent timber, one of which is little inferior to mahogany. The country con- tains mines of gold, but these are placed under Fetiche, from the idea that the working of them would corrupt their industrious habits. It is procured, however, of fine quality, from the in- land countries of Warsaw and Dinkara. The coast contains many convenient creeks and har- bours. The people are on the whole well dis- posed, and treat Europeans with respect, when their behaviour merits it. The government is a monarchy, but under very

strict limitations. The principal towns are Axim, Dixcove, and Suc- condre.

AHASUERUS, in scripture history, king of Persia, the husband of queen Esther, to whom the Jews were indebted for a singular deliver- ance from extirpation, which they commemorate to this day, by an annual feast, i. e. that of PURIM, preceded by what is called the fast of Esther. Scaliger supposes Xerxes to be the Persian monarch intended by the sacred histo- rian, who had a queen named Harrestris, of which he regards Esther as a corruption. Nor do we know that the fact which Herodotus supplies, of Xerxes having a son by Harrestris in the seventh year of his reign, is, in itself, any proof to the contrary. According to Prideaux, Conn. v. i. p. 361, &c. the Ahasuerus of Scripture was Ar- taxerxes Longimanus; the LXX. constantly using the word Artaxerxes, as he alleges, for that monarch's name, as do the apocryphal additions to the book of Esther. And Josephus asserts, that Artaxerxes Longimanus was the protector of his nation on this occasion. But archbishop Usher and F. Calmet contend, principally from the chronology of the period, that this Ahasuerus was Darius Hystaspes : and we incline to this opinion, as on the whole the most probable. Only when these learned writers suppose that Atossa was the Vashti of scripture, they seem to forget, that the princess of the former name is said to have retained her influence over Darius until his death, to have outlived him, and to have obtained the succession to the crown, for her son Xerxes ; whereas Vashti was finally removed from the king's presence according to Esther, i. 19. and resigned her station to Esther. It has been well remarked, that the successive missions of Ezra and Nehemiah into Judea to relieve their countrymen and restore their ancient prosperity, is strong presumptive proof that they possessed a friend at the Persian court, and that kind of influence ascribed to Esther. See archbishop Usher's Annot. Vet. Test. Ann. Jul. per. 4193. Josephus, Art. lib. xi. chap. 6, &c.

AHASUERUS, is also a scripture name for Cambyses, the son of Cyrus, Ezra, iv. 6. ; and for Astyages, king of the Medes, Dan. ix. .

AHA V AH, a river in Assyria, on the banks of which Ezra, with his countrymen, observed a solemn fast, for direction in their return to Jerusalem. Ezra viii. 15 ††† 21.

AHAZ, f^K, Heb. i; e. possessing, the son of Jotham, king of Judah, succeeded his father, A. M. 3265, and during his short reign of sixteen years, proved to be one of the worst princes that had reigned in that state, from the first conversion of the commonwealth into a monarchy. The various judgments that followed his establish- ing idolatry, and abolishing the true religion; the repeated invasions of his kingdom by Pekah, king of Israel, and Rezin, king of Syria; the dreadful slaughter of 120,000 of his men in one day, the capture of 200,000 men, women and children, by these tyrants ; with their restoration at the request of the prophet Oded ; the ravages committed by the Edomites and Philistines ; his bribing Tiglath-pileser with the gold of the tem- ple to assist him against them, the consequent death of Rezin, and the destruction of his king- dom, with the other particulars of his unfortu- nate and infatuated reign, and his d>aih, A. M.*

3278, and A. A. C. 726, are recorded in 2 Kings xv. and xvi. 2 Chron. xxvii. and Isaiah vii.

AHAZIAH, n^fiK, Heb. i. e. the vision of the Lord, king of Israel, the son of Ahab and Jeze- bel, a foolish and wicked monarch, worthy of such parents. His imitation of their idolatrous example ; his attempt to trade with Ophir, de- feated by the destruction of his fleet ; his mortal bruise by a fall from his balcony ; his folly in send- ing to

consult the oracle of Baalzebub ; the severe reprimand and, vengeance denounced by Elijah ; his repeated messages to that prophet, with the destruction of two companies of his messengers, and his own death, in the second year of his reign, A. M. 3108, are narrated in 1 Kings xxii. 2 Kings i. and ii. Chron. xx.

AHAZIAH, king of Judah, the so and suc- cessor of Jehoram, by Athaliah the daughter of Ahab, came to the crown, A. M. 3119, and reigned only one year. During this short period, however, he gave sufficient evidence of his being more inclined to follow the bad example of his mother, and her idolatrous and bloody house, than the good one set by his paternal grand- father Jehoshaphat ; but he was stopt in his career, and mortally wounded by Jehu, king of Israel, the avenger of the blood of Naboth.*

AHEAD' On head. See HEAD. In ad- vance ; used chiefly of vessels on the water.

And now the mighty Centaur seems to lead ; And now the speedy Dolphin gets ahead.

Dryden's JEneid.

It is mightily the fault of parents, guardians, tutors, and governours, that so many men miscarry. They suffer them at first, to run ahead ; and, when perverse inclinations are advanced into habits, there is no dealing with them. L' Estrange' s Fables.

A calm ensues ; adjacent shores they dread, The boats, with rowers mann'd, are sent ahead ; With cordage fastened to the lofty prow, Aloof to sea the stately ship they t/w.

Dryden>

AHEAD, in sea language, signifies not only farther onward than the ship, but at any dis- tance before her, lying immediately on that r>oint of the compass to which her stern is di- iccted. It is used in

opposition to astern, which expresses the situation of any object behind the ship. See ASTERN.

AHIAH, the son of Ahitub, and great grand- son of Eli, the high priest of Israel under kiug Saul.

AHIAH, the son of Sisha, and his brother Eli- horeph, were chief scribes, or secretaries of state, under king Solomon.

AHICCYATLI, in zoology, the name of an American serpent, approaching to the nature of the haemorrhus and rattle-snake, but larger than the former, and wanting the rattle of the latter. It is as fatal in the effects of its poison as any known species of serpent.

AHIEZER, nfynK, i. e. a brother's help, a prince of the tribe of Dan, who was selected to assist Moses in numbering the Israelites.

AHIGHi,) On high. See HIGH.

AHEIGHT'. $

And so some mounted vpon the walles, and

threwe themselfe from ahygte, downe to the groundc, the more parte of whom dyed.

Nicoll't Thucydides, fol. 47. c. 2.

*But have I fallen or no, ***

*** *From the dread summit of this chalky bourne ? Look up aheight ! the shrill-gorg'd lark so far, Cannot be seen or heard. King Lear.*

AHI JAH, an inhabitant of Shiloh, and an in- spired prophet of Israel, who tore Jeroboam's new garment in twelve pieces, and gave him ten of them, as an emblem that the ten tribes, over which he foretold that Jeroboam should reign, would be rent from the house of David. He also foretold the death of Jeroboam's son, and wrote a history of the reign of Solomon, which is lost. He flourished about the year

3046.

AHIKAM, the son of Shaphan, and father of Gedaliah, the vice-roy of Jerusalem, under Nebuchadnezzar, a prince of Judah, who was one of those employed by king Josiah to con- sult Huldah the prophetess, and who, in the reign of his son Jehoiakim, protected and pre- served the prophet Jeremiah.

AHIMAAZ, the son and successor of Zadok the high priest, a zealous friend of David in his adversity. His exertions along with Jonathan in favour of the old monarch, during the un- natural rebellion of his son ; the imminent risk they both ran at Bahurim, from Absalom's party ; with his anxious zeal to bring the earliest in- telligence to David of the victory, are recorded in 2 Sam. xv. xvii. and xviii.

AHIMELECH, jSnTIK, i. e. a king's bro- ther, the son of Ahitub, great grandson of Eli, and brother and successor of Ahia, high priest of Israel under Saul. His kindness to David, in giving him and his followers the shew-bread to eat, when he had no other, and the bar- barous massacre, that followed, of him and eighty-four priests, by Doeg the Edomite, Saul's bloody informer, with the total extirpation of the whole inhabitants of his city Nob, not ex- cepting the women, the children, or even the cattle, are mentioned in 1 Sam. xxi. and xxii. These bloody transactions, which happened about A. M. 2944, place the character of Saul in a worse point of view, than almost any other event of his whole unfortunate reisn.

AHIMELECH, the son of Abiathar, oy Saul's appointment, succeeded his name sake and pre- decessor as high priest, and acted as sagan, or second priest, in the end of David's reign.

AHINOAM, the daughter of Ahimaaz, and wife of king Saul.

AHINOAM of Jezreel, one of king David's wives.

AHITOPHEL, VSTPHN, Heb. i. e. a brother forsaken, a

native of Giloh, one of king David's counsellors, and highly esteemed for his politi cal sagacity. He was undoubtedly the Machia- vel of his age, both for wisdom and wickedness, His advice to Absalom, who followed the wicked part of it, but left the wise part unaccomplished, together with the deserved tragical end of this disappointed politician, who is the first suicide recorded in history, are well known.

AHITUB, the son of Pnineas, succeeded his grandfather Eli, as high priest of Israel.

AII1US. See SALT-STONE.

AHLAB, a city of Canaan, from which the original inhabitants were not expelled by the Israelites ; Judges i. 31.

AHLDEN, ALEN, or AHLEN, a town and nailiwick of Hanover, principality of Lune- burr, situated on an arm of the river Leine, not far from the Aller. Long. 9►►. 40'. E, Lat. 52►►. 49'. N.

AHLEN, ALEN, or AALEN, in Suabia, once a free imperial town ; but since 1802, the head of an upper bailiwick, in the kingdom of Wirtem- berg, district of Ellwangen. It is seated on the Kocher, and not far from the town of Gemund : forty miles north-west of Augsburg. It contains 1930 inhabitants,

AHLWARDT, (P.) professor of logic and metaphysics at Griefswalde, was born in that place, Feb. 1716, and became a student of theo- logy in 1727 ; but applied chiefly to mathematics and philosophy. In three years he removed to the university of Jena ; and in 1732, returned to Griefswalde, where he read a course of lectures on his favourite studies. In 1743, he became an adjunct of the philosophical faculty, and nine years after was chosen professor ;

he also preached often with great approbation. Ahlwardt largely contributed to the critical researches of the society at Griefswalde, of which he was a member, and founded the order of the Abelites. His principal works are, Considerations on the Confession of Augsburgh ; Thoughts on the Powers of the Human Understanding ; An In- troduction to Philosophy ; A Treatise on the Im- mortality of the Soul ; and Brontotheologia, or Thoughts on Thunder and Lightning. He is said, never to have corrected what he had once written. He died March 1, 1791.

AHMED (KHAN,) emperor of the Moguls in 1282, was of the race of Jenghis or Zingis, the son of Hulaku, and brother of Abaka khan, whom he succeeded. He assumed the name Ahmed, on his embracing Mahommedanism ; and offered, on this occasion, protection to all Mussulmans. This change of religion offended the princes of his family to such a degree, that he could never regain their affection. His nephew Argun raised an army against him, but he was soon defeated and taken prisoner. He was afterwards released by some conspirators, and having killed the emperor's principal officers, he pursued and overtook him ; and delivered him up to his mother-in-law, who, in revenge for the loss of her own sons whom Ahmed had caused to be slain, put him to death, after a reign of two years and two months, A. D. 1284. Mod. Un. Hist. vol. iv.

AHMEDABAD, the capital of the province of Gujerat in Hindostan : was founded by sultan Ahmed in the year 1409. It stands in long. 72►►. 37. E. and 23". N. lat. on the banks of the river Sabermaty, which falls into the gulph of Cambay, near to the city of that name : was for- merly famous for its manufacture of chintz, brocade, velvet, arms of various kinds, &c. ; and is one of the best fortified cities in Hindostan. The walls are of brick and stone, flanked at cer- tain distances with large round towers and battle- ments. It has twelve gates, and, including the suburbs, is about four miles and a half in length.*

On the west is the castle, walled with free-stone,

and almost a spacious city of itself. The caravan- sary is south of the King's square, which is 700 paces long and 400 broad.

Ahmedabad was taken by the English in the year 1780. On the conclusion of the peace in 1783, it was restored to its former possessors, the Poonah Mahrattas, under whom it still continues.
AHMEDNUGGAR, a city of Hindostan, iu the province of Aurungabad, a modern division of the Decan. It belongs to the Paishwa, a de- pendent of the British empire, and was founded by Ahmed Nizam Shah, in 1493. Before the close of the century, this chieftain established an independent empire, which he called after the name of this city, and which continued in the dynasty of the founder until 1600, when the last prince of his race was seized, while an in- fant, by the Moguls, and the whole of his dominions in a few years became a province of the Mogul empire. On the death of Aureng- zebe, it partook of the precarious fate of all the neighbouring provinces ; but finally fell into the hands of the Mahratta Paishwa, from whom it was wrested by Dowlet Row Scindia, in 1797. The former prince having placed himself en- tirely under British protection, in 1801, the army of Fort St. George, headed by our im- mortal Wellington, then General Wellesley, ad- vanced upon Poonah, to re- instate him in his sovereignty. The British were at this time at war with Holkar and Scindiah, and one of the first operations of the campaign of 1803 was the reduction of the fortress of Ahmednuggar, which led to the victories of Assaye and Arga- um, in the former of which Wellesley's army of 4,500 men, beat the allied forces of Scin- diah, and the rajah of Nagpoor, amounting to 30,000 men. Ahmednuggar was replaced in the hands of the Paishwa in 1804, and commands the best entrance into his dominions, as well as into those of our neighbouring ally, the Nizam. It stands in N. Lat. 19►►. 1'. and E. Long. 75►►. 4'. 83 miles from Poonah, and 181 from Bombay

AHMEDPORE, a town of Hindostan, in the province of Orissa, thirty-four miles south of Cuttack.

AHMELLA, in botany, a species of bidens, or water hemp agrimony. Its flowers are large, and resemble those of the marigold ; growing in large numbers on the tops of the stalk, and large branches, and succeeded by oblong seeds, which have the same sort of points at one end with those of our common bidens. The stalks are square, and the leaves in pairs, in shape like those of the common nettle. We have one species of it very common in all parts of England, about watery places, and easily known by its seeds, in autumn, sticking to the clothes and stockings of those who go near the plant. This plant, and the others of the same genus, bear the name bidens, from the teeth or prickles at the ends of the seeds; but the word should be tridens, for there are certainly three of them.

AHMOOD, a town of Gujerat, belonging to the Mahrattas.

AHNA, a bailiwick of Germany, in lower Hesse, belonging to the elector of Hesse-Cassel.

AHRBERG, a bailiwick, market town, and castle in Germany, in the upper division of the bishopric of Eichstad ; now in the Bavarian circle of the Rezat, district of Herrieden. Population 3300. The town is three miles S. W. of Ohren- bau.

AHRENFELS, a domain (formerly imperial) with a castle, lyipg on the Rhine, not far from Lintz, and belonging, till lately, to the house of Nassau-Usingen. Also a village, 17miles N.N W. of Coblentz.

AHU, in zoology, the ibex capensis of Kol- ben, the kevel of Buflbn, the flat-homed ante- lope of Pennant, and the antelope kevella of Gmelin's Linnaeus.

AHUCYATLI, in natural history, an Ameri- can

serpent, approaching to the nature of the haemorrhus and rattle-snake, but larger than the former, and wanting the rattle of the latter ; it is as fatal in the effects of its poison as any known species of serpent.

A-HULL, in sea language, the situation of a ship when all her sails are furled on account of the violence of the storm, and when, having lashed her helm on the lee side, she lies nearly with her side to the wind and sea, her head being somewhat inclined to the direction of the wind.

AHUN, a town of France, in the department of C reuse, seated on the C reuse, eight miles S. E. of Gueret, and in the arrondissement of that name ; thirty miles N. E. of Limoges, and fifty-five S. E. of Moulins. Long. 2►►. 4'. E. lat. 46►►. 5'. N.

When any of the gheastes would have touched any thinge, it vanished suddainely awaie, and was turned to nothings. And so, when their eies were ful, they put vp theire kniues and rose ahungred.

Jewel' Defence of the Apologie. I am not a hungry, I thank you, forsooth.*

Shafupeare't Merry Wives of Windsor. And when he had fasted forty days and forty nights, he was afterward an hwigred.

St. Matt. iv. 2.

AHUYS, a sea-port town of Sweden, small, but very strong by its situation. It is seated in the principality of Gothland, in the territory of Bleckingby, near the Baltic Sfea, about eighteen miles from Christianstadt Lon. 14►►. 15'. E. Lat. 56►►. 15'. N.

AHUZZATH, the friend of Abimelech II. king of Gerar, and who, along with Phicol, ac- companied him, to witness the alliance made between him and the patriarch Isaac.

AHW AS, AHUAZI, or HAVISA, a town of Persia, on the

river Karoon or Karasu, in the province of Kuzistan. It was formerly a large and flourishing city, the capital of a province of the same name, and the wintering place of Arta- banes, the last of the Parthian kings. After- wards it seems to have been independent of the sophis of Persia, and governed by a descendant of Mahomet, who exercised the rights of sove- reignty. It is now incorporated with the do- minions of the same king, whose authority is acknowledged by most of the Persian provinces : but is a poor place, whose population does not exceed COO or 700 souls. Close to the edge of the

river are the ruins of a spacious palace, whose walls consist of massy hewn stone. Distant forty- eight miles south of Shuster, or Suster, the ca- pital of Kuzistan, and forty north of Bussorah. Long. 48►►. 58'. E. Lat. 46►►. 10. N.

AI, in ancient geography, a town of Judea, N. from Jericho, called by Josephus An/a, originally a kingdom of the Canaanites, before it was cap- tured by Joshua. See vii. and viii. chapters of Joshua. Some critics pretend to find a discord- ance between the third verse of the eighth chapter, where 30,000 men are mentioned as ' sent away by night,' and the twelfth verse, where it is said, that ' Joshua took about 5000 men, and set them to lie in ambush.' But this difficulty is easily removed, either by supposing with Masius, that 5000 lay in wait, while 25,000 attacked the city; or with Calmet, and most other interpreters, that two bodies were placed in ambuscade, the one consisting of 25,000, and the other of 5000 men. Ai, being burnt upon this occasion, was rebuilt by the Benjamites, and long after this period, was taken by Senacherib. After the captivity, it was rebuilt a second time. Nehem. xi. 31.

Ai, a city of the Ammonites, taken and plun- dered by the Chaldeans.

AIAIA, in ornithology, the name of a Brazilian bird, of the platea, or spoon-bill kind, called by the Portuguese colhorado. It is exactly of the same

shape, and much of the same size, with the European spoon-bill, and its beak is in the same manner, broad at the end. It is of a pale, but very bright and shining flesh-colour on the back and wings ; the other parts of its body are per- fectly white. It is common upon the shores of rivers, and its flesh is well tasted.

AJACCIO. See AJAZZO.

AJALON, or AIJALON, a town of the tribe of Benjamin, about three miles east from Bethel, rendered memorable by Joshua's victory over the five Canaanitish kings in the adjacent valley and still more so, by the extraordinary circum- stance attending it, of the miraculously length- ened day. Whether this was accomplished by an arrestment of the earth's motion round its own axis, or by that of the rays of light proceed- ing from the sun, and reflected from the moon, it is impossible to determine. But while each of these hypotheses are within the bounds of possibility, and do not, like transubstantiation, baffle the power of credulity itself to believe, those who are willing to give credit to divine revelation, and who believe, that he who esta- blished the laws of nature can alter or suspend them at his pleasure, will not readily listen to the scoffs of infidels against this miraculous interposition of divine power.

AJALOJJ, or AIJALON, the name ot three other cities in Palestine, viz. \ . a city of Dan, which stood between Timna and Bethshemesh, assigned to the Kohathites, though the Amorites kept possession of it long after. It was taken how- ever by Uzziah, and retaken by the Philistines from Ahaz. 2. A city in the tribe of Ephraim, about two miles from Shechem. 3. A town of Benjamin, between Bethel on the north and Jeru- salem on the south. 4. A town of Zebulon, whose situation is not precisely known.

AJAN, a coast and country of Africa, which has the river Quilmanci on the south ; the moun- tains from which that river springs, on the west; Abyssinia, or Ethiopia, and the Straits of Babel- raandel, on the north ; and the Eastern, or Indian Ocean, on the east. The coast abounds with all the necessaries of life, and has plenty of very good horses. The kings of Ajan are often at war with the Abyssinians ; and all the prisoners they take, they sell to the merchants of Cambaya, those of Aden, and other Arabs, who come to trade in their harbours, and give diem in exchange, co- loured cloths, glass beads, raisins, and dates ; for which they also take back, besides slaves, gold and ivory. The whole sea-coast, from Zangue- bar, to the Straits of Babelmandel, is called the coast of Ajan ; and a considerable part of it the Desert coast.

AJANTIA, AutvrtM, an annual feast, conse- crated to Ajax, the son of Telamon, and observed with great solemnity in the island of Salamis, as well as in Attica : where, in memory of his valour, a bier was exposed, set out with a complete suit of armour.

AJAR : On jar, i. e. on char, on the turn. A. S. Dyban Acypan, to turn.

The leuys remanis vnsterit of thare place, Na partis not furthe of reule, quhill per case The pyping ~wynd blaw vp the dure on char, And driue the leuis.

Douglas, b. iii. p. 83. JEned.

The mystic numbers m the cavern laid, Are rang'd in order by the sacred maid ; There they repose in ranks along the floor ; At length a casual wind unfolds the door ; The casual -wind disorders the decrees, And the loose fates arp scatter'dby the breeze. Pitt.

So rumour says, who will believe, But that they left the door ajar, Where safe, and laughing in his sleeve, He heard the distant din of war.

Gray' Long Story.*

ALAS, or AJASSO, a sea-port of Asiatic Turkey, the ancient Issus, in the government of Marasch, standing in a bay of the Mediterranean, of the same name. It is thirty-six miles S.S.W. of Ma- rasch, and twenty north of Scanderoon, and famous for its warm baths.

AJASSALUCK, die Turkish name for a vil- lage standing on or near die site of the ancient Ephesus. It occupies the side of a hill, at the top of which is a large mosque, broken aque- ducts, and ruinous buildings, interspersed. Its name signifies the temple of die moon, and die whole place seems to have been built from die ruins of Ephesian grandeur. The seats of a theatre, or stadium, some bearing Greek letters, constitute die buttresses of the casde ; and over die arch of die gateway are sculptures of die most exquisite workmanship, supposed to repre- sent incidents related in the Iliad. A long Greek inscription also is exhibited in the mosque ; and its marbles, together with die large granite columns supporting die roof, are die spoils of Ephesus. Many of the scattered structures, with square domes, have been baths, testifying a more numerous population, whose dwellings

have fallen to decay. Several circumstance combine in demonstrating the former importance of Ajassaluck, but its history is imperfectly known. It has flourished chiefly, if not solely, under the Mahommedans ; and its origin has been referred to the thirteenth century. Tamerlane encamped here, after subduing Smyrna in 1 402 ; and the events recorded of Ephesus posterior to this date seem to relate to Ajassaluck, which is thirty-nine miles south of Smyrna, and two west of Ephesus.*

AIATASTO, a river of Peru, in the province and government of Tucuman, having pasturage on its banks, which feed about 40,000 cattle and 6000 horses.

AJAX Oiliades, in classical biography, one of the

most celebrated of the Greek leaders, in die expedition against Troy, and the son of Oileus, a powerful chief of the Locrians. Homer as- cribes to him agility, and promptitude in executing whatever he undertook ; and he is said to have excelled in the use of the bow and javelin. Ho- race is, by some commentators, supposed to re- fer to him, Od. xv. lib. i. v. 19. Homer Odyss. lib. iv. 502, says,

Impious he roarM defiance to the gods, To his own prowess all the glory gave.

Pope.

He is said to have incurred die displeasure of the gods, by his violation of Cassandra, the daughter of Priam, in the sanctuary of Minerva, where she had taken refuge. Ajax, however, denied the fact, and imputed the charge to the artince of Agamemnon, who wished to keep Cassandra for himself. In his return home, he and his whole fleet were wrecked by the vengeance of Minerva. Some say that he escaped ; and that in the moment of danger he exclaimed : ' In spile of the gods, I will escape: Homer ubi supra, v. 504.

AJAX Telamonius, the son of Telamon, prince of Salamis, and one of the principal heroes of the Iliad, is by Homer represented as inferior only to Achilles in strength and valour, and as the chief bulwark of die Greeks, after the secession of that warrior. ' His character,' says Dr. Aikin, ' seems to be intended as the model of that steady agree- able courage which is ever at hand, when its exer- tions are wanted, and requires no aid of circum- stances to excite its energy. He is the only hero, who neither asks nor receives the assistance of a deity.' Homer pardy vindicates him from die charge of irreligion : for though he did not pray to Jupiter himself, when he prepared to engage die valiant Hector, he desired others to pray for him, either with a low voice, lest theTroj ans should h►►ar, or louder if they pleased ; ' for,' says he, ' I fear no person in die world.' Iliad, lib. vi. v. 194. When the arms of Achilles were adjudged by die

Greek chieftains to his rival Ulysses, Ajax was bereaved of his understanding; and first venting his rage against a fleck of sheep, taking them to be Greeks, he then turned his sword against himself. Fable reports, that the flower called hyacinth sprung from his blood. The Greeks erected a noble monument to him on the pro- montory of Rhceteum. Pausanias says, lib. i. that one of their tribes bore the name of Ajax, and that the people of Salamis built a temple to

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him. Herodotus, lib. viii. c. 64. c. 121, in- forms us that the whole country of Greece in- voked him a little before the battle of Salamis, and dedicated to him, as part of the first-fruits due to the gods, one of the ships which they had taken from the Persians in that battle. Pausa- nias states, among other wonderful things, that the waves cast the arms of Achilles upon the tomb of Ajax, after the shipwreck of Ulysses. The fate of Ajax was the subject of several eminent tragedies. In his last exploit, when he was en- deavouring to preserve and rescue the dead body Patroclus, and when he was overwhelmed ith a mist or darkness, which intercepted his iew of the Grecian host, he made the following .dress to Jupiter, which has been much ad- mired for its sublimity :

Lord of earth and air, O king ! O father ! hear my humble pray'r : Dispel this cloud, the light of heaven restore : Give me to see, and Ajax asks no more : If Greece must perish, we thy will obey, But let us perish in the face of day.

Pope. Iliad, lib. xvii. v. 645, &c.

Dr. Aikin thus sums up his character : ‘ Such is the Ajax of the Iliad ; a hero (as far as so rude an age admits of heroism) in grain ; tried and proved by every difficulty and danger ; not the meteor of a day, but shining with equal lustre ” rough the whole period of action ; always in place; resorted to on every emergency, and in vain ; not hurried along by idle bravado or enthusiastic ardour, but making utility the guide of his actions ; finally, never yielding but when mortal assistance was unavailable, and when a heaven-born champion, with celestial aid, was necessary to turn the tide of fortune. He may then stand in the number of able and useful men, whose value is superior to their fame : a class of which there are members in every profession and rank of life, and to whose assistance, the first-rate characters owe great part of their celebrity and success.’

AJAX, in Grecian antiquity, a furious kind of dance, in use among the Greeks ; intended to re- present the madness of that hero after his defeat by Ulysses, to whom the Greeks had given the preference in his contest for Achilles’ arms. Lucian, in his treatise of Dancing, speaks of dancing the Ajax.

AJAZZO, or AJACCIO, the capital, formerly, of one of the five provinces of the division of the island of Corsica, called Di la da Monte, is the chief town in this island, the seat of the existing administrative offices, and the head of an arron- dissement. It is the best built town on the island, being walled and protected by a citadel ; and is de- lightfully situated on the north side of the Golfo d’Ajaccio, which forms a secure and commodious harbour for ships of the largest size ; having a strong mole, but the entrance is rendered some- what dangerous by a small projecting rock. The number of inhabitants in the town and suburbs, which stretch along the harbour, was in 1815, 6845, having increased rapidly daring the present century, in consequence chiefly of the encouragement given to settlers by the French government, who spared no pains on its improve- meD. and embellishment. It is remarkable for

being the birth place of Napoleon Buonaparte. Long. 8►►. 53'. E. lat. 41►►. 46'. N.

AICH, a town of Germany, in Bavaria, seated on the river Par. It was taken by the Swedes, in 1634, and some time after reduced to ashes

AICHMALOTARCHA. See JECHMALOTAR-

CHA.

AICHSTAET, a town of Germany, in Franco- ma, and the ancient capital of a bishopric of the same name. Itcontains several hospitals, a cathe- dral and other churches, one of which is built after the model of the church called the Holy Sepul- chre at Jerusalem; and is remarkable for a curious piece of workmanship, called the Sun of the Holy Sacrament.

AICHSTETTEN, a town of Bavaria, in Suabia ; containing 1380 inhabitants.

AICURUS, in ornithology, a species of parrot. See PSITTACUS.

AID', v. & n.~\ A j ►►► ►►► j. r> ►►► . AID'ANCE i Ad : JUVO> jutum : "' atder AZD'ANT, ' ►► * contraction of the foregoing AID'ER I -^atin wor(i ►►► to nelp > to carry*

AID'LESS.

a burthen ; to assist.

And in the ayd of Turnus and supple, Ane thousand feirs folkis assemblit he.

Douglas, b. 7. p. 234.

Also thou shall not swere for envie, neyther for favour, ne for mede, but only ior rightwiseuesse and for declaring of trouthe to the honour and worship of God, and to the aiding and helping of thin even Cristen. Chaucer. The Persones Tale, v. ii. p. 333. Into the lake he leapt, his lord to aid ; And, of him catching hold, him strongly staid From drowning.

Fairy Queen.

Neither shall they give any thing unto them, that

make war upon them, or aid them with victuals,

weapons, money, or ships. Maccabees viii. 26.

All along, as he went, were punished the adhe-

rents and aiders of the late rebels.

Bacon's Henry VII. Oft have I seen a timely parted ghost, Of ashy semblance, meagre, pale, and bloodless, Being all descended to the lab'ring heart : Who, in the conflict that it holds with death, Attracts the same, for aidance 'gainst the enemy.

Shakspeare's Henry VI. He had met

Already, ere my best speed could prevent, The aidless innocent lady, his wish'd prey.

Milton's Comus. - She can unlock

The clasping charm, and thaw the mumming spell, If she be right invok'd in warbled song ; For maidenhood she loves, and will be swift To aid a virgin, such as was herself. Comut.

BOAB. Advise, or aid, but do not pity me j No monarch born can fall to that degree j Pity descends from kings to all below j But can, no more than fountains, upward flow.

Dry den's Conquest of Granada, Part 1. - To Turnus' aid, A thousand men the youthful hero 'fed. Dry den. The memory of useful things may receive consider-able aid, if they are thrown into verses.

Watts'a Improvement of the Mind. A golden coffer in her hand she bore, The present treacherous, but the bearer more. Twas fraught with pangs ; for Jove ordain'd above, That gold should aid, and pangs attend on love.

ParneU's Henod.

AID, in ancient customs, a subsidy paid by vassals to their lords on certain occasions. Such were the aids of relief, paid upon the death of the lord mesne to his heir ; the aid cheval, or capital aid, due to the chief lord on several oc- casions, as, to make his eldest son a knight, to make up a portion for marrying his daughter, &c.

AID, in the menage, is the same with what some writers call cherishing, and used to avoid the necessity of correction. ??? The inner heel, inner leg, inner rein, &c. are called inner aids ; as the outer heel, outer leg, outer rein, &c. are called outer aids.

AID, in theology ; the aids or assistances of divine favour, which are offered to man, have been the subject of much dispute betwixt the Jansenistsand Jesuits; for the composing whereof a celebrated congregation was erected at Rome, under the title of congregation of aids, congrega- tio de auxiliis.

AID, ROYAL, is a name sometimes given for- merly to the land-tax.

AIDAB, or GAIDHAB, a town on the confines of Abyssinia in Africa, opposite to Giodda, from whence, great numbers of Africans take shipping to visit Mecca.

AIDAN, a famous Scotch bishop, of Landis- farne, or Holy Island, in the seventh century, was employed by Oswald, king of Northumber- land, in the conversion of the English, in which he was very successful. He died in 651. We have an extraordinary instance of this bishop’s liberality to the poor. Having received a present from king Oswin of a fine horse and rich housings, he met with a beggar, and dismounting, gave him the horse thus caparisoned. When the king ex- pressed some displeasure at this

singular act of humanity, and the slight put upon his favour, Aidan quaintly, but forcibly asked, ‘ which do you value most, the son of a mare or a son of God?’ Bede describes the character of Aidan in terms of high commendation, and ascribes to him miracles, which the credulity ‘of the times in which he lived would be disposed to admit. To the report of one of his miracles we are in- clined to give our assent. When the bishop gave the priest, who was to conduct the betrothed wife of Oswi by sea to Northumberland, a phial of holy oil, instructing him, in case of a storm, to pour it into the sea, and assuring him that it would soon become calm, it is possible he might not be unacquainted with the efficacy of oil thus applied; which has been long known, and is now sufficiently established by observation and ex- periment.††† Biog. Brit.

AID-DE-CAMP, in military affairs, an officer employed to receive and carry the orders of a general.

AIDERBEITZAN, ADERBIJAN, or, as the Persians call it, AZERBEYAN, in geography, a province of Persia, adjoining east on the province of Ghilan, the Caspian Sea and Tabri- stan, to the south on Irac-Ajemi, to the west and north-west upon Curdistan and Upper Ar- menia, and to the north on Schirwan and Geor- gia. The etymology of the name imports a country of fire ; and it is so called on account of the temple erected in it for keeping their sacred fire. The soil is fruitful, and the climate healthy,

though cold. The most considerable cities in it are Tauris, Ardevil, and Sultania. The province extends from about N. lat. 36††. to 39††. and from E. long. 48††. to 54††.

AID-MAJOR, or ADJUTANT, in military affairs, is an officer, whose business is to ease the major of part of his duty ; and to perform it all in his absence Some majors have several aid-majors. ††† Each troop of guards has but one major, who has two aid-majors, as it contains battalions. ††† When the battalion is drawn up, the aid-major’s post is on

the left, beyond all the captains, and behind the lieutenant-colonel.

AIDIN, a district of Asiatic Turkey, of which the city of SMYRNA is the capital, which see.

AIDON, Aidon, ancient British or Wels'i, the wing of an army, a castle in Northumberland, where Camden supposes there was a station of the Roman army, under Julius Caesar.

AIDONEUS, in fabulous history, a king of the Molossians, who imprisoned Theseus, for at- tempting to steal his daughter Proserpine, near the river Acheron ; whence the poetical fable of Theseus's descent into hell.

AIEREBA, in ichthyology, the name of a fish of the pastinacha marina kind, but differing from all the others, in that the form of its body is re- gularly round, and its head placed far within the verge of its thin part. It is common in the Western Ocean.: but is not much esteemed for the table, being more loose in its flesh than the other kinds.

AIGHENDALE, the name of a liquid mea- sure used in Lancashire, containing seven quarts.

AJG'LET, or) Fr. aiguillette, the tag of a

AG'LET. 5 lace, or of the points formerly

used in dress; sometimes formed into small figures ; spangles, &c.

He gyueth alwaye hys old point at one end or other some new aglet ; but when al his cost is don theron, it is not al worth an aglet of a good blewe poynte. Sir Thos. More' a Workes, p. 675. c. 2.

It all above besprinkled was throughout With golden aigulets, that glister'd bright, Like twinkling stars ; and all the skirt about, Was hemm'd with golden fringes.

Faerie Queens.

He thereupon gave for the garter a chain worth 2001. and his gown addressed with aglets, esteemed worth 251, Mayward.

Why, give him gold enough, and marry him to a puppet, or an aglet baby, or an old trot, and ne'er a tooth in her head. Shaksp. Taming of the Slirew.

AIGILULF, AIGILULFUS, a king of the Lom- bards, who took Ravenna, and put an end to the exarchate, A. D.752, after it had lasted 171 years.

AIGITHALUS, aiytBaXoQ, in ornithology, a name by which some old authors call the parus or titmouse.

AIGLE, or AELEN, a district in the Swiss canton of Vaud, (formerly in that of Berne,) with the title of a government. It lies east of the lake of Geneva, was anciently reckoned in the Pays de Vaud, and belonged to the dukes of Savoy. Through this district lies the great road from Vallais into Italy, by Villeneuve, which is at the head of the lake of Geneva, through a deep valley, three miles wide, bordered on one side with the Alps of Switzerland, and on the other

with those of Savoy, and crossed by the river Rhone. It passes through the town of Aigle. See next article. Ivorna, in the district of Aigle, was in part buried by the fall of a mountain, occasioned by an earthquake in 1584.

AICLE, a large thriving town in the canton of Berne, seated on the banks of the Rhone, six miles from its entrance into the lake of Geneva, is surrounded with vineyards, fields, and mea- dows. The houses are built of a white marble, found in the neighbourhood. The governor's castle is on an eminence, above the town, and has a lofty marble tower, inhabitants 2500. It is twenty-six miles north-east of Geneva.

AIGLE, a lofty promontory on the coast of Provence, in France, between Marseilles and Toulon. Also a town on the river Rille, in Lower Normandy, the head of a canton in the department of the Orne, arrondissement of Mor- tagne. 14 leagues N. E. of Alencon.

AIGLE, or EG RE, is likewise a small river of France, in the department of the Loir and Cher, which falls into the Loir. ††† Also a small island in the St. Lawrence, formed by the conflu- ence with that river of the Riviere des Prairies, which bounds the southern shore of the island of Montreal. It is mostly good meadow land.

AIGLETTE, in heraldry. See EAGLET.

AIGNAN, or AGNAN, a town of France, in the department of the Gers, arrondissement of Mi- rande. It has a population of 2610, and lies on the river Midou.

AIGNAN (St.), a small town of France, below the conflux of the Saudre and Cher, in the de- partment of the Loir and Cher. It is 8 leagues south of Blois, and 47 S. S. W. of Paris.

AIGNAN, St. an uninhabited island in the South Pacific ; one of those denominated the Archipelago of Louisiadeby the French. It rises from a precipitous coast on the north into woody mountains ; the eastern extremity is in Lon. 152††. 56'. 30". E. Lat. 10††. 41'. 19". S.

ArGNAN, (M.) a modern French author of some celebrity, who died in Paris, in the be- ginning of 1825. He has enriched the French language with a new translation of Homer, which some critics consider very similar in cha- racter with that of Pope, in our own tongue ††† elegant as a composition, rather than an accu- rate transcript of his author's meaning. He wrote also the tragedy of ' Brunehaut,' once very popular ; was the editor of a provincial review, called, Bibliotheque Etrangere, which contains some curious learning ; and furnished, on

the coronation of Napoleon, a letter-press description of the plates engraved to illustrate that ceremony.

AIG RE, a town of France, formerly in the Angoumois, diocese of Saintes, intendancy of La Rochelle, now the head .of a canton, in the de- partment of the Charente, arrondissement of lluf- fec. Inhabitants 1430. It is 7 leagues N.W. of Angouleme.

AIGRE-FEUILLE, a small town of France, the head of a canton, in the department of the Lower Charente, arrondissement of Rochefort, two leagues and three quarters E.S.E. of La Rochelle. Likewise the name of several villages in Brittany and Lansuedoc.

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AIGRETTA, in ornithology, the name of a species of heron, which seems to be a synonyme of the ardea alba minor, or the small white heron. AIGUE MARINE. See AQUA MARINA AIGUE-PERSE, a town of France, in Au- vergne, the head of a canton, in the department of Puy de Dome, near which there is a very cold spring, which bubbles up with a strong ebullition, and is fatal to animals that drink it. It lies 18 miles N. of Clermont, and 25 S. of Paris, in the arrondissement of Riom. Inhabitants, 5050.

AIGUES-MORTES, a town of France, in Lower Languedoc, in the department of the Card, arrondissement of Nismes. It formerly stood near the sea, which has retired two leagues from the town, leaving it in a morass, which, however, serves as a defence for it. It is 7 leagues S.S.W. of Nismes.

AIGUES-VIVES, a town of France, in the de- partment of the Gard, 4 leagues S. W. of Nismes. Also a town of France, in the province of Touraine. not far from the Cher ; now in the department of the Indreand Loir.

AIGUI.LLON, a town of France, situated at the conflux of the Lot and Garonne, in the depart- ment of the Lot and Garonne, contains 2380 in- habitants.

Five leagues and a half N.W. of Agen. AIGUISCE, in heraldry, denotes a cross with its four ends sharpened, but so as to terminate in obtuse angles. ††† It differs from the cross fitchee, in as much as the latter tapers by degrees to a point, and the former only at the ends. ' -

AIKIN, (John, M. D.) a modern author, and editor of various useful works, was born 15th of January, 1747, at Kibworth, Leicestershire, being the only son of Dr. T. Aikin, a dissenting minister, and master of a respectable academy at that place. He received the rudiments of his education at home ; but was sent early to the Dissenters' academy at Warrington, which was then in considerable repute.

Mr. Aikin evincing a taste for medical pur- suits, was first articled to the late Dr. Garthshore, then a practising surgeon and apothecary, at Uppingham, in the county of Rutland. He be- came a member of the University of Edinburgh, in 1764, where he continued for two years ; and after passing three years more as a pupil to Mr. White, of Manchester, settled as a surgeon in Chester ; but soon removed to Warrington. In this place he began his career as an author, by publishing several miscellaneous pieces in con- junction with his sister, Mrs. Barbauld ; and an excellent translation of Tacitus's De moribus Germanorum; and Life of Agricola. Here also commenced his friendship with Dr. Priestley, and with Gilbert Wakefield, both of whom were then connected with the Warrington academy. In 1784, Mr. Aikin proceeded to Ley den where he graduated as a physician ; in which capacity, he soon after settled at Yarmouth, in Norfolk. Dr. Aikin throughout life, was distin- guished for the liberality of his opinions, as well as the candour and fearlessness with which he professed them. Joining at this time in the strenuous efforts of his fellow dissenters, to obtain a repeal of the corporation and test acts, he ex-

cited considerable jealousy in the high church party of the place ; which was increased, by his becoming the advocate of the early measures of the French revolutionists. Our author is said to have been finally compelled to leave Yarmouth upon these grounds. In 1796, Mr. now Sir Richard Philips, engaged him to conduct the Monthly Magazine ; of which he was the sole editor for ten years. The volumes published, under his superintendence, contain numerous striking proofs of his talents as an essay-writer. During this engagement he projected, in con- junction with Dr. Enfield, a General Biographical Dictionary, which was continued at various in- tervals of publication, to the extent often volumes quarto. The first volume appearing in 1799, and the last in 1815. Dr. Aikin also conducted for Messrs. Longmans a superior magazine, (but of short-lived success,) called the ' Athseneum.' He was also the author of a life of Huet, bishop of Avranches ; and of a volume of Medical Biography, 8vo. He likewise edited for the booksellers in 1806, a superior edition of Spenser, 6 vols. 8vo. ; bishop Newton's Works of Mil- ton, with a prefatory critical essay, which passed through three editions ; and, a volume that fully justified its title, called Select Works of the British Poets, comprising a chronological series of our classical poets, from Ben Jonson to Beattie, without mutilation or abridgment. ' The contents are so comprehensive, that few poems, it is believed, are omitted ; except such as are of a secondary merit, or unsuited to the perusal of

Emth.' Dr. Aikin died at Stoke Newington, ec. 7, 1822, in the seventy-fifth year of his age. AIRMAN, (William,) in biography, a painter of eminence, the son of William Aikman, Esq. advocate of Cairney in Scotland. He was born October 24th, 1682, and intended by his father, for his own profession ; but devoted himself to the fine arts, and particularly to that of painting. In 1707, he went to Italy ; and

having resided for three years at Rome, passed to Constanti- nople and Smyrna, and in 1712 returned to his own country. Here he followed the profession of painting under the patronage of the duke of Argyle, the earl of Burlington, Sir Godfrey Kneller, and other patrons of the arts. For the earl of Burlington he painted a large picture of the royal family, now in the possession of the duke of Devonshire, which his death prevented his finishing; and there are several portraits painted by him in Scotland, which are now in the possession of the duke of Argyle, the duke ef Hamilton. &c. Mr. Aikman died in London, June 4th, 1731 ; having lost his son about six months before, at the age of seventeen. Amongst his intimate friends were Somerville, the well- known author of the Chase, Mallet, Mr. Allan Ramsay, and the celebrated author of the Seasons, each of whom paid an elegiac tribute to his me- mory. A very neat epitaph by Mallet was engraven on his tomb.

Thomson's poem on the death of Mr. Aikman, contains the following beautiful lines :

A friend, when dead, is but removed from sight, Sunk in the lustre of eternal light; And when the parting storms of life are o'er, May yet rejoin us on a happier shore.

As those we love decay, we die in part ; String after string is sever'd from the heart. Till loosen 'd life at last but breathing clay, Without one pang is glad to fall away, Unhappy he, who latest feels the blow Whose eyes have wept o'er every friend laid low ; Dragg'd ling'ring on from partial death to death, Till dying, all he can resign is breath.

AIL', v. & n.) A. S. Aiblian, to be sick ;

AIL'MENT. 5 to pain; to trouble; to affect in any manner.

And the angel of God called to Hagar out of heaven, and said unto her, What aileth thee, Hagar ? fear not, for God hath heard the voice of the lad, where

he is.

Gen. xxi. 17.

Love smiled, and thus said, ‘ Want, joined to desire, is unhappy ; but, if he nought do desire, what can Heraclitus ail ? ‘ Sidney.

What ails me, that I cannot lose thy thought !

Command the empress hither to be brought :

I, in her death shall some diversion find ;

And rid my thoughts at once, of woman-kind.

Dryden’a Tyrannick Love. Little ailments oft attend the fair, Not decent for a husband’s eye or ear.

Granrille .

AILAH, a small but ancient town of Asia, in Arabia Petraea, seated on the east side of one of the north bays of the Red Sea, near the Sinus Elanites. It is supposed to be the place called Elath and Eloth in Scripture. It lies near the road, which the pilgrims travel, from Egypt to Mecca. Long. 36►►. 40’. E. Lat. 29►►. 10’. N.

AILANAH, AILATH, or AHELOTH. See last article.

AILE, or AIEL, from aieul, Fr. grand-father, in law, a writ which lies where the grand-father, or great-grandfather, called befaile, was seized in lands or tenements in fee simple, on the day he died ; and a stranger abates or epters the same day, and dispossesses the heir or grand- child. See ABATEMENT.

AILERONS, in natural history, petty wings, a French term, expressing two small fleshy sub- stances, resembling part of wings, or young and just growing wings, and found in the two-winged flies, situated at the root of the larger wings. It is a diminutive of the French aile, wing.

AILESBURY, or AYLESBURY, an ancient borough and market town of Buckinghamshire, eighteen miles from Buckingham, and thirty-nine from London. It is the TEglesbury of the Saxons ; and was a well fortified British town, maintain- ing its independence against the incursions of the Saxon invaders, till reduced by Cuthwolf, brother to Cealwin, king of tV.e West Saxons, in the year 571. St. Osyth, who was beheaded by the Pagans in Essex, was buried at this place, about the year 600 ; and numerous mira- cles were believed to have been wrought by her relics in the church here ; on which account a religious house was erected to her memory. Camden, speaking of this town, says, that it was bequeathed by Frewald to his daughter Editlia ; but to whom it descended from this pious lady does not appear. Subsequently, however, it be- came a royal manor; and \Villiam the Conqueror, invested his favourites with some of its lands, under the tenure of providing ' straw for his bed chamber; three eels for his use in winter;

and in summer, straw, rushes, and two green geese, thrice every year, if he should visit Ailesbury so often.' In the reign of this monarch, the manor of Ailesbury was purchased by Sir John Baldwin, chief justice of the Court of Common Pleas, whose daughter having been married to one of the Packingtons, this manor came into that family, and has regularly descended in it to the present time. Drayton says,

Aylesbury's a vale that walloweth in her wealth, And (by her wholesome air, continually in health) Is lusty, firm, and fat ; and holds her youthful strength.

Fuller, in his Worthies of England, states, that 'the best, and biggest-bodied sheep in England, are in the Vale of Ailesbury, where it is nothing to give ten pounds or more for a breed-ram. So that,

*should a forrainer hear of the price thereof, he would guess the ram rather to be some Ro- man engine of battery, than the creature com- monly so called.' In Leland's time the houses
 ॐ were of timber, but now they are mostly of brick. Here is a county gaol, and the Lent assizes are holden here. Ailesbury consists of several irregular streets, containing altogether about 16,671 inhabitants. The county hall is a handsome modern fabric, and the church a very ancient and spacious edifice. It was made pre- bendal to the see of Lincoln by William the First. The town was incorporated by royal charter, and empowered to return two members to Parliament in 1553. In the Rolls chapel, among the writs for the parliamentary returns, in the 14th Eliz. is a curious document, addressed by ' Dame Dorothy Packington, late wife of Sir John Packington, Kt., lord and owner of the town of Ailesbury,' to ' all Christian people, &c.' stating, that she had ' chosen, named, and ap- pointed her trusty and well- beloved Thomas Litchfield and George Burden, Esqrs., to be her burgesses of her said town of Aylesbury ;' and further stating, that whatever the said Thomas and George should ' do in the service of the Queen's Highness, in that present parliament,' &c. ' she did ratify and approve to be of her own act, as fully and wholly as if she were witness or present there !' On first receiving the privileges of a borough, the electors of Ailesbury were confined to the bailiff, nine aldermen, and twelve burgesses ; but this charter being lost through neglect, the elective franchise was ex- tended to all householders not receiving alms ; who amounted to between 300 and 400. This privilege also having been abused and corrupted, in the year 1804 a bill was brought into parlia- ment for still further extending the right of elec- tion to the three adjoining hundreds ; so that the number of voters are now nearly tripled. Be- sides the church, already mentioned, there are various places of worship for several denomi- nations of Protestant Dissenters. During the late exile of the royal family of France, Louis XVIII., with various members of his family, re- sided some years at Hartwell,*

about two miles from this town ; and here his consort, Marie Josephine Louise de S voie', comtesse de Lille, died on the 13th Nov. 1810, in her 58th year. Ailesbury gives the title of earl to the Brudenel family. Markets on Saturday.

AILESFORD, Eaglesford, Sax. the eagle's ford, a town in Kent, famous for the great victory obtained by Vortimer, the British king, over Hengist and his Saxon army.

AILES VITREES, in natural history, a French term used to express the wings of a series of in- sects, which seem of a middle nature, between the fly and the butterfly kind, and are therefore called papilion mouches by these writers. The wings of these insects arc in part covered with dast, or scales, and in part free from it, and transparent. In these free parts they look glassy; whence their name, signifying glassy wings.

AILMER, or ^ETHELMARE, earl of Cornwall and Devonshire, in the reign of king Edgar. It is not known of what family he was. His au- thority and riches were great, and so also in ap- pearance was his piety. He founded the abbey of Cerne, in Dorsetshire. In 1016, when Canute invaded England, and found himself stoutly op- posed by Edmund Ironside, this earl Ailmer, with Eadric Streone, earl of Mercia, and earl Algar, joined the Dane against their natural prince, which was one great cause of the ruin of the Saxons.

AILRED, EALRED, abbot of Revesby in Lin- colnshire, in the reigns of Stephen and Henry II., was born in 1109, of a noble family, and edu- cated in Scotland with Henry the son of king; David. On his return to England, he became Cistertian monk in the monastery of Revesby, ot which he afterwards was made abbot. He died in 1166, aged fifty-seven, and was buried in hig monastery. ' He was,' says Leland, ' in great esteem during his life ; celebrated for the miracles wrought after his death ; and admitted into the catalogue of saints.' He was author of several works ; most of which were published by Gilbo the Jesuit

at Douay, 1631 ; part of them may be also found in the Bibliotheca Cistertiensis, and Bibliotheca Patrum. His principal work is Speculum Charitatis.

AILSA, an insulated rock on the western coast of Scotland, between the shores of Ayrshire and Cantyre. It is two miles in circumference at the base, is accessible only at one place, and rises to a great height in a pyramidical form. A few goats and rabbits pick up a subsistence among the short grass and furze ; but the im- portance of the rock consists in the great variety and boundless numbers of birds, by which it is frequented; particularly the gannets or solan geese, whose young are used at the best tables, and bring a good price. Other birds are caught for their feathers. The rock is rented from the Earl of Cassilis. The depth of water around the base is from seven to forty-eight fathoms. It is surrounded with excellent banks, well stocked with cod and other white fish. An ancient castle surmounts this rock, which is useful as a sea mark, in W. Long. 5□□. 8'. N. Lat. 55□□. 18'. AIM' v. & n. \ Old Fr. esme, to point at. AIM'LESS. S □□□ Cotgrave and Skinner. □□□ amyer, presenter, dresser. □□□ Ducange. □□□ Perhaps from the Gothic haim, home, primarily, then to direct a missile weapon to a point ; to have an immediate object in view, to which the attentioa is particularly directed.

Then Turnus aiming long in hand a dart of sturdy oke. Well tipt with steele, at Pallas forth it flung, and

and thus he spoke,

Lo, see if that our dart be sharper than thy weapon was. JEneidoi, Booh 11, by Phaer fy Twyne. Lo, here

the world is bliss ; so here the end, To which all men do aim, rich to be made ; Such grace now, to be happy, is before thee laid.

Faerie Queene.

It is impossible, by aim to fell it ; and for experience and knowledge thereof, I do not think that, there was any of the particulars thereof.

Spenser on Ireland.

There is a history in all men's lives, Figuring the nature of the times deceas'd : The which observ'd, a man may prophesy With a near aim, of the main chance of things, As yet not come to life ; which, in their seeds And weak beginnings, lie intreasured.

Shakspeare's Henry VI.

*Another kind there is, which although we desire for itself, as health, and virtue, and knowledge; nevertheless, they are not the last mark, whereat we aim, but have their further end, whereunto they are *ef erred. Hooker.*

He trusted to have equall'd the Most High, If he oppos'd : and with ambitious aim, Against the throne and monarchy of God, Rais'd impious war. Paradise List,

But see, how oft ambitious aims are crost ; And chiefs contend, till all the prize is lost.

Pope.

Aim'st thou at princes, all amaz'd they said, The last of games ? Pope's Odyssey.

Ascanius, young and eager of his game, Soon bent his bow, uncertain of his aim ; But the dire fiend the fatal arrow guides, Which pierc'd his bowels through his panting sides.

Dryden, JEn. vii. 1.621.

AIMARAEZ, a province of Peru, bounded by that of Andahuailas, on the north-west and west, on the south by Parinacochas, on the south-east "by Chumbivilcas, and east by Cotabamba. It is 120 miles from north to south, and 26 miles from east to west. Its surface is full of lofty ridges and snowy summits, and on this account the climate is generally cold, with the exception of some valleys, where the land produces abun- dantly, sugar, cattle, and grain. It is inter- sected by three rivers, of little use on account of the lowness of their beds, but which after- wards unite, and form the Pachachaca. There are innumerable veins of gold and silver in the province, which are not worked. Some mines of quicksilver, which have been discovered, have been forbid to be wrought. The number of in- habitants in the province amounts to 15,000. The yearly tribute formerly received by the corregidpr used to be 800,000 dollars. The jurisdiction contains fifty settlements.

AIMARGUES, a town of France, in the de- partment of the Gard, five leagues from Nismes Number of houses 400, inhabitants 1800.

AJMEER, or RAJPOOTANA- See AGI MEER.

AIN, a river of France, giving name to the department of the Ain, and which, rising at the foot of Mount Jura, falls into the Rhone above Lyons.

AIN, a department of France, formed out of the ancient districts of Bresse, Bugey, and a part of Bumindy. It is enclosed by Savoy,

Switzerland, and the departments of the Isere ; the Rhone and Loire, the Saone and Loire, and finally of Jura, and extends about twenty- two leagues from east to west, and seventeen from north to south ; the number of square leagues is 299. It is divided into the four arrondissements of Bourg, Nantua, Belley, and Trevoux, and contained, according to the most recent returns to the board of statistics at Paris, 322,608 inhabitants.

AIN, a town in the pachalic of Bagdad, ninety miles west of Bussorah.

AINA, the name given by Josephus to Ai, which see.

AINOS, or AINUS, sometimes called also Wild Kuriles, the aborigines of Jesso, and Saghalin. See JESSO.

AINIMOSA, a large and opulent town, in the N.E. of Wallachia, N.W. of Tergovitz.

AINOD, a splendid castle and lordship, on the river Gurk, in Carniola, 5 miles N.W. of Rudolfswerth.

AINSA, a town of Spain, in the principality of Sorbrabe. and kingdom of Arragon, seated in a plain, on the river Cinca.

AINSWORTH, (Dr. Henry,) an eminent nonconformist divine, who, about the year 1590, distinguished himself among the Brownists, which drew upon him such troubles, that he re- tired to Holland, and became minister of a church at Amsterdam. His skill in the Hebrew lan- guage, and his excellent Annotations on the Holy Scriptures, which are still highly esteemed, gained him great reputation. He also wrote several pieces in defence of the Brownists, (to which bishop Hall replied,) with other works. The circumstances that occasioned his death, are somewhat extraordinary, and deserve to be men- tioned. Having found a diamond of great value in the streets of Amsterdam, he advertised it ; and when the owner, who was a Jew, came to demand it, he offered him any acknowledgment which he would desire. Ainsworth, though poor, would accept of no remuneration but a conference with some of the Jewish rabbies, upon the prophecies of the Old Testament relating to the Messiah, which the Jew promised ; but not having interest sufficient to obtain it, through shame or vexation, or from some other motive, he is said to have poisoned Ainsworth. This event happened about the year 1629.

AINSWORTH, (Robert,) born at W^oodyale, in Lancashire, 1660, was master of a boarding- school

at Bethnal-Green, whence he removed to Hackney, and other places in the neighbourhood of London. After acquiring a moderate fortune, he retired, and lived privately till 1743, when he died. We are indebted to him for the best Latin and English Dictionary extant : he pub- lished itm 1736 ; and in 1752, the fourth edition, under the care of Dr. Ward, of Gresham College, and the Rev. William Younge, was enlarged to two vols. folio. It has been since published in quarto and octavo, with various improvements

AINTAB. SeeANTAB.

AJOVEA, in botany, a genus of the hexandria monogynia class and order; the characters of which are : CAL. single-leaved and tridentated ; COR. three petals, the filaments terminated with

two glandules, the antherae doubly excavated ; STIG . divided into six segments, and the fruit a round- ish, single-celled, monospermous berry. There is one species, viz. A Guianensis ; which grows in the forests of Guiana.

AIOU, a group of sixteen islands, in the Eastern seas, off the north coast of Waygion, and surrounded by a reef fifty miles in compass, which is penetrated by a deep channel on the north-west side.

AIOU BABA, is the largest about five miles in circuit, and 500 feet high, and lies in 128►►. 25'.

►►. Long, and 0►►. 32'. N. Lat. Tropical fruits and roots are produced here ; and the inhabitants obtain abundance of fish and turtle. They pro- cure sago from Waygion and Rawak ; and sel! tortoise- shell and biche de mer, (an animal of the mollusca tribe, much sought for in the East- ern seas,) to the Chinese.

AIPJXIMIRA, in ichthyology, the name ot an American

fish, more usually known by the name of pudiano. It is small, of the shape of a pearch, with a purple back, and yellow sides and belly.

A I R.

AIR, v. & 71.^ Gr. arip, aiifu, to breathe. ††† R RIAL, Fr. air. ††† The noun designates

jE'RiE, the fluid which constitutes our

AIR'INESS, (atmosphere, and which sur- AIR'ING, (rounds or penetrates all sub- AIR'LESS, stances with which we are con-

AIR'LIXG, I versant; it is variously com- AIR'Y. J bined and modified, and is

necessary to animal life. The different signifi- cations of the root and its derivations, are deduced from the attributes of the air ; hence, when its motion is forcible, it is the wind.

The adjectives mostly refer to that which is light, gay, and unsteady. Through the medium of the French and Italian tongues, air signifies the carriage or deportment of a person ; sound in music and poetry ; aery, is the eagle's nest, so called from its aerial situation.

Lyke as when an arowe is sbott at a marck, it parteth the ayre, which immediatly commeth together agayne, so that a ma can not knowe where it wete thorow. Bible, 1539. Wysdome, c. v.

For Jupiter had from the heuynnis fare, Send down Iris, quhilk duellis in the are Unto his spous and sister thare at hand, Ful scharp chargis bringis and command.

Douglas, b. ix. p. 307. Joy'd to range abroad in fresh attire, Thro' the wide compass of the airy coast.

Spenser.

There be many good and healthful airs, that do appear by habitation and other proofs ; that differ not in smell from other airs.

Bacon's Natural History, No. 904. The first is the transmission, or emission of the thinner and more airy parts of bodies ; as in odours and infections ; and this is of all the rest, the most corporeal. . . . Bacon.

Our aiery buildeth in the cedar's top, And dallies with the wind and scorns the sun.

Richard III.

He that is merry and airy at shore, when he sees a sad tempest on the sea ; or dances when God thunders from heaven ; regards not, when God speaks to all the world. Taylor.

Fresh gales and gentle airs

Whisper'd it to the woods ; and from their wings Flung rose, flung odours from the spicy shrub, Disporting ' Paradise Lost.

Nor think, with wind

Of any threats to sv/e, whom yet with deeds Thou can'st not. Idem.

Nor (to avoid such meanness) soaring high, With empty sound and airy notions fly.

Roscommon

I have found a complaint concerning the scarcity of money ; which occasioned many airy propositions, for the remedy of it. Temple's Miscell.

The painters draw their nymphs in thin and airy habits ; but the weight of gold and of embroideries is reserved for queens and goddesses. Dryden.

There are fishes that have wings, that are no strangers to the airy region. Boyle.

If I were to tell what I mean by the word air ; I may say, it is that fine matter which we breathe in and breathe out continually : or it is that thin fluid body, in which the birds fly, a little above the earth ; or it is that invisible matter, which fills all places near the earth, or which immediately encompasses the giooe of earth and water. Watt's Logick.

As I was here airing myseif on the tops of the mountains, I fell into a profound contemplation, on the vanity of human life ; and passing from one thought to another, surely said I, man is but a, shadow, and life a dream. Spectator.

As meadows parch'd, brown groves, and with'ring

flow'rs,

Imbibe the sparkling dew, and genial show'rs, As chill dark air inhales the morning beam, As thirsty harts enjoy the gelid stream ; Thus to man's grateful soul from heav'n descend, The mercies of his Father, Lord, and Friend.

Sir W. Jones,

The eagle falls from her aerial tower, And mingles with irrevocable dust j But man from death springs joyful, Springs up to life and to eternity.

Kirk White's Poena.

1. AIR, is a generic name for permanently elastic fluids ; or, to speak with more strictness of language, for those exceedingly rare substances which are not condensable, even into what is com- monly called the fluid state, by any degree of cold that has hitherto been found in nature, or produced by art. But as this term air, is, in its common sig- nification, limited to the specification of that com- pound of aeriform fluids by which the atmosphere is constituted, we shall in the present article restrict ourselves to the consideration of this last compound, and treat of other gaseous fluids under the words GAS and CHEMISTRY.

2. The atmosphere demands to be considered in three points of view ; in the first instance we are naturally called upon to describe its physical and sensible properties ; secondly, its chemical composition affords a rich source for minute in- vestigation ; and, lastly, it may be found in- teresting to discuss the medicinal relations ot tl air we breathe to the general conditions of health

or sickness. It is in this order then that we now proceed.

3. SECT. I. PHYSICAL OR MECHANICAL PRO- PERTIES OF AIR. ††† The atmosphere is a thin, transparent, invisible, and elastic fluid, which surrounds our planet ; and reaches to a consider- able height above its surface, probably about forty miles.

4. Air is a ponduous body. Of this property the ancients seem to have had some confused notions ; thus Aristotle says that all the elements have gravity, and even air itself; and as a proof of it, he says, that a bladder inflated with air weighs more than the same when empty ; and Plutarch and Stobreus quote him as teaching that the air in its weight is between that of fire and earth ; and, further, he himself, treating of respiration, reports it as the opinion of Empe- docles, that he ascribes the cause of it to the weight of air, which by its pressure forces itself into the lungs ; and much in the same manner are the sentiments of Asclepiades expressed by Plutarch, who represents him as saying, among other things, that the external air by its weight forcibly opened its way into the breast. Never- theless it is certain, however unreasonable it may seem, that Aristotle's followers departed in this instance from their master, by asserting the contrary for many ages together. Several of the phenomena arising from this property of pon- derosity in the air, had, indeed, been remarked from the highest antiquity. Many centuries

since, it was known that, by sucking the air from an open pipe, having its extremity immersed in water, this liquid arises above its level, and occupies the place of the air. In consequence of such observations, sucking pumps were con- trived, and various other hydraulic machines ; as Heron's syphons, described in his Spiritalia, or Pneumatics, and the water clocks known in Aristotle's time, under the name of clepsydrae, which alternately stop or run as the finger closes or opens their upper orifice. Indeed, the reason assigned by philosophers, many ages after, for this phenomenon, was a pretended horror which nature conceives for a vacuum ; so, that rather than endure such vacuum, it makes a body as- cend contrary to the powerful solicitations of its gravity. It is curious, we may remark by the way, to observe, how, in every part of ancient philosophy, final were thus mixed and confounded with efficient causes. Every thing in nature was explained on the principle of design.

5. Among the more modern investigators of the properties of air, we may first mention Galileo, who was born in the latter part of the sixteenth century. He found that a copper ball, in which the air had been condensed, weighed heavier than when the air was in its ordinary state of tension. The fact was afterwards demon- strated by Torricelli, whose attention was drawn to the subject by the attempt of a well-digger at Florence, to raise water, by a sucking pump, to a height exceeding thirty-three feet. It was then found that the pressure of the atmosphere, and not nature's abhorrence of a vacuum, was the cause of the ascent of the water in the pump- pipes ; and that a column of about the height mentioned, was sufficient to equipoise the atmos- phere.

6. In the year 1643, this able disciple of Galileo took a glass tube of some feet in length, sealed it hermetically at one end, and filled it with quicksilver ; then inverting it, and holding it upright, by pressing his finger against the lower or open orifice, he immersed that end in a vessel of quicksilver ; then removing his finger, and

suffering the fluid to run out, the event verified his conjecture; the quicksilver descended till the column of it was about thirty inches high above the surface of that in the vessel below. Hence Torricelli concluded that it was no other than the weight of the air, incumbent on the sur- face of the external quicksilver, which counter- balanced the fluid contained in the tube. The empty space, formed by the descent of the quick- silver from the upper part of the tube, has been called the Torricellian vacuum, and is as perfect as any that can be formed.

7. Torricelli thus, not only proved that the air had ponderosity, but also that it is this property of the atmosphere which keeps water and quicksilver raised in pumps and tubes.

8. This experiment and its results soon be- came generally known. It was repeated and varied in several ways; Messrs. Pascal and Petit in France, especially occupied themselves in the investigation At the age of twenty three, an experimental treatise was published by the former, entitled Experiences Nouvelles touchant la Vuide, in which the writer, after first rea- soning on the old notion of nature's abhorrence of vacuum, adopts the Torricellian principle of pressure from the air, and devises several ex- periments in confirmation of it.

9. The very important discovery was now made, that upon ascending a mountain, quick- silver fell in the tube, because there was less air above to press upon the surface of the metal in the basin; and in this way the doctrine in question was not only illustrated and confirmed, but a method was discovered for ascertaining the height of mountains, by means of the baro- meter, this instrument, by the rise and fall of its contained fluid, indicating a corresponding change in the density of the atmosphere. See BAROMETER and METEOROLOGY.

10. At the surface of the earth, it has been seen that the mean density or pressure, is equal to the support of a column of quicksilver thirty inches high.

At 1000 feet above the surface the column falls to ... 28-91 inches.

2000 27-86

3000 26-85

4000 25-87

5000 ....;.. 24-93

1 mile 24-67

2 20-29

3 16-68

4 13-72

5 11-28

10 4-24

15 1-60

20 0-95

11. The weight of the air, and its mechanics properties in general are well illustrated by the uir-jm►►ip; but for an account of this instrument and its uses, we must refer to another part of

our work See PNEUMATICS. It is sufficient for our present purpose to have established the principle that air has a positive weight, and that its density decreases in proportion to the alti- tude from the earth at which experiments are in- stituted.

12. The next quality of air which we may no- tice is its ELASTICITY, by which it is capable of being compressed into a smaller bulk than ordi- nary, but returns, like a spring to its original volume, immediately upon the pressing force being removed. It may be proper to remark, that this property of air is susceptible of some diminution, by long-

continued and violent pres- sure. The property itself is easily rendered evident by the following simple experiment. Take a shrivelled bladder, which contains only a small quantity of air, and put it under the receiver of the air-pump ; then exhaust the receiver of its" air, and the bladder, from being shrivelled or collapsed, will expand itself to its full dimen- sions ; thus proving the elasticity of the air con- tained within the bladder, which only awaited the taking off of the pressure from without, thus to expand its volume.

13. This property of air is distinct from its density, and indeed is, in a manner, opposed to it ; and it will be found a law of elasticity, that it increases as, the density of the air increases, for there must necessarily be a balance between ac- tion and re-action ; i. e. the gravity of the air, which is a compressing power, and its elasticity, which is an expanding quality, will prove equal. Hence, its elasticity increasing or diminishing universally as the density increases or diminishes, it is of no consequence whether the air be com- pressed and retained in a given space by the weight of the atmosphere, or by any other means ; it must endeavour, in either case, to re-act or expand with the same force. And hence, if air near the earth be pent up in a vessel, and all communication with the circumambient fluid be cut off, the pressure of the enclosed air will be equal to the weight of the atmosphere, at the time the quantity was confined.

14. By this property of expansion, air enters with facility into all parts not already occupied by the pressure of solid matter : thus it gains access into the pores of bodies, and creates a perpetual oscillation among the particles of the material universe. Indeed the degree of heat, and the air's gravity and density, and conse- quently its elasticity and expansion, never re- maining the same for the least space of time, there must be an incessant vibration, dilation, and contraction in all bodies. From this cause it is, that the air contained in bubbles of ice, by its continued action bursts the ice. Thus, also, entire columns of marble

sometimes are cleft in the winter, from the increased elasticity of some little bubble of air contained in them ; and for the same reason it is that few stones will bear to be heated by fire without cracking into many pieces, by the increased expansive force of some air confined within their pores.

16. This principle of reciprocation is indeed traceable in its effects, even upon organic ex- istence, although in this case, it is more under ⁇ he modification of laws, which apply only to

living or osganized matter; but the compression and expansion of vessels, in the vegetable king- dom, for example, must depend greatly upon the conditions of the atmosphere already alluded to ; and it is found that no vegetation or germination is carried on in vacuo. The effects which follow the application of cupping glasses to the surface of the animal body are in proof and illustration of this principle.

16. It has not, however, been fully ascertained to what degree, air of the density which it pos- sesses at the surface of the earth, is susceptible of being compressed. Dr. Hales, by means ot a press, condensed it thirty-eight ; and afterwards, by forcing water in an iron globe, into 1551 times less space than it naturally occupies. But Dr. Halley, from experiments made both in London and at Florence, concluded that no force whatever is able to reduce air into 800 times less space than that which it naturally possesses on the surface of our earth. Experi- ments made by Mr. Boyle, however, in reference to the dilatability of the air, present astonishing results. This philosopher dilated it to even 13,679 times its natural space, and this without the help of fire. It is stated, indeed, that the air we constantly inspire, is compressed by its own weight into at least the 13679th part of the space it would occupy in vacuo. But if the same air be compressed or condensed by art, the space it would take up when most dilated, to that it occupies when condensed, will be, according to experiments,

as 5500 to 1. PUMP, AIR.

17. This elastic property of the air is exerted equally in all directions ; and when air is at liberty and freed from the cause which com- pressed it, it of course expands equally in all directions ; and, in consequence, always assumes a spherical figure in the interstices of fluids in which it is lodged. This is evident when liquors are placed in the receiver of an air-pump, and the air exhausted ; at first there appear a multi- tude of exceedingly small bubbles, like grains of fine sand, dispersed through the fluid mass, and rising upwards; and as more air is pumped out, they enlarge in size, but still they continue round. Also, if a plate of metal be immersed in the liquor, on pumping, its surface will soon be covered over with small round bubbles, composed of the air which adhered to it, now expanding itself : and for the same reason it is, that large glass globes, &c. are always blown up of a spherical shape, by blowing air through an iron tube into a piece of melted glass at the end of the pipe.

18. It will be understood, from what has been said, that the space occupied by a determinate quantity of air, is in the inverse ratio of the elastic force; and, from this law, it follows, that, with the same given temperature, the elas- ticity of two moleculae of air does not augment by their mutual approach.

19. In order to render this inference sensible, let a mass of air be conceived to be enclosed in a bladder, which communicates with a recurved or syphon-like tube containing mercury, and let it be supposed that its elastic force is in equi- librio with a column of mercury ; of thirty inches- high : if the bladder be compressed in such manner that the air shall be reduced to half its

volume, the stratum of air contiguous to the surface

of the liquid mercury, will evidently have a density twice as great as it had b fore the compression ; and consequently, a double number of moleculx of air will touch and act upon the surface ; therefore, since, according to the experiment, the height of the column of mercury has been doubled, the elasticity of each moleculae has necessarily been the same ; thence it follows, as we have stated, that with a given temperature, the elasticity of the mo- leculffi of air is not increased by their mutual approach, the number is merely multiplied of moleculae acting upon an assumed surface.

The truth thus established, manifestly con-
lucts to the following results.

20. i. The moleculae of gas yield sensibly only to the repulsive force of heat, and the at- traction which they exercise one upon another, is very small,with respect to that force : thus, their elasticity depends exclusively upon the temperature, and the quantity of free caloric which exists in a mass of air, is, at equal temperature, proportional to its volume ; for, if there were more under the same volumes in the state of condensation, than in dilatation, the repulsive force of two neigh- bouring moleculae would be augmented.

21 ii. If the volume of a gas be diminished, a third or a half, there must be disengaged a third or a half of the free caloric which existed between its moleculae. The effect of the caloric thus disengaged, is perceptible upon the velocity of sound; it produces the excess of that velocity, over that given by the ordinary theory ; as has been shewn by the calculus of Laplace and others.

22. iii. If we conceive equal volurnes of two different gases comprised in two envelopes of the same capacity, and inextensible ; and suppose that at a given temperature, the elasticity of these two gases is the same ; on augmenting in the same manner their temperature, the aug- mentation of their elasticity will be the same, since it depends only upon their temperature. If we now conceive the

envelope comprising the two gases to become extensible, the gases will dilate, until their elasticity is in equi- librio with the pressure of the atmosphere sur- rounding the envelope ; and since for each gas the volume is in the inverse ratio of the elastic force, the two gases will assume the same vo- lume, and will dilate equally; which is con- formable to experience.

23. FLUIDITY is another property which philo- sophers have ascribed to air ; but this quality should be, perhaps, in strict propriety, regarded negatively, or considered as an insusceptibility of being made to assume the condition of a solid, by any extent of condensing power, or pressure, which art is capable of effecting, or perhaps, man of conceiving. True it is, as we shall im- mediately see, when treating on the chemical properties of the atmosphere, that the specific principles which enter into the formation of ~ir, are capable of passing from an aerial, or fluid' into a solid state; and there is even some com- plication connecting itself with this result, when minute investigation is given to its rationale; but that air, as air, should be solidifiable, im-

plies, under our present acquaintance with the laws of the universe, a contradiction in terms.

24. SECT. II. We now then proceed to the second division of our subject, viz. THE CHEMI- CAL COMPOSITION, AND PROPERTIES OF ATMOS- PHERIC AIR ••• a subject which cannot be con- templated in all its bearings, without exciting astonishment and admiration ••• a subject, indeed, which involves all the leading, and many of the minor circumstances, by which the line of de- marcation is marked out between the chemistry of former times, and the chemistry of the pre- sent day, with more decision, fulness, and force, than, perhaps, is done in any other department of scientific inquiry.

25. In following the march of philosophy, com- mencing from the earliest periods, the reflecting observer will often meet with announcements and

intimations, which imply, on the part of the persons making them, and the periods in which they were made, a greater precision and accuracy, in respect of particular insights into nature's laws, than either the persons or the times in other ways substantiate : this remark will be found to apply with especial propriety to the topic now under discussion; so much so indeed, that some have refused the credit of novelty and discovery, to the development of those laws of atmospheric composition, and the circumstances of gaseous being, which have recently operated that vast reformation in chemical research, to which we have above adverted. But it should be recollected, in justice to the moderns, that the lights alluded to were spent and dispersed amidst the surrounding darkness of the aera in which they appeared ••• that the individuals by whom these anticipations of future discoveries were made, seemed scarcely themselves conscious of the great fundamental truths they were indicating; and even at farthest, as was remarked by a mo- dem chemist of most deserved celebrity : ' We are not to consider conclusions as unavailing, because anticipated; the very circumstance of attaining them by different means justifies the research ; and he, whose investigations disclose new views, and unfold new truths, may rest satisfied that he has not laboured in vain, because he ultimately arrives where others have been before him. In estimating, however, the true merits of chemical discoveries and inventions; and more especially in determining the excel- lence and originality of theories, it is requisite to look to their sources, to examine the steps which led to them, and the paths by which they are surrounded ; and upon that examination to found our opinion.'

26. The leading feature and important novelty of the science, as influencing its progress in the last century, was certainly the discovery of gaseous bodies, and the perfection of pneumatic chemistry, without which, analysis could have made little progress; and independent of which, all improvement in theory would have been but lame and ineffectual :

it was also materially, though less directly assisted by those investiga- tions respecting the agency of heat, in which Dr. Black made himself so eminently conspicuous.'

27. We deem it expedient then, in this place.

instead of limiting ourselves to a statement of the chemical components of the air we breathe, first to give a succinct history of the several cir- cumstances by which the great laws at present known to regulate aerial bodies, became gi-adually developed into their present state of maturity.

28. It is now about two hundred years, since the burning of some substances in the open air, was distinctly observed to be attended with an increase of weight. Le Brun having melted two pounds six ounces of tin, found that in six hours the whole had passed into a state of calx, weigh-, ing three pounds one ounce : and, being puzzled at the circumstance, he consulted REY, a physi- cian of Perigord, as to its cause, who imme- diately set about an investigation of the matter, which terminated in explicitly referring the cause of the increase to the fixation afair.

29. We request the reader particularly to notice the above, as being the first among modern intimations, of the relation in which certain kinds of solid substances stand, to the invisible matter oy which they are surrounded.

30. Hooke in his investigations, and Boyle by his experiments with the air-pump, which was now just perfected and coming into use, suc- ceeded not merely in demonstrating the impor- tant part performed by the pressure of atmos- pheric air in combustion, but Hooke carried his enquiries still further, and, in his mind's eye at least, seems to have seen, and anticipated, the re- sults that were

gained at a much later period of chemical science, and established upon a less questionable authority.

31. These, more than intimations, we may almost say, of Hooke, were further illustrated by John Mayow, who was born in Cornwall, in the year 1645, and died in London, 1697, at the house of an apothecary, in York-street, Covent Garden. This experimentalist seems to have been early struck with the analogy between the phe- nomena of combustion and those of respiration. He burned a candle-end in a bell-glass, and found the air so deteriorated, as to be unfit for the continuance of combustion. He then con- fined a mouse in a similar portion of air, and it soon manifested the want of its renewal. Then, by putting a mouse and a candle under the same bell- glass, he found it live only half the time that it had survived when under the glass alone. He then renewed the experiment, and endeavour- ed to fire combustible matter in air that had been spoiled by breathing ; and finding that it would not burn, he observes, that ' the nitro-derial par- ticles are absorbed both by the candle and the animal.''

32. Examining the residuary air standing over water after combustion, he found that it was a little lighter than the atmosphere, and extinguish- ed flame ; then he described the deleterious as well as the vivifying portion of the atmosphere, and speaks of the former as a non-supporter of combustion, of its being not absorbable by water, and, as we have intimated, of its being lighter than atmospheric air itself. The next individual whom it is in order to name, in this historical sketch, is Dr. Hales, who was born in Kent, in the year 1677, and died at Teddington, 1761. Hug highly talented and virtuous man commenced

the communication of his lesearches to the Royal Society about the year 1717: and in 1727 he published his 'Statical Essays,' containing a specimen of an attempt to analyse the air by a great variety of chemico-statical experiments, which were read at several meetings berore the Royal Society.'

33. Dr H. employed several methods of col- lecting and examining the gaseous products of a variety of bodies, many of which, approach those that now are in use. Sometimes he placed substances upon a stand, under a bell-glass, in- verted over water ; or he employed a flask to contain the materials, producing aeriform matter, over which was placed a bell-glass, the whole being confined over water as before ; or, where a high temperature was required foi the pro- duction of the gaseous bodies, he used an iron retort, formed of a bent gun-barrel, and received the air into a vessel inverted in a tub of water.

34. In the course of his investigations, Dr. H. observed that phosphorus, when burned, absorbed air, and produced white fumes ; but he neglected any examination of the product and of the re- sidue. He distilled air from wood, and found it fatal to animals ; from Newcastle coal he ob- tained one third its weight of gas ; from nitre, one hundred aud eighty times its bulk ; and from salt of tartar urged by intense heat, he also pro- cured aeriform matter; but in no one instance did he examine these gaseous bodies with the attention that might have been expected from an experimentalist so diligent and original. He found that iron filings, and oil of vitriol produced scarcely any air ; but that upon the addition of water, gas was abundantly evolved from such a mixture. Here he obtained hydrogen, but in- stead of stopping to examine its properties, he hastens on to irrelevant observations, and seems always eager rather to multiply experiments, than to examine their results.

35. In the experiments on respiration, Dr. Hales obtained results of such interest, that one is surprised (says the intelligent historian whom we are now principally following) at the coldness with which he pursued them, and the careless- ness with which he drops the enquiry. Finding that a given quantity of air could only be re- spired for a given time ; and that it soon pro- duced oppression and difficulty of breathing, in consequence, as he says, ‘ of the gross and sulphureous vapours with which it becomes load- ed,’ he endeavoured to discover some

substance, which by absorbing those vapours, might render respired air more fit for breathing and conse- quently contribute to its purification in small and crowded rooms, and other similar situations. In other experiments the author notices the puri- fication of air spoiled by the burning of candles, and of brimstone, by the action of calcined tar- tar ; but he takes no pains to enquire into the specific actions of the salt, and confounds it with that of saline bodies generally.

36. These charges of oversight and neglert, when seemingly a little closer attention might have effected so much in the way of discovery, scarcely seem applicable to this great man's re- searches respecting the connection of the vege- table world with the circumambient an-; and

besides otner important particulars, which are not applicable to our present purpose, he en- gaged in a series of experiments, to shew that a considerable quantity of air is inspired by plants; but still he always fails of precisely discriminating between common air and the various gaseous products that resulted from some of his experi- ments ; and therefore, as was likewise the cass with his contemporary Boerhaave, stopped short of giving any thing like a satisfactory account of the component parts of atmospheric air.

37. Indeed the fixability of air, if we may so express it, remained for proof, until the two great discoveries of Dr. Black came to oe ap- plied to the investigation of gaseous being ; and it has always appeared to us, that these dis- coveries effected more towards producing a thorough reformation in the whole body of chemi- cal doctrines, than any thing prior or posterior to them. What were these discoveries ? When Dr. Black first entered the precincts of che- mistry, (we, in this and several other places, use the words of Brande,) there was a

busy and acute controversy respecting the cause of causticity, in earths and alkalies; it was, by some, supposed that the conversion of lime-stone into quicklime depended upon its absorbing certain igneous particles ; by others, the change was referred to an acrid acid, contracted in the fire ; by others, to non-descript saline particles.

38. Dr. Black's notice appears to have been drawn to this enquiry, by the researches of Hoffman concerning the nature of magnesia : he found that when that earth was obtained, by adding a mild alkali to a solution of Epsom salts, it effervesced upon the addition of an acid ; but that, if heated red hot, it no longer effervesced, and, moreover, lost considerably in weight. The same fact applied equally to lime, and led him to believe, that that substance, in- stead of acquiring its acrimony by the absorp- tion of something from the fire, became caus- tic, by the loss or expulsion of one of its ele- ments, in consequence of being heated. He then distilled some magnesia in a retort ; but finding that though it diminished considerably in weight, the only visible loss it sustained was a minute portion of water, he conceived the pos- sibility of the escape of some gaseous matter ; and, on mixing common magnesia and an acid in a proper phial, he collected a considerable quantity of a permanently elastic gaseous body ; from chalk, or lime-stone, and from the mild alkalies he procured a similar gas, and termed itfxed air ??? a term which, however improper, may be taken partly in proof of the fact, that our present discoverer was the first properly to appreciate the concentrability of gaseous prin- ciples. Dr. Black was born in France, of Scotch parents, in 1728. He died at Edinburgh in 1799.

39. The next of the two great discoveries of this extraordinary man, respects the different cir- cumstances in which bodies exist in relation to heat. This power, heat, had only been thought of as a cause of raising the temperature, or changing the form of bodies; but Dr. B.'s re- marks established this very important and com- manding principle, viz.

that, independently of temperature and even of form, heat attaches itself

to material substances in such sort as to be lost to the senses, or become hidden. It had already, indeed, been observed, that ice, during liquefac- tion, retained an uniform temperature of 32►►, and that water, during its boiling, never became hotter than 212►►, hence the use of those fixed points in the graduation of thermometers. See THERMOME- TER. We have now to indicate merely the views which these phenomena suggested to Dr. Black, and the results that followed his enquiries into their cause and effect. It will be more in order to engage in the detail of these important investiga- tions, in another place, See CHEMISTRY and CA- LORIC ; but it will be necessary here just to say sufficient for the detection of the principle.

40. When water, it has already been said, is made to boil, the steam which rises is not hotter than the water itself, although there be a continual influx of heat, which, therefore, must become latent in the steam ; and consequently steam and other vapours may be regarded as compounds of liquids and heat. Again, let two masses of matter be mixed together, and the temperature of the mass will not prove a mean of the temperature of the two, but will be higher or lower, according to the nature of the materials employed, without a proportionate quantity of heat being presented to the senses, or even demonstrating itself by causing ther- mometrical variation : hence the heat which thus by admixture has been made to dis- appear, was said to become latent; and the principle which effects this, is one which pre- sents a clue to the whole secret of vaporous, aerial, and gaseous existence ; and gives a facility to our experiments and reasoning on the sub- ject of gaseous constitution, to an almost in- calculable extent.

41. We have now to advert to the labours of another philosopher, whose investigations on the subject of air, have proved especially availa- ble in reference to the topic under notice, viz. the chemical habits

and circumstances and compo- sition of the air we breathe. What was by him called dephlogisticated air, and wi.^t is now usually termed oxygen gas, was discovered by Dr. Priestley, on the first of August 1774. The method of experimenting, which he adopted, consisted in exposing a quantity of red preci- pitate of mercury to the action of the sun's rays, concentrated by a burning lens ; the red precipitate was contained in a small flask, filled up with quicksilver, and inverted in a basin of the same metal : ' I presently found (he says) that by means of this lens, air was expelled from it very readily. Having got about three or four times as much as the bulk of my ma- terial, I admitted water to it, and found that it was not imbibed by it. But what surprised me more than I can well express, was, that a candle burned in this air with a remarkably vigorous flame, very much like that enlarged flame with which a candle burns in nitrous air, exposed to iron, or liver of sulphur; but, as I got nothing like this remarkable appearance from any kind of air, besides this particular modi- fication of nitrous air, and I knew no nitrous acid was used in the preparationof the mercurius calci- naius, I was utterly at a loss how to account for it.

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42. Nitre and other substances were afterwards shown by Dr. Priestley to afford this kind of air, and in the event it came to be ascertained, that the matter thus detected by our experimentalist, as a constituent, so to say, of those bodies, is in truth the main vivifying ingredient of the aerial mass in which we are enveloped.

43. The constitution indeed of the atmosphere, was one among the many enquiries that engaged Dr. Priestley's diligence, and that was made out during the period of his activity. In 1772, Dr. Rutherford demonstrated the existence of a pe- culiar elastic fluid in atmospheric air, differing from fixed or mephitic air ; and yet, like it, ex- tinguishing

flame, and unfit for respiration. This component part of the atmosphere, was denominated by Dr. Priestley phlogisticated air, as the other had been dephlogisticated.

44. While Priestley was thus occupied in Britain, Scheele, on the Continent, was almost simultaneously engaged in investigations that led to nearly similar results. Finding air necessary for the production of fire, this last experimen- talist turned his attention to its analysis. He found that a solution of liver of sulphur, and cer- tain other sulphurous compounds, occasioned a diminution in the bulk of air to which they were exposed, equal to one part in about five. He likewise obtained what he calls empyreal air, the dephlogisticated air of Priestley, and the oxygen gas of the new nomenclature, by the decomposition of the nitrous acid, and other processes ; he also shews by direct experiments, that the absorption occasioned in atmospheric air by liver of sulphur, is referrible to the ab- straction of its empyreal portion ; that it totally absorbs empyreal air; and that upon adding to the residuary portion of atmospheric air, a quan- tity pf empyreal air, equal to that absorbed by the sulphureous liquor, an air is again com- pounded, similar in all respects to that of the atmosphere.

45. But now the terms dephlogisticated, em- pyreal, &c. were to be exploded, and a new nomenclature introduced into the science of pneumatic chemistry, founded on the principle, that the old theories assumed the presence of an undemonstrable material. It has already been said, that one of the first steps leading to the de- tection of aerial circumstance was, the obser- vation that the burning of some materials in the open air, occasioned an increase of weight in the materials so treated ; this increase of weight in the calcined body, was subsequently found to correspond, cateris paribus, with the quantity of air that disappeared during the experiment ; and it is upon this fact that the Lavoisierean or oxygenous theory came to oppose itself to the phlogistic principles and nomenclature of Priestley and others. Lavoisier analysed

atmospheric air in the following way : he exposed fifty cubic inches of it to heated mercury, by which it un- derwent a decrease equal to one sixth of its original bulk, and became unfit for respiration and combustion ; at the same time the quick- silver was partly converted into a reddish matter, forty-five grains of which, heated red hot in a proper retort, afforded 41.5 of run-

ning mercury, and seven or eight cubical inches of gas, eminently supporting combustion, and being the dephlogisticated air discovered by Priestley. The recombination of the forty-two cubical inches of the mephitic air of the retort, with the eight cubical inches of dephlogisticated air, separated from the mercury, reproduced fifty cubic inches of atmospheric air.

46. Here then, say the opponents of the phlo- gistic hypothesis, we have both analysis and synthesis, both composition and reduction, to prove that the principle of phlogiston is a gratui- tous and unnecessary assumption, complicating what is simple, and implying a contradiction in terms. All aeriform fluids, says Lavoisier, are compounds of a ponderable. basis, with heat and light; in the above experiment, the ponder- able part of what, in the school of Priestley, was named dephlogisticated air unites to the quick- silver ; this union is effected under other cir- cumstances in different ways and various degrees, and according to the manner of junction, or the quantity combined with the base, different com- pounds are formed ; in all instances, however, it is assumed that the process of combination is effected by taking this same something from the air, and fixing it in the material employed in the experiment. This something was deno- minated oxygen gas by the new theorists, from its general tendency to form acids; and a system of highly ingenious and plausible, but in some instances, as has been subsequently proved, of untenable generalization, was now made to apply in the way of exposition to all the pheno- mena of pneumatic chemistry. See COMBUSTION.

47 Thus we see, by taking a slight retrospec- tive glance upon the ground that has been gone over, that Le Bran's experiment on combus- tion, together with Mayow's observation of the concentration of nitro-aerial particles, that Hale's subsequent experiments proving the absorption of air during combustion and respiration ००० that Black's discovery of the actual fixidity of air, and the latency of heat ; and lastly, that Priestley's detection of the presence of dephlogisticated air, or according to the more modern nomenclature, oxygen gas, in the presence of certain metallic substances, have constituted altogether the ma- terials out of which our present knowledge of the laws and constitution of the atmosphere has come to be established ; and we now proceed to state more precisely, the component parts of which it is formed, the general habits of the ingredients which enter into its composition, and the means to which nature resorts in order to perpetuate its uniformity and purity.

48. Atmospheric air is composed of at least two species of air, or elastic fluid ००० the one called oxygen gas or vital air, the other azotic, or more recently nitrogen gas. The first of these is the great agent in respiration and combustion ; and upon the proper proportion of it depends the purity of the atmosphere. The latter pos- sesses contrary qualities, is noxious to animals, and incapable of maintaining combustion; the proportion of these two parts of atmospheric air, is commonly about twenty-six or twenty- seven parts of oxygen air, and seventy-fo .1 or

seventy-three parts of azotic gas by weight ; or about twenty-two parts of the former, and seventy-eight of the latter by bulk. A small portion of hydrogen and carbonic acid gases are found in- deed to enter its composition ; but these two last ingredients are naturally in such small quantity as scarcely to deserve notice.

49. The immense mass of permanently elastic fluid, (says Ure,) which surrounds the globe we inhabit, must consist of a general assemblage of every kind of air which can be formed by the various bodies which compose its surface. Most of these, however, are absorbed by waters ; a number of them are decomposed by combination with each other, and some of them are seldom disengaged in considerable quantities by the pro- cesses of nature. Hence it is that the lower atmosphere consists chiefly of oxygen and nitrogen, together with moisture, and the occasional vapours or exhalations of bodies. The upper atmosphere seems to be composed of a large proportion of hydrogen, a fluid of so much less specific gravity than any other, that it must natu- rally ascend to the highest places, where, being occasionally set on fire by electricity, it appears to be the cause of the aurora borealis and fire- balls. It may easily be understood that this will only happen on the confines of the respective masses of common atmospherical air, and of the hydrogen, or inflammable air, that the combus- tion will extend progressively, though rapidly, in flashings from the place where it commences ; that when by any means a stream of inflam- mable air, in its progress towards the upper atmos- phere, is set on fire at one end, its ignition may be much more rapid than what happens higher up, where oxygen is wanting, and at the same time more definite in its figure and progression, so as to form the appearance of a fire- ball. See ME- TEOROLOGY.

50. In the historical sketch we have above given, of the successive steps by which we have acquired the knowledge of aerial compound, will have been seen the Lavoisierean mode of analyzing the air ; but it may be right to be still more particular on this head, and give the fol- lowing experimental method of ascertaining the component principles of the atmosphere. If heat, then, be applied to mercury enclosed in a proper vessel of atmospheric air, the air will be diminished, and the mercury will lose its splen- dour, gradually changing to a reddish powder, and acquiring an addition to its weight.

When no further change is observed, the separation of the principles of air has taken place. That portion which remains in the receiver is unfit for supporting flame, or maintaining respiration, and is azotic or nitrogen gas ; the other part which is oxygen gas, is absorbed by the mercury, which it reduces to the state of an oxide, and from which it may afterwards be extracted by heat. By this last operation the mercury will be restored to its metallic state, and will lose the weight it had acquired during its oxidation. These separated gases thus differing in their properties from each other, and from atmospheric air, being again mixed in the proportions above stated, form at- mospheric air of the ordinary degree of purity ; differing from it, however, in some trifling re- spects, yet not so much as to invalidate the gene-

ral conclusion, but which differences are probably occasioned by our inability to combine the ingredients so perfectly as they are combined by nature.

51. Oxygen, then, and azote, being the main and primary, while carbonic acid, and hydrogen gases are the less and more incidental compo- nents of the atmosphere, we now go on to treat separately of these several ingredients in the order above enumerated.

52. i. OF OXYGEN GAS. ††† This gas forms about a fifth part of the atmosphere. Water contains 88.88 per cent, of it ; and it exists in most vegetable and animal products, acids, salts, and oxides.

53. This gas may be obtained from nitrate of potash, exposed to a red heat in a coated glass, or earthen retort, or in a gun barrel, from a pound of which about 1200 cubic inches may be ob- tained ; but this is liable, particularly towards the end of the process, to a mixture of nitrogen. It may be expelled from the red oxide of mer- cury or that of lead, and still better from the black oxide of manganese heated red hot in a gun-barrel, or exposed to a gentle heat in a re- tort with half its weight,

or somewhat more of strong sulphuric acid. To obtain it of the greatest purity, however, the chlorate of potash is pre- ferable to any other substance, rejecting the portions that first come over, as being debased by the atmospheric air in the retort. Growing vege- tables exposed to the solar light, give out oxygen gas : so do leaves laid on water in similar situa- tions, the green matter that forms in water, and some other substances.

54. Oxygen gas has neither smell nor taste. ??? Its specific gravity is 1.1111, 100 cubic inches weigh 33.88 gr. It is a little heavier than atmospheric air. Under great pressure water may be made to take up about half its bulk. It is essential to the support of life ??? hence called vital air ; an animal will live in it a considerable time longer than in atmospheric air ; but its respi- ration becomes hurried and laborious before, the whole is consumed, and it dies, though a fresh animal of the same kind, can still sustain life for a certain time in the residuary air.

55. Combustion is powerfully supported by oxygen gas. Any inflammable substance previ- ously kindled and introduced into it, burns ra- pidly and vividly. If an iron or a copper wire be introduced into a bottle of oxygen gas, with a bit of lighted touch- wood or charcoal at the end, it will burn with a bright light, and throw out a number of sparks. The bottom of the bottle should be covered with sand, that these sparks may not crack it. If the wire coiled up in a spiral form like a cork-screw, as it usually is in this experiment, be removed with a jerk, the in- stant a melted globule is about to fall, so as to throw it against the sides of the glass, it will melt its way through in an instant ; or if the jerk be less violent lodge itself in the substance of the glass. If it be performed in a bell-glass, set in a plate filled with water, the globules will fre- quently fuse the vitrious glazing of the plate, and unite with it so as not to be separable without detaching the glaze, though it has passed through perhaps two inches of water.

This gas constitutes four-fifths of the volume of -
63. 'Carbonic gas is emitted in large quantities

the atmosphere. The readiest mode of procuring by
bodies in the state of the vinous fermentation -

it is to abstract its oxygenous associate, by the
and on account of its great weieht it occupies the

combustion of phosphorus, or hydrogen. It may
apparently empty space, or upper part of the

be also obtained from animal matters, subjected
vessels in which the fermenting process is going

in a glass retort to the action of nitric acid
diluted with eight or ten times its weight of water.

A/?? ?? * o o

variety of experiments may be made in this elastic
fluid. Lighted paper, or a candle

57. Azote possesses all the physical properties
dipped into it, is immediately extinguished and of
air. It extinguishes flame and animal life, the
smoke remaining in the carbonic acid gas It is
absorbaWe by about 100 volumes of water, renders its
surface visible, which by agitation may Its specific
gravity is 0.9722. 100 cubic be thrown in to waves
like water. If a dish of water inches weigh 29.65
grains. It has neither taste be immersed in this
gas, and briskly agitated it nor smell. It unites
with oxygen in four pro- soon becomes impregnated,
and obtains the pun-

portions, beside that of atmospheric air, forming
gent taste of Pyrmont water. In consequence of four
important compounds. These are, 1st. The its weight,
this' gas may be lifted out in a pitcher nitrous

oxide, or protoxide of azote. 2d. Ni- or bottle, which, if well corked, may be used to trous gas, nitric oxide, or deutoxide of azote, convey it to great distances, or it may be drawn

out of a vessel by a cock like a liquid. The effects produced by pouring it from one vessel to another have a singular appearance. If a candle or small animal be placed in a deep vessel, the former be- comes extinct, and the latter expires, in a few

general article CHEMISTRY, and turn to the re- seconds after the gas is poured upon them, though spective substances : some under the head of Gas, the eye is incapable of distinguishing any thing and others in their respective alphabetical order, that is poured. If, however, it be poun.d into a 58. Azote has hitherto resisted all attempts vessel full of air, in the sun-shine, its density, to decompose it; but it is supposed to be of a being so much greater than that of the air, renders compound nature, from its being found abun- it slightly visible by the undulations and streaks dantly in the organs of animals, which feed on it forms in this fluid as it descends through it.'

3d. Nitrous acid. 4th. Nitric acid. It also combines with chlorine and iodine, constituting by the union, two very formidable compounds. For an account of the habits of these se- veral compounds, the reader must consult the

substances that do not contain it.

59. Its uses in the economy of the globe are little understood. This is likewise favourable to the idea that its real chemical nature is as yet unknown, and leads to the hope of its being decomposable.

60. It would appear that the atmospheric azote and oxygen spontaneously combine in other proportions, under certain circumstances, in natural operations. Thus we find that mild calcareous, or alkaline matter favours the forma- tion of nitric acid in certain regions of the

* Ure. For a further account o* this gas see CARBONIC ACID, and CHEMISTRY.*

64. IT. OF HYDROGEN GAS. This is the lightest species of ponderable matter hitherto discovered. It can be procured from water, of which it forms an essential ingredient. It was discovered by Mr. Cavendish in 1766.

65. Hydrogen gas is about 14.4 times less dense than common air ; sixteen times less dense than oxygen ; and fourteen times less dense than azote. It is colourless and possessed of all the physical properties of air. It has usually a

earth ; and that they are essential to its produc- slight garlic odour, arising probably from ar- senical particles, derived from the zinc used in its preparation. When water is transmitted over pure iron in a state of ignition, it yields hydrogen free from smell. It is eminently combustible, and if pure, burns with a yellowish white flame; but from accidental combination, its flame has frequently a reddish tinge. Animal

tion in our artificial arrangements for forming nitre from decomposing animal and vegetable sub- stances.

61. iii. OF CARBONIC ACID GAS. This gas cannot be formed by the chemist from the direct combination of its constituents ; for, at the tem- perature requisite for effecting a union, the

carbon attracts its full dose of oxygen, and thus life> and flame are extinguished by this gas, generates carbonic acid. To obtain it pure, though Sir H. Davy has shewn, that if the lungs our only plan is to abstract one proportion of De not previously exhausted by a forced expira-

oxygen from carbonic acid, either in its gase- ous state, or as condensed in the carbonates. Thus by introducing well-calcined charcoal into a tube traversing a furnace, and, when heated to redness,

passing over it backwards and for- wards, by means of two attached mercurial gasometers, or bladders, a slow current of car- bonic acid, we convert the acid into an oxide more bulky than itself. Each prime of the carbon becomes now associated with only one of oxygen, instead of two as before. The carbon acting here by its superior mass is enabled to effect the saturation of the oxygen.

62. The specific gravity of this gas is slated by

tion, it may be breathed for a few seconds with- out much seeming inconvenience.

66. When five measures of atmospheric air are mixed with two of hydrogen, and a lighted taper, or an electric spark is applied to the mix- ture, explosion takes place, three measures of gas disappear, and moisture is deposited on the inside of the glass. ••• When two measures of hydrogen, mixed with one of oxygen, are de tonated, the whole is condensed into water These/ experiments give us, on a small scale, instances of thunder, lightning, and rain.

67. Hydrogen, combined with oxygen forms water, with chlorine, muriatic acid ; with iodine,

Lussac and Thenard, from theoretical considera- hydriodic acid ; with prussme, prussic acid ; with

tions, to be 96782, though Mr. Cruikshanks's ex perimental estimate was little more than -9500.

carbon, subcarbonates, carbonates, and hydrafs; will azote, ammonia; with phosphorus, phos-*

phates, &c. ; with sulphur, sulphates, &c. ; with arsenic, arsenuretted hydrogen ; with tellurium, telluretted hydrogen; with potassium, potass- uretted hydrogen; for an account of which, see CHEMISTRY, and the articles in their alphabetical

order.

68. A Question of much interest has been agitated among chemical philosophers, viz. whe- .her the different ingredients, which enter into the composition of air, be commingled in a merely mechanical manner, or whether there be an actually chemical junction of the materials by which the atmosphere is constituted.

69. Now, as oxygen and azote, or nitrogen, differ in specific gravity, in the proportion of 135 to 121, according to Kirwan, and 139 to 120 according to Davy, it has been presumed, that the oxygen would be more abundant in the lower regions, and the azote in the higher, if they constituted a mere mechanical mixture, which appears contrary to fact, because they both retain their distinctive propertiec unaltered, and no change of temperature or density takes place on their union. But perhaps it may be said, as they have no repugnance to mix with each other, as oil and water have, the continual agitation to which the atmosphere is exposed, may be sufficient to prevent two fluids, differing not more than oxygen and nitrogen in gravity, from separating by subsidence, though simply mixed. On the contrary, it may be argued, that to say chemical combination cannot take place without producing new properties which did not exist before in the component parts, is merely begging the question; for though this generally appears to be the case, and often in a very striking manner, yet combination does not always produce a change of properties, as ap- pears in M. Biot's experiments, with various substances, of which water may be instanced, the refraction of this being precisely the mean of that of the oxygen and hydrogen, which are indisputably combined in it

70. Mr. Dalton considers the general atmos- phere as composed of four fluids principally, or four particular atmospheres, namely, those of the four gases above-mentioned. These, he supposes, to be totally unconnected with each other ; the particles of the one, not acting on the particles of the other; agreeably to his opinion that in a mixture of

two or more different elastic fluids, the particles of the one neither attract nor repel those of the other, differing in this, from the particles of homogeneous elastic fluids,which repel each other, with a force reciprocally proportional to the distance of their centres from each other. Applying this principle to atmospheric air, he supposes that the density and elastic force of each gas at the earth's surface, are the effects of the the weight of the atmosphere of that gas solely ; different atmospheres not gravitating one upon another, any more than if each were in a vacuum.

71. This hypothesis, says Dr. Ure, might ac- count for the state of the atmosphere, it is true ; but it does not agree with certain facts. In the case of the carbonic acid gas in the Grotto del Cani. and over the surface of brewers' vats, why does not this gas expand itself freely upward, if the superincumbent gases do not press upon it?

Mr. Dalton himself too, instances as an argu- ment for this hypothesis, that oxygen and hydro- gen gases when mixed by agitation, do not separate on standing. But why should either oxygen or hydrogen, require agitation to diffuse it through a vacuum in which, according to Mr. Dalton, it is placed ?

72. The theory of Berthollet (continues Dr. U.) appears consistent with all the facts, and sufficient to account for the phenomena. If two bodies be capable of chemical combination, their par- ticles must have a mutual attraction for each other. This attraction, however, may be so opposed by concomitant circumstances, that it may be diminished in any degree. Thus we know that the affinity of aggregation, may occa- sion a body to combine slowly with a substance for which it has a powerful affinity ; or, even entirely prevent its combining with it ; the pre- sence of a third substance may equally prevent the combination ; and so may the absence of a certain quantity of caloric. But in all these cases the attraction of the particles must subsist, though diminished or counteracted by opposing circumstances. Now we know

that oxygen and nitrogen are capable of combination, their par- ticles therefore must attract each other ; but in the circumstances in which they are placed in our atmosphere, that attraction is prevented from exerting itself to such a degree, as to form them into a chemical compound, though it operates with sufficient force to prevent their separating by their difference of specific gravity. Thus the state of the atmosphere is accounted for, and every difficulty obviated without any new hypothesis.

73. It is a curious fact, that the proportions of the atmosphere are preserved under a vast variety of circumstance and place ; and the pro- portion of oxygen to its antagonist ingredient, appears to be very nearly the same, whether it be in this country, or on the coast of Guinea ; on low plains, or lofty mountains, or even at the height of 7250 yards above the level of the sea; as ascertained by Gay Lussac, in his aerial voyage in September, 1805. This being the case, it becomes interesting to ascertain, or to endea- vour at ascertaining, what are the provisions of nature by which this proportion of oxygen in the atmosphere, that is continually consumed in respiration and combustion, is again restored to the atmosphere. As far as an estimate can be formed of the great and general operations of nature, there appears to be at least as great an emission as there is consumption of oxygen. Thus in volcanic eruptions there appears to be at least as much oxygen emitted, or extricated by fire from various minerals, as is sufficient to maintain the combustion, and perhaps to ame- liorate the atmosphere; and in the bodies of plants and animals, which appear in a great measure to derive their sustenance and augmen- tation from the atmosphere and its contents, it is found that a large proportion of nitrogen exists. Most plants, as shewn by the experiments of Dr. Priestley and others, emit oxygen in the sunshine, from which it is highly probable, that they imbibe and decompose the air, retaining carbon, and emitting the vital part. Lastly, it to this we add the decomposition of water, and

the effects consequent upon the agitation of large seas and rivers, there will be numerous occasions in which the aqueous fluid will supply us with disengaged oxygen ; while, by a very natural supposition, the hydrogen of this fluid may be considered as having entered the bodies of plants, for the formation of oils, sugars, mucilages, &c. from which it may again be extricated. On this head, however, we have still much to learn.

74. On this interesting topic, which as we have just said, demands further investigation, we may here, with propriety introduce an ex- tract from an author, whose labours we have already made use of in the present article. Among the many and ingenious investigations of Dr. Priestley, says Mr. Brande, none have pro- duced more pleasing subjects of inquiry, than those relating to the influence of vegetation upon air, contaminated by combustion, respiration, and the putrefaction of animal matter.

75. Finding that air was not spoiled by the growth of a sprig of mint kept in it for some months, our author thought it possible that the process of vegetation might restore the air in- jured by burning candles ; and, accordingly, on the 17th of August, 1777, he put a sprig of mint into air, in which a wax candle had burned out; and on the 27th of the same month, found that another candle burned perfectly well in it ; and then, to verify the conclusion, he divided the in- jured air into two separate portions, putting the plant into one of them, and merely leaving the other standing over water ; he never failed to find, that a candle would burn in the former, but not in the latter.

76. This restoration of air, says Dr. Priestley, I found, depended upon the vegetating state of the plant; for though I kept a great number of the fresh leaves of mint, in a small quantity of air, in which candles had burned out, and changed them frequently for a long space of time, I could perceive no melioration in the state of the air. This remarkable

effect does not depend upon any thing peculiar to mint ; for I found a quantity of this kind of air, to be per- fectly restored by sprigs of bjlm.' Grounsel, spinach, and some other plants were used, with like effect, to show that it did not depend upon aromatic effluvia.

77. In Dr. Priestley's observations on air, infected with animal respiration and putrefac- tion, a multitude of facts are adduced to demon- strate its renovation, when exposed to growing vegetables, and he is thus led to the following general remarks on the subject. ' These proofs of a partial restoration of air, by plants in a state of vegetation, though in a confined and unnatural situation, cannot but render it highly probable, that the injury which is continually done to the atmosphere by the respiration of such a number of animals, and the putrefaction of such masses of both vegetable and animal matter is, in part, at least, repaired by the vegetable creation, and notwithstanding the prodigious mass of air that is corrupted daily by the above mentioned causes ; yet, if we consider the immense profusion of ve- getables upon the face of the earth, growing in places suited to their nature, and, consequently at full liberty to exert all their powers, both in-

haling and exhaling, it can hardly be thought but that it may be a sufficient counterbalance to it, and that the remedy is adequate to the evil.

78. When treating on the economy of vege- tation, we shall have again to advert to this subject, and to mention the experiments o. Ingenhousz and others in reference to these par- ticulars.

79. The air of the atmosphere, like other fluids, appears to be capable of holding bodies in solution ; and ' the dissolving faculty of the air,' is treated of by authors among its chemical pro- perties. It indeed takes up water in consider- able quantities, with a consequent diminution of its own specific gravity ; from which circum- stance, as well as from the consideration that water rises very

plentifully in the vaporous state in vacuo,\. seems probable that the air suspends vapour, not so much by a real solution, as by keeping its particles asunder, and preventing their condensation. Under the word METE- OROLOGY, we shall have more fully to engage in considerations relative to the circumstances of air, in connection with aqueous fluid.

80. We now proceed to the last division of our subject and treat of the PROPERTIES OF AIR ON THE LIVING SYSTEM. ††† When chemistry had at length succeeded in fully unfolding the constitu- tion of the atmosphere, it was natural enough to conceive that variations in the ingredients of which it was composed, whether found naturally or produced in an artificial manner, would be productive of much variety of effect on the phy- sical constitution ; hence were broached theories and opinions, respecting a more or less oxygenous atmosphere ††† and hence too, speculations were eagerly engaged in, on the probable influence that artificial airs might possess in controlling the actions, or abating the malignancy of disease. It happened that pneumatic chemistry came into play and repute, about the time that the public mind was agitated by the political convulsions that were going on in France and other countries ; and this circumstance, aided by the novelty and interest of the new views and doctrines, excited in the minds of some of the more ardent and enthusiastic, anticipations of the happiest re- sults in the physical, as had already been sup- posed about to take place in the moral and political relations of man.

‘ See palsy dance, spasmodic action still ; And asthma pace, without a puff, up hill.’

81 . These golden visions have, however, passed by, and it even appears that the administration of medicinal aid, through the medium of the pulmonary organs is now become unjustifiably neglected : there certainly are cases in which the inspiration of air made artificially more than ordinarily vivifying, might much assist iu in- vigorating the frame, and

restoring a healthy tone of action to organs debilitated by protracted disease ; and it has often appeared to us probable, that a judicious employment of that singular combination of oxygen and azote, which con- stitutes the nitrous oxide, or protoxide of azote, as above noticed, might in the hands of judicious physicians, be made to apply beneficially under several conditions of nervous derangement.

82. To justify this opinion, we may here cite

a few examples taken from the researches of Sir which he was unable to divest himself. His first II. Davy, of the extraordinary effects whicli fol- definite sensations, were a fulness and dizziness

lowed the inspiration of this, as it had been called, laughter-producing gas.

83. Sir H. Davy first describes the effect it had upon himself as follows : ' Having previously closed my nostrils, and exhausted my lungs, I breathed four quarts of nitrous oxide from and into a silk bag. The first feelings were those of giddiness; but in less than half a minute, the respiration being continued, these feelings di- minished gradually, and were succeeded by a sensation analogous to gentle pressure on all the muscles, attended by a highly pleasurable thrilling, particularly in the chest and in the ex- tremities. The objects around me became dazzling, and my hearing more acute. Towards the last inspiration the thrilling increased, the sense of muscular power became greater, and at last an irresistible propensity to action was in- dulged in. I recollect but indistinctly what fol- lowed : I know that my motions were various and violent.

84. These effects very soon ceased after respi- ration. In two minutes I had recovered my natural state of mind. The thrilling in the ex- tremities

continued longer than the other sensa- tions.

85. The gas has been breathed by a great number of persons, and almost every one has observed the same things. On some few, in- deed, it has no effect whatever ; and on others the effects are always painful.

in the head, such as to induce a fear of falling This was succeeded by a laugh, which was in- voluntary, but highly pleasurable, accompanied with a peculiar thrilling in the extremities ; a sensation perfectly new and delightful. For many hours after this experiment, he imagined that his taste and smell were more acute ; and is certain that he felt unusually strong and cheerful. In a second experiment, he felt pleasure still superior ; and has once poetically remarked, that he supposes the atmosphere of the highest of all possible heavens to be composed of this gas.

91. Robert Kinglake, M.D. Additional free- dom and power of respiration, succeeded by an almost delirious, but highly pleasurable, sensa- tion in the head, which became universal, with increased tone of the muscles. At last, an in- toxicating placidity absorbed for five minutes all voluntary power, and left a cheerfulness and alacrity for several hours. A second stronger dose, produced a perfect trance for about a minute; then a glow pervaded the system. The permanent effects were, an invigorated feeling of vital power and improved spirits. By both trials, particularly by the former, old rheumatic feelings seemed to be revived for the moment.

92. Mr. Wedgewood breathed nitrous-oxyde gas, without knowing it was so. He declared it to have no effect, which confirmed him in his disbelief of the power of the gas. After breathing

86. Mr. J. W. Tobin, (after the first imperfect this some time, however, he threw the bag from trials) when the air was pure, experienced some- him, kept breathing on laboriously with an open

times sublime emotions, with tranquil gestures ; sometimes violent muscular action, with sensation indescribably exquisite ; no subsequent debility ††† no exhaustion ; his trials have been very numerous. Of late he has only felt sedate pleasure. 87. Mr. James Thomson. Involuntary laugh- ter, thrilling in his toes and fingers, exquisite sensations of pleasure. A pain in the back and

mouth, holding his nose with his left hand, without power to take it away, though aware of the ludicrousness of his situation ; all his muscles seemed to be thrown into vibrating motions ; he had a violent inclination to make antic gestures, seemed lighter than the atmosphere, and as if about to mount. Before the experiment, he was a good deal fatigued by a long ride, of which he

knees, occasioned by fatigue the day before, re- permanently lost all sense, fn a second experi- i tew minutes afterwards. A similar ment, nearly the same effect, but with less plea- observation, we think, we have made on others ; and we impute it to the undoubted power of the gas to increase the sensibility, or nervous power,

In a third, much greater pleasure.' 93. The effects of a gas containing more than

.... y} ††† *, .†††,,††††††.††† ^(/n/c, , its natural proportion of oxygen have already*

S. 1.!! ††_ther agent> and Probably ^ a pe- been noticed, both upon vegetable and animal*

life ; and it is so stimulating upon the respiratory organs as to have endangered, and even pro- duced, inflammation, when unduly or inju- diciously employed. That azote, and carbonic acid gases, breathed without any admixture, are speedily fatal to life, has also been made evi- dent by a variety of experiments and observa- tions.††† Every one has heard of the destructive effects upon dogs, consequent upon these animals breathing the air of the Grotto del Cani ; and when faintness, or

suspended animation, is caused by holding the head over the fermenting vats of brewers, the i the

culiar manner.

88. Mr. Thomas Pople. At first unpleasant feelings of tension ; afterwards agreeable luxurious languor, with suspension of muscular power ; lastly, powers increased both of body and mind!

89. Mr. Stephen Hammick, surgeon of the

yawning and languor. It shoi ‘ ” ” that the first sensation has often

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Paul at Geneva, in breathing pure hydrogen air. He inspired it with ease, and did not perceive that it had any sensible effect on him, either in entering his lungs or passing out. But after he had taken in a very large dose, he was desirous of speaking, and was astonishingly surprised at the sound of his voice, which was become soft, shrill, and even squeaking, so as to alarm him. Paul made the same experiment on himself, and the same effect was produced.

94. It may be said in objection to proposed medicinal trials of factitious airs, founded upon these and other observations, that their effects are loo transient and uncertain for any practical inference that might otherwise be deduced from them; but it should be recollected, that even medicinal

substances that are taken into the stomach, lay claim to no more than temporary excitation ; and the degree of uncertainty that accompanies medicinal agency altogether is pro- verbial. In giving it, however, as our opinion that more might be made of pneumatic medicine than the fashion of the present day inclines to believe, we protest against any mis- use that may be made of our admissions, by unwarrantable enthusiasm, or bungling indiscrimination.

95. But it was not only on air artificially pro- duced, but on that presented by the hand of nature at once, that speculation grew out of pneumatic discoveries ; and air was talked of for the sick, as being more oxygenous, or more azotic, or more hydrogenous, according to the several circumstance? of individual requirement. On this head, however, much of what was not only crude and inapplicable, but absolutely falla- cious, was conceived and propagated. It has already been intimated, that the relative propor- tions of the air are generally preserved amidst every variety of place and circumstance ; and we may here repeat, from a modern author, that the most celebrated chemists have been unable to discover any difference in the component parts of the atmosphere taken from different situations. Berthollet found the proportions the same in Egypt and in France. Dr. Thomson found them the same at Edinburgh at all seasons of the year ; and Gay Lussac examined air brought from the height of 21,000 feet above Paris, and found it precisely the same as the air at the earth's sur- face : nor does it appear that an increased pu- rity of the atmosphere would be so congenial to human life as has been supposed. It is well known, that the effect of inhaling an atmosphere with a superabundant proportion of oxygen is to produce a state of morbid excitement, and greatly to quicken the circulation. And so, it will be advanced, does a lightened atmosphere ; but there is a wide difference between an aided and a stimulated circulation, between the in- creased action effected by external and me- chanical means, and that produced by external

stimuli. In the one case, the materia motus, or which is the same thing, the removal of resist- ance, is supplied from without, and calls for no additional exertion of the power of life. In the other, the same principle and the same effect aie to be produced by direct sensorial ex- citement, and increased labour of the vital powers. In the feverish and inebriating ex-

citement of the one, the powers of life are too quickly exhausted. In the other, they are as- sisted in their labours, and enabled to maintain them for a longer period. ††† Mansford, on the in- fluence of situation on the duration of life.

96. {The author, from whom we have made the above quotation, has endeavoured to prove that health and longevity, as far as situation and air are concerned, are best secured by situations that are at once high, dry, and temperate. He sup- poses, that although there be no appreciable dif- ference in the chemical ingredients of the air in any part of the habitable globe, yet that the dif- ference of the weight of the atmosphere may, at different elevations, when it comes permanently to operate, be productive of permanent re- sults.

97. An elevation, says he, of 500 feet, a very common variation in the surface of a hilly coun- try, diminishes the average weight of the atmos- phere pressing on the human body something more than a sixtieth part, or nearly 600 pounds ; and although this reduction of pressure is not felt, it cannot be doubted, but that the removal of so large a degree of resistance, must give a greater freedom of action to the main spring o. the circulation, as well as a greater power of dis- tension to the vessels themselves, especially to the superficial vessels ; both of which causes, like all others, will operate most powerfully on a diseased part.

98. This last effect is supposed to prove un- favourable to those individuals whose pulmonary

system and general frame are already under the influence of morbid irritation ; he therefore in- fers, that the situation which will prove genial and productive of longevity to the individual free from pulmonary taint, will prove the re- verse to those who have such taint. He is disposed to think, that under these last circum- stances, low and moist situations are best adapted to the demands of the case ; and this opinion Dr. Wells has supported in the third vol. of Transactions of a Society for improving Me- dical and Chirurgical Knowledge. Sir James Mac Grigor, in his Observations on the Diseases of the Army in Portugal, also gives his testimony to the same effect. Dr. Harrison, whose situa- tion afforded peculiar opportunities of observa- tion, says, in an Address to the Medical Society of Horncastle, in Lincolnshire, that idiopathic consumptions, which were frequent in the wolds of that country, were seldom found in the fens ; which he attributes to a difference in the component parts of the air in those situations. This observation was confirmed by Mr. Wayet, an experienced practitioner at Boston. Dr. Harrison also asserts, on the authority of Mr. Boucherett, M. P. for Great Grimsby, that con- sumption is a rare disease in Holland. We have also the testimony of Dr. Cogan, who re- sided several years in that country, that consump- tions were much less frequent than in England. These concurrent testimonies, says our author, to which others might be added, would appear suf- ficient to establish, as a fact, that air impregnated with moisture, or with different effluvia, or mias- mata, by which its purity is lowered, is rathe favourable to the consumptive than otherwise.*

But air answering to these conditions, is for the most part, to be found only in low situations ; where the increased density of the atmosphere, and

the resistance offered by it to inordinate ac- tion of the vessels, especially of their extreme branches, may be supposed to have a skare in the beneficial effect.

99. We feel but little doubt that there is something both in the above statements, and in the inferences made from them by Mr. Mans- ford; at the same time, it should be observed, that the observation does not obtain universally of fenny countries being comparatively free from consumptive ailment. In Dr. Southey's Work on Consumption, we recollect to have seen two letters from respectable physicians in Chelms- ford, stating, that disorders of the lungs were as common in the fenny, as in other parts of the county of Essex ; and other remarks might be cited of the same import. At any rate, we are disposed fully to concur in the opinion advanced by the writer to whose speculations we are now referring, respecting the advantage of elevation and dryness, and moderate temperature, as con- ducing generally to the preservation of health and the maintenance of life : a short residence in an elevated place may be sufficient to invigorate the young convalescent; but that of the old man must be more permanent ; he may perhaps quit it occasionally a short time with impunity, but he must consider it as his residence, where nine- tenths of his time are to be spent. Above all, those who have passed the whole, or the greater part, of a long life in an elevated situation, should be cautious of quitting it, to reside in a lower one. If lightening the atmospheric load can give fresh vigour to the vital actions, and thus prolong life ; increasing it must necessarily, by depressing them, shorten it. The lives of Parr and John Jacobs soon terminated after quitting their native hills ; the one of Jura, and the other of Shropshire.

100. Now, beyond these sensible qualities in the air, viz. of different degrees of temperature and humidity, and density, we fear the experi- mental observer can go but little way in pre- dicating medicinal property. Contagious and infectious miasmata are indeed conveyed on ►► the wings of the

wind' ••• the malaria of the southern parts of Europe carries sickness and death with it wherever it travels ; but still these changes and circumstances are only known in their effects ; and we must be possessedof a nicer test of ascertainment, than any we have hitherto been furnished with, before the why and the wherefore of endemic and epidemic visitations can be satisfactorily made out. In a variety of of instances catarrlial affections visit the in- habitants of this great metropolis with a fre- quency and force l>eyond what even the cir tumstances of temperature, or humidity, or dryness can account for:, this being the case, the imagination is naturally led to something noxious in the air that surrounds us, of a spe- cific nature ; but no eudiometrical trials have satisfied us as to what this something is ; and, for the present, at least, we must rest content with what mere observation, unassisted by science imparts to us.

101. Even respecting the extent to which animal and vegetable poison impregnates the air of districts, and causes disease, opinion is nut unanimous. It has been observed, for instance, that fevers of a certain kind and aspect, appear in much greater frequency where shallow stag- nant waters abound ; and these forms of dis- order have thence been attributed to a poison generated by the decomposed vegetable matter of the marsh or morass ; but of what this mat- ter consists, and how it impregnates the atmos- phere, are so far from being matters of demon- stration, that some have derided altogether the notion of its specific agency, contending that the cold and humidity of the places in question, are quite sufficient sources whence to trace their diseases: and that temperature and humidity have a great deal to do with it, may be inferred from the especial unhealthiness of these regions where a rapid transition is made from the sul triness of the day to the damps and fogs of the night ; but it certainly implies too much of a sceptical and generalizing disposition to deny, that besides the common physical and chemical conditions of an

atmosphere, a something is superadded of a positive and specific nature.

102. In the counteraction of this something, however, it is pleasing to feel that much may be accomplished by the industry of man ††† nay, that much has been effected. During the last century, as stated by a modern writer, the greater part of Europe has been most happily and efficaciously acting upon this principle of counteraction ††† swampy lands have been drained ††† waste marshes cultivated ††† filth removed from our cities ††† air made to circulate through our dwellings ††† superstitious apprehensions respect- ing pestilential visits considerably lessened ††† and, adds the writer from whom we are now extracting, ' in consequence, shall we say, with- out incurring the charge of assuming where we ought to prove, the greater part of Europe, and our own country and cities in particular, instead of harbouring and fostering contagion into venomous, and permanent, and wide spread- ing pestilence, have merely afforded a short and niggardly entertainment to the mildest forms of contagious fever.' See CONTAGION and INFECTION.

103. We now bring this article to a conclu- sion, by subjoining the following observations on the medicinal qualities of air, from the Me- dical Dictionary of Dr. Parr.

104. 'The physical or medicinal qualities of the air have occasioned numerous disquisitions. But extensive enquiries, the comparison of the tables of mortality, and experience long continued, have allowed us to draw few conclusions that will bear the test of careful examination. In spring we find inflammatory complaints, in autumn bilious diseases ; in every season fevers, in the commencement inflammatory, in the con- clusion more or less of an opposite type. To be more particular, continued cold produces that tension of the fibres, that strong and steady action which we style inflammatory diathesis; high situations with a pure bracing atmosphere pro- duce similar effects. These are partly owing to an

excess of oxygen ; but in a great measure

to moderate continued cold. A previous moist temperate winter, which predisposes to scrophu- lous complaints, will at this period produce the most fatal consequences in hectic cases. The fever will increase, the ulceration proceed with rapidity, and the heat of the ensuing summer close the scene. Those, however, who are mo- derately healthy, and not peculiarly robust, will find a winter of no extreme cold healthy ; and the opening spring expanding the fibres, will give a genial glow and new life to every organ. Summer of course may produce its own dis- eases ; but if we peruse the history of Epi- demics, we shall with difficulty trace any par- ticularly bad effects of the heat, till the evenings begin to cool, the fruit to be plenty, and the bile to become a conspicuous cause of disease, from its accumulation and excessive discharges. Win- ter again recurs; and Dr. Heberden has endea- voured to show, from the bills of mortality, that it is a fatal season. ' It may be so in general ; old people resist cold with difficulty, and the catarrhous sufrbcations,asthma, and similar com- plaints, are often fatal at this period. In our experience, however, it is not the cold, but the early warmth of spring succeeding cold, which is most injurious ; the constitution, braced by cold, cannot bear the subsequent relaxation. A long damp summer has had similar effects.

105. Philosophers have taught us how much pressure we bear from the atmosphere ; and of course from the diminution of that pressure, we shall feel the want of tension or tone, which results from the removal of any support. Thus, when the air is lighter we find a languor come on ??? when heavier, we find our spirits are more brisk and lively. The whole, however, is not owing to the absolute weight of the air, but in part to its elasticity ; or rather our feelings of health and activity are in the compound

ratio of both. Thus, at the height of from 1200 to 2000 feet above the level of the sea, the pressure is greatly diminished ; but we feel increased activity, as we are in general above the region of the clouds, and the air is more elastic ; and the languor felt in very high situations is not uniform or constant ; so that it cannot depend on a constant cause. During rain, the mercury in the barometer is not depressed half an inch. Yet, we feel more languor than on the tops of moun- tains, where it has probably fallen from five to ten inches.

106. In other respects, the physical properties of the air seem to have little influence. The warmest and longest summers are often healthy ; the coldest winters, with the exception of inflamma- tory complaints, are the same. The warmest weather, with the dampest fogs, have been followed by no peculiar epidemic. It is what Hippocrates long since called the TO 9eiov, something divine or inexplicable, that produces fevers, or similar diseases ; but before we notice ' the divinity that stirs within us,' we must add a few remarks on our situation, as connected with the physical properties of the air.

107. A dry elevated spot, on a gravelly soil, is said to be most wholesome, especially if shel- tered from the east wind. Elevation is, however, relative; light clouds float in the atmosphere,

about 1000 feet above the level of the sea, and the healthier spot is said to be some way above this elevation. This appears, however, to be fanciful ; and it has not been proved that atmos- pheric moisture alone is injurious. In dry gravelly elevated spots, experience has fixed the most salutary residence for consumptive cases ; yet in these oxygen seems to abound, which is peculiarly injurious in such complaints; and air of a lower quality, as it has been styled, is seemingly as good, in die opinion of some pre- ferable. In asthmatic cases, elevated spots are manifestly injurious. In fact, theorists may de- claim, but facts give the lie to the most plausible declamations. A change is often necessary ; and from

the effects of the change, the conduct proper for each individual must be ascertained.

108. It is observed by some authors, that vaults, corn magazines, and apple garrets, &c. should open to the north ; for that point is inva- riably proper ; but the south and west are con- stantly improper. The most healthy exposure, if a house is to be built, is said to be found by cutting one of the trees that grow there trans- versely with a saw, observing the rings ; the side of the tree on which the distances between each ring is widest, is the most healthy exposure, and the windows of the house, all other circum- stances being the same, should ever face that way.

109. We have mentioned the effects of the east wind in general, and we shall now notice them more particularly, though it cannot be yet determined whether they belong to the chemical or physical properties of the air. The atmosphere, while the east wind prevails, is lucid; and even when clear, the sun has not its brilliant hue. The strength is not equal to the usual exertions, the respiration not free, the spirits not lively. Asthmatics and hypochondriacs feel it severely. Yet it is often dry, and when it rains during a south-east wind, its fall is frequently periodical, extending only to twelve or twenty-four hours. While the clouds constantly display a promise of fair weather, there is seemingly a perpetual contest between the causes of rain and their antagonists, whatever they may be.

110. As we have now instruments by which the quality of the air may be measured, it might be presumed that these would inform us of the cause of this singular state of the atmosphere. The east wind is not peculiar to any situation, so that it is not injurious from passing over a baleful desert, or a successive series of marshes ; nor does the eudiometer show any particular ingredient which may impair health or induce disease. The assistance which this instrument affords to the medical chemist is indeed inconsiderable. In crowded cities, and the most apparently healthy situations, re- mote from '

the busy hum of men,' its results are nearly the same. Chemists must decide whether this similarity in the appearances are owing to the imperfections of the instru- ment, or whether the injurious qualities of the air are not cognizable by it,

111. The aerial pathology has not yet been successfully cultivated. Man can live and en- joy health from the heat of twenty-eight to one

hundred and eight degrees of Fahrenheit. He can exist in a constant fog, where the hygrome- ter proceeds beyond the extreme of humidity ; and in air which supports the mercury only at twenty-two or twenty-three inches, he is robust and active. Sudden changes are injurious ; but the injuries are often transitory or inconsider- able ; or if severe, producing only temporary or acute diseases. Yet the air is accused as the cause of numerous diseases, and it really is so. Sudden cold, checking perspiration, will apparently produce almost every form of the pyresiae. . Partial cold will produce rheuma- tisms ; damp air, catarrhs ; and, in old people, those diffusions which are called humours, as asthmas, and catarrh suffocavit. The conti- nued heat of summer occasions bilious disor- ders ; and the cold of winter, return of the more active inflammations. The air, how- ever, is chiefly a vehicle of injurious effluvia, some of which only can be ascertained. Marsh miasmata, as they are styled by pathologists, are the causes of numerous intermittent and remittent fevers, as well as those apparently of a more continued form. It has been ascer- tained that a clayey soil, when moistened, will attract the oxygen of the air, and leave the azotic part not sufficiently guarded to support the vis vitae; and it is found that districts become un- healthy, chiefly when the earth begins to appear in consequence of a diminution of the water.

It is singular that Linngeus, with a view to prove the cause of intermittents to be an argil- laceous earth, has traced very minutely the pre> valence of intermittents in clayey countries a circumstance which may be explained front the views just assigned. To this diminution of the oxygen must be added a larger and unusual proportion of inflammable air, from the parts of marshes still covered with water. To these conjoined causes many epidemics are owing; and when the changes in the physical

properties of the air appear to produce fevers, they act only as exciting causes of these miasmata.

112. Many objections might be taken to some of the above views of our ingenious author. We shall only advert to two particulars, in which there appears to be a fallacy in Dr. Parr's reasoning. The unhealthiness of an ar- gillaceous, or clayey soil, seems to be rather referrible to the difficulty with which moisture percolates through it; and the extreme, or, if it may be so said, evaporating dryness of east winds appears to be in a great measure the cause of their peculiar unhealthiness. Dr. Hut- ton, of Edinburgh, found that a wetted ther- mometer, exposed to a moderate east wind, in the month of March or April, sunk between eight and nine degrees below the temperature of the air, but in the driest summer weather, it never fell more than four, and often only two or three.

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AIR, in music, is taken in different senses. It is sometimes contrasted with harmony ; and, in this sense, it is synonymous with melody in general. Its proper meaning is, a tune, which is set to words, or to short pieces of poetry. Sometimes it denotes simply the treble part of a musical composition. There are three kinds of airs in dramatic music ; the aria can- tabile, or the air of song ; the aria

di bravura, the air of execution ; and the aria parlanta or speaking air. The first is usually applied to the pathos, or effect of music ; the second, (bra- vura) to prove the brilliancy and difficulty of execution ; and the parlanta to that music which approaches nearest to the natural manner of earnest speech. This last is therefore used in recitative. These and the several correspond- ing movements are varied to infinity , whence also air, with variations, a melody varied, ad libitum, by the compiler. ••• Air teudre, an air, so denominated for the tenderness of its style.

In operas, the name of air is given to such pieces of music, as are formed with measures and cadences, to distinguish them from the re- citative ; and, in general, every piece of music is called an air, which is formed for the voice, or even for instruments, and adapted to stanzas,

whether it forms a whole in itself, or whether it can be detached from any whole of which it forms a part, and be executed alone. ••• If the subject admits of harmony, and is set in parts, the air is, according to their number, denomi- nated a duett, a trio, a quartette, &c. We need not follow Rousseau and others in their endea- vours to investigate the etymologyof the word air. The curious may consult this whimsical writer's article in the Dictionaire de Musique. In mo- dern music, there are several different kinds of airs, each of which agrees to a certain kind of dancing, and from these dances, the airs them- selves take their specific names. The airs of oui operas, are, if we may be permitted the expres- sion, the canvas, or substratum, upon which are painted all the pictures of imitative music ; melody is the design, and harmony the colour- ing ; every picturesque object selected from the most beautiful parts of nature, every reflected sentiment of the human heart, are the models which the artist imitates; whatever gains atten- tion, whatever interests the soul, whatever charms the ear, or causes emotion in the heart, these are the objects of his imitation. See IMITATION. An air which delights the ear, and discovers the talents of the

composer; an air invented by

genius, and composed with taste, is the noblest effort of music : it is this which explores the compass, and displays the delicacy, of a beauti- ful voice ; it is this in which the charms of a well- conducted symphony shine ; it is by this, that the passions, excited and inflamed by nice gradations, reach and agitate the soul through the avenues of external sense. After hearing a beau- tiful air, the mind is acquiescent and serene : the ear is satisfied, it remains impressed on the fancy, it becomes a part of our essence, we carry it with us, we are able to repeat it at pleasure ††† without the ability acquired by habit to breathe a single note of it, we execute it in our imagina- tion, in the same manner as we heard it: one beholds the scene, and the musician : one hears the accompaniments and the applauses. The real enthusiast in music never forgets the beautiful airs which he has heard : when he chooses, the opera recommences. The words to which airs are adapted, are not always rehearsed in regular succession, nor spoken in the same manner with those of the recitative ; and though, in general, they are very short, yet they are interrupted, re- peated, transposed, at the pleasure of the artist. They do not constitute a narrative, which once told is over : they either delineate a picture, which it is necessary to contemplate in different points of view, or inspire a sentiment in which the heart acquiesces with pleasure, and from which it is neither able nor willing to be disengaged : and the different phrases of the air, are nothing else but different manners of beholding the same image. This is the reason why the subject of an air should be one. It is by these repetitions properly placed, it is by these redoubled efforts, that an impres- sion, which at first was not able to move you, at length

shakes your soul, agitates and transports you out of yourself: and it is likewise upon the same principle, that the runnings, as they are called, or those long, mazy, and inarticulated in- flections of the voice, which, in pathetic airs, fre- quently seem, though they are not always so, im- properly placed r whilst the heart is affected with a sentiment exquisitely moving, it often expresses its emotions by inarticulate sounds, more strongly and sensibly than it could do by words them selves. The form of airs is of two kinds. The small airs are often composed of two strains, which ought each of them to be sung twice ; but the important airs in operas are frequently in the form of rondeaus.

AIR, in mythology, was adored by the hea- thens, under the names of Jupiter, and Juno ; the former representing the superior and finer part ►►f the atmosphere, and the latter the inferior and grosser part. The augurs also drew presages from the clouds, thunder, lightning, &c.

AIR, in painting, &c. denotes the manner and very life of action ; or it is that which expresses the disposition of the agent. It is sometimes also used in a synonymous sense with gesture or attitude. Thus Correggio and Guido are said to have excelled in the airs of the heads, as well as of the whole figures they painted.

AIR, in surgery, has a medicinal efficacy that has attracted the consideration of various emi- ►►ent writers. Fixed air, or carbonic acid gas fc been applied by means of the fermenting*

cataplasm to fetid and gangrenous sores. It haa also been used in malignant ulcers of the fingers, nose, &c. as well as in caries of the bones. Mr. Witstock recommends the application of it by means of a receiver or air bell, connected with a flexible tube or pipe sufficiently air-tight ►►► supposing the fixed air to be produced from the effervescence of fixed alkali and vegetable acid. Others impregnate water with the gas, and soak- ing compresses therein, lay them on the seat of the disorder. Mr.

Loeffler, a German surgeon, has recommended a particular apparatus for this purpose, which may be easily constructed, and which he employs for saturating water with fixed air, by the mixture of chalk and vitriolic acid, or during the process of fermentation. When we wish to apply the air to a cancerous breast, for example, we are to fill a bladder with the air as it rises from the above mixture. Then introduce a tube, fixed to its orifice into another bladder, which is to be cut round in such a man- ner that it can be applied like an open bag to the breast, and held close to it with the hands. When it is fastened below,, it must be untied,, so that the fixed air may pass out of the first into the second bladder, and find access to the ulcerated part. In order to facilitate this pro- cess, a gentle degree of pressure is to be ap- plied to the bladder, and as one bladder will not be sufficient, a number of them should be provided in readiness, and filled for immediate use in succession. This operation is to be con- tinued half an hour or longer each time, and re- peated twice or thrice a day.

AIR, in the menage, is the artificial motion of a taught horse ; as the demi volt, curvet, capriole, &c.

AIR, CIRCULATION OF, IN ROOMS. To ren- der the circulation of air perceptible, let the air of a room be heated by a strong fire, whilst that of a contiguous room is cold ; then let the door between those two rooms be opened, in which case the hot air of one room being lighter, will pass through the upper part of the opening of the door into the cold room ; and, on the contrary, the cold air of the other room being heavier, will pass into the former room through the lower part of the opening. Accordingly, it will be found, that applying a lighted candle at the top, in the middle, and at the lower part of the opening be- tween the two rooms, a strong current of air will appear to pass from the hot into the cold room near the top ; a contrary current of air will ap- pear to pass from the latter into the former room near the lower part of the said

opening , as may be clearly perceived by the direction of the flame of the candle, whilst in the middle there is little or no morion at all. It is for the same reason that when the fire is lighted in a grate, a strong current of air is occasioned to enter the room, which may be felt by applying the hand near the key-hole, or other such small opening, if the doors and windows are shut ; for the air over the fire, being heated, becomes lighter, and ascends into the chimney ; consequently other colder air must supply its place, which forces its way through all the small openings it can find. Were a room with a fire in it to be perfectly closed, excepting, the chimney, the air in it would soon become un- wholesome for respiration, and the fire would be'

soon extinguished, besides other inconveniences. Hence it appears that those persons mistake who expect to keep the air of a room sweet and wholesome, especially for convalescents, by ac- curately stopping all the smallest openings that admit fresh air. When the current of air that enters into a room is on some side of it, and falls immediately on persons of delicate con- stitution, it maybe injurious. In that case, such opening should be closed ; but at the same time another should be made for admitting fresh air, in a more convenient part; for a circulation of air, especially in rooms where a fire is kept, is not only salutary and useful, but is absolutely necessary. See PNEUMATICS.

In an ingenious publication, entitled, a Prac- tical Treatise on Chimneys, there are the follow- ing useful remarks, on the best method of admitting air into a room. The author directs a vent-hole to be made near the top of the room, in order to expel the heated and contaminated air, and says, that ' this might be done by means of a small tube opening into

the room, either in or near the ceiling ; which should be carried to the top of the building, or be made to com- municate with the external air, by a small per- foration through the wall at the roof of the room ; by means of either of which, a proper circula- tion would be established, and the foul air carried off. For the fire would no sooner have warmed any particle of air within the room, than these would be greatly expanded, and rise im- mediately upwards, so as to fill the higher parts of the room with rarefied air ; and as other par- ticles would be successively heated and rarefied in their turn, by their expansive force they would press upon the sides of the apartment in every place, so as to force the lightest particles through the opening, left for that purpose, in the top of the rooms : by which means the foul air would be gradually drawn off, without descend- ing again into the lower regions.' But in order to admit fresh air into the room, ' Let,' says he, ' another opening be made in the ceiling of the room, having a communication with a small pipe that should lead from thence, either to the out- side of the wall of the house, or to any other part of the building that might be judged more convenient, where it should be bent, and con- ducted downwards, till it reached the ground ; where it should be left open, to communicate with the external air. In this situation, the cool external air would be forced in at the lower opening of the tube, and made to ascend into the apartment, in proportion to the quantity that escaped towards the higher regions, by means of the ventilator. And as that weighty air would no sooner enter the room, than it would tend to- wards the floor by its own natural gravity, it would gradually mix with the heated air in its descent ; become, in some measure, warmed by that means, and equally dispersed through the room, so as slowly and imperceptibly to reach the candles and the company in the room, and supply them with a sufficient quantity of fresh and wholesome air, without the inconveniences to which the company are subjected, by the usual way of admitting fresh air.' Such of our readers as have been unaccustomed to specula-

tions of this sort, will be at a loss to comprehend in what manner two holes, both of them in the roof of the room, and communicating with the air, without any valve, or other contrivance for opening or closing of themselves, should yet an- swer the two very opposite purposes, the one, of constantly bringing cool air into the room with- out emitting any warm air, and the other, of as constantly emitting warm and admitting no cool air. They will observe, that the one of these tubes communicates with the atmosphere, at the bottom of the house, and the other towards the top : the opening of the one is beneath the level of the room, that of the other above it. Now, as the air is more dense at the surface of the ground, than at the height above it, the warm rarefying air will naturally issue at the opening where it meets with least resistance, which must invaribly be through that which opens to the external air at the greatest height ; and as the cool air will naturally be pressed into the room, by that opening where the air is most weighty, this must invariably be by that which is nearest the surface of the earth.

A friend of Dr. Franklin's, whose observations on a topic of this kind are always as useful and practical, as they are philosophical, writes thus :

' Dr. Franklin was, if I mistake not, the first who observed that respiration communicated to the air a quality resembling the mephitic ; such as the Grotto del Cano near Naples. The air impressed with this quality rises only to a certain height, beyond which it gradually loses it. The amendment begins in the upper part, and descends gradually until the whole becomes capable of sustaining life. The Doctor confirmed this by the following experiment. He breathed gently through a tube into a deep glass mug, so as to impregnate all the air in the mug with this quality. He then put a lighted bougie into the mug; and upon touching the air therein the flame was instantly extinguished ; by frequently repeating this operation, the bougie gradually preserved its light longer in the mug, so as in a short time to retain it to the bottom of it ; the air having

totally lost the bail quality it had con- tracted from the breath blown into it.

'At the same time that the lower part of the air is thus affected, an acrid noxious quality may be communicated to its upper part in the room, occasioned by the volatile putres- cent effluvia of the persons enclosed therein. ' It is surprising,' says Sir John Pringle, in his observations on the diseases of the army, fourth edit. p. 109, ' in how few days the air will be corrupted in close and crowded wards ; and what makes it hard to remedy the evil, is the difficulty of convincing either nurses or the sick them- selves, of the necessity of opening the windows and doors at any time for a supply of fresh air.'

'It may be inferred from the preceding ac- count of mephitic air, that such air can be but little altered by a ventilator in the ceiling of a room ; and Dr. Franklin justly concluded, that in crowded rooms, and especially in bed-rooms in dwelling-houses, a current of air should be kept up in the lower part of the rooms, to carry off what is thus affected. He approved of the use of chimnies for this purpose, especially when

' Every person has an atmosphere of his own, he observed, heated by the warmth of his body, which can be dissipated only by motion in the circumambient air. Thus in warm weather wind cools the body, by carrying off the personal atmosphere, and promoting at the same time a more free evaporation of the effluvia arising from the body. This creates a great degree of coolness on the skin. The personal atmosphere can be but little affected by a ventilator in the ceiling of a room, unless the admission of external air is so directed as to act

principally on the air sur- rounding those in the room. Dr. Franklin, when consulted on ventilating the House of Commons, represented that the personal atmosphere, sur- rounding the members, might be carried off by making outlets in the perpendicular parts of the seats, through which the air might be drawn off by ventilators, so placed, as to accomplish this without admitting any by the same channels. It will appear from what has been said, that win- dows placed high in the walls of churches, or rooms intended for large assemblies, can contri- bute but little towards correcting the mephitic quality of the lower part of the air, or towards carrying off the personal atmospheres.'

' Dr. Stephen Hales endeavoured to sug- gest an easy and effectual way to carry off such yitiated air. But his ventilators were attended with the inconveniency of occasioning smoky ehimnies, by drawing off so much air, that there was not a sufficiency left to keep a current strong enough to carry the smoke up the chimney, un- less a door or window was left open. And the circulating ventilators in windows were intended for refreshing the air in rooms, without affecting the current of air up the chimney ; but they did not affect the mephitic air, nor the higher air near the ceiling of lofty rooms, which is most vitiated with putrescent particles ; and they were besides often out of repair.

' Instead of either of these, Dr. Franklin proposed that openings should be made close to the ceilings of rooms communicating with a flue, which should ascend in the wall close to the flues of the ehimnies, and, where it can be done con- veniently, close to the flue of the kitchen chim- ney ; because the fire burning pretty constantly there, would keep the sides of that flue warmer than those of the other ehimnies; whereby a quicker current of air would be kept up in the ventilating flue. Such a flue might be carried irom the vaults or under ground offices. This would render them drier, without altering their temperature much as to heat or cold. These*

ventilating flues would cause a constant dis- charge of the volatile putrescent effluvia without interfering with the current of air up the chim- ,nies, whilethe current towards the chimney would carry off the mephitic air below. These ven- tilating flues would be peculiarly beneficial in bed-rooms, the ceilings of which are low,

' Dr. Franklin mentioned an instance of number of Germans, who on their arrival in. Pennsylvania were obliged to live in a large barn ; there being at that time no other place of resi- dence fit for them. Several small windows were made on both sides of the barn under the eaves These windows were kept constantly open, even during a severe frost in the winter ; and this without any detriment to the health of the Germans. Prejudice, said he, has raised so great a dread against cold air in England, that such openings would make persons shudder at the thought of being exposed to so great a degree of cold : and therefore I did not dare to recom- mend a practice, the good effects of which I had known. The dormitory for the youths of West- minster school is a similar instance ; for the glass put in their high lofty windows is soon broken, but seldom repaired; yet without prejudice to the health of the youths.

' An attentive observer will soon be con- vinced,' continues our author, ' that there is a current of warm air which ascends in the room from the chimney, while a fire burns. Dr. Franklin showed that this was the case, by the following experiment. He suspended by a thread, a piece of pasteboard cut in a spiral form. The thread was fastened to the chimney- piece, so that the pasteboard drawn out in a spiral form, came near to the edge of the chim- ney. The constant current of warm air, heated by the fire, gave a continued circular motion to the pasteboard. This warm air ascending to the ceiling, there spread, and kept a constant motion in the upper part of the air. The warm air thus ascending, coming into contact with the cool walls, and being thereby condensed, become? heavier, and so falls along the sides of the walls. Also the glass in windows being exposed to the temperature of the

external air, in cold weather, becomes colder than any other part of the room : therefore more sensibly descends, as may be seen by approaching a lighted taper to a win- dow. The flame is then carried downwards by the air; or if the flame is extinguished, the smoke will more clearly shew this truth, by de- scending along the window till it meets the air of an equal temperature. This will be the case, however tight the window ; and the more so, the brighter and stronger the fire is, and the colder the external air ; the circulation of the air being thereby quickened. This accounts for the fami- liar caution of avoiding to sit in or near a win- dow. This circulation of the air is yet more evidently proved by the following instance : When there is a bright strong fire in a close room, open the door and present immediately a lighted candle to the upper part of the door- way, the flame will bend outward; though warm- air in the higher part rushes out, lower the candk gradually, and the strength of the current outward will lessen by degrees, as the candle is lowered,.

till it comes to a space in which the flame shall lise upright: continue to lower the candle gradually, and then the current of cold air in- ward will gradually increase and more strongly bend the flame of the candle inward. This will be the case even in frosty and windy weather. ??? May it not be inferred from this circumstance, of so strong a current of air outwards in the upper part of the door-way, that an opening over or in the upper part of the door in the ward of an hospital might be of advantage, especially if there is no ventilating flue in the ceiling ? By such means a circulation of the air in the upper part of the ward could be constantly kept up ; and thereby a vent would be given to the volatile putrescent particles. This vent might remain open at all times, without any

prejudice to the patients.

' What is said on this subject by Dr. John Armstrong, a gentleman no less remarkable for his benevolence than for his judgment and fine taste, may be properly mentioned here. ' A con- stant circulation of fresh air is so necessary, so important in fevers, and in all feverish disorders, that it ought to be particularly considered in the construction of houses. It would be well, if in all the apartments of every house, but especially in bed-chambers, the upper sashes of every win- dow were contrived to let down ; for by this means the admission of fresh air would at all times be perfectly safe ; except during a rawr damp, foggy night ; as the body, even when under such a sweat as could not without danger be interrupted, may receive all the refreshing, restorative, and invigorating influence of the air, without being exposed to a stream of it ; mean- time, where this is wanting, the best method to supply it, is by drawing the bed-curtains close, now and then, for a few minutes at a time, while a free passage is made to the foul air, by opening the doors and windows.' Medical Essays, page 22.

' The noxious vapours that fill a sick room are not only offensive, but dangerous to those who continue in it for any time. If dangerous then to people in health, how detrimental must they be to one oppressed and struggling under an enfeebling disease ! It is a common thing in a campaign to dLoibute the sick soldiers, ill of malignant fevers, in open barns, where the putrid volatile poison is in a short time dissipated.

' There is in a volume of the Memoirs et Obser- vations recueillies par la Societe' Economique de Berne, aletter concerning the health of the inhabi- tants of the Pays de Vaud ; part of which I beg to present here as bearing a near analogy to this sub- ject. The letter is written by a most accurate and judicious clergyman. 'One fact/sayshe, '"deserves to be noticed. Taking one year with another, a greater proportional number always die in towns than in

villages. But whence comes it, that when epidemic diseases prevail, the morta- lity takes quite a different road ; that is, it is much more considerable in villages than in towns ? I have taken great pains to find out the cause of this phenomenon, and am apt to im- pute the difference to the difference of habita- tions. The poor in cities and great towns dwell in houses originally not intended for them ; but

which being so old and past repairing-, as to be no longer tenantable by persons at their easer fall to the lot of the lower class of people. In these houses the rooms are spacious, cold as ice,, where the air plays freely around, with doors and windows that do not half shut. The inhabitants of these shattered houses are pitied ; and yet the very circumstance of their being out of repair, is what contributes to the health of those who live in them, and facilitates their cure when dis- eases reign.'

' The more I see of hospitals, the more I am convinced of the great want of instructions on duly ventilating them.'

The many excellent observations of a variety of eminent men, on a universally interesting topic, may excuse the length of this extract from Mr. SMALL'S ' Essay on Ventilation, con- taining Dr. Franklin's Observations on the SUD ject,' lately published in the complete works o Dr. F. 6 vols. 8vo. See VENTILATION.*

*The ' Philosophical Survey of Ireland' has this singular passage : ??? ' Smith mentions a Dr.Lyne, of Cork, who, for the last fifty years of his life, never glazed a window in his house ; four of which he had in his bed-chamber, two on each side of his bed. It is remarkable, mat during all that time, nobody died in the house, till he was himself carried off by the small pox, at the age of eighty- five. ??? After the windows were glazed by his own son, death became a frequent visitor.**

AIR-BAG, in botany, or FOLLICULUS, a small distended

seed-bag, or bladder, opening on one side, as in the perriwinkle, or bladder-sena, and having the seeds loose in it. Also a name given by Withering to little bags filled with air in other parts of plants, as at the root of the utricalaria.

AIR-BALLOON, in aeronautics, the machine that has of late been so frequently used for the purposes of aerial navigation. See AERO- NAUTICS.

AIR-BLADDER, in ichthyology, vessels contain- ing elastic air, found in the bodies of fish, and sometimes called the swim, or swimming-bladder, sometimes the sound. This membranous bag by means of which, fish elevate, sustain, and sink themselves in water, lies close to the back-bone, and is furnished with a strong muscular coat, by which it has the power of contraction and dilatation. Because it is connected with a glan- dular substance, which contains a quantity of red blood, some have supposed that the air con- tained in the swimming-bladder is derived from this substance. Two processes or appendices issue from its anterior part, and terminate in the fauces. But cartilaginous and cetaceous fish, (or sea-animals,) are wholly without air-bladders. This membrane was discovered by observing, that a bubble of air, in rising from the bottom of a fluid, dilates till it reaches the top, by reason of the continual diminution of the weight, or pres- sure of the incumbent water. The air, in the bladder, is like the bubble, more or less com pressed, according to the depth the fish swims at, and takes up less or more space ; and conse- quently the body of the fish, part of whose bulk this bladder is, is greater or less according to the several depths, though it retains the same

weight. Now by a rule of hydrostatics, if the fish in the middle region of the water be of equal weight

with an equal bulk of the water, it will rest there, without any tendency either up- wards or downwards ; and if the fish be deeper in the water, its bulk becoming less by the com- pression of the bladder, and yet retaining the same weight, it will sink and rest at the bottom : on the other hand, if the fish be higher than the middle region, the air dilating itself, and the bulk of the fish consequently increasing, without any increase of the weight, the fish will rise and rest at the top of the water.

Fish have been supposed to have some power of emitting air out of the bladder, and afterwards out of their bodies ; also that when there is not enough, to take in more air, and convey it to this bladder ; in which case it will be easily ac- counted for, that there should be always a pro- per supply of air in the bodies of fish, according to the depth of water they live in. Perhaps also, by some muscle, the fish can contract this blad- der beyond the pressure of the weight of water ; and by its sides, or some other defence, keep off the pressure of the water and permit the air to dilate.

In lieu of a bladder, the water-snake, has a large membranous air-bag on its back, which empties and fills with air at pleasure, by an aperture, which it can shut very close, by means of a sort of valve, so that the least globule of water cannot enter without its consent. By this artifice it can enlarge or lessen the bulk of its body, and inhabit all depths of the water. Ray has conjectured that it is by the help of water, which they take in and let out by two holes in the lower part of their abdomen, near to the ventricle, that they ascend and descend ; that they sink in the water, by letting in some of it at these holes ; the orifices whereof are opened and shut at pleasure, by means of proper muscles, and the water being thus received into the abdo- men, which it contracts or dilates at pleasure, that portion of its body becomes, in fact, its air- bladder. In some fish, as carp for instance, the air-bladder is divided into two compartments, in others into three. Some maintain that all fish which have teeth in their jaws, have only a single air-

bladder ; but this seems no certain criterion. If the air-bladder of a fish be pricked or broken, the fish presently sinks to the bottom, unable either to support or raise itself up again. Flat fishes, as soles, plaice, &c. which always lie grovelling at the bottom, have no air-bladder. Dead fishes are found swimming on the surface of the water, because the muscles of this membrane cease to act ; and their bellies are uppermost, as the back- bone cannot yield, and the distended sac is pro- truded into the abdomen : the back becomes con- sequently heaviest at its upper part.

In most fishes there is a channel, leading from the gullet, or upper orifice of the stomach to the air-bladder, which doubtless serves for conveying air into it. In a sturgeon it has been observed, that upon pressing the bladder the stomach pre- sently swelled ; so in that fish it seems the air passes freely both ways ; and possibly the fish nrny have a power to raise up this valve, and let out air on occasion.

In a variety of other fishes there are com- munications with some parts of the alimentary canal, particularly the oesophagus and stomach. The salmon has an opening from the fore end of the air-bladder into the oesophagus, which is sur- rounded by a kind of muscular fibres. The herring has a sort of runnel, connecting the bot- tom of the stomach with the air-bag ; by which the air probably comes out from it.

Dr. Priestley supposes that the air, enclosed in the air-bladder of fishes, serves some further purpose in their economy besides that of enabling them to rise or sink in water. Some fish have no air- bladder, and yet rise or sink without dif- ficulty. That fishes cannot live without air is a well known fact, established long ago by the ex- periments of Mr. Haukshee. The fishes he em- ployed were gudgeons, which are lively in the water, and which subsist for a considerable time when taken out of it. Having put three of these into a vessel of water which had no communica- tion with the external air,

and which was de- signed to resemble a frozen pond, and other three into a vessel of water exhausted of its air ; he observed, that in about half an hour the latter manifested signs of uneasiness by an unusual motion of their mouth and gills ; and the former frequently ascended to the top of the vessel in which they were confined and then sunk down again, without any sensible alteration. After five hours the gudgeons in the vessel exhausted of its air, became less active ; and in about three hours more those in the confined air lay at the bottom of the vessel with their bellies upwards, without moving their fins or tail, but indicating life by a motion with their mouths. On un- covering the vessel, they revived in two or three hours, and were perfectly well next morning ; at which time those in the vessel purged of its air were also recovered. When this last vessel was put under the receiver of an air-pump, and the air was exhausted, they all died . When the air was exhausted they remained at the top, but on its re-admission, they sunk to the bottom. It is not easy to explain the manner in which fishes are supplied with air, nor the benefit they derive from it ; nor are the nature and qualities of the air, contained in their air-bladder, satisfactorily ascertained. Priestley confined minows, and other small fish in water without any access of com- mon air, till they died, and upon examining this water, he found that it was somewhat worse than air in which a candle just goes out. Hence he infers, that air contained in water, in an un- elastic state, is as necessary to the life of fishes, as air in an elastic state is to that of land-animals. Upon putting fish into water impregnated with phlogisticated air, he found that it was not only injurious, but in process of time fatal to them; although he observes, that fish, like insects and some other exsanguinous animals,can live a con- siderable time without any thing equivalent to respiration. In mentioning some experiments on the state of the air, which is contained in the air-bladder of fish, he remarks, that when these are taken out of the fish, the air cannot be dis- charged from them by pressure through any exist- ing

aperture, but he was always obliged to cut or burst them. The air itself, obtained from

many of them was not affected by nitrous air ; but that of some, particularly of roaches, ex- hibited slight indications of the effect of this test. It thus appears, that he seldom met with oxygen, and with that only in a small quantity. Exp. and Obs. relating to Nat. Philos. vol. ii. p. 138. Fourcroy found that for the most part, the air contained in the air-vessel of the carp, was per- fectly pure azotic gas, though it sometimes con- tained a small quantity of carbonic acid gas. From the nature of the fluid, he infers, that the air in the bladders of fishes is produced in the stomach. Ann. de Chem. i. 47. Dr. Monro, in his lectures, led his auditors to conclude, that it was fixed air. But Dr. Brodbelt of Jamaica, collecting about a quart of the air from the bladder of a large sword-fish, which, he says, consisted of innumerable cells that had no com- munication with one another, found to his sur- prise that it was oxygen. A flame was brightened and an ignited stick was rekindled by it; and it was so strong and pure, that the common ex- periment of a piece of steel-wire, heated and put into it, succeeded well, and threw out a most vivid light when melting. This pure air, he sup- poses, is adapted to serve the purposes of life, when the fish is far below the surface of the water. Duncan's Ann. of Med. for 1796, p. 393. AIR-BLADDERS, or AIR-BAGS, in ornitho- logy, cells or receptacles of air in the bodies of birds, which are found to be lodged both among the fleshy parts, and in the hollow bones of these animals. Hunter contends that the air-cells, which are found in the soft parts of birds, have no communication with the cavity of the common cellular membrane of the body ; some of them communicate immediately with one another ; and all of them may be said to have a communication together, by means

of the lungs as a common centre. Some are placed in larger ca- vities, such as the abdomen; others are so lodged in the interstices of parts, that they would, at first, appear to be the common connecting mem- brane, as about the breast, axjlla, &c. The bones, which receive air are of two kinds ; some, as the sternum, ribs, and vertebrae, have their internal substance divided into innumera- ble cells ; whilst others, as the os humeri and the os femoris, are hollowed out into one large canal. These bones may be distinguished from those that do not receive air, by their less spe- cific gravity ; by being less vascular, and con- sequently whiter, than others ; by containing little or no oil ; by having no marrow nor bloody pulpy substance, even in their cells; by not being, in general, so hard and firm as other bones ; and by the ease with which the passage that conveys the air into the bones may be per- ceived. The mechanism by which the lungs are adapted for communicating air to the above- mentioned parts consists principally in the at- tachment of the lungs to the diaphragm and their connection with the ribs and sides of the vertebra. These adhesions are peculiar to this tribe of ani- mals. For the communication of the air from the lungs to the other parts, the diaphragm is perforated with large holes, which open a free passage between the cells of the lungs and the abdomen : to each of these perforations is an-

nexed a distinct membranous bag, which is very thin and transparent, and these bags, which re- ceive the air, are extended over the whole ab- domen. The lungs open at their anterior part, or towards the sternum, into membranous cells, which lie open upon the sides of the pericar- dium, and communicate with the cells of the sternum. The superior part of the lungs opens into large cells of a loose net work, through which the trachea, oesophagus, and large vessels, in their way from and to the heart pass. When these cells are distended with air, the size of the part where they lie is enlarged, and this distension indicates passion, as appears in the turkey-cock, pouting pigeon, &c., and in the breast

of a goose, when it cackles. These cells communicate with others in the axilla, under the large pectoral muscle, &c. ; and those again with the cavity of the os humeri by small open- ings in the hollow surface, near the head of that bone. The posterior edges of the lungs, which lie on the sides of the spine, and project back- wards between the ribs, open into the cells of the bodies of the vertebra;, ribs, canal of the medulla spinalis, sacrum, and other bones of the pelvis ; and thus the air finds a passage to the cavity of the thigh-bone. This supply of the bones with air is not wholly by means of the lungs ; for the cells of the bones of the head, in some birds, are filled with it, as in the case of the owlr which has the diploe between the two plates of the scull cellular, and capable of admitting a con- siderable quantity of air from the Eustachian tube. Hunter finally conjectures that these air-blad- ders are to be considered as appendages to the lungs ; and that they answer the same purpose with the two bags that form the lungs of am- phibious animals, which are continued down through the belly, the upper part of which per- forms the office of respiration, and the re- mainder of which is a reservoir of air. In consequence of this conformation, these animals can breathe less frequently than others ; and birds are thus aided in their flight, which must render frequency of respiration difficult, and a reservoir of air singularly useful. He farther suggests that this construction of the respiratory organs may assist birds in singing ; and that the long continuance of the song of a canary- bird between its breathings may be owing to this cause. See Philos. Trans, vol. Ixiv. p. 205. Dr. Latham, Linnaean Transactions, vol. iv. p. 94, queries, whether this construction may not enable some birds to dive and stay for a considerable time tinder water. According to Dr. Monro, these air vesicles are of consider- able use in two respects. They serve, by dis- tending the lungs with air, to render the bodies of birds specifically light, and also to straiten the trachea arteria, and thus return the air ; and moreover to supply the place of a muscular diaphragm and strong abdominal muscles, and thus to

aid the exclusion of the eggs and faeces.

AIR-CAKE, an air-gun adapted to the shape and dimensionsrand commonly carried about as a walking-stick, ††† see the following article. It is the same in principle as the air-gun, the only difference being, that the syringe is applied to the extremity of the barrel, and the lock

and trigger shut up in a brass case, and the trigger pulled, or the discharge made by pulling the chain. In this form of the machine, there is a round .chamber for the condensed air ; and it has a valve acting in a similar manner to that of the copper ball.

The AIR-GUN is a pneumatic instrument for the projection of bullets by the condensation of air. The ancients were certainly acquainted with the principles of its construction, as well as the general properties of air. Aristotle speaks of all the elements having weight, with the ex- ception of fire ; and Plutarch and Strobceus represent him as having taught, that the weight of air was between that of fire and earth. The last philosopher also quotes Empedocles, as attributing the action of respiration to the pres- sure of air, by which it insinuates itself into the lungs. Hero, of Alexandria, in his work, Spi- ritalia, applies the principle of the elasticity of the air to explain various phenomena, and in such a way as sufficiently to prove that he was no stranger to its common properties. Ctesibus adopt- ing the principle of elasticity, as is well known, constructed ' wind-guns,' between which, and the modern air-gun, there was only this difference, that in the former the ball was not immediately exposed to the action of the air, but was impelled by the longer arm of a lever, while the air acted on the shorter ; but the

principle of operation is the same in both, and shows clearly that the elastic property of common air, if it could not be accurately measured, was at least well known at that time. The first modern account of an air-gun which we meet with, is in the Elemens d'Artillerie of David Rivaut, who was preceptor to Louis XIII. He ascribes the invention to Marin, of Lisieux, who presented one to Henry IV. of France.

The elasticity of gunpowder has been esti- mated as equal to about 1000 times that of com- mon air : admitting, therefore, this to be correct, (although there seems to be great reason to sup- pose it to be under-rated) it would be necessary that air should be condensed 1000 times more than in its natural state, to produce the same effect as gunpowder. There is, however, this important consideration to be attended to, viz. that the velocities with which equal balls are im- pelled, are directly proportional to the square roots of the forces ; so that if the air in an air-gun be condensed only ten times, the velocity with which it will project a ball will be one-tenth of that arising from gunpowder ; and if the air were condensed twenty times, it would communicate a velocity of one-seventh of that of gunpowder and so on.

But air-guns project their balls with a much greater proportion of velocity than that stated above, for this reason, that as the reservoir, or magazine of condensed air, is commonly very large in proportion to the narrow tube which contains the ball, its density is very little altered by expanding through that tube, and, conse- quently, the ball is urged all the way by nearly the same uniform force as at the first "instant ; whereas the elastic fluid arising from inflamed gunpowder, is but very small in proportion to the tube or barrel of the gun, occupying, indeed,

but a very small portion of it next the butt-end ' and, therefore, by dilating into a comparatively large space as it urges the ball along the barrel, its elastic force is proportionally weakened, and it

acts always less and less on the ball in the tube. Whence it happens that air condensed into a pretty large machine only ten times, will project its ball with a velocity but little inferior to that given by gunpowder ; and if the valve of communication be suddenly shut again by a spring, after opening it to let some air escape, then the same charge may serve to impel several balls in succession. In all cases where a con- siderable force is required, and, consequently, a great condensation of air, it will be requisite to have the condensing syringe of a small bore, perhaps not more than half an inch in diameter ; otherwise the force requisite to produce the compression will become so great, that the ope- rator cannot work the machine ; for, as the pres- sure against every square inch is about 15 Ibs., and against every circular area of an inch diameter, 12 Ibs. ; if the syringe be an inch in diameter, it will require a force of as many times 12 Ibs. as the density of the air in the receiver exceeds that of the common atmosphere ; so that when the condensation is ten times, the force required will be 120 Ibs. ; whereas, with a half- inch bore, it will only amount to 30 Ibs.

The common air-gun is made of brass, and has two barrels ; the inside barrel A, plate II. fig. 10, which is of a small bore, from whence the bullets are exploded ; and a large barrel, E C D R, on the outside of it. There is a syringe, SMP, fixed in the stock of the gun, by which the air is injected into the cavity between the two barrels through the valve E P. The ball K is put down into its place in the small barrel, with the ram- mer, as in any other gun. At S L is another valve, which, being opened by the trigger O, permits the air to come behind the bullet so as to drive it forwards. If this valve be opened and shut suddenly, one charge of condensed air may be sufficient for several discharges of bul- lets ; but if the whole air be discharged on one single bullet it will drive it out with a greater force. This discharge is effected by means of a lock, fig. 13, placed as in other guns ; for the trigger being pulled, the cock will go down and

drive the lever O, fig. 10, which will open the valve, and let in the air upon the bullet K.

An improvement of this air-gun has been made by Dr. Ellis, in which the chamber containing the condensed air is not in the stock, but in five or six hollow copper balls, about three inches in diameter. These are fitted to a screw on the lock of the gun, and are so furnished with valves as to retain at pleasure the air forced into their cavities, whereby they may be carried about from place to place, ready charged with condensed air, and the gun itself is rendered as light and portable as the smallest fowling-piece.

The best construction, of modern times, has, however, been suggested by the late Mr. B. Mar- tin, and is represented fig. II A is the barrel with the lock, stock, ram-rod, &c. of the size and weight of a common fowling-piece. Under the lock at b, is a round steel tube, having a small moveable pin in the inside, which is pushed out when the

trigger o is pulled, by the spring work within the lock ; to this tube, a hollow copper ball c, screws perfectly air-tight. This copper ball is folly charged with condensed air by the syringe, B fig. 9, previous to its being applied to the tube b of fig. 11. It is then evident that if a bullet be rammed down in the barrel, the copper ball screwed fast at b, and the trigger a be pulled, that the pin in b will, by the action of the spring work within the lock, forcibly strike out into the copper ball, and thereby in pushing suddenly a valve within the copper ball, let out a portion of the condensed air ; which air will rush up through the aperture of the

lock, and forcibly act against the bullet, driving it to the distance of sixty or seventy yards, or further. If the air is strongly condensed, at every discharge only a portion of the air escapes from the ball ; therefore, by re- cocking the piece, another discharge maybe made; and thus repeated to the amount of fifteen or six- teen times. An additional barrel is sometimes made, and applied for the discharge of shot, in- stead of the one above described. The air in the copper ball is condensed by means of the syringe, B, %. 9, in the following manner. The ball c is screwed quite close on the top of the syringe. At the end of the steel-pointed rod a, is a stout ring through which passes the rod k : upon this rod the feet should be firmly set ; then the hands are to be applied to the two handles ii, fixed on the side of the barrel of the syringe. Now by moving the barrel B steadily up and down on the rod a, the ball c will become charged with condensed air; and it may be easily known when the ball is as full as possible, by the ir- resistible action that the air makes against the piston when you are working the syringe. At the end of the rod k is usually a four-square hole, which, with the rod, serves as a key to fasten the ball c fast on the screw b of the gun and syringe, close to the orifice in the ball c. In the middle is fixed a valve and spring which gives way for the admission of air; but upon its emission comes close up to the orifice, shutting up the internal air. The piston rod works air-tight by a collar of leather on it, in the barrel B; it is therefore plain, when the barrel is drawn up, the air will push in at the hole h. When the barrel is pushed down, the air therein contained will have no other way to pass from the pressure of the piston but into the ball c at top. The barrel being drawn up, the operation is repeated, until the conden- sation is so strong as to resist the action of the piston. Sometimes the syringe is applied to the end of the barrel C, see fig. 12, the lock and trigger shut up in a brass case d ; and the trigger pulled, or discharge made, by pulling the chain b. In this contrivance there is a round chamber for the condensed air at the end of the syringe at e, and it

has a valve acting in a similar manner to that of the copper ball. When this instrument is not in use, the brass case d is made to slide off, and the instrument then becomes a walking stick ; from which circumstance, and the barrel being made of cane, brass, &c. it has received the appellation of air-cane. The head of the cane unscrews and takes off at a, where the ex- tremity of the piston rod in the barrel is ►►hown : an iron rod is placed in a ring at the end of this,

and the air condensed in the barrel in a similar manner to that of the gun as above ; but its force of action is not near so strong and permanent as that of the latter.

M. L. Colbe's magazine air-gun is also an im- provement of the common air-gun. By his contrivance ten bullets are so lodged in a cavity ; near the place of discharge, that they may be drawn into the shooting barrel, and successively shot so quickly, as to be nearly of the same use with so many different guns ; the only motion required, when the air has been previously in- jected, being that of shutting and opening the hammer, and cocking and pulling the trigger. In fig. 18 is exhibited a section of the gun, as large in every part as the gun itself; and so much of its length is shown as is necessary to give a complete idea of the stock; G Fig. 14 is the end of the injecting syringe, with its valve H ; opening into the cavity, FF 16 between the barrels. KK is the small or shooting barrel, which receives the bullets, one at a time from the magazine, E D, which is a serpentine cavity, fig. 1 5, wherein the bullets, b, b, &c. are lodged, and closed at the end, D. The circular part, S I s k M i, is the key of a cock, having a cylindrical hole, I K, through it, equal to the bore of the small barrel, and forming a part of it in the present situation, When the lock is taken off, the several parts, Q, R,T,S, W, &c. come into view, by means of which the discharge is made by putting up the pin, P p, which raises and opens a valve, V, to let in the air against the bullets, I, from the cavity, FFF; which valve is immediately shut down again by means

of a long spring of brass. N N. This valve V, being a conical piece of brass, ground very true on the part which receives it, will of itself be sufficient to confine the air. To make a discharge, pull the trigger, Z Z, which throws up the seer, y x, and disengages it from the notch, x ; upon which the strono- spring, W W, moves the tumbler, T, 17, to which the cock is fixed. The end, u, of this tumbler bears down the end, v, of the tumbling lever, R, which, by its other end, m, raises the flat end, I, of the horizontal lever, Q, by which means the pin, Pp, is pushed up, and opening the valve, V, discharges the bullet ; all which is evident from a bare view of the figure.

To bring another bullet instantly to succeed I, there is a part, H, called the hammer, repre- sented in fig. 19, and fig. 20, which by a square hole goes upon the square end of the key of the cock, and turns it about, so as to place the cylin- dric bore of the key I k, in any situation required.

Thus, when the bullet is in the gun, the bore of the key coincides with that of the barrel K K ; but when it is discharged, the hammer, H, is instantly brought down to shut the pan of the gun ; by which motion the bore of the key is turned into the situation ik, so as to coincide with the orifice of the magazine; and upon lift- ing the gun upright, the ball next the key tum- bles into its cavity, and falling behind two springs, ss, fig. 18, is by them detained. Then lifting the hammer again, the ball is brought into its proper place, near the discharging valve, and the bore of the key again coincides with that of the shooting-barrel. It appears how expeditious a

methoij this is of charging and discharging a gun; and if the force of condensed air was as preat as

that of gunpowder, such an air gun would actually answer the end of many guns, and prove the best defence against highway- men or robbers ; because, when there is reason to suspect them, they might then make five or six discharges before the robber could come within pistol-shot. See PNEUMATICS.

AIR-JACKET, a sort of jacket made of leather, in which are several bags, or bladders, composed of the same materials, communicating with each other. It is designed for the use of bathers and young swimmers. The bags or bladders are filled with air through a leather tube having a brass stop-cock accurately ground at the ex- tremity, by which means the air blown in through the tube is confined to the bladders. The jacket must be wet before the air be blown into the bladders, as otherwise, it will immediately escape through the pores of the leather. By the help of these bladders, which are placed near the breast, the person is supported in the water.

The AIR-LAMP is formed by a combination of inflammable air and electricity : and although depending upon principles different from the foregoing instruments, is generally classed with pneumatic machines. The construction of it is as follows :

A, fig. 57, is a glass jar, containing inflammable air, B an open glass urn holding water, by the pressure of which, the air is forced out of the jar A, through the brass pipe a ; C is the stop-cock, so perforated that the water may descend from B into A, and the air pass out through the pipe a. By turning the bar of the stop-cock into a horizontal position, the communication between the two vessels is cut off, and the passage of the air obstructed ; but by placing it in a vertical position, the communication is again opened. The lower jar A is supplied with inflammable air by means of the bladder, fig. 58, and two bladders of this kind are attached to each lamp. The method of using the machine is as follows : Take off the cover D from the lamp, and turn the stop-cock upwards, then pour as much clean water into it as will fill the vessel A up to the . pipe

a, unscrew this pipe, and put in its place the small brass piece W, and to this screw one of the stop-cocks and bladder, fig. 58.

With the bladder under one arm, and with one hand applied to the cock at C, while the other is directed to the bladder, press the latter, and at the same time open the apertures ; by which means, the air will be forced upon the water in A, and driven up the glass pipe through the tube into B. When the vessel A is thus charged with air, the stop-cocks are to be turned, so as to cut off the communication with the ex- ternal air ; and care must be taken that the com- mon atmospheric air does not mix with the inflammable ; for, if this takes place, the ex- plosion would be great, and might be attended with unpleasant circumstances.

For lighting the lamp the electric fluid is em- ployed, the apparatus being as follows: The wooden base EF, fig. 59, is a sort of box, about twelve inches square, and five inches deep ; and in this is placed an electrophorus, consisting of a

resinous cake c, and metallic plate d, which, by a hinge at its back, admits of being pulled upwards and downwards by the silken string b, connected both with it and with the stop-cock C. When this cake is once excited, its electric effect upon the metallic plate will be continued a long time. A metallic chain G, communicates with a wire and ball, passing through a brass tube below, in the box over the plate ; and above, with a fine wire passing through a glass tube. This upper wire is bent to about one-eighth of an inch distance from the flame-pipe. It is evident that when the electrophorus in the box is previously ex- cited, and the stop-cock C turned, the silken string b will raise the metallic plate ; and this will give an electric spark to the ball and wire above, which will convey it instantly to the flame-pipe, and inflame the air issuing out of the pipe, in consequence of the pressure of the water in its descent into the vessel A. The cock C being turned back, the flame ceases ; and turned again, appears ; and will serve to light a candle, match,

&c. whenever it may be thought proper.

The number of times in which light may be produced will be very great, depending on the quantity of inflammable air in the vessel A. If the cock be not turned back, the flame will continue till the whole of the inflam- mable air is consumed. The light thus pro- duced will be sufficient for reading a large print in the night, or seeing the hour by a watch. When the electrophorus is to be excited, the silken string b is unhooked from the plate, and the apparatus taken out of the box ; and the me- tallic plate is lifted up, whilst with a silken string, or dry cat-skin rubber, you may briskly rub the surface of the resinous cake. About 20 revolu- tions in rubbing will be sufficient, so that the plate will give a spark to the knuckle about the distance of an inch ; and by the strength of the spark the degree of excitation is to be estimated. The silken string and small glass tubes, through which the wire G passes, should always be very dry, that the passage of the electrical spark may be quite perfect. The whole length of this ap- paratus is about 22 inches ; but it may be made of any dimensions. Dr. Ingenhousz used a small apparatus, constructed upon a similar principle, in obtaining light for domestic purposes, both when at home and on his travels. Adams's Lectures, by Jones, vol. ii. p. 99, &c.

AIR-PIPES, are an invention for drawing foul air out of ships, or any other close places, by means of fire, and were first suggested by Mr. Sutton, a brewer in London ; from him they received the name of Sutton's air-pipes. The principle on which their operation depends, is this simple one, that air is necessary for the sup- port of fire ; and, if it have not access from the places most adjacent, it will not fail to come from those that are more remote. Thus, in a common furnace, the air enters through the ash-hole ; but if this be closed up, and a hole made in the side of a furnace, the air will rush in with great violence ; if a tube of any length whatever is inserted, the air will rush through the tube into the fire, and of consequence there will be a continued circulation of air in that

place wnere the extremity of the tube is laid. Mr. Sutton's contrivance, as communicated to the Royal Society by Dr. Mead, is thus de- scribed : ' As, in every ship of any bulk, there is already provided a copper or boiling-place, proportionable to the size of the vessel ; it is proposed to clear the bad air, by means of the fire already used under the said coppers or boil- ing-places for the necessary uses of the ship. It is well known, that, under every such copper or boiler, there are placed two holes, separated by a grate; the first of which is for the fire, and the other for the ashes falling from the same; and that there is also a flue from the fire-place upward, by which the smoke of the fire is dis- charged at some convenient place of the ship. It is also well known, that the fire once lighted in these fire-places, is only preserved by the con- stant draught of air through the forementioned two holes and flue ; and that if the said two holes are closely stopped up, the fire, though burning ever so briskly before, is immediately put out. But if, after shutting up the above- mentioned holes, another hole be opened, com- municating with any other room or airy place, and with the fire, it is clear, the said fire must again be raised and burn as before, there being a like draught of air through the same as there was be- fore the stopping up of the first holes ; this case differing only from the former in this, that the air feeding the fire, will now be supplied from another place. It is therefore proposed, that, in order to clear the holds of ships of the bad air therein contained, the two holes above-mentioned, the fire- place and ash-place, be both closed up with substantial and tight iron-doors ; and that a copper or leaden pipe, of sufficient size, be laid from the hold into the ash place, for the draught of air to

come in that way to feed the fire. And thus it seems plain, from what has been already said, that there will be, from the hold, a constant discharge of the air therein con- tained ; and consequently, that the air, so dis- charged, must be as constantly supplied by fresh air down the hatches or such other com- munications as are opened into the hold ; whereby the same must be continually freshened, and its air rendered more wholesome and fit for respi- ration. And if into this principal pipe so laid into the hold, other pipes are let in, communi- cating respectively, either with the well or lower decks, it ntust follow, that part of the air, con- sumed in feeding the fire, must be respectively drawn out of all such places to which the com- munication shall be so made.' It is evident, that, by means of pipes of this kind, a constant circulation of fresh air would be occasioned through those places where it would otherwise be most apt to stagnate and putrefy. Several other contrivances have been used for the same purpose ; and Doctor Hale's ventilators have, by some, been reckoned superior in efficacy, and even simplicity, to Mr. Sutton's machine.

A machine capable of answering the same purpose was invented by Mr. Desaguliers, which he called the ship's lungs. It consisted of a cylindrical box set up on its edge, and fixed to a wooden pedestal. From the upper edge of the box issued a square trunk open at

the end, and communicating with the cavity of the box. Within this box was placed a cylin- drical wheel turning on an axis. It was divided into thirteen parts, by means of partitions placed like the radii of a circle. These partitions did not extend quite to the centre, but left an open space of about eighteen inches diameter in the middle : towards the circumference, they extended as far as possible without interfering with the case, so that the wheel might always be allowed to turn freely. It is plain, that if the wheel were now turned towards that side of the box on which the trunk was, every division would push the air before it, and drive it out through the trunk, at the same time that fresh

air would come in through the open space at the centre, to supply that which was thrown out through the trunk. By turning the wheel swiftly, a strong blast of air would be continually forced out through the square trunk, on the same principles on which a common fanner winnows corn. If the wheel is turned the opposite way, a draught of air may be produced from the trunk to the centre. If this machine, then, is placed in a room where a circulation of air is wanted, and the trunk made to pass through one of the walls ; by turning the wheel swiftly round, the air will be forced with great velocity out of that room, at the same time that fresh air will enter, through any chinks by which it can have access, to supply that which has been forced out. It is evident, that the cir- culation which is promoted by this machine, is entirely of the same kind with that produced by Mr. Sutton's ; the turning of the wheel in Mr. Desagulier's machine being equivalent to the rarefaction of the air by fire in Mr. Sutton's ; but that the latter is vastly superior, as acting of itself, and without intermission. Mr. Sutton's machine has yet another conveniency, of which no other contrivance for the same purpose can boast ; namely, that it not only draws out putrid air, but destroys it by causing it to pass through fire ; and experience has abundantly shown, that though putrid air is thrown into a great quan- tity of fresh air, it is so far from losing its per- nicious properties, that it often produces noxious diseases. We do not say, indeed, that putrid air becomes salutary by this means; but it is undoubtedly rendered less noxious than before ; though, whether it is equally innocent with the smoke of fire fed in the common way, we can- not pretend to determine. Besides this machine by Mr. Desagulier, and the ventilators of Dr. Hale, already mentioned, those called wind- sails, are likewise used for the same purpose. The former of which is an improvement of the Hessian bellows, see VENTILATOR; the other is a contrivance for throwing fresh air into those places where putrid air is apt to lodge ; but this has the last mentioned inconvenience in a much greater degree than any of the others, as the blast of fresh

air throws out that which was rendered putrid by stagnation, in such a man- ner as to contaminate all around it. See WIND- SAILS.

AIR-PUMP, in PNEUMAHCS. The discovery of this pneumatic instrument was perhaps the most important event connected with the history of that science. It is ascribed to Otto de Oue-

ricke, the consul of Magdeburg, who exhibited his first public experiments with it before the emperor and the states of Germany, at the break- ing up of the Imperial diet, at llatisbon, in the year 1654 ; and his description of the instrument, and of the experiments performed upon it, were first published in his Experimenta nova Mag- deburgia de Vacuo Spatio, in the year 1672; but like many other important inventions and discoveries, its true origin has been warmly con- tested. Dr. Hook and M. Duhamel ascribe the invention of the air-pump to Mr. Boyle ; but that ingenious philosopher frankly confesses, that

- *De Guericke was before-hand with him.' In a letter which Boyle wrote to his nephew, Lord Dungarvon, at Paris, about two years after Schottus's book was published, he introduces the acknowledgment of his obligation for the disco- very of this useful machine, to what he had heard of it, though he had not perused it, by that well- applied passage of Pliny, ' benignum est et plenum ingenui pudoris fateri per quos profece- ris.' Some attempts, he assures us, he had made upon the same foundation, before he knew any thing of what had been done abroad ; but the information he afterwards received from Schottus's Mechanica Hydraulico Pneumatica, published in 1657, wherein was given an account of De Guericke's experiments, first enabled him to bring his own instrument to maturity. Hence, with some assistance from Dr. Hook, arose a new air-pump, more simple and manageable than the German*

original, but this noble instrument has since received various modifications and im- provements. We shall now, therefore, give a sketch of De Guericke's pump, and the one first constructed by Mr. Boyle, that contrasting them with the modern instruments, the progress of this important invention may be clearly traced. De Guericke's machine is exhibited in plate I. fig. 1, AIR PUMP. It consists of an iron three- legged frame a b c df, supporting a round iron plate b c, in the middle of which is inserted a brass syringe g h. The upper part of this syringe is furnished with a rim of lead y, fig 1-a, and it is fastened below by means of an iron ring k, k, and three iron arms, o, o, o, to the legs of the frame. Within the rim y there is a brass plate, m n fig. 1-6, encompassed by a ring of leather, and fixed by three screws, which terminate upwards in a small tube n, into which the pipe connected with the vessel to be exhausted is inserted as occasion requires. To this, on the lower side, is adapted a valve of leather, through which the air passes into the syringe. In this plate there is also another small valve at z, opening upwards, through which it escapes-, the plate being co- vered by a copper vessel, x,x, intended for containing water. The piston of the syringe

- *A, fig. 1, and fig. 1-c, is connected by a joint at t, with the iron rod t u, which is fastened to the landle wuu, and this moves round the pin at it', oy which it is connected with one of the legs of ihe frame. In order to prevent the air from entering into the syringe, a copper vessel of water is suspended by hooks to the arms o, o, o, so that the lower part of the syringe at k, k, and the piston, mav be always covered with water when the macnine is at work.*

A1R-P UM ^

The receiver L is a glass sphere, adapted to a brass

cap p p, which has a pipe with a stop-cock q r, and this pipe is fitted to the tube n above- mentioned. From this brief description of the machine, its operation may be easily understood. When the piston s h is depressed, the air will be expanded in the syringe g h, and that of the receiver, will descend into it through the val /e in the lower surface of the plate m n ; but when the piston is elevated, and the air is compressed, this valve, shutting upwards, will close the passage to the receiver, and make it escape through the valve 2, which opens upwards. In order to render the exhaustion more complete, a small exhausting syringe is adapted to the plate, which is represented at m.

Considering that at this time the elastic pro- perty of the air was but little 1

Mr. Boyle's air-pump is represented in the same plate fig. 2. It consisted of a spherical receiver A, with a hole at the top, whose diame- ter B C was about four inches ; this was covered with a plate, having a brass rim DE, which was firmly cemented to the ring of glass that sur- rounded the hole, and to the tapering orifice of the brass rim was adapted a brass stopple F G, ground so exactly as to prevent, as much as pos- sible, the admission of air. In the centre of the cover was a hole, of about half an inch diameter, provided with a socket; to which the brass stopple K was so fitted as to prevent the en- trance of the air ; the lower part of this stopple was perforated with a hole, and through this passed a string for the convenience of moving to and fro the subjects of experiments. To the neck of the receiver a stop-cock N was fastened, and to the shank of the cock X, a tin plate, M T U W, was so cemented as to prevent the ad- mission of air. The lower part of the machine consisted of a wooden frame with three legs, a, a, a, and a transverse board 6, b, b, on which the pump rested. The cylinder of the pump was cast brass, and it was fitted with a sucker, of which one part was covered with shoe leather, so as exactly to fill the cavity of the cylinder ; and to this was fastened the other part, which was a thick narrow plate of iron e e,

somewhat longer than the cylinder, indented on one edge with narrow teeth, so as to admit the corres- ponding teeth of a small iron nut, fastened by two staples to the under side of the transverse board b, b, b. On this the cylinder rested, and was turned to and fro by means of the handle f. The last part of this cylinder is the valve R, con- sisting of a hole bored through at the top of the cylinder, somewhat tapering towards the cavity, into which a ground peg of brass is fitted, to be taken out or put in at pleasure. In order to prevent more effectually the admission of air, and to prepare the sucker of the pump for mo- tion, a quantity of oil was poured in at the top of the receiver, and also into the cylinder. The

–

N

operator having fixed the lower shank of the stop-cock into the upper orifice of the cylinder, turns the handle, and thus forces the sucker to the top of it, so that no air may be left in its upper part. Then shutting the valve with the plug, and turning the handle the other way, he draws down the sucker to the bottom of the cylinder, and thus its cavity, into which no air is admitted, will be in an exhausted state. By turning the stop-cock, and opening a passage between the cylinder and the reservoir, the air contained in the one will descend into the other; and this air being prevented from returning, by turning back the key of the stop-cock, will be raade to open the valve, and to escape into the external air, by forcing the sucker to the top of the cylinder ; thus, alternately moving the sucker upwards and downwards, turning the key, and stopping the valve, as occasion requires, the exhaustion may be carried on to any extent. ††† We

now pass to

AIR-PUMP, BOYLE'S, AS IMPROVED BY HAWKES- BEE. ❖❖❖ The description of this machine as given by Desaguliers, in vol. ii. of his Exper. Philos. is as follows : It consists of two brass barrels a a, a a, fig. 22, twelve inches high and two wide. The pistons are raised and depressed by turning the winch b b. This is fastened to an axis pass- ing through a strong-toothed wheel, which lays hold of the teeth of the racks c c c c, the one being raised, while the other is depressed; by which means the valves, which are made VOL. I.

immersed in a glass cistern, m m, filled with mer- cury. This is covered on the top with a cork float, carrying the weight of a light wooden scale divided yito inches, which are numbered from the surface of the mercury in the cistern ; and the scale will therefore rise and fall with the mercury in the cistern, and indicate the true elevation of that in the tube.

There is a stop-cock immediately above the in- sertion of the gauge-pipe, by which its communi- cation may be cut off; and another at n, by which a communication is opened with the external air, for allowing its re-admission; there is sometimes also another, immediately within the insertion of the conduit-pipe, for cutting off the communica- tion between the receiver and the pump. This is particularly useful when the rarefaction is to be continued long, as there are by those means fewer chances of the insinuation of air by the many joints. The receivers are made tight by simply setting them on the pump-plate with a piece of wet or oiled leather between; and the receivers, which are open at the top, hare a brass cover set on them in the same manner. In these covers there are perforations and contrivances for various purposes. The one in the figure has a slip wire passing through a collar of oiled leather, having a hook or a screw in its lower end for hanging any thing on, or for producing a variety of motions. Sometimes the receivers are set on another plate, which has a pipe

screwed into its middle, furnished with a stop-cock and a screw, fitting the middle pipe k. When the rarefaction has been made in it the cock is shut, and then the whole may be unscrewed from the pump, and removed to any convenient place. This is called a transporter-plate.

It only remains to explain the gage II 1 1. In the ordinary state of the air its elasticity balances the pressure of the incumbent atmosphere. We find this from the force that is necessary to press it into less bulk in opposition to this elasticity. Therefore the elasticity of the air increases with the vicinity of its particles ; consequently it is reasonable to expect, that when we allow it to occupy more room, and its particles are further asunder, its elasticity will be diminished, though not annihilated ; that is, it will no longer balance the WHOLE pressure of the atmosphere, though it may still balance part of it. If, therefore, an up-right pipe have its lower end immersed in a vessel of mercury, and communicate by its upper end with a vessel containing rarefied, and therefore less elastic, air, we should expect that the pres- sure of the air will prevail, force the mercury into the tube, and cause it to rise to such a height that the weight of the mercury, added to the elasticity of the rarefied air, acting on its upper surface, shall be exactly equal to the whole pressure of the atmosphere. The height of the mercury is the measure of that part of the whole pressure which is not balanced by the elasticity of the rarefied air, and its deficiency from the height of the mercury in the Torricellian tube, is, in like manner, the exact measure of this re- maining elasticity. It is evident, therefore, that die pipe will be a scale of the elasticity of the remaining air, and will indicate the degree of rarefaction ; for there must be some analogy be-

tween the density of the air and its elasticity, and we have seen, (except in extreme cases of condensation and rarefaction) that they increase and diminish together and according to the same law. This gage must be considered as one of the most important improvements introduced into this machine by Hawkesbee ; at the same time it must be acknowledged to have certain imperfections and inconveniences attending it, which are obviated in other contrivances of a like kind.

It will be immediately perceived, that air- pumps merely serve to rarefy the air to a greater or less degree, and that none of them can pro- duce a complete exhaustion. But, independent of this theoretical impossibility, there are me- chanical defects which prevent us from carrying on the exhaustion according to the law laid down in theory ; few pumps will bring the mercury, in such a gage as that above described, to within one-tenth of an inch ; and that of Hawkesbee's, fitted up according to his own instructions, will seldom bring it within one-fifth. Pumps with cocks of the best construction, and under the most favourable circumstances, will bring it within one-fortieth ; but this degree of rarefaction has never been attained, when valves fitted up with wet leather were employed : in such cases, one-fifth of an inch is the least that the gage falls short of the Torricellian column. Pumps with stop-cocks, when well made and newly put together, are generally found to rarefy the air to a greater degree than those which are made with valves ; but after being used for some time they become less accurate than those with valves. The valves, however, are also imperfect, because the external air, pressing upon that in the piston, prevents its rising when the elastic force of air in the receiver under exhaustion is much di- minished; and attempts have therefore been made, particularly by the Abbe Nollet and Gravesande, to perfect the construction of cocks.

In the latter author's double-barrelled-pump, the cocks at the bottom of the pistons are turned by an

apparatus that is moved by the handle of the pump. The piston has no valve, and the rod is connected with it by a stirrup, as in a common pump. This rod has a cylindrical part, which passes through the stirrup and moves stiffly in it, through the space of about half an inch, between a shoulder above and a nut below. The stirrup supports a round plate, which has a short square tube that fits tight into the hole of a piece of cork, and which has also a square shank that goes into the square tube. Between the plate and the cock is put a piece of thin leather, soaked in oil, and another is placed between the cork and the plate, which forms the sole of the stirrup. When the winch is turned to raise the piston from the bottom of the barrel, the friction of the piston against it keeps it in its place, and the rod is drawn up through the stirrup. The wheel has thus liberty to turn about an inch, and this is sufficient to turn the cock, so as to cut off the communication with the external air, and to open that with the receiver. When this is done, the continued motion serves to raise up the piston to the top of the barrel. When the

winch is turned in the opposite direction, the piston remains fixed till the cock is turned, so as to shut the communication with the receiver and open that with the external air. The cock has one perforation diametrically through it, and another in a perpendicular direction to this, and after reaching the centre, it passes along the axis of the cock, and communicates with the external air. By means of this communication, when it is opened, the air rushes in and balances the pressure on the upper side of the piston in this barrel, so that the pressure on the other must be counteracted by the person who works the pump. In order to obviate this inconvenience, Grave- sande put a valve on the orifice of the cock, by tying over it a slip of wet bladder, or oiled leather ; and by means of this the piston is pressed down as long as the air in the barrel is rarer than the outward air, just as if the valve were in the piston itself. This is all that is necessary to be described in Gravesande's pump ; its

performance is highly extolled by him, as far exceeding his former pumps with valves ; and the same preference was given to it by his suc- cessor Muschenbroeck. Hawkesbee's pump, however, maintained its pre-eminence in this country, and, indeed, pretty generally on the continent, except in France, till about the year 1750, when Smeaton, so celebrated for his mechanical skill, undertoook to improve and perfect the cock-pumps, which, however, he at length, after various attempts, gave up, finding it absolutely impossible to bring them to that degree of accuracy he had in view ; and he then turned his attention to the valve-pumps ; and the great advantages, gained by his construction, have been thus explained:

His first object was to diminish the resistance to the entry of the air from the receiver into the barrels, which he rendered almost nothing, by enlarging the surface on which this feebly elastic air was to press. Instead of making these valves to open by the pressure of the air on a circle of one-twentieth of an inch in diameter, he made the valve hole an inch in diameter, thus enlarging the surface 400 times ; and to prevent this piece of thin leather from being burst by the great pressure upon it, when the piston in its descent was approaching the bottom of the bar- rel, he supported it by a delicate but strong grating, dividing the valve-hole like the section of a honey-comb ; and that the points of con- tact between the bladder and grating might be as few as possible, the holes were made hexagonal, and the partitions filled almost to an edge. The breadths of these hexagons are three-tenths of an ouch, and, consequently, the surface nine times larger than common ; and, as the circumference is three times greater than that of the common valve, and the cohesion to be overcome is, in the first moment of the air exerting its force, pro- portional to the circumference of the hole, the valve over any of these holes will be raised with three times more ease. Beside, the raising of the valve over the centre hole is aided on all sides by those that are placed round it ;

and, as they all contribute as much to raise the bladder over the centre hole, as the air acting imme- diately under it, the valve will be raised .with

much more facility than we have already sup- posed, that is, with about one-sixth of the force commonly necessary. The other defect in the common constitution would still hinder the rarefaction from being carried on beyond a cer- tain degree; for, as the piston does not fit so closely to the bottom of the barrel as totally to exclude the air, this air, as the piston rises, will expand itself, and, pressing upon the valves in proportion to its density, prevent the air within the receiver from coming out. Therefore, if a vacancy, for example, equal to 150th part of the capacity of the whole barrel had place, no air could pass out of the receiver when expanded 150 times, though the piston were constantly drawn to the top ; because the air in the receiver would be in equilibrio with that in the barrel when in its highest state of rarefaction. In or- der to obviate this inconvenience, Mr. Smeaton shut up the top of the barrel with a plate, having in the middle a collar of leather, through which the cylinder works that carries the pis- ton ; by which means the external air is pre- vented from pressing on the piston ; but, for the discharge of the air that passes from below through the valve of the latter, there is another valve applied to the plate at top, which opens up- wards. By this construction, when the piston is put down to the bottom of the cylinder, the air under it will evacuate itself so much the more, as the valve of the piston opens more easily when pressed by the rarefied air above it, than when pressed by the whole weight of the atmosphere ; and, as the piston may be made to fit as nearly to the top of the cylinder as it can to the bottom, the air may be rarefied as much above the piston as it could before have been in the receiver ; whence it follows, that

the air may now be rarefied in the receiver, in the duplicate proportion to what it could be upon the common principle. By this means a pump, (consisting of a common barrel, may be worked with more ease than the common pump with two barrels, be- cause the pressure of the outward air is taken off by the upper plate ; and when a considerable degree of rarefaction is required, it will produce it more speedily.

This gentleman's air-pump, as constructed by Nairne, may be described as follows : Upon a solid base or table are set up three pillars F, H, H, fig. 23 ; the pillar F supports the pump-plate A; and the pillars H, H, support the front or head, containing a brass cog-wheel, which is turned by the handle B, and works in the rack C fastened to the upper end of the piston- rod. The whole is still farther steadied by two pieces of brass, c 6 and o k, which connect the pump-plate with the front, and have perforations communicating between the hole a in the middle of the plate and the barrel. DE is the barrel of the pump, firmly fixed to the table by screws through its upper flanch ; e f d c is a slender brass tube screwed to the bottom of the barrel, and to the under hole of the horizontal canal c b. In this canal there is a cock which opens a communica- tion between the barrel and the receiver, when the key is in the position represented in the figure ; but when the key is at right angles with this position, this communication is cut off. If that

side of the key which is here drawn next to the pump-plate be turned outwards, the external air is admitted into the receiver ; but if turned in- wards the air is admitted into the barrel, g h is another slender brass pipe, leading from the discharging valve atg to the horizontal canal h /c, to the under side of which it is screwed fast. In this horizontal canal there is a cock n which opens a passage from the barrel to the receiver when the key is in the position here drawn ; from the barrel to the external air when the key is turned outwards, and from the receiver to the external air when the key is turned inwards. This com- munication with the

external air is not imme- diate, but through a sort of box i ; the use of which is to receive the oil discharged through the top valve g. In order to keep the pump tight, and in working order, it is proper some- times to pour a table-spoonful of olive oil into the hole a of the pump-plate, and then to work the pump . The oil goes along the conduit 6 c dfer gets into the barrel and through the piston-valve, when the piston is pressed to the bottom of the barrel, and is then drawn up, and forced through the discharging valve g, along the pipe g h, the horizontal passage h n, and finally into the box ►►. This box has a small hole in its side, near the top, through which the air escapes. From the upper side of the canal c b there arises a slender pipe, which bends outward and then turns down- wards, and is joined to a small box, which cannot be seen in this view. From the bottom of this box proceeds downwards the gage-pipe of glass, which enters the cistern of mercury G fixed be- low. On the upper side of the other canal at o is seen a small stud, having a short pipe of glass projecting horizontally from it, close by, and parallel to, the front piece of the pump, and reaching to the other canal. This pipe is closed at the further end, and has a small drop of mercury or oil in it at the end o. This serves as a gage in condensing, indicating the degree of condensa- tion by the place of the drop ; for this drop is forced along the pipe, and condenses the air before it in the same degree that it is condensed in the barrel and receiver. In constructing this pump, Mr. Smeaton introduced a method of join- ing together the different pipes and other pieces, which has great advantages over the usual man- ner of screwing them together with leather between, and which is now much used in hy- draulic and pneumatic engines. The piece hip in fig. 24, is the same with the little cylinder observable on the upper side of the horizontal canal c d, in fig. 23. The upper part h i is formed into an outside screw, to fit the hollow screw of the piece deed. The top of this last piece has a hole in its middle, giving an easy passage to the bent tube c b a, so as to slip along it with freedom. To the end c

of this bent tube is soldered a piece of brass cfg, perforated in continuation of the tube, and having its end ground flat on the top of the piece h ip, and also covered with a slip of thin leather strained across, and pierced with a hole in the middle. It is plain, from this form, that if the surface/g be applied to the top of h i, and the cover deedbe screwed down on it, it will draw or press them toeether, so that no air can escape by the joint, 2 D 2

and this without turning the whole tube c b a round, as is necessary in the usual way.. The conduit-pipe, E e fc, fig. 23, is fastened to the bottom of the barrel, and the discharging pipe g h to its top, in the same manner.

In describing Hawkesbee's, or Desagulier's air-pump, we mentioned the gage employed by that author for estimating the degree of rarefaction produced by the operation of the machine ; we have also stated that it was subject to some in- conveniences, and particularly on account of its length, which rendered its application very in- commodious. In order to remove this incon- venience, a short barometer-gage was next in- troduced. This was, in fact, only the bottom part of a common barometer, about eight or nine inches in length, filled with mercury, and im- mersed with its aperture into a small quantity of mercury contained in a glass vessel, which forms the cistern. This may either be placed under the receiver, upon the principal flat of the pump, or under a small receiver, upon a small auxiliary plate, which is annexed to some air-pumps for this purpose. As this gage is not equal to a whole baro- meter, it will not show the first stages of the rare- faction ; but its indications will commence when about three-fourths of the air have been removed from the receiver ; that is,when the air has been rare- fied till its remaining elasticity is not able to sup- port that short

column of mercury. The siphon- gage, which is shown in the figure of Smeaton's air-pump, differs from the short barometer-gage merely in this circumstance, that, instead of ter- minating in a cistern, the tube is here bent and rises upwards with its aperture, which, by means of a brass tube, is made to communicate with the inside of the pump, so that the ascending leg of the tube performs the office of a cistern. ??? Hence, in rarefying the air, the mercury descends from the closed end of the tube, and rises into the ascending leg; and, consequently, the alti- tude of it in one leg, above its altitude in the other, shows the degree of rarefaction ; and this altitude, as in the long and short barometer-gages, is shown by an annexed scale of inches and parts. The gages above mentioned evidently indicate the elasticity of the fluid, which remains in the receiver of the pump after a certain degree of rarefaction ; and it is immaterial whether that elastic fluid be air or vapour. Mr. Smeaton in- vented another instrument of this kind, which, from its form, is called a pear-gage ; this shows (not at the actual time, but after the re-admission of the air into the receiver) how much of that fluid had been left in the receiver in the preced- ing rarefaction. This gage is also shown in the figure of Smeaton's pump above described. It consists of a glass vessel, which has a small pro- jecting orifice, and at the other end it is extended into a tube closed at the upper extremity ; the capacity of which is 100th part of that of the whole vessel. The instrument is suspended with its aperture downwards to the lower end of a slip of wire, or a wire which passes through a collar of leather, within the glass receiver of the pump, and exactly under it, a small cup, con- taining quicksilver, is placed upon the plate of the pump. When the machine has been worked to the intended degree, the air in the pear-gage

is evidently rarefied as much as it is in the re- ceiver ; and in that state, by lowering the slip of wire, the pear-gage is let down till its aperture has reached the bottom of the mercury. This done,

the external air is admitted into the re- ceiver ; which cannot, as is obvious, enter the pear-gage, on account of the aperture being im- mersed in the quicksilver ; but the pressure of the atmosphere, now acting on the surface of the mercury, forces that fluid into the gage, and fills it up to a certain degree, for instance to r; then the upper part of the gage will contain all the air or vapour which occupied the whole cavity of it during the rarefaction. To the upper part of the gage is annexed a divided scale, which shows what part of the capacity of the whole gage is filled with air, and of course measures the degree to which the rarefaction of the air had been carried. Mr. Smeaton on making use of this gage, was much surprised to find that it did not give always the same results as the common gages above described. When the receiver contains no other fluid besides air, the pear-gage and the other gages will indicate the same degree of rarefaction ; but if the receiver contain the vapour of water or of other liquor, then the pear-gage will indi- cate a much greater degree of rarefaction, than the siphon or short barometer-gage ; because the vapour, which has elasticity sufficient to supply the place of air in the receiver, on the re- admis- sion of air, is condensed into a much smaller space than the same quantity of rarefied air could be, so that the pear-gage shows the quantity of air alone which had been left in the receiver, whereas the other gages show the quantity of elastic fluid which is actually remaining in it. This cause, however, of the difference in these two kinds of gages was not in the least suspected at first; but some experiments upon it being repeated before the honourable Mr. Cavendish, the latter accurate philosopher immediately ac- counted for the difference which the two gages indicated on the principles above stated, by re- ferring to some experiments of his father, lord Charles Cavendish; from which it appeared, that water, whenever the pressure of the atmosphere 'on it is diminished to a certain degree, is imme- diately turned into vapour, and reduced as sud- denly to water again on restoring the pressure. The degree of pressure

varies according to the temperature of the water ; for when the heat is 72►► of Fahrenheit's scale, it is converted into vapour as soon as the pressure is reduced to three-quarters of an inch of quicksilver, or about one-fortieth of the usual pressure of the atmos- phere ; but when the heat is only 41►► of Fahren- heit's scale, the pressure must be reduced to that of a quarter of an inch of quicksilver, or to a one hundred and twentieth part of the usual pressure, before the water turns into vapour. According to this hypothesis, whenever the air in the receiver is exhausted to the above-men- tioned degree, the moisture adhering to the dif- ferent parts of the machine will be converted into an elastic vapour, and supply the place of the air which is drawn away by the working of the pump, and the fluid left in the receiver and pear-gage will be chiefly this vapour. When the air is let into the receiver a ain the vapour

within the pear-gage will be reduced to water, and only the real air will remain uncondensed ; consequently, this gage shows only how much real air is left in the receiver, and not how much the pressure or spring of the included air is diminished ; whereas either of the other gages shows how much the included elastic fluid is diminished, and that equally, whether it consist of air or vapour.

In order to ascertain the truth of this theory, Mr. Nairne proceeded to free every part of his apparatus as much as possible from any adhering moisture, concluding that, by these means, he should be able to bring the two gages to an agreement. Instead, therefore, of placing the receiver on leather as before, he put it on the pump-plate, made as clean and dry as pos- sible, and applied a cement round its edge to exclude the outward air. When the pump, in this state, was worked for ten minutes, the barometer-gage indicated a degree of exhaustion nearly equal to 600 ; and on letting the air into

the receiver, the pear-gage showed also an ex- haustion but little exceeding the former. In another experiment he put a piece of the oiled leather above-mentioned into the receiver, and found, on working the pump, that the barometer- gage indicated a degree of exhaustion of nearly 300, while, on the re-admission of the air, the pear-gage gave an exhaustion of little less than 400, and thus confirmed the hypothesis ad- vanced by Mr. Cavendish. He performed, like- wise, numerous other experiments relating to this subject, which may be seen in vol. Ixvii Phil. Trans. .

There still remained one imperfection which

I Mr. Smeaton had not attempted to remove. The discharging- valve was opened against the pressure of the atmosphere; and although the in- genious contrivances of this celebrated mechanist had greatly diminished, it had not annihilated, the obstructions to the passage of the air from the receiver into the barrel. His success, how- ever, encouraged other attempts, but they are too numerous for us to enter upon in detail in this article ; we shall, therefore, pass over some of minor importance, and proceed at once to describe that of Mr. Prince, a native of America, who conceived the idea of dispensing with the the valves entirely. In order to effect this, he removed the lower valve, and opened the bot- tom of the barrel into a cistern on which it was placed, and which had a free communication with the receiver; for the valve on the upper plate on the top of the barrel, constructed like Mr. Smeaton's, made it unnecessary, that there should be any at the bottom, in order to rarefy the air in the receiver. The cistern was made deep enough to admit the piston descending into it below the bottom of the barrel. If the piston be solid, that is, without a valve, when it enters the barrel and rises to the top plate, which is made air-tight with a collar of leather, like Smeaton's, it forces out all the air above it ; and, as the air cannot return into the barrel on account of the valve in the top plate, when the piston descends there will be a vacuum between it and the plate,

every thing being supposed perfect. : But, in working the pump, the piston is not

allowed to descend entirely into the cistern, so far as to leave the barrel open ; it descends only below a hole in the side of the barrel near the bottom, which opens a free communication be- tween the barrel, cistern, and receiver. Through this hole the air rushes from the cistern into the exhausted barrel, when the piston has dropped below it; and by the next ascent, this air is forced out as the other was before. If the capa- city of the receiver, cistern, pipes, &c. below the bottom of th⬚ barrel, taken together, be equal to the capacity of the barrel, half the re- maining air will be expelled at every stroke. But in order to save the labour that would attend the working of this pump with a solid piston, the constructor pierced it with three holes, at equal distances from each other, and by a circular piece of bladder tied over the top of the piston, formed a sort of valve over the holes, which opened with sufficient ease to save any labour in working the pump, by allowing the air to pass through the piston in its descent. The escape of the air, however, does not depend upon a passage through the piston into the barrel ; for when the air, weakened by rarefaction, cannot open this valve, it will still get into the barrel when the communication is opened with the hole at the bottom. This piston will, therefore, de- scend as easily as any other, nor will the rare- faction be in any respect impeded by the valves. By this construction the valves, made to open with more ease by Mr. Smeaton, are rendered useless for rarefying the air, and that at the bot- tom of the barrel is entirely removed ; the valve on the top plate being the only one necessary in the rarefaction.

The next object of this mechanist was to ex- pel the air more perfectly out of the barrel than was effected in the machine last described, by making a more complete vacuum between the piston and the top plate, so that more of the air might be allowed to expand itself into the bar- rel from the receiver. Mr. Prince also con- trived to connect the valves on

the top plate with the receiver, occasionally, by means of a pipe and cock, by the turning of which the machine might be made to exhaust or condense at pleasure. It still remained to remove the pressure of the atmosphere from the valve on the top plate, so that this might open as easily as the piston-valve; with which view he connected with the duct on the bottom piece, which conveys the air from the valves to the cock, a small pump of the same construction as the large one, having the barrel opening into the cistern ; the piston-rod, which is solid, mov- ing through a collar of leathers, and a valve at the top, through which the air is forced into the atmosphere. This is called the valve-pump ; its principal use being to rarefy the air above the valves, or to remove the weight of the at- mosphere from them. When this valve-pump is used, the passage through the cock is shut up ; and, therefore, instead of placing three ducts at equal distances round the cock, after the manner of Mr. Smeaton, the whole is di- vided into five equal parts, leaving the distance of one-fifth part between the ducts leading from the cistern and the valves to the cock, and two-

fifths between each of these and the one leading from the cock to the receiver ; therefore, when the communication is open between the receiver and the valves for condensation, the other hole through the cock opens the cistern to the at- mosphere ; but when the communication is made between the cistern and the receiver, for ex- haustion, a solid part of the key comes against the duct leading to the valve, shuts it up, and the air which is forced out of the barrel passes through the atmosphere into the valve-pump. One advantage in this construction is, that the pump with two barrels may be made like the common pump, which cannot be conveniently done where the lower valve is retained. In this pump the pistons do not move the whole length of the barrel, a horizontal section being made in them a little

more than half way from the bottom, where the top plates are inserted ; on which account it is more convenient and sim- ple, as the head of it is brought down from the top of the barrels, in the same manner as in the common air-pump. The barrels also stand upon the receiver-plate, which is raised high enough to admit the long barometer-gage, of thirty-two or thirty-three inches, to stand under it, without inconvenience in working the pump ; as the winch moves through a smaller portion of an arc at each stroke, than it would do if the piston moved through the whole length of the barrels. A gage is placed between the barrels when the condensation is to be measured, having a free communication with the valves, cock, &c. This is likewise so constructed that it will serve to measure the rarefaction above the valves, when the air is worked off by the valve-pump ; and consists of a pedestal, the die of which is made of glass (which forms a cistern for the mercury), a hollow brass pillar, and a glass tube hermetically sealed at one end, which moves up and down in the pillar through a collar of leathers. When the pump is used as a con- denser, the degree of condensation is shown by a scale marked on one edge of the pillar, and when as an exhauster, the rarefaction is marked on the other edge. This gage will also show when the valves have done playing, either ???with the weight of the atmosphere on them, or taken off. For the purposes of great con densation, the inventor has fitted a condenser of a smaller bore than the great pump, to the cistern of a valve-pump, to be screwed on oc- casionally. Or even without this condenser, the valve pump may be adapted to the purpose, by being made a little larger, and by having a plate made to screw into the bottom of the cy- linder, with a valve on it opening into the cis- tern ; a hole must be made to open on the same occasion near the top of the cylinder, to let air in below the piston, when this is drawn up a'love it. The common gage, which is generally placed under the receiver-plate, is here situated i:i the front of the pump, so that it may be seen by the person working the machine ; and tnat the plate itself may be left free for other i.ses, the plate

is also so fixed to the pipe lead- lag to the cock, that it may be taken off at pleasure, and used as a tiansferrer, or for other purposes.

The head is made whole, except a small piece on the back, where the wheel is let in ; the latter being freed from the piston-rods by pushing it into the back part of the head, where it is kept in its place by a button, screwed into the socket in the axis behind. The piston-rods are thus dislodged from the wheel, and let down into the cistern when the pump is not in use, in which cistern they may have the advantage of being covered with oil ; the same may also be done with all the principal joints which are sunk into the sockets, that the leathers which close them may be covered with oil, to prevent their leaking after a long disuse. A perspective view of Prince's air-pump, as constructed by Mr Jones, is shown in fig. 25 ; which will render the above account more intelligible.

CUTHBERTSON'S AIR-PUMP. The last improve- ment in the construction of air-pumps which it will be necessary for us to mention, is that by Mr. Cuthbertson, a machine so excellent in its structure, and so powerful in its effects, as to claim particular notice and desciiption.

A perspective view of it is given in fig. 26, with its two principal gages screwed into their places, which need not, however, be used toge- ther, except in cabes where the utmost exactness is required. In common experiments one of them is removed, and a stop-cock put in its place. When the pear-gage is used, a small, round plate, on which the receiver may stand, must be first screwed into the hole at A ; but this hole is stopped on other occasions by a screw. When all the three gages are used, and the receiver is exhausted, the stop-screw B, at the bottom of the pump, must be unscrewed, to admit the air into the receiver ; but when they are not all used, any of the stop-screws will an- swer the purpose. Fig. 27 represents a cross- bar for preventing the barrel from being shaken, either by working the pump, or by accident ; its place in fig.

26 is represented by the dotted lines ; where it is confined and kept down close to the barrels by two slips of wood, N N, which must be drawn out, as well as the screws O O, when the pump is taken asunder. The figures 28, 29, &c. exhibit a section of all the working parts of the pump, except the wheel and rack, in which there is nothing uncommon. Fig. 28 is a section of one of the barrels, with all its internal parts; and figs. 29, 30, 31, and 32, are different parts of the piston, proportioned to the size of the barrel. In fig. 28, C D represents the barrel, F the collar of leathers, G a hollow cy- lindrical vessel to contain oil, R is also an oil- vessel to receive the oil which is drawn along with the air through the hole a a, when the piston is drawn upwards ; and when this is full, the oil is carried over with the air, along the tube T, into the oil vessel G ; c c is a wire, which is driven upwards from the hole a a by the passage of the air; and as soon as this has escaped, it falls down again by its own weight, shuts up the hole, and prevents all return of air again into the barrel. At dd are fixed two pieces of brass to keep the wire c c in a vertical position, in order that it may accurately shut the hole ; and H is a cylindrical wire or rod, which carries the pis- ton I, being made hollow to receive a long wire

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gg, which opens and shuts the hole L. On the other end of the wire O, is screwed a nut, which, oy stopping in the narrowest part of the hole, prevents the wire from being driven up too far ; these are seen more distinctly in figs. 29 and 33 ; they slide

in a collar of leather r r, fig. 29 and 32, in the middle piece of the piston. Figs. 31 and 32 are the two mean parts which compose the piston, and when the pieces, figs. 30 and 33, are added to it, the whole is represented by fig. 29 ; and fig. 32 is a piece of brass of conical form, having a shoulder at bottom, in which is cut a long hol- low screw, about two-thirds of its length-, and the remaining part of the hole, in which there is no screw, is of about the same diameter as the screwed part, except a thin plate at the end, vhich is of a width exactly equal to the thick- ness of gg.

That part of the inside of the conical brass ii which no screw is cut, is filled with oiled leathers, having holes, through which gg Can side stiffly. An external screw, with a hole in it, is also fitted to gg, and serves to compress the leuhers rr. In fig. 31, aaaa is the outside of thi piston, the inside of which is turned so as exictly to fit the outside of fig. 32; bb 'are round leathers about sixty in number ; and c c is a circular piece of brass of the size of the leathers, while d d represent the screw serving :o compress them. The screw at the end of fig. 50 is made to fit the screw fig. 32, and if fig. 33 be pushed into fig. 32, this into fig. 31, and fig. 30 be screwed into the end of fig. 32, these will compose the whole piston, as shown in fig. 28. [n fig. 28 and 29, H represents the same part, aeing that to which the rack is fixed ; if, there- fore, this be drawn upwards, it will cause fig. 32 to shut close into fig. 31, and drive out the air above it; and on the contrary when it is pushed downwards, it will open as far as the shoulder a a will permit, and suffer the air to pass through. A A, fig. 34, is the receiver-plate, BB is a long square piece of brass, screwed into the under side of the plate, through which a hole is drilled, corresponding to that in the centre of the receiver-plates, and with three internal screws, b, b, c.

Let us now endeavour to explain the process of rarefaction, which is carried on as follows. Conceive the piston to be at the bottom of the

barrel, the inside of which, from a, fig. 28, con- tains common air. Now when the rod is drawn up, the upper part of the piston sticks fast in the barrel, till the conical part connected with the rod shuts the conical hole, and its shoulder ap- plies close to its bottom. The piston being now shut, the whole is drawn up by the rack-work, driving the air before it through the hole a c into the oil-vessel at R, and out into the atmosphere by the tube T. The piston will then be at the top of the barrel at a, and the wire gg will stand nearly as shown in the figure, just raised from the hole L, where it is prevented from rising higher by the nut O. During this motion the air will expand in the receiver, and come along ihe bent tube m, into the barrel. By this means he barrel will be again filled with air, which, as Ue piston rises, will be rarefied in the propor- on of the capacity of the receiver, pipes, and

barrel together, to that of the latter alone. When the piston is moved down again by the rack-work, it will force the conical part, fig. 32, out of the hollow part, fig. 31, as far as the shoulders a a; fig. 29 will rest on a a fig. 31, which will then be so far open as to permit the air to pass freely through it, while at the same time the end of gg is forced against the top of the hole, and by shutting prevents any air from returning into the receiver ; thus the piston moving downwards, suffers the air to pass out between the sides of figs. 31 and 32 ; and when it is at the bottom of the barrel, it will have the column of air above it, and, consequently, when drawn up it will shut, and drive out this air, and, by opening the hole at L, will, at the same time, give a free passage to more air from the receiver. This process being continued, the air of the receiver will be rarefied as far as its ex- pansive power will permit ; for, in this machine, there are no valves to be forced open by the elasticity of the air in the receiver, which at last it is unable to effect ; there is, therefore, nothing to prevent the air from, expanding to its utmost degree, which is the peculiar excellency of this construction.

When this machine is used for condensation, at the same time that it rarefies, or sepa- rately, the piece containing the bent tube T must be removed, and fig. 35 put in its place, and fixed by its screws. This figure, as drawn in the plate, is intended for a double-barrelled pump ; but for a single-barrel, only one piece is used, represented by b a a, the double piece being cut off at the dotted line a a. In this piece is an internal screw, to receive the end of a long brass tube, to which a bladder (if sufficient for the experiment of condensation), or a glass, properly secured for this purpose, must be screwed : then the air, which is ab- stracted from the receiver on the pump-plate, will be forced into the bladder, or glass ; but, if the pump be double, the apparatus fig. 35, is used, and the long brass tube screwed on at c. Figs. 36 and 37 represent two gages, the former of which is screwed into c b, or into the screw at the other end of c ; fig. 34, and fig. 37 into the screw ab, fig. 34. When the machine is used as a single pump, either to rarefy or condense, the screw K which fastens the rack to the piston rod H, must be taken out; then turning the winch till H is depressed as low as possible, the machine will be fitted to exhaust as a single pump, and if it be required to condense, the direc- tions above given must be observed with regard to the tube T and fig. 35.

Mr. Cuthbertson, by a variety of experiments with this air-pump, has shown its great power of exhaustion with the double siphon-gage, as also with the long gage, compared with an attached barometer, in which the mercury had been re- peatedly boiled ; and the difference between the heights of the mercurial columns was found not to exceed one-fortieth of an inch, the barometer standing at thirty inches, which gives a rarefac- tion of 1200. On some occasions, when the air was in a very dry state, the difference has been observed as low as an hundredth part ot an inch, a rarefaction more than double the former.

See A Description of an. Improved Air-Pump, iy John Cuthbertson j and Nicholson's Philoso- phical Journal, vol. i.

The latter work, in examining the compara- tive merits of Prince's and Cuthbertson's air- pumps, offers the following observations :

' There is no provision to open the tipper fixed valve of Prince's greater barrel, except the difference between the pressures of the elastic fluid on each side of the stripe of bladder : and this may reasonably be inferred to limit the power of his small pump. In Cuthbertson's pump, the same valve is exposed to the action of the atmosphere, together with that of a column of oil in the oil- vessel. The mischief in either instrument is probably trifling ; but in both the valve might have been opened mechanically. If this were done, the small pump of Prince might, perhaps, be unnecessary in most states of the atmosphere. With regard to the lower valves, Cuthbertson, by an admirable display of talents as a workman, has insured their action ; Prince, on the other hand, has, by the process of reason- ing, so far improved the instrument, that no valve is wanted. In this respect he has the ad- vantage of simplicity and cheapness with equal effect. The mechanical combination of Cuth- bertson's pump, reduces the operation to one simple act of the handle; but Prince's engine requires some manipulation with regard to the play of the small pump ; though this might have been remedied by a more skilful disposition of the first mover.

- *The most perfect scheme for an air-pump, taking advantage of the labours of these judi- cious operators, seems to be that in which two pistons, of the construction of Prince, should work in one barrel, one piston being fixed at the lower end of the rod, and the other at the middle. The lower piston must come clear out of the barrel when down, and work air-tight through a diaphragm at an equal distance from*

the effective ends of the barrel. In the diaphragm must be a metallic valve of the form of Cuth- bertson's lower valve, but with a short tail beneath, that it may be mechanically opened when the piston comes up. Above the dia- phragm must work the open piston, similar to the first ; but as it cannot quit the barrel when down, a small portion of the barrel must be enlarged just above the diaphragm, so that the leathers may be clear in that position. Lastly, the top of the barrel must be closed, and fitted with a valve and oil-vessel, according to the excellent contrivance of Cuthbertson.'

We shall conclude our sketch with the de- scription of a table, or portable air-pump, which is from its size and figure, very convenient and sufficiently powerful for most common experi- ments.

*AIR-PUMP, TABLE, OR PORTABLE.**** *This has two brass barrels, which are firmly retained in a perpendicular situation to the square wooden table on which they rest, by a transverse beam, which is pressed upon them by screws at the top of the two pillars. From the hole in the centre of the pump- plate there is a perforation, or canal, in a brass piece to the fore part of the frame of the pump ; and from this canal there*

is a perforation, at right angles to the former, passing to the centre of the base of each barrel. At each of these centres a valve is placed, open- ing upwards, to admit the air into the barrels ; and to each barrel a piston is so fitted that the air cannot pass between it and the sides of the barrel. Both pistons have a valve opening up- wards, that the air in the lower part of the barre1 may escape through them into the room o atmosphere. They are also connected by a rack, and raised or depressed by a handle, the lower part of which is fixed to the axis of a cog- wheel, whose teeth lay hold of the rack. One piston is raised, and the other is depressed by the same turn of the handle, and the operation of exhaustion is the same as in the common

pump first described. The two barrels arJ advantageous, because they perform the wort more speedily, and also because the weiglt of the atmosphere, pressing upon the rising piston, is counterbalanced 'oy an equal weigh pressing upon the other piston descending.❖❖❖ *Behind the large receiver on the pump plae, there is sometimes a small plate for sustaining a small receiver ; and from the hole, at the cente of this plate, there is a canal communicathg with that, which passes from the large receher to the barrels. Under the receiver is a small bottle containing mercury, and a small tube filled with mercury, freed from air, inverted with the open end in the mercury ; which is, in fact, the short barometer-gage described. This pump, without the gage, is shown by fig. 38.*

AIR-PUMP, EXPERIMENTS WITH THE. ❖❖❖ *Having now illustrated its construction under a variety of forms, it may be interesting to many of our readers to be furnished with a few familiar de- ductions confirmed and established by experi- ments on this important apparatus.*

1 . One of the most interesting experiments of this kind, showing the weight and pressure of atmospheric air, is to take a large copper ball, as light as is consistent with the purpose it is intended to answer, having a small neck to it, furnished with a stop-cock ; this neck is to be screwed on the receiver-plate, so that it may be exhausted of air after the same manner as the common receiver ; this being done, turn the stop-cock, which will prevent any air from en- tering when the ball is unscrewed. Let now the weight of the ball be taken by a very accurate balance, and when this is well ascertained, turn again the stop-cock, and the air will immediately rush in, and the ball will in consequence prepon- derate. The weight necessary to bring the balance to an equilibrium will be equal to the weight of the air re-admitted. In this manner, the specific gravity of air has been ascertained to be .00128, that of water being 1. 2. Let a receiver be placed on the plate of the air-pump, having a hole an inch or an inch and a half in diameter at

the top ; cover this hole with the palm of the hand, while another person works the machine so as to produce the exhaustion ; and the pressure which, after two or three strokes of the piston, will be experienced on the hand from the external atmosphere, will be such as to con- vince the most sceptical of the truth of the propoJ sition. If the exhaustion be carried to any consil

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derable degree, it will be difficult to remove the hand without violence, or without re-admitting the air. 3. Place a small receiver, O fig. 39, over the hole of the pump-plate, and, upon exhaust- ing the air, the receiver will be fixed down to the plate by the pressure on its outside; then, oy turning the cock of the pump, and re-ad- mitting the air, the receiver will become loose. In order to prove that the receiver O is held down by the pressure of the air, suspend it on the hook of the wire P P passing through the collar of leathers at the top of the receiver M, by which it is covered, and thus let it down on the plate of the pump; and when the air is exhausted from both receivers, the large receiver M will be fixed to the plate by the pressure of the external air ; but the small one will be loose and easily removed ; then again, in letting in the air, the lesser one will be fixed to the plate, and the other will be released. 4. The same may be otherwise shown by the glass employed in experiment '2, viz. by tying over the hole at top a piece of bladder; then, as the air is exhausted, the bladder will be pressed into the receiver in a concave hemispherical

form, and by carrying the exhaustion to a sufficient extent, the bladder will at length burst with a loud report ; or, in- stead of the bladder, a piece of common window glass may be employed, resting on a rim of leather; when it will be found that the pressure of the external air will break the glass as soon as the air is exhausted. 5. Join together the two hollow brass hemispheres A and B, fig. 40, the edges of which must be made very perfect, or otherwise they must have a circle of wet leather placed between them ; screw the end D into the plate of the pump, and open the stop-cock E of the pipe C D communicating with the hemis- pheres ; and having exhausted the air, turn the cock again so as to stop the pipe ; remove the ball from the plate, and screw on at the end D the handle F H. Two strong men now, one taking hold of each handle, and pulling straight against each other, will find considerable diffi- culty, or will be, perhaps, wholly unable to separate the two hemispheres. The degree of strength that will be requisite depends upon the diameter of the sphere and the nature of the exhaustion. If the latter be nearly complete, and the diameter be four inches, the area of the section will be

42 x .7854 =: 12.5664 inches; and, assuming the pressure on every square inch to be about 15lbs. we shall have

12.5664 x 15 r= 188lbs.

for the force or strength requisite to produce the separation. 6. The pressure of the air may be also shown as follows : Set a square phial of thin glass upon the pump-plate, and, to prevent accidents, cover it with .a wire cage, and place both under a close receiver. The phial must be supplied at top with a small valve opening up- wards, so as to be exhausted with the receiver, but which shuts and prevents the air from after- wards entering. Let the air be exhausted from the receiver and phial, and it will be found that, upon re-admitting the air into the former, the latter will be crushed into a number of small pieces. Quicksilver may also be forced into

the pores of wood, and made to pass through it by the pressure of the atmosphere. 7. Immerse the neck c d of the hollow glass ball e b, fig. 41, in the water of the vessel a a ; place it on the plate of the pump, and cover it and the hole of the plate by the receiver A ; exhaust this re- ceiver, and the air will escape by its spring, from the ball e b, through the neck c d, rise in bubbles through the water, and pass off into the external air. When the water has done bubbling, turn the cock of the pump, and the air that is ad- mitted will, by its pressure on the surface of the water, force it up in a jet into the ball e b, and nearly fill it ; the small quantity of remaining air which occupied the whole ball, and which is now reduced to a small space by condensation, is all that prevents the water from filling the whole cavity of the ball. This experiment may be varied by screwing the end A of the brass pipe A B F, fig. 42, into the hole of the pump-plate, and placing it, by means of a circle of leather, \ipon the plate c d, a tall receiver GH, close at top, exhausting the receiver of air, and stopping the pipe by the cock e : when this is done, re- move the apparatus from the pump, set its end A in a basin of water, and open the pipe by turning the cock e, when it will be found that the pressure of the air on the water will force it up through the pipe, so that it will ascend in a jet to the top of the receiver

Again, place the tall open receiver, A B, fig. 43, on the pump-plate over the jar D. con- taining quicksilver ; the latter being placed near the hole or pipe communicating with the barrels. Into the plate C, placed upon the upper end of this receiver, introduce the open glass tube gft immersed at its lower extremity in the quick- silver of the jar D, and screwed by a brass top annexed to it at h, to the syringe H, which is itself screwed to the plate C. By means of the ring I, draw up the piston of the syringe, and thus exhaust the tube of its air ; and the quick- silver in the basin, pressed by the undilated air of the receiver AB, will ascend in the tube. That this ascent is owing to the pressure of

the air, and not to what is vulgarly called suction, may be shown by exhausting the receiver of its air, which will cause the quicksilver to descend into the jar, and, by re-admitting the air, it will rise again in the tube, although the piston of the syringe be not moved. If the tube be thirty- two or thirty-three inches in length, the quick- silver will rise nearly as high in the tube as it stands at that time in the barometer ; and if the syringe have a small hole at m, and the piston be drawn up above that hole, the air will pass through it into the syringe and tube, and the quicksilverwill immediately fall down into the jar.

Once more : the jar A, fig. 44, being filled with quicksilver, and placed on the pump-plate, cover it with the receiver B, and push the open end of the glass tube d e through the collar of leather in the brass neck C, almost down to the quicksilver in the jar; then exhaust the receiver B of its air, and the tube d e, which is close to the top /, will at the same time be exhausted. When the exhaustion has been carried on to a sufficient extent, push the open end of the tube, into the quicksilver in the jar, and it will be

found, that although the tube is exhausted, the mercury will not rise in it, because there is no pressure on the surface of that in the jar ; but upon admitting the air into the receiver, the quicksilver will immediately rise, and stand as high as it did, in consequence of the action of the syringe, in the preceding experiment. These latter experiments not only exhibit the weight and pressure of the atmosphere, but they also show that they are increased or diminished in proportion to the increase or decrease of the density of the air.

The elasticity of the air may be shown in the most satisfactory manner, by placing under the receiver of an air-pump a flaccid bladder, well tied and

secured at its neck, so as to prevent the air within it from escaping. Exhaust the air out of the receiver, and the bladder, as the pro- cess proceeds, will continue to expand, till at length it will appear like one full-blown, and even burst if the exhaustion be carried on to a sufficient degree ; but upon re-admitting the air, it will quickly return to its original flaccid state. In experiment 6, we supposed the glass ball, fig. 41, to be filled with water, with the exception of a small bubble of air; if, in this state, it be placed with its neck downwards into the empty jar a a, and covered with a close receiver, and the air of the latter be exhausted, the air-bubble will expand itself, and ty its elastic force pro- trude the water out of the globe into the jar. The same may be shown by screwing the pipe A B, fig. 42, into the pump-plate, and by placing the tall receiver G H upon the plate c d; for now, exhausting the receiver, remove the apparatus, and screw it into the copper vessel C C, fig. 45, half filled with water: then turn the cock e, fig. 42, and the air confined in this vessel will, by its spring, force the water through the pipe A B, and cause it to form a jet into the exhausted receiver equal to that which was produced by the pressure of the air in the former experiment.

The little amusing experiment called the Car- tesian devil, depends upon principles nearly the same as the above. The figure of a man, made of glass, or enamel, is so constructed as to have the same specific gravity as water, and will therefore remain suspended in a mass of that fluid. A bubble, similar to that in the last ex- periment, communicating with the water, is placed in some part of the figure, sometimes in a small globe, as shown at m, fig. 46. At the bottom B of the vessel is a diaphragm of bladder which can be pressed upwards by applying the finger to the extremity e of lever e o, moving about a centre o. The pressure applied to e is communicated through the water to the bubble of air which is thus compressed. The specific gravity of the figure is thereby increased, and it consequently sinks to the bottom ; but by re- moving the

pressure, the figure again rises, so that it may be made to oscilate or dance in the vessel without any visible cause. Fishes made of glass are sometimes substituted for the human shape, and when a common jar is used for the experiment, the pressure is applied to the upper surface of it at A, which is, in this case, a piece

f bladder, instead of being placed at the bot- tom as shown in the figure. The same effects

will be produced by placing the jar under the receiver of an air-pump, and varying the pres- sure by rarefaction ; but, in this case, the specific gravity of the figure ought a little to exceed that of the water in the jar.

Bodies cannot move about in the atmosphere without displacing it, which requires force, and therefore the resistance of the air always diminishes the velocity of moving bodies ; but this diminu- tion will be greater or less according to the density of the falling or moving mass ; for which reason those bodies which we call light, fall much slower than more dense or heavy substances. To show that this is actually the case, we need only let fall a feather and a piece of metal out of our hands at the same instant, and it will be found that the metal has reached the floor while the fea- ther is yet falling; but place them both under the receiver of an air-pump and exhaust the air, and then let them fall, and they will both be found to reach the bottom in the same time : an apparatus for performing this experiment is shown in fig. 49 ; the two bodies being laid together on the brass flap d or e, which may be at any time let down, by simply turning the wire f, which passes through a collar of leathers g, placed in the head of the receiver A B. Figure 50 repre- sents another apparatus for showing the same thing. It consists of two sets of brass vanes put on separate axles, in the manner of wind-mill-sails. One set has the edges placed in the direction of their whirling motion, that is, in a plane to which the axis is perpendicular. The planes of the other set pass through the axis, and they

are, therefore, trimmed so as exactly to front the air through which they move. Two springs act upon pins projecting from the axis, and their strengths or tensions are so adjusted, that when they are disengaged in a vacuum, the two sets continue in motion equally long ; but if they are disengaged in air, those vanes which oppose the air by their planes will stop long before those that cut it edgewise.

In the preceding account of the air-pump we have seen that the most modern of these machines may be made use of either for the purpose of rarefaction or condensation ; but in many cases the latter operation is required to be performed when no pump is at hand : and moreover, it does not always require the same delicacy of process as that of rarefaction, and more simple apparatus are, therefore, frequently employed.

Take, for example, a prismatic tube AB, fig. 51, shut at one end, and fit it with a piston, or plug C, so that no air can pass by its sides, which, in a cylindrical tube, is best done with a turned stopper, covered with oiled leather, and fitted with a long handle CD. When this is thrust down, the air, which formerly occupied the whole capacity of the tube, is condensed into less room, and the force necessary to pro- duce any degree of condensation, may be con- cluded from the weight necessary for pushing down the plug to any depth; but it is obvious that the instrument in this form is not sufficiently accurate for us to deduce, from experiments upon it, any very accurate conclusions ; the fol- lowing is, therefore, more commonly the form of the condenser. The end of the tube, instead of

being closed as - described above, is perforated with a very small hole ef, and being externally turned to a small cylinder, a narrow slip of bladder, or of thin leather, soaked in a mixture of oil and tallow, must be tied over the hole. Now, let us suppose that the piston is forced down to the bottom of the barrel, to which it applies close ; then, when it is drawn up to the top, it leaves a void behind, and the weight of the external air presses on the slip of bladder, which, therefore, claps close to the brass, and thus performs the part of a valve, and keeps it close, so that no air can enter. But, the piston having reached the top of the barrel, a hole F in the side of it is just below the piston, and the air rushes through this hole and fills the barrel. Push the piston down again, it immediately passes the hole F, and no air escapes through it, therefore it forces open the valve a.tf, and escapes while the piston moves to the bottom.

Now, let any vessel E, as, for instance, a glass bottle, or brass ball, have its mouth furnished with a brass cap firmly cemented to it, having a hollow screw, which fits a solid screw p q, turned on the cylindric nozzle of the syringe, and this vessel may be considered as a receiver. Screw the syringe into this cap, and it is evident that the air forced out of the syringe will be ac- cumulated in this vessel ; for upon drawing up the piston, the valve f always shuts by the elas- ticity or expansive force of the air in E ; and on pushing it down again, the valve will open as soon as the piston has got so far down that the air in the lower part of the barrel is more powerful than the air already in the vessel. Thus, at every stroke, an additional barrel-full of air will be forced into the vessel E ; and it will be found that, after every stroke, the piston must be pushed down further before the valve will open; for, as stated above, it cannot open till the air, condensed in the barrel by the down- ward motion of the piston, exceeds that in the receiver ; and as

the latter is increased at every stroke, so also must the stroke be longer every time before the valve will be opened.

A construction somewhat different to the above is now very commonly adopted : this consists in supplying the piston itself with a valve ; that is, instead of being, as above described, one solid piece, it is made of two pieces perforated. The upper part, i k m n, is connected with the rod or handle, and has its lower part turned down to a small cylinder, which is screwed into the lower part k Ion; and has a perforation g h going up the axis, and terminating in a hole h in one side of the rod, and a piece of oiled leather is stretch- ed across the hole g. When the piston is drawn up, and a void left below it, (he weight of the external air forces it through the hole h g, opens the valve g, and fills the barrel. Then, on pushing down the piston, the air being com- pressed into less space, presses on the valve g, shuts it, and none escaping through the piston, it is gradually condensed, as the piston descends, till it opens the valve f, and is added to that al- ready accumulated in the vessel, E. We may thus force any quantity of air consistent with the strength of the vessel into it, and it will be ready for any experiments that we may be de-

sirous of making with it. Instead of the glass bottle, or simple hollow globe supposed above, we may use the latter furnished with a neck and stop-cock ; in this case, the cock may be turned, the ball unscrewed from the syringe, and be thus in a state to be transferred and applied to any other purpose required.

The condensation thus produced may be measured by a gage fitted to the instrument as follows : a glass tube G H, fig. 51-►►, of cylindri- cal bore, and close at the end, is screwed into the side of the cap on the mouth of the vessel E ; a small drop of water or mercury is taken into this tube by warming it a little in the hand, which expands the contained air, so that when the open end is dipped into water, and the whole allowed to cool, the water advances a

little into the tube. The tube is furnished with a scale, divided into small equal parts, num- bered from its close end. Now, since this tube communicates with the vessel, it is evident that the condensation will force the water along the tube, acting like a piston, on the air beyond it, and the air in the tube and vessel will always be of one density. Suppose, for example, the number at which the drop stands, before the condensation is made, to be c, and that it stands at d, when the condensation has attained the re- quired degree ; the density of the air at the re- mote end of the gage, and consequently in the

vessel, will be - . It was by such means that

the laws of the condensation and elasticity of common air were originally deduced.

AIR-SHAFTS, among miners, denote holes or shafts let down from the open air to meet the adits, and furnish fresh air. The damps, want, and impurity of air, which occur, when adits are wrought thirty or forty fathoms long, make it ne- cessary to let down air shafts, in order to give the air liberty to play through the whole work, and thus discharge bad vapours, and furnish good air for respiration : the expense of which shafts, in regard of their vast depths, hardness of the rocks, drawing of water, &c. sometimes equals, nay exceeds, the ordinary charge of the whole adit. Sir Robert Murray describes a method, used in the coal mines at Liege, of working mines without air-shafts. When the miners at Mendip have sunk a groove, they will not be at the charge of an air-shaft till they come at ore ; and for the supply of air have boxes of elm exactly closed of about six inches in the clear, by which they carry it down about twenty fathoms. They cut a trench at a little distance from the top of the groove, covering it with turf and rods dis- posed to receive the pipe, which they contrive to come in sideways to their groove, four feet from the top ; which carries down the air to a great depth. When they come at ore, and need an air-shaft, they sink it four or five fathoms distant, according to the convenience

of the breadth, and of the same fashion with the groove, to draw as well ore as air. ††† See Phil. Trans. No. V. and XXXIX.

AIR-THREADS, in natural history, a name given to the long filaments, so frequently seen in autumn floating about in the air. These threads are the work of spiders, especially of that species called

the long legged field spider; which, having mounted to the summit of a bush or tree, darts from its tail, several of these threads, till one is produced capable of supporting the creature in the air : on this it mounts in quest of prey, and frequently rises to a very considerable height. See ARANIA. They are long, downy, and very soft, and though they hold together when un- touched, they stick to the fingers in handling, and easily break with a light touch. The general method of these creatures in spinning and weav- ing the webs, is to let down the thread, then draw it after them, and so dispose it as they think proper ; but in the midst of their work of this sort, if they are closely observed, they will sometimes be found to desist, and turning to the contrary way of the wind, will emit a thread with great rapidity, no less than that with which a jet of water is discharged from a cock. In this man- ner they continue darting forth the thread, which the wind takes, and carrying it forwards, it soon becomes many yards long. Soon after this the creature will throw itself off from the web, and trusting to the air, with this long tail, will ascend swiftly, and to a great height with it. The frag- ments of these lines, and the spiders attached to them, though unobserved, make these air-threads; and the use nature destines them for, is evidently the wafting of the creature along in the air, and giving it an opportunity of preying on gnats, and many other insects that inhabit the air, out of the

reach of these creatures by any other means. When the threads are newly spun, ??? they are always single, and are generally seen ascending higher and higher in the air; but when they are seen coming down, they are found sometimes composed of three or four others, and either with- out any spider at the ends, or with two or three, or more. It is plain that this happens from the meeting of these threads one with another in the air, and their tangling together ; and this incom- modes the creatures, and brings them down.

As these soon entangle together, and bring one another down, it is no wonder that they are more frequent in the lower regions of the air, than those with the spiders adhering to them, which usually rise to great heights, and sustain them- selves there. And hence the origin of the threads was much perplexed among the enquirers, because they were found without any mark of the animal to which they owed their existence. The business of feeding is not all the use of these threads, but the creatures evidently sport and amuse them- selves by means of them, floating about in the air, and changing height and place at pleasure. When a spider has once raised itself from the earth in this manner, it does not descend always on the same thread it arose by, but draws that up at times, and winds it up into a hank with its fore-feet, and darts out another by way of sup- port ; and the new thread is made more or less long, as it is intended for a higher or lower flight Philos. Trans. No. L.

AIR-TRUNK, is a contrivance by Dr. Hales to prevent the stagnation of putrid effluvia in jails, and other places where a great number of people are crowded together, in a small space. It con- sists only of a long square trunk, open at both ends ; one of which is inserted into the ceiling of

the room, the air of which is required to be kept pure ; and the other extends a good way beyond the roof. Through this trunk a continued circula tion is carried on : and the reason is, that the putrid effluvia, which do so much mischief when collected,

being much lighter than the pure at- mosphere, rise to the top of the room ; and, if they there find a vent, will continually go out through it. These effluvia arise in a very con- siderable quantity, being calculated by the late Dr. Keil, at no less than thirty-nine ounces from one man in twenty-four hours. These trunks were first made trial of by Mr. Yeoman, over the House of Commons, where they were nine inches wide within ; and over the Court of King's Bench in Westminster hall, where they were six inches wide. They are sometimes made wider, and sometimes narrower ; but the wider they are, the longer they ought to be, more effectually to promote the ascent of the vapour. The reason why vapours of this kind ascend more swiftly through a long trunk than a short one, is, that the pressure of fluids is always according to their different depth, without regard to the diameter of their basis, or of the vessel which contains them ; and, upon this principle, a gallon of water may be made to split a strong cask. See HYDROSTATICS.

When the column of putrid effluvia is long and narrow, the difference between the column of atmosphere pressing on the upper end of the trunk, and that which presses on the lower end, is much greater than if the column of putrid effluvia were short and wide ; and consequently the ascent is much swifter. One pan of a single pair of scales, which was two inches in diameter, being held within one of these trunks over the House of Commons, the force of the ascending air made it rise so as to require four grains to restore the equilibrium, and this when there was no person in the house ; but when it was full, no less than twelve grains were requisite to restore the equilibrium ; which clearly shows that these trunks must be of real and very great efficacy.

AIR-VESSELS, are spiral ducts in the leaves, &c. of plants, supposed to be analogous to the lungs of animals, in supplying the different parts of a plant with air. See PLANTS.

Dr. Grew, in his enquiry into the motion and cause of the air in. vegetables, enters at some length into the structure of these remarkable ves- sels ; and shews that air enters plants in various ways, not only by the trunk, leaves, and other visible parts, but also at the root. The pores designed for the reception and expulsion of air, are so very large in the trunks of some plants, as in the thick walking cane, that they are visi- ble to the naked, eye ; but with a glass, the cane seems as if it were full of laige pin-holes, resembling the pores of the skin in the ends of the fingers, and ball of the hand. In the leaves of the pine, through a glass, they make an ele- gant appearance, standing almost exactly in rank and file throughout the length of the leaves The chief admission of air into plants, however is at the root : much as in animals, some part of the air may continually pass into the body and blood hy the pores of the skin ; but the chief

draught is at the mouth. If the chief entrance of the air were at the trunk, before it could be mixed with the sap in the root, it must descend ; and so move not only contrary to its own nature, but in a contrary course to the sap : whereas by its reception at the root, and its transition from thence, it has a more natural and easy motion of ascent. The same fact is farther evident, from the fineness and smallness of the diametrical aper- tures in the trunk, in comparison of those in the root ; which nature has plainly designed for the separation of the air from the sap, after they are botn together received into them. Grew. Anat. of

Root, chap. iii. p. 127.

Air-vessels are found in the leaves of all plants, and are even discoverable in many without the help of glasses ; for upon breaking the stalk or chief fibres of a leaf, the likeness of a fine woolly substance, or rather of curious small cob-webs, may be seen to hang at both the broken ends. This is taken notice of only in some few plants, as in scabious, where it is more visible ; but may also be seen more or less in most others, if the leaves be very tenderly broken. This wool is really a skein of air-vessels, or rather of the fibres of the air-vessels, loosed from their spiral posi- tion, and so drawn out in length. Id. ibid. chap. iv. p. 155.

Dr. Hales has proved that air is inspired by vegetables ; and has shewn that air, in many in- stances, freely enters the vessels of trees, and is wrought in great abundance into their substance. But as to particular air-vessels in plants, he asks, may not the use of those spiral wreaths, that are coiled round the insides of those vessels, which are supposed to be air-vessels, and which are manifestly to be seen in several trees, and in the leaves of the vine and scabious, be designed by nature to promote the quicker ascent of air, by being in some measure conformed to its elastic contortions ? For such spiral wreaths seem to be altogether useless for promoting the ascent of any liquor, as the sap, which ascends most freely through, innumerable other capillary vessels, having no such spiral coils in them : not that we are to suppose the air in its elastic state actually to touch, and thereby to be determined in the course of these spirals, as any liquor would be. But as the rays of light, when they are re- flected from a solid body, are found to be re- flected, without actually touching the reflecting body in the point of reflection ; so it is not un- reasonable to suppose, that elastic air may, like light, be diverted from one course, and so be determined to another, by the solid bodies it approaches, without touching them, but rebound- ing like light from those solid bodies near the point of contact.

This ingenious writer has observed, that these spirals are coiled in a course opposite to those of the sun, that is, from west to east. Vide Static. Ess. vol. i. p. 155, and vol. ii.p. 265, and 266.

Dr. Darwin in his Phytologia, contends that the vessels which Malpighi, Grew, and many others, have denominated bronchia, and errone- ously thought to be air-vessels, and to serve the purpose of respiratory organs, are absorbent vessels, destined to imbibe the nutriment of plants, and that they are the genuine lungs of

vegetables. 'These absorbent vessels.' he says, 1 which resemble the lacteals of animal bodies, are found in the roots of plants for imbibing nourishment from the moist earth, on the ex- ternal surfaces of the bark and leaves, for ab- sorbing the humidity of the atmosphere, and also in the internal surfaces of the cells and cavities of the vegetable system, where they ab- sorb the secreted fluids, after they have per- formed the offices to which they are adapted. The existence of the first sort of absorbents is evinced by the growth of plants, whilst mois- ture is applied to their roots, and by their withering when it is withdrawn. Those of the second sort are manifested by plucking off a leaf and laying it in water, which is found not to wither so soon as if it were left exposed to the dry air. The third class of vessels of this kind will be perceived to perform its office by moistening the alburnum or sap-wood, and the inner surface of the bark of a branch severed from a tree ; which are thus preserved, whilst the same parts left unmoistened in the dry air are observed to wither. Besides, if vegetables be inserted in glass-tubes or narrow vessels, filled with water, the surface of the water will be seen to subside much sooner than by evapo- ration alone in similar circumstances.' Dr. Dar- win contrived to exhibit these absorbent vessels to the eye, by dipping twigs of a fig-tree in a decoction of madder and of log-wood, which after some time, upon cutting off about an inch of the stalk near the bottom, exhibited a circ',►► of red points, believed by him to be the co- loured

ends of the absorbents, that existed in the newly formed alburnum. He expresses his astonishment that any person should have con- ceived these vessels, that are found in the al- burnum, and which consist of a spiral line, to be air vessels or tubes ; and farther observes, that the absorbent vessels of trees in passing down their trunks, consist of long, hollow cylin- ders, of a spiral form, and of such large diameters in some vegetables, e. g. in cane, as to be visible, when dry and empty, to the naked eye. Through these air will pass rapidly upward and down- ward; and hence Dr. Hales has been led to coincide with Grew and others in opinion, that they are air-vessels or lungs designed for res- piration, and receiving atmospherical air in their natural state. But to this Dr. D. objects, that they have no communication with the hori- zontal air-vessels of plants, and they exist in the root, as well as in the trunk, where, not being exposed to the atmosphere, they cannot serve for the purpose of respiration. Air, how- ever, in its combined state, or dissolved in water, may be absorbed by these vessels ; and may appear when the pressure of the atmos- phere is removed in the exhausted receiver, or when it is expanded by heat ; as is the case in the froth observed at one end of a green stick, when the other is burning in the fire. Dr. Darwin apprehends, that the structure of those large vegetable absorbents, which have been erroneously called air-vessels, consists of a spiral line, and not of a vessel interrupted with valves ; and in this respect it differs from that of animal lymphatics. According to this writer,

the proper air-vessels are horizontal vessels of large diameter, which pass through the bark of trees to the alburnum. Malpighi has given a figure of them, and Duhamel mentions fine horizontal perforations through the bark of trees, which he

believes to be perspiratory or excre- tory organs ; and besides these, he takes notice of others, that are larger, standing prominent in the birch-tree, and piercing the exterior bark; which probably contain air during the living state of the tree. Dr. Darwin supposes, that the horizontal vessels first mentioned contain air, enclosed in a thin moist membrane, which may serve the purpose of oxygenating the fluid in the extremities of some fine arteries of the embryo buds, in a manner similar to that by which the air at the broad end of the egg is thought to oxygenate the fluids in the termi- nation of the placental vessels of the embryo chick.

AIR, or AYRSHIRE, in geography, an extensive county of Scotland, stretching ninety miles in length, along the western coast, from its southern boundary near Loch Ryan, in Wigtonshire, to Kelly bridge, which separates it from Renfrew- shire on the North ; and extends in breadth, ge- nerally from twenty to twenty-five miles. It is bounded on the north by Renfrew, on the south by Galloway, on the east by Lanarkshire, and on the west by the Frith of Clyde. It comprehends the districts of Carrick, Coil, Kyle, and Cunning- hame, which are divided into forty-six parishes, and contains 526,602 Scotch acres, or 662,005 English. From Colonel Fullarton's General View of this county, drawn up for the Board of Agriculture, we learn, that within these forty years, it has rapidly improved in its cultivation, trade, and commerce, as well as in the popula- tion, industry, and opulence of its inhabitants ; that in 1791, its entire population being 83,892 souls, above 780 were proprietors of land ; 1592 farmers ; and about 461 paupers ; that the an- nual funds for relief of these last, were upwards of ►►1262 sterling, that the valued rents amounted to ►►191,605 Os. Id. Scots ; and the real rents to between ►►150,000 and ►►160,000 sterling ; the number of horses were about 4300 ; of sheep about 135,000 ; and of black cattle upwards of 34,000. This county exhibits the form of two wings extending to the N.W. and S.W. and forming a vast bay at the mouth of the Frith of Clyde. The principal rivers m

it are the Ayr, the Stencher, the Gervan, the Doon, and the Irwin. The roads are excellent, and the plan- tations and clumps of trees numerous and beau- tiful. The county abounds in coal, iron, and other minerals. For its improvements in general, it was formerly much indebted to the exertions of the late earl of Eglington and Mr. Fairly, of Fairly, nor has the spirit of improvement re- laxed of late years. Its population, according to the last census, was 127,299. Vast quantities of sea-weed are thrown on shore here, from which many tons of kelp are annually made. Most of the lochs have plenty of marl, the prin- cipal of which is loch Doon. The rivers abound with salmon, and the coasts are admirably adapted for the white fishing. The county is particularly adapted for the purpose of manu-

factures, from the abundance of the fuel ; and those of cotton, woollen, thread, and muslin, are carried to a very considerable extent. In the hills of Carrick, a few curious fragments of agate, porphyry, jaspar, and calcareous petri- factions have been found ; and galena and plum- bago in the parishes of Stair and New-Cumnock, together with a species of whet-stone, known by the name of Ayr-stone. This county gave birth to Sir William Wallace, who in the reign of Alexander III. after fighting gloriously for his country, was at length betrayed into the hands of the English'.

AIR, or AYR, or as it is spelt in some ancient writings, ARE, a parish of Scotland, situated in the county of that name, of a quadrangular form, about three miles long from north to south, and four miles broad at its eastern extremity, though not two at its western. It contained, according to the return made to Sir John Sinclair, by Drs. Dalrymple and M'Gill, in 1791, about 4100 inhabitants. The climate is moist, notwithstand- ing which many of the natives live to a great age. Tradition reports, that a battle was fought in this parish, in the valley of Dalrymple, be- tween the Scots and Picts, before the Christian sera, wherein both the sovereigns, Fergus and Coilus, were slain. Here is a strong chalybeate spring, famous in scrofulous and scorbutic com-

plaints ; and the parish is distinguished as the birth place of the celebrated Johannes Scotus, and Robert Burns, the poet.

AIR, or AYR, a royal burgh of great antiquity, the county-town of Ayrshire, and the seat of a circuit court. It is seventy-five miles south-west from Edinburgh ; contains 944 houses, and 7455 inhabitants within the parish. In 1202, it was made a royal burgh by king William the Lion. It is situated on the southern bank of the river Ayr, near its influx into the Frith of Clyde. In the centie of the town, which is in the shape of a crescent, stand the tol-booth and town-hall, with a spire 135 feet high. Ayr has two churches and several other places of worship. Here are also a theatre, a public academy, a library, and a reading-room, a dispensary, a work-house, and a savings-bank. It is also intended to erect a range of public buildings, including a court house, and a gaol for criminals and debtors, on an im- proved plan. The harbour formed by the mouth of the Ayr, is subject to the inconvenience of a shifting bar of sand ; to remedy which, two re- flecting light-houses have been erected. The principal manufactures are tanning, boot and shoe making, soap-boiling, also ship-building to a small extent. The exports are cotton and woollen goods, pig-iron, coals, paint, and whetstones; the imports, grains, spirits, bricks, slates, timber, and lime-stone : the principal trade is with Ire- land. Besides the salmon fishery, the sand-banks on the coast abound with all kinds of white fish, and one or two companies are established here for catching and curing them. Sir William Wallace began his exploits, and Edward I. fixed a powerful garrison at this place. Oliver Crom- well converted the church into a garrisoned fortress and armoury, and gave the inhabitants 100 merks English to build another. In the Old Church the parliament met, which confirmed

Robert Bruce's title to the throne. Ayr sends a member to parliament along with Irvine, Roth- say, Inverary, and Campbeltown. Ayr is a fashionable place of resort, has well-attended races, and is sometimes the seat of the Cale- donian hunt. It is governed by a provost, two bailies, a dean of guild, a treasurer, and twelve councillors. It has two weekly markets, and four annual fairs.

AIR A, in botany, alpa, the Greek name for lolium or darnel, has been given by Linnaeus to a genus of plants, class 3, triandria ; order 2, di- gynia, called in English aira grass, or hair grass. Its gen. characters are : CAL. glume, two flowered ; valves, ovate-lanceolate: COR. bivalve; nectary two-leaved ; leaflets acute : STAM. filaments capil- lary ; antherae oblong : PIST. germ ovate ; styles cetaceous ; stigmas pubescent : PER. none ; seeds, sub-ovate. The species mostly consist of different species of the avena, or gramina of other writers. Fourteen have been enumerated, nine of which are natives of Great Britain.

AIRANI, or AIRANITJE, in church history, an obscure sect of Arians, in the fourth century, who denied the consubstantiality of the Holy Ghost with the Father and the Son.

AIRDRIE, a market-town of Scotland, in East-Monkland parish, county of Lanark, on the great road to Edinburgh, twelve miles east of Glas- gow. It is regularly built, with fine wide streets, extending nearly a mile in length. Here are dis- tilleries, an iron foundry, a cotton manufactory, and a Burgher chapel. It has a weekly market, Fairs, second Tuesday of January, second Tues- day of February, third Thursday of May, O. S. last Tuesday of August, and first Thursday of November, O. S. population 4860.

AIRE, a town of France, formerly the chief town of Gascony Proper, now the head of a canton in the department of the Landes, &c. ar- rondissement of

St. Sever, situated in a fertile and agreeable country, on the slope of a hill on the left bank of the Adour. It is. nine leagues N. N. E. of Pau, and twenty-two S. S. E. of Bourdeaux. Population 3000, including the suburb village of Le Mas. Long. 0►►. 12'. W. lat. 43►►. 42'. N.

AIRE, or ARIEN, a town of France, in the county of Artois ; the head of a canton in the de- partment of the Pas de Calais, arrondissement of St. Omer. It is situated on the Lys, thirteen miles from St. Omer, with which it has communication by canal. Long. 2►►. 29'. E. lat. 50►►. 38'. N.

AIRLY, a parish of Scotland, in the county of Angus; containing 1070 inhabitants. It is situated partly in the vale of Strathmore, and partly on the Grampian hills. AIRLY CASTLE, the residence of the earl of Airly, is a fine modern structure, erected on the ruins of an ancient castle of the same name. The castle of Balrie is another ruin of considerable extent, in the same neighbourhood.

AIRVAUX, or AIRVAULT, a town of France, in the province of Poitou, included in the mo- dern department of the Deux Sevres. . It con- tains 440 houses and 2070 inhabitants ; and is fourteen leagues N. E. of Niort.

AISEAU, a marqvusate, with a village of the

same name, in the kingdom of the Netherlands three miles E. S. E. of Chatelet.

AISLE', n. Latin, ala; fr.aile; a wing; the walks in a church, or wings in the choir of a cathedral.

The abbey is by no means so magnificent as one would expect from its endowments. The church is one huge nef, with a double aisle to it ; and at each end is a large quire. Additon.

Nor you, ye proud, impute to these the fault, If memory o'er their tomb no trophies raise, Where through the long drawn aisle and fretted vault, The pealing anthem swells the note of praise.

Gray's Elegy.

AISLINGEN, formerly a free county of the empire, belonging to the bishopric of Augsburgh, now included in the kingdom of Bavaria, circle of the Upper Danube. A market town of the same name lies about four miles south of Dil- lingen, has a castle, a baihvick, and 1170 in- habitants.

AISNE, or AINE, a considerable river of France, which, after a course of forty leagues, unites itself with the Oise, a little above Cham- paigne. It becomes navigable near Chateau- Porcien, in the department of the Ardennes ; and attempts have been made to connect it with the Maese by means of canals ; but as yet without success.

AISNE, a department of France, consisting of portions of the ancient Compeigne, Isle of France and Picardy. It derives its name from the above river; and is said to contain 432,239 inhabitants. It is a grain district of considerable importance. AlSTULFUS, the last king but one of the Lombards in Italy, succeeded his brother Ra- chisuis, A. D. 748, had divers unsuccessful wars with Pepin, king of France, and ended a short and inglorious reign, A. D. 753, by breaking his neck at a hunting match.

AJUGA, BUGLE ; in botany, a genus of the gymnospermia order, belonging to the didynamia class of plants ; and in the natural method rank- ing under the 42d order, asperifoliae. The cha- racters are : CAL. a one-leaved short perianthium, cut half-way into five clefts, with the segments nearly equal : COR. is monopetalous and rin- gent ; tube cylindric and bent in ; the upper lip very small, erect, bifid, obtuse ; the lower, large, spreading, trifid, obtuse ; middle division, very large and obcordate, side ones small : STAM. subulate, erect filaments, longer than the upper lip, anthers twin : PIST. a four-parted germ, style filiform, and with respect to situation and length as in the stamina; stigmas two, slender, the lowest shorter ; no pericarpium ; the calyx which is converging, fosters the seeds, which are some- what oblong. ••• There

are six species, viz. first, A. orientalis, or eastern bugle ; second, ajuga Geneversis, a native of Switzerland ; third, ajuga pyramidalis ; fourth, ajuga acpina, or mountain bugle; fifth, ajuga decumbens, the Japanese bugle ; sixth, ajuga reptens, or common bugle.

AJURU-CATINGA, in ornithology, the Guiana red-billed parrot, a variety of the psit- tacus rufirostris, the psittaca aquarum Lupiarum insulse of Brisson, and the Guiana green parrot of Bancroft, and of Latham ; has the bill, legs,

feet and claws of a whitish-red colour, and the orbits ash-coloured. It inhabits South America ; and is about the size of a thrush ; the irides have two coloured circles, of which the outer one is reddish, and the inner ash-coloured.

AJURU-PARA, a species of Brasilian parrot of a small size ; of a beautiful green, and with white legs, a white beak, and white skinny cir- cles round its eyes.

AJURU PARROT, or PSITTACUS ^Esnvus, in ornithology, the ajuru-curau of Marcgrave, the aourou-couraou of Buffon, the middle-sized parrot of Willughby, and the common Amazons parrot of Latham, is of a green colour, slightly spotted with yellow ; with a blue front, blood- red shoulders, and flesh-coloured orbits. It is twelve inches long, and its body about the size of a pigeon : the back has a number of tawny yel- low feathers, interspersed over its green plumage. The face is yellow, with a blue forehead and white crown; the tail-quills are green with paler tips : the first, second, and third on each side are red on their inner webs near the base ; the outer web of the first being blue ; the shoulders are either tawny or blood-red ; the pri- mary wing-

quills are black, with bluish tips, the outer webs being green, and the inner black ; the first four or five of the secondaries have their outer webs red near the base ; the bill is black at the tip. This inhabits Amazonia, Guiana, and Brasil ; and has several varieties, to the four first of which the above description is applica- ble : e. g. first, the ajuru of Jamaica ; this is the psittacus viridis melanorinchos of Aldrovand, the black-billed green parrot of Willughby, and the Jamaica parrot of Brown and Latham : second, the; main ajuru parrot, with the lesser wing coverts red ; the crown yellow, the cheeks and chin paler, the- forehead blue, the under half of the five middle wing-quills, and the in- ner webs, at the base of four tail-quills on each side red ; a variety which inhabits Guiana and Amazonia: third, Brasilian ajuru parrot, with cap blue, variegated with black, a yellow spot on the crown, and one on each side below the eyes, and a blue chin. This is the ps. Brasil. cyanocephalos of Brisson, the ajuru-curuca of Marcgrave, Ray, and Willughby, and the blue- topped parrot of Latham. The primary wing- quills, according to Mr. Latham, are variegated with yellow, red, and violet-blue. It inhabits Brasil : fourth, varied ajuru parrot, with the crown, cheeks, and chin yellow, and the front blue. The crown is varied with blue, the scrag and upper part of the back with yellow, and the bill is ash-coloured. This is the ajuru curau secundus of Marcgrave and Ray, and the West India green parrot of Edwards and Latham : fifth, Amazonian ajuru parrot, pale green, with a pale yellow front and tawny temples. This is the ps. arnazonicus of Gmelin, and the Brasilian yellow-fronted parrot of Latham. It inhabits Brasil and Amazonia, and is almost twice the size of those above-mentioned : sixth, great ajuru parrot, green, with a blue forehead, the crown, cheeks, and chin, and middle of the belly yellow. It is nearly as large as the former, and inhabits Brasil: seventh,yellow-necked ajuru parrot, green,

with yellow head and neck, and red shoulders, of the size of the former, and like it, the wing- quills

are marked with a red spot, and the la- teral tail-quills are red at the base : eighth, counterfeit ajuru parrot, green, variegated with. yellow, having a blue forehead and red shoulders. It inhabits Brasil. Gmelin s Linn. torn. i. p. 340. Kerr's Linn. p. 598. Buffun's Birds, &c.

AITON, (William) in biography, an eminent botanist and gardener, was born in 1731, at a small village near Hamilton, in Lanarkshire, in Scotland. Having been accustomed from his youth to the science and practice of horticulture, he came into England in 1754, and was engaged as an asistant by Mr. Philip Miller, well known as the author of the Gardener's Dictionary, and then superintendent of the physic-garden at Chelsea. In this situation he soon attracted notice, and in 1759 was recommended to the princess dowager of Wales, as a fit person to manage the botanical garden at Kew. In this office to which he was then appointed he con- tinued during life ; and here he laid the founda- tion both of his fame and fortune. As the garden at Kew was destined to be the repository of all the curious plants that could be collected from the various quarters of the globe, Mr. Aiton had the most favourable opportunity for indulging his taste, and employing his care and skill in their cultivation ; and in so doing he acquired distinguished reputation amongst the lovers of this science, and the particular esteem of his royal patrons. Under his superintendence, Kew gardens became the principal scene of botanical culture in the kingdom. In 1783 Mr. Aiton was promoted to the more lucrative office of managing the pleasure and kitchen gardens at Kew, which he was allowed to retain in connection with the botanical department which he had before occu- pied. In 1789 he published his Hortus Kew- ensis, or Catalogue of the Plants cultivated in the Royal Botanical Garden at Kew, in three vols. 8vo. with thirteen plates ; a work which had been the labour of many years, and which justly entitles him to respectful commemoration among the promoters of science. The number of species, contained in this catalogue, is between five and six thousand. A new

and curious article in it relates to the first introduction of particular exotics into tn'e English gardens. The system of arrangement is that of Linnsus, with such improvements as the advanced state of botanical science required. To Sir Joseph Banks, Dr. Solander, and Mr. Dryander, Mr. Aiton respectfully acknowledges his obligations for assistance in compiling this celebrated work. The Hortus Kewensis, was much valued by the best judges, and a large impression of it found a rapid sale. Notwithstanding the tem- perance and activity of Mr. Aiton, he laboured under the incurable malady of a scirrhous liver, which occasioned his death in 1793, in his sixty- second year. His eldest son, devoted to the same pursuits, and distinguished by his talents, was appointed by the king's own nomination, to all his father's employments. The private cha- racter of Mr. Aiton was highly estimable for mildness, benevolence, piety, and every domestic

and social virtue. He was interred in the church- yard of Kew, amidst a most respectable con- course of friends. Gen. liiog.

A1TONIA, in botany, so called from Mr. W. Aiton, his majesty's late gardener at Kew, a genus of the monadelphia octandria class and order, and of the natural order of columnifenE. Its characters are : CAL. a one-leafed, erect, four-parted, short, perianthium, divided into four ovate, sharp, seg- ments : COR. four erect, equal, broadly-ovate, con- cave, very obtuse petals : STAM. have filaments, joined as far as the middle, divided above into eight, awl-shaped, furrowed, standing out of the corolla, and having ovate, furrowed anthers : PIST. a germ, superior, ovate, smooth, and subangular ; style one, filiform, of the same length with the stamina; stigma obtuse, undivided: PERICARP. an ovate, dry, membranaceous, four-cornered, one-

celled, brittle berry, the corners are produced and sharp ; the seeds many, fixed to a column, globular and smooth. It varies with five-cleft, ten-stamined flowers. There is one species, viz. A. Capensis, found at the Cape by Thunberg, and introduced here in 1774 by Mr. F. Masson.

AITZEMA, (Leo) a celebrated historian of Friesland, born A. D. 1600. and author of a His- tory of tha United Provinces, in fifteen volumes quarto, and seven folio. As a large collection of authentic pieces, this work is extremely valu- able. JVoMu. Diet. Hist.

AIUS LOCUTIUS, i. e. a speaking voice, one of the Dii minores, to whom the Romans erected an altar. The following incident occasioned the Romans to erect an altar to this ideal Deity. M. Seditius, a plebeian, acquainted the tribunes, that, in walking the streets by night, he had heard a voice over the temple of Vesta, giving the Romans notice that the Gauls were coming against them. This intimation was, however, neglected ; but after the truth was confirmed by . the event, Camillus supposed this voice to be a new deity, and erected an altar to it under the name of Aius Locutius. A more rational sup- position might have been, that the goddess Vesta herself had given them the warning ; but in this absurd manner did the heathens multiply their gods and their superstitions without end. Cicero de Diviu. i. 45.

AJUTAGE, or ADJUTAGE, from ajouter, to adapt, in hy draulif ??? s, part of the apparatus of an artificial fountain, or jet d' eau ; being a sort of tube, fitted to the mouth, or aperture of the vessel, through which the water is to be played, and by it determined into this or that figure. It is chiefly the diversity in the ajutages, that makes the different kinds of fountains ; and hence, by having several ajutages to be supplied oc- casionally, one fountain comes to have the effect of many. Marriotte enquires into the best kind of ajutages, or spouts, for jets d' eau ; affirming from experiment, that an even polished round hole,

in the end of the pipe, gives a higher jet than either a cylindric, or a conical ajutage. See FOUNTAIN and HYDROSTATICS, and Phil. Traits.

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AIX, a small island on the coast of France, between the isle of Oleron and the continent. It is 12 miles N.W. of Rochfort, and 12 S.S.W. of Rochelle, now included in the department of

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Charente Inferieure. The English made a descent on it, in 1758, and demolished the fort. Lon”-. 1►►.5.‘W. Lat. 46►►. 45’. N. Inhab. about 15,000.

AIX, a handsome and ancient city of France, in the department of the Mouths of the Rhone, the capital of the ci-devant province called Pro- vence, and now the chief town of an arrondisse- ment. It is about 89 miles S. by E. of Paris, 48 S. E. of Avignon, and 21 N. of Marseilles. It is a well-built city, and is said to resemble Paris more than any other town in France. Ex- cellent wine is produced in its neighbourhood, but its principal trade is in oil, which is un- commonly fine ; and there are also some silks and other stuffs manufactured in it. Their articles of export are wine, brandy, almonds wool, silk, grain, raisins, figs, capers, plums, olives, nuts, fish, vermicelli, linen, and hardware. The city is populous, and is seated in a large plain, chiefly planted with olive trees ; and is embellished with abundance of fine fountains, and several beautiful squares. The place des preacheurs is on the side of a hill ; it is about 150 yards in length and breadth; and is sur- rounded with trees, and houses built with stone three stories high. The town hall is at one end of the city, and is distributed into several fine apartments. The hotel de ville is a handsome building, but hid by the houses of the narrow street in which it is placed . The cathedral church is a gothic structure, and contains several ancient monuments. The cours, in the orbitelle quarter, is a magnificent walk, above

300 yards long, formed by a triple avenue of elms, and two rows of regular and stately houses ; and ornamented in the centre by several fountains. The churches in general are handsome buildings. In one of them, was formerly a silver statue of the Virgin Mary, almost as large as life. The baths without the city, which has eight gates, were discovered in 1704, and have good buildings, raised at a vast expense, for the accommodation of those who drink the waters. As well as a college of Jesuits and other seminaries, there was here a famous university, founded in 1409 by Pope Alexander V. The College de Bourbon was intended as a superintending court over the uni- versity. Both institutions were dissolved at the revolution, and replaced by a Lycee.

Although Aix was the first Roman settlement in Gaul, it is not remarkable for Roman antiqui- ties. The warm springs, for which it is now known and frequented, induced Sextus Calvinus to found a colony here, to which he gave the name of Aquae Sextiae, which, in correct maps of the west empire, occupies a conspicuous place on the shores of the Mediterranean. But Aix is indebted for its greatest improvements to Louis XIV. The baths are supposed to possess particular virtues in cases of debility ; and seve- ral altars have been dug up sacred to Priapus, the inscriptions on which indicate the gratitude of its ancient inhabitants to that deity. Long. 5□□. 31′. E. Lat. 43□□. 32′. N. Population about

27,000.

Aix, an ancient town of France, in the c partment of Mont Blanc, in the ci-devant duchy of Savoy, eleven miles north of Chamberry. is seated on the lake Bourget, at the foot of a

mountain, between Chamberry, Annecy, and Rumilly. There is here a triumphal arch of the ancient Romans, but it is almost entirely mined. The mineral waters bring a great number of strangers to this place. It was originally called Aquae Gratianae, from the hot baths built there by the emperor Gratian. Long. 5►►. 48.' E. Lat. 45►►. 40.' N. Population 1600.

AIX-LA-CHAPELI.E, a large and handsome city of Germany, once included in the circle of West- phalia and duchy of Juliers, now in the grand duchy of the Lower Rhine. It is situated 17 miles N. of Limburgh, 22 N. E. of Leige, 21 from Spa, and 40 W. of Cologne. It has a castle, built upon a hill, from which may be seen sixty different towns, the ocean, and even England, in a clear day. The town is seated in the valley, and is surrounded with woods and mountains, notwithstanding which the climate is good. It was a free imperial town for ages, and all authors agree about its antiquity ; it being mentioned in Csesar's Commentaries, and the Annals of Tacitus. The Romans had colonies and fortresses in it, when they were at war with the Germans ; but the mineral waters and the hot baths so increased its fame, that, in process of time, it was advanced to the privileges of a city, by the name of Aquasgranii, that is, the waters of Granius. That of Aix-la-Chapelle, was given it by the French, on account of a chapel built in honour of the Virgin Mary, by Charlemagne ; who, having repaired, beautified, and enlarged the city, which had been destroyed by the Huns in 451, made it the usual place of his residence. He lies interred in the church of Notre Dame, where were long kept his sword, his belt, and the four evanglists written in letters of gold, and used at the coronation of the emperors : but the emperor of Austria is said to have trans- ferred the three principal appendages of the chapel to Vienna; i.e. the gospels, Charlemagne's sword, and the shrine above mentioned, as in- dispensably necessary to the future coronation of the emperors. The last crowned here was Ferdinand I. in 1531, since which time the cere-

mony has taken place at Frankfort on the Maine. Aix-la-Chapelle, however, retains the greater number of the privileges conferred on it by Charlemagne.

The town may be divided into the inward and outward city. The inward is about three quar- ters of a league in circumference ; and the out- ward wall, in which there were eleven gates, is about a league and a half in circumference. There are rivulets which run through the town and keep it very clean,besides various pwblic fountains, and many private ones. They have stone quar- ries in the neighbourhood, which furnish the inhabitants with proper materials for their mag- nificent buildings, of which the stadt-house, and the cathedral are the chief. There are likewise thirty parochial churches, and numerous con- vents ; but the greater part have been suppressed. The market place is very spacious, and the houses round it stately. Aix-la-Chapelle con- tained, in 1807, 3080 houses, and 27,164 inhabi- tants. Its manufactures of broad-cloth from Spanish wootare utill famous, and occupy thirty- four flourishing ►►stablishrnents. Here are also

copper and brass works of some celebrity. Its revenues, including, among other things, the tax or licence paid by lottery agents, may amount to 70,000 rix-dollars, or ►►1 2,000 sterling. Part of this arises from the adjacent lands, which are productive of iron and coal.

This place is famous for several councils and treaties of peace concluded in it ; particularly those between France and Spain in 1668, and between Great Britain and France in 1748. In the year 1792, it was taken by the revolutionary forces of France; was retaken in 1793, and finally again seized by the French, under the command of general Jourdan, in 1794, who de- feated Clairfait, near Juliers, and made the French masters of Cologne and Bona. Until the fall of Napoleon it continued to form a part of the French empire, being the capital of the department of the Roe'r, and head of the arron- dissement. It was ceded to Prussia by the treaty of Vienna. During this period, the bishop and clergy of

Aix-la-Chapelle, testified their gratitude to the ci-devant emperor, (then first consul) as the restorer of the Gallican church, by an elegant column in the area to the principal entrance of the cathedral, bearing in the inscrip- tion, Heroi Bonaparte Reipublicae Gallicre Primo Consuli, Episcopus Clerusque Aquisgranus Posuerunt, and recording the triumphs of France. The Cossacks, when here, overturned it to get at the coins which were deposited beneath ; but the king of Prussia restored it, only altering some parts of the inscription dishonourable to his country.

The hot sulphureous waters, for which this place has so long been celebrated, arise from several sources, which supply baths constructed in different parts of the town. The waters near the sources are clear and pellucid ; and have a strong sulphureous smell, resembling the washing of a foul gun ; but they lose this smell by ex- posure to air. Their taste is saline, bitter, and urinous. They do not contain iron. They are also neutral near the fountain ; but afterwards are manifestly and pretty strongly alkaline, insomuch that clothes are washed with them without soap. The heat of the water of the hottest spring, by Dr. Lucas's account, raises the quick-silver of Fahrenheit's thermometer to 136□□, by Mons. Monet's account, to 146□□; and the heat of the fountain, where they commonly drink, by Dr. Lucas's account, to 112□□. Dr. Simmons has given the following account of their several temperatures, as repeatedly observed by himself, with a thermometer constructed by Nairne. The spring which supplies what is called the

Emperor's Bath, the New Bath, and the Queen

of Hungary's Bath, 127□□.

St. Quirin's Bath, 112□□.

The Rose Bath, and the Poor's Bath, both

supplied by the same spring, . . . 112□□. Charles's Bath, and St. Corneille's Bath, 112□□. The spring

used for drinking is in the

High Street, opposite to Charles's

Bath ; the heat of it at the pump is . 106►►. Dr. Lucas evaporated the water of the hottest spring, the Emperor's Bath,- and obtained 268 grains of solid matter from a gallon, composed of fifteen grains of calcareous earth, ten grains of

selenites, and 243 grains of a snlina matter made up of natron and sea salt. They are at first nauseous and harsh, but by habit become familiar and agreeable. At first drinking, also, tSiey generally affect the head. A chemical analysis of this water discovers its gaseous contents to be a small portion of carbonic acid, and much sul- phurated hydrogen gas, highly supersaturated, and of great volatility and pungency. The sul- phur is sublimed, in a cistern, in a solid form, adhering to the upper stone, in the form of a fine powder ; which is gathered, as it accumulates from time to time, and sold in the shops as Aix sulphur. That which is still retained in the water, becomes volatilized by evaporation ; for when the water is exhausted by boiling, no par- ticles remain in the residuum. A quantity of uncombined soda, is among the most important articles of its solid contents. There is also a minute portion of common salt and carbonated lime ; but it does not appear that there are any purely metallic properties belonging to these waters. According to Bergman's analysis, an English pint, wine measure, is found to contain four grains and three quarters of carbonated lime, five grains of common salt, and twelve of carbonateld soda. The quantity to be drank, as an alterative, is to be varied according to the constitution and other circumstances of the patient. In general, it is best to begin with a quarter or half a pint in the

morning, and in- crease the dose afterwards to pints, as may be found convenient. The water is best drank at the fountain. When it is required to purge, it should be drank in large and often repeated draughts. In regard to bathing, this also must ' be determined by the age, sex, strength, &c. of the patient, and by the season. The degree of heat of the bath should likewise be considered. The tepid ones are in general the best, though there are some cases in which the hotter ones are most proper. But even in these, it is best to begin with the temperate baths, and increase the heat gradually. These waters are efficacious in diseases proceeding from indigestion, and from foulness of the stomach and bowels. In rheu- matisms ; in the scurvy, scrofula, and diseases of the skin; in hysteric and hypochondriacal disorders ; in nervous complaints, and melan- choly ; in the stone and gravel ; in paralytic com- plaints ; in those evils which follow an injudicious use of mercury ; and in many other cases. They ought not, however, to be given in hectic cases where there is heat and fever, in putrid disorders, or where the blood is dissolved, or the constitu- tion much broken down. The time of drinking, in the first season, is from the beginning of May to the middle of June ; and in the latter season, from the middle of August to the latter end of September. There are galleries or piazzas, under which the company walk during the time of drinking, in order to promote the operation of the waters. ••• The Poor's Bath, (Campus-bud) is free for every body, and is frequented by crowds of poor people. It is scarcely necessary to add, that there are all kinds of amusements common to other places of public resort ; but the sharpers appear more splendid here than elsewhere, as suming titles, oquij.:;g'-s, See.

AIZET-LE-DUC, a town and barony of France, in Burgundy, department of Cote d'Or, nine leagues N. W. of Dijon.

AIZOON, in botany, called by Mr. Miller sempervive, though the name Aizoon has been by some writers applied to the house-leek, and also to the aloes : a

genus of the penta- gynia order, belonging to the icosandria class of plants ; and in the natural method ranking under the thirteenth order, succulentEe. The characters are : CAL. a single leaved perian- thium, divided into five segments, and persis- tent: there is no corolla : ST AM. very numerous capillary filaments ; the anthera simple : PIST. a five-cornered germen above, with five simple styli ; and the stigmata simple : The pericar- pium is a bellied, retuse, five-cornered capsule, having five cells and five valves : The seeds are many and globular. Linnseus mentions three species, viz. 1. Aizoon Canariense, a native of the Canary islands. 2. Aizoon Hispanicum, a native of Spain ; and, 3. Aizoon Paniculatum, a native of the Cape of Good Hope. They may all be raised in this country in hot beds ; but are not remarkable for their beauty.

AKANIMINA, a town on the coast of Guinea, near cape Apollonia, about three-fourths of a league from the shore. The anchorage is good ; and gold dust and ivory are procured here.

AKAS AK A, a town on the south coast of the island of Niphon, belonging to Japan, the houses of which were remarked by Kaempfer to be larger than those of any other place, even Jeddo the capital. It also contains some elegant inns, and is 100 miles E. of Meaco, 140 W. S. W. of Jeddo.

AKASI, an open town on the south coast of the above island, intersected by a broad and deep river, having a fortress where the governor resides.

AKBAH, a celebrated Saracen conqueror, who overran the whole of Africa, from Cairo to the Atlantic Ocean. At the head of ten thou- sand of the bravest Arabs, he marched from Damascus, and gradually increased his army by numbers of the barbarians, whom he had con- quered and converted. Amid the fictions of oriental writers, it is not easy to follow Akbah through the line of his victories. We know merely that he penetrated with dauntless intre- pidity the very heart of the country ; and after traversing the wilderness, where his successors

erected the capitals of Fez and Morocco, carried his arms to the Western Ocean. Distressed at this limitation which nature had set to his brilliant career, he is said to have spurred his horse into the ocean, and exclaimed, ‘ Great God ! if my course were not terminated by this sea, I would still advance to the unknown re- gions of the West, preaching the unity of thy holy name, and putting to the sword the rebel- lious nations that worship any other God than thee.’ A general revolt among the Greeks and Africans recalled him from the West, and proved the means of his destruction. The insurgents trusted to the revenge of an ambitious chief, who had disputed the command, and having failed in his designs was led about as a prisoner in the camp of Akbah. He revealed their de- 2 E 2

sign, however, to the Arabian general, who, under the impulse of gratitude, loosened his fetters, and gave him leave to retire. The ge- nerous chief chose rather to die with his be- nefactor, and having embraced each other as fellow martyrs, and broken to pieces their scab- bards, they fell by each other’s side, after aglorious conflict with the insurgents. Akbah, proposed to establish an Arabian colony in the interior of Africa, in order to check the barbarians and secure a place of refuge to the families of the Saracens. He accordingly founded Cairoan, under the title of a Caravan Station, in the fiftieth year of the Hegira. He encompassed an area 12,000 paces in diameter with a brick wall, and in five years the palace of the governor was encircled with a number of private dwellings; and a splendid mosch was erected upon five hundred columns of granite, porphyry, and Nu- midian marble. See Qckley’s Hist, of the Sa- racens, vol. ii. Leo Africanus, fol. 75. Shaw’s Travels. Marmol. Description de V Afrigue, torn. iii. &c.

AKBAR, or AKBER, sultan, in biography and history, the sixth of the descendants of Timur Bek or

Tamerlane, who reigned in Hindostan under the appellation of Moguls, was born in 1542, and succeeded his father Hemaiun in 1556. He was proclaimed emperor at Calanor, in the pro- vince of I/ahor, and assumed the title of Jilal D'din, q. d. the aggrandizer of religion. Having overthrown the Patans and taken possession of Delhi, he was inaugurated in the city, and as- sumed the government which had at first been ad- ministered by his tutor, Bey ram Khan. He then, madehimself masterof the strong fortress of Chitor, after a severe engagement with a rebel chief, and quelled other insurrections ; and having obtained an interval of tranquillity, he made a pilgrimage, barefoot to Azrnir, at the distance of 200 miles ; for the purpose of visiting the tomb of HajiMondi, and of obtaining children by the intercession of this saint. During his abode at Fettipur, on his return, he was informed of a rebellion at Guzerat, which hastened his march to this province ; and having subdued the rebels, reduced the castle of Surat, and secured the province by fortifying Ah- med-abad, he returned to Hindostan. In this year he finished the castle of Agra, at an expense of two miHions, five hundred thousand rupees, laid out a million and a half on the walls and palace of .Fettipur, and began to erect sumptuous sepulchres of his family at Schander, five miles from Agra. At this time he directed his views to the conquest of Bengal, and having, after a long siege, taken possession of Patan, he became master of the whole country. His next acquisi- tions were Kabul, Kandahar, Kashmir and Sindi. Having united these countries to his empire, he employed a powerful army in the invasion of Dekan, which, notwithstanding vigorous re- sistance on the part of the queen of this country, subdued several provinces and annexed them to the Mogul empire. Whilst Akbar was engaged in the prosecution of the Dekan war, his pros- perity was interrupted by a concurrence of do- mestic misfortunes. He was deprived of two of iis sons, viz. Sultan Morad, in 1598, and Sultan Danul, in 1604, by intemperance; and his son

Selim took the advantage of his absence, for seizing his treasures and marching a numerous army towards Agra, in order to take possession of his father's throne. Akbar, as soon as he re- ceived intelligence of his son's rebellion, hastened back to Agra, and having made ineffectual over- tures of accommodation, in enforcing which, his vizir Abul Fazl lost his life, he resolved to turn his arms against Selim. But as he had lost his other sons, he once more attempted to persuade his son into submission. With this view he em- ployed the tutor of Selim to convey letters to him, in which he reproached him for his rebellion : but at the same time declared, that, as he was his only son and heir, he was ready to receive him to favour. The father's letters and the tutor's arguments produced effect; Selim returned to Agra and submitted. Akbar at first treated him with austerity, but at length pardoned him, though he still retained suspicions of his son's fidelity. The emperor did not long survive this reconciliation. Being incensed against a mirza, who governed one of his provinces, he resolved to remove him by poison ; and for this purpose ordered two pills of opium, in one of which there was poison. Having held these in his hand for some time, he gave one to Mirza, and by mistake took the poisoned one himself. The consequence, notwithstanding the use of reme- dies as soon as the mistake was discovered, was fatal. When Selim paid his dying father a visit, he put his own turban on this prince's head, and girt him with his father Hemaiun's sword ; but on the twelfth day after he had taken the poison, Akbar died, A. D. 1605, at the age of sixty-three years, and was buried in the family sepulchre near Agra. Akbar was distinguished by his conquests, and by his success in reducing almost the whole of India to obedience. He was also one of the few sovereigns entitled to the appellation both of great and good, and the only one of the Mahommedan race, whose mind was so far divested of the illiberal prejudices of the fanatical religion in which he was educated, as to be capable of forming a plan worthy of a monarch who loved his people, and was solici- tous to render

them happy. Although he was not attached by profession to any form of religion himself, he was not a persecutor of any. In 1582 he wrote a letter to the king of Portugal, preserved by Fraser, and containing an avowal of sentiments, liberal and enlightened ; in which he desires that a translation of the Christian scriptures into Arabic or Persian might be sent to him, and at the same time a learned person to explain the Christian religion. One Gerom'mo Xavier was deputed, and with this view learned the Persian language ; but the Gospels, which were translated into this language, and presented to the mogul, 1602, were so intermixed with popish legends, that they were not likely to be very intelligible, or to produce any very good effect. As in every province of his extensive dominions, the Hindoos formed the great body of his subjects, Akbar endeavoured to acquire u perfect knowledge of their religion, their sciences their laws and (heir institutions ; in order that he might conduct every part of his goverment, particularly the administration of justice, in a

manner as much accommodated as possible to their own ideas. In these generous views he was seconded by Abul Fazl, a minister whose understanding was not less enlightened than that of his master By their assiduous researches, and the consultations of learned men, such infor- mation was obtained as enabled this vizir to publish a brief compendium of Hindoo juris- prudence in the Ayeen Akbery, which may be considered as the first genuine communication of its principles to persons of a different religion. In what estimation the mild government of Ak- bar was held by the Hindoos we may learn from a beautiful letter of Jesswant Sing, Rajah of Joudpore, to Aurengzebe, his fanatical and persecuting successor. ' Your royal ancestor, Akbar, whose throne is now in heaven, con- ducted the affairs of this empire in equity and firm security for the space of fifty-two years, preserving every

tribe of men in ease and happiness. Whether they were followers of Jesus, or of Moses, of David, or of Mahomet ; were they Brahmins, were they of the sect of Dharians, which denies the eternity of matter, or of that which ascribes the existence of the world to chance ; they all equally enjoyed his countenance and favour; insomuch that his people, in gratitude for the indiscriminate pro- tection which he afforded them, distinguished him by the appellation of Juggot Grow, guardian of mankind. If your majesty places any faith in those books, by distinction called divine, you will there be instructed, that God is the God of all mankind, not the God of Mahommedans alone. The Pagan and the Mussulman are equally in his presence. Distinctions of colours are of his ordination. It is he who gives existence. In your temples, to His name the voice is raised in prayer; in. a house of images, where the bell is shaken, still He is the object of adoration. To vilify the religion and customs of other men, is to set at naught the pleasure of the Almighty. When we deface a picture, we naturally incur the resentment of the painter ; and justly has the poet said, ' presume not to arraign or to scrutinize the various works of Power divine.' For this valuable communication, we are indebted to Mr. Orme. Fragment, notes, p. 97. Fraser's Hist. JNWir Shah. p. 11□□□12. Mod. Un. Hist. vol. v. p. 365 □□□ 375. Robertson's Hist. Disquisition concerning India, p. 424.

AKENSIDE, (Dr. Mark,) was born 9th of November, 1721, at Newcastle. His father, a butcher, of the same name, belonging to the Pres- byterian denomination, had his son Mark taught the rudiments of education in his native town ; after which he was sent to the university of Edin- burgh, preparatory to his filling the office of dis- senting minister, assisted by a fund generally provided to encourage young men of that de- scription. While at the university he altered his views and applied himself to the study of medicine, replacing the money which he had received from the fund. In 1741, he went to the university of Leyden, and three years afterwards

took his degree. Here he pro- duced his treatise on the growth of the human icjttus. in which he is said to have departed with

great judgment from the opinion then entertained, and to have adopted that which has been since established.

As a poet, he was one of those who displayed great precocity of invention, and felt very early the motions of genius; he, therefore, had his memory well stored with sentiments and images. His chief work, The Pleasures of Imagination, appeared in 1774 ; on which occasion, Dodsley, by whom it was published, relates, that when the copy was offered him for ►►120, he felt re- luctant to make the purchase ; but resolved to take the opinion of Pope, who very much ad- mired the composition, and advised him to give the money, assuring him that this was no ordinary writer. Akenside having in this poem adopted the sentiment of Shaftsbury, that ridicule is effica- cious for the discovery of truth, Warburton made an attack upon it. The poet nevertheless rose into popularity, and the objectionable passage was expunged. In 1745, he published a collection of odes, which displayed considerable poetic genius, though not equal to his former publication. As a physician, he practised first at Northampton, then at Hampstead, and aftei- wards in London.

He was enchanted to enthusiasm with the sound of liberty, a great lover of contradiction, and no friend to any thing established. This disposition proved very detrimental to his suc- cess. Mr. Dyson, his fellow student, with whom he had contracted a friendship at Leyden, bought a house at North End, near Hampstead, where he supported him, introduced him to the long-room, and to all the clubs and assemblies of the inhabitants. Here, however, his litigious disposition engaged him in so many disputes, that little could be done at Hampstead. Mr. Dyson afterwards thought of introducing him to London ; and parting with his villa at North End, took a house in Bloomsbury-square, and allowed

Akenside ►►300 per annum. Here, as at Hampstead, he manifested a very high opinion of himself, and haughtiness towards men of inferior endowments. He engaged in political controversy, censured the public councils, and professed the most bigotted notions respecting government.

In the winter evenings he frequented Tom's coffee-house, in Devereux-court, the resort of the most eminent scholars of the day. With many of these he shortly became entangled in disputes, and altercations, that fixed on his cha- racter the stamp of haughtiness and self-conceit ; so that persons who admired him for his genius and parts preserved a respectful distance. His abilities at last began to recommend him : he became fellow of the Royal Society, obtained a degree at Cambridge, entered the college of phy- sicians, became physician to St. Thomas's hos- pital, and afterwards physician to the queen. He published several medical treatises, which were highly approved, especially one on dysen- teries ; read the Gultonian lectures on anatomy ; and might have reached a greater elevation than he ever anticipated, had not death put an end to all his designs and hopes, on the 23d of June, 1770, in the 49th year of his age. He was buried with

preat solemnity, in the church of St. James's, Westminster.

With respect to the character of Akenside, he ►►►was a man of religion and virtue; a philosopher, a scholar, and a poet. His conversation was of the most delightful kind, learned, instructive, cheerful, and entertaining. He possessed grea powers of mind, and his work on the imagi- nation was published before he was 23 years old. He afterwards attempted its revision and*

correction ; but despairing of being able to effect it to his own satisfaction, he resolved to write it anew ; finished two books, and part of the two succeeding ones. The original was nevertheless thought so excellent, that it has generally been retained with the corrections. His odes have their dark and light parts; and abound with flights of thought, almost superhuman. His Latin discourse on dysenteries, entitles him to the same place among scholars, as his imaginary works among poets.

AKERMAN, an ancient town of Turkey, in Europe, situated at the mouth of the Dneister, where it falls into the Black Sea.

AKERSTAFF, an instrument for cleansing the plough-coulter.

AKHISAR, or WHITE CASTLE, a town of Asiatic Turkey ; so called from its quarries of white marble. It stands on, or very near to, the site of the ancient Thyatira. It is about 40 miles S. E. of Pergamos, in a plain, about 18 miles in extent, on the banks of the Hennas, and abounding in grain and cotton. The inhabitants, who are about 5000 in number, carry on some trade in opium and Turkey carpets. Lon. 27►►. 49'. E. Lat. 38►►. 15. N.

AKIBA, a famous rabbi, flourished a little after the destruction of Jerusalem by Titus. He kept the flocks of a rich citizen of Jerusalem till the fortieth year of his age, then applied himself to study in the academies for twenty-four years ; and was afterwards one of the greatest masters in Israel, having 24,000 scholars. He declared for the impostor Barcochebas, whom he owned for the Messiah ; and not only anointed him king, but took upon himself the office of his master of the horse. The troops which the emperor Adrian sent against the Jews, who under the conduct of this false Messiah had committed horrid massa- cres, exterminated this faction. Akiba was taken, and put to death with great cruelty.

AKI LA, or ST. COLM'S one of the Hebrides, and lying

in W. Lon. 6►►. 19’. N. Lat. 57►►. 53’.

AKIN’. Of kin. SeeKix.

I do not envy thcc, Pamela ; only I wish, that being thy sister in nature, I were not so far off akin in fortune. Sidney.

The cankered passion of envy is nothing akin to the silly envy of the ass. L’ Estrange’ s Falles.

Some limbs a^ain, in bulk or stature Unlike, and not akin by nature,

In concert act, like modern friends ; Because onp serves the other’s ends. Prior.

He separates it from questions, with which it may have been complicated ; and distinguishes it from questions which may be akin to it.

Watis’s Improvement of the Mind.

Their idle sport,

Who pant with application misapplied To trivial toys, and pushing iv’ry balls Across a velvet level, fee) a joy Akin to rapture, when the bauble finds Its destined goal. Camper’s Tank.

AKISKA, GHALZIG, or TAIK, a fertile and populous province of Asiatic Turkey, is bound- ed by Georgia on the north-east. It contains in the mountainous parts the richest mineral ores ; and the decayed towns scattered throughout the province, indicate that under a more propitious government it has flourished still more than at present. The aborigines are distinguished by uncommonly fine and thick beards. They prac- tise a rude husbandry, and rear bees and the silk-worm. Its capital is

AKISKA, or AGHALZIGHE, a town on the banks of the Kur, or Cyrus, containing about 400 houses, and defended by a strong and lofty castle. It is a considerable trading place, especially with Battum, a port on the Black sea. The inhabi- tants are of

all countries and religions. It is distant 90 miles N.N.W. of Erivan; 100 miles S.W. of Teflis.

AKKA, a station of Lower Suse, on the fron- tier of the Great Sahara, south of Morocco. It forms the rendezvous of the caravans from all parts of Morocco, whence they proceed across the desert of Tombuctoo. Mr. Jackson estima- ted it to contain, with the neighbourhood, 10,000 inhabitants.

AKLOOSS, a town of the Maharatta territory, in the province of Bejapoor, near Assodnagur. It has a fort and well-supplied bazaar ; is nearly a mile in length, and contains several handsome wells and buildings. The Nera river is a little to the north of the town, and is 100 yards broad in the wet season.

AKKER, a city of Syria, upon mount Bargy- lus, about twenty-seven miles from Tortosa. Shaw supposes that this is the Kir of the Scrip- tures, (Amos, chap. i. 5, and chap. ix. 7,) and intimates that it must formerly have been as celebrated for its strength and beauty, as it is now for its various kinds of fruits, as apricots, peaches, nectarines, &c.

AKOND, in Persian polity, a judge of the civil courts, whose especial duty it is to preside over the causes of widows and orphans. He possesses deputies in all parts of the Persian em- pire, and gives directions, or as some say, lectures to all inferior officers.

AKO USC HY, in zoology, and cavia acuschy, the olive cavy of Pennant, has a short tail ; the upper parts of the body of an olive colour, and the under part whitish. It differs from the agouti in having a tail, which theother wants, or rather in having a longer tail than that of the other ; in being smaller, and in having its hair of an olive, and not a red colour; differences, says Buffon, sufficient to constitute two distinct species. It is about the size of a half-grown rabbit ; is hunted with dogs, easily tamed, and reckoned the

finest game in South America. It inhabits the woods, and lives on fruits ; has such a dread of water, that it will submit to be seized by the dogs rather than go into it; and it will sometimes, though rarely, cry like the restless cavy. Bujfon, by Smellie, vol. v. p. 61, &c.

AKSCHINSK, a fortress and village of Rus- sian Tartary, in Dauria, on the right bank of the Onon. It was built by the Russians in the year 1756, and forms one of a series, or chain of military posts, on this portion of the Russian frontier. E. Lon. 132►►. N. Lat. 50►►.

AKSIIEHR, a town of Natolia, in Asiatic Turkey, at the foot of a mountain of the same name, from whence copious streams of water constantly descend, forming a rivulet through most of the streets. The neighbourhood abounds in beautiful gardens, rich in almost all the fruits of Europe and Asia. Fine carpets, wool, wax, gum, galls, and tragacanth, are exported hence, particularly to Smyrna. This place was taken by Tamerlane in 1402, and is distant 60 miles S. S. E. from Karahissar.

AKTUBA, a river of Asiatic Russia, branch- ing from the Volga, about twelve miles above Tzaritzin, and rejoining it again before it falls into the Caspian. The abundance of mulberry trees on its banks has induced the Russian government to establish colonies here, to promote the culture of silk.

AL, an Arabian particle, answering to the English the, and employed in the same manner to mark any thing distinctly, as Alcoran, from coran, to read; the reading, or book, in distinc- tion from all others. Second, Al, or aid, from the Saxon Ael►►, old, is affixed to the name of old towns, as Aldborough, Aldford, &c.

ALA, or AL, in ancient military affairs, the wings of an army, or the horse on each side flanking the foot; and so called because they stood on the right and left, as the wings on the body of a bird.- They were also according to Vegetius called vexilationes. AuL Gell. 1. 16, c. 4 ; Veget. de Re Mil. 1. 2. c. 1.*

ALA, AUE, or AXILLA, in botany, a wing or membrane on the sides of a petiole or footstalk, or attached to a seed or seed-vessel ; which last is distinguished by the names of monopterygia or alata?, dipterygia or bialatse, tripterygia or trialatse, Sec. according as there is one, two, three, or more wings. Second, the two side petals of a papilionaceous flower. Linn. Phil. Botan.

ALA, or AL^E, in anatomy, /iaerx►►Xij the arm- pit. Hippocrat. de Art. ; Gorr. Defin. Med. ►►► Alae aurium, Trrfpwyw^ara TWV w ra>v, the supe- rior parts of the external ear. Gal. Introd. c. 10, &c. ►►► Ala, or Alae Nasi, Trrepvyia pivof, the cartilages which are joined to the extremities of the bones of the nose, and form the moveable part. Gal. de Usu. Part. 1. 11. ►►► Alae ossis Sphe- noides, the two apophyses of the os sphenoides. ►►► Ala, or Alae Pudendi, the same as Nymphse.

ALABA, a small district of Biscay, in Spain, fertile in rye, barley, and fruits. There are in it very good mines of iron, and it had formerly the title of a kingdom.

ALABAIIA, a river of East Florida, North America, also the name of a branch of St. Mary's river.

ALABAMA, an Indian village of North America, on the banks of the Mississippi, where reside the remains of the Alabama nation, W!ID, before they were conquered by the Creeks, in- habited the east side of the great Mobile river.

ALABAMA, a river of North America, formed by the junction of the two rivers of Georgia, the Coosa, and Tallapoosse. It is a beautiful stream abounding

with fish, and having a current run- ning about two miles an hour. It takes a south- westerly direction, until it meets the Tombighee from the north-west. The Alabama forms a quick and pleasant conveyance by boats from Little Tallasee to Mobile bay, a distance of about 350 miles, and finally empties itself into the Gulf of Mexico : its banks abound with trees and vegetables. It is eighty roods wide at its head, and from fifteen to eighteen feet deep at the driest season. An American writer says, that ' to go from Mobile to Fort Jackson, a dis- tance of about 420 miles, will take from a month to six weeks, according to the state of the river.' ' A barge, with five hands, and carrying 125, barrels,' has gone this distance in thirty days ; ' but it was reckoned a remarkably good trip.' Settlements on the banks of this river are rapidly increasing, especially in the country lying be- tween it and the Tombighee.

ALABAMA TERRITORY, or STATE, a newly set- tled state or territory of the great northern re- public of America ××× the United States, is situated between thirty and thirty-five degrees of north latitude. Its boundaries, as established by law on the 3d of March, 1817, are as follows : be- ginning at the point where the line of the thirty- first degree of north latitude intersects the Perdido river, thence east to the western boundary line ,of the state of Georgia, thence along the said line to the southern boundary line to the state of Tennessee, thence west along the said boundary line to the Tennessee river, thence up the same to the mouth of Bear creek, thence by a direct line to the north-west corner of Wash- ington county, thence due south to the Gulf of Mexico, thence eastwardly, including all the is- lands within six leagues of the shore, to the Perdido river, thence up the same to the begin- ning/ It has the new state, formed from the western part of the Mississippi territory, on the west ; Tennessee north ; Georgia and the rem- nant of West Florida east, and the Gulf of Mexico and West Florida south. These boundaries comprise about one half of the late Mississippi territory, which

contained about 93,480 square miles", or 59,827,200 acres.

The main rivers of this territory run south, and fall into the Gulf of Mexico. The Alabama described above, is the most considerable.

The Coosa, under the names of Connesangah, Estenaury, Hightour, &c. runs probably above 150 miles, estimating the distance by land, through the Cherokee territory, in the north-west corner of the state of Georgia.

The country between the Mobile and the Ca- tahouchy, is about 180 miles wide, and watered by the Perdido river, which forms the boundary between the Alabama territory and the remnant of West Florida; it runs parallel to the Mobile, and falls into Perdido Bay. The streams are the

Conecah and Escambia, whose waters unite and flow into Pensacola Bay ; the Conecah is navi- gable upwards of 100 miles, and is lined by forests of valuable timber. Beyond the Escam- bia is Yellow-water river, which falls into the Bay of Pensacola. Choctaw and Pea rivers, still further east, fall into the Bay of St. Roses. These streams are all navigable from fifty to 100 miles; the country which they drain is mostly of a sandy soil, and pine timber.

The Catahouchee is a noble river, affording a navigation of 400 miles ; heads in the south- east corner of Georgia, pursues a south-west course 300 miles until it strikes the boundary line between Georgia and the Alabama territory, when itself becomes the division line to the limits of West Florida, a distance of 120 miles.

The northern parts of this territory are broken ; near the Tennessee line, towards the south-east corner, it may be said to be mountainous. The middle

is hilly, with here and there tracts of level prairie land. Along the Florida line is a strip of country fifty or sixty miles wide, covered with the short and long leaved pine, cypress, and loblolly, so closely resembling the country between Pearl river and the Mobile, as to render a description of the one applicable to the other. Such are its general aspects. The soil between the Mobile and the Catahouchee, bor- dering West Florida, is better than that on the east side of Flint river; between the Conecah and the Catahouchee the land is broken and waving ; the ridge dividing their waters has high flats of light sandy land, well set with willow-leafed hickory, and iron ore in places ; all the streams have cane on their margins, and are frequently ornamented with the sour orange tree; the country healthy, and affording a fine range for cattle, hogs, and horses. The pine flats have the wire grass and saw palmetto : the soil of the waving land, stiff and red loam, with stone on the ridges ; the pine land pretty good for corn. Between the Mobile and the Perdido, the soil is thin, timber pine, loblolly bay, cypress. The head waters of Escambia and Conecah embrace large quantities of fine cotton and sugar lands, and orange groves. Along the Tensaw, pine and cy- press forests, of a heavy growth; canebrakes, along the river ; and sometimes cypress swamps. The Alabama is margined with cane swamps ; these at intervals, with pine flats of good soil, suitable for sugar, cotton, and corn. The swamps at the confluence with the Tombighee, and for some distance below, are subject to periodical inundations, for which reason the inhabitants never fence their improvements. Above they are very wide, intersected with slashes and crooked drains, and much infested with mus- quitoes. The land bordering on the swamps is a poor stiff clay, for one mile back; the growth pine and underbrush ; back of this, broken pine barren ; cypress ponds and canebrakes on the branches. Fifty miles from the union of the Alabama with Tombigbee, the high broken lands commence, extending for sixty miles upwards ; timber, oak, hickory, poplar, and very large cedars.

The best part of the territory is to be found between the Alabama and Tombigbee ; the Black

Warrior, and Bear creek, have some fine bottoms ', and those of the Tallapoosa from Tookabatchee to its confluence with the Coosa, about thirty miles, are excellent ; the broken land terminates on its right bank, the good land spreads out on the left. Proceeding towards the dividing ridge, between the Alabama waters and those of the Conecah, we pass over an extensive tract of rich land, the timber large, and cane abundant, liberally watered by creeks ; this tract is thirty miles long including the plains, and twenty wide. The plains are waving, hill and dale, and ap- pear divided into fields, interspersed or bounded with clumps of woodland ; soil lead-coloured or dark clay, very rich and covered with weeds and tall grass. Below the plains, soil stiff, very red in some places, and gravelly ; surface broken for thirty miles, then pine barren. At the sources of Limestone creek, there is an excellent body of land called the Dog wood ; the growth oak, chesnut, poplar, pine, and dogwood. This vein of land is twenty miles in length, and eight broad ; the dogwood is very thick set, and tall, the whole finely watered. Sixty miles above the confluence of Coosa and Tallapoosa, there is a high waving country, settled by the Creek Indians, who live generally on rich flats of oak, hickory, poplar, walnut, and mulberry : the springs are fine ; cane on the creeks, and reed on the branches ; the surrounding country broken and gravelly. Most kinds of game are scarce throughout the territory. Stone coal abounds on the Cahaba, Black War- rior, &c. The late colonel Hawkins, long resi- dent in the Creek nation, pourtrays the surface and soil of this country in these words :

The country between Coosa, Tallapoosa, and Chatahouchee, above their falls, is broken ; the soil stiff, with coarse gravel, and in some places stone. The trees post oak, white and black oak, pine, hickory, and chesnut; all of them small ; the whole well watered, and the rivers and creeks have rocky beds, clad in many places with moss, greatly

relished by cattle, horses, and deer, and are margined with cane and reeds, and narrow strips or coves of rich flats. On the Coosa, sixty miles above its junction with Tallapoosa, there is limestone, and it is to be found in several places from thence to E-tow- woh, and its western branches.

Above the falls of Ocmulgee and Flint rivers, the country is low and broken, as that of the other rivers. These have their sources above each other ; on the left side of Chatahouchee, in open flat land, the soils stiff, the trees post and black oak, and small. The land is generally rich, well watered, and lies well, as a waving coun- try, for cultivation; the growth of timber, oak, hickory, and the short leaf pine, pea vine on the hill sides and in the bottoms, and a late (or autumnal) broad leaf grass on the richest land. Below the falls of these two rivers, the land is broken or waving, the streams are some of them margined with oak woods ; and all of them with cane or reed. The uplands of Ocmulgee are pine forests ; the swamp wide and rich ; the whole fine for stock. On its right bank, below the old Uchee path, there is some light pine barren, with some light palmetto grass.

Flint river has also, below it;: falls, some rich

swamp for not more than twenty miles ; its left bank is then poor, with pine flats and ponds, down within fifteen miles of its confluence with Chatahouchee. These fifteen miles are waving, with some good oak land in small veins. On its right bank there are several large creeks which rise out of the ridge, dividing the waters of Flint and Chatahouchee. Some of them margined with oak woods, and cane ; and all the branches for seventy miles below the falls have reeds : from thence down, there are bay-galls, dwarf evergreens, and cypress ponds, with some live oak. Bet%veen these rivers there is a good post, and black oak land, strewed over with iron ore, and the

ridge dividing their waters has a vein ex- tending itself in the direction of the ridge. Within twenty-five miles of the confluence of the rivers, the live oak is to be seen near all the ponds ; here are limestone sinks ; the land is good in veins, in the flats, and on the margins of the rivers. The trees of every description small ; the range a fine one for cattle.

The extensive body of land between Flint river and Oke-fau-no-cau, Altamaha and the eastern boundary of the Creek claims, is pine land, with cypress ponds and bay-galls. The small streams are margined with dwarf ever- greens; the uplands have yellow pine, with dwarf, saw palmetto and wire grass ; the bluffs on SL Illas are some part of them sandy pine barren ; the remainder a compact, stiff, yellowish sand or clay, with large swamps ; the growth loblolly, bay, gum, and small evergreens ; the whole of these swamps are bogs. In the rainy season, which commences after midsummer, the ponds fill, and then the country is, a greater part of it, covered with water ; and in the dry season it is difficult to obtain water in any direction for many miles. ††

Bees abound in the Okefaunocau and other swamps eastward of Flint river ; the whortle- berry is to be found in swamps and on the poorest land bordering on the cypress ponds, when the woods are not burnt for a year or more; the latter are on dwarf bushes, grow large, and in great abundance. The dwarf saw—palmetto, when the woods are not burnt, in like manner, bears a cluster of berries on a single stone, which are eaten by bears, deer, turkies, and Indians. The berries, half an inch thick, are covered with a black skin, and have a hard seed : they are agreeable to the taste, sweet accom- panied with bitter, and when fully ripe they burst, and the bees extract much honey from them. The China briar is in the flat, rich, sandy margin of streams. The Indians dig the roots, pound them in a mortar, and suspend them in coarse cloth, pour water on them, and wash them ; the sediment which passes through with the water is left to subside ; the water is then poured off, and the sediment is baked into

cakes, or made into gruel sweetened with honey. This briar is called Coonte, and the bread of it Coon- tetucaliga, and is an important article of food amon? the hunters. In the old beaver ponds, ana in thick boggy places, they have the bog potatoe, a small root used as food in years of scarcity.

The" Okefaunocau is the source of St. Mary's

and Little St. Johns, called by the Indians Sau- wau-he. It is sometimes pronounced Ecunfino- cau, from Ecunau earth, and finocau quivering ; the first is the most common among the Creeks ••• it is from Ocka, a Choctaw word for fire and water; Ocau, quivering. This is a very ex- tensive swamp, and much of it a bog ; so much so, that a little motion will make the mud and water quiver to a great distance ; hence the name is given.

The settlements already made extend from Mobile point to Fort Jackson on the Coosa. On the Alabama the country is pretty well settled near the river, twenty-five miles above Fort Jackson. There are also settlements on the Conecah, Cahaba, and Black Warrior, Below St. Stephens the country is very thinly settled ; but it is now rapidly settling between the Al- abama and Tombigbee.

There are several new towns ; the village of Blakely is situated at the mouth of Tensaw, on the east side of the Mobile bay. Its site is high, commanding, and pleasant. Its fountains of fresh spring water, are pure, cool, numerous and copious. A good road can be found along the dividing ridge separating the branches of Conecah and Escambia from those of the Alabama ; and the distance from Mobile to Fort Claiborne, by this route, is thirty miles shorter than by that of St. Stevens. The main road from Georgia to New Orleans will probably strike Mobile bay at this point. The borders of the Conecah are fast settling, especially by the poorer class of people, and Stock owners ; it being better calculated for men of small capital than the Alabama The rapidity of the settlement of Madison county is probably without a parallel in the history of the

union. We subjoin the census of 1816. Counties. Whites. Slaves. Total.

Wayne, , . 1,566 . . 517 . . 2,083 Baldwin, . . 411 . . 752 . . 1,163 Clarke, . . 2,763 . .1,338 . . 4,196 Greene, . . 992 . 729 . . 1,721 Monroe, . . 3,593 . .1,603 . . 5,296 Jackson, . . 714 . . 255 . . 969 Washington, 1,888 . . 671 . . 2,559 Madison, . 10,000 . . 4,200 . . 14,200 Mobile, . 867 .. 433 . . 1,300

Total, 22,794 10,493 33,287

This territory is rapidly augmenting its inhabitants, by emigrants from Georgia, the Carolinas, Kentucky and Tennessee.

The Creeks or Muscogees, are the only Indians inhabiting the territory, and reside chiefly on the waters of Alabama and Catahouchy, in about thirty towns ; they are brave, raise stock, and cultivate the soil ; and although greatly reduced by war and famine, in 1813 and 1814, their number at this moment exceeds 20,000 souls.

In 1819 the population of this territory rising above 60,000 souls, it was admitted 14th of December of that year, into the confederacy or general Union, as a distinct State : in 1821 its population, according to the census, was 85,451 whites; 41,879 slaves; and 415 free blacks.

ALABANDA, in ancient geography, a town of Caria, near the Meander, situated between Amyzo to the west, and Stratomce to the east

The place abounded in scorpions, and the inhabitants were remarkable for their voluptuousness. Under the Romans it was the head of a jurisdiction, and it still retains some relics of its former splendour.

ALABANDI, ALABANDENI, or ALABANPEN- SES, the inhabitants of Alabanda. Under the Ro- mans they had assizes, or a convention of juris- diction.

ALABANDUS, the founder of Alabanda, and worshipped as a god by the natives.

ALABARCHA, in antiquity, a kind of magis- trate among the Jews of Alexandria, whom the emperors allowed them to elect, for the super- intendency of their police, and to decide dif- ferences and disputes which arose among them.

ALABARDA, the name of a spear anciently used by the Helvetians and Germans.

AL'ABASTER, n. A\a/3a

A womman cam that hadde a boxe of aldbastre of preciouse oynement spikenard, and whanne the boxe of alabastre was brokun sche helde it on his heed.

Wiclif. Mark xiv.

Why should a man, whose blood is warm within, Sit like his grandsire cut in alabatter ? Sleep when he wakes ? and creep into the laundies With being pceuish. Shaksp. Merchant of Venice.

*Yet I'll not shed her blood ; Nor scar that whiter skin of hers, than snow ; And smooth as monumental alabaster**

S/iakspeare.- It was a rock

Of alabaster piled up to the clouds Conspicuous far. Milton's Par. Lost, b. iv.

ALABASTER, albatre, Fr. alabastrites of Pliny, in mineralogy a species of that genus of stones whose base is calcareous earth. It differs from marble in being combined, not with the aerial, but with the sulphuric acid. Hence no efferves- cence appears when it is mixed with any acid. Some derive tne word from albus, on account of the whiteness of this stone. Others from oXa- /SaTpov 'formed of the

privat. a and Xa/i/3avw, capio, to take, this stone being too smooth and slippery for the hand to take fast hold of it. Under this name are confounded two minerals wholly distinct from each other when pure, but occasionally mixed in some of the varieties.

The compact gypsum of Kirwan, (Alabastrite, La Meth, albatre gypseux de Lisle Dichter Gypstein, Werner) when of a white yellowish or greenish colour, semi-transparent, and capable of receiving a polish, is called among statuaries alabaster, and is characterized by Pliny under the word alabastrites, as a stone resemblino- gypsum. When its colours are disposed in bands or clouds, it is called in the first case onyx alabaster, and in the second agate alabaster. Considerable confusion, however, often arises between the distinctions of statuaries, and those of chemists, amongst the stones known by the name of marble, and distinguished by a variety of denominations. Alabasters, according to statuaries, are those which have a degree of imperfect transparency, a granular texture, are softer, take a duller polish than marble, and are usually of a whiter colour. Some stones of a veined ;uid coloured appearance have nevertheless been

called alabasters from their possessing a slight transparency; and other yellow sparry stones have been thus denominated for the same reason. Alabasters among chemists, are only such opaque, consistent, and semi-transparent stones as are composed of lime, united with the sulphuric acid, and hence are often confounded with the selenites and gypsums, or plaster of Paris. The semi- opaque appearance and granular texture, are the effects either of a disturbed or a successive crystallization, which would else have formed transparent spars. The calcareous stalactites, or drop stones, formed by the transition of water through the roofs of caverns, differ nothing in appearance from alabaster, most of which is formed after the same manner. It is, however, necessary to observe, that the calcareous stalac- tites consist of calcareous earth and carbonic acid ; while the alabaster of the chemists is com- posed of the same

earth and sulphuric acid.

What some writers have distinguished as the gypseous alabaster is very easily worked, and susceptible of considerable polish. It is made into vases, columns, tables, &c. Some thin slabs of it have been used in one of the churches of Florence, instead of window-glass. That most esteemed among the ancients came from Caramania, Syria and Upper Egypt. The boxes for holding perfumes, mentioned both in sacred and profane history, were formed of the variety, called onyx, hence in Horace, ‘ Nardi parvus onyx.’ The calcareous alabaster exhibits con- siderable variety of colours, such as white, yellowish, greenish, reddish, and bluish-grey. Its hardness is inferior to marble, its polish considerable, and its fracture striated or fibrous, the striae sometimes parallel, and at others di- vergent. Its transparency is nearly equal to that of white wax, and its gravity from 2.4 to 2.8. Two sorts of alabaster have been distin- guished by statuaries, the common and oriental, the latter including the hardest, finest, and best coloured pieces ; numerous sub-varieties are produced by the colours being in veins, or dendritic, or in concentric undulating zones. The most beautiful specimens are brought from Italy and Spain ; others of an inferior description are found in Germany and France. That of Montaiout near Rome, is remarkable for its whiteness and the bigness of its blocks, some of which are so large, that statues as big as the life may be easily cut out of them. F. Labit, in his journey to Italy, observes, that there are quarries of alabaster in the neighbourhood of the village called de la Tossa, near Civita Vecchia : there is also alabaster to be found in some places of Lorrain ; but it is not much esteemed. The most common species of alabaster are,*

1. ALABASTER, the snow white shining, or lygdinum of the ancients, it is found in Taurus, in pieces large enough to make dishes, or the like. It cuts freely, and is capable of a fine polish.

2. ALABASTER, the variegated, yellow and reddish. This species is the common alabaster of the

ancients, and is so soft that it may be cut with a knife : It is remarkably bright, and almost transparent ; admits of a fine polish, and con- sists of large angular sparry concretions. It is not proof against water ; it ferments violently

with aquafortis, and burns to a pale yellow. The colour of this species is a clear pale yellow, re- sembling amber, and variegated with undulated veins; some of which are pale red, others whit- ish, and others of a pale brown. It was for- merly brought from Egypt, but is now to be met with in several parts of England.

3. ALABASTER, the yellowish, or phengites of Pliny, is found in Greece ; and is of a soft, loose, open texture, pretty heavy, and nearly of the colour of honey. This species has likewise been found in Germany, France, and in Derby- shire in England. The alabasters are frequently used by statuaries for small statues, vases, and columns. After being calcined and mixed with water, they may be cast in any mould like plas- ter of Paris. See GYPSUM.

In many places hot sulphureous waters rise out of the ground, of a turbid wheyish colour, occasioned by a quantity of gypsum or chalk, which they held suspended in a state of half solution. In proportion as these grow cool and lose their carbonic acid, the earthy particles are deposited,leaving the channels through which they flow covered with a compact alabaster, or a thick crust of stalactite of a dazzling white, especially when the sun shines upon it. The most remark- able spring of this description in Europe, is situated on a mountain near Radicofani. It supplies the baths of St. Philip in Tuscany, and forms the source of the little river Paglia. Ad- vantage has been occasionally taken of this cir- cumstance, to obtain very beautiful impressions of bas reliefs, by exposing the moulds to a current of such water, till they have become

filled 'with the earthy deposit. The hardness of the alabaster depends upon the degree of ob- liquity at which the mould is placed to receive the dashing of the water. The more vertical the position, the harder the alabaster. The hardest models not being so white as the softer, the water is frequently caused to make a circuitous course before it reaches the mould, that all the grosser particles may be previously deposited. Even the softer ones, however, are as hard as Carrara marble, and surpass it in whiteness. The time required for these productions varies, according to the thickness, from one month to four. When the mould is sufficiently filled, and the ground of the model has acquired a thickness capable of supporting the figures, the whole is removed from the water ; the wooden supports are broken by gentle strokes of the hammer, and the in- crustation on the outside of the mould is chipped off by repeated strokes. Then the tub is struck with a smart blow of a hammer, which separates the model from the mould ; generally, however, cracking the latter. The brilliancy of the models is completed by brushing them with a stiff hair- brush, and rubbing with the palm of the hand, when they become semi- transparent and very beautiful.

The composition of this alabaster is gypsum, mixed with a small proportion of carbonated lime. Dr. de Vegni has, after many attempts, succeeded in giving a fine black, or flesh colour to the figures thus formed, by putting a vessel half lull of colouring matter into the water, be-

fore it arrives at the mould. The colouring may also be varied by protecting particular parts of the mould, while the water continues charged with colouring matter.

Mr. Boyle observes, that alabaster being finely powdered, and thus set in a basin over the fire, will, when hot, assume the appearance of a fluid, by rolling in waves, yielding to the smalles. touch, and emitting vapour ; all which proper- ties it loses again on the departure of the heat, and discovers itself a mere incoherent powder.

ALABASTER, in antiquity, from the frequent use of the stone so called for that purpose, frequently denotes a vase or vessel wherein odo- riferous liquors were preserved. Pliny says expressly (Nat. Hist. lib. 33. c. 8.) that of the alabaster stone (albastritem) they make vessels to hold ointments, which it is said to preserve free from corruption. It is found about Thebes in Egypt, and Damascus in Syria. The latter is the whiter of the two. Kypke, in Matt. xiv. 3. cites from Plutarch, in Alexandra, p. 676, a variety of vessels, icai aXafiaffrpovg, vavra xpvan i)ffKT)[uva TTfptTTug, and alabasters, all curiously wrought with gold. In Theocritus we read of Slipup Ss pvpwi. \pvati aXa/3airrpo, golden ala- basters, full of Syrian ointments. Herodotus has a similar expression, lib. iii. c. 20, respecting the presents of Cambyses to the king of Ethiopia.

The expression, avvrpi^/aaa TO oXajSa-rpov, Mark, xiv. 3. which our translators have ren- dered ' she brake the box,' has occasioned some difficulty to critic : bishop Pearce referring the awrpnlaaa to the ointment, and not to the box ; renders the words, 'breaking she poured the box ; ' i. e. breaking the parts of the ointment, and liquifying them by shaking it, she poured some of the ointment out of the box upon his head; others with Mr. Wakefield, write; ' after shaking the box together, she poured it out upon his head,' and to justify this translation, it has been observed, that Luke, ix. 39, uses ffvvrpifov for bruising. Black- wall, Sacred Classics, vol. ii. p. 166. has remark- ed that the shaking of liquids of this nature breaks and separates their parts, and thereby makes them more liquid and fragrant ; and that the word owrpi^affa is an excellent one for that purpose; quoting Plato in Phaedone, AiarpnJ/ac TO fapuojcov: Martial's Epigrams, iii. 45. ed. Del- phin.❓❓❓ ' Et fluere excusso cinnama fusa vitro/ and Lucretius, iv. 700.*

' Fracta magis redolere videntur

Omnia quod contrita.'

See Pearce' Com. vol. 1. p.276. Wakefield'* Silva Critica. Pars. 1, ma. p. 156.*

Sir Edward Knatchbull and Dr. Hammond have suggested the same interpretation of this passage. But Dr. Campbell insists from tne syntax of the passage that the avvrpityaaa. must refer to the vessel, and seems best to meet all objections by translating the phrase 'she broke open the box,' &c. We apply such a phrase as this, constantly to the opening of a letter, and it is not improbable that the ointment might be sealed up in the vessel in the manner that otto of roses is still imported from the east. ALABAS- TER is also said to have been used for an ancier t

liquid measure, containing ten ounces of wine, or nine of oil, and in this Sense was equal to half the sextary.

ALABASTER, or ELEUTHERA Island, in geo- graphy, one of the Bahama or Lucayo islands, on the great Bahama bank. Its climate is said to be healthy, and th-a soil, which is chiefly at the north end, better than that of Providence Island. Pine-apples are exported from Alabaster Island in considerable quantities. There is a small fort and garrison on the island. Lon. 76►►. 22'. to 76►►. 56'. W. Lat. 24►►. 40'. to 26►►. 30'. N.

ALABASTERJ (William,) an English divine, was born at Hadley in the county of Suffolk ; and at- tended the earl of Essex, as chaplain in the ex- pedition to Cadiz, in the reign of queen Elizabeth. He was one of the controversial writers of the period ; but, with other warm disputants, of little personal steadiness : not having been long on the continent before he joined himself to the Romish communion, and publicly abjured protestantism. He, however,

could not reconcile himself to the discipline of that church, which paid no regard to his previous degrees, or heretical ecclesiastical character. He soon returned to England, and resumed his former religion, when he obtained a prebend in the cathedral of St. Paul, and the rectory of Therfield in Hertfordshire. He was well skilled in the Hebrew tongue ; but studied the Cabala, until he well merited Festus's reproach of St. Paul : he preached a mystical sermon, upon taking his degree of D. D. at Cambridge, from 1 Chron. i. ch. 1. v. Adam, Seth, Enos! His verses were greatly esteemed. He wrote a Latin tragedy, entitled Roxana, which, when acted in a college at Cambridge, was attended with a very remarkable accident ; a lady being so ter- rified at the last word, Sequar, Sequar, pro- nounced with a vehement tone, that she lost her senses for life : he also wrote, Apparatus in Revelationem Jesu Christi, printed at Antwerp in 1607. But the only work of his worth notice, is a Lexicon Pentaglotton, which he published in folio. He died m 1640.

ALABASTRA, in plants, are those little her- baceous leaves which encompass the bottoms of flowers, particularly the rose. See CALYX, &c. Some, with Jungius, explain alabastra, by the globe or roundish bud of the rose just peeping out.

ALACANANDA RIVER, a river of Hindostan, which springing from the Himalaya mountains, in Serinagur, joins the Bhagirathi, at Deva- prayaga, the junction of the two forming the celebrated river Ganges. The superstitions con- nected with this stream, will justify our giving a few particulars of its rise. A short distance north of Bhadrinath, the breadth of the Alacananda does not exceed twenty feet, the stream being shallow, and moderately rapid. Further up it is concealed under immense heaps of snow, which have not been disturbed for ages, although the shastras mention a city nearer its source, called Alacapura, the fabulous abode of Cuvera, the plutus of Hindoo mythology. At their junc- ture, the Alacananda is larger than the Bhagirathi, being 142 feet in breadth, and in the rainy season forty-six and forty-seven feet above the low water

level. At Ranibaugh, the breadth of the Alaca- nanda is from seventy to eighty yards, with a current of seven to eight miles an hour. Many fish of the roher species, cyprinus denticuhitus, four or five feet in length, haunt this stream, and are fed daily by the Brahmins, from whose hands they will take bread. There is also a beautiful, and remarkably delicate, species six or seven feet long.

ALACHUA, an ancient town on the borders of the Savannah of that name in East Florida, and about seventy-five miles west of St. Augus- tine. The Indians removed to Cuscowilla, two miles distant, on account of the unhealthiness of this spot : but the soil around is very fertile, and the Savannah, surrounded with high sloping hills, covered with waving forests, and fragrant orange groves, is about fifteen miles over, and fifty in circumference.

ALACRANES, an extensive range of hidden rocks, shoals, and banks, opposite the coast of Yucatan. They lie east from Stone Bank, and west from Cape St. Antonio, on the south side of the gulf of Mexico, within the twenty-third degree of north latitude, and between the eighty- ninth and ninty-first degree of west longitude. Those who navigate these parts pass round, in place of venturing among them, although there are some good channels and soundings.

ALAC'RITY, n. ^ Lat. Alacris; merry, ALAC'RIOUSLY, / ••• cheerful, brisk, cheerful ALAC'RIOUSNESS. j activity ; the effect of a willing mind.

For as the holy doctor saint Chrisostome saithe, thoughe pain be grieuous for the nature of ye afflic- cion, yet it is pleasaunte by the alacritie and quick mind of them that willyngly suffer it.

Sir Tliomas More's Works, p. 75. col. 1. These orders were, on all sides, yielded unto with no less alacrity of mind ; than cities, unable to hold out any longer, are wont to shew ; when they take conditions, such as it liketh him to offer them, which hath them in the narrow straits of advantage.

Hooker.

Give me a bowl of wine : I have not that alacrity of spirit, Nor cheer of mind, that I was wont to have.

Shakspeare.

He glad, that now his sea should find a shore, With fresh alacrity and force renew'd, Springs upward. Milton's Par. Lost.

Never did men more joyfully obey, Or sooner understood the sign to fly : With such alacrity they bore away, As if, to praise them, all the states stood by.

Dryden.

Epaminondas alacriomly expired, in confidence that he left behind him a perpetual memory of the victories he bad achieved for his country.

Government of the Tongue.

ALACUOTH, among Arabian physicians, an infirmity of the nerves, attended with diarrhoea in some peculiar circumstances.

ALADINE ISLANDS, are a cluster of small islands in the bay of Bengal, near the coast of Siam, and in the south of what is sometimes called the Mergui Archipelago. They run from 9►►. 5'. to 9►►. 40'. N. Lat. and are in 97►►. 52'. E. Lon. The chief islands are Alexander's Peak, Auriol's, Bruer's, Christie's, Davis's Dankiu'E, Graham's and Watson's.

ALADINISTS, a sect among the Arabs, an- swering to freethinkers among us. They multi- plied greatly under the kings Almonsor and Miramolinus.

ALADULIA, a province of Turkey, in Asia, in Natolia,

between the mountains of Antitaurus, which separate it from Amasia on the north, and from Caramania on the west. It has the Medi- terranean sea on the south, and the Euphrates on the east, which divides it from Diarbeker. It comprehends the Lesser Armenia of the ancients, and the east part of Cilicia. Formerly it had kings of its own ; but the last king was behead- ed by Selim I. emperor of the Turks, who had conquered the country. It is now divided into two parts : the north, comprehended between Taurus, Antitaurus, and the Euphrates, is abeg- lerbeglic, which bears the name of Marasch, the capital town ; and the south, seated between mount Taurus and the Mediterranean, is united to the beglerbeglic of Aleppo. The country is rough, ragged, and mountainous; yet there are good pas- tures, and plenty of horses and camels. The people are hardy and thievish. The capital is Malatigah; Adana and Marisch are also considerable places.

AL7E, in botany, the plural of ALA, which see.

ALAGNON, a principal river of Auvergne,in France, which rises at Cantal, through the de- partment of which it has part of its course, is very rapid, and runs into the Allier, between Issoire and Brioude.

ALAGOA, a town in the island of St. Michael, one of the Azores, which has two parish churches. It is eight miles east of Point Delgada.

ALAGON, a town of Spain, in the kingdom of Arragon, seated on a peninsula, formed by the rivers Ebro and Xiloca, twelve miles north- west of Saragossa.

ALAIA, PHTHISIS, in Med. aXaia (j>0i

ALAID, a volcanic peak in the Okhotsk sea, near the first of the Kurile islands. It began to emit volumes of smoke in the year 1790; and about three years afterwards flamed with great fury ; but no mischief appears to have been done by this eruption.

ALAIN, a river, in the province of Quito, South America, which, after running in a north- east

direction, enters the Pucure.

ALAIN, (Chartier,) secretary to Charles VII. king of France, was born in the year 1386. He was the author of various pieces ; but his Chro- nicle of King Charles VII. is his only work of importance. Giles Coroxet states, that Mar- garet, daughter to the king of Scotland, and wife to the dauphin, passing once through a hall where Alain lay asleep, she stooped and saluted him in the presence of her retinue : some of whom telling her, that it was strange she should kiss a man who had so few charms in his person, she replied, 'I did not kiss the man, but the mouth from whence proceeds such excellent sayings, and so many wise discourses.' Fonte- nelle has constructed one of his Dialogues of the Dead, upon this Incident. Pasquier compares Alain to Seneca, on account of the elegance of his writings.

ALAINS, a babarous northern race, who, in

the fourth and fifth centuries, joined the Goths and Vandals, and overspread a great part of the south of Europe, and the north of France, carry- ing terror and desolation wherever they went.

ALAIS, ALETS, or ALAS, a town of Fiance, in the department of Card, seated on the Garden, near a beautiful plain, at the foot of the Cev►►i- nes. It is the head of an arrondissornent, and contains 9000 inhabitants. The annual export of raw silk from it is considerable, and the town carries on a good trade in grain, olives, oil, wine, and several manufactures of the district. A hot medicinal spring issues from the adjacent moun- tains, and many openings in the rocks show that mines have formerly been wrought in them. A fort was built in it, in 1689. It is situated four- teen leagues north of Montpelier, and 140 south by east from Paris.

ALAISEE, in heraldry, the same with hu- metty or raccourcy.

ALAKTUGAL LAKE, a lake of Chinese Tartary, in Mongolia, a short distance east from the Balkash

lake. It has a large island in its centre, and has on its east, Kiurgha Lake. N. Lat. 45►►. E. Lon. 74►►. 15'.

ALALCOMEN^E, in ancient geography, a city of Boeotia, where Minerva is said to have been born. Hence Homer applies the epithet aXaX- Koptvi]i►► A0JJVJJ to the goddess. She had a famous temple here.

ALALCOMENIUS, in ancient chronology, the Boeotian name for the Athenian month Mae- macterion, which was the fourth of their year, and answers to the latter part of our September and beginning of October.

ALALIA, in ancient geography, aXaXfy, a town of Corsica built by the Phocaeans, and de- stroyed by Scipio 526 A. C. but rebuilt by Sylla. Herod. 1. i. c. 165

ALAM, EB AL ALAM, in biography, a great mathematician, who lived in the reign of the sultan Adhdaedoulat.

ALAMAGAN, or Conception Island, one of the Ladrones, about eighteen miles in circuit. It lies between the Guguan and Pagon, eleven miles from the former, and thirty from the latter. Lat. 18►►. 10'. N.

ALAMANDUS, (Lewis,) Fr. ALEMAN, arch- bishop of Aries, and cardinal of St. Cecilia, was one of the greatest men of the fifteenth century. He presided in the council of Basil, which de- posed Eugenius IV. and elected the antipope, Felix V. and is much commended by ./Eneas Sylvius, for his firm and vigorous conduct on that occasion. One day he so eloquently ha- rangued against the superiority of the pope over the council, that several persons pressed to kiss him; and even to embrace his robe. Though deprived of his dignities by pope Eugenius, Ala- mandus died in the odour of sanctity, and per- formed so many miracles after his death that, at the request of the canons and Celestine monks of Avignon, he was beatified by Clement VII.

ALAMANNI, (Lewis,) was born at Florence, of a noble family, on the 28th of October, 1495. He was obliged to fly his country for a conspiracy against Julius de Medicis, who was soon after chosen pope under the name of Clement VII. During this voluntary banishment, he went into France; where Francis I. from a regard to his

genius and merit, became his patron. This prince employed him in several important affairs and honoured him with the collar of the order of St. Michael. About the year 1540, he was ad- mitted a member of the Inflammati, an academy newly erected at Padua, chiefly by Daniel Bar- bara and Ugolin Martelli. After the death of Francis, Henry duke of Orleans, who succeeded him in 1537, shewed no less favour to Alamanni; and in the year 1551, sent him as his ambassador to Genoa: this was his last journey to Italy; and being returned to France, he died at Amboise, A. D. 1556, in the sixty-first year of his age. He left many beautiful poems, and other valuable performances, in the Italian language ; as well as some notes upon Homer's Iliad and Odyssey. Those upon the Iliad were printed in the Cam- bridge edition of Homer in 1689, and Joshua Barnes also inserted them in his fine edition of Homer in 1711.

ALAMANNICUM, in antiquity, a tribute imposed on the people by the emperor Alexius Angelius, for raising the sum of sixteen talents of gold, to be paid the Alamanni, on the condition of a peace stipulated with them. The eccle- siastics themselves were not exempted from this tax.

A LA MESURE, in Italian & tempo, in music, in strict time.

A LA MI RE, in music, an Italian method to determine the key of A, by its dominant, and subdominant, A E

D. In the Guidonian scale

of music a-la-mi-re is the octave Y~TZ O ⬚⬚⬚

above a-re, or A in the first space .>⬚⬚⬚ Z in the base.*

ALAMMELECH, in Scripture geography, a city in the tribe of Asher.

ALAMODALITY OF WRITING, alamodalitas scribendi, are modern Gallicisms by which some writers would express the endeavours of learned men to adapt the productions of their minds, to the genius or taste of the times, in order to render them more acceptable to the readers. A German writer, Geamoenus, has a dissertation on alamodality in writing,

ALAMODE, in commerce, a thin glossy black silk, chiefly used for women's hoods and men's mourning scarfs.

ALAMOS, (Balthasar,) a Spanish writer, born at Medina del Campo-in Castile. After having studied the law at Salamanca, he entered into the service of Anthony Perez, secretary of state under Philip II. He was in high esteem and confidence with his master, upon which account he was imprisoned after the disgrace of this minister and kept in confinement eleven years, until Philip HI. coming to the throne, set him at liberty. Alamos continued in a private ca- pacity, till the duke of Olivarez, the favourite of Philip IV. called him to public employments. He was a man of wit as well as - judgment ; and his Spanish translation of Tacitus gained him great reputation. This work was published at Madrid in 1614 ; and was to have been followed with a Commentary, which, however, never appeared. The author composed the whole during his imprisonment. He died in the eighty-eighth year of his age.

ALAMOTH, in ancient Hebrew music, a word

used in the superscription to the forty-sixth Psalm,

and supposed to have been the name of some Hebrew melody, according to which the Psalm was intended to be sung. As it partly signifies a sheaf of corn, the air might be one used in harvest.

ALAN, a river of Cornwall, sometimes called Camel and Camlan, a corruption of Camb-alan, ‘ the crooked river.’ Leland calls it Dunmere, i. e. the water of the Hills. It rises about two miles north of the borough of Camelford, where its banks are famous for two battles ; in one of which king Arthur, it is said, was slain, having slain his antagonist ; the other in which many thousands fell, was fought between the Cornish Britons and the west Saxons of Devonshire, in 824. After a course of about twelve miles in a winding southern direction, the Alan at Par- brook becomes navigable for barges, and receives the river Lane, or Lynder. It afterwards be- comes increased by several smaller rivers; and pursuing its course, empties its united streams into Padstow harbour, in the Bristol channel. At Padstow it is nearly a mile broad. This river produces some very fine trout.

ALAN, or ALLEN, (Cardinal William,) was born at Rassal in Lancashire, in the year 1532, and went to Oxford at the age of fifteen. In 1550, he was elected fellow of Oriel college. ††† In 1556, being then only twenty-three years old, he was chosen principal of St. Mary’s-hall, and one of the proctors of the university. In 1548, he was made canon of York ; but upon queen Elizabeth’s accession to the throne, he left England, and settled at Louvain in an Eng- lish college, of which he became the chief support and ornament. He visited his native country in 1565 ; but on account of his extreme activity in the propagation of the Roman Catholic reli- gion, was obliged to quit it finally in 1568. ††† He went first to Mechlin, and then to Douay, where he received his diploma. Soon after he was appointed canon of Cambray and then canon of Rheims. He was created cardinal in July 1587, and obtained from the king of Spain a rich abbey in the kingdom of Naples, and afterwards the bishopric of Mechlin. It is supposed to have been by the advice

and insti- gation of cardinal Alan that Philip II. attempted to invade England. The cardinal furnished him, we are told, with numerous copies of a polemi- cal treatise, (A declaration of the sentence of Sextus V. &c.) to prove queen Elizabeth a here- tic and schismatic, whom her subjects were bound to depose. He died on the 20th of October, 1594, aged sixty-three: and was buried in the English college at Rome. Allan was a man of considerable learning, and an elegant writer. ††† ††† His works, in defence of the Romish religion, were perhaps the most powerful of the Romish treatises in his day. The most remarkable are, 1. A Defence of the Twelve Martyrs in one year, (which Thomas Alfield was hanged for bringing into England, in the year 1584.) 2. Of the Worship due to Saints and their Relics, 1583. ††† 3. A True and Modest Defence of Christian Catholics. The learned Edmund Bolton calls it ' a princely, grave, and flourishing piece of natural and exquisite English ' This treatise was answered

by lord Burleigh, who esteemed it the most elegant of the cardinal's writings. Dr. Southey says, that cardinal Alan was the person of all others whom the English Catholics,' at the period of the threat- ened Spanish invasion, 'regarded with most respect : ' that he solicited Philip of Spain to employ an English Catholic regiment, as well as to confide the management of his fleet to English sailors, on that memorable occasion ; and that when ' he spoke of this in after years he used to weep with bitterness, remembering how fatally for the Romish cause his advice had been re- jected.' Book of the Church, vol. ii. 293-4. Mr. Butler, in his defence of the Catholics of this period, does not attempt to repel this statement. It appears certain that Alan was amongst the sincerest and most bitter, as well as one of the most learned bigots, that ever lived ;*

but much of his conduct is to be attributed to the unhappy and illiberal spirit of his age. It is said that in later life he expressed regret at having taken so active a part against his country ; and that letters of his are extant, advising a reconciliation of catholics with the protestant government, on the ground of a simple toleration.

ALANA-GIEBA, in botany, the yellowish white tripoli-

ALANA-TERRA, English oker-: it is esteemed drying and astringent ; its principal use is to mix with salts in distillation, in order to keep them from melting. It is thought that this stone is what the ancients called the Samian stone, ' Samius lapis.'

ALANBY, an agreeable watering place in Cumberland, situated about twenty miles north of Whitehaven, as far south of Carlisle, and 308 from London. There is a good anchorage in the bay, and an extensive herring fishery is carried on here.

ALANCHE, or ALLANCHES,a town of France, in Auvergne, formerly in the intendancy of Riom, and election of St. Flour, now the head of a canton, in the department of the Cantal, arrondissement of Murat. It contains 2500 in- habitants. Fine lace is manufactured here, and there are good tanneries. It is four leagues W, S. W. of Mercoeur.

ALAND'. On Land. See LAND. Her ost was cypher in ys sydeo/ofufebyleued bypoute. R. Gloucester, p. 307. Thei sailen, till thei come a londe At Tharse nygb. to the citee.

Gower. Con. A. b. viii. Dep seith he wol for do. and a down brynge All patlyvep opr lokep, a londe and a watere.

The Vision of Piers Plcnihman, p. 340.

He only, with the prince his cousin, were cast a land, far ofi from the place whither their desires would have guided them. Sidney.

ALAND, or AELAND, a considerable island of the

Baltic, in N. lat. 60□□. 18′. E. Ion. 19□□. 40′. It is about forty miles in length, and thirty in breadth, and being deeply indented by the sea, is composed of several peninsulas. It contains eight parishes, and a population of 11,300 persons. The soil is very fertile, producing corn, and abundance of forest woods, from which the natives manufacture excellent wooden utensils. There are nearly 4000 acres of land, in a high state of cultivation here ; and 2500 barrels of

wheat are said to be produced annually. It is an island remarkable for the longevity of the inhabitants, and yielded the king of Sweden, some years since, a revenue of 1 9,980 rix dol- lars. The chief town is Castleholm : and the island itself gives name to a cluster of inferior islets. The inhabitants generally speak the Swedish language. In 1634 it was included m the government of Finland; but has recently been ceded to Russia. The channel between Aland and the Swedish coast, is that which is reckoned most safe in making for the gulf of Bothnia.

ALAND′S BAY, on the south coast of Ireland, between Waterford harbour and Tramore bay. □□□ N. lat. 52□□. 8′. W. Ion. 7□□. 5′.

ALAND, (Sir John Fortescue,) lord Fortescue of Ireland, was the son of Edmund Fortescue, esquire, of London, by Sarah, daughter of Henry Aland, esquire, of Waterford, whose name he assumed. He was born in 1670, and received his education at Oxford, from whence he re- moved to the Inner Temple, where he was chosen reader, and called to the bar. In 1714, he became solicitor-general to the Prince of Wales, and next year to the king. In the following year he was made one of the barons of the exchequer. In 1717, he removed to the court of king′s bench, and in 1728, to the common pleas, which situa- tion he resigned in 1746, on being created a peer, shortly after which he died. He published, in 1714, 8vo., Sir John Fortescue′s Treatise on Absolute and Limited Monarchy; and was himself a sound lawyer, and a proficient in the Saxon literature. After his

death, his Reports were printed in folio. This judge was remarka- ble for a flat nose ; and a serjeant who had lost an arm, one day arguing a case in an awkward manner, the judge told him, that ',he appeared to handle the matter rather lamely ; ' to which the other replied, ' with submission, I trust to be able to make the case as plain as the nose in your lordship's face.' Lord Fortescue was very intimate with Pope, and furnished him with the legal burlesque of Stradling versus Styles.

ALANGI, SANTIAGO DE, a small but rich city of South America, in the province of Terra Firma. It supplies Panama with cattle and fruit.

ALANGUERA, a town of Portugal, in Es- tremadura, near the Tagus, and between Lisbon and Leiria. It is supposed to have been built by the Alani ; its present name intends, (Alen- kir-kana) the temple of the Alans.

ALANI, in ancient geography, a mountain of Scythia, on one side of Irraus, and east of the Hyperborean mountains.

ALANI, or ALANS, a people of Tartar origin, who first settled on the banks of the Jaick, near the districts of Solemskoi and Cufa. They after- wards migrated into the plains northward of Circassia, but in A. D. 130, advanced to the Danube, and in A. D. 406, to the Rhine. Here they united themselves with the Vandals, and traversing Gaul, attacked the Goths and Franks in Spain, but were repulsed, and settled among the Pyrenees. Ammianus says, they had no other houses than their military waggons, though th :y were followed by large flocks and herds, and derived their principal subsistence from their

produce. A natural death was thought disgrace- ful to their men ; their horses were caparisoned with the scalps of their enemies ; and they worshipped a naked scimeter placed upright in the ground.

On the banks of the Tanais, says Mr. Gibbon, the military power of the Huns and the Alani encountered each other with equal valour, but with unequal success. The Iluns prevailed; the king of the Alani was killed ; and the re- mains of the vanquished nation were dispersed by the ordinary alternative of flight or submis- sion. A colony of exiles found a secure refuge in the mountains of Caucasus, 'between the Euxine and the Caspian, where they long pre- served their name and independence. Another colony advanced with intrepid courage, towards the shores of the Baltic ; associated themselves with the northern tribes of Germany, and shared the spoil of the Roman provinces of Gaul and Spain. But the greatest part of the nation of the Alani embraced the offers of an honourable and advantageous union; and the Huns, who esteemed the valour of their less fortunate ene- mies, proceeded with an increase of numbers and confidence, to invade the limits of the Gothic empire. The name of the Alani was finally lost in that of the Goths and Huns. ††† Ammianus, xxxi. 2. De Guignes Hist, des Huns, torn. ii. Gibbon's Decline and Fall of the Ro- man Empire, vol. iv. p. 373.

ALANIEH, a town of Asiatic Turkey, occu- pying the site of the ancient Coracesium, a city of Cilicia, near the mouth of a river flowing into the Mediterranean. In this port pirates were shut up by Pompey and compelled to surren- der. It is 110 miles S. S. W. of Konieh. Lon. 21††. 29'. E. lat. 36††. 34'. N.

ALANORAVIUS, from the Gothic, dan, a greyhound, in our ancient customs, a keeper of or manager of spaniels, or selling dogs, for hunting, hawking, &c. ††

ALAPI, in ornithology, a species of the turdus, and the white-backed thrush of Latham. Its specific characters are, the colour above olive- brown, the throat and breast black, the ab- domen cinerous, and the tail wedge-shaped and blackish Its legs are yellowish, the wings above cinerous brown, and superior coverts spotted with white ; the male has a

white spot on the middle of the back ; the female none, but its chin is white, the rest of the under- part of the body and the points of the coverts of the wings rusty. Its length is six inches ; it feeds on ants ; seldom flies for any time, though very agile, and is found in the thick woods of Guiana.

ALAPOULI, in natural history, the name of an East Indian tree, a species of the bilimbi, which is used in medicine, as a purge and vomit, mixed with the seeds of mustard.

ALAQUECA, in mineralogy, a medicinal stone brought from the Indies, in small glossy fragments ; much praised by some for its efficacy in haemorrhages.

ALARAF, in the Mahommedan theology, the partition wall that separates heaven from hell. The word is plural, and properly written al araf; in the singular it is al arf, derived from theArabic verb arafa, to distinguish. Al araf gives the

denomination to the seventh chapter of the Alco- ran, wherein mention is made of this wall,[illegible] *Mahomet seems to have copied his al araf, either from the great gulf of separation mentioned in the New Testament, or from those Jewish writers, who speak of a thin wall dividing heaven from hell. Mahommedan writers differ extremely as to the persons who are to be found on al araf. Some take it for a sort of limbus for the patriarchs, prophets, &c. others place here sucli whose good and evil works so exactly balance each other, that they deserve neither reward nor punish- ment ; while a third opinion is, that this inter- mediate space is possessed by those who, going to war without their parents' leave, and suffering martyrdom, are excluded paradise for their diso- bedience, yet escape hell because they are martyrs. See Sale's Koran, preface, &c.*

ALARBES, an Arabian name for those who live in tents, as distinguished from others who live in

towns.

ALARCON, a small town of Spain, in New Castile, near the Xucar, founded in 1178, and afterwards entirely destroyed by the Moors, but rebuilt by Alphonso IX.

ALARES, in antiquity are supposed by some authors to have been a kind of militia, or soldiers among the Romans ; so called from ala, a wing, because of their lightness and swiftness in the combat. Others make them a people of Pan- nonia; but others with more probability, take alares for an adjective or epithet, and apply it to the Roman cavalry ; because placed in two wings, or alee, of the army ; for which reason, a body of horse was called ala.

ALARES MUSCULI, in anatomy. See PTERY-

GOIDEUS.

ALARGED'. See ENLARGE.

A ghe corynthis, oure mouth is open to ghou cure herte is alargid ghe ben not angwischid in us, but ghe ben angwischid in ghoure ynwardness and I seie as to sones, ghe that ban the same reward, be ghe alargid. Widif. 2 Corinth, vi.

ALARIC, a famous general of the Goths, was descended from a noble family, and for some years served in the Roman armies ; but being refused preferment, he revolted, and committed great ravages in the Grecian provinces. He entered Thrace at the head of 200,000 men, and laid waste all the country through which he passed. He marched next into Macedonia and Thessaly, A. D. 396 ; where the Thessalians met him near the mouth of the river Peneas, and killed about 3000 of his army ; nevertheless he advanced into Greece, and having ravaged the whole country, returned to Epirus, loaded with immense spoils. After staying here five years, he resolved to turn his arms to the west. He marched through Pannonia; and finding little resistance, entered Italy, under the consul- ship of Stillicho and Aurelinus, A. D. 400. ❓❓❓ ❓❓❓ After various battles and treaties, he at last took Rome by treachery, and permitted his soldiers

to plunder it, A. D. 409. Alaric having laid waste a great part of Italy, intended to pass into Sicily; but a storm obliging him to land again, he besieged the city of Consentia ; and having taken it, died there in 411, eleven years after he first entered Italy. lie was buried in the bed of

tbe small river Busentinus, which washed the wails of Consentia, and which for this purpose was diverted from its course and then restored ; the place of his interment was further concealed by the massacre of the prisoners who had been employed in the work. Alaric, whatever may be alleged respecting the conduct of his followers, was himself not devoid of humanity, and exhi- bited more moderation and fidelity to his en- gagements than many of the modern class of con- querors. ' He was,' says Dr Lardner, 'a Goth, and therefore was called a barbarian ; but he was a man of a great and generous mind, and a Chris- tian of the Arian denomination. When Rome was sacked and plundered, the calamity was attended with some favourable circumstances, resulting from the generosity of Alaric, and his profession as a Christian. By ordering the lives of men to be spared as much as possible, and the churches to be respected, many Christians and Pagans were preserved. Although, 'adds this candid writer,' the taking of Rome by Alaric was the occasion of many reflections upon the Christians, from which they have been vindi- cated both by Augustine and Orosius, the event was very prejudicial to the interests of Gentilism, and consequently conducive to the progress of the Christian religion.' See Lardner '$ Works, vol. ix. 180.

ALARIS VEXA, in anatomy, the inmost of the three veins in the bend of the arm.

L ALARM', v. 4- n.^\ From the Italian, alF ALARM'IKG, I arrnc. To the arms; to ALARM'INGLY, ^arms; to sound to arms ; ALARM'IST, i to announce

danger ; to ALAR'UM, v.&cn.J disquiet. Alarum, a cor- ption of alarm.

Turnus sluggish sloth doth stay, but force with speed

he bends, Gainst Troians all his power, and on the shore a-

front them tends.

They blow alarme, ffineidos, b. x. by Thns. Phaer. When the congregation is to be gathered together, you shall blow; but you shall not sound an alarm.

Numbers.

God himself is with us, for our captain ; and his priests with sounding trumpets, to cry alarm against you. Chron. xiii. 12.

Withered murder

(_ Alarum' d by his sentinel the wolf, Whose howl's his watch) thus, with his stealthy pace, Moves like a ghost. Shakspeare.

That Almatro might better hear, She sets a drum at either ear ; And loud and gentle, harsh or sweet, Are but th' alarums, which they beat. Prior. Crowds of rivals, for thy mother's charms, Thy palace fill with insults and alarms.

Pope's Odyssey. The trumpet's loud clangour,

Excites us to arms, With shrill notes of anger,

And mortal alarmt, Dryden.

Taught by this stroke, renounce the war's alarms, And learn to tremble, at the name of arms.

Pope's Iliad.

When rage misguides me, or when fearn/arnw, When pain distresses, or when pleasure charms.

Tichell,

Man sleeps, and man alone, and man whose fate, Vate irreversible, entire, extreme, VOL. I.

Endless, hair hung, breeze shaken, o'er the gulf A moment trembles ; drops ! and man for whom All else is in alarm; man, the sole cause' Of this surrounding storm ! and yet he sleeps As the storm rocked to rest. Young .

It is not without reason that the Apostle represents our passage through this stage of our existence, by images drawn from the alarms and solicitude of a mili- tary life ; for we are placed in such a state that almost every thing about us conspires against our chief in- terests. Ramblu. ALARM, in fencing, denotes a step, or stamp, made on the ground with the advancing foot. ••• It is otherwise called an appel, or challenge.

ALARM, or rather ALARUM, is also used for an instrument to awaken persons at a certain hour ; one very simple contrivance of this kind, is that used by weavers. See WEAVER'S ALARM.

ALARM, in military affairs, any notice given either by the beat of the drum or the firing of cannon, &c. which shall cause the men to run to their arms. ••• ALARM POST, in the field, is the spot fixed upon by the quarter-master-general for each regiment to march to in case of an alarm : in the garrison, a similar place is marked out by the governor. ••• ALA-RM-BELL, a bell which is used for the purpose of ringing an alarm, as in case of fire, mutiny, &c. ; called by the French a tocsin.••• FALSE ALARMS, are stratagems of war, which are employed either by an enemy for the purpose of harassing, or by commanders for the purpose of trying the vigilance of the men.

ALAS', infer.j Fr(,nchj hdus Ita, ifajM . ALLACE. f an exciamatjon expressing sor ALLAKE , 4 lamentation, woe. ALACK. J

He loked on her vgly leper's face, The whiche before was white as lely flour. Wringing his hands, oft times saied alace That he had hued to see that wofull hour.

Chaucer. Complaint of Creseide, fol. 196.

Allace, allace!

I leis my fader, al comfort and solace And al supple of our trauel and pane, Thare, thare allake. Douglas, b. iii. p 93.

Alas, my father there, my only ioy in care and wo, Anchises I do lose (a/a) he there departs me fro.*

JEneidos, b. iii. by Thos. Phaet,

Alacke, the olds prouerbes bee to true : an ape

although she be clothed in purple, will be but an ape,

Hall, p, 119.

But yet, alas ! O but yet, alas ! our haps be but hard haps. Sidney.

A las, how little from the grave we claim ! Thou but preserv'st a form, and I a name.

Pope.

ISAB. Alas, alas !

Why all the souls that were, were forfeit once, And he that might the vantage best have took, Found out the remedy.

Shakspeare' Measure for Measure. YORK. Yet looks he like a king : behold his eye, As bright as is the eagle's, lightens forth Controlling majesty, alack, for woe, That any harm should stain so fair a show.*

Shakspeare s K. Richard II. Alack, when once our grace we have forgot, Nothing goes right ; we would, and we would not.

Shahsp. Measure for Measure. At thunder now no more I start. Than at the rumbling of a cart : 2 F

Nay (what's incredible) alack, I bardly hear a woman's clack. Swift.

Alas ! for pity of this bloody field ; Piteous indeed must be : when I, a spirit, Can have so soft a sense of human woes.

Dry den.

ALASCANI, in church history, a name that as been sometimes given to the friends of John Alasco. See next Article.

ALASCO, (John,) a Polish prince of the six- teenth century, who, imbibing the reformed opinions, was expelled his country. He was the uncle of king Sigismund of Poland; was born in 1499, and having received an education suited to hu birth, travelled into foreign coun- tries ; when being at Basil in 1525, he contracted a friendship with Erasmus, which lasted to the death of that great man. In Switzerland, he also formed an acquaintance with Zuinglius, which occasioned his conversion to the protes- tant faith. In 1526, he returned to Poland, and was nominated to the bishopric of Vesprim in Hungary, but his new principles obliged him to decline that station. In 1540, he quitted that country, and two years afterwards undertook the pastoral office at Embden ; but foreseeing perse- cution there, came to England about the year 1 551 , while the reformation was carrying on under Edward VI. The publication of the Interim driving the protestants to such places as afforded them toleration, a considerable congregation arrived at the same time with Alasco, who through the liberal patronage of Archbishop Cran- mer, were naturalized here, and obtained a char- ter of incorporation,

*independent of the church of England. The Augustine friars church was granted them, with revenues for the maintenance of Alasco as superintendant, and four assistant ministers, who were to be approved by the king. This congregation lived undisturbed until the accession of Queen Mary, when they were all sent away. They were kindly received and permitted to settle at Embden; and Alasco at last, after an absence of twenty years, by the favour of Sigismund, returned to his own coun- try, where he died in 1560. He was much esteemed by Erasmus, who says of him, * that which the young ought to learn of the aged, I, an old man, have learned of this youth ;' he was also the intimate friend of Melancthon. The historians of his time speak greatly in his praise : we have of hii writings, De Ccena Domini Liber; Epistola continens summam Controversise de Coena Domini, &c. He had some particular tenets respecting the presence of Christ in the Lord's Supper.*

ALASTROB, among alchemists, denotes lead ; though some suppose it to signify calx,

ALATAMAH A., a noble river of Georgia, North America, which rises in the Cherokee moun- tains, and in its descent receives several auxi- liary streams. After winding with considerable rapidity through a hilly country 250 miles, it throws itself upon the open plains, by the name ofOakmulgee, for 150 miles, and is joined by the Oconee, which likewise has its source in these mountains. After this junction, it assumes the name of Alatamaha, a.nd becomes a majes- tic river, flowing with a gentle current through forests and plains 100 miles, until it discharges

itself into the Atlantic by several mouths. A northern channel glides by the heights of Darien, about ten miles above the bar, and after several turnings enters the ocean between Sapelo and Wolf islands. The south channel, which is the largest and deepest, after its separation from the north, descends gently between M'Intosh and Broughton islands ; and at last, by the west coast of St. Simon's Sound, between the south end of the island

of that name and the north end of Jekyl island, accomplishes its confluence with the Atlantic, where it is 500 yards across.

ALATE'. See LATE.

I saw standying the goodly portress, Whyche axed me from whence I came alate.

Hawet. ††† Tower of Doctrine, c. 4. Where chilling frost alate did nip,

There flasheth now afire ; Where deep disdain bred noisome hate, There kindleth now desire.

Greene, Dittie of Doralicia.

ALATED LEAVES, among botanists, those made up of several pinnated ones, as the orobus. See LEAF.

ALATERNOIDES, a name given by bo- tanists to the cassine.

ALATERNUS, in botany, the trivial name of a species of the rhamnus. See RHAMNUS.

ALATRI, an old town of Italy, seated on a hill, in the Campagna di Roma, forty miles south- east of Rome, and six miles north-west of Veroli. It has a bishop's see. Lon. 13††. 9'. Lat. 41††. 32' N.

ALATUNGA,in ichthyology, a species of the scomber, having the first pectoral fins very long, and seven small fins on each side of the tail. It is found periodically gregarious in the Me- diterranean.

ALAT YR, a provincial town and district of Asia- tic Russia, seated on the river Suru, in the circle of Alatyrskoi, and nine miles west of Simbursk, from the capital of which it is distant about 100 miles. The houses of the town are all of wood ; but here are five churches, besides a convent.

ALAVA, a district of Spain, twenty miles in length and seventeen in breadth, called also ALABA, which see: Victoria is the capital.

ALAUDA, in entomology, a species of Cur- culio ; cinereous, sub-globose thorax, back marked with a transverse band and black spots, and brown legs : found in Pomerania.

ALAUDA, in ichthyology. See BLENNIUS.

ALAUDA, or LARK, in ornithology, a genus of birds of the order of passeres ; the characters of which are these : the beak is cylindrical, su- bulated, straight ; and the two mandibles or chaps are of equal size. The tongue is bifid, and the hinder claw is straight, and longer than the toe. There are twenty-eight species of the alauda, of which the following are the most remarkable.

1. ALAUDA ALPESTRIS, the chief wing-feathers are half white, the throat yellow, and it has a black streak under the eyes and on the breast. It inhabits North America, where it is migra- tory. It visits Albany the beginning of May, but goes farther north to breed. In winter it comes in vast flocks into Virginia and Carolina. It feeds during its stay in the more southern parts on oats and other grain ; and while at Albany, on the grass and sprig-birch. It runs

into holes; whence the natives of these last parts have given it the name of chi-chup-pi-sue. The English call it the ortolan, and reckon it delicious eating. By some it is called snow- bird, as being very plentiful in that season. It is always seen on the ground and has little or no song. This bird we hear of in Germany also ; and it abounds throughout Russia and Siberia.

2. ALAUDA ARBOREA, or wood-lark, a native of Europe, and distinguished by an annular white fillet about the head. It is inferior in size to the sky-lark, and is of a shorter, thicker form ; the colours are

paler, and its notes less sonorous and varied, though not less sweet. It perches on trees, and whistles like the black- bird. It will sing in the night ; and, like the common lark, sings as it flies.. It builds on the ground, and makes its nest on the outside with moss, within of dried bents lined with a few hairs. The males of this and of the pratensis are known from the females by their superior size. But this species is not numerous.

3. ALAUDA ARVENSIS, or common sky-lark. This and the wood-lark are the only birds that are known to sing as they fly ; this raising its note as it soars, and lowering it till it quite dies away as it descends. It will often soar to such a height, that we are charmed with the music when we lose sight of the songster ; it also be- gins its song before the earliest dawn. Milton, in his Allegro, most beautifully calls upon, us

' To hear the lark begin his flight, And singing startle the dull night, From his watch-tower ia the skies, Till the dapple dawn doth rise.' And bishop Newton observes, that the scene of rural cheerfulness thus exhibited, not only gives us a fine picture of the poet's regularity of life, but of the innocency of his mind. It conti- nues its harmony several months, beginning early in the spring, on pairing. In the winter they as- semble in vast flocks, grow very fat, and are taken in great numbers. They build their nest on the ground, beneath some clod, forming it of hay, dry fibres, &c. and lay four or five eggs. They are taken in great quantity, in the neigh- bourhood of Dunstable ; the season begins about the twelfth of September, and ends the twenty- fifth of February. Vastly greater numbers, how- ever, are at times caught in different parts of Germany, where there is an excise upon them. Keyster says, that the excise in his time pro- duced 6000 dollars (about ►►1400 sterling) every year to the city of Leipsic. They are also taken in great numbers in the country about Naum- burg, Merseburg, and Halle.

4. ALAUDA CAMPESTRIS, has one half of its chief

feathers of the wing brown, except two in the middle which are white, and the throat and breast are yellowish.

5. ALAUDA CRISTATA, the chief tail-feathers are black, but the two outermost are edged with white, and the head is crested. It is a native of Europe. It sings well, like the sky-lark : lays four or five eggs ; and is said to hatch twice in a year.

6. ALAUDA MAGNA, the great lark, is yellow on the belly, with a crooked black streak on the breast, and the three side-feathers of the tail white. It is a native of Africa and America.

7. ALAUDA PRATEMSIS, or tit-lark, has the two outward feathers of the wing edged with white, and frequents the meadows. It is found fre- quently in low marshy grounds : like other larks, it builds its nest among the grass, and lays five or six eggs. Like the wood-lark, it sits on trees; and has a most remarkably fine note, singing in all situations, on trees, on the ground, while it is sporting in the air, and particularly in its de- scent. This bird, with many others, such as the thrush, black-bird, willow-wren, &c. become silent about midsummer, and resume their notes in September : hence the interval is the most mute of the year's three vocal seasons, spring, summer, and autumn. Perhaps the birds are induced to sing again as the autumnal tempera- ment resembles the vernal.

8. ALAUDA SPINOLETTA, the chief tail-fea- thers are black, only the outermost two are ob- liquely half white. It is a native of Italy.

9. ALAUDA TRIVIALIS, whose chief feathers on the tail are brown, only half of the outermost is white at the end, in the shape of a wedge ; there is likewise a double whitish line on the wings. It is a native of Sweden, and perches on the tops of trees.

10. ALAUDA ZEELANDIS:, the New Zealand lark, is seven and a half inches in length : the bill is half an inch, of a pale ash-colour, with the upper part

black : the upper parts of the body are dusky, edged with pale ash-colour : the breast and belly are white ; the legs reddish ash-colour, and the claws black. It inhabits Charlotte Sound, and is called kogoo aroure.

ALAUNA, the ancient name of Alnwick in Northumberland. See ALNWICK.

ALAUSI, a district of the kingdom of Quito, South America, bounded on the north by the province of Riobamba, north-west by Chimbo, south by Cuenca, west by the district of Yagu- ache, and east by that of Macas. It is moun- tainous, but the country is pleasant, and yields every kind of American fruit and grain. The capital has flourishing manufactures of cloths, baizes, and cotton garments, a good parish church, and a convent of the order of St. Francis. It stands in Lon. 78□□. 39′. W. Lat. 2□□. 12′. N.

ALAUSI, a river of South America, which has its rise in the desert of Assuay, in the kingdom of Quito, and flowing down the western side of the Cordilleras, discharges itself into the bay of Guayaquil.

ALAY, in Turkish customs, a kind of military triumph at the opening of a war. It is an ex- hibition of the most insipid buffoonery, and bar- barity. That which took place tfpon occasion of a late war between the Porte and Russia is described by Baron Tott in his Memoirs as follows : ‘ It consists in a kind of masquerade, in which each trade successively presents to the spectators the mechanical exercise of its respec- tive art. The labourer draws his plough, the weaver handles his shuttle, the joiner his plane ; and these different characters, seated in cars richly ornamented, commence the procession and precede the standard of Mahomet, when ft is brought out of the seraglio to be carried to the army, in order to ensure victory to the Otto- man troops. This banner of the Turks, which

they name Sandjack Cheriff, or the Standard of the Prophet, is so revered among them, that, notwithstanding its reputation has been so often tarnished, it still retains their implicit confidence, and is the sacred signal to which they rally. Every thing proclaims its sanctity. None but the emirs are allowed to touch it ; they are its guards, and it is carried by their chief. The Mussulmen alone are permitted to look upon it. If touched by other bands, it would be de- filed ; if seen by other eyes, profaned. In short, it is encompassed by the most barbarous fana- ticism. A long peace had unfortunately caused the ridiculousness, and especially the danger, of this ceremony to be forgotten. The Chris- tians imprudently crowded to see it ; and the Turks, who, by the situation of the houses, could make money of their windows, began to profit bv the advantage; when an emir, who preceded the banner, proclaimed with a loud voice, ' Let no infidel dare to profane with his presence the holy standard of the prophet ; and let every Mussulman who perceives an unbeliever make it known under pain of reprobation. From that moment no asylum was to be found ; even those became informers, who, by letting out their houses, had rendered themselves accomplices in the crime. A religious fury seized on every mind and put arms in every hand ; the more atrocious the cruelty, the more was it meiito- rious. No regard was paid to sex or age ; preg- nant women, dragged by the hair, and trodden under feet by the multitude, perished in the most deplorable manner. Nothing was respected by these monsters ; and under such auspices the. Turks commenced the war.'

ALAY, among sportsmen, a term borrowed

perhaps from the above ceremony, to express

fresh dogs sent into the cry.

ALB, or > Lat. albus, white. The priest's

ALBE, n.) vestment in the Catholic church,

answering to the surplice of the English church,

excepting that the alb is made close at the wrists.

Of preste pow has no mcrke, albe ne now amite

Bot laced in a hauberke, pai is no clerk is abits.

R. Brunne, p. 319.

And Moses brought Aaron and hys sonnes, and wasshed them with water, and put upon him an ulbe, and girded him wt a girdle. Bible, 1539. ieo.viii.

Each priest adorned was in a surplice white ;

The bishops donn'd their albs and copes of state.

Fairfax. Tauo. ii. 4.

ALB, from albus, white, in ecclesiastical his- tory, a white vestment usually worn for eight days, in the ancient churches, by the newly bap- tized. The Sunday after Easter was called Do- minica in albis, on account of the albs worn by the Neophites, who were baptized on Easter- day. It is also a name for the surplice of the Romish priests.

ALB is also a name of a Turkish coin, other- wise called asper. See ASPER.

ALBA, an ancient town of the Marsi in Italy, on the north side of the Lacus Fucinus, which still retains its original name. It stands upon an eminence, and is noted in Roman history for being the state prison to which captive princes were committed, after being dragged through the streets of Rome at the chariot wheels of a

triumphant consul. Perses king of Macedon ter- minated his wretched career in this confinement,

with his son, the last hope of an illustrious Lne of kings. Syphax the Numidian, and Bituinus king of the Averni were also condemned to this gaol by the particular clemency of the senate ; which sometimes indulged its savage disposition by putting its captives to death. Alba being situated in the centre of Italy, amidst difficult mountainous passes, and far from all means of escape, was considered a proper place for the custody of prisoners of importance. Artificial strength was added to its natural security, and traces of its solid fortifications remain to this day. For the entertainment of the garrison, an amphitheatre was erected, and Lucius Vitellius, brother to the emperor of that name, had a villa in the neighbourhood, famous for the variety and excellence of its fruit-trees. His gardens were the nurseries where several of the most delicious stone-fruits, that are now so common in Europe, were first cultivated and multiplied.

AI.BA, a fortified town of Upper Italy,, in Piedmont, situated on the river Tanaro, nine- teen miles south-east of Turin. Anciently it was a principal city of Old Liguria. It is now the see of a bishop, and contains, besides the cathedral, three parish churches, and seven con- vents. Population about 9000.

ALBA LONGA, in ancient geography, a city of Latium, in Italy, built by Ascanius, after La- vinium had stood thirty years, on the Mons Albanus (afterwards so called from the city) ; and on the spot where a white sow was found, as foretold to ./Eneas. Virg. JEn. 1. viii. v. 43, and 83. Aurel. Viet. c. 19. Livy, 1. i. c. 3. only says, that the population of Lavinium becoming too great for it, Ascanius founded Alba Longa, and removed the people thither. The city con- tinued to be the capital of the kingdom for three centuries, but Rome eclipsed its glory, and Tul- lus Hostilius destroyed it entirely, B. C. 666, and transferred its inhabitants to Rome. Livy 1. i. c. 29. But the temple, which was in a grove on the mountain, and in which Jupiter was worshipped, was spared. Strabo, . v. Cicero, Orat. pro MUone, c. 31.

The Mons Al- banus, in later ages, became celebrated for the palaces and villas erected on it ; among which was a very magnificent one belonging to Pom- pey. Cicero,Ibid. See ALBANUS.

ALBA POMPEIA, in ancient geography, a town of Liguria, on a small river called the Ceba. From the evidence of some inscriptions, it is supposed to have been a colony planted by Pompey, or to have been settled by Scipio, and restored by him. The Roman emperor, Pertinax, is said to have been born there ; but Julius Capitolinus (in vita) assigns him a dif- ferent birth-place. The town is now called ALBA, as above. Plin. 1. iii. c. 7. Ptolemy, 1. iii. c. 1.

ALBA JULIA, now WEISSENBURG, a town of Transylvania, on the river Marisius, or Merisch, to the west of Hermanstat, supposed to have been named after Julia Domna, the mother of Caracalla. There are, however, several inscrip- tions found at or near Weissenburg, which bear Col. Apul. that is, Colonia Apulensis, without

the rfast mention of Alba Julia, though inscribed after Caracalla's time. And Ulpian, reciting the colonies of Dacia. calls this colony Apulensis but neither Alba nor Julia. From all which there is a suspicion that Alba Julia is a cor- ruption of Apulum. It was also called Apu- lum Augustum. Long. 25►►. 0'. E. Lat 46►► 46'. N.

ALBACETE, anciently called Cetide, a small but busy town of Spain, in the province of Murcia, about eighty miles from Valencia. There is a good trade here in wine, saffron, corn, and oil. Its fair, or market, held in September, has long been famous for cattle.

ALBAN, ST. a celebrated saint and martyr of the

third century, who is said to have been the first person who suffered martyrdom for Christianity in Britain ; and is therefore usually styled the proto-martyr of this island. He was born at Yerulam, and in his youth took a journey to Home, in company with Amphibalus a monk of Caerleon, and served seven years as a soldier undei the emperor Dioclesian. At his return he settled in Verulam ; and, through the example and instructions of Amphibalus, renounced the errors of paganism, .in which he had been edu-cated, and became a convert to the Christian re-ligion. It is generally agreed that Alban suffered martyrdom during the great persecution under Dioclesian, ; but authors differ as to the year when it happened : Bede and others fix it in 286 ; some refer it to the year 296 ; but Usher places it in 303. His martyrdom, according to Bede, hap- pened thus : ••• Being as yet not known to be a Christian, he entertained Amphibalus in his house ; of which the Roman governor being in- ibrmed, sent a party to apprehend Amphibalus ; but Alban, putting on the habit of his guest, presented himself in his stead, and was carried before that magistrate. The governor having asked him of what family he was ? Alban re- plied, ' To what purpose do you enquire of my family ? if you would know my religion, I am a Christian.' Then being asked his name, he answered, ' My name is Alban ; and I worship the only true and living God, who created all things.' The magistrate replied, ' If you would enjoy the happiness of eternal life, delay not to sacrifice to the great gods.' Alban answered, •••' The sacrifices you offer are made to devils ; neither can they help the needy, or grant the petitions of their votaries.' His behaviour so enraged the governor, that he ordered him im- mediately to be beheaded. In his way to exe- cution, he was stopped by a river, over which was a bridge so thronged with spectators that it was impossible to cross it ; the saint, as we are told, lifted up his eyes to heaven, when the stream was miraculously divided, and afforded a passage for himself and 1000 more persons. Bede does not indeed give us the name of this river ; but the omission, we suppose, will not cause the miracle to be less

believed. This won- derful event converted the executioner upon the spot, who threw awa^" his drawn sword, and, falling at St. Alban's feet, desired he might nave the honour to die with him ; which circum- stance occasioned a delay in the execution till another person could be got to perform the office ;

St. Alban therefore walked up to a neighbourin hill, where he prayed for water to quench his thirst, and a fountain sprang up under his feet ! Here he was beheaded on the twenty-third of June. The executioner is said to have been a signal example of divine vengeance ; for as soon as he gave the fatal stroke his eyes dropt out of his head. We conclude with the words and feelings of Milton in regard to this narrative ; who, speaking of St. Alban, says, 'The story of whose martyrdom, foiled and worse martyred with the fabling zeal of some idle fancies, more fond of miracles than apprehensive of the truth, deserves no longer digression.' ††† See ST. ALBAN'S.

Dr. Southey says, ' Monkish writers have dis- figured this story with many fictions in their wonted manner ; but there is no room to ques- tion that the main facts are historical truths/ Book of the Church, vol. i. p. 13.

ALBAN, ST. a considerable town of France, in the district of Gevaudan, in Languedoc, arron- dissement of Marvejols. The inhabitants, who amount to 2100, are chiefly employed in the manufacture of woollen stuffs. It is twenty-one miles west of Mende.

ALBANA, in ancient geography, a sea-port town of Albania, on the Caspian Sea, between the rivers Cfesius and Albanus; now called Bachu, or Bachy, giving name to the Caspian Sea, viz. Mar de Bahu.

ALBAN ENSES, in church history, another name for the Albigenses, according to some writers. Those, who would distinguish them, attribute the same opinions to both ; only mak- ing the Albanenses to have been prior in respect of time, being known to exist

towards the close of the eighth century; whereas the Albigenses did not appear till the twelfth. See ALBIGENSES.

ALBANI, or ALBANO, (Francis) a celebrated painter, born at Bologna, in 1578. His father was a silk-mercer, and intended to bring up his son to that business ; but Albani having a strong inclination to painting, when his father died, de voted himself entirely to that art, though then but twelve years of age. He first studied under Denys Calvert; and Guido Rheni being at the same time under this master, the pupils con- tracted a warm friendship. Calvert drew but one profile for Albani, and afterwards left him entirely to the care of Rheni ; whom he followed to the school of the Caraches : but envy poisoned the intercourse of the young artists ; when Rheni had set up a beautiful altar-piece, Albani would oppose to it some fine picture of his : and yet they spake of each other with the highest re- spect. Albani having greatly improved himself under the Caraches, went to Rome, where he continued many years, and married ; but his wife dying, he returned, at the request of his re- lations, to Bologna. His second wife, Doralice, was well descended, though possessed of little fortune ; and so beautiful, that Albani sought no other model for his finest representations of the sex. She brought him several fine children, who were also the originals of some of his best corn- positions. From them too, the famous sculptors, Flamand and Argaldi, modelled their Cupids. Alban's painl ings, says Malvasia, breathe nothing but content and joy." He died in 1660. King

Charles I. invited him to England by a letter signed with his own hand .

ALBANI, in antiquity, a college of Salii, or priests of Mars, instituted by Tarquin, and de- nominated from mount Albanus, the place of their residence.

ALBANI, in writers of the middle age, denotes strangers or foreigners ; answering to what we call aliens.

ALBANI, (Alexander,) a cardinal and virtuoso, was born at Urbino in 1692, being raised to the rank of cardinal by Innocent XIII. He died much esteemed in 1779. The villa Albani was famous for beautiful statues, paintings, &c. His late majesty in 1762, purchased for 14,000 crowns the collection of drawings, amounting to three hundred volumes, one- third of which were originals of the first masters, and the remainder most excellent engravings. This prelate was librarian to the Vatican, and author of some ce- lebrated literary and political works.

ALBANI, (John Francis,) cardinal, nephew, and heir of the above, was also a patron of the fine arts. He increased the library of his uncle from twenty-five to thirty thousand volumes. In the year 1793 it was computed that the villa Albani contained nearly two hundred thousand works of art and specimens of antiquity, all of which were dispersed or carried away when the French entered Rome. They are accused of a great want of generosity in this instance. On

the election of Pius VII. cardinal Albani re- turned to Rome, but could never muster sufficien fortitude to visit his dilapidated villa. He died in 1803, with the character of being one of the most affable, and accomplished persons of the age. Athenaeum, vol. iii.*

ALBANI, (Aloisia de Stolberg, countess of), wife of prince Charles Edward Lewis Stuart, commonly known by the name of the Pretender, is celebrated as the ' mia donna' of the Italian poet Alfieri. The life of this lady was throughout an unhappy one : in the possession of great beauty and accomplishments, she was united to a coarse, licentious, and intemperate husband early in life. His disgusting habits are con- firmed by the accounts of his most devoted friends, and were in fact, the final cause of the extinction of his party in England. She was compelled at length to take refuge from his bru-

tality in a convent, where she remained till his death in 1788. Her own took place at Florence, January 29, 1824, in her seventy-second year. Gent, Mag.

ALBANO, or ALBANI, (Giovanni Battista,) the brother and disciple of Francesco, was princi- pally devoted to landscape painting, which he designed in exquisite taste ; touching the trees with spirit, and giving them a great sweetness of colour. His general style, both in manner and colouring, resembled that of his brother. He died in 1668.

ALBANIA.

ALBANIA, in ancient geography, a province of Asia, bounded by the Caucasian mountains on the north, the Caspian sea on the east, Ar- menia on the south, and Iberia on the west. ††† According to several ancient writers, its chief cities were Teleba, Thalbis, Geld a, Thiauna, Thabilaca, Albana, Chadaca, Misia, Boziata, and Cabalica, which last Pliny calls the metropolis. Its rivers were Cyrus or Cyrnus, now Kur, Albanus, Caesius, Gerrhus, Soana, Cambyses, and Alazon; which discharge themselves into the Caspian sea. This country is that now known by the names of Shirwan and East Georgia, and is extremely fertile and pleasant. The in- habitants have been represented as tall, robust, graceful, and comely in their persons ; and simple in their manners. ††† Strabo, torn. 2. p. 767. Pliny says, they were of a white complexion, and could see as well by night as by day. H. N. torn. i. p. 371. They worshipped as gods the sun, Jupiter, and the moon. Tacitus, lib. 5, and Pliny, torn. i. p. 311. trace their origin to the Thessalians, who attended Jason in his expedi- tion to Colchis, and settled in this part of the isthmus, between the Euxine and Caspian seas. Justin, lib. xiii. describes them as being de- scended from the inhabitants of Alba in Italy.

Ammianus Marcellinus derives them from the Massagetae. Strabo says, this country included no tewer than twenty-six kingdoms or principali- ties, speaking as many languages ; but the Albani

overcoming the other tribes, became masters of the whole, and established a regular succession of kings, of whom we read occasionally in history,

from the time of Alexander the Great. At the invasion of Pompey, they brought into the field 60,000 foot and 12,000 horse; and though Pompey was victorious, he was obliged to retire.

We have no account of any of their kings till the time of Alexander the Great, when the king of Albania is said to have presented that monarch with a dog of extraordinary size and swiftness. Pliny, torn. i. p. 465. Oroeses the next king, was defeated by Pompey, and obliged to retire to Mount Caucasus. Pharasmenes, another king of Albania, committed great devastations in Armenia, Media, and Cappadocia, and was sum- moned by the emperor Adrian. This sum- mons he refused to obey, but in lieu thereof sent a number of such great coats as were then worn, made of cloth of gold, in which the emperor, as an insult to the king, ordered 300 criminals to be clothed, and in that attire to fight the wild beasts in the public theatre. After the death of Adrian, he attended the summons of Antoninus Pius, on which occasion he was re- ceived with respect and courtesy. Two other kings of Albania are mentioned in history, one of whom was cotemporary with Valerian, and the other with Constantius, the son of Constan- tine the Great. The race of Albanian kings were continued down to the time of Justinian II. who is said by Zonaras and other writers, Anc. Univ. Hist. vol. ix. p. 122 ––– 126, to have sub- dued the country by his general Leontius.

ALBANIA, a city of Asia, in Assyria, occupying a site east of the river Titana.

ALBAS IA, in modern geography, called by

ALBANIA.

tLe Turks, Arnaut, is a province which, though in fact nearly independent, nominally forms one of the provinces of the Turkish empire. It ex- tends from the thirty-ninth to the forty-third de- gree of latitude, for the space of about 250 miles along the east of the Adriatic and Ionian seas. ••• The breadth inland nowhere exceeds one hundred miles, and in the southern part not more than thirty. It is bounded on the north by Dalmatia and Servia, and on the south by Livadia. Its eastern boundaries are not distinctly ascer- tained. The chain of Pindus,now the mountains of Sagori, Metzovo, and of Suli, separate it by an ill-defined line, from Macedonia and Thes- saly. To use the language of a late publication, f Were a line drawn in the Suli mountains, from about the narrowest breadth from the sea above cited, and extended to the country of the Montene- grins, a distance of about 250 miles, where this province has its greatest breadth, it would com- plete as correct an outline of Albania, as in the present imperfect state of its geography our latest travellers will enable us to describe.' ••• loannina, the capital of a district of that name, eastward, would be about twenty miles to the south- east of this line, and here resided the enter- prizing Albanian chief, Ali Pasha, who lately commanded the entire resources of this interesting country.' Albania thus comprehends in its widest sense the ancient Illyricum and Epirus, and is included by the Turks in the government of Romania.

The natural features and beauties of this country, together with its most striking topogra-

Ehy are exhibited in the following beautiful nes from Lord Byron's Childe Harold: ••• Land of Albania ! where Iskander rose, Theme of the young, and beacon of the wise, And he his name-sake whose oft baffled foes Shrunk from his deeds of chivalrous empriza : Land of Albania ! let me bend mine eyes On thee, thou rugged nurse of savage men ! The cross descends, thy minarets arise, And the pale crescent sparkles in the glen,*

Through many a cypress grove within each city's ken.

Morn dawns, and with it stern Albania's hills, Dark Sulis' rocks, and Pindus' inland peak, Rob'd half in mist, bedewed with snowy rills, Arrayed in many a dun and purple streak, Arise ; and, as the clouds along them break, Disclose the dwelling of the mountaineer ; Here roams the wolf, the eagle wets his beak, Birds, beasts of prey, and wilder men appear,

And gathering storms around convulse the closing

year.

Ambracia's gulf behold, where once was lost ! A world for woman, lovely, harmless thing In yonder ripling bay, their naval host Did many a Roman chief and Asian king ••• Look where the second Caesar's trophies rose ! To doubtful conflict, certain slaughter bring : Now like the hands that rear'd them withering : Imperial anarchs doubling human woes ! [lose ?

God ! was thy globe ordained for such to win and From the dark barriers of that rugged clime, Ev'n to the centre of Illyria's vales, Childe Harold passed o'er many a mount sublime,

- *Iskander is the Turkish word for Alexander, the Christian name for Scanderberg ; whose coun- tryman Mr. Gibbon makes Alexander the Great.*

Through lands scarce noticed in historic tales ; Yet famed in Attica, such lovely dales Are rarely seen ; nor can fair Tempe boast, A charm they know not ; loved Parnassus fails, : ••• Though classic ground, and consecrated most To match some spots that lurk within this lowering coast.

The capital of Albania was formerly Albano- poli ; but it is now Durazzo. The other prin- cipal towns are Scutari, Dulcigno, Antivari, Croya, Alesso, Velona, Dataro, Dibra, &c. Amongst the lakes we may reckon Scutari. The most remarkable river is the Delichi, formerly called Acheron ; and, to the class of mountains, we may refer the Acroceraunian, or

mountains of Chimaera. The soil of this province is extremely fertile, producing excellent wine. Its manufac- tures are chiefly carpets.

The climate of Albania is mild and healthy. In the spring there is seldom much rain, or a long continued drought. The autumnal rains last about a month. In the close of the season, the country is truly delightful ; the sky presents the most perfect clearness, and the middle of the day is as warm as our June. The winter lasts but two months in the year, and in summer the heat is oppressive.

Though Albania has frequently changed its name, its masters, and its boundaries, a people have been embosomed in its mountains from time immemorial. The Greek Illyricum, and the Roman Epirus, of which Albania nearly occupies the site, were, however, described as barbarous, because unexplored and unconquered regions. The natives called by the Turks Ar- nauts, are descended from the ancient Illyrians, whose language and habits are still preserved amongst the mountaineers, and have been called, ; from their simple and primitive mode of life, the Scythians of the Turkish empire.

Thucydides denominated the Albanians by the general term barbarous, and applies it to a people on the coast of Epirus, opposite the island of Sy- bota ; and Strabo expressly states, that the Epirotic tribes were mixed with the Illyrian, and spoke two languages, probably their own vernacular tongue, and the Greek language, as the Albanians do to this day. The people have been commonly represented as extremely uncivilized. Polybius calls the Illyrians the enemies of all nations ; and Livy attributes the ferocity of one of the four Roman divisions of Macedonia, to the fact of its lying contiguous to these people. Epirus, and that part of Illyricum, subsequently dis- tinguished by the term New Epirus, neither the Greeks nor the Romans were able properly to civilize. Ptolemy, the earliest geographer, who mentions the Albani of this district, represents them as a small tribe cf Illyrians, possessing the small town of Albanopolis, of which we hear no more

for several centuries. It is then described as Albanon, Arbanon, and Elbanon, a town com- manding the passes ‘ leading from the country about Lychnidus, to the maritime plains.’ Anna Comment. 1. xiii. ††† Accropolita, c. 14, 25. A tradition exists in the country, that the name of this town was derived from some obscure con nexion with Alba in Italy. The situation of the country induced the Greeks of the lower empire;*

to apply the name of Albanoi, to all the nations of these, and the contiguous mountains ; and to the country itself, that of A\f3avia, AX/Savjjria, and Ap[3avi)Tia. But the inhabitants call the coun- try Skiperi, and an Albanian, they call Skipetar.

The great divisions of modern Albania, accord- ing to Major Leake, who is allowed to be the best informed traveller on this head, are those formed by the varieties of the native tribes. Those which are principally recognized, are the Ngege, the Toske, the Liape, and the Tzami. The Ngege, or Ghegides, possess the northern district, as far as the ancient Genusus, and Kavaia. Their principal towns are Dulcigno, Scutari, and Durazzo. The Toske inhabit the great plains of Mizakie and Malakastra, extend- ing from the hills of Dyrrhachium to Berat and Avlowa, also the mountains bordering on the south side of these plains as far as Lopesi, Tepelini, and Klisara, which are situated on the ancient Aous, the modern Viosa, and the mountains which stretch into Macedonia as far as the dis- trict of Koretza. Their chief towns are Berat and Elbasan, the latter of which is the ancient Albanopolis ; and the former, next to Skodre, the most important place in the Albanian terri- tory. The Liape, a poor predatory race, inhabit the wild mountains and the sea coast, extending from Toskeri, south as far as the plain of Del- vino. The Tzami inhabit all the regions south of the river Kalama, anciently called Thyamis, of which the present name of the tribe is supposed to

be a corruption. It extends inland towards loannina, and is called Dai by the Albanians, Tzamouria by the Greeks. The chief places are Suli (the Selli of Strabo), Paramithia, Parga, Liuarati, Aghia, and Margarita. The inferior districts, which, it is presumed, have been de- tached from the above by the different masters of Albania, comprehend the maritime region opposite Corfu, called Parakalamo, the plain of Delvino, near the ancient Phoenice, Deropul, Zagonia, and the mountains east of Deropul, Reze, Kara-Murata, Kolonia, Premedi, and Khimara. The districts of Konitza, Paleo-Po- goniana and loannina, are considered rather as conquests of the Albanians than proper divisions of the country.

Although Albania from time immemorial has been distinguished by the rude valour of its in- habitants, its remote situation, and want of union among its tribes, generally prevented it from acting any conspicuous part in Grecian politics. The only remarkable exception occurs in the reign of Pyrrhus II. who has been justly cele- brated as one of the greatest captains of antiquity. After the death of this illustrious commander, the country was again divided into a number of petty states, which fell under the power of the kingdom of Macedon.

The Romans gladly availed themselves of the xrany fine harbours of the coast ; and the traces of the Ignatian road which communicated from Apollonia to Thessalonica, a distance of 262 Roman miles, are still visible. After the decay of the Roman puwer, Alaric and the Goths took possession of the country. Some of their de- scendants are afterwards mentioned as having retained possession of the northern district

Sidismund is particularized for his alliance with Theodoric the Great. It was afterwards the prey of the Sclavonian tribes during the eighth, ninth, and tenth centuries. Of these, the Bulgarians were the most prominent. In 870, Achris, or Ocreda, the ancient Lychnidus, was the residence of the Bulgarian kings,and the see of an archbishop; the ancient Nicopolis, and ultimately the whole region,

fell under the power of the same race, as is evident from the united testimony of many celebrated historians. ' It was in these ages of the Bulgarian prowess,' says Major Leake, in his Researches in Greece, 4to. p. 240, 241, ••• ' that the remains of the Illyrian and Epirotic nations became finally included within the boundaries which they have ever since held.

It was during the decline of the Greek empire that the Albanians gradually rose to distinction ; and at last, to independence. Such was their valour, that they were able to maintain their ground against the Bulgarians, who had occupied all the neighbouring districts of Greece. In the year 1079, historians particularly distinguish them. They formed one of the four divisions of the army of Nicephorus Basilaces, and were found to be very important auxiliaries. The Roman kings of Sicily obtained settlements on this coast, as did the Franks and other nations, in their alliance, during the period of the cru- sades. On the dismemberment of the Oriental empire, by the conquest of Constantinople in 1204, Michael Angelus, illegitimately related to the imperial family, established a despotate in this district, embracing Acarnania, j^Etolia, and Epirus, together with the towns of loannina, Arta, and Naupactus. This, with some trifling interruption, continued an independent kingdom until 1431, when it fell under the Turkish yoke. The despots of Epirus during this period were counted as allies, not only by the surrounding states, but even the imperial family ; and exer- cised a powerful influence on the neighbouring politics. In 1383 they were defeated by the Turks ; but under the command of their cele brated leader, George Castriot, commonly called Scanderberg, they survived and baffled all the efforts of Mahomet II. the conqueror of Con- stantinople, who, after his entrance into Albania, experienced a succession of defeats and mortifi- cations, till he was ultimately obliged to acknow- ledge its independence by a formal treaty. The porte had undisputed dominion over the rest of northern Greece. On the death of Scanderberg the Turks

redoubled their efforts, and at length reduced Albania to nominal subjection. The siege of Scutari, or Scodra, in 1478, which is perpetuated by Marinus Barletius, a contempo- rary biographer and eye-witness, formed the termination of this memorable struggle. The subjection, however, was always imperfect ; re- volts were frequent ; and the Venetians who, after aidiag them in the siege, obtained some towns, and established themselves in the contiguous Ionian islands, co-operated in preserving their independence, and preventing their complete subjection to the Ottoman faith. Islamism has therefore been far from common ; and the Porte has rarely been able to enforce a more absolute submission to its orders than of late years, when

every provincial governor first establishes his influence over the country ; and afterwards ap- plies to the Constantinopohtan government for a sanction to his authority. Motives of pay and plunder appear to have had more weight in Albania than any other species of influence ; and this was the ruling motive which prevailed upon the Albanian soldiers to unite themselves with the Turkish army. In proportion, however, as the Ottoman empire declined in vigour, its hold of this celebrated kingdom became less firm, till at length the enterprizing genius of Ali Pasha, again converted this dependency into what may almost be called a separate kingdom. From the vigorous influence of the above-mentioned chief upon the history and politics of Albania, we shall here present the reader with a brief narra- tion of his history, referring the detail of his memoirs to a separate article.

Until the middle of the last century the king- dom of Albania was divided into several inde- pendent pashaliks ; of which those of loannina, Delvino, and Berat, possessed considerable mili- tary force. In 1751, the chief in question was born at Tepelini, a small town in the interior, where his father, a

pasha of two tails, exercised a limi- ted jurisdiction. When he was of the age of fifteen years his father deceased, and left the young chief in a very critical situation. He used to boast that he began his fortunate career with sixty paras and a musket ; and an Albanian who attended Mr. Hobhouse said, he remembered to have seen the pasha with his jacket out at elbows. Ali shortly after his inauguration was driven from Tepelini, and abandoned by almost all his followers. The inhabitants of Gardiki, a neigh- bouring town, next formed a plan for his de- struction ; and for this purpose, surrounded him in a village in the night time, where, although he effected his escape, they seized his mother and his sister, and treated them with every indignity, ××× injuries for which he took a dreadful ven- geance. After his escape, he first entered into the service of Coul, the neighbouring pasha at Berat, and the most important of the chiefs of Albania ; where, by his address and activity, he so far in- sinuated himself as to marry the pasha's daugh- ter. Shortly afterwards he overthrew the pashalik of loannina, which (under the sanction of the Porte) he made the centre of his future fortunes ; and whence, by money, artifice, force, and treach- ery, he extended his authority. The pashalik of Arta now submitted to his arms ; and the Porte appointed him derveni-pasha of Romelia, guar- dian of all the passes of the country. In 1798 he was appointed vizier, or a pasha of three tails (a title of honour derived from the number of horses' tails carried before great officers in pro- cession.) His father-in-law being dead, he attacked and defeated the pashas of Berat and Delvino in 1811 and 1812 ; by which means, he gained the finest parts of Albania, and a popula- tion of between 200,000 and 300,000 souls. He was induced for some time to preserve pasha Ibrahim in authority at Berat, and contracted with the family, marriages for his sons. The reduction of Prevesa, Vonitza, and Karlili, or A carnania, conferred new lustre onhisenterprizes; ana Tepelini (with its inhabitants) now fell into

his power. His series of good fortune had not

obliterated the remembrance of the wrongs he formerly received from these people, and he re- solved upon taking a signal revenge : he pre- tended, with his usual duplicity, an oblivion of all grounds of resentment, until he had completely enclosed the city with his troops, when he ordered all the inhabitants who were supposed to have been involved in the guilt, to the number of 700, to be dragged into a large khan near the city, where they were bound together with cords, and on a signal given by Ali, the soldiery stationed on the walls with their musquetry, commenced a most unmerciful fire, which they continued till they were all destroyed. The Suliotes, a people inhabiting the Suli, an almost inaccessible range of mountains, proved the most formidable adver- saries with whom Ali had to contend. The Suli are placed in the southern extremity of the Al- banian territory ; and beneath them winds a river, conjectured by Dr. Holland and others, to be the Acheron of the ancients ; the strength of these native bulwarks, the warlike habits of the people, and their contempt of death, rendered them the terror of the Albanians, whom they frequently invaded, while no foreign power ventured to scale the tremendous barriers by which they were guarded. Ali, however, accomplished the diffi- cult project, and entered their retreat ; where, after a furious resistance; till the natives were partly extirpated, he acquired permanent possession.

The extent of this chief's dominions are dif- ficult to define, or the degree of authority which he possessed. Even within Albania, Scutari was independent. They are supposed to have been bounded on the north by an irregular line, from Durazzo to the Gulf of Salonica,and to have includ- ed the mountainous district of Macedonia, nearly the whole of Thessaly, and part of Livadia. On the east they were bounded by those of Ismael Bey, who rules over the plains of Macedonia. The power of this great man was almost abso- lute ; and while little attention was paid to the imperial firman, a letter with the signature com- manded implicit obedience. The

Albanians are said to have been enthusiastically attached to him, and to have admired the energy of his character ; .so that when they heard of any other chief, they used to cry, ‘ he has not a head like Ali.’ It was this, in all probability, which, if it did not invite, at least accelerated, the hand of rivalry

The terms on which the Albanian vizier held his government, in relation to Constantinople, may be understood from the preceding account of his character and progress. The Porte ac- knowleged his titles as conferred by the sultan, and the vizier - made a formal acknowledgment of the imperial authority by the respectful re ception of an annual finnan from Constantino- ple, to which he remitted considerable sums in the shape of a karach or capitation-tax, rents, impost, &c. But in the internal government of Albania the Turks had no interference whatever; nor in Ali Pasha’s alliances with foreign states, from which he received and sent agents regularly in his own name. England, France, and Russia, generally kept a consul here ; and the political information of the court of loannina was said to

be superior to that of Constantinople. The pro- with prompt and decisive action, which indicates cress of this enterprizing chief was long viewed a mind equally formed for politics and for war. with jealousy and alarm, but a mutual fear pre- He is remarkable for his address, both in gaining vented hostilities between him and the Porte ; friends, and in lulling asleep the suspicions of the latter not being in a condition to hazard his bitterest enemies. But if his abilities are of driving him into an open rebellion. Prudential a superior order, his dispositions are of a kind reasons therefore suggested the propriety of their which render him an object of fear and detesta- investing him, by means of their firman, with tion. His cruelty rather

resembles that of an the sovereignty of all the provinces he won by Indian savage, than of even the least civilized Eu- his sword. Similar motives, perhaps, induced ropean. Impaling and roasting alive are among him to pay an outward deference to the Porte, the common punishments reserved for those who and aid them against foreign enemies. He have unhappily offended him. The fierceness of marched against Paswan Oglou, and was pre— his cruelty is only exceeded by the depth of his sent at the siege of Widden. His son Mouctar dissimulation. It is impossible for the most skil- Pasha, also distinguished himself greatly in the ful observer to conjecture, from his outward de- late war against the Russians. The Porte most portment, the real sentiments with which he ardently wished him to repair to Constantinople; regards any individual. The only observable and even offered him, in that case, the dignity difference consists in a peculiar kindness of of grand vizier ; but AH uniformly refused their manner towards those unfortunates, whose cruel kindness, knowing that his arrival at that metro- doom he has silently and unrelentingly sealed, polis would be the immediate signal for striking ' It is nevertheless pleasant,' says Dr. Holland, off his head. The lale emperor, Napoleon, < to be able to allege, as one proof of his supe- courted his favour, and is said to have offered him rior understanding, a degree of freedom from the dignity of king of Albania; but Ali viewed the national and religious prejudices rarely to be designs of that ambitious despot with too much found among Turkish rulers. He has studiously alarm to admit him as an auxiliary. To England, adopted into his territory several of the improve- therefore, he invariably attached himself, with ments of the more cultivated nations ; he has whose interests and politics Dr. Holland thought destroyed the numerous bands of robbers who him well acquainted. infested the peaceful inhabitants of the country ;

The military force of Ali was calculated at by his direction roads have been made, bridges 100,000 men ; his disposable force in the field, constructed,

and agricultural improvements at- however, seldom exceeded 15,000, or his stand- tempted. This laudable spirit has added respect ing army 10,000, of which 5000 were generally to the terror inspired by his government ; and stationed round his capital. His treasures even those who, out of the immediate reach of arose, first, from a land-tax, amounting to his power, can venture to express hatred of his about ten per cent, of the produce ; secondly, a tyranny, are obliged to allow, that Albania is tax levied on cities and towns in the shape of a more happy and prosperous under his single requisition ; thirdly, customs which he raised, and stern dominion, than when divided among to about six per cent. ; and fourthly, the inhe- numerous chieftains, and harassed by incessant ritance of all who die without male heirs, Wars. From this opinion, no deference to the together with other sources too numerous to par- principles of despotism can be inferred. The ticularize. His residence was in an immense experience of history has proved that a single building near loannina, the outer courts of which tyrant is less injurious to the happiness of a peo- were crowded with soldiers, and persons of all ple, than tyranny divided among several ; and descriptions who might have petitions to present the vizier of Albania has himself become a des- to him. The mysterious awe which he com- potj oniy by the annihilation of the many despots manded, was, to Dr. Holland, astonishing. He who preyed on that heretofore distracted and exercised in person the whole judicial capacity, divided country.'

in which his decisions were equitable; and all Lord Byron describe his visit to the Pasha's petitioners, on their approach, used to kneel and court mtfte following beautiful lines: kiss his garments. He rose at six in the morn- ing, and, with the exception of an hour at dinner and an hour at supper, spent the whole day in business. He is said to have been extremely temperate at table ; and in his haram, seldom retaining more than 300 females. According to the most accurate information we have been able to obtain, the following description of*

his character, from a late publication, is just and impartial; and although written in Ali's life- time, we transcribe entire. 'Ali is now (1815) sixty or sixty-one years of age ; his figure is cor- pulent and unwieldy, his neck short, his stature about five feet nine inches. The expression of his countenance is striking and majestic ; and

his features give no indications of those terrible The deeds that lurk benealh> and stain him WIth dls- qualitics by which he is characterized. His abi- lt is not that h lengthening beard, lilies are certainly of no mean order. He djs- m suits the passions which belong to youth; plays that union of deep thought and contrivance Love conquers age❓❓❓ so Hafiz hath averred,

To greet Albania's chief, whose dread command Is lawless law ; for with a bloody hand He sways a nation, turbulent and bold : Yet here and there some daring mountain-band Disdain his power, and from their rocky hold Hurl their defiance far, nor yield, unless to gold.

In marble-paved pavilion, where a spring Of living water from the centre rose, Whose bubbling did a genial freshness fling, And soft voluptuous couches breathed repose, ALI reclined, a man of war and woes ; Yet in his lineaments we cannot trace, While gentleness her milder radiance throws Along that aged venerable face, [grace.

So sings the Teian, and he sings in sooth ❓❓❓ But crimes that scorn the tender voice of truth, Beseeming all men ill, but most the man In years, have marked him with a tyger's tooth ; Blood follows blood, and, through their mortal

span,

In bloodier acts conclude those who with blood be- gan.

This despot was finally defeated by the Turks, and died in a manner suited to his desperate life, being cut down by Turkish officers in 1822. See ALI PASHA.

The physicians of Albania, in the consider- able towns, are Greeks, and are for the most part well informed men. The surgeons are Albanians, and very ignorant. Some of their methods are very curious. Mr. Hobhouse de- scribes the practice of kneading the shoulders, and pulling the limbs for a cold ; and another practice in case of ferers, equally curious. ??? The patient stretches out his arm, and the doctor rubs his thumb along the principal artery, from the wrist up to the shoulder : having by a repeti- tion of this operation thrown the man into a perspiration, he covers him up warm, and leaves him in a fair way of recovery.

The Albanians 'are of a middle stature; small round the loins, the chests full and broad, the eyes quick and lively. They wear a tight girdle round the waist, and puncture and stain their skin. The women bear many marks of misery, and are rather masculine in their appearance. Their common dress is a coarse cotton, with the head covered by a shawl, clasped under the ears. Some of them have a white woollen dress; and the young women have frequently a scull-cap, under which the hair is braided, and flows down, strung with all their smaller pieces of money. The women in general have a fantastic taste in their dress, and are not very cleanly in their habits. The common attire of the men is a shirt of cot- ton, drawers of the same materials, a white woollen mantle, and a large great coat or capote with loose open sleeves, and a white woollen or horse-hair band, which often hangs in a small piece behind, but when used upon the head, is pinned into form by a long needle or a pistol ramrod. Their girdle is a coarse shawl, drawn very tight by a belt, containing their pistols; when they rest, they loosen them, and draw their capote about them, and seldom have any other covering. In the summer they throw off the capote and mantle. The poorest Albanian has his pistols in his belt, and also a case knife ornamented, and the handle strung with amulets, and

the calamaro, a sort of portable ink-stand and pen, of which they are very proud. Their dress is the most elegant of any used in the Turkish empire, and the agas who can afford it, have it made of rich velvet, embroidered and worked with gold and silver; superadding another, which is a kind of jacket without sleeves. Lord Byron says, the resemblance be- tween the Albanians and the Highlanders struck him forcibly. The inhabitants are very dextrous at the long gun, one of which is to be found in every cottage.

The cottages are neat, consisting for the most nurt of one floor, divided into two rooms, in one

of which they keep their maize in the stalk or their grapes, which they spnnkle with salt to preserve them. Each person has a small garden, and each village a green for holiday sports, and a circular piece of paved ground attached to it, on which their corn is trodden out by eight or nine horses driven abreast from a stake fixed in the centre. Their food is chiefly vegetables ; all classes drink wine, and also an ardent spirit called rackee, extracted from grapes, husks, and barley ; they also drink water in large draughts during the most violent exercise without incon- venience. The inhabitants are generally tem- perate and avaricious, but withal are idle and ignorant. They think it honourable to rob, but disgraceful to steal.

Their forms of salutation are curious : from the rising of the sun to three hours afterwards, they say, ' mire nestrascia,1 or ' nestrascia emire,' good morning. From the third hour to noon, ' mire minghiessi,' a good cheese-making to you, this being cheese-making time. Good day, good evening, and good night, are much the same as with us. To a man in his own house, they say, ' mire mbe sctepij,' well at home. To a person at work, they say, ' mire mbe pune,' well at your work ; and to those who are reclining in the sun, ' mire mbe dieli,' well in the sun. They are fond of music and dancing; but their execution in both these exercises is extremely imperfect. Notwithstanding these deficiencies, as

soon as the daily occupation is over, they begin to sing and play ; and each Albanian is his own composer and poet. In their dances there is only one va- riety : either the hands of the party are locked in each other behind their backs ; or every man has a handkerchief in his hand, which is held by the next to him, and so on through a long string of them. The first is a slow dance ; the party stand in a semicircle, and their musicians in the middle, continually walking from side to side, accom- panying the movements with their music, which are nothing but the bending and unbending the two ends of the semicircle, with some slow foot- ing, and now and then a hop. In the handker- chief dance, which is accompanied with a song from themselves, they are often violent. It is upon the leader of the string that all the princi- pal movements devolve ; and all the party take this place by turns. He begins with the song, footing quietly from side to side ; then he hops forward, dragging the whole string after him in a circle ; and then twirls about, dropping fre- quently on his knee; and rebounding from the ground with a shout, continues hopping, twirling, rebounding, &c., and then gives his place to the next man, and so on all round the company, each endeavouring to exceed his predecessor in the quickness of his evolutions and movements. Two or three old men often sit in the middle to set the songs, &c. The same dance can be exe- cuted by one performer. Mr. Hobhouse saw a boy of about fifteen, who, by the ease with which he performed the pirenette, and other dif- ficult movements, made a very agreeable specta- cle. Their chief instruments are the lute, three- stringed guitar, with a very long neck, and a small round base, played with a plectrum forme/1 of a pie'ce of quill half an inch in length.

Their trade is considerable. The exports con- ducted through the gulf of Arta, are grain, timber, oil, tobacco, cotton, wool, &c. Fifty cargoes of grain

are annually sent to the Ionian, isles, Italy, and Malta. The timber is grown almost on the shores ; and during the revolu- tionary war, a French agent resided at Arta for the purpose of contracting for supplies of it. Tobacco is cultivated in Upper Albania ; cotton is received through Thessaly, and exported to the German and Italian ports of the Adriatic. The only manufactured article exported is the capote, which produces 150,000 piastres annually. The imports are sugar, coffee, cloths, linen, fire-arms, ironmongery, gunpowder, &c. The Albanians are connected with the Greek houses at Trieste, and Maltese houses, through which they receive the manufactures of Great Britain. The people have, from remote antiquity, been distinguished for their contempt of death ; and can endure, beyond most men, the extremes of heat and cold. A soldier being condemned to death, was on his way to the place of execution, which was situated without the walls of Prevesa,

unknown, and the mechanical arts are chiefly, practised by foreign residents.

AH Pasha established a complete system of religious toleration. The Mussulman and the Greek church are, however, the two most promi- nent religions. The Mahommedan makes no diffi- culty in observing Easter, and the Greeks often assist at Mussulman ceremonies. Rhamazan re- minds us of the old fable of beauty and the beast ; and after an obsequious courting, who knows but the nuptials may be completed, and they may both be identified in one despotism of moral empire. The general morals are indifferent. The remains of a feudal independence keep, the clans in a constant anarchy ; and though under the general jurisdiction of a rigid government, the bones and tombs, scattered every where, evince the fre- quency of desperate quarrels and seditions. The gypsies, called by the Turks Tchinguenes, are numerous in this country. The rights of hospi- tality are as much respected here, as in Greece during the early ages. Should a mountain traveller enter the house of even a robber chief, he may rely on protection and kindness.

Homer's descriptions are still realized here. When a stranger arrives at a village, he is surrounded by the chiefs, invited to the public square, when the old men interrogate him respecting his travels, his country, &c., and relate their chief affairs. He is presented with wine and fruits. At the time of repast, he is invited to one of their houses, a sheep roasted whole is placed before him, and he is admitted to eat with the principal inhabitants.

The Albanian, or Skipetaric, is not a written language. Sometimes the Greek characters have been used to represent Albanian words; but the Greek being familiar to the higher classes of society, is commonly the language used in writing. Major Leake has formed a vocabulary and a grammar of the vernacular tongue ; and Mr. Hobhouse, in the appendix to his travels in this country, gives an abridgment of an Albanian grammar, formed in 1716, by an Italian mis- sionary. The chief peculiarity of utterance is the predominance of the nasal sounds. Leake's Researches in Greece. Hollands Travels. Vuu- doncourfs Memoirs of the Ionian Islands. Hob- house's Albania.

ALBANO, a lake of Italy, in the Campagno di Roma, of an oval figure, and about seven miles in circumference, surrounded on every side with hills. It abounds with excellent fish, and in one place is said to be unfathomable. An aqueduct, constructed by the Romans, B. C. 398, is still in good preservation here. -

ALBANO, a town of Italy, seated on the lake of that name. See last article. Some suppose this to have been the ancient Albanum Pompeii, built out of the ruins of Alba Longa. It stands twelve miles south- east of Rome, and for the pleasantness of its situation is the summer re- tirement of a great many Roman families. It is likewise the see of a bishop, who is one of the six senior cardinals. The town is famous for its excellent wine, and the ruins of a mausoleum,

which, according to the tradition of the inhabi-

tants, was made for Ascanius. The prospect from the garden of the Capuchins is extremely pleasant, taking in the Campania of Rome, and terminating in a full view of the Tuscan sea. Close by the town lies the Albano, which, by reason of the high mountains round it, looks like the area of a great amphitheatre. The mountain of Albano is called Monte Cavo, on the top of which was a celebrated temple, dedicated to Jupiter and Juno. Near the Capuchins there is another convent of Franciscans ; and not far from thence the palace of cardinal Barberini, remarkable for very pleasant gardens, with the ruins of ancient baths, and several old fragments of Mosaic work. Lon. 12►►. 50'. E. Lat. 41►► 43'. N.

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ALBANO, a town of Naples, remarkable for the fertility of the surrounding territory. ALBANOIS. See ALBANENSES, and ALBI-

ENSES.

ALBAN'S HEAD, or HIGHLAND, ST. a cape, r point of land lying in the county of Dorset, a little east of the town of Weymouth. W. Lon. ►►►2►►. 10. N. Lat. 50►►. 4'.

ALBAN'S, St. a town of Hertfordshire, in the hundred of Cashio, a very great thoroughfare, accompanied with good inns, 21 miles N. by W. from London, and 12 miles S. E. of Dunstable. This town sends two members to parliament, elected by all the inhabitants who pay scot and lot ; and has one of the best markets for wheat in England ; considerable quantities of straw- plait are also brought here. St. Alban's is seated near the ruins of an ancient Roman city, by Tacitus called Verulam ; and by the

Saxons Watlingcester, because it is seated on the road called Watling-street. The site is said to have been in more ancient times that of the metropolis of Britain. Here queen Boadicea, at the head of a powerful army, made a vigorous assault upon the rising Roman colony ; and the elegant pen of Tacitus has recorded the failure of her enterprize, after an immense slaughter. Nothing now remains of Verulam but the ruins of old walls, in the fields adjacent to which Roman coins are still found occasionally, as they for- merly found tesselated pavements. In memory of St. Alban, Offa, king of the Mercians, anno 795, erected an abbey, calling it St. Alban's ; and near it the town of the same name was after- wards built. Edward VI. granted it a charter, incorporated it under a mayor and burgesses. Charles II. afterwards vested the government in a mayor and twelve aldermen, twenty-four assis- tant burgesses, a high steward, recorder, coroner, &c. The jurisdiction of this town extends to Rickmansworth, Watford, Barnet, Langley-Ab- bots, Estree, Bushby, &c. It has a gaol delivery the first Thursday after the quarter-sessions at Hertford. The market-house and the town-hall, in which all the public business of the town is transacted, and under which is the borough gaol, stand in St. Peter's street. The churches are St. Alban's, St. Michael's, St. Peter's, and St. Ste- phen's. The celebrated duchess of Marlborough endowed nine alms-houses, for thirty-six decayed men and women, with a pension of ►►12 annually. The church of the abbey still remains; time and weather have made it look like stone although built of brick. When the monasteries were dis- solved, the revenues of St. Alban's were esti- mated at ►►2510 6s. \d. according to Speed ; and the townsmen paid ►►400 to prevent the church being levelled with the ground. They have since converted it into a parish church,which for large- ness, beauty, and antiquity, has claims not often rivalled. It formerly had a fine font of solid brass, in which the children of the kings of Scot- land were in ancient times baptized; and which was brought from Edinburgh by Sir Philip Lea, when the city was in flames ; but in the civil Wars it was

taken away. Not many years since a leaden coffin was discovered in the church, said to be that of Humphrey, duke of Gloucester, youngest son of Henry IV. The body was almost

entire, being preserved in a sort of pickle. There was also once a stately cross in the middle of the town, as there were in many other places where queen Eleanor's body rested, when it was brought out of the north for interment at Westminster ; but it has been demolished. The market is on Saturday. The inhabitants, about 5000 ; and those who pay scot and lot about 600. This town gave the title lord Verulam to Bacon, who was buried in St. Michael's church. In 1451, and 1461, two celebrated battles between the houses of York and Lancaster, were fought near this spot.

ALBANUM, among chemists, denotes salt or urine.

ALBANUM MONS, in ancient geography, now called Mont Albano, sixteen miles from Rome, near where Alba Longa stood.

ALBANUS MONS, in ancient geography, to the north of Istria, called Albius by Strabo ; the extremity of the Alps, which, together with the mountains to the east joining it, called Monies Bebii, separated the farther Liburnia and Dal- matia from Pannonia.

ALBANY, a county of the state of New York, on Hudson's river, between Ulster and Saratoga; by which, with Schenectady county, it is bounded on the north, having the county of Hudson or Rensselaer on the east ; Green county on the south ; and Schoharie county on the west. It comprehends an extent of about 462 square miles, and is of early origin. The state of which it forms a part became a regular settlement, under the Dutch, about the year 1614; and in. 1691, Albany county sent two representatives, or delegates, to its first legislative assembly. It has a great variety of soil and produce, is agreeably diversified with hills and dales; and watered by numerous navigable creeks, lakes and rivers. In some places, particularly near

its northern boundary, the land is nearly barren indeed, though this county is deemed one of no small importance in North American statistics, the progress of cultivation does not appear to have been very rapid. The population in 1810 amounted to 34,600.

ALBANY, the capital of the above county, and of the state of New York, is situated on the western banks of the Hudson, about 160 miles north of New York city, and 394 miles south of Quebec. In a statistical point of view this is one of the most important cities in the United States. It derives considerable advantages from its situation, as a point of communication on the great roads between the eastern states and western country. In 1797, it is said to have contained about 6000 inhabitants ; and in 1810, to have doubled that number. Here are several good places of worship for the episcopalians, presby- terians, the baptists, the methodists, &c. ; and several noble public buildings connected with the municipal government of the city, the com- merce, amusements, &c. of the inhabitants. Near the capitol or state-house, a reservoir of hewn stone, constructed on a rising ground, re- ceives the water from a spring a few miles distant, and the inhabitants are thus plentifully supplied witli water through numerous small aqueducts. There are works here and in the neighbourhood

for the manufacture of mustard, chocolate, to- bacco, snuff, starch, &c. equal in extent of busi- ness to any on this continent. The climate is healthy ; and the inhabitants a mixture of almost every nation. The communication between this place and the city of New York, has, within these few years past, been greatly facilitated by the construction of steam boats, which perform their passages in about thirty-five hours, notwith- standing some rapids and shoals which are found in the passage; and also against the tides, which often

are strong in the current of the river.

ALBANY RIVER, in North America, after run- ning in a north-east direction, falls into St. James's bay. It communicates with several small lakes southward of Winnipeg Lake.

ALBANY, the modern district of the colony of the Cape of Good Hope, toward which the emigration of our countrymen has been recently encouraged by government. Its Dutch name is Zuurveldt ; and it forms a sub-division of the Drosdy of Uitenhagen. The interest which must now be attached to this spot by many British families, will warrant our noticing it in a distinct article. For more general views of the colony, see CAPE OF GOOD HOPE.

The district of Albany was the ancient pos- session of the Gonaquas Hottentots, a race that is now lost among the Caffres or other native tribes. It is bounded on the north and north- east by Caifraria from which it is separated by the Great Fish River, east and south by the Indian Ocean, and west by other parts of the district of Uitenhagen, from which it is divided by the Sunday River. Its average breadth in- land is about thirty miles, and its length seventy miles, containing 2000 square miles, or 1,280,000 acres of land, of which about 1,000,000 acres are unsettled, and destined to be those which shall be first cleared and occupied by the British emigrants.

*The Fish River is the principal stream of this part of the colony, and attracted the attention of the Portuguese so far back as the year 1498, when the admiral of their India fleet called it after his own name Rio d'Infante, and induced his government, on his return, to attempt a set- tlement on its banks. It is generally understood, on the faith of the Dutch authorities, (for it is remarkable, that no accurate survey of the colony of the Cape is in the hands of government,)**

- *►► Truth compels us to state,' says an able article on ' the Cape of Good Hope' in the*

Quarterly Review, No. XLIII. < that, during the last twenty years we have held possession of the Cape of Good Hope, not a single survey has been made : ††† that it is not known what extent of land is cultivable ; what rivers are navigable ; ††† to sum up all in one word, there exists no detailed in- formation on which the government at home can venture to make a single grant.' We certainly have not imbibed Mr. Hobhouse's fears, either of a ' burning sun' which is never felt, or of ' the iackals and tigers,' which are easily subdued here ; but \ve do submit that it would have been for more in keeping with the general intelligence of the colonial measures of adminstration to have met the enquiries of emigrants, with a better ac-

thattlus nver, in common with all the streams of the coast, has a bar of sand across the mouth, which would prevent the entrance of ships of burden : on the other hand, it has been remarked, that it is not probable the Portuguese would have built a fort, as they did, at its entrance, and attempted to have established here a permanent place of refreshment, had they found any such obstacle. It will be curious to be informed from our emigrant friends, whether any modern accretion of this, kind has really been formed ; or whether, from whatever motives, this is a misrepresentation of the Dutch. The authors of the Universal History make their quarrels with the natives to be the reason of the Portu- guese for their abandonment of this coast. Within the bar the Fish River is said to be of sufficient capacity to receive the largest vessels of war. Graham's Town is a new settlement of this dis- trict on the banks of the river, and the resi- dence of the deputy landrost, or chief magistrate of Albany.*

The Sondag or Sunday River, the second in importance, rises in the Nieuwveldt or Snow mountains, and, after watering a considerable portion of the Graff Reynet district, enters the ocean in a south-east direction in Zwartkops or

Algoa Bay. It is with difficulty crossed by the waggons of the colony, no such erection as' a bridge having entered into the thoughts of the Dutch farmers of the neighbourhood. Mr. Campbell's Travels in South Africa, 1815, re-

resents the five waggons with him as being ragged over in an hour with ten, and twelve, and one of them, with two and twenty horses; two waggons having been overturned a few days before, by the rapidity of the current.

The other rivers in this district are the Bos-jesman's, the Kareeka, the Kasowka, and the Kowie, or Buffalo River, which, though small, are highly acceptable. The road near the banks of the Kareeka, Mr. Campbell represents, as ' strewed with the dung of elephants,' and the trees and shrubbery of the neighbourhood as bearing frequent marks of their passage amongst them. The writer in the Quarterly Review to whom we have referred in a note, and of whose information we are inclined to think highly, says, that ' In the whole range of the colony there are not fifty of these creatures remaining.' This must, however, be speaking a little by anticipation. Zwartkops, or Algoa Bay, (which see) is the nearest inlet to the proposed new settlements. On its banks stand the town or drosdy of Uiten- hagen, which contains the residence of the land- rost, the under sheriff, and the principal local authorities of the eastern part of the Cape. Here is a church, a public school, the matri- monial court, [See the article CAPE OF GOOD HOPE for its useful functions) and a post office ; the latter communicating once a week with Cape Town, which is about 500 miles to the west. ' For the present, therefore,' says the writer just named, ' this place will be the general market for the new settlers ; but as population multiplies,

couni of this district, than could be obtained at Downing-street, or at least to have furnished them with a decent map of the colony.

ALBANY

and the surplus increases, some of the rivers will no doubt be made accessible, and fishing towns, and villages be established along the shore of Albany.'

In this neighbourhood there is a peculiar faci- lity of procuring salt for any purpose ; one of the largest salt pans of Uitenhagen, being si- tuated near the Sunday River on the borders of the district. It is an object of annual resort to the inhabitants of various neighbouring and remote regions in time of peace. The salt is taken out of the lake in masses of from four to six inches thick, which are broken down by stones or ham- mers ; but that which accumulates on the banks after a dry wind, is preferred, and is equal to any of the British islands. The bays and inlets here abound with excellent fish, which are said to have been never considerably disturbed, the Dutch boors being too lazy to look after them, even for personal gratification, and the native tribes so singularly indifferent to this advantage as not to ply a single canoe on the shore.

Travellers speak of the genera! aspect of this district, in the highest terms, and of the agreeable diversity of hill and dale which every where meets the eye and varies the soil. 'Though completely in a state of nature,' says Campbell (and this gentleman made a close survey of Al- bany, with a permission from the landrost of Uitenhagen to fix upon the most eligible sta- tions for two missionary establishments), ' the country through which we passed was beautiful in the extreme, much resembling a nobleman's park in England. The ground was covered with the finest green, interspersed with single trees and clumps of trees.' ' There is plenty of stone for building in various parts, and timber in every direction.'

Thickets of aloes, euphorbias, and other suc- culents, sometimes extending to a depth of thirty or forty miles, are uncleared ; and although the plains do not, as heretofore, swarm with game, flocks of

hart-bucks and spring-boks are occa- sionally seen. Here also are the holds of various beasts of prey that infest the colony. In the vales are numerous rills and springs that have been ac- cidentally discovered by travellers : many others are supposed to remain unopened. Graham's Town is never without a sufficient supply of water.

The soil is fit for any species of culture. The coarse sour grass of the plains, which gave its original name of Zuurveldt to the district, has been long suffered to grow and wither annually in unchecked rankness, except when the Caffres have set it on fire. But even this, as well as the heavy brushwood, which is every where found in clumps, argues ' the vigour of the soil. The vines of the colony are recommended to be cul- tivated on the sloping lands, and are said rarely to experience an unproductive season. Grain , pulse, artificial grain, and culinary vegetables, would do well in the plains. Tobacco has also been recommended as a staple article of culti- vation. The climate is highly salubrious, and neither subject to such sudden changes as that of the Cape Peninsula, nor to equal heat and cold with that of England.

The plan of colonizing this district is as fol- lows : ××× That the application of the ××50.000

voted by the House of Commons, be confined to persons, who, possessing the means, will en- gage to carry out at least ten able-bodied in- dividuals, above eighteen years of age, with or without families.

That every person so engaging, shall deposit at the rate of ××10 for every family taken out; in consideration of which, a passage will be pro- vided at the public expense, and also their vic- tualling, from the time of embarkation, until the time of landing at the colony.

That a grant of land will be made to each person carrying out the aforesaid number, at the rate of 100 acres for every such person or fa- mily whom he

takes out : one-third of the money advanced by him at the onset, to be repaid to him on landing, when the victualling at the public expense shall cease ; a farther propor- tion of one-third to be repaid when it is certi- fied to the governor that the settlers are actually placed on the lands assigned to them ; and the remaining third at the expiration of three months from the date of their location.

That the lands will be granted at a perpetual quit- rent, to be fixed, but which will be remitted for the first ten years ; this rent not to exceed in any case ►►2 sterling for every 100 acres ; sub- ject, however, to a clause, that the lands shall become forfeited to Government in case the party shall abandon the estate, or not bring it into cultivation within a given number of years.

That in the allotment of lands, the interests and the wishes of the parties will be consulted and attended to, as far as it may be consistent with the public and private interests of the colony, the several landrosts having instructions to that effect ; with a caution, however, in the distri- bution of ground, to preserve the waters, so that the most extensive accommodation may be afforded with regard to future settlers.

That in case 100 families shall proceed to- gether, and apply for leave to carry out with them a minister of their own persuasion, the Governor will, on their being actually fixed, assign a salary to the minister whom they may have selected to accompany them.

The lion, elephant, buffalo, wolf, Cape leopard, and a formidable list of the insect tribe (see our article on the Cape,) are the principal annoy- ances of the animal world. But the beasts of prey exist in no formidable numbers ; and will necessarily retreat before the march of civiliza- tion. The lion of the colony is said to be a remarkably sluggish, and almost timid animal. The elephants have constantly diminished within these few years ; and the buffalo, though fierce when provoked, never attacks unless

hunted. The leopard is the most ferocious of all the re- maining tribes. Mr. Latrobe speaks of him in common with other travellers, as the tiger of the Cape, but in fact the striped tiger is un- known here. This gentleman gives us the fol- lowing picture of the ferocity of this compara- tively small animal : ••• One of the wolves that a hunting party of his friends had lamed with a shot, having retreated into the brushwood, a con- siderable number of the Hottentots followed him there ; when the dogs started an anima'., which those among the bushes coxild not see.

The Hottentots remaining on the outside, perceiving it to be a tiger, called aloud to the missionary to return. He, therefore, with Philip, began to retreat backwards, pointing his gun, and ready to fire, in case the animal made his appearance. Suddenly a tiger sprang forward, but from a quarter not expected ; and by a fly- ing leap over bushes, fastened upon the Hotten- tot, seizing his nose and face with his claws and teeth. ' I measured the distance of the place from whence the tiger made his spring, to that on which the Hottentot stood, and found it full twenty feet, over bushes from six to eight feet high.'

Brother Schmitt observed, that if it had not been for the horror of the scene, it would have been a most amusing sight to behold the enraged crea- ture fly, like a bird, over the length of ground and bushes, with open jaw and lashing tail, screaming with the greatest violence. Poor Philip was thrown down in the conflict, and lay now upon, and then under, the tiger. The missionary might easily have made his escape, but his own safety never entered his thoughts. Duty and pity made him instantly rush forward to the assistance of the sufferer. He pointed his gun ; but the motion both of the Hottentot and the tiger, in rolling about and struggling, were so swift, that he durst not venture

to pull the trigger, le&t he should injure Philip. The tiger perceiving him take aim, instantly quitted his hold, worked himself from under the Hottentot, and flew like lightning upon brother Schmitt. As the gun was of no use in such close quarters, he let it fall, and presented his left arm to shield his face. The tiger instantly seized it with his jaw : brother Schmitt with the same arm catch- ing one of his paws, to prevent the out-stretching claws from reaching his body. With the other

Eaw, however, the tiger continued striking towards is breast, and tearing his clothes. Both fell in the scuffle, and providentially in such a position, that the missionary's knee, without design, came to rest on the pit of the tiger's stomach. At the same time he grasped the animal's throat with his right hand'keeping him down with all his might. The seizure of his throat made the tiger let go his hold ; but not before brother Schmitt had received another bite nearer the elbow. His face lay right over that of the tiger, whose open mouth from the pressure of his wind-pipe, sent forth the most hideous, hoarse, and convul- sive groans ; whilst his starting eyes, like live coals, seemed to flash with fire. In this situa- tion brother Schmitt called aloud to the Hotten- tots to come to his rescue, for his strength was failing, rage and agony supplying to the animal extraordinary force, in his attempts to disengage himself. The Hottentots at length ventured to enter the thicket, and one of them snatching the loaded gun which lay on the ground, pre- sented it, and shot the tiger, under the mission- ary's hand, right through the heart His death w►►is instantaneous ; his eyes shut, his jaw fell, and he lay motionless. Had any life been left' his dying struggles might yet have proved fatal 10 some of his assailants.' ►►► Lattole's Journal of a Visit to South Africa in 1815 and 1816, p. 306,

*OrtQ ' * '*

The state of the native tribes in this neighbour hood has also been considered as a source of alarm to the new settlers. This can only relate to the

present hostility of the Caffres, proceed- ing, as there is good reason to suppose, irom a temporary cause. The Hottentots within the limits of the colony have been but too entirely and unfeelingly subjugated by its former posses- sors, the Dutch ; and the Bosjesmans, and other wild tribes, are far to the north of this settle- ment. But in a long-standing quarrel between the chiefs of the Caffre frontier, the British authorities felt it proper to interfere, and even to suffer our forces to assist in carrying off the cattle of one party. For awhile, the line of military forts on iish lliver kept the subdued party in check ; but on the withdrawment of the cavalry, they were determined on revenge. They crossed the boundary of the colony in great numbers, and penetrating to the settle- ment of the Moravians, on the White River, drove away every head of oxen they met with, and killed many of their Hottentot keepers.

The Caffres have been often, of late, com- pletely repulsed ; but the boors are generally or- dered to be under arms, to resist any new incursion ××× a sort of summons which they very readily obey. The fact is, that the Caffre has sound reason to complain of the conduct of Europeans towards his country. During the Dutch sovereignty here, perpetual encroach- ments on the territories and possessions of these tribes were encouraged, on the title, we may suppose, which Kolbern, the historian, urged on the behalf of the States, to all the land from Mosell Bay to Mozambique, a territory of 300,000 square miles, which he says was ori- ginally purchased for 30,000 guilders ! When, or of whom, however, he does not condescend to state. The boors a few years since had not so much regard for the life of a Caffre as for that of one of their own oxen ; and no plausible or pro- mising opportunity of seizing their herds was ever overlooked. At the period of our first con- quest of the colony, the whole of this district was desolated by the quarrels thus fermented. The general policy of our government here has certainly been conciliatory; and the late dis- turbance is the only serious one that have

since taken place.

In conclusion we would say, let not emigrants or their friends overlook the disadvantages of the proposed point of emigration. The glowing pictures of vegetable beauty, which all travellers who have seen the country in the beginning of summer, concur in giving us, must not drive from our recollection the sober truth that summer ends. Of the forests of this coast there are por- tions, of course, that frown ' in green or russet o'er the land ' throughout the year ; and the best trees of the colony are certainly found in the district of Albany and its neighbourhood. But there is a stuntness of growth about them, and the grain is generally too twisted ever to render the timber important as an article of commerce. And no country shews a greater contrast between the beginning and the end of summer. The predominant soil of the colony being a stift clay, into which no plough will enter until it is

*thoroughly soaked with rain, the uncultivated parts when the wet season has terminated, (and plains of many square miles together are and must for ever remain of this description in the interior,) appear wholly naked and smooth, ex- cept where a few quartz pebbles, or gravel may glitter to the eye. Now this is the season at which the emigrants who have embarked lately for the Cape, will arrive at that colony. Some ob- jection has been taken on this head to the choice of government with regard to the season of em- barkation. To this it has been replied, that the rains beginning to fall partially towards the end of March, and rarely, if ever, later than April, the moment they begin the labours of the field should commence ; that a ship leaving England in December, will reach Algoa Bay in March ; and there will not then be more than sufficient time for the emigrants to distribute and settle themselves before the rains will have again begun. * The new settler will immediately take care to get his potatoes into the ground,' says the Quar- terly*

Revieic, ‘ in order that he may dig up the first produce of his labour by the end of Sep- tember, or the beginning of October ; with these potatoes, a crop of maize or Indian corn, and a few culinary vegetables, he should lay his ac- count for his first year’s supply ; and, in truth, this, with the cattle he may purchase from the neighbouring boors at fifty shillings a head, and sheep at six or seven, together with the fish that abound on every part of the coast, especially near the mouths of the rivers, will more than suffice to remove every apprehension of suffering from an actual want of food.’

*On the rains of the wet season the principal hopes of the farmer depend. If these fail, the crop fails. But this has been rarely known to occur more than once in seven years. The south-east winds are also occasionally injurious, and the descent of locusts has been sometimes as truly terrific in this neighbourhood as in any part of the world. We cannot but hope that some competent engineers will be found among the new settlers to direct the floods of the rainy season into the most profitable channels ; no country would so quickly repay an improved system of irrigation. * We are anxious, above all things,’ says the intelligent writer just quoted, ‘ to warn the emigrant against the fallacious idea, that he will there reap without sowing ; on the contrary, he may lay his account with a few of the first years of his residence being years of toil and anxiety.’*

The comparative stupidity and filthiness of the Hottentots ††† the lazy tyranny of the Dutch boors, who will become his neighbours, and who, in the accumulated filth of some of their establishments, are surpassed by no class of human beings ††† the want of markets for surplus produce, which will at first be found ††† the Dutch laws, which at present prevail here, and to which the trial by jury, and the confronting witnesses with the accused, or with each other, are alike unknown ††† the monopoly of all India and China goods enjoyed by the East India Company ††† and the depreciated paper currency, especially the

two latter, are further annoyances and disadvan- tages which emigrants and their friends must

add to this account : and thus have we placed before them, according to the most recent and authentic documents, a fair view of their pros- pects in this part of the world. To this ought also to be now added,! 826, that the first settlers have been greatly disappointed in their views; and that the probable general prospects of this settlement are far from promising.

ALBARA, or ALBORA, among physicians, a name sometimes given to a mixed species of ma- lignant itch, compounded of the morphew, ser- pigo, and lepra. The albara partakes most of the nature of the leprosy : some make it the same with the leuce, vitiligo, or morphew. See Ai.- PHOS.

ALBARA, in botany, the white poplar.

ALBARDEOLA, in ornithology, a name given by many authors to the platea, or spoon- bill ; a bird approaching to the nature of the heron.

ALBARII, in antiquity, properly denoted those who gave the whitening to earthen vessels, &c. in which sense they stood contradistinguished from dealbatores, those who whitened walls.

ALBARIUM OPUS, in the ancient building, the incrustation or covering of the roofs of houses with white plaster made of lime. This is otherwise called opus album. It differs from tectorium, which is the common name given to all roofing or ceiling, including even that formed of lime and sand, or lime and marble ; whereas albarium was restrained to that made of lime alone. The baths of Agrippa, Vitruvius says, were covered with the albarium, which was also used for its ornaments, and would take the polish of marble. The white chunam of Indian architecture, and the white patent stucco of M r. Chambers, the

banker, are also of this description.

ALBARRAZIN, an ancient and strong town of Arragon in Spain, seated on an eminence, near the river Guadalaviar, a little below its source, and on the frontiers of Valencia, and New Cas- tile. It is the seat of a bishop, and produces the best wool in all Arragon. Population about 1800; it is about 100 miles east of Madrid. Long. 1►►. 16'. W. lat. 40►►. 34' N.

ALBARREGAS, a considerable river of South America, in the kingdom of Granada ; which descending from the mountains of Bogotia, emp- ties itself into the lake Maracaibo.

ALBA TERRA, one of the numerous names for the philosopher's stone.

ALBATEGNI, a celebrated astronomer, who lived at the close of the ninth century, and de- rived his name from the town of Batan, between the Tigris and Euphrates, where he was born. In the year 882, he observed that the autumnal equinox was, on the 19th September, at 13h. 15'. at Aracta, or Ruca, a town of Chaldea. In 883, he found the longitude of the first star of Aries to be 18►►. 2'. ; the obliquity of the ecliptic to be 23►►. 35'.; and the motion of the earth's aphelion, and that of the stars, one degree in seventy years. He also ascertained the eccen- tricity of the earth's orbit. The imperfections of the astronomical tables of Ptolemy, induced Al- batecmi to compute new ones, which he adapted to th►►e meridian of Aracta. His work, entitle^ The Science of the Stars, founded on his own

observations, as well as those of Ptolemy, was

translated into Latin from the original Arabic, which lies unpublished in the Vatican, by Plato of Tibur. It was published at Nuremberg, in 1537, with some additions by Regiomontanus, and republished at Bologna in 1695, with an- notations by the same author. Albategni died in 888. See Phil. Trans. 1693, No. CCIV. and D'Herbelot's Biblioth. Orient.

ALBATI EQUI, in antiquity, a name given to those horses, in the games of the circus, which were distinguished by white cloths or furniture.

ALBATROSS ISLAND, a small island on the north of Van Diemen's land, frequented by in- numerable albatrosses and seals. Long. 144►►. 4'. E. lat. 40►►. 25'. S.

ALBATROSS POINT, a cape of New Zealand. Long. 184►►. 42'. W. lat. 38►►. 4 S.

ALBATROSSE, in ornithology, a species of the diomedea. See DIOMEDEA.

ALBAY, a volcano, and mountain of the is- land of Lucon, subject to frequent eruptions. It broke forth in the year 1814 with uncommon violence, and laid waste the whole neighbouring province, destroying thousands of the inhabitants. ALBAZIN, a town of Great Tartary, upon the river Amour, once fortified with a strong castle : it lies on the road from Moscow to Pekin. Long. 104►►. 10'. E. lat. 54►►. 0. N. ALBE', } Formed of the three words al ALBE'IT. J be it. Now obsolete.*

Saturne anon, to stenten strif and drede

Al be it that it is again his kind,

Of all this strif he gan a remedy find.

Chaucer. The Knightes Tale. b. i. Ne wou'd he suffer sleep once thitherward. Approach, albe his drowsy den was next.

Spenser.

This very thing is cause sufficient ; why duties, belonging to each kind of virtue (albeit the law of ►►eason teach them) should notwithstanding be pre ►►►cribed, even by human law. Hooker.

One whose eyes

(Albeit unused to the melting mood) Drop tears as fast as the Arabian trees Their medicinal gum. Shaktp.

LE BEU. Good sir, I do in friendship counsel you To leave this place, albeit you have deserv'd High commendation, true applause, and love, Yet such is now the duke's condition, That he mis-construes all that you have done.

Shaktp. As you Like it.

He, who has a probable belief, that he shall meet with thieves in such a road, thinks himself to have reason enough to decline it ; albeit he is sure to sus- tain some less (though yet considerable) inconve- nience, by his so doing. South's Sermons. . flashing pang ! of which the -weary breast Would still, albeit in vain, the heavy heart divest.

Lord Byron's Childe Harold. AIBE, in commerce, a small coin, current in Germany, worth only a French sol and seven derniers.

ALBE, a river of France, in Lorraine, which runs into the Sarre, at Sarre-alb, in the depart- ment of the Moselle.►►► Also a river of Hanover, in the principality of Luneburg, which falls into the Aller, near Ilethem.

ALBELEN, in ichthyology, the name of a fish of the truttuieous kind, called the Albulla and much resembling the ferra. It is caught in

the German and other lakes, and is found from five to twelve Ibs. weight : its colour is a fine silvery white.

ALBELLUS, in the Linnsean system, a species of

anseres, belonging to the genus mergus.

ALBEMARLE, or AUMARLE, a town of France, iu Upper Normandy, from whence the noble family of Keppel takes the title of earl. The serges of this town are esteemed. It is seated on the declivity of a hill, on the confines of Picardy, 35 miles north-east by north of Rouen, and seventy N.N.W. of Paris. It is the head of a canton in the department of the Lower Seine, arrondissement of Neufchatel, with 170 houses, and about 1720 inhabitants. Long. 1►►. 48'. E. lat. 49►►. 46'. N.

ALBEMARLE, a county of Virginia, North Ame- rica. In extent it is thirty-five miles square, and contains 20,000 inhabitants; the chief town is Charlottesville.

ALBEMARLE SOUND, on the coast of North Carolina, is a kind of inland sea, sixty miles in length, and from eight to twelve in breadth. It lies north of Pamplico Sound, and communicates with it ; as it likewise does with the Currituck, Roanoke, and Meherrin rivers. The neck leading into the sea is called Roanoke Inlet.

ALBEN, a market-town and mountain of Carniola, in Germany, where there are mines of quicksilver. It is two miles north-west of Ozirthnitz.

ALBENGA, or ALBENGUA, a town of Italy, in Genoa, anciently called Albingaunum, and Albium Ingaunum. It is the see of a bishop ; and was once a handsome town, but is not well peo- pled on account of the insalubrity of the air. It is situated on a beautiful and well cultivated plain: is a sea-port, about thirty miles south- west of Genoa, and twelve north-east of Oneglia. Long. 8►►. 3'. E. lat. 44►►. 4'. N.

ALBEOLA, a species of anas.

ALBERNUO, in commerce, a kind of cam- blet, brought From the Levant by the way of Marseilles.

ALBERONI, (Julius, Cardinal,) was the son of a poor gardener of Placentia ; and born in 1664. At the age of fourteen he obtained a post in the cathedral of Placentia, and in due time became priest and canon. Having had the good fortune to relieve M. Campistron, secretary to the duke of Vendome, when he was robbed near Placentia, he was recommended by him to his general, who took him into Spain ; where he rose by several gradations, to the dignity of cardinal, and archbishop of Valentia, and to the office of prime minister, in the court of Spain. He was indebted for both these honours to the patronage of the princess of Parma, whose marriage with Philip V. he had projected and accomplished. Alberoni's disposition was intriguing and enter- prising. Not content with effecting some do- mestic reforms and arrangements, in which were included many regulations favourable to the arts and to commerce ; he formed the design of an expedition against Sardinia and Sicily, and in order to prevent the interference of other powers, made an alliance with czar Peter, Charles XII. of Sweden, and the Ottoman Porte. He also proposed exciting the Turks to make war on the emperor,

to advance the pretender to the throne of Eng- land, by means of Peter and Charles, to divest the duke of Orleans of the regency of France ; and to annihilate the German power in Italy. But an union between England and France, was the result of the discovery of this plan ; and these powers concurred in declaring war against Spain, in 1719: making, as the condition of peace, the removal of Alberoni, and his banishment from the kingdom. Having, therefore, in December 1720, received an order to quit Madrid in twenty- four hours, he retired with great wealth; nor was it discovered before he had been two days on his journey, that he had abstracted the im- portant will of Charles II. of Spain, which ap- pointed Philip universal heir of the monarchy. Being followed, this document could only be wrested from him by force ; when pursuing his journey, he was arrested at Genoa, by order of the pope, on the charge of negociating with the Turks. On his liberation from the convent of the Jesuits, to which he was confined for a year, he engaged in new intrigues, and particularly in an unsuccessful enterprise against the small re- public of St. Marino. A bon mot of Benedict XIV. on this occasion has been very geflerally circulated : ' Alberoni is like a glutton, who, after having eaten a large salmon, cannot help casting a wishful eye at a minnow.' His views were more laudably directed to the establishment and endowment of a seminary of education for poor scholars in his native city. Aiberoni pre- served his health and vivacity to old age ; when his conversation usually turned on the recital of his own exploits, and was instructive and amus- ing ; though in his temper he was irascible and impatient. He died in 1752, at the advanced age of eighty-seven, leaving behind him the cha- racter of a great politician, daring as Richelieu, and supple as Mazarin, and with as little principle as either. His life, to the year 1719, has been

published by John Rousset, translated from the Spanish. A Testament Politique, published under the name of Alberoni, in 1753, is con- sidered spurious. Nouv. Diet. Hist. fyc.

ALBERT, of Aix, or ALBEHTUS AQUENSIS, was a canon of Aix-la-Chapelle, in the twelfth century, who travelled in the Holy Land, and wrote a History of the Expedition to Jerusalem, under Godfrey of Bouillon, and other leaders. It is esteemed an accurate narrative, and comprehends a period of twenty-four years. It was printed by Reineccius in 1662. Voss. de Hist. Lot. lib. iii. c. 6.

ALBERT I. surnamed the Triumphant, son of Rudolphus I. was elected emperor of Ger- many on the deposition and death of Adolphus, of Nassau, whom he himself killed in battle in 1298. He was assassinated in 1308, by his nephew, John, duke of Suabia, and other con- spirators. During the reign of this emperor the Swiss regained their independence, and laid the foundation of the Helvetic League. Bon. Fin. 1. 3, dec. 4.

ALBERT II. surnamed the Grave and the Mag- nanimous, the son of Albert IV. duke of Austria, was elected emperor in 1438, as also king of Hungary and Bohemia, and died after a short but honourable reign of a year and seven months.

Aventin. Ann. Boior. 1.7; JEn. Silv. Hist. Bo- hem, c. 56 ; Spondan. Annul, ann. 1437, &c.

ALBERT the Great, in biography, ALBERTUS MAGNUS, so called, on account of his great eru- dition, was born at Lawingen, in Suabia, about the year 1193, or, as some say, 1205. He was educated at Pavia, and hi 1236, made doctor in medicine at Paris ; where, having heard father Jourdain, the Dominican, preach, he was in- duced to take the habit ; and on the death of Joindain, was made vicar-general, then provin- cial of that order. He taught philosophy, me- dicine, and theology, at Cologne, and at Paris, to numerous auditories. St. Thomas Aquinas was his pupil, at Cologne. In 1260, he was made bishop of

Ratisbon ; but at the end of three years resigned that dignity, and retired to Cologne. From hence he travelled through Germany and Bohemia, to preach the crusade ; and in 1274 attended the council of Lyons. He continued to instruct the religious of his order at Cologne till the time of his death, November 1280. His very voluminous works were col- lected by father Jammi, a Dominican of Greno- ble, and published at Lyons in 1615, in twenty- one volumes in folio ; many of them are supposed to be spurious ; but he was undoubt- edly the author of numerous works on arithmetic, geometry, perspective or optics, music, astrology, and astronomy; under the titles ××× De Sphaera, de Astris, de Astronomia, item speculum Astro- nomicum, &c. Being a man of genius and knowledge superior to his contemporaries, he was charged, according to the spirit of the times, with being a magician. He is said to have con- trived a kind of androides, or machine in the human form, which he had brought to such per- fection, that it could speak : and of which many idle tales are related. Some have, without foundation, ascribed to Albert the invention of fire-arms. The chief object of his investigation was, probably, the philosopher's stone, as this was the ignis fatuus of the age. Gen. Did. Du- pin cent. xiii. Snicker's Hist. Philos. by En- fold, vol. ii. p. 371, 372.

ALBERT, margrave of Brandenburgh, and the last grand master of the Teutonic order, laid aside the habit of his order, embraced Lutheran- ism, and concluded a peace at Cracow in 1525, by which he was acknowledged duke of the east part of Prussia, (formerly called for that reason Ducal Prussia,) but to be held as a fief of Po- land, and to descend to his male heirs. See PRUSSIA.

ALBERT, (Jane d') daughter of Margaret, queen of Navarre, was betrothed at the age of eleven to the duke of Cleves, but the marriage was annulled. In 1548, she espoused Antony de Bourbon, duke of Vendome ; and in 1553 was delivered of a son, afterwards Henry IV. of France. In anticipation of this event, the king, her father, promised to put

into her hands his will, on condition that during her labour she should sing a Bearnoise song ; accordingly, it is said, when her father entered the chamber, she sang a popular song in the language of her na- tive country. The king, on her delivery, gave her a gold box containing his will, and at the same time threw round her neck a chain of gold, 2 G 2

saying, ‘ These are for you, but this is mine !” taking the infant in his arms, which he carried to his chamber. On the death of her father, in 1555, she became queen of Navarre, and estab- lished the protestant religion. Being invited to the French court, to assist at the nuptials of her son with Margaret of Valois, she expired sud- denly, not without suspicion of poison, in 1572, in the forty- fourth year of her age. She left several compositions in prose and verse. ••• Bayle.

ALBERT, (Louis Joseph d’) son of Louis Charles duke de Luynes, was bom in 1672. After serving gallantly in the armies of France, he entered into that of the elector of Bavaria, who, on becoming emperor under the title of Charles VII., created him a prince of the Holy Roman Empire, by the title of Prince of Grim- berghen. His political and military engagements did not wholly divert him from literature : his works are, Le Songe d’ Alcibiade, Paris, 1735, 12mo. ; Timandre instmit par son Genie, and other pieces, published under the title of Recueil de Differences Pieces de Litterature, Amsterdam, 12mo., 1759. He died in 1758, aged eighty- seven. Biog. Universelle.

ALBERT, (Erasmus) a German divine, educated under Luther, known only as the author of a book entitled the Koran of the Cordeliers, ridi- culing the Franciscans. It was printed in Ger-, man, with a

preface by Luther, in 1531, and in Latin, in 1542. The best edition is that of Am- sterdam, in 2 vols. 12mo., 1734. This author died in 1553.

ALBERTET, an Italian mathematician and poet of the thirteenth century, was a native of Provence. He wrote several poems in honour of his Platonic mistress, the marchioness of Malespine, which he left to a friend in order to be presented to the lady, instead of which he sold them to Faber d'Uzes, who published them as his own. The plagiarism being discovered, D'Uzes was whipped for the appropriation, agreeably, it is said, to a then existing law upon the subject. Vossius Moreri.

ALBERTI, (Leone Baptista,) was descended from a noble family in Florence ; and was a pro- ficient in painting, sculpture, and architecture. He wrote on each of these subjects; but his studies did not permit him to leave any thing considerable behind him in painting. He was much employed by Pope Nicholas V., and Lo- renzo Medici. His principal erections are at Florence, Mantua, and Rimini. His works are, first, Momus de Principe, Rome, 1520; second, Trivia sive de Causis Senatoriis, 1588, 4to. ; third, Fables or Apologues ; fourth, Treatise on Scripture; fifth, De Pictura, Basil, 4to., 1540, and Leyden, (Elzevir) 1649; sixth, De Re tfxhficatoria, 1485. The last has been translated mto Italian by Lauro, and was handsomely pub lished in Italian and English in 3 vols. folio, London, 1726. The invention of the Camera Obscura has been ascribed to this artist, who died in 1475.

ALBERTI, (di Vjllanova Francis) an able lexi- cographer, was born at Nice in 1737. His prin- cipal work is entitled, Dizionario Universale Cntico Enciclopedeco della Lingua Italiana, a new edition of which, in six volumes, was pub-

lished in the year in which he died at Lucca, 1803. Un. Biog. Diet.

ALBERTISCHER BASS, in music, a German expression, denoting a species of bqcs consisting of arpeggios,

invented by Dominico Alberti, an amateur, in the year 1730. See' Ex. 5.

ALBERTISTS, a sect of scholastics, so named from their leader >lbertus Magnus, a man of superior erudition, who was honoured with the title of a magician, and regarded by the alchy- mists as one of the most successful of their brethren.

ALBERTUS, in commerce, a gold coin, worth about fourteen French livres ; and first coined during the administration of Albertus archduke of Austria.

ALBESIA, a kind of shield used by the ancient Albenses, a nation of the Marsi. See DECUMANA.

ALBESZTI, a market town in Wallachia, be- tween the rivers Proava and Chiricon ; not far from the Syul. It is 70 miles N. E. of Bucharest.

ALBI, or ALBY, an ancient city of France, the capital of the department of Tarn, seated on the river of that name, which washes its walls, and serves both for defence and ornament. It is situated 335 miles south from Paris, 30 south by west of Rhodes, and 42 north-east of Tou- louse. It was the chief city of the Albigeois, and the ci-devant see of an archbishop. The cathedral is dedicated to St. Cecilia, and was once ornamented with a valuable silver shrine, of the Mosaic kind, of exquisite workmanship. It still possesses what is accounted the finest organ in France. The chapel of this pretended saint is magnificent, and adorned with paintings. The Lice is a fine large walk without the city ; distinguished by a terras above a deep mall, which serves instead of a fosse ; and two rows of fine trees, which are kept in excellent order. Here are some inconsiderable manufactories of coarse linen and woolen stuffs. Population

9860.

ALBI, anciently called Alba fucentes, a small town of Naples, in Abruzzo.

ALBICI, the inhabitants of Albioece, men- tioned by

Caesar. They were also called Reii Apollinares from their superstitious worship of Apollo. See ALBIOECE.

ALBICILLA, in ornithology, a species of Falco, in the Linnsean system, the aquila albi- cilla of Brisson, pygargus, albicilla hirund'inaria of Bellon, Gesner, and Ray, grand pygargue or great eagle of Buffon, braun fabler adler of Frisch, white-tailed eagle of Willughby, and cinereous eagle of Pennant and Latham. Its specific characters are, that its cere and feet are yellow, the tail-feathers white, and the inter- mediate ones black at their vertex. It is of the size of a peacock, and inhabits Europe, particu- larly Scotland and the neighbouring isles. Aris- totle Hist. Anim. lib. ix. b. 32, torn. i. p. 798, gives this species the epithet of Hinnularia, de- noting that it preys upon fawn, that is, young stags, deer, and roe-bucks

ALBICILLA, in conchology, is a species of the Nerita, with a striated shell, subdentated lips, the interior tuberculated. It is found at the Cape of Good Hope and in the Indian sea.

ALBIFICATION, albumfacere, to make white. Our lampes brenning bothe night and day To bring about our craft, if that we may Our fourneis eke of calcination And of wateres albification.

Chaucer, The Chanones Yemanne's Tale.

ALBIGENS.ES, in ecclesiastical history, the name of a religious sect of the twelfth century, eminently distinguished by their zealous opposi- tion to the church of Rome, as well as for the importance of many of the sentiments for which they contended. Too often ' their ashes flew, no marble tells us whither,' and the difficulty attending the detection of facts, amidst imperfect and often contradictory documents, renders it almost impossible to give any

very minute and accurate detail, either of their history or opinions. They have been frequently considered as the same people with the Waldenses, but little evi- dence of this identity can be deduced except their being confounded with them, and condemned under their name, by the decrees of their ene- mies.

The Albigenses first made their appearance in the vicinity of Toulouse, and the Albigeois in Languedoc, and may, with probability, be con- sidered as a sect of the Paulicians, who, having withdrawn from Bulgaria and Thrace, either to escape persecution, or from motives of zeal to extend their doctrines, settled in various parts of Europe. They acquired different names in dif- ferent countries, as in Italy, whither they origi- nally migrated, they were called Paterini and Cathari, and in France Albigenses, from the cir- cumstance, as Mosheim affirms, of their opinions being condemned in a council held at Alby, Lat. Albigia, in the year 1176. Others, however, maintain that this appellation was derived from the district itself which was their chief residence. Besides these epithets, they were called in dif- ferent times and places, and by various authors, Bulgarians, Publicans, Boni Homines, or good men, Petro- Brussians, Henricians, Albelardists, Arnoldists, and Passagers. In fact, the term was frequently employed to denote any descrip- tion of heretic or dissentient from the Romish church. Hence it becomes extremely difficult to ascertain their peculiar sentiments with pre- cision. Upon the authority of several writers, they are charged with holding Manicheism, in which is said to have consisted their chief dis- agreement from the Waldenses, who are allowed to have held a purer faith. The book of the Sentences of the Inquisition at Toulouse, charges them with believing that there are two Gods and Lords, good and evil ; that all things visible and corporeal were created by the devil, or the evil god ; that the sacraments of the Romish church are vain and unprofitable ; and that, in short, its whole constitution is to be condemned. They are stated to

have maintained the unlawfulness

of marriage ; to have denied the incarnation of Christ, and the resurrection of bodies ; and to have believed that the souls of men were spirits banished from heaven on account of their trans- gressions.

There were likewise said to be two classes of them ; the perfect and the believers. The per- fect boasted of their living in continence, of eating 'neither flesh, eggs, nor cheese. The believers lived like other men, and were even loose in their morals ; but they were persuaded they should be saved by the faith of the perfect, and that none could perish who received imposition of hands from them.

The Albigenses became so formidable to the Romish priesthood at the beginning of the thir- teenth century, that a crusade was formed for their extirpation ; and Innocent III. admonished all princes to oppose and expel them from their dominions. Raymond, earl of Toulouse, who was their chief protector, drew upon his head the thunders of excommunication ; and the legate who bore the papal decree, promised a plenary remission of sins to all who engaged in the holy league against them. Dominic, the inventor of the inquisition, joined in this service ; and Ray- mond, after much resistance, at length yielded to terror and self-interest. In the year 1209 the dreadful war began, and Simon, the celebrated earl of Montfort, became generalissimo of the army. Notwithstanding the intrepidity displayed by the objects of this military persecution, town after town was captured, and the poor people, who were stigmatised with the name of heretics, but whom Hume Hist. vol. ii. has characterised as ' the most innocent and the most inoffensive of mankind,' were hanged, slaughtered, and burnt, without mercy. The earl of Toulouse was assisted by the kings of England and Arra- gon, but he lost his dominions, and in vain ap- pealed to the council of Lateran. Raising some forces in Spain, while his son Raymond exerted himself in Provence, he regained the city of Toulouse, and part of his possessions. The earl died in 1221, and his son succeeded to the do- minions he

had recovered ; but pope Honorius III. stimulated Lewis of France to engage in the contest, and, though he encountered numerous difficulties, Raymond was necessitated at length to obtain peace upon very degrading conditions, and finally relinquished his protestantism ; the Albigenses became dispersed, and excited no further attention till they united with the Vaudois, and the Genevan reformed church.

ALBIGNY, a village and lordship of France, in the Lyonnois. ††† Also a small town on the river Nerre, in the province of Berry.

ALBIN, or AUBIN, a small town of France, in the department of the Aveyron, and arrondis- sement of Ville Franche. It contains about 3200 inhabitants, and is eight leagues north-west of Rhodes. E. Lon. 2††. 20'. N. Lat. 44††. 31'.

ALBINO, LEUCJETHIOP. or WHITE NEGROES, a variety of the human species, that frequently occurs in Africa. Ptolemy and Pliny apply the term Leucaethiopes to a tribe of people in Ni- gritia. The Portuguese first gave the name of Albino to the white negro. Instances are met with in different parts of Europe ; but races, the hue of whose skin approaches most nearly to black, are in general most liable to deviations in colour. Albinos have been seen in the Indies, in Borneo, in New Guinea, in Java, and in Cey- lon.

The peculiarities of the Albino appertain to the eye, the skin, and the hair. The iris of the eye is of a bright red, or of a blue colour ; and the whole organ is peculiarly sensible to the im- pression of light. The skin is either uncommonly fair, or of a dull white colour, similar to that of a recently dead body. The hair is either white and silky,, or of a very flaxen colour; and, ac- cording to Dr. Pritchard, when this variety springs up among the negroes, the woolly excres- cence which covers the

heads of that race is white.

These characters have been met with in ani- mals, both wild and domesticated. In the buffalo, the common roe, sometimes, though rarely, in the elephant ; in the bear, the dromedary, apes, oquirrels, rabbits, rats, mice, hogs, moles, opos- sums, martins, goats, and foxes. Several species of birds, as crows, blackbirds, canary-birds, part- ridges, fowls, and peacocks, exhibit similar phe- nomena, having their feathers of a pure white colour, and their eyes red.

Buffon does not consider the Albinos as a particular race, but as individuals who have accidentally degenerated from the original stock ; and considers the production of whites by negro parents as supporting his opinion. According to this author, they are among the negroes what Wafer tells us the white Indians are among the yellow or copper- coloured Indians of Darien.[illegible] *1 It is singular,' he remarks, < that this variation of nature takes place from black to white only, and not from white to black. It is no less sin- gular, that all the people in the East Indies, in Africa, and in America, where these white men appear, lie under the same latitude : the Isthmus of Danen, the negro country, and the island of Ceylon, are under the very same parallel. White then,' he continues, ' appears to be the primitive colour of nature, which may be varied by climate, by food, and by manners, to yellow, brown, and black; and which, in certain circumstances, returns, but so greatly altered that it has no re- semblance to the primitive whiteness.'*

The following is Wafer's account of the Albinos, which are found among the Indians of the Isthmus of Darien : ' They are white, and there are of them of both sexes ; yet there are but few of them in comparison of the copper- coloured possibly but one to two or three hun- dred. They differ from the other Indians chiefly in respect of colour, though not in that only.[illegible] *Their skins are not of such a white as those of*

fair people among Europeans, with some tincture of a blush or sanguine complexion ; neither yet is their complexion like that of our paler people, but it is rather a milk-white, lighter than the colour of any Europeans, and much like that of a white horse. For there is this further remarka- ble in them that their bodies are beset all over, more or less, with a fine, short, milk-white down, which adds to the whiteness of their skins ; for they are not so thick set with this down, espe cially on the cheeks and forehead, but that their skin appears distinct from it. The men would probably have white bristles for beards, did they ndt prevent them by their custom of plucking the young beard up by the roots continually.' ††† ††† Their eye-brows are milk-white also, and so is the hair of their heads, and very fine withal, about the length of six or eight inches, and in- clining to a curl. They are not so big as the other Indians, and what is yet more strange, their eye-lids bend, and open in an oblong figure, pointing downwards at the corners, and forming an arch, or figure of a crescent, with the points downwards. From hence, and from their seeing so clear as they do in a moon-shiny night, we used to call them moon-eyed. For they see not very well in the sun, poring in the clearest day, their eyes being but weak, and running with water if the sun shines towards them ; so that in the day time they care not to go abroad, unless it be a cloudy dark day. Besides, they are but a weak people, in comparison of the others, and not very fit for hunting or other laborious exercise, nor do they delight in any such. But notwithstanding their being thus sluggish and dull in the day- time, yet when moon-shiny nights come, they are all life and activity, running abroad and into the woods, and skipping about like wild bucks, and running as fast by moon-light, even in the gloom and shade of the woods, as the other Indians do by day ; being as nimble as they, though not so strong and lusty. The copper- coloured Indians seem not to respect them so much as those of their own complexion, looking on them as something monstrous. They are not a distinct race by themselves, but now and then one is bred of

a copper-coloured father and mother ; and I have seen of less than a year old of this sort. Some would be apt to suspect they might be the offspring of some European father ; but, besides that the Europeans come little here, and have but little commerce with the Indian women when they do come, these white people are as different from the Europeans in some re- spects, as from the copper-coloured Indians in others. But neither is the child of a man and woman of these white Indians, white like the parents, but copper-coloured as their parents were. For so Lacenta, the chief of one of the Indian tribes, told me, and gave me this as his conjecture, how these came to be white, that it was through the force of the mother's imagina- tion, looking on the moon at the time of the conception ; but this I leave others .to judge of. He told me withal, that they were but

short-lived.' This author accompanied Dampier in his voyage round the world.

Dapper, in his Description de 1'Afrique, speaks of Albinos as a variety seen in Lower Ethiopia, and remarks, that they have flaxen hair, blue eyes, the countenance and body so white, that at a distance they may be mistaken for Europeans; but when approached the difference is readily perceived. He observes also, that the colour of the skin is not that of a bright or natural white, but pale and livid, like that of a dead body, or of one affected with the leprosy ; that their eyes are weak by day, but that by the light of the moon they are brilliant, and their sense of sight strong. They generally sleep during the day, and go abroad in the night. They are mostly males ; are not so robust and vigorous as other men, but are exceedingly active during the night ; and when the moon shines they run through the forests with as much alacrity as other men do in the brightest day-light. Dapper further remarks, that they are put to labour in the mines of

Brazil, but that they prefer death to a life of slavery. The negroes regard them as monsters, and there- fore endeavour to prevent them from multiplying their species. As the sight of Albinos is so feeble during the day that they are almost in- capable of discerning any object ; the negroes, their enemies, attack them during that time, and readily secure them.

In Saussure's Voyages dans les Alpes, is the following account of two boys, at Chamouni, who have been called Albinos. ' The elder, who was at the end of the year 1 785 about twenty, or one and twenty years of age, had a dull look, with lips somewhat thick, but nothing else in his features to distinguish him from other people. ??? The other, who is two years younger, is rather a more agreeable figure ; he is gay and sprightly, and seems not to want wit. But their eyes are not blue ; the iris is of a very distinct rose- colour ; the pupil too, when viewed in the light, seems decidedly red ; which seems to demon- strate, that the interior membranes are deprived of the uvea, and of that black mucous matter that should line them. Their hair, their eye-brows, and eye-lashes, the down upon their- skin, were all, in their infancy, of the most perfect milk- white colour, and very fine ; but their hair is now of a reddish cast, and has grown pretty strong. Their sight too is somewhat strengthened ; though they exaggerate to strangers their aver- sion for die light, and half shut the eye-lids to give themselves a more extraordinary appearance. But those who, like me, have seen them in their infancy, before they were tutored to this deceit, ami when too few people came to Chamouni to make their affection profitable to them, can attest that they then were not much offended with the light of day. At that time, they were so little desi- rous of exciting the curiosity of strangers, that they hid themselves to avoid such ; and it was neces- sary to do a sort of violence to them before they could be prevailed on to allow themselves to be inspected. It is also well known at Chamouni, that when they were of a proper age they were unable to

tend the cattle like the other children at the same age ; and that one of their uncles maintained them out of charity, at a time of life

when others were capable of gaining a subsistence by their labour. ††† I am therefore of opinion that we may consider these two lads as true Albinos ; for if they have not the thick lips and flat noses of the white negroes, it is because they are Albinos of Europe, not of Africa. This affinity affects the eyes, the complexion, and the colour of the hair ; it even diminishes the strength, but does not alter the conformation of the features. ††† Besides, there are certainly in this malady various degrees : some may have less strength, and be less able to endure the light ; but these circumstances in those of Chamouni are marked with characters sufficiently strong to entitle them to the unhappy advantage of being classed with that variety of the human species denominated Albinos.'

- *When nature,' continues this author, 'presents the same appearance often, and with circum- stances varied, we may at last discover some general law, or some relation which that appear- ance has with known causes : but when a fact is so singular and so rare, as that of those Albinos, it gives but little scope to conjectures: and it is very difficult to verify those by which we attempt to explain it. I at first imagined that this dis- ease might be referred to a particular sort of organic debility ; that a relaxation of the lym- phatic vessels within the eye might suffer the globules of the blood to enter too abundantly into the iris, the uvea, and even into the retina, which might occasion the redness of the iris and of the pupil. The same debility seemed also to account for the intolerance of the light, and for the whiteness of the hair/*

But professor Blumenbach, who has made many profound observations on the organs of sight, and has considered with great attention the Albinos of Chamouni, attributes their infir- mity to a

different cause. He says, it is generally to be seem in the warm blood animals ; but that he has never met with it in those of cold blood ; and is of opinion, that the redness of the iris, and of the other internal parts of the eye, as well as the extreme sensibility that accompanies this redness, is owing to the total privation of that brown or blackish mucus, that, about the fifth week after conception, covers all the interior parts of the eye in its sound state. He observes that Simon Pontius, in his treatise de Coloribus Oculorum, long ago remarked, that in blue eyes the interior mem- branes were less abundantly provided with this black mucus, and were therefore more sensible to the action of light. This sensibility of blue eyes agrees very well, says M►► Blumenbach, with northern people, during their long twilight ; while, on the contrary, the deep black in the eyes of negroes enables them to support the splen- dour of the sun beams in the torrid zone. As to the connection between this red colour of the eyes, and the whiteness of the skin and hair, the same learned physiologist says, that it is owing to a similarity of structure, consensus ex similiru- dine fabrics. He asserts, that this black mucus is formed only in the delicate cellular substance, which has numerous blood-vessels contiguous to it, but contains no fat; like the inside of the eye, the skin of negroes, the spotted palate of several

domestic animals, &c.' And, lastly, he says, 'that the colour of the hair, generally corresponds with that of the iris.' See Gazette Lett, de Gottengen, Oct. 1787.

At the time M. Blumenbach was reading this memoir to the Royal Society of Gottingen, M. Buzzi, surgeon to the hospital at Milan, an eleve of the celebrated anatomist Moscati, published in the Opusculi Scelti

de Milan, 1784.t. vii.p. 11, a very interesting memoir, in which he demon- strates by dissection what Blumenbach had only supposed. A peasant of about forty years of age, died at the hospital of Milan of a pulmonary disorder. His body was exceedingly remarkable for the uncommon whiteness of the skin, of the hair, of the' beard, and of all the other covered parts. M. Buzzi, who had long desired an opportunity of dissecting such a subject, immediately seized upon this. He found the iris of the eyes per- fectly white, and the pupil of a rose-colour. The eyes were dissected with the greatest possible care, and were found entirely destitute of that black membrane which anatomists call the uvea ; it was not to be seen either behind the iris, or under the retina. Within the eye there was only found the choroid coat extremely thin, and tinged of a pale red colour, by vessels filled with discoloured blood. What was more extraordinary, the skin, when detached from different parts of the body, seemed also entirely divested of the rete mucosum : maceration did not discover the least vestige of this, not even in the wrinkles of the abdomen, where it is most abundant and most visible. M. Buzzi also accounts for the whiteness of the skin and of the hair, from the absence of the rete mucosum, which, according to him, gives the colour to the cuticle. Among other proofs of this opinion, he alleges a known fact, that if the skin of the blackest horse be ac- cidentally destroyed in any part of the body, the hairs that afterwards grow on that part are always white, because the rete mucosum, which tinges those hairs, is never regenerated with the skin. What is it then that destroys the rete

mucosum in such persons ? M. Buzzi relates a singular fact which seems to throw some light on this subject. A woman of Milan, named Calcagni, had seven sons. The two eldest had brown hair and black eyes ; the three next had white skins, white hair, and red eyes : the two last resembled the two eldest. It was said that this woman, during the three pregnancies that produced the Albinos, had a

continual and im- moderate appetite for milk, which she took in great quantities : but that when she was with child of the other four children, she had no such desire. It is not, however, ascertained, that this preternatural appetite was not itself the effect of heat or internal disease, which destroyed the rele mucosum in the children before they were bom. According to Bichat, the internal portion of the hair, consists apparently of two systems of minute vessels. One of these has the functions of the vascular system in general, and affords a passage to excreted fluids ; the other contains the colour- ing matter in the form of a stagnant fluid, the absence of which in the Albino occasions the whiteness, or flaxen colour, of the hair. There appears to be a constant relation preserved be- tween the complexion of the skin, the colour of the hair, and the hue of the pigment of the eye. This is clearly shown in the Albino, and in all kinds of animals liable to a similar variety. The Albino cannot correctly be regarded as afflicted with disease ; there is defective organization, but not morbid action, and the phenomena which result from the absence of the black pigment, &c. in" this variety of the human species, serve to point out, in the clearest manner, the uses to which these parts are subservient. See Philos. Trans. 1706-7. Nicholson's Journal, ix. Soemmering, Jcones Oculi Humani. Wafer's Account of the Isthmus of Amercia, 1704. Saussure's Voyages dans les Alpes, &c.

ALBINO, a well-built but small town of Italy, in the Lombardo-Venetian. kingdom, district of Bergamasco.

ALBINOVANUS, a Latin poet whom Ovid styled divine. No part of his works is extant, except two elegies on Drusus and Mecsenas.

ALBINTEMELIUM, Albintimelium, or at full length, albium intemelium, in ancient geo- graphy, now Vintimiglia, situated on the south- west of the territory of Genoa, near the borders 'of the country of Nice, with a port on the Mediterranean, at the mouth of the Rivulet Rotta, about half way between Monaco and South Remo. Lon. 7□□. 40'. E. lat.

43►►, 17'. N.

ALBINUS, in ancient history, an African who, having entered into the Roman armies, was made governor of Britain by Commodus ; after the murder of Pertinax he was elected emperor by the soldiers in Britain, amounting to about 50,000 men ; but Severus having been elected by his own army, met him in Gaul with the same number, attacked and conquered him. His head was cut off by the order of Severus, and his body thrown into the Rhone. He was al- ways attached to a military life, and when at school used to repeat with ardour, die following liue from \7irgil,

'Arma amcns capio, nee sat rationis in armis.

JEneid. ii. 314.

A writer of the name of Codrus gives an ex- aggerated account of his appetite, according to whom he devoured for breakfast no less than 500 figs, 100 peaches, 20 pounds of dry raisins, ten melons, and 400 oysters.

ALBINUS, (Bernard Siegfred) a celebrated phy- sician and anatomist, was born of an illustrious family, at Frankfort on the Oder, in 1697. His father was then professor of medicine in the uni- versity of Frankfort; but in the year 1702, was appointed professor of anatomy and surgery in the university of Leyden. Here the son studied under Boerhaave, the most eminent master in Europe, who, from the abilities which he dis- played, had no difficulty in prognosticating his future eminence. On the death of his father, he was appointed to succeed him as professor of anatomy ; and Delivered an oration, De vera via ad fabrics humani corporis cognitionem ducente ; which was heard with universal approbation. He wrote, 1. Index Supellectilis Anatomicae Raviana', 4to. Ludg. Bat. 1725. 2. De Ossibus-

Corporis Ilumani, 8vo. Lugd. Bat. 1726 ; an improved edition with plates in 1762. 3. His- toria Musculorum Hominis, 4to. Lugd. Bat. 1734. 4. Annotationes Academicae, 4 vols. 4to. : besides treatises on the Vascular System of the Intestines, &c. and revised editions of Harvey, Vasalius, Fabricius, and Eustachius ; and, after most ably filling the professor's chair for nearly half a century, died at Leyden in 1770.

ALBINUS, (Christian Bernard) brother of the foregoing, was professor of anatomy at Utrecht, where he died in 1752. He is author of 1. Specimen anatomicum exhibens novam tennium Hominis Intestinorum descriptionem, Leyden, 4to. 1722, 8vo. 1724; 2. De Anatome errores detegente in Medicina, Utrecht, 1723. ••• Biog. Univ.

ALBIOECE, or ALEBECE, in ancient geogra- phy, otherwise called civitatis reiensium ; now llei/, in Provence, about eighteen leagues to the north-east of Toulon, on the north side of the rivulet Verdon, was originally a Roman colony, and celebrated for the devotion of its inhabitants to Apollo. See ALBICA.

ALBION, in ancient geography, album, white, Lat. the island of Great Britain, so called by Caesar, on account of the chalky cliffs on the English coast. It distinguished this island from Hibernia and the other British islands. Aga- themerus, lib. xi. c. 4, speaking of the British islands, says, they are many in number ; but the most considerable are Hibernia and Albion ; and Ptolemy, lib. ii. c. 3, calls Albion a British island. Pliny, H. N. lib. iv. c.16. tom,i. p. 222, observes, that the island of Britain, so much ce- lebrated by the Greek and Latin writers, was formerly called Albion ; the name of Britain being common to all the islands round it.

ALBION, NEW, a name given by Sir Francis Drake to the extensive district of California and part of the north-west Coast of America, of which he took

possession in 1578. Humboldt, and recent geographers, limit the denomination of New Albion to that part of the coast which extends from the 43rd to the 48th degree of north lati- tude, which was visited, and all its coasts minutely explored, by Vancouver, in May, 1792. Re- garded in an agricultural point of view, says this navigator, I should conceive it capable of high improvement, notwithstanding the soil in general may be considered to be light and sandy. Its spontaneous productions in the vicinity of the woods are nearly the same, and grow in equal luxuriance with those under a similar parallel in Europe ; favouring the hope, that if nutritious exotics were introduced, and carefully attended to, they would succeed in the highest degree. The mildness of the climate, and the forward- ness of every species of plants, afforded strong grounds in support of this opinion. The in- terruptions we experienced in the general se- renity of the weather were probably no more than were absolutely requisite in the spring of the year to bring forward the annual productions. These were attended with no violence of wind, and the rain which fell, although disagreeable to travellers, was not so heavy as to beat down and destroy the first efforts of vegetation. Under all these favourable circumstances, the country yet

labours under one material disadvantage, in the scarcity of fresh water. The streams, however, that we met with appeared sufficient to answer all purposes, in the domestic economy of life, to a very numerous body of inhabitants ; and, were the country cleared and searched, there can be little doubt that a variety of eligible situations might be found for establishments, where, with proper exertions, wholesome water might be pro- cured.

The mountains were covered with pines even to their summits. Insulated peaks, however, were observed towering above the general height of the ridges to which they belonged, and rising far above the line of perpetual snow. Near the coast the country offered the finest prospects. Extensive lawns were seen covered with luxuriant grass,, or diversified

with woods and flowers, so that no pleasure grounds could have been more skilfully or more agreeably arranged. The soil for the most part was found to be a light sandy loam, in several places of very considerable depth, and abundantly mixed with decayed ve- getables. The forests with which the country was covered consisted of poplar, arbor-vita, common yew, black and common dwarf oak, American ash, common hazel, sycamore, maple, oriental astintus, American alder, common willow, the Canadian alder, small fruited crab and Penn- sylvanian cherry trees. Aquatic birds are nu- merous along the shore, and at the outskirts of the woods near the coast were found, in great numbers, the white-headed and brown eagle, ra- vens, carrion crows, American king'sfisher, a very handsome species of wood-pecker, and, on some of the low projecting points and open places in the woods, a bird which seemed to be of the heron species, with a remarkably long neck and legs, and its body equal to the size of the largest turkey. Its plumage is of a light brown, and when erect its height could not be less than four feet. Partridges and humming birds are also found in abundance in the woods. The only living quadrupeds seen by Vancouver or his crew were a black bear, several wild dogs, rabbits, squirrels, rats, mice, and another small animal, whose effluvia was the most intolerable that they had ever experienced. From the skins shewn them by the inhabitants, all the animals common to the western coasts of America seemed to abound in this district.

The country is but thinly inhabited, and the manners of the natives are exactly similar to those of Nootka, described by captain Cook. The only difference is, that they are not so stout, and are less filthy in their habits; not covering their bodies with such a profusion of paint, nor loading their hair with that immense quantity of oil and colouring matter which is customary among the people of Nootka. Their hair in general is neatly combed and tied behind. Their dress is a woollen garment, or the skins of deer, bears, &c. Some wear dresses manufactured of bark, which like their woollen

dresses are very neatly manu- factured. Their spears, arrows, and other wea- pons, are generally barbed ; some are pointed with common flint, agate, and bone ; but most of them with thin flat iron. Their bows, which, are made of yew, are of a superior construction.

in general from two and a half to three feet in length, and about three quarters of an inch thick, neatly made, tapering to each end, which ter- minates in a shoulder and a hook for the security of the bow-string. Their habitations are rude in the extreme, being composed of cross sticks, with a few mats laid upon them. They are a wandering race, living almost entirely by hunting and fishing. But some deserted villages were found.

ALBIREO, a star of the third or fourth mag- nitude, in the constellation Cygnus.

ALBIS, in ancient geography, now the Elbe, which divided ancient Germany in the middle, and was the boundary of that country, so far as it was known to the Romans : all beyond they reckoned uncertain, no Roman except Drusus, and Tiberius having penetrated so far as the Elbe. A. U. C. 744, or about six years before Christ, Domitius jEnobarbus, crossing the river with a few, merited a triumph ; so glorious was it reckoned at Rome to have the passage accom- plished. In the following age, however, the river that before occupied the middle of ancient Ger- many, became its boundary to the north, from the irruptions of the Sarmatae, who possessed them- selves of the Transalbin Germany. See ELBE.

ALBIUM INGANNUM. See ALBENGA.

ALBOGALERUS, in Roman antiquity, a sa- cerdotal cap, or ornament, worn by the priests, styled flamen dialis, otherwise called galerus.

ALBOIN, a king of the Lombards, in the sixth century, who, having slain the son of Turi- sund, king of the Gepidae, when fighting under the banners of his father Audoin, the Lombards requested that he should be permitted to sit at the royal feast, by which the victory was to be commemorated. But as this was contrary to the custom of the country, till the young prince should be invested with arms by a foreign king, Alboin set out with forty of his companions to visit the court of Turisund. At the entertain- ment prepared for the occasion, Alboin occupied the seat of the prince whom he had slain in battle. This circumstance awakened the feel- ings of the father : and his surviving son Cunis- mund, with the other Gepidae, who perceived his agitation, determined to be revenged upon the Lombard prince. They addressed their visitors in the language of reproach and contumely. The Gepidce sprung from their seats at the ap- pointed signal. The young hero and his brave associates grasped their swords ; but the rising tumult was instantly assuaged by the interference of Turisund, who generously dismissed Alboin with the blood-stained arms of the prince whom he had slain. When Alboin succeeded to the throne, he asked in marriage the fair Rosamond, the daughter of Cunismund, who now swayed the sceptre of the Gepidae. This request being refused, the Lombard king, with the assistance of the Avars, overturned the kingdom of the Gepidae in 566 ; and Cunismund having fallen in battle, his fair daughter became the prize, and afterwards the wife, of her victorious lover. Hav- ing relinquished these territories to the Avars, who promised to restore them in the event of misfortunes, the Lombards attacked Italy, and made themselves masters of the whole country,

from the mountains of Trent to the gates of Ra- venna and Rome, which henceforth became the kingdom of the conquerors. In a feast at Vienna, given by Alboin to his fellow-soldiers, a cup, formed of the skull of Cunismund, was intro- duced upon the table. The brutal and unfeeling Lombard placed it in the hands of Rosamond. She touched the sacred cup with

trembling lips, which at the same instant muttered vengeance against her savage lord. After some fruitless attempts to procure an accomplice, she selected Peredeus, one of the Lombard chiefs ; but found it necessary to employ art to secure his assistance. Rosamond secretly supplied the place of one of Peredeus's mistresses, and then assured her de- ceived companion, that either his death, or that of Alboin, must be the consequence of their criminal indulgence. Peredeus did not hesitate about the alternative which he was to choose. He introduced the assassin into the chamber of his master : Alboin starting from his sleep, at- tempted to draw his sword, but Rosamond had secured it in the scabbard ; and the Lombard king, with only a stool to defend him, fell by the spears of his murderers, A. D- 573. See Uni- vers. Hist. vol. p. 337. Gibbon, vol. viii. p. 207. chap. 44. Giannome, Hist, de Naples, liv. iii. cap. 4.

ALBON, (James D',) in biography, marquis of Fronsac, was one of the greatest generals of the sixteenth century, and rose to high military eminence, in the reigns of Henry II. and Charles IX. of France. By the former he was made marshal of France in 1547, and was chosen to carry the collar of his order to Henry VIII. of England, who decorated him in return with that of the garter. He acquired great reputation in the wars of 1552, and 1554; and in 1557, was made prisoner at the battle of St. Quintin. After the death of Henry II. he was one of the trium- virate who governed the kingdom four or five years in spite of Catharine of Medicis. He was killed in 1562, at the battle of Dreux, by a per- son whose confiscated estate he possessed. The Huguenots, who did not love him, used to call him the Harquebuseer of the west. 'He had the qualities of a soldier and a courtier; was ad- dicted to every kind of luxury, excelled in polite- ness and the amiable accomplishments, and on the day of battle was distinguished by his pru- dence and his courage. His daughter and heiress is said to have been poisoned by her own mother for her property. Gen. Biog.

ALBORAK, amongst the Mahommedan writers, the beast on which Mahomet rode in his journeys to heaven. The Arab commentators give many fables concerning this extraordinary animal. It is represented as of an intermediate shape and size between an ass and a mule. A place, it seems, was secured for it in paradise at the intercession of Mahomet; which, however, was in some measure extorted from the prophet, by Alborak's refusing to let him mount him, upon any other condition, when the angel Gabriel was come to conduct him to heaven.

ALBORAN, an island lying between the coast of Spain and Africa.

ALBORG, or AI.BOURG. See AALBORG.

ALBORO, in ichthyology, a name by which

the orythrinus, a small red fish, caught in the Me- diterranean, is commonly known in the markets of Rome and Venice.

ALBRICIUS, born at London in the eleventh century, was a great philosopher, an able physi- cian, and well versed in polite literature. He wrote first, De Origine Deorum; second, De Ratione Veneni ; third, Virtutes Antiquorum ; fourth, Canones Speculativi. Other works have been attributed to him, which belong, as is sup- posed, to a bishop of Utrecht, of his name, who died in 784.

ALBUCA, BASTARD STAR OF BETHLEHEM : a genus of the monogynia order, belonging to the hexandria class of plants ; and in the natural method, ranking under the tenth order, coro- narise. The characters are : CAL. wanting : COR. six oval oblong petals, which are persistent : STAM. six three-sided filaments the length of the corolla; of these, three are fertile, with versatile antherse; three are barren, without

an thera : FIST. an oblong three-sided germeri ; the stylus three- sided : the pericarpium, an oblong obtuse tri- angular capsule, having three cells, and three valves : the seeds are numerous, flat, and incum- bent. Of this genus Linnaeus reckons only two species ; viz. first, Albuca major, or star flower, ###with spear-shaped leaves, a native of Canada, and some other parts of North America : Second, Albuca minor, or African star flower, a native of the Cape of Good Hope. ,

ALBUCUS, in botany, a name used by some for the white asphodel.

ALBUGINEA, in anatomy, the outermost coat, or tegument of the eye ; otherwise called adnata, and conjunctiva. It takes its name al- buginea from its whiteness ; as it is this that forms what we call the album, or white of the eye. Albuginea is also applied to the third coat of the testicles ; so called from its colour which is white. It is a strong thick membrane, very smooth on the outer surface ; the inner, which adheres to the substance of the testicle, being rough and uneven. In its upper part are inserted blood vessels, nerves, and lymphatics, which from thence, send divers branches into the sub- stance of the testicles.

ALBUGIN'EOUS, albus, albumen, albugo, applied to a white speck in the eye ; or, par- taking of the nature of albumen, one of the con- stituent properties of animal substances. Ejrgs will freeze in the albvgineoia part thereof.

Brown's Vulgar Errours.

ALBUGINEUS, in anatomy, a term some- times applied to the aqueous humour of the eye. ALBUGO, or LEUCOMA, is defined by phy- sicians, to be a distemper occasioned by a white opaque spot, growing on the cornea of the eye, and obstructing vision. See MEDICINE, INDEX. ALBULA, in ichthyology, a genus of fishes of the truttaceous kind, having no teeth. The prin- cipal species are ; first, Albula indica, a small rtsh, resembling a herring, caught about the

shores of the East Indies, and called by the Dutch the wit-fish. Second, albula nobilis, a truttaceous fish, found in great plenty in the lakes of Germany, and other places.

ALBITLA, ?n natural history, mineial waters

of an aluminous kind ; hence endowed with an astringent quality, and of use in wounds.

AL'BUM, a white table book on which the Praetors recorded their edicts. The names of the senators were written in the Album Senato- rum. Also a white paper book which foreigners have long been accustomed to provide, with the design of inviting strangers of distinction, or literary eminence to insert their names, together with any observation in prose or verse, as a me- morial of their visit. The practice has been of late years extensively adopted in this country.

The composer of this work, in his begging scraps all about, I know not by what means, seems to have lighted on a merry definition of an ambassador, which above eight years before, passing by that way, I had chanced to set down, at my friend's Mr. Christopher Hickamon, in his album of friends, after the German custom, which was worded thus : Legatus est vir bonus peregre missus, ad mentiendum respublic& causa. Sir H. Wootton's Lett, to M. Valenu.

ALBUM, in antiquity, a kind of white table, or register, wherein the names of certain magis- trates, public transactions, &c. were entered. Of these there were various sorts, such as the

ALBUM DECURIONUM, JUDICUM, &C. which See.

ALBUM, in alchemy, a tincture pretended to transmute metals.

ALBUM, in chemistry, white lead, or ceruse.

ALBUM, in natural history, is used for the white of an egg ; more properly called albumen.

ALBUM, in pharmacy, is applied to divers compound medicines, of a white colour, as un- guentum album, white ointment, &c.

ALBUM AMICORUM, has been used in modern times, to denote a kind of memorandum-book, or literary repository, wherein the men of letters, with whom a person has conversed, inscribe their names with some sentence or motto. ••• The famous Algernon Sidney, being in Denmark, was by the university of Copenhagen, presented with their album, whereupon he wrote these words :

Maims hsec inimica tyrannis

Ense petit placidam sub libertate quietem.

ALBUM DECURIONUM, in Roman antiquity, the register wherein the names of the decuriones were entered. It is otherwise called matriculatio de- curionum.

ALBUM JUDICUM, in Roman antiquity, was a table wherein the names of judges were entered.

ALBUM NIGRUM, is used by some medical writers, for muscerda.

ALBUM OCULI, among anatomists, the tunica adnata ; also called albugo ; or the white of the eye.

ALBUM PR^ETORIS, in Roman antiquity, was a book wherein the formula; of all actions, and the names of such judges as the praetor had chosen to decide causes, were written.

ALBUM RHASIS, in pharmacy, an ointment so called from Rhasis, the inventor.

ALBUM SEN ATORUM, the list of senators' names, which was first introduced by Augustus, and re- newed yearly.

ALBUMAZAR, a learned Arabian astronomer, in the tenth century, who wrote a treatise of toe Revolutions of the Years.

bu9> white, has been considered as one of the radical parts of animal substances, which received its name from being first noticed in the eggs of birds, where it forms the white. Fourcroy dis- covered a similar substance in vegetables. Ani- mal albumen exists, in its most perfect state, in the white of eggs, and in the serum of the blood. It is a viscous fluid, soluble in water at the com- mon temperature, and coagulating when exposed to a heat of 134►►, Fahr. then it is no longer soluble in water. The vitreous and crystalline humours of the eye, and the liquor that fills the abdomen in dropsy, contain large portions of albumen. As contained in milk, it conduces largely to the nutriment of man.

In the vegetable kingdom it is found prin- cipally amongst the narcotic and antiscorbutic punts, where it generally resides in the leaves. Fourcroy first obtained it from the juice of young cresses. Solid albumen, says Dr. Ure, may be obtained by agitating white of eggs with ten or twelve times its weight of alcohol. This seizes the water which held the albumen in solution ; and this substance is precipitated under the form of white flocks or filaments, which cohesive at- traction renders insoluble, and which conse- quently may be freely washed with water. Al- bumen thus attained is like fibrine, solid, white, insipid, inodorous, denser than water, and with- out action on vegetable colours. It dissolves in potash and soda more easily than fibrine ; but in acetic acid and ammonia with more difficulty. When these two animal principles are separately dissolved in potash, muriatic acid added to the albuminous does not disturb the solution, but it produces a cloud in the other. Fourcroy, and se- veral other chemists, have

ascribed the charac- teristic coagulation of albumen by heat to its oxygenation ; but cohesive attraction is the real cause of the phenomenon. In proportion as the temperature rises, the particles of water and al- bumen recede from each other, their affinity diminishes, and then the albumen precipitates. However, by uniting albumen with a large quantity of water, we diminish its coagulating property to such a degree, that heat renders the solution merely opalescent. A new laid egg yields avsoft coagulum by boiling ; but when, by keeping, a portion of the water has transuded so as to leave avoid space within the shell, the con- centrated albumen affords a firm coagulum. An analogous phenomenon is exhibited by acetate of alumina, a solution of which, being heated, gives a precipitate in flakes, which redissolves as the caloric which separated the particles of acid and base escapes, or as the temperature falls. A so- lution Containing one-tenth of dry albumen forms by heat a solid coagulum; but when it contains only one-fifteenth, it gives a glairy liquid. One thousandth part, however, on applying heat, oc- casions opalescence. Putnd white of egg, and the pus of ulcers, have a similar smell. Ac- cording to Dr. Bostock, a saturated solution of corrosive sublimate let fall into water containing one-two-thousandth of albumen, occasions a milkiness and curdy precipitate. On adding a ###light excess of the mercurial solution to the albuminous liquid, and applying heat, the pre-

cipitate which falls, being dried, contains in every seven parts, five of albumen. Hence that salt is the most delicate test of this animal pro- duct. The yellow pitchy precipitate occasioned by tannin, is brittle when dried, and not liable to putrefaction. But tannin, or infusion of galls, is a much nicer test of gelatine than of albumen.

The cohesive attraction of coagulated albumen, makes it resist putrefaction. In this state it may be kept for weeks under water without suffering change. By long digestion in weak nitric acid, albumen seems convertible into gelatine. By the analysis of Gay Lussac and Thenard, 100 parts of albumen are formed

of 52.883 carbon, 23.872 oxygen, 7.540 hydrogen, 15.705 nitrogen; or in other terms, of 52.883 carbon, 27.127 oxy- gen and hydrogen, in the proportions for con- stituting water, 15.705 nitrogen, and 4.815 hydrogen in excess. The negative pole of a voltaic pile in high activity coagula-tes albumen ; but if the piVe be feeble coagulation goes on only at the positive surface. Albumen, in such a state of concentration as it exists in serum of blood, can dissolve some metallic oxides, particularly the protoxide of iron. Orfila has found white of egg to be the best antidote to the poisonous effects of corrosive sublimate on the human stomach. As albumen occasions precipitates with the solutions of almost every metallic salt, probably it may act beneficially against other species of mineral poison. For much interesting information respecting this substance, see FOUR-CROY, Systeme des Con. Chemique, and Phil. Trans, vol. xc. See also CHEMISTRY.

The white of an egg, according to Boerhaave, makes an ' extraordinary menstruum. Boiled hard in the shell, and afterwards suspended in the air by a thread, it resolves and drops down into an insipid scentless liquor, which appears to be the anomalous unaccountable menstruum of Paracelsus ; and will, though it contains no- thing sharp, oleaginous, or saponaceous, make a thorough solution of myrrh ; which is more than either water, oil, spirits, or even fire itself, can effect. A little putrid white of egg, taken into the stomach, occasions a nausea, horror, fainting, vomiting, diarrhoea, and gripes ; it in- flames the bile, excites heat, thirst, fever ; and dissolves the humours like the plague. On the contrary, the white of fresh-laid eggs, if taken while warm from the hen, is extremely nourish- ing to the infirm : it may be taken in luke-warm milk; but if any other heat is applied to it, the nutritious quality will be diminished. The fresh white of egg prevents burns from rising in blisters, if it is used immediately after the ac- cident : it mitigates inflammations of the eyes, and preserves the face from sun-burning. In pharmacy, it is used

as a medium to render balsams and turpentines, &c. miscible with the aqueous fluids ; but as it disagrees with many stomachs when thus taken, a mucilage of gum- arabic may supply its place ; it being as good a medium in similar circumstances, and not apt to offend the tenderest stomach. Whites of eggs are also useful for clarifying liquors ; for which purpose, being mixed and incorporated with th►► liquors to be clarified, and the whole afterwanU

boiled, they carry off the gross parts of the liquor. A solution of that has also been used in cases of contraction and rigidity of the joints. Whites of eggs, beaten in a basin till they coagulate, form the alum curd of Riverius, and alum cataplasm of the London Pharmacopaeia. See EGG.

ALBUNA, the tenth Sybil, worshipped as a goddess by the ancient Romans.

ALBUNEA, in ancient geography, a wood on the river Anio, near Tibur, sacred to the Muses, and deriving its name from the sibyl Albunea, to whom a temple was erected at Tibur, the ruins of which yet remain. The albunea fons was a name given to some sulphureous waters that were found near this spot, and which were re- sorted to for medical purposes.

ALBUQUERQUE, (Alphonso, d',) surnamed the great, was born at Lisbon, 1452, and raised the power of the Portuguese to its utmost height in India. He and his brother Francis went to India in 1503 on a voyage of discovery ; but Francis arrived first, and having restored the king of Cochin to his capital, was joined by his brother. Here they built a fort, and compelled the Zamorin to sue for peace. The two brothers soon after sailed for Portugal, where Alphonso arrived in safety, but the other was lost.

In 1508, Alphonso being appointed governor of the Por- tuguese settlements in India, subdued Ormuz ; but he was soon obliged to quit that place and return to India. Here in an attack on Calicut he was wounded, and compelled to retreat. In 1510 he took Goa, and afterwards the strong city of Malacca ; but while about to engage in other enterprises, he was taken ill, and died in 1515. His son Blaise, on his father's death, took the name of Alphonso, pursuant to the com- mand of the king of Portugal, who also conferred on him the rank of nobility. He wrote memoirs of his father's transactions, and died in 1580. ††† Moreri.

ALBUQUERQUE, a small city of Spain, in the province of Estremadura, seated on an emi- nence nine miles from the frontiers of Portugal, and twenty north of Badajos. It is defended by an almost impregnable fortress, built on a high mountain ; and carries on a considerable woollen trade. It was founded in the middle of the eighteenth century, and taken in 1735, by the Portuguese, who kept it till the peace of Utrecht. Inhabitants, about 5500.

ALBURN, or AUBURN, from albus, white, Lat. and bruno, brown, Ital. a compound colour, a mixture of white and red, or reddish brown.

ALBURNUM, the soft white substance, which in trees is found between the liber, or inner bark, and the wood, and in progress of time acquiring solidity, becomes itself the wood- From its co- lour and comparative softness, it has been styled by some writers adeps arborum, the fat of trees. The alburnum is found in largest quantities in trees that are vigorous ; though in such as lan- guish, or are sickly, there is a great number of beds. In an oak, six inches in diameter, this substance is nearly equal in bulk to the wood. In a trunk of one foot diameter, it is as one to three and a half; of two and a half feet diameter, as one to four and a half, &c. but these proportions vary according to the health

and constitution of the trees. The alburnum is

frequently gnawed in pieces by insects, which lodge in this substance, and are nourished from it.

ALBURNUS, in ichthyology, a fresh water fish, commonly called, in English, the bleak. Iu is common in our rivers, and in those of Ger- many and elsewhere; and is esteemed a well tasted fish. It is most in season in September, and is a species of the cyprinus of Linnaeus.

ALBUS, in commerce, a small French coin current at Cologne, and worth about a half- penny, English.

ALBUS PISCIS, the white fish, in ichthyology, a name by which Silvian has called capito-iacus- tris, and the same with the blue chub, or, as it is more commonly called, the jentling. It is the cyprinus jeses of Linnaeus.

ALBURY, or ALDERSBURY, a town in the county of Surry, five miles from Guildford, seated on the Wye, which runs through it.

ALBURY, a town in Hertfordshire, near Put- more heath.

ALBY, a town in the county of Norfolk, four miles from Aylsham.

ALBY, in France. See ALBI.

ALCA, or AUK, in ornithology, a genus of the order of anseres. The beak of the genus is without teeth, short, convex, compressed and frequently furrowed transversely : the inferior mandible is gibbous near the base ; the feet have generally three toes. There are twelve species of the alca, of which the most remarkable are :

1. ALCA ALLE, the little auk, or black and white diver, with a smooth conical bill, a white streak on the belly and wings, and black feet. The size of this species exceeds not that of a blackbird. It is npt very common in Britain, but met with in various parts of Spitzbergen, and Greenland, in company with the black-billed species. In Greenland it is called

the ice-bird, being the harbinger of ice. This species is some- times seen of a pure white.

2. ALCA ARCTICA, or the puffin, with a com- pressed bill and four furrows ; the orbit of the eyes and temples are white. The legs of this spe- cies are very small ; and placed so far behind as to disqualify it from standing except quite erect, resting not only on the foot, but the whole length of the leg. This circumstance, which like- wise attends every one of the genus, makes the rise of the puffin from the ground very difficult, and it meets with many falls before it gets on wing ; but when that is effected, few birds fly longer or stronger. These birds frequent the coasts of several parts of Great Britain and Ire- land ; but no place in greater numbers than Priestholm isle, where their flocks may be com- pared to swarms of bees for multitude. They are birds of passage ; and resort there annually about the fifth or tenth of April, quit the place, almost to a bird, and return twice or thrice, be- fore^hey settle to burrow and prepare for ova- tion and incubation. They begin to burrow the first week in May ; but some few save them- selves that trouble, and dislodge the xabbits from their holes, taking possession of them till their departure from the isle. Those which form their own burrows, are at that time so in- tent on the work as to suffer themselves to be*

taken by the hand. This task falls chiefly to the share of the males ; who also assist in incu- bation. The first young are hatched the begin- ning of July. If a parent is taken at breeding time, and suspended by the wings, it will in a sort of despair treat itself most cruelly, by biting every part it can reach ; and the moment it is loosed, will never offer to escape, but instantly resort to its unfledged young: this affection ceases at the stated

time of migration, which is most punctually about the eleventh of August, when they leave such young as cannot fly to the mercy of the peregrine falcon, who watches the mouths of the nests for the appearance of the little deserted puffins, which, forced by hun- ger, are compelled to leave their burrows. Their flesh is extremely rank, as they feed on sea- weeds and fish, especially sprats: but when pick- led and preserved with spices is admired by those who love high eating. Their noise, when taken, is very disagreeable ; being like the efforts of a dumb person to speak. These birds are also common in Ireland; on the island Skerries, three leagues north-north-west of Holyhead ; and in the south Stack, near Holyhead, they breed in plenty. This species is also found in the Ferroe Isles, where it is called lunda ; and in the Farn Isles, where it is called coulterneb, from the shape of the bill. It goes also by various names; such as gulden-head, bottle-nose, and helegug, in Wales; at Scarborough, mullet; and in Cornwall, pope. In America they are said to frequent Carolina in winter ; and have been met with in Sandwich Sound : the natives ornament the fore parts and collar of their seal- skin jackets with the beaks of them ; and those of Aoonalashka wear gowns of their skins, along with those of other birds. On the coasts of Kamtschatka and the Kurulschi islands they are also common, even as far as Ochotka : the nations of the two first wear the bills about their necks fastened to straps ; and according to the super stition of these people, their shaman or priest must put them on with a proper ceremony in order to procure good fortune.

3. ALCA CIRRHATA, so called by Pallas, or tufted auk, is somewhat bigger than the common puffin, and the colours much the same; the bill is an inqh and three quarters in length, the same in depth at the base, and crossed with three fur- rows : over each eye arises a tuft of feathers four inches in length, which falls elegantly on each side of the neck, reaching almost to the back ; and are white as far as they are attached to the head, but are afterwards of a fine buff yellow ; the legs are of a bright red

; the claws black. The female is principally distinguished by hav- ing the bill crossed only with two furrows in- stead of three. This species inhabits the shores of Kamtschatka, the Kurile islands, and those in- tervening between Kamtschatka and America. In manners it greatly resembles the puffin ; liv- ing all day at sea, but at no great distance from the rocks ; it comes on shore at night ; burrows a yard deep under ground, and makes a nest with feathers and sea plants; is monogamous and lodges there the whole night with its mate! It lays one white egg in the end of May, or be-

ginning of June, which alone is thought fit to be eaten, the flesh of the bird itself being in- sipid and hard. It feeds on crabs, shrimps, and shell-fish, which last it forces from the rocks with its strong bill. Pallas remarks, that the Kamtschatkan girls imitate the tufts of these birds, which nature has supplied them with, by plac- ing a similar strip of the white skin of the glut- ton behind each ear, hanging down by way of ornament ; and such a present is well received from a lover to his mistress. The bills both of this and the common puffin were formerly held by the natives as a charm, and worn by the priests as amulets ; indeed at present these have been fixed round their head dresses, but supposed now to be only esteemed as mere ornaments : the skins are, however, made use of for clothing. It is called in Kamtschatka muechagatka ; and in Oschotsta, igilma.*

4. ALCA IMPENNIS, the northern penguin, or, great auk, with a compressed bill furrowed on. each side, and an oval spot OH each side of the eyes. According to Mr. Martin, this bird breeds on the isle of St. Kilda ; appearing there the be- ginning of May, and retiring the middle of June. It lays one egg, six inches long, of a white colour ; some are irregularly marked with pur- plish lines crossing each other : others blotched with black and ferruginous about the thicker end : if the egg is taken away, it will not lay another that season. Mr. Macauley says, that it does not visit that island annually, but some- times keeps away for several

years together; and adds, that it lays its eggs close to the sea mark, being incapable, by reason of the short- ness of its wings, to mount higher. The length of this bird, to the end of its toes, is three feet ; but its wings are so small, as to be useless for flight; the length from the tip of the longest quill feathers to the first joint, being only four inches and a quarter. This bird is observed by sea- men never to wander beyond soundings ; and according to its appearance they direct their measures, being then assured, that land is not very remote. It sometimes frequents the coasts of Norway, the Ferroe Isles, Iceland, Greenland, and Newfoundland; and feeds much on the lump fish, father-lasher, and other fish of that size. The young birds eat rose roots, and other plants. The old ones are very rarely seen on irhore, though the young ones are not unfre- quently met with. It is a very shy bird. It walks ill; but dives well, and is taken in the manner used for the razor-bill and puffin. The skin between the jaws is blown into a bladder, and used for the darts of the Greenlanders, as is also that of some other birds. The skin of the

. body is supposed to be used by the Esquimaux Indians for garments.

5. ALCA PICA, or black-billed auk, has the bill of the same form with the torda, but is en- tirely black. The cheeks, chin, and throat are white : in all other respects it agrees with the torda. Mr. Latham is of opinion that it is no other than the young of that species. Mr. Pen- nant observes, that it is sometimes found on our coasts; but, according to Mr. Latham, it is in the winter season only, when the common sort

Has quitted them. They are said to he met with on

the coasts of Candia, and other parts of the Mediterranean.

6. ALCA PSITTACULA, or perroquet auk, of Dr. Pallas, is about the size of the little auk. The bill is much compressed on the sides, in shape convex both above and below, and of a bright red colour : from the remote corner of each eye is a very tender tuft of fine white fea- thers, hanging down the neck ; the head and upper part of the body are dusky ; the lower whitish, varied with black edges ; the legs are a dirty yellow ; and the webs dusky. The species is found at Kamtschatka, in the isles towards Japan, and on the western shores of America. They are sometimes seen in flocks, but seldom far from land, except when driven by storms. During night they harbour in the crevices of rocks. They lay an egg almost the size of a hen's, of a dirty white or yellowish colour spotted with brown; which they do about the middle of June, upon the bare rock, or sand, for they make no nest. Like most of the tribe, they are stupid birds, as is evinced by the method of catching them. One of the natives places himself under a loose garment of fur, of a particular make, with large open sleeves, among the rocks at evening ; when the birds, returning to their lodging places at dusk, run under the skirts, and up the arm holes for shelter, during the night, and thus be- come an easy prey. Their stupidity likewise ap- pears from flying aboard ships, mistaking them for roosting places, whereby navigators have been taught to avoid the danger of falling in too near the land, either in the evenings, or on ap- proaching storms. The eggs are esteemed good.

7. ALCA TORDA, or the razor-bill, with four furrows on the bill, and a white line on each side running from the bill to the eyes. These birds, in company with the gullimot, appear in our seas the beginning of February ; but do not settle on their breeding places till they begin to lay, about the beginning of May. They inhabit the edges of the highest rocks that impend over the sea, where they form a grotesque appearance, sitting close together, and in rows, one above another. They properly lay but one

egg apiece, of an ex- traordinary size for the bulk of the bird, being three inches long : it is either white, or of a pale sea green, irregularly spotted with black : if this egg is destroyed, both the auk and the gullimot will lay another ; if that is taken, then a third : they make no nest, depositing their egg on the bare rock : and though such multitudes lie con- tiguous, by a wonderful instinct each distinguishes its own. What is also a matter of great amaze- ment, they fix their eggs on the smooth rock with so exact a balance, as to secure it from rolling off ; yet should it be removed, and attempted to be replaced by the human hand, it is extremely difficult, if not impossible, to find its former equilibrium. According to Mr. Latham, it is by means of a cement that the bird fixes its egg. The eggs are food to the inhabitants of the coast they frequent, which they get with great hazard, being lowered from above by ropes, trusting to the strength of their companions, whose footing is often so unstable that they are forced down the precipice, and perish together. These birds

are found in the north of Europe, also in Iceland, Greenland, and on the coast of Labrador. I?i Europe they extend along the White Sea, into the Arctic Asiatic shores, and from, thence to Kamtschatka and the gulph of Ochotka. The.y are the only species which reach the inland Bal- tic ; being found there on the Carls-Ozar isles, near Gothland, and the isle of Bondon off An- germania.

ALCACER-DO-SAL, or ALCAZAII-DO-SAL, a town of Portugal, in Estremadura, seated on the river Caldao, thirty-eight miles south-east of Lisbon. It was called Salagia by the ancient Romans, on account of the salt it produces.

ALGOUS, a famous ancient lyric poet, born at Mitylene in the island of Lesbos, esteemed by Horace the inventor of this kind of poetry. He flourished in the forty-fourth Olympiad, at the same time with Sappho, who was likewise of Mitylene. Alcaeus professed himself a great enemy to tyrants, but was not a very brave soldier. He was present at an

engagement, wherein the Athenians gained a victory over the Lesbians ; and here, as he himself confessed, he threw down his arms and saved himself by flight. The taste and talents of Alcaeus are undisputed : and though his poems were chiefly in the lyric strain, yet his muse was capable of treating the sublimest subjects with suitable dignity

ALC^EUS, an Athenian tragic poet, and, as some think, the first composer of tragedies. He renounced his native country Mitylene, and passed for an Athenian. He left ten pieces, one of which was Pasphae, that which he produced when he disputed with Aristophanes, in the fourth year of the ninety-seventh Olympiad.

ALC.SUS, another poet, mentioned by Plutarch perhaps the same whom Porphyrius mentions as a composer of satirical iambics and epigrams, and who wrote a poem concerning the plagia- rism of Euphorus the historian. He lived about the 145th Olympiad.

ALCJEUS, the.Messenian, lived in the reign of Vespasian and Titus, and is said to have suffered, for his lewdness, a very singular kind of death ; which gave occasion to the following epitaph :

'AXKOiS T000f 8TOC, &C.

' This is Alcseus's tomb, who died by a radish ; the daughter of the earth, and punisher of adul- terers/

ALCAHEST, n. s. an Arabic word, to ex- press an universal dissolvent, pretended to by Paracelsus and Helmont.

ALCAIC, in ancient poetry, a denomination given to several kinds of verse, from Alcaeus, the inventor. The first kind consists of five feet, viz. a spondee or iambic ; a caesura, and two dactyls; such is the following verse of Horace ;

Eheu !] fugajces, | Postume, | Postume, Labunjtur anpi ! | nee piejtas moram.

The second kind of two dactyls and two troches; as

Afferet, | indomijtaeque | morti.

Besides these two, which are called dactylic alcaics, there is another styled simply alcaic;

consisting of an epitrite, two choriambi, and a baccbius : the following is of this species. Cur timet flajvum Tibcrim | tangere, cuijolivum ?

ALCAIC ODE, an elegant kind of ode composed of several strophies, each consisting of four verses ; the two first of which are always Al- caics of the first kind : the third verse is a diameter hypericatalectic, consisting of four feet and a caesura ; and the fourth verse is an alcaic of the second kind. The following strophe is of this species, which Horace calls minaces Alcaii camenae.

Ojmajtre pul|chra I filia | pulchrior, Quern cri minojsis [cunque vojles modum Pones | iamjbis ; sijve flam|ma Sive majri libet | Adri|ana.

ALCAID, ALCAYDE, or ALCALDE, in the polity of the Moors, Spaniards, and Portuguese, a magistrate, or officer of justice, answering nearly to the British justice of peace. ††† The al'caid among the Moors is vested with the su- preme jurisdiction, both in civil and criminal cases.

ALCALA DE GAUDERIRRA, a small town of Spain, in Andalusia, upon the river Guadalquiver, six miles S. of Seville. Here are abundance of springs, from whence they convey water to Seville by an aqueduct. Lon. 6††. 16'. W. Lat. 37††. 20'. N.

ALCALA DE HENAREZ, a beautiful and exten- sive city of Spain, in New Castile, seated upon the river Henarez, which washes its~walls, eleven miles south-

*west of Guadalaxara, and fifteen E. N. E. of Madrid. The ancient name was Complutum, when it was a Roman colony ; and at this place was printed the celebrated Biblia Complutensia, or Complutensian Polyglot, at a cost of 250,000 ducats to cardinal Ximenes. It
ॠ was the first polyglot Bible ever printed, and we must gratify our bibliographical readers with one anecdote respecting it. The impression was limited to six hundred copies, three of which were struck off on vellum ; one of these being deposited in the Royal library at Madrid; a second in the Royal library at Turin ; and the third, supposed to have belonged to the cardinal himself, after passing through various hands, was purchased at the sale of Signer Pinelli's library in 1739, for the late Count McCarthy of Toulouse, for four hundred and eighty-three pounds. On the sale of this nobleman's library, at Paris in 1817, it was bought by George Hib- bert, Esq. of Portland Place, London for 16,100 francs, or ॠ676. 3s. 4d. sterling,*

Alcala is built upon a fertile plain and was once a most flourishing place, containing an university, endowed by Ximenes, that rivalled Salamanca, but ॠ which has now fallen wholly into decay. Here are still, however, three parish churches, twenty-eight monastic institutions for both sexes, four hospitals, and twenty-four colleges. Cardinal Ximenes lies buried in the university church. Inhabitants about 5000. Lon. 4ॠ. 20 W Lat 4ॠ. 35.' N.

ALCALA LA REAL, a small city of Spain, in Andalusia, with a fine abbey. Population 9000. It is built on the top of a high mountain, near the river Salado, nine leagues from Jaen. Seve- ral kinds of exquisite fruits and wines are found

in the vicinity. Lon. 4ॠ. 12. W. Lat 37ॠ. 38'. N.

ALCALI, or ALKALI. See CHEMISTRY.

ALCAMER, or ALCAMERE. See ALCKMAEE.

ALCAMO, a town and district of Sicily in the valley of Mazaro, at the foot of Mount Boni- fati, on the road to Palermo, twenty-five miles S. of Palermo. Lon. 13►►. 52'. E. Lat. 38►►. 2' N.

ALCANITZ, a town of Arragon in Spain, seat- ed on the river Guadaloupe, forty-six miles from Saragossa. It was formerly the capital of the kingdom of the Moors ; but being taken from them, it was made a commandery of the order of Calatrava. Lon. 0►►. 9'. W. Lat. 41►►. 0'. N.

ALCANNA, in commerce, a cosmetic powder, prepared from the leaves of the Egyptian privet, in which the people of Cairo drive a consider- able trade. It is much used by the Turkish women to give a golden colour to their nails and hair. There is also an oil extracted from the berries of alcanna, and used in medicine as a quiescent.

ALCANTARA, or ALCANTARILLA, a town of Spain, in the province of Andalusia. It stands on an eminence near a morass, where the Romans built a bridge, with a tower at each end.

ALCANTARA, or VALENZA DE ALCANTARA, a small, but strong city of Spanish Estremadura, seated on the banks of the Tajo, or Tagus. It lies in a very fruitful soil, and is celebrated for its bridge over that river, which was built, in the time of the emperor Trajan, as appears by an in- scription over one of the arches, by the people of Lusitania, who were assessed to supply the expense. At the entrance of the bridge, there was a small antique chapel hewn in a rock by the ancient pagans, who dedicated it to Trajan, as the Christians did to St. Julian. The city is said to have been built by the Moors on account of the convenience of the bridge, which is at a place where the Tajo is very deep, running be- tween two high steep rocks : and for this reason, they called it Al-Cantara, signifying the bridge. It was taken from them in 1214, and given to the knights of Calatrava. The principal occu- pation, of the inhabitants is the trade in wool and cloth. Population 3000. It is 115 miles S.S.W. of

Salamanca, 130 W.S. W. of Madrid. Lon. 6►►. 43'. W. Lat. 39►► 40'. N.

ALCANTARA, or ALCANTARILLA, another town of Spain, in the province of Seville, not far from the Guadalquiver. The Romans built here a bridge, to pass the marshes formed by the river, which is still remaining. It was shut in at each side with a gate, over which was a tower. It is situated fourteen miles south of Seville.

ALCANTARA, a town of Portugal, near Lisbon, in the province of Estremadura, seated on the Tagus; there is a royal palace here with beautiful gardens, grottos, and artificial fountains.

ALCANTARA, a town in the province of Maren- ham, Brazil ; in the bay of St. Marcos, opposite to the island of Marenham. It is built on a semicircular hill, and consists of stone houses one story high. It is a thriving place, as the lands in the neighbourhood are in request for cotton plantations. A handsome stone quay has been built for small craft, upon the inside of a neck of land, round which the harbour extends

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ALCANTARA, THE KNIGHTS OF, a military order of Spain, which took its name from the above-mentioned city. They make a very con- siderable figure in the history of the expeditions against the Moors ; and took the same vows as .hose of Calatrava, being only distinguished from them by this, that the cross, fleur de lis, which they bear over a large white cloak, is of a green colour. They possess thirty-seven com- manderies. By the terms of surrender of Alcan- tara to this order, it was stipulated, that there should be a confraternity between the two orders, with the same practices and observances in both ; and that the order of Alcantara should be sub- ject to be visited by the grand-master of Cala- 'rava. But the former soon released themselves from this engagement, on pretence that their grand-master had not been called to the election of that of

Calatrava, as had been likewise stipu- lated. After the expulsion of the Moors and taking of Granada, the sovereignty of these two orders was settled in the crown of Castile by Ferdinand and Isabella. ††† In 1540, the knights of Alcantara sued for leave to marry, which was granted them.

ALCARAQUE, a river in Spain that falls into the Guadiana, about twenty miles from the city of Badajos, in the province of Estremadura.

ALCARAZ, a small city of Spain, in the pro- vince of La Mancha, situated on a mountain of the same name, in a fertile tract, called the Campo di Montiel, near the source of the Gua- darmena. It has 3300 inhabitants, and is 105 miles S. S. E. of Madrid.

ALCARRAZAS, in pottery, vessels used in Spain for cooling water. They are distinguished principally by their porosity, from other kinds of earthenware, which is so considerable as to allow the liquor to ooze slowly through and stand in small drops on the outside, hence there is a con- stant evaporation from the surface (though sur- rounded by a current of warm air) and the water in the jar continues at a much lower temperature than the surrounding atmosphere. In Portugal these vessels are used for moistening snuff or to- bacco, the jar for this purpose being filled with snuff and placed in water, which, by filtering slowly through its sides, gives the powder the re- quisite humidity. The following is an analysis of the clay used for these vessels, according to M. Darcets : sixty parts of calcareous earths, mixed with alumina and a little peroxide of iron, and thirty-six of silicious earths mixed with a little alumina, worked up with water and salt, which are dried in it. The pieces are only half baked.

ALCASSAR, a fortified town of Barbary, about two leagues from Larache, in Afgar, a province of the kindom of Fez. It was of great note, the seat of the governor of this part of the kingdom, and built by Jacob Almanzor, king of Fez. about the year 1180. He designed it for a magazine and place of rendezvous,

for the great preparations he was making for the invasion of Spain. The place is now fallen greatly into de- cay. Not far from hence the famous battle was fought between Don Sebastian, king of Portugal, and the Moors ; in which the Portuguese were defeated, and their king slain.

ALCASSAR-DO-SAL. See ALCACAR-DO-SAL.

ALCAVALA, in the Spanish finances, was at first a tax of ten per cent, afterwards of fourteen per cent, then of six per cent, levied upon the sale of every sort of property, whether moveabie or immoveable ; and repeated every time the property is sold. It is at this time about five per cent. The levying of this tax requires a multitude of officers sufficient to guard the trans- portation of goods, not only from one province, but from one shop to another ; and it subjects the dealer in all sorts of goods, to the continual visits and examinations of the tax-gatherer. It is to the alcavala, that Ustaritz imputes the ruin of the manufactures of Spain.

ALCAZAR, a city of Spain in New Castile, seated on the river Guardamena, which lies in a very fruitful country, 100 miles north-west of Carthagena.

ALCAZAR LEGUER, a town of Africa, in the kingdom of Fez, which was taken by Alphonzo, king of Portugal, in 1468 ; but, soon after, abandoned to the Moors. It is seated on the coast of the straits of Gibraltar.

ALCE, ALCES, or ELK, in zoology, the trivial name of a species of the cervus, belonging to the order of mammalia pecora. See CERVUS.

ALCEA, the HOLLYHOCK, a genus of the polyandria order, belonging to the monadelphia class of plants ; and in the natural method rank- ing under the thirty-seventh order, columniferse. The characters

are ; CAL. a double perianthium, monophyllous and persistent; the exterior one six-cleft, the interior five-cleft : COR. five petals, coalesced at the base, heart-shaped inversely, and expanding : STAM. numerous filaments, co- alesced below in a five-coloured cylinder, loose above, and inserted into the corolla : the antherae are kidney shaped : PIST. a roundish germen ; a short cylindric stylus; and numerous bristly stigmata the length of the stylus. The pericar- pium consists of many arilli, jointed into a ver- ticillum about a columnar depressed receptacle. The seeds are solitary, reniform, and depressed. Though Linnaeus mentions two distinct species of this genus, he thinks that the one perhaps is only a variety of the other; but Mr. Miller affirms them to be a distinct species, whose difference in the form of their leaves always continues. First, Alcea Ficifolia, a native of Istria. Second, Alcea Rosea, a native of China. Its leaves are roundish, and cut at. their extremities into angles. Though both species are natives of warm coun- tries, they are hardy enough to thrive in the open air in Britain, and have for many years been some of the greatest ornaments in our gardens, towards the end of summer.

ALCEDO, or KINGSFISHER, in ornithology, a genus of the order of picae. The alcedo has a long, strait, thick, triangular bill ; with a fleshy, plain, short, flat tongue. Of this genus there are a great many species, with one or other of which almost every part of the world is furnished. Most of them frequent rivers, and live on fish, the mode of their catching which, is admirable sometimes hovering over the water, where small fishes are seen playing, at other times waiting with attention, on some low branch hanging. over the water, for the approach of a single on

who is so unlucky as to swim that way ; in either case dropping like a stone, or rather darting with rapidity on its prey , when, seizing it crosswise in its bill, it retires to a resting-place to feast on it ; which it does piecemeal, bones and all, without reserve,- afterwards bringing up the indigestible parts in pellets like birds of prey. The wings of most of the genus are very short ; yet the birds fly rapidly and with great strength. It maybe remarked, that throughout this genus, blue, in different shades, is the most predomi- nant colour. This species, found in the South- Sea Islands, are held in a kind of superstitious veneration by the natives ; perhaps, on account of their being frequently seen flying about the morals or burial places. That which inhabits Otaheite, where it is called Erooro, is accounted particularly sacred, and not allowed to be taken or killed. The jacamars are much allied to this genu3,and have been ranked under it by Linnaeus. There are above thirty species of this genus, of which the following are the most remarkable, viz.

1. ALCEDO GALBULA, or green jacamar, is about the size of a lark. The bill is black, of a square form, a little incurvated and sharp at the point : the plumage, in general, in the upper part of the body, is of a most brilliant green, glossed with copper and gold in different lights : the belly, throat, and vent, are rufous ; the tail is composed of ten feathers, and shaped like a wedge ; the legs are of a greenish yellow, very short and weak ; the claws are black. This spe- cies is found, both in Guiana and Brasil, in the moist woods, which it prefers to the more dry spots for the sake of insects, on which it feeds. It is seldom seen except single, as it is a very solitary bird, keeping generally in the thick- est parts; its flight quick, but short; it perches on branches of a middling height, where it sits all night, and frequently part of the day with- out stirring. Though these birds are solitary, yet they are far from scarce, as many may be met with. They are said to have a short and agreeable note. The natives of Guiana call this bird Venetore; and

the Creoles, Colibri des grands bois. At Brasil their flesh is eaten by some.

2. ALCEDO ISPIDA, or common kingsfisher, is not much larger than a swallow ; its shape is clumsy; the bill disproportionably long; it is two inches from the base to the tip ; the upper chap black, and the lower yellow. But the colours of this bird atone for its inelegant form : the crown of the head and the coverts of the wings are of a deep blackish green, spotted with bright azure ; the back and tail are of the most esplendent azure ; the whole under side of the oody is orange coloured ; a broad mark of the same passes from the bill beyond the eyes ; be yond that is a large white spot ; the tail is short, and consists of twelve feathers of a rich deep blue ; the feet are of a reddish yellow, arid the three joints of the outermost toe adhere to the middle toe, while the inner toe adheres only by one. From the diminutive size, the slender short legs, and the beautiful colours of this bird, no person would be led to suppose it one of the most rapacious little animals that skims

the deep. Yet it is for ever on the winp, and feeds on fish ; which it takes in surprising quantities, when we consider its size and figure. It takes its prey after the manner of the osprey, balancing itself at a certain distance above the water for a considerable space, then darting into the deep, and seizing the fish with inevitable certainty. ††† While it remains suspended in the air, in a bright day, the plumage exhibits a beautiful variety of the most dazzling and brilliant colours. This striking attitude did not escape the notice of the ancients ; for Ibycus, as quoted by Athenaeus, styles these birds aXicvovte Tavvaiirrfpoi, the hal- cyons with expanded wings. It makes its nest in holes in the sides of the cliffs, which it scoops to the depth of three feet; and lays from five to nine eggs, of a most beautiful semi-trans- parent white. The female begins to lay early in the season, and excludes her first brood about the beginning of April. The male, whose fidelity exceeds even that of the turtle, brings her large provisions of fish while she is

thus employed ; and she, contrary to most other birds, is found plump and fat at that season. The male, that used to twitter before this, now enters the nest as quietly and as privately as possible. The young ones are hatched at the expiration of twenty days ; but are seen to differ as well in their size as in their beauty. This bird is found not only in Britain, but throughout Europe, Asia, and Africa ; as specimens have been received from China, Bengal, and Egypt. Belon also remarks his having met with it in Romana and Greece ; and Scopoli notices it as a bird of Camiola, where, he says, it remains the whole year as in England. Indeed it bears the rigours of the colder climates so well, that among the Germans it has gained the name of Eiszvogal, or Ice bird : Olnia speaks also of its not regarding the ice and cold ; and Gmelin assures us, that it is found even in Tartary and Siberia. But, however this may be, there are few winters in which many of these birds do not perish, appa- rently from cold alone; as several have been found frozen stiff by the sides of even running water, without the least mark of violence about them. M. D'Aubenton has kept these birds for several months, by means of small fish put into basins of water, on which they have fed ; for on experiment they have refused all other kinds of nourishment.

This species is the aXKvova^wvos, or mute halcyon of Aristotle, which he describes with more precision than is usual with that great philoso- pher. After this description of the bird follows that of its nest ; than which the most inventive of the ancients have delivered nothing that appears at first more fabulous and extravagant. He relates, that it resembled those concretions that are formed by the sea-water ; that it re- sembled the long-necked gourd ; that it was hollow within ; that the entrance was very narrow, so that, should it overset, the Water could not enter ; that it resisted any violence from iron, but could be broken with a blow from the hand ; and that it was composed of the bones of the BtXov►►j, or sea-needle. The nest had medical virtues ascribed to it ; and from

the bird was called Halcyoneum. In a fabulous age, every

odd substance that was flung ashore received that name ; a species of tubular coral, a sponge, a zoophite, and a miscellaneous concrete, Ifcr.ving by the ancients been dignified with that title from their imaginary origin. Yet much of this is founded on truth. The form of the nest is justly described ; and the materials which Aris- totle says it was composed of, are not entirely of his own invention. Whoever has seen the nest of the "kingsfisher, will observe it strewed with the bones and scales of fish ; the fragments of the food of the owner and its young. On the foundation laid by this philosopher, succeeding writers formed other tales ; and the poets, in- dulging the powers of imagination, dressed the story in all the colours of romance. Its nest they represented as a floating one, placed in a tranquil sea, and the bird was supplied with charms, to allay the fury of the turbulent ele- ment. The Halcyons were therefore said to be the peculiar favourites of Thetis, the Nereids, and the other sea-goddesses ; as to their influence these deities were supposed to owe a repose in the midst of the storms of winter. Aristotle and Pliny tells us, that this bird was most common in the seas of Sicily ; that it sat only a few days, in the depth of winter ; and that during that period the mariner might sail in full security; for which reason they were styled halcyon days ; and the expression became at last proverbial for prosperity in general. The modern fables, that the flesh of the kingsfisher will not corrupt, that it banishes all vermin, and that when hung up dead, its breast always points to the north, are perhaps remains of the old traditions.

3. ALCEDO PARADISEA, or paradise jacamar, is of the same size with the former, and has a similar bill :

the throat, fore part of the neck, and under wing coverts, are white : the rest of the plumage is of a deep dull green, in some lights appearing almost black, in others with a slight gloss of violet and copper bronze ; the tail is composed of twelve feathers of unequal lengths; the two middle ones longest ; the legs are black : the toes are placed two before and two behind, and pretty much united. It inhabits Surinam ; and like the galbula, it feeds on insects ; and sometimes, contrary to it, frequents open places. It flies farther at a time, and perches on the tops of trees : it is frequently found with a compa nion, not being quite so solitary a bird as the other. It also differs in the note, having a kind of soft whistle, often repeated, but not heard a a great way off.

4. ALCEDO RUDIS, or Egyptian kingsfisher, as described by Hasselquist, is the size of the Royston crow. The bill is blackish, more than half an inch broad at the base, and two inches in length : the head, shoulders, and back, are brown, marked with oblong ferruginous spots : the throat is of a ferruginous white: the belly and thighs are whitish, marked with lon- gitudinal, broadish, cinereous, spots : the upper tail coverts quite white : the quills spotted with white on the inner webs, chiefly at the tips : the tail is ash-coloured : the legs are of a pale green ; and the claws blackish. It inhabits lower Egypt, about Cairo ; builds in sycamore and date trees ; and feeds on frogs, insects, and small fish ; whirfc

last it meets with in the fields when they are overflowed. Its cry is not unlike that of the common crow.

5. ALCEDO TAPARARA of Buffon, is about the size of a starling. The upper mandible of the bill is black, the lower red : the hind part of the neck, the back, and scapulars, are of an elegant blue; the rump and upper tail coverts bright beryl-blue : the under parts of the body are white'; the wing coverts blue, and the legs red. It inhabits Cayenne and Guiana, at which last place the natives call all the

kingsfisher tribe by the name of Taparara. In this part of South Ame- rica, which contains many rivers full of fishes, kingsfishers, as might be expected, abound in vast numbers : but what is remarkable, they never herd together, always being found single, except in breeding time, which is about the month of September. They lay their eggs in the holes of banks, like the kingsfisher of Europe. The cry of this bird imitates the word Carac.

6. ALCEDO TORQUATA, or cinereous kinsgfisher, is about the size of a magpie, and fifteen inches and a half in length. The bill is three inches and a half long, and brown; the base of the

lower mandible reddish: the head is crested: the upper parts of the head and body are bluish ash; the under parts chesnut; the throat is whitish, descending down the neck, and passing behind like a collar, ending towards the back in a point : the under tail coverts are of a pale ful- vous, transversely striated with black : less r wing coverts varied with bluish, ash, black, and yellowish : the legs are red ; and the claws blackish. It inhabits Martinico and Mexico : at which last place it is called Achalalactli. This bird migrates into the northern parts of Mexico, at certain seasons only, and is supposed to come there from some hotter parts.

ALCHATA, in ornithology, a species of the tetrao.

ALCHEMILIA, or LADIES-MANTLE : a ge- nus of the monogynia order, belonging to the tetrandria class of plants; and in the natural method ranking under the thirty-fifth order, senticosse : CAL. a single-leaved perianthium, tubular, and persistent; the mouth flat, and eight-parted ; there is no corolla : STAM. four small erect subulated filaments placed in the mouth of the calyx; the antherae are roundish: PIST. an egg-shaped germen : the stylus is filiform, the length of the stamina, and inserted at the base of the germ : the stigma is globular. There is no pericarpium, but the neck of the calyx closed. The seed solitary, elliptical and compressed. Of this

genus there are three species, viz. ;

. ALCHEMILLA ALPiNA,or cmquetoil ladies- mantle, with finger-shaped sawed leaves, and greenish blossoms. It is a native of the moun- tainous parts of Europe.

2. ALCHEMILLA MINOR, or least ladies-mantle, with five smooth leaves growing at a joint and cut into many segments. It grows naturally in Sweden, Lapland, and other cold countries. This and the alpina are eaten by cows and goats ; but refused by horses, sheep, and swine,

3. ALCHEMILLA VULGARIS, or common la- dies-mantle, with leaves plaited like a fan and

yellowish green blossoms. It grows naturally in pasture lands in this as in most other countries in Europe.

ALCHEMIST, a practitioner in alchemy.

ALCHEMY, from al, the, Arab, and Xij/►►a, chemistry, that obsolete or rather pretended branch of chemistry which had for its objects, the transmutation of metals into gold ; the pana- cea, or universal remedy ; an alkahest, or uni- versal menstruum; an universal ferment; and many other things equally ridiculous. The origin and antiquity of alchemy are much con- troverted.►►► If regard may be had to legend and tradition, :t must be as old as the flood. But in fact few of the ancient poets, philosophers, or physicians, from Homer till 400 years after Christ, mention any such thing. The first author who writes of making gold, is Zosimus the Panapolitc, who lived towards the beginning of the fifth century, and who has an express treatise,

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iroiije, of the divine art of making gold and silver, extant, in manuscript, in the late French king's library. Kircher, instructed in all the secrets of chemistry, fully exposed the artifices and im- postures of alchemists. Mr. Harris very properly distinguishes between alchemy and chemistry; and defines the former to be,Ars sine arte, cujus principium est mentiri, medium laborare, et finis mendicare ; and the Italians have a proverb, non ti fidiare ol alchemista povero o modico amalato. The ruin which has attended this de- lusion has occasioned several states to make severe laws against pretences to alchemy. The Romans formerly banished all such as professed it ; and the sacred canons likewise directed the thunder of their censure against them. Diocle- sian and Caesar ordered all books which treated of this subject to be burnt. Rymer furnishes us with a licence for practising alchemy, with all kinds of metals and minerals, granted to one Richard Carter in the year 1476; Rym. Faed. torn. xii. Nevertheless, we have had severe laws against alchemy, and multiplying of metals, as much so as against coining itself. Mr. Thomas Taylor, the ingenious defender of the system of Plato, and translator of' the principal part of his works, examines the opinion of Suidas, that alchemy could not be satisfactorily proved more ancient than the time of Dioclesian. He in- stances, from the Greek Dictionary of the empress Eudocia, p. 108 of Villoison's edition, the fol- lowing observations concerning the famous golden fleece. 'Dionysius, the Mitylenean, says, a man whose name was Krius, this name means also a ram, was the pedagogue of Phiyxus, and that the sheep skin had a golden fleece, not agreeably to poetic assertion, but that it was a book written m skins, containing the manner in which gold ought to be made, according to the chemical art. Justly therefore, says he, did those of that period denominate the skin golden through the energy proceeding from it.' ►►► This Dionysius, as Fabricius shews, lived somewhat

C>r to Cicero. Again Manetho, in the fourth k of his Apotelesmatica, p. 66, says, ‘ Venus alone, in conjunction with the beautiful Phaeton, the sun, points out makers of gold and workers of Indian ivory.’ This Manetho lived in the

time of Ptolemy Philadelphus, to whom he dedicates his work. Alchemical knowledge was anciently kept secret, but the invention of print- ing, and a more extended spirit of enquiry, have caused all its nostrums and mysteries to disap- pear.

ALCHIMELLA. See ALCHEMILLA.

ALCHOLEA, a kind of food in use among the western Moors, being fleshy meat, pickled, dried and potted.

ALCHORNEA, in botany, a genus of the dioecia monadelphia class and order of professor Martyn, and monadelphia octandria of Scwartz and Gmelin, the characters of which are: CAL-. of the male, a three or five-leaved perianthium; leaflets ovate, concave, equal, coloured, and deciduous : no corolla . STAM. eight filaments, equal, scarcely longer than the calyx, slightly connate at the base ; antherae ovate and upright : FIST, a rudiment ; the calyx of the female is a one-leafed, four or five-toothed perianthium, the teeth equal and small ; no corolla ; the pis- tillum has a germ twin, superior ; styles two, very long and filiform; stigmas simple and acute ; the pericarpium, a capsule berried, two-seeded, two-celled, two-valved ; the seeds solitary, large and oblong : there is one species, viz. Alchornea latifolia.

AL’CHYMIZE ,v. ^

AL’CHYMY,

ALKYM’ISTRIE,

ALCHYM’ICAL,

ALCHYM’ICALLY,

AL’CHYMIST,

ALCHYMIST'ICAL,

Deduced by some from the Arabic al, the, and %EVW, to melt. Per- haps it may be defined the pouring and mixing of mineral substances, in a state of fusion, in

ALCHYMIST'ICALLY,J order to obtain the pre- cious metals supposed to be contained therein.

And whan this alkymisfre saw his time,

Risethup, sire preest, quod he, and stondeth by me ;

And for I wote wel, ingot had ye non,

Goth, walketh forth, and bringeth a chalk ston.

Chaucer. T/ie Chanone Yemannes Tale, b. ii. White alchymy is made of pan brass one pound, and arsenicum three ounces ; or alchemy is made of copper and auripigneantum.*

Brown'i Vulgar Errours. Raymond Lully would prove it alchymically.

Camden.

To solemnize this day, the glorious sun Stays in his course, and plays the alchymist ; Turning, with splendour of his precious eye, The meagre cloddy earth to glittering gold.

Shaktp. King John.

Every alchymist knows, that gold -will endure a vehement fire for a long time without any change ; and after it has been divided by corrosive liquors into invisible parts, yet may presently be precipitated, so as to appear in its own form. Grew.

Compared to this, All honour's roimick ; all wealth, alchymy.

Donne.

They bid cry,

With trumpets regal sound, the great result ; Tow’rds the four winds, four speedy cherubim Put to their mouths the sounding alchymy, By herald’s voice explained. ‘ Mitt. Par, Lost. It was by the means of fantastical ideas and notions, that chemistry was turned into alchymy ; astronomy into judicial astrology.

Bulingbroke’s Efsay on Human Know.

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*Time ***was, when I know not what mystical meanings were drawn, by a certain cabalistic alchymy, from the simplest expressions of holy writ.*

Hartley’s Sermons.

ALCIATI, (Andrew,) a celebrated lawyer, who flourished in the sixteenth century, born at Milan. Thuanus highly commends him for mingling much of polite learning in the explica- tion of the laws, and divesting it of barbarous technicalities. He published a great many law books, and some notes upon Tacitus.

ALCIBIADES, a famous Athenian general, was the son of Clinias, who fell at the battle of Coronaea, by Dionomache, the daughter of Xan- tippus, who overthrew the Persians at Mycale ; and the sister of Pericles, the celebrated orator. He was born B. C. 405, and lived at a time when his country was a scene of confusion. The Greeks, grown insolent from their conquests in Persia, turned their arms against each other, under the conduct of the two most opulent states, Athens and Lacedaemon. Alcibiades, in the midst of an expedition he had planned against the enemy, was recalled home to answer some charge of a private nature ; but fearing the malice of his enemies, instead of going to Athens, he offered his services to Sparta, where they were readily accepted. By his advice the Lacedaemonians made a

league with Persia, which gave a favourable turn to their affairs. But his credit in the republic giving rise to jealousies against him, he privately reconciled himself to his country, and took again the com- mand of an Athenian army. Here victory attend- ed all his motions. The loss of seven battles obliged the Spartans to sue for peace. He enjoyed his triumphs, however, only a short time at Athens ; one unsuccessful event making it ex- pedient for him to retire. In his absence the Spartans again took the lead, and at the fatal battle of ^gos entirely subdued the Athenian power. Alcibiades, though an exile, endeavour- ed to restore the power of his country ; of which the Spartans having intelligence, procured him to be assassinated. He was a man of admirable accomplishments, but indifferent principles ; of great parts, and of an amazing versatility of genius.

ALCIBIADUM, or ALCIBIUM, in botany, a word used by the ancients as an epithet for a kind of echium, or vipers bugloss, and sometimes as the name of a peculiar plant.

ALCIDES, in mythology, an epithet of Her- cules.

ALCINOUS, in fabulous history, a king of the Phoenicians, in the island now called Corfu, son of Nausithous, and grand-son of Neptune and Periboea. His gardens have immortalized his memory. He , received Ulysses with great hospitality, when a storm had cast him on his coast.

ALCM^EON, the thirteenth and last per- petual archon of Athens, died, after reigning only two years, in the third year of the sixth Olympiad, A. A. C. 754.

ALCMAER, a city of North Holland, about four miles from the sea, and twenty-four N.N.W. from Amsterdam. It is one of the cleanest towns in Holland; and the town-house, and ar-

senal have been much admired. It had formerly two parish churches situated near each other, dedicated to St. Matthew and St. Lawrence. The latter had so high a tower that it served for a sea mark, but it fell down in 1464, and so much damaged the other, that they were both demolished in 1470, and one church was built in their stead, dedicated to the same saints. The Spaniards, under the command of Frederic of Toledo, son of the duke d'Alva, came to be- siege it, after they had taken Haerlem in 1573; but were forced to raise the siege, after lying before it three months, as well on account of the infection of the air as the brave resistance of the inhabitants and soldiers ; even the women sig- nalizing themselves boldly in its defence. In this city, in the year 1637, 120 tulips, with the off- sets, sold for 90,000 florins ; and one of them, called the viceroy, for 4203 guilders ! The states at last put a stop to this extravagant passion for flowers, which had ruined so many, or rather to the speculative passion of gambling in them as an article of commerce, by severe penalties. The town has a very good trade in butter, and cheese,which are esteemed the best in Holland ; as well as in grain, seeds, and flower roots. It is well fortified, and contains, besides the Catholic churches, two Calvinist, one Lutheran, and one Baptist church, as well as a Jewish synagogue. Inhabitants from 9000 to 10,000. Alcmaerwas taken and held for a short time by the British in 1799; here is a canal which leads from Hoorn through Alcmaer to Petten, and serves to unite the Zuyderzee with the North sea. Lon. 4►►. 21'. E. Lat. 52►►. 38'.N.

ALC MAN, a lyric poet, was born at Sparta, and flourished in the twenty-seventh Olympiad. He composed several poems, of which only some fragments remain, quoted by Athenaeus and some other ancient writers. He was very amorous : accounted the father of gallant poesy ; and is said to have been the first that introduced the custom of singing love songs in company. He is reported to have been one of the greatest eaters of his age. He died, of a

strange disease ; for he was eaten up with lice.

ALCMANIAN, from Alcman, see last article, in ancient lyric poetry, a kind of verse consisting of two dactyls and two trochees, as, ††† Post equi│tem sedejta tra │ cura. Some authors mention other Alcmanian verses, composed of three dactyls, and a caesura ; as, Munera │ loetitijamque Defe.

ALCMENA, in mythology, the daughter of Electryon, king of Mycenae, and wife of Amphitryon. Jupiter, assuming the form of her betrothed husband, while he was abroad in the wars, made her the mother of Hercules ; Am- phitryon is said to have been proud of the cir- cumstance. ,

ALCO, in zoology, the canis Amencanus Linnaeus, about the size of a squirrel, with small head, pendulous ears, curved body, and short tail. There are two varieties, viz. the lat alco, ytzcuinte- porzotli, canis Mexicanus of Her- nandez, which is extremely fat, head very small, ears pendulous, with the fore part of the head very white, and yellowish ears, short neck, arched back, vellow hair, white short pendulous

tail, large belly, spotted with black, white legs and feet, and the female with six conspicuous

Japs ; and the techichi of Fernandes, which is ke the small dogs of Europe, except that it has a wild and melancholy air. The first of these approaches the Iceland dog, and the second is perhaps the same animal with the koupara, or crab-dog of Guiana, which in figure resembles the fox, and in its hair the jackal. It has been called the crab-dog, because it lives chiefly upon crabs and other testaceous animals.

ALCOCK, (John,) LL.D. and bishop of Ely, in the reign of Henry VII. was born at Beverly in Yorkshire, and educated at Cam- bridge. He was first

made dean of Westminster, and in 1471, was consecrated bishop of Roches- ter; in 1476, he was translated to the see of Worcester ; and in 1486, to that of Ely. He was a man of great learning and piety ; and so highly esteemed by king Henry, that he ap- pointed him lord president of Wales, and afterwards lord high Chancellor of England.

Alcock founded a school at Kingston upon Hull, and built the spacious hall belonging to the episcopal palace at Ely. He was also the foun- der of Jesus College at Cambridge, and the house which was formerly a nunnery, dedicated to St. Radigund, had become so notorious for the incontinence of its inmates, that king Henry VII. and Pope Julius II. consented to its disso- lution; and Alcock obtained a grant of it. Bayle calls it spiritualium meretricum CBenobium. Bishop Alcock, wrote, 1. Mons Perfectionis, Lond. 1501. 2. In Psalmos Penitentiales. 3. HomilifflVulgares. 4. Meditationes Piae. 5. Galli Cantus ad Confratres suos Curatos in Synodo apud Barnwell, 1498, 4to, which bears out the pun on the bishop's name by a print of his preaching with a cock on each side of him. He died in 1500.

Also, a philosopher of the second century, who wrote a treatise De Doctrina Platines, which has been edited by various learned men : the best edition is the 12mo. Oxford, 1667.

A L C O H O L.

ALCOHOL, in chemistry, ardent spirit, spirit of wine : alcool esprit de vin, Fr. ; weingeist, Ger. ; spirito ardente, spirito de vino, acquar- zente, Italian ; in the nomenclature of modern chemistry, the purely spirituous part of all liquors that have undergone the vinous fermen- tation, and derived from none but such as are susceptible of it. As a chemical agent, it is of the highest importance, and in its various com- binations, involving all the grand principles of the science. All fermented liquors agree in two points : a saccharine juice is necessary to the pro- duction ; and they are all capable of furnishing an ardent spirit by

distillation. The term, how- ever, is commonly used to signify this spirit more or less imperfectly freed from water, in the state in which it is usually met with in the shops, and in which, as it was first obtained from the juice of the grape, it was long distinguished by the name of spirit of wine. At present it is ex- tracted chiefly from grain or melasses in Europe, ' and from the juice of the sugar-cane in the West- Indies ; and, in the diluted state in which it commonly occurs in trade, constitutes the basis of the several spirituous liquors, such as brandy, rum, arrack, malt-spirits, &c. : differing from each other in colour, smell, taste, and strength ; but the spirituous part, to which they owe their inflammability, their hot fiery taste, and their intoxicating quality, being the same in each, may be procured in its purest state by a second dis- tillation, which is termed, in technical language, rectification. As we are not able to compound alcohol immediately from its ultimate consti- tuents, we have recourse to the process of fer- mentation, by which its principles are first extri- cated from the substances in which they were com- bined, and then united into a new compound ; to distillation, by which this new compound, the alcohol, is separated in a state of dilution will) water, and contaminated with essential oil ;

and to rectification, by which it is ultimately freed from these. In this country, alcohol, as well as ardent spirits of different kinds, is pro- cured most largely from fermented grain liquor, prepared, for the purpose of distillation, from wheat, barley, melasses, &c. ; but in the wine countries, the spirit is obtained by the distillation of wine, whence the synonymous term, spirit of wine.

It appears to be essential to the fermentation of alcohol, that the fermenting fluid should con- tain saccharine matter, which is indispensable to that species of fermentation called vinous. In France, where a great deal of wine is made, particularly at the commencement of the vintage, which is too weak to be a saleable commodity, it is a common practice

to subject this wine to dis- tillation, in order to draw off the spirit; and, as the essential oil that rises in this process is of a more pleasant flavour than that of malt or me- lasses, the French brandies are preferred to any other^ though even in the flavour of these there is a difference, according to the wine from which they are produced. In the West Indies a spirit is obtained from the juice of the sugar-cane, which is highly impregnated with its essential oil, and well known by the name of rum. The distil- lers in this country use grain or melasses, whence they distinguish the products by the name of malt spirits, and melasses spirits. It is said that a very good spirit may be extracted from the husks of gooseberries or currants, after wine has been made from them.

As the process of malting develops the saccha rine principle of grain, it would appear to render it fitter for the purpose : though it is the common practice to use about three parts of raw grain with one of malt. For this two reabons may be assigned; by using raw grain the expense of malting is saved, as well as the duty on malt ; and the process of malting requires some nicety

f attention since, if it be carried too far, part watery part is left behind. This second product,

f trm cnpr-nnnnf moTi-op -10 inat n^A If It. 1 i ..... ►►.*

the saccharine matter is lost, and if it be topped too soon, this matter will soon be

termed raw spirit, being distilled again, is called rectified spirit. It is calculated, that a hundred

wholly developed Besides, if the malt be dried gallons of malt or corn wash will not produce

too quickly or by an unequal heat, the spirit above

twenty of spirits, containing sixty parts of

it yields will be less in quantity, and more un-
alcohol to fifty of water : the same of cyder wash

leasant in flavour. Barley appears to produce
fifteen gallons; and of melasses wash, twentv

*s spirit than wheat ; and if three parts of raw *- ”*
in.— ‘-

two gallons. The most spirituous wines of France,

heat be mixed with one of malted barley, the those
of Languedoc,Guienne,and Rousillon, yield,

according to Chaptal, from twenty to twenty-five
gallons of excellent brandy from 100 ; but those of
Burgundy and Champagne much less. Brisk wines,
containing much carbonic acid, from the

produce is said to be particularly fine. This is the

practice of the distillers in Holland for producing

a spirit of the finest quality ; but in England

they are expressly prohibited from using more

than one part of wheat to two of other grain,
fermentation having been stopped at an early

Itye affords still more spirit than wheat. :-J
----” <- ‘

The practice with the distillers in Scotland, is to
use one part of malted with from four to nine parts
of un malted grain ; which yields an equal quantity
of spirit, and at a much cheaper rate than the
former proportions. The grain em- ployed must be
coarsely ground, and then mixed

with a little cold water, so as to prevent its run-

period, yield the least spirit.

The spirit thus obtained ought to be colourless, and

free from any disagreeable flavour ; and in this state it is fittest for pharmaceutical purposes, or the extraction of tinctures.

We shall take the example of brandy, which is the product of the first distillation of wine, and exhibit the methods by which alcohol is

ning into lumps; water about ninety degrees of procured from it by rectification, to illustrate one

Fahrenheit may then be added, till it is suffi- ciently diluted ; and, lastly, a sufficient quantity of yeast. The whole may then be allowed to ferment in a covered vessel, to which the air can have access. If the temperature exceeds seventy- seven degrees of Fahrenheit, the fermentation will be too rapid ; if it be below sixty degrees, the fermentation will cease : hence the mean between these will be found most favourable. In this country the common practice is to mash the grain as for brewing malt liquors, and to boil the wort. But if the wash or liquor intended for distillation be made from melasses and water, the fermentation must be continued till the liquor grows fine, and pungent to the taste, which will generally be about the third day, but not so long as to permit the acetous fermentation to commence.

In this state the wash is to be committed to the still, of which, including the head, it should occupy at least three-fourths ; and be distilled with a gentle heat as long as any spirit comes over, which will be till about half the wash is con- sumed. The more slowly the distillation is con- ducted, the less will the spirit be contaminated with essential oil, snd the less danger will there be of empyreuma. A great saving of time and fuel may be obtained by making the still very broad and shallow, and contriving a free exit for the steam. This has been carried to such a pitch in Scotland, that a still, measuring forty- three gallons, and containing sixteen gallons of wash, has been charged and worked no less than four hundred and eighty times in the space of twenty-four hours; which, if

it were not esta- blished by unquestionable evidence, would ap- pear incredible.

This wonderful rapidity of distillation has ceased since the excise duties have been levied on the quantity of spirit produced, and riot, as formerly, by the size of the still. Hence, too, the spirit is probably improved in flavour

of the most useful modes of preparing alcohol.

This spirit is a compound of alcohol, water, a colouring extractive matter, and a small quantity of oil. It is to the two last that it owes its pe- culiar flavour, smell, and appearance, whereby it is distinguished from other distilled spirits. The object of the process of rectification is to separate the first from the other ingredients, and this separation is effected upon the principle that alcohol is the most easily volatilized when a gentle heat is applied, and therefore appears, in the first product of distillation, whilst the extractive mat- ter and much of the water remain behind. It is more difficult, however, to get rid of 1-he small portion of oil which brandy contains, as this is soluble in alcohol, and will rise with it in dis- tillation, unless prevented by the means which will be presently mentioned. The observations of M. Baume, and his directions for the prepara- tions of alcohol, are so judicious and accurate, that we shall here mention them.

' To procure rectified alcohol,' says this able chemist, 'put a quantity of brandy in the water bath of an alembic, and proceed to distillation. Set apart the first product of the distillation when it amounts to about a fourth part of the liquor put into the alembic. Then continue the process till about as much more is obtained, or till the liquor comes over white and milky. Then re-distil the latter product, and mix the first half which comes over with the first part of the former distillation, and continue to distil as long as any spirit comes over. This latter portion may be again distilled, and the first product mixed with the former first

pro- ducts, as before After each distillation, there remains in the alembic a watery liquor which retains the smell of brandy, but is entirely de- prived of inflammable spirit, and is thrown away as useless. Having thus procured all the spirit from the brandy, return all the reserved

The first product, "technically termed low wine, first products to the alembic, and distil with a is again to be subjected to distillation, the latter gentle fire. When about half the liquor has

come over, it should be kept apart as pure recti- fied alcohol ; the remainder is to be distilled as

portions of what comes over, called faints, being set apart to be put into the wash still at some future operation. Thus a large portion of the

long as it is inflammable, and may either be

again rectified, or reserved for those purposes where a spirit of inferior strength is required. This judicious chemist gives this reason for the above process : the spirit which first passes over in distillation is the purest, and contains the least portion of gross essential oil ; the latter portion, on the other hand, is almost saturated with this oil, and the difference between the two is easily distinguishable when rubbed on the hands ; the first product leaves no smell of brandy, but the last gives an odour like the breath of drunkards, who digest their food imperfectly. The quantity of oil, however, varies according to the nature of the brandy ; that which is made from wine alone containing the least oil, but that which is pro- cured from wine lees being so full of it as to leave a stratum of the oil swimming on the wa- tery extractive liquor left in the alembic, after all the spirit has been distilled off.

Dubuisson remarks, concerning this oil, that the

Languedoc brandies contain much more of it that the Cogniac ; and that after distilling a large quantity of the former, the head of the alembic was covered with expanded drops of the oil, which adhered to the vessel. When collected together, and quite cold, they became as stiff as suet, had a chesnut colour, a strong disagreeable taste, and a smell like turpentine. Various addi- tions have been made to the impure sprit, in order to assist in the separation of the oil. The simplest and one of the most efficacious is water. This, when added to the oily spirit, turns it milky (as is the case with any other solution of essen- tial oil in alcohol), and, by weakening the adhe- sion between the oil and the spirit, it enables the latter to rise in distillation, unmixed with the former. The chief inconvenience is, that this addition weakens the strength of the spirit so much, as to require successive rectifications be- fore it can be sufficiently deprived of its water. Bran, chalk, crumbs of bread, and other sub- stances, are also added, before distillation, to the spirit, when oily and ill-flavoured ; and they all have a good effect in keeping down the matters which contaminate the alcohol, and render the distillation more effectual in purifying it. Quick- lime is still more efficacious, but much lessens the product of alcohol, alters its nature in some degree, and makes it more penetrating. It would appear, however, that there are some kinds of wine in which the odorant particles are so intimately mixed with the spirituous, that it is scarcely possible to separate them by simple distillation, however cautiously and skilfully conducted. The common still, with the worm- tube and refrigeratory, is well calculated for the rectification of spirits, only allowance must be made for the readiness with which ardent spirit, when heated, assumes the state of vapour, and the very great expansion which it then under- goes.

Alcohol, freed from all foreign ingredients but water, and already of considerable strength, may be brought to the specific gravity of 0.825, at the temperature of 60►►, by a single distillation,

where the heat is moderate and applied gra- dually, and the condensation slow. When about a third or half of the spirit is distilled over, the strength of the succeeding portion is di-

minished, the specific gravity increases, and it becomes more watery, ''and therefore the first product should be kept apart. This cannot be rendered stronger by any simple distillation, but it may be still further dephlegmated by means which will be mentioned hereafter.

But for ordinary sale something more is re- quired. The brandy of France, which is most in esteem here, though perfectly colourless when first made, and often preserved so for use in that country by being kept in glass or stone bottles, is put into new oak casks for exportation, whence it soon acquires an amber colour, a peculiar flavour, and something like an unctuosity of con- sistence. As it is not only prized for these quali- ties, but they are commonly deemed essential to it, the English distiller imitates by design these accidental qualities. The most obvious and natural method of doing this would be by im- pregnating a pure spirit with the extractive, re- sinous, and colouring matter of oak shavings ; but other modes have been contrived. The dulcified spirit of nitre, as it is called, is com- monly used to give the flavour ; and catechu, or burnt sugar, to impart the desired colour. A French writer has recommended three ounces and a half of finely powdered charcoal, and four ounces and a half of ground rice, to be digested for a fortnight in a quart of malt spirit.

The finest gin is said to be made in Holland from a spirit drawn from wheat, mixed with a third or fourth part of malted barley, and twice rectified over juniper berries ; but in general rye meal is used instead of wheat. They pay so much regard to the water employed, that many send vessels on purpose to fetch it from the Meuse; but all use the softest and clearest river water they can get. In England it is the com- mon practice to add oil of turpentine, in the pro- portion of two ounces to ten

gallons of raw spirit?, with three handfuls of bay salt, and drawn off till the faints begin to rise.

But corn, or melasses spirit, is flavoured like- wise by a variety of aromatics, with or without sugar, to please different palates ; all of which are included under the general technical term of compounds or cordials.

Other articles have been employed, though not generally, for the fabrication of spirit, as carrots and potatoes ; and we are lately informed by professor Proust, that from the fruit of the carob tree he has obtained good brandy in the propor- tion of a pint from five pounds of the dried fruit.

To obtain pure alcohol, different processes have been recommended ; but the purest rectified spirit, obtained as above described, being that which is least contaminated with foreign matter, should be employed. Rouelle recommends to draw oft' the spirit in a water bath ; to rectify this twice more, drawing off two-thirds each time ; to add water to this alcohol, which will turn it milky by separating- the essential oil remaining in it ; to distil the spirit from this water ; and finally, rectify it by another distillation.

Alcohol is often dephlegmated, or still further freed from water, by means of some alkaline salt. Boerhaave recommended, for this purpose, the muriate of soda, deprived of its water of crystal- lization by heat, and added hot to the spirit. But

the sul)carbonate of potash is preferable. About a third of the weight of the alcohol should be added to it in a glass vessel, well shaken, and then suffered to subside. The salt will be mois- tened by the water absorbed from the alcohol ; which being decanted, more of the salt is to be added, and this is to be continued till the salt falls dry to the

bottom of the vessel. The alcohol in this state will be reddened by a portion of the pure potash, which it will hold in solution, from which it must be freed by distillation in a water bath. Dry muriate of lime may be substituted advantageously for the alkali.

Alcohol, as we have already intimated, is a colourless transparent liquor, appearing to the eye like pure water. It possesses a peculiar pe- netrating smell, diirinct from the proper odour of the distilled spirit from which it had been procured. To the taste it is excessively hot and burning, but without any peculiar flavour. From it►► great lightness and mobility, the bub- bles, which are formed on shaking it, subside al- most instantaneously, and this 'is one method of judging of its purity. Alcohol is very easily vo- latilized by the heat of the hand, it even begins to be converted into a very expansible vapour at the temperature of 55►► Fahr. and the quick- ness of evaporation always produces a consider- able cold. It boils at about 165►►, and the vapours when condensed return unaltered to their former state. It has never been frozen by any cold, natural or artificial, and hence its use in thermometers to measure very low tempera- tures.

Alcohol takes fire very readily on the applica- tion of any lighted body, the speedier in propor- tion to its purity. It burns with a pale flame, white in the centre and blue at the edges ; this gives but a small degree of heat, and is so faint as to be scarcely visible in bright day-light. It burns without any smoke or vapour, and if strong, leaves no residuum ; but if weak, it is extinguished spontaneously, and the watery part remains behind.

As alcohol is much lighter than water, its specific gravity is adopted as the test of its purity. Fourcroy considers it as rectified to the highest point when its specific gravity is 829, that of water being 1000 ; and perhaps this is nearly as far as it can be carried by the process of Rouelle or Baume simply. M. Bories found the first measure that

came over from twenty of spirit at 836 to be 820, at the temperature of 71►► of Fahrenheit. Sir Charles Blagden, by the addition of alkali, brought it to 813, at CO0 of Fahrenheit. 'Chaussier professes to nave reduced it to 798 ; but he gives 998.35 as the specific gravity of water. Lowitz asserts Jiat he has obtained it at 791, by adding as much alkali as nearly to absorb the spirit; but the temperature is not indicated. In the shops it is about 835 or 840 : according to the London College it should be 815.

It is by no means an easy undertaking to de- termine the strength or relative value of spirits, even with sufficient accuracy for commercial pur- poses. The following requisites must be ob- tained before this can be well done : the specific gravity of a certain number of mixtures of al-

cohol and water must be taken so near each other, as that the intermediate specific gravities may not perceptibly differ from those deduced from the supposition of a mere mixture of the fluids ; the expansions or variations of specific gravity in these mixtures must be determined at different temperatures ; some easy method must be contrived of determining the presence and quantity of saccharine or oleaginous matter which the spirit may hold in solution, and the effect of such solution on the specific gravity ; and lastly, the specific gravity of the fluid must be ascer- tained by a proper floating instrument with a graduated stem, or set of weights ; or, which may be more convenient, with both.

The strength of brandies in commerce is judged by the phial, or by burning. The phial proof consists in agitating the spirit in a bottle, and ob- serving the form and magnitude of the bubbles that collect round the edge of the liquor, techni- cally termed the bead, which are larger the stronger the spirit. These probably depend on the solution of resinous matter from the cask, which is taken up in greater quantities, the stronger the spirit. It is not difficult, however, to pro- duce this appearance by various simple additions to weak spirits. The proof

by burning is also fallacious; because the magnitude of the flame, and quantity of residue, in the same spirit, vary greatly with the form of the vessel it is burned in. If the vessel be kept cool, or suffered to become hot, if it be deeper or shallower, the results will not be the same in each case. It does not follow, however, but that manufacturers and others, may, in many instances, receive con- siderable information from these signs, in circum- stances exactly alike, and in the course of opera- tions wherein it would be inconvenient to recur continually to experiments of specific gravity.

The importance of this object induced the British government to employ Dr. Blagden, now Sir Charles, to institute a very minute and accu- rate series of experiments. Of these we shall give a summary in this place, from the Philosophical Transactions for 1790.

The first object to which the experiments were directed, was to ascertain the quantity and laws resulting from the mutual penetration of water and spirit.

All bodies in general expand by heat; but the quantity of this expansion, as well as the law of its progression, is probably not the same in any two substances. In water and spirit they are remarkably different. The whole expansion of pure spirit from 30►► to 100►► of Fahrenheit's thermometer is not less than l-25th of its whole bulk at 30►► ; whereas that of water, in the same interval, is only l-145lh of its bulk. The laws of their expansion are still more different than the quantities. If the expansion of quicksilver be, as usual, taken for the standard, (our ther- mometers being constructed with that fluid,) the expansion of spirit is, indeed, progressively in- creasing with respect to that standard, but no, much so within the above- mentioned interval , while water kept from freezing to 30►►, winch may easily be done, will absolutely contract < it is heated for ten or more degrees, that is to 40►► or 42►► of the thermometer, and*

will then begia

to expand as its heat is augmented, at first slowly, and afterward gradually more rapidly, so as to observe upon the whole a very increas- ing progression. Now, mixtures of these two substances will, as may be supposed, approach to the less or the greater of these progressions, according as they are compounded of more spirit or more water, while their total expansion will be greater, according as more spirit enters into their composition ; but the exact quantity of the expansion, as well as the law of progression, in all of them, can be determined only by trials. These were, therefore, the two other principal objects to be ascertained by experiment.

The person engaged to make these experi- ments was Dr. Dollfuss, an ingenious Swiss gentleman then in London, who had distinguished himself by several publications on chemical sub- jects. As he could not conveniently get the quantity of spirit he wanted lighter than 825, at 60►► Fahrenheit, he fixed upon this strength as the standard for alcohol.

These experiments of Dr. Dollfuss were re- peated by Mr. Gilpin, clerk of the Royal Society ; and as the deductions in this account will be taken chiefly from that last set of experiments, it is proper here to describe minutely the method observed by Mr. Gilpin in his operation. This naturally resolves itself into two parts : the way of making the mixtures, and the way of ascer- taining their specific gravity.

1. The mixtures are made by weight, as the only accurate method of fixing the proportions. In fluids of such very unequal expansions by heat as water and alcohol, if measures had been employed, increasing or decreasing in regular proportions to each other, the proportions of the masses would have been sensibly irregular : now the latter was the object

in view, namely to de- termine the real quantity of spirit in any given mixture, abstracting the consideration of its tem- perature. Besides, if the proportions had been taken by measure, a different mixture should have been made at every different degree of heat. But the principal consideration was, that with a very nice balance, such as was employed on this occasion, quantities can be determined to much greater exactness by weight than by any practicable way of measurement. The propor- tions were therefore always taken by weight. A phial being provided of such a size as that it should be nearly full with the mixture, was made perfectly clean and dry, and being counterpoised, as much of the pure spirit as appeared necessary was poured into it. The weight of this spirit was then ascertained, and the weight of distilled water required to make a mixture of the intended proportions was calculated. This quantity of water was then added, with all the necessary care, the last portions being put in by means of a well-known instrument, which is composed of a small dish terminating in a tube drawn to a fine point : the top of the dish being covered with the thumb, the liquor in it is prevented from running out through the tube by the pressure of the at- mosphere, but instantly begins to issue by drops, or a very small stream, upon raising the thumb. Water being thus introduced into the phial, till

it exactly counterpoised the weight, which having been previously computed, was put into the op- posite scale, the phial was shaken, and then well stopped with its glass stopple, over which leather was tied very tight to prevent evaporation. No mixture was used till it had remained in the phial at least a month, for the full penetration to have taken place ; and it was always well shaken before it was poured out to have its specific gravity tried.

2. There are two common methods of taking the specific gravity of fluids ; one by finding the weight which a solid body loses by being im- mersed in them ; the other, by filling a convenient vessel

*with them, and ascertaining the increase of weight it acquires. In both cases a standard must have been previously taken, which is usually distilled water ; namely, in the first method, by finding the weight lost by the solid body in the water ; and in the second method, the weight of the vessel filled with water. The latter was pre- ferred, for the following reasons : ***

When a ball of glass, which is the properest kind of solid body, is weighed in any spirituous or watery fluid, the adhesion of the fluid occa- sions some inaccuracy, and renders the balance comparatively sluggish. To what degree this effect proceeds is uncertain ; but from some ex- periments made by Mr. Gilpin with that view, it appears to be very sensible. Moreover, in this method, a large surface must be exposed to the air during the operation of weighing, which, especially in the higher temperatures, would give occasion to such an evaporation as to alter essentially the strength of the mixture. It seemed also as if the temperature of the fluid under trial could be determined more exactly in the method of filling a vessel, than in the other : for the fluid cannot well be stirred while the ball to be weighed remains immersed in it ; and, as some time must necessarily be spent in the weighing, the change of heat which takes place during that period will be unequal through the mass, and may occasion a sensible error. It is true, on the other hand, that in the method of filling a vessel, the temperature could not be ascertained with the utmost precision, because the neck of the vessel employed, containing about ten grains, was filled up to the mark with spirit not exactly of the same temperature, as will be explained presently : but this error, it is supposed, would by no means equal the other, and the utmost quantity of it may be estimated very nearly. Finally, it was much easier to bring the fluid to any given temperature when it was in a vessel to be weighed, than when it was to have a solid body weighed in it ; because in the former case the quantity was smaller, and the vessel contain- ing it more manageable, being

readily heated with the hand or warm water, and cooled with cold water : and the very circumstance, that so much of the fluid was not required, proved a material convenience. The particular disadvan- tage in the method of weighing in a vessel, is the difficulty of filling it with extreme accuracy ; but when the vessel is judiciously and neatly marked, the error of filling, will, with due care, be exceedingly minute. By several repetitions

of the same experiments, Mr. Gilpin seemed to bring it within the 1-15000th part of the whole weight.

The above-mentioned considerations induced Dr. Blagden, as well as the gentlemen employed in the experiments, to give the preference to weighing the fluid itself; and that was ac- cordingly the method practised both by Dr. Dollfuss and Mr. Gilpin in their operations.

The vessel chosen as most convenient for the purpose was a hollow glass ball, terminating in a neck of small bore. That which Dr. Dollfuss used held 5800 grains of distilled water ; but as the balance was so extremely accurate, it was thought expedient, upon Mr. Gilpin's repetition of the experiments, to use one of only 2965 grains capacity, as admitting the heat of any fluid contained in it to be more nicely deter- mined. The ball of this vessel, which may be called the weighing bottle, measured about 2.8 inches in diameter, and was spherical, except a slight flattening on the part opposite to the neck, which served as a bottom for it to stand upon. Its neck was formed of a portion of a barometer tube, .25 of an inch in bore, and about 1J inch long; it was perfectly cylindrical, and, on its outside, very near the middle of its length, a fine circle or ring was cut round it with a diamond, as the mark to which it was to be filled with the liquor. This mark was made by fixing the bot- tle in a lathe, and turning it round with great care, in contact with

the diamond. The glass of this bottle was not very thick ; it weighed 916 grains, and with its silver cap 936.

When the specific gravity of any liquor was to be taken by means of this bottle, the liquor was first brought nearly to the required tempe- rature, and the bottle was filled with it up to the beginning of the neck only, that there might be room for shaking it. A very fine and sensible thermometer was then passed through the neck of the bottle into the contained liquor, which showed whether it was above or below the in- tended temperature. In the former case the bottle was brought into colder air, or even plunged for a moment into cold water ; the ther- mometer in the mean time being frequently put into the contained liquor, till it was found to sink to the right point. In like manner, when the liquor was too cold, the bottle was brought into warmer air, immersed in warm water, or more commonly held between the hands, till upon repeated trials with the thermometer the just temperature was found. It will be under- stood, that during the course of this heating or cooling, the bottle was very frequently shaken between each immersion of the thermometer ; and the top of the neck was kept covered, either with the finger, or a silver cap made on purpose, as constantly as possible. Hot water was used to raise the temperature only in heats of 80►► and upwards, inferior heats being obtained by applying the hands to the bottle : when the hot water was employed, the ball of the bottle was plunged into it, and again quickly lifted out, with the necessary shaking interposed, as often as was necessary for communicating the required heat to the liquor ; but care was taken to wipe the bottle dry after each immersion, be-

fore it was shaken, lest any adhering moisture might by accident get into it. The liquor hav- ing by these means been brought to the desired temperature, the next operation was to fill up the bottle exactly to the mark upon the neck, which was done by some of the same liquor, by means of a glass funnel with a very small bore. Mr. Gilpin endeavoured to get that

portion of the liquor which was employed for this purpose, pretty nearly to the temperature of the liquor contained in the bottle ; but, as the whole quan- tity to be added never exceeded ten grains, a difference of ten degrees in the heat of that small quantity, which is more than it ever amounted to, would have occasioned an error of only 1-30th of a degree in the temperature of the mass. Enough of the liquor was put in to fill the neck rather above the mark, and the su- perfluous quantity was then absorbed to great nicety, by bringing into contact with it the fine point of a small roll of blotting paper. As the surface of the liquor in the neck would be always concave, the bottom or centre of this con- cavity was the part made to coincide with the mark round the glass ; and in viewing it, care was taken that the near and opposite sides of the mark should appear exactly in the same line, by which means all parallax was avoided. A silver cap, which fitted tight, was then put upon the neck to prevent evaporation ; and the whole apparatus was in that state laid in the scale of the balance, to be weighed with all the exact- ness possible.

The spirit employed by Mr. Gilpin was fur- nished to him by Dr. Dollfuss, under whose in- spection it had been rectified from rum supplied by government. Its specific gravity, at 60 de- grees of heat, was .82514. It was first weighed pure, in the above- mentioned bottle, at every five degrees of heat from 30 to 100 inclusively. Then mixtures were formed of it and distilled water, in every proportion, from t-20th of the water to equal parts of water and spirit; the quantity of water added being successively aug- mented, in the proportion of five grains to one hundred of the spirit ; and these mixtures were also weighed in the bottle, like the pure spirit, at every five degrees of heat. The numbers hence resulting are delivered in the following table ; where the first column shows the degrees of heat ; the second gives the weight of the

it up from 30►► to 100►► ; hence some small error in its strength may have been occasioned in the higher degrees, by more spirit evaporating than water : but this, it is believed, must have been trifling, and greater inconvenience would pro- bably have resulted from interposing a fresh mixture.

The precise specific gravity of the pure spirit employed was .82514 ; but to avoid an incon-

venient fraction, it is taken, in constructing the table of specific gravities, as .825 only, a pro- portional deduction being made from all the other numbers. Thus the following table gives the true specific gravity, at the different degrees of heat, of a pure rectified spirit, the specific gravity of which at 60►► is .825, together with the specific gravities of different mixtures of it with water, at those different temperatures.

REAL SPECIFIC GRAVITY AT THE DIFFERENT TEMPERATURES.

Heat.

The pure spirit.

100

grains of

100

grains of

100

grains of

100

grains of

100

jjraius of

100

grains of

100

grains of

100

grains of

100

grains of

100

grains of

spirit to 5 gr. of

spirit to lOgr. of

spirit to 15 gr. of

spirit to 20 gr. of

spirit to 25 gr. of

spirit to 30 gr. of

spirit to 35 gr. of

spirit to 40 gr. of

spirit to 45 gr. of

spirit to 50 gr. of

30U

.83896

.84995

.85957

.86825

.87585

.88282

.88921

.89511

.90054

.90558

.91023

3.5

83672

84769

85729

86587

87357

88059

88701

89294

89839

90345

90811

40

83445

84539

85507

86361

87184

87838

88481

89073

89617

90127

90596

45

83214

84310

85277

86131

86905

87613

88255

88849

89396

89909

90380

50

82977

84076

85042

85902

86676

87384

88030

88626

89174

89684

90160

55

82736

83834

84802

85664

86441

87150

87796

88393

88945

89458

89933

60

82500

83599

84568

85430

86208

86918

87569

88169

88720

89232

89707

65

82262

83362

84334

85193

85976

86686

87337

87938

88490

89006

89479

70

82023

83124

84092

84951

85736

86451

87105

87705

88254

88773

89252

75

81780

82878

83851

84710

85496

86212

86864

87466

88018

88538

89018

80

81530

82631

83603

84467

85248

85966

86622

87228

87776

88301

88781

85

81291

82396

83371

84243

85036

85757

86411

87021

87590

88120

88009

90

81044

82150

83126

84001

84797

85518

86172

86787

87360

87889

88376

95

80794

81900

82877

83753

84550

85272

85928

86542

87114

87654

88146

100

80548

81657

82639

83513

84038

85031

85688

86302

86879

87421

87915

Heat.

100

grains of spirit to 55 gr. of water.

100

grains of spirit to 60 gr. of water.

100

grains of spirit to 65 gr. of water.

100

grains of spirit to 70 gr. of water. .

100

grains of spirit to 75 gr. of water.

100

grains of spirit to 80 gr. of water.

100

grains of spirit to 85 gr. of water.

100

grains of spirit to 90 gr. of water.

100

grains of spirit to 95 gr. of water.

100

grains of spirit to 100 gr. of water.

*30**.*

.91449

.91847

.92217

.92563

.92889

.93911

.93474

.93741

.93991

.94222

35

91241

91640

92009

92355

92680

92986

93274

93541

93790

94025

40

91026

91428

91799

92151

92476

92783

93072

93341

93592

93827

45

90812

91211

91584

91937

92264

92570

92859

93131

93382

93621

50

90596

90997

91370

91723

92051

92358

92647

92919

93177

93419

55

90367

90768

91144

91502

91837

92145

92436

92707

92963

93208

60

90144

90549

90927

91287

91622

91933

92225

92499

92758

93002

65

89920

90328

90707

91066

91400

91715

92010

92283

92546

92794

70

89695

90104

90484

90847

91181

91493

91793

92069

92333

92580

75

89464

89872

90252

90617

90952

91270

91569

91849

92111

92364

80

89225

89639

90021

90385

90723

91046

91340

91622

91891

92142

85

89043

89460

89843

90209

90558

90882

91186

91465

91729

91969

90

88817

89230

89617

89988

90342

90668

90967

91248

91511

91751

95

88588

89003

89390

89763

90119

90443

90747

91029

91290

91531

100

88357

88769

89158

89536

89889

90215

90522

90805

91066

91310

95

90

85

80

75

70

65

60

55

50

grains of

grains of

grains of

grains of

grains of

grains of

grains of

grains of

grains of

grains of

Heat.

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr, of

spirit to 100 gr. of

water.

water.

water.

water.

water.

water.

water.

v ater.

water.

*30**

.94447

.94675

.94920

.95173

.95429

.95681

.95944

.96209

.96470

.9671-9

35

94249

94484

94734

94988

95246

95502

95772

96048

96315

96579

40

94058

94295

94547

94802

95060

95328

95602

95879

96159

96434

45

93860

94096

94348

94605

94871

95143

95423

95705

95993

96280

50

93658

93897

94149

94414

94683

94958

95243

95534

95831

96126

55

93452

93696

93948

94213

94486

94767

95057

95357

95662

95966

60

93247

93493

93749

94018

94296

94579

94876

95181

95493

95804

65

93040

93285

93546

93822

94099

94388

94689

95000

95318

95635

70

92828

93076

93337

93616

93898

94193

94500

94813

95139

95469

75

92613

92865

93132

93413

93695

93989

94301

94623

94957

95292

80

92393

92646

92917

93201

93488

93785

94102

94431

94768

95111 1

ALCOHOL.

477

45

40

35

30

25

20

15

10

5

grains of

grains of

grains of

grains of

grains of

grains of

grains of

grains of

grains of

Heat.

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to 100 gr. of

spirit to lOOgr.of

spirit to lOOgr.of

spirit to lOOgr.of

water.

water.

water.

water.

water.

water.

water.

water.

water.

*30**

.96967

.97200

.97418

.97635

.97860

.98108

.98412

.98804

.99334

35

96840

97086

97319

97556

97801

98076

98397

98804

99344

40

96706

96967

97220

97472

97737

98033

98373

98795

99345

45

96563

96840

97110

97384

97666

97980

98338

98774

99338

50

96420

96708

96995

97284

97589

97920

98293

98745

99316

55

96272

96575

96877

97181

97500

97847

98239

98702

99284

60

96122

96437

96752

97074

97410

97771

98176

98654

99244

65

95962

96288

96620

96959

97309

97688

98106

98594

99194

70

95802

96143

96484

96836

97203

97596

98028

98527

99134

75

95638

95987

96344

96708

97086

97495

97943

98454

99066

80

95467

95826

96192

96568

96963

97385

97845

98367

98991

From this table, when the specific gravity of any spirituous liquor is ascertained, it will be easy to find the quantity of rectified spirit of the above-mentioned standard, contained in any given quantity of it, either by weight or measure.

*Dr. Blagden concludes this part of the report ***with observing, that as the experiments were made with pure spirit and water, if any extra- neous substances are contained in the liquor to be tried, the specific gravity in the tables will not give exactly the proportions of water and spirit in it. The substances likely to be found in spirituous liquors, where no fraud is sus- pected, are essential oils, sometimes empyreu- matic, mucilaginous, or extractive matter, and perhaps some saccharine matter. The effect of these, in the course of trade, seems to be hardly such as would be worth the cognizance of the excise, nor could it easily be reduced to cer- tain rules. Essential and empyreumatic oils are nearly of the same specific gravity as spirit, in general rather lighter, and therefore, not- withstanding the actual penetration, will proba- bly make little change in the specific gravity of any spirituous liquor in which they are dis- solved. The other substances are all heavier than spirit ; the specific gravity of common gum being 1.482, and of sugar 1.063, according to the tables of M. Brisson. The effect of them therefore will be to make spirituous liquors ap- pear less strong than they really are. An idea was once entertained of endeavouring to determine this matter with some precision; and accord- ingly Dr. Dollfuss evaporated 1000 grains of brandy, and the same quantity of rum, to dry- ness ; the former left a residuum of 40 grains, the latter only of 8^ grains. The 40 grains of residuum from the brandy, dissolved again in a mixture of 100 of spirit, with 50 of water, in- creased its specific gravity .00041 ; hence the effect of this extraneous matter upon the specific gravity of the brandy containing it, would be to increase the fifth decimal by six nearly, equal to what would indicate, in the above-mentioned mixture, about one seventh of a grain of water more*

than the truth, to 100 of spirit; a quan- tity much too minute for the consideration of government.

The strength of spirit is determined, accord- ing to law, by Sykes's hydrometer ; but as many

dealers use Dicas's,we shall describe it here, and .the former under DISTILLATION.

It consists of a light copper ball, terminating below with a ballast bottom, and above with a thin stem, divided into ten parts. The upper extremity of the stem is pointed, to receive the little brass poises, or discs, having each a hole in its centre. These poises are numbered 0, 10, 20, 30, &c. up to 350, which is the lightest o►►. the series. The intermediate units are given by the subdivisions on the stem. A graduated ivory scale, with a sliding rule and thermometer, ac- companies the hydrometer, to make the correc- tion of temperature. The first thing in using this instrument is to plunge the thermometer into a glass cylinder containing the spirits to be tried. The sliding rule has then the degree of tempera- ture indicated, moved opposite to zero. The hydrometer is now placed in the liquid, and such a poise is put on as to submerge a portion of the stem. The weight, added to the number on the stem, gives a sum, opposite to which on the scale we find a quantity by which the par- ticular spirit may exceed or fall short of proof. Thus, if it mark 20 under proof, it signifies that every 100 gallons of that spirit would require to have 20 gallons of water abstracted from it to bring it up to proof. If it mark 10 over proof, we learn that every 100 gallons contain too little water by 10 gallons. When the ther- mometric degree of 60►► is put opposite to zero, then the weights and value of the spirits have the following relations on the scale.

102.5 denotes 20 under proof

122.0 10

143.5 Proof

167. 10 over proof

193. 20

221. 30 over proof

251. 40

284.5 50

322.5 60

350.5 Alcohol.

There is, besides, an upper line on the scale which exhibits the relation of spirit to water reckoned unity. Thus, above 10 per cent over proof in the second line, we find in the uppe. line 8. From which we learn, that 8 of that spirit by bulk, will take 1 of water to bring it down to proof. At 60►► Fah. wefind that 10 over

proof, on Dicas, corresponds to specific gravity

0.9085.

3►► over proof to 0.9169

Proof, 0.9218.

Now, by Gilpin's tables, this indicates a com- pound of 100 grains of alcohol 0.825, and 85 grains of water. But by Lowitz's table in Crell's Annals, the above specific gravity corresponds to 48 alcohol of 0.791 at the temperature of 68►►, united to 52 of water, and cooled down to 60.

Equal weights of that strong alcohol and water, give at 60►►, a specific gravity of 0.9175. By the Act of Parliament of 1762, the specific gravity of proof was fixed at 0.916. It is at present to water as 12 to 13, orn:0.923. See DISTIL- LATION.

For the following table of the quantity of absolute alcohol, in spirits of different densities, we are indebted to Lowitz.

100 parts.

Sp. gravity.

100 parts.

Sp. gravity.

100 parts.

Sp. gravity.

Ale.

Wat.

At 68□□.

At 60□□

Ale.

Wat.

At 68□□.

At 60□□.

Ale.

Wat.

At 68□□.

At 60□□.

100

0

0.791

0.796

66

34

0.877

0.881

32

68

0.952

0.955

99

1

0.794

0.798

65

35

0.880

0.883

31

69

0.954

0.957

98

2

0.797

0.801

64

36

0.882

0.886

30

70

0.956

0.958

97

3

0.800

0.804

63

37

0.885

0.889

29

71

0.957

0.960

96

4

0.803

0.807

62

38

0.887

0.891

28

72

0.959

0.962

95

5

0.805

0.809

61

39

0.889

0.893

27

73

0.961

0.963

94

6

0.808

0.812

60

40

0.892

0.896

26

74

0.963

0.965

93

7

0.811

0.815

59

41

0.894

0-898

25

75

0.965

0.967

92

8

0.813

0.817

58

42

0.896

0.900

24

76

0.966

0.968

91

9

0.816

0.820

57

43

0.899

2.902

23

77

0.968

0.970

90

10

0.818

0.822

56

44

0.901

0.904

22

78

0.970

0.972

89

11

0.821

0.825

55

45

0.903

0.906

21

79

0.971

0.973

88

12

0.823

0.827

54

46

0.905

0.908

20

80

0.973

0.974

87

13

0.826

0.830

53

47

0.907

0.910

19

81

0.974

0.975

86

14

0.828

0.832

52

48

0.909

0.912

18

82

0.976

0.977

85

15

0.831

0.835

51

49

0.912

0.915

17

83

0.977

0.978

84

16

0.834

0.838

50

50

0.914

0.917

.16

84

0.978

0.979

83

17

0.836

0.840

49

51

0.917

0.920

15

85

0.980

0.981

82

18

0.839

0.843

48

52

0.919

0.922

14

86

0.981

0.982

81

19

0.842

0.846

47

53

0.921

0.924

13

87

0.983

0.984

80

20

0.844

0.848

46

54

0.923

0.926

12

88

0.985

0.986

79

21

0.847

0.851

45

55

0.925

0.928

11

89

0.986

0.987

78

22

0.849

0.853

44

56

0.927

0.930

10

90

0.987

0.988

77

23

0.851

0.855

43

57

0.930

0.933

9

91

0.288

0.989

76

24

0.853

0.857

42

58

0.932

0.935

8

92

0.989

0.990

75

25

0.856

0.860

41

59

0.934

0.937

7

93

0.991

0.991

74

26

0.859

0.863

40'

60

0.936

0.939

6

94

0.992

0.992

73

27

0.861

0.865

39

61

0.938

0.941

5

95

0.994

72

28

0.863

0.867

38

62

0.940

0.943

4

96

0.995

71

29

0.866

0.870

37

63

0.942

0.945

3

97

0.997

70

30

.0.868

0.872

36

64

0.944

0.947

2

98

0.998

69

31

0.870

0.874

35

65

0.946

0.949

1

99

0.999

68

32

0.872

0.878

34

66

0.948

0,951

0

100

1.000

67

33

0.875

0.879

33

67

0.950

0.953

The most remarkable characteristic property of alcohol, is its solubility or combination in all proportions with water, a property possessed by no other combustible substance, except the acetic spirit obtained by distilling the dry acetates. When it is burned in a chimney which commu- nicates with the worm-pipe of a distilling appa- ratus, the product, which is condensed, is found to consist of water, which exceeds the spirit in weight about one-eighth part; or more accu- rately, 100 parts of alcohol, by combustion, yield 136 of water. If alcohol be burned in close vessels with vital air, the product is found

to be water and carbonic acid. Whence it is inferred that alcohol consists of hydrogen, united either to carbonic acid, or its acidifiable base ; and that the oxygen uniting on the one part with the hydrogen, forms water ; and on the other with the base of the carbonic acid forms that acid.

The most exact experiments on this subject are those recently made by M.de Saussure. The alcohol he used had, at 62.8►►, a specific gravity of 0.8302 ; and by Richter's proportions, con- sists of 13.8 wate-, and 86.2 of absolute alcohol. The vapour of alcohol was made to traverse a

narrow porcelain tube ignited, from which the products passed along a glass tube about six feet in length, refrigerated by ice. A little char- coal was deposited in the porcelain, and a trace of oil in the glass tube. The resulting gas being analyzed in an exploding eudiometer, with oxygen, was found to

resolve itself into carbonic acid and water. Three volumes of oxygen dis- appeared for every two volumes of carbonic acid produced : a proportion which obtains in the analysis by oxygenation of olefiant gas. Now, as nothing resulted but a combustible gas of this peculiar constitution, and condensed water equal to ^►► of the original weight of the alcohol, we may conclude that vapour of water and olefiant gas are the sole constituents of alcohol. Sub- tracting the 13.8 per cent of water in the alcohol at the beginning of the experiment, the absolute alcohol of Richter will consist of 13.7 hydrogen, 51.98 carbon, and 34.32 oxygen. M. Gay Lussac infers, that alcohol, in vapour, is composed of one volume of olefiant gas, and one volume of the vapour of water, condensed by chemical affinity into one volume.

The sp. gr. of olefiant gas is 0.97804

Of aqueous vapour is 0.62500

Sum = 1.60304 And alcoholic vapour is ~ 1.6133

These numbers approach nearly to those which ►►►would result from two prime equivalents of ole- fiant gas, combined with one of water ; or ulti- mately, three of- hydrogen, two of carbon, and one of oxygen.

A considerable number of the uses of this fluid, as a menstruum, will pass under our observation in the various articles of this work. The mutual action between alcohol and acids produces a light, volatile, and inflammable substance, called aether. Pure alkalis unite with spirit of wine,

Quantity Salts soluble in

of grains. 200 grains of spirit.

4 "Nitrate of potash

Muriate of potash Sulphate of soda Nitrate of soda Muriate of soda Sulphate of ammonia Nitrate of ammonia Muriate of ammonia Nitrate of lime Muriate

of lime Nitrate of silver Muriate of mercury Nitrate of iron Muriate of iron

48 Nitrate of copper

48 Muriate of copper

and form alkaline tinctures. Few of the neutral salts unite with this fluid, except such as contain ammonia. The carbonated fixed alkalis are not soluble in it.

From the strong attraction which exists be- tween alcohol and water, it unites with this last in saline solutions, and in most cases precipitates the salt. This is a pleasing experiment, which never fails to surprise those who are unacquainted with chemical effects. If, for example, a satu- rated solution of nitre in water be taken, and an equal quantity of strong spirit of wine be poured upon it, the mixture will constitute a weaker spirit, which is incapable of holding the nitre in solution ; it therefore falls to the bottom instantly, in the form of minute crystals.

The degrees of solubility of many neutral salts in alcohol have been ascertained by experiments made by Macquer, of which an account is pub- lished in the memoirs of the Turin Academy. ††† The alcohol he employed was carefully freed from superabundant water by repeated rectifications, without addition of any intermediate substance. The salts employed in his experiments were pre- viously deprived of their water of crystallization by a careful drying. He poured into a matrass, upon each of the salts thus prepared, half an ounce of his alcohol, and set the matrass in a sand bath. When the spirit began to boil, he filtrated it while it was hot, and left it to cool, that he might observe the crystallizations which took place. He then evaporated the spirit, and weighed the saline residuums. He repeated these experiments a second time, with this differ- ence, that instead of evaporating the spirit in which the salt had been digested, he set fire to it in order to examine the phenomena wmch its flame might

exhibit. The principal results of his experiments are subjoined.

Peculiar phenomena of the flame.

Flame larger, higher, more ardent, yellow, and

luminous.

Large, ardent, yellow, and luminous. Considerably red. Yellow, luminous, detonating. Larger, more ardent, and reddish. None.

Whiter, more luminous. None.

Larger, more luminous, red, and decrepitating. Like that of the calcareous nitre. None.

Large, yellow, luminous, and decrepitating. Red and decrepitating. More white, luminous, and sparkling. More white, luminous, and green; much smoke.

The saline residuum became black and burnt. Fine green, white, and red figurations.

He also accompanies the relation of his expe- riments with many judicious reflections.

The alcohol he employed in these above men- tioned, had a specific gravity of 0.840. Alcohol affords frequently a valuable agent for separating salts from each other. ►► We shall therefore intro- duce the following additional table, derived fr^m the experiments of Wenzel : ►►►

100 parts of alcohol dissolve of Temp.

Nitrate of Cobalt, Copper, Alumina, Lime, Magnesia,

Muriate of Zinc,

at

54►►.5 54►►.5 54►►.5

180.5

54►►.5

100 parts

100

100

125

290

100

430

Muriate of Alumina, Magnesia, Iron, Copper,

Acetate of Lead,

ALCOHOL.

54.5 temp. 100 parts

180.5 547

180.5 100

180.5 100

154►►.5 100

At tne boiling point, 100 parts of alcohol dis-solve of muriate of lime 100 parts Nitrate of ammonia, . 89 Corrosive sublimate, . 88.8 Succinic acid, . . 74.0 Acetate of soda, . . 46.5 Nitrate of silver, . . 41.7 Refined sugar, . . 94.6 Boracic-acid, . . 20.0 Nitrate of soda, . . 9.6 Acetate of copper, . . 7.5 Muriate of ammonia, . 7.1 Superarseniate of potash, . 3.75 Oxalate of potash, . 2.92 Nitrate of potash, . 2.08 Muriate of potash, . 2.08 Arseniate of soda, . 1-58 Arsenious acid, . . 1.25 Tartrate of potash, . 0.42

It appears from the experiments of Kirwan, that dried muriate of magnesia dissolves more abundantly in strong than in weak alcohol. 100 parts of

specific gravity 0.900 dissolve 21 .25 ; of 0.848,23.75; of 0.834, 36,25; and of 0.817, 50 parts. The same holds to a more limited extent with acetate of lime, 2.4 grains being so- luble in 100 pf the first alcohol, and 4.88 in 100 of the last. The other salts which he tried dis- solved more sparingly in the stronger than in the weaker alcohol. The temperature of the spirit was generally 60►►.

All deliquescent salts are soluble in alcohol. Alcohol holding the strontitic salts in solution, gives a flame of a rich purple. The cupreous salts and boracic acid give a green ; the soluble calcareous, a reddish ; the barytic, a yellowish. For the effect of other salts on the colour of flame, see a preceding table.

Kirwan also, with that accuracy which has distinguished him, has given a table of the solu- bility of certain salts, by means of alcohol of different densities. In these the temperature is properly noticed ►►►

Salts employed, all de-

Soluble in 100 grains of Alcohol

prived of their water

of different specific gravity. ►►► ►►►

of crystallization.

Heat, from 50►►. to 70►►.

Sp. Gr.

Sp. Gr.

Sp. Gr.

Sp. Gr.

Sp. Gr.

0.9

0.872

0.848

0.834

0.817

Grains.

Grains.

Grains.

Grains.

Grains.

Nitrated Potash

2.76

1.

0

0

0

Muriated Potash

4.62

1.66

???

0.38

0

21.25

23.75

(dried at 120??. by

36.25

50.

Kirwan)

Barytes

1.

0.29

0.185

0.09

Ditto, ditto, crystallized Acetated Lime

1.56 2.4

###

0.43 4.12

0.32 4.75

0.06 4.88

The alcohol of 0.825 has been subjected to a cold of ### 91## without congealing. But Mr. Hutton has given, in the Edinburgh Encyclo- pedia, article Cold, an account of his having succeeded in solidifying it by a cold of ### 110##. The alcohol he employed had a density of 0.798 at 60##. His process has been kept secret. The boiling point of alcohol of 0.825 is 176##. Alco- hol of 0.810 boils at 173##.5. For the force of its vapour at different temperatures, and its specific heat, see CALORIC, and the Tables of VAPOUR.

When potassium and sodium are put in con- tact with the strongest alcohol, hydrogen is evolved. When chlorine is made to pass through alcohol in a Woolfe's apparatus, there is a mutual action. Water, an oily looking substance, mu- riatic acid, a little carbonic acid, and carbona-

ceous matter, are the products. This oily substance does not redden turnsole, though its analysis by heat shews it to contain muriatic acid. It is white, denser than water, has a cooling taste analogous to mint, and a peculiar, but not an ethereous odour. It is very soluble in alcohol, but scarcely in water. The strongest alkalis hardly operate on it

It was at one time maintained, that alcoho did not exist in wines, but was generated anc evolved by the heat of distillation. On thi subject M. Gay Lussac made some decisive ex periments. He agitated wine with litharge in fine powder, till the liquid became as limpid a water, and then saturated it with subcarbonate o potash. The alcohol immediately separated anc floated on the top. He distilled another portion of wine in vacuo, at 59►► Fahr. a temperature

considerably below that of fermentation. Alco- hol came over. Mr. Brande proved the game position by saturating vine with subacetate of lead, and adding potash.

MM. Adam and Duportal have substituted for the redistillations used in converting w ne or beer into alcohol, a single process of great ele- gance. From the capital of the still a tube is led into a large copper recipient. This is joined by a second tube to a second recipient, and so on through a series of four vessels, arranged like a Woolfe's apparatus. The last vessel communi- cates with the worm of the first refrigeratory. ►►► This, the body of the still, and the two recipients nearest it, are charged with the wine or fermented liquor. When ebullition takes place in the still, the vapour issuing from it soon communicates the boiling temperature to the liquor in the two recipients. From these the volatilized alcohol will rise and pass into the third vessel, which is empty. After communicating a certain heat to it, a portion of the

finer or less condensable spirit will pass into the fourth, and thence, in a little, into the worm of the first refrigeratory. The wine round the worm will likewise acquire heat, but more slowly. The vapour that in that event may pass uncondensed through the first worm, is conducted into a second, surrounded with cold water. Whenever the still is worked off, it is replenished by a stop-cock from the nearest re- cipient, which, in its turn, is filled from the second, and the second from the first worm-tub. It is evident, from this arrangement, that by keeping the third and fourth recipients at a cer- tain temperature, we may cause alcohol, of any degree of lightness, to form directly at the re mote extremity of the apparatus. The utmost economy of fuel and time is also secured, and a better flavoured spirit is obtained. The arriere gout of bad spirit can scarcely be destroyed by infusion with charcoal and redistillation. In this mode of operating, the taste and smell are excel- lent from the first. Several stills on the above principle have been constructed at Glasgow, for the West India distillers, and have been found extremely advantageous. The excise laws do not permit their employment in the home trade.

If sulphur in sublimation meet with the va- pour of alcohol, a very small portion combines with it, which communicates a hydro-sulphur- ous smell to the fluid. The increased surface of the two substances appears to favour the combi- nation. It had been supposed, that this was the only way in which they could be united ; but M. Favre has lately asserted, that having digested two drams of flower of sulphur in an ounce of alcohol, over a gentle fire not sufficient to make it boil, for twelve hours, he obtained a solution that gave twenty-three grains of precipitate. A similar mixture left to stand for a month in a place exposed to the solar rays, afforded sixteen grains of precipitate ; and another, from which rfie light was excluded, gave thirteen grains. It alcohol be boiled with ouc-foi.ith of its weight of sulphur for an hour, and filtered hot, a small quantity of minute crystals will be deposited on

tooling ; and the clear fluid will assume an opa- line hue on being diluted with an equal quantity tf water, in which state it will pass the filter, nor

will any sediment be deposited for several hours. The alcohol used in the last-mentioned experi- ment did not exceed .840.

Phosphorus is sparingly soluble in alcohol, but in greater quantity by heat than in cold. The addition of water to this solution affords an opaque milky fluid, which gradually becomes clear by the subsidence of the phosphorus.

Earths seem to have scarcely any action upon alcohol. Quicklime, however, produces some alteration in this fluid, by changing its flavour, and rendering it of a yellow colour. A small portion is probably taken up.

Soaps art dissolved with great facility in al- cohol, with which they combine more readily than with water. None of the metals, or their oxides, are acted upon by this fluid. Resins, essential oils, camphor, bitumen, and various other substances, are dissolved with great facility in alcohol, from which they may be precipitated by the addition of water From its property of dissolving resins, it becomes the menstruum of one class of varnishes. See VARNISH.

Camphor is not only extremely soluble in alco- hol, but assists the solution of resins in it. Fixed oils, when rendered drying by metallic oxides, are soluble in it, as well as when combined with alkalis.

Wax, spermaceti, biliary cal

The uses of alcohol are various. As a solvent of resinous substances and essential oils, it is employed both in pharmacy and by the perfumer. When diluted with an equal quantity of water, constituting what is called proof spirit, it is used

for extracting tinctures from vegetable and other substances, the alcohol dissolving the re- sinous parts, and the water the gummy. From. giving a steady heat without smoke when burnt in a lamp, it was formerly much employed to keep water boiling on the tea-table. In thermo- meters for measuring great degrees of cold, it is preferable to mercury, as we cannot bring it to freeze. It is in common use for preserving many anatomical prepartions, and certain subjects in natural hL-tjry ; but to some it is injurious, the molluscas for instance, the calcareous covering of which it in time corrodes. It is of consider- able use too in chemical analysis, as appears under the different articles to which it is appli- cable.

From the great expansive power of alcohol, it has been made a question, whether it might not be applied with advantage in the working of steam-engines. From a series of experiments made by Betancourt, it appears, that the steam of alcohol has, in all cases of equal temperature, more than double the force of that of water; and that the steam of alcohol at 174►► Fahr. is equal to that of water at 212►► : thus there is a consi- derable diminution of the consumption of fuel, and where this is so expensive as to be an ob- ject of great importance, by contriving the ma- chinery so as to prevent the alcohol from being lost, it may possibly at some future time be used with advantage, if some other fluid of great ex-

pansive power, and inferior price, be not found more economical.

It remains for us to mention the chemical nature of alcohol, and the appearances which attend its decomposition. The remarkable cir- cumstance of a vegetable product burning away, without the smallest

trace of smoke or fuliginous vappur of any kind, had long engaged the at- tention of chemists. Junker and Boerhaave threw much light on the subject by remarking, that the product of the combustion of alcohol was always a quantity of pure water ; and. this fact was more fully illustrated by the experiments of the illustrious Lavoisier. The ready evapora- tion of alcohol, and the ease with which its vapour will fill a large vessel, renders it a dan- gerous experiment to submit a considerable quantity at once to combustion, in oxygen gas confined in any vessel ; but this difficulty was sur- mounted in an ingenious manner. His first experiment was simply to ascertain the quantity of water yielded by the combustion of a given weight of alcohol. This was performed in the following apparatus, contrived by M. Meusmier. See CHEMISTRY, plate I. fig. 1.

E F is a worm, contained in the cooler A B C D. To the upper part of the worm E, the chimney G H is fixed, which is composed of two tubes, one within the other, the inner of which is a continuation of the worm, the outer one is a case of tin plate, which surrounds it at about an inch distance, and the interval is filled with sand. At the inferior extremity K of the inner tube, a glass tube is fixed, to which is adapted the Argand lamp L M, for burning alcohol.

Things being thus disposed, and the lamp being filled with a determined quantity of alcohol, it is set on fire ; the water which is formed during combustion rises in the chimney K E, and, being condensed in the worm, runs out at its extremity, F, into the bottle P. The use of the outer tube G H, and of the sand between it and the inner tube, is to prevent the latter, which proceeds from the worm, from being cooled during combustion, which would occasion the water, formed by the burning, to fall back on the lamp, instead of passing on into the worm.

This apparatus, though not perfect, has the advantage of enabling the chemist to operate with

larger quantities than can be admitted in the more accurate experiments on combustion, and by it, the above mentioned chemists were able to establish the important fact, that the quantity of water collected by the combustion of alcohol very sensibly exceeds the quantity of the alcohol which is consumed. The product of water must vary according to the strength of the alcohol, and the care of conducting the experi- ment ; but it is so considerable, that from six- teen ounces of ardent spirit, Lavoisier obtained

eighteen ounces and a half of pure water. .

There is besides, however, a large quantity of carbonic acid produced in this experiment which escapes, and cannot be estimated by this appara- tus. Some of this gas unites with the water which is collected, and causes it to precipitate lime-water.

Having thus ascertained in a general way the products of the combustion of alcohol, Lavoisier

proceeded to repeat the experiment, in vessels which might determine the result with accuracy. He employed, for this purpose, a large bell glass, holding from 700 to 800 cubic inches, and in- verted over a mercurial trough. A small lamp, filled with a known weight of alcohol, was in- troduced under the glass, swimming on the sur- face of the mercury, and the wick was armed with a very minute portion of phosphorus. The atmospherical air within the glass was sucked out by a syphon, till the mercury rose to a certain height which was noted ; and the phosphorus on the wick being then kindled by a hot iron, the spirit soon took fire. As the air within the glass would be soon consumed, and the inflammation of the spirit stopped, a constant supply of oxygen gas was sent into the glass through a syphon tube, connected with a reservoir of this gas, and which passed under the mercury into the glass where the combustion was going on. Great precaution was required not to let in more oxygen than was barely necessary to keep up the combustion; otherwise the heat, volatilizing part of the spirit,

would have filled the glass with vapour of al- cohol, and this mixing with the oxygen, would have suddenly exploded by the combustion. In this, as in other respects, the combustion of al- cohol strikingly resembles that of pure hydrogen gas. The experiment was at last stopped by the quantity of carbonic acid generated ; and on ex- amining the results, (proper corrections being made for pressure and temperature) it was found, that 93.5 grains of alcohol and 110.32 grains of oxygen had been consumed. The products of these were 93.8 grains of carbonic acid and 106.2 grains of water, which last, therefore, ex- ceeded by 12.7 grains the quantity of alcohol employed. From these data, and from previous experiments (wherein Lavoisier estimated, that 100 grains of oxygen take up 38.88 grains of carbon, for the production of carbonic acid gas ; and that the same quantity of oxygen takes up 17.64 grains of hydrogen for the production of water,) he concluded the composition of alcohol to be the following :

Carbon 28. 5 3

Hydrogen 7. 8 7

Water already existing in the alcohol 63. 6

100

We may observe, however, that the result of this experiment can only be considered as an approximation towards the truth, since the esti- mation of the component parts of alcohol here given, does not agree with that which is deduced by the same chemist, from the result of vinous fermentation. Neither is there any light thrown on the mode of union between the component parts, and their degree of oxygenation as they exist in the spirit before combustion.

Alcohol has likewise been more directly de- composed without the accession of oxygen gas. Dr. Priestley procured inflammable air by pass- ing the electric spark through spirit of wine. But the most striking experiments on this sub- ject, performed by this

excellent philosopher, were the decomposition of spirit by passing it through red-hot tubes, both of earth and metal. He first transmitted two ounce measures of al-

cc hoi. reduced to vapour by boiling, through an ignited porcelain tube, and procured 1900 ounce measures of air, ‘ which was all inflam- mable without any mixture of fixed air in it, and which burned with a blue lambent flame.’ (We here quote the very words of the author, which the writer of the article ALCOOL, in the Encyclo- pedic Methodique, has made to correspond with the experiments of Lavoisier, by adopting the following singular translation : ††† 1VI. Priestley, en faisant passer de 1’alcoo dans un tube d’argile rougi au feu, en a retire du gas hydrogene mele de gaz acide carbonique.) Dr. Priestley’s next experiments are still more curious, as they de- termine the existence of carbonaceous matter in spirit of wine. Having found interesting re- sults from the transmission of the vapour of water through a heated copper tube, he repeated the experiments, only substituting the vapour of spirit of wine for that of water. ‘ In this case/ he observes, ‘ the vapour of the spirit had no sooner entered the hot copper tube, than I was perfectly astonished at the rapid production of air. It resembled the blowing of bellows. But I had not used four ounces of the spirit of wine before I very unexpectedly found that the tube was perforated in several places, and presently afterwards it was so far destroyed, that in at- tempting to remove it from the fire, k actually fell in pieces. The inside was full of a black sooty matter, resembling lamp-black.’ He then varied the experiment by using earthen tubes, placing within them copper filings, and trans- mitting the vapour of alcohol. The copper was, as before, converted into a black friable sub- stance, obviously produced by the addition of carbonaceous matter furnished by one part of the spirit, whilst

the other part appeared in the form of a copious stream of inflammable air. It is, however, by no means the whole of the char- coal of the alcohol which is detained by the copper, for much of it escapes mixed with the inflammable air in the form of fine soot, giving the gas the appearance of a dense black cloud ; and when the tube is strongly heated, this vola- tilized charcoal will give an uniform black coat- ing to any balloon or large vessel in which the gas is received. Dr. Priestley found some other metals to undergo a similar change by the vapour of alcohol, but none in so striking a manner as copper. On heating some of this charcoal of copper, as he calls it, in oxygen gas, he found it to burn very readily to a certain point, after which the remainder could not be again kindled. The gas produced by the combustion was pure fixed air or carbonic acid.

The excellent Dutch chemists, of the Teyle- rian institution, Van Marum and colleagues, re- peated Dr. Priestley's experiments with great accuracy, and found the same results in every essential particular. They employed, as well as Dr. Priestley, Wedgwood's porcelain tubes, which they inclosed in iron tubes to prevent the sudden action of the fire which is apt to crack them. One extremity of the earthen tube re- ceived a small retort in which was put the alco- nol, and the other entered a metallic serpentine tube, immersed in a refrigeratory, and provided at the further end with a bottle to receive the

gaseous products. In the first experiment which was performed, an ounce and a half of alcohol in vapour had been transmitted through the heated copper, and had produced about six cubic feet of inflammable air.

In the second experiment the heat was greater, and the productions of the gas more rapid. In all, the copper was reduced to a black and very friable substance, which fell to pieces between the fingers. The proportion of charcoal added to the copper by the experiments, varied at diffe- rent times,

apparently owing to the greater or less rapidity with which the process was conducted. Dr. Priestley had united 446 grains of charcoal to twenty-eight of copper, in one instance; and 508 to nineteen, in another; but the Dutch chemists found a much less proportion of char- coal, being only an addition of 292 grains to 748 of copper in one case, and in another, 180 of charcoal to 612 of the metal. The great difference in the result is, however, of little consequence in attempting to ascertain by these experiments the exact proportion of the component parts of alcohol, since a large part of the carbonaceous ingredient escapes the copper, and passes over into the ves- sels which receive the inflammable air, where it either appears in the form of a fine black soot, or remains permanently united with the hydrogen gas. M. Van Marum likewise collected, in the bottle connected with the serpentine, a quantity of nearly pure water, about equal to half the weight of the alcohol evaporated by boiling, and of the specific gravity of .996. He does not inform us of the strength of the spirit which he used. He confirmed the other part of Dr. Priesley's experiment by burning the char- coal of copper in oxygen gas, and procuring pure carbonic acid, whilst the remaining copper still retained a small portion of carbon which could not be consumed. It is worthy of re- mark, that the inflammable air, produced in the experiments of both these eminent chemists, was found to be not more than twice as light as common air, and it probably bears a considera- ble resemblance to that species of gas, termed, with great propriety, by Mr. Cruikshank, gase- ous oxyd of carbon.

The vapour of alcohol transmitted through earthen tubes, forms, in particular circumstances, that singular air which has been named olefiant gas. It possesses in the highest degree the cordial, stimulating, and intoxicating qualities, of all distilled spirits, and although the less powerful and more grateful of the spirituous liquors, such as rum, brandy, &c. are more peculiarly devoted to the use of the table, the purer ardent spirit, again

sufficiently diluted with water, is employed as the basis of many of the artificial cordial spirits and liquors, to which a flavour and additional taste are given by particular admixtures. Its use in medicine as a solvent for the more active parts of vegetables, under the form of tinctures, has already been mentioned ; it is also employed as an external application, often with considerable success.

The highly antiseptic power of alcohol which renders it so valuable in preserving particular parts of the body, as anatomical preparations, is of ffreat importance : as also the gentle, steaay,

and uniform heat which it gives during combus- tion, and the absence of smoke or fuliginous vapour, which make it often a most eligible ma- terial for burning in lamps. Its uses in these respects have already been mentioned ; but as a luid for thermometers, though it has the advan- tage over mercury in not freezing in any known degree of cold, yet from its ready volatility in a moderate heat it cannot be depended on with any accuracy, above ninety or 100 degrees.

We refer the reader to the articles FERMENTA- TION, (vinous and otherwise,) DISTILLATION, and the several species of distilled spirits ; in which the formation of alcohol in its progressive stages will be more fully developed.

ALCOHOL, is also a fine, impalpable powder, used by the ladies of the East as a kind of fucus. Kohol is the generic name for a substance applied to the eye-ball, on the inside of the eye-lids, in the form of a finely levigated powder. That which is employed for ornament is called al kohol orisphahany; when other ingredients, as flowers of olibanum, amber, and the like, are added, on account of some

particular disorders, the kohol is distinguished by some, appropriate epithet. Dr. Shaw says, that none of the women in Barbary think themselves completely dressed, until they have tinged their hair and edges of their eye-lids with al-ka-hol, the powder of lead-ore. Lady Montague also takes notice of this custom among the Eastern women, Letters, vol. ii. p. 32. This ore used at Aleppo, is the stibium of the ancients, but very different from antimony, is brought from Persia, and prepared by roast- ing it in a quince, an apple or a truffle, then add ing a few drops of oil of almonds, it is ground to a subtile powder on a marble. The quantity of kohol consumed in the East is incredibly great. It has been said by one of their poets, in allusion to the probe used for applying the

powder, and the mountains where the mineral is found, ‘ that the mountains have been worn away by a bodkin.’ This probe or bodkin, called meel, is made of ivory, silver, or wood ; it is dipped in water, and when a little of the powder has been sprinkled on it, it is applied horizontally to the eye, and the eye-lids being shut upon it, the probe is drawn between them, leaving the inside tinged, and a black rim all round the edge. The Roman .satirist alludes to this custom, as well as to blackening the eye-brows ;

‘ Ilia supercilium madida fuligine tactum Oblique producit acu, pingitque trementes Attollens oculos.’

Juvenal, Sat. ii. v. 67. and Casaubon’s note.

Kohol is used also by men for strengthening the sight, and preventing various disorders of the eye. It is applied also to the eyes of children, as soon as they are born, and renewed at intervals of a few days through the several periods of their adolescence. The use of the kohol is of very ancient date. Passages relative to it, in sacred history, may be seen in Shaw, Travels, p. 229. Harmer, Observations, vol. ii. p. 405. and Lowth’s Notes on Isaiah, c. iii. v. 16. Harmer conceives that the redness of the eyes, as it is in our version, which

*the dying patriarch mentions in blessing Judah, Gen. xlix. 12, is to be ex- plained by this usage. Dr. Russel observes, on a passage in Xenophon, referred to by Shaw, that blackening the eyes, though a custom among the Medes, was not at that time in use among the Persians; for Cyrus, among othe*1 things, seems to have been surprised at the painted eyes of his grand-father Astyages. Cyropaed. lib. i, p. 8. See Russell's Aleppo, vol. i, p. Ill, p. 367. ed. 1794. Perhaps from this impalpable powder the name was transferred to other subtile powders, and afterwards to spirits of wine.*

ALCORAN.

ALCORAN, or AL-KORAN, from the Arabic particle al, and coran or koran, derived from the verb caroa or karoa, to read; signifying the reading ; or rather, that which ought to be read : amongst the Mahommedans, the name of .the book which contains the revelations and doc- trines of their pretended prophet, Mahomet. By this name they entitle not only the entire book or volume of the Koran, but also any par- ticular chapter or section of it; just as the Jews call either the whole scripture, or any part of it, ' by the name of Karah, or Mikra, words of the same origin and import. Besides this peculiar name, the Koran is also honoured with several appellations common to other books of scripture ; as, al Farkan, from the verb foraka, to divide, or distinguish; not, as the Mahommedan doctors say, because these books are divided into chapters or sections, or distinguish between good and evil ; but in the same notion as the Jews use the word perek, or pirka, from the same root, to denote a section or portion of scripture. It is also called al Moshaf, the volume, and al Kitha, the book, by way o.f eminence, which answers to the Biblia of the Greeks; and al Dhikr, the

admonition, which name is also given to the Pentateuch and Gospel.

The Alcoran is divided into 114 larger por- tions of very unequal length, which we call chapters, but the

Arabians sowar, in the singular sura; a word rarely used on any other occasion, and properly signifying a row, or a regular series ; as a course of bricks in building, or a rank of soldiers in an army, and is the same in use and import with the sura, or tora, of the Jews ; who also called the fifty-three sections of the Pentateuch, Sedarim, a word of the same signification. These chapters are not in the manuscript copies distinguished by their nume- rical order, but by particular titles, which are taken sometimes from a peculiar subject treated of, or person mentioned therein ; usually from the first word of note, exactly in the same man- ner as the Jews have named their Sedarim ; though the word from which some chapters are denominated be very distant, towards the middle, or perhaps the end of the chapter, which seems ridiculous. But the occasion of this appears to have been, that the verse or passage wnerem such word occurs, was, in pome 01 time, re-

.realed and committed to writing before the lither verses of the same chapter which precede it in order ; and the title being given to the chapter before it was completed, or the passages reduced to their present order, the verse from whence such title was taken did not always Happen to begin the chapter. Some chapters have two or more titles, occasioned by the dif- ference of the copies. Some of them being pre- tended to have been revealed at Mecca, and others at Medina, the noting this difference makes a part of the title. Every chapter is divided into smaller portions, of very unequal length also, which we customarily call verse : but the Arabic word is ayat, the same with the Hebrew ototh, and signifies signs or wonders ; such as the secrets of God, his attributes, works, judgments, and ordinances, delivered in those verses ; many of which have their particular titles also imposed in the same manner as those of the chapters. Besides these unequal divi- sions, the Mahommedans have also divided their Koran into sixty equal portions, which they call Ahzab, in

the singular, Hizb, each subdivided into four equal parts ; \vhich is likewise an imitation of the Jews, who have an ancient division of their Mishna into sixty portions called Massictoth. But the Koran is more usually divided into thirty sections only, named Ajza, from the singular, Joi,, each of twice the length of the former, and in like manner subdivided into four parts. These divisions are for the use of the readers of the Koran in the royal temples, or in the adjoining chapels where the emperors and great men are interred ; of whom there are thirty belonging to every chapel, and each reads his section every day ; so that the whole Koran is read over once a day. Next after the title, at the name of every chapter, except only the ninth, is prefixed the following solemn form, by the Mahommedans, called the Bismallah, ' in the name of the most merciful God ; ' which form they constantly place at the beginning of all their books and writings in general, as a peculiar mark or distinguishing characteristic of their religion, it being counted a sort of impiety to omit it. The Jews, and eastern Christians, for the same purpose, make use of similar forms. But Mahomet probably took this form from the Persian Magi, who began their books in these words, ' Benam yezdam bakshaishgher dadar ; ' that is, In the name of the most merciful just God. There are twenty-nine chapters ot the Koran, which have this peculiarity, that they begin with certain letters of the alphabet, some with a single one, others with more. These letters the Mahommedans believe to be the peculiar mark of the Koran, and to conceal several profound mysteries ; the certain under- standing of which, the more intelligent confess, has not been communicated to any mortal, their prophet only excepted : notwithstanding which, some take the liberty of guessing at their mean- ing, by that species of cabala, called by the Jews Notarikon. There are also abrogated passages classed under three divisions ; the first, where both the letter and the sense are abro- gated ; the second, where this is the case with the letter only ; the third, where the sense, and fiot the letter ►►s abrogated.

The Koran is universally allowed to be written with the utmost elegance and purity of language, in the dialect of the tribe of Koreish, the. most noble and polite of all the Arabians, but with some mixture, though very rarely, of other dia- lects.[illegible] *It is confessedly the standard of the Arabic tongue, and, as the more orthodox be- lieve, and are taught by the book itself, inimitable by any human pen, (though some sectaries have been of another opinion,) and therefore insisted on as a permanent miracle, greater than that of raising the dead, and alone sufficient to convince the world of its divine original. And to this miracle did Mahomet himself chiefly appeal for the confirmation of his mission, publicly challenging the most eloquent men in all Arabia, which was at that time stocked with thousands, whose sole study and ambition it was to excel io elegance of style and composition, to produce even a single chapter that might be compared with it. As the composition and arrangement oi words, however, admit of infinite varieties, it can never be absolutely said, that any one is the best possible. In fact, Hamzah Benahmed wrote a book against the Alcoran, with at least equal elegance; and Moselema another, which even surpassed it, and occasioned a defection of a great part of the Mussulmans. To this pomp and harmony of expression, some ascribe all the force and effect of the Alcoran, which they con- sider as a sort of music, equally fitted with other species of that art to ravish and amaze. In this Mahomet succeeded so well, and so strangely captivated the minds of his audience, that several of his opponents thought it the effect of witch- craft and enchantment, as he himself complains. Others have attributed the effect of the Alcoran to the frequent mention of rewards and punish- ments ; heaven and hell occurring almost in every page. Some suppose, that the sensual pleasures of paradise, so frequently set before the imagina- tions of the readers of the Alcoran, were what chiefly bewitched them.*

The general design of the Koran was to unite the professors of the three different religions, then

followed in the populous country of Arabia, (who, for the most part, wandered without guides, the far greater number being idolaters, and the rest Jews and Christians, mostly of erroneous opinions,) in the knowledge and worship of one God; under the sanction of certain laws and ceremonies, partly of ancient, and partly of novel institution, enforced by the consideration of re- wards and punishments both temporal and eter- nal ; and to bring them all to the obedience of Mahomet, as the prophet and ambassador of God ; who, after the repeated admonitions, pro- mises, and threats of former ages, was sent at last to establish and propagate Goti's religion on earth ; and to be acknowledged chief pontiff in spiritual matters, as well as supreme prince in temporal. The great doctrine then of the Koran is the unity of God, to restore which, Mahomet pretended, was the chief end of his mission ; it being laid down by him as a fundamental truth, That there never was, nor ever can be, more than one true orthodox religion: That, though the particular laws or ceremonies are only temporary andsuojectto alteration, according to the divine direction, yet the substance of it being eternal

truth, is not liable to change, but continues im- mutably the same : And that, whenever this re- ligion became neglected, or corrupted in essentials, God had the goodness to re-inform and re-ad- monish mankind thereof, by several prophets, of whom Moses and Jesus were the most distin- guished, till the appearance of Mahomet, who is their seal, and no other to be expected after him. The more effectually to engage people to hearken to him, great part of the Koran is em- ployed in relating examples of dreadful punish- ments formerly inflicted by God on those who rejected and abused his messengers ; several of which stories, or some circumstances of them, are taken from the Old and New Testaments, but many more from the apocryphal books and traditions of the Jews and Christians of those ages, set up in

the Koran as truths, in opposition to the Scriptures, which the Jews and Chris- tians are charged with having altered ; and in- deed, few or none of the relations or circum- stances in the Koran were invented by Mahomet, as is generally supposed, it being easy to trace the greatest part of them much higher, as the rest might be, were more of those books extant, and were it worth while to make the enquiry. ••• The rest of the Alcoran is taken up in prescribing necessary laws and directions, frequent admoni- tions to moral and divine virtues, the worship and reverence of the Supreme Being, and resig- nation to his will. One of their most learned commentators distinguishes the contents of the Alcoran into allegorical and literal ; under the former are comprehended all the obscure, para- bolical, and enigmatical passages, with such laws as are repealed, or abrogated ; the latter such as are clear and in full force. The most excellent moral in the whole Alcoran, interpreters say, is that in the chapter Al Alraf, viz. ' Shew mercy, do good to all, and dispute not with the ignorant;' or, as Mr. Sale renders it, ' Use indulgence, command that which is just, and withdraw far from the ignorant.' Mahomet, according to the authors of the Keschaf, having begged of the angel Gabriel a more ample explication of this passage, received it in the following terms : < Seek him who turns thee out, give to him who takes from thee, pardon him who injures thee ; for God will have you plant in your souls the roots of his chief perfections.' It is easy to see that this commentary is borrowed from the gospel. In reality, the necessity of forgiving enemies, though frequently inculcated in the Alcoran, is of a later date among the Mahommedans, than among the Christians ; among those later than among the heathens ; and to be traced originally among the Jews. See Exodus xxxiii. 4, 5. But it matters not so much who had it first, as who observes it best. The caliph Hassan, son of Hali, being at table, a slave let fall a dish of meat reeking hot, which scalded him severely. The slave fell on his knees, rehearsing these words of the Alcoran, < Paradise is for those who restrain their

anger.' 'I am not angry with thee,' answered the caliph. 'And for those who forgive offences against them,' continues the slave. ??? I forgive thee thine,' replies the caliph. ' But above all, for those who return good for evil,' adds the slave. ' I set thee at liberty,' re- joined the cal'mh, ' and I give thee ten dinars.'

There are also a great number of occasional pas- sages in the Alcoran, relating only to particular emergencies. For this advantage Mahomet had by his piecemeal method of receiving and de- livering his revelations, that whenever he hap- pened to be perplexed with any thing, he had a certain resource in some new morsel of revela- tion. It was an admirable contrivance to bring down the whole Alcoran only to the lowest heaven, not to earth ; since, had the whole been published at once, innumerable objections would have been made, which it would have been im- possible for him to have solved ; but as he re- ceived it by parcels, as God saw fit they should be published for the conversion and instruction of the people, he had a sure way to answer all emergencies, and to extricate himself with honour from any difficulty which might occur.

It is the common opinion, that Mahomet, assisted by one Sergius, a monk, composed this book; but the Mussulmans believe, as an ar- ticle of their faith, that the prophet, who, they say, was an illiterate man, had no concern in inditing it ; but that it was given him by God, who, to that end, made use of the ministry of the angel Gabriel : that, however, it was communi- cated to him by little and little, a verse at a time, and in different places, during the course of twenty-three years. ??? ' And hence, say they, pro- ceed that disorder and confusion visible in the work ; ' which in truth, are so great, that all their doctors have never been able to adjust them. For Mahomet, or rather his copyist, having put all the loose verses promiscuously in a book together, it was impossible ever to retrieve the order wherein they were delivered. ??? Those twenty-three years, which the angel employed in conveying the Alcoran to Mahomet, are of wonderful

service to his followers : inasmuch as they furnish them with an answer, to such as tax them with those glaring contradictions .of which the book is full, and which they piously father upon God himself; alleging that in the course of so long a time, he repealed and altered several doctrines and precepts which the prophet had before received of him. ††† M. D'Herbelot thinks it probable, that when the heresies of the Nestorians, Eutychians, &c. had been condemned by oecumenical councils, many bishops, priests, monks, &c. being driven into the deserts of Arabia and Egypt, furnished the impostor with passages, and crude, ill-conceived doctrines, out of the Scriptures ; and that it was hence that the Alcoran became so full of the wild and erroneous opinions of those heretics. ††† The Jews also, who were very numerous in Arabia, furnished ma- terials for the Alcoran ; nor is it without some reason, that they boast twelve of their chief doc- tors to have been the authors of this work. ††† The Alcoran, while Mahomet lived, was only kept in loose sheets , his successor, Abubeker, first col lected them into a volume, and committed the keeping of it to Haphsa, the widow of Mahomet, in order to be consulted as an original ; and there being a good deal of diversity between the several copies already dispersed throughout the provinces, Ottoman, successor of Abubeker, pro- cured a great number of copies to be taken from that of Haphsa; at the same time suppressing all the others not conformable to the original.

The chief differences, in the present copies of the first transcript has been from everlasting by this hook, consist in the points, which were not God's throne, written on a table of vast bigness m use in the time of Mahomet, and his imme- called the preserved table, in which are also re- diate successors ; but were added since, to ascer- corded the divine decrees past and future : that tain the reading ; after the example of the Mas- acopy from

this table, in one volume on paper, soretes, who added the like points to the Hebrew was by the ministry of the angel Gabriel sent texts of Scripture. There are seven principal down to the lowest heaven, in the month of editions of the Alcoran ; two at Medina, one at Ramadan, on the night of power ; from whence Mecca, one at Cusa, one at Bassora, one in Gabriel revealed it to Mahomet by parcels, some Syria, and the common, or vulgate edition. The at Mecca, and some at Medina, at different times first contains 6000 verses, the others surpassing during the space of twenty-three years, as the this number by 200 or 236 verses ; but the exigency of affairs required ; giving him, how number of words and letters is the same in all, ever, the consolation to show him⁇ the whole, viz. 77.639 words, and 323,015 letters. The which they tell us was bound in silk, and adorned following are the most beautiful manuscript with gold and precious stones of paradise, once copies found in Europe. One, supposed to have a year; but in the last year of his life he had the been used by Solyman the Great, in the Museum favour to see it twice. They say, that only ten Kircherianum, at Rome ; one in the library of chapters were delivered entire, the rest being Christiana of Sweden ; one in the Imperial revealed piecemeal, and written down from time library at Vienna ; one, with a commentary, by to time by the prophet's amanuensis, in such Abi Saidi Rades, obtained among the spoils at a part of such and such a chapter, till they were the defeat of the Turks, in 1683, by George, completed, according to the directions of the elector of Saxony. The first edition of the whole angel. The first parcel that was revealed, is in Arabic, was published at Venice, in 1530, by generally agreed to have been the first five verses Paganinus of Brescia, which was burnt by of the ninety-sixth chapter. ⁇⁇⁇ In fine, the book order of the pope. Afterwards, in 1684, it was of the Alcoran is held in the highest esteem and printed at Hamburgh. In 1698, the original, reverence among the Mussulmans. They dare with A Latin version, and a partial confutation, not so much as touch it, without being

was published at Padua, by Father Lewis Ma- racci, by desire of pope Innocent XI. An edition of the Arabic, with Scholia, was printed in folio, at Petersburg!!, by the empress Catharine, 'with a studious imitation of a manuscript character, in order to meet the prejudices of her Mahom- medan subjects. The first Latin version by a Christian was in 1143, when an Englishman, with the aid of Hermannus Dalmata, performed the task. In 1550, it was published by Bib- liande, and, about the close of the fifteenth cen- tury, was translated into the Arragonian language by Johannes Andreas, a convert from the Ma- hommedan faith. Reineccius published an edition of Maracci's translation, with notes, at Leipsic

not so much as touch it, without first washed, or legally purified; to prevent which, an inscription is put on the cover or label, ' Let none touch but they who are clean.' Some Mahommedan sects, however, do not admit the Koran to be uncreated, and accuse the main- tainers of this doctrine of infidelity, as asserting two eternal beings. This was particularly the case with the sect called the Motazalites, and the followers of Isa Ebn Sobeh Abu Musa, sur- named Al Mozdar. It is nevertheless read with great care and respect ; being never held below the girdle. They swear by it ; take omens from it on all weighty occasions ; cany it with them to war : write sentences of it in their banners ; adorn it with gold and precious stones; and,

in 1721. Sale's well-known translation was knowingly, suffer it not to be in the possession of published in London, in 1734 ; a German trans- any of a different religion. Some say that it is lation, by Boysen, at Halle, in 1773, and a punishable even with death, in a Christian, to French one, by Savary, at Paris, 1782. The touch it; others, that the veneration of the Mus- number of commentaries on the Alcoran is so sulmans leads them to condemn the translating large, that the bare titles would make a huge it into any other language, as a profanation : but volume. Ben Oschair has written the history of these seem to be exaggerations. The Mahom- them,

entitled, Tarikh B

It is the general belief among the Mahomme- other representations, such especially as relate

dans, that the Koran is of divine original ; nay, to paradise, nothing can be more cor

that it is eternal and uncreated ; remaining as contrast than the Holy Scriptures and m

some express it,►► the very essence of God; that hommedan Bible. The former exhibits to the

view of mortals a scene replenished with felicity, but felicity of the purest kind, such as sanctified spirits may be expected to relish, and such as a holy God might be believed to communicate ; whereas the paradise of the Koran is neither moral nor rational. It is neither more nor less than an abode of selfishness and sensuality ►►► degrading, instead of elevating to the pure and Infinite Spirit, and mean and sordid in all its arrangements.

The Koran, thus ill sustaining its own claims to inspiration, studiously acknowledges the mis- sions both of Moses and Christ, though it charges their disciples with corrupting the Scrip- tures of each dispensation. Jesus is allowed to be the true Messias, and a worker of miracles, but his crucifixion is denied, the traitor Judas, it is asserted, being changed into his likeness, and put to death in his stead. Every circum- stance, indeed, connected with the histories of the Holy Scriptures, is either distort'.;: or blended with the fictions of Rabbinical tradition, or with spurious gospels. Its doctrinal principles are borrowed frequently from the Arianism of the Arabian Christians, and the notions of the Per- sian magi.

The author of the 'View of Christianity anctMa- hommedanism,' observes, that by the advocates of

Mahommedanism, the Koran has always been held forth as the greatest of miracles, and equally stupendous with the act of raising the dead. The miracles of Moses and Jesus, they say, were transient and temporary ; but that of the Koran is permanent and perpetual ; and, therefore, far surpasses all the miraculous events of preceding ages. We will not detract from the real merit of the Koran : we allow it to be generally elegant and often sublime : but at the same time WP re- ject with disdain its arrogant pretence to any thing supernatural ; all the real excellence of the work being easily referrible to natural and visi- ble causes. ??? In the language of Arabia, a lan- guage extremely loved and diligently cultivated by the people to whom it was vernacular, Ma- homet found advantages which were never en- joyed by any former or succeeding impostor. It requires not the eye t>f a philosopher to discover in every soil and country a principle of national pride : and if we look back for many ages on the history of the Arabians, we shall easily per- ceive that pride, among them, invariably to have consisted in the knowledge and improvement of their native language. The Arabic, which has been justly esteemed the most copious of the Eastern tongues ; which had existed from the re- motest antiquity ; which had been embellished by numberless poets, and refined by the con- stant exercise of the natives ; was the most suc- cessful instrument which Mahomet employed in planting his new religion among them. Admi- rably adapted by its unrivalled harmony, and by its endless variety to add painting to expression, and to pursue the imagination in its unbounded flight, it became in the hands of Mahomet an irresistible charm to blind the judgment, and to captivate the fancy of his followers. ??? Of that description of men, who first composed the ad- nerents of Mahomet, and to whom the Koran was addressed, few, probably, were able to. pass

a very accurate judgment on the propriety of the sentiments, or on the beauty of the diction : but all could judge of the military abilities of their leader ; and in the midst of their admiration it is

not difficult to conceive, that they would ascribe to his compositions every imaginary beauty of inspired language. ††† The shepherd and the soldier, though awake to the charms of those wild 'but beautiful compositions, in which were celebrated their favourite occupations of love or war, yet were little able to criticise any other works than those which were addressed to their imagination or their heart. To abstract reason- ings on the attributes and the dispensations of the Deity, to the comparative excellencies of rival religions, to the consistency of any one re- ligious system in all its parts, and to the force of its various proofs, they were quite inattentive. In such a situation, the appearance of a work, which possessed something like wisdom and con- sistency ; which prescribed the rules, and illus- trated the duties of life ; and which contained the principles of a new and comparatively sub- lime theology, independently of its real and permanent merit, was likely to excite their asto- nishment, and to become the standard of future composition. In the first periods of the literature of every country, something of this kind has hap- pened. The father of Grecian poetry very obvi- ously influenced the taste and imitation of his country. The modern nations of Europe all pos- sess some original author, who, rising from the darkness of former ages, has begun the career of composition, and tinctured with the character of his own imagination the stream which has flowed through his posterity. But the prophet of Arabia had, in this respect, advantages pecu- liar to himself. His compositions were not to his followers the works of man, but the genuine language of Heaven, which had sent him. They were not confined therefore to that admiration, which is so liberally bestowed on the earliest productions of genius, or to that fond attachment, with which men every where regard the original compositions of their country ; but with their admiration they blended their piety. To know and to feel the beauties of the Koran, was in some respect to share in the temper of heaven ; and he who was most affected with admiration in the perusal of its

beauties, seemed fitly the object of that mercy which had given it to igno- rant man. The Koran, therefore, became na- turally and necessarily the standard of taste. With a language thus hallowed in their imagi- nations, they were too well satisfied, either to dispute its elegance or improve its structure. lu succeeding ages, the additional sanction of an- tiquity, or prescription, was given to these com- positions which their fathers had admired ; and, while the belief of its divine original continues, that admiration, which has thus become the test and the duty of the faithful, can neither be al- tered nor diminished. When, therefore, we con- sider these peculiar advantages of the Koran, we have no reason to be surprised at the admi- ration in which it is held. But if, descending to a more minute investigation of it, we consider its perpetual inconsistence and absurdity, we shall indeed have cause for astonishment at that

weakness of humanity, which could ever have icceived such compositions as the work of the Deity.

'The first praise of all the productions of genius, (continues this author) is invention : that quality of the mind, which, by the extent and quickness of its views, is capable of the largest conceptions, and of forming new combinations of objects the most distant and unusual. But the Koran bears little impression of this transcendent character. Its materials are wholly borrowed from the Jewish and Christian Scriptures, from the Talmudical legends and apocryphal gospels then current in the east, and from the traditions and fables which abounded in Arabia. The ma- terials collected from these several sources are here heaped together, with perpetual and need- less repetitions, without any- settled principle or visible connection. When a great part of the life of Mahomet Jiad been spent in preparatory me- ditation on the system he was about to. establish, its chapters were dealt out slowly

and separately during the long period of twenty-three years. Yet thus defective in its structure, and no less exceptionable in its doctrines, was the work which Mahomet delivered to his followers as the oracles of God. The most prominent feature of the Koran, that point of excellence in which the partiality of its admirers has ever delighted to view it, is the sublime notion it generally im- presses of the nature and attributes of God. If its author had really derived these just concep- tions from the inspiration of that Being whom they attempt to describe, they would not have been surrounded, as they now are on every side, with error and absurdity. But it might easily be proved, that whatever it justly defines of the divine attributes, was borrowed from our holy I Scripture ; which even from its first promulga- (tion, but especially from the completion of the ; New Testament, has extended the views, and enlightened the understandings of mankind ; and thus furnished them with arms, which have too often been ineffectually turned against itself by its ungenerous enemies. In this instance particu- . larly, the copy is far below the great original, . botli in the propriety of its images, and the force

I of its descriptions.'

As a specimen of the Alcoran, we may take the opening passages, which are solemn and imposing: ' In the name of the most merciful God ! Praise be to God, the Lord of all creatures : the most merciful : the King of the day of judgment. ??? ??? Thee do we worship, and of thee do we beg as- sistance. Direct us in the right way ; in the way of those to whom thou hast been gracious ; not of those against whom thou art incensed, nor of those who go astray.' This is the first chapter,

II and is entitled the preface, or introduction, re- | vealed at Mecca. In Arabic it is called Al I Ffetibat, and is esteemed the quintessence of the J whole Koran, the Mahommedans often repeating | it in their devotions, both public and private, as I Christians do the Lord's prayer. One or two I other

specimens will serve to convey to the reader

– some general idea of this volume. ‘ Now hath

God in truth verified unto his apostle the vision

‘\ (or dream which Mahomet had at Medina,)

H wherein he said ye shall surely enter the holy

temple of Mecca, if God please, in full security ; having your heads shaved and your hair cut ; ye shall not fear ; for God knoweth that which ye know not ; and he hath appointed you, besides this, a speedy victory. It is he who hath sent his apostle with the direction, and the religion of truth ; that he may exalt the same above every religion ; and God is a sufficient witness hereof. Mahomet is the apostle of God, and those who are with him are fierce against the unbelievers, but compassionate towards one another. Thou mayest see them bowing down prostrate, seeking a recompence from God and his good will. Their signs are in their faces, being marks of frequent prostration. This is their description in the Pentateuch, and their description in the gospel : they are as seed which putteth forth its stalk and strengtheneth it, and swelleth in the ear and riseth upon its stem, giving delight unto the sower. Such are the Moslems described to be, that the infidels may swell with indignation at them. God hath promised unto such of them as believe, and do good works, pardon and a great reward.’ ††† Ch. xlviii.

The following is one of the smaller sections (ch. Ixxii) entire,

*‘ Entitled, the Genii ; revealed at Mecca. * In the name of the Most Merciful God,*

‘ Say, it hath been revealed unto me, that a company of genii attentively heard me reading the Koran, and said, verily we have heard an admirable discourse, which directeth unto the right institution ; wherefore we believe therein, and we will by no means associate any other with our Lord. He (may the

majesty of our Lord be exalted !) hath taken no wife, nor hath he begotten any issue ; yet the foolish among us have spoken that which is extremely false of God : but we verily thought that neither man nor genius would by any means have uttered a lie concerning God And there are certain men who fly for refuge unto certain of the genii ; but they increase their folly and transgression ; and they also thought as ye thought, that God would not" raise any one to life. And we formerly at- tempted to pry into what was transacting in heaven; but we found the same filled with a strong guard of angels, and with flaming darts ; and we sat on some of the seats thereof, to hear the discourse of its inhabitants: but whoever listeneth now, findeth a flame laid in ambush for him, to guard the celestial confines. And we know not whether evil be hereby intended against those who are on the earth, or whether their Lord intendeth to direct them aright. There are some among us who are upright; and there are some among us who are otherwise. We are of different ways. And we verily thought that we could by no means frustrate God in the earth ; neither could we escape him by flight : where- fore, when we had heard the direction contained in the Koran, we believed therein. And whoever believeth in his Lord, ne"ed not fear any diminu tion of his reward, nor any injustice. There are some Moslems among us ; and there are others of us who swerve from righteousness. And whoso embraced! Islam, they earnestly seek true dircc-

tion : but those who swerve from righteousness shall be fuel for hell. If they tread in the way of truth, we will surely water them with abun- dant rain, that we may prove them thereby ; but whoso turneth aside from the admonition of his Lord, him will he send into a severe torment. Verily the places of worship are set apart unto God ; wherefore invoke not any other therein together with God. When the servant of God stood up to invoke him, it wanted little but that the genii had pressed on him in crowds, to hear him rehearse the Koran. Say, verily I call upon my

Lord only, and I associate no other God with him. Say, verily I am not able, of myself, to procure you either hurt or a right institution. Say, verily none can protect me against God ; neither shall I find any refuge besides him. I can do no more than publish what hath been revealed unto me from God, and his messages. And whosoever shall be disobedient unto God and his apostle, for him is the fire of hell prepared; they shall remain therein for ever. Until they see the vengeance with which they are threatened, they will not cease their opposition ; but then shall they know who were the weaker in a pro- tector and the fewer in number. Say, I know not whether the punishment with which ye are threatened be nigh, or whether my Lord will appoint for it a distant term. He knoweth the secrets of futurity ; and he doth not communi- cate his secrets unto any, except an apostle in whom he is well pleased : and he causeth a guard of angels to march before him and behind him, that he may know that they have executed the commission of their Lord : he comprehendeth whatever is with them, and counteth all things by number.'

- *Our holy Scriptures, continues our author, are the only compositions that can enable the dim sight of mortality to penetrate into the invisible world, and to behold a glimpse of the divine perfections. Accordingly, when they would represent to us the happiness of heaven, they describe it, not by any thing minute and particular, but by something general and great ; something, that, without de- scending to any determinate object, may at once by its beauty and immensity, excite our wishes and elevate our affections. Though in the pro- phetical and evangelical writings, the joys that shall attend us in a future state, are often men- tioned with ardent admiration, they are expressed rather by allusion than by similitude, rather by indefinite and figurative terms, than by any thing fixed and determinate. ►► Eye hath not seen, nor ear heard, neither have entered into the heart of man, the things*

which God hath prepared for them that love him.' 1 Cor. ii. 9. What a re- verence and astonishment does this passage ex- cite in every hearer of taste and piety ! What energy, and at the same time what simplicity, in the expression ! How sublime, and at the same time how obscure, is the imagery ! Dif- ferent was the conduct of Mahomet in his des- criptions of heaven and paradise. Unassisted by the necessary influence of virtuous intentions and Divine inspiration, he was neither desirous, nor indeed able, to exalt the minds of men to sublime conceptions, or to rational expectations. By attempting to explain what is inconceivable,

to describe what is ineffable, and to materialize j what in itself is spiritual, he absurdly and im- | piously aimed to sensualize the purity of the j Divine essence. Thus he fabricated a system of I incoherence, a religion of depravity, totally re-] pugnant to the nature of that Being, who, as he : pretended, was its object ; but therefore more likely to accord with the appetites and concep- j tions of a corrupt and sensual age. That we | may not appear to exalt our Scriptures thus far i above the Koran by an unreasonable preference, we shall produce a part of the second chapter 1 of the latter, which is deservedly admired by the Mahommedans, who wear it engraved on their ornaments, and recite it in their prayers. 'God! there is no God but he ; the living, the self-sub- sisting : neither slumber nor sleep seizeth him : to him belongeth whatsoever is in heaven, and on earth. Who is he that can intercede with him but through his good pleasure He knoweth that which is past, and that which is to come. His throne is extended over heaven and earth, and the preservation of both is to him no burden. He is the high, the mighty.' Sale's Koran, ii. p. 30. To this description who can refuse the praise of magnificence. Part of that magnifi- cence, however, is to be referred to that verse of the Psalmist, whence it was borrowed, ' He that keepeth Israel, shall neither slumber nor sleep.'

*Psal. cxxi. 4. But if we compare it with that other passage of the inspired Psalmist, cii. 24 27, all its boasted grandeur is at once obscured, and lost in the blaze of a greater light. * O my God, take me not away in the midst of my days ; thy years are throughout all genera- tions. Of old hast thou laid the foundation of the earth ; and the heavens are the work of thy hands. They shall perish, but thou shall en- dure ; yea all of them shall wax old, like a gar- ment ; as a vesture shall thou change them, and they shall be changed. But thou art the same, and thy years shall have no end.' The Koran, therefore, upon a fair examination, far from sup- porting its arrogant claim to a supernatural work, sinks below the level of many compositions confessedly of human original ; and still lower does it fall in our estimation, when compared with that pure and perfect pattern, which we justly admire in the Scriptures of truth. It is therefore abundantly apparent, that no miracle either was externally performed for the support, or is internally involved in the composition of the Mahommedan revelation.'*

ALCORAN, used figuratively, is applied to cer- tain other books full of impieties and impos- tures. In this sense we meet with the Alcoran of the Cordeliers, which has made a great noise ; wherein St. Francis is extravagantly magnified and put on a level with Jesus Christ. The Al-l coran of the Cordeliers is properly an extract of a very scarce book, entitled, The Conformity of the Life of the Seraphic Father Francis, with the Life of Christ, published in 1510, 4to; since, at Bologna, in folio. Erasmus Albertus, being, by j the elector of Brandenburg, appointed to visit a monastery of Franciscans, found this book ; and, being struck with the extreme absurdity of it, collected a number of curiosities out of it, and published them under the title of the Al-

Moravites, a sort of priests, repeat prayers from the Koran thrice a day, with a very loud voice; making the tour of the gallery all the while, that they may be the better heard around. Like the

minarets of the Turks, these are the principal ornaments of the Mosques.

ALCORANISTS, among Mahommedans,those who adhere strictly to the letter or text of the Alcoran, from an opinion of its ultimate sufficiency and perfection. The Persians are generally Alcoranists. The Turks, Tartars, Arabs, &c. besides the Alcoran, admit a multitude of tra- ditions.

AL'COVE, Spanish, alcoba; Danish, alkove; from the Arabic, alkobba : an arched or vaulted apartment, containing a bed of state, or seats for company : also a shady recess in gardens or pleasure grounds.

The weary 'd champion lull'd in soft alcoves,

The noblest boast of thy romantic groves :

Oft, if the muse presage, shall he be seen

By Rosamonda fleeting o'er the green ;

In dreams be hail'd by heroes' mighty shades,

And hear old Chaucer warble through the glades.

Tichell.

Deep in a rich alcove the prince was laid, And slept beneath the pompous colonnade.

Pope's Odyssey

On mossy banks, beneath the citron grove, The youthful wand'rers found a wild alcove.

Falconer's Shipwreck. This gloomy alcove darkling to the sight, Where meeting trees create eternal night; Save when from yonder stream the sunny ray, Reflected gives a dubious gleam of day.

Kirhe White's Poems.

ALCOVE, in architecture, the recess or part of a chamber which is generally appropriated in magnificent houses to the state-bed. See the above

lines of Pope. The word was adopted by the Spanish architects from the Arabic el-kauf, which bears the same meaning. But more an- cient architects often made alcoves in the form of a niche, as in the ruins of Hadrian's villa, those of Trajan's villa, at Pompeii, atTrivoli, &c. The alcove of modern times is susceptible of great magnificence and elegance. It may be raised above the other part of the chamber and approached by steps, separated by columns, antae and balusters, agreeing with the architecture of the apartments, and with dwarf doors in the balustrade for entrance. The interior may be embellished with basso-relievo,panelling,pictures, and tapestry, with a magnificent state bed, or throne, to complete the arrangement. If for a bed-chamber, at the sides of the alcove should be warm and cold baths, dressing and water-closets, &c. according to the magnificence of the man- sion, and the rank and opulence of the owner ; such are found .in the palaces of Italy, and the mansions of the nobility in France and Spain. The alcove, of course, should correspond in every respect with the style of architecture and decora- tion used in the apartment.

ALCOVENDAS, a small town of Old Cas- tile.

ALCOVES, from elcauf, Arab, a sleeping

place, or elcoba, a tent, are frequent in Spain ; and the bed is raised two or three ascents, with a rail at the foot. The word is often used for in- closed garden seats.

ALCOY, a town of Spain, in the province of Valencia, with flourishing manufactures of cloth, soap, and paper ; fruitful environs, and nearly 10,000 inhabitants. Twenty miles north of Ali- cante.

ALCUDIA, a decayed city of the island of Majorca, situated between Port Major and Port Minor, and containing about 1000 inhabitants. Lon. 3►►. 0'. E. Lat. 30►►. 50'. N.

ALCUDIA DE CARLET, a town of Valencia, Spain, with about 2000 inhabitants, a parochial church, and a

convent of Franciscans. It is five leagues south of the capital of the province.

ALCUINUS, (Flaccus,) or ALBINUS, an eccle- siastic of the eighth century, who is said to have been born in Yorkshire, and who certainly was educated there, under archbishop Egbert; as we learn from his own letters, in which he frequently calls that prelate his beloved master. He sur- vived Bede about seventy years, and speaks of him with the highest veneration. It is said, that before he left England he was .abbot of Canter- bury. In 790 he was sent on an embassy, by Offa, king of Mercia, to the emperor Charle- magne : who contracted so great an esteem for him, that he prevailed upon him to settle in his court, and become his preceptor in the sciences. The courtiers called him, by way of eminence, the emperor's delight. Mr. Turner, in his ex- cellent history of the Anglo-Saxons, speaks of him at this period, as in the enjoyment of im- perial affection and confidence, to a degree which literature has never experienced in any other instance. Charlemagne employed him to write several books against the heretical opinions of Felix, bishop of Urgel, in Catalonia, and to defend the orthodox faith against him in the council of Frankfort, A. D. 794 ; which he per- formed, it is said, not only to the satisfaction of the emperor, but to the conviction of Felix and his followers. An academy was established in the imperial palace, over which Alcuinus pre- sided, and in which the princes and nobility were educated ; other academies were established in the chief towns of Italy and France, at his insti- gation, and under his inspection ; and the whole of that kingdom became indebted to Alcuinus for its polite learning. The universities of Paris, Tours, Fulden, Soissons, &c. owe to him their origin or their increase ; those of which he was not the superior and founder, being enlightened by his doctrine and example, and enriched by the substantial benefits he procured for them from Charlemagne. Camden cites a German poet who thus speaks of these philanthropic services of Alcuiiius : ???

‘ Quid non Alcuino, facunda Lutetia, debes ! Instaurare bonas ibi qui feliciter artes, Barba- riemque procul solus depellere, cspit.’ ††† Let Gallia’s sons, nurtur’d in ancient lore, To Alcuin’s name a grateful tribute pay ; ‘Twas his, the light of science to restore, And bid Barbaric darkness flee away.’ We cannot forbear to subjoin an extract from this excellent prelate’s letters to Charlemagne, exhibiting a picture of his mind and .occupations, as creditable to himself as it is interesting and surprising, in so dark an age. They are dated from his beloved retreat.††† ‘ The employments of your Alcuinus in his retreat are suited to his humble sphere ; but they are neither inglorious nor unprofitable. I spend my time in the halls of St. Martin, in teaching some of the noble youths under my care the intricacies of grammar, and inspiring them with a taste for the learning of the ancients ; in describing to others the order and revolutions of those shining orbs, which adorn the azure vault of heaven ; and in ex- plaining to others the mysteries of divine wis- dom, which are contained in the holy scriptures ; suiting my instructions to the views and capacities of my scholars, that I may train up many to be ornaments to the church of God, and to the court of your imperial majesty.’

To the honour of old England he continues, ‘ In doing this, I find a great want of several things, particularly of those excellent books in all arts and sciences, which I enjoyed in my na- tive country, through the expense and care of my great master Egbert. May it therefore please your majesty, animated with the most ardent love of learning, to permit me to send some of our young gentlemen into England, to procure for us those books which we want, and transplant the flowers of Britain into France, that their fragrance may no longer be confined to York, but may per- fume the palaces of Tours. I need not put your majesty in mind, how earnestly we are exhorted in the holy scriptures to the pursuit of wisdom. ††† Learning and wisdom exalt the low, and give additional lustre to the

honours of the great. ' By wisdom kings reign, and princes decree justice.' Cease not, then, O most gracious king! to press the young nobility of your court to the eager pursuit of wisdom and learning in their youth, that they may attain to an honourable old age, and a blessed immortality. For my own part, I will never cease, according to my abilities, to sow the seeds of learning in the minds of your subjects in these parts ; mindful of the saying of the wisest man, ' In the morning sow thy seed, and in the evening withhold not thine hand ; for thou knowest not whether shall prosper, either this or that.' To do this►► hath been the most delightful employment of my whole life. In my youthful years I sowed the seeds of learning in the flourishing seminaries of my native soil of Britain ; and in my old age, I am doing the same in France, praying to God, that they may spring up and flourish in both countries.' ' How few princes,' says Henry, 'enjoy the happiness of such a correspondence, or have the wisdom and virtue to encourage it !'

At length he wholly retired from court to his ab- tey of St. Martin's at Tours, where he maintained

a regular correspondence with the emperor ; from which it weuld seem that both were animated with the most ardent love to learning and reli- gion. He wrote in a style much superior in elegance to that of his contemporaries. Charle- magne often solicited Alcuin to return to court, but, 'he excused himself; and died A. D. 804, in his retirement. His works were collected and published, by Andrew DuChesne, in one volume folio, Paris 1617. They consist of, 1. Tracts upon Scripture doctrine, discipline, and morality. 2. Historical treatises, letters, poems, &c.

ALCYON, in ornithology, the trivial name of a species of alcedo. See AI.CEDO.

ALCYONE, in entomology, a species of the papilio nymphalis, with dentated brown wings and yellow

bands, the interior having two oscilli on both sides, and the posterior marbled below ; it is found in the mountains of the southern parts of Russia.

ALCYONE, a town in Thessaly.

ALCYONE, in mythology, the daughter of Nep- tune, and wife of Ceyx, king of Thrace, who hearing of her husband's death at sea, cast herself into it, whereupon they were both metamor- phosed into kingsfishers.

ALCYONIUM, in natural history, a peculiar kind of fossil coral of the astroites kind, found in Wales, where it is very plentiful, and has the appearance of a sort of marble.

ALCYONIUM, in the Linnsean system of zoology, a genus of zoophytes ; the characters of which are, that the animal grows in the form of a plant : the stem or root being fixed, fleshy, gelatinous, spongy, or coriaceous; with a cellular epidermis, penetrated with stellated pores, and shooting out tentaculated oviparous hydrae. The number of species, mentioned and characterized byGmelin, is twenty-eight ; viz. 1 . A. arboreum, with woody stem, obtuse branches, and pores in the form of pimples, found in Norway, White, and Indian seas, sometimes of the human height. 2. A. exos, with stem arborescent, coriaceous, crimson-coloured, above ramous, and with stel- lated papillae; called by several authors the sea- hand, and found at the bottom of the Mediter- ranean sea. 3. A. epipatrum, with stem cavated, fleshy, and reddish : the finger-shaped sea-pen of Ellis, and sea mad-apple of Rondeletius, found in the Mediterranean, about four inches long, and of the thickness of the finger. 4. A. agaricum, with stem filiform, and reniform ; pileus kidney-shaped, purple, sea-pen of Ellis, found in the sea, washing the coast of Carolina.

5. A. digitatum, stemless, oblong, coriaceous, and rugose ; dead-man's hand, or dead-man's toes of Ellis ; the tethya of Rumphius, and fucus palma marinus of C. Bauhin, found in the Eu- ropean sea,

encrusting testaceous fish and stones.

6. A. schlosseri, roundish and stupose, pene- trated with ray-like stars ; the alcyonium ramosum lividum, &c. of Solander and Ellis, the uva marina of Gesner, the botryllus stellatus of Gartner, found on the coast of Cornwall, brown or ashy, and covering other bodies. 7. A. lyn- curium, globose, fibrous, yellow and warty ; the tethya sphamca of Donat, found in the Mediter- ranean, and at the Cape of Good Hope, about the size of an orange, and cartilaginous. 8. A.

bursa, sub-globose, pulpous and green ; the sea- orange of Marsilli, found in the English and Mediterranean seas, about the size of a middling apple, and coriaceous. 9. A. cydonium, round- ish, spongy, yellow and smooth ; found in the African, Mediterranean, and Northern seas, af- fixed to rocks and corals, and sometimes loosened by the agitation of the waves. 10. A. ficus, obovated, pulpous and livid ; the sea-fig of Ellis, and sea-lungs of Ray, the alcyonhun tuberosunv of J. Bauhin, found in the Mediterranean and English seas, very rarely among fossils, of an olive colour, and within granulose. 11. A ge- latinosum, polymorphous and gelatinous ; the alcyonium luteum gelatinosum polymorphum of Solander and Ellis, spongia ramosa, &c. of Par- kinson, fucus gelatinosus of Hudson, and fucus nodosus and spongiosus of Ray, found in the European ocean and the Icy sea, adhering to the algae, stones, shell-fish, &c. 12. A. manus diaboli, polymorphous, perforated with obtuse protuberances, found in Iceland. 13. A. massa, yellow, spongy, patulous, with five radiated small stars, and black centre, found in the sea of Norway. 14. A. cranium, tuberiform, white and bristly, found in the Norway sea. 15. A. rubrum, crustaceous, soft, sprinkled with reddish scattered spots, found in the Norway sea. 16. A. mammillosum, whitish, coriaceous, with con- vex mammillae, and the centre hollowed and

substellated, found in the American sea. 17. A. ocellatum, ferruginous, coriaceous, with rugose subcylindric cellules, and radiated ocel- lated apices, found adhering to rocks, with twelve rays of stars, in the island of St. Dominica. 18. A. tuberosum, yellowish and tuberous, with the apices frequently subdivided, and tubulous pores, found adhering to rocks in the island of Mauritius. 19. A. gorgonoidesT cinereous, sandy-fleshy, with radiated watery cellules, found, with twelve rays of cellules, adhering to corals and rocks, in the island of Curassoa.

20. A. asbestinum, with a roundish stem, and oblong pores scattered over every part of it, found in the sea washing the American coast, very porous, whitish, and within rose-coloured.

21. A. alburnum, white, very ramous, attenuated and subdivided, with tubulous terminal pores, found in the Indian sea. 22. A. papillosum, crustaceous, with large papillae thickly set, and convex, the boletus marinus of Marsigli. 23. A. conglomoratum, gelatinous, convex, with con- glomerated fingers, and terminal mouths without teeth, found in the Cornish seas. 24. A. as- cidioides, crustaceous, coriaceous, with dispersed papilla?, and two subdentated mouths, found in the Cornish seas. 25. A. synoicum, with many

| cylindric fleshy stems, and an orifice stellated at

| the apex, found on the northern shore of Spitz-

: bergen. 26. A. vermiculare, green, ramous,

with cylindric, obtuse, pyramidal branches, found

on the' rocks of the island of Nisita, opposite to

Neapolis. 27. A. stellatum, with two stellated

terminal mouths. 28. A. corniculatum, with

: four stellated mouths, encompassing a papilla,

- and four small erect terminal horns, found in the sea of Holland. From experiments made by i Mr. Hatchett, on a few species of alcyonium, viz. atbcstiuum, sicus, and arboreum, he was led to conclude that they were all composed of a soft, flexible, membranaceous substance, slightly hardened by carbonate, mixed with a small por- tion of phosphate of lime. Phil. Trans for 1800. P. ii. p. 364.

ALCYONIUM MARE, in ancient geogra- phy, a name given to that part of the gulph of Corinth, which stretched itself between the western coast of Bceotia, the northern coast of Megaris, and a small part of Corinth, as far as the promontory of Olmia.

ALCYONIUM STAGNUM, in ancient geography, a lake in the territory of Corinth, whose depth was unfathomable, and in vain attempted to be discovered by Nero. Through this lake Bacchus is said to have descended to hell, to bring back Semele ; and near it was a temple to the honour of Amphiarus, a sorcerer

ALCYONIUS, (Peter,) a learned Italian printer, who flourished in the sixteenth cen- tury. He was well verged in Greek and Latin, and wrote some pieces which met with great ap- probation. He was corrector of the press a considerable time for Aldus Manutius, and is entitled to a share in the praises given to the editions of that learned printer. Paulus Manu- tius charges Alcyonius with the plagiarism of several fragments of a treatise of Cicero de Gloria ; and that afterwards, m order to save himself from being detected, he had burnt the manu- script of Cicero, the only one extant. Be that as it may, Alcyonius was certainly capable of writing well : for the two orations he made after the taking of Rome, wherein he represented very strongly the injustice of Charles V. and the barbarity of his soldiers, were excellent pieces.

ALD, from Eald, Sax. or alt, Teut. prefixed to the names of places, signifies antiquity, as Aldborough, Aldgate, &c.

ALDABARAM, in osteology, a name given by some writers to the sesamoide bones in the great toe.

ALDAN, a river of Siberia, which, rising on the confines of China, in long. 125►►. E. lat. 55►►. 50′. N. ; and taking a north-east course to lat. 63►►. N. changes its direction to west north- west, and joins the Lena in long. 128►►. 20′. E. lat. 63►►. 25′. N. On the banks of this river, in the province of Yakutzk, the finest sables are obtained. When the fiwt breaks up, about the month of May, an inundation takes place, and the stream drifts down vast masses of ice with extraordinary impetuosity.

ALDARU, in botany, a name given by Avi- cenna, Serapion, and other authors, to the Lentisk tree.

AL′DAY. All day.

Withinne fyf-zer aftur pis kyng so prout bi com, For pe grete tresour nameliehe pat healdaynom, Dat he nas not ene y paid to habbe pis kyndom. R. of Gloucester, p. 93.

ALDBOROUGH, or ALDEBURGH, a sea-port, borough, and market-town of Suffolk, in the hundred of Plomsgate, ninety-four miles from London, and three miles north of Orford. Being a commodious harbour, it is chiefly inhabited by seamen and fishermen ; and, although meanly built, is clean, and pleasantly situated in the valley of Slaughton. The Aid, from which this

town derives its name, runs on the south, and forms an excellent quay. The harbour is well defended by cannon, and the regular declivity of the shore affords every convenience for bathing. From the healthiness and convenience of the situation, connected with the patronage of several families of distinction, this place has of late become one of considerable resort. The en- croachments of the sea

having swept away one of the principal streets, Aldborough was until lately, fast falling to decay, but is- now considera- bly improved. The church on the west of the town is ,a neat ancient edifice, although much intermixed with modern work. The manor of this name was originally the property of the monastery of Snape, and was afterwards granted to Cardinal Woolsey. It is governed by two bailiffs, ten burgesses, and twenty-four petty officers, and sends two members to parliament. Sprats are caught here in great quantities, and pickled for the Dutch market ; as are also soles, lobsters, &c. The church is a rectory. Market- days, Wednesday and Saturday.

ALDBOROUGII, a town in the West Riding of Yorkshire, seated on the river Ouse, fifteen miles north-west of York, and 207 north by west of Lon- don. It sends two members to parliament. It was anciently a Roman city, called Isurium Bri- gantium ; and several coins and monuments of the Saxons and Romans have been discovered there. Few places have afforded such numerous relics of the Roman dominion in Britain. Here have been discovered the fragments of aqueducts cut in great stones, and covered with tiles ; a vault, which it is thought led to the river Ouse, near whose banks the present town is seated, and supposed to have been a dormitory; vast quan- tities of Roman coins, mostly of brass, from the reign of Augustus to Constantine -} together with several signets, urns, and other utensils of red earth, wrought with a variety of figures, knots, and flowers. Some beautiful Mosaic pavement, consisting of small stones, of about a quarter of an inch square, with a border nearly four times that size, were discovered in 1770 ; and in the year 1808, a great number of urns, containing calcined bones, with a lachrymatory, a fibula vestaria, and eighteen human skeletons. These remains, which, there is little doubt, had been in the ground upwards of 1400 years, were all in a high degree of preservation ; and a thin stratum of black earth, which surrounded them, affords a strong presumption that the bodies of those whose ashes-were contained in the urns, had been burned on the place where they were de-

posited. On the south side of the town arc the reliques of a Roman encampment, containing about two acres of ground. The Roman Isurium was, in all probability, built about the year 80 ; after Julius Agricola had completed the reduc- tion of the Brigantines, one of the most powerful of all the British tribes, and possessing the entire districts, now forming the counties of York, Lancaster, Westmoreland, Cumberland, and Durham. Before the foundation of Ebo- racum, now the city of York, it appears to have been the principal city of the district. Some have supposed that it was burnt by the Danes ; others, that it was more gradually destroyed,

and afterwards rebuilt by the Saxons, who gave it the name of Aldburgh, or the Old Town.••• The market is on Wednesday.

ALDEBAC, in the materia medica of the an- cient Arabian physicians, the name by which they have called bird-lime, which they place among the vegetable poisons.

ALDEBARAN, or the bull's eye, in astrono- my, a star of the first magnitude in the southern eye of the constellation Taurus. Ptolemy calls it 6 Xa/iTTjooc T&V vaSwv, i. e. the bright star of the Hyades. The right ascension for 1812 was 66••. 17'. 4" : Declination, 16••. 7'. 31" N. : An- nual variation in right ascension 51" 31 : in declination 8" 16. Ptolem. Almagest. I. 7, c. 5, &c.

ALDENHOVEN, a bailiwick and town of the grand duchy of the Lower Rhine, in the ancient duchy of Juliers, with 1050 inhabitants. It is three miles west south- west of Juliers. Long. 7••. 12'. E. lat. 50••. 53'. N.

AL'DER, or) Aller, or allder, alle, all.

ALLER. $ The ancient genitive case plu-

ral of all. It was used much in composition, in

connection with adjectives in the superlative degree ; as aller best, best of all ; aller worst, worst of all; alder lieve, most beloved, most dear.

Grete townes in Engelond he amcndede y nowe, And London aller most for per to hys herte drowe.

R. of Gloucester, p. 44.

Sex and twenty baners of Inglond alder best, Of armes pat knewe pe maners, to vrerre were alle

prest. R. Brunne, v. ii. p. 271.

Wei coude he rede a lesson or a storie, But alderbest he sang an ofiertorie.

Chaucer. The Prologue, v. i. p. 29.

QUEEN. Great king of England, and my gracious

lord, <

The mutuall conference that my minde hath had, By day, by night ; waking, and in my dreaines, In courtly company, or at my beads, With you mine alder liefest soueraigne, Makes me the bolder to salute my king.

Shakspeare's 2d. part of King Henry IV. act i.

ALDER, in botany, the betula alnus of Lin- naeus, a well-known tree which thrives in moist places. It is the Greek K\rjQpa, in Lat. alnus, German eller, Danish ell, and Swedish all, ahl, &c. The principal sorts of alder are, the round- leaved, or common alder, the long-leaved, and the dwarf. The wood is valuable for fences,piles, pumps, and all other works which remain under water ; it , is also much used by turners. The bark is employed in tanning. The black alder is the ramnus frangula of Linnaeus.

ALDERAIMIN in astronomy, a star of the third magnitude, on the right shoulder of the constellation Cepheus, marked a by Bayer.

ALDERHOLM,u pleasant island of Sweden, formed by three arms of the river Gefle. It has a wharf, and a repository for planks and deals, in which a considerable traffic is carried on. It is eighty miles norm of Stockholm. N. lat. 6►►. 40’.

ALD’ERMAN,n.-v A. S. EaVaonman, from

ALD’ERMANITY, / ./Eh>, 7Eh>ori, old, older,

ALD’ERMANLIKE, \andman. Corresponding

ALD’ERMANLY, i in origin and signification

ALD’ERMANSHIP. J with the word senator, in

Latin ; and a title of high distinction in Anglo-Saxon times. It is now well known as the official title of a superior member of a municipal corporation, chosen for his supposed age and experience.

The -which Symode be haued hym so -well after, that he was admytted for an alderman ; but in short proccsse after, he demeanyed hym so ille, and so cotraryouslye vnto the weale and good ordre of the citie, that he was dyscharged of his aldermanshyp , and dyscharged from all rule and counceyll of the citie.

Fabian, p. 331.

By the lawes of king Ina, 100 yeares before Alfred, as they are extant in the Saxon tongue, and by the lawes of Rennethus, king of Scots, there is mention made of shyres and of the shyreman or elderman, ►►►whom we nowe call shireeue or sheriffe.

Tell him, ‘ Myself, the mayor, and alderman, Are come to have some conf’rence with his grace.’

Shaktpeare.

Though my own aldermen conferr'd my bays,

To me committing their eternal praise ;

Their full-fed heroes, their pacinck may'rs,

Their annual trophies, and their monthly wars.

Pope's Dunciad.

These, and many more, suffered death, in envy to their virtues and superior genius ; which emboldened them, in exigencies wanting an aldermanly discretion, to attempt service out of the common forms.

Swift's Miscellanies.

ALDERMAN, among our Saxon ancestors, was a degree of nobility answering to earl or count at present. Alderman, in process of time was also used for a justice of the peace, or judge of various degrees of authority. Thus we meet with the titles of Aldermannus totius Anglias ; Aldermannus regis, comitatis, civitatis, burgi, castelli, hundred! sive wapensachii, et novem decimorum. According to Spelman, the Alder- mannus totius Anglian seems to have been the same officer who was afterwards styled capitalis justiciarius Angliae, or chief justice of England ; the aldermannus regis seems to have been an occasional magistrate, answering to our justice of assize ; and the aldermannus comitatis, a ma- gistrate who held a middle rank, between what was afterwards called the earl and the sheriff. ??? He sat at the trial of causes with the bishop ; the latter proceeding according to the ecclesiasti- cal law, and the former declaring and expound- ing the common law of the land. - ' The alder- man of the county,' says Spelman of the ancient government of England, 'whom confusedly they call an earl, was in parallel equal with the bishop, and therefore both their estimations valued alike in the laws of Ethelstane at eight thousand thrymses, (worth about three shillings each.) He was a man learned in the

laws, and had the government of the whole shire, and cognizance over all the inferior courts and persons, both in civil matters and criminal ; for which purpose he held his ordinary court by the shreve once every month, and there resorted as suitors, and bound by duty, all the lords of manors, and principal men of the county, with the rest of the freeholders, who were not only assistants, but judges with him of all matters there depending, whether en- tered there originally, or coming thither by appeal or provocation from the inferior courts.

' The Ealdorman,' says Mr. Turner, was the highest officer in the kingdom. In rank, he was inferior to an etheling ; for when an ethelings were-geld was fifteen thousand thrymses, an ealdorman's was but eight thousand. He was the chief of a shire, and he lost this dignity if he connived at the escape of a robber, unless the king pardoned him. He was one of the witans, who attended the witena-gemot. He presided with the bishop at the scire-gemot, which he was ordered to attend, and the fole-gemot. He ranked with a bishop, but was superior to the thane. He had great civil powers in administering jus- tice, and also enjoyed high military authority ; he is mentioned as leading the shire to battle against the enemy. To draw weapons before him, incurred a penalty of one hundred shillings ; and to fight before him in a gemot, incurred a fine to him of one hundred and twenty shillings, besides other punishments. The ealdorman is a title which occurs perpetually in the Saxon Chronicle.'

ALDERMAN, in modern British policy, is a magistrate, subordinate to the lord mayor of a city or town corporate. The number of these magistrates is not limited, but is greater or less according to the magnitude of the place. In Lon- don they are twenty-six; each having one of the wards of the city committed to his care, except the twenty-sixth, erected in 1550, according to Mait- land, which serves only to dignify the senior Alderman, as father of the city. This office is for life. When one dies, or resigns, a wardmote is called, who

elect another and return him to the court of aldermen, who are obliged to admit him to supply the vacancy. All the aldermen are justices of the peace, by a charter of 15 Geo. II. They are exempted from serving in inferior offices ; nor can they be put upon assizes, or serve on juries, so long as they continue in office. They may be called the peers of the city, which much resembles in its government the three estates of the kingdom. In the wardmote the alderman presides over the election of the com- mon councilmen; and from the court of alder- men, of which the lord mayor is the official chairman, the latter officer is annually chosen. ••• The livery nominate, in common-hall, two alder- men to this dignity, one of whom, generally the senior, is finally elected by the court of aldermen. Those aldermen who have passed the civic chair are justices of the quorum ; and the lord mayor, recorder, common serjeant, and aldermen, are judges of oyer and terminer for the city of Lon- don and county of Middlesex. The aldermen attend, or should attend, daily at the public offices, to dispose of all charges and breaches of the public peace within the city.

ALDERNEY, an island on the coast of Nor- mandy, about eight miles in circumference, and. though much nearer the French than the British coast, being within seven miles of Cape La Hogue, it is subject to the crown of Great Britain. With Guernsey, Jersey, and Sark, it forms the only part of the possessions of Wil- liam the Conqueror that now remain in our pos- session. Alderney is about thirty miles from the nearest part of the English coast, and about eigh- teen from Guernsey. The Race of Alderney is a

name given to the strait running between the coast of France and this island. The town of this name,

about two miles from the harbour, is but poorly built ; though it has a handsome church, and contains about 1000 inhabitants. In stormy weather the whole coast is dangerous, more particularly from a ridge of rocks, called the Caskets, which, from the numerous eddies, have often proved fatal to mariners. ••• The air is salubrious, and the soil fertile, and in the highest state of cultivation ; but the custom of parting their lands into small parts by gavel-kind, keeps the people in a state of poverty. They send a considerable quantity of corn to England, but their trade is small, and they receive their goods from Guernsey. In 1119, Henry, duke of Nor- mandy, son of king Henry I., with many of the nobility, were overtaken by a dreadful storm, and lost, near this island ; and off the same rocks, in 1744, the Victory of 116 guns, admiral Sir John Balchen, with 1100 marines and sailors, foundered, and all on board perished.

ALDHAFERA, in the Arabian astronomy, de- notes a fixed star of the third magnitude, in the Lion's mane, marked y. ALDHELM. (St.) See ADELME. ALDHUN, ALFHUNUS, or ALDWINUS, was presented to the see of Lindisfarne, or Holy Island, in the year 990, the twelfth of the reign of king Ethelred. He was admonished, in a dream, as the legends of the times say, to quit the island with his brethren, and take with him the body of saint Cuthbert, which had been buried there 113 years : he obeyed, it is added, and founded the city and bishopric of Durham. Alfred and Edward, the sons of king Ethelred, were educated by this bishop, and were con- ducted by him, together with queen Emma, to her brother Richard, after the defeat of their fa- ther by Swain, king of Denmark, in 1017. He died in 1719.

ALDII, in antiquity, servants who attended their masters in expeditions to the wars. These were otherwise called aldiones, aldionri, and al- dionarii.

ALDRED, abbot of Tavistock, was made bishop of Worcester in 1046. He was so much in favour with king Edward the Confessor, that he induced that

monarch to be reconciled with the worst of his enemies, particularly with Swaine, son of earl Godwin, who had revolted against him, and came with an army to invade the kingdom. Aldred also restored the union between king Edward and Griffin, king of Wales. He afterwards went to Rome, and in 1054, was sent ambassador to the emperor Henry II. He staid a whole year in Germany, and was very honourably entertained by Herman, archbishop of Cologne, from whom he adopted much of the ecclesiastical discipline, which, on his return, he established in his own diocese. In 1058, he went to Jerusalem, which no English prelate had ever done before him. Two years after he re- turned to England ; and Kinsius, archbishop of York, dying in 1060, he was elected to that see, which he thought fit to hold with his bishopric of Worcester, as some of his predecessors had done. Aldred went soon after to Rome, to re- ceive the pallium from the pope, attended by the

earl of Northumberland, and two other bishops, who were well received ; but Aldred, it is said, being found ignorant, and guilty of simony, the pope refused to confirm his new appointment. On his way home, he and his fellow-travellers being attacked by robbers, they were compelled to return to Rome ; and the pope, either out of compassion, or from tne threatenings of the earl of Northumberland, gave Aldred the pallium; but obliged him to resign his bishopric of Wor- cester. However, as the archbishopric of York had been almost ruined by the many invasions of foreigners, king Edward gave the new arch- bishop leave to keep twelve villages, which be- longed to the disputed see. Edward dying in 1066, Aldred, according to the Saxon Chronicle, crowned Harold his successor. He is also said to have crowned William the Conqueror, after he had made him swear to protect the holy churches of God and their leaders ; to establish and observe righteous laws ; and that he would entirely prohibit and suppress all rapine and unjust judgments. Some writers, however, dis- pute the fact of his having crowned the Norman monarch. It was certainly the

right of the see of Canterbury. With William, Aldred soon be- came a favourite; and, though imperious to every body else, he submitted implicitly to this pre- late ; of which Brompton gives a remarkable instance. It happened, when Aldred was at York, that the deputy-governor, or lord-lieute- nant, going out of the city with his attendants, met the archbishop's servants, who came to town with several carts and horses loaded with pro- visions. The governor asked them to whom they belonged ; and they having answered they were Aldred's servants, he ordered that all the provisions should be carried to the king's store- house. On this the archbishop sent some of his clergy to the governor, commanding him to de- liver the property back, and to make satisfaction to St. Peter, and to him his vicar, for the injury he had done them. But the governor returned an answer as haughty as the message. Aldred there- upon went to London, to make his complaint to the king ; and, meeting him in the church of St. Peter, at Westminster, addressed him thus : ' Hearken, O William ! when thou wert a foreigner, and God, to punish the sins of this nation, per- mitted thee to become master of it, (after having shed a great deal of blood,) I consecrated thee, and put the crown upon thy head with blessings ; but now because thou hast deserved it, I pro- nounce a curse on thee, instead of a blessing; since thou art become the persecutor of God's church, and of his ministers, and hast broken the promises and oaths which thou madest to me before St. Peter's altar.' Terrified at this dis- course, the king fell upon his knees, it is said, and humbly begged the prelate to tell him, by what crime he had deserved so severe a sentence. While the noblemen present, enraged against the archbishop, cried out, that he deserved death, or at least banishment, for having offered such an insult to his sovereign ; and pressed him with threatenings, to raise the king from the ground. But the prelate, unmoved, answered calmly, ' Good men, let him lie there; he is not at Aldred's, but at St. Peter's feet; and must feel

St. Peter's power, since he has dared to injure his vice-gerent.' He now vouchsafed to take the king by the hand, and to tell him the ground of his complaint. The king, in reply, pleaded igno- rance of the whole matter ; but it was not with- out much entreaty, aided by promises and pre- sents, that the archiepiscopal wrath was appeased. The Danes having invaded the north of England, in the year 1068, under the conduct of Harold and Canute, the sons of Swane ; Aldred is said (o have died of the afflictions it caused him, on the llth of September, in that year.

ALDRICH, (Dr. Henry,) an eminent English divine, born at London in 1647, was educated at Westminster school, under the famous Dr. Busby, and admitted of Christ-church college, Oxford. He had a great share in the con- troversy with the papists, in the reign of James II. ; and bishop Burnet ranks him among those who had examined all the points in dispute, with a solidity of judgment, clearness of argument, and depth of learning, far beyond any who had preceded him. He rendered himself so con- spicuous, that at the revolution, when Massey, the popish dean of Christ-church fled, his deanry was conferred on him. In this station he be- liaved in an exemplary manner, and that fabric owes to him much of its beauty. He published a System of Logic, with some other pieces ; and ihe revising Clarendon's History of the Re- bellion is said to have been entrusted to him and bishop Spratt. Dr. Aldrich was also rector of Wem in Shropshire, and prolocutor of the con- vocation in 1702. He died at Christ-church, on the 14th of December 1710. Dr. Aldrich had considerable taste as a musician, and com- posed many services, and about twenty anthems for the church ; he also produced some compo- sitions of a lighter kind. Two catches of his are still esteemed; viz. the bonny Christ-church bells, and a smoking catch, to be sung by four. His ovm love of smoking it seems was excessive. He is of some note as a Latin poet. In

the Musae Anglicanae, we find two elegant copies of his verses, one on the accession of king William III. and the other on the death of the duke of Gloucester. Sir John Hawkins has preserved a humorous translation by him of the well-known English ballad, a soldier and a sailor, &c. ; and an epigram, entitled Causae Bibendi.

' Si bene quid memini, causse sunt quinque bibendi ;

Hospitis adventus, presens sitis, atque futura,

Aut vini bonitas, aut quaelibet altera causa.' ' If on thy theme I rightly think, ' There are five reasons why men drink : Good wine, a friend, because I'm dry, Or lost I shall be by and bye ; Or any other reason why.'

ALDROVANDA, in botany, a genus of the pentandria order, belonging to the pentagynia class of plants ; of which there is but one species : CAL. divided into five parts; the petals five; and the capsule having five valves, with ten seeds. It is a native of Italy, and the Indies ; and has no English name.

ALDROVANDUS, (Ulysses,) professor of philosophy and physic at Bologna, the place of his nativity. He was a most curious enquirer into natural history and travelled into the most

distant countries on purpose to inform himself of their productions. Minerals, metals, plants, and animals, were alike the objects of his inde- fatigable researches; but he applied himself chiefly to birds, and was at great expense to have figures of them drawn from the life. Aubert le Mire says, that he gave a painter a yearly salary of 200 crowns, for thirty years and up- wards; and employed, at his own expense, Lorenzo Bennini and Cornelius Swintus, as well as the famous engraver Christopher Coriolanus. These expenses ruined his fortune, and at length reduced him to the utmost necessity ; so that he died blind, it is said, in an

hospital at Bologna, at a great age, in 1605. Bayle observes, that antiquity does not furnish us with an instance of a design so extensive and laborious as that of Aldrovandus, with regard to natural history ; that Pliny has treated of more kinds of subjects, but only touches lightly on any thing; whereas Aldrovandus has collected all he could meet with. The compilation, upon his plan, consists of seventeen volumes in folio, several of which were printed after his death. He himself pub- lished his History of Birds, in three folio volumes, in 1599 ; and seven books of insects, which make another volume of the same size.

ALDRUDE, countess of Bertinoro, in Ro- magna, in the twelfth century. She was cele- brated for her magnanimity. In conjunction with William degli Adelardi of Ferrara, she compelled the Venetians and Imperialists to raise the siege of Ancona. The citizens made a brave resistance, but being driven to extreme exigency for want of provisions,' they applied to William degli Adelardi and the countess of Bertinoro. who assembled troops, and marched to their relief. Aldrude, by her presence and exhortations, in- spired the troops with courage ; and on their arrival, the besiegers fled in confusion. On her return she encountered several parties of the enemy, and came off victorious in every action. William, having disbanded his troops, went to Constantinople, where he was received by the emperor with great honour.

ALDSTON-MOOR, a market town and parish of Cumberland, in the ward of Leath, 302 miles from London, and eleven from Hexham. The town is beautifully situated on- the side of the hill, at the bottom of which runs the river Tyne, over which is a fine stone bridge. The neighbourhood abounds with lead mines, and is one of the most romantic parts of the border towards Northumberland. The church is a curacy. Market on Saturday.

ALDUABIS, or ALDUASDUBIS, in ancient geography, a river of Celtic Gaul, which, rising from Mount Jura, separated the Sequani from the Helvetii, and running

through the county of Bur gundy, or Franche Cotnte, environed almost on every side the city of Besancon ; and falls into the Scare. It was also called Dubis : now le Doux.

ALDULPH, from eald, old, and ulph, help, Sax. an archbishop of Litchfield, in the end of the eighth century.

ALDUS, (Manutius,) a learned printer of the fifteenth century, to whom the world is in- debted for numerous accurate and elegant im-

pressions of the classics. He was born at Bas- saro, and by his indefatigable and judicious pur- suit of his profession, became the restorer of the Greek and Latin languages to Europe : he invented what is called, after his country, the Italic letter, tnd published an excellent Greek Grammar, "besides abundant notes and commentaries on the principal ancient authors. He died at Venice in 1516. See MARUTIUS.

ALDWINKLE, ALL SAINTS, a small town of Northamptonshire, in the hundred of Iluxloe, eighty miles from London, and the birth-place of the poet Dryden.

ALDWINKLE, ST. PETER, a town of Nor- thamptonshire, in the Huxloe hundred, seventy- two miles from London, where the antiquary Fuller was born.

ALE.

ALE. Eale, from aelaw, to kindle and en- flame. A liquor made by infusing malt and hops in hot water, and then fermenting the liquor. Wcl coude he knowe a draught of London ale.

Chaucer. The Prologue, v. i. p. 16. For as siue

kcepeth ale, Right so can Cheste kepe a tale, All that he wote, he woll disclose, And speke er any man oppose.

Gower, Con. A. book iii.

You must be seeing christenings. Do you look for ale and cakes here, you rude rascals ?

Shakspeare's Henry VIII.

The fertility of the soil in grain, and its being not proper for vines, put the Egyptians upon drinking ale, of which they were the inventors. Arbuth.

Where village statesmen talk'd with looks profound, And news much older than their ale went round.

Goldsmith's Deserted Village.

ALE, ol, Swedish : both, perhaps, being de- rived from the A. S. verb, as above, aelaw, to inflame, that well known fermented liquor, which in this country is obtained by fermentation from the malt of barley, a due mixture of hops, &c.

Countries to which nature has denied the richer juice of the grape, as a natural production, have in all ages cultivated some kind of substitute ??f this description. Hence from Egypt is said originally to have been derived barley-wine, and Herodotus attributes the first discovery of the art of brewing it to Isis, the wife of Osiris. Pelusium, situated on one of the mouths of the Nile, was particularly celebrated for its manu- facture of malt liquors, of which there were two kinds, answerable very remarkably to our own popular liquors of ale and porter ; the one called carmi, being sweet and glutinous, the other, named zythum, seems to have been analogous to modern beer. Dioscorides, the friend of Mark Antony and Galen, who flourished in the reign of Antonius Pius, were both well acquainted with ale : and from the testimony of Tacitus, it appears that the Germans were capable of pre- paring a liquor similar to

wine, (quandam vini speciem), from barley, by fermentation. Julian, Strabo, and Polybius, show, that the same art was known to the Spaniards, the Gauls, the in- habitants of the British Islands, and the north of Europe. Our Anglo-Saxon ancestors placed one of their chief future felicities, in quaffing no- ble draughts of fermented malt liquors in the hall of Odin. But all the ancient malt liquors seem to have been made entirely of barley, or some other farinaceous grain, and therefore were not

generally calculated for long keeping, as this quality depends considerably, though not en- tirely, on the bitter extract of hops, or other vegetables, with which the liquor is mingled.

A beverage of this kind is well known to En- lish law, and is to be traced in every record of ancient customs and festivities from the earliest periods. Lands were held on a rental in the ninth century, which included two tuns full of clear ale ††† a hundred loaves ††† ten mittan of Welch ale, &c. A cumb full of a third sort of ale, called lithes, or mild ale, is mentioned in Dugdale's Monasticon, as reserved in a grant of Oflfa ; and a Saxon youth in jEfric's Colloquies, when asked what he drank, expresses a choice, not yet obsolete ††† ' Ale if I have it, and water if I have it not.' (M.S. Tab. 3, in the Cotton Library.) Ale is mentioned by Buchan as drank in Scotland at a very early period, and called vinum ex frugibus corruptis. For modern laws respecting it, see the close of this article, ALE- HOUSES, EXCISE, &c.

The brewing of ale and beer of all kinds, is con- ducted by the same general process : the difference between them arising solely, in the first in- stance, from the different colour of the malt employed.

Good ale is commonly expected to be a light amber colour, brisk, and sweetish, or at least, not bitter to the taste ; beer, in which we may include porter, is dark-coloured, much less brisk, and having a

bitter taste, of a very peculiar na- ture. This last peculiarity, in fact, seems to render porter at once more agreeable to the palate, and more nutritive to persons who take strong exercise : it also renders it capable of being longer and better kept. Under the arti- ticle BREWING, we shall enter more at large into the commercial and scientific relations of this subject ; and the history of the astonishing increase of brewing-concerns in this country, especially in London : our present object is to treat it more familiarly; and, while exhibiting the real principles of the process, to assist their appli- cation to private and small concerns, rather than to those of the public and opulent brewers.

Ale is a wine of grain, distinguished, how- ever, by containing a larger portion of mucilage and saccharine matter, and by the absence of su- per- tartrate of potash, a salt found in all wines expressed from the grape. As distinct from por- ter, ale contains also its farinaceous matter and saccharine mucilage in a more undecom- posed state, which gives that clammy consis-

tency to the one, which we do not find in the other: and hence strong new ale becomes muddy by a mixture of alcohol which effects no percep- tible change in porter.

As produced by a common process, all malt liquors contain a common chemical alcohol, or spirit. Professor Brande (Phil. Trans. 1811. p. 345.) found in the best Burton ale, 8.88 per cent of alcohol ; in good home-brewed ale, 8.30 ; in three samples of Burton ale, 6.25 ; in Edinburgh ale, 6.70 ; in six samples of London ale, 5.82 ; in three of Scotch, 5.75 ; in Dorches- ter ale, 5.50. The best brown-stout, or London porter, yielded only 6.80, according to this cele- brated chemist.

A fermented liquor of the ale kind is com- monly

made in America from Indian corn. In the interior of Africa, according to Mungo Park, from the seed of the holcus spicatus, (which yielded beer, says this traveller, equal to the best and strongest of our malt liquors), we have seen wheat and oat malts, and they have been occasionally tried in considerable breweries ; in some countries in the north of Europe, a mix- ture of rye and barley is said to be used. But the grain which is unquestionably best adapted for malting and brewing purposes, is barley; (hordeum vulgare) and its Scottish variety big, or bear, (hordeum hexasticton) its germination be- ing more easily effected, and its farinaceous matter more abundant and more readily convertible into saccharine than that of any other seed. The only ingredients of all good malt liquor, then, are malted corn, water, and hops. For MALTING, see that article.

We suppose a brewer, whether for public or domestic purposes, to possess himself of good malt and hops. Of the former, there are three different kinds in general use, namely, pale, brown, and amber, names derived from the colour, which depend on the mode of drying the malt. Pale malt differs little in colour from barley, it being dried by a very gentle heat, just so far as to put a stop to the vegetation of the grain.

Amber-coloured malt is, in all its properties, intermediate between pale and brown, and is so rendered by being dried with a greater heat. Brown malt differs from both in having been ex- posed to a still greater temperature ; so that the outside of the flower is in a measure charred. Pale, and amber-coloured malt, not only affect the colour of the liquor brewed ; but, in conse- quence of the chemical operations of the heat, applied on the principles that are developed in the grain, during the process of malting, ma- terially alter the quality of the beer, especially with regard to the properties of becoming fit for drinking, and growing fine. The quality of malt differs according as it is more or less soaked, drained, germinated, dried, or baked, and the quality of the barley from which it

is obtained. High dried malt contains a less quantity of mat- ter capable of producing a vinous fluid, than the. same quantity of pale malt. Hence the great breweries, even for porter, prefer the pale malt of Hertfordshire, and use a patent burnt malt in small quantities for colouring. If colour be wanted in domestic brewing, it may be more economi- cally given by burnt sugar.

Hops", it is well known, are the seed, or flower- pods of the humulus lupulus, or hop-plant, which is cultivated in considerable quantities in the south of England, especially in Kent and Hamp- shire. They are collected when ripe, and dried on a kiln ; then packed up in bags, and sold to the public. The peculiar bitter taste of hops, and a weak aromatic odour, possessing sedative qualities to a considerable extent, are their recom- mendations for brewing. A pillow, filled with hops, has often been found to induce sleep, wlien every thing else has failed. If they are distilled with alcohol, in a retort, there remains behind a solid green-coloured oil, of a sharp taste, and scarcely bitter, but putting one in mind of the peculiar flavour of good ale. This oil is the part of the hops which gives them their charac- teristic smell, and beer its distinguishing flavour. It is apt to be dissipated by long boiling. It does not appear, according to the opinion of some brewers, that the intoxicating qualities of ale are to be ascribed to the oil of the hop. The bitter prin- ciple of hops is easily extracted by water, and in no part of nature does it exist in greater perfection. ' No re-agent,' says Dr. Thompson, ' is capable of throwing it down excepting acetate of lead.' This taste, in all its peculiarities, is communicated to the wort of beer and ale, and the stronger the liquor, the more, of course, it will bear of this valuable addition. In brewing the best mild Edinburgh ale with sixty bushels of malt, yielding 11 J bar- rels of wort (measured when boiled completely) 40 Ibs. of hops have been used; with 47J bushels, yielding 10.83 barrels of wort, 36 Ibs. of hops; with 60 bushels of malt from big.??? 14.7 barrels of wort, 40 Ibs. of

hops. A common rule is to employ a pound of hops with every bushel of malt.

Let our brewer be now further provided with either a mait-mill, (the best of which is that in which the malt is bruised between iron rollers), or ground malt, and consider the whole of that valuable domestic and public art to be comprised under an attentive observation of this five-fold process, viz. : 1. Mashing. 2. Boiling. 3. Cool- ing. 4. Fermenting. 5. Cleansing.

I. OF MASHING. ••• He grinds his malt, say fifty bushels, and uses a copper boiler, whose solid contents amount to 382 ale gallons, being rather more than 107,521 cubic inches or, 62i cubic feet. This boiler must be placed over brick work upon a furnace, and there must be conveniences for filling it with water and for letting the water off, when sufficiently heated, into the mash-tun.

He must be provided also with a mash-tun, or wooden vessel composed of staves properly fixed by means of iron hoops, and generally placed in the middle of the brew-house. It usually has a false bottom full of holes at some little height above the true bottom, and to be capable of mashing fifty bushels of malt, must be at least one-third larger than the bulk of the malt, or capable of containing seventy-five bushels.

Into the boiler is to be put a quantity of water equal, at least, in bulk to that of the malt, and heated up to 190••, or 180••, according to the judgment of the brewer and the quality ot the malt. But the best brewers employ the lower temperature. This water is then to be let into

the mash-tun, and the malt, previously ground, to be let down into it immediately after. All the clots

are now carefully broken, and mixed with the water by narrow wooden shovels, or, when the capacity of the mash-tun is great, by machinery. Great care must be taken to break all the clots, because the whole of the malt within them would otherwise escape the action of the water, and be lost to the brewer. When the water and malt are sufficiently mixed, the mash-tun is covered and left in this state about three hours. But the time varies according to circum-stances. To what degree the temperature of the water is lowered when thus mixed with the malt, it is difficult to ascertain,' from the impossibility of inserting a thermometer into the centre of the mash-tun. But fifty-one bushels of water at the temperature of 192□□, mixed with 47□□ bushels of malt, have afterwards given the temperature at the surface of the mash 140□□. When the wort began to run off, two hours and a half after, its temperature was 156□□ ; and at that time the sur- face of the mash was at 136□□. -Thus, perhaps, tne whole mash lost four degrees as well as the surface, and the mean between the bottom and top, will give for the mean heat of the whole after the mashing, 150□□ : so that the water has lost thirty-two degrees of heat, while the malt (its temperature before mixture was 48□□) gained 102□□; which makes the specific heat of the malt, 0.69, rather above, probably, than under the truth. The mash having continued for about three hours, longer or shorter according to cir-cumstances, a stop-cock, placed below the false bottom in the mash-tun, is opened, and the wort allowed to run out into a vessel prepared to re-ceive it, known by the name of the underbeck. At the same time the cover is taken off the mash- tun, and quantities of water, of the temperature of 180□□, are occasionally sprinkled over it from the boiler, which had been again filled with water to be heated, as soon as the water for mashing was drawn off. No specific directions can be given respect- ing the quantity of hot-water added in this man- ner by sprinkling, because that must depend upon the views of the brewer. If he wishes to have ale of great strength, he will of course add less water; if the ale is to be weak he will add more. The best way is

to determine the strength of the liquor as it flows into the underbeck by means of a saccharometer, or by taking its specific gravity. When the specific gravity (at sixty degrees) sinks to 1.04 or 1.05, or when it contains only 36►► or 46? Ibs. per barrel of solid matter in solution, it would be useless or in- jurious to draw any more off for making strong ale. But an additional portion may still be drawn off and converted into small beer.

No general rule can be laid down for the specific gravity or strength of the wort, when it begins to flow from the mash. It will depend upon the goodness of the malt, and upon the quantity of mashing water employed, when compared with the quantity of malt. The fol- lowing gravities have been taken at this period of the process: 1.084, 1.0305, 1.0815, 1.0835, 1.091, 1.094 ; or containing respectively 78►►, 74, 75$, 78, 85, and 87| Ibs. per barrel. When it first flows from the mash-tun, the wort is a trans-

parent liquid of a fine amber colour, a peculiar smell, and a rich, luscious, sweet taste. If it is cloudy, it is a proof that the water used for mashing was of too high a temperature. We have seen the wort run cloudy from the mash- tun, when the temperature of the water had been as high as 200►►, or 191►►, but never whei it was no higher than 180►►. This affords an additional reason with the brewers for keeping the temperature of the. mashing-water low. But we have doubts about the accuracy of the reason ; and it must be acknowledged, that some obscurity hangs upon this part of the process of brewing. For worts will sometimes continue opaque during the whole process of boiling, cooling, and fermenting, and require ultimately to be clarified, or fined, as the brewers term it, by means of isinglass. The substance which renders ale in this case turbid, seemed to be a variety of starch, or some particular form of that substance ; for it has been completely pre- cipitated by infusion of nutgalls, and the pre- cipitate redissolved by the application of a mo- derate heat. A quantity 6f wort like that of which we have been treating, takes from

six to eight hours in flowing from the mash-tun. As it flows on its colour diminishes to a light yellow, the smell is less pleasing, and the taste not so sweet. The wort which first comes off, evaporated to dryness, leaves a yellow-coloured residuum, of a sweet taste, which dissolves readily in water, absorbs water from the atmosphere, and becomes clammy, and similar in appearance to treacle. Its specific gravity is 1.552. There can be no doubt that this residue contains a good deal of sugar, to which it nearly approximates in gravity, and is precisely the same in its properties with the sugar into which starch is converted by a very dilute acid. But it is mixed likewise with a considerable portion of starch. The chemical constitution of wort is in fact threefold : 1 . Sac- charine matter, which is perhaps the base or essential constituent. 2. Starch, which is in- stantly detected by dropping in a solution of iodine, that produces a blue precipitate. 3. Mucilage, which is precipitated in flakes when the wort is poured into alcohol. This abounds more in the last drawn off wort than the first ; and readily passes into the acetous fermenta- tion ; consequently the flavour of our malt- liquor is improved, if we take only for the best ale, the wort that runs off first.

II. We now arrive at another important step in our process, BOILIKG the wort. Being raised by means of pumps from the underbeck into the copper boiler, the wort is boiled for several hours, till it has acquired a strength of which the brewer judges according to his views, and by scientific instruments. Thus from fifty bushels of malt 13.444 barrels of wort are to be obtained, of the specific gravity 1.068, or of 63.125 Ibs. of saccharine matter per barrel: and it may be boiled down to 11.083 barrels of the specific gravity 1.1015, or of 94J Ibs. per barrel. From 60 bushels of rrialt, 23.465 barrels of wort, of the strength of 64.37 Ibs. per barrel, or of the specific gravity 1 .0683 : and it may be boiled down to 19.736 barrels of the strength of 82.7 Ibs. per barrel, or of the specific gravity

1.089. From sixty bushels of big malt 23.8193 barrels of the specific gravity 1.0648, or of 58.75 Ibs. per barrel of saccharine matter ; boil- ing down to 19.736 barrels of the specific gravity 1.078, or of 72 ►► Ibs. per barrel of saccharine matter.

The hops are added while the wort is in the Boiler, according to the strength of the wort, ►►ad the time it is designed to keep the beer, which is sometimes called hopping the wort. The cop coagulates the excess of mucilage and glu- tinous matter which is extracted from the malt in mashing, for if this were suffered to remain in solution in the beer, it would never become fine, but would always be cloudy : the boiling hardens this substance in the same manner as the white of an egg acquires solidity by boil- ing. This coagulation is called the breaking or curdling of the wort. The boiling must therefore always continue till the breaking ap- pears. Another object is attained by the hops in the operation of boiling, namely, the concentra- tion of the wort. Its bulk becoming reduced by evaporation, which merely carries off a por- tion of water, the original quantity of ferment- able matter remains concentrated in a smaller space.

III. The wort having been boiled down to the requisite strength, it is let down into the COOLERS, or shallow floors of wood, surrounded with a wooden ledge, and water-tight, placed in the most airy and exposed situation in the brewery ; to hold the whole of the wort at a depth not ex- ceeding three or four inches. The object is to cool down the wort, as rapidly as possible, to the temperature of the atmosphere ; because, if it were allowed to remain long hot, it would run the risk of becoming sour, and spoil the whole process. The superiority of many breweries consists in the construction of the coolers, or, upon Iheir being as well adapted as

possible for speedily reducing the temperature of the wort. They must be kept perfectly clean, and a free current of air should pass over them.

Rather more than one-fourth of the whole wort is dissipated by evaporation during the cooling. When the wort is let out of the boiler into the cooler, the hops still remain, and, as they are soaked with wort, a considerable loss would be sustained if they were thrown away. Thus 45 Ibs. of hops have retained half a barrel of wort after they were drained so completely tiiat no more wort would drop out. In another case, 35 Ibs. of hops, retained in the same way, 0.3666 of a barrel, which is rather more than one-third of a barrel. To recover this wort it is proper to subject the hops to pressure. By some brewers this circumstance is too much neglected.

Where the brewery is small, and, from the weather or otherwise, the apartment in which the fermenting vessels are placed is cold, it is proper not to reduce the temperature of the wort lower than 56►►. When the apartment in which fer- mentation is carried on is warm, 51►► or 52►► is a very good temperature. If a brewer is obliged to make ale in warm summer weather, it is ma- terial to reduce the temperature as low as pos- sible.

IV. The wort being now sufficiently cooled

down by exposure, it is let down into the FER MENTINC TUNS, or, as the brewers call them, the gyle-tuns, in order to be fermented ; by whic process, it is converted from the luscious sweet, tasted liquor called wort, to the brisk intoxicating liquor which constitutes ale. The gyle-tuns are cylindrical wooden vessels, varying in size, ac- cording to the extent of the brewery. In London breweries and distilleries, they are of prodigious size ; but in private houses they often do not ex- ceed the size of a wine hogshead, or even of a beer barrel. The fermentation is perhaps con- ducted with the greatest economy in larger ves- sels ; but good ale may be made in comparatively small quantities. Good porter has scarcely ever been made, except by*

those who manufacture it upon a large scale. The fermenting tuns are never filled by the wort ; because a considerable increase in bulk takes place during the fermen- tation, in consequence of which the liquor would run over, unless allowance were made for it: and the fermentation of ale or beer is never car- ried to any great length. The object is, to re- tain the flavour and good qualities of the ale or beer, not to develope the greatest quantity of spirit, which can hardly be done without allow- ing the wort to run into acidity.

The strength of the fermentation depends upon the quantity of yeast nsed. This is a frothy sub - stance, of a brownish-grey colour, and bitte1 taste, formed on the surface of ale or wine while fermenting. If it be put into sacks, the moisture gradually drops out, and the yeast remains be- hind in a solid form, of the flavour and taste of cheese, but darker in its colour.

Mr. Westrumb is the only chemist who has subjected yeast to an analysis ; and this is so far back as the year 1796. He obtained from 15,360 parts of fresh beer,

Of Potash . . . , . . 13

Carbonic acid Acetic acid . Malic acid . Lime . . . Alcohol Extractive

. . . -. 15

.... 10

.... 45

.... 69

.... 240

.... 120

Mucilage .^ 240

Saccharine matter 315

Gluten 480

Water 13,595

Loss

15,142 218

Total 15,360

A gallon of yeast is generally allowed to about three barrels of wort : ' one gallon to every sixteen barrels of ale or porter,' says a London brewer. In about five or six hours after the yeast has been added, the fermentation begins. Its first appearance is a white line or border on the surface of the liquor, commencing at the sides of the tun, and gradually covering the sur- face of the liquor with a white scum.

Air bubbles separate from it, and a froth, of a yellowish-grey colour, collects slowly. In a few days, especially if the weather be warm, it col- lects in considerable quantities. At the same time, the temperature of the wort increases, and.

it yields a very considerable quantity of carbonic acid gas. The increase of temperature which takes place during the fermentation of ale may be stated, at an average, to amount to twelve or fifteen degrees. Sometimes it amounts to twenty, and sometimes does not exceed five degrees; though in such cases, there is generally some deficiency in the skill of the brewer.

Fermentation, indeed, is the great secret of the brewer's art, and the true theory of it, has occu- pied the attention of chemists ever since the ma- nufacture of ale began to be attended to by men of science. Lavoisier was the first person who attempted to offer any thing like a theory of this intricate process. He endeavoured to determine the

composition of common sugar, a substance which may be fermented just as well as the soluble part of malt, and which yields similar products, and ascertained the constituents of alcohol, the substance formed by fermentation. On the whole, he formed a plausible theory, but valuable chiefly as a first approximation, though there can be little doubt that it was erroneous in every particular. Since that time, several expreiments on the subject have been made by Thenard, Gay Lussac, and Berzelius, which have more accurately determined the constituents of sugar ; and Theodore de Saussure has made very elaborate, and, we believe, accurate, experiments on the composition of alcohol. The general theory, as resulting from experiments on common sugar, and on the saccharine matter of malt, may be thus stated.

A weak solution of sugar in water kept in a warm place will ferment of itself. The solution of sugar of grapes in water ferments still more speedily ; as also does sugar of starch ; and the saccharine matter of malt. In a general view of fermentation, therefore, we may leave out the small quantity of yeast ; because it is not abso- lutely necessary, but seems merely to render the effect more rapid, and thul to prevent the change of the liquid into acidity

In complete fermentation the sugar disappears altogether, and two new substances are found in its place, carbonic acid and alcohol. Accord- ing to Lavoisier's experiments, 100 parts of sugar yielded, when fermented,

Alcohol 57.70

Carbonic acid 35.34

The specific gravity of his alcohol could scarcely be less than 6.825 such alcohol con- tains ait least eleven per cent, of water ; for that quantity has been actually extracted from it. From Saussure's experiments, it is probable that the real quantity of water contained in alcohol of the specific

gravity 0.825, is 18.387 per cent, or almost a fifth. On this supposition, sugar, according to Lavoisier's experiments, yields

Alcohol 47.1

Carbonic acid 35.34

82.44

or per cent.

Alcohol 57.1

Carbonic acid 42.9

100.0

Thenard mixed sixty parts of yeast with 300 of sugar, and fermented the mixture at the tem- perature of fifty-nine degrees. He informs us that in four or five days all the saccharine mat- ter had disappeared The quantity of carbonic acid evolved amounted by weight to 94.6 parts. It was perfectly pure, being completely absorbed by water. The fermented liquid being distilled, yielded 171.5 parts of alcohol, of the specific gravity 0.822. When the residue of the distilla- tion was evaporated, twelve parts of a nauseous acid substance remained, and forty parts of the yeast still continued unaltered in appearance, though Thenard assures us that it had lost the whole of its azote. Thus the products of the fermentations were

Alcohol of 0.822 171.5

Carbonic acid 94.6

Nauseous residue 12.0

Residual yeast 40.0

Loss

318.1 41.9

Total 360.0

But the nauseous residue and residual yeast, making up nearly the quantity of yeast employed, we need only consider the products of decom- posed sugar, supposing the loss to be propor- tionally .divided between the carbonic acid and alcohol. Now alcohol, of the specific gravity 0.822, contains one-tenth of its weight of water, which can be separated from it ; and if we sup- pose with Saussure, that absolute alcohol con- tains 8.3 per cent, of water, then the products of sugar decomposed by fermentation, according to this philosopher's experiments, are

Alcohol 47.70

Carbonic acid . . 35.34

83.04

or, in 100 parts

Alcohol ....'.... 57.44 Carbonic acid . . 42.56

100.00

A result approaching so near to that of Lavoi- sier, as decidedly to confirm the general truth o both calculations. Dr. Thompson, of Edin- burgh, from comparing the foregoing experi- ments, with additional ones of his own, on the saccharine of malt, concludes that the alcohol, or pure spirit, yielded therefrom, when fermentation is properly conducted, is almost exactly one half.

Languid fermentation is to be accelerated by rousing, as it is called, or beating in the yeast, which is formed on the top of the liquor, by rais- ing the temperature, &c. If the fermentation is suddenly checked, the beer becomes what is called grey, or never fine. Worts made with water too highly heated, are particularly liable to this malady.

At the completion of the fermentation, which may be taken at about forty or forty-five hours in general cases, (but it depends greatly on the tem- perature of the atmosphere and the strength of the liquor,)

the saccharometer swims deeper on the wort, from the decomposition of the saccharine matter and the production of alcohol being carried

mentation is suffered to proceed until the head follows, and will be seen to be perfectly inno-

of yeast that floats on the surface of the liquor cuous: The pickings of book, or leaf-isinglass are

assumes an uniform and compact appearance, thrown into a wooden tub, and when the tub is

and does not float any higher. In the brewing about one-third full, it is filled up with good

of ale, it is seldom suffered to advance to quite -
**~'~ " *-□□□ * ' '*

such a degree. In ale, of which the specific

gravity amounts to 17.25, or eighteen pounds

stale small beer, which soon dissolves the isin-glass. It is then rubbed through a sieve, and all the hard lumps picked out, the mass is re-

per barrel, it is stopped by most brewers when duced to a proper consistence for use by the

the gravity is reduced from seven to nine pounds addition of a further quantity of good sharp

per barrel. If the beer is meant to be full beer. When used for fining, it must be well

bodied or hard, the fermentation must be con-stirred, and in the course of a few hours the

ducted slowly, that is so far as consistent with liquor may be drawn off clear and bright □□□' one

the richness of the wort ; if it is intended to be pint is the usual proportion to a barrel of beer

brisk, the fermentation is stopped the earlier.

If now the wort were allowed to remain in the gyle-tun, the yeast would again mix with it; and the consequence would first be, a disagree-

but sometimes two and even three, are neces- sary.

The age at which ale is drank, will depend ilpon a private person's stock ; the size of his

able bitter taste, known among brewers by the cellar, &c. but more frequently upon his family

□□□□□. □□k., f .□□□□□:□□□□□□ u habits, and the pecuniary means he chooses to

devote to this beverage. Good mellow ale, soft and fine, may be had at a year old ; and it is, perhaps, never better than from one year old to two. Some persons never reckon ale to be old,

name of yeast bitter; the fermentation would proceed, though in a languid manner, and the ale would soon run into acidity. These accidents are prevented by drawing off the ale into small casks. This is called

V. CLEANSING. The casks are to be filled unless it drinks a little hard, or with some, ap-

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quite full, and left with their bungs open. The drawing off of the ale from the gyle-tun lowers its temperature, and, of course, checks the fer-mentation. Sometimes, therefore, the cleansing

preaches to sharpness, or acidity ; But this is a false taste : old ale ia this sense, it has been well said, is old ale spoiled.

After all, a hogshead or pipe of ale, that has .

is practised in summer, when the elevation of been properly brewed and carefully managed, temperature in the wort is at its height. The will not always be fine when tapped. Suppose

❖❖❖ ' ' it be a year old, or what is more common, sup- pose it to be brewed in October (the best month in which to brew ^jood ale for keeping), and tapped at the Christmas twelve-month following; duced brewers to distinguish it by the name of if when tapped it be not fine, it may be corked

ale continuing to ferment after it is put into casks, the yeast, as it comes to the surface, flows out at the bung, and thus separates altogether from the beer. It is this separation that has in-

cleansing. In these casks, then, the yeast divides itself into two portions. The greatest part rises up with the carbonic acid evolved, and flows out at the bung-hole ; while another portion subsides to the bottom, and constitutes what is called the dregs of the beer. It is essential to the cleansing, that the casks should be always full, otherwise the yeast will not run off, and the beer will not become transparent. This object is accomplished in small breweries by a man con- stantly going round, and filling up the casks as they work down ; but in large breweries, by me-

up again, and stand another twelve-month, when it will probably be found not only fine, but greatly improved in flavour ; but if it be wanted, it may be fined as follows : draw off a gallon or two, if the cask be a pipe, and take a quarter of a pound of isinglass, and some fresh hops, and scald them in a clean copper pan, dissolving the isinglass therewith ; pour the quantity into a dry pail, and when cool put it into the barrel, and stir the whole together well with a long stick, or such an one as you have head-way to introduce ; bung down the cask a few hours

chanical contrivances, according to their scale of afterwards, and in a fortnight the ale will be-

business. When the fermentation has subsided, the b►►er will in general be found transparent : is bunged up in the cask, and preserved for sale or use.

The filling up of the casks, if the beer works briskly, should be attended to every two or three hours at least, for the first fourteen or fifteen

come fine. If the ale drink thin, and incline to be hard, let a pound or two, or more if required, of sugar-candy, bruised, be put into the pan with the hops, &c.

The method called marrying ale, we have often seen tried upon a private person's stock with success. It seems to increase its strength,

hours, after which the fermentation will subside, but especially its mellowness and the fulness of

in a great degree, and therefore less attention its flavour, and consists in tapping a pipe or

becomes requisite ; but, until the fermentation hogshead of ale in the middle, and when it is

appears wholly to have ceased, yeast should be drawn as low as the tap, to fill up the cask with

added according to the strength of the beer, another brewing of wort. The particulars to be

the state of the weather, &c. This will generally observed are : to begin upon a sound stock, such

be in about forty or sixty hours. Well-fermented as is approved as to colour and flavour ; for if

beer, especially that designed for private use, there be any approach to acidity it will not do.

generally becomes fine of itself; but the various The next point is to tun the newly-fermented

changes of place, &c. that attend beer brewed wort

upon the old stock, when it has fermented

for the public, have induced the general use about twelve hours. The third particular, of

of isinglass as a fining or assistance to the de- great importance, seems to be, not to marry

positing of the portions of flocculent glutinous your ale in winter, but in autumn (October), for

if your cellar be not a vault, the old stock is too cliill, and the fermentation may suddenly stop : if this should happen, as in cellars that are not vaults, the heat may increase considerably in spring, the fermentation may be renewed, and the ale may spoil, or mischief happen to the cask by bursting. Ale that is brewed in the usual way will sometimes ferment in summer, and throw up the bungs of the barrels ; especi- ally if the fermentation have been hastily con- ducted, and little or no cleansing have taken place in the barrels after tunning (which is likely to be the case when brewing is performed in frosty weather) ; where this happens, the danger is that acidity will follow, and therefore the beer should be speedily used. When ale is married, the fermentation will bring away all the old hops, and it is not to be overlooked that the cork will rise that had been driven in with the tap. It is, therefore, requisite to work it out at the bung- hole, skimming away the hops, &c. till they and the cork are discharged ; then fill up the cask, and take out the top cork for cleansing, as be- fore. It may be filled up several times with fresh wort, as in other cases, until the fermenta- tion stops, and then the cork and bung put in (the latter very lightly) and left so until it is ne- necessary to hop it down. The writer has refilled a cask in this manner five years successively, and had the ale always superior, anil always alike in colour and flavour ; in continuing this practice for a long

period it is necessary to remove the casks for fear of accidents. The excellence of this ale is, that you can never guess at its age ; it drinks always soft and mild, without any resemblance to ale recently brewed, and is equally remote from hardness or acidity.

Although we have pursued a train of reason- ing and observations in this article which will apply to brewing on any scale, we cannot close it without particularly urging on the small farmer and cottager, even the labouring cottager, to en- deavour to furnish himself with the beverage of his ancestors, home-brewed beer. 'In former times,' says Mr. Cobbett, in the most useful of his works we have seen, ' to set about to show to Englishmen that it was good for them to brew beer in their own houses, would have been as im- pertinent as gravely to insist that they ought to endeavour not to lose their breatty ; for, in those times, only forty years ago, to have a house and not to brew was a rare thing indeed. Mr. Ell- man, an old man and a large farmer, in Sussex, has recently given in evidence before a committee of the House of Commons this fact, that forty years ago, there was not a labourer in his parish that did not brew his own beer; and that now, there is not one that does it, except by chance the malt be given him. The cause of this change has been the lowering of the wages of labour, com- pared with the present price of provisions, by the means of the paper money, the enormous tax upon the barley when made into malt, and the increased tax upon hops. These have quite changed the customs of the English people as to their drink. They still drink beer, but, in general, it is of the brewing of common brewers, and in public houses, of which the common brewers have become the owners, and have thus,

by tne aid of paper-money, obtained a monopoly in the supplying of the great body of the peoplj with one of those things, which to the hard-work ing man, is almost a necessary of life.*

'At present prices of malt and hops,' continues this

powerful writer, ‘ home brewed beer is the cheapest drink that a family can use, except milk, and that can be applied only in certain cases. The drink, which has come to supply the place of beer has, in general, been tea. It is notorious, that tea has no useful strength in it ; that it contains nothing nutritious ; that it, besides being good for nothing, has badness in it, because it is well known to produce want of sleep in many cases, and, in all cases, to shake and weaken the nerves. It is, in fact, a weaker kind of laudanum, which enlivens for the mo- ment and deadens afterwards. At any rate it communicates no strength to the body ; it does not, in any degree, assist in affording what la- bour demands. It is, then, of no use. And, now. as to its cost, compared with that of beer, I shall make my comparison applicable to a year, or three hundred and sixty five days. I shall suppose the tea to be only five shillings the pound; the sugar only seven-pence; the milk, only two-pence a quart. The prices are at the very lowest. I shall suppose a tea-pot to cos a shilling, six cups and saucers two shillings ana six-pence, and six pewter spoons eighteen-pence How to estimate the firing I hardly know ; but certainly there must, in the course of the year, be two hundred fires made that would not be made, were it not for tea drinking. Then comes the great article of all, the time employed in this tea-making affair. It is impossible to make a fire, boil water, make the tea, drink it, wash up the things, sweep up the fire place, and put all to rights again in a less space of time, upon an average, than two hours. However, let us allow one hour ; and here we have a woman occupied no less than three hundred and sixty-five hours in the year, or, thirty whole days, at twelve hours in the day ; that is to say, one month out of the twelve in the year, besides the waste of the man’s time in hanging about waiting for the tea ! Needs there any thing more to make us cease to wonder at seeing labourers’ children with dirty linen and holes in the heels of their stockings ? Observe, too, that the time thus spent, is one half of it the best time of the day. It is the top of the morning, which, in every calling of life, contains*

an hour worth two or three hours of die afternoon. By the time that the clattering tea tackle is out of the way, the morning is spoiled ; its prime is gone ; and any work that is to be done afterward lags heavily along. If the mother has to go out to work, the tea affair must all first be over. She comes into the field, in summer time, when the sun has gone a third part of his course. She has the heat of the day to encounter, instead of having her work done, and being ready to return home at an early hour. Yet early she must go, too ; for, there is the fire again to be made, the clattering tea tackle again to come forward ; and even in the longest day she must have candle light, which never ought to be seen in a cottage (except in cases of ill- ness) from March to September,

ALE.

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Now, then, let us take the bare cost of the use of tea. I suppose a pound of tea to last twenty days, which is not nearly half an ounce every morning and evening. I allow for each mess half a pint of milk. And I allow three pounds of the red dirty sugar to each pound of tea. The account of expenditure would then stand very high ; but to these must be added the amount of _he tea tackle, one set of which, will, upon an average, be demolished every year. To these out-goings must be added the cost of beer at the public house ; for some the man will have after all, and the woman, too, unless they be upon the point of actual starvation. Two pots a week is as little as will serve in this way; and here is a lead loss of ninepence a week, seeing that two pots of beer, full as strong, and a great deal better, can be brewed at home for three pence. The account of the year's tea drinking will then stand thus :

18lbs. of Tea . . . . ►►4 10 0 54lbs. of Sugar .... 1 11 6 365 Pints of Milk ... 1106

Tea tackle 050

200 Fires 0 16 0

30 Day’s works .... 0 16 0 Loss by going to public-house 1 18 0

11 7 2

I have here estimated every thing at its very lowest. The entertainment which I have here provided is as poor, as mean, as miserable, as any thing short of starvation can set forth ; and yet the wretched thing amounts to a good third part of a good and able labourer’s wages. For this money, he and his family may drink good and wholesome beer ; and, in a short time, out of the mere savings from this waste, may drink it out of silver cups and tankards. In a labourer’s family, wholesome beer, that has a little life in it, is all that is wanted in general. Little children, that do not work, should not have beer. Broth, porridge, or something in that way^ is the thing for them. However, I shall suppose, in order to make my comparison as little complicated as possible, that he brews nothing but beer as strong as the generality of beer to be had at the public house, and divested of the poisonous drugs which that beer but too often contains ; and I shall further suppose that he uses in his family two quarts of this beer every day from the first of October to the last day of March in- clusive ; three quarts a day during the months of April and May ; four quarts a day during the months of June and September ; and five quarts a day during the months of July and August ; and if this be not enough it must be a family of drunkards. Here are 1097 quarts, or 274 gal- lons. Now, a bushel of malt will make eighteen gallons of better beer than that which is sold at the public houses. And this is precisely a gal- lon for the price of a quarf. People should bear in mind, that the beer bought at the public house is loaded with a beer tax, with the tax on the public house keeper, in the shape of license, with all the taxes and expenses of the brewer, v/i\h all the taxes, rent, and other expenses of tiie publican, and with all the profits of both brewer and publican ; so that when a man sw

lows a pot of beer at the public house, he has all these expenses to help to defray, besides the mere tax on the malt and on the hops.

Well, then, to brew this ample supply of good beer for a labourer's family ; these 274 gallons require fifteen bushels of malt, and, (for let us do the thing well) fifteen pounds of hops. The malt is now eight shillings a bushel, and very good hops may be bought for less than a shilling a pound. The grains and yeast will amply pay for the labour and fuel employed in the brewing; seeing that there will be pigs to eat the grains, and bread to be baked with the yeast. The ac- count will then stand thus :

15 bushels of Malt .... ►►6 0 0 15 pounds of Hops .... 0 15 0 Wear of Utensils 0 10 0

►►750

Here, then, is four pounds, two shillings and two pence, saved every year. The utensils for brewing are, a brass kettle, a mashing tub, coolers, (for which washing tubs may serve), a half hogshead, with one end taken out for a tun tub, about four nine gallon casks, and a couple of eighteen gallon casks. This is an ample supply of utensils, each of which will last, with proper care, a good long life time or two, and the whole of which, even if purchased new from the shop, will only exceed by a few shillings, if they exceed at all, the amount of the saving arising the very first year, from quitting the troublesome and pernicious practice of drinking tea. The saving of each succeeding year would, if you choose it, purchase a silver mug to hold half a pint at least. However, the saving would naturally be applied to purposes more conducive to the well being and happiness of a family.

' Jt is not, however, the mere saving to which I look,' adds Mr. Cobbet, ' this is, indeed, a matter of great importance, whether we look at the amount itself, or at the ultimate consequences of a judicious application of it ; for, four pounds makes a great hole in a man's wages for the year ; and

when we consider all the advantages that would arise to a family of children from having these four pounds, now so miserably wasted, laid out upon their backs in the shape of decent dress, it is impossible to look at this waste with- out feelings of sorrow, not wholly unmixed with those of a harsher description. But, I look upon the thing in a still more serious light. I view the tea drinking as a destroyer of health, an en- feebler of the frame, an engenderer of effeminacy and laziness, a debaucher of youth, and a maker of misery for old age. In the fifteen bushels of malt, there are 570 pounds weight of sweet; that is to say of nutritious matter, unmixed with any thing injurious to health. In the 730 tea messes of the year, there are fifty-four pounds of sweet in the sugar, and about thirty pounds of matter equal to sugar in the milk. Here are eighty-four pounds, instead of 570, and even the good effect of these eighty-four pounds is more than over balanced by the corrosive, gnawing, and poisonous powers, of the tea.

It is impossible for any one to deny the truth of this statement. Put it to the test with a lean HOG : give him the fifteen bushels of malt, and

he will repay you in ten score of bacon or thereabouts. But give him the 730 tea messes, or rather begin to give them to him, and give him nothing else, and he is dead with hunger, and bequeaths you his skeleton at the end of about seven days. It is impossible to doubt in such a case.' COBBETT'S Cottage Economy, con- taining Information relative to the brewing of beer, making of bread, keeping of cows, pigs, bees, ewes, goats, poultry, and rabbits ; and relative to other matters deemed useful in the conducting of the affairs of a labourer's family.'' We have cited the whole of his title, for this little work is really described by it, and cannot be too widely circulated among the classes for whom it is de- signed. Of course it must

be read with due al- lowance for Mr. Cobbett's occasionally wild and ever-varying political doctrines.

The following method for preserving ale from turning sour in long voyages, was first published by Dr. Stubbs in his Phil. Trans. No. 27. To every runlet of five gallons, after being placed in a cask on ship-board not to be stirred any more, put in two new-laid eggs whole, and let them He in it. In a fortnight, or a little more, the egg shells will be entirely dis- solved, and the eggs become like wind-eggs en- closed only in a thin skin ; after this the white is preyed on, but the yolks are not touched or corrupted ; and by these means the ale has been so well preserved, that it was found better in Jamaica than at Deal.

To give the reader an opportunity of com- paring the quantity of ale and porter drank in London, we subjoin

A table exhibiting the quantity of strong ale and porter brewed by the seven principal houses in London, in the year ending the 5th of July, 1815.

PORTER.

Barrels.

ALE.

Barrels.

337,621 282,104 272,162 219,333 261,018 223,100 105,081

Wyatt

27,094 22,146 20,444 14,491 10,134 7,985

5,433n

Meux, Reid, and Co Trueman, Ilanbury, and Co. . . F Calvert and Co ....

Charrington and Co

Coding and Co

Stretton and Co

Whitbread, and Co

Hale and Co

Ball and Co

Giving the great difference of 1592, malt liquor in and about the metropo

1700,419

592 barrel. Us.

i in the consumption of these two descr

107,727

ptions of

THE FOLLOWING ARE THE LAST YEARS RETURNS.*

A table exhibiting the quantity of strong ale and porter brewed by the six principal houses in London, in the year ending the 5th of July, 1825.

PORTER.

Barrels.

ALE.

Barrels.

Barclay and Perkins

357,446 223,766 203,842 190,252 146,743 108,948

Coding and Co . .

28,292 20,193 16,795 15,422 12,245 8,006

Trueman, Ilanbury, and Co. . . Whitbread and Co. .

**

ALES, in cnurch history and ancient customs, were variously denominated. From the pre- dominance of this old English beverage in the feasts of the people, the entertainments given passed by the names of the bridal-ale, leet-ale, lamb-ale, Whitsun-ale, &c. denoting respectively a wedding feast, an entertainment at the court- leet of a manor, at lamb-shearing, &c.

CHURCH-ALES were feasts established by cus- tom or authority in the neighbourhood of a church, for the double purpose of regaling the people, and gathering from them contributions to its repair, the honour of the patron-saint, &c. They are described by Pierce, bishop of Bath and Wells, in his answer to the enquiries of archbishop Laud, as celebrated when the

people go from after-noon prayers on Sundays to their lawful sports and pastimes in the church-yard, or in the neighbourhood, or in some public-house where they drink and make merry. By the bene- volence of the people at these pastimes, many poor parishes are said to have cast their bells and beautified their churches, and raised stock for the poor. See Warton's English Poetry, vol. iii. &c.

CLERK-ALES, or lesser church-ales, were so called because they were for the better mainte- nance of the parish-clerk ; ' and there is great reason for them,' says his lordship, ' for in poor country parishes, where the wages of the clerk are but small, the people thinking it unfit that the clerk should duly attend at church, and not gain by his office, send him in provision, and then come on Sundays and feast with him, by which means he sells more ale, and tastes more of the liberality of tho people,- than, their quarterly payment would amount to in many years ; and since these have been put down, many ministers have complained to me,' he adds, ' that they are afraid they shall have no parish-clerks!'

A BID-ALE was held on behalf of poor men, decayed in substance, and set up again by the liberal benevolence and contribution of friends at a Sunday's feast. The people were fond of these recreations, and the above-mentioned pre- late recommended them, as bringing the peo- ple more willingly to church, tending to civilize them, to compose differences among them, &c. But the justices of the peace were of a different opinion, and signed a petition to the king, in which they declare that these revels had not only introduced a great profanation of the Lord's day, but riotous tippling, contempt of authority, quarrels, murders, &c., and were very prejudicial to the peace, plenty, and good government of the country, and therefore they pray that they might be suppressed. Two judges in the western cir- cuit, in 1653, made an order for suppressing them ; but archbishop Laud complained to king Charles I. of their invading the episcopal juris- diction, and they were summoned before the

council, reprimanded, and enjoined to revoke this order at the next assizes.

ALE-CONNER, an officer of the city of London, appointed by common-hall, whose duty it is to taste and judge of the quality of the ale sold within the jurisdiction of the city, and to regulate the ale-measures of the public-houses. There are Icur of these officers chosen every Midsummer day.

ALE AND BEER DUTIES make a considerable

branch of the revenue in England. They were imposed in 1643, at the first establishment of the excise, again by Car. II. and have been con- tinued by several subsequent acts of parliament. By 43 Geo. III. c. 69, for every barrel of beer or ale brewed for sale, above sixteen shillings a barrel, exclusive of the duty hereby imposed, and not being two- penny ale, nor table-beer, the brewer shall pay ten-shillings; and for every barrel of table-beer, or beer or ale of sixteen shillings the barrel, or under (exclusive of the duty), two-shillings; and for every barrel of two- penny ale, (described in the seventh article of the Union with Scotland) four shillings and two- pence. The allowance for waste shall be three gallons out of thirty-six gallons, which shall be reckoned a barrel of beer or ale made by com- mon brewers. These duties the private brewer for his own consumption, entirely escapes.

ALE-HOUSES are licensed yearly by the jus- tices of peace of a county, or supreme ma- gistrates of a city, for the sale of ale or beer. The occupiers of such houses are bound in re- cognizances that no riot or disorderly conduct shall take place in them; and their licences, upon misconduct, or the forfeiture of such re- cognizances, may be taken away at the pleasure of the magistrates granting them. By 26 Geo. II. c. 41, justices on granting licences, are to take recognizances in ––10, with sureties in the like amount, for the maintaining good order. Certificates of good character are to be given before any new licence is granted ; and the pe- nalty for selling ale, &c. without licence is, by this and subsequent acts, fixed at forty shillings for the first offence ; for the second, four pounds ; and the third, six pounds. For suffering tippling in such houses, they are to be fined ten shillings. At wakes or fairs, however, ale may still be sold indiscriminately, and without a licence. No persons, otherwise than as above mentioned, are to sell wine to be drank in their own houses without an ale licence as well as a wine licence. But persons who sell ale or beer in casks not less than five gallons, and in bottles (reputed quarts) not less than two dozen, and not to be drank in their own houses, are exempted from the penalties of retailing without a licence. By 48 Geo. III. c. 143, the stamp duties on ale licences are repealed, and excise duties, to be paid annually, granted on them in lieu thereof.

ALE MEASURES are to be regulated by the standard quart and pint preserved in his ma- jesty's exchequer; sub-commissioners and col- lectors of excise are to provide full and substantial ale quarts and pints in every town of their division, and the mayors or chief magistrates to mark the measures from the standard, or forfeit five pounds by stat. 1 Jac. I. c. 9. Ale-house keepers selling in short measures are exposed to a penalty of not less than ten shillings, and not more than forty shillings.

ALE-SILVER, a rent, or tribute, yearly paid to the lord mayor of London, by those who sell ale within the city.

ALE-TASTER, is an officer appointed and sworn, in certain court-leets, to take heed that there be a due size, and goodness of bread, ale, and beev, sold within the jurisdiction of the leet.

ALE MEDICATED, in pharmacy, ale wherein medicinal herbs have been infused, or added during the fermentation.

ALEA, in antiquity, denotes in general all kinds of games of chance ; but, in a more re- stricted sense, was used for a particular game played with dice and tables, not unlike our back- gammon, and wherein black and white stones were used instead of wooden men. The Greeks called these games pettia and chivia, and the Romans, tabula, tessera, duodecim scripta, &c. Some writers on Roman Antiquity observe, that, in games of hazard,, two sorts of dice were used ; the tessera, or cube, having its six sides marked from one to six; and the talus of an oblong form, of which the four long sides only were marked ; one side having one point on it, the opposite six points, and the other two sides four and three. In play- ing, three tesserae, or four tali were used, which, after being shaken in the dice-box, called fritillus, were, to guard the better against fraud, thrown through another box, the pyrgus or turricula, in the form of a tower,placed on the middle of the board. The fritillus and the pyrgus have been considered, however, as the same box The highest cast of the tesserae was three sixes, and of the tali, when all four came up different. It was named Venus, or Venereus Jactus. The Cornelian, Publician, and Titian laws were passed to prohibit all games of

chance (which in them seem to be comprehended under the general title of alea), except in the month of De- cember, when the Saturnalia were celebrated. But it is supposed, by some authors, that they were designed only to restrain the cupidity of professed gamesters, who were held in infa- my ; or these laws do not seem to have been generally regarded ; and the Roman emperors countenanced dice-playing by their own ex- ample. All gaming was expressly forbidden in the army. Cicero de Sencct. cap. 16 ; de Divinat. 1. i. c. 13; Suet. Vit. Aug. cap. 17; Dion. Cass. 1. lix. c. 22 ; Mart. lib. xiv. ep. 14; and lib. v. ep. 85 ; Hor. I- iii. od. 24 ; Juv. Sat. xiv. v. 4.

ALEA, in mythology, an epithet of Minerva. Also a town of Arcadia, on the east border, named after its founder Aleus, whose inhabitants were always members of the councils of Argolis. Both Bacchus and Minerva, surnamed ALEA, see above, had temples here ; where the women, it is said, were scourged at the public festivals by command of the Delphic oracle. Augustus conveyed the ivory statue of the goddess from this place to Rome.

ALEANDER, (Jerome,) cardinal and arch- bishop of Brindisi, was born in 1480 : and dis- tinguished at the beginning of the reformation by his opposition to Luther. Being sent into Germany as the pope's nuncio in 1.519, he de- claimed for three hours against the reformed doctrine before the diet of Worms, but could not prevent Luther from being heard. He published several works, and died at Rome in 1541.

ALEANDER, (Jerome,) a learned divine of the seventeenth century, of the same family with the preceding, was born in Priuli. He was em- ployed at Rome as secretary under cardinal Ban-. dini, and discharged this office with great honour

for almost twenty years. He afterwards, at the particular wish of Urban VIII. became secretary to cardinal F. Barberim, whom he accompanied to France in the character of legate a latere, and in whose

service he died in 1631. .He was one of the first members of the academy of Humorists, see ACADEMY; and wrote, 1. Psalmi Poeni- tentiales, Versibus Elegiacis expressi, 4to. 1593. ††† 2. Caii, Veteris Jurisconsulti, Institutio- num Fragmenta cum Commentario, 4to. 1600. Venet. ††† 3. Explicatio Antiquae Tabulae Mar- moreae, &c. 4to. Venet. 1627. ††† 4. Carmina Varia. ††† 5. Le Lagrime di Penitenza, ad Imi- tazione di sette Salmi Penitenziali, 8vo. Rom. 1623. ††† 6. Difesa deil'Adone, Poema del Cava- lier Marino, pt. i. 12mo. Venet. 1629; pt. ii. 1630; besides other smaller works mentioned by Mazzuchelli.

ALEATORIUM, in Roman antiquity, was the place where they played at alea. The alea- torium was near the sphaeristerium ; that the sportsmen, when tired with the pila, or more robust exercises, might refresh themselves in the aleatprium.

ALEC, in ichthyology, a name given by Gaza, in his commentaries on Aristotle, to the fish called mainis, and by Ovid menerela. It is of the spams kind.

ALECTO, in mythology, from a priv. and Xjj-yw, to rest, one of the three furies ; the daughter of Acheron and Night, or, as others have it, of Pluto and Proserpine. Virgil, lEn. lib. vii. v. 32, introduces Alecto exciting the flames of war, at the instigation of the implacable Juno, between the Latins and the Trojans. He describes her as having her hair and her dark wings covered with wreathing snakes, whose poison she infuses into her victims, till she infects them with un- governable rage. So malignant was this divinity, that she was the abhorrence of Pluto, her father, and of her sister furies. From Cocytus, a river of hell, she is called Cocyfcia Virgo. Claud, in Ruf. 1.1. v. 25. speaks of her as atrox, black, Invidias quondam stimulis incanduit atrex Alecto, plac'das late cum cerneret urbes.

ALECTORlA, from aXttcrwp, a cock, a stone said to be formed in the gall-bladders of old cocks, to which

the ancients ascribed many fabulous virtues. It was called alectorius lapis and alectorolithos. Modern naturalists hold the alectorius lapis to be swallowed, and not gene- rated in the stomach or gizzard of cocks and capons.

ALECTORTCARDITES, from oXticrwp, an.l KapSia, the heart, in natural history, a name given by Plot, to a figured stone resembling a pullet's heart, with the fat near the basis of it, and the coronary vessels descending from it. ††† ALECTOROLITHOS. See ALECTORIA.

ALECTOROMANTIA. See PENDICULARIS.

ALECTOROMANTIA. in antiquity, a kind of divination performed by means of a cock ; and thus effected : a circle being described on the ground, and divided into twenty-four equal portions, in each of these spaces was written one of the letters of the alphabet, and on each of the letters was laid a grain of wheat ; after which a cock being turned loose in the circle, particular notice was taken of the giains which he picked

up, because the letters under them, being formed into a word, made the answer desired. It was thus, according to Zonaras, that Libanius and Jamblicus sought who should succeed the emperor Valens ; and the cock, eating the grains answering to the spaces 0EOA, several whose names began with these letters, as Theodotus, Theodistes, Theodolus, &c. were put to death; which did not hinder, but promote, the succes- sion of TheodosiuS. This story, however, has been called in question, from the silence of Mar- cellinus, Socrates, and other historians of the time. Another species of augury was taken from the crowing of the cock, wherein regard was had to the time of day, whether before noon or after; to which

some added the consideration of the sign the sun was in, and the motion of the moon.

ALECTRA, in botany, a genus of the didy- namia angio-spermia class and order ; its cha- racters are : CAL. a one-leafed, two-lipped, peri- anthium, upper lip two-cleft, lower three-cleft; the clefts ovate, obtuse, shorter than the tube : COR. one-petalled, tubular, the tube gradually widened ; the border expanding, five-parted ; the parts broad, lanceolate, obtuse : STAM. four filaments, inserted into the tube, filiform, bearded, of the length of the tube, two of them a little shorter ; antherae twin : FIST, a germ ovate ; style filiform, of the length of the filaments ; stigma incurved, a little thicker than the style,, and of the same length, striated on both sides : PERI- CARP, a capsule, ovate, obtuse, twin, smooth, two-celled, and two^valved; the seeds solitary and ovate. There is one species, viz. A. Capen- sis, a native of the Cape of Good Hope, growing in grassy places near rivers, and flowering in November and December, and growing black in drying. Martyn.

ALECTKUONURUS. See FESTUCA.

ALECTRYOMANCY, from oX►►rwp, a cock, and fiaxn, a fight, cock-fighting.

ALECTRYON, a youth whom Mars, in an amour with Venus, stationed at the door to watch the approach of the sun. He however fell asleep, and Apollo came and discovered the lovers, who were exposed in each other's arms before all the gods. The incensed Mars changed Alectryon into a cock, which, mindful of his neglect, was said ever after to announce early the approach of the sun.

A-LEE, in the sea-language, a term only used when the wind, crossing or flanking the line of a ship's course, presses upon the masts and sails so as to make her incline to one side, which is called the lee-side : hence, when the helm is moved over to this side, it is said to be a-lee, or hard a-lee.

ALEGAMBE, (Philip,) a celebrated Jesuit, born at Brussels, 1592, distinguished himself by publishing, 1 . Bibliotheca Scriptorum Societatis Jesu, folio, Antw. 1643. 2. Vita P. Joannis Cardin Lusitani ex Societate Jesu, 12mo. Rom, 1649. 3. Heroes et Victims: Charitatis Socie- tatis Jesu, quarto, Rom. 1658. 4. Mortes Illustres et Gesta eorum de Societate Jesu, qui in Odium Fidei ab Haereticis vel aliis occisi sunt, fol. Rom. 1657. He died at Rome in 1652.

ALE'GER, or) Ale, aigre, Fr. sour. Sour ALE'GAR. $' ale, a kind of acid liquor

made with ale or malt. Power has given a de- scription of the eels in aleger.

*ALE'GER. Allegro, Ital. Gay, cheerful.****
Obsolete.

Coffee, the root and leaf-beetle, and leaf-tobacco, of which the Turks are great takers, do all condense the spirits, and make them strong and aleger.

Bacon's Nat. Hist.

ALEGGE', - A. S. Alecjan, Lecjan, to*

ALEGE'ANCE, >lay, to lay down *** *whence, or*

ALEGE'MENT. j from a sirailiar origin, the old Fr. alleger, aleger.

The modern word is allay. To lay, to put down, to ease, sooth, or alleviate, po he was ycrouned kyng at Westmynstre y wys, He byhet God and pat folc an byheste, pat was pys To alegge alle luper lawes, pat yholde were bynore, And betere mak pan were supp he was ybore.

R. Gloucester, p. 422. It would have brought my life againe For certes euenly, I dare well saine The sight only and the sauour A legged much of my langour.

Chaucer. The Remount of the Rose His feeling wordes

her feeble sence much pleased, And softly sunck into her molten hart ; Hart, that is inly hurt, is greatly eased With hope of thing that may allegge his smart.

Spenser's Faerie Queene, b.'iii. c. ii,

ALEGRE, a town of France, in Auvergne, intendancy of Riom, with the title of a marqui- sate ; now in the department of the Upper Loire, arrondissement of Le Puy. The number of houses is about 200, that of inhabitants 900. Eighteen leagues south-south-east of Clermont Ferrand.

ALEGRETTE, a fortified town of Portugal, in the province of Alentejo, on the Spanish frontier, seven miles and a half south-east of Portalegre, on the river Caja, a branch of the Guadiana.

*ALEIPHA, from a\►►0G>, I anoint, in the ma- teria medica of the ancients, a word used for all fatty bodies whatever ; as the oils of vegetables, the fat of animals, any sort of medicated oil im- pregnated with aromatic vegetables, &c. Its ge- neral meaning was such compositions as were in- tended to anoint the body, or fats impregnated with the lighter parts of plants, and not clogged with an addition of powders, wax, or any thing jvhich might have given them the consistence of ointments. The ancient physicians were very fond of these compositions, which they applied both to a diseased part, and to the whole body, after they had made the patient use the warm bath to relax and open the p*ores.*

ALEIUS CAMPUS, in ancient geography, a plain in Cilicia, on this side the river Pyramus, near the mountain Chimera, famous for Bellero- phon's wandering and perishing there, after being thrown off Pegasus ; from which it cbtaine the appellation.*

ALEMANNI, or ALEMANS, in ancient his. tory, a body of Suevi, who appeared on the banks of the Mein, and in the neighbourhood o the Roman provinces, in quest either of food or plunder, early in the third

century of the

Christian era. Asinius Quadratus, an original Roman historian, cited by Agathias, lib. i. c. 5, informs us, that their hasty army, which co- alesced into a great and permanent nation, was composed of many different tribes, and on this account assumed the name of Allemanni, or All-men, i. e. men of all nations, and perhaps to denote thoir common bravery. They were chiefly Suevi, however, who were joined by several other German nations and some Gauls. . Aure- lius Victor, St. Jerome, and other writers, place them between the Danube, the Upper Rhine, and the Mein, in the present duchy of Wirtem- berg. They were numerous and warlike, and were chiefly celebrated for fighting with great dexterity and bravery on horseback. Their ab- horrence of slavery was so great, that those taken prisoners chose rather to die than to endure captivity ; and when they were actually sold, they not only destroyed themselves, but some of them dispatched also their children. The go- vernment of their tribes was monarchical ; and the objects of their worship were the same with those of the other German nations. Caracalla, in consequence of a victory which he gained over them in the year 214, was distinguished by the surname of Alemannicus. In the thirteenth year of Alexander Severus, the Alemanni, accom- panied with other German nations, passed the Rhine, took possession of the forts on the banks of that river, and ravaged Gaul. The emperor returning from Persia, hastened to the banks of the Rhine, and as the Alemanni had re-passed the river upon the news of his approach, he ordered a bridge to be thrown over, proposing to attack them in their own country : but being assassinated at this juncture by his soldiery, this business devolved upon his successor. Accord- ingly Maximinus pursued them with great slaughter, took many of them prisoners, and great spoil of corn and cattle ; in commemoration of which, the .senate conferred upon him and his son

the title of Germanicus. In the year 256, the fourth of Valerian's reign, the Alemanni made an unexpected irruption into Gaul, and laid waste' the country ; whilst those who dwelt on the banks of the Danube, penetrated the Rhaetian Alps into the plains of Lombardy, advanced as far as Ravenna, and displayed their victorious banners almost in sight of Rome. A large army being suddenly convened, the Alemanni were intimidated, and retired into Germany. On another occasion 300,000 of this warlike people are said to have been vanquished in a battle near Milan, by Gallienus, at the head of only 10,000 Romans ; after which Gallienus seems to have formed an alliance with the Alemanni, and to have protected Italy from their fury, by marrying Pipa, the daughter of a king of the Marcomanni. A party of them was defeated by Claudius in 268, and compelled to save themselves by a precipitate flight into their own country. As soon, however, as they heard of the death of Claudius, they prepared for again invading Italy ; 40,000 horse appeared in the tield, and the number of the infantry doubled that of the ca valry. Their first objects were a few cities on the Rhaetian frontier ; but as they proceeded they

enlarged their views, and traced a line of da vastation from the Danube to the Po.

Aurelian, A.D. 270, having collected an active body of troops, marched with silence and ce- lerity along the skirts of the Hercynian forest ; and when the Alemanni, laden with the spoils of Italy, arrived at the Danube, the Roman army, which lay concealed, intercepted their return. The dismayed barbarians, enclosed by the Ro- man legions, and reduced to a condition abject and distressed, now sued for peace. Their am- bassadors were received by Aurelian with every appendage of dignity ; and when they were or- dered to rise and allowed to speak, they attempted to extenuate their conduct, and de- manded a large subsidy, as the price of the alliance which they offered to the Romans. The emperor's reply was stem and imperious. He treated their offer with contempt, and their de- mand with indignation ; and dismissed them with the choice only of submitting to his

uncon- ditional mercy, or awaiting the utmost severity of his resentment. Aurelian, being suddenly called away into Pannonia, committed the destruction of the Alemanui, either by sword or by famine, to his lieutenants. But the barbarians once more made their escape, and returned towards the mountains of Italy. As soon as the emperor heard of this, and that they were ravag- ing the territory of Milan, he hastened to march to its relief. The Alemanni, in the mean while, had spread themselves from the Alps to the Apen- nines ; and, by a desultory war, the force of the enemy remained unsubdued. Three considerable battles are mentioned, in which the principal force of both armies was obstinately engaged. In the first battle, fought near Placentia, the Romans received so severe a blow, that the im- mediate dissolution of the empire was appre- hended. But the firmness of the emperor restored in some degree the honour of his arms. The second battle was fought near Fano, in Umbria ; and here the Alemanni were totally and irre- trievably defeated. The flying remnant of their host was exterminated in a third and last battle near Pavia; and Italy was rescued from the inroads of these barbarians. During the alarm which preceded the decisive battle of Fano, the Sibylline books were consulted, A.D. 271 ; and the ceremonies which were enjoined were punc- tiliously observed. ' These superstitious arts,' says Mr. Gibbon, ' however peurile in them- selves, were subservient to the success of the war ; and if, in the decisive battle of Fano, the Alemanni fancied they saw an army of spectres combating on the side of Aurelian, he received a real and effectual aid from this imaginary rein forcement.'

They are still to be traced as the assailants of Rome, for nearly two centuries onward. The emperor Probus, A.D. 277, delivered Gaul from the invasion of these tribes, and recovered seventy flourishing cities, which had been oppressed by them. He passed the Rhine, compelled nine of the most considerable princes of Germany to re- pair to his camp, to fall prostrate at his feet, and to accept such conditions as he thought proper to dictate : and, in order to

raise a bulwark

against their future inroads, he constructed a stone wall of considerable height, and strength- ened it by towers at convenient distances. It stretched from the neighbourhood of Newstadt and Ratisbon, on the Danube, across hills, valleys, rivers, and morasses, as far as Wimpsen, on the Necker, and at length terminated on the banks of the Rhine, after a winding course of near 200 miles. Within a few years after the death of Probus, this wall was overthrown by the Ale- manni. In 287, they made another incursion into Gaul, but were defeated by Maximian, who, in the following year, laid their country waste wherever he came, with fire and sword. Dio- clesian also, at the same time, entered Germany through Rhaetia ; and is said to have extended the confines of the empire to the source of the Danube. In the year 291 the Burgundians seized on part of the country belonging to the Alemanni ; and in 301 Constantius Chlorus, the father of Constantine, gained a signal victory over them, on which occasion the Alemanni are said to have lost 60,000 men. Notwithstanding this loss, they did not long remain quiet ; for in 310, they crossed the Rhine and ravaged the neighbouring provinces : but the emperor himself marching against them, defeated them in a battle, and obliged them to quit their booty and repass the Rhine. Some say he was called Maximus on account of this victory. In the 18th year of Constantius's reign, the Alemanni again at- tempted to make an incursion into Italy; and having advanced as far as the lake of Constance, that prince marched against them, and put them to flight. In the course of the same year, another body breaking into Gaul, with the Franks and Saxons, took and plundered above 40 towns on the banks of the Rhine, among which was the city of Cologne, which they almost entirely ruined. They were at length driven out of Gaul by

Julian ; but assembling near Strasburg, A.D. 357 , a battle ensued ; and after victory had remain- ed for some time in suspense, the Alemanni were defeated, and driven completely out of Gaul. Julian now granted them a truce for ten months. When the truce expired, he passed the Rhine on a bridge of boats, entered their country, and compelled them to sue for peace. Upon his death they again ravaged Gaul ; defeated the Romans in a pitched battle, but were afterwards defeated by Jovinus in three battles, A. D. 366. In the close of the following year they again rally, and pass the Rhine ; but Valentinian gains a signal victory over them : invades their country ; and in 374 concludes a peace with their king Macrianus. In 387 they are again in arms, and waste the neighbouring provinces, but are de- feated with great slaughter by Gratian ; in 388 submit to Maximus, who usurped the empire in Gaul, and agree to pay him a yearly tribute.

In the reign of Honorius a colony of the Alemanni was allowed to settle in that part of the present Switzerland, which is separated by mount Jura from the Franche Comte, and by the lake of Geneva and the Rhine from the present Savoy and province of Vienne. In 477 Audoacrius, king of the Saxons, and Childeric,

king of the Franks, marched against those who had settled among the Alps, and put many of them to death. Upon the destruction of the western empire, the Alemanni subdued that part of Gaul which is now known by the name of Alsace, where they settled. \ These were joined by their countrymen in Germany, and those who dwelt between mount Jura and the lake of Geneva ; and in 496 entered Germania Secunda, and wasted the country ; but they were over- come by Clovis, king of the Salian Franks, and dispersed. Those who settled in Alsace, and near the lake of Geneva, acknowledged him for their king. Others took refuge in Rhietia and Noricum, where they were allowed by Theodo- ric, king of Italy, to reside. Many of them were transplanted by the same prince into Italy, and the rest were permitted to settle between the Alps and the Danube. From this time the

Alemanni had no king of their own ; but con- tinued, as they were dispersed in several countries, subject partly to the Ostrogoths, who were masters of Italy, and partly to the Franks, who had dominion in Gaul. When the Ostro- goths ceded their territories oul of Italy to the children of Clovis, the Alemanni, those excepted whom Theodoric had transplanted into that country, submitted to the Franks. Gibbon's History, &c. vol. i. p. 417, &c. Vol. ii. p. 21, &c. Un. Hist. vol. xvii. p. 288 ??? 299.

ALEMANNIA, or ALEMANIA, in ancient geography, a name given to Germany, which was not known before the time of the Antonines, and then applied only to part of it. The appel- lation is derived from the Alemanni.

ALEMBDAR, or ALEMDAR, an officer in the court of the grand seignior, who bears the green standard of Mahomet, when the sultan appears in public upon any solemn occasion.

ALEMBERT, (John le Rond d'), an eminent French philosopher, born at Paris in 1717. He derived the name of John le Rond, from that of the church, near which, after his birth, he was ex- posed as a foundling. His father, Destouches Canon, informed of this circumstance, and listen- ing to the voice of nature and duty, took measures for the proper education of his child, and for his future subsistence in a state of ease and indepen- dence. He received his first education among the Jansenists, where he gave early marks of capacity and genius. In the first year of his philosophical studies, he composed a Commen- tary on the Epistle to the Romans. The Jan- senists considered this production as an omen that portended to the party of Port Royal, a re- storation of some part of their ancient splendour ; and hoped to find, one day, in M. d'Alembert, a second Pascal. They now, therefore, engaged their rising pupil in theology and mathematics ; but soon perceived, that his enthusiastic attach- ment to science, was likely to disappoint the hopes they had formed with respect to his future destination. On his leaving college, he

found himself alone and unconnected in the world: and sought an asylum in the house of his nurse, the wife of a glazier, comforting himself with the hope, that his fortune, though not ample, would better the condition and subsistence of a family,

which was the only one he could consider as his own. Here he lived, during the space of 30 years, with the greatest simplicity, discovering the augmentation of his means only by increasing displays of his beneficence. His growing reputa- tion and celebrity, were entirely unknown to these honest people, and their plain and uncouth man- ners, were the daily subject of his good-natured pleasantry, and philosophical observation. His nurse perceived his ardent activity; and heard him mentioned as the writer of many books ; but never supposed him the great man he was, and beheld his conduct with regret and compas- sion. ‘ You will never,’ said she to him one day, ‘ be any thing but a philosopher ††† and what is a philosopher ? ††† A fool, who toils and plagues limself during his life, that people may talk of nim when he is no more.’ M. d’Alembert’s fortune not much exceeding the demands of ne- cessity, his friends advised him to think of a pro- fession that might enable him to augment it. He accordingly turned his views to the law, and took his degrees, but soon abandoned this for the study of medicine. His passion for mathema- tical studies, however, was always drawing him back to his former pursuits, and after many inef- fectual efforts to overcome it, he renounced all views of a lucrative profession, and gave him- self over entirely to the pursuit of science and to poverty. In 1741, he was admitted member of the Academy of Sciences; having attracted universal attention and admiration, by correcting the errors of a celebrated work, the Analyse de- montree of F. Beinau, which was deemed clas- sical in France, as a treatise on geometry. He, after this, set himself to examine, with great as- siduity, the motion of a body which

passes from one fluid into another more dense, in a direction not perpendicular to the surface separating the two fluids. Every one knows the phenomenon which happens in this case ; but M. d'Alembert was the first who explained it in a satisfactory and philosophical manner. Two years after his election to a place in the academy, he published his Treatise on Dynamics, and established the principle of the equality, at each instant, be- tween the changes that the motion of a body has undergone, and the powers which have been employed to produce them. So early as 1744, M. d'Alembert had applied this principle to the theory of the equilibrium, and the motion of fluids; and all the problems before solved by geometricians, became, in some measure, its co- rollaries. The discovery of this new principle, was followed by that of a new calculus, the first trials of which were published in a Discourse on the general theory of the Winds ; to which the prize medal was adjudged, by the academy of Berlin, in 1746 ; and which was a brilliant ad- dition to the fame of d'Alembert. This new calculus 04 partial differences, he applied to the problem of vibrating chords, whose solution, as well as the theory of the oscillations of the air and the propagation of sound, had been given but incompletely by the geometricians who pre- ceded him. In 1749, he applied his principle to the motion of any body of a given figure ; and solved the problem of the procession of the equinoxes; determined its quantity; and ex-

plained the nutation of the terrestrial axis disco- vered by Dr. Bradley. In 1752, he published a treatise on the Resistance of Fluids, to which he gave the modest title of an Essay ; but which contains a multitude of original ideas, and new observations. He also published, in the Memoirs of the Academy of Berlin, Researches concern- ing the integral calculus, which is indebted to him for the progress it has made in the present century.

While the studies of M. d'Alembert were con- fined to geometry, he was little known or cele- brated in his native country. His connections were limited to

a small society of select friends : and he had made no acquaintance with men in power. Satisfied with an income which fur- nished him with the necessaries of life, he did not aspire after opulence or honours ; nor had they been hitherto bestowed upon him, as it is easier to confer them on the forward, than to look out for the deserving. But his cheerful conver- sation, and a singular mixture of delicate wit with simplicity of manners, rendered him a plea- sant companion, and he was now much sought after in the fashionable circles. His reputation, at length, reached the throne. He received a pension from the French government of 1200 livres, which he owed to the friendship of Count d'Argenson. This accession to his pe- cuniary resources, is said, however, to have but little increased his happiness. His eulogist, the celebrated Condorcet, ascribes to envy, detrac- tion, and other ungenerous motives, all the op- position and censure that M. d'Alembert met with on account of the famous Encyclopedical Dictionary of Arts and Sciences. None can fairly refuse the tribute of applause to the emi- nent genius, judgment, and literary taste, dis- played by our author in his contributions to this great work. The preliminary discourse which he affixed to it, on the rise, progress, and con- nection of all the branches of human knowledge, is perhaps one of the most capital productions of which the philosophy of the present age can boast. Nor will it be disputed, that the master builders of this new and stupendous temple of science, for the worship of Nature, had also really in view the advancement of human know- ledge, and the improvement of the arts and sciences. This, no candid philosopher will call in question. But that in the inner court of this temple, there was a confederacy formed against all who looked higher than Nature, for the object of their veneration and confidence, is a fact too palpable, nay, too boldly avowed, to stand in need of any proof. Some time after, d'Alembert published his Philosophical, Historical, and Phi- lological Miscellanies ; and his memoirs of Chris- tina, queen of Sweden ; in which last work he proved that he was well acquainted with the natural rights of mankind,

and was bold enough to assert them. His Essay on the Intercourse of Men of Letters with Persons high in Rank and Office, wounded the former to the quick, as it exposed to the eyes of the public the ignominy of those servile chains, which they feared to shake off, or were proud to wear. This work was dedicated to the king of Prussia, who was at this time terminating a glorious campaign by

an honourable peace, in the three following

Latin verses :

- *H;EC ego de vends, dum ventorum ocyor alis Palantes agit Austriacos Fredericus, et orbi, Insignis lauro, ramum praetendit olivae.' Swifter than wind, while of the winds I write, The foes of conquering Frederic speed their flight ; While laurel o'er the hero's temple bends, To the tir'd world the olive branch he sends/*

M. d'Alembert also gave decided proofs of his classical taste, in his translations of some select pieces of Tacitus. About the same time he en- riched the Encyclopedia with a multitude of excellent mathematical articles, and composed his Researches on several important Points of the System of the World, in which he carried to a higher degree of perfection, the solution of the problem of the perturbation of the planets.

M. d' Alembert, in 1759, published his Ele- ments of Philosophy ; a work remarkable for its precision and perspicuity ; but containing many questionable tenets, in metaphysics and moral science. The resentment that was kindled, and the disputes that followed upon the publication of the article Geneva, inserted in the Encyclopedia, are well known. M. d'Alembert did not leave the field of controversy with triumph. His at- tacks upon the religious

orders and the priesthood, if in many respects just, were often indiscriminat- ing and violent. Voltaire was an auxiliary in the contest : but as, in the point of candour, he had no reputation to lose, and as he weakened the blows of his enemies, only by throwing both them and the spectators into laughter, the issue of the war gave him little uneasiness. It fell more heavily on d'Alembert ; and exposed him, even at home, to much contradiction and oppo- sition. It was on this occasion that the king of Prussia offered him an honourable asylum at Berlin, and the presidency of the academy ; and was not offended at his refusal, but cultivated an intimate friendship with him during the rest of his life. He had, some time before this, refused a proposal made by the empress of Russia to in- trust him with the education of the Grand Duke: ??? a proposal accompanied with all the flattering offers that could tempt a man ambitious of titles, or desirous of making a fortune ; but tranquillity and study, not ambition or avarice, were the ob- jects of our philosopher's affection. In 1765, he published his Dissertation on the Destruction of the Jesuits. This piece drew upon him a host of adversaries, who confirmed the credit of his work, by their manner of attacking it. Be- sides the .works already mentioned, he published Opuscules, 9 vols. ; in which he has solved a multitude of problems relative to astronomy, mathematics, and natural philosophy ; and Ele- ments of Music ; rendering at length, the system of Reaumeur intelligible ; but he did not think the mathematical theory of the sonorous body sufficient to account for the rules of that art. He was always fond of music ; which he felt to be connected with the most subtile researches of mechanics ; while, on the other hand, its power over the soul exhibited to him phenomena, perhaps still more inexplicable. In 1772, he was chosen secretary to the French academy, and soon after tbrmed the design of writing the lives of all the

deceased academicians from 1700 to 1 772 ; which he executed in the space of three years, compos- ing

seventy eulogies. M. d'Alembert died in 1783. There were many amiable lines of can- dour, modesty, disinterestedness, and beneficence, in his moral character; which are described, with diffusive detail, in his eulogium, by M. Condorcet.

Many young persons, who discovered talents for science and learning, found in him a patron and a guide. To worthy men, in adversity or under persecution, he was a firm and courageous friend : and to those who had shewn him kind- ness, he never ceased to be grateful. Two of his works were dedicated to ministers in disgrace, the Count d'Argenson, to whom he owed his pension, and the Marquis d'Argenson, who had given him many proofs of respect and esteem. When in early life, Mad. de Tencin, informed of his singular talents, came to him, and fondly caressing him, discovered to him the secret of his birth : ' What do you tell me '.' he cried out : ' Ah ! you are but a step-mother ; it is the glazier's wife who is my mother ;' and through life he re- tained for his nurse the affectionate sensibility of a grateful son.

Much of pernicious influence on the morals and politics of France, has been attributed to the writings of d'Alembert: and to him and his friends has been assigned the odium of bringing on the disasters of the Revolution. We are not indifferent to the dangerous spirit of infidelity that breathes throughout his works ; nor to the unphilosophical manner, so common in modern times, of insinuating sceptical principles in works of science. But that France needed a revolution, both in church and state, it is too late to deny ; and if she effected it without the moderation of our own happy change in 1688, the immediate actors in the scene are perhaps more justly blameable, than an individual writer, so remotely connected with it as our philosopher.

ALEMBICS, from the Arabic particle al, and a//3t?, Gr. an earthen vessel, were made of glass or of copper, and used for distillation. The bottom which contained the subject for distillation, was called, from its shape, the cucurbit; the upper part, which*

received and condensed the steam, was called the head, the beak being fitted into the neck of a receiver. Retorts, and the common worm still, are now more generally employed.

Dioscorides and Pliny mention the a/i/?i►►, (ambix) which is described by the latter of these writers, as a hemispherical iron cover, luted upon the earthen pots in which mercury was procured by the distillation of cinnabar : it is probable however, that the ambix was in the time of Pliny a mere plain still, without any beak or gutter, since he mentions the mercury being wiped off in small drops from the inside of the vessel, the necessity of which would be superseded by the invention of a beak. When the alchemists adopted the alembic, their object being to sepa- rate, as much as possible, the most volatile pro- ducts from those that are less so, they imagined that the greater distance which the vapour had to pass through, in its passage from the boiler to the condenser, the more perfectly would the spirit or quintessence be dephlegmated ; for this pur-

pose the body of the alembic was made of a globular form, terminating above in a long narrow neck, to the end of which was luted the capital ; sometimes for the purpose of more effectually keeping down the impure particle's, the neck was bent in a zig-zag or spiral direction. The characteristic difference between an alembic and a still seems to be in the construction of the head or capital, which in the alembic, is contrived not merely to collect, but to condense the vapour ; whereas, the corresponding part of a still serves merely to collect the vapour, which is transmitted in an elastic state through the beak, and condensed in the worm. In the figure

already referred to, the distance between the body and the capital is so great, that much of the heat must be given off from the vapour before it arrives in this part ; the mere refrigerating power, therefore, of the atmosphere is amply sufficient to condense the vapour into drops on the inner surface of the ca- pital, which, trickling down into the channel or gutter at the bottom, are delivered by the beak into any vessel placed to receive them. The length and narrowness, and convolution of the neckr were, however, found to condense so much of the vapour before it reached the capital, as to render all processes, in which it was employed, insufferably tedious ; besides requiring so high a heat as to alter and injure the products very considerably; the neck was therefore shortened and made wider, and as, in consequence of this, the vapour came into the capital more heated than before, it was necessary to substitute a more powerful refrigerating cause to the casual and varying action of the external air ; with this in- tention, the capital of the metallic alembics was inserted into a vessel of water, called a refrigera- tory, and thus the alembic, as far as concerned the number and general disposition of its parts, was completed.

The glass and earthen-ware alembics soon re- ceived all the perfection of form which their materials would allow : the body, instead of being a globe with a long neck, was altered into a cucurbit ; and the capital assumed a more co- nical shape, the two parts of the apparatus were aiso fitted closely into each other, by grinding with emery. The irregular expansion and con- traction of glass by heat, rendered the use of a refrigeratory impossible, so that when distilling briskly, it is necessary to cover the capital with cloth, soaked in cold water and frequently re- newed : thus requiring a constant attention, be- sides running the risk of cracking the cucurbit, by a drop of cold water falling upon it from the head. On this account the glass alembic is but little employed, although capable, when skilfully managed, of distilling a much larger

quantity in a given time, than a retort of equal capacity.

The metallic alembics being formed of more Jnanageable substances, and being appropriated to large processes, in which economy of time tod fuel was of great importance, invited and obtained a number of valuable improvements. The most considerable of these are due to M. Beaume". The French brandies are generally prepared in alembi:s, whereas all British spirits

are manufactured in stills ; the advantage of the alembic is that less fuel is required, and the spirit is but little exposed to the risk of becoming em- pyreumatic. Its disadvantage consists in being less expeditious, and in requiring greater accu- racy in the temperature of the refrigeratory ; if too cold, the vapour is in part condensed before it touches the inside of the capital, and falls back into the boiler ; if too hot, a portion of vapour, escapes into the air ; a greater proportion also of water is required for the condensation of a given quantity of vapour, than where a worm and still is made use of. Encycloped. Method. Art. Alem- bic.••• Beaume. Element de Pharmacie, $c.

ALEMETH, or ALMON, a city of Judea, in the tribe of Benjamin, situated near Anathoth.

ALEMBROTH, from a Chaldean word sig- nifying the key of art, in the writings of the al- chemists, a word used for a sort of fixed alkaline salt, which had the power of the famous alcahest, in dissolving bodies, opening the pores of most or all known substances, and thence, as well as by destroying sulphurs, promoting the separation of metals from their ores. It is also used for a com- pound of sal ammoniac and corrosive sublimate. Some use the term alembroth desiccatum, for salt of tartar. ' Corrosive muriate of mercury,' says Dr. Ure, ' is rendered much more soluble in water by the addition of muriate of ammonia. From this solution crystals are separated by cool- ing, called sal-alembroth by the earlier che- mists, consisting of ammonia,

muriatic acid, and mercury.'

ALEMPARVE, or ALLAMPARVA, a fortress of Hindostan, on the sea-coast of the Carnatic, which was transferred, by the native powers, to the French in 1750, and taken from them by the British in 1 760. Distant sixty-seven miles south- west of Madras. Long. 80►►. T. E. Lat. 12►►. 10'. N.

ALENCON, or ALENZON, a large and popu- lous town of France, the capital of the depart- ment of Orne, seated on the Sarte, in an open fertile country, abounding in corn and fruits. It is situated twenty miles north of Mons, sixty- three south by west of Rouen, and eighty-seven south-west of Paris. It was formerly surrounded with good, walls, and flanked with towers ; and the castle was a place of great consequence, having sustained several long sieges. A square tower 150 feet high still remains. Near it there are quarries of stone of the Bristol kind, &c Lon.0►►.10'. E. Lat.48►►.25'.N.Inhabitants13,000. Alencon has a linen trade of some extent, but is particularly famous for its point-lace, a manu- factory of which was established under JM. Col- bert's administration in 1665, by letters patent; and a grant from government to the proprietors of 26,000 livres as a capital. Here are also glass- houses, smelting-houses, and tanneries, in a nourishing state.

ALENIO, (Julius) a Jesuit, born at Brescia, in the republic of Venice. He travelled into the eastern countries; and arrived at Macao in 1610, where he taught the mathematics. From thence he went to the empire of China, where he conti- nued to propagate the Christian religion for thirty-six years. He was the first who planted the faith in the province of Xanfi, and built

several churches in that of Fokien. He died in 1649, leaving behind him several works in the Chinese

language.

ALENON, a word used by old medical wri- ters, for the oil of sweet almonds.

ALENTEJO, one of the largest provinces of Portugal, seated between the Tagus and the Guadiana, and watered by both. It is bounded on the north by Estremadura and Beira; on the east by Spain; on the south by Algarve ; and on the west by the sea; extending from north to south about forty miles, and from east to west between thirty and thirty-four. The soil is very

fertile. It takes its name from its situation, ly- ing, with regard to the other provinces, on the farther side of the Tajo, or Tajus. Its superficial extent is 883 French leagues, and the popula- tion, in 1800, was 380,480. Evora is the ca- pital. Alentejo contains four cities, 105 towns, and 358 parishes. It is divided into the eight jurisdictions of Evora, Beja, Elvas, Portalegre, Ourique, Villa Viciosa, Crato, and Aviz.

ALENZON. See ALENCON.

ALEORE, oXtwpij, a word used by the old medical writers, for the intermission of ease from the raging pains of any violent acute distemper.

ALEPPO.

ALEPPO, OLD, the Kinnasreen of the Ara- bians, an ancient town of Syria, supposed to have been Calchis, the capital of the district Chalcidone. It gives its Arabian name to the northern part of Syria, and is fifteen miles south of the modern Aleppo. The ruins, (for the whole place is scarcely any thing beside,) are surrounded by the foundations of walls, about a mile in compass, ten feet thick, and fortified by equidistant square towers. On the top of a high hill, west of the city, on which the castle stood, surrounded by a double wall, are three or four very fine large cisterns excavated from the rock. The district around the city was reckoned one

of the most fruitful provinces of Syria, and was seized by Ptolemy, the son of Mennaeus, during the troubles of Syria, and by him made a separate kingdom. Ptolemy him- self is styled by Josephus and Hegesippus, prince of Chalchis, and his son Lysanias is honoured both by Josephus and Dio with the title of king. The place is 'frequently mentioned by authors of the middle ages, or even later. It capitulated to the Saracens in the year 630.

ALEPPO, BASHALICK or PACHALIC of, one of the five pachalics of Syria, was a province ex- tending eastward from the bay of Scanderoon to the banks of the Euphrates, and from forty miles north of the city, extending about fifty miles to the south-east. But it is not now nearly so extensive. Khillis, formerly dependent on Aleppo, is erected into a separate district on account of the frequent depredations of the Kur- deens, who inhabit the neighbouring mountains ; and since the year 1752, an alteration has taken place with respect to Bylan, which, together with Caramoot, Scanderoon, Byas, and the ad- jacent mountains, has been also placed under a distinct government. At present the pacha- lie on the north is bounded by the village of Bailik, situated in the road to Aintab, eastward by the Desert, Bab at the distance of ten hours east-north-east, and Haglah, about the same distance to the south-south-east, being among the last inhabited villages : on the south it is bounded by the Great Desert, between the skirts of which and the west, or west-north-west, are situated the most fertile and populous parts of the forest. Sirmeen is the last town southward ; and Antioch, with its dependencies, may be leckoned the western boundary, which, till a

late period, reached to the sea : Scanderoon and Byas being then the two frontier maritime towns. About one half of the villages formerly on the borders of the province, are said to be totally deserted. Many of the inhabitants of this moun- tainous tract acknowledge scarcely any autho- rity but that of their own chieftains ; and the champaign, in many places, is either desert, or only occupied transiently by the wandering tribes of

Turkmans, Begdelees, and Rushwans, from the north, or by the Bedowens and Chin- gana ; who, though they pay an annual tribute, can in other respects, scarcely be considered subjects of the province. The oppression of the agas, the destructive marches of the grandees through the province, and the roving of the ruffian troops of Levands out of pay, oblige the peasant tenants to remove ; so that vast tracks of the beautiful plains in the bashalick are shamefully overrun with thistles, whilst the mountainous parts, better secured from oppres- sion, are finely cultivated, full of people, and present on every side thriving hamlets.

Such is the account given of this pachalic by Dr. Russel. Volney describes it, as extending from the Euphrates to the Mediterranean, be- tween two lines, one drawn from Scanderoon to Beer, along the mountains, the other from Beleo to the sea by Mare and the bridge of Shogar, and as consisting of two plains, that of Antioch to the west, and that of Aleppo to the east ; the north and sea coast being occupied by lofty mountains, known to the ancients by the names of Amanus and Rhosus. The soil of this pachalic is generally fat and loamy ; the greatest part of the land lies waste, and the traces of cultivation are scarcely discernible in the environs of the town and villages.

The traveller sees nothing in this and other pachalics of Syria, but houses in ruins, cisterns rendered useless, and fields abandoned. Its principal produce consists in wheat, barley, and cotton, which are found in the flat country : in the mountains, the vine, mulberry, olive, and fig-trees are cultivated. The sides of the hills, towards the sea-coast, are appropriated to tobacco, and the territory of Aleppo to pistachios. The pasturage is abandoned to the wandering Turk- mans and Curds. See ALEPPO. Russel's Hist. vol. i. p. 314. 339. Volney's Travels vol. ii. p. 130, &c.

ALEPPO, the capital of the above pachalic, 2 L 2

is situated on eight small hills, and is watered by the river Kowick, which in winter sometimes swells into a formidable stream, overflowing its bridges and the neighbouring gardens, wherewith the banks are covered. The wall, supposed to have been built by the Mameluke princes, is flanked by frequent towers, but the fosse is partly filled up with rubbish, or occupied by kitchen gardens, and the city being commanded by heights, is not defensible as a military post. It is inferior to Constantinople, Cairo, and Da- mascus, with regard to situation, magnitude, population, opulence, and courtly splendour, but may be reckoned superior to these cities in the salubrity of its air, the solidity and elegance of its private buildings, and also the neatness and convenience of its streets. In Arabic, Aleppo is called Haleb, to which is usually added the epithet Al Shahba. The Arabian writers, some of them, trace the origin of this city to the mi- gration of the patriarch Abraham into the land of Canaan, who rested for some time on the hill, where the castle of Aleppo is now situated, the appellation Haleb is derived from the circum- stance of distributing milk to the poor of a neighbouring village. Their frequent repetition of the words ' Ibrahecm haleb,' or ' Abraham has milked,' gave occasion, as it is said, to the name Haleb, which was conferred on the town that was afterwards built on this spot. The epithet Al Shahba is referred to a pied cow, dis- tinguished by its lowing in the herd of the above patriarch. Golius and others, however, with much greater probability, deduce this term, which de- notes a variegated grey and white colour, from the colour of the soil, and of the buildings. Some have supposed that Aleppo was the Zobah of Scripture ; but it was, more probably, the Bercea of the Greeks. Aleppo is situated, according to celestial observations, (see Conn, des Temps, 1792,) in N. lat. 36►►. 11'. 25". and E. long. 37►►. 9'. at a considerable height above the level of the sea. Its distance from Scanderoon or Alex- andretta, the nearest sea-port, is in a straight line, between

sixty and seventy miles ; but in the caravan road, between ninety and one hun- dred miles. It is encompassed at the distance of a few miles, by a circle of hills, which are in general rocky, scantily provided with springs, and totally destitute of trees, but affording good pasture for sheep and goats. Within this circle, there are hills and hillocks, which are intersected by plants and little valleys ; the soil of which is in some parts of a reddish or black colour, rich and fertile, but in general whitish, shallow, and mixed with many small stones. This city, in- cluding its extensive suburbs, occupies eight small hills, the intermediate valleys, and a consi- derable extent of flat ground, comprehending in the whole a circuit of about seven miles. It has nine gates, two to the east, three to the west, two to the north, and two to the south. One of the northern gates, formerly called the Jews' gate, which the son of Saladin changed into Bab al Naser, or Gate of Victory, was once, according to the missionaries, the residence of the prophet Elisha, and it has lamps which are kept con- stantly burning in commemoration of him. The

castle, which stands on a hill near the north-east corner of the city, and which is encompassed by a broad deep ditch, about half a mile in circum- ference, partly wet, and partly planted with trees, may be distinguished at a considerable distance ; it is deemed impregnable, and is entered from the south by a bridge of seven lofty narrow arches thrown over the ditch, on which are two gates fortified by turrets, and two more still higher on the hill. Near the summit is a reser- voir of immense depth, from which the water, supposed to be derived from a spring five miles distant, is raised by a wheel. A numerous garrison is kept here, but the privates are allowed to follow their trade in the city, and return before sun-set. The castle, in reality, is of no use but as a great magazine for military stores, and in serving to overawe the citizens ; but a traveller, approaching from the west, can see scarcely any other part of the city, till he gains

the brow of one of the hills with- in two or three miles of the gates ; and thus it becomes an extensive and striking object. ††† The mosques, the minarets, and the numerous cupolas, form a splendid spectacle, and the flat roofs of the houses which are situated on the hills, rising one behind another, present a suc- cession of hanging terraces, interspersed with cypress and poplar trees. Although at a distance this city, like many others in the east, assumes a fine appearance, and from the very great splendour of the buildings, already enumerated, excites an unparalleled interest in the eye o the spectator, nevertheless the traveller is disap- pointed on his entrance, for the streets art gloomy, and appear narrower than they are in reality, in consequence of the disproportionate height of the stone walls on both sides, which exhibit but a few windows, and these guarded with lattices. Some of the streets are spacious,, and well paved with bricks in the middle, the ends being placed uppermost for the conveni- ence of the horses. There are two raised foot- paths on the sides, and sometimes a beautiful vista is opened, by looking through several arches in succession. They are defended from the sun by mats spread on wooden rafters, project- ing from each side. The bazar gates are regularly shut at sun-set, and watchmen, provided with a pole and lamp, are stationed for the night within them. There are also gates and watchmen in the principal streets. The natives, who are for the most part sober and regular, retire to their habitations early. The houses are spacious, and clothed with terraces and sky-lights, those that have domes excepted. During the summer, the inhabitants sleep on these terraces, which are separated by parapet walls. From their equal elevation, and doors of communication, which the Franks have made, a considerable circuit may be made without descending into the streets , The natives, however, have no intercourse by the terrace, and guard, by high walls, against being overlooked.*

The mosques in Aleppo are numerous ; and are built of free-stone, with domes in the centre covered with

lead. Of these, seven or eight are considered magnificent, though none have more

jhan a single minaret, or steeple, whence the people are summoned to prayers. These mi- narets are said to have been first annexed to the mosques by Al Waleed, who succeeded to the caliphate, in the eighty-sixth year of the Hegira. Into these mosques none but Moslems are permitted to enter ; and at Aleppo, it is only one of them into the court-yard of which Jews and Christians are allowed admission. . The Greeks, Syrians, Armenians, and Maronites, have each a church. The public edifices, next in importance to the mosques, are the khans or caravansaries, intended principally for the accommodation of strangers, and goods. These are of a quadrangular form, one story in height, having rooms, which serve as chambers, ware- houses, and stables. The bazars, or markets, are lofty stone edifices, arranged in the form of a long gallery arched above, or roofed with ###wood, where small shops are replenished with goods, each different kind of business having a distinct bazar, which is always locked at sun- set. The public baths, or hummums, do not contribute much to the embellishment of the city, as their fronts to the street are very simple ; but the coffee-houses, which are spacious and handsome, and dispersed through all quarters of the town, attract the notice of strangers. They are gaudily painted, and furnished with matted platforms and benches ; and those of the belter sort have a fountain in the middle, with a gallery for musicians. At certain hours of the day the coffee-houses are full of company, though they are not frequented by persons of the first rank. The dwelling-houses of Aleppo comprehend the seraglios, or palaces, the houses of the opulent merchants, and the habitations of the middling and ordinary people. The seraglio, in which the bashaw of Aleppo usually resides, is situated noar the castle, and is a very ancient and exten- sive building, surrounded by a

strong and lofty wall. The gates of this edifice lead to several interior courts, which are destined for barracks, stables, an hippodrome, and various other offices. The principal building contains apartments for the bashaw, his harem, household officers, and pages. It consists of three courts, one of which is the divan, where the bashaw gives pub- lic audience. The whole of this building is much neglected , and if it had not been originally a very substantial edifice, it would long ago have been in ruins. There are five or six other seraglios of more modern date, that are much smaller, well built, and gaudily decorated ; they were erected at different periods by former bashaws, and belong to their heirs. They are now occasionally let to such governors as do not choose to reside in the old seraglio, and to other officers of the Porte, who visit Aleppo on public business. Other buildings, constructed on the same plan with these, though not denominated seraglios, are occupied by the principal agas and effendees.

To the lower class of strangers, as Arabs, Kurds, and other Turks of foreign extraction, and Ar- menian Christians, there is appropriated a kind of accommodation, called Keisaria, which is a large area, surrounded by a number of mean, low houses, each consisting of two or three rooms. Other buildings, in the form of a close

or court, allotted to weaving and other manu- factures, are called by the same name.

The castle of Aleppo is in a bad state, and were it not for its importance as a magazine for military stores in times of war with Persia, for the awe of the city, and an asylum to the magis- trates in case of insurrection ; as a prison for state criminals, and a place of execution for the Janissaries, when condemned to die, it would scarcely be preserved. The Aga of the castle is immediately dependent upon the Porte, and sub- ject, only in certain cases, to the bashaw, he commands a numerous garrison ; and the private men, with their families, lodge in the castle.

The fuel used at Aleppo is wood and char- coal, the former of which is brought on camels from the mountains. Little fuel is made use of, except in the kitchens. The mode of heating the bagnios renders them an absolute nuisance ; the dung of animals, the parings of fruit, the refuse of stables, and offals of every description being employed for the purpose Camels,and sheep's dung, with brushwood, or the stalks of different kinds of plants which grow in the desert, are more commonly used for fuel. Cow-dung is resorted to by the peasants, not only for fuel, but for forming a sort of pan, in which they and the Arabs frequently fry their eggs. At Aleppo, in one of the suburbs called Mashirka, they have a glass manufactory, and a tannery to the south-west of the town near the river. Their slaughter-houses are situated in an airy field, in the skirts of the suburbs, towards Bankusa, and their principal flesh market is in the suburb called lideida. ??? They have several lime-kilns near the walls, on the south-west of the city, and a manufactory of catgut half a mile to the south, which occasionally emits a very offensive stench. Within the walls, they have only one public burial ground, besides several private cemeteries ; but without the walls the burial grounds are of wide extent round the town, whose white tombs and grave-stones, viewed at a distance, forcibly strike the attention.

The city is supplied with water by means of an aqueduct from two springs, near a village called Heylan, at the distance of about eight miles to the north. This aqueduct, which is said to be coeval with the city, was repaired by the empress Helena, the mother of Constantine, and again repaired and enlarged by the son of Sala- din, in 1218. It is mostly open, but partly sub- terraneous, and distributes the water by earthen or leaden pipes to the gardens of.Babullah, to the fountains, baths, and private houses. The gardens of Babullah extend about twelve miles, and generally belong to some effendee or aga, possessing sufficient authority for the protection of his tenants, or forms a part of some religious estate. Those also on the banks of

the river Kowick, are numerous and fine. They are sub- divided into fields, of different shapes and dimensions, bordered with dwarf trees, flowering shrubs, and taller trees, such as the plane, weep- ing-willow, ash, and white poplar. Within these enclosures are cultivated mad-apples, melons, and cucumbers, with a variety of esculent roots, cabbages, and greens for the kitchen ; in others, cotton, tobacco, sesamum, palma christi, and lucern ; anO some are sown with barley, whicU

is used in the spring as green fodder for the horses. Among these enclosures are large plan- tations of pomegranate, plum and cherry trees, and sometimes groves, composed of the various fruit trees which the country produces. The gardens, those of Babullah excepted, are supplied from the river by means of Persian wheels. In most of the gardens there are summer-houses, furnished with fountains, and with kiosks, or a kind of balconies, projecting over the river. The Aleppo gardens are spoken of with rapture by the natives. They supply the city with greens and fruits, and contribute both to the health and amusement of the inhabitants.

In the vicinity of the city are many extensive quarries, which afford a gritty stone, when first dug easily cut, and indurated by exposure to the air ; and the more ancient of these quarries have subterraneous excavations of great length, which serve the Bedowen Arabs for winter habitations, as stables for the camels, and as dens of debau- chery to the Janissaries. The marble of Aleppo is of a yellowish colour, but by rubbing it with oil, and exposing it to the moderate heat of an oven, it is made to resemble the red marble of Damascus. An extensive plain, called the valley of salt, or salt lake, eighteen miles from the city, supplies the inhabitants with that article.

The climate of Aleppo may be characterized as, upon

the whole, mild. The heat, indeed, is great during the summer months of July and August, though it is generally moderated by westerly breezes. But it is intense when the wind proceeds from the north-north-west, east, north-east, or south-east, and all the inhabitants, both native and foreign, are then oppressed with an excessive lassitude, an oppression of the breast, and a parched sensation of the eyes, lips, and nostrils. These winds do not occur every year, nor do they produce such fatal effects as the desert wind. In general, the air of Aleppo is dry, piercing, and salubrious,. The spring commences in the early part of the month of February, about the middle of which the al- mond-tree blossoms, and the fields become clothed with verdure. In May the corn ripens rapidly into harvest. Refreshing showers fall in the beginning of June, after which drought prevails till the middle of September. From about the close of May to this "time the inhabi- tants usually sleep on their terraces, without sustaining any injury. The severest part of the year is from the middle of December to the latter end of January, when frost is common, though snow is comparatively rare. At the end of August the Nile-clouds, as they are called, make their appearance, and are often attended with dew. About the autumnal equinox the air is refreshed by showers, which are termed the first rains, and are usually preceded by irregular gusts of wind that raise the dust in vortices. These we succeeded in twenty or thirty days by the second rains, which are more plentiful than the first, and after them the weather becomes vari- able and much cooler. The transition from the Autumn to the Winter is slower than that from Spring to Summer. The trees retain their leaves till the beginning of December, and the most

delicate persons nave no fires till the middle of this month. The rigour of winter commences about the middle of December, and lasts forty days ; but though there is almost always some frost in winter, many years pass without snow. The narcissus is in flower during the greatest part of the winter, and violets and hyacinths are plen- tiful in January.

Although violent storms of wind are rare at Aleppo, squalls, accompanied with heavy showers, and sometimes with thun- der, are frequent in the Spring and Autumn. Lightning, unaccompanied with thunder, is fre- quently seen in the night during the months of September and October ; and it is sometimes seen in Summer ; but the nocturnal sky, in the hot months, is almost always serene, exhibiting a glorious scene to the astronomer, who may in- dulge his study, and at the same time enjoy the cool air on the terrace.

The soil near Aleppo, in the more distant plains, consists of a reddish, sometimes of a blackish, light mould, and produces the fruits of the earth in great abundance. The fields near the city yield, in consequence of much manure, two or three crops of different kinds every year ; but without manure, they are only sown once a year with different sorts of grain alternately, but are seldom suffered to remain fallow. They be- gin to plough in September ; and the plough is drawn, by one or two small cows, or by a sin- gle ass, in furrows so straight, that one would imagine a line must have been used in tracing them. They sow wheat, barley, lentiles, chiches, beans, chichling, small vetch, a small green kid- ney bean, and Indian millet. The earliest wheat is sown about the middle of October, and bar- ley so late as the end of February. They sel- dom use the harrow, the grain being covered by repassing the plough along the edge of the furrow ; in sandy soil, they sow first, and then plough. The barley harvest commences in May, about ten or fourteen days before that of the wheat, and early in June corn of every kind is taken off the ground. Among the reapers in Syria, a custom prevails of accosting a passing traveller and presenting to him a handful of corn, with a general shout ; and a small pre- sent is expected in return. The corn, when reaped, is carried on asses to the summit of the nearest hill, and, being laid on hard even ground, is separated from the chaff, not by threshing, but by means of a sledge fixed on two or three rollers, and armed with several iron rings, witii serrated edges, so sharp

as to cut the straw. This machine is drawn by oxen, mules, or asses, and driven by a man seated on the sledge, and as it passes circularly over the corn spread beneath, the grain, by repeated opera- tions, is trodden out, while the straw is chopped by the iron rings. The chaff and bruised spikes are then separated from the grain, by throwing up the whole into the air with wooden shovels, when the wind blows moderately. The spikes that have been imperfectly trodden are again submitted to the sledge. When the grain has been afterwards more perfectly winnowed and separated from the straw, it is thrown together in a large heap, and is then divided in a stipu- lated proportion between the husbandman and

tho landlord. The cattle employed in the har- vest are left unmuzzled at the heap, as the Scrip- ture mentions. See Lowth's Com. on Isaiah, ch. xxviii. v. 27, 28. Notes, p. 130. The grain is then removed to granaries, which are subter- raneous grottoes, with one round opening at the top, which, when the magazine is full, is shut close and covered with earth, and thus com- pletely concealed from the enemy. The corn is chiefly ground in mills wrought by mules, though there are some water-mills upon the river Kowick, and among the lower people by hand-mills. Wind-mills are unknown.

The olives produced at Aleppo resemble the Spanish olives, but are not so large, and the annual produce of them is inconsiderable. The city is supplied with oil from other parts, and particularly from Edlib and adjacent villages, where the olive plantations are more extensive. Large quantities are employed in making soap, and the ashes employed in this manufacture are brought from the Desert by the Arabs. The gardens afford several varieties of grapes ; those that are ripe appear iu the market in Septem- ber, but the vintage is not at its height till the middle of November. The dried fruit of the

vine affords part of the food of the inhabitants ; it is eaten with bread and used in sherbets ; a larsre quantity of raisins is also used in the dis- tillery, carried on both by Turks and Christians. Anniseed is added in the distillation, and the spirit, which is very strong, is called araki. The inspissated juice of the grape is much used by the natives ; it is called dibs, and much resem- bles coarse honey in appearance. It is brought to town in goat skins, and serves for the com- mon people instead of honey. The pistachio tree is diligently cultivated, and the nuts reckoned superior to those of any other part of the world. Pliny, lib. xiii. c. v. lib. xv. c. 24, says, that pistachios were first brought from Syria into Italy, by Lucius Vitellius, in the reign of Tibe- rius ; and Galen, De Alim. Facult. lib. ii. c. 30, mentions Bercea as famous for that fruit in his time. Large quantities are exported from hence to Europe. The nuts of the wild pistachio are brought to town from the mountains; the tree not growing near Aleppo. The white mulberry is common in the gardens, and brought to mar- let in May, and the fruit of the red mulberry, vhich is not ripe till two months later, is delicious. Very little silk is made at Aleppo ; that which is exported from hence to Europe, by way of Scanderoon, is chiefly the produce of \ntioch and the adjacent mountains, or it is Brought to Aleppo from places more distant. . "he pomegranate is common, and ripens towards tie end of August. The markets are supplied will several varieties of figs ; but the middle siz>d yellow fig is the most esteemed. The gar- deis also produce other fruits, as cherries, apri- cot, peaches, plums, apples, pears, quinces, corielian cherry, almonds, walnuts, hazel-nuts, juju.es, and sumach ; the former of these two last leing much valued as a medicine, and the latter as an ingredient in cookery. Oranges, lemon, and citrons, were formerly produced in the orhards of Aleppo; but as they are not now ciltivated, it has been inferred from this

circumstance, that the winters in Syria are now more rigorous than they were in former times, and this is

the opinion entertained by the na- tives. Among the vegetables which form part of the diet of the inhabitants, the mad-apple (Solanum Melongena of Linnaeus,) of which there are three varieties, claims a principal place. Of the vegetables produced in the fields without culture there are capers, borage, common mallow, sorrel, dandelion, water-cress and truffles. Savory is used to give a relish to their bread.

The inhabitants of Aleppo consist chiefly of Turks and Arabs; many among them, to the amount, perhaps, of four thousand, claim de- scent from Mahomet, and wear their dress inter- mixed with green, as a token of this distinction. They are not at present held in very high esteem, owing to their superciliousness and conten- tious spirit, although, formerly, they were greatly reverenced, and any injury done to them was severely punished. The extent of the popula- tion is variously estimated. Dr. Russel, whose calculations ought probably to be most relied upon, states it at 250,000, of which 30,000 are Christians, and 5000 Jews. The population of this place and neighbourhood is thought to be on the decline, in consequence of exactions prac- tised on the inhabitants by a despotic and op- pressive government. The domestic servants are nearly all Armenians.

The men dress in the long eastern habit, and during six months in the year wear furs. Under the furs their garments consist of a silk or linen shirt, and drawers, wide trowsers of red cloth, to which are sewed socks of yellow leather, serving for breeches, stockings, and, within doors, for shoes ; but in walking, they use slippers without heels. They also wear a waistcoat, called a kun- baz, that comes lower than the knee, and a long vest reaching down to the heels, which covers all, is named a dulaman. Above the dulaman, they have a long Persian shawl, and a belt under the waistcoat, and to this cincture they attach a small dagger or knife, and men of business a sil- ver inkhorn. The turban is commonly worn. The Abai is a silk or camblet gown, with large sleeves, laced down the seams with a narrow gold

lace, which is worn in summer instead of the kurk, or loose gown trimmed with furs. Abai is the name of the ordinary vestment of the Arabs. The dress of the ladies in many respects resembles that of the men. But their dulaman and kunbaz sit closer to the shape, and, not folding over the breast, lea/e the neck uncovered. Instead of the costly, long-haired furs of the men, they use sable or ermine, and they are formed in a different fashion. The ladies are fond of thick long hair ; and their head-dress, consisting of a warm cloth cap, under cotton and muslin, which compose the rest of the attire, is much warmer than that of the men. They wear ear-rings, a necklace, or collar, of goM, large clumsy gold bracelets on the wrist and ancles, a string of zechins close to the hair on the forehead, and another, very long, across the body like a sash. Both sexes wear rings on their fingers, and some women wear them on their toes. The use of rouge is not much known, but the women tinge their fingers and hands, also their toes and feet, of a dusky red

or yellow, with a paste formed of the powdered leaves of henna and water. These parts are afterwards covered with another paste composed of flour and water, with crude sal ammoniac and quicklime, which changes them to a very dark green. The inside of the eyelids are tinged with a powder called kohol. The women apply ano- ther composition called khatat to the eye brows, which tinges them of a fine black, and makes the hair smooth and glossy. The men, after a cer- tain age, or after performing the pilgrimage to Mecca, let the beard grow, and bestow much pains upon it. The Turks wear whiskers, and persons of both sexes use a variety of perfumes, of which sandal wood, musk, and spikenard are the most common. The women never appear in the streets without their veils, which in general are a linen sheet covering the whole habit from head to foot, and concealing the whole face ex- cept one eye. Those of the Christian and Jewish women are of plain

white calico, which the Turk- ish women chequer with blue and red. The Jewish women have one arm free. Women of every class, when they go abroad, wear thin yel- low boots, reaching half way up the leg, over these yellow babooge or slippers ; and in wet weather wooden clogs, called kabkal. Women are never seen in the streets after dusk. They are always particularly anxious to keep the crown of the head covered, which scarcely any considera- tion can induce them to bare. Though society is deemed the most polished here of any part in the Turkish dominions, the females are said to be addicted to intrigue, whenever it can be se- cretly conducted,

Trade is carried on in Aleppo to a very con- siderable extent, both by Christians and Ma- hommedans. Four caravans proceed annually through Natolia to Constantinople, and others arrive from Bagdad and Bassora, with coffee and India muslins and shawls. The Turks carry on the trade of India, Asia Minor, Constantinople, and Egypt. The exports are cloth, from An- tioch, Merdin, and other places; osnaburghs, from Aleppo and Damascus ; and printed cot- tons, from Diarbekir ; galls, drugs, and various other articles. The imports are considerable ; cloths, Lyonnese stuffs, and bonnets, from Eu- rope ; merceries, indigo, tea, sugar, paper, soap, and numerous coral ornaments. Commerce with Europe has of late years much declined, and the European establishments in the city con- sequently reduced.

Generally speaking, the inhabitants of Aleppo are sedentary in theirmodeof life and habits, and are somewhat addicted to amusements, though not at all disposed to exercise. The men frequent the coffee- houses, where they are entertained with music and dramatic representations. The women often attend the baths, where persons of every class in society are admitted, in an indis- criminate manner, till they are full. At these places music and refreshments are provided, parties of pleasure formed, and all the splendour of attire that can be mustered, is brought into view. Dancing is not reckoned a genteel ac- complishment for people of condition, and even among the vulgar it is seldom practised, unless by such as

make it their trade. The coffee-

houses are entertained by a band of music, a puppet-show, and a story-teller. The Aleppeens have, in general, a correct ear, and are fond of music. The instrumental music is of two kinds; one martial and loud, intended for the field, and the other less sonorous, adapted to the chamber. A band of music, belongingto the castle, smaller than, that of the bashaw, performs regularly twice a day from the battlement, and the bashaw's band also- performs twice a day in the court of the seraglio. With regard to nuptial contracts and cere- monies at Aleppo, they are similar to those generally observed among the Turks. When a matrimonial engagement is projected, the pro posal is intimated to the mother of the intended bride, and the relations on both sides proceed to make the necessary enquiries. If the result prove satisfactory, the young woman is formally de- manded of her parents by the father of the young man. Substitutes are then appointed to stipulate the necessary conditions; and these proxies adjust the sum to be paid to the bride's father, with other articles of the marriage con- tract. When the money is paid, the contract is regularly signed and sealed, and then the Cadi grants his licence for the marriage. About ten days before the wedding, the bride is invited by her female relations to the bagnio, and there she is entertained till the day preceding the marriage, when they proceed to apply the henna. At Aleppo it is customary for the father of the bride to make some addition to what is paid by the bridegroom, and to lay it out for the benefit of his daughter ; but among the Bedowen inhabit- ants, and in the villages, the father usually retains a part of what he receives for his daughter; and in this respect they may be said to sell their daughters. This custom of purchasing wives is practised by all the oriental Christians, as well as the Turks, and appears from the sacred writings, to have been the ancient practice. Ac- cordingly, among the Arabs, daughters constitute the riches of a family. On the nuptial day, the women go in procession from the

bridegroom's house to fetch the bride, who is brought home amidst the acclamations of the women, accom- panied by her mother, and several other female relations. The procession is in the day time, and at Aleppo they do not carry tapers, as some travellers have reported. On their arrival in the house, the remainder of the day is spent in feast- ing and music. When the bride, covered with a veil of red gauze, and dressed in her wedding garment, has been introduced to her husband,, the relations withdraw, and continue singin►►; and feasting till morning; and the nuptial ic- joicings last several days. The mother for th< most part suckles her child, unless prevented b/ incapacity, and the child is seldom kept at tie breast less than two years, sometimes thee or four ; and the mother often suckles durhg the whole time of pregnancy. During die first week the child is swaddled, and nen dressed in clothes which are more loose and easy ; and as soon as they are able, they ac left at liberty to crawl about on the carpet. Vhen children can support themselves, they are isually carried astride on the shoulders; and tie ex- pression used by Isaiah, ch. Ix. v. 4, upor which

bishop Lowth comments, Notes on Isaiah, p. 258, viz. fyobj; is literally that which is now used by the Arab women. The difference of carrying a child in the bosom or on the shoulder, referred to, Isaiah xlix. 22, and noticed by Harmer, Obs. ou Scripture, vol. ii. p. 366, may be owing to their different age, without re- gard to sex.

In the funeral ceremonies practised at Aleppo, the women perform a conspicuous part. ►►► When a person is dangerously ill, one or two sheiks are employed to read portions of the Koran, and to pray by the bed-side. At the approach of death, the attendants turn the face of the dying person towards the keblah, that is, towards Mecca. When he expires, the women in the chamber give the alarm, by

shrieking, as if they were distracted, and are soon joined by all the other females in the ha- rem. This conclamation is termed the Wulwaly, and is so shrill as to be heard, especially in the night, at a prodigious distance. Schultens in his commentaiy on Job, x. 15, torn. i. p. 978, con- siders the Arabic Wulwal, as corresponding to the Hebrew y?, and to the Greek oXoXw^w and aXaXa►►w, and he supposes that the former Greek word was applied in a joyful sense. However, the Arabic wulwaly is applicable only to distress and affliction, and seems to have a greater affinity to the latter term than to the former, which was commonly used by the Greeks on sacred or joyful occasions. See Mark, v. 38. ►►► Plutarch refers to this practice in his account of Portia's fainting on the day of Caesar's death, when her maids, apprehending that she was dead, wailed over her. Brutus, Oper. torn. i. 991. We also learn from Cicero DC Legibus, lib. ii. Oper. torn. iii. p. 221, ed. Olivet, that the extravagant exclamations of women at fune- rals was prohibited by the twelve tables. See PRJEFIC.C. In a few hours the corpse is pre- pared for interment by ablution, and by stopping all the natural passages with cotton, sprinkling parts of it with a powder composed of spikenard and other aromatic herbs, and wrapping it up in a cotton winding-sheet. Over the bier, at the head of which is fixed a batoon, on which the man's turban, or the attire of the female head, is placed, is thrown a black pall, and over this the best wearing apparel of the deceased. The funeral procession is attended by the acquaint- ance and kindred of the deceased : a number of the sheiks, some of whom incessantly repeat Ullah, Ullah, and others chant verses of the Koran : and one person is the chief mourner, and manifests her grief, real or fictitious, by the most extravagant and frantic cries and gestures. Other mourners are sometimes hired, who, at intervals, join the general wulwaly. A funeral service is performed by the imam in some neigh- bouring mosque, and the corpse is then deposited in the grave, in a reclining posture, with the head to the west, and the face turned towards Mecca. A handful of earth is then thrown by the*

imam, or sheik, after a funeral service, into the grave, which is also done by others who stand near, and who at the same time pronounce a short benediction ; after which the grave is nlled up. The funeral service in use among the

Kurdeens is very laconic, and is as follows :

‘ If thou hast taken away, thou shalt restore ; if thou hast given, it shall be restored to thee ; and if thou doubtest this, thou shalt now be con- vinced.’ The funeral service, recited by the imam at the grave, is as follows : ‘ O man ! from ‘ earth thou wast at first created, and to the earth thou dost now return : this transitory abode being the first step of thy progress to the man- sions of eternity. ‘ If, in thy actions in life, thou hast been beneficent, God will pardon thy trans- gressions ; and if thou hast not, still the mercy of God has no bounds. But remember what thou didst profess in this world, that God is thy Lord, and Mahomet thy prophet ††† and thy belief in all the prophets and apostles, and that God’s forgiveness is amply extended.’ The sepulchre is visited by the near relations on the third, seventh, and fortieth day after the inter- ment ; they also celebrate the anniversary : so- lemn prayers are offered at the tomb for the repose of the deceased, and victuals and money are distributed to the poor. The tomb is be- strewed by the women, in their visits, with flowers and aromatic herbs ; and the wulwaly is repeated. The men make no alteration in their dress as a mode of mourning; but the women lay aside their jewels, dress in their plainest garments, and wear on the head an embroidered handkerchief of a dusky brick-dust colour. ††† They commonly mourn twelve months for a hus- band, and six for a father.

Crimes of a capital kind are very rare at Aleppo. The usual capital punishments are hanging, beheading, strangling, and impaling. Janissaries are strangled, not with a bow-string, but by a cord put round the neck, and then twisted with a stick in the manner of a tourni- quet. The bodies of all who are executed remain for some days exposed to public

view. Theft is uncommon ; when it occurs, it is sometimes punished by amputation of the hand, but more commonly with the bastinado, which is performed with rods about the size of a small walking-stick; and this is the usual punishment for offences of an inferior kind. Banishment to the island of Cyprus, and the maritime towns of Syria, is chiefly employed for removing turbulent mem- bers from the city or the divan.

The state of literature at Aleppo is much de- generated from that of ancient times, when it was more respectable. There are indeed public day- schools adjoining to some of the principal mosques, but their colleges for students in ad- vanced life are few in number, and poorly en- couraged. They are more properly seminaries of pedantry and superstition than of science; and they are chiefly frequented by the studious of the poorer class, who dedicate themselves to the service of the mosque. Grammar and school- divinity are the subjects chiefly taught at college. The effendees, who assume an appearance of re- spect for learning; have no liberal notion of sci- ence. Astronomy, which was once a favourite study among the Arabs, is at present wholly neglected. Although they have books on the subject in their libraries, and some instruments, yet so little is known of the science at Aleppo, that a person who is found capable of calculating

eclipses, has, on this account, the reputation of a most profound astronomer. Almanacks are seldom constructed at Aleppo, but are brought thither from Constantinople or Cairo. As to mathematical studies, they are little attended to by the modern Arabs ; nor have natural history and the experimental parts of philosophy made .any progress amongst them for several centuries. History is little regarded by the

literati at Aleppo. Their knowledge of distant states, and of the revolutions of empire in the western world is very partial and imperfect ; and even their own history, before the appearance of their prophet, remains in great obscurity. Their geographical knowledge also lies within very narrow bounds ; nor have they any good maps, except such as have been imported from Europe. Superstition has banished painting from Syria ; and music, degraded by fashion to a mercenary profession, is rather tolerated than encouraged ; poetry, which was formerly much cultivated among the Arabs, has very perceptibly declined and lan- guished ; so that the modern Aleppo bards never attempt any performance beyond a dirge, a bal- lad, or an epigram. Although the medical prac- titioners at Aleppo are numerous, their knowledge of medicine is superficial, perverted by preju- dice, and accompanied with pedantic affectation, arrogance, and obstinacy. A very competent judge affirms their general practice to consist in specious trifling. Their knowledge of anatomy is acquired by reading, not by dissection ; and their ignorance of the circulation of the blood, leaves them quietly in possession of the ancient doctrines. The most calamitous disease to which they are subject is the plague.

The epidemical diseases most prevalent in Aleppo are, continual fevers, intermittent and remittent fevers, regular and anomalous, erratic fevers, commonly attended with diarrhoea ; the dysentery, quinsy, pleurisy, peripneumony, rheu- matism, and ophthalmia. The sporadic and chronic diseases are, with few exceptions, nearly the same as in Britain. Those which are most common at Aleppo, are pulmonary complaints, spitting of blood, and consumptions, obstructions of the abdominal viscera, cachexy, jaundice, dropsy, inguinal ruptures, the haemorrhoids and worms. The tinea is common, and various other cutaneous eruptions ; but the true or confirmed leprosy is now become obsolete in Syria. The

venereal disease is also very common in this country. The Europeans soon after their arrival at

Aleppo are subject to a fever, which has been distinguished by the name of 1'oca, or goose. The disease attacks but once ; and the English are rather more liable to it than the Provencals and Italians. The natives of Aleppo and Euro- pean strangers, after some residence here, are subject to a singular kind of eruption ; which from the supposed time of its duration, is de- nominated the botch of a year, or the ring-worm or pimple of Aleppo ; but by the Europeans and Turks, il mal d'Aleppo, the Aleppo evil, and the Aleppo ulcer. No part of the body or limbs is exempt from this eruption; but it most com- monly fixes on the face, and leaves a scar, with which almost all the inhabitants are disfigured. Volney suspects that it proceeds from the quality of the water. Dr. Russell has particularly de- scribed it : and he observes, that the mercurial plaster was the most efficacious remedy.

The animals, birds, &c. of Aleppo, will be treated of in the geography of the district. One species of pigeon, however, claims a slight de- gree of attention.

Speedy intelligence was of such importance in Aleppo, that the carrier-pigeon was employed to convey notice from Scanderoon or Alexan- dretta, and Bagdad, to Aleppo. It is the pecu- liar quality of this bird to find its way through the air from incredible distances, to which it has been conveyed hood-winked, or in a covered basket, and with a velocity no less surprising. But this practice can only be adopted during the period of incubation, or while its young are unfledged ; and a kind of training is required. Damiri, an Arabian author, affirms, that it can traverse 450 miles in a day ; and, according to Maillet, a French writer, its flight is at the rate of sixty miles an hour. Thus it may easily be believed, that intelligence was conveyed in two- hours and a half throxtgh the distance of seventy miles, from Alexandretta to Aleppo. The prac- tice has been discontinued in Syria for some time ; but during its existence, it is said that a merchant of Aleppo having

accidentally killed a carrier-pigeon, discovered from the billet under its wing that a scarcity of galls prevailed in En- gland; and, availing himself of the informationr made such arrangements as enabled him to realize a fortune.

ALEPYRUM, in botany, a, without, Xeirvpov, a bark, shell, or covering, i. e. of corollaceous glumes, by which this genus is distinguished from Devauxia ; class and order, monandriapolygynia. Nat. Ord. Restiaceae,

Gen. Ch. CAL. sheath of two concave, keeled, permanent valves, clasping each other at the base, containing one or more flowers : COR. none : STAM. filament one, capillary, drooping, about as long as the calyx; anther simple, oval: PIST. germens several, six to eighteen, ovate-oblong, superior, inserted into one side of a central ob- long receptacle, and all turned one way ; styles as many, thread-shaped, combined at the bottom, spreading or deflexed at the upper part : STIGM.

linear, downy : PERICARP, capsules as many as the germens, membranous, oval, of one valve, and one cell, bursting longitudinally at one side : SEED, solitary, obovate, pendulous. Essential characteristics, sheath of two valves ; COR. none , ANTH. simple; GERM, unilateral : CAPS, bursting longitudinally at one side : seed solitary.

Also a geniis of small herbaceous plants, nearly allied to the more numerous one of Devauxia, and scarcely to be separated therefrom, the want of petals in Alepyrum being the only difference. The three species are all natives of the south coast of New Holland, nor do they appear to have been met with by any botanist or collector, excepting Mr. Brown: ROOTS fibrous: leaves

/adical, simple, linear-lanceolate, or setaceous : flower-stalks radical, unbranched, single-flowered. 1. A. polygonum: many-jointed Alepyrum, sheath single-flowered ; the outer valve with a leafy point : GERM, from fifteen to eighteen ; stalk twice the length of the leaves. 2. A. Pumilio, dwarf Alepyrum; sheath single- flowered ; the outer valve with a leafy point : EERM. from six to nine ; stalk the length of the eaves. 3. A. muticum, pointless Alepyrum; sheath with a few flowers ; the outer valve pointed.

ALERIA ALALIA, or ALARIA, in ancient geography, a town of Corsica, mentioned by Ptolemy, situated near the middle of the east side of the island, on an eminence, near the mouth of the river Botanus, built by the Pho- caeans. Afterwards Sylla planted a colony here. It is now in ruins, and called Alleria Distrutta. ALERION, in heraldry. See ALLERION. ALERT', 1 Ital. All' erte, aT erta, par- ALERT'NESS. } ticipial adjective from the verb ergere ; Lat. erigere ; estre a 1'erte, to observe, or watch from a high place ††† a military phrase formed by a combination of French and Italian. See Cotgrave. ' Stare a 1'erta, to be watchful.' Florio's Italian Dictionary. ††† Watchful, brisk, lively.

Thir nobill nymphis maid reverence, With gestour lively and allairt ; ' And eftir their obedience, Hir grace passit to ane udder pairt.

Bitrel in Sibbald's Chronicles, v. iii. p. 470. That alertness and unconcern for matters of com- mon life, a campaign or two would infallibly have given him. Addison, Spectator.

Not such the alert and active ; measure life By its true worth, the comfort it affords, And their's alone seem worthy of the name.

Cowper's Task.

ALES, (Alexander) a divine of the confession of Augsburg, born at Edinburgh in 1500. He entered the lists very early against Luther, but became at

length a perfect convert to the Protes- tant religion. The change of religion which hap- pened in England after the marriage of Henry VIII. with Anna Bullen, induced Ales to go to London in 1535. He was highly esteemed by Cranmer, archbishop of Canterbury, Latimer, and Thomas Cromwell, who were at that time in high favour with the king. Upon the fall of these favourites, he was obliged to return to Germany : and the elector of Brandenburgh appointed him professor of divinity at Frank- fort upon the Oder, in 1540 ; but leaving this place upon some disgust he returned to Leipsic, and died in March 1565. He wrote a Commen- tary on the writings of St. John, on the epistle to Timothy, and on the Psalms.

ALES, a name given to a compound salt ; it also signifies contracted, when used by physi- cians as an adjective.

ALES, a river of Roxburghshire, which rises in Selkirk, and falls into the Tiviot, a little below Ancrum.

ALESA, ALJESA, or HALSEA, in ancient geo- graphy, a town of Sicily, on the Tuscan sea, built, according to Diodorus Siculus, by Archo- nides of Herbita, in the second year of the 94th Olympiad, or A. A. C. 403 ; situated on an emi-

nence about a mile from the sea ; now in ruins. It enjoyed immunity from taxes under the Ro- mans.

ALESANI, a town and jurisdiction of Corsica, consisting of nine villages, in the district of Ale- ria, which see.

ALESHAM. See AYLESHAM.

ALESIA, in ancient geography, a town of the Mandubii; called also Alexia,byLivyand others, situated on a very high hill, whose base was washed by two rivers. The town was of such antiquity, that Diodorus Siculus relates it was built by Hercules. It is now called the city of Alise, in the duchy of

Burgundy, near Dijon.

ALESSANDRIA, in Egypt. See ALEXAN- DRIA.

ALESSANDRIA, or ALEXANDRIA, is a strong town, with a citadel, lying. in a marshy country on the east bank of the Tanaro, in Upper Italy. It is the see of a bishop, the suffragan of the arch- bishop of Turin. It contains, besides the ca- thedral church, twelve parish churches, two collegiate churches, seventeen monasteries and nunneries, together with several fine private build- ings, and had in the year 1806, 35,216 inha- bitants. The yearly fairs held here at the end of April and beginning of October, are attended by merchants from all parts of Italy, and even from France and Switzerland, being inferior to none in Italy, except those of Sintegaglia. This town and fortress were founded in the latter half of the twelfth century by the Lombard league, formed to oppose the emperor Frederic I. The French made themselves masters of the town and citadel in the war of the Spanish succession, but were dispossessed by prince Eugene in 1706. In the invasion of Italy by Buonaparte in 1796, the fortress of Alessandria was given up to the French conditionally, by the armistice of 28th April, and definitively by the treaty of 15th May. It remained in their hands above three years ; but after the defeat which the French sustained at San Guiliano, on the 25th June 1799, it fell into the power of the allied Austrian and Rus- sian armies. It had been furiously bombarded during six days, and was about to be stormed when it surrendered by capitulation ; and so ob- stinate had been the resistance, that of 103 can- non found by the allies, only six were fit for use. After the decisive battle of Marengo, in 1800, Alessandria fell into the hands of the' French, in whose possession it remained till 1814, when it once more changed masters, on the restoration of the king of Sardinia to his Italian states. Dur- ing this interval it was the capital of the depart- ment of Marengo, and was greatly strengthened in its fortifications. Thirty-eight miles south- west of Milan, and forty-four miles east of Tu- rin. Long. 8►►. 40'. E. Lat. 44►►. 57'. N.

ALESSIA, or ALESSIO Lissus, a town of European Turkey, in the province of Albania, seated near the mouth of the Drino, forty miles west of Albanopolis. It is famous for the castle, where Scanderberg died, and was buried in 1467, for whom the Turks have such a veneration, that they carry away pieces of his tomb as relics, and esteem them effectual charms to animate their courage in battle. Lon. 19►►. 36'. Lat. 42►►. 8'N. ALESSIO, a town of Turkish Dalmatia. in

Hungary, seated on a mountain, twenty-five miles from Spalatio. It is a bishop's see.

A L'ETENDARD, in music, to the standard ! a military signal sounded by the trumpet, for the troops to gather round the standard, on the at- tack of an enemy.

ALETHA, a town of France, seated on the river, and in the department of Aude, arrondis- sement of Limouse, thirty-five miles south of Car-

cassone, and thirty-seven miles south-west of Narbonne. It is remarkable for its baths, and for the grains of gold and silver found in a stream which runs from the Pyrenean mountains, at the foot of which it stands.

ALEUROMANCY, from aXivpov, meal, and Havrtia, divination, otherwise called alphitoman- tia, and crithomantia, an ancient kind of divina- tion performed by meal or flour.

ALEUTIAN ISLES.

ALEUTIAN, ALETJTSKIE, or ALEUTIC IS- LANDS, of aleut, a bold rock, a name given, principally by Russian navigators, to a chain of islands, extending from the promontory of Alaschka, in North America, to Kamtschatka, in Asiatic Russia. They are between forty and fifty in number, and include what were

generally known in our English geographical works by the name of the Fox islands, Behring's and Copper islands, and the group formerly divided into the Aleutian and Andrenovian Isles. Behring's and Copper islands are still excluded from this de- nomination by some writers, but as the entire chain is evidently connected, and as they appear to be but a continuation of the immense moun- tains of the neighbouring continents, we shall find it most convenient, in common with the most recent Russian geographers, to consider them under this one appellation. In this extended view of them, these islands are scattered over that portion of the Northern Pacific, nearly 1500 leagues in circuit, communicating with the Northern ocean by Behring's straits. All the settlements hitherto formed upon them belong to Russia, and to that nation must be attributed the honour of their first discovery.

In the year 1725, Peter the Great, whose mind was strongly excited by the question then agitated, relative to the distance between the American and Asiatic continents, drew up in- structions with his own hand, for the conduct of an expedition of discovery to this region, which was to be entrusted to the command of an officer named Behring. In 1728, the deputation sailed from the mouth of the Kamtschatka river, and coasted the eastern shore of Siberia as far as 67►►. 18'. north latitude; but making no discovery of the opposite continent, in 1729 he again reiterated his attempt, but with no better success. The same illustrious officer, deputed in 1741 by the empress Anna, and attended by another vessel under the command of Tschirikoff, not only ac complished the primary object of his mission, but led the way to all the subsequent important discoveries of the Russians in these seas. His discoveries in the course of the voyage, aided by the recent conquest of Kamtschatka, have facili- tated the solution of some of the most interesting problems of modern geography. Tschirikoff is said to have discovered the coast of America in the 56th degree of latitude ; and Behring, who was separated from his companion in a storm, saw it in latitude

58►►. 28'. ; and in his return was driven upon the island which now bears his name, and where he died.

The two uninhabitated islands, Behring's and Copper island, appear to have been first visited in 1745 ; and becoming known to the natives of Kamtschatka, were largely resorted to for the sake of the valuable furs which they afforded. The Eudokia, in the year above alluded to, was fitted out by private adventurers, and the com- mand given to Michael Nevodtsikof, a native of Tobolsk. Other adventurers penetrated as far east as the Fox Islands. One of the most re- markable of these voyages was that of St. An- drean and Natalia, fitted out by the merchant Andrean Tolstyk, which sailed from the Kamt- schatka river on the 27th September, 1760, and reached Behring's Island on the 29th. Driven ashore by a violent autumnal storm, they were obliged to pass the winter ; but putting to sea on the 24th of June the following year, they passed by Copper Island, 150 versts from the former, and steered south-east to the Aleutian Isles. These they reached on the 6th of August, and thence proceeded on the 19th, in quest of more distant islands, for the purpose, if possible, of exacting tribute. Steering away to the north- east, and north-east by east, they were driven by a gale of wind upon an island indented by a safe bay, where they anchored in safety. This they called Ayagh, or Kayaka, and another, about twenty versts distant, Kanaga. Four other islands were afterwards discovered. This group, north-west of the Fox Islands, were, in honour of the vessel which made the discovery, called the Andreanofskie, or Andrenovian Isles. From the year 1758 to 1760, though several vessels visited the Fox Islands, and obtained valuable cargoes of sea-otter and fox skins, little informa- tion was obtained. In 1762, four vessels sailed from the Fox Islands, of which only one returned, and the natives seemed exceedingly hostile.

For the better discovery of this archipelago, Captain Krenitzin and lieutenant Levashef sailed from the mouth of the Kamtschatka river, by order of the empress Catharine, to examine the chain of

Aleutian Islands. Having care- fully surveyed the whole of this archipelago from Behring's island to the promontory of Alaska, and after spending the winter in the Fox Islands, this expedition, in the autumn of 1769, returned to Kamtschatka. But our im- mortal Captain Cook communicated more sci- entific information respecting these islands, and also of the coasts of the two continents, than all the previous voyages of the Russians put to- gether. During his third and last voyage in 1778, he surveyed the eastern portion of this

archipelago with his usual energy and perse- verance, and enriched the science of geography with many new discoveries.

In the year 1785, the Russians instituted a fresh expedition, under the command of Captain Billings, an English naval officer, in the Russian service, who had accompanied Captain Cook in his last voyage to the Pacific Ocean. This at- tempt is ascribed to the suggestion of Mr. Coxe, then at St. Petersburgh, and whose account of the Russian discoveries between Asia and Ame- rica, had attracted the attention of the Russian government. During this voyage, which was not completed till 1796, the whole chain of the Aleutian Isles was explored; and some parts of the western coast of America. The details are published in the narratives of Martin Sauer, secre- tary to Captain Billings, and Admiral Sary- tochef. A few years after the return of this expedition, the Russian American Company turned their attention towards the best means of supplying the north-west American settlements with provisions, &c. It was resolved to try whether the conveyance by sea would not an- swer a better purpose, than the tedious journey by land to Ochotsk. To ascertain the prac- ticability of this hypothesis, Captain Krusenstern, who had long served in the British Navy, sug- gested the plan of an expedition from Cronstadt, round Cape Horn, to the Aleutian Islands, and the north-west

coast of America. This plan meeting the approbation of count Romanzof, the minister of commerce, and Admiral Mordwinof, minister of the marine, obtained the sanction of his imperial majesty ; and two vessels called the Nadeshda and the Neva, were accordingly pur- chased in London for the voyage. The command of the expedition devolved on Captain Kru- senstern, the original author of the plan, subor- dinate to whom, C ap tain Lisiansky was appointed to the Neva. These two vessels sailed in com- pany from Cronstadt in the month of August, 1803, and proceeded to the Brazils, whence they sailed round Cape Horn to the Sandwich Islands where they separated ; the Nadeshda proceeded to Japan and China, while Captain Lisiansky, in the Neva, proceeded to Kadyak and the Ame- rican settlements. Upon the details of this voyage our limits do not allow us to enter, but full and interesting accounts have been published by the two captains, and also by Dr. Langsdorff, who went out in the expedition in the quality of a physician.

The westerly part of the Aleutian chain con- sists of those islands which lie nearest to Kamt- schatka. The first is Commodore's, or Bearing's Island, situate, according to Captain Cook, in fifty-five degrees of latitude, and sixty of lon- gitude from the harbour of Petropaulowska, in the bay of Awatska. It is from seventy to eighty versts long, and stretches from north-west to south-east. Ten leagues from the south-east point of this island, in the direction of east by south or east-south-east lies Mednoi Ostroff, or Copper island, so called for the large masses of native copper found upon the beach. Still further to the east lie three small islands, Attak or Attoo, Semitshi, and Agattoo, the Plishnie Ostrova, or nearest [Aleutian Isles of the Rus-

sians. These islands are situated between the fifty-fourth and fifty-fifth degrees of north latitude. Attak is the largest ; nearly of the same shape as Behring's Island, but more extensive, stretch- ing from east to west, to the length of eighteen leagues. It has two harbours, one of which lies on

the southern coast. From the eastern ex- tremity of the Aleutian Islands, properly so called, another group runs south-eastward, con- tinuing the chain as far as the western extremity ot the Fox Islands. These are called the An- dreanofskie Islands ; but we have less accurate information respecting the central part of the chain, than of the eastern and western groups. They are said to -lie within the fifty-second and fifty-fourth degrees of north latitude, but being of inconsiderable extent and importance, are sel- dom visited by navigators. The most remarkable are, Takavangha, which has in its centre, near the northern coast, a burning mountain ; Kanaghi or Kanaga, which has likewise a high smoking mountain; Ayag, which has a number of good bays and anchoring-places ; and Tshetchina, on which a high white mountain overtops the rest, apparently an extinct volcano, especially as there are still hot springs on the island. Atshak, or Atchka, and Amlac, are also usually reckoned among the number of the Andrenovian isles, of which the former greatly resembles Copper Island, and is prgvided with a commodious har- bour.

The most important and best explored portion of this archipelago is the easterly group, called by the Russians Lyssie Ostrova, or the Fox Islands. Of these the most considerable are, Umnak, Unalashka, or Oonalashka, and Uni- mak ; the last of which is separated by a narrow strait from the promontory of Alaska. Beyond these, to the north-east, lies the large island of Kadyak, or Kodiak, generally included in the group called Schumagin's Islands.

The whole of these islands are bare and moun- tainous; their coasts are rocky and surrounded by breakers, which render their circumnaviga- tion exceedingly dangerous. The land rises im- mediately from the coasts to steep bald moun- tains, towering above each other higher and higher, and assuming the appearance of chains of mountains, with a lengthwise direction of the island. Springs take their rise at the bottom of the mountains, and either flow in broad and rapid streams into the neighbouring sea, or, col- lecting in the rocky vales and glens, form

ample lakes, sending off their superfluous waters, by natural canals, into the adjacent bays. They bear evident marks of volcanic formation ; and several of them have still active volcanoes, which continually emit smoke, and sometimes flames. No traces of metals have been discovered, on these islands ; but carneoles and sardonyxes are common. Their soil is similar to that of Kamt- schatka; and affords the same kinds of edible berries and roots ; some few vegetables, howevei , seem to be of foreign origin. No wood of any considerable growth has been perceived upon any of these islands, except a small quantity on Unalashka. The land animals are bears, wolves, river-otters, river-beavers, and ermines. The sea-otter, so valuable on account of its skin, is

*frequently caught; but the number of these animals, is much diminished. The Fox Islands furnish a great variety of foxes, of various colours, black, grey, red, and brown. The sea abounds
उ with all sorts of seals, dolphins, and whales, and occasionally sea-lions and porpoises are seen. Salmon are caught in great abundance and variety ; and halibut of an immense size are fre- quently taken. The winter upon these islands is mild, but the summer is equally short and unpleasant. The inhabitants are numerous, and tributary to Russia, from whence vessels are sent out, and establishments formed upon these islands on account of the very profitable chase of sea- otters and foxes for the supply of trade,*

Unalashka, one of the largest of the Fox Islands, as visited by Captain Cook during his last voyage, merits more particular attention. This island stretches from north-east to south-west, and is from seventy to eighty versts in length, but of very unequal breadth. On the north and north- east side there are many bays and creeks, in some of which are convenient harbours. A part of the south-west shore consists of very high, steep, inaccessible cliffs ;

and another part has remain- ed hitherto wholly unexplored. The whole island consists of a mass of rocks, covered with a thin coat of earth ; the hills are of very unequal height, and are intersected by irregular valleys, the soil of which is commonly argillaceous, or an earth washed down from the hills. In the lower val- leys there is abundance of grass, and Captain. Cook was of opinion that cattle might subsist at Unalashka all the year round, without being housed. The soil, in many places, appeared ca- pable of producing grain, esculent roots, and vegetables . Wood is unknown on this and the neighbouring islands, but low bushes and shrubs of dwarf-birch, willow, and alder, are common. For all the timber used for the purposes of build- ing, &c. they are indebted to the sea, which wafts it to their shores from the continent of America. The inhabitants are rather low of stature, but plump and well shaped ; with short necks, swarthy chubby faces, black eyes, small beards, and long, straight, black hair, which the men wear loose behind, and cut before, but the women tie up in a large fold. With regard to their character, Captain Cook describes them as the most inoffensive people he ever met with, and perfect patterns of honesty. But, according to the accounts of the first discoverers, this does not seem to have been their original disposition ; and recent travellers have observed, that although generally kind-hearted and peaceable, yet, when roused to anger, they become exceedingly male- volent, indifferent to all danger, and even to death itself. The clothing of the men and wo- men is nearly the same, and consists of a sort of frock or shirt, called parka, fastened round the neck with a broad stiff collar, and descending below the knee. These garments are made of the skins of seals, prepared in a manner peculiar to themselves, and sewed together very inge- niously. Though simple in their form, they are ornamented in a variety of ways with glass beads, beaks of sea parrots, long white goats' hair, brought from Siberia, or small red feathers. Over the frock, the men sometimes wear a kam-

leika, or rain-garment. This is made of gut, which is water-proof; and has a hood to it, which draws over the head, and is tied under the chin. When on shore, the men wear boots, made of seal's skin ; and they all have a kind of oval snouted cap, made of wood, with a rim to admit the head. These caps are dyed with green and other colours, and are fancifully ornamented with ivory figures, carved from the teeth of the sea-cow, with glass or amber beads, and with the bristles from the beard of the sea-lion. They make use of no paint ; tattooing was formerly very much in use among them, par- ticularly among the women ; but their inter- course with the Russians has rather brought this practice into disrepute. Both men and women, particularly the latter, bore the under lip, and insert pieces of bone or other orna- ments ; but this practice has also decreased of late. The women generally go barefooted; wear bracelets of glass beads just above the wrist and ancle-joints, and are fond of rings upon their fingers. The principal food of these islanders consist of fish, sea-animals, birds, roots, and ber- ries. They dry large quantities of fish in sum- mer, which they lay up in small huts for the winter. Roots and berries are also preserved for the same season. Of fish, the most common and abundant are several sorts of salmon, cod, herrings, and halibut. The last is the most es- teemed, and is sometimes caught of an enormous size. The fat of the whale is also a favourite species of food ; and when it grows old and ran- cid, serves to light and warm their houses. They eat almost every thing raw ; but of late, have learnt from the Russians some simple modes of cookery. Vegetable food is not held in much esteem by the Unalashkans. That sweet plant, the Siberian parsnip, (heracleum Sibericum,) is but little eaten, any more than the bulb of the saranna, or Kamtschadale lily. Edible berries abound ; as bramble-berries, cran-berries, hurtle- berries, heath-berries, and others. The Russians have begun to plant potatoes, which succeed extremely well, and are much liked by the peo- ple. The habitations of the Unalashkans are holes dug in the earth, covered with a wooden roof, over which they throw grass and

earth ; so that a village has the appearance of an European church-yard full of graves. The entrance into these huts is from the roof; but some of the largest which are inhabited by the Russians, have a door in the side. Light is also admitted by the roof, through an opening or window, covered with seal's entrails, or dried fish-skin. Several divisions are made within, by means of seal-skins or straw-mats, which separate the apartments of the different families. Their house- hold furniture consists of bowls, spoons, buckets, piggins or cans, matted baskets, and perhaps a Russian kettle. The knife and the hatchet, (o rather a small flat piece of iron, made like ar adze, by fitting it into a crooked wooden handle, are the only iron tools found amongst them. Their instruments and utensils are, however made with the greatest neatness, and the most exact symmetry. The needles, with which they sew their clothes and embroider, are made of the wing-bone of the gull, with a very nice cut, round

the thicker end, instead of an eye, to which they tie the thread so skilfully, that it follows the nee- dle without any obstruction. Their thread is made of the sinews of the seal, the fibres of which they split, to the thickness which each sort of work requires. The women are the tailors, shoe- makers, and boat-builders, or boat-coverers. At their leisure hours, particularly in long winter evenings, they make fine mats, little baskets, and pocket- books of straw, that are both beautiful and strong. Captain Cook observes, there is a neatness and perfection in most of their work, that shows they neither want ingenuity nor per- severance. Their houses have no fire-place, but are both heated and lighted by lamps. These are made of a flat stone, hollowed on one side like a plate ; in the hollow part they put the oil, mixed with a little dry grass, which serves the purpose of a wick. They produce fire both by collision and attrition ; the former by striking two stones one against another,

one of them being previously rubbed with brimstone. The latter with two pieces of wood, one of which is a pointed stick, and the other a flat piece. The pointed end of the stick they press upon the other, and whirling it nimbly round as a drill, in a few minutes it produces fire.

The principal occupations of the Aleutians, are fishing, hunting, and preparing the necessary implements for both, Their baidars, baidarkas, or boats, resemble the canoes of other savages, and consist of a skeleton of wood, over which is stretched a leather covering of seal's skins. The boats of the Unalashkans are superior in point of beauty to those of any of the other islands; some of them appear so transparent, that one might trace the formation of the inside, and the position of the rower. In their form, they are long and narrow, and commonly hold only one person ; sometimes they are made to hold two, and occasionally three ; each person sitting in a round hole just fitted to the size of the body. The whole canoe is so light, that, even when sodden with water, it may be carried in one hand, and is impelled by means of double paddles, seven or eight feet long, which are managed with great dexterity. Experienced navigators sometimes venture out, in these boats, a considerable way to sea, even in stormy weather. The darts, or javelins, with which they kill their game, are adapted with the greatest judgment to the different objects of the chase. For land animals a single barbed point ; for birds, three points of light bone, spread, and barbed ; for seals, &c. a false point, inserted in a socket at the end of the dart, which parts, on the least effort of the animal to dive, remaining in its body. To this barbed point, a string of considerable length is fastened, and twisted round the wooden part of the javelin. This serves as a float to direct them to the seal, which, having the stick to drag after it, tires, and soon becomes an easy prey. These darts are not shot from a bow, but slung from a small plank, about eighteen inches long and two inches broad. In order that the weapon may be held the faster, they have a

sort of handle at the lower end, and an opening through which the fore-finger is thrust. At the other end is a small channel, into which the javelin fits with a little knob, which

serves to retain it. When the javelin is to be thrown, the plank is held horizontally, and the aim being taken, the'weapon is directed by the middle finger and thumb. This is done with so much dexterity, and the motion given to it is so powerful, that the object aimed at is rarely missed, and even whales are thus killed without any other weapon.

Their favourite amusement is dancing, in which, however, they do not excel. Their music is exceedingly rude, consisting of a small drum or tambour, and a rattle made of the bladder of a sea-dog, filled with peas or small pebbles. ??? These little drums, however, are frequently or- namented with ingenuity and elegance. They also cut out from the teeth of the sea-cow, small figures of men, fish, sea-otters, and other objects, in a manner that appears very extraordinary, considering that the sea-cow's teeth are much harder than ivory, and that they have no proper tools to work with.

The religion of these Islanders, consists in su- perstitious observances, and a belief in charms. Many of them have been baptized, and are no- minally professors of the Greek faith ; of which, however, they understand nothing more than making the sign of the cross. They have no marriage ceremony ; every man may have as many wives as he can conveniently maintain ; if his means decrease, he sends first 'one, then another, back to their parents ; and the women thus dismissed, look out for other husbands. Sometimes the same woman lives with two hus- bands ; and it is not uncommon for men to sell or exchange wives. Boys, if they happen to be very handsome, are often brought up entirely in the manner of girls ; instructed in the arts of female blandishment ; and used as concubines. This shocking, unnatural, and immoral practice, has prevailed here even from the remotest times. Such men are known under the name of

schc- pans. The bodies of the dead, especially of the men, were formerly interred in places set apart for the 'purpose, and with particular ceremonies. Their best javelins and clothes, with a portion of train-oil and other articles of food, were laid with them in the grave; and sometimes even slaves of both sexes were slaughtered upon the occasion. These customs are now, however, entirely laid aside.

The population of Unalashka, and the neigh- bouring islands, appears to have been formerly considerable, amounting to several thousands. ??? In 1790, Sarytcheff reckoned it at 1300. Ac- cording to the most recent accounts, it does not appear to amount to more than 300. This rapid depopulation is ascribed partly to the practice of sending the best hunters from hence to a dis- tance, to chace the large sea-otters, few of whom ever return again to. their families ; and partly to the state of oppression under which the natives live, and the change which has taken place in their modes of living. Captain Cook seems to consider the natives of these Islands as originally of the same extraction with the Greenlanders and Esquimaux. When first discovered by the Russians, they were under the government of Toigans, or chiefs, who, however, possessed little distinction or dignity, and had no revenue. A

present they are subject to the Russian settlers. Throughout the whole of the Aleutian Islands, on the island of Kadyak, and the western coast of America, the Russians have formed settlements for the purpose of hunting, and collecting furs ; with which they carry on a lucrative commerce, particularly with the Chinese. The most valua- ble fur is that of the sea-otter. Besides the sea- otter, there are a number of foxes, especially on the Fox Islands. The black foxes are not so. valuable as those of Siberia. The

arctic, or ice-fox, also called the rock fox, and the blue fox, from the natural colour of the fur, which is of a bluish- grey, is very common. From the first discovery of these islands by Behring and Tscherikoff, in 1741, the fur- trade was carried on for a long pe- riod by private adventurers; and appears to have been productive of great abuses. The natives were frequently treated in the most barbarous manner; and the keenness displayed by these rapacious hunters, threatened to extirpate the race of ani- mals upon which the trade depended. Convinced of the extreme necessity of putting a stop to this destructive plan of proceeding, Schelikoff, an in- telligent Russian merchant, took considerable pains to unite the different partakers of this trade into a company, in order that it might be con- ducted upon some plan that might prove advan- tageous to all parties. In 1785, he succeeded in joining company with the Golikoffs. They in- creased their capital, and fitted out several ships which the enterprising Schelikoff commanded in person. Factories, protected by forts, were es- tablished in almost all the islands, as far east- ward as Kadyak ; and for several years they con- tinued a lucrative trade, and acquired consider- able wealth. The success of this connexion in- duced several merchants to unite like Schelikoff and the Golikoffs ; and, in this manner, was laid the foundation of the present Russian American Company. The irregular manner in which the trade was still carried on, and the cruelty which was frequently exercised towards the natives of the islands, drew upon them great censure : inso-

much, that the Emperor Paul determined to put an end both to the company apd the trade. This determination would have been infallibly carried into effect, but for the interference of M. Von Re- sanoff, who had married Schelikoff 's daughter, and was personally interested in the continuance of the American company. By means of his ac- tive interposition, the new established company was, in 1799, confirmed, with considerable pri- vileges. The late Emperor, on his accession, interested himself

very much in behalf of the company, of which he became a member, and in- duced many of the nobility to follow his example. By means of the active superintendence of the minister, count Romanzoff, and the commer- cial counsellor Benedict Cramer, this branch of Russian commerce has undergone several advan- tageous changes ; but, according to recent ac- counts, many abuses still remain. The miser- able situation of the Promiischleniks, or fur col- lectors, themselves the slaves of the company's agents, and exercising, in their turn, the most op- pressive tyranny over the wretched Aleutians, has been represented by several eye-witnesses in the most deplorable colours. It is to be hoped, that their situation may attract the attention of the Russian government. Notwithstanding the cruel- ties inflicted on them, these people are said to be very hospitable in their dispositions, and to re- ceive their friends with some peculiar marks of respect. Attired in their best apparel, they go out beating drums to the shore, and the host and hostess rush out into the sea as high as their breasts, and draw the canoe towards the land. They then assist the guests to disembark, and bear them on their backs to the place of re- ception. The host tastes every thing before he presents it to the company ; and after the feast they retire to their favourite amusement. ??? Miil- ler's Samlung Russischer Geschichte. v. iii. Coxe's Account of the Russian Discoveries. Tooke's View of the Russian Empire. Voyages and Travels of Billings; Sarytcheff; Cooke, Langsdorff, &c.

ALETRIS, from aXtrpvw or aXtw, to grind, in botany, a genus of the hexandria monogynia class and order, of the natural order of lilia or liliaceae, the coronariae of Linnaeus and aspho- deli of Jussieu. Its characters are, no calyx ; COR. one-petalled, ovate-oblong, hexangular, fun- nel-shaped, semisexfid very much wrinkled, divi- sions lanceolate, acuminate, spreading, erect, and permanent ; STAM. awl-shaped filaments of the length of the corolla, inserted into the base of the divisions, antherae oblong and erect; PIST. an ovate

germ : STYLE subulate, of the length of the stamens, STIG. trifid ; PERICARP, an ovate, three- cornered, acuminate, three-celled capsule; and the seeds are very many. Professor Martyn enumerates eight, and Gmelin nine species, viz. 1. A. farinosa, American aletris, stemless, leaves lanceolate, membranaceous, flowers alternate, growing in North America, was cultivated here in 1768, by Mr. Miller. The natives frequently use it a bechic and incisive in coughs and in the pleu- .sy. 2. A. Capensis, waved-leaved aletris vel- tlieimia of Gleditsch, stemless, leaves lanceolate,

waved, spike ovate, flowers nodding; natives of the Cape of Good Hope, flowering here from November to April, and brought over in 1768, by Mr. W. Malcolm. 3. A. glauca, stemless, leaves lanceolate glaucous, flowers, nodding with a spreading border; a native of the Cape of Good Hope, flowering in January, and intro- duced in 1781, by Mr. J. Wynch. 4. A. uvaria, aloe uvaria of others, great orange-flowered A. stemless, scape longer than the sword-shaped keeled leaves; a native of the Cape of Good Hope, cultivated at Chelsea in 1707, and flow- ering in August and September in large spikes. There is a variety with narrower leaves, and longer spikes of flowers. 5. A. pumila, small orange-flowered A. stemless, scape shorter than the linear, sharply- heeled leaves ; a native of the Cape, introduced in 1774, and flowering from September to November. 6. A. hyacmthoides, stemless, leaves lanceolate, fleshy, flowers ger- minate ; having two varieties. 7. A. fragrans, sweet scented aletris, caulescent, leaves lanceolate, loose; found in Africa, and cultivated in 1768

by Mr. Miller. 8. A. cocbincliensis, caulescent, leaves lanceolate-linear, reflex, flowers panicled ; a native of Cochin china, the juice of the leaves is used to dye green, and the flowers are eaten. The eighth species of Gmelin is A. japonica, stem- less,

with leaves petiolated, ovate, lanceolated, seven-nerved, and spiked flowers. The ninth species is A. aurea.

ALEURITES, AXsrpirjjff, farinaceous, of oXtvpof, meal, parts of the tree having a meal scattered over them ; in botany, a genus of the moncecia monadelphia class and order, of the natural order of tricoccae and euphorbiae of Jussieu, the characters of which are, that the flowers are male and female ; CAL. of the male is a PERIANTH, three cleft, very short, clefts oval, and obtuse, COR. has five petals, oblong, spreading, obtuse : much longer than the calyx ; the nectary has five scales somewhat cornered, very short at the bases of the petals : STAM. nu- merous filaments, connate into a conic colum- nar receptacle; antherae, roundish. The female flowers are few, in the same corymb ; the calyx, corolla, and nectarium, as in the male, but larger ; the pistillum has a germ conic superior ; the style none, the stigmas two, very short ; the pericar- pium a large, globose, two-seeded berry ; the seeds are two, globose, coated with a double bark. There is one species, viz. A. triloba, which is a tree of the islands of the South Sea.

ALEWIFE FISH, clupea tyrannus. Among the different species of fish that resort to York River, in Virginia, about the month of March, the alewife or oldwife, called the bay alewife (clupea non descripta) arrives in very consider- able shoals, and in some seasons their number is almost incredible : they are of the size of a large herring, and are principally distinguished from that fish by a bay or red spot above the gill-fin. When caught, from March to May, full roed and fat, they are as good for the table as the herring. In this season, each of the fish has in its mouth

an insect, fixed with its back downwards, and firmly holding itself by its sixteen legs to the pa- late of the fish : it is two inches long, and called by the fishermen the louse : it is with difficulty that it can be separated, and perhaps never with- out injury to the jaws of the fish, though that may be

from the hasty aukwardness of the fisher- men ; from which circumstance, it is, among the many superstitions current with that class of men, considered essential to the life of the fish : for when it is taken out, the fish, though returned to the river, is incapable of swimming, and soon dies. But as this is the case with every fish on whose mouth or gills any force has been used by heed- less fishermen, such as the extracting a hook or drawing out an insect, we must attribute its death more to the injury received than to the loss of its companion. It is as yet uncertain whe- ther the latter obtains its post by force or favour ; wJhether it is a mere traveller or a constant resi- dent, or what may be its business where it is found. There are some other particulars with regard to the natural history of this fish and its insect, which it may not be uninteresting to men- tion. The alewife comes from the ocean into the rivers of Virginia about the same time with the chad, and travels upwards from the beginning of March to the middle of May. As long as they are caught on their passage up the river they are full of roe ; and every fish has the insect clasped to its mouth. A respectable gentleman who amused himself with fishing forty years, has de- clared, that in all that time he never saw a bay alewife without the louse. The chad returns from the fresh water lean, and out of season, about the end of May or beginning of June, and continues descending during the remaining sum- mer months : no one then values it, being un fit for use. Whether the bay alewife returns with the chad is not known, for after June the fishing for them is discontinued.

ALEXANDER.

ALEXANDER, (king of Macedon,) surnamed the GREAT, was the son of Philip of Macedon, by his wife Olympias, daughter of Neoptolemus king of Epirus. lie was born, according to the most authentic accounts, in the 106th Olympiad, B. C. 356, in the month Boedromion, and the night the temple at Ephesus was burnt. Alexander was contemporary, in his youth, with some of the greatest men in Greece,

and had the happiness to be placed under the care of Aristotle as his tutor, who became deservedly his friend. ‘ I am indebted,’ he once observed, ‘ to Philip, my father, for living; to Aristotle for living well.’ It is presumed that the poems of Homer con- tributed much to produce his passion for military glory, especially as the character of Achilles seems to have been selected by him for a model. While very young, he gave several proofs of manly skill and courage ; one of which, the breaking in of his fiery courser, Bucephalus, which had mastered every other rider, is men-

tioned by all his biographers as an incident which convinced his father Philip of his uncon- querable spirit. His progress in every kind of science was rapid, and corresponded to the natural talents which he possessed, and the dis- tinguished attention and abilities of his tutor. He devoted himself with the greatest assiduity to the study of metaphysics, mathematics, and morals ; and was no less solicitous to be a master of rhetoric both in the theory and practice of it. To his solicitude in this respect we owe Aris- totle’s treatise on rhetoric, which, with a jealousy unworthy a great mind, he requested the author not to communicate to any but himself. He had also a taste for the arts in general ; he knew their importance and utility ; and music, painting, sculpture, and architecture, flourished in his reign, because they found in him a competent iudge, and, as some say, a munificent protector. In early life he manifested a genius formed for great and splendid actions. When he conversed

with the Persian ambassadors at his father’s court, at the age of no more than seven years, the subjects of his enquiry were, not the palaces and retinue of

their king, but the character and manners of their sovereign, the number and dis- cipline of his army, the road that led into upper Asia, and 'the number of days' march from Macedonia to Susa.' When he was requested to enter his name among the Olympic competi- tors, he replied, ' So I would, if I were to have kings for antagonists.' On the occasion before mentioned, of his taming the famous horse Bu- cephalus, which none of his father's grooms would venture to mount, Philip was so delighted that he said to him, ' My son, seek a kingdom more worthy of thee, for Macedon is below thy merit.' His youth is said to have been distin- guished by temperance, chastity, and self-conv roand.

His dutiful respect for his mother, whom Philip divorced, produced a disagreement be- tween him and his father ; and was increased by a suspicion, which was entertained, that he would be disinherited, in favour of one of Philip's children by another wife. When only sixteen years of age, he was appointed regent of Mace- donia during his father's absence ; on which oc- casion he manifested such prudence and bravery, that he was afterwards employed in several military enterprises, and is said to have once preserved the life of his father by his resolute and seasonable interposition. In the battle of Chaeronea, at the age of eighteen, he signalized himself by his valour, and greatly contributed to the victory. Before Philip undertook his pro- jected expedition into Asia, he recalled his son from Epirus, whither he and his mother had re- tired, and was apparently reconciled to him : but when his father was assassinated by Pausanias, Alexander and his mother were suspected of being privy to the conspiracy. The first act of his reign, however, was the just punishment of the murderers. In the twentieth year of his age, B. C. 336, he succeeded to the throne of Mace- don ; and commenced his military career by marching into Thessaly to overawe the Greeks, who were disposed to emancipate themselves from the Macedonian yoke, and by causing At- talus, who encouraged their revolt, to be put to death. Having succeeded in this enterprize, he

marched into Thrace, defeated the Triballi, who inhabited the modern Bulgaria, and drove them beyond the Danube ; he also made the Gete to fly at his approach ; subdued several barbarous nations, and established a treaty of peace, in which the Celtes, a fierce and high-spirited peo- ple, and others, were comprehended. During his absence in these expeditions, the cities of Greece, instigated by the eloquence and influence of Demosthenes, formed a powerful alliance against him. The report of his death had induced the Thebans to revolt; and, having murdered two officers of the Macedonian garrison, they were preparing to besiege the citadel. Alexander, receiving intelligence of this event, hastened to Greece, B.C. 335, passed the straits of Thermo- pylae, and entered Boeotia before the Thebans were undeceived as to his death. To those who accompanied him, he spoke in the following

manner : ' Demosthenes, in his orations, called me a child when I was in Illyria and among the Triballi ; he called me a young man when I was in Thessaly ; and I must now shew him, before the walls of Athens, that I am a man grown.' The city of Thebes, though bravely defended by the inhabitants, was at length taken by storm, the buildings were rased, the house of Pindar the poet excepted, from a respect to its owner ; the inhabitants were sold for slaves, and the lands distributed among the soldiers ; this con- duct struck the Greek states with terror. Athens sent a deputation to Alexander, imploring his clemency ; but he demanded the surrender of ten orators, whom he supposed to have been the chief instruments in forming the league which Philip his father had defeated at Chajronea. This was the occasion on which Demosthenes recited to the people the celebrated fable of the Wolves and the Dogs.

Alexander having relented, by the interference of Demades, and waved the enforcement of his demand, re-established the tranquillity of Greece, and went to Corinth, where his office of generalis- simo was recognized and settled. At yEgea he held a grand council of state and war, in order to deliberate upon his expedition into Asia. An- tipater and

Parmenio recommended delay, but Alexander had formed his purpose ; and having offered sacrifices, entertained his friends with feasts, and distributed among them the crown- lands, Perdiccas asked him what he had reserved for himself? ' Hope,' replied Alexander. Ac- cordingly he assembled his army, and prepared for his march into Asia. When one of his at- tendants asked him why he succeeded so well in quieting the dangerous tumults in Asia? he answered, ' It was by delaying nothing.' In the twenty-second year of his age, B. C. 334, Alexander crossed the Hellespont into Asia, with an army of about 30,000 foot, and 4000 or 5000 horse. Parmenio, who commanded the infantry, passed over with the greatest part of the army from Sestos to Abydos; and Alexander crossed first the Strymon, afterwards the Hebrus, and after twenty days march arrived at Sestos. Hav- ing prepared for his expedition by a variety of superstitious ceremonies, to which he was at- tached, he proceeded to Ilium, where he sacrificed to the heroes buried in the neighbourhood, and particularly to Achilles, to Minerva, and to the ghost of Priam. In his march he preserved Lampsacus, which he had determined to destroy, on account of its adherence to the Persians ; and this he did in consequence of the interposition of Anaximenes. ' I swear solemnly,' says Alex- ander to Anaximenes, who met him on the road, and the object of whose interview he suspected, ' that I will not do what you desire me.' ' My request, then,' said the old man, smiling, ' is, that you would burn Lampsacus.' The Persians collected a large force to meet him on the banks of the river Granicus, May 22, B.C. 334; but after an obstinate resistance, they were routed with great slaughter. The consequence of this victory was the surrender of Sardis, the chief town of Lydia, and the possession of the whole country as far as the river Hermus. Our con- queror then proceeded to Ephesus, and restored

tne democracy ; and by an edict established the popular government in all the Greek cities. At Miletus, which he besieged and took, he dis- missed his fleet, and advanced to the siege of Halicarnassus, which was abandoned by the Per- sians, and then to Tralles, which he took and le- velled with the ground. Having demolished Halicarnassus, he appointed Ada, who claimed the title of queen of Caria, and who delivered up to him Alinda, governess-general of all Caria ; which induced many of the princes of the Lesser Asia to revolt from the Persians, and to put themselves under his protection. Alexander in- gratiated himself with the army, by permitting the soldiers who were married to spend the win- ter with their wives in Macedonia; a practice conformable to the law of Moses, Deut. xxiv. 5., and which Aristotle probably learnt of some Jew, and recommended to his pupil. Whilst the king was busily preparing for the next campaign, an unsuccessful attempt was made upon his life by the corruption and treachery of an officer of his army.

The campaign, howevef, was opened early in the spring; and Alexander, taking possession, in his march, of the cities of Lycia and Pamphylia, proceeded to Phrygia ; and at Gordium, the ca- pital, he was desirous of seeing the famous cha- riot to which the Gordian knot was tied. The oracle had foretold, according to an ancient tra- dition of the country, that the man who could untie it should possess the empire of Asia: Alex- ander, persuaded that this prediction related to himself, after many fruitless trials, exclaimed,

- *It is no matter which way it be untied,' and cut it with his sword. Having subdued Paphla- gonia and Cappadocia, he advanced by hasty marches into Cilicia, and arrived in the country called Cyrus's Camp. Through a narrow strait called the Pass of Cilicia, he marched with his army to Tarsus, where Parmenio arrived just in time to prevent its being set on fire by the Per- sians. Heated and fatigued by so rapid a march, he plunged into the river*

Cydnus, which ran through this city, and was instantly seized with a shivering, which his attendants thought would prove fatal. The whole army were alarmed, and they expressed their apprehensions with lamen- tations and tears ; and as the speedy arrival of Darius was expected, Alexander intimated to his friends and physicians, that the condition of his affairs would not admit either of slow remedies or timid physicians. ‘ A speedy death,’ says he,

- *is more eligible than a slow cure.’ Philip, an Acarnanian, one of his physicians, who tenderly loved him, offered to give him a dose, which would be speedy in its effects, and desired three days to prepare it. In the mean time Alexander received a letter from Parmenio, in Cappadocia, which bid him beware of Philip, Darius having bribed him by the promise of a thousand talents, and his sister in marriage. Hisconfidence how- ever, prevailed over his fears. He did not di- vulge the contents of the letter, but when Philip came to administer his medicine, he took it from under his bolster, and gave it Philip to read ; and fixing his eyes on the physician, swallowed the draught without hesitation. The effects of the medicine were very violent, but the skill of*

the physician prevailed, and Alexander in three days presented himself to the congratulations of the army.

During this interval Darius was on his march, and Alexander advanced to meet him near Issus, in the month of October, B. C. 333. The army of Darius consisted of 600,000 men ; but by infa- tuated councils, and a vain confidence in the num- ber of his forces, he had quitted an open and level country, and prepared to engage in a close and mountainous situation, where his multitude could only embarrass him in action. Victory was for some time obstinately disputed ; and Alexander received a wound in his thigh ; but at length the Persian

emperor fled. A dreadful carnage suc- ceeded, and the tent of Darius, with his mother, wife, and daughters, came into the possession of the conqueror. When Alexander had performed the offices of duty and compassion to the dead and wounded, he entered the tent where the queens were lodged, accompanied only by his favourite Hephsestion. The queens mistaking Hephaestion for the king, paid their respects to him as such ; but as soon as Sysigambis, the mother of Darius, had discovered the mistake, she fell prostrate at the feet of Alexander, and begged his pardon. The king raised her from the ground, and said to her, ' Dear mother, you are not mistaken ; he also is an Alexander.' Alexander, after this respectful visit, declined exposing himself to the danger of human frailty, and solemnly resolved never to see the queen of Darius any more.

After this victory, he pursued his march to Syria. Parmenio went to Damascus, and pos- sessed himself of the treasures of Darius. The king proposed to visit Tyre, that he might have an opportunity of sacrificing to the Tyrian Her- cules ; but the Tyrians resolved not to admit a Macedonian within their gates. Alexander therefore determined to besiege the city; and this siege, one of the most famous in history, lasted for seven months, when the place was stormed and utterly destroyed. Thousands were put to the sword, two thousand were crucified, and the rest sold for slaves. After having de- populated the city, he colonized it anew, and boasted of being its founder. This event took place, August 20th, B. C. 332.

From Tyre Alexander proceeded to Jerusalem, with the intention of punishing the Jews for af- fording relief to the Tyrians during the siege. ; but on his approach he met Jaddua, the high priest, in his pontifical habit, accompanied by the priests in their sacred vestments, and the people clothed in white. When the procession drew near, Alexander bowed before the priest, and paid him religious adoration; alleging to Parmenio, as the reason of this conduct, that the figure of a person in such

habit had appeared to him at Dium, in Macedonia, and assured him of the divine guidance, and of ultimate success m his expedition. After this interview, he is said to have accompanied Jaddua to Jerusalem, sacrificed in the temple, and conferred great favours on the Jewish nation. From Jerusalem he proceeded to Gaza, which he besieged, and took by storm : from Gaza he marched to Pelu- sium.left a garrison in it. and sailed up the Nilu. 2 M 2

lie afterwards marched through the deserts to Heliopolis, and, crossing the river, he arrived at Memphis, where he offered pompous sacrifices not only to the Grecian gods, but to the Egyp- tian Apis. From Memphis he sailed down the river to the sea, and fixed on the place where he proposed to build a new city, which has since become so famous under the name of Alexandria. Here he formed the design of visiting the tem- ple of Jupiter Ammon, situate on an oasis in the midst of the Lybian deserts. The senior priest of this temple flattered him with the title of the son of Jupiter, which Alexander joyfully accepted ; and he was farther as- sured that he should be the monarch of the world. From this journey, which had proved so successful, he returned as from a triumph; and afterwards in all his letters and decrees, used the following style : 'Alexander, king, son of Jupiter Ammon.'

Having, during his abode at Memphis, settled the affairs of Egypt, he marched in the spring towards the east against Darius. In his way to Tyre, which was the place appointed for the general rendezvous of his forces, he heard that Andromachus, whom he had appointed governor of Syria and Palestine, had been massacred at Samaria : and, in order to avenge this audacious act, he put those that were concerned in it to death, banished the rest from Samaria, supplied their place with a colony of Macedonians, and divided part of their territories among the Jews.

From Tyre he directed his march to Thap- sacus, and having passed the Euphrates, was informed of the death of Statira, the captive queen of Darius ; which detained him, till he had visited Sysigambis, administered suitable consolation, and performed the funeral obsequies of departed royalty in the most magnificent manner. Darius was much gratified by the tokens of respect which Alexander had rendered to his queen and family, and renewed propo- sitions of peace. On a former occasion, during the siege of Tyre, he had made very advan- tageous proposals, which Parmenio wished him to accept; declaring, that he would agree to them if he were Alexander. ' And so would I,' re- plied Alexander, 'were I Parmenio.' Darius now offered him all the provinces between the Euphrates and the IMlespont : but Alexander had more extensive news, and Darius prepared for battle, pitching his camp near a village called Guagamela, in a plain at some distance from Arbela. Alexander, at the sight of his formida- ble army, consulted soothsayers, offered up victims to fear, joined in prayers addressed to Jupiter, Minerva, and Victory, and afterwards went to Led, and slept soundly the whole night. Parmenio expressed his surprize in the morning, that the king should be able to sleep so calmly, just as he was going to fight a battle in which his whole fortune was at stake : ??? ' How could it be pos- sible,' replied Alexander, ' for us not to be calm, since the enemy is coming to deliver himself into our hands ?' The army of Darius consisted of 600,000 foot, and 40,000 horse ; and, according to some historians, of upwards of a million of men, and that of Alexander of no more than 40,000 foot, and 7000 or 8000 horse. The Persians

were, however, totally routed : Parmenio, who was in great danger, was rescued by Alexander in person ; and they both joined in the pursuit of Darius ; and, passing the river Lycus, marched to Babylon, which Mazaeus, the governor, instant- ly surrendered. This battle of Arbela, fought in October, B. C. 331, decided the fate of Asia.

From Babylon Alexander marched towards Susa, where

he found treasures of various kinds, and of great value. Here he left Darius's mother and children ; and having reduced the Uxii, whose country lay near Susa, and extended to the frontiers of Persia, he forced his way through the Persian straits, and arrived at Per sepolis. Having destroyed the royal palace, to which he and his companions, in a season of de- bauch, at the request of Thais (the courtezan, and Ptolemy's mistress,) set fire, and plundered the city, he pursued Darius first to Ecbatana, the capital of Media, and then as far as Rhages, a city one day's journey from the Caspian straits His progress was however interrupted by the news of the death of this monarch, who was murdered by a conspiracy of his own subjects. Having settled the government of Parthia, he reduced Hyrcania, dispersed the Mardi, took possession of Zadracarta, the capital of Hyrcania, where for fifteen days he celebrated solemn games, and offered magnificent sacrifices to the gods of Greece, and then entered and proceeded to the reduction of Asia.

The luxury of the Persians produced in his army, not only faction and discontent, but even a conspiracy against the life of the king ; Philotas, the son of Parmenio, was forced, by torture, on this occasion, to confess his guilt, and his condemnation was followed by the assas- sination of his father, at the age of seventy years. This alienated the affections of his army, and produced such a degree of dissatisfaction and disgust, that he separated those who were disposed to sedition from others, and proceeded without further delay to action. Having passed through Drangania, Arachosia, and the country of the Arimaspi, all which submitted to his arms, he arrived at a part of Mount Caucasus, called Paropamisus, where his army endured much toil and hardship ; and where Bessus, who had been a principal agent in procuring the death of Darius, and had assumed the imperial purple, under the title of Artaxerxes, had laid waste the country, in order to deprive him of pro- visions and forage. Alexander having found au opening that led into Media, directed a city to be built there, which he called

Alexandria ; and also founded several towns in its vicinity. From hence he penetrated into Bactria, and took Aornos and Bactra, the two strongest cities of the country : he then passed the river Oxus in pursuit of Bessus, who had withdrawn with a few adherents over this river to Nauticus, a city of Sogdiana. When Alexander arrived at a small city inhabited by the Branchidae, he com- mitted an act of cruelty, which though omitted by Arrian, is related by Curtius, lib. vii. c. 5. torn. ii. p. 520. ed. Snakenb, and referred to by Strabo, lib. xiv. torn. ii. p. 787. Bessus, des- poiled of all the ensigns of royalty, and strippel even of his garments, was brought in chain

before him, when he ordered his ears and nose to be cut off, and delivered him up to Oxyaites, the brother of Darius, by whom he was sent to Ecbatana, and, according to some, crucified. Plutarch relates, that being fastened by his limbs to trees which were bent together, he was torn asunder by their elastic force, when they were allowed to return to their natural position.

Our hero then pursued his march to Mara- cnnda, the capital of Sogdiana, known by the name of Samarcand, and by long and dangerous stasres advanced to the river laxartes, erroneously called by Arrian, Curtius, and others, Tanais. On the side of this river he was surprised by the barbarians, who, rushing suddenly from their lurking holes in the mountains, and fighting with bows and slings, killed many of the Macedo- nians, and took others prisoners. The king Limself was wounded in the conflict; but the Barbarians were at length defeated with great slaughter. Soon after this transaction he formed a treaty with the Abian Scythians, who, from the time of Cyrus, had lived in freedom and independence, and were distinguished by equa- lity and liberty, love of poverty and justice. \Vhilst he was forming a plan for building a city on the river

laxartes, in order to curb the nations he had. already conquered, and those he intended to subdue, he was diverted from the execution of his design by the revolt of the Sogdians and Bactrians : and, directing his arms against their combined forces, he took and destroyed in a few days seven of their cities. The capture of Cyro- polis, the most populous of the whole country, was vigorously resisted by the inhabitants ; but it was razed to the very foundations. In these dif- ferent sieges, Alexander, Craterus, and many of his principal officers were wounded. He then returned to the laxartes, marked a space of about three leagues in circumference, and built a city, called Alexandria. In less than twenty days the ramparts were raised, and the houses built ; and, in order to people it, he ransomed all the pri- soners he could find, settled in it several Mace- donians, who were worn out in the service, and permitted many natives of the country, at their own request, to inhabit it. His conflict with the Scythians, was difficult, and he granted them a peace on their own terms. The Sacae, a pow- erful nation, submitted to him, and, by an em- bassy, courted his favour.

*Alexander was now gradually throwing off both the habit and manners of a Macedonian prince, and assuming those of an eastern despot, lie was surrounded by a number of sycophants, the bane of princes, and the curse of nations, who, by indulging his humour and soothing his passions, precipitated him into extravagances, and deprived him of his former equanimity. One faithful friend, whose value was unknown, declined concurring in the general adulation. At a banquet which succeeded the sacrifices per- formed at a festival of Bacchus, the honour of ###which Alexander had transferred to the Dioscuri, i. e. to Castor and Pollux, some of the attendants extolled the actions of the Macedonian prince above those of Castor and Pollux, and even of Hercules. Clytus remonstrated, alleging, that *he could not bear to hear such indignities*

offered to the gods, or the credit of ancient he- roes undervalued, to tickle the ears of a living

prince.' As to Alexander's actions, he allowed they were great and glorious, but he maintained that they were not supernatural ; that the army had shared in them, and that they had a right to participate in the praise belonging to them. Alexander was indignant; and, as Clytus af- firmed that he had preserved the life of the king at the battle of the Granicus, stretching out his arm and saying, ' this hand, O Alexander, saved thee ;' the king rushed upon him, and endea- voured to kill him, but was prevented by the interposition of friends. At length, however, when his friends retired, he seized a lance, or long Macedonian pike, and laid Clytus dead on the spot. His passion soon subsided, and, re- flecting on the deed he had perpetrated, he in- dulged excessive grief, refused food for three days, neglected his apparel, and, as some say, would have slain himself with the same pike that killed Clytus. Flattered, however, by the army, and perverted by the doctrine of Anax- archus, of Abdera, the sophist, who taught him, ' that let a sovereign prince do what he will, all his actions are just and lawful/ he soon became more tranquil. His servile attendants attempted to persuade him that he was more than man, and that it was unjust and disloyal in his subjects not to own his divinity ; and some of them, amongst whom Anaxarchus was the chief, even endeavoured to engage the Greeks, as well as the Asiatics to pay him adoration. Alexander was pleased ; and was highly provoked by a speech of Callisthenes, the disciple and relation of Aristotle, who attempted to awaken in his mind more sober thoughts ; and it was deter- mined that when the king drank to any guest, he should immediately arise, adore him, and having received a kiss from the king, depart from his divine presence.

These produced a new conspiracy against the king, but the conspirators being discovered, were stoned to death. Callisthenes was apprehended, and, as some say, carried about in chains, till he died a natural death; but according to others, he was first racked and then crucified. The death of Callisthenes, says Seneca, Nat. Quaest. lib. vi. c. 23, is an eternal

reproach to Alexander, and a crime of so horrid a nature, that no quality, however excellent, nor military exploit, however illustrious, can ever efface its infamy.

After having surmounted his domestic dangers, he pushed his conquests into the countries north- east of Persia, and waged war with the Sogdian prince, Oxyartes. The only strong hold which the enemy could retain, was the Sogdian rock, or the rock of Oxus, into which Oxyartes had conveyed his wife and family. It was defended by Arimazes, with 30,000 soldiers under his command, and furnished with provisions for two years, and was deemed impregnable. Alexander, before he commenced the siege, summoned the garrison to submit, when the commander asked in return ' whether Alexander, who was able to do all things, could also fly ; and whether nature, on a sudden, had given him wings ?' Alexander was highly exasperated, and directing 300 mountain- eers in his army to seek a pain to the top of the

rock; sent a message to the commander, sum- moning him to surrender, and informing him ' that he had now a corps of winged soldiers.' The Macedonian camp resounded with the shout of ' victory,' and the barbarians instantly sur- rendered. Implacable in his resentment, Alex- ander ordered Arimazes and the principal nobility of the country to be scourged with rods, and afterwards to be fixed to crosses at the foot of the rock. After the reduction of this place, he marched into the country of the Paratacae, where was another fortress, called the rock of Chorianes, also deemed impregnable. Chorianes, the com- mander, was, however, induced by Oxyartes, to surrender it ; and, having been enrolled in the number of Alexander's friends, was entrusted with the charge of it, in return for which he sup- plied the Macedonians with provisions. On one of these occasions, Roxana, the daughter of Oxyartes, who,

after the death of the wife of Darius, was esteemed the most beautiful woman in Asia, fell into the hands of the conqueror ; and such was the influence of her charms, that he espoused her publicly.

India next attracted Alexander's attention ; and accordingly he dispatched a herald to Tax- iles, and the other princes on this side the river Indus, enjoining their submission; and He- phaestion, with part of the army, was dispatched to join Taxiles and the rest of the Indian princes, who were come out to meet them, and to reduce the country as far as this river. This was speedily executed. Alexander bent his march towards the river Choaspes, and reduced several places in his progress, among which Andaca was one of the most considerable. He proceeded against the Aspii and Assaceni, whom he suc- cessively defeated ; but having invested Magaza, the capital of the latter people, he was wounded in the siege, and repeatedly repulsed. The In- dians were however compelled to submit ; and by an act of perfidy, which Diodorus Siculus and Plutarch severely condemn, were all put to the sword. Ora, Bazira, and the rock of Aornus, to which the inhabitants of the latter place re- tired, were next reduced ; and Alexander pro- 'ceeded to the river Indus, where Hephaestion and Perdiccas had already provided a bridge of boars for the passage of the army. Having re- freshed his troops in the territory of his ally, Taxiles, Alexander passed the Indus, B. C. 327, and advanced forward to the Hydaspes, known in modern times by the name of the Betah or Chelum, or, according to the orthography of Major Itennell, Behut, and Ihylum, where Porus, with a large army, lay encamped to dispute his passage. On approaching the banks of this river, he found that the people with whom he had to contend were not to be subdued so easilv as the Persians. The Indians were a very tall, robust, hardy, and well disciplined people; and their king, Porus, a prince of high spirit and invincible courage. Alexander, however, after encountering great difficulties, on account of the inundations of the Indian rivers, at the time of his march, which was about the height of the rainy

season, passed the Ilydaspes ; and, having vanquished a detachment under the com- mand of the sot of Porus, who was slain in the

action, encountered Porus himself at the head of 4000 horse, 30,000 foot, 300 chariots, and 200 (or as Q. Curtius says, lib. viii. 18.) 85 ele- phants. The dispute was short and bloody. The Indians were completely routed, and Porus compelled to submit. Alexander received the king with respect. This prince being1 asked ' how he wished to be treated ?' replied, ' as a king.' ' That, for my own sake,' said Alex- ander, ' I shall do.' ' And therein,' rejoined Porus, ' is comprehended all that I can ask.' Alexander gave him his liberty, and restored his kingdom, with additional provinces; whilst Porus, in return, became his friend and aliy. Two cities were built ; one called Nicaea, and the other Bucephala, for perpetuating the re- membrance of this victory. Passing the river Acesines, he entered the territories of another Porus, and in pursuit of him crossed the Hy- draotes ; and having conquered the kingdom, he gave it to his late ally. In the midst of this success, Alexander received advice, that the Cathei, Oxydracee, and Malli, the most warlike nations in India, were confederated against him, and had assembled a great army. He imme- diately proceeded to attack them ; and, though they made a vigorous defence, they were put to flight ; and their city of Sangala taken by storm and razed. He then prepared to pass the Hy- phasis, as Arrian says, to seek new enemies. Here he was told, that after passing this river, he must travel eleven days through deserts, that he would then arrive at the Ganges, the largest river in India ; and that farther in the country were the Gangaridae and Prasii, who were collecting a great force, in order to oppose his entering into their dominions. Rumours of this kind spreading through the army, produced discontent, which unable to allay, he was constrained to terminate his progress. When his purpose was made known to the army, he was saluted with loud acclamations, 'because,' they said, 'he who was invincible had suffered himself to be

overcome by their prayers.' On the banks of the Hy- phasis, the modern Beyah, which were the limits of his conquests, he caused to be erected twelve altars, on which sacrifices were offered. These altars, if we may believe the biographer of Apol- lonius Tyanaeus, were still remaining, with legible inscriptions, when that fantastic sophist visited India, 373 years after Alexander's expedition. ††† Philostrat. vita Apollon. lib. ii. c. 43. ed. Olearii.

Having exhibited public shews in the Grecian manner, he added all the conquered country to the dominions of Porus, and began a retrograde march towards the river Hydraotes. From thence he proceeded to the Acesines, and marched on to the Hydaspes, proposing to embark on the river Indus, and to pass by this river to the ocean. Observing in these rivers many croco- diles, and seeing that the country produced beans like those of Egypt, he inferred, that he had discovered the source of the Nile, and prepared a fleet to sail down the Hydaspes to Egypt, Strabo. Geog. lib. xv. p. 1020. This circumstance shews, that the knowledge of the Greeks, in his age, did not extend beyond the limits of the Me- diter'- anean. The breadth of the Panjab, as it

ts now called, through which Alexander passed, from Ludhana, on the Setlege, to Attock, on the Indus, is computed to be 259 geographical miles, in a straight line ; and his march, computed in the same manner, did not exceed 200 miles. But in his advance and return, his troops were so spread over the country, and all his movements were so exactly measured and de- lineated, by men of science, whom he kept for the purpose, that he acquired a very extensive knowledge of that part of India.

Having prepared a fleet, consisting of eighty .vessels of three banks of oars, and about 2000 smaller ships and transports, and having offered

sacrifices to the gods, he embarked, and at the sound of a trumpet the fleet began to move; but arriving at the confluence of the Acesines with the Hydaspes, where these united streams roll with great rapidity into the Indus, many of his vessels were lost, and he himself was in great danger. When the danger was past, and the fleet and army were joined, he began his march, through a desert country, in order to reduce the Malli and Oxydracae, whom he surprised before they could prepare for a contest. In storming their principal city, Alexander, in person, scaled the walls, and leaped down into the city, accom- panied by only three of his guards. Here being wounded, he fainted through loss of blood ; two of his guards, who were themselves wounded, however, covered him with their shields; till the soldiers from without, ascending the walls, threw themselve's into the city, and by an act of the most undaunted resolution rescued their sovereign. As soon as he was able he rejoined his forces. His first thoughts were now directed to the in- crease of his fleet; and, having accomplished this object, having given orders for erecting a city in the commodious situation afforded by the confluence of. two great rivers, and having con- ferred upon Oxyartes, the father of his wife Roxana, the government of Paropamisus, with some additional territories, he embarked, and continued his voyage ; occasionally employing himself, as he proceeded, in reducing some In- dian princes, who were either negligent in at- tention, or took up arms against him. Of this number, were Musicanus, the sovereign of one of the richest and most populous kingdoms in India; Oxycanus, another Indian prince, who was takea prisoner; and Sambus, whose ca- pital, Sindomana, opened its gates to receive him. Musicanus afterwards revolted; and Alexander directed him to be carried back into his own dominions, to be there crucified, toge- ther with all the brahmuns, who had instigated him to revolt. The king next sailed to Patala, the modern Tatta, an island formed by two branches of the river Indus, where he ordered an haven and convenient docks to be constructed for his ships ; and when he had careened

his fleet, he sailed down the right hand branch of the river towards the ocean. As they approached the sea, they were exposed to great danger for want of skilful pilots ; and, therefore, after hav- ing gratified his vanity by entering the ocean beyond the Indus, performing religious rites in honour of Neptune, and surveying two small islands, he returned to Patala. Having sur-

veyed the other branch of the Indus, and found a place of safety for his fleet, he gave directions to Nearchus, to conduct the fleet, by the ocean, through the Persian gulf, up the river Tigris, to meet him and his army in Mesopotamia ; and departed, with the army, to march back by land to Babylon. The distance of that place on the Hydaspes, where Alexander fitted out his fleet, from the ocean, according to the researches of Major Rennell, cannot be less than a thousand British miles, whence, considering the slow na- vigation of such a fleet as he conducted, it is no wonder that he was above nine months before he reached the ocean.

Having left Patala, Alexander crossed the Arabis, and marched through the country of the Oritae, whose capital he seized, and converted into a new and noble city, which he committed to the government of Hephaestion. He then pro- ceeded through Gedrosia ; and, in the whole of his progress, suffered much from sickness, exces- sive heat, and fatigue, and also from famine and thirst; so that he brought back from India scarcely one fourth of his army, which had con- sisted of 120,000 foot, and 15,000 horse. In these circumstances, he maintained an invincible resolution ; and, by his example, encouraged the perseverance of his troops. Having rested and refreshed his army at the capital of Gedrosia, he prepared his march into Caramania, a very plentiful country, where his attendants were amply recompensed for the hardships and fa- tigues they had endured. Here he punished those governors who were charged with mal-ad- ministration, some of whom were put to death ; and redressed the various grievances which the people had suffered in his absence. He then continued his march through Caramania, and was

joined by Nearchus, his admiral ; and, turning aside to Persia, he visited the tomb of Cyrus, at Pasargadae ; ordered Orsines, the go- vernor of Persia, who was charged with many atrocious crimes, to be crucified; placed Peu- cestas, who had saved his life in a city of the Malli, in his room ; and commanded Baryaxes, a Mede, who had usurped the title and tiara of ––king, to be put to death. In these marches, Ca- lanus, an Indian brahmun, who had accompanied Alexander, finding his health declining, requested to have a funeral pile prepared ; on the top of which he stretched himself at full length, and re- mained without voice or motion in the midst of the flames.

At Susa, to which Alexander next marched, he put to death Abulites, and his son Ozathres, who were charged with enormous crimes in the administration of public affairs ; and, to unite the Macedonians and Persians, he encouraged the forming alliances between the noblest fami- lies of Persia and the principal persons of his own court; and by taking himself two wives of the royal blood of Persia, viz. Statira, the daughter of Darius, and Parysatis, the daughter of Ochus, set the example. He also bestowed fortunes on those Persian ladies of high rank, who were married to his own principal officers. Here, also, he paid the debts of his army, and conferred rewards ana promotions on those who had signalized themselves in his service.

Having still a curiosity to see the ocean, and to explore the maritime parts of his empire, he went down from Susa, upon the river Eulaeus; and having crossed the Persian gulf to the mouth of the Tigris, went up that river to the army, which was previously encamped, under the command of Hephtestion, on its banks, near the city of Opis. Here he issued an edict, that those Macedonians, who were either unable, or unwilling, to make any more campaigns, might have their discharge, and return home ; and

that those who chose to remain with him, should be duly encouraged. This edict, which was in- tended to please the army, excited a mutiny, which was quelled by extraordinary resolution and intrepidity. Whilst the soldiers surrounded the tribunal on which he was seated, all cla- mouring for their discharge, reproaching him with the favours which he had conferred on the Barbarians, and insolently telling him, that his father Ammon and he might go and subdue the world by themselves, he leaped into the midst of them, ordered his guards to seize thirteen of the ringleaders, whom he pointed out, and com- manded their immediate execution. This ter- rified them into silence ; immediately upon which, remounting his tribunal, he pointed out to them, in an eloquent speech, the justice of his own conduct and the folly of theirs. He after- wards promoted the Persian nobility to the prin- cipal commands in his army; and by thus seeming to transfer his confidence, humbled the Mace- donians, who delivered up the authors of the sedi- tion on condition of reconciliation and favour.

At Ecbatana, whither he next went, he of- fered sacrifices, and exhibited sports and games ; which were followed by a royal banquet; but his joy on this occasion was unexpectedly inter- rupted by the sudden illness and death of He- phaestion. From Ecbatana, he marched against the Cossseans, and subdued them; and he then pursued his course towards Babylon, where he formed a variety of new projects ; but befoite any of his plans could be fully carried into effect, he was seized with a fever, occasioned, as some say, by excess of drinking, which, in a few days, terminated his life. He died on the 21st of April, in the second year of the 114th Olympiad, B. C. 323, after he had lived thirty- two years and eight months, and reigned twelve years and eight months. When his prin- cipal courtiers, perceiving his death to be in- evitable, asked him to whom he left the empire, he answered, ' to the most worthy ;' and when Perdiccas enquired at what time they should pay him divine honours, he replied, < when you are nappy;' and having pronounced these words,

he expired. Alexander's corpse was embalmed, after the manner of the Egyptians and Chal- deans; and Aridseusjhis bastard brother, who had been declared king, was appointed to convey it to the temple of Jupiter Ammon. Two whole years, see Lilian, lib. xiii. c. 30. torn. ii. p. 898, were employed in preparing for this magnificent funeral, during which, Olympias bewailed the fate of her son. The funeral procession, conducted by Aridseus, was singularly splendid. Ptolemy advanced with a guard of his best troops, as far as Syria, to meet the procession.

He prevented their depositing the corpse in the temple of Jupiter Ammon, and conveyed it first to the city of Memphis, and thence to Alexandria. Here he reared a magnificent temple to the memory of Alexander, and re i- dered him all the honours which were usually paid to demi-gods and heroes by Pagan an- tiquity. Freinshemius, in his Supplement to Livy, lib. cxxxiii. c. 65. torn. vi. p. 910, ei Drakenb., relates, after Leo Africanus, who lived in the fifteenth century, that the tomb of Alex- ander was to be seen in his time, and that it was reverenced by the Mahommedans, as the monu- ment, not only of an illustrious king, but of a great prophet.

Alexander, as to his person, was of a middle size, with his neck somewhat awry; having full eyes, and a fierce majestic countenance. His talents, and general character, have been differently appreciated by his biographers. It is certain that he rendered essential service to science by the presents which he conferred on his preceptor, and employed men of talents of every description, and liberally rewarded them. But when we consider the greater part of his life, well might the Gentoo annals call him ' a mighty robber and murderer ;' and justly does the author of the first book of Maccabees characterize him, by saying, 'he butchered kings,' topaKf /3aTJJC yijc- ' What have we to do with thee,'said the Scythian ambassador, ' we never once set our foot in thy country. Are not those who live in woods allowed to be ignorant of thee, and the place from whence

thou comest ? Thou boastest, that the only design of thy marching is to extirpate robbers ; and thou thyself art the greatest robber in the world ! ‘ To the same effect was the answer of the pirate, when Alex- ander questioned him, what right he had to infest the seas? Alexander has been praised for his continency, yet his life was by no means regular in this respect. In his early youth in- deed, he appeared so indifferent to the sex, that his mother suspected him to be impotent ; and his behaviour to the Persian captives shows him to have had a great command over himself in this particular. The wife of Darius was a finished beauty ; her daughters were likewise considered handsome ; yet this young prince, when he had them in his power, not only bestowed on them all the honours due to their high rank, but ma- naged their reputation with the utmost delicacy. The Amazon Thalestris could not obtain from him a compliance with her gallant request till after a delay of thirteen days. But in opposition to all this, what are we to conclude from his causing his favourite mistress Pancaste to be drawn naked by Apelles, and whom he indeed gave to the painter, who fell in love with her ? What of that immoderate love of boys, which Athenaeus relates of him ? What of that prodigious number of wives and concubines, which he kept ? No- thing surely, but that the continence of his early years was a piece of affectation proceeding from his ruling passion, vanity. His excesses with regard to wine were notorious, and almost beyond imagination; and he committed, when ine- briated, a thousand extravagancies. ††† Diodorui s;, lib. xvii. torn. ii. p. 160. ††† 253. ed. We-*

seii/ig. Plutarch, Oper. torn. i. p. 664. ††† 707. ed. Xyl’d&d. Q. Curti/tsde Rebus gestis Alex. Mag. passim, ed. Snakenb. Arriani Exped. Altxandri. passim, ed. Gronov. Strabo, Geog. torn. i. & ii. ed. Amst. 1707. Rollin’sAnc. Hist, book xv. vol. iv. & v.

ALEXANDER SEVERUS, the Roman emperor, was born at Acra, in Phoenicia, according to one account, in the year 208, and according to ano- ther, Dec. 12, 205. His father, Genesius Mar- cianus, was a Syrian, and became a consul. His mother, Mamaea, was the daughter of Julia Maesa, the sister of Julia, wife to the emperor Severus; and as another daughter of Maesa was married to Heliogabalus, Alexander, (or Alexianus, which was his family name), was first cousin to that emperor. She was a woman of talents, and having imbibed Christian principles, is said to have paid particular attention to his education and moral improvement. His application and improvement corresponded with his advantages. With a robust and graceful form, and consider- able mental accomplishments, he combined a mild, humane, and generous temper, and made it his chief study to please and oblige. When Maesa, his grandmother, perceived the approach- ing termination of Heliogabalus's career of profligacy, she embraced a favourable oppor- tunity of persuading him to adopt Alexander. Accordingly he assumed this name instead of that of Alexianus, with the addition of Severus, and was invested with the t'.tle of Caesar, A.D. 221 . The young prince soon gained the affec- tions of the people to a degree which excited the jealousy of the emperor, who, therefore, re- solved to destroy the dangerous competition, either by corrupting the manners, or by taking away the life of his aspiring rival. Mamaea and her mother defeated his design, and, by means of the Praetorian guards, the very attempt of He- liogabalus, against the honour and life of the young Caesar, terminated in his own ignominious death. By the same auxiliaries, Alexander in the year A.D. 222, was advanced to the throne; and the senate invested him with the various titles and powers annexed to the imperial dignity; offering him at the same time the name of An- toninus, and the surname of Great ; which, how- ever, he modestly declined. With the consent of his mother Mamsea, he married the daughter of a patrician, who afterwards became the object of her jealousy and cruelty, and was by her instigation banished into Africa. Under her direction, and with

the approbation of the senate, a council of state was appointed, consisting of sixteen of the wisest and most virtuous senators. At the head of which, as praetorian praefect, was Ulpian, distinguished by his knowledge and respect for the laws of Rome. The prudent firmness of this aristocracy restored order and authority to the government; and, by their influence, the city was purged from the superstition and luxury, which Heliogabalus had introduced, and every department of public administration was dignified by diplomatic probity. But the most important objects of Mamaea's solicitude was that of form- ing the character of the young emperor. His excellent understanding encouraged cultivation. The natural mildness and moderation of his

temper preserved him from the precipitation of passion, whilst his affection for his mother, and his respect for the wise Ulpian, guarded him from the poison of flattery. . He was very in- dulgent to the Christians ; and seems to have been himself well acquainted with the Christian morals ; for he frequently repeated the gospel golden rule, ' Do as you would be done by ;' caused it to be.,.inscribed over the gates of his palace, and on several public edifices ; adopting it as the motto of his own private conduct.

'His ordinary occupations,' says a popular historian, ' exhibit a pleasing picture of an ac- complished emperor; and, with some allowance for the difference of manners, might well de- serve the imitation of modern princes. Alexan- der rose early : the first moments of the day were consecrated to private devotion, and his domestic chapel was filled with the images of those heroes, who, by improving or reforming human life, had deserved the grateful reverence of posterity. But, as he deemed the service of mankind the most acceptable worship of the gods, the greatest part of his morning hours was employed in his council, where he discussed public affairs, and determined private causes, with a patience and discretion above his years. The dryness of business was relieved by the charms of literature ; and a portion of time was always set apart for his

favourite studies of poetry, history, and philosophy. The works of Virgil and Horace, the republics of Plato and Cicero, formed his taste, enlarged his under- standing, and gave him the noblest ideas of man and government.'

Although he was very religious, his offerings in the temples were not magnificent. He often repeated the words of Persius, Satii. v. 69. 'In sancto quid facit aurum T ' What has gold to do with sacred tilings ?' His respect for virtue extended to the dead as well as the living. Ac- cordingly he collected in Trajan's square the statutes of the deified emperors of Rome, and of the famous Roman commanders, and adorned them with inscriptions, setting forth their great exploits and eminent virtues. In his palace he had two chapels, in which the principal objects of his veneration were ranged in two classes, the one destined to virtue, and the other to talents. In the first were placed the good emperors, among whom he very erroneously ranked Alex- ander the Great ; and next to them the wise men, by whose useful lessons mankind had been be- nefitted;and here were blended Abraham, Or- pheus, Apollonius Tyanasus, and Jesus Christ. The second chapel was destined to military heroes, and men conspicuous in the republic of letters, Achilles, Cicero, Virgil, whom he called the Plato of the poets, and some others. In order to encourage the progress of letters and of science in general, he allotted pensions to rhe- toricians, grammarians, physicians, architects, men skilled in mechanics, and even to aruspices and astrologers. He established schools foi all these arts, and provided for the instruction of the poor without expense to them. His life, how- ever, has not been free from blemishes. His deference for his mother was considered as car- ried to a culpable excess. He gave her name w

kfveral buildings, which, (as we learn from Am-

*mianus Marcellmus, lib. xxviii. p. 372.) they , retained in the fourth century, and caused her to be honoured with the titles of Augusta, mother of her country, of the armies, and of the senate. He was also charged with being of a suspicious and inquisitive temper, and with being inclined to vanity. His timidity likewise betrayed him into imbecility of conduct; particularly with reference to the praetorian guards, who by their mutiny produced a civil war in Rome, that lasted three days, and terminated in the massacre of Ulpian. Although this wise man sheltered himself in the emperor's palace, and was even murdered in his presence, he had not resolution sufficient to avenge this atrocious crime in the manner it deserved. Such indeed was the weak- ness of government, that the tyranny of the army threatened with instant death his ********** &ithful ministers, and it is said to have IKM,*^ jd his own person The historian Dion Cassius, who had commanded the Pannonian legions with a spirit of ancient discipline, and whom the em- peror recompensed by appointing him his col- league in the consulship, was compelled to retire from the city, and to spend the greatest part of his consulship at his villas in Campania, and the remainder of his days in Bithynia, his native country. Dion. Cass. Hist. lib. Ixxx. p.*

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This imbecility, however, was not uninter- rupted. In one of these apyrexia, when some of the soldiers at Antioch had excited a sedition in the legion to which they belonged, and inter- rupted his mild expostulations by their clamours, he addressed them in the following dignified and spirited language : ' reserve your shouts till you take the field against the Persians, the Germans, and the Sarmatians. Be silent in the presence of your sovereign and benefactor, who bestows upon you the corn, the clothing, and the money of the provinces. Be silent, or I shall no longer style you soldiers, but citizens ; if those indeed, who disclaim the laws of Rome deserve to be ranked amongst the meanest of the people.' When their brandished anns threatened even

his person; 'your courage,' resumed the emperor, ' would be more nobly displayed in the field of battle ; me, you may destroy ००० you cannot in- timidate ; and the severe justice of the republic would punish your crime, and revenge my death.' The clamour continuing, the emperor, with a loud voice, pronounced the decisive sen- tence : ' citizens, lay down your arms, and depart in peace to your respective habitations.' The clamour was instantly silenced, and the soldiers supplicated forgiveness ; nor were they restored to their rank in the army, till he had punished with death those tribunes, whose connivance had occasioned the mutiny. When he became capable of taking the government into his own hands, and of exerting his genius and courage, he more effectually commanded the awe of his soldiers.

While Artaxerxes, the restorer of the Persian monarchy, was preparing to invade the Roman dominions, Alexander sent ambassadors in order io dissuade him from engaging the two empires ifl a long and dangerous war. The message was

received with contempt ; nor did any of Alex- ander's remonstrances avail to prevent the Per- sian monarch from ravaging Mesopotamia and entering Cappadocia. The emperor, therefore, resolved to march against him in person. In the spring of the year 233, Alexander, with an army of the praetorian guards and part of the hardy legions of Europe, advanced towards the frontiers of the Roman dominions to meet the great king which was the haughty style assumed by Artax- erxes in his embassies ; whose force consisted, as history reports, of 120,000 horse, clothed in complete armour of steel ; 700 elephants, with towers, filled with archers, on their backs ; and 1800 chariots armed with scythes. Of the event of the battle which ensued, historians have given very contradictory accounts. Herodian asserts, and Mr. Gibbon acquiesces in his account, that the plan of Alexander for the conduct of the war, however judiciously concerted, totally failed. The emperor himself, influenced by his mother's counsels, and perhaps by his own fears, deserted the bravest

troops and the fairest prospect of victory ; and, after consuming in Mesopotamia an inactive and inglorious summer, led back to Antioch an army diminished by sickness, and provoked by disappointment. But the Persian monarch, in several obstinate engagements against the veteran legions of Rome, lost the flower of his troops ; and, instead of expelling the Romans from the continent of Asia, found him- self unable to wrest from their hands the little province of Mesopotamia. Crevier and many other modern writers choose rather to follow Lampridius, whose account is entirely different from that of Herodian. The Persians, says the last author, were totally defeated, and Alexan- der approved himself an intrepid soldier and a skilful general. The great king fled before his valour; an immense booty and the conquest of Mesopotamia were the immediate fruits of this signal victory, Alexander, it is said, having taken care to guard Mesopotamia with several well garrisoned forts, returned to Rome, A. D. 234, to give the senate an account of his exploits, and was received by persons of all ranks with the greatest demonstrations of joy; and obtained a signal triumph. His triumphal car was drawn by four elephants ; the air resounded with ac- clamations and the shouting attendants unceas- ingly exclaimed, 'Rome is happy, whilst she sees Alexander alive and victorious.'

Soon after his triumph, Alexander, accom- panied by his mother, marched against the Ger- mans, who had passed the Rhine, and who were making incursions into every part of Gaul. Upon his arrival in Gaul, he sent ambassadors to the barbarians in order to treat with them ; and if Herodian may be credited, to purchase peace, which he preferred to the precarious issue of a war. Having passed the winter in the neighbourhood of the Rhine, he employed him- self in introducing discipline among the licentious legions of Gaul. His attempts for this purpose produced discontents in the army, which were aggravated by a person, originally a barbarian of mean origin, whose father was a Goth, and mother an Alan, and who had been raised from the lowest

station to the rank of a general officer.

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This person was proclaimed emperor by the seditious soldiers : and made his way to the throne by the massacre both of Alexander and his mother. This event happened on the 19th of March, A.D. 235, when Alexander was in his twenty-seventh year, after a reign of thirteen years. The untimely death of this prince was universally regretted ; and the soldiers, who were not con- cerned in the plot, manifested their resentment by a speedy vengeance in immediately killing his murderers. The senate decreed both to him and his mother divine honours ; appointed for them altars, priests, and sacrifices ; and instituted, in honour of the deceased emperor, an annual feast, which was celebrated on the first of Octo- ber, the day of his nativity. Creviers Rom. Emp. vol. viii. book xxiv. p. 279 ??? 350. Anc. Un. Hist. vol. xiii. p. 432 ??? 449. Gibbon's Hist. vol. i. p. 238. 240. 337, vol. ii. p. 450.

ALEXANDER (Jannseus,) king of the Jews, was the third son of Hyrcanus, and succeeded his brother Aristobulus in the year before Christ, 106. Queen Salome, the widow of Aristobulus, took him and his two brothers out of prison, and placed Alexander on the throne. His fourth brother endeavoured to deprive him of the crown, and was put to death ; but the youngest, whose name was Absalom, was favoured with his pro- tection as long as he lived. Alexander, being a subtle and warlike prince, began his reign with leading an army against Ptolemais; but his own dominions being invaded during his absence, by Ptolemy Lathyrus, he was obliged to raise the siege and return to defend them. On the banks of the Jordan he was defeated, with the loss of 30,000 men, besides those that were taken pri- soners ; and, if he had not been succoured by Cleopatra, Lathyrus would have forced his way into Judea. Alexander, after an interview with Cleopatra at Ptolemais, returned to Jerusalem; and having

recruited his broken army, marched against Cadara and took it. He next proceeded against Amathus, and reduced it after a very short siege; but he was soon obliged to relin- quish it in consequence of a defeat by Theodotus, the son of Zeno, tyrant of Philadelphia, in which he lost many men, his baggage, and the whole of the treasure which he had taken at Amathus. The next place against which he directed his arms was Gaza, which had afforded protection and assistance to Lathryus ; and on this account, as soon as the town was betrayed to him, he re- venged himself on the inhabitants, after leading them to expect clemency and moderation, by abandoning them to the fury of the soldiers. After which, he reduced the city to a heap of ruins. On his return to Jerusalem, the people, exasperated by the Pharisees, who were con- stantly caballing against him, insulted him with the most opprobrious language, exclaiming that such a slave as he, was unworthy of either the pontifical or regal dignity, and proceeded even to violence against his person. He was wearied with their clamours, and marched out of Jeru- salem, in order to gratify his inclination for war. Having taken and destroyed the city of Amathus, he proceeded against the Arabians, whom he subdued, and then laid the Moabites and Moun- taineers of Gilead under tribute. Near Gadara

he fell into an ambush, and it was with great difficulty that he regained his capital. During his absence, the Pharisees had caused a rebellion, which terminated in a civil war of six years' continuance. Demetrius, surnamed Euchaerus, assisted the rebels; and, after some previous skirmishes, Alexander was defeated, and retired to the mountains. This defeat, however, in- duced the Jews, who had joined Demetrius, to desert him, and join Alexander ; and Demetrius, alarmed by this defection, left Judea. Alexander then marched against the rebellious Jews ; but the fury of their resentment continued, till a de- cisive battle put an end to the war. In this last action he cut off the greatest part of their army, and drove the rest into Bethome, which he besieged and captured. Josephus, who, being a

zealous Pharisee, may possibly have exaggerated, informs us, that he caused 800 of the principal captives to be carried to Jerusalem, where they were all crucified at the same time and place ; and that, whilst they were hanging on the cross, he ordered their wives and children to be butch- ered before their faces. It is added by the his- torian, that a banquet was prepared for himself and his concubines, near to this horrible scene, that they might behold and enjoy the torture and distress of the sufferers. After this event, the rebels dispersed ; nor were the Pharisees able to make any effort against him as long as he lived. The succeeding years of his live were employed in extending his conquests through Syria, Idu- msea, Arabia, and Phoenicia ; and his return to Jerusalem, after an expedition of three years' continuance, was the occasion of loud acclama- tions on the part of his subjects. From this time, however, he devoted himself to drinking, and other debaucheries ; which at length brought on a quartan ague, that prevailed till the day of his death, which happened about three years after his return. He died in his camp before Regaba, a fortress in the Gerasene territory beyond Jor- dan, which he was besieging, in the twei>►►y- seventh year of his reign, in the year before Christ 79. He left two sons, Hyrcanus and Aristobulus; but decreed by his will, that his wife Alexandra should govern the kingdom du- ring her life, and appoint for her successor either of them, according to her own pleasure. Alex- andra, by conciliating the Pharisees, according to the advice of her husband, secured their in- fluence with the people ; so that they celebrated the funeral of the deceased king with great pomp, and confirmed her as sovereign administratrix of the nation . Her eldest son Hy rcanus was appointed high-priest, and the direction of all affairs of im- portance was committed to the Pharisees. Their resentment against those who had opposed diem in the late reign still continued ; and they con- trived every method that was practicable for destroying them. This conduct induced the miserable subjects to assemble, and, with Aris- tobulus at their head, to wait on the queen, and

implore her protection ; but, the queen having surrendered herself and the government to the Pharisees, could devise no means for their re- dress. At length, however, she complied; and consented that they should disperse themselves into places where she had garrisons. In the year

before Christ 70, Alexandra was seized with a disorder which threatened her life; and when Aristobulus perceived her danger, he repaired to his friends, in the garrisoned towns, and they arranged themselves in great numbers under his standard; hoping that he would exert himself for abolishing the oppressive tyranny of the Pha- risees, well knowing that no service of this kind could be expected from his brother Hyrcanus. The Pharisees were alarmed, and accompanied Hyrcanus to the queen, in order to represent what had occurred, and to demand her assistance. The impaired state of her health would not admit of her interference, and having left the care of the government to them, she appointed Hyrcanus her heir general, and soon after expired. Accord- ingly he took possession of the throne, and raised an army to oppose his brother. A battle near Jericho decided the quarrel. Hyrcanus, aban- doned by the greatest part of his troops, was obliged to fly to Jerusalem, and afterwards to seek an asylum in the castle of Baris, whilst his partisans, who were chiefly of the sect of the Pharisees, took refuge in the temple. In a little while, they both submitted to Aristobulus ; and in the year before Christ 69, he obtained both the high-priesthood and the crown. Josephus Ant. lib. xiii. c. 12. ††† 15. torn. i. p. 666 ††† 675. Bell. Jud. lib. i. c. 4, torn. ii. p. 59 ††† 62. Anc. Un. Hist. vol. iii. p. 114 ††† 123. Rollings Anc. Hist. vol. viii. p. 4 ††† 11.

ALEXANDER, (Padas,) king of Syria, was, as some say, the natural son of Antiochus Epi- phanes ; but, according to others, a young man of mean extraction

at Rhodes, named Balas, suborned by Heraclides at the instigation of Ptolemy, Attains, and Ariarthes, to personate the son of Antiochus Epiphanes, and under that title, to lay claim to the crown of Syria, in op- position to Demetrius. After he had been ac- knowledged by the three kings above- mentioned, Heraclides, who conducted the imposture, took him to Rome, in the year before Christ 153, and together with him Laodicea, the real daugh- ter of Antiochus Epiphanes, and presented them to the senate, who received them graciously, and passed a decree in their favour ; though, as Polybius asserts, Legat. cxlii. p. 966, the whole city was convinced of the imposture. The se- nate not only acknowledged Balas under the assumed name of Alexander, but decreed that their allies should assist him in his endea- vours for recovering the rights of his father. Thus countenanced by the Roman senate, he landed in Syria, and found no difficulty in raising troops, which, together with the succours afforded him by Ptolemy, Attains and Ariarthes, enabled him to make himself master of Ptole- mais, the reduction of which induced a great number of persons to join him. Demetrius and Alexander were competitors for the favour and support of Jonathan, who had succeeded Judas Maccabaeus in the command of the Jewish forces, and strove to outvie each other in their alluring offers. Alexander, however, prevailed ; and with him Jonathan formed an alliance. These two competitors took the field at the head of their respective armies ; and though Alexan- der was defeated, he maintained his ground;

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and, being supplied by his powerful allies with fresh succours, succeeded in a second battle, in which Demetrius was killed, before Christ 150. Alexander having gained possession of the whole Syrian empire, sent an embassy to Egypt, de- manding Cleopatra, the daughter of Ptolemy, in marriage ; and the king not only complied with his request, but attended her in person, and the nuptials were solemnized at Ptolemais in a very splendid and magnificent manner. Alexander could not bear his

elevation and prosperity, but became insolent and debauched, and committed .the management of his affairs to a profligate and tyrannical favourite, whose name was Ammonius, who conducted himself with a degree of despotism, which exposed him and his master to the hatred of the nation. De- metrius, the eldest of the deceased king's sons, availed himself of this opportunity for recover- ing his right ; and was acknowledged by Ap- pollonius, governor of Ccelosyria and Phoenice.

When Alexander was roused out of his lethar- gy, and perceived the danger of his situation, he applied to hfs father-in-law, Ptolemy, for assist- ance ; who, with an army, which the author of the second book of Maccabees compares to the sand of the sea-shore, marched to his relief. Upon his arrival at Ptolemais he was informed that Alexander was plotting against his life, and that Ammonius had charged himself with the ex- ecution of this detestable scheme of treachery. Ptolemy complained to the king of Syria of this plot, and demanded the criminal to be delivered up to him ; but Alexander refusing to comply, Ptolemy concluded that he was privy to the de- sign, and determined to turn his arms against his son-in-law. He therefore sent ambassadors to young Demetrius, offering him his daughter Cleopatra, the wife of Alexander, and promising to settle him on the throne of his ancestors. De- metrius accepted the offer ; and when the news of this event reached Antioch, Ammoniug was put to death by the populace ; but the inhabi- tants of this city refused to declare in favour of Demetrius. However, such was the hatred they had conceived against Alexander, that they en- tered into a confederacy against him, and opened their gates to Ptolemy, offering to put the crown on his head. This prince, says Josephus, know- ing how to set bounds to his ambition, rejected the proposal, and with singular self-denial and generosity, declared, that he could not, without the most flagrant injustice, place himself on the throne of Syria, by excluding the lawful heir. He proceeded to recommend Demetrius by an eulogy on his character, and by pledging him- self as guarantee for his future conduct, at the same time undertaking to assist him and to teach him the art of governing. These disinterested representations of Ptolemy had the desired effect Demetrius was proclaimed king of Syria, and placed on the throne of his ancestors. Alexan- der, who was then in Cilicia, assembled a nu- merous army and advanced to Antioch. Pto- lemy met him, and a bloody engagement ensued, in which Alexander was defeated; and his ad- herents abandoning him, espoused the

cause of Demetrius. Upon this Alexander fled to Arabia, and seeking refuge in the house of Zabdiel or

Zabel, or as Diodorus Siculus, in Excerpta Pho- tii cod. 244, calls him, Diodes, was murdered by his treacherous host. Ptolemy was wounded mortally by Alexander's friends ; and when the head of the murdered prince was brought to him as a present from the Arabian, the joy he felt on the occasion put an end to his life. Demetrius, without any further opposition, took possession of his father's dominions, and styled himself from this victory Nicator, or the conqueror. Alex- ander Balas had reigned according to Josephus, five, but according to the history of the Macca- bees, six years, (reckoning from the 160th year of the a?ra of the Seleucidae to the 167th, which was the first year of the reign of Demetrius Nica- tor.) This happened in the year before Christ 145. Such is the account which Josephus gives of the troubles of Syria, and the death of Alex- ander Balas. But the author of the history of the Maccabees varies much from him, especially in ' what relates to the character of Ptolemy Philo- metor, whom Joseph us highly commends ; where- as the author of the first book of the Maccabees represents him as an ambitious and perfidious prince, who trampled under foot the most sacred laws of nature and justice, to raise himself on the ruins of his son-in-law. Josephus Ant. lib. xiii. c. 2. 4. torn. i. p. 634 ००० 643. Diodorus Sic. torn, ii. p. 592. 1 Maccabees, xi. 4 ००० 12. Anc. Un. Hist. vol. viii. p. 224 ००० 233.

ALEXANDER, bishop of Lincoln, in the 12th century, was by birth a Norman, educated under his uncle, bishop of Salisbury, and by his interest promoted to the episcopal see in 1123. Having been accustomed in early life to a splendid mode of living, he affected a degree of state, and in- dulged in unnecessary expenses. Henry of Hun- tingdon, in the dedication

of his history to him, which is penned in the language of servile adu- lation, calls him ‘ the flower and top of the king- dom and nation ; and he informs us that at the court of Rome he was styled ‘ the Magnificent.’ St. Bernard, in a letter addressed to him about a year before his death, acts the part of a more honest friend, and cautions him ‘ not to be daz- zled with the lustre of secular grandeur, nor to look upon any worldly advantage as permanent ; nor value his fortune more than himself ; to guard against the flattery of prosperity, for fear of a turn of misfortune, which will last longer : not to be charmed by the transient satisfactions of life ; for that scene will quickly be shut up, and make way for another both lasting and uncom- fortable.’ He also advises him ‘ not to deceive himself with any distant prospect of death ; for such delusive hopes lead directly to danger and surprise, and are the likeliest way to hurry a man into the other world without preparation.’ These prudent and salutary lessons, however, did not seem to have been regarded. In imitation of the barons and some of the bishops, he built three castles ; one at Banbury, another at Sleaford,and a third at Newark. He likewise founded two monasteries King Stephen was offended by these stately edifices and strong fortresses ; and when he determined to take the castles from the barons, he seized that at Newark ; in consequence of which the bishop was imprisoned for seven months, and with difficulty obtained his liberty.

From this time he employed his thoughts and time in ornamenting his church, which he had rebuilt with a stone roof the year after its conse- cration : increasing the number of its prebends, and augmenting its revenue With several manors and estates ; and at length he rendered it the most stately and flourishing of any in the king- dom. He went twice to Rome, viz. in 1142 and 1144 ; and after his first visit, he returned as the pope’s legate, and called a synod, in which he published many useful canons. In 1147 he visit- ed the pope in France, and there fell sick through the heat of the

weather. He returned to England and soon after died, in the twenty-fourth year of his prelacy. Biog. Brit.

ALEXANDER I. (pope, and a martyr,) suc- ceeded Eoaristus in the see of Rome, in the tenth year of Trajan, while the persecution was rag ing, in which Ignatius perished. He himself suffered martyrdom in 119, during the fourth persecution under Hadrian. The epistles ex- tant under his name, are the forgeries of a later age ; but the tradition, that he first introduced the use of holy water into the Romish church, seems to rest on a better foundation.

ALEXANDER II. (pope,) was a native of Mi- lan, of the name of Anselm, and removed from the see of Lucca to that of Rome, in the year 1061. He was elected pope by the instance of Hildebrand, who was at the head of the ecclesi- astical faction at Rome, in opposition to the em- press Agnes, widow of Henry III. who was regent during the minority of her son Henry IV. and who supported the lay faction, in the in- terest that subsisted between the clergy and the laity. By her influence, Cadalus, bishop of Parmas, was elected pope, under the name of Honorius II. The dispute was terminated by a council at Mantua in 1064, and Alexander, by a signal triumph of the church over the civil power, was declared lawful pope. The disci- pline and privileges of the clergy were the prin- cipal objects of this pontiff's attention; and the subordinate instrument of conducting his mea- sures was Peter Damien, a monk. Alexander laid hold of every opportunity that occurred for interposing in the secular concerns of kingdoms and princes. He sanctioned the project of Wil- liam, duke of Normandy, for the conquest of England ; denounced excommunication against Harold as a perjured usurper; and sent William a consecrated banner, and a ring with one of St. Peter's hairs in it ; thus, as Hume says, Hist, vol. i. p. 186, 'covering over safely all 'the am- bition and violence of that invasion with the broad mantle of religion.'

Alexander extended his authority in all direc-

tions. He not only prohibited the young em- peror from divorcing his wife Bertha, but, in 1073, summoned him to appear at Rome, and to account for his conduct in the disposal of church benefices for providing his army with supplies. The dispute was, however, closed by the death of the pope in 1073. The increase of papal tyranny, under the direction of Hilde- brand, to whom this pope was subservient, dis- criminates his pontificate. Many of his lettevs on public affairs are extant; and one of them addressed to the bishops of Spain for the purpose

of restraining the cruelties which they exercised towards the Jews, does honour to his humanity. For an account of these letters, see Dupin's Ec- clesiastkal History, vol. iv. p. 29 : also, Bower's History of Popes, vol. v. p. 224.

ALEXANDER III. a pontiff of great ability, was born at Sienna, where he was bishop under the name of Roland, and succeeded Adrian IV. in 1159. At the time of his accession to the papal chair, Frederic I. was making vigorous attempts for reducing the power of the Roman see, and cardinal Octavian was elected pope under the name of Victor IV. in opposition to Alexander. After the death of Victor, in 1164, cardinal Guy was chosen by the influence of the emperor, and denominated Paschal III. but the whole interest of the Roman clergy was exerted in favour of Alexander, who, in the former pontificate, had been compelled to retire into France, and he now returned to 'Rome, and was restored to his see. Councils were summoned to settle the dispute. The council of Wurtzburg, convened by the em- peror in 1166, produced an union of the nobility and clergy in support of the rights of Paschal ; and the council of Lateran, called by Alexander in 1167, deposed the emperor, and abrogated the oath of allegiance by which his subjects were bound to him as their lawful sovereign. At length an appeal was made to the sword ; and though Frederic was at first

*successful, and upon the death of Paschal procured the election of John, abbot of Strum, as his successor, under the name of Calixtus III., he was in the issue obliged to give up the contest, and in a treaty of peace, made with Alexander at Venice in 1 1 77, to acknowledge him as lawful pontiff. The pride of Alexander knew no bounds on the oc- casion of this triumph. When Frederic was prostrate at his feet, he addressed him with the words of the Psalmist, ' Thou shalt tread upon the lion and adder ; the young lion and the dragon thou shalt trample under foot :' and when the emperor replied, ' Not to you, but to Peter;' the pope answered, 'To me and to Peter.' This story is discredited by some writers, but believed by others, and the truth of it is con- firmed by concurring circumstances, for which we refer to Dupin. After the establishment of Alexander he treated his rival Calixtus III. with condescension and kindness, and appointed him to the see of Benevento. The pope, securely seated in the papal chair, directed his atten- tion towards securing the independence, and maintaing the prerogative and privileges of the triple crown ; and in order to prevent the dis- orders likely to arise in future from equal fac- tions, he obtained a canon in the third council of Lateran, held at Rome in 1 1 79, which enacted, that the right of election to the pontifical dignity should not only be vested in the cardinals alone, but that two-thirds of the votes of the electors should be necessary for rendering it legal. Thus ; the people, and e*en the Roman clergy, were t ntirely excluded from all participation in the h onour of conferring this important dignity.*

At this council, the right of recommending an; i nominating to the saintly order was taken aw, iy from councils and bishops, and canoniza- tion was ranked among the greater and more im-

portant causes, the cognizance of which belonged to the pontiff alone. In this year he exercised that tyranny over princes, which had been usurped by the popes from the time of Gregory VII. in conferring the title of king, with the en- signs of royalty, upon Alphonso I. duke of Por- tugal, by an arrogant

bull, in which he treats him as a vassal. Whilst he was in France, he had supported the cause of Thomas a1 Becket against his sovereign Henry II., and in 1164, when the constitutions of Clarendon, which as- serted the king's jurisdiction over the clergy, were sent to him for confirmation, he rejected and annulled them. When Becket was banished, he received him kindly ; obtained for him a pen- sion from the French king, abrogated the sen- tence that had been passed upon him ; re-invested him with his dignity, and appointed him his le- gate in England. After the murder of this ar- rogant prelate, Alexander, who had kept the king in awe during the whole of the contest, by the terror of excommunication, compelled him to undergo a very severe penance ; and having forgiven him, issued bulls at his desire, against his son, and canonized the archbishop. With a view of restoring order and tranquillity in the church, he convoked a solemn and nu- merous assembly of the clergy in 1164, in which the licentious rage of disputing about religious matters was condemned ; and in the council of Lateran, of 1179, a spiritual war was declared against heretics, and more particularly against the Albigenses.

Having enjoyed the undisturbed possession of the pontifical chair scarcely four years, Alexander

III. died in the year 1.181, with the character of having exhibited more ambition to obtain, than moderation in exercising, the supreme authority. Dupin. Eccl. Hist. vol. iv. p. 116. Bower's Popes, vol. vi. p. 11. Mosheim, vol. ii. p. 481. vol. iii. p. 53, &c. Hume's Hist. vol. i. p. 381. 396, &c.

ALEXANDER IV. (pope,) was Raynald or Ro- land, bishop of Ostia, and succeeded Innocent

IV. in 1254, at the time of the contest between the Guelphs and Gibellines. The right of the Roman see to the disposal of the crown of Sicily was supported by a war, in the pontificate of Innocent IV., against Mainfroy or Manfred, regent for Conradine, the son of the emperor Conrad ; and this pope, in order to engage the assistance of a powerful ally,

had conferred the crown on Edmund the second son of Henry III. of England. Alexander IV. pursued the plan of his predecessor, and published a crusade against Sicily, and, for defraying the expenses of it, induced Henry to levy a tenth on all eccle- siastical benefices in England for three years. A demand for farther supplies was however re- sisted, and the nominal possession of the crown reverted to Alexander ; but Mainfroy, having de- feated the crusaders, became the real possessor of it, A.D. 1258. The pontiff was equally un- successful in his attempts to oppose the progress of Ezzelin or Ecelin, who, at the head of the Gibellines, and on the part of the heirs of Fre- deric II., had made himself master of Lombardy, In defiance of the banner of die cro.ss, and anathemas fulminated by the apostolic see,

Ezzelin pursued his victories; and Mainfroy kept possession of the throne.

Alexander maintained the cause of the mendi- cant dominican friars, against the members of the university of Paris, who refused to admit them to a participation of the rights and privi- leges of their society ; and condemned a book written by William de Saint Amour, one of the doctors of the Sorbonne, entitled, The Perils of the Last Times, in which the character of the dominicans was described, and their pride, hy- pocrisy, and licentiousness, cruelly censured. In the council of Aries, held in 1260, he con- demned another book, written by the abbot Joachim, under the title of The Everlasting Gospel ; and at the same time proscribed those who, under the denomination of Joachimites, had adopted the doctrine which this book pro- mulgated. Differences of another kind having arisen between the states of Venice and Genoa, a council for settling them was summoned to meet at Viterbo ; but in the mean time Alexander, oppressed by the dissensions of the church, and by the vexations

which his ineffectual attempts for composing them produced, closed his life in the year 1261. ‘ He appears,’ upon the whole, ‘ to have been a narrow-minded bigot, more con- cerned to preserve and enlarge the privileges of a monastic order, than to correct abuses and en- courage improvements.’ Dupin. Eccl. Hist. vol. v. p. 50, 118, 138, &c. Bower’s Popes, vol. vi. p. 225. Cave H. L. torn. ii. p. 303. Hume’s Hist. vol. ii. p. 173, &c.

ALEXANDER V. (pope), was born in the isle of Candia, about the year 1339. His original name was Philargo, and his parents were so poor, that in his childhood he was a beggar. An Italian monk took him under his protection and instruc- tion, and procured his admission into his order of friars minors. By his recommendation he became a student at Oxford, and afterwards took his degree of doctor in divinity at Paris. Hav- ing passed through several gradations of prefer- ment, (being first bishop of Vicenza, then of Novara, and at length archbishop of Milan, car- dinal, and legate of pope Innocent VII. in Lom- bardy,) he was unanimously elected pope by the. cardinals, at a council in Pisa, in the year 1409. This pontiff was mild and liberal, and extended his generosity particularly to the mendicant or- ders of monks. Such was his munificence, that he used to say, ‘ When I became a bishop, I was rich ; when a cardinal, poor ; and when pope, a beggar.’ He seems, however, to have counter- acted his good qualities by the orders transmitted to the archbishop of Prague, enjoining him to proceed with rigour against Huss and his fol- lowers. This zealous reformer, confiding in the known candour of the pontiff, instead of person- ally appearing at Rome, in compliance with the summons that had been sent him, commissioned two friends to plead his cause, saying, on his own part, ‘ I appeal from Alexander ill-informed, to Alexander well-informed.’ When Alexander

Eroposed to visit Rome, he was persuaded by althasar Cossa to accompany him to Bologna. Whilst he was at this city he died, in the year 1410, having possessed the papal see little more than ten months

; and Cossa, who was suspected

of hastening his death, by his influence with the cardinals, and a recommendation from Louis of Anjou, king of Sicily, was chosen to succeed him. Dupin Eccl. Hist. vol. v. p. 8, &c. Bower's Popes, vol. vii. p. 123.

ALEXANDER VI. (pope), was born in 1431, at Valencia in Spain, and by the interest of his un- cle, pope Calixtus III., was appointed cardinal in 1455 ; and afterwards archbishop of Valencia, and vice-chancellor of Rome. The emoluments of this last office enabled him to maintain the state of a prince, and supplied him with the means of licentiousness and extravagance. Un- der pope Siztus IV. he was legate in Spain ; and at last by assuming a sanctity, and by bribing the cardinals, he was elected, at the age of 61, to succeed pope Innocent VIII. in 1492. He then changed his original name of Roderic Borgia for that of Alexander VI. By Vanozza, a Roman lady, with whom he had continued an illicit con- nection for many years, he had five children. His second son was Caesar Borgia, who was a monster of debauchery and cruelty, and who is said to have quarrelled with his elder brother for the favour of his sister Lucretia, and to have killed him, and thrown his body into the Tiber. Notwithstanding his infamous character he was the favourite of his father, who trampled with contempt on every obstacle which the demands of justice, and the remonstrances of religion laid in his way, in order to aggrandize himself and his children. In his political connections he was faithless and treacherous ; and formed alliances with the purpose of violating them. Having en- gaged Charles VIII. in an enterprise for the con- quest of the kingdom of Naples, he entered into a league with the Venetians and with Maximi- lian, to rob him of the fruits of his victory ; and after having obtained a large remittance from the sultan Bajazet, in order to enable him to carry on war against this king of France, he delivered up to him Zizom, the brother of Bajazet. Notwith- standing his notorious vices, he proposed to the Christian princes to march at the head of an army against the

Turks ; and under this pretext he issued a bull for a jubilee in 1500, by which he contrived to enrich his treasury. Of his pre- sumption, as well as of his hypocrisy, we have a curious specimen in his division of America be- tween the Spaniards and the Portuguese. For this purpose, he appointed that a line, supposed to be drawn from pole to pole, a hundred leagues to the westward of the Azores, should serve as a limit between them ; and in the plenitude of his power, bestowed all to the east of this imaginary line upon the Portuguese, and all to the west of it upon the Spaniards ††† professing that zeal for propagating the Christian faith was his motive.

The profligate career of this execrable hypo crite and tyrant was continued till the year 1503, when the poison, which he and his son Caesar had prepared for others, and particularly for Adrian, a wealthy cardinal, who stood in the way of their avarice and ambition, by a happy mistake terminated his own days. Some writers, amongst whom is Voltaire, have dis- puted this account of Alexander's death; but Guicciardini and other reputable historians attest it. The life and actions of this pontiff shew

says Mosheim, that there was a Nero among the popes as well as among the emperors. Besides other instances of infamous licentiousness with which he is chargeable, he is accused of incest

they were condemned. At the instigation of their enemies, however, Alexander VII. the successor of Innocent, issued a bull in 165G, declaring, that the five propositions which had

with his own daughter. And though it may be been condemned were the tenets of Jansenius, possible that the malignity of his enemies may actually contained in lus book, and proceeded, nave forged false accusations against him, and in in 1666, to

send into France the form of a some instances exaggerated the hoiror of his real declaration to this purpose, which was to be crimes vet there is upon record an authentic list subscribed by all those who aspired to any pre- of undoubted facts, which, by both their number ferment in the church This declaration pro- and atrocity, render the name of Alexander VI. duced the most deplorable divisions and tumults.

— "❓❓❓ ❓❓❓ .ii = — — It was vigorously opposed by the Jansemsts,

who maintained, that in matters of fact the pope was fallible, especially when his decisions were personal, and not confirmed by a general coun- cil; and, consequently, that they were under no obligation to subscribe this papal declara- tion, which had merely for its object a matter of fact. Notwithstanding this intolerant bull, Alexander is said to have been liberal in his sentiments ; to have disapproved the severities exercised towards the Vaudois in Piedmont, and

odious and'detestable. His insatiable avarice is

expressed in the following lines :

Vendit Alexander claves, altaria, Christum, Vendere jure potest ; emerat ille prius.

Christ's altars, keys, and Christ himself, Were bartered by this Pope for pelf : But who shall say he did not well ? That which he bought, he sure might sell.

Dupin's Eccl. Hist. vol. vi. p. 14. Bower's Popes, vol. vii. p. 328. Mosheim's Eccl. Hist. vol. iii. p. 431. Robertson's America, vol. i. p. 162, 8vo.

to have treated the Protestants who visited Rome with condescension. It is further related,

ALEXANDER VII. (pope,) was born of the illus- that when some English gentlemen presented

trious family of Chighi, at Sienna, in 1599, and recommended by the marquis Fallavicini to pope Urban VIII. Having been inquisitor at Malta, and legate at Ferrara, he was nuncio in Germany, and employed at Munster in con- ducting the conferences that were intended to restore the peace of Europe. Some writers re- late, that at this time he had formed the design of abjuring Popery, and embracing the Protes- tant religion, but was deterred from executing his purpose. Upon his return from this embassy, he was appointed bishop of Imola, in Romagna, and afterwards cardinal and secretary to the pope. His next advancement was to the papal chair, to which he was introduced by the unanimous suffrage of the sixty-four cardinals, which he contrived to obtain by that dissimulation and address of which he is said to have been com- plete master. After his election in 1655, he ordered his coffin to be placed under his bed in his apartments in the Vatican, that it might serve to him as a memento of mortality ; when he was robed in the pontifical habit, he appeared to have a hair-cloth under his shirt ; and when a wealthy female, signora Olympia waited upon him with congratulation, he dismissed her with a cold repulse, saying, ' It is not decent for a woman to enter the dwelling of the father of the church.' That the whole of this appearance of humility and self-denial was a farce, was suffi- ciently verified in his future conduct. His zeal ror religion, and his concern for terminating the wars which distracted the Christian world, seem o have subsided after his elevation to the pon- tificate ; nor did he take any pains to conci- liate the crowns of France and Spain. The five propositions of Jansenius, which contained the sum of his doctrine, had been condemned by Innocent X.; but the Jansenists had contrived to evade this sentence by a subtle distinction, which allowed them to acknowledge that these propositions were justly condemned by the pope ;

themselves at his feet to pay him the customary homage, upon finding that they were Protes- tants, he courteously said . < Rise, you shall not commit

what you think an idolatry ; I will not give you my blessing, but I pray God you may be worthy to receive it.' To the Jesuits this pontiff manifested a peculiar partiality ; for though Innocent X. had, in 1645, condemned the indulgence which these artful missionaries had shewn to the Chinese superstititions, Alex- ander virtually disannulled, in 1656, the sen- tence of his predecessors, and allowed the Chinese converts the liberty of performing several of the rites to which they had been accustomed, and to which they were principally attached.

This pontiff was a friend to literature and the fine arts, and expended considerable sums in promoting them. He embellished the city of Rome and erected the magnificent college, Delia Sapienza, which he furnished with a fine library and botanical garden. He appointed six new professorships, and increased the salaries of the former professors As an author, he has been highly extolled by his panegyrists ; a volume of Latin poems, entitled Philomathi Musae Juve- niles, consisting of heroic, elegiac, and lyric verses, and a tragedy under the title of Pompey, after the model of Seneca, written in his youth, whilst he was a student at Sienna, was published in folio, at the Louvre, in 1656. He died in the year 1667, with a higher reputation for talents than for honesty : and, as Bayle says, more lamented by the Jesuits than the Jensenists, Mosheim's Eccl. Hist. vol. v. p. 26[illegible]99[illegible]214. Bower's Popes, vol. vii. p. 483. Gen. Diet.

ALEXANDER VIII. (pope,) originally called Peter Ottoboni, was born at Venice in 1610: and having studied at Venice and Padua, was made a bishop and cardinal by Innocent X ; and at the age of seventy- nine succeeded Innocent XI. in the papal see. Instead of devoting the powers which he had acquired at this late period

but to maintain that they were not contained in of life to the service of religion, his thoughts were the book of Jansenius in the sense in which chiefly employed in providing for his relation

and accumulating upon them honour and wealth. Accordingly one of his domestics being asked by this pontiff what the people said of him, replied, that they said, ‘ he lost no time in the advance- ment of his family.’ ‘ Right,’ says the pope, ‘ for I nave only half an hour left of the four and twenty.’ His indifference with regard to compromising the dispute that subsisted between France and the court of Koine, was considered by the French court as an evidence of his disposition to yield to the claims of the clergy of France ; but at the close of his life, he issued a bull of execration against every thing that had been done to the prejudice of the pope’s authority in the assembly of the clergy of France in 1682. Having enjoyed the honour and emoluments of his station fifteen or sixteen months, he died in 1691, with a cha- racter stained with the reproach of avarice and duplicity. Gen. Diet. Bower’s Popes, vol. vii. p. 490.

ALEXANDER AB ALEXANDRO, so called, be- cause his Christian and family names were Alex- ander, was born at Naples in 1461. He relin- quished the practice of the law, to which he was at first devoted, because this profession endan- gered his integrity ; and preferred a small for- tune, in the tranquillity of retirement Against the power and favour of the great, he says, an advocate would find it impossible to support his clients ; and the issue of suits depended not so much on the justice of the cause, as on the will and favour of an indolent or corrupt judge ; so that it was fruitless to study, with diligence and labour, controverted points of law, with the va- rieties of its cases ; and adds, that the provisions of law, though wisely contrived, were often ini- quitously perverted. From the works of the ancients, to which he had been accustomed to direct his attention, he made a collection of pas- sages relating to the history and customs of the Greeks and Romans, which he arranged in six books, under the title of Dies Geniales ; a work which manifests more learning than judgment or taste. An edition of this work, with notes by various writers,

was published in two volumes 8vo. at Leyden, in 1673. The author appears to have been credulous and superstitious, and gives a strange account of dreams, spectres, haunted apartments in his house at Rome, &c. ; he died in this city about the year 1523. Gen. Diet.

ALEXANDER AB ALEXANDRO, proto-medicus of Sicily, in which island he was born early in the fifteenth century ; left a work on the duties and privileges of the office he held, which was afterwards published: Constitutiones et regu- lata Jurisdictionis Regii protomedicatus Sicilise elucidata, scripta. Haller says, circa A. 1429, edita Panormi, 1564, 4to. a I. Philippo Ingrassia.

ALEXANDER NOEL, OR NATALIS, a Dominican friar, and one of the most laborious writers of the seventeenth century, was born at Rouen, in Nor- mandy, in 1639, admitted into the order of Do- minican friars, in 1655, and went to pursue his Studies in philosophy and divinity, at the great convent in Paris. He afterwards taught philo- sophy in the same convent in which office he wntinued for twelve years; and declining that of a preacher, he devoted himself entirely to the

study of the scriptures and ecclesiastical history He was created a doctor of the Sorbonne in 1675. By Colbert, the minister, with whose esteem he was honoured, he was introduced to his son who was afterwards archbishop of Roan ; and m this connection he enjoyed the conferences of persons of distinguished learning. These con- ferences led him to conceive the design of writ- ing an ecclesiastical history. The first volume of this work, which he executed with great assi- duity, and which was entitled, Selecta Historiae Ecclesiastics capita, et in loca ejusdem insignia Dissertationes Histories Chronologies Dogmati- cs was published in 1676. This work consists of twenty-six volumes in

8vo. the last four of which were not published till 1086. In the first vo- lume he gives a history of the first age of the church, with an account of the persecutions which it suffered, the succession of popes, the heresies which arose, and the councils whicn condemned them, the writers in favour of Chris- tianity, and the kings and emperors who reigned during the first century. To this volume are an- nexed twenty-eight valuable and much esteemed dissertations, upon such points as have been the subjects of dispute in history, chronology, cri- ticism, or doctrine. The history of the second century was published in 1677 in two volumes, and to it are subjoined three dissertations against M. Daille with regard to fasting in lent,confirma- tion, and the use of the fathers ; and another dissertation concerning the time of celebrating Easter ; and he also treats of the version of the Septuagint, &c. &c. The third century was published in 1678; and in three dissertations he has collected what relates to the life, manners, ordination, fall, errors, and defenders of St. Cy- prian. The history of the fourth century, com- piled in three volumes, and containing forty-five dissertations, was printed at Paris in 1679. In the three following years he published his history of the fifth, sixth, seventh, eighth, ninth, and tenth centuries ; and that of the eleventh and twelfth centuries in 1683; and in these volumes therft are several excellent dissertations. His senti- ments on the subjects of some of these disserta- tions exposed him to the resentment of the court of Rome, which issued out a decree against his writings in 1684. Nevertheless, he published in the same year, in three volumes, the history of the thirteenth and fourteenth centuries, in which he continued to defend the rights of kings against the pretensions of that court, though he vindi- cates those princes who employed fire and sword against the Albigenses. He at last completed this work in 1686, by publishing four volumes, containing the history of the fifteenth and six- teenth centuries. The history of the CouncH of Trent occupies the greatest part of the last vo- lume. Of this voluminous work, containing many curious

particulars, there have been many editions. In 1689 he published a work of the same kind upon the Old Testament, in six vo- lumes in 8vo. which .extends from the creation of the world to the birth of Christ, and which period he has divided into six ages. From 1678 to 1680 he also published several other dis- sertations. In 1689 our author published hia Theologia Dogmatica et Moralis secunduiu

Ordinem Catechismi Concilii Tridentini, in quin- que libros tributa, i. e. Positive and moral Divinity, according to the order of the Cate- chism of the Council of Trent, in five books ; printed at Paris in ten volumes in 8vo. and at Venice 1698. Another volume having been added in 1701, this work was printed at Paris, in two volumes in folio, in 1703, with a col- lection of Latin letters. He also published, in 1704, Commentaries on the four Gospels; in 1710, upon St. Paul's, and the seven Canoni- cal Epistles ; and he also wrote a Commentary on the Prophets Isaiah, Jeremiah, and Baruch, which was never printed : and he likewise pub- lished several other treatises, which we shall not recite. Towards the latter part of his life he was afflicted with the loss of his sight, which he bore with great calmness and resignation. He died in 1724, in the eighty-sixth year of his age. His piety, humility, and disinterestedness ren- dered him an object of general esteem. Gen. Diet.

ALEXANDER I. (king of Scotland,) was the son of Malcolm III. and succeeded his brother Edgar in 1107. His character was distinguished by vigour and impetuosity, which gave him the appellation of ' the fierce : ' and which, though previously concealed by his piety and devotion, discovered themselves on his accession to the throne. His conduct both in the northern and southern parts of the kingdom was so severe, that he awed the insurgents into submission; but a conspiracy was at length formed against his life, and the traitors, who were engaged in the

execution of it, obtained admission into his bed-chamber at night, whilst he lodged at a castle in the Carse of Cowrie. Alexander, after having killed six of them, made his escape. Having reduced his own kingdom to order, he visited his brother-in-law, Henry I. of England, and assisted him in terminating a difference between him and the Welsh. He closed his reign in en- acting and enforcing civil and ecclesiastical regulations, died a bachelor in the seventeenth year of it, and was succeeded by his younger brother, David. Mod. Un. Hist. vol. xli. p. 45.

ALEXANDER II. (king of Scotland,) succeeded his father William the Lion, in 1214, in his six- teenth year. His attempt to recover the possession of Northumberland was retaliated by a destruc- tive expedition into Scotland, conducted by John, king of England. Whilst John was thus employed, Alexander reduced Northumberland ; and, being forced to discontinue his pursuit of the English king, who was burning the towns, ravaging the country, and advancing towards the capital, he entered England by way of Carlisle, which he took and fortified, and proceeded as far as Richmond, in Yorkshire, retaliating, upon the adherents of John, severities similar to those which his own subjects had suffered. But his progress was impeded, and he was compelled to return.

In 1221,- he married the princess Joan, eldest sister of Henry III. of England, which contri- buted to preserve the peace of the two kingdoms. After her death in 1239, they were again em- broiled ; but by the mediation of the earl of Corn- wall, Henry's brother, and the archbishop of York, they were again reconciled. Alexander, in his

voyage to quell some commotions that were ex- cited in Argyleshire, fell sick, and being put on shore on an island called Kernery, on that coast, died in the fifty-first year of his age, and thirty-fifth of his reign. He was succeeded by Alexander III. his son by his second queen, the daughter of Egelrand de Coucy, one of the most powerful of the French nobility.

Mod. Un. Hist. vol. xli. p. 77.

ALEXANDER III. (king of Scotland,) son of the preceding, succeeded his father at the age of nine years, in 1249. His marriage with Marga- ret, the daughter of Henry III. of England, was soon after solemnized in the presence of the two courts at York. 'On this occasion, Alexander paid homage to Henry for his English posses- sions; and, on being pressed to perform his homage for the crown of Scotland, he declined it. Alexander, .upon his return to Scotland, found that the Cummins, a family of very great in- fluence, had formed a strong party against his English connections, under the plea that Scot- land was never any better than a province of England ; and both the king and queen were committed to close custody in the castle of Edin- burgh, where they were debarred from seeing any company, or associating with each other, and prohibited from all concern in the government. When Henry heard of their situation, he deter- mined to relieve them, and for this purpose assembled his military tenants at York, and marched to the borders ; and by his emissaries, whom he dispatched to the castle of Edinburgh, released the royal pair, and afterwards dispos- sessed the usurpers. The king then assumed the exercise of the regal power ; and, as soon as he was of age, pardoned the Cummins and their adherents, upon their submitting to his authority. However, in 1263, Haquin, king of Norway, ap- peared on the coast, with a fleet of 160 ships, to make good his pretensions to the Western Islands ; and, disembarking his troops, made himself master of the castle of Ayr, and advanced into the country. Alexander, having assembled an army, met him at a place called Largs ; and, after a long and doubtful contest, the Scots army- was victorious. Of the Norwegians, 10,000 are said to have perished in the field, and the Scots lost 5000. The ships of Haquin were so much wrecked the day after the battle, that he could scarcely procure a vessel to carry him and a few friends to the Orkneys, where he died of grief. His son and successor, Magnus, concluded a treaty with Alexander ; and in consideration of his

*receiving 1000 marks of silver in two years, and an annual payment of 100 marks for ever after, renounced all claim to those islands. As a further cement of friendship, Margaret, Alex- ander's daughter, was betrothed to Eric, the son and heir of Magnus. In 1256, Alexander and his queen repaired to the English court, where they were sumptuously entertained ; and when the queen was delivered, they both returned to their own kingdom. During the war between Henry and his barons, Alexander assisted him with 5000 men, and preserved the northern for- tresses against all their attempts. Upon the accession of Edward I. to the throne of England, Alexander, with his family was present at hi**

coronation, and soon after paid him homage for his English estates. In the parliament, held at Westminster in .1282, Alexander attended as the first peer of England. In 1283 he lost his son Alexander, in the twentieth year of his age ; and his death was soon followed by that of his sister the queen of Norway, who left an only daughter. Having no surviving issue besides this infant princess, Alexander was urged by the nobility and the states of the kingdom to marry ; and, in compliance with this request, he married loletta, daughter to the Count of Dreux in France. This excellent prince was soon after killed, whilst he was hunting, by his horse's rushing down a high precipice, A. D. 1285,in the forty-fifth year of his age, and the thirty-seventh of his reign. He was succeeded by Margaret, his grand daughter, and heir of his crown, who did not long survive him. ??? Scotland was now in a very critical state, Edward I. was acquir- ing an influence in the kingdom, which no other English monarch ever possessed, and revived the claim of sovereignty, to which his father Henry had never pretended. The death of Alexander was much regretted ; and the services he had performed to the kingdom demanded a tribute

of respect to his memory. He had introduced many excellent regulations of government; he had divided

the kingdom into two parts, in each of which he occasionally resided, with a view of preserving the public peace, and for the pur- pose of more easily administering justice to all ranks of people ; and he had greatly contributed to diminish the burdens of the feudal system, and to restrain the licence and oppressions of the nobility. The death of Alexander III. forms a remarkable aera in the Scottish historv. Mod. Un. Hist. vol. xli. p. 79, &c. ►►

ALEXANDER, prince of Parma and Placentia, the son of Octavius Farnese, and great grand- son of pope Paul III. succeeded his father in 1580 ; previous to which he had acquired the character of the greatest hero of his age ; having given early proofs of uncommon courage, and military skill, in the wars of the Netherlands, under Don John of Austria : on which account, Philip k"mg of Spain appointed him governor of the Netherlands, and prefect of Burgundy, upon the death of Don John. In 1566, he married the princess Mary of Portugal, and died in 1592, aged 48.

ALEXANDER OF RUSSIA.

ALEXANDER I. (Emperor of Russia and King of Poland), was the eldest son of Paul I. by his second wife, Sophia Dorothea, princess of Wirtemberg Stuttguard. He was born 22d December 1777, and the care of providing for his education being assumed by his grandmother, the Empress Catherine, she placed him under the tuition of the celebrated M. de la Harpe. In the year 1793 he married Elizabeth Aleviowna, princess of Baden ; and on the sudden demise of his father (it was officially announced that he was , found dead in his bed), in March 1801, he suc- ceeded to the throne. The general amnesty pub- lished on his accession was allowed, it is said, to include all persons connected with his father's death, except one nobleman, who was sent into Siberia. The young emperor declared his inten- tion of supporting the institutions, and abiding by the policy of his august grandmother. Rus- sia having been precipitated by his predecessor into a maritime

confederacy with the other nor- thern powers against England, he very promptly manifested his desire to enter into amicable re- lations with this country ; and on the 17th June a convention was signed at St. Petersburg!! be- tween the Russian ministers and Lord St. He- lens, conceding the great British question, of the right to search neutral ships in time of war, and adjusting all matters in dispute. To this com- pact Denmark and Sweden immediately acceded. Few events in the history of the maritime strug- gles of Great Britain have been more important than was the dissolution of the northern confe- deracy at this juncture. Alexander was crowned at Moscow in September, and published on this occasion an ukase to discontinue the recruiting of the army, for diminishing taxes, liberating deb-

tors, and prohibiting all prosecutions for fines, together with a full pardon to deserters. In June 1802, he appeared, for the first time, per. sonally among the potentates of Europe, and had an interview with the king of Prussia at Memel. France, under the guidance of Napoleon, was at this period making rapid conquests in the south of Europe ; Buonaparte having been, in the preceding month, crowned king of Italy at Milan; shortly after which he annexed Genoa to France. But the cabinet of St. Petersburgh seems wisely to have thought that its distance from the scene of action, might well excuse the emperor from any active interference with the belligerent states. He contented himself, therefore, in 1803, with offering to interpose his good offices in restoring the newly ruptured peace between England and France. Thearrest andmurder of theDucD'Eng- hein, however, aroused him to make a strong re- mojistrance the following year against this shame- ful violation of the neutral territory of Baden ; and he appealed from the frivolous excuses of the French government on that subject, to the diet of Ratisbon. But the influence of France was at this time paramount in Germany.

On the llth April, 1805, Russia came forth decidedly into the first of her great struggles with France, and signed a treaty with England, Swe- den, and

Austria, to use the most efficacious means for the purpose of putting a stop to the encroachments of the French government, and securing the independence of the different states. A large Russian force now, therefore, advanced into Germany, but not in time to rescue the ca- pital of the emperor of Austria from the more rapid advances of Napoleon. On the second of December was fought the memorable battle of 2 N 2

Austerlitz, in which the emperor Alexander ap- peared at the head of 50,000 Russians, and the emperor Francis with an Austrian force of about half that amount : the result is well known. Buonaparte spoke always of the sun of Auster- litz as shining upon one of his most glorious days. His force was about equal, perhaps, to that of the allies ; whom, after a sanguinary and often doubtful contest, he compelled to quit the field. Alexander, in consequence, commenced his retreat on the sixth, and in the following July appears to have concurred very cordially in the negociations for a general peace, which were conducted by the ministers of the different powers at Paris. But the Russian minister, M.d'Ou- bril, having precipitately signed a separate treaty with France, the emperor refused to ratify it. The negociations were broken off, and the rela- tions of England and Russia remained undis- turbed.

The French, at the close of this year, having completely humbled Prussia, advanced into Po- land ; and on the 26th of November was fought between the French and Russians the equivocal battle of Pultusk. In that of Eylau, which was fought on the 7th and 8th of February, 1807, both parties again claimed the victory. On the morn- ing, however, of the 9th, the Russian army found it necessary to retreat ; and on the 14th of June was completely beaten by the French in the me- morable battle of Friedland. Lord Hutchinson, who was present, declared, in the British senate, (hat the Russians recrossed the Niemen with the loss of 40,000 men, 1848 officers

killed or wound- ed, and 27 generals. The result was an inter- view between Alexander and the French emperor at the instance, it is said, of the latter; and the celebrated treaty of Tilsit followed. Russia, by this compact, acknowledged the brothers of Buonaparte as kings respectively, of Naples, Holland, and Westphalia ; she formally recog- nised also the confederation of the Rhine, and promised to acknowledge all the sovereigns who might hereafter become members of that confe- deration. She engaged also that hostilities should, on her part, instantly cease with the Ottoman Porte, and that she would use her mediation to negotiate and conclude a peace between Great Britain and France. Secret articles are said to have been added, that Dantzic and the ports of Prussia and Russia should be shut against the commerce of Great Britain. By another secret article, Alexander also consented to concede Cor- fu and the seven islands to France. Such was the humiliating commencement of this prince's celebrated friendship with Napoleon.

In the autumn of 1806, the British cabinet was induced, from secret and pretty correct informa- tion of the designs of the French government upon them, to seize the eighteen Danish ships of the line ►►then lying at Copenhagen, a measure which Russia thought proper to resent by de- claring war against England. All British ships and property were detained, and the fortofCron- stadt put into a state of defence. Hostilities be- tween England and Russia, however, were never carried much further than a cessation of commer- cial intercourse. A sewmd meeting between

Alexander and the emperor of France took place at Erfurt on the 27th of September 1808, with the obvious design, on the part of the latter, of en- abling himself, with safety, to withdraw his troops from Germany. For that noble resistance of his usurpations was now commencing in the Peninsula, which ultimately issued in the eman- cipation of enslaved Europe.

While in this year his good brother of France was

thus well engaged, the troops of Alexander advanced upon Finland, took possession of Abo, the capital, in the month of March ; and on the 27th of September, 1809, procured the formal annexation of the greatest part of that province to Russia. The interruption of all commerce with England, began now to be severely felt by Russia ; and the restraints of Napoleon's con- tinental system, were ill-brooked by the pride of Alexander. From the commencement of 1812, a storm seemed to be gathering, which threatened the destruction of French influence in the north of Europe. Alexander put his armies in motion ; and, by an imperial ukase of the 23rd of March, ordered a levy of two men in five hundred throughout his dominions. He concluded a treaty also with the Ottoman Porte, and settled all matters in dispute with Great Britain. Buo- naparte, in the mean while, was pouring French troops, and those of the confederation of the Rhine, into Germany ; and occupied all the principal towns and fortresses of Prussia. On the 6th of June, Napoleon passed the Vistula, and shortly after, the Niemer. ' Russia,' said he, in one of his favourite harangues, ' is dragged along by a fatality ! Her destinies must be ac- complished.••• Are we no longer to be regarded as the soldiers of Austerlitz ? ••• Let us carry the war into her territory : a second war in Poland will be as glorious to the French arms as the first.' We cannot pursue the details of the me- morable campaign that followed. Suffice it to say, that he who entered Russia at the head of from 300,000 to 400,000 men, after having de- feated the Russians in almost every pitched bat- tle that they fought ; after having taken Moscow, the capital of the empire, returned ulojie ! and of his immense army but 50,000 ever re-passed the Russian frontier. Alexander, who had hitherto only fought for independence, now resolved in his turn to become the aggressor; and, joining his army in Poland, published in February 1813, the celebrated manifesto, which served as a basis for the coalition of the other powers of Europe, against the rapacity of the French. The battle of Leipsic, in which the allies compelled the French to retire, seems to have

been almost the last struggle of Napoleon, to preserve his domi- nion over the other potentates of Europe. The Russian monarch marched with the rest of the allies into France ; and it was principally to the efforts of Alexander, that, after about two months of constant fighting, with various success, one bold and great push was made to seize on Paris which the allies reached on the 30th of April 1814, at six in the morning, and which they oc- cupied by capitulation, at three in the afternoon At the peace, Alexander visited England, and amongst a succession of fetes given upon the

occasion, dined with the prince regent, the em- peror of Austria, and king of Prussia, at the Guildhall of London.

On his return he seems to have occupied him- self in sincerely endeavouring to improve the internal condition of his empire. Early in his reign, he had given it, in a manner, a new con- stitution ; re-organizing the senate and limiting the power of governors. When he was crowned kintj of Poland in 1815, he limited his own au- thority, granted legislative powers, and the pri- vilege of self-taxation to the Polish senate, and a representative body to the people. One of his ukases forbad the confiscation of hereditary pro- perty in Russia, in any criminal case whatever, an advantage, until his reign, enjoyed only by the nobility. Nor should we omit to state, that he was decidedly the friend of literature, the arts, and every moral and benevolent institution of the age. The noble support he afforded to the Russian Bible Society, may be instanced as a proof of our last remark.

In the flower of his age this distinguished prince was seized with a fatal illness, and died at Taganrok, a fortress of the sea of Agof, in November, 1825.

The French papers, in conveying the intelli- gence of his death, coupled it with a curious ex- tract from the Royal Prussian Calendar, in which the second brother, the grand duke Nicholas, was declared heir to the throne, in omission of his elder brother Constantine. Such intimation could scarcely originate in error in that quarter ; and in consequence, it was at first inferred that Constantiue was set aside. This inference was the more rational, as an ex post facto law had really passed to supersede any issue which he might have by his second marriage with the countess Gradinska, an accomplished Polish lady, on the ground that children to succeed must be royal on both sides. Reports also attributed sinister attempts to Constantine four or five years ago, whicli it was insinuated, led to his virtual renunciation of the right of succession ; and one English paper boldly asserted that Alexander met a violent death. These rumours, however, appear to have rested on no adequate foundation ; and in spite of the authority of the Berlin Alma- uack, the emperor Constantine set out on the 8th of December from Warsaw, for St. Peters- burgh, where he was proclaimed on the 15th. The Court of Berlin had been previously ap- prised of the illness of Alexander; the proximate cause of whose decease originated in the break- ing out of erysipelas in his leg, that he was aware of his own danger, and died as became him. The Russian authorities in London took an oath of allegiance to the new emperor Con- stantine, on Sunday the 25th of December.

On the whole, this monarch cannot be denied the meed of considerable commendation with re- spect to the internal management of his great empire. If he has not all the glory of a Peter I. in originating improvements, he has the great credit of continuing and enlarging them with ex- emplary patience and industry ; and if he never pursued the ambitious projects of a Catherine with regard to other nations, he nobly defended aud rescued his country from the grasp of an

unprincipled usurper, and was foremost in a series

of conflicts, essential to the liberty of half the civilized world. To hold the balance even in respect to his character, there seems to have been, of late years, a more decided leaning in this prince to arbitrary measures, both at home and abroad ; and he is one of those potentates who has been busily engaged in the so-named Holy Alliance.

ALEXANDER'S TOMB, an elegant and very an- cient sarcophagus, supposed once to have con- tained the body of Alexander the Great ; and now, through the zeal and enterprize of Dr. E. D. CLARKE, deposited in the British Museum. It is an entire block of green Egyptian breccia, a beautiful variegated marble, of which few specimens remain, measuring ten feet three inches and a half in length, three feet ten inches in height ; at the circular end, five feet three inches, and at the other end, four feet two inches in breadth ; covered with hieroglyphics.

This valuable relic of antiquity had been re- moved by the French from the mosque of St. Athanasius, at Alexandria, when the British troops entered that place ; and Dr. Clarke found it concealed in the hold of a hospital-ship, in the inner harbour, half filled with filth, and covered with the rags of the sick. AH descriptions of the inhabitants and visitants, with whom the learned traveller conversed, concurred in the tradition of 'its being the tomb of ISCANDER (Alexander), the founder of the Alexandrian city. On its shipment for England, in the Ma- dras, the Capitano bey, with many Turks of dis- tinction, came on board to pay a last testimony of devotion to this proud trophy of British va- lour ; and, according to General Turner, ' all solemnly touched the tomb with their tongues.' The privilege to render this act of adoration be- ing a contribution of six paras or medins to the iman of the mosque. On taking leave, the Capitano bey expressed his belief that provi- dence would never suffer the tomb to go safe to England.

The chain of evidence by which Dr. Clarke supports his confident opinion of the identity of this sarcophagus with the real tomb of Alexan- der, is as

follows: The body of Alexander, according to Plutarch, being embalmed at Ba- bylon by certain Egyptians and Chaldeans, his funeral was delayed for two years, by the dis- putes amongst his successors, and, still more, by the immense preparations which were made for that solemnity. A notion prevailed, that the final possession of it would be most propitious to the state with whom it might rest ; whence Perdiccas, who afterwards conducted the funeral procession, would have deposited it in the se- pulchre of the kings of Macedon; but Alex- ander had ordered it to be taken to the temple of Jupiter Ammon, in Lybia. Diodorus Sicu- lus, lib. xviii. c. 26., gives an elegant and most interesting account of its movement thither. The car, ou which it was conveyed, was the most magnificent the world had then seen ; a prodi- gious concourse of people attended it from all the cities? vear which it passed ; and Ptolemy Sotcr, receiving intelligence of its approach, went out with au army as far as Syria to

it. Pretending to render the highest honours to the imperial corse, he conducted it to Memphis, and there it was detained until the shrine, in which he now determined to deposit it at Alex- andria, was finished. This is described by the above historian as being constructed with all pos- sible magnificence, and as standing within the city of Alxandria. Pausanias mentions the re- moval of the body from Memphis ; Quintus Cur- tius, its being ultimately carried to Alexandria with great pomp ; and Strabo, ' that there it still lies, though not in its original coffin, a case of glass having been substituted for the gold covering, which a later Ptolemy had removed.'

Augustus visited the tomb B. C. 30 ; and Dion Cassius mentions the singular circumstance of the

emperor's mutilating the nose, in touching

the body : he placed a golden crown upon 'A, on departing, and scattered flowers over it. Cali- gula is said to have taken away the breast-plate from the armour in which Alexander was buried, and occasionally to have worn it himself. A. D. 202, it was visited by Septimus Severus, who causing a strict search to be made through Egypt for all the monuments of its ancient literature, deposited them in the tomb of Alexander, and ordered the shrine to be closed from all future access. Caracalla, however, in 213, presumed to violate this injunction, placing a purple vest, splendid rings, &c. on the tomb ; and here closes all the direct history of its existence. For further particulars respecting this interdlting monument See ALEXANDRIA.

ALEXANDREA, ia ancient geography, a mountain of Mysia, on the sea coast, forming a part of mount Ida, where Paris is fabled to have given judgment on the three goddesses.

ALEXANDRETTA, called by the Turks Scanderoon ; a town in Syria, at the extremity of the Mediterranean sea. It is the port of Aleppo, from which it is distant twenty-eight or thirty leagues, but is now, properly speaking, nothing else but a village, without walls, in which the tombs are more numerous than the houses, and which entirely owes its existence to the road which it commands. This is the only road, in all Sy- ria, where vessels anchor on a solid bottom, with- out their cables being liable to chafe ; but in other respects it has many inconveniences. It is infested, during winter, by a wind, called by the French sailors le Raguier, which, rushing from the snowy summits of the mountains, frequently forces ships to drag their anchors several leagues. And when the snow begins to cover the moun- tains which surround the Gulph, tempestuous winds arise which prevent vessels from entering for three or four months together. The road also to Aleppo by the plain is infested by Curd rob- bers, who conceal themselves in the neighbour- ing rocks, and frequently attack and plunder the

strongest caravans. But the worst circumstance is the extreme unwholesomeness of the air, oc- casioned here by stagnant waters and mephitic exhalations. It may be affirmed, that this every year carries off one third of the crews of the ves- sels which remain here during the summer ; nay, ships frequently lose all their men in two months. The season for this epidemic disorder is princi- pally from May to the end of September ; it is an intermitting fever of the most malignant kind ; and is accompanied with obstructions of the li- ver, which terminate in a dropsy. To this bane- ful epidemic, Alexandretta, from its situation, seems to be irremediably condemned ; for the plain on which the town is built is so low and flat, that the rivulets, finding no declivity, can never reach the sea. When they are swelled by the winter rains, the sea, swelled likewise by tem- pests, hinders their discharging themselves into it : hence their waters, forced to spread them- selves, form lakes in the plain. On the approach of the summer, the waters becoming corrupted

by the heat, exhale vapours equally corrupt, and which cannot disperse, being confined by the mountains that encircle the gulf. The entrance of the bay besides lies to the west, which in those countries is the most unhealthy exposure, when it corresponds with the sea. The labour neces- sary to remedy this would be immense, and after all insufficient ; and, indeed, such an undertak- ing would be absolutely impossible, under a go- vernment like that of the Turks. Several years ago, Mr. Volney informs us, the merchants of Aleppo, disgusted with the numerous inconve- niences of Alexandretta, wished to abandon that port and carry the trade to Latakia. They pro- posed to the Pacha of Tripoli, to repair the har- bour at their own expense, provided he would grant them an exemption from all duties for ten years. To induce him to comply with their re- quest, the agent they employed talked much of the advantage which would, in time, result to the whole country : ‘ But what signifies it to me what may happen in time ?’ replied the

Pacha ; ‘ I was yesterday at Marach ; to-morrow, per- haps, I shall be at Djedda : Why should I de- prive myself of present advantages, which are certain, for future benefits I cannot hope to par- take of?’ The European factors were obliged therefore to remain at Scanderoon. There are three of these factors, two for the French, and one for the Eng’ish and Venetians. The only curio- sity which they have to amuse strangers with, consists in six or seven marble monuments, sent from England, on which you read : ‘ Here lies such an one, carried off in the flower of his age, by the fatal effects of a contagious air.’ The sight of these is the more distressing, as the lan- guid air, yellow complexion, livid eyes, and drop- sical bellies of those who show them, make it but too probable they cannot long escape the same fate. It is true, they have some resource in the village of Ballan, the pure air and excellent wa- ters of which surprisingly restore the sick. The Aga, for some years past, has applied the duties of the custom- house of Alexandretta to his own use, and rendered himself almost independent of the Pacha of Aleppo. The Turkish empire is full of rich rebels, who frequently die in peace- able possession of their usurpations.

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ALEXANDRIA,

ALEXANDRIA, now called Scanderia, the ancient capital of Lower Egypt, was built by Alexander the Great, B. C. 335. It was situated on the Mediterranean, between the lake Mareotis and the beautiful harbour formed by the Isle of Pharos, about twelve miles west of the Canopic branch of the Nile, in N. lat. 31►►. 10’. and E. long. 30►►. 19’. It is probable, says a popular historian, that the opposition and efforts of the republic of Tyre, which gave Alexander so long and so severe a check in the career of his vic- tories, led him to perceive the vast resources of a maritime power, and suggested to him an idea of the immense wealth which the Tyrians derived from their commerce, especially

that with the East Indies. As soon, therefore, as he had ac- complished the destruction of Tyre, and reduced Egypt to subjection, he formed the plan of ren- dering the empire, which he designed to establish, the centre of commerce as well as the seat of dominion. With this view he founded a great city, which he honoured with his own name, near one of the mouths of the river Nile, that, by the Mediterranean sea and the vicinity of the Arabian gulf, it might command the trade of both the east and west. He had no sooner conceived the design than he hastened to execute it. And so sudden was, his resolution, that after he had directed where every public structure was to be placed, fixed the number of temples, and the deities to whom they should be dedicated, &c. there were no instruments at hand proper for marking out the walls, according to the custom of those times. Upon this, a workman advised the king to collect what meal was among the soldiers, and to sift it in lines upon the ground, whereby the circuit of the walls would be suffi- ciently marked out. The advice was followed ; Dinccrates, the most celebrated architect of the age, was employed to draw up the plan, and every resource of power and art was employed to render it worthy of the name of its founder ; which now became the chief commercial city in the world. During the subsistence of the Grecian empire in Egypt and in the east, and amidst all the successive revolutions in those countries, through a period of about 1800 years, commerce, particularly that of the East Indies, continued to flow in the channel, which the sagacity and foresight of Alexander had prescribed.

The breaking up of the empire of Alexander did not retard the progress of Alexandria to opulence and greatness. It became the capital of the Ptolemies, a race of enlightened princes, who placed their glory in commerce and the sciences. They erected, on an island opposite to the mouth of the harbour, a pharos, or light-house, which was considered one of the wonders of the ancient world. Alexandria then engrossed the commerce of India, the grand object of ancient ambition. The goods being brought up the Red

Sea, were landed at Berenice, and being carried across to the river, were there embarked, and conveyed down to the city

This city, says a modern traveller, was a league

and a half long by one-third in breadth, which made the circumference of its walls about four leagues. Quintus Curtius, lib. iv. c. 8. torn. i. p. 221, makes them eighty stadia, or a little more than nine miles. According to Pliny, H. N. lib. v. c. 10. torn. i. p. 258, they were fifteen miles. Strabo,lib. xvii. torn. ii. p. 1143, makes the length of the city thirty stadia, and the breadth between seven and eight stadia ; and Diodorus Siculus, lib. xvii. torn. ii. p. 590. ed. Wessel, makes the circuit ninety stadia, or somewhat more than eleven miles; and he says, that the city was peopled by 300,000 free inhabitants, besides, at least, an equal number of slaves. The lake Mareotis bathed its walls on the south, and the Mediterranean on the north. It was intersected lengthwise by straight parallel streets. This di- rection left a free passage to the northerly wind, which alone conveys coolness and salubrity into Egypt. A street, two thousand feet wide, began at the gate of the sea, and terminated at the gate of Canopus. It was decorated by magnificent houses, by temples, and by public buildings. In this extensive range the eye was never tired with admiring the marble, the porphyry, and the obelisks, which were destined at some future day to embellish Rome and Constantinople. This street, the handsomest in the universe, was intersected by another of the same breadth, which formed a square, at their junction, half a league in circumference. From the middle of this great place the two gates were to be seen at once, and vessels arriving under full sail from the north and from the south. A mole, of a mile in length, called Hepta Stadium, stretched from the continent to the Isle of Pharos, and divided the great harbour into two. That which is to the northward preserved the name of the founder, and was called the Great Port. A dyke, drawn from the island to the rock on which the Pharos was built, secured

it from the westerly winds. The other was called Eunostos, or the Safe Return. The former is called at present the New, and is the port to which the vessels of Europe resort ; the latter is the Old harbour, and is that to which those only from Turkey are admitted : a bridge that joins the mole to the city served for a com- munication between them. It was raised on lofty pillars sunk into the sea, and left a free passage for the ships. The palace, which ad- vanced beyond the promontory of Lochias, ex- tended as far as the dyke, and occupied more than a quarter (a third or fourth, says Strabo) of the city. Each of the Ptolemies added to its magnificence. It contained within its enclosure the museum, an asylum for learned men, groves and buildings worthy of royal majesty, and a temple where the body of Alexander was de- posited in a golden coffin. Perdiccas, it is said, undertook to convey the body of Alexander to the temple of Jupiter Ammon, agreeably to the will of that prince ; but Ptolemy, son of Lagus, carried it off, and placed it in the palace ot Alexandria. The infamous Seleucus Cibyosactes violated this monument, carried off the golden

coffin, and put a glass one in its place. In the great harbour was the little island of Anti- Rhodes, where stood a theatre and a royal place of residence. Within the harbour of Eunostos was a smaller one, called Kibotos, or Cibotus, q. d. the harbour of the arch, dug by the hand of man, which communicated with the Lake Mareotis by a canal. Between this canal and the palace was the admirable temple of Serapis, and that of Neptune, near the great place where the market was held. Alexandria extended like- wise along the southern banks of the lake. Its eastern part presented to view the Gymnasium, with its porticoes more than 600 feet long, sup- ported by several rows of marble pillars. With- out the gate of Canopus was a spacious circus for the chariot races. Beyond that the suburb of

Nicopolis ran along the sea shore, and seemed a second Alexandria. A superb amphitheatre was built there, with a race-ground, for the celebra- tion of the Quinquennalia, or feasts that were celebrated every fifth year. Such is the descrip- tion, says Savary, Letters on Egypt, vol. i. p. 29, left us of Alexandria by the ancients, and above all by Strabo. The original architect of this city is said to have acquired great reputation by rebuilding the temple of Diana at Ephesus, which Herostratus had burnt.

Ptolemy Soter, one of Alexander's captains, who, after the death of this monarch, was first governor of Egypt, and afterwards assumed the title of king, made this city the place of his resi- dence, about 304 years before Chiist. This prince founded an academy, called the Museum, in which a society of learned men devoted them- selves to philosophical studies, and the im- provement of the sciences ; he also gave them a library, which was prodigiously increased by his successors ; and induced the merchants of Syria and Greece to make this city a principal mart of their commerce. His son and successor, Ptolemy Philadelphus, pursued the designs of his father, and completed the tower of Pharos; brought hither the image of the god Serapis, from Pon- tus ; erected the famous temple of Serapion ; improved the Alexandrian Library, and finished the canal, begun by Necos and carried on by Darius Hystaspes, which was intended for join- ing the Nile to the Red Sea. Ptolemy Euer- getes, imitating the example of his predecessors, contributed to the wealth and prosperity of Alexandria. But the voluptuousness of Alexan- dria became proverbial : hence, ' Ne Alexandrinis quidem permittenda deliciis.' Quinctilian. For about 300 years, from the commencement of the reign of Ptolemy Soter to the death of Cleopatra, Alexandria continued in subjection to the Ptole- mies ; but mcvt of them Jevoted themselves to indulgence and pleasure, and, by their example, contributed to that corruption which ultimately terminated in the ruin of this famous city. Ptolemy Physcon, in particular, was a monster of vice and cruelty. About the year B. C.

136, he put to death or banished most of those per- sons who had been in favour with his brother Philometor, and who had been employed during his reign ; and permitted his foreign troops to plunder and massacre at discretion. Many of

savage conduct, and in order to avoid his cruelty, retired into foreign countries, and left the city almost a desert. Of these there were gram- marians, philosophers, geometricians, physicians, musicians, and other masters in the liberal sciences, who disseminated the polite arts and general science through Greece, Asia Minor, ana the islands, and indeed to every place whither they fled. To supply the places of these fugi- tives, Ptolemy caused proclamation to be made in all the neighbouring countries, that persons of any nation, who were desirous of settling at Alexandria, should receive suitable encourage- ment. The proposal was accepted by many, and the houses and privileges which belonged to the former inhabitants were assigned to these new settlers, and thus the city was repeopled : but they soon found reason to dislike their situa- tion, and to hate their new sovereign. Cruel and timid as he was, he determined to massacre all the young men of the city; and for this pur- pose he caused the Gymnasium, or place of exercise, in which they were assembled, to be in- vested by his foreign troops, and put them all to the sword.

When Julius Caesar, B. C. 48, in his pursuit of Pompey, landed at Alexandria, he found the city in great commotion, without law and with- out government. Having arbitrated between Ptolemy XII. and Cleopatra, and decreed that they should reign jointly in Egypt, Pothinus in- stigated the Alexandrians to resist the decree, and to concur in driving Caesar out of the city. Accordingly he brought 20,000 troops to effect his purpose, but Caesar supported the attack ; and in order to prevent any injury from their fleet, to which they next had recourse, he caused it to be set on fire, and possessed himself of the tower of Pharos, which he garrisoned. Some of the vessels that were on fire came so near, that the flames caught the houses

adjoining to the quay, and spread through that quarter of the city which was called Bruchion, and consumed the library that was placed there, consisting of 400,000 volumes. In a decisive battle with the whole army of Ptolemy, Caesar, assisted by a consider- able body of Jews, obtained a complete victory. Ptolemy, in endeavouring to make his escape in a boat, was drowned in the Nile ; and Caesa. returned to Alexandria. Before he left this city he confirmed all the privileges which the Jews enjoyed, in gratitude to them for their assistance, and ordered a column to be erected, in which these privileges were engraven, with the decree that confirmed them. The emperor Caligula was inclined to favour (he Alexandrians, because they manifested a readiness to confer divine honours on him ; and conceived the horrid de- sign of massacring the chief senators and knights of Rome, A. D. 40, and then of abandoning the city, and of settling at Alexandria. At this time the Jews who inhabited this city, and who had continued to enjoy the privileges of citizens granted to them by Alexander, under the Ptole- mies, and who had obtained a confirmation ot them from Julius Caesar, Became obnoxious to the Alexandrians. Their number amounted in the whole of Egypt to a million. The prerogatives that distinguished them, excited etivy and jealousy,

and their fellow-citizens wanted only a pretence for destroying them. They had been for some time restrained from doing them injury ; but under the government of Flaccus, A. D. 40, who permitted the statues of Caesar to be set up in the oratories of the Jews, they were grieviously op- pressed. He took occasion, in consequence of some dissentions and seditions that occurred, to publish a decree, by which, without offering them a hearing, they were declared strangers in Alex- andria ; he also restricted them to one of the five districts into which the city was divided ; and their houses, which they were compelled to abandon, were plundered :

whilst, destitute of any settled abode, they were obliged to wander about the fields and the sea-shore, without shel- ter, property, or even the means of subsistence. Those who fell into the hands of their enemies were destroyed by a lingering and painful death. The streets, market-places, and theatres were deluged with blood ; neither sex nor age was distinguished ; and none, says Philo, Leg. ad Caium, were spared. This writer assigns no other cause for these barbarities than the rage and fury of the Alexandrians. When Flaccus was recalled, the Jews obtained some respite ; but they were soon alarmed by the order of Caius to have his own statue set up in the temple of Jerusalem. In the mean while they sent a de- putation to the emperor, at the head of which was Philo, to petition the restoration of their citizenship and of their oratories. Before the object of their embassy was settled, Caius died; and Claudius declared in favour of the Jews, whom he re-established in the possession of all the privileges they had enjoyed in Alexandria from the time of the foundation of that city. When Adrian visited Egypt, A. D. 130, he ex- pressed a great dislike of the manners and dis- positions of the Egyptians in general, and of those of the inhabitants of Alexandria in particular. In a letter written from thence, and addressed to the consul Servian, he says, ' the city of Alexan- dria is rich and powerful, with great trade, which produces plenty. Nobody is idle there ; some blow glass, others make paper ; many are em- ployed about linen and making of clothes ; all have some trade. All, whether Jews or Chris- tians, acknowledge but one God. I wish that this city, by its grandeur and riches the first of all Egypt, was furnished with better inhabitants. For Nero the Alexandrians built baths in the city, when they expected a visit from him in his way to Egypt ; and because Caecina Tuscus, the son of his nurse, whom he had made prefect of Egypt, presumed to make use of them, he was condemned to banishment. To Alexandria be- longed the honour of being the first place where Vespasian was acknowledged and proclaimed, A. D. 69, and the emperor remained here whilst his generals and armies were fighting against

Vitellius : and though he came hither for the purpose of starving Italy, by preventing its sup- plies of foreign com, yet as soon as he heard of ihe death of Vitellius, and that Rome had sub- mitted, the best ships of Alexandria were imme- diately laden with corn, and ordered to sail for their suoply. While Vespasian continued in this nty, he received ambassadors from the Volo-

geses, who offered him 40,000 Parthian horse ; but peace was then restored to the Roman em- pire. The emperor Severus, in his visit to Egypt, A. D. 202, granted the Alexandrians a council, the members of which had the title and privileges of senators, and assisted in the admi- nistration of public affairs, and thus mitigated the rigour of the despotic government of the prsefect instituted by Augustus. He also changed several laws in their favour ; and they erected a column as a monument of their gratitude, called by Abulfeda the Pillar of Severus. Cara- calla, whose vanity they ridiculed, because, though of small stature, deformed, and destitute of military merit, he had compared himself to Achilles and to Alexander, is said to have con- ceived an irreconcileable dislike to the Alexan- drians. Whilst they were preparing to receive him with joy and magnificence, when he visited the temple of Serapis, and the tomb of Alexan- der, he was meditating cruel retaliation. In the midst of peace, and on the slightest provocation, he issued his commands for a general massacre, A. D. 215. From a secure part of the temple of Serapis, he viewed and directed the slaughter of many thousand citizens, as well as strangers, without distinguishing either the number or the crime of the sufferers ; since, as he coolly in- formed the senate, all the Alexandrians, those who had perished and those who had escaped, were alike guilty. Dion., lib. Ixxvii. p. 1307, represents it as a cruel massacre ; Herodian, lib. iv. p. 155, says, that it was also perfidious. The massacre was accompanied with the plunder both of temples and houses ; and all strangers, except merchants, were driven from the city. ††† The societies of learned men, who were main- tained in

the Museum, were abolished ; and the different quarters of the city were separated from each other, by walls and towers to prevent all communication between them. Caracalla, how- ever, being soon after killed, Alexandria reccn vered its splendour, and became again the second city of the empire. Under the reign of Gallienus, ./Emilian, who had been prefect of Egypt for some years, assumed the imperial purple, on occasion of a violent sedition, which terminated in a ruinous war. All communica- tion between the different quarters of Alexandria was cut off, and it was easier, says St. Dionysius, to go from one end of the world to the other than from Alexandria to Alexandria. The streets were filled with blood, the dead bodies putrefied, and by their infection brought on the plague. ••• TEmilian, in vain, endeavoured to appease the people. They were exasperated against him, and attacked him with stones and darts ; upon which, in order to avert the imminent danger that threatened him, he declared himself emperor. ••• The soldiers and the people, happy in the pros- pect of being rescued from the yoke of Gallie- nus, acknowledged his sovereign authority. At length he was attacked and defeated by Theo- dotus, the minister of Gallienus's vengeance. ••• Upon this he retired to the Bruchium, a quarter of Alexandria, and sustained a siege, in which Anatolius and St. Eusebius, intimate friends, and afterwards bishops of Laodicea, were ad- mired for their ingenious charity in comforting

and relieving the unhappy besieged, who perished with hunger. Anatolius was shut up in Bruchium, and Eusebins remained with the llomans. The former, moved with compassion to the wants and misery of the besieged, applied to the latter in order to obtain amnesty for those who should leave the garrison and surrender themselves. Having succeeded in his applica- cation, he immediately proposed surrendering the place, and making peace with the

besiegers. The answer was, that no peace should be made. Anatolius then proposed, that all who were of no service should leave the place in dis- guise, and they were kindly received and seasonably supplied by Eusebius. ./Emilius was afterwards taken by Theodotus and sent to Gallienus, who ordered him to be strangled in prison. The various misfortunes that befel Alex- andria so depopulated this great city, that, after these calamities, the number of its inhabitants, from four to fou?score years of age, was not equal to that which had been usually reckoned before of those who were between forty and seventy. ††† This difference was known by the registers that were kept for the gratuitous distribution of corn. Eusebius, Eccl. Hist. vii. 21. Dioclesian, A. D. 296, marched against Achilleus, who had usurped the government of Egypt ; and, having driven him to Alexandria, besieged the city, cut off the aqueducts which conveyed the waters of the Nile into every quarter of that immense city, and rendering his camp impregnable to the sallies of the besieged multitude, he pushed his reiterated attacks with caution and vigour. After a siege of eight months, Alexandria, wasted by the sword and by fire, implored the clemency of the conqueror, but it experienced the full extent of his severity. Many thousands of the citizens perished in a promiscuous slaughter, and there were few obnoxious persons in Egypt, who es- caped a sentence either of death, or at least of exile. Eutropius, ix. 24. Orosius, vii. 25, says, that he gave up the city to be plundered. ††† As an apology for the severity of this emperor, it has been alleged that the seditions of Alexan- dria had often affected the tranquillity and sub- sistence of Rome kself, and that his severity was counterbalanced by salutary regulations. ††† In 302, he established, for the benefit of this city, a perpetual distribution of corn . Constan- tine, with a view of establishing his new city of Constantinople, distributed every day 80,000 bushels of corn brought from Alexandria ; and he employed the Alexandrian fleet in victualling New Rome, as it was called, leaving to Old Rome only that of Africa. Socrat. ii. 13.††† Alexandria suffered in common

with other places by the violent and destructive earthquake which shook the greatest part of the Roman empire, July 21st, A. D. 365; and this city annually commemorated this fatal day, when 50,000 per- sons had lost their lives in the inundation.

It was in Alexandria chiefly that the Grecian philosophy was engrafted upon the stock of an- cient oriental wisdom. The Egyptian method of teaching by allegory was peculiarly favourable to such an union. This influence of the Grecian upon the oriental philosophy continued long after the time of Alexander, and was one principal

occasion of the confusion of opinions which occurs in the history of the Alexandrian and Christian schools. Alexander, when he built the city with a determination to make it the seat of his empire, opened a new mart of philoso- phy, which emulated the fame of Athens itself. A general indulgence was granted to the promis- cuous crowd assembled in this rising city whether Egyptians, Grecians, Jews, or others, to profess their respective systems of philosophy without molestation. The consequence was, that Egypt was soon filled with religious and philo- sophical sectaries of every kind; and particularly, that almost every Grecian sect found an advo- cate and professor in Alexandria. The family of the Ptolemies, as we have seen, who obtained the government of Egypt after Alexander, from motives of policy, encouraged this new establish- ment. Ptolemy Lagus, who had obtained the crown of Egypt by usurpation, invited people from every part of Greece to settle in Egypt, and removed the schools of Athens to Alexan- dria. This enlightened prince spared no pains to raise the literary, as well as the civil, military, and commercial credit of his country. Under the patronage first of the Egyptian princes, and afterwards of the Roman emperors, Alexandria long continued to enjoy great celebrity as the seat of learning, and to send forth eminent phi- losophers of every sect to distant countries. It remained a school of learning, as well as a com- mercial emporium, till it was taken, as we shall see in the sequel of this article, and plundered of its

literary treasures by the Saracens. Philosophy, during this period, suffered a grievous corruption from the attempt which was made by philoso- phers of different sects and countries, Grecian, Egyptian, and oriental, who were assembled in Alexandria, to frame, from their different tenets, one general system of opinions. The respect which had long been universally paid to the schools of Greece, and the honours with which they were now adorned by the Egyptian princes, induced other wise men, and even the Egyptian priests and philosophers themselves, to submit to this innovation. Hence arose an heterogeneous mass of opinions, under the name of Eclectic- philosophy, and which has been the foundation of endless confusion, error, and absurdity, not only in the Alexandrian school, but among Jews and Christians ; producing among the former that specious kind of philosophy, which they called their Cabbala, and among the latter innu- merable corruptions of the Christian faith. The Alexandrian school is celebrated by Strabo, lib. xvii. ; and by Ammianus, xxii. 6. trucker's His- tory of Philosophy, by Enfield, vol. i. p. 500.

At Alexandria there was, in a very early pe- riod of the Christian sera, a Christian school of considerable eminence. St. Jerome says, the school at Alexandria had been in being from the time of St. Mark. Pantsenus, placed by Lard- ner at the year 192, presided in it. St. Clement of Alexandria succeeded Pantsenus in this school about the year 190; and he was succeeded by Origen. Lardner's Works, vol. ii. p. 203. The theological system of Plato was introduced into both the philosophical and Christian schools of Alexandria ; and many of his sentiments and ex-

piessions blended with the opinions and lan- guage of the professors.

In the year 638, Amrou, the general of Omar, invaded

Egypt; and in the following year he commenced the siege of Alexandria. This siege 5 perhaps the most arduous and important en- terprise in the annals of Saracen conquests. The first trading city in the world was abundantly replenished with the means of subsistence and defence. Her numerous inhabitants fought for the dearest of human rights, religion and pro- perty. The sea was continually open; and if Heraclius had been awake to the public distress, fresh armies of Romans and barbarians might have been poured into the harbour, to save the second capital of the empire. A circumference of ten miles would have scattered the forces of the Greeks, and favoured the stratagems of an active enemy; but the two sides of an oblong square were covered by the sea and the lake Mareotis, and each of the narrow ends exposed a front of no more than ten furlongs. The ef- forts of the Arabs, however, were not inadequate to the difficulty of the attempt. The faithful na- tives devoted their labours to the services of ###Amrou ; and in every attack his sword and ban- ner glittered in the van of the Moslems. The general, having been released from a temporary captivity, into which his imprudent valour had betrayed him, advanced towards the city doomed to destruction. At length, after a siege of four- teen months, and the loss of 23,000 men, the Saracens prevailed ; the Greeks embarked their dispirited and diminished numbers; and the standard of Mahomet was planted on the walls of the capital of Egypt, December 22, A. D. 640. ' I have taken,' said Amrou to the caliph, ' the great city of the west. It is impossible for me to enumerate the variety of its riches and beauty ; I shall content myself with observing, that it contains 4000 palaces, 4000 baths, 400 theatres, or places of amusement, 12,000 shops for the sale of vegetable foods, and 40,000 tributary Jews. The town has been subdued by force of arms, without treaty or capitulation, and the Moslems are impatient to see the fruits of their victory.' According to the Arabian historians, Alexandria, at this time, consisted of three cities, viz. Menna, or the port, which included Pharos and the adjacent parts ;

Alexandria, properly so called, where the modern Scanderia stands ; and Nekita, or the Necropolis of Josephus and Strabo.

The intelligence of this disgraceful and cala- mitous event afflicted the declining health of the emperor, and Heraclius died of a dropsy about seven weeks after the loss of Alexandria. Under the minority of his grandson, the clamours of a people deprived of their daily sustenance, com- pelled the Byzantine court to undertake the re- covery of the capital of Egypt. In the space of four years the harbour and fortifications of Alex- andria were twice occupied by a fleet and army of Romans ; who were twice expelled by the valour of Amrou. But the facility of the at- tempt, the repetition of the insult, and the ob- stinacy of the resistance, provoked him to swear, that if a third time he drove the infidels into the sea, he would render Alexandria as accessible on

all sides as the house of a prostitute. Faithful to his promise, he dismantled several parts of the walls and towers, but the people were spared ; and the mosch of mercy was erected on the spot where the victorious general stopped the fury of his troops. For the fate of the library, see ALEX- AXDRIAN LIBRARY.

Under the domination of the Arabs, Alex- andria gradually lost its splendour. In the year 924 it was taken by the Magrebians, two years after the destruction by fire of its great church, called by the Arabs, Al Kaisaria, or Caesarea, which had been formerly a Pagan temple, erected by queen Cleopatra, in honour of Saturn. The city was soon abandoned by the Magrebians. and in 928 the possession of it was again re- sumed. But when their fleet was afterwards defeated by that of the Caliph, the Magrebian general, Abul Kasem, retired from Alexandria, leaving in it a garrison of 300 men, who, with the remaining inhabitants, were removed by the Caliph's admiral, Thmaal, to an island in the Nile, called Aboukir. According to Eutychius, more than 200,000 of the wretched inhabitants perished this year.

In the year 875 the old walls had been demo- lished ; its extent contracted to half its ancient dimensions, and those walls were built which exist at the present day. This second Alexan- dria, which may be called, says Savary, that of the Arabs, presented, by the disposition of its streets, the form of a chequer. It had preserved a part of its public places and of its monu- ments. The pharos still existed ; and Alex- andria, in its decline, still presented an air of grandeur and magnificence that excited admi- ration.

The dominion of the Turks, and the discovery of the Cape of Good Hope, in 1499, however, completed its ruin, and from that time it has fallen into decay. Its large buildings fell into ruins ; and, under a government which discou- raged even the appearance of wealth, no person could venture to repair them.

The present state of Alexandria affords a scene of magnificent ruin and desolation. It is divided into the new and old town ; the latter of which is incomparably the most extensive. It is partly enclosed within walls, which are evidently of Saracenic structure, of great thickness and solidity, arid flanked by a hundred towers. They are supposed, by Dr. Pocock, to have been built in 1212, by one of the successors of Saladin, who employed in them the wreck of the ancient city. Part of them is composed, in a singular manner, of a species of shelly concretions, so cemented together as to appear a simple compo- sition. These walls are two French leagues, or nearly six miles in circumference ; but the space which they enclose, forms only a small part of the ancient city of the Ptolemies, whose ruins can be distinctly traced over more than three times that circuit. Even of the enclosure within the walls, by much the greater part is composed of ruins. No traveller has described, in so lively a manner as Volney, the aspect of ancient Alexandria. ‘ In our country,’ says he, ‘ ruins are an object of curiosity. Scarcely can we dis- cover, in unfrequented places, some undent

castle, whosft decay announces rather the deser- tion of its master, than the wretchedness of the neighbourhood. In Alexandria, on the contrary, we no sooner leave the new town, than we are astonished at the sight of an immense extent of ground overspread with ruins. The earth is covered with the remains of lofty buildings destroyed ; whole fronts crumbled down, roofs fallen in, battlements decayed, and the stones disfigured and corroded by saltpetre. The tra- veller passes over a vast plain, furrowed with trenches, pierced with wells, divided by walls in ruins, covered over with ancient columns and modern tombs, amid palm trees and nopals, and where no living creature is to be met with, but owls, bats, and jackals. The inhabitants, ac- customed to this scene, behold it without emo- tion ; but the stranger, in whom the recollection of ancient ages is revived oy the novelty of the objects around him, feels a sensation, which not unfrequently dissolves him into tears, inspiring reflections which fill his heart with sadness, while his soul is elevated by their sublimity.*

Amid this total wreck of ancient grandeur, a few objects only rise distinguishable through the surrounding desolation. Of these, the most re- markable by far is that called ' Pompey's Pillar.' All travellers have been struck with the loftiness and grandeur of this monument. Norden con- siders it as the finest column that the Corinthian order has ever produced, and Sonnini reckons it superior to any in the world. The height has been estimated at 117 feet, but appears, by more careful measurements, not to exceed ninety-four or ninety-five. It is composed of three pieces of the finest granite, one of which serves for the pedestal, the other for the shaft, and the third for the capital. The mean diameter is seven feet nine inches, so that the entire contents of. the column may be estimated at 6000 feet. It is uninjured, unless in the pedestal and some part of the bottom of the shaft. Denon conceives the body of the column to be much the finest part of it ; the capital, and still more the

pedes- tal, he represents as of inferior workmanship. The name expresses the general belief, that it was erected by Caesar, to commemorate his vic- tory over Pompey ; but this derivation seems very uncertain ; and the opinions respecting its origin and date are exceedingly various. Denon ima- gines, that it formed only part of a more exten- sive building, the traces of which, in its vicinity, appeared to him distinctly risible.

In the space of two leagues enclosed by walls, nothing is to be seen but the remains of pilas- ters, of capitals, and of obelisks, and of whole mountains of shattered columns and monuments of ancient art, heaped one upon another, and ac- cumulated to a greater height than that of the houses. The famous tower of Pharos has been long since demolished, aud a square castle, with- out taste, ornament, or strength, called Farillon, erected in its place. The mole which joined the continent to the isle of Pharos is enlarged, and is now become a part of the main land. The island of Anti-Rhodes is in the middle of the present town, and is discoverable only by an eminence covered with ruins. The harbour Ki- botos is choked up. The canal which conveyed

the waters of Mareotis has disappeared. This lake itself, through the negligence of the Turks in preserving the canals which conveyed the waters of the Nile, is no longer in existence, but is entirely occupied by the sands of Lybia. The canal of Faoue", the only one which at present communicates with Alexandria, and without which that town could not subsist, since it has not a drop of fresh water, is half filled with mud and sand. Under the Roman empire, and even under the domination of the Arabs, it was navi- gable all the year, and served for the conveyance of merchandize. Its banks were shaded with date trees, covered witli vineyards, and adorned with country houses. At present it has no water till about the end of August, and its supply is hardly sufficient to fill the cisterns of the town. The fields adjoining to it are deserted ; the groves and gardens which surrounded the ancient city

have disappeared, and without the walls there are only a few scattered trees, some sycamores and fig trees, some date and caper trees, and kali, that hide the burning sands, which would be otherwise insupportable to the sight. Neverthe- less, every trace of ancient magnificence is not obliterated. Some parts of the old walls are yet standing ; and they are flanked with large towers, at the distance of about 200 paces from each other, and with smaller intermediate ones. Be- low are magnificent casemates, which may serve for galleries in which to walk. In the lower part of the towers is a large square hall, whose roof is supported by thick columns of Thebaic stone ; and above this are several rooms, over which are platforms more than twenty paces square. The reservoirs, vaulted with much art, and extending under the whole town, are almost entire at the end of 2000 years. Of Caesar's palace there remain only a few porphyry pillars, and the front, which is almost entire, and appears very beautiful. The palace of Cleopatra was built upon the walls facing the port, having a gallery on the outside, supported by several fine columns. Towards the eastern part of the pa- lace are two obelisks, vulgarly called Cleopatra's Needles. They are of Thebaic stone, and covered with hieroglyphics ; one is overturned, broken, and lying under the sand ; the other is on its pedestal. These two obelisks, each of them of a single stone, are about sixty feet high, by seven feet square at the base. Towards the gate of Rosetta are five columns of marble, on the place formerly occupied by the porticoes of the Gymnasium. The rest of the colonade, the design of which was discoverable 100 years ago by Maillet, has been since destroyed by the bar- barism of the Turks. The canal of the Nile, already mentioned, is about seventy paces from Pompey's pillar; and on the top of the hill is a tower, in which a centinel is placed, who gives notice by a flag, of the ships that are coming into port. On the sea-coast there is a large basin, cut out of the rock that forms the shore having on its sides two beautiful saloons that are hewn out by the chissel, with benches across them. A canal of a ziz-zag form, for the purpose of

stop- ping the progress of the sand by its different windings, conveys into them the water of the sea, pure and transparent as crystal. The water

rises a little above the waist, when a person is seated on the stone bench, and the feet rest on a fine sand The waves of the sea dash against the rock, and foam in the canal. The swell en- ters, raises you up, and leaves you ; and thus alternately entering and retiring, furnishes a constant supply of fresh water, and a coolness, which is grateful and delicious under a burning sky. This place is vulgarly called the Bath of Cleopatra ; and some ruins indicate its having been formerly ornamented.

A more useful, and even more magnificent la- bour, consisted in the reservoirs with which an- cient Alexandria was supplied with water. The construction of these excavated the whole ground upon which that city stood. A conduit, commu- nicating with the canal of Cleopatra, extended the whole length of the city. When this was judged to be filled with the overflowings of the Nile, the chiefs of the city went in great ceremony to open it, and admit the water into the cisterns. These reservoirs, which were formerly very nu- merous, are now reduced to half a dozen, which however are sufficient for the reduced consump- tion of the city.

The catacombs are a still more extraordinary monument; they begin at the extremity of the old city, and extend some distance along the coast, forming what was called the Necropolis, or city of the dead. They consist of small sepulchral grottoes, cut in the rock. The interior of the galleries is plastered by mortar. Most of these cavi- ties have been the subject of discovery, and each has been found to contain three coffins piled over each other. The Arabs report, that there is a subterraneous communication between this quar- ter and the ancient city of Memphis ; but this statement

seems to require confirmation.

The modern Alexandria is built near the brink of the sea, on a kind of peninsula, situate between the two ports above mentioned. The new port assigned to Europeans, is clogged up with sand, which renders the entrance into it both difficult and dangerous, and, in the stormy weather, endangers the bulging of the ships ; and the bottom is rocky, so that the cables soon chafe and part ; and thus vessels are frequently driven against one another, and are sometimes lost. An instance of this happened in March, 1773, when more than forty vessels were dashed to pieces on the mole by a north- west gale. Similar accidents have also happened at different fimes; and under the Turkish go- vernment, which, as it is said, ruins the labours of past ages, and destroys the hopes of future time, no provision is likely to be made for pre- venting their occurring again. The other port, or fie Eunostus of the ancients, to the westward of the Pharos, is called the port of Africa ; it is much larger than the former, and lies immediately under part of the town of Alexandria. The new Alexandria, even in its state of decay, is still to Europeans the most interesting of the cities of Egypt. It is built chiefly along the coast, and occupies only a small portion of the space en- closed within the Saracenic walls. Alexandria, says a modern traveller, now exhibits very few marks by which it could be recognised as one of the principal monuments of the magnificence of

the conqueror of Asia. Its houses, like all those of the Levant, have flat terraced roofs ; the place of windows is supplied by apertures which them- selves are almost entirely obstructed by a pro- jecting wooden lattice, through which the light can scarcely penetrate. The streets, narrow and aukwardly disposed, have neither pavement nor police; the eye of the traveller is arrested by no public nor private edifice ; and but for the ruins of the old city, there would be nothing to attract a moment's attention.

The population of modern Alexandria has been variously estimated. Some have carried it so high as 20,000, while others assert that the stationary numbers cannot exceed 5000 ; in addition to which, howevei, there is a continual resort of strangers from all, quarters of the world. The basis of the population consists of Turks, Copts, and Jews. The Turks compose the officers of government and the garrison ; the rest are chiefly artizans and shopkeepers, in easy circumstances, but few of whom carry on any extensive trade. The Copts are numerous, but held in contempt ; a few of them only have acquired some wealth by commerce. But the mercantile transactions of Alexandria are al- most entirely in the hands of the Jews. Although they pay a higher per centage to the custom- house than the European merchants, they yet find means to sell their goods cheaper. The customs being let in farm every two years, they agree with the farmer for a composition, which he is obliged to make favourable, otherwise the Jews would delay the greater part of their impor- tations, till the end of his period. There are about twelve great Jew-merchanls in Alexan- dria, who exercise a species of sovereignty over their countrymen, both by the extent of their capital and commercial transactions, and by be- coming umpires in their disputes.

The commerce of Alexandria is still not in- considerable ; since it includes all which the European states carry on with Egypt. It was at first nearly monopolized by the Venetians and Genoese ; but after the discovery of ►►the Cape of Good Hope, their establishments ra- pidly declined, and fell at last into a state of total bankruptcy. The whole trade then fell into the hands of the French and the English. The former, previous to the revolution and the late war, carried it on to the greatest extent, and had a considerable number of merchants residing there. The approach to Alexandria from the west is attended with considerable dif- ficulty, the Lybian shore being completely a dead flat, presenting no object that is percepti- ble at the smallest distance. A vessel, which has this shore to leeward,

must keep a strict watch, as there is neither port nor road to afford any shelter. ^The first land-mark consists in two eminences, with a tower on each, called Aboukir, or by Europeans the Tower of the Arabs. The immediate approach to Alexandria is announced by the appearance of Pompey's pillar. There are two harbours, the old and the new. The former, though somewhat difficult of entrance, is safe, and affords sufficient depth of water. Unfortunately, it is considered too sacred to be entered by any but the disciples of

Mahomet. Christians are obliged to content themselves with the new harbour, which is shal- low, has a rocky bottom, and is exposed to the north wind, which often blows with great violence.

Volney describes Alexandria as wholly un- able to resist any attack ; and, accordingly, on the landing of the French, it surrendered with- out striking a blow. They seem, however, to 'iave been industrious in placing it in a state of .'.efence, and so far succeeded, that the English, in 1801, after gaining two victories in front of it, did not venture to attack the city, but turned .heir arms against Cairo, the reduction of which ed 10 the general evacuation of Egypt. Alex- andria, however, was taken by the English in 1806, without difficulty, though it did not re- main long in their possession. Long. 30►►. 5'. E. Lat. 31►►. 16'. N.

The language spoken at Alexandria is the Arabic ; but most of the Alexandrians, and those in particular whom commerce leads into an in- tercourse with the merchants of Europe, speak likewise the Italian. The moresco or lingua franca, which is a compound of bad Italian, Spanish, and Arabic, is likewise spoken in this place. The government of Alexandria is like that of other places in Egypt ; and is conducted by an aga, who has under him a kadi and sub- basha, all nominated by the chief basha. It

*has a small garrison of soldiers, part of which are Ja- nissaries and Assafls ; who are haughty and inso- lent, not only to strangers, but to the mercantile and industrious part of the people. These are lodged in the farillons or castles that guard the port, where the aga or governoV that commands them also resides. But though the Pharos, ac- cording to established regulations, ought to be garrisoned by 500 janissaries, it has never half that number ; and not more than four canons for its defence. The whole of the fortifications might easily be beaten down by a single frigate ; but a foreign army would experience great difficulty in maintaning possession, of Alexandria for want of water. Alexandria was taken by assault on the fourth of July, 1798, by the French army under the command of Buonaparte, at that time prime consul of France ; after putting to flight the Arabs and Mamalukes who defended it, and killing about 300 of them. The troops that were left in possession of the town, when the army be- gan its march across the desert, having been for- bidden, under penalty of death, from entering the houses or mosques of the Turks, or committing any violence on their persons, or those of their families, built huts of palm-branches without the city, to shelter themselves from the sun. The men of science, who accompanied the army, were lodged in the houses of the few Europeans resi- dent at Alexandria; but a dozen 'of them were crowded together in one chamber, under the heat of a torrid climate. Miserably supplied both with food and water, molested with the stings of insects, and surrounded with filth and wretched- ness, they at the same time contemplated, in a city once renowned for industry, commerce, and activity, nothing but ruins, barbarism, and po- verty ; stupid-looking citizens, with long pipes,
نdolsutly sitting in the public places ; half starved*

and naked children, and the forms of bare- footed women, in blue serge gowns, and black stuff veils, flying the approach, or turning away with precipitation, whenever they met a French- man. The French beheld every where monu- ments of antiquity,

but every where misplaced ; pilkrs of granite, inscribed with Egyptian hiero- glyphics, strewed the streets, or divided by the saw, served for their holds and benches ; marble and porphyry bases and capitals, baths and cata- combs, were found in ruins, with nothing entire but a bath of black granite, destined for the mu- seum of Paris ; the pillar of Pompey, and the obelisk of Cleopatra, which were yet in good preservation.

The Christian zeal against all the idols of the heathen world was exercised so unsparingly at Alexandria, at the close of the fourth century, as to produce the greatest public disorders. The temple of Serapis was converted into a church to the honour of the martyrs ; and over the tomb of Alexander, a Christian church is said to have been erected to the memory of St. Athanasius, that distinguished relic itself being converted into a cistern. On the conquest of Alexandria, by the Saracens, happily, as Dr. Clarke thinks, for the identity of this monument, the church only changed its name for the mosque of St. Athanasius: and the fame of the founder of this city, throughout the eastern world, was naturally transferred to his tomb. Celebrated in many eastern writings, as ' the lord of the two ends o the world,' ' the king of kings,' &c. ; for ages reverenced as a god by the Egyptians, and spoken of with distinction in the Koran, the ve- neration now paid to this relic of Alexander, seems to have been uninterrupted for centuries Benjamin, of Toleda, a Spanish Jew, who visited Alexandria in the thirteenth century, speaks of ' a marble sepulchre, on which were sculptured all sorts of birds, and other animals, with an in- scription of the ancients which no one can read :' but ' they have a conjecture,' he adds, ' that some king, before the deluge, was buried there ; the length of which sepulchre was fifteen spans, the breadth six.' Johannes Leo, in 1491, expressly mentions ' a small edifice, built like a chapel, worthy of notice, on account of a re- markable tomb, held in high honour by the Ma- hommedans ; in which sepulchre, they assert, is interred the body of Alexander the Great,

an eminent prophet and king, as they read in the Koran.' We now trace it through the testimony of Marmol, the Spaniard; Jahai Ben Abdal- latiff (1270); Sir George Sandys, in 1611 ; the reports and enquiries of Dr. Pococke, in 1743 Irwin, Sonnini, Brown, and Denon. Through a period of upwards of 2000 years, it is thus attempted to be shown, that the shrine of the son of Ammon has survived himself. Several objections are still taken by antiquaries, how- ever, against the conclusions of our enterprising traveller : that there should not be a single Greek inscription on this alleged tomb of the greatest of the Greeks: that Eutychius, who composed, at Alexandria ' Annals of that City in the Tenth Century,' should mention the body of Alexander being brought here, without stating, that his tomb remained : the silence of

Furer, Boucher, Vansleb, and Niehbuhr, are circumstances that have been thought to weigh Strongly against its claims; but, in conformity with our general principle, of furnishing an im- partial record of such opinions (and, because, we are rather among the unbelievers, than the converts, of Dr. C.'s arguments, we have given them the more fully,) we have now placed the whole of this interesting enquiry before the reader; and must leave the decision upon the claims of this monument to the further light that may be thrown on its numerous hieroglyphics, and ??? himself.

When the blockade of the port, by the Eng- lish fleet, after the famous battle of Aboukir, cut off the communication with Rosetta, and the supply of water was thus impeded, Buonaparte caused the canal, which led from Rhamania to Alexandria, across a desert of forty miles, to be cleansed ; by which means, not only this city received a larger supply of water and provisions, but the artillery was conveyed expeditiously and conveniently, by water, to the general deposit at Gisa. Buonaparte also drew

plans for the better defence of the port of Alexandria, and the city of Cairo ; formed a great establishment for the mecha- nical arts; and, with the concurrence of the sci- entific men who attended him, formed a national academy, called the Institute. In the year 1801 Alexandria was taken by the English army, under the command of general Hutchinson, the news of which was announced soon after the preliminaries of peace between England and France were signed, by the respective agents of the two countries; by one article of which, Egypt is to be delivered up to the Sublime Otto- man Porte. The symbols employed by the Alex- andrians on their medals, were, the ibis, Hippo- potamus, ears of com, the lion, and others, which were common to the whole country, or to Africa.

A medal of Adrian represents Alexandria in the form of a woman, sitting on the ground, having, on her right side, and at her feet, ears of corn, and rest- ing on a basket full of fruits. Goltx. Nurnm. Imperat.

Alexandria is situated in N. lat. 31►►. 11'. 20. E. long. 30►►. 16'. 30". ►►► Nautical Almanac. Ac- cording to Brace's Travels, vol. i, p. 16, N. lat. 31►►. 11'. 32". E. long. 30►►. 17'. 30". Anc. and Mod. Un. Hist. Rollins Anc. Hist. Savory's Jitters on Egypt, vol. i. letter 2. Sonnmi's Travels through Upper and Lower Egypt. Gib- bon's Decline, $c of the Rom. Emp.*

ALEXANDRIA was also a name given to several other cities, viz. a city of Arachosia, on the river Arachotus, the Alexandropolis of Isidore, (Ste- phanus) ; thought by some to be the modern Cabul : ►►► another of Gedrosia, both built by order of Alexander the Great, Pliny, H. N. lib. vi. c. 23. ►►► A third of Aria, near the lake Arius, ac- cording to Ptolemy; but, according to Pliny, lib. vi. c. 23, on the river Arius, built by Alex- ander, who settled a colony of Macedonians there, Strabo, lib. xv.; Ammianus, lib. 22. ►►► A fourth in Bactriana, so called, according to Pliny, lib. vi. c. 23, from its builder. ►►► A fifth, an inland

town of Carmania, built by Alexander,

and mentioned by Ptolemy, Ammianus, and Pliny. ††† A sixth, in the country of the Dahac, in Sogdiana, Isidorus Characenus. ††† A seventh, in India, at the confluence of the Acesines and Indus, Arrian, lib. v, c. 15. ††† An eighth, built by Alexander the Great, between Issus and the straits which lead from Cilicia into Syria, called also Alexandretta, and now Scanderoon. ††† A ninth, in Margiana, built by Alexander, and re- built (after it was demolished,) by Antiochus, the son of Seleucus, and hence called Antiocha of Syria; and also Seleucia, watered by the river Mergus ; seventy- stadia in circuit, accord- ing to Pliny, lib. vi. c. 16; who adds, that, after the defeat of Crassus, Orodes conveyed the captives to this place. ††† A tenth, of the Oxiana, in Sogdiana, built by Alexander, on the Oxus, near the confines of Bactria, Pliny, lib. vi. c. 16. ††† An eleventh, built by Alexander, at the foot of Mount Paropamisus, which was called Caucasus, Pliny, lib. vi. c. 23. ††† A twelfth, in Troas, called also Troas and Antigonia, built by Alexander, in commemoration of Troy ; Antigonus, one of his lieutenants, laid the foundations of it, and gave his name to the city ; but the name of Alexander was restored by Lysimachus, who afterwards embellished, and extended it. It became, under Augustus, one of the handsomest cities of the east. Under Adrian, Herodes At- ticus constructed a superb aqueduct, some traces of which are still visible. The walls of the city, houses, temples, and other monuments, are built of a hard shelly stone. The marble of Pares, and that of Marmora, also several sorts of granite, are common here. Near the rivulet, to the south of the city, are two springs of mineral water, resorted to by the Turks and Greeks, recommended for disorders of the skin, the leprosy, and syphilis. The harbour, of narrow extent, is almost choked up with sand. History does not mention the epoch in which this city was destroyed ; but it was before the Turks established themselves in this country. The environs present a fruitful soil, forming a plain, in which the velani oak grows

without cul- ture. The ruins of this city are six leagues to the south of Cape Sigaeum. Olivier's Travels, &c. vol. ii. p. 46. ††† A thirteenth, Alexandria, built by Alexander, on the Jaxartes, bounding his victories towards Scythia. ††† A fifteenth, in Adia- bene, mentioned by Pliny ; and, as Hardouin suggests, designed to perpetuate the remembrance of the defeat of Darius. ††† A sixteenth, on the northern coast of the island of Cyprus, south of the promontory of Callinusa. ††† A seventeenth, in Palestine, on the river Scham, and near the sea, to the south of Tyre.

ALEXANDRIA, or ALESSANDRIA, surnamed Delia Paglia, because the inhabitants use stubble for fuel, instead of wood; or, because the Ger- mans contemptuously called it Palearis, or a fortress of straw, a city of Italy, in the district of Alexandria, or Alessandrino, belonging to the duchy of Milan. It has a castle, and is situated in a marshy-country, on the river Tenaro. . was built in honour of pope" Alexander III. m 1170, and is said tq have 12,000 inhabitants. By this pope, it was made a bishopric, suffragan of Milan, with several privileges annexed. The

citadel ia strong, but the fortifications are indif- ferent. It was ceded to the duke of Savoy, in 1703; taken by prince Eugene, after three days siege, 1706; by the French, in 1745; and re- taken by the king of Sardinia, in 1746, to whom by the treaty of Utrecht it belongs. It is thirty- eight miles east of Turin, and thirty-seven south-south-west of Milan. N. lat. 44††. 48'. E. long. 8††. 39'.

ALEXANDRIA, in modern geography, the prin- cipal Russian settlement in the Aleutian islands, and the residence of the governor on the island of Kodiak. The harbour is excellent and capa- cious, being sheltered by several small islands lying to the south-west. Alexandria consists of. about fifty

houses built of logs, the rooms of which are caulked with moss, and covered with grass. This is the principal depot belonging to the Russian African company, and where the furs are collected. The town is called St. Paul by captain Lisiansky. It contains a church, a barrack for the Russian convicts, a school, and several store-houses belonging to the North- West Company.

ALEXANDRIA, in North America, a town of Virginia, on the south bank of the river Potow- mak. The situation is elevated and pleasant, and the streets are laid out regularly upon the

plan of Philadelphia It is situated 100 miles north from Richmond, and contains upwards of 300 houses, many of which are elegant. Its population is rapidly increasing. Long. 77►►. 0 . W. Lat. 38►►. 30'. N.

ALEXANDRIA, (Patriarch of,) in ecclesiastical history. See PATRIARCH.

ALEXANDRIAN, in a particular sense, is applied to all those who professed or taught the sciences in the school of Alexandria.

Thus, Clemens is called Alexandrinus, or the Alexandrian, though some say he was born at Athens: the same epithet is applied to Apion, born at Oasis; and to Aristarchus, by birth a Samothracian. The chief Alexandrian philoso- phers were, Euclid, the famous geometer; the two ancient astronomers, Aristillus and Timo- charis; Eratosthenes, Apollonius Pergaus, Co- non, Hipparchus, Ctesibius, Heron, Possidonius, Pappus, Theon, Ilypathia, the daughter of Theon, Ptolemy; and Philoponus and Didymus, the last mathematicians of this school. To these, we may add, Ammonius, Plotinus, Origen, Por- phyry, Jamblichus, Sopater, Maximus, and Dexippus.

ALEXANDRIAN is more particularly under- stood of a college of priests, consecrated to the ser- vice of Alexander Severus, after his deification.

ALEXANDRIAN COPY.

ALEXANDRIAN COPY, is a manuscript, consisting of four volumes, in a large quarto, or rather folio size, containing the whole Bible in Greek, including the two Testaments and the Apo- crypha. ' Of the few manuscripts known to be extant,' says an intelligent author, ' which con- tain the Greek scriptures, (that is the Old Testa- ment according to the Septuagint version, and the New Testament ;) there are two which pre- eminently demand the attention of the biblical student, for their antiquity and intrinsic value, viz. : ††† the Alexandrian manuscript which is pre- served in the British Museum, and the Vatican manuscript, deposited in the library of the Vati- can palace at Rome.'

The Codex Alexandrinus, noted by the letter A. in Wetstein's and Griesbach's critical editions of the New Testament, includes within the three first volumes the books of the old Testament and the Apocrypha. In the fourth volume are found, the New Testament, the first epistle of Clement to the Corinthians, and the Apocryphal Psalms ascribed to Solomon. In the New Testament are wanting the beginning as far as Matthew xxv. 6, o vvfiQiog fpxfrat ; likewise from John vi. 50, to viii. 52 ; and from 2 Cor. iv. 13, to xii. 7. The Psalms are preceded by the epistle of Athanasius to Marcellinus, and followed by a catalogue containing those which are to be used in a prayer for each hour, both of the day and the night ; also by fourteen hymns, partly apochryphal, partly biblical, the eleventh of which is a hymn, in praise of the Virgin Mary, entitled irpoTJJQ SrioTOKe. The arguments of Eusebius

are annexed to the Psalms and his canons to the gospels.

This manuscript is now preserved in the Bri- tish Museum, where it was deposited in 1753. It was sent as a present to king Charles I. from Cyrillus Lucaris, a native of Crete, and patriarch of Constantinople, by Sir Thomas Rowe, am- bassador from England, to the grand seignior, in the year 1628. Cyrillus brought it with him from Alexandria,

where, probably, it was written.

In a schedule, annexed to it, he gives this account : that it was written, as tradition informed him, by Thecla, a noble Egyptian lady, about thirteen hundred years ago, a little after the council of Nice. He adds, that the name of Thecla, at the end of the book, was erased ; but that this was the case with other books of the Christians, after Christianity was extinguished in Egypt by the Mahommedans : and that recent tradition records the fact of the laceration and erasure of Thecla's name. The proprietor of this manuscript, before it came into the hands of Cyrillus Lucaris, had written an Arabic sub- scription, expressing that this book was said to have been written with the pen of Thecla the martyr. Various disputes have arisen with re- gard to the place whence it was brought, and where it was written, to its antiquity, and of course, to its real value. Some critics have be- stowed upon it the highest commendation, whilst it has been equally depreciated by others. Of its most strenuous adversaries, Wetstein seems to have been the principal. The place from

which it was sent to England was, without doubt, Alexandria, and hence it has been called Codex Alexandrinus. As to the place where it was written, there is a considerable difference of opinion. Matthaeus Muttis, who was a cotem-v porary, friend, and deacon of Cyrillus, and who afterwards instructed in the Greek language John lludolph Wetstein, uncle to the celebrated editor of the Greek Testament, bears testimony, in a letter written to Martin Bogdan, a physician in Bern, dated January 14, 1664, that it had been brought from one of the twenty-two monasteries in mount Athos, which the Turks never de- stroyed, but allowed to continue upon the pay- ment of tribute. Dr. Woide endeavours to weaken the evidence of Muttis, and to render the tes- timony of the elder Wetstein suspicious : but

Spohn, in his Notitia Codicis Alexandrini, p. 10 ––– 13, shews, that the objections of Woide are ungrounded. Allowing their reality, we cannot infer that Cyrillus found this manuscript in Alexandria. Before he went to Alexandria, he spent some time on Mount Athos, the repository and manufactory of manuscripts of the New Testament, whence a great number have been brought into the west of Europe, and a still greater number have been sent to Moscow. It is therefore probable, independently of the evidence of Muttis, that Cyrillus procured it there either by purchase or by present, took it with him to Alexandria, and brought it thence on his return to Constantinople. But the question recurs, where ––– was this copy written ? The Arabic subscription above cited clearly proves that it had been in Egypt, at some period or other, before it fell into the hands of Cyrillus. This subscription shews that it once belonged to an Egyptian, or that during some time it was preserved in Egypt, where Arabic has been spoken since the seventh century. Besides, it is well known that a great number of manuscripts of the Greek Bible have been written in Egypt. Woide has also pointed out a remarkable coincidence be- tween the Cod. Alex, and the writings of the Copts. Michaelis alleges another circumstance as a probable argument of its having been written in Egypt. In Ezekiel xxvii. 18, both in the Hebrew and Greek text, the Tyrians are said to have fetched their wine from Chelbom, or, ac- cording to Bochart, Chalybon. But as Chalybon, though celebrated for its wine, was unknown to the writer of this manuscript, he has altered it by a fanciful conjecture to oivov ––B XtjSpwv, wine from Hebron. This alteration was probably made by an Egyptian copyist, because Egypt was formerly supplied with wine from Hebron. The subscription, before mentioned, ascribes the writing of it to Thecla, an Egyptian lady of high rank, who could not have been, as Michaelis supposes, the martyress Thecla, placed in the time of St. Paul : but Woide replies that a dis- tinction must be made between Thecla martyr, and Thecla proto-martyr.

With regard to these subscriptions we may observe,

with a learned writer (Bp. Marsh), that the true state of the case appears to be as follows : ' Some centuries after the Codex Alexandrinus had been written, and the Greek subscriptions, and perhaps those other parts where it is more

defective, already lost, it fell into the hands of a Christian inhabitant of Egypt, who, not finding the usual Greek subscription of the copyist, ad- ded in Arabic, his native language, the tradition, either true or false, which had been preserved in the family or families to which the manuscript had belonged, ' Memorant hunc codicem scripturn esse calamo Theclse martyris.' In the 17th cen- tury, when oral tradition respecting this manu- script had probably ceased, it became the pro- perty of Cyrillus Lucaris ; but whether in Alex- dria, or Mount Athos, is of no importance to the present enquiry. On examining the manuscript, he finds that the Greek subscription is lost, bui that there is a tradition recorded in Arabic by a former proprietor, which simply related that it was written by one Thecla a martyress, which is what he means by ' memoria et traditio recens.' Taking therefore upon trust, that one Thecla the martyress was really the copyist, he consults the annals of the church to discover in what age and country a person of this name and character ex- isted, finds that an Egyptian lady of rank, called Thecla, suffered martyrdom between the time of holding the council of Nice, and the close of the fourth century ; and concludes, without further ceremony, that she was the very identical copyist. Not satisfied with this discovery, he attempts to account for the loss of the Greek subscription, and ascribes it to the malice of the Saracens ; being weak enough to believe that the enemies of Christianity would exert their vengeance on the name of a poor transcriber, and leave the four folio volumes themselves unhurt. Woide, who transcribed and published this manuscript, and must be better acquainted with it than any other person, asserts, that it was written by two dif- ferent copyists ; for he has observed a

difference in the ink, and, which is of greater moment, even in the strokes of the letters. The conjecture of Oudin, adopted by Wetstein, that the manuscript was written by an Acoemet is, in the judgment of Michaelis, worthy of attention, see ACOEMET.S, and he adds, that this conjecture does not con- tradict the account that Thecla was the copyist, since there were not only monks but nuns of this order.

The antiquity of this manuscript has been also the subject of controversy. Grabe and Schalze think that it might have been written before the end of the fourth century, which, says Michae- lis, is the. very utmost period that can be al- lowed, because it contains the epistles of Athanasius. Ouiiin places it in the tenth cen- tury. Wetstein refers it to the fifth, and sup- poses that it was one of the manuscripts col- lected at Alexandria in 615, for the Syriac ver- sion. Dr. Semler refers it to the seventh century. Montfaucon is of opinion, that neither the Cod. Alex, nor any Greek manuscript, can be said with great probability to be much prior to the sixth century. Palseog. Grace, i. p. 185. Mi- chaelis apprehends, that this manuscript was written after Arabic was become the native lan- guage of the Egyptians, that is, one, or rather two centuries after Alexandria was taken by the Saracens, which happened in the year 640, be- cause the transcriber frequently confounds M. and B. which is often done in the Arabic : and

he concludes, that it is not more ancient than the but Wetstein contents himself with asserting eighth century. Woide, after a great display of that it could not have been written before the learning (with which he examines the evidence fifth century, because Alexander, who founded for the antiquity of the Cod. Alex.) concludes, this order, lived about

the year 420. From this that it was written between the middle and the statement, pursued more at large, Michaelis de- end of the fourth century. It cannot be allowed duces a reason for paying less deference to the a greater antiquity, because it has not only the Cod. Alex, than many eminent critics have done, ►►rXw or KefiaXaia majora, but the KifaXaut mi and for the preference that is due in many re- uora, or Ammonian sections, accompanied with spects, to ancient versions, before any single ma- the references to the canons of Eusebius. Woide's nuscript, because the antiquity of the former, arguments have been objected to by Spohn, in which is in general g7 eater than that of the lat-

p 42 io9, of his edition of Woide's Notitia ter, can be determined with more precision.

Codicis Ale'xandrini. Some of the principal ar- The value of this manuscript has been dif- guments advanced by those who refer this manu- ferently appreciated by different writers. Wet- script to the fourth or rifth centuries are : that stein, though he denotes it by A, the first letter the epistles of St. Paul are not divided into chap- of the alphabet, is no great admirer of it, nor ters like the gospels, though this division took does Michaelis estimate it highly, either on ac- place so early as 396, when to each chapter was count of its internal excellence or the value of prefixed a superscription. The Cod. Alex, has its readings. The principal charge which has the epistles of Clement of Rome ; but these were been produced against the Alexandrian manu- forbidden to be read in the churches, by the script, and which has been strongly urged by council of Laodicea, in 364, and that of Car- Wetstein, is its having been altered from the La- thao-e in 419. Hence Schulze has inferred, that tin version. It is incredible, says Michaelis, who it was written before the year 364 ; and he pro- once agreed in opinion with Wetstein, but found duces a new argument for its antiquity, deduced occasion to alter his sentiments, that a transcriber from the last of the fourteen hymns found in it who lived in Egypt, should have altered the after the

psalms, which is superscribed vpvoe Greek text from a Latin version, because Egypt tu>6tvoc, and is called die grand doxology ; for this belonged to the Greek diocese, and Latin was hymn has not the clause ayu>eo&oc,ayioc►►rxvpof, not understood there. On this subject Woide aytog aOavarog, t\tri

fully copied, the arguments apply rather to this than to the Alexandrian manuscript itself. It is the hand-writing alone, or the formation of the letters, with the want of accents, which can lead to any probable decision. The arguments al- leged to prove that it is not so ancient as the fourth century, are such as these. Dr. Semler thinks that the epistle of Athanasius, on the va- lue and excellency of the Psalms, would hardly have been prefixed to them during his life. But it ought to be recollected, that Athanasius had many warm and strenuous advocates. From this epistle Oudin has attempted to deduce an argument, that the manuscript was written in the tenth century. This epistle, he says, is spurious, and could not have been forged during the life of Athanasius, and the tenth century was fertile in spurious productions. Again, the Virgin Mary, in the superscription of the song of the Blessed Virgin, is stiled QIOTOKTOC, a name which Wetstein says betrays the fifth century. Fur- ther, from the probable conjecture, that this ma- nuscript was written by one of the order of the Acremetae, Oudin concludes against its antiquity ;

vision of this manuscript; and the Alexandrian in the Epistles of St. Paul. The transcriber, if this assertion be true, must have copied the three parts of the Greek Testament from three different manuscripts, of three different editions. It is observable, that the readings of the Cod. Alex, coincide very frequently, not only with the Cop- tic and the old Syriac, but with the new Syriac and the Ethiopic ; and this circumstance favours the hypothesis, that the manuscript was written in Egypt, because the new Syriac version having been collated with Egyptian manuscripts of the Greek Testament, and the Ethiopic version be- ing taken immediately from them, have neces- sarily the

readings of the Alexandrian edition.

This manuscript has neither accents nor marks of aspirations ; it is written with capital, or as they are called, uncial letters ; and there are no intervals between the words, but the sense of a passage is sometimes terminated by a point, and sometimes by a vacant space. Although abbre- viations are not very numerous, yet this manu script abbreviates avQpw-n-og, dafiid, Stag, wjffsf, t

poc,ff►►>rijp, woe, xpiToe ; and it has also other marks of abbreviation. Dr. Semler supposes, that the more ancient manuscripts from which the Cod. Alex, was copied, had a much greater number ; from a false method of decyphering which marks, he explains many errors committed by the co- pyist of the latter. (See note thirty-three to Wet- stein's Prolegomena). Of these abbreviations, and the points annexed to certain letters, which before appeared unintelligible ; and of the large initial letters, which are sometimes placed in a very extraordinary manner ; and of other parti- culars, an account may be seen in Woide's Pre- face, who has given an accurate description of the manuscript in general. No manuscript has been more frequently and more accurately col- lated; and it was supposed, that the last ex- tracts, made by Wetstein, would have rendered future labours of this kind superfluous ; but Woide informs us, that Wetstein is chargeable with several omissions and errors, and has ad- mitted into his collection of readings the mis- takes of Mill. We are now in possession of a perfect impression of this manuscript, ac- companied with so complete and so critical a collection of various readings, as is hardly to be expected fiom the edition of any other manu- script. Dr Woide, principal librarian of the British Museum, published it in 1786, with types cast for the purpose, line for line, without intervals between the words, as in the manuscript itself: the copy, whose title is '

Novum Testa- mentum Gracum e” Codice MS. Alexandrino qui Londini in Bibliotheca Musei Britannici asservatur descnptum. Alarolo Godofredo

Woide. Londini exprelo Joannis Nichols Typi Jacksonianis MDCCLXXXVI,’ is so perfect a resemblance of the original, that it may supply its place. It is a very splendid folio. Twelve copies were printed on vellum. The fac-simile itself fills 260 pages, and the preface, comprising twenty-two pages, contains an excellent descrip- tion of the manuscript. It is illustrated by an engraving which represents the style of writing in various manuscripts ; to this is subjoined an ex- act list of all its various readings, in eighty-nine pages, and each reading is accompanied with a remark, giving an account of what his predeces- sors, Junius (i. e. Patrick Young), Bishop Wal- ton, Doctors Mill, and Grabe, and Wetstein, had performed or neglected. To complete this work, however, the following should be added: ??? Appendix ad editionem Novi Testament! Grseci, e Codice Alexandrino descripti a C. G. Woide, in qua continentur Fragmenta Novi Testament! juxta interpretationem dialecti superioris /Egypti quse Thebaica vel Sahidica appellate, e Codd. Oxoniens. maxima ex parte desumpta cum dis- sertatione de Versione Bibliorum .ZEgyptiaca, quibus subjicitur Codicis Vaticani collatio. ()x- onii : E. Typographeo Clarendouiano, 1799, folio. This work was edited by the Rev. Dr. Ford. The following specimen of the first seven verses of St. John’s Gospel, will convey to the reader an idea of this manuscript ; and we have to acknowledge the politeness of the Rev. T. H. Home, in favouring us with his types, taken from those of the Rev. H. Baber, on this*

FAC-SIMILE OF THE ALEXANDRIAN MANUSCRIPT.

7

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MXPXH H MOXOrOCKXIOXOroci-i

TTPOCTOMeM-KXieCHMOXOrOC OYTOCHNeNXPXHTTPOCTOMeN

TT XNTX AJXYTO YereNeTO i < A i xtu

B

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KXITOCbcoCeMT

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TCJDICDXMMHC OYTOCHXeeM eiCMXPTYPIXM IMXMXPTYPH CHTTePITOYCbcDTOC IMXTTA

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ALEXANDRIAN.

in 1812 the Rev. II. II. Baber, one of the librarians of the British Museum, published, by subscription, a fac- simile of the book of Psalms, from the manuscript now under consideration of which twelve copies are on vellum, to match with the copies of the New Testament. To com- plete the Old Testament in a similar manner, the British Parliament, at the recommendation of several church dignitaries, and the two universi- ties, engaged to defray the expenses of complet- ing this noble undertaking. The Pentateuch, and the notes belonging, we understand, were published at the price of seven guineas. The work is executed in a splendid folio size, so as to render every iota of the original manuscript in the most faithful manner. The better to pre- serve the identity of the original, instead of spin- ning out the contracted various readings in the margin by letters in the

full, after the manner of Dr. Woide, fac-similes of such various readings,

cut in wood, are inserted precisely in the places where they occur, filling up only the same space with the original. The tail pieces, or rude Ara- oesque ornaments, at the end of each book, are also represented by fac-similes in wood. The edition is limited to 250 copies. For further in- formation concerning the Alexandrian manu- script, the reader is referred to Dr. Grabe's Pro- legomena, in his edition of the Greek Septuagint, and the Prolegomena of Dr. Woide ; also to those of Dr. Mill and Wetstein, prefixed to their edi- tions of the New Testament ; also Michaelis's In- troduction to the New Testament, vol. ii. p. i. pp. 186 ––– 209. Bishop Marsh's notes in part ii. pp. 648 ––– 660. Dr. Lardner has given the table of contents of this manuscript, in his credi- bility of the Gospel History, part ii. chap. 147. (Works, 8vo. vol. v. pp. 253 ––– 256. 4to. vol. iv. pp. 44 ––– 46,)

*ALEXANDRIAN LIBRARY, called by Livy, ' Elegantiae regum curseque egregium opus,' was first founded by Ptolemy Soter, for the use of an academy, or society of learned men, in A. D. 304. Beside the books which he procured, his son Ptolemy Philadelphus added many more, and left in this library at his death a hundred thousand volumes; the succeeding princes of this race enlarged it still more, till at length the books lodged in it amounted to the number of seven hundred thousand volumes. In the col- lection of these books they are said to have seized all books that were brought by the Greeks, and other foreigners, into Egypt, and to. have sent them to the Academy, or Museum, where they were transcribed by persons employed for that purpose. The transcripts were then de- livered to the proprietors, and the originals laid up in the library. Ptolemy Euergetes, having borrowed of the Athenians the works of So- phocles, Euripides, and ./Eschylus, only returned *hem the copies, which he caused to be trans- cribed in as beautiful a manner as possible ; re- taining the originals for his own library, and presenting the Athenians with fifteen*

talents, or three thousand pounds sterling, for the exchange. As the Museum was at first in the quarter of the city called Bruchion, the library was placed there ; but when the number of books amounted to four hundred thousand volumes, another li- brary was erected within the Serapeum, by way of supplement, and therefore called the daugh- ter library. The books lodged in this increased to the number of 300,000 volumes, and the two, making up 700,000, formed the royal libraries of the Ptolemies. In the war which Julius Caesar waged with Alexandria, the library of Bruchion was accidentally burnt But the library in the Serapeum still remained, and there Cleopatra de- posited the two hundred thousand volumes of the Pergamean library, with which she was presented by Marc Antony. These, and others added to them from time to time', rendered the library of Alexandria more numerous and considerable than at any former period, and though plundered wore than once during the revolutions which

happened in the Roman empire, yet it was as frequently supplied, and continued for many ages to be of the highest utility, till it was burnl by the Saracens in the 642nd year of the Chris- tian sera. Abulpharagius, in his history of the tenth dynasty, gives the following account of this catastrophe. John Philoponus, surnamed the Grammarian, a famous Peripatetic philosopher, being at Alexandria when the city was taken by the Saracens, was admitted to familiar inter- course with Amrou, the Arabian general, and presumed to solicit a gift, inestimable in his opinion, but contemptible in that of the bar- barians ; and this was the royal library. Amrou was inclined to gratify his wish, but his rigid integrity scrupled to alienate the least object without the consent of the caliph. He accord- ingly wrote to Omar, whose well known answer was dictated by the ignorance of a fanatic. ' H these writings of the Greeks agree with the Koran, or book of God, they are useless, and need not be preserved ; if they disagree, they are pernicious, and ought to be destroyed.' The sentence of destruction "was executed with blind obedience ; the volumes of paper

or parchment were distributed to the four thousand baths oi the city; and such was their number, that six months were barely sufficient for the consumption of this precious fuel. Since the dynasties of Abulpharagius have been given to the world in a Latin version, this tale, as Mr. Gibbon, Hist. vol. ix. p. 440., calls it, has been repeat- edly transcribed ; and every scholar has deplored this irreparable wreck of learning, arts, and antiquities, ' For my own part,' says this historian, adopting the scepticism of Renaudot, Hist. Alex. Patriarch, p. 170,

scribed tne conquest of Alexandria. But this curious anecdote will be vainly sought in the annals of Eutychius, and the Saracenic history of Elmacin. The silence of Abulfeda, Murtadi, and a crowd of Moslems, is less conclusive from their ignorance of Christian literature. The rigid sentence of Omar is repugnant to the sound and orthodox precept of the Mahommedan casuists : they expressly declare, ' that the re- ligious books of the Jews and Christians, which are acquired by the right of war, should never be committed to the flames ; and that the works of profane science, historians or poets, physi- cians or philosophers, may be lawfully applied to the use of the faithful.' Reland de Jure Mi- litari Mohammedanorum, in the third volume of Dissertations, p. 37. The reason for not burn- ing the religious books of the Jews or Christians, is derived from the respect that is due to the name of God. However, the positive evidence of an historian, of such unquestionable credit as Abulpharagius, cannot be set aside by an argu- ment merely negative. Mr. G. acknowledges, ' that a more destructive zeal may perhaps be at- tributed to the first successors of Mahomet.' His reference to A. Gellius, Noctes Atticae, 1. vi. c. 17, Ammian. Marcell., 1. xxii. c. 16. and Orosius, 1. vi. c. 15,

as speaking of th►► Alex- andrian libraries in the past tense, are foreign from the purpose ; these writers only referring to the destruction of books at Alexandria in the time of Julius Csesar; after which, large libraries were continually accumulating, schools of phi- losophy nourishing, and new institutions arising from obscurity on almost every subject. Brucker's Hist. Philos. by Enfield, vol. ii. p. 228. Ammian. Marcellin. 1. xxii. c. 16. p. 266. ed. Gronov. Dion. Cass. 1. xlii. 38. torn. i. p. 327. ed. Re.l- tnari. Plutarch in Jul. Ctes. Oper. torn. i. p. 731. Tcrtullian in Apolog. c. 18. p. 18. ed. Rigalt. Euseb. in chron. Gellius, 1. vi. c. 17. Isidor. Grig. 1. vi. c. 3. Orosii. Hist. 1. vi. c. 15. p. 421. ed. Haverc. Plut. in Anton, op. vol. i. p. 943. Newton's Diss. on the Prophecies. ►►► Works vol. vii. p. 357. 8vo. Anc. Un. Hist. vol. viii. p. 166.

ALEXANDRIN, in geography, a small dis- trict of Italy, in the duchy of Milan, in the environs of Alexandria della Paglia, to which it owes its name.

ALEXANDRIN, or ALEXANDRIAN, in poetry, the name of a verse which consists of six feet or six feet and a half, equal to twelve or thirteen syllables ; the rest, or pause, being always on the sixth syllable.

It is said to have taken its name from a poem on the life of Alexander, entitled, the Alexan- driad ; written, or at least translated into this kind of verse, by some French poets ; though others will have it so denominated from one of the translators, Alexander Paris.

This verse is thought, by some, very proper in the epopcaia, and the more sublime kinds of poetry : for which reason it is also called heroic verse. It answers in our language to the' hexame- ters in the Greek and Latin ; though, according to some, it rather answers to the senarii of the ancient tragic poets. ►►► Chapman's translation of Homer consists wholly of Alexandrians.

The advantages of the Alexandrian verse, are

its keeping the rhymes from coming so near, and consequently hindering them from being so much perceived. To this may be added, that coming nearer to the nature of prose, it is fitter for tne- atrical dialogues, and supplies the office of the ancient iambics better than any other verse in rhyme. This measure is used either to close a verse, or distich, as by Spenser at the end ov" each stanza of his Faerie Queene ; or else, but more rarely, wholly to compose the poem, as by Drayton, in his Poly Albion, and by Chapman, in his Homer. The pause is always on the sixth syllable. In the former instance it has the beau- tiful effect of a chord at the close of an air in music, and ends the verse with a full sweep ; and in the latter it answers nearly to the hexa- meter of the classic verse, and is a sort of re- citative in poetry. The etymology of its name is very uncertain ; we have given the best con- jectures. Pope's satirical illustration of its abuse is well known : A needless Alexandrine ends the song, Which, like a wounded snake, drags its slow length along.

ALEXANDROVKA, a settlement of Asiatic Russia, on the banks of the river Kuma, being one of a long range of settlements which Catha- rine II. directed to be established with a view to the peopling that country, and thereby to strengthen her Caucasian frontier. It contains about 450 inhabitants.

ALEXANDROVSKAIA, a Russian fortress in the government of of Ekaterinoslav, situated on the Dnieper forty miles below Ekaterinoslav, and 114 miles north-east of Cherson.

ALEXANDROW, the chief town of a circle in Russia, in the government of Vladimir, where the czar John Wassiljewitsch erected the first printing-press in Russia. It lies forty-eight miles east of Moscow.

ALEXICASON, or ALEXICACUS, from aXf5 to drive away, and KO.KOV, or icaicoe, evil, an an- tidote against evil. Constantine Khodocanaces gave this name to the spirit of sea-salt, and pub- lished a work on the subject under this title.

ALEXICACUS, in antiquity, an attribute ot Neptune, whom the tunny fishers used to invoke, that their nets might be preserved from the &0iae, or sword-fish, which used to tear them ; and that he might prevent the assistance which, it was believed, the dolphins gave the tunnies on such occasions.

ALEXIPHARMICS, from a\t|w, arceo, to expel, and ^op/iaicoj/, poison, in medicine, are properly remedies for expelling or preventing the ill effects of poison. Some of the moderns having imagined that the animal spirits, in acute dis- tempers, were affected by a malignant poison, the term has been understood to mean medicines adapted to expel this poison, by the cutaneous pores, m the form of sweat. In this sense alexi- pharmics are the same as sudorifics. It has also been occasionally used for amulets, and various real or supposed remedies against disease. Alexi- pharmic medicines are in general aromatic and pungent, although some acid plants and juices, from their use in malignant and colliqua- tive fevers, have been classed under this title The principal alexipharmics in the animal king-

dom, arc hartshorn, bezoars, and the bones and teeth of different animals. In the vegetable kingdom, the leaves arid flowers of all the aro- matic plants, especially such as are umbelliferous. In the mineral kingdom, the different prepara- tions of antimony, the dulcified spirit of vitriol, together with alcohol in all its forms and combi- nations. They chiefly act by exciting or increas- ing a diaphoresis, or perspiration ; or by sup- porting the vigorous motion of the heart and arteries, which is always diminished in malignant diseases unattended by inflammation. In this lat- ter sense wine may be reckoned among the prin- cipal alexipharmics. These medicines are also esteemed preservatives against malignant and pes- tilential

fevers ; but they are to be used with caution.

ALEXIS, (Michaelovitch,) of Russia, born in 1630, and succeeded his father Michael as czar, in 1646, was the father of Peter the Greatr an able monarch, and the first Russian ruler who acted on the policy of a more intimate connexion with the other states and nations of Europe. He preceded his celebrated son in measures for the civilization and political and commercial im- provement of Russia, and by his diversion of the Turkish arms, greatly contributed to the celebra- ted victory over that nation, obtained by John Sobeiski, king of Poland, near Choskni. He died at the age of forty-six in the year 1677, was suc- ceeded by Peter the Great, his son by his wife Natalia.

ALEXIS, a native ot' Piedmont, and author of a book of secrets, which was printed at Basle 1536, in 8vo. and translated from Italian into Latin by Wecher. It has also been translated into French, and printed several times with additions. There is a preface to the piece, wherein Alexis informs us, that he was born ot a noble family ; t'.iat he had from his early years applied himself to study ; that he had learned the Greek, the Latin, the Hebrew, the Chaldean, the Arabian, and several other languages : and having an extreme curiosity to be acquainted with the secrets of nature, he had collected as much as he could during his travels for fifty- seven years. That he had piqued himself upon not communicating them to any person ; but that when he was eighty-two years of age, having seen a poor man who had died of a sickness, which might have been cured, had he commu- nicated the recipe to the surgeon who took care of him, he was touched with such a remorse of conscience, that he lived almost like a hermit ; and it was in this solitude that he arranged his secrets in order to be published

ALEXIS, grand duke of Russia, the unfortunate son of Peter the Great, called also PETROVICH, which see.

ALEYN, (Charles,) an English poet in the reign of Charles I. In 1631, he published two poems on the

famous victories of Cressy and Poictiers. He succeeded his father as clerk of the ordnance, and was commissary general of the artillery to the king at the battle of Edge-hill. He also wrote a poem on that victory which placed Henry VII. on the throne of England. In 1639, the year before he died, he translated the history of Eurialius and Lucretia, from the Latin epistles of /Eneas Sylvius,

ALFADER, the Danish name for the univer- sal father and creator of all things . See Southey's Book of the Church, vol i. p. 67.

ALFAQUES, among the Moors, the names generally used for their clergy, or those who teach the Mahommedan religion ; in opposition to the Moabites, who answer to monks among Christians.

ALFARO Y GAMON, (Don Juan De,) a Spanish painter, was born at Cordova, in 1640, he studied successively under Castillo and Ve- lasquez, to whose style he adhered, but in his portraits he adopted the manner of Vandyck. Two of his finest pieces, are a picture of the Na- tivity, and the Guardian Angel. He attached himself to the admiral of Castile, and lived in his family on terms of friendship, till the time of that grandee's exile in 1678, when he left Madrid, and retired to his native city. Here he lived in obscurity, until an edict was published, levying a tax upon paintings, when Alfaro laid aside the pencil. He suffered great distress, until infor- mation reached him in 1680, that his patron was released, when lie hastened to Madrid, and re- pairing to the house of the admiral, was refused admission, when he retired, and in a few days died of a broken heart. ' Thus perished,' says Pilkington, ' one of the most ingenious and ele- gant artists that Spain ever produced ; and a man described to have been of refined manners, and of a most tender and susceptible spirit.'

ALFATERNA, in ancient geography, the last town of Campania, beyond Vesuvius : the same with NOCERA, which see.

ALFECCA, in astronomy, the star otherwise called Alpheccar and Lucida corona.

ALFENUS, (Varus), a Roman lawyer, native of Cremona, and a disciple of Servius Sulpitius, who flourished about the year one of the Chris- tian ?era. He is mentioned by Horace as having formerly been a shoe? naker, and as having quitted that trade for the profession in which he obtained his reputation. Hor. Sat. iii. v. 130. ††† He wrote several works, of which Paulus the civilian made an abridgment, and he is referred to as an authority in matters of law by Ammiaims Marcellinus ; and Aulus Gellius mentions him as a diligent enquirer into antiquities. Some say that he was consul, and was buried at the public expense.

ALFET, in our ancient Anglo-Saxon laws, from

ALFIDENA, an ancient town of Italy, in the kingdom of Naples, and in the citerior Abruzzo, fifteen miles south-south-west of Salmona. It was famous in the wars of the Samnites, with the Romans. It gives title to a marquis. Lon. 14††. 10' E. Lat. 41††. 48'. N.

ALFIERI, (Victorio,) the Italian Sophocles, was born in Aste, a city of Piedmont, about half way between Turin and Alepondria, on the 17th of January 1749, of a noble family. He has favoured the world with an account of him- self and his writings, carried nearly dow;i to

the period of his death; from which we shall select a sketch of the principal incidents and employments by which his remarkable life was distinguished. When an author becomes his own biographer, he can boast at least of pos- sessing the most intimate knowledge of his sub- ject, whatever be his other qualifications for the task he undertakes, and whatever other claims he may have upon the faith of

his readers. In the present instance, we have the testimony of his contemporaries, in support of the veracity and candour with which this extraordinary man details his own history, in addition to the in- ternal evidence of its own fearless frankness and bold disclosures. Alfieri divides his own his- tory into almost as many eras as Shakspeare's seven ages ; but in the two first of these, which he styles his infancy and adolescence, there is nothing particularly worthy of notice, except taken in connection with the talents he after- wards displayed, and the celebrity he acquired. His father, Anthony Alfieri, was a nobleman, who was distinguished for no knowledge or in- formation. He married the mother of our poet, when above fifty years of age ; and the first fruit of this marriage was a daughter, the second the subject of this memoir. The father of Alfieri survived this latter event only a year, when his widow married again. Alfieri when very young was committed to the care of a priest, called father Ivaldi, for the purpose of being taught Latin, from whom he learned but little. On one occasion he had to submit to the dreadful suffering of walking to the church with a silk night-cap, for having told a lie ; and he philo- sophically ascribes his candour and regard to truth, in subsequent life, to this disgraceful punishment. If this be correct, we owe the confidence with which we may read his history to a very trifling cause ; and whenever we can- not lend implicit credit to his testimony, we must suppose that he has forgotten the night- cap. At the age of nearly ten years, he was taken from under the tuition of his domestic pedagogue, and sent to Turin, to be under the care of his uncle, and to receive his education at the academy. Here he speaks of learning as little as under father Ivaldi. At his thirteenth year, he was fitted for the university ; and there he entered upon philosophy and geometry. In the peripatetic philosophy, he made such pro- gress, that he was able to answer almost all the questions asked him by his teachers; and he committed the whole six books of Euclid to memory, without being able to comprehend the fourth proposition. He had even at

this age a contempt for the useless and pedantic jargon of logic, which he was forced to acquire. Though he had at this time read none of the Italian poets but a part of Ariosto and Metastasio, he composed his first sonnet, which not being approved of by his uncle, deterred him for twelve years from the services of the muses. His paternal uncle, who was governor of Sar- dinia, died about this time ; and he was led to meditate upon plans for spending with eclat that more liberal portion of his fortune which it was now permitted him to enjoy. He had enrolled himself as an officer of the militia; but

he now only thought of those methods of employ- ing his time, which would acquire him the greatest distinction, or bring him the greatest pleasure.

Travelling was one of those pursuits which obviously offered the greatest allurements to his restless disposition; and he accordingly determined to seize the earliest opportunity of commencing his rambles. He had frequently heard the students from England, Germany, Poland, and Prussia, describe the wonders of their various countries ; and he was inspired, either with the curiosity of seeing them, or with the ambition of being as far travelled as his com- panions.[illegible] *But his first excursion from home was confined to Italy. An opportunity oc- curred of being able to traverse Italy to Rome and Naples, under the care of an English catho- lic, who had the charge of two Dutch pupils* [illegible] *his school-fellows in the academy ; and he pre- vailed upon his brother-in-law to solicit per- mission from the king for that purpose. His Sardinian majesty, it would appear, allowed none of his nobility to leave his dominions with- out obtaining his consent. This permission be- ing obtained, on the 4th of October 1766, our young poet left Turin for Naples, but as he had made no preparations for travelling with advantage, he avows he neither understood nor relished any works of the fine arts : and in a country where nothing else is read but poetry, he had not perused any of the poets but Ariosto and Metastasio : he could not even speak Italian with propriety, and although he spoke French with*

facility, he had not studied its structure, nor attempted to attain its elegance. When at Florence he began to learn English ••• a language in which he never made any proficiency, and which, together with the French, he afterwards despised and disliked. Although his ignorance rendered his travels of little importance to his mental improvement, yet the circumstance of his keeping a journal of his observations, and the anxiety he felt from classical recollections before he entered Rome, are indications of re- flections and feelings which could not belong to every idle youth of eighteen. At Naples- he got quit of his tutor, the English catholic, and of his two Dutch companions, and commenced his rambling alone. He visited Venice; and, without returning to Piedmont, passed by Genoa and Marseilles to Paris, where he arrived in August 1757. We find him soon afterwards in London; and during the four months he re- mained there, he had it in his power, by means of the Spanish ambassador (who was originally a Piedmontese) and his own fortune, to satisfy his thirst for dissipation, and his propensity to jockeyism. ' My amusement,' says he, ' dur- ing the winter, consisted in being on horseback five or six hours every morning, and being seated in the coach-box for two or three hours every evening, whatever might be the state of the weather.' He felt the attractions of Eng- land at one time so powerful, that he resolved to fix his residence in it ; but his resolution was abandoned almost as soon as formed. At the Hague he made a friend of the Portuguese am- bassador, and became enamoured of a Dutch lady. The violence of his passion could scarcely

obtain credit, did we not take into account the previous instances of his ardent temperament. When the lady was obliged to leave the Hague to join her husband in Switzerland, he committed a thousand follies, called on death to his aid, and, among other extravagancies, after causing himself to be bled by a surgeon, he tore the bandage from his arm ; and, if his servant had not interposed, would have

*destroyed himself. He was at this time importuned by his friends to marry, but he felt a ‘ reluctance to have his children born at Turin,’ and did not pursue his suit with the ardour necessary to ensure success: he again, after settling his affairs, re- solved to travel. Without following him in his rambling career, it will be sufficient to state, that in this second erratic sally he visited successirely, Germany, Hungary, Denmark, and Sweden ; Russia, Prussia, Holland, and England ; Spain and Portugal. In Turin he again took up his residence; and having fitted up a splendid house, he began to entertain his friends, and to live in a style of elegance and luxury. These friends, who consisted principally of young men who had been his college- fellows, constituted themselves into a society, with some- thing of the formalities of free-masonry, and agreed to meet at one another’s houses several times in the week, for the purpose of conversa- tion upon any subject that might occur, or for reading small essays at composition, to which the members should anonymously contribute. AJ- fieri was here the greatest contributor to the so- ciety’s amusement, and gave in several papers,
﴾which were read with eclat. He had by this time, although his life was principally spent in dissi- pation, acquired a considerable acquaintance with French literature ; he had studied latterly some of the best Italian authors ; had seen much of mankind ; and he possessed a power of fancy and invention that could render his acquirements use- ful or entertaining. He even began at this time, from the praises he received, to imbibe a greater confidence in his own faculties, and to rise to the hope of being able to execute some work for im- mortality. The abbe Caluso, whom he met with at Lisbon in the suite of the Piedmontese ambas- sador, and who continued the friend of his subse- quent life, almost convinced him that he was a poet, and now was drawing near the time when he was destined to prove his title to that charac- ter. A sonnet was the first poetical offspring of his genius. Having once accidentally com- posed a dialogue on the subject of Cleopatra, and hearing the work of an obscure author on the*

same subject praised by one of his friends, which he thought inferior to his own, the state of his mind, and the circumstances in which he was placed, recommended it to him as a theme for his first dramatic effort : and, accordingly, after much consultation with those in whose opinions he confided, he produced, in the twenty-seventh year of his age, the tragedy of Cleopatra, which was represented at Turin on the 16th of June 1775. Having now become a candidate for literary and dramatic fame, he pro- secuted the means of success with his character- istic ardour ; and the laborious assiduity of the latter pan of his life forms a perfect contrast to

*the idleness and dissipation of the former. The subsequent history of his life is little more than an account of his labours and publications. He transferred his property to his sister for an equivalent, that he might have no more to do with Piedmont. He studied the Latin classics with the greatest ardour ; he composed upwards of twenty tragedies, besides satires, odes, sonnets, and prose works on government and literature ; he studied afterwards G*eek, when upwards of fifty, and wrote comedies; he finished various translations of prose and poetical authors ; he devoted a portion of his time to the reading of Hebrew; and, after more than twenty years of toil and glory, which our limits will not permit us to dwell upon, he died one of the most ac- complished characters of his age, on the 8th of October, 1003. He was interred in the Fran- ciscan church of St. Croce in Florence, a sanc- tuary where repose the ashes of Galileo, Michael Angelo, Arretino, and many other illustrious men; and over him there is placed a monument, representing Italia mourning for his loss, a work of the great Conova. The majestic figure of Italy is invested with flowing robes, and adorned with a turreted crown ; which circumstances gave rise to an epigram, repeated to the author of this article by one of the monks, purporting, that this clothed figure was by no means a true representation, and that the statuary had forgot- ten that she was*

stript by Buonaparte. The style of his tragedies is peculiarly his own. He keeps one subject in view, and pursues it from the beginning to the end of the piece without di- gression, without trifling or delay. The persons he introduces are few, and all are necessary to the development of the plot. He allows no under plot, nor gossiping among servants. The lan- guage is always vigorous and energetic, but desti- tute of imagery or ornament ; seldom very smooth, but always elegant and varied. The undei stand- ing of Alfieri was as comprehensive and pene- trating as his imagination was inventive, and enabled him particularly to shine in disquisitions concerning government, history, and criticism. ••• Though, during the latter period of his life, he devoted his time chiefly to recluse study, he was not an inattentive spectator of the events that were passing around him. He had early im- bibed a love of liberty, and he added to it af- terwards a love of Italy. These two passions constituted a fever which continually boiled in his veins, and imparted much heat to his con- versation, his poetry, and political sentiments. ••• Never had freedom a more ardent worshipper at her shrine, nor had ever Italy a more fond ad- mirer ; but these feelings were rather guided by his imagination than his reason, and acted more in sharpening his hatred of those whom he con- sidered as oppressors, than in suggesting reme- dies against oppression. The French domination he cordially detested ; and, preparing in return to expect persecution, he made his will, and settled his affairs before thpy entered Florence His passions, as will be seen, during the whole of his life, were violent ; and, in the early part of it, made his history ••Jmost the history of a hur- ricane. He sometimes surrendered his mind to the dominion of caprice, without capitulation or

condition, and obeyed her dictates without at- tempting resistance ; but where his aftections were engaged by a worthy object, he was steady and

unchangeable. He had a strong propensity to satire and sarcasm ; but he never indulged it at the expense of those whose attachment he en- joyed and valued. Of his mother he always spoke with affectionate regard ; and his friends had reason to delight in his unreserved commu- nication when living, and to cherish his memory when dead. His works consist of twenty trage- dies, six comedies, sonnets, odes on liberty, &c.

ALFORD, a town in Lincolnshire, with a market on Tuesdays for provisions and corn ; and two fairs, on Whit-Tuesday, and November 8th, for cattle and sheep. It is seated on a small brook that runs through the town, and is a com- pact well built place. A salt spring was dis- covered here in 1670, from the pigeons which flew thither in great numbers to drink the water; these birds being known to be fond of salt. It contains a purging salt, together with a portion of sea-salt, and is recommended as cooling, cleansing, and attenuating. Alford is 6 miles from the sea, 20 north of Boston, and 140 north of London. Long. 0►►. 15'. E. Lat. 53►►. 30.' N.

ALFORD, a district of Aberdeenshire, eleven miles long from east to west, and between four and six miles long from north to south, reckon- ing from the tops of the mountains. It compre- hends five parishes, viz. Forbes, Keig, Tillynessle, Tough,and Alford ; and the easternmost part of it is situated twenty miles west from Aberdeen. The Don is the principal river in this district.

ALFRAGAN, AHMED EBN KOTHEIR At FARGANI, or, as others call him, MOHAMMED EBN KETIR At FORGANI, in biography, a cele- brated Arabian astronomer, born at Fergan, in Sogdiana, now Samarcand, and flourished in the beginning of the ninth century, under the Cali- phate of Al-Mamon. His principal work, in Arabic, entitled, Rudimenta Astronomica, con- sists of thirty chapters or sections, and is formed upon the principles of Ptolemy, whom the au- thor often cites. Of this work we have a Latin translation by Johannes Hispaliensis.

ALFRED, commonly called THE GREAT, an Anglo Saxon monarch, one of the mosril- lustrious on record in the history of nations. He was the youngest son of Ethelwolf, king of the West Saxons, and born at Wantage, Berks. A.D. 849. At the age of five years he was sent by his father to Rome, when he was con- firmed, and, as some writers assert, royally anointed by pope Leo IV. Soon after his return, he accompanied his father again to the same capital . It was by this early travelling that his dawning faculties received that favourable direction by which they were, in future life, so admirably distinguished. Alfred was in his tenth year ???when Ethelwolf died, and was succeeded suc- cessively by his elder sons Ethelbald, Ethelbert, and Ethelred, by the last of whom Alfred was employed as chief minister and general. In 871, when a Danish force, which had successfully in- vaded England in 866, under the command of Hubba and Hinguar, marched to Reading, and mastered both town and castle, Ethelred and Alfred collected a force, and obtained a victory

over the invaders, but were soon however routed, near Devizes ; when Ethelred, receiving a wound which terminated his existence, left the crown of England to Alfred, then in his twenty-second year. The first conflict of this prince with the Danes, at Wilton, was unsuccessful ; but they were subsequently compelled to agree to a peace. This they violated ; but, in consequence of a great naval victory obtained by Alfred, were re- duced, a second time, to the same terms. The arrival of new hordes, however, so increased their number in Wiltshire, that the Saxons could not withstand them; and Alfred himself, laying aside all marks of royalty, took shelter in the house of one of his neatherds. While in this obscure re- treat, a little adventure occurred, of which most of our English historians take notice. The woman of the house having placed some cakes before the fire to toast, ordered Alfred to attend them. Intent on trimming his bow, the king suffered the cakes to burn without observation, which so enraged the good woman, that she rated him

soundly, and doubted not that he would be ready enough to eat them, though so little inclined to attend to them. Soon after, collecting a few faithful followers, he took pos- session of the small isle of Athelney, formed by the confluence of the Tone and the Parrot, in Somersetshire,, whence he sallied out occasionally upon the unguarded quartets of the Danes in his neighbourhood. At length, understanding that Odun, earl of Devonshire, had obtained a signal victory over the Danish leader Hubba, and taken the famous magical standard of the raven, he left his retreat, and proceeding towards the camp of Guthrum, the Danish prince, in the disguise of a harper,, remained several days making observations. He then summoned his nobles, with their followers, to a general rendez- vous on the borders of Selwood Forest, and de- feating the enemy in battle, surrounded their camp, and compelled them to surrender. It. was the policy of Alfred, if possible, to transform them into subjects, and for that purpose he gave them settlements in East Anglia and Northum- berland, on condition of allegiance and conver- sion to Christianity. It is said the king himself stood sponsor for Guthrum at the font. On this happy re-establishment, Alfred exerted himself for the defence of his kingdom. He erected castles and fortresses, formed a militia, and got together an armed fleet of 100 sail, which he manned partly with his subjects, and partly with Frisians. He also besieged and recovered the city of London, which he found in a miserable condition, but he repaired and maintained it as a fortress. In 893, an interval of some years having elapsed, a Danish fleet, after ravaging the coast of France, disembarked a large force in Kent, which was, however, checked by the vigilance of Alfred. He had then turned his attention to the rebellious operations of his new subjects in East Anglia and Northumberland, who appeared suddenly with a fleet off the western coast ; and having put down all these annoyances, he closed the whole warfare by the capture of some Nor- thumbrian Danes, who were ravaging the west, and whom, after a legal trial, he executed as- pirates. The remainder of the life of Alfred waa-

peaceable ; for such was now his character, that the Danish settlers, on the east and the north, humbly submitted. The Welsh also acknow- ledged his authority ; and after fifty-six battles, in which he had been personally engaged by sea and land, he found himself undisputed king of the island as far as the frontiers of Scotland. Great and active, however, as Alfred appears in warlike exploits ; as a legislator, a reformer of manners, and a promoter of learning and the arts, his exertions were still more extraordinary. He laid the foundation of the common law of England. The institution of the trial by jury, attributed to him, Sir William Blackstone con- jectures he only adopted and improved : the same observation is extended by Whitaker and others to the division of the country into shires, hundreds, and tithings, for purposes of judica- ture and police. It is certain, however, that the general survey of the kingdom, called the Win- chester Book, the origin of that of Doomsday, was compiled by the order of Alfred. Judicial adminis- trationseems tohave engaged no small share of the attention of this monarch ; for, in addition to his regulations in favour of general and equal justice, he severely punished delinquency in any of its departments. The political constitution of England is also presumed to be indebted to Alfred for the settlement of one of its principal regulations, viz. a regular convocation of the states. His great council, consisting of bishops, earls, aldermen, and thanes, was by an express law called together twice a year in London, for the better government of the realm. In other circumstances he also showed a paternal regard for the welfare of his people, dedicating a large portion of his revenues to the rebuilding of cities ruined by the Danes, the erecting of new ones, and the restoring of monasteries and other reli- gious foundations. His encouragement of learn- ing was as distinguished as his own proficiency therein; of the ecclesiastics, Alfred complained that there were very few south of the Humber who

either understood the service of the church, or could translate a single piece of Latin into English. To remedy this defect, he invited men of learning to his court, from all parts, and placed them at the head of seminaries in various parts of his kingdom. He has been called the founder of the University of Oxford, or at all events is said to have founded University College, Oxon ; but there is reason to believe, from the recent researches of Whitaker and Smith, that these assertions are not absolutely correct; it is how- ever admitted that he greatly improved the system of education there. Alfred himself may be said to stand at the head of the list of royal authors ; so many works indeed are attributed to him, that, in order to keep within the bounds of credibility, it must be presumed that he only patronized many of the voluminous translations which bear his name. Versions of Orosius, of Bede, of Boe- thius, of several pieces of St. Gregory, of A" sop's Fables, of various religious works, including the Psalter, together with several collections of legal and historical matters are attributed to his pen. In the translation of Orosius is also an account of a voyage, made under his patronage, for the discovery of a north-east passage ; and he even

fitted out an expedition to carry alms to the Christians of St. Thomas in the East Indies and received back the commodities of the coun- try. To accomplish all these things, as the nicest distribution of his time and his revenue was essential, he entered into the strictest ar- rangement for the employment of both. To crown his great public character, Alfred is de- scribed as one of the most mild and amiable of men in private life ; of a serene temper, cheer- ful, affable, kind, and merciful ; eminently pure in his own conduct and manners, yet not averse to society, or to innocent recreation. He was personally well-favoured, possessing a handsome and vigorous form, dignified by a commanding and engaging aspect. After reigning twenty- eight years and a half, this prince died, accord- ing to some accounts, A. D. 900, although

others say 901 . By his queen j?Elswitha he had three sons and three daughters; one of his sons died in his father's life time ; the second, Edward the Elder, succeeded him. One of his daughters, named .ZEthelfleda, married to an earl of Mercia, is said to have inherited the greatest portion of his talents. In this age of critical reasearch, some doubts have been thrown on the accuracy of the unmixed panegyric of the monkish authors, from whose writings this history of Alfred is chiefly drawn. His benefactions to the church and to religious and learned men may be sup- posed to have influenced them ××× borne away by the strength of a character, it was scarcely in their nature to conceive or to invent ; for the qua- lities and actions ascribed to him are of a higher class than those which usually form the themes of monkish adulation. But since there is no contradiction of their general testimony from other quarters, it is not well to cavil away the attributes of an exalted character, whose name is associated with the origin of some of the most important institutions in the country, in fa- vour of hypercriticism on the one hand, or party predilection on the other. At present, the his- tory of Alfred presents an almost perfect union, of monarch, patriot, and man ××× one of those fine examples of the admixture of the true elements of greatness and of goodness, which are so seldom witnessed among mankind, but which occasion- ally exist as blessings in their own age, and as models for all posterity.

' The merit of this prince both in private and public life,' says Hume, ' may be set in oppo- sition to that of any monarch or citizen which the annals of any age or any nation can present to us. He seems indeed to be the model of that perfect character, which, under the de- nomination of sage or wise man, philosophers have been fond of delineating rather as a fiction of their imagination, than in hopes of ever see- ing it really existing. So happily were all his virtues tempered together; so justly were they blended, and so powerfully did each prevent the other from

exceeding its proper boundaries ! He knew how to reconcile the most enterprizing spirit with the coolest moderation ; the most ob- stinate perseverance with the easiest flexibility ; the most sincere justice with the greatest. lenity ; the greatest vigour in commanding, with the most perfect affability of deportment ; the highest

capacity and inclination for science, with the most shining talents for action. His civil and military virtues are almost equally the objects of our admiration, excepting only that the former being more rare amongst princes, as well as more useful, seem chiefly to challenge our ap- plause. Nature also, as if desirous that so bright a production of her skill, should be set in the fairest light, had bestowed on him every bodily accomplishment, vigour of limbs, dignity of shape and air, with a pleasing, engaging and open countenance. Fortune alone, by throwing him into that barbarous age, deprived him of historians worthy to transmit his fame to pos- terity ; and we wish to see him delineated in more lively colours, and with more particular strokes, that we may at least perceive some of those small sparks and blemishes, from which, as a man, it is impossible he could be entirely exempted.' Hume's Hist. vol. 1, p.

100, 101.

ALFRETON, from TLlfredtun, Sax. i. e. Al- fred's town, a town in Derbyshire, built by Al- fred the Great, pleasantly situated on a small hill, six miles from Chesterfield, thirteen north of Derby, and 142 north-west of London. The manufactures are stockings and brown earthen- ware. It has a weekly market on Monday, and an annual fair 20th July, for horses and horned cattle.

ALG/E, FLAGS, one of the seven families, or natural tribes, into which the whole vegetable kingdom is divided by Linnaeus, in his Philoso- phia Botanica. They are denned to be plants, whose root, leaf, and stem are all one. Under this description are comprehended all the sea weeds, and some other aquatic plants. In the sexual system, they constitute the third order of the twenty-fourth class Cryptogamia ; inTourne- fort, the second genus of the second section, Marina, aut fluviatiles, of the twenty-seventh class, Aspermae vulgo habitae ; and the fifty- seventh order in Linnaeus's Fragments of a Natural Method. The algae are distributed by Lamarch into three divisions : the first of which comprehends all those plants, whose fructifica- tion seems doubtful. These commonly live in water, or upon moist bodies, and are membra- nous, gelatinous, or filamentous. To this division are referred the byssi, conferva, ulva, tremella and varec. The plants of the second division arc distinguished by their apparent fructification, although it be little known, and are formed of parts which have no particular and sensible opening or explosion at any determined period ; their substance is ordinarily crustaceous or co- riaceous. They include the tassella, ceratos- perma and lichen. The third division comprises plants, whose fructification is very apparent, and which are distinguished by constituent parts which open, at a certain period of maturity, for the escape of the fecundating dust or seeds. These plants are more herbaceous, both as to their substance and colour, than those of the other two divisions, and are more nearly related to mosses from which they do not essentially differ. Their flowers are often contained in articulated and very elastic filaments. This di- vision includes the riccia, blasia, anthoceros.,

targiona, hepatica, and jungermanna. In the Lin- naean system the algae are divided into two classes the terrestres and aquatics?. The former include the anthoceros, blasia, riccia, lichen, and byssus , and the latter are the ulva, fucus and conferva. The fructification of the algae, and particularly of

those called aquaticae, has been denominated the opprobrium botanicorum.

ALGAGLIOLA, a small sea-port town in the island of Corsica, fortified with walls and bas- tions. It was almost destroyed by the malcon- tents in 1731 but has since been repaired. Lon. 9►►. 45'. E. lat. 42►►. 10. N.

ALG AUDI, ALESSANDRO, in biography, an eminent artist, as a sculptor and archtitect, born at Bologna in 1598. He became a disciple o►► Julius Caesar Conventi, and acquired a reputa- tion in sculpture little inferior to that of Michael Angelo Buonaroti. He also frequented the school of the Caraccii, from whom he probably learned the art of engraving, as his style re- sembles that of Augustino Caracci, being slight and free, and his execution with the graver is bold and open. In 1625, when at Rome, he became acquainted with Domenichino, who obtained for him the statuary work of the chapel Bandini, which he was painting. For some years before he had been chiefly employed in repairing antiques and modelling for goldsmiths ; but his talents and reputation now procured him superior work. The first display of his powers was a statue of St Philip de Neri, in the sacristy of the oratory at Rome. His group of the decollation of St. Paul for the Barnabite church at Bologna, and the tomb of Leo XI. at St. Peter's were among the first efforts of his genius. One of his prin- cipal performances was a bas-relief in this ca- thedral, thirty-two feet by eighteen, representing the story of Attila, the labour of four years, and which, when finished, gained him universal ap- plause, also the honour of knighthood and the golden cross. His bronze figure of Innocent XI. is reckoned the finest of all the statues of the popes in Rome. A crucifix likewise, called by way of distinction, Algardi's crucifix, has been much admired, and often copied. He was assiduous and quick in execution, but, becoming infirm, he was compelled to avail himself of the assistance of his pupils, of whom he formed an eminent school. He died in 1654, at the age of fifty-two years. He lived in celibacy, and left his

property to his sister. His works are held in high estimation, though the air of his heads are esteemed too studied.

ALGAROTH, powder of, is a white oxyd of antimony, which may be obtained by precipita- ting the oxymuriate of antimony in pure water. The precipitate when dried is called algaroth. Although the ease with which it may be obtained might render it advantageous as an antimonial medicine, the London practice has entirely re- jected it, but it is used at Edinburgh and on the continent as the basis of emetic tartar or tartarized antimony.

ALGAROTTI, (Count,) a celebrated Italian writer, a native of Padua. Led by curiosity and a desire of improvement, he travelled early into foreign countries ; and was very young when he arrived in France in 1736. Here he composed

his Newtonianismo pour des Dames. He was noticed by Frederic, king of Prussia, who con- ferred on him the honour of knighthood, a con- sulship, and the post of chamberlain. He died at Pisa in 1764 ; and ordered his own mausoleum with this inscription to be fixed upon it : ' Hie jacet Algarettus, sed non omnis.' i. e. ' Here lies Algarotti ; but not the whole of him." He was a great connoisseur in painting, sculpture, and architecture, and contributed much to the re- formation of the Italian opera. His works are numerous, and upon a variety of subjects, abounding with vivacity, elegance, and wit : ••• According to the last and most correct edition of Venice, 1790 and 1794, they form seventeen vo- lumes 8vo., and consist of Memoirs of his Life and Writings ; An Analysis of the Newtonian System ; Pieces on Architecture, &c. ; Tra- vels in Russia; Letters on Painting, &c. &c.

ALGARVA, once an independent kingdom, and now a southern province in the kingdom of Portugal, sixty-

seven miles in length and twenty in breadth ; bounded on the south and west by the sea, on the east by the Guadiana, and on the north by Alentejo. It is very fertile in figs, almonds, dates, olives, and excellent wines; the fishery also is extensive. The capital town is Pharo. It contains four cities, twelve

towns, sixty-seven parishes, and about 96,000 inhabitants.

ALGATES', } Sax. aljearer1, all-ways. Gate ALGETE'.. J is the same as via, a way. Todd's Johnson. . Tooke supposes it to mean all-gett, and says, get is sometimes spelt by Chaucer geate. Geate, pronounced as here writ- ten, is used for gate in the rustic dialect of the western counties. Does this favour Johnson's etymology ? By all means, notwithstanding. Alfreds was eldest, non mot his wille withhald To London he wild allegate to speke with kyng Harald. R. Brunne, p. 52.

He wolde, algate, his trouth holde, As euery knight thereto is holde, What hap soeuer him is befall.

Gower. Con. A. book i.

Bifore alle thingis haue ye charite ech to othire, in yousilff algatis lastinge for charite keuerith the multitude of synnes. Wicklif. 1 Peter, c. iv.

Nor had the boaster ever risen more, But that Renaldo's horse ev'n then down fell j And, with the fall, his leg oppress'd so sore ; That, for a space, there must he algates dwell.

Fairfax,

ALGAVAREIA, the language anciently spoken by the Moors, or Moriscoes in Spain. ††† It was a dialect of Arabic, and stood contradis- tinguished from the ALGAMEIA.

ALGEBRA.

ETYMOLOGY, DEFINITION AND HISTORY OF ALGEBRA,

We cannot introduce this science better, than by the derivations and definition of the word, and the account of the origin of the art, given by Dr. Johnson.

ALGEBRA, n. s. an Arabic word of uncer- tain etymology ; derived, by some, from Geber the philosopher ; by some, from gefr, parchment ; by others, from algehista, a bone-setter ; by Me- nage, from algiabarat, the restitution of things broken. This is a peculiar kind of arithmetic, which considers the quantity sought, as if it were known, and by means of its relation to one or more quantities given, proceeds by consequence, till the quantity at first only supposed to be known, is found to be equal to some quantity or quantities which are known, and consequently itself is known. This art was in use among the Arabs, long before it came into this part of the world ; and they are supposed to have borrowed it from the Persians, and the Persians from the Indians. The first Greek author of algebra, was Diaphantus, who, about the year 800, wrote thir- teen books. In 1494, Lucas Pacciolus, or Lucas de Burgos, a cordelier, printed a treatise on alge- bra, in Italian, at Venice. He says, that algebra came originally from the Arabs. After several improvements, by Vieta, Oughtred, Harriot, and Descartes, Sir Isaac Newton brought this art to the height at which it still continues. Trevoux, Chambers.

To be more particular, algebra is defined, by authors who have written expressly upon the

subject, to be a general method of computation- by means of signs and symbols, commonly the letters of the alphabet, by which numbers or any other quantities are represented, and hence it is called universal arithmetic, literal arithmetic, and the arithmetic of signs.

Besides the derivations above quoted, several other fanciful etymologies have been given of the word algebra. By the Arabians it is coupled with the word macabelah, signifying opposition and comparison.

Thus, algebra almacabelah is used by them to express what we properly call algebra; and which is explained to be the act of restitution and comparison, or opposi- tion and comparison, or resolution and equa- tion. Some, with great probability, derive it from geber, by prefixing the article al, which properly signifies the reduction of fractions to a whole number.

ALGEBRA seems not to have been wholly un- known to the ancient mathematicians. We see the traces and the effects of it, in many places, though it looks as if they had designedly con- cealed it. Something of it there seems to be in Euclid, or at least in Theon upon Euclid, who observes that Plato had begun to teach it. There are instances of it in Pappus, and more in Archimedes and Apollonius. But the ana- lysis used by those authors is rather geome- trical than algebraical ; as appears by the examples we find in their works : so that we may safely say, that Diophantus is the first and only author among the Greeks, who has treated of algebra professedly. It was known, however, among the Arabs, much earlier than

long the Greeks; and :he Arabs carried it into Spain; whence, some are ofj>pinion, that it

Algebra, specious or literal, or the new aige- bra, is tha. wherein both the known and un-

passed into England, before Diophantus was known quantities are represented by symbols known among us. Only six of Diophantus's or by letters of the alphabet. This eases the books are extant. They were translated into memory of that effort, otherwise required to Latin, by Xylander, m 1575 ; and published in keep several matters necessary for the discovery 1621, in Greek and Latin by M. Bachet and of the object of research, present to the mind ••• This algebra of Diophantus only ex- hence, this art may be properly denominated the solution of arithmetical indeter- metaphysical geometry.

Quantities which can be measured, are the object of mathematics. They may be divided into two kinds, number and extension. The former is treated of in arithmetic : the latter in geometry. Numbers are ranged in a scale by the continued repetition of some one number, which is called the root ; and, in consequence of this

Fermat. tends to

minate problems. The first European writer on algebra is Lucas Pacciolus, or Lucas de Burgos, a Minorite friar, who, having previously given small treatises, published at Venice, in the year 1494, his principal work in Italian on algebra. He makes mention of Leonardus Pisanus, and some others, of whom he had learned the art;

and adds, that algebra came originally from the order, they are conveniently expressed in words Arabs; but, as he never mentions Diophan- ••• J tus, it is probable, that that author was not then

known in Europe. His algebra goes no farther than simple and quadratic equations, and posi- tive roots only are used. After him came Sti- felius, ⁇cipio Ferreus, Cardan, Tartaglia, and some others, who reached as far as the solution of some cubic equations. Bombelli followed these, and went a little farther. Nunnius, Ramus,

and denoted by characters. Investigations by common arithmetic are greatly limited, from the want of characters to express the quantities that are unknown, and their relations to each other and to such as are known. Hence letters and other convenient symbols have been introduced to supply this defect; and thus gradually has arisen the science of algebra, or universal arith- metic. In common arithmetic, too, the given

Schoner, Salignac, Clavius, &c. took different numbers disappear in the course of the opera-

ation, so that general rules can seldom be derived from it; but, in algebra, the known quantities, as well as the unknown, may be expressed by letters, which, through the whole operation, retain their original form ; and hence every particular example furnishes a general rule for all like cases, and the mutual dependence of the several quantities concerned, is always apparent. This general method of expressing quantities, and the general reasonings concern- ing their connections which may be founded on it, have rendered this science not less useful in the demonstration of theorems, than in the resolution of problems. If geometrical quan- tities be supposed to be divided into equal parts their relations, or their proportions, may be ex- pressed by numbers; one of these equal parts being denoted by the unit. Arithmetic, however, is used in expressing only the conclusions of geometrical propositions ; and it is by algebra that the bounds and application of geometry have, of late, been so far extended. The proper objects of mathematical science are number and extension; but mathematical enquiries may be instituted also concerning any physical quantities, that are capable of being

measured or expressed by numbers and extended magnitudes : and as the application of algebra may be equally univer- sal, it has been called the Science of Quantity in general.

courses, but none of them went farther than quadratics. In 1590, Vieta introduced his Spe- cious Arithmetic, denoting the quantities, both known and unknown, by symbols or letters. He also gave an ingenious method of extract- ing the roots of equations, by approximations ; since greatly improved and facilitated by Raph- son, Halley, Maclaurin, Simpson, and others. Oughtred, an Englishman, in his Clavis Ma- thematica, printed in 1631, improved Vieta's method, and invented several compendious cha- racters, to show the sums, differences, rectangles, squares, cubes, &c. Harriot, another English- man, cotemporary with Oughtred, left at his death, a work on Algebra, which was printed in 1631. In it Vieta's method is put into a form, which is still in estimation. In 1657, Des Cartes published his geometry, in which he applied Harriot's method to the higher geo- metry, explaining the nature of curves by equa- tions, and adding the constructions of cubic, biquadratic, and other higher equations. From the time of Des Cartes, continual improvements have been made in the science, by Baker, Fer- mat, Schooten, Slucius, Wallis, Newton, Mer- cator, Demoivre, Maclaurin, Landen, Euler, Waring, Lorgna, Bernouilli, Prestet, Ozanam, Kersey, Roberval, Guisnee, Ghetaldus, Pell, Ward, Hammond, Saunderson, Le Gendre, Arbogast, Vince, Waring, Herschel, Babbage, fcc. &c.

PART I. INTRODUCTION.

ALGEBRA is of two kinds, numeral and literal. Algebra, numeral or vulgar, is that of the ancients, which only had place in tne resolution of arithmetical questions. In this, the quantity sought is represented by some letter or charac- ter; but all the given quantities are expressed by numbers. This is thought by some to have proved an introduction to the art of keeping mer- chants' accounts by double entry.

DEFINITIONS.

1 . Known quantities are generally represented by the first letters of the alphabet, as a, b, c, &c. Unknown by the last letters, as x, y, z, &c.

2. The sign + (plus) is a mark of addition. Thus a + b denotes the sum of a and b ; 3 + 5 denotes the sum of 3 and 5; or 8. When no sign is expressed, J is understood.

3. The sign ––– (ir.mus) denotes subtraction Thus a ––– b denotes the excess of a above b ; 6 ––– 2 is the excess of 6 above 2.

4. Quantities with the sign + prefixed to them are called positive or affirmative ; with the sign ––– prefixed to them are called negative.

5. The sign x denotes multiplication. Thus 5 k 4 means 5 multiplied into 4, or 20 ; a x b means a multiplied by b ; and when two letters are adjacent without any mark, multiplication is understood. Thus a b means a x b.

6. 7 is the mark of division; thus a-=- b means a divided by b : or the quotient of two quantities is denoted by placing the dividend above a small line and the divisor below it in the form of a

1 8

fraction. Thus ––– is the quotient of 18 divided

3

by 3 ; or 6.

7. A number prefixed to a letter is called its numeral co-efficient, and it expresses the product of the quantity by that number. When no num- ber is prefixed, unit is understood.

8. A simple quantity consists of one part or term, as + a, ††† abc; a compound quantity con- sists of more than one term, connected by the signs + or ††† . Thus a + b, a ††† b + c, are com- pound quantities. If there are two terms, it is called a binomial ; if three, a trinomial, &c.

9. Like quantities consist of the same letter or letters, equally repeated. Thus + ab, ††† Sab, are like quantities; but + ab, and + aab are unlike.

10. The sign z: is the mark of equality. Thus x + a ††† b ††† c means, that the sum of x and a is equal to the excess of b above c.

11. When several quantities are multiplied together, any of them is called a factor of the product.

12. The products arising from the con- tinual multiplication of the same quantity are called the powers of that quantity, which is the root. Thus aa, aaa, aaaa, &c. are powers of the root a ; and are expressed, by placing above the root, to the right hand, a figure called the index or exponent, denoting how often the root is re- peated. Thus,

*†† ^ d Clst~) Power of the r a> or a aa f ††† a) 1 2d f root a, and is 1 a3 aaa f o~ J3d †† otherwise ex)ac aaaa * .2 v4th J pressed by v.a4*

The 2d and 3d powers are generally called the square and the cube ; and the 4th, 5th, and 6th, are sometimes respectively called the biquadrate, sursolid, and cubocube.

CHAP. I. SECT. I. FUNDAMENTAL OPERATIONS.

The fundamental operations in Algebra are performed by addition, subtraction, multiplica- tion, and division.

PROB. I. To add algebraic quantities.

Simple quantities, or the terms of compound quantities, to be added together, may be like with like signs, like with unlike signs, or they may be

unlike.

Case \ . To add terms that are like and have like signs.

Rule. Add together the co-efficients, to their sum prefix the common sign, and subjoin the common letter or letters.

Examv. To 5ab Add 4ab

Sum Qab

3aa ••• ab 7aa ••• lab 4aa ••• 5ab

14o•• ••• Qab

Case 2. To add terms that are like, but have unlike signs.

Rule. Subtract the less co-efficient from the greater, prefix the sign of the greater to the remainder, and subjoin the common letter or letters.

+ 3a

+ 7bc <••• 3bc + be

+ 5bc

••• 5ab + 2ab + 3ab

Case 3. To add terms that are unlike.

Rule. Set them down, one after another, with their signs and co-efficients prefixed.

2a + 36 ••• 6c + 8

Compound quantities are added together, by uniting the several terms of which they consist by the preceding rules.

f5ab ••• 3xy ••• Ex. The sum of < 7xy ••• ab + 15

is 4ab ••• 3cd +15 ••• 4wm PROB. II. To subtract

algebraic quantities.

General Rule. Change the signs of the quan- tity to be subtracted into the contrary signs, and then add it, so changed, to the quantity from which it was to be subtracted ; the sum arising by this addition is the remainder.

Ex. From + 5a 7ab□□□ I6bc Subtract + 3a Sab + mb Rem. + 2a 4a6 □□□ 166c □□□ mb

When a positive quantity is to be subtracted, the rule is obvious. In order to show it, when the negative part of a quantity is to be subtracted, let c □□□ d be subtracted from a, the remainder, according to the rule, is a □□□ c + d. For if c is subtracted from a, the remainder is a □□□ c ; but this is too small, because c is subtracted instead of c □□□ d, which is less than it by d; the remain- der therefore is too small by d; and d being added, it is a □□□ c + d, according to the rule.

PROB. III. To multiply algebraic quantities.

General Rule for the Signs. When the signs of the two terms to be multiplied are like, the sign of the product is + ; but when the signs are unlike, the sign of the product is □□□ .

Case 1 . To multiply two terms.

Rule. Find the sign of the product by the general rule ; after it place the product of the numeral co- efficients, and set down the letters one after another.

Mult. + a By +6

+ 5b □□□ 3c

□□□ 5ax

□□□ lab

+ ab □□□ 156c + 35aabx

The reason of this rule is derived from Def.

5. and from the nature of multiplication, which

is a repeated addition of one of the quantities

to be multiplied as often as there are units in

the other. Hence also the letters in two terms to be multiplied together may be placed in any order, and therefore the order of the alphabet is generally preferred. ••• Case 2. To multiply compound quantities.

Rule. Multiply every term of the multipli- cand by all the terms of the multiplier, one after another, according to the preceding rule, and then collect all the products into one sum ; the sum is the product required. Ex. 1. Mult. 2a + 36 By 3a.r ••• 4by

6aax

••• Qaby ••• I2bby

Prod . 6aax + Vabx ••• Qaby ••• 1 2bby

Ex. 2. Mult, m + x BY m ••• x

Prod. mm

Ex. 3. Mult, a••• b By c ••• d

ac ••• cb ••• ad + db

Prod. ac ••• cb ••• ad \ db Powers of the same root are multiplied by adding their exponents. Thus, a8 x a3 ••• a5, or aa x aaa ~ aaaaa, b3 x b rz fr4.

On the General Rule for the Signs.

The reason of the rule will appear from the iast

mentioned example of a ††† b multiplied by c ††† d, in which every case of it occurs.

Since multiplication is a repeated addition of the multiplicand, as often as there are units in the multiplier, if a ††† b is to multiplied by c, a ††† b must be added to itself as often as there are units in c, and the product therefore must be ca ††† cb.

But this product is too great ; for a ††† b is to be multiplied, not by c, but by c ††† d only, which is the excess of c above d; d times a ††† b there- fore, or da ††† db, has been too much ; hence this quantity must be subtracted from the former part of the product, and the remainder, which is ca ††† cb ††† da + db, will be the true product re- quired.

Scholium.

Sometimes the multiplication of quantities is expressed by setting them down with the sign (X) between them, without performing the operation according to the preceding rales ; thus †† ††† b x c ††† d expresses the product of a ††† b, multiplied by c ††† d ; and the line drawn over any number of terms of a compound quantity, is called a vinculum, the quantities under the vinculum being collectively considered as one quantity.

Thus also a + b}2 expresses the second power of a + b, or the product of that quantity multi- plied by itself; whereas a + b2 would express only the sum of a and 62. By some writers a parenthesis () is used as a vinculum, and (a + b) is the same thing as a + b\9.

PROB. IV. To divide algebraic quantities.

General Rule for the Signs. If the signs of the divisor and dividend are alike, the sign of the quotient is + ; if they are unlike, the sign of the quotient is ††† .

This rule is easily deduced from that given in Prob.

III. for, from the nature of division, the quotient must be such a quantity as, multiplied by the divisor, should produce the dividend with its proper sign.

Case 1. When the divisor is simple, and a factor of all the terms of the dividend.

Rule. Expunge the letter or letters in the divisor from each term of the dividend, divide the co-efficient of each term by the co-efficient of the divisor ; and the quantity resulting is the quotient. Ex. a)ab(b. 2a26) 6a3bc ††† 4a?bdm (Sac ††† 2dm.

The reason of this is evident from the nature of division, and from Def. 5. Note. It is ob- vious that powers of the same root are divided by subtracting their exponents.

Thus a2) a3 (a. a3) a7 (a4. Also a26) a366 (ab.*

Case 2. When the divisor is simple, but not a factor of the dividend.

Rule. The quotient is expressed by placing the dividend above a line, and the divisor below it.

Thus, the quotient of 3ab divided by 2mc iz

i. <††† ††††† 3a6 the traction- †††

2?nc

Cose 3. When the divisor is compound.

Rule 1. Arrange the terms of the dividend according to the powers of some one of its letters ; and those of the divisor, according to the powers of the same letter.

Thus, if a2 +2a6 + 62 is the dividend, and a + b the divisor, they are ranged according to the powers of a.

2. Divide the first term of the dividend by the

first term of the divisor ; and set this quotient down as a part of the quotient wanted, multiply the whole divisor by it, and subtract the product from the dividend. If nothing remain, the di- vision is finished: consider the remainder, if there is any, as a new dividend.

3. Divide the first term of this new dividend by the first term of the divisor as before, and join the quotient, with its proper sign, to the part already found : then multiply the divisor by this part of the quotient, and subtract the product from the new dividend ; and thus the operation is to be continued till no remainder is left.

Thus, a2, divided by a, gives a, which is the first part of the quotient wanted : and the pro- duct of this part by the whole divisor a + b, is a2 + ab, which being subtracted from the given dividend, there remains ab + b3 for a new divi- dend.

Then, + ab, the first term of the new divi- dend, divided by a, gives b; the product of which, by a + b, being subtracted from ab + b , nothing remains, and a + b is therefore the true quotient.

a2 +

ab ab

1 ••• a) 1 (1 + a'+ a' + 1 ••• a

45)63(1 45

••

a2 ••• ••••

+ a3, &c.

In this example there is a remainder, from which the operation may be continued with- out end ; the

quotient is called an infinite series. By comparing a few of the first terms, the law of the series may be discovered, and it may be con- tinued to any number of terms wanted.

SECT. II. ON ALGEBRAIC FRACTIONS. Definition.

In a fraction, the quantity above the line is called the numerator ; and that below it is called the denominator.

If both the numerator and derwrninator of the fraction be either multiplied or divided by the same quantity, the value of that fraction is the same.

Thus, let ⬚ ~ c, then⬚ r ⬚ c. For, from the o mo

nature of division, if the quotient r(nc) be multiplied by the divisor b, the product must be the dividend a. Hence (j X b ~ Jbc ~ a,

and likewise ma ⬚ mbc, and dividing both by

, ma ⬚ , ., ma

mo, ⬚ r ⬚ c- Conversely, it ⬚ r⬚ c, then also ‘ mb ” mb

a _

Cor. . Hence a fraction may be reduced to another of the same value, but of a more simple form, by dividing both numerator and denomina- tor by any common measure.

mS)30⬚f-M⬚y_5f-⬚v.

Cor. 2. A fraction is multiplied by any integer, by multiplying the numerator, or dividing the denominator by that integer ; and conversely, a fraction is divided by any integer, by dividing the numerator, or multiplying the denominator by that integer.

PROB. I. To find the greatest common measure of two

quor.aties.

1. OF PURE NUMBERS.

Rule. Divide the greater by the less ; and, if there is no remainder, the less is the greatest common measure required. If there is a re- mainder, divide the last divisor by it; and thus proceed, continually dividing the last divisor by its remainder, till no remainder is left, and the last divisor is the greatest common measure re- quired. The greatest common measure of 45 and 63 is 9 ; the greatest common measure of 187 and 391 is 17. Thus,

18)45(2 36

9)18(2

18

. - > _

0

The rule depends on the two following principles :

1. A quantity which measures both divisor and remainder must measure the dividend.

2. A quantity which measures both divisor and dividend must also measure the remainder.

For a quantity which measures two other quantities, must also measure both their sum and difference ; and, from the nature of division, the dividend consists of the divisor repeated a cer tain number of times, together with the remain- der. By the first it appears, that the number found by this rule is a common measure ; and, by the second, it is plain there can be no greater common measure ; for, if there were, it must necessarily measure the quantity already fount less than itself, which is absurd.*

When the greatest common measure of alge- braical quantities is required, if either of them be simple,

any common simple divisor is easily found by inspection. If they are both compound, any common simple divisor may also be found by inspection. But when the greatest compound divisor is wanted, the preceding rule is to be applied ; only,

2. The simple divisors of each of the quantities are to be taken out, the remainders in the several operations are also to be divided by their simple divisors, and the quantities are always to be ranged according to the powers of the same letter.

The simple divisors in the given quantities, or in the remainders, do not affect a compound di- visor which is wanted ; and hence also, to make the division succeed, any of the dividends may be multiplied by a simple quantity. For the simple divisors in the remainders, not being found in the divisors from which they arise, can make no part of the common measure sought ; and for the same reason, if in such a remainder there be any compound divisor, which does not measure the di- visor from which it proceeds, it may be taken out. Examples.

lab f 2&2 Remainder winch divided by 2& is a b) a2 b2 (a + b a2 Z>2

If the quantities given are 8a262 10a3 + 264, aud 9aW 9a362+3a'&3 3a&4. The simple divisors being expunged from each, viz. 262from the first, it becomes 4a2 Sab -f b1, and Sab from the second, it is 3a3b3 3a26 f ab3b3. As the latter is to be divided by the former, it must be multiplied by 4, to make the operation suc- ceed, and then it is as follows:

1 5ab +

12a3

ALGEBRA.

463(3a

**

Divide this remainder by 6, and multiply the new dividend by 3, to make the division proceed. Thus,

a2 \$ab + 362 (4 12a3+ 4ab 16fc2

Ex. Add together 2 1 J.the sum is ? 6 dj

bdf

From r- subt. - the difference is 6 d

ad be

pr .

bd

This remainder divided by 196, gives a i, which, being made a divisor, divides 3a2 f ab 4b3 without a remainder, and therefore a 6 is the greatest compound divisor ; but there is a simple divisor b, and therefore a b x b is the greatest common measure required.

PROB. II. To reduce a fraction to its lowest terms.

Rule. Divide both numerator and denominator by their greatest common measure.

75abc 3a

Inus , 25oc being the greatest com- 1 4>o0cjc OJT

** _ b* 2 + b* mon measure ; - 5 . a5 fljo* a3*

PROB. III. To reduce an integer to a fraction.

Rule. Multiply the given integer by any quan- tity for a numerator, and set that quantity under the product for a denominator.

_, _ ma a?b3

Inus, a ~ , a f b ⬚ - =-. m a ⬚ o

The denominoter of an integer is unity.

PROB. IV. To reduce fractions with different denominators to fractions of equal value, that shall have the same denominator.

Rule. Multiply each numerator, separately taken, into all the denominators but its own, and the products will be the new numerators ; and multiply all the denominators for the common denominator.

Example. Let the fractions be , , — , r^ they are

adf bcf bde ictively equal to j-j-., ⬚ j^.

Cor. 1. Integers and fractions may be added and subtracted by this rule, by considering unity as the denominator of the integers.

,p, , c bd + c a2⬚ 62

Thus, b + - ⬚ ⬚ -~, and a — = ad 2a

2a3 ⬚ a2 + b2 _ a2 + b3 2a " 2a '

Cor. 2. A fraction, whose numerator is a compound quantity, may be distinguished into parts, by dividing the numerator into several parts, setting each over the original denomina- tor, and uniting the new fractions by the signs of their numerators.

_, o2 ⬚ 2ai + b a* lab 62 Thus,*

2a

2a

2a

PROB. VI. To multiply fractions.

Rule. Multiply their numerators together for the numerator of the product ; and the denomi- tors, for the denominator of the product.

^ a c ac a--b a ??? b a* ??? b3 Wr *. v ??? ~~ ??? _ v _ ~~ ???

- ** . i A. , ??? . . ??? / . ??? ^^ ; .

b d bd c , d cd

Proof. Let t ???m, and -r???n Then a~bm, and

The reason of the operation appears from the preceding proposition ; for the numerator and denominator of each fraction are multiplied by the same quantities; and the value of the fractions therefore is the same.

PROB. V. To add and subtract fractions.

Rule. Reduce them to a common denomina- OT, then add or subtract the numerators ; and toe sum or difference placed over the common denominator is the sum or remainder required. VOL. I.

c -=jdn, and ac???bdnm, and ??m(??? -Xj) =

PROB. VII. To divide fractions.

Rule. Multiply the- numerator of the dividend by the denominator of the divisor, for the nume- rator ; and the denominator of the dividend by the numerator of the divisor, for the denomina- tor of the quotient.

c a be c b

Thus, -7 f r ' ??? ??? 1 = <7 X -.

' d b ad d a

Proof. Let r ???=. m, and ???= n ; then a ??? bm,

b d

and c ??? dn ; also ad ??? bdm and be r: bdn ; there

/bdn \ n be

tore, i 7-5 I -f

' \bdrn / m ad

CHAP. It

SECT. I. OF EQUATIONS. Definitions.

1. An equation is a proposition asserting the equality of two quantities, and is expressed by placing the sign =. between them.

2. Equations containing only one unknown quantity and its powers, are divided into orders,

2 P

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un .

st-) 1st, f The ~\ Simple, n- f , > equa- f Quadratic in ( ) tion is (

J 3d, &c. Vcalled) Cubicle.

according to the highest power of the unknown quantity to be found in any of its terms.

If \he highest- 1st, f The ~\ Simple, pcwer of the un- known quantity in any term be the

It is here supposed that the exponents of the unknown quantity are integers, and that the equation is cleared of such fractions a? the un- known quantity in the denominator.

3x - b

Thus, x + a = - is a simple equation ; c

3# __ 12, when cleared of the fraction "by

AtX

multiplying both sides by 2, becomes 6x* ††† 5 = 24ns a quadratic,^ ††† 2,r4 = x6 ††† 20 is an equation of the sixth order, &c.*

To resolve an equation is to find the value of the unknown term.

of the equation, with the same sign, it may be taken away from both.

Also, if all the terms in the equation are multiplied or divided by the same quantity, it maj by taken out of them all.

Ex. If 3x + a ††† a + b, then 3tf ††† b.

If 2ax + 3ai .ma\ a?, then 2x + 36 = m + a.

By these rules the unknown term may be separated from the known, and the equation resolved.

Examples of simple equations resolved by these rules.

Ex. 1. If 3 + 5 = *+ 9*

†† . Of simple equations, and rules for their resolution.

Rule 1. Any quantity may be transposed from one side of an equation to the other, by changing its sign.

Thus, if 3x ††† 10=2 + 5*

Then, ST ††† 2x ††† 10 + 5 or x =. 15

*Thus also, 5x + b = a + 2**

By transp. 3r ~ a ††† b.

For equal quantities are thus added to or subtracted from both sides.

Cor. The signs of all the terms of an eq -ation may be changed into the contrary signs, and it will continue to be true.

Rule 2, Any quantity, by which the unknown quantity is multiplied, may be taken away, by dividing all the other quantities of the equation by it.

Thus, if ax ~ b

b

x zz a

Also, if mx \ nb zz am

, nb

x H ⬚⬚⬚ a

m

For if equal quantities are divided by the same quantity, the quotients are equal.

Rule 3. If a term of an equation is fractional, its denominator may be taken away by multi- plying all the other terms by it.

Thus, if - ⬚⬚⬚ b + c. x zz ab f ac

Also, if a ⬚⬚⬚ - zz c

x

ax ⬚⬚⬚ b ⬚⬚⬚ c.r And by trans, ax ⬚⬚⬚ ex ⬚⬚⬚ b

And by div. x ~ .

a ⬚⬚⬚ c

For if all the terms of the equation are multi- plied by the same quantity, the quantities on each side will be equal.

Cor. If any quantity be found on both sides

Ex. 2. If 5⬚⬚⬚*

30-r ⬚⬚⬚ 15.r ⬚⬚⬚ Qx ⬚⬚⬚ 84. Or 7x = 84

Ex. 3. If + = 16

20 + 9 = 64x*

20 = 64.r ••• 9z =. 55x

20 4

•• 2. Solution of questions producing simple equations.

. General Rule. The unknown quantities in the question proposed must be expressed by letters, and the relations of the known and unknown quantities contained in it, or the conditions of it, as they are called, must be expressed by equa- tions. These equations being resolved give the answer to the question.

For example, if the question is concerning two numbers, they may be called x and y, and the conditions from which they are to be investigated must be expressible by equations.

*Thus, if it be required that the^*

sum of two numbers sought (. QQ

be 60, that condition is ex- f ~" 3'••• pressed thus : J

If their difference must be 24, then x••• y~ 24

If their product is 1640, then

If their quotient must be 6, then - zz 6

Case 1. When there is only one unknown quantity to be found.

Rule. An equation involving the unknown quantity must be deduced from the question ; and it is obvious, that when there is only one un-

known quantity, there must be only one inde- pendent equation contained in the question ; for any other would be unnecessary, and might be contradictory to the former.

Example 1 . To find a number, to which if there be added a half, a third part, and a fourth part of itself, the sum will be fifty.

Let it be z ; then half of it is -, a third of it

Therefore, z +

= 50

z

4

••• 1200)^ ••• 1200 z••• 24

se 2. When there are two unknown quan- tities.

Rule. Two independent equations involving the two unknown quantities, must be derived from the question. A value of one of the un- known quantities must be derived from each of the equations ; and these two values being put equal to each other, a new equation will arise, involving only one unknown quantity.

Example 2. Two persons, A and B, were talk- ing of their ages : says A to B, seven years ago I was just three times as old as you were, and seven years hence I shall be just twice as old as you will be. What are their present ages ?

Let A's age ••• x, and B's age ••• y ; then by the condition of the question we have

x ••• 7 = 3 . y ••• 7 and x + 7 ••• 2 . y + 7. Subtracting the first of these equations from the second, we have

these a value of one of the unknown quantities must be obtained. By comparing these three values, two

equations will arise, involving only two unknown quantities ; and in like' manner may the rule be extended to such questions as contain four or more unknown quantities. Hence, it may be inferred, that when just as many inde- pendent equations may be derived from a ques- tion as there are unknown quantities in it, these quantities may be found by the resolution of equations.

Example 4. To find three numbers, such, that the first, with half the other two, the second with one third of the other two, and the third with one fourth of the other two, may each be equal to thirty-four.

Let the numbers be x, y, z, and the equations

2 .y + 7 ••• 3.;y ••• 7 = 14; or 7 ••• t/ = 14, ory = 21. Whence x = 49.

y + i••^ = 34, and z + - ••• •••••••- = 34.

y

We have, hence,

- *34 •••*

%

x ••• 102 ••• 3^ ••• z and x ••• 136 ••• 4z ••• y. By equating the first two of these latter equations,

we find y ••• 136f~ Z; by equating the last two,

we find y = Hence

The ages of A and B then are forty-nine and twenty-one.

Example 3. A gentleman distributing money among some poor people, found he wanted ten shillings to be able to give five shillings to each ; he therefore gave each four shillings only, and found he had five shillings left. To find the num- ber of shillings

and poor people.

If any question such as this, in which there are two quantities sought, can be resolved by means of one letter, the solution is, in general, more simple than when two are employed. There must be, however, two independent conditions ; one of which is used in the notation of one of the unknown quantities, and the other gives an equa- tion.

Let the number of poor = 2, then each of the equations 5z ××× 10 and 42 + 5 will represent the number of shillings.

*Hence 5z ××× 10 = 4z + 5, whence * = 15, and, consequently, the number of shillings is sixty-five.*

Case 3. When there are three or more un- known quantities.

Rule. When there are threp unknown quan- tities, there must be three independent equations arising from the question; and from each

3a××× 34

2

3g ××× 34 _ 136 ××× z ××× or $_T$ 5 '

15z ××× 170=272 ××× 22, or 17z=442, or z = 26 ; whence y = 22 and x. = 10.

Scholium.

On many occasions, by particular contrivances, the operations by the preceding rules may be much abridged. This, however, must be left to the skill and practice of the learner. A few ex- amples are the following.

1 It is often easy to employ fewer letters than there are unknown quantities, by expressing som of them from their relation to others, contained in the conditions of the question.

2. Sometimes it is convenient to express by letters, not the unknown quantities themselves, but some other quantities connected with .them, as their sum, difference, &c. from which they mav be easily derived.

i In the operation, also, circumstances wiU sometimes suggest a more easy method Jhan > that pointed out by the general rules Two of the original equations may be added together or may be subtracted; sometimes they must b previously multiplied by some quantity, to r en- ►►er some' addition or subtraction effectual, m exterminating one of the unknown quac titles, ^or otherwise facilitating the solution. J ►►"

may be made of the values of quantltie^,"J place of quantities themselves, and vanous othe.

such contrivances may be used, to render the solution less complicated.

SECT. II. GENERAL SOLUTION OF PROBLEMS.

In the solutions of the questions in the pre- ceding part, the given quantities (being numbers) disappear in the last conclusion, so that no ge- neral rules for the like cases can be deduced from them. But if letters be used to denote the known, as well as the unknown, quantities, a general solution will be obtained, because during the whole course of the operation, they retain their original form. Hence, also, the connection of the quantities will appear, in such a manner as to discover the necessary limitations of the data, when there are any, which is necessary to the perfect solution of a problem.

Example 5. To find two numbers, of which the sum and difference are given.

Let s be the sum given, and d the given diffe- rence. Also, let x and y be the two numbers sought.

Then x f y :n s and x ††† y ~ d, whence x ~ s ††† y and x ††† d + y, conse- quently d + y ††† . ††† y, or 2y ††† s ††† d,*

s ††† d ., s + d

or y zr ††† - ††† ; and hence x ††† ††† - ††† .

Thus, let the given sum be 100, and the dif- arence 24.

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*Then * -*

And y ~-

f=3,

CHAP. III. OF INVOLUTION AND EVOLUTION

Lemma.

The reciprocals of the powers of a quantity lay be expressed by that quantity, with negative xponents of the same denomination. That is,

111 1 ††† lie senes a, 1, -, ††† , ††† , -, &c. may be expressed

jy a1, a", a ††† 1, a ††† 2, a ††† 3, a ††† - ††, &c.

For the powers of the same root are divided by subtracting their exponents ; if then the index of the divisor be greater than that of the divi- dend, the index of the quotient will be negative.

T, a' 2 ††† 3 †††1

Ihus, ††† no =: a

Also, ††† = †††, ††† ††† a"* ††† a††. a3 a1 a"*

a" Also, ††† ††† 1, and so on of others*

Cor. These negative powers, as they are called, are multiplied by adding, and divided by sub- tracting, the exponents.

1 1 1

-?X -3 = ••• B ••• 6.

fl"1 n 1 \ 1 /••'

s =1 a. Or •••5 1 - ••• I ••• ••• a.*

a ••• 3 ••V a \a ~

1. Of Involution.

To find any power of a quantity is the busi- ness of involution.

Case 1. When the quantity ?s simple.

Rule. Multiply the exponent of the letters by the index of the power required, and raise the co- efficient to the same power.

Thus, the second power of a is •• x 2 ••• a".*

The third power of 2a8 is 8a2 x 3 = 8a6.

For the multiplication would be performed by the continual addition of the exponents ; and this multiplication of them is equivalent.

If the sign of the given quantity is +, all its powers will be positive. If the sign is ••• , then the powers whose exponents are even numbers are positive ; and those whose exponents are odd numbers are negative.

This is obvious from the rule for the signs in multiplication.

Case 2. When the quantity is compound.

Rule. The powers must be found by a con- tinual multiplication of the quantity by itself.

Thus the square of x + - found by multiply-

gt ing it into itself is x2 + ax + - . The cube is

got by multiplying the square already found by fiie root, &c.

The involution of compound quantities is ren- dered much easier by the binomial theorem,; for which see Chap. VII.

2. Of Evolution.

Evolution is the reverse of involution, and by it powers are resolved into their roots.

Def. The root of any quantity is expressed by placing before it A/ "(called a radical sign) with a small figure above it, denoting the denomina- tion of that root

Thus, the square root of a is ►►/ a or ^/a.

*The cube root of be is 2J be. The fourth root of a2J ►►► x3, is lja*b ►►► x3. The with root of c* ►►► dx, is \/c* ►►► dx.*

General rules for the signs.

1. The root of any positive power may be either positive or negative, if it is denominated by an even number ; if the root is denominated by an odd number, it is positive only.

2. If the power is negative, the root also is negative, when it is denominated by an odd number.

3. If the power is negative, and the denomi- nation of the root even, then no root can be assigned.

This rule is derived from the change of signs in multiplication. When the quantity, whose root is to be found, is negative, it is convenient

to set the radical sign before the negative quan- tity, and then it is called an impossible or ima- ginary root

Thus, the square root of ††† aa is denoted ^ ††† a1.

The root of a positive power, denominated by an even number, has often the sign †† before it, denoting that it may have either 4- or ††† .

Case 1 . When the quantity is simple.

Rule. Divide the exponents of the letters by the index of the required root, and prefix the root of the numeral co-efficient.

1. The exponents of the letters may be multi- ples of the index of the root, and the root of the co- efficient may be extracted

Thus, the square root of a4 ~ a ††† Hh a". a6 =. 3a^ =. 3a*.*

2. The exponents of the letters may not be multiples of the index of the root, and then they become fractions; and when the root of the co-efficient cannot be extracted, it may also be expressed by a fractional exponent, its original index being understood to be 1.

Thus,

Case 2. When the quantity is compound. 1. To extract the square root,

Rule. 1. Range the given quantity accord- ing to the powers of some letter, as in division.

2. Extract the square root of the first term from the first part of the root sought. Subtract its square from the given quantity, and divide the first term of the remainder by double the part already found, and the quotient is the se- cond term of the root.

3. Add this second part to double of the first, and multiply the sum by the second part : sub- tract the product from the last remainder, and if nothing remain, the square root is obtained. But if there is a remainder, it must be divided by the double of the parts already found, and the quotient will give the third part of the root ; and so on.

The operation is as follows.

a8 + 2ai + b (a + b*

la + b X b

*2 + b1 2ab + b**

X~2

The reason of this rule appears from the com- position of a square.

2. To extract any other root.

Rule. Range the quantity according to the di- mensions of its letters, and extract the required root of the first term, and it will be the first member of the root required. Then raise this root to a dimension lower by unity than th►► number that denotes the required root, and mul- tiply the power that arises by that number itself. Divide the second term of the given quantity by the product, and the quotient will be the second member of the root required. In like manner are the other parts to be found, by considering those already got as making one term.

Thus, the fifth root of

o5 + 5a<6 + 10a3&►► + Wa'b3 + 5ab4 + 6 (a + b a5*

5a4) 5u4b

And a + b raised to the fifth power is the given quantity, and therefore it is the root sought.

It often happens, that the operation vrill not

terminate, and the root will be expressed by a series.

Thus, the square root of a f x3 becomes a series.*

la + ⬚⬚⬚ 2a

*= * + ⬚⬚*

X ~

x^ 4⬚⬚2 x4

fl Qa4

x⬚⬚ 64a6'

J_ Qa4

⬚⬚⬚

3. Of Surds.

Def. Quantities with fractional exponents are called surds, or imperfect powers.

Such quantities are also called irrational; in opposition to others with integral exponents, which are called rational.

The operations concerning surds depend on the following principle : If the numerator and denominator of a fractional exponent be both multiplied or both divided by the same quantity, the value of the power is the same.

Lemma. A rational quantity may be put into the form of a surd, by reducing its index to the form of a fraction of the same value

Thus, a ⬚⬚⬚ J ⬚⬚⬚ V"3

PROB. I. To reduce surds of different denomi- nators

to others of the same value, and of the same denomination.

Rule. Reduce the fractional exponents to others of the same value, and having the same common denominator.

Example. >fi,ljl?OT a,$; but*

PROB. II. To multiply and divide surds.

1. When they are surds of the same rational quantity f they are multiplied by adding, and di- vided by subtracting, their exponents.

Thus, o1 X a1 - a + f = a►► = ^a*.*

2. If they are surds of different rational quan- tities, let them be brought to others of the same denomination. Then, by multiplying or divi- ding these rational quantities their product or quotient may be set under the common radical

Thus,

x 6 ►►► ambn ►►►

.

►►►a + b a'+b "

If the surds have any rational co-efficients, their product or quotient must be prefixed.

Thus, a>Jm X b^/n ►►► ab^/mn. Cor. If a rational co-efficient be prefixed to a radical sign, it may be reduced to the form of a surd by the lemma; and conversely, if the quan- tity under the radical sign be divisible by a per- fect power of the same denomination, it may be taken out, and its root prefixed as a co-efficient.

Converse ►►► 26.

; 2 x 1/ ►►► ab^/b ;

►►► 8a2b =

Even when the quantity under the radical sign is not divisible by a perfect power, it may be useful sometimes to divide surds into their com- ponent factors by reversing the operation of this problem .

*Thus, j'ab-=. ^/a IJba***bx x*

-A

*** &** =*

upon one side of the equation, and then taking away the radical sign from it, and raising the other side to the power denoted by the index of that surd.

*Example. If Then And 9 X x2 *** a2*

*** **2 f 2j/ *** a + y.*

*** a2 = a *** y.*

*= a? *** lay +y*.*

If the unknown quantity be found only under the radical sign, and only of the first dimension, the equation becomes simple.

*Thus, if lj**x + 16 + 5=9*

*Then ?/4x + 16 *** 4*

And 4 -f 16 = 64*

4x=. 48

And x r= 12

PROB. III. To involve or evolve surds.

This is performed by the same rules as in other quantities, by multiplying or dividing their exponents by the index of the power or root re- quired.

Scholium.

If a member of an equation be a surd root, then the

equation may be freed from any surd, by bringing that member first to stand” alone

*Then a?x ††† ti*x zz am*

am

X~ a - b**

9 m

In general if j?’ + x ††† a, by reducing the*

jm. qm

surds to the same denomination x j x ‘ zz ††, I

and making xqn†††z, the equation is 21 f 2††” zr a, in which the exponents of z are integers ; and z being found, # is to be found from the equation- i*

CHAP. V. OF QUADRATIC EQUATIONS.

Quadratic equations are either pure or ad- fected.

Definitions.

1. A pur†† equation is that in which only one power of the unknown quantity is found.

2. An adfected equation is that in which dif- ferent powers of the unknown quantity are found in the several terms.

*Thus, a2 -f a*3 = b9, ax* ††† bz = m* + .r2 are pure equations.*

x1††† ax ††† b-, x3 + x††† 17. are adfected equations. .*

Solution of Pure Equations.

Rule. Make the power of the unknown quan- tity to stand alone by the rules formerly given, and then extract the root of the same denomina- tion on both sides, and the value of the unknown quantity will be obtained.

Examples.

If a1

ax3 ~ b3

ax ~ b3*

, b3

X –

□□□ a2

axm □□□ b ~ xm □□□ c axm □□□ xm zz b □□□ c

b □□□ c

JT□□□ □□□ –

a□□□ 1

ALGEBRA.

Solution of adjected quadratic equations.

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An adfected quadratic equation (commonly called a quadratic) involves the unknown quan- tity itself and also its square.

Rule 1. Transpose all the terms involving the unknown quantity to one side, and the known terms to the other ; and so that the term contain- ing the square of the unknown quantity may be positive.

2. If the square of the unknown quantity is

..I.. 1 1 1 _ /T□□ □□□□□□□□□□□□□.. .. *.*

roots will be positive. If □□□ he equal to b3, the

a2

two roots become equal; but if □□□ is less than

4

62, the quantity under the radical sign becomes negative and the two roots are impossible.

4. If the equation express the relation of magnitudes abstractedly considered, where a con- trariety cannot be supposed to take place, the negative roots cannot be of use, or rather there

multiplied by any co-efficient, divid'e all 'the are no such roots ; for then a negative quantity terms of the equation by it, so that the co-efficient bv itself is unintelligible, and therefore the of the square of the unknown quantity may be 1 . square root of a positive quantity must be posi-

3. Add to both sides the square of half the tive only, co-efficient of the unknown quantity, and the

side of the equation involving the unknown quantity will be a complete square.

4, Extract the square root from both sides of the equation, and by transposing the above- mentioned half co-efficient, the value of the un- known quantity will be obtained.

The reason of this rule is manifest from the composition of the square of a binomial, for it con-

Solution of questions producing quadratic Equations.

sists of the squares of the two parts, and twice the product of the two parts.

The different forms of quadratic equations, expressed in general terms, being reduced by the first and second parts of the rule, are these.

1. x* f ax rr b*

2. Xs ••• ax zz b1

3. x3 ••• ax ••• ••• b3 Case 1. x2 + ax =. b*

*•• + ax + * = b2 + ••2 f +••••=••^^+1

Example 1. One laid out a certain sum of money in

goods, which he sold again for twenty- four pounds, and gained as much per cent, as the goods cost him. What did they cost him ?

Let the money laid out ††† y, then 24 y is

the gain; and 3, : 24-,,:: 100 ; 240†† ~

:^ the gain equal to y.

per cent. which by the question is

Hence y ~

2400 ††† IQOy ††† ->

*Case 2. x' ††† ax ††† b**

*††-s**

Case 3. ,r2 ††† ††.r †††

1. Every quadratic equation will have two roots, except those of the third form, whose roots become impossible.

I. In the fkst two forms, one of the roots will be positive, and the other negative.

a2 3 In the third form, if ††† , or the square of

half the co-efficient of the unknown quantity, be greater than />2, the known quantity, the two

or y††† 2400 ††† lOOy, or y4- 100yiz24ob; whence, by adding to each side of the equation

100

2500, the square of ††† ,

we have y + lOCy + 2500 = 4900; and hence, by extracting the square root, we have y + 50 =†† 70, ory ††† †† 70††† 50=20, or †††120. The answer therefore is 20y the negative result from the nature of the problem being excluded. The answer is twenty pounds, which succeeds. The other root, ††† 120,*

has no place in this ex- ample, a negative number being here unintelli- gible.

Example 2. To find two numbers whose sum is 100, and whose product is 2059.

Let the given sum 100 ir a the product 2059 ††† b, and let one of the numbers sought be x, the other will be a ††† .r, and their product

ax ††† x1. Hence ax ††† x3 =&,

or x ††† a r ††† ††† ft j*

and, by completing the square, we have

, ††2 †† j. x* ††† ax -\ ††† ††† b.*

4 4

Then, by extracting the square root, there results

Whence x †††

By substituting for a and b their numerical values as given in the question, we find x =: 71 or 29,

and a ††† jr ~ 29 or 71, which are the two num- bers required.

But in this example, by a different mode of sub- stitution, an adfected equation may be avoided. Let a ††† half the sum, and x ††† half the differ- ence of the required numbers ; then the numbers will be represented by a f x and a ††† x.

Hence a-- x . a ††† .r ~ 6, or a2 ††† ,r2 ††† 6 ;

whence x ~ †† ^u†† ††† 6zz (with the given num- bers) 21 ; whence the numbers are as before 71 and 29. In the first solution it may be observed, that b

must not be greater than ??? , for the roots of the

equation would then be impossible ; that is, the given product must not be greater than the square of half the given sum of the numbers sought. This limitation can easily be shown from other principles ; for the greatest product of the two parts into which any number may be divided, is, when each of them is a .half of it. If

ff b be equal to ??? , there is only one solution, riz.

a , a

**=-, also a ??? * = -.*

Ira r2 ???

??? , - ??? a, which must alwavs be rational,

r \ \ r f 1*

will be the sides of the two squares required.

Thus, if a2 ???=. 100 ; then if r2 ??? 3, the sides of the two squares are 6 and 8, for 36 + 64 ??? 100.

Also, let a2 ??? 64. Then if r ??? 2, the sides of

32 , 24 , 1024 576

the squares are ??? and -??? ; and ??????? + 7,?- ???

1600

The reason of the assumption of rx ??? a as a side of the square a2 ??? a;2, is, that being squared and put equal to this last, the equation manifestly will be simple, and the root of such an equation is always rational.

Example 2. To find two square numbers whose

difference is given.

Let a;2 and t/2 be the square numbers, and a. their difference.

z + v _

Put

and

𝍐 y.

CHAP. VI.

OF INDETERMINATE PROBLEMS.

It has already been observed, that if there are more unknown quantities in a question than equations, by which their relations are expressed, the question is indetermined. The method of solving such problems may be better learnt by ex- amples than by any general rules ; and, indeed, no general rules can be given for the purpose, each individual example forming in itself an especial and distinct case.

Example 1. To divide a given square num- ber into two parts, each of which shall be a square number.

There are two quantities sought in this ques- tion, and there is only one equation expressing their relation; but it is required also that they may be rational, which circumstance cannot be ex- pressed by an equation : another condition, therefore, must be assumed, to obtain a solution in rational numbers.

Let the given square be a2; let one of the squares sought be a;2, the other is a 𝍐 x3. Let rx 𝍐 a also be a side of the last square, therefore r2*2 𝍐 2nra + a2 𝍐 a2 𝍐 x'2 by transp. rV -f x3 = 2r*a*

*divide by x r*x f x 𝍐 2ra*

Therefore x = Zra

And rx ◆◆◆ a ◆◆◆

r2◆◆◆ 1

Let r therefore be assumed at pleasure, and

zv ◆◆◆ a. If x and y are required only to be rational,.

then take v at pleasure, and z ~ ◆◆◆, whence x and

v

y are known.

But if x &udy are required to be whole num- bers, take for z and v any two factors that pro- duce a, and are both even, or both odd numbers. And this is possible only where a is either an odd number greater than 1, or a number divisible

by 4. Then ◆◆◆ ◆◆◆ ◆◆◆ and are the numbers

sought.

For the product of two odd numbers is odd, and that of two even numbers is divisible by 4.

Also if z and v are both odd, or both even, ◆◆◆ ◆◆◆ ”

z ◆◆◆ v and ◆◆◆ – ◆◆◆ . must be integers.

Example 1. If a r= 27, take v ◆◆◆ 1, then 2 ◆◆◆ 27, and the squares are 196 and 169. Or z may be 9 and v ◆◆◆ 3, and then the squares are 36 and 9.

2. If a r= 12, take v =. 2, and z = 6 ; and the squares are 16 and 4.

Example 3. Find three integral affirmative numbers, of which the sum of all three shall be a cube, and the sum of every two a squara number.

Let ar, y and z represent the numbers, and let x + y ◆◆◆ ?◆◆2a2, x f z ◆◆◆ nz2 62, and y + z ◆◆◆ >n2c2, then three of the required conditions are

fulfilled,

and there remains only to make

m x + y + z ††† ††† (d* + P + c?) a. cube,*

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Then we have - s p , -,

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which it is when m ††† †† (a2 f 6 + c2), in which case x ††† m2 (m ††† c2), l y ††† m(m ††† b2),*

and z ††† m2(m ††† c2);

where a2, V, c2 must be so taken that the sum of every two of them may be greater than the third. If a, ††† 5, b ††† 6, and c = 7, then m ††† 55, a; m 18150, j/ ††† 57475, and z ††† 90750.

*As an example of the various ways in which questions of this kind may be considered, we add another solution of this question. Let the numbers be represented by 2 Or2 + jf _ *††), 4 (†††††† + ††† **-A and 2 (2** + y ††† x2) ; then 2 (,r2 + y2 + ~>) ††† a3. Put a ††† 2/>s,*

then a;2 = 4p6 ††† y ††† z3 = n- ††† # (if n2 be put for 4p6 ††† y2.) Assume*

*ns ††† .s2 ~ OT.;; ††† ?i2 ††† m*zz ††† 2mnz f n3,*

where p, q, r, &c. are called quotients, and p -f -, q { -,&c. complete quotients.

And b being again divided by c, c by d, d by c, &c. we shall, by successive substitution, have †† . e ,1 1

and, by extending have

,

r+5,&c.

the number of terms, we

then z ⬚⬚⬚

2⬚⬚m

As na⬚⬚⬚ 4/>6⬚⬚⬚ j/2 Let this be assumed

+ 1

y> ⬚⬚⬚ 4pe ⬚⬚⬚ n2

then n ⬚⬚⬚

4p3c y= en ⬚⬚⬚

r+-,&c.

A continued fraction may be converted into its equivalent vulgar fraction by adding together a few of its leading terms, and observing the law of their formation.

Thus, if it w^ere required to find a series of vulgar fractions successively approximating to the continued fraction.

Imn

*and *-=.mz ⬚⬚⬚ n, z being found from the previous expression.*

On continued fractions.

A continued fraction is one which has for its denominator a mixed number, or a whole num- ber and a fraction, which fraction has, in like manner, for its denominator, a whole number and a fraction, &c.

One of the greatest practical advantages deriva- ble from the properties of formula of this class, is, in approximating to the values of ratios, which are expressed by large numbers, which is effected by dividing the greater number by the less, the last divisor by the last remainder, &c. as in find- ing

*the greatest common measure of two num- fiy j \ x S + bers; the several quotients thus obtained being NQW ^ ^ of continuation of these succes- the denominators of the fractions, their numera- ^ fractio easil be discovered if the tors being always units. quotients a, ft y, *, &c. be placed in a line over*

Thus, to rep resent^ by a continued fraction, the results, as follows :

let b be contained, in a, p times with a remainder r ; let c be contained in b, q times with a remain-

der d ; d in c, r times with a remainder e, &c. as in the following operation. b) a (p

py

a/3+1

ap + y + a

for it is evident that the product of each nu ••• merator, and the quotient above it, added to the preceding numerator, gives the numerator next following; and in like manner, the 'product ot each denominator, and the quotient above it, added to the preceding denominator, gives the next succeeding denominator.

As an example of the application of continued fractions, let it be required to exhibit a series of tractions approximating to the ratio which the

586'

A L G •• D R A

diameter of a circle bears to its circumference, that ratio being expressed by the fraction By successive division, we find

a = 3, ft = 7, y ••• 1, 5 = : 1, &c. 3 a/3 + 1 _ 22

1* ' /3 " ~" 7'

Hence

qj3 + 1.y-f- a _ 25

~ 8 '

15'

ft + 1 . S + ft

, . 3 22 25 47 72

the successive fractions being -, ###, - -jj>^>

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, all fractions of small terms approximating

61

to the given one.

CHAP. VII. I. OF ARITHMETICAL SERIES.

Def. When quantities increase or decrease by the same common difference, they form an arithmetical series. Thus, a, a + 6, a f 26, a + 36, &c. x, x ### 6, x ### 26, &c. Also 1, 2, 3, 4, 5, 6, &c. and 8, 6, 4, 2, &c.

Prop. In an arithmetical series, the sum of the first and last terms is equal to the sum of any two intermediate terms, .equally distant from the ex- tremes.

Let the first term be a, the last x, and 6 the common difference ; then a + 6 will be the se- cond, and x ### 6 the last but one, &c.

Thus, a, a + 6, a + 26, a + 36, a + 46, &c. x, x ### 6, x ### 26, x ### 36, x ### 46, &c.

It is plain, that the terms in the same perpen- dicular rank are equally distant from the ex- tremes; and that the sum of any two in it is a + x,

the sum of the first and last.

Cor. 1. Hence the sum of an arithmetical series is equal to the sum of the first and last terms multiplied into half the number of terms.

If n be the number of terms, and s the sum of the

Prop. I. The product of the extremes in a geometrical series is equal to the product of any two terms, equally distant from the extremes.

Let a be the first term, y the last, r the com- mon ratio : then the series is,

n, or, ar, ar3, or4, &c.*

Each term in the upper rank is equally distant from the beginning as that below it from the end ; and the product of any two such is equal to ay, the product of the first and last.

Prop. K. The sum of a geometrical series, ###wanting the first term, is equal to the sum of all but the last term multiplied by the common ratio.

For,

?/ V V

ar { ar -+### ar3, &c. . . . + -^ + ## + : h V*

^ ^ T

the series wanting the first term

r X a + ar2, &c. . . . + -^ + ^

v i y

r9"" r*

the series without the last term multiplied by r.

Cor. \ . Let s be the sum of the series

yr ••• a

s ••• yxr ••• s ••• a. And s ••• .

r ••• 1

Cor. Since the exponent of r in any term is equal to the number of terms preceding it; in the last term its exponent will be n ••• 1 ; the last term, therefore,

ar* ••• a r* ••• 1

y := ar* ••• ‘, and s~ =a x 7.

r ••• 1 r ••• 1

Hence of these four, s, a, r, n, any three being given, the fourth may be found. If n is not a small number, it will be most conveniently found by logarithms.

Cor. 3. If the series decreases, and the num- ber of terms is unlimited, then, according to this-

notation, s ••• -••• t a finite sum is the limit of the r ••• 1

series: s = a + x x •••’ If a~ 0, then s=-

Examp. Required the limit of the series 1,

L i> i> &c- Hence y ••• 1 , and r ••• 2. Therefore

Cor. 2. x=. a + n ••• 1 x 6, and s ••• 2 a + . 1 X 2 __ •••

n ••• \ x 6 x

_2 an + ra26 ••• nb r, * _ ,

Cor. 3. Of the first term, common difference, sum, and’ number of terms, any three being given, the fourth may be found by resolving the prece- ding equation ; a, 6, s, and n, being successively considered as the unknown quantity. In the first

three cases the equation is simple, and in the last it is quadratic.

II. OF GEOMETRICAL SERIES.

Def. When quantities increase by the same multiplier, or decrease by the same divisor, they form a geometrical series. This common mul- tiplier or divisor is called the common ratio.

Thus,

a, ur, ar\ &c. a, ?-, ⬛⬛, ⬛⬛, &c. 1,2,4,8, &c.

2 ⬛⬛⬛ 1 ~

Repeating and circulating decimals are geome - trically decreasing series, and their limits ma> be found by this rule.

Thus -333, &c. = l + r|r +, &c. y~ 1 and

10

yr 3 X 10 i

r ⬛⬛⬛ 10 ; therefore s :=⬛⬛⬛ ⬛⬛⬛ - ⬛⬛⬛ ⬛⬛⬛ ⬛⬛⬛ ⬛⬛⬛-

r ⬛⬛⬛ 1 10×10⬛⬛⬛1 3

III. OF INFINITE SERIES.

In "many cases, if the division and evolution of compound quantities be actually performed, the quotients and roots can only be expressed by a series of terms, to be continued ad infinitum. By comparing a few of the first terms, the law of the progression of such a series will frequently be discovered. When this cannot be done, the work is much facilitated by several methods ; the " which is that by the binomial theorem.

Theorem. Any binomial (as a + b) may be raised to any power (m) by the following rules.

1 . From inspecting a table of the powers of a binomial obtained by multiplication, it appears that the terms without their co-efficients are a-, a~ ‘&, a 3b2, a 363, &c.*

2. The co-efficients of these terms will be found by the following rule :

The co-efficient of any term multiplied into the exponent of a in it, and divided by the ex- ponent of 6 increased by 1, will give the co-effi- cient of the next following term.

The co-efficient of the first term is always 1 ; and the co-efficients of the terms in order are as follows :

the expansion of a + x ,

will be equal to each term in the expansion

— —

of a + x multiplied by a \ x, and

m I

*m *

771 2 X , &c.

1, m, m X 2 > 2 - 3

or more conveniently expressed thus: 1. Am,

m 1 m 2 m 3

B x , c x , D X : , &c. the

capitals denoting Hence

3 4

the preceding co-efficient.

_

consequently a . a + x = a + a a,

will be the first term in the expansion

_ m + l

of a + x ,

and the literal point of its second term. Let the yet unknown co-efficient of this second term be

m

represented by B, then BO x will be the second term.

If again we put m + 2 for m in the original expression,

/ tn+ I m \ _

we have \a + BO ayx a + x =

m + 2 _ m + l m

a +B + 1.0 x + a o=*

the first and second terms in the expansion

o+TT ••• am + A7?zam ••• l b + B X

771 ••• 1

a••• 262 + c x

m ••• 2

••••••• 3b3 &c.

This theorem, perhaps the most useful in the whole circle of mathematical science, may be thus demonstrated :

First, it may be expedient to premise, that if two series, as

A + −&x + ex3 + ox3 + &c. and A′ f B′X j c′x3 + o′x3 + &c. be always equal, whatever be the value of x; then the co-efficients of the corresponding series are also equal, viz.

A iz A′ ; B ••• B′ &c.

For since the series are equal, whatever value be given to x, they are equal when x ••• 0 ; in which case there results A ~ A′ ; hence the remaining parts BJ + ex″ + &c.

and B′X + c′x″2+ &c. are equal ; or dividing each by x, then B j ex (nx2 f &c.

= B′+ c′a; + D′r + &c. ; and supposing again that x = 0, there results as before, B = B′ ; and in the same way it may be shown, that ••• c = c′, D = D′ &c. Let us now endeavour to find the form of the*

expansion of a + x ,

m / x \ m

or of its equal a (1 −J J ,

77i being any number whatever. Since every power or root ‘of 1 is 1, the first term in the ex- pansion of (1 −) •••) must be 1 ;

whence the first term in the expansion

- */ x \m m*

of a I 1 H •••) must be a . \ a /

If now m + 1, be put for m, then asa-f-x xa + x =a + x ,

of a + x with the literal part of its third

term. In like manner by substituting

m + 3, m + 4, &c.

successively for 777, we shall have the literal parts in the expansion of

*M I *1 M L M O*

*tn *f n in ^ n i in f n &*

a + a x + a x-+

a x3, &c. continued to m + 1 terms.

With respect to the co-efficient, it appears

that if the co-efficient of the second term in the

OT+1

expansion of a + x will be B,

that in the second term of the expansion of

o + x will be B + 1.

But m+i .B=m + 2 B + l, or the difference between the exponent and the co-efficient of the second term, is constant in each successive expansion. But when m = 0, the co-efficient of the second term in the expansion

of a + x is 1 ;

the difference between which and the exponent is 0 : hence, with respect to the second term, the difference between its co-efficient and the ex- ponent of the expansion is always 0 ; or the co- efficient of the second term of the expansion is equal to the exponent.

Let now a + x]r be represented as above, viz. let a + x]r = ar + Bar ~~ lx + car ” 2r + &c. where, as has been just shown, B = r, and c, D, &c. are to be determined. If each side of the equation be squared, we have

*and substituting (2or + x2) for x in the expan- sion of a + xr, we have (a + tax + x*y =*

4co:

But (ar

&c.)'r:

A 1 G E B R A.

4 . Q~ * = 4 . o ~2 = !,, ,□□□ . ?L=ll x

'

m . 0□□- ,3 = 4 x _ t x

Now as these series are equal whatever be the

value of x, the co-efficients of the like powers of □□□ f 5

- are equal, as has been shewn above. 3 . 6 . 9 . 27'

Hence2B = "B!> -

- Sec.

3 . 6 . 9 . 27

This theorem may be applied to quantities

3 .r . which consist of more than two parts, by sup-

and the law of continuation^ posing them distinguished into two, and then

The expansion then of a + x\m in a series is substituting for the powers of these compound m □□□ 1 OT_2 , . parts their values.

□□□ □□□ - am V+ □□□ ,, □□□□□□. ^

Thus, a + & + c1 = a + ft + c' . m □□□ 2 OT_

.

2 ON THE METHOD OF DIFFERENCES. or A, B, c, &c. denoting the co-efficients of the

preceding terms This method consists in finding any term of a

_ _ m _ i series, or the sum of all the terms, the successive

*<, + x\m'=am + Amam~~*x + B . ••• - ••• X differences of the terms being known. From*

the limits to which we are confined, we must, on

m••• 2^2 i c m ••• 2flffl3~j3 &c. this, and several other points of analysis, be very

3 brief; but the following problems contain a full

where m may be any number, integral or frac- exposition of the principles of the method.

tional.

PROBLEM I.

Examples of the a^licatwn of the binomial To find the first term Of any order of difference.*

. ••• r Let a, b, c, d, &c. represent the successive

Example 1. Required the 7th power of a+b, term of any necessary series, then the first order

or the expansion of a 4. b7. of differences will be

Here m =7, and the literal parts of the term b ••• a, c ••• 6, d ••• c, e ••• d, &c.

of the expansion are The second,

am = a7, am~lb= a••b, a"' ~268 = ••5i2, &c. to b '; c ••• b ••• T^-_a = c ••• 2& + a,

and the co-efficients are d ••• c ••• c ••• b ••• d ••• 2c + b,

m _ i 76 e ••• d ••• d ••• c ••• e ••• 2rf + c> &c A-l,A.m=7,B.•••

Whence

, ⁂ 35,

rf_2c +6 ⁂ c ⁂ 26 + a = rf ⁂ 3c + 3i ⁂ a,

3 3

⁂-3 35.4

&c.

Hence the co-efficients of the terms composing the difference of any order, are the same as the co-efficients of the expanded binomial. The first difference of the n th order, is therefore __,_ mj._i_n-n ⁂ 1 n.n-r⁂1.n ⁂ ^^_l_Jlrn

' 4 4

m - 4 35 . 3

5 5 '

m ⁂ 5 21 . 2

6 6

m ⁂ 6 7.1

+ 2 + 2 .c the upper signs being used when n is even, and the lower ones when n is odd.

PROBLEM II.

7 7

35a364 + 21o265 + tab6 + a1.

EV,,. 7-0 r- 4 To find the nth term of any series, a, b c, d, &c.

Enwple 2. Extract the cube root of 9 ; or from the difference! exhibit in a series the expansion of 8 + 1^.*

Here m = ►►, ►► = 8, and x = I ; Let the first term in each order of differences

mi m _ j i _ , be represented by d′, d″, d′″, d″″, &c.

►► = 8 = 2, ma x = ►►8 ″ .1 ::= Then, by the last problem, we have,*

ALGEBRA.

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or b ►►► a + d″ ;

*c ►►► 26 + ►► ►►► <**. or c zz a j 26 f d′ ;*

d ►►►. 3c + 36 ►►► a zz d″′, or d zz a ►►► 36 + 3c + d′″ ; &c.

Or, by substitution,

6 zz a + d′,

c zz c + 2d′ f d″,

Hence the co-efficients of a, d′, d″, &c. in the n1fllth term of the series, a, 6, c,d, &c. are the same

*as the co-efficients of the expansion of a j b″ ‘, hence, the ?*th term is*

n ►►► 1.n ►►► 2 n ►►► 1.n ►►► 2. a ►►► 3►►►,

a+n

&c.

2 . 3

and the series will terminate when d, d″ or d″′, &c. becomes 0, in which case the nth term will be found accurately, otherwise it can only be ap- proximated to.

PROBLEM III.

To find the sum of n terms of any series, from the differences.

If hi the series assumed in the two preceding problems, a zz 0, then the n + 1th term of the series will, by the last problem, be represented by ,, n . n ††† I n .n ††† 1 . n ††† 2 ,†††,

"+††† 2††† d + 271 d +&C';*

and if 6 zz a, c zz a + /3, d zz a + /3 + y, fcc. the n + 1th term of a, 6, c, d, &c. or the nth term of 6, c, d, &c. will be n terms of a + /3 + y+ &c. and d" in the former series is the same as d' in this.

Hence, the sum of n terms of a, /3, y, 5, &c.is

n . n ††† lj/i †† ††† †† ††† 1 ††† w ††† 2 , †††

~~2~~ 2.3 '

Before quitting this subject, we deem it proper to exhibit another method, by which an exten- sive and useful class of series may be summed. As 2 _ g ††† gra + yp ††† qn _

and

pen n + p > w ' representing two fractions having the

respective forms

Example. Required the sum of n terms of the series

1 _!††† J &c

1.3 3.5 5.7

Here p zz 2, 9 zz 1, and ra zz 1, 3, 5, &c.

and

Hence-J ^_=ih__l***

*pfn **+p < 2n-p-l*

2ra

.: , the required sum.

2 . 2ra + 1

On the reversion of series.

*To revert a series, is to express the value of the unknown quantity in it, by means of another series, involving the powers of some other quan- tity. For example, if ax j ba? + ex3, &c. = y, then it can be found equal to a series, involving the powers of y and the given quantities, a, b, c, &c. the series involving * is said to be reverted.*

To accomplish the reversion, assume

x = &y + By + cy3 + &c. A, B, c, &c. being indeterminate co-efficients. Substitute this series and its powers for x, and its powers in the given series, and subtract y from each side of the resulting equation, and it will then stand as under :*

OA

Jicu auuiu

^a . y+A.z+ 6A . 3/2-r7ac+26AB+CA3 . y3,*

*Hfinne OA *** 1 zz 0, OB + 6A2 *** 0,*

AC + 2&AB + CA2 ZZ 0, &C.

and consequently,

n+p n . n + p

^g_ _ U? 9

*n.n4-p **tn n J*

it follows that if any fraction of the for

n . n + p

is equal to the pth part of the difference of ??? if this difference is krtown, the value

n + p

of – r? ^, then of ??? and ??? ^ ??? are unknown. n . n +p n n +P

Hence if there be a series of fractions of the form — , the sum of the series will be equal to

, &c. ;

If the series had consisted of the odd powers of ar, its reverted form would have been 1 b , , 36s ??? ac . .

-a + /del>&C– If the series are given equal to each other as ax + bx* + ex3, Sue. ??? ay + ??/ + r/ ?? &c– the value of a– is obtained in terms of y in the same manner, viz. by assuming

x ???=. Ay + By* + cy3, &c. and substituting this value in place of t ,

PART II.

OF THE GENERAL PROPERTIES AND RE– SOLUTION OF EQUATIONS OF ALL OR– DERS.

CHAP. I.

OF THE ORIGIN AND COMPOSITION OF EQUA– TIONS; AND OF THE SlGNS AND Co–EFFICIENTS

OF THEIR TERMS.

THE higher orders of equations, and their ge– neral affections, are best investigated by con– sidering

their origin from the combination of inferior equations.

In this general method, all the terms of any equation are brought to one side, and the equa- tion is expressed by making them equal to 0. Therefore, if a root of the equation be inserted instead of (x) the unknown quantity, the positive terms will be equal to the negative, and the whole must be equal to 0.

*Def. When any equation is put into this form, the term in which (x) the unknown quantity is of the highest power is made the first ; that in
وhich the index of x is less by 1 is the second ; and so on to the last, into which the unknown quantity does not enter, and which is called the Absolute term.*

Prop. I. If any number of equations be mul- tiplied together, an equation will be produced, of which the dimension is equal to the sum of the dimensions of the equations multiplied. ॐ The term dimension, in this chapter, means either the order of an equation, or the number denoting that order, which was formerly denned to be the highest exponent of the unknown quantity in any terra of the equation.

If any number of simple equations be multiplied together, as x ॐ a~0, x ॐ i~0, x ॐ c ॐ d ॐ Q, &c. the product will be an equation of a dimen- sion, containing as many units as there are simple equations. In like manner, if higher equations are multiplied together, as a cubic and a quadra- tic, one of the fifth order is produced, and so on.

Conversely. An equation of any dimension is considered as compounded either of simple equa- tions or of others, such that the sum of their di- mensions is equal to the dimension of the given one. By the resolution of equations these in- ferior equations are discovered, and by investi- gating the component simple equations, the roots of any higher equation are found.

Cor. 1 . An equation admits of as many solu- tions, or has as many roots, as there are simple equations which compose it.

Cor. 2. And conversely, no equation can have more roots than it has dimensions.

Cor. 3. Imaginary or impossible roots enter an equation by pairs; for they arise from qua- dratics, in which both the roots are such. And an equation of an even dimension may have all its roots, or any even number of them impossible, but an equation of an odd dimension must at least have one possible root.

Cor. 4. The roots are either positive or negative, according as the roots of the simple equations, from which they are produced, are positive or negative.

Cor. 5. When one root of an equation ;s dis covered, one of the simple equations is found, from which the given one is compounded. The given equation, therefore, being divided by this simple equation, will give an equation of a di- mension lower by 1 .

Prop. II. To explain the general properties of the signs and co-efficients of the terms of an equation.

Let x ••• a ~ 0, x ••• 6 =: 0, x ••• c ••• 0, x ••• d ••• 0, &c. be simple equations, of which the roots are any positive quantities 4- a, + b, -f c , \ d, &c. and let x \ m ••• 0, x f n rz 0, &c. be simple equations, of which the roots are any negative quantities ••• m, ••• n, &c. and let any number of these be multiplied together as in the following table :

x ••• a ••• 0 X x••• b

~ x' ••• ax

Xx ••• c ••• <

••• b >X

in 0, a quadratic.

+ ab

*+ ac

4- be

X x ••• o6c~0, a cubic.

X q + i•• '••• ••• 0

+ m &c.

x*

(+

J •••

ban

=0, abi-

quadratic. H

•••bm

••• cmj

From this table it is plain,

1. That in a complete equation, the number of terms is always greater by unit than the di- mension of the equation.

2. The co-efficient of the first term is 1 .

The co-efficient of the second term is the sum of all the roots (a, b} c, m, &c.) with their signs changed.

The co-efficient of the third term is the sum of all the products, that can be made by multiplying any two of the roots together.

The co-efficient of the fourth term is the sum of all the products, which can be made by mul- tiplying together any three of the roots with their signs

changed; and so of others.

The last term is the product of all the roots, with their signs changed.

3. It appears too, that in any equation, (the terms being regularly arranged as in the prece- ding example,) there are as many positive roots as there are changes in the signs of the terms from f to ००० , and from ००० to + : and the re maining roots are negative.

Note. The impossible roots in this rule are supposed to be either positive or negative.

Cor. If a term of an equation is wanting, the positive and negative parts of its co-efficient must then be equal. If there is no absolute term, some of the roots ~ 0, and the equation may be de- pressed, by dividing all the terms by the lowest power of the unknown quantity in any of them. In this case also, #+0 zr 0, x ००० 0 ००० 0, &c. may be considered as so many of the component simple equations, by which the given equation

being divided, it will be depressed so many de- grees.

CHAP. II. Or THE TRANSFORMATION OF EQUATIONS.

Prop. 1. The affirmative roots of an equation become negative, and the negative become affir- mative, by changing the signs of the alternate terms, beginning with the second.

Thus the roots of the equation x4 ००० x3 ००० 19.ra + 49x ००० 30 = 0 are + 1, + 2, + 3, ००० 5, whereas the roots of the equation x4+x3 ००० 19×2 ००० 49or, ००० 30 = 0, are ००० 1, ००० 2, ००० 3, + 5.

The reason of this is derived from the compo- sition

of the co-efficients of these terms, which consist of^combinations of odd numbers of the roots, as explained in the preceding chapter.

Prop. 2. An equation may be transformed into another, that shall have its roots greater or less than the roots of the given equation, by some given difference.

Let e be the given difference ; then^ ††† †† e, x ††† y qi e ; and if for x and its powers in the given equation, y + e and its power be inserted, anew equation will arise, in which the unknown quantity is y, and its value will be x †† e.

Let the equation prooosedbe x3 ††† px2 -f qx ††† r ††† 0, of which the roots must be diminished by e. By inserting for a: and its powers, y + e and its powers, the equation required is,

of the first term is any known quantity, as a may thus be transformed into another, into which the co-efficient of the first term shall be unit. Thus, let the equation be aa?†††- px3--qx ††† r ~ 0. Sup-

posey ††† axoTx ††† y- 9 and for x and its pow-ers insert- and its powers, and the equation be-

Cor.

y3

+ e3

+ qy

__r. 1. The use of this transformation is to take away the second or any other intermediate term ; for, as the co-efficients of all the terms of the transformed equation, except the first, involve the powers of e, and known quantities only, by putting the co-efficient of any term equal to 0, and resolving that equation, a value of e may be determined, which being substituted, will make that term to vanish.

*Thus, let the co-efficient 3e ******* p *** 0, ande = \ p, which being substituted for e, the new equa- tion will want the second term. And universally, the co-efficient of the first term of an equation of n dimensions being 1, the second term may be*

taken away by supposing a; zz y Jr p.

Cor. 2. The second term may be taken away by the solution of a simple equation ; the third by the solution of a quadratic and so on.

Prop. 3. An equation may be transformed into another, of which the roots shall be equal to the roots of the given equation, multiplied or divided by a given quantity.

*Let y *** xe, or y *** -.*

&

*Then substitute for .T and its powers, **orj/e and*

its powers ; and the new equation will have the property required.

Cor. 1. An equation, in which the co-efficient

*^5 *** J- + *** *** r = 0, or y3*** py* +*

*2qy *** aV =: 0.*

Cor. 2. If there are fractions in an equation, they must be taken away, by multiplying the equation by the denominators, and by this pro- position the equation may then be transformed into another, without fractions, in which the co- efficient of the first term is 1. In like manner may a surd co- efficient be taken away in certain cases.

Cor. 3. Hence also, if the co-efficient of the se- cond term of a cubic equation is not divisible by 3, the fractions thence arising in the transformed equation, wanting the second term, may be taken away by the preceding corollary. But the se- cond term

may also be taken away, so that there shall be no such fractions in the transformed equa- tion, by supposing x ~ ••• - ••• , •• p being the

3

co-efficient of the second term of the given equa- tion. And if the equation ax3 ••• px f qx ••• r ir 0 be given, in which p is not divisible by 3, by*

, the transformed equation

supposing x ••• •••

reduced is 2s ••• 3/ + Qaq x z ••• ty +

••• 7o7r ~ 0 ; wanting the second term, having 1 for the co-efficient of the first term, and the co- efficients of the other terms being all integers, the co-efficients of the given equation being all supposed integers.

General Corollary to Prop. 1, 2, 3.

If the roots of any of these transformed equa- tions be found by any method, the roots of the original equation, from which they were derived, will easily be found from the simple equations expressing their relation. Thus, if 8 is found to be a root of the transformed equation z3 + 23z

••• 696 = 0. Since x == ^-, the correspond-

0

ing root of the given equation 5 x3 ••• 63? + 7x •••

30 = 0 must be ¯= 2. It is to be ob- o

served also, that the reasoning in Prop. 2 and 3, and the corollaries may be extended to any order of equations, though in them it is applied chiefly to cubics.

CHAP. II. OF THE RESOLUTION OF EQUATIONS.

From the preceding principles and operations, rules may be derived for resolving equations o all orders.

I. Cardan's rule for Cubic Equations. The second term of a cubic equation ††† being taken away, and the co-efficient of the first term being made 1, it may be represented by x3 + 3qx + 2r =r 0 ; the sign + in all terms denoting the addition of them, with their proper signs, Let x ††† m + n, and also mn ††† ††† q, by the substitution of these values, an equation of the 6th order, but of the quadratic form, is deduced, which gives the value of m and n ; and hence,

m+n= x=i

Cor. 1. In the given equation, if 3^ is negative and if ra is less than g3, this expression of the root involves impossible quantities ; while at the same time, all the roots of that equation are possible. The reason is, that in this method of solution, it is necessary to suppose, that x the root may be divided into two parts, of which the product is q. But it is easy to show, that in this, which is called the irreducible case, that cannot be done.

For example, the equation x3 ††† 156 -+††† 560*

. ††† 0 belongs to the irreducible case, and the

three roots are + 4, + 10, ††† 14 ; and it is

plain that none of the roots can be divided into

two parts, of which the product can be equal to

††† or 52 ; for the greatest product from the

3

division of the greatest root ††† 14, is ††† 7 x ††† 7 ††† 49 less than 52.

If the cube root of the compound surd can be extracted, the possible parts balance each other, and the true root is obtained.

Cor. 2. Biquadratic equations may be reduced to cubics, and may therefore be resolved by this rule.

Some other classes of equations, too, may be

resolved by particular ruler ; out these and every other order of equations, are commonly resolved by the general rules, which may be equally ap- plied to all.

II. Solutions of Equations whose Roots are Commensurate.

Rule 1 . All the terms of the equation being brought to one side, find all the divisors of the absolute term, and substitute them successively in the equation for the unknown quantity. That divisor which, substituted in tins manner, gives the result ००० 0, will be a root of the equation.

Ex. 1. ***s ००० 3a*** + 3a.r3 ००० 2as6 1 _ ft ००० bx2 + 3abx 5 ”*

The simple literal divisors of ००० 2a b are a, b, y, 26, any of which may be inserted for x. Sup- posing x = a, the equation becomes*

a3००० 3a? 4. 3a3००० 2a36) ,- , ००० , . , -la + Mb \ winch is obv10usly=C*

The reason of this rule appears from the pro- perty of the absolute term being the product of all the roots.

To avoid the inconvenience of trying many di- visors, this method is shortened by the follow- ing:

Rule 2. Substitute in place of the unknown quantity successively three or more terms of the progression, 1, 0, ००० 1, &c. and find all the di- visors of the sums that result; then take out all the arithmetical progressions that can be found among

*these divisors whose common difference is 1, and the values of x will be among those terms of the progressions, which are the divisors of the result arising from the substitution of * = 0. When the series increases, the roots will be positive; and when it decreases, the roots will be negative.*

Supposit.

Result.

Divisors.

Ar. pro.

r ••• + 1 ")

.... f ••• 4

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4

x +6=) + 6

1, 2, 3, 6,

3

X ••• 1 J

(+ 14

1, 2, 7, 14,

2

In this example there is only one progression, 4, 3, 2 ; and therefore 3 is a root, and it is ••• 3, since the series decreases.

*It is evident from the rules for transforming equations, that by inserting for *, + 1, the result is the absolute term of an equation, of which the roots are less than the roots of the given equation by 1. When x = 0, the result is the absolute term of the given equation. When for x h in- serted ••• 1,*

the result is the absolute term of an equation, whose roots exceed the roots of the given equation by 1. Hence, if the terms of the series, 1, 0, ००० 1, ००० 2, &c. be inserted successively for x, the results will be the absolute terms of so many equations, of which the roots form an increasing arithmetical series with the difference 1 . But as the commensurate roots of these equations must be among the divisors of their absolute terms, they must alsT be among the arithmetical progressions found by this rule. The root? of the given equation therefore are to be sought, for among the terms of these progres-

sions which are divisors of the result, upon the supposition of x = 0, because that result is its absolute term.

If from the substitution of three terms of the progression,!, 0, ००० 1, &c. there arise a number of arithmetical series, by substituting more terms of that progression, some of these series will break off, and, of course, fewer trials will be necessary.

III. Example of Questions producing the Equations.

The sum of the squares of two numbers 208, and the sum of their cubes 2240 being given, to find them.

Let the greater be x f y, and the less x ००० y. Then x+ y +x००० y* ००० 2x* + 2y2 = 208.*

Hence y rz 104 ००० x*. Also x + y\3 + x^y* ००० 2×3 + 6.rya n 2240.*

ALGEBRA.

Substitute for y- its value aud

2.r3 +624 + 6r०० = 2243. is reduced gives x3 ००० 156T + 560 ००० 0.*

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a positive, and the other a negative, result. Either the number above the root, or that below it, may be

assumed as the first value ; only it will Le

ie roots of this equation are 10 + 4 n 14 raore convenient to take that which appears to

be nearest to the root.

x ~ 10, then y ××× 2; and the numbers ight are 12 and 8, which give the only just solution.

IV. Solution of equations by approximation.

By the former rules, the roots of equations, when they are commensurate, may be obtained. These, however, more rarely occur ; and when they are incommensurate we can find only an approximate value of them, but to any degree of exactness required. Of the various rules that have been given for this purpose, we select the two following as the most general and easy of application. The first is by Sir Isaac Newton, and requires the equation to be previously pre- pared and arranged. The second is by Dr. Hutton, and may be applied to any equation, however complicated, without any previous pre- paration or arrangement

SIR ISAAC NEWTON'S METHOD.

To understand rightly the principles of this method, we deem it proper to premise the fol- lowing :

Lemma. If any two numbers, being inserted for the unknown quantity in an equation, give results with opposite signs, an odd number of roots must be between these numbers.

This appears from the property of the absolute terms, and from this obvious maxim, that if a number of quantities be multiplied together, and if the signs of an odd number of them be changed, the signs of the product are changed. For, when a positive quantity is inserted for x, the result is the absolute term of an equation, whose roots are less than the roots of the given equation, by that quantity. If the result has the same sign as the given absolute term, then from the property of the

absolute term either none, or an even num- ber only, of the positive roots have had their signs changed by the transformation ; but if the result has an opposite sign to that of the given absolute term, the signs of an odd number of the positive roots must have been changed. In the first case, then, the quantity substituted must have been either greater than each of an even number of the positive roots of the given equa- tion, or less than any of them ; in the second case, it must have been greater than each of an odd number of the positive roots. An odd num- ber of the positive roots, therefore, must lie be- tween them when they give results with opposite signs. The same observation is to be extended to the substitution of negative quantities and the negative roots.

From this lemma, by means of trials, it will not be difficult to find the nearest integer in a root of a given numeral equation.

Let the equation be x3 ††† 2 ††† 5 =0.*

1. In this case a root is between 2 and 3 ; for these numbers being inserted for x, the one gives

VOL. I.

*2. Suppose * = 2 +/, and substitute the value of * in the equation.*

††† 2jr =†††4 ††† 2/ †††5 =†††4

x3††† -2x ††† 5 †††††††\ + 10/+ 6/2 +/3 ††† 0.

If/ is less than unit, its powers/2 and/ may be neglected in this first approximation, and 10/ = lr or 0-1 nearly, therefore * = 2-1 nearly.*

3. As/= 0-1 nearly, let/= 1 + g, and in sert this value of fin the preceding equation. /3=z 0-001+0-03g+0-3g2+g3 6/2= 0-06 + 12g+ 6g2 10/= 1 + lOg

/' + 6/2 + 10/- 1 = 0-061+1 1-23 g+ 6'3g + g3 = 0,*

and neglecting g2 and g3 as very

small, 0-61 + ll‘23g=0, or g ••• ~

*•••0054, hence /= 0 * + g = ‘0946 nearly, and * = 2-0946 nearly.*

4. This operation may be continued to any length, as by supposing g = ••• ‘0054 + h, and so on, and the value of x ••• 2-09455147 nearly.

By the first operation a nearer value of x may be found thus : since / = •••! nearly, and ••• 1 +

1Q/-+ 6/’ +/’=0,/ = .2, that

= -094 true the last

is f = ‘ J ‘ ~ 10 + -6 + -01

figure, and x = 2-994.

In this manner may the root of any equation be found, after it has been cleared of radical quantities; but in the application of algebra to practical purposes, the following method of trial and error, which is applicable at once to any equation, will generally be found preferable.

DR. HUTTON’S METHOD.

Rule. Find by trial two numbers nearly equal to the root ; substitute each of them in the given equation, and note the results arising from each subtraction.

Then the difference of these results is to the difference of the two assumed numbers, as the difference between the true result, and either of the former to the correction of the number which produced that result ; and this result added to the number when it is too little, or subtracted from it when it is too great, will give the re- quired root nearly.

Then this number, and any other numbei nearly equal

to it, being substituted as before, a second correction will be obtained; and the operation may be continued till the root is oo- tained, to any degree of ac< uracy.

Example. If (~ ††† 15^ + r ^ = 90††

what is the value of x ?

2 Q

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ALGEBRA,

By a few trials it may be found that the value of x lies between 10 and 11. Let these be as- sumed as the values of x. Then

1st supposition. 2d supposition.

25 84.64

31.622 36.482

—

*x ††J **

Results 56.622

121.122

*Hence 121-122 ††† 56'622 : 11 ††† 10 :: 121-122 ††† 90' : 482 nearly. Hence * = 11 ††† †††482 = 10-518 nearly. Let then 10'5 and 10-6 be assumed for *, and we have, by proceeding as above, 83-7264 and 90-341883 for the respec- tive results. Hence 90-341883 ††† 83-7264 : 10-6 ††† 10-5 :: 90341883 : 90-0051679 nearly. Whence x = 10-6 ††† '0051679 very nearly.*

This method also applies with great facility to finding the roots of exponential equations of the

x

form x = a, the only case in that class of equa- tions in which there is any trouble in finding the root.

*If * = a, then by the property of logarithms * . log. x = log. a. Therefore find by the pre- ceding method of trial and error, a number which multiplied by logarithms, produces the logarithm of the given quantity a, and it will be the root of the equation.*

Before we dismiss this part of our subject, we shall give a concise view of the leading proper- ties of recurring and binomial equations.

On recurring equations.

Recurring equations are those whose terms, taken in a direct order, have the same co-effi- cientsas theirrespective terms taken in an inverse order.

In these equations one half of the roots are the reciprocals of the other half ;

and put x = -; then

P Q Q P

~yn y”^ vn-2’” + ? + 3/ + 1~⬛⬛;

^ j

as it ought ; and in like manner when the cor- responding co-efficients have different signs, if + 1 be put for r, the terms will destroy each other.

*Hence, every binomial equation of an odd de- gree is advisable, either by x 4. 1 or * ⬛⬛⬛ 1 ; and the equation may always, therefore, be depressed to the next lower degree, or a binomial equation of an odd degree may be transformed into one of an even degree.*

We shall, in the next place, shew that a recur- ring equation of an even degree may always be reduced to one of half that degree.

Let the equation be

or 1 + vy + oy + . . V~+ p”- +/ = 0, an equation the same as the given one, having y ; instead of*; hence the value of x in an equa- tion is equal to that of y in the other; and what- ever be the value of x, the value of q is -from*

the manner in which the second equation is generated.

A recurring equation of an odd degree has al- ways ††† 1 for a root, when the equal co-efficients have the same sign, and + 1 when the equal co-efficients have different signs.

For, in the recurring equation.

Divide by xn, and we have xn + 2 . ††

Or

*/ *

xn + n + P (††-! + _L)*

\ xn~1 /

Take n successively ††† 1, 2, 3, &c. and let x + -

†††2, then the tranformed equation become x + -

+ P = 0, or 2 + p = 0,

+ + (x +

-) + Q + zs ††† 2 + PZ + Q = 0, z3 ††† 3z +

x J,

z” ††† 2 + QJZ + R ††† 0, 8cc. a recurring equation of half the degree of the given one.

On binomial equations.

Binomial equations are of the form y” †† a††~ 0, or if ax ††† y, of the form anxn †† a†† †††

0, or xn ►► 1 ►►► 0.

The following are a few of the obvious pro- perties of these equations.

1. If n be an even number, the roots of the equation x” + 1 are all imaginary, for ‘

2. If n be odd, xn + 1 = 0 has only one root, for \j ►►► 1 ►►► ►►► 1 when n is odd

3. If n be even, xn ►►► 1 ►►► 0 has only two real roots, and therefore n ►►► 1 imaginary one; for

4. If n be odd xn ►►► 1 has only one real root. and therefore n ►►► 1 imaginary one, for ‘

PART III.

_ P _ Q3T ►► Qx2►►pr►►;l ►►► 0, OF THE APPLICATION OF ALGEBRA TO GEOMETRY. any co- efficient, as p of an odd power is also a

co -efficient of an even power; therefore, if the CHAP I orrespondmg co-efficients have the same sign,

A ~l s3►► for *> ^ termswi11 destroy each A line, whether known or unknown, may be*

*aer, and the equation will become win al tn T. ►►►

This is particularly the case in those proposi- tions, which may be geometrically deduced with- out any construction of the squares, rectangles,

mi xi. j. ►► i ►►► ►►► T. **"►►►►►*"') * <-v- 10.11 uica►►*

These are the most simple expressions of geo- &c. to which they refer. From the first propo-

metncal magnitudes; and any other, which has sition of the second book of Euclid, the nine fol-

a known proportion to them, may in like man- lowing maybe easily derived in this manner and

ner be expressed algebraically. Conversely, the they may be considered as proper examples of

geometrical magnitudes, represented by such al- this most obvious application of algebra to geo-

gebraical quantities, may be found ; only the algebraical dimensions above the third, not hav-

metry.

If certain positions are either supposed or to be

ing any corresponding geometrical dimensions, inserted in a theorem, we must find, according to must be expressed by proportionals. Thus, if the preceding observations, the connection be- the algebraical equation a4 + 64 zr c4 ►►► d, is to tween these positions and such relations of mag- be expressed geometrically, a, 6, c, and d, being nitude, as can be expressed and reasoned upon supposed to represent straight lines ; let a. : b : e by algebra. The algebraical demonstration, of*

the 12th and 13th propositions of the second a -f g ; then let book of Euclid, require only the 47th of the I. o : /, also, l.et c : El. The 53d and 36th of the third book require only the 3. III. El. and 47 I. El,

From a few simple geometrical principles, a number of conclusions, with regard to figures, may be deduced by algebra ; and to this in a great measure is owing the extensive use of this science in geometry. If other more remote geometrical principles are occasionally intro- duced, the algebraical calculations may be much abridged. The same is to be observed in the so- lution of problems ; but such in general are less obvious, and more properly belong to the strict geometrical method.

if'.g, in continued proportion, then a1 : 64 ►► : g, and a4 : a4 + b ; a : c : h : k : I, and ►►4 :*

d : m : n : p, and c4 : d4 ; : c : p or c : c* ►►► d4 '.'. c : c ►►► p. By combining the two former proportions, c4 : a4 + b4 : I : a + g, and com- bining the latter with this last found, c4 ►►► d4 :*

c. ►►► p x i = c

c ►►► p x I : c x a -f g; therefore X a + g, and c : c ►►► p '.'. I :

If any known line is assumed as 1, as its powers do not appear, the terms of an equation, including any of them, may be of very different dimensions ; and before it can be properly ex- pressed by geometrical magnitudes, the deficient dimensions must be supplied by powers of the 1 . When an equation has been derived from geometrical relations, the line denoting 1 is known ; and when an assumed equation is to be expressed by the relations of geometrical mag- nitudes, the 1 is to be assumed.

In this manner may any single power be ex- pressed by a line. If it is x5, then to 1, x find four quantities in continued proportion : so that 1 : x : m : n : p : q, then 1 q '. '. 1s, or q = x5 ►►► and so of others.

The opposite position of straight lines may be , expressed by the signs j and ►►► .

Thus, let a point A be given in the line AP,

any segment AP taken to the right hand being considered as a positive, a segment Ap to the left is properly represented by a negative quantity. If a and b represent two lines, and if, upon the line AB from the point A, AP be taken towards the right equal to a, it may be expressed by a; then PM taken to the left and equal to b, will be properly represented by ††† b, for AM is equal to u ††† b. If a = b, then M will fall upon A, and a ††† b =0. By the same notation, if b is greater than* a, M will fall to the left of A ; and in this case, if 2a = 6, and if pp be taken equal to b, then a ††† 6 = ††† a will represent Ap, which is equal to a, and situated to the left of A.

II. The Demonstration of Theorems. All propositions in which the proportion of

III. Of the Solution of Problem.

Upon the same principles are geometrical pro- blems to be resolved. The figure appropriate to the solution of the problem is supposed to be constructed, and the known and unknown quan- tities are denoted by appropriate symbols. Thus from the known geometrical relations between the parts known, and the one unknown, the necessary equations are formed ; and by their respective revolution the problem is solved. It may first be remarked, as was done in the case of theorems, that in those problems which relate to the division of the line and the proportions of its parts, the expression of the quantities, and the stating their relations by equations, are so easy as not to require any particular directions. But when various positions of geometrical figures and their properties are introduced, the solution re- quires more attention and skill. No general rules can be given on this subject, but the fol- lowing observations may be of use.

1 . The construction of the problem being sup- posed, it is often farther necessary to produce some

of the lines till they meet ; to draw new lines joining remarkable points ; to draw lines from such points perpendicular or parallel to other lines, and to perform such other operations as seem conducive to the finding of equations ; and for this purpose, those specially are to be employed which divide the figure into triangles that are given, right-angled or similar.

2. It is often convenient to denote by letters, not the quantities particularly sought, but some

*magnitudes only are employed, and all proposi- others from which they can easily be deduced tions expressing the relations of the segments of The same may be observed of given quantities. * straight line, of their squares, rectangles, cubes. :>. There must be as many independent equa-*

tions as there are unknown quantities assumed in the investigation, and from these a final equa- tion may be inferred by the rules of Part I.

If the final equation from the problem be re- solved, the roots may often be exhibited geome- trically ; but the geometrical construction of pro- blems may be effected aho without resolving the equation, and even without deducing a final equation.

If the final equation is simple or quadratic, the roots being obtained by the common rules may be geometrically exhibited by the finding of proportionals, and the addition or subtraction of squares.

By inserting numbers for the known quanti- ties, a numeral expression of the quantities sought will be obtained by resolving the equation. But in order to determine some particulars of the problem, besides finding the unknown quantities of the equation, it may be farther necessary to make a simple

construction ; or, if it is required that every thing be expressed in numbers, to substitute a new calculation in place of that construction.

PROBLEM I.

To divide a given straight line AB into two parts, so that the rectangle contained by the whole line, and one of the parts may be equal to the square of the other part .

c A c B

Let c be the point of division, and let AB ††† a, AC zz x, and then CB ††† a ††† x. From the problem a2 ††† ax rr a? ; and this equation being resolved, gives x ~ +

Let EC ††† a, and AD ††† p, both of which are given be- cause the triangle is given. Let AK be assumed as the unknown quantity, because from it the square can easily be constructed ; and let it be called x. Then (KD Z3 EG †††) EF ††† p ††† x.

On account of the parallels EF, BC, AD ; AK ; EF ; that is p : a ' '. x : p ††† x, and px ††† ax, which equation being resolved _ p2

- *††† -†††* _ _*

*BC ; **

p _ gives*

*/ a**

The quantity V^ a+T's the hypotheneuse*

of a right angled triangle, of which the two sides

Therefore x or AK is a third proportional to p f. a and p, and the point K being found, the con' struction of the square is sufficiently obvious.

PROBLEM III.

To describe a circle through two given points A, B,

that shall touch a line CD given inposition.

Join at B, and A,

through o, the as- sumed centre of the required circle, draw FE perpendi- cular to AB, which it will bisect in E.

Join OB, and draw

EII,OG perpendicu- lar to CD;OG will fall on the point of con tat a

Now, as A, E, B, H, and F are given points, put EB ••• a, EF ~ b, EH ~ c, and EO, the required radius rz: x.

Then OF ••• b ••• x, and because OEB is a right-angled triangle AB ••• EO2 + EB2, or OB zz */xs + a3 ; and by similar triangles FE : EII : :*

FO : EG ; or OB ; or b : c : : b ••• x : OB zr /

are a and•••, and is therefore easily found ••••••• being

At 2>

taken from this line, gives x ~ AC, which is the proper solution. But if a line AC be taken on the opposite side of .A, and equal to the above-mentioned hypotheneuse, together with••• it will

m

represent the negative root-\/ a2 + - -, and

4 At

will give another solution; for in this case also AB x BC ~ AC". But c is without the line AB ; and therefore, if it is not considered as making a division of AB, this negative root is rejected.

PROBLEM II.

In a given triangle ABC to inscribe a square.

Suppose it be done, and let it be EFHG. From

X bx. Hence if these two values of OB be equated, we have, >^x2 + a =. ^ . b ††† x; or by*

squaring each side of the equation

ja (.2 xt (26c2,z zz b (c2 os)>*

ni- T" I f ††† ^

*ur * p TT 5*- ††††††† †† o o > Ir ††† c b ††† fr*

a quadratic equation, which, resolved the usual way, gives

_ b^/c + ^^a*

*T? ††† be**

b'2 ††† c2

CHAP. II. OF THE DEFINITION OF LINES BY EQUATIONS.

1 . When curve lines are considered algebrai- cally, they are supposed to be produced by the extremity of one straight line, as PM moving in a given position, which is called the base.

2. The straight line PM, moving alon the

A let AD be perpendicular on the base BC, meet- other, is called an inordinate, and is usually

mg EP

denoted by y.

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A

0

In like manner is a punctum triplex, &c. to be

determined.

Let the equation be ay ××× ry* = x3 4. bx**

*Therefore, v**

*y

d y – +

″ – –

= ►►vs’JdL+it.

3. The segment of the base AP between a given point in A, and an ordinate PM, is called an absciss, with respect to that ordinate, and is denoted by x. The ordinate and absciss to- gether are called co-ordinates.

4. If the relation of the variable absciss and ordinate AP and PM be expressed by an equation, which besides x and y contains only known quan- tities, the curve MO, described by the motion of the ordinate, is called the locus of that equation.

5. If the equation is finite, the curve is called algebraical. N. B. The terms geometrical and algebraical, as applied to curve lines, are used in different senses by different writers ; there are several other classes of curves, besides what are here called algebraical, which can be treated of mathematically, and even by means of algebra.

6. The dimensions of such equations are es- timated from the highest sum of the exponents of x and?/ in any term. Thus the terms x*, x3y, jfy2, ?y3, y4, are all of the same dimensions.

7. Curve lines are divided into orders, from the dimensions of their equations, when freed from fractions and surds.

I. The determination ofthefgure of a curve from its equation.

The general figure of the curve may be found by substituting successively particular values of x the absciss, and finding, by the resolution of these equations, the corresponding values of y the ordinate, and of consequence to so many points of

the curve.

1. If in any case a value of y vanishes, then the curve meets the base in a point determined by the corresponding value of x. Hence by putting y ??? 0, the roots of the equation, which in that situation are values of x, will give the distances on the base from the point assumed as the beginning of x, at which the curve meets it.

2. If at a particular value of x, y becomes infinite, the curve has an infinite arc, and the ordinate at that point becomes an asymptote.

3. If when x becomes infinite, y vanishes, the base is an asymptote.

4. If any values of y become impossible, then so many intersections of the ordinate and curve vanish. If at any value of x, all the values of y become impossible, the ordinate does not there meet the curve.

5. If two values of y become equal, and have the same sign, the ordinate in that situation either touches the curve, or passes through an intersection of two of its branches, which is called a punctum duplex, or through an oval become infinitely little, called a punctum conjugatum.

Let AB be assumed as a base on which the ab- scisses are to be taken from A, and the ordinates perpendicular to it.

Since the two values of y are equal, but hav??. opposite signs; PM and PTO, which represent them, must be taken equal to each other on op- posite sides of AB; and it is plain that the parts of the curve on the two sides of AB must be every way similar and equal.

*If * is made equal to a, y = x\r ,*

which is an algebraical expression for infinity , therefore if AC is taken equal to a, the perpendicular CD will become an asymptote to the curve,

which will have two infinite arcs. If x is greater than a, the quantity under the radical sign be- comes negative, and the values of y are impos- sible ; that is, no part of the curve lies beyond

CD.

*Both branches of the curve pass through A, since y ~ 0, when * = o. Let x be negative,*

and = ⬚⬚⬚+⬚⬚⬚ x\/ ; the values of y will be

a + a

possible, if is not greater than b; but if x = b, then y = 0, and if x is greater than b ; the values of y become impossible ; that is, if the absciss AP be taken to the left of A, and less than b, there will be two real equal values of y, PM, pm on the opposite sides as before ; if AE be taken equal to b, the curve will pass through E, and no part of it is beyond E.*

The portion between A and E is called a nodus.

If y be put = 0, then the values of x are 0, 0, ⬚⬚⬚ b ; that is, the curve passes twice through A, or A is a punctum duplex, and it passes also through E as before.

By the same methods, the locus of any other equation is to be traced : thus, by varying the former equation, the figure of its locus will be varied. If b = 0, then the points A and E coin- cide, the nodus vanishes, and A is called a cuspis.

If b is negative, then E is to the right of A, which will now be a punctum conjugatum. The rest of the curve will be between E and c, and CD becomes an asymptote.

II. General properties of curves from their equations.

A straight lino may meet a curve in as many points as there are units in the dimensions of its equation ; for so many roots may that equation have. An asymptote may cut a curve line in as many points, excepting two, as it has dimensions, and no more. The same may be observed of the tangent.

Impossibla roots enter an equation by pairs ; therefore the intersection of the ordinate and curve must vanish by pairs.

The curves, of which the number expressing the order is odd, must have at least two infinite arcs ; for the absciss may be so assumed, that for every value of it, either positive or negative, there must be at least one value of_y, &c.

Scholium.

If the relation between the ordinate and ab- sciss be fixed, but not expressible by a finite equation, the curve is called mechanical or transcendental. This class is also sometimes defined by equations, by supposing either x or y in a finite equation to be a curve line, of which the relation to a straight line cannot be expressed in finite terms.

If the variable qualities x or y enter the ex- ponents of any term of an equation, the locus of that equation is called an exponential curve.

We shall now conclude this article with two or three problems to show the application of al- gebra to the different departments of science.

PROB. I. A pendulum vibrates as often in a minute as it is inches long. What is its length ?

Let the required length be represented by x ; then the length of the seconds pendulum being 39$, and the number of vibrations made in a given time being inversely as the square roots of the lengths, we have

/7 : \X39~J : : 60 : T, or x**/x = 60*^/39$, or .1^140850; whence xlj** *140850 zz52‘02C82.*

PROB. II. Sxippose a wheel A turns another wheel B, on whose axis is another wheel c which turns a wheel D. It is required to find the least number of teeth in each of these four wheels, so that the wheels A and D may make equal revolu- tions ; the wheel D being supposed to roll round the wheel c in 365 turns of the wheel A ?

Let a, b, c, d, represent the four wheels, the letters denoting also the number of teeth in the

wheels. Then - are the turns b or c has for c

one of a, and - the turns c

d has for one cf c ; con-

. bd sequently ††† are the turns

J ac

d makes for one of ††, viiich would be 1, if the wlieel d were stationary, Because a and d are to re- volve in equal times. But

††† are the turns which d gains or loses in 365 turns of the wheel a, according as it is carried,

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the contrary or the same way as the motion of

c c

*the wheel c, and 365 : : : 1 : . . ., the par**

(t oOOu-

of a turn which d gains or loses in one turn of a Hence we have this equation

††† †††+- ††† zz 1 or—+- †††

Here 365 is divisible into two fractions, 73 and 5, take c.'.zz73, and, and multiply the equation by

5, and it becomes j zz ††† ††^††† . To find the

least value of d which will make

teger, multiply it by 29, J65d ►► 29

73

5d+ \

73

it

and it becomes which must also be a whole number,

. 146d 145d-l-29 d+29 and consequently! -^ ^p►►► = ►►►

must be a whole number. Let n be that number, then d zz 73w ►► 29. If d roll round c the same way that c revolves, the lower sign is used ; but if the contrary way, the upper sign.

It is evident that the least value of d will be obtained by taking n=.c, when d►►► 29, 5a-=-fczz2, or a : b ►►► : : 2 : 5, the ratio of a to b ; whence a =. 10, b ►►► 25, c ►►► 73, and d zz 29. If the upper sign be used, the least value of d will be obtained by taking a zz 1, in which case azzlS, b ►►► 23, c zz 73, and d ►►► 46.

PROB. How high in a given latitude is it pos- sible to erect a building?

When the centrifugal force arising from the earth's rotation exceeds the force of gravity at the. same point, a body situ- ated in that place would be thrown off from the earth ; hence the height of the point at which the focus of gravity and centrifugal force are equal, will be the answer to this question. Now the centrifugal force at the surface of the earth at the equator is known to be sJgth part of the force of gravity, and the force of gravity is inversely as the square of the distance from the centre, and the centrifugal force di-

rectly as the distance from the axis of rotation. In the annexed figure let AB represent the building, N the north, and s the south pole ; E and Q the points where the meridian cuts the equator, BF and AD perpendiculars on EQ and ►►s. Put AB zz x, CA zz r, and AD zz c ; then BC zz r + x, and CA : AD :: CB : CF; or r : c : r + x zz c . r + x i r zz CF. Now if s be considered as the centrifugal force at Q, and 289 the force of gravity at Q or A, then CQ : CF : : 1 : r~+lc .c –^r7, the centrifugal force at F or B in the direction CF ; and CB : CF : : r + x . c J r : r~+~ar . c2 ►►► r, the centrifugal force at B in the direction CB.' And CB2 : CA* : : 289 : 289 .*

rz : r –f a:2, the force of gravity at B. Hence

*r~+~x . c2 7 r ►►► 289r2 = r + x3, or r + *? = 289r> f c2, whence x zz /►►►(►►►$/ 289 r c2 ►►► 1). If the latitude be 55►►, and the radius of the earth zz 3970 miles, then &c.*

ALGIERS.

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ALGEDO, in surgery, from aXyoc, the run- ning of a gonorrhoea stopping suddenly after it appears When it thus stops, a pain reaches to the anus, or to the testes, without their being swelled ; and sometimes to the bladder ; in which case, there is an urging to discharge the urine, which is with difficulty passed ; calomel re- peated so as to purge, brings back the running, and then all difficulty from this symptom ceases.

ALGEMA, aXyij/ia, in medicine, the disease whence the pain proceeds, in which sense the term is frequently used by Hippocrates.

ALGEMISI, or ALGEMESEN, a small town, of Spain, six leagues south of Valencia, and five leagues north-north-west of Gandia. It is si- tuated not far from the river Xucar, near which, grow great quantities of the pita, (as it is called). or American aloes, Agave, of which the people make cordage, and the

Catalans spin it to a suffi- cient fineness for making lace .

ALGENEB, or ALGENIB, in astronomy, the name of two fixed stars of the second magnitude ; one marked y in the wing of Pegasus, the other a on the right side of Perseus.

ALGERINES, the inhabitants of Algiers. See 'ALGIERS.

ALGEZIRA, or ALGEZIRAS, an ancient mari- time town of Andalusia, in Spain, which has a sea-port, on the coast of the Straits of Gibraltar. The harbour is formed by two islands, which gave rise to the name Algezira, signifying in the Arabic tongue, an island. It was formerly called Old Gibraltar, and lies seven miles west from the town of that name. By this city the Moors entered Spain in 71 3 ; and it was not recovered from them till 1344, after a very long siege, re- markable for being the first in which cannon

were made use of. Algezira is agreeably situated close by the sea side, on a gentle slope, not far from Jarifa. It formerly consisted of two towns of considerable importance, but is now falling into decay. An aqueduct of hewn stone, three- fourths of a mile in length, supplies the city with fresh water. It was near this place that Sir James Saumarez, obtained a victory over the French and Spanish fleet, on the llth of July,

1801.

ALGEZUR, a small town of Portugal, in Algarva, whose old castle makes a part in the royal arms of Portugal.

ALGHER, or ALGERI, a town in Sardinia, and a bishop's see, upon the north-west coast of the island, between Sasseri and Bossa, seventy- nine miles north-west of Cagliari. Though not large, it is well peopled, and has a commodious port. The coral obtained on this coast is in the highest esteem of any in the Mediterranean.

ALGIABARII, a Mahommedan sect of predes- tinarians, who attribute all the actions of men, good or evil, to the agency or influence of God. The Algiabarii stand opposed to the Alkadarii. The justice of God in punishing the evil he has caused, they resolve wholly into his absolute do- minion over his creatures.

ALGIDUM, from gelidus, cold or freezing, in ancient geography, a town of Latium, supposed to be so called on account of the cold. It be- longed to the ^.qui, and was situated between Proeneste" and Alba. On the top of a high mountain of the same name, was situated a cele- brated temple of Diana.

ALGITEN, a small town of Lombardy, ten miles north of Milan, and situated on the Lam- bro.

ALGIERS.

ALGIERS, a kingdom of Africa, now one of the states of Barbary. According to the latest and best computations, it extends 460 miles in length, from east to west, along the Barbary coast, but is very unequal in breadth, some places being scarce forty miles broad, and others upwards of one hundred. It lies between long. 0 . 16'. and 9►►. 16'. west, and extends from lat. 36►►. 55'. to 44►►. 50'. north. It is bounded on the north by the Mediterranean ; on the east by the river Zaine, the ancient Tusca, which divides it from Tunis ; on the west by the Mil- wooia, and the mountains of Trava, which sepa- rate it from Morocco and Tafilet ; and on the south by mount Atlas, and the Zaara, or Numi- dian desert.

DIVISIONS. ►►► This country comprehends the greaterpart of the Numidia and Mauritania Caesa- riensis of the ancients ; so called from the city of Caesarea, built here by Juba the younger. The present name is derived from the situation of the metropolis, called by the Turks Algezair, Aljezier in Arabic, Al-jezirah, the island, alluding to an island which was anciently opposite the city, but is now joined to it by a pier. The modem divisions are Tlemsan or Tremecen, Mascara,

Titterie, Algiers Proper and Constantia ; although Dr. Shaw makes a different arrangement, and unites the provinces of Algiers Proper and Tit- terie into one district.

Of the above divisions Constantia is the most important, lying along the eastern confines, and once in the possession of Tunis. Of the chief towns of this district, Constantia contains a popu- lation of at least 100,000 ; Bona is strongly for- tified, and has an excellent harbour ; Bujeya has a larger port than Algiers, though not so safe for shipping; Gigeri, Zamoura, Tebef, Necanz, and Stessa are all places of considerable eminence. Cuco and Biscari are regions tributary to this province ; but can scarcely be said to have any settled administration of government ; and in this respect correspond with Labez, a barren rocky region, frequently described as a portion of this province. Algiers Proper contains the capital. Titterie, extending towards the south presents a surface irregularly broken with moun- tains, although some fertile plains are stretched around in different directions ; and the towns of Bieeda and Medea contribute much to its im- provement. I i Mascara or Tlemsan, the western district, are the towns of Tlemsan, Mascara,

O:-an, Tennis, Mustygannim, Sher-shell, and the port of Mars-al-Quibber ; of which Oran, ori- ginally fortified by the Spaniards, and Sher-shell, containing monuments and antique remains, are the most important

RIVERS. ??? The chief rivers are the Milwooia, an- ciently called Malva, the Yesser orZiz, which di- vides the province of Mascara ; the Zelif or Shellif ; the Mina, the Chylematis of Ptolemy ; the Belef, the Carthena of the ancients ; the Hued-al-quiver or Zinganir, supposed to be the ancient Nalabata or Nasaba, and the Suf-Gemar, the Ampsaga of Ptolemy; the Haregol, probably the Signa of Ptolemy, flowing

from the Great Atlas, through the desert of Anguid, till it falls into the Medi- terranean Sea near Oran.

MOUNTAINS. The chief mountains are the Atlas, various branches of which stretch into these pro- vinces from the southern regions, under the names of Lowat and Arnnier ; the mountains of Trara and Jurjura, extending from the interior toward Algiers ; those of Felizia, Gibbell Auress, An- well, the Mons Auracia of the ancients. Gene- rally speaking, the Great Atlas bounds the states from east to west, and the mountains of Trara from the west towards the kingdom of Morocco. CLIMATE, SOIL, &c. ††† The climate of Algiers, except when the hot and violent winds blow from the Great Desert, is in most places so moderate, that they enjoy a constant verdure ; the leaves of the trees being neither parched up by heat in sum- mer, nor nipped by the winter's cold. They begin to bud in February ; in April the fruit appears in its full bigness, and is commonly ripe in May. The melons have an exquisite taste, and the stems of the vines are so large, that a man can hardly grasp them with his arms ; and the bunches of grapes are 1†† feet long. Scarcely a cloud blots the sky in the summer months ; and in September and October the rains begin to fall, wheat and beans are then sown ; the latter rains fall in April, to which succeeds the harvest in May or June. I. ii dressing their corn the Algerines still retain two remarkable customs of the east, viz. treading out the corn by means of horses or cattle ; and throwing it up with a shovel or fan against the wind to winnow it. The soil of Algiers is ex- cessively various ; some places being very fertile in corn, fruits, Sec. and others extremely hot, dry, and barren, on which account they are generally suffered to lie uncultivated by the inhabitants, who are very negligent. These barren places, es- pecially such as lie on the southern side, and are at a great distance from the sea, harbour vast numbers of wild creatures, as lions, tigers, buf- faloes, wild boars, stags, porcupines, monkies, ostriches, &c.

ANIMALS. ††† The horses of this country are very

superior, though the breeding of them isnotattend- ed to as it is in Arabia. They are extremely active, full of fire, command an interesting appearance, and aie exercised to gallop with the reins thrown upon the neck ; and so expert are the riders, that they can stop them at full speed. African horses are seldom seen in any other pace than a gallop ; and are, from their impetuosity, admi- rably adapted for cavalry charges. The kumrah, a breed from the ass and the cow ; the ass ; the snute ; the dromedary and camel, are the beasts of

burden. The tame cattle are black and slender < but numerous herds run wild in the southern and eastern parts of the country, distinguished by the inflexion of their horns. Of sl>eep there are two species : that near the desert has an excellent appearance, and reaches almost to the height of a Shetland pony; but is not remarkable for either its flesh or its wool. A peculiar species of the goat is found in the hilly regions, with tufts of hair on the knee and neck joints. Of wild animals, besides those already mentioned, are leopards, hyaenas, panthers, wolves, and a species of the jackal, which pours down into the villages in terrific flocks, and is so furious as to tear up the dead bodies out of the graves. .

BIRDS. ••• Of birds they have a great variety. Quails are seen at the fall of the year crossing the Mediterranean in large flocks like clouds. Starlings, storks, pigeons, and most of the domestic fowls and common birds of Europe are in great plenty. There is a red lark not seen in Italy, which frequently excites the attention of travellers. Of those birds which are less com- mon, may be enumerated, the karabur, or ash- coloured falcon ; the saheerag, a species of mag- pie ; the graab, or large crow of the desert, with legs and beak red like the falcon ; the houbarry, whose gall is said to be medicinal; and the capsa, a large sparrow with a shining breast and ruddy coat like the lark, who, in melody, is said far to surpass the European nightingale. Os- triches mostly inhabit the desert of Anguid, where they are seen in large flocks, and appear at a distance like troops of robbers. They

shed their feathers in the winter, which are collected by the natives to supply the European markets. Assisted by the wind, this bird is capable of out- running the fleetest horse ; but if driven against the wind, is easily taken, the flapping of her wings meeting with less resistance from the sur- rounding air.

REPTILES AND INSECTS. ••• The scorpion is, amongst reptiles, the most formidable of those that are common to this region. It is of different colours, and inflicts a virulent wound, of which, though not perhaps in itself dangerous, many persons die annually. Vipers and numerous other serpents are common, and the great boa constrictor lies in the southern provinces. The locusts are a most dreadful scourge to this, and to contiguous kingdoms, from which neither fires,, nor trenches, nor all the art and ingenuity of man have, as yet, been able to deliver them. In the months of April and May, these insect armies appear from the south, and spreading themselves over the valleys, begin to deposit their eggs. The young ones appear in June, and ascend in such vast multitudes, as to cover many acres of ground to the depth of several inches. Moving slowly on in quest of food, they destroy every vestige of vegetation, and leave nothing behind them but misery and distress, lor the curious natural history of this insect, see the article. They have also a terrible kind of fly, which is poisonous to cattle, and particularly tormenting to the horse,. A swarm of these insects settling upon a horse, have been known to sting him till he falls through loss of blood.

ANTIQUITIES. ••• The antiquities of thi.

dom are considerable, enriched with ruins, which have hitherto delighted and astonished the world. The mountains of Auress, to the south of Con- stantina, are a knot of eminences running over one

another, with several plains and valleys be-

top, and spend their evenings in each others so-
ciety. The common buildings are of brick and stone,
with four chimneys rising in the four cor- ners of
the terrace, and those of the more opu- lent class
are adorned with marble columns and

tween them. They are considered the garden of
ceilings of superior workmanship. The baths

the kingdom, and present a circuit of 130 miles, and
mosques are numerous, and of the former

covered with numerous rums, of which those of some
are set apart for the use of females. With-

L'Erba, called by the ancients Lambese, are the out
the city are numerous sepulchres and cha-

most remarkable. The magnificent remains of pels
dedicated to marabouts or reputed saints,

several city gates break upon the sight of the
traveller on his approach to this interesting spot.
These were four in number, according to the Arabs,
from each of which, in case of emergency, the city
could rout 40,000 armed mtn. The frontispiece of a
beautiful temple of the Ionic

which the wcynen yet visit every Friday. The
barracks for the Turkish soldiery are spacious and
handsome. In the middle of the last century this
town was surrounded with a high wall, twelve feet
thick, flanked with square towers and a ^eP ditch.
These works have, however, been

order, and the remains of an amphitheatre, in-
suffered to decay, a naval rather than a military

eluding the seats and upper part almost entire. An
elegant mausoleum, erected in the form of a dome,
supported by Corinthian columns, with a

defence, being die chief dependence of the Al-
gerines. The mole of the harbour forms a spacious

semicircle, a basin 130 fathoms long

supposed triumval arch, and several other emi- and eighty wide, affording shelter and protection

nent antiquities, throw a light on the former mag- nificence of this ancient city. At Mednascham is a fabric supposed to be the tomb of Syphax and the Numidian princes. Constantina, the

for ships of the largest burden. It is surrounded by a light-house, and overlooked by a castle, founded on the solid rock. Powerful batteries protect the entrance of the harbour ; and along the

ancient Corta, capital of Numidia, forms one of coast are numerous other batteries, which, since

the most interesting parts of the kingdom ; and though of inferior extent to the former city, is perhaps second only to Algiers. For a detail, see CONSTANTINA. Some remains of Sigma, at Nedroma, in Constantina province, and of the Pontus Divini of Strabo, are still standing ; and at Shershel are the supposed remains of Julia Casarea, consisting of wide cisterns, mosaics, broken columns, and curious sites of buildings, amongst which are found numerous medals and other monuments of antiquity.

1'he city of Algiers, opposite Minorca, and 300 miles west of Tunis, is supposed to be the ancient Iconium, and forms the present capital of the kingdom. It rises, from the ac clivity of a hill, in the imposing form of an amphitheatre, and is a mile and a half in circuit, containing nearly 30,000 inhabitants. Its antiqui- ties are not very important, and of modern build- ings the dey's palace, and the seraglio of his favourite wife are the largest, and are adorned with marble pillars of curious workmanship. There are ten large mosques and fifty of inferior dimensions ; the finest of these erections is sixty feet in length, by forty in width, three stories in height, and supported by beautiful pillars. The walls are composed of white stone from the ruins of Ouran, the columns of white

marble imported from Genoa. From the scarcity of water in the city, magnificent aqueducts have been erected, which convey water from no fewer than 150

the British expedition, have been put in a better posture of defence. The inhabitants are chiefly Mahommedans, Jews, and Christians. The Turk- ish soldiers are great tyrants; for they will go to the farm houses in the country for twenty days together, living at free quarters, and making use of every thing, not excepting the women. The Algerines eat, as in Turkey, sitting cross-legged round a table about four inches high, and using neither knives nor forks; before they begin, every one says, ' Be isme Allah,' ' In the name of God.' When they have done, a slave pours water on all their hands as they sit, and then they wash their mouths. Their drink is water, sherbet, and coffee. Wine, though prohibited by Mahomet, is drank immoderately by some. Algiers, though for several ages it has braved some of the greatest powers of Christendom, could make but a faint defence against a regular siege ; and it is said that three English fifty gun ships might batter it about the ears of its inhabitants from the harbour. The Spaniards attacked it in the year 1775, both by land and sea, but were re- pulsed with great loss, though they had near 20,000 foot, 2000 horse, and 47 royal ships of different rates, and 346 transports. In 1783 and 1784, they also renewed their attacks by sea to destroy the city and galleys ; but were at length forced to retire without effecting its cap- ture.

The manufactures, consisting chiefly of sashes,

fountains, communicating pipes branching out in handkerchiefs, and carpets, are inferior to those

ill directions towards the different houses. The of Turkey. The trade, till within the last twenty

town consists, for the most part, of one principal years, was entirely in the hands of the French,

street, in the direction of east and west, inter-

who kept establishments at Bona, La Cala, and

II Col, partly with a view to the coral fisheries in these quarters. In consequence of the

sected by a few others of inferior importance. The

streets generally are extremely irregular and in- . . ., ###

convenient. So narrow are they that two per- lution, however, France lost this branch of her

sons can scarcely pass abreast ; and when a camel commerce ; and Great Bntain, in 1806, stipulated

passes, one must stand up close to the wall to with the Dey of Algiers for the possession ot the

avoid being crushed by him. The houses which three ports above named. The sum ot 50,00j

communicate with each other ar## flat roofed and dollars has been regularly paid for them, altl

lofty, forming a promenade from one end of the little advantage has been, at present, derived.

town to the other. The inhabitants visit on the From its situation, it affords an excellent medium

for conveying British goods into the interior of Africa. It is said that the corsairs or pirates of Algiers form a small republic, of which the rais or captain is the supreme bashaw; who, with the officers under him, form a kind of douwan, in which every matter relating to the vessel is de- cided. These corsairs are chiefly instrumental in importing whatever commodities are brought into the kingdom by way of merchandize or prizes, as gold and silver stuffs, damasks, cloths, spices, tin, iron, plated brass, lead, quicksilver, cordage, sail-cloth,

bullets, cochineal, linen, tar- tar, alum, rice, sugar, soap, cotton, copperas, aloes, Brazil wood, logwood, vermilion. Few commodities, at present, are exported from Al- giers. Ostrich feathers, copper, rugs, silk sashes, embroidered handkerchiefs, dates, &c. are the most remarkable.

The inland inhabitants, distinguished by the name of Berebers, are the proper natives of the country, supposed to have been descended from the ancient Sabeans, who plundered the patriarch Job ; and still retaining their original character of robbers and pirates, removed from Arabia Felix and settled at Algiers.

Others believe them to be descended from the Canaanites, who were driven out of Palestine by Joshua. They are dispersed all over Barbary, and divided into a multitude of tribes under their respective chiefs : most of them inhabit the moun- tainous parts ; some range from place to place and live in tents or portable huts ; others in scattered villages : in which situation they have generally kept from intermixing with other na- tions. The Berebers are reckoned the richest of all the Algerines, go better clothed, and carry on a much larger traffic in cattle, hides, wax, honey, iron, and other commodities. They have also some artificers in iron, and some manufacturers in the weaving branch. ††† The name, Bereber, is supposed to have been originally given them on account of their being first settled in some desert place. Upon their increasing in process of time they divided themselves into five tribes, probably on account of religious differences, called Zinhagians, Muscamedins, Zeneti, Hoares, and Gomeres ; and these having produced 600 families, subdivided themselves into a great num- ber of petty tribes. ††† To these we may add the Zwowahs, by European authors called Azuagues, or Assagues, who are likewise dispersed over the greater part of Barbary and Numidia. Great num- bers of these inhabit the mountainous parts of Cuco, Labez, &c. leading a wandering pastoral life. But the most numerous inhabitants have long been Moors and Arabians. The

former are very stout and warlike, and skilful horsemen ; but so addicted to robbing, that one cannot safely travel along the country at a distance from the towns without a guard, or at least a marabout or saint for a safeguard. The inhabitants, in general, have a pretty fair complexion ; they are robust and well proportioned. People of distinction wear their beards ; they have rich clothes made of silk, embroidered with flowers of gold, and turbans enriched with jewels. The Turks, who compose the military force, have great privileges, pay no taxes, are never publicly punished, and rarely in private. The lowest soldier domineers

over the most distinguished Moors at pleasure. If he finds them better mounted than himself, he exchanges horses without ceremony The Turks alone have the privilege of carrying fire-arms. Some good qualities, however, distinguish them, in spite of this excess of despotism. They never game for money, nor even for trifles ; and they never profane the name of the deity. They soon forget their private quarrels ; and, after the first paroxysm of resentment is over, it is infamy for a Turk to keep in remembrance the injuries he has received. In this respect certainly they are less barbarous than some other nations that boast of their civilization.

The government of Algiers, although it has been styled a republic, is neither republican nor despotic, but a sort of oligarchy, or at least approximating to that model. According to some writers it is difficult to ascertain what it is, whether a vile oligarchy, an aristocratical commonwealth, or a lax, tumultuous, ill-regulated despotism. Almost every dey that succeeds to the throne, paves the way by the murder of both his predecessor and rival competitors, and is himself at last strangled or otherwise despatched at the pleasure of a more powerful rival. To the imperfection of its government, may be in a great measure attributed the many miseries of this un- happy kingdom.

The population consists chiefly of Moors and Turks,

who though not more than 7000 in num- ber, keep the government in their own hands exclusively. The most enlightened of the peo- ple are the Cologlis, or the children of the Turks by the Moorish women. The Moors are divided into two kinds, the Kabylas or mountain tribes, and the Berebers, the mechanics of the country. The Arabian tribes keep themselves totally distinct and are employed in commerce.

The cadi is the ecclesiastical judge, besides whom there is a superior religious officer, called mufti or high-priest; and an inferior one called the grand marabout. To these officers lies the supreme appeal in all religious concerns. The people are generally ignorant; yet so jealous are the higher ranks of their authority, that print- ing, according to M. Pantani, has been prohibited, lest there should be too much knowledge in the nation. The only instruction consists in teaching boys to read and repeat fifty or sixty aphorisms from the Koran. The Alfagni or learned men are jugglers.

The Algerine kingdom made formerly a consi- derable part of the Mauritania Tingitana, See MAURITANIA, which was reduced to a Roman province by Julius Caesar, and from him also called Mauritania Cresariensis. After the Ro- mans had been driven out of Africa by the Van- dals, and the latter by the Saracens about the middle of the seventh century, the Arabs conti- nued masters of the country, divided into petty kingdoms under chiefs of their own choosing, till the year 1051, when Albubeker ben Omar, or, as the Spanish authors call him, Abu Texefien, provoked at the tyranny of those despots, gathered, by the help of his marabouts, or sain's, a power- ful army of malcontents, in Numidia and Libya, His followers were named Morabites; by the Spaniards, Almoravides, probably from their being

assembled principally by the Mahommedan saints so called The khalif of Kayem's forces were at this time taken up in quelling revolts in Syria, Mesopotamia, &c. and the Arabs in Spain engaged in

the most bloody wars ; so that Texefien, having nothing to fear from them, had all the success he could wish against the Arabian cheyks whom he repeatedly defeated, and at last drove out of Numidia, Libya, and all the western parts, reducing the whole province of Tingitania under his dominion. He was suc- ceeded by his son Yusef, or Joseph, who laid the foundation of Morocco, which he designed for the capital of his empire. While that city was building, he sent ambassadors to Tremecen, at that time inhabited by a powerful sect of Mahom- medans called Zeneti, proposing to bring them back to what he called the true faith ; but the Zeneti, despising his offers, murdered his ambas- sadors, and invaded his dominions with an army of 50,000 men ; whereupon he immediately led his army into their country, destroying all before him with fire and sword ; while the Zeneti, instead of opposing his progress, retired as fast as pos- sible towards Fez, in hopes of assistance. But in this they were miserably deceived, for the Fez- zans coming up with the unhappy Zeneti, encum- bered with their families and baggage, and ready to expire with hunger and weariness, cut them all to pieces, except a small number who were either drowned in attempting to swim across a river, or perished by falling from the adjacent rocks. Meantime Joseph reduced their country to a mere desert ; but it was soon repeopled by a numerous colony of Fezzans, who settled there. In this war it is computed that near a million of the Zeneti, men, women, and children, lost their lives. Notwithstanding the assistance Joseph had thus received from the Fezzans-, he declared war against them, reduced them to become his tributaries, and extended his conquest all along the Mediterranean. He next attacked those Arabian cheyks who had not yet submitted, taking many castles and fortresses, till then deemed impregnable ; and at last completely subdued them. Thus was founded the empire of the Morabites, which, however, was of no long dura- tion; that race being in the 12th century driven out by Mohavedin, a marabout. This race of priests was expelled by Abduiac governor of Fez ; and he, in the 13th century, was stripped of his

conquests by the Sharifs of Hascen, the descendants of those Arabian princes whom Abu-Texefien had formerly expelled. The bet- ter to secure their new dominions, the Sharifs divided them into several little kingdoms or provinces ; and among these the present king- dom of Algiers was divided into four, viz. Treme- cen, Tenez, Algiers Proper, and Bnjeyah. The four first monarchs laid so good a foundation for a lasting balance of power between their little kingdoms, that they continued for some centuries in mutual amity ; but at length the king of Tre- mecen having ventured to violate some of their articles, Abul Farez, king of Tenez, declared war against him, and obliged him to become his tributary. This king dying soon after, and hav- ing divided his kingdom among his three sons, new discords arose ; which Spain taking advan-

tage of, sent a powerful fleet and army against Barbary, m 1505, under the count of Navarre, who took Oran, Bujeyah, and some other im- portant places ; which so alarmed the Algerines, that they put themselves under the protection of Sehm Eutemi, an Arabian prince. He came to their assistance with a great number of his bravest subjects, but was not able to prevent the Spaniards from landing a number of forces near Algiers, and making the Algerines tributary to Spain; or from building a strong fort on a small island opposite to the city, which terrified their corsairs from sailing either in or out of the har- bour. They continued under this yoke until 1516 ; when, hearing of the death of Ferdinand, king of Spain, they sent to Aruch Barbarossa, who was at this time no less dreaded for his va- lour than for his surprising success, requesting him to join his forces with those of Seltm Eutemi, and free them from the Spanish yoke ; offering him a gratuity answerable to so great a service. Upon this Barbarossa immediately des- patched eighteen galleys and thirty barks to the assistance of the Algerines : while he himself advanced towards the city with 800 Turks, 3000 Jigelites, and 2000 Moorish volunteers. In his road

to Algiers, he surprised Hassan, another famed corsair, and obliged him to surrender ; not without a previous promise of friendship : but no sooner had Barbarossa got him in his power, than he cut off his head ; and obliged all Hassan's Turks to follow him in his new ex- pedition. On Barbarossa's approach to Algiers, he was met by prince Selim, attended by the people, who looked for deliverance from this abandoned villain,, whom they accounted invin- cible. He was conducted into the city amidst their acclamations, and lodged in one of the noblest apartments of prince Eutemi's palace, where he was treated with the greatest marks of honour. Elated beyond measure with this kind reception, Barbarossa formed a design of becoming king of Algiers; and fearing op- position from the inhabitants, on account of the excesses he suffered his soldiers to commit, caused prince Eutemi to be murdered at the baths, and caused himself to be proclaimed king ; his Turks and Moors crying out as he rode along the streets, ' Long live King Aruch Barbarossa, the invincible king of Algiers, the chosen of God to deliver the people from the oppression of the Christians ; and destruction to all that shall oppose, or refuse to own him as their lawful sovereign.' This last threaten- ing so intimidated the inhabitants, already ap- prehensive of a general massacre, that he was immediately acknowledged king. The unhappy princess Zaphira, Selim's queen, poisoned her- self, to avoid the brutality of this tyrant, whom she unsuccessfully endeavoured to stab with a dagger. After this, Barbarossa treated his sub- jects with such cruelty, that they used to shut up their houses and hide themselves when he appeared in public. A plot was formed against him, but being discovered, he caused twenty of the principal conspirators to be beheaded, and their bodies to be buried in a duughill, and laid a heavy fine on those who survived ; which so terrified the Algerines that they never afterwards

attempted any thing against him. Meantime, the son of prince Selim, having fled to Orar, and put himself under the protection of the marquis of Gomarez, laid before that nobleman a plan for putting the city of Algiers into the hands of the king of Spain. Upon this young Selim Eutemi was sent into Spain, to lay his plan before car- dinal Ximenes ; who, having approved of it, sent a fleet with 10,000 land forces, under the command of Don Diego de Vera, to drive out the Turks, and restore the young prince. But the fleet was no sooner come within sight of the land, than it was dispersed by a storm, and the greatest part of the ships dashed against the rocks. Most of the Spaniards were drowned ; and the few who escaped were either killed by the Turks or made slaves. The king of Tenez made an attack upon him, but as the rest of the history of this bloody tyrant will be narrated under the article BAKBAROSSA, it is only necessary to add here, that, after taking and plundering Tenez, and being chosen king of Tremecen, by the in- habitants, who were displeased with their own sovereign, he was at last killed by Abuchen- men, king of Tremecen, assisted by the Spa- niards, in the forty-fourth year of his age, and second of his reign over Algiers. The circum- stances of his defeat and death are related as follows : The prince of Tremen fleeing to Charles V. obtained an army of 10,000 under the com- mand of the marquis Gomarez, who besieged him closely. Taking with him 1500 Turks and 5000 Moors, he sallied out upon his be- siegers, but was obliged to retire and defend himself within the citadel of Tremecen. Seeing no other prospect of escape, he dug a subter- raneous passage, by which means he left the city, but was pursued by some Spaniards, who, although he scattered plate and jewels in the way, would not suffer themselves to be diverted, and at last overtook him at Harxda, eight leagues from Tremecen, and despatched him. Abuchen- men was then declared king.

Although the news of Barbarossa's death spread the utmost consternation among the Turks at Algiers, they nevertheless proclaimed his brother Hayradin

*king ; and the Spanish commander, having sent back the emperor's forces, without making any attempt upon Al- giers, he lost the opportunity of driving the Turks out of that country ; while Hayradin, justly dreading the consequences of the ty- ranny of his officers, sought the protection of the grand seignior. This was readily granted, and himself appointed bashaw or viceroy of Algiers ; by which means he received such re- inforcements, that the Algerines durst not make the least complaint; and such numbers of Turks resorted to him, that he became not only capa- ble of keeping the Moors and Arabs in subjec- tion at home, but of annoying the Christians at sea. His first step was to take the Spanish fort of Calan, which was a great nuisance to nis metropolis, and though the Spaniards held out to the last extremity, he soon became mas ter of it. He next set about building a strong mole for the safety of his ships. In this he ******in ployed 30,000 Christian slaves, whom he*

obliged to work without intermission for three years, in which time the work was completed He then caused the fort he had taken to be re- paired, and placed a strong garrison in it, to prevent any foreign vessels from entering the harbour without giving an account of them- selves. By these two important works, Hayra- din soon became dreaded not only by the Arabs and Moors, but also by the maritime Chris- tian powers, especially the Spaniards. The grand seignior having sent him a fresh supply of money, he was enabled to erect batteries on all places that might favour the landing of an enemy. All these have since received greater improvements from time to time, as often as there was occasion. Meantime the Sultan, either from a sense of the great services Hayra- din had done, or out of jealousy lest he should make himself independent, raised Hayradin to the dignity of bashaw of the empire, and ap- pointed Hassan Aga, a Sardinian renegade, and an experienced officer, to succeed him as bashaw of Algiers. Hassan had no sooner taken possession of his new government, than he began to pursue his ravages on the Spanish coast

with greater fury than ever; extending them to the ecclesiastical state, and other parts of Italy ; whereupon Pope Paul III. exhorted the emperor Charles V. to send a powerful fleet to suppress those cruel pi- racies ; and, that nothing might be wanting to render the enterprise successful, a bull was pub- lished, wherein a plenary absolution of sins, and the crown of martyrdom, were promised to all who should either fall in battle or be made slaves. The emperor on his part needed no spur ; and therefore set sail with a fleet of 120 ships and 20 galleys, having on board 30,000 chosen troops, and an immense quantity of money, arms, am- munition, &c. In this expedition many young nobility and gentry attended as volunteers, and many knights of Malta, so remarkable for their valour against the enemies of Christianity. Even ladies of birth and character attended Charles in his expedition, and the wives and daughters of the officers and soldiers followed them, with a design to settle in Barbary after the conquest was finished. The Algerines were greatly alarmed by this prodigious armament. The city was defended only by a wall, with scarce any outworks. The whole garrison consisted of 800 Turks and 6000 Moors, without fire arms, and poorly disciplined and accoutred ; the rest of their forces being dispersed in the other pro- vinces of the kingdom, to levy the usual tribute on the Arabs and Moors. The Spaniards landed without opposition, and immediately built a fort, under the cannon of which they encamped, and diverted the course of a spring which supplied the city with water. Being now reduced to the utmost distress, Hassan was on the point of sur- rendering, when advice was brought him that the forces belonging to the western government were in full march towards the place ; upon which it was resolved to defend it to the utmost. Charles, in the mean time, resolving upon a general as- sault, kept a constant firing upon the town ; which, from the weak defence made by the gar- rison, he looked upon as already his own. But

while the douwan or Algerine senate, were deli- berating on the most proper means of obtaining an honourable capitulation, a mad prophet, named Yuself, attended by a multitude of people, entered the assembly, and foretold the speedy destruction of the Spaniards before the end of the moon, exhorting the inhabitants to hold out till that time. This prediction was soon accom- plished in a veiy surprising and unexpected manner: for, on the 28th of October, 1541, a dreadful storm of wind, rain, and hail, arose from the north, accompanied with violent shocks of earthquakes, and an universal darkness, so that the elements seemed to combine together for the destruction of the Spaniards. In that night, some say in less than half an hour, eighty-six ships and fifteen galleys were destroyed, with all their crews and military stores ; by which the army on shore was deprived of all means of subsisting in these parts. Their camp also, which spread itself along the plain under the fort, was laid quite under water by the torrents which descended from the neighbouring hills. Many of the troops, trying to remove into some better situation, were cut in pieces by the Moors and Arabs ; while several galleys, and other vessels, endeavouring to gain some neighbouring creeks along the coasts, were immediately plundered, and their crews massa- cred by the inhabitants. Next morning Charles beheld the sea covered with the fragments of so many ships, and the bodies of men, horses, and other creatures, swimming on the waves; at which he was so disheartened, that abandoning his tents, artillery, and all his heavy baggage, to the enemy, he marched at the head of his army, though in no small disorder, towards cape Mala- bux, in order to re- imbark in those few vessels which had outweathered the storm. But Hassan who watched his motions, allowed him just time to get to the shore, when he attacked the Spaniards in the midst of their hurry to get into their ships, killing great numbers, and bringing away a still greater number of captives ; after which he re- turned in triumph to Algiers, where he celebrat- ed his happy deliverance with great rejoicings. In this unfortunate expedition

upwards of 120 fhips and galleys were lost, above 300 land and sea officers, 8000 soldiers and marines, besides those destroyed by the enemy on the re-imbarka- tion, or drowned in the last storm. The num- ber of prisoners was so great, that the Algerines sold some of them, by way of contempt, for an onion per head. Charles himself escaped with difficulty to Tunis with his few remaining fol- lowers. Hassan afterwards made his ally the king of Tremecen tributary, and returning to Al- giers laden with riches, soon after died of a fe- ver, in the sixty-sixth year of his age. After this Haji became king, and the Spaniards afterwards were never able to annoy the Algerines in any considerable degree. In 1555 they lost the city of Bujeyah, which was taken by Selha-Rais, Hassan's successor, who dying soon after of the plague, the Algerine soldiers chose a Corsican renegade, Hassan Corso, in his room, till they should receive farther orders from the Porte. He did not accept of the .bashawship without a good deal of difficulty ; and he had hardly en- joyed his dignity four months, before news came

that eight galleys were bringing a new bashaw to succeed him ; one Tekelli, a principal Turk of the grand seignior's court: upon which the Al- gerines unanimously resolved not to admit him. By the treachery of the Levantine soldiers, how- ever, he was admitted at last, and the unfortunate Corso thrown over a wall in which a number of iron hooks were faxed ; one of which catching the ribs of his right side, he hung three days in the most exquisite torture before he expired. Tekelli was no sooner entered upon his new go- vernment, than he behaved with such cruelty and rapacity, that he was assassinated even under the dome of a saint, by Yusef Calabres, the favour- ite renegade of Hassan Corso ; who, for this ser- vice, was unanimously chosen bashaw, but died, of the plague six days after his election. Yusef was succeeded by Hassan, the son of Hayradin, who had formerly been recalled from his bashaw- ship, when he was succeeded by Selha-Rais : and now had the good fortune to get

himself re- instated in his employment. Next year the Spaniards undertook an expedition against Mo- stagan, under the command of the Count d'Alcan- dela ; but were defeated, their commander killed, and 12,000 taken prisoners. Hassan having dis- obliged his subjects by allowing the mountaineers of Cuco to buy ammunition at Algiers, was sent in irons to Constantinople, while the aga of the Janisaries supplied his place. Hassan found means to clear himself : but a new bashaw was appointed, called Achmet ; who was no sooner arrived, than he sent the two deputy bashaws to Constantinople, where their heads were struck off. ••• Achmet was a man of insatiable avarice, and had bought his dignity by the money he had amassed while head gardener to the Sultan. He enjoyed it, however, only four months ; and after his death, the state was governed other four months by his lieutenant ; when Hassan was a third time sent viceroy to Algiers, where he was received with the greatest demonstrations of joy. The first enterprise in which Hassan engaged, was the siege of Marsalquiver, near Oran. His army consisted of 26,000 foot and 10,000 horse; and his fleet of thirty-two galleys and galliots, to- gether with three French vessels laden with pro- visions. The city was defended by Don Martin de Cordova, brother of the Count d'Alcandela, who had been taken prisoner in the battle where that nobleman was killed, but had obtained his liberty from the Algerines with immense sums, and now made a most gallant defence against the Turks. The city was attacked with the utmost fury by sea and land, so that several breaches were made in the walls. The Turkish standards were several times planted on the walls, and as often dislodged ; but the place must have in ihe end submitted, had not Hassan been obliged to raise the siege, on hearing that the famed Geno- ese admiral Doria was approaching with succours trom Italy. The fleet accordingly arrived soon after; but missing the Algerine galleys, bore away for Pennon de Velez, where they were shamefully repulsed by a few Turks who gar- risoned that place ; which, however, was taken the following year. In 1567 Hassan was again recalled to Constantinople,

where he died three years after. He was succeeded by Mahomet,

who gained the love of the Algerines by several public spirited actions. He 'incorporated the Janissaries and Levantine Turks together, and by that means put an end to their dissensions, which laid the foundation of the Algerine inde- pendency on the Porte. He likewise added some considerable fortifications to the city and castle, Which he designed to render impregnable. But while he was thus studying the interest of Algiers, one John Gascon, a bold Spanish adven- turer, formed a design of burning the whole pi- ratic navy in the bay ; but this plan, though pa- tronised by king Philip II. proved abortive, owing to the dampness or improper mixture of the fire works ; and Gascon himself, being taken prisoner, was barbarously slain by the Algerines. Mahomet, being soon after recalled, was succeed- ed by the famous renegade Ochali, who reduced the kingdom of Tunis; which, however, remained subject to the viceroy of Algiers only till the year 1586, when a bashaw of Tunis was appoint- ed by the Porte. In 1585, under Memi Arnaud an Albanian, we first find the Algerines passing the Straits of Gibraltar, and extending their de- predations as far as the Canary Islands, where they made a descent, carried off 300 persons (in- cluding the governor's family), with great plun- der, but admitted some of the principal ladies to ransom. Early in the seventeenth century the government of the Algerines underwent con- siderable revolution.

Algiers, till the beginning of the seventeenth century, continued to be governed by viceroys appointed by the Porte; concerning whom we find nothing very remarkable, further than that their avarice and tyranny was intolerable both to the Algerines and the Turks. At last the Turkish Janissaries and militia becoming powerful enough to suppress the tyrannic sway of these bashaws, and the

people being almost exhausted by the heavy taxes laid upon them, the former resolved to depose those petty tyrants, and set up some officers of their own at the head of the realm. The better to succeed in this attempt, the militia sent a deputation of some of their chief members to the Porte, to complain of the oppression of these bashaws, who sunk both the revenue of the state, and the money remitted to it from Con- stantinople, into their own coffers, which should have been employed in keeping up and paying the soldiery ; by which means they were in con- tinual danger of being overpowered by the Ara- bians and Moors, who, if ever so little assisted by any Christian power, would hardly fail of driving all the Turks out of the kingdom. They represented to the grand vizier how much more honourable, as well as easier and cheaper, it would be for the grand seignior to permit them to choose their own dey, or governor, from among themselves, whose interest it would then be to see' that the revenue of the kingdom was rightly applied in keeping up its forces com plete, and in supplying all other exigencies of the state, without any farther charge or trouble to the Porte than that of allowing them its pro- tection. On their part, they engaged always to acknowledge the grand seigniors as their sove- reigns, and to pay their usual allegiance and tri- bute, to respect their bashaws, and even to lodge,

and maintain them and their retinue, in a man- ner suitable to their dignity at their own charge The bashaws, however, were, for the future, to be excluded from assisting at any but general douwans, unless invited; and from having the liberty of voting in them, unless when their ad- vice was asked, or the interest of the Porte was likely to suffer by their silence. All other con- cerns, which related to the government of Al- giers, were to be wholly left under the direction of the dey and his douwan. These proposals having been accepted by the Porte, the deputies returned highly satisfied; and having notified their new privileges, the great douwan immediately pro- ceeded to the election of a dey from among themselves. They compiled a new set

of laws, and made several regulations for the better sup- port and maintenance of this new form of go- vernment, to the observation of which they obliged all their subjects to swear ; and the militia, navy, commerce, &c. were all settled pretty nearly on the footing upon which they now are ; though the altercations that happened between the ba- shaws and deys, the one attempting to recover their former power, and the other to curtail it, caused such frequent complaints at the Ottoman court, as made them often repent their compli- ance. In 1601, the Spaniards, under Doria the Genoese admiral, made another attempt upon Algiers, in which they were more fortunate than usual, their fleet being only driven back by con- trary winds, so that they came off without loss. In 1609, the Moors being expelled from Spain, flocked in great numbers to Algiers; and as many of them were very able sailors, they \m- doubtedly contributed to make the Algerine fleet so formidable as it became soon after. In 1616 it consisted of forty sail, of between 200 and 400 tons, their admiral 500 tons. It was divided into swo squadrons, one of eighteen sail, before the port of Malaga ; and the other at the Cape of Santa Maria, between Lisbon and Seville ; both of which fell foul on all Christian ships, both English and French, with whom they pre- tended to be in friendship, as well as Spaniards and Portuguese, with whom they were at war. The Algerines were now become very formidable to the European powers. The Spaniards, who were most in danger, and least able to cope with them, solicited the assistance of England, Rome, and other states. The French, however, were the first who d"ared to show their resentment of the perfidious behaviour of these miscreants; and in 1617 M. Beaulieu was sent against them with a fleet of fifty men of war, who defeated their fleet, took two of their vessels, while their admiral sunk his own ship and crew, rather than fall into his hands. In 16►►0 a squadron of Eng- lish men of war was sent against Algiers, under Sir Robert Mansel; but it returned without doing any thing ; and the Algerines, becoming more and more insolent, openly defied all the European powers, the

Dutch only excepted ; to whom, in 1625, they sent a proposal, directed to the prince of Orange, that in case they would fit out twenty sail of ships the following year, upon any good service against the Spaniards, they would join them with sixty sail of their own. Next year, the Coulolies, or Cologlies, the chil-

dren of such Turks as had been permitted to marry at Algiers, who were enrolled in the mi- litia, having seized on the citadel, had well nigh made themselves masters of the city ; but were attacked by the Turks and renegadoes, who de- feated them with terrible slaughter. Many of them were executed ; and their heads thrown in heaps upon the city walls, without the eastern gate. Part of the citadel was blown up ; and the remaining Coulolies were dismissed from the militia, to which they were not again admitted till long after.

Amurath IV. in 1623, having made a truce for twenty- five years, with the emperor Ferdi- nand II. the Algerines and other states of Bar- bary threw off their dependence on the Porte altogether, and set up for themselves ; and re- solved, that whoever desired to be at peace with them must apply to their government. They accordingly began to make prizes of several merchant ships belonging to powers at peace with the Porte ; and having seized a Dutch ship and poleacre at Scanderoon they ventured on shore, and finding the town abandoned by the Turkish aga and inhabitants, they plundered all the magazines and warehouses, and set them on fire. About this time Louis XIII. under- took to build a fort on their coast, instead of one formerly built by the Marsilians, and which they had demolished. This, after some dif- ficulty, he accomplished ; and it was called the Bastion of France : but the situation being afterwards found inconvenient, the French purchased the port of La Calle, and obtain- ed liberty to trade with the Arabians and Moors. The

*Ottoman court, in the mean time, was so much embarrassed with the Persian war, that there was no leisure to check the Algerine pirates. This gave an opportunity to the vizier and other courtiers to compound matters with the Algerines, and to get a share of their prizes, which were very considerable. However, for form's sake, a severe reprimand, accompanied with threats, was sent them; to which they replied, that, * these depredations deserved to be in- dulged to them, seeing they were the only bul- wark against the Christian powers, especially against the Spaniards, the sworn enemies of the Moslem name : ' adding, that ' if they should pay a punctilious regard to all that could purchase peace, or liberty to trade with the Ottoman em- pire, they would have nothing to do but set fire to all their shipping, and turn camel-drivers for a livelihood.' The Algerines continued to pro- secute their piracies with impunity, to the te'rror and disgrace of the Europeans, till the year 1652 ; when a French fleet being accidentally driven to Algiers, the admiral took it into his head to demand a release of all the captives of his nation, without exception. This being re- fused, the Frenchman without ceremony carried off the Turkish viceroy, and his cadi or judge, who were just arrived from the Porte, with all their equipage and retinue. The Algerines, by way of reprisal, surprised the bastion of France already mentioned, and carried off the inhabitants to the number of 600, with all their effects; which so provoked the admiral, that he sent them word, he would pay them another visit*

next year with his whole fleet. The Algerines, undismayed by his threats, fitted out a fleet of sixteen galleys and galliots excellently manned and equipped, under the command of admiral Hali Pinchinin. The chief design of this arma- ment was against the treasures of Loretto ; which, however, they were prevented by contrary winds from obtaining. Upon this they made a descent on Naples, where they ravaged the whole terri- tory of Nicotera, carrying off a vast number of captives, and among them some nuns. From thence steering

towards Dalmatia, they scoured the Adriatic ; and loading themselves with im- mense plunder, left those coasts in the utmost consternation. At last the Venetians, alarmed at such terrible depredations, equipped a fleet of twenty-eight sail, under the command of admiral Capello, with express orders to burn, sink, or take, all the Barbary corsairs he met with, either on the open seas, or even in the grand seignior's harbours, pursuant to a late treaty of peace with the Porte. The captain bashaw, who had been sent out with the Turkish fleet, to chase the Flo- rentine and Maltese cruisers out of the Archipe- lago, understanding that the Algerine squadron was so near, sent orders to the admiral to come to his assistance. Pinchinin readily agreed : but having resolved on a descent upon the island of Lissa, belonging to the Venetians, he was over- taken by Capello, from whom he retired to Va- lona, a sea port belonging to the grand seig- nior, whither the Venetian admiral pursued him ; but the Turkish governor refusing to eject the pirates according to the articles of the peace be- tween the Ottoman court and Venice, Capello was obliged to content himself with watching them for some time. Pinchinin at last ventured out, when an engagement immediately ensued, in which the Algerines were defeated, and five of their vessels disabled, with the loss of 1500 men, Turks and Christian slaves; besides 1600 galley slaves who regained their liberty. Pin- chinin, after this defeat, returned to Valona, where he was again watched by Capello ; but the latter had not lain long at his old anchorage, before he received a letter from the senate, de- siring him to make no farther attempt on the pirates at that time, for fear of a rupture with the Porte. This was followed by a letter from the governor of Valona, desiring him to take care lest he incurred the sultan's displeasure by such insujts. The brave Venetian was forced to comply ; but, resolving to take such a leave of the Algerines as he thought they deserved, ob- served how they had reared their tents, and drawn their booty and equipage along the shore. He then kept firing among their tents, while some well

*manned galliots and brigantines were or- dered among their shipping, who attacked them with such bravery, that, without any great loss, they towed out their sixteen galleys, with all their cannon, stores, &c. In this last engage- ment, a ball from one of the Venetian galleys happening to strike a Turkish mosque, the whole action was considered as an insult upon the grand seignior. To conceal this, Capello was ordered to sink all the Algerine ships he had taken, except the Admiral; which was to oe conducted to Venice, and laid up as a tropny.***

*Capello came off with a severe reprimand ; but the Venetians were obliged to buy, with 500,000 ducats, a peace from the Porte. The grand seig- nior offered to repair the loss of the Algerines by building ten galleys for them, upon condition that they should continue in his service till the end of the ensuing summer ; but Pinchinin, who knew how little the Algerines chose to lie under obligations to him, civilly declined the offer. *** Meantime, the news of this defeat filled Algiers with the utmost confusion. The whole city was on the point of a general insurrection, when the bashaw and douwan issued a proclamation, not only forbidding all complaints under the severest penalties, but all persons whomsoever, to take their thumbs fiom within their girdles, while they were deliberating on this important point. In the mean time they applied to the Porte for an order that the Venetians, settled in the Levant, should make up their loss. But with this the grand seig- nior refused to comply, and left them to repair their loss, as well as build new ships, the best way they could. It was not long, however, be- fore they had the satisfaction to see one of their corsairs land with a fresh supply of 600 slaves, whom he had brought from the coast of Iceland, whither he had been directed by a miscreant native taken on board a Danish ship. Our pirates did not long continue in their weak and defence- less state ; being able, at the end of two years, to*

appear at sea with a fleet of sixty-five sail, which soon cleared the seas, and brought home vast numbers of slaves, and an immense quantity of rich spoils ; insomuch that the English, French and Dutch, were obliged to cringe to the mighty Algerines, who sometimes vouchsafed to be at peace with them, but swore eternal war against Spain, Portugal, and Italy, whom they looked upon as the greatest enemies to the Mahommedan name. At last Louis XIV. provoked by the out- rages committed by the Algerines on the coasts of Provence and Languedoc, ordered, in 1681, a considerable fleet to be fitted out against them, under the Marquis Du Quesne, vice-admiral of France. His first expedition was against a num- ber of Tripolitan corsairs ; who took shelter in the island of Scio, but pursuing them thither, he quickly destroyed fourteen of their vessels, be- sides battering the walls of the castle ; and find- ing they still continued their outrages on the French coast, he sailed to Algiers in August 1682, cannonading and bombarding it so furi- ously, that the whole town was in flames in a very little time. The great mosque was battered down, and most of the houses laid in ruins, in- somuch that the inhabitants were on the point of abandoning the place ; when, on a sudden, the wind changed, and obliged Du Quesne to return to Toulon. The Algerines immediately made reprisals, by sending a number of galleys to the coast of Province, where they committed the most dreadful ravages, and brought away a vast number of captives ; upon which a new armament was to be got ready at Toulon and Marseilles against the next year ; and the Algerines, having received timely notice, put themselves in as good a state of defence as the time would allow. In May 1683, Du Quesne with his squadron, cast

anchor before Algiers ; where, being joined by the marquis D'Affranville, at the head of five stout vessels, it was resolved to bombard the town. Accordingly 100 bombs were thrown into it the first day, vvh'ich did terrible execution ; while the besieged made some hundred discharges of their

cannon against them, without doing any considerable damage. The following nights the bombs were again thrown into the city in such numbers, that the dey's palace and other great edifices were almost destroyed; some of their batteries were dismounted, and several vessels sunk in the port. The dey and Turkish bashaw as well as the whole soldiery, alarmed at this dreadful havock, immediately sued for peace. ??? As a preliminary, the immediate surrender was insisted on of all Christian captives who had been taken fighting under the French flag; which being granted, 142 of them were immediately delivered up, with a promise of sending him the remainder as soon as they could be got from the different parts of the country. Accordingly Du Quesne sent his commissary-general and one of his engineers into the town ; but with express orders to insist upon the delivery of all the French captives without exception, together with the effects they had taken from the French ; and that Mezomorto their then admiral, and Hali Rais, one of their captains, should be given as hostages. This last demand having embarrassed the dey, he assembled the douwan, and ac- quainted them with it ; upon which Mezoraorto fell into a violent passion, and told the assembly, that the cowardice of those who sat at the helm had occasioned the ruin of Algiers ; but that for his part he never would consent to deliver up any thing that had been taken from the French. He immediately acquainted the soldiery with what had passed ; which so exasperated them, that they murdered the dey that very night, and on the morrow chose Mezomorto in his place. This was no sooner done, than he cancelled all the articles of peace which had been made, and hostilities were renewed with greater fury than ever. The French admiral now kept pouring in such volleys of bombs, that in less than three days, the greatest part of the city was reduced to ashes, and the fire burned with such vehemence, that the sea was enlightened with it for more than two leagues round. Mezomorto, unmoved at all these disasters, and the vast number of the slain, whose blood ran in rivulets along the streets ; or rather, grown furious and des- perate, sought only how to wreak

his revenge on the enemy: and, not content with causing all the French in the city to be cruelly mur- dered, ordered their consul to be tied hand and foot, and fastened alive to the mouth of a mor- tar, from whence he was shot away against their navy. By this piece of inhumanity Du Quesne was so exasperated, that he did not lep Algiers till he had utterly destroyed all their fortifica- tions, shipping, almost all the lower part, and above two-thirds of the upper part of the city ; by which means it became little else than a heap of ruins. The haughty Algerines were now tho- roughly convinced that they were not invincible ; j and, therefore, immediately sent an embassy into j

Trance, begging in the most abject terms for peace; which Louis immediately granted, to iheir inexpressible joy.

The following copy of the speech, made by the Algerine envoy on this occasion, will give the reader an idea how deeply they felt the con- sequences of this defeat.

' Most high, most excellent, most powerful, mag- nanimous, and invincible Louis XIV. emperor of the French, whom God preserve, and make happy, I prostrate myself at the foot of thy sublime imperial throne, as the messenger of the joy with which our republic, and the dey, my master, have concluded a peace with thy lieutenant ; and of their impatient desire, that thy sublime majesty will be pleased to put thy ratifying seal to it. The force of thy ever- victorious arms, and the strength of thy sword, have made them sensible of the fault which Baba Hassan committed, in declaring war against thy subjects. I am de- puted hither to beg thy pardon for it, and to as- sure thee, in the sincerest terms, that, henceforth, our conduct shall be such as may deserve the friendship of the greatest emperor of the disciples of Jesus, and the only one we stand in

dread of.

' The atrocious violence committed against the person of thy consul, is such as we should judge would prove an invincible obstacle to a peace if thy light, which, like that of the sun, penetrates all things, did not easily conceive how far an en- raged and ungovernable populace can carry their furious resentment, in the midst of multitudes of their fellow-citizens, crushed in pieces by thy bombs; of which number they beheld their parents, brethren, and children, deprived either of life, effects, or liberty.

' But whatever their motives were, the violence we are far from excusing or extenuating. I come to beg of thee to turn for ever away thy sacred eyes from beholding a deed detested by all good men amongst us, especially those in power; who cannot therefore be justly charged with it.

- *We hope, mighty emperor, great as Gemsehid, opulent as Kraour, magnificent as Solyman, and magnanimous as Akemptas, that thy clemency will not reject these our earnest prayers ; and the high opinion we have of thy unparalleled gene- rosity, gives us a kind of assurance, that thou wilt order all our brethren who wear thy chains to be set at liberty, as we ourselves have done, not only to thy subjects, but likewise to those who were under the shadow of thy august name ; that the joy for this peace may become equal and universal ; and that a much greater number of mouths may be thereby opened to celebrate thy praise. That, when thy subjects return to their country, they may thankfully come and throw themselves at thy feet, while our's proclaim thy praise throughout the vast countries of Africa, and i- -rint in their children a veneration for thy incoru. -v'e virtues, and a due regard for the French' nation.*

' This will prove the happy foundation of an eternal peace ; of which we promise an exact and religious

observance on our part, in all its articles ; not doubting but it will be equally ob- served by thy subjects ; from whom thy authority claims an unlimited obedience. VOL. I

‘ .May the almighty and gracious Creator give a blessing upon this peace, and maintain a per- petual union between the most high, most ex- cellent, and most magnanimous emperor of the French, and the most illustrious and magnificent bashaw, dey, douwan, and the victorious armies of the republic of Algiers.’

Fearful of his predecessor’s fete, the ferocious dey now abdicated the sovereignty ; and the dis- putes which took place between the Turkish viceroys and the Algerine deys, occupy the prin- cipal part of their domestic history to the con- clusion of this century, when the Porte united the two dignities into one. They now began to pay some regard to other nations, and to be a little cautious how they wantonly incurred their displeasure. The first bombardment by the French had so far humbled the Algerines, that they condescended to enter into a treaty with England ; which was renewed, upon terms very advantageous to the latter, in 1686. This was renewed, at various periods, by James II., William III., and Geo. II. It is not to be sup- posed, howevei, that the habitual perfidy of the Algerines would disappear on a sudden : notwith- standing this treaty, they lost no opportunity of making prizes of the English ships when they could conveniently come at them. Upon some infringement of this kind, captain Beach drove ashore, and burnt seven of their frigates in 1695; which produced a renewal of the treaty five years after : but it was not till the taking of Gibraltar and Port Mahon that Britain could have a suf- ficient check upon them to enforce the observa- tion of treaties ; and these have since proved such restraints upon Algiers, that they still con- tinue to pay a greater deference to the Englisn than to any other European power. The last century furnishes no very remarkable events in the history of Algiers, except the taking of the famous city of Oran from the Spaniards in 1708, which they retook in 1737, and the expulsion of the Turkish bashaw,

and uniting his office to that of dey in 1710. This intro- duced the form of government which still con- tinues in Algiers.

During the general peace of the European continent in 1816, the British government felt inclined to enter into some more permanent en- gagements with this people. They were required to treat the inhabitants of the Ionian isles as British subjects; a peace was negociated by our commander between the Barbary states and Sardinia and Naples, and the abolition of all Christian slavery. These proposals, the last ex- cepted, met the dey's approbation; but, with respect to the last, as he was a subject of the Porte, he required a delay of six months to en- able him to consult his government. Lord Ex- mouth agreed to wait three months, but had scarcely quitted the shores, when a most barba- rous outrage on the coral fisheries at Bona, where a number of Corsicans, Neapolitans, and Italians, had long resorted for coral, under the protection of the British flag, summoned him to return. On the 23d of May, a body of Algerine infantry and cavalry, to the number of 2000, attacked their boats ; the fire of the forts opened upon

them at the same time, the British flags were seized and trampled underfoot, and nearly the whole of the crews barbarously butchered. Our government immediately resolved to punish this insulting barbarity ; and, accordingly, the Im- pregnable of ninety-eight guns, three ships of seventy-eight guns, four frigates, and several smaller vessels, gun-boats, &c., were commanded to rendezvous, at Gibraltar, where they were joined by five Dutch frigates and a sloop, and appeared before Algiers on the 18th of Arfgust. Here they found that very considerable additions had been made to the fortifications, that new works had been thrown up on both flanks of the town, that the ships were all in port, and between forty and fifty mortar and gun

boats, while an army of 40,000 troops had been collected from the interior.

After a fruitless message to the dey on the morning of the 27th of August, lord Exmouth, in the Queen Charlotte, personally commenced the attack, which was seconded by the whole fleet of English, and well supported by the Dutch. After twelve hours incessant firing, the whole Algerine fleet was destroyed, and at least half of the town. The fleet then retired to anchor beyond those of the enemy's batteries and mortars] which were still undemolished, and the following morning the British admiral had the satisfaction to receive from the dey the full ac- knowledgment of all the proposals made by the British government, in the following treaty. 1. The abolition of Christian slavery. 2. The delivery to the British flag of all slaves in the dominions of the dey, to whatever nation they may belong, at noon on the 31st of August. 3. To deliver also to the British flag all money received by the dey for the redemption of slaves since the commencement of this year, at noon also of the same day. 4. Reparation being made to the British consul for all losses he may have sustained in consequence of his confinement. 5. The dey to make a public apology, in pre- sence of his ministers and officers, and begging pardon of the consul in terms dictated by the captain of the Queen Charlotte. Lord Exmouth had the satisfaction of informing the British Admiralty, on the 1st of September, that all the slaves in Algiers were already embarked, with 357,000 dollars for Naples, and 25,000 for Sar- dinia.

Upon the conclusion of the treaty of 1816, and withdrawal of the British fleet from before Algiers, the dey remained undisputed monarch of this little kingdom, paying no other tribute to the porte than a certain number of youths and other presents annually to Constantinople. His own income rose and fell according to the oppor- tunities he met of spoliating both natives and foreigners ; whence different estimates have been formed of his wealth by different authors. Dr. Shaw computed that the taxes of the whole kingdom brought no more than

300,000 dollars annually into the treasury, but imagined that the eighth part of all prizes, the effects of those who died childless, in conjunction with the yearly contribution paid to the government, fines, and extortions, constituted about as much more. The dey and his officers enriched themselves by

plunder and fraud ; an example imitated to the letter by his faithful subjects. It is very well known that the first deys were elected by the militia, who were at that period called the douwan or common council. This elective body at first consisted of 800 militia officers, without whose concurrence the dey was not permitted to enact any public measure. Upon emergencies, all the resident officers in Algiers, sometimes amounting to 1500, were invited to assist in council. But in the changes that naturally take place in the lapse of years, the dey, the stadholder of Algiers, became more powerful, and his senate or douwan was limited to only thirty chiah-bashaws or colonels, with the mufti and cadi upon extra- ordinary occasions. Upon the election of a dey, the military character of the government was fully developed ; for then every soldier was per- mitted to vote. By this martial court, every re- gulation should have been approved, previously to its becoming a law, or before the dey had au- thority to carry its provisions into effect: but during the latter years of Turkish rule, the douwan or Algerine parliament became, obso- lete, and was only convened by the tyrant to give a color of justice to his proceedings, or sometimes possibly from an idea that the con- sciousness of guilt would be alleviated by parti- cipation. The mode in which these devoted members gave in the expression of their assent (for dissent there was little less than treason) was this, ••• the aga or general of the Janissaries, the president pro tempore, first proposed the question, which was immediately repeated with a loud voice by the chiah-bashaws, and re-echoed by four officers called bashaldalas ; from these the question was sent round from one member of the douwan to another, accompanied at each

repetition with savage growlings, and even con- tortions of the body, according to the taste and feeling of the members. From the peculiarity of each person's tone the aga was left to conjecture his intention, and to collect, as well as he could, the wishes of the majority of this uncouth as- sembly : and from the uncivilised beings who composed this parliament, as well as from the preposterous method of ascertaining their wishes, it is not to be wondered at that their deliberations were frequently attended with results the most dissatisfactory and unhappy. At the election of a dey, when the entire army were admitted to the privilege of voting, endless trouble and dis- order constantly arose, and the choice was gene- rally accompanied by scenes of massacre and bloodshed. The successful (fortunate he could not be called) candidate, notwithstanding the previous violence, was immediately greeted by all parties with Alia barrick, "God bless" or "God prosper you ;" words most inconsistently applied to a monster who the next hour usually caused every officer a member of the douwan to be strangled, and filled their places with the very assassins themselves. From this history of the election of a chief governor, the natural conclu- sion is, that the government could not have been either secure or just, and that, as they ascended the throne through disorder, tumult, and blood, so in most cases they were compelled to abdicate it by the hand of the assassin, or the poisoned bowl.

The officer next in power to the dey was the aga of the janissaries, who was one of the oldest officers in the army, and held his post only for two months. He was then succeeded by the chiah, or next senior officer. During the two months in which the aga enjoyed his dignity, the keys of the metropolis were in his hands ; all military or- ders were issued out in his name ; and the sentence of the dey upon any offending soldier, whether capital or not, could only be executed in the court of his palace. As soon

as he had gone through his short office, he was considered as mazoul, or su- perannuated ; received his pay regularly, like the rest of the militia, every two moons ; was exempt from all further duties, except when called by the dey to assist at the grand council, to which he had, however, a right to come at all times, but had no longer a vote in it. ††† Next to the aga in dignity, was the secretary of state, who registered all the public acts; and after him were the thirty chiahs, or colonels, who sat next to the aga in the douwan, and in the same gallery with him. Out of this class were generally chosen those who go ambassadors to foreign courts, or who dis- persed the dey's orders throughout the realm. ††† Next to them were 800 bolluk-bashaws, or eldest captains, who were promoted to that of chiah- bashaws, according to their seniority. The oldah- bashaws,or lieutenants, were next; who amounted to 400, and were regularly raised to the rank of captains in their turn, and to other employments in the state, according to their abilities. These, by way of distinction, wore a leather strap, hang- ing down to the middle of their back. One rule was strictly observed in the rotation of these troops from one deputy to a higher ; viz. the right of seniority ; one single infringement of which would raise an insurrection, and probably cost the dey his life. Other military officers of note were the vakelards, or purveyors of the army ; the peys, who are the four oldest soldiers, and consequently the nearest to preferment ; the soulacks, who were the next in seniority to them, and were part of the dey's body-guard, always marching before him when he took the field, and distinguished by their carabines and gilt scimitars, with a brass gun on their caps ; the kayts, or Turkish soldiers, each band of whom had the government of one or more adowars, or itinerant villages, and collected their taxes for the dey ; and the sagiards, or Turkish lance-men, 100 of whom always attended the army, and watched over the water appointed for it. To these we may add the beys, or governors of the three great provinces of the realm.

Algiers with regard to its government was, as we have already intimated, by some styled a repub- lic ; but, if it was not a perfect despotism, it could at best be only ranked as a vile oligarchy. It did not eren merit the title of an aristo- cratic commonwealth. The powerful party of Turks, always to be found in this part, kept the government in their own hands, and the na- tives had no share. Algiers was formerly di- vided into three provinces; viz. the eastern, western, and southern. The eastern, or Levan- tine government, which was by far the most con- siderable of the three, and was also called Beylick, contains the towns of Bona. Constantina, Gigeri,

Bujeyah, Stessa, Tebez, Zamoura, Biscara, and Necanz, in all which the Turks had garrisons; besides which, it included the two ancient king- doms of Cuco and Labez, though independent of the Algerine government, to whose forces their country was inaccessible ; so that they still lived under their own cheyks, chosen by each of their adowars or hords. To these we may add a French factory at Callo, under the direction of the company of the French Bastion. ??? The west- ern government had the towns of Oran, Treme- cen, Mostagan, Tenez, and Secrelly, with its castle and garrison.; ??? The southern government had neither town, village, nor even a house, all the inhabitants living in tents, which obliged the dey and his forces to be always encamped.

In this country it was not to be expected that justice would be administered with any degree of impartiality. It was ordinarily administered by the cadi, who attended a kind of police court twice a day ; but principal causes were referred to the dey. The Mahommedan soldiery were so much favoured, that they were seldom put to death for any crime, except rebellion ; in which case they were either strangled with a bow-string, or hanged to an iron hook. In lesser offences they were fined, or their pay stopped ; and, if officers, they were reduced to the station of common soldiers, from whence they might gradually raise them- selves to their former

dignity. Women guilty of adultery, had a halter tied about their necks, with the other end fastened to a pole, by which they were held under water till they were suffocated. The bastinado was likewise inflicted for small of- fences, and was given either upon the belly, back, or soles of the feet, according to the pleasure of the cadi, who also appointed the number of strokes. These sometimes amounted to 200 or 300, according to the indulgence the offender could obtain, either by bribery or friends ; and hence many died under this punishment, for want of advocates sufficiently powerful. But the most terrible punishments were those inflicted upon the Jews or Christians who spoke against Mahomet or his religion ; in which case, they were either to turn Mahommedan, or be impaled alive. If they afterwards apostatized, they were burned or roasted alive, or else thrown down from the top of the city walls upon iron hooks, where they were caught by different parts of their body, according as they happened to fall, and sometimes expired in the greatest torments ; though by accident they might be put out of pain at once. This terrible punishment, how- ever, in latter years was disused.

The coin in circulation at Algiers is chiefly that of the foreign commercial nations; the Spanish doubloon and dollar are those most commonly seen : the sultanas of gold pass for two dollars. Besides these, there is a copper barba, having the arms of the country on each side, and a square silver asper, worth about an English crown. The pata chica is an ideal sum, like the pound English, equal to 232 aspers.

With respect to trade, we observed the corsairs, or pirates, formed a small republic, of which the rais or captain vFas the supreme bashaw; who, with the officers under him, formed a kind ot

douwan, in which every matter relating to the vessel

was decided in an arbitrary way. These corsairs were chiefly instrumental in importing whatever commodities were brought into the kingdom either by way of merchandise or prizes ; which consist chiefly of gold and silver, stuffs, damasks, cloths, spices, tin, iron, plated brass, lead, quicksilver, cordage, sail-cloth, bullets, cochineal, linen, tartar, alum, rice, sugar, soap, cotton, raw and spun, copperas, aloes, Bra- zil and log-wood, vermilion, &c. Very few com- modities, however, are exported from this part of the world ; the oil, wax, hides, pulse, and corn produced, being but barely sufficient to supply the country ; though before the loss of Oran, the merchants have been known to ship off from one or other of the ports of Barbary, several thousand tons of corn. The consumption of oil, though here in great abundance, is likewise so consider- able in this kingdom, that it is seldom permitted to be shipped off for Europe. The other exports consist chiefly in ostrich feathers, copper, rugs, silk sashes, embroidered handkerchiefs, dates, and Christian slaves. Some manufactures in silk, cotton, wool, leather, &c. are carried on in this country, but mostly by the Spaniards settled here, especially about the metropolis. Carpets are also a manufacture of the country, which, though inferior to those of Turkey both in beauty and fineness, are preferred by the people to lie upon, on account of their being both cheaper and softer. There are also, at Algiers, looms for velvet, taffaties, and other wrought silks ; and a coarse sort of linen is likewise made in most parts of the kingdom. The country furnishes no ma- terials for ship-building. They have neither ropes, tar, sails, anchors, nor even iron.

The preceding account of Algiers as it was, is extraordinary, as establishing the melancholy truth of so much injustice, cruelty, and infamy

having been permitted to retain an uncontrolled dominion for so many years, in the vicinity of the most civilised nations of the world, and ac- tually adjoining a commercial settlement of the French nation. Until the present century all nations trading to the Mediterranean were sub- jected to an

annual tribute to this nation of pirates, in order to protect their commerce from interruption, their property from spoliation, and their subjects from slavery. Spain endeavoured to release herself from the irksome impost, and to prohibit the extortion, but without success. England stormed the haughty robber in his fortress, shook his capital around him, and, having humbled him to the dust, struck off the fetters from the Christian captives. America, a land of freedom, also asserted the rights of man, and united with her parent country, in 1816, in giving liberty to the numerous victims of Algerine cruelty. Any other nation, any oilier governor, if not influenced by a feeling of actual loss and injury sustained by repeated chastise- ments, would have either calmly yielded to the conditions which nations so superior in force had imposed, or acknowledged the obligation of a treaty. It was otherwise, however, with this piratical people ; and the continuance of their falsehood and infamy led to their extinction as an independent state. The French ultimately resolved upon ridding the world of this bar- barous system of government, and, in the year 1830, despatched an army of 40,000 men for that purpose to the shores of Barbary. This body of troops, well disciplined and equipped, landed on the coast in the autumn of that year, and effected an easy conquest of the city of Algiers. The dey was permitted to withdraw into Europe, where he sunk into private life, and the state of Algiers was converted into a de- pendency of France.

ALGOA, or ZWARTKOPS BAY, an inlet of the southern coast of Africa, east of the Cape of Good Hope, from which it is distant about 500 English miles, being situated in south lat. 33►►. 56'. and east long. 26►►. 53'.

This bay, in the neighbourhood of which it is projected by government to found a new and important colony, is about twenty miles in breadth from east to west, and the shore is a level sandy beach, except from the usual landing place to its western extremity. The bottom is good holding ground. A heavy swell rolls in from the eastward, and the bay

is open to all winds that blow from north-east to south-east; so that it at present affords but a very imperfect shelter against the most prevailing gales. On the west, about a mile out, is good anchorage in five fathoms ; in the bay the tide rises between six and seven feet. It receives the Sunday, Kowie, and Zwartkops rivers, and has some fine springs of water near the landing place on the western side. The bar of the Zwartkops is sometimes open, and at other times closed ; but within the bar the river is navigable for small vessels several miles.

A slip of laud about 4000 feet in length, and

500 wide, is here sheltered on one side by a ridge of sand hills, and on the other by a sudden rise of the country. The soil is fruitful, and pre- sents a fine situation for a fishing village. The black whale abounds in the bay ; a large natural salt pan is' found in the neighbourhood, and solid advantages might be derived to the nation, and to the East India Company in particular, it would seem, by an establishment formed on this spot for salted beef and fish. Superior cattle to those of the Cape are found in this neigh- bourhood, and Mr. Barrow conjectures that beef could be yielded here at sixpence per pound, or even under that price, to shipping. Hides and skins might also be salted and become a valuable export. Those of the wild animals here, (par- ticularly of the antelope), even with the native dressing, make excellent leather ; the surrounding country is fertile in corn, and has several noble woods within a short distance from the bay. 'The country about Zwartkops bay,' says the enlightened traveller we have just named, seems to be well adapted for the cultivation of grain. The farmers here give themselves no trouble to manure the land, yet reckon upon a return of twenty-five, thirty, and even fortv. for one, es^-

pecially if a stream of water can occasionally be turned upon the ground. On stiff clayey land a small quantity of sheep's dung is sometimes employed to prevent the fragments from clogging together, and so make the parts less tenacious. The little value they attach to manure is obvious from the heaps of dung that are piled about the houses in those places where the cattle, in order to preserve them from beasts of prey, are pent up at night. These consist of circular or square spaces, shut in by dead branches of the thorny mimosa, which are called kraals, a name they have also thought proper to transfer to the collected huts of the Hottentots and Caffres. The beds of some of these kraals were not less than twelve feet deep of dung, unmixed with any other material ; but this is neither the only nor the least offensive nuisance with which the hovel of a Dutch peasant is usually surrounded.

The great fertility of the land in this part of the colony, is not, however, any inducement to the farmer to extend the cultivation of grain be- yond the present limited quantity, as he can have no demand for his produce unless a regular coasting trade were established. They would be very glad to find a market for their grain at a fixed contract price, even as low as two shillings and eight pence for a Winchester bushel, de- livered in Zwartkops bay. (This was in 1797.) The wheat of the Cape is a large full grain, weighing usually from sixty-one to sixty-six pounds a bushel. Immediately after the capture a small cargo was sent to Europe, which sold at Mark-lane market at a higher price than the best English wheat that appeared on the same day.'

Zuurveldt is on the east side of this bay, and the capital of the new district of Uitenhagen stands to the north of it, and on the Zwartkops river. Fort Frederick is a recent establishment on the shores of the bay, surrounded by a few houses.

ALGOIDES, in botany, a name given by Vaillant to a species of plants, called by Micheli and Linnaeus zannichellia. Also an aquatic plant so called from its resemblance to the alga, having imperfect

hermaphrodite flowers.

ALGOL, or MEDUSA'S HEAD, a fixed star of the third magnitude, in the constellation Per- seus ; Ion. 21□□. 50'. 42□□. of Taurus ; lat. 23□□. 23'. 47." N. according to Flamstead. This star has been subject to' singular variations, appearing at different times of different magnitudes, from the fourth to the second which is its usual size. This is supposed to be owing either to the in- terposition of a large body revolving round Al- gol, or to some portion of its own; in conse- quence of which, part of its body covered with spots, or such like matter, is periodically turned towards the earth.

ALGON, a small island of Sweden, on the \ve-t coast of the gulf of Bothnia. Long. 18□□. 26'. E. lat. 63□□. 9'. N.

ALGONQUINS, the name of several tribes of savage Indians, who inhabit different parts of North America, but all supposed to proceed from a common origin. The Algonquins of Canada were formerly numerous; but their

present number, according to Mackenzie, does not exceed 150 families.

The Algonquins of Rainy Lake inhabit a country, the precise limits of which are not accurately known. The country which they possess has been much hunted, and its game is now nearly exhausted ; in consequence of which they roam about in detached parties in quest of a precarious subsistence. They are immoderately fond of spirits, of which large quantities are furnished them by the north-west traders, in return for their furs and other commodities.

The Algonquins who inhabit Portage de Prairie, possess a low, flat, and marshy country, mostly covered with timber, and filled with game. They are emigrants from the lake of the woods, and the country east of it, and were settled in their

present abodes by the north-west traders, that they might hunt the country on the lower parts of Red River. They are orderly, well disposed, and immoderately addicted to spirit drinking.

As hunters and warriors, the Algonquins had no rivals, and were once closely connected with the Iroquois Indians, and considered as their pro- tectors ; but their allies and protegees began to rival their former masters in the arts of hunting and of war, and jealousies arose which almost proved fatal to the existence of the Algonquins, although they were assisted by the French. The language of the Algonquins is considered as the most ancient and copious of the three radical tongues of the North American Indians, and is preferred to either the Huron or the Sioux. There is a church devoted to the Romish religion in their territory ; but the exertions of the priest- hood have hitherto had little effect on their morals : they are in the general practice of po- lygamy, and given to the use of intoxicating liquors as much as ever. The country around them is cultivated in miserable and detached patches of ground, and this solely by their women, the men being engrossed with fishing and hunting. The residence of the first chief, or Sachem, of all the Algonquin tribes, is at the trading establishment, situate on a high bank on the north side of the river la Pluie, in north lat. 48►►. 37'. This chief is by way of dis- tinction called Nectam, implying personal pre- eminence. In this place the elders meet in council to treat of peace, war, and other public concerns.

ALGORAB, a fixed star, of the third mag- nitude, in the right wing of the constellation Cofvus, marked (S) by Bayer.

ALGORITHM, an Arabic term for the art of numbering truly and readily, comprehending the six common rules of arithmetic, and called logistica numeralis. We say the algorithm of integers, the algorithm of fractions, the algorithm of surds, &c.

ALGOSAREL, in botany, a name used by Avicenna, and

some other authors, for the dau- randa decus carotta of Linnaus.

ALGOZO, a small town of Portugal, in Traz- oz- montes, twenty miles west-south-west of Mi- randa de Duero.

ALGUAZIL, in the Spanish polity, an officer

whose business it is to see the decrees of a judge executed.

ALHABOR, the Arabian name for the star called Sirius

ALHAGI, in botany, the trivial name of a species of hedysarum. See HEDYSARUM iu;s.

ALHAMA, a populous and well built town of Granada, in Spain, situated in the midst of craggy mountains, about twenty-five miles south- west of Granada, on the banks of the Motril, and having the finest warm baths in all Spain. It was taken from the Moors in 1481, when the inhabitants, though surprised, and the town without a garrison, made a gallant defence ; but being at length forced ttf submit, the place was abandoned to the pillage of the Christian sol- diers, who, not satisfied with an immense quan- tity of gold and jewels, made slaves of upwards of 3000 of the inhabitants. Lon. 3►►. 24'. W. lat. 36►►. 49'. N.

ALHAMBRA, an ancient fortress, and resi- dence of the Moorish monarchs of Granada, It derives its name from the red colour of the ma- terials with which it was originally built, Al- hambra signifying a red house. It appears to a traveller a huge heap of ugly buildings as can well be seen, all huddled together, seemingly without the least intention of forming one ha- bitation out of them. The walls are entirely unornamented, all gravel and pebbles, daubed over with plaister in a very coarse manner : yet this is the palace of the Moorish kings of Gra- nada, and it

is indisputably the most curious place that exists in Spain, perhaps in the world. In many countries may be seen excellent mo- dern, as well as ancient architecture, both en- tire and in ruins ; but nothing to be met with any where else can convey an idea of this edi- fice, except the decorations of an opera, or the tales of the genii.

*Passing round the corner of the emperor's palace, one is admitted at a plain unornamented door in a corner. ' On my first visit,' says Swinburne, in his Travels in Spain, * I confess I was struck with amazement, as I slept over 'he threshold, to find myself on a sudden trans- ported into a species of fairy land. The first place you come to is the court called the com- muna or del mesucar, that is, the common baths ; an oblong square, with a deep basin of clear water in the middle ; two flights of marble steps leading down to the bottom; on each side a parterre of flowers, and a row of orange trees. Round the court runs a peristyle paved with marble ; the arches bear upon very slight pillars, in proportions and style different from all the regular orders of architecture. The ceilings and walls are encrusted with fret work in stucco, so minute and intricate, that the most patient draughtsman would find it difficult to follow it, unless he made himself master of the general plan. This would facilitate the operation ex- ceedingly; for all this work is frequently and regularly repeated at certain distances, and has been executed by means of square moulds ap- plied successively, and the parts joined together with the utmost nicety. In every division are Arabic sentences of different lengths, most of them expressive of the following meanings :*

' There is no conqueror but God ;' or, ' Obedi- ence and honour to our lord Abouabdoulah .' The ceilings are gilt or painted, and time has caused no diminution in the freshness of their colours, though constantly exposed to the air. The lower part of the wall is mosaic disposed in fantastic knots and festoons. The porches at the end are more like grotto work than any thing else to which they can be compared. That on the right hand opens into an

octagon vault, under the emperor's palace, and forms a perfect whis- pering gallery, meant to be a communication between the offices of both houses. Opposite to the door of the communa through which you enter, is another leading into the quarto de los leones, or apartment of the lions, which is an oblong court, 100 feet in length, and fifty in breadth, environed with a colonnade seven feet broad on the sides and ten at the end. Two porticoes or cabinets about fifteen feet square, project into the court at the two extremities, The square is covered with coloured tiles ; the colonnade with white marble. The walls are covered five feet up from the ground with blue and yellow tiles disposed chequerwise. Above and below is a border of small escutcheons, enamelled blue and gold, with an Arabic motto on a bead ; signifying, 'No conqueror but God.' The columns that support the roof and gallery are of white marble, very slender and fantas- tically adorned. They are nine feet high, in- cluding base and capital, and eight inches and a half diameter. They are very irregularly placed ; sometimes singly, at others in groups of three, but more frequently two together. The width of the horse-shoe arches above them is four feet two inches for the large ones, and three for the smaller. The ceiling of the portico is finished in a much finer and more complicated manner than that of the communa, and the stucco laid on the walls with inimitable delicacy ; in the ceiling it is so artfully frosted and handled as to exceed belief. The capitals are of various de- signs, though each design is repeated several times in the circumference of the court, but not the least attention has been paid to placing them regularly or opposite to each other. Not the smallest representation of animal life can be discovered amidst the varieties of foliages, gro- tesques, and strange ornaments. About each arch is a large square of arabesques, surrounded with a rim of characters, that are generally quotations from the Koran. Over the pillar is another square of delightful filagree work. Higher up is a wooden rim, or kind of cornice, as much enriched with carving as the stucco that co-

vers the part underneath. Over this projects a roof of red tiles, the only thing that disfigures this beautiful square. This ugly covering is mo- dern, put on by order of Mr. Wall, the late prime minister. In the centre of the court are twelve ill- made lions muzzled, their fore parts smooth, their hind parts rough, which bear upon their backs an enormous basin out of which a lesser rises. While the pipes were kept in good order, a great volume of water was thrown up : which, falling down into the basins, passed through the beasts, and issued out of their mouths into a large reservoir, where it communicated by channels

with the jets d'eaux in the apartments. This .fountain is of white marble, embellished with many festoons and Arabic distiches, compliment- ing the monarch and his princes. Passing along the colonnade, and keeping on the south side, you come to a circular room used by the men as a place for drinking coffee and sorbets in. A fountain in the middle refreshed the apart- ment in summer. The form of this hall, the elegance of its copula, the cheerful distribution of light from above, and the exquisite manner in which the stucco is designed, painted, and finish- ed, exceed all powers of description. Every thing in it inspires the most pleasing, voluptuous ideas ; yet in this sweet retreat, they say, that Abouabdoulah assembled the Abencerrages, and caused their heads to be struck off into the foun- tain. Continuing your walk round, you are next brought to a couple of rooms, at the head of the court, which are supposed to have been tri- bunals, or audience chambers. Opposite to the Salas de las Abencerrages is the entrance into the Torre de las dos hermanas, or the tower of the two sisters ; so named from two very beauti- ful pieces of marble laid as flags in the pave- ment. This gate exceeds all the rest in profu- sion of ornaments, and in the beauty of prospect which it affords through a range of apartments, where a multitude of

arches terminate in a large window open to the country. Tn a gleam of sun- shine the variety of tints and lights thrown upon this enfilade are uncommonly rich. The first hall is the concert room, where the women sat ; the musicians played above in four balconies. In the middle is a jet d'eau. The marble pave- ment is equal to the finest existing, for the size of the flags and evenness of the colour. The two sisters are slabs that measure fifteen feet by seven and a half, without flaw or stain. The walls, up to a certain height, are mosaic, and above are divided into very neat compartments of stucco, all of one design, which is also followed in many of the adjacent halls and galleries. The ceiling is a fretted cove. To preserve this vaulted roof, as well as some of the other principal cupolas, the outward walls of the towers are raised ten feet above the top of the dome, and support another roof over all, by which means no damage can ever be caused by wet weather or excessive heat and cold. From this hall you pass round the little myrtle garden of Lindarax, into an ad- ditional building made to the east end by Charles V. The rooms are small and low. His favourite motto, < Plus outre",' appears on every beam. This leads to a little tower, projecting from the line of the north wall, called El tocader, or the dressing-room of the sultana. It is a small square cabinet, in the middle of an open gallery, from which it receives light by a door and three windows. The view is charming. In one cor- ner is a large marble flag, drilled full of holes, through which the smoke of perfumes ascended from furnaces below ; and here, it is presumed, the Moorish queen was wont to sit to fumigate and sweeten her person. The emperor caused this room to be painted with representations ot his wars, and a great variety of grotesques, which appear to be copies, or at least imitations, ot .hose in the lobby of the Vatican. From hence vou go through' a long passage to the hall oi

ambassadors, which is magnificently decorated with innumerable varieties of mosaics, and the mottoes of

all the kings of Granada. This long narrow antichamber opens into the communa on the left hand, and on the right into the great audience hall in the tower of Comares, a noble apartment, thirty-six feet square, thirty-six high up to the cornice, and eighteen from thence to the centre of the cupola. The walls on three sides are fifteen feet thick, on the other, nine ; the lower range of windows thirteen feet high. The whole wall is inlaid with mosaic of many colours, disposed in intricate knots, stars and other figures. In every part various Arabic sen- tences are repeated. Having completed the tower of the upper apartments, which are upon a level with the offices of the new palace, you descend to the lower floor, which consists of bed-chambers and summer rooms : the back stairs and passages, that facilitated the intercourse be- tween them, are without number. The most re- markable room below is the king's bed-chamber, which communicated, by means of a gallery, with the upper story. The beds were placed in two alcoves, upon a raised pavement of blue and white tiles ; but as it was repaired by Philip V. who passed gome time here, it cannot be said now it may have been in former times. A fountain played in the middle, to refresh the apartment in hot weather. Behind the alcoves are small doors that conduct you to the royal baths. These con- sist of one small closet with marble cisterns for washing children, two rooms for grown-up per- sons, and vaults for boilers and furnaces that sup- plied the baths with water and the stoves with party coloured earthenware ; light is admitted by holes in the ceiling. Hard by is a whispering gallery, and a kind of labyrinth said to have been made for the diversion of the women and children. One of the passages of communication is fenced off with a strong iron gate, and called the prison of the sultana ; but it seems more pro- bable that it was put up to prevent any body from climbing up into the women's quarter. Under the council room is along slip, called the king's study : and adjoining to it are several vaults, said to be the place of burial of the royal family. In the year 1574, four sepulchres were opened; but as they contained

nothing but bones and ashes, were immediately closed again.' This noble palace, however, is hastening to decay, and without repairs, to which the finances of Spam are inadequate, it will in a few years be a pile of ruins. Its beautiful apartments, its stately co- lumns, and its lofty walls, will be mingled to- gether, and no memorial be left in Spam of a people who once governed the Peninsula.

ALHANDAL, from handal, Arab, colocynthos, a term in the Arabian pharmacy, signifying colo- cynth❓❓❓ The trochisee alhandal, are a kind of troches composed of colocynths, bdellium, and gum tragacanth. They were esteemed good purgatives, though not used at this time.

ALHAZEN, in biography, a learned Arabian, who lived in Spain about the close of the eleventh, or beginning of the twelfth century. His prin- cipal works are a treatise on astrology, and ano- ther on optics, printed in Latin in the Thesaurus Optic of Risner, in 1572. Alhazen suppose vhat the refraction of the atmosphere did not de-*

pend upon its vapours, but upon its different transparency. In examining the effects of re- fraction, he endeavours to prove that it is so far from being the cause of the heavenly bodies ap- pearing larger near the horizon, that it would make them appear less : two star?, he says, ap- pearing nearer together in the horizon than near the meridian. This phenomenon he ranks among optical deceptions.

ALHEN, in natural history, a name by which Dr. Shaw, and others, have called a genus of plants, named by Linnaeus Lawsonia inermis.

ALHIDADA, or ALIDADE, Arab, a ruler, the index or label of an astronomical, or geometrical astrolabe for taking heights or distances.

ALHIRTO, in astronomy, a fixed star of the third magnitude, in the constellation Capricorn, otherwise called rostrum gallinse. Near this star, in 1600, appeared a new star, which con- tinued visible twenty-one years, and then disap- peared.

AH, a sect among the Mahommedans, who ad- here to the right of succession of Ali, and to the reform of Mussulmanism introduced by him. This sect is more particularly called Schiites ; and stands opposed to the Sunnites, or sect of Omar, who adhere to the law as left by Maho- met, Abubeker, and Omar. After' Mahomet's death, great disputes arose about the succession, and though many voted for Ali, Abubeker was preferred, and elected the first caliph. The Per- sians are the chief adherents to the sect of Ali, whom they hold to have been the legitimate suc- cessor of Mahomet, and Abubeker an usurper. On the contrary, the Turks are of the sect of Omar ; and hold Ali in execration. The distin- guishing badge of the followers of Ali is a red tur- ban, which is worn by the Persians, who are hence called in derision, by the Turks, Kilsibachi, i. e. red heads. See next article.

ALI, or HALT, the son of Abu Taleb, cousin- german and son-in-law of Mahomet, being mar- ried to his daughter Fatimah. He was the fourth caliph after him, as he did not succeed till after the death of Othman, in 1655, though he stood competitor with Abubeker, upon Maho- met's death, A. D. 632, which occasioned a civil war among the Mussulmans. He was murdered in the fifth year of his reign, and sixty- third of his age, A. D. 660, near . Cafa, in Arabia Felix, by Muavias, the sixth caliph ; who, to obtain that dignity, poisoned Ali's sou and successor, Hacen, along with his brother Hassan, and eleven of Ali's grandsons, within six months after his death. It is worth remarking, that the four first successors of Mahomet, Abubeker, Omar, Oth- man, and Ali, whom he had employed during his life as his chief agents in establishing his reli- gion, by extirpating unbelievers, and whom on that account he styled the ' cutting swords of God,' like the successors of Alexander, all died violent deaths ;

and that this bloody impostor's family j as well as that of the mad monarch of Macedonia, was nearly, if not totally, extirpated within thirty years after his death. When the prophet assembled his kinsmen, and declared his mission, he asked which among them would be his vizier : ' I am the man,' exclaimed the youth- ful Ali, then of the age of fourteen ; ' whoever rises against thee, I vi\ dash out his teeth, tear

out his eyes, break his legs, rip up his belly ; O prophet, I will be thy vizier over them.' Ali kept his word ; and famous both for his eloquence and valour, became one of the main pillars of the new faith, and obtained the name of the ' Lion of God, always victorious.' He is said to have been the author of several works, particu- larly one entitled Centiloqulum, which is much esteemed among the Arabs and Persians ; and part of which has been translated into English by M. Ockley. He also wrote an interpretation of the Alcoran.

ALI BEY, an eastern adventurer, whose his- tory and exploits have excited considerable interest. He was probably born among the Abazans, a people inhabiting Mount Caucasus, and brought by the slave merchants to one of the annual sales at Cairo, where he was purchased bj the brothers Isaac and Yousef, Jews, em- ployed in the custom-house, and presented by them to Ibrahim, a kiaya, or veteran colonel of janissaries, and one of the most considerable men in Egypt. He is supposed to have been then twelve or fourteen years of age. By the favour of his patron, he was taught to read, write, and perform the customary military exercises, in which he displayed a fire and activity that obtained for him the appellation of djendali, or madman. At the age of eighteen or twenty his beard was allowed to grow, or he was made free ; his patron gave him a wife and revenues, promoted him to the rank of kachef, or governor of a district, and procured him to be elected one of the twenty- four beys. His ambition was hereby excited ; and the death of Ibrahim, in 1 757, opened a way for the execution of his projects. After an absence of a few years, during which he had

been engaged in various intrigues for raising and displacing several chiefs, and two years of which he had passed in a state of exile in Said, or Upper Egypt, devising his plans of future domination, he returned to Cairo in 1766 ; and in one night killed four beys, who were his enemies, banished four others, and from that time became chief of a numerous party. Not contented with the office of bey, he aspired to the sultanship of Egypt ; determined to throw off the supremacy of the Porte, and accordingly expelled the pacha, re- fused the tribute, and in 1768 proceeded to coin money in his own name. The Porte, occupied by other concerns, was under a necessity of tem- porising ; and Ali pushed forward his enterprises with success. He began with dispossessing Hammam, an Arab sheik, of a port of the Said, which he had occupied, and where he had formed a power capable of giving disturbance : and towards the end of this year, 1769, fitted out some vessels at Suez, which were ordered to seize on Djedda, the port of Mecca, whilst a body of cavalry marched by land to take possession of the city itself. The project which he had formed was, to make Europe abandon the passage to the East Indies by the Cape of Good Hope, and substitute the ancient route of the Mediterra nean sea, and the Arabian gulf. Flushed wiffi success, in the enterprises he had accomplished already, his ambition suggested to him more ex- tensive conquests. Syria was the first object of his contemplation; and the war with the Rus- sians, which broke out in 1769, and which occu-

pied all the Turkish forces in the north, favoured his design. Besides which, sheik Daher, in actual rebellion against the Porte, would be a powerful ally ; and the extortions of the pacha of Damascus disposed those he had oppressed for revolt, and made way for his obtaining the title of the deliverer of nations. AH having laid his plan, detached in 1 770 a corps of Mamalukes, to take possession of Gaza, and thus to secure an entrance into Palestine ; soon after he sent a larger army to form a junction with Daher at Acre, and to proceed thence to Damascus.

Osman, the pacha of this place, was diligent in nis preparations, and collected a numerous army. On the 6th of June 1771, a decisive action took place, in which Mahomet, the friend of AH, and Daher his ally, proved victorious, and took pos- session of Damascus ; but the castle resisted. At the moment when the signal of surrender was expected, Mahomet suddenly commanded a re- treat, and all his cavalry turned towards Egypt. This singular revolution was at first attributed to a pretended report of the death of AH Bey ; but it was owing to a conference which had passed the preceding night between a crafty agent of Osman and Mahomet Bey, Ali's commander. AH, though disappointed and chagrined, did not re- nounce his projects; he prepared, in conjunction with Daher, a second army for the campaign of 1772, but the event was unpropitious. The escape of Mahomet roused his jealousy and his fears ; he beheld in him a dangerous rival, and re- solved on his ruin. Having ordered the gates of Cairo to be shut, and no Mamaluke to be allowed to pass, he sentenced Mahomet into immediate exile in the Said. Mahomet, however, contrived to make his escape ; and from this moment all was lost; for the Mamalukes, wearied with the insolence of AH Bey, repaired in crowds to his rival, so that in about six weeks he left the Said with a strong force, and marched towards Cairo. Ali, however, prepared to meet him ; and in the month of April 1772 the two armies had a ren- contre in the plains of El-Masateb, at the gates of Cairo ; the issue of. which was, that Mahomet and his party entered the city, sabre in hand ; and Ali Bey had barely time to escape with 800 of his Mamalukes. With this inconsiderable force he repaired to Gaza, and attempted to join his ally, Daher, at Acre, who, after some danger from which he was rescued, conducted him to the city. Both Ali and Daher marched to the suc- cour of Said, (Sidon,) which was then besieged by the troops of Osman, in conjunction with the Druzes. At their approach the Turks raised the siege, and retired to a place about a league north of the city, on the river Aoula. There, in July 1772, an engagement took place; and the Turkish army, three times more numerous than that of the two

*allies, was entirely defeated. The seven pachas, who commanded it, fled; and Said remained in the possession of Daher. AH Bey and Daher, on their return to Acre, proceeded to chastise the inhabitants of Yafa, or Jaffa, who had revolted ; and, after a siege of eight months, the town v capitulated in February 1773. Ali now determined to return to Cairo ; and he was encouraged in his purpose by the promised suc- ******ours of Daher, and of the Russians. This*

assistance was delayed,. and Ali became impatient. In April 1773, quickened in the execution of his purpose by fabricated letters which he re- ceived from Cairo, he began his march at the head of his Mamalukes, and some troops fur- nished by Daher ; ' but when he advanced into the desert, which separates Gaza from Egypt, he fell into an ambush of 1000 Mamalukes, com- manded by Mourad, a young bey, who, being enamoured of the wife of AH Bey, had obtained a promise of her from Mahomet, in case he should bring him the head of AH. The attack was impetuous ; Mourad met with AH in the crowd, wounded him in the forehead, made him prisoner, and conducted him to Mahomet. By his former master, Ali was received with perfidious respect; but on the third day this parade of civility and politeness terminated by the death of AH Bey, who, according to some, died of his wounds; or, as others report, by poison.

*Ali Bey was a character of original vigour and capacity ; and was superior in his views to what could have been expected, from one who was bred in barbarism and ignorance *** he governed Egypt with a steady hand, and was particularly favourable to the Franks. But he undertook more than he had power or talents to perform; and by this means exhausted his revenues in fruitless enteiprises. He is also blamed for re signing active labours to his lieutenants, fo- placing unlimited confidence in his favourites, and winking at the exactions of his officers. His morals were those of his country, where perfidy and murder are the only means of pursuing the objects of ambition ; yet he was not*

devoid of generosity. During his administration, several nests of robbers in Egypt were annihilated; vil- lages which had been inhabited by the pirates of the Nile were razed; the communication between different parts of the country was free ; the roads were no longer infested with robbers, nor was navigation interrupted by that spirit of pillage, which, since his death, has resumed its fatal activity. It was his wish that every man might be able to carry his purse in his hand, and leave his door open, without running any risk.

ALI PACHA, of Janina and vizier of Epi- rus. He rose, as we have seen already, (arti- cle ALBANIA,) from a comparatively obscure birth ; but the genius and enesgy of his mother gave a very remarkable and successful impulse to his early life. In the strength, as well as impla- cability, of her character, she appeared worthy to be the parent of such a son. ' To my mother,' said he one day to the consul general of France, M. Pouqueville, ' I owe all ; for my father, on his death bed, left me but a mere hole, and a few fields. My imagination, fixed by the counsels of her who has twice given me existence, for she has made me a man and a vizier, revealed to me the secret of my destiny. From that mo- ment I only considered Tepelini as the natal aerie from which I was to dart upon the prey already mine in idea. From that moment I thought but of power, treasure, and palaces ••• in fact, of all which time itself has realized, and which it still promises.' Khamco, in fact, ^er- self the daughter of the Bey of Konitza, and

favourite wife of Ali's falher, believed our hero to be destined to restore the honours of his fa- mily. ' My son,' she would frequently say to him, 'he who does not defend his inheritance deserves to be deprived of it. Recollect that the property of others only belongs to them by the right of the stronger. Why then should it not be yours ?' •••

and All was, through life, but too obedient to this advice. The indignity she endured from the Gardikiotes, was, it must be admitted, cruel to the last degree ; being car- ried off by surprise from Tepelini, the family inheritance, with her daughter Chainitza, then in the flower of youth. She was imprisoned in a dungeon, and brought out daily to endure the brutal embraces of the principal inhabitants ; an injury remembered for forty years by Ali and his sister. The vizier himself declared, that after being reduced, some time after this circum- stance, to the necessity of selling his sabre to procure bread, his fortunes were suddenly al- tered by the circumstance of discovering a chest full of gold, in the ruins of an old monastery ; with which money he raised two thousand men, and entered Tepelini in triumph. He now took one of his characteristic methods of making himself absolute master of his native town. Having personal enemies whom he wished to cut off, he secretly fermented amongst them a conspiracy against himself; and left on a certain day his riding cloak in a wood, where he oc- casionally hunted and slept, covering a goat. The conspirators, as previously arranged, came and fired through his mantle, exclaiming in tri- umph as they returned, 'Veli bey, is no more.' In the evening he attacked their houses, crying out in return, ' Mine is the cause of justice,' and put the whole party to the sword.

We have noticed his attack and overthrow of the neighbouring pachas of Berat and Delvino ; the latter was, according to his own acknowledg- ment, a distinguished benefactor of Ali's. He possessed a territory which had long been a mat- ter of dispute between the Porte and the Vene- tians ; and having sold to the latter a forest near the lake Pelode, Ali caused it to be secretly re- presented at Constantinople, that the Pacha of Delvino had alienated a portion of the Sultan's territory. On this, the Divan, as he had cal- culated, despatched a firman to Ali, for that chieftain's death. He went to Delvino, was re- ceived by the old Pacha with his accustomed kindness, and lodged in the seraglio.

Every morning he waited upon his host to pay him the customary compliments. One day feigning in- disposition, Ali requested Selim would come into his apartment for the purpose of receiving an important communication. The invitation being accepted, scarcely had the unfortunate old man entered the room, than the assassins, who had been concealed in a closet, upon a signal being given, rushed out, and stabbed him to the heart; he fell, pierced with wounds, uttering almost the same words as Caesar, ' Is it thou, my son, who deprivest me of life?' At the noise of the tumult, his guard hastened to the spot, and found Ali in the midst of the assassins, with the firman in his hand, exclaiming in threatening accents, ' I have killed the traitor by order of our

glorious sultan ! here is his imperial mandate Ali's contests with the Suliotes, developed IT. the latter many of the noblest qualities of the ancient Greeks. At the commencement of theit first war with him, they possessed sixty-six in- dependent villages, and an army of 1400 expe- rienced soldiers. The whole of this valiant Christian republic he managed, after several years of cruelty and treachery, to disperse or destroy. Their ill-deserved fate found commiseration with in the walls of his own seraglio. Emineh, his favourite wife, and mother of his two sons, Mouctar and Veli, fell at his feet to implore his clemency for them, asserting that the tutelar genius of his fortunes had warned her in a dream to spare the Suliotes. ' The Suliotes, the most inveterate ??? the most implacable of my enemies,' exclaimed the vizier in a voice of thunder, and drawing a pistol from his girdle, discharged it at the suppliant, who, though not wounded, it is said, died with fright. His cruelties to the weaker sex ' stain him' indeed ' with disgrace.' His son, Mouctar, having become enamoured of the wife of a principal citizen of Janina, Ali did not disdain to take up the quarrel of his daughter-in-law, who detected a jewel in the possession of the beautiful Phrosina, which she had given to her husband. He swore by the beard of Mahomet, that he would obtain

*for her ample vengeance ; and repaired himself by night to the residence of the frail fair one. With *he lamp in his hand, he entered her bed-room, awoke her, exhibited the ring, and commanded her to rise and follow him. Having arrived in the court-yard, he directed his guards to conduct her into a Greek church, on the borders of the lake, and afterwards sent thither twenty of the vilest women of the place as her companions. The next evening the whole were taken out upon the water in a boat, and each being in succession sown up in a sack, was precipitated into the waves.*

After the reduction of the Suliotes, Ali found himself in the midst of new enemies, having re- fused, on the destruction of that republic, to withdraw his troops from the district of Tra- mouria ; the beys in authority there resented his conduct, and refused to pay into his hands those maritime duties of the coast which he had farmed from the Porte. They solicited, and re- ceived, considerable aid from the Russians, who further augmented Ali's jealousy against them, in 1805, by becoming masters of Montenegro, on the north of Albania. In this war with the beys, Ali subdued and pillaged above forty towns and villages. The progress of the French arms in Dalmatia was by no means pleasing to him, and first induced him to open that active correspondence with the court of St. James, which, through Lord Nelson, Lord Collingwood, and Major Leake successively, was kept up for many years. All the events of the French revo- lution were familiar to this Napoleon of the east; rior did Buonaparte overlook the importance of Ali's political situation. In the latter end of 1805, M. Pouqueville, to whom we are indebted for many anecdotes of this despot, was nomi- nated consul-general of France at Janina. He thus describes his first audience with the vizier :

' After the usual compliments, the privatv.1

dragoman of the vizier was called, in order to commence the conversation, which the Pacha began by asking questions with a volubility very uncommon among the Turks. Through the shade (for the hall of audience was only illuminated by the flitting and uncertain light of a yellow bougie), I perceived the coruscations of his pe- netrating eyes, and observed the convulsive motions of his features ; I listened to his con- versation, apparently vague and unconnected, yet full of cunning and duplicity. Swinging himself about, continually laughing and talking, not a word escaped him but had its import, not- withstanding the rapidity of his utterance ; he at times threw scrutinizing glances on me, and at length ordered his Greek secretary, and his minister, who was dressed in black and wore a long white beard, to retire. We remained with the interpreter, who continued to stammer out the questions and answers, till after a conversa- tion of about two hours, we withdrew, leaving the vizier struggling between hopes and fears. ††† ††† This interview sufficed to dissipate some of the illusions which I had been under : AH Pacha was neither a new Theseus, nor the modern Pyrrhus of Epirus. I was disgusted with his manners, and secretly deplored my fate in being compelled to reside near and be in communi- cation with a man of such a character.'

After the battle of Austerlitz, our wily Greek found his account in flattering the French usurper ; and, is said, through the interest of the latter at Constantinople to have obtained the pachaship of Lepanta for his son Mouctar ; and that of the Morea for his second son Veli. The French government, in 1 807, gratified him highly by supplying him with a detachment of artillery men, and ordering colonel Vaudoncourt to re- main in his dominions, for the purpose of im- proving the military tactics of his army. Ali, during the war that now ensued between France and Russia, was keeping a watchful eye on the Ionian isles, with the hope of adding them to his other conquests. He sent envoys to London, to Malta, Sicily, and, it is said, even to Tilsit, in the hope

of accomplishing, by negociation, this favourite object ; but the islands were seized by France, and Ali now again returned to his friendly relation with England. He is said to have considerably influenced the signing of a peace at this time between England and Turkey. It was at this period, 1809, that he finally subdued his rival, Ibrahim, the pacha of Herat, and cajoled the divan to bestow the vacant pachaship on his son Mouctar. He finally im- prisoned the feeble vizier, Ibrahim, and con- structed for him a dungeon under the great stair- case of his palace, that he might have the satisfaction of walking daily, as he said, ' over the head of his enemy.' A stratagem of Ali's, with regard to this fallen foe, marks the character of his mind and actions very strikingly. Being in- formed that reports of his various cruelties were becoming rather too serious at Constantinople, he suddenly withdrew Ibrahim from his prison, and concealed the place of his residence from his daughters, who had followed him into cap- tivity. They now therefore naturally concluded that "he had been put to death. Janina resounded

with their insinuations and complaints, and the French consul despatched the tidings to Con- stantinople. On this, a capidgi-baschi was or- dered to proceed to Janina, and make a report respecting the conduct of Ali to Ibrahim. The former received him in the presence of all his ministers, and on the firman of the grand seignior and the nature of his mission being an- nounced, Ali, with a tone of indignant surprize, exclaimed, ' Dead ! ??? my father Ibrahim dead !' Then turning to his ministers, Mahomet and Sechri-efiendi, ' Go,' said he, ' and accompany this officer into Ibrahim's apartment, that he may be convinced of the vile calumnies which are propagated against me.' These officers found Ibrahim in the handsomest apartment of the se- raglio, and well instructed for their reception. He prayed the capidgi-baschi to assure the sultan, his master, that he kissed the earth on which he placed his sacred feet, and while he felt with the deepest gratitude the interest which his

highness took in his welfare, being now too old to support the cares of government, he could not be happier than for himself and his possessions to be in the hands of his dearest friend, the vizier of Janina. Our limits will not allow us to add many other characteristic anecdotes of this most accomplished and most ferocious tyrant of modern times ; but they abound in the writings or allusions of Lord Byron, Mr. Hobhouse, Dr. Holland, and Mr. Hughes.

From his alliance with England, Ali obtained one object of his ambition, little to the credit, as we humbly opine, of British diplomacy ००० the possession of Parga. Ali had strenuously en- deavoured in 1814, to seize upon this devoted rock, the only spot along the whole extent of his coast which could now boast of any indepen- dence ; but though 5000 of his bravest and most experienced troops surrounded the place, and succeeded at one time in entering the lower town they were repulsed by the Parganiotes ; and the place well provisioned, but garrisoned principally by seventy French grenadiers, frowned defiance upon him. When Ali first received the news of this repulse of his troops, he was returning into his capital from Preveza, accompanied with the English resident, and is described as becoming in a moment frantic with rage. ' What !' cried he, ' Parga defended only by sixty Frenchmen, and victorious !' ००० then would he roll himself on his sofa, alternately ' crying like a child, and roaring like a wild beast.' The brave Parganiotes ulti- mately prevailed upon the British authorities in the neighbourhood to seize Parga by a coup de main. Ali, in the cession of this island, reigned with terrible and undisputed sway over a larger country than Pyrrhus, or even than Alexander himself had done before his conquests in Asia Minor. He was master in fact of all continental Greece, from the frontiers of Attica to the mountains of Illyria.

But he himself, on one occasion, ably denned his station: 'A vizier,' he said, ' is a man co- vered with honours, and seated on a barrel of onnpowder,

which may be blown up with a spark.' The Porte became well acquainted with the great extent of his treasures, and anticipated their possible division amongst his children, iu

case he died a natural death. Pacha Bey, an ejected minister, or selictar of his son Veli, had incurred the implacable hatred of AH ; who, fleeing from All's frequent attempts to procure his assassination in Greece, had met at Constan tinople with Demetrius Paleopulo, an ^Etolian, and these two chieftains together drew up a me- morial to the divan, on the subject of Ali's ex- tensive possessions and barbarous tyranny. Pa- cha Bey, after a long attendance upon the sultan, became one of his capidgi-bachi or chamberlains, and in this situation Ali Bey had the hardihood to attempt taking him off, by means of two as- sassins. They procured admission to the resi- dence of this enemy, but having only slightly wounded him, endeavoured to escape. Being pursued and put to torture, they confessed that they were hired by Ali Pacha to assassinate Pa- cha Bey. The assassin was hung in front of the imperial seraglio, and the sentence, firmanly or imperial proscription, was shortly after pro- nounced against the pacha of Janina. Its tenor was, that Ali Pacha, accused of high treason, and having at different periods received pardon of his delinquencies and felonies, should be placed under the ban of the empire, as a relapse, if he did not present himself within forty days at the ' golden threshold of the gate of felicity,' to plead in justification ; and the grand seignior, having put all his agents and couriers into irons, de- clared that whosoever should dare to speak to him in favour of Ali should lose his head.

New governors were at first placed in all the military positions bordering upon Albania; then the neighbouring pachalics of Scodra, Thrace, &c. were ordered to assemble their forces, and the command of

the entire expedition against the rebel vizier was committed to Pacha Bey, now denominated Pacha of Janina and Del vino, by the right of arpalich or conquest. The old lion, as Ali was frequently called, aroused himself with an energy worthy his warlike character. ††† He first .applied for the interposition of the English with the Porte, but failing in this, he purchased largely of them arms and military stores. He re-organized the armatolis, and paid great court to the Greeks ; but on the first ap- pearance of his rival in the neighbourhood, a con- siderable body of the former revolted, and before a blow was struck,Ali lostCisaxian, Macedonia^ and Thessaly, to the defile of Gomphy . His son Veli, on the appearance of the enemy in that direction, abandoned Lepanto, removed by sea all his valuable property to Preveza, and retired himself to Janina, whither his brother Mouctar repaired about the same time. Though Ali was, on his appearance in public, every where re- ceived with acclamations, he now began to find that no reliance could be placed on the greater part of his troops. The whole of higher Albania fell away from him ; and though for a time his enemies were dilatory, and a Turkish fleet, which appeared upon the coasts, at first retired without effecting any object, Pacha Bey gradually advanced in sight of Janina, without fighting a single battle. Ali's long meditated plan of final defence was this, to destroy the tov.'n of Janina, and shut himself up within his vast fortress, situated on the isle of a neighbouring lake. There were remaining to

him about 8000 faithful troops. With these ht garrisoned his three well-constructed castles or the isle, whose walls were protected by 250 pieces of cannon. When the inhabitants of Janina saw the despot retiring with all his treasure into the fortress, they began to embark their property and families upon the lake with a view to escape the coming conflict. Ali, on the other hand, made no scruple of giving up his capital to be pillaged by the soldiery ; and Pacha Bey, on the 19th of August, marched into its still smoking ruins, through the

gate of Paralepti. Ali's gar- rison was provisioned for more than four years, and had ample supplies of ammunition and war- like stores ; neither could water ever be wanting as the castle was situated in the midst of a lake. As the crisis of his fate approached, Ali appeared to summon all his energies to over- come it : even his physical strength seemed to be renewed, and to triumph over the weight ot his years. He was seen at all hours, and in all places ??? now on horseback, now in his palan- quin ; and sometimes seated on a bastion, in conversation with the workmen and common soldiers, whom he daily inspected. In the au- tumn, supposing that some of his troops might be discontented with the confined and arduous service in which they were engaged, he selected 1500 for a sortie-': and, giving them their full pay, opened his gates and sent them forth. As he expected, when they arrived in sight of the Turkish camp, they saluted his enemy, as ' Vali ' and 'Gazi.' In September, the besiegers began to murmur at their new chief, who, finding no present hope of reducing Ali to submission by military manoeuvres, had recourse to a negocia- tion with his sons. These terminated in the surrender of both Previsa and Berat, of which, when Ali was informed, he only observed, ' that he had long considered his sons unworthy of their race; and that henceforward his now depend- ent soldiers are his only children.' Gradually his magnificent palace became only a well- de- fended camp : his harem was attacked almost universally with scurvy and fever ; and a gra- dual waste of his own fine form and complexion evidently appeared. He slept little, and could not trust his person but to the watchfulness of two individuals, Athanasi Vai, on whose knees he slept ; while Ibrahim Saretih, his former post- master, kept watch at the door of his apartment. The siege proceeded slowly, and more than 5000 bombs had been thrown against the castle of Ali without effect. The sultan was at last weary of these ineffectual efforts to subdue a single rebel, and Ismael Pacha was superseded ; in command by Churchid Mahomet Pacha, who after various minor intrigues, induced our Pacha : to open a communication with him in December, ! on

the terms of receiving a pardon and his life, for ! relinquishing his fortress and his treasures. One ; characteristic fact Ali had taken care to commu- nicate to the new commander, viz. that he kept ; in his magazine, night and day, a Turk named Selim, at all times willing to sacrifice his life ! and who was always1 provided with a lighted I match, for the purpose of blowing up 200,000 ! barrels of gun- powder. Churchid at last en i trapped the wily Ali, by an artifice similar tc j

what this despot had often practised. He sent word by a flag of truce that at length the sultan had listened to his frequent representations, and granted AH a pardon ; but it was necessary that he should repair to the Turkish camp, and confer with Churchid in person, Ali was duped into compliance with this; and with about a dozen officers repaired to the camp of Churchid. Here a magnificent tent was prepared for his reception, and all things appeared fair and pro- mising. On the morning of the 5th of February, Churchid sent a message to Ali Pacha, that the pardon had at length arrived, and proposed that as a token of gratitude, Ali should direct his faithful Selim to give up his lighted match. He was doubtful, but, cajoled ; drew forth the half of a ring ; on sight of which Selim prostrated him- self, extinguished his match, and was instantly poniarded.

It was now five o'clock, P. M. and Ali being seated at the door which led to the conference chamber, the apartment was suddenly entered by Hassan Pacha, Omer Bey Brioni, the selictar of Churchid Pacha, and several other officers of the Turkish army. Ali arose with all the energy of his youth, and grasping one of his pistols, ex- claimed, ' Stop ! What is it you bring me ? ' ' The firman of his highness : know you not his sacred characters ?' (shewing him the signature). ••• ' Yes, and I rerere them.' ••• '

If so,' said Has- san, ' submit to your fate, perform your ablutions, and make your prayer to God and to the pro- phet : your head is demanded.' Ali would not permit him to conclude : ' My head,' replied he furiously, ' is not to be delivered up so easily :' and fired his pistol, by which Hassan's thigh was broken. With the rapidity of lightning Ali drew forth his other pistols, and shot two more of his adversaries dead upon the spot. Already had he levelled his blunderbuss loaded with slugs, when the Selictar, in the midst of the affray, (for Ali's adherents defended their master with the utmost fury,) shot him in the abdomen. Another ball struck him in the breast, and he fell, crying out in the struggle of death to one of his si- caires, ' Go, my friend, despatch poor Vasiliki, that these dogs may not profane her beauteous form.' Thus died as he lived this extraordinary and bloody despot : deceived to his undoing, and desperate when he found himself in the toils, because, in fact, he was without principles to teach him either patience or courage.

ALIA, in antiquity, solemn games, celebrated by the Rhodians on the twenty-fourth day of the month Gorpitea, answering to the month Baedro- mion, or the third of the Athenian year, in ho- nour of the sun, aXtoj- or ijXtoc, said to have been born in Rhodes, the inhabitants of which were re- puted his posterity, and therefore called Heli- ades. Boys as well as men engaged at these games, and the victor received a crown of poplar.

ALIACMON, or HALIACMON, a river of Ma- cedonia flowing into the ./Egean sea, to which Claudian gives the epithet of rapidus. It is now called Polecas.

ALJAMEIA, the name which theMoriscoes in Spain gave to the language of the Spaniards. ???

Among other articles agreed upon by the Junto, which was appointed by the emperor Charles V. in 1526, in favour of the Moriscoes, this was one, that the Moriscoes should no longer speak Al- gavaria, i. e.

Moorish or Arabic ; but should all speak Spanish or Aljameia, as it was called by the Moors, and all their writing and contracts should be in that language.

ALIAMET, (J.) a celebrated French engraver, and a member of the academy of Painting, was born at Abbeville in 1728. His best works are representations of battles between the Chinese and Tartars. He died in 1788, at Paris.

ALIAS. Lat. otherwise. Often used in the trial of criminals after one name and before another, to signify that they have more than one appellation ; as, John alias Thomas.

What nation formerly knew not the acts of English- men better than themselves? otherwise, Polydore Virgil had not undertook, to our shame and prejudice, the English chronology : nor Verstegan, alias Rowly, the confidence to render well nigh all the conside- rable gentry of this land, from the etymology of their names, Teutonicks.

Sir T. Herbert's Travels, p. 396.

If the sheriff cannot find the defendant upon the first writ of capias, there issues out an alias writ.

Blackstone.

ALIAS, in law, a second writ issued from the king's courts at Westminster ††† a latitat, capias, or quo minus, having been issued without effect.

ALIAS DICTUS, in law, the manner of describ- ing a defendant when sued on a bond or other speciality. After the name, &c. comes the alias dictus, which describes him by the exact name and addition whereby he is bound in the bond or speciality in question.

ALIBANTES, from dXifiavrtc, a Greek name for those who, on account of poverty, could not procure burial.

ALIBI, in law, denotes the absence of the accused from the place where he is charged with having committed a crime ; or his being else- where, as the word imports, at the time spe- cified.

AL1CA, a sort of frumenty, a nourishing farinaceous food. It is also used for a kind of wheat, %ovSpo►►, which was used as a medicine.

ALICANT, a rich and strong sea-port town of Spain, in the prqyince of Valencia, and territory of Segura. It is seated between the mountains and the sea, and has a castle that was long reckoned impregnable. The port is defended by three bastions, furnished with artillery, and has watch-towers to give notice of an enemy's ship. It was taken from the Moors in 1264. The castle was taken by the English in 1706, and held out a siege of two years before it was re- taken by the French and Spaniards ; but at last surrendered upon honourable terms, after part of the rock was blown up on which the castle stood, and the governor killed. The houses are high, and well built; and a very great trade is carried on in it, particularly in wine and fruit. The English, Italians, &c. have consuls in it. It is seated on the Mediterranean, on a bay of the same name, thirty-seven miles north-east of Mur- cia, and seventy-five miles south of Valencia. Lon. 9►►. 36'. W. lat. 38►►. 35'. N.

ALICANT WINE, in pharmacy, a cordial which has the agreeable colour of red wine added to the mildness of a wine made of must ; and it is generally allowed that it is prepared in that manner. It is evident that the must which pro- duces it has been coloured before fermentation.

ALICATA, a mountain of Sicily, near the valleys Mazara and Noto, upon which was situated, as is

generally thought, the famous Daedalion, where the tyrant Phalaris kept his brazen bull.

ALICATA, anciently called Leocata, a town of Sicily, remarkable for corn and good wine, seated on a sort of peninsula near the sea, eighteen miles east-south-east of Girgenti. It was plundered by the Turks in 1543. Alicata contains 10,000 inhabitants. The populace pay uncommon re- verence to the sacerdotal character ; the women and children falling on their knees in the streets before a clergyman, touching his garments with a finger, and then kissing their hands with great veneration. Alicata is said to possess some an- cient Greek manuscripts relating to the an- cient city of Galae : the most remarkable is a psephisma, or decree of the senate for crowning Heraclides, director of the public academy. Lon. 13►►. 50'. E. Lat. 37►►. 11'. N.

ALICATA CHLAMYS, was a sort of vest with sleeves worn by the Roman boys till the age of thirteen, when they put on the praetexta.

ALICATICA, an Arabian weight.

ALICES, in medicine, spots preceding the pustules of small pox.

ALICONDA, in botany, an African tree, grow- ing naturally in the kingdom of Congo, of such bulk that ten men cannot fathom it round. The natives call it bondo ; and they do not build their huts near it, lest its fall should crush them to death, as the wood easily rots, or its fruit, which is of the size of a large gourd and easily broken from the tree, should knock them down. The bark of this tree well beaten and macerated, yields a coarse thread, of which they make their ropes ; and which, when macerated and dried, and beaten with bars of iron or wood, becomes like a large piece of cloth, with which the natives cover their middle from the girdle to the knees. The shell or rind of the fruit, which is hard like that of a gourd or calabash, being freed from its pulp, which may be made inlo a

nourishing pap, serves for vessels of various kinds, and gives an aromatic taste to water preserved in it. The small leaves are eaten in time of scar- city, and the large ones serve to cover houses, or being burned make good soap.

ALICUDA, or ALICUR, one of the Lipari islands, near the coast of Sicily. This island is about six miles in circumference ; but its po- pulation is not so great as that of Felicunda, which consists of about 650 inhabitants; the houses are built about half way up on the de- clivities of the mountains, in order that their inhabitants may guard themselves against the nightly attacks of the Tunisian Corsairs. In these two islands a considerable quantity of good wine is made ; besides which they have Indian figs and olive-trees. The corn grown here is wheit and barley ; which, together with the grapes, amount in value of produce to about

3000 Neapolitan crowns. The inhabitants of this island are extremely industrious, aud cultivate the ground to the utmost extent ; though the soil is greatly interrupted by points of rocks, masses of lava, clefts and crags. Three or four fishing- boats belong to this island, which are nearly all the property of the parish priests, and are used for the purpose of increasing their small revenues, amounting to little more than twelve sequins. There is not a spring of fresh water on either this or the neighbouring island, and therefore when there is a long continance of dry weather, the distress of the inhabitants is ex- treme. Their food consists of black barley-bread and wild fruits, and sometimes by way of dainty, salt fish ; and their houses, or rather huts, which appear like the nests of birds hung to the cliffs, are formed of pieces of lava, and scarcely admit a ray of light ; yet they are uncommonly con- tented and happy, owing to the salubrity of the air and the temperature of the climate they en- joy. By the vestiges of fire which are discern- able in every part of this island, it has beeu supposed that Felicunda and Alicuda had once formed a single conical mountain ; and yet, though these islands shew so indubitably that they

have been the seats of volcanic eruptions, there is at present no appearance of fire ; nor do the most ancient writers mention any con- flagrations in either of these islands. The an- cient name of Alicuda was Ericusa ; and the author of the epitome of Stephanus says that it was so named from the erica, or heath, which grows there in such abundance. Lon. 14►►. 3'. E. Lat. 38►►. 31'. N.

ALICULA, in antiquity, a kind of puerile habit worn by the Roman children. It was a sort of chlamys or tunica manicata.

ALICUN, a town of Spain, in the province of Granada, celebrated for its medicinal waters. It is twelve miles from the city of Granada.

AJLJEMBUT, or, as some write it, gembut, a name given by Avicenna, and others, to a species of acacia, also called the Nabathaean pod, and ceration, or siliqua, and which some have sup- posed to be the same with the common carab ; but they expressly distinguish it, by saying that it is an astringent, whereas the other is gently purgative, and that the fruit of it was given in haemorrhages. Isidore says, that the acacia juice of the shops was made of its fruit, while unripe.

A'LIEN, v. n. & adj. ~\ Lat. uliemis, alias :

A'LIENABLE, I to make any thing the

A'LIEN ATE, v. n. & adj. V property of another ;

ALIENA'TION, I to transfer good-will,

AXIENA'TOR. J friendship, or affec-

tion.►►► An alien, formerly alyaunt, is one from another country, a foreigner.

Gyf that thou sekis ane alienare vnknaw, To be ►►hy maich or thy gud sone in lawe.

Daugltu, b. vii. p. 219.

Symound, –what seemith to thee ? kyngis of crthe of Vhom taken thei tribute, of her sones either of aliens? And he seide, of aliens.

Wiclif. Matthew, chap. xvii.

*An alien is one, born in a strange country, aud never enfranchised. A man, born out of the land, so it be within the limits beyond tbe seas, or of English parents out of the king's obedience, so the parents (at the time of the birth) be of the king'**

ALIEN.

obedience, is not alien: if one, born out of the king's allegiance, come and dwell in England, his children (if lie beget any here) are not aliens, but denisons.

Cowell.

The countries of the Turks were once Christian, and members of the church, and where the golden candlesticks did stand ; though now they be utterly alienated, and no Christians left. Bacon.

If the son alien lands, and then repurchase them again m fee ; the rules of descents are to be observed, as if he were the original purchaser.

Hole's History of Common Law. Land is alienable, and treasure is transitory ; and both must pass from him, by his own voluntary act or by the violence of others, or at least by fate.

Dennis's Letters.

In whomsoever these things are, the church doth acknowledge them for her children : them only she holdeth for aliens and strangers, in whom these things are not found. Hooker.

If it be proved against an alien, He seeks the life of any citizen ; The party, 'gainst the which he doth contrive, Shall seize on half his goods.

Shak. Merch. of Ven.

The mere Irish were not only accounted aliens, but

enemies ; so as it was no capital offence, to kill them.

Sir John Dailies on Ireland.

Be it never so true, which we teach the world to

believe ; yet, if once their affections begin to be

alienated, a small thing persuadeth them to change

their opinions. Hooker.

His eyes survey'd the dark idolatries

Of alienated Judah. Milton's Par. Lost.

The mother plant admires the leaves unknown Of alien trees, and apples not her own. Dryden.

From native soil

Exil'd by fate, torn from the tender embrace Of his young guiltless progeny, he seeks Inglorious'shelter in an alien land. Philips.

God put it into the heart of one of our princes, to give ►► check to sacrilege. Her successour passed a law, which prevented all future alienations of the church revenues. Atterbury.

Great changes and alienations of property have created new and great dependencies.

Swift on Athens and Rome. ALIEN, in law, from the Latin alius, ' another,' q. d. a person born out of the king's dominions. Thus there are alien friends, viz. persons born in countries in alliance with the state, and alien enemies ; by which name are de-signated those born in countries considered by the state as hostile; children born of English parents, though under temporary subjection, or allegiance to a foreign power, are not considered as aliens in the

eye of the law ; nor children born of English parents on the high seas ; nor children of English ambassadors at foreign courts. But British parents who have been guilty of felony or high treason, make their children aliens, who are born abroad. See the 25 Edward III. 7 Anne, c.'5. 10 Anne, c. 5, &c. The last two mentioned acts, however, with 4 Geo. II. c. 21, and 13 Geo. III. c. 21, render all children bor(n out of the king's allegiance, whose grandfathers, by the father's side, or whose fathers were natural-born subjects, entitled to the civil rights of natural-born subjects. Such grandchildren, however, must, to claim the privilege of exemption from the alien duty, be protestants, and resident within the realm; and the claim to any estate or interest must be made

within five years. The issue of an English woman by an alien, born abroad, is an alien.

Having thus described what, according to the law of England, is termed an alien, we shall briefly enumerate the most common civil and political disadvantages to which he is subject, with an account of the most recent statutes, ex- pressly bearing upon this particular.

An alien cannot vote at the election of mem- oers of parliament, nor can he enjoy any office, or be returned on any jury, unless where an alien is party in a cause when the inquest is composed of an equal number of denizens and aliens. An alien cannot purchase lands for his own use : nor can an alien female be endowed with lands, although she become the wife of a natural-born subject ; nor a Jewess the wife of a naturalized Jew. However, an alien may ac- quire any kind of personal property ; and he may bring or defend any action or process at law, for the protection of it, and may dispose of such property, by deed, will, or otherwise ; his children born in the realm are generally to be held natural-born subjects. Aliens also may take leases of lands, and estates in trust ; but these rights of aliens must be understood as of alien friends only ; alien enemies having no rights at all, and no privileges,

unless by the king's es- pecial favour.

An alien may, by letters patent, ex donatione regis, be made an English subject, and is then called a denizen, being in a middle state between a natural-born subject and an alien. He may now purchase lands, or possess them by devise, but cannot inherit them, although his heirs may inherit from him; the parent of the denizen being held to have had no inheritable blood, which the denizen possesses after becoming so. See DENIZEN. He is still, however, subject to the alien duty, and there is no method of giving him the full personal rights of a natural-born subject, but by act of parliament. Even after naturalization, an alien cannot become a member of the House of Commons, or Privy Council, or hold offices or grants under the crown ; and by stat. 12 William III. c. 2, and 1 Geo. I. c. 4, eveiy bill for the naturalization of particular persons shall contain the proper disqualifying clauses. See NATURALIZATION.

After the commencement of the French revo- lution, our legislature judged it necessary to make the laws respecting aliens still more strict. Accordingly an act was passed in the 33 Geo. III. entituled, ' an act for establishing regula- tions respecting aliens arriving in this kingdom, or resident therein, in certain cases ;' of which the following are the principle heads: 1. Masters of vessels must give in to the officer of customs at the port of arrival a written declaration spe- cifying the names, &c. of the foreigners on board. 2. Aliens, arriving after the 10th of January, 1793, must give to the port officer of customs a written declaration of their names, rank, &c. Upon neglecting this, to be adjudged to depart out of the realm, and upon non-com- pliance to be transported for life. 3. They are to receive from the officer a certificate of their declarations. 4. Arms, attempted to be import- ed by aliens except as merchandise, are to be

seized. 5. If bis majesty in council shall direct that aliens of any description shall not be landed, or only at prescribed places, masters offending are not only liable to a penalty but to forfeit their vessels. 6. No aliens are allowed to depart from the place of their arrival, (except for pur- poses specified) without a passport. 7. Aliens, (except domestic servants of natural-born sub- jects, &c.) arrived since the 1st of January, 1792, or arriving during the continuance of the act, desirous to remove ; must obtain a passport from a magistrate. 8. Magistrates are authorized to grant passports to all parts of the kingdom, and also to require of an alien an exhibition of his passport, and in certain cases to detain him, till nis majesty's commands may be received ; and to commit him to prison, if his majesty shall not direct him to be discharged or to depart the realm. 9. Aliens who do not depart the realm, when ordered by his majesty's proclamation, are also to be imprisoned. 10. The secretary of state may grant warrants to conduct out of the kingdom, aliens, who will not obey proclama- tions, &c. The king may order any alien, arrived since the 1st of January, 1792, or arriving during the continuance of the act, to reside in such districts as he ?hall think proper. 11. Aliens in the kingdom on the 10th of January, 1793, or who arrived since the 1st of January, 1792, or arriving after the 10th of January, 1793, must deliver an account of their names, &c. and magistrates may require such accounts, and commit to jail those who neglect or refuse them. 12. They may also summon aliens suspected of not having delivered such accounts, and may arrest them for non- compliance. 13. They may require from house- keepers an account of the names, &c. of aliens, residing with them. 14. Justices of the court at Westminster, &c. may admit aliens to bail ; as well as any other justices by authority of the secretary of state. 15. Aliens, within the times specified, must give an account of all weapons, &c. in their possession, and deliver them up to a magistrate, who may require them to do so.

16. The secretary of state may grant warrants to

search the houses of aliens, for weapons, &c. and may require an account of such weapons from the house-keepers where aliens lodge.

17. His majesty may send out of the realm any alien, committed to jail, and if afterwards found in the kingdom he shall be transported for life.

18. Aliens thus adjudged to be transported, to be sent to such places as the king in council shall appoint : 19. and to suffer death if after- wards found within the realm. 20. Certificates are to be given gratis, and fresh passports may be granted for lost ones ; but heavy penalties are awarded on those who forge them. 21. In questions respecting offences against this act, the proof lies on the party accused; and parties appealing must give six days notice. 22. The act does not extend to foreign ambassadors, aliens under fourteen years of age, or mariners certified by ship-masters to the officers of cus- toms. Trespasses against this act, subjected the offenders to a variety of heavy penalties, spe- cified in the act.

The acts 33 Geo. III. and 34 Geo. III. arose out of the influx of strangers to this country,

from the continent, and have been from time to time amended, and continued as in 43 Geo. III. c. 155, &c. They have generally been supposed I to be applicable only to a state of warfare, or i decisive political danger from the influx of fo- reigners ; the spirit of our constitution, and the nature of our protestant principles, having always inclined our governors to make England a place of refuge for the persecuted, and of succour to the distressed of all countries. On the principles of these laws every man is pre- sumed to bear faith and love to that prince and country where he received protection during his infancy ; and that one prince might not settle spies in another's country ; but chiefly, that the rents and revenues of the country might not be drawn to the subjects of another. Some aver that the laws against aliens were introduced in the time of Henry II. when a law was made at the parliament

of Wallingford, for the expulsion of strangers, in order to drive away the Flem- ings and Picards, who had been introduced into the kingdom by the wars of king Stephen. Others reckon the origin of this law more an- cient ; and that it is an original branch of the feudal law : for, by that law, no man can pur- chase any lands, unless he do fealty to the lords of whom the lands are holden ; so that an alien, who owed a previous faith to another prince, could not take an oath of fidelity in another sovereign's dominions. Among the Romans, only the Gives Romani were esteemed freemen ; but when their territories increased, all the Italians were made free, under the name of Latin, though they had not the privilege of wearing gold rings till the time of Justinian. Afterwards all born within the pale of the empire were considered as citizens. Upon the same principle, an individual born in the British colonies is considered as a natural-born subject.

ALIENATION, in law, from alienare, to pass away, a transfer of property from one person to another, and chiefly relating to lands and tene- ments. Alienation in mortmain is to pass or transfer lands or tenements to a religious body po- litic, or house.

ALIENATION, in fee, is the sale of lands, &c. in fee simple. All persons possessing lands, &c. may alien them to others, with particular ex- ceptions; for no person can be supposed to transfer what he never possessed. In feoffments conditions that the feoffee shall not alien are void ; but the grant of an estate in fee, on con- dition that the person who receives the grant shall not alien to any one particular person, is valid ; and where a reversion stands in possession of the donor of an estate, he may restrain an alienation by condition. Co. Lit. 361, 118, 206. Wood's Inst. 141. Hob. 261, &c.

ALIENATIONS, by tenants for life, &c. incur a forfeiture of the estate. By the statute of Ed- ward I. a bar was put to alienations, by what we call entails, which is an expedient (not founded on the strictest principles of justice) for procuring

perpetuities in families ; but counter expedients wtre devised to defeat this intent, and a practice was introduced of cutting off entails by fines; and of barring remainders and reversi►►ns by re-

coveries. The statute for alienations in Henry VII. 's time had a great effect on the constitution of this kingdom ; as, among other regulations of that reign, it tended to throw the balance of power more into the hands of the people. By the stat. 12 Car. II. cap. 24, fines for alienations are taken away. Crown lands are only alienable under a faculty of perpetual redemption. The council of Lateran, held in 1123, forbids any clerk to alienate his benefice, prebend, or the like. By the laws of the ancient Jews, lands could only be alienated for the space of fifty years. At each return of the jubilee all re- turned again to the primitive owners, or their descendants.

ALIENATION, in mortmain, is making over lands, tenements, &c. to a body politic, or to a religious house, for which the king's license must first be obtained, otherwise the lands, &c. alien- ated will be forfeited.

ALIEN DUTY, an impost laid on all goods im- ported by aliens, ovei and above the customs paid for such goods imported by British subjects, and on British bottoms. It is otherwise called

The luminous inferior orbs, enclos'd From chaos, and th' inroad of darkness old, Satan alighted walks. Milton's Paradise Lost.

Should a spirit of superior rank, a stranger to human nature, alight upon the earth, what would his notions of us be 1. Addison, Spectator.

ALIGHT'. On light ; to light, or enlighten ; to set

on fire; to enkindle.

The next morow, with Phoebus laump, the earth

Alighted clere ; and eke the dawning day

The shadowes dark gan from the poale remoue.

Surrey. sEneis. And for to speaken ouer this, In this parte of the aire it is, That men ful ofte sene by night The fire in sondrie form alight.

Gower. Con. A. b. vii.

The officer having by this time alighted his lamp, entered into the room to see him whom he accounted to be dead.

Sheltan's Trans. Don Quixote, Ed. 1652. ALIGNA, one of the Philippines, lying to the north of Mindanoa. It is low and flat, and co- vered with thick forests.

ALIGNMENT, in maritime affairs, a supposed

. line drawn to preserve any part of a fleet in its petty custom, and navigation duty.-Fish dried jugt and 1J direction/

ALII DE REGXO, and ALII MULTI, are phrases which often occur in our ancient records and historians. Their meaning has occasioned much dispute. Dr. Brady will have them to signify only tenants in capite; which Mr. Tyrrel en- deavours to refute, and shew that they denote the whole commons of the kingdom.

ALIKE'. See LIKE. With resemblance; without difference ; in the same manner ; in the same form.

pe bisshop of Canterbire, in common alle o liche, Schewed it in ilk schire, alle his bisshop riche.

R. Brunne, p. 301.

And efter thaym elike furth in euin space Pristis and Cenature straif for the first place.

Douglas, book v. p. 132.

Prudence is goodly wisedome in knowinge of thynges: Strength voydeth al aduersitees aliche euen.

*Chaucer. Test of Love, book iii. fol. 308. c. 4. The darkness hideth not from thee ; but the night shineth, as the day : the darkness and the light are both alike to thee. P*alm cxxxix.. 12.*

With thee conversing, I forget all time –, All seasons, and their change, all please alike.

Paradise Lost.

Riches cannot rescue from the grave, Which claims alike the monarch and the slave.

Dryden.

Let us unite, at least in an equal zeal, for those Faerie Queene. capital doctrines; which we all equally embrace, and are alike concerned to maintain. Atterbvry.

Two handmaids wait the throne ; alike, in place ; But diff'ring far, in figure and in face. Pope.

The boast of heraldry, the pomp of power,

And all that beauty, all that wealth e'er gave, Await alike the inevitable hour,

The paths of glory lead but to the grave.

Gray's Elegy.

ALIL7EI, in ancient geography, a nation of

or salted, and cod fish or herring not caught in _British vessels, and cured British, pay a double alien duty. ††† On what footing aliens are per- mitted to import foreign commodities into Great Britain, see DUTY.

ALIEN PRIORIES, a kind of inferior monas- teries, formerly very numerous in England, and so called

from their belonging to foreign abbeys.

ALIFORMES MUSCULI, from ala, awing, and forma, shape, in anatomy, a pair of muscles, arising from the pterygoid bone, and ending in the neck of the lower jaw, towards the internal seat of the head.

ALIFORMES PROCESSUS, the prominences of the os cuneiforme.

ALIGHT'. Active alihtan, Sax. to alight, lighten, to light. Hence by inference, to descend from a carriage; to dismount; discontinue a jour- ney temporarily or altogether; to come down; to stop ; to fall upon.

Kyng Henry in pe senepe jer of hys crounyng, And enlene hondered jer and senene of our Lorde aly^tyn. R. Gloucester, p. 430.

Bot at the last softlie he gan alicht Of Calcidonis apoun the castell hicht.

Douglas, b. vi. p. 162. There ancient night arriving, did alight From her high weary waine.

There is alighted, at your gate, A young Venetian. Sluiksp. Merck, of Venice.

Slackness breeds worms ; but the sure traveller, Though he alights sometimes, still goeth on. Herbert. When marching with his foot, he walks till night ; When with his horse, he never will alight. Denham.

When Dedalus, to fly the Cretan shore, His heavy limbs on jointed pinions bore ; To the Cumcan coast, at length he came ; And, here alighting, built this costly frame.

Dryden's JEneid.

Arabia Felix, of whom l)iodorus speaks. He mentions that their country, although burnt up enjoyed frequent and copious

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proportionally scarce, and were therefore es- teemed more valuable.

ALIMA, among mineralists, a kind of sand found in gold mines, out of which lead is ex- tracted.

ALIMENA, in entomology, a species of Pa- pilio Nymphalis, with dentated black wings, an interrupted cserulean fascia, and seven white marginal points, found in South America and India.

*ATIMENT, "1 Alo, alitum, to find one ALIMENTAL, hn food. Alimentum ; nou- ALIMENTALLY, Vrishment food. That which ALIMENTARY, fcherishes' t com_*

ALIMENTATION, forts<

ALIMON lous. J

The sun that light imparts to all, receives

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ALIMENTATION, forts<

ALIMON lous. J

The sun that light imparts to all, receives

From all his alimental recompence

In humid exhalations, and at even

Sups with the ocean. Milton's Par. Lost, book v.

Plants do nourish ; inanimate bodies do not : they have an accretion, but no alimentation.

Bacon's Natural Hiitory.

Wise men are of opinion, the bodies of animals cannot receive a proper aliment from ayr.

Brown's Vulgar Errours.

New parts are added to our substance ; and, as vre die, we are born, daily ; nor can we give an account how the aliment is prepared for nutrition –, or by what mechanism it is distributed.

Glanville'i Scepsis Scientifica.

I do not think that water supplies animals, or even plants, with nourishment ; but serves, for a vehicle to the alimentary particles, to convey and distribute them to the several parts of the body.

Ray on ilte Creation.

Of alimentary roots, some are pulpy and very nu- tritious, as, turnips and carrots. These have a fatten- ing quality. Arbuthnot on Aliments.

All bodies, which (by the animal faculties) can be changed into the fluids and solids of our bodies, are called aliments. In the largest sense, by aliment, I understand every thing which a human creature takes in common diet ; as, meat, drink j and seasoning, as salt, spice, vinegar. Arbuthnot.

Th' industrious, when the sun in Leo rides,

Forget not, at the foot of every plant,

To sink a circling trench, and daily pour

A just supply of alimental streams,

Exhausted sap recruiting. Philips.

The plethora renders us lean, by suppressing our spirits, whereby they are incapacitated of digesting the alimonious humours into flesh.

Harvey on Consumptions.

ALIMENT, in a physical sense, is whatever may be dissolved and turned into chyle, so as afterwards to become blood. The subject of aliments has been very diffusely and compre- hensively discussed by Dr. Cullen and others. We select a few practical and plain observations and directions upon this subject, from his Materia Medica, compared with other sources of in- formation.

Our food, by the process of digestion, be- comes in part, a very mild, sweet, and whitish liquor, resembling milk, and distinguished by the name of chyle. This being absorbed by the lacteal veins, is by them conveyed into circu- lation, and assimilated into the nature of blood, affording that supply of nutrition which the con- tinual waste of the body is found to require. See DIGESTION. Next to air, food is the most

necessary thing for our preservation; on the choice of it, therefore, health greatly depends. The blood and juices naturally incline to become putrid and acrimonious : fresh chyle, duly re- ceived, prevents this destructive tendency, and preserves them in that mild state which alone consists with health. Generally, animal diet affords the most of this bland nutritious mucilage; while watery fluids dilute the too gross parts, and carry off what is become unfit for use. Of vegetables only the small portion of jelly which is separated from the farinaceous parts, after being much elaborated,- is converted into the animal nature ; yet the use of vegetables prevents both repletion and a too great tendency to a pu- trescent acrimony of the blood. In hot climates, as well as from the constitutional

heat of parti- cular persons, vegetables are required in the largest proportion. Animal substances afford the highest relish while our appetite continues ; but sate the appetite before the stomach is duly filled. Vegetables may therefore be eaten after either flesh or fish ; few herbs or fruits satiate so much as that the stomach may not be filled with them, when it is already satisfied with flesh or fish ; for no diet, which is very nourishing, can be eaten to fulness, because its nutritious parts are oily and satiating. Loathing is soon the consequence of animal food alone : hot acid habits, too, receive from milk and vegetables what is needful for correcting their excesses ; but cold, pituitous, and nervous habits, which require much nourishment from little digestion, and from the smallest quantity of food, may use animal diet more freely.

In the animal and vegetable, as well as in the human system, we behold the procession of de- composition and reproduction, and analyse the substances that administer to the growth and repair of each system most distinctly ; but in their application to the wants and enjoyments of man, these phenomena become far more in- teresting. As ' lord of all below,' the whole circle of organic being moves around him for his benefit, and the student cannot be more gratified, than the common people may be ad- vantaged, by an intelligent consideration of the admirable provisions in nature for its various movements.

From the structure of his teeth and alimentary canal, man would appear to be at present formed to subsist both on animal and on vegetable food, and these great organs of his frame are thus suited to all climates and their produce. Rice is said to be the chief food of the larger portion of mankind ; and it is well known that the Brahmins and other eastern tribes, subsist wholly on vegetables. Northward, and in the colder regions of the earth, the stronger stimulus of animal food is resorted to, and few vegetables comparatively are eaten. Many savage nations, again, live almost wholly on fish,

whilst others never taste them.

Mr. Moore, in his Essay on the Materia Me- dica, has some valuable observations on the power of habit over the animal economy, with regard to diet.

If any one suddenly changes his food, and feeds upon substances to which he has been un-

accustomed, he will xmdoubtedly become disor- dered. If a person, accustomed to vegetable farinacea, tries to eat a large portion of animal food, he will become feverish and plethoric ; and if any one accustomed to meat suddenly adopts a vegetable diet, he will be in danger of losing strength, and being seized with indigestion. This is one reason why too great a variety of food is unwholesome ; for the stomach cannot acquire the habit of digesting a variety of ali- ments with equal facility. Those persons, there- fore, who use one or two kinds of aliments constantly and regularly, have their stomachs in far better order than those who indulge themselves in variety. But it would appear that even the habit of digesting a variety of aliments is in some degree to be acquired ; for persons accustomed to va riety are less disordered by it than others, although their digestive faculty is probably not in such perfect order as it is in those who live in a more simple manner. \Ve need not, then, be sur- prised at the frequency of stomach complaints among the rich, for the luxurious superfluity of whose tables the earth, air, and sea are ransacked. This variety, especially when prepared with eastern spiceries, and all the refinements of mo- dern cookery, has another bad effect ; it produces a false appetite, and forms a temptation to in- dulge the palate after the natural appetite is gone, by which the stomach is gorged and over- loaded ; whereas, those who live upon a few plain and simply dressed aliments, have no ex- citement to eat more than their natural appetite prompts. From these, and

many other causes, disorders in the stomach are frequent ; and as some aliments are more easily digested than others, directions respecting diet are necessary for weak and disordered stomachs, which are un- able to digest aliments that are easily overcome by stomachs of greater health and power. Ani- mals discover their proper food by the senses of taste and smelling. Mr. Moore conceives that men, in a great degree, do the same ; and, there-

tore, that a strong presumption may be formed respecting the wholesomeness of alimentary sub- stances, by attending to the natural inclination of men. But the greatest care must be taken not to confound natural tastes with those ac- quired by habit and prejudice, or brought on by diseases. It is inconsistent with the admirable order and constitution of the universe, to con- ceive that men will naturally have a desire for such aliments as are improper for them, and loathe such as are wholesome. But we know that, in consequence of necessity, example, or prejudice, men may be induced to use, as food, substances at first disagreeable, but which, by degrees, they may be brought to prefer to more wholesome diet. It is owing to this, that many, the rich in particular, instead of plain and salu- tary food, prefer what is highly seasoned with hot pungent spices. These acrid and stimu- lating substances are detested by every person at first ; but even children may be induced to eat them in imitation of their friends and relations ; and, having acquired a taste for them, the sti- mulus given to the stomach becomes at last necessary.

But that those stimulants, though they seem to assist, yet, in reality, and in the course of time, impair the appetite and digestion, is evident from this, that the stomach which could with ease digest plain food, before it was accustomed to spiceries, cannot afterwards digest it without their assistance. A stomach in this situation, therefore, may justly be said to be in a diseased state. And it is not without foundation, that diseases, and premature old age, have been im- puted to the habit of using stimulating and acrid condiments. See Essay

on the Materia Medico, by James Moore.

We annex a list of vegetables and animals according to the Linnaean system from which the aliments of man are principally derived ; begin- ning with his simplest and perhaps his primitive food.

TABLE I.

VEGETABLE SUBSTANCES yielding Human Food.

Order.

Linnzan Name.

Common Name.

Where eaten.

Character as Food-.

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! 1

Apium petroselinum .

Parsley . . . j Celery Asparagus ....

Colewort and cabbage Brocoli .....

Europe ge- | nerally . }

Aromatic .seeds diuretic.

Mucilag. and aromatic. Mucilag.stimulant,quick of digestion. Watery and flatulent, Cauliflower best. Delicious but flatulent. Bitter and wholesome. Quick of digestion and stimulant. Sweet, mucilaginous. Diuretic, narco'.ic, most digestible boiled.

Pungent,bitter,&aromat. Laxative. 2 S 2

Asparagus officinalis .

Brassica oleracea . . italica . . ???

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5

Cichorium endivia . . Crambe maritima . . Cynara, scolymus . . Lactua sativa . . ???

Lepidum sativum . . . 1’ortulaca oleracea . ???

Endive Sea kale Artichoke .... Garden lettuce . . .

. cress . ??? ??? _ purslane

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ALIMENT.

Order.

Linnxan Name.

Common Name.

Where eaten.

Character as Food.

j

Ilerbae ??? Herbs

A

Rumex acetosa . . . Sisymbrium nasturtium

(

Common sorrel . <

Water cress . . . Spinage . .

Europe gen.~\ and much { esteemed (in France j

Wholesome, contains oxalic and tartaric acid.

Wholesome, bitter and pungent. Flatulent.

1

Radices ••• Roots.

Allium ascalonicum .

Shallot i?

Acrid, fit for sauce. Stimulant. Idem. Acrid, good for sauce. Idem. Very saccharine, should be well boiled. Idem. Wholesome. Light and nutritious.

Bitter and wholesome. Nutritive, Idem, mealy.

Mucilag. saccharine. Idem. Nutritious. Of the roots is made tapioca. Mucilaginous. Sweet, mucilaginous. Nutritious. Warm, acrid, watery.

Mucilaginous.

Sweet,quick of digestion . Anylaceous and readily digested. Sweet.

Garlic

Rocambole . . . Red beet ....

White beet .... Manger wurzel .

Beta vulgaris . . .

f

t

Brassica rapa . . . Cichorium intybus

Convolvus batatas . . Dioscorea alata . . ~)

Succory . . . . < Spanish potatoe . .

Id. in Ger-^ many as > coffee .)

Carrot .

Daucus carota . . . Helianthus tuberosus . Jatropha manihot . 1 ••• janipha . J Maranta arundinacea . Orchis mascula . . Pastinaca sativa . . Raphanus sativus . .

Scorzonera hispanica . Siun sisarum . . . Solanum tuberosum . Tragopogon porrifolium

Jerusalem artichoke . Bitter and sweet cassava Indian arrow root . .

$

Parsnip

Radish

Viper's grass . . < Skirret

Spain and) S. Europe J Europe gen.

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Potatoe

-

Fructus ••• Fruits.

r ' ' ' -

Artocarpus incisa . . Amygdalus persica Annona rauricata . . Berberis vulgaris . . Bromelia ananas . . Brosimum alicastrum . Cactus opuntia . . . Citrus aurantium sinense

Bread fruit . . . Peach and nectarine Custard apple . . Barberry . . . Pine apple . . . Bread nut . . . Indian fig,or prickly pear China orange . . .

Seville orange . . . Lemon

Warm climates Europe gen.

Wholesome. Delicious. Cooling and wholesome. Wholesome. Acid and agreeable. Wholesome. Idem. Grateful. Rough, sour, bitter, peel aromatic. Acid, grateful. Juicy and cooling. Watery, mucilag. difficult of digestion. Watery, unwholesome Mucilaginous. Pleasant, cooling. Well flavoured. Wholesome. Rough, astringent. Cooling. Wholesome. Sweet, mucilaginous. Wholesome, more nu- tritious than peach or nectarine.

East . . . Spain . . j

palense . . . . J Citrus medica . . . Cucurbita citrullus

Cucumis sativus . . melo

Water lemon . . . Cucumber . . . Melon

Europe gen. S

' I

Ficus carica .... Fragaria vesica . . . 3arcinia mangostana . Mangifera indica . . Mespilus germanica . Morus nigra . . . Vlusa paradisaica . . Phoenix dactylifera

Prunus armeniaca . .

Fig

East & Europe Europe gen.

Strawberry .... Mangosteen .... Mango ....

East ??? . . Europe gen.

Medlar

Mulberry .... Plantain tree . . . Date . . .

East, &c.

Apricot . ...

Europe gen. <

ALIMENT

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Order.

7

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0

Linnacan Name. ' Prunus domestica

. Common Name.

" '

Plum Cherry . '. '. '. | Pomegranate Pea . .

~_ Where eaten.

Europe gen.

East . . . Europe gen.

Character as Food.

Apt to disorder bowels. Unwholesome.
2ooling,disorder bowels. Refreshing, flatulent.
Forms marmalade. Wholesome.

^ooling,disorder bowels. Cooling, sub-acid. More acid, but very wholesome. Dleasant. Cooling, wholesome. Agreeable. Astringent, acid. Saccharine, cooling, and wholesome.

Punica granatum . Pyrus communis

cydonia . .

Quince Apple . . .

Ribes grossularia .

Gooseberry .... Black currant . . .

Red currant .... Hip . .

Rosa canina .... Elubus idasus . . Vaccinium myrtillus . oxycoccus . Vitis vinifera . . .

Raspberry . . . , Bilberry ....

Cranberry .... Grape

i

Semina ••• Seeds.

Amygdalus communis Anacardium occidentale Avena sativa . . . Cocus nucifera . . . Corylus avellana . . Fagus castanea . . .

Hordeum vulgare . . Holcus sorghum . . Juglans regia . . . Oryza sativa . . .

Almond . .

Europe, Asia

Indigestible, husk acid. Indigestible. Demulcent, laxative. Indigest. milk agreeable. Indigestible, husk acid. Indigest. best roasted. Viscid, indigestible, ex- cept pearl barley. Indigestible. Husk astringent and acrid, nut nutritious. Wholesome. Nutritive. Farinaceous. Wholesome, idem, 'dem. 'dem. 'dem. 3est grain causing starch, glutinous and mucila- ginous matter. \stringent, flatulent.

^axative & wholesome.

Cashew nut Oat ....

Cocoa nut .... Hazel nut and filbert . Chesnut

Warm climate Europe . .

West Indies Europe . j

East ... 3en. growth Europe . . East ... Surope gen.

Barley

3uinea corn . . . Walnut

Rice ..’,

Panicum miliaceum . Phaseolus vulgaris . . ‘istacia vera . . . Pisum sativum . . .

Millet

vidney bean . . . Jistachio nut . . . Pea ... . .

5olygonum fagopyrum

3uck wheat . . .

Secale cereale . .

Theobroma cacao . . Mticum aestivum . . ficia faba .... Zea mays ....

Chocolate nut . . . Wheat

East . . . Europe . <

Broad bean .... ndian corn . . . <

iVestlndies, } America,& ►► S.Europe j

Algae- >v Lichens f & Sea- / weeds. J

Lichen islandicus . .] Fucus esculentus . . ‘.

celand liverwort . . I datable fucus . . .

forth . .]

Bitter, mucilaginous. Mucilaginous.

►►►M

bo 2►► C 7

A.garicus campestris . (

Common mushroom . (Europe . . S

>timul. but indigestible.

A great number of Fungi are edible, others are not. ††† See Sowerby's Coloured Figures of English Fungi, 3 vols. and suppl. fol.

Chemical analysis has satisfactorily determined that the nutritive qualities of vegetables depend upon the nature of their compost, and are in pro- portion to the relative quantities of mucilage, oil, starch, gluten, and sugar which they contain. This species of aliment, less stimulating indeed, than that which is derived from the animal king- dom, nevertheless yields its nutriment more readily to the process of digestion. The quality of chyle derived from vegetables, is inferior to that which is derived from animals ; and hence, a much greater proportion of aliment is necessary

for those whose support is derived from these substances. On a review of the above table, we shall only add by way of appendage, that the seeds of certain plants belonging to the natural order of gramina, and the leguminous family of plants, yield the greatest proportion of nutritive matter; potatoes, yams, grains, &c., claim the next rank ; to these, succeed beets, carrots, acids, dulcescent fruits, as grapes, dates, plums, apricots, &c. and lastly, the oily seeds, as al- monds, filberts, chesnuts, &c.

ALIMENT.

TABLE II. ANIMAL SUBSTANCE^ yielding Human Food. ††† (MAMMALIA, Class of Lin.naeu?.)

Order.

Linnieau Name.

Common Name.

Where Eaten.

Character as Food.

I. Pri- >

mates. J

Vespertilio vampyrus .

Rougette ....

India . .

Very good.

a

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>-4 M

iMynnecophaga tetra-) dactyla ... 5 Manis pentadactyla .

Middle ant-eater . .

Pangolin .... Armadillo ....

Guinea . .

India . . S. America

Good.

Fat, delicunis. Delicious, when young. Idem.

Like coarse pork.

., ,_ septemcinc- i

- 8 banded J

tus)

of Mr. Pennant .) One-homed rhinoceros Two-horned rhinoceros Great elephant . . .

Rhinoceros unicornis .

Warm climates

Elephas maximus . .

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1### 1

Phoca vitulina . . .

Common seal . . . Bottle-nosed seal . . Coasse ...

North & South

Delicate. Delicate, paw exquisite Indigestible. Like mutton. Highly esteemed. Like sucking pig. Delicate. Equal to hare.

Flabby, insipid.

Viverra vulpecula . .

Universally .

Fossane weasel . . . Brazilian otter . . . Brown bear .... Black bear .... Polar bear .... Common badger . . Virginian opossum Molucca opossum Cayenne opossum Great kangaroo . .

Striped hedgehog . .

Lutra Braziliana . * Ursus arctos fuscus

S. America . Warm climates Europe, &c. North . . Universally . America . .

Ursus maritimus

Didelphis woapink

Macropus major . . Erinaceus madagas- 1 cariensis . . . S

N. Holland . India . ### . .

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Hystrix cristata . .

Crested porcupine . . Brazilian porcupine Variegated cavy, or > Guinea pig . . $ Spotted cavy . . . Capybara .... Agouti . . . . ~\ Olive cavy . . . J Rock cavy ... 3 Castor beaver . . . Perchal rat .... Water rat .... Lemming rat ... African rat .... Common marmot . . Maryland marmot . . Bobak

Rome . ‘ S Brazil .’ .

Union ; ❓❓❓ ❓❓❓’.”

Very delicate. Oily and fishy taste.

Excellent flavour.

Good. Moderate. Idem. Resembles squirrel. Good. Disagreeable. 3ood. Resembles hare Resembles barn-door fowl. Delicate, [dem. Idem. Stimul. well-flavoured. Easy of digestion. Tender. White and good. Delicate. Good. Idem. Idem.

Cavia cobaya . . .

S. America .

N. America . India . ❓❓, .^(France . . Lapland . . Africa . . . S. Europe . M. America .

Castor fiber . . . Mus perchal . . . : amphibius . . lemmus maritimus Arctomys marmota

❓❓❓ bobac . . Sciurus vulgaris . .

Common squirrel . . Grey squirrel . . . Fat dormouse . . . Common jerboa . .

N. Europe .

Myoxus glis . . . Dipusjaculus . . . Lepus timidus . . .

Europe gen. East . . . Europe gen.

Rabbit . . . . ††† Peruvian hare . ††† . Cape hare . , – . Minute hare .... Brazilian hare . . . Cape hyrax ....

††† viscaccia . .

S. America . S. Africa . .

P. '

Brazil . . S. Africa . . Asia

Hyrax capensis . .

ALIMENT.

TABLE II.††† Continued.

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Order.

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Linnsean Name. Camelus glama . .

Common Name. ††† ††† ††† ††† ††† ††† . Glama . . . , Viccunna . . . . j Guanaco .... 5 Chilihucque Tibetian musk , Brazilian musk . Elk . .

Where eaten. East . . .

Character as Food.

Like mutton. Excellent.

Idem. Moderate. Delicate. Light and delicate. Good tongues valued.

Easy of digestion.

Delicate. Idem. Excellent.

Dry, but delicate. Disagreeable. Fair grained and juicy.

Coarse and tough.

Highly esteemed. Strong, nutritious.

Digest, and wholesome.

Lump in the shoulders a great delicacy. 3ood. [dem. Disagreeable. Coarse, marrow delicate

S. America Asia . . . America . . N. Europe .

Universally . East . . .

N. Asia . . Africa . .

Switzerland .

Asia . . . Universally .

jenerally

*East ********** |*

*America Africa . *** Warm climates Africa . .*

Moschus moschiferus . americanus Cervus alces . . .

tarandus . .

Rein deer .... Fallow deer . , i

stag ;

Rib-faced deer . . } Roe buck . . . . $ Indian antelope . . Ourebi antelope . . > Klipspringer antelope $ Cervine antelope Scythian antelope . .

Antilope orcas . . .

gnu

*Chamois ... .1 Wild goat . . . I Caucasan goat . . . Domestic goat . . . Common sheep . . } Common ox . . . *

Greater Indian ox . .

American bison . . Buffalo

Capra ibex ....

Dvis aries . . . Bos taurus ....

taurus indicus major

americanus . . ••• bubulus . . . moschatus . . . caffer ....

Musk bull .... Cape ox .

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Equus caballus . .

Generous horse . . Wild mule . .

Ass

Tartary . . Asia . . . Arabia . .

Africa . .

America . . Generally . America .- .

5ast . . .

Moderate. Esteemed. Excellent.

idem.

•••Vholesome. Strong and nourishing. Coarse.

Wholesome.

Hippopotamus am- 1 phibius . . . . J Tapir americanus . . Sus scrofa .... ??? tajassu ....

??? babyrussa . . |

Amphibious hippopo- ^ tamus . . . . J Long-nosed tapir . . Common hog . . . Mexican, or Peccary hog [ndian, or Babyrous- } sa hog .... J

???22 C

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H? J

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> V

Balaena mysticetus Delphinus -phocaena delphis . .

Common whale . . Porpoise . . . .) Dolphin . . . . J

North & South Generally

Dry and insipid. Tough and tasteless.

TABLE III.

BIRDS yielding Human Food. ??? Linnsean Class, AYES.

Order.

Linnasan Name.

Common Name.

Where Eaten.

Character,

as Food.

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s C

Delicate. Good.

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CJ A

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Strix wapacuthu . . Lanius ruficollis . .

Wapacuthu owl . . Wood-chat shrike . .

America . . Africa . .

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ALIMENT

TABLE III.### Continued.

Order. | Linnaean Name.

)

Common Name.

Where Eaten.

Character, as Food.

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"-i l

, Corvus ccrax . . .

frutrilegus

Raven . . .

North . . Generally

Indifferent. Digest. & well flavoured. Resembles land-rail, [ndigestible. 3ood. Idem.

Rook

' Cuculus canorus . . i Picus viridis . . .

Common cuckoo . . Woodpecker, green

Europe . .

" Sitta Europaea . . .

European nut-hatch .

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I-H 1❓❓❓ 1 h- 1

Anas cygnus ....

Wild swan .... Goose . . . .

Europe . .

Esteemed. Strong stimulant. Fishy, indigestible. Resembles lark.

Resembles wild duck.

Delicate and stimulant. Idem. Fishy.

Admired. Fishy.

Bernacle, or Brent goose Muscovy duck . . . Widgeon . . . . "1

penelope . . .

crecca .... ??? – boschas . . .

Common teal . . 3 Duck, wild ....

Alca arctica .

Puffin –.

North . .

1

Tufted hawk . . . Jannet . . . . 1 Black-backed gull . J

J

Pelecanus bassanus Larus marinus . . .

~ J Generally

si

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*>**

??H

Phaenicopteros ruber . Ardeagrus ....

Eled flamingo . . . Common crane . . .

Europe . . & Africa

Esteemed. Tough, bad. Valued. Resembles haie.

Light, savoury, and di- gestive.

Savoury.

Digest, and stira. tdetn.

Bittern .... Woodcock . . . ~ Snipe .

Generally Europe . <

Europe . .

Scolopax rusticola

Gid, or jack snipe . Jreat plover . . . > Spotted snipe . . Stone plover . . .

totanus . . limosa . .

Tringa puguax . . .

luff and reeve . . " ^apwing ....*

*5rey plover . . . Totterell . . . . ” 5reen plover . . *fo-kneed bustard . ^ong-legged plover irown gallinule . ~*

Charadrius morinellus

. sedicnemus .

Fulica fusca . . .

**urple gallinule . j Water rail ....*

lliillus aquaticus . .

i

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o s>

?avo cristatus . Meleagris gallopavo . Penelope cristata I!rax alector . . . Phasianus gallus . .

Peacock

Europe & Asia

Elarely eaten. Light. idem, idem, delicate, idem, dem. Disagreeable.

Digestible.

Light, nferior to the above.

Turkey ″ . , . .

juiana Guan . . . Crested curassour . . Dunghill cock and hen Common pheasant 3uinea hen . . : . Mountain cock . . . Slack cock . . . ‟) ited game . . . > White game . .. j Common partridge 3uail . . .

America . .

2urope .–. . :

^Jurnida meleagris Tatrao urogallus . .

ALIMENT.

TABLE III.⬚⬚⬚ Continued.

633

der.

Linnxan Name.

I

Common Name.

Where Eaten.

Character, as Foo 1.

VI. Pas seres.

″ Columba domestica .

Common pigeon . 1 Ring dove ... 5 Lark .

Europe . .

America . Europe . .

Savoury and stim. Delicate.

Highly esteemed. Delicate. Tender.

Savoury

Delicate in the extreme Esteemed.

Bitter taste.

Savoury and Digest. Digestible.

Alauda

Turdus viscivorus

Missel thrush . . ^ Fieldfare . . . . ' Blackbird ... 3 Mimic thrush . . . Cross bill . . . . -\ Hawfinch , . . J Greenfinch ... 3 Snow bunting . . } Bunting . . . . j Ortolan . . . . } Yellow hammer . J Rice bird .... Chaffinch . . . -\ Brambling . . . / House sparrow . . ►► Tree sparrow . . j Hedge sparrow . . ^ Epicurean warbler . Wheatear . . . Whin chat . . . V Stone chatter ►►► . . Red start .... Red tail .... _, Esculent swallow*

Loxia curvirostra . .

Emberiza nival is . .

India & Amer. Europe . .

Generally .

Fringilla ccelebs . .

' Motacilla modularis .

phoenicurus

tlirundo esculenta

- *The nests of these birds are thought a delicacy by the Indians.*

TABLE IV.

AMPHIBIA yielding Human Food.

Order.

Linnaean Name.

Common Name.

Where Eaten.

Character, as Food.

1

P□□;

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Testudo mydas . .

Green turtle . . . Loggerheaded turtle .

Land turtle .... Pipa

South Seas .

Greece . . Surinam France . ,

Indigestible. Coarse. Finely flavoured. Esteemed. Moderate. Idem. Not very nutritious. Idem. White, delicious. Delicate.

1 gncca . Rana pipa .... temporaria . .

Common frog . . . Edible

Bull frog .... Alligator .... Common guana . .

Lacerta alligata . .

America . Bahamas

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^rotalus horridus . . Uoluber vivipera .

Banded Rattlesnake .

America Italy . .

White and delicate. Nourishing.

Adder 5

TABLE V.

PISCES. ??? Fishes yielding Human Food.

Order.

Linnaean Name.

Common Name.

Where Eaten.

Character as Food.

no

I

O

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I-H

Mursena anguilla . .

Common eel ... Conger eel .... Roman muraena . . Southern muraena . i Javan monoptere . J Carapo gymnote . . Bearded ophidium

Mastacembalus . .

Aculeated odontognathus Sand lance .... Silver trichiure . . . Common wolf fish Broad-finned sword

–v fish f Short snouted sword (fish J Paru stromat . . ~\ Ash–coloured stromat f Silver stromat . . i Black stromat . . J

Generally

Indigestible.

Europe . . Javan . . America

Excellent. Idem.

Wholesome Coarse.

Like eel.

Moderate. Esteemed. Tolerable. Idem.

Coarse. Esteemed.

Monopterus javanicus 3ymnotus carapo . . Ophidium barbatum .

Asia . . .

East . . . Isle of Wight America . . N. Europe .

Generally

America & ") other places)

••• balus .... 5 Odontognathus aculeatus Ammodytes tobianus Trichiarus argenteus . Anarhicas lupus . . Xiphias platypterus

Stromateus paru . .

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^allionymus lyra . .

Generous dragonet .) Sordid dragonet . . J Bearded star-gazer

North . .-:

Generally Europe . . Newfoundland

European &) other seas . J

Palatable.

Coarse. Esteemed. Idem.

Excellent.

Indifferent. Esteemed.

Coarse.

LJranoscopus scaber . Trachinus draco . . jadus morrhua . .

Cod . .

Haddock . . . ××× ""

Pout . .

Bib

Poor > Saida

Whiting .... Coal fish .... Pollack . . . . ., Hake

lota ....

Burbot . . . . > Torsk J

Blennius occellaris . .

Ocellated blenny . 1 Gunnel 5

gunellus . .

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P

M

1[illegible] I t[illegible] I

j Echeneis remora . .

Coryphaena hippurus

Sucking fish . . <

Common coryphene Brazilian corypheue j Razor coryphene . f Five-spotted cory- ^ f phene . . . J j Gilt tailed coryphene Common goby . . Blue-finned goby . . Plumiers goby . . . River bullhead . . ^ Grunting . . . . > Lasher . . . . j Didactyle scorpaena .

European & ^ other seas J

Moluccas &) Europe . J

Generally

Like fried artichoke.

Excellent.

Esteemed. Poor. Esteemed.

Liver injurious. Excellent.

. maculata . . . $

Gobius niger

Cottus gobio

N. Europe . Generally

Scorpaena didactyla

ALIMENT.

TABLE V.[illegible] Continued

Order.

Liumean Name.

Common Name. Where Eaten.

Character as Food.

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Zeus vomer ....

Brazilian dory . . Ciliated dory .' . Common dory . . .

lalibut ... .5 ^esser halibut . . .

generally . 1

fot much esteemed, hoarse. Esteemed.

ndigestible.

uperior. ATiolesome.

Excellent.

isteemed. dem.

excellent.

;dem. Idem.

Idem.

Delicate, [dem. Indigestible. Coarse.

Digestible. Indigestible.

]

3leuronectes hippo- ^ glossus . . . . $

. Europe . '.

Dab . . ~\

ndian seas . lolland, &c.

East & other { >laces . . j

'ndia, Ame-^ rica, & Ara- >)ia . . j Dhina . .

Europe . .

laevis .... liniandoides flesus .... solea .... zebra .... marmoratus . . tuberculatus . . Chatodon imperator . catesbeii

>mear dab ... I ..ong dab .... V founder .... V Sole . . ??? J

Zebra sole ??? . ???) Marbled sole . . J

imperial chaetodon "^ \ngel chaetodon Wandering chaetodon Jaculator ... > Bifasciated chaetodon jlaucous chsetodon . Sordid choetodon

Blackish acanthuras <

joramy trichopus 3ilt head sparus . ^ Spined sparus . ??? (

??? glaucus ??? sordidus

Acanthurus nigricans .

Trichopus goramy . . Sparus aurata . . .

Labrus scams . . . Ophicephalus punctatus

*Scarce labrus . . . * Punctated ophicephalus Striated Mackarel .... Tunny Red surmullet . ??? i Striped .... 1 Piper*

Scomber scomber . .

Mullus barbatus . .

Trigla lyra ....

IV. Abdominales.

A ,, _, ,

" 3obitis barbatula Salmo salar . . ???

tmttn

!/>ach, or ground ling Salmon . . . ??? Sea-trout ....

iurope . ???

Savoury. Digest. Nutritious.

leady of digestion, indigestible.

[dem.

Coarse. Ready of digestion.

"Moderate. (Coarse. ???Good.

Wholesome.

Dharr Salmon trout . . Smelt Whiting .... Grayling

Esox lucius .... Mugil cephalus . . . Clupea harengus . .

Miillpt

Herring . ??? ??? ??? "] Sprat '

*Shad .... ??? \ Anchovy . . . . *

Europe .

Cyprinus barbus . .

Carp Gudgeon . ??? – ??? Tench Chub Dace Roach Bleak Bream

tinea . ??? cephalus

leuciscus ??? rutilus . ??? . alburnus

.. . bi ama .

..

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ALIMENT.

TABLE V '.???Continued.

Order. 1 Linnaean Name.

1

Common Name.

Where Eaten.

Character as Food.

V. ChondropterygL".

A

iAccipenser sturio . . ??? ??? ruthenus

Sturgeon .... Starlet ~

Europe.

Nutritive. Tender.

Coarse. Idem.

Indigestible

Isinglass fish . . . f White shark . . . (Skate J

Squalus carcharias Raia batis ... . Petromyzon marinus

Lamprey . . . ~) Lesser lamprey . > Lampern . . . . J

TABLE VI.

INSECT A. ??? Insects yielding Human Food.

Order.

Linnaean Name.

Common Name.

Where Eaten.

Character as Food.

!!

Gryllus migratorius Cicada septendecim .

Migratory locust . . American ....

Africa . . India . .

Moderate. Idem.

Hymen- f optera. ?

Apis melhfica . . .

Honey bee ....

Generally

Yields honey.

f

Cancer msenas . . .

Common crab . .)

Generally

Coarse.

ei

Indigestible

S

04

serratus . .

Prawn . . . . f

^

Similar to lobster.

Whifp 3

*****

TABLE VII.

*VERMES. *** *Worms sometimes Eaten.*

Order.

Linnaean Name.

Common Name.

Where Eaten.

Character as Food.

Mollusca.

Limax rufus . . . Sepia sepiola . . . Ecninus esculentus Pholas dactylus . .

Red slug .... Cuttle fish .... Edible sea urchin . . Dactyle pholas . . .

Generally Italy . . .

Nutritious.

Indigestible. Delicate.

A %

Cardium edule . . Ostrea edulis . . .

Common cockle . . Common oyster . .)

Generally

Nutritious. Quick of digestion.

& \ u 1

maxima . .

Scallop . . . . J

Rir>Vi

H (_

Helix pomatia ►►

With respect to animal food generally, it may be observed that venison seems to unite the qualities of being lighter and most nutritious of any; the flesh of young animals yields more gelatine than that of the same animal in the adult state ; that of wild animals is also sooner digested than that of domesticated ones. Salt meat is not so strengthening as fresh ; and meat ►►►which has been kept for a short time, is consi- dered to be more nourishing than that recently

killed. Even meat in a state of incipient putre- faction is more easily digested than that which is quite fresh: it does not follow, however, that jt is more wholesome ; and children universally reject it. Roast meat is considered to be more nutritious than boiled ; for, by the process of boiling, much of the nutritious matter is eva- porated.

ALIMENTARII PUERI, Sec. in Roman anti- quity, weie certain children maintained and edu- cated by the munificence of the emperors, in public places, not unlike our hospitals. Trajan was the first that brought up any of these alimen- tary boys. He was imitated by Adrian. An- toninus Pius did the same for a number of maids, at the solicitation of Faustina, and hence, in some medals of that empress, we read Pvellae Favsti- nianae. Alexander Severus followed his example, at the request of Mammjea ; and the maids thus educated were called Mammaeanae.

ALIMENTARY DUCT, or CANAL, ductus ali- mentalis, is that part of the body through which the food passes, from its reception into the mouth, to its exit at the anus ; including the gula, sto- mach, and intestines. The whole ductus alimen- talis may be divided into four parts. 1. That which conveys the food, called the sesophagus. 2. That which digests, or corrodes it, called the stomach. 3. That which distributes the chyle, called the intestines. 4. That which discharges the fasces, called the rectum. This duct is said to be the true characteristic of an animal, there being no animal without it, and whatever has it, being properly ranged under the class of ani- mals. Plants receive their nourishment by the numerous fibres of their roots, but have no com- mon receptacle for digesting the food received, or for carrying off the recrements. But in all, even the lowest degree of animal life, we may observe a stomacn and intestines, even where we cannot perceive the least formation of any organs of the senses, except the common one of feeling, as in oysters.

ALIMENTARY LAW, was an old lawamongthe Romans, whereby children were obliged to find sustenance for their parents.

ALIMONY, ALIMONIA, in law, denotes that portion, or allowance, which a married woman sues for, upon any occasional separation from her hasband, wherein she is not charged with elopement or adultery. It was

anciently called rationabile estoverium, reasonable maintenance, and recoverable only in the spiritual court ; but now it is recoverable also in chancery. When a woman is divorced a mensa et thoro, she may sue her husband in her own name for alimony, or maintenance, out of her husband's estate, during the separation, either in chancery, or in the spi- ritual court.

ALIMOS, in botany, a name given by Greek writers to liquorice, from its quality of making the appetite insensible either to hunger or thirst.

ALINDA, AXivSa, in ancient geography, a town of Caria, whose queen, Ada, adopted Alex- ander the Great as her son. A medal of this town represents a club, with a lion's skin, and within which, a crown of laurel, emblematical of Hercules ; the inscription is AAINAEQN.

ALINDESIS, or ALINDES, in the ancient gymnastic medicine, a kind of exercise, wherein persons being besmeared with oil, roll themselves naked in the dust.

ALINGSAS, or ALINGSAHS, an inland town of Sweden, in the province of Elsborg, where there are silk,, woollen, tobacco, and pipe manufac- tunes. Lon. 12►►. 20'. E. lat. 50►►. 30'. N. ►►►

ALIO DIE, in mythology, the formula used by

the Augur when on religious grounds she dis- solved the comitia or assemblies of the people, ' Quid gravius quarn rem susceptam dirimi, s! unus augur alio die dixerit.' Cic. de Leg.

ALIP/ENOS, or ALIPANTOS, from aXnraivoy, a negative, and \urcuvtv, to fatten, in the ancient physic, an appellation given to dry topical me- dicines, or such as have no fat mixed with them. It stands opposed to lipara, or plasters, which have fat in their composition ; called also by Celsus, lenia. Galen gives the name oXtTri; to the remedies which are applied to fresh wounds, in order to check the

inflammation, and hasten their healing.

ALIPASMA, in ancient' medicine, an oinu ment applied to the body to prevent perspira- tion.

ALIPEDE, from ala, a wing, and pes, the foot: nimble; swift-footed.

ALIPEE, a town of Cochin, in Hindostan, belonging to the rajah of Travancore. It is situated on a river communicating with that of Quilon, and is very populous, many merchants residing here who act as agents for houses at Bombay. Pepper, grain, and timber, are the chief exports. Lat. 9►►. 42'. N,

ALIPILARIUS, or ALIPILUS, in antiquity,an officer belonging to the baths, who, by means of waxen plasters, took off the hairs from the dlae, or arm-pits. The alipilus answered to what the Greeks called flpawaws-jjc. The ancient Romans made it a point of cleanliness to keep the arm- pits clear and smooth ; and in after times went farther, and took off the hair from their arms, legs, and other parts, with pitch, rosin, and the volsella, an instrument for that purpose.

ALIPI US, bishop of Tagaste, in Africa, the countryman ' and intimate friend of St. Augus- tine, and, like him, at one time, a zealous Mani- chee. He accompanied him to Rome, where he studied law, and had some considerable employ- ments. He embraced the Christian religion, and was baptized by St. Ambrose the same day with his friend Augustine. He afterwards went to Palestine, where he became intimate with St. Je- rome. On his return to Africa, in 394, he was chosen bishop of Tagaste. He assisted at se- veral councils, particularly that of Carthage, where he shewed his zeal against the Donatists, and died in 430.

ALIPIUS, in ancient history, a geographer of Antioch, and made governor of Britain, by the emperor Julian, to whom he dedicated a work on geography. He was afterwards exiled for following magical divinations.

ALIPOW, Montis Ceti, a kind of white tur- bith. It is found in several parts of Languedoc, particularly near Cete, whence its name of Mon tis Ceti. It is sometimes used instead of senna ??? but is a much stronger cathartic.

ALIPTA, from a\??tf>w, J anoint, in the an- cient gymnastics, a slave appointed to anoint the athletae. The aliptae amount to the same with what are otherwise called unctores or jatra- liptae. The word is sometimes used for the director, or superintendant of the exercises of the athletes ; in which sense, it is synonymous with gymnastes, or psedotriba.

ALIPTER1UM, aXi7rr>jp??>v, in antiquity, the

place where the athleta? were anointed before anthium : COR. three roundish, large, flat, ex- their exercises, otherwise called elaeothesion, panding petals : STAM. six awl-shaped filaments, unctuarium, and sometimes also ceroma. shorter than the corolla: ANTH. roundish: PIST. ALIQUANT PAKT, in arithmetic, that part more than five germina: STYLI, simple: STIG. of a given quantity which will not divide it ex- blunt; the seeds, small and solitary. Of this actly, or without remainder. It is opposed to genus there are nine species, viz.: l.Alisma the aliquot part of a quantity ; thus four is an Cordifolia, a native of America, found in stag- aliquant part of ten. The following are the ali- nating waters, 2. Alisma Damasonium, or star quant parts of a pound English : headed water plantain, a native of Britain. 3.

3s. is an aliquant part = -fcth and ^th of \L A,HAsma Flava> or yellow water P^ntain a native

6s _ ujj an(j njj of America, grows in swamps. 4. Alisma na-

7s’ ‘ _ Tth and xth.’ tans’ or creePing water plantain, a native of

o ' ' ••• gths Britain. 5. Alisma Parnassifolia, a native of

=. ith and 4th America, found in boggy ground. 6. Alisma

lls' | _ I and 1 4. ' plantago, or great water plantain, grows in all

12g' 'nland^th' the marshy parts of Scotland. 7. Alisma ranun-

.' .' = 4, -rijth, and 4th. culoides, or lesser water plantain, also a native of

14!J __ i and 4th country. 8. Alisma subulata, a native of

America. 9. Alisma repens, a native of Spain,

i nv, or,^ i*v. growing on the banks of the Manzanares.

IDS ••• 5, *Ui ••iuu fnlii. " T ,5^. . . , •••
_'

17s i i and ,•• ALISO, in ancient geography, a river of Ger-

18s' * __ |'an(j 2thg many, which flows into the Lippe, not far from

I9s' __ I i an(j ijjj Paderbon. It is now called Alme. Pliny also

mentions a place near the Rhine by the name

ALIQUOT PART, in arithmetic, that part of AXiurov.

a given quantity which will equally and exactly ALISONTIA, or ALISUNTIA, in ancient geo-

divide it. It is opposed to the aliquant part ; graphy, a river of Belgic Gaul, now Alsetz; which,

thus, four is an aliquot part of twenty. The fol-

rising on the borders of Lorrain, and running

lowing are the aliquot parts of a pound English : through the duchy, waters the city of Luxem-

4n . , c i j burg, and falls into the Sur.

10S ~ i OI It. ATTIT1TS/ A 1-^1

5 \ , ALITE . A little.

He rested bot a lite, a sonde pe Inglis him sendes.

4s ~ ►►h. D ►►►

- , n. Brunne, p. 81.

►►►^s ►►► 1otn- For leueth well and sooth is this

" ►►► 5o'-"' That whan I knowe all howe it is,

6s. 8d ►►► Jd. I WOH but fortliren hem alite.

3s. 4d ►►► ^th. Gower. Con. A. book ii.

2s- 6d , = Ith- ALITES, in ancient mythology, birds which

ls- ►►rj ►►► li1"- afforded auguries by their flight, in distinction

"►►► ►►► ►►► -^th. from oscines> or those which gave auguries by

"►►► ^d ^ -fetn. singing or croaking, &c. To the class of alites

"^ ►►► i1- belonged the buzzard, osprey, &c. To that of

"^ ►►► ►►tn- oscines, the crane, raven, owl, &c.

ALIRROTHIUS, a son of Neptune, killed by
ALJUBARROTA, a market town in the dis-

Mars for an attempt upon the chastity of Alcippe

trict of Leira, Portuguese Estremadura, contain-

his daughter. Neptune cited Mars before him ing about 1600 inhabitants. It is ten miles north

on the hill Areopagus, which derived its name ►►f Leira.

from this circumstance. ALJUSTREL, a town of Portugal, in the ALISANDERS, or ALEXANDERS, in botany, province of Alentejo, 16 miles from Beja, con- See SMYRNIUM. taining 1,500 inhabitants. There is another town ALISANUS, in botany, the Rhexia virginica ►►f this name in Estremadura, four miles from of Linnaeus. See RHEXIA. Thomar.

ALISE, a small town of France, in the depart- ALIVE'. On live. In life. See LIFE.

ment of the Cote d'Or, or the Auxois, Burgundy, Our queue pat was pen dame Helianore his wife

about twenty miles W. N. W. of Dijon. It stands Pe Sode> erle of Warenne, Sir Hugh was pan o life.

on the site of the ancient ALESIA, which see. R' Brunne> P- 213-

ALISHUNG, or ALISHUN, a district of Af- *or as thf ffishe' * ll bfe d,rie'

ghaun.tan in India, situated between the thirty- t^S

hfth and thirty-sixth degrees of north latitude, Nobman ne beast mj ht thriue.

and sixty-eighth and sixty-ninth of east longi- Gower. Cm. A. bookvii.

tude, and surrounded by lofty mountains, gene- Nor well ^ nor wholl dead> th were

rally covered with snow, whence the river Ali- But some faint signs of feeble life appear. VryJen.

shung has its rise. The chief town is Penjshehr. Not youthful kings, in battle seiz'd alive;

ALISMA, or WATER PLANTAIN, so called Not scornful virgins, who their charms survive. Pope.

from its supposed virtue in curine the bite of a

And to those brethren said. rise, rise by-live ;

sea-hare It was also supposed to have the And unto battle do yourselves address :

power of breaking the stone in the kidneys.??? For yonder comes the prowest knight alive,

GENUS, polygynia: CLASS hexandria : NATURAL Prince Arthur, flower of grace and nobiless.

ORDER, Tetrapetaloidese : CAL. a three leaved peri- Faerie Qneene

ALKALI.

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The earl of Northumberland, who was the proudest man alive, could not look upon the destruction of monarchy with any pleasure. Clarendon.

John was quick, and understood business ; but no man alive was more careless, in looking into his ac- counts. Arbuthnot.

Contemn thou while thou art alive, that, which thou canst not enjoy, when thou art dead.

Bp. Hall's Remedy of Discontentment.

His soul, where moral truth spontaneous grew,

No guilty wish, no cruel passion knew;

Though tremblingly alive to nature's laws,

Yet ever firm to honour's sacred cause.

Falconer's Shipwreck.

ALKA, the auk. See ALCA.

ALKADARII, from Akladar, Arab, a decree, a sect of the Mahommedans, who deny any eternal, fixed, divine decrees ; being asserters of free will. They are a branch of Moatazalites, and stand opposed to the Algiabarii.

ALKAHEST, in alchemy, compounded of al and geest, Germ. i. e. all spirit, according to Paracelsus and Van Helmont, is a certain fluid in nature, capable of reducing all sublunary bodies, into their ens primum, or original mat- ter or into an uniform portable liquor, that will unite with water, and the juices of our bodies. Van Helmont, declaring that he himself possessed the secret, excited succeeding chemists and al- chemists to the pursuit of so wonderful a men- struum ; and Mr . Boyle is said to have declared that he had rather have been master of it than of the philosopher's stone. The different conjectures of chemists, with regard to the matter of the alKahest, are innumerabJp ; some expected to obtain it from sea-salt and mercury ; others wrought on equinoctial dew ; others on rain- water, others on talc, on zinc, on antimony, &c. &c. But Kunkel very properly asks, If the al- kahest dissolves all substances, in what vessel can it be contained ? Alkahest is used in a more extensive sense for all fixed salts volatilized, and reduced into a quintessence.

ALKAKENGI, or winter cherry, the fruit of a species of nightshade.

ALKAKENGI, in medicine, is used as an ab- stergent, dissolvent, and diuretic, and is cele- brated for its lithontriptic quality ; it is also pre- scribed to cleanse the urinary passages in the gravel, and other obstructions. Its detersive quality also recommends it against the jaun- dice, and other disorders of the viscera.

ALKALI, in botany. See KALI and SALI-

CORNIA.

ALKALI, a term in chemistry applied to an order of

salts of considerable importance. It has been traced by some to the Arabic word, alkhalet, burnt; but it is more generally derived from the word kali, the name of a plant, from the ashes of which one species of alkali can be extracted. The substances that are met with tinder the denomination of alkaline, are pos- sessed of certain properties of a peculiar kind ; they are mainly characterized, however, by a power of combining with acids in such a manner as to impair the activity of the latter, so that alkalis, as chemical agents, are distinguished by properties the reverse of acids; acids and alkalies being thus generally considered as antagonist principles.

But besides the power of neutralizing acids, and thereby forming certain saline substances, the alkalies are further distinguished by the fol- lowing properties :

First, they have an acrid taste, and corrosive power when applied to some substances ; thus proving caustic to the skin and tongue.

Secondly, They change the blue colour of vegetables to a green, the red to purple, and the yellow to a reddish brown. If the purple have been reddened by acid, alkali will restore the original colour.

Thirdly, They are almost unlimitedly solu- ble in water ; that is, they combine with it in every proportion.

Fourthly, They unite with oils and fats, and form by this union the well-known compound called soap.

There is another class of substances which have a strong analogy with alkalies, especially in reference to their opposition to acids, viz. the earths ; these indeed by Fourcroy were arranged among the alkalies, but they have been kept apart by other systematic writers, on the ground of the analogy between the one and the other being far from amounting to an identity of essence and peculiar property.

The true alkalies have been arranged by a modern chemist into three classes.

First, Those which consist of a metallic oasis, combined with oxygen. These are three in number, potash, soda, and lithia. Secondly, That which contains no oxygen, viz. ammonia. Thirdly, Those containing oxygen, hydrogen, and carbon. In this class are placed aconita, atropia, brucia, cicuta, datura, delphia, hyo- scyamia, morphia, strychina. And it is supposed that the order of vegetable alkalies, may by sub- sequent discoveries, be proved as numerous as the vegetable acids. The original distribution of alkaline substances was into volatile and fixed ••• the volatile alkali being known under the name of ammonia, while one of the fixed was called potash or vegetable, because pro- cured from the ashes of vegetables generallj ••• the other soda, or mineral, on account of its having been principally obtained from the in- cineration of marine plants.

In respect to the principle of alkalescence ge- nerally, this, like that of acidity, has recently been the subject of an investigation, which has led to very important inferences. Alkalies and earths, it has already been said, display in their relations to acids, considerable analogy ; and the substances that are known under the denomina- tion of metallic oxydes, have nearly the same connexions. Now the constitution of these last having been ascertained, it might have been fair to suppose that the former are of a similar nature; but their real composition was not at all un- derstood, until the splendid discoveries of Sir H. Davy, who, having submitted potash and soda to the action of a powerful galvanic battery, observed that at the negative pole globules were collected, having metallic lustre, while at the positive side, a gas was disengaged, which proved to be oxygen. These results, Sir H. D. fairly inferred, arose from the decomposition of the alkalies, which he thence considered as com-

pounds of metallic substances with oxygen ; and thus has for ever been banished the hypothetical principle of Morveau, who conceived hydrogen to be the principle of alkalescence as Lavoisier had judged oxygen to be the essence of acidity. But although, so far, both the analytic and syn- thetic experiments are complete and satisfactory in relation to the components of alkalies, we must not push the inference to too great an ex- tec !; for ammonia seems to shew that the alkaline principle may exist independent of oxygen; nor is there at present any proof that metallic matter constitutes the base of this last-mentioned substance.

Analysis and synthesis have, however, gone far enough to prove, that in the composition of the acids and alkalies, there is some sort of ana- logy, or rather to show that it is the mode in which the constituents of each are united, rather than the nature of the constituents themselves, which gives rise to the acid or alkaline condi- tion. According to Dr. Murray, indeed, ' the class of alkalies will exhibit the same relations as the class of acids.' ' Some,' he says, ' are com- pounds of abase with oxygen, such are the greater numbers of the metallic oxides, and probably of the earths. Ammonia is a compound of a base with hydrogen. Potash, soda, barytes, stroutites, and probably lime, are compounds of bases with oxygen and hydrogen ; and these last, like the analogous order among the acids, possess the highest powers. Acidity, he says, is produced in a higher degree by the joint action of oxygen and hydrogen, than by the operation of hydrogen alone. A similar result, there is reason to con- clude, exists in their relations to alkalinity. The most powerful alkalies, potash and soda, and the earths which have the highest degree of alkaline energy have been supposed to contain water in considerable proportion, in intimate combination, in their insulated form. There is every reason to draw the same conclusion with regard to this ; as with

regard to the supposed pressure of com- bined water in the stronger acids. It is probable that the elements rather exist in the combination ; and thus the alkalies, applying the term in its most extensive signification, to denote those sub- stances which neutralize acids, display the same relations as acids.' But against this elementary hypothesis of Murray, Dr. Ure starts objections somewhat similar to those he had urged in refer- ence to the principle of acidity ; and we shall conclude the present article, by extracting the observations made by Dr. Ure on this head. ••• ' Surely,' says he, ' perfectly dry and caustic barytes, lime, and strontites, as well as the dry potash and soda, obtained by Gay Lussac and Thenard, are not inferior in alkaline power to the same bodies after they are slacked or com- bined with water: 100 parts of lime destitute of hydrogen, that is pure oxide of calcium, neutra- lize seventy-eight parts of carbonic acid. But 132 parts of Dr. Murray's strongest lime, that is the hydrate, are required to produce the same alkaline effect. If we ignite nitrate of barytes, we obtain, as is well known, a perfectly dry barytes or protoxide of barium ; but if we ignite crystallized barytes, we obtain the same alkaline earth combined with a nrime equivalent of

water.' These two different states of barytes were demonstrated by M. Berth ollet, in an ex- cellent paper published in the second volume of the Memoires D'Arcueil, so far back as 1809 : ••• ' The first barytes,' says he, ' presents all the characters of a combination; it is engaged with a substance which diminishes its action on other bodies, which renders it more fusible, and which gives it by fusion the appearance of glass. This substance is nothing else but water ; but in fact, by adding a little water to the second barytes, (that from ignited nitrate, as opposed to that from crystallized barytes,) and by urging it at the fire, we give it the properties of the other.' 100 parts of barytes void of hydrogen, or dry barytes, neutralize 28^ of dry carbonic acid. Whereas 1 1 1•• parts of the hydrate, or what Dr.

Murray has styled the most energetic, are required to pro- duce the same effect. In fact, it is not hydrogen which combines with the pure barytic earth, but hydrogen and oxygen in the state of water. The proof of this is, that when carbonic acid and that hydrate unite, the exact quantity of water is disengaged. The protoxide of barium or pure barytes, has never been combined with hydrogen by any chemist. For an account of the different alkalies, see under their respective names, and also the article CHEMISTRY.

ALKALIMETER, in chemistry, a scientific instrument invented by Descroizelles to mea- sure the purity of different alkalies ; it acts by ascertaining how many times their own weight they require in sulphuric acid to complete their saturization.

ALKANET, in botany. See ANCHUSA.

ALKENDI, (Jacobus,) a celebrated Arabian philosopher, born at Balsora, in the begin- ning of the ninth century. Alkendi appears to have studied philosophy with attention and suc- cess. He explained the writings of Aristotle to the schools, and obtained so much celebrity that Cardan ranks him as one of the first twelve sublime spirits of the world. His moderation is greatly exemplified by the following anec- dote related of him by Abulfaragius. Alkendi having endeavoured to explain the doctrines of the Alcoran, as consistent with the principles of philosophy, was accused by one Abu-Maasher, an advocate for the vulgar interpretation, of impiety. Instead of using his influence with the caliph to silence this bigot, he procured a person to teach him philosophy, and by his kindness won him to become one of his most zealous disciples. Alkendi's principal works are a treatise entitled DeTemporibus et Mutationibus. 2. De Gradibus Medicinarum compositarum investigandis. 3. De Ratione sex Quantitatum. 4. De Quinque Essentiis. 5. De Motu Diurno. 6. De Vegetali- bus. 7. De Theoria Magicarum Artium.

ALKERMES, in medicine, a term borrowed from the

Arabs, denoting a celebrated remedy, of the consistence of a confection ; whereof the kermes berries are the basis. The other ingre- dients are pippin-cyder, rose-water, sugar, am- ber-grease, musk, cinnamon, aloes-wood, pearls, and leaf-gold ; but the sweets are usually omitted. The confectio alkermes is chiefly made at Mont- pelier. The grain which gives it the denomi- nation, is no where found so plentifully as there.

ALKIBRIC, in chemistry, sulphur vivum. ALKIN, in chemistry, pot-ash.

ALL-GOOD, in botany, the chenopodium or bonus henri of ^ J►►d►►.

y tominon to heai

ALKUSSA, in ichthyology, a name given by the Swedes to the fish which they also call lake. It is a species of the silurus, distinguished by Arredi as the silurus with one cirrus, or beard under the chin ; the common silurus, the glanus of the ancients, having four cirri.

ALL, n. adj. & adv. Gothic, alle ; SL\. alle, Sax. Old Welsh ; al, Dutch ; alle, German ; o\u>c, Gr. The whole number; everyone, taken together; quite; completely. In our old writers it may be often considered expletive, or em- phatic. It is found, in composition, without ►►hanging the sense of the word, to which it gives additional force.

He sent for alle pe kynges fro Berwik vnto Kent, And pei with fulle gode wille alle vuto him went.

R. Brunne, p. 19.

And who ever wole be the firste among you schal be servaunt of alle. Wicldif. Mark, x.

Six days thou shalt labour, and do all thy work.

Deut. v. 13.

All the fitter, Lentulus ; our coming Is not for salutation ; we have bus'ness.

Ben Jonson. When I shall wed ; That lord, whose hand must take my plight, shall

carry

Half my love with him, half my care and duty : Sure, I shall never marry, like my sister, To love my father all, Shaksp. King Lear.

Then shall we be news-cramm'd. ††† All the better ; we shall be the more remarkable. Shakspeare.

Up, with my tent ; here will I lie to-night : But where, to morrow ? ††† Well, all's one for that.

Shakspeare.

Brutus is an honourable man : So are they all} all, honourable men.

Shaksp. Julius Caesar . To graze the herb all leaving, Devour'd each other. Milton's Parad. Lost.

Sceptre and pow'r, thy giving, I assume : And glad, her shall resign ; when, in the end, Thou shalt be all in all, and I in thee, For ever ; and in me, all whom thou lov'st. Milton. I am of the temper of most kings ; who love, to be in debt †††, are all for present money, ao matter how they pay it afterward. Dryden.

No more with fruitless care, and cheated strife, Chase fleeting pleasure through the maze of life ; Finding, the wretched all they here can have, But present food, and but a future grave. Prior. Ye sons of men, with just regard attend, Observe the preacher, and believe the friend, Whose serious muse inspires him to explain, That all we act, and all we think, is vain.

Prior’s Solomon. Knowledge.

Our all is at stake, and irretrievably lost, if we fail of success. Addison.

Thus let me hold thee to my heart,

And ev’ry care resign ; And shall we never, never part, My life ??? my all that’s mine.

Goldsmith’s Hermit.

ALL-FOURS, a game of cards played by two persons ; so called from the four sorts of cards, called high and low, jack of trumps, and the game, which, joined in the hand of either oarty, constitute him the winner.

ALL-HALLCW FAIR, an annual fair held in Edinburgh, beginning the second Monday ot November, and lasting a week, chiefly for black cattle and horses.

ALL HANDS Ho AY, in sea language, the order by which the ship’s company is summoned on deck by the boatswain. All hands to quarters hoay, is the order to the crew for preparation for battle. This command is more generally given by the boatswain piping down the hatchway.

ALL IN THE WIND, the state of a ship’s sails when parallel to the direction of the wind, so as to shake and shiver, by turning the ship’s head to windward, either by design, or neglect of the helmsman.

ALL-HEAL, in botany, the stachys of Lin- naeus. See STACHYS.

ALL-SAINTS, a festival, called also All-Hal- lows, celebrated on the first of November, in commemoration of all saints in general. The number of saints being excessively multiplied, it was found too burdensome to dedicate a feast day to each ; there being, in fact, scarce hours enough in the year for this purpose. It was therefore resolved to commemorate, on one day, all who had no particular

days. Boniface IV. in the ninth century, introduced the feast of All- Saints in Italy, which was soon after adopted into the other churches.

ALL-SAINTS ISLANDS, a small group of islands lying near Guadaloupe, in the West Indies.

ALL-SAINTS, a large convenient bay on the coast of Brazil, province of Bahia. It is thirty- seven miles from north to south, and twenty- seven from east to west. Its entrance is about eight miles from point Tagapipe to that of San Antonio. In this bay vessels are sheltered from every wind in clear ground, and there is ample space for an immense number of ships to harbour here without confusion. There are many smaller bays in it, convenient for careening vessels, and also many fertile islands. On the west side are two shoals, which, however, are not dangerous, sufficient space being left for the passage of ves- sels, without approaching them. Several rivers fall info this bay, the principal are Paraguasu, Sergippe, Jaguaripe, Matuim, Paranamerin, and Piraja. This capacious lake or inland sea, as it might be called, is surrounded by a rich and fertile country, the neighbouring shores being covered with sugar plantations, the productions of which are conveyed in large barges by the rivers ' The trade has greatly increased since the com- mercial treaty concluded with great Britain, after the royal family of Portugal quitted Europe. The surrounding coast abounds with whales ; a few large boats are employed in this fishery ; but the oil procured is hardly equal to the consump- tion. The eastern part of the bay lies in long 38►►. 42'. W. lat. 12►►. 42'. S.

AI.L-SAINTS (bay of), a deep bay on the coast of New California, or New Albion. Point Gra- jero, its northern promontory, is situated in long, 243►►. 34'. E. lat. 31►►. 43'. N.

ALL-SEED, in botany, a name given to tbp 2 T

ALL

Chenopodium polyspermum, or linum radiola of tlie

Linnaean system.

ALL-SOULS DAY is a festival held in commemoration of all the faithful deceased ; first introduced in the eleventh century, by Odi- lon, abbot of Cluny, who enjoined it on his own order ; and soon after adopted by the neighbour- ing churches.

ALL-SPICE. See MYRTUS PIMENTO.

ALLA, or ELLI, the first king of Sussex, who landed in England with a Saxon army, in 477, and having made himself master of that part of the country, erected it into a kingdom, and died in 514, after a reign of twenty-three years. Polyd. I'irg.

ALLA, OB ALLAH, the name by which theprofes- sors of Mahommedanism call the Supreme Being. The word is Arabic, derived from the verb alah, to adore. It is synonymous with the Hebrew Eloah, which signifies the Adorable Being.

ALLAGITE, in mineralogy, a carbo-silicate of manganese.

ALLAHABAD, a province of Hindostan, lying between the twenty-third and twenty-sixth degrees of north lat., and the seventy-ninth and eighty-third of east long. It is bounded on the north and north-west by the provinces of Oud? and Agra ; on the east by Bahar and Gundwa- na ; on the south by Gundwana and Berar ; and on the west by Agra and Mahvah. Its greatest length is about 250 miles, and its breadth about 120 miles, comprehending, according to the ar- rangement of the Ayeen Akberry, ten circars, or counties, and 177 pergunnahs, or hundreds; and capable, at the time of the completion of that celebrated volume, of yielding 11,375 cavalry, 237,870 infantry, and 323 elephants. The chief towns are Allahabad (' the House of God,' or ' King of Adorable Places,' as it signifies) ; Be- nares, the ancient seat of Brahminical learning, Callingur, Chunar, Chatterpore, Ghazypore, Joanpour, and Mirzapour ; and it is well watered by the Ganges, the Jumna, and their various tributary streams. A

large portion of the inha- bitants are native Hindoos, and the rest, perhaps one-eighth, Mahommedans.

On the dismemberment of the Mogul empire, in 1749, this province was seized by Mahomet Kooli, an ally of the Zemindar of Benares, with whom he entered the Bengal provinces, in 1760, at the head of 60,000 men. The British, then acting as allies of the nabob of Bengal, con- ducted an inferior force to meet him, to which he was ultimately obliged to surrender himself; and ??? this district, with that of Corah, was again ceded to the mogul, the emperor having the fort of Allahabad for his residence. In return, he con- firmed the rights of the British to their territorial acquisitions on the coast of Bengal, the great foundation of the British power in India. Of the Benares part of this province, the British, obtained possession on the death of Sujah Dow- lah, in 1775 ; of the capital and central districts in 1801 ; and of Bundelcund, and the southern parts of the province, by treaty with the Paishwa of the Poonah Mahrattasin 1803.

The diamond mine at Pannah, in this pro- vince, was formerly considered the most remark- able mine in India, and seems to have been

known to Ptolemy. It was a source of conside- rable revenue to the emperor Acber, as well as to the native chiefs of liundelcund, where it is situated. To the former, it yielded eight lacks of rupees annually. In 1756 it. was conside- rably exhausted, and only yielded four lacks of rupees to the rajah. Latterly it has excited little attention, and, we therefore conclude, af- fords but little profit. Muslins, cotton, opium, indigo, salt-petre, sugar, grain, and a great va- riety of fruits, form the other produce of Alla- habad. The population is said to exceed seven millions.

Allahabad is, on the whole, one of the most productive provinces of Hindostan. In the neighbourhood of the river, particularly, wheat flourishes exceedingly well, and will yield seven

quarters per acre. Land is rented here at about a pound an acre. Ploughing is begun at the commencement of the rainy season, in June; but the land is only turned up once until the rains cease. It is then ploughed fourteen or fifteen times before it is thought fit for the seed. But a still more laborious occupation of the agricultu- rist is to keep it watered in the dry season, a task which will employ four bullocks and three wa- terers, for nine days, on a single acre. They sow in September and October, after rains, peas, barley, and oil crops with the wheat.

In the province of Allahabad are two famous resorts of Hindoo superstition, Benares and Pra- gaya (Allahabad), which have for ages attracted their thousands from all parts of India.

The Bundelcund portion of this province rises to the south-west in elevated table lands, which abound with fortresses, but are very ill cultivated. Here the climate is as delightfully temperate, as in the flatter and more fruitful districts ; it is in- supportably sultry to Europeans. This part of the province has no considerable streams, and principally depends for irrigation on the periodi- cal rains. There is a small .breed of sheep cul- tivated in this district, the fleece of which is used as a rug for the shepherds, it being wholly unfit for weaving.

ALLAHABAD, the capital of the province of that name, is situated near the junction of the Jumna and the Ganges. It is divided into two parts, the Old Town and the New. The former stands on the site of the ancient town of Praeg, or Bhat Prayag, held in the highest veneration through- out Hindostan; so that notwithstanding all its changes of masters and of appearances, Allaha- bad is still the resort of numerous pilgrims, who come hither to offer their devotions to the Ganges and perform their ablutions in its waters. The surrounding country, to the extent of forty miles, is esteemed by these devotees as a sort of holy ground. This ancient part is mainly distin- guished by the magnificent ruins of a

fortress of stone, erected here by the emperor Acber. The walls are said to have been forty feet high throughout, including a number of elegant courts and domes. In the centre, a column of one stone, nearly forty feet high, is still standing, which records the honours of the emperor, in Sanscrit and Persian, the date of the building, 1583, &c. There is an extensive subterraneous cave in the middle of this fort, supported by

pillars, in which some of the most importznt rites of the Hindoo devotees are performed. It is said to extend under ground to Delhi. We should not omit to notice, that Dr. Robertson re- gards this place as occupying the situation of the palihothra of Strabo and Arrian, the celebrated capital of the Prasii.

On the sides that are presented to the two rivers, the fort retains its old walls, which are mounted with some pieces of cannon. The other side has three regular modern ravelins, two bastions, and a half bastion, whose foundations are much higher than the surrounding country. There is a spacious government house within the ###walls, containing some elegant rooms that over- hang the river, and an extensive barrack.

The modern town is the residence of a British judge, and of the collector of the province. Po- pulation about 20,000. The fort stands in north lat. 25##. 27'. and east long. 81##. 50'. at about fifty-three miles from Benares, and 550 from Calcutta.

ALLAHABAD, is also the name of a district surrounding the above city, and contains some of the most fertile lands of the province.

ALLAH-SHEHR, i. e. CITY OF GOD; a town of Natolia, in Turkish Asia, the Phila- delphia of the ancients. It contains some few remains of its ancient strength and importance ; particularly portions of the strong

walls and towers with which it was once encompassed. The inhabitants, however, are not very numerous : they are a mixture of Turks and Greeks ; but during the passage of the caravans to and from Smyrna, (distant about five days' journey,) the town is much frequented. The Greeks are said to amount to about three hundred and ten fa- milies, living on friendly terms with the Mahom- medans. Here is a lofty and beautiful cathedral for the use of the Greeks. Besides which, they have upwards of twenty inferior churches, though few in a state fit for public worship. This town is about five leagues from Sardis, or Sart.

ALLAMANDA, in botany; a genus of the monogynia order, and pentandria class of plants. Characters : CAL. one-leaved perianth. COR. one funnel-shaped petal : TUBE, cylindric : BOR- DER semiquinquefied and verticose; divisions expanding and obtuse : STAM. filaments scarce any : ANTH. five arrow-shaped, converging in the throat of the tube : PIST. oval germen, girt at the base with an annular margin; stylus uniform, the length of the tube: STIGM. headed and contracted in the middle: PER. is an or- bicular, compressed, bristly capsule, containing one cell with two valves : the seeds are imbri- cated, orbicular, flat, with a membraneous wing on the margin, and are very numerous. There is but one species, viz. allamanda cathartica, a native of Surinam.

ALLAMPARVA, a fort on the coast of the Carnatic, Hindostan, originally presented by the native powers to the French, by whom it was ceded to the British in 1760. It is sixty-seven miles south by west from Madras. North lat. 12►►. 10'. eastSng. 80►►. 7'.

ALLAN, a river of Perthshire, which rises near Gleneagles, in the parish of Blackford, runs west through Strathallan, and, after passing Dum-

blane, falls into the Forth, a mile above Stirling bridge.

ALLAW, (David,) a Scottish portrait and his- torical painter of the eighteenth century, was born at Edinburgh. After a long course of study at Rome, he was, in 1780, appointed master of the academy established in Edinburgh for diffusing the knowledge of the fine arts Ihere are several engravings from his pictures, one of which, entitled the Origin of Painting, or the Corinthian Maid, drawing the shadow of her lover, is well known and justly appreciated He died in 1796.

ALLAN, (George,) an attorney and antiquary of Darlington, in Yorkshire, who died ia 1800. lie had a printing-press in his own house, and issued many curious tracts, as, The Letter of Cromwell to William Lenthall, Esq. speaker of the House of Commons, for erecting a College and University at Durham, &c. 4to. Mr. Allan liberally communicated MSS. to the com- pletion of a civil and ecclesiastical history of the county palatine of Durham, having presented to the Society of Antiquaries of London twenty- six quarto volumes of MSS. chiefly gathered by the Rev. William Smith, of University College, Cambridge, and formerly rector of Melsonby, Yorkshire.

ALLANITE is a mineral first recognised by Mr. Allan of Edinburgh. Its analysis and de- scription, by Dr. Thomson, were published in the sixth volume of the Edinburgh Philosophical Transactions. M. Giesecke found it in a granite rock in West Greenland. It is massive and of a brownish-black colour. External lustre, dull ; internal, shining and resinous ??? fracture small conchoidal ??? opaque ??? greenish-grey s treak ??? scratches glass and hornblende ??? brittle ??? spec, grav. 3.5 to 4.0. Froths and melts imperfectly before the blow- pipe, into a black scoria. It consists in 100 parts, of silica 35.4, oxide of ce- rium 33.9, oxide of iron 25.4, lime 9.2, alumina 4. l.and moisture 4.0. It has been also found crystallized in four, six, or eight sided prisms. It closely resembles gadolinite, but may be dis- tinguished from the thin fragments of the latter, being translucent on the edges, and of a fine green colour, whereas those of the former

are commonly opaque and of a yellowish brown. The ores of cerium analyzed by Berzelius, under the name of cerin, approach very closely to it in their composition.

ALLANTODIA, in botany, from aXAac, aX- Xavros, a sausage, so called from the tumid oblong figure of the son or lines of capsules, wrapped within their membraneous covering. Class and order, cryptogamia, filices. NAT. ORD filices. Ess. CHAR, fructification in scat- tered oblique lines accompanying a vein, invo- lucrum vaulted, originating laterally from the vein, and inserted into it by both margins ; at length separating at the inner one. The habit of this genus, says Mr. Brown, is between ne- phrodium and diplazium. Polypodium umbrp- sum Hort. Kew. ed. 1, affords an example of it, and there are some unpublished species. We are acquainted with.

A. umbrosa. Madeira wood sausage-fern. Frond triply pinnate: ultimate segments lan- 2 T 2

eeolate, decurrent, deeply serrated ; the lower serratures cloven. Lines contiguous; finally confluent. ??? Gathered in shady woods in Madeira, by the late Mr. Masson, who sent roots to Kew, in 1779, and gave specimens to the younger Linnaeus. A. australis. Southern sausage-fern. Br. n. 1. ??? Frond doubly pinnate, deltoid, mem- braneous, flaccid. Leaflets pinnatifid,' tapering at the point ; lobes oblong, obtuse, deeply ser- rated, many-flowered. Involucrum oblong. ??? ??? Native of Van Diemen's island. ??? A. tenera. Tender sausage-fern. Br. n. 2. ??? Frond doubly pinnate, membraneous, flaccid. Leaflets pinna- tifid ; lobes oblong, obtuse, serrated, flowering at the base. Spots linear. ??? Gathered by Mr. Brown, in the neighbourhood of Port Jackson, New South Wales. The Aspidium axillare, Willd. Sp. PI. v. 5. 278. Ait.

ed. 2. v. 5. 512, should seem, if the specific character of Will- denow were right, to belong to the present genus.

ALLANTOIS, in anatomy, a urinary mem- brane so called from its resemblance to a pud- ding. It makes a part of the secundine, ap- pearing differently in different animals, and most conspicuously in the cow and sheep kind. Its length in the former extends to about twelve feet. It is very dilatable, and may be blown up to above a foot diameter. The inhabitants of Iceland make use of it, instead of glass, for windows.

ALLASIA, from oX►►.ae, & sausage, or black- pudding, in reference to the shape and colour of the fruit. Class and order, tetrandria, monogy- nia. General Character : CAL. one leaf, inferior; TUBE, short : LIMB, in five, rather acute, hairy seg- ments : COR. superior, of four small, concave and very hairy petals: STAM. Filaments four, awl- shaped, thick, the length of the calyx : ANTHERS, inverted, two-lobed, each lobe two cells : PIST. Germen roundish, between the calyx and the co- rolla : STYLE, awl-shaped, length of the stamens : STIGM. acute : PERIC. berry large, oblong, ob- tuse, smooth, fleshy, pendulous, one cell. Seeds numerous, ovate, tumid, somewhat compressed and imbedded in pulp. Ess. Char. Berry with numerous seeds : GERM, between the five-cleft calyx : COR. four petals. Its common name is the biack-pudding tree, or muringuiringue of the Africans. It was first observed by Loureiro, at Mozambique, near the eastern coast of Africa. It is a large tree, with spreading branches, desti- tute of thorns.

ALLAT, from Allah, God, Arab, the name of an idol among the Arabians and idolatrous Jews.

ALLATIUS, (Leo,) a native of Scio, keeper of the V7atican library, and a celebrated writer of the seventeenth century. He assisted the gentlemen of Port Royal in their controversy with M. Claude, respecting the belief of the Greeks as to the Eucharist. He was devoted to the see of Rome, and

inveterate against the Greek church, in which he had been educated. He never en- gaged in matrimony, nor entered into orders. Pope Alexander VII. having aiked him one day, why he did not enter into orders ; he answered, ' Because I would be free to marry.' The Pope rejoined, ' If so, why do you not marry ? ' be- cause,' replied he, ' 1 would be at liberty to take

orders.' Patricius says, that Allatius had a very extraordinary pen, with which he wrote Greek for forty years ; and when he lost it, he lamented it with tears. He published several translations of Greek authors, and some pieces of his own, the principal of which are, De Ecclesiae Occiden- talis et Orientalis perpetua Consensione, On Purgatory, De Patria Homeri, De septem orbis Spectaculis, Confutatio Fabulee de Joanna pa- pissa, De Georgiis, De Simeonibus. He died at Rome in 1669, aged 83.

ALLAY', v. &ra.~\ Supposed to be derived

ALLAY'ER, f from allegge, with the g

ALLAY'MENT, ►► softened intoy fromAlecjan,

ALLOY'. J to lay : to put down ; to

ease ; to soothe ; alleviate ; lessen ; reduce. To

abate the force or strength of the predominant

material with which something is made ; as in

alloy, immediately from the French alloyer.

If he no lusty thought assaye, Whiche inaye his sory thurst allaye, As for the tyme yet it lesseth To hym, whiche other ioye misseth.

Gower. Con. A . book vi For if that they were put to swiche assayes, The gold of hem hath now so bad alayes, With bras, that though the coine be faive at eye, It wolde rather brast atwo than plie.

Chaucer. The Clerkes Tale, v. i. p. 368. When

flowing cups run swiftly round

With no allaying Thames, Our careless heads with roses bound,

Our hearts with loyal flames : When thirsty grief in wine we steep,

When healths and draughts go free, ??? Fishes, that tipple in the deep, Know no such liberty.

Rd. Lovelace in Ellis, v. iii. p. 277.

But thou'lt say

There were some pieces of as base allay And as false stamp there, parcels of a play, Fitter to see the tire-light than the day : Adultrate monies, such as would not go.

Ben Jonson. Underwood's. On Vulcan. Gold incorporates with lead in any proportion ; so it does with copper, which is its common alloy ; it likewise incorporates with brass and tin, which was the ancient alloy. Bacon's Nat. awl Exper. Hist.

Phlegm and pure blood are reputed allayers of acri-mony. Harvey on Consumptions, I will purge in the furnace thy dross ; And I will remove all thine alloy.

Lowth's Isaiah. Preliminary Di. Yet leave me not ! I would allay that grief, Which else might thy young virtue overpower, And in thy converse I shall find relief When the dark shades of melancholy lower.*

Beattie's Minstrel, b. ii.

ALLAZ^EZIS, among chemists, denotes a philosophical brass or copper, called also ss album, aqua mercurii.

ALLE, a river of Prussia, which falls into the Pregel, near Wehlaw.

ALLE, a species of auk. See ALCA. ALLECT', -\ Ad :

lacio, lectum, to

ALLECT'IVE, ►►.&►►$. (draw to; to attract, al-
ALLI'CIENT, ►►lure, entice, seduce ; to

ALLI'CIEKCY. J gain over by stratagem.

Consider what is root and ground

Of thy mischief, which is plainly found

ALLEGANY.

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Woman farced with fraud and disceipt To thy confusion most allectiue baite. Chaucer. The Remedie of Love, foil. 323. c. i.

They made so cruell and deadly warre, that not lyke men, whose nature is to be satisfied with the slaughter of men, and to be merciful to the impotent and sycke persons, brent tounes, spoyled houses, and killed me aud children, and allected with the sweet-, nes of spoyle and prayes, wasted all the countrey of Northumberlad.

Hall. Hen. VII. fol. 50.

But among all thinges, the very deadly pestilece is this : to be couersaut dale and night among them, whose life is not only on euery side an allective to synne : but ouer that all set in the expugnacion of vertue; Sir Thomas More's Workes, p. 12. c. i.

ALLECTOR, a species of CRAX, which see.

ALLECTUS, in ancient history, a praetorian prefect, who, having killed Carausius in Eng- land, took possession of his throne, which he held from 294 to 297 ; when Constantius Caesar landing in Britain with an army, Allectus was killed in an engagement which ensued. Medals are still extant bearing his effigy.

ALLEGANY COUNTY, a county of the state of New York,

in North America. It was erected from Genesee county in 1806, is about forty miles north and south, and twenty-eight east and west. It is bounded on the north by Genesee county, east by Steuben county, south by Pennsylvania, west by Cataraugus county. The area is 1120 square miles. The first settlement of this county commenced in 1804, whence it is at present in its infant state. It is watered by the Genesee river, which follows a devious course nearly through its centre from south to north, receiving many small streams from every part. In the south-west corner some small streams are collected, which form the eastern sources of Allegany river, and in the south-west corner rise the eastern sources of Cataraugus Creek. The soil is rich, though a considerable part of the land is broken. The Merino sheep nave been introduced along with other agricultural improvements, which are common through- out the state.

ALLEGANY COUNTY, in Pennsylvania, extends from the junction of the river of that name with the Ohio, where its chief town Pittsburg is si- tuated, to the New York line.

ALLEGANY, or AHALACHIAN MOUNTAINS, a range of mountains in North America, which extend in a direction west of south from the forty- second to the thirty-fourth degree of north lati- tude. They approach the sea, in the state of New York, whence, in their course towards the south, they recede from the sea-shore. Their breadth may be estimated at 110 miles, and they consist in a succession of parallel ridges, follow- ing nearly the direction of the sea-coast, irregu- larly intersected by rivers, and divided by valleys. The ridge which separates the Atlantic rivers from the western waters, generally known by the name of Allegany, preserves throughout a nearly equal distance of 250 miles from the Atlantic ocean, and a nearly uniform elevation of 3000 feet above the level of the sea. Those mountains may, however, be perhaps considered as consisting of two principal chains ; between these lies the fertile Limestone valley, which, although occasionally interrupted by transversal

ridges, and, "in one place, by the dividing of Al- legany ridge, may be traced from Newburgh and Esopus, on the Hudson river, to Knoxville on the Tennessee. The eastern and narrowest chain is the blue ridge of Virginia, which, in its north-east course, under various names, traverses the states of Maryland, Pennsylvania, and New Jersey, forms the high lands broken at West- point by the tide of the Hudson, and then uniting with the Green mountains, assumes a northerly direction, and divides the waters of the Hudson, and of lake Champlain, from those of Connec- ticut river. On the borders of Virginia and North Carolina the blue ridge is united, by an inferior mountain, with the great western chain, and thence to its southern extremity becomes the principal or dividing mountain, discharging east- wardly the rivers Roanoke, Pedee, Santee, and Savannah, into the Atlantic ocean ; southwardly the Chatahouchee, and the Alabama into the gulf of Mexico, and westwardly the New River and the Tennessee. The New River, taking a north- wardly course, breaks through all the ridges of the great western chain, and, at a short distance beyond it, unites under the name of Kanhaway with the Ohio. The Tennessee pursues at first a south-west direction between the two chains, until having reached, and in a westwardly course turned, the southern extremity of the great western chain, it assumes a northwardly direction, and joins its waters with those of the Ohio, a few miles above the confluence of that river with the Mississippi. The western chain, much broader, and more elevated, is known by the names of Cumberland and Gauley mountains, from its southern extremity, near the great bend of the Tennessee river, until it becomes in Virginia the principal or dividing mountain. Thence, in its northerly course, towards the state of New York, it discharges westwardly the Green Briar river, which, by its junction with the New River, forms the Kanhaway, and the rivers Monongahela and Allegany, which, from their confluence at Pitts- burgh, assume the name of Ohio. Eastwardly it pours into the Atlantic ocean, James river, the Potomac, and the Susquehannah. From the northernmost and less elevated spurs of the

chain, the Genesee flows into the lake Ontario ; and in that quarter the northerly branches of the Sus- quehannah seem to take their source, from amongst the inferior ridges, and in their course to the Chesapeake to break through all. the mountains. From the Susquehannah the prin- cipal chain assumes a more eastwardly direction, and is washed on the north by the lateral valley of the river Mohawk. Whilst it gives rise southwardly to the Delaware, it terminates under the name of Catskill mountain, near the tide- water of the Hudson. In the back parts of Pennsylvania, scarce one acre in ten of this vast range is capable of cultivation; but in other parts, extensive tracts of fine arable and pasture land intervene between the ridges, having a fine rich black soil ; and some of the mountains admit of cultivation almost to their tops.

ALLEGANY RIVER, a river of North America, which rises on the western side of the Allegany mountains, about twenty miles from Lake Erie ; aud after a course of 200 miles in a south-wes►► direction, meets the Monongahela at Pittsburg,

when these rivers both unite from the Ohio. In its course it is increased by French Creek and other smaller rivers, and begins to be navigated abovit 200 miles from Pittsburg. Its banks are fertile, and the planters settled upon it, as well as upon the Monongahela, export the products of tneir grounds by way of the Ohio and the Mississippi. For about 150 miles above Pitts- burg the lands consist of white oak and chesnut ridges, and in many places of poor pitch pines, interspersed with tracts of good land and low meadow. The waters of the Allegany are clear and limpid in all weathers.

ALLEGATA, Lat. from allegatus, appoint- ment ; a word anciently subscribed at the bottom of rescripts

and constitutions of the emperors, as signata, ortestata, was under other instruments ; &nd synonymous with verificata, verified. It was, however, less used than data, propositum, accepta, &c.

ALLEGE’,- -\ Ad. . allegatio_ To ALLEGATION, f ^ . J* of excuse or ALLEGE ABLE, V f ^ ^ affi

ALLEPEMENT’S maintain; urge.

/Vl, I,]’ GER. J

I wene be kyng allegid, bei were of his tresour, Nobeles he wild haf briggid, be fals loue and erroure. R. Brunne, p. 247. And eke this noble duke aleyde Full many an other skill, and seide, She had well deserued wreche.

Gower. Con. A, book iii. Thy son Enee, mysknawing this deray, As thou allege!*, is absent now away.

Douglas, book x. p. 316. Thei wollen a leggen al so, and by pe godspel preoven

hit Nolite judicare quenquam.

Vision of Pier’s Plouhman, p. 202. Hath he not twit our sovereign lady here With ignominious words, though darkly coucht ? As if she had suborned some to swear False allegations, to o’erthrow his state.

Shakspeare’s Henry VI.

If we forsake the ways of grace or goodness, we cannot allege any colour of ignorance, or want of in- struction ; we cannot say, we have not learned them, or we could not. Sprat.

He hath a clear and full view ; and there is no more to be alleged, for his better information. Locke. The narrative, if we believe it as confidently, as the famous alleger of it (Phamphilio) appears to do, would argue ; that there is no other principle requi- site, than what may result from the lucky mixture of several bodies. Boyle.

ALLEGEAS, or ALLEGIAS, a stuff manufac- tured in the East Indies ; of which there are two sorts ; the one of cotton, and the other of several kinds of herbs, spun like flax. They are eight ells by five, six, or seven eighths, and twelve ells by three fourths or five eighths.

ALLE'GIANCE,n. 1 Ad: ligare, to bind ALLE'GIANT. $ to. Old Fr. allegiance.

The tie or bond of fidelity which binds the go- verned to the governor. Applied also to any tie , or bond of duty, or good faith.

In this passe tyme, Robert duke of Normandy, moued in concyence to vysyte the holy sepulture of our Lorde, called before hym his lordes of his lande, wyllynge and comaundynge theym to owe theyr trewe aUegeawice vnto his yonge gone, Wyllyam -, and

to take hym for theyr lorde and duke, if he retourne nat agayne. Fabyan, p. 220.

I did pluck allegiance from men's hearts, Loud shouts and salutations from their mouths, Even in the presence of the crowned king.

S/iaktp.

For your great graces Heap'd upon me, poor undeserver, I Can nothing render, but allegiant thanks, My pray'rs to heaven for you.

Shaksp. Henry VIII. We charge you, on allegiance to ourselves, To hold your slaughtering hands, and keep the peace.

Shaksp.

The house of commons, to whom every day peti- tions are directed by the several counties of England, professing all allegiance to them, govern absolutely; the lords concurring, or rather submitting, to whatso- ever is proposed. Clarendon. Ere wit oblique had broke that steady light, Man, like his Maker, saw that all was right ; To virtue

in the paths of pleasure trod, And own'd a father when he own'd a God. Love all the faith, and all th' allegiance then, For nature knew no right divine in men.

Pope's Essay on Man, Epist. iii.

ALLEGIANCE, in English law, Lat. from alligare, to bind, is the ligamen, or tie, which binds the subject to the king, in return for that protection which the king affords the subject. The thing itself, substantially, is founded in the nature of government ; the name and form are derived to us from our Gothic ancestors. Under the feudal system, every owner of lands held them in subjection to some superior, from whom, or from his ancestors, the tenant, or vassal, had received them ; and there was a mutual trust subsisting between the lord and vassal, that the lord should protect the vassal in the enjoyment of the territory he had granted him, and that the vassal should be faithful to the lord, and de- fend him against all his enemies. This obliga- tion on the part of the. vassal was called his fidelitas or fealty ; and an oath of fealty was required by the feudal law to be taken by all tenants to their landlord, which is expressed in almost the same terms as our ancient oath of allegiance ; except that, in the usual oath of fealty, there was frequently an. exception of the faith due to a superior lord, under whom the landlord himself was perhaps only a tenant or vassal. But when the acknowledgment was made to the superior himself, who was vassal to no man, it was no longer called the oath of fealty, but the oath of allegiance ; and therein the tenant swore to bear faith to his sovereign lord, in opposition to all men, without any ex- ception. Land held by this species of fealty, was called feudum legium, a liege fee ; the vas- sals, homines ligii, or liege-men ; and the sove- reign, their dominus ligius, or liege lord. And when sovereign princes did homage to each other, for lands held under their respective sove- reignties, a distinction was always made between simple homage, which was only an acknow- ledgment of tenure, and liege homage, which included the fealty

before-mentioned, and the services consequent upon it. In Britain, as it became a settled principle of tenure, that all lands in the kingdom are holden of the king 3d their sovereign and lord paramount, no oath but

that of fealty could be taken to inferior lords ; and the oath of allegiance was necessarily con- fined to the person of the king alone. By an easy analogy, the term of allegiance was soon brouglu to signify all other engagements due from subjects to their prince, as well as duties merely territorial. And the oath of allegiance, as administered in England for upwards of 600 years, contained a promise ' to be true and faith- ful to the king and his heirs, and truth and faith to bear of life and limb and terrene honour, and not to know or hear of any ill or damage intended him, without defending him therefrom.' But, at the revolution, the terms of .this oath being thought to favour non-resistance, the present form was introduced by the Convention Parlia- ment, which is more general and intermediate than the former ; the subject only promising ' that he will be faithful and bear true allegiance to the king,' without mentioning ' his heirs,' or specifying in the least wherein that allegiance consists. The oath of supremacy is principally calculated as a renunciation of the pope's pre- tended authority : and the oath of abjuration, introduced in the reign of King William III. very amply supplies the loose and general texture of the oath of allegiance; as it recognises the right of his majesty, derived under the act of settlement; engaging to support him to the utmost of the juror's power ; promising to dis- close all traitorous conspiracies against him ; and expressly renouncing any claim of the descend- ants of the late pretender, in explicit terms. This oath must be taken by all persons in any office or employment ;

and may be tendered by justices of the peace to any person whom they suspect of disaffection. It may also be tendered to all persons above the age of twelve years, whether natives, denizens, or aliens. Besides these express engagements, the law also holds that there is an implied, original, and virtual al- legiance, due from every subject to his sovereign, antecedent to any express promise, and although the subject never swore any allegiance in form. Thus Sir Edward Coke observes, that 'all sub- jects are equally bounden to their allegiance as if they had taken the oath ; because it is written by the finger of the law in their hearts, and the taking of the corporeal oath is but an outward de- coration of the same.' Allegiance, both expressed and implied, is however distinguished by the law iuto two species, the one natural, the other local.

In natural-born subjects, and also in subjects naturalized by law, allegiance is perpetual, and cannot be dissolved. The former, immediately upon their birth, are under the king's protection ; and the latter are so, immediately upon their naturalization. This species of allegiance there- fore becomes a debt of gratitude, which cannot be forfeited or altered by any change of time, place, or circumstance ; nor by any thing except the united concurrence of the legislature. Thus, a Briton, who removes to France or to China, owes the same allegiance to the British sovereign, as when at home ; and the same twenty years hence as now.

The oath of allegiance, or rather the allegiance sworn to in it, is held to be applicable, not only

to the political capacity of the king, or regal office, but to his natural person and blood-royal ; and for the misapplication of their allegiance, viz. to the regal capacity, exclusive of the person of the king, were the Spencers banished in the reign of Edward II.

It is to be observed, however, in explanation of this allegiance, that it does not preclude re- sistance to the king, when his misconduct or

weakness is such as to make resistance beneficial to the community. Allegiance is obedience to lawful commands. If the king should issue a proclamation, levying money, or imposing any service or restraint upon the subject, beyond what the law authorized, there would exist no sort of obligation to obey such a proclamation. Neither can allegiance extend to the king after he is actually deposed, driven into exile, or otherwise rendered incapable of exercising the regal office. The promise of allegiance implies, that the person to whom it is made continues to exercise the power, and afford the protection, which belong to the office of king.

Local allegiance is that which is due from an alien or stranger boni, so long as he continues within the king's protection ; and it ceases the instant such stranger transfers himself from this kingdom to another. It is founded on the prin- ciples of civil policy, ' that the government which gives protection requires obedience.' The com- mon law prescribes the taking the oath of allegiance by all persons above twelve years of age, at courts leet ; and there are various statutes requiring the oaths of allegiance and supremacy to be taken under penalties. Persons above the age of eighteen may be summoned by any justice of peace to take these oaths ; and if any natural- born subject be withdrawn from his allegiance, and be reconciled to the pope or see of Rome, or shall promise obedience to any other state, he and his advisers incur the guilt of treason. 1 Eliz. c. i. 1 William and Mary, c. i. 8. 1 Anne, stat. i. c. 22, &c. &c.

AL'LEGORYE, or-> AAXoe, another; ayo- AL'LEGORY, n. p⬚⬚w, to make a speech;

ALLEGOR'ICAL, i oXXijyopta,anothermean-
ALLEGOR'ICALLY, [ing. A figurative dis- AL'LEGORIST,
course in which some-

AL'LEGORIZER. J thing is intended besides what the words literally signify.

For it is wrytten, that Abraham had two sonnes, the

one by a bonde mayde the other by a fre woma. Yee and he whych was borne of the bonde woman, was born after the flesshe : but he which was of the fre woma, was borne by promes. Which thynge9 are spoken by an Allegorye. For these are two te tametes. Bible, 1539. Galatiani, iv.*

Wyth hys alkgoricall cxposicion of spirituall eating of Christes godhead and of his bodi by beliefe of hys passion, he goeth about to take away from vs the very lytterall truth, of the very eating and bodely receiulng of Christes own veri flesh and blood.

Sir Thomai More' Worket, p. 1041, c. i.*

When our Saviour said, in an allegorical and mys- tical sense, ' Except ye eat the flesh of the Son of Man, and drink hi►► blood, ye have no life in you ;' the hearers understood him literally and grossly.

Bentley.

The epithet of Apollo for shooting, is capable of two applications ; one literal, in respect of the darU

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and bow the designs of that god; the other allegorical, in correct allegory it is real. The history of

*in regard to the rays of the sun.. V*pe- Abraham's family, particularly Sarah s miracu-*

Fable may be divided into the Probable, the Alle- jous and Hagar's natural conception, w,th the

- *TJ ►►► Kn-th oTiil ctnto rit thpir ►►nnc arp> pvnrpsiQlv nallan*

gorical, and" the Marvellous. Pope

The stoic philosophers, as we learn from Cicero,

were great allegorisers. Coventry. Phil. Con.

Neither must we draw out our allegory too long ;

lest either we make ourselves obscure ; or fall into

affectation, which is childish. Ben Jonson.

birth and strife of their sons, are expressly called an allegory, Gal. iv. 24. representing the two covenants. But although this distinction applies, in general, to scriptural allegories and parables, in other writings allegory is universally under- stood to be a work of imagination. Thus Spen- ser's Faerie Queene, Butler's Iludibras, Swift's

, . , v . ,-r her s raune vvuccue. jjunci a uuuiuioa. uvnua

This word nympha meant nothing else, but (by Gulliver's Travels, &c. are

nJIffinnA the vegetative humour or moisture, that ' .

SLhandgivethlifetotreesand flowers, whereby allegories, wherein the figures, personages, and

quicKenetn a] peacham. scenes represented, are entirely imaginary, though

ey grov

On the broad stern, a pencil warm and bold, That never servile rules of art controll'd, An allegwic tale on high pourtray'd There a young hero, here a royal maid.

Falconer's Shipwreck, can. ii.

the moral and satire contained in them apply to real life and historical facts. Nothing gives greater pleasure than an allegory, when the re- presentative subject bears a strong analogy, in all its circumstances, to that which is represented. No

author ancient or modern has drawn a

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ALLEGORY, in composition, a figure of speech more c lete or fect aiiegory than John which conceals, under the literal meaning B ►► his p^m's Progress; a work

of our words, another and a different sense. w] ' we believ6j hag afforded pieasure to many

seems to be derived from aXXoe, another, and read even am those who do not entirely ayopa, an harangue ; and is a species of compo- e of ►►e doctrines it inculcates. An emi-

sition with which the eastern writings abound. ^ London bookseller, lately deceased, who An allegory differs from a metaphor or simile, as had made an estimate of the quantity Of copies it consists of a continued story, told in a chain gold Qf the bookg most universaiiy read> says> of metaphors. Thus, likening a ship to a state that ards of 430,000 copies of Bunyan's Pil- is a simile ; but to steer the ship through storms Krim'srPrOKress have beea printed ; which exceeds without, to rule it in spite of mutiny within and ^e gale Qf ^ the Qther books in the English to reach the destined port in safety, signifying i e> exce t> the Bible and prayer books,

the outward warfare and the internal rebellions &c b aboye 100;000 copies ; This affords an of that state, overcome by the wisdom of its go- indubitable proof how universally a well written vernor, is an allegory, and one of the most usual, alwOry is relished. See FABLE, METAPHOR, and the most obvious kind. Thus Horace, 1. i. pA►►ABLE TYPE, &c.

ode xiv. ALLEGORICAL SYMBOLS. The following ex-

O navis, referent in mare te novi ira.ct from one of Plutarch's moral essays, is a

Fluctus. O quid agis ? fortiter occupa curious specimen of the symbolical language, in

Portum. which the ancients sometimes concealed their

The principal subject is kept out of view, but precepts. These allegorical symbols were em- all its circumstances and properties will be re- ployed by Pythagoras ; and the Chaldean ora- presented ‘ in common with all other metaphorical cles, given by Mr. Taylor, could they be at this language.’ Says a late author, ‘ an allegory is day as ingeniously elucidated, might appear exactly similar to an hieroglyphical painting, only more significant, and less mysterious. ††† We must substituting words for colours.’ not feed on fish with black tails ; that is, we

Numberless instances of allegory, in the highest must avoid all connexions with men of a malig- style of excellence, might be given from writers uant character.- ††† Tread not on the scales ; that is, in our own language, as it has been a favourite respect justice, and be careful not to infringe the figure of composition with us. The Bible abounds laws. ††† Sit not on the bushel; that is, fly all in- in the finest instances, of which Blair gives dolence, and labour for the necessaries of life. ††† Psalm Ixxx. ver. 8 ††† 16 as a specimen. Spen- Wear not a tight ring; that is, preserve your li ser’s Faerie Queene is an allegory throughout, berty, and be the slave of no person. ††† Stir not and Addison, in his Spectator, abounds with al- the fire with a sword ; that is, irritate not a inaa legories, any of which maybe taken as a prototype in a passion, but strive to calm him. ††† Gnaw na for this kind of figure. The resemblance of an your heart ; that is, give not yourself up to de allegory to its real and intrinsic meaning may vouring griefs. ††† Abstain from eating beans ; tha be too obvious ; but equal care must be taken is, do not meddle with the affairs of government . that it may not be broken or obscure ; for in for anciently the votes for the election of magis- the one case the pleasure is destroyed, and in trates were made with beans. It is in this man- the other the instruction intended to be conveyed ner that the commencement of all knowledge ha is overwrought, hidden, and finally

lost. Most been made in enigmas ; and these have appeared writers are unlucky in their choice, the analogy to remote posterity more absurd and barbarous being generally so faint and obscure, as rather than they really were, by metaphors which are to puzzle than to please. unintelligible, and customs which are forgotten,

The distinctive characters of allegory and pa- ALLEGRANZA, a very small island, o. rable have not in general been accurately defined, rather rock, the most northerly of the Canaries. The beautiful parable 01 the Egyptian vine, It is barren and destitute of inhabitants, and is Psalm Ixxx. is by no means a correct allegory, only resorted to by those of the neighbouring The figure in parable is altogether imaginary; islands at certain times to gather orchilla.

ALLEGRAMENTE, in music, rather quick.

ALLEGRESSIMO, in music, very quick.

ALLEGRETTO, in music, a diminutive of alle- gro, which is more quick and lively.

ALLEGRI (Alexander,) an Italian satirical poet, of the latter end of the sixteenth century, ###who was born at Florence. He served in the army, but afterwards became an ecclesiastic. His principal works are Rime piaceovoli, Lettere di ser poi Pedante, and Fantastica Vizioni di Parri da Pozzolatico. These were published together in one volume, which is now very scarce. Allegri left other poetry in the hands of his family, which never was published, together with a tragedy entitled Idomeneus, and several Latin poems of considerable excellence.

ALLEGRI (Gregorio,) was an eminent mu- sical

composer of the seventeenth century, a na- tive of Rome, and by profession an ecclesiastic. He was a disciple of Nanini, who was contempo- rary with Palestrina, and his. intimate friend. His abilities as a singer were inconsiderable, and yet be was accounted an admirable master of har- mony ; and the pope appointed him to be one of the singers at the Vatican in 1629. To his extraordinary merit as a composer of church music, he is said to have -joined a devout and benevolent disposition, and an excellent moral character. He died February 18th, 1672, and was buried in the Chiesa Nuova, before the chapel of St. Filippo Neri.

ALLEGRI (Antonio.) See CORREGIO.

ALLEGRO, in music, a word denoting one of the six distinctions of time. It expresses a sprightly motion, the quickest of all, except Presto, and originally means gay, as in Milton.

ALLEGRO, Piu, in the Italian music, intimates to play or sing a little quicker.

ALLEGRO Poco Piu, that the part it is joined to must be played, or sung, a little more brisk and lively than allegro alone requires. The usual distinctions succeed each other in the fol- lowing order : grave, adagio, largo, vivace, alle- gro, and presto. The movements of the same name, as adagio, or allegro, are swifter in triple than in common time.

ALLEIN (Joseph,) the son of Tobias Allein, was born in Devizes in 1633, and educated at Oxford. In 1655 he became assistant to Mr. Newton, of Taunton Magdalen, in Somerset- shire ; but was deprived for non-conformity. He died in 1668, aged 35. He was a man of great learning, and greater charity ; preserving, though a non-conformist, and a severe sufferer on that account, great respect for the church, and loyalty to his sovereign. He wrote several books of piety, which are highly esteemed ; but the most celebrated is his Alarm to Unconverted Sinners, of which the sale has always been considerable.

ALLEIN (Richard,) a nonconformist divine, born in 1611 , at Ditchet, in Somersetshire. He ???was educated at Oxford, and in 1641 obtained the living of Batcomb, in Somersetshire, from which he was ejected for nonconformity, and preached privately till his death in 1681. His writings on practical divinity have been useful.

ALLELENGYON, in antiquity, a kind of tax or tribute, which the rich paid for tli?? poor, when absent in the armies.

ALLELOPHAGI,frorn aXXn\??c, one another, and aju, I eat, in natural history, a term used by Mouffet, and other writers on insects, to ex- press a peculiar genus of flies, which devour one another ; thus called in distinction from the he- terophagi, which feed on different substances, and not on one another.

ALLELUL\, ALLELUJAH, or HALLELUJAH, my?n, Praise ye the Lord.

He will set his tongue to those pious divine strains, which may be a proper przludium to those allelitjuhs he hopes eternally to sing. .

Government of the Tongue. Then shall thy saints Unfeigned hallelujahs to Thee sing ; Hymns of high praise. Milton.

ALLELUJA, in botany, a name used by many for the common wood sorrel.

ALLELUJAH, in sacred music, an expression formerly used in religious assemblies, as a call for each other to praise the Lord.

ALLEMAND, a sort of grave solemn music, invented by the Germans, with good measure, and a slow movement. Also a brisk kind of dance, very common in Germany and Switzer- land.

ALLEMANDA, in music books, a certain air in common time, and in two parts, each part being played twice over.

ALLEMANNIC, ALAMANNIC, or ALEMANIC, from Alemanni, Allemanni, or Alamanni ; the name whereby the German nation was anciently known ; any thing relating to the ancient Ger- mans. Goldastus published collections of writers on Allemannic affairs. The Allemannic lan- guage was spoken throughout the southern parts of Germany, which was divided into several dis- tricts ; the principal of which are the Suevic and Helvetic. It differed from the Francic, which was the language in use through the northern parts of Germany. The chief dialects of this are the Palatine, Franconian, and Saxon.

ALLEMANNIC LAW, otherwise called the Sue- vic law, that which obtained in the more southern parts of the country, as the Saxon law did through- out the northern. Schiller has published the feu- dal Allemannic law.

ALLEN, a county town of Kentucky, in the United States, North America, population 5327; Scotsville, 160 miles south-west by south of Frankfort, is the chief town : also the name of a newly formed county in the state of Ohio.

ALLEN, BOG OF, an immense tract of moss, the largest in Ireland, which runs through part of the counties of Dublin, Carlow, Kildare, Kil- kenny, and Meath. Part of it has been recovered and cultivated, by burning and sowing it with rape-seed.

ALLEN, ISLE OF, corrupted from Hy-al-lam, Irish, i. e. the district of the great plain, a dis- trict of Ireland, in the county of Kildare.

ALLEN, (John,) archbishop of Dublin, under Henry the VIII. was educated in the university of Oxford, but took his degree of A. B. at Cam- bridge. Being sent by Dr. Warham, archbishop of Canterbury, to the pope, he continued at Rome nine years, and was there created LL. D. After his return he was appointed chaplain to cardinal Wolsey, and jvdge of his court as legate a latere.

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He assisted the cardinal in suppressing forty small monasteries, for the erection of his colleges at Oxford and Ipswich ; and Wolsey procured him the living of Dalby in Leicestershire. In 1528 he was consecrated archbishop of Dublin, and about the same time made chancellor of Ire- land. His principal works are, 1. Epistolae de Pallii significatione activa et passiva. 2. De Consuetudinibus ac statutis in tuitoriis causis observandis ; with several other pieces on eccle- siastical affairs. He was barbarously murdered in an insurrection set on foot by Thomas Fitzge- rald, eldest son of the earl of Kildare, in 1534.

ALLEN, (Thomas,) a famous mathematician of the sixteenth century, born at Utoxeter in Staffordshire, the 21st of December, 1542. He went to Oxford in 1561 ; and in 1567 took his decree of A. M. In 1570 he retired to Gloucester- hall ; and when Robert earl of Leicester would have conferred a bishopric upon him, his love of solitude made him decline the offer. The author of a book, entitled Leicester's Commonwealth, accused him of using the black art, to promote the ►►arl of Leicester's unlawful designs, and to bring about a match between him and queen Elizabeth. He published in Latin the second and third books of Chuidius Ptolemy of Pelusium, con- cerning the Judgment of the Stars ; or, Quadri- l>ariite Construction, with an exposition. He vroto also a Commentary on Lilly's books, and on Joliri I {ale's work, De Scriptoribus M. Bri- tanniae. Having lived to a great age, he died in Gloucester-hall in 16:52.

ALLENBUKG, a town of East Prussia, in the circle of Tapiau, \viili 1350 inhabitants. It stands on the Alle, aboi►►►► "Jiirty miles south-east of Konigsberg.

ALLENCE, in mineralogy, another name for stannum.

ALLENDALE, E.andW. townships inTindal ward, Northumberland, nine miles and a half south-west from Hexham, and 291 miles from London ; containing 790 houses and 4629 inha- bitants. They are chiefly inhabited by miners, and stand, as the name implies, in a dale at the foot of Tinney-hill, on the river Allen, which flows into the South Tyne.

ALLENDORF, a bailiwick and small town of Hesse Darmstadt, between Marburg and Giessen, with 1030 inhabitants : six miles north-east of Giessen. Long. 6►►. 51'. E. lat. 50►►. 40'. N. Also a small town of Germany, in the duchy of West- phalia.

ALLENDORF, a town in the electorate of Hesse-Cassel, remarkable for its salt-works and three stone bridges. It is seated on the Weser, fifteen miles east of Cassel, and contains 2500 inhabitants.

ALLENSTEIN, in Polish Olsztan, a baili- wick and town, with a castle, in East Prussia. Population 2000. Sixty miles south of Konigs- berg. Long. 20►►. 25'. E. lat. 53►►. 40'. N.

ALLENSTOWN, a town of New Jersey, North America, fifteen miles north-east from Burlington, and thirteen south by east from Princeton. Also a township of North America, in New Hampshire, situated on the east side of Merrimack river, twenty-five miles north-west of Exeter, and forty from Portsmouth.

ALLEN-TOWN, Northampton county, in Penn-

sylvania, is situated on the point of land formed by Jordan's creek, and the Little Leheigh, and contains about ninety houses, and an academy. Long. 75►►. 30'. W. lat. 40►►. 35'. N.

ALLER, a river of Germany, which rises in Magdeburg, runs north-west through the duchy of Lunenburgh, and, passing by Zell, falls into the Weser a little below Verdun.

ALLERBERG, a market-town of Bavaria, sixteen miles from Nuremberg. Inhabitants,

1570.

ALLER SANS JOUR, in law, Fr. to go without day : to be finally dismissed the court, no farther day being appointed.

ALLERIA, a decayed town of Corsica, where king Theodore first landed, in 1739. Long. 8►►. 50'. E. lat. 42►►. 5'. N.

ALLERION, or ALERION ; from aquilario, a diminutive of aquila, an eagle : in heraldry, a sort of eagle without beak or feet, having nothing perfect but the wings. They differ from martlets by having their wings expanded, whereas those of the martlet are close and denote imperialists vanquished and disarmed ; for which reason they are more common in French, than in Ger- man coats of arms.

ALLERTON, NORTH, or NORTH-ALLERTON, (anciently ALVERTON), a borough and market- town in Allertonshire wap. N. It. of York, 222 miles from London ; containing 557 houses and 2626 inhabitants. The manor has been subject to the bishop of Durham from the time of Wil- liam Rufus. He appoints a bailiff for life, who presides at the election for members of parlia- ment, the choice of whom is in the whole of the housekeepers who pay scot and lot. The town chiefly consists of one street about half a mile long, on a small stream called the Wiske, a branch of the Swale. The church is a Gothic structure, built in the form of a cross, and contains several handsome monuments. Here is a new prison, erected on Mr. Howard's plan, as a relief to the county gaol at York ; it consists of thirty cells, with four strong ones for capital offenders, and a place for correction and labour. Formerly there was an ancient castle at North Allerton, which was enlarged by bishop Pudsey ; but seized and destroyed by Henry II. A small convent for monks of the Cistercian order was founded here by Edward I. but no remains are extant. Near this place was fought the celebrated battle be- tween the English and Scots, called the battle of the Standard, in 1138. The spot retains the name of Standard Hill,

and some caverns near are supposed to be the places where the Scots were buried. When the invaders under the command of David, king of Scotland, had advanced as far as this town, committing the most horrid murders and desolations, they were met by the English army under the command of the earls of Albemarle and Ferrers. In order to animate them, the archbishop of York brought forth a consecrated standard from the convent of Bever- ley, which was drawn on a four-wheeled carriage ; from this circumstance it derived its name. The battle was fought with great obstinacy on both sides ; until the Scots, through a mistake, ima- gined their king was slain, when the flight be- came general, and a great slaughter ensued The town has a good weekly market on Wednesday

for corn, catfr.e, and provisions. The living is a vicarage, value ►►17. 10s., of exempt jurisdiction. Patron, the dean and chapter of Durham.

ALLERTON, a township in the parish of Brad- ford, North Riding of York, 199 miles from Lon- don, and three north-east of Bradford. Popu- lation 1488.

ALLERTON-CHAPEL, a township and curacy of Leeds parish, 1 93 miles from London, and three north of Leeds, with 1678 inhabitants. It has a hospital for ten widows, with an endowment of fifty pounds annually, given by Robert Parker.

ALLERSHEIM, a market-town of Bavaria, six miles south of Wurtzburgh.

ALLESTRY, (Richard, D. D.) born at Up- pington in 1619, was educated at Coventry, and afterwards at Oxford. He took up arms for king Charles I. and was sometimes seen with his musket in one hand, and his book in the other. Being very active in the service of Charles II. before his restoration, he was seized at Dover by a party of soldiers, as an emissary of

the royalists, and confined six or eight weeks. On the resto- ration, he was made canon of Christ-Church, chaplain to the king, and regius professor of divinity. In 1665 he was appointed provost of Eton college, and raised the school, which he found in a low condition, to great reputation. ••• The west side of the outer quadrangle of the college was built from the ground at his expense. He died in 1680, and lies buried in Eton chapel.

ALLESTRY, (Jacob,) of the same family as the above, entered at Christ Church, Oxford, in 1 671; was elected student in 1672 ; took his degree in arts in 1679 ; and died in 1686. He published Examen Poeticum, containing verses and pasto- rals, spoken in the theatre at Oxford in 1681, before James, duke of York, his duchess, and the lady Anne.

ALLEVEURE,the smallest copper coin that is struck in Sweden, not worth quite two deniers Tournois, of France, or above a British half- penny.

ALLEVIARE, in old records, to levy or pay an accustomed fine or composition.

ALLE'VIATE,z;.-) Ad: leva, levis, light.

ALLEVIA'TION, > To make light ; to lift up

ALLE'VIATIVE. j a weight or burden so as to relieve the person carrying it. To lessen ; to comfort ; to ease ; to soften.

These are, my son, special compositions of whole- some recipes for the several maladies of thy soul ; wherein it shall be my happiness to have suggested unto thee such thoughts as may any whit avail to the alleviation of thy sorrows.

Bp. Hall'i Balm of Gilead.

The pains, taken in the speculative, will much al- leviate me in describing the practical part. Harvey.

Most of the distempers are the effects of abused plenty and luxury, and must not be charged upon our

Maker ; who, notwithstanding, hath provided excel- lent medicines, to alleviate those evils which we bring upon ourselves. Beiuley.

Some cheering alleviative to lads kept in pure slavery to a few Greek and Latin words.

Corah's Doom.

All apologies for, and alleviations of, faults, though they are the heights of humanity ; yet they are not the favours, but the duties, of friendship. South.

This loss of one-fifth of their income will sit heavy

on them, who shall feel it, without the alleviation of aay P►►>nt.

He [David] sought in piety that peace which he could not find in empire, and alleviated the disquie- tudes of state with the exercises of devotion. Home.

AL'LEY, n. Fr. aller, to go. Skinner de- fines it a way through which it is possible to go or pass. Applied to walks in a garden, to paths, or passages, from streets and roads.

So long about the aUeyes is he gan, Till he was comen again to thilke pery, Wher as this Damian sitteth ful mery On high among the freshe leves grene.

Chaucer. The Merchantes Tale, vi. p. 414. And all within were walks and alleys wide, With footing worn, and leading inward far.

Spenser.

Where alleys are close gravelled, the earth putteth forth the first year knotgrass, and after spiregrass.

Bacon's Natural History. Yonder alleys green, Our walk at noon, with branches overgrown.

Milton.

Come, my fair love ! Our morning's task we lose : Some labour, ev'n the easiest life would choose : Ours is not great ; the dangling bows to crop, Whose too luxuriant growth our alleys stop.

Dry den.

The thriving plants, ignoble broomsticks made. Now sweep those alleys they were born to shade.

Pope.

Here oft the peasant, with enquiring face, f

Bewilder'd trudges on from place to place ; He dwells on every sign with stupid gaze, Enters the narrow alleys doubtful maze.

Gay's Trivia, book ii.

ALLEY, in horticulture, a straight parallel walk, bounded on both sides with trees, shrubs &c. and usually covered with gravel or turf.

ALLEY, in husbandry, the vacant spaces be- tween the uttermost row of corn on one bed and the nearest row to it on the next parallel bed ; usually about four feet in breadth, exclusive of the partitions between the rows of corn in the beds. See HOEING.

ALLEY, in perspective, that which, ia order to have a greater appearance of length, is made wider at the entrance than the termination.

ALLEY, (William,) a bishop of Exeter in the reign of Queen Elizabeth, was born at Great Wycombe in Buckinghamshire. From Eton, in 1528, he removed to Cambridge, where he took the degree of A. B. He also studied some time at Oxford ; was presented to a living, and be- came a zealous reformer. Upon queen Mary s accession he left his cure, and retired into the north of England, where he maintained his wife and himself by teaching, and practising physic. On queen Elizabeth's accession he went to London, where

he acquired great reputation by reading the divinity lecture at St. Paul’s, and 11 1760 he was made bishop of Exeter. He died in 1570 ; and was author of, 1. The poor man s library, two vols. fol. Lond. 1571, which contains twelve lectures on the first epistle of St. F< ter, read at St. Paul's. 2. A Hebrew grammar. He also translated the Pentateuch, in the version the Bible which was undertaken by queer Elizabeth's command.

ALLEYN, (Edward,) an English actor in the reigns of Elizabeth and James I. but principally known as the founder of Dulwich college, Surrey. He was born at London, in 1566, and in high favour with the town, in 1592. lie usually played the capital parts, and was one of the ori- ginal actors in Shakspeare’s and Ben Jonson’s plays, the latter highly Applauded him. He was keeper of the royal bear-garden, which was frequented by vast crowds of spectators; and was thrice married. Aubrey mentions a tradition, that Alleyn playing as a demon, with six others, in one of Shakspeare’s plays, was, in the midst of the scene, surprised by the appear- ance of the devil himself; and that this so worked upon his imagination, that he made a vow of charity, which he performed by building DUL- WICH COLLEGE, which see. He met with some difficulty in obtaining a charter for settling his lands on the college, having proposed to endow it with ►►8000, per annum, for the maintenance of a master, warden, and four fellows, whereof three were to be clergymen, and the fourth a skilful organist ; also six poor men and as many women, besides twelve poor boys to be educated till the age of fourteen or sixteen, and then put out to some trade. Lord Chancellor Bacon wished a part of them to be settled for the support of two academical lectures. He was himself the first master of this college, which he called the College of God’s gift ; and died, Nov. 25th, 1626, aged 61. In

the chapel of his college, where he was buried, there is a tomb-stone over his grave, with an inscription. His original diary is also preserved.

ALLEZER, Fr. in military affairs, to cleanse the mouth of a cannon or other piece of ord- nance, and to increase the bore, so as to produce its determined calibre.

ALLEZOIR, Fr. in military affairs, is a frame of timber suspended in the air with strong cord- age, on which is placed a piece of ordnance with the muzzle downwards. In this situation the bore is rounded and enlarged by means of an instrument which has a very sharp and strong edge, made to traverse the bore by men or horses, in a horizontal direction.

ALLIA, in ancient geography, a river of Italy, now the Aja, which, running down a very steep channel from the mountains of Crustuminum, mixed with the Tiber at forty miles from Rome. It is famous for the great slaughter of the Ro- mans by the Gauls, under Brennus; hence Al- liensis dies, an unlucky day. ' Our ancestors,' says Cicero, ' deemed the day of the fight of Allia more fatal than that of taking the city.' Virgil alludes to this battle, JEn. vii. v. 717.

Quosque secans infaustum interluit Allia nomen.

ALLIAGE, in military affairs, a term used by the French, to denote the composition of metals used for the fabrication of cannon and mortars, &c.

ALLIANCE, with the ancient Romans, though a sort of servitude, was much coveted. Ari- arathes, we are told by Polybius, offered a sa- crifice to the gods by way of thanksgiving for having obtained this alliance. The Romans had different sorts of allies ; some only united to them by a participation of privileges, as the

Latini and Hemici ; others uy their foundation, as the colonies; others by the benefactions they

received from them, as Massinissa, Eumenes, and Attains, who owed their kingdoms to Rome ; others again by free treaties, which last became finally subjects, as the kings of Bithynia, Cap- padocia, Egypt, and most of the cities of Greece: lastly, others by compulsive treaties, and sub- jection, as Philip and Antiochus. For they never granted peace to an enemy, without mak- ing an alliance with him : that is, they never subdued any people without using that conquest as a means of subduing others. The forms or ceremonies of alliance have been various in dif- ferent ages and countries. Anciently eating and drinking and offering sacrifices together were customary rites of ratifying alliance. Among the ancient Arabs, alliances were confirmed by draw- ing blood out of the palms of the hands of the two contracting princes with a sharp stone, dip- ping in it a piece of their garments, and there- with smearing other stones. Among the people of Colchis, the confirmation of alliances was said to be effected by one of the princes offer- ing his wife's breasts to the other to suck, which he was obliged to do till blood issued.

ALLIANCE, in a figurative sense, is applied to any kind of union or connection ; thus we say, there is an alliance between the church and state.

ALLIARIA, in botany, dame's violet. .

ALLICA, in entomolgy, a species of papilio.

ALLICAR, in chemistry, the same as acetum.

ALLIER, a department of France, so named from the river of the next article, composed of the old provinces of the Bourbonnois, &c. part of the generalite of Moulins : having the department of the Creuse and Cher west ; the Cher and Nievre, north ; the Saone and Loire east, and the Pay de Dome, south, for its boun- daries. It contains the four arrondissements of Mont Lucon, Moulins, Gannat, and Palessi ; and 254,555 inhabitants.

ALLIER, a river of France, which rises in the

mountains of Lozere, near Coudray, and run- ning through the ci-devant provinces of Niver- nois, Bourbonnois and Auvergne, becomes na- vigable near Viale, and falls into the Loire above Orleans.

ALLIGATI, in Roman antiquity, the basest kind of slaves, who were usually kept fettered. The Romans had three orders of slaves or ser- vants ; the first employed in the management of their estates ; the second in the menial or lower functions of the family ; the third, called alligati, above mentioned.

ALLIGATION, in arithmetic. See ARITH- METIC.

ALLIGATOR, in botany, a species of pear. See LAURUS.

ALLIGATOR, in zoology, a synonyme of thela- certa crocodilus. See LACERTA.

ALLIGHAR, or AYGHAR, a town and for- tress of Hindostan, formerly called Kole, and the residence, in the twelfth century, of Cattub, the first Mahommedan sovereign of Delhi. It stands in the province of Delhi, between the Ganges and the Jumna, and was taken - from. Scindiah, by the British, in the war of 1803.

ALLITERATION.

British judge and collector are now stationed

re, subordinate to the Bareily division.

ALL1NGIIEY, a town in the province of Dindigul, Hindostan, thirty miles south-west of Dindigul.

ALLINEGHUR, a town of Hindostan, in the Oude, twenty miles north of Ghazypore.

ALLIONI, (Charles,) a physician and botanist of Piedmont, born in 1725, and died in 1804; leaving many works on botany and medicine, of

montanae Specimen, 8vo. Pans, 1757. 3. Enu- ❓❓❓ ❓❓❓ - ❓❓❓

Taurin. 1762. 5. Flora Pedemontana, 3 vols. folio, Taurin. 1785. 6. Auctarium ad Flora Pedemontana, Taurin. 1789.

ALLIONIA, in botany, a genus of plants of the monogynia order, belonging to the tetan- dria class ; in the natural method ranking under the forty-eighth order, Aggregate. The characters are; the common CAL. oblong, simple, three- flowered, five-parted, and persistent ; the proper one, obscure, above : the proper COR. rnonopeta- lous and funnel-shaped ; the mouth quinqucfid and erect: STAM. four bristly filaments, longer than the corolla, and bending to one side ; the antherae roundish : PIST. an oblong germen be- neath ; the stylus bristly, and longer than the stamina ; the stigmata are multifid and linear : no pericarpium : the seeds are solitary, oblong, and naked : the receptaculum is naked. There are two species, viz. 1. Allionia incaranata, 2. Allionia violacea, both natives of Ame- rica.

ALLIOTH, Arab, a horse : in astronomy, a star in the tail of the Great Bear, marked (t) by Boyer, whose observation is much used at sea, for finding the latitude. The Arabs give this name to each of the three stars in the tail of the Greater Bear, on account of their appearing like three horses, ranged for drawing a waggon. See URSA MAJOR.

ALLIOTICA, ALLIOTICS, from oXXww, to vary, Galenic medicines for purifying the blood, consisting chiefly of the roots of dandelion, suc- cory, fennel, and raisins; with the herbs endive common ox-eye, lettuce, sorrel, &c.

ALLISTAR, or ALLESTAR, a mean looking town in the peninsula of Malacca, and kingdom of Quedah, two or three leagues from the mouth of a river. The inhabitants are a mixed race of Indians and Chinese, and the natives of the latter have a large temple here. The sovereign of Que- dah resides in a

fortress built at Allistar, but his palace hardly equals a respectable English farm- house and yard.

ALLITERATION, } Ad : litera, to a letter.

ALLITERA'TIVE, >The placing words in

ALLITERA'TOR, J succession, or at short intervals from each other, commencing with the same letter.

The prosody of the Welsh bards depended much on alliteration. Hence they seem to have paid an attention to the scaldic versincation. The Island

are said to have carried alliteration to the highest pitch of exactness in their earliest period.

T. Warton's Hist, of the Eng. Poetry.

Thus the fields must be flowery, beauty must be

beaming, ladies must be lovely; and in the same

manner must the ' waves wind their wat'ry way,' the

' blust'ring blasts blow,' and ' locks all loosely lay,'

not for the sake of the poetry, but the elegance of the

alliteration. Cfomoisseur, No. 83.

ALLITERATION has been used by the most

celebrated poets, both ancient and modem ; Vir-

difficult to appropriate this figure to any particular passion, since rage and grief, pity and despair, have been alike expressed by it ; also the roughness, strength, smoothness, airiness, and gaiety of the muse. No satisfactory account of alliteration has been given in the writings of the

silence, either as a false refinement, or as a mere trifle. Many chapters have been composed on quantity, on the beauties resulting from different

arrangements of long and short syllables, and on the powers of pauses variously placed ; but not a word on alliteration. This is the more extraor- dinary, as one should think it impossible for any man to examine minutely, and dissect a number of verses, widiout perceiving the vast abundance of this ornament. It is as if an anatomist should publish a complete table of the arteries in the human body, and affect never to have seen a vein nor a nerve : for we may safely affirm, that upon examining any number of verses, remarkable either for sweetness or for energy, many of them will be found in some degree alliterative. We do not say that the sweetness and energy of ver- sification depend chiefly on this circumstance, yet we cannot help believing that it may claim a considerable share: for the poets whose fame is highest for versification, are most extensive dealers in alliteration.❓❓❓ The trifling appearance, and the frequent abuse, of the ornament itself, are circumstances which have induced a degree of neglect. How common is it for writers, who affect to be comic, when in want of other means for raising a smile, to use affected alliteration with success ! But, in the fine arts, no beauty or grace is beyond the power of ridicule. The no- blest attitudes in painting have been rendered laughable by caricature. So fares it with allite- ration. Nor is it to be wondered at, that much of the delight afforded by versification arises from so trifling a cause as the occasional repetition of the same letter or sound on the accented parts of a verse ; since there are many other causes of pleasure which, when dissected, seem equally contemptible. The fact is, that the principal operation of this ornament is no doubt mechani- cal. It is easier for the organs of speech to re- sume, at short intervals, one certain conforma- tion, than to assume a number of different ones, unconnected : succession of

of all to ft^e Souuds of ❓❓hich the

articulation is easiest, are most completely in the power of the speaker. Not to add the plea- sure that results to the ear from the repetition of the same letter, and which has been compared to the frequent returns of the key-note in music. The ear is pleased with alliteration, as it contri- butes to the superior ease of recitation ; for what is recited with ease must be heard with pleasure. ??? These remarks might be illustrated by num- berless passages from the best poets. Pope's works are full of alliterations; and Grey, who learned his versification from Dryden, as Dryden did from Spenser, seems to have paid particular attention to this grace : indeed these three abound in alliterations. This ornament is almost always founded upon a repetition of one or more conso- nants ; and generally on those in the beginning of the emphatic words ; but a verse is held to be alliterative, which has a letter repeated on its ac- cented parts, although those parts do not begin words ; the repeated letter bearing a strong ana- logy to the bars in a musical phrase. The fol- 'owing lines, selected from Pope's Essay on Man, afford instances of both kinds of alliteration.

Reason is here no guide but still a guard. In spite of pride, in erring reason's spite. Who for thy table feeds the wanton fawn For him as kindly spreads the flow'ry lawn. The bounding steed, you pompously bestride, Shares with his lord the pleasure and the pride. Man cares for all ; to birds he gives his woods 'j To beasts his pastures, and to fish his floods : For some his int'rest prompts him to provide ; For more his pleasure ; yet for more his pride.

'That very life, his learned hunger craves, He saves from famine, from the savage saves : Nay feasts the animal he dooms his feast, And, till he ends the being, makes it blest. That Virtue's ends from vanity can raise : And not a vanity is giv'n iu vain. Most strength the moving principle requires j Active its task, it prompts, impels, inspires.

In lazy apathy let Stoics boast Their virtue fix'd ;

‘tis fix’d as in a frost.

The young disease that must subdue at leneth, Grows with his growth, and strengthens with his strength.

Death still draws nearer, never seeming near. Great standing miracle ! that heav’n assign’d Its only thinking thing this turn of mindj

Alliterations contribute more to the beauties of poetry, than is generally supposed, and can- not, therefore, be deemed unworthy of a poet’s regard in composition. If two words offer of equal propriety, the one alliterative, the other not, the first ought to be chosen if it suit the pur- pose in every other respect; but the beauty of alliteration, when happy, is not greater than its deformity when affected, or forced. Alliterations are evidently improper, where the sense is sacri- ficed to the sound ; as in the following unnatural metaphor of Grey ; ” Eyes that glow and fangs that grin ;” where the poet ascribes a property to the fangs, that can only belong to the face of an animal ; and in the following couplet of Pope’s, in the first line of which, however, the alliteration is unexceptionable, viz. j

The arts of building from the bee receive ; Learn of the mole to plough, the worm to weave.” The idea of a worm weaving, which seems to be introduced as much for the sake of alliteration, as of the rhyme, scarce even poetical licence can justify ; for though the silk-worm is an excellent spinster, we believe none of the insect tribe merits the epithet of a weaver except the spider, which does not belong to the class of vermes, or worms. Alliteration was much affected by the Saxons, as appears from many instances of this kind which occur in their laws. It is oftentimes so frequently introduced as to make the work in which it appears completely ridiculous, an in- stance of which occurs in the Nugsevenales, attri- buted erroneously to one Lates, from Germany, music master in the university at Oxford, which begins thus :

Plaudite, porcelli, porcorum pigra propago

Progreditur.

And it consisted of nearly 350 lines ! the real author's name, however, was Petrus Placentius, and he assumed the name of Petrus Porcius, from the subject he so laboriously discussed. Aldhelm, one of the three great luminaries of the Anglo Saxons, also appears to have carried this orna- ment to the extreme. His letter to Eahfred con- tains a most elaborate specimen of Latin allitera- tion. Fifteen words begin with the same letter in the first paragraph : ' Primitus (pantorum pro- cerum pretorumque pio potissimum paternoque prasertim prrivilegio) panegyricuin poemata que passim prosatori sub polo promulgantes stridula vocum symphonia ac melodise cantilenjeque car- mine modulaturi hymnizenus.' In the same let- ter we have afterwards ' torrenda tetrse tortionis in tartara trusit.' We are told of one Theo- baldus, a Monk of the order of St. Benedict, who flourished in the time of Charles the Bald, to whom he presented a panegyric on baldness, every word beginning with the letter C. The plays and romances of Lilly, which consist wholly of affectation and conceit, contributed to spoil the state of the age in which he lived. Those who are fond of the figure would perhaps equally enjoy a poem composed by the lipogram- matists or letter-droppers of antiquity, who would take an exception against some particular letter in the alphabet so as not to admit it once into a whole book. One Tryphidorus, a great master in this kind of writing, is said to have composed an Odyssey consisting of 24 books, excluding from the first book the letter A, from the second B, and so on : thus shewing the whole 24 letters, one after another, that he could do his business without them. It must have been very pleasant to have seen this poet making his escape through the several Greek dialects, when he was pressed with it in any particular syllable, with the same earnestness as another would avoid a false quan- tity ; for the most apt and elegant word in the whole language was rejected, like a diamond with a flaw in it, if it appeared blemished with a wrong letter. In allusion

to this, Mr. Addison says he saw in a dream the phantom of Triphidorus the Lipogrammatist engaged in a ball with 24 per- sons, who pursued him by turns through all the intricacies and labyrinths of a country dance, without being able to overtake him

ALLIUM, from a\►►w, to avoid, because many this plant appears above the snow, they seem t* shun the smell of it: garlic; a genus of the put this dreadful d.sorder at defiance, and find a monogyma order, belonging to the hexandria cure almost in its worst stages class of plants ; and m the natural method rank- ALLIX, (Peter, D. D.) a learned French Pro- ing in the ninth order, Spathaceae. The charac- testant born at Alencon in 1641, and minister of ters are: CAL. a common spatha, roundish, and the reformed church at Rouen, where his repu- multiflorous: COR. six oblong petals : STAM. six tation as an author induced the reformed to call subulated filaments, often the length of the him to Chanenton, about a league from Paris corolla ; the anthene are oblong and erect : PIST. being the principal church they had in France* a germen above, shorter, nearly three-cornered, On the revocation of the edict of Nantz, he with angles engraved with a line; the styli are retired to England; and studied the language simple; the stigmata acute: PERICARP, a very with much success, leaving behind him many short, broad, three-lobed capsule, with three cells testimonies of his literary abilities, and theologi-

1. ALLIUM ASCALONIUM, or eschalot, was Bonnes et Saintes Pense”es pour tous les Jours

found wild in Palestine by Dr. Hasselquist. duMois, Amsterdam, 1687. 4. Reflections upon

The root of this species is very pungent, has a the Books of the Holy Scriptures, to establish the

strong, but not unpleasant smell, and therefore
Truth of the Christian Religion, republished by

is generally preferred to the onion for making
Bishop Watson in his Tracts. 5. Some Remarks

high-flavoured soups and gravies. It is also put
upon the Ecclesiastical History of the ancient

into pickles, and in the East Indies they use a
Churches of Piedmont, 4to. London, 1690.

great deal of it for this purpose.

2. ALLIUM CEPA, or common onion, differs from the
garlic only in the swelling pipy stalk, which is
much larger in the middle than at either

6. Remarks upon the Ecclesiastical History of the
ancient Churches of the Albigenses. 4to. Lond. 1692.
7. The Judgment of the ancient Jewish Church against
die Unitarians, &c.

end. From whence this was- first brought into Of
this last work bishop Horsley speaks highly Europe
is not known ; but that it is natural to in his
controversy with Dr. Priestley. He was Africa is
beyond a doubt, it being evident that complimented
with the degree of D. D. and in

onions were eaten by the Egyptians about 200 years
before Christ; and they make a great pa:t of their
constant food to this day.

3. ALLIUM PORRUM, or leek, has been so long
cultivated, that its native place of growth cannot
be traced. It is the same as that men- tioned in the
eleventh chapter of Numbers, where it is said that
the Israelites longed for leeks and onions. Their
general use as a pot- herb is well known. ###
Their culture is the same with that of the onion.

1690 was made treasurer of the church of Salis-
bury. He died in 1717.

ALLOA, a town and parish of Scotland, in the county

of Clackmannan, extending about four miles from east to west and about two from north to south, containing about 3900 acres. The Forth is its southern boundary, and the course of the river is so circuitous, that its banks on the border of the parish measure five miles and a half. Upon the west it is watered by the Divon, which joins the Forth about a mile from Tulli-

4. ALLIUM SATITUM, or garlic, has a bulbous body, and has a pier built at its mouth, where

root, of an irregularly roundish shape, with vessels of tolerable burden can load. The climate

several fibres at the bottom; each root is com- is good, and the soil various. The rivers produce

-posed of a number of lesser bulbs, called cloves salmon, trout, &c. and the coast is frequented by

of garlic, enclosed in one common membraneous sturgeons, soles, turbots, skate, haddocks, Congo

coat, and easily separable from one another, eels, &c.; and a peculiar species of herrings,

All the parts of this plant, but more especially called GANDANOOKS, which see. Upon the eastern

the roots, have an acrimonious, and almost extremity of the parish there is an artificial lake,

caustic taste, with a strong offensive smell, turning various mills, cleansing the harbour, &c.

which last has induced those who preserved On the north-east extremity is the elegant seat

some of the species in gardens, on account of of Shaw Park. The colliery affords employment

. __ .r ii **i** !;.,. _**??*???** , . ., .1
Ai*.**??**if>ViA**??** o c r\f\f\

their yellow flowers, to eradicate them.

to many of the inhabitants, and furnishes 35,000

5. ALLIUM SCHOENOPRASUM, or cives, is an tons of coal annually for export. Themachmery inhabitant of Siberia, and a very small plant used is excellent. There were formerly 1 compared with the former. Us taste, smell, looms employed in the manufacture of camblets,

but these are now almost wholly discontinued ; as well as the manufacture of serges and inferior woollen stuffs. Here are two xtensive distilleries, two celebrated breweries, tanneries of repute,

and virtues, are much the same as those of the common onion.

6. ALLIDM SCORODOPRASUM, or rokambole, grows naturally in Denmark and Sweden.

7. ALLIUM URISNUM, or wild garlic, is very and a glass manufactory of great extent, common and useful in Kamschatka for medicine The town of Alloa was the Alauna of

as well as food. Both Russians and natives ancient Romans, and is seated on the north

gather it in great quantities for winter service, of the Forth, seven miles east from Stirling by

,teep it in water, then mix it with cabbage, land, but above se venteen by wate r about thir y-

, and other ingredients, and form out of two north-west from Edinburgh by land an

. ragout which they eat cold. It is also twenty-seven andahal higher up the ^thth

As soon as Leith. It is pleasantly situated and contains

They steep it in water, then mix it with cabbage

onions

them a ragout which they

the principal remedy for the scurvy

from 5000 to 6000 inhabitants. Tt has two market days in the week, and four annual fairs. Alloa is remarkable for its fine castle, the seat of the ancient earls of Mar, and for the coal mines near it. The harbour is extremely commodious, with great depth of water; enabling vessels to load expeditiously. An excellent dry dock has been erected, capable of receiving ships of the .reatest burden : and above the dock there is a ferry, with two very complete piers, one on each side of the river. The tower and lands of Alloa were exchanged by David II. king of Scots, in 1365, with Thomas Erskine, for the lands and estate of Strathgartney in Perthshire ; and since that period the castle of Alloa has been the favourite residence of the family of Mar. The turret of the tower is eighty-nine feet in height ; and the walls are eleven feet in thickness. It was built in the end of the thirteenth century. Its situation is uncommonly beautiful. The gardens were the first that were laid out on a great scale in Scot- land ; they contain about forty acres. In this re- sidence of the family of Erskine, many of the Scottish princes received their education, having been for more than two centuries the wards of the lords Erskine and earls of Mar. The last heir of the Scottish monarchy who was nurtured in it, was Henry, prince of Cumberland, son of king James VI. The streets of Alloa are, in general, narrow and irregular; but there is one, called John’s street, built by the late earl upon a regu- lar plan, which runs in a line parallel to the gardens, and leads to the harbour, between seventy- six and eighty feet broad, and termina- ting in a beautiful gravel walk. A row of lime- trees on each side adds to its beauty, and affords an agreeable

shade in summer. The church of Alloa is rather small for its population. It has a post-office and custom-house; a subscription library, on a respectable footing; and contains a burgher, antiburgher, and relief meeting houses. Alloa is governed by a baron-bailie. Market on Saturday.

ALLOBROGES, from Allobrox : a people of Gallia Narbonensis, situated between the Isara and the Rhone, and the lake Lemanus : com- mended by Cicero for their fidelity ; but censured by Horace on account of their fondness for no- velty. Epod. 16, v. 6.

Novisque rebus infidelis Allobrox.

ALLOBROX, in ancient history, a name given by Berosus to the fifteenth king of the Gauls ; whence some have derived the name of the Allobroges. Dupleix, Mem. des Gaules, 1. 2. c. 16.

ALLOCATION, in law, an allowance made on account in the Exchequer.

ALLOCATIONS FACIENDA, a writ for an ac- countant to receive such sums from the treasurer as he has expended. Reg. Orig. 206.

ALLOCATO COMITATU, in law, a new writ of exigent allowed before any county court holden, on the former not being fully served or complied with.

ALLOCATOR, in law, i. e. it is allowed ; a term applied to the certificate of allowance by the master on taxation of costs.

ALLOCHROITE, in mineralogy, an opaque

garnet, of a greyish, yellowish, or reddish colour. Quartz scratches it, but it strikes fire with steel It has externally a glistening, and internally a glimmering lustre. Its fracture is uneven, and its fragments are translucent on the edges : sp. gr. 3.5 to 3.6. It melts before the blowpipe into a black opaque enamel. Vauquelin’s analysis is the following : Silica 35, lime 30.5, oxide of iron 17, alumina 8,

carbonate of lime 6, oxide of manganese 3.5. M. Brogniart says it is abso- lutely infusible without addition, and that it re- quires a flux, as phospate of soda or ammoniu. With these it passes through a beautiful grada- tion of colours. It is covered at first with a species of enamel, which becomes on cooling reddish-yellow, then greenish, and lastly of a dirty yellowish-white. He represents it as rather difficult to break. It was found by M. Dan- drada in the iron mine of V'irums, near Dram- men in Norway, and is accompanied by car- bonate of lime, protoxide of iron, and brown garnets.

ALLOCUTIO, in Roman antiquity, the ora- tion of a general addressed to his soldiers to ani- mate them to fight, to appease sedition, &c. A mount of earth was frequently raised on the oc- casion, and from this the general pronounced his harangue to the several squadrons around him.

ALLOCU'TION, n. or > Ad : loquor, loaitus,
ADLOCU'TION, J to speak to. Addres-

sing the speech to.

Upon such a high tribunal or scaffold [the $>|u►►, or pulpit] we often see the emperor standing, and some- times sitting in medals and ancient bass- relievos ; both in adlocutions to the annv, and in distributing their bounty to the people.

Sir G. Weeler, on the Churches of the Prim. Chris.

ALLODIARIUS, in feudal customs, the pro- prietor of allodial lands ; also a lord paramount of a manor. See next article; also FEE and FEODAL.

ALLODIUM, most probably of German ori- ginal : a possession held in absolute indepen- dence, without any acknowledgment of a lord paramount. It is opposed to fee, or feudum, which intimates some kind of dependence. There are no allodial lands in England, all being held either mediately or immediately of the king.

ALLOEOTHETA, in rhetoric, a\oioQira; from aXAotof

various, Otroc disposed : a figure of grammar varying from the ordinary rules of syntax, as a noun in the singular with a verb plural, Pars abiere.

ALLOGIA, in antiquity, of locus, Lat. a place: winter quarters appointed for the soldiery.

ALIXJGNE, in military affairs, the cordage used with floating bridges, by which they are guided from one side of a river to the other.

ALLOISI, BALUASSARE, a celebrated painter of Bologna, who obtained the name of Galanino. He was born in 1578, and studied under the Caracci, whose style he retained in all his com- positions. The Italians have considered him a second Vandyck. He died in 1638.

ALLONBY. See ALANBY.

ALLONGE, n. s. allonge, Fr. 1. A pass of thrust with a rapier, so called from the lengthen- ing of the space, taken by tlis fencer. 2. It is

rein, when the horse is

likewise taken for a Ion trotted in the hand. ALLOO', inter). ^ Loo, aloo, halloo, lo, im-
►►►►&

Operative of the verb look me HALLOO . J Alew is found in Spenser.

Awhile she walkt and chauft ; awhile she threw ' Herself apon her bed and did lament : Yet did she not lament with loude alew. As women wont, but with d►►epe sighes and singulfes few. Spenser's Faerie Queene,book v. c. vi.

List, list ; I hear Some far off halloo break the silent air.

Milton's Com-tu.

Alloo thy furious mastiff, bid him vex The noxious herd, and print upon their ears A sad memorial of their past offence. Philips. ALLOOR, a town of Hindostan, in the Northern Carnatic, 114 miles north of Madras N.lat. 14►►. 40'. E. long. 80►►. 3'.

ALLOPHANE, in mineralogy, a stone of a

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qualities ; the spirit of my father grows strong m me, and^I will no longer endure it : therefore allow me -.erciseg as may become a gentleman, or give poor allottery my father left me by testament, with that I will go and buy my fortunes.

Shaktpeare's As you lilts it. Five days we do allot thee for provision, To shield thee from disasters of the world ►►► And on the sixth to turn thy hated back Upon our kingdom, Shalup. King Lear.

I shall deserve my fate if I refuse That happy hour, which heaven allots to peace.

Dryden.

rhere can be no thought of security or quiet in this world, but in a resignation to the allotments of God and nature. L'Estrange.

Though it is our duty to submit with patience to more scanty allotments ; yet thus much, we may reasonably and lawfully ask of God.

Rogers's Sermons. It is laid-out into a grove, for fruits and shade ; a

*11 i ►►► *-*►► ' ** ►►►►"►►*;> **u** nuiLa aliu SUaUC*

blue, and sometimes a green or brown colour, vineyard ; and an allotment, for olives and herbs which occurs massive, or in imitative shapes. Lustre vitreous ; fracture imperfectly conchoidal ; transparent or translucent on the edges. Mode- rately hard, but very brittle. Specific gravity 1

.89. Composition,silica 2 1 .92, alumina 32.2, lime 0.73, sulphate of lime 0.52, carbonate of copper, 3.06, hydrate of iron 0.27, water 41.3. Stro- meyer. It gelatinizes in acids : it is found in a bed of iron-shot limestone in greywacke slate, in the forest of Thuringia.

ALLOPHESES, aXXo^curif, in medicine, is speaking of things differently from what they are, delirium.

Broome.

Since fame was the only end of all their studies, a man cannot be too scrupulous in allotting them their due portion of it. Toiler.

Of memory, which makes so large a part of the excellence of the human soul, and which has so much influence upon all its powers, but a small por- tion has been allotted to the animal world. Rambler.

ALLOY. See ALLAY.

ALLOY, or ALLAY, alliage, Fr. Legiren metallversetsung, Germ, lega, Jtal. This word is supposed to be derived through the French language, from the Latin, ad-ligatio; which sig-

ALLOPHYLLUS, in botany ; a genus of the nifies the act oftyeinS> binding, or connecting

monogynia order, belonging to the octandria class of plants. The characters are : CAL. a four leaved perianthium, with orbicular leaflets, the opposite ones less: COR. four orbicular equal petals, less than the calyx ; the claws broader,

together. The term formerly was almost wholly confined in England to the goldsmiths, and the mint, where it was appropriated to the lowering of the purity of gold or silver, previous to its being coined, and hence seems gradually to have

the length of the smaller leaves of the calyx! Burned the meaning of the English verb, to

STAM. eight slender filaments, the length of the corolla : the ANTH. are roundish : FIST, a round didymus germen above; the stylus filiform, longer than the stamina ; and the stigma bifid, with revolute divisions. There is but one spe- cies, viz. allophyllus zeylanicus, a native of Ceylon.

ALLORI, Alexander, or Bronzino, a painter of Florence, who successfully followed Michael

allay, i. e. to abate, to lower. All the other known combinations of metal with each other, were simply called ‘ mixed metals,’ but the term alloy, has at length been made to comprehend all the binary and more complicated metallic compounds. Those of which mercury makes a part, are generally known by the name amalgam. An alloy, therefore, amongst philosophical chemists, may be defined a combination of any

Angelo, and died in 1607, after having gained a two or more metals into one homogeneous mass

*rt *hn tivrAiicin-n f\f mf\m mo/*hom.-‘al TnirtlllVQ

great reputation ALLORI, Christophano, son and disciple of the

to the exclusion of more mechanical mixtures.

The most valuable and useful of these have ac-

preceding, was bom 1577, and died at the age of

ALLOT’MENT, S- Aug. Sax. lot or hlot is the

alloy of copper and tin, &c. When any pre- cious metal is mixed with another of less value, the assayers call the latter the alloy.

Every alloy is distinguished by the metal

ALLOT’TERY. j regular past tense of hli&an, —
-.

- i .1* , TT which predominates in its composition, or wnicn

gives it its value. Hence, English jewellery

to cover, and means something covered. Hence, probably, the verb allot . To put to lot ; to distribute by lot ; parcel out ; to give ; grant ; apportion.

Thy self content with that is the assinde And vse it well that is to the (dotted. Wyatt.

Oil. Let me go, I say.

ORLA. I will not till I please : you shall hear me. M father charged you in his will, to give me good

trinkets are ranked under alloys of gold, though most of them deserve to be placed under the head of copper. Since there are about 30 diffe- rent permanent metals, independent of those evanescent ones that constitute the bases of the alkalies and earths, there ought to be about 870 different species of binary alloy. Only 132

******jr lamer ciiargeu you in ins win, 10 give uiu guuu - ~r - ****** -j i

education : you have trained me up like a peasant, species, however, have hitherto been made an

******* " _ " **_i r **.****rt.li**lrtott-itntv

obscuring and hiding me from all gentleman-like VOL. I.

examined.

Some metals have so little affinity 2 U

to others, that no compound of them has yet been effected. The mast common obstacles to alloying,

arise from the difference in fusibility and volatility. Yet some metals are known whose melting point is nearly the same, which refuse to unite. No two bodies will combine, unless their affinity or reciprocal attraction be stronger than the cohesive attraction of their in- dividual particles. It is in order to overcome this cohesion of the solid bodies, and to render affinity predominant, that they are penetrated by caloric. If one be very difficult of fusion, and the other very volatile, they will not unite unless the reciprocal attraction be exceedingly strong. But if their degree of fusibility be almost the same, it is otherwise. Alloys in their physical properties have the closest relations with the metals. They are a solid at the temperature of the atmosphere, except some few amalgams : they possess metallic lustre, are opaque, and dense in a greater or less degree according to the metals which compose them. They are ex- cellent conductors of electricity, and crystallize more or less perfectly. Some alloys are brittle, others ductile and malleable : some have a pe- culiar odour, and some are sonorous and elastic. An alloy consisting of metals differently fusible, is usually malleable while cold, but brittle while hot. We see this exemplified in the case of brass.

*With regard to the density of an alloy, we ob- serve that it is sometimes greater, and some- times less than the mean density of its component parts, which evinces a diminution or augmenta- tion of volumes, at the instant of their union. The relation between the expansion of the se- parate metals and that of their alloys has been in some cases investigated. Alloys containing a volatile metal are decomposed, either in whole or in part; a fact which is exemplified at a strong heat, in the case of arsenic, mercury, tellurium and zinc. Those that consist of two metals differently fusible may be often decom- posed by eliquation, or exposing them to a tem- perature capable of melting only one of them. This mode is employed to extract silver from copper. Argentiferous copper is melted with 3** times its weight of lead ; and the triple alloy*

being exposed to a sufficient heat, the lead carries off the silver in its fusion, and leaves the copper under the form of a spongy lump. By a subse- quent operation the silver is recovered from the lead.

‘ Some alloys,’ says an intelligent author, ‘ oxidize more readily by heat and air, than when the metals are separately treated. Thus 3 of lead, and 1 of tin, at a dull red, bum visibly, and are immediately oxidized. Each by itself, in the same circumstances, would oxidize slowly, and without the disengagement of light.’

The formation of an alloy must be regulated by the nature of the particular metals ; the de- gree of affinity between metals may be in some measure estimated by the relative facility with which, when of different degrees of fusibility or volatility, they unite, or with which, when united, they can be separated by heat. The degree of tendency to separate into different proportional alloys, by long continued fusion, may also throw additional light on this subject. Mr. Hatchett

in his researches on metallic alloys, remarked, that gold made standard, with the usual precau- tions, by silver, copper, lead, antimony, Sac. and then cast into vertical bars, was by no means a uniform compound ; but that the top of the bar, corresponding to the metal at the bottom of the crucible, contained the larger proportion of gold. Hence, for thorough combination, two red-hot crucibles should be employed ; and the liquefied metals should be alternately poured from the one into the other. And to prevent unnecessary oxidizement by exposure to air, the crucibles should contain, besides the metal, a mixture of common salt and powdered charcoal. The melted alloy should also be stirred occasionally with a rod of pottery.

The most direct evidence of a chemical change having taken place in the two metals by com- bination, is when the alloy melts at a lower temperature than the fusing points of its compo- nents. Iron, which alone is nearly infusible, when alloyed with gold acquires

almost the fusi- bility of this metal. Tin and lead form solder, which is more fusible than either of its com- ponents, and the triple compound of tin, lead, and bismuth illustrates this remark in a still more striking manner. The analogy is here strong, with the increase of solubility which salts acquire by mixture, as is exemplified in the uncrystallizable residue of saline solutions. Some- times two metals will not directly unite, which yet, by the intervention of a third, are made to combine. Thus, mercury and iron have been made to amalgamate by previously uniting the iron to tin or zinc. The tenacity of alloys, ge- nerally speaking, is inferior to the mean of the separate metals. One part of lead will de- stroy the compactness and tenacity of a thou- sand of gold. Brass made with a small propor- tion of zinc, is more ductile than copper ; but when, one-third of zinc enters into its composition, it becomes brittle.

In common cases, the specific gravity affords a good criterion whereby to judge of the propor- tion in an alloy, consisting of two metals of different densities. A very fallacious rule has nevertheless been given in some respectable works, for comparing the specific gravity that should result from given quantities of two metals of known densities in a state of alloy, supposing no chemical penetration or expansion of volume to take place. Thus it has been taught, that if gold and copper be united in equal weights, the mathematical specific gravity of the alloy is the arithmetical mean of the two specific gravities. Referring the details to the article specific gra- vity, the correct rule is as follows : The specific gravity of the alloy is found by dividing the sum of the weights by the sum of the volumes ; com- pared to water, reckoned unity. ??? Let the sum of the weights be multiplied into the product of the two specific gravities for a numerator, and each specific gravity into the weight of the other body, and the two products added together for a deno- minator. The quotient then obtained by dividing the numerator by the denominator, compared with this, is the true

computed mean specific gravity ; and that found by experiment will show whether expansion or condensation o*

volume nas attended the combination. Gold having a specific gravity of 19.36, and copper of 8.87, being alloyed in equal weights, give on the fallacious rule of the arithmetical mean of the

densities, ###36+8‘87 =14.11 ; whereas the o

true mean specific gravity is only 12.6. It is evident, that by comparing the former number with chemical experiment, we should be led to infer a prodigious condensation of volume be- yond what really occurs,

Mr. Hatchett observed upon the density of metals, that when a bar of gold was cast in a vertical position, the density of the metal at the lower end of the bar, was greater than that at the top, in the proportion of 17.364 to 17.035.

From the above fact some authors have inferred that melted metal is a compressible fluid, and that particles passing into the solid state under pressure, exert a superior degree of cohesive attraction. On this subject, however, we shall leave the reader to form his own conclusion.

Upon the whole, since we are far from know- ing all the binary alloys, which are possible,

and still further from knowing aft the triple quadruple alloys, &c. which may exist, we must confess, with Dr. Thomson, that tie chemistry of alloys is at present but little under- stood and that these compounds at present are much better known to artists and manufacturers than to chemists. The following tabular views from this mtelligent author, exhibit the general properties of the different alloys, as far ##5 they have been

accurately examined, and with them we shall close the present article.

The first of these tables comprehends the alloys of the malleable metals with each other ??? the second, the alloys of the brittle metals ; and the third, the alloys of the malleable and brittle metals. In these tables, the letter M sig- nifies malleable; B, brittle; S, submalleable, used when the alloy is malleable in certain pro- portions, but brittle in others. O is used when the metals do not unite. The sign + is used when the alloy occupies a greater balk than the separate metals ; the sign ??? when the alloy oc- cupies a smaller bulk. The first indicates an expansion; the second a condensation.

TABLE I.

MALLEABLE METALS.

Zinc.

Lead.

Tin.

Nickel.

Iron.

Copper.

Indium.

Potassium.

Sodium.

Palladium

Mercury

Silver

Platinum

Gold.

M

M

M +

O

0

B

S

B +

M

M

*S***?**

B +

*B***?**

B

S

M

B

B

B

S

B

B

B

B

B +

B

S

B

B

B

B

0

B

B

B

B

B

B

3

B

O

M

M +

M +

M ◆◆◆

B ◆◆◆

B

S ◆◆◆

S ◆◆◆ S ◆◆◆

M◆◆◆

M◆◆◆

M

M +

B

M +

R

B +

M +

M +

M +

M

M

N

M +

M +

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ALLOY.

TABLE II.

BRITTLE METALS.

Titanium.

TungiUn.

Chromium.

Uranium.

Molybdenum.

Manganese.

Coba t.

Ar,enic.

Tellurium

Antimony.

Biimutb.

B

B

B

B

B

B

B

o

B

B

S

o

O

B

B

TABLE III,

MALLEABLE AND BRITTLE METALS.

1 1

Bismuth.

Antimony.

Arsenic.

Cobalt.

Manganese.

Molybdenum.!

Gold ....

B ###

B ###

B

B ###

M

B !

Platinum . . .

B

B.

B

B ◆◆◆

i

Silver ....

B ◆◆◆

B ◆◆◆

B

B

B

Mercury . . .

B

B

B

O

O

O

Palladium . .

B ◆◆◆

B

Rhodium . .

Potassium . .

B

B

B

Sodium . . .

B

B

B

Copper . . .

B ◆◆◆

B ◆◆◆

M

M

S

Iron ....

B +

B +

B

B

S

B

Nickel . . .

B

B +

B

S

Tin ....

M

M? +

B

B

Lead ....

M???

M???

B

B

S

Zinc ....

O

B +

B

O

O

o

ALL

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ALL

ALLOW, e.

Of unsettled etymology, nish^hints or intimations; to convey insinua- ALLOW??ABLE, | Some derive it from the tions, or make indirect observations

ALLOW’ABLENESS, (Latin adlaudare. ALLOW’ABLY, ALLOW’ANCE,

ALOW’. J ligan, to lay ; to low or

ower, [claims or pretensions.] There is little

Others These wordes, good readers, haue no great harme in ‘contend for its northern theim at the firste face. But they allude vnto certain | origin, as if its root was woordes of Tyndall wyth whyche he argueth agaynste me- Sir T. More’s Workes, fol. 860.

As for the grace o’f the Latin toungue, I think vn-

doubt but it comes immediately from the French, ? ►►f sible to bee liuely expressed, as this autour doeth

allouer. Its principal synonymes are, to admit; ” m the Latin byreason of soondrie allusions, diuerse

grant ; yield ; permit ; approve ; concede ; sanction ►►► Prouerbes►► many figures, and exornacions rhetoricall.

_ .►►► _ * f* TIfJsi/l T^HPoftm* #rt St Tm.l,~

give up ; set apart to a specific use.

pe gode bisshop Antoyn per he bare pe pris, His dedes ere to alowe, for his hardynesse.

R. Brunne, p. 281. For selde it is, that loue alloweth The gentill man withouten good, Though his condicion be good.

Gower Con. A. book iv.

by lord lokeb to Have alowance for hus bestes, And of be monye bow haddist br myd.

Vision of Pier’s Plouhman.

So arhis errors manifold, that many words dothe use, With humble secret playnt, fewe words of hotte ef-fect,

Honor thy lord ; alowance vaine of voyd desert neg-lect. Surrey.

The pow’rs above

Allow obedience. Shaketp.

The Lord alloweth the righteous. Bible.

It is not allowable, what is observable in many

pieces of Raphael ; where Magdalen is represented

before our Saviour, washing his feet on her knees ;

which will not consist with the text.

Brown's Vulgar Errours.

In actions of this sort, the light of nature alone may discover that, which is in the sight of God allowable. Hooker. I was, by the freedom allowable among friends, tempted to vent my thoughts with negligence. Boyle. Reputation becomes a signal and a very peculiar blessing to magistrates ; and their pursuit of it is not only allowable but laudable.

Atterbury's Sermons.

Udatt. Preface to St. Luke.

These speeches of Jerom and Chrysostom do seem to allude unto such ministerial garments, as were then in U!ie- Hooker.

Here are manifest allusion and footsteps of the dissolution of the earth, as it was in the deluge, and will be in its last ruin. Burnet's Theory.*

'.This last allusion gall'd the Panther more j
Because indeed it rubb'd upon the sore.

Dryden.

Expressions now out of use, allusions to custom? lost to us, and various particularities, must needs con- tinue several passages in the dark. Locke.

The Jewish nation, that rejected and crucified him, within the compass of one generation, were, according to his prediction, destroyed by the Romans, and preyed upon by those eagles (Matt. xxiv. 28.), by which, allusively, are noted the Roman armies, whose ensign was the eagle. Hammond.

Where the expression in one place is plain, and the sense affixed to it agreeable to the proper force of the words, and no negative objection requires us to depart from it ; and the expression, in the other, is figurative or allusive, and the doctrine de'duced from it liable to great objections ; it is reasonable, in this latter place, to restrain the extent of the figure and allusion to a consistency with the former.

Rogers's Sermons,

ALLUM. See ALUM.

ALLUM BAY lies round the Needles Point, or north- east from the rocks so called, at the west end of the Isle of Wight, on the coast of Hampshire. It has good anchorage, with a suf-

The principles, which all mankind allow for true, ficient depth of water, not far from the bottom of are innate ; those, that men of right reason admit, the bay, and out of the strong run of the tide, are the principles allowed by all mankind. Locke, which is frequently very rapid here.

The pow'r of musick all our hearts allow ;

ALLUMEE, allume, French, in heraldry,

And, what Timotheus was, is Dryden now. Pope, denotes the eyes of an animal when they are re- That some of the Presbyterians declared openly presented light or sparkling, and of a different against the king's murder, I allow to be true. Swift. colour frQm ^ animal itself ag wnen they are

If we consider the different occasions of ancient

and modern medals, we shall find they both agree

in recording the great actions and successes in war ;

allowing still for the different ways of making it,

and the circumstances that attended it. Addison.

The ruin'd spendthrift, now no longer proud,

Claim'd kindred there, and had his claims allow'd.

Goldsmith's Deserted Village^

red, and the animal proper. Also applied to the flame of a torch, when illumined, and the handle itself is of the colour of nature. ALLURE', v.&n.\ A leurre, Fr. to call or ALLURE'MENT, (beckon to the lure, or ar ALLUR'ER, {tificial bird exhibited in

ALLUR'ING. J order to call off the hawk

ALLOW, EAST, a river of Durham, which from his prey- a term of falconry. To practi

art with a view to entice; to call in order; to de-

runs into the Tyne.

ALLOW, WEST, a river of Northumberland, Ceive5 which runs into the Tyne ; also a river of the isle s ise> of Anglesea.

t(

Sometimes used in a good

Vpe be alurs of be castles be laydes banne stode, ALLUCIUS, in anci nt history, a prince of And byhulde bys noble game, and whyche kynjts

were god. R. Gloucester, p. 192.

What shoulde I speake of the other lesse euils, that he alewred and alerted her with, as the pleasure

Ad : Itido, to play or sport of the eye in the beholdynge of that frute, wjth with, about, or near: re- likorous desyre of the delicious taste.

Sir T. More's Workes, fol. 1274.

An eye whose judgment no effect could blind, Friends

to atture, and foe's to reconcile ;

the Celtiberi, to whom Scipio Africanus restored his beautiful bride, who had fallen into his hands in war. Plutarch calls him Lucceius. ALLUDE', v.
ALLU'SION,

ALLU'SIVE, Vferring primarily to what is
ALLU'SIVELY, i sportive or playful. Sub-
ALLU'SIVENESS.,/ sequeetly it signifies to fur-

ALL

t>t>2

ALL

Whose piercing look did represent a mind With virtue fraught, reposed, void of guile.

Earl of Surry's Poems.

Unto laws that men make for the benefit of men, it hath seemed also needful to add rewards ; which may more allure unto good, than any hardness de- terreth from it ; and punishments, which may more deter from evil, than any sweetness thereto allureth.

Hooker,

Hunger and thirst at once Powerful persuaders ! quickened at the scent Of that alluring fruit, urg'd me so keen.

Milton's Par. Lost,

Against allurement, custom, and a world Offended ; fearless of reproach and scorn, Or violence. Id.

The golden sun, in splendour likest heav'n, Allur'd his eye. Id,

❖❖❖ Adam, by his wife's allurement, fell.

Paradise Regained. To shun th' allurement is not hard To minds resolv'd, forewarn'd, and well prepar'd j But, wond'rous difficult, when once beset

; To struggle through the straits, and break th’ involv- ing net. Dryden. The rather to train them to his allure, he told them both often, and, >with a vehement voice, how they were over-topped and trodden down by gentlemen. ,

Hayward. ??? Each flatt’ring hope, and each alluring joy.

Lyttleton.

He tried each art, reprov’d each dull delay f Allur’d to brighter worlds and led the way.

Goldsmith.

ALLUSH, or rather ALUSH, in ancient geo- graphy, a place in Palestine, where the Israelites encamped, Numb.xxxiii. 13, supposed by Eu- sebius, Jerome, and Ptolemy, to have belonged to Idumaea, and to have been situated near Petra, the capital of Arabia Petrsea.

ALLUSION, from ad, to, and ludere, to play, in rhetoric, a figure originating in a comparison or association of ideas, suggested by some simi- litude of name, sound, or circumstances. Cam- den defines allusion a playing with words alike in sound, but unlike in sense ; whence words re- sembling, one another become applicable to dif- ferent subjects ; in which sense it is synonymous with punning. Thus the Romans played on their tippling emperor Tiberius Nero, by calling him Biberius Mero ; and thus in Quintilian the sour fellow Placidus is called Acidus. But al- lusion has, in modern times, a more extended and important signification. We cannot illus- trate its graver uses better than by the following fine passage of Dr. Ogilvie’s respecting religious controversy. ‘ If it be the obscure, the minute, the ceremonial parts of religion for which we are contending, though the triumph be empty, the dispute is dangerous ; like the men of Ai we pur- sue, perhaps, some little party that flies before us, and are anxious that not a straggler should escape, but when we look behind us we behold our

city in flames.' Pope illustrates its admi- rable service in irony, alluding to Denton's well- known passage respecting the Thames : Flow, Welsted, flow ! like thine inspirer, beer : Though stale, not ripe ; though thin, yet never clear ; ###So sweetly mawkish, and so smoothly dull ; Heady, not strong ; o'erflowing, though not full.

Pope. The Dunciad, book iii.

ALLUT, a large village of Ceylon, north-east of Candy, from which it is distant about fifteen miles.

ALLU'VION, n. Ad : luo, lutum, to wash to ; the washing away ; the washing up of sand o## earth, so as to form a mud soil.

Some rivers by insensible clluvions take in and let out the waters that feed them, yet they are said to have the same beds. Huwell's Letters.

ALLUVION, from adluo, I wash to, com- pounded of ad and lavo ; in law, a gradual in- crease of land along the sea-shore, or the banks of large rivers. The civil law places alluvion, among the lawful means of acquisition ; and de- fines it to be a latent, imperceptible accretion. But where any considerable portion of ground is torn away at once by an inundation, and joined to some neighbouring estate, this is not acquired by right of alluvion, but may be claimed again by the former owner. Great alterations are made in the face and limits of countries by allu- vions of the sea, rivers, &c. whose plains are sometimes formed by alluvions.

ALLY', v. & n. ~) Fr. oilier, to fasten or

ALLI'ANCE, > attach to; from the Latin

ALLI'ANT. j adligo, to join, unite, by

kindred, marriage, friendship, confederacy, or

resemblance.

Gisors my gode cite, with alle pe purueiance,

Richard I gaf it fre, to mak pis aliance.

R. Brunne, p. 156. Or to adione vp fryendschip and ally, With Tirrheue pepill and folk of Tuskany ?

Douglas, b. x. p. 315. Sit. If this man

Had but a mind allied unto his words, How blest a fate were it to us and Rome.

Ben Jonson's Sejanus, act. i. sc. 2.

He in court stood on his own feet ; for the most

of his allies, rather leaned upon him, than shored

him. Wotton.

We> could hinder the accession of Holland to

France ; either as subjects, with great immunities for

the encouragement of trade ; or as an inferior and

dependent ally, under their protection. Temple.

Two lines are indeed remotely allied 'to Virgil'a

sense ; tmt they are too like the tenderness of Ovid.

Dryden.

Remembrance and reflection how allied, With thin partitions, sense from thought divide.

Pope.

Wants, frailties, passions, closer still ally The common int'rest, or endear the tie. /fr⬚⬚

To the sun ally'd,

From him they draw the animating fire. Thomson, Time was, ere yet in these degenerate days Ignoble themes obtained mistaken praise ; When sense and wit with

poesy allied, No fabled graces, flourished side by side, From the same fount their inspiration drew, And reared by taste, bloomed fairer as they grew. Lord Byron's English Bards and Scotch Reviewert,

ALLY, (Vizier,) ex-nabob of Oude, was the adopted son of Ausuf ab Dowlah, late nabob of Oude. His reputed father, a wealthy and eccen- tric prince, who had succeeded to the musnud or thron* of Oude, under the protection of the British, was in the habit, whenever he saw a preg- nant woman whose appearance pleased him, of

inviting her to his palace to lie in ; such an one was the mother of vizier Ally, in 1781, and her child, engaging the affections of the nabob, was by him finally adopted as his successor. Vizier Ally accordingly succeeded, but was deposed by the English government in favour of the brother of the late nabob ; and a pension of two lacks of rupees, or ►►25,000 sterling settled on him. Pro- ceeding to Benares, where Mr. Cherry the com- pany's agent was despatched to make arrange- ments for his future residence, he came to break- fast with Mr. C. attended by an armed retinue, and, after complaining bitterly of the treatment which he had received from the Indian Com- pany, gave a signal, on which his followers rushed in and cut to pieces Mr. Cherry and his assistant Mr. Graham. Ally made his escape into the territory of Berar ; but was at length given up, on condition that his life should be spared. He died in confinement in May, 1817. ALLYGUNGE, a town of Bengal, in the dis- trict of Purneah, forty miles north-north-east of the town of that name. N. lat. 26►►. 16'. E. long.

87►►. 38 .

ALMACANTAR, in astronomy, ALMINCA- TARATH, from the

Arabic Almocantharat ; a name for the parallels of altitude on the celestial globe, whose zenith is the pole or vertical point.

ALMACANTER'S STAFF is an instrument for observing at sea the sun's amplitude rising and setting.

ALM AD A, a town in Portuguese Estremadura, on the Tagus, opposite Lisbon.

ALM AD E, a town of Spain, in the province of La Mancha, and kingdom of Castile, situated upon the top of a mountain, where are some of the most ancient silver mines in Europe.

ALM AD EN, a town of Seville, in Andalusia, near which there are also silver mines.

ALMADEN DE LAZOGUE, a town of Spain, m Mancha, famous for its rich mines of mercury and vermilion. It is forty-five miles south-west of Ciudad Real.

ALMADIE, in commercial affairs, a small vessel or canoe, used by the negroes of Africa, about four fathoms long, and made usually of the bark of a tree. This name is also given to the vessels of Calicut, in India, called likewise cathuri. They go with great swiftness.

ALMAGEST, in antiquity, a celebrated book, composed by Ptolemy ; being a collection 01 the observations and problems of the ancients, re- lating to geometry and astronomy. In tt ginal Greek it was called ffwrafa fwyif ►►?> i- e. greatest construction, or collection : which last word mesiste, joined to the particle al, gave occasion to its being called almagestby the Ara- bians, who translated it into their language about the year 800. The Arabic word is almaghesti. Ricciolus also published a body of astronomy, which he entitled, the New Almaghest; being a collection of ancient and modern discoveries that science. jji->.

ALM AGRA, in chemistry, red bole or rude sometimes a lotion, or wash.

ALMAGRA, in natural history, the sil atticur of the ancients, an ochre of a fine and deep red with some mixture of purple, very heavy and a dense yet friable structure, and rough dusty surface. It adheres firmly to the tongue, melts

easily in the mouth, and is of an austere and strong astringent taste. It stains the skin, and ferments very violently with acid menstruums ; by which quality it is sufficiently distinguished from the sil syricum, to which it has in many respects a great affinity. It is found in immense quantities, in many parts of Spain ; and in Andalusia there are in a manner whole mountains of it. It is used both in painting and in medicine, being a very valuable astringent.

ALMAGRO, a fortress of Spain, the capital of one. of the districts of La Mancha. It was built by the archbishop Roderic of Toledo, who finished it in 1214 ; and put a considerable gar- rison into it, to restrain the incursions of the Moors.

ALMAGRO, (Diego de), a Spanish commander, of mean descent, who accompanied Pizarro in the expedition against Peru in 1525. He is ac- cused of having given orders for the murder of Atahualipa the inca. In 1535 he took Cuzco, the capital of Chili, and reserved the plunder for himself, which giving offence to Pizarro's brothers, who were there, he made them prisoners, and a civil war ensued. For some time Alma- gro's party experienced great success ; but at length he was taken prisoner, after an obstinate battle. He was kept in confinement several months, and strangled in 1538, aged seventy- five. His son Diego endeavoured to revenge his father's death, but failed in the attempt, and was beheaded by De Castro in 1542.

ALMAGUER, a city of South America, twenty- one miles south of Popayan, in the kingdom of Quito, and province of Popayan, founded in 1543, on the top of a small mountain. Its tem- perature is mild and pleasant, and in its district are some gold mines.

ALMAKERK, or MALLENTROY, a market town of Transylvania, upper county of Weissen-

burg.

ALMA MATER, in literature, a title given to Oxford, Cambridge, &c. by such as have re- ceived their education in these and other acade- mical foundations.

ALMANCHERY, a town of Hindostan, in the Carnatic, about eleven miles north of Bom- ranzepollam.

ALMAMON, or ABDALLAII, caliph of bag- dad, was the son of Haroun Al Raschid, and suc- ceeded his brother Al Amin in 813 ; he was a great patron of learning, and founded a celebrated academy at Bagdad. He calculated a set of as- tronomical tables, and caused the works the most celebrated ancient authors to be trans- lated into Arabic. He died in 833, exclaiming in the mortal struggle, ►► Oh Thou that never diest, have mercy on me, a dying man ! It conduct towards his uncle and rival Ibrahim, was an unusual example of clemency and mag- nanimity. That prince, after his deposition, kept himself some years concealed in B: Being at length discovered, he was brought b fore the caliph, and told that the council had un- animously condemned him to death counsellors (said Ibrahim) have judged accord ing to the customary rules of political govern- ment; if YOU pardon me, you w.ll not, indeed judge according to precedent but you will have no equal among sovereigns.' The caliph, raismg

and tenderly embracing him, said, with great emotion, ' Uncle, be of good cheer ►►► I will not do you the least injury ;' and he not only par- doned him, but bestowed upon him a rank and fortune suitable to his birth. When Almamon's courtiers came in crowds to compliment him on this generous action, he exclaimed, in the full- ness of his heart, '►►►

Oh ! did men but know the pleasure I feel in pardoning, all who have of- fended me would come and confess their faults !' ALMANACK, a calendar, or book, in which the revolutions of the seasons ; the rising and setting of the sun ; the phases of the moon ; the most remarkable conjunctions, positions, and phenomena of the heavenly bodies are marked down for every month and day in the year ; also the several feasts and fasts to be observed in the church and state ; together with the com- mon ecclesiastical notes, &c. Some derive the etymology of the word from the Arabic parti- cle al and manach, to count; others from ul and pa.va.Kos, the course of months. Golius thinks it derived from a custom prevailing throughout the East, for all subjects, at the beginning of the year, to make presents to their princes. He ob- serves that the astrologers, among the rest, pre- sent him with their ephemerides for the new year, called alman-ha, or new-year's gifts. Vers- tegan and others write the word almonat, and consider it of German origin. Not a few derive it from the Teutonic al and maan, the moon, or an account of every moon or every month, so our ancestors, observes Verstegan, used to carve the courses of the moon for the year upon a square piece of wood, which they called almonaght, signifying in old English, or Saxon ALL-MOON-HEED. With respect to the opinion of Golius, Murza Ja a far, a gentleman belonging to the court of the prince of Persia, and a native of great intelligence and veracity, assures us, that though the custom still remains, yet neither the Persians nor the Arabians have any such word in their language as almanfia. He has also favoured us with the inspection and explanation of a Persian almanack, which is no ordinary curiosity. The first page con- tains a list of fortunate days for certain pur- poses, as for example, for buying, for selling, for marrying, for taking medicine, &c. ; after which follow predictions of events, as earth- quakes, storms, political occurrences, &c., after the manner of Moore's Almanack, occupying only one page. Then begins the calendar arrang- ed much after the manner of our almanacks, in which the days of the month and

of the week are arranged from the top of the page downwards. The second column exhibits the rising and set- ting of the sun, and the seven succeeding ones the distance of the sun from the six primary planets, according to their imperfect notions of astronomy, the Moon, Mercury, Venus, Mars, Jupiter, and Saturn. The next page contains the days of the month repeated, with columns of the distance of the moon from the other planets. The column next succeeding shews the time of her coming upon the meridian both above and below the horizon, commonly called the zenith and nadir; and the right hand column is an entire register of the several feasts and remarkable

events connected with the Mahommedan religion The last two pages contain a scheme of the confi- guration of the planets, the calculation of eclipses, &c., formed upon the Ptolemaic system ; and as the system is erroneous, the calculations are ex- tremely imperfect. The Persian almanacks, according to this example of them, greatly cor- respond with the genius of the nation, who are much addicted to astrology and astronomy, to which a pastoral life, perhaps, inclines them, and also furnishes them leisure ^ apply themselves. To the present time they neither sow nor reap, plant, travel, buy, sell, nor undertake any ex- pedition without consulting first of all the stars and almanacks. There are astrological rules for doing any thing, bleeding, purging, &c., down to the cutting of the hair, and paring of the nails. In this kingdom and in many states of Europe we have almanacks of various descrip- tions, both in pamphlets and sheets ; some of them annual and some perpetual. The primary subject of our almanacks are the calendar of months, weeks, and days ; the motions, changes, and phases of the moon, to which are added astronomical, astrological, meteorological, chro- nological, political, medical, and rural parerga, &c.; calculations of eclipses, solar ingresses, prognostics of the weather, table of tides and terms, lists of princes, nobility, posts, offices, dignities, public institutes, &c.

The modern almanack answers, in a word, to the fasti of the ancient Romans. In France, however, the astro- logical observations are expunged by an edict promulgated by Henry III ; and so little encou- ragement is given to them generally, that they are at the present time confined to one or two of these publications. The first almanack is said to have been printed at Constantinople in 1716, under the direction of Abdonaham. Regio- montanus was the first in Europe who made a complete revision in the plan of almanacks, and reduced them to their present form, with the exception of their predictive observations, which have been in all probability introduced into Europe from the Persians. The utility of almanacks cannot for a moment be doubted; and though they appear abstruse and difficult, yet by the help of good astronomical tables they are very easily made.

The most popular almanacks of the present day, are Poor Robin's Almanack, which com- menced in 1652 ; the Lady's Diary, which appeared first in 1705 ; Season on the Seasons, which began in 1735 ; the Gentleman's Diary, first printed in 1741 ; Moore's Almanack ; Par- tridge's Almanack ; White's Ephemeris, or Celes- tial Atlas; Goldsmith's Almanack, and Rider's Pocket Almanack.

The Lady's and Gentleman's Diary, have, in a remarkable degree, subserved the culture of the mathematical sciences in this kingdom. ??? All learned foreigners aver, that there is a greater proportion of our y>opulation acquainted to a certain extent with mathematical science and ??? knowledge, than of any other country in Europe, and perhaps of the world ; and this circumstance is chiefly owing to the extensive circulation and in ??? rluence of the two publications already mentioned. The proposing 01 so great a variety of questions

in every stage of advancement, from the first and most easy to the most remote and difficult to be answered. The succeeding year is well calcu- lated to excite emulation among the younger branches of society, who, drawn insensibly to Ihe consideration of the subject, are delighted by new truths, arising out of the plainest principles. The observer becomes an amateur, and the ama- teur a proficient. Many eminent mathematicians of the last century, as Simpson, Emerson, Lan- den, Wildbore, and other satellites, by the diffusion of whose light posterity shall discover truth, began with expounding the different axioms and positions laid down in the above publications.

The almanack, included in the book of Com- mon Prayer, forms a part of the law of England, of which the courts must take notice in the return of writs, &c. It is in short a perpetual almanack, but will require frequent revision, being founded on the Gregorian calendar, which supposes 365 days, 5h. 49′, 12″, in the year; whereas its true duration of time is 365 days, 5h. 48′. 45^″. Another important publication is the Nautical Almanack, published annually under the direction of the Board of Longitude, two or three years in advance. In addition to all the essential parts of other almanacks, this contains a great variety of particulars generally interest- ing, although especially adapted to nautical purposes. It particularizes the distances of the moon from the sun, and from the most im- portant fixed stars for every three hours of apparent time, according to the meridian of the Royal Observatory, Greenwich. By comparing these with the distances carefully observed at sea, the mariner may readily infer his longitude, and by having immediate recourse to Mayer's Lunar Tables, avoid the trouble and uncertainty of many intricate calculations. The sun's longitude, for- merly computed from Mayer's Tables, printed in 1 770, under the inspection of Dr. Maskelyne, late astronomer royal, to whom the almanack itself owes its origin, has been rendered more accurate by the additional tables of Delambre,

as improved by professor Vince ; and since the year 1791, the phases of the sun and moon have been both inserted.

In the almanack of 1803 the latitudes and longitudes are connected, and the moon's distance from them ascertained, according to Taylor's valuable tables, to every second of the quadrant. Since 1780, the calculations have been made from Lalande's Tables, as exhibited in the second edition of his Astronomy ; and those of the eclipses of Jupiter's satellites, till the year 1795, from both Lalande's tables and War- gentine's (with the exception of the second satel- lite), computed by new tables of Wargentine, found in the Nautical Almanack for 1779. The eclipses have, however, from 1793, been com- puted to mean time from the new tables of De- lambre, subjoined to the third edition of Lalande's Astronomy. Many valuable papers have ap- peared in this publication, adapted to facilitate nautical calculations generally. One of the most conspicuous is the rule laid down by Brinkley m 1819, for clearing the lunar distance. From the commencement of this valuable work, down

to the death of its institutor and conductor, great accuracy was observed. Since that event, nu- merous errors have been detected, calculated to render the publication not only useless, but in- jurious. At length the subject was brought be- fore parliament ??? the board of longitude re- modelled, and the Almanack submitted to the care of a secretary. It is hoped that no interest will prevail with the British government to place any individual in that situation who is not duly qualified.

The French have a similar publication to our Nautical Almanack, which they call Connaissance des Terns. It commenced in the year 1698; and though subject to slight alterations, and oc- casionally discontinued, it has for many years been conducted with great regularity and accu- racy. There are, in this work, many valuable speculations on mathematical subjects, which greatly heighten its practical importance. A mi - nute history of the

work is given in the Alma- nack for 1808.

ALMANACKS, WOODEN. Antiquaries give the name of Almanacks also to a kind of instrument, usually of wood, inscribed with various figures and Runic characters, and representing the order of the feasts, dominical letters, days of the week, and golden number, with other matters necessary to be known throughout the year ; used by the ancient northern nations, in their computations of time, both civil and ecclesiastical. Almanacks of this kind are known by various names among the different nations wherein they have been used ; as rimstocks, primstaries, runstocks, run- staffs, Scipiones Runici, Bacculi Annales, clogs, &c. They appear to have been used only by the Swedes, Danes, and Norwegians. From the second of these people, their use was introduced into England, whence divers remains of them in the counties. Dr. Plot has given the description and figure of one of these clogs, found in Stafford- shire, under the title of the Perpetual Stafford- shire Almanack. The external figure and matter of these calendars appear to have been various. Sometimes they were cut on one or more wooden leaves, bound together after the manner of books; sometimes on the scabbards of swords, or even on daggers ; sometimes on tools and implements, as portable steelyards, hammers, the helves of hatchets, flails, &c. Sometimes they were made of brass or horn : sometimes of the skins of eels, which, being drawn over a stick properly in- scribed, retained the impressions of it. But the most usual form was that of walking staves or sticks, which they carried about with them to church, market, &c. Each of these staves is divided into three regions ; whereof the first in- dicates the signs, the second the days of the week and year, and the third the golden number. The characters engraven on them are, in some, the ancient Runic; in others, the later Gothic characters of Ulsilus. The saints' days are ex- pressed in hieroglyphics, significative either of some endowment of the saint, the manner of his martyrdom, or the like. Thus, against the notch for the first of March, or St.

David’s day, is re- presented a harp; against the twenty-fifth of October, or Crispan’s day, a pair of shoes^; against the tenth of August, or St. Lawrence’s

day, a gridiron ; and, lastly, against new-year’s day, a horn, the mark of good drinking, which our ancestors gave a loose to at that season.

ALMANACKS, method of constructing. The first thing to be done is, to compute the place of the sun and moon for each day of the year, or it may be taken from some ephemerides and en- tered into the almanack ; next, find the domini- cal letter, and, by means thereof, distribute the calendar into weeks ; then, having computed the time of Easter, by it fix the other moveable feasts ; adding the immoveable ones, with the names of the martyrs, the rising and setting of each luminary, the length of day and night, the aspects of the planets, the phases of the moon, and the sun’s entrance into the cardinal point of the ecliptic, i. e. the two equinoxes and solstices.

ALMANAR, in the Arabian astrology, the pre-eminence of one planet over another.

ALMAND, a river of Athol, Scotland, which runs into the Tay. It has a cascade near thirty yards high ; not far from which two rocks meet across the river, in such a manner as to form a natural bridge.

ALMAND CATHARTICA, in botany, a plant of Surinam, supposed by the inhabitants to be good for the colic.

ALMANDINE, in mineralogy, a coarse sort of ruby, approaching in colour nearer to the granite than the ruby. It takes its name from Alabanda, a city of Caria, whence Pliny says it was brought.

ALMANASOR, (Jacob,) a caliph of the Sa- racens in Africa, who, after conquering territo- ries to the extent of above 1200 leagues in length, and 180 in breadth, including the whole country from Messa to Tripoli, at last met with such a reverse of fortune, that, to save his life, he fled to Alexandria, where he commenced baker, and died in that honest profession, A. D.

1205.

ALMANZA, a small town of New Castile, on the frontiers of Valencia in Spain, rendered me- morable by the defeat of the allies in 1707, under the marquis de las Minas, and the earl of Gal- way. It stands in a fertile plain, on the fron- tiers of Valencia, thirty-five miles south-west of Xativa, and sixty-two north of Murcia.

ALMANZOR the Victorious, the second caliph of the house of Al Abas, succeeded his brother Abul Abbas Al Saffa, in the year 753. During his reign the city of Bagdad was raised from the foundation, and became the imperial residence. He was opposed by his uncle Ab- dalla-ebn-Alli, who was defeated by Almanzor's general, Abu-Moslem. Fearing this general's abilities and popularity, he caused him to be assassinated. Several insurrections took place in his reign, which were all suppressed. He died on a pilgrimage to Mecca, in the sixty- third year of his age.

ALMARHHA, a sea-port of Arabia, near the northern extremity of the Red Sea, two miles east of Cape Almarhha.

ALMARHHA, CAPE, a cape on the west coast of Arabia, in the Red Sea, forming the southern extremity of port Firaoun. Lon. 33►►. 3'. 40*. E. lat. 29►►. 1'. 41'. N.

ALME, or ALMA, singing and dancing girls

in Egypt and Hindostan, who, like the Italian improvisatori, can occasionally pour forth un-

premeditated verse. They are called alme', from having received a better education than other women ; and form a celebrated society in Egypt. To be received into it, according to M. Savary, it is necessary to have a good voice, to under- stand the language well, to know the rules of poetry, and be able to compose and sing cou- plets impromptu. The alm6 know by heart all the new songs. Their memory is furnished with the most beautiful tales. There is no fes- tival without them ; no entertainment of which they do not constitute the ornament. They are placed in a rostrum, from whence they sing during the repast. They then descend into the saloon, and form dances which have no resem- blance to ours. They are pantomime ballets, in which they represent the usual occurrences of hfe. The suppleness of their bodies is incon- ceivable, as well as the mobility of their features, to which they give at pleasure the impression suited to the characters they play. Frequently, however, they lay aside, with their veils, the modesty of their sex. They are the modern Bacchants in a delirium. It is then that a peo- ple, far from delicate, redouble their applauses. These alme are sent for into all the harams. They teach the women the new airs, amuse them with amorous tales, and recite in their presence poems, which contain lively pictures of oriental manners. The common people have also their alme of a secondary order.

ALMEDINA, a decayed town of Morocco, on a declivity of mount Atlas. The country around it is very fertile.

ALMEHRAB, among the Mahommedans, denotes a niche in their mosques, which directs to the kebla, or temple of Mecca, to which they are obliged to bow in praying. See KEBLA.

ALMEIDA, a frontier town of Portugal, in the province of Tralos Montes, on the confines of Leon, where there was . a very brisk action between the French and Portuguese in 1663; seventeen miles north-west of Ciuidad Rodrigo.

ALMEIDA, a fortified town of Portugal, in Beira, on the Spanish frontier, containing about 2500 inhabitants and two parishes. It is 113 miles north-east of Lisbon. This place was taken by the French in 1810, and retaken by the British at the beginning of the following year.

ALMEIDA, (Francis,) a Portuguese gentleman, appointed in 1505 the first viceroy of India. He took the city of Quiloa, and made many other conquests. Being informed that a rich Arabian fleet lay in the harbour of Panama, he proceeded thither with his squadron, and found the ships protected by a rampart and a strong garrison. Almeida, however, ventured to land, and, after an obstinate conflict, defeated the enemy, and set the city and ships on fire. On the death of his son, who was killed in a severe engagement, Almeida only said, ' he thanked God for having honoured him with so glorious a death.' While he was thus engaged, Albuquerque received orders from Portugal to supersede him, but Al- meida being about to proceed to Dabul with a fleet, refused to deliver up his government. In this expedition he sullied his reputation by

putting all the inhabitants of the city to the sword, and not sparing even the infants. He afterwards fell in with the fleet of the enemy, and aeteated it, making a slaughter of 4000 men. This produced a peace. On his passage to Europe he was slain at the Cape of Good Hope, in a skirmish with the natives.

ALMELILETU is used, by Avicenna, to ex- press a preternatural kind of heat, a degree less than that of a fever.

ALMELOO, a small town and lordship of Overyssel, Holland, district of Twenthe, be- longing to the count of Rechteren. It had 2162 inhabitants in 1796, and carried on a consider- able trade in the linen

which is here manufac- tured. Twenty miles east-north-east of Deventer

ALMELOVEEN {Theodore Jansen Van), a physician, was born in 1657, at Medrecht, near Utrecht, and died in 1712. Among his works are, 1. Hippocratis Aphorismi, Gr. et Lat. 12mo. Amst. 1685. 2. Aurelius Celsus de Medicina, 12mo. Amst. 1687; 8vo. 1713 ; 8vo. Patav. 1722. 3. Apicii Calii de Obsoniis et Condimentis, sive de Arte Coquinaria, Libri x. 8vo. Amst. 1709. 4. Aurelianus de Morbis Acutis et Chronicis, 4to. Amst. 1709. 5. Bib- liotheca Promissa et Latens, 8vo. 1688, 1698, 12mo. 1692 ; 8vo. Nuremberg, 1699. 6. The Anatomy of the Muscle, 8vo. Amst. 1684. 7. Onomasticon Rerum Inventarum et Inventa Nova et Antiqua, id est Brevis Enarratio Ortus et Progresses Artis Medicse, ibid. 1684. 8. Fasti Cousulares, 8vo. Amster. 1705. As he had no children, he left his collection of the different editions of Quintilian to the Uni- versity at Utrecht. His library, which was extensive, was sold the following year at Am- sterdam.

ALMENDVALAIO, a town of Spanish Es- tremadura, near the borders of Portugal.

ALMENE, in botany, a name given by some of the Arabian writers to the prickly lotus of Africa, called by the ancients lotus acanthos, and by Virgil acanthus only.

ALMENE, in commerce, a weight of two pounds used to weigh saffron in several parts of the con- tinent of the East Indies.

ALMERIA, a river of Spain, on the mouth of which is seated the town of that name. See next article.

ALMERIA, a sea-port town of Granada, in Spain, pleasantly situated in a fine bay on the Mediterranean. This town is by some thought to have risen from the ruins of the ancient Ab- dera, and was formerly a place of great conse- quence. It was taken from the Moors in 1147, by the Emperor Conrad III. in conjunction with the French, Genoese, and

Pisans ; being at that time the strongest place in Spain held by the infidels, from which their privateers, which were exceedingly numerous, gave equal disturbance to the maritime provinces of Spain, France, Italy, and the adjacent islands. The city being well fortified and provisioned, having a strong castle, and a numerous garrison, was at last taken by storm, and upon its reduction was made a bishopric, suffragan of Granada. The harbour is commodious and well sheltered, and the castle yet remains. It is forty-five miles south of Baza,

and fifty-four south-east of Granada. Lore? 2□□. 41 . W. lat. 36□□. 50’. N.

ALMERIA, a sea-port town of Mexico, in the province of Vera Cruz ; on the coast, and near the river Noadan. It is fifty miles north of Vera Cruz, and 150 east of Mexico. Long. 97□□ 30' W.lat. 20□□. 18’. N.

ALMERICIANS, in ecclesiastical history, a short lived sect of the thirteenth century, who in- sisted that the power of each of the persons of the Holy Trinity commenced at certain periods of time. That of the Father was, according to their creed, restricted to the Mosaic dispensation, that of tne Son reached to the beginning of the thirteenth century, and the reign of the Holy Ghost then commencing, all the ceremonies of external worship were to be discontinued.

ALMESFEOH, alms money, or Peter pence, a tribute formerly paid in England to’ the pope, on the eighth of August.

ALMIGGIM WOOD, a word used in the scrip- tures to signify a beautiful and light sort of wood, used for musical instruments. Meibomius proves, that it was the Indian pine or fir tree.

ALMIGHTY, adj. i All might. Having

ALMIGH’TINESS. $ all might or power.

Grecte and wounderful ben thi werkis, Lord God Almighti, thi weies ben iust and trewe Lord kyng of worldis. Wiclifs't Apocalip. c. xv.

It serveth to the world, for a witness of his almightinets, whom we outwardly honour with the chiefest of outward things. Hooker.

In creating and making existent the world universal, by the absolute act of his own word, God shewed his power and almighttncss.

Sir Walter Raleigh.

In the wilderness, the bittern and the stork, the unicorn and elk, live upon his provisions, and revere his power, and feel the force of his almightinets.

Taylor.

The Lord appeared unto Abraham ; and said unto him, I am the almighty God : walk before me, and be thou perfect. Genesis, xvii. 1.

Th' infernal serpent ! he it was whose guile

Stirred up with envy and revenge deceived

The mother of mankind.

Him th' almighty power

Hurl'd headlong flaming from the ethereal sky,

With hideous ruin and combustion down

To bottomless perdition. Miltcm.

ALMIRANTE, a river of the province of Florida, which runs south-east, and falls into the sea in the bay of Pensacola.

ALMIRANTE BAY, a bay of South America, on the coast of Veragua, and kingdom of Terra Firma, so called from its having been discovered by Columbus in his fourth voyage. He was nearly wrecked at its

entrance.

ALMISSA, a strong town and district in Ve- netian Dalmatia, anciently calhed Peguutium; seated on the mouth of the Cetina, between two high mountains, on a steep rock inaccessible to shipping. It lies ten miles east of Spalatro, di- rectly opposite to the isle of Brassa. Long. 39►►. 33′. E. Lat. 43►►. 56′. N.

ALMIZADIR, among alchemists, is some- times used for verdigris; sometimes for the process of the philosopher's stone ; and some- times for the aqua mercurialis, or aqua philoso- phorum.

ALMO, in ancient history, a rivulet of Cam-

pagna, falling into the Tiber at Rome; now called Rio d'Appio. On the 25th of March, the image of Cybele, and whatever was consecrated to her was washed in this river.

Est locus in Tiberim quo lubricus influit Almo, Et nomen magno perdit ab amne minor j Illic purpure►► canus cum veste sacerdos Almouis dominam, sacraque lavit aquisi.

Ovid. Fast. 1. 4. v. 387.

ALMODAVAR, a small town of Alentejo, Portugal, having 1800 inhabitants. It is nine miles south of Ourique.

ALMODAVAR DEL CAMPO, a handsome town of New Castile, Spain, with a castle, and containing 3000 inhabitants. It is eighteen miles south of Cividad Real, and included in the district of that name.

ALMOHARAM, the first month of the ancient Arabs.

ALMOHEDES, in history, the name of an African dynasty which succeeded that of the Almoravides, in Barbary, in the commencement of the twelfth century. It took its rise in the reign of Al Abraham, or Brahem, and derived its name from an obscure founder, a Barber, of the tribe of Muzamada, originally named Ab- dallah. In order to secure success to the design he had conceived, he assumed the title of Mohdi, or Mohedi, and set up for the head or leader of the orthodox, who were now become so nume- rous by his preaching, that he presumed to bid defiance even to his sovereign. Their unex- pected increase at last alarmed him, and he pre- pared for subduing them. His force, however, was insufficient for the purpose, and in his first engagement he was totally defeated. Abdallah was wary, and secured the capital ; so that Bra- hem, pursued as a fugitive by Abdolmumen, one of the party, was obliged to see'k refuge in the city of Fez. But the gates of the city were not only shut against him, but opened to receive his pursuers. The next place to which this prince repaired was Auran, or Oran ; but that city was soon invested by Abdolmumen, and the magis- trates, unable to defend themselves, and dreading the consequences of an hostile attack, urged him to leave the town. Under the shelter of a dark night, he, with his favourite wife on horseback behind him, set out from Oran, but being dis- covered and p\irsued,he spurred the animal in a fit of despair, and leaped down a precipice, where he and his wife were dashed to pieces. The fatal end of this prince put a period to the empire of the Almoravides. As soon as Abdol- mumen, vulgarly called Abdalman, was apprised of Brahem's death, he traversed the kingdom of Tremec en in his way to Morocco, where, Ab- dallah being dead, he was declared his successor by the chiefs of the party, and proclaimed king of the Almohedes, under the title of Al Emir Al Mumin Abdallah Mohammed Abdal Mutnen Ebn Abdallah Ibni Ali, i. e. chief or emperor of the true believers of the house of Mohammed Abdal Mumen, the son of Abdal Mumen, the son of Abdallah of the lineage of Ali. Abdallah had appointed a council of forty disciples of his sect,

all of whom were preachers ; some were commissioned to regulate all public affairs, and at proper seasons to itinerate in the country, and

others to the number of sixteen, were to act as secretaries. From the former of these two classes the successors to the regal and pontifical throne were to be elected. The disciples of this sect were by the Arabian writers styled only preachers, and by the Spanish Al Mohedes; but the de- scendants and successors of that tribe continued to retain the appellation of Emir Al Mumenin, or chiefs of the faithful or true believers, as long as their dynasty lasted.

ALMOIN, in law. See FKANK-ALMOIN.

ALMON (John), a political writer, born at Liverpool in 1 738. After serving his apprentice- ship to a bookseller, he went to sea, and in 1759 settled in London. On the death of George the Second, he published a Review of his reign, which went through two editions. His next piece was a review of the administration of Mr. Pitt, which gained him the patronage of Lord Temple. In 1765 he opened a shop in Pic- cadilly, but his success, however, in trade was not adequate to his activity, and he was obliged to give up the bookselling business. He died in 1805. His principal publications were ††† 1. Anec- dotes of Lord Chatham, 3 vols. 8vo. 2. Biogra- phical Anecdotes of Eminent Persons, 3 vols. 8vo. 3. An edition of Junius, 2 vols., in which he attempted to prove, that Hugh Boyd was the author of those celebrated letters. ††† Gen. Biog. Diet.

ALMOND, a river in Perthshire, which rises in Glenalmond, and falls into the Tay, a little above Perth.

ALMOND, in botany. See AMYGDALUS.

ALMOND, in commerce, a measure by which the Portuguese sell their oil ; twenty-six almonds make a pipe. Almonds, the fruit, are also used instead of a small money, in several parts of the East Indies;

particularly where the cowries, those small shells which come from the Maldives, are not current.

ALMOND, in anatomy, a name for the glan- dular substances, otherwise called tonsillae, on each side the uvula at the root of the tongue.

ALMOND-STONE, in mineralogy, the amygda- lites of Linnaeus, a sort of stones consisting of glandules resembling the almond in shape.

ALMONDBURY, a small town of England, in the West Riding of Yorkshire, about a mile from Huddersfield, on the river Calder. It is said to have been the Campodonum of the Ro- mans, and the residence of some of the Saxon kings. But Dr. Whittaker disputes the former. The vestiges of a castle are still perceptible on a neighbouring hill. Population 4613. Distant 186 miles from London.

ALMONER, in its primitive sense, denoted an officer in religious houses to whom belonged the management and distribution of the alms of the house. By the ancient canons, all monaste- ries were to spend at least a tenth part of their in- come in alms to the poor. The almoner of St. Paul's was to dispose of the monies left for charity, according to the appointment of the donors, to bury the poor who died in the neighbourhood, and to breed up eight boys in singing, for the use of the choir. By an ancient canon, all bishops are required to keep almoners. The Greek alm- oner, (le grand aumonier,) of France, was the

t ecclesiastical dignity in that kingdom, before tne revolution. To him belonged the su- perintendency of all hospitals and. houses of lepers. The king received the sacrament from his hand ; and he said mass at all grand solem- nities. Almoner is also a fashionable title given by some writers to chaplains. In this sense we meet with almoner of a ship, almoner of a regi- ment, &c.

ALMONER, Lord, or Lord High Almoner, of England, is an ecclesiastical officer, generally a bishop, who had formerly the forfeiture of all deo- dands, and the goods of felos de se, which he was to distribute among the poor. He had also the power of giving the first dish from the king's table to whatever poor person he pleased.

Hindostan, situated in the district of that name, of which it is the capital, as well as of Kemaoon! The district is hilly, covered with impervious forests and jungles, and thinly peopled. It is a subdivision of Kemaoon, the whole being tri- butary to the Goorkkali rajah of Nepaul. The town is built on the top of a ridge of moun- tains, the thinly scattered houses extending down the slope on each side. It is said to be more extensive and populous than Serinagur, and a place of greater traffic, but has not yet been entered by any European. The inhabitants are foreigners, or the descendants of emigrants from the low lands. Lat. 29►►. 35'. north, long. 79►►. 40'. east.

ALMORAVIDES, in history, a name given by the Spanish historians to an Arab tribe, which took possession of a district of Africa in order to live at their ease, and in a slate of retirement; or, as they pretended, to follow the dictates of the Koran more closely than others of their sect, from whence they took the name of Mora- bites, which the Spaniards changed into that of Almoravides. The first prince or chief of this nation was Abubeker Ben Omar, who is com- monly called by Spanish authors Abu Texfein, or Texifian, and who founded the dynasty of the Almoravides in Barbary, A.D. 1051.

ALMOST', adv. All and most. Most or greatest ; part of the whole or all.

And in the sabot suynge almest al the citee cam togidre to heere the word of God.

Wiclif "s Dedis. c. xiii.

Who is there almost : wlw►►* mind, at some time or other, love or anger, fe n grief, has iwt so fastened to some clog, that it could not turn itself to any other object. Locke.*

There can be no such thing or notion, as an almost infinite ; there can be nothing next or second, to an omnipotent God. Bentley's Sermons.

Atlas becomes unequal to his freight ;

And almost faints, beneath the glowing weight.

Addison.

ALM

eufol he was to needy men, and fre.

And yet he geue^ ►►►►►►;►► And fasteth ofte and heareth messe,

Gower. Con. A. b. i.

And lo a man stood before me in a why t clooth and me, Cornehe thi prerier is herd, and thin almejaedes ben in mynde in the sight of God.

Wiclif. The Dedis of Aposlis, c. ►►. The second was an almner of the place, His office was the hungry for to feed, And thirsty give to drinke ; a work of grace : He fear'd not once himselfe to be in need.

Spenser's Faerie Queene, b. i. c. x.

He endowed many religious foundations, and yet

he a great alms-giver in secret; which shewed,

This woman was full of good works, and which she did. Aeft ix 36<

Hard-favourM Richard, where art thou ? Thou art not here : murder is thy almsdeed ; Petitioner for blood thou ne'er pu_t'st back. '

Shakspeare.

m give my jewels, for a set of beads ; My gorgeous palace, for a hermitage ; My gay apparel, for an almsman's gown. Id.

My arm'd knees,

Which bow'd but in my stirrup, bend like his, That hath received an alms. jy.

The poor beggar hath a just demand of an almt from the rich man, who is guilty of fraud, injustice, ###and oppression, if he does not afford relief according to his abilities. Swift.

Many penitents, after the robbing of temples and other rapine, build an hospital or alms-house, out of the ruins of the church, and the spoils of widows and orphans. L'Estrange.

Such statter'd ears as are not worth your care, Your charity for alms may safely spare, For alms are but the vehkles of pray*r.

Hind and Panther. Dryden's Poems. Behold yon alms-house, neat, but void of state ; Where age and want sit smiling at the gate. Pope.

Power and authority are sometimes bought by kindness ; but they can never be begged as alms, by an impoverished and defeated violence. Burke.

ALMS in the early ages of Christianity, were divided into four parts ; one of which was allotted to the bishop, another to the priests, and a third to the deacons and subdeacons, which made their whole subsistence ; and the fourth part was employed in relieving the poor, and in repairing the churches. No religious system is more fre- quent or warm in its exhortations to alms-giving than the Mahommedan. The Alcoran represents alms as a necessary means to make prayer be heard. Hence that saying of one of their caliphs : ' Prayer carries us half way to God ; fasting brings us to the door of his palace, and alms in- troduces us into the presence-chamber.' Many illustrious examples of this virtue are recorded among the Mahommedans. Hassan, the son of

ALMOXARIFARGO, in commerce, a duty Ali, the grandson of Mahomet, in particular, is of two and a half per cent, on bulls' hides in related to have thrice in his life divided his sub- Spain.

ALMS, n. -\ Said to be derived from

ALM'ONER, f fXt^oecuvjj, from t\to❓❓

ALM'ONRY, ? mercy, by the following pro-

AL'MORY. J cess, ' Almosine ❓❓❓ almosie ❓❓❓ almose ❓❓❓ alines ❓❓❓ alms.' Tookc's Charitable Dona- tion,

stance equally between himself and the poor, and twice to have given away all he had. And many of them extended their charity even to brutes. ❓❓❓ Alms also signify lands or other effects left to churches or religious houses, on condition of praying for the soul of the donor. They were divided into alms free, which were liable to no

rent or service ; reasonable alms, a certain por- tion of the estates of intestate persons, allotted to the poor ; paschal alms at Easter, &c.

ALMS-BOX, or ALMS-CHEST, a small chest or coffer, called by the Greeks Kt/3ariov, wherein anciently the alms were collected, both at church and at private houses. Thus also a strong box, with a hole in the upper part, having three keys, was formerly directed to be placed in every church in England, by the book of canons.

ALMUCANTARS, in astronomy, the same as parallels of altitude. See ALMACANTAR.

ALMUCIUM, in ecclesiastical affairs, a kind of cover for the head, worn chiefly by monks and

ecclesiastics : it was of a square form, and seems to have given rise to the bonnets of the same shape still retained in the universities and cathedrals. Almucium was also used for the furs or muffs which were worn by the canons on their left arms.

ALMUDE, in commerce, a liquid measure in Portugal, &c. At Lisbon, wine and oil are sold by the pipe of twenty-six almudes ; but the pipe of Lisbon wine sent to England contains about thirty-one almudes ; and the standard gauge at the London custom-house is 140 gallons; the Lisbon almude is therefore reckoned at 4^ Eng- lish gallons. At Oporto, the pipe is divided into twenty-one almudes ; which almude and its sub-divisions are 49 ►► per cent, greater than those of Lisbon ; so that the standard gauge of a pipe of port at the custom-house of London, is 1 38 gallons, and the almude of Oporto is accord- ingly equal to six English gallons and five pints nearly.

ALMUDEVAR, a town and district of Ar- ragon, included in the district of Huesca.

ALMUGAVARI, in archaeology, a name for the Spanish soldiers who distinguished them- selves against the Saracens.

ALMUGIA, in astrology, denotes a certain configuration of the five planets, in respect to the su and moon, correspondent to that which is between the hours of those planets, and the sun’s and moon’s hours.

ALMUGIM. See ALMIGGIM.

ALMUGNECAR, a town of the province of Granada, Spain, with 2000 inhabitants, a good harbour, and a castle. It was long in the pos- session of the Moors, and is thirty-six miles south south-west of Granada.

ALMUNIA, in archaeology, a sort of tenure in use among the Spaniards.

ALMUTEN, in astrology, the lord of a figure, or strongest planet in a nativity.

ALMUTRIUM, in archaeology, a cap made with lambs or goats' skins. Dugd. Man. Angl.

ALNA, a river in the county of Orkney.

ALNA FIRTH, a small voe, or harbour, at the mouth of the Alna, in the parish of Belting, in Orkney.

ALNABATI, in the materia medica, a name given by Avicenna and Serapion to the siliqua dulcis, or carob-tree. They called both this and the acacia, by the common name charnub ; but distinguish this as a gentle purge, whereas the other is astringent.

ALNAGAR, ALNAGER, or ALNEGER, n. s. from alnage, a measure by the ell, a sworn

officer, whose business it formerly was to inspect the assize of woollen cloth, and to fix the seals appointed upon it for that purpose.

ALNCESTER, a town in Cumberland, seated on the Alne, memorable for a synod of the An- glo-Saxons held in it.

ALNEE, in mineralogy, a name sometimes given to tin.

ALNEMOUTH, a sea-port in Northumber- land, seated on the mouth of the Alne, where some bones of a gigantic size have been dug up. The harbour is safe for fishing and other small vessels. Some of 300 tons burden are built here. In the reign of queen Elizabeth, the French took possession of this town and fortified it. Distant five miles from Alnwick, and 315 from London.

ALNERIC, in chemistry, sulphur vivum.

ALNEY, a small island in the Severn, near the city of Gloucester, famous for the royal duel fought upon it, in sight of both their armies, be- tween king Edmund Ironside, and Canute king of Denmark; the latter being wounded, he pro- posed an amicable division, and accordingly ob- tained the north part of the kingdom, the south falling to Edmund.

ALNUS, in botany, the alder-tree, a species of betula. See BETULA.

ALNUS, in the ancient theatres, that part which was most distant from the stage.

ALNUS BACCIFERA, the berry-bearing alder, in botany, a name given by some writers to the frangula.

ALNWICK, the county town of Northumber- land, on the road to Scotland ; a place peculiarly fatal to some of the ancient Scots monarchs. ††† Here Malcolm III. making an inroad into Nor- thumberland, was killed, with Edward his son, and his army defeated by Robert Mowbray, earl of this county, A.D. 1093. Malcolm having be- sieged this town, and obliged it to surrender, a soldier pretending to present the keys on a spear, stabbed him to the heart; and his son Edward, attempting to avenge his death, was also slain, and his army routed. Here too his great-grandson, William I. invading England with an army of 80,000 men, was encountered, his army routed, and himself made prisoner, A. D. 1174. Alnwick appears to have been formerly fortified, by the vestiges of a wall still visible in many parts, and three gates which are almost entire. ††† But its chief ornament is the stately Gothic castle of the duke of Northumberland, which stands on the south side of the town, and commands a beautiful view of the surrounding country. It was a strong fortress in the time of the Saxons, and has been lately repaired and improved with great taste and judgment. The market-place is a spacious square, and there is a large town- house, where the quarter-sessions and county courts are held. The duke of Northumberland has also built a stone bridge over the Alne. The government of the town is vested in four cham- berlains, who are chosen once in two years, out of a common-council of twenty-four. The manner of making freemen is said to be as follows : The persons who are to be made free, or, as the phrase is, leap the well, assemble in the market- place, very early in the morning, on St. Mark's-

ALOE.

day. They appear on horse-back, with every man his sword by his side, dressed in white, and with white night-caps, attended by the four chamberlains and the castle bailiff, mounted and armed in the same manner ; hence they proceed, with music playing before them, to a large dirty pool, called Freeman's Well, where they dis- mount and draw up in a body, at some distance from the water ; and then rush into it all at once, and scramble through it as fast as they can. As the water is generally foul, tney come out in a dirty condition ; but taking a dram, they put on dry clothes, remount their horses, and ride full gallop round the confines of the district ; then re-enter the town sword in hand, and are met by the inhabitants dressed in ribbons with bells and garlands. These are called timber-wasts. The houses of the new freemen are on this day distinguished by a great holly bush, as a signal for their friends to assemble and make merry with them after their return. This ceremony is ascribed to an order of king John, who was mired in this neighbourhood. Market on Saturday. ??? Alnwick is seated on the Alne, 310 miles north by west from London, thirty-three north of New- castle, and twenty-six south of Berwick. Inha- bitants, 6000.

ALOA, in Grecian and Roman antiquity, a festival held in honour of Ceres, by the husband- men, and supposed to resemble our harvest- home. Some derive the name of the town of Alloa, from this festival.

ALOADDIN, better known by the appellation of the old man of the mountains, was prince of the Arsacides, or assassins, from whence the word assassin is derived : his residence was a castle between Antioch and Damascus, and he had a number of young men with him who were so devoted to his will, as to engage in any un- dertaking he chose to send them upon. This made the neighbouring princes very careful not to offend him. He and his subjects were Ma- hommedans.

ALODIUM. See ALLODIUM.

ALOE, in botany, a\o?;, the name of a plant. It is derived, in all probability, from the Hebrew TlVnK-

The aloe which comes from India is said to resemble the squill, with the exception, that it is bigger, and provided with fatter leaves. The juice, which is found sticking to the plant like a tear, is exceedingly bitter; but is greatly famed for its medicinal virtues. Dioscor. 1. 3. c. 25. Ruff. Epftes. Fragment, de Med. Purg. Gal. Camm. 2. in Hippocrat. de Art. c. 49. Cels. de Re Med. 1. 2. c. 1 2. Oribas. Med. Coll. 1. 7. c. 27. Aet. Tetrab. i. Serm. iii. c. *24. Actuar. de Meth.Med.l.S.c.B. Salmas. Exercitat. flin. 1053. Plin. 1. 27.

Aloe, in the Linnaean system, is a genus of the order monogynia, class hexandria; and, in the natural method, ranking under the tenth order, coronariae. The characters are : No CA- IYX : COR. monopetalous, erect, six-cleft, and oblong; tube gibbous; border spreading, and small ; with a nectary-bearing bottom : STAM. six subulated filaments, rather surpassing the corolla in length, and inserted into the recep- tacle : the ANTHERS: oblong and incumbent: the PJST. ovate germen ; STYLE simple, the length of

the stamina ; the STIO. obtuse and trifid: the PER. an oblong capsule, three-furrowed, three-celled, three-valvnd : seeds many and angular. The proper earth for planting these vegetables in, is, one half fresh light earth from a common, and the rest an equal mixture of white sea-sand and sifted lime-rubbish . This mixture should always be made six or eight months before the plants are to be set in it. The common aloe will live in a dry green-house in winter; and may be placed in the open air in summer in a sheltered situation, but must have very little water. Most of the other aloes are best preserved in an airy glass-case, in which there is a stove, to make a little fire in very bad weather. The tenderest kinds require a greater share of heat to preserve them in winter, and should be kept in a good stove, in air ten degrees above temperate. Many other kinds may also be kept in this heat; but the greater the heat, the more water they always require

*. About the beginning of June, it is usual in England to set the pots of aloes out of the house; but they should be set under the shelter of hedges or trees, to keep them from the violence of the sun; the rains also, which usually fall in this and the following month, are apt to rot them. It is therefore best to keep them under cover the greatest part of the year. .The best time to shift these plants is the middle of July. They are, on this occasion, to be taken out of the pots, the loose earth to be picked from about their roots, and the decayed or mouldy parts of them cut off; then a few stones are to be put at the bot- tom of the pot, and it is to be filled with the composition before described, and the plants carefully put in, the roots being so disposed as not to interfere with one another. They are to be carefully watered after this, at times, for three weeks, and set in a shady place. The common kind will bear the open air from May to October, and should be shifted every year. All the aloes are propagated by off-sets, or by planting the leaves. The off-sets should be taken from the mother plant at the time when it is shifted : they are to be planted in very small pots of the proper mixed earth ; and if that part of them which joined to the mother plant be observed to be moist when taken off, it should lie on the ground in a shady place two or three days before it is planted, otherwise it will rot. After planting these, they should remain in a shady place a fortnight; and then be removed to a very mo- derate hot bed, plunging the pots therein, which will help their striking new roots. To- wards the end of August they must be, by de- grees, hardened to the open air, by taking off the glasses of the hot-bed ; and, in September, they may be removed into the green-house. Of this genus, some botanical writers enumerate only ten species; Miller and others mention twenty-five; while others, with Dr. Johnson, as above, state no fewer than thirty-nine species But, in enumerating so many, those writers must have confounded the various species of different genera, such as those of the agave, aletris, &c. with this genus : of which we shall only parti- cularise the following : ***

*1. Aloe Disticha, by some called the soap aloe, by others the caballine aloe, seldom rise**

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ALOE S.

*above two feet high. The leaves are very broad at the base, where they closely embrace the stalk, and gradually decrease to a point. The edges are set with sharp spines, and the under leaves spread open horizontally every way. These are of a dark green colour, spotted with white, some- what resembling the colour of soft soap, from ***whence the plant got the name of soap-aloe. The flowers grow in umbels on the tops of the stalks, are of a beautiful red colour, and appear in August and September.*

2. Aloe lingua-formae, or tongue aloe, has its leaves about six inches in length, and shaped like a tongue. The flowers grow in slender loose spikes, each hanging downward, of a red colour below, and green at the top.

3. Aloe margaritifera, or pearl aloe, is a very beautiful plant. It is smaller than most of the aloe kind. The leaves are short, very thick, sharp pointed, and turning down, with a large thick end, appear there triangular. The colour of the leaves is a fine green striped in an ele- gant manner with white, and frequently tipped with red at the point. The flower-stalk, which rises in the midst of the leaves, is round, smooth, of a purple colour, and generally about eight inches high. When the plant has been properly cultivated, the flowers are striped with green and white; and sometimes they are entirely white. This aloe is singular in not having the bitter resinous juice with which the leaves of most others abound ; when a leaf of this species is cut, what runs from it is watery, colourless, and perfectly insipid.

4. Aloe perfoliata, or Socotorine aloe, has long,

narrow, succulent leaves, which come out without any order, and form large heads. The stalks grow three or four feet high; and have two, three, and sometimes four of these heads branching out from it. The flowers grow in long spikes, each standing on a pretty long foot- stalk ; they are of a bright red colour, tipped ###with green, and generally appear in the winter season.

5. Aloe retusa, or cushion aloe, hath very short, thick, succulent leaves, compressed on the upper side like a cushion. This grows very close to the ground ; the flowers grow on slender stalks, and are of an herbaceous colour.

6. Aloe spiralis, with oval crenated flowers, grows somewhat like the former ; only the flowers grow upon taller stalks, which branch out and grow in very long close spikes.

7. Aloe variegata, or partridge breast aloe, Is a low plant, seldom rising above eight inches high. The leaves are triangular, and curiously veined and spotted, somewhat like the feathers of a partridge's breast. The flowers grow in very loose spikes, and are of a fine red colour, tipped with green.

8. Aloe viscosa, with funnel-shaped flowers, grows near a foot high, with triangular leaves of a dark green colour. The flowers grow thinly upon very slender footstalks, are of an herba- ceous colour, and their upper part turns back- ward. The species, of which aloe is the most commonly received name, are the crapula per- foliata, the agave Americana, the dacxna mar-

ginata, the aletris uvaria, and the yucca aloifolia, of Linnaeus.

ALOES, n. s. obnKj as it is supposed. It is applied to three different things. 1. A precious wood used in the East, for perfumes, of which, the best sort is of higher price than gold, and was the most valuable present given by the king of Siam, in 1686, to the king of France. It is called tambac, and is

the heart, or innermost part of the aloe-tree; the next part to which is called calembac, which is sometimes imported into Eu- rope; and, though of inferior value to the tambac, is much esteemed: the part next the bark is termed, by the Portuguese, pao d'aquila, or eagle-wood ; but some account the eagle-wood not the outer part of the tambac, but another species. Our knowledge of the wood is yet very imperfect. ??? Savary. 2. Aloes is a tree which grows in hot countries, and even in the moun- tains of Spain. 3. Aloes is a medicinal juice, extracted not from the odoriferous, but the com- mon aloes-tree, by cutting the leaves and ex- posing the juice that drops from them to the sun. It is distinguished into Socotorine and caballine, or horse aloes : the first is so called from Soco- tora ; the second, because, being coarser, it ought to be confined to the use of farriers. It is a warm and strong cathartic.

With respect to the manifold uses of aloes, we shall now make a few observations. The aloe is a kind of symbolic plant to the Mahommedans, especially in Egypt, and in some measure de- dicated to the offices of religion ; for whoever returns from a pilgrimage to Mecca, hangs it over his street door, as a token of his having performed that holy journey. The superstitious Egyptians believe that this plant hinders evil spirits and apparitions from entering the house ; and, on this account, whoever walks the streets in Cairo, will find it over the doors both of Christians and Jews. From this plant the Egyp- tians distil a water, which is sold in the apothe- caries' shops at Cairo, and recommended in coughs, hysterics, and asthmas. An unexpe- . rienced French surgeon, says Hasselquist, gave a Coptite, forty years old, afflicted with the jaun- dice, four tea-cups full of the distilled water of a species of aloe, and cured him in four days. This remedy, unknown to our apothecaries, is not difficult to be obtained, as the plants might easily be raised in the warm southern parts of Europe. The Arabians call it sabbara. Of the leaves of the Guinea aloe, mentioned by Mr. Adanson in his voyage to Senegal,

the negroes make very good ropes, not apt to rot in tne water. Dr. Sloane mentions two sorts of aloes; one of which is used for fishing-lines, bow-strings, stockings, and hammocks; the other has leaves which, like those of the wild pine and banana, hold rain water ; and, therefore, afford a very necessary refreshment to travellers in hot countries, where there is generally a scarcity of wells and water. The maguei, a species of aloe in Mexico, yields almost every thing necessary to the life of the poor in that country. Besides making excellent hedges for their fields, its trunk serves in place of beams for the roofs of their houses, and its leaves in-

stead of tiles.

make wine, honey' sugar and vinegjrSf the seSon of the yea,

trunk andthickestpartoftheleave^when-wTl ZK^T^f ' baked, they make a very tolerable dish of food, weeks without a drop of rain. The mosTS Lastly, it is a powerful medicine in several dis- neral time, however, of plantin- them is from orders, and particularly m those of obstructions April to June. In the March follow???', theT of the urine. It rs also one of the plants the bourers carry a parcel of tubs andTarslnto the most valued and most profitable to the Spaniards, field, and each takes a slip or breadS" and As to the medical properties of Aloes, the begins by laying hold of a bunch of the Wades substance known by the name of aloes, is the as much as he can conveniently grasp with one inspissated juice of some of the above-men- hand, while with the other he cu it just above tioned species. The ancients distinguished two the surface of the earth, as quickly as possible sorts of aloes: the one was pure, and of a ye!- that the juice may not be wasted; and then lowish colour, inclining to red, resembling the places the blades in the tub, bunch

b^ bunch or colour of a liver, and thence named hepatic ; the handful by handful. When the first tub is thus other was full of impurities, and hence sup- packed quite full, a second is begun (each la- posed to be only the dross of the better kind, bourer having two;) and, by the time the ►►e- At present, various .sorts are met with, distin- cond is filled, all the juice is generally drained guished either from the place whence they are out of the blades in the first tub. The blades are derived ; from the species of the plants ; or from then lightly taken out, and thrown over the land some difference m the juices themselves. Of by way of manure; and the juice is poured outinto these, we shall notice the common aloes, or ajar. The tub is then filled again with blades ; juice of the officinal aloe►►► hepatic aloes, the and so, alternately, till the labourer has produced juice of the guinea aloe, so called from its liver- his jar full, or about four gallons and a half of like colour ►►► caballine, or horse aloes, from the juice, which is often done in six or seven hours ; same plant, but a coarser sort, commonly given and he has then the remainder of the day tohim- to horses ; Socotorine aloes, from the juice of the self, it being his employer's interest to get each aloe of Socotora. Those commonly sold in the day's operation as quickly done as possible. shops may be arranged in three classes, viz. It may be observed, that although aloes are

1. Aloes caballinae, foetid, caballine, or horse- often cut in nine, ten, or twelve months iifter aloes, is supposed to be a coarse sort obtained being planted, they are not in perfection till the from the aloe perfoliata; according to others, second and third year; and that they will be it is the produce of the aloe disticha. It is productive for a length of time, say ten or twelve chiefly distinguishable by its strong rank smell, years, or even for a much longer time, if good

2. Aloes hepaticae, hepatic, Barbadoes, or dung, or manure of any kind, is strewed over common aloes, the juice of a variety of the the field once in three or four years, or oftener former, is not so

clear and bright as it; it is also if convenient. ††† The aloe juice will keep for se- of a darker colour, more compact texture, and veral weeks without injury. It is therefore not for the most part drier. Its smell is much boiled till a sufficient quantity is procured to stronger and more disagreeable; the taste in- make it an object for the boiling house. In the tensely bitter and nauseous, with little or nothing large way, three boilers, either of iron or ot of the fine aromatic flavour of the Socotorine. copper, are placed to one fire, though sonic have The best hepatic aloes come from Barbadoes in but two, and the small planters only one. The large gourd shells; an inferior sort, which is boilers are filled with the juice ; and as it ripens generally soft and clammy, is brought over in or becomes more inspissated, by a constant but casks. Of the cultivation and preparation of he- regular fire, it is ladled forward from boiler to patic aloes in the island of Barbadoes, we have boiler, and fresh juice is added to that farthest the following account in the London Medical from the fire, till the juice in that nearest to the Journal, vol. viii. art. 8. ††† ' The lands in the vi- fire (by much the smallest of the three, and cinity of the sea, that is, from two to three commonly called by the name of tatch, as in the miles, which are rather subject to drought than manufactory of sugar) becomes of a proper con- otherwise, and are so stony and shallow as not to sistency to be skipped or ladled out into gourds, admit of the planting of sugar-canes with any' or other small vessels used for its final reception, prospect of success, are generally found to an- The proper time to skip or ladle it out of the swer best for the aloe plant. The stones, at tatch, is when it is arrived at what is termed a least the larger ones, are first picked up, and resin height, or when it cuts freely, or in thin either packed in heaps upon the most shallow flakes, from the edges of a small wooden si barren spots, or laid round the field as a dry that is dipped from time to time into the tatch wall. The land is then lightly ploughed, and for that purpose. A little lime water is used by very carefully

cleared of all noxious weeds, lined some aloe boilers, during the process, when tt at one foot distance from row to row, and the ebullition is too great.••• As to the sun-d young plants set, like cabbages, at about five or aloes, which is most used for medicinal pur

six inches from each other. This regular mode very little is made in Barbadoes.

of lining and setting the plants is practised only is, however, very simple, though extre

by the most exact planters, in order to facilitate dious. The raw juice is either put it

the weeding of them, by hand, very frequently; left quite open at top, and suspended VOL. J. 2 X

sun, or in broad shallow trays of wood, pewter or tin, exposed also to the sun, every dry day, until all the fluid parts are exhaled, and a perfect resin formed, which is then packed up for use, or for exportation.' ••• The Barbadoes aloes is said to be common also in the other West India islands ; and the following account of the manner of preparing it in Jamaica is given by Dr. Wright in the same volume of the Medical Journal, art. 1 . ' The plant is pulled up by the roots, and carefully cleansed from the earth or other impurities. It is then sliced and cut in pieces into small hand-baskets or nets. These nets or baskets are put into large iron boilers with water, and boiled for ten minutes ; when they are taken out, and fresh parcels supplied till the liquor is strong and black. At this period the liquor is thrown through a strainer into a deep vat, narrow at bottom, to cool, and to de- posite its feculent parts. Next day the clear liquor is drawn off by a cock, and again com- mitted to the large vessel. At first it is boiled briskly ; but towards the end of the evaporation, is slow, and requires

constantly stirring to prevent burning. When it becomes of the consistence of honey, it is poured into gourds or calabashes for sale. This hardens by age.'

3. Aloes perfoliatse, Socotorine aloes, brought from the island of Socotora in the Indian ocean, wrapt in skins ; it is obtained from the fourth spe- cies above-mentioned. This sort is the purest of the three ; it is of a glossy surface, clear, and in some degree pellucid ; in the lump, of a yellowish red colour, with a purple cast ; when reduced to powder, of a bright golden colour. It is hard and friable in the winter, somewhat pliable in summer, and grows soft betwixt the fingers. Its taste is bitter, accompanied with an aromatic flavour, but insufficient to prevent its being disa- greeable : the smell is not very unpleasant, and somewhat resembles that of myrrh. With regard to the physical effects of aloes, all the different kinds are gum resins, which contain more gum- mous than resinous parts. Water, when of a boiling heat, dissolves all the soluble parts of aloes ; but if let stand till it grows cold, they drop most of their resin. A strong spirit dis- solves and keeps suspended almost the whole of the aloes, though they contain such a large portion ofgummous parts; hence it is evident, that aloes contain some principle, saline or other, which renders water capable of dissolving resin, and spirit capable of dissolving gum. Aloes are a stimulating stomachic purge, which, given in small quantity, operates mildly by stool ; but in large doses acts roughly, and often occasions an irritation about the anus, and sometimes a dis- charge of blood. They are good opening medicines to people of lax habit, or who live a sedentary life ; and to those whose stomach and bowels are loaded with phlegm or mucus, or who are trou- bled with worms, or are debilitated ; because, at the same time that they carry off those viscid humours, which pall the appetite, and overload the intestines, they serve as strengtheners. In small doses, repeated from time to time, they not only cleanse the primae viae, but likewise tend to promote the menstrual

discharge in women; and

therefore are frequently employed in chlorosis, or where the menstrua are obstructed. They are a good stomachic purge, and given in all cases where such a one is wanted ; but are considered as a heating medicine, and not proper in bilious habits, or where there is much heat or fever ; and a continuei use is apt to bring on the piles. Aloes are given in substance from five grains tc a scruple, though formerly it used to be prescribed in doses of two or three times that quantity ; but these large doses sometimes brought on troublesome symptoms. As they operate slowly, they are generally taken at bed time, and operate next day. With regard to aloes, as well as all other resinous purges, it ought to be observed, that when they are given in substance without any mixture, they are apt to adhere to the coats of the intestines, and to occasion griping and uneasiness ; for these reasons aloes are ge- nerally mixed with some saponaceous or resolvent body to destroy their viscid tenacity : they are given in substance. The substances which are most used for this purpose are, a small quantity of the fixed alkaline salts, soap, the yolk of an egg, and gummous vegetable extracts. Mr. Barton alleges, that by triturating aloes with a small quantity of alkaline salts, their tenacity was more effectually destroyed than by any other thing he tried : that Castile soap and the yolk ot an egg answered next best ; that manna, sugar, and honey, were far inferior to them ; and that gummous, or mucous vegetable extracts, such as the extracts of gentian, or of liquorice root, triturated with the aloes, in the proportion 01 one part of the extract to two of the aloes, and then made up into pills with a sufficient quantity of syrup, destroyed the viscidity of the aloes and rendered their operation mild. Socotorine aloes contain more gummy matter than hepatic ??? and hence are likewise found to purge more, and with greater irritation. The first sort therefore is most proper where a stimulus is required, as for promoting or exciting the menstrual flux; whilst the latter is better calculated to act

as a common purge. For preparations of aloes, see PHARMACY, Index.

With regard to aloes wood, many authors mis- take the plant and tree for each other ; because, we have but little knowledge of the tree ; and the drug which the plant produces is much better known, and of much greater use. The aloe tree grows in China, in the kingdom of Lao, in Cochin China, Champac, and Sumatra. It is about the same height and form as the olive tree ; its trunk is of three colours, and contains three sorts of wood : the heart is dearer in the Indies than even gold itself; it serves to perfume clothes and apartments, and is reckoned a sovereign cordial in fainting fits, and against the palsy It destroys the tinea and ascarides in children. It is used at sacrifices, as incense, by the Chinese, and all the heathen Moors. It is also used to set the most precious jewels that are worked in the Indies. The aloes wood is very highly valued ; and divers strange fables have been invented as to the origin of the tree that yields it ; some feign that it grew in paradise, and was only con- veyed to us by means of the rivers overflowing

their banks, and sweeping off the trees in their way ! ! Others suppose it to grow on inacces- sible mountains, where it is guarded by certain' wild beasts, &c. See XYLOE ALOES.

We shall only add that Braconnot was the first person who imagined he detected in aloes a pe- culiar principle, similar to the bitter resinous which \ auquelm has found in many febrifuge barks. The recent juice of the leaves absorbs ###oxygen, and becomes a fine reddish purple pigment.

ALOE, THE BASTARD. See ALETRIS.

ALOE, THE GREAT AMERICAN. See AGAVE.

ALOE, XYLOE. See XYLOE.

ALOEDARY, aloedarium, aXoi/tapiov, a purging medicine, wherein aloes is an ingredient; or an aloetic. It is also used for a history of the class of plants, under the denomination of aloes.

ALOEUS, in entomology, a species of scara- baeus, or beetle. Characters : thorax three-horned, intermediate longer and simple; head submu- ticous ; elytra unistriated ; found in America.

ALOEUS, in ancient mythology, a giant, the son of Titan and Terra, who married Iphimedia, by whom Neptune had the twins Othus and Ephialtus. Aloeus educated them as his own, whence they were called Abides. They grew nine inches every month, and when nine years old, made war against the gods, but were slain by Apollo and Diana. They also built Ascra, a town at the foot of Mount Helicon.

ALOEXYLUM, aXojjJ-uXov, in botany, aloes- wood, a name given to the tree producing this precious wood, by Loureiro ; who refers it to the class and order decandria monogynia, and its natural order seems to be lomentacese, Linnasus ; leguminosa, Jussieu. Its General Characters Are : The CAL. perianthium inferior, of four acute, hairy, deciduous leaves ; the lowermost falcate, incurved, nearly twice as long as the rest : COR. petals five, unequal, longer than the calyx : STAM. filaments ten : PIST. germ, superior, elongated, curved, compressed : STYLE thread-shaped : PERIC. legume woody, smooth, falcate : SEED solitary, oblong, curved, tunicated. Essential Characters : CAL. four acute deciduous leaves ; the lower one longest : PETALS five, un- equal : LEGUME curved : SEED solitary, tunicated. 1. A. Agallochum. Fragrant aloes-wood. ??? Native of the loftiest mountains of Cochin China, near the great river which runs between that kingdom and Laosios, and is a large lofty tree, with erect branches. Bark fibrous, brown, smooth, thin. Leaves alternate, stalked, lanceo- late, flat, entire, smooth, coriaceous, about eight inches long. Flower- stalks terminal, many- flowered.

ALOFT’, adv. & prep. On loft ; A. S. Lype, air :

Lyft, luft, loft, above.

pe weder was fulle soft, pe wynde held pam stille, pe saile was hie o loft, pei had no wynde at wille.

R. Brunne. p. 169. The great luminary (Aloft the vulgar constellations thick, That from his lordly eye keep distance due) Dispenses light from far. Milton's Par. Lott.

The fiend look'd up and knew His mounted scale aloft : nor more, but fled

ALO

Munn'ring and with him fled the shades of nigbt. ~ T, Paradue Lott, b. nr.

**or I have read in stories oft, That love has wings, and soars aloft. SuckKnq*

Upright he stood ; and bore aloft his shield Conspumous from afar ; and overlook'd the field.

All crimes shall cease, and ancient frauds shalUail ' Keturning Justice lift aloft her scale, Peace o'er the world, her olive wand extend, And white rob'd innocence from heaven descend.

Pope't Mettiah.

All hands unmoor ! proclaims a boist'rous cry, All hands unmoor ! the cavern'd rocks reply.

Rous'd from repose, aloft the sailors swarm,

And with their levers soon the windlass arm.

Falconer's Shipwreck.

ALUUIANS, in church history, from a, pri- vative, and Xoyoc, the word, a sect of ancient heretics, who denied that Jesus Christ was the Logos, and rejected the gospel of St. John.[illegible] *Some ascribe the origin of the name, as well as of the sect of Alogians, to Theodore of Byzantium, by trade a currier. They rose toward the close of the second century.*

ALOGOTROPHIA, in medicine, a term sig- nifying the unequal growth or nourishment of any part of the body, as in the rickets.

ALOIDES, in bctany, a name given by some to the aloe palustris, or fresh water aloe ; often called in England, water soldier, and by Lin- naeus, stratiotes.

ALONE’, adv. & adj.-) ...

AWv,►►fcfcX> ,,A11 one: onebemg

ALONE’NESS. ja11' unaccompamed.

He fond no man pat durst, for non had myght,

With Colibrant alone in bataile to fight.

R. Brunne, p. 31. Let us alone, to guard Corioli : If they set down before’s ; ‘fore they remove, Bring up your army. Shakeip.

Let you alone, cunning artificer ; See, how his gorget peers above his gown, To tell the people in what danger he was. Ben Jon.

Eagles we see fly alone ; and they are but sheep, which always herd together. Sidney.

Alone, for other creature in this place, Living or lifeless, to be found was none. Hilton.

I never durst in darkness be alone. Dryden

But midst the crowd, the hum, the shock of men, To hear, to see, to feel, and to possess, And roam along, the world’s tired denizen, Wilh none who bless us, none whom we can bless : Minions of splendour shrinking from distress ! None that with kindred consciousness endued, If we were not, would seem to smile the less Of all that flatter’d, follow’d, sought, and sued ; This is to be alone ; this, this is solitude !

Lord Byron’* Childe Harold.

ALONG, v. Si prep.) On long. See LONG.

ALONG'ST.) Along, the past parti-

ciple, means, produced from the A. S. Gelang, (Tookfc) to long, to make long. Here I salle be gyne alle myn heritage, & als along as I lyue to he in pin ostage.

R. Bnmne, p. 196.

I your commission will forthwith dispatch ; And he to England shall along with you.

Shakesp. Hamlet.

Hence then ! and Evil go with thee along ! Thy offspring, to the place of evil, hell. Milton.

Religious zeal is subject to an excess, and to a defect ; when somethine is mingled with it, which tt

should not have ; or, when it wants something, that ought to go along with it. Sprat.

Command thy slaves : my free-born soul disdains A tyrant's curb, and restive breaks the reins. Take this along ; and no dispute shall rise (Though mine the woman) for my ravish'd prize.

Dryden.

A needless Alexandrine ends the song : That like a wounded snake drags its slow length along. Pope's Essay on Criticism, 356. Slow sinks, more lovely ere his race be run, Along Morea's hills the setting sun ; Not as in northern climes obscurely bright, But one unclouded blaze of living light !

Lord Byron's Corsair.

ALONG-LYING, in maritime affairs, a term applied to a vessel when pressed down side- ways, by the action of a side wind against the sails.

ALONG-SHORE, is applied to coasting naviga- tion, or to a course which is in sight of, or nearly parallel to, the shore.

ALONG-SIDE, side by side, or parallel to a wharf, ship, or any other object.

ALOO, STRAITS OF, a channel in the Eastern seas, between the islands of Lomablem and Pantar.

ALOOF', adv. All off, entirely separate ; at a distance. Perhaps of the same origin with aloft.

Then bade the knight this lady yede aloof, And to an hill herself withdraw aside ; From whence she might behold the battle's proof, And else be safe from danger far descried.

Faerie Queene. As next in worth,

Came singly where he stood, on the bare strand ; While the promiscuous crowd stood yet aloof.

Milton's Paradise Lost.

The noise approaches ; though our palace stood Aloof from streets, encompass'd with a wood.

Dryden.

Under the !awwe might look at Christ aloof; now, under the gospel, we may coi&e near him.

Hall's Cwitimplalisn.*

No domestic difficulties, no domestic weakness reached him ; but aloof from the sordid occurrences of life, and unsullied by its intercourse, he came oc- casionally into our system, to counsel and to decide. Grattan's Character of Lord Chatham.

ALOOF, has been supposed to be a sea term; and its similarity with the phrases keep a luff1, or keep

the luff, probably gave rise to this conjec- ture. If a sea phrase originally, it seems to have referred to the danger of a lee shore, in which situation the pilot might naturally apply it in the sense of keep all off" ; it is, however, never expressed in that manner by seamen now. See LUFF.

ALOPE, in entomology, a species of the sphinx, with wings dentated and brown, the pos- terior yellow and black at the apex, the abdo- men black, and having interrupted pale-coloured bands, found in India.

ALOPE, in ancient history, a daughter of Cer- cyon, king of Eleusis, who having a child by Neptune, exposed it in the woods, covered with a piece of her garment. The child being found, and brought to Cercyon, he recognised the gar- ment, and ordered his daughter to be put to death. She was changed by Neptune into a fountain. Her son, named Hippothoon, was

afterwards placed by Theseus on the throne of his grandfather.

ALOPECIA, or ALOPECE, in ancient geogra- phy, two islands : viz. 1 . An island of the Bos- phorus Cimmerius ; and 2. In the ^Egean sea, over against Smyrna.

ALOPECIA, in medicine, a total falling off of the hair from certain parts, occasioned either by the defect of nutritious juice, or by a viscous corrosion of the roots of it. The word is form- ed from aXuTTriK, vulpes, a fox ; because it is a disease which is common to that creature. The alopecia properly differs from defluvium capilo rum, as in the former certain parts are left en- tirely bald, whereas in the latter the hair only grows immoderately thin. It also differs from the ophiosis, as this latter creeps in spires about the head, like windings of a serpent, whereas the former is not confined to any figure. The re- medies which remove the proximate cause of this malady are called /wraffvyicpiriKa, metasyncritica. A multitude are to be found in the works oi Taranta, Rondeletius,

Hollerius, Celsus, and other physicians. Alopecia is also used by Galen, for a change of the hair to another colour. See PLICA POLOMCA.

ALOPECIAS, in ichthyology, a name of the vulpes marina, or sea fox.

ALOPECURUS, or FOX-TAIL GRASS, in bo- tany, a genus of the triandria digynia class ; and in the natural method ranking under the 4th order, gramina. The characters are: CAL. a single flowered bivalve glume : COR. one valved : STAM. three capillary filaments; the antherae bi- furcated at both ends : PIST. a roundish germen ; there are two styli ; and the stigmata are villous. The pericarpium is a corolla clothing the seed ; and the seed is ovate and covered. There are 8 species : viz. 1. A. agrestis, a native of France. 2. A. bulbosus, or bulbous fox-tail grass. 3. A. genikulatus, or flote fox-tail grass ; these two species grow wild in Britain. 4. A. hordeifor- mis, a native of India. 5. A. Monspeliensis, a native of France, and the southern parts of Europe. 6. A. Indicus, or Indian fox-tail grass, a native of the East Indies. 7. A. Pani- ceus, a native of France, and the south of Europe. 8. A. pratensis, grows wild in Britain. See GRASS.

ALOPEX, in zoology, a species of the canis, with a strait tail and black tip. It is commonly called the field-fox.

ALOPEX, in entomology, a species of the scarabasas melolontha, hair yellow ; clypeus re- flex and emarginated ; elytra smooth and black : found at the Cape of Good Hope. Gmelin re- fers to this genus the following species, beside those above enumerated, viz. A. ciliatus, with a culm spiked and erect, and ciliated glumes. A. Carolinianus, with radicating culm, subspiked panicle, smooth glumes, and awned corollae. A. typhoides, with simple raceme, and awnless flosculi. A. caudatus, with spiked caudated panicle, and flosculi intrenched with awns. A. ovatus, with panicle ovated, contracted, resem- bling a spike, and exterior petal awned before the apex. A. Capensis, with cylindric spike, and smooth awnless glumes, a native of the Cape of Good Hope. A. Antarcticus, with eiect

culm, orated spike, hairy glumes, and awned corolla, the awns being longer than the calyx ;" native of the Straits of Magellan. A. echinatus, with spiked ovated panicle,punctuated, ciliated glumes, and geniculated culm; native' of the Cape of Good Hope.

ALOSA, in ichthyology, the shad, a species of the clupea. See CLDPEA.

ALOSAT, in chemistry, argentum vivum.

ALOSE', v.) Latin, laus, praise. To praise,

ALOSED'. J or commend. Loos was for- merly common.

Nojjer lacky ne alose, ne leyve J?at ber were

Eny wickeder in bis worlde, ban y were myself.

Vision of Pier's Ploughman, p. 326.

ALOSE, in ichthyology, a species of fish, which some take for the shad, (see ALOSA,) but it more in fact resembles the sardine, or pil- dine, or pilchard, though it is much larger. It is seldom seen in the British seas, and only visits the rivers in spring. The roes are valued in the East Indies, and form a lucrative article of trade.

ALOS'ING. In loosing.

And as they were a lossynge ye colte, the owners thereof sayde vnto them, why loose ye the colte ?

Bible, 1539, S. Luke, chap. xix.

ALOST, or ALEST, a district of the Nether- lands, which was the scene of some manoeuvres during the French revolutionary war ; also a town in the above-mentioned district, seated on the Dender, fifteen miles north-west of Brussels, and thirteen south-east from Ghent. It has but one parish ; the church is collegiate, and has a provost, a dean, and twelve canons. It has two convents of Carmelites, one of capuchins, three nunneries, an hospital, and a convent of Guille- mins, in which is the tomb of Theodore Martin, who first introduced the art of printing into the low countries. It was taken from the French in 1706, after the battle of Ramillies. Near this place Lord Moira effected a junction of the troops under his command, with those of General Clairfayt, in July 1793.

ALOUATE, in zoology, Buffon's name for the simia seniculus, or long-tailed, bearded, red monkey, of the Linnzean system, having a pre- hensile tail; the arabata of Gumilla, Oronoko, and royal monkey of Pennant. This species is sometimes found in Brazil, and is1 common in Cayenne. Its voice and manners are the same with those of the Simia Beelzebul. They are commonly seen in the woody islets of large flooded savannahs. Their cry or scream in- spires terror, and seems as if the forests contained the united howlings of all its savage inhabitants together. This clamour, usually made in the morning and evening, is repeated in the course of the day, and

sometimes in the night. In a state of captivity the animal loses its voice, and seldom lives long. The male is larger than the female, and the latter always carries her young on her back. In order to kill these animals, it is necessary to fire several times ; while any life remains, and after they are dead, they will re- main clinging to the branches by the hands and tail. Their flesh, after all the trouble of possess- ing them, is not good ; it is always tough, and never admitted to any tables but to those of in-

digent inhabitants and travellers, to supply the want of other food.1 This animal when full-grown is said to be as large as a calf, and to live on the fruit of the banana-tree.

ALOUD', adv. On loud. Past part of the verb to low, or to bellow (i. e. be-low) ; lowed low'd, loud.

And he wepte alowde, so that the Egypcians, and the house of Pharao herde it.

Bible, 1539. Genesis, c. xiv.

Strangled he lies ! yet seems to cry aloud, To warn the mighty, and instruct the proud ; That of the great, neglecting to be just, Heav'n in a moment makes an heap of dust. Waller

Then heav'n's high monarch thund'red thrice aloud, And thrice he shook aloft a golden cloud. Dryden.

ALOW, v. & adv. See ALLOW. Signifying to be humbled.

Narcissus may example bee

and myrrour to the prowde, By whome they may most plainely see

how pride hath been allowde. Turbenille.

The quene [widow of Edward 4th] her self satte alone alowe on the rishes all desolate and dismayde whome the archebishoppe comforted in the best man. ner hee coulde. Sir Thos. Moore's Works, f. 43. c. 1

ALOWAY, or ALLOWAY. See ALLOA.

ALP, in zoology, an English name used for the bull-finch.

ALPAGE, alpagium, in ancient writers, de- notes the right of feeding cattle on the Alps or other high mountains, or a sum paid for the pur- chase of such a right.

ALPAGNA, or CAMELUS PACO of Linnaeus, in zoology, an animal of South America, much like the vigognas, except that the legs are shorter, and its muzzle thicker and flatter, so that it almost resembles a human face. The Peruvians use these animals as beasts of burden, and some of them carry a hundred weight. Of their wool they make stuffs, ropes, and bags, and of their bones tools for weavers.

ALP AM, in botany, the siliquosa indica, a native of the Indies. The stem of this plantr which divides itself twice or thrice, is covered with a bark of an ashy-green colour, inodorous, and of an acid astringent taste. It bears flowers and fruit as well at the end of the year as at the beginning, and is always full of leaves. Any part of this shrub made into an ointment with oil, is a remedy for the scab, and old ulcers. The juice of the leaves, with calamus aromaticus, is good against the venom of serpents.

ALP ARSLAN, the second sultan of the dy- nasty of Seljuk in Persia, was the son of David, and great grandson of Seljuk, the founder of the dynasty. He was born A. D. 1030, of the He- gira, 412. In place of Israel, which was his ori- ginal name, he assumed that of Mohammed, when he embraced the Mussulman faith, and was afterwards surnamed Alp Arslan, which, in the Turkish language, signifies a valiant lion, on ac- count of his military prowess. Having held the chief command of Khorasan for ten years, as lieutenant of his uncle, Togrel Beg, he succeeded him in 1063, and at the commencement of his reign saw himself sole monarch of all the coun- tries from the river Oxus to the Tigris. In 1068 he invaded the

Roman empire, the seat of which

was then at Constantinople ; and, at the head of 40,000 cavalry, according to the highest accounts, he defeated Romanus Diogenes, commanding an army of 100,000 men, in the Armenian territory, and took him prisoner ; but treated him kindly till he was ransomed, when he was dismissed loaded with presents. After a reign of ten years, in which he was not more distinguished for his valour, than for his liberality, piety, patience, justice, and sincerity, he was stabbed by a des- perate Carizmian, whom he had taken prisoner, in 1072. His words to his attendants, when he found his end approaching, are worthy record : ' In my youth/ said he, ' I was advised by a wise man to humble myself before God; never to con- fide in my own strength, or despise the most contemptible enemy. These lessons I have neg- lected, for which I have now met deserved punishment. Yesterday, when I beheld from an eminence the number and discipline of my troops, I said in the confidence of my heart, * What power on earth can oppose me ? What man dares to attack me ? To day, vainly trust- ing to my own strength and dexterity, I foolishly checked the prompt zeal and alacrity of my guards for my safety, and now I have fallen by the hand of an assassin ! but I perceive that no force or address can resist fate.' Alp Arslan had a fine appearance, and covered his head with a high turban, folded in the form of a crown. The caliph Bemrillah conferred on him the title of Ezzedin, or Adadheddin, signifying ' Defender of the Faith.' It is said 1200 princes, or sons of princes, have stood at the foot of his throne.

ALPEN, a town of Germany, in the circle of the Lower Rhine, and electorate of Cologne; eight miles south-west of Wesel, and fifty north north-west of Cologne.

ALPHA, the name of the first letter in the Greek alphabet ; corresponding to our A. It is formed from the Hebrew x (aleph) ; and accord- ing to Plutarch, was placed at the head of all the letters, because, in the Phoenician language, it denotes an ox ; which was thought the most important among beasts. In composition this letter sometimes denotes privation, ir the same sense with artp, without ; sometimes augmen- tation, as ayav, much ; and sometimes union, as apa, together. It is also used as a letter of or- der, to denote the first ; and of number, to sig- nify one ; but when it was a numerical letter, a little stroke, or an acute accent, was drawn above it thus, A r to distinguish it from the mere A, which was a letter of order. See A.

ALPHA and OMEGA, in Scripture, signify the beginning and the end, or the first and the last, (i. e. before and after all things; and are there- fore used as a hieroglyphic of the Divine Being.) They were also formerly the symbol of Chris- tianity, and engraved accordingly on the tombs of the ancient Christians, to distinguish them from those of idolaters. They are still seen on some altar-pieces. *The Alpha and Omega' is a title of Jesus Christ in the Apocalypse, derived from a mode of expression frequent amongst the Jewish rabbin. Some have supposed the verb aw to breathe, is designedly formed from the first and last letters of the Greek alphabet, to denote the first and last act of life.

ALPHA, in ancient geography, a river in die vicinity of Aquileia, near which Constantinc was killed, and into which his body was thrown.

ALPHABET, n. -v AW , ,

ALPHABETICAL f AX^a alPha>/3►►-a beta.

ALPHABETICALLY, (The, hteral Characters of

ALPHABETA'RIAN. 3 any

Thou shalt not sighe,

Nor winke, nor nod, nor kneele, nor make a signc ;

But I of these will wrest an alphabet, And by still practice learne to know thy meaning.

Shakspeare.

The letters of the alphabet, formed by the several motions of the mouth ; and the great variety of syl- lables, composed of letters, and formed with almost equal velocity; and the endless number of words, capable of being framed out of the alphabet, either of more syllables or of one, are wonderful. Holder,

Taught by their nurses, little children get This saying, sooner than their alphabet.

Dryd. jun. Juv.

I have digested, in an alphabetical order, all the counties, corporations, and boroughs in Great- Britain, with their respective tempers. Swift.

I had once in my thoughts, to contrive a grammar, more than I can now comprise in short hints ; and a dictionary, alphabetically containing the words of the language, which the deaf person is to learn.

Holder's Elements of Speeeh.

ALPHABET, in grammar, of a\$a and fitrar Greek ; alphabetum, Latin : the whole order or collection of letters which are used in any lan- guage. An extensive controversy has existed amongst learned men, whether the method of expressing our ideas by visible symbols, called letters, be really a human invention ; 01 whether we ought to attribute an art so exceedingly use- ful, to an immediate intimation from the Deity. In favour of the latter opinion it has been urged, 1. That the five books of Moses are universally acknowledged to be the most ancient composi- tions, as well as the most early specimens of al- phabetical writing extant. If, therefore, we sup- pose writing to be the result of human ingenuity, it must be different from all other arts, having been brought to perfection at once ; as the He- brew alphabet contains every thing essential to the exposition of human thoughts. It may in- deed be

replied, that alphabetical characters per- haps existed ages before the writings of Moses, though the more ancient specimens have perished. But the simplicity of manners predominant in the early ages, and the little intercourse which nations had with one another, will scarce allow us to suppose that such a complex and curious contrivance as alphabetical writing could be in- vented by a race of men whose wants were so few, their advantages so circumscribedrand their ideas so limited. 2. If alphabetical characters were a human invention, it might be expected that different nations would have fallen upon the same expedient independent of each other during the compass of so many ages. But no such thing has taken place ; and the writing of every people on earth may be referred to one common original. If this can be proved, the ar- gument from successive derivation, without a single instance of independent discovery, must be allowed to amount to the very highest degree

of probability in favour of our hypothesis, which will now rest on the evidence for or against this fact; and which may be summed up in trie fol- lowing manner : ••• Among the European nations we find none who can pretend any right to the discovery of letters. All of them derived the art from the Romans, excepting only the Turks, who had it from the Arabians. The Romans never laid claim to the discovery ; but confessed that they derived their knowledge from the Greeks, and the latter owned that they had it from the Phoenicians ; who, as well as their colonists the Carthaginians, spoke a dialect of the Hebrew scarcely varying from the original. The Coptic or Egyptian resembles the Greek in most of its characters, and is therefore to be referred to the same original. The Chaldee, Syriac, and latter Samaritan, are dialects of the Hebrew, without any considerable deviation, or many additional words. The Ethiopic differs more from the He- brew, but less than the Arabic ; yet that these

languages have issued all from the same stock, the similarity of their formation, and the num- berless words common to them, all sufficiently evince ; and the Persic is very nearly allied to the Arabic. Alterations indeed would naturally be produced, in proportion to the civilization of the several nations, and their intercourse with others ; which will account for the superior copiousness of some above the rest. It appears then, that all the languages in use amongst men, that have been conveyed in alphabetical charac- ters, have been the languages of people connected ultimately or immediately with the Hebrews, who have handed down the earliest specimens of writing to posterity; and we have therefore the greatest reason to believe, that their method of writing, as well as their language, was derived from the same source. This proposition will be farther confirmed from considering the sameness of the artificial denominations of the letters in the Oriental, Greek, and Latin languages, accom- panied also by a similar arrangement, as alpha, beta, &c. Herodotus informs us, that ' those Phoenicians who came with Cadmus, introduced many improvements among the Greeks, and al- phabetical writing too, not known among them before that period. At first they used the Phoe- nician character ; but in process of time, as the pronunciation altered, the standard of the letters was also changed. The Ionian Greeks inhabited at that time the parts adjacent to Phoenicia ; who having received the art of alphabetical writing from the Phoenicians, used it, with an alteration of some few characters, and confessed ingenu- ously, that it was called Phoenician from the in- troducers of it.' He tells us that he had himself seen the characters of Cadmus in a temple of Ismenia Apollo at Thebes in Boeotia, engraven upon tripods, and very much resembling the Ionian characters. Again, the old Samaritan is precisely the same as the Hebrew language ; and the Samaritan Pentateuch does not vary by a single letter in twenty words from the Hebrew : but the characters are widely different ; for the Jews adopted the Chaldaic letters during their captivity at Babylon, instead of the

characters of their forefathers. 3. What we know of those nations who have continued for many centuries

unconnected with the rest of the world, strongly militates against the hypothesis of the human in- vention of alphabetical writing. The experiment has been fairly made upon the ingenuity of man- kind for a longer period than that which is sup- posed to have produced alphabetical writing by regular gradations; and this experiment deter- mines peremptorily in their favour. The Chinese, a people famous for their discoveries and mecha- nical turn of genius, have made some advances towards the deliueation of their ideas by arbitrary signs, but have nevertheless been unable to accomplish this exquisite device; and after so long a trial to no purpose, we may reasonably in- fer that their mode of writing, which is growing more intricate and voluminous every day, would never terminate in so clear, so comparatively simple an expedient as that of alphabetical cha- racters. The Mexicans, too, had made some rude attempts of the same kind ; but with less success than the Chinese. Hieroglyphics were also in use among the' Egyptians posterior to the practice of alphabetical writing by the Jews ; but whether the epistolography, as it is called, of the former people, which was in vogue during the continuance of the hieroglyphics, might not be another name for alphabetical writing, cannot be decided.

We shall not pursue this argument further, but offer the reader a table of the most celebrated alphabets of ancient and modern times referring to GRAMMAR, LANGUAGE, and the articles which treat of the respective countries, where they are or have been spoken, for further imformation respecting them.

ABYSSINIAN Alphabet. In substance the same as the ETHIOPIC, which see.

ADAM, Alphabet of, a Chaldean alphabet at tributed to Adam.

./EOLIAN, an ancient Greek alphabet, according to

Thesius Ambrosius.

ANGLO-NORMAN, a variety of the GOTHIC al- phabet, which see.

The ARABIC Alphabet is in its most ancient form called the Kufic from the city Kufa, on the Euphrates. It consists of initial letters used at the beginning ; medial letters, or those used in the middle ; and final letters, or those used at the end of words. The modern Arabic is said to have been invented by the vizier Molach, A. D. 933, who wrote the Koran three times in it, so fair and correct as to make it a perfect model of writing. This consists also of four sorts of characters, namely, single, initial, medial, and final, which is the common character of the Arabians, Turks, and Persians ; but the two latter nations have added four more letters,

namely, <_- > p , - cfl> j zh> ? 8> and ^ven a different power to others. There are two othe: variations of the Arabic, namely, the African and Mauritanian, which are said to be used in different parts of Africa.

ARCADIAN, a Latin alphabet, taken from tht Eugubian tables, and so called because supposed to have been brought by Evander from Arcadia into Latium.

ARMENIAN approaches, in many respects, very near to the Chaldee or Syriac, and to the

Greek in otheis. There is a common printing character of the Armenian capitals and small letter; and an ornamental kind of character, which is termed blooming, or flowery, because it is used for the titles of books : Duret likewise mentions an ancient Armenian character, which he says was taken from an inscription over an entrance into the castle of Curcho. Schroeder. Thesaur. Li?ig. Armen. ; Duret. Tresor. des Lung. p. 725. It is used in Asia Minor, Syria, and Tartary, as well as Armenia.

ATTIC, a variation of the ancient Greek, ###which see.

BALI, a dialect used in Bali, an island north of Java.

BARMAN, an alphabet of the kingdom of Ava, in the order, power, and general form of its letters greatly resembling the Sanscrit.

BASTARD or MONGREL, first made by a Ger- man named Heilman, in 1490, was in common use in France, in the fifteenth century ; so called because it was derived from the Lettres de Forme, or Gothic character ; but it has most of its angles cut off or diminished. Fournier gives four varieties of this bastard character.

BATTA, one of the most extensive languages in the island of Sumatra.

BENGALLEE, the alphabet of Bengal, very similar to the Sanscrit.

BULGARIAN, a character similar to that of the Illyrian.

BULLANTIC or IMPERIAL, an alphabet of or- namented capitals, so called because it was employed in writing the papal buils.

CADEAUX, flourishing capitals, that were used in French writing of the fifth century.

CADMEAX, the original Greek alphabet, sup- posed to have been first introduced into Greece by Cadmus.

CHALDEE alphabets can scarcely be distin guished from the Phoenician or Syriac. Several have been ascribed by the Rabbin to Adam, Enoch, Noah, &c. Its character, as at present known, is that of the Hebrew, %

'Of CHARLEMAGNE, the name of three alpha- bets attributed to the emperor Charlemagne, by whom they are said to have been introduced, at the

commencement of the ninth century, for the purpose of improving the letters used in his dominions.

The CHINESE language has no literal alpha- oet, but consists of 214 key-words, or radical characters, that serve to form 80,000 characters, of which it is composed.

COPTIC, so called from Coptos, in Egypt, a mixture of Greek and Egyptian. There are two characters under this name, one of which is the ancient, and the other the modern Coptic. The latter, consisting of thirty-two letters, is only to be met with in the books of Egyptian Christians, by whom it was used in the translation of the Sacred Writings. Kircher. (Edip. JEgypt. et Copt.; Pocock.in Not. ad Spec. Hist. Arab.

CROATIAN, a variety of the ILLYRIAN alpha- bet, which see

DALMATIAN, said to have been invented by St. Jerome. Dwet. Tresor. des Lang. &c. p. 738.

Dome, a variety of the ancient GREEK.

EGYPTIAN. Ancient Egyptian characters were

of three kinds ; namely, iirvzoXoypafaKbg, or vul- gar; itpartKoe, or sacred ; and UpoyXwpiicoc, hiero- glyphic Vestiges remain of them all, of which only conjectural explanations can be offered. Their letters are in all probability lost. The Coptic is the only Egyptian character that re- mains. Herod. 1. 2, c. 36 ; Diodor. Sic. 1. 3 ; He- liodor. Mthiop. . 4 ; Clem. Alexandria. Strom. 1. 5; Eustath. ad Horn. II. 6, v. 168.

ENGLISH, Old, or Black Letter, called by the French, Lettres de Forme, was first used by Gut- temberg and Faust, at Mentz, and by them de- nominated Lettres Burgeoises.

The ETHIOPIC, AMHARIC, or ABYSS:ATIAX al- phabet, is evidently derived from the Samaritan or Phoenician ; only, contrary to the Oriental cus- tom, it is

written from right to left.

ETRUSCAN was the earliest alphabet used in Italy, so called from the Etrusci,the most ancient inhabitants of that country. It is a sort of Pe- lasgian or Arcadian character, frequently found on coins, and disposed after the Greek fashion, jBa^po^rjSov, i. e. alternately from left to right, and from right to left. Two other alphabets are attributed to the Etruscans, which were used as sacred characters by their priests.

FLEMISH is the proper alphabet of the Austrian and French Netherlands, and is used in their common printing, which resembles the old English.

FRANCO-GALLIC, so called from its being a mixture of French and Gaulish characters, was used under the first race of the kings of France in their public acts.

FRANKS, an alphabet used by the earliest in- habitants of the Low Countries, and afterwards transferred to Gaul, was a variety of the Latin alphabet. Another alphabet under this name belonging to the Lingua Francais, is a kind of jargon spoken on the shores of the Mediterranean ; the characters of which are composed of French, vulgar Greek, Spanish, and Italian.

FRENCH, Ancient, an alphabet of this name was used in the fifth century, under the first race of the French kings.

The GEORGIAN is an alphabet which consists of four different characters ; namely, ancient Georgian, immediately derived from, and nearly allied to, the Greek ; two, called sacred, consist- ing of capitals and small letters ; and the fourth, a writing-hand of the Georgians.

GERMAN consists of two characters, capital and small letters, which are used for printing, and two also for writing, or the current-hand.

GOTHIC. To Ulphilas, a bishop of the Goths, in 388,

is attributed the most ancient alphabet of this name. It bears a strong affinity to the Runic; a second Gothic alphabet is formed from the Greek and Latin ; a third, attributed to Al- bert Durer in the sixteenth century, is very similar to the German.

GOTHIC, Modern, an old English or Norman character, called in French,les Lettres Tourneures. It was much used in adorning the missals of the Romish church.

GREEK. We have seen the testimony of He- rodotus, (similar to that of Pliny, Plutarch, and others,) that Cadmus, the Phoenician, introduced the first Greek alphabet into Bceotia. wnere he

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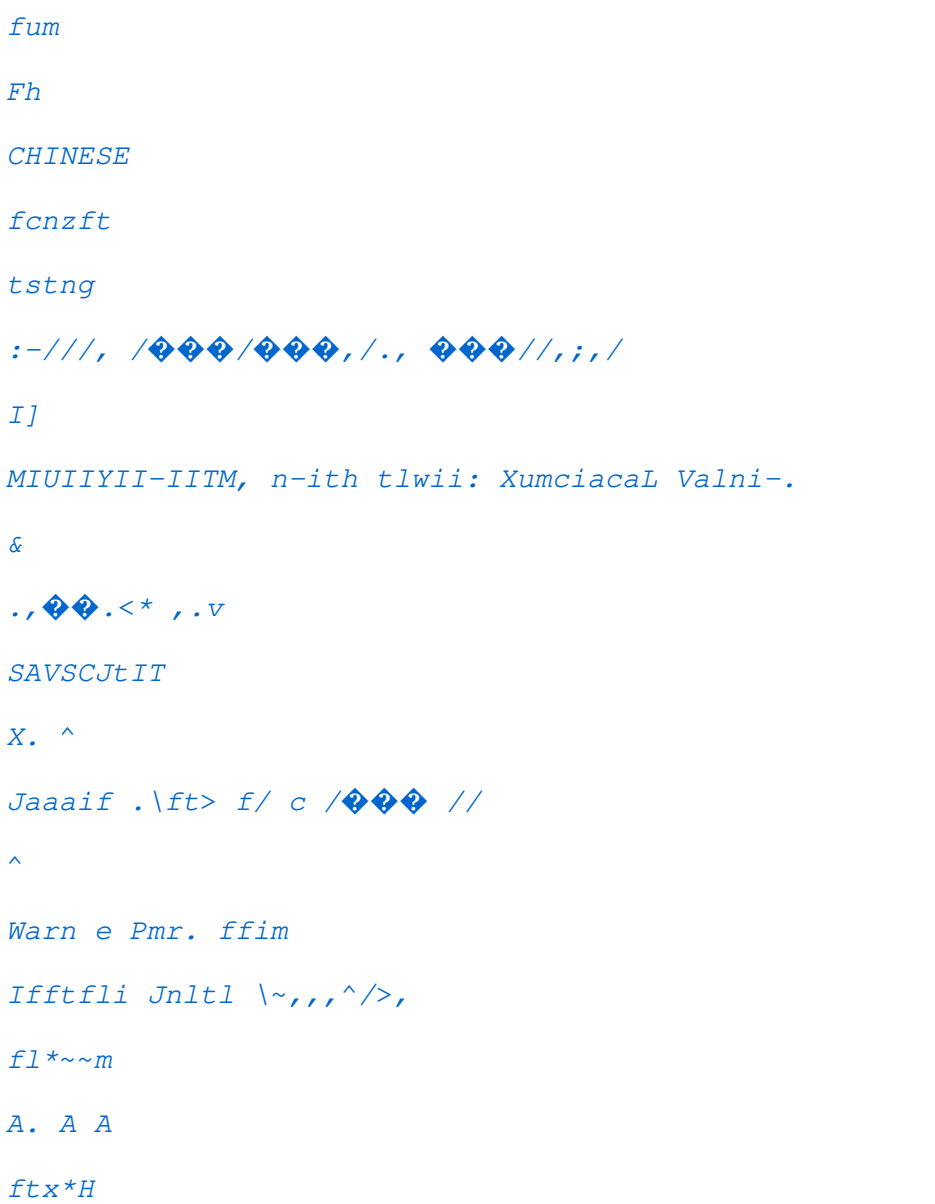

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ALPHABET.

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settled B.C. 1500; although Diodorus is of opinion that the Pelasgian letters were prior to the Cadmean. From comparing the Cadmean and Pelasgian alphabets, however, with the Phoe- nician, it is clear that they sprung from one and the same origin. The Cadrnean, or, as it is otherwise called, the Attic or Ionic alphabet, is principally found on coins and medals, the Pelas- gian is drawn from the Eugubian tables : the former consisted originally of only sixteen letters, to which eight others were afterwards added ; the number of the latter varies, according to the account of different writers, from twelve to twenty letters. The next Greek alphabet of ancient times is the Sigean, so called because the letters which composed it are taken from the inscription on a marble pillar near the town of Sigeum. The antiquity of this alphabet is evinced by its being read alternately from left to right, and from right to left, which manner of writing was called pa^po^Sov, because it resembled the turning of oxen at both ends of a furrow. It is besides observable that the H for the long E, and the Q for the long () were not 'then in use, but afterwards introduced by Simonides. Other Greek characters are drawn from medals and in- scriptions ; namely, the

Nemean, B. C. 430, engraven on marbles, as is supposed, before the Peloponnesian war; the Delian, from inscrip- tions on the remains of a stately building on Mount Cynthus, in the island of Delos; the Athenian; and the Teian. About 500 years be- fore the Christian sera, Simonides completed the Greek alphabet, called the Ionic; and other Greek alphabets of different ages are ??? one used in the time of Alexander the Great, B. C. 330 ; another drawn from the coins of the Antiochi, kings of Syria, &c. B. C. 240 to 187 ; that of Constantine the Great, A. D. 306; of Justinian the Great, A. D. 527 ; of Heraclius, A. D. 610 ; of Leo Jaurus, A. D. 716. To these may be added that of the Alexandrian MS. of the New Testament. See ALEXANDRIAN MANUSCRIPT, for a specimen.

HEBREW. The Rabbins attribute the invention, of two Hebrew alphabets to Solomon. Those most worthy of note are the ancient and modern Hebrew, the former of which is supposed to have been invented by Esdras after the captivity, and to have given rise to the latter. This question, however, has undergone much discussion among the learned, both Jews and Christians ; but while the two Buxtorfs contend that the Hebrew now in use was that in which Moses wrote, the prevailing opinion is, that the Samaritan or Phoenician was the original Hebrew character, and that the present alphabet was invented after the captivity. PI. III. MISCELLANEOUS, contains specimens of Samaritan inscriptions on coins, which it is admitted were struck prior to captivity. Fig. 1 , represents the censer on the obverse, and, on the reverse, Aaron's rod budding ; the in- scriptions, the ' Shekel of Israel ' and ' Jerusa- lem the Holy.' The first, which has x over the censer, was a half shekel ; the second having t, the third of a shekel ; and the third also having ????? the fourth of a shekel. The Rabbinical Hebrew

is the current hand in use among the Jews at present.

The HUNS, an alphabet so called because used by the

Huns, who settled in Pannonia, or Hungary, in 370.

JACOBITE, a corruption of the Greek alphabet, used by the Jacobites, an heretical sect, in their religious services.

JAPANESE consists of three characters ; namely, two that are in common use, and one that is used only at court. Like the Chinese, it is written from top to bottom.

ICELANDIC, the same as the Runic. ILLYRIAN. There are two alphabets of this name ; one said to have been invented by St. Cyril, and the other by St. Jerome, or, according to Aventinus, by one Methodius, a bishop of Illyrium, who used it in the translation of the Scriptures : the former bears a great affinity to the Russian, the latter to the Dalmatian. Duret. Tres. des Lang. p. 741.

INDIAN, the same as the Ethiopian. Duret mentions another Indian alphabet, which is ge- nerally used among the Easterns.

The IRISH alphabet bears, in the opinion of Valiancy, a great affinity to the Phoenician, from which he supposes it to be derived. The Irish also used mysterious alphabets in their incanta- tions, after the manner of those given under the name of ogums, from oga and ogma, an augury. Their three principal ogums, were the ogum Beath, when bt or beath was placed always for the letter a ; ogum coll, when, for vowels, diphthongs, and triphthongs in the ogum, the let- ter c was variously repeated ; ogum croabh, or the virgular ogum, having a line or stem called the croabh, through which, on each side, are drawn perpendicular strokes.

KUFJC, the ancient Arabic. See ARABIC. LATIN, from the ETRUSCAN, which see. This alphabet underwent successive changes, until it arrived at its present state, in which it is more generally known by the name of Roman.

The LOMBARD is also a variety of the Latin

character.

MJESO-GOTHIC, an alphabet attributed to Ul- philas, bishop of the Goths, in the ninth century, and used in the translation of the Scriptures.

MALABARIC, an alphabet consisting of sixteen vowels, and thirty-five simple consonants or radicals. Alphabet Var. Congregat . , de Propar- gand. Fide, vol. ii.

MALAYAN is a character similar to the Arabic.
MANTCHON, a sort of Tartaric. See TAR- TAR 1C.

MENDEAN, an alphabet used by the Mendes, a people of Egypt, A. D. 277 ; formed from the Syriac.

MONK'S, a mode of writing among the ancient Britons by cutting letters upon sticks, either in a square or triangular form, very similar to that which is given as a specimen of the Welsh or Bardic alphabet.

NORMAN. Two alphabets are given under this name on the authority of Bede, one of which was a variety of the Greek.

PALI* YRIAN was first decyphered by the Abbe

Bartheleme", is read from right to left. It bears a strong affinity to the Hebrew.

PELASGIAN is a name given to the alphabet which the Greeks derived from the Phoenicians, whom they called IltXacryot, Pelasgii, quasi Pe- lagi, from Trt\ayog, the sea, because they tra- versed the ocean for the purposes of commerce.

PERSIAN, Modern, is nearly the same as the Arabic alphabet, except the addition of four letters, and a few slight differences in the powers given to the letters. Hyde gives an ancient character called Zend or Pazend, and supposed to have been used by

Zoroaster. Hyde de Re- lig. Vet. Persar.

The PHOENICIAN alphabets comprehend a great variety of characters, drawn generally from coins or inscriptions, and as ancient characters as any in the world. Scaliger supposes this to have been the original Hebrew character, other- wise called the Samaritan.

RUNIC, a variety of the Maeso-Gothic, used by several nations of the North.

The RUSSIAN alphabet is evidently derived from the Greek.

SAMARITAN is the name given to that variety of Phoenician character, which is supposed to have been used by the Jews from the time of Moses to the captivity. See HEBRRW. This name was given to it, because the Samaritans continued to use it, after the captivity, in writing the Pentateuch. It has been collected by Wal- ton from coins and inscriptions : the modern Samaritan differs somewhat from the ancient.

SANSCRIT. The alphabet of the Sanskrita, i. e. the perfect or polished language of the Hindoo class, is called also the Devanagari.

SARACEN. The Saracen alphabet, used at the time of their conquests, bears some affinity to the Phoenician. Another alphabet under this name is quoted by Morton, on the authority of Kircher, which is very similar to the Arabic. ??? Duret. Tres. des Lang. p. 475.

SAXON consists of two characters, the ancient and modern.

SCLAVONIAN, the alphabet used by the ancient inhabitants of Sclavonia, and which bore some resemblance to the Illyrian.

SERVIAN, an alphabet bearing some resem- blance to the Greek, is attributed to St. Cyril, A. D. 700 ; and other characters, under this name, to St.

Jerome.

SIAMIC is an alphabet bearing affinity to the Chinese.

STRANGHELO, the ancient Syriac, from the Greek rpoyyvXoc, round, or rather, rude and rough, said to have been in use, B. C. 300. The modern Syriac, consists of initials, medials, and finals, like the Arabic. From this character two others were formed, called Nestorian, from the Nestorians of Syria, but differing only in some slight particulars. A fifth and sixth sort of Syriac nave been given under the names of Syro Galilean and Syro-Hebraic.

SUMATRAN. The dialects of Sumatra have each a peculiar alphabet, of which Marsden has taken notice in his Comparative Vocabulary, as the Batta, Lampoor, Rejang, &c.

TALENGA, an alphabet of the kingdom of Decan, similar to the Malabaric.

TAMOULIC, an alphabet of India, much used in letter-press printing.

TARTARIC, the same as the Arabic ; but the Mantchou Tartar is a different character.

TEUTONIC, a northern alphabet, bearing considerable affinity to the Saxon.

THIBETAN, the alphabet used by the Lamas, according to the ' Alphabeta Varia Typis sacra Congregationis de Propaganda Fide.'

TURKISH is the same as the Arabic, with the addition of five letters.

WELSH, (Coelbren y Beirs, i. e. the Bardic alphabet,) consisted of sixteen primitive or radical characters, and twenty-four secondary ones. It was formed by cutting the letters on a stick in a triangular or square character.

The learned author of Hermes states, that to about

twenty plain elementary sounds, we owe that variety of articulate words which have been sufficient to explain the sentiments of such an innumerable multitude as all the past and present generations of men. Mr. Sheridan says, that the number of simple sounds in our tongue are twenty-eight ; while Dr. Kenrick contends, that we have only eleven distinct species of articulate sounds, which even by contraction, prolongation,, and composition, are increased only to the num- ber of sixteen ; every syllable or articulate sound in our language being one of the number. Bishop Wilkins and Dr. William Holder speak of thirty-three distinct sounds. ••• After the analysis or decomposition of language into the elementary sounds, the next step towards the notation of it by alphabetical characters would be the delinea- tion of a separate mark or letter to represent each sound ; which marks, though few in num- ber, ••• would admit of such a variety of arrange- ments and combinations, as might be capable of producing that infinity of articulate sounds which compose language. The ingenious Wachter, in his Nature et Scripture Concordia, p 64, endea- vours to show, that ten marks or characters are sufficient for this purpose. From a calculation made by Mr. Prestet, it appears, that, allowing only twenty-four letters to an alphabet, the dif- ferent possible words that may be made out of those letters, would amount to the following number,1391,724,288,887,252,999,425,128,493, 402,200 ! Of all known languages, the Greek has been regarded as one of the most copious, the radices only of which are estimated at about 3244 ; but then it abounds so exceedingly in compounds and derivatives, that Wilkins thinks they may be moderately computed at about 10,000. Hermanns Hugo asserts, that no lan- guage has so few as 100,000 words; and Varro is frequently quoted by learned men, as having affirmed that there are in the Latin no less than 5,000,000 ; reckoning all the variations of nouns and verbs by composition, conjugation, declen- sion, and inflection.

Bishop Wilkins charges all the alphabets ex- tant

with great irregularities, in respect to order, number, power, figure, &c. The order of them certainly appears inartificial, precarious, and confused : and even in the Hebrew alphabet there are letters both redundant and deficient. Most known alphabets are redundant, either by allotting several letters to the same power and

sound, as in the Hebrew 73 and E7, and the ordi- nary Latin c and k, f and ph ; or by reckoning double letters among the simple elements of speech ; as in the Hebrew y, the Greek ►► and $, the Latin x, z, and j consonant : and deficient, in various respects, especially in regard to vowels, of which there are seven or eight kinds commonly used, though the Latin alphabet only takes notice of six ; besides which, the difference among vowels, in respect of length or brevity, is not sufficiently provided for . the ancients, we know, used to express a long vowel, by doubling its character, as amaabam, naata, ree, seedes ; and the vowel i, instead of being doubled, was fre quently prolonged, as in JED!LIS, plso, vlvus. The method used in English for lengthening and abbreviating vowels, viz. by adding e quiescent to the end of a word, for prolonging a syllable ; and doubling the following consonants, for the shortening of a vowel, are equally improper; be- cause the sign ought ever to be where the sound is. Again, their powers are not always fixed ; the vowels, for instance, are generally acknow- ledged to have each of them several sounds : thus the vowel t has at least three different sounds, and one of these only is expressed in writing no less than in six several ways, viz. by e, as in he ; by ee, as in three ; by ie, as in fold ; by ea, as in near ; by eo, as in people ; and by i, as in privilege. Nor are the consonants of more determinate power; witness the two different pronunciations of the same letter c in the same word circo ; and of g in negligence. To add no more,' the letters c, s, and t with an i after it, are used

alike to denote the same power; and the letter s is comrtionly used for z ; and which is yet worse, some letters of the same name and shape are used at one time for vowels, and at another for consonants ; as j, v, w, T/; which yet differ from one another, says bishop Wilkins, sicut corpus et anima ; 'as much as soul and body.' ??? From this confusion in the power of letters, there arise divers irregularities; such as, that some words are distinguished in writing, which are the same in pronunciation, e. gr. cessio and sessio, &c. and others are distinguished in pronunciation, which are the same in writing ; as I now read ??? I have read, &c.

Various plans have been suggested to remedy these imperfections, and very plausible schemes have been exhibited for that purpose, by Mr. Lodwick, Bp. Wilkins, Dr. Franklin, &c. ; but the great difficulty, if they should be ever so perfect, lies in bringing them into general use. Mr. Sheridan observes, that, in our English al- phabet, there are many sounds for which we have no letters or marks : and that there ought to be nine more characters or letters to make a com- plete alphabet, in which every simple sound should have a mark peculiar to itself. The fol- lowing is his scheme of the English Alphabet. Rhet. Gram. p. 9.

Number of simple sounds in our tongue 28.

312 32 3111

9 Vowels, a a a e o o e i u hall hat hate beer note noose bet sit but

w short oo

v short ee

19 Consonant* tbdfgklmnprstvzth J Consonants, ^ sfi zh ng

2 Superfluous, c, which has the power of k or s ; q, that of k before u.

2 Compound, j, which stands for dzh ; z for k$

OTgZ.

I No letter, h, only a mark of aspiration. Consonants divided into mutes and semivowels. 6 Mutes, b d g k p t.

3 Pure mutes, k p t.

3 Impure, b d g.

13 Semivowels.) /.i .. .r- , ,

or liquids. '\flmnrsvzthtKshzhnz.

9 Vocal, I mnr v z th zh ng.

4 Aspirated, f s iK sh.

Divided again into 4 Labial, b p r f. 8 Dental, d 1 1 h t H z ss zh esh. 4 Palatine, g k I r. 3 Nasal, m n ng.

ALPH.&A, in entomology, a species of the phalaena bombyx, with ferruginous wings, a white point in the middle, and a punctuated brown streak ; ??? found in New Holland.

ALPHENUS VARUS. See ALFERNUS.

ALPHERATZ, in astronomy, a fixed star of the third magnitude in Aquarius.

ALPHERY (Mikipher), a native of Russia, and of the imperial line. When that country was torn in pieces by intestine quarrels, in the latter end of the 16th century, this gentleman and his two brothers were sent over to England under the care of a Russian merchant, who en- tered them at Oxford, where two of them died of the small pox. This surviving brother entered into orders ; and in 1618 obtained the rectory of Wooley in Huntingdonshire ; and though twice invited to return to his native country by a poli- tical party, he chose rather to remain with his flock. In 1643 the republicans took him by force from his pulpit, as he was preaching, and turned his wife and children into the street. He raised a tent

in the church-yard, over against his house, and lived there with his family for a week. Mr. Alphery afterwards left Huntingdon- shire, and resided at Hammersmith till the res- toration again put him in possession of his living ; but, being aged and infirm, he could not per- form its duties ; and having settled a curate, re- tired to his son's house at Hammersmith, where he died.

ALPHESIBGEA, 'AX$fffij3oia, in mythology daughter of Phlegeus, and wife of Alcmaeon,the son of Amphiareus, abandoned by her husband for Calirrhoe, the daughter of Achelous. He attempted to obtain a necklace from her which she had received as a bridal present, and was killed by her brothers in revenge.

ALPHESTES, in ichthyology, the name of a fish, the cinaedus of Linnaeus, seeming to approach very much to the turdus or wrasse kind, but having the rays of its back-fin prickly all the way to the tail ; whereas the turdi have only the an- terior rays of that fin prickly, the rest smooth. It is a small fish, caught about the shores, and among rocks ; its back is purple, and its sides and belly yellowish. Its mouth is small, and has thick and fleshy lips.

ALPHETI, in astronomy, another name for the star Lucida Corona.

ALPIJEUS, or ALPHEIUS, in ancient geogra-

phy, a large river of the Peleponnesus ; which, rising in, and after several windings running through, Arcadia, and by Olympia in Elis, with a south-west course fell into the Sinus Chelo- nites, about ten miles south of Olympia. It had a common spring with the Eurotas, at the foot of mount Parthenius, near the village Asea. The poets fabled that, out of love to the nymph Are- thusa, this river ran under the sea to Sicily, and burst out again at the fountain of that name in Syracuse. Pausanias adds, that the Eleans had a law, which condemned any woman to death that should either appear at the Olympic games, or cross this river during that solemnity. Virgil alludes to this stream in the following lines :

Alphaeum fama est hue Elidis amnem

Occukas egisse vias subter mare ; qui nunc

Ore, Arethusa, tuo Siculis confunditur undis.

And Lord Byron has a beautiful application of

the above fable, as a metaphor, in his Lara.

ALPHEUS, the father of the apostle James and Jude. Mary, his wife, is safB to have been the sister of the Virgin, and hence some writers say his sons were called the brethren of our Lord. He is supposed to be the same with Cleophas. Also the name of the father of the Evangelist Matthew.

ALPHITIDON, fr;m a\irov, powder, i.e. a bone ground to powder. In surgery, a species of fracture, wherein the bone is broken into a great number of small parts, or portions.

ALPHONSIN, in surgery, an instrument for extracting bullets, or other extraneous substances, from the human body. This instrument derives its name from the inventor Alphonsus Ferrius, a physician of Naples; and consists of three branches, which are closed on a ring. When in- troduced into the wound, the operator draws back the ring towards the handle,

upon which the branches opening, the ring is pushed from the haft, by which means the ball is grasped firmly, and extracted from the wound.

ALPHONSINE TABLES, astronomical ta- bles made by Alphonso X. (See ALPHONSO X.) They were drawn up chiefly by the skill and pains of a learned Jew, rabbi Isaac Kazan, and called Alphonsine Tables in honour of this prince, who was at considerable expense con- cerning them. He fixed the epoch of the tables to the 30th of May, 1252, being the day of his accession to the throne. They were printed for the first time in 1483, by Radtolt, of Venice ; (an edition extremely rare ;) there are others of 1492, 1521, 1545, &c.

ALPHONSO, or ALPHONSUS, I. king of Ar- *agon and Navarre, succeeded his brother Pedro I. in 1104; and in 1109 became king of Castile by his marriage with Urraca, daughter to Alphonso VI. king of Castile and Leon. He took Saragossa from the Moors; but his queen proving faithless, he divorced her, which involved him in wars with the Castilians. He died in 1124.

This was also the name of several monarchs of Arragon, Leon, and Castile, who variously dis- tinguished themselves in contest with the Moors in the 12th and 13th centuries.

ALPHONSO X. king of Leon and Castile, was surnamed the Wise, and author of the astronomi- cal tables, called Alphonsine. The perusal of

Quintus Curtius is said to have afforded him such delight, that it gave a favourable turn to a dangerous illness. He is said also to have read the Bible fourteen times, with several comments on it ; and favoured its translation into the Spanish language. He also completed a code of laws, known under the title of Las Partidas, begun by his father, and substituted the verna- cular tongue for the Latin in law proceedings. He was elected emperor in opposition to Richard, duke of Cornwall, and was excommunicated by the pope for persisting in his

claim to that dig- nity. Dethroned by his son Sancho : he died of grief, in 1284.

ALPHONSO XI. king of Leon and Castile, suc- ceeded his father Ferdinand IV. in 1312. He defeated and slew Abdulmalic, son of Abul Has- san, king of Fez, in 1339; and at the battle of Tariff, in 1340, obtained a signal victory over the Moors, of whom it is said 200,000 were slain ; besides taking Algezira from them : he died iti

1350.

ALPHUS, in medicine, a distemper, described by Celsus, under the name of vitiligo. In this disease the skin is rough, and exhibits spots of white; whence it is denominated leuce. Where the spots are black, it is called nigra and melane. It bears the same relation to the leuce, as the scabies to the lepra ; the first is superficial and cutaneous, the second sinks deeper into the flesh,

ALPINE MOUSE. See MOUSE and MARMOTS.

ALPINI, or ALPINUS, (Prosper), a celebrated Venetian physician and botanist, born in 1553. He travelled in Egypt to acquire a knowledge of exotic plants, and was the first who explained the fructification and generation of plants by the sex- ual system. Upon his return to Venice, in 1586, Andrew Doria, prince of Melfi, appointed him his physician; until the republic of Venice, being jealous that so distinguished a subject of theirs, as Alpini, should continue at Genoa, invited him in 1593, to fill the professorship of botany at Padua. He dischargeu this office with great re- putation, till he died in 1616, in the 64th year of his age. His principal works (which have pass- ed through numerous editions), are De Medicina uEgyptiorum ; De plantis ^Egypti ; De Balsamo, a treatise on the famous balm of Gilead ; De Prasagienda Vita et Morte JEgrotaritium, con- sisting chiefly of a collection and arrangement of 'the presages of Hippocrates ; De Medicina Me- thodica, being an attempt to elucidate and re- store the ancient doctrine of the

Methodistic sect in medicine ; De Raphontico disputatio inaugu- ralis ; and De Plantis exoticis.

ALPINIA, in botany, a genus of the mono- gynia order, belonging to the monandria class ot plants ; and in the natural method ranking undei the 8th order, scitaminc. The characters are : CAL. aperianthium above, small, and trifid : COR. monopetalous, unequal, and as if doubled : STAM. one filament, with linear antherae joining to the margin : PIST. a roundish germen, beneath : the stylus simple, and the stigma obtusely trigonous : PER. is a fleshy ovate trilocular capsule, with three valves. The seeds are ovate, and very nu- merous; the receptaculum is pulpy and very large. Of this genus, various species, natives of the East and West Indies, have been lately

enumerated by Mr. Roscoe, Dr. Roxburgh, and ethers, but they have not been very intelligently described. It grows naturally in moist places. . ALPS or ALPES, a long and stupendous ridge of mountains, which lie almost in the very heart of continental Europe, and stretching in a crescent-like form through Provence, Dauphine, Savoy, Switzerland, the Tyrol, Trent, Brixen, Suabia, the Electorate of Saltzburg, Carinthia, Carniola, and the ci-devant republic of Venice, from the Gulf of Genoa to the top of the Adri- atic, divides Italy, on the north, from Germany, France, and Switzerland. The name is supposed to be derived either from the Celtic alp, signifying verdant heights, or mountains, (Isidore in Ori- gen, lib. iii. and Servius in Virgil,]►►n. lib. Hi.); and, amongst the ancient Scythians and Scandi- navians, the spirit of a mountain ; or from albus, alpus, white with snow. The etymology from Albion, the son of Neptune, who was said to have been killed by Hercules, when disputing the passage of this god across these mountains, is too fabulous, if not for our attention, at least for our belief.

The length of this lofty range is from 600 to 700 miles, and its breadth, variously estimated, in some

places exceeds 100, the whole comprising various chains or branches, broken into lofty peaks, and divided from each other by narrow valleys, and dreadful chasms several thousand feet deep. Many of these stupendous masses appear like mountains piled upon mountains, till their summits reach above the clouds, and at that altitude resemble islands emerging from the bo- som of the ocean. These are chiefly from 4000 to 12,000 feet in altitude above the level of the sea, and form a series of summits, the highest of which are clothed with perpetual snow. The most rugged parts of this chain are those lying between Savoy and the Vallais, amongst which the celebrated Mont Blanc lifts its lofty head to the enormous altitude of 15,660 feet, and is visi- ble from Dijon and Langres, at the distance of 140 miles. From these immense heights, nu- merous lakes and rivers derive their origin, down their sides are poured stormy cataracts, and beautiful cascades, whilst fine views, and scenes the most picturesque and delightful, break from various directions upon the eye of the traveller. The lower parts of these mountains are clothed with woods and pastures ; the superior regions, to which the shepherds resort with their flocks during summer, produce a great variety of plants and shrubs, and are refreshed with clear and excel- lent springs, whilst the supreme altitude presents a series of rugged and almost inaccessible rocks. In ascending the Alps, the traveller experiences not only the four seasons in succession, within a short space of each other, but all the intermediate changes. Even summer and winter here lose their animosity, and dwell almost together. Many parts of die Alps, especially the middle regions, are subject to violent storms, the tremendous effects of which on the northern branches are fearfully felt. Within the space of a few hours, these dreadful acirs> or hurricanes, often fill the lavines, obliterate the paths and precipices, cover the villages, bury the inhabitants, and de- plorable is the state of that traveller who is thus

overtaken at a distance from any shelter ††† his path is no longer visible ††† the precipice and

the plain can no longer be distinguished ??? if he stands, he is frozen ??? if he proceeds, he is buried.

Since the time of the Romans, who first pene- trated these mountains thoroughly, they have been called by different names in different parts. The principal subdivisions are the following : ??? the Maritime, the Cottian, the Greek or Grecian, the Pennine, the Rhcetian, distinguished into the High Alps, the Lepontine, agd the Rhoetian Proper ; the Tyrolese and Tridentine, including those of Suabia, the Noric, the Carnic, and the Julian.

In the course of this immense range, these mountains assume several distinct names and subdivisions, according to their different and re- lative situations. The Maritime Alps, or Alpes Littorese, or Maritimae, so called from their prox- imity to the Mediterranean, begin at the eastern extremity of the chain, near Monaco, and termi nate near the source of the Po, at Mount Viso, between Dauphine in France, and Piedmont in Italy ; thus connecting the Alps with the north- ern part of the Appennines, and leaving ancient Gaul to the west, and Genoa to the east. Saus- sure has included the whole range of mountains, from Nice to Genoa, under this subdivision, which he divides into two great branches, one running eastward along the coast, until it joins the Appennines ; the other stretching westward through Provence : the usual distribution, how- ever, gives the eastern branch of this range to the northern Appennines. The heights of Came- lon and Tenda are the most celebrated and con- spicuous of this division, both situated in the county of Nice ; and the passes called the Col di Tenda, the boundary of Nice on that side, and the Col d'Argentiere, leading from Barcellonette in Provence, to Coni, in Piedmont, are those best known to travellers. The ancient city of Embrun was formerly the capital of this district, the inhabitants of which enjoyed, under the em- peror Nero, the privileges appertaining to the allies of Rome ; and trophies are said to have been erected on one of its highest summits, called Tropcea, or

Turbia, in honour of the emperor Augustus.

The Cottian Alps, Alps Cottiae, o'r Cottanae, now Mont Genevre, begin at Mount Viso, at the termination of the former, and taking a northern direction to mount Cenis, form the boundary line between this part of Dauphine and Piedmont. The chief town of this district is Susa, and across this range it is supposed, by Holstenius, D'An- ville, and others, that Hannibal with his army entered into Italy. This, however, is by no means clear. The manner in which the Car- thaginian general levelled somp of the most inaccessible heights, splitting the rocks by means of fire, and afterwards pouring on quantities of vinegar, which are said to have softened and crumbled them, rests entirely upon the authority of Livy, 1. xxi. c. 27, supported by an extrava- gant line of Juvenal, Sat. x. v. 15. ' Diducit scopulos, et montem rumpit aceto.' In the present advanced state of chemistry, we know nothing of a calcination of immense masses of rock that could be thus effected. Pliny states.

in book xxii. c. 1. of his Natural History, that vinegar will dissolve calcined substances, and the pearl of Cleopatra may be instanced as a proof of this ; but the details of natural history are so imperfectly given by the ancients, and Pliny is himself so full of marvellous relations, that this evidence can weigh but little ; and even allowing the fact to be correct, as to the pearl, the dissolution of so small a substance can bear no analogy to softening down the rocks of the Alps. There is, however, still extant an ancient pass on this division of these mountains, which leads from Briancon to Susa, formerly called the Cottia ; by which, if Hannibal passed over this portion of the Alps, he must have proceeded.

The Greek Alps, or, according to Pliny and Cornelius Nepos, Alpes Graise, begin at the northern part of

the range last described, and divide Savoy and the Tarentese territory in a western direction ; they also run to the east, between Piedmont and the valley of Aosta, ter- minating at Great St. Bernard. This division is sometimes called Little St. Bernard, as it contains that mountain, and is the part where Hercules, on his return from Spain, was fabled to have forced his passage against Albion.

The Pennine Alps, or Alpes Penninae, seem to have derived their name from the Celtic word Pen, signifying head or top, in relation to the comparative heights of these mountains. The etymology which derives the name from Pceni (Carthaginians), as denoting it to have been the place of Hannibal's passage, is inconsistent with the tenor of history, although conjectured in the time of Livy, lib. xxi. This division begins at the north-east of the Alpes Graiae, and, sepa- rating the Vallais from Italy on the south, extends to the sources of the Rhine and the Rhone, at the foot of the Great St. Gothard. There are three roads across these mountains; that by which the emperor Constantius marched his army against the Alemanni ; another over Mount Simplou, by which Buonaparte invaded Italy, in 1800, prior to the battle of Marengo. This great road into Italy was highly improved by the ci-devant emperor, and is that usually travelled. It runs along the Savoy side of the lake of Ge- neva, and connects the ridge of the Jura with the Alps. At St. Maurice it falls in with the road that traverses the Swiss margin of the lake, passes up the Vallais beyond Sion ; and then turning to the right ascends the Great Simplon, and conducts the traveller to the lake Maggiore and Milan. The track, at the town of Martigni, is unworthy the name of a road, and is passable only by mules. It branches off to the Furca, the Col de Balme, and the romantic scenes of the vale of Chamouni. This division contains Great St. Bernard, Mont Blanc, and that im- mense range of precipices extending southward from the Rhone, and northward from the modern Piedmont. Here the Alps assume their greatest ureadth, and branch out into those

enchanting lalleys which form the habitations of the Swiss.

The Rhsetian Alps, or Alpes Rheeticae, are so called from their situation in the ancient Rhaetia. Of this range there are three subdivisions : first, the Rhzetian Alps proper, which form an imme- diate junction with the Pennine Alps, and pass

between the country of the Grisons and the Tyrol, to the sources of the rivers Piave and Drave, and in their course give rise to the Inn, the Adige, the Oglio, and the Adda ; second, the High Alps, designating the summits of St. Go- thard, the Vogelsberg, the Furca, the Crispalt, the Schreckhorn, and the Grimsel, which they contain. This chain runs from St. Gothard to the lake Maggiore, and divides Milan from Swit- zerland. In its course, a branch of the river Rhine springs from the mountain Vogelsberg, and the sources of the Rhone and the Reuss are to be found in the mountain of Furca. This sub- division is sometimes called the Helvetian Alps. The third, or Lepontine Alps, take their name from the inhabitants of the surrounding country, extend southward of the Pennine Alps and of the High Alps, and stand between the sources of the Rhone and the lake Maggiore, joining the Great St. Bernard westerly.

The Tyrolese, or Tridentine Alps, Alpes Tri- dentinae, run northward of Trent, and include the great mountain Brenner ; the Alps of Algou, in Suabia, are a part or continuation of the Ty- rolese Alps, and cannot justly be divided from it ; within this range, in the county of Konigseck- Rothenfels, stands the Hochvogel, and here the rivers Lech, Iller, Bregentz, and the Aller, derive their several sources.

The Noric Alps, or Alpes Noricae, take their name from the ancient Noricum, and divide the counties of Nice, Saltzburg, and the territory of Venice. They extend eastward of the Rhaetian Alps, and terminate at Dolback in the Tyrol.

The Carnic Alps, or Alpes Carnicas, which have been little explored, extend from the Noric Alps to mount Occa, running between Carinthia and Friuli.

The last distinct portion of these mountains is that known by the different names of the Ju- lian, Pannonian, or Venetian Alps ; Alpes Juliae, from Julius Caesar, who formed a plan of a road over them, afterwards completed by the emperor Augustus. The additions of Pannonicas or Ve- netae are derived from the counties of Pannonia and of Venice, through which they run. This division of the Alps continues the chain from Mount Occa to the gulf of Carnaro, in the Ve- netian gulf, or Adriatic sea, near Istria, and running between Carinthia, Carniola, and Friuli, completes the crescent before described.

The Alps, according to Saussure, consist, in their higher summits, chiefly of a large-grained granite. On the loftiest peaks, the sun sheds its lustre at setting, full three quarters of an hour after the light has disappeared in the Pays de Vaud, and other places in Switzerland, which stand more than 1000 feet above the sea. At the rising of the sun, the tops of these mountains are illuminated for an equal length of time be- fore his rays reach the surrounding country, when they appear like stars amidst the dark- ness of the morning. The valleys and terrific precipices, on the sides of these heights, are in- terspersed by those beautiful, but dangerous wonders of nature, the glaciers, or rocky pyra- mids of ice, accumulated in these Alpine avenues in immense quantities, and in immense shapes and varieties. Coxe divides them into

the upper and lower glaciers, of which the last are much the more considerable in extent and depth; that of Des Bois is fifteen miles long, and in some places upwards of three broad. Saussure found the average depth of the ice, composing this glacier, from eighty to a hundred feet. They seem, in the

larger ravines, as if enormous multitudes of icy hills had rushed from the summits of the surrounding mountains, and crushed each other into the thousand forms that thus fill up the valley. Their surfaces are rough and granulated, the ice of which they are com- posed being remarkably porous and full of bub- bles ; they are easily passed, except in a rapid descent, and in the case of snow accumulating over the fissures, which, however, are not many, and always felt for by the guides. The upper glaciers, on the sides and summits of the Alps, are formed of the purest snow, converted into various degrees of hardness, and continually sliding downward to the valleys. The avalanches are prodigious masses of these accumulations, which are suddenly precipitated down the sides of the mountains, and, increasing as they pro- ceed, sometimes overwhelm whole villages at their feet. The valleys themselves, nevertheless, present some of the finest landscapes to the eye, and afford the most luxuriant pasturage ; corn, vines, and fruits, diversify the scene, and excel- lent fish of all kinds are found in the waters. Recesses from the world are formed, by means of these mountains, in the very heart of Europe, which would seem designed to be the cradle of liberty ; but the warrior and the statesman have often decided the fate of the civilized world upon their borders. Many parts of the Alps yet re- main untrodden by the foot of man; but the most noted passes, besides those already men" tioned, are those of Mount Cervin, Furca, Col di Seigne, Great St. Bernard, St. Gothard, Splugen, the Bulls of Rastat, and the Brenner. Tourists, in these districts, have multiplied the descriptions of particular passes, so that we shall not conduct the reader through any of the ordi- nary routes: Saussure, and the MM. Bourrit, have given us, perhaps, the only scientific ac- counts of the geological and mineralogical won- ders of the scene ; while Mr. Archdeacon Coxe, and other English travellers, have, no doubt, found their way to most of our readers.

A few additional extracts from varieties, des- criptive of the most prominent features of Alpine

scenery, will form the conclusion of the present article. ' The prospects from many parts of this enormous range of mountains,' says a late writer, ' is extremely romantic, especially to- wards the north-west. One of the most cele- brated is the Grande Chartreuse, where is a monastery, founded by St. Bruno, about the year 1084. From Echelles, a little village in the mountains of Savoy, to the top of the Char- treuse, the distance is six miles. Along this course the road runs winding up, for the most part not six feet broad. On one hand is the rock, with woods of pine trees hanging over head ; on the other a prodigious precipice al- most perpendicular; at the bottom of which rolls a torrent, that, sometimes tumbling among the fragments of stone which have fallen from on

high, and sometimes precipitating itself down vast descents with a noise like thunder, rendered yet more tremendous by the echo from the mountains on each side, concurs to form one of the most solemn, the most romantic, and most as- tonishing scenes in nature. To this description may be added, the strange views made by the craggs and cliffs, and the numerous cascades which throw themselves from the very summit down into the vale. On the top of the moun- tain is the convent of St. Bruno, the superior of the whole order, which, though not of the first style of architecture, is not altogether without its effect upon the surrounding scenerv.'

In the extraordinary narrative of M. "Bourrit's journey hither, we meet with the following ac- count of the Prieure, in the valley of Chamouni. We had, says he, the magnificent prospect of a chain of mountains, equally inaccessible, and covered with ice; and above the rest that of Mont Blanc, whose top seemed to reach, and even pierce the highest region of clouds. The chain, upon which the mountain looks down like a giant, is composed of masses of rocks, which terminate in pikes or spires, called the Needles, and which are ranged like tents in a camp. Their sides appear lighter and more airy from the ornament of several hollow breaks and fur- rows fretted in the rock itself, as well as from the

different streaks and panes of ice and snow, which, without changing the general character of their form, or the majesty of their appearance, give them a picturesque variety. Lower down, the eye surveys with ravishment the hills of ice, and the several glaciers, extending almost into the plain, whilst this appears like an artificial garden, embellished with the mixture of a variety of colours. We have a picturesque op- position to this chain, which is formed by innu- merable mountains at the distance of near 50 leagues, between whose tops we have a glimpse of those several plains which they environ. M. de Saussure, who had visited those mountains about two months before M. Bourrit, felt him- self naturally electrified in this place. This ex- traordinary phenomenon seems not to have been experienced by the latter or his company ; but they heard a long continued rumbling noise, like that of thunder, which was rendered more awful by the silence of the place where they stood. This noise proceeded from the subse- quent causes, viz. the avalanches of snow, which separated from the tops of the mountains, and rolled down to the bottom ; considerable frag- ments of the rocks which followed them, over- turning others in their fall ; and massy blocks of ice, which precipitated from the summits. The valley of Montanvert appears to be peculiarly romantic. Here, says M. Bourrit, we beheld a spacious icy plain entirely level ; upon this there rose a mountain all of ice, with steps ascending to the top, which seemed the thruae of some di- vinity. It likewise took the form of a grand cas- cade, whose figure was beyond conception beau- tiful ; and the sun which shone upon it, gave a sparkling brilliance to the whole. The valley on our right hand was ornamented with prodigious glaciers, which, shooting up to an immeasurable height between the mountains, blend their

Colours with the skies, which they appear nearly to reach.

ALPS, SUABIAN, a chain of mountains, which stretch along the frontiers of Wirtemberg, in Germany, separating the Danube' from the Neckar. They may be considered as a continu- ation of the Tyrolese Alps, forming part of the Schwarzwald, or Black Forest. They reach from Sultz to the vicinage of Tubingen, and then eastward as far as Ulm.

ALPS, MARITIME, department of, in France, ???is formed from the ancient county of Nice, and a certain part of High Provence. Nice is its chief town, and, with Puget and Herieres, forms three sub-prefects or arrondissements. It is di- vided into twenty-two cantons, and contains a population of 131,300 inhabitants. This is a mountainous district: but the valleys produce excellent wine and oil. It is in the eighth mi- litary division east.

ALPS, LOWER, department of, in France, is formed out of Provence High, or the north-east part of Provence, and of the valley of Barcelo- nette. Digne is the chief place. There are five arrondissements, or sub-prefectures, viz. Digne, Barcelonette, Castelane, Sisteron, and Forcal- quier. The population is about 149,400, and its extent three hundred and seventy-two French leagues. It has the department of the Upper Alps to the north, to the east the Piedmontese Alps, the department of the Var bounds it on the south, and the mouth of the Rhone and Vaucluse on the west. It is also in the eighth east military division.

ALPS, HIGHER, department of, in France, is" formed of the south-east part of Dauphine, and part of Provence. Gap is the chief place. There are three sub-prefectures or arrondissements, viz. Gap, Briancon, and Embrun. It is divided into twenty-three cantons, its extent is two hundred and fifty-one French leagues, and con- tains a population of 121,500 inhabitants. This department is fertile iu corn, wines, and nut-oil, and on its hills sheep and goats abound. It is in the seventeenth east military

division.

ALPS, is likewise frequently used as an appel- lative to denote any mountains of extraordinary neight or extensive range. In this sense, Auso- nius and others call the Pyrenean mountains Alps; and Gellius the Spanish Alps, Alpini Hispani. Hence also we say, the British Alps, the Asiatic Alps, the American Alps, the Scottish Alps, &c.

ALPTEGHIN, a Turkish slave of Achmet, sultan of the Samanides, who having obtained his freedom by his talents and address, rose gra- dually to the highest offices of state ; and on the death of Achmet, obtained possession of the city of Gazna, where he reigned for 16 years, and at his death, was succeeded by his son-in-law, Se- Decteghin, the father of Mahmud, the founder of the great Gaznian dynasty.

ALPUJARRAS, or ALPUXARRAS, mountains of Spain, in the province of Granada, on the coast of the Mediterranean sea. They are about 17 leagues in length, and 11 in breadth, reach- ing from the city of Velez, almost to Almeria. They are inhabited by the descendants of Moors Mrho have embraced the Christian religion, but preserve fneir ovm manner of living and lan-

guage, though' much corrupted. Here is a rivv- let between Pitros and Portugos, which is said to dye linen that is dipped in it black in an in- stant. The Moriscoes cultivate the soil extremely well, and plant fruit trees ; some of which grow to a prodigious height and thickness, and give the mountains an agreeable aspect.

ALQUIER, also called cantar, a liquid mea- sure for oil, used in Portugal. It contains six cavadas, or canadors. Two alquiers make an almeede, or almonde. It contains 675 French, or 817 English cubic inches; so that 21 alquiers are nearly ××× 1 English quarter ; or more cor- rectly, 50 alquiers ~ 19 English bushels. Al- quier is also a measure for grain at Lisbon.

ALQUIFOU, or ARQUIFOU, in mineralogy, a sort of mineral lead, very heavy, easily reduced into powder, though hard to melt. When broken, it parts into shining scales, in colour much like needles of antimony. The potters use it to give their works a green varnish, whence it is com- monly called potter's ore. It is found in Corn- wall : the potters mix manganese with it, and then the varnish or glazing on their wares be- comes of a blackish colour.

ALRAMECH, or ARAMECH, in astronomy, the Arabic name of a star of the first magnitude, otherwise called ARCTURUS.

AL-RASCHID (Haroun), a caliph of Bag- dad. See AARON.

ALRATICA, among the Arabian physicians^ is where the vagina is imperforate, or at least the foramen smaller than ordinary, whether natu- rally or by accident.

ALRE, a river of England, rising near Aires- ford, below which it is called Itching.

ALREADY, adv. A\l ready, wholly ready, done, past.

For if the wolfe come in the waie Their gostly staffe is then awaie, Whereof thei shuld their flocke defende. But if the poure shepe offende In any thynge, though it be lite, Thci ben all ready for to smite.

Gower. Con. A. The Prologue.

Touching our uniformity; that, -which hath been already answered, may serve for answer. Hooker,

You warn'd me still, of loving two ; Can I love him, already loving you ?

Dryden's Indian Emperor.

See, the guards from yon far eastern hill Already move, no longer stay afford ; High in the air they

wave the flaming sword, Your signal to depart. Dryden’s State of Innocence.

Methods for the advancement of piety are in the power of a prince, limited like ours by a strict execu- tion of the laws already in force. Swift.

Methinks, already I your tears survey j Already hear, the horrid things they say ; Already see you, a degraded toast; And all your honour in a whisper lost ! Pope.

ALREDUS, or ALUREDUS, of Beverley, a celebrated English historian, who flourished in the reign of Henry I. It is said that he was educated at Cambridge, and afterwards became canon and treasurer of St. John’s, at Beverley. He travelled through France and Italy, for im- provement, and at Rome became domestic chap- lain to cardinal Othoboni. He died in 1128 or 1129, leaving behind him the following works: 1 . The Annals of Alured of Beverley : Oxford,

1726; published by Mr. Hearne, from a manu- script belonging to Thomas Rawlinson, Esq. It contains an abridgment of our history, from Brutus to Henry I. written in elegant Latin, and with great accuracy. 2. Libertates ecclesiae S. Johannis de Beverlac, &c. a MS. in the Cotton library, which has never been published. It is a collection of records relative to the church at Beverley, translated from the Saxon language.

ALRESFORD, a market town and parish of Hampshire, in Alton North division, 57 miles from London, and 6 miles north-east from Win- chester, containing about 1219 inhabitants. The church of Old Alresford is a neat building, to which the churches of New Alresford and Maid- stead are chapelries annexed. The parsonage- house is a neat commodious building.

Near this place is a pond which covers near 200 acres of ground, but was formerly much larger, as it reached the bishop of Winchester's palace at Bishop's Sutton, a mile and a half distant. By charter from king John, the Itching was made navigable for barges and lighters ; but the navi- gation has long reached no further than Win- chester. The only manufactory is that of linseys. New Alresford is governed by a bailiff, and 8 burgesses, and formerly sent a member to parlia- ment. At Tichburn Hall, a gift of 2d. in bread or money is given to every applicant on Lady- day. Market day, Thursday.

ALROA, or ALROE, a Danish island.

ALROE, a small island of Jutland, in the gulf of Horsens, belonging to the bailiwick of Achia. Long. 10►►. 30'. E. lat. 55►►. 52'.

ALRUKAK, in the materia medica, a word used by Avicenria, and others, for what was called by the Greeks leptos Hbanotis, and manna thuris, i. e. the fragments of frankincense, broken off from the larger pieces in collecting or packing them.

ALRUM, in the botanical writings of the ancients, a name given to the tree which pro- duces the bdellium. This gum was originally known to be the exudation of a tree growing in Arabia and the East Indies, and well known to Avicenna, and others, and by all of them called by that name.

ALRUNES, a name given by the ancient Germans to small figures of wood, of which they made their lares.

ALSA, in ancient geography, a river of Car- niola, now the Ausa; running by Aquileia, with a short course from north to south into the Adriatic ; where Constantine, the son of Con- stantine the Great, fighting against Constans his brother, lost his life.

ALSACE, LOWER and UPPER, a ci-devant province of

France, now included in the depart- ments of the Lower and Upper Rhine. It is bounded on the east by the Rhine ; on the south by Switzerland ; on the west by Lorrain ; and on the north by the palatinate of the Rhine, or ci-devant department of Tonnere. It was for- merly a part of Germany, but was given to France by the treaty of Munster. It is one of flie most fruitful and plentiful provinces of Eu- rope, abounding in corn, wine, wood, flax, tobacco, pulse, fruits, &c. Upper Alsace con-

tains silver, copper, and lead mines; and i* remarkable for die wine called strok, or straw wine. The mountains which divide it from Lor* rain are very high, and generally covered with fir, beech, oak, and horn-beam. There are also iron-works in several parts of Alsace, and a mineral spring at Sultsbach, near Munster, which is in reputation for curing the palsy, Sec. Of the two modern divisions of Alsace, (the Upper and Lower Rhine) Strasburgh and Colmarare the capital towns.

ALSADAF, in the materia medica, a name given by Avicenna and Serapio to the unguis adoratus; as also to the murex, or purple-fish, of the shell of which it was sxipposed to be a part.

ALSAHARATICA, in botany, used by some to signify the parthenium or feverfew.

ALSAHARCUR, in the materia medica, a name given by Rhases, and some others of the old writers, to the skink, a small animal of the lizard kind, used in medicine as a cordial, and as a provocative to venery.

A.L SEGNO, in music, to the sign, an expres- sion used to avoid writing the same passage twice over, and generally placed at the end of rondeaux, and such vocal compositions as are con- structed upon the principle of the grand coup Ternaire : the first part or division of which must always be repeated. The sign to which the re- turn is made is generally

marked thus,

ALSEN, a fertile island of Denmark, about 100 miles west of Copenhagen, in the entrance to the Baltic, between Sleswick and Funen, and belonging to the duchy of Sleswick. It is re- markable for two castles, and produces large crops of grain, and aniseeds, a carminative much used in seasoning the food and bread all over the Danish dominions. Alsen is about eighteen miles long and nine broad, or 132 square miles in superficial extent; and contains 15,045 inhabitants. The chief town is Sonderburg.

ALSFELD, a town of Germany, in the grand duchy of Hesse, 18 miles east of Marburg, and 50 north-east of Frankfort. It is an ancient town, and well built ; and the inhabitants were the first of this country who embraced the Refor- mation. Lon.9□□.5′. E. lat. 50□□. 45′. N. Inhabi- tants 3000.

ALSHASH, a province containing formerly a very beautiful city in Bukharia, supposed to be the same with that called Tashcant, the capital of the eastern part of Turkestan. It was situated on the river Sihun, now Sir, and had a well watered garden for every house ; but was ruined by Jenghiz Khan.

ALSHEDA, a parish of Sweden, in the pro- vince of Smaland, containing a gold mine : dis- covered in 1738.

ALSHEIM, a market town of the grand duchy of Hesse, formerly in the upper bailiwick of Alzey, containing 165 houses, and 1030 inhabitants. It is 10 miles north of Worms.

ALSIMBEL, or SIMBALETH, in the materia medica, a name given by Avicenna and others to the spikenard of India; so called from its

having the appearance of a spike, or ear, or a congeries of many spikes, or ears, as the nardyx Indica, or Indian spikenard.

ALSINA, in botany, a synonyme of the theli- gonum. See THELIGONUM.

ALSINASTRUM, in botany, the trivial name, and also a synonyme of the elatine. See ELATINE. ALSINE, or CHICKWEED, a genus of the trigynia order, belonging to the pentandria class of plants ; and in the natural method ranking under the 22d order, caryophyllei. The cha- racters are : CAL. quinquephyllous ; COR. five equal petals, longer than the calyx: STAM. five capillary filaments ; the antherse roundish : PIST. an oval germen, three filiform styli, and obtuse stigmata : PER. an ovate unilocular capsule, with three valves : the seeds are roundish and nume- rous. Of this genus a great number of species are enumerated by some botanical writers ; but none of them possess any remarkable properties, except the A. media, or common chickweed, with white blossoms, which affords a notable instance of what is called the sleep of plants. Every night the leaves approach in pairs, so as to include within their upper surfaces the tender rudiments of the new shoots ; and the uppermost pair but one at the end of the stalk are furnished with longer leaf-stalks than the others ; so that they can close upon the terminating pair, and protect the end of the branch. The young shoots and leaves, when boiled, are hardly to be dis tinguished from spring spinach.

ALSINEFORMIS, in botany, the montia fontana, of Linnaeus.

ALSINELLA, in botany, the name by which Dillenius calls the plant sagina.

ALSINGSUND, a strait in the Baltic, near Sunderburg, which separates the island of Alsen from the main land of Sleswick. It is about 30 miles in length, but not above three in breadth, in many places.

ALS1NOIDES, the bufonia and montia of Linna?us.

ALSIRAT, in the Mahommedan theology, a bridge over the middle of hell, said to be finer than a hair, and sharper than the edge of a sword, over which people are to pass, after their trial, on the day of judgment. Mahomet assures us, that the alsirat, narrow as it is, is beset with briars and thorns; none of which, however, will be any impediment to the good, who shall fly over it like the wind, Mahomet and his fol- lowers leading the way ; whereas the wicked, by the narrowness of the path, the entangling of the thorns, and the extinction of the light, which shall direct the former to paradise, will miss their footing, and fall into perdition.

ALSIUM, a city of ancient Etruria, occupying the spot on which Pala now stands. Dionysius Halicarnassensis says, that Alsium was built by the Aborigines, long before the Tyrrhenians in- vaded Italy. In this case it must have been founded not long after the dispersion in the days of Peleg. Its founder is said to have been one Alaesus, or Alisa ; whom some conjecture to have been Alisah, or Elisha, the son of Javan, men- tioned in scripture.

ALSITZ. See ALISONTIA.

ALS'O, adv. \ Gothic uls, all, so or so, ths

ALS. \ article this or that.

pe cyte he barnde al dene & a chyrche aho

Of cure leuede pat per inne was. R. Gloucester Sad remembrance now the prince amoves,

With fresh desire his voyage to pursue ;

Alt Una earn'd her travel to renew. Faerie Queene.

In these two, no doubt, are contained the causes of the great deluge ; as according to Moses, so ala> according to necessity : for our world affords no cthor treasures of water. Btirnet's Theory.

ALSOP (Vincent), a non-conformist minister, a native of Northamptonshire, and educated at St. John's College, Cambridge. He was suc- cessively minister of Welby, in his native county, (whence he was ejected in 1662,) and pastor of a dissenting church in Westminster. King James II. shewed him the great favour of pardoning his son when he had been convicted of treason. He died in 1703; and wrote, ††† 1. Antisozzo, against Dr. Sherlock, 1675. 2. Melius Inqui- rendum, in an answer to Dr. Goodman's Com- passionate Inquiry, 8vo. 1679. 3. The Mischief of Impositions, in answer to Stiilingfleet's Mis- chief of Separation, 1685. 4. Duty and In- terest united in Praise and Prayer for Kings. 5. Practical Godliness the ornament of Religion,

1696.

ALSOP (Anthony), a divine and poet, educated at Westminster school, and at Christ Church, Ox- ford; where he took the degree of M.A. in 1696, and B. D. in 1706. He published Fabularum .ZEsopicarum Delectus, Oxon, 1698, 8vo., with a poetical dedication to lord viscount Scudamore, and a preface in which he took part against Dr. Bentley in the famous dispute with Mr. Boyle. He passed through the usual offices in his college with considerable reputation, until his merit re- commended him to Sir Jonathan Trelawney, bishop of Winchester, who appointed him his chaplain, and soon after gave him a prebend in his cathedral, together with the rectory of Bright- well, Berks. In 1717, a verdict for a breach of promise of marriage being obtained against him for ††2000., he retired for some time abroad. His death, which happened June 10th, 1726, v††as occasioned by his falling into a ditch near his garden door. Besides the Fabularum yKsopi- carum Delectus, a book of his poems, entitled Antonii Alsopi, .SLdis Christi olim alumni, Odarum Libri duo, and several pieces in Dods- ley's collection remain. Bentley calls him Tony Alsop, a late editor of the ^Esopean Fables.

ALSOPHILA, in botany, from aXoog , a grove, or forest, and 0tX††w, to love ; alluding to tlie

favourite station of this beautiful tribe of tree ferns. ††† Brown Prodr. Nov. Holl. v. 1,158. This genus is founded on our Cyathea aspera, C. extensa of Swartz, Polypodium lunulutum of Forster, and some other allied species, and can scarcely be distinguished from the first of these. ALSO-SAJO, a place in Hungary, in the county of Gomah, where great quantities of cin- nabar, and some mines of quicksilver, are found. ALSTEDIUS, (John Henry), a protestant divine, and one of the most indefatigable writers of the seventeenth century. He was professor of philosophy and divinity at Herborn, in the county of Nassau ; whence he removed into

Transylvania, to be professor at Alba Julia, and continued there until his death, in 1638. He wrote, 1. An Encyclopaedia. 2. Triumphus Bibliorum Sacrorum, seu Encyclopaedia Biblica, 12mo. 1620; and united, with his laborious pur- suits as an Encyclopaedist, some sanguine and peculiar views of prophecy. See his De Mille Annis, in which he anticipated that the millennium would begin in 1694.

ALSTON, (Charles), an eminent physician and botanist, was born in Scotland in 1683, and educated at Glasgow, from whence he went to Leyden, and took his doctor's degree. On his return he settled at Edinburgh, and became lec- turer on the materia medica and botany. He died in 1760, having published Tirocinium Botanicum Edinburgense, in which he attacked the sexual system of Linnaeus. His lectures on the Materia Medica were published in two vols. 4to. 1770. He wrote also some papers in the Edinburgh Medical Essays.

ALSTONIA, in botany, called also symplocos, a genus of the monogynia order, belonging to the hexandria class of plants ; so named after the above botanist. The characters are: CAL. a perianthium beneath,

imbricated : COR. monope- talous, and shorter than the calyx ; the border expanding, eight or ten parted, with alternate divisions : STAM. numerous short filaments, the exterior ones longer ; the antherss are orbicular and furrowed : FIST, a small ovate germen above ; a simple stylus the length of the corolla, filiform and erect; the stigma inverse, egg-headed. There is but one species, viz. A. thegeformis, a native of America. Mr. Brown has given this name to another plant, of the class and order pentandria monogynia, of which he describes four species in his Trans. Werner, Soc. vol. i.

ALSTON-MORE, or ALSTON MOOR. See ALDSTON MOOR.

ALSTROEMER (Jonas), a patriotic Swedish manufacturer, was born of poor parents at Aling- sas, in West Gothland, in 1685. He visited London while in very indigent circumstances; and paid such particular attention to its trade, and the manufactures of Great Britain, that, on his return home, he soon raised his native town to a flourishing condition, and kindled a spirit of emulation which diffused itself all over Sweden. Alstroemer followed up this good work by col- lecting information respecting manufactures from all parts of Europe ; and carried on, at the same time, a most extensive sugar-house at'Gotten- burgh, and traded to the Indies and the Levant. He is said to have introduced many useful plants, particularly the potatoe, into Sweden. He also improved the woollen trade, by importing sheep from England and Spain, and the Angora goat. Alstroemer, in the decline of life, was deservedly honoured with letters of nobility, the order of the polar star, and the title of counsel- lor of commerce. The academy of sciences chose him a member, and the national states decreed a public statue to be erected to his honour on the exchange of Stockholm. He died in 1761, leav- ing a large fortune to his four sons, three of whom were also men of talents and considerable public importance.

ALSTROEMEK (Claude), born in 1736, became

a pupil of Linnaeus. He travelled over a great part of Europe, in the course of which he~sent many valuable plants to his preceptor, and, among the rest, the seeds of a fine Peruvian plant, to which Linnaeus gave the name of the lily of Alstroemer. One of his papers on the simla mammon is in the memoirs of the academy of Stockholm. He died in 1794.

ALSTROMERIA, in botany, a genus of the monogynia order, belonging to the hexandria class of plants; and, in the natural method, ranking under the eleventh order, sarmentaceae The characters are : There is no calyx : the corolla is nearly bilabiated ; and consists of six petals, the two inferior tubular at the base the stamina consist of six subulated filaments, declining and unequal ; the anthera oblong : the pistillum has an hexangular germen beneath ; the stylus declining, filiform, the length of the stamina ; and three oblong bifid stigmata : the pericarpium is a roundish hexangular capsule, with three cells and three valves : the seeds are globular and numerous. There are five species, natives of Italy and Peru.

ALSVIG, one of the Hebrides, near the isle of Sky.

ALT, a river in Lancashire, which runs into the Irish Channel, north of Liverpool.

ALT, or ALTWA, a river in Transylvania, whose banks and sands contain particles of gold.

ALT, from altus, high, Lat., in music, a term applied to the higb notes in the scale.

ALTA GRACIA, a city of South America, the capital of the province of Satagaos, in the kingdom of Granada. It was founded in 1540, but has at present a scanty population. ††† Also a town in the government of Buenos Ayres, and province of Cordova, twenty miles south-south- west of Cordova. This is the name likewise of five settlements, three of which are in Guiana and in the province of Cumana; one in the kingdom of Peru, and government of Tucuman ; and the

other in the province and government of Venezuela.

ALTAHEST, in chemistry. See ALKAHEST.

ALTAIC CHAIN, OR ALTAIC MOUNTAINS, a range of mountains in Asia, extending, under different names, about 5000 miles in length, between the 70th and 140th degrees of east lon- gitude. The compact of this immense chain consists, for the most part, of granite, porphyry, limestone, marble, and various valuable ores. In some parts of it, in Russia, are several gold and silver mines; and large masses of native iron have been occasionally obtained. Thi* range gives rise to many of the largest rivers of northern Asia, and several lower ridges diverge from it, and diversify the neighbouring districts. Little, however, is known beyond its outlines and general direction. The Bogdo Tola, or Bogdo Alim, the Almighty mountain, is si- tuated in about 94►►. E. Ion. and 47►►. N. lat. on the limit between the Soongarian and Mongolian deserts : thence a chain runs north-west, called the Golden Mountain, being the main Altaian ridge, and passing the sources of the Irtish, ex- tends to the lake of Altyn. Another range called Changai, passes to the south, and a ridge, by the Tartars called Alia Koola, or Alia Tau, or the 2 Y 2

Chequered mountain, stretches to the west, and gives rise to the river Hi, a considerable stream running northward. This principal chain forms the boundary line between Russia and Indepen- dent Tartary, and proceeding onward from the rtish to the Amur, or Amour river, branches into he mountains of Kamtschatka and Oudskoi, or Okhotsz, terminating in the sea of Kamtschatka, where it forms the extended chain of the Aleutian Islands, uniting the eastern shores of Asia with North-west America. The Lesser Altain chain separates Soongoria from the government of Kolhyvan; and near the conjunction of these two main divisions are the principal sources of the

Yenisei, the Oby, and the Irtish, which empty themselves into the Northern ocean. Though such of these mountains as have been explored present many interesting mineralogical and geo- logical facts, and the whole chain, in point of magnitude and extent, can be rivalled only by the Andes of South America, they have never been very accurately laid down in maps, and are known amongst the semi-barbarous people who inhabit the surrounding country, by so many va- rious names and subdivisions, that a connected description of them is exceedingly difficult to gather. That part of the chain immediately south of the lake Baikal is said to be upwards of 10,000 feet in altitude. The Russian maps of these dis- tricts are little credited by Major Rennell ; and though they are preferred by Mr. Pinkerton, it is admitted that these mountains are very faintly described in them. The map of Isleniff, a Rus- sian officer, appears to be the best.

The part of this chain best known is the nine Russian portions, which are divided into the Alasey or Alaskai, the Kolhyvan, the Korboli- kinsk, the Oubinsk, the Buktarminsk, the Te- letsk, the Tsharinsk, the Krasnoyarsk, and the Kunetz. The last two ridges are almost wholly inaccessible, and the tops of many of them are covered with perpetual snow, and sometimes the seven preceding divisions are called the Kolhy- van mountains, as situated principally in the government of that name. The best mines of Siberia are found in these mountains, particu- larly in the Korbolikinsk division. In the course of forty years of the last century, the only period of which any regular account of the annual pro- duce of these mines appears to have been kept, they produced 830 poods Russian (equal to about thirty-six English pounds each) of fine gold; and 24,460 poods of fine silver. The copper mines yield annually 15,000 poods of metal; the iron mines, running through the larger portion of the range, are too extensive, and in the hands of too many agents, to be distinctly estimated ; but they form one of the most important sources of the rising greatness

of the Russian empire.

ALTAIR, in astronomy, a star of the first mag- nitude, in the constellation Aquila.

ALTAMIRA, a small town and county of Gallicia, Spain, fifteen miles west of St. Jago de Campostella.

ALTAMURA, a town of Naples, in the ter- ritory of Bari, with the title of a principality, and the seat of a royal governor, at the foot of the Appennine mountains. It contains 16,000 in- habitants, many of whom are Greeks, and is six

miles north-east of Gravina. Some have sup posed this to be the ancient Petillia.

ALT'AR, n. Latin altare, (quasi alta ara the rising altar on which the victims were bunt [the ara being a less elevated spot, where prayeu and drink offerings were presented.] A plaoS raised to receive offerings to Jehovah in the Jew- ish theology, and to the gods in the heathen mythology. Also a term used by some Chris- tians to designate the place where the Lord's Supper is dispensed.

be kyng wepte with his ine, that sight mykelle he

praised, & siluer grete plente vpon the altere laid.

R. Brunne, p. 79.

Men of Athenys, bi alle thingis I se'ghou as veyne wor&chiperis, for I passide and segh ghoure mawmetis, and foonde an auter in which was writen to the un kuowun God ; therefore which tiling, ghe unknowinge worschipern, this thing I schewe to ghou.

Wiclif, Dedis. ch. xvii. Her grace rose ; and, with modest paces, Came to the altar ; where she kneel'd, and saint-like Cast her fair eyes to heav'n, and pray'd devoutly.

Shakspeare.

The way coming into our great churches was anciently at the west-door, that men might see the altar and all the church before them ; the other doors were but posterns. Selden's Table Talk.

Thy liberal heart, thy judging eye, The flower unheeded shall descry, And bid it round heaven's altars shed The fragrance of its blushing head.

Gray's Ode for Music. Before thy mystic altar, heavenly Truth, I kneel in manhood, as I knelt in youth, Thus let me kneel, 'till this dull form decay And life's last shade be brighten'd by thy ray Then shall my soul, now lost in clouds below, Soar without bound, without consuming glow.

Sir W. Jonei.

ALTAR, the Lexicography of which is already given, properly signifies a table, or a raised place on which any offering was made. It is so called, because altars were set up by the Hea- thens in high places, or, at any rate, raised above the ground. Indeed the opinion has prevailed, that the word altar in its early acceptation de- noted nothing more than the spot on which sacrifices were made. Hesychius and Phavori- nus expressly speak of people who had sacrifices without altars, (or distinct edifices.) Strabo makes a similar assertion respecting the ancient Persians. The history of these celebrated mo- numents connects itself with one of the most important enquiries of the human mind, viz. the origin of sacrifices, from their connection with which it is inferred, that the date of their first appearance is almost coeval with that of the world. Gen. c. iv. Some attribute their origin to the Egyptians ; others to the Jews; others to the patriarchs before the flood. Some remove them as far back as Adam, whose altar is much spoken of by Jewish and even Christian writers. Others are contented to make the patriarch Enoch the first who consecrated a public altar. Be this as it will, the earliest altars of which we find an express testimony are those of Noah, Gen. viii. 20, and of Abraham, Gen. xii. 7, In the patriarchal times

altars were, no doubt, of rude construction, and temporary, appro-

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up at Bethel was merely the stone on which he rested, Gen. xx. 8.; such was also the altar of Gideon, Judges, vi. ; and the first altar which Moses erected was made of earth, by the com- mand of God, Exod. xx. 24. Among the Jews the principal altars were the altar of incense, the sltar of burnt-offerings, and the altar or table of she w-bread. These were built of wood, the first and the last were overlaid with pure gold, and the second with brass, but all richly sculptured by the hands of cunning workmen, and enriched with the choicest beauties of Jewish architecture. In this, the Jews, for the times in which they lived, were not inferior to any people ; and though our information on these particulars is comparatively scanty, yet the admirable skill with which their temple was contrived and beautified, imposes a magnificent idea of the embellishment attached to their altars. The form of these erections has been a subject of considerable altercation amongst the learned; and accordingly different opinions have been given. They

are represented by Josephus as being square, and having horns at the four cor- ners. His words are rerpaywvoe & iSpvro, Kepa- rotiSeig vpoavf \tttv ywvia^. We find an allusion to such appendages in many parts of scripture ; but whether these horns were made of wood, or were in reality the horns of some animal is not obvious. Whether they were merely ornamental appendages, or answered some practical pur- poses, has also been questioned. Some writers have imagined, that they served to move, and carry the altar with the greater ease and steadi- ness. Michaelis doubted whether they were real projections, and averred that nothing more was intended by the horns than the four corners of the edifice. ' Those who have thought other- wise,' says a late writer, ' have not informed us whether they were upright, oblique, or curved.' Spencer, Le Clerc, Witsius, and others, considered them horn- shaped, like the ara pacis of the Ro- mans; various theories have been entertained. They have been thought emblematical of dig- nity and power, and to refer to the diverging rays of the solar orb when breaking forth in the morning or from behind a cloud, especially as the word translated horn, also signifies a ray of light. There can be no doubt that they were real appendages ; and their uses, with respect to the larger altar, are sufficiently obvious. They served to secure the sacrificial victims, see Ps. cxviii. 27 ; and for fugitives to seize, when fleeing to that monument for protection.

The altar of incense was made of shittim wood, adorned after the manner already de- scribed. It was one cubit square, and two cubits high, with an ornament of gold like a carved moulding round the top of it ; it was carried about by two bars of the same wood, overlaid with gold, and passing through four golden rings. Its use was for burning incense morning and evening. It was particularly to be sprinkled with the blood of the sacrifices that were offered for the sins of ignorance, committed by particular persons, or by the community in general. The following diagram, will perhaps,

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to be observed : ???

1. The horns; 2. the crown of pure gold ; 3. the rings under the crown; 4. the censer which was placed upon it. See Exod. xxx. 1. &c. This celebrated altar was hidden before the cap- tivity, by the prophet Jere- miah. See 2 Maccab. ii. 5. &c.

The altar of burnt-offering, described Exodus xxvn. and xxviii., was made of shittim wood overlaid with brass, and had four brass rings, through which were put two bars, by which it was carried on the shoulders of the priests. At each corner was a horn or spire, wrought out of the same wood with the altar, the uses of which have already been surmised. Within the hollow was a grate of brass, supposed to be about five feet square : on this the fire was made, and through it fell the ashes into an inferior recep- tacle. This part of the apparatus was suspended by rings at the corners, attached, possibly, to chains in the cavity of the altar. The dimen- sions of this altar were five cubits, or two yards and a half square; and three cubits, or a yard and a half high. It was placed towards the east end of the court, fronting the entrance of the taber- nacle, and at such a distance that the smoke of the fire might not disfigure the furniture within the tabernacle. The altar made by Solomon, and mentioned 2 Chron. iv. 1, &c. was much larger than the former. We exhibit the following dia- gram, as an illustration of this edifice,

in which the reader will observe : 1 . the horns, or four spires, at the four corners ; 2. the grate of brass, in which the fire was made ; 3. the pan which received the ashes ; 4. the rings and chains by which it was affixed to the horns be- fore alluded to ; and 5. the kibbesh, or ascent to the altar, Exod. xx. 26, &c.; 2 Chron. iv. 1, &c. Between the grate and the altar sufficient space was left on every side to prevent the fire from damaging the

wood work, and every thing was regulated with the utmost exactness. The fire on this altar was considered as sacred, having first descended upon it from heaven, Lev. ix. 44, and was therefore kept constantly burning, Lev. vi. 13. Hence, probably, the Chaldeans and Persians borrowed their notions of sacred fire,

which was always preserved with great care and attention, and from them this custom is known to have passed to the Greeks and Romans. This altar was demolished by the Babylonians at the conflagration of the temple, but was restored immediately on the return of the Jews from cap- tivity, Ezra iii. 3. It was now a large pile of unhewn stone, 32 cubits square at the bottom, and gradually decreasing to the top, or hearth, which was a square of 24 cubits, and one cubit high, made of solid brass, and hence called the brazen altar. The ascent to the altar was by a gentle rising on the south side, corresponding with the kibbesh in the diagram. This part of the structure was 32 cubits in length, and 16 in breadth, and banded on the upper benching-in next the hearth, or the top of the altar. Prid. Con. vol. i. p. 199.

The altar, or table, of shew-bread, was like- wise of shittim-wood, overlaid with gold, and exquisitely adorned. Its dimensions were two cubits long, one wide, and one and a half high. It had a golden border, crown, or rim, round it, and upon it were placed two rows, including twelve loaves of bread, with salt and incense, which were changed every Sabbath-day. This table was also furnished with golden dishes, spoons, and bowls. The Jews gave the name of ' altars ' to a kind of tables occasionally raised in the country or fields, on which sacrifices were offered ; thus we often read, in such a place an altar was built to the Lord.

The altars of the Heathens were at first made of

turf; afterwards of stone, marble, wood, and even of horn, as that of Apollo in Delos. Before temples were in use, altars, as already intimated, were erected in groves, in the high- ways, and on the tops of mountains ; and it was customary to engrave upon them the name or attribute of the deity to whom they were consecrated. They were also of different kinds with regard to their qualities, the uses to which they were applied, and the objects to which they were appropriated ; being sacred to gods, heroes, virtues, vices, diseases, &c.: we read also of inner and outer, stationary and portable, public and private altars. Again, they differed in their figure, which was round, square, or triangular. All of them were turned towards the dast, and generally adorned with sculpture, basso-relievos, and inscriptions, expressing the gods to whom they were appropriated, or representing their distinguishing symbols. For a specimen of pagan altars, see Plate III. Misc. No. 1 represents an altar dedicated to Neptune, and exhibits a trident, and two dolphins, the attributes of this deity, on its sides. No. 2 is a four-square altar ; and, as the inscription informs us, dedicated to the nymphs. No. 3 was erected to Bacchus, and exhibits a Bacchanal, with a thyrsis in his hand, with two other sides, it appeared triangu- lar. Each side of No. 4, which was triangular, exhibited a genius, one of whom is seen carrying an oar upon his neck, which seems to indicate that it belonged to Neptune. No. 5, with the inscription, ‘ Ara Neptuni,’ is of a round figure; the god is represented wholly naked, preserving the pallium on his shoulder, holding a trident in his left hand, and in his right a dolphin. Altars

differed also in their height as well as in their figure.

According to Servius, in Virg. Eel. v.” 66. JEn. ii. 515, those set apart for the honour of the celestial gods, or gods of the higher class, were placed on some pretty tall pile of build- ing, as the altar of Olympian Jupiter, which was nearly 22 feet high ; and for that reason were called altaria, from the

words alta and ara, a high elevated altar. Those appointed for the terrestrial gods were laid on the surface of the earth, and called arse ††† and, on the contrary, they dug into the earth, and opened a pit for those of the infernal gods, which they called jSoOjxu and Xaeieoi, scrobiculi. But this distinct tion is not every where observed.

In the great temples of ancient Rome there were commonly three altars : the first placed in the sanctuary, at the foot of the statue of the divinity, upon which incense was burned, and libations offered; the second was before the gate of the temple, and upon it they sacrificed the victims ; and the third was a portable altar, upon which were placed the offering and the sacred vessels.

The Greeks had two species of altars: that whereon they sacrificed to the gods was called /3fc>fioc, and was a real altar, different from the other, whereon they sacrificed to the heroes, which was smaller, and called w%aoa. Pollux makes this distinction of altars in his Onomasti- con : but adds, that some poets used the word ††*%apa for the altar whereon sacrifice was offered to the gods. (The Septuagint version some- times also uses t.ffxa9a f††r a sort ††f Kttle l††w altar, which some authors express in Latin by craticula.) The nymphs, instead of altars, had avrpa, caves, iu which adoration was paid to them.

The superior altars of the Greeks were ranged under three subdivisions : the tpirvpoi, designed for burnt-sacrifices; airvpoi, without fire, and avaipaKroi, without blood ; for upon the two last, only offerings of cakes, or fruits of the earth, and libations, could be presented to their respective divinities. Venus had an altar at Paphos, which was avot/iajcrof, but not airvpoq; and Tacitus says that she was worshipped, precibus solis et igne puro, by prayers and fire alone. Among the primitive Greeks, the consecration of their altars was attended but with little expense ; but as they increased in riches, they gradually intro- duced more magnificent and costly ceremonies into this part of their

religious worship. From a passage in the EI^TJVJJ of Aristophanes, and from the Danaides of that poet, we find that the ordinary mode of the consecration of altars was similar to that of images. He speaks of a woman dressed in a robe of various colours, with a vessel filled with pulse upon her head, consecrating the statues of Mercury and the altars of Jove. The usual mode of dedication was performed by placing a gariand of flowers upon them, then anointing them with oil, and afterwards offering up libations of wine and oblations of fruits. There is no doubt but that the unction, with oil, constituted the principal part of the ceremony of consecration ; and that this practice was derived from the most remote antiquity We all know

that, among the Jews, the altar of Moses was consecrated by the pouring out of oil, by the express command of God, and that the altar of Jacob was dedicated by the performance of the same ceremony.

The altars of the ancient heathens, like those of the Jews, were adorned with horns, to which the victims were fastened, and to which criminals, who tied for refuge, used to cling. The ancients also, on solemn occasions, as in forming alliances, and confirming treaties of peace, swore upon them and by them. See Adam's Rom. Ant. p. 140, &c. In the Dionysica of Nonnus, Agave is introduced offering up a sacrifice upon fw/cfjjaw Trapo ►►w/jy. The same ornaments are still visible in those which remain in the ruins of Rome. Although we have given the most common forms of the altars of the ancients, other forms were common, and for the most part different forms appear to have been adopted by different nations. The square form was that most common among the Greeks; but we find, from ancient medals, that altars of the circular and pyramidical figures were not unfrequent. It is probable, that the custom which was ob- served, of placing the altars on the

eastern side of their temples, suggested the Christian custom of placing the sacramental table on the eastern side of the early churches.

The altar which the apostle Paul found at Athens, bearing the inscription of the Ayvia^of Oeoe, eternized by the memorable discourse of which it became the basis, has created consider- able diversity, and even contrariety of opinion among biblical critics. The erection of this altar has been ascribed, by some, to Dionysius, the Areopagite ; who, unable to account for the eclipse at our Lord's death, was yet sensible that it was the sympathy of nature with a superior being. Theophylact attributes it to the appear- ance of an unknown spectre after a battle lost by the Athenians : others to a complaint of the god Pan, during the war between the Persians and the Greeks, who, considering himself neglected, acted accordingly; whence, lest any other deity should have like cause of displeasure, an altar was erected intended to include all those gods who were not named in the general description. Lucian, in his Philopatris, swears by ' the un- known god of Athens.' Some have supposed the god of the Jews to be intended, whose name was unknown to them. Jerome supposes, that the inscription on this altar was not, as St. Paul quotes it, ' to the unknown god,' but 'to the gods of Asia and Europe and Africa, unknown and strange gods ;' and that the apostle has not quoted the inscription exactly, but dexterously applied it to the occasion. Theophylact and (Ecumenius are also of opinion, that the inscrip- tion was ' to gods,' in the plural number. But Chrysostom, and Isidore of Pelusium, assert, that the inscription was as St. Paul quotes it. Le Clerc says, that though the inscription was in the plural number, St. Paul was in the right to allege it in the singular. The notions of Dio- genes Laertius, in Epimen. lib. i. seg. 110. p. 70, 71, are as follows: 'about 600 years before Christ, the fame of Epimenides was very great

among all the Greeks, and he was supposed to be in favour with the gods. The Athenians be- ing

afflicted with a pestilence, they were directed by the Pythian oracle to get their city purified by expiation. They therefore sent Nicias, son of Niceratus, in a ship to Crete, inviting Epime- nides to come to them. He came accordingly, in the forty-sixth Olympiad, purified their city, and delivered them from the pestilence in this manner: taking several sheep, some black, others white, he led them up to the areopagus, and then let them go where they would ; and gave orders to those who followed them, where- ever any one of them should lie down, to sacrifice it to the god to whom it belonged; and so the plague ceased. Hence it comes to pass, that to this present time may be found, in the boroughs of the Athenians, anonymous altars, a memorial of the expiation then made.'

ALTAR of Adam, in antiquity, is pretended by some rabbin and others to have been erected by the first man posterior to the fall; when, being overwhelmed with sorrow, the promise was made him by the ministry of the angel Ha- ziel, of a redeemer. In gratitude he is said to have built an altar, and sacrificed. The reliques of this monument have been mentioned by se- veral writers of later ages.

ALTAR, in modern times, is used for a square table placed on the eastern side of the church, raised a little above the floor, and set apart for the celebration of the sacrament. Its form is not borrowed either from that of the heathen altars, or even from that of the Jews in the temple ; but from the view taken of the eucha- rist as a supper. Its name is the communion table ; the denomination, altar, is founded on the supposition that the eucharist is a proper sa- crifice ; which, though the standing doctrine of the church of Rome, is utterly denied by most of the reformed churches. Accordingly, bishop Ridley, in the reign of Edward VI. A.D. 1560, issued injunctions for taking down all altars, and requiring the churchwardens of every parish to provide a table, decently covered, and to place it in such a part of the choir or chancel as should be most meet, so that the ministers and communicants should be separated from the rest of

the people. The canons of the council of Nice, as well as the fathers St. Chrysostom and St. Augustin, call it the Lord's table; and though they sometimes call it an altar, it is to be understood figuratively. An altar has relation to a sacrifice ; so that if we retain the one, we must admit the other. The practice of conse- crating altars with their furniture was introduced and vindicated by archbishop Laud, in the reign of Charles I., but objected to by Prynne, as having no higher original than the Roman missal and pontifical edicts. To the antiquity of altars it was replied, that though the name is often men- tioned in Scripture, yet it is never applied to the Lord's table; but altars and priests are put in opposition to the Lord's table, and ministers of the New Testament, 1 Cor. ix. 13, 14. It was added, that it cannot be pretended, by any law or canon of the church of England, that it is called an altar more than once, stat. 1 Edward

VI. cap. 1., which statute was repealed within three years; and another made in which the word altar is changed into table.

ALTAR of Prothesis, is a name given by the modern Greeks to a smaller preparatory kind of altar, wherein they bless the bread, before it is carried to the large altar where the liturgy is performed. F. Goar maintains that the table of prothesis was anciently in the sacristy or vestry ; which he makes appear from some Greek co- pies, where sacristy is made use of in lieu of prothesis.

ALTAR, in church history, is also used for the oblations or contingent incomes of the church. In ancient days they distinguished between the church and the altar. The tithes, and other settled revenues, were called the church, ec- clesia; and other incidental incomes, the altar.

ALTAR, in astronomy. See ARA.

ALTARAGE, in law, altars erected in virtue of donations, before the reformation, within a parochial church, for the purpose of singing of mass for deceased friends.

ALTARIST, ALTAR ISTA, or ALTARTHAN, properly denotes the vicar of a church who serves the altar, and to whom the alterage, or produce of the altar, is assigned for his mainte- nance. The altarist is likewise called altararius, and sometimes altar priest. It is also used for chaplain.

ALTA.R-THANE, or ALTARIST. See ALTARIST.

ALTASRIF, in literary history, the title of a medicinal book written in Arabic, describing the medical practice in use among the Arabs. It was written by Alsaharavius, and translated into Latin by P. Ricins in 1519.

ALTA TENURA, in law, the high tenure in chief, or by military service.

ALTAVELA, in ichthyology, the name of a flat cartilaginous fish, of the aquila marina kind ; but with its wings, as they are called, that is, its thin and flat sides,, broad and obtuse towards their lower part. The fishermen, from the re- semblance these flat sides have to wings, have an opinion that this fish can fly. The tail is very short, being scarce half the length of the body. Its flesh is solid, and well tasted, and it sells well in the markets. It abounds in the Mediterranean.

ALTAVELLA, in geography, a town of Italy, in the kingdom of Naples, and province of Principato Ultra, seven miles south of Bene- vento.

, ALTAVILLA, a town and county of Naples, in the Principato Citra, eighteen miles south- east of Salerno.

ALTDORF, or ALTORF, a handsome town of Switzerland, chief of the canton of Uri. It is situated below the

lake of the four cantons, in a plain, at the foot of a mountain, whose passages are difficult, and serve instead of fortifications. It is celebrated for being the place where Wil- liam Tell shot the apple from his son's head. ††† See TELL (William.) The town-house and the arsenal are worth seeing.

ALTE et RASSE, in middle age writers, sove- reignty, or a thing done with supreme power.

ALTEA, a sea-port town of Valencia, in Spain, on the coast of the Mediterranean. It

was taken in 1706 in favour of the archduke Charles ; but lost after the battle of Almanza, in 1707. It is twenty-four miles north-east of Alicant.

ALTENA, or ALTONA. See ALTON A.

ALTEN A, a manufacturing town in the Prussian grand duchy of the Lower Rhine, formerly in- cluded in the Westphalian county of Mark. It is seated on the Lenne and Nette, and has a Lu- theran and Calvinist church, a court of justice, 590 good houses, and about 3300 inhabitants. Thirty miles north-east of Cologne. Also, a small district of South Holland, between the Maese and Biesbosch.

ALTENBERG, a lordship and flourishing town of Germany, in the Saxe Gotha portion of the old principality of Altenburg, Upper Saxony. Of that principality, this was the capital. At present it has excellent manufactures of cotton and wool ; and a good trade in corn and cattle. Population about 9500. This is also the name of a mining town in the Erzgeberg, or miners' portion of Saxony. Eighteen miles south of Dresden.

ALTENBURG, or OLDENBURG, an ancient town of Germany, in the duchy of Holstein.

ALTENHOFEN, a market town in Carinthia, on the small river Metnitz, with a castle. There are iron-works in the neighbourhood. Four miles north-east of Vei

ALTENKIRCHEN a small town of Germany, in the

Westerwald, which was the scene of several obstinate conflicts between the French and Aus- trians, in 1796. Fifteen miles north-north-east of Coblentz. Long. 7►►. 29'. E. lat. 50►►. 38'. N. Also a market-town of Pomerania, in the land of Wittow, situated near the point of the peninsula.

ALTENMARKT, or ALTENWICHT, a market town in Upper Bavaria, circle of the Iser, dis- trict of Obing, on the borders of Saltzburg, twenty-six miles north-west of Saltzburg.

ALTENMARKT, two market towns in the Aus- trian dominions ; one near the Ens, in the circle of Brack, Styria, fourteen miles north-east of Rottenmann ; the other in the quarter above the forest of Vienna, Lower Austria, four miles south-west of Baden.

ALTEN-OETINGEN, a market town in Upper Bavaria, with 1400 inhabitants.

ALTENSTADT, a market town and bailiwick in the grand duchy of Hesse.

ALTER, v. "|

ALT'ERABLE, Alter, vel alteragf,

AL'TERANT, [other. To make other-

AL'TERATE, f wise or different ; to

ALTERATION, change.

ALTERA'TIVE, n &adj.J

And whether the body be alterant or altered, ever-more a perception precedeth operation ; for else all bodies would be alike one to another. Bacon.

Why may we not presume, that God ,doth even call for such change or alteration, as the vory condi- tion of things themselves doth make necessary ?

Hooker

Alteration, though it be from worse to better, hath in it inconveniences, and those weighty. Id,

Do you note. How much her grace is alter'd on the suddeiiT

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How long her face is drawn ? how pale she looks,

And of an earthly cold ?

Sfiahspeare's Henry VIII

Acts appropriated to the worship of God by his own appointment, must continue so, till himself hath otherwise declared j for who dares alter what God hath appointed. Stiliingfleet.

That alterable respects are realities in nature, will never he admitted by a considerate discerner.

Glancllle.

ALTERCUM, in botany, a name for the hyos- cyamus, or henbane.

ALTERNANTHERA, in botany, so calleo trom the stamens being, as it was thought, al- ternately furnished with anthers, and withou. them. ††† Forsk. jEgypt. Arab. 28. Brown Prodr. Nov. Holl. v. i. il6. ††† Class and order, Pen- tandria Monogynia. Natural Order, Holeraceae, Linnaeus. Amaranth!, Jussieu. Its General

Our condition in this world is mutable and uncer- Characters are : CAL. perianth inferior, of ††† one

leaf, in five deep, coloured, pointed, spreading, permanent, and finally hardened, segments : COR. none : STAM. filaments five, capillary, shorter

tain, alterable by a thousand accidents, which we can

neither foresee nor prevent. Rogers.

Medicines called alterative, are such as have no

immediate^ sensible operation, butgradually gain upon than the calyx, inserted into a membranous ring,

round the base of the germen, with intermediate teeth ; anthers simple, oval, of one cell, generally wanting one, two, or three of the filaments alter- nately : FIST, germen ovate, acute ; style very short; stigma capitate: PERIC. capsule mem- branous, inversely kidney-shaped, compressed, of one valve and one cell, inflated, not bursting, ALTER (Francis i Charles), a critic of Germany, endosed in the cartilaginous calyx : SEED soli-

the constitution by changing the humours from a state of disteinperature to health. They are opposed to evacuants. Quincy.

When there is an eruption of humour in any part, it is not cured merely by outward applications, but by such alterative medicines as purify the blood.

Government of the Tongue.

was Jesuit and laborious Greek teacher in the school of St. Anne at Vienna, was born at En- glesberg in Silesia, in 1769, and died in 1804. He was the author, it is said, of 250 volumes and dissertations, the principal of which, Novum Testamentum ad codicem Vindobonensem Grace expressum, two volumes 8vo, has been critically examined by bishop Marsh, in his preface to Michaelis. Among his other works, are a Ger- man Translation of Harwood’s Classics, 8vo.

tary, roundish, pointed. Essential Characters:: CAL. in five deep segments, cartilaginous : COR. none : STAM. partly imperfect, inserted into a membranous ring, with intermediate teeth : an- thers single-

celled : STIG. capitate : capsule kid- ney-shaped, of one cell, without valves : SEED solitary. The species are : 1. A. sessilis, sessile- flowered alternanthera. 2. A. denticula, or toothed A. 3. A. nodiora, or knotty-flowered. 4. A. angustifolia, or narrow-leaved. 5. A. nana,

Vienna, 1778 : Lysias ; Ciceronis Quzest. Acad. ,□□□. dwarf> 6- A achyrantha, in the Kew garden, Tusc. ; Lucretius ; Homer s Iliad, with various where is also 7 A poiygoinoides, or pericaria readings from the MSS. in the Imperial Library ; - and Homer's Odyssey, &c. with various read- ings from the Palatine library, 8vo. 1785-94. □□□ 2. Some of Plato's Dialogues, 8vo. 1784. 3. Thucydides, 8vo. 1785. 4. The Greek Chronicle of George Phranza, or Phranzes, not before printed : Vienna, fol. 1796, &c. 5. Notices, in German, of the Literary History of Georgia.

ALTERANTS, or alterative medicines, such as

correct the bad qualities of the blood, and other to change regularly ; to vary according to a pre- humours, without occasioning any sensible scribed rule.

leaved A. ALTERNATE, v. n.&tadj. ALTERN', ALTER'NALLY, ALTERNATELY, ALTERNATION, ALTERNATIVE, n. &adj. ALTERNATIVELY, ALTERN I'TY.

Alternatus, from alter other. To follow ano- ther in turn ; to act in succes- sion, after an interval filled up by another ;

evacuation.

ALTERATION, in alchemy, denotes the conver- sion of one body into another by similitude.

ALTERATION OF QUANTITIES, amongst alge- braists, denotes'what we otherwise call variations, or permutations.

ALTERCATION, n. Lat. Altercatio, from alter. The alternate expression of difference of opinion

between two persons, in which the de- bate is somewhat acrimoniously conducted.

be parties wer so felle altercand on ilk side,

bat non be soth couth telle, whedir pes or werre

suld tide, Bot God bat is of myght, and may help whan he

wille. R. Brunne, p. 314.

That iche of thame by coursis alterant Sa oft gais and returnis that gait.

Douglas, b. vi. p. 167.

And God made two great lights, great for their use To man ; the greater to have rule by day, The less by night, ultern. Milton.

The princessMelesinda, bath'd in tears, And toss'd alternately with hopes and fears, Would learn from you the fortunes of her lord.

Dry den.

Unhappy man ? whom sorrow thus and rage To different ills alternately engage. Prior

The rays of light are, by some cause or other, at ternately disposed to be reflected or refracted for many vicissitudes. Newton.

Friendship consists properly in mutual offices,

Bv this hot pursuit of lower controversies amongst and a generous strife in alternate acts of kindness.

men professing religion, and agreeing in the principal foundations thereof, they conceive hope, that, about the higher principles themselves, time will cause altercation to grow. Hooker.

Their whole life was little else than a perpetual rangling and altercation; and that, many times, rather for vi'Aory and ostentation of wit, than a

sober and serious search of truth.

Hakewili on Providence.

South.

Hear how Timotheus' various lays surprise, And bid alternate passions fall and rise ! While, at each change, the son of Lybian Jove Now burns with glory, and then melts with love.

Pope.

A Iternately transported and alarm'd ! What can preserve my life, or what destroy.

Fwy.

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ALTERNATE, in heraldry, is used in respect to the situation of the quarters. Thus the first and fourth quarters, and the second and third, are usually of the same nature, and are called alter- nate quarters.

ALTERNATE ANGLES, in geometry, are the internal angles made by a line cutting two pa- rallels, and lying on the opposite sides of the cutting line; the one below the first parallel, and the other above the second : thus,

A/h

a/c

in which a and b, c and d, are alternate angles, and respectives, equal to each other.

ALTERNATE LEAVES, in botany, when the leaves or branches of plants arise higher on op- posite sides alternately.

ALTERNATE RATIO OR PROPORTION, is where the antecedent of one ratio is to its consequent as the antecedent of another to its consequent ; the very same ratio, in this case, holding alter- nately in respect of the antecedents to each other, and the consequents to each other. Thus, if A : B : : C : D ; then, alternately, A : C : : B : D.

ALTERNATION in numbers, is used to express the different changes, or alterations of orders, in any number of things proposed. This is also called permutation, &c., and is easily found by a continual multiplication of all the numbers, be- ginning at unity. Thus, if it be required to know how many changes or alternations can be rung on six bells, multiply the numbers 1, 2, 3, 4, 5, 6, continually into one another ; and the last product gives the number of changes.

ALTERNATIVEMENT, in music, to play or sing two airs by turns, several times over.

ALTERN BASE, in trigonometry, a term used in contradistinction to the base. Thus in oblique triangles, the true base is either the sum of the sides, and then the difference of the sides is called the altern base; or the true base is the difference of the sides, and then the sum of the sides is called the altern base,

ALTHAEA, in botany, marsh-mallow, a genus of the polyandria order, belonging to the monadelphia class of plants ; and, in the natural method, ranking under the thirty-seventh order, Columniferae. The characters are : CAL. a double perianthium, the exterior one nine cleft: COR. consists of five petals, coalesced at the base: STAM. numerous filaments inserted into the corolla ; the antherae are kidney shaped : FIST. an orbicular germen; a short cylindrical stylus; and numerous bristly stigmata, the length of the stylus : PER. numerous arillae : SEEDS solitary, and kidney-shaped. There are three species, viz. 1. A. cannabini, or shrubby marsh-mallow, is a native of Hungary and Istria. 2. A. Hirsuta, or hairy marsh-mallow, a native of Spain

and Portugal. 3. A. Vulgaris, or common marsh- mallow, a native of Britain, with a perennial root, and an annual stalk, which perishes every autumn.

AI.THEA FROTEX. See HIBISCUS.

ALTHJEA, in medicine. The Althaea vulgaris, is the only species used. The whole plant, especially the root, abounds with a mild muci- lage. It has the general virtues of an emollient: and proves serviceable in a thin acrimonious state of the juices, and where the natural mucus of the intestines is abraded. The root is em- ployed externally for softening and maturating hard tumours ; chewed, it is said to give ease in difficult dentition of children.

ALTH^A is also applied, in pharmacy, to an officinal syrup, decoction, and ointment, pr* pared from the althaea vulgaris. It was once ai> ingredient in the compound powder of gu u tragacanth, and the oil and plaster of mucilages.

ALTH.EA, in mythology, the daughter of Thes- tius, wife of (Eneus, king of Calydon, and mother of Meleager.

ALTHEIM, a market town of Wirtemberg, in the district of the Danube ; also a market town of Austria, in the bailiwick of Braunau, consisting of 130 large wooden houses.

ALTHORP PORT, is in E. long. 223►►. 55'. and N. lat. 88►►. 11'., on the north-west coast of King George the Third's archipelago, between Point Lucan and Point Lavinia. Several islands and rocky islets are at its entrance ; but on each side of them there is a spacious navigable chan- nel. The surrounding country is composed of rocky eminences, covered with forests, consisting in general of pine trees.

ALTHOUGH', conj. All ; though : though is the imperative Dap or Daps of the Ang. Sax. verb Dapan, to allow, permit, grant, yield ; Tooke. Albeit, allowed, permitted, admitted.

Take any brid and put it in a cage, And do all thin contente and thy corage, To foster it tendrely with mete and drinke Of all deintes that thou canst bethinke, And kepe it all so clenely as thou may Although the cage of gold be never so gay, Yet had this brid by twenty thousand fold Lever in a forest that is wide and cold, Gon eten worms and swiche wretchedness : For ever this brid will don his busineese To escape out of this cage whan that he may, His libertee the bird desireth ay.

Chaucer Manciple's Tale.

We all know, that many things are believed, al- though they be intricate, obscure, and dark ; although they exceed the reach and capacity of our wits ; yea, although in this world they be no way possible to he understood. Hooker.

Me the gold of France did not seduce, Although I did admit it as a motive The sooner to effect what I intended.

Shakspeare.

The stress must be laid upon a majority ; without which the laws would be of little weight, although they be good additional securities. Swift.

ALTICA, in entomology, a division of the genus cantharis, according to Fabricius, con- sisting of the insects of that tribe, which are of an oblong shape, and have the lip bifid.

ALTICOZZI (Loreneo), a Jesuit of Corton?., who. died at Rome, 1777, was the author of several polemical treatises, especially one in reply to Beausobre on Manicheeism ; but his principal work is the Sum of St. Augustine, six

quarto volumes, containing an able account of the rise ond progress of the Pelagian heresy.

ALT I MAR, in mineralogy, burnt copper.

ALTIN, ALTAY, or TEI.ETZK, a lake in Si- beria, from whence issues the river Ob, or Oby. By the Kalmucks it is called Altinor. It is said to be near ninety miles long and fifty broad, with a rocky bottom. The north part of it is some- times frozen so hard as to be passable on foot, but the southern part is never covered with ice. It is in the government of Kolhyvane.

ALTIN, in commerce, a coin both of silver and copper in Russia, worth three copecs, one hundred of which make a ruble, or about four shillings and sixpence sterling. The silver altins under Peter I. had on one side the eagle, and on the other, with the date of the year, the word Altinik. They have been latterly disused.

ALTINCAR, or ALTINEAR, among mineralists, a species of factitious salt, used in the fusion and purification of metals. It is a sort of flux powder. Divers ways of preparing it are given by Li- bavius.

ALTING (Henry), professor of divinity at Heidelberg and Groningen, was born at Emden in 1583, und chosen in 1605 preceptor to the three young counts of Nassau, Solms, and Izen- berg. After various difficulties he settled at Groningen, where he continued till his death, August 25, 1644. His works are, 1. Notae in Decadem Problematum Joannis Behm de Glo- yioso Dei et Beatorum Ccelo, Heidelberg, 1618. 2. Loci Communes, 3 vols. Amst. 1646. 3. Exegesis Augustanae Confessionis, Amst. 1647. 4. Methodus Theologiae, 4to. Amst. 1654. 5. Historia Ecclesiastica Palatinae, 4to. Amst. 1644. 6. Explicatio Catacheseos Palatinae, 4to. Amst.

1646.

AI.TING (James,) son of the former, was born at Heidelberg in 1618, and travelled into Eng- land in 1660, where he was ordained by the learned Dr. Prideaux, bishop of Worcester. He was afterwards professor at Groningen, and died August 20, 1679. He

wrote, 1. Dissertations on Oriential antiquities. 2. Commentaries on many Books of the Bible. 3. A Syrio-Chaldaic Grammar. 4. A treatise on Hebrew Punctuation ; making together 5. vols. fol. Amst. 1687. There were other learned members of this family, whom our limits will not allow us to notice.

ALTl'NGAT, in mineralogy, rust of copper.

ALTISONANT, adj. Lat. altus, high ; sono, to sound. High-sounding.

For it stood greatly with reason, seeing his lord and master changed his estate and vocation, that he should alter likewise his denomination, and get a new one, that were famous and altisonant as becomed the new order and exercises which he now professed.

S\elton's Trans. Don Quixote, Ed. 1652.

ALTISSIMO, in music, or altiss, an Italian epithet for notes above F in alt.

ALTISTA, in music, an Italian name for the vocal performer who takes the alto primo part.

ALTITH, in botany, a name given to the plant of which the asafetida of the shops is the gum.

ALTITUDE, n. Altitudo, Lat. Height.

Ten masts attach'd make not the altitude, Which thou hast perpendicularly fall'n. Shaksp.

She shines above, we know, hut in whaf piece, How near the throne, and heav'n's imperial face, By our weak opticks is but vainly guess'd ; Distance and altitude conceal the rest.

ALTITUDE, in geometry, is the third dimen ??? sion of a body considered with respect to its ele- vation above the ground ; and is otherwise callea its height or depth : the former when measurea from bottom to top, the latter when measured from top to bottom. The altitude of a figure is the distance of its vertex from the base, or the length of a

perpendicular let fall from the for- mer to the latter, as B. A. in plate I. fig. 1. MIS- CELLANEOUS.

The altitude of a terrestrial object is the height of its vertex above some horizontal plane as- sumed as a base in physical geography. The altitudes of mountains are measured from the general level of the ocean ; that is, the altitude of a mountain is the difference between the mean terrestrial radius and the distance of the vertex of the mountain, from the centre of the earth. Altitudes are distinguished into accessi- ble and inaccessible. The accessible altitude of an object is that to whose base there is access to measure the nearest distance to it on the ground. The inaccessible altitude of an object is that to whose base there is not free access, by which a distance can be measured to it, by rea- son of some impediment, as water, and the like. If an altitude cannot be measured by stretching a string from top to bottom, which is the direct and most accurate way, some other expedient is resorted to, by measuring some other line or distance, which may serve as a basis, in con- junction with some angles, or other proportional lines, to compute, geometrically, the altitude of the object sought. There are various ways of measuring altitudes, or depdis, by means of different instruments, and by shadows, or re- flected images, on optical principles, &c. The instruments mostly employed in measuring alti- tudes, are the quadrant, theodolite, geometrical square, line of shadows, &c. There are also various ways of computing the altitude in num- bers, from the measurements taken as above, by geometrical construction, trigonometrical calcu- lation, or by simple numerical computation, from the property of parallel lines, &c.

We exhibit the following problems, as the most familiar illustrations of the above theoretical remarks.

PROBLEM I.

To measure the altitudes of objects by means of

their shadows.

This is one of the most ancient methods of measuring altitudes, of which we have any re- cord. It is said to have been first employed by Thales, in measuring the heights of the pyramids in Egypt : with this view he erected a staff, and at a certain time measured the length of its shadow; at the same time the length of the shadow of the pyramid was also ascertained : then knowing the length of the staff, he made the height of the pyramid to bear the same pro- portion to the length of the staff, as the shadow of the former to the shadow of the latter. This method may be more explicitly illustrated : At any time when the sun shines, erect a staff a b, fig. 2, perpendicularly at ►►, and measure the ^

length of its shadow ; at the same time cause the length of the shadow of the proposed object, AB fig. 2, to be also taken. Then, by similar tri- angles, as

L . r< A . a b X CA A ►►► c a ; a b \\ CA : ►►► AB

c a the altitude required.

If the altitude be inaccessible, as in fig. 3, but still such that the difference of the lengths of its shadow, taken at two different times, can be ascertained, the altitude may be found nearly the same as -in the last example.

Make a b ►►► a, a c ir b, fig. 2, and the un- known length of the shadow ofAB, viz.AC~:r; let the second shadow of the rod, a c' ►►► b', the second shadow of the object, AC' ~ x + d, and the height AB of the object ~ y : then, by the preceding proportion,

1st operation, b * a ', \ x ', y, 2d operation, b' ; a ; ; x+d '. y; whence, by subtraction,

b 02 b’ ‘, a ; *. d I y; that is,

AT> fl d AB ◆◆◆ y ◆◆◆ , ◆◆◆

b vi b’ ‘ the altitude required.

PROBLEM II. To measure altitudes by means of staves.

Let AB (fig. 5 . plate I. MISCELLANEOUS) re- present an object, of whicn the altitude is re quired. Being provided with two rods, or staves, of different lengths, plant the longest of them, as CF, at a certain measured distance from the base of the object ; then, at a further distance, plant the second or shortest staff ED, in such a man- ner that the tops of the two, E and F, may be in a line with the top of the tower B.

This being done, measure the distance ID, as also the length ED, and we shall have, by simi- lar triangles, as

ID : ED : : IA : AB ;

that is, by multiplying the second and third terms together, and dividing by the first, we shall have the altitude of the tower AB, or AB_EDxJ[A

ID ◆◆◆

For example, suppose IA ◆◆◆ 100 feet, ID ◆◆◆ 8 feet, and ED n 4 feet, then

AB_ 4X100, 5()feet>

the altitude of the tower.

In some cases where the base of the object is inaccessible, two operations similar to the one above-mentioned become requisite. For fami- liarizing this mode of calculation, see fig. 5, plate I. MISCELLANEOUS.

Let ID ◆◆◆ a, ED rz d, also the unknown dis- tance IA =: x, and the required altitude of the object ◆◆◆ y ; then in the second operation, in which

both the staves must be replanted, make the second distance ID ••• a', and the second unknown distance I'A ~ x •• c,c being the dis- tance between the two stations of the shorter staff ED, E'D'; the lengths of the staves still re- maining the same. Now, from the preceding proportion we shall have (by substituting foi ID, ED, IA, and AB, the above letters), 1st operation, a '. d '.', x ', y;

2d operation, a' ', d '. *. x •• c '. y ••• whence, by subtraction,

(a' tn a) ; d '. '. c '. y ; consequently,

j/ = AB = - dc

a vi a '

PROBLEM III. To measure an altitude by means of a geometri'

cal square.

The geometrical square is nothing mo-e than a square board or frame, having one of its sides divided into equal parts ; (figure of the instru- ment, fig. 6, plate I. MISCELLANEOUS), a plumb- line being then suspended at one of its angles, falls perpendicularly, and marks off a certain number of those divisions, from which the height of the object may be determined, as follows: ••• Having fixed the instrument at any place, C. as fig. 7. plate I. MISCELLANEOUS, turn the square about the centre of motion if it be mounted on a stand, or otherwise adjust it by holding it in your hands, till the top of the object, B, is per- ceived in the direction of the sights, or of the side of the square, and note the number of divi- sions, F /*, cut off by the plumb-line ; then hav- ing measured the distance, CA, we have, by similar triangles,

EF : F/ : : CA : BH,

that is BH

EF

and, consequently,

AB ••• CAxF/_|_ DC, EF

the altitude sought.

In the case of an inaccessible object, two observations must be made similar to that above ; in which the only variable lines will be Ff, CA. Let, therefore, the side of the square ~ s, and the variable part F/ ••• a, in the first observation, and a' in the second; also put the unknown distance ••• #, in the first case, and x -••_ c in the second ; so that c will be the distance of the observer's two stations, and make the required height of the object ~y. Then, on the same principles as those above,

1st operation, s '. a ' '. x '. y ;

2d operation, s '. a' '. '. x••c '. y; whence by equality,

a ~ a' ; * x •• c I x, and a c/2 a' ; \ d \ c\ x ,

therefore,

x =

a vi a'

and by the first equation, ax

a a' c

the altitude required.

PROBLEM IV. To measure the altitude of objects by means of

optical reflection.

Place a mirror, or other reflecting surface horizontally in the plane of the figures' base, as in fig. 8. I. (in which case we suppose the object

to be accessible), and measure the distance CA. Now, retire back in the direction AC to D, till the eye observes the top, of the object exactly in the centre of the mir-

ror, which, for tne greater degree of accuracy, may be marked by a line across it. Then, hav- ing measured the distance DC, and ascertained the height of the eye of the observer, it will be, from the known laws of reflection, viz. the equality of the angles of incidence and reflection, as

DC.-DE:: CA:DEDXCCA-AB,

the altitude of the object required.

When the object is inaccessible and CA cannot be measured, two such operations as that above must be employed, as in fig 9, I. Thus, let ED❓❓❓ a, DC❓❓❓ d, and the unknown distance CAnz; also, let

1st operation, d \ a ‘, ; x ‘. y ;

2d operation, d’ ‘, a’. ‘. x❓❓ c \ y;t whence, by subtraction,

d cc

ac’ ❓❓❓

the altitude sought.

All these problems, for inaccessible objects, will give the distance of the objects as well as their altitude. Thus,

Prob. I. The distance

❓❓❓ ,

a a (b vi b)

The distance

d d (a c►► a)-

Prob. II.

Prob. III. The distance CA=:m:

Prob. IV. The distance

PA_

(a c►► a')'

a a (d t/j d').

Other methods of taking altitudes may be seen in Dr. Hutton's Mensuration, Bonnycastle's Trigonometry, &c.

The method of taking considerable terrestrial altitudes, of which those of mountains are the greatest, by means of the barometer, is very easy and expeditious. It is done by observing, on the top of the mountain, how much the mercury has fallen below what it was at the foot of the mountain. See BAROMETER.

ALTITUDE, in astronomy, is the arch of a ver- tical circle, measuring the height of the sun, moon, star, or other celestial object, above the horizon.

This altitude may be either true or apparent. The apparent altitude is that which appears by sensible observations. The true altitude is that which results by correcting the apparent, on account of refraction and parallax.

The quantity of the refraction is different at different altitudes ; and the quantity of the pa- rallax is different according to the distance of the different luminaries : in the fixed stars this is too small to be observed ; in the sun it is only

about 8J seconds; but in the moon, at a mean proportion, it is about 58 minutes.

The altitude of a celestial object may be ac

curately determined, by measuring the arc of an oblique great circle intercepted between the star and the horizon, and the inclination of the same great circle to the horizon. This may be put in practice by means of the equatorial, thus : let the sine of the estimated altitude of the object be s, elevate the equatorial circle above the horizon to an angle, the sine of which??? /s, rad.1. The declination circle being set to 0, direct the line of collimation to the star, by the equatorial and azimuth circles moved in their own planes ; observe the arc of the equa- torial circle intercepted between the index and VI ; if the sine of this arc??? />, the sine of the observed altitude will be equal to p/s, radius being 1. This indirect method is, in general, less exposed to errors than the direct method in about the proportion of 1 to 7. See Atwood's Lectures, p. 198, 227.

THE MERIDIAN ALTITUDE OF THE SUN, OR ANY CELESTIAL OBJECT, is an arch of the meri- dian intercepted between the horizon and the centre of the object upon the meridian. The altitude of a celestial body is greatest when it comes to the meridian of any place (the poles of the earth excepted, for there the altitude of a fixed body is subject to no variation) ; and the altitude of any star which sets not, is least, and the depression of any star which does set is greatest, when in the opposite part of the me- ridian.

ALTITUDE OF THE POLE is an arch of the meridian intercepted between the horizon and the pole : it is equal to the latitude of the place.

ALTITUDE OF THE EQUINOCTIAL is the ele- vation of that circle above the horizon, and is always equal to the complement of the latitude.

REFRACTION OF ALTITUDE is an arch of a vertical circle, whereby the altitude of a heavenly body is increased by refraction.

PARALLAX OF ALTITUDE, is an arch of a ver- tical circle, by which the true altitude, observed at the centre of the earth, exceeds that which is observed on the surface ; or the difference be- tween the ((

IM } and (f IK of alti- ^l(tude there ; and it is equal to the angle I ((L, formed at the moon, or other body,and subtend- ed by the radius I L of the earth.

The ALTITUDE of the mercury, in the barome- ter, marked by degrees on the face of that instru- ment, is the chief object of its construction. The mean altitude of the mercury at London for every day in several years, is about 29.87 inches.

ALTITUDE, in astrology, denotes the second of the five essential dignities, which the planets ac- quire in virtue of the signs they are found in. In this sense, altitude is otherwise called exaltation.

ALTITUDE INSTRUMENT, or equal altitude in- strument, is that used to observe a celestial ob- ject when it has the same altitude on the east and west sides of the meridian See ASTRONOMY

ALTITUDE, MERIDIAN. The meridian being a vertical circle ; a meridian altitude, that is, the altitude of a point in the meridian, is an arch o' the meridian intercepted between it and the ho- rizon. See ASTRONOMY.

ALTITUDE OF MOTION, the measure of anymo- tion, reckoned according to the line of direction,

ALTITUDE OF THE EYE, in perspective, is a right line let fall from the eye, perpendicular to the geometrical plane

ALTIVAIG, an island on the coast of the pa- rish of Kilmuir, in the isle of Sky, with a good harbour.

ALTKIRCH, or ALTKIRK, a town and castle of France,

in the department of the Upper Rhine, the chief town of an arrondissement on the river Ille, 6 miles south-west of Michausen.

ALTMANN (John George), a Swiss historian and divine, was born in 1697, and died in 1758, curate of Inns, and professor of moral philoso- phy and Greek at Berne. He wrote, 1 . Tempe Helvetica, 6 vols. 8vo. 1735-43. 2. Versu- cheiner Historisch-und Physischen Beschreibung der Helvetischen Eisberg, 8vo. Zurich, 1751. 3. Meletemata Philologica Critica, quibus Diffi- cilioribus N. Test. Locis ex Antiquitate Lux affunditur, 3 vols. 4to. 1753. 4. Principia Ethica ex Monitis Legis Naturae et Prreceptis Religionis Christianae deducta, 2 vols. 8vo. Tigur. 1754.

ALTMANNSTEIN, a market-town of Bava- ria, in the circle of the Regen, fourteen miles from Ingolstadt.

ALTMARK, a division of the Mark of Bran- denburg, bounded on the east by the Elbe, Magdeburg, and the Triegnitz ; on the south by Magdeburgh, and on the west and north by Brunswick- Lunenburg. It contains, on an extent of 1 670 square miles, thirteen towns, six royal bailiwicks, twenty-seven manors, 494 villages, 16,938 houses, and 98,305 inhabitants.

ALTMULL, a river of Germany, which rises in Franconia, runs south-east by Anspach, then turns east by Pappenheim and Aichcst, and at last falls into the Danube, at Kelheim, 12 miles above Ratisbon.

ALTO, high, in music, as alto viola, the tenor violin, in opposition to the bass viol, to which in- strument or violoncello, the tenor strings are tuned octaves as Cc. G. D‘1. A”. The following is the complete scale on the tenor.

, ^1

0^

2d String. 1st String.

ALTO et BASSO, or in ALTO, and in BASSO, in law, signifies the absolute reference of all differences, small and great, high and low, to some arbitrators or indifferent persons. The form of submission is in Latin, pateat universis, &c. signifying ' Know all men by these presents, that A B. of C. and D E. of F. have placed them- selves in Alto et Basso under the arbitration of two, three, or more men ; viz. respecting a certain complaint now depending in court between them.'

ALTO CONCERTANTE, the tenor of the little chorus.

ALTO TENORE, in music, the upper or coun- ter-tenor part in music of several parts. Alto cliff', the cliff placed on the third line of the stave. 𝄞𝄞𝄞 Alto concertante, the tenor of the little chorus which sings throughout. 𝄞𝄞𝄞 Alto primo, the first or upper ulto, in distinction from the 𝄞𝄞𝄞 Alto secondo, or lower alto. 𝄞𝄞𝄞 Alto ripieno, the tenor of the great chorus which performs in the full parts. 𝄞𝄞𝄞 Alto viola, the ssnall teuor of the violin.

ALTO RELIEVO, in sculpture, a representation of figures and other objects against a flat surface or back ground, and differs from basso relievo only in the work being much more relieved and brought forward.

ALTOBELE, a lofty island of a sugar-loaf shape, near the north of Hispaniola, long. 71𝄞𝄞. 18'. W. lat. 17𝄞𝄞. 38'. N.

ALTOGETHER, adv. All; to; gather. See GATHER. All collected, united, conjoined. Hence, wholly, unitedly, completely.

It is in vain to speak of planting laws, and plot- ing policy, till the people be altogether subdued.

Spenser's State of Ireland.

We find not in the world any people that hath lived altogether without religion. Hooker.

*If death and danger are tilings that really cannot be endured, no man could ever be obliged to suffer for his conscience, or to die for his religion ; it being altogether as absurd to imagine a man obliged to suf fer, as to do impossibilities. Soutf**

I do not altogether disapprove of the manner of in- terweaving texts of scripture through the style of youi sermon. Swift.

ALTO'MUNSTER, a market town in the district of Aichart Bavaria, 20 miles north-west of Munich .

ALTON, a parish and market town in the hundred of that name, Hants, ten miles south- west from Alresford, and from London forty- seven miles west-south-west, containing 2500 inhabitants. The church, though small, is neat ; and the town is composed of three streets, standing on the river Wye. Manufactures of serges and of druggets are carried on here to a great extent ; and white yarn and worsted ar- ticles of superior descriptions are also manu- factured here. The town is almost surrounded by hop plantations. It contains a presbyterian and a quaker's meeting, and a famous free-school. Market day, Saturday.

ALTONA, or ALTENA, a large city, two miles west of Hamburgh, on the Elbe, in the lordship of Pinneberg, and belonging to the crown of Denmark. It was originally a village, but being united, with the rest of Pinneberg, in 1640, to the kingdom of Denmark, it so increased in size as to receive, in 1664, the rights and pri- vileges of a city. The present number of houses is about 3120, and the inhabitants at least 30,000, partly Lutheran, partly Calvinist, and partly Catholic. Multitudes of Jews are also to be met with, who pay yearly for their protection the sum of 2000 ducats. The commerce in all branches is considerable. The number of vessels belonging to the harbour is upwards of 100 ; and the most common destinations, exclusive of the ports in

the Baltic and North seas, are the Me- diterranean, and the various fisheries for herring,

cod, whales, and seals. Ship-building is an im- portant employment here, and there are also manufactures of velvet, silk, stuffs, calico, stock- ings, leather, gloves, tobacco, vinegar, starch, wax, and looking-glasses, with sugar refineries and distilleries. The principal public establish- ments are : an academy founded by Ckristian VII. a library, a house of correction, and an orphan- house. In 1713Altonawas, with the exception of 100 houses, burned to the ground by the Swedish general Steinbock. It is now beautifully rebuilt.

ALTORF, in Switzerland. See ALTDORF.

ALTORF, a town of Germany, in the circle of the Rezat, Bavaria. It contains 23 public buildings, 223 dwelling houses, and (in 1803) 2070 inhabitants, of whom 220 belonged to the now-suppressed university. The culture of hops is extensively pursued by the inhabitants of this town and neighbourhood ; and brewing is like- wise an important branch of their industry. 12 miles east-south-east of Nuremberg, 34 east- north-east of Anspach, Lon. 11►►. 20’. E. lat. 49►►. 23’. N.

ALTORF, a market town and upper bailiwick of Suabia, in the kingdom of Wirtemberg, district of the lake of Constance. It contains 100 inha- bitants. 5 miles north-east of Wirtemberg.

ALTORF, a market town of Hungary, in the county of Zyps, 18 miles north of Leutch.

ALTRANSTADT, a town in Saxony, famous for the treaty between Charles XII. king of Sweden and Augustus elector of Saxony, in 1 706, wherein the latter resigned the kingdom of Poland.

ALTRAUCH, a market town of Moravia, in the circle of

Iglau, south of the town of Iglau.

ALTRINGHAM, or ALTKINCHAM, a market town of Chester, on the canal from Runcorn to Man- chester. It has several manufactories of yarn, worsted, and cotton, an annual fair and a weekly market. Population 2032. Distant from Knuts- ford 7 miles, and 179 from London.

ALTUN KUPRI, or ALTOUN KOPRI, the Golden Bridge, or many bridges, a town of Asiatic Turkey, in the pachalic of Bagdad, situated on the north bank of the Little Zab. A large Turkish garrison is always kept here. Popula- tion 2000. Distant about 210 miles from Bag- dad, ninety south-east of Mosul. Long. 43□□. 20'. E. lat. 35□□. 45'. N.

ALTZEY, a town and upper bailiwick in the grand duchy of Hesse-Darmstadt, Germany, lying on the Selsach, and formerly belonging to the palatinate of the Rhine. It contains about 3051 inhabitants, and is twenty-three miles north-west of Worms.

ALVA (Don Ferdinando Alvares de Toledo, duke of Alva), was born in 1508, of an illustri-

long after appointed the emperor's vicar-genera! in Italy ; but instead of driving the French from Piedmont, he was obliged to conclude the cam- paign with the surrender of part of it ; and m the following year, by the resignation of Charles in favour of his son, was transferred to a new master. His military talents now appeared, united with an unrelenting temper, and as much fero- cious cruelty and oppression as ever stained the page of history. After the general peace esta- blished in Europe in 1559, the king of Spain found leisure to attempt a more complete reduc- tion of his revolted provinces of the Netherlands, and determined to employ Alva to compel future submission, and to punish past revolt. He en- tered Brussels in August 1567, and his arrival spread consternation and dtsmay over all the provinces. The Prince of Orange, with many thousands of less exalted character, left the country, and happy would it have been for many more had they

followed their example. Counts Egrnont and Horn, two of the most distinguished patriots, were immediately imprisoned, tried, and executed. In a short time the duchess of Parma, the regent, obtained leave to quit her government, and Alva was thus left at liberty to act without responsibility or control. He had not only allotted to him the command of the army, but the presidency of the council of state, of justice, and of the finances. To the protes tants he allowed a month for leaving the country , but die blood-hounds of the inquisition were secretly set upon them, and ordered to seize their prey. A council of twelve, called the council of tumults, of which Alva constituted himself president, assisted the court of inquisition From his troops and his councils the people fled in consternation, and 20,000 of them were in a short time dispersed over France, England, and Germany. In a few months nearly 2000 persons had suffered by the hands of the executioner. The details of the proceedings by which these unfortunate victims of persecution were detected and secured ; the atrocious injustice which met them when dragged before the tribunal of ven- geance ; and the tortures and agonies which ingenious cruelty invented for their execution, were never exceeded, if equalled, by any other efforts of the holy office. To have once fre- quented a protestant meeting was a sufficient proof of guilt,which could not be atoned^orby any subsequent abjuration of error ; and the slightest punishment inflicted was hanging or drowning. The members of the bloody council itself at last began to be shocked at their own work, and se- veral of them sought their dismission from office. Out of the twelve there seldom assembled more than three or four at a time of more hardened hearts or more flaming zeal. The citizens of Antwerp ventured to petition Alva to abate the ††† rigour of persecution ; but their request was received with scorn by the haughty bigot. Some of the catholic nobility presented remonstrances to the king against the cruelty of their governor ; but he was equally cruel and bigoted. Even the exhortations of the head of the church to moderation were disregarded, and the

inquisition continued the work of blood with insatiable fury. The people were finally driven

to seek relief in open rebellion to an authority which they would otherwise have respected, and found a leader happily in the prince of Orange. He had been summoned to appear before Alva when he entered the Netherlands ; but by his prudent suspicion of the designs of that perfi- dious chief saved himself from the fate of some of his more unsuspecting companions. He now prepared to oppose him in the field, and published a manifesto, in which he declared the change that had taken place in his religious sentiments, and called upon the protestants to join him in the overthrow of superstition and tyranny. He was, however, unsuccessful in his first attempts, and obliged to disband his army. Many of the per- secuted, in the mean time, came to England, where they enjoyed the freedom of religious worship, and the benefits of political protection, while they enriched their new country with the introduction of various manufactures formerly unknown to its inhabitants. The success of Alva over the prince of Orange, and the congra- tulations of the Pope for his efforts to suppress heresy, now inspired him with increased arro- gance, and led to those absurdities of wanton despotism which produced the subsequent diffi- culties of his administration, and eventually established the republic of Holland. Heedless of the people, who had hitherto been taxed by their native princes, he determined to levy con- tributions by his own authority, and to 'increase the impositions to such an extent as not only to provide for his present exigencies but lay up a fund for the future. His religious persecutions affected only a part of the states. This arbi- trary proceeding threatened the whole, and united them all in opposition to his authority. They assembled and remonstrated. The

prince of Orange, seeing the general discontent, again pre- pared for invasion ; and those who had been driven into exile by persecution, fitted out armed ships, and visited the coasts of their country as enemies and pirates. They made prizes of all the Spanish ships they met with on the English or Flemish coasts. The revolt in North Holland became general. A meeting of the states, held at Dort, determined to acknowledge the prince of Orange as their governor and commander of their forces by sea and land. At last the Spanish troops mutinied, and the fleet of the governor was defeated by the rebel Zealand ers. Upon this Alva solicited leave to retire ; and Philip, seeing the little hopes of reducing the rebels under such an unpopular chief, granted his re- quest. He left the Netherlands accordingly in 1573, and retired to his estates until Philip again commanded the assistance of his sword to reduce the kingdom of Portugal. At the ad- vanced age of seventyhe accomplished this service, and did not long survive it. He died in 1582, leaving few equals in this career of infamy in modern times. See Robertsons Charles V. Watson's Philip II. &c.

ALVA, a town and parish in Stirlingshire, on the river Deveron, four miles north of Alloa ; containing 200 houses and 1150 inhabitants. It haj been long distinguished for the variety of minerals with which it abounds. Some time since, a valuable vein of silver-ore was wrought

here ; and considerable quantities of native mal- leable silver have been dug. Cobalt, arsenic, lead, copper, and iron, have also been discovered at the foot of the hills. Extensive seams of coal are now working. The town is seven mile* north-east of Stirling, at the foot of the Ochil- hills. The manufacture of serges and Scotch blankets has been carried on here for more than a century.

ALVA UE TORMES, a considerable towu in Spain, in the province of Leon, with strong castle formerly belonging to the famous duke of Alva. It is seated on the north bank o the river Tormes, twelve miles

south-east of Sa- lamanca, and was frequently occupied by the British in the peninsular war of 1812.

ALVAR, a district of the province of Agra, Hindostan, on the south-west of Delhi, situated between the twenty-seventh and twenty-ninth degrees of latitude. It has been called Mewat by the Mahommedan historians. In the Ayeen Acberry it is said to be capable of furnishing 6514 cavalry, and 42,020 infantry to the state. This district is in a remarkably uncultivated state. In modern times it has yielded a barba- rous race of native soldiers, who were occasionally subsidized by the various warlike chiefs of the last century, for the purpose of spreading the greater devastation in their marches. Its facili- ties for agriculture, however, are not few. It has the west side of the Jumna for its eastern boundary, to an extent of about ninety miles, and stretches westward about 130 miles from that river. At present it is subject to the Ma- cherry Rajah, who has fixed his capital at the city of this name, and with whom a treaty of alliance and friendship was concluded by the British in 1803.

ALVAR, a city of Hindostan, in the province of Agra, the capital of the district of Alvar, and under the government of the Macherry Rajah. It is strongly fortified, and stands about seventy- seven miles south-south-west of Delhi, and eighty-four north- west of Agra, in N. lat. 27►►. 41'. and E. long. 76►►. 40'.

ALVARES, a town of Portuguese Estrema- dura. Inhabitants 1500.

ALVARID, or ALVARIUS, a judge among the Spanish Moors.

ALVARADO, an abundant river and town of Mexico, in the intendancy of Vera Cruz. The former has its rise in the lofty ridges of the Table Land, forty miles south-west of Guaxaca. It is joined by several other streams, which swell it to a large size, and near the town runs into the gulf of Mexico, about twelve

leagues south-south-east of Vera Cruz. Long. 96►►. 54'. W. lat. 18►►. 40'. N.

ALVARISTS, in ecclesiastical history, a branch of the Thomists, so called from their leader Alvarez, who maintained the efficacy ot divine grace, in distinction from the former, who maintained its sufficiency.

ALUCIT./E, in entomology, a subdivision of insects belonging to the genus of phalsena, and of the lepidoptera order, in the Linnsan system ; comprehending eight species.

ALUCO, or sacred owl, in ornithology, a species of the owl, or strix, with rusty head, black irides, and the primary wing-quills serrated at

me edges. It is the la hulotte of Buffon, the ulula of Briss. Gesn. and Aldr. the black owl ►►f Albin, and the brown owl of Pennant and Lewin. Its cry, a kind of howl, resembling that of wolves, furnished its name ulula, and the German huhu, or hoo-hoo. It is said to be considered as sacred by the Calmucks, for having contributed to preserve the life of their great monarch, Jenghis Khan.

ALUDELS, in chemistry, earthen tubes or vessels used in sublimations. They are without a bottom, and are fitted into one another as oc- casion may require. At the bottom of the furnace there is a pot holding the matter that is to be sublimed ; and at the top there is a head to re- ceive the flowers that sublime up.

ALVEARE, in conchology, a species of tro- chus with a plicated nodulose shell, striated transversely, and adorned with bands of con- catenated points, funnel-shaped umbilicus, and crenulated coluraella. Found in India; the shell is coloured with a mixture of green and white, pearly within.

ALVEARIUM, an alveary, or bee-hive, from alveus, a cavity ; in allusion to the alveoli, or cells in bee-hives. Some of the ancients use also tfie word alvearium for a bee-house, more usually called apiary.

ALVEARIUM, in anatomy, th►► bottom of the toncha, or hollow of the auricle, or outer ear. ►►► The alvearium auriculae is a cavity, terminating at the meatus auditorius, wherein that bitter yellowish excrement is collected, called cerumen, or ear-wax.

ALVEARIUM, in literature, is used figuratively for a collection.

ALVEOLARIS PROCESSUS, in anatomy, another name for the maxillaria superiora ossa.

ALVEOLI, among naturalists, those waxen cells in the combs of bees, wherein their honey is deposited.

ALVEOLI, in anatomy, those little sockets in the jaws, wherein the teeth are set. The alveoli are lined with a membrane of exquisite sense, which is wrapt about the roots of each tooth; from whence, and from the nerve, proceeds that pain called odontalgy, or tooth-ach. Of these alveoli there are usually sixteen in each jaw. Some writers speak of teeth growing without alveoli. Holler gives an instance of a person, whose teeth were of a piece with his jaws, without any insertion into alveoli.

ALVEOLUS, in natural history, a sea fossil of a conic figure, composed of a number of cells, like bee-hives, joined into each other, with a pipe of communication.

ALUESEN, in botany, the pucedanum, or hog's-fennel.

ALVEUS, a channel, Lat., in anatomy, the tumid lacteal branches arising from the recepta- culum chyli, under the diaphragm.

ALVEUS, in antiquity, a small vessel, or boat, tiade out of the trunk of a single tree, by boring or cutting it hollow. Such was that wherein Ro- mulus

and Remus are said to have been exposed. ALVIDUCA,fromalvus, the belly,and ducere, to draw ; a term used for purgative medicines. ALUM ; alumen, Lat. A kind of mineral

a sense of sweetness, accompanied with a consi- derable degree of astringency. We give the fol- lowing definition from a valuable and standard author : ‘ A massive mineral, of a blackish- brown colour, a dull lustre, an earthy and some- what slaty fracture, sectile, and rather soft. By Klaproth’s analysis it contains, charcoal 19.65, silica 40, alumina 16, oxide of iron 6.4, sulphur 2.84, sulphates of lime and potash each 1.5, sulphate of iron 1 .8, magnesia and muriate of potash 0.5, and water 10.75. Under the form of Alum- slate, it assumes two varieties; 1. Common. This mineral occurs both massive and in insulated balls of greyish-black colour, dull lus- tre, straight slaty fracture, tabular fragments, streak coloured like itself. Though soft it is not very brittle. Effloresces, acquiring the taste of alum. 2. Glossy Alum-slate, which is a massive mineral of a bluish- black colour. The rents display a variety of lively purple tints. It has a semi-metallic lustre in the fracture, which is straight, slaty, or undulating. There is a soft variety of it approaching in appearance to slate clay. By exposure to air its thickness is pro- digiously augmented by the formation of a saline efflorescence, which separates its thinnest plates. These afterwards exfoliate in brittle sections, causing entire disintegration.’ The ancient na- turalists allow of two sorts of alum, natural and factitious. The natural is found in the island of Milo, being a kind of whitish stone, very light, friable, and porous, and streaked with filaments resembling silver. England, Italy and Flanders, are the countries where alum is principally pro- duced; and the English roche-alum is made from a bluish mineral stone, in the hills of Yorkshire and Lancashire. Saccharine alum is a

composition of common alum with rose water and whites of eggs, boiled together to the con- sistence of a paste, and thus moulded at pleasure. As it cools, it grows hard as a stone. ††† Burnt alum, is alum calcined over the fire. ††† Plumose or plume alum is a sort of saline mineral stone, of various colours, most commonly white, bor- dering on green ; it rises in threads or fibres, resembling those of a feather ; whence its name from pluma, a feather. Chambers. ††† By long beating the white of an egg with a lump of alum, you may bring it, for the most part into white curds. Boyle.

Most of the alum to be met with is artificially prepared, though sometimes it is produced na- turally. This native alum is mixed with hete- rogeneous matters, or effloresces in various forms upon the ores during calcination. It rarely oc- curs in a crystallized state, though it is said to be thus met with in Egypt, Sardinia, Spain, Bo hernia, and other places. It is also found in the waters impregnated with fixed air, but very sel- dom in fountains or hot medicated waters. There are several kinds of alum to be met with; but these differ from one another only in being mixed with some salts which are not of die aluminous kind. The Roman alum has been considered as preferable to any other. It is usually met with in small chrystals, and has a reddish colour, most probably owing to a small quantity of calx of iron, which, however, does not in the least im- pair its qualities. The other kinds of alum con-

tain a portion either of vitriolated tartar or sal ammoniac, according to the nature of the alkali used in its preparation. Sir Torbean Bergman informs us, that the vegetable alkali, if pure, does not hurt the alum, though it be added in the pre- paration ; but that the volatile alkali, by adulte- rating it with a portion of vitriolic sal ammoniac, renders it unfit for some purposes. The alum made by adding a

portion of clay to the liquor, at the beginning of the boiling, he considers as equal if not superior to Roman alum. He in- forms us also, that a kind of alum some time ago began to be manufactured at Brunswick, which was equal in quality to the Roman alum.

Alum mines are said to have been first found in Italy, in 1460; and in the 16th century the art of alum making was begun in Germany and Spain, and a little before its conclusion works were established at Whitby in England, by Sir Thomas Chaloner, who had the honour of being excommunicated, by the reigning Pope, on that very account. King James I. by advice of his ministry, assumed the monopoly of it himself, and therefore prohibited the importation of foreign alum ; and in 1625 the importation of it was fur- ther prohibited by the proclamation of Charles I. ' The greater part of this salt is factitious, being extracted from various minerals, called alum ores, such as, 1. Sulphurated clay. This con- stitutes the purest of all aluminous ores, namely, that of la Tolfa, near Civita Vecchia, in Italy. It is white, compact, and as hard as indurated clay, whence it is called petra aluminaris. It is tasteless and mealy ; one hundred parts of this ore contain above forty of sulphur and fifty of clay, a small quantity of potash, and a little iron. Bergman says it contains forty-three of sulphur in one hundred, thirty-five of clay, and twenty-two of silicious earth. This ore is first torrefied to acidify the sulphur, which then acts on the clay, and forms the alum. 2. The pyri- taceous clay, which is found at Schwemsal in Saxony, at the depth of ten or twelve feet. It is a black and hard, but brittle substance, con- sisting of clay, pyrites, and bitumen. It is exposed to the air for two years ; by which means the pyrites are decomposed, and the alum is formed. The alum ores of Hesse and Liege are of this kind ; but they are first torrefied, which is said to be a disadvantageous method. 3. The schistus aluminaris contains a variable proportion of petroleum and pyrites intimately mixed with it. When the last are

in a very large quantity this ore is rejected as containing too much iron. Professor Bergman very properly suggested that, by adding a proportion of clay, this ore. may turn out advantageously for producing alum. But if the petrol be considerable it must be torrefied. The mines of Becket in Normandy, and those of Whitby in Yorkshire, are of this species. 4. Volcanic aluminous ore. Such is that of Solf.itorra near Naples. It is in the form of a white siline earth, after it has effloresced in tin- air ; or olse it is in a stony form. 5. Bitu- minous alum ore is called shale, and is in the form of a schistus, impregnated with so much oily matter, or bitumen, as to be inflammable. It is found in Sweden, and also in the coal mines at XVhiteliaven, and elsewhere.'

Alum is often manufactured from saline earthy ores. The only place where this kind of ore is formed, in sufficient abundance to be worth working, is the Salfatara, a few miles from Naples, called by the ancients, ' Forum Vulcani, Campi Leucogei.' The white clayey soil of this plain being constantly penetrated by sulphureous vapours, and the exhalations during the night being for the most part mixed with the dew, are returned with it to the surface, and thus cause it to be covered with a light saline efflorescence : this, together with the earth to which it adheres, is daily collected and distributed into leaden cal- drons, so as to nearly fill them two-thirds full ; water is then poured upon it till it stands about 3 or 4 inches above the surface of the clay, and this in a few hours, by the assistance of the na- tural heat of the ground, in which the caldrons are set almost up to the brim, extracts the alum from the clay, forms it in rough crystals on the surface of the water, nearly in the mode that copper is obtained. These crystals are then taken out and worked in the first water ; after which, fresh water is put into other boilers, and the crystals are dissolved for the purpose of purifying ; the solution is then filtered into wooden coolers, and in a day or two affords a large quantity of pure colourless crystals. The author

already alluded to describes alu- mina as one of the primitive earths, which, as constituting the plastic principle of all clays, loams, and boles, was called argil, or the argil- laceous earth ; but now, as being obtained in greatest purity from alum, is styled alumina. It was deemed elementary matter, till Sirll. Davy's celebrated electro-chemical researches led to the belief of its being, like barytes and lime, a me- tallic oxide.' This author further relates, ' The purest native alumina is found in the oriental gems, the sapphire and ruby. They consist of nothing but this earth, and a small portion of colouring matter. The native porcelain clays or kaolins, however white and soft, can never be regarded as pure alumina. They usually con- tain fully half their weight of silica, and fre- quently other earths. To obtain pure alumina we dissolve alum in twenty times its weight of water, and add to it a little of the solution of carbonate of soda, to throw down any iron which may be present. We then drop the supernatant liquid into a quantity of the water of ammonia, taking care not to add so much of the aluminous solution as will saturate the ammonia. The volatile alkali unites with the sulphuric acid of the alum, and the earthy basis of the latter is separated in a white spongy precipitate. This must be thrown on a filter, washed, or edulco- rated, as the old chemists expressed it, by repeated affusions of water, and then dried. Or if an alum made with ammonia instead of potash, as is the case with some French alums, can be got, simple ignition dissipates its acid and alkaline constituents, leaving pure alumina.

Alumina prepared by the first process is white, pulverulent, soft to the touch, adheres to the tongue, forms a smooth paste without grittiness in the mouth, insipid, inodorous, produces no change in vegetable colours, insoluble in water, but mixes with it readily in every proportion,

and retains a small quantity with considerable force; is infusible in the strongest heat of a fur-

nace, experiencing merely a condensation of volume and consequent hardness, but is in small quantities melted by the oxyhydrogen blowpipe. Its specific gravity is 2.000, in the state of powder, but by ignition it is augmented.

Every analogy leads to the belief that alumina contains a peculiar metal, which may be called aluminum. The first evidences obtained of this position are presented in Sir H. Davy's re- searches. Iron negatively electrified by a very high power, being fused in contact with pure alumina, formed a globule whiter than pure iron, which effervesced slowly in water, becoming covered with a white powder. The solution of this in muriatic acid, decomposed by an alkali, afforded alumina and oxide of iron. By passing potassium in vapour through alumina heated to whiteness, the greatest part of the potassium be- came converted into potash, which formed a coherent mass with that part of the alumina not decompounded ; and in this mass there were numerous grey particles, having the metallic lustre, which became white when heated in the air, and which slowly effervesced in water. ††† In a similar experiment made by the same illus- trious chemist, a strong red heat only being applied to the alumina, a mass was obtained, which took fire spontaneously by exposure to air, and which effervesced violently in water. This mass was probably an alloy of aluminum and potassium. The conversion of potassium into its deutoxide, dry potash, by alumina proves the presence of oxygen in the latter. When re- garded as an oxide, Sir H. Davy estimates its oxygen and basis to be to one another as 15 to 33; or as 10 to 22. The prime equivalent of alumina would thus appear to be 1.0 X

2.2=3.2.

But Berzelius's analysis of sulphate of alumina seems to indicate 2.136 as the quantity of the earth which combines with 5 of the acid. Hence aluminum will come to be represented by 2.136 ††† 1 = 1.136. But we shall presently shew that his analysis, both of alum and sulphate of alumina, may

be reconciled to Sir H. Davy's equivalent prime = 3.2. That of aluminum will become of course 2.2.

Alumina which has lost its plasticity by igni- tion, recovers it by being dissolved in an acid or alkaline menstruum, and then precipitated. In this state it is called a hydrate, for when dried in a steam heat it retains- much water ; and there- fore resembles in composition wavellite, a beau- tiful mineral, consisting almost entirely of alumina, with about twenty-eight per cent, of water. Alumina is widely diffused in nature. It is a constituent of every soil, and of almost every rock. It is the basis of porcelain, pottery, bricks, and crucibles. Its affinity for vegetable colouring matter is made use of in the prepara- tion of lakes, and in the arts of dyeing and calico printing. Native combinations of alumina constitute the fuller's earth, ochres, boles, pipe- clays, &c.

Alum is manufactured from alum stone, in con- siderable quantities ; the alum known in commerce under the name of Roman Levant or Smyrna alum,

is made at La Tolfa, riot far from Civita Vecchia, in the Roman state. The ore forms veins of considerable hardness, which are taken from die rock by blasting. The pieces are carried to the calcining oven, which is merely a hole dug in a rising ground 4 or 5 feet in diameter, and from 5 to 6 in depth, with a side gallery communicat- ing with the open air and the bottom of the fur- nace; the bottom being covered with pieces of: wood, on which the ore is laid so as to form a hollow vault, between the openings of which room is left for the smoke. The fire being kindled, and the flame appealing between the pieces of ore, a workman attends to keep it at a regular heat. In about four hours the smoke decreases, and the fire begins to burn brightly, which it is suffered to continue till a strong smell of burn- ing sulplnir arises. The ore is then sufficiently roasted, the fire is put out, and the stones left to cool. If this process has been properly con- ducted, the ore obtains the sweet astringent taste of alum. The second process is

nearly si- milar to the first mode pursued to obtain sulphate of iron (green vitriol) : it begins by piling the calcined stones in long beds on a sloping floor, the lower side of which is terminated with a ditch of water, having a clayey bottom : from this ditch the beds are frequently sprinkled, and the water drains from them again into the reser- voir. In about fourteen days the stones begin to crack and break down, and are in about forty days overspread with a reddish efflores- cence and reduced to a kind of paste : (perhaps this might be much more speedily effected by breaking down the ore in large mortars, crushing it by mill-stones or by a pavior's beater, &c.) A leaden boiler is now half filled with water, and, when heated, fresh portions of the prepared ore are continually stirred in till a solution of suffi- cient strength is procured; the liquor, though yet turbid, is drawn off into another boiler, where it is gently evaporated, and clarifies itself by de- positing its earth. Having arrived at the point of crystallization it is transferred by means of a pipe into a square wooden vessel, eight feet high by five feet wide, so constructed as to be readily taken to pieces ; after remaining in it a few days, the mother water is poured out to be boiled again with fresh alum ore in the first cauldron. The crystals when dried are then ready for sale. By the burning in the first part of this process the stones are not only rendered porous, as is the case with the lime- stone in burning, but all the inflammable matter is driven away, as in the smelting of lead ore : the sweet alumi- nous taste is at the same time excited. The subsequent crackling and breaking down, whilst on the inclined plane in the second process, is probably caused by their absorption of moisture. The alum manufactured from pyritous ores, which, with the foregoing, are the only alums made in Europe, is prepared from aluminous slate or earth ; and, as they possess that salt in a very small degree, a more extensive process is necessary for its extraction. This is begun by ex- posing it to the action of the atmosphere, which reduces it almost into the state of sulphate of iron. As in England and Sweden this article is obtained from a stony

substance, a previous 2 Z 2

roasting is necessary, which is performed in this manner. A floor is formed of clay beat tight, on which faggots or coals are placed, and set fire to. Upon this the workmen throw, by degrees, small pieces of ore unburnt, till a stratum is formed about six inches thick. These soon take fire by their own bitumen, and are then covered with a stratum of ore, already burnt and lixivi- ated, of the same thickness ; to this succeeds a layer of unburnt ore, and thus they proceed until they form about ten strata. The same care to preserve an equal degree of heat is here to be observed as in the mode practised at La Tolfa, till the bitumen being all consumed the fire ceases of itself. If the ore is now examined it will be found to be of a reddish colour, from the same reasons that in placing the sulphate of iron in a *ed heat, it obtains and continues that colour, and is then called colcothar. In some Swedish manufactories it is accordingly lixiviated without further preparation. In the alum works of the English and Germans, the roasted ore is lightly watered, but without the precaution used at La Tolfa, of again receiving the liquor. It is like- wise exposed for a greater or less time to the action of the atmosphere, by which the sulphur of the pyrites is more completely oxygenated, and consequently a greater proportion of alum obtained. At Flone, in the department of Ourte in France, the excellent practice is ob- served of lightly roasting the ore after sponta- neous efflorescence. The acid being thus ex- cited and united in part to the alumine, the process of lixiviation begins. To effect this more completely the ore is thrown into large reser- voirs, either of stone or wood, which have false bottoms, to serve the purpose of filters. Water is then poured on and allowed to remain about 24 hours, in which time the greatest part of the salts are dissolved. Eacli of these reservoirs are furnished with a pipe, and a cork placed within a

few inches of the bottom, (attached in the same manner as they are to the glue-makers' boilers) by this the liquor is run off, after which fresh water is poured on again. This second water is used again for the first lixiviating liquor of another parcel of ore. Both these lixiviations are per- formed with cold water ; but it appears that great improvement, by a saving of time, might be made by boiling it. Should even the fuel increase the expense, yet the frequency of renewal, as in the distillation of whisky, might compensate that. It is now boiled down in leaden boilers with the mother water of a preceding boiling ; and the waste of steam is supplied either by adding mo- ther water or fresh liquor. The evaporation lasts from twenty- four to forty-eight hours. In Saxony, where it is concentrated very highly, it is boiled eight days. At the end of these respec- tive periods the strength of the liquor is tried by a leaden hydrometer, or with still greater exact- ness by filling a bottle of known size and weight with the liquor arid then weighing them. When it is sufficiently strong an alkaline solution is added, and the first crystallization is brought about. In the Saxon manufactories, as soon as the evaporation is finished, the contents of a boiler are let out into a reservoir, where they are strongly agitated for half an hour ; in which

time a certain proportion of soap-makers' lees and sour urine is added, and the liquor being let into another vat the crystals of alum bet^in immediately to be deposited. At the end of a few days the mother water is ladled out, and the crystals collected and washed. ††† In the English works, after examining by the hydrometer, if suf- ficiently evaporated the fire is taken away, and a stream of impure alkaline lixivium, from kelp and soap-makers' ashes, poured into the boiler ; at the same time the cork at the bottom is opened and the liquor run off into a reservoir, by which means a speedy and complete mixture is effected. It remains in this reservoir three hours, when the alkali makes it deposite an earthy and ferrugi- nous sediment, which is the

action of clearing it. It is then transferred to another vessel, and again proved, when a greater or less quantity ol putrid urine is added, according as it is above the standard; it is briskly stirred for about a quarter of an hour, and then left to rest : in the course of five days the crystals are deposited. ††† The rough alum is then washed, to free it from the green vitriol, which is deposited with it. It is boiled again, and when boiling, bul- locks' blood, or other such substance, is throws in to clear it: when this is effected, the liquor is run into casks, where the crystals are deposited in large masses. After ten or twelve days the mother water is poured out, and the salt, after drying, is ready for sale. The stone itself is found in great quantities in some parts of the Lo- thians, and in the neighbourhood of the Hurlet Works near Paisley ; it abounds also in the Isle of Sky, as has been proved from a late survey.

The most extensive alum manufactory in Great Britain is at Hurlett, near Paisley. The next at Whitby ; of the state and processes of which an instructive account was published by Mr. Winter in Nicholson's Journal. The stratum of alu- minous schistus is said to be twenty-nine miles in width, covered by strata of alluvial soil, sand- stone, ironstone, shell, clay, &c. The alum schist is generally disposed in horizontal laminae. The upper part of the rock is so abundant in sulphur,, that a cubic yard taken from the top of the stratum is of five times more value than the same bulk 100 feet below.

If a quantity of the schistus be laid in a heap, and moistened with sea-water, it will sponta- neously take fire, and continue to burn till the inflammable matter be consumed. The rock, however, is commonly broken into small pieces, and laid on a horizontal bed of fuel, composed of brushwood and such like materials. When about four feet in height of the rock is piled on, fire is set to the bottom, and fresh rock con- tinually augmented upon the pile, until the calcined heap be raised to the height of ninety or one hundred feet. Its horizontal area also at the same time, progressively extended, till I

forms a great bed nearly 200 feet square, having about 100,000 yards of solid measurement. Thi rapidity of the combustion is allayed by plastering up the crevicos with moistened schist,

The calcined mineral is digested in water, i| pits of about sixty cubic yards. The liquid n drawn off into cisterns, and afterwards pumped again upon fresh calcined minerals ; this is re-

peated until the specific gravity becomes 1.15. The half-exhausted schist is then covered with water to take up the whole soluble matter, and the strong liquor drawn off into settling cisterns, where the sulphate of lime, iron, and earth are deposited; and where the liquid is boiled its purification is accelerated. It is then run into leaden pans ten feet long, four feet nine inches ???wide, two feet two inches deep at the one end, and two feet eight inches at the other. Here the liquor is concentrated at a boiling heat. Every morning the pans are emptied into a settling cistern, and a solution of muriate of potash, cither pure from the manufacturer, or crude and compound from the soap-boiler, is superadded. The quantity of muriate necessary is regulated for the workmen by the hydrometer. By this addition the pan-liquor, which had acquired a specific gravity of 1.4 or 1.5, is reduced to 1.35, and, after being allowed to settle for two hours, is run off into the coolers to be crystallized. At a greater specific gravity than 1.35, the liquor, instead of crystallizing, would, on cooling, pre- sent us with a solid magma, resembling grease. Urine is added occasionally to bring it to the proper density.

After standing four days, the mother-waters are drained off, to be pumped into the pans on the succeeding day, and the crystals of alum washed in a tub and drained. They are then put into a lead pan, with as much water as will make a saturated solution at the boiling point. When the solution is run off into casks, which at the end of ten or sixteen days

are unhooped and taken asunder, the alum is found exteriorly in a solid cake ; but in the interior cavity in large pyramidal crystals, consisting of octahe- drons successively inserted into one another. This last process is called roching.

Alum is extremely useful in the art of dyeing; as by means of it a great number of colours are fixed and rendered permanent upon cloth, which otherwise would either not adhere in any degree, or only for a very short time. In what- manner this is accomplished we are ignorant. See the conjectures and theories on this subject under DYEING. It constitutes the basis of crayons, which generally consist of the earth of alum finely powdered and tinged for the purpose. In the preparation of Prussian blue, it prevents the basis of martial vitriol, which is soluble in acids, from being precipitated by the superfluous alkali employed in the preparation of that pigment; that is, the alkali which is not saturated by the colouring matter. As this basis adheres more strongly than the clay to the vitriolic acid, and would form a green by the mixture of its yellow- ness, the white earth of alum likewise, accord- ing to its quantity, dilutes the darker colours, even black itself, and produces an infinite num- ber of shades.

ALUM, in medicine, is of considerable use as an astringent and tonic. It is reckoned particu- larly serviceable for restraining haemorrhages, and immoderate secretions from the blood ; but less proper in intestinal fluxes. In violent haemorrhages it may be given in doses of fifteen or twenty grains, and repeated every hour or half hour till the bleeding abates : in other cases, doses are more adviseable, large ones

being apt to nauseate the stomach, and occ*. sion violent constipation of the bowels. It 13 used also externally, in astringent and repellen lotions and collyria. Burnt alum taken inter- nally has been highly extolled in cases of cholic. In such

instances, when taken to the extent of a scruple for a dose, it has been said gently to move the belly, and give very great relief from the severe pain. Its officinal preparations are, for external use, pulvis stypticus, and aqua styp- tica; for internal applications, the aqua aluminis, and coagulum aluminis and alumen ustum; which last is no other than the alum dried by fire, or freed from the watery moisture, which, like other salts, it always retains in its crystalline form. By this loss of its water it becomes sharper, so as to act as a slight escharotic ; and it is chiefly with this intention that it is employed in medicine, being very rarely taken internally. Alum is used in large quantities in various manufactories. When added to tallow, it renders it harder. Printers' cushions, and the blocks used in the calico manufactory, are rubbed with burned alum to remove any greasiness, which might prevent the ink or colour from sticking. Wood sufficiently soaked in a solution of alum does not easily take fire, and the same is true of paper impregnated with it; which for that reason is very properly employed in preserving gunpowder, as it also excludes the moisture of the air. Paper impregnated with alum is used in whitening silver, and silvering brass without heat. Alum is also of use in tan- ning, which it assists in restoring the cohesion of the skins almost entirely destroyed by lime. Vintners fine down their wines, &c. with alum ; fishers use it to dry cod-fish with ; and bakers have mixed it with the flour to make their bread compact and white ; to this last use of it great objections have been made, but unjustly, for it is entirely innocent Alum mixed in milk helps the separation of butter ; and if added in a very small quantity to turbid water, renders it perfectly limpid, without any bad taste or quality ; while the sulphuric acid imparts to it a sensible acidity, and does not precipitate so soon, or so well, the opaque earthy mixtures.

Brunswick alum was made to imitate the rock' alum. Now as this last is often used in medi- cine, and frequently the first, which contains arsenic, is

mistaken for it, an easy method, therefore of detecting the counterfeit may be useful to society : the external appearance dif- fers but little ; the taste of the Brunswick is less styptic ; it is not so soluble in water, and when heated to redness, loses only 39.5 per cent, of its first weight, whilst the rock loses one half. When this last is exposed to the blow-pipe, it becomes opaque, swells, Foams, and is converted to a white spongy mass. The Brunswick swells less, foams very little, but melts, and becomes ot a greenish colour, exhaling an arsenical vapour. The rock alum being precipated by potash or soda, and mixed with borax, fuses before the blow-pipe into a white or yellowish white : the Brunswick gives a violet coloured globule ; and, in fact, it is nothing but common alum with a small proportion of arsenic and cobalt.

ALUMGURNAGHUR, the Mahommedan name of Beyhar, a city of Bengal, and of a for-

tress which stood formerly on the banks of the Megna. ALUMINITE is a mineral of a snow-white colour, dull, opaque, and having a fine earthy fracture, found chiefly in the alluvial strata round Halle, in Saxony. I', has a glistening streak ; found in kidney-shaped pieces, which are soft to the touch, and adhere slightly to the tongue.

Specific Gravity, 1.67.

It consists of sulphuric acid . . 19.25 Alumina, . . 32.50 Water . . . 47.00

Silica, lime, and oxide of iron . 1.25

100.00

ALUMTA, in botany, a name given by the old Latin writers to the lutum and corniola, by the Greeks called cymene. It was the same with our genistella tinctoria, or dyers' weed, and was used by the ladies to tinge their hair yellow, the colour that was then esteemed beautiful.

ALUNGU, in natural history, the name given by the Malabarians to a species of the manis of Linnseus, and belonging to the family of ant- eaters, which have no teeth, but a long round tongue with which they take the ants.'

ALUNKAN, or ARROUKAGE, in geography, a town of Prussia, in the province of Zabulistan, 100 miles south of Candahar.

ALUNTIUM, ALONTIUM, in ancient geogra- phy, a town in the north of Sicily, situated on a steep eminence at the mouth of the Clydas ; said to be as old as the war of Troy. It is now in ruins ; from which arose the hamlet St. Filadelfo, in the Val di Demona.

ALVOR, in geography, a small place with an earldom in the province of Algarve, between Villa Nova de Portimao and Lagos.

ALVOREDO, an island of South America, on the coast of Paraguay, three leagues south of St. Catharine's island. S. lat. 27►►. 43'. W. long. 49►►. 16'.

ALVORNINHA, or ALBURNINHA, a small town of Portugal, in Estremadura, containing about 1500 inhabitants.

ALURNUS, in entomology, a genus of insects of the order coleoptera, with filiform antennae, six very short palpi or feelers, and horny arched maxilla or jaw. There are three species, viz. 1. A. grossus, black, with crimson thorax and yellow elytrae, found in South America and In- dia. 2. A. femoratus, of a green-reddish colour, with the hinder thighs and legs dentated, the te- nebrio femoratus of Drury, and the tenebrio viridis of Sultzer, found in India,

with the an- tennae half the^length of the body, and the last joints black. 3. A. dentipes, black, with the hinder thighs and legs dentated, and found at the Cape of Good Hope

ALUSAR, in chemistry, manna.

ALUSH. SeeALLusH.

ALUSHMA CARAMANICA, in botany, a plant growing in Caramania, and a preparation of that plant or pigment made from it. It occurs often m the writings of Avicenna and Serapion.

ALUTA, in medicine, soft, thin, leather, used for plasters.

ALVUS, in anatomy, a term u,►►ed for the belly

in general, but very frequently applied to the bowels.

A i.vus ADSTRICTA, a costive state of the belly.

ALVUS LIQUIDA, a laxative state of the viscera.

AL'WAYS, adv. All ways, or al-way. ' Alia wa?ga. ►►► Ital. tutta vui. Constantly, perpetually ; under all circumstances or conditions.

That, which sometimes is expedient, doth not al- way $ so continue. Hooker. Man never is, but always to be blest. Pope. For every trifle scorn to take offence, That always shows great pride, or little sense ; Good nature and good sense should ever join . To err is human, to forgive divine. Id.

He is always great, -when some great occasion is presented to him. . Dryden.

ALYGHEN. See ALLIGHEN.

ALYPIAS, or ALYPON, in the materia me- dica, a species of turbith, prescribed by some physicians for the purging of bile, grows in se- veral parts of France, particularly in Provence and Languedoc. It

is a kind of senna.

ALYPIUS, a platonic philosopher of Alexan- dria, in the fifth century, remarkably small in stature, but of a strong mind, and one of the best dialecticians of his time.

ALYPIUS, an architect and geographer of An- tioch, employed by Julian, in his attempt to rebuild the temple of Jerusalem. At the close of life he was charged with magical practices, and banished. His geographical description of the world was printed at Geneva in 1628.

ALYPIUS, bishop of Tagasta, in Africa, the friend of St. Augustine, was baptized with him at Milan in 388. He opposed the Donatists and Pelagians with great zeal, and died in 430.

ALYPUM, in botany, a name given by some authors to a species of spurge, the tithymalus amygdaloides angustifolius, or narrow-leaved almond spurge of Tournefort. Alypum is like- wise a name given by some authors to a species of dog's-bane, the purple flowered sea apocynum of Venice, with willow-like leaves. Alypum is applied also to the globularia of Linnaeus.

ALYPUM, in medicine dXvirov, a word used by Galen, for a minorative, or opening medicine,

ALYSSUM, ALLYSON, or ALLYSOIDES, mad- wort ; from a \vaata, to be mad ; because it was believed to have the property of curing madness. A genus of the siliculosa, belonging to the tetra- dynamia class of plants; and in the natural me- thod ranking under the 39th order, siliquosa. CHAR, are: calyx, an oblong four-leaved perian- thium : COR. four cruciform petals ; with claws the length of the calyx, the petals shorter : STAM. consists of six filaments the length of the calyx, two of them rather shorter and denticu- lated : ANTH. are erect and expanding: FIST, an ovate germen: STY. simple, and the length of stamina : STIG. obtuse : PER. a sub-globular emarginated silicic, furnished with a

bilocular stylus, having an elliptic partition: the seeds few, orbicular, and fixed to filiform receptacles. Of this genus, Linnaeus enumerates 19 species; but none of them are remarkable except the fol- lowing : ??? A. halimfiolium, or madwort, with whole spear-shaped leaves. It is not now used in medicine.

ALYTARCHIA, a priest of Antioch in Syria, who, in the games instituted in honour of the

gods, presided over the officers who carried rods to clear away the crowd and keep order. In the Olympic games, the alytarchs had the same com- mand, and obliged every person to preserve order and decency.

ALYTH, a parish in Perthshire, on the north side of Strathmore ; about twelve miles long, and three broad, (at an average) ; stretching from south to north towards the Grampians. It is watered by the Isla, the Ericht, and the Alyth ; and the low ground of it is extremely fertile, producing excellent crops of barley, oats, and wheat ; with grass, turnips, potatoes, &c. Also Alyth, a rivulet of Perthshire, which rises in the upper part of the parish.

ALYTH, a village in Perthshire, which was erected into a burgh or barony by king James III. and contained 2000 inhabitants. The principal ma- nufactures are yarn and brown linens.

ALZACHI, in the Materia Medica, the name given, by the Arabian physicians, to that kind of gourd called citrul, and by the Italians anguria. It is an oblong, and usually crooked gourd, containing in its cavity a considerable quantity of water. Its seeds are oblong, flatted and covered with a hard skin.

ALZAGIAT, or AEZEGE, a name giveu by the Arabian

writers to all the vitriolic minerals.

ALZARAC, a kind of coarse camphor, of a brown colour ; the same with our rough camphor as imported from the Indies.

ALZEMAFOR, in chemistry, cinnabar.

ALZILAT, in medicine, a weight of three grains.

ALZOFAR, in chemistry, burnt copper.

ALZUM, or ALDUM, in botany, a name given by the ancients to the tree which produces the gum bdellium, called by the Arabians mokel.

AM. The first person, present tense, indicative mood, of the verb to be. It is remarkable that the verb corresponding to this, is irregular and auxiliary in many languages. The Gothic, Saxon, and German tongues, are those from which the principal forms in English are derived. Gothic, Ik im, thee is, is est, Wus syum, Ik Was, Wus, \vesum, are the archetypes of our present im- perfect tenses. ??? To similar originals we may refer the remaining forms, for which, see the grammars of the above- named languages, and their northern affinities.

What ? do I feare my selfe ? There's none else by,

Richard loues Richard, that is, I am I,

Is there a murtherer heere ? No ; yes, I am.

Shahspeare't King Richard III. SES. Thou bors't the face once of a noble gen- tleman,

Rankt in the first file of the virtuous, By every hopeful spirit.

Tell me, Virolet,

If shame have not forsook thee, with thy credit.

VlK. No more of these lacks; what I am, lam.

Beau, and Fletch. Double Marriage, act iii.

And God said unto Moses, I am that I am : and

!ie said, Thus shalt thou say unto the children of

Israel, I am Lath sent me unto you. Ejcodtts iii. 14.

Come then, my soul : I call thee by that name, Thou busy thing, from whence I know I am : for knowing that I am, I know ihou At ; Since that must needs exist, \Litli tan impart.

Prior.

*' I am be*ter thap thou,' raises the furious and Moody contestations for precedency : ' I am holier than thou,' causes a contemptuous separation from company perhaps better than ourselves : ' I am wiser than thou,' is guilty of all the irregular opinions that the world is disquieted withal.*

Bp. Hall's Peace Maker.

AM, in geography, supposed to be the pre- sent Am, a famous city of Armenia, where they formerly reckoned 100,000 houses, and about 1000 mosques. It was taken by the Tartars in 1219, and is now considerably reduced.

AMA, AME, or rather AMES,

AMA, AMULA, or HAMA, in ecclesiastical writers, a vessel wherein wine, water, or the like were held, for the service of the eucharist.

AMA in commerce, a wine measure, a cask, pipe, or the like.

*AMABYR, in ancient customs, a price paid to the lord of the manor on marrying a virgin of his tenantry. * Pretium virginitatis domino sol- vendum.' It once prevailed in many parts of England and Wales, and so late as the 3d of Philip and Mary, we find Henry, earl of Arun- del, releasing to his tenants this right.*

AMACHURA, a river of the province of Cumana, in South America, which empties itself northward in the principal mouth of the Orinoco.

AMACK, or AMAK, a small island of the Baltic, joined to Copenhagen, on the south, by two bridges, was

colonized originally from East Friesland, by Christian II. in 1516, for the pur- pose of supplying the inhabitants of the capital of Denmark, with butter, cheese, and herbs, and is to this day principally appropriated to the same purpose. The inhabitants preserve much of their original dress and manners, which are said to resemble those of the society called Friends ; and, indeed, their particular privileges, courts of judicature, &c. tend to preserve these distinctions, although intermarriages are con- stantly taking place between them and their neighbours. The island is about four miles long, and two broad ; has some quarries for lime, and stone for building ; and contains about 3,500 souls, who are distributed among six diffe- rent villages. A portion of this capital, called Christian's haven, (from its being principally built by Christian IV.) is erected upon the shore of this island. The inlet between Amack and the main land, from the harbour of COPENHAGEN, which see.

AMACORE, a large river of South America, in the province of Guiana, which descends from the western Cordillera, and, running eastward, bordered by beautiful trees, after being joined by several other rivers, falls into the Atlantic Ocean.

AMACUSIA, a city and province of Japan, near the island of Ximo.

AMADABAT, a corruption from AHMED ABA D, or AHMED'S city.

AMADAN, or HAMADAN. See HAMADAN.

AMADANAGER, or AN DAN ACER. See AH ME-

DNUGGAR.

AMADEUS V. count of Savoy, succeeded to the sovereignty, in 1282, and obtained the sur-

name of ' the great. His possessions were much enlarged by marriage, purchase, and do- nation. In defending Rhodes against the Turks, in 1311, he gained distinguished honour; and, in memory of this service, he and his successors took for their device, F. E. R. T. the initials of the Latin words, ' Fortitudo ejus Rhodum te- nuit,' i e. ' His valour preserved Rhodes.' The grand master of the knights of St. John, to whom Rhodes belonged, granted him a palace at Lyons as a reward of his effectual succour. He died, after a reign of 38 years, in 1323, at Avignon, where he was soliciting pope John XXII. to publish a crusade in favour of Andonicus, em- peror of the East, who had married his daughter. He was much loved and honoured by all the sovereigns of Europe, and was generally the me- diator in their differences. Mod. Univ. Hist. vol. xxxiv. p. 16.

AMADEUS VIII. count of Savoy, succeeded his father, Amadeus VII. in 1391, and acquired the titles of the ' Pacific/ and ' the Solomon of the age.' In 1416 Savoy was erected by the emperor into a duchy ; but after this elevation, Amadeus formed the resolution of retiring from his throne and family, into a religious house, at a place called Ripaille. In his retreat, which he had sought, according to the opinion of the world, from religious motives, he devoted him- self to every kind of pleasure and luxury, so that faire repailles, became proverbial to signify a life of exquisite gratification and indulgence. Here he instituted the order of St. Maurice, or the Annunciata, consisting of a number of her- mits, who excluded women from their commu- nity, but in other respects maintained the cha- racter of Epicureans, and votaries of pleasure. Here also Amadeus aspired to the papacy, and employed large sums of money at the council of Basil, to secure the object of his ambition. Ac- cordingly, in 1439, this council having deposed pope Eugenius IV. conferred the triple crown on Amadeus (though he had never taken holy orders), under the name of Felix V. A schism was the consequence of this extraordinary elec- tion; and Eugenius at length excommunicated

his rival. On his death, Amadeus was per- suaded to abdicate, and a new pope was chosen in his room. ' His resignation was amply re- compensed, by the dignities of cardinal, bishop, and apostolical legate, and by his being allowed to retain most of the pontifical insignia. He died, at the age of 69, in 1451, at Lausanne. Mod. Univ. Hist. vol. xxxiv. p. 78.

AMADEUS IX. count of Savoy, was su-rnamed the ' happy,' on account of his virtue and piety. He succeeded Lewis, in 1464 ; and, though his bodily infirmities prevented his engaging in any great exploits, acquired and maintained a very exemplary character. He was eminently dis- tinguished by the benevolence of his disposition. Being once asked by a courtier, * whether he kept hounds ?' he pointed to a gieat number of poor people, who were seated at tables, eating and drinking, and replied, ' those are my hounds, with whom I go in chace of heaven.' When told that his- alms would exhaust his revenues: ' Take the collar of my order,' he said, ' sell it, and relieve my people.' He married lolande of

France, who concurred with him in all his good deeds. His death, in 1472, at the age of 37, and after a reign of seven years, was universally re- gretted. Mod. Univ. Hist. vol. xxxiv. p. 83.

AMADIA, an important town and fortress of Kurdistan, in Asia, on a lofty mountain, at the base of which is a plain covered with dependent villages. Its prince, or governor, is descended from the caliphs of Bagdad. Only one ascent, by a narrow flight of steps, cut out of the rock, leads up from below. The town, which has considerable trade, is 72 miles north of Mouel.

AMADOU, in natural history, is a variety of the boletus igniarius, found on old ash and other trees. When boiled in water to extract its so- luble parts, and beaten with a mallet to loosen its texture, it has the appearance of very spongy doe- skin leather. It is now impregnated with a so- lution of nitre, and dried, when it is called spunk, or German

tinder; and is a substance much used on the continent for lighting fires.

AMAGUANA, a town and river of South America, in Quito. The river rises on the west side of the Andes, in the desert of Ilinissa, and after running northward, joins the Esmeralda, near St. Antonio, and falls into the Pacific. The town is 10 miles south of Quito.

AMAIN, adv. Ang. Sax. CDajan, to possess power or might; past participle CDagen, might, with all might. Power, strength.

When stars doe counsel] rest Incroching cares renue my griefe as faste, And thus desired night in wo I waste : And to expresse the harts excessive paine, Mine eies their deawie teares distill amaine.

Turbenille.

Great lords, from Ireland am I come amain, To signify that rebels there are up. Shaksp,

What! when we fled amain, pursued, and struck With heaven's afflicting thunder, and besought The deep to shelter us ? Milton,

The hills, to their supply, Vapour and exhalation, dusk and moist, Sent up amain. Id.

From hence the boar was rous'd, and sprung amain, Like light'ning sudden, on the warriour train, Beats down the trees before him, shakes the ground ; The forest echoes to the crackling sound, Shout the fierce youth, and clamours ring around.

Dryden.

From step to step the rolling ruin bounds : At every shock the crackling wood resounds ; Still gathering force, it smokes and urg'd amain, Whirls, leaps, and thunders down impetuous to the plain. Pope's Iliad, xiii. 197.

AMAIN, or AMAYNE, in sea language, a term importing

to lower something, either at once, or by degrees. Thus, to strike amain, is to lower, or let fall the top-sails ; to wave amain, is to make a signal, by waving a drawn sword, or the like, as a demand that the enemy strike their top-sails ; which is done either in the fore-top, or on the poop.

AMAISTRE , v. To master. See MASTER.

Plato had a cause his seruaunt to scourge, and yet cleaped he his neighbour, to perfourme the doing himselfe would not, least wrath had him amaistred, and so might he haue laid on too much.

Cliaucer. Test of Loue,M. 305. c. iv.

Is he not rich that hath suffisance, and half yo power that no man may amaittrein. Id. fol. 305. c. ii'

AMAK, or ABULNAGIE AL BOKHARJ, a cele- ruler of Edom, and the successor of Oatam in brated poet of Persia. H,s principal produc- the government of the Edomites ; unless, as is turn is a poetical History of the Loves of Joseph probable, all the seven rulers, mentioned Gen

2fe T□□□.-?? □□□ f rSt reSunt □□f XXXVL 15' -16' were -temporary. Some authors

suppose him to have been the progenitor of the Amalekites; but this is improbable. Seethe arti- cle AMALEKITES.

AMALEK, the son of Ham, and grandson of

the academy of poets, instituted in the fifth cen- tury, by Khedar Khan. He lived to an advanced age.

AMALAGANOR,or ISLAND of CONCEPTION.

f . 1 T 1 □□□ 1 i

PVTJ ††† i †††. . ‘ ixc*.††iij in n tiiaijuauii \jl

one of the Ladrone isles about six miles in cir-
Noah, according to the Arabians, the progenitor

of the Amalekites, and the father of Ad, a cele-
brated Arabian prince, the head of the Arabian
tribe, called Adites, and’the grandfather of Sche-

Long.

cuit, and three and a half from Gugnan. 128††.
14.E. lat 18††. IG’.N.

AMALARIC, or AMAURY, king of the Visi goths, was the
son of Alarjc II.; but being an dad and I Schedid.”
‘See next “articTe!

infant of five years, at his father’s death, in 506,
the throne was usurped by Gensaliac, the natural

AMALEKITES, a people of Arabia, long ago
exterminated. Some authors trace their

son of Alaric. Amalaric, in the meanwhile, origin
from Amalek, ruler of Edom, and pretend

was taken into Spam ; and his grandfather, The- to
account for their early antipathy to the Israel-

odoric, king of the Ostrogoths, having expelled
ites, from their revenge for Jacob’s having de-

Gensaliac from the throne, reigned over the Visi-
prived Esau of his birth-right ; but these writers

goths also, till his death, in 526, when Amalaric
seem to forget that Moses mentions the Amale-

assumed the government. This prince was zea- kites
as a distinct nation in the time of Abraham,

lously attached to the Arian doctrine and cause,
Gen. iv. 7; and expressly says, that their coun-

and as he had married Clotilda, the daughter of try

was ravaged by the four combined kingg,

Clovis, who inherited the piety and orthodoxy of Amraphel, Arioch, Chedorlaomer, and Tidal, at her mother, he used various means, and as the

Catholic historians say, those of violence, to proselyte her to his own opinion. In conse- quence of her complaints, her brother, Childe- bert, king of France, marched with a numerous army into the territories of Amalaric, defeated him in an engagement, and forced him to take refuge on board his fleet. But recollecting that his treasures were left in the city of Narbonne, Amalaric went on shore, where he was surprised by the enemy ; and seeking safety in a church belonging to the Catholics, a con.mon soldier ran him through with a spear, A. D. 531. Some say that he retired to Barcelona, and was assassinated by his own subjects. Mod. Univ. Hist. vol. xvi.

AMALASONTHA, regent and queen of Italy, was the daughter of Theodoric the Great, king of the Ostrogoths, by Audefleda, the sister of Clovis, and united in her person the two most illustrious families of the barbarians. She was born about the year 498, and in 515 was married to Eutharic, the last heir of the royal race of the Amali, whom her father had sent from Spain, and designed for his successor, as the sex of his daughter excluded her from the Gothic throne. Eutharic soon died, and left an infant son, Atha-

least 200 years before the birth of Amalek the Edomite. Balaam, too, in his prophecy, Numb, xxiv. 20, styles them the first of nations. We rather adopt the opinion of the Arabians, who trace their descent from a son of Ham, see last article. The earliest account we have of this nation, after the depredations committed upon them by Chedorlaomer and his allies, A. M. 2091, is their uprovoked and cowardly attack upon the Israelites, after their arrival in the wilderness, when they assaulted those who, flirough weakness or fatigue, were unable to keep pace with their brethren ; an act of inhu-

manity for which the Israelites were expressly commanded to extirpate the nation. See Deut. xxv. 17 ; Exod. xvii. 8 ??? 14; Judges iii. 13, &c.
AMALFI, an ancient city of Italy, situated on the bay of Salerno, ten miles west from that city, and thirty from Naples. It is said to have de- rived its origin from a number of Roman fami- lies, who, about the middle of the fourth century, left Rome and embarked for Constantinople ; but meeting with storms on their passage, were thrown on the shores of Salerno, where they founded a flourishing republic. Impervious mountains and inaccessible coasts preserved their infant state from the first fury of the Lombards,

eastern emperors. Sico, prince of Salerno, marched a body of troops by night ; surprised

laric ; when Amalasontha assumed the guardian who seldom attempted the conquest of a mari- ship of her son, and of the kingdom of Italy, time people ; and in 825, it attained considerable His death, at the age of 16, in consequence of rank and importance under the patronage of the intemperance, left her destitute of any firm sup- port, or legal authority; she now conceived the _ _ , _ . design of sharing with one of her cousins, the Amain ; and, carrying off the greatest part of the regal title. The eloquent Cassiodhrius an- inhabitants, compelled them to fix at his own nouncecl to the senate and to the emperor, that capital, which had lately suffered a great loss of Amalasontha and Theodatus, had ascended the people by an epidemical disorder. But before throne of Italy. But the issue of this scheme of the fifth year of their captivity was expired, thi ambition soon proved fatal. Instigated by the Amalfitans took advantage of the absence of the principal Goths, Theodatus caused the queen to Salernian chiefs, who were then carrying on a be imprisoned in a small island, in the lake of war with the Beneventans; armed themselves ; Bolsena, where she was strangled in the bath, and, after burning and plundering Salerno,

marched in triumph back to their own country.

On their return, their first plan was to vest the

A. D. 535. Gibbon’s Hist. vol. vii.

AMALEK, pbnjT, Heb. i. e. a sucking peo-

AMALEK p’jnP, Heb. i. e. a sucking peo- On their return, their tirst piai w ❓❓❓ vwi ^

pie, die son of Eliphaz, by his concubine, supreme authority in ,a temporary prefect; but fcmna, and grandson of Esau! He was the 7th afterwards they placed that power in the hands

a duke elected for life, whose office was here- ditary in the family of Piccolomini. Under these governors Amalfi attained the summit of her glory ; and extended her territory eastward from Vico Vecchio, to the promontory of Mi- nerva westward, including likewise the island of Caprea, and the two islands of the Galli. Towards the north it comprehended the cities of Lettere, Gragnans, Pimontio, and Capule di Franchi ; towards the south those of Scala, Ra- velli, Minori, Majori, Atrani, Tramonti, Agerula, Citara, Prajano, and Rosilano. Leo IV. found the Amalfitans useful allies in his wars with the infidels, and honoured the commonwealth with the title of Defender of the Faith. The Nea- politans experienced many signal favours from them; and even the Mussulmans found it ex- pedient to court their alliance. A court was established at Amalfi for the decision of all con- troversies arising in maritime transactions ; and its code and reports became the general rule throughout this part of Europe. To crown the glory of the republic, it was reserved to the lot of an Amalfitan to make, or at least to perfect, the most important discovery for the improve- ment of navigation. Pasitano, a village which stands on the shore a few miles west of Amalfi, boasts of having given birth to Flavius Gioia, or, as others call

him, Flavius Bembo, the inventor of the mariner's compass. The Amalfitan mer- chants long engrossed the trade of the Levant. The Pisans, Venetians, and Genoese, rose upon their ruin ; and made way for the more compre- hensive and daring spirit of the present maritime powers. At present Amalfi is subject to Naples, and is the see of an archbishop. It is but a shadow of what it was in its flourishing state, when it extended over the stupendous rocks that hang on each side, still crowned with remains of battlements, fortified walls, and ruined towers. Its buildings, Mr. Swinburne says, are not re- markable for elegance or size ; and contain at most 4000 inhabitants. The cathedral is an un- couth building. Under the choir is the chapel and tomb of the apostle St. Andrew ; to whose honour the edifice was dedicated, when Cardinal Capuano, in 1208, brought his relics from Con- stantinople. Long. 15►►. 20'. E. lat. 40►►. 35'. N. AMALFIANS, or AMALFITANS, the inhabi- tants of Amalfi. See their history in last article. AMAL'GAME, v.~\ Fr. Amalgamer; gene- AMAL'GAM, n. 'rally deduced from the AMALGAMATE, i Gr. a/we, together, & AMALGAMATION. J ya/►►w, to unite. To unite together; to incorporate.

Amalgamation is the mixing of mercury -with any of the metals. The manner is thus in gold, the rest are answerable : Take six parts of mercury, mix them hot in a crucibl", and pour them to one part of gold made red hot in another crucible ; stir these well, that they may incorporate ; then cast the mass into cold water, and wash it. Hacon.

The metaphysical and alchemistical legislators, have attempted to confound all sorts of citizens, as well as they could, into one homogeneous mass ; and then they divided this, their amalgama, into a number of incoherent republics.

Burke, on the French Revolution.

AMALGAM, in chemistry, from the Greek

uua, together, and ya/xav, to join : mercury united

with a metal. The amalgam of mercury with lead, is a soft, friable substance, of a silver colour, By washing and grinding this amalgam with warm water in a glass mortar, the impurities of the metal will mix with the water; and by changing the water, and repeating the lotion again and again, the metal will be farther and farther purified. ††† Boerhaave mentions it as one of the greatest secrets in chemistry, to bring off the liquor as clear as when first poured on the amalgam ; which, he says, might afford a method of making the nobler metals, or procuring them from the baser rnetals. This philosophical way of purifying metals may be easily applied to all metals, except iron and copper. The amalgams of gold, silver, tin, lead, zinc, bismuth, and cop- per, with quicksilver, are all white ; and when the quantity of metal is large in proportion to that of the mercury they thicken into a kind of paste. All metals, except iron and copper, spontaneously unite and amalgamate with mer- cury ; but gold with the greatest facility ; silver the next ; then lead and tin ; copper and regulus of antimony with difficulty; iron and cobalt, scarce at all ; but with all other metals and semi- metals, mercury may easily be amalgamated.

For the combination of one metal with another, it is generally sufficient that one of them be in a state of fluidity. Mercury, being always fluid, is capable of amalgamation with other metals without heat, although heat considerably facili- tates the operation. To amalgamate without heat requires nothing more than rubbing the two metals together in a mortar ; but the metal to be united with the mercury should be previously divided into very thin plates or grains. When heat is used, which is always most effectual, and in some cases indispensably necessary, the mer- cury should be heated till it begins to smoke, and the grains of metal made red hot befoie they are thrown into it.

The amalgamation of COPPER is a very diffi- cult process, mercury not mixing well with that metal, unless when in fusion, and the heat suf- ficient to keep it in that state being great enough to

evaporate the mercury, Tnturation, however, may be made to supply the place of heat, first re- ducing the copper to an exceedingly fine powder. This amalgam boiled in river water, then distilled in a retort, and cohobated twice, leaves the cop per in form of a new mstal, of the colour of gold, and more ductile than before. Amalgamations of copper may likewise be performed by dissol- ving the metal in aquafortis, diluting the solution with twelve times the quantity of pure water, then beating and putting into it polished plates of iron ; by this means the copper will be precipi- tated to the bottom, and the iron dissolved. Pour ofif the liquor, and wash the precipitate with hot water, till it becomes insipid. The powder being well dried, and put into a glass mortar, with an equal quantity of hot mercury, an amalgam will be made.

Amalgamation of GOLD is usually performed by heating the plates of that metal red hot ; after which, quicksilver, gently heated, is to be poured upon them, and the mixture stirred with a small iron rod, till it begins to rise in a smoke. It is then thrown into a vessel full c f water, when it

coagulates, and becomes manageable. This amalgam is of great use among goldsmiths and gilders. Being laid on any other metal, and afterwards placed on a small fire to evaporate, the gold will be left on the surface of the copper, which makes what we call gilding. ??? The black- ness adhering to the amalgam may be washed away with water ; and a great part of the mer- cury may be pressed out through a linen cloth ; and the rest being evaporated in a crucible, by a gentle and gradual heat, the gold remains be- hind in an impalpable powder, which admits bolter of being burnished, than that which is procured by grinding of gold-leaf. Gold retains about thrice its own weight of mercury. The gold-dust, or filings, as well as those of silver, dispersed through the sweepings of the gold- smiths'

shops, which would otherwise be lost, are recovered by amalgamation with mercury, after washing and trituration.

Amalgamation of IRON has been reckoned ex- tremely difficult, if not absolutely impossible. However, Mr. Navier succeeded in combining mercury with iron by the following process : ??? Having made strong solutions of iron and of mercury separately in distilled vinegar, he put equal quantities of each into a mattrass, which he placed in balneo maricE. As soon as the liquor became very hot, there began to be formed on its surface, and within it, an extremely light, fine, white substance, resembling snow, which evidently contained mercury and iron, in a saline form, intimately united with each other. The liquor being filtered left behind this snowy sub- stance, which, when washed and dried, appeared to be a silvery mass, made by the union of in- numerable crystals in the form of thin plates, without acidity or acrimony.

Amalgamation of LEAD is thus performed. ??? Melt a proper quantity of pure lead in an iron crucible ; remove the vessel from the fire, and when the metal is a little cooled, add to it an equal weight of clean mercury, which will im- mediately enter the lead with a hissing noise. Stir the 'mixture well together with an iron rod, and when cold it will appear in the form of a softish brittle mass. ??? Bismuth promotes the ac- tion of mercury upon lead in a remarkable manner. Mercury impregnated with one-fourth, one-eighth, or one-twelfth its weight of bismuth, dissolves masses of lead, in a gentle warmth, without the agitation, triture, comminution, or melting heat, necessary for uniting lead with pure mercury.

Amalgamation of PLATINA. Dr. Lewis rubbed together one ounce of platina with six ounces of pure quicksilver, together with a little common salt and water, and a few drops of spirit of salt in an iron mortar. After the grinding had been continued for about six hours, the grains of pla- tina appeared to be coated with the quicksilver, so jui to cohere

together into a kind of imperfect amalgam. After repeating the experiment seve- ral times, and evaporating the mixture, he always found, on examining the dark coloured powder, intermingled with shining particles which re- mained, that a part of the platina was dissolved by the mercury, and that the undissolved grains were coaled with it.

Amalgamation of SILVER is performed in the same manner wilh that of gold ; or it may be previously dissolved in aquafortis, and precipi- tated. Mr. Gellert observes concerning this amalgam, that its specific gravity is not only greater lhan the intermediate specific gravity of the mercury and of the silver, but that it is even greater than the specific gravity of mercury, al- though silver is much lighter. This amalgam is used in the operation of silvering ; and also in making the Arbor Dianae, or the philosophical tree.

Amalgamation of TIN is made in the same way with that of lead. It is used for tinning looking-glasses, and for making mercury balls used in purifying water. Mr. Canton firsl observed that a small quantity of this amalgam, with a little chalk, being rubbed on the cushion 'of a glass globe, or on the oiled silk rubber of a tube, would contribute to increase the power of elec- tricity.

Perhaps the most importanl amalgams are those of gold and silver, and the simplest mode of preparing them is, by taking advantage of the natural affinity, and trusting the combination to the fluidity of the mercury alone. Thus, leaf- gold, by simple trituralion, will form with mer- cury an amalgam in a few minutes ; and pieces of gold, silver, or tin, even of considerable thick- ness, will, without trituration, be dissolved in a few days. The crystalline form of amalgams, ow- ing to their soft or semi-fluid state, at a moderate temperature, distinguishes ihem from the pure metals. Any metal, melted and cooled very slowly, will exhibit in its fracture a crystalline structure, the crystals of which, by particular management, may be exhibited in a slate of sepa-

ralion from each other. Similar appearances may, however, be produced with much greater ease in amalgams. All amalgams are brittle, and any of them, being broken, will exhibit a granular or laminated texture, which, by the microscope, will be found to be owing to a mul- titude of minute crystals, applied by their surfaces to each other, but not adhering with any consi- derable force. M. Sage obtained regular crys- tals of most of the amalgams in the following way : ††† Having prepared a very fluid amalgam, by adding four, five, or six times a greater quan- tity of mercury than of the other metal, he put it into retorl, and proceeded to distillation in a sand- bath, lill a fourth, or even a third, of the mercury had been driven off; the residue, being then allowed to cool very gradually, was found regu- larly crystallized at the bottom of the vessel. He thus obtained silver amalgam in the form of articulated tetraliedrons,aluminifbrm oclahedrons, resembling the native dendritic silver. In the same manner the amalgams of gold, bismuth, tin, and zinc, assumed the form of regular crys- tals ; but it is found that crystals of copper, arsenic, and antimony could not be obtained by this mode.

AMALGAMA, or AMALGAM, is amongst

E= or

chemists expressed by the character

-Idtt The operation of amalgamation it i|-t~

marked by three letters, A A A

AMALTH./EA, in fabulous history, the name t)f the Cumsean Sibyl, who is said to have offered to Tarquin II. nine books, containing the Ro- man destinies, and demanded 300 pieces of gold for them.

He derided her ; whereupon she threw three of them into the fire ; and asked the same price for the other six ; which being de- nied, she burnt three more ; and still demanded the same price. Upon which Tarquin, consult- ing the pontiffs, was advised to buy them. These books were in such esteem, that two magistrates were created to consult them upon extraordinary occasions. The books, and the whole story con- cerning them, appear to have been fabrications of the Roman priests to impose upon that super- stitious people, and increase their own import- ance, by occasionally quoting and pretending to interpret these Sibylline oracles.

AMALTH^A, in pagan mythology, the daughter of Melissus, king of Crete, and the nurse of Jupiter, whom she fed with goats' milk and honey. According to others, Amalthsea was a goat, which Jupiter, after she died, translated into the sky, with her two kids, and gave one of her horns to the daughters of Melissus, as a re- ward for the pains they had taken in attending him. This horn had the peculiar property of furnishing them with whatever they wished for, and was thence called the cornucopia, or horn of plenty. See J^GIS.

AMALTH/KUS, (Jerome, John Baptist, and Cornelius), three celebrated Latin poets of Italy, who nourished in the 16th century. Their com- positions were printed at Amsterdam, in 1685. One of the best pieces in that collection is an epigram on two children, whose beauty was very extraordinary, though each of them was deprived of an eye :

Lumine Aeon dextro, capta est Leonilla sinistro, Et poterat forma vincere uterque deos.

Parve puer, lumen quod babes concede sorori j

Sic tu caecus Amor, sic erit ilia Venus. The following imitation in English, comes far short of the original, but may convey to the un- learned reader a faint idea of the humour of the epigram :

Aeon and Lonilla are

Each of one eye bereft, Tbe boy the right deplores ; the fair

Mourns that she wants the left. Each might with gods in beauty vie.

And could the lad but spare His light, blind Cupid he might be,

And she a Venus fair.

AMANA, a mountain beyond Jordan, in the half tribe of Manasseh.

AMANCE, a town of Tranche Comte, France, the head of a canton in the department of the Upper Saone, arrondissementofVessoul,15 miles north of Vessoul. This place was first assigned to France, at the peace of Baden, in 1714 ; and formerly contained a celebrated abbey, the chap- ter of which was composed of 44 ecclesiastics, one third of whose places were in the gift of the crown. The abbey church is still admired for the boldness and elegance of its architecture. Here are chalybeate waters, much recommended for rheumatism and the stone ; they are impreg- nated with sulphur and salt. The manufactures

have gone to decay, with the exception of a pot- tery, which produces very fine earthen ware ; tne inhabitants of the neighbourhood are chiefly oc- cupied in spinning.

AMANCE, a town of France, seated on a river of that name, six miles east of Nanci, in the de- partment of the Meurthe.

AMAND, ST. a town of France, seated upon the river Cher, in the department of Cher, 25. miles south of Bourges. It was built in 1410, on the ruins of Orval, and is the head of an arrondissement, containing 12 cantons. It has iron works, a cannon foundry, and a great trade in corn and wine. Inhabitants about 5000.

AMAND, ST. a fortified town of France, in the

department of the North, seated upon the river Scarpe, three leagues north of Valenciennes. It contains from 8000 to 9000 inhabitants. Lon. 3►►. 35′. E. lat. 50►►. 27′. N.

AMAND, ST. or AMANS, ST. a town of France, in Languedoc, the head of a canton in the depart- ment of the Lozere, arrondissement of Mende, with 3380 inhabitants. Four leagues north of Mende.

AMAND, ST. or ST. AMAND DE VALHORET, a town of France, on the river Taure, in Langue- doc, the chief town of a canton in the depart- ment of the Tarn, arrondissement of Castres, with 2015 inhabitants. It is 5►► leagues south- east of Castres.

AMAND, ST. a town of France, in the Niver- nois, with 1500 inhabitants, the head of a canton in the department of the Nievre, arrondissement of Cosne ; noted for the manufacture of earthen- ware. 13►► leagues north of Nevers.

AMAND, ST. a town of France, in Champagne, department of the Marne, arrondissement of Vitry, with 1060 inhabitants. It was formerly the seat of a commandery of the order of Malta. 5►► leagues south-east of Chalons.

AMAND DE BOUEX, ST. a town of France, in the Angoumois, with 1410 inhabitants, and for- merly with an abbey ; it is now the head of a canton, in the department of the Charante, arron- dissement of Angoulfeme, from which it is distant north, about four leagues.

AMA ND, ST. (Mark Anthony General, sieur de) a French poet, was born at Rouen, in Nor- mandy, in 1594. His father commanded a squadron of ships in the service of queen Eliza- beth, for 22 years, and our poet was for three years a prisoner in the Black Tower at Constan- tinople ; two of his brothers having been killed in an engagement against the Turks. His lifu was spent in a continual succession of travels. The greater part of his poems are comic

; the best edition is that of 1'aris, in 8 vols. 1649. He died in 1661.

AMANDA VA, in ornithology, a species of fringilla found in Bengal, and concisely de- scribed by Linnaeus, as being of a brown and reddish colour, spotted with white. It is about the size of a wren, or four inches in length ; the upper part of the plumage brown, with a mix- ture of dull red, the under part of the same co- lours, but naked, except the middle of the belly which is darkest. It has been called the Bengal finch, or Amaduvade; in allusion to which Brisson names it Bengalus punctatus, and Buffou

Bengale piquet^. There is a variety of this spe- cies, the Amandava (/?) of Linnseus, hitherto found only in Bengal, which is said to be en- tirely brown, and without spots. It is the Ben- galus fuscus of Brisson, and Bengale brun of Buffon.

AMANDINUS LAPIS, in mineralogy, a gum of various colours, said to resist poisons.

AMANIBO, a river of South America, in Dutch Guiana, which enters the Atlantic, near the lake of Iracubo, in lat. 5►►. 57'. N. ; also a town on the coast between Paramaribo and Ca- venne.

AM AN 1C /E PYUE, ^ Straits in Mount

AMANIDES PYLE, or > Amanus, through

AMANI PORTJE, J which Darius en-

tered Cilicia ; at a greater distance from the sea than the Pylse Ciliciae, through which Alexander passed .

AM AN IT A, in botany, (from ►►, privative, and fiavia, madness, i. e. the least hurtful of all the species,) an old Greek name for fungi in ge- neral,

and used by Ilaller, after Dillenius, for the whole Linncean genus of Agaricus, or nearly so. Persoon adopts it for such species only as are furnished with a volva, which, on that ac- count, he considers distinct. See AGARICUS.

AMANOA, in botany, a genus of the pentan- dria monogynia class and order. Its characters are : CALYX quinquepartite : no COR. ; the ger- men is triangular, the stigma trigonous, concave, and fimbriated. There is one species, viz. A. Guianensis. Aubl. pi. gui.

AMANTEA, a sea-port town of Naples, situ- ated near the bay of Euphemia, in the province of Calabria, 20 miles south-west of C6senza.

AMANUEN'SIS, n. Low Latin, amanuensis, the principal ingredient in which is manus, the hand : one who assists another with his penman- ship, or hand-writing only.

I have no such authority, no such benefactors, as that noble Ambrosius was to Origen, allowing him six or seven amanuenses to write out his dictates j I must for that cause do my business myself.

Burton's Anat. of Mel. Dem. to the reader.

The mirth of the commons grew so very outrageous, that it found out work for our friend of the quorum, who by the help of his amanuensis took down all their names and their crimes, with a design to produce his manuscript at the quarter sessions, &c. &c. &c.

Spectator, No. 617.

AMANUS, in ancient geography, a mountain of Syria, which separates it from Cilicia, the straits of which are the Amanicae Pylae mention- ed above. It is a branch of mount Taurus, ex- tending chiefly eastward, from the sea of Cilicia, to the Euphrates; and is now called Monte Negro, or rather Montagna Neres, by the inha- bitants ; that is, the watery mountain as it abounds in springs and rivulets. It

is cele- brated by Appian as the retreat of wild beasts. Kuvjjy. 1. 3. K.t\iKa►► rt irdysQ nai irp&vaf

A/JLOLVS.

AMAPALLA, a city of South America, in the piovince of Guatimala in Mexico, seated on the gulph of the same name in the Pacific Ocean, 220 miles south-east of the town of Guatimala, and four leagues from St. Miguel. It trades in cochineal, cocoa, indigo, hides, &c.

AMA

AMAPALLA, a large gulf or bay on the west coast of America, between the province of Gua- timala and Nicaragua. It is nearly sixty miles m length, and from nine to thirty in breadth It is also called the gulf of Fonseca. 100 miles north- west of Leon. Lon. 88►►.56'.W. lat. 13►►. 30'. N.

AMARA, in antiquity, a/tdpa, a furrow or channel through which water flows.

AMARA, in medicine, bitters, or the essence of a bitter substance ; of which great use is made in medicine, particularly for bracing the relaxed fibr es of the organs of digestion.

AMARA DULCIS, in botany, the solanum dulc mara. ►►► AMARA INDICA, the momordica charan- tia of Linnaeus.

AMARA (Singha), a Hindoo brahmin of the first century, the author of a Sanscrit dictionary, en- titled, Amara Kocha, including the names of stars, elements, &c. The first part of this dic- tionary was published at Rome by Father Pau- lin, in 1798, entitled, Amara Singha, Sectio Prima de Coelo ex tribus ineditis Codicibus Manuscripts, 4to. A manuscript of the whole is preserved in the royal library at Paris.

AMARACUS, among ancient naturalists. See SAMPSUCHUS.

AMARACUS, in botany, bastard feverfew.

AMARADULUS, in botany; a name some- times given to the woody nightshade.

AMARANTE, an order of knighthood, insti- tuted in Sweden by queen Christina in 1653, at an annual feast; at the close of which she threw off" her habit, which was covered with diamonds, leaving it to be pulled in pieces by the masques. In memory of this ridiculous scramble, she founded a military order, called in Swedish, Ceschilschafft, into which all present at the feast were admitted, including sixteen lords, and as many ladies, besides the queen. Their device was the cypher of Amarante, composed of two A's, the one erect, the other inverted, and inter- woven together; the whole enclosed by a laurel crown, with this motto, ' Dolce nella memoria.'

AMARANTE, a town of Portugal, in Entre- Duero-e-Minho. It has a linen manufacture, and contains about 4000 inhabitants ; 23 miles south-east of Braga.

AM ARANTII, n.) a, not ; and /iapaivw, to

AMARAN'THINE. $ wither. ' Its nature is ex- pressed by its name,' says Pliny, ' since it does not fade." A well-known plant of the descrip- tion vulgarly called Everlasting. The ama- ranthus of poetry is not described, at least by botanists, and is supposed to be imaginary.'

Some roots are yellow, as carrots, and some plants blood-red, stalk and leaf, as the amaranthus.

Bacon's Nat. and Exper. Hutory.

Immortal amaranth ! a flower which once In paradise, fast by the tree of life, Began to bloom ; but soon, for man's offence, To heav'ii removed, where first it grew : there grows. And flow'rs aloft, shading the fount of life ; And where the river of bliss, through midst of heav n, Rolls o'er Elysian flow'rs her amber stream : With these that never fade, the

spirits elect Bind their resplendent locks, inwreath'd with beams. Milton'i Par. Lott. By the streams that ever flow. By the fragrant winds that D.ow O'er the Elysion flow'rs ;

By those happy souls that dwell In yellow meads of asphodel,

Or amaranthine bow'rs. Pff\>e.

Whatever was brought before her, she beheld by the steady light of the torch of truth ; and when her examination had convinced her that the laws of just writing had been observed, she touched it with the amaranthine end of the sceptre, and consigned it over to immortality. Rambler.

The only amaranthine flow'r on earth Is virtue ; th' only lasting treasure, truth.

Cowper's Task, book iii.

AMARANTHOIDES, in botany, the trivial name of a species of illecebrum.

AMARANTHUS, in botany, from a privative, and fiapaiixa, to wither ; because the flower of this plant, when cropped, does not soon wither. Amaranth, or flower-gentle, according to Dios- corides, was a remedy against the bites of ser- pents : A genus of the pentandria order belong- ing to the monoecia class of plants ; and in the natural method ranking under the 54th order, miscellanea: The characters are, the male CAL. a five or three-leaved perianthium, erect, coloured, and persistent : no COR.: STAM. consist of five or three erect capillary filaments, the length of the calyx ; the antherae are oblong and versatile : the female CAL. the same as the male, and no COR. : PIST. an ovate germen ; the styli three, short, and subulated; the stigmata

sim- ple and persistent : PER. an ovate capsule, three beaked, unilocular, and cut round : the seed is one, globular, compressed, and large. Of this genus Linnseus enumerates nineteen species ; the most remarkable of which are : ††† 1. A. bicolor, melancholicus, or two-coloured amaranthus. This greatly resembles the Tri- color, in its manner of growth ; but the leaves have only two colours, which are an obscure purple, and a bright crimson. 2. A. caudatus, with very long hanging cylindrical spikes. This species is a native of America. It has an upright stem, three feet high; the leaves and stalks are of a pale green. Th†† spikes of flowers are produced from the wings of the stalks, and at the extremities of the branches. They are of a bright purple colour, and hang downward, sometimes two feet and a half long, so that many of them touch the ground. 3. A. maximus, or tree-like amaranthus, grows with a strong stem to the height of seven or eight feet. 4. A. oleraceus, with obtuse indented leaves. This has no beauty ; but it is used by the Indians as a substitute for cabbage. 5. A. sanguineus, with compound spikes and oblong oval leaves, a native of the Bahama islands, is an esculent plant, and bears fine flowers. 6. A. tricolor, or three-coloured amaranthus. This has been long cultivated in gardens, on account of the beauty of its variega- ted leaves, which are green, yellow, and red ; very elegantly mixed.

AMARANTHUS is also the thirtieth natural order in Jussieu's system, being the first of his seventh class. The following are the characters of these amaranthi : CAL. divided, more or less deeply, often surrounded by scales at the base : STAM. definite, sometimes distinct, sometimes mona- delphous ; in some genera there are scales alter- nate with the filaments ; in others the combined

filaments form a tube or sheath: GERM, simple, style or stigma simple, or double, or triple : CAPS, of one cell, with an unconnected recep- tacle, and either bursting at the summit, or splitting all round, containing one or many seeds : CORCULUM curved round a farinaceous mass. Flowers capitate or

spiked. Leaves generally undivided and pointed; in some alternate; in others opposite; in a few instances accompanied by stipulas : STEM, for the most part herbaceous Stamens and pistils sometimes in separate flowers.

Under his first section, (leaves alternate, with- out stipulas,) Jussieu enumerates amaranthus and celosia of Linnseus; with aerua of Forskall, a genus formed of alternate-leaved species of ille- cebrum ; and digera of the same author, to which achyranthes muricata of Linnaeus is supposed to belong. ►►. 2. Leaves opposite without stipulas. consists of iresine, achyranthes, gomphrena, and illecebrum. ►►. 3. Leaves opposite, with stipu- las. Here are ranged paronychia of Tournefort, separated from the Linnsean illecebrum ; and her- niaria of all authors. This order, as Jussieu candidly observes, is very nearly related to that of the caryophylleoe. Jussieu, in the Annales du Museum, v. 2. 131., has published some addi- tions to the present order, which, according to a recent alteration in the nomenclature of natural orders, he there terms amaranthaceae. A trans- lation of his paper may be seen in Sirns and Konig's Ann. of Bot. v. 2. 274. To the section with stipulated leaves, he adds three new genera. 1 . Anychia of Michaux, to which belongs queria canadensis of Linnaeus. 2. Lithophila of Swartz. 3. Polychroa of Loureiro. Jussieu also remarks, that cyathula of Loureiro, a plant of this order, is really an acliyranthes with a many-cleft stig- ma; but that polia of the same author, supposed to belong to the amaranthi, is one of the caryo- phyllese.

AMARELLA, in botany, feverfew.

AMARIN, or DAMARIN, a small town of France, in the department of the Upper Rhine, on the Thur, has 1400 inhabitants. It is the head of a canton, and has a good iron trade supplied by the valley of Amarin, which is ricli in that metal.

AMARAWDH, prince of North Wales, the son of Roderick the Great, king of Wales, and the sixth in a direct

line from Cadwallader, the last king of the South Britons, succeeded his fa- ther, A. D. 877, in North Wales, the southern principality being allotted to his brother, and had various wars with the Danes and Anglo-Saxons. He died, A. D. 913, in the 36th year of his reign.

AMARUCO, a river of South America, which traverses the eastern part of Guiana, and falls from the south into the Orinoco, just at its mouth. It is navigable for sloops about ten or twelve miles.

AMARUM, in mineralogy, sulphate of mag. nesia, or Epsom salt ; a genus of mineral sub- stances; class salts; a bitter taste, easily soluble in water, and melting in heat.

AMARUM AJU, a considerable river of South America, in the kingdom of Peru, which rises in the Cordillera of the Andes, in 13►►. 30'. S. lat. It passes through the province of Mojos, and,

after frequently changing its name, enters the Amazons in 4►►. 36'. S. lat.

AMARUS DULCIS ORIENTALIS, in botany, costus.

AMARUS, in mineralogy, a genus of earths, of the class silices, consisting of silica, with a small portion of magnesia, alumina, and carbonate of lime.

AMARYLLIS, lily-asphodel : a genus of the monogynia order, belonging to the hexandria class, of plants ; and in the natural method ranking under the ninth order, spathaceae. The characters are : CAL. an oblong obtuse spatha, emarginated, and withering: COR. six petals, lanced : STAM. six subulated filaments: the^x- THER.E oblong, incumbent and ascending: PIST. a roundish fulcated germen beneath ; a filiform stylus, nearly the length of the stamina: the STIGMA trifid and slender : PER. is an ovate trilo- cular capsule, with three valves : the

seeds are many. The principal species are: 1. A. farin- ensis, or Guernsey lily, is supposed to have come originally from Japan, but has been many years cultivated in the gardens of Guernsey and Jer- sey ; in both which places it seems to thrive as well as if they were in their native country, and from these islands its roots are sent annually to the curious in most parts of Europe. 2. A. for- mosissima, or jacoboea lily, produces its flowers two or three times a year, without being regular to any season. 3. A. lutea, or autumnal narcis- sus. 4. A. Orientalis, or lily daffodil, with leaves shaped like a tongue. This is a native of the Cape of Good Hope. 5. A. Regina, or bel- ladonna lily, is a native of Portugal, where it was formerly cultivated in great plenty ; but of late it has been supplanted by the jacobsea lily, so that the roots which have been brought from that country for some time past for the belladonna, have generally proved to be the jacobaea lily. 6. A. Zeylanica, or Ceylon lily, is a native of the West Indies, and usually flowers in June. Sometimes the same root will flower again in autumn, but the flowers are of no long duration. These three last species of the amaryllis may easily be raised by taking care to shelter them in a stove from the winter's cold.

AMASA, XltfOK, Heb. i. e. sparing the peo- ple: the son (by some supposed illegitimate) of Abigail, the sister of David, by Jether. See 2 Sam. xx. 10.

AMASAI, the son of Elkanah, a principal officer under Saul, who, with a number of his friends, joined David in his exile. 1 Chron. xii.

AMASIA, an ancient city of Germany, now Marpurg, in the landgravate of Hesse, on the Lahn. Acccording to others, it is Embden in Westphalia.

AMASIA, an ancient town of Turkey, in Na- tolia, the capital of the district of that name, and memorable for the birth of Stiabo the geogra- pher. It is the residence of a bashaw, and is seated near the river Iris or Kasalmack, fifty miles north-west of Tocat, and two hundred east of Constantinople. It was

anciently the residence of the kings of Cappadocia. It is commanded by a fort, situated at the highest part of the town, on a sharp-pointed rock, and is surrounded by mountains, so that it can be ap-

proached only by two narrow passes on the north and south, which are so rugged as to be easily defensible. Though an extensive and populous place, the streets are narrow and dirty, and most of the houses are built of wood. The greater part of the inhabitants being Christians, there is only one mosque, a fine edifice with two lofty minarets, all of hewn stone ; of which material the numerous baths, and some few of the better houses, are also constructed. The baths have agreeable promenades in front, with several rows of trees; and the whole are surrounded with a high wall. The river is large and rapid, and affords abundance of water, which is raised by means of wheels nearly thirty feet in diameter, filling buckets on their circumference, which, empty themselves into troughs or reservoirs ; and the water is thence conveyed in pipes to the baths and fountains. A kind of good wine, re- sembling sherry, is made in Amasia; and the environs produce abundance of fruits. The in- habitants are distinguished for their urbanity and attention to strangers, and the women are cele- brated as the fairest and most engaging of all Asia Minor. Population from 60,000 to 70,000 Long. 36►►. 12'. E. lat. 40►►. 40'. N.

AMASIS, first a prime minister, and after- wards king of Egypt. He owed his royal dignity to a very singular circumstance. Apries, kin^ of Egypt, or, as he is called in scripture, Pharaoh Hophra, having by his oppressions excited the Egyptians to revolt, sent his minister Amasis to pacify them ; when the people, while he was haranguing them, brought a crown and othei ensigns of royalty, and forcing them upon him proclaimed him king. He was afterwards countenanced by Nebuchadnezzar, king of Ba- bylon, who assisted him against Apries. He made a law that all his subjects should annually give an account of their means of support ; and refused to continue his alliance with Polycrates, of Sicily, on account of

his extraordinary pros- perity. The close of his reign was, however, very different from its commencement. Having by some means or other incurred the displeasure of Cambyses, the Persian monarch prepared to invade Egypt, and derived effectual assistance from Phanes, of Halicamassus, who commanded the Greek auxiliaries in the pay of Amasis. But Amasis was rescued from the evils that were gathering round him, by death, B. C. 525, after a reign of forty-four years. His body being em- balmed, was deposited in a sepulchre which he had built for himself in the temple at Sais. The reign of his successor, Psammenitus, was short and calamitous; and the victorious Persians, after his defeat, capture, and death, took the body of his father Amasis from the tomb, man- gled it in a shocking manner, and then burnt it to the great disgust of the Egyptians. ††† Herod. i. ii. iii.

AMASONIA, in botany, a genus of the an- giospermia order, belonging to the didynamia class of plants. The characters of which are : CAL. a tripartite monophyllous perianthium, bell- shaped and persistent : COR. monopetalous and tubular; the border quinquefid, expanding and small : STAM. four filaments longer than the co rolla; the anthene oval and incumbent: PIST

an ovate germen ; the stylus the length of the stamina ; the stigma two, acute : there is no pe- ricarpium : SEED an ovate unilocular nut, the length of the calyx.

AMASS', v. & n. \ Fr. amasse ; Lat. massa ;

AMASS'KENT. J Gr. p.a

The last is the compounded order : His name being a brief of his nature. For this pillar is nothing in effect, but a medly, or an amasse of all the prece-

dent ornaments. ReliqtdeB Wottonianee.

The rich man is not blamed, as having made use of any unlawful means to amass riches, as having thriven by fraud and injustice. Atterbury's Ser.

When we would think of infinite space, or dura- tion, we, at first step, usually make some very large idea, as perhaps of millions of ages, or miles, which possibly we double and multiply several times. All that we thus amass together in our thoughts, is posi- tive, and the assemblage of a great number of positive ideas of space or duration. Locke.

AMASTRIS, AMASTRO, a sea-port of Ana- tolia, in Turkey ; but its two harbours have been long choked up with sand ; and little of its ancient splendour now remains, except some ruins.

AMATA, in fabulous history, the wife of king Latinus, and the mother of Lavinia, who hanged herself that she might not see ./Eneas married to her daughter.

AMATARIA, in entomology, a species of the Phalaena, of the geometra family, that inhabits Europe. The wings are angulated, of a pale brown, slightly speckled, with an obsolete darker waved streak, and a straight purple line across the middle. It is produced from a green larva, with yellow rings, that feeds on the leaves of oaks. Linntsus. Don. British Insects, tab. 33. fig. 2.

AMATE'. A. S. meet. To drears: to be made stupid ; senseless.

But thought and sicknesse were occasion That he thus lay in lamentation, Grouffe on the ground, in place desolate Sole by himself, awhaped and ornate. Chaucer. Complaint of the Blacke Knight, f. 271, c. 3. Upon the wall the pagans old and young Stood hush'd and still, amated and amazed.

Fairf. b. xi. xii. No more appal'd with fear Of present death, than he whom never dread Did once

amate. O. PL 2. 214.

For never knight, that dared warlike deed, More luckless disadventures did amate.

Spent. 1. 2. 1. 9. 45.

AMATEUR. Fr. one who has a taste for an art, but does not practise it professionally.

It must always be to those who are the greatest

amateurs, or even professors of revolutions, a matter

very hard to prove, that the late French government

was so bad, that nothing worse, in the infinite devices

of men, could come in its place. Burke.

AMATH, in ancient geography, a town of

Phoenicia, sacred to Venus ; which had an ancient

temple dedicated to that goddess.

AMATHA, a city on the Jordan.

AMATHUS, an ancient town in the south of

IS.

I Amo ; amator : to >love; a lover. Of, \ or concerning love.

Cyprus, so called from Amathus the founder; of from Amath in Phoenicia. It had a very ancient temple of Venus and Adonis : and, according to Ovid, was rich in copper ore. It is now called Limisso.

AMATHUS, a town of the tribe of Gad, beyond Jordan ; but at what distance from it, is not determined.

AMATI, a violin maker of Cremona, who lived about the year 1600, and by his own and his family’s skill

gave name to the Amati violins, which are still considered, with the exception perhaps of Stainer's, the first in the world. They are also called Cremonas.

AMATOR'IAL, adj.

AMATOR'IOUS,

AMATOR'IAN,

AM'ATORY.

They seem to have been tales of love and chivalry,

amatorial sonnets, tragedies, comedies, and pastorals.

Warton's Hist. Eng. Poetry, iv. 7.

It is the same thing whether one ravish Lucretia by force, as Tarquin, or by amatory potions not only allure her, but necessitate her to satisfy his lust, and incline her effectually, and draw her inevitably, to follow him spontaneously. Bramhall against Hubbes.

AMATORII MUSCULI, in antiquity, a term sometimes used for the obliquus superior and obliquus inferior muscles of the eye, as these muscles assist in ogling, or drawing the eye sideways.

AMAURI I. and II. kings of Jerusalem : the first succeeded to the throne in 1163, and was a courageous and enterprising prince, but these qualities were sullied by avarice and cruelty. He died in 1174. ††† Amauri II. succeeded his brother, Guy de Lusignan, in 1194; his title was contested by Isabella, second daughter of Amauri I. ; but on her becoming a widow, he married her, and was crowned. The Saracens having taken his capital, he applied for assistance to the European princes, but before the succours arrived he died, in 1205.

AMAUROSIS, from a/iaupow, to darken, in medicine, is by some defined to be a deprivation of sight, the

eye remaining fair and seemingly unaffected. A perfect amaurosis is when the blindness is total ; when there is still a power of distinguishing light from darkness, the disease is called by M. de St. Ives an imperfect amau- rosis. There is a periodical sort which comes on instantaneously, continues for hours or days, and then disappears. Mr. Hey, surgeon at Leeds,, mentions several cases of patients afflicted with the amaurosis who were relieved by being electrified.

AMAZE', v. & n.^\ From the Dutch, missen: AMA'ZEDLY, I to miss, to err, to wander.

AMAZED', | Hence maze, a labyrinth

AMA'ZEDNESS, }*To maze occurs in our AMAZE'MENT, I older writers. To effec AMA'ZING, | with what is incompre-

AMA'ZINGLY. J hensible; to confound, perplex, astonish, stupify.

I am right siker, that the pot was erased ; Be as be may, be ye no thing amased. As usage is, let swepe the flore as swithe ; Plucke up your hertes and be glad and blithe. C/Mucer. The C/tuncnes Yemannes Tale.

AMAZONS.

Heare O Israeli, ye are come vnto battell as;Bnste yor encmyes,lct not your hartes faynte, neither "feare, nor be amased nor a dread of them.

Bible, 1539. Deuteronomie , c. xx. Yea, I will make many people amazed at tb.ee, and their kings shall be horribly afraid for thee, when I shall brandish my sword before them, and they shall tremble at every moment ; every man for his own life in the day of the fall. Ezekiel

He answer'd nought at all ; but adding new Fear to his first amazement, staring wide, With stony eyes, and heartless hollow hue, Astonish'd stood, as one that had espy'd Infernal furies, with their chains

unty'd.

Faerie Queene. But look '. amazement on thy mother sits ;

0 step between her and her fighting soul : Conceit in weakest bodies strongest works. Shalup.

But why Stands Macbeth thus amazedly ?

Come, sisters, cheer we up his sprights. Id.

He ended, and his words impression left

Of much amassment to th' infernal crew,

Distracted and surpris'd with deep dismay

At these sad tidings. Milton.

Fairfax, whose name in arms thro' Europe rings, And fills all mouths with envy or with praise, And all her jealous monarchs with amase. Id.

Meantime the Trojan cuts his wat'ry way, Fix'd on his voyage, through the curling sea; Then casting back his eyes with dire amase, Sees on the Punick shore the mounting blaze. Dry.

Al.M. As when some dreadful thunder-clap is nigh, The winged fire shoots swiftly through the sky ; Strikes and consumes ere scarce it does appear, And by the sudden ill prevents the fear : Such is my state in this amazing woe, It leaves no power to think, much less to do.

Dryden's Indian Emperor. An amphitheatre's amasing height Here fills my eye with terror and delight, That on its };ul>lic shows, unpeopled Rome, And held, uncrowded, nations in its womb. Addison.

It is an amazing thing to see the present desolation of Italy, when one considers what incredible multi-tudes it abounded with during the reigns of the Roman Emperors. Addison.

Know'st thou the importance of a soul immortal ?

Behold this midnight glory, worlds on worlds ! Amazing pomp ! redouble the amaze ! Ten thousand add, and twice ten thousand more ; Then weigh the soul, one soul outweighs them all.

Young.

AMAZIAH, the eighth, or including the usurper Athaliah, the ninth monarch of Judah, succeeded his father Joash, A.M. 3164, or ac- cording to Alstedius, A. M. 3109. See 2 Kings, xiv. and 2 Chron. xxv.

AMAZIAH, the priest of Bethel, under Jero- boam, II. king of Israel.

*AM'AZON, n. \ Gr. a, without ; /*a□□oc, the*

AMAZO'NIAN. Abreast. A warlike woman, a virago.

When the strong town of Hennebond, near Rennes, was besieged by the French, this redoubtable amazon [the Countess of Montfort] rode in complete armour from street to street, on a large courser, animating the garrison. Wartm's Hist. Eng. Poetry, i. 254.

1 do not with less willingness own my weakness than my sex, being far from any such amazoman boldness as affects to contend with so many learned and godly men. Bp. Taylor's Artificial Handsomeness.

AMAZONIA, a country of South America, situated between the equator. Its twundaries VOL. I.

are: on the north, Terra Firma and Guiana; on the east, the Atlantic Ocean and Brazil ; on

the south, Paraguay ; and on the west, Peru.

This country was first discovered, and so named, by Francisco Orellaua, who, about the year 1541, in a bark manned with fifty soldiers, was borne down by the stream of the river Napo into the channel of the Maragnon ; and pretended to have discovered along

its banks nations so rich that the roofs of their temples were covered with plates of gold ; he also described a warlike and powerful republic of women, who, with arms in their hands, opposed his passage, and hence he called the country Amazonia; and the river, which had formerly been denominated Maragnon Amazon.

AMAZONIUM, aplace near Athens, so callei from a battle fought between the Athenians ancf the Amazons.

AMAZONIUS, in pharmacy, a kind of pastil, or troche, anciently used against risings of the stomach and vomitings. It is composed of small- age, anise-seed, wormwood, myrrh, pepper, castorium, opium, and cinnamon.

AMAZONS, in antiquity, a nation of female warriors, who are said to have founded an em- pire in Asia Minor, upon the river Thermodoon, along the coasts of the Black Sea, as far as the Caspian ; and to have formed a state from which men were excluded. What commerce they had with that sex was only with strangers, and that for the purpose of continuing the race; they killed all their male children ; and they cut off the right breasts of their female ones, to make them more fit for the combat. From that last circumstance it is, that they are supposed to take their name, which is compounded of the priva- tive a and pa►►oe, breast. But Dr. Bryant, in his Analysis of Ancient Mythology, explodes this account as fabulous; and observes, that they were in general Cuthite colonies from Egypt and Syria, who formed settlements in different countries, and that they derived their name from zon, the sun, which was the national object of worship. It has indeed been controverted, even among ancient writers whether there really ever were such a nation as that of the Amazons. Strabo, Palsephatus, and others, deny it ; whilst Herodotus, Pausanias, Diodorus Siculus, Trogus Pompeius, Justin, Pliny, Mela, Plutarch, &c. expressly assert their existence. The most an- cient Greek writers mention the Amazons. In the third book of the Iliad, Priam speaks of having been present in

a battle with them ; and some of them are said afterwards to come to the assistance of that prince during the siege of Troy. They are also mentioned by Herodotus, wl says that the Grecians defeated them on the river Thermodoon. After their victory, they carried off all the Amazons they could take alive, in three ships. But while they were at sea, the Amazons conspired against the men, and killed them all. Having no knowledge of navigation, they were now driven by wind and tide towards the precipices of the lake Msotis, in the Scy- thian territories. Here they went ashore, seized the first horses they met with, and began to plun- der the inhabitants. The Scythians at first supposed them to be men; but after they had

taken some prisoners, and discovered them to be women, they were unwilling to carry on hosti- lities against them. By degrees a number of the young Scythians took .these gentle dames as wives, who prevailed with their husbands to re- tire to Sarmatia. ' Hence,' says Herodotus, ' the wives of the Sarmatians continue their ancient way of living. They hunt on horseback in the company of their husbands, and sometimes alone ; they march with their armies, and wear the same dress with the men : and no virgin is permitted to marry till she has killed an enemy in the field. Diodorus Siculus has decribed a similar people ###who dwelt near theThermodoon,who were subject to the government of women, and in which females managed all the military affairs like men. Justin represents the Amazonian republic to have arisen in Scythia. The Scythians had a great part of Asia under their dominion up- wards of 400 years, till they were conquered by Ninus, the founder of the Assyrian empire. After his death, which happened about 1150 years before the Christian aera, and that of Semi- ramis and their son Ninias, Ilinus, and Scolo- pites, princes of the blood-royal of Scythia, were driven from their country by other princes, who like them aspired to

the crown. ??? They departed with their wives, children, and friends; and being followed by a great number of young peo- ple of both sexes, they passed into Asiatic Sarmatia, beyond mount Caucasus, where they formed an establishment, and supplied themselves with what they wanted, by making excursions into the countries bordering on the Euxine sea. The people of those countries, exasperated by the incursions of their new neighbours, united, surprised, and massacred the men. The wo- men then resolving to revenge their death, and to provide for their own security, formed a new kind of government; chose a queen; enacted laws ; and maintained themselves, without men ; for ever renouncing marriage, which they con- sidered an insupportable slavery. For the con- tinuance of the race, however, they made a law to go every year to the frontiers, and invite men to come to them, but to leave them as soon as they were pregnant. The female infants amang the Amazons were educated ; but the boys, if we believe Justin, .were strangled at the moment of their birth. According to Diodorus Siculus, they crippled their legs and arms, so as to ren- der them unfit for military exercises. Quintus Curtius, Philostratus, and Jordarus, say, that the less savage sent them to their fathers. Their right breast is said to have been burnt off, by applying to it, at eight years of age, a hot brazen instrument; but other writers state that this breast was constantly compressed from infancy, so as to prevent its growth, at least so far as to hinder its ever being incommodious in war.

Plutarch, in his life of Theseus, speaks of a battle which had been fought between the Athenians and the Amazons at Athens, and says, that the graves of those that were slain, were to be seen in the streets that lead to the gate Piraica, by the tem- ple of the hero Chalcodue. In another place he states, that ' it appears, that the passage of the Amazons through Thessaly was not without oppo- sition ; for there are yet to be seen many of their

sepulchres near Scrotusxa and Cynocephalae. And in his life of Pompey, that, ' they inhabit those parts

of mount Caucasus that look toward the Hyrcanian Sea, (not bordering upon the Albanians, for the territories of the Getse and the Leges lie between) : and with these people do they yearly, for two months only, accompany and cohabit near the river Thermodoon. Quin- tus Curtius states, the nation of the Amazons to be situated upon the borders of Hyrcania in the plains of Thermiscyra. Their queen was named Thalestris, and she had under her subjection all the country that lies between mount Caucasus and the river Phasis. This queen came out of her dominions, in consequence of an ardent desire she had conceived to see Alexander, and sent messengers to acquaint him that she was come to have the satisfaction of an interview. Having obtained permission to visit him, she advanced with 300 of her Amazons, leaving the rest of her troops behind ; and arriving within sight of the king, leaped from her horse, holding two javelins in her right hand. She surveyed Alexander with an undaunted countenance, and narrowly examined his person ; when the king having asked whether she had any thing to de- sire of him, she replied, without scruple or hesi- tation, that she was come with a view to have children by him. Their offspring, if of the female sex, she would retain herself; and if of the male sex, it should be delivered to Alexander. He then asked her whether she would accompany him in his wars. But this she declined, alleg- ing that she had left nobody to take care of her kingdom. Having accomplished her object, she returned home. Justin repeatedly mentions this visit of Thalestris to Alexander, and says, ' she performed a march of twenty-five days in order to obtain the meeting. The interview between Alexander and Thalestris is likewise men- tioned by Diodorus Siculus. The Amazons are represented as being armed with bows, arrows, and javelins; and also with an axe of a particular construction. According to the elder Pliny, it was invented by Penthesilia, their queen, who went to the Trojan war. On many ancient medals are representations of the Ama- zons, armed with these axes. They are also said to have had bucklers in the shape of a half-moon. The Amazons are

mentioned by many other an- cient authors besides those which have been enumerated; and if any credit be due to the accounts concerning them, they subsisted through several ages.

The ancient medals and monuments on which they are represented are also very numerous. The Abbe Guyon speaks of the history of the Amazons as having been regarded by many per- sons as fabulous, ' rather from prejudice than from any real and solid examination.'

Among the striking instances of Amazonian conduct in modern ladies, may be mentioned that of Jane of Belleville, widow of Mons. de Clisson who was beheaded at Paris in the year 1353, on a suspicion of carrying on a correspon- dence with England and the Count de Montfort. This lady, filled with grief for the death of her husband, and exasperated at the ill treatment which she considered him as having received,

sent off

put to sea, to revenge the death of her husband upon all the French with whom she should meet. This female corsair made several descents upon Normandy, where she stormed castles ; and the inhabitants of that province were spectators more than once, whilst their villages were all in a blaze, of one of the finest women in Europe, with a sword in one hand and a torch in the other, urging the carnage, and eyeing with plea- sure all the horrors of war.' Mezerai, says, that during the crusade in 1147 '"many women did not content themselves with, taking the cross,

hernia.

AMAZOXS, M ARAGNON or ORELLANA, a river of South

America, and one of the largest in the world. It rises in Peru, between two ridges of the Andes, in about sixteen degrees of south la- titude, under the name of the Apurimac ; and flows northerly over a country overspread with forests ; and expanding, by means of numerous tributary accessions, forms the Ucayale, about 300 geographical miles from its source. From

squadrons of females, which rendered credible all that has been said of the prowess of the Amazons.' In 1590, the League party obtained some troops from the king of Spain. Upon the news of their being disembarked, Barri de St. Auriez, Henry IV's governor at Lucate, sent out to communicate a scheme to the Duke de Mont- morenci, commander of that province. He was taken in his way by some of the troops of the League, who were also upon their march with the Spaniards towards Leucate. They were persuaded that, by thus having the governor in their hands, the gates of that place would be immediately opened to them, or at least would not hold out long. But Constantia de Cecelli, his wife, after having assembled the garrison, put herself so resolutely at their head, pike in hand, that she inspired the weakest with courage ; and the besiegers were repulsed wherever they presented themselves. Shame and their great loss having rendered them desperate, they sent a message to the courageous woman, acquainting her that if she continued to defend herself they would hang her husband. She replied, with tears in her eyes, ' I have riches in abundance : I have offered them, and I do still offer them^ for his ransom ; but I would not ignominiously purchase a life which he would reproach me with, and which he would be ashamed to enjoy. I will not dishonour him by treason against my king and country.' The besiegers having made a fresh attack without success, put her husband to death, and raised the siege. Henry IV. after- wards sent to this lady the brevet of governess of Leucate, with the reversion for her son. The famous maid of Orleans is a shining example of female courage and patriotism, well known to every reader ; and her

fate is an everlasting dis- grace to the tyrant who murdered her. See JOAN OF ARC. In the end of the eighteenth century, the enthusiasm of French liberty and equality excited many females of that nation to commence Amazons, and follow their husbands, brothers, and lovers, to victory or death. The Abbe Arnard, in his memoirs, speaks of a countess of St. Balmont, who used to take the field with her husband and fight by his side. She sent several Spanish prisoners of her taking to Marshal Feuquires ; and, what is not a little extraordinary, this Amazon at home was all affability and sweetness, and gave herself up to reading and acts of piety. John de los Sanctos, a Portuguese author, in his description of Ethio-

distance of about six degrees, where it unites with the Tunguragua, and forms the Amazon. It then nakes an easterly course, or nearly so, across the continent ; and, after traversing 4000 miles, rolls its vast tide into the ocean with such violence that it repels all other waters, and car- ries its own stream pure and unmixed to the dis- tance of eighty leagues. This circumstance is the more remarkable, as it is calculated that from Obidos, 400 miles from its mouth, the ground does not decline more than four feet. This river is navigable up to the very foot of the Andes, and is, at its mouth, 180 miles wide. The principal branches of the Amazon from the south are: 1. The Tunguaraque and Ucayale, already described ; 2. The Madeira, its princi- pal tributary, which rises in the United Provinces near Potosi, about 20►► S. lat. ; and passing under various names into Brazil is joined by numerous other rivers, and rolls in a north-easterly direc- tion to the Amazon, after a course of 2000 miles ; 3. The Tocantins, which enters the Amazon near its mouth, after a course of about 1500 miles. Its tributary, the Arasruay, rises between the parallels of 18►► and 19►► of south latitude. The other important tributaries of the Amazon from the south are, the Jutay, the Juruay, and i the Puros, which join it between the Ucayale and the Madeira; and the Tapnjos and Xinsru, which join it between the

Madeira and the Tocantins. The principal rivers which fall into the Amazon on its northern bank are, the Napo, the Icaor, the Putumayo, the Jupura, and the Negro, the last of which is remarkable for sending off a branch towards the north, which, under the name of Cassiquiari, falls into the Orinoco, and unites, by this means, the Amazon with that magnificent stream. All the rivers which rise on the eastern declivity of the Andes, between the parallels of 2►► north latitude and 20►► south, including a space of 1600 or 1700 miles, contribute to swell the waters of the common channel, by which this immense portion of South America is drained of its waters. The basin of the Amazons has been calculated at more than 1500 miles from north to south, and upwards of 200 from east to west, including a superficial area of 3,000,000 square miles, or nearly half of South America.

The banks of this river are clothed with im- mense and impenetrable woods, abounding with bears, tigers, leopards, wild boars, snakes, and serpents. Alligators are numerous, and fre- quently grow to the length of thirty feet. They are often seen stretched along on the banks, in appearance like long branches of timber covered 3 A *

vrtlt lough dry bark. Turtles are numerous and excellent. Tortoises, or land-turtles, are found on the neighbouring shores. The neighbouring woods abound with a variety of birds of the most beautiful plumage, and with innumerable apes of the most extravagant and ridiculous appear- ances. The vegetable productions are ►►► cocoa, cinnamon, vanilla, pines, coffee, sugar-canes, plantains, lemons, limes, oranges, wax, storax, copal, rice, maize, balsams, resins, and medicinal plants. Woods, extremely precious, of every kind, colour, and size, are found here ; as cedar, redwood, &c. ; some of which are extremely hard, and resemble ebony. The current of this river is violent, and its depth

unfathomable. The swellings and freshes which come on with the periodical rains are very great; the whole of the numerous islands in the channel of the river are then overflowed ; many of them change their places on some occasions ; others are formed by the new channels, which the boundless im- petuosity of the river is accustomed to make for itself.

The climate of the countries watered by this stream is hot, moist, and unhealthy, especially on the shores. Countless varieties of mosqui- toes, and other venomous insects, are nourished and invigorated by the damp exhalations fo- mented on its banks by the influence of a burn- ing sun. The river above the Pongo, a Spanish name for the narrow channel of the mountains, through which rivers emerge previously to their spreading over the plains, runs down a moun- tainous channel, and exhibits numerous cata- racts, rapids, &c. At the Pongo the stream is suddenly contracted from a breadth of 1600 to 160 feet, and the current becomes amazingly rapid, so that a canoe or any other species of boat would inevitably be driven at the mercy of the stream, and dashed to pieces on the rocks. The difficult parts of the river are therefore passed in rafts of a particular construction, called Balses. In these, the different beams of which they are composed are neither dove- tailed nor nailed together, but are fastened by twigs called lianas, which ar.e extremely flexible and elastic ; so that when the raft strikes with violence against the rocks, the lianas have the effect of a spring, and by their elasticity deaden the shock. The greatest danger to which the navigator is ex- posed, is being carried by eddies out of the cur- rent, which he may find it almost impossible to regain. This accident happened to Condamine in navigating this river ; and he relates that a short time before a missionary was thus drawn into the vortex, was kept in it for two days destitute of provisions ; and but for a providen- tial swell of the river, which brought him again into the current, might have perished for want.

Condamine calculated, that in the narrowest part he was carried on his raft at the rate of two toises per second, which is equal to rather more than nine miles an hour. After he had emerged from this range of hills, he describes the aspect of tne country as a maze of lakes, rivers, and canals, penetrating in every direction the gloom of an immense forest, which but for them were forbidden access to. New plants, new animals, and new races of men, were exhibited to view.

' Accustomed during seven years to mountains lost in clouds, 1 was wrapt in admiration at the wide circle embraced by the eye, restricted here by no other boundary than the horizon, save where the hills of Pongo, soon about to disap- pear, raised themselves to chequer the constant monotony of the scene. To the crowd of vary- ing objects which diversify the cultured fields of Quito, and which still presented themselves to the imagination, succeeded the most uniform contrast, the whole that was to be seen being verdure and water; for the earth is so thickly covered with tufted plants and bushes, that it is trodden, but not perceived ; to find a barren space, though but a foot square, requires a world of toil. Below Borja, and 400 or 500 leagues be- yond, on falling down the river, a stone, nay a pebble, is an object rare as a diamond. The savages of these countries, indeed, have no con- ception of stones, and when on visiting Borja they first perceive them, the wonder they occa- sionis admirable to behold ; every gesture betokens surprise; they collect them together, and load themselves with the precious burden, till, begin- ning to notice their abundance, they finally dis- regard, and throw them away.'

The first European who visited the river Ama- zons was Francis d'Orrelana, who, having met with some armed women or Amazons on its banks, conferred upon the river its present name. He embarked in 1539, on a river in the vicinity of Quito; and being carried by subordinate streams into the main current of the Amazons, he arrived at the North Cape, in Guiana, after a navigation of more than 5000 miles. In 1568, Pedro de Ursoa fell into this river from a tribu-

tary stream on the southern side ; but he pe- rished in the course of his voyage by the hands of his followers, who afterwards descended the stream to its mouth. It was afterwards ascended in 1638, by Pedro Texeira, whose voyage was printed, together with a chart of the course of the river. In 1707, a new chart was published by Father Fritz, who had traced the Amazon throughout its whole length ; but, for want of the necessary instruments, could not fix with any degree of accuracy the position of particular points. In 1743 and 1744 it was navigated by Monsieur de Condamine, of the royal academy of sciences at Paris ; who has published a correct map of its course.

A tradition long prevailed among the Spanish missionaries, that this river and the Orinoco were joined together by some of their subordinate streams, but no clear evidence was brought for- ward in favour of the fact, until the illustrious Humboldt, who in the course of his journies into the interior penetrated from the Rio Negro, a branch of the Amazons already described, to the Cassiquiari, and ascending its stream arrived in the main channel of the Orinoco.

AMBA, in botany, the manga, indica, or mango tree, called also ambalam and ambe.

AMBAGES, n. A circuit of words ; an in ??? direct manner of expression.

Calchas led us with ambages, That is to saine, with double wordis slie, Such as men clepen a word with two visages.

Chaucer. Troihts fy Cressida, v. 897.

AMBASSADOR.

Ejiigramma in which every mery conceited man,

might, without any long studie or tedious ambages,

make his frend sport, and anger his foe, and give a

prettie nip, or shew a sharpe conceit in a few verses.

Puttenham. Art of Poesie, lib. 1. c. 27.

They gave those complex ideas names, that they might the more easily record and discourse of things they were daily conversant in, without long ambages and circumlocutions ; and that the things they were continually to give and receive information ahout, might be the easier and quicker understood. Locke.

AMBAHLAU, or AMBALAYA, a large town in the province of Delhi, 126 miles north by west from the city of Delhi, and belonging to Sheik chiefs. It is a walled town, and has a large citadel. The houses are mostly built of burnt bricks, but the streets are so narrow as scarcely to allow room for an elephant to pass. Lat. 30□□. 21'. N. long. 76□□. 17'. E.

AMBA-GESHEN, a rock in Abyssinia, in the dis- trict or independent state of Amhara of pro- digious steepness, and almost impregnable. Its summit is said to be about half a Portuguese league in breadth, and the circumference at the bottom about half a day's journey. The ascent at first is easy ; but grows afterwards so pre- cipitous, that the Abyssinian oxen, which will otherwise clamber like goats, must be craned up, and let down with ropes. Here the princes of the blood were formerly confined, a circumstance to which Dr. Johnson so finely alludes in the open- ing chapter of his Rasselas, prince of Abyssinia.

AMBAIBA, a tree in Brazil, called by the Indians tipisca.

AMBALAM, in botany, an Indian tree, the fruit of which is a kind of kernel that is good to assuage pains in the ears ; of the root is made a pessary that promotes the menstrual discharge. The bark converted into a powder is beneficial in dysenteries, and a decoction of its wood is given with success in gonorrhoeas. Rail. Hist. Plant.

AMBARVALE CARMEN, the song or prayer used at the festival of the AMBARVALIA, which see. A formula of it is preserved in Cato, De Re Rustica, cap. cxlii.

AMBARVALE SACRUM, the sacrifice offered at the Ambarvalia. See next article.

AMBARVALIA, in antiquity, a festival among the Romans celebrated annually in honour of Ceres, in order to procure a happy harvest. At these feasts they sacrificed a bull, a sow, and a sheep, which, before the sacrifice, were led in procession thrice around the fields ; whence the feast is supposed to have taken its name ; from the Greek a^t, about ; or the Latin ambio, I go round ; and ai vum, a field. ††† Though others write it, ambarbalia, and ambarbia, and deduce it from ambire urbem, to go round the city. From the beast offered in sacrifice, the ceremony was also called suovetaurilia. The ambarvalia were of two kinds, public and private. The private were those solemnized by the masters of families, accompanied with their children and servants, in the villages and farms out of Rome. They walked three times round the grounds, every one being crowned with leaves of oak, and singing hymns in honour of Ceres. After the procession they went to sacrifice. The pub- lic ambarvalia were those celebrated in the boundaries of the city, and in which twelve

priests, called fratres arvales, officiated pontifi- cally, walking at the head of a procession of the citizens, who had lands and vineyards at Rome. These festivals were annual, some say twice a year, viz. in January or April, and in July or August. Some make a quinquennial ambar- valia, performed once every lustrum, or fifth year.

AMBARVALIS FLOS, in botany, a name gi- ven by some authors to the polygala, or milk- wort.

AM'BASSY, n. ~]

AMBASSADE',

AMBAS'SADOUR, *** ***** 2tarfJ ;

AMBASSADRESS, .tanbascfor: one who waits

AM'BASSAGE, for resides near the highest

AMBASSATRIE, authorities.

AMBAS'SIAT. J

Go ye therfore as trustye ambassailotiret, aud stickynge to me your authour ; teache fyrst the Jewes, than the next nyghboures vnto them, afterwardes all the natios of the whole world.

Udall. Math. cap. xxviii.

Maximilian entertained them with dilatory an- swers ; so as the formal part of their ambattage night well warrant their further stay. Bacon.

Give first admittance to th' ambassadovrs. Shahtp.

Rais'd by these hopes, I sent DO news before, Nor ask'd your leave, nor did your faith implore ; But come without a pledge, my own ambassadour.

Dryden

Well, my ambassadress

Come you to menace war, and loud defiance ?

Or does the peaceful olive grace your brow 1 Rowe .

AMBASSADOR, or EMBASSADOR, the represent- ative of one sovereign power to another, to which he is sent properly accredited. The ori- gin of the domestic management of a state, is not the whole of government ; every country has neighbours and is obliged to look abroad, to discover how its interests are affected by die countries around it ; to discern with sagacity in what manner they may be either injured or best promoted, and to take wise measures to prevent the one, or to second the other

: to accomplish this with the fullest effect, a skilful agent seemed necessary on the spot, to suggest views and mo- tives, to represent the circumstances of his own country in the most favourable light, and those of the country to be opposed in the most un- favourable. It was soon found that all the na- tions in Europe had some ties of connexion, and that the views of no one country could be mo- delled to the purposes of another without pro- ducing a correspondent effect on the views of all the other countries which fell within this great circle of connexion ; the foreign politics of mo- dern nations became in this manner very com- plicated ; each was obliged to direct its attention not to one or a few, but to all the nations, to per- ceive how its interests were likely to be affected by any one. As it became necessary to transact business of so much consequence with the rulers or ministers of a nation's government, it \yas found advisable to send men possessing high dignity in their own nation. Thus the title of agent was exchanged for that of ambassador, and complication, finesse, and aristocracy, con- tinue to support the title. See Lord Chester, field's Letters to his Son, passim. Ambassadors

are either ordinary or extraordinary : ambassa- abbey the unbuned coffins of two oors ordinary are those stationed at a foreign ambassadors, whose bodies were ai rested after court to preserve a good understanding between death. It has been enquired what violations of the court sending tliem and that to which they the criminal code of a country ought to be are sent : the signing and countersigning of punished in an ambassador ? The modern usage passports, the general protection of trade, and is to consider him amenable to his own sove- the transmission of intelligence, as far as it can reign only, in all cases, excepting that of treason interest their respective courts, are the chief against the state where he resides, which is a

duties of their office. Ambassadors extraordi- violation of the law of nations. Instances to the nary are those deputed on some important occa- contrary, however, have occurred in former sion, and are generally surrounded with supe- times. In 1654 the brother of the Portuguese rior pomp and splendour. Till within these ambassador, who is said to have been jointly 200 years, ambassadors in ordinary were not accredited with him to the English court, was heard of: all, till then, were ambassadors extra- tried, condemned, and beheaded for murder ; ordinary ; that is, such as are sent on some par- the only difference made between his punish- ticular occasion, and who retire as soon as the ment and that of some of his servants, who were affair is despatched. By the law of nations, none also implicated, was in the mode of execution, under the quality of a sovereign prince can send When the duke de Sully resided at this court as or receive an ambassador. The privileges of ambassador of Henry IV. of France, being in- ambassadbrs are various. By the law of Europe, formed that one of his gentlemen had murdered a and of most civilized nations, not only the per- man at a bagnio, he sent a message to the magis- son of the ambassador is inviolate, but his whole trates of the city, that they might take the offender train are exempt from the municipal law of the and proceed with him according to law ; but country where he resides. On the breaking out though he was tried and condemned, the British of a war, the ambassador, with all his attendants monarch thought proper to grant him a pardon and property, is permitted to retire home. No- tice may be given that an ambassador will not be received ; and if this caution be neglected, they may be taken for enemies ; but if admitted, though by enemies in arms, they are entitled to the protection of the law of nations ; and the ordinary respect paid to a flag of truce proceeds upon this principle. The Turks have, indeed, thrown ambassadors into the castle of the Seven Towers at Constantinople, on the commence- ment of hostilities, and even mutilated their per- sons; but the porte, of late, has shewn a dispo- sition to follow the humane usage of other courts.

By statute, 7 Anne, cap. 12, an ambassador and suite is in this country protected from the con- sequences of arrest by the king's writs for debt ; if they are arrested, the process shall be void,

and the persons suing out and executing the writ shall suffer such penalties and corporeal

and his liberty.

The ceremonies, on the reception of ambas- sadors, vary according to the customs of diffe- rent courts. At some, an ambassador is expected not to quit his house until he has been received with all due pomp at the court to which he is sent. In China the ceremony of prostration is required on the admission of an ambassador to the presence of the emperor ; and a ninefold humiliation of this kind has been exacted ; hitherto this lias been refused by British ambas- sadors, and sometimes at the expense of the total failure of the mission. So important is the ceremony of a due reception, that, according to the general usage of European states, no ambas- sador is entitled to any privilege of his office nor can he assume any of its functions, until he has been thus properly acknowledged.

At Athens, ambassadors mounted the pulpit

punishment as the lord chancellor, or either of of the public orators, and there opened their

the chief justices, shall think proper to inflict. This act originated in the following circum- stance : The count de Matueof, ambassador of Peter the First of Russia, to the court of queen Anne, was publicly arrested by a laceman of London, and maltreated by the bailiffs, who dragged him from his coach to prison, where he continued until bailed by the earl of Feversham ; and neither the count nor the czar were readily to be appeased. Most of the foreign ambassa-

commission, acquainting the people with their errand. At Rome, they were introduced to the senate,

and delivered their commissions to the senators. Ambassadors should never attend any public solemnities, as marriages, funerals, &c. unless their masters have some interest therein : nor must they go into mourning on any occa- sions of their own, because they represent the person of their prince. AMBATO, ASSIENTO DE, the capital of a

dors in London joined in a protest against the district of the same name in South America,

insult, and Matueof retired to Holland. Anne which stands upon the banks of the river Am-

and her ministers were much perplexed respect- bato. It has a parish church, two chapels of

ing the proper course to be pursued ; the parties ease, and a convent of Franciscans. In the

concerned in the arrest were apprehended ; but the secretary of state acknowledged that the law of England provided no adequate punishment for the offence. Peter demanded, without hesi- tation, that the sheriff and all concerned should suffer death. Nor was it until an extraordinary embassy was sent, with the new act now carried through parliament, and the offer to pay all the expenses of the count, that this affair was ami- cably settled. There are shewn in Westminster-

year 1698 it was entirely destroyed by an erup- tion of Cotopaxi, which is near it, and at the same time the snowy mountain or desert of Carguairaso, throwing up a river of mud and lava, inundated the whole country. The monu- ments of this misfortune are still visible ; the town, however, now flourishes. It is eighteen leagues from Quito, and four from Tarunga. The river Ambato is amazingly violent in its stream and forms one of the tributaries to the Patate.

/v, A^IBAZAC' a town of France? in Limousin, the ancients gave it the denomination of succi-

Ihe head of a canton m the department of num, from succus, juice. But as good amber

Upper \,enne and arrondissement of Limoges, has been found in digging at a Considerable

four leagues north-north-east of the last place, distance from the sea as that gathered on the

It contains 2800 inhabitants. coast. Boerhaave ranks it with camphor, which

_AJMBh, m anatomy, a superficial jetting out is a concrete oil of aromatic plants, elaborated

by heat into a crystalline form. Within some

AMBE, m botany. See AMBA. pieces of amber have been found leaves, and in-

AMBE, in surgery, an ancient instrument, with sects included; which seems to indicate either

which they reduced dislocated bones. The that the amber was originally in a fluid state or

ambe, or commander, is mentioned by Hip- that, having been exposed to the sun, it was sol-

pocrates, and has its partizans among the mo- ened, and rendered susceptible of the leaves

derns, especially for replacing the arm. But it and insects. Amber, when rubbed, draws or at-

is only useful in luxations directly downwards, tracts bodies to it ; and, by friction, is brought

and even in these is dangerous. M. Le Cat has to yield light pretty copiously in the dark. Some

endeavoured to remedy its defects. See Phil, have distinguished amber into yellow, white,

Trans. N. 469. brown, and black; but the two latter are sup^

AM’BER, v. n. & adj. German, amberen, anbernen, or anhrennen ; to burn, to kindle. Yet neuer eye to Cupid’s seruice vow’d Bi held a face of such a louely pride, A tinsell vaile her amber locks did shroud, That stroue to couer what it could not hide.

posed to be of a different nature and denomina- tion ; the one called jet, the other ambergris. Liquid amber is a kind of native balsam or resin, like turpentine ; clear, reddish, or yel- lowish ; of a pleasant smell, almost like amber- gris. It flows from an incision made in the bark

Fair/ax’* Taxso, book iv. Of a fine large tree in New Spain> ^Ued by the natives ososol. The colour of amber is gene- rally some shade of yellow, as wine, wax, or honey-yellow, hyacinth-red, yellowish-white ; it is also found occasionally green or brown. It occurs amorphous, and in detached pieces, more or less shining, with a waxen lustre. Its frac- ture is conchoidal, and when broken it flies into indeterminate, not particularly sharp, fragments. It is commonly transparent, more rarely semi- transparent or translucid. It is brittle, and its specific gravity varies from 1.065 to 1.1. By rubbing, it readily becomes electric. When ap- plied to a lighted candle it takes fire, swells considerably, but does not run into drops, and exhales a white smoke of a pungent penetrating odour. From its Greek name jjXtwpov, the im-

Thy belt of straw and ivy buds, Thy coral clasps and amber studs ; All these in me no means can move, To come to thee and be my love.

Sir Walter Raleigh, in Ellis, v. ii. - Fresh roses bring To strew my bed, ‘till the impoverish’d spring Confess her want ; around my amorous head Be dropping myrrh and liquid amber shed, ‘Till Arab has no more. Prior’s Solomon, b. ii. Say, will no white- rob’d son of light, Swift-darting from his heav’nly height,

Here deign to take his hallowM stand ; Here wave his amber locks ; unfold His pinions, cloth’d with downy

gold ;

Here smiling stretch his tutelary wand ?

Mason’s Elfrida. If light penetrateth any clear body that is co-

l^^^^^^^*:^, Port”? science of electricity received its name

- - Amber has been ot great repute in the world

from the earliest times. Many years before Christ it was in esteem as a medicine ; and Plato, Aristotle, Herodotus, /Eschylus, and others, have commended its virtues. Theophrastus wrote ex- pressly upon the subject, about A. A. C. 300. In the times of the Romans it became in high AMBEER a town in the pro- esteem as a gem; and in the luxurious reign of

^ HindoS rdlS^e^irS SM~t’^`` `` `` `` `` `St

Ir the a,s,ricn *`` `` `j^`` `` `^`` `` `3 S^t^aSKS^S1-*

it gives the light the colour of it* medium. Peacham.

No interwoven reeds a garland made, To hide his brows within the vulgar shade ; But poplar wreaths around his temple spread, And tears of amber trickled down his head. Addison. The spoils of elephants the roofs inlay,

And studded amber darts a golden ray. Pope.

vince of

that name also. 53’. E. See

Lat. 26`` `` `. 58’. N. long. 75`` `` `

ncLiurnlistS) noo utv** v*.v^`` `` `` `` `` `` `^`` `` `-* `` `` `` `` `` `*- `` `` `7 /

pellucid, bituminous substance of a particular nature, of use in medicine, and in several of the arts, and called electrum by the Greeks. Amber has a

resinous taste, and smells like oil of turpentine; it is chiefly found in the Baltic sea, along the coasts of Prussia. Some naturalists refer its origin to the vegetable, others to the mineral, and some even to the animal kingdom. Pliny describes it as a resinous juice, oozing from aged pines and firs, and discharged thence into the sea. He adds, that it was hence

by its flavour ; for those insects are never \ in the centre of the pieces of amber, but always near the surface. It is observed by the inhabi- tants of those places where amber is produced, that all animals, whether terrestrial, aerial, or aquatic, are extremely fond of it, and that pieces of it are frequently found in their excrements. The bodies of insects found buried m amber have been long admired; but of the most re- markable of these, many are to be suspected : counterfeit, the great price at which beautiful specimens of this k?wl sell having tempted ingenious cheats to introduce ??? !????? l such an artful manner into

pieces of amber, that it is not easy to detect the fraud. Of those which have been originally enclosed in amber., some are plainly seen to have struggled hard for their liberty. This also may account for the common accident of finding legs, or wings of flies, without the rest of their bodies, in pieces of amber ; the insects having, when entangled in the yet soft and viscid matter, escaped at the expense of leaving those limbs be- hind them. Drops of clear water are sometimes also preserved in amber. These have doubtless been received into it while soft, and preserved by its hardening around them. Beautiful leaves of a pinnated structure, resembling some of the ferns, or maiden-hairs, have been found in some pieces ; but these are rare, and the specimens of great value. Mineral substances are also found at times lodged in masses of amber. Some of the collections of the German princes boast of specimens

of native gold and silver in masses of amber; but as there are many substances of the marcasite, and other kinds that have all the glit- tering appearance of gold and silver, it is not to be too hastily concluded that these metals are really lodged in these beds of amber. Iron is found in various shapes immersed in amber ; and as it is often seen eroded, and sometimes in the state of vitriol, it is not impossible but that cop- per, and the other metals, may be also sometimes immersed in it in the same state : hence the bluish and greenish colours, frequently found in the recent pieces, may be owing, like the parti- cles of the gem colours, to those metals; but as the gems, by their dense texture, always retain their colours, this lighter and more lax bitumen usually loses what it gets of this kind by being kept. Small pebbles, grains of sand, and frag-: ments of stones, are also found immersed in amber. Naturalists have been greatly divided as to the origin of this substance, and what class of bodies it belongs to. Some suppose amber a compound substance. Prussia, say they, and the other countries which produce amber, are moistened with a bituminous juice, which, mix-r ing with the vitriolic salts abounding in those places, the points of those salts fix its fluidity, whence it congeals ; and the result of that con- gelation inakes what we call amber ; which is more or less pure, transparent, and firm, as those parts of salt and bitumen are more or less pure, and are mixed in this or that propdrtion. Bry- done, in his tour to Sicily and Malta, says, that the river Gearetta, formerly celebrated by the poets under the name of Simetus, throws up near its mouth great quantities of amber. He men- tions also a kind of artificial amber, not uncom- mon there, made, as he was told, from copal, but very different from the natural. According to Hartman, amber is formed of a bitumen mixed with vitriol and other salts. But though this were allowed him in regard to the fossil amber, many dispute whether the sea-amber be so pro- duced. It is, however, apparent, that all amber is of the same origin, and probably that which is found in the sea has been washed thither out of the cliffs ; though

Hartman thinks it very possi- ble that some of it may be formed in the earth under the sea, and be washed up thence. The ⁂ea-amber is usually finer to the eye than the

fossil ; but the reason is, that it is divested of that coarse coat with which the other is covered while in the earth. Upon the whole, it seems generally agreed upon, that amber is a true bitumen of fossil origin. ⁂ In a late volume ot the Journal de Physique, however, we find it asserted by Dr. Girtanner to be an animal product, a sort of honey or wax, formed by a species of large ant called by Linnaeus formica rufa. These ants, he says, inhabit the old pine forests, where they sometimes form hills about six feet in diameter ; and it is generally in these ancient forests, or in places where they have been, that fossil amber is found This substance is not so hard as that which is taken up in the sea at Prussia, and which is well known to na- turalists. It has the consistence of honey or of half-melted wax, but it is of a yellow colour like common amber ; it gives the same product by chemical analysis, and it hardens like the other when it is suffered to remain some time in a solution of common salt. This accounts for the insects that are so often found enclosed in it. Among these insects ants are always the most prevailing ; which tends farther, Dr. Girtanner thinks,to the confirmation of his hypothesis. Am- ber then, in his opinion, is nothing but a vegetable oil rendered concrete by the acid of ants, just as wax is nothing but an oil hardened by the acid of bees ; a fact incontestibly proved, we are told, by Mr. Metheries, who has made artificial wax by mixing oil of olives with the nitrous acid, which wax is not to be distinguished from the natural. In the second volume of the Edin- burgh Philosophical Journal, Dr. Brewster has given an account of some optical properties of amber, from which he considers it established beyond a doubt that amber is an indurated vegetable juice; and that the traces of a regular structure, indicated by its action upon polarized light, are not the effect of the ordinary

laws of crystallization by which mellite has been formed, but are produced by the same causes which in- fluence the mechanical condition of gum arabic, and other gums, which are known to be formed by the successive deposition and induration of vegetable fluids.

There are several indications which discover where amber is to be found. The surface of the earth is there covered with a soft scaly stone ; and vitriol in particular always abounds there, sometimes white, sometimes reduced into a mat- ter like melted glass, and sometimes figured like petrified wood. Amber of the finest kind has been found in England. It is frequently thrown on the shores qf Yorkshire and many other places, and found even in our clay pits ; the pits dug for tile-clay, between Tyburn and Kensingtori gravel pits, and that behind St. George's Hospital at Hyde Park Corner, have afforded fine specimens. Poland, Silesia, and Bohemia, are famous for the amber dug up there at this time. Germany affords great quantities of amber, as well dug up from the bowels of the earth, as tossed about on the shores of the sea and rivers there. Saxony, Misnia, and Sweden, and many other places in this tract of Europe, abound with it. Denmark has af- forded, at different times, several quantities of

AMBER.

i'<>3^1 amber ; and the shores of the Baltic abound to be the basis of all With it. But the countries lying on the Baltic afford it in the greatest abu- ndance; and of these the most plentiful country is Prussia, and the

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next Pornerama. Pruss.a was, as early as the of amber into a mass, and consSuS times of Theodonc the Goth, famous for amber ; one of them : but tin

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this prince saonme nadves TpSaTh ” ^ ^^ M the makin” of gold fall the [ria⬚⬚s

about his court, offered to go to their own country, where that substance, they said, was produced, and bring back great store of it. They accord- ingly did so ; and from this time Prussia was the Country of Amber, instead of Italy, which had before undeservedly that title. Junker describes, after Neumann, the Prussian amber mines, which are the richest known : First, at the surface of the earth, is found a stratum of sand. Immediately under this sand is a bed of clay, filled with small flints about an inch diameter each. Under this clay lies a stratum of black earth, or turf, filled with fossil wood, half decomposed, and bitumi- nous ; this stratum is extended upon a bank of minerals, containing little metal, except iron, which are consequently pyrites. Lastly, under the bed the amber is found, scattered about in pieces, or sometimes accumulated in heaps.

Its chemical properties have been as yet but little examined. According to Hoffmann, one part of powdered amber, and two of oil of almonds, are capable of combining with each other into a clear gelatinous mass, by being moderately heated for about an hour in a Papin’s digester. It is also, according to the same au- thor, totally soluble in caustic potash. Alcohol extracts the colouring part with some resin, but is not a complete solvent. It is said also, that sulphuric acid is a menstruum for amber, but probably not without considerably changing its properties. When exposed to dry distillation in a glass retort, it melts and swells greatly, and gives out first a watery acid liquor,

smelling strongly of amber, then a concrete acid salt which crystallizes in yellowish needles in the neck of the retort, and is the succinic acid ; after which there passes a light coloured odorant oil, which, as the distillation goes on, becomes of a darker colour and thicker consistence ; a small quantity of the acid also rises at the same time. When all the volatile parts are thus separated, there remains in the retort a spongy intensely black shining coal, the basis of the fine black varnish. The oil is afterwards rectified by distillation with water, when only the light fragrant colourless part comes over. The relative proportions of oil and acid vary according to the purity of the amber used, and the care of the operator. From sixteen ounces of the common dark brown amber of the shops, Neumann obtained eleven ounces six drachms of oil, four drachms and a half of acid, an ounce and a half of acidulous water, and about an ounce of carbonaceous residue. From thirty-two ounces of the small granular kind, or sandstein, he obtained nine drachms of acid, and twenty-four ounces of oil. The specific gravity of amber is from 1.065 to 1.100. When it melts it yields an agreeable smell, and pro- jected on burning coals, burns with a whitish flame and a whitish yellow smoke, gives little soot, and leaves brownish ashes. Amber is said

experimenters, proving that the heat which is necessary to melt amber is sufficient to destroy it. See Phil. Trans. N►►. 248. Hartman indeed mentions a phenomenon which shows the pos- sibility of many pieces of amber being combined into one, by an operation of nature, though it cannot be effected by art. A sheep, he says, was once killed in Prussia , in whose stomach was found a large piece of amber, which was com- posed of several other smaller pieces, the join- ings of all which were visible, though as firm as the pieces themselves. This showed the ani- mal had swallowed the amber in small pieces with its food, and that nature, by the heat and juices of its stomach, had softened those pieces without melting them, in such a manner as to make them unite firmly, though not blended to- gether.

Amber has been much used and recom- mended in medicine for its nervous and cordial qualities, also for promoting the menstrual dis- charge, expulsion of the fetus, &c. as an anti- dote for spasms, and preservative against the pestilence ; but many of its supposed qualities are at least questionable.

AMBER, OIL OF, a fine, transparent, ponderous, yellow oil, procured from amber, by increasing the heat after the spirit is obtained. See next article. It is reckoned a good anti-hysteric and anti-spasmodic.

AMBER, SPIRIT OF, an acid liquor, procured from amber by pulverizing and distilling it with a sand heat. It is chiefly used in rheumatic pains externally, and in inveterate gleets inter- nally.

AMBER-TREE, in botany, frutex Africanus am bram spirans. A shrub whose beauty is in its small ever-green leaves, which grow as close as heath, and, being bruised between the fingers, emit a very fragrant odour. We shall here only observe, that this is one of several genera of plants, which afford a decisive evidence of the truth of the Linnoean or sexual system of botany ; as the male and female flowers grow on different plants, which when separated cannot propagate, more than animals of different sexes separated from each other. For many years there were only a few male plants of this shrub in our gardens, which were continued by cut-tings, till seeds of the female plant were im-ported from the Cape of Good Hope, when plants of both sexes were raised. See ANTHO-

SPERMUM.

AMBER, VOLATILE SALT OF, is the principal chemical production of amber. It is a peculiar acid salt, which rises after the oil, and fixes in the neck of the retort. Mr. Potts concludes, from various experiments, that the acid of this salt is essentially different from the mineral acids, and approaches nearest to those of the vegetable kingdom. It is a good cephalic and detergent; and

Quincy says, it attenuates, cuts, and pene-
trates, the most remote and minute recesses ; and thus scours, as it were, the whole nervous system. Its chief tendency, he adds, is to secretion ; and what it carries off, is by urine. It also contri-butes to promote a diaphoresis, and is prescribed in chronic cases, as palsies, 'and epilepsies. It is often adulterated with sal ammoniac, nitre, and cream of tartar, &c. AMBER LIQUID. See BALSAM. AMBERG, a city of Germany, formerly the capital of the upper palatinate of Bavaria, with a good castle, armory, ramparts, bastions, and deep ditches ; several beautiful walks are now made in and about the latter. It is seated near the confines of Franconia, on the river Ills, or Wills, 40 miles east of Nuremberg, and 32 north of Ratisbon, is divided into the upper and lower towns, and it drives a great trade in iron and other metals found in the neighbouring mountains. Population about 9000. The houses though mostly of wood are well-built, and the streets broad and clean. The principal square in the middle of the town is regular and even beautiful. In it stands the old Gothic town-house, and the splendid parish church of St. Martin. There is here an academy and lyceum, a well- endowed hospital and several religious houses. A convent of very respectable nuns, found- ed by the electress Maria in 1692, maintains a public school for young girls and has a new and noble church. Among the other edifices may be noticed the electoral (now royal) castle, the arsenal, the government build ings (where the colleges of justice and finance had their sittings), and the mint, reckoned one of the finest in Germany. The manufactures are those of fire- arms, earthen-ware, tobacco, and iron ; and there is a good trade in salt. The district to which the town gives name contains on an extent of 187 square miles, 13,339

inhabitants, exclusive of the town. Amberg was taken by the Austrians in 1743, and by1 the French in 1796.

AMBERGREASE KKY, an island in the bay of Honduras, northward of the British set- tlement of Balize. It is upwards of 70 miles in length, but very narrow, abounding with game, and diversified with numerous fresh water lakes. No constant settlement of any consideration has ever been made on it, but it is a place of agreeable resort, in the hot months, to the settlers on the neighbouring continent. The brasiletto, logwood, and other dyeing woods abound here. See HON- DURAS.

AMBERGRIS, AMBERGREASE, or GREY AMBER, is described by natural historians as a fatty inflammable substance, variegated like marble, remarkably light, rugged and uneven in ils surface, and having a fragrant odour when heated ; which increases as it grows older, or when it is mixed with musk, or other aromatics, as is done in preparing perfumes or odoriferous waters. It does not effervesce with acids ; it melts freely over the fire into a kind of yellow resin ; and is hardly soluble in spirit of wine. It is- found swimming upon the sea, or the sea- coast, or in the sand near the sea-coast; especially in the Atlantic ocean, on the sea-coast of Brazil, and that of Madagascar ; on the coast of Africa, of the East Indies, China, Japan, and the Molucca

Islands ; but most of the ambergris which is brought to England comes from the Bahama islands, from Providence, &c. where it is found on the coast, as well as in the abdomen of whales by the whale- fishermen, in lumps of various shapes and sizes, weighing from half an ounce to 100 pounds or more. An American fisherman from Antigua found, some years ago, about fifty-two leagues south-east from the Windward Islands, a piece of ambergris in a whale, which weighed about 130 pounds, and sold for ►►500 sterling. Lumps are sometimes formed of near 200 pounds weight. The inhabitants of the Samballas search for ambergris in a singular manner. They hunt

it by the scent; after a storm they run along the shore, and if any ambergris be thrown up they discover it by the smell. There are certain birds and other animals on those coasts that are very fond of ambergris, and attracted from a distance by its scent. There are various suppositions and theories as to the nature of this substance, whether it belongs to the vegetable, mineral (for it is found adhering to rocks washed by the sea), or to the animal kingdom. By many it has been considered as a bitumen, a sort of petroleum issuing from the rocks, and condensed by the action of the sun and the water of the sea. Others have imagined it to be made up of the excre- ments of birds nourished on odoriferous herbs ; and by some it has been taken for a sea-mush- room, torn up from the bottom by the violence of tempests. Others, again, have ascribed its origin to the froth thrown out by sea-calves, the excrements of the crocodile, &c. Some main- tain that ambergris is made from the honey- combs, which fall into the sea from the rocks, where the bees had formed their nests ; several persons having seen pieces that were half amber- gris and half plain honey-comb ; and others have found large pieces of ambergris, in which, when broken, honey-comb and honey too were found in the middle.

Pommet and Lemery thought it a mixture of wax and honey, hardened by the action of the sun, and altered by the sea water. M. Formey, who has adopted this opinion, supports it by an experiment which consists in digesting wax and honey : he asserts, that a product may thus be formed of an agreeable smell, nearly the same with that of ambergris. Some authors have con- sidered ambergris as an animal juice, deposited in bags situated near the root of the genital or- gan in the male whale; and others have ima- gined that it is formed in the bladder of that cetaceous animal : but the nebs of cuttle-fishes found in this concrete juice are sufficient to confute these opinions. The most probable opinion, and which has of late obtained the most general admission, is that of Dr. Schwediaur, who, after examining a great many specimens of this

substance, and receiving accounts concern- ing it from different navigators, has concluded it to be formed in the alimentary canal of the phy- seter macrocephalus, or spermaceti whale. He considers ambergris as an excrement of this cetaceous animal, mixed with some parts of its food, 1. Because fishermen find it in these whales ; 2. Because it is common in the lati-

tudes which they inhabit ; 3. Because beaks of tl>e cuttle-fish with eight feet, sepia octopoda, on which that animal lives, are always found in it ; 4. Because he distinguished the black spots mixed through ambergris to be the nebs of this polypous animal; Lastly, because the excre- ments of several quadrupeds, as cows, hogs, &c. exhale an odour similar to that of ambergris, when kept for any length of time.

Ambergris when taken from the whale is not so hard as it becomes afterward on exposure to the air. Its specific gravity ranges from 780 to 926. If good, it adheres like wax to the edge of a knife with which it is scraped, retains the im- pression of the teeth or nails, and emits a fat odoriferous liquid on being penetrated with a hot needle. It is generally brittle ; but on rubbing it with the nail it becomes smooth like hard soap. Its colour is cither white, black, ash- coloured, yellow, or blackish ; or it is variega- ted, namely, grey with black specks, or grey with yellow specks. Its smell is peculiar, and not easy to be counterfeited. At 144°° it melts, and at 212°° is volatilized in the form of a white vapour : but on a red-hot coal it burns, and is entirely dissipated. Water has no action on it ; acids, except nitric, act feebly on it ; alkalies com- bine with it, and form a soap; aether and the volatile oils dissolve it ; so do the fixed oils, and also ammonia, when assisted by heat ; alcohol

dissolves a portion of it, and is of great use in analyzing it. When distilled, it yields an aque- ous phlegm, a brown-coloured acidulous spirit, a deeper-coloured oil, a thick balsam, and, as some say, a volatile salt, leaving a black shining residuum. The spirit, oil, balsam, and salt, are similar to those obtained from amber ; but the oil is of a more grateful smell. Its chemical products resemble those of bitumens, among which it has been ranked.

According to Bouillon la Grange, who has given the latest analysis of it, 3820 parts of am- bergris consist of adipocere 2016 parts, a resi- nous substance 1167, benzoic acid 425, and coal 212. Bucholz found no benzoic acid in it; but two different specimens examined by Dr. Ure exhibited a difference in this respect. The one yielded benzoic acid ; the other, equally genuine to all appearance, afforded none.

Ambergris, in a medical view, is stomachic, cordial, and antispasmodic. In Asia, and part of Africa, it is used not only as a perfume and a medicine, but as an article of cookery ; in which it is added to dishes in lieu of all-spice. A great quantity of it is bought by the Mecca pil- srims, probably to use it for the purpose of fu- migation and sacrifice. With us its use is chiefly confined to perfumers, who melt it over a gentle fire, and make extracts, essences, and tinctures of it ; they also use it to scent pillows, candles, balls, bottles, gloves, and hair-powder. As am- bergris is very dear, it is counterfeited and mixed with different substances. It may be known to be genuine by its fragrant scent, when a hot needle or pin is thrust into it, and its melting like fat, of a uniform consistence ; it swims also on water when pure, and does not stick to hot iron.

AMBERICA or ST. GERMAIN D'AMBERIEUV.

a town of France, the head ol a canton in the department of the Ain, arrondissement of Bellay, 6^ leagues from Bourg. Population 2900.

AMBERT, a town of France, in the depart- ment of Pay-de-Dome, the head of an arron- dissement, seated in a beautiful valley on the river Ore, 21 miles east of Issoire, and 300 from Paris. It was the chief town of the ci-devant territory of Livradois. An extensive manufac- ture of paper is carried on in it; as well as of camblets, ferrets, coarse laces, &c. Lon. 3►►. 50'. E. lat. 45►►. 25'. N. Population 5500.

AMBIANENSIS CIVITAS, or AMBIANI, now Amiens, a city of ancient Gaul. It is called Sa- marobriva by Caesar and Cicero ; which, accord- ing to Valesius, signifies the bridge of the Sa- mara or Somme. Ambiani is a later name, taken from that of the people, after the usual manner of the lower age. See AMIENS.

AMBIDEXTER, n. > Lat. ambo, dexter;

AMBIDEXTROUS. \ a/t^tfcfroe; both hands right. One who uses the left hand equally with the right. One who will act with readiness on both hands, or with either party.

Some are ambidexterous or right-handed on both sides ; which happeneth only unto strong and athle- tical bodies, whose heat and spirits are able to afford an ability unto both. Brown's Vulgar Errvurt.

Others not considering ambidextrous and left- handed men do totally submit unto the efficacy of the liver. Brown

.(Esop condemns the double practices of trimmer!, and all false, shuffling, and ambidextrotu dealings.

L' Estrange.

AMBIDEXTER. Various conjectures, or rather chimeras, have been offered with respect to the causes of ambidexterity. Some have thought, that were it not for education and habit, all mankind would be ambidexters; and, in fact, we frequently find nurses obliged to take much pains before they can bring children to forego the use of their left hands. How

far it may be an advantage to be deprived of half our natural dexterity, may be doubted. It is certain, there are many occasions in life, when it would be better to have the equal use of both hands. Sur- geons and oculists are of necessity obliged to be ambidexters ; bleeding, &c. in the left arm, or left ancle, and operations, on the left eye, cannot be well performed but with the left hand ; and instances occur in history, where the left hand has been exercised preferably to the right. By the laws of the ancient Scythians, people were enjoined to exercise both hands alike ; and Plato enjoins ambidexterity to be observed and encouraged in his republic. In the German ar- mies formerly, the more distinguished soldiers, their pikemen, and halberdiers, as well as those who formed the first line of the battalions, were trained to be able to fight equally with the leit hand or the right. We find it mentioned m scripture, that on an extraordinary occasion, the single tribe of Gad produced 700 brave men, who fought with the left hand as well as the right, Judges xx. 16; David had also slmgers and archers of this description, 1 Chron xn 2; and the Roman historians inform us, that thev had gladiators who were trained to ambidexte- rous combats. An ingenious French writer is

surprised, that among all the modern refine- ments in the art of war, none have thought of restoring the ancient practice of training ambi- dexters, who undoubtedly might be of service in cases of stratagem.

AMBIEGNA Bos, in antiquity, an ox ; so named by the augurs because it had the other ???victims around it. Varro de Ling. Lat. 1. 6, c. 3.

AM'BIENT, adj.) Lat. ambio ; ambiens : AM'BIT. $ am, corruption of the Gr.

o/j0i, around, and ire to go. Going round, sur-rounding or encircling.

Tills which yields or fills All space, the ambient air wide interfus'd.

Milton.

The thickness of a plate requisite to produce any colour, depends only on the density of the plate, and not on that of the ambient medium. Newton's Optics.

Around him dance the rosy hours, And damasking the ground with flow'rs, With ambient sweets perfume the morn.

Fenton to Lord Gower. Illustrious virtues, who by turns have rose With happy laws her empire to sustain, And with full pow'r assert her ambient main.

Prior.

The ambient aether is too liquid and empty to impel horizontally with that prodigious celerity.

Bentley.

Around the circle of their ambient skies, New moons may grow or wane, may set or rise.

Prior's Solomon.

The tusk of a wild boar winds about almost into a perfect ring or hoop ; only it is a little writhen. In measuring by the ambit, it is long or round about a foot and two inches ; its basis an inch over.

Grew's Museum.

AMBIGENJE OvES,in the heathen sacrifices, an appellation given to such ewes as, having brought fortli twins, were sacrificed together with their two lambs, one on each side. We find them mentioned among other sacrifices of Juno.

AMBIGENAL HYPERBOLA, a name given by Sir Isaac Newton to one of the triple hyperbolas of the second order, having one of its infinite legs falling within an angle foraed by the as- symptotes, and the other without.

AMBIGUITY, n. } Lat. ambigo : from am AMBIG'UOUS, > for o/t^i around, and ago

AMBIG'UOUSLY. j to drive. Ambiguity de- notes confusion and doubt ; going this way and that way for want of knowing tile right direc- tion ; at a loss.

We can clear these ambiguities,

And know their spring, their head, their true descent.

Shakspeare.

The words are of single signification, without any ambiguity ; and therefore I shall not trouble you, by straining for an interpretation, where there is no difficulty j or distinction, where there is no difference.

South.

But what have been thy answers, what but dark, Ambiguous, and with doubtful sense deluding?

Milton.

Th' ambiguous god, who rul'd her lab'ring breast, In these mysterious words his mind exprest ; Some truths reveal'd in terms, in volv'd the rest.

Dryden.

Some expressions in the covenant were ambiguou*, and were left so, because the persons who framed them were not all of one mind. Clarendon.

Silence at length the gay Antinous broke, Constrain'd a smile, and thus ambiguous spoke.

Pope

Simplicity apace,

Tempers his rage, he owns her charms divine, And clears th' ambiguous phrase, and lops the un- wieldly line. Beattie's Minstrel.

AMBIT. See AMBIENT. AMBIT, in antiquity, was used to denote a space of ground to be left vacant betwixt one building and another. By the laws of the twelve tables, houses were not to be built contiguous, but an ambit or space of two feet and a half was to be left about each for fear of fire. The am- bitus of a tomb or monument denoted a certain number of feet, in breadth and length, around the same, within which the sanctity assigned to it was limited. It was usual to inscribe the ambit on it, that it might be known how far this sanctity extended ; as ' in fronte pedes tot, in agrum pedes tot.'

AMBIT, in geometry, is the same with what is otherwise called the perimeter of a figure. See PERIMETER.

AMBITION, n.~\ Ambio, to go round; AMBIT'IOUS, ^ am and eo. A going about AMBIT'IOUSLY, i to solicit places of honour. AMBIT'IOUSNESS. J A strong desire of honours and glory.

How divine a thing is knowledge, whereof even inuocency itself is ambitious ! Hall's Contemplations. For wild ambition like a ravenous wolf, Spur'd on by will, and seconded by power, Must make an universal prey of all, And last devour itself.

Dri/den's Troilus and Cressida. The neighb'ring monarchs, by thy beauty led, Contend in crowds, ambitious of thy bed : The world is at thy choice, except but one, Except but him thou canst not choose alone.

Dryden.

The grandeur and beauty of the soul charm us

universally, who have all of us implanted in our bosoms, even in the midst of misery, passions of high descent, immense ambition, and romantic hopes.

Uiher.

Contest begets aversion : a little success inspire more ambitious hopes. Cowper's Letter**

The quick'ning power would be, and so would rest ; The sense would not be only, but be well :

But wit's ambition longeth to the best, For it desires in endless bliss to dwell. Davies.

No nation was ever governed by a conqueror that did not suffer by his ambition.

Hawhesworth's Telemachus. No, freedom, no, I will not tell How Rome before thy face, With heaviest sound, a giant-statue fell, Push'd by a wild and artless race, From off its wide ambitious base.

Collins' Ode to Liberty.

AMBITION is generally used in a bad sense, for an immoderate or illegal pursuit of power or honour. In the literal, and perhaps original meaning, however, of the word, it signified the same with the ambitus of the Romans. See AMBITUS. Ambition, in the former and more usual sense, is a passion that can never be satis-

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fed. It swells gradually with success, and every AMBITUS, in music, si-nines the particular ex- acquisition serves but as a spur to farther pursuits, tent of each' tone, or modification ^6 id \ et Dr. Young has justly styled ambition, or the sharp

love of fame, the universal passion. In this enlarg-' AMBIX, in ancient writers, denotes a vessel

ed view we would define ambition to be-a desire of glass or shell. Hence the origin of the wtrd

of excelling, or at least of being thought to excel, alembic, which we sometimes aSo find denoted

our neighbours in any thing This definition, by the word ambix

we apprehend, will apply to ambition in every AMBLAW, AMBLOO, or BELAW, one of the

point of view whether us objects are good or Molucca islands, about fifteen miles in circum-

bad-laudable or the contrary. It was repre- ference. It is but thinly peopled, and dependent

sented, in ancient hieroglyphics, as a young man on Amboyna. The Papuas plundered it about

cad in green, and crowned with ivy, about to the year 1765, and carried off all the inhabitants,

climb a steep ascent, at the top of which ap- Fine shells are found on the shore. Distant two

peared crowns and sceptres. He had a lion by leagues south of Bouro. Lon

his side to denote that fortitude which should be ~* "*' the companion of ambition.

AMBITIOSI.

AMBITUS.

See AMBITUS.

ambitus,

Lat. De-

rived from the custom of candidates surrounding ting.

3□□. 55'. south.

AM’BLE, v. ^ Lat. ambulare, to walk. Ap- AM’BLIKG, > plied to a horse which goes a AM’BLER. j gentle pace, distinct from trot-

those whose suffrages they sought. Seeking the favour or interest exemplified by the English practice of canvassing a town or county pre- viously to an election,

AMBITUS, in antiquity, the setting up for some magistracy or office, and formerly going

round the city to solicit the interests and votes of

i ►► u-. j-o- j f penurv : him time ambles withal,

the people. Ambitus differed from ambition,

as the body does from the soul ; the former being the act, or effect ; the latter the exciting cause existing in the mind. It was of two kinds; one lawful, the other infamous. The first, called ambitus popularis, was when a person offered his service to the republic frankly, leaving it to every body to judge of his pretensions as they found reasonable. The means and instruments here made use of were various : 1 . Amici, or friends, under different relations, including cog- nati, affines, necessarii, faroiliares, vicini, tributes, clientes, municipes, sedales, collegae. 2. No- menclatura, or the calling and saluting every person by his name; to which purpose the can-

This markis hath hire spoused ►►►with a ring Brought for the same cause, and than hire sette Upon an hors snow white, and well ambling.

Chaucer. The Cle-ke’i Tale.

Who ambles time withal 1 ►►► A rich man that hath not the gout ; for he lives merrily, because he feels knowing no burden of heavy tedious

Shakspeare’t At you like it.

It is good, on some occasions, to enjoy as much of

the present, as will not endanger our futurity ; and to provide ourselves of the virtuoso's saddle, which will be sure to amble, when the world is upon the hardest trot. Dryden.

A laughing, toying, wheedling, whimpering she, Shall make him amble on a gossip's message, And take the distaff with a hand as patient As e'er did Hercules. Rowe't Jane Shore.

*Frequent in park with lady at his side, ***

Ambling and prattling scandal as he goes ;

But rare at home, and never at his books,

Or with his pen, save when he scrawls a card.

Cowper't Task, book ii.

AMBLESIDE, a town of England, in the

didates were attended with an officer, under the county of Westmoreland, situated on a declivity

denomination of interpres, or nomenclator. 3. near the banks of Windermere lake. Here is a

Blanditia ; or obliging persons, by serving them, considerable manufactory of woollen cloth, which

or their friends, patrons, or the like, with their is sent to Kendal, thirteen miles distant. The

vote and interest on other occasions. 4. Pren- place is supposed to have been the Dictusofthe

satio ; the shaking every person by the hand, Romans. Distance from London 274 miles north.

offering him his service, friendship, &c. The AMBLETEUSE, a maritime town of France,

second kind was that wherein force, cajoling, in Picardy ; formerly in theBoulonnois, now in the

money, or other extraordinary influence, was

department of the Pas de Calais, arrondissement

made use of. This was held infamous, and se- of Boulogne. It has a fort and a harbour, which

verely punished, as a source of corruption and was ruined by the English in the 17th century,

other mischiefs. Ambitus was practised not only and is remarkable as being the place where

at Rome and the forum, but in the meetings and James II. landed, after his abdljation in 1668,

assemblies of other towns in Italy, where nura- four miles south of Boulogne,

bers of citizens were usually found on account of AMBLOSIS, iu midwifery, ABORTION, whic trade and business. The practice ceased in the city from the time of the emperor, as posts were

see. AMBLOTICS,

Gr. medicines

no longer to behad by courting the people, but by that cause abortion

favour from the prince. Ambitus was also AMBLYGON, from a^Xt/c, obtuse, and 7ovia,

shamefully practised by persons who had causes angle: in geometry denotes an obtus

depending going about among the judges to triangle, or a triangle one of whose angles <

implore their favour and mercy. They who ' sists of more than ninety degrees.

practised this were called ambitiosi. Hence, we AMBLYGUI It., IT

also meet with ambitiosa decreta, and ambitiosa green mineral, mark* I super

and dark yellow spots. It is touna i*e, anu

the judges, contrary tc crystallized, in oblique four-sided prisms ; ►►0

used for such sentences and decrees as

tc ,

either gratutously ofor a vitreous lustre fracturing uneven, and the frag-

and equty,

rpents rhomboidal.

AMB

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AMB

AMBLYOGMOS and AMBLYOPIUS, in me- dicine, ap.fi \vnjyp,oc, a word frequently used by Hippocrates tor dimness of sight.

AM'BO. A/j/3u>v, whatever rises up or pro- jects : an deva:ed place in churches, distinct from the pulpit and reading desk, fovmerly used in churches, some of which are still standing, for the purpose of chanting and preaching to the people.

Between the 'TVo7r<7r7ovT►►f and the faithful, stood the ambo, or reading desk.

Sir G. Wheler's Ace. of the Chur. of Prim. Chris.

The principal use of this iiinhu was, to read the scriptures to the people, especially the epistles and gospels. They r<.ad the gospel there yet, and not at the altar. Id.

AM BO, or AMBON, from avaSaivuv, to mount, or ambo, the admission to it being from both sides : a kind of pulpit, or desk, in the an- cient churches where the priests and deacons stood, to read or sing part of the service, and preach to the people ; called

also analogium. The ambo was ascended by steps ; which occa- sioned that part of the office performed there to be called the Gradual. See GRADUAL. At the top of the ambo the gospel was read, and the epistle a step lower ; they likewise published from this place the acts of martyrs, the comme- moration of departed saints, &c. Here, too, converts made their confession of faith ; and bi- shops their defence, when accused : treaties also were sometimes concluded, and the coronations of emperors and kings performed, in this place. A late writer shows, that the usual place from whence the ancients preached was the steps of the altar ; and when St. Chrysostom and St. Augustine preached from the ambo, it was con- sidered an extraordinary circumstance.

AMBOISE (George D'), a cardinal, was born of a noble French family in 1460. He became successively bishop of Montauban, archbishop of Narbonne, and lastly of Rouen. Louis XII. made him prime minister, and he soon acquired great and just popularity by taking off the taxes which had usually been levied on the people at the accession of every new monarch. The king, by his advice, undertook the conquest of the Milanese, and succeeded. Soon after this, he was appointed the pope's legate in France, with the dignity of cardinal, and in that capacity effected a considerable reform among the religious orders. He died in 1510 ; and on his death-bed often said to the friar who attended him, ' Brother John, why have not I been my whole life brother John?' D'Amboise was certainly one of the best statesmen France ever possessed. His ne- phew, George D'Amboise, succeeded him in the archbishopric ; and in 1546 was created a cardinal. He died in 1550.

AMBOISE, a town of France, in the department of Indre and Loire, arrondissement of Tours, seated at the confluence of the rivers Loire and Massee; 15 miles east of Tours, and 141 south-west of Paris. The town is mean and ill built, consisting only of two streets, but with the suburbs containing about 5600 inhabitants. The principal places of note are the fine prome- nade, the two churches, and the castle. The manufactures are woollen and silk

stuffs, buttons,

swords, and other hardware. The silk stuff called amboisienne is peculiar to this town ; and the steel from the establishment of Sanche ap- * preaches in hardness and durability very near to that of Sheffield. The castle is on a craggy rock, extremely difficult of access, and the sides of which are almost perpendicular. At its foot flows the Loire, which is divided into two streams by a small island. To this fortress the duke of Guise, when an insurrection among the Hugo- nots was expected, removed Francis II. for his security. Only two detached parts of the an- cient castle now remain, one of which was con- structed by Charles VIII. and the other by Francis I. The former of those princes was born at Amboise, and died here in 1498. Lon. 0►►. 54' E. lat. 47►►. 25'. N.

AMBON, in anatomy, aju/3wv, the edge of the sockets in which bones are inserted.

AMBONG, a large and deep harbour on tha north-west coast of Borneo, with an island in the centre. Lat. 6►►. 14'. N. long. 116►►. 25'. E.

AMBOON, or AM BOOR, a district of Hindos- tan, formerly included in the territories of the Nabob of Arcot, but ceded, with the rest of his possessions, to Great Britain in the year 1801. It is now included in the Arcot district of the Carnatic. In Amboon the thermometer in the hot season rises in the shade to 100 degrees, and in the sun to 120 degrees. It is surrounded with hills, whose skirts are covered with the date and palmyra trees, and which embosom well wa- tered plantations of the cocoa nut, tobacco and mango. The river Palar enters them about three miles east of the town of Amboon, and is con- ducted by various works along the margin of the heights.

AMBOON, the capital of the above district, is situated on the river Palar, thirty miles west of Arcot in N. lat. 12►►. 51', and E. Ion. 78►►. 50'. It stands at the foot of a high hill, which was

once defended by a considerable fort now in ruins; and is a compact and well-built town. The lower part of the fortress is used as a pro- vincial prison. It stands completely isolated from the place, on a mountain which has a broad plain on the summit, containing two invaluable tanks of water. The atmosphere on this summit is delightfully cool and refreshing. It has been principally an object of British policy to dis- mantle this fort; few places in India have more natural facilities for defence, or have been more prized in former times as rallying points in war. The principal export of Amboon is a superior castor oil.

AMBOTON, one of the Philippines near the south coast of Mindanao. Lou. 121►►. 8'. E. lat. 12►►. 15'. N.

AMBOULE, a province and town of Mada- gascar, somewhat to the northward of south lat. 23►►., is said to be a fertile and agreeable coun- try, watered by the river Manampani, whose mouth lies in south lat. 23►►. 30'. This country produces plants and fruits in great plenty, and iron mines are also found here; the cattle also are extremely fat, and their flesh excellent. Near the town is a fountain of hot water, within twenty feet of a river whose sand is almost burning. The people are employed in manufacturing the iron

and steel, which they have from their own mines, into different instruments, which they do with tolerable skill. Their governor is honoured with t'.ie title of rabertau, or great lord.

AM BOY, a city of New Jersey, Middlesex county, situated at the head of Rariton bay, and standing on a neck of land between Rariton river and Arthur Kull sound. It lies open to Sandy-Hook, and has one of the best harbours on the continent, which may be entered in almost any weather. It is a port of entry and post-town, but not in a flourishing state. It is thirty-five miles south-west of New York, and

seventy-four north-east of Philadelphia. Long. 74►►. 50* W. lat. 40►►. 35'. N.

AMBOYNA, the largest and most valuable of the Molucca Islands in the Indian Ocean, and the seat of their government. It lies in E. long. 128►►. 15'., and S. lat. 3►►. 42'., and is between fifty and sixty English miles in length from north to south. On the western side it is divided by a bay into two peninsulas, one of which is called Hitou, being twelve leagues long and two and a half broad ; and the other Leytimor, about five leagues in length and one and a half in breadth. There is an inferior harbour on the eastern side, where the Portuguese originally erected their principal fort. It has no river of importance, but its general aspect is beautiful, and the climate is generally salubrious. The rainy season sets in with the southerly monsoon, accompanied with thunder, lightnings, and earth-quakes. The soil is a darkish red clay, mixed with sand. Some of the hills are incrusted with a copious efflorescence of sulphur, and one on the Hitou peninsula is called Wawani, or Brimstone-hill, from the great abundance of that article imbedded there. The deer and wad boar are the principal animals of the island ; but there are a few sheep and black cattle, buffaloes, horses, and goats. The cassowary parades the mountains ; but the chief boast of Amboyna is its rich productions of the vegetable kingdom. An astonishing variety of beautiful wood for in- laying, and other ornamental purposes, forms part of the commerce of the island ; 400 different species are reckoned by Rumphius. The cajaput tree affords a valuable oil, and the sassafras an aromatic bark. The clove tree is, however, its staple production. In favourable situations this tree, according to some writers, grows frequently to the height of fifty feet ; its branches spread wide from the stem ; the cloves grow in clusters, but on separate stalks, and the leaves are long and tapering. It will bear from about nine or ten years, to one hundred years of age. The average quantity of cloves annually produced is from seven to twelve pounds per tree, but some have been known to afford

thirty pounds ; and the island, taken together, about 650,000 pounds. They are gathered from October to February. The Dutch, during the long period of their for- mer possession of this island, attempted the en- tire monopoly of this spice ; the number of trees was regularly registered by the governor, all the plantations visited, and particular districts ap- propriated to their cultivation. They bought from the neighbouring islands all the cloves that other nations were likely to import, and in some

cases compelled their chieftains to destroy the rest, and the trees that bore them. The Dutcb East India company's warehouse was the dt pository of the crop ; and they are said to have prohibited the culture of many edible roots on the island, to deprive settlers and conquerors of the means of subsistence. When the cloves were gathered from the tree, they were dried be- fore the fire upon hurdles, and sprinkled with water; by which means their natural colour, which is red, was changed into deep purple or black. The design of this process was said to be, to prevent the worm from getting into the fruit ; but another motive was suspected, ??? that of adding to their weight.

Thirty years back, the Dutch allowed some nutmegs to be grown here, because Banda did not furnish a sufficient supply for the demand. Sugar and coffee are plentiful at Amboyna ; the sago tree is a principal article of subsistence; and the few fruits cultivated are delicious ; among the latter may be reckoned the mangus- teen of Hindostan. They import their cattle and grain from the island of Java, and a variety of curious woods from Ceram.

Amboyna is inhabited by four distinct races of people ; the Aborigines, the Amboynese pro- perly so called, Chinese, and Europeans. The first, who are called Alforese or Horaforas, and seem to be of the same description as the Idaan or Maroot of other eastern islands, are now much reduced. They are represented as wild and savage, of a lighter

complexion, and greater mus- cular power than the Amboynese ; and their women handsome. The natives, like the other Malays, are rude and savage in their manners, and, when intoxicated with opium, are equal to the perpetration of any crime. Mixed races from intermarriages are nearly as fair as Euro- peans. Those who are the offspring of European fathers and native mothers are called mixtices or mestees ; those of a mixtice and European mar- riage, poestices ; and those of a European and poestice, castices. These children are all legiti- mated, and included with the European society of the island. The Chinese are industrious, and live much together. Some of the aboriginal race in the woods are said to be extremely bar- barous, and to offer human sacrifices. Their dress consists of a loose shirt or frock of cotton cloth. The men wear large whiskers and mus- tachios; the women bind their hair in knots. Wives are bought of their fathers ; and should they bear no children the contract is dissolved. When the English took this island in 1796 it contained about 45,252 inhabitants, of whom nc less than 17,813 were protestants; and the rest Mahommedans and Chinese. The houses of I natives are made of bamboo canes and sago trees ; they sleep upon mats ; and use, as weapons, bows, darts, scimitars, targets, &c. Their chiefs are called rajahs. The Amboynese are said to b indolent, effeminate, and pusillanimous; a their women particularly licentious.

The Dutch governor of Arrboyna had ten iacent islands under his jursidiction : Ceram, Ceram-Lavut, Bouro, Amblau, Mampa, Kela Bonva, Orna, Honimoa, and Noussa-Laout ; th three last isles are called Uliassers. The growing

of cloves is limited to the Uliassers and Am- boyna.

Uiegro D'Abrew and Ferdinand Magellan, two Portuguese adventurers, first discovered Amboyna in 1515; in 1564 it was taken pos- session of by Portugal, and afterwards conquered by the Dutch republic in 1605. The English had erected several factories in the country, which were protected by the Dutch fort; but disputes arising between the settlers, the treaty of 1619 between Great Britain and the United Provinces stipulated that the English colonists should reside unmolested at Amboyna, and pos- sess one-third part of its cloves. In 1622 fresh differences arose, which were referred to the Dutch council at Jacatra, in the island of Java. ; and finally to the government of the two coun- tries in Europe for decision. The Dutch colo- nists however contrived, by alleging a fictitious plot against the English, to make themselves masters of the whole island. This event is known in history by the name of the ' Massacre of Amboyna.' A plot, it was said by the Dutch authorities, was confessed by two soldiers in their service, and confirmed by an English pri- soner, but these had been all first sentenced to the rack. Upon this evidence the English were accused of being confederates in a conspiracy against the Dutch possessions : they were imme- diately seized, loaded with irons, and thrown into prison. The most savage modes of torture were then resorted to by the Dutch governor, for the purpose of extorting a further confession from the unhappy sufferers : some were put to the rack, others half-drowned and miserably scorched with fire. Those who escaped this inhuman treatment were all executed, although they per- sisted in their innocence to the latest breath. The number of persons who thus perished were ten Englishmen, eleven Japanese, and one Por- tuguese. The day after these wretched men were put to death, the governor ordered public festi- vals and solemn thanksgivings for their deliver- ance from this pretended conspiracy. It is absurd to suppose that such a plot as pretended by the Dutch ever existed ; for the number of the En- glish did not exceed twenty persons upon the island, whereas the Dutch garrison in the fort amounted to three hundred men; and the

En- glish had not a single ship in the port, whereas eight Dutch vessels were lying off the town of Amboyna. In consequence of this massacre the English factory was withdrawn from the island, and the Dutch retained possession of the effects of the English merchants to the amount of ►►400,000. The English factories in the adjacent islands were also seized, and the traders forci- bly dispossessed. James I. and Charles I. of England were either unwilling or unable to avenge the national honour upon the cruelty and cowardice of the Dutch ; but Cromwell com- pelled the United Provinces, in his celebrated treaty with that power, to pay the sum of ►►300,000, as a small recompense for their atro- cious conduct. From this time down to the year 1796, Amboyna remained quietly in the hands of its Dutch masters ; but in that year the English admiral Rainier took it without opposi- tion. It was restored to the Batavian republic at the peace of Amiens ; and again taken by the

English in the year 1810. At the general peace of Paris, in the year 1814, the Dutch were again re- instated in the possession of it, unuer whose government the island is far from being in a nourishing condition.

AMBOYNA, the capital of the island, is situated on the peninsula of Leytimor, and commands a capacious harbour. It is a regularly built town, though most of the houses are of wood, and but one story high. Matted cane is neatly contrived to form a substitute for glass in their windows, and the roofs are made of the branches and en- twined leaves of palm-trees- Abundance of water runs through this town in rivulets. There is an hospital ; a good town-house ; and two churches, in one of which divine service is per- formed in the Malay language. An earthquake completely destroyed one of the churches in 1755, and rent the other throughout; but they were immediately rebuilt. Between the for- tifications of the harbour and the town is a fine esplanade, terminated by a handsome range of houses, shaded by a double row of nutmeg- trees, where many of the principal inhabitants reside.

AMBRACIA, one of the most considerable cities of ancient Epirus, situated on. the river Aracthus, at a small distance from the sea ; built, according to Polybius, by Ambrax son ot Thesprotus, when the territory of his father had been ravaged by the Dryopes; and thus the origin of the Ambracians is traced to an era about fifty years before the last war of Troy. At first it was a free city; but was afterwards re- duced by the ^Eacidae, kings of Epirus, who chose it for the place of their residence. In process of time the ./Etolians made themselves masters of it, and held it till the year before Christ 189, when it fell into the hands of the Romans. At this time Ambracia was a place of great strength. It was defended on one side by the river Aracthus, on the other by steep and craggy hills; and surrounded with a high and thick wall, above three miles in circumference. The Roman consul Fulvius began the siege by throwing up lines of circumvallation and con- travallation ; and building a wooden tower, in form of a castle, over against the citadel. The Etolians, however, before the lines were quite finished, found means to throw about 1000 men into the place, and sustained attack in five dif- ferent places at once. While Fulvius was car- rying on the siege, Nicander, the /Etolian preetor, brought 500 men into the city, under the com- mand of Nicodamus, with whom Nicander agreed to attack the Roman camp in the night time : but Nicodamus did not appear. However, the garrison marched out, armed with fire-brands and torches ; and though two parties were driven back, the third made a great slaughter of the Romans, and retired in good order into the city. The consul beginning to undermine the wall, they countermined him, and the two parties met, when a battle ensued; after which the ^Etolians, in order to drive the enemy out, invented a ma- chine, which is thus described : it was a hollow vessel with an iron bottom, bored through in many places, and armed with spikes at proper distances, to prevent the enemy from approach- ing; having filled it with feathers, they sei it on

' ††† ††.††††g,v-v4. ††† iu leave me

mine, half suffocated. At last Fulvius obtained the place by employing Amynander, king of the Aihamanes, to persuade the inhabitants to sur- render. From this time the city of Ambracia made no figure in history. It is scarce known where it stood; but Arba, in Upper Albania, seems best to agree with what is said of its an- cient situation.

††† , the anthospermum /Ethiopicum of Linnaeus. AMBRESBURY. See AMESBURY.

France, the head of a canton in the department and arrondissement of Mayenne. It had for- merly the title of barony, and contains 240 houses, 2230 inhabitants ; three leagues north of Mayenne. Long. 0††. 33'. W. lat. 48††. 24'. N.

AMBRIZ, a river of Congo, forming a bay, and affording anchorage to small vessels, which enter from the south

AMBRONES, a people of ancient Gaul, who lived near the foot of the Alps, between Switzer- land and Provence. They invaded the Roman territories, in conjunction with the Cimbri and Teutones ; but were defeated with great slaughter by Marius about A. A. C. 102. Their women, who had staid during the engagement in a kind of fortification made with carts, on seeing their husbands flying, and the Romans in pursuit, armed themselves with axes, and fell with indis- criminating fury both on the pursuers and the pursued. Their first rage being spent, they of- fered to surrender, upon condition that their honour should be preserved; but this equitable request being denied, they first killed their chil- dren, and then themselves.

AMBROSE (Isaac), a presbyterian minister, ejected from Garstang in Lancashire in 1662. He wrote the Prima, Media, et Ultima; or the First, Middle, and Last Things; War with the Devils ; Looking unto

Jesus, &c. the last of which is to this day a popular tract.

AMBROSE (St.), bishop of Milan, one of the most eminent fathers of the fourth century, born in Gaul A. D. 333, according to Dr. Cave, or according to Dupin in 340. His father was at this time praefectus praetorio in Gaul ; and resided at Aries, the capital of Gallia Narbonensis. A swarm of bees is said to have settled upon the mouth of the saint as he lay in the cradle ; and was regarded as a presage of his eloquence* He soon acquired a considerable share of secular learning; and pleaded before Probus with so much success, that he was appointed his assessor, and soon after governor of the provinces of Li- guria and /Emilia. He settled at Milan ; where, in 374, upon the death of Auxentius bishop of that city, there being a great contest between the Catholics and Arians concerning the choice of a new bishop, Ambrose thought it his duty, as go- vernor, to go to the church to compose the tumult. At the close of his address to the people, a child exclaimed, ' Ambrose is bishop !' The voice of the infant was regarded by the multitude as a divine intimation to elect the orator to that office, which was accordingly done. Ambrose expressed considerable reluctance to

to

seem singular enough ; _nwonted harshness and severity in his magisterial capacity, and re^ ceivmg into his house women of bad character le was, however, ordained bishop towards the latter end of 374, or beginning of 375. About the year 377, the barbarous nations makin^ an incursion into the Roman empire, he fled to II-

usurped the empire, and prevaijed upon him not to pass over into Italy. The heathens being encouraged by these intestine commotions in the empire, attempted to restore paganism, and em- ployed Q.Aurelius Symmachus, prefect of Rome a man of great

eloquence, to plead their cause! This gave rise to the famous contest between St. Ambrose and him, about repairing the altar of victory. But Symmachus, having lost his cause, was expelled the city, and commanded not to approach within 100 miles of it. The petition which Symmachus presented to the emperor Valentinian II. is still extant. St. Ambrose wrote a confutation of it. In his office he met with much opposition from the Arians. Justina, the empress and mother of Valentinian, resolving to restore Arianism at Milan, demanded of him one of the churches, called the Portian church, but he refused it ; and the people surrounding the palace in a body, she was obliged to desire him to pacify them. After this, Ambrose was a second' time sent to Maximus on the behalf of Valentinian, who soon after retired to Thessalo- nica m Illyricum to desire Theodosius' assist- ance. Theodosius having defeated Maximus, and restored Valentinian, committed great cruelties at Thessalonica, and Ambrose exhorted him to repentance in a pastoral letter. Soon after this, the emperor coming to Milan, went to receive the sacrament at the great church ; but Ambrose meeting him at the door, denied him entrance, and represented his guilt in the most forcible and pathetic terms. The emperor was struck with his words, and with great uneasiness of mind returned to his palace; but about a year after, Ambrose, being convinced of the sincerity of his repentance, admitted him into the church. In 392, Valentinian being assassinated, Ambrose was obliged to leave Milan ; but he returned the year following, and died there the 4th of April, 397. The most considerable of his works is the De Officiis ; but his writings are inter- mixed with many strange and peculiar opinions. Paulinus wrote his life, and dedicated it to St. Augustine: this life is generally prefixed to St. Ambrose's works ; the best edition of which is that published by the Benedictines, two volume* folio, Paris, 1682 and 1690.

AMRROSE, an island in the South Pacific, on the coast of Chili, five leagues due west from St. Felix island. It appears at a distance liku two small

islands ; but they are joined by a reef. It lies in latitude 26►►. 17’. 40’. S. and.loug 79►►. 8’. 35*. W.

AMBRO’SIA, n.~\ Anfoooui, from a not, and AMBRO’SIACK, f /3poroe, mortal. The food AMBRO’SEAL, (of the gods ; so called from AMBRO’SIAN J its supposed power of be- 3 B

stowing everlasting life : applied to whatever is exquisitely grateful to the senses of taste and smell.

Nectar et ambrorium, latices, ep\ilasque deorum.

Quid.

Thus -while God spake, ambrosial fragrance *fill’d All heav’n, and in the blessed spirits elect Sense of new joy ineffable diffus’d. Milton.

Through breaking ranks his furious course he bends, And at the goddess his broad lance, extends ; Through her bright veil the daring weapon drove Th’ ambrosial veil which all the graces wove : Her snowy hand the razing steel profan’d, And the transparent skin with crimson stain’d.

Pope’s Iliad, v 415.

AMBROSIA, in ancient mythology, from a privative, and /3poroc, mortal, denotes the food of the gods. It had the appellation ambrosia, as being supposed to render those immortal who fed on it ; and it is said, that Berenice, the wife of Ptolemy Soter, was saved from death by eating it. Titonus was made immortal by Au- rora, by eating ambrosia ; and in like manner, Tantalus and Pelops, who, on account of their impiety, had been driven from heaven, and com- pelled to die upon earth, had their lives pre-

served. It had the power of healing wounds, and therefore Apollo, in Homer's Iliad, saves Sarpedon's body from putrefaction by rub- bing it with ambrosia; and thus also Venus heals the wounds of her son, in Virgil's .ZEneid. Lucian, ridiculing the follies of the heathen wor- ship, says, that ambrosia and nectar, of which one is the meat, and the other the drink of the gods, were not so excellent as the poet describes them, since these deities would leave them for the blood and fat of the sacrifices.

AMBROSIA, in antiquity, a feast celebrated by the Aconians, in honour of Bacchus. They were also denominated Choa and Lenaea, being held in the month called Lenseon.

*AMBROSIA, in botany, a genus of the pentan- dria order, belonging to the moncecia class of plants ; and, in the natural method, ranking under the 49th order, composite nucamentaceae. Characters: male flowers compound; CAL. single-leaved perianth, the length of the flo- rets : COR. uniform, tubular, flat, and hemisphe- rical ; monopetalous, funnel-shaped, and quin- quefid : STAM. five very small filaments : ANTH. erect, parallel, and pointed : FIST, has a filiform stylus, the length of the stamina : STIGMA orbi- cular and membraneous : the receptaculum naked. ??? Female flowers below the male ones, on the same plant, doubled : CAL. single-leaved pe- rianthium, entire (with the belly quinqueden- tated,) one flowered, and persistent : COR. none : PIST. an ovate germen in the bottom of the calyx : STYL. filiform, the length of the calyx ; the stig- mata two, long, bristly: PERICARP, au ovate unilocular nut : seed single and roundish. Of this genus, five species are enumerated: 1. A. trifida, trifid-leaved ambrosia. 2. A. elatior tall ambrosia. 3. A. artemisifolia, mugwort leaved, ambrosia. 4. A. maritima, sea ambrosia. 5. A. arborescens, tree ambrosia. They are perennial, *ad may be propagated, either by cuttings or by seeds.*

AMBROSIA, in medicine, a splendid title given by some physicians to certain alexipharmic com-

positions. Nic. Abn. Frambesia has written a treatise on the preparation of ambrosias.

AMRROSIA, in natural history, is applied, by ancient authors, to the food of the bees.

AMBROSIACA, in ornithology, a species of hirundo, or swallow, inhabiting Senegal, and smelling particularly strong of ambergris ; of a greyish brown colour, bill blackish, legs brown. In length it is five inches and an half, bill half an inch, the plumage darkest on the head and quills, and the tail very forked.

AMBROSIAN OFFICE, or RITE, in church history, a particular formula of worship in the church of Milan, which takes its name from St. Ambrose, who instituted that office in the fourth century. Each church originally had its parti- cular office ; and when the Pope, in aftertimes, took upon him to impose the Roman office upon all the western churches, that of Milan sheltered itself under the name and authority of St. Am- brose ; from which time the Ambrosian ritual has prevailed.

AMBROSIN, in middle-age writers, a coin struck by the lords or dukes of Milan, whereon was represented St. Ambrose on horseback, with a whip in his right hand.

AMBROSINI (Bartholomew), professor of physic, and director of the botanical garden at Bologna, where he died in 1657. He published, 1. Panacaea ex Herbis quse a sanctis denomi- nantur, 1630. 8vo. 2. Historia Capsicorum cum Iconibus, 1630, 12mo. 3. Theodorica Medicina, 1632, 4to. His brothei and successor, Hya- cinth, published several valuable works on bo- tany.

AMBROSINIA, in botany, a genus of the monandria order belonging to the moncecia class of plants ; the characters of which are : CAL. sin- gle-leaved spatha, divided by a partition into two cells: COR. none : STAM. none: ANTH. nu- merous, with two roundish concave nectaries at their base : PIST. is

in the interior cell : german roundish ; STYL. cylindrical, and shorter than the spatha; STIGM. obtuse : PERICARP, a capsule, roundish and unilocular. There is but one spe- cies, a native of Turkey.

AMBROSIUS, AURELIUS, or AUFELIANUS, a famous general of the ancient Britons, of Ro- man extraction. He was educated at the court of Aldroen of Armorica; who, at the request of the Britons, sent him over with 10,000 men to assist them against the Saxons, whom Vortigern had invited into Britain. The success of Am- brosius induced the Britons to choose him for their king, and compelled Vortigern to give up all the western part of the kingdom to the Ro- man high-way, called Watling-street. On the death of Vortigern, Ambrosius became sole monarch of Britain ; and assumed the imperial purple, after the manner of the Roman emperors. Geoffrey of Monmouth tells us, that Ambrosius built Stonehenge near Salisbury in Wiltshire. Coming to a monastery near Caercaradoc, now Salisbury, where 300 lords, massacred by Hen- gist, lay buried, and resolving to perpetuate the memory of this action, he ordered his workmen to prepare a large quantity of stones and other

materials. But having here consulted the famous Merlin, he was advised, it is said, to send over to Ireland for certain great stones, called chorea gigantum, the giants' dance, placed in a circle on a hill called Killair, and his sons after a battle with an Irish prince brought away the stones. Alexander Mecham celebrates this fable in his poem De divinae sapientije laudibus. See STONE- HENGK. After the Britons had defeated the Saxons, and obliged them to retire northward, Ambrosius convened the princes and great men at York, where he gave orders for repairing the churches destroyed by the

Saxons, and restoring the exercise of religion to its former lustre ; and tells us he was poisoned at Winchester by one Eopa a Saxon, hired for that purpose by Pas- centius one of the sons of Vortigern ; but the generally received opinion is, that he was killed in a battle which he lost in the year 508, against Cerdric, one of the Saxon generals.

AMBRUM, or EMBRUN. See EMRUN.

AMBRY, in antiquity, the place where arms, plate, and every thing belonging to house-keep- ing of a great family were formerly kept. Hence, probably, the ambry at Westminster was so cal- ed ; or perhaps from aumonery, a house adjoin- ing to an abbey ; in which the charities were laid up and distributed to the poor. The word is still used in Scotland.

AMBRYM, one of the new Hebrides in the South Sea. It is about 60 miles in circuit, and exhibits the appearance of a volcano in activity. Long. 168►►. 80'. E. lat. 16►►. 15'. S.

AMBUBAJjE, in Roman antiquity, were im- modest women, who came from Syria to Rome, where they lived by prostitution, and by playing on the flute : the word is derived from the Syriac abub, which signifies a flute ; although others make it to come from am and baiae, because these prostitutes often retired to Baise. According to Cruquius, these women used likewise to sell paint for ornamenting the face, &c.

AMBUBEIA, in botany, wild succory.

AMBULANT, or AMBULATORY COMMIS- SIONERS, were commissioners under the old go- vernment of France, who had no settled office; but visited all the offices within a certain dis- trict, to see that nothing was done in them against the king's right and the interest of his farms.

AMBULANT, in commerce, is applied to those brokers at Amsterdam, or exchange agents, who have not been sworn before the magistrates.

AMBULA'TION, n.) Ambulatio, Lat.

AMBU'LATORY,W. &adj.] Walking. On fair ambulande horse they sit.

Gmeer. Con. A . b. iv.

A knight dormant, ambulant, combatant !

Gayton's Notes on Don Quixote.

From the occult and invisible motion of the mus- cles, in station, proceed more offensive lassitudes than from ambulation. Brown's Vulg. Er.

The gradient, or ambulatory, are such as require some basis, or bottom, to upnold them in their no- tions : such were those self-moving statues, which, unless violently detained, would of themselves run away. Wilkin's Math. Magick.

He was sent to conduct thither the princess, of whom his majesty had an ambulatory view in his tra- vels. Cotton.

AMBULATION, in medicine, a term used by some for the spreading of a gangrene

AMBULATOR, in entomology, a species of lamia, figured by Petiver Gazop, and de- scribed by Fabricius. The anterior part of the thorax is armed on each side with two spines, and the body clouded with cinereous and ches- nut. It is properly a cerambyx of Linnams.

AMBULATORIATuRRis, in ancient warfare, an engine or battery, on wheels, for taking towns.

AMBULATORIUS, in entomology, a species of ichneumon, very rare, with a yellowish scu- tellum, and spotted thorax, the second joint of the abdomen ferruginous brown, the margins of the others white. It inhabits Great Britain, and was first described by Fabricius in the Species Insectorum, from a specimen in the cabinet of Sir Joseph Banks, Bart.

AMBULIA, in botany, a genus of the didy- namia angiospermia class and order. Essential characters : CAL. quindentated : COR. tubulose, quadrifid, with unequal segments : CAPS, pen- tagonous, single-celled, and single-seeded. One species, viz. A. monosperma, of Gmelin, or A. aromatica of La Marck. This plant, according to La Marck, grows in Malabar, in a sandy and watery soil, and appears to be annual. All its parts have a sweet and aromatic smell, resembling pepper when green. Its taste is bitterish ; and it is administered in a decoction for fevers, or in sour milk for vertigo.

AMBURBIALES VICTIM*, victims carried round the city of Rome, and afterwards sacrificed. See next article.

AMBURBIUM, or AMBURVIUM, in Roman antiquity, from ambire, to go round, and urbs, the city ; a procession made by the Romans round the city and pomoerium, in which they led a victim, and afterwards sacrificed it, in order to avert some calamity that threatened the city. Scaliger in his notes on Festus, and several other critics, maintain the amburvia to have been the same with the AMBARVALIA, which see.

AMBURY, or ANBURY, among farriers, de- notes a tumour, wart, or swelling, which is soft to the touch, and full of blood, sometimes cured by tying a horse-hair very hard about its root ; and when it has fallen off, which happens in about eight days, strewing some powder of ver- digris upon the part, to prevent the return of the complaint. If the tumour be so low that nothing can be tied about it, it is cut out with a knife, or burnt off with a sharp hot iron ; in sinewy parts, they eat it away with oil of vitriol, or white sublimate. Many farriers recommend the following preparation : take three ounces of green vitriol and one ounce of white arsenic ; beat them to a coarse powder, and put them into a crucible; place the crucible in the midst of a charcoal fire, stirring the substance, but carefully avoiding the poisonous steams ; when the whole grows reddish, take the crucible out of the

fire, and when cool, break it and take out the matter at the bottom ; beat this to powder in a mortar, and add to four ounces of this powder five ounces of album rhosis; make the whole into an ointment, and let it be applied cold to warts ; rubbing them with it every day. 3 B 2

AMBUSCADE', w.^v Emboscudo, Spanish ;

AMBUSCA'DO, f from bosquc, a bush. To

AMBUSCA'DOED, \ambush is to hide in a

AM'BUSH, v. & n. i bush in order to sur-

AM'BUSHMENTT. J prise an enemy. Ap- plied literally and metaphorically to any mode of concealment adopted for the purpose of stratagem. ??? Busse, enbusse, bussement, and en- bussement are common in R. Brunne.

Saladyn priuely was bussed beside pe flom.

R. Brunne, p. 187.

In secret ambush I, in yonder wood, in place not wide,

That so both wayes I may besidge, myselfe intend to

hide. Twyn.

A winding vale there lay, within the shade,

Of woods, by nature for an ambush made. Pitt. Againe great dole on either partie grewe, That him to death unfaithful Paris sent ; And also him that false Ulysses slewe, Drawne into danger through close ambushment. Spenser. Virgil's Gnat.

Like as a wily fox, that having spied

Where on a sunny bank the lambs do play,

Full closely creeping by the hinder side,

Lies in ambushment of his hoped prey. Spenser. Nor shall we need,

With dangerous expedition, to invade

Heav'n, whose high walls fear no assault or siege,

Or ambush from the deep.

Milton's Paradise Lost.

Thick as the shades, there issue swarming bands Of ambush'd men, whom by their arms and dress, To be Taxallan enemies I guess.

Dryden's Indian Emperor.

When I behold a fashionable table set out, I fancy that gouts, fevers, and lethargies with innumerable distempers, lie in ambuscade among the dishes.

Addison.

AMBUSTA, in entomology, a species of pha- laena of the noctua family. The thorax is crest- ed ; and the wings are incumbent, greyish-brown, with three yellowish streaks, an anuule in the middle, and an undulated streak behind. This moth is produced from a naked brown larva, with white lines. The antennae are ferruginous, white at the base ; head and thorax reddish- grey. Posterior wings white, tips brown. In- habits Austria, on Lichen parietinus. Fabricius.

AMBUSTA, in medicine, burns or scalds.

AMBUSTUS, in ornithology, a species of falco. The body is of a pale tawny colour, front of the head between the eyes and bill naked, cere large, legs bluish. This is the tawny vulture of Brown and Latham. The bill is dusky, short and thick, cere large, and beset with bristles, the chin bearded with a tuft of long slender feathers : head, neck, breast, belly, and thighs, pale tawny ; coverts of the wings in- termixed with brown ; tail dirty

white, with brown bands ; legs slender, bluish claws, long and slightly bent. The length of this bird is two feet four inches ; it inhabits Faulkland islands.

AMCHITCHE, one of the Fox Islands, in the North Pacific Ocean. Long. 178►►. 14'. E. lat. 53►►. 22'. N.

AMEA, in botany, a name given, by the na- tives of Guinea, to a plant which they use in bleedings at the nose, by drying and powdering the leaves, and snuffing up the powder. It seems to b►►► a species of the plant called pajamirioba,

by Sir Plans Sloane, in his Jamaica Catalogue. Its leaves are large and alated, and of a beauti ful green, even when dried

AUMEDABAD.

AMEDANA, in botany, the almis vulgaris of Linnaeus.

AMEDEI, or AMEPIANS, in church history, a congregation of religious in Italy, instituted A. D. 1400, so called from their professing them- selves amantes Deum, ' lovers of God;' or ra- ther amati Deo, ' beloved of God.' They wore a grey habit, wooden shoes, and girt themselves with a cord. They had twenty-eight convents, and were united by pope Pius V. partly with the Cistercian order, and partly with that of the Soccolanti, or wooden-shoe wearers.

AMEDNAGUR. See AHMEDNUGGER.

AMEIVA, in zoology, a species of Brazilian lizard, which, according to Marcgrave, resem- bles the TABAGUIRA (which see) in figure, but has a bifid tail. Ray, however, doubts the ex- istence of any such two-tailed species.

A'MEL, n.) Ang. Sax. myltan meltan, to

AMEL'LED. } melt. Supposed to signify ena- melled.

And with a bend of gold tassiled And knoppes fine of

gold amiled.

Chaucer. Romaunt of the Rose.

Heaven’s richest diamond set in amel white.

Fletch. Purple Isl. x. 33. A husband like an ammel would enrich Your golden virtues. Duchess of Sujf. act iv.

The materials of glass melted with calcined tin, compose an undiaphanous body. This white amel is. the basis of all those fine concretes that goldsmiths and artificers employ in the curious art of enamelling.

Boyle on Coloun.

AMEL CORN, from amylum, Latin, starch ; French rice, a species of grain from which starch is made.

AMELANCHIER, in botany, the chionan- thus virginica and mespelus amelanchia of Lin- naeus. Raii Hist. Plant.

AMELI, in botany, karetta-amelpodi of Rheede, Malab. a plant, from the leaves of which the inhabitants of Malabar obtain a decoction good for the colic.

AMELIA POINT, the south point of the bay of islands on the west shore of King George’s archipelago. Long. 224►►. 25’. E. lat. 57►►. 17’. N.

AMELIA, formerly AMERIA, or ^EMILIA, an episcopal city of Italy, in the pope’s territories, seated on a mountain, between the Tiber and Nira, in a fertile country, 18 miles south-west of Spoletto, and 45 north of Rome. Lon. 12►►. 20’. E. lat. 42►►. 35’. N.

AMELIA, a county of Virginia, situated be- tween Blue-ridge and the tide waters, having Cumberland county on the north, George county on the east, and Lunenburg county on the south and west. Amelia, including Nottaway, a new county, contains 18,097 inhabitants, of whom 11,037 are slaves.

AMELIA ISLE, an island on the coast of Flo- rida, about seven leagues north of St. Augustine, and very near Talbot island on the south, at the mouth of St. John’s river. It is thirteen miles long and two broad, is very fertile, and has an excellent harbour. Its north end lies opposite Cumberland Island, between which and Amelia

‘ !! ” “I* C►►“ClUS”>” ►►f ‘

veniy; so be it; or so it ought to be. It has

Lat. melior. To better, to mend, to improve.

The class of proprietors contributes to the annual produce by the expense which they may occasionally lay out upon the improvement of the land, upon the buildings, drains, enclosures, and other ameliorations, which they may either make or maintain upon It.

Smith’s Wealth of Nations.

His humanity must exult at the probability of their lot being so much ameliorated.

Swinburne’s Travels through Spain, letter 36.
AMELLUS, STARWORT, a genus of the poly- gamia, superflua order, belonging to the synge- nesia class of plants ; and in the natural method ranking under the 49th order, composite oppo- sitifolise. The characters are : common CAL. imbricated and roundish: compound COK. is radiated : the hermaphrodite corollets numerous in the disk ; the female numerous in the ray ; proper corolla of the hermaphrodites are tubular and quinquefid ; of the females, tongued, loose, and two or three toothed : STAM. in the her- maphrodites, consist of five short capillary fila- ments : the anthera cylindric and tubular : PIST. an ovate germen ; a filiform stylus,

the length of the stamina ; and two filiform stigmata : there is no pericarpium, but the calyx unchanged: the seeds are ovate and solitary ; the pappus is hairy, the receptaculum chaffy. Of this there are two species, viz. 1. A. lychnitis, with one flower on each footstalk. This is a native of the Cape of Good Hope, and is a perennial plant, rising about three feet high. 2. A. umbellatus, with flowers growing in umbels, a native of Jamaica, from two to three feet high.

AMELLUS, in Virgil, is used for the aster Atticus, and by some other botanical authors for the caltha palustris.

AMELOT DE LA HOUSSAI (Nicholas), born at Orleans in 1634, was much esteemed at the court of" France, and appointed secretary of an embassy which that court sent to the common- wealth of Venice; but his writings afterwards gave such offence, that he was imprisoned in the Bastile. They were : 1. Histoire du Govern- ment de Venice, &c.; Paris, 1676. 2. La Mo- rale de Tacite ; 1686. 3. A Translation of Palafox's Theological and Moral Homilies upon the Passion of our Lord ; besides Translations into French of Machiavel's Prince ; Father Paul's History of the Council of Trent ; Bal- thasar Gracian's Oraculo Manual ; and the first six books of Tacitus's Annals. Niceron also gives a list of some other pieces.

AMELOTTE (Denis), was born at Saintonge, in 1606, and died in 1678, leaving, 1. La Vie du P. D. Gondren, 4to. Paris, 1643. 2. A French Translation of the New Testament, in 4 vols. 8vo. 1666-8. 3. Abrege de la Theologie, 4to. Paris, 1675. 4. Les Epitres et les Evangilesde toute 1'Annee ; &c.

AMELPODI, in botany, an Indian tree, used as an antidote against the bites of serpents. Ruii Hist. Plant.

AMEN', interj. f[illegible]K, Ileb. whence Gr. a/iyr, ust-d in scripture, and still in the Christian

most countries, possessing a translation of the scriptures.

One cried, God bless us ! and, Amen! the other, As they had seen me with those hangman's hands :' List'ning their fear, I could not say Amen, When they did say God bless us.

Shakspeare't Macbeth,

Blessed be the Lord God of Israel, from ever- lasting and to everlasting, Amen and Amen.

Psalm xli. 13.

AMEN, among the Jews, was used likewise to affirm any thing, and was a sort of affirmation used often by our Saviour; Apnv, A/JIJV, Xsywu/uv, i. e. ' Verily, verily, I say unto you.' It is also understood as expressing a wish ; as ' amen, so be it,' Num. v. 22. In this sense, the word has been adopted into almost all the modern lan- guages, without any alteration. It was likewise used as an affirmative, ' amen, yes, I believe it,' 1 Cor. xiv. 16. The Hebrews began the five books of Psalms, according to their way of dis- tributing them, with the words amen, amen; which the Septuagint have translated ytvoiro, ytvoiro ; and the Latins, fiat, fiat. The Greek and Latin churches have preserved this word in their prayers, as well as hallelujah and hosan- nah ; because they observed more energy in them, than in any terms which they could use in their own languages. At the conclusion of the pub- lic prayers, the people answered with a loud voice, amen ; and St. Jerome says, that at Rome when the people answered amen, the sound of their voices was like a clap of thunder: ' In si- militudinem ccelestis tonitrui amen reboat.' The Jews assert, that the gates of heaven are open to him who answers amen with all his might !

AMEN'ABLE, Fr. amener, to bring or lead unto. Amenable may be that which may be brought; to answer enquiries, to account for actions.

Again, because the inferior sort were loose and poor, and not amenable to the law, he provided, by another act, that five of the best and eldest persons of every sept, should bring in all the idle persons of their surname, to be justified by the law.

Sir John Davies on Ireland.

The sovereign of this country is not amenable to any form of trial known to the laws.

Jtiniits's Letters, ded.

AMENABLE, or AMAINABLE, in law, is applied to a woman who is supposed to be governable by her husband.

AMEN'AGE, v.) To menage or manage AMEN'ANCE. $ See MANAGE. With her, [Occasion,] whoso will raging Furor tame, Must first begin, and well her amenage.

Spenser's Faerie Queene II, act iv. sc. 11. For he is fit to use in all assays, Whether for arms and warlike amenance, Or else for wise and civil governance. Spenter. AMENANUS, in geography, a river of Sicily nowJudicello, that had its source in Mour TEtna, and a very small stream. Ovid. Fast. 1. iv. v. 467.

Necnon Sicanias volvens Amenanus arenas Nunc fluit; interdum suppressis fontibus aret.

AMEND', v, ~\ Lat. emendare, e from and AMENDS', / menda, a fault, which Vos-

AMEND'ER, n. V sius thinks is from the Greek AMEND'FUL, l/►►wov; for it is properly AMEND'MENT. J called menda, when any thing is deficient. To free from deficiency, fault, or blemish ; to repair,

correct, improve, reform. Bute ys wille al clene was ys lond for to amende, And attur all pis to Wynchestre from Londone he

wende,

For to amande bilke side and so and so to Salusbury And so for to amende more, to be downe of Ambres- bury. R. Gloucester, p. 144.

Sir ert bou not ferd of wreche of Code's ire, bat bou wilt werre bigynne, without amendmennt, Ageyn God don synne ageyn holy kirke has went ? Irede bow mak amends of pat grete misdede.

R. Brunne,p. 391.

And axide of hem the our in which he was amen- did, and their seiden to him, fro yistirday in the seven the our the fuere lefte him.

Widif, John, iv. Now hit thyn kep me in . pouht pat evere ich so

wroughte

Lord er ich lyf lete. for loue of py selve Graunte me goode Lorde. grace of amende.

Vision of Pier's Plouhman, p. 92. Poverte is hateful good ; and as I geese, A ful gret bringer out of biseneese, A gret amender eke of sapience, To him that taketh it in patience.

Chaiccer. The Wife of Bathe's Tale,

It is an assured sign of a worthy and generous

spirit whom honour amends : for honour is, or should

be the place of virtue, and as in nature things move

violently to their place, and calmly in their place :

virtue in ambition is violent, in authority settled and

calm. Lord Bacon’ Essays.*

ROL. Away with him, hence, hail him straight to

execution.

AUB. Far fly such rigour your amendful hand. Rot. He perishes with him that speaks for him.

Beau, and Fletch. Bloody Bro. act iii. Our Lord and Saviour was of opinion, that they ###which would not be drawn to amendment of life, by the testimony which Moses and the prophets have given, concerning the miseries that follow sinners after death, were not likely to be persuaded by other means, although God from the dead should have raised them up preachers. Hooker.

If I have too austerely punish’d you,

Your compensation makes amends. Shaksp,

Of the amends recovered, little or nothing returns

to those that had suffered the wrong, but commonly

all runs into the prince’s coffers. Raleigh’s Essays.

There I, a pris’ner chain’d, scarce freely draw The air imprison’d also, close and damp, Unwholesome draught ; but here I feel amends, The breath of heav’n fresh blowing, pure and sweet, With day spring born ###, here leave me to respire.

Hilton.

Some little hopes I have yet remaining, that I may

make the world some part amends for many ill plays,

by an heroick poem. Dryden.

If our sauls be immortal, this makes abundant

amends and compensation for the frailties of life, and

****ufferings of this state. Tillotson.*

There are but few pleasures that make us amends

for the pain of repeated disappointments.

, Cowper's Letters _

AMEND, or AMENDE, in the ci-devant French customs, was a pecuniary fine, imposed by a judge for any crime, false prosecution, or ground- less appeal.

AMENDE HONORABLE, was an infamous kind of punishment formerly inflicted in France, upon traitors, parricides, or sacrilegious persons. The offender being delivered into the hands of the hangman; his shirt was stripped off, a rope put about his neck, and a taper in his hand ; then he was led into court, where he was obliged to ask pardon of God, the king, the court, and his country. Sometimes the punishment ended here, but sometimes it was only a prelude to banish- ment to the galleys, imprisonment in the Bastile, death, or torture. Amende honorable is also a term used for making recantation in open court, or in presence of the person injured.

AMENDMENT, in law, may take place, un- less the error lies in giving judgment, for in that case it is not amendable, but the party must bring a writ of error. A bill may be amended on the file at any time before the plea is pleaded ; but not afterwards, without motion and leave of the court.

AMENDMENT OF A BILL, in parliament, is some alteration made in the first draught of it.

AMENDMENT OF A MOTION, in public meet- ings, is to be proposed before the chairman puts the motion; and if seconded, is put by him be- fore the motion.

In cases of wrong returns, so reported by the committee of privileges and elections, and voted by the house of commons, it is usually ordereJ that the returns be amended by the returning officer, according to the directions of the house, without issuing a new writ.

Amendments ought always to be in that house from whence the thing to be amended originally proceeded, though the directions for the amend- ments came from the other house. Hakew. Mann, of Passing Bills, p. 167.

AMENDOLARE, in geography, a town of Italy, in the kingdom of Naples, and province of Calabria Citra ; fourteen miles north-east of Cassano.

AMENDUS, in ancient geography, a town of Caria, supposed by Martiniere to be Myndus.

AMENEBURG, in geography, a town of Germany, in the circle of the Lower Rhine, five miles east-south-east of Marburg, and forty-eight north-north-east of Mentz.

AMENIA, a town of Asia Minor, belonging to the Chalybes, who inhabited the eastern part of Pontus.

AMENIA, in geography, a thriving township ot Duchess County, New York, in America, six miles from Sharon in Connecticut; containing 3078 inhabitants, of whom 383 are electors.

AMENITY, Lat.amanus, which Festus thinks so called, because it alludes to the love of itself, (ad se amandum). Pleasantness, sweetness, agreeableness.

If the situation of Babylon were such at first, as it was in the dayes of Herodotus ; it was rather a seat of amenity and pleasure then conducing unto this in- tention ; it being in a very great plain, and so an im- proper place to provide against a general deluge by towers and eminent structures.

Brown's Vulgar Errours.

AMENORRHOEA of a, priv. fuvtc, the men- ses, and pew, to flow; in medicine, an absence or deficiency of the menstrual excretion in women. See MENSES and CHLOHOSIS

AMENTACEOUS, in botany, a term applied to the flowers of certain trees and plants, which are composed of a vast number of apices, or anthers, hanging down in form of a rope, such as the hazel, Sac. See CATKIN.

(AMENTACE^,, in botany, one of the natu- ral order of Linnaeus, comprehending those plants whose fruit is a catkin. Linn. Philos. Botan. Sec. It is also the name of a class in the system of Tournefort and others, and hence is derived the adjective, amentaceous.

AMENTIA, in medicine, from a priv. and mens, the mind, a weakness of intellect, as either
want of the memory, or incapability of receiv- ing mental impressions. This lamentable malady is placed, by Dr. Cullen, under nervous diseases affecting the mind ; because the mental defi- ciency is generally the most prominent symptom. In many instances, however, the bodily defects are equally conspicuous, and we may conclude that the cause of the disease is always to be traced to some imperfect organization of the body, par- ticularly the brain and head. Amentia is divided into three kinds : when originating in birth, it is called amentia congenita; when from acci- dent, as from the effects of fever, it is called amentia acquisita; and when from old age, amentia senilis.

AMENTUM, in antiquity, a thong tied about the middle of a javelin or dart, and fastened to the fore- finger, in order to recover the weapon as soon as it was discharged. The ancient Ro- mans made great use of the amentum, thinking it helped to increase the force of the stroke ; for which reason, some of their great men refused to use it, as confiding wholly in the natural strength of their own arms. It also denotes a latchet that bound their sandals.

AMEN'USE, v. minuo, imminuo, to lessen; Fr.

ameneuser. To lessen, make little, di- minish.

The thridde [the spice of envy] is to amenuse the bountee of his neighbour.

Chaucer. The Personnel Tale,vo. ii. p. 223. AMERADE, a kind of officer among the Sa- racens, answering to the governor of a province among the Europeans.

AMERBACH (John), a learned printer of Bazil, in Switzerland, in the fifteenth century. He first made use of the Roman type instead of the Gothic and Italic: he died in 1515. His son John was professor of law at Basle, scyndic

of that city, and the intimate friend of Erasmus :

he died in 1562, aged 67. There were other

learned ministers of this family. AMERCE', v. 7 Lat. merces, a merondo, AMERCE' MENT, or > says Vossius, after Varro ; AMER'CIAMENT. 3 and mereo, whence me-

reido, from /wpoe, a part or share.

a portion or share of money or goods; to

irroose a fine or penalty ; to exact a recom-

peice.

They ben clerkes her courts they overse, Her poor tenaunce fully they slite The hier that a man amerced be The gladlier tbey woll it write.

Chaucer's Ploughman's Tale, fol. 96.

They shall amerce him in an hundred shekels of silver, and give them unto the father of the damsel, because he bath brought up an evil name upon a vir- gin of Israel. j^. ^xli. 19.

All amercements and fines that'should be imposed upon them, shall come unto themselves.

Spenser's State of Ireland.

Where every one that misseth then her make Shall be by him amerc'd with penance due.

Spenser.

But I'll amerce you with so strong a fine, That you shall all repent the loss of mine.

Shalupcare.

Millions of spirits, for his fault amerc'd Of heav'n, and from eternal splendours flung For his revolt. Milton.

AMERCEMENTS, in law, differs from a fine in being imposed arbitrarily in proportion to the fault ; whereas a fine is a certain punish- ment settled expressly by some statute. Man- wood, in his Forest Law, makes another dif- ference, and says, amercement is a more e^y and merciful penalty, and a fine more heavy and severe one. A court of record can impose a fine; other courts can only ameree..By Magna Charta a freeman cannot be amerced for a small fault, but in proportion to the offence, and that by a judgment of his peers. 9 Hen. III. c. 4.

Before this period amercements were often ex- cessive, and they were imposed on a thousand different occasions, not only for real crimes, but for trivial or imaginary offences, and on the most frivolous pretences; of course they were the sources of infinite vexations to the subjects, as well as of great riches to the sovereigns of England. They fell heavy, not only on the common people, but upon the greatest prelates and most powerful barons of the kingdom. This gave occasion to the above-mentioned article of the great charter, and to the rules founded upon it, which enacted, that no man should have a larger amercement imposed upon him that his circumstances or personal estate would bear; saving to the landholder his contenement or land, to the trader his merchandize, and to the ' countryman his wainage, or team and instruments of husbandry.

AMERCIAMENT ROYAL, a pecuniary pun- ishment

inflicted upon a sheriff, coroner or other officer of the king, by justices, for an abuse in his office.

AMERI, in botany, the Indigofera tmctoria of Linnaeus.

AMERI A, in ancient geography, a district of Armenia, mentioned by Strabo (torn. ii. p. 835.) as situate in the vicinity of Cabira, in which was a celebrated temple of the month Pharnacus. AMERIA, now AMELIA, a town of Italy, south-west of Spoleto, founded, according to Cato, 954 years before the Persian war, or 1135 years before Christ. Augustus established a co- lony in it. The celebrated Roscius is said 1 have been a native of this cky ; and its territory was assigned by August-is to the veteran sol- diers.

1 . AM ERICA is the largest of what are termed the four grand divisions of the globe, extending through the greater part of both hemispheres, from the latitude of 55►►. 30'. south of the equator to 74►►. north. It stretches more than 9000 miles in length, and in its widest part 3800 miles in breadth. The average breadth may be estimated at 1500 miles, and the whole area at 12,000,000 of square miles. It lies between 35►►. and 168►►. of long, west from Greenwich, dividing the Atlantic from the Pacific Ocean. Its form is very irregular. On the south it has a long narrow projection, terminating in Cape Horn. On the north, it spreads to its greatest width ; and stretching ge- nerally to the north-west, approaches within forty miles of the eastern extremity of Asia. Its limits on the north have not been fully examined ; but the investigations of captain Parry prove that it is bounded by an arm of the sea, at least as far as long. 113►►. west, from Greenwich; and, it can scarcely be doubted, that this strait is con- tinued to the Pacific Ocean, and forms a com- plete

separation between the continent and the arctic regions connected with Greenland. Ex- tending through every zone, and comprising every variety of climate and soil, which are requisite for any production of the earth ; dis- tinguished for the grandeur of its natural features, and the richness and variety of its vegetables, minerals, and gems, this continent may well be entitled the New World. It is not less interest- ing as the birth place of all modern republics ??? ??? the grand theatre on which a new series of expe- riments, upon the political and moral institutions of men, has been commenced. The Caribbean Sea and the Gulf of Mexico divide the continent into two great portions ??? North and South Ame- rica. They are connected by the narrow Isthmus pf Darien, in lat. 8??. north.

2. HISTORY. ??? It has been believed by many, that America was not unknown to the ancients ; and, from certain passages in the works of some of the writers of antiquity, as well as from coin- cidences in the languages and customs of some of the nations of the old and new continent, plausible reasons have been advanced in favour of this theory. Whatever knowledge, however, the inhabitants of Europe possessed of America, no traces of it existed at the period of the revival of letters; and, it was generally supposed, that the Canaries, or Fortunate Islands, formed the western boundary of their world. For the cor- rection of this error, and the discovery of a new continent, mankind are indebted to the genius and enterprise of Christoval Colon, a native of Genoa, better known to us by the name of Chris- topher Columbus. From a long and close ap- plication to the study of geography, this great man had obtained a knowledge of the true figure of the earth, far beyond what was common to the age in which he lived. Another continent, he conceived, necessary to complete the balance of the terraqueous globe ; but he erroneously con-

ceived it to be connected with that of India This error arose from the construction of the maps of that period; which represented the oriental countries of Asia, as stretching vastly farther to

the east, than actual observation has proved them to extend. Having fully satisfied himself with the theoretical truth of his system, his adventurous spirit made him eager to verify it by experiment. For this purpose, he applied to the senate of Genoa, developing his views, and representing the advantages which would accrue to the republic, from the possession of a new route to the great source of opulence. The Genoese, however, treated the idea as absurd and chimerical, and rejected the proposal with contempt. Although disappointed in this first attempt, Columbus was not discouraged. Through his brother, Bartholomew, he applied to Henry VII. of England; but, the cautious prudence of that monarch, deprived him of the honour of patronising a man, whose friendship would hare immortalized him. The next attempt of Co- lumbus, was at the Portuguese court ; which had in that age, greatly distinguished itself by favouring the spirit of discovery along the African coast. Here he met with an additional mortification, from an attempt to anticipate him in the enter- prise; which, however, proved abortive at an early period. As a last resource, he now pre- sented his scheme to the court of Spain. After eight years of anxious solicitation and contemp- tuous neglect, he at last obtained a gleam of royal favour on his bold and original project.

3. The interest of queen Isabella procured him three small vessels, with which he set sail from the port of Palos, in Andalusia, on the 3d of August, 1492. He steered directly for the Ca- naries, whence, after having refitted, as well as he could, his crazy and ill-appointed flotilla, he again sailed, on the 6th of September, keeping a due western course over an unknown ocean. Several days passed without a sight of land, and the anxieties of the sailors, arising from this cir- cumstance, were heightened by the variation of the compass, then first perceived. An open mutiny took place, which required all the cou- rage and address of the great navigator, to quell it. They pursued their course ; but when thirty days had elapsed, without any indication of ar approach to land, both officers and

men joinet in a second revolt. Columbus was forced par- tially to give way to their remonstrances. I'e consented to return, if, after proceeding thrae days longer, nothing appeared to confirm his ex- pectations. With these assurances, they agnn proceeded, and about midnight, on the lltl of October, Columbus, who was standing on the forecastle, discovered a light a-head.

4. Morning displayed the joyful sight of laid ; and the sailors were now as ardent, in their ex- pressions of repentance and admiration, as they had before been insolent and ungovernable. Tie island of St. Salvador, one of the Bahamas, wrs

AMERICA.

the first part of America trodden by the feet of Europeans. From the rude poverty of the inha- bitants, Columbus soon perceived that he was still at a distance from the shores of India. The island of Cuba was next discovered, and al- though no gold was found, the natives pointed to the east, where, in an island, which they called Hayti, this metal was said to abound. Columbus proceeded in that direction, and discovered Hayti on the sixth of December. Here he found some specimens of gold ; and, leaving some men to form a colony, he re- turned to Spain. On his arrival, he immedi- ately proceeded to court, where he was received with admiration and respect. The glory and benefit which promised to result from the disco- very, rendered the government eager to forward his design. A fleet of seventeen sail was pre- pared ; and Columbus, who was now appointed viceroy of all the countries he should discover, departed on his second voyage, accompanied by many persons of rank and distinction. Dur- ing the progress of this voyage, he discovered the islands of Dominica, Marigalante, Guada- loupe, Montserrat, Antigua, Porto Rico, and Jamaica. The success of this great man did not fail to excite envy and intrigue against him at the court of Spain. An officer was sent to act as a spy over his actions : and Columbus soon found it necessary to return to Europe, for the purpose of defeating the

machinations of his enemies. After great difficulty, he obtained leave to set out on a third expedition, in 1498. Sailing south from Spain, as far as the equator, he then directed his course to the west, and steered with the trade winds across the Atlantic. At the end of seventeen days, the island of Tri- nidad was discovered ; and, on the first of Au- gust, he reached the mouth of the great river Orinoco. From the magnitude of this stream, he concluded that he had discovered the conti- nent ; and, the continuance of land to the west, confirmed the belief. He then coasted along westward, to Cape Vela, from which he crossed over to Hispaniola. The new glory, which Co- lumbus had now acquired, excited fresh in- trigues against him, which prevailed so far, that he was superseded in his government, and sent home in irons. He justified himself, however, to the court; and, in 1502, was allowed to de- part on a fourth voyage, in the course of which, he discovered the harbour of Porto Bello, and a considerable part of the continent. He then re- turned to Europe, and died at Valladolid, in the year 1506, in the 59th year of his age.

5. The honour of having made known to mankind the existence of North America, and, indeed, the first discovery of the continent was acquired by the family of Cabots, residents of Bristol, in England. The fame which Colum- bus had gained by his discoveries, spread through Europe, and inspired many with a similar spirit of enterprise. As early as the year 1495, John Cabot, a Venetian, obtained from Henry VII. of England, a commission for himself, and his three sons, ‘ to navigate all parts of the ocean, for the puipose of discovering islands, countries, regions, or provinces, either of Gentiles, or Infi- dels, which have been hitherto unknown to all

Christian people; with powei to set up hij standard, and take possession of the same, as vassals of the crown of England.’ Such were the terms of this grant, which rivalled the bulls of the papal see, in

the extent of the power and authority it professed to confer. In pursuance of this commission, John Cabot sailed from England, in 1497, carrying with him his three sons. On the 24th of June, 1497, he discovered a large island, to which he gave the name of Pnma Vista, or the First Seen, now called New-foundland. A few days after, he discovered a smaller island, to which he gave the name of St. John's ; and, continuing his course westwardly, he soon fell in with the continent, and sailed along the coast of Labrador, as far as the latitude of 67►►. 30'. north. But, not meeting with the ex- pected north-west passage, he changed his course to the south, and sailed along the whole coast, as far as Florida, having made the first and most extended discoveries of the main land of the New World.

6. A spirit of discovery was now universally excited. In 1499, Amerigo Vespucci, a Floren- tine, a man of science and genius, sailed with a small squadron to the New World, but made very little addition to the former discoveries. He, however, published, on his return, the first description of the new countries that had ap- peaied, and the injustice of mankind has given his name to the whole continent, an honour to which Columbus was so much more justly en- titled. In the year 1500, the coast of Brazil was accidentally discovered by Alvarez de Ca- bral, a Portuguese admiral, in consequence of having been driven too far to the west, on a voyage round the Cape of Good Hope. The idea entertained originally by Columbus, that America was part of the continent of Asia, was generally received until 1513, when the Pacific Ocean being descried from the mountains of the Isthmus of Darien, this delusion was dissipated. In 1512, Ponce de Leon, a Spaniard, sailed from Porto Rico, northwardly, and discovered tbe continent in 30►►. 8'. north lat. He landed on Easter-day, whence, according to some, Florida derives its name ; but, according to others, it was so called from the verdure and bloom, with which, at that season, the country was covered. For many years the name was applied to the whole of the continent.

In 1517, Hernandez Cordova sailed from Ha- vannah,

with three barks, and 110 men, on a voyage of discovery. Steering a westerly course, the first land he saw was Cape Catoche, the eastern point of the peninsula, now called Yu- catan. The Spaniards were here astonished to meet with natives, clothed in cotton garments, and exhibiting other traces of civilization and wealth. They attempted to land, but were re- pulsed, with great toss ; and Cordova himself died soon after his return to Cuba. In the fol- lowing year, Velasquez, the governor of Cuba, excited by the accounts given of the country, dispatched a second armament, under the com- mand of Juan de Gryalva, consisting of four ships, and 200 Spanish soldiers. This expe- dition sailed on the fifth of April, 1518, and completed those discoveries whichled to the sub-

gation of Mexico. They first touched at the island of Cozumel, and then at another, which they called the Island of Sacrifices, from its being the first place where they had observed human sacrifices. They terminated their voyage at St. Juan de Ullua, and returned in triumph to Cuba, having examined a considerable extent of the coast, and ascertained the existence of the rich and extensive empire of Montezuma. From them this country received the name of New Spain. The success of this expedition, and the reports of the wealth to be found in New Spain, induced Velasquez to send out another arma- ment of ten ships, and 550 soldiers, under the command of Hernando Cortez; and with this small force, aided by treachery and cruelty, that celebrated adventurer commenced the war in which he completely subdued the empire of Mexico.

8. Several years now elapsed without any further progress being made in the discovery of North America. The French, who had not dis- played the same spirit of enterprise as their neighbours, entered the lists in 1524. In that year Francis I. sent John Verrazani, a Florentine, to America, for

the purpose of making disco- veries. He traversed the coast from lat. 28□□. to 50□□. north ; but in a second voyage, some time after, was unfortunately lost. In 1525, Stephen Gomez, the first Spaniard who came upon the North American coast, with a view to discovery, sailed from Groyn in Spain to Cuba and Florida, thence northward to Cape Razo, in lat. 46□□. north, in search of a northern passage to the East Indies. In the spring of 1534, a fleet was fitted out at St. Maloes, in France, by direction of Francis I. with the design of attempting dis- coveries. The command of the fleet was given to James Carder. He arrived at Newfoundland in May of this year. Thence he sailed north- wardly, and on the day of the festival of St. Lawrence he found himself in the midst of a broad gulf, which he named the St. Lawrence. He gave the same name to the river which empties into it. In this voyage he sailed as far north as lat. 51□□., expecting in vain to find a passage to China. In the following year he sailed up the river St. Lawrence as far as the Falls. He called the country New France ; built a fort, in which he spent the winter, and returned the following spring to France. On the 12th of May, 1539, Ferdinand de Soto, with 900 men, besides sailors, sailed from Cuba, having for his object the conquest of Florida. On the 30th of May he arrived at Spirito Santo, from whence he travelled in various directions, and, after exploring a vast extent of country, and even reaching, as it is supposed by some, the river Susquehannah, died on the bank of the Mississippi, aged forty-two years. Cartier, in the next year, made a third voyage to Canada, built a fort, and began a settlement in 1541 or 1542, which he called Charlebourg, four leagues above Port St. Croix. He soon afterwards broke up the settlement, and sailed for Newfoundland. In 1542 Francis La Roche was sent to Canada by the French king, with 200 men, women, and children, but returned with his colony the next spring. In 1550 a number of adventurers sailed

for Canada, but were not afterwards heard of. No other attempt appears to have been made to settle

Canada during this century. In 1562, a French squadron under the command of John Rebalt, arrived on the coast of Florida, and discovered a river, which is supposed to be the St. Mary's. As he coasted northwards, he dis- covered several other rivers, one of \hich he called Port Royal.

9. The attempts to find out a north-east pas- sage to India having failed, the English sect out, in 1576, Captain Frobisher, to find a north-west passage. The first land which he made was a cape, which he named Queen Elizabeth's Fore- land. In coasting northerly, he discovered the straits which bear his name The two following years he made a second and a third voyage, which produced no material discovery. In the same year, Sir Francis Drake, being on a cruise against the Spaniards in the Pacific ocean, landed on the continent of North America, northward of California, took possession of a harbour, and called the surrounding country New Albion. In 1583, Sir Humphrey Gilbert obtained a patent from Queen Elizabeth for lands not yet possessed by any Christian prince, provided he would take possession within six years. In 1583, he sailed to Newfoundland, and took formal possession of the continent of North 'America, in the name of the crown of England. In pur- suing his discoveries, he lost one of his ships on the shoals of Sable, and, on his return home, a storm overtook him, in which he was unfor- tunately lost. In 1 584, a patent was granted by Elizabeth to Sir Walter Raleigh, by the authority of which, he sent out a colony the next year. They arrived on the coast, and anchored a few leagues west of the Roanoke. Here'they landed, and took possession of the country on behalf of Queen Elizabeth, calling it, in honour of her, Virginia. In 1585, a colony was planted, but became so disheartened, that they returned to England in 1586, with Sir Francis Drake. Another attempt was made, in the year last mentioned, to establish a colony in Virginia, but with similar ill success.

10 A third attempt, made in 1587, also failed ; the colonists perished miserably, having either died of famine or been massacred by the Indians. In 1585, an

English expedition, under the com- mand of Davis, discovered Davis's straits ; and examined the adjoining coasts as far as 72►►. north latitude in 1587. In 1602, Bartholomew Gos- nold with thirty-two persons, made a voyage to North Virginia, as it was then called, and dis- covered and gave names to Cape Cod, Martha's Vineyard, and Elizabeth Islands. Attempts were made to form a settlement in the vicinity, but without success ; and it is believed that, at the beginning of the seventeenth century, there was not one European family settled on all the vast extent of coast from Greenland to Florida. In 1603, Bartholomew Gilbert, in a voyage to South Virginia, in search of the colony which was left there in 1587, landed near Chesapeake bay, where, in a skirmish with the Indians he was unfortunately slain. In the same year, the king of France granted by patent to M. de Mons all the country from the fortieth to the

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forty-sixth degree of north latUude, under the name of Acadia. In 1605, George's islands and Pentecost harbour were discovered by captain Weymouth, who soon afterwards entered a large river, now supposed to be the Kennebeck or I'enobscot. In 1606, James I. divided Virginia into two colonies, the northern and southern, which were granted to different companies. The next year, M. de Champlain sailed up the St. Lawrence, and founded Quebec. In 1607, the first permanent settlement was effected in the present state of Virginia, at James-town, the first English town in America.

11. Henry Hudson, a native of England, but at the time in the service of the Dutch East India Company, discovered, in 1609, and sailed up the river which has since borne his name. Set- . tlements were soon after made here by the Dutch. In 1614, captain Smith explored the coast of Massachusetts, and thence southerly ; and on his return home to London drew a map of the country, which he called New England, a name which has superseded that of North Virginia. In 1616, William Baffin discovered the great northern bay which bears his name. In 1620,

the first permanent settlement was effected at Plymouth, in New England. In 1627, a colony of Swedes and Fins came over, and made the first settlement on the Delaware river. In the reign of Charles 1. Lord Baltimore, a Roman Catholic, obtained a grant of land upon Chesa- peake Bay, and soon after came with a number of Catholics, and settled Maryland. Connec- ticut and Rhode island were next settled from Massachusetts. New Jersey was granted to the Duke of York, by Charles II. In 1669, the settlement of the Carolinas began. In 1682,- William Penn, with a colony of Quakers, arrived in Pennsylvania. Louisiana was colonized by the French in the beginning of the next century, and in 1732, Georgia was settled by general Ogle- thorpe.

12. Following its great geographical features, we divide the present article on America, into two parts; i.e. NORTH and SOUTH AMERICA; and again subdivide them into chapters, sugges- ted by the

great physical peculiarities, and po- litical divisions of these two important portions of the globe.

PART I.••• NORTH AMERICA.

CHAP. I.

GENERAL PHYSICAL DESCRIPTION.

NORTH AMERICA is the largest of the two great divisions of the American Continent, extending from the isthmus of Darien, in latitude 8••. ; to Barrow's straits, in latitude 71••. north ; and from Davis's to Behring's straits. Its greatest length from north-east to south-west, is 3000 miles, and its greatest breadth from east to west, 3800 miles.

13. SEAS, BAYS, AND GULFS.••• The waters which intersect the American Continent, may be considered in connection with the three great oceans around it, of which they are branches ••• ••• the Atlantic, the Pacific, and the Arctic oceans. The Pacific ocean has few branches of much importance, extending into the Western Conti- nent•••Cook's inlet, Norfolk Sound, Queen Char- lottes, and Nootka Sounds, and the Straits of St. Juan de Fuca, are the only considerable in- dentations in the coast until we reach the gulf of California. This gulf extends towards the north, between the peninsula of California, and the main, to the distance of 800 miles, varying from 20 to 120 miles in breadth. Its entrance is between Cape St. Lucas, and Cape Comentes. It is full of islands, and shoals, and its navi- gation is difficult. The harbour of Acapulco is the principal port on the peninsula; and the gulfs of Tehuantepee and Panama, are the two principal points proposed for opening a com- munication between the oceans. ••• The gulf ot Guayaquil is the principal indentation in the coast of South America, until we reach the gulf

or Archipelago of Chiloe. The gulf is studded with numerous islands, and bears a striking re- semblance

to the Grecian Archipelago, in the liveliness and enterprise of its inhabitants, as well as in its natural features.

14. The straits of Magellan present the first opening from the Pacific to the Atlantic Ocean, extending 340 miles in a winding course, between California, and Terra del Fuego. The western current, from the Atlantic, passes through these straits into the Pacific, with great rapidity, and the navigation is very difficult.

15. The Atlantic Ocean makes but few en- croachments upon the eastern coast of South America ; and some parts of it are even desti- tute of convenient harbours. The principal openings are those formed by the two great rivers, the Amazon, and the Paraguay. These vast expanses of fresh water resemble ordinary gulfs, or bays, in size, the former being fifty, and the latter 180 miles in breadth. The La Plata is not safe as a place of anchorage, on account of the force of its current, and the sand banks with which it abounds. The best harbours on the eastern coast of South America, are those of Pernambuco, Bahia, and Rio Janeiro, the last of which is remarkably defended from the agita- tions of the ocean by an extensive reef resem- bling an artificial mole, and is considered one o the finest ports in the world.

16 In proceeding northward, from the river Amazon, we soon reach the extensive sea which

separate the two portions of the continent. They are separated from the main ocean, by the chain of the West India islands, and the ap- pearance of the whole at once suggests the idea that they have been formed by the gradual en- croachments of the current from the east, pro- duced or aided by the trade winds j and that the islands are the relics of an extensive tract of land which formerly united North and South America. The principal divisions of this

branch of the Atlantic are the Carribbean sea on the south, and the gulf of Mexico on the north. The island of Cuba, and the other large islands, often called the greater Antilles, form the northern limit of the Carribbean sea : it is separated from the ocean by the smaller chain, or Carribbee islands, and extending 1400 miles in length, and washes the coast of Colombia and Guatimala. The bay of Honduras, and gulf of Darien are its principal large divisions, and the harbour of Porto Bello, Carthagena, and Laguira are its best ports.

*17. The gulf of Mexico washes the coast of Mexico and the United States, separated from the ocean by the sandy peninsula of Florida. It extends about 1000 miles in length, and 700 *)r 800 in breadth. The passage to the ocean is rendered easy by a rapid current, termed the gulf stream, which continually flows through the straits or gulf of Florida. The entrance is, for the same reason, very difficult, and requires a circuitous and dangerous navigation through the shoals and keys of the Bahama isles.*

*18. The gulf stream is one of the most re- markable permanent currents on the globe. It appears to be formed by the accumulation of water which *he trade winds throw into the Carribbean sea, from the wide Atlantic ; or striking the shores of the Isthmus of Darien, they are turned northward into the gulf of Mexico, and thence pass out by the most un- obstructed passage between Cuba and the Ba- hamas, and the peninsula of Florida. It issues from the gulf with a velocity of four or five miles an hour, and sweeps along the American coast nearly parallel to it, at the distance of thirty to fifty miles from Cape Hatteras. The coast then taking a more northerly direction, the line of the gulf stream recedes from it until it reaches the banks of Newfoundland. Here it is turned towards the east, and would appear sometimes to reach the north- eastern coast of Europe. Tropical productions are frequently thrown up on the coast of Scotland and Norway, which could only find their way by this current; and in one instance the mast of a vessel burned in the West Indies, was cast upon the shore*

of the Hebrides. The current appears to pass in an immense curve to the Azores, where it is also traced by the American productions it throws up, and seems then to pass on, and be lost in the great western current from which it originated. Humboldt estimates that two years are occupied in the whole circuit. The gulf stream is readily distinguished from the surrounding ocean, by its greater temperature, produced by the tropical sun in the gulf of Mexico, and which it retains to the banks of Newfoundland, even in the winter season. The Colour of its water, and

the sea-weed with which it abounds, are also very obvious indications. The vapours which rise from it render the atmosphere above it, and the winds which blow from it peculiarly damp. From the difference of temperature between it and the surrounding oceanr it is the theatre of frequent gales and thunder-storms. It diminishes in velocity, and increases in width, as it proceeds; and both circumstances are affected by the state of the wind. It is found that the current which runs through the gulf of Mexico, and ultimately forms this stream, throws up sand on the coast of Mexico, which renders its harbours shallow, and the coast difficult of navigation. The beds of sand, filled with sea shells, which have been discovered at ten leagues from the present shore, indicate that in this way the land is encroaching upon the sea, and the basin of the gulf gradually contracting. No good port is found along the coast ; and the harbours of Cuba are the nearest places of safe rendezvous for the armed ships of Spain. That of the Havannah is the best.

1 9. A large part of the coast of the United States is also low and alluvial, like that of Mexi- co, and presents a succession of sand banks, se- parated from the shore by a series of shallow passages and sounds, which afford great fa- cilities for the coasting trade, but none for foreign commerce. The harbours of Charleston, and the Savannah river, are almost exclusively the seat of foreign trade, until we reach the fine openings of the Chesapeake and Delaware bays. The Chesapeake bay resembles an

inland sea, in the extent of its surface, the number of its tributary streams^ and the character of its navigation. Its length is 180 miles, and its average breadth from ten to twenty miles. It receives several laree rivers, and numberless small streams ; and is the medium of extensive trade in itself.

20. Delaware bay is much less extensive, and must rather be considered as the prolonged es- tuary of the river of the same name. Its length is about sixty miles, and its breadth increases from three to thirty miles, in going towards the entrance. It is navigable for large vessels, but obstructed by shoals. At New York we enter on the primitive region of the United States, and find a corresponding change in the coast. The shores become bold, and indented with many harbours of great depth. The port of New York is one of the finest in the world, and the principal seat of foreign trade in the United States.

21. The larger branches of the ocean on the New England coast, are Long-island sound, about fourteen miles long, and three to twenty- five wide, dividing Long-island from the state of Connecticut. Naragannot bay, which pene- trates the small state of Rhode island, and gives it every part of a coast. Buzzards bay, on the south side of the peninsula of Barnstable, and Massachusetts bay, in which is the harbour of Boston, on the north side, bounded by cape Cod and cape Ann

22. The bay of Fundy divides the state of Maine from the British province of Nova Scotia. It is remarkable for the height of its tides, which sometimes flow from forty to sixty feet, with a rapidity which is scarcely credible, and which

sometimes renders them destructive to the cattle feeding on the shores.

23. The river St. Lawrence forms an extensive gulf at its mouth, which hears the same name. It Kis

divided from the ocean by the islands of Newfoundland and Cape Breton, stretching ahout 400 miles from east to west, and an equal dis- tance from north to south.

*24. The seas and bays of the northern ex- tremity of America must be considered as branches of the Arctic ocean, although the limits of this ocean are not yet ascertained. ††† Davis's straits is a passage 450 miles wide, by which we approach the division of the waters of the globe from the Atlantic ocean. In pursuing a direct course, we enter Baffin's bay, whose ex- istence was for some time doubted ; but which has been fully examined and surveyed in the recent voyages undertaken by order of the British government. It stretches between u*e coast of Greenland and Labrador, as far as lat. 80††. north. Its outlets or connections on the north have not been traced ; nor is it known that there is any direct communication to the Atlantic on the east, except by the strait which insulates the point on which cape Farewell is situated.*

25. At the entrance of Davis's straits are the straits of Hudson and Cumberland, leading into Hudson's bay, a large inland sea, extending from lat. 51††. to 68††. north, and from Ion. 75††. to 95††. west. Its navigation is difficult, on account of ihe ice, which completely closes it during a large part of the year; and renders it dangerous during the period of its formation and destruction. It. exceeds the Baltic in size. It does not abound in fish ; but two species of the whale are taken here.

26. North of Hudson's straits, a strait was discovered by the British expedition under capt. Ross^ and penetrated by captain Parry to Mel- ville island, in the Ion. of 113††. west, to which the name of Barrow's straits has been given. The land on the northern side was called North Georgia, but it was not ascertained whether it consisted merely of a group of islands, or formed a part of an extended tract of land. The diffi- culties and dangers attending the exploring tour, from the long winter

period of darkness, and the short summer of light, with the consequent ac- cumulation of ice, prevented captain Parry from ascertaining the connections of the southern land ; and from determining whether any communica- tion existed with Hudson's bay. An expedition sent into this bay during the following season was equally unsuccessful; but captain Parry approached so near to the situation in which the sea was seen by Hearn and Franklin, as to leave little doubt that there is a continued passage along the northern coast of North America, to the mouth of Mackenzie's river, and thence to the straits of Behring.

27. Another expedition has been sent to at- tempt farther discoveries; and a land party, under captain Franklin, with a second squadron sent by Behring's straits, will attempt to prose- cute the same object in their mode, with U hope of forming a junction, or approaching so n►►ar to each other, that the geography of these unknown regions may be in some measure

settled, even if no practical result sno id follow It is, indeed, quite improbable that a channel which could not be passed in two years of labour and suffering, by the best appointed ships, en- tirely appropriated to the conveyance of the men, fuel, and provisions, necessary for navi- gating in these cold and desolate regions, should ever become a regular channel of lucrative commerce, while the passage round cape Horn can be made with far more ease and safety in a shorter period.

28. MOUNTAINS. ►►► North America is unrivalled for the magnitude of its lakes, and yields only to South America in the size of its rivers and basins. Its mountains are generally inferior in height to those of the other quarters of the world, but in the length of its chains it surpasses the eastern continent. It is traversed by two great chains of primitive mountains ; the" Rocky, or Chippewan mountains on the west, and the Apalachian chain,

embracing the Allegany ridge, and the White mountains on the east.

29 The great western chain of North America may be considered as a prolongation of the An- des. Its origin may be traced to the Isthmus of Darien, where it is connected with the Andes by a low, but uninterrupted ridge. It increases in height as it advances north, pursuing an irregular course, sometimes in the centre, and sometimes on one side of the peninsula, until it reaches the eighteenth degree of latitude, where it stretches from south to north, and approaches the eastern coast.

30. In the Mexican division, there is a group of mountains which rivals the most elevated of the new continent; the principal are Popoca- tapetl, and the Pic de Oruciba, above 17,000 feet in height; and Irtaccihuatl, 15,000 feet high ; all of them volcanic summits, unlike -the South American Andes. The ridge of the chain here spreads into one extensive table land ; and the most elevated summits, instead of forming a continued crest of peaks, are either dispersed upon this extended mountain top, or ranged in lines, which preserve no regular course. As far as the nineteenth degree of latitude, this chain is termed the Cordillera of Anahuac, or Mexico. Here it takes the name of the Sierra Madre, and runs north-west to Guanaxuato, where it sends off a branch to the east and another to the west. The principal chain extends northward to the sources of the Rio del Norte and Rio Gila, and on entering the United States receives the name of the Rocky, or Chippewan mountains. Only four of the summits in the southern part of the chain are covered with perpetual snow. The general aspect of that part is volcanic ; and the country is subject to earthquakes and fiery eruptions, although they are less frequent than in South America.

31. In its middle course, between the latitudes of 35►►. or 40►►. and 55►►. north, the great western chain has been called by various names ; among which the most common are the Rocky, Shining, and Chippewan mountains ; the last being de- rived

from the Indian, and the only one which seems applicable as a distinctive title. This part of the range was quite unexplored, until it was traversed by Lewes and Clark, and more recently

by Major Long, under the direction of the govern- ment of the United States. To the latter we are particularly indebted for the most detailed and interesting accounts of these mountains, and the adjoining regions, which has yet been given. The general course of the Chippewan range is north- north-east. Its breadth varies from 50 to 100 and 200 miles. They rise abruptly from the elevated plains at their eastern base, towering into peaks of great height, which renders them visible at the distance of more than 100 miles on the east, and in some states of the air 140 miles. At this distance the view is that of se- yeral conic summits, unconnected at their base. At a nearer approach an uninterrupted chain is discovered, crowned with sharp conical peaks. The body of the range consists of ridges and peaks variously disposed, and interspersed with many broad and fertile valleys. The more elevated parts are covered with perpetual snows, which contribute to give them a luminous, and at a great distance even a brilliant appear- ance, from which they have derived their name of the Shining Mountains. They are chiefly primitive in their geological character, but covered for some distance on the eastern declivity with a crust of secondary rocks. The base of these mountains is skirted by a range of naked and almost perpendicular rocks of sandstone, visible at the distance of several miles, and resembling a vast rampart, erected to guard the approaches and intercept the view of the main ridge. The whole appears as if it had been broken off from the mass,' and thrown into its present position, by some great convulsion of nature. These, and other ridges of sandstone found in the neigh- bouring plains, often assume the form of ruined towers and castles ; and like similar

objects in the plains of Russia and Africa, might be mis- taken by a careless traveller for the remnants of ancient works of art.

32. The lower portions of these mountains are covered with a scattered growth of dwarf pines, cedar, and oak, and exhibit a very rugged and broken aspect. Above the limit of woody plants it is almost wholly naked ; the soil is very scanty, and on the highest, or Long's Peak scarcely a lichen or moss is to be seen. Here the limit of snow was found in midsummer. It has been already observed, that the summits of the chain are generally covered with snow in latitude 42►►. and of course cannot be less than 8000 feet in elevation. Some which were ob- served farther north, seemed to be snow-clad almost to their bases. The highest points as- certained in this part of the chain are Long's or Highest Peak, 12,500 feet ; and James's Peak, 11,500 feet above the level of the sea, situated near the sources of the Arkansaw and Platte rivers, in latitude 41►►. 30'.

33. North of the sources of the Missouri we cave no account of these mountains, except from the tour of that accurate and intelligent traveller, Sir Alexander Mackenzie. From him we learn that in his route to the Arctic Ocean, he found them extending northward in the same direction, until they terminated near the mouth of Mac- kenzie's river, beyond 65►►. north latitude. They appear, in this part of their course, to diminish

in elevation, but still rise to the limits of per- petual snow, which is lower in these latitudes, and retain the other characteristic appearances of the range. Their structure is not known ; but there is no reason to doubt that they are still composed of primitive rocks.

34. In reviewing the whole course and cha- racter of this great range of mountains, we shall find it surpassing most chains of the old continent in dimensions and grandeur. It extends without interruption for the distance of 7000 miles, and

seems like the spire of the continent it traverses. Commencing with moderate elevation at the south, it soon spreads into so wide and elevated a plain, that cities and empires may be founded on its expanded mountain tops ; and this is again crowned with lofty summits, which, if they were placed even on the ordinary level of the earth, would be deemed vast mountains. The grandeur of this part of the chain is increased by the volcanic character of its peaks. Popo- catapetl, the loftiest, is continually burning; Orcraba, Turtla, and Colima, have occasional eruptions ; and this region was the scene of one of the most remarkable events in the natural history of the earth which is upon record, the formation of the large volcano of Jarullo. Du- ring a series of earthquakes and other convul- sions, which occurred in 1759, at the distance of 180 miles from any active volcano, this new volcano was thrown up by the heavings of the earth upon a plain to the height of 1500 feet, surrounded by five less elevated cones, and thousands of small ones, all of which threw forth fiery eruptions. Jorullo is still burning, and throws out large quantites of lava from its sides. The Mexican Cordillera is not less dis- tinguished for its mines of gold and silver, the proverbial standard of immense wealth, which nave recently given new energy to enterprise, and new violence to the mania of speculation in Great Britain. In going northward we still find the singular combination of a level country at a mountainous height; and travel with the same ease at two miles above the level of the sea, as on the sands of its shores. On passing the pa- rallel of 30►►. the table-land extends in breadth as it diminishes in height. In place of a fertile cultivated country, we find a dry and barren desert; and the mountains, rising in a more obvious and regular manner from its level, pursue their course to the north with more of the rugged and dreary character which we as- sociate with a chain. Being uninhabited it forms an almost insurmountable barrier, between the two portions of the continent. We know nothing of its mineral treasures beyond the Mexican peninsula ; but its snows and springs supply

those vast rivers and chains of lakes which water and fertilize more than two-thirds of North America, and confer more certain and permanent wealth than the mines of Mexico.

35. Along the coast of the Pacific Ocean fliere is another chain of mountains nearly parallel to the Chippewan, and forming a kind of secondary range or step between these and the ocean. It extends from the cape of California across the Columbia river near its mouth, about 3000 miles, as far north as the coast has been examined

In the southern part it attains no great deration being only 4500 feet high in California. La Perouse states that the northern part rises to the height of 10,000 feet, and is covered with snow and glaciers At the northern extremity is mount Elias, one of the loftiest peaks of North America, rising nearly 18,000 feet above the level of the sea. This portion of the chain has a volcanic character. At Port Bucarelli, hi latitude 55►►. a Spanish voyager saw seven volcanoes, whose summits were crowned with snow, throwing out flames and ashes; and at Prince William's' Sound, in latitude 60►►. volcanic eruptions were also witnessed. Mount Fairweather is next to mount Elias in height, being nearly 15,000 feet above the level of the sea. Between 40►►. and 50►►. of latitude, several prominent points are laid down by Lewis and Clark, two of which, on the south of the Columbia river are called Mount Jefferson and Mount Hood ; and three on the north, Mount St. Helens, Mount Regniere, and Mount Baker, the last being near the^straits of St. Juan de Fuca. The two former are covered with perpetual snow, and therefore cannot be less than 7000 feet in height.

36. There are no considerable branches pro- ceeding from the great western chain, except those which pass off from it to the*east and west in Mexico. It is obvious that there must be an elevated tract or ridge of land proceeding from it on the north, and dividing the waters of the northern declivity from

those of the United States. It has been supposed that there is a chain of mountains passing across to Hudson's Bay, and thence around its southern extremity, until it unites with the chain which passes through the middle of Labrador ; but of this we have no good evidence. The high lands in the basin of the Mississippi are too little connected with this great range to be considered as branches. It appears to be flanked on the western, as well as the eastern side, by an elevated table-land of a desert and dreary character.

37. The Apalachian chain stretches the distance of 900 miles from south-west to north-east, along the eastern coast of North America, generally at the distance of 50 to 100 miles. It may be con- sidered as rising on a confused group of moun- tains on the borders of the Alluvion, or the southern coast of the United States, in the north- eastern part of the state of Georgia. It proceeds in a series of parallel ridges through the states of Carolina, Virginia, Maryland, and Pennsylvania. In New York and New Jersey, the chain appears somewhat broken, but still may be traced by a series of groups and ridges, of similar structure to the ranges of New England ; and thence to the White Mountains, and the mountains of Mame, which divide the waters of the Atlantic and the St. Lawrence.

38. The principal or central ridge of the southern portion is the Allegany ; and sometimes Us name is employed to indicate the whole chain. It commences in the northern part of Georgia, under the local names of the White, Smoky, Bald, Iron, and Yellow Mountains. On entering Vir- ginia it assumes the name of the Allegany Ridge, which it retains during its passage through this state and Maryland, to its apparent termination

in the interior of Pennsylvania. A range of high lands may, however, be traced through the northern parts of Pennsylvania and the state of JNew York, to the mountains lying on the west of lake Champlain.

The western portions of Virginia and Pennsylvania are occupied by se- veral secondary ridges, of which the principal are the Laurel and Chesnut ridge. Two consi- derable branches from the west unite with the Allegany ridge in Virginia; the Clinch moun- tain from the southern side of the Tennessee river, and the Cumberland mountains, which com- mence near the entrance of the Tennessee and Kentucky rivers, into the Ohio, separate their stream through their whole course.

39. The Blue ridge is a lower and subordi- nate portion of the Apalachian chain, but longer than the Allegany. It lies between the Allegany ridge and the ocean, and forms the first step from the low and alluvial, to the elevated and primitive country. It commences near the same spot with the Allegany ridge, and traverses the Atlantic states in a direction verg- ing more to the east, until it terminates in the high lands of the Hudson river, of which the most remarkable point is the precipitous bluff, on which the strong fortress of West Point is situated. During a part of its course through Pennsylvania, it is called the north mountain, but again assumes the name of the Blue ridge on the north-east; and is known by no other but local designations in its passage through the states of New Jersey and New York. In cross- ing the Hudson river the direction and name of the Blue ridge is lost ; but it is still connected by the Taghonnui and Saddle mountains with the masses of primitive mountains which tra- verse the New-England states.

40. The various ridges of mountains which form the continuation of the Appalachian chain east of the Hudson river, run more directly from north to south than other portions of the chain ; but they are still connected by lateral spurs and ridges in a series of steps, tending on the whole toward the north-east, in a direction parallel to the coast. They may be i educed to two principal portions, the Green mountain and the White mountain ranges.

41. The Green Mountain range commences on the northern shore of Long Island Sound, and passes

directly north on the eastern side of the Connecticut river, until it unites with the height of land which bounds the basin of the river St. Lawrence. The White Mountain range originates on the same coast, in several ridges connected with the former by lateral spurs, whicn centre in 'the principal group of the White Mountains in the State of New Hampshire Branches proceed with a gradual diminution of height from these to the mountains of Maine, and in several directions towards the highlands, which separate the waters of the United States from those of the St. Lawrence, and which have been recently surveyed, with a view to the final settlement of the boundary between the United States and the British possessions.

42. The breadth of the Apalachian chain is, according to computation, from 100 to 150 miles ; its general course, as already observed, is parallel

to the coast. It ranks among the longest moun- tain chains ; but is surpassed by most others in height. None of its summits rise to the limit of perpetual frost ; and few attain the elevation which prevents the growth of forests. South of the Hudson River, the average height does not exceed 1000 to 2000 feet. The highest peaks in this part of the chain are, the Table Mountain in South Carolina. Otter Peak in Virginia, and Round Top, in the subordinate chain of the Catskill mountain, which do not exceed 4000 feet in height. Table Mountain has a lofty perpendicu- lar front of granite, 900 feet in height, extending a mile in length : viewed from the valley, it appears like an immense wall rising up to heaven ; and the involuntary awe it inspires is increased by the bones of animals destroyed in falling from the precipice, which are strewed at its base.

43. The general aspect of these mountains is not of that bold and rugged character which is found in

most of the ranges of Europe1. The summits are generally rounded, the declivities are not steep, nor are the passes rugged and difficult ; instead of conic peaks and a sharp serrated outline, they present long and level ridges. The sides furnish many fertile spots ; and the ridges are frequently separated by broad and fertile valleys, or flanked by level table lands. Some of the richest districts of Virginia and the Carolinas are situated among the moun- tains ; and in consequence of the elevation, the coolness and salubrity of the northern states are extended into the southern. The most elevated ranges are composed of primitive rocks ; others are of secondary origin. They furnish a variety of valuable building stones, but no extensive mineral treasures. Some of the mountains of New England are composed of trap, and exhibit the perpendicular precipices with a columnar structure which belong to the formation, and are finely exemplified in the Calton Hill at Edin- burgh. But they are generally primitive, and exhibit something of that ruggedness which is peculiar to the older rocks. The loftiest points of the Green Mountains are Mansfield Moun- tain, and Camel's Rump, in Vermont, about 4000 feet in height. Saddle Mountain in Mas- sachusetts is a spur of the same chain, and about the same height. It is six miles in length, and forms the highest point in Massachusetts, visible at a great distance from the neighbouring states.

44. The White Mountains of New Hampshire contain the loftiest summits of the Apalachian chain, and exhibit more of the Alpine character than any others in the western portion of North America. They comprise a long range of proud eminences, of which Mount Washington, the commanding peak, is 6634 feet in height. During nine, ten, and sometimes eleven months in the year, their summits are covered with snow ; and in clear weather they are surrounded or capped with white fleecy clouds. These circumstances have given them their name ; and render them visible at a great distance at sea, when the wea- ther is fine. The base of the mountains is co- vered with forests. At the height of 4000 feet, and above the

region of cultivation, it is sur- rounded with a zone of shrubby evergreens, so

thickly set as almost to furnish a passage over their tops. A succeeding zone extends some distance, which furnishes no vegetation but moss. The upper region is a mass of naked rocks. The various peaks are separated by deep chasm? sometimes winding for a great distance betwee— perpendicular walls of naked rock. The most remarkable of these is termed the Notch or Gap. It is a deep narrow defile on the western side, extending nearly two miles in length, and be- tween lofty precipices in one part only twenty- two feet wide. The mountain appears as if cloven at its base, with a perpendicular cliff or, one side, and on the other a declivity of forty- five degrees. The scene is rendered peculiarly sublime by the great depth of the chasm, and the striking assemblage of rocky ruins scattered through every part of it. The streams which descend from their summits fall in numerous cascades from their precipices, and various por- tions of the group present the most romantic and sublime mountain scenery.

45. It will be useful to present at one view, the height of the most elevated mountain peaks in North America, in connection with those of corresponding elevation on the old continent. The number is small whose height has been ac- curately ascertained.

WESTERN OR CHIPPEWAN CHAIN.

The loftiest are exceeded only by the Himma- leh Mountains of Asia, and the Andes of South America

Mount St. Elias 17,875

Vol. Popocatepetl, or Smoking Moun- tain 17,720

Vol. Pic de Ouraba, also called Citta-

petl., or Star Mountain 17,370

Iztaccihuatl, or White Woman . . . 15,700 (Mont Blanc, highest of the Alps, 15,662.)

Nevada de Toluca 15,165

Limit of perpetual snow, lat. 20□□. . . 15,091 Mount Fairweather (North-west coast) . 14,992 Cofre de Perote, or Nacihcampatepetl . 13,415 Long's, or Highest Peak (United States) 12,500 James's Peak (United States) . . . 11,500

Mine of Real del Monte 9,125

(St. Gothard, a summit of the Alps, 8,930) City of Mexico and surrounding table- land 7,470

(Hospital of St. Got hard in t he Alps,6,QQ7.)

46. EASTERN OR APALACHIAN CHAIN.

Mount Washington, New Hampshire,

highest peak of the White Mountain 6,634 (Mount Olympus in Turkey, 6,500.) Limit of forest trees on the White Moun- tain 4,428

Moose hillock (New Hampshire) . . 4,636 (Benesevis, highest in Great Britain,4387 .) Mansfield Mountain, Green Mountains,

Vermont 4,279

Camel's Rump, Green Mountains, Ver- mont 4,188

Killington Peak, Green Mountains, Ver- mont 3,924

Saddleback, highest in Massachusetts . 4,000 (Snowdon, highest peak in Wales, 3,571.)

NORTH AMERICA.

AsciUney, detached peak, Vermont . . 3,806 (,>f□□ 1'ett, highest peukin England, 3, 166.) 'Round Top, CatskilV Mountains, New

1 Ork o or\4

High Peak, Catskill Mountains, New

^ □□□□□□□□□□□□□□□□. Q TOR

Table Mountain, South Carolina .' .' 4,'ooo Otter Peak, Blue Ridge, Virginia . . 3*950 Highlands on the Hudson River, New

York 1 3g5

(Rock of Gibraltar, 1,500.) Blue Mountains, Connecticut) . . . 1,000

47. PHYSICAL DIVISIONS. ••• The great moun- tain chains of North America, and their connecting highlands, divide it into four principal portions, intimately connected with the "water-courses we have described : 1. The eastern, or Atlantic de- clivity of the Apalachian chain, between these mountains and the ocean. 2. The great central basin of the Mississippi, or the southern decli- vity, pouring its waters into the gulf of Mexico. 3. The western declivity of the Chippewan mountains, lying between that chain and the Pacific Ocean ; and 4. The northern, or Arctic declivity, lying between the Arctic ocean and the highlands which give rise to the waters which flow into it. The basin of the St. Lawrence, •••which lies between that of the Mississippi, and the northern declivity, and the table-land 01 Mexico on the south also require distinct consi- deration, on account of their peculiar features and individual importance. The two great chains of mountains, as we have already noticed, are chiefly composed of primitive rocks. The pri- mitive ridges of the Apalachian chain spread in its northern part, and form an extensive tract of rugged primitive country, covering the whole of the states east of the Hudson and a part of New York. The coast of the Atlantic is bordered with an alluvial tract which extends westward to the foot of the Apalachian chain, and passes round the whole coast of the gulf of Mexico. The great central basin is entirely secondary. The structure of the northern and western decli- vities is not so well known ; but there is some reason to suppose that the secondary region ex- tends northward from the gulf of Mexico to the Arctic Ocean.

48. The eastern or Atlantic declivity of North

America is occupied exclusively by the maritime portions of the United States, and the small British provinces of Nova Scotia and New Brunswick. It comprises a primitive region between the Hudson River and the Atlantic, including the eastern, or New England States, and the British provinces; and an alluvial region stretching south of that river to Cape Florida. The Eastern States, which comprise nearly all the extended primitive country of the United States, present the usual irregularity of surface in their formaticn. A small portion only in the states of New Hampshire and Maine ex- hibit the rugged and dreary aspect of the Alpine regions of Europe. Some districts are crossed by ridges of mountains, which give them a bold and picturesque character, without rendering them unproductive, or presenting insurmountable obstacles to cultivation ; as in the state of V er- ir.nnt, and the range of country south of it, con- VOL. I.

nected with the Green Mountains. The greater part of this region presents a"surfac►► continually undulating, and agreeably diversified with hill and dale. In approaching the coast it becomes more level, but rarely spreads into a plain of any extent. The country is finely watered by springs and rivulets, which flow from numerous hills, and wind through almost every valley. It abounds also in lakes, which an American writer, who has travelled over most parts of the region) estimates to exceed 1000 in number, or a sur- face of 70,000 square miles ; and, as there are no stagnant waters in so 'ineven a country, they contribute to the salubrity of the air, as well as the fertility of the soil. The largest lakes are St. Winnipisiogee in New' Hampshire, twenty- seven miles long, and ten broad; Lake Umbagop, about the same size; Moose Head Lake in Maine, sixty miles in diameter ; and Memphre- nagog in Vermont, forty miles in length. Most of the lakes and streams are termed small, from their vicinity to others of unusual magnitude; but they are large when compared with those of Great Britain. The borders of the lakes are commonly distinguished

by the wilder beauties of scenery, and are free from the aquatic vege- tables which often deform and corrupt the stag- nant waters of alluvial countries. The streams usually have a rapid descent, which renders them valuable fox mechanical purposes, while it ob- structs their navigation. They abound with in- teresting falls and beautiful cascades ; and there are a few cataracts of considerable grandeur, although far inferior to that sublime object which is here the standard for this species of scenery ??? the Falls of Niagara.

49. The soil of the eastern states is productive, but from the unevenness of the country it is better adapted to pasturage than tillage ; and laborious and skilful husbandry is necessary to render agriculture profitable. The vales of the rivers and streams are usually overflowed once or twice a year ; and the alluvions thus formed and fertilized, which are termed in America in- tervale or bottom- lands, are cultivated year after year with scarcely any manure, and present a luxuriance of vegetation, and a richness of crops, which is no where surpassed in temperate cli- mates. The vale of the Connecticut River, which accompanies it almost through its whole course, is distinguished for the beauty of it> scenery. The banks are frequently bordered with a fringe of trees or shrubs. The intervales, or portions of the vale, divided by highlands or mountains, which touch upon the river, are fields of various extent, from 500 to 5000 acres, rising in terraces as they recede, and presenting every species of vegetation. A large portion is occupied by natural meadows, interspersed with lofty and beautiful forest trees, and occasionally diversified with orchards. Another division is covered with the various crops of the climate, with no visible lines of separation except the diversity of hue. Not a spot of waste or neglects ground is seen. When viewed in connection with the majestic river and its numerous tribi taries, the villages scattered on its banks, ar to gradual change from the rich cultivated valley of the rough declivities and forested summits the

the hifls and mountains which bound it, nothing seems to be wanting to the completeness and beauty of the landscape.

It ought to be mentioned, to prevent any con- fusion concerning the geology of this region, that it contains several tracts of secondary formation. A strip of what is usually called transition rocks is found east of Lake Champlain ; another extends from Rhode Island to Boston : and another nar- row strip, from the Delaware to the Yadkin River. A secondary region extends from New- Haven, along the Connecticut River, to Vermont; and another from the Hudson to the Rappahan- nock, which covers the primitive in New Jersey. Richmond has a secondary coal formation. The banks of streams, lakes. &c., of course present many examples of limited alluvions.

50. The alluvion of the eastern declivity commences on the southern shore of Long Island, and extends between the Atlantic Ocean and the primary ridges of the Apalachian Chain, until it passes round the southern extremity of these mountains, and unites with the basin of [illegible]the Mississippi on the shores of the Gulf of Mexico. A remarkable granite, or gneiss ridge, forms the boundary between the primitive and alluvial formation, which is believed by some to have been the ancient line of the sea coast. It crosses Long Island Sound at Hurlgate near New York ; the Delaware at Trenton ; the Sus- quehannah at the rapids near its mouth; the Potomac at Georgetown ; the Rephannock at Fredericksburg ; James River at Richmond ; and the Roanoke at Halifax; producing rapids or falls in all these streams, except the Potomac, which obstruct navigation. The boundary con- tinues by Raleigh and Columbia, nearly parallel to the coast, to Augusta on the Savannah River, and thence to Natchez on the Mississippi.

51 . The shore is low and sandy. Its elevation gradually increases in proceeding south. The tide extends through the alluvion to the foot of the mountains, on all the rivers north of the Roanoke ; but, below this, it does not reach the western boundary. Through the whole region there is very little that deserves the name of rock. The great mass below the soil is composed of sand, gravel, pebbles, shells, clay, and marl ; the last of which sometimes forms extensive beds.

52. A bed of shells, sometimes cemented into shell-limestone, extends from Eutaw Springs on the Santee River, to the Savannah River, and the Chickasaw Bluffs, on the Mississippi. It is 600 miles long ; from 10 to 100 broad; and in some parts 300 feet thick. In other parts, the gravel and sand are converted into a loose, friable sandstone. Remains of vegetables are found at the depth of 100 feet in various places. The character of the alluvion varies according to the nature of the countries lying at the head of its streams. The portion north of the Potomac, including Delaware and a part of Virginia, is also watered by streams which flow from secondary mountains and render the alluvion very fertile. The streams south of the Potomac flow from the primitive portions of the Allegany Ridge, and bring down only sand, or gravel, or the hard ma- terials of primitive rocks, which produce a more

steril soil in Virginia, North and South Carolina, and a part of Georgia.

53. In these states, the tracts which are low and moist are soon covered with vegetation from the heat of the climate ; and the accumulation of vegetable soil renders them peculiarly fertile. The same heat renders the dry tracts more sterile ; and there is a greater contrast between the rich and poor soils in this region than in colder cli- mates.

54. The borders of the streams are often mere swamps, extremely rich and well adapted to the cultivation of rice, but productive of the most noxious effluvia. The more elevated tracts are too

sandy and arid to permit the growth of any forest trees except the pine.

55. The central portion of the continent, extending from the Apalachian mountains on the east, to the Chippewan range on the west; and from the gulf of Mexico on the south, to the sources of the streams which flow into the Arctic- Ocean on the north, is occupied by a vast basin almost uniform in its geological character and general features. It extends through more than twenty degrees of latitude, and thirty of longi tude, covering a surface of 1,300,000 square miles. The northern part is occupied by the great chain of lakes and rivers which form the St. Lawrence ; but nearly all the waters of this immense region are poured into the single stream of the Mississippi, and find their way to the ocean by its outlet, giving just ground for calling it the basin of the Mississippi. By means of this great stream and its branches, one of the largest upon the globe, it enjoys an extent of inland navigation, emanating from a single centre, which is almost peculiar. It is entirely a region of secondary rocks, and therefore a large part of it is characterized by peculiar fertility ; while the extent of latitude it embraces renders it capable of furnishing most of the productions of hot and cold climates. The barriers, which separate it from surrounding countries, seem to designate it as the seat of a great empire, while they forbid the inhabitants to attempt foreign conquests. The vast internal resources, and the easy com- munication through every part, will render it pe- culiarly independent of foreign aid ; and the small extent of sea coast will almost secure it from the dread of a foreign invasion. It is rapidly filling with emigrants from the maritime United States, and has been traversed in several directions by men of intelligence ; but we are still imperfectly acquainted with a large part of it, especially on the north and north-west.

56. For the sake of greater accuracy we shall describe this extensive tract in three principal divisions. The Delta of the Mississippi, and the

neighbouring alluvion of the gulf of Mexico ; the eastern section lying between the Mississippi and the Apalachian chain ; and the western sec- tion, extending from the river to the Chippewan mountains. Before we proceed to the descrip- tion it will be necessary to explain one of the great natural features of this continent, those ex- tensive grassed plains, termed prairies. The eastern section of the continent, from the gulf of Mexico to the 55►► north latitude between the At-

la.itic, and to lake Erie ; the Ohio and the lower part of the Mississippi was originally, with few exceptions, covered by a dense forest ; it was the largest probably upon the globe, and only a small part of it is yet destroyed. It extends fifty or one hundred miles beyond the lower Missis- sippi, and into a part of the state of Ohio; but here the whole aspect and character of the coun- try is changed : it would seem as if some exten- sive conflagration had not only swept away every vestige of a forest, but had even exterminated its seeds, and destroyed the capacity of the soil to rear trees. The eye traverses extended plains ►►►where not a shrub is to be seen, usually waving wah long grass, and presenting not a single ob- ject to interrupt the view or diversify the scene, except the birds and animals which may be feed- ing upon them ; they furnish no marks by which to estimate the distance or size of any thing which may be visible, and thfe inexperienced traveller is often deceived in the most ludicrous manner. A series of these prairies of various extent, con- tinues to the foot of the Chippewan mountains, interrupted occasionally by streams and hills, or studded with mountains, but generally presenting the most striking and dreary uniformity of scene. Many of them are entirely destitute of stones, and scarcely any wood is to be found, except in narrow strips on the borders of the streams.

57. The district east of the Mississippi which borders immediately on the Delta, embracing the

greater part of the state of Mississippi, and Alabama, has a large portion of the most fertile land, and is adapted by its climate to furnish the richest products of agriculture. A part of it consists of river alluvion, but the greater part of the elevated or hilly tracts are termed bluffs. Agreeably to the usual characteristics of hot countries, there is scarcely any soil which holds a middle place between the best and the worst ; the climate rendering those tracts quite sterile which are not sufficiently supplied with moisture. The greater part of this district is hence covered with that light soil which produces forests of dwarfish pines. Still the fertility of the remain- der, and the importance of the staple production, cotton, renders it one of the most valuable tracts in the United States.

58. In the middle of this part of the basin is a mountainous section, connected with the Cum- berland mountains, already described, embracing the greater part of Kentucky and Tennessee, and the western parts of Virginia and Pennsylvania, between the Ohio and the Allegany mountains. It abounds in hills, elevated near the Ohio, from 400 to 1000 feet above the river, and higher in the neighbourhood of the mountains. It is based upon limestone, which gives great fertility to its soil ; but is so much broken by fissures and caves, that it is liable to extreme drought in the summer by the sinking of the water. It is in some degree rugged ; but enjoys a temperate, healthy climate, and is capable of a high degree of cultivation.

59. The northern section of this part of the basin, between the Ohio, the Mississippi, and the lakes, embraces the states of Ohio, Indiana, Illi- nois and the North Western Territory. It may be divided into three portions; the hilly country,

the plain country, and the valley country, besid ie peninsular territories of Michigan and Wis-

* 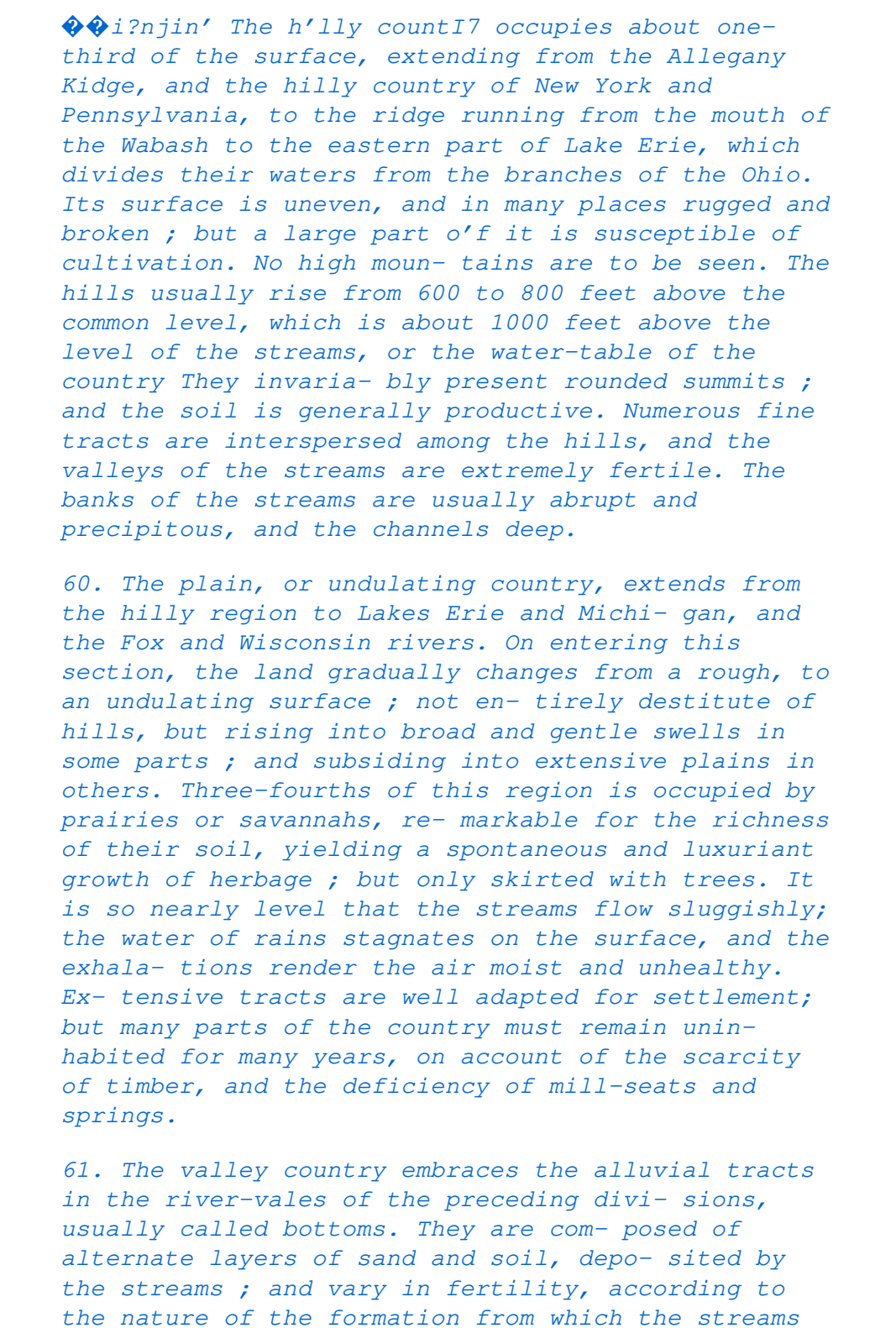 i?njin’ The h’lly countI7 occupies about one-third of the surface, extending from the Allegany Kidge, and the hilly country of New York and Pennsylvania, to the ridge running from the mouth of the Wabash to the eastern part of Lake Erie, which divides their waters from the branches of the Ohio. Its surface is uneven, and in many places rugged and broken ; but a large part o’f it is susceptible of cultivation. No high moun- tains are to be seen. The hills usually rise from 600 to 800 feet above the common level, which is about 1000 feet above the level of the streams, or the water-table of the country They invaria- bly present rounded summits ; and the soil is generally productive. Numerous fine tracts are interspersed among the hills, and the valleys of the streams are extremely fertile. The banks of the streams are usually abrupt and precipitous, and the channels deep.*

60. The plain, or undulating country, extends from the hilly region to Lakes Erie and Michi- gan, and the Fox and Wisconsin rivers. On entering this section, the land gradually changes from a rough, to an undulating surface ; not en- tirely destitute of hills, but rising into broad and gentle swells in some parts ; and subsiding into extensive plains in others. Three-fourths of this region is occupied by prairies or savannahs, re- markable for the richness of their soil, yielding a spontaneous and luxuriant growth of herbage ; but only skirted with trees. It is so nearly level that the streams flow sluggishly; the water of rains stagnates on the surface, and the exhala- tions render the air moist and unhealthy. Ex- tensive tracts are well adapted for settlement; but many parts of the country must remain unin- habited for many years, on account of the scarcity of timber, and the deficiency of mill-seats and springs.

61. The valley country embraces the alluvial tracts in the river-vales of the preceding divi- sions, usually called bottoms. They are com- posed of alternate layers of sand and soil, depo- sited by the streams ; and vary in fertility, according to the nature of the formation from which the streams

originated. In the vale of the Ohio, the quality of the soil appears to im- prove from its source downward. The climate of the valley country is, almost without exception, unhealthy; but cultivation will gradually di- minish, and perhaps remove, the causes of disease, by clearing the land of putrefying vegetation. The most extensive tract of valley country east of the Mississippi, is the American Bottom, ex- tending about 81 miles on the Mississippi, from the Kaskaskias, to the Missouri. Its aver- age breadth is four miles ; and it is considerably elevated above the present level of freshets. It is generally very rich ; and is destitute of timber, except on the margin of the river. Other bot- toms of great extent are found below the junction of the Missouri. The Ohio bottoms are uni- formly covered with deep forests, and have n►► prairies of importance. The valley of the St Lawrence seems, from its geological charactet and general aspect, to be only a branch or por- tion of the basin of the Mississippi, and may at

least be advantageously considered in connection with it.

62. The general characteristics of the peninsular territories of Michigan and Wisconsin, are si- milar to those which have been described. The land appears to be more elevated and less abund- ant in streams. The Wisconsin, or north-west territory, is crossed by a wide range of hilly or broken country, commencing on the Wisconsin river and extending to Lake Superior ; and called by Major Long the Wisconsin Hills. In geological character and metallic production they appear to resemble the Ozark mountains, which will soon be described, and probably be- long to the same formation. The remainder of this basin is a narrow tract, lying on the lakes and the St. Lawrence ; bounded on both

sides by ranges of highlands which separate its waters from those of the surrounding declivities. It re- sembles the vale of the Mississippi to a consi- derable extent, in its geology and soil, from Lake St. Clair to Montreal. The northern parts

. of the state of Illinois, Indiana, Ohio, and New York, and the north-eastern part of Pennsylvania, ###which belong to this basin, are generally level, and equal any part of the United States of the same extent in fertility.

63. The western section of the great central basin, lying between the Mississippi and the Chippewan mountains, form the greater part of the territory formerly purchased by the United States, under the name of Louisiana, comprising the state of Missouri, and the territories of Ar- kansaw and Missouri. The southern portion is traversed by a range of mountainous country, recently surveyed, which are called the Ozark Mountains, and the northern is divided by the Missouri.

64. The country lying between the Mississippi and the Missouri, above their junction, contains no mountains of any magnitude. It is not des- titute of abrupt hills and precipices ; but is characterised by a rolling, undulating surface, variegated by broad river vales, and tracts of upland. It is generally destitute of forests, and only chequered with stripes of woodland on the borders of the streams. The bottoms on the Mississippi and Missouri are very rich, and ge- nerally covered with timber ; but prairies become more numerous on going upward from their ###unction. The soil of this region is probably equal, if not superior, to that of any other tract of upland in the United States ; but the scarcity of timber, mill-seats, and springs, must for a long time impede its settlement.

65. The tract extending south of the Missouri, ' to the Red River, between the Mississippi and longitude 96## west, has a surface much diversi- fied. An extensive bottom lies on the Missis- sippi, extending from the Ohio to the Red River, which

contains large swamps of cyprus trees, almost impenetrable from the undergrowth of shrubs. The Great Swamp, the most consider- able, commences near the head of this tract, and stretches about 200 miles in length, and from five to thirty in width. The lowlands lying im- mediately on the Mississippi, are bounded by a chain of heights, corresponding in some degree to the bluffs on the river, which form the com-

mencement of a tract of broken and hilly country, extending from 300 to 400 miles west. The vales on the Missouri and Arkansaw, and their branches resemble the country north of the Missouri, in the prevalence of prairies and the undulations of its surt'ace. Writh these exceptions, the whole tract is very rough, presenting nume- rous peaks and cliffs of considerable height. The central portion forming a mountainous district, and resembling many portions of the Apalachian chain in appearance, has received the name of the Ozark Mountains, from the late expedition,

66. The Ozark Mountains extend from the Spanish province of Texas, across the Red and Arkansaw rivers, in a north-easterly direction towards the confluence of the Mississippi and Missouri ; and thence are continued on a low range of hills to the Wisconsin Hills, and Lake Superior. The lead and copper with which they abound, is found throughout the whole distance; and the continuance of the same peculiar geo- logical character indicates that both are parts o a single district formation. The range consists of low ridges, irregularly placed, interspersed with detached hills, and rarely rising more than 1500 or 2000 feet in height. The general course is the same with that of the Apalachian chain. Like them they have a basis of primitive, covered, and often crowned, with secondary rocks, usually forming rounded summits, and sometimes pre- senting perpendicular cliifs and abrupt preci- pices. They are covered with pines and dwarf- ish trees of other kinds, and have a dreary aspect compared with the surrounding country. The whole breadth of the range is from 100 to 1 50 miles. They*

give rise to a number of con- siderable streams, which flow into the Missis- sippi, Missouri, and Arkansaw. They may be considered as extending on the west, to a line drawn from the confluence of the Canadian, with the Arkansaw river on the south-west, to the north of the Wisconsin river on the north-east.

67. From the base of the Ozark mountains, just described, an immense sterile desolate pain extends for twelve degrees of longitude, to the foot of the Chippewan range ; which, from its being the first example of this kind found upon the continent, has been called the Great Ameri- can Desert. The hilly country gradually sub- sides to a level but undulating surface, with nothing to limit or variegate the prospect but here and there an insulated hill or tract of table-land. The latter sometimes rise 600 or 800 feet above the common level, surrounded in many instances by rugged precipices, and add to the singular appearance of the region ; their surface is usually waving, often nearly bare, but sometimes covered with stunted trees. The soil consists of fine granite sand, intermixed with the remains of organized beings, and sometimes not furnishing a rock or stone for hundreds 3 miles. It is almost entirely destitute of timber j a scanty growth of grass is the only covering, and large tracts are often met with wh'ch exhi- bit scarcely a trace of vegetation

68. The streams are broad and shallow; and, running through a bed of sand, are liable to be- come dry in the bot season. The valleys of the

r.vers and creeks are usually sunk 150 or 200 ieet below the common level of the country ; rney are bounded in some places by perpendi- cular precipices ; and in others by bluffs or banks of gentle slope. Many of them are rich, especially near the mouths of the rivers; but towards the sources become sterile;

and the salts and magnesia mingled with the soil are often so abundant as to destroy vegetation entirely. The waters are to a great extent impure, and frequently too brackish for use. The valley of the Canadian river is incrusted to a great extent with salt nearly pure, resembling ice or snow in its appearance. The waters of the river are so impregnated with salt as to be unfit for use ; and this is the case with other tributaries of the Arkansaw and the Red River. These streams are also tinged with a deep red, from the soil over which they grow. On approaching within 100 miles of the Chippewan mountains, their snow-capped summits become visible. Here the hills become more frequent, elevated rocks more abundant, and the soil more sterile ; until we reach the abrupt chain of peaks which divides it from the western declivity of North America. Not a thousandth part can be said to have any timber growth, and the surface is generally quite naked.

69. The region we have been describing ap- proaches more nearly to the steppes of Tartary than any portion of North America. Scorched in summer by the reverberation of the rays of the sun, and chilled in winter by the freezing winds which blow over it without interruption, it presents no shelter or attractions to civi- lized man, and is occupied entirely by herds of bisons and wild horses, and a few roving bands of Indians, who subsist upon the game it sup- ports. In regard to this extensive ' section of country,' says Major Long, ' we do not hesitate in giving the opinion that it is almost wholly unfit for cultivation, and of course uninhabitable by a people dependent upon agriculture for their subsistence. Although tracts of fertile land, considerably extensive, are occasionally to be met with, yet the scarcity of wood and water, almost uniformly prevalent, will prove an insu- perable obstacle in the way of settling the country. Agreeably to the best intelligence which can be had, the vast region commencing near the sources of the Sabine Trinity, Brasis and Colorado, and extending northwardly to the forty-ninth degree of north

latitude, by which the United States territory is limited in that di- rection, is throughout of a similar character. This region however, viewed as a frontier, may prove of infinite importance to the United States, inasmuch as it is calculated to serve as a barrier to prevent too great an extension of our popula- tion westward, and to secure us against t machinations or incursions of any enemy that might otherwise attack us from that quarter.

70. The waters of the vast basins we have been describing, are all discharged into the gult of Mexico, through a tract of 700 miles m extent, consisting of alluvions formed by thei deposits; and which, from the importance of th principal stream, may be designated t of the Mississippi. This singular Delta, with

its adjoining alluvion, contains perhaps as great diversity and extremes of soil as any portion of the globe of equal extent, from the most sterile to the most productive. The Gulf is bordered by an extensive marsh or swamp, which forbids all settlements immediately upon the shore. It extends to the distance of twenty or thirty miles is destitute of trees, and covered with a coarse species of reed, four or five feet high, presenting the most dreary prospect to the ships which pass through it on their way to the ports upon the rivers ; and forming not merely a barrier to im- provement, but a source of pestilence. The south-western portion of the state is occupied by extensive prairies, bordering upon the sea-marsh, admirably adapted to the rearing of cattle. Thousands are fed here continually, and the district is almost exclusively inhabited by the herdsmen. Beyond the prairies, with the ex- ception of the river alluvions, the greater part of the country is occupied by pine forests,which in- dicate a soil difficult of cultivation, and only likely to be occupied when there shall be an overflow of population. In some parts east of the Mis- sissippi they descend to the water's edge. The remainder of the region is occupied by river alluvions, which, from the structure of the coun- try, are divided

into two portions, river-borders and the interior plains. In their annual inunda- tions, the streams deposit their coarser and heavier portion of the alluvion immediately upon the banks, and have produced a loose but fertile soil, elevated above the level of the surrounding country, and ultimately above the common floods. In passing into the interior only the finer and argillaceous particles are left, forming a hard and stiff surface, which is annually overflowed, and continues covered with water after the river has subsided ; and when laid dry is almost as solid as stone, and ill adapted for cultivation. These interior tracts, usually but erroneously called swamps, are equally unfit for habitation or cul- tivation ; and the only lands which can strictly be called arable in this region are the alluvial river borders. Their extent is comparatively small ; and in this respect the Delta of the Mississippi is essentially different from the con- tinuous region of fertility at the mouth of the Nile. But the richness of their soil in the luxu- riance of their natural products, and the value of their crops, seem to be a sufficient balance for their united extent, and place this region among the most productive of North America. It is constantly extending into the Gulf ot Mexico, from the alluvion brought down by th ordinary current and annual floods ; and il portance must be greatly enhanced, as^opulation increases in the great basin, of whose prod must be the chief market, and whose wants must in a great measure supply.

71 The northern or arctic declivity of North America has been examined by few travellers, and our knowledge of it is very imperfect. W are ignorant, particularly, of the nature of t boundary on the south. Many have supposed that a range of mountains divide the wat the Mississippi from those of the northern streams; but the best information leads us ra ther to rely on the old statement, derived from

the natives, that four of the largest rivers of the continent, the Mississippi, St. Lawrence, Sas- catchawine, and Columbia, have their sources in the same plain. According to the statements of Col. Dixoh, and others who have traversed the country between the Missouri and the Arsmibon River of Hudson's Bay, no elevated ridge is to be seen ; but, on the contrary, tributaries to both these streams rise in the same champaign country. The general appearance of the country near the sources, and of these great streams, and north of the great lakes, favours this idea. The water-courses are generally chains of lakes ; and stagnant pools and lakes are scattered in every direction, without any indications of the declivity produced by a chain of mountains, and afford strong evidence that it is an extensive plain, little inclined on any direction. Hence, it has been inferred, that it is merely a portion of an immense region of flat country, embracing the central basin, and extending northwardly from the Gulf of Mexico, between the two great ranges of mountains, and spreading, as they diverge, to the Atlantic, on the east, and the Arctic Ocean on the north. The same geologi- cal formation may be traced from the St. Law- rence to the sources of the northern streams. The extensive division north of these great lakes, as far as it has been examined, has a dreary level surface ??? a sterile, and generally arid soil ; and an inhospitable climate, which gives it a striking resemblance to the frozen wastes of Siberia. Its only products of value are the fur- red animals ; and the few Indians that wander over it obtain but a scanty and precarious sup- port.

72. The western declivity of North America is among the least-explored portions. A few tra- vellers have crossed it in the Spanish territory two centuries ago ; and a single expedition, under the command of Lewis and Clarke, examined the Missouri, and the country between its source and the mouth of the Columbia River; and a few hunters and fur-traders have occasionally travelled over the northern portion.

73. We have reason to believe that the south- ern part of the declivity, above thirty degrees of latitude, contains an arid sterile region of the same character with that on the eastern side of the mountains ; but we have no means of esti- mating its extent. The Mexican provinces below this latitude are productive countries, well adapted for cultivation, but very thinly, settled, and imperfectly described. The peninsula of California is a sterile tract, traversed by a chain of mountains, and presenting only an arid sandy soil at their base; but the province of New Cali- fornia, extending north of this to the territory of the United States, is a well-watered, fertile, and picturesque country ; but, like other portions of the western declivity, has never been fully de- scribed. The basin of the Columbia River, which lies north of the Spanish territory, is also a well- watered and productive tract. On de- scending the mountains towards this river we enter on a high level plain of fifty miles in breadth, which is rather sterile. In advancing, the soil gradually becomes more fertile, and a productive country, most of which is level,

extends from 400 to 500 miles to the mountains nearest the coast. It is generally distitute of woods ; but there are broad stripes of forests on the banks of the streams which furnish an ample supply. The same valley, or level tract, seems to extend northward, and was observed by Mackenzie to be 200 miles in width, in latitude 53►►. This region contains a large number of Indian tribes, and is capable of supporting a considerable population.

74. Between the central basin, and the west- ern declivity of the continent, lies the table-land of Mexico, one of the most extraordinary eleva- tions on the globe. In Europe, Switzerland, and some of the neighbouring regions, and the interior of Spain, are considered very elevated countries. But this opinion is founded merely on the aspect of groups of summits, and collec- tions of parallel chains of mountains. None of the plains on which they rest, or by which they are separated, of any extent, are more

than from 1500 to 2500 feet in elevation. The Desert of Cobe is stated to be 5500 feet in height. But the whole interior of Mexico, extending from 1 8 to 40 degrees of north latitude, or more than 1500 miles in length, forms an immense plain,ele- vated from 6000 to 9000 feet above the sea. It appears to decline towards the north, but so gradually, that from the city of Mexico to Du- rango, a distance of 140 leagues, the surface maintains an elevation equal to that of Mount Cenis and St. Gothard. Beyond this place,, which is 6500 feet above the ocean, the height is not ascertained ; but the continuation of the same highlands, forming the base of the Chippe- wan mountains, in the United States, presents a surface about 3000 feet above the level of the sea. The surface is so uniform that carriages travel with great ease as far north as Santa Fe.

75. This singular table-land presents a succes- sion of extended plains, separated by hills which present scarcely any obstacles to be sur- mounted by art in the construction of a road. The ease of communication and transportation, combined with the fertility of the soil, and the richness of the mines, confer on this extensive region advantages which are almost singular ; but, in common with, other e'evated tracts, it suffers for want of water and navigable streams. The quantity of raki is small, and there are few mountain summits which reach the line of per- petual snow, and thus furnish a reservoir for supplies of moisture. The narrowness of the continent in this part prevents the collection of a great mass of water. The lakes which abound seem to be merely the remains of extensive basins of water which formerly existed, and these appear to be annually diminishing. Springs are not frequent; and streams are seldom found, except on the declivity, or at the foot of the table land. This aridity has been increased since the arrival of Europeans ; by the destruc tion of trees, and the draining of moist lands. Hence, many of the most elevated portions are covered with saline incrustations, and bear a great resemblance to the steppes of Asia. The declivities are exposed to

humid winds, and frequent fogs, which 'produce vegetation of an uncommon beauty and strength; and a greal

part of the region is very productive in ordinary years ; and from the peculiarity of its climatf furnishes the most valuable plants of different zones.

76. RIVERS AND LAKES. ••• In describing the rivers and lakes of North America, the first place is due to that noble stream which was called by the Indians the Mississippi, or mother of waters. It is the great outlet for the waters of central North America, and the longest river in the world, except the Amazon. Its origin must be traced to the source of the Missouri, which is the largest of the two branches composing it, and which gives its character to the stream. The Missouri rises in the Chippewan mountains, by three branches ••• Jefferson, Maddison, and Callation rivers, between forty-two and forty- eight degrees north latitude. Its course is very circuitous, first bending in a curve to the north, then descending nearly south, and turning sud- denly to the south-east, before its junction with the upper Mississippi. At the distance of 400 miles from the thread of navigation, it rushes through the pass which is called the gates of the rocky mountain, presenting a scene of uncom- mon grandeur. It is confined to a channel 450 feet broad, and runs nearly six miles between precipitous rocks, 1200 feet in height, which often overhang the stream with the most threat- ening aspect. After a course of more than 3000 miles, in which it drains a tract of 400,000 square miles, it is about half a mile broad, and very deep, running with a rapid and turbid cur- rent.

77. Here it is joined by the upper Mississippi, which is a broad stream, only 1300 miles in length, with clear but shallow waters. The supply it

furnishes to the main stream is small compared with that brought in by the Missouri ; and it does not drain more than one-third of the extent of country. The united streams of the Missburi and Mississippi, or the lower Missis- sippi, receives most of its waters from the Missouri, and with them its turbid appearance and rapid current. After a course of 1400 miles they are discharged into the gulf of Mexico, be- low New Orleans, making the whole length of the stream from the source of the Missouri, 4500 miles. There are six outlets to the Mississippi, two of which have twelve feet of water on their bars in ordinary seasons. The north-eastern passage is principally used. Below the mouth of the Red river% the stream is generally about 3000 feet in width, and twenty feet deep, flow- ing three miles an hour. The waters are dis- tinguished from those of the gulf of Mexico, for some distance from the mouth. The quantity discharged is estimated at 230 millions of gal- lons per minute??? twice the quantity discharged by the St. Lawrence, and seven times that whi< flows from the Ganges.

78 This great river forms the chief outlets fo the waters of the interior of the continent, and contains a surface of 1,300,000 square miles, 01 two-thirds of the United States' territory, equal in extent to the Russian empire in Europe.

79 Of its numerous branches, the Arkansaw ranks with the first rivers of the eastern conti- nent, and the Red river and La Platte exceed

any in Europe, except the Volga. The Ten- nessee, the Ohio, the Kansas, and the Yellow- stone, hold the fourth rank among the rivers of the world, and many other branches rival some of the most celebrated in Europe. The banks of the Mississippi, in the lower part of its course, are annually overflowed from the effect of the rains and the melting of the snows, and large tracts of the country are covered with water.

80. Next to the Mississippi itself, the Arkan- saw is the most important river of the central basin.

Assuming the Missouri as the principal stream, the Arkansaw is its chief branch, ranking even before the upper Mississippi. The sources are not well ascertained, but are probably near the line of 420. It winds through eight degrees of latitude, and twenty of longitude, a distance of 2000 miles, before it reaches the Mississippi, Its channel, from longitude 100►►. W. of London, is the boundary between the United States and the Spanish possessions. This river is more im- peded by falls and cataracts than most others iji the basin. In the last 600 miles of its course, U flows in a deep and rapid channel 600 yards wide. The Canadian is a very large branch of the Arkansaw, nearly 1000 miles in length, which from its red colour has been hitherto sup- posed to be a branch of the Red river. It is re- markable that a large part of its channel is per- fectly dry during the summer season, in conse- quence of the aridity of its basin. Red river is next in magnitude and length to the Arkansaw It rises in the mountain prairies of New Mexico, about ten degrees south of the source of the Arkansaw, and not far to the east of Santa Fe. It pursues a winding course of 1500 miles, and enters the Mississippi near its mouth, dividing the branches of the Mississippi from the streams which flow into the gulf of Mexico. In its pro- gress it receives a number of branches. In the lower part of its course it presents a striking pe- culiarity by which it is distinguished from most other streams. For a distance of 100 miles it is skirted by a series of lakes from five to thirty miles long, and a quarter to three quarters of a mile wide, which serves as a kind of reservoir to regulate the height of the water. When the stream is highest, they receive the surplus water, and when it is again depressed, they discharge it slowly, to prevent the destructive effects of an excessive flood. In some parts it is also divided into several channels, each confined within high and steep banks. Its navigation is also ob- structed by an extensive and singular collection of trees and brush, called the great raft, which covers its waters, and is considered impassable by boats. This river takes its name from the colour of

its water, which in times of flood is c a bright red, and partakes more or less of t colour through the year. It is doubtless derived from the red argillaceous sandstone of the Chip- pewan mountains, and the neighbouring region. The White, St. Francis, and several other con siderable streams, empty into the Mississippi on the west, below the mouth of the Missoun ; bu none claiming particular notice in connexion wim these great streams. Above the Missouri the principal branch on the west is St Peters river: but following the Missouri as the mam

stream above the junction, we find a great num- ber of considerable branches, of which the Platte and Yellowstone are the largest.

81. The Platte, as its name imports, is almost uniformly a broad and shallow stream, fordable almost every where except when swollen by freshets. The banks are low, and yet, from the breadth of the channel, and the rapidity of the current, are seldom overflowed. Its valley is a wide plain, terminated by gravelly hills. The whole length of its course is 750 miles ; and the influx of its waters gives a new character to the Missouri, which is more rapid and turbid, and more difficult of navigation, below its mouth. The principal remaining branch of the Missouri, is the Yellowstone, which joins it 680 miles below its source. Its own course is about the same ; and the volume of water appears to be as great as that of the Missouri. It is 800 yards wide at its outlet, and materially increases the size of the main stream below.

82. On the eastern banks, a little above the mouth of the Missouri, the Mississippi re- ceives the Illinois, a stream 400 yards wide at its mouth, and 400 miles in length. It rises by two branches so near tne waters of lake Michi- gan, that it forms one of the proposed channels of commmnication to the lakes which will be described hereafter. It flows in

a gentle current unbroken by rapids, and is bordered by a fertile country. But the great eastern branch of the Mississippi, and indeed one of the most interest- ing rivers of the basin, is the Ohio. It rises in the Allegany ridge, in the western parts of Penn- sylvania and New York, by two branches, the Allegany and Monongahela. They unite at Pittsburg ; and after an entire course of more than 1000 miles, empty into the Mississippi 160 miles below the mouth of the Missouri. It descends with a rapid but smooth and transparent current, which is not broken by any considerable falls, except at Louisville. It varies in breadth from 400 to 1400 yards. At Cincinnati it is about 800 yards, which may be regarded as the mean breadth. The floods of this stream rise from thirty to sixty feet above the level of low water. It has sufficient depth at these periods to float a vessel of 300 tons to Cincinnati. This stream has been admired from the period of its dis- covery, for its beautiful scenery, especially in the first 200 or 300 miles of its course. The gradual slope and luxuriant fertility of its banks, the gentle swells, and deep forests, which are inter- spersed with cultivated grounds, and rising vili lages and cities, combine to form a landscape perpetually varying and eminently beautiful.

83. The Ohio receives several considerable branches in its progress. The largest on the north is the Wabash, 500 miles in length ; but the'principal are the Cumberland and Tennessee, on the south, both of which rise in the Allegany mountains ; and, pursuing a circuitous course, enter the Ohio about thirty miles from its mouth. They are both fine streams : the Cumberland about 600, and the Tennessee more than 10UO miles in length. The basin of the Ohio is nearly as large as that of the upper Mississippi, and far more interesting and . valuable. It is probable that 110 portion of the Up^ed States contains so

large a proportion of fertile land so well adapted for settlement.

84. The remaining rivers of North America are found

almost entirely in the United States ; a few emptying into the gulf of Mexico, but most of them descending from the Apalachian chain into the Atlantic Ocean. Of the former, Pearl and Pascagoula are not more than 200 miles in length, and present no features of in- terest. The Mobile is rather the estuary of two considerable streams, the Tombigbee and Ala- bama, rising in the mountainous region, border- ing on Tennessee, which forms a- branch or root of the Apalachian chain. The Apalachicola is a stream of some magnitude. In the peninsula of Florida, the only river of magnitude is the St. Johns ; which runs from south to north, nearly parallel to the eastern coast, and sometimes only 100 miles from it. It rises in a swamp or lake, called Lake Mayar, and expanding in its course into several lakes, of which Lake George is the principal, empties into the Atlantic, above St. Augustine, at the distance of 300 miles from its source. The St. Marys, which empties a. little above this, is a small stream, only remark- able as the boundary between the State of Georgia and Florida.

85. The Altamaha is the first river of magni- tude which belongs to the Apalachian chain on the Atlantic coast. It is formed by two great branches, the Oconee and Oakmulgee, and empties into the Atlantic by several mouths, after an entire course of 500 miles. The Sa- vannah is a smaller stream, whose month forms the principal port in this part of the coast. However in the eastern boundary of Georgia, in North and South Carolina, the chief river? are the Pedee and Santee, which are about the size of the Savannah, or 450 miles in length, and the Cape Fear River which is only 350. Their branches are numerous, and extend over a large part of these states, but present rp fea- ture of particular interest. After passing the Cape Fear River, there are no streams of mag- nitude until we reach the Chesapeake Bay. The James is a noble stream, the principal river and channel of commerce in Virginia. It rises in the interior among the mountains ; receives the tide at the distance of 100 miles from its mouth, and empties into the southern

extremity of Chesapeake Bay, by a broad estuary, called Hampton Roads, after an entire course of more than 500 miles. The Potomac is the last con- siderable stream of the Alluvial regions, rising in the Allegany Ridge, and pursuing a winding course of 500 miles, enters the Chesapeake at the middle point of its length. It is the boun- dary between the states of Virginia and Mary- land, through its whole course. At the head of tide waters, 300 miles from its mouth, is the city of Washington, the seat of government of the United States, which is accessible to ships of the largest size. The course of all the streams of the Atlantic alluvion, which have been described, is nearly south-east. The remaining streams of importance run from north to south. The finest in order is the Susquehannah, which empties into the head of the Chesapeake Bay ; and indeed may almost be considered as forming this great estuary.

it is a large and beautiful stream, rising by falls ; its banks are populous, and thickly set

jeveral branches in the state of New York, and with towns and villages, and connected E

pursuing a rapid uninterrupted course through a numerous bridges. We find only a few small

fertile country extending the whole breadth of streams, such 2 the Charles, Taunton, 8cc. eas

Pennsylvania. Its length is about four hundred of the Connecticut, until we reach the coast of

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86. Ihe Delaware is a more tranquil silent country has a number of fine streams of consider- stream, of about 300 miles in length, and rising able length, but flowing chiefly through a wil not far from the sources of the Susquehannah, derness, and only imperfectly described. The it empties by the fine estuary called Delaware Merrimach belongs to this region, although it Bay, exclusively supplied by its

waters. The empties in the state of Massachusetts. Its co□□urse Delaware forms the boundary between the States does not exceed 200 miles ; and it is chiefly re- of Pennsylvania and New Jersey through its markable as having its navigation more improved whole course. Its banks are rich and populous; by art than any other river in North America; and at the head of ship navigation is Philadel- and, indeed, as being the first example of this' phia, one of the two largest cities of the United kind upon the continent. The Piscataqua is a States. The Hudson, which is the next in order, small stream only forty miles in length. The is inferior to the Delaware and Susquehannah Kennebeck is much larger, and more important in length, but more important. It is a broad The Penobscot is the largest stream of Maine deep stream, in which the tide flows 160 miles, exceeding 250 miles in length; and the St. and seems rather like an arm of the sea than a Croix, or Scoodre River, expands to a con- river. The streams south of this have usually siderable breadth near its mouth, but is chiefly low and level banks, with none but the softer interesting as the north-eastern boundary of the beauties of scenery. The Hudson pursues its United States. The St. John's River is the most course for some distance among the precipitous important stream of this region, rising in the cliffs and lot'ty peaks of the Highlands, and along northern part of Maine, and flowing first to the the Catskill mountains, presenting on this part north-east and east in this state, and then bend- some of the most magnificent and sublime see- ing to the south, discharges itself in New Brims- nery ; and in other parts, winding through a wick into the Bay of Fundy, after a course of not rich and level country, which is uniformly more less than 400 miles, and forming the largest and elevated than the banks of the more southern one of the most navigable streams of the northern streams. The Hudson rises in the mountainous section of the coast. The tide flows up eighty region between Lake Ontario and Lake Champ- miles. The highlands at the head of this stream lain ; and, running nearly south into the noble are a kind of centre of waters, resembling, in

estuary and harbour of New York, is discharged miniature, those at the head of the Mississippi into the Atlantic. Throughout its whole course Giving rise on the south-east to this river and the banks are lined with large villages and towns, the Penobscot, they send off, within twenty miles,, and the city of New York, at its mouth, is not the Chaudesere branch of the St. Lawrence tc only the most populous in the United States, thenorthjandatnogreatdistance the Connecticut but is rendered by its situation the great commer- flows to the south, and the St. Francis to the cial capital of the country; and is gradually north-west. The heads of these streams, and the becoming the great centre of trade for all the direction of the highlands from which they roe, reeion east of the Apalachian chain, and north have been recently examined by joint commi: of the Ohio. The only considerable branch of sioners from Great Britain and the Unite the Hudson is the Mohawk, which flows in from States, in order to settle the boundary whic the west a little above the head of tide-water. It passes along their summits ; and we may tl is precipitated from a bed seventy feet above fore hope for a more complete account than we the level of the Hudson over the falls of the have yet received.

Cohoes. The whole course of these streams is 88. We have now reached the boundary whu within the state of New York. The valley of divides the waters we have been describing, from the Mohawk is the first passage around the Apa- the second great river of North America lachian chain between the waters of the Atlantic order we have followed, the ; and the upper lakes, and contains the great canal which absorbs all the waters of a tiactof country of communication extending from the ocean to the s

87. The Connecticut is the principal stream Mississippi. LJi.Srlrf

of the primitive country east of the Hudson, nected chain, the five principal which comprises all the eastern states. It rises America whose ou let ouly has rece

valley of great "fertility and exquisite beauty. . "►►>_ t)- a^out 350 miles m

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irauquil, but diversified with a few rapids and length, at

are drained from other streams of a surrounding basin, probably 60,000 square miles. They cover 35,000 square miles, an extent greater than the whole of Scotland or Ireland ; and its :'slands exceed in size the lakes which are scat- tered over the surface of these kingdoms. Isle Royal, the largest, is 100 miles in length, and in some parts 40 in breadth. The waters of Lake Superior are every where of sufficient depth for the navigation of the largest ships. The shores are rocky, and often rise perpendicularly from 300 to 1500 feet in height ; and the principal har- bours of safety are found in the islands. The lake is also subject to violent storms, which, with the want of harbour, renders the naviga- tion very dangerous. The soil of the basin is generally so sterile, and the climate so severe, that this extensive sheet of water will probably be of little importance ifi the promotion of com- merce or civilization. It is now only employed as the thoroughfare of the fur trade, which passes by the Grand Portage River on the west, to the sources of the Assinoboin, Red, and other rivers of the northern declivity.

90. Lake Superior is 600 feet below the level of the sources of the Mississippi, and about the same height above the surface of the Atlantic. Its waters issue at the east end in a rapid, inter- rupted by huge masses of rock, called the Falls of St. Mary. These are an effectual bar to na- vigation, except for boats and canoes, although the fall is only 23 feet in half a mile. On pass- ing the tracts of St.

Mary, we enter the second great division of the basin of the St. Lawrence, comprising Lakes Huron, Michigan, St. Clair, and Erie. The whole surface drained is about 400,000 square miles, of which the lakes occupy

50,000.

91. Lake Huron is next to lake superior, the largest in North America. It resembles that lake in its triangular form, and the purity and depth of its waters. It is about 220 miles long, and 90 in mean breadth, covering about 20,000 square miles, an extent greater than the whole of Switzerland. It is almost divided into two parts by a chain of islands, called by their Indian name of Monatoulin, or Islands of the Evil Spirits, whose residence they were supposed to be.

92. On the west of lake Huron, is lake Michi. gan, a singular cul de sac appended to this mass of waters, which seems as if it were intended, like the regulating receiver of some hydraulic construction, to receive the occasional surplus and supply the deficiencies of the main stream. It is situated entirely in the territory of the United States, between forty-two and forty-six degrees north latitude. It stretches from north to south in an elliptical form about 300 miles in length, and 50 in average breadth, covering a surface of 15,000 square miles, or half the ex- tent of Ireland Green bay is a considerable branch on its western side, 120 miles in length, connected with it by a passage, 75 miles in width. Lake Michigan extends nearly parallel to the shores of lake Huron and its outlets, as far south as the latitude of lake Erie, at the dis- tance of less than 200 miles from its nearest point, inclosing the peninsular territory of

Michigan. The communication across the isth- mus might easily be completed by a short canal between the rivers of each lake. The straits of Michulmackinare or Mackinaro form the outlet from lake Michigan to lake Huron on the north- east. The strait is navigable for vessels drawing twelve feet

of water, and the lake itself for ships any size.

93. Pursuing the direct course of the waters, the river St. Clair conducts us from lake Huron to lake St. Clair, a beautiful but comparatively small sheet of water, about 30 miles in diameter, and 900 square miles in area. The waters are again confined in the channel of the deep broad river of Detroit, which issues from the southern extremity of lake St. Clair, after a course of twenty-seven miles, again expands into the large lake Erie. Lake Erie is the fourth in extent, of the great chain, and forms a beautiful and trans- parent sheet of water. It has not the great depth of the upper lakes, but still is navigable for sloops of considerable burthen, and was the scene of an important naval engagement during the late war. It is about 230 miles long, 45 broad, and 10,000 square miles in extent. The northern shore is ge- nerally high and rocky; the southern more sandy and shelving. The rocky bottom renders anchor- age insecure ; and there are not many harbours in which vessels can take refuge from the violence of its storms. The waters of this lake are dis- charged at the eastern extremity by the river and falls of Niagara, over a precipice 160 feet high and with rapids above and below the great falls, which render the whole descent to lake Ontario, 450 feet. In consequence of this the discharge of its waters is much increased or di- minished by the winds, and there is occasionally considerable change in its level during a long prevalence of wind from the same quarter

94. Lake Ontario, like Erie and Michigan, has an oval form, but is inferior to both in size. Its length is 180 miles, its breadth about 40, and its contents about 7000 square miles. Its ave- rage depth is estimated at eighty fathoms. There are several good harbours, and it is the channel of valuable commerce ; but its navigation is liable to much danger from the storms which prevail over the whole of this chain of inland waters. At the eastern "end of lake Ontario it empties itself by numberless passages through a group of islands termed the Thousand Isles, into the channel of the St.

Lawrence,, and, with some inconsiderable expansions, the form and cur rent of a river is preserved to the ocean. ••• After passing the island of Montreal, the .St. Lawrence receives the waters of two other con- nected lakes,, lake Champlain, and lake George, which are situated within the United States. Lake George is the source of these waters ; a small but interesting lake, remarkable for the purity of its water, and the beauty of its islands and scenery. It flows with a rapid current into Lake Champlain, which extends 160 miles in length, and one to sixteen miles in breadth. Its shores are generally bold and rocky, and often precipitous; and its scenery, especially on the eastern shore, is often very fine. These lakes form the principal passage between the United States and Canada, and have been at different

periods of the history of North America, the scenes of sanguinary battles, and naval en-age! ments.

95. Several smaller lakes are connected with

••? PgfV Wbch has been described.

Some of the most interesting are the small lakes of the state of New York, emptying into Lake Ontario. Cayngo lake, the largest, is•• forty rnts

%' E , TlYG rbrr••ad' ab••Ut the ^me extent with the lakes of Constance and Geneva, in Switzerland. It is here interesting to notice also, that Lake Ontario, the smallest of the great chain, except St. Clair, is larger than any body of fresh water yet discovered on the eastern Con- tinent. Lake Nepming, which empties into lake Huron, is the most considerable on the north of the great chain, being about equal to lake St Clair in extent.*

96. The river St. Lawrence, which forms the outlet of this vast mass of waters, after a course of 400 miles from lake Ontario, forms an estuary called the gulf of St. Lawrence of about the same length, and 250 miles in breadth, which is separated from the ocean by the island of New- foundland, and

communicates with it by two openings between the island and the main. The quantity of water which flows through this channel to the ocean, after all the waste of eva- poration, may be estimated by the dimension of the channel below the falls of Nyagara. The river is here half a mile broad, twenty-five feet in average depth, and flows about three miles an hour. In one hour, therefore, it discharges a column of water, which would fill the channel for three miles, or 1,111,000,000 cubic feet; being 8,000,000 cubic feet, or 113,000,000 gallons each minute.

97. On the northern declivity of North Ame- rica we find rivers of a similar character to the St. Lawrence, but inferior in magnitude, inclu- ding several lakes in their course. The most remarkable is Mackenzie's river, which is called the Unyah or peace river at its source. It passes through lake Athapescow, and assumes the name of Place river ; expands into the Slave lake, and from the northern extremity of this lake pursues its course to the Arctic ocean, under the name of Mackenzie's river; the whole length of this stream exceeds 2000 miles. The Athapescow lake which discharges its waters through the same outlet, is also supplied by the Athapescow or Elk river, which rises not far from Peace river. Havi lake lies between latitude 60►► and 62►► north. It is twenty-seven miles in length from east to west, and about forty in average breadth, and equal to lakes Michigan and Erie in size.

98. The Sascatchawine river rises in the Chip- pewan mountains, and passing through lake Winnipee, empties by Nelson's river into Hud- eon's Bay. A number of other lakes are con- nected with these waters, and with each other, by a variety of inosculations which indicate the level character of the country. The water course which rises near lake Superior in the Long lake, and lake of the Woods, also passes through lake Winnipic, and finds its way by a different outlet to Hudson's Bay.

99. Lake Winnipic appears to be the largest ff the

northern lakes, and Slave lake is next in

tt?3;tb►►? ►►► 16SS than lake Huron> ►►►* arP^ch to lake Erie m extent. The Athapescow lake is among the largest of the others. The lake of the

rtL*S^J”f f►►rmS a Part of ** boundary of United States, is among the small lakes of this continent, but is larger than those of Swit- zerland. The nature of the country, and the cli- mate, will probably prevent the employment of these extensive water courses in commerce, ex- cept m the portage of cannon, for the conveyance ot the hunters and their provisions, and furs, and the few articles which the natives are able to purchase.

100. In the southern peninsulas portion of North America, the largest lake is Nicaragua, about 200 miles in circumference. It is of such depth as to be navigable for the largest vessels. It communicates with Lake Leon, and its waters empty into the Carribbean Sea, by the River St. Juan : it is only twenty or thirty miles from the Pacific Ocean. The valley, in which is the city of Mexico, contains five lakes, of which Tetruca, which formerly flowed around the capi- tal, is the largest. It is eighty square miles in extent, and is only remarkable on account of its situation, and saltness. All these lakes commu- nicate with each other, and the superfluous water of the valley is discharged by the river Tula, at the harbour of Sampico. Lake Cha- pala, which lies west of these, is the largest in Mexico, thirty miles in length, and twenty in width. It communicates with the river St. Jago, which empties into the Pacific Ocean.

101. The only large river of the western de- clivity which has been fully described is the Columbia, which rises in the Chippewan Moun- tains. It has thiee principal branches, Clark’s River, Lewis’s River, and the Multnomah; the most northern of which

rises near the sources of the Missouri, while the main stream rises near the head waters of Mackenzie's River : it empties into the Pacific, m the forty-sixth degree of north latitude, after a course of 1500 miles. The stream is remarkably large in proportion to its length. At the junction of Lewis's River, 400 miles from the sea, it is 960 yards wide, and below the head of tide-waterr 159 miles from its mouth, it expands to four or five miles, and is capable of receiving vessels of considerable bur- then. The greater part of its basin is consider- ably elevated above the ocean, and it is, there- fore, precipitated over a series of ledges which obstruct its navigation, but add to the beauty of the scenery : the banks are generally productive, and the appearance of the country interesting. The Colorado, the principal remaining river of the western declivityrrises in the Mexican Cordel- lera, or Sierra Madre, and empties into the gulf of California after a course of 1000 miles. It has been too imperfectly examined to permit any correct description. On passing to the western side of the mountains, we find the Rio del Norte, which rises near the sources of the Arkansaw, about 300 miles north-west of Santa Fe. It is peculiarly an independent river, and pursues a course of 1500 to 2000 miles to the gulf ot Mexico almost without receiving a single branch. The stream can be forded with great difficulty during the summer ; but it is subject, like othc:

rivers of this region, to annual floods, which continue two or three months, and raise it far above the ordinary level. Its waters are re- markably turbid. The Colorado of Texas is the only considerable river before reaching the Sabine, which forms the western boundary of the United States for 250 miles from the gulf of Mexico to its source, and empties only a short distance from the mouth of the Mississippi.

102. INLAND NAVIGATION. ??? North America is penetrated by four great rivers, the Missis- sippi, the St. Lawrence, the Columbia and Mackenzie's River, by which navigation is ex- tended to a great distance into the interior. The Mississippi and its branches, drain the great central basin which lies between the Allegany and Chippewan Mountains. On the Mississippi, the navigation for boats of considerable burthen extends to the Falls of St. Anthony. On the Missouri, which is the largest, and in fact the principal stream, it extends to the Gates of the

- Rocky Mountains. From the secondary character of the country, the numerous branches of these great rivers are generally navigable, and afford a passage from almost every part of the western states, and the vast regions at the base of the Rocky Mountains, to the Gulf of Mexico and the ocean, at least during the season of high water, from the spring to the middle of summer. The current of the principal streams is so rapid, that although their depth would admit vessels of considerable size, the navigation is chiefly by means of steam-boats. Even the ascent from the mouth of the Mississippi to New Orleans is so difficult that vessels are sometimes delayed thirty days.

103. The navigation of the Mississippi is at- tended with some danger, from the numerous trees fixed in its bed, which are called by the boatmen planters and sawyers, and are as fatal to the boats as reefs of rocks. Below Natchez these dangers are obviated by the depth of the water. Above this they become more and more numerous and difficult to pass ; but the main channel, though intricate, affords depth of water in all stages sufficient for boats of five or six feet draft, to the mouth of the Ohio. From this point to the mouth of the Missouri, 220 miles, the navigation is obstructed by shoals at low water, which will not admit boats drawing more than three feet. Its current probably averages 3f miles an hour. The obstructions to the na- vigation of the Missouri resemble those in Mis- sissippi but are

much greater. This stream is rapid and turbulent. No part of it is exempt from rafts, bars, snags, or other obstructions, and the channel is very intricate. From March to July or August, it is raised by freshets to such a height as to admit boats of any burden; but during the remainder of the year, it can scarcely be called navigable, except for boats drawing two to two and a half feet of water. Its velocity in a middle stage of water is four miles and a half; in freshets five and a half per hour. It is usually blocked up with ice during the winter.

104. The Ohio is navigable for boats of con- siderable burden, from the middle of February to the latter part of June, and again a few weeks during the freshet in the autumn. The falls of Louisville can be passed by large boats, only in

the highest water. During low water, boats of small burden cannot pass some other rapids and shoals, and the river is fordable in many places.

105. The Arkansaw is the next branch to the Missouri in size. It has only short periods of Hood, and will not admit boats of considerable burden. A part of its channel is sometimes dry. The Canadian, a branch of the Arkansaw, 1000 miles in length, leaves its channel dry a large part of the summer. The Red River is naviga- ble most of the year to the Great Raft, a collec- tion of timber which closes the passage, 500 miles from its mouth. The river St. Francis is blocked up at its mouth by rafts of logs and drift wood, which prevent the passage of boats entirely.

106. The branches of the Missouri are usually blocked up at their mouths after the freshets in July, until the next spring, with mud brought down by the Missouri. They are of course na- vigable only during the freshets. The Platte is a broad shallow stream, fordable in almost every part, and navigable only for canoes of skins. ??? The Yellowstone is nearly as large as the branch which takes the name of the Missouri, and is navigable through the

greater part of its course.

107. The St. Lawrence is navigable nearly to Montreal, for vessels of 600 tons burthen, where it is obstructed by rapids. The boat navi- gation continues above them to Ogdensburg, whence sloops and large vessels may be navigated 170 miles, through Lake Ontario, to the River Niagara. At the falls is a portage of seven miles, after which there is a navigation of 231 miles through Lake Erie, for vessels of sixty or seventy tons. The navigation continues by the straits of Detroit twenty-eight miles ; Lake St. Clair twenty miles ; and the River St. Clair sixty miles, to Lakes Huron and Lake Michigan. Between Lakes Huron and Superior, are the rapids of St. Mary's Straits; along a part of which a canal has been formed by the British North West Fur Company, for the convenience of their traders.

108. The River St. Lawrence above Quebec, and a great part of the lakes are frozen over from the beginning of December till April ; but an easy and rapid conveyance is afforded over the ice by means of sledges. The common route of the fur traders in their bark canoes, is from the Saint Lawrence, through the Ottawa or Grano River, and thence by a short passage to Lake Nipissing, and down the French River, into Lake Huron. This route is one-third shorter than through the great lake. From Lake Huron they proceed through the straits of Saint Mar}-, and Lake Superior, to the Grand Portage, nine miles in length, which brings them to the great northern chain of Lakes, beginning with the lake of theWoods, at the distance of 1100 miles, from the place of their departure.

109. Lake Champlain is a branch of the Saint Lawrence, emptying into it by the River Sorel, or Richelieu. Vessels of 150 tons may ascend twelve or fourteen miles ; and boats to Cl ambly or St. John's. From this place there is a ship is-igation of 160 miles on the lake, to the shores :>f Venixmt and New York. The River St. Francis, one of whose branches rises in Lake St. Francis, and another in Lake Memphrema-

gog, is also a channel of navigation to the St. Lawrence.

110. The Columbia River is from one to three miles wide in the lower part of its course. Ves- sels of 300 tons may ascend to the mouth of the Multomah, 125 miles ; and sloops, to the head of the tide waters, sixty miles further. At the dis- tance of 200 miles from the mouth, there are two rapids which require a short portage; but ex- cept these, the boat navigation is uninterrupted as far as the great falls, 260 miles from the sea. The numerous rivers on the eastern declivity of the Apalachian Chain, afford the advantages of a good inland navigation to most parts of the At- lantic states* In all those streams which flow through trre alluvial region, from the Mississippi to the Roanoke, the tide waters of the ocean ter- minate at some distance from the root of the mountains, varying from 30 to 120 miles. From the Roanoke to the floods, they extend through the alluvial region to the base of the primitive hills ; but in no rivers south of the Hudson do they pass beyond the alluvial region. As far as the tide flows the streams are generally navigable for sloops.

111. In passing from the hilly and primitive, to the flat and alluvial region, the streams are almost uniformly precipitated over ledges of rocks, by rapids which obstruct their navigation. Indeed the line of alluvion marks the line of na- vigation from the sea, which passes through Milledgeville on the Altamaha, Augusta on the Savannah, Columbia and Camden on the Santee, Richmond on the James, Fredericksburg on the Rappahannockr Georgetown on the Potomac, and Trenton on the Delaware. Above the rapids, navigation is performed entirely by boats pro- pelled by oars or poles, or drawn up by ropes, or by means of the bushes growing on their

banks.

112. The Savannah River is navigable for ships to Savannah, and for boats 350 miles to Augusta. The rivers of South Carolina are navigable nearly through the alluvial region, and there are some good harbours at their mouths ; that of Charleston, which is formed by the Ashley and Cooper Rivers and the Santee Canal, with the Santee River.

113. The coast of North Carolina is lined with a range of low, sandy islands, enclosing a chain of sounds. Their entrances are generally obstructed by bars, and no vessels of consider- able size can enter. But the streams are navi- gable for sloops, some distance into the interior.

114. The Chesapeake bay is of itself an ir land sea of considerable size; and, with the nu- merous streams and inlets on its borders, forms an important channel to the ocean, for a large extent of country, covering the whole of Mary- land and the eastern declivity of Virginia ; and extending through the middle section of Fens sylvania, nearly to the small lakes of New York The largest ships have access to its shores, and proceed to some distance, in several of its streams. Not far from the entrance of the bay are Hamp- ton Roads, which is the first anchonng ground for vessels from the ocean. The James river is navigable for large ships to James town, and tor sloops to Richmond. Canals are formed around

the falls at this place, and several obstructions above, which extend the boat navigation 227 miles above Richmond. The Potomac is navi- gable for shios of any burden to the navy yard at Washington ; and this is the most inland point in the United States, to which the largest vessels have access. Above Washington, there are five falls on this stream, which are rendered passable by canals. A boat navigation is thus opened to its sources, which are connected with the waters of the Mississippi by the great Cum- berland road. The Susquehannah is obstructed at its entrance into Chesapeake bay by a series of rapids, extending forty miles, to Columbia, which can scarcely be ascended by boats.

A.*.- tempts have been made to remove these ob- structions, at great expense ; and a canal of one mile in length has been cut around the Cone- wago falls, twenty miles above Columbia. But the navigation of this river is still so difficult, that the trade is principally confined to the con- veyance of timber in rafts, and of produce in large flat boats, termed arks, from the interior to the Day. Above the falls of Conewago, there are few obstructions in the Susquehannah to the boundaries of New York ; and batteaux may as- cend to its very sources.

115. The Delaware bay and river are naviga- ble for the largest ships as far as Philadelphia ; but the ascent is often much retarded by the current. Sloops ascend to the falls at Trenton ; and boats of eight or ten tons, 100 miles far- ther, to Easton. By means of the Schuylkill and Lehigh, it affords inland navigation to a long though narrow section of country, comprising the eastern part of Pennsylvania, and the western part of New Jersey. A canal is now form- ing to connect the Schuylkill with the Susque- hannah, and thus open a direct navigation from the basin of the Susquehannah to Philadelphia and the ocean. The Lehigh, one of its branches, has been rendered navigable for a part of its course, to open a conveyance from the extensive beds of coal upon its banks.

116. The Raiitan river, in the northern part of New Jersey, is navigable for sloops to Bruns- wick, within twenty-eight miles of the head of sloop navigation on the Delaware ; and the Pas- saick and the Hackinsack afford a short inland navigation. But the dry sandy region of New Jersey on the south, and the mountainous por- tion on the north, have no navigation except from their borders; and there are few harbours on the eastern coast.

117. The Hudson is the only river in t United States where the tide passes through the alluvial, primitive, and transition formations. I is navigable for ships to the city of Hudson, and sloops of considerable burden pass through all the formations,

*to the falls of the secondary country, above Troy, which is 165 miles from the ocean. This is the most distant point to which the tides flow, and sea- vessels can ap- proach in a direct line, in the United States At its mouth this nver forms the harbour of New York, which is considered one of the finest in the world. The Northern Canal connect; the Hud- son with the borders of Lake Champlam and * St Lawrence; and the Western Canal with the*

upper lakes, and the rich secoudary region which occupies the centre of the state. This river is thus made the grand artery of an inland naviga- tion, by which the wealth of this tract of country will flow to the city of New York.

118. In the rivers of the United States, east of the Hudson, the tide extends only a small dis- tance, and the navigation is obstructed by the falls and rapids which are common in primitive countries. The Connecticut river is navigable for vessels of considerable size, fifty miles to Hartford. Several canals and locks have been constructed on this river at South Hadley, Ha- nover, and some intermediate rapids, which ex- tend the boat navigation to Averhill, in New Hampshire. In the eastern part of Connecticut, the Thames is navigable for sloops to Norwich, and forms the fine harbour of New London, at its mouth. Narraganset Bay, and the streams which empty into it, afford easy access from the ocean to every district of Rhode Island. A canal is contemplated, to extend from Providence into the interior of Massachusetts, to furnish an easy conveyance for fuel and produce to this flourishing seaport.

119. The Marimac of New Hampshire, is much obstructed by rapids ; but its upper waters are connected with Boston Harbour by the Middle- sex canal. The rivers of Maine are generally obstructed. The Penobscot, the St. Johns, and the western branch

of the Kennebec, afford a boat navigation nearly to their sources. The heads of these rivers approach within no great distance of the waters of the St. Lawrence ; and the portage from the head of the Kennebec to that of the Chaudiere River is only five miles. The basins of the river St. Lawrence, and the Mississippi, and the Atlantic declivity are so in- timately connected, that it would not be difficult to unite them by an inland navigation ; and much progress has been made in accomplishing this im- portant object. The waters of the St. Lawrence, or the great lakes, have two natural communica- tions with the branches of the Mississippi at particular seasons. The Fox river, which flows into the branch of Lake Michigan, called Green Bay, rises near the Ouisconsin branch of the Mississippi, and afterwards flows within a mile and half of its channel, separated from it only by a short portage, over a prairie. During the season of high water, this river is easily naviga- ble, and the intervening ground is overflowed, so that loaded boats may pass to the Ouisconsin, which affords a rapid but unobstructed naviga- tion to the Mississippi. A short canal would render the communication permanent.

120. Another communication is stated to exist from the Chicago River, emptying into the south- western corner of Lake Michigan, to the Illinois. It is passed by boats of fifty tons, engaged in the fur trade, and is open at all seasons, except about three months. The Atlantic waters are united with Lake Ontario, and the lower portion of the St. Lawrence, by the Northern Canal of New York, from Whitehall, on Lake Champ- Jain, to Fort Edward, on the Hudson. 'It passes in part through the channels of small streams ; and the navigation is extended around the ob-

structions in the Hudson River, to Albany; it is the channel of considerable trade.

121. The most important canal in the United States, and the longest in the world, except the Imperial Canal of China, is the Grand Western Canal of New York. It passes from the Hud- son River along the

Mohawk, generally above its level, to Rome ; and thence westward, across the head of the small lakes, and over the Ge- nessee River, to lake Erie, at Buffalo, connect- ing the Atlantic with the great Anticasa above the falls of Niagara ; in different parts, it rises about 526 feet, and contains in the whole, about eighty locks, with several considerable embank- ments and aqueducts. It was commenced in 1817, and in 1823 it was finished from Albany to Rochester. It is expected that the whole canal will be completed in 1826. The expense is estimated at about five millions of dollars. The canal will be the property of the state ; and is likely to afford an immense revenue for public purposes. Since the commencement of this great work, an effort has been made by the people of Canada, to prevent the diversion of trade from Montreal, by cutting a canal along the northern shore of the falls of Niagara, and thus complete the chain of communication by the lakes. It is said that the project is ready for execution ; and many of the preparations made for commencing the work.

122. Two routes have been proposed to con- nect the Atlantic and western waters, by means of the Grand cana. of New York. The most obvious is by a Canal from lake Erie to the branches of the Ohio, which will probably soon be overtaken by the state of Ohio. The other route is by a canal from lake Erie to lake Michi- gan, and another from Chicago river to the Illinois. The latter route is but little longer than the former ; and the navigation would pro- bably be less obstructed. It is also proposed to connect the Ohio with the Atlantic, by a canal from the head waters of the Monongahela to those of the Potomac, which will pass under the prin- cipal ridge of the Allegany, by a tunnel two miles in length. There is now a portage communica- tion, by means of the Cumberland Road. The state of Virginia proposes another portage com- munication, from the head waters of the James to those of the Great Kanhawa ; and a third has been proposed in Pennsylvania, from the western branch of the Susquehannah to the Allegany river, and also to lake

Erie.

123. Great facilities also exist for the establishment of an inland navigation along the coast of the United States, from New Hampshire to Georgia. The Middlesex canal connects the Merrimac river above the falls, and the interioi of New Hampshire, with the harbour of Boston. From this harbour and Massachusett's bay, a canal across the isthmus which unites cape Cod to the main, would form a communication through Narraganset bay, and Long Island Sound, to New-York. The Raritan river could be connected with the Delaware by a canal of twenty-eight miles, requiring only an elevation of thirty feet to the summit level. The Dela- ware bay will soon be united with the Chesa-

peake by another, of twenty-two miles, between Christiana and Elk river, which is commenced. All these canals would pass through a flat coun- try ; and might be constructed without very great labour. It is somewhat doubtful, however, whether the canal across the isthmus of Cape Cod would not be liable to obstructions, by the accumulation of sand; and another route has been thought more likely to be useful, connect- ing Boston Harbour with Taunton River, which empties into Narraganset Bay, by a canal twenty- six miles in length, rising 133 feet. After descending the Chesapeake Bay to Norfolk, on the Elizabeth River, there is a canal passing through the Great Dismal Swamp, which extends

the navigation to Albemarle Sound From this sound, a range of low islands extends along the coast to Florida, which forms an inland passage nearly the whole distance. A part of this dis- tance may be traversed by the canal which con- nects the Santee River with the harbour of Charleston.

124. The following table shows the size and ex- ten t of the canals of thellnited States,in comparison

with the principal works of the same kind on the eastern continent, from which it appears that the Grand Canal exceeds all works of the kind in length, except the Imperial Canal of China, which passes, for a considerable part of its course, through the channels of rivers.

Canals.

Connecting.

Long.

Broad.

Deep.

Elevation.

Locks.

Miles.

Feet.

Feet.

Feet.

Imperial, Chinese .

Pekin and Canton . . .

500

???

???

???

???

Western, New York

Hudson and Erie ....

360

40

4

526

80

Languedoc . . .

Garonne and Mediterranean

140

64

6

207

103

Grand Trunk

Mersey and Trent . . .

140

30

???

326

80

Leeds and Liverpool

L. and L. ??? England . . .

140

???

H

483

Ladoga, Russia . . Caledonian . . .

Along L. Ladoga . . Atlantic and Murray Frith .

67* 59

70 110

7 20

level.

94

Middlesex . . .

Merrimac and Boston . .

31

34

4,

107

16

Kiel

Baltic and North Sea . .

22

100

10

27

3

Santee

Santee and Cooper River .

22

35

4

68

13

Champlain . . . Chesapeake . . .

Champlain and Hudson Chesapeake and Delaware .

22 22

40

4

140

42

125. The extensive channels of navigation which we have described are fully estimated, and diligently employed, by the Americans. The Mississippi and Ohio are continually traversed by 50 to 100 steam boats of very large size. They are found in great numbers on the rivers of the Atlantic states; and the chain of communica- tion alon►►- the coast is almost completed by the union of these with regular conveyances across the short portages. They are also found upon the great lakes,^ furnishing regular conveyance along this immense channel of navigation. 1 great canals of communication from the Atlantic to the northern and western waters are crowded with boats, and yield a revenue which exceeds all previous calculation. In short, the country is capable of an internal commerce, whose im- portance is only beginning to be developed

126 The table-land of Mexico, as has been already remarked, is too dry to permit internal navigation, except for very short distances. Rio del Norte,

although a stream of considerable size, is so interrupted by sand bars in the low country, and rapids above, that it is not naviga- ble Spt for Sort distances. The other rivers, and Vadjoining country are too little ^known to admit of description, except a few s streams which descend from the table-land, and a❓❓❓ fe connexion with the coast. Macken- Se's river and other streams of the northern de- it an extensive navigation by canoes, interruption by rapids; and the na-

ture of the country renders it a question of little interest, whether any other navigation is praoti cable.

127. The most interesting topic connected with the inland navigation of the peninsular por- tion of North America, is, the possibility of es- tablishing a water communication between the Atlantic and Pacific Ocean. Their close approx- imation, and the immense advantages which would result to commerce, by shortening the distance to the East Indies, has made this a con- stant subject of discussion ; but still the common intercourse between the places on the coasts, and the table-land, is carried on entirely by mules, over the immense heights of the table-land, or by long and difficult portages. Nine points have been suggested in different parts of the continent for the object.

128 In the northern and widest portion o the continent, the sources of several great rivers approach very near, and we have reason to sup pose that the Columbia uses not far from th* Lad waters of the Missouri, Nelson's Driver, and Mackenzie's river. This route would be only important On account of the fur trade which would be secured to the nation that should com- plete and control such a communication 2. latitude 40❓❓. the sources ******** are separated from those of the Colorado, by a mountainous tract of only twelve or thirteen ❓❓❓agues in breadth, but presenting too circuitous a route, and too great an ascent, to furnish an

useful communication. 3. The isthmus of Tehuantepee offers the first eligible spot, and perhaps the most advantageous of all. The river Thiarualeo, which empties into the gulf of Mexico, has a branch called the Rio del Passo, which rises in the central highlands at the dis- tance of only six leagues from the head of the Chimalpa river, which empties into the Pacific at Tehuantepee. - It is said by one of the en- gineers, who was employed to survey the ground, that the central ridge was crossed by transverse valleys, and that a canal might be cut from one stream to another, without deviating from a level or employing a single lock. If this be the case, the only remaining difficulties are to remove some obstructions in the upper part of the Passo, and to deepen the harbour of Tehu- antepee, which has been for a century past neg- lected and filling up with sand. This was at one period the principal rout between the oceans. It is stated, in a recent official report to the Mexican congress, that in 1814 the Cortes of Spain decreed the opening of the canal at this point, and committed the execution of the plan to the local authorities. Their inability to attempt so great a work, and the subsequent war of independence, entirely prevented even the preparation for it. But since the establishment of the new government, this report states, that application has been made by foreigners for per- mission to execute it, which offers much hope of its completion. 4. The Lake of Nicaragua communicates with the Carribean sea, by the river St. Juan, and is separated by a narrow isthmus from the Gulf of Papagayo. Several volcanic summits are found in the interval, but the nature of the country is little known ; the distance does not exceed twenty or thirty miles, and it is even a matter of doubt, whether any chain of mountains exists here ; but we have no accounts more recent than the voyage of Dampier, which speaks of it as only a little hilly, and for the greatest part level. The most serious obstacle to the utility of this, will probably be found in the dangerous storms which rage upon the

coast during several months in the year, and extend also to Tehuantepee.

129. The Isthmus of Panama has been the spot generally selected for a canal, as being the narrowest part of the continent. The River Chagres, which empties into the Carribean Sea, to the west of Porto Bello, affords good navigation to Cruces, and obstructs it only by the rapidity of its current. This point is attained in four or five days in ordinary times; and a journey of five leagues only remains to the port of Panama. This was for a long time the only route for transpor- tation from Peru and Chili to the Atlantic, and is still much used in time of war ; hut the pas- sage round Cape Horn is now preferred in time of peace. With regard to the construction of a ship canal acri.ss the Isthmus, Humboldt ex-

presses his decided opinion that it ought to be abandoned ; that no passage can be opened which would admit any thing larger than flat boats, which might transport merchandize from sea to sea ; and, as the passage would be entirely under the control of the owners of the country, there would still be difficulties in this channel of commerce, which would lead the greater num- ber of merchants to send their vessels round Cape Horn. Its principal value would be in reference to the commerce of the western coast of South America, and would be very great in time of war. The thin population of this region, and the indolence and ignorance of the inhabi- tants, almost precludes the possibility of ef- fecting so great an object by the labour of the natives ; and the pestilential character of the climate would probably render it impracti- cable to accomplish by the aid of foreigners. The country must be materially improved, from its present neglected unproductive con- dition, before it could support the necessary labourers and animals ; and, when these objects were effected, the great number of foreigners who perish in the mere passage across the isth- mus, or in the intervals before embarkation, indicate the danger there would be in making it the commercial route between the oceans.

regard to the whole extent of the labour requisite either here or at any other point of the isthmus, we are quite ignorant. From the re- public of Columbia to the environs of Mexico there is not a single mountain, or city, or station, whose elevation is known ; and even the longi- tude and relative positions of Panama and Porto Bello, have never been accurately ascer- tained.

130. Should any effort of art, or convulsion of nature, open an entire passage from sea to sea, great changes must follow on the coast of the Atlantic. The ocean is probably elevated twenty feet above the level of the Pacific ; of course the extent of the land would be increased, and the shores be extended ; sea-ports would be removed inland ; many shoals and rocks would become dry, and new ones probably arise. The waters of the Gulf-stream would doubtless be diverted into the new opening, and the effects would thus extend along the whole coast of North America, and effect great changes in the relative situation and commercial relations of its harbours and sea-ports. The desertion of low grounds by the tides would probably produce pestilential dis- eases in many instances ; and a generation might pass before the effects of this great revolution would be fully developed. Its effects on the state of the world are more difficult to estimate. We can only say, that the greatest obstacles to the invaluable trade of Western America and the East Indies would be removed, and the bulwark of the independence of China and Japan would be broken down.

END OF VOL. I

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THE

LONDON ENCYCLOPAEDIA,

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AMERICA TO ARSENAL.

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THE

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UNIVERSAL DICTIONARY

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Sic oportet ad librnm, presertim miscellanei generis, legendum acceclere lectorem, ut solet ad couvivium conviva civilis. Corivivator aunititur omnibus satisfacere ; et tamen si quid appouitur, quod hujus aut illius palato non respondeat, et hie et ill.; urbane digsimulant, et alia fercula probaut, ne quid contristent convivnturtm. Eratnuu.

A reader should sit down to a book, especially of the miscellaneous kind, as a null -behaved visitor does to a banquet. The master of the feast exerts himself to satisfy his guests; bat if, after all his care and pains, something should appear on the table that does not suit this or that person’s taste, they politely pass it over without notice, and commend other dishes, that they may not distress a kind host. Translation.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITANA,

. ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

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1837.

THE

LONDON ENCYCLOPAEDIA,

AMERICA.

131. THE remaining points proposed for com- munication are in South America. 5. The river Atrato, which empties into the Gulf of Darien, approaches in two points by its branches to the Pacific. 6. The Naipa, which enters near its mouth, is navigable to a point within five or six leagues of the port and bay of Cupica, which should be the Suez of the new continent. The interval is quite level, and well adapted for a canal. 7. Near the source of the Atrato a small branch, called the River Quito, is connected by the small ravine of Raspadurawith the head waters of the St. Juan, which empties into the Pacific. By the energy of a single priest and his parishioners, a small canal was dug in 1 788 along the ravine, by which canoes laden with produce pass from sea to sea during the time of heavy rains.

It is obvious that no point yet examined presents so few difficulties in the way of this great object ; and the government of Columbia have directed the necessary surveys to be made in reference to it. Of the two remaining routes, that which was suggested from the Gulf of St. George to the ocean is quite impractica- ble : the other presents a communication com- paratively easy, by a portage over the mountains of only five or six leagues from the river on the Peruvian coast, 1 0° south latitude to the branches of the Amazon, and would carry the rich pro- duce of Peru and Chili to the mouth of the Amazon and the coast of Europe in five or six weeks; while a passage of four months, attended with great danger, is necessary in going round Cape Horn. The jealousy of the Brazilian go- vernment at present renders the plan impracti- cable. The only canal yet executed in this dis- trict of North America is the great drain, or derague of Huehuetoca, designed to draw off the waters by which the valley and city of Mexico are frequently inundated. Although it serves no commercial purpose, it

claims admira- tion as one of the most gigantic hydraulic con- structions in the world. It was originally a subterraneous passage through the crest of moun- tains which surrounds the valley of Mexico ; but, being found inadequate, it was converted at an immense expense into an open drain, more han twelve miles in length and nearly 200 feet in depth in soma parts, and 200 or 350 feet broad ; in some parts nearly equal to the Seine at Paris. If but a small part of it were filled with water, ships of war might pass through the mountains. It is now much fallen to decay.

132. CLIMATE. — It is a well-known fact, that the temperature of countries on the eastern coast

of North America, beyond the limits of the tro- pical heats, corresponds to that of countries seven or even ten degrees farther north in Eu- rope. Various causes have been assigned for this difference, none of which have appeared satisfactory. The prevalence of north-west winds, the extensive forests, the great lakes, the extent of land on the north in America, have all been alleged as the causes of this supposed ano- maly in climate.

133. But all these theories proceed on the ground that the temperature of Europe is that which is naturally produced by its latitude. The fact really is, that scarcely any other portion of the globe, of the same extent, is so much subject to the influence of local causes : it is sheltered from the bleak winds from the north by the Scandinavian chain of mountains : it is sur- rounded on the north by the ocean immediately communicating with the Atlantic, and intersected by extensive seas whose waters preserve an equable temperature, and give it out to mode- rate the severity of winter. Its southern coun- tries are still more sheltered by ranges of moun- tains passing from east to west; and are bordered by a sea extending into a hot climate, and trans- porting its heats by currents and winds with great rapidity. The deserts of Africa on the south are like immense furnaces, raising the temperature of all the surrounding countries. America on the other hand is exposed to the common influences of the season without shelter, and would therefore be more likely to furnish a fair standard of the temperature of the earth. But we shall find, on further examination, that the eastern coasts of both continents, so far as they have been examined, appear to resemble each other, and to have colder climates than the western. The eastern coast of Asia resembles that of North America in the greater severity ot its climate. On the other hand, the western coast of America, so far as it has been

explored, has been found to have a climate milder than the eastern. The most important circumstance, probably, which is concerned in producing the more elevated temperature of Europe, is the pre- valence of south-west winds upon its western coast. How far this is the case on the western coast of America we are not informed; but it is well known that the south-west wind, coming of course from a warm climate, blow? about two-thirds of the year upon the western coast of Europe, and therefore continually mo- difies its climate by mingling the warm air of the tropics in its atmosphere. In corresponded

with this view we shall find that the cold in- creases in going into the interior of Europe. The growth of plants in Russia, where we have no accounts of temperature, indicates a tempe- rature still lower in that country ; and the strong- est evidence is furnished that, in moving inland, we are leaving some important source of heat. That it is not merely the ocean which causes the difference, is evident from the fact that no such change occurs on the eastern coast of America ; and we are left without any other means of ac- counting for it than the prevalence of the wind we have mentioned. It is a singular fact, also, that the lines described by Mr. Young as bound- ing the various climates of France, instead of fol- lowing the parallels of latitude, pursue a course perpendicular to the direction of this wind, as if

this were the governing cause, rather than dis- tance from the diurnal path of the sun.

134. If we add to this, that the prevalent winds on the coast of America are from the north-east and north-west, we shall have good grounds for anticipating a great difference of temperature from these sources alone. The com- bination of causes we have mentioned justifies the opinion, that America is probably a better standard for the general temperature of the earth than Europe, and all the accounts we have of Asia confirm this opinion.

135. The following table, presenting a compa- rative view of the mean temperature of places in the same latitude, but in different situations, affords an illustration of the remarks which we have made.

MEAN ANNUAL TEMPERATURE.

Lat.

Western Europe and Africa.

Eastern Coast of Asia, and interior places.

Eastern Coast of America.

2°

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12 13 14 15 19 23 30

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49 50

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53 J

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Cumana . . .81.5

17° Antilles . . 81 VeraCruz . . . 78.8 Havannah . . • 77.9 29i° Florida . . 68 Natchez .... 64.8 Fort Johnson . . 66 Huntsville ... 63 Raleigh .... 59 Williamsburgh . 60.8

Washington . .58.1

Pondicherry . .81.3 Madras 80.4

Manilla 78

Senegambia . . 79

Calcutta . . . 78.5 Cairo 72.7

Canton ... 75

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Algiers 72

Palermo . . . 63.5

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Pekin .... 54.8 Madrid .... 59.7 (elevated 1978 feet.)

Cincinnati . . . 54.2 Philadelphia . . 54.8 New York . . . 53.8

Providence . . . 44.7 Boston .... 48.6 « Salem .... 45.3 (Williamstown . 45 (Brunswick . . 43 (Middlebay . . 43 St. Peter's Reach . 43

Quebec . . .41.7 St. George's Bay . 41

Table Bay ... 32 (Labrador). 57° Nain, Lab. . 26.8 Fort Churchill . 25

(Arctic Regions). Melville Isle . .1.3

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Naples . . . .63.5 Rome 60.4

{ Mid. France . 59 \ Toulon . . . G2 y Nismes . . . 60.3) Genoa 60 6

| Marseilles . . 58.8

| Bologna 56

Padua .... 52.2 Geneva 49.3

Bourdeaux . . . 56.5

Nantes 54.6

St. Malo . . . 54.1 Pans 52

Vienna 50.5

Prague .... 49 Gottingen . . .46.9 Warsaw 48.6

Berlin . . .’ . 49

London. . . .51.8 Amsterdam , 53.4 Dublin . . , . 50.1

York .... 49 Copenhagen . . 45 Edinburgh . . . 47.7 Orkney Islands . 45.7 f Upsal . .41.9 f Christiana . . 42.8 Drontheim . . . 39.9

Moscow . . . 40.1

41.

Stockholm . . .42.2 Petersburgh . .38.8

Umea .... 33.3 68°Enontekis . . 26.8

Wadso, J.ap. . . 36 Mage me Isle . . 32

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NORTH A“‘M u R I C A.

1 36. It will be most convenient to consider the continent as it is divided by the gradations of temperature, or isothermal lines, into

various regions, distinguished by the same prominent characteristics of climate, and furnishing similar productions. For this purpose we shall describe particularly the course of the principal isother- mal lines; and, in order to furnish the best op- portunity for comparison, we shall trace them in their progress over the eastern continent, rely- ing chiefly on the original and interesting papers on this subject, which have been published by Baron Humboldt. It has been said that the climate of America is growing milder, as the forests are destroyed ; but it is by no means proved. On the contrary, the mean temperature does not appear ID have varied. At the same time it is true that the winters have become shorter and more open, while the spring and summer are proportionably colder, and the sea- sons are less uniform. Changes of the same nature, however, take place in Europe ; and in Europe, as well as in America, a series of mild seasons contrasted with some preceding seasons of uncommon severity, has been made the ground of a false conclusion as to the amelioration of the climate.

137. The coldest, or frozen region of North America, may be considered as extending from the northern limits of the isothermal line of forty-one degrees, which corresponds nearly to the utmost northern limit of the oak and wheat. The last oaks are seen on the coast of Norway, in latitude sixty-three degrees ; on the gulf of Bothnia, above sixty degrees ; in Russia, at fifty-five degrees ; and in Siberia, still lower. In North America this line is found at the bay of St. George in Newfoundland, in lati- tude forty-nine, and generally at fifty degrees on the eastern coast ; but it rises higher on the western. In the coldest parts of this region brandy and mercury freeze during the winter ; and masses of snow and ice continue through the summer, covering a large part of the country. Wells are frozen at a great depth ; and at Hud- son's Bay, and in most parts of this region, no water can be obtained in winter, except by melt- ing snow and ice. At the depth of three feet the ground is frozen in summer at Hudson's Bay ; and lakes and standing waters of no great depth are frozen to the bottom in the winter. The inland waters continue frozen from seven to nine months ; and snow, which begins to fall in August, continues from eight to ten months in all parts.

138. During the winter, the inhabitants of the coldest parts remain crowded together in small huts. The whole inside of a hut or ship is usually lined with ice, formed from the vapour of the breath, which must be cut away every morning. The savages even build huts of snow, stop the openings with ice, and use it as glass. Every part of the body must be covered in going out, or it is instantly frozen. The air, when breathed, seems to pierce and even rend the lungs. The cup often freezes to the lips, if it is touched in drinking. The provisions

must be cut with hatchets and saws. Trees and the beams of houses are split by the frost, and rocks

rent with a noise like that of fire-arms. Meat is preserved here in a frozen state without any care. The snow forms smooth and permanent paths for sleds, over which they travel with great ra- pidity, chiefly with rein-deer and dogs.

139. The change from winter to summer is very sudden, and the valleys are covered with grass a few days after the snow has melted. The temperature of the summer is very uniform : and the heat of the sun is often oppressive from the length of the days. In most parts of this region the summer is too short to bring grain to ma- turity. Cultivation is practised only to a very limited extent, and without any certainty of a crop, although this part of North America is in the same latitude with Denmark and Great Britain.

140. At Melville Island, the extreme point of Captain Parry's voyage, he states the mean annual temperature to be only one degree and a half, while at the North Cape of Europe, nearly in the same latitude, it is thirty-two degrees.

141. The isothermal line of 50°. correspond- ing nearly to the limit of the wine-grape in the middle of Europe, there passes along the parallel of 50°. ; on the western coast it ascends to j2°. ; and in England, to 54°. ; but in going eastward from Germany, it continually descends ; and we find it as low as 45°. in Asia. But in North America, it commences on the coast at Boston, in latitude 42°. On reaching the basin of the Mississippi, beyond the Hudson River, it as- cends to the borders of the great lakes: it descends again beyond the Mississippi; but again rises beyond the Chippewan Mountains ; and is supposed by Humboldt to strike the wes- tern coast in latitude 50°. The region north of this line, extending to the utmost limits of the oak, may be termed the Cold Region, embracing the British provinces and the northern part of New England. In this region the winters com- mence in November and end in April. The change of seasons is sudden ; frosts begin in September, and often continue through the month of May. The air is keen and penetrating, but clear and salubrious ; and the climate appears remarkably favourable to long life. The cold is remarkably steady ; and it is said that it is more easily en- dured, than that of milder climates, which are subject to frequent changes. The snow is per- manent; and the sled-roads afford a rapid and easy mode of transportation through the winter. In Nova Scotia and Canada the rivers freeze to the thickness of several feet, and snow lies through the winter; while in France, in -the same latitude, snow is rare, and the

rivers' are seldom frozen at all.

142. Little vegetation appears in the interior before April, and then springs up immediately after the snows are melted. The summers are short, but hot, and sometimes oppres- sive. They are as warm at Quebec as in the middle of France. The climate is adapted to the coarser grains ; but wheat flourishes chiefly in the southern parts. The pastures are rich, and the verdure fine. Apples, pears, cherries and plums are easily cultivated, of the finest • quality, and in the greatest abundance. All the • species of berries are abundant, and some very delicious, as strawberries, gooseberries, &c. The

walnut, and most of the ordinary nuts, and the common garden vegetables, peas, cabbage, turnips, potatoes, &c. flourish best. It is also the native climate of oats, hemp, and flax, and the most favourable for their cultivation.

143. At the northern limits of this region, the oak commences, and the forests are composed of the oak, the elm, the maple and the beach, instead of the birch, willow, fir and pine.

144. The isothermal line of 59°. passes through Raleigh, in the United States, in latitude 35°. ; but in Europe it ascends to 44°. and passes be- tween Rome and Florence ; extending north of Greece and the Black Sea to the Caspian Sea. It descends probably to latitude 35°. after passing the great table-land of Asia. On the western coast of North America, it ascends to 37°. or 38°. and perhaps still higher. Between the line of 59°. and that of 50°. beibre described, is the temperate region, whose climate in North America may be rather termed a mixture of the cold and hot. This region includes the southern part of New England and the Middle states, with the more elevated regions of Maryland and Virginia, and the Western states on the Ohio. Tennessee, and the western parts of the Caro- linas, from their elevation, partake of the same climate.

145. The mean annual temperature is the same as in this region in Europe ; but it is dif- ferently distributed. In the Atlantic states, the climate is narked by extremes of heat and cold, icsembling the south of Europe in summer, and the middle regions in winter. But the weather is variable, and neither lasts long at a time. Philadelphia has summers as hot as Montpelier and Rome, while its winters are like

those of Vienna. New York has the summer of Rome, and the winter of Copenhagen. Quebec is as warm as Paris in summer ; and as cold as Pe- tersburgh in winter. The eastern coast of Asia appears to be characterised by equal or greater extremes of temperature ; for Pekin is hotter than Cairo in summer, and as cold as Upsal in Sweden in winter.

146. The Atlantic

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1 17. 1 roin the influence of the great lakes, the temperate region extends farther north in the interior than on the coa > t ; and beyond Lake Krie, reaches to the latitude of the southern point of hake Huron. The states west of the Allega rnes and especially in the mountainous districts south of Pennsylvania and the River Ohio, are not liable to the same extremes of heat and cold. The winters are commonly milder, and cattle

remain abroad throughout the year. The spring is earlier, and the weather is generally more serene and settled. But the basin of the Mississippi is open to the winds from the torrid and frozen regions, and is therefore liable to very great changes. The temperature has sometimes varied on the Mississippi sixty degrees in the course of a month ; while in Philadelphia, Washington, and Detroit, the variation in the same month was only from thirty to forty degrees.

148. In the elevated regions of the southern United States, lying among the Allegany Moun- tains, the temperate region of the middle states extends as far south as thirty-one degrees. From this circumstance, Tennessee enjoys a temperate, delightful climate ; and the neighbouring parts of Georgia and the Carolinas, which lie on the sides of the mountains, are also free from the ex- cessive heats and violent diseases of the low country. The next important line which is dis- tinctly marked, is that of 68°. which corresponds nearly to the northern limit of the sugar-cane and coffee, and is generally the most southern limit of snow. In North America it is almost coincident with the parallel of 30°. or 31°. on the eastern coast ; while on the other side of the Atlantic we find the same plants, and a corres- ponding temperature in latitude 37°. in the south of Spain, Sicily, Asia Minor, and Syria ; but on reaching Persia it descends to 30°. : it is still lower in passing round the table-land of Tartary ; and probably does not extend beyond 30°. in China.

149. The warm regions extend from the boun- daries of the temperate

region to the northern limit of the sugar-cane, lying between the iso- thermal lines of 59°. and 68°. ; and of course have a temperature intermediate between these. The frosts are not severe in the plains ; snow is rare, and the waters are seldom frozen over. The winters are distinguished more for dampness than cold, resembling the spring of the temperate regions. The more delicate fruits, as the olive, the fig, 8cc. flourish ; and vegetables grow du- ring seven or eight months of the year. The level portions of the southern United States, which he in the warm regions, have a different climate from the corresponding countries in Europe, on account of the moisture which pre- vails. Vegetation is abundant, marshes are numerous, and the heat is therefore less scorch- ing ; but they are not usually favoured with a salubrious air. Noxious effluvia are continually formed ; and there is a general tendency to bi- lious diseases and fevers, especially of the inter- mittent kind. The autumn is almost uniformly sickly; and the countenances of the inhabitants have a pale and sallow cast, instead of the bloom and freshness of more northern climates,, or the brunette of the southern Europeans.

150. On passing the isothermal line of sixty- eight degrees, corresponding in America to the thirtieth or thirty-first parallel of latitude, we meet with the sugar-cane and coffee for the first time ; and find ourselves in a tropical climate, whose characteristics vary very little, except in the gradual increase of temperature from the frigid to the opposite extreme of the torrid zone. In the leve1 tracts of this region frost and snow

are unknown; the trees are covered with per- petual verdure, and the various periods of flower and fruit in different plants are the chief indica- tions of season. The mean temperature varies from seventy to eighty degrees; the heat of sum- mer is oppressive to the natives, and dangerous to strangers; exposure to the sun in the middle of the day is hazardous for both. Those districts •which are nearly at the level of the sea, are still more subject to the noxious effluvia which we have described in the warm regions; and are annually visited by that dreadful scourge of hot climates, the malignant bilious or yellow fever. Few strangers who visit these countries in the hottest season escape the disease, although many survive its attacks. On the coast of Mexico it is not uncommon for a traveller to experience a fatal attack, merely in passing from the high country to embark for Europe.

151. The insular situation of the West Indies of course modifies their climate, as will be fully described under that head. The continent itself

in this portion is so generally elevated above the level of the sea, that it has every variety of cli- mate from that we have been describing to that of the temperate regions. Immediately above the Tierras Calientes, or hot regions of the coasts, •we find on the declivity of the table-land the Tierras Templadas or temperate regions, com- mencing at the height of 4000 or 5000 feet. A soft spring temperature perpetually reigns here, which never varies more than eight or ten de- grees; the mean annual temperature is sixty- eight or seventy, corresponding to that of the regions last described ; the extremes of heat and cold are equally unknown, and the malignant fever never reaches the borders of these favoured tracts: they are only incommoded by frequent thick fogs, in consequence of this being the usaal elevation of the clouds. At the height of 7000 feet the Tierras Frias or cool regions com- mence, which extend over the table-land; the mean temperature is less than sixty-two degrees, or corresponds to that of Rome ; it is rare that the thermometer falls below the freezing point ; the winters are as mild as at Naples, having a mean heat of from fifty-five to seventy degrees ; in summer the thermometer in the shade never rises above seventy-five. Some districts of limited extent rise still higher than this, and experience a severity of cold which is disagreeable and un- favourable to vegetation.

152. With regard to the country near the sources of the Rio del Norte, it is observed by Pike, that ‘ no person accustomed to reside in the temperate climate of thirty-six and thirty-seven degrees of north latitude, in the United States, can form any idea of the piercing cold in that parallel in New Mexico ; but the air is serene, and unaccompanied by damps and fogs, as it rains but once in the year, and some years not at all. It is a mountainous country. The grand dividing ridges, which separate the waters of the Rio del Norte from those of California, border it on the line of its western limits, and are covered in some places with eternal snows, which give a keenness to the air that could not be calculated upon nor expected in a temperate zone.’

The prevalent winds of North America are

from the north-east and north-west, sweeping between the chain of mountains, and in the same directions. The south-west appears to be next in frequency, produced in part by the re-action of the atmosphere after the preceding. The north-easterly winds are usually loaded with cold vapours, and are peculiarly piercing. The west- erly and north-westerly winds are generally dry, and produce a clear and invigorating state of the air. The south-westerly winds are of course warm ; and, as they bring the vapours of the gulf of Mexico, they render the atmosphere moist, producing rain in winter, and a sultry heat in

summer. The frequent alternations of these winds produce the sudden and unwholesome changes so much complained of in the American climates. 153. The quantity of rain is greater than in those countries of Europe which have the same mean temperature ; but, in consequence of its falling more rapidly, the number of clear days is generally greater than in any country of Europe north of the Alps and west of Russia. These facts will be seen on the examination of compa- rative tables.

The following table shows the quantity of rain which falls annually, in a number of places on both continents, arranged according to the amount.

Inches. Grenada, (W.I.) – – – – 112

Calcutta ------- 81

Charleston, (S. C.) – – – – 54

Frankfort, (Ken.) – – – – 54

Andover, (Mass.) – – – – 51

Williamsburgh (Vt.) – – – 47 Cambridge ------ 47

Vienna ___--- 44.8

Pisa _— 43.2

Rutland (Vt.) 41

Brunswick, (Me.) – – – – 40

Naples ------- 37

Charleston, (Mass.) – – – 36 England (average) – – – – 36

Cincinnati ------ 36

Rome ------- 35.7

Salem -------- 35

Liverpool (18 years) – – – 34.1 Zurich ------- 32

Philadelphia ------ 30

Scotland (average) – – – – 30.1

Algiers ------- 29.2

Padua ------- 25.2

Abo — 25

Williamstown (Mass.) – – – 25 Palermo ------- 22

London ------- 22

Marseilles ------ 21.4

Paris 20.8

The average number of rainy days in a year, for twenty years, in Salem and Cambridge in Massachusetts, and in twenty cities in Europe, is stated as below, with the number of clear and cloudy days for one or two years. The other statements are for one year only.

Rainy. Clear. Cloudy.

Salem – – – – 95 173 90 Cambridge – – – 88 208 69 20 cities in Europe- 122 64 113 Philadelphia – – 64 216 85.

AMERICA.

Washington – – Council" Bluffs Missouri River Florida – – – – Pittsburg – 154. VEGETABLES. — A

Rainy. Clear. Cltntdy.

84 222 58

59 236 73 40 257 68 65 210 55

continent embracing

157. The cedar, which is so much valued for its odour and durability, grows on the southern borders of the United States. The sugar maple, which furnishes good sugar in considerable quan*- tity, is abundant in the northern and middle United States, and is also found in Canada and Nova Scotia. The chestnut and walnut are com- mon, and produce fine nuts. The cherry, mul- berry, and crab-apple, are also natives of North America. The cherry, and some species of the

such a variety of soil and climate of elevation and exposure, can scarcely be deficient in any important vegetable production. Some of its

native plants have become articles of necessity in maple and bay tree, furnish valuable woods for

Europe ; as maize potatoes, and tobacco. Almost ornamental purposes. The magnolia combines

all civilized nations use its cotton for clothing, the grandeur of a forest tree, with the beauty

Every species of grain which has been brought and fragrance of a flowering shrub ; and the

from Europe nourishes as well as in its original bay is scarcely less conspicuous for beauty,

soil. Rice is as fine as in the East Indies. The birch, beech, elm, and other common forest

Garden vegetables are reared with great ease, trees, abound in their customary latitudes ; and

and in abundance. In the tropical regions of there are many species of inferior value which are

Mexico, the banana and the manioc or cassava have been from time immemorial the chief sup-

peculiar to this continent. The forests of Ame- rica supply some of its most valuable articles of

port of the inhabitants ; and the maguey fur- commerce. The timber and lumber of various

kinds, formed from the oak and pine, are ex- ported in large quantities. The potash and pearl-ash, produced in clearing and burning the forests preparatory to cultivation, are also im- portant articles of trade. The pine forests, especially of the southern states, furnish a large supply of naval stores to the countries of Europe.

158. ANIMALS. — The quadrupeds of America are far from exhibiting those symptoms of de- generacy, when compared with the same species on the eastern continent, which Buffon imagined was a

necessary result of the inferiority of the new world. The immense skeletons of the mas- todon, usually termed the mamnoth, discovered in the western states, indicate that the continent was once the residence of animals not less majestic or powerful than the elephant. The beasts of prey are as numerous, and those of the same species as fierce as those of the old con- tinent. But no portion of the continent appears to present any rival to the lion of Africa, and the tiger of Bengal. The brown bear of Mis- souri rivals or surpasses that of the Alps in strength and ferocity ; and indeed is thought to be surpassed by no beast of prey in power and courage. Other species of the bear resemble

“•’ ‘ • from Virginia to tin; Mississippi, those of Europe. Various species of the wolf

are found, which exhibit a great degree of saga- city and courage. It is supposed that animals or twenty miles of this species were tamed and employed by the which abounds Indians in hunting in the place of dogs.

159. The cougouar, a native animal, called also the American panther, resembles the pan- ther of Asia and Africa in shape. It is occa- sionally seen in every part of the continent, with different varieties of form and colour ; and is possessed of considerable strength and cou- rage. The catamount is next in size to the ccugouar. It is a strong and ferocious animal, and, like the cougouar, often leaps upon the neck

is and of cattle and deer, and destroys them by tearing open the veins of the neck, while it is secure from the rage of the animal it attacks. There are four species of the lynx or wild cat, which were formerly very numerous, but, in common with other beasts of prey, have been almost destroyed o: driven back

nished the Mexicans with a substitute for wine ; while it supplied them with materials for ropes, cloth, and paper. Every species of fruit is reared on this continent in the highest perfection ; in short, nothing is wanting in the vegetable world to render it independent of all other coun- tries, except some of the finest spices and tea ; while immense supplies of vegetable food and clothing, and other useful products, are sent abroad. It abounds also with natural meadows, which rear cuttle almost without attention from the herdsman; and in some districts immense herdv have sprur,.’ from those which escaped from Kuropean settlements.

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into the wilderness of the interior by the progress of population. The wolverine and tne kineajow

are smaller carnivorous animals, with habits similar to those of the cougouar and catamount.

160. The skins and fur of these animals are valuable, especially that of the bear. There are several species of the fox, designated by names derived from their colour — red, grey, &c. : the fur is very useful ; and that of the black fox is among the most valuable furs. The ermine is also found in the northern United States. The badger or carcajou, weasel, marten, and several species of otter, are common in North America, and add to the supply of furs. The racoon is an active sagacious animal, resembling the fox in size and shape, and producing a coarse fur. The skunk or pole-cat is a small animal which defends itself from its pursuers by emitting a fluid of the most disgusting odour, which ren- ders any thing en which it falls so offensive that it cannot be used until a length of time has elapsed.

161. The American forests abound with the various species of squirrels. Seven species were observed by Lewis and Clark, west of the Mississippi river. The flying squirrel is a small but beautiful animal, remarkable for a membrane two or three inches broad, extending from the fore to the hind legs, on each side of the body, •which it uses to aid its progress and sustain its weight in leaping from tree to tree.

Rabbits are also numerous ; but the European hare has not been discovered. The American marmot, known under the names of the wood-chuck or ground- hog, is about the size of a rabbit, but more re- sembling a rat in its form : it burrows like the rabbit ; and is hunted for its flesh and fur.

162. The Missouri marmot or Prairie dog is found in great numbers in the Missouri country, and is remarkable for its singular habits. These animals live in families, and burrow to a con- siderable depth. The sites of their towns are generally on the brow of a hill near some stream or pond, but sufficiently elevated to escape in- undation. They sometimes extend over two or three square miles. Their holes descend in a spiral form, and to such a depth, that it is im- possible to drive them out. In approaching one of their settlements, you are saluted on all sides by the cry of wish-ton-wish, uttered in a shrill piercing manner, like the bark of a small dog, from which the Indian name of the animal is copied. At this signal they all retreat to the entrance of their burrows, and post themselves in watchful attention to your motions. It is remarkable that their towns are infested with rattle-snakes to such a degree, as to render it dangerous to pass through them. The jerboa of Canada is a little animal of the mouse kind, which frequents the meadows and corn-fields as well as the forest, remarkable for its rapid jumping motion. The Canada rat is distinguished by a pouch on each side of its mouthi for the reception and preservation of food. The opossum is an animal about as large as a cat, remarkable for the mode of producing and rearing its young. At their birth they are extremely small, and remain concealed in a. oouch under the belly, attached to the teats, as ‘f they were inanimate. When somewhat grown, Jiey appear occasionally at the opening of the

pouch ; and after they are able to run about they retreat to it in time of danger, and are pro- tected or carried off by the mother. The opossum is remarkable for its tenacity of life : its flesh is very palatable. There are four species of the deer, differing in several particulars from the European. They are found in great numbers in those parts of the country which are still covered with wood. The elk and the moose are large animals, resembling the deer in many points ; but distinguished by their superior strength and greater weight.

163. The most valuable domestic animals, the horse, the ox, the ass, the sheep, the dog, are not natives of the new continent ; but they have been introduced from Europe, and are now found in all parts of the continent. Immense herds of wild horses traverse the plains west of the Mis- sissippi ; and the wild cattle of South America are hunted merely for the hides. A peculiar species of sheep, differing from the

domestic animal, is found among the Chippewan moun- tains. The goat is seen in large nerds on the plains of the Missouri.

164. The plains west of the Mississippi also abound with herds of the bison, or American wild ox, whose flesh and skin form the principal support of the Indian tribes. The bison were formerly abundant even on the sea-coast of North America ; but have constantly retired as the po- pulation advanced, and are now only found be- yond the Ohio and Mississippi. Thousands are sometimes seen feeding together. The musk- ox is found in the higher latitudes of this con- tinent. Of the amphibious animals, the seal is found upon the north-west coast, and the sea- elephant in the seas ou the north and east. On the coast of Mexico is the manati, or sea-cow, whose flesh resembles that of the ox. The bea- ver is found through the whole breadth of the continent ; and exhibits the most surprising in- genuity and sagacity in the construction of its cabin and provision for its support and safety.

165. The following table will show the fallacy of the opinion, that the animals of the new con- tinent are inferior to those of the old. The first column exhibits the weight of several species of quadrupeds in Europe, as given by Buffon; and the second shows the weight of the same animal in Vermont, as given by Dr. Williams, whose auth ority is unquestionable.

Animals.

In Earope.

In Vermont.

Ibs. oz.

Ibs. oz.

The Bear ...

153 7

456 0

Wolf . v? v

69 8

92 0

Deer . V V

288 8

308 0

Fox (Red) . . Porcupine . . Marten . . .

13 3 2 2 1 9

20 0 16 0 5 4

Pole-cat . . .

3 3

7 8

Rabbit . v;'.'

3 4

7 0

Weasel . d a?

2 2

0 12

Ermine . . .

8 2

014 }

Flying Squirrel Beaver . w vi

2 2 18 5

C 10 63 B

Otter . •;"*/'

8 9

29 8

AMERICA.

loG. The birds of North America present every variety of beautiful plumage and exquisite colours, and every form and size, from the soar- ing powerful eagle and the screaming vulture to the gaudy paroquet, and the exquisite minia- ture of the kind — the humming bird. Some have a fine note ; and the mocking-bird is remarkable for its imitation of every species of song. The game and wild fowl are abundant, including pheasants, snipes, wild geese and wild ducks of several kinds, and the wild turkey, which is esteemed the greatest luxury of the kind. The reptiles are less numerous. The rattle-snake is distinguished for its habit of giving previous notice of its attacks ; and this circumstance, with the slowness of its movements, renders it far less dangerous than is generally imagined. The scorpion is found in the hot countries near the tropics. America is celebrated for the number of its venomous insects, which are indeed a serious evil in the marshy, and especially the hot dis- tricts. The sea-coast is amply supplied with fish ; and the banks of Newfoundland are the storehouse of cod fish for all Europe. The lakes and rivers abound with many peculiar species of great delicacy.

167. MINERALS. — North America embraces every species of geological formation, and there- fore we may expect it to contain almost every variety of useful and beautiful minerals. II is well known that Mexico furnishes two-thirds of the whole amount of silver annually extracted from the globe. Gold is also found in Mexico and the I'nited States in considerable abundance; copper and lead are abundant; and North America is proverbially a land of wood and iron, the tirst necessary to convert the last to useful purposes. Tin and mercury are found in Mexico, and zinc in many parts of the continent. The demand has not vet led to sufficient care in searching for the other less important metals.

1 ti8. The secondary region, which occupies the central portion of the continent, and the more limited districts of the same character on the const, abound with coal, salt, and lime — those articles of prime necessity which could not without difficulty be imported from abroad into the interior. Nitre is also produced in sufficient quantities to supply the continent with the means of defence in the natural caves of Ken- tucky, Tennessee, and Virginia. Gypsum, which lias hecome an important aid to agriculture, is also abundant. Building stone of every descrip- tion is found in great abundance in most parts of the continent; and there are stores of beauti- ful marbles for ornamental purposes. There are ••ilso materials of the first quality for the manu- facture of every species of earthen-ware and glass. The particular description of the mines of various kinds is reserved for the individual countries, as they form so important a part of their resources.

1GO. The alluvial regions of North America uUo present us with a great variety of interesting objects in the form of organic remains. Whole forests are found buried in beds of rock and stnita of sand on the Atlantic. The remnants of marine and land animals are also found in great '.'.liimdance ; and the hones of the mastodon, ti > i;iv! in \arious parb < >!' the United States, have

furnished the learned with an interesting object of admiration and research. This portion of the continent is also well supplied with mineral springs. Those of pure salt are very numerous in the secondary region. Those of sulphur also abound. Others of various qualities, saline, sulphureous, chalybeate, and carbonated, were known to the natives to have been discovered by travellers in different directions. We have the best account of those in the United States, which contain numerous and valuable mineral springs of various qualities. The whole secondary region belonging to the basin of the Mississippi, abounds in sulphureous and saline springs, which have not been fully examined or described ; and in almost every state, some are found which are valued for their medicinal properties.

170. In the Atlantic States, the most noted sulphureous springs are those of Bedford and York in Pennsylvania ; Ontario county and Ballston in New York ; Stafford in Connecticut ; Pacolet springs in South Carolina ; and those of the Allegany Ridge in Virginia. On the Arkan- saw River there are warm springs, said to have a temperature of 180 to 190 degrees. They have long been resorted to by the Indians for the cure of diseases. Buncombe county, in North Caro- lina, also contains warm springs, which are much visited. In Virginia are the Warm and Hot Springs of the county of Bath. The Warm Spring issues with a very bold stream, sufficient to turn a mill, and keeps the water in its basin thirty feet in diameter, at the vital warmth of ninety-six degrees. The Hot Spring, about six miles distant, has a temperature of 106 to 108 degrees of Fahrenheit. In the adjoining county of Monroe are the sweet springs, which rise at the foot of a large mountain ; they are usually considered as more medicinal than any others in Virginia, especially for drinking ; and are very copious, so that a saw-mill can be turned by them at the distance of 200 yards from their source. The taste is slightly acid ; and hence they were absurdly called sweet. The tempera- ture is 72 degrees of Fahrenheit. At New Lebanon, twenty-nine miles south-east of Albany, is a warm spring which has a moderate degree of heat. The mineral impregnation is very slight, but it has frequently proved a valuable remedy for diseases. Chalybeate springs are so numerous in all parts of the United States, that a particular description is impracticable. The most celebrated in the northern states are those of Ballston and Saratoga in New York ;

Schooley's Mountain in New Jersey ; Stafford in Connecticut ; and the red springs, near the sweft* springs of Virginia. A spring recently discovered at Orange, near Newark in New Jersey, has begun to be a place of resort from the city of New York. All these springs, except those of Ballston and Saratoga, are simple chalybeates, with very little carbonic acid gas. Ballston and Saratoga are remarkable for the number and variety of their mineral springs, which are probably not surpassed in efficacy by any in the world. Their waters are bottled, and exported to distant states, and even to Europe, in considerable quantities.

171. Ballston is chiefly distinguished for its chalybeate springs, highly impregnated, and

sparkling with carbonic acid gas. Besides these, it has a saline and sulphureous spring, which are of less value. Saratoga is particularly celebrated for its saline springs, of a purgative quality, also impregnated with carbonic acid gas. The Con- gress spring is the principal ; but there are seve- ral others of a similar kind. There are also .several chalybeate springs, little inferior t.- those of Ballston in pleasantness or efficacy. The Olympian springs, in Kentucky, have a similar

ariety of waters in the space of half a mile. A "emarkably fine spring of aerated water was

ound at the foot of James's Peak, among the jocky mountains, by the party of Major Long.

172. Springs of petroleum are found in the United States, near Green River, Kentucky ; in the western parts of Pennsylvania ; in Ohio, and in other places throughout the secondary region. It is often in connection with salt. At Oil Creek, Pennsylvania, and at Seneca Lake, New York, it is found floating on the surface of springs in considerable quantities. There are several places in which inflammable air or vapour issues from the ground, which are usually termed springs : one of these is found in Virginia ; another is in Canada, near the Niagara river; laut these appear to be merely objects of curiosity.

173. OBJECTS OF CURIOSITY.— CATA- RACTS.— The numerous rivers of North America, and its varied surface, of course give rise to many fine cataracts. The most celebrated is, the Falls of Niagara, in the river of the same name, which surpasses all others of the known

world in grandeur. The whole mass of water, which forms the great inland seas of America, is here compressed into a channel of three quarters of a mile in width, and plunges over a precipice of 150 to 160 feet in height, into an abyss whose depth has never been fathomed.

174. The river is divided by Grand and Navy Islands, more than a mile above the grand falls, and from this place has a gradual descent of fifty- seven feet. The banks preserve the level of the country, and rise in some parts 100 feet from the water. The rapidity of the current is such that the “whole stream is covered with waves, and foams like the sea in a storm. At the grand falls the river is three-fourths of a mile broad, and the precipice winds nearly in a semicircle, extending in the longest line on the American or eastern side. The falls are divided by Goat Island into two principal portions ; the American Fall on the east, and the Horse-shoe Fall on the west, or Canada side. A portion of the fall on the Ame- rican side is cut off by a small island on the precipice, and forms a narrow sheet between this and Goat Island. The rest descends in one body, from a precipice 164 feet in height, and 1000 feet in length. The water is more shallow than in the other fall, and descends almost perpendi- cularly. Both the falls on the American side are crossed by bridges. The Horse-shoe Fall is 14 feet less in height, but far superior in grandeur. The great body of the water passes over this fall, and with such force that it forms a curved sheet, and strikes the stream below at the distance of 50 feet from the base of the precipice. The wind and stream are frequently in a state which permits visitors to pass behind the sheet of

water ; but there is much danger of injury from the fall of rocks, which occasionally break off from the precipice. The best view of the falls is from Table Rock, a projecting mass of rock on the Canada bank in front of the Horse-shoe Fall.

The concussion of the waters produces a shock and roar which has been described as a ‘ thunder which fills the heaven and shakes the earth.’ The clouds of spray which rise from the bottom, and conceal the source of this tumultuous roar from the spectator, ascend to the height of 100 feet above the precipice, and float away in varied shapes to a considerable distance. They are frequently illuminated with a rainbow. Sometimes three are visible in different parts of the cloud, and crown the sublimity of the scene with their dazzling splendour. The whole river seems to be in a foam, and for some distance is agitated with a deep tremour, or vibration, like the heaving produced by the shocks of an earth- quake. The emotions inspired by such a scene are beyond description. The mind is over- whelmed with a sense of the weakness and little- ness of man, and the awful power of the

Creator. In describing this wonderful cataract, the most sublime features of all the others are depicted. The foam, the roar, the clouds of vapour, and usually the rainbow, attend most cataracts in a greater or less degree : and a minute account of others would involve the repetition of similar circumstances, less grand and interesting in their character.

175. The River Montmorenci forms a cataract 220 feet in height, nine miles below Quebec, which is in full view from the St. Lawrence. The body of water is small, and the breadth only 50 feet ; but the height is great. The waters appear like snow-white foam, enveloped in a cloud of vapour, and the whole effect is grand. The falls of the River Chaudiere, which are not far distant, are about 100 feet in height, and are surrounded with interesting scenery.

175. The Mississippi forms a cataract, 40 feet in height, above its junction with the Ohio, which is more conspicuous for beauty than gran- deur. The stream is 700 feet in width; the country around is level and fertile, and there are no precipices, to interrupt the view.

177. The Missouri, at the distance of 500 miles from its source, descends 360 feet in eighteen miles, generally in a series of rapids. There are three principal cataracts ; the highest eighty-Steven feet ; the second forty-seven ; and the third twenty-six feet in height. The river is 1000 feet broad ; and the whole scene is said to be surpassed by no other of the kind except Niagara.

178. The falls of the Passaick, a small river in New Jersey, are among the most celebrated in the United States. They are situated in Patter- son, about fifteen miles from Newark. The river is 120 feet broad, and falls in one entire sheet into a chasm seventy feet in depth, and twelve wide. Its waters form the moving power for the most considerable group of manufactories in the United States.

179. The Mohawk River, near its junction with the Hudson, forms the falls termed the Cohoes, about sixty feet in height. In the Housatonic River, in the north-western corner

of Connecticut, is a cataract of the same height, which is the finest in New England. When the river is high, it is said to surpass the Cohoes in grandeur. The small streams of the United States abound in cataracts and cascades too nu- merous to mention. In the mountainous

districts of South Carolina, there are several of conside- rable height and beauty. The Catawba River, in one part of its course, is precipitated in several falls through a rocky channel, to the depth of 100 feet.

180. In Georgia there is an interesting cata- ract in the Tockoa Creek, which flows from the Cunawhee Mountain, the southern termination of the Allegany Ridge. It passes through a channel twenty feet wide, over a precipice 187 feet high. In a wet season it descends in one sheet; but in ordinary periods the waters are separated into a fine rain, or spray, before they reach the bottom. A similar cataract occurs in the small river Ache, in Bavaria : it falls over an elevation of 200 feet by five steps, and is- entirely scattered in spray : its noise is heard several miles; and the current of air is so strong as to drive back the visitor from the gulf.

181. The Connecticut River has several falls or rapids, of which the most remarkable is Bel- lows Falls, near Walpole. The river, when low, is compressed into a rocky passage sixteen feet in width, and rushes down with immense force, and a tumultuous roar. The whole scene is grand and striking. Them is a similar rapid in tin1 Hudson River, at (>len's Falls.

1K'2. CANTS. — Tin1 secondary formation of the ('iMted States abounds in caverns, which are most freijiient in limestone rocks. In these instances, the water triiklnm through the roof dissolves a portion of the lime, and again deposits it when dropping. It thus gradually forms a slender tube, or stalactite of pure and brilliant white- ness. In ihr prou'n >s of time these stalactites are lengthened into large pillars hanging from the mot. Tlir water N\hich falls on the floor of ihcsi ia \rms makes a similar deposit, and forms a pedestal, or stalagmite, which often unites with a stalactite, aial completes a column. These cnlu m iis arc, in many ot the caverns, enlarged to a u'tvat M/.e, \ aned in their shape, and sometimes beautifully tinted. In some cases the parts are imperfect. A stalagmite rising from the floor seems like an altai, or a statue ; or a number of stalactites depending from the roof are united mtii a curtain. In ihis\av the most interesting and tanta-M<: toims are produced ; and one of tht sr (a\ ities oiteii ri- M'inl'les an immense (Cathe- dral lined with columns, or a magnificent palace in nuns.

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184. Wier’s Cave, in the same county, is of the same kind, extending 800 yards, but ex- tremely irregular in its course and size. It does not appear to fall short of any in the United States, in the beauties peculiar to such caverns. Near the north mountain in Frederick county, Virginia, is another cave 400 feet in extent. On the banks of the Swetara River, a branch of the Susquehannah, in Pennsylvania, and in Cla- rendon, Dorset, and Derby in Vermont, Water- town, New York, and many other places in the United States, are similar caves. At Rhinebec, Duchess county, New York, is a cave of this kind, composed of two chambers, one above the other.

185. Another class of caves includes such as produce nitre and salts of different kinds. Near Corydon, Indiana, is a large cave which has been explored for the distance of several miles, cele- brated for producing Epsom salts, which is continually forming in the earth on the bottom. In Kentucky and Tennessee, caves are numerous, which appear to have been used as burial-places. The e’arth found in them is often so impregnated with nitre, that great quantities of this article are manufactured from it. Some in Kentucky are said tc be several miles jn length, containing rooms of immense size, and frequently adorned with stalactites.

186. In the north-west part of Georgia is a cave of this kind called Nickojack Cave, fifty feet high, and 100 wide, which has been ex- plored to the distance of three miles. A stream of considerable size runs through it, which is broken by a waterfall at this distance from the mouth. In the Allegany Ridge, in Virginia, is a blowing cave, from which wind constantly issues. It is 100 feet in diameter, and the

current of air is so strong as to keep the weeds prostrate to the distance of sixty feet from its mouth. A similar one is found in the Cumberland Moun- tains. We have no account so particular as to enable us to describe objects of curiosity of this kind in other parts of the continent.

187. The natural bridge of Virginia is among the most interesting objects of curiosity of North America. It passes over Cedar Creek, in Rock- bridge, with a lofty arch of solid rock sixty-five feet Nvide, and covered with a sufficient depth of earth to support a number of large trees. The chasm is from sixty to eighty feet in width ; and the arch springs from perpendicular rocky abut- ments to the height of 210 feet above this stream. The bridge is bordered by a parapet of rocks, and the traveller might pass without being aware of his situation. Few have sufficient resolution, on perceiving the height, to walk to the edge. The passenger involuntarily falls on his hands and creeps to the parapet; and probably no one can look down without a degree of shuddering as well as astonishment. The view from below is as delightful as that from above is painful. The arch seems springing to the clouds; no scene of nature can produce higher emotions of the sublime. A similar bridge in Scott county, in Virginia, is 1000 feet long, but has attracted less attention.

188. POLITICAL DIVISIONS. — Previous to the discovery of America in 1492, it was exclusively

inhabited and possessed by the various tribes of Indians. As discoveries were made, and settle- ments established, each European nation claimed possession of the portions respectively seen, or occupied by their subjects, usually without any regard to the rights of the natives, or any com- pensation for their lands. In this way, the French laid claim to the Canadian provinces, and the English to the country south of the St. Lawrence, as far as Florida. The French were ultimately expelled from Canada, and the whole continent north of latitude 30° except Louisiana, was under their control. Disputes with the colonies south of Canada led to their declaration of independence in 1 776, and the foundation of the United States, the first independent govern- ment of whites. On the new continent, Spain laid claim to the peninsula of Mexico and Flo- rida by right of discovery and conquest; and to the extensive region of Louisiana, lying between the United and the Pacific Ocean. The pur- chase of Louisiana and

Florida by the United States, extended the dominions of that government to the Pacific ; and the continent is thus divided into three great portions : the British possessions, occupying the northern portion ; the United States, the middle ; and the late colony of Mexico, now an independent federal republic, the southern and peninsular part. The southern provinces of Mexico have recently separated themselves, and formed an independent govern- ment ; and the Russians claim a small division of the north-west Coast, thus adding two subdivi- sions, but of little importance in point of extent.

189. The two great lines of division have been carefully settled by treaties. The boundary between the United States and the British possessions, commences on the Atlantic coast at the mouth of the river St. Croix, and proceeds to its source. 2. Thence north to the highlands, dividing the water of the St. Lawrence, and the Atlantic, and along those highlands to the 45th degree of latitude. 3. Thence by a line due west to the St. Lawrence, and up that river, and through the centre of the great lakes to the long lake, and lake of the woods. 4. Thence to the 49th degree of latitude, and along that parallel to the Rocky Mountains. Beyond these moun- tains the boundary is left unsettled.

190. The southern boundary of the United States, dividing them from Mexico, commences at the mouth of the Sabine River, proceeds along its western bank to the 32nd degree of latitude. 2. Thence it proceeds due north to the Red River, and along that river to the 100th degree of longitude west from London. 3. Thence due north to the Arkansaw River, and along that river to its source. 4. And thence to the 42nd degree of latitude, and along that parallel to the Pacific Ocean. The bounding streams in both instances are common to the respective nations, for the purpose of navigation.

191. The actual divisions, as in many othei cases of the kind, do not correspond to the no- minal. If the continent be divided by a line drawn northward from the mouth of the Missis- sippi, the whole western portion north of 30°. of latitude, and the whole eastern portion north of 50°. forming three quarters of the continent, are occupied and governed almost exclusively by the Indians, and a large part of it has scarcely been visited by a white man. A few trading houses here and there are the only emblems o the power of the whites, west of the Mississippi, and north of Canada; and they are in effect only in possession of one-fourth part of the ter- ritories they claim unitedly.

192. The proportion of population is very different. The territories occupied by civilized inhabitants, contain at least eighteen millions of

inhabitants; while the Indians cannot be sup- posed to exceed two millions, and probably fall short of this number.

The relative population of each division is as follows : —

Mexico, United States, British Possessions Unsubdued Indians

. . . 6,600,000

. . . 9,638,000

. . . 828,000

. . . 2,000,000

19,066,000

Supposed increase of United) States in five years \ ‘ ‘ 1 > 600‘000

Total population, ... 20,666,000

This population is thus arranged as to their races.

WHITES.

Mexico 1,200,000

United States, . 7,860,000

Add J for increase . . 1,310,000 British Possessions . 828,000

11,198,000

INDIANS AND MIXED RACES. Mexico,

Subdued Indians, . 2,500,000

Mixed race, 1,231,000

United States, 500,000

Other parts, 1,500,000

5,731,000

Increase, ‘ 1,000,000

6,731,000

AFRICANS.

Mexico 8,000

United States

Slaves 1,538,000

Free 234,000

Add for increase 300,000

Total

2,080,000 20,009,000

193. THE UNITED STATES form a single repub- lic, composed of twenty-four separate states and several territorial governments, together with an extensive territory acquired by purchase, west of the Mississippi River, which is yet undivided, and scarcely explored. The whole covers a surface of two millions of square miles : about one million are occupied by 9,600,000 civilized :.. nabitants; and the remainder by 400,000 or 500,000 Indians, in a savage state. The mean length from east to west is 2500 miles; and the mean breadth from north to south 830, It ex- tends from latitude 24°. 20'. to 49°. and lies between 66°. 49'. and 125°. west longitude from London, extending through every climate, and presenting every variety of soil and exposure, and nearly all the species of productions and animals found in North America. Its eastern boundary is the Atlantic Ocean ; on the north it is sepa rated from the neighbouring British possessions by the great chain of lakes ; on the south it ex- tends to the Gulf of Mexico ; and on the south- west and west, its inhabited portions are protected from invasion by an extensive barren region and lofty mountains, while its territory stretches to the Pacific.

194. If we attend only to the inhabited por- t on, which extends from the ocean inland to a line drawn from Lake Erie along the Wabash and the Mississippi, the included region has an irregular conical form about 1700 miles in length from Maine to Louisiana. This region is divided into two parts nearly equal, by the Apalachian chain, the maritime states lying on the Atlantic declivity of these mountains, and the western states on the opposite side. Several of the ma- ritime

states, however, have this boundary, and form, as it were, connecting links between these portions, whose interests at first sight seem to be opposed. This vast country, though it contains ten millions of inhabitants, is yet so thinly peo- pled that it appears to an European eye like one vast forest. In the region west of the moun- tains, a vast extent remains entirely in its natural state ; and in the most populous parts the wood is preserved for fuel so as to cover nearly half the country. We have already described the great features of this country — its mountains, geo- logical structure, surface, and waters. It only re-

mains to describe its political conditions, its principal resources, and the state of population and improvement. The United States are usually divided into four great sections: 1. The eastern or New England states, lying east of the Hudson River and Lake Champlain. 2. The four middle states lying on the Atlantic waters between the Hudson River and Maryland. 3. The six southern states, lying south of Pennsylvania on the sea-coast ; and 4. The eight western states, lying west of the mountains, and on the waters of the Mississippi. By the northern states are generally intended the eastern and middle states, distinguished from the southern and slave-hold- ing states.

195. POPULATION. — A census of the United States is taken every ten years.

The following table will show the whole po- pulation of the United States at the last census in 1820, its distribution among the different states, the increase of each state, and the rela- tive increase of whites and slaves.

196. It will be seen that a large and unhappy- part of the population of the southern and south- western states consists of slaves, and that they are increasing with alarming rapidity. It is now deemed even by the slave-holders themselves, to be important to provide some asylum for them out of the country, and thus render their gradual emancipation safe. A colony has been com- menced with this view at Cape Misurado, on the coast of Africa. The northern states, it will be observed, are in a great measure free from this curse. Indeed it was originally entailed upon the colonists by the avarice of merchants at home, notwithstanding several strong remon- strances and urgent petitions from the provincial legislatures ; and should rather be pitied as a misfortune, than charged as a fault on the pre- sent proprietors, provided that they take the earliest means which safety permits to eman- cipate them. It should be remembered, that a question of this magnitude cannot be correctly decided, but by one intimately acquainted with the condition of the slaves and the situation of the

country. It is happily now understood, that slave-labour is less profitable than that of free- men ; and it is hoped the evil may thus furnish its own cure.

TABLE I.

U‘7. Of the Population of the United States, arranged in Classes; from the Census of 1830

[• ree \ hite Citizens.

Males.

Females.

7,780,668 2,745,580

I’nder 10 vears . From 10 to 15 . . . From 15 to ‘20 . . . From 20 to IK) . . .

Total under 40 vears Over 40 years

1,755,055 669,734 573,196 956,487

1,672,675 638,856 596,254 918,411

3,954,472

3,826,196

Carried forward 10,526,248 |

NORTH AMERICA.

13

Brought forward . .

10,526,248

Free Coloured Persons.

Males.

Females.

Under 10 years . . .

46,675

47,329

From 10 to 24 . . .

43,079

48,138

From 24 to 36 ...

27,650

32,541

From 36 to 55 ...

22,271

24,327

From 55 to 100 ...

11,509

13,425

Total under 55 years .

153,184

165,760

318,944

655

Slaves.

Under 10 years . . .

353,498

347,665

From 10 to 24 ...

312,567

308,770

From 24 to 36 ...

185,586

185,786 •

From 36 to 55 ...

118,880

111,887

Total under 55 years .

970,530

954,108

1,924,632

Total under 100

.

84,405

Total, including 107,832 Aliens, according to the) Census of 1830 ~. J

12,854,890

TABLE II.

Of the Free White Population, of the Free Persons of Colour, and of the Slaves, in 1820.

1

States.

Free White Persons.

Free Coloured Persons.

Slaves.

Total.

Population] to a square Mile.

c

Maine

297,340

929

298,335

9

Eastern States.

New Hampshire Massachusetts . . Rhode Island .... Connecticut

243,236 516,419 79,413 267,181

786 6,740 3,554 7,870

48 97

244,161 523,287 83,059 275,248

26 72 61 58

t

Vermont

234,846

903

235,764

23

15 f

New York ....

1,332,744

29,279

10,088

1,372,812

30

•2 oj \

T3 OJ »

New Jersey . . .

257,409

12,460

7,557

277,575

34

•3 3 <

S«2 (_

Pennsylvania ....

1,017,094

• 55,282

30,202 12,958

211

4,509

1,049,458 72,749

24, 34

Maryland ....

260,222

39,730

107,398

407,350

29

Virginia . ....

603,074

36,889

425,153

1,065,366

17

North Carolina .... South Carolina .... Georgia

419,200 237,440 189 566

14,612 6,826 1,763

205,017 258,475 149,656

638,829 502,741 340,989

13 18 6

Alabama

96 245

633

47,439

144,317

3

Mississippi ....

42,176

458

32,814

75,448

2

Louisiana ....

73 383

10,476

69,064

153,407

3

jj

Tennessee

339,727

2,729

80,097

422,613

10

si

$11

Kentucky . . • . . Ohio

434,644 576,572

2,759 4,723

126,732

564,317 581,434

13 15

£<*>

Indiana ... .

145,758

1,230

190

147,178

4 ‘

Illinois . . .

53,788

457

917

55,211

1

Missouri

53,788

347

10,222

66,586

1

Michigan Territories . . Arkansaw Territories . . District of Columbia . .

8,591 12,552 22,614

174 59 4,048

1,617 6,377

8,896 14,273 33,039

Total ....

7,852,504

233,592

1,543,688

9,654,415

TABLE III.— Of States in the order of Population in 1830, with the Population in 1800, 1810, 1820, and 1830, and the Increase per Cent.

States.

1800.

1810.

1820.

1830.

Increase per cent.

New York .

586,0.r > 0

959,049

1,372,812

1,913,508

39,4

I Virginia

866,149

974,622

1,065,366

1,211,272

13,7

Pennsylvania

602,548

810,091

1 049,458

1,347,072

28 4

North Carolina

478,103

555,500

638,829

738,470

15,6

|Ohio

45,365

230,760

581,434

937,679

61,2

220,959

406,511

564,317

688,844

22,1

422,815

472,040

523,287

610,014

16,6

345,591

415,115

502,741

581,458

15,7

Tennessee

105,602

261,727

422,613

684,822

62,7

Maryland

349,692

380,546

407,350

446,913

9,7

162,686

252,433

340,989

516,567

51,5

Maine

151,719

228,705

298,335

399,462

33,9

New Jersey

211,149

245,562

277,575

320,779

15,6

Connefticut . .

251,002

261,942

275,248

297 711

o cy

New Hampshire

183,858

214,460

244,161

269,533

10,4

Vermont

154,465

217,895

235,764

286,679

19,0

Louisiana

76,556

153,407

215,575

40,7

Indiana .... .

•

24,520

147,178

341,582

132,1

Alabama

j

I 144.317

308,997

141,6

Mississippi . . . . .

8,850

31,502

ˆ 75 448

136,806

80,1

Rhode Island

69,152

76,931

83,059

97,210

17,0

Delaware . . . .

64,273

19,783

72,749

76,739

5,5

Missouri

20,845

66,586

140,074

110,4

Illinois

12,282

55,211

157,575

185,4

District of Columbia New Ter

14,093

24,023

33,039

39,858 96,366

20,1

Michigan TPP

31,260

Arkansas Ter. ...

30,383

Florida Ter

34 723

United States and Teiritories .

5,319,762

7,239,903

9,654,415

12,856,167

33,4

TABI.F, IV. — Of the Increase of Slaves and Free Persons, and the Number of

Slaves to 1000 Free Persons in each State.

States.

Increase per cent.

1830.

Incrr; se of Slaves per cent.

Number of Slaves to 1000 Free Persons.

In 1810.

In 1820.

In 1830.

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36 2 62 105 445 643 386 732 579

147

223

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60 451 674 436 897 714

827 205 246

iminish

7

27 66 358 664 472 1055 782 453 769 818 233 266

1 16 181

N<:w Hampshire \ crmont . .

Massachusetts

Connecticut

Rhode Island ..... New York . .

Pennsylvania Now Jersey . •

Delaware

Maryland Virginia North Carolina

South Carolina Oeorjjia .

Mississippi ....

Louisiana

Tfennc ;see.

Kentucky

Ohio

Indiana Illinois Missouri .

Tlicˆc have no Slave

NORTH AMERICA.

15

TABLE V.

198. The following Table exhibits the Classification of the productive Inhabitants of each State, the Number of Persons engaged in Agriculture, Commerce, and Manu- factures, in each of the United States; together with the proportion which each Class forms of the whole Population.

States.

Persons engaged in

Agriculture.

Commerce.

Manufactures.

Number.

Propor- tion.

Number.

Propor- tion.

Number.

Propor- tion.

55,031 52,384 63,460 12,559 50,518 50,951 247,648 40,812 140,801 13,259 79,135 276,422 174,196 161,560 101,185 30,642 22,033 53,941 101,919 132,161 110,991 31,074 ‘12,395 14,247 1,468 3,613 853

18.5

21.4 12.1 15.1 18.4 21.6 18.0 14.4 13.4 18.2 19.4 25.9 27.3 32.9 29.6 24.0 29.2 35.1 24.1 23.4 19.0 21.1 22.5 21.4 16.6 25.4 2.6

4,297 1,068 13,301 1,162 3,581 776 9,113 1,830 7,083 533 4,771 4,509 2,551 2,588 2,139 452 294 6,251 882 1,617 1,459 429 233 495 392 79 512

1.5 .4 2.5 1.4 1.3 .3 .66 .66

•67

.73 1.2 .4

•4 •5 •6 •3 •4

4.1

•2

.3

•2 •3 •4

.8 4.4 .5 1.6

7,643 8,699 33,464 6,091 17,541 8,484 60,038 15,941 60,215 2,821 18,640 32,336 11,844 6,488 3,557 1,412 650 6,041 7,860 11,779 18,956 3,229 1,007 1,952 196 179 2,184

2.5 3.5 6.4 7.3 6.4 3.6 4.3

£7

5.7 4.0 4.5 3.0 1.8 1.3 1.0 1.1 .9 4.0 1.8 2.0 3.3 2.2 1.8 3.0 2.0 1.2 6.6

Rhode Island . . ...

New York .....

Pennsylvania .....

Delaware

Maryland •.;.’,*

Virginia

North Carolina

South Carolina . . . . “•* ‘L ‘

Georgia ‘*’ »•’

Alabama

Mississippi ..

Louisiana

Tennessee .

Kentucky

Ohio

Indiana

Illinois

Missouri

Michigan Territory

Arkansaw Territory ....

District of Columbia .... Total

2,065,399

21.4

72,397

.75

349,247

3.5

199. The following Table shows the Increase of Population in the whole United States since 1790. It is generally at the rate of 3 per cent, per annum.

Year

1790 1800 1810 1820 1830

Population. 3,929,326-v 5,306,035 f 7ˆ903 (

9,654,415 3

12,856,1 OJ

8,925,089

AMERICA.

200. GOVERNMENT. — The powers of the fede- ral government are legislative, executive, and judiciary: I. The legislative power is vested in a congress of the United States, consisting of a senate and a house of representatives.

201. The members of the house of represen- tatives are chosen every second year by the peo- ple of the several states ; and the electors in each state must have the qualifications requisite for the electors of the most numerous branch of the state legislature. A representative must be twenty-five years of age, and have been seven years a citizen of the United States ; and be an inhabitant of that state for which he shall be chosen. The representatives are at present chosen in the several states in the proportion of one for every 40,000, in which enumeration the

Indians and two-fifths of the people of colour are not included.

202. The senate is composed of two members from each state, chosen for six years by the re- spective state legislatures ; and the seats of one- third are vacated every two years. A senator must be thirty years of age, and have been nine years a citizen of the United States, and at the time of his election an inhabitant of the state for which he is chosen. The vice-president of the United States is likewise president of the senate ; but has no vote unless they are equally divided.

203. Congress must assemble at least once every year. The meetings shall be on the first Monday in December, unless a different day shall be appointed by law. No law can be passed without the concurrence of both houses. When that is obtained, it is presented to the president, who, if he approves, signs it; if not, he returns it, with his objections, for the re-con- sideration of congress, and it cannot in that case become a law without the concurrence of two- thirds of the members. The .president must return it within ten days, otherwise it becomes a law without his approbation.

204. The congress have power — 1. To lay and collect taxes, duties, imposts, and excises, to pay the debts, and provide for the common de- fence and u'eneral welfare of the United States; but all duties, imposts, and excises, shall be uniform throughout the United States. 2. To borrow money on the credit of the United States. .'!. To regulate commerce with foreign nations, and among the several states, and with the In- dian tribes. 4. To t'>tablish an uniform rule of naturalization, and uniform laws on the subject of bankruptcies, throughout the United States. .x To s ot' science and useful arts, by se- cunns tor limited times, to authors and inventors, the exelusi\e riˆht lo their respective writings itiid discoveries. <). To constitute tribunals in- ferior to the supreme court, 10. To define and punish piracies and felonies committed on the iiigh seas, and offences against the law of nations. 11. To declare, war; grant letters of marque and

reprisal ; and make rules concerning captures on land and water. 12. To raise and support ai- mies. But no appropriation of money for that use shall be for a longer term than two years. 13. To provide and maintain a navy. 14. To make rules for the government and regulation of the land and naval forces. 15. To provide for calling forth the militia to execute the laws o the union, suppress insurrections, and repel in vasions. 16. To provide for organizing, arming and disciplining the militia, and for governing such part of them as may be employed in the service of the United States ; reserving to the states respectively the appointment of the offi- cers, and the authority of

training the militia according to the discipline prescribed by con- gress. 17. To exercise exclusive legislation, in all cases whatsoever, over such district (not ex- ceeding ten miles square) as may, by cession of particular states, and the acceptance of congress, become the seat of government of the United States ; and to exercise like authority over all places purchased by the consent of the legisla- ture of the state in which the same shall be, for the erection of forts, magazines, arsenals, dock- yards, and other needful buildings ; and 18. To make all laws which shall be necessary and pro- per for carrying into execution the foregoing powers, and all other powers vested by this con- stitution in the government of the United States, or any department or officer thereof.

205. II. — The executive power is vested in a president, who is elected for four years, as fol- lows : Each state appoints, in such a manner as the legislature may direct, a number of electors equal to the whole number of senators and re- presentatives which that state sends to congress. But no senator or representative, or person hold- ing any office of trust or profit under the United States, can be an elector. The electors meet in their respective states, and vote by ballot for president and vice-president, one of whom, at least, shall not be an inhabitant of the same state with themselves. The list of the votesare sent to the seat of government, directed to the president of the senate; who, in presence of the senate and house of representatives, opens the certifi- cates, and the votes are counted. The person having the greatest number of votes for president is declared to be elected to that office, provided he have the votes of a majority of all the electors appointed. If not, then from the persons hav- ing the greatest number of votes, not exceeding three, the house of representatives choose the president by ballot. No person except a natu- ral-born citizen, or a citizen of the United States at the time of the adoption of this constitution, shall be eligible to the office of president ; and he must be thirty-five years of age, and have re- sided fourteen years within the United States. The president shall be commander-in-chief of the army and navy of the United States, and of the militia of the several states, when called into the actual service of the United States. He may require the opinion, in writing, of the principal officers in each of the executive departments, upon any subject relating to the duties of their respective offices ; and he shall have power to grant reprieves and pardons, for offences against

the United States, except in cases of impeach- ment.

206. He shall have power, by and with the advice and consent of the senate, to make treaties, provided two-thirds of the senators present concur ; and he shall nominate, and, by and with the advice and consent of the senate, shall appoint ambassadors, other public ministers, and consuls, judges of the supreme court, and all other officers of the United States, whose appointments are not otherwise provided for, and which shall be established by law. But the congress may, by law, vest the appointment of such inferior officers, as they think proper, in the president alone, in the courts of law, or in the heads of departments. The president shall have power to fill up all vacancies that may happen during the recess of the senate, by grant- ing commissions, which shall expire at the end of their next session.

207. He shall, from time to time, give to the congress information of the state of the Union ; and recommend to their consideration such mea- sures as he shall judge necessary and expedient. He may, on extraordinary occasions, convene both houses, or either of them; and, in case of disagreement between them, with respect to the time of adjournment, he may adjourn them to such time as he shall think proper. He shall receive ambassadors and other public ministers. He shall take care that the laws be faithfully ex- ecuted ; and shall commission all the officers of the United States.

208. III. — The judiciary power of the United States is vested in a supreme court, and in such inferior courts, as the congress may, from time to time, ordain and establish. The judges, both of the supreme and inferior courts, hold their offices during good behaviour ; and receive for their services a compensation, which cannot be diminished during their continuance in office.

209. The judiciary power extends to all cases, in law and equity, arising under this constitu- tion, the laws of the United States, and treaties made, or to be made, under their authority ; to all cases affecting ambassadors, other public ministers, and consuls ; to all cases of admiralty and maritime jurisdiction ; to controversies to which the United States shall be a party, to con- troversies between two or more states, between a state and citizens of another state, between citi- zens of different states, between citizens of the same state claiming lands under grants ‘of diffe- rent states, and between a state, or the citizens thereof, and foreign states, citizens, or subjects.

210. In all cases affecting ambassadors, other public ministers, and consuls, and those in which a state shall be a party, the supreme court

shall have original jurisdiction. In all the other cases before mentioned, the supreme court shall have appellate jurisdiction, both as to law and fact, with such exceptions, and under such regulations, as the congress may make.

211. The trial of all crimes, except in cases of impeachment, shall be by jury, and such trial shall be held in the state where the said crimes shall have been committed ; but when not com- mitted within any stale, the trial shall be at such

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place or places as the congress may by law have directed.

212. The following declaratory clauses show more particularly the principles of the constitu- tion. 1. The privilege of the writ of habeas corpus shall not be suspended, unless when, in cases of rebellion or invasion, the public safety may require it. 2. No bill of attainder or ex post facto law shall be passed. 3. No capitation or other direct tax shall be laid, unless in pro- portion to the census. 4. No tax or duty shall be laid on articles exported from any state. No preference shall be given, by any regulation of commerce or revenue, to the ports of one state over those of another ; nor shall vessels bound to or from one state, be obliged to enter, clear, or pay duties in another. 5. No money shall be drawn from the treasury, but in consequence of appropriations made by law ; and a regular statement and account of the receipts and expen- ditures of all public money shall be published from time to time. 6. No title of nobility shall be granted by the United States ; and no person, holding any office of profit or trust under them, shall, without the consent of congress, accept of any present, emolument, office, or title, of any kind whatever, from any king, prince, or foreign state. 7. No state shall enter into any treaty alliance, or confederation ; grant letters ol marque and reprisal ; coin money ; emit bills or” credit ; make any thing but gold and silver coin a tender in payment of debts ; pass any bill of attainder, ex post facto law, or law impairing the obligation of contracts, or grant any title of nobility. 8. No state shall, without consent of con- gress, lay any tax or duties on imports or exports, except what may be absolutely necessary for ex- ecuting its inspection laws ; and the net produce of all duties and imposts laid by any state on imports or exports, shall be for the use of the treasury of the United States; and all such laws shall be subject to the revision and control of congress. No state shall, without the consent of congress, lay any duty on tonnage, keep troops or ships of war in time of peace, enter into any agreement or compact with another state or with a foreign power, or engage in war, unless

actually invaded, or in such imminent danger as will riot admit of delay. 9. Full faith and credit shall be given in each state to the public acts, records, and judicial proceedings of every other state. And the congress may, by penal laws, prescribe the manner in which such acts, records, and proceedings shall be proved, and the effect thereof. 10. New states may be admitted by th« congress into this union ; but no new state shall be formed or erected within the jurisdiction of any other state, nor any state be formed by the junction of two or more states, without the consent of the legislatures of the states concerned as well as of the congress. 11. The congress shall have power to dispose of, and make all needful rules and regulations respecting the ter- ritory or other property belonging to the Uniteo States ; and nothing in this constitution shall bj so construed, as to prejudice any claims of the United States, or of any particular state. 12. The United States shall guaranty to every state

in this union a republican form of government ; and shall protect each of them against invasion, and on application of the legislature, or of the executive (when the legislature cannot be con- vened), against domestic violence. 13. The senators and representatives before mentioned, and the members of the several state legislatures, and all executive and judicial officers, both of the United States and of the several states, shall be bound, by oath or affirmation, to support this constitution ; but no religious test shall ever be required as a qualification to any office or public trust under the United States. 14. Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof ; or abridging the freedom of speech, or of the press ; or the rights of the people peacea- bly to assemble, and to petition the government for a redress of grievances. 15. A well-regulated militia being necessary to the security of a free state, the right of the people to keep and bear arms shall not be infringed. 16. No soldier shall in time of peace be quartered in any house, without the consent of the owner; nor in time of war, but in a manner to be prescribed by law. 17. The right of the people to be secure in their persons, houses, papers, and effects, against un- reasonable searches and seizures, shall not be vio- lated ; and no warrants shall issue, but upon pro- bable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized. 18. No person shall be held answerable for a capital, or otherwise infamous crime, unless on a pre- sentment or indictment of a grand jury, except n cases arising in the

land or naval forces, or in the militia, when in actual service in time of war or public danger : nor shall any person be subject, for the same ofiV-nce, to be twice put in jeopardy of life or limb ; nor shall be compelled, in any criminal rase, to be a witness against him- self ; nor be deprived of life, liberty, or pro- perty, without due process of law; nor shall private property be taken for public use, without just compensation. 19. In all criminal prose- cutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the state and district wherein the crime shall Inve been committed, which district shall have been previously ascertained by law ; and to be informed of the nature and cause of the accusa- tion ; to be confronted with the witnesses against him ; to have compulsory process for obtaining witnesses in his favour, and to have the assist- ance of counsel for 1, s defence. 20. In suits at common law, where the value in controversy shall cxeeed twenty dollars, the right of trial by jury shall he piv-,r.d; and no fact tried by a •ury shall be otherwise re-examined, in any court ti.e I. nited Stales, than according to the rules nt the common law. 21. Kxcessive bail shall not be required, i,or excessive lines imposed, nor cruel and i;n;-ual punishments inflicted. 2. Tin1 enume,,.iio!i in t! ,• constitution of certain ‘.iuhls si, i! – .t be > o ;.t]U(..l to deny or

T!H’ pnw.-rs no’ de!t u.tl-d to the I ‘nited States e c •> >iv;!ur’.’:i, nor prohibited by it to the states respectively, or

to the people. 24. The judicial power of the United States shall not be construed to extend tp any suit in law or equity, commenced or pro-secuted against one of the United States by citizens of another state, or by citizens or subjects of any foreign state.

213. The laws of the United States are of two- fold character, corresponding with the nature of the government ; and are general or federal laws, and state laws. The general laws consist of the constitution of the United States, acts of con- gress and public treaties. The state laws consist of the state constitution, the statute law or acts of the state legislature, and the common law of each, usually founded on the common law of England.

214. AGRICULTURE. — The United States, and its territories, were so recently settled, and fertile land has been so abundant, that there has been less inducement than in Europe, to improve the methods of tillage. It has been too common to cultivate lands in an imperfect manner, until they were worn out; and then clear up new tracts of forest, or emigrate into the unsettled and fertile country west of the Allegany mountains. The rich vegetable mould which accumulates in a

forest affords for many years so rich a soil, that abundant crops are produced with very little care. Hence the agriculture is much inferior to that of England, although far superior to that of most parts of Europe. In the older states, great efforts have been made of late years, and con- siderable improvements effected.

215. With regard to the products of agricul- ture, the United States may be divided into four regions, corresponding to those of climate : the northern or grazing region — the middle or wheat region — the warm or cotton region — and the tropical region on the gulf of Mexico, producing the sugar-cane.

216. New England, and the northern parts of New York, are best adapted to grazing, from the soil and face of the country. Butter, cheese, cattle, and provisions, are the chief products, and large quantities are exported. Great numbers of sheep are raised, and a considerable quantity of wool is furnished for manufacture. New England is divided into small farms, which are generally tilled in a neat and skilful manner. Wheat was formerly cultivated ; but it has become a preca- rious crop of late years, and rye is the principal grain now raised. Large supplies of wheat are obtained from the middle region. Maize and potatoes are among the most important vegetable products. Barley, oats, and buck-wheat, and the garden vegetables, yield abundantly. Or- chards are numerous in most parts of New England ; and cider is the common drink of the inhabitants. The peach is raised with difficulty ; but other fruits of the temperate regions are abundant.

217. Maine, New Hampshire, and Vermont are only in a partial state of cultivation. The extensive forests furnish large quantities of tim- ber and potash for exportation.

218. The northern part of Rhode Island is sterile ; but the islands and coast of Narraganset Bay are among the most fertile and well culti- vated spots in the United States, and are cele-

brated for excellent cattle, and numerous flocks of sheep.

219. Massachusetts is considered the best cul- tivated state in the Union, except Pennsylvania ; and much advance has been made by means of agricultural societies, and the premiums offered by them. Connecticut has commenced a similar course of improvement.

220. The middle, or wheat region, comprises the southern and western

parts of New York, New Jersey, Pennsylvania, the states north of the Ohio, Delaware, Maryland, Virginia, and Kentucky. In New York, New Jersey, Pennsyl- vania, Delaware, and the neighbouring portions of Maryland and Virginia, tillage is generally conducted with skill.

222. Pennsylvania was the first state in the Union in which agricultural societies were formed, and doubtless holds the first rank in agricultural improvements. These have been chiefly made in the south-western parts, extend- ing to the foot of the Blue Ridge. Much of the northern and western parts is still covered with forests. In this state was first introduced the practice of manuring with clover, which has so much enriched the soil of that and all the neigh- bouring states. It is raised by means of plaster of Paris in luxuriant crops, and is then ploughed into the soil.

223. In Maryland and Virginia much less attention is paid to agriculture ; and lands are frequently worn out and deserted for want of care. The valley of the Shenandoah, west of the Blue Ridge, is superior in tillage to the sur- rounding country.

224. In the western states on the Ohio the native richness of the soil is not yet exhausted ; and, without the aid of an improved system of agriculture, the crops are far superior to those of the best cultivated states on the Atlantic.

225. The wheat of the middle region is the finest produced in the United States, and forms the third in importance among our exports. Maize is raised in great quantities, and rye, oats, and buck-wheat are abundant. Tobacco is ex- tensively cultivated in Maryland, Virginia, and Kentucky, and, next to cotton, is the most valu- able article of export from the United States. Hemp was formerly cultivated extensively in Kentucky, but of late it has been exchanged for tobacco, as a more profitable crop.

226. In the states on the Atlantic orchards are numerous, and great quantities of cider are made. The cider of New Jersey (especially of Newark) is much celebrated, and often rivals the Champagne wine of France in sprightliness and flavour. West of the mountains, orchards are more rare, and large quantities of grain are raised for the distillation of spirituous liquors. The peach is abundant in Virginia, Maryland, Delaware, New Jersey, Ohio, the southern parts of Pennsylvania, and the western parts of New York. Extensive orchards are cultivated in Vir- ginia, for the manufacture of peach brandy. Pears, cherries, plums, and other fruits flourish in most parts of this region. At Vevay, on the Ohio river, vineyards have been planted by a

colony of Swiss, and good wine is made.

227. In New York, Pennsylvania, and New

Jersey, the grazing and fatting of cattle are im- portant branches of agriculture ; and the pro- ducts of the dairy are very fine. In Virginia, and the western states, great numbers of swine are raised in the woods for provisions. Large quantities of pork are exported from the Western States ; and droves of horses and cattle are sent into the Atlantic states. The winters are so mild that they usually require no shelter, and little fodder.

228. The warm or cotton region of the United States, commences in Tennessee and the southern parts of Virginia, and extends to the gulf of Mexico. In all the states lying south of Penn- sylvania and the river Ohio, the land is tilled almost entirely by slaves. In consequence of this, agriculture is much more imperfect than in the northern states, where the farmer himself is usually employed in the labours of the field.

229. Cotton is the chief article of culture in this region, and yields great profit to the planter. It is raised throughout Virginia for home con- sumption, and has been found to flourish still farther north. Rice and maize are the principal grains of the cotton region. Maize is the prin- cipal food of the slaves in these states, and in Virginia. Rice is exported in considerable quan- tities. Wheat and rye are little cultivated, except in the hilly country. Barley, oats, hemp, and tobacco flourish here. Indigo has been culti- vated to a great extent, especially in Georgia and South Carolina; but the profits arising from the crops of cotton now lead to the neglect of all others. The potatoe cannot be cultivated to advantage in this region; and the sweet potatoe, a plant of a different species, is generally sub- stituted.

230. Peaches are abundant and fine. The fig and pomegranate are also raised, and the orange and lemon grow imperfectly in South Carolina. Apples, pears, and other fruits of the temperate regions degenerate.

231. The cotton is of two kindsl The black- seed or sea-island is by far the most valuable ; but it can be raised only in a few districts, and chiefly on the low islands which line the coast of the southern states. The green-seed, or up- land cotton, requires so much labour to separate it from the seed, that it was not worth raising until the invention of the cotton-gin. Before this time it was an article of small importance, but now it forms one-third of the exports of the United States, exceeding in value all the other products of the field and the

forest.

232. The tropical region embraces Louisiana, Florida, and the southern parts of Georgia, Ala- bama, and the Mississippi. Sugar is here an important article of culture, and an object of in- creasing attention. Coffee may probably be raised ; but experiment has not yet been made to any extent.

234. Maize produces luxuriant crops, almost without cultivation. But the inhabitants of the whole region lying on the Mississippi and Gulf of Mexico, south of Kentucky, depend chiefly on the states on the Ohio river for supplies of grain, and are occupied more profitably in the culture of cotton or sugar. Great numbers of cattle and swine are raised and fattened in the woods with

very little care. The orange, lemon, and fie;, are found in this region in perfection ; and it is not improbable, that this tract of country may sup- ply us hereafter with sugar and coffee, and most of the important productions of the tropical re- gions.

235. ROADS. — Probably no people ever made so many improvements in roads, bridges, and canals, over such an extent of country in the same time, as the inhabitants of the United States. .Two centuries ago the whole tract was a wilderness, covered with forests, and tra- versed only by the foot-paths of the Indians. Now, there are roads constructed in every direc- tion to connect the villages, towns, and cities, which have sprung up in rapid succession. In ‘1790 the extent of post-roads was only 1875 miles; in 1818 it was 51,600. The number of post-offices exceeds 4000 ; and the mail is trans- ported 20,000 miles daily. To describe all the roads would require an enumeration of all the important settlements in the country. A large number are public roads, constructed and re- paired by the towns through which they pass; but the great roads are usually turnpikes, con- structed by the state or incorporated bodies, and supported by tolls. Only their general charac- ter, and the most important routes, can be de- scribed.

‘2.’!t>. The northern primitive district of the Tinted States, including New England and the northern part oi’ New York, falls within the cold ivgion : ;ind generally has permanent snows durin’_r the winter, as far south as latitude forty- tsvo decrees, which render travelling easy, and

protect the roads from injury. New England and the threat ur part of the middle states are intersected in every direction by roads, which are usually well constructed, and in good repair. New York and Pennsylvania have little advan- tage from tlie snow ; and the rich clayey soil, which is most prevalent, renders the roads very bud during the winter. The same is true to a mvater extent in Maryland. In Pennsylvania about ei'jht millions of dollars are invested in mads and bridges.

•2",7 . In the s.mdy alluvial country of the At lantic const, frr.in New York to Florida, the roads are heavy, and not easily improved; but they rardy present the difficulties and dangers found in the mads or' a rich country, after a wet season. The scattered slat/ of population has prevented much attention to roads in the states south of Maryland, and frequent impediments are pre- M'tited hv the want of bridges and causeways over the streams and marshes.

•J:5o. In the western states, the richness of the soil, the want of stone and gravel, and the mois- ture of the winter, render the construction of uood and permanent roads almost impracticable. Durum the wet season the difficulty of travelling i< MTV ureat ; anil many roads are scarcely pass- able for whet l-carriai:es. The streams are so variable at different seasons, that most of them can be forded during the dry season, and bridges ;>ie rarely built. The banks are high and steep, 'ind the ditiiculty of passage is often very great. l)i;nnu hi-ˆli water many < >!' the streams beeonie imntiss.iulc. an-1 the traveller encounters

serious difficulties and dangers. Little has yet been done to improve roads; but in all these states, except Tennessee and Kentucky, a por- tion of the proceeds of public lands sold by the United States, is appropriated to them, besides the usual taxes; and we may expect a rapid improvement in this respect, when these states become thickly settled. In Louisiana, the levees on the banks of the streams form excellent roads.

239. The most important post-road of the United States, is that which traverses the states on the Atlantic, a distance of 1800 miles, passing through all the principal towns, from Robbins- town in Maine, to Florida. The principal roads from the Atlantic to the western states' are — the great western turnpike of New York, from Al- bany to Buffalo and Erie ; the road from Phila- delphia, through Lancaster, to Pittsburgh ; and the Cumberland road, from Washington city to Wheeling on the Ohio river. The latter was constructed at the expense of the general govern- ment, and is probably the best route over the

mountains. Other roads, of less importance, cross the Allegany ridge in Virginia and North Carolina ; and the state of South Carolina has recently opened a road across the mountains to Tennessee.

240. A military road has been opened by General Jackson, at the expense of the United States, from Nashville in Tennessee to Madisonville on lake Ponchartrain, opposite New Orleans, which may be travelled by wagons. A branch leads from this road to Natches, through the wil- derness inhabited by the Choctaw Indians. From New Orleans the traveller may continue his journey by a road which has been opened by the inhabitants of Louisiana, across the adjoining province of Texas and the desolate plains of the Ilio del Norte, to the capital of Mexico. There are few obstacles to be overcome in making it a good commercial route : the ascent of the table-land in this direction is easy ; and Humboldl observes, that ‘ public coaches will doubtless one day roll from Philadelphia and Washington to Mexico and Acapulco.’ The chief difficulties now existing are the want of water and habitations.

241. MINES AND MINERALS. — With the ex- ception of the mines of the precious metals in Mexico, almost all our mineralogical knowledge of North America is confined to the United States. Silver has never been discovered in the United States, except in very small quantities Sand containing gold has been found in Ca- barras county, in North Carolina ; in the beds of Meadow creek, a branch of the Pedee, and other small streams. Between 1810 and 1820 gold was sent to the United States’ mint from this place, which was valued at 19,000 dollars, and the amount is said to be increasing.

242. There are numerous and inexhaustible beds of iron ore in the United States, particu- larly along the Allegany or Apalachian mountains, from Franconia in New Hampshire, to Georgia. Twelve mines are now open in Vir- ginia ; Kentucky, Tennessee, and Ohio, also abound in iron. New York, New Jersey, and Pennsylvania, produce ore in abundance, of a

quality not exceeded in Sweden. New Jersey, besides the iron-stone in the north, has extensive be’ds of bog-ore on the coast, which are renewed some years after they have been once exhausted. Similar beds occur in other parts of the alluvial coast, south of New Jersey ; but they are not extensively wrought. In Connecticut, impor- tant

mines are wrought at Salisbury, and at other places in Litchfield county. Massachusetts has a number of mines ; and the green mountains of Vermont contain numerous beds of ore.

243. Copper is often found in pure metallic masses, sometimes very large, on lake Superior. A single mass on the Onontagon river is estimated to exceed a ton in weight. Copper ore is found in many parts of the United States ; but no mines are now wrought. That of Belleville near Newark, New Jersey, was formerly very productive.

244. The United States also contain several extensive beds of lead ore. The mine at South- ampton, Massachusetts, is the principal now wrought east of the Mississippi. Lead is found, however, on the Schuylkill river ; on the Great Kenhawa; at Middleton, Connecticut; and in most of the states comprised in the primary and secondary regions. The lead mines of Missouri, lying near the Mississippi river, are among the richest in the world. The ore is found abun- dantly, within two feet of the surface, in detach- ed masses weighing from 1 to 1800 pounds. The annual produce is estimated at three mil- lions of pounds. Dubuqu's lead mines, on the Mississippi, have been wrought, until recently, by the Indians, who sold the ore to the whites ; and have produced 30,000 or 40,000 pounds annually.

245. Mercury has been discovered in small quantities in the form of black and red sand. It occurs on the southern shores of lakes Michigan, Huron, St. Clair, and Erie, as far east as the mouth of Vermilion river. No considerable deposit has been discovered. A single mine of cobalt has also been discovered, and is now wrought on the Connecticut river, near Mid- dleton. Slate and free-stone, and other fine building stones, are abundant and excellent in the United States. Marble is also found exten- sively, and often of great beauty. The quarries are chiefly wrought in a range of limestone, •which extends along the edge of the secondary region, through the western parts of Vermont, Massachusetts, and Connecticut. Some produce fine white marble. In other quarries it is beau- • tifully clouded. Pursuing the same directions along the Blue ridge, we find other beds of marble — at Kingsbridge, in New York ; and in Montgomery and Lancaster counties, in Pennsylvania, most of which are primitive. At Milford, near New Haven, Connecticut, there are quarries of yellow, and also of green variegated marble of uncommon beauty ; the last resembling the celebrated verd-antique. On the Potomac river, in Maryland, there are extensive beds of a secondary breccia marble, which is finely diversified with pebbles and fragments of various sizes and colours. The columns of the capitol at Washington are com- posed of this marble.

246. The United States are well supplied with coal. One of the most extensive coal mines now wrought, is near Richmond, Virginia, in a bed of bituminous coal, twenty miles in length. Large quantities are exported to other states.

247. In Pennsylvania the coal beds are said to extend over one-third of the surface. Beds of anthracite, or stone-coal, without bitumen, of excellent quality, are found along the Susque- hannah river at Reading, and across to the heads of the Schuylkill and Lehigh. Beds of bituminous coal extend from the mouth of the Juniata river, through all the country watered by the Susquehannah, to Pittsburgh. From this place they continue down the Ohio to Mis- souri; and along the valley of the Mississippi to the heads of the river Tombigbee. There are also indications of coal beds in the secondary region extending from New Haven ; to Middle- ton, Connecticut, and thence to Northampton. Rhode Island has a mine of anthracite ; and another has recently been discovered in Wor- cester county, Massachusetts.

248. The interior is also well supplied with that mineral of the first necessity — salt. The Great Desert of North America is encrusted with salt in many places ; and its waters are ge- nerally brackish in the dry season. In many parts of the western United States there are spots of ground so impregnated with it, that wild animals resort to them, and lick the surface: this has given them the name of salt-licks. There are numerous brine springs, also, found rising from beds of salt, so strongly impreg- nated, that it is obtained for use by evaporating their waters. They abound throughout the se- condary region of the United States, particularly on the Ohio river and its branches, in Ohio, Illinois, Kentucky, Tennessee, and Virginia; and near the small lakes of New York. The most extensive salt works are at Salina in New York, and on the Great Kenhawa river in Virginia.

249. Gypsum, which is so valuable for agricul- tural purposes, was formerly obtained exclusively from France and Nova Scotia. But within a few years extensive quarries have been discovered and wrought in the interior of the state of New York. It is known to exist in considerable quantities in other parts of the United States ; and it is probable that the home supply will soon be adequate to the consumption.

250. MANUFACTURES. — With so ample a sup- ply of raw material of easy production, it must for a long time after the settlement of a country like the United States, be most profitable to em- ploy other nations in manufacturing. In a country so thinly settled as it still is, and afford- ing such ready means of independent support to all

classes, it will not be easy to procure labour at such a rate as to compete with the overflowing, and sometimes half-starved, population of older countries. The United States have always ma- nufactured those coarse articles, whose bulk is a more important consideration than the labour they require. In the years 1802, 1803, and 1804, it was found that four-fifths of the manufactures consumed were produced in the United States; and the subsequent restrictions on commerce greatly increased the amount.

AMERICA.

251. In the year 1810 it was found that the following manufactures were carried on to an extent that was adequate to a supply of the de- mand.

Wooden articles of every kind.

Leather and articles of leather.

Soap and tallow candles.

Spermaceti oil and candles.

Flaxseed oil.

Refined sugar.

Coarse earthen-ware.

Snuff, chocolate, and mustard. The following branches were firmly established, supplying the greater part of the demand.

Iron and articles of iron.

Hats and straw bonnets.

Cotton, wool, flax, and hemp.

Paper, printing types, printed books, and playing cards.

Spirituous and malt liquors.

Wax candles :

Considerable progress had been made in the following branches :

Paints and colours.

Chemical preparations and medicinal drugs.

Salt.

Copper and brass.

Japanned and plated ware.

Queen’s and other earthen-ware.

Glassware, &c. &c.

2.52. The. total annual value of the manufac- fures of this period, excluding all doubtful articles, was otimatcd at 127,694,000 dollars, of which the following are the most prominent larticulars :

Dollars.

Goods manufactured by the loom 39,500,000 Machinery of various kinds . . 6,100,000

Hats 4,100,000

Iron manufactures 14,360,000

Leather 17,900,000

Distilled ami fermented liquors – 16,530,000 \Y«od(n manufactures . . . 5,540,000

253. The value as distributed among the states

was as follows :

Dollars.

Alame 2,138,000

Nev, Hampshire 8,135,000

Vermont . . . 4,325,000

Massachusetts . 17,516,000

Ifl.ode l>land . . 3,080,000

Connecticut 5,901,000

New York 14,569,000

Nt w Jersey 4,703,000

I’ennsvlvama . . . 32,089,009

D< hware 090,000

Marvland 6,554,000

Virginia . . 11,447,000

Ohio . . . 1,987,000

Kentucky . 4,121,000

iNorth Carolina . . . 5,323,000

IVnnexrt! . 3,708,000

S’.uth (aiolma . 2,174,000

2,744,000

.Miˆi-ipjii Ten ,IM. v 314,000

< Irl'-'i,, Yi rut" V 35,000

Louisiana Territory Indiana Territory Illinois Territory Michigan Territory Columbia District

Dollars.

35,000 197,000

72,000

37,000 719,000

It was known, however, that many of the re- turns were incomplete ; and it was presumed that the manufactures of all descriptions might be estimated at upwards of 170,000,000.

254. The war with Great Britain, in 1812, led to a great increase of manufacturing establish- ments, both from the difficulty of procuring foreign goods, and from the amount of capital unem- ployed. The return of peace, and the excessive importations which immediately took place, proved destructive to many of them ; but the number

remaining was far greater than at any former period, and necessity and experience had produced great improvements in the articles made, and the machinery employed. A census was ordered to be taken of the amount of manu- factures in 1820; but owing to the reluctance of manufacturers to disclose the state of their affairs, merely for the information of the public, the results were too imperfect to enable us to form any just estimate of their present state. The whole number of persons employed in mechanical and manufacturing labour was 349,506, or about one-twentieth of the whole po- pulation ; supposing that they bear the same proportion to the population as in 1810. Melish estimates the present value of manufactures at 225,000,000 dollars ; adding the following obser- vations and calculations: —

‘ We find that the value of all the manufactured goods imported into the United States in 1821 was only 32,000,000 dollars, of which 5,000,000 dollars was re-exported, leaving 27,000,000 for the consumption of the country, of which about 22,000,000 only was for clothing. We may esti- mate, that the total consumption of this country of manufactured articles is equal to 26 dollars for each individual ; the result will be . 250,500,000 From which deduct imports . . 27,000,000

The result will give as the value of) the manufactures of the country S

255. Again if we estimate the value of manu- factures at three dollars per day for each person employed, including the raw materials ; and sup- pose the manufacturers to work on an average 300 days in the year, the result for 349,506 per- sons will be nearly 315,000,000 dollars; from which deduct 90,000,000 dollars for buildings, exclusive of those for manufactures, implements of husbandry, &c and the residue will show the manufactures to be in value 225,000,000 dol- lars. The domestic manufactures exported in 1821 amounted to 2,755,000, and it is presumed that such exports will rapidly increase.

256. With regard to the quality of the finer articles, the manufacturers of the United States must of course generally fall below those of the nations of Europe. Still they are constantly procuring artizans from abroad ; and their native ingenuity has produced many inventions of great value for perfecting and facilitating labour,

*nd is probably adequate to every purpose, ex- cept where the nice

tact of long experience is ne- cessary. In manufactures of glass they appear to have succeeded perfectly. Their plain cot- tons are often excellent and beautiful fabrics ; and it is stated, that they have recently brought the stamping of calicoes nearly to as great per- fection as in England. Some of their manufac- tories produce cloths equal to the finest seen on this side of the Atlantic ; but they do not usually succeed well in their dyes. For cutlery and fine metallic articles; porcelain, and the finer earthen- ware ; muslins, silks, and many other articles, chiefly of luxury, and for which the demand in- creases with the progress of refinement — they are still, and long must be, indebted to Great Britain and other countries of Europe. They are pro- bably in a great measure independent as to the articles of necessity ; and very heavy duties have recently been imposed on foreign manufactures, with the view of encouraging this branch of na- tional industry still farther. Whether the results will be favourable admits of question.

257. COMMERCE. — The exports of the United States are distinguished in the official statements into, 1. produce of the forest; 2. produce of the field; 3. produce of the sea; 4. of manufactured articles ; and 5. of foreign articles re-exported.

258. From the abundance of forests it is ob- vious that there can be no limit to the amount of the first, except the demand. They consist of lumber of all kinds — naval stores, or the tar, pitch, turpentine, and resin, obtained from the pine-forests ; pot and pearl-ashes, procured by the burning of the timber in clearing the land ; oak bark, and other dyes; ginseng, and the

225,000

139,000 900,000

skins and furs of wild animals. The official value of the exports of these various articles was as follows : —

Dollars. Lumber, 1803 to 1807, annually . 2,500,000

Naval stores 500,000

Ditto, in 1816 800,000

Pot and pearl-ashes in 1816 . . 1,630,000 Oak and other bark and wood for tanning and dyeing, 1803 . . Ginseng, chiefly to China, 1806 Skins and furs 1804 to 1807, annually

259. The products of agriculture form the most important and valuable portion of the ex- ports of the United States. Cotton is the first of these in importance ; it constitutes one-fourth of the whole exports, and forms the staple of all the states south of 37° latitude. Next in value are wheat, maize, and rye, raised chiefly in the northern and middle states, and forming, in some years, nearly as large, a part of the value of exports as cotton. Tobacco is the great staple of Virginia and Maryland, and has an importance among the articles of export which we should by no means anticipate, amounting often to 10,000,000 dollars in a year. Rice, which is found in the same parts of the country as cotton, is next to tobacco, but is now less attended to than formerly, in consequence of the superior value of cotton. Indigo, which was formerly an export of some value, has been abandoned for the same reason.

260. The following table shows the relative proportion of the different articles which were exported at several periods :

Vo-»*.

COTTON.

FLOUR.

TOBACCO.

RICE.

Pounds.

Barrels.

Hhds.

Tierces.

1790

100,000

724,623

118,460

80,845

1795

1,300,000

887,369

61,050

138,526

1800

17,789,803

633,052

73,680

112,056

1804

35,034,175

810,008

83,342

78,385

1817

85,649,328

1,479,198

62,365

79,296

261 . The products of the sea are derived chiefly from the cod and whale fisheries. Both are car- ried on almost exclusively from the eastern states and New York ; and a large proportion of the tonnage employed belongs to the statac of Massachusetts and New Hampshire. The amount of this branch of exports is much less than either of the preceding, as the home market requires a large supply of such articles ; but the produce of this branch of national industry, compared with the capital invested, is very considerable. The whole amount of exports of the produce of the sea has not generally equalled the single

article of rice, varying from one to three millions of dollars. The manufactured articles of export are made both from foreign and domestic ma- terials, and are equivalent in value to the pro- ducts of the sea on the average. Soap and tallow, distilled spirits, and furniture, coaches, and

other manufactures of wood, are the most im- portant articles of this class.

262. A very important branch of the commerce of the United States consists in the importation of foreign manufactures and produce, and their re-exportation to the West Indies and South America, usually called the carrying trade. It has in some years exceeded in value the trade in domestic articles, producing great increase of public revenue, as well as of private wealth and commercial tonnage. Sugar and coffee are the principal articles in amount. The duties in this case are paid by the foreign consumers, forming a clear gain to the country, which, in some years, amounts to one-ninth of the whole revenue from the customs. In the years 1806 and 1807 the freight of the sugars imported and re-ex- ported amounted to three or four millions of dollars, and must ol course have been paid in

the same way, by foreign countries, to the owners of the American carrying ships.

263. The most distinct view of this subject will be derived from an examination of the fol- lowing tables of exports, in which the several articles

upon the books of the custom-house. Thus a number of ships are constantly employed in procuring furs from the north-west coast, and sandal-wood from the Sandwich Islands, and carrying them to China in exchange for teas, silks, &c. In the year 1803 the furs entered at Canton in this manner were valued at half a million of dollars. The ships of the United States are also frequently employed in coasting voyages between the various ports on the Pacific coas* of America.

264. EXPORTS FROM THE UNITED STATES, 1831

Articles.

DOMESTIC ARTICLES.

Products of the Sea.

Fish

Oil & Sperm Candles

Total .

15ct:f’T;il!u\v, &< >.

Value.

930,OOC

470,000

Country to which exported.

French W. Indies, J. W. Indies generally. Germany, £. Cuba, -fa. Holland, Spain, S. America.

Cuba, £. French W. Indies, $. W. Indies, British America. British America, J. Holland, £. France, f England, ˆ. England, £ nearly. Germany, J. China, J. ‘!reat Britain, £. China

England, §. Germany, J. Russia, |. American Colonies, Europe, and China.

England, f . France, J.

England, f. Holland, £. Germany, |. France, ˆ.

W. Indies, more than £. Brazil, J. S. America generally, and British America, each

W. Indies, . England, I nearly. Germany,. Holland,ˆ, and Russia.

W. Indies, §. British America, J. and S. America.

Danish and Dutch W. Indies, J. British America, -fa. and VV. Indies generally.

French W. ladies, £. Cuba, |. W. Indies, J. British Ame- rica, j. England, -,![.

Ireland, f. England more than $.

\V. Indies, jj. British America, £. 1 1 M ;,< K u I French W. Indies, £.

W. Indies generally. British America, J.

3,000! England, J. France, J. Brazil,!. Spain, ˆ. 23,ooojGermany, §• Denmark, France, Russia, Sweden.

Cotton and Tobacco, Europe ; remainder, W. Indies and S.

America.

W. Indies, f. S. America, | nearly.

.”>00,ooo Cuba, i. W. Indies generally. S. America, £ nearly. ”””- Cuba, 3. West Indie? generally, £. British America, J.

“\

America, -,«,. China, jg. i:iO,OOu|Cu!-a, ‘,. West Indies generally. S. America, -J.

L ondon . HitAMfJ hv Thai ‘

Shurf.

NORTH AMERICA.

264. EXPORTS FROM THE UNITED STATES— Continued

Articles.

Value.

Country to which exported.

DOMESTIC ARTICLES.

Manufactured Ar- ticles, continued. . Beer, and Spirits from grain Hats

DOLLARS.

120,000

86,000 82,000 60,000 44,000

34,000

28,000 26,000

i

S.America, £. Cuba, £ nearly. W.Indies, |. E. Indies, J. Cuba, £. W. In lies generally. S. America, . W. Indies, f. S. America, £. Africa, J. Africa, $. Denmark and Norway, j. S America, £. Teneriffe, ˆ. Cuba, £. West Indies generally, £. England, £. Germany and France, }. South America, f . *•

W. Indies and S. America. S. America, more than £. W. Indies, J. Gibraltar, f .

W. Indies and S. America.

China, £. East Indies, £. Asia generally, and England. France, =ˆ. lolland, J. Germany, }. Turkish Dominions, £. Russia, J. Italy, France, Austria, each -ˆ. lolland, more than £. Germany, f. France, &. Italy & Malta, -jˆ. lolland, f. Italy and Malta, J, Gibraltar, Austria, each ˆ. Germany, France, Russia, 5(5. jermany, £. France, . Gibraltar, }. Holland, f . lolland, . France, . Italy and Malta, J. Germany, Russia. England, . Russia, £. Germany, }. Holland, J. Sweden, ˆ. Italy, i. taly and Malta, . Spain, . Gibraltar and France, each £.

Europe.

< Products of Agriculture, |— of Forests, ˆ — of Manufac- \ tures, Tfc — of Sea, ˆ.

Gold and Silver, ˆ. Tropical products, £. Manufactures, J.

Gunpowder . . . Spirits from Molasses Medicinal Drugs

Cordage .... Linseed Oil & Spirits of Turpentine . Refined Sugar . .

Total . . .

FOREIGN ARTICLES. jGold and Silver

iCoffee

50,000,000

10,800,000 1,700,000

1,200,000 1,000,000

700,000 450,000 250,000

200,000

Indigo .... Sugar

Teas ....

iSpices

Dye Woods . . . Cacao

Total . . .

.

Exports of Domes-) tic Articles . . $ Exports of Foreign } Articles . . . $

Total . . .

17,000,000

50,000,000 17,000,000

67,000,000

265. It is obvious from the accounts we have given, that the imports of the United States must consist chiefly of manufactured articles, and the products of warm climates. Most other articles of importance to be found within their limits, and even these are supplied to some ex- tent from their own resources. The following

table shows the various articles imported, ar- ranged in the order of their value, with the countries from which they are procured, and the amount of each re-exported. The manufactured articles are distinguished by the letter m ; and the products of warm climates by an asterisk (*”» prefixed.

- This amount increased in 1831 to 61,277,057 dollars, f This amount increased in 1831 to 20,033,526 dollars j In 1831, the total amounted to 81,ˆ10,583 dollars

266. TABLE OF IMPORTS OF THE UNITED STATES, FOR 1831.

IN THE ORDER OF THEIR VALUE.

IMPORTS.

Value Dolls

Rc-cxportct

From -what Countries Imported.

m Woollen Goods . m Cotton ditto . . m Silk ditto . . . * Coffee .... m Iron and Steel * Sugar .... m Linen Goods . . Gold and Silver } Coin, & Bullion) Spirits . . .

12,200,000 10,300,000 6,800,000 5,600,000 5,200,000 5,000,000 4,100,000

3,400,000

2,500,000 2,400,000 2,000,000 1,900,000

1,900,000 1,800,000 1,500,000

1,400,000

1,100,000 1,100,000

720,000 030,000 500,000

450,000 400,000 360,000

360,000 330,000 310,000 300,000 280,000 270,000 250,000 200,000

150,000 1 50,000 140,000 120.000 1 00,000 94,000 00,000 60,000

57,000 49,000 30,000 26,000 1 9,000 13,000 11,000 1 1 ,000

200,000 1,700,000 1,000,000 1,700,000 300,000 1,000,000 400,000

moreexp’fd

200,000 4,000 40,000 200,000

700,000 1,200,000 400,000

50,000

50,000 4,000

14,000 1,000 450,000

55,000 25,000

66,000 14,000 234,000 1,000 12,000 24,000 205,000 26,000

34,000 22,000 1,000

3,000 6,000

1,000

9,000 14,000 57,000 6,000 1,000

England, £§. Great Britain, ft. China, . France, §. China, |. British E. Indies, £. Cuba,|. Hayti,|. Brazil,. E.& W.Indies, generally. Man. England, ig. Crude, Sweden, §. Russia. Cuba, jj. Danish W. Indies, f and other W. Indies. England and Scotland, $. Ireland, }. Germany, J. < S. America, J. Cuba, J. Other W. Indies, J. Hol l land and Italy. France, g. Danish W. Indies, |. Holland, }. Cuba, i. French W. Indies, |. Dutch W. Indies, f . S. America, -J. W. Indies, $. Spain, J. France, J. Tenerifle, J. Portugal, f. Madeira, -fr. Azores, &. Sicily, ˆ. Iˆhina. British E. Indies, |. W. Indies and S. America. Russia.

Man. England, Unwrought, England, J. S. America, J.

England, lussia.

laly, |. France, fo. England, i British W. Indies, J. Portugal, ˆ. Southern parts of Asia, §. and W. Indies.

England, |. Germany, J. Spain, f Portugal, $. Spain and Gibraltar, f. and Mediterranean ports gen.

tussia, . and Mediterranean ports. Scotland, §. England, §. W. Indies and south-west shores of the Gulf of Mexico. Brit. America, £. Germany,!. England,. S. America,ˆ. England, f. Holland. England. S. America, f. and W. Indies. Cuba.

England, |. France, J. tussia, §. England, ˆ. ingland, f . British America, J. Scotland, |. >ova Scotia. England, tV •” ranee, f. England, £. tussia, |. Great Britain, £. taly and Malta, J. Trieste and other Austrian ports, |. Russia, J. England, ˆ. China, J. France J. Italy & Malta, s. other European Mediterranean ports,}. Spanish S. America. ;,ngland. British America. England. Sweden, |. Germany, J. “ranee.

- MolassSs . . . Raw Hides . . . * Wines ....
- Teas .... * Indigo .... m Duck and sheetings m Copper, Brass, and tin

m Earthen and Stone Ware .... •Irmp

m Hats, Caps, and Bonnets Salt ....

- Spices .... m Glass Ware and Window Wool

*’ Fruits .... Candles, Cheese, and Soap .... m Hempen Goods . * Dye Woods . . ‘urs

in Paints . . Lead

Car-no .... Cigars .

///Gold, Silver, and Precious Stones, (manufactured) /// Cordage

Coal .’....

‘iyp-inn .... w’He’r, Al«.,& Pnrter /// Paper ....

iristl.-s aii-l Glue . Snlj.lmr ....

/// (,hina \ are ‘ Olive oil . . .

- Cntlnil ....

/// (iuii]io\ del’ •‘ish

Copperas .... Alum . . . .

>urr Mill Stones Total . . .

;:>, 000,000

22,000,000

NORTH AMERICA.

27

267. The following Table, compiled from the two preceding, will show the comparative Value of Exports and Imports, and the Countries with which the United States are connected in commerce :

COMPARATIVE TABLE OF EXPORTS AND IMPORTS.

r

States.

IMPORTS.

EXPORTS.

Excess of Imports.

Excess of Exports.

Amount.

Per

Cent.

Domestic.

Foreign Produce.

Total.

Per

Cent.

3reat Britain and do-

minions

39,500,000

48

26,400,000

3,400,000

29,800,000

36

9,700,000

—

Spain and dominions

12,400,000

15

5,300,000

3,100,000

8,400,000

10

4,000,000

—

France and dominions

. 7,000,000

8*

5,700,000

1,300,000

7,000,000

81

—

—

China

5,200,000

65

400,000

5,500,000

5,900,000

7

i

700,000

Russia

3,300,000

4

200,000

400,000

600,000

|

2,700,001!

Elolland & dominions

2,700,000

3i

3,100,000

2,700,000

5,800,000

7

3,100,000

Denmark & dominions

2,500,000

3

1,600,000

800,000

2,400,000

3

100,000

—

Portugal & dominions

2,400,000

3

1,600,000

300,000

1,900,000

2*

500,000

—

Hayti

2,300,000

2f

1,700,000

400,000

2,100,000

2s

200,000

,

Germany ....

1.600,000

2

1,600,000

900,000

2,500,000

3

900,000

Italy and Malta . .

1 ‘,600,000

2

600,000

900,000

1,500,000

If

100,000

—

Sweden & dominions

1,500,000

If

750,000

170,000

920,000

1*

580,000

—

Turkey, Levant, and

Egypt ....

360,000

—

6,000

400,000

—

—

—

—

Trieste and Austrian

ports ....

270,000

—

40,000

440,000

480,000

—

— –

210,000

Barbary States . .

—

—

—

—

—

—

—

—

Cape of Good Hope

64,000

—

6,000

—

6,000

—

58,000

—

Asia generally . .

170,000

—

70,000

1,100,000

1,170,000

—

—

1,000,000

Africa generally

120,000

—

70,000

70,000

140,000

—

—

20,000

South Seas . . .

86,000

—

37,000

12,000

49,000

—

37,000

• —

West Indies generally

2,000

—

520,000

25,000

545,000

—

—

543,000

Europe generally

—

—

59,000

7,000

66,000

ir*

—

66,000

North-West Coast .

—

—

55,000

111,000

166,000

— •

—

166,000

Total . . .

83,000,000

50,000,000

22,000,000

72,000,000

18,000,000

It appears from an examination of this table, that about half the imports of the United States are from Great Britain and her dominions, and nearly half the exports find a market in this country and her colonies. The greater part of the remaining trade is with Spain, France, and their colonies, and with China. It is obvious that commercial interests unite America with Great Britain more strongly than with any other power, and that her trade with us is too valuable to be sacrificed on slight grounds.

268. The exports of the United States appear to have doubled every eighteen years since 1769 ; and in 181 6 they exceeded those of any other nation except Great Britain.

269. From a view of the whole subject, it will be found that the United States are at present the second commercial nation in the world,. The following data are taken from the statistical work of Mr. Pitkin, whose accuracy is so well known : ‘ In 1807 the tonnage of British ves- sels which entered the ports of Great Britain from all parts of the world, (including the re- peated voyages,) was about 1,482,000 tons. The tonnage of American vessels employed in foreign trade, wnich entered the ports of the United States, (mol’.’.ding their repeated voyages,) was a little more than 1,100,000 in the same year.’ —

Pitkin’ s Statistics, p. 431. In 1800 the French vessels which entered France from foreign voyages, amounted only to 98,304 tons.

270. The whole amount of tonnage owned by citizens in the United States in 1810 was 1,424,781 tons, as entered on the custom-house-books ; but, deducting for losses and old ships, it must be estimated at one million and a quarter, 1,250,000. In 1800, the commercial tonnage of England was estimated at 1,269,329 tons. In 1787 France possesed but 300,000 tons of ship- ping. In 1804 the whole tonnage of all the nations and states around the Baltic, including Norway, was 493,417 tons, or less than half that of America.

271. In the following page will be found a table, showing the amount of tonnage in the respective states, arranged in the order of supe- riority in this respect ; and indicating how far each is actively concerned in commerce. The single state of Massachusetts owns a greater amount of tonnage than was owned in England in 1700. The increase of the American tonnage is not less remarkable than its actual amount. The registered tonnage was doubled in the fourteen years between 1795 and 1809, and nearly tripled in the twenty years between 1795 and 1815, although this included a period of war.

272. It will be interesting also to observe the increase and comparative state of commerce and population in several of the principal sea-ports

and commercial places, as exhibited in the fol- lowing table. For the sake of more easy com- parison, the increase per cent, is ai-‘o stated : —

Cities.

Population in 1800.

Population in 1810.

Increase per cent.

Tons of Shipping in

1794.

Tons of Shipping in

1815.

Increase per cent.

N€W York

60,439 67,811 26,214 24,937 20,437 10,000 9,457 7,614 5,739 6,746

96,373 92,247 46,555 33,250 24,711 17,242 12,613 10,071 9,735 9,183

60 36 77 33 21 72 33 32 70 27

94,061 74,168 24,253 ‘ 66,961 40,572

23,623 12,603

17,594

299,617 101,830 101,960 143,420 36,473 13,299 34,454 14,465 9,943 31,628

208 37 320 112

40 14

80

Charleston

New Orleans

Norfolk

273. The following table will show the pro- portions of the exports which are sent from each state. Some correction must be made, however, in order to ascertain the actual amount of exports produced in each. Thus New Jersey exports almost all her produce through the ports of New York and Philadelphia ; and a large part of the products of Connecticut are sent to New York; and there must of course be a correspond-

ing diminution in the nominal amounts for these states. New York receives much of the produce of these states, and of the western parts of New England. Massachusetts exports the produce of New Hampshire and Vermont, as as well as its own. The exports of Louisiana in- cludes those of the states on the Mississippi; and therefore are much greater than the proper tionofthis state alone : —

TABLE SHOWING THE VALUE OF EXPORTS OF EACH STATE.

States.

Domestic.

Foreign.

Total.

Maine New I lampshire .... \ i ‘I’m out

643,435 93,499 658/256

3/>99,952

206,965 38.5 610 13,<3 18.278 8,224 2,924,452 52,258 3,07.5,985 746,591 4,788,804 398,550 7,580,821 5,336,626 2,291,825

27,087

2,6yj

3,613,242 71,985 3,901 6,079,70.5 100 1,367,341

715,497 7,382 2,480 783 46,210

‘3,129 2,445,952

670,522 96,184 658,256 7,213,194 278,950 389,511 19,697,983 8,324 4,291,793 52,258 3,791,482 7.53,973 4,791,644 399,333 7,627,031 5,336,626 2.294,594

15,488,692

1,588 7,570

Massachusetts

Rhode Island Connecticut

New York

New Jersey

Delaware

Maryland

District of Columbia . \ ir“‘inia

North Carolina .... South Carolina ...

(ieor”ia

Alabama Mississipi

Louisiana

13,042,740

Ohio

.Miehuan Ter Florid. i Ter

1,588 7,570

Total of tin.’ I’nited States .

59,462,029

14,387,479

73,849,508

‘J7.”>. The comparative rank of each state in tiie union may be understood t’rom an inspection of the following tables: — exhibiting the extent and density of population of earh ; the amount of manufactures in 1810; the valuation of real rˆtatf in 1 ;! 1 ‘! ; and the tonnage in the same year.

flhe la-t table is a summaiy of all the prece- din.:, in which the states are arranged in six

classes, according to their rank, in each important respect. Thus Massachusetts, which belongs to the fifth class in extent, is found among the first in density of population, and value of manufac- tures, tonnage, and exports ; and yields to few in the value of its real estate: while ~ Virginia, which holds the first rank in extent and popu- lation, is below it in most other respects.

NORTH AMERICA.

276. TABLE I.

29

Showing the Number of Acres and Square Miles in each State, and the Number of Acres to each

Inhabitant. ‘

States.

Population

to a Square Mile

Missouri 1

Virginia 17

Georgia 6

Illinois 1

Louisiana 3

North Carolina 13

New York 30

Alabama 3

Mississippi ; . 2

Pennsylvania 24

Kentucky . , 13

Tennessee 10

Ohio 15

Indiana 4

Maine 9

Michigan Territory

South Carolina 18

Maryland 29

Vermont 23

New Hampshire 26

New Jersey 34

Massachusetts 72

Connecticut 58

Delaware 34

Rhode Island . . . , 61

Number of Square Miles

Number of

Acres in each

State

66,000

64,000

62,000

52,000

48,000

48,000

46,000

46,000

45,000

44,000

42,000

40,000

39,000

37,000

32,000

30,000

28,000

13,950

10,212

9,491

8,320

7,500

4,764

2,120

1,508

40,960,000 39,680,000 33,280,000 30,720,000 30,720,000 29,440,000 29,440,000

| 28,800,000

28,160,000 26,880,000 25,600,000 24,960,000 23,680,000 20,480,000 19,200,000 17,920,000 8,928,000 6,535,680 6,074,240 5,324,800 4,800,000 3,048,960 1,346,800 965,120

Number of Acres to each Inhabitant

42

120

660

196

48

21

420

576

27

47

60

43

160

69

1600

35

22

24

25

19

9

11

19

16

277. TABLE II.

Showing the Amount of Manufactures, and the value of Houses an3 Lands in each of the United States.

States.

Manufactures in 1810.

Dollars.

Pennsylvania ... New York .... Massachusetts and Maine

Virginia

Maryland .... Connecticut .... New Jersey . . North Carolina . . . Kentucky . ,

Vermont .... . New Hampshire . . . Rhode Island . . .

Georgia

South Carolina . . . , Tennessee . . . . ,

Ohio

Delaware . . . . Louisiana . Columbia District . ., Alabama and Mississippi

Indiana

Missouri

Illinois

Michigan Territory . ,

Total of the United States

33,691,111

25,370,280

25,636,644

15,263,473

11,468,794

7,771,928

7,054,594

6,653,152

6,181,024

5,407,280

5,225,045

4,106,074

3,658,481

3,623,595

3,611,029

2,894,290

1,733,744

1,222,357

1,100,000

419,073

300,000

200,OCO

120,000

50,000

172,761,968

Valuation of Houses

and Lands in

1814—15.

Dollars.

346,633,889

269,370,900

143,765,560

165,608,199

106,496,638

88,534,971

95,899,333

51,517,032

66,878,587

32,461,120

38,745,974

20,907,766

31,487,658

74,325,262

24,247,750

61,347,215

13,429,370

1,631,657,224

30

A M E R I C A.

278. TABLE III. On the Tonnage belonging to each State, in 1815.

States.

Foreign Trade.

Coasting Trade.

Fisheries.

Total. Tons.

Tons.

Tons.

Tons.

Massachusetts and Maine . . New York

299,298 180,664 88,161 77,199 31,152 33,472 25,826 29,019 24,501 2,465 24,532 11,280 13,766 11,253 27 159

120,653 106,358 65,047 22,359 40,344 24,880 15,185 9,171 12,667 28,735 3,491 10,473 3,437 4,035 392

145

34,298 478

1,749 1,721

454,249 287,500 153,208 99,558 71,496 60,090 41,011 ‘ 38,196 37,168 31,200 29,744 21,753 17,203 15,288 419 159 145

Maryland .... . .

Pennsylvania

Connecticut

New Jersey .

District of Columbia ....

Georgia

Kentucky and Ohio .... Michigan Territory .... Mississippi Territory . . .

Total of the United States

854,294

475,664

38,246

1,358,387

279. TABLE IV. Showing the Rank of the States in several respects.

States.

Extent

a

o

1

“3

o PH

Density of Po- pulation.

Value of Houses and Lands.

Manufactures.

!

o.

X

W

Tonnage.

Increase of Population.

Maine

4

4

4

4

4

2

4

\e\v Hampshire

5

4

2

5

3

5

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NORTH AMERICA.

31

280. REVENUE AND EXPENDITURES.— The revenue of the United States is derived chiefly from the duties on imports and tonnage, and from public lands. There is sometimes an ex- cess of revenue over the expenditure of the post- office department, and some incidental receipts, but they are trifling. The government also holds 7,000,000 dollars of United States' bank stock, and is entitled to draw the dividends thereon. The expenditures consist of : 1 . The expenses of the civil government, being the pay of the members of congress, at the rate of eight dollars per day for the time they are in session, and the salaries of the presidents, heads of de- partments, public officers, and clerks in the several departments ; judges, district attornies, and all public officers of the United States; expense of ambassadors, foreign consuls, &c. called diplomatic ; and miscellaneous expenses of different kinds. 2. Military service, including fortifications, ordnance, &c. ; revolutionary, mi- litary, and Indian pensions ; arming the militia, &c. 3. Naval service, including new ships of war, repairs, navy-yards, &c. 4. Interest on the public debt. In 1830 the revenue and

expendi- tures were nearly as follow :

REVENUE.

Dollars.

Customs 21,922,391-39

Public lands 2,329,356-14

Bank dividends ..... 490,000-00 Arrears of old duties, and mis-)

Michigan, North West, Missouri, and Arkansaw territories. — The extent and value may be esti- mated as follows :

cellaneous

In Ohio . Indiana Illinois . . Missouri . Alabama . Mississipi . Louisiana . Michigan

territory North West

territory Arkansaw

territory

202,368-98 24,844,116-51

EXPENDITURES.

Dollars.

Civil, diplomatic, and miscel- laneous 5,222,985-77

Military 4,767,128-88

Naval 3,239,428-63

Interest of the public debt . . 11,355,748-22

24,585,281,55

Cash price Acres. per Acre. 9,000,000 125 dol. 10,000,000 do. 30,000,000 do. 15,000,000 do. 12,000,000 do. 6,000,000 do. 10,000,000 do.

Dollars.

11,250,000 12,500,000 37,500,000 18,750,000 15,000,000

7,500,000 12,500,000

I 4,000,000 do. 5,000,000

I

2,000,000 do. 2,500,000 15,000,000 do. 18,750,000

141,250,000

The purchase of Florida has cost five millions of dollars ; and it may be estimated that the lands in it will be worth that sum. . . 5,000,000

Lots in the city of Washington

146,250,000 250,000

146,500,000

281. PUBLIC PROPERTY. — The public pro- perty consists principally of the public lands ; the United States' lots at Washington ; the public buildings, fortifications, arsenals, arms, ships of war, &c. The aggregate is very large ; but we shall confine this view to a valuation of that part only which is calculated to bring money into the public treasury. The United States hold all the unsold lands, with certain reservations, in the states of Ohio, Indiana, Illinois, Missouri, Alabama, Mississipi, and Louisiana, and in the

In addition to the public lands valued above, the United states hold the pre-emption rights of immense tracts of land, or the inclusive right of purchasing from the Indians, extending over se- veral of the states and territories mentioned, and of the great territory of Missouri. The aggre- gate is not less than one thousand millions of acres.

282. The amount received for the sale of lands in 1820 was as follows :

Dollars.

Ohio 399,000

Indiana 400,000

Illinois 134,000

Missouri 149,000

Alabama . . . . • 431,000

Mississipi 116,000

Michigan 7,000

2,636,000

The purchase of Louisana, Florida, and other compacts, has augmented this expenditure on land to 48,077,551-40 in 1831.

The amount of money received at the treasury, proceeds of the sales of public lands, up to the 30th September, 1831, 37,273,713-31.

The total amount of the funded debt on Jan- 1st, 1832, was 24,282,879-24 ; and the unfunded debt, at the same date, amounted to 39,355-64.

283. The following Table will show the state of an inferior branch of the Revenue, the Post Office Establishment, and its progressive Improvement, together with the Com- pensation paid to Post Masters, the Cost of the Transportation of the Mail, the inci- dental Expenses, the Nett Revenue of the Establishment, and the Extent of Post Roads in Miles, every fifth Year, from 1790 to 1820.

Years.

Number of Post Offices.

Amount of Postage.

Compensa- tion to Post Masters.

Incidental Expenses.

Transpor- tation of the Mail.

Nett ˆRevenue.

Extent of Post Roads.

1790 . ....

75 453 903 1,558 2,300 3,000 4,500

Dollars.

37,935 160,620 280,804 421,373 551,684 1,043,065 1,111,927

Dollars.

8,198 30,272 69,243 111,552 149,438 241,901 352,295

Dollars.

1,861 12,262 16,107 26,180 18,565 18,441 26,206

Dollars.

22,081 75,359 128,644 239,635 327,966 487,779 782,425

Dollars.

5,795 42,727 66,810 44,006 55,715 294,944

Miles.

1,875 13,207 20,817 31,076 36,406 43,966 73,492

1795

1800 ... . .

1805

1810

1815

1820

284. The following Tables are interesting, as they form the Balance Sheet of the Accounts of a Nation from its Origin to the Conclusion of the late War.

TABLE I.

Showing the Aggregate Receipts of the Treasury, from the 4th of March, 1789, to the

31st of March, 1825.

Receipts.

Total Amount.

Annual Avera6e.

Proportion of the whole.

I’roin the customs . ...

Dollars.

222,530,374

Dollars.

8,558,860

90.05

internal revenue ... .

9,016,342

346,782

3.65

direct taxes .

4,476,826

172,185

1.86

postage of letters

747,388

28,745

.30

sales of public lands

8,658,359

333,014

3.50

miscellaneous sources

1,590,001

61,154

.64

247,019,302 107,138,184

9,500,000 4,120,699

100.00

354,157,487

13,621,441

do. to !»:’()

783,870,286

285. TABLE II.

Showing the Aggregate Expenditures of the Treasury, from the 4th of March, 1799, to the

31st of March, 1815.

Expenditures.

Total Amount.

Annual Average.

— 1 Proportion of the whole.

For pay and subsistence of the army fortifications of post and harbours . other military expenses Indian department . . ....

Dollars.

88,270,562 4,374,805 4,938,611 1,338 040

Dollars.

3,395,021 168,384 189,946 51,463

25.04 1.24 1.49 .38

naval department

47,818 303

1,839,165

13.56

foreign intercourse . . ....

10,678,015

410,693

3.03

liarbary powers ... .

2,405,322

92,512

.68

civil list

14,940,695

574,642

4.24

miscellaneous civil

9,909,978

381,153

2.81

public debt ....

167,524,588

6,443,253

47.52

account of revolutionary government . .

316,268

12,164

C’

Total expenditure

352 560 193

13,560 008

100 00

do. to 1H30.

777,855,716

NORTH AMERICA.

33

286. PUBLIC DEBT.— The debt of the United States was contracted in the war for indepen- dence which continued from \77b to 1783, amounting in all to 75,000,000 dol. It was gra- dually reduced till 1812, when it amounted to 45,000,000 ; and again accumulated by war to 123,000,000 ; since the peace it has been reduced to 93,000,000, which is much less than the original debt, compared with the three-fold po- pulation of the country. The following table shows the state of the debt at different periods.

Year. Debt.

1791 75,469,467 dollars

1796 81,642,272

1806 74,542,957

1812 45,035,123

1816 123,016,375

1813 99,107,346

1832 24,424,000

The following were the receipts and expendi- tures during the late war, which produced the increase already mentioned.

RECEIPTS.

1812.

.

1813.

1814.

Total.

Propor- tion.

From Revenue . . . 1 . . Loans .... . . Treasury Notes .

I Total . .

9,801,132

10,002,400 2,835,500

14,340,709 20,089,635 6,094,500

11,500,606 15,080,546 8,297,280

35,642,447 45,172,581 17,227,280

36.33 46.10 17.57

22,639,032

40,524,844

34,878,432

98,042,308

100.00

EXPENDITURES.

1812.

1813. 1814.

Total.

Propor- tion.

Civil and Miscellaneous Military Establishment . Naval Establishment . , Public Debt ....

Total . .

1,791,360 12,078,773 3,959,365 4,449,622

1,833,308 19,802,489 6,446.600

11,108ˆ123

2,337,897 20,510,238 7,312,899 8,386,881

5,962,565 52,391,499 17,718,764 23,944,625

5.96 52.39 17.71 23.94

22,279,120

39,190,520

38,547,915

100,017,453

100.00

287. The following table will illustrate the increase of the United States in snipping, exports, revenue, and population, between 1790 and 1830.

Shipping.

Dom. Exports.

For. Exports.

Revenue.

Population.

DOLLARS.

DOLLARS.

DOLLARS. v

1790

486,090

14,200,900

1,800,000

2,410,320

3,929,326

1795

747,964

18,064,050

29,791,506

5,954,534

4,500,900

1800

972,000

31,840,Q03

39,120,877

10,777,709

5,305,666

1805

1,443,453

42,387,002

53,179,029

13,650,693

6,180,000

1810

1,424,781

42,366,675

24,391,295

9,384,214

7,239,903

1815

1,372,218

45,979,403

6,583,350

27,656,436

8,400,000

1830

1,741,391

59,462,029

14,387,479

24,844,116

12,856,165

288. ARMY AND NAVY. — The peace establish- ment of the army of the United States did not exceed 10,000 men, who are distributed in the various fortresses on the sea coast, and on the Indi3n frontier. The militia, which includes all the inhabitants liable to bear arms, amounted in the returns in 1816 to 748,566. They are only called out for exercise a few days in a year ; and therefore cannot be regarded as an efficient force of much importance, except in case of invasion. The navy of the United States consists of four- teen ships of the line, thirteen frigates, and twenty sloops of war, and smaller vessels, amounting in the whole to forty-seven sail. Six- teen of these were in commission in 1832,

289. RELIGION. — The United States present the first, and almost the only example of a na- tion which allows no superiority ; and refuses no privilege or office on account of any religious opinion. It is not uncommon to find a Jew holding a civil office. This undistinguishing protection of all sects has not produced a greater variety of religious opinions {than in other coun- tries. Most of them are derived from England ; and the few which had their origin in America, do not exceed in number or in fanaticism those which are found in Europe. The want of an establishment leads to a more open avowal of sentiment than in those countries where con- formity is connected with promotion, and aids

the projects of avarice or ambition; or where dissent exposes to the loss of privileges and lespectability, or the infliction of penalties and fines. The line of division between the believer in Christianity and the infidel is more strongly marked ; and infidel sentiments are expressed more boldly from this cause, and from that bold independence of character which has been charged upon the American as preventing even the proper attention to the civilities of life. Certain it is that in the most populous portion of this country, the northern states, religion is decidedly and generally respected ; and infidelity discountenanced, as a matter of opinion, by the mass of the community.

290. The most prevalent denomination of Christians are the Presbyterians, if we may be allowed to use this term as it is sometimes em- ployed by the persons in question, as a con- venient generic term, referring to those who maintain the equality of all Presbyters in op-

position to Episcopacy. They are divided into two portions, the Presbyterians strictly so called ; and the Congregationalists, more nearly resem- bling the English Independents.

The Presbyterians are governed by representa- tive bodies of the clergy and laity, as in the established churches of Scotland and Holland. This is the prevailing denomination in the Mid- dle United States; and probably the most nu- merous south of the Hudson River. One portion of the Presbyterians, in the states of New York and New Jersey, form a distinct body under the name of the Dutch Reformed Church ; it is composed almost entirely of descendants from Dutch emigrants.

The Congregationalists are distinguished from Pivsbyterians chiefly by the fact that each con- irreu'ation claims the right of governing itself; except in those cases where it voluntarily sub- mits to the authority of others convened in coun- cil. They embrace most of the inhabitants of the eastern United States. Most churches of these denominations maintain Calvinistic opinions. Among the Congregationalists of Massachusetts and New Hampshire there are many Unitarian churches ; and their opinions are extending into other .states, but the number is not known. The Baptists are probably the next denomination in point of numbers, and are rapidly increas- iiiii': they are spread throughout all the states; Inn two-thirds of the whole are in the southern and western states.

'291. The Wesleyan Methodists form a large :in d increasing body, embracing 312,000 mem- bers. Of these 200,000 are in the southern and western states, 90,000 in the middle states, and '20,000 in the eastern.

292. The Episcopalians, or those who adopt the government and liturgy of the Church of England, form a highly respectable but less numerous class than the preceding. It embraces ten bishoprics, and two or three theological seminaries, but possesses none of the wealth, and ha— none of the immense stipends to bestow on it- diututari, s, which are found in the mother

settlements are scattered in different parts of the country.

294. The Quakers or Friends are chiefly in the middle states : they form a large proportion of the inhabitants in some parts of Pennsylvania, which was originally settled by them.

295. The. Catholics, from a mere mission in 1 790, have become quite

numerous. The people of Louisiana, Missouri, and Florida, are chiefly catholics; and they are numerous in Maryland. All these states were settled by catholics. The whole number in the United states is estimated at 800,000 ; comprised in 784 churches, with 460 clergymen. They have also a number of literary and religious institutions ; and it is sin- gular that the Jesuits were established here when they were expelled from Europe. There is an incorporated society of Jesuits at Georgetown, containing ninety-three members, and a Sul- pitian monastery at Baltimore. There are con- vents at Georgetown, Port Tobacco, and Em- metsburg in Maryland, others at Boston and New York, three in Kentucky, one in Missouri, containing in all from 100 to 200 nuns. The catholics have colleges at Baltimore, New Orleans, and St. Louis; and seminaries at several other places.

296. The following table contains the most recent statements of the number of churches and preachers of each denomination : —

Denomination.

Ministers.

Churches.

Baptists . . . .) (in general) . . $

3,299

4,854

Methodist . . .) (Episcopal) . . J

1,777

Presbyterian Gene-) ral assembly . . S

1,801

2,253

Congregationalists .

1,000

1,381

Protestants . . . ˆ (Episcopal) . . J

558

992

Roman catholics .

784

Quakers

462

Methodists . . .1 (associate) . . J

350

Unitarian . . .

160

193

Dutch reformed

159

602

Lutheran, &c. . .

205

1,200

9,309

12,721

293. The -icnnan Lutherans are found almost exclusively in the middle states. A few Moravian

297. From the above account, which does not embrace several small sects, and a number of seceding churches of each class, it appears that there are 12,721 places of worship, or one to every 1,000 people in the United States; and 9,309 of the regular clergy, or one for 1200 per- sons— a supply as great as that of London.

298. The clergy of the United States are sup- ported entirely by

voluntary contribution, either directly in the form of subscription, or in- directly by a tax laid by the votes of every con-

eregation upon themselves. The states of Massachusetts and New Hampshire alone re- tain a law, which formerly existed in some of the other states, by which every one is compelled to pay a tax to some denomination of Christians, but is left to choose for himself. The number of churches is very small which possess any fund, except as the common stock of those who belong to it, and subject it to their control. The mere fact of the erection of so large a number of churches, and the support of so large a body of clergy, is an indication that religion is regarded with general respect ; and the maintenance and increase of this body is a strong testimonial of their general character. From the nature of the case there cannot be non-residents or pensionaries except among the superannuated ; no living is ever placed in the gift of any individual ; and the sale of church-benefices is impracticable.

299. EDUCATION. — Great care has been taken to provide for the general education.ef the people in the United States ; and the results have been proportionally happy. It is stated, in a work which has usually expressed no favourable opinion of the United States, that ‘ the great body of the American people is better educated than the bulk of any European community.’ Edinburgh Review. In many of the United States, provision is made by law for the support of common schools, either by the appropriation of a fund, or the imposition of taxes.

300. The Eastern, or New England States, are peculiarly favoured with means of instruc- tion of this kind. The people are thickly settled in towns and villages. Every town is divided into districts, each of which is obliged to support a school during the whole or a part of the year ; and it is rare to meet with a native of these states who cannot read and write. Academies are also numerous ; and in Massachusetts a classical school is required by law in all places of sufficient size. Connecticut has a fund of 1 ,700,000 dollars for the support of schools ; and thus distributes to the people a greater amount annually for the education of their children, than they pay for the expenses of the state government.

301. The middle states have been subject to a great influx of emigrants from Europe of the labouring class, many of whom are of

course ignorant, and have entailed this misfortune upon their families by neglect : the state of edu- cation is much inferior to that of New England on this account. The prevalence of the Dutch and German languages in some parts of New York, New Jersey, and Pennsylvania, has also been an obstacle to the improvement of the people.

302. The state of New York has united all public literary institutions into one body under the name of the university. It has a fund of a million of dollars for the support of common schools, under the direction of the regents of the university ; and in 1830 it was found that nine-tenths of the children received instruction. This state has a distinct fund of 100,000 dollars for the encouragement of literature, which is ap- propriated to colleges and academies at the dis- cretion of the regents. Pennsylvania has also commenced a system of public education.

303. In the southern states the people gene- rally live on extensive plantations, or in settle- ments spread over a large tract, so that it is difficult for a sufficient number to unite for tlie establishment of institutions for literary and religious instruction. On this account the means of education are not easily procured, except by the rich. The slaves of these states are rarely taught even to read ; and in many parts of the country it is considered dangerous by the plan- ters to give them any instruction. Virginia has established a fund of more than a million of dollars for the purposes of education, of which 45,000 are annually appropriated to common schools. Georgia and South Carolina also make some provision for the support of schools. The western states have been so recently settled, and are yet so thinly populated, that it is difficult to establish and support the means of instruction, and often difficult to obtain competent teachers, either literary or religious. In most of these states, however, a portion of land has generally been reserved by congress for the purposes of education. A foundation is thus laid for the promo- tion of knowledge, which will doubtless produce the most salutary effects, when the state of the country shall permit the advantageous employ- ment of these funds. In Missouri, Ohio, In- diana, and Illinois, l-36th of each township is devoted to schools, besides an appropriation for the establishment of colleges, sufficient, if pro- perly managed, to found and support institutions superior to any now existing in the country.

304. The system of mutual instruction has been introduced in most of the large cities of the United States, and is gradually extending to other places where the population is sufficiently dense to render it important. Sunday-schools are very extensively introduced, not usually for the sake of elementary instruction, which is accessi- ble to

almost every one except the poor of the cities, so much as for the communication of religious instruction.

305. Extensive efforts are making to improve the system of education by the formation of schools on the plan of those of Yverdun and Hoffwyl in Switzerland ; and an institution of some celebrity has been formed and conducted on the principle of applying military discipline as the instrument of government, and the means of developing the physical powers.

306. Peculiar attention has also been paid of late years to female education. Attempts have been made to found public establishments in which the sex shall be furnished with those pri- vileges, and provided with those safeguards, arising from the employment of responsible in- structors and established rules of discipline, which have hitherto been inaccessible to them from the independence and imperfection of private schools. The success which has attended these efforts thus far, is such as to encourage the hope of a favourable result, and open impor- tant improvement in the education of those who form the early character of the *uture guardians and governors of the state.

307. The unfortunate have not been quite for- gotten in the provision for public education; and five institutions for the instri. ction of the

deaf and dumb have been founded in Hartford, in Connecticut, at Philadelphia, New York, and Kentucky. The three first have received legis- lative patronage, and some of the states have resolved to grant an annual provision for the education of the deaf and dumb. Number of deaf and dumb 6,106, of blind, 5,444.

308. UNIVERSITIES AND COLLEGES. — The United States are also well s-upplied with insti- tutions for classical and scientific education. The universities and colleges of this country usually have a collection of buildings in which the students reside entirely, and live at a com- mon table. They are in other respects orga- nized on the plan of the colleges of Scotland ; but several of them pursue a more extended course of study. Instruction is generally con- tinued throughout the year, with short vacations. The students are superintended and taught by a number of professors, who deliver lectures on particular branches

; and tutors, who direct their studies more particularly, and examine them in their daily lessons. It is also considered a part of their duty to inspect and regulate their con- duct, and exercise a paternal care in forming their character. The course of study is usually four years ; and degrees are conferred on exami- nation, after a full course of instruction. The bachelor becomes master at pleasure at the end of three years ; but all higher degrees are ex- clusively honorary, except in medicine, and are not applied for.

309. The eastern states are best provided with colleges, which were established at the first set- tlement of the country, and have maintained the highest reputation for discipline and learning. The two principal institutions arc Harvard University at Cambridge in Massachusetts, and Yale College at New Haven in Connecticut.

310. Harvard university is the oldest in the United States. It holds the first rank in the extent of its funds, library, and means of instruc- tion, and the number of its professors. A theo- logical school at Cambridge, and a medical school in Boston, are connected with it.

311. Yale college at New Haven was next to Harvard in the period of its foundation. It has very limited funds, but an extensive apparatus for chemical and philosophical instruction; and the finest cabinet of minerals in the United States is deposited here by Colonel Gibbs. A medical college and theological school are con- nected with it.

312. The middle states have a number of seats of learning which hold a respectable rank. New York has three colleges, of which Union college at Schenectady is considered as holding the first rank. There is also an important medical institution in the city of New York. The university of Pennsylvania, at Philadelphia, is celebrated for its course of medical instruc- tion, and some of its professors have gained great celebrity in Kurope. New Jersey has a flourish- ing college at Princeton styled Nassau Hall, which was among the earliest institutions of the country, and has produced some of its most celebrated men.

313. The southern states are not so well pro- vided with literary institutions, and a large

number of their youth are educated in the nor- thern states. Maryland has distinguished schools of medicine and law at Baltimore, and a Catholic college. In the district of Columbia is a Catholic college at Georgetown ; and a Baptist institution, called the Columbian college, has recently been founded in the city of Washington. Virginia has

established a university for the state at Charlottesville with ample funds, to which 15,000 dollars are annually appropriated. Ex- tensive and elegant buildings have been erected, comprising 104 dormitories for students, with five hotels or boarding-houses, and several houses for the professors. The expense of their erection absorbed all the funds for some years, and the institution has just come into operation. At Williamsburg is the college of William and Mary, founded in the reign of those sovereigns, which at one period had nearly fallen to decay, but is now revived. North Carolina has a state university at Chapel Hill, liberally patronized, and rapidly advancing in usefulness and respecta- bility. South Carolina has a university at Columbia, founded in 1801, which is richly endowed from the public funds. The university of Georgia consists of a well-endowed college, called Franklin college, at Athens, and a number of academies or preparatory schools, oiie of which is to be established in each county under the direction of a body styled the Senatus Acade- micus.

314. In the western states a number of col- leges have been founded on the appropriation of land made by congress ; but several have not gone into operation ; and others have not risen above the rank of respectable academies. At Lexington, in Kentucky, is a flourishing institu- tion, styled the Transylvania University, which comprises a law school and a medical institution. It holds the first rank among the institutions of the western states, in the number of its profes- sors and students, and the extent .of its course of instruction.

315. Among the most distinguished scientific institutions in the United States is the military academy at West Point, on the Hudson river. It is said to rival or surpass the best establish- ments of this kind in Europe. A very thorough course of instruction is given in the natural, and especially the mathematical sciences (extending to the highest branches in their application to the military art), the French language, drawing, and the elements of moral and political philoso- phy. There are 250 students supported by the United States, each for five years. They reside in a large building, live at a common table, and are continually subject to military discipline. They are daily exercised by companies in mili- tary manoeuvres ; and are encamped at least three months in the year. Each in his turn has an opportunity of learning the duties of a com- mon soldier, and of every grade of office. Those who finish the course of five years are considered candidates for any vacancy which may occur among the officers of the army.

316. In addition to the literary institutions described under the name of universities and colleges, and the provision made in a number of them for theological instruction, there are several

institutions exclusively devoted to theological students ; some of which are distinguished for extensive research in biblical literature, and its kindred branches of knowledge.

317. The following tables will give a distinct idea of the state of these institutions in 1823.

The tutors attend more to the aetail : the stu- dents in literature are distinguished from those devoted to medicine. The colleges are arranged according to states. The theological institutions according to the denomination of Christians by whom they are supported respectively.

318.

TABLE I.

Place.

Colleges.

Profes.

Minis.

Lit.

stud.

Medical stud.

Total stud.

Bowdoin, Brunswick . . .

6 10 5 6 4 24

7 6 8 6 15 9 9 6 10 9 4 4 7 18 2 4

7 6 9 9 3

6 2 11

4

6

39 530 205

1424 215

52 442 1267

268 20

406

26 136

9 26

156 178 99

36 226

115

197 114 346 100 205 93 105 125 21 47 120 147 150 50 140 60 54 69 111 40 44 141 21 82 57

125

99

62 40 95

85

69 180

410

211 113

255 178 99 62 76 331

115 85 197 114 415 280 205 93 105 535 21 47 120 147 150 50 140 60 54 69 111 40 44 352 21 82 170

125

New Hampshire . • Vermont ....

Massachusetts . • . Massachusetts . . .

Middlebury .....

— Castleton Med. Institution Burlington University of Ver. Harvard University . . . (32 Theological students) Williams' College .... Berkshire Med. Institution

Rhode Island . . . Connecticut . . New York ....

New Jersey . . . Pennsylvania . . .

Brown University . . ,-f . . Yale College

Nassau Hall . . . , »

Pennsylvania Univ. Philadel.

•

Maryland .... District of Columbia Washington . . . District of Columbia Virginia ....

Baltimore College . . . -„«.

Catholic Univ. Georgetown William and Mary . • Hampden Sydney .... University of North Carolina University of South Carolina Franklin College (Georgia) Greenville . . . . Transylvania University . (48 Law students)

North Carolina . . South Carolina . . Georgia Tenesse

Tenessee .... Ohio .....

Athens University ... ...

St. Louis ....

TABLE II.

THEOLOGICAL INSTITUTIONS.

Denomination.

Places.

Professors.

Students.

Congregational ... . .

2

14

4

139

Auburn, New York ....

3

51

Princetown, New Jersey • »

3

111

Dutch Reformed Presbyterian . Episcopal

New Brunswick, New Jersey .

2 4

24 28

Baptist

Washington, District of Columbia

3

Waterville. Maine ....

3

57

Hamilton, New York . .

4

80

Lutheran

Hartwick, New York ....

10

38

A M E R I C A.

319. The number of preparatory schools under the name of grammar schools and academies, is too great for particular detail ; and the number and character of private schools is highly respect- able. A few of the former are supported by legislative provision, and others were established upon funds bestowed by private donors ; but they are generally dependent on the fees of tuition.

320. From the tables it appears that more than 5000 young men are continually in a course of scientific and classical education in the colleges of the United States ; and many more acquire a competent knowledge of science and literature in the secondary institutions, both pub- lic and private, which abound in every part of the country. No religious test is required for admission into any of the colleges ; and the ex- penses are so moderate, that they are accessible to all classes of the community. Not a few enjoy these privileges who have no resources but such as they obtain by their own efforts in the periods of vacation.

321. None of the institutions of this recent empire are provided with those magnificent buildings and libraries, and those immense funds which have been accumulating for ages in the universities of Europe. They have no provision for fellows, and few scholarships. On all these accounts they cannot have that mass of learning which is collected in the venerable institutions of the old world : nor do they attempt tnat atten- tion to minute accuracy in the ancient languages which is deemed so necessary in Europe, but which is here not demanded in any employment of life; nor to the more abstract and speculative parts of mathematics. They conform to the spirit of the people in attending most to objects of practical utility. In the apparatus, and collections, and course of instruction in the phy- sical sciences, some of them surpass the English universities ; and, if we may believe respectable travellers, almost all are supplied with what is essentially necessary. The officers are left in some measure dependent on the resort of pupils for their support, ami therefore have a strong stimulus to the faithful

discharge of their duty. A sinecure in these institutions is scarcely known. At the same time the discipline usually brings every student under the immediate inspection of a responsible officer, and obliges him to some degree of industry in order to continue in the institution. On all these accounts it is ques- tionable whether tlie actual efl'ect of these insti- tutions, in diflusin'.: \aluable knowledge through the community (the most important object in a new and rising country), is not greater than that ot the more splendid and aged institutions of other nations. That this plan leaves the nation dependent on foreign countries for researches pud discoveries in literature and science, is an obvious evil lesultiuu' from this system, but pro- bat i)\ the loast important in existing circum- stances.

3-J-J. HISTORY. — 1. From the settlement to the finift ._'/" 17u:;.— The ureater part of the present tcmto v of the Tinted States was originally called \ iru'iKi •>. in honour of Queen Elizabeth, by whom it v, i ; unuitˆl. The earliest settlement effected

under this grant was in 1607, within the limits of the present state of Virginia, under the autho- rity of James I. Several years afterwards a co- lony of Dutch commenced a settlement upon the present island of New York, and retained posses- sion until 1664, when it was surrendered to an armament fitted out by Charles II. Massachu- setts was settled in 1620 by a body of Puritans from England, and New Hampshire in 1623. The next settlement, in order of time, was that of Delaware, by the Swedes. Connecticut and Maryland were colonized contemporaneously — the former by emigrants from Massachusetts in 1633 ; the latter by a party of Roman Catholics from England under Lord Baltimore. Religious persecution drove a number of persons from Massachusetts, and led to the founding of Rhode Island in 1636. In 1663 some of the Virginian settlers laid the foundation of North Carolina, which was followed by the settlement of South Carolina in 1670. New Jersey, on which the Dutch and Swedes had made partial settlements early in the seventeenth century, was not effec- tually colonized until after the year 1670. In Pennsylvania also a small body of Swedes had planted themselves at an early period. The set- tlement increaseS slowly, until the arrival in 1681 of William Penn, with a numerous com- pany of Quakers, whom the prospect of relief From persecution induced to emigrate. The last settled of the original thirteen states was Georgia, founded in 1732 by general Oglethorpe.

323. The history of all new colonies is neces- sarily one of hardship and suffering. In the case of most of the American settlements, however, the ordinary evils were augmented by the vindic- tive hostility of the natives, who saw with indig- nation the tide of

Christian dominion gradually overflowing their land, and who used every means to stay its progress. Their most sagacious chiefs, from Philip of Pokanoket to Tecumseh, have endeavoured to unite the different tribes in a common purpose of opposition, but without much success. The superior arts of the Euro- peans generally triumphed in the engagements of bodies of men ; but it was in the surprisal and assault upon individuals or families that Indian hostility was most effective. The settlements of Massachusetts, New Hampshire, Maine, and Virginia, especially, were for a great number of years the theatres of sanguinary conflicts. In Rhode Island, Pennsylvania, and Maryland, a system of policy more humane and prudent con- ciliated the savages, and advanced the prosperity of the settlements. Another fruitful source of disquiet to the colonies was the adjoining settle- ments in Canada. The British and French pro- vinces, which would otherwise, it is probable, have remained at peace with each other, were compelled to take part in the unceasing wars of the mother countries, and wasted their young strength in supporting projects of European ag- grandizement, in which they themselves were but remotely interested. This grievance fell with the greatest weight upon the colonies of New York and New England. The influence which the governors of Canada have always possessed over the Indians, enabled the French to direct the full force of savage hostility against the

English colonists. The frontiers were, during every war, a scene of desolation and bloodshed. The colonists saw that nothing short of the ex pulsion of the French from Canada would be sufficient to ensure their repose : they devised frequent plans for the conquest of that province, and urgently called on the British government for assistance. In 1690 commissioners from the eastern and middle colonies met at New York, to concert measures for an expedition against the French colonies. The enterprise failed through the tardiness of the British admiral. Similar at- tempts were made in 1692 and 1696, but from similar causes they also were unsuccessful. At the beginning of the eighteenth century the co- lonies enjoyed a short period of repose. The renewal of the war in Europe, however, brought upon them again all thf horrors of Indian and French hostility. New York and New England had previously been the chief theatre of Indian incursions ; but the extension of their settlements on the Ohio gave the French an opportunity of leading the savages against the frontier inhabi- tants of Pennsylvania and Virginia. The colo- nies of South Carolina and Georgia were equally harassed, during the first half of the eighteenth

century, by the Spaniards and southern Indians. In the year 1745 a resolute and successful at- tack was made upon the strong fort of Louis- bourg, in the island of Cape Breton, by a small body of New Englanders, headed by William Pepperell, a merchant of Boston.

324. After the peace of Aix-la-Chapelle, the colonies were for a short period unmolested, until the conflicting pretensions of the two na- tions to lands on the Ohio produced another con- test. To enable themselves more effectually to resist their enemies, some of the colonies proposed about this time the formation of a federal govern- ment, to be administered by a grand council chosen by the provincial assemblies. The British ministry, however, refused to accede to the pro- ject, without such modifications as would have given them the absolute control over the general congress ; and the colonies being equally averse to this alteration, the plan was abandoned. The year 1755 was rendered memorable by the defeat of the British General Braddock, whose army was saved from entire ruin by the skill of Wash- ington, then a colonel of provincial militia, and by the courage of the colonial troops. In 1758 Fort Duquesne, now Pittsburg, was taken by the British and provincial troops. Louisbourg, which had been restored to France, was also taken ; and the tide of success set so strongly in favour of the British, that in the succeeding years Quebec and the whole of Canada were conquered. The American colonies, now relieved in a great mea- sure from a state of harassing warfare, began to acquire with rapidity wealth and population. Their improved condition attracted the notice of the mother country ; who, forgetful that the co- lonies had struggled almost unaided through their difficulties, many of which difficulties had arisen from her absurd and oppressive regulations, as- sumed the credit of their thriving appearance, and resolved to provide some remuneration for her fancied exertions in their behalf.

325. The inhabitants of Great Britain laboured

at this time under a load of taxation, part of which burden it was determined to transfer to the Americans. The first step taken in pursu- ance of this resolution, was to impose a stamp duty on instruments of writing executed in the provinces. An act was accordingly passed to this effect by the British parliament in 1765. It was resisted from the first moment by the .co- lonies. Delegates from the several provinces as- sembled at Philadelphia, who with great una- nimity agreed upon a declaration of rights, and a statement of their grievances. The people at large entered into associations against the im- .portation of British manufactures, which, not- withstanding their previous dependence for clothing upon England, were adhered to almost universally. This

determined resolution com- pelled the British ministry to repeal the obnox- ious act. The concession was received with gratitude, and for a short period tranquillity and prosperity prevailed. The intention of subject- ing the colonies to the payment of taxes was not however abandoned. In 1767 an act was passed, laying duties on certain articles imported into the colonies. The latter, equally deter- mined in their resolution not to submit to what they deemed an oppressive and unlawful mea- sure, refused to recognise the right. The British government at length repealed all the duties, ex- cept those upon tea. To counteract the design of collecting this duty, the inhabitants of the provinces entered into an agreement not to import or consume the article. For some time matters remained in suspense, without any di- rect opposition to the laws. At length, a large quantity of tea being sent to Boston, it was seized by the people and thrown into the sea. When intelligence of this proceeding reached England, measures of the most severe kind were resolved upon. An act was passed for closing the port of Boston, and other acts directed against the charter of Massachusetts. A feeling of indignation broke forth in all parts of the continent. Even those provinces the most re- mote from Massachusetts, and which had expe- rienced practically none of the evils of which that province complained, were zealous and ar- dent in the common cause. Massachusetts as- sembled a provincial congress, voted to raise men and money, and recommended a general assembly of the provinces to be held at Phila- delphia. According to this recommendation, a congress of delegates convened in August, 1774; and, after approving of the proceedings in Mas- sachusetts, and pledging themselves not to import from, or export to Great Britain, con- cluded their session by addressing an earnest remonstrance to the British government. The latter, still resolving to force the colonies to sub- mission, sent over a large additional military force, and passed laws restraining the trade of all the colonies, except North Carolina, Dela- ware, and New York. By this exception they hoped to produce disunion among the provinces, but they refused an advantage offered to them at the expense of their countrymen. In the mean time warlike preparations were making in Mas- sachusetts, as well as on the British side, and it was soon perceived that a contest was unavoidable.

AMERICA.

326. Lexington in Massachusetts was the scene of the first conflict between the Americans and English. Some military stores having been de- posited at Concord, about eighteen miles from Boston, General Gage, the British commander, sent a body of 800 regulars, on the 18th of April 1775, to obtain possession of them. Intelli- gence of their intentions had previously reached the country, and the alarm was

given by the ringing of bells and the firing of guns. At Lex- ington the British tell in with a small party of seventy militia men, upon whom they fired, and killed eight, and wounded several. The fire was returned by the militia, who then retreated. At Concord the British found another party of mili- tia, upon whom they again fired. Having suc- ceeded in destroying the stores they commenced their retreat, in the progress of which they were reinforced by Lord Percy with 900 men. During this retreat the Americans kept up a constant fire ; and though the British party ef- fected their return to Boston, it was with a loss of 273 in killed, wounded, and prisoners. A strong reinforcement arrived soon afterwards from Eng- land, and was principally stationed in the town of Boston, while the New England troops occu- pied different posts in the vicinity. An impor- tant eminence, called Bunker's Hill, near Boston, was taken possession of, and partial entrench- ments were thrown up by the provincials on the night of the 16th of June. The number of mi- litia and others, by whom the post was occupied, was about 1500. At noon of the next day a body of three thousand British regulars advanced to dislodge them. The provincials reserved their fire until the British had approached to within one hundred yards of the works, when they discharged it with such destructive effect, that the column retreated in the utmost con- fusion. Twice did these undisciplined men put to flight a body of veteran troops double their own number. At the third onset the powder of the Americans began to fail, their position was raked by the ships and the British field-pieces, their redoubt was assailed on three sides at once, and, having in vain endeavoured to oppose the bayonets of the British with the butts of their discharged guns, they were compelled to aban- don their posts. Their retreat was effected in good order over Charleston neck. The loss of the royal troops in this action, in killed and wounded, exceeded 1000 men; that of the pro- vincials was 4,”>;i killed, wounded, and missing. Among the killed was General Warren, whose death was greatly and universally lamented.

IS‘27. The Continental congress, which con- vened again at Philadelphia on the 10th of May, now determined to raise forces in the name of the United Colonies. On the loth of June they unanimously elected George Washington, then a member from Virginia, commander-in-chief of th” troops. On the 2nd of July he arrived at Cambridge, and took command of the forces stationed there, With these undisciplined troops, ill supplied with the munitions of war, Wash ington undertook the siege or rather the blockade of Boston. Towards the close of this year a bold but rash attempt was made upon Canada t>y a body of pm ninals under Generals Mont-

gomery and Arnold. The former invaded Ca- nada by the lakes, while

the latter ascended the Kennebec ; and after a march through the wilder- ness, during which the men underwent excessive toils and privations, they succeeded in reaching Quebec. Here they found themselves without the means of carrying on a regular siege ; and after a month's delay they attempted to carry the place by escalade. Two attacks were made at once by Montgomery and Arnold. The for- mer was killed while leading his men ; the latter was wounded. Many of the Americans were killed or captured, and the remainder were driven from the walls. The attempt was then abandoned, and the survivors with difficulty reached the United States. The British remained in possession of Boston until March 1776, when they embarked on board of the fleet, and sailed for Halifax. General Washington then moved his army southward, and established his head- quarters at New York.

328. While these affairs were in progress, congress had vainly attempted to obtain a repeal of the obnoxious edicts from the British govern- ment. They addressed themselves to the king, to the parliament, and to the people. Finding their remonstrances fruitless, they solejnnly de- clared the colonies free and independent, and es- tablished a general government. This act took place on the 4th of July 1776.

329. On the 23rd of August British troops to the number of 24,000, commanded by Sir Wil- liam Howe, landed on Long Island, about nine miles from New York. The American forces at this time amounted in number to about 17,000, and those principally raw troops. A partial en- gagement took place near Brooklyn on the 27th, in which the British were victorious. Washing- ton, deeming it inexpedient to risk a general battle, retired from New York Island, which was entered by the British on the 14th of September. The retreat of the Americans was continued through Jersey and across the Delaware into Pennsylvania. Fort Washington, the only post left on New York Island, was attacked on the 12th of November, and surrendered after an ob- stinate resistance. The garrison, consisting of 2700 men, fell into the hands of the enemy. Fort Lee, on the Jersey shore, opposite, was also taken, but the garrison effected their escape. In addition to these misfortunes, great numbers of the militia, whose term of service had expired, returned to their homes, and the remainder were dispirited by the success of the enemy, and des- titute of almost every article of comfort. The British pursued with rapidity, but were unable to reach the Delaware before the retreating army had crossed. The pursuit was then given up, and the main body of the enemy cantoned in the vicinity of the river. During the autumn and part of the winter of 1776 the prospects of the United States wore a most gloomy aspect. The

once formidable army of Washington was re- duced by desertion, disease, and the expiration of the term of service, to a handful of half-naked and disheartened men ; while the invaders were numerous, well-organized, and flushed with suc- cess. The idea of submission was, however spurned both by congress and the army; ‘and

the enterprise of Washington soon gave a brighter aspect to affairs. Detachments of Hessian troops nad been stationed at Trenton, Bordentown, and Princeton. Upon one or more of these points tie resolved to make an attack. Accordingly on Christmas-eve he crossed the Delaware, sur- prised the post at Trenton, and, after a short re-sistance, took 1000 prisoners. A few days afterwards, having sent his prisoners to Phila delphia, he eluded the main body of the British, taptured or destroyed a large party at Prince- ion, and finally compelled the enemy to evacuate the principal part of New Jersey.

330. During the spring of 1777, his ma- .noeuvres prevented the enemy, though possessing a vastly superior force, from advancing to Phila- delphia by land. General Howe therefore changed his plan of operations, and determined to attack the city from the south. He sailed for the Chesapeake, and landed at the head of Elk. Washington, as soon as the arrival of the fleet in the Chesapeake was known, pushed for- ward with his army, and fronted the enemy at Chad’s Ford on the Brandywine. The British not daring to attack the Americans in front, •crossed at a ford higher up, and assailed the right of Washington’s army. After a short but warm contest, the Americans retreated with the loss of 1200 men, the British losing about half that number. Washington, convinced by the result of this engagement that general battles were to be avoided in the undisciplined state of his army, now left Philadelphia to its fate. On the 26th of September Sir William Howe en- tered the city : his army was principally sta- tioned at Germantown, about six miles from Philadelphia. Washington determined to make an attack upon this post : the plan was well conceived, but accidental causes rendered it un- successful. A severe action took place, in which the loss of the Americans was double that of the British.

331. During the progress of these operations, events had occurred in the northern part of the United States eminently beneficial to the cause of the colonies. For the purpose of opening a communication between New York and Canada, and cutting off the intercourse between the east- ern and southern states, a force of upwards of 10,000 men, under General Burgoyne, advanced by way of lake

Champlain towards Albany in June 1777. Their first operations were highly successful. Ticonderoga, garrisoned by above 3000 men, surrendered after a short siege ; and, notwithstanding the obstacles thrown in his way by the provincials, Burgoyne reached the Hud- son within thirty-six miles of Albany. The aspect of affairs, however, soon changed. The American army, under General Gates, was sta- tioned in his front, and the patriotism 6f the people rendered supplies of provisions very precarious. A body of Hessians, in number about 500, which had been despatched by Bur- goyne to seue some stores of provisions at Ben- nington, w

Burgnyne, met wjth the same fate. After vainly endeavouring to retreat, and after two actions in which his best troops were defeated by the Americans, General Burgoyne surrendered his whole army at Saratoga on the 17th of October. This event proved of the utmost importance to the cause of independence. It gave confidence to the people, afforded a supply of the munitions of war, and produced a powerful effect upon the dispositions of foreign governments. Soon after the intelligence reached Europe, a treaty of al- liance was concluded between the United States and France. In pursuance of which a fleet and army were despatched to the assistance of the Americans. The preceding winter had been spent by Washington and his army in a hutted encampment at Valley Forge, where they en- dured, with fortitude, sufferings and privations under which mercenary soldiers would have sunk. On the retreat of the British they ad- vanced with alacrity in pursuit. Their num- bers and state of discipline, however, were not such as to authorize Washington to lead them into a general engagement; and, except atMon- mouth, when a partial action took place to the advantage of the Americans, the British reached New York without much loss. During the re- mainder of the year 1778 no other event of im- portance occurred, than an attempt on Rhode Island by the Americans under General Sulli- van ; which failed, owing to the want of a pro- mised co-operation on the part of the French admiral.

332. In 1779 the principal operations of the British armies were in the southern states. Sa- vannah was captured ; but an attempt on Charleston was gallantly repulsed. The only event of importance in the north was the cap- ture of the strong post at Stoney Point, which was carried by assault by a small party of Americans, headed by the gallant General Wayne.

333. In 1780 the war was continued with vigour in the south. A large force was despatch- ed by the British to Carolina. Charleston wap compelled to surrender, and a great part of the country overrun by the

invaders. To relieve the inhabitants, congress despatched General Gates with a respectable force. He resolved on a general action, and was totally defeated by Lord Cornwallis, at Camden, with great loss. He was succeeded in the command by General Greene, whose talents restored hope to the Ame- ricans : by dint of great exertions he collected together the appearance of an army, with which he was enabled to make head against the British. In September of this year a treacherous attempt, on the part of General Arnold, to deliver up the important post of West Point to the British, was counteracted by a timely discovery. Arnold es- caped to the enemy ; but Major Andre, a British officer who came to consult with him, was taken, and executed as a spy.

334. In January 1781 a victory was obtained by General Morgan, at the Cowpens, with an army inferior in force to the British, and com- posed in a great measure of militia. The British, however, triumphed over the Americans in a battle fought at Guildford. Cornwallis shortly

afterwards moved his army into Virginia, and Greene returned to South Carolina ; where, after suffering a partial check near Camden, he gained a decisive victory at Eutaw Springs. Cornwallis in the mean time having received reinforcements marched to York Town, in Virginia, where he threw up entrenchments. Washington, who with the French army had been threatening New York, suddenly broke up his encampment, and marched to the south to attack Cornwallis. The Chesapeake was block- aded by the French fleet ; and on the 30th of September the investment of the British posts took place. After a siege of seventeen days, in the course of which several of the British out- posts were carried by assault, their whole army, amounting to upwards of 17,000 men, surren- dered prisoners of war. This event was deci- sive of the contest. An expedition against New London was made by a force under Arnold, to whom the British had given a command ; but nothing further of importance occurred during the remainder of the war. The British govern- ment at length acknowledged the independence of the colonies by a treaty signed on the 23d of September 1783.

335. 2. From the Treaty of Peace of 1783 ˆo 1822. — The successful issue of a conflict with so powerful a nation as Great Britain was highly flattering to the national pride of the peo- ple of the United States, and gave them a more elevated rank in the eyes of foreign

nations than their age could claim. The mere establishment

>f their independence, however, they soon found vas far from being sufficient to ensure their pros- perity. The expenses of the war had created a debt uf many millions, which remained to be paid ; an excessive issue of paper currency had taken place, and produced the necessary conse- quences upon the public wealth and morals; and the system of confederation, which, even with the enthusiasm by which it was upheld during the war, hail been found inefficient, now, when the impulse arising from a common danger no longer operated, became merely a nominal bond. The recommendations of congress, though supported by the most cogent reasons, were uenerally disregarded : the country was drained of its specie to pay for foreign goods; the value of the public stock sunk to two shil- lings in the pound in consequence of the want of funds to p;iy (lie interest ; and every thing in- dicated a dissolution of the confederacy, and approachim; anarchy. This alarming state of •thmus e\citctl in the friends of order an earnest •desire fora change in the confederation. At the instance of t tie legislature of Virginia, commis- sioners from five of the states assembled at An- napolis in 17 Ho; who, having taken the subject • if the comnii rcial difficulties into consideration, prop;, •-<•;! a meeting of delegates from each state, •for she purpose of revising the confederation. On the Hull of .May, 1787, they convened at IMiiUidelphia ; and, on the 17th of September, laid before congress the result of their labours in the existing constitution of the United States. Tins instrument uas well adapted to unite the stati – more closely : the republic was rendered mure furmid .tlile to other nations, and the gene-

ral government gained the requisite power and authority in its internal concerns, without dimi- nishing the liberty of the people. Public opinion, however, ˆas divided on the question of its adoption or rejection. The subject was dis- cussed with great warmth and ability on either side. Conventions were called in each state. In some the ratification of the constitution was obtained with difficulty, and it was not finally adopted by the little state of Rhode Island until after the lapse of two years. Eleven states hav- ing ratified it, the government went into opera- tion in 1789. At this period arose the two great parties which have since agitated the country — the federalists, who advocated the constitution ; and the anti-federalists, who op- posed it.

336. However discordant the opinions of the American public in relation to the constitution, there was but one sentiment with regard to the individual by whom the office of president should be first filled. Washington was unanimously chosen president, and accepted the

office with unfeigned reluctance. John Adams was chosen vice-president. The beneficial effects of the new system of government, administered as it was by such men, was soon perceived. Trade revived, confidence was restored, and the con- dition of the people sensibly improved. During the war that arose out of the French revolution, the United States remained neutral. The wise policy of Washington discouraged all proceed- ings tending to involve the country in a contest with either party.

337. The feelings of a large portion of the community were warmly enlisted on the side ot France, and would have urged the nation into hostilities with England The neutral course pursued by the government met with opposition ; and increased the hostility of the two parties, which, under the names of republicans and fe- deralists, had so long divided the nation. In 1 790 the Indians commenced a war on the north frontier. General Harmer was sent with 1500 men to repulse the invaders; but, after some suc- cesses, was routed with considerable loss. Gene- ral St. Clair was appointed to succeed him; but, without any ground of accusation, was equally unfortunate. Some additional troops were now raised ; and the Indians were finally routed and" dispersed by General Wayne in 1794. To support this war an excise was laid on whisky. In consequence of this, an insurrection broke out in some of the western counties of Pennsyl- vania, which the energy and prudence of the government soon suppressed. Washington had been unanimously re-elected to the presidency in 1 793 ; but, on the approach of the period at which this necond term expired, declined a re- election in a farewell letter, which breathes the purest patriotism and the warmest affection for his beloved country. He was succeeded in office by John Adams, a distinguished actor in the revolution. During his presidency the French revolutionary government, disappointed in the object of engaging the United States in the war with England, pursued a course of insult and aggression towards t'lem, which ended in actual hostilities. The American administration

nad forborne for a long time, but at length adopted measures of retaliation and defence. A provisional army of regular troops was establish- ed, and the navy was increased by several frigates. Washington was appointed, by the unanimous consent of the senate, lieutenant-ge- neral and commander-in-chief of the armies of the United States. This illustrious citizen died shortly afterwards, on the

14th of December 1799, leaving behind the character of one of the most pure of patriots. When information of his death reached congress, resolutions expressive of the national grief for a public loss were adopted ; and it was recommended to the people of the United States to wear crape for thirty days — a measure which was universally adopted. Hos- tilities between the United States and France continued only a few months, and were altoge- ther confined to the ocean. Two severe and well-fought actions took place between frigates, in both of which the Americans were victorious ; the first between the frigate Constellation, of 38 guns, and the French frigate L'Insurgente, of about equal force, in which the latter was cap- tured; the second was between the same Ame- rican frigate and La Vengeance, of superior force, which made her escape in the night, after having, it was believed, struck her colours.

338. In 1811 a revolution took place in the administration of public affairs. The demo- cratic or republican party, having become the majority, succeeded in elevating their candidate Mr. Jefferson to the presidency, in opposition to Mr. Adarns. During the first term of his official career the United States enjoyed a sin- gular degree of commercial prosperity, while the benefits of free institutions were visible in the elevated character and happy condition of the people. The European war, a cessation of which had taken place, was renewed, after a short breathing time, in 1803. The principal belligerents, whose wide-spread schemes of hos- tility towards each other had, during the ad- ministration of preceding" presidents, occasionally and seriously affected neutrals, began about 1806 to pursue a more injurious course. For the purpose of cutting off the trade with France, the British government declared a part of the French coast in a state of blockade, without pursuing the ancient mode of stationing a naval arma- ment to enforce it. The emperor Napoleon re- taliated by an edict of a similar nature, the execution of which was evidently impracticable in the state of the French marine. The English then issued their memorable orders in council, by which they forbade any trade whatever with France or her dependencies under penalty of seizure ; and in a subsequent decree Napoleon declared all neutral vessels denationalized which should suffer themselves to be visited by an En- glish vessel of war. Public indignation was' strongly excited by an unjustifiable attack upon the frigate Chesapeake, which was afterwards disavowed by the British government ; and was continually roused by fresh accounts of the im- prisonment of American seamen from on board their own ships, as being English. It is stated, by those acquainted with the British navy at that p

sands. War vras loudly demanded bv one party, but it was believed the country was not prepared for it. A system of restrictions upon commerce, which should operate towards both belligerents, was therefore attempted. In December 1807 an embargo was laid on all American vessels, the restrictions of which were enforced by several subsequent acts. After trying an experiment of more than a year, and when it was found that this measure did not produce the desired effect in Europe, congress, yielding to the earnest pe- titions of the commercial interest, repealed the embargo la\v, and substituted an act interdicting the commercial intercourse with both Great Britain and France ; but giving to the president authority to remove the restriction in case of an amicable arrangement. In the year 1809, Mr. Jefferson having declined a re-election, James Madison was chosen president. In April an arrangement was made with Erskine, the British minister, by which the latter engaged on the part of his government for the repeal of the ob- noxious orders, and the president consented on the other hand to the renewal of the commercial intercourse between the two countries. The British government, however, did not think pro- per to ratify this act of their minister, on the ground of its having been concluded without sufficient authority. The non-intercourse with Great Britain was consequently renewed. In August 1810 the French government officially announced to the American minister at Paris, that the Berlin and Milan decrees would cease to operate on the first of No vember ensuing. The president accordingly issued a proclamation on the second of November, declaring that the intercourse between the United States and France might lawfully be renewed. The Indians had been again excited to war on the north-west. In November 1811 an action was fought at Tippe- canoe, between an army of regulars and militia commanded by Governor Harrison, and a large body of Indians, in which the latter \v ere de-feated with the loss of upwards of 170 killed and wounded.

339. The system jof restrictions upon com- merce was continued until 1812, when the American government deemed it necessary to adopt more decided and effective measures. With a view to hostilities the president was authorized to augment the number of the regu- lar army : volunteers were accepted ; and the few frigates belonging to the navy were ordered to be fitted out. War was declared on the 18th of June 1812, having been recommended by the president in a message to both houses. Not- withstanding the length of time in which hos- tilities had been meditated, they were commenced with a very imperfect state of preparation on the part of the Americans. An addition to the regu- lar army of twenty-five thousand men had been authorized ; but few of them had been enlisted . Few persons were found sufficiently

acquainted with military science to act as officers ; and the volunteers and militia were undisciplined. In consequence of these imperfect preparations, and the want of sufficient foresight in other re- spects on the part of the government, the early operations of the war were marked by singuhr

ill-success. An army, composed principally of volunteers and militia, under the command of General Hull, invaded Canada from the Michi- gan territory in July ; and, after a brief pos- session of a portion of tne enemy's country, fell back to Detroit. The British having the command of the lake immediately cut off his communica- tion with the state of Ohio, from which he had derived his supplies. Two attempts made to open the route failed of success. In this situation a British force, under General Brock, advanced against the American troops; and, without waiting an attack, General Hull surrendered his army prisoners of war. He was afterwards tried by a court-martial, and condemned to be shot. The president approved the sentence, but remitted the punishment in consequence of the age and revolutionary services of the general. On the Niagara frontier the operations of the Americans were almost equally unfortunate. About 1000 troops, commanded by General Van Rensselaer, crossed the river in November, and attacked the British at Queenstown. They were at first successful ; but not receiving the expected reinforcements, and their retreat to the opposite shore being cut off, they were after an obstinate engagement compelled to surrender.

340. The disappointment arising from the failure of these military enterprises was in some measure balanced by the success of the Americans on the ocean. On the 20th of August, 1812, the United States' frigate Constitution of fifty-four guns fell in with the British frigate Guerriere of forty-nine guns. In the space of thirty minutes the fire of the Constitution reduced her to a sinking state, and she was forced to surrender with the loss of 100 men killed, wounded, and missing. On board the Constitution seven only were killed, and seven wounded. This exploit was followed by others of a similar nature. On the 25th of October, the frigate United States of fifty-four guns, commanded by Captain Decatur, engaged and captured the British fri- gate Macedonian of forty-nine guns, after an action of an hour and a half In November the British sloop-of-war Frolic was captured by boarding, after a severe engagement with the American sloop-of-war Wasp of inferior force. Before the close of this year the frigate Con-

stitution, being off the coast of Brazil, encoun- tered and captured the British frigate Java. Not lon£ afterwards the sloop-of-war Hornet fell in with and captured the British sloop-of-war Pea- cock of superior force, after an action of only eight minutes. The commander of the Hornet was subsequently promoted to the frigate Ches- apeake, and met a reverse of fortune. On the second of June 1813 lie encountered the frigate Shannon immediately after leaving the port of Boston. In ci'Jit minutes the captain of the Chesapeake was killed, and in fifteen minutes the ship struck to the Shannon.

341. The military operations of the year 1813 were productive of alternate success and reverses. The north-western frontier, on which the arms of the n 'public had met with a signal disas- ter, was attain the theatre of misfortune and !>ioo;!slu<]. A tier the capture of Hull's army, lae uoviniaii.Mt immediately called out detach-

ments of the militia and volunteers from Ken- tucky, Ohio, and Pennsylvania, and placed the whole under the command of General Harrison. The object proposed in the first instance was the recovery of Detroit. In pursuance of his plans General Winchester was sent forward to the ra- pids of Miami with about 800 men, with direc- tions to commence the building of huts. Early in January he arriTed at this post, and formed a fortified camp ; but hearing of an intended at- tack upon Frenchtown at the river Raisin by the Indians, he moved forward to that place Here, on the morning of the 22nd of January, he was suddenly attacked by a large force of British and Indians. The Americans were surrounded and surprised; and, though they fought with courage, they found themselves com- pelled to surrender to the number of about 1500. After the battle the English commenced their march towards Maiden, leaving the pri- soners in the charge of the Indians. A most barbarous massacre ensued, and of those who escaped the tomahawk or the flames many were sold into captivity. It was stated by the Ame- ricans that no effort was made to save these unfor- tunate soldiers, although it had been expressly engaged that they should be protected. On the Ontario frontier the American arms enjoyed a brief advantage. York, the seat of government of Upper Canada, being abandoned by the British, was taken possession of by troops under the command of General Dearborn on the 27th of April. When the Americans were within a short distance of the British works, after they had driven back the troops with the bayonet, an explosion took place from a magazine previously prepared for the purpose, by which about one hundred were killed ; among whom was the com- mander of the detachment, General Pike, an officer of distinguished military talents and bra- very, whose loss was deeply lamented. His troops, however, took possession of the fort; and, having destroyed or

removed most of the public stores, the army evacuated York.

342. On the 27th of May a detachment pro- ceeded to attack Fort George, which surrendered after a sharp contest. During the absence of General Dearborn with the troops from Sacket's Harbour, an attempt was made upon that post by a formidable force under Sir George Prevost. They were received, however, with so much coolness and good conduct by General Brown, with a small body of militia, volunteers, seamen, and regulars, that they retreated. At the Bea- ver Dams near Fort George, a detachment of Americans under the command of Generals Chandler and Winder, were surprised at night by a British party, and both the generals in- gloriously captured. On the _ borders of Lake Erie the campaign opened with an attack by the British upon Fort Sandusky, in which they were repulsed with loss, by the gallant com- mander Major Croghan. After the defeat and capture of General Winchester, General Harrison concentrated his forces at the Rapids, where he erected Fort Meigs. The British forces advanced to this place, and commenced a siege in May 1813; in which they were unsuccessful. Not- withstanding the repulse of a body of Kentuc-

kians, who, descending the river to the relief of the fort, were defeated by the British forces, the siege was raised without any great loss having been incurred by either party. In the mean time great exertions had been making to gain the ascendency on Lake Erie. The American squadron, commanded by Commodore Perry, consisted of nine vessels carrying fifty-four guns ; the British, of six vessels with sixty-three guns. On the morning of the 10th of Septem- ber the two squadrons encountered each other. The action was long and well contested, and, at one period, the principal American vessel had struck her colours. A bold and unusual ma- noeuvre of the American commander, however, decided the fortune of the day. After an action of three hours the whole British squadron sur- rendered, not a single vessel escaping. This victory relieved the entire north-western frontier from the presence of the enemy. General Har- rison hastened to take advantage of the facilities it afforded. He embarked his main army on board of the American squadron, and, landing on the Canadian shore, immediately marched in pursuit of the enemy. Near the river Thames an action was fought on the 5th of October, which terminated in the total? defeat and dis- persion of the British army. With this action ended the important occurrences of the war on the north-western frontier.

343. During the early part of the war the Atlantic frontier enjoyed

comparative peace. In the spring of 1813 a series of devastating hostility began on the shores of the Chesapeake, which reflected no honour on the British arms. With the hope of obtaining possession of Nor- folk, an attack was made on Craney Island, which eventuated in the total defeat of the in- vaders. The small town of Hampton was, however, taken, and given up to plunder. Du- ring the remainder of this year the British in the Chesapeake were chiefly employed in threatening Washington and Baltimore. On the ocean the American frigate Chesapeake was captured by the British frigate Shannon, of somewhat superior force and equipment, and the sloop-of-war Argus was taken by the British ship Pelican, of superior force ; but on the other hand, the British sloop of war Peacock was taken by the Hornet, and the Boxer was taken by the Ameri- can brig Enterprise, of similar force. In the latter part of this year a formidable expedition was fitted out for an attempt on Montreal. The object was to be effected by the union of two divisions, one of which was to advance from Plattsburg under General Hampton, arid the other to descend the St. Lawrence under General Wilkinson. The former made a short incursion into Canada, when, in consequence of a dis agreement between the two generals, he returned within the boundary line. The expedition under Wilkinson, after proceeding a short distance down the river, and having encountered with- out much success, a body of the British, found the obstacles greater than they were anticipated, and abandoned the attempt. The army then went into winter-quarters. Early in the spring, General Wilkinson made another incursion into Canada, which ended unsuccessfully. He was

soon afterwards superseded in the command On the Niagara frontier events occurred which retrieved the character of the American arms. Great pains had been taken to improve the discipline of the troops, and prepare them to encounter veteran soldiers. The command was assigned to General Brown, who had distin- guished himself at Sackett's Harbour. On the 2d of July the troops crossed, and having cap- tured Fort Erie, with its garrison, proceeded to attack the British position at Chippewa. The respective forces were about equal in numbers. On the 5th of July a very obstinate and well- fought battle took place, which terminated in favour of the Americans, who carried all the British positions by the bayonet. Another still more warmly-contested battle occurred on the 25th of the same month. The British having been reinforced advanced towards the American position and were attacked by General Scott near the falls of Niagara. After a gallant resist- ance they were forced to retreat v*th great loss. The American force, however, was so much weakened, that it fell back to Fort Erie. The British advanced to lay siege to the fort, but their

operations proved unsuccessful. An at- temp/ to carry it by assault was defeated with great slaughter; and, in a sally upon the be- siegers' lines, the Americans gained great advan- tages. The operations on this frontier during the remainder of the war were of minor conse- quence. On the northern frontier the arms of the republic obtained a naval triumph. The whole British squadron on Lake Champlain surrendered, after a warm contest, to an American squadron of inferior force. A powerful military expedition, commanded by Governor Prevost, was repulsed in an attack on Plattsburg, and compelled to abandon its views. During this year the British government availed itself of its naval force to invade the Atlantic frontier. In the month of August a body of about 4500 men was landed near Washington, and took posses- sion of that place. After destroying most of the public buildings, they retired without molesta- tion. The disgrace arising from this event was in some measure retrieved by the defeat of a similar attempt upon Baltimore, in which Gene- ral Ross was killed. On the ocean the frigate President was captured by a squadron of the enemy, and the Essex by two vessels of superior force, after a most desperate engagement and great slaughter ; but in the actions of the Eper- vier, the Avon, the Reindeer, the Cyane, the Levant, and the Penguin, the Americans were uniformly successful. The military operations of the war were closed by an attack upon New Orleans by a formidable and well-appointed British army, which was defeated by the Ameri- cans, under General Jackson. Peace, which had been for some time in negotiation, was concluded at Ghent on the 24th of December, 1814.

344. This treaty, which was ratified on the 17th of February, was silent with regard to the original subjects of the war, and stipulated only for the restoration of prisoners, &c. &c. the adjustment of boundaries, and an effort for the abolition of the slave-trade generally. Imme- diately after the ratification of peace with Eng-

land, the government resolved to chastise the insolence of Algiers, which had taken advantage of the English war to prey on American com- merce. A squadron was accordingly despatched under commodore Decatur, who, after capturing a frigate and a sloop of war, compelled the Dey ,o sign a treaty renouncing for ever the practice of holding American prisoners in slavery. In 1819 a treaty was concluded with Spain, by

which that power agreed to cede Florida to the United States. After many vexatious delays on the part of the Spanish crown, the treaty was finally ratified, and the American troops took possession of the territory in 1821. In 1822 the congress of the United States, by an almost unanimous vote in each house, recognised the independence of the late Spanish provinces in America.

BRITISH AMERICA.

CHAP. III.

345. The British possessions comprise the whole of the northern section of North Ame- rica, except those tracts upon the western coast which are claimed by Russia, extend- ing through eleven degrees of latitude, and containing more than 1,000,000 square miles: But so disadvantageous is the climate, and so thinly peopled are the inhabited provinces, that it is justly observed by Pinkerton, they sink into insignificance when compared with the great and flourishing territories of the United States and Mexico. This vast tract does not contain more than 800,000 inhabitants, while the bordering state of New York contains 1,300,000 on one- twentieth part of the surface ; and Mexico has 6,000,000 on a territory of the same extent as the British possessions. Still, however, they are of great and increasing importance, and are rapidly filling with the population which is necessary to uive them all the value which cir- cumstances admit. The most striking feature in their geography, and that which renders them particularly valuable to Great Britain, is the gulf and river St. Lawrence, which forms at once a line of defence for their borders, and a channel of inland navigation of immense importance.

34G. From the view that has been given of this stream, it will be perceived that the Gulf and River St. Lawrence is navigable with ships of the largest size to Quebec, nearly 700 miles from ihe sea. Merchant vessels ascend to Montreal, 1 70 miles above Quebec. Batteaux of large size ascend to Kingston, about 200 miles above Montreal. Lake Ontario is navigable with ships of laiije burden, 170 miles, to the mouth of the Niagara River ; and that river is navigable eight miles to Queenstown. Here there is an over-land carriage of ten miles to Chippeway, from whence the river is navigable in large boats, twenty-two miles to Fort Erie. A canal is about to be cut around the tails. Lake Erie is navigable with ships of large burden to Amherstburg, 250 miles; and the navigation is continued through Detroit River, twenty-five miles; through Lake St. Clair twenty-five; through St. Clair River, thirty-two ; and through Lake Huron to the rapids of St. Mary, 2.50 miles. There is a portage by a canal of three miles at these rapids; and

then Lake Superior is navigable to the grand portage lead- ing to Lake Winnipeg, 300 miles, and to its west end, 150 miles more. The whole of this ex- tended navigation is therefore 2315 miles; and

it is all navigable with ships, except 213 miles, of which only ten require the use of land car- riage.

347. Besides the direct navigation to the head of Lake Superior, there are various minor branches, some of them of great extent and im- portance; and there are many portages to the head waters of the western rivers. The Utawas or Grand River connects Montreal, by an inland passage, with the upper lakes and with James's Bay; and from the last there is a continued chain of water communication to the Arctic Ocean. The grand portage connects Lake Superior with the Lake of the Woods, Lake Winnipeg, and the interior of the country to a great extent ; and from the head of Lake Su- perior there is but a short portage to the river Mississippi and the western waters.

348. The chief of these possessions is Canada, now divided into two provinces, called Upper and Lower Canada, separated by the Uttawas river : the former is on the north of the great lakes ; the lower division, on the river St. Law- rence. On the eastern coast, south of the river St. Lawrence, are Nova Scotia, New Brunswick, and the Islands of Newfoundland, Cape Breton, and St. Johns. Labrador, and the regions around Hudson's Bay, sometimes called New Britain, are nominally subject to Great Britain also. All the British possessions are subject to a governor- general residing at Quebec. The greater part of this region is important only for the fur trade and fisheries.

349. The following table exhibits the latest estimate of the population of the British colonies in North America.

Western Territory .... Unsettled

Upper Canada 300,000

Lower Canada 340,000

New Brunswick 60,000

Nova Scotia 100,000

Prince Edward's Island . . . 5,000

Cape Breton 3,000

Newfoundland 10,000

Bermudas Islands 10,000

828,000

350. COMMERCE. — The value of articles of commerce in the British possessions may be seen in the following account of the exports and imports for 1808.

NORTH AMERICA.

47

EXPORTS.

IMPORTS.

From Quebec. Furs, and other domestic produce . Wheat biscuit flour ....

£.

350,000 171,200 157,360 290,000 37,500

120,000 30,000

From England. Manufactures .... West India goods . . .

From United States. Provisions and foreign

£.

200,000 130,000

£.

330,000

280,000

Timber and lumber ..... Pot and pearl ashes .

100,000 70,000 110,000

From Labrador and Gaspe.

Lumber

To United States, about .... £

Number of vessels . .

Tonnage . .

. 70,275.

1,156,060

‘

. 334.

610,000

351. The trade between the United States and the British colonies in North America, and the West Indies, is carried on chiefly through the free ports of Halifax and Bermudas. The follow- ing was the amount in 1830.

Dollars. Imports of domestic produce from the

United States 3,650,031

Ditto of foreign articles 136,342

Total 3,786,373

Exports to the United States ... 650,303

352. Lower Canada lies between 45° and 52° north lat., and between 64° and 82° west long, extending 750 miles from east to west. It is bounded on the north by the territory of the Hudson’s Bay Company, or East Maine ; east, by the gulf of St. Lawrence, and part of the Labrador coast ; south, by New Brunswick and the United States ; and west, by Upper Canada, from which it is separated principally by the Uttawas river, and a line drawn from the head of the river in lake Temiscaming due north to Hudson’s Bay. It is divided into the districts of Montreal, Three Rivers, Quebec, and Gaspe, which were subdivided by a proclamation of the government in 1792 into the following twenty- one counties, viz., Bedford, Buckingham, Corn- wallis, Devon, Dorchester, Effingham, Gaspe, Hampshire, Hertford, Huntingdon, Kent, Lein- ster, Montreal, St. Maurice, Northumberland, Orleans, Quebec, Richlieu, Surrey, Warwick, and York. The minor divisions are, — first, the seignories, or the original grants of the French government under the feudal system, which are again partitioned out

into parishes ; secondly, the townships, or grants of land made by the English government since the year 1796, in free and common soccage.

353. Lower Canada nominally extends north of the St. Lawrence into unexplored regions : but the only portion which is settled is the vale of the St. Lawrence, enclosed by two ridges of mountains running from south-west to north- east, dividing the waters of this stream from those of the northern and Atlantic declivities.

354. At the mouth of the St. Lawrence the country is rugged and mountainous, and the climate very severe : but in the upper and more southerly portions of the province, the country is well-watered and fertile, and the climate is milder. All parts, however, have the winters of Sweden, although situated in the latitude of France ; and are liable to great and sudden heat in summer. At Montreal the spring is reckoned to commence six weeks earlier ; vegetation is proportionably more vigorous and luxuriant; and the crops produced are more abundant, as they are seldom checked by the early frosts which are common in the eastern parts of the province. The thermometer rises sometimes in summer to 98°, and in winter the mercury freezes. The winter sets in early in November, and con- tinues till April, during which the ground is entirely covered with snow, often from four to six feet deep. In January and February the frost is so intense, that there is often danger of being frost-bitten, and to guard tagainst it the inhabitants cover the whole body with furs, ex- cept the eyes and nose.

355. The climate is still favourable to health in an eminent degree. The cloudless sky and pure dry air of winter make the cold both pleasant and healthful. No general description will convey an adequate idea of the soil of Lower Canada. In the part of the province south of the St. Lawrence, a triangular district, included between the St. Lawrence, the Chaudiere, and the parallel of 45° north lat. consists of excellent land, laid out in townships, and in many parts settled and cultivated, which bids fair to become the most flourishing part of the province. From the Chaudiere to the sources 01 the St. John the land is much broken, and of an indifferent qua- lity. From the sources of the St. John to the gulf of St. Lawrence the country has been but partially explored, but has every appearance of sterility. On the north side of the St. Law- rence, a ridge of heights commences at the eastern extremity of the province, and runs along the margin of the river, from 64° to 71° west long. ! it then leaves the river, and, taking a south-west direction, strikes the Uttawas river, about thirty-

eight leagues above its confluence with the St. Lawrence ; enclosing between it and the two rivers a level, well-watered, and beautiful country. On the north side of the ridge just described lies the remaining part of Lower Canada, which has been so little explored that it is only known to be covered with immense forests. The principal productions are wheat and lumber.

356. The population of Lower Canada has rapidly increased within a few years. In 1759, when it was conquered from the French, it was estimated at 70,000 ; in 1775 it had only in- creased to 90,000; but in 1814 a capitation showed no less than 335,000, of whom 275,000 were descendants from the original French set- tlers, and the remainder English, Scotch, Irish, Americans, &c. The greater part of the inhabi- tants therefore are French, who are generally industrious. Their manners and customs are considerably tinctured with the French gaiety and urbanity. The French women of the lower classes in Canada can generally read and write, and are thus superior to the men ; but both are very ignorant and superstitious, and blindly devoted to their priests. They universally use the French language.

357. The rivers of Lower Canada embrace several valuable islands. Montreal island is thirty miles long, and its greatest breadth between seven and eight, its circumference being about seventy miles. The land rises gradually from the river, and, at the distance of two miles andahalf from the city, forms a mountain about 700 feet ln\;h, from the top of which there is a fine view. The island is divided into nine parishes, and is the seat of a very extensive population. The principal settlements, besides Montreal are — La Chine, so called from a project formed to pene- trate across the continent to China from this place; St. Joseph, Le Saut, St. Laurent, St. Genevieve, and St. Ann.

358. The Isle of Jesus lies to the north-west of Montreal, from which it is divided by the River des Prairies : so called from being bordered on each side by meadows. This island is about “fteen miles long, and five broad, and contains several settlements. To the north of the Isle of Jesus is the river St. John, a branch of the I thiwns, or Grand River, a consi- derable stream, \hich towards the west is interspersed with such a. vast variety of islands, that there appears as much land as water. West of this river are the Two Mountains, and south of them the I’tawas river extends itself into a laruc !>a

:}”>’.». Lake St. Louis is only an expansion of the river St. Lawrence, about four miles broad, and stretches to LaCliine, where it contracts to

the breadth of little more than half a mile. Opposite to La 1'rairie there are considerable rapids. Helow these it spreads out into a stream from one to two miles wide, interspersed with a number of i>lands, among which the river runs with a deep strong current. It is navigable with merchant vessels toMontreal; but from the rapidity

of the current, a strong east wind is necessary to bring them up, and the passage is very tedious.

360. The mode of navigating the St. Law- rence and Utawas upwards is interesting. The St. Lawrence is navigated by flat-bottomed boats about forty-nine feet long, and six across at the broadest part. They generally carry about 9000lbs. and are conducted by four men and a guide. Each boat is supplied with a mast and sail, a grappling iron, with ropes, and setting poles. When loaded they take their departure from La Chine, generally eight or ten together that the crews may aid each other. The time of performing the voyage to Kingston and back is about ten or twelve days, the distance being about 200, miles. From twenty to thirty of these boats are kept in the service of the government, for transporting necessaries and stores for the troops, and presents of European manufacture to the Indian tribes.

361. The navigation ot the Utawas, or Grand River, is performed in bark canoes in a direct course to St. Joseph on Lake Huron, and thence to the new establishment called Kamanastigua, on Lake Superior.

FOREIGN TRADE. — The principal exports con- sist of lumber, pot and pearl ashes, peltry, wheat,, flour, Indian corn, pulse, salt provisions, fish, and other articles, which employ generally about 150,000 tons of shipping. In return are im- ported wines, rum, sugar, molasses, coffee, tobacco, salt, coals, and British manufactures. — In 1821 the amount of the imports of Lower Canada was 2,185,196 dollars.

362. The prevailing religion is the Roman Catholic, under the direction of two bishops, nine vicars-general, and about 200 curates and missionaries.

363. The government is under the direction of a governor, lieutenant-governor, executive council, and legislative council, who are ap- pointed by the king ; and a house of assembly, who are elected by the people. For the defence of both the Canadas a regular military establish- ment is maintained by the British government,, which was estimated in 1815 at from 27,000 to 30,000 men.

364. UPPER CANADA is situated between 24° and 25° N. lat.and between 73° 30′ W.long. and extends indefinitely to the westward. It is bounded north by the territory of the Hudson's Bay company ; north-east and east by the Uta- was, or Grand River, dividing it from Lower Canada ; south-east and south by the United States : on the west and north-west no limits have been assigned to it.

365. It is divided into eight districts, viz. the Eastern, Johnstown, Midland, Newcastle, Home, Niagara, London, and Western. These are again subdivided into twenty-three counties and 159 townships. The townships contain, in all, 9,694,400 acres, of which 3,000,000 are granted in free and common soccage, 2,769,828 are re- served for the crown and clergy, and 3,924,572 still remain to be granted. These townships are laid out along the banks of the St. Lawrence, lake Ontario, lake Erie, and lake St. Clair ; and extend back for a distance varying from forty to fifty miles. This province comprehends a vast

extent of territory ; its length from east to west is about 600 miles, arid its breadth about 360 Trom north to south. The area is about 290,000 square miles.

366. The settlements are chiefly confined to the banks of the rivers and lakes, and present a most extensive and in some places a thickly settled frontier to the United States. About 300 miles of this province border on the rivers and lakes opposite the Michigan territory ; 150 on Lake Erie opposite the state of Ohio ; forty- five opposite the state of Pennsylvania; and 300 on the state of New York. That part of the province which lies south of 45C latitude, be- tween Lakes Erie and Ontario, is by far the most valuable, and the only portion which is likely to be speedily settled.

367. The soil of Upper Canada, it is stated by Bouchette, is generally a fine dark loam mixed with a rich vegetable mould, not exceeded in any portion of North America. From the eastern frontier of the province to Lake Ontario, a distance of about 170 miles, the land presents an almost uniform level of exquisite beauty, rising only a few feet above the banks of the St. Lawrence, and finely intersected in every direc- tion by numerous streams. Several of these are navigable, with occasional obstructions from falls, for boats and canoes, while they offer many choice situations for the erection of mills. On the northern shores of Lake Ontario is a ridge of heights of no great

elevation, and of inconsidera- ble breadth, from which the land soon descends again, and forms a level fertile tract extending to Lake Huron.

368. The climate of Upper Canada is parti- cularly salubrious ; and epidemic diseases, either among men or cattle, are almost unknown. The winters are shorter and not so rigorous as in Lower Canada, and the spring opens, and agri- cultural labours commence, from six weeks to two months earlier than in the neighbourhood of Quebec. The summer heats are also more mo- derate; and the autumns are in general favourable for securing the produce of all the late crops.

369. The inhabitants are generally of British origin, and superior to. those of the lower pro- yince. Many are emigrants from the United States. Agriculture is pretty well understood, and the produce is abundant ; but the distance to a market, and the number of competitors from the United States, diminish its value. The grand canal of New York will doubtless have a favourable effect upon this province. Domestic manufactures are carried on to a considerable extent, and a few coarse woollens are made ; but it is of course the policy of government rather to encourage the production of the raw materials which are of value to Great Britain, than of ma- nufactures \vhich can be served more cheaply and with greater advantage to the empire from home.

370. The government of Upper Canada is administered by a lieutenant-governor, who is almost always a military officer, a legislative council, an executive council, and a house of assembly. The legislative council consists of not less than seven members, who are appointed by mandamus from the king, and hold their seats, under certain restrictions, for life. The

executive council is composed of six members The house of assembly consists of twenty-five members, who are returned from the respective counties, and the duration of the assembly is limited to four years.

371. NEW BRUNSWICK extends from Nova Scotia to Lower Canada, and from the Gulf of St. Lawrence to the state of Maine, being about 180 miles long and 120 broad. This province being united with Nova Scotia, Cape Breton, and St. John’s, in one military command sub- ject to the governor of Lower Canada, it excites no great attention either in a civil or military point of view. The soil and climate are some- what assimilated to those of the slate of Maine contiguous to it. There are a

number of very extensive rivers in the interior, of which St. John's is the chief; and the soil is represented as being fertile, producing grain and grass in plenty. There are considerable fisheries on the coast and in the rivers, principally of cod-fish, salmon, and herring. The inhabitants amount to about 90,000. Frederick-town is the capital. The principal commercial towns are St. Andrew's, St. John's, and Miramachi.

372. NOVA SCOTIA is situated between 43° 30′ and 46° N. lat. and 61° and 66° W. long. It is a narrow peninsula projecting from New Brunswick, more than 300 miles long, stretching from south-west to north-east. It is bounded north by the gulf of St. Lawrence ; north-east by the island of Cape Breton, from which it is sepa- rated by the gut of Canso ; west by the bay of Fundy; north-west by the province of New Brunswick ; and on all other sides by the Atlan- tic Ocean. It is divided into nine counties, viz. Halifax, Hants, King's, Annapolis, Shelburne, Queen's, Lunenburg, Sydney, and Cumberland.

373. The north-east part of the province pre- sents a gloomy and barren aspect ; but the coun- ties to the south-west of Halifax, and along the bay of Fundy, have a rich soil, and produce good crops of grain. The climate is milder thai' that of Canada, but subject to frequent fogs The population is estimated at above 150,000 ; the great body of the people are principally emi- grants from New England. After these the Scotch and Irish settlers are most numerous. There are valuable mines of gypsum, coal, and iron, which furnish articles of export. Roads are generally good, and communication easy ; there are good harbours on the coast; and the commerce and wealth are increasing. Gypsum, lumber, and fish, are the principal exports.

374. ST. JOHN'S, orPaiNCE EDWARD'S ISLAND, is situated in the gulf of St. Lawrence, about thirty miles to the westward of Cape Breton, and on the north of Nova Scotia and New Brunswick, from which it is divided by a narrow strait. It is afbout 110 miles long and 30 broad. It is rich and fertile, containing about 18,000 inhabitants, and is therefore of more importance than Cape Breton; but the climate is cold, damp, and

foggy-

375. To the north and east of these islands there is a group called the Magdalen Islands, which, being entirely unsettled, merit no par- ticular notice.

376. The large island of Anticosti also

situated at the outlet of the river St. Lawrence, is entirely barren and uninhabited.

377. The island of CAPE BRETON is situated between Nova Scotia and Newfoundland, and extends from north latitude 45° 32′ to 47° 05’, and from between 59° 42′ and 61° 30′ west longitude from London. It is about 100 miles long by 80 broad ; but the soil and climate are so disadvantageous, that the inhabitants are very few, probably not above 3000 ; chiefly attached to the fisheries. The face of the country is covered with numeious lakes and forests. The soil has, after various experiments, been found totally unfit for agriculture. The climate is ex- ceedingly cold, foggy, and unwholesome. There are some veins of coal in the island ; but, with the exception of timber, it can scarcely boast a single vegetable production of value.

378. The island of NEWFOUNDLAND is on the east side of the gulf of St. Lawrence, separated from the coast of Labrador on the ‘north by the straitsof Bellisle. It lies between latitude 46° 45′ and 52° north, and between 53° 10′ and 59° west long. ; being 381 miles long, and about 900 in circumference. The interior of the island has never been explored. The country near the shore is hilly, and the soil barren ; the coasts are high and bold, and abound with large and com- modious harbours. The climate is exceedingly disagreeable ; the cold is severe, and of long du- ration ; and in summer the heat, though it con- tinues but for a short time, is violent. The coasts are extremely subject to fogs, attended with almost continual storms of sleet and snow ; and, excepting a short time in summer, the sky is generally overcast with clouds. The only vege- table production of value is timber, which is abundant, and is a considerable article of com- merce.

370. Newfoundland owes all its importance to the fisheries which are carried on upon its shores and upon the banks which lie to the south-east of the island. The Grand Bank, \hicli lies 100 miles from the south-east ex- Iremity of the island, is 300 miles long and 75 broad ; and the depth of water upon it varies from fifteen to sixty fathoms. No less than 3000 sail of small craft, belonging principally to Great Britain and the United States, were recently em- ployed in these fisheries. In 1813 the export in fish and oil amounted to £1,000,000. sterling. The population of the island is very fluctuating, depending

entirely on the state of the fisheries. In 1P.13, when they were most prosperous, it amounted to nearly 70.000. St. John's, the capital, i< on the south-ea-.t coa*t of the island, and contained in ll'.l") about 12,000 inhabi- tants: but in IKIil an.] U517 three dreadful tires laid nearly the whole town in ashes.

3ftO. I,AI',I; \noi:.— This larˆe country was so named by a 1'orPi'j-ui •-.• navigator who first dis- covered it. In tin1 inland parts there were American Indians, and on the coasts Esquimaux; but the former ha\e moSCIMII uni'lnaily to withdraw. There \ere onl\ a fr\v factories here till the Moravian elei_v former! iii'lc settlements at Nam, OkkaK, and 1 lujie.lale, composed of Christiaui/ed nati\es. So iar as it has been

examined Labrador is generally hilly, and ev?n mountainous. The eastern coast exhibits a most barren and iron-bound appearance, the rocky mountains rising suddenly from the sea ; and is lined with thousands of islands abounding with the eider-duck and other sea-fowl. Rivers, brooks, lakes, pools, and ponds, are abundant, rich in fish, and frequented by innumerable birds. In the interior the air is milder ; there are many trees, and some symptoms of fertility. The mountaineers of the interior resemble gypsies, with somewhat of French features, from a mix- ture of Canadian blood. They live in a kind of tent covered with deer skin and birch bark. They profess to be Roman Catholics, and oc- casionally visit the priests at Quebec.

381. HUDSON'S BAY. — The Hudson's Bay Company claim the extensive territories on the west, south, and east, of that inland sea, sup- posed to extend from 70° to 115° of west longi- tude ; and, allowing the degree only thirty miles, the length will be 1350 geographical miles, and the medial breadth about 350. This vast extent of ice and snow is, however, of little conse- quence considered in itself; and it is not under- stood that the company gain great wealth. There are some fertile tracts on the southern border.

382. The regions on the west of Hudson's Bay have been called New North and New South Wales ; while that oa the east is styled East Maine. The most valuable settlements are in the vicinity of James's Bay, at Albany-fort, Moose-fort, and East Maine factory. To the west the Hudson's Bay Company have extended little farther than Hudson House. The Sea of Hud- son commonly presents bold, rocky, shores; but at intervals there are marshes and large beaches. Even in latitude 57° the winters have the severity of the Frozen Regions already described. The fish in Hudson's Sea are far from numerous ; and the whale fishery has been attempted without success. The quadrupeds and birds correspond with those of Labrador and Canada. The

northern natives are Esqui- maux, but there are other savages in the south : and the factories are visited by several tribes. All subsist on the products of hunting and fishing.

383. The BERMUDAS ISLANDS are situated about 800 miles from the American continent, and nearly at equal distances from Nova Scotia and the West Indies. There are a considerable number of islands in the group, but the greater part are mere rocks, and only four are of con- siderable importance. The largest island is named Beimudas. St. George, the capital of all the islands, is situated in the island of St. George, and contains about 500 houses. The other islands are St. David's and Somerset. The whole contain about 12000 or 13,000 acres of very poor land, of which a small part only is in cultivation. The chief produce is maize, culinary vegetables, and cotton. The inhabitants amount to about 10,000, of whom nearly one half are negroes The principal employment is ship-building, navi gation, and fishing. The climate is very fine, resembling a perpetual spring ; and nothing can exceed the beauty of the scenery ir. these se- questered islands The inhabitants are said to

be kind and affable to strangers, and a residence among them is very pleasant.

384. HISTORY. — The first effective settlement of this part of America was made by an arma- ment equipped in France, by which Quebec was founded in 1608. The colonists were for many years in a feeble condition ; and often in danger of extermination by the Indians. The French ultimately concluded a treaty with them, and gained the entire control over them to the great inconvenience of the neighbouring English settlements. In 1628 a company of French merchants obtained a patent for the ex- clusive trade with Canada. The next year an English expedition, under Sir David Keith, took possession of Quebec ; but it was surrendered again to the French by the treaty of St. Ger- main's. In 1663 the charter of the company of merchants was taken away, and new privileges were granted for forty years to the West India Company. From this period Canada appears to have remained in a state of tranquillity until 1690, when a bold attempt was made by the people of New England to reduce it to subjec- tion to the crown of England. An armament was equipped for this service, and the command given to Sir William Phipps. The effective men, to the number of between 1200 and 1300, landed a little below the town of

Quebec, and were fired on from the woods by the French and Indians. Having found the place too strong for them they re-embarked with precipitation, and returned to Boston. The attempt was renewed in 1 71 1 by a powerful force of British veteran troops, assisted by about 4000 provincials and Indians. Such were the difficulties and losses, however, experienced in passing up the river, that the design was abandoned by the British officers to the great mortification of the provin- cial troops. Canada continued in the occupation of the French, without any further molestation, until the breaking out of the war between France and England in 1756. Great preparations were then made on both sides for attack and defence. In 1759 the British government formed the project of attempting the conquest of Canada by three different but simultaneous attacks. One division of the army was to ascend the St. Law- rence and lay siege to Quebec ; the central and main body was to be conducted against Ticon- deroga and Crown Point ; the third was to pro- ceed against Niagara, and, after the reduction of that place, to descend the St. Lawrence to Montreal. The division which ascended the St. Lawrence was commanded by General Wolfe, and was completely defeated in its first operations by the French. Their great supe- riority of force, however, enabled the English to obtain possession of Quebec, after a gallant resistance on the part of the French, whose

brave commander, Montcalm, had been killed in the action. The English general, Wolfe, was also killed. Soon afterwards the whole province of Canada was subdued by the English forces, and was confirmed to Great Britain by the treaty of 1763.

385. In 1775 Canada was invaded by a body of provincial troops under General Montgomery; Montreal was taken, and a gallant but unsuccess- ful attempt was made on Quebec, in which General Montgomery was killed. No other attempt was made on this province during the revolutionary war. We have few records of Canadian history from this period until the late war between the United States and England Upper Canada then became the theatre of a san- guinary contest. The American troops were unable, however, to make any permanent con- quests ; and the province has since remained subject to Great Britain.

386. NOVA SCOTIA AND NEW BRUNSWICK. — The origin of the French settlement on the isle of Sables is mentioned in the preceding sketch. Few or no English settlements of importance existed in Nova Scotia in 1749, when a large expe- dition sailed from England. In 1755 an English armament sailed against the French possessions ; and, having taken the principal post, resorted to the cruel measure of

expelling all the French inhabitants to the number of 7000, who were landed in different parts of the American colo- nies; many of them arrived in Philadelphia, where they were received with kindness and liberality. In 1763 Nova Scotia was formally ceded to England by the treaty of Paris, and has since remained a British colony.

387. NEWFOUNDLAND was discovered by Cabot in 1497. In 1610 John Guy, with thirty- nine other persons, began a settlement on this island. By the treaty of Utrecht in 1713 New- foundland was acknowledged to belong to England.

388. CAPE BRETON. — The French made the first actual settlement on this island in the year 1712. They gave it the name of Isle Royale. The fortification of Louisbourg was begun in 1720; and about that period popu- lation increased with rapidity. Cape Breton remained in possession of the French until 1745, when it was captured by a body of troops from New England under General Pepperell. Since that year it has been under the dominion of the British crown.

389. PRINCE EDWARD'S, like Cape Breton, was settled by the French, and has experienced the same fortunes. In 1745, on the capture of Cape Breton, the inhabitants, who then amounted to about 4000, submitted to the British, under whose government it has since remained.

RUSSIAN AMERICA-

, OR, NORTH-WEST COAST.

389.* The Russians may be regarded as the south as latitude 52°. About 50,000 Indians first discoverers of the north-western shores of acknowledge their authority. The islands be- Arqˆrica. They lay claim to the territory as far tween America and Asia have the general

appellation of the Aleutian Isles, and form a chain from the American Promontory of Alaska. They are also called the Fox Isles ; while the Aleutian Isles of the Russians are those which we term Behring's and Copper Isles, connecting the two continents.

390. This coast seems to be chiefly alpine ; in some parts rising into snow-capped summits, with immense glaciers winding through its ca- vities. In this respect, and in its numerous creeks and isles, it bears no

small resemblance to Norway. The most remarkable mountain seems to be that called St. Elias by the Russian

navigators ; and which, it is affirmed, has been visible at sea at the distance of sixty leagues.

39.1. The inhabitants of the more northern regions of this coast appear to be Esquimaux. The savages of Nootka are said to be very cruel to the captives taken in war, and have frequently proved treacherous in their attacks on trading vessels. Whales form a favourite article of their food. This coast abounds in seals and other furred animals, which supply the natives with a very important article of trade. A number of ships visit this coast to procure furs for the Chinese market.

SPANISH AMERICA, MEXICO, AND GUATIMALA. CHAP. IV.

392. MEXICO. — This country, in its widest extent, embraces the whole region lying between latitude 42°. and 18°. extending from the Pacific Ocean to theCarribean Sea, the Gulf of Mexico, and the Sabine river. It is situated between 42°. and 113°. of VV. long. Its extreme length from Yucatan to the north-western extremity is 2400 miles ; and its breadth from the Sabine to the Pacific is 1000. The whole area comprises about 1,700,000 square miles. More than 700,000 are entirely unsettled, and occupied ex- clusively by the wandering tribes of Indians.

The remainder does not contain more than 7,000,000 of inhabitants, or seven to the square mile, and probably a less number. Under the Spanish government it was divided into three distinct portions, which it will be conve- nient to observe in description : — 1. California. 2. The internal provinces. 3. The vice-royalty of Mexico.

393. The following table exhibits the civil division and population of these provinces in 1803, according to Baron Humboldt :

Divisions.

Square miles.

Population in 1803.

Chief Towns.

California . |

Internal pro- * vinces . . ˆ

Vice-Royalty of Mexico

Old California

55,880 16,278 43,731 146,635 129,247 263,109 73,628 18,039 6,878 26,396 45,401 20,651 31,720 34,064 45,784

9,000 . 15,600 40,200 121,400 159,700 334,900

«30,500

153,300 517,300 376,400 1,511,800 813,300 156,000 534,800 465,800

Loreto. Monterey. Santa F£. Arispe. Durango. San Luis Potosi. Guadalaxara. • Zacatecas. Guanaxuato. Valladolid. Mexico. Puebla. Vera Cruz. Oaxaca. Merida.

New California

New Mexico

Sonera

Durango, or North Biscay . San Luis Potosi .... Guadalaxara

Zacatecas . ....

Guanaxuato ..... Valladolid

Mexico Puebla ... ...

Vera Cruz

Oaxaca ..... Yucatan, or Merida . . .

Total . . Unsettled, and inhabited only by Indians . ...

957,441 753,434

5,840,000

1,710,875

‘•’>’.i-. In 1793 the population, according to the :ˆ ill n-turns, \as l,4«3,,r.1(.>. In 1803 it was ••Minuted by Humboldt at 5,!UO,000,

and in i:u>8 at (‘>,.•”>()( ),<>oo. This population is com- jm.O’il uf the following classes: — 1. European Spaniards. ‘J. (rcolcs, or whites, of European

extraction, born in America. 3. Negroes. 4. Indians. 5. Mestizoes, or descendants of whites and Indians. 6. Mulattoes, or descendants of whites and negroes. 7. Zamboes, or descendants of negroes and Indians. The number of Euro- pean Spaniards is only about 80,000, and that of

the negroes only 6 or 8000. The Creoles form about one-fifth of the whole population, the In- dians two-fifths, and the mestizoes, mulattoes, and zamboes, nearly two-fifths. The northern provinces are very thinly settled. In 1803, 5,000,000 of the inhabitants, or about seven- eighths of the whole population, were concen- trated within the torrid zone, on about one-third of the territory ; and 4,000,000 of this number ived on the table-lands upon the ridge of the Jordillera. Nearly half the territory, as we have already seen, is quite unoccupied by ci- vilized inhabitants.

395. The Indians and casts, who form nearly four-fifths of the population, are in the most de- graded and oppressed state ; and it is only since the revolution that the Creoles have been per- mitted to take any share in the government and privileges vested in the small body of Europeans.

396. FACE OF THE COUNTRY. — California is situated in the north-western part of the Mexican territory, lying between the Pacific Ocean and the internal provinces, and extending north to the boundary of the United States. The settle- ments are almost confined to the coast, so that a large portion of the interior is not only uninha- bited but unexplored by the whites. It may be considered in fact as extending from the Rio Colorado to the Pacific, between twenty-three and forty-two degrees of north latitude. Its greatest length is 1300 miles, and its breadth 580 ; the area including about 400,000 square miles. The face of the country is very various. The peninsula, or Old California, is barren and sandy, traversed by a ridge of mountains which continue their course to the north-west. The coast of New California is bold, and the land gradually rises towards the interior into the table-land, on which the Chippewan mountains are based. The soil of New California is pro- ductive, and the climate in both parts of this province is fine ; but it has scarcely a popula- tion of one person to sixteen square miles The internal provinces are situated east of

California, in the same latitude, lying between this province and the territory of the United States, and stretch- ing on the south to the Gulf of Mexico ; the Vice-royalties, and the Pacific Ocean. They extend about 1000 miles from north-west to south- east, and 960 from north-east to south-west, the area being estimated at 960,000 square miles. The surface and soil are extremely various. The shores of the Gulf of Mexico and the Pacific Ocean are low, level, and sandy. The north-eastern section forms a part of the American Desert. The interior rises to the level of the table-land. The soil is generally dry and sandy, but there are many districts of great fertility; and the excellence of the climate, and the pecu- liar productiveness of the manioc and maize render it capable of sustaining a considerable population. But the great resource of this country is in its mines of gold and silver, which are numerous and rich.

397. The vice-royalty of Mexico lies south of the internal provinces, extending from twenty-four to sixteen degrees of north latitude, between the Pacific Ocean on the west, and the Gulf of Mexico and the Carribean Sea on the east. Its

length from east to west is about 1100 miles, and its breadth from north to south 550, making its area about 300,000 square miles. The shores, like those of the preceding division, are low and sandy, but in many parts very productive. The interior forms the principal portion of the great table-land we have described so particularly. It is a country remarkable for its picturesque beau- ties and rich soil, as well as for the grandeur of its lofty peaks and volcanoes, and the richness of its mines : it has been for ages the seat of one of the richest empires of the world. We have already described the climate of this country, and it is only necessary to add, that, in conse- quence of the general elevation of the interior, more than three-fifths of that portion of New Spain which lies within the tropic, and which forms about one-third of the whole, enjoy rather a temperate than a hot climate, entirely free from the extremes and the diseases of the coast.

398. PRODUCTIONS. — A considerable part of the country situated to the north of the tropic is rendered barren by want of moisture; and in many parts also of the table-land within the tro- pics the plains are arid and destitute of wood. Still a great portion of New Spain belongs to the most fertile regions of the earth. On the banks of all the rivers, and wherever there is a supply of moisture, the fertility is extreme. The declivity of the Cordillera is exposed to humid winds and frequent fogs; and the ve- getation, nourished by these aqueous vapours, exhibits an uncommon beauty and strength. The humidity of the coasts, assisted also by a burning sun, though it generates some

terrible diseases, is favourable to the growth of th* richest produce of tropical climates. The pro- ductions of this country are as various as its climate. In the course of a few hundred miles are to be found almost all the fruits of the temperate and torrid zones. The fertile regions on the coast produce, in abundance, sugar, indigo, and cot- ton. The banana also, which supplies the place of bread to the inhabitants of the torrid zone, and which is said to produce a greater quantity of nutritive substance than any other plant on the same space of ground, flourishes luxuriantly in all the low country. The same region in which the banana grows, produces also the manioc, which yields a very nutritious bread. But by far the most important agricultural pro- duction is maize. It grows in the low country, and on all the table-land except some of the highest plains, and the produce is most abundant, being in some places 800 fold, and on an average 150 fold. In the most warm and humid regions it will yield two or three harvests annually. Wheat, rye, and other European grain, have been successfully introduced in the northern provinces, and on the elevated plains within the tropics. All the garden vegetables and fruit- trees of Europe are now also possessed by the Mexicans. The central table-land produces in the greatest abundance cherries, prunes, peaches, apricots, figs, grapes, melons, apples, and pears. The vine and the olive would also flourish in this delightful climate ; but, through the influence of the merchants in the mother-country, the4r cultivation has been prohibited, and the colo-

nists are still obliged to import their wine and oil from Old Spain. Tobacco is cultivated in some districts. One of the most valuable objects of husbandry is the cochineal insect, which is employed for dyeing scarlet, and is produced in considerable quantities.

399. MINES. — More than nine-tenths of all the silver in the known world is derived from the mines of Spanish America. Of this Mexico fur- nishes 22,000,000 of dollars annually. The mint of Mexico furnished from 1690 to 1803 more than 1,353,000,000 of dollars ; and from the first discovery probably 2,028,000,000, or nearly two-fifths of the whole sent from America. Nearly half of this is procured from the three mining districts, Guanaxuato, Zacatecas, and Catorce, which form a central group of mines between 21° and 24° of latitude. The vein of Guanaxuato alone furnishes on an average one- sixth of the whole silver of America. ‘ The pro- duce of the Mexican mines,’ says Humboldt, who is our nrincipal source of information on this subject, ‘

has tripled in fifty-two years, arid sex- tupled in a hundred years ; and it will admit of greater increase, as the country shall become more populous, and industry and information become more diffused.' The mines have hitherto been wrought in a manner calculated to render them far less productive and more expensive than they might be made. As British capital and Hritish ingenuity are now occupied in endeavouring to improve their condition, we may expect in due season an increase still more im- portant than lias yet been known. I5ut, notwith- standing the imperfection of the processes, and the want of steam-engines and suitable ma- chinery, they have produced immense profits to their proprietors. ' The single mine of Valen- ciana, in which the expense of working exceeds tour millions and a half of francs per annum, has for the last forty years never ceased to yield annu- ally to the proprietors a net profit of more than tlnve millions of francs ; the profits sometimes amounted to six millions; and it amounted to twenty millions in the space of a few months, for the family of Fayoaga at Sombrerite' — Humboldt. In 1802 the mine' produced 285,000 dollars. In nine years it yielded a net profit of 5,789,317 dollars. The expense of ei'jcht millions added to this gives in the UTOSS product of thirteen mil- lions. There were 1<">00 workmen employed in the interior of the mine, and three hundred men women and children without, making a total of 2100, at one dollar to half a dollar per day. The depth oi the mine is lo 10 feet, audit extends about (-lulu miles in lenuth.

iuo. According to Humboldt there are 3000 mines of the precious metals in Mexico at 450 sta tions, i heir wealth consists more in the abundance ll'.an the mhuc-s of the ore. The consumption J>t mercury is \ery r_ivat, and the difficulty of iiroenrmu' it is one olKtacle to the progiess of the mines. The Teat depth of many of the mines re- ijiiiro i TV expensive machinery; ami in some places inel could not he procured to work steam- eii'.iun >. The mo-,1 p:oiiucti\e mmes are situated at an elevation oi' from 5000 to 10,000 feet I' e h\el , which he estimates

do not occupy a surface of more than 12,000 square leagues, or a tenth of the whole kingdom.

401. Gold is not peculiarly abundant in Mexico. While the annual export of silver amounts to twenty-two millions of dollars, that of gold does not exceed one million. The gold is chiefly extracted from alluvial grounds by washing. These grounds are common in So- nora in latitude 31°; lumps of five or six pounds' weight have been found, but the exces- sive price of provisions, and want of water, are great obstacles to the extraction of the metal. There are also veins of native gold in Oaxaca, and in Guanaxuato, Durango and Guadalaxara ; it is

also found in the silver ores. Platina has never been found north of the Isthmus of Pa- nama.

402. Mercury, which is so essential in the •working of the mines of silver, has been disco- vered in many parts of Mexico, especially in the provinces of Guanaxuato and Mexico. At St. Juan de Chiaa is a vein of cinnabar from six to eighteen feet in width, and its ores are extremely rich. It has only been wrought to the depth of 160 feet. The mine of Durasno produced in a very few months 700 quintals v.f mercury ; but, from the want of intelligence a id perseverance in working the mines of this raie and important metal, they were considered not worth attention ; and only two were wrought during Humboldt's visit to the mining regions.

403. Copper is abundant in Mexico, and was the material used by the ancient Mexicans for cut- ting instruments in place of iron. Tin is found in grains in Guanaxuato and Zacatecas. Iron mines are found in considerable abundance in Valladolid, Zacatecas, and Guadalaxara ; and are wrought with considerable spirit when the in- terruption of commerce shuts out foreign sup- plies Lead is found in the north-eastern pro- vinces. Zinc and arsenic are also among the minerals of New Spdin. Humboldt concludes his account of these minerals by expressing the opinion, that ' the Mexican Cordilleras will one day supply the mercury, iron, copper, and lead, necessary for internal consumption.'

404. MANUFACTURES. — The whole value of the manufactures of Mexico was estimated by Humboldt at 1,500,000 dollars. They embrace cotton and woollen cloths, but chiefly those of a coarse texture, and conducted in a very imperfect manner. They were carried on usually by Indian workmen in a state closely resembling slavery. Silk is scarcely an article of manu- facture; hemp and flax are not wrought at all, and even the manufacture of paper was un- known. Hard soap is a considerable article of domestic manufacture, in consequence of the abundance of soda found upon the table-land, and which will one day become an article of commerce with Europe. In 1802 there were sixteen manufactories of delf ware and two of glass. Hides are also manufactured to some extent.

405. The manufactures of tobacco and gun- powder are among the most extensive, and were formerly reserved as royal monopolies. The privilege, however, was by no means secured from violation, for much more of these articles

•was annually consumed than the government produced. The manufacture produced a revenue of 800,000 dollars in 1802. The latter monopoly is maintained by the present government.

406. There are few countries in which a more considerable number of large pieces of plate are annually executed than in Mexico. The smallest towns have their work shops of silver ; and ser- vices of plate, to the value of 6000 dollars, have been manufactured in Mexico, which rival the best productions of Europe in elegance of design and fine workmanship. The mint of Mexico is an immense manufactory of coin, which supplies the treasuries of Europe. The coinage of this single mint exceeded that of the sixteen in France, between 1726 and 1780, by nearly one half Other articles of luxury are also made beautifully in this country. Even harpsichords and pianos are made in the internal provinces. The forests afford a great variety of beautiful woods.; and the Indians display great ingenuity in forming them into articles of furniture and toys. Very handsome carriages are also made here, although the most elegant driven through the streets of Mexico, at the height of 9000 feet above the sea, are of London manufacture.

407. COMMERCE. — Mexico has a considerable internal commerce. The mining districts are continually exchanging their produce with the other provinces for provisions, and tools, and other supplies. The interior supplies the coast with bread stuffs; and receives foreign goods and the produce of the lower and warmer re- gions In return. The opposite coasts exchange the supplies which they receive respectively from Asia and Europe. The city of Mexico is the central mart of all the trade. The foreign com- merce centers almost entirely in the two depots for the East Indies and Europe, Acapulco, and Vera Cruz. It is much impeded for want of good harbours.

408. The eastern coast of New Spain, properly speaking, possesses no port ; for Vera Cruz, through which the whole commerce is carried on, is merely a bad anchorage. The cause of this disadvantage is the gulf stream, which, in its passage along the shore, continually throws up the sands of the ocean, forming bars over which large vessels cannot pass. The sands thus heaped up by the stream are continually adding to the continent, and the ocean is everywhere retiring. These obstacles do not exist on the coast of the Pacific Ocean. San Francisco in New California, San Bias in the intendancy of Guadalaxara, near the mouth of the river Santiago, and especially Acapulco, are remarkably fine ports. A serious inconvenience, however, is common to the eastern coast and the coast of the Pacific Ocean — they are rendered

inaccessible for several months of the year by violent tempests, which effectually pievent all navigation. The port of Acapulco is an immense basin cut in granite rock, and forming one of the most secure harbours, in which the largest ships lie almost touching the shore. It was chosen as the depot for the trade between Spain and its possessions in the East Indies, and a galleon of 1200 or 1500 tons is annually despatched from them to this port laden with cottons, silks, jewelry, and spices; and returned

with coin and iron to the amount of 1,500,000 dollars. Its arrival is the signal for the concourse of merchants from all parts of the country, and produces the chief fair of Mexico.

409. The commerce with Europe is carried almost entirely from Vera Cruz, although Tam- pico has recently become a place of resort for foreign ships. It is the eastern port for export- ing the precious metals to other parts of the world, and the great mart for the disposal of manufactured goods. The trade, as calculated by Humboldt, was as follows : —

Dollars. Annual exports of gold and silver J

coin, bullion and plate . . .S 17>uoo>00′

Cochineal 2,400,000

Sugar 1,300,000

Flour 300,000

Other articles 790,000

21,790,000

Annual imports of bale goods, in-“)

eluding woollens, cottons, linens > 9,200,60C

and silks, to the value of . . j

Paper 1,000,000

Brandy 1,000,000

Cacao 1,000,000

Quicksilver 650,000

Other articles 1,750,000

14,600,000

410. GOVERNMENT. — The government of Mexico is now republican in its form ; but the principles of its constitution do not seem to be finally established ; and, in the present disturbed state of the country, it must be, to some extent, a military despotism. It is too feeble, or its agents are too corrupt, to repress the bands of rob- bers. The mass of the peasantiy are nearly in the feudal state of vassalage, and the odious distinc- tions between the native Indians and whites, in taxation and privileges, do not seem to be abo- lished. Recent and authentic information leads us to believe that much must be done before a republican government can be administered in any degree of purity.

411. REVENUE AND DEBT. — The revenues have of course been materially affected by the revolutionary state of the country. They are derived from the foreign customs, the monopoly of tobacco, an oppressive duty, called the Alca- bala,paid on every removal of goods, and various excise duties and direct taxes. In 1823 the products of six months were only 6,418,814 dol- lars according to the official report of the minis- try. The expenditures for the same period amounted to the same sum, including 2,800,000 employed in conducting the manufactories of tobacco and gunpowder. From the amount we have stated must be deducted the expense of the manufactories and the deficit, and we have the net amount of revenue only 3,500,000, or 7,000,000 per annum ; of this, 200,000 was ex- pended on the army, and 600,000 on the civil list. The revenue for 1808 under the old go- vernment was 20,000,000, and the expenditure*

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14,000,000, leaving a balance, remitted to Spain, of 6,000,000 dollars

412. The public debt was stated at 46, 110,112 dollars, besides a sum of 26,000,000, due to Spain, which was supposed to be no longer binding upon them, after the opposition of the mother country to their emancipation, and the great revenue it had exacted.

413. RELIGION. — The established religion is the Roman Catholic, and no other is tolerated by law. The clergy are said to amount to 14,000, and form a powerful body. They are not dis- tinguished for piety and morality; and their cha- racter has unhappily produced a very general disregard and disbelief of religion, which can scarcely

endure the existing state of things. The Indians have no knowledge of religion, except as a collection of forms ; and these they have been permitted to mingle with their pagan rites.

414. EDUCATION. — Education was formerly refused to the Indians and Mestizoes ; and there are not now adequate means of improvement for those who desire it in most parts of the country. The university at Mexico was once highly re- spectable, and produced men of great learning. The people are in general grossly .ignorant on all subjects ; and no time has yet been afforded for the new government to adopt plans for gene- ral improvement. A society has been formed and patronized by the government for the intro- duction of the system of mutual instruction, and a school for 1600 children has been established in a convent in the capital, on this plan, intended to communicate not only the elementary, but the higher brandies of knowledge.

4 15. HISTORICAL SKI.TCH. — Fernando Cortez, a native of the town of Medellin in Old Spain, and a descendant of a noble but decayed family, \vas the discoverer and conqueror of Mexico. This celebrated adventurer was born in the year Ho1.'), had studied at Salamanca, and was in- tended for the law ; but his restless disposition caused him to abandon his profession and search for distinction in the romantic regions of the west. Proceeding to llispaniola he joined Ve- lasquez in an expedition to Cuba: here he was chosen to undertake a voyage of discovery to the coa.t of Mexico; and, having spent the greater part < >t his fortune in equipping his army and licet, he set sail on the loth of February, 1519, and Meer« ward, and landed at the place now called St. .hum de I'lloa, where he debarked his men, horse-;, and ;ˆuns, and erected a fortification.

•lit). The emperor of Mexico, hearing of the arrival of the Spanish ships at this place, sent two ambassadors to meet the strangers, to en- quire t'aeir intention-;, and to ofi'er them assist- ance, (.'nrti /. returned a haughty answer, that ' he \soulil confer ssii'i none but the emperor.' The Me\ienn > endeavoured to conciliate him by every mi ms in their power. Alarmed by the nnii-u;,! .-omul of cannon they heaped upon hiai the must costly presents, with the hope of in'luein; him not to inarch into the interior.

The Spanish troops, who entertained fears of being attacked, broke out into mutiny : this was, however, soon quelled by the address of Cortez, who persuaded them besides to choose him commander and president of the new colony they were about forming. The town, thus com- menced, received the name of La Villa Rica de la Vera Cruz. Not

long afterwards another mu- tiny took place of a more serious character ; but the influence of Cortez again prevailed, and he succeeded in inducing his men to adopt a de- cisive step which left them no alternative but conquest or utter ruin. This was the destruc- tion of the fleet, a measure which left between five and six hundre'd persons without hope of escape, in the midst of the hostile inhabitants of a powerful and populous empire.

417. Having effected this important measure, Cortez, who had been joined by the cacique of Zempoalla with 600 men, marched on the 16th of August, having with him 500 of his own sol- diers, with fifteen horses, and six cannon. With this force he entered the state of Tlascala, where he met with great opposition for fourteen days ; but, after having beaten the Tlascalans at all points, he granted them peace, and they became afterwards his allies. He next advanced against Cholula, where he was treacherously received, and, to avenge himself, massacred 6000 of the natives. Proceeding onwards from this place they came in sight of the capital of the empire. At a short distance from the entrance in to the city they were met by Montezuma at the head of his nobles, and surrounded by his guards and cour- tiers. Cortez dismounted from his horse and saluted the emperor with the utmost humility; and, after much ceremony, the emperor conduct- ed him to a house prepared for his reception. No sooner had Cortez taken possession, than he fortified it in the strongest manner. Here he learned that the cause of their not having been attacked was a traditionary prophecy current among this people, that a powerful nation, chil- dren of the sun, would chastise the country for the punishment of their sins. Cortez readily turned the idea to his own advantage, and en- couraged the awe which the Mexicans enter- tained for the Spaniards. Having under cover of the most friendly exterior made observations upon the city, he came to the determination of seizing Montezuma in his palace, and confining him in the Spanish quarters. He entered the palace with ten officers and soldiers, while a large party waited without. He addressed Montezuma; and, complaining of several things which he affected to dread, he requested the emperor would condescend to take up a tem- porary residence with the Spaniards. Monte- zuma reluctantly consented. He was at first treated with the attention and respect due to his station ; but, after a short interval, Cortez came to his apartment with a soldier bearing fetters, and told him that the garrison at Villa Rica had been attacked ; that he was the instigator of the insult ; that he (Cortez) had ordered the guilty to be executed ; and that the monarch himself must feel the weight of his anger. Turning fiercely to the soldier he commanded him to fetter the legs of Montezuma. The

unfortunate

monarch and his attendants were sunk in grief and affliction, and Cortez left the room to at- tend at the execution of the sentence on the cul- prits. After this was ended, he repaired to the emperor's chamber, and with his own hands took off the shackles.

418. Montezuma remained a prisoner for six months, during which period Cortez was em- ployed in reconnoitring the country, in preparing to build vessels on the lakes, and in dividing with his soldiers the spoils of their conquest. Monte- zuma now acknowledged himself, in form, a vassal of the Spanish king, and sent to Cortez his tokens of homage executed in all the prescribed forms, with a magnificent present accompanied by others from his subjects. In the mean time Velasquez, the commander of the expedition in which Cortez had sailed to Cuba, hearing of his success in Mexico, fitted out a fleet with a con- siderable force of land soldiers, which he placed under the command of Narvaez, with instructions to seize Cortez and his officers, and to take pos- session of the empire in the name of Velasquez. Cortez, hearing of the arrival of this armament, quitted Mexico, leaving a small force to guard Montezuma and his capital; and, having sent bribes to many of the officers of Narvaez, attacked the army by surprise, and gained a complete and almost bloodless victory. Hearing that his gar- rison had been attacked in Mexico, he returned immediately, and entered the city without moles- tation ; but was attacked in his fortress with great vigour. Having been twice wounded, and forced to retreat in the sallies made upon the besiegers, he adopted the resolution of placing the emperor in view of his enraged subjects. Montezuma endeavoured to pacify them, but in vain. The forlorn monarch was wounded by an arrow, and, disdaining the aid of the Spaniards, died broken-hearted and despairing. After his death, Cortez, finding that he could no longer maintain his position, quitted the town secretly, and marched for the Tlascalan territories. Hav- ing recruited the spirits of his followers, and re- ceived a reinforcement of 10,000 Indian allies, he again marched for Mexico exactly six months after his evacuation of it.

419. Having fixed his head-quarters at Tez- cuco, on the banks of the lake, twenty miles from the capital, he built, with the assistance of the Indians of the place, thirteen small ships, which he launched on the lake. At this juncture four vessels, fitted out by his friends in

Hispaniola, arrived with 200 infantry, eight horses, and sup- plies of arms and ammunition. He therefore im- mediately attacked the city on the east, west, and south. It was defended by Guatimozin, the new emperor, with undaunted courage, and Cortez himself was once taken prisoner ; but fortunately rescued, though wounded in the attempt. His soldiers, who fell into the hands of the Mexicans, were sacrificed on the altars of the god of war. His allies, the Indians, now amounted to up- wards of 100,000, and his vessels obtained pos- session of the lakes Tezcuco and Chalco. The siege continued with vigour for seventy-five days, and the town capitulated on the 21st of August, 1.V21, wben Guatimozii. was taken prisoner; but C ci IL-Z stained t'ac glory of his triumph by cruelly

ordering the emperor to be put to the torture, in order to make him confess where he had hid his treasure ; which, in fact, he had caused to be thrown into the lake. The remaining provinces of the Mexican empire yielded without much opposition to the Spanish conquerors.

420. Cortez now gave the country the name of New Spain. His proceedings were regarded with much jealousy at home, and an order was even issued for his arrest ; but this was revoked, and he was appointed captain-general of New Spain. After adjusting the government, Cortez returned to Spain. Here he gained the affection of the emperor, who conferred on him the title of Marquisi del Valle de Guaxaca, together with the order of St. Jago, and the grant of a large dis- trict in New Spain. His unabated ardour for discovery and conquest, carried him again to America in 1530. His after-life was doomed to be embittered by disappointments. The Spanish government took from him the political govern- ment of New Spain, vesting it in an audiencia real, or royal audience, but leaving him the military command. In 1536 he fitted out some vessels, and discovered the Great Californian Gulf and part of its shores; and, after enduring incredible hardships, returned to Mexico. Here he met with a renewal of* disappointment and oppression; and, for the purpose of obtaining justice, sailed for his native country, where he arrived in 1540, but obtained no redress. Mor- tification preyed upon his spirits, and this ex- traordinary man died in 1547, in the sixty-second year of his age.

421. The first viceroy of New Spain arrived in 1535. From this period to the year 1808, Mexico was governed by a succession of fifty viceroys, of whom only one was an American by birth, the Marquis De Casa Fuerte, a native of Peru. The annals of Mexico, from the conquest to the beginning of the present century, are re- markably devoid of interest. A series of restric- tive illiberal measures and oppressive exactions by the viceregal government, and especially the exclusive

employment of Europeans in civil offices, excited great discontent among the Creoles. At length the revolutionary spirit of the provinces of South America was in some measure com- municated to Mexico.

422. After the occupation of Madrid by the French, and the abdication of the king in 1808, the viceroy of Mexico received such contradic- tory orders from the several authorities which claimed the control of Spain, that he proposed to call a junta of the country. This excited jea- lousy among the Europeans, who had hitherto been accustomed to the exclusive possession of power, and they seized the viceroy in his palace, sent him prisoner to Spain, and assumed the government. This act excited equal indignation among the Creoles or native Mexicans, and a conspiracy was formed by them against his suc- cessor. It was headed by Hidalgo, a priest of some talent, and enthusiastic in the cause of in- dependence. He collected a considerable force, and was proclaimed generalissimo on the 17th of September, 1810, arid was received with shouts of joy by the Indians and Creoles. On the 27th of October he entered Toluca, a town

only twelve leagues west of the capital on his way thither. Some cause not ascertained led him to retire, and gave time for the royal forces to collect and pursue him with such vigour that he was completely defeated. He was ultimately taken and executed on the 20th of June 1811, together with some of his principal officers.

423. A junta had now been assembled as a provisional council for the revolutionists. Morelos, another priest, assumed the command in place of Hidalgo; and several provinces were com- pletely occupied. Morelos next called a congress of forty members, who framed a constitution and proposed terms of peace to the viceroy, which were rejected with contempt. On the 5th of November 1815 Morelos was taken and shot. The congress, after removing from place to place, were dissolved by General Teran, who had suc- ceeded to Morelos. In 1816 Mina, a nephew of the Spanish Guerilla chief, came to aid the revolutionists, and met with some success ; but was ultimately defeated and met the fate of Hi- dalgo and Morelos. The war was maintained in an irregular manner, and with various success, until in February 1818 the congress was sur- prised, and the president taken prisoner. The form of government, however, was still maintain- ed. In 1819 the war languished every where; the royalists had possession of the strong holds; the armies were at length disbanded ; and the chiefs dispersed

or retired to the mountains to wait a more favourable period. The teimination of this revolution is principally to be attributed to the opposition of the clergy.

424. The revolution in Spain, which intro- duced the cortes and the decrees for confiscating the church estates and reducing the number of the clergy, excited alarm in the same powerful body in Mexico, and they at once proclaimed from the pulpit that the interests of religion required the independence of Mexico. They united with the Europeans in selectiag Don Augustin Iturbide, a Creole, but a zealous royalist and in command of the army, as the instrument for tne execution of their plans. He soon formed a junction with the patriots ; and after having despatched emissaries to every part of the kingdom to prepare the people, he advanced to Iguala; and on the 24th February 1822 proposed to the chiefs the plan of Iguala, which was immediately adopted, and transmitted lo every part of the kingdom. This plan pro- vided,— lirst, for the preservation of the catholic religion and rights of the clergy; secondly, for the union of Knropeans and Creoles; thirdly, for thr indi prudence of Mexico ; fourthly, for a Imiiinl monarehy under Ferdinand, or one of his family. This plan, by no means the choice of ;niy party, \as yet received as a compromise by :ill ; and the revolution was effected every where without l)lood>lied, and almost without a struggle.

42.V At this moment General O'Donojou arrived at Vera Cm/, \ith the appointment of captain uvneral ; but finding the country so coinplelelv in the possession of the revolutionists, he made a tn-atv with Iturbide grounded on the plan of Kuala, and withdrew the royal forces from ihe capitol. A junta of thirty-six members \vj> nov. - ii.j.oinvd, and they chose a regency of

five persons, with Iturbide as president, to exer- cise the executive power. From this moment Iturbide, who had hitherto affected great modera- tion, made every effort to obtain absolute power. On the 24th of February 1822 a cortes elected according to the direction of the junta was as- sembled; they were soon divided into three parties, the Bourbonists, the republicans, and the partisans of Iturbide, who sought to profit by their dissensions to give him the supreme power. Frequent contests occurred between the parties and the regency, and at length were brought to a crisis by the refusal of the cortes to raise the troops required by Iturbide. On the 18th of May his friends assembled and harangued the soldiers, and distributed money among them ; and at ten o'clock at night they proceeded to Iturbide's house, and proclaimed him emperor under the name of Augustine the First. In the morning, on the assembling of the cortes, they found

themselves surrounded by an insulting soldiery and an enthuiastic mob, who threatened them with death if they did not immediately ratify their choice. This was accordingly done. Iturbide now made urgent demands for an in- crease of power, for a control over the judges, and many other arrangements which the cortes absolutely refused. On the 26th of August he arrested fourteen of the most active of his oppo- nents, and kept them in confinement without allowing them to be brought to trial. His views were still thwarted, and at length he sent an officer to dissolve the cortes, and expel them by force from their chamber.

426. The Emperor now called a junta of mem- bers appointed by himself, who assembled to the number of forty-five on the 2d of November, obviously as the mere organ for the expression of the imperial will. An insurrection, however, had broken out in the northern provinces in the month of October. Santana, who was in com- mand at Vera Cruz, in consequence of receiving a dismission, induced his troops to revolt and proclaim a republican government. Guadalupe Victoria, an early hero of the revolution, joined him ; and the party was soon after strengthened by the addition of other generals of the imperial troops. This was the signal for general revolt The emperor was called upon to abdicate, and at length, on the 8th of March, he called together some members of the old cortes, and tendered his resignation. The members declined receiv- ing any abdication, as this would imply his right to the throne ; but advised that he be per- mitted to leave the country with a pension ; and he was accordingly escorted to the coast, and embarked for Leghorn on the llth of May

1823.

427. On the 27th of March the republican army entered the capital. The old congress was immediately convoked ; a provisional government appointed, with an executive of three members ; a new congress was called, who framed a con- stitution since adopted. A federal government was established, and sworn to in the capital on the 24th of February 1824. The provinces next proceeded to organize state governments with every appearance of harmony.

428. Some disturbances arose subsequently,

from the ambitious designs of some of the supe- rior officers, but were quelled without serious difficulty. Iturbide was afterwards induced by his friends to return, but was discovered under a disguise, and was immediately arrested and shot. The great difficulties under which the new government now labours, arise from the distracted state of the finances, and the exhaust- ed condition of the country. Emissions of paper and forced loans were the only sources of supply for some time, and the credit of the government had become very low; but as these measures were abandoned it was again rising, and the loans obtained from British merchants promised to re-establish the finances and give time for the country to recover. The great dangers to be apprehended are — on the one hand from the in- fluence and intrigues of the priests, who dread the improvement of the people, and are opposed to civil liberty ; and on the other, from the degraded and oppressed Indians and casts, who form the majority of the population. The improvement of the condition of this part of the population was pronounced some years ago,as indispensable in order to secure the tranquillity of the country, even under the despotic rule of Spain.

429. GUATIMALA. — The southern portion of the Mexican provinces, formerly entitled the Captain Generalship of Gutatimala, has recently been erected into an independent republic, under

the name of the Central States of America, with a constitution nearly resembling that of the United States. Its former division were Chiapa, Vera Paz, Guatimala, Honduras, Nicaragua, and Costa Rica. The country was about 1000 miles in length from north-west to south-east. The settled parts lie chiefly on the coast of the Pacific. It is crossed by the ridge of the Cordillera, which in this part abounds with volcanoes. About twenty are in an active state. The lake of Nicaragua is in this region.

430. The soil is represented as extremely fer- tile, and the productions are similiar to those of Mexico. Grain, cotton, cochineal, wax, honey, dye-woods, and indigo of superior quality are the principal articles. The province of Honduras is particularly celebrated for logwood and ma- hogany; and the English have a settlement in it for the purpose of carrying on this trade. The farming districts furnish cattle, sheep, and wool in abundance. Guatimala contains few mines , The state of agriculture is better than in most of the other Spanish colonies, and the country more populous. In some parts three crops of maize are raised in a year. The climate is in some districts agreeable ; in others hot and un- healthy, varying like that of Mexico with the elevation of the ground. The population is estimated at 1,800,000, of which a considerable part are Indians.

INDIANS.

INDEPENDENT TRIBES OF NORTH AMERICA.

CHAP. V.

431. Only three centuries ago the whole ot North America was a dreary wilderness, occupied by the native tribes of Indians. Extensive tracts are now inhabited by civilized nations. The numerous tribes once found on the eastern coast have gradually diminished as the white popula- tion increased, and many have become extinct ; destroyed in part by the new diseases which they took from the whites, and still more, perhaps, by the habits of intoxication they learned. But a large part of this extensive division of the world, is still occupied by savage tribes, although nominally included within civilized governments. They have almost exclusive possession of all the territory north of thirty degrees of latitude, ex- cept the portion of the United States east of the Mississippi, and the British province south of latitude fifty degrees, or of the territory ex- tending from the northeri shores of the continent to latitude fifty on the eastern coast, and to lati- tude thirty degress west of the great river Mis- sissippi.

432. The northern and north-eastern coasts are inhabited entirely by the Esquimaux, who derive their subsistence chiefly from the sea. They resemble the Samoiedes of Asia in ap- pearance ; and, like them, are dull in intellect, mild in their disposition, and filthy in their habits. They do not appear to be regularly

organized in tribes. The Moravians have esta- blished several missionary stations among them, and find them very docile.

433. All the natives of this continent belong to a single and peculiar race, except the Esqui- maux ; and throughout its vast extent of country and variety of climates they preserve the same characteristics. They have a copper colour resembling that of rusty iron or cinnamon ; coarse, straight, black hair ; high cheek bones, and sullen eyes. The forehead is usually short, the nose and the whole countenance broad, the nostrils very open, and the lips thick. The beard is thin and scanty. It has been said that the Indians were destitute of beards ; but it is well ascertained . that this is not the case naturally, and that they take great pains to pluck them out. Some of the American race have a lighter colour than others. Thus Cook states that the natives around Nootka ‘Sound are little inferior in fair- ness to Europeans ; and the same observation is made concerning the Peruvians, that these variations do not appear to arise from situation, as they do not

correspond to the difference of climate.

434. Most of the Indians of North America are formed into distinct tribes. Those now re- maining in the United States are really independent communities, being allowed to hold their

lands, and continue under their own government and laws, so far as they do not interfere with the laws of the Union. At the original settlement of the country the right of soil, which to the Indians had only the value of a hunting ground, was purchased in several of the provinces. The only right now claimed by the government of the United States is the sovereignty of the soil, and the right of pre-emption of all lands sold by the Indians. Most of the tribes receive frequent presents, and many of them an annual stipend from the government, of blankets, mus- kets, gunpowder, and other articles of necessity, and the authority of the chiefs is recognised by investing them with medals. The interior of North America, from the borders of the Esqui- maux to the St. Lawrence and the great lakes, is occupied chiefly by the various tribes of the Knisteneaux and Chippewayans. The Knis- teneaux are the most intelligent, mild, and honest. These tribes inhabit the northern part of Missouri Territory, and extend as far east as Lake Michigan. Thoie are two or three missionary stations among them ; and a few small commu- nities are partially civilized.

435. The principal tribes between the St. Lawrence and the Potomac, were the Mohekan- neews, or Mohegans, and the Iroquois, or Six Nations. A few of the Mohekanneews still re- main scattered through New England and its islands ; and about 5,000, chiefly Iroquois, reside in the western part sf the State of New York. Some ot these have become civilized and Chris tian, from the instructions of missionaries and the agents of government. Among these were several tribes on the island of Martha's Vine- yard, and there are still considerable numbers remaining; but almost destitute of religious in- struction. The most important tribes in the United States are those living between the Tennessee River and the Gulf of Mexico ; the Cherokees, Chichasaws, Choctaws and Creeks, amounting to 60,000. Those nations have acquired most of the arts of civilized life ; and many cannot lie distinguished from the whites with whom they have intermarried; but they still retain their former government and many of their customs. They are friendly to our govern- ment, which has united with missionary societies in sending teachers and mechanics to give them

instruction in Christianity and the arts of civiliza- tion. Even now there are many among them v»ho are well educated, and possess large estates v>ith numerous slaves. The Seminoles formerly belonged to the Creeks, but are said not to have so good a character. In the Arkansaw territory several powerful tribes are found, who use horses taken tiom the immense herds which are found wild in that region.

•l.'!tj. Tli'j nations best known in the Missouri territory are the Sioux, the Pawnees, the Rica- rees, ,md the Usages. They are remarkably tall, roiiiiiM, ;unl ferocious, and fond of war. Their country abounds \itli animals, furnishing excel- lent 4.insaiid furs, which they sell to the whites. Sever;]! missionary stations are established among t;ns;' tribe.s, \ ith favourable prospects; and one among t:iose (.'herok'.-es \lio removed from their to.nvr residence to the Arkansaw territory a

few years since. The Snake Indians are a mild inoffensive race living among the rocky moun- tains, who are much oppressed by those around them. The tribes west of the Rocky Mountains are very little known. Many of them are called flat-head Indians, from the flatness of their skulls, produced by pressing their heads in infancy. It is supposed that there are 150,000 Indians be- tween the Mississippi and the Rocky Mountains ; and about the same number beyond these moun- tains ; all of which are in a savage state, ignorant of Christianity, and sunk in vice. There are probably 100,000 east of the Mississippi, (making 400,000 in the whol(e,) most of whom are in the same condition.

437. The number of Indians in the British provinces is not well ascertained. Their condi- tion does not seem to be so secure as in the United States. The tribes which originally possessed the provinces of Nova Scotia, and are united by treaty with the government, are now mere wanderers. They possess no land, they receive no stipend from the government, nor are they the objects of its care in any respect. They are even left without adequate protection from the oppression of individuals. Even their bury- ing-grounds have been taken from them by individuals, and their attempts to settle and cul- tivate the ground have more than once been thwarted by the seizure and appropriation of their improvements by the whites.

438. The Indians of Mexico form two-fifths of the whole population, but are kept in a state of entire dependence, and of subjection strongly resembling slavery. They ate confined to villages in which whites are not permitted to reside ; are allowed to possess no private property ; and are rendered incapable of entering into a contract. The casts are kept in a state of degradation by an impost called the tribute, and

other restric- tions, merely on the ground of the mixture of blood ; and by leading them into debt many are made almost perpetual slaves to those possessed of capital.

439. The Indios Bravos, or independent tribes of the north, are considerably numerous, and maintain a state of perpetual war with the whites. When taken prisoners they are usually made slaves. They are vastly superior to the subdued Indians in character and energy. The only important difference between them and the In- dians of the missions in Mexico, consists in the subjugation and confinement of the subdued to a single spot, their acquaintance with some of the arts of civilization, and their making the sign of the cross, and performing the other ex- ternal rites of the catholic religion.

440. The Indians of North America are ge- nerally distinguished for boldness, activity, and patience under fatigue and suffering. They are usually grave and hospitable in their disposition ; and a remarkable degree of native intelligence and eloquence is found among their chiefs and warriors. The Indians of Mexico have a milder character and less energy than those of the northern tribes. The subdued Indians have the feebleness and degradation of slavery.

441. AMERICAN LANGUAGES. — The languages cf America are known but imperfectly, and

there is a great variety of opinions concerning them. In North America, east of the Mississippi river, all known languages are traced by the latest authors to three or four great branches. 1st. The Karalit, or Esquimaux, is spoken by the Indians of this name on the northern and north-eastern coasts. It has been found to be the same with that of the Tschutkis, or eastern Siberians. 2d. The Delaware, sometimes called Mohegan and Algonkin, is the most widely dif- fused. It prevailed among all the ancient tribes of New England, and those north of the Ohio River, and the lakes, and as far west as the Rocky Mountains. Dialects of this language are still spoken by the Chippeways, Shawnees, Ottawas, Winnebagoes. 3d. The Iroquois is a distinct language, remarkable for wanting all labials, and therefore sonorous. 4th. The Flo- ridian family, according to Heckewelder, is a distinct branch, embracing all the dialects on the Gulf of Mexico.

442. West of the Mississippi there are many languages not well

known. Among these are the Sioux and the Pawnee in the north ; and in the south a great variety.

443. Mexico is said to have more than twenty languages, many of which are as distinct from each other as the Greek, the German, and the French. Fourteen have grammars and dictiona- ries. The Aztec, or ancient Mexican, is the most prevalent. On the coast of California no less than seventeen languages are spoken.

444. The Carribee is the native language of the northern parts of South America, and was that of the West India Islands. The language of the Incas, which is called the Quichua, pre- vails in Peru and the neighbouring districts. It is described by a native of that country as abounding in vowels, and peculiarly soft in its sounds.

445. The Araucanian of Chili is also de- scribed as a distinct language, remarkably rich and harmonious.

446. The character of the American languages

is by no means such as we should expect among barbarous nations. Some resemblance has been found to Asiatic dialects; but their origin and connections have not been fully investigated. Although they were never written by the Indians, they are remarkably artificial and complicated in their structure. Some of them are almost desti- tute of the irregularities found in the languages of the civilized world. Words are easily com- bined so as to express every shade of meaning with exactness, and the Chilese is said to bf far more precise than European languages. There is such a variety of words to express a single idea that, without a full examination, they would be considered as belonging to a different language, and hence the variation of dialects is much less than at first appears. Some, like the Mexican and Chilese, are distinguished for their copious- ness in abstract terms ; so as to render them pe- culiarly suitable for discussions. They are re- markable for the length of their words, and are generally sonorous and agreeable in their pro- nunciation. A distinguished scholar, who has investigated these languages, declares himself ‘ lost in astonishment ‘ at the copiousness and sin- gular structure of these languages. Notwith- standing the regular form of their languages, no native people of this continent had devised an alphabet ; and other methods were used for re- cording events. The Indians of South America at an early period used knotted cords, called quipo, as a record ; and the North American Indians were accustomed to deliver a belt of wampum, as the memorandum of each portion of a speech or message.

447. The most perfect means of recording events among the natives of America, was the picture-writing of the Mexicans. It was a mix- ture of paintings and hieroglyphical emblems, and was the only means of communicating in- formation to a distance. The Indians of the United States convey intelligence by drawings and symbols of the same nature, but executed in a very rude manner.

PART II.— SOUTH AMERICA.

CHAP. I.

GENERAL PHYSICAL DESCRIPTION.

1. SOUTH AMERICA, connected with North America by the Isthmus of Darien, lies between north lat. 12° 30'; and south latitude 55° 30'; and between 35° and 81° west long. It is bounded on the north by the Carribean Sea, the Atlantic Ocean, and the isthmus already named; east and south by the Atlantic; and on the west by the Pacific Ocean. Its greatest length from north to south is 4570 miles ; and its greatest breadth 3320, including a superficial area of about 7,01 0,500 square miles.

2. We shall divide our observations upon this it'jpendous portion of the continent into two

parts : the first, including a general physical description, or its great geographical divisions and features; and the second, the more circum- scribed geography and extent of its civil divi- sions, together with its politics, and a sketch of its intellectual and moral state.

3. The New World is not more distinguish- able from the other regions of the globe by its position and extraordinary magnitude, than by the majesty and sublimity of its geographical features — all to be traced, in their full extent, in this southern portion. Its stupendous moun- tains which bulge above the clouds, and are piled

one above another like the fabled pillars of heaven — its wide- stretching plateaux — its almost immeasurable savannas — and its mighty rivers, rolling their majestic waters over the plains to the ocean, impress the mind with sensations of awe and astonishment. Placed amid the summits of its Andes, the European traveller seems as if lifted into a new horizon, and surrounded by the ruined fragments of a superior world. The im- pressive scenery of America, in this respect, is nevertheless deficient in some of those features which

augment the beauty and sublimity of other mountainous regions. The magnificent glaciers, which in the Alpine districts of Europe add majesty to horror, and the terrible avalanches, so awfully grand and destructive, are unknown in the torrid zone. But the tremendous chasms and cataracts have excited the astonishment of every beholder.

4. The Andes are the most magnificent moun- tains in South America; and, indeed, all the other mountains of any considerable importance are considered by some writers as different branches and ramifications of these. We sup- pose the range which runs along the eastern coast to be an exception to this statement. The main chain of the Andes, running along the wes- tern coast, extends on both sides of the equator to near the thirtieth degree of latitude, it is of unequal height, sinking in some parts to 600 feet from the level of the sea, and, at certain points, towering to an elevation of almost four miles. The colossal Chimborazo lifts its snowy head to an altitude which would equal that of the Peak of Teneriffe placed on the top of Mount /Etna. Tlic medium height of the chain under the equator may be reckoned at 14,000 feet, while that of the Alps and Pyrenees hardly exceeds 8000. Its breadth is proportionably great, be- ing sixty miles at Quito, and 150 or 200 at Mexico and some districts of the Peruvian ter- ritory. This stupendous ridge, intersected in Peru and New Granada by frequent clefts, or ra- vines, of amazing depth, softens down by degrees to the north of the Isthmus of Panama, and spreads out into the vast and elevated plain of Mexico. In the. former provinces the inhabitants are obliged to travel on horseback or on foot, and in some cases to be carried on the backs of Indians ; whereas carriages drive with ease through the whole extent of New Spain, from Mexico to Santa]•'(‘, alori'j; a road of more than 15,00 miles. The equatorial regions of America ex- hibit the same composition of rock that we meet with in other parts of the globe. The only for- mations which llmnboldl could not discover in iiis travels were those of rhalk, roe- stone, gray wakke, the lopa/.rock of \Verner, and the com pound of serpentine with granular limestone which occurs in Asia. Minor. Granite, in South America, constitutes the great basis which sup- ports the' other form; tions; above it lies gneiss; schist, and then primitive , stone, chlorite schist, and form subordinate beds in ceous schist, which is very imes alternates with serpen higli ridge of the Andes with formations of por-

phyry, basalt, phonolite, and green-stone ; and these, being often divided into columns, that ap- pear from a distance like ruined castles, produce a very striking and picturesque effect. At the bottom of these huge mountains occur two dif- ferent kinds of limestone ; the one with a silicious base, enclosing primitive masses, and sometimes cinnabar

and coal ; the other with a calcareous base, and cementing secondary rocks together.

5. Plains of more than 600,000 square miles are covered with an ancient deposit of limestone, containing fossil wood and brown iron ore ; on this rests the limestone of the Higher Alps, pre- senting marine petrifactions at a vast elevation. Next appears a lamellar gypsum, impregnated with sulphur and salt ; and, still higher, another calcareous formation, whitish and homogeneous, but sometimes cavernous. Again occurs calca- reous sand-stone, then lamellar gypsum mixed with clay; and the series terminates with calca- reous masses, involving flints and hornstone. “But what may perplex some geologists, is the singular fact noticed by Humboldt, that the se- condary formations in the New World have a most enormous thickness and elevation. Beds of coal are found in the neighbourhood of Santa Fe”, 8650 feet above the level of the sea ; and even at the height of 14,700, near Huanuco in Peru. The plains of Bogota are covered with sand-stone, gypsum, shell-limestone, and, in some parts, with rock-salt. Fossil shells, which, in the old continent, have not been discovered higher than the summits of the Pyrenees, or 11,700 feet above the sea, were observed in Peru, near Micuipampa, at the height of 12,800; and again at that of 14,120; besides at Huan- cavelica, where sand-stone also appears. The basalt of Pichincha, near the city of Quito, has an elevation of 15,500 feet; while the top of the Schneekoppe, in Silesia, is only 4225 feet above the sea, the highest point in Germany where that species of rock occurs. On the other hand, granite, which in Europe crowns the loftiest mountains, is not found in the American conti- nent above the height of 11,500 feet. It is scarcely known at all in the provinces of Quito and Peru. The frozen summits of Chimborazo, Cayambe, and Antisana, consist entirely of por- phyry; which, on the flanks of the Andes, forms a mass of ten or twelve thousand feet in depth. The sand-stone near Cuenca has a thickness of 5000 feet; and the stupendous mass of pure quartz, on the west of Caxamarca, measures, per- pendicularly, 9600 feet. It is likewise a remark- able fact, that the porphyry of those mountains very frequently contains hornblende, but never quartz, and seldom mica.

6. The Andes of Chili have a distinct nature from those three chains called the Maritime mountains, which have been successively formed by the waters of the ocean. This great interior structure appears to be coeval with the creation of the world. It rises abruptly, and forms but a small angle with its base ; its general shape being that of a pyramid, crowned at intervals with conical, and, as it were, crystallized ele- vations. It is composed of primitive rocks of quartz, of an enormous

size and almost uniform configuration, containing no marine substances,

which abound in the secondary mountains. From the Cordillera of this part of the Andes, are obtained blocks of crystal, of a size sufficient for columns of six or seven feet in length. The central Andes are rich beyond conception in all the metals, lead only excepted. One of the most curious ores found in the bowels of those mountains is the pacos, a compound of clay, oxyde of iron, and muriate of silver, with native silver. The mines of Mexico and Peru, hitherto worked with remarkable success, so far from being exhausted, promise, under a liberal and improved system, to become more productive than ever. Nature has, however, blended with those hidden treasures the active aliments of de- struction. The whole chain of the Andes is subject' to the most terrible earthquakes. From Cotopaxi to the South Sea, no fewer than forty volcanoes are constantly burning; some of them, especially the lower ones, ejecting lava, and others the muriate of ammonia, scorified basalt, and porphyry, enormous quantities of water and moya, or clay mixed with sulphur and carbona- ceous matter. Eternal snow invests their sides, and forms a barrier to the animal and vegetable kingdoms. Near that confine the torpor of ve- getation is marked by dreary wastes ; and in these wild solitudes the condor, a fierce and powerful bird of prey, fixes its gloomy abode.

7. The appellation Chimborazo, a mountain in the Paramo, or desert of Riobamba, in the kingdom of Quito, signifies, mountain ' of the other side.' It is the loftiest in the world, situate, according to the observations of M. de la Condamine, in 1° 21′ 18″ south latitude. Its sides are covered with a kind of white sand, or calcined earth, with loose stones, on which grows a certain herb called pajon, which affords pasture for cattle. The warm streams flowing from its north side seem to warrant the idea that within it is a volcano. From its summit flow the Guaranda running south, the Guano south- east, and the Machala east. On its skirt lies the road which leads from Quito to Guayaquil ; in order to pass which, with safety, it is requisite to be cautious in choosing the proper season. Many Spanish conquerors of this province were here frozen to death. On the 23d of June, 1797, this mountain was visited by Humboldt, who, with his party, reached its east slope on that day, and planted their instruments on a narrow ledge of porphyritic rock which projected from the vast field of unfathomed snow. A chasm, 500 feet wide, prevented their further

ascent. The air, reduced to half its usual density, was intensely cold and piercing. Respiration was difficult, and blood oozed from their eyes, lips, and gums. They stood on the highest spot ever trod by man. Its height, as ascertained from barometrical ob- servation, was 3485 feet greater than the eleva- tion attained, in 1745, by Condamine, and 19,300 feet above the level of the sea. From that extreme station the top of Chimborazo was calculated at 2140 feet still higher. In Quito is also the mountain desert of Cotopaxi, in the province of Tacunja, in 4° 1 1′ south latitude. It is of the figure of an inverted truncated cone, and was discovered, iu 1802, to be only 260 feet lower than the crater of Antisana, which is

19,150 feet above the level of the sea. On its snowy summit is a volcano which burst forth in 1698 in a dreadful manner, and destroyed the city of Taconja, with three-fourths of its inhabi- tants, together with several other settlements. A river of mud, which it vomited up, so altered the face of the province, that the missionaries of the Jesuits of Maynos, seeing carcases, pieces of furniture, and houses, floating down the Marag- non, were persuaded among themselves that the Almighty had visited this kingdom with some signal destruction ; and, therefore, wrote circular letters to ascertain what number of persons were remaining alive. Similar phenomena were ex- perienced in the years 1742, 1743, 1766, and 1768. From the east part of this mountain the Napo takes its rise; and from the south the Alagues, the Cotouche, and several other rivers.

8. The celebrated mountain of Potosi, in the twenty-sixth degree of latitude, has on its skirts the city of its name. This mountain is well known throughout the world for the immense riches extracted from its inexhaustible mines of silver. The distinguishing feature of the moun- tains of Chili, especially that of Copiapo, is, that they consist, in a great degree, of petrified teeth, or bones of animals, coloured by metallic vapours. Copiapo, according to the Indian tradition, owes its name to, and is indicative of, this circum- stance. The turquoises, or stones, found on its mountains ,are usually of a greenish blue, and very hard, being known by the name of the tur- quoises of the old rock. Some authors describe the mountain as consisting of marble, striped with various coloured bands of a beautiful appearance.

9. It appears to be a general principle in these mountains that they are highest at the equator; and that they decrease, in a gradual ratio, as they are distant from the lofty chains of the Andes. The following table exhibits the comparative height of the most remarkable mountains in South America, in relation to those of some other parts of the world.

Feet above the level of ths Sea, Chimborazo, the highest peak of the Andes 21,440

The highest part upon this mountain ever trodden by man 19,400

Cajambe 19,480

Antisana (volcanic) 19,150

Farm-house on the above (the highest inhabited place on the globe) . . 13,500

Cotopaxi (volcanic) 18,898

Illinissa 17,238

Nevada de Santa Marta 16,490

Catocatche 16,450

Tunguaragua (volcanic) 16,270

Nevada de Merida 15,201

Pambomarca 13,500

Imbabura (volcanic, which frequently throws up fish) 8,960

In Europe, and other parts of the World.

Peak of Teneriffe 15,396

Mount Blanc 15,243

TEtna . . t 12,000

Gemmi, in Switzerland . . . , . 10,110

Feet above the level of the sea.

Buet 9,945

Granacion 8,874

Blue Mountains, in Jamaica . . . 7,483 Table of Good Hope Cape 3,585

10. But America is, perhaps, not more re- markable for the stupendous magnitude of its mountains than for the vast elevation of its plains.

The highest cultivated land in Europe is sel- dom more than 2000 feet above the level of the sea ; whilst a great portion of the table-land in America lies at the enormous height of from 6000 to 10,000. Many of the extensive plains of Peru are near 10,000 feet in elevation. Other wide plains, almost interminable, stretch through the regions of this amazing continent, at a slight elevation above the level of the sea, as exempli- fied in those of Orinoco, Amazonia, and Buenos Ayres. These consist, for the most part, of ex- tensive savannas, occasionally diversified with clumps and palms. Of these lofty regions the province of Quito is the most remarkable, which enjoys a delightful climate, and supports an immense population. Extensive towns have been erected on this celebrated spot. That of Quito is 9,639 feet in altitude, and the people, who reside secluded from the rest of the world, gradually forget that, the towns crowded with inhabitants — the pastures covered with flocks — the fields waving with luxuriant harvests, and every other surrounding object, hang suspended in the upper regions of the atmosphere, at the elevation of 9,600 feet above the level of the sea.

1 1 . As the mountains of America are so much superior to those of the other divisions of the globe, so are the rivers of much greater magni- tude and importance. The Magdalena rushes into the ocean with such a volume of waters, that it holds itself independent of the Atlantic to a distance of at least twenty leagues from its disemboguement, and as far as this the water is perfectly pure and sweet to drink. The mouth of tliis river is about sixty-three miles to the north-east of Carthagena, 11° 2′ north latitude, and was discovered in 152.5 by Rodrigo Basti-

the navigation is rendered unpleasant on account of the great number of musquitoes with which it is infested.

12. The Maragnon is the largest known river, not only in America, but in the whole world. It is said to rise from the lake Lauricocha, in the province of Tarma, in Peru, 10° 29′ south lati- tude ; but its most

remote source is the river Beni, which rises in the Cordillera De Acama, about thirty-five miles from La Paz, in the pro- vince of Sicasica. It runs from north to south as far as the province of Yaguarsongo, in the kingdom of Quito, whence it forms the strait of Guaracayo, and follows its course from west to east, running a distance of 1800 leagues. The mouth or entrance of this river is about 180 miles wide ; the tide-water ends at Obidos, about 400 miles from its mouth, where the river is 905 fathoms wide. The violence with which this river flows is so great that it repels the waters of the ocean, and retains its own stream pure and unimpregnated for a distance of eighty leagues in the sea ; a circumstance the more wonderful, inasmuch as from the above distance of Obidos to its mouth, 400 miles, it has a fall of only four feet. Innumerable are the rivers which it re- ceives in its long-extended course. The first who discovered the mouth of this immense river, was Vincente Yanez Pinzon, in 1498. It was afterwards reconnoitred in 1541 by Francisco de Orellano, lieutenant of Gonzalo Pizarro ; in 1560 by Pedro de Ursua, by order of Don Andres liurtado de Mendoza, marquis of.Canete, viceroy of Peru; in 1602 by the father Rafael Ferrer, of the abolished order of Jesuits of the province of Quito, and missionary amongst the Cofanes Indians; and in 1616 by order of Don Francisco de Borja, prince of Esquilache, vice- roy of Peru ; also in 1 725 by Juan de Palacois, in company with fathers Domingo Breda and Andres de Toledo, of the order of San Francisco. Besides these, Pedro Texeria, a Portuguese, un- dertook, in the name of Santiago Raimundo de Norona, governor of San Luis de Marauham, the further navigation of this river, arriving by the Napo as far as the port of Payamino, in the province of Moxos. In 1639 Don Geronimo Fernandez de Cabrera, count of Chmchon, and viceroy of Peru, sent as far as Paru, the fathers Christoval de Acuna and Andres de Artieda, Jesuits of the province of Quito, and also the father Samuel I ritz, a German, and of the same extinguished company, a great missionary and profound mathematician. He it was that took the most exact observations as far as Paru, in his voyage made in the years 1689 and 1691, and who gave to the world the first geographical chart of the Maragnon, made and published in Quito in 1 707. Another map was afterwards published by Don Carlos de la Condamine, of the royal academy of sciences at Paris, he being one of the persons commissioned to make astronomical observations under the equinoctial line. This last map is the most correct, and was made in the voyages he took in the Maragnon in the years 1743 and 1744, although it was much amended and enlarged by another map which had been formed by the father Juan Magnin, of the afore- said company, and then missionary of the city

of Borja, of the province of Mainas, and an honorary academician of the sciences at Paris. See AMAZONS RIVER.

13. The Orinoco rises in latitude 5° north, and longitude 65° west; its course is very crooked, somewhat resembling the figure 6. For the first 300 miles it runs from north to south. It then turns and proceeds for several hundred miles in a westerly direction. At St. Fernando it receives the Guaviari, a considerable river from the south-west. Turning northward it re- ceives the Vichade from the west, and precipi- tates its waters down the cataracts of Atures 740 miles from the mouth of this river, and 760 from its source. About 90 miles below the cataracts the river is enlarged by the junction of the Meta, which is 500 miles long, and navigable 370 miles ; and about 90 miles from the mouth of this river, the Orinoco receives from the west the river Apure, a large river 520 miles long, having nu- merous branches and more rapids than the Ori- noco itself, into which by many mouths it dis- embogues its waters. After receiving the Apure it turns, and, running about 400 miles in an easterly direction, divides itself into many branches, and empties its waters into the ocean opposite the island of Trinidad by fifty mouths, the two most distant of which are 180 miles apart : seven of them are navigable ; and the southern one, called the Ship's Mouth, for vessels of more than 200 tons. The various islands formed by the mouths of the Orinoco, called the Orotomecas or Palomas, are inhabited by a bar- barous race of Indians of the same name.

14. The Orinoco bears the name of Iscarite until it passes through the country of the Tames Indians and acquires the name of that district, which it changes at passing through the settle- ment of San Juan de Yeima into that of Guayare, and then to that of Barragan just be- low where it is entered by the Meta. The Orinoco is navigable for more than 200 leagues for large vessels, and for canoes as far as Tunja, or San Juan de los Llanos. Its shores are co- vered with black forests, abounding with an in- finite variety of animals and rare birds. All the rivers which rise on the southern declivity of the chain of Venezuela, and on the eastern declivity of the Andes, between the parallels of 2° 9′ north latitude, are tributaries to the Orinoco, which conveys to the ocean the waters of an im- mense basin extending from east to west about 1000 miles, and from north to south from 500 to 600. This river was discovered by Columbus in 1498 ; and Diego de Ordez was the first who entered it, he having sailed up it in 1531. The soundings between Fort San Francisco de la Guiana and the channel of Limon are sixty-five fathoms, measured in 1734 by the engineer Don Pablo Dias Faxardo, and at the narrowest part more than eighty fathoms deep. In the months of August and September the river is accus- tomed to rise twenty fathoms at the time of its swelling or overflow, which lasts for live months ; and the natives have observed that it rises a yard higher

every twenty-five years. The flux and reflux of the sea is clearly distinguishable in this river for 160 leagues. In the part where it is narrowest stands a formidable

rock in the middle of the water of forty yards high, and upon its top is a great tree, the head of which alone is never covered by the waters, and is very useful to mariners as a mark to guard against the rock. Such is the rapidity and force with which the waters of this river rush into the sea, that they remain pure and unconnected with the waters of the ocean for more than twenty leagues' distance.

15. There is a peculiar phenomenon in this river, namely, that it rises and falls once a year only ; for it gradually rises during the space of five months, and then remains one month sta- tionary ; after which it falls for five months, and in that state continues for one month also. These alternate changes are regular, and even inva- riable, and may depend on the rains which fall in the mountains of the Andes every year about the month of April.

16. The river La Plata ranks in size next to the Maragnon, and gives its name to some very extensive provinces to the south of Brazil. It was discovered by the pilot Juan Diaz de Solis in 1515, who navigated it as far as a small island in south latitude 34° 23′ 30* ; and who, having seen on the shores some Indian cabins, had the boldness to disembark with ten men ; when they were all put to death by the native inhabitants. Five years afterwards there arrived here Sebas- tian Gaboto, who passed from the service of the English to that of the Spaniards, by the former of whom he was sent to the discovery of the strait of Magellan ; but, finding himself impeded in his views by an insurrection of his people, he was under the necessity of entering the river La Plata, and sailed as far as the island discovered by Solis, to which he gave the name of San Ga- briel. Seven leagues above this island he disco- vered a river called San Salvador, and another at thirty leagues' distance, which the natives called Sarcana, where he built a fort, which he called the tower of Gaboto. He then pursued his voyage as far as the conflux of the rivers Parana and Paraguay, and, leaving the former to the west, entered by the second, and had a battle with the Indians in which he lost twenty-five men; but succeeded in routing the infidels, taking from them many valuables of silver ; and, supposing that there was an abundance of this metal in the territories washed by this river, he conferred upon it the name of Rio la Plata, (river of sil- ver,) whereby it lost the original name of Solis, given it by the discoverer.

1 7. This river is accustomed to have such ex- cessive high floods as to inundate the country for many leagues, fertilizing it as the Nile does Egypt. It abounds with an incredible multitude of fish, and on its shores are numerous most beautiful birds. The distance from the conflux of the Paraguay and Parana to its mouth, is about 200 leagues by the course of the river, the whole space being filled with the most delightful islands, and being navigable for the largest vessels. By some writers this broad river has been called an estuary formed by the Uruguay and the Parana, which unite near latitude 34° south; since it is nowhere less than thirty miles broad, and at its entrance into the ocean, between the parallels of 35° and 36°, expands to the

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width of 150 miles. It contains numerous rocks and shoals, on which many valuable vessels have been wrecked. Impetuous winds prevail in this river, which the natives call pamperos ; and which blow from west to south-west, acquiring from the shore so much the greater force in pro- portion to the smallness of the obstacles they find to impede their course, sweeping over llanuras of 200 leagues without being interrupted either by mountains or trees. On some occasions, though not very frequently, a regular hurricane takes place here ; which, if it takes its course along the river, no vessel can resist, but its masts are immediately snapped in twain, as has hap- pened to some ships, even when their top-masts and yard-arms were struck. In this river storms are more frequent than at sea. It laves the cities of Buenos Ayres, the colony of Sacra- mento, and Monte Video. It has some very good ports, and its mouth is in south latitude 35° 30'.

18. The Uruguay, the eastern branch of the Plata, rises on the western declivity of the Andes of Brazil ; and pursues a south-westerly course of more than 1000 miles, for the last 200 of which it is navigable. The Parana, or western branch of the Plata, is formed by an union of several small streams, rising also on the western declivity of the Andes in Brazil, between 18° and 21° degrees south latitude. After running about 1000 miles in a south-westerly direction, it receives the Paraguay from the north; and, after a further course of ,r>00 miles, joins the Uruguay. The tine river Paraguay has its re- mote springs to the west of the heads of the Arinas, in latitude 13°; and, after pursuing a southerly course through nearly 14° of latitude, joins the Parana in the parallel of 27° south latitude. The confluence of the Jauru with the Paraguay is a point of much importance: it guards and covers the threat road between Villa liella, C'uiaba, and their intermediate

establish- ments, and in the same manner commands the navigation of both rivers, and defends the entrance into the interior of the latter captainship. The Paraguay from this place has a free naviga- tion upuard almost to its sources, which are about seventy leagues distant, with no other im- pediment than a large fall. These sources are said to contain diamonds.

19. Between the Paraguay and the Parana there runs from north to south an extensive chain of mountains, which have the appellation of Amanbay ; they terminate to the south of the river Iguatimy, forming a ridge running south and west, called Maracaver. From these mountains spimg all the rivers which, from the Taquari south, enter the Paraguay; and from the same chai:i also proceed many other rivers, which, taking a contrary direction, llow into the Parana; out ot them, and the most southern, being the Iguatimy, which has its mouth in latitude 23° 17′ a little ahove t'ie Seven Falls, or the won- derful cataract of the Parana. This cataract is a IHO-.I sublime spectacle, being distinguished to the eye of the spectatoi from below by the ap- pearance of six rinii tail a const. n the air to a 'jredt di > tance.

20. From the river Xexuy downwards the Paraguay takes its general source south for 32 leagues to the city of Assuncion, the capital of Paraguay, and the residence of its governor Eleven leagues to the south of Coimbra, on the west side of the Paraguay, is the mouth of Bahia Negra, a large sheet of water of six leagues in extent, being five leagues long from north to south ; it receives the waters of the wide- flooded plains and lands to the south and west of the mountains of Albuquerque. At this bay the Portuguese possessions on both banks of the Pa- raguay terminate.

21. To the above rivers we may add the Janeiro, a river giving the name to that captain- ship in Brazil, being so called from its being discovered on the 1st of January, 1516, and which forms a large and convenient bay, much frequented by merchant vessels; the Apure, which, after running 300 leagues through the kingdom of Granada, enters by three mouths into the Orinoco with such force, that the latter resigns its current to the influence of the Apure for upwards of a league ; the Negro, also tributary to the Orinoco, which it enters at a disembogue- ment a league and a half wide ; the Valdivia, in the kingdom of Chili, which is so large, clear, and deep, that vessels of the greatest burden come close up to the city, three leagues from its mouth ; the Biobio, and the Maule, both in the kingdom of Chili, whose shores abound no les« in natural curiosities, and in gold and silvei minerals, than they are noted for the famous battles fought between the Spaniards and the native Araucanians. In the Maule is

found a clay as white as snow, smooth and greasy to the touch, extremely fine, and sprinkled with bril- liant specks. It is found on the borders of several rivers and brooks in the province of Maule, in strata which run deep into the ground. Its surface, when seen at a distance, has the appearance of ground covered with snow; and is so unctuous and slippery, that it is almost impossible to walk upon it without falling. It does not effervesce with acids ; and, instead of losing in the fire any portion of its shining white- ness, it acquires a slight degree of transparency. It is believed to be very analagous to the kaolin of the Chinese ; and that, combined with fusible spar, of which there are great quantities in the province, it would furnish an excellent porce- lain.

22. The deserts of South America are vast and numerous, and are commonly known under the titles of paramos, llanos, and savannas. The former consist of table-lands resting upon mountains, several of them of greater altitude than the highest mountains of the Old World the llanos are plains of the level country, of many leagues in extent ; and, with the savannas, are sometimes entirely barren and sandy, and sometimes covered in part, particularly on the verge of the valleys or ravines, with rank vege- tation. These deserts are common to every part of South America ; but those in the neighbour- hood of Caracas and La Plata are the most ex- tensive. In the latter the traveller will some- times see large flocks of cattle, of all descriptions, hurrying to some distant lake, to which they arc

ied by instinct, to quench their parching thirst ; and with such force do they plunge into the water, that those who arrive first are sure to be drowned by the motion of those that are behind preventing them from recovering the shore.

23. The lakes of this country are rather large than numerous; many of them being nothing but the overflowings of immense rivers, and accord- ingly appearing in the winter, and being perfectly dried in the summer, when they form many of the savannas of which we have just spoken. Amongst the regular and more important lakes we shall particularize the following: — the lake of Maracaibo took its title from a cacique of this name, who was living at the time of the entrance of the Spaniards. It is about 132 miles long from north to south, and, at the broadest part, 90 wide (though Coleti reduces it to 33), and is formed by many rivers. In it are two small islands, the one called De

las Palomas, the other De la Vigia. In the high sea-tides, the waters of the gulf of Venezuela enter this lake, and then they are somewhat brackish. Its first discoverer was Bartholomew Sailler, a German lieutenant of the General Ambrosio de Alfinger, who entered it in 1529 ; and, from having found a number of houses built in the same manner as they are at Venice, gave it the name of Vene- zuela. There are not more than four very small settlements ; and the beams of timber on which the houses are built are converted into stoue as far as they are immersed in the water. The ex- traordinary lake of Valencia is of an oblong form, and, although it receives the waters of twenty rivers, has no visible .outlet. It has been dimi- nishing for twenty years, and its waters, as they recede, leave behind them a rich productive soil, but an unhealthy air. The cultivators are, in some parts, from the want of water, under the necessity of draining the neighbouring streams to irrigate their plantations. The eastern side is laid out in tobacco-grounds. The lake of Parima, in Guiana, is an oblong sheet of water, 100 miles long, and 50 broad, in an island of which is a rock of glittering mica, celebrated as having been the seat of El Dorado, a suppo- sitions city, the streets of which were paved with gold, alluded to by Milton in his Paradise Lost.

24. No country in the world is more famous for its enormous gulls than South America. The Gulf of Mexico of itself is an extensive sea, which almost intersects the two continents. Mr. Thompson has published a tract, wherein he attempts to explain how this gulf has been formed by the natural ablution of ages. He shows that there is a constant stream running from the bottom of New Holland, round the Cape of Good Hope, and across the Atlantic, into this gulf, whence it runs up the side of North America, forming the gulf-stream, and so onwards to the north beyond Newfoundland, &c. He also points out the peculiar circumstance of this stream's following the exact course of the sun's ecliptic, and ending, with respect to the gulf, exactly in that point where the continent is narrowest, namely, at the isthmus of Darien or Panama. The cutting across this isthmus has long been a subject of interest with politicians,

and nature will probably effect what • human skill and labour could never hope to accomplish. It is a fact but little known, yet decidedly true, that the sea on the side of the gulf is about twenty-five feet higher than the waters in the South Sea on the opposite side. When Buona- parte had thoughts of going through Egypt to India, he sent some cognoscenti to survey the passage of the Red Sea, who pronounced the waters of this arm of the ocean to be about twenty-seven feet higher than the waters of the Mediterranean. The coincidence is strong and striking ; and argues amongst other

speculations the great probability that the waters of this gulf will, in the course of time, work their own way into the Southern or Pacific ocean. In long. 79° 19′ W. lat. 9° 30′ N. of this sea is the fine bay of Panama. The port is formed by some islands two leagues and a half distant from the town, where vessels may lie sheltered from the winds. The tides are regular; high-water is every three hours, when it runs to a great height, and falls with such rapidity as to leave three quarters of a league dry when down.

25. The harbour of Valdivia is the safest, and, from its natural position, the strongest and most capacious of any of the ports in the South Sea. The island of Manzera, situate in the mouth of the river, forms two passages strongly fortified, and bordered by steep mountains. San Miguel a gulf in the province of Terra Firma, is beautiful and capacious, having its mouth, or entrance, closed in by a shoal called El Buey, there being only a narrow channel left for the course of ves- sels. Within it are many small rocks or reefs and into it runs a large river, which flows down from the mountains of the same province. The port of Buena Ventura, in the district of the province of Choco, is also on the South Sea, where there is a small settlement, subsisting only by means of the vessels which arrive at it. It is of a very bad temperature, and difficult to be entered ; and the road to the city of Cali is so rough as to be passed only upon men's shoulders — a circumstance which arises from the inaccessible mountains which lie in the route. It is thirty-six leagues from Cali, and is the staple port of this place, Popayan, Santa Fe, &c. Long. 76° 48* W. lat. 3° 51′ N. In Chiloe, an island dependent upon the government of Chili, there are two ex- cellent ports, of which Chacas, in lat. 41 °50′ south, is the best. Castro, the capital city, is also a good port, and lies between two small rivers. It is inhabited by some good and opulent fami- lies, and'enjoys a pleasant and healthy tempera- ture. It is of a regular and beautif il form, and is also called Chiloe, and has, besides the parish church, a convent of monks of St. Francis, and a bishop auxiliary to that of Santiago. It was sacked by the Dutch in 1643 ; is 42 leagues south of the city of Osorno, in lat. 42° 40′ S. But no bay on the western side of this continent de- serves more to be noticed than that of Concep- tion ; it is large, noble, and convenient. Its only defence is a battery, on a level with the water, which defends its anchoring-groxmd.

26. On the coast of Terra Firma is the gulf of Cumana, so called from the capital on its shores This bay runs ten or twelve leagues from west to

east, and is one league broad at its widest part. It is from 80 to 100 fathoms deep, and the waters are so quiet as to resemble rather the waters of a lake than those of the ocean. It is surrounded by lofty chains of mountains, which shelter it from all winds, excepting that of the north-east, which, blowing on it through a straitened and narrow passage, is accustomed to cause a heavy swell, especially from ten in the morning until five in the evening, after which all becomes calm. In the above case the larger vessels ply to wind- ward ; and if the wind be very strong they come to an anchor on the one or other coast, and wait till the evening, when the land breezes spring up from the south-east. In this gulf there are some good ports and bays, as the lake of Obispo, of Juanantar, of Gurintar, and others. The gulf of Guayaquil, in north lat. 2° 27', so called from the river of its name, is famous for its shifting sand- banks, on which, as the river recedes, alligators are left in great numbers. Vessels, after leaving their guns in the island of La Puna, require to be steered by an experienced pilot. Gulf Triste, in the Atlantic, and in the province of Caracas, is sixteen leagues wide from the point of Car- valleda to the S.S.E. as far as cape Muerto to N.N.E., and about nine leagues in depth. It was so named on its first discovery by Columbus in his fourth voyage, 1498, to commemorate the misfortunes he suffered here.

27. In the gulf of Cumana, in the province of that name, are several convenient ports and bays; indeed the whole coast is beautifully in-dented with them : the sea is here remarkably calm, and peculiarly so in the celebrated gulf of Cariaco, the gulfs of the lake of Obispo, Gua-nantar, Gurintar, &c. Within cannon-shot of the shore of the gulf lies the city of Cumana, in a semicircular form, where all kinds of vessels may lie built : a saline ground on its beach supplies salt for the us'e of the city and the neighbouring settlements. It lies in the middle of the plain of its name. At the back begins the serrania, which, for more than eight leagues, is impassable on account of brambles and thorns. The soil towards the front of the city is composed of pebble, gypsum, and sand, which, during the prevalence of the wind bri/.a, occasions an ex- cessive heat, and is very offensive to the eyes ; bad sight here being a very common malady. Nearly in the centre of the town, upon an ele- vated ground, stands the castle of Santa Maria de la Caheza, which is of a square figure, and commands the city. In the lofty part of the sierra are seen three round hills; upon the highest oi' which stands a castle called S;vi An- lonio, ;Mid v.j on the lowest a fort called La (.'andelaria. There is upon the beach another rustic, called the fort of

Santa (,‘atalina, at the month ot’the river, just where a sand-hank has of htte been funned so as to block up the entrance nt’ the river, and to render it dangerous for large •< ssels. The iort is at some distance from the julf. Todos Santos is one of the best of the numerous bays on the coast of Brazil. It is three Katies fiom the entrance from the bar of San Antonio to tin: strait of Tauaunpe, twelve U':a'_v.es in diameter, and thirty six in eircum ;;.-rcnce. It is coin eni< ;:t, sectiie, and full of

islands ; and its vicinities are covered with sugar-engines and estates. Porto Seguro, on the same coast, takes its name from the security it afforded to Pedro Alvarez Cabral, who, when he discovered it, found it a shelter from tempests. The capital is situate on an eminence, and defended with good fortifications and a castle. The town is small, handsome, rich, commercial, and well peopled. Its climate is hot, but healthy. It is 92 miles south of San Jorge, and 286 N. N. E. of EspiriterSanto. Long. 39° 37′ W. lat. 16° 7′ S.

28. The harbour of Rio de Janeiro is one of the finest known, having at its entrance a bar, at the extremes of which rise two rocks. This bay is twenty-four leagues in length, and eight in width; in which are many islands, the most celebrated of them being that called De Cobras, off which the ships cast anchor. On the opposite side of the city a natural wall of rocks, called Los Organos, extends itself as far as the sea; forming, independently of the neighbouring fortresses, a perfect line of defence. The bay of Maranham, 492 miles north-west of cape St. Roque, affords a convenient harbour at the mouth of the river St. Mary. The straits of Magellan, at the southern extremity of this con- tinent, are amongst the most celebrated in the world, both for their length and the difficulty of their navigation. From cape Virgin Mary, in the Atlantic, west long. 68* 22’, south lat. 52° 24’, to cape Pillar, in the Pacific Ocean, west long. 75° 10’, south lafr. 52° 45’, they have been estimated at 342 miles in length, and are of vary- ing breadth, bounded northward by Patagonia, and on the south by Terra del Fuego. They derive their name from Hernandode Magallanes, who discovered them in 1520, and have been subsequently passed by Drake, Byron, Wallis, Carteret, and Bougainville. The straits of Le Maire form a safer passage from the Atlantic to the Pacific Ocean, westward of Terra del Fuego, and bounded on the east by Staten-Land. Le Maire, who was the first that doubled Cape Horn, and after whom they are called, first passed them in June 1615.

29. Some geographers have called the passage formed by the eastern mouth of the Maragnon, and the island of Morajo, by the name of the straits of Maguari ; and various minor passages, formed by the numerous islands round the shores of this continent, have been

dignified with this appellation.

30. Capes and promontories have generally the same names as the chief rivers or gulfs which surround them. Amongst the few that are worth enumerating is point Natsi, or Chama, on the west point of the celebrated isthmus of Panama, from whence the coast tends west to Haguera Point seven leagues. All ships bound to the north-west, and to Acapulco, make this point. The promontory of Balleno, on the coast of Peru, to the south-south-east of the cape Bor- rachos, and north-north-east of Palmar, is sur- rounded by a sandy and level soil, and the water is very shallow. In Chili the point Canero extends itself with a gradual slope into the sea ; here the prevalence of the east winds endangers navigation. Ballena, lying betweea

the river and ravine of Cheoapa, in the province of Quillota, is well marked by navigators. Vil- liva. or Quedal, in the ‘province of Valdivia, south lat. 41° 6’, is eighty miles south of that place, and is a noted land-mark. Cape Guia, between the point Aguja and the river Del llacha, in the province of New Granada, is seen an immense distance from land.

31. The diversity of surface observed on this continent gives rise to a corresponding diversity .n the climate. It is however, except in the mountainous regions, of a benign temperature, though the mighty influence of the Andes and their branches contributes to render it colder than parallel latitudes in the west. In Peru, the Andes mountains being on one side, and the South Se.i on the other, it is not so hot as tro pical countries in general; and in some parts it is disagreeably cold. In one part are mountains of a stupendous height and magnitude, having their summits covered with snow ; on the other volcanoes flaming within, while their summits, chasms, and apertures, are involved in ice. The plains are temperate, the beaches and valleys hot ; and lastly, according to the disposition of the country, its high or low situation, we find all the variety of gradations of temperature between the two extremes of heat and cold. It is re- markable that in some places it never rains, which defect is supplied by a dew that falls every night, and sufficiently refreshes the vegetable creation. In Quito they have prodigious rains, attended by tremendous storms of thunder and lightning. The city of Lima, though very heal- thy and pleasant, is infested by swarms of flies’ and musquitoes all the year round. Putrid fevers and convulsions are common. It is sub- ject to terrible earthquakes, by which it has been frequently destroyed ; the strongest of these occurred in the following years : viz. in 1582,

1586, 1609, 1630, 1655, 1678, 1687, 1690, 1697, 1699, 1716, 1725, 1734, 1743, 1746.

In this last it was completely demolished. — The city of Callao,]the port of Lima,Avas also by this earthquake totally destroyed , and swallowed up by the sea. By this terrible convulsion of nature upwards of 3000 people perished in Callao alone ; and the ruins of the former town are yet to be seen under water, in a calm day, at that part of the bay called mar braba (rough sea). ‘ I became acquainted (says a modern traveller) with an old mulatto, called Eugenic, who was one of the three or four who were saved ; he told me he was sitting on some timber which had been landed from a ship in the bay, at the time that the great wave of the sea rolled in and buried the city, and that he was carried, clinging to the log, near to the chapel, a distance of three miles.’ Stevenson’s Twenty Years’ Re- sidence in South America, vol. i. p. 138-9.

32. The maximum height of Reaumur’s ther- mometer, in the province of Cumana, is twenty- seven degrees, the minimum seventeen degrees, in the month of July. In the paramos alone some change is to be perceived ; although the manner in which these paramos are affected, and what may be considered the peculiar charac- teristic of their climate, is a dense cloud, which almost constantly envelopes them, and which,

when it happens to fall in the shape of small hail, snow, or mist, makes them so insufferably cold as to render life precarious. With all this however, in the parts in which there are no paramos, and where the wind is moderate ,and the rays of the sun can penetrate the earth, the climate is very salubrious.

33. The temperature of Caracas does not cor- respond with its latitude; for instead of insup- portable heat, as might be expected so near the equator, it enjoys an almost perpetual spring, owing to its elevated situation. The transitions from heat to cold are great and sudden, and from these numerous diseases arise, the most common of which are colds, called by the Spaniards catarros. The height of Fahrenheit’s thermometer at Caracas in the winter is : —

Generally at 6 A.. M 58°

2 P. M 73

10 P. M 68

Maximum 76

Minimum . 52

In the summer : —

Generally at 6 A. M 72

2 p. M 79

10 P. M 75

Maximum 85

Minimum 69

Humidity according to the hydrometer of Du Luc : —

Generally 47

Maximum . i . 58

Minimum 37

The mercury which rises in the most southern parts of Europe, and in the variations of the atmosphere to ˆths of the Paris inch, ascends only ˆths in the eastern parts of Terra Firma. They observe at Caracas, in all seasons, four small atmospherical variations every twenty-four hours; two in the day, and two in the night. Blue of the skies by the cyanometer of Saussure:

Generally 18°

Oxygen and nitrogen gas; of one hundred parts, twenty-eight of oxygen, and seventy-two of ni- trogen : —

The maximum of the first is ... 29° The minimum 27£

Variation of the needle September 17th. 1799. 4° 38′ 45”. Inclination of the dipping needle : generally 43ˆ. Oscillation of the pendulum : in fifteen minutes, 1270 oscillations.

34. For climate Chili is one of the finest countries in the world. Though bordering on the torrid zone it never feels the extremes of heat, being secured on the east by the Andes, and refreshed from the west by cooling sea- breezes. The seasons revolve in regular suc- cession, as in all the countries of the southern hemisphere : the spring commences on the 22nd September, the summer in December, the autumn in March, and the winter in June. From the opening of spring

until the autumn, there is a constant succession of fine weather, particu- larly between the 24° and 36° of latitude ; but in the woody islands the rains are frequent even in summer. The rainy season on the continent usually commences in April, and continues unti, the end of August, but is seldom

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with liail storms, and thunder is scarcely known in the country. Lightning is wholly unknown; and although in tlie Andes mountains, and near the sea, storms occasionally arise, yet, according to the direction of the wind, they pass over, and take their course to the north or south. Snow in the maritime provinces is never seen. In those nearer the Andes it falls about once in five years, and sometimes still more distant, and then but in small quantities. The north and northerly winds, before they arrive at Chili, cross the torrid /one, and there becoming loaded with vapours, bring with them heat and rain. This heat, however, is very moderate; and it would seem that these winds in crossing the cold summits of the Andes become qualified, and lose much of their heat. In Tucuman and Cujo, however, where they are known by the name of sonda, they are much more incommodious and suffocating than even the siroc in Italy. The south winds are usually from the south-west, and, coming immediately from the antarctic pole, are cold and dry ; these prevail in Chili during the time that the sun is in the southern hemisphere ; and blow constantly towards the equator, the atmosphere being at that period highly rarefied, and no adverse current of air opposing itself to their course. As they disperse the vapours, and drive them towards the Andes, it rains but seldom during their continuance. But clouds collected upon these mountains, uniting with those which cmni; from the north, occasion very heavy rains, accompanied witli thunder, in all the provinces bevoii.l the Andes, particularly in those of Tucuman and Cuj< >, while, at the same time, the atmosphere of Chili is constantly clear, and its inhabitant-; enjoy their finest weather. The con- trary, however, takes place in winter, which is the line season in these provinces, and the rainy one in (‘lull.

3.”). The south wind never continues blowing during the whole day with the same force; as the sun approaches the meridian it falls very rons’de.rably, an 1 vises again in the afternoon. At noon, \hen this wind is scarcely perceptible, a fresh hree/t; is felt from the sea, which conti- nues about two or three hours ; the husbandmen give it the name of the twelve o’clock breeze, or tin; countryman’s watch, as it

serves to regulate them in determining that hour, This sea-breeze returns regularly at midnight, and is supposed tu be produced by the tide; it is stronger in au- tumn, and sometimes accompanied with hail. The east winds nirtly prevail in Chili, their course being obstructed by the Andes. Hurri- canes, so common in the Antilles, are unknown hero. One solitary example, indeed, exists of a hnrrirme, which in K>:;:i did much injury to the lurmss of (‘are:<.ia!po, in the south part of the kingdom. Tl.e mild temperature of Chili depends upon the succession of these winds, as a situation so near the tropic would naturally e\po5e it to a more violent degree of heat. In addition to which, the tide, the abundant dews, and certain winds from the Andes, which are distinct from the east winds, cool the air in sum- mer, and rendci the country agreeable in the < -:tivme. The inhabitants of the sea-coast dress tre same in the \\intor as in the summer; and,

in the interior, where the heat is most perceptible, Reaumur’s thermometer scarcely ever exceeds 25°. The nights throughout the country are generally of a mild temperature. The warmth of the soil far exceeds that of the atmosphere ; and hence, notwithstanding the moderate heat of Chili, all the fruits of warm countries, and even those of the tropics, arrive to great perfection. The countries bordering on the east of Chili do not enjoy these refreshing winds, but, on the other hand, experience the air as suffocating and oppressive as under the same latitude in Africa.

36. Meteors, especially those called shooting stars, are frequent in Chili, and are to be seen there almost the whole year ; also balls of fire, that usually rise from the Andes, and fall into the sea. The aurora australis, on the contrary, is very uncommon ; that which was observed in 1640 was most remarkable, and was visible, from the accounts that have been left us, from February until April. During the last century they have appeared at four different times. In the Archipelago of Chiloe this phenomenon is more frequently visible, from the greater eleva- tion of the pole in that part of the country.

37. In ascending the Andes the climate varies exceedingly, and illustrates, in proportion to its elevation, the general temperature which prevails upon different parts of the continent, calling forth the various vegetable productions indigenous to every portion of the globe. At the eleva- tion of from 3000 to 5000 feet, maize, plantains, indigo, sugar, cotton, coffee, cassava, and cacao, are produced. Cotton, coffee, and sugar, grow at a much greater elevation ; and the last is suc- cessfully cultivated even in the valley of Quito. From 6000 to 9000 feet in elevation the cli- mate is suited to the growth of the

various kinds of European grain, the oak, and various other species of forest trees. Above that alti- tude large trees of all kinds begin to disappear except dwarf pines, which are found at nearly 1 3,000 feet elevation above the level of the sea, and about 2000 ‘feet below the line of perpetual snow. From 13,000 to 15,000 the ground is clothed with grasses ; and from the latter ex- treme the lichen is the only plant, which creeps on the rocks and seems to penetrate under the snow. The following table will afford the reader a more perfect view of the important data con- nected with this interesting subject :

Under the Equator.

ft. above the sea.

The highest flight of the condor . .

21,800′ 18,225 15,730. 12,800 11,125 10,500.

9,500J

3.280, 5,685-

5,000

Lower limit of perpetual snow .- . . The highest limit of pines ....

The lowest limit of pines .... The distance between corn and snow, i according to Humboldt . . . >

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38. The greatest volcanic eruption ever known in Chili, was that of Peteroa on the 3rd of De- cember, 1760, when a new crater was formed, and a neighbouring mountain rent asunder for many miles in extent ; the eruption was accom- panied by a dreadful explosion, which was heard throughout the whole country. It was not, however, succeeded by any very violent shocks of an earthquake. The quantity of lava and ashes filled the neighbouring valleys, and occa- sioned a rise of the waters of the Tingeraca, which continued for many days. The course of the Lontue, a very considerable river, was impeded for ten days by a part of the mountain which fell and filled its bed; till at length the water forced itself a passage, overflowed the neigh- bouring plains, and formed a lake, which still remains. Besides those of the Andes, there are but two volcanoes ; the first, at the mouth of the

river Rapel, is small, and discharges only a little smoke from time to time ; the second is the great volcano of Villarica, in the county of Arauco. This volcano may be seen at the dis- tance of 150 miles; and, although it appears to be insulated, is said to be connected by its base with the Andes. The summit of the moun- tain is covered with snow, and is in a constant state of eruption. Its base is fourteen miles in circumference, and is principally covered with pleasant forests ; from its sides a great number of rivers emerge ; and its perpetual verdure fur- nishes the best criterion of the comparatively tri- fling violence of its eruptions.

39. The inhabitants of Chili usually calculate three or four earthquakes annually, but they are very slight, and little attention is paid to them. Of the great earthquakes, not more than five oc- curred from the arrival of the Spaniards to the year 1818, a period of 244 years- It has been ascertained that earthquakes in this country never occur unexpectedly ; but are announced by a hollow sound proceeding from a vibration of the air ; and, as the shocks do not succeed each other rapidly, the inhabitants have sufficient time to provide for their safety. However, in order to secure themselves from the effects of these catastrophes, they have built their cities in a ju- dicious manner; the streets are so broad, that the inhabitants would be safe in the middle of them, even should the houses on both sides fall to the ground. The houses have also spacious courts and gardens, which would serve as places of refuge ; and those who are wealthy have usu- ally in their gardens several neat wooden barracks where they pass the night whenever they appre- hend an earthquake. The earthquakes in Chili, owing probably to subterraneous passages com- municating with the volcanoes of the Andes, which are so many vent-holes for the inflamed substances, are much more moderate than those of many other parts of the continent, and have never hitherto been attended with any con- siderable sinking of the earth, or falling of buildings. Were it not for the number of these volcanoes, Chili would in all probability be ren- dered uninhabitable.

40. In the eastern part of the continent the weather is generally humid ; and, in the winter months (June, July, and August), at times

boisterous, and the air keen and piercing. In summer, also, the serenity of the atmosphere is frequently interrupted by tremendous thunder- storms, preceded by dreadful lightning, which frequently damages the shipping, and followed by heavy rain, which sometimes destroys the harvest. The heat is troublesome, and engen- ders swarms of musquitoes in such numbers that they infest every apartment.

41. By far the greater part of the precious metals used in the world are brought from America, and, with the exception of those from the mines of Mexico, almost all from the southern continent. It is impossible to give any adequate description of the treasure of these mines : many of them are inexhaustible, and many hundreds have ceased to be worked on account of the want of quicksilver, and from their being filled with water. The former objection is owing, in a great measure, to the government monopolies, and the latte* to the want of steam-engines. Some of those recently sent have effectually drained the pits ; and afforded a lucrative return to the projectors. The Spanish government, since the discovery of this country, has derived its principal resources from these metals ; and to secure to itself the undivided enjoyment of them has passed the most rigid laws, to prevent as far as possible all intercourse of the nations with foreign powers. The annual produce of the mines of New Granada, as calculated from the amount of the royal duties, and therefore considerably under the truth, amounts to 18,000 Spanish marks of pure gold, and very few of silver ; the value in dollars is 2,624,760, the gold being estimated at 145$f; dollars, and the silver at 9-& dollars the Spanish mark. Besides this we must add for contraband 1,735,240 dollars, and the total produce will then be 4,360,000 dollars.

42. In the northern parts of Peru are the fa- mous mines of Potosi, several of them gold, but those of silver are found all over the country; and never in any country did nature afford to the avidity of man such endless sources of wealth. These mines were discovered in the year 1545 in the following manner, which we give in the terms of a late popular publication : ‘ An Indian named Hualpa, one day following some deer, which made directly up the hill of Potosi, came to a steep craggy part of the hill ; and, the better to enable him to climb up, laid,hold of a shrub, which came up by the roots, and laid open a mass of silver ore. He for some time kept it a secret, but afterwards revealed it to his friend Guanca, who, because he would not discover to him the method of refining it, acquainted the Spaniard his master, named Valaroel, with tht discovery. ‘ Valaroel in 1545 registered the mine; and, from that time till the year 1638, the mines of Potosi had yielded 95,619,000 pieces of eight, or about 4,255,000 pieces a year. But the annual sum derived from these mines, ac- cording to the latest accounts, and as calculated from the produce of the royal duties, and there- fore considerably under the truth, amounts to 3,400 Spanish marks of pure gold, and 513,000 of pnre silver. The value in dollars of both is 5,317,988; the gold being estimated at 145$,

dollars, and the silver at 9-fc dollars the Spanish mark; to which if we add for Contraband 922,012 dollars, the total produce will be 6,240,000.

43. The following table will exhibit the in- creasing amount of the produce of these mines of late years.

Produce of Polosi in Gold and Stiver.

GOLD. SILVER.

Value in Dol. Rls. Annual average from > OV7

1780 to 1790] 257,247 Coinage of 1791 . 257,526 0 4,365,175 0 Coinage of 1801 . 481,278 0 7,700,448 0

Dol. Rls.

3,960,010 7

Thomas Valaroel was the first person who examined this mine. The mountain is three miles in circumference, and 6000 Castillian yards high above the level of the sea, as it was measured by Don Louis Godin, of the academy of the sciences of Paris. It is of a sharp conical figure, and resembles a great pavilion, but is nearly hollow in the interior from the excava- tions which have been made for so many years. In appearance it resembles an ant-hill, from the multitude of mouths by which it is entered.

44. The silver mines of Esquilache, in Peru, are so rich that the bishop's yearly dues from the labourers amounted to 14,000 dollars; and one of the thirty-six which lay close together in that neighbourhood, was not long since sold for no less than a daily rent of 1,040 dollars. The mines are however but half worked for want of mechanical power, though great quantities of silver are excavated. Alcedo observes, that if these mines were emptied of their water, they would yield twenty times as much ore as at present. In Chili are mines of silver, copper, lead, sulphur, white lime and salt, but the most abundant are of copper; large quantities of this metal have been sent to Spain for founding ar- tillery, and from the same source has been made all the artillery in this kingdom. Of this metal are found two sorts : campanel, which is only tit for founding, and de labVar, which has a mix- ture of gold, and is an excellent working metal.

4;”). In the province of Santiago are mines that can be worked only in the summer months, namely, December, January, February, and March, owing to the rains, snow, and severity of the winters. Twenty leagues from the capital is the great mine of Rempu, which has no fewer than sixteen veins. Further south is a mine, named Maipo, discovered more than 100 years a ‘.TO, and called San Simon, the metals of which an- lowered down by engines from a very lotty mountain. Hire also are the mines of He San Pedro Nolasco, which render a con- siderable portion of massy silver. On the north part, by the mountains of the curacy of Colina, arc found thirty-four gold mines, independently < >t Juo others, all of which are worked. Be sides these mines there are rive lavaderos, or washing-places, in the mountain of Guindo ; and some other veins in the old asiento of Tiltil. ‘1 he top of C’alen is covered with lavaderos of lh<: i ichesl gold. The total amount furnished annually in u< >ld and silver, by the mines of what “• – miiininn’.y called Spanish America, is ex- hibit.•

£ sterling.

New Spam 5,030,800

New Granada .... 507,000 Peru and Chili .... 1,730.000 Buenos Ayres, or La Plata 882,000

Making a total of . £8,149,800 to which may be added more than another mil- lion for the contraband trade.

46. It was not till after the expulsion of the Dutch, that the Portuguese began to be aware of the riches they possessed in their mines. The government being under the Portuguese minister, was then vested in some priests of acknowledged virtue : these scattered themselves over the whole coast, founding settlements, and penetrating into the interior ; and first discovered the different gold mines which have been since worked to such prodigious emolument ; as also the mines of diamonds, topazes, and other precious stones. — Those of Cuiaba have been worked since the year 1740, and yielded great quantities of gold.

47. Formerly Bahia de Todos Santos, or the bay of All Saints, was the principal seat of the government, and chief mart of the commerce of Brazil ; but the discovery of the gold and dia- mond mines near Rio de Janeiro, has given a decided superiority to the latter. The manner in which the former of these minerals was disco- vered is differently related : we quote the most common account from a late publication : ‘ The Indians on the back of the Portuguese settle- ments were

observed to make use of gold for their fish-hooks ; and enquiry being made as to their manner of procuring this metal, it appeared that considerable quantities of it were annually washed from the mountains, and left among the gravel and sand that remained in the valleys after the running off or evaporation of the water. From the time of this discovery considerable quantities of gold were imported into Europe from Brazil ; and these imports have gradually augmented since new mines have been wrought in many other provinces. The extraction of this precious metal is neither very laborious no* attended with the smallest danger in this part of the new world. The purest sort is generally found near the surface of the soil, though it is sometimes necessary to dig for it to the depth of three or four fathoms. It is usually incumbent on a bed of sandy earth, termed by the natives saibro. Though, for the most part, the veins that are regular and run in the same direction, are the richest, it has been observed that those spaces, the surface of which was most spangled with crystals, were those which furnished the greatest plenty of gold. It is found in larger pieces on the mountains and barren or stony rocks than in the valleys, or on the banks of rivers. But in whatever place it may have been gathered, it is of 23ˆ carats on coming out of the mine, unless it be mixed with sulphur, silver, iron, or mer- cury ; a circumstance that rarely occurs, except at Goyas and Araes.”

48. ‘ Every man who discovered a mine was obliged to give notice of it to the government. If it was conceived to be of little consequence by those persons appointed to examine its value, it was always given up to the public ; but it, oi»

the contrary, it was found to be a rich vein, the government never failed to resrrvc a portion of it for themselves : another share was given to the commandant ; a third to the intendant ; and two shares were awarded to the discoverers : the remainder was divided among the miners of the district, in proportion to their circumstances, which were determined by the number of their slaves. The disputes to which this species of property gave rise, fell under the cognizance of the intendant, with the right of appeal from his decrees to the supreme court established at Lisbon, under the title of council d’outremer. It is said that a slender vein of this metal runs through the whole country, at about twenty-four feet from the surface ; but is too thin and poor to answer.the expense of digging. Gold is always, however, to be collected in the beds of rivers which have pursued the same course for

a con- siderable time ; and, therefore, to be able to divert a stream from its usual channel is es- teemed an infallible source of gain.'

49. The employment of searching the bottoms of rivers and torrents, and washing the gold from the mud and sand, is principally performed by slaves (chiefly negroes), of whom the Portuguese keep great numbers for that purpose. By a particular regulation these slaves are obliged to furnish their master every day with the eighth part of an ounce of gold ; and if, by their industry or good fortune, they collect a larger quantity, the surplus is considered as their own property, and they are allowed to dispose of it as they think fit; by which means, some negroes have lived in great splendour, and purchased slaves of their own; the Portuguese ounce is somewhat lighter than our troy ounce. The proprietors of the mines paid to the king of Portugal, as above- mentioned, a fifth part of the gold which they extracted by operations more or less successful ; and this fifth of the gold obtained from all the mines in Brazil was estimated, at an average, to amount annually to about £300,000 sterling; consequently the whole capital must be nearly £1,500,000 sterling. If we add to this the gold exchanged with the Spaniards for silver, and what was privately brought to Europe without paying the duty, which amounted to £500,000 more, the annual produce of the Brazilian mines was about £2,000,000 sterling.

50. Among the many impediments thrown in the way of trade, may be ranked the prohibition which prevented the people of Brazil from working up the gold of their own mines. Even the tools and instruments used by the artificers for such purposes, were seized and confiscated. It was only about the beginning of the last cen- tury that diamonds made a part of the exports from Brazil to Europe. These valuable stones are, like the gold, found frequently in the beds of rivers and torrents. Before they were sup- posed to be of any value they were often perceived in washing the gold, and were conse- quently thrown away with the sand and gravel ; and numbers of large stones, that would have enriched the possessors, passed unregarded through the hands of several persons wholly ig- norant of tlieir nature. The diamonds sent from the new to the old world were enclosed in a

casket with three locks, the keys of which were separately put into the hands of the chief mem- bers of administration ; and those keys were deposited in another casket, to which was affixed the viceroy's seal. While the exclusive privilege subsisted, this precious deposit, on its arrival in Europe, was remitted to government, which, according to a settled regulation, retained the very scarce diamonds, which exceeded twenty carats, and delivered every year, for the profit of the company,

to one, or to several contractors united, 40,000 carats, at prices which have suc- cessively varied. An engagement was made on one hand to receive that quantity ; and on the other not to distribute any more ; and whatever might be the produce of the mines, which neces- sarily varied, the contract was invariably fulfilled.

51. Before the recent changes in the Portu- guese government, that court threw 60,000 carats of diamonds into trade, which was monopolized by a single merchant, who paid for them at the rate of about £l . lls. 6d. per carat, amounting in the whole to £130,000 sterling. The contraband trade in this article is said, by persons compe- tent to form a just estimate on the subject, to have amounted to a tenth more ; so that the produce of these mines, the riches of which have been so much boasted of, did not exceed annually £140,000. The rough diamonds used to be purchased from the Portuguese merchants by theEnglish and the Dutch, who, after cutting and polishing them, and supplying the demand of their own countries, disposed of what remained to other nations of Europe. In the diamond and mine districts are found, between the para- sitic stones, amethysts, topazes, sapphires, eme- ralds, and fine chrysolites. Jacinths or granites are sometimes discovered in the interstices of talc, or micaceous stones ; but these, as well as some other precious stones, have never been subjected to a monopoly like diamonds. The annual exportation of these stones from Janeiro, and some of the other ports, seldom exceeded £6,250, for which the government received a duty of one per cent, amounting to the sum of £62. 10s. sterling.

52. Mines of iron, sulphur, antimony, tin, lead, and quick-silver, are found in this and other provinces of Brazil ; but the pursuit of gold has diverted the attention of the colonists from more useful speculations. It was long supposed that copper had been withheld by nature from this vast and fruitful region of the new hemisphere; but later researches have shown this to be an unfounded suspicion. In Rio de Janeiro there exists a rich and copious mine of cupreous pyrites (pyrites cupri); one cwt. of this mineral yields 251bs. of pure copper. Similar mines of this metal have also been dis- covered in Minas Geraes, and other districts.

53. In fruit-trees, vegetables, and nutritive roots, South America is extremely rich, and in different kinds of wood for building, dyeing, &c. Inde- pendently of many kinds peculiar to this coun- try, vast numbers have been introduced since the sixteenth century. The inhabitants of western Europe have deposited in America what they have been receiving for 2,000 years, by their communications with the Greeks and Romans,

by the irruption of the hordes of central Asia, by the conquests of the Arabs, by the crusades, and by the navigations of the Portuguese. All these vegetable treasures, accumulated in an ex- tremity of the Old Continent by the continual flux of nations towards the west, and preserved under the happy influence of an increasing civilization, have become almost at once the in- heritance of Mexico and Peru. In Peru, as •well as in other parts, the culture of maize, pi- mento, and cotton, which was found established there, has not been neglected ; and that of wheat, barley, cassava, potatoes, sugar, and the olive and vine, is attended to. Humboldt classes the Mexican wheat amongst that of the first quality, and as superior to that of Monte Video, which, according to Azara, has the grain smaller by one half than the Spanish. Maize, or Indian wheat, is used much by the natives ; it is a genus of the monoecia triandria. The plant is one single stalk, which shoots out leaves more than a yard in length and three inches in breadth, and the fruit is a sort of cone, about a span in length, very closely set with grains of different colours; but generally white and yellow. They reckon five species, or rather varieties, of maize, which differ very little from each other. The method of sowing it is to make a hole, throw in a few seeds, and cover them, and without any further trou- ble it soon appears above ground, and is fit for reaping at the end of five months at latest : hence they easily obtain two crops in one year. The wheat, made into flour, serves for bread for all the Indians and common people ; and is used in the composition of several dishes, as also to feed cattle, pigs, domestic animals, and poul- try. The maize is evidently a native of the New World.

54. The plantain, next in importance to maize, is another principal food of the natives, and more particularly of the negroes. The fruit generally is about an inch and a half in diameter, and ten or twelve in length, something curved. It has the appearance of an hexagon, with the angles made round and terminating in hexagonal points. The skiu, which is smooth, and of a green co- lour before it is ripe, afterwards becomes yellow, and contains a sub.:;ance resembling cheese, without seeds, and only a few large fibres. After the plantain is past maturity the rind turns black, and the pulp becomes sour; but in taste is very similar to the pear. All classes of animals are very fond of it. The tree which bears the plan- tain gives fruit only once, in large bunches, and is immediately cut, or, if left, withers and falls; but the root, which is large, round, and solid, produces fresh supplies, which, in twelve or fourteen months, yield fruit and decay, and the roots shoot forth again

with renewed vigour. The plant is not woody, nor has it any bark, but is a thick, cylindrical body, consisting of a great number of long broad leaves wrapped round each other, the outer ones serving as a rind to the other.—. It arrives at its full height in about nine months, and is about ten or twelve inches in diameter. This plant requires a moist, rich, and solid land, and if these be wanting ceases to prosper, and uives an inferior kind of fruit. Before it is ripe it is boiled like turnips with

meat, and is eaten after this method by sailors and fishermen. It is also roasted on coals, and used by the negroes instead of bread. When boiled in wine with sugar and cinnamon, it as- sumes a beautiful red colour, and acquires a delicious taste and fragrant smell ; and is one of the best preserves which the Creoles make. Of plantains there are four species, distinguished by the names of bananas, guanas, dominicos, and cambures.

55. Of the vegetables, there are none (after the manioc and the papas, or potatoes), more used for the subsistence of the common people than the oca (oxalis tuberosa), the batate and the igname. The first of these grows only in the cold and temperate climates, or on the summit or declivity of the Cordilleras ; and the others belong to the wanner regions of the valleys and sea-coasts. The igname or dioscorea alata, like the banana, appears indigenous to equinoctial regions. The account of the voyage of Aloysio Cadamusto (Cadamusti Navigatio ad Terras in- cognitas. Grynaeus Orb. Nov. p. 47), informs us that this root was known by the Arabs.

56. Among the most useful plants proper to this continent, the cacomite, or oceloxochitl, a species of ligridia, of which the root yielded a nutritive flour to the inhabitants of the valley of Mexico ; the'numerous varieties of love-apples, or tomatl (solanum lycopersicum), which was formerly sown along with maize; the earth-pistachio, or matii (arachis hypogea), of which the root is concealed in the earth, and which appears to have existed in Cochin China (see Loureiro, Flora Cochinchinensis, p. 522,) long before the discovery of America; lastly, the different species of pimento (capsicum baccatum, c. annuum, and c. frutescens), called by the Mexicans chilli, and the Peruvians uchu,

57. Almost all the garden stuffs and fruit-trees of Europe are now common in South America, and it is not easy to say which of the former existed in the new continent before the arrival

of tne Spaniards. The same uncertainty prevails among botanists as to the species of turnips, sallads, and cabbage cultivated by the Greeks and Romans. The Americans were always ac- quainted with onions (in Mexican xonacatl), haricots (in Mexican ayacotli, in the Peruvian or Quichua language perutu), gourds (in Peruvian capulla), and several varieties of cicer; and Cortes, speaking of the eatables which were daily sold in the market of the ancient Tenoch- titlan, expressly says, that every kind of garden- stuff (legume) was to be found there, particularly onions, leeks, garlic, garden and water cresses (mastuerzo y berro), borrage, sorrel, and arti- chokes (cardo y tagarninas). No species of cabbage or turnip (brassica et raphanus) was cultivated in America, although the indigenous are very fond of dressed herbs. It appears that the Mexicans had originally no peas; and this fact is the more remarkable, as our pisum sa- tivum is believed to grow wild on the north-west coast of America. In general, if we consider the garden-stuffs of the Aztecs, and the great number of farinaceous roots cultivated in Mexico and Peru, we see that America was by no means so poor in alimentary plants as has been supposed by some learned men, who were acquainted with the New World only through the works of Herera and Solis. The degree of civilization of a people has no relation with the variety of productions. Hence we must not be astonished at not finding among the Mexicans of the six- teenth century the vegetable stores now contained in our gardens. The Greeks and Romans even neither knew spinach nor cauliflowers, nor scor- zoneras, nor artichokes, nor a great number of other kitchen vegetables.

58. The central table-land of New Spain pror duces in the greatest abundance cherries, prunes, peaches, apricots, pine-apples, figs, grapes, melons, apples, and pears. In the environs of Mexico, the villages of San Augustin de las Cuevas and Tacubaya, the famous garden of the convent of Carmelites at San Angel, and that of the family of Fagoaga at Tenepantla, yield, in the months of June, July, and August, an immense quantity of fruit, for the most part of an exquisite taste.

59. The maguey, so abundant in every part of South America, is much esteemed by the Indians, because it supplies them with water, wine, vinegar, oil, balsam, honey, beams for building houses, tiles, thread for sewing and weaving, needles, and with its shoots for victuals. It may be classed with the aloes. The leaves, when half roasted, afford a quantity of liquor something sweet, which, when boiled to a syrup, is an excellent remedy for cleansing old wounds. It may also be taken in

the quantity of half or a whole drachm, in warm water, to dislodge any crudity from the stomach, and to expel bile or extravasated blood. This plant is very abundant ; and is sometimes employed in making pulque, a sort of liquor, which is the common drink of the South American Indians. When the tree is eight years old they cut the corazon, or bundle of central leaves, and insensibly enlarge the wound, covering it with lateral leaves, which tbi'V raise up by drawing them close, and tying

them to the extremities. In this wound the vessels appear to deposit all the juice which would have formed the colossal hampe loaded with flowers. This is a true vegetable spring, which keeps running for two or three months, and from which the Indian draws three or four times a day. We may judge of the quickness or slowness of the motion of the juice by the quantity of honey extracted from the maguey at different times of the day. A foot commonly yields in twenty-four hours four cubic deci- metres, or 200 cubic inches (242 cubic inches English), equal to eight quartillos. Of this total quantity, they obtain three quartillos at sun-rise, two at mid-day, and three at six in the evening. A very vigorous plant sometimes yields fifteen quartillos, or 375 cubic inches (454 cubic inches English), per day, for from four to five months, which amounts to the enormous volume of more than 1100 cubic decimetres, or 67,130 cubic inches. This abundance of juice produced by a maguey of scarcely a metre and a half in height, or 4ˆ feet, is the more astonishing, as the agave plantations are in the most arid grounds, and frequently on banks of rocks hardly covered with vegetable earth. The value of a maguey plant near its efflorescence is, at Pachuca, five piastres, or£l. 2s. 4d. In a barren soil the Indian calculates the produce of each maguey at 150 bottles, and the value of the pulque furnished in a day at from ten to twelve sols. The produce however, like that of the vine, is unequal. Plantations of the maguey are found in New Mexico, which bring in an- nually nearly £2000. sterling. The cultivation is an object of such importance for the revenue, that the entry duties paid in the three cities of Mexico, Toluca, and Puebla, amounted in 1793 to the sum of 817,739 piastres, or £178,880 sterling. The expenses of collecting were then 56,608 piastres, or £12,383 sterling; so that the government drew from the agave juice a net revenue of 761,131 piastres, or £166,497, or more than 3,800,000 francs. A very intoxica- ting brandy, called Mexical, is formed from the pulque. The grape of the best quality is that of Zapotitlan, in the intendancy of Oaxaca. The wine of Passo is in great estimation.

60. The Spaniards, who first learnt from the Indians the method of decocting the fruit of the cacao, have since diffused this knowledge

amongst other nations. Herera, the historian, compares the leaves with those of the chestnut- tree; the plant is so delicate that, to preserve it from the rays of the sun, they always set it near some tree which is capable of shading it. The flower is white, and produces fruit twice a year, in a pod grooved like a melon, and co- vered with a white skin in the bud of each flower; each one contains from twenty to fifty nuts compactly set, and of the size of large almonds. There are two kinds of cacao, the wild and bitter, which the Indians used to prize highly, and, as it is still in some repute, they endeavour to cultivate and improve it ; the other is distinguished by its quality according to the soil or country in which it grows. The best cacao is produced in the province of Soconosco, but very little is brought to Europe. The second,

in point of goodness, is that of Machala and Ironcoso, in the province of Guatimala; the third, that of Motina, in the same province ; the fourth, that of Rio de la Magdalena, in the king- dom of New Granada ; the fifth, that of the island of Trinidad ; the sixth, that of Caracas, in the province of Venezuela; and the seventh, that of Guayaquil. Europe is chiefly supplied from the abundant crops of the two last places, where the cacao is nearly the only fruit they cultivate. The butter extracted from the cacao is very fresh, and is applied to various purposes in medicine.

61. The vanilla is a plant of the thickness of a small vine branch, the fruit of which forms a considerable branch of trade. It is analeptic, cephalic, and stomachic, and is mixed with cho- colate to give the latter an agreeable flavour. The English esteem it as a specific for hypo- chondriacal diseases All the resinous substance may be extracted, and a few spoonfuls of this essence will improve the colour and taste of spirituous liquors. The herb of Paraguay, so called from the province of that name, is an odoriferous shrub, of which there is an incredible consumption throughout the kingdom of Peru, being the herb of which they make their mate. The trees, which form themselves into very thick woods, are more than 100 leagues from the ca- pital. The neighbouring people lay the leaves on plates to be dried by fire, and rub them with the hands till they are nearly as small as steel filings, pack them up in bags of seven or eight arrobas, which they send to Peru or Chili. According to Don Casme Bueno, the quan- tity gathered annually exceeds 12,000 arrobas. The herb is of two kinds : one, called camini. which is the most tender part of the leaf and falls off first, is the finest and most esteemed ; the other, called yerba de

palos, is somewhat coarser, and contains the fibres and stalks of the leaves.

62. Among the herbs for dyeing, which are ex- ceedingly numerous, the most remarkable are the anil, or indigo, and the cochineal. The latter, however, is not a plant, but an insect growing upon a plant called nopal ; which, with the ex- ception of the leaves, resembles in every respect the tunas of Andalusia. The insect in shape re- sembles the lady-bird, and when arrived at its full size is no larger than a flea. It feeds and lives on the nopal, and deposits its eggs on the leaves. The juice of this plant, which is its only moisture, is converted into its own substance, and, instead of being fluid and aqueous, assumes a beautiful carmine hue. In the months of May and June the plant is in the most vigorous state, and this is the most favourable time for deposit- ing on the leaves the almost imperceptible eggs, «i task which the Indians perform with wonder- ful patience ; and in the short space of two months it arrives at the state we have mentioned. It is, however, exposed to a multiplicity of dangers ; the northern blasts and violent showers of rain carry away the eggs, and the frost withers and destroys the leaves ; nor are there any other means of preventing these calamities, than by making tires at Mime distance and filling the air with smoke. They are also endangered from different birds which hunt after them, and also

from the grubs engendered in the nopai. When the insects have attained their full size they are gathered into glass vessels, when they die and are put into bags. The Indians have, nevertheless, three different methods of killing them ; one with hot water, another by fire, and thirdly, by ex- posing them to the sun ; and hence proceed the different degrees of colour, which is sometimes dark, at others very lively. A knowledge of the proper time when they ought to be taken off the leaves is necessary to preserve their quality. The cochineal, in some respects, may be compared with the silk- worm, particularly in depositing its eggs. The insects reserved for this purpose are caught at their full growth, ard put into a box tightly closed, where they deposit their eggs and die. The boxes are kept shut till the time for placing the eggs on the nopal, and the quantity contained in the shell of a hen’s egg is sufficient to cover a whole tree. The insect does not in- jure, in the smallest degree, the plant on which it feeds, only extracting from between the slender tegument of the leaf the most succulent part of the juice. The principal places in America in which the cochineal is cultivated, are Oaxaea, Xaxcala, Cholula,New Galicia, in the kingdom of Mexico, in Guatimala, and v. hiapa, in Loxa and Ambuto, in the kingdom of Quito, and in Tu- cuman, and in some other provinces or Peru ; but the greatest quantity is produ *ed in Oaxaea. 63. The indigo

plant is about two feet high, and has round leaves : the nil which is extracted from the leaves, differs from that which is pro- cured from the branches; the first kind is dis- tinguished by the name of Serguise, from the village where it is prepared, situated a few leagues from Surat, in the East Indies. The nil is pre- pared in the following manner : when it begins to lose its foliage the plant is cut, and the col- lateral branches stripped off, put into a sufficient quantity of water, and left in infusion from thirty to thirty-six hours ; afterwards the vessel is somewhat inclined, so that the water, which has already assumed a green colour, almost ap- proaching to blue, may ooze into a vat ; then with poles, iu the form of a pestle, capped with ” iron, it is agitated and churned till the surface is covered with scum. In this state they infuse one pound of oil of olives for the liquor extracted from seventy pounds of nil. After it has under- gone this operation, the scum, which resembles the froth of milk, is taken off, and the liquor is left to settle. When it has remained in this state a competent time, the cock is opened, and the water runs off, leaving the dregs in the bottom like lees of wine. The sediment is then put into small linen bags till the water ceases to flow. Finally, it is placed in shallow wooden boxes, and the nil is prepared. When the top of the nil is covered with a dark violet colour, it never fails to be good. The second species is prepared in the same manner 5is the former, with the ex- ception, that the leaves and branches make part of the composition. The best kind comes from Guatimala. That which comes from St. Domingo has not such a lively colour, yet for its quality it holds the second rank ; that of Jamaica the third ; and that from the Windward Islands the fourth ; all of which are esteemed in proportion to their

cleanness and purity. In New Spain they call the plant guiquiliti ; or, more properly, huiquilit. The membraneous mica, otherwise nursery-grass, is also found here in the greatest perfection, both with respect to its transparency and the size of its lamina. The country people make artificial flowers of it; and, like the Russians, use it for windows.

64. An immense number of the trees exude gums of a resinous, mucilaginous, and balsamic nature; among these may be enumerated the liquid ambar styracifluum, of two species, the croton sanguinium, yielding the gum called dragon’s blood, and of which there are three species, — the dividivi, a tree like the tamarind, and affording an excellent black dye ; the storax officinalis, exuding through its pores a fragrant gum of this name, which is used for incense in churches and

is also of use in pectoral com- plaints ; the aloes, of great medicinal virtues, and of which there are seven or eight species ; the anime, called by the French curbaril, which, dissolved in spirits of .wine, has been found effectual against the gout and nervous com- plaints ; and the sarsaparilla, the sassafras, and the guaiacum, an infusion of which is often used for purifying the blood, and which has been found peculiarly efficacious in venereal complaints.

65. The famous balsam of Tolu takes its name from a town so called. It is a resinous, dry, solid gum, of a bright yellow colour, of an agree- able scent and good taste, in whicn last parti- cular it differs from other balsams. It is procured by incision from a tree resembling a small fir, whose leaves are always green. This balsam is greatly esteemed and is brought into Europe in small cocoa-nut shells about the size of a lemon, and possesses the same virtues as the balsam of Gilead. The Peruvian bark, so famous at present for curing intermittent fevers, is peculiar to this country. It is distinguished into three kinds, — red, yellow, and white, but the red is found to be the best and most efficacious. The Jesuits carried this bark to Rome as early as 1639; but the natives are supposed to have been acquainted with its medicinal qualities many ages before. The calaquala, the decoction of which is the most powerful specific known for extracting bad humours ; the accinchinali, of wonderful virtue in dissolving and expelling extravasated blood, and healing internal wounds ; the maguey and guayaba, of similar virtues ; the canchalagua and the culen, both extraordinary fine vermifuges, the former being also a good antiscorbutic, and useful in the quartan ague, not to mention others indispensible in our pharmacopeia, as jalap, tobacco, ginger, pimento.

66. In the southern provinces, where the noisture of the climate is aided by the .warmth of the sun, the woods are almost impervious ; and the surface of the ground is hid under a thick covering of shrubs, herbs, and weeds. In other parts the trees are generally more lofty, and often much larger than are to be seen in any other parts of the world. The trees are often so thick as to afford 600 planks, each of twenty feet long and of one foot and a half in width ; and some have measured twenty-four yards in cir-

cumference. Tn Chili alone there are known ninety-seven different kinds of trees, only thirteen of which shed their leaves ; amongst the plants of that kingdom there are 3000 not mentioned in botanical works. Of all the trees in America the largest is the ceiba (bombax ceiba) ; it pro- duces a sort of white wool, very fine and soft, which they apply to several purposes. Of the tree they make boats of one

entire piece. In Darien is a hollow tree of this species, in which twenty persons have sat down to dinner. The quebrachs, or break-hatchet, takes its name from its excessive hardness ; there are two species, red and white. In Buenos Ayres they make of this wood axle-trees for the carts.

67. The mangle is a tall, bulky tree which grows spontaneously near the sea-coast; the wood is very strong and straight, and therefore much used in building houses. Lemori says there are thre« species ; the largest is twenty-five feet high anu twenty inches in diameter. The manner in which this tree grows is ve*ry astonishing; from the branches which are flexible, high, and long, there issue small bunches of filaments, which reach the ground, spread, and strike, and in a short time become as large as the tree from which they proceeded ; in this manner they increase in such a degree that whole woods spring from a single tree. The wood of the mangle is solid and heavy, has very long close grains, and is used in making boats ; the leaves resemble those of the pear tree, the flowers are small, and are succeeded by berries similar in outward appearance to those of the cassia, filled with a bitter pulp. The root is soft, and is used by fishermen to cure the bites of venomous animalp. These trees are so thick, and their roots so interwoven, that in many places you may walk twenty leagues with- out touching the ground.

68. The maragnon is the size of an apple-tree ; the fruit is acid and fibrous, and extracted by suction : they make furniture of the timber. The mata-palo, in the beginning, is only a shrub or twig, always growing near some other tree, round which it entwines, and, by its malignant influence, deprives it of all its sap. Some are twenty geometrical feet in circumference, and are made into canoes. There are five species of mata-palos, which bear a near resemblance to each other. The pinus cupressoides of America much resembles the European fir, but is of a distinct species. It sometimes measures ninety feet in circumference. The wood is used in building on account of its durability, and is transported from the island of Chiloe. One of these trees contains, in general, from 600 to 800 boards, twenty feet long and half a yard broad.

69. The Brazil wood derives its name from the country in which it grows. It is of the best quality, in the province of Pernambuco. The tree is large, crooked, and knotty ; the leaves are of a beautiful red, and exhale an agreeable odour. The bark is so thick, that a tree as large as a man’s body with the bark, will not be so thick as the leg, when peeled. The wood, cut into large pieces, without the rind, is a conside- rable article of commerce. When cut into chips, it loses the

pale colour which it before had, and becomes red, and, when chewed, has a swc*t

taste. It is used for various purposes by cabinet- makers, and admits of a beautiful varnish ; but its principal use is in dyeing red : a sort of liquid lac is made of it (or carmine), for painting in miniature. A great deal of mahogany is found about the bay of Honduras, and the isthmus of Panama. From that procured at Panama are made tables five yards long and two and a half broad of one board. When grown on a barren soil it is hard and of a close grain, and more finely variegated than when it proceeds from damp lands. The lignum vitae, chiefly peculiar to the island of Jamaica, is found on this conti- nent ; one species of it is found in China.

70. The minerals of South America form one of the most important and distinguishing features of this continent. Its mines of silver and gold have already been described ; besides which it abounds in copper, lead, tin, quicksilver, brim- stone, loadstone, and coal. Iron mines are rare. The quicksilver necessary for the working of the metals is abundant in Chill.

71. The piedra de cruz, or stone of the cross, very much resembles green marble, and is chiefly found in the kingdom of Granada. In whatever direction this stone be broken, it displays a black cross perfectly drawn, and it is said by the na- tives to possess singular virtue in curing the rheum and fevers. The great abundance of this stone makes it of little value. M. Bomare says that it appears to be a sort of madrepore fossil, whose veins cross eacli other in such a manner, that, whether they are cut horizontally or verti- cally, there is the figure of a cross-nature filling up the spaces with a hard argillaceous earth. The same stone is found in Portugal, Santoigne, Normandy, and Guienne, and particularly near Santiago in Galicia ; and the Spanish silversmiths enchase them in gold and silver. The girasol is also a precious stone, found in Granada, partly transparent and partly opaque. It has a milky look, emits a weak lustre blended with blue and yellow, and it sometimes has the colour of the rainbow, or a trill colour. When cut in the form of a sphere or semi-sphere it reflects the rays of light every way, but not so well as the opal. It is uncertain whether this stone be a species of the opal or calcedonia. The most beautiful are of a milk-white colour, shaded with blue and yelinw beautifully intermixed. This stone, which is harder than the

opal, is brought from the east, but those of a softer nature from the west. They are to lit met with in the island of Cyprus, Ga- lieia, Hungary, Bohemia, as well as in several parts of America. Sometimes they, are found together, with the opal enclosed in another red tender stone, clouded with black. The name girasol was given to this stone by the Italians. There is a green stone called chalchihuites, found in the silver mines in the, kingdom of New Galicia., to which they attribute the virtue of alleviating the pain of the hip-gout, or sciatica. The ancient Americans held these stones in great esteem. The most esteemed are green, of which there is a larˆe altar-stone in the cathedral in the town of 1'uebla de los Anirelos.

7'2. On this continent is also found in the sand on the shore of tin-island of Dominica, a small stone, shaped like a lentil, which they call

limpia-oios, or eye-cleaner. The mineral naptha is of a aquid consistency, clear, pellucid, of a strong scent, and very inflammable, and when pure burns without leaving any residuum. It is found in large quantities on the surface of foun- tains, at the foot of some mountains in Persia, Tartary, and China; and, if a light be applied to the surface of the water, it burns for a conside- rable time, emitting a very offensive smell. Genuine naptha is very scarce in Europe. In America it is found in the province of Piura, in the kingdom of Peru.

73. Of the aetites, or eagle-stone, well known in Europe, there are great quantities in Peru, particularly in the province of Huamalies. This stone is of a ferruginous nature, and has a cavity within, sometimes full and sometimes empty, and of various figures. Some are round or oval ; others again are of a triangular, square, or flat form : the superfices are sometimes smooth and sometimes rough. The huano, which, ac- cording to prevalent opinion, was esteemed as the dung of a bird of that name bred in the small islands situate in the South Sea, is now incon- testibly proved to be a fossil earth ; and is used to fertilize the land in the province of Costa. One handful of this earth, strewed about the roots of a plant of Indian wheat, makes it grow with such vigour, that it prpduces two hundred-fold. In this manner an incredible quantity of this fossil is consumed. There is also another earth found here very analogous to the kaolin of the Chinese ; and another kind called kovo, pro- ducing an excellent black dye, is found in Chili represented by Feuille and Frazier as superio- to the best European blacks.

74. The quadrupeds of America are as nu merous, in proportion, as any other part of the living creation. Those introduced from Europe have increased and multiplied beyond all ex- ample, so that in the

provinces of La Plata, in particular, it is impossible for any one to distinguish what animals do or do not belong to himself; and thus each, when he wants horses, goes out and catches as many as he wants, or kills as many oxen as he requires. The goat has thriven very well, but the sheep have de- generated, and their wool has become extremely coarse, excepting in Chili. The horses and mules are sure-footed and active. The horned cattle have acquired much in point of size, while their flesh has become more palatable and nutri- tive. The sheep breed twice a year, and gene- rally have twins ; and their fleeces yield annually from ten to fifteen pounds of wool each.

75. It is remarkable that none of the ferocious animals found here assimilate to the lion, the tiger, the wolf, &c. of the old continent. Though under the influence of a similar climate to Africa, even the climate of Peru and of Caracas produce nothing more like the lion than the puma (felis onza sive jaguara), being equal to its prototype neither in size, fierceness, colour, nor mane. Its head has some resemblance to that of the lion and tiger, but the tail is shorter than that of either of those animals ; it climbs trees, is both timid and cowardly, and flies at the sight ot a man . Modern naturalists place this animal in the genus of the felices, and in the species of

jaguara, which they believe is the ounce of the ancients.

76. The beast most resembling the tiger is the cunaguaris (felis onza), found chiefly in tiie pro- vince of Guiana; it resembles that animal in its shape, actions, and dispositions, and can only be distinguished from it in the size, which is less, and in the difference of the ground brown colour of the spots. It is also called cat, and lobo cerbal, or hart-wolf; it is very much like the wild cat, and of the size of a common dog ; it feeds on prey like the tiger, and may be tamed if taken young; but it is always necessary to have it chained during the night, or it would destroy the hens and turkeys. Of all the quad- rupeds pertaining to the order of wild beasts, the mochilera (dilelphis marsupialis), is perhaps the most peculiar to South America. These animals have ten fore teeth in the upper mandi- ble, and eight in the lower ; the grinders are large, and the tongue grained; and it has a pouch, formed by the folding of the skin of the belly, in which it preserves its young, and opens and shuts at pleasure by means of the union of several muscles, and of two bones situated before the pubis. The interior of this pouch is filled with small glands containing a yellow substance, which gives the whole body a fetid smell, but when taken out and dried loses this nauseous odour and acquires that of

musk. This animal is a native of South America, and the female, it is said, brings forth five, six, or seven at a birth ; and that as soon as they are born she deposits them in her pouch, and, continues to suckle them in it till they can walk. When the young are frightened they instantly shut themselves up in the pouch. The motion of this animal is so slow that a man may easily catch it without running ; but they climb trees with great facility, and hide themselves in the leaves, or hang by the tail from the branches. It is a carnivorous ani- mal, but feeds occasionally on fruit, sugar-canes, and leaves. There are five species, which differ from each other merely in point of size, and are found in almost every part of America.

77. The anta (tapir bris), also peculiar to America, is about the size of a calf of two months old : it has neither tail nor horns ; its head is large and fleshy, the trunk strong and nervous ; eyes small, legs short, and body arched like a hog. It inhabits the mountains and dry places, and is a great friend to cleanliness ; when hard pressed by the dogs it makes to some river, and swims with amazing rapidity till it finds a safe asylum on the opposite banks. Its aversion to light makes it retire into the thickets. Its hide is ball-proof, and its flesh insipid, yet the Indians eat it, and, when young, is by some esteemed delicate. It is found in every part of America, and is sometimes tamed. The Brazilians call it tapir; the Peruvians ahuara; the Portuguese anta ; and the Spaniards danta, or great beast. Many have erroneously inferred, from the mul- tiplicity of names, that there are two distinct species. But the most ferocious animal found in these regions is the famacosio (felis famococius) chiefly in Paraguay. In figure and bulk it re- sembles the mastiff, and its head is like that of a tiger ; it has no tail : in swiftness and ferocity it is

matchless. If any person comes within view of this animal he may reckon himself as become a prey to it, unless he have the opportunity of climbing into a tree to evade its pursuit. When thus disappointed the animal rears his fore feet against the tree, and roars hideously till others come to his assistance ; then they gnaw the tree about the root till it falls to the ground, and if the distressed fugitive has no arms, his death is inevitable. To diminish them the Mannacicas Indians, where they are most abundant, enclose themselves in a circumvallation of palisadoes, and begin to bellow till these animals, attracted by their cries, crowd to them, and begin to gnaw the stakes to find an entrance. Whilst they are thus employed, the Indians shower their arrows upon them with such skill and dexterity, that they never let one escape. In this manner they kill great numbers.

78. In Guiana is found the rabo pelado, or naked-tail, a ravenous

animal of the vulpine species, naturally ferocious, though it principally feeds on birds, and seldom appears abroad in the day. The females have under the belly a sort of pouch, hairy in the inside and close, in which they nurse and carry their young, which are generally attached to the paps enclosed within the pouch, and do not quit their hold till they can follow the mother. According to Wil- liam Pison there are two other species, less than the one described. The most rare species is about the size of a young cat of two months old, and is distinguished by a bag at the bottom of the neck, which it fills with maize.

79. There is an animal of the pig kind, the sus tajacu of Linnaeus, called the pig of the woods, which has an aperture on its back, from which, when closely pursued, it emits a most in- tolerable stench. If, on killing the animal, the part be instantaneously cut out, the flesh affords good eating ; but should that operation be neg- lected, even for a short period, the taint conta- minates the whole carcase. The domestic pigs are by no means good, for they feed so much upon beef that their flesh is very hard and coarse. There is an animal of the opossum kind, about the size of a rabbit, called a zurilla, the skin of which, streaked black and white, is considered valuable. When attacked it ejects a fetid liquor of so pungent a nature, that if it falls on any part of the dress of its pursuers, there is no possibility of getting rid of the stench but by some months exposure to the weather. The zu- rilla is very fond of eggs and poultry, and some- times enters a house in quest of its prey ; the inhabitants immediately hasten out and leave him in quiet possession, knowing that the slightest attempt to drive him out would expose them to the disagreeable catastrophe already alluded to.

80. The alpaca, which may be esteemed a subaltern species of the camel kind, is a quadru- ped peculiar to Peru and Chili ; it differs from that animal only in its size and compactness. The neck is long, the head small, the ears large, the eyes round and big, the beard short, and the upper lip a little open. Its legs are rather long in proportion to its bulk, its hoof cloven, and its tail long; its hair is long, and rather coarser than that of the vicunna: in

the parts of generation it also resembles the camel, male and female. Like that ruminating animal, it has four ventricles. The second con- tains, between two ventricles of which it is composed, a number of cavities calculated to deposit water. This animal, like the camel, is domable, and will carry from seven to nine stone ; it will fall on its

knees for the convenient reception and exoneration of its burden. The disposition of the hoof, and the closeness of the hair, will admit neither shoe nor harness : they are slow, but sure-footed. It has a great thick- ness of fat between the skin and the flesh ; and so great is the fluxion of blood in its veins, that the most intense colds are incapable of penetra- ting it ; the enormous load of fat with which it is endowed prevents the blood from being con- sumed by the excessive heat of the sun. In the ventricle are formed five bezoar stones. . The under mandible, like that of the camel, is fur- nished with six incisors, two canine teeth, and several grinders ; but in the upper jaw the two first kinds of teeth are wanting, in which respect it differs from the camel kind. The ears are pointed, and better made than those of the camel ; its nose is simple, its neck straight and well-pro- portioned, its tail beautiful, and adorned with long hair as soft as wool ; it makes a noise like the neighing of a horse. When irritated it neither assails with its mouth nor heels, but ejects from its nostrils some viscous matter on the offender, which some have erroneously asserted creates tne itch.

81. The vicunna. though considered by Count Buffbn to be the alpaca in its wild state, is an animal of a different species, though of the same genus ; and, though inhabiting the same mountains, they are never found in each other's company. The vicunna rather resembles the goat than the camel. Its wool is greatly esteemed in Europe, and is made into very fine cloth. The vicunnas are very abundant in the Cordil- lera of the Andes ; and live on the most steep, craggy parts of those mountains. They have not been reared well in any part of Europe. They feed in flocks, like goats, and no sooner see a man than they escape with great velocity, driving their young before them. The hunters join in large bodies, surround some hill on which they are known to feed, and following them gently, they drive them towards some narrow passage, over which they have previously drawn a rope, on which they hang bunches of old rags: as soon as the vicunnas, which are naturally timid, see these they are alarmed; and huddling together, they permit the hunters to catch, sheer, and kill them.

fVj. The alco, or native dog of the new hemi- sphere, does not, seem to have diiiered greatly from thai o. the old, except, that it possessed not the power ofbarking. The natives of St. Domingo accounted their flesh a great delicacy. The number and vanity of the canine species are very gre" monkey tribes -re lound in all the variety known ,n anv par1: t.i iae ulobe.

. The woods and grjvos of South America abound v.ith • -ario'iv birds of exquisite plumage nna melodious voices, mauv of whi?b are nut

known in the Old World. The trillis, or thrush of Chili, has a note equally harmonious with that of the European ; but always pines and dies if confined in a cage. There is a curious bird which they call in Peru the predicador, or preacher, from its imitation of a person preaching, in its natural action and gestures ; its flesh is very good to eat. The mono has the extraordinary talent, in its warbling, of imitating the voices of men, dogs, and all other animals ; but what is still more singular is, that not possessing the means of defending itself from its enemies, on account of the shortness of its beak and claws, it searches protection in the company of wasps, with whom it lives in the strictest union, and builds its nest in such a manner that they may defend it. This bird may perhaps be the same with the cuchucho of the Portuguese. There is another bird which the Spaniards call the organ, from its imitation of that instrument; and another the trumpeter, from a similar power of imitation. The curi- quinqui, or Inca's bird, is larger than a hen, and considered the domestic fowl of Peru. It spends the whole day in clearing the fields of insects, and returns home to sleep in the evening. It is a mortal enemy to the snake, which it attacks, opposing its wing as a shield to guard against the sting ; and having killed the snake it separates the head from the body and eats it. Eagles, both of the gray and blue species, as well as other birds of prey, are found here in great numbers. Here are also paroquets in immense flocks, pigeons, great red-legged partridges, small partridges, wild ducks, and wild turkeys. Os- triches of a large species are very numerous ; they are so fleet and active that even when well mounted it is impossible to get near them but by surprise ; the stroke of their wing is said to be inconceivably strong.

84. The condor of America is said by Molina to differ in colour only from the vulture ot Switzerland, called laemmer geyer ; this immense bird, the largest hitherto known, builds its nest on the rocky prominences in the most rugged parts of the mountains. They lay two large eggs, far exceeding in magnitude those of the turkey. Their usual food is the flesh of animals : they frequently attack flocks of sheep and goats, and will kill calves a year old. To effect this several of them unite, and besetting the calf on a sudden they surround it, with their wings ex- tended, and pull out its eyes that it may not escape, when they tear it to pieces in a moment. The peasants, who watch every opportunity of destroying these aerial pirates, wrap themselves in the skin of an ox newly slain, and lay them- selves flat on the ground ; the condor, deceived by the appearance, thinking it some dead body, approaches the peasant, who immediately seizes their legs with his hands, which are protected with strong gloves. As soon as the bird is seized, other peasants, who had lain in ambus- cade, run to assist in

securing and killing the captive. Others make a small endow” with palisadoes, and place in it the carcase of some dead animal : the condor, whose eye is very piercing and sense of smell very qxiiok, immediately falls upon it, and loads itself in such a manner that it cannot rise on thfi wing, through

ttu’ ?mall extent of the enclosure ; otherwise, if it gets upon any eminence, it flies with the greatest ease, however much it may have eaten, rising to such a height that it hides itself entirely in the clouds.

8.5. The fregata, or frigate, has its name from the circumstance of its being seen soaring out at sea at the distance of 300 leagues from land, ..hough it cannot support itself on the water. It is ahout the size of a hen, but has long wings, with which it skims above the surface of the water with ease, and strikes with such dexterity that it never misses its aim. It pursues other sea-fowls for the sake of the fish which it takes out of their bellies. Its flesh tastes something like the water-hen ; and its grease, used as an ointment, alleviates rheumatic pains. As it always follows ships, the appearance of this bird is looked upon as a certain sign that some vessel is at no great distance. There is a small island not far from Guadaloupe, called the island of Fragatas, from the great numbers which resort thither to pass the night and to build their nests. This bird is not now very common. The tropic (phaeton sethereus) can soar as high as the frigate, but has the power of resting itself on the water, being able to swim like a duck. The Indians very much esteem the long feathers in the tail, with which they adorn their heads, and even thrust them through the cartilage of the nose to imitate mustachios.

86. Among the amphibious animals of the creation, none is more worthy of remark than the caiman, or alligator. The species found in America are different from the crocodile of the Nile, the first having no voice, whilst the latter can cry like a child. Its colour is gray, its aspect ferocious, and it is covered with a shell that is impenetrable to ball. It is timid, and flies at the least noise; but when tempted to human flesh it is voracious and daring. The eyes are situated in two prominences, which are the only part of it visible when it is in the water : it comes to land to bask in the sun and to eat : it swallows a quantity of large stones, which serve as weights in its stomach to make it sink in the water ; the mouth is furnished with se- venty-two teeth, the twenty grinders being in double rows in each jaw. The

stomach has a strong smell of musk, extremely fetid. This animal abounds in the rivers and creeks, and along the sea-coast. The female lays at each incubation forty or one hundred eggs, like the ostrich, which she deposits in the shore, making a hole and covering them with sand, at the same time counterfeiting others, to prevent them from being discovered. But the gallenazos watch them from the trees, and, as soon as the caiman retires, they descend to pull them out and eat them. If it were not for those birds, and for the circumstance of the old alligators eating their young ones, which they do till the latter are too large for them to swallow, they would soon vie in numbers with the.flies. The eggs which es- cape the search of the gallenazos remain in the sand forty days before the embryo arrives at a state of perfection, at which time the female re- turns and takes them out. Some have been seen

in the rivers Guayaquil and Magdalena twenty four feet in length.

87. The head of a full-grown alligator is about three feet long, and the mouth opens nearly the same length ; the eyes are small, and the whole head in the water appears, at a dis- tance, like a piece of rotten, floating wood ; the upper jaw only moves, and this they raise so as to form a right angle with the lower one. They open their mouths while they lie basking in the sun, on the banks of rivers and creeks, and when filled with flies, musquitoes, and other in- sects, they suddenly let fall their upper jaw with surprising noise, and secure their prey. They have two large, strong, conical tusks, as white as ivory, not covered with any skin or lips, and these give the animal a frightful appearance. In the spring, their season for breeding, they make an hideous and terrible roar, resembling the sound of distant thunder. The alligator is an oviparous animal ; their nests are in the form of an obtuse cone, about four feet high, and four or five in diameter at their bases ; and are commonly built on the margin of some creek or river, at the distance of fifteen or twenty yards from the water. They are constructed with a sort of mortar, made of a mixture of mud, grass, and herbage ; first, they lay a floor of this com- position, on which they deposit a layer of eggs, upon this a stratum of their mortar, seven or eight inches thick, and then another layer of eggs. In this manner they proceed one stratum upon another, nearly to the top of the nest. The Indians in Guayaquil catch them with the tolete, which is a very strong piece of wood, three quarters of a yard long, sharpened at both ex- tremities : at an equal distance from each end they tie a thong of ox-hide, which they keep in their hands, and play with the caiman with great dexterity and in perfect security ; for though it can run

swifter than a horse, yet, as it has no joints to assist it in turning, it is obliged to cir- cumscribe a circle with the whole length of its body. When the animal is tired and fatigued by frequent attempts to catch them, they thrust the tolete horizontally into its mouth, placing it erect when it enters, by which means it remains fastened on both jaws.

88. The lizards, and other amphibious reptiles of that genus, found in the waters of the Orinoco and Amazons, are innumerable. The iguana, which is about a yard long, has frequently found in its inside a stone about as large as a small tur- key's egg, of a pale ash colour, composed of different coats of lamina like an onion. Reduced to powder, and taken in warm water, it is a re- medy against the stone. The liron, also amphi- bious, is small and beautiful, resembling the dormouse. Its belly is divided into two skins, which it opens and shuts at pleasure, like a doublet. These skins are interiorly lined with a soft fur, and within them the female carries six young ones, attached to the umbilical gut and to a small twisted nipple, which each young one holds in its mouth from its first formation till it is brought to light. Hence if you catch a female fifteen or twenty days gone with young, on opening the belly you, may discover the sa

young of the size of small mice, in the surpri- sing state in which they are engendered thus supported. In the province of Venezuela it is called the little water-dog.

89. The rr.anati, or sea-cow, is a large am- phibious animal correspond ing with quadrupeds by the junction of the fore feet at the breast, and with the cetaceous as being destitute of hind legs and feet, in place of which it has a very large tail, which spreads like a fan horizontally ; the head is larger than that of an ox ; the eyes are small and without an iris, and the holes which conduct to the organs of hearing only a line in diameter : it has no teeth in front, but a hard callous substance which serves to cut the grass, and thirty-two grinders ; it is also desti- tute of a tongue. It has two fins placed near the head ; the skin is an inch thick, and is co- vered with hair of an ash colour. Its usual weight is from 500 to 800 Ibs. ; the flesh is good and fresh, and tastes rather like veal than fish, and when dried and pickled is more esteemed. It is found in abundance in the Maragnon and the Orinoco. The sea-lion is

more active, beauti- ful, and better shaped than the other phocae, though of a roundish form, and covered with 4 dark-brown hair ; its back, from the shoulders to the tail, is very short ; the neck and head are long, like those of the goat; its mane is very conspicuous, and gives it something of the out- ward appearance of the African lion, and an exclusive right to be called the lion-marine, or sea-lion. The name which Admiral Anson gave it, and which Linnaeus afterwards adopted, is improper. The Indian natives of Chili gave it the name of thopel-lame, or the hairy-lame. It bears a r.triking resemblance to the African lion, in the shape of its head and in the nose. The amphibious tortoise differs from the land tortoise in its size, deformity, and feet, which resemble the fins of a fish. The Indians, to takethem, wait till they come out to lay their eggs in the sand, and then going on one side, turn them on their hacks without a possibility of their being able to rectify themselves, on account of the flatness of their shell. Tlvey are from two to four feet long, two or three broad, and some weigh 400 Ibs. They lay about 300 eggs at each incubation.

00. On the coast of the kingdom of Quito .‘here is a fish called manta, found in such shoals that it has given its denomination to a conside- rable port. It is very large, resen.bling the sole ; ai;d the body is surrounded with a membrane of an oblong figure, three or four yards long and two broad, and nearly a hand in thickness. With this skin it seizes a man, of whom it is the mortal enemy, and squeezes him till he is drowned. The divers carry a knife with two edges with them, and is soon as they perceive the fish begin to cover them, before they press them tight, they take th<; knife and cut all round ; and thus, after frequently stabbing the cieature under the belly, at once kill it, and en- sure their own safety. The bou;uilla, of delicious flavour, H common to the lake of Chucuito in Peru ; it is about four inches long and three b.-oad, and sells at six dollars per thousand. The Kuacarito is plentiful in the Orinoco ; its great

characteristic is its great partiality for blood, which is so predominant, that a few drops on the side of the canoe will draw them in shoals. The capitan is a delicious savoury fish, found in the rivers of New Granada : it is the bagra of other provinces, but those of Granada are the best. It has been remarked, that, when the bones of the head are separated, each one repre- sents some one of the instruments of the passion of our Redeemer, forming the spear, cross, nails, &c. The bobo, or fool, is also very common, having its name from the facility with which it suffers itself to be caught.

91. The snakes of South America are large and venomous. The boa (constrictor magnus) is said to have the property of attracting with its

breath birds and other animals for its prey. It is a native of America. It has 240 rings ~on its belly, and 60 on its tail ; it is amphibious, and so large that some are upwards of thirty-six feet in length ; the body is very thick, greatly re- sembling the trunk of a large tree ; it is of a dusky pale colour, and the upper part of the back is marked with numerous spots ; the tail is of a darker colour, and the sides are beautifully speckled ; the head is covered with small scales, and it has a black streak a little above the eye : it has no grinders, nor is its bite venomous ; the tongue is fleshy and very thin ; the part above each eye is a little elevated ; the scales are small and very smooth, and the tail is not more than one-eighth part of its body. The Indians adore this monster, the skin serves as an ornamental part of their dress, and by them the body is eaten. It generally lives in caverns and very thick woods, taking its station near some tree, round which it twines its tail and springs out upon any thing that passes within its reach. As soon as it has got possession of its prey, parti- cularly if it be some large animal, it surrounds the body, squeezing it very hard to break the bones, which it readily accomplishes by the force of its circular muscles : after this is done, it passes its tongue over the skin, leaving on it a kind of saliva, to facilitate deglutition, and swallows it by degrees. If its prey be an horned animal it begins at the hind feet and finishes at the head, leaving the horns hanging out of the mouth till the body is digested, when they then fall. After it has devoured a large animal it is incapable of motion for two or three days, when the hunters avail themselves of the opportunity, and kill it. When irritated it sends forth terrible hisses. It frequently rolls in mire, and then hides itself among the fallen leaves, waiting for prey near some path frequented by wild beasts ; and in this state the hunters have sometimes set their foot upon it, mistaking it for a fallen tree. This snake is found in the kingdom of Terra Firma, in the kingdom of New Granada, and in many other parts of the continent. In the province of Chaco they are called ampalabas; and by the Dutch in their colonies smugglers.

92. The flying snake is peculiar to the pro- vince of Guayaquil in the kingdom of Quito, where it is, with great reason, more feared than any other. It is about three palms in length, slender, of a dark colour, and very venomous.

Hie vuigar persuade themselves that it has hid- den wings, which it expands when it wishes to fly ; but its flight is nothing more than a

con- traction of the body, and the flying off like an arrow, taking incredibly large jumps. This snake is the chinchinton of Guatimala. The coral snake is a yard long, and an inch in diameter, with a beautiful skin ; but its bite is instant death. The person who is bitten im- mediately swells and begins to shed blood from every part of his body, and, all his veins being burst, he instantly expires. This serpent is very frequent in every part of America. Bomare confounds it with the yacumana of the Ama- zons, but the difference between them is very great.

93, The distinguishing mark of the rattle- snake is, that it has a rattle in the end of its tail, consisting of several sounding shells, or rather a small shelly bag with a little bone in the inside, which rattles when the animal moves, and serves to warn those who hear it of its ap- proach. It receives an increase of one bell, or rattle, every year. There are five species : the horridus, or American rattle-snake, is of a deep orange colour, or blackish on the back and ash- coloured on the belly, from four to five feet long. The second is the miliar, ash- coloured, with black spots, peculiar to Carolina. The third, the dryinas, of a whitish colour, with a few spots of yellow. The fourth, the dursisus, spotted •vith white and yellow ; and, fifthly, the mutus,

of a rhomboidal figure, with black spots on the back and a streak of the same colour behind its «yes. This last is a native of Surinam. They are found in both North and South America, •where they are very numerous ; the bite of any of them is so extremely venomous that it kills in a very short time.

94. Numerous kinds of insects infest every city and colony, most of them unknown to European climes. The comajen is a very di- minutive insect, resembling the moth in its de- ttructive qualities, but so very active, that, in :he space of one night, it will penetrate the hardest substances ; and there have been in- stances of its having perforated from one side to the other, in the above-mentioned time, a bale of paper, containing twenty-four reams. It is very frequent in hot rainy countries ; and the greatest precaution is necessary to prevent it from entering the magazines. Tar is generally used to prevenj its effects ; and by Linnaeus quicklime is recommended.

>95. The coya is a very venomous insect, generated in the hot provinces, such as that of San Juan de los Llanos, and particularly in the plains of Aciva. It is the same shape and size as that which is known in Europe by the name of cochinilla de San Anton, or cochineal of St. Anthony. It neither stings nor bites ; but if it happen to burst, and its blood touch any part of the body, except the soles of the feet

and the palms of the hands, it is said to produce violent and often fatal convulsions. As this is the effect of a sudden coagulation of the blood, the ordinary remedy is to make a fire of straw,

and expose the patient freely to the action ot the flames. The instinct in animals which are pas- turing and see one of these insects near them is very singular; they instantly snort and gallop off in another direction.

96. The mosquito de Gusana is of a cream- colour, and when it bites it leaves behind the seed of a small grub, which increases daily in magnitude. At first it is covered over with a skin, and causes very intense pain. It afterwards breaks out into a wound, and, if not properly attended to, ends in a gangrene, which puts an end to the existence of the sufferer. This insect has been extended to several provinces in which it was not formerly found, by means of the cattle.

97. The nigua is a very small kind of flea, which penetrates the stockings, and introduces itself under the nails and into the joints and top of the toes. The pain which it causes on piercing the skin is like the bite of a common flea. As soon as it has fixed its situation it begins to corrode the flesh around it, and causes a slight itching ; and in this state attains the size of a small pea, and lays its eggs, which are so many other young niguas, which settle near the mother, and live in the same manner, increasing with such wonderful celerity, that if care be not taken to pull them out, they corrupt all the flesh near them, and cause malignant ulcers, and fre- quently gangrenes. When the bite is felt, the bad effects may be prevented by breaking the skin where the insect is situated, and extracting it with the point of a needle, putting a pinch of snuff, or ashes out of a tobacco-pipe, into the wound. The negroes, and all people who are dirty, frequently lose the use of their feet for want of dislodging these insects at the proper time ; and many have been obliged to submit to amputation of the leg. Pigs are also very subject to this disease, and their feet are always full of this insect. In Peru it is called pique.

98. The centipedes here are found from three to ten inches in length, and have the power of biting with both head and tail, the wound causing a fever and violent pain. There is also a small insect called the alicuya, generated amongst the herbs of Peru, and very prejudicial to the flocks. It eats its way into the inside of a beast, settles in its liver, and causes an ulceration, of which vast numbers die. Against it salt is the best preservative. Ants, in many provinces, are ex- ceedingly numerous ; and would be intolerable, but for a quadruped peculiar to South America, called the ant-eater, which has the power of shooting

out its tongue into the ant-holer, from whence, when it is covered with them, it with- draws it, and swallows them by myriads.

99. Of the indigenous worms, insects, &cc. of this continent, it is hardly possible to give an exact account. In Chili alone there are thirty-six species of insects ; and the tunicated cuttle-fish found here is 150 pounds weight. In the seme province there are thirteen species of crabs and craw-fish found on the coast, and four species in the fresh waters.

CIVIL AND POLITICAL DIVISIONS OF SOUTH AMERICA.

CHAP. II.

100. SOUTH AMERICA, once regularly deli- vered over by the Pope to Spain, and for cen- turies divided principally between the Spaniards and Portuguese, is now occupied for the main part by a group of rising independent states, to which, therefore, we shall direct our principal attention. In Guiana, a province little known, the British possessions (comprehending all that was once called Dutch Guiana) demand a slight

attention ; and Cayenne is a French island oflT this coast, and the name of a small French settle- ment opposite to it. The great political divisions of South America are exhibited in the follow- ing table. Both the dimension and popula- tion of the different countries will commonly be estimated in round numbers, their exact propor- tions never having been very correctly ascer- tained

CIVIL DIVISIONS AND POPULATION OF SOUTH AMERICA.

‘

Order.

Countries.

Square miles.

Population.

Number of persons estimated to a square mile.

1

1,350,000

3,000,000

2

2

90,000

250,000

2

3

Peru

495,000

1,076,997

3

4

Brazil

3,060,000

2,200,000

2 for 3 miles.

5

6

United Provinces . . . Chili

1,440,000 175,500

2.400,000 1,226,000

1

7

7

Patagonia

400,000

101. COLUMBIA, at present the best esta- blished of the South American States, is situated between 5° 50′ south and 12° 30′ north latitude, and 58° and 82° west longitude. It is bounded on the north by the Carribean sea, and north- east by the Atlantic Ocean ; on the east by Guiana, from which it is separated by the river Essequebo ; on the south by Brazil and Peru ; on the west by the Pacific Ocean, and north-west by Guatimala in North America, with which it is connected by the Isthmus of Darien. It is esti- mated to be 1500 miles long and 900 broad, including an area of about 350,000 square miles.

102. The Andes chain of mountains is con- tinued from Peru along the shores of the Pacific Ocean, and, dividing near the southern boundary, run parallel with each other in a northerly di- rection for 200 miles, enclosing a longitudinal valley nearly thirty miles broad, and elevated 9000 feet above the level of the sea. Between the second and third degrees of north latitude, the range again divides into three separate chains, of which the eastern was called Venezuela, the middle one Santa Martha, and the western or pa- rent range. The Venezuela chain preserves a north-easterly direction towards the southern ex- tremity of the lake of Maracaibo, where, dividing into two great brandies, it takes a two-fold di- rection ; one range proceeding on the west side t>i' the lake till it terminates ; and the other con- tinuim: in a north-easterly direction, and winding along the northern coast, diminishes in height till it terminate-; on the (Julf of Paria, opposite the inland of T:mi

103. The country east of the Andes, and south of the Venezuela chain, consists of immense plains, comprehending the vast tracts watered by the Orinoco and its b.ranches, a considerable part of which is overflowed in the rainy season. Columbia is full of noble rivers ; the largest of which, besides the Orinoco and Amazon, are the Magdalena, Cauca, Atrato, Guayaquil, and Gua- rapiche. It is also indented by numerous gulfs and bays, particularly the Gulf of Guaya- quil, the Bay of Choco, the Bay of Panama, the Gulf of Darien, the Gulf of Maracaibo enclosed between two peninsulas, and communicating by a mouth forty miles in width with the Carri- bean sea, the Gulf of Cariaco formed by a long peninsula projecting from the main land to

the south of the island of Margarita, and the Gulf of Paria.

104. The lakes also contribute to the import- ance of this country. Lake Maracaibo is 200 miles long and 70 broad ; and communicates with the Gulf of Maracaibo by means of a narrow strait well defended with strong forts. Lake Pa- rima is generally laid down in maps a little to the east of the sources of the Orinoco. The cli- mate varies in proportion to its elevation ; but the temperature at the city of Leon de Caraccas, 8000 feet above the level of the sea, is delightful all the year, and presents an unparalleled as- semblage of all the lively, grand, and picturesque features of nature.

105. The republic of Columbia is composed of the united provinces of New Granada and Venezuela, and contains the following divisions and population, viz.

SOUTH AMERICA.

j VENEZUELA.

NEW GRANADA.

1 1

Provinces.

Population.

Provinces.

!

Population.

Gui > ina

40 000

Rio Ilacha .

20 000

Cuinana ....

100,000

Santa Marta . ...

70,000

Island of Margarita ....

15,000

Cartagena

210,000

Caraccas

460.000

Panama. ... .

50,000

120,000

Coro . .

40,000

90,000

Antioquia ...:.,..

110,000

Pamplona ...

90 000

825,000

Sacorro

130,000

200,000

Cundinamarca

190,000

Mariquita

110,000

Popayan ... .

320 000

Casanare

20,000 I

Quito

500,000

Cuenca

200,000

Guayaquil

50 000

Loxa and Jaen .....

80,000

t

Quisos and Marnes

40,000

-•j *• •••

•

2,430,000

106. This population consists of Indians or Aborigines, Europeans, Spaniards, and Creoles, or their descendants ; Negroes, and mixed or coloured races known by the names of Mulatto'es, Mestizoes, Quarterons, &c. ; and with the na- tions of independent Indians, as the Gaahiras who inhabit the country betwixt Rio Hacha and Maracaibo; the tribes on the coast of Darien ; the population of the Meta, and the tribes of the Orinoco, raise the above enumera- tion to upwards of 3,000,000. The latest partition of Colombia is into 12 depart- ments, viz. The Isthmus, Magdalena, Zulia, Venezuela, Orinoco, Cauca,

Cundinamarca, Byaia, Apure, The Equator, Guayaquil, and Asuay.

107. The chief towns are — Santa Pe” de Bogota, the former capital of the vice-royalty of New Gra- nada, and the present seat of government, situated on the small river Bogota, a river tributary to the Magdalena ; it contains about 30,000 po- pulation— St. Thomas containing 7000, situated oh the south bank of the Orinoco — Leone de Caraccas, situated among the mountains, near the northern coast, in a valley considerably elevated above the sea. In 1802 it contained 42,000 inhabitants, of whom one-fourth were whites. In March, 1812, many houses were de- stroyed by a dreadful earthquake ; and 12,000 per- sons buried in the ruins. La Guayra, the port of Caraccas, is seven miles north of the city in an unhealthy situation. The harbour is open to the wind, and continually agitated by the surge of the sea. The population is about 6000. Quito, which contains 70,000 inhabitants, of whom one- sixth are whites, is situated almost under the equator, on the side of the volcanic mountain Pichincha. It is subject to dreadful earthquakes. Carthagena, which contains 24,000 inhabitants, lies in seventy-six degrees west longitude, and

has a spacious harbour. Porto Bello, which has an excellent harbour, on the north coast of the Isthmus Darien ; Panama, on the south side of the same Isthmus ; Guayaquil, on the west bank of the river of that name. Maracaibo, on the western bank of a lake of the same name, containing 25,000 population, at least half of whom are whites. Cumana, on an arid and sandy plain near the mouth of the gulf of Cariaco, containing a population of 18,000. Porto Ca- bello, situated in a peninsula ninety miles west of Leon, is the commercial emporium of a con- siderable district : it possesses a deep, spacious, and well-protected harbour; and a population of 7500 inhabitants. Popayan is situated on the Andes in 2° 28′ north latitude, on an extensive plain, 250 miles south-west of the capital ; is nearly 6000 feet above the level of the sea, and in the vicinity of two great volcanoes ; popula- tion 25,000, one-third of whom are negroes. Angostura, situated on the river Orinoco, con- tains 7000 inhabitants.

108. -The internal navigation of this republic is excellent ; and several new canals have been proposed. A branch of the Rio Atrato, which falls into the Gulf liarien, approaches within five or six leagues of the Pacific Ocean. A similar project has been in agitation with respect to the country between Cruces and Panama. A canal has been actually dug from a branch of the Rio Atrato to a small river which falls into the Pacific Ocean.

109. The commerce of Columbia, though in its infancy, is flourishing.

Under the Spanish government, indeed, it was almost suppressed ; the culture of the vine and the olive were for- bidden ; tobacco could only be raised in such quantities as the government thought proper to purchase at a price fixed by itself. The distil- lation of spirits was monopolized ; and thei:

articles whicn were cultivated, could only be exported through the Spanish merchants. The principal articles of Columbian trade at present are cocoa, coftee, cotton, indigo, sugar, hides, cattle, and Brazil wood. The iˆely forests which cover the banks of the Orinoco and Mag- dulena, with their tributary stream-, *ill here- after supply Europe with cedar, mahogany, and an infinite variety of woods of exquisite beauty and durability, together with a variety of drugs, precious balsaˆis, &c. On the coast of the

islands of MargariUa was formerly a considerable pearl-fishery ; there is another on the Goagira coast, betwixt Rio Hacha and Maracaibo. The pearls of this coast are remarkable for their beautiful orient or play of light, in which they are far superior to the pearls of the east.

We give the following extract from a pam- phlet published at Santa Fd in 1810, ‘ Sobre la Constitucion de los Estados Unidos,’ by Don Miguel Pombo, on the revenue of this country :

COLUMBIA.

Nˆw GRANADA.

VENEZUELA.

Sources of Revenue.

Amount

Sources of Revenue.

Amount.

Value of Europ. goods an. imported of Exports from Guayaquil, Panama, River Magdalena, &c. Cast and ingots of gold exported Tithes

Dollars.

2,500,000

\ 1,150,000

2,650,000 800,000

- 10,000,000

1

ˆ 3,200,000

Annual produce of u’crioultnre and cattle ....t

Revenue arising from the same sources as that of New Gra- nada •

Dollars. | 6,000,000

> 1,400,000

700,000 26,000

Which sum supposes an annual agricultural produce of . .

Monopoly of tobacco .... Sale of bulls (abolished) .

Total revenue . .. ,

Revenue arising from

1. The 1st and 5th part of gold extracted from rivers (abolished) 2. Produce of all salt works about 100 000 dollars

2,126,000

The following is an Official Return of the Port of La Guayra, from the 1st of January to the 31st of October, 1823, in dollars.

3. Capitation tax paid by the In- dians (ab)

4. Produce of monopolies of to- bacco aiul spirits (partly ab.) .”>. Bulls of crusade (ab.) . . . 6. Custom-house duties

7. Alcabala, or duty paid on the sale of every article of consump- tion (ah)

Import duties

515,609 OJ 153,101 3i 7,788 3i

5,083 1$ 414 0 105,552 3

- 6,038 OJ

Export ditto

Tonnage ditto . . ... Salt ditto

Anchorage

8. Duty on stamp paper . 9. Pecuniary penalties 10. Produce of lands belonging to

Prizes

Duties appropriated by the mili- tary hospital

1 1 . Sale or’public employment(ab.)

Total

760,576 4J

reiuni of the exports of La Guayra, i-23, are as follows : Mahogany, i, 3.’), -1-2(5 t’aud. 90 Ibs. ; coffee, <. ; indko 189, 108 Ibs. ; hides, 183; vanilla, 289 Ibs.; sarsapa- ibs. ; calaeuala, 4 qn. fiO Ibs. ; 10 Ibs.; molasses, 25 barrels ; sweetmeats, 11 boxes; garlic, 1611 ; strings and horns, 30GO. The value of the cargoes was stated at l(),483,.">t)7i dollars, and the duties at Io4,.r21i. Beside the above articles were ex- ported 114(5 bales ot varinas tobacco, weighing 108,t)tjo Ibs. ; but these bavins; been sold at the ‘obacco \aiv house, have not been valued nor cln.r’j;i’d with duties. The revenue is badly ma- ii.iued, owiiiˆ- u> the general corruption of the •subordinate m iˆistrates and agenis of govern

ment, and the commerce is fettered by want of population, want of industry, want of capital, want of knowledge, and want of internal com- munications.

111. The manufactures of Columbia are not considerable; and Europe perhaps will, for ages, be the work shop of the new world. In Quito, and some provinces of New Granada, coarse cloths are manufactured ; baizes, blankets, hats, and other articles of inferior clothing. — The value of manufactured produce in the pro- vinces of Quito, Cuenca, Casanare, Guayaquil, Tunja, Socorro, and Pamplona, amounted m

1810 to 5,000,000 dollars.

1 1$. With respect to the arts of life, the Co- lumbians are extremely defective. Houses of all classes are built of mud, sometimes n ixed

with stones, and occasionally plastered on wattles. Architecture in most papal countries receives an impulse from ecclesiastical wealth and influence; hut here no monument has been raised of this kind at all worth the traveller's attention. The fapades of several churches in Caraccas were tasteful before they yielded to the earthquake, but with the exception of the cathedral of Bogota, there is no edifice worth naming. This is of yellow stone ; and on the whole an imposing structure. There are twenty-nine other churches and convents, differing only in the gilding and barbarous decorations with which they are over- charged. The doors and windows of their buildings generally would be inadmissible in an English stable. Whoever wishes to build accord- ing to European ideas of decency must send to Europe for workmen, or import his house already made. The various branches of handicraft are equally imperfect ; and the fine arts of course in a state of infancy. Painting is cultivated with some success in Quito : Bogota boasts the native genius of Varques. It was, however, impossible that the arts should flourish beneath the Spanish yoke, as will appear from the following fact : — Antonio Garcia, an artist of Bogota, had two paintings, from which he used to study ; one of which represented Hercules spinning by the side of Omphale, and the other Endymion sleeping on the breast of Diana. The commissary of the inquisition, being informed of the circumstance, proceeded to search his cabinet, and had the pictures cut to pieces on the pretended ground that they were indecent. The inhabitants of Venezuela have great musical talent ; and before the revolution this science was studied with suc- cess in Caraccas. At present it can scarcely be said to be a subject of study ; but wildly scatters sweetness on its native air.

1 1 3. Education and literature in Caraccas are confined almost exclusively to the capital and Santa Fe. A college was founded by bishop A. Gonzales de Acuna, who died 1682, in which «t first nothing but Latin was taught, with the addition of scholastic philosophy and theology ; but reading, writing, rhetoric, philosophy, ethics, school divinity, positive divinity and theology, civil and common law, and medicine, were after- wards introduced ; and sixty years after the foundation of the college an university was su- peradded, from which

different degrees were confirmed. The oath imposed upon each rank was to maintain the Immaculate Conception, not to teach nor practice regicide, nor tyrannicide, and to defend the doctrine of St. Thomas. In this college and university there were, in 1802, sixty- four boarders, and 402 students not boarders,viz. : In the lower classes, comprising rhetoric 202

Philosophy 140

Theology 36

Canon and civil law 55

Physic 11

In the school of sacred music . . 22

466

1 14. EDUCATION, viewed in relation to the cha- racter of the knowledge acquired at Caraccas and Santa Fe, was widely different. The lively genius and ardent temper of the Caraccacians

prompted them to the study of philosophy, elo- quence, and politics; whilst in Santa Fe the several branches of natural history, botany, and mathematics, were cultivated with success, under the auspices of Dr. Mutes, Calders, Zea, and other members of the university. The course of study by law enacted was by no means pro- pitious to the cultivation of letters, and the inqui- sition exercised great authority ; the works of Rousseau, Voltaire and Volney, were nevertheless read, together with many other prohibited publi- cations; and although a dancing academy was suppressed, and the jealousy of the church mani- fest, the Flora of Bogota commenced by Dr. Mutes, proceeded after his death under the di- rection of Dr. Senforso Mutes, his nephew, Don Francisco Jose Caldas, and Don Jose Lorano, aided by the pencil of Don Salvados Rezo. At present great efforts are made in favour of edu- cation; Lancasterian schools are established in several of the principal towns ; the colleges and universities have their several courses of studies reformed ; professorships of mineralogy and na- tural history have been established, and filled by French gentlemen engaged by Mr. Zea — circum- stances which have induced the friends of Co- lumbia to indulge the most pleasing anticipations.

115. The religion of Columbia is the Roman Catholic, and the priests were formerly exces- sively numerous, till the honours and emolu- ments of military and civil life drew away great numbers of the young

men from the clerical office. A law was published in 1821, August 22nd, to abolish the inquisition, and to restore to the ecclesiastical courts jurisdiction in matters of religion. The third article of this law states : ‘ Juridical proceedings in such cases shall take place only with respect to Roman Catholics born in Columbia, their children, and those who hav- ing come from other countries shall have en- rolled themselves in the parish registers of the Catholics ; but not with respect to strangers who may come to establish themselves temporarily or permanently ; nor with their descendants who can in no manner be molested on account of their belief, though they ought to respect the Roman Catholic worship and religion.’ Tolera^ tion is thus extended to all classes ; but the ex- isting regulations, which interdict marriages be- tween Roman Catholics and heretics, will for the present prevent the amalgamation of foreigners with the Columbian population.

116. The diseases of this climate, which reign with great violence on the sea-coast, on the bor- ders of great rivers, and low situations, are fevers and dysenteries ; the milder species assuming frequently the type of the more malignant, and ending in that species which is called ‘ the black vomit.’ Intermittent fevers, putrid or bilious fevers, &c. are its common preliminaries ; but dysenteric complaints, from the simple diarrhoea through all the stages of bloody flux to confirmed dysentery, constitute a class of diseases far more destructive to the Columbian population than even fevers themselves.

117. Temperance and exercise are indispen- sable here. Probably 8000 Englishmen have visited this country during the war, as officers and soldiers ; and of these there are not now SCO

survivors ; and three-fifths of this loss must be ascribed to drinking spirituous liquors. An oc- casional debauch is often, of the two, more speedily fit&l than habitual drunkenness.

118. The diseases of the mountainous and temperate districts are few, and resemble those in the north of Europe. One exception, how- ever, we must name, and that is the malady called papos in this country, and goitre in Swit- zerland. It appears in the shape of a swelling on the throat, which rapidly increases, and often becomes larger than the head itself. It is said to be an effect of constitutional weakness ; and moreover that the children of goitred parents are commonly deaf or

dumb, and in the generation next succeeding entirely idiots. To so alarming an. extent does this disease exist in the moun- tainous region of the interior, that it is said whole villages are be found in which there is scarcely an individual who does not wear this unsightly excrescence.

119. The history of Columbia now demands our attention. The republic of this name is of recent origin ; but the two states, by the union of which it is composed, have had their separate histories as early as the time of Columbus ; and before 1811 they were known as the vice-royalty of Granada and the captain-generalship of Ca- raccas.

120. The coasts of New Granada were first visited by Columbus during his fourth voyage, \vlio with his brother landed at Cape Honduras to take possession of the new territory for the crown of Spain. After this ceremony the fleet proceeded along the shore; and being compelled by strong easterly winds to double a cape, in doing which they found great difficulty, they called it Cape Gracias a Dios. In the course of his voyage he touched at Veragua, Nombre de Dios, Belos, Porto Hello, and other places. At the first of these he sent his brother up the country in quest of gold ; who returning with a great quantity, he wished to plant a colony here. Ojeda and Amerigo Vespucci followed Columbus in the work of exploration ; and Ves- pucci gave the first regular description of the natives of Columbia. Ojeda and Nicuessa in 1508 obtained from the Spanish crown extensive grants in this district and its immediate vicinity; the- former, tinder the name of New Andalusia, had in hi* charter the country from Cape de la Vela to the gulf of Darien, whilst the latter in- dividual, under the name of Golden Castile, was to govern the territory from the gulf of Darien to Cape Gracias :‘i Dios. Ojeda, defeated in his design, established the colony of St. Sebastian on the eastern promontory, whence from want of supplies proceeding to Carthagena, found his town on his return destroyed by the natives; and sailing forthwith to the river of Darien, they con- quered an Indian tribe and founded the town of Santa .Maria del Darien. Nicuessa endeavoured to establish a colony at Nombre de Dios, and was shortly after thro igh the death of Ojeda

vernment, but in conse-

culh’d to assume the t; queuce of the dissensi

ns of,the colonists he was el and sent to sea, where perished. The Terra hnth the above grants.

was in 1514 conferred upon Pedro Adrias de Avila, under whose

government Vasco Nunez de Balboa, who discovered the South Sea, was be- headed in consequence of a revolt. The western coast of Panama, Veragua, and Darien as far north as cape Blanco, were discovered by order of Avila, and the town of Panama founded. Sebastian de Benalcarar, who accompanied Pizaro' to Peru in 1530, conquered and colonized the in- ternal provinces of New Granada to the south whilst Gonzalo Ximenes de Quesada sent by Lugo, admiral of the Canaries, overran the northern districts from Santa Marta. The whole was formed into a kingdom, over which in 1547 was appointed a captain-general.

121. In 1718 New Granada became a vice- royalty. In 1724 the former government was restored, which in 1740 again reverted to the re-establishment of the vice-royalty accompanied by its numerous evils. It continued under this system till the invasion of Spain by the French, and shortly after avowed its independence by a congress delegated from the different provinces. The country has since that period passed through many vicissitudes of fortune ; and the alternate triumphs of the royalists and the independents have been preceded by frightful scenes of blood- shed and rapine. In 1816 an action fought with the Spanish army under Morillo, ended in the defeat of the independents, and the dispersion of the congress. Three years of further subjection to their old masters ensued, when in August 1819 the infant state was rescued by the army of Bolivar, whose subsequent successes have been uniform and brilliant. In the beginning of 1822 the only point occupied by the Spanish armies was the isthmus of Panama, and in December, 1819, New Granada and Venezuela were united in one re-public.

122. The coast of Venezuela was discovered by Columbus during his third voyage in 1498; shortly after which, several efforts being made to colonize, the Spanish government resohed to settle the country under its own direction. When the natives were partly subdued, Charles V. sold the proprietorship to the Weltsers, a German mercantile company. Their administration being replete with abuses, they were dispossessed in 1550, and in their stead a supreme government was appointed under the title of captain-general.

123. From this period till 1806, Caraccas remained in quiet subjection to the mother- country, when an unfortunate attempt at her emancipation under General Mirando, a native gave, at least for the time, an effectual blow tc the cause of independence. In 1810, when Spain was overrun by French troops, a junta suprema, or congress, was convened in Caraccas, consisting of deputies from the different provinces with the exception of Maracaibo, who, though they art first

published their acts in the name of Ferdi- nand VII., shortly assumed the supreme autho- rity under the title of the confederation of Venezuela. The Spanish regency and Cortes adopted the most violent measures; but the con- gress nevertheless issued a formal proclamation of independence on the 6th of July 1011. Affairs now wore a favourable aspect, till the earthquake, whicl), operating on the deeply-rooted supersti-

tions of the people, effected a great change in the produce cotton, sugar, coffee, tobacco, and all public opinion ; of which General Mouteverde a the common fruits of tropical climes; and

royalist being sensible, he marched against Ca- ----- L 1 uLˆ-jt

raccas, overthrew General Mirando, and com- pelled the whole province to submit. In 1813 it was emancipated by Bolivar, but he was defeated by Boves in 1816. He returned again

and was defeated ; but in the December of the same year he rallied his forces and defeated the

amongst which may be particularized the banana or plantain, the orange, especially the esteemed species of the selecta, and the tangerinha : to this fruit the inhabitants are particularly partial in the morning, when they say it is oro (gold), at noon prata (silver), and in the evening chumbo (lead) ; the pine-apple, the maracuja, passion-

royalists with great loss. In the month following flower, (passiflora), with large scarlet flowers

Barcelona was taken by the Spaniards ; and, affairs becoming desperate, Bolivar was invested by the congress with the ample power of a dictator.

124. On the 17th of December, 1819, an union was agreed upon between the states of Granada and Venezuela, which received the title of the republic of Columbia. The installation of the general congress took place in the city of Rosario of Cucuta, on the 6th of May, 1821. It was then and there agreed that the two states should form one nation under a popular representative government, divided into legislative, executive, and judicial. Bolivar, the president, spared no effort towards bringing the war to a speedy close; and on the 24th of June,

1821, was fought the celebrated battle of Carabobo, in which the royalist army was defeated, losing artillery, bag- gage, and upwards of 6000 men.

125. BRAZIL, including Portuguese Guiana, forms another important division of South Ame- rica, situated between 4° N. and 34° S. lat. and 35° and 72° W. long. It is bounded on the north by Columbia, French Guiana, and the Atlantic Ocean ; on the west by the United Pro- vinces, Columbia, and Peru ; on the east and south-cast by the Atlantic Ocean. From north to south its length is about 1800 miles, and its

and green edges, the fruit of which is so grateful and cooling ; the mango, brought from Asia; the fruta do conde, or custard-apple; the grumi- chama (myrtus lucida) ; the pitanga, a small red fruit ; the jambuticaba; the jam ha, or rose-apple, and others. The Conde de Barca (Aurajo), who died during his ministry in 1817, procured the bohea tea plant from China, and a number of Chinese to cultivate it. This tree still covers a few roods of land, three leagues from the city of Lagoa de Freitas ; but, although it produces abundance of seeds, is said by travellers to want that luxuriance of leaf or bushy appearance which it assumes in the empire of China. The soil in the immediate vicinity of Rio de Janeiro appears to be similar to that of the south of China ; and when to this we add the latitude, which is 22° S. and that the tree in question flourishes as far as 30° from the line S., there can be no reason why it should not succeed. The forests of this region abound with the most useful and beautiful varieties of timber, parti- cularly the jacaranda, a species of inga without the smell, but in other respects similar to the rose-wood of India ; and a wood yet more beau- tiful, called by the natives Gonzalo-Alves. The pao d'alioo, or garlic tree, is extremely singular. On every side the attention is attracted by the

wean breadth about 1 700, the greatest part of most beautiful flowers ; among which may be

which is one impenetrable forest.

126. The Brazilian Andes run parallel with the coast, from which they are not very distant, from 10° to 32° S. lat. with the steepest side towards the sea, and sloping towards the interior. This country, rising in the west by gentle gradations, attains the height of from 3000 to 6000 feet ; where, under the name of Campos Parexis, it spreads out into barren and sandy plains, occu- pying the very centre of South America, and surrounding the sources of the Tapajos entirely, and the head waters of the Madera partially. It is said, that of 19,584,000,000

acres, or 3,060,000 square miles of land, included in the area of this kingdom, not more than 20,000 square miles are at present brought under culti- vation, although the country is fertile and well watered.

127. The soil, especially in that part conti- guous to Rio de Janeiro, is mostly of a light brown colour, containing in many places spots

mentioned several varieties of bignonias, passi- floras, and others, selecting for themselves warm exposed situations, or cooler retreats in the woods, and presenting a surprising magnifi- cence, accompanied, however, with none of that sweet scent which is common in those of north- ern regions.

129. Minerals abound generally in the pro- vince. It is not easy to ascertain with exactness the produce of the diamond mines, as they are rented by the government. In some years the quantity discovered by the government is said to have amounted to 4000 octavos of eighteen carats ; but twelve octavos is thought to be the average. These stones are equally fine with the oriental. The quantity of gold obtained from the mines, it is also difficult to ascertain, owing to the one-fifth due to government. Its annual value, however, is supposed not to exceed £900,000, including the contraband specie, which is prohibited from being carried coastwise,

of a deep red cast and clayey, and by washing and renders it needful for northern traders to

this last description the children obtain a small quantity of gold. In some parts the soil seems to be owing more to a decomposition of rock than any alluvial deposit mingled with a large portion of mica; also crystals of feldspar, in a decomposing state, are frequently found embed- ded in the soil.

128. The northern regions of this province

take bank-bills, paying a premium of from three to five per cent. The legal rate of interest is six per cent. ; but money can with difficulty be obtained under twelve. In the capitania of Minas Geraes numerous precious stones are found in the b€ds of the mountain torrents, or in deep valleys, in a stratum of rounded pebbles or gravel ; also, the head waters of the great rivers

which flow northward, and fall into the Amazons, as the Xingu, the Tapajoz, the Araguaya, and the Madeira, are fertile with gold. The diamond district extends about fifty miles from north to south, and twenty-five from east to west, around the sources of these rivers. It is under military government, and guards are stationed on all sides to examine travellers and detain suspicious persons.

130. The rivers of this province constitute another branch of its importance. The Paraguay, the Parana, and the Uraguay, rise in this terri- tory ; whence they flow into the United Pro- vinces, opening a navigable communication from the ocean to every part of the interior. The tri- butaries of the Amazons, with the exception of the Tocantins, have been already enumerated. The following are the most remarkable streams which fall directly into the ocean: — 1. The Parnaiba, which terminates in longitude 42° west. 2. The Rio Francisco, which, rising in the western declivity of the Brazilian Andes, near the parallel of the 20th degree of south latitude, and flowing first south and then east, a course of 1000 miles, terminates under the parallel of 11° south latitude. 3. The Rio Grande, which rises near the sources of the Francisco, and falls into the ocean a little north of Porto Seguro, south latitude 15°. 4. The Doce, which rises near the town of Villa Rica, in south latitude 21°, and falls into the sea about 19° 30'. 5. The Paraiba, which pursues a north-easterly course along the foot of the eastern declivity of the mountains for 150 miles, and falls into the ocean in south latitude 22°. 6. The Rio Grande, the second of the same name, and empties its waters in latitude 32° south.

131. The climate of this country is healthy, but greatly diversified in temperature. In some places the heats are great, but tempered by a humid atmosphere and by the mountains ; and in the southern parts it is mild and temperate, the thermometer seldom falling below 40°. As the northern parts of Brazil are situated near the middle of the torrid zone, there is little variation in the seasons, and the days and nights are nearly of the same length ; the sun declines only a few degrees from his vertical position ; the trees never lose their foliage ; nor is the ground ever desti- tute of flowers. Many of the plants and trees are adorned with the most beautiful flowers, which, being intermixed with leaves of the brightest green, impart to the forests of these regions a splendour unparalleled in the torrid zones. Near the shores of the Atlantic the re- freshing influence of the trade-winds is constantly felt. In short we may adopt the language of a celebrated author, ' A finer country than Brazil, one blessed with a more genial climate, or possessing a inure fruitful soil; one more happily diversified with wood and water, intersected with navigable rivers; or richer in mineral trea- sures, is scarcely to be found in the whole com-

pass of the globe.'

132. The civil divisions of this country are as follow : Portuguese Guiana includes all the part north of the Amazons ; and the remaining part is divided into the following provinces or capi- tuuias • —

Para, Rio Janeiro,

Maranham, St Paul,

Seara, St. Catherina,

Pernambuco, Rio Grande,

Bahia, Goias,

Minas Geraes, Matto Grosso.

133. The population was recently estimated at 2,400,000; but in 1792 it consisted, according to Hassel, of 2,184,273, of whom one-sixth were whites of Portuguese origin, one-half mulattoes and negroes, and the remainder independent Indians. Four millions was the conjecture 01 Correa da Serra. They are now thought to be about the same number.

134. Of the chief towns Rio Janeiro or St. Sebastian stands in latitude 22° 54′ south, on the shore of a large bay or harbour, at the foot of several lofty mountains, and contains 140,000 inhabitants, of whom nearly one-half are ne- groes. The harbour is one of the finest in the world ; the entrance by a mouth of two miles wide is bounded on one side by a conical hill, on the other by a mass of granite which supports- the castle of Santa Cruz. The harbour widens to about three or four miles, and is sprinkled with islands, and indented with beautiful penin- sulas. The tower stands on the west side of the town, on an eligible tongue of land, and is de- fended by a fort. Opposite this point is Serpent Island, the usual anchorage of shipping. St. Sebastian is the chief mart of Brazil, and more especially of the provinces of Goias, St. Paul, Matto Grosso, and Minas Geraes. St. Salvador or Bahia, seated on the eastern shore of the bay of All Saints, is in latitude 12° 45′ south. It extends three miles along the coast, and is in the centre more than one mile in the interior, nar- rowing progressively towards each extremity. Immediately behind the first street of the town the land suddenly rises to the height of 400 feet, and the principal part .of the town is upon the top of this hill, whence opens a most magnificent prospect. So steep is the descent from the upper town to the lower, that packages are conveyed up and down by cranes and other

machinery. The houses are mostly built of stone ; besides which the town contains numerous churches and convents, many of them elegant, and a popu- lation of 100,000, of whom 30,000 are whites, 30,000 mulattoes, and the rest negroes. Per nambuco. containing a population of 32,000, lies on the coast, -north-east of St. Salvador, in 8° south latitude, and consists of three divisions : viz. Recife, St. Antonio, and Boa Vista. Recife division is nearest the sea, on the extremity of a long narrow sand-bank, projecting from the main land, and is the principal mart for business. St. Antonio, the largest and handsomest division of the town, is seated on a sandy island, and is connected with the above by means of a bridge. Boa Vista, connected in the same manner with Recife, consists of small straggling houses, built upon the continent. Pernambuco is understood by some writers to comprehend the town of Recife, and the contiguous city of Ollinda, joined to it by a narrow sand-bank, in which case its popu- lation is 65,000. The harbour is formed by a reef of rocks ; the tide flows under the bridges, and forms an expanse of water resembling a

**e on the north side of the town. Rio Grande, er St. Pedro, near the southern extremity of Brazil, in latitude 32° south, is a new flourishing ;own. The port is dangerous, the water being shoal, and a violent sea always running; not- withstanding which a great trade is carried on to all parts of Brazil. The population within the town, and a circle of twenty leagues round it, is estimated at 100,000. Villa Rica, containing 20,000 population, forms the capital of Minas Geraes, in the vicinity of the gold mines, 250 miles south of Rio Janeiro. Tejuco, the capital of the diamond district, is near the source of the Jigitonhonha, a branch of the Rio Grande, 200 miles north of Villa Rica. Cuiaba, on a river of the same name, ninety-six leagues from its confluence with the Paraguay, is the most western of the Brazilian mining districts. Para, the ca- pital of the province of the same name, is seated on the river Tocantins, and contains 10,000 inhabitants. Maranham, or St. Luis de Ma- ranham, has a convenient harbour, and contains 15,000 inhabitants. It is seated in longitude 43° 37′ west, on an island of the same name, at the mouths of three small rivers, which discharge themselves on the northern coast. Santos, the

storehouse of the capitania of St. Paul, and con- taining 7000 population, is a place of considerable commerce, seated on the coast, west-south-west of Rio Janeiro. St. Paul, the chief town of the capitania of the same n?me, is in the vicinity of the gold mines, about forty miles from Santos.

135. The internal means of communication, not only with respect to the towns already stated, but through every part of this district, will be found under the article BBAZIL.

136. The commerce of Brazil, though formerly subjected by the Portuguese government to all the restraints of the colonial system, was, on the emigration of the court to Rio Janeiro, thrown open to Great Britain, on the condition of our merchants paying a duty of fifteen per cent. British manufactures are now imported together with oil, wine, brandy, linens, and cottons from Portugal. From the United States are imported flour, salted provisions, naval stores, and house-hold furniture. The exports are gold and diamonds, wheat, horn, hair, and tallow; to- gether with cotton, coffee, tobacco, sugar, and Brazil wood.

The following Comparative View of the Trade of the two chief Ports of this Kingdom we extract from the details of a celebrated author.

COMMERCE OF RIO DE JANEIRO AND BAHIA FOR THE YEAR 1816.

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Portuguese Vessels from the Ports of

INWARDS.

OUTWARDS.

Rio de Janeiro.

Bahia.

Rio de Janeiro.

k

Bahia.

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113

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57 0 1 7 2 17 15

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862 56 57 53 1 2

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93 0 12 11 9 41 16

5

214

37 56 17 16 3 0 0

52 0 1 4 3 22 6

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i

River Plata

Havannah and North America ....

1 .- ..| Foreign Vessels.

British

Russian .

Swedish ,

French

1 Dutch ... , .

‘• Spanish

Danish >

German j

Total ....-...,

L

1,460

519

1,232

431

AVM ERICA.

137. In 1820 the exports of British manufac- ture amounted to £1,860,000, and in 1821 to £2,230,000. The imports of 1820 were £950,000 and in 1821 amounted to £1,300,000. Three- fifths of the exports are sent to the capital. The returns are chiefly made in diamonds and pre- cious stones, gold, coffee, tobacco, cotton, sugar, &c. The chief sources of the revenue are the customs inward and outward, the fifth on gold, duties on negroes, that on importation paid by the seller, that on further sale by the purchaser, and similar impositions, and amount to the an- nual sum of £2,500,000.

138. The community is divided into two classes, the Brazilians and the Portuguese, who mingle little in society. 'Marriages,' says a late author, * at least such as I had an opportunity of witness- ing, were attended by few. The bride first went into the confessional, and then approached the altar where the intended husband was waiting for her. Their right hands being then bound firmly together by a gold band, the prayers com- menced ; and at their termination the hands were loosed, and the ceremony was complete.' Mar- riages are formed when the parties are very young. Mothers are often seen not more than thirteen years old ; indeed the youth of the women ex- tends from ten to twenty-five years. Their funerals take place at night, when the body, being laken into the church, is exposed in full dress, and decorated with jewels; but after service is performed it is carried into the vault, stripped of its richest habits, some quick-lime is laid in the coffin, which is then locked, and the key given to the nearest relation. It is then put into a niche in the wall, and the friends retire.

139. Literature is at a low ebb. Since the late changes the press has been freed from many shackles ; hundreds of political pamphlets have appeared, and a gazette is published twice a week. The Conde de

Linhares, prime minister in 1810, caused the catechisms and vocabularies of the tongues of the indigenous tribes to be ex- amined by the Jesuits ; and a reprint to be made of their Lingua Geral. This tongue is under- stood by all the tribes, and considered to be the Tupinamba. The plan for writing an account of the medicinal plants in Brazil has been aban- doned. The public museum has been enriched by various minerals ; and the emperor has lately added a gallery of paintings, and proposed to establish an university in Brazil, but without success ; it is, however, at last to be put in exe- cution. In the absence of an university there formerly existed a large school, which has been since converted into a military hospital. The number of small schools is considerable ; and Bell's system is adopted in one establishment with success.

140. The religion of Brazil is the Roman Catholic, and festivals are extremely numerous. The processions are splendid, and angels are personified by handsome young females dressed up with wings, and high-heeled shoes, and sup- ported by fathers. There are two convents for women, of whom the number is very limited. Every person carries about with him the Muos d'Aicbiche, a composition which is formed into small hands or vune other charm. ' MY mule-

driver,' says a late traveller, * had suspended about his neck a small piece of magnetic iron, which was to make him an object of attraction to all fair ladies and successful with them.' Witches are common ; and so uncontrolled is the deleterious- influence of superstition, that not many year* ago a young woman, among the Indians of Marogogippe, was burnt alive on the suspicion of having set evil eyes on a sick person. By the treaty of 1810 toleration was granted to people of different persuasions, with the restric- tion that all meeting-houses were to be in ex- ternal appearance like a private house. The conduct of the clergy is extremely reprehensible. ' One of them a Padre Canto,' says the traveller above alluded to, ' had four mulatto sons, who, following the mother, were slaves. He sold two of them ; and the others performed the pleasing and filial act of carrying their father about the town in a sedan chair.

141. We subjoin an historical sketch of Brazil from the most approved authorities. Martin Behem is said to nave first visited the coast in 1484 ; but the honour of having first seen this coast is more generally attributed to Pedro Alvarez Cabral, who iu a voyage to the East Indies, with a Portuguese squadron, struck out to sea to avoid xhe storms of the Cape of Good Hope, and steering southward fell in with the South American continent, aud anchored in Puerto Seguro Bay ; landing with a body of troops, he rtook possession of the country in the name

of his sovereign ; which, in token of the cross which he erected, was called Santa Cruz, but afterwards changed by king Emanuel to Brazil from the red wood produced there. The Portuguese sent their convicts there, and received in return cargoes of parrots and dye-woods. In 1548 those of the Jews who had taken refuge in Portugal, were persecuted by the inquisition, and banished to Brazil, and commenced the cultiva- tion of the sugar-cane. A colony was formed ; and de Souza, a wise and able man, was the first governor ; by building St. Salvador he formed a central rallying point for the colony, but found increasing difficulties in his enterprize till the Jesuits insinuating themselves among the savages, gained their affections by presents and by kind- ness, and brought them to look favourably to- wards the Portuguese. The prosperity of Brazil excited the envy of many of the states of Eu- rope. The Dutch in .1 624 detached a powerful squadron under their admiral Willekens, who landed on the coast of St. Salvador, and took possession of the town in the name of the United Provinces. He published a manifesto, allowing liberty of conscience to all who were willing to swear fidelity to the republic of Hol- land ; and, having plundered the people of St. Salvador of their wealth, retired to Europe, leaving Colonel Van Dort as governor. The Spaniards next sent out a powerful fleet manned with 12,000 soldiers and marines under Frederic de Toledo, who compelled the Dutch to surren- der. In 1630 the Dutch despatched Admiral Henery Louk with forty-six men-of-war to at- tempt the entire conquest of Brazil. This commander, after reducing Pernambuco, retired. to Europe leaving behind him troops which re

duced the provinces of Temeraca, Paraiba, and Rio Grande.

142. Maurice of Nassau was next entrusted with the enterpnze of conquering Brazil, who reached his destination in the beginning of 1637, and after much opposition seized upon Seara, Seregippe, and the major part of Bahia. Seven of the fifteen provinces which composed the colony had already submitted to them, when they were checked by the revolution, which banished Philip IV. from the throne of Portugal, and gave to the Portuguese independence and a native sovereign. The seven unsubdued provinces of Brazil threw off the Spanish yoke, and the Dutch and Portuguese came to an agreement ; the former relinquishing all claim to that part of Brazil which they had not conquered, and the latter confining the title of the former to the seven provinces of which they were in posses- sion. This agreement

gave rise to the name of the Brazils. The Dutch oppressing the Portuguese colonists, the latter took up arms and drove them from the provinces ; and, by a treaty immediately succeeding, the Portuguese became the acknowledged masters of the whole kingdom, which was honoured by giving title to the pre- sumptive heir of the crown. During the eighteenth century Brazil remained in the possession of the Portuguese. In the year 1806, the parent king- dom having been invaded by the French, the royal family embarked for Brazil under the con- voy of a British squadron. From the moment of their arrival at Brazil a revolution took place in the character of the country ; and Brazil rose to the dignity and importance of an independent nation. Commerce was thrown open to other

% nations, and a sudden spring was given to im- provement. Amid the political changes which have passed upon this continent, the revolutionary ferment extended itself to Brazil. In 1817 an insurrection broke out at Pernambuco, but was soon overpowered. On the formation of a free constitution the king was compelled to return to Lisbon. This event occurred in July, ,1821, when the heir apparent was left in the govern- ment as viceroy. Dissatisfied with the parent government, the Brazilian deputies assembled in Lisbon in the spring of 1822, but met with no success. Portugal had endeavoured to prevent any union amongst her transatlantic possessions. On the 12th of October, the anniversary of his royal highness's birth-day, the prince regent was proclaimed constitutional emperor of Brazil. Bahia however still groaned under the Portu- guese yoke, but was shortly after added to the new government; and the independence of Brazil, has very recently been acknowledged by the Portuguese government.

143. THE UNITED PROVINCES, including that portion of territory formerly known by the name of La Plata, or Buenos Ayres, are situated between 12° and 40° 45′ south latitude, and 51° 10′ and 69° 55′ west longitude. They are bounded on the north by Peru and Brazil, east by Brazil, south by Patagonia and the Atlantic Ocean, and west by Chili, the Pacific Ocean, and Peru. Its length from north to south is aoout 1800 mile% and its mean breadth 800,

including a superficial area of about 1,440,000 square miles, or 921,600,000 acres of land.

144. The chain of the Andes runs from north to south along the western boundary, and the country is generally mountainous. East of the rivers Paraguay and Parana is a fine and well-watered country ; whilst the district lying between the above rivers and the mountains, and extending north and south throughout the whole direction of the

country, consists of extensive plains. In the south these are called pampas, and are remarkably dry and destitute of trees ; whilst many parts in the north are subject to in- undation. One of these pampas commencing near the banks of the Parana extends into Pata- gonia and measured to its full extent is 1500 miles long and 500 broad. On this magnificent plain there is not a single hill, nor an object to vary the scene, but the eye passes over it as over the ocean in a calm.

145. The greatest natural disadvantage under which this province labours is the almost entire want of timber ; the hard peach is chiefly culti- vated for fuel. The soil is in many parts ex- tremely fertile, producing the common fruits and vegetables of the temperate and torrid zones The umbu is among the few indigenous trees of the country. Several species of the cactos, the cardon, or thistle, with blue flowers, and a few others, comprehend the larger portion of the native vegetable riches. Of the trees introduced by the Spaniards, except the hard peach and the olive, few have succeeded ; the cherry-tree is common, but, the blossoms being destroyed by the winds, produces no fruit. The sauce, or willow, is sometimes met with ; grapes thrive well ; but the melon and apple are inferior. The paucity of vegetables in some parts has been attributed by some to the thickness of the clay bed ; the vegetables of Europe have however been introduced with success. The territory east of the Paraguay and Parana is the finest part of the country, but has been chiefly appropriated to pasturage. The yerba, or Paraguay tea, flourishes here : it is a fine stomachic, and con- tains many excellent qualities ; the genus is now made out ; apd it is believed that ultimately it will be cultivated in England with success.

146. Immense herds of cattle graze on these plains, and constitute one important source of the wealth of this kingdom. The bisachia (le- pus biscaa), a small animal not unlike a rabbit, is found in great abundance. The armadillo is also common in the pampas ; and a speciss of deer which has an unpleasant smell. The ounce is also abundant, but whether they cross the Pa- rana is doubtful, there being so little shelter for them on the right bank. The birds are in this district more numerous than the quadrupeds. The swan of the Rio de la Plata is a most ele- gant bird, the body is perfectly white, the head and a portion of the neck black. To take them, a man enters the water with three large wooden balls, two of which are fastened at one end of a large thong of leather, and the third attached to the other extremity held in the hand ; approach- ing the swan, he throws the balls with such dex- terity, that they twist round the neck of the bird

and as they are made of wood the bird cannot escape by diving. The South American ostrich (naudu) is met with in the pampas ; it is about half the size of the African species, and the p.urnage in point of value far inferior. It is said that several females lay eggs of a yellowish colour in one nest, and that they are hatched by the male. There are two kinds of partridges in the pampas found in great abundance, the smaller is similar to the quail of Europe. Water- fowls are numerous on the banks of the rivers. A late traveller observes, ‘ there did not seem to me any great variety of insects :’ the musquito is common, and fleas abound ; they appear to live in the grass, as Dobrizhoffer says ; for on lying down in some places the body becomes covered with them. Reptiles are not common. Bones of the megatherium have been discovered in the vicinity of Buenos Ayres : the Marquis of Loretto when viceroy, sent home in 1789 the first and perhaps the most perfect specimen of this enormous animal. It was discovered while making some excavations in the bank of the river Luzdu, fifteen leagues from Buenos Ayres, and is now in the cabinet of Madrid ; a tooth of the same animal has within the last few years been found sixteen leagues farther in the same di- rection. Horses and mares are chiefly reared for their hides. The number of horned cattle and the cheapness of meat are objects of astonish- ment to all travellers. The whole ox may be bought for less than five dollars, and of these the hide is worth three dollars and a half.

147. The country is very rich in minerals, and a short time ago there were no fewer than seventy-three mines in actual operation, viz. thirty of gold, twenty-seven of silver, seven of copper, two of tin, and seven of lead. The richest of these are the celebrated mines of Potosi, discovered in 1545, and which from that period to 1803 yielded £‘237,358, 334 sterling, or nearly £1,000,000 annually. The extensive plains ly- ing between the Paraguay and the mountains, and watered by the Pilcomayo, the Vermejo, the Salado, and the Dulce abound with salt.

148. The Paraguay is the principal river of this country. It runs in the very centre of South America; and, after a course of more than 2000 miles, enters the ocean between Cape Santa Maria on the north, and Cape St. Antonio on the south. Its principal tributaries are the Parana and the Uruguay from the east; and the Pilco- mayo, the Yermejo, the Salado, the Tercera, and the Saladillo from the west. From the junction of the Parana to the junction of the Uruguay, it is usually called Parana river; and from the junction of the Uruguay to the ocean, the Rio de la Plata is navigable for large vessels as far as Assumption a little above the mouth of the Pil- iomayo, and nearly 1000 miles from the ocean ; mid for small craft to the eighteenth

degree of scuth latitude. A little above this parallel it overflows its banks during the rainy season, and

spreads over the flat country, forming an im- mense lake, called Lake Xarayes, about 330 miles lo.igand 120 broad.

149. The Parana rises in the mounf?:ns of Brazil, in the province of Minas Geraes, and after a course of about 1000 miles joins the Paraguay at Corrientes. In latitude 24° is the fall of the Itu, formed by a collection of rocks rising from the bed of the river in separate masses, and leaving channels for the passage of the water. Boats pass down with difficulty, and are drawn up by ropes. The Uruguay rises on the decli- vity of the Brazilian Andes, in the province of Rio Grande near the parallel of 28° south lati- tude, and pursues a westerly course of more than 1000 miles. For 200 miles from its mouth it i& navigable, but higher up the navigation is inter- rupted by rapids and falls. The Rio Negro is an eastern branch of this river, and joins it fifty-four miles from its mouth. The Pilcomayo rises in the Andes in the parallel of 20° north latitude, and flows east through a mountainous country 600 miles, and afterwards turning south-east tra verses a level country for more than 400 miles and in 25° south latitude discharges itself into the Paraguay.

150. The Vermejo, rising near the source of the preceding river, flows south-east and joins the Paraguay in 27° south latitude. The Salado is- difficult of navigation, and discharges itself at Santa Fe1, in 31° 41′ south latitude, after a south- east course of 800 miles. The Saladillo, which after a course of several hundred miles joins the Plata, about fifty miles from Cape Antonio, may be considered as a continuation of the Rio- Quinto. The Rio Dulce rises on the moun- tains of the interior, and flows parallel with the Salado, and loses itself about 100 miles north- west of Santa Fe” in the salt-banks of Povonzos.

150. In the northern part of the country, the Mamore and other head streams of the Madera, rise on the north side of the Andes, of Chiquitos,. and pass into Peru. Lake Titicaca opens a fine sheet of water 240 miles in circumference be- tween two ridges of the Andes; it is so deep as to be navigated by the largest vessels, and con- tains several islands, one of which was the resi- dence of Manco Capac, the first of the incas, and the founder of the Peruvian monarchy.

151. The climate of this country is various. The heat during summer is oppressive on the plains, whilst in the more elevated regions the air is cold and healthy. The north winds inevi- tably bring heat, and have the effect of the Si- rocco on the feelings. The south-west winds, called

pamperos from their blowing over the im- mense pampas in the south, are remarkably dry ; and during their prevalence putrefaction scarcely goes on at all.

152. The civil divisions, as they existed in 1810, consisted of eleven provinces, one com- mandery, eight intendancies, and two audiences. They now include twenty-two provinces.

1

Intendancies.

Chief Towns.

Population.

Buenos Ayres . . .

(Buenos Ayres, Monte Video, Santa Fe, £ Corrientes ....

>

Assumption .

According to official esti-

Cordova

(Cordova, Mendoza, San Juan de Jacban,

mates furnished in 1817,

1 300 000

Salta .....

$ Salta, S. Miguel de Tucuman, Santiago

Potosi, Chayanta, Chicas

700,000

Charcas

C Chuquisaca, or La Plata, Yampares, t Oruro .

Savage Indians,

La Paz

La Paz Sicasica

Number unknown.

Cochabamba . . .

{ Cochabamba, Santa Cruz de la Sierra ˆ Mizque

‘l.ible showing the population and capital towns of the independent states of South and Central America.

Name of province.

Population.

Capital.

Population.

Ruler.

Mexico ....

8,000,000

Mexico

150,000

Vice President.

Central America . . . Columbia i

2,000,000

Guatamala Bogota

50,000 50 000

President. Do

Venezuela . . . . S Pene ....

3,000,000 1,600,000

Caraccas Lima

30,000 60,000

Do. Do

Bolivia ....

1,200,000

Chuquisaca

30,000

Do

Chili

800,000

Santiago

40000

Do

Buenos Ayres . . . ˆ Or. Ress. Uraguay . . £ Paraguay 3

2,000,000

Buenos Ayres Monte Video Assumption

80,000 10,000 12,000

Do. Do.

Dictator.

Brazil

4,000 000

It 10 Janeiro

150,000

Emperor.

Hayti

935,000

Port Republican

30,000

President.

153. Many of the people of this territory perished in the revolution, and since that event they have greatly diminished, owing to the political changes which have occurred, and the larue armies which have gone forth to assist other countries to throw off the Spanish yoke.

15*. The following account of the chief towns is taken from the latest authority. — Buenos Ayres, the capital, seated on the south-west bank of the Rio de la Plata, 180 miles from its mouth, where the river is thirty miles wide. Its popu- lation has been estimated at 80,000. Monte Video stands on the north shore of the Plata, 120 miles east of the preceding, and occupies the whole of a peninsula projecting southward from the main land. Its population has been variously stated from 10,000 to 20,000. Potosi, famous for its rich silver mines, lies in the Andes, in 20° 26′ south latitude. Its population is estimated at 100,000. Assumption stands on the east bank of the Paraguay, 977 miles from the sea, and a little above the mouth of the Pil- comayo. Its population is 12,000. Corrientes, below the confluence of the Parana and the Paraguay, contains five thousand. Santa Fe, at the mouth of the Salado, has fifty thousand. Cordova, seated on the river Primero, which loses itself in one of the salt lakes, has also six thousand. Santiago del Estero lies north of

the preceding, on the west bank of the Dulce. Mendoza, at the foot of the eastern declivity of the Andes, contains twenty-one thousand. St. Juan, north of the above, contains nineteen thousand. Rioja lies farther to the north. Tucuman lies on the Dulce, upwards of 100 miles above San- tiago del Estero. Salta, on a branch of the Vermego, contains 9000 inhabitants ; La Plata, or Chiquisica, sixty miles east of Potosi, thirty thousand ; Charcas or Chayanta, north of Po- tosi, thirty thousand ; and La Paz, near the south-east extremity of Titicaca Lake, twenty thousand.

155. The manufactures of this part of South America are few and

unimportant. The com- merce under the old government was a monopoly in the hands of the Spanish merchants. At present the export and import trade is chiefly in the hands of the British. The exports are hides, beef, tallow, furs, peltry, and mules ; together with gold and silver from the mines of Potosi . The imports are principally British manufac- tures, with some articles from the United States^ &c. Exports and imports have been estimated by an American author at 10,000,000 dollars per annum. The following tables may tend to elucidate this branch of the geography of these provinces, and the importance of the trade to the British territories.

AMERICA

Goods shipped from England to

Year.

Vessels.

Value.

Buenos Ayrcs.

1

1816—1817

1822 1823

167

338,487

1,164,745

156. In the year 1821 three hundred and twenty-two vessels were cleared outwards at Buenos Ayrc-s, of which 114 were British ; and in 1822 three hundred and four vessels, of which 167 were British. During this year no fewer than 957,600 horse and cow-hides arrived in England, and as great a number sent to Antwerp and other continental ports. The Yerba or Paraguay tea has formed the most lucrative branch of inland commerce. In 1814 no fewer than 20,000 bales came down the river, of seven, eight, and nine arobas, or 210,240,270 pounds, and worth, on a moderate computation, 1,000,000 pounds sterling.

157. The state of the fine arts in the United Provinces is not high, but

music is successfully cultivated. The Spanish spoken there is pro- vincial, or any thing but pure Castilian. For- merly the only university in this part of the world was at Cordova ; and, before the declara- tion of independence, every obstacle was thrown in the way of public instruction. Common schools only were permitted, and these under municipal regulations. At present Bell's system is taught in many large schools at the expense of the government ; and, on the 9th of August, 1821, a decree came out for the formation of an university in Buenos Ayres. Books are per- mitted to enter free of duty, and some native works have been published. A large public library, consisting of 12,000 volumes, was es- tablished some years ago, and this is now greatly augmented. Rivadavia, the secretary of state, in January, 1823, established a library society, and ordered a collection of the national poetry to be made, and printed at the public expense. There is no scientific journal printed, but there are several gazettes.

1")8. The religion is the Roman catholic, but other sects are tolerated. A late traveller speaks favourably of the morals of the people, but attributes to them a disposition to indolence. Fighting with swords, knives, and other weapons, is frequent ; and numberless are the crosses about the doors of the pulperias, intimating the fatal quarrels which they have witnessed.

159. The country was formerly a Spanish colony under the government of a viceroy : but a new government was established in 1810, which ruled in the name of the Spanish king till 1816; and on the 9th of July declared itself independent under the title of the United Pro- vinces of Rio de la Plata, which has been since changed for that of the United Provinces of South America. Three or four revolutions have occurred since IB 10 ; but during all the changes there has existed a congress consisting of repre- sentatives from the several provinces. The revenue for the year 1817 was 3,037,187 dollars.

Since the separation of the provinces in 1820, the style of the chief became necessarily altered. General Rodriguez was, on the 6th of October, 1820, appointed governor and captain-general of the province of Buenos Ayres for three yeais ; in which office he was succeeded on the 1st of April, 1824, by I). Juan Gregorio de las Heras, who was chosen by a majority of ten voices. In August, 1821, the chamber of representatives was declared extraordinary and constituent, and re- gulations made accordingly. The improved state of the country is owing to the appointment of D. Bernadino Rivadavia to the office of secretary of state ; he had been some time in England, and observed our enlightened institutions. Under the Spaniards the

king was head of the church ; the tithes fell into the royal treasury, and monks and nuns were numerous. The government is now the head of the church, and Rivadavia used every effort to clip the wings of the cloistered clergy ; to prevent any further importation of them, and to raise the secular clergy in the eyes of the people, tithes were abolished and the dignitaries of the church limited to a dean with a salary of 2000 dollars, and four presbyters with 1600 dollars. An attempt was made to overturn the government, and with the cries Viva la religion, Mueren los Hereges ! a number of rebels galloped into the capital, but this was soon suppressed. Rivadavia also remodelled in a measure the courts of justice, raised the salaries of the judges, and caused them to furnish a monthly list of all cases brought before them, civil or criminal. The establishment consists of four counsellors of justice at a salary of 250O dollars, and five judges of the high court at 2000 dollars. Juries have not yet been intro- duced. The crimes punished with death are trea- son, murder, and robbery ; and of late the military have been rendered amenable to the civil law.

160. The discovery of this country took place later than that of the other part of South Ame- rica in the Atlantic. Juan Diaz de Solis, a Spaniard, is said to have explored it in 1515, and to have taken formal possession of it. In 1526 Sebastian Cabot, then in the Spanish ser- vice, entered Rio de la Plata, and discovered an island which he called St. Gabriel : twelve leagues further in the interior he discovered the river St. Salvador, and still further another, which he called the Paraguay. From the supplies, of silver which he received from the Indians, he called the main river Rio de la Plata, or the river of silver. In 1535 Don Pedro de Mendoza, sent out by the Spanish government, founded the city of Buenos Ayres. The government however, until the establishment of a vice-royalty, was dependent upon that of Peru, although th« chief of Buenos Ayres had the title of captain-general. The restrictions of commerce produced much infelicity and poverty. Reiterated remonstrance at length relaxed the policy of the Spaniards; monopoly was to a certain extent abandoned; the annual flota was lessened from 15,000 to 2000 tons of shipping, and in 1748 sailed to Cadiz for the last time. In 1774 a free trade was allowed between several of the American ports ; and in 1778 several Spanish ports were allowed an open trade with Buenos Ayres, ano

the ports of the Pacific. The country was now erected into a vice-royalty, and its trade continued to augment until the war between

Spain and England occasioned a material interruption. In 1806 the capital was taken by a British army under General Beresford ; but after a few weeks a body of militia under the command of General Liniers, a French officer, invested the city, and, on the 12th of August compelled them to sur- render. Shortly afterwards, a body of 5000 troops, under the command of Sir Home Popham, arrived from the Cape of Good Hope, who, after taking Fort Maldonado at the mouth of La Plata, laid siege to Monte Video, but were repulsed ; but other troops arriving under Sir Samuel Auchmuty, the town was carried by storm. In May, 1807, when fresh succours arrived, General Whitelock assumed the chief command; and being joined by General Crawford, proceeded with 12000 men, and were permitted to approach this town without molestation ; but no sooner had they entered than they found that every house was converted into a fortress, and were received with a tremendous and well-directed fire of grape and musketry : General Whitelock was at last obliged to surrender to the militia of Buenos Ayres.

161. The important services of Liniers raised him to distinction ; and the people disgusted with the conduct of Sobremonte the viceroy, who fled into the interior provinces, immediately raised him to that dignity. The situation of the parent .country was critical in the extreme : the French overran the country ; the United Provinces were sending money and supplies, and at length Buonaparte, whose power over the parent-country appeared to be unlimited, turned his attention to the colonies. Liniers used every means to bring them to his interest ; but Don Josef de Goyeneche, deputed from the junta of Cadiz, by his well-concerted measures prevented a counter- revolution of the public opinion ; and caused the inhabitants of Buenos Ayres to proclaim Ferdi- nand VII. On the 1st of August, 1809, the people rose at the instigation of the Spanish deputy, and demanded the establishment of a junta, but were suppressed by the troops of Liniers. In August,

1809, Cisneros, a new viceroy, was sent out from Spain; and Liniers was deposed by the junta and exiled to Cordova. Commotion succeeded commotion ; and at length, on the 26th of May,

1810, the people resolved upon taking the government into their own hands ; and, appoint- ing a provisional junta of nine persons, deposed the viceroy, and sent him to Spain. From this event must be dated the independence of the state. Monte Video and the provinces of Cordova and Paraguay protested against this measure, but were carried along with the stream. Liniers forming an army in Cordova was joined by General Nieto with an additional one collected in Potosi, and made an effort to stem the torrent ; but meeting with a total defeat was, with

his coadjutor, and six of his principal officers, be- headed.

162. Early in 1813 Potosi district fell into the hands of the patriots, who instantly coined money, raised a national flag, and performed other acts proper for an independent state. At the resto-

ration of Ferdinand in 1814, a deputy left Rio de la Plata to submit the state of the country at Madrid, including the wants of the people, and to solicit a general amnesty for the past, and a new system for the future ; but these representatives being rejected with contempt, Spain lost the favourable opportunity for regaining her ter- ritories in the new world. In 1814 General Artigas, who had ‘ considerable influence and command in the country east of the Uruguay, disturbed the friendship which had hitherto subsisted between the two provinces, and strangely retired from the siege of Monte Video, the last strong hold of the Spaniards, which nevertheless fell into the hands of the patriots. The succeeding two years were filled up with, deplorable scenes of anarchy and confusion.

163. In 1816 a sovereign congress met at Tu- cuman; and D. Juan Martin Pueyrredon was appointed dictator of the United Provinces of the Rio de la Plata, and on the 6th of October took place the solemn act of independence. During these successes the Portuguese marched an army into the Banda Oriental, and took posses- sion of the most valuable part of the country. An understanding and even a combination might have been effected but for the jealousy of Artigas, on whom had devolved the care of Monte Video. This town was taken by the Portuguese under the command of General Lecor, since called Baron de Leguna. The provinces on the east bank of La Plata were desirous of an union with Buenos Ayres ; but the influence and disaffec- tion of Artigas prevented it, and the anarchy of the chiefs of Banda Oriental afforded the in- vaders a favourable opportunity to complete their conquest. D. Jose de San Martin now emerged upon the public notice; he was governor of Mendoza ; and while there meditated the plan of proceeding across the Andes to re- conquer Chili. In thirteen days he crossed the great chain with the loss of 5000 horses and mules, and a few blacks, and conquered at Chacabuo. In 1811 the director sent forces into the Entre Rios to support the independents, but they were twice defeated. General San Martin shortly after sealed witfi the blood of the Spa- niards the independence of the provinces of the Rio de la Plata. The animosities of the pro- vinces in contact with Buenos Ayres still con- tinued ; Artigas being hard pressed by the Portuguese escaped across the river

to Paraguay, where he was taken charge of by the dictator Francia. In 1819 this heterogeneous union of the provinces was terminated by the flight oi Pueyredon the dictator to Monte Video.

164. In March, 1820, Ramirez, chief of the Entre Rios, with Lopez, governor of Santa Feˆ marched against Buenos Ayres, and the political changes that followed were numerous ; but on the 6th of October D. Martin Rodriguez was finally confirmed governor. At present all the principal places on the eastern shore of the Uruguay, and of the country between that river and the Parana, with the province, still remain in possession of the Portuguese. Passing over the several animosities of the different provinces, the most important events in the recent history of this republic are the annexation of the Banda

Oriental to the kingdom of Brazil, and the re- cognition of the independence of Buenos Ayres by the Portuguese government in 1821. A general congress was appointed to meet at Cor- dova ; and a decree of the 15th of December, 1821, announced that the number of deputies from each province would be regulated by its relative population.

165. PERU, situated between 3° 25′ and 21° 30′ S. lat. and 65° and 81° 10′ W. longitude, is bounded on the north by the republic of Colum- bia ; east by Brazil ; south by Atacama Desert, which separates it from Chili, and by the United Provinces; and west by the Pacific Ocean. It is about 750 long, and 660 broad, including an area of 495,000 miles.

166. The Andes pass through this country parallel with the coast, in the direction of south- east and north-west. Soon after crossing the southern boundary, they divide into three ridges or cordilleras, which, in the sixth degree of south latitude, again unite in a single chain. Along the coast is a narrow plain from thirty-five to seventy miles wide, called the Country of Valles, which consists of a succession of sandy deserts. East of this is the lower ridge of the Andes, composed of successive summits of immense height, reaching the whole length of Peru. Be- tween the western and central ridges is a series of plains varying in width from 100 to 170 miles. These are intersected by deep valleys ; nnd are elevated generally 8,000 or 10,000 feet above the level of the ocean. The summits of the central Cordilleras are less

broken than the •western, and reach the average altitude of 15,000 feet. Immense and unexplored plains stretch beyond the eastern Cordilleras, which reach into Brazil, and are traversed by the numerous tribu- taries of the Amazons. The mountains that rise comparatively little above the level of the table- land are chiefly metallic ; and some of them are said to be more abundant in silver ore than any others on the globe. The mines ot Gualgayoe in the partido of Choto, arc 13,385 feet above the level of the sea; in the plains of Curimayo, j'old was procured by the Incas at 11,184 feet; petrified shells are, found on the plains of Choco- parnpa at 13,123 feet. The mines of Pasco are 13, 000 feet; the ancient Peruvian road 15,540 feet ; and the town of Micupampa 11,670 feet above the level of the sea.

167. The numerous mines of this kingdom in 1791 are exhibited in the following table :

Minos.

Produce.

Gold mines and workings

69

Silver mines ....

784

i

Quicksilver .... Lead . . .

4 12

\ 4,500,000

Copper

4

163. The rivers on the eastern side of the Andes are not of considerable importance. On the northern side rises the Amazons and its tribu- taries, for which see AMAZONS. The soil of Valles

sandy and comparatively barren, containing,

however, a few fruitful spots on the banks of small rivers. The

elevated plains are verdant, and produce a great diversity of fruits and vegetables.

169. The vegetable productions are numerous and diversified ; while sugar, rice, tobacco, yams, sweet potatoes, and cocoa, are raised in warm situations, grapes and quinoa (chenipodium) are found in colder spots, and potatoes in those which are most elevated. The papa amarilla, a yellow potatoe, is produced thirty leagues north- east of Lima ; the arracacha, which is both yel- low and white, and similar in taste to a boiled chestnut, is common in New Granada ; the ca- motes, or sweet potatoes, are valued in Chili. The grapes are well-flavoured, as also the melon and water-melon, the granadilla; the palta (laurus persea) are common ; the chirimoya is of a most exquisite taste. The name is derived from chiri, cold, and muhu, seed, or cold- seeded. The tree is twelve or fifteen feet high, with large broad leaves, and branches extending to the ground, producing a small, pink, and sweet-scented flower, and a fruit varying in size from an orange to a large melon, covered with a smooth green skin, and a white interior pulp, if not liquid easily cut with a spoon and enveloping a number of black shining pips of the size of an almond kernel, which on exposure to the air become of a light brown. The flavour of this production is not easily described ; but it resem- bles the custard-apple, and contains that happy mixture of sweetness and acidity, with delightful scent, which forms the perfection of fruits.

170. Musquitoes are not remarkably trouble- some in Peru ; but fleas of unusual size and activity are common, and swarm like flies upon the sea beech. Other entomological productions are numerous.

171. The climate of Lima and the neighbour- ing coast is remarkable. This spot, situated within twelve degrees of the equator, consists of a sandy poor soil, on which it has not rained for fourteen years ; and which nevertheless produces some of the finest and heaviest crops to be met with in any part of the globe. The barometer ‘is little affected by atmospheric changes ; and Dr. Unanue gives its mean height at 27.4; but in this little confidence can be placed. The thermome- ter varies from 61° to 84°.

172. In this part of the Pacific the wind is usually from the south, but occasionally blows with extreme violence from the north. At day-break there is a gentle breeze from the west, which towards eleven o’clock turns round to th southward, and at sun-set reaches the south east. Fogs prevail in the winter from April to November, and during the rest of the year take place at the changes of the moon. In some parts of the year the sun is obscured for days together ; towards the

end of autumn the sun is perfectly bright, and on some days in the winter is en- tirely concealed, the rest of the year being one perpetual change from light to dark. The valley of Rimac is rendered fruitful by fogs ; but in the neighbouring Sierra the rain falls with great vio- lence, accompanied by much thunder. This last phenomenon is so rare in the valley, that the dates of thunder-storms are preserved, and only

four have occurred since 1582. As the Chilian Cordillera thunder-storms are frequent, while the plains below are free from them, so in the au- tumn on the Andes the snow-storms are seldom unaccompanied with lightning.

173. The heat is intense in the summer, and in the low country, fevers, pleurisies, and con- stipations are common. The Andes in some places intercept the clouds and receive their con- tents ; and in the high table-land the climate is a mixture of spring and autumn, summer and winter being unknown, and vegetation flourishes at the height of 10,000 feet. In the plains, be- tween the western and central Cordillera, the rains prevail from November to May. The highest Andes experience uninterrupted winter

between the tropics. Earthquakes in this country are supposed to occur once in the course of fifty years, and the epochs of 1586, 1630, 1687, 1746 and 1806 seem to favour this notion. The shocks of late years have not been so violent as formerly. Every earthquake in South America is succeeded by rain, and after the violent shock in 1806 the streets of Lima were almost inun- dated for several days. A further description of this, as also the other kingdoms of South America, when we come to treat of those separate articles.

174. Peru is divided into seven intendancies, which are subdivided into fifty-one districts. These with their population, as they existed in 1795, are exhibited in the following table : —

Intendancies.

Whites.

Indians.

Mestizoes.

Mulattoes.

Slaves.

Total.

Lima

23,270 31,828 39,357 19,098 5,378 2,341 15,039

63,180 159,105 66,609 115,647 75,284 23,899 105,187

13,747 23,104 17,797 76,949 29,621 4,537 78,682

17,864 993 7,003 13,757 943

844

29,763 283 5,258 4,725 30 41 236

146,824 225,313 136,024 230,176 111,258 30,818 199,988

Cuzco

Arequipa

Truxillo . . .

Guamanˆa

Guancavelica ..... Tarma

Total ....

136,311

608,911

244,437

41,404

40,336

1,071,399

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Besides these many tribes of Indians, whose population is unknown, occupy all the plains to the east of the mountains. ‘ The whole population of Peru,’ says a recent author, ‘ including the Indians, amounts to 1,400,000 souls.

175. There are several important towns in Peru, of which we must take some notice, although a complete description of them in this place will not be expected. Lima, situated about two leagues from the coast in lat. 12° 5′ south, is in the centre of a delightful valley, watered by the small river Rimac, which flows along the northern side of the city, the houses are generally low, on account of the frequent earthquakes, and are constructed chiefly of wood. The placa, a great square five hundred feet above the Pacific, is of great extent and beauty. In the centre is a large and magnificent fountain ; and on its sides are disposed the cathedral and arch- bishop’s palace, and that of the viceroy, together with the town-house and prison. The other principal buildings are the churches and chapels; which are partly built of stone, ornamented with numerous paintings, and decorated with gold, silver, and precious diamonds. The population in 1790 amounted to 52,627, in the proportion of 17,215 whites, 8960 negroes, 3912 Indians, and an unknown number of Mulattoes, Mestizoes, &c. Of the whites 3000 are said to have been monks and

nuns. The present population, ac- cording to a late traveller, is about 70,000 souls, of whom about 25,000 are Spaniards, 2500 monks, nuns, and secular clergy, 15,000 free Mu- lattoes, 15,000 slaves, 7200 Mestizoes and 5000 Indians. Luxury in dress, and passionate fondness for show and splendour,distinguish the inhabitants of Lima. Calao, the port of Lima, is two leagues distant, in a low flat point of land, near the mouth

of a river of that name. The port, one of the most commodious on the coast of the Pacific Ocean is defended by numerous batteries. ‘ It is the rendezvous of about 17,000 tons of shipping,’ says an American author ; ‘ and contains a popu- lation of 5000.’ Cuzco, the ancient capital of the Peruvians, is 550 miles east-south-east of Lima, and still contains many monuments of its anti- quity, of which one of the most remarkable is the great fortress built for its defence. The population, as stated by the author above alluded to, is 32,000; in the proportion of 16,000 whites 14,000 Indians, and the remaining portion a mixed race. Arequipa 217 leagues south-east of Lima, on the banks of a small river about twenty leagues from the coast, is one of the largest towns in Peru, described by an American publication as containing 24,000 inhabitants. Truxillo, ir lat. 8° south, contains 6000. Gua- manga, an Indian town sixty-three leagues south- east of Lima, contains 25,970 souls, of whom only 169 are whites. Tarma, eighty-five miles east of Lima, contains 5538 souls, of whom 361 are whites. Guancavelica, celebrated for its quicksilver mine, and for the quantity of precious metals found in its vicinity, is 140 miles south-east of Lima; and contains 5156 inhabi- tants, of whom 560 are whites.

176. There are several manufactures in Peru much in request. Among the first are articles of silver filagree of exquisite workmanship, which are chiefly made in Guamanga, consisting of animals and devices for burning pastilles, holding fruit, &c. Another fabric highly es- teemed is that of a species of grass, bleached and plaited into various articles, as pouches and cigar cases. Hats of this material are exporte and found convenient in warm climates. The

traveller from whose work these observations are derived could obtain little information re- specting this exquisitely fine material in its raw state, and was equally unfortunate respecting the tinder which is carried in silver tubes in the pockets of all classes for lighting cigars ; he learnt, however, that it is the inner bark of a tree which grows near

Quito.

177. The trade of Peru is considerable as well with Europe as the Philippine islands and other parts of America. The exports are chiefly gold, silver, wine, brandy, Peruvian bark, salt, Vicuna wool, coarse woollen, sugar and pimento. Its imports are from Europe, manufactured goods, as silks, cloths, lace, &c. ; from the Phi- lippine islands, muslins, tea, and other East India goods; from Guatimala, indigo; from Chili, wheat and copper ; from Buenos Ayres, Paraguay tea, mules, &c. The inland communication is in- different owing to the deep valleys which sepa- rate the elevated plains and the lofty mountains which rise between the table-land and the coast.

178. The religion of Peru is the Roman Ca- tholic, and the church is under the direction of one archbishop and four bishops.

179. While subject to the dominion ot Spain the government was vested in a viceroy, and had two royal audiences, viz. Lima and Cuzco : the Creoles were, however, excluded from all im- portant offices, civil, military, and ecclesiastical ; which were conferred upon the European Spaniards. Its present government will appear in the following sketch of its history.

180. The traditions of the Peruvian Indians represent that their ancestors were taught the arts of society and government by Manco Capac and Mama Oello, a man and woman who came from an island in a lake south of Peru; the former instructing the men in agriculture and other useful employments, and the latter apply- ing her assiduity to teach the females weaving and spinning. A town was founded (the sub- sequent capital of Peru), laws were framed, and the illustrious stranger constituted himself their sovereign and priest, and established the suc- cession hereditary in his family. The territories were greatly enlarged ; and tradition represents the disappearance of this personage to have been as mysterious as his former appearance. This happened about the beginning of the thirteenth century of the Christian era; and, from this pe- riod to the epoch of the Spaniards' arrival there, fourteen successive ineas, or monarchs, are said to have reigned.

181. In the reign of lluana Capac, in 1524, Peru was discovered by Europeans; shortly after which tlu.' Spaniards insinuated themselves into the newly-discovered territory, and, in a manner which will lie described under the article Peru, acquired possession Pi/arro, who had been sent from the king of Spain with the title of governor of Peru, on a pretended provocation attacked the natives, and gained possession of the inca's person, who offered for his ransom as much uokl as

would till the place in which he was confined. This was accepted ; and the un fortunate monarch put to death immediately afterwards ; being condemned to be burnt, after a mock trial upon the pretended charge of

having wrested the sceptre from his brother, the rightful sovereign. The same individual de- feated Paula Inca, a brother of the deceased, extended his possessions, and sent an immense present of gold and silver to the king of Spain. He was confirmed in his government, to which an addition, seventy leagues south, was made ; and was created Marquis of Atibillos ; while Almagro, with a priest named Hernando de Luque, who accompanied him in the origina» voyage of discovery, received the government of the country 200 leagues south of that prescribed to Pizarro.

182. In January, 1533, Pizarro founded the city of Lima, and distributed the lands among his colonists ; but Manco Capac, the reigning inca, took up arms ; the Peruvians took Cuzco, and even Lima was with difficulty retained. Almagro considering Cuzco within the limits of his grant, marched against it in 1537; and the inca retired to the mountains, whilst the brothers of Pizarro submitted. Pizarro shortly after marched in person, and in a decisive action fought near Cuzco, took Almagro prisoner; shortly after which he brought him to trial, and beheaded him. Pizarro himself was assassinated two years afterwards, on the 26th of June, 1541, by one of the party of Almagro. Vasco de Castro was then appointed governor, and was succeed- ed by Blasco Vela, whose conduct excited an insurrection, at the head of which was Gonzalo Pizarro ; arid the royal troops were defeated in a pitched battle, in which the viceroy was slain. Pedro de la Gasca, a priest, being sent out as president, defeated Pizarro ; who, after under- going a trial, was beheaded on the 10th of Apru 1548. In 1562 Toledo, the viceroy, attacked Tupac Amaru, son of Manco Capac, who had taken refuge in the mountains ; and the inca sur- rendered himself, with his wife and children, who were all carried prisoners to Cuzco. The inca was sentenced to be beheaded, which sen- tence was executed ; and thus expired the last of the Peruvian emperors. The sons of Indian women by Spaniards were put into confine- ment, and many of them to the torture, on a charge of conspiracy. The royal authority thus became established in Peru.

183. The year 1782 was marked by an in- surrection of the Indians, under Jose Gabriel Condorcanqui, a descendant of Tupac Amaru. He had petitioned the Spanish court to restore to him the title of Marquis of Oropesa, as granted to his ancestor, Sayu Tupac ; but finding his re- quest neglected, he proclaimed himself inca, and the Indians flocked

to his standard : he pro- claimed vengeance against the European Spaniards ; but, after two years varied success, he and his family were made captive, and, with the exception of his brother Diego, who escaped, all executed. Diego himself, on suspicion .of his being concerned in a revolt which happened at Quito some years afterwards, was beheaded. Of the history of Peru little more is known till the invasion of Spain by Napoleon.

184. In the early part of that contest the vice-royalty was less agitated by revolutionary movements than any other part of the continent, owing to the strong political holds in which ih .

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influence of the Spanish government was en- trenched in that quarter. In 1809, when juntas were established in the cities of La Paz and Quito, Peru sent out troops, which for the time suppressed their rising efforts. In 1813 a strong force sent against the republicans of Chili restored the royal authority. In 1817 the tide of fortune was turned, and the victories of General San Martin compelled the Peruvian arfny to evacuate Chili ; and Chili, in return, having ac- quired sufficient strength, sent an army into Peru, and compelled the surrender of the capital. Lima capitulated to the liberating army on the 6th of July 1821. A few days afterwards San Mar- tin entered and held his levees in the vice-regal palace. Callao was next blockaded by sea and land ; and, on the 28th of July, the solemn de- claration of the independence of Peru took place with considerable pomp ; and in commemora- tion medals were struck. San Martin took upon himself the sovereign authority under the title of protector. On the 20th of September, 1822, he called together a constituent and sove- reign congress ; and placing in their hands the supreme government of affairs, retired as an individual to Chili.

185. From that time affairs wore a chequered appearance. The congress appointed a govern- ing junta unfit for their calling; the patriots on the side of Arequia were defeated in the commencement of 1823. Rivaaguero shortly afterwards dissolved the congress, and anarchy prevailed ; and, in June, General Cantarac marched down and took Lima, and remained there fifteen days. Bolivar arrived from Guaya- quil with 4000 troops, reinforced by Chilians, who landed about the same period. The Spa- nish troops still maintained their positions in the Sierra. Happily there is no prospect of the re-establishment of the Spanish power in Peru. The state of the country is

still far from happy ; agriculture is destroyed, the mines are neglected, and the country is without capital. Its independence was declared in 1821.

186. CHILI is a long narrow country, lying between the Andes and the Pacific Ocean, be- tween 24° 20′ and 43° 50′ S. lat. and 68° 50′ and 74° 20′ W. long. It is bounded on the north by the desert of Atamaca ; east by the Andes ; southj Patagonia and the gulf ofGuaiteca; and on the west by the Pacific Ocean. It is about 1350 miles long and 130 broad, and includes an area of 175,500 square miles.

187. The face of the country is picturesque and delightful. The lofty chain of the Andes runs along its eastern boundary ; while the country below is composed, in a great mea- sure, of valleys surrounded by subordinate ele- vations, through the openings of which the inhabitants of one valley hold intercourse with another To the traveller who wanders over this delightful country, the scenery is often grand and magnificent ; especially when, in addition to the natural features of the country, he obtains a view of the Great Pacific Ocean.

188. The soil of Chili is a stiff clay, abound- ing with water-worn pebbles, but of singular fertility. Numerous streams and mountain tor- rents descend from the Andes, watering and re-

freshing the country, out there are no streams of any considerable importance. The most re- markable are the Salado, a northern boundary, Huasco, Juncal, Limari, Coquimbo, Maypo Quillota, Mataquito, the Maule, Itata, Token, Biobio, Callacallas or Valdivia, and Bueno. Numerous harbours are seen upon the coast; and several lakes are found in the interior of considerable extent. Of these, that of Aculeo, from its proximity to the capital, is most visited by foreigners. The baths of Colina are much celebrated. Eleven leagues north of the capital the water issues out of five small holes from a chlorite slate, at a temperature of eighty-five degrees. The scenery is grand and magnificent There are forty-seven islands in the Archipelago of Chiloe or El Ancud, at the southern extremity of Chili, of which thirty-two are peopled by Spaniards and Indians, and the rest uninhabited : Chiloe is the largest and gives its name to the whole group. Those of Juan Fernandez are two small uninhabited islands, in lat. 33° 40′ S. and long. 70° W. about 400 miles from the coast of Chili.

189. The whole of the Chilian territories are fruitful, the southern part abounding with corn, wine, and oil. The country between the pa- rallel of thirty-two degrees and the northern boun- dary is barren of

vegetation, but rich in mines of the most precious metals. Wheat is extensively cultivated in the valleys ; barley and hemp flou- rish in most parts of the kingdom. Vines and olives are numerous ; in short all the delicacies and luxuries of life which spring out of the earth, are capable of great perfection in Chili. From a large palm a kind of honeyis produced, dark-coloured, and resembling molasses and water, by boring to the heart of the tree called miel de palma. The bark which produces soap by mastication (the quillai), and a plant resem- bling English groundsel, which when rubbed on the cheek yields a scarlet dye of a lasting nature, are indigenous. Botany is on a very extensive scale ; the cbld summits and warm valleys of the Andes offer plants of different habits which might be transplanted to any clime. The calceolarias, the varieties of the myrtle, the profusion of medicinal plants and dye-woods, and the large spreading trees of the south, open a fine field to the eye of a philosopher.

190. The climate of Chili is the most delight- ful of any in the New World. The temperature is moderate, the heat of the summer being finely tempered by its vicinity to the Andes, and the refreshing breezes of the Pacific Ocean. The summer commences in the month of December, and a shower seldom falls during its continuance, the heavy dews supplying the deficiency of rain. Chili, as to its climate, has been distinguished into two regions, viz. the variable and humid region, south of the Maule, where the weather is changeable and rains frequent ; and the in- variable or dry country, to the north of that river, where it does not rain for two-thirds of the year. In the most northerly provinces of the latter region it does not rain at all. Throughout the whole of the dry country, extending north from thirty- five degrees of south latitude, a dis- tance of nearly 700 miles, not a cloud is to W

seen from November to May, the atmosphere is perfectly clear, the dews are scarcely perceptible, and the heat little oppressive. The thermometer fluctuates between seventy and eighty degrees of Fahrenheit, and nearly rises to eighty-five de- grees. < In the. shade,' says a late traveller, ' it seldom, during my residence, exceeded seventy- six degrees, this was in the season that would correspond with an European autumn. The thermometer in the winter seldom falls to free- zing, but early in the morning there is a cold feel which continues about half the day. Snow has not fallen in the memory of man. The south- east winds are peculiarly drying and generally cause

the cuticle to peel off. North-west gales from the North Pacific Ocean are common in the winter time ; they bring abundance of rain, and frequently damage the shipping off the coast. Storms are rare ; but lightning, if ever seen, is very seldom. This phenomenon, the clearness of the atmosphere, the beauty of the celestial luminaries, the magnificence of the nights, and the general illumination of the heavens have opened sources of astonishment to those who have studied as- tronomical subjects. This, however, is to be explained from well-known natural causes.

191. ‘There are fourteen volcanoes in Chili,’ says an American author, ‘ which are in a state of constant eruption ; and several others which dis- charge smoke at intervals. With one or two ex- ceptions, they all lie in the centre of the Andes, from east to west.’ Earthquakes are frequent, but they are light and little notice is taken of them. Only live great earthquakes occurred be- tween the years 1.V20 and 1782.

I’.t’J. Chili abounds with almost all the precious and useful metals ; gold is found in the sands of the plains, brooks, and livers, and in almost every mountain or lull. Several of the mines have been wrought for centuries; yet, perhaps, the greatest proportion of the u’old found in Chili is ptncurcd by means of washing the beds of rivers, li is ‘.if a very pure quality ; ‘ but,’ says a late traveller, ‘ I met with it in no instance crystal- li/i’d. but in large flattened trrains of apeculiarly brr.:ht colrr:r.’ I’roiu this circumstance, he con- clnd’d that its matrix had been originally some metallic substance, probably the sulphurate of iron; and beds of gold of several inches thick •••re fie(]uen;ly met with which have never been disturbed, as appears fiom the sharp angles which could ‘inly have been left by some de- con:; < siil str.nce. This traveller observes vnh respect to th" '.:old mine on the road to \ alpara.Mi, that it evicted in a gangue of iron pynte-:, bi:t \ \aˆ r.; i'her rich nor extensively worked. The auriferous iron pyrites of Chili

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;• mines are confined to the an’! re! h-t parts of the Andes. The

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eighty per cent, of metal. They are in many cases worked in veins, running through a clay- slate, and those near the Pacific through a mountain of limestone. Some specimens from Huasco have been pronounced to consist of na- tive silver, with the muriate and carbonate of lime. The tax paid to government on the pre- cious metals is about eight per cent. ; on copper five per cent.

194. The copper mines are numerous, and yield upwards of half the weight of the ore in refined copper; that of Coquimbo is esteemed the best in the world. In 1787 there were more than 1000 mines between the cities of Copiapo and Coquimbo. Mines of quicksilver are found in Chili ; also lead and iron mines of the very best quality. A few years ago it was calcu- lated that the amount of gold and silver pro- duced annually was 3,000,000 dollars, and that of copper and tin 500,000. Coal seams have been found near Talcaguano, the port of Con- ception, on and near the surface of the earth ; and from specimens already examined appears to be a regular formation.

195. The civil divisions of Chili are as follow : all the territory below the river Biobio in lati- tude 36° 50′ S. is in the possession of variqus tribes of independent Indians. The remaining portion, extending from the abore river to the northern boundary, is inhabited by Spaniards, and divided into the folio wing districts: Copiapo, Huasco, Coquimbo, Cuzcos, Petorca, Quillota, Melipilla, Rancagua, Colehagua, Curico, Maule, Cauguenes, Itata, Puchacay, Conception, Acon- cagua, Santa Rosa, Mapocho, Isla de Maule, Chilian, Rere, Isla de la Laxa. According to a census taken about the year 1812, the population was 1,200,000, exclusive of independent tribes of Indians ; and the island of Chiloe, and neigh- bouring islands added since, have a population of 26,000. Chili has been divided into three intendancies, viz. : Coquimbo, St. Jago, and Conception ; and the present population, exclu- sive of the Indians, has been stated in a late census to amount to 1,200,000. Of the po- pulation of the Araucanos little or nothing is known.

196. The chief towns are the following : St. Jago the capital is in lat. 33° 20′ S. seated in a delightful plain on the south bank of she Mapo-

cho, a branch of the Maypo, ninety miles from the ocean, and twenty-one from the Andes. The city is regularly laid out, the streets intersecting each other at right angles, and enclosing in the middle a spacious open square, on the sides of which are the principal buildings, and in the centre a beautiful fountain. The spacious cathedral was planned and built by two English- men ; besides which there are numerous churches, convents, chapels, and hospitals. No university exists, but there is a large public school at the institute, where 400 boys are educated at the public expense. At this institution the candi- dates for holy orders are examined and licensed. There is a public library, consisting of many thousand volumes and many curious MSS. relating to the early history of the country, under the care of Don Manuel de Salas. Valparaiso, the port of St. Jago, and the most commercial city

in the kingdom, is seated on a high rugged pro- montory which, projecting into the ocean, forms •with the shore a deep crescent, the cavity of which opening to the north forms the harbour. The town is scattered irregularly not only on the beach, but over the hills and ravines of the promontory, and contains a population of 6500 souls. Conception, in point of rank, the second city of Chili, contains 13,000 inhabitants, and is seated on the north side of Biobio,a league from the sea. It was originally built three leagues north of its present situation ; but, having been twice destroyed by an earthquake, the inhabitants removed to the present site. Talcaguano, the port of this city, is six miles to the south-west in the bay of Conception. This bay is one of the largest in the Pacific Ocean, being ten miles long from north to south, and nine from west to east ; and opening to the north is divided by the island of Quiriquina into two channels. Under the south side of this island is good anchorage ; and also at the south-west extremity of the bay opposite Talcaguano.

197. In addition to the above, the most im- portant sea-ports are : 1. Copiapo, at the mouth of the river of the same name, in lat. 27° 15′ S. 2. Coquimbo, or La Serana, in lat. 29° 54’, on the south bank of the river of the same name. Its harbour is a fine capacious bay, easy of access, protected from all winds, and from the swell of the sea. 3. The port of Valdivia in lat. 39° 50′ is one of the safest, strongest, and most capacious harbours in the western coast of the new conti- nent.

198. The internal communication is in- different. There are but three

carriage-roads in the whole country, viz. two from Santiago to Valparaiso, and one from the former city to Con- ception. Besides these there is no road in which a carriage can travel with safety out of the par- ticular valley to which it belongs. The com- merce with Buenos Ayres is chiefly carried on through the passes of the Andes, of which the most frequented is that of Putaendo on the Us- pallata, on the road between Santiago and Mendoza.

199. Chili, when a Spanish colony, imported European goods from the parent kingdom to the amount of more than a million of dollars an- nually, and the returns were principally in gold and silver." Since her independence the imports have been chiefly from Great Britain and the United States, consisting of arms, ammunition, iron, furniture, tobacco, and French, India, and British, manufactures. The returns have been gold, silver, copper, tin, wheat, hides, hemp, &c. The army in 1818 consisted of 8400 troops; the navy, of one vessel of fifty-two guns, one of thirty-six, and several smaller vessels, manned by Americans and Englishmen.

200. When the Spaniards possessed Chili, they derived no revenue from it ; the alcbala, the royal fifths on the precious metals, and other inland taxes, being scarcely sufficient to defray the expenses of the government ; but the pos- session of this country was quite necessary for the safety of Peru. The revenue for 1817 was 2,177,967 dollars. The chief source of the reve- nue at present is derived from the duty of 26£

per cent, on foreign merchandize, forming 4-5ths of the whole amount of the treasury returns. In May, 1822, a loan was contracted in London to the amount of a million sterling.

201. The religion by law established is the Roman Catholic, and the church is very rich. There are said to be 10,000 monks and nuns in Chili; and the religious institutions with which they are connected, monopolize nearly one-third of all the landed property in the country, The connexion between Chili and the court of Rome has never been entirely suspended. Soon after the revolution an agent was sent to Rome, where he continued till 1823, and was recalled on account of the expense. The pope offered to send a nuncio to Chili to regulate the affairs of the church ; but this was declined also for the same reason.

202. Of the history of Chili before the middle of the fifteenth century, little is known ; but in 1450, Upauqui, governor of Peru, determined upon its conquest, and despatched one of his princes, who extended his victories as far as the Rapal river, where he was Defeated by the

Pro- mancian tribe. The Peruvians, however, re- tained possession until 1535, when the country was first visited by the Spaniards. Almagro, the companion of Pizarro, collected a force of 570 Spaniards and 15,000 Peruvians; and crossing the mountains reached the province of Copiapo. The Spaniards were received by the natives with respect ; but a massacre of some of their chief men by order of Almagro roused their indignation, and led to the defeat of the Spaniards, and their consequent return to Peru in 1538. Two years afterwards Pizarro detached Pedro de Valdivia, with 200 Spaniards and a body of Peruvians, with women, monks and cattle, to Chili, to settle such districts as he should conquer. The natives of Copiapo opposed him, but having conquered several districts he arrived at the country of Mapocho, where he founded the city of Santiago on the 24th of February, 1541. Going out to attack the Promancians, the Mapochians attacked the new settlement, and continued a formidable scale of opposition for six years. In 1545 Valdivia made the Promancians his allies ; and visiting Peru on his return brought with him a commissioner, a governor, soldiers, and stores. The city of Coquimbo was rebuilt by Aquirre. Valdivia, in 1550, founded the city of Conception, and was soon afterwards attacked by the Araucanians ; but, receiving rein- forcements from Peru, he ma'rched into Arauco where he founded the city of Imperial ; and tra- versing the country as far as the territory of the Cunches, and founding another town on which he conferred his own name, returned to Santiago.

203. The Araucanians shortly after overthrew his power and took him prisoner, when an old chief killed him with a club. Villagran succeeded him in the command ; but the opposition of the Araucanians impeded the progress of the settlements. In 1557 the viceroy of Peru sent Don Garcia de Mendoza, his son, with a large force, who succeeding indifferently returned to Peru. Villagran succeeding died soon after, and was succeeded by his son Pedro. In 1598, an insurrection of the Araucanians taking place,

every Spaniard found outside the forts was nut to death; Villanca, Valdivia, Imperial, and other towns, were taken, and Conception and Chillar were burnt. The Dutch too landed in the islands of Chiloe, plundered Chiloe, and put the Spanish garrison to the sword. In 1641 peace was concluded between the marquis of Baydes, governor of Chili, and the Araucanians, which lasted till 165.5; when, after an interruption of ten years' hostilities, harmony was once more restored.

In 1722 a conspiracy was formed by .he nations from the borders of Peru to the river Biobio. At a fixed moment, when the watch- fires were to blaze upon the mountains, the Indians were to rise against the whites and de- liver the country. The design however mis- carried, and peace was shortly concluded. In 1742 Don Josef Manto, the governor, collected the colonists into towns, divided the country into provinces, and founded several new cities. In 1770 an attempt of the same kind, with respect to the Araucanians, made by Don An- tonio Gonzago, produced a new war, which con- tinued till 1773, when peace succeeded, and the Araucanians agreed to keep a resident minister at Santiago.

204. Chili appears to have enjoyed tranquillity during the remaining part of the eighteenth cen- tury, and agriculture and commerce revived. The occupation of Spain by the French in 1809 led 10 a revolutionary movement in Chili, which was at first successful. On the 18th of July, 1810, the captain-general resigned, a junta was formed, and all native Spaniards desired to quit the country within a stated period ; the governor of \ aldivia, who endeavoured to effect a counter- revolution, was taken prisoner and executed; but in 1814 nearly the whole district was sub- clued by a royalist army from Peru. In 1817 the able conduct of General San Martin, with a body of troops from Buenos Ayres, led to the de- font of the royalists and the freedom of the Country. A junta was formed, and I). Bernardo OMIiggins became director. A battle fought on the ,r)th of April, 1818, almost extinguished every hope of the royalists; and Lord Cochrane, who had the command of the Chilian naval forr-e, declared the whole country, from Guayaquil in the north, to the desert of Atacama in the south, to I'e in a state of blockade.

•JU"> . hi 1IV.K), August 20th, an army of Chi- lian*;, under the command of San Martin, was sent au'ainˆt the Spanish empire in Peru. This general, after conquering Peru, retired to Chili as a private individual. On the 28th of January, KVJ.'i, (Hlnru'ins lesiu'ned the dictatorship; and (ieneral Irene, who had been active in the cause, henr.: declared commander-in-chief, took the government. In September the same year took place the la

2utj. The Kritiˆh possessions in South Ame- rica comprise the whole of what was originally ciUed Dutch Arieriea, 01 Dutch Guiana, a i (.11:. try i \it nding irotu the mou!'i of the Orinoco : : •' of tin M ;nn\!,..'. t r :'<•!; tin. fifth to the

seventh degree of north latitude. It is bounded on the north by the Atlantic Ocean ; east by Cayenne or French Guiana ; south by the un-

explored country called Amazonia ; and west by Spanish Guiana.

207. This territory is divided into the three governments of Berbice, Essequibo and Deme- rara, and Surinam; Essequibo and Demerara being two districts under one government. See the separate articles.

208. The country of Guiana may be said to have become first known to Europe by the voyage of Sir Walter Raleigh up the Orinoco in 1595, in search of the imaginary city of El Dorado, whose streets were declared to. he payed with gold. Columbus had seen this coast in 1458 according to some accounts; while others attribute the discovery of it to Vasco Nunez in 1504. Raleigh penetrated the country in his expedition on the Orinoco to the extent of 600 miles. After him we find the English buccaniers resorting to the coast; and in 1634 a mixed colony of sixty" individuals, partly English and partly French, settled in Surinam to cultivate tobacco ; and traded along the whole of those shores. After an unsupported struggle with their difficulties for about twenty years, these settlers were taken under the protection' of the British government, and Lord Willoughby, of Parham, was appointed their governor by charter in 1662. Paramaibo is supposed to derive its name from this nobleman. In 1667 the Dutch attacked and took possession of the colonial establish- ments ; which were shortly afterwards confirmed to them by the treaty of Westminster, in ex- change for New York. Thus ended our early connection with this coast. During the American war, the Dutch settlements on the banks of the Essequibo were captured by a small English ar- mament; but at the peace of 1783 they were restored to the States General. In 1796 Berbice and Demerary submitted to our arms, and in 1799 the valuable colony of Surinam, com- pleting the conquest of what was called Dutch America. Again, however, were these possessions restored to Holland, in full sovereignty by the peace of Amiens. Shortly after their arrival, the Dutch troops sent to take possession of Berbice, being very ill equipped from home, broke out into mutiny against the colonial au- thorities, and war being again declared between Holland and Great Britain, General Greenfield and Sir Samuel Hood appeared before the place. In September, 1813, this settlement surrendered to their joint attack ; and the same year saw us masters of Demerara and Surinam. The whole of these settlements were finally confirmed to Great Britain by the treaty of Paris in 1814.

209. The inaccessibility of this coast (for it can be approached only at the mouth of its great rivers), and its uncultivated appearance from the sea, induced some of the early European navi- gators to call it the Wild Coast, and these cir- cumstances seem to have led to the fallacious conclusion that no colony would flourish near the ocean.

Accordingly we find the first settlers, particularly the Dutch, planting themselves at a considerable distance from the shore ; and this pdicy was not wfioTly abandoned until the

modern possession of these settlements by Great Britain. The soil is so exceedingly rich to the very borders of the Atlantic, that for ten or twelve feet below the surface it is equal to the manure of most countries, and portions of it have been carried to Barbadoes to be used as such. These lands are so low as to be covered with water in the rainy season to the depth of eighteen inches; and the whole country is in- tersected with swamps and marshes. The interior beyond the settlement has been but little ex- plored, but as it becomes more hilly toward the Mei Mountains, the land is noorer, sandy, and stony. From these mountains, which run nearly in the form of the coast, the numerous rivers of the district descend ; some of them, as the Esse- quibo, falling direct into the Atlantic, others into the Amazons and Orinoco. Between this range and the shore thirty crops of rice can be raised on the land, successively, whilst the richest of the West India islands will yield but two.

210. Here are two summers or dry seasons, dis- tinguished as the greater or less ; and two winters or wet seasons, similarly distinguished ; the greater or longer wet season beginning at the middle of April, and terminating at September, when the third dry season commences and lasts till the middle of November. The short wet season now comes on, and continues until the middle of January, when it is succeeded by the long dry season which ceases in April. The last is a most delightful period of the year. The trade-wind sweeping o-ver the Atlantic from east to west, aided by a sea breeze which generally blows from the north-east during the day, keeps the whole atmosphere cool and fresh until the evening; when the latter is succeeded by a land breeze from the south-east, which prepares the constitution for the dullness of the night. Indeed, the climate of Guiana, as a whole, has been thought to be the most congenial to Eu- ropeans of any country within the tropics. Du- ring the wet season the rain falls in torrents towards the close of the day, and rarely in the driest season is the night without showers. The changes of the season are accompanied with heavy storms of thunder and lightning, but the desolating hurricanes of the West Indies are un- known here, and the earthquakes of other parts of South America are rarely felt. Since the lands have been more cleared, the return of the seasons has been

observed to be not quite so re- gular ; and the rains are naturally less frequent. Europeans should avoid the heat of noon and the evening dews, as most liable to expose them to the fever of the climate. It appears occasionally in all degrees from the simple intermittent to the yellow fever. Leprosy is also a frequent and very severe disorder here. A dreadful infectious disease, called the yaws, similar to the small-pox, seems peculiar to the negroes whose per- sons it covers with large ulcers. The bloody flux, dropsy, and dry gripes, are also frequent. The tickling feeling of the skin which is some- limes common, accompanied with a scarlet eruption, has been thought conducive to health; but the stings of musquitoes, and gnats, are suc- ee«*'.ed by large pimples, which if scratched be- rome ulcers. Similar annoyances are found in

the ring-worm, which spreads in large scarlet spots about the face and neck, and is cured by an application of lime juice mixed with gun-powder ; and the sting of the chigoe, or jiger, a kind of sand-flea, which lodges under the toe- nails between the skin and the flesh.

211. The principal rivers of this part ol Guiana, are the Essequibo, Surinam, Demerai a, Berbice, and Canje. The Essequibo has a course of upwards of 300 miles in length, and is twenty-one miles wide at its mouth. The Sv«- rmam is three quarters of a mile in width at the mouth, and navigable for the largest vessels full twelve miles from the ocean : smaller craft pro- ceed sixty or seventy miles further. Near the mouth, at the junction of the Commanwine with the Surinam, is a fort of two redoubts, but of no considerable strength. The banks of the river, covered with the evergreen mangrove, furnish some of the most pleasing prospects of the country. The Demerara, which runs from south to north, is navigable for 200 miles to vessels which can pass the bar of sand at its mouth ; where there is only about twenty-four feet water at the highest tides, and the difference between high and low water mark is from ten to twelve feet. At its mouth, opposite the fortification, it is about two miles wide ; twelve miles above the fort it lessens to about a mile in width. The Berbice is a quarter of a mile wide and two fa- thoms deep at its mouth, having the land on both sides extremely low and covered with wood. The plantations extend 300 miles from its entrance into the sea. The Canje, running nearly due-east, is a fine, and, at its rise, a most romantic stream : the colony schooners navigate it three miles up. Immense falls and cataracts break its way down the mountains ; and a creek about forty miles below connects it with the Courantine, by means of which despatches are brought from Surinam to Berbice.

212. The productions of the whole of this district being so very

similar, we shall proceed to describe them in this place, leaving only the peculiarities of the separate settlements to be no- ticed in distinct articles. In the numerous forests of the coast are found — the jaguar tiger, which sometimes measures from five feet and a half to six feet, from the nose to the root of the tail — the couquar, or red tiger, resembling a large grey- hound— and the tiger cat, a very destructive but beautiful little animal : it is called the crabbo dago by the inhabitants, and seems to correspond with Buffon's grey-weasel or grison. Numerous tribes of monkies are found in Guiana, but no apes. Of these the quato has a naked face, eyes sunken, a negro nose, large ears, and excepting its long tail, an almost entire resemblance to the human form. The howling baboon has. a large black beard and is generally found to muster in crowds and utter a horrid yell, which is heard for immense distances previous to the coming on of rain. The lion-monkey, called by the na- tives the saccawinkee or schacomingky, is a deli- cate little animal of the same species, which weighs only about five or six ounces, has a small head, round smooth ears, and an oval face covered with fine white hair. Round its neck is a long bushy mane resembling that of a lion ; it will

perch on the hand luce a bird, and is often brought to the plantations for sale. The coa- timondi or Brazilian weasel, the ant-bear and several species of opossum, the sloth, the por- cupine, armadillo, and hedge-hog, complete the list of animals of prey found in this district. Of these the ant-bear deserves some particular no- tice. From the snout to the end of the tail this creature will sometimes measure seven or eight feet ; its head, which is small compared to its entire size, is covered with a soft hair; while its tail, immensely large, is set with strong bristles which constitute a complete armour for the animal when attacked, and under which during a storm it will sometimes cover its body. With its tongue, which is often two feet in length, and from which it discharges a sweet saliva, it per- forates the abode of the ants, who will imme- diately settle on it in vast numbers, and thus be- come the prey of their enemy. Herds of deer of all sizes range along the savannas ; the pacca- rara, or Indian coney, resembling our hare, is also common ; and abundance of wild hogs. There is one species of the latter indigenous to Guiana, having neither tail nor tusks, but re- markable for a receptacle on its back about an inch deep, in which is a white fetid liquid that must be carefully discharged from the flesh im- mediately the animal is killed, or it renders the whole carcase unfit to be eaten. The domestic animals have been principally exported from

the Old World, and the whole, except the hog, have degenerated here. The sheep, in particular, are very diminutive, and the wool, as at the Cape of (Jood Hope, changed to a sort of coarse hair. Beautiful goats abound, and the finest poultry. forest and fruit trees of the most curious de- scription line this coast. The mountain cabbage, as it is strangely called, stands unequalled among tile vegetable tribes. A perpendicular tapering stem, from seven to eight feet in circumference, rises to the height of about 100 feet; and is surmounted by the cabbage consisting of thin white strata, and tasting like an almond. Branches twenty feet long diverge from the stem, having narrow leaves of about two feet in length, and full of nuts which are the seeds of the plant. The iron-wood, bullet, launa, and mahogany trees. uro\v to the height of fifty feet; the tuo first are remarkably hard and close Drained; the launa yields a fruit resembling our apple, \ith the juice of which the natives paint their bodies. The red mangrove, the cocoa, the pipetra, and the tonquin-bean trees rise fioni sixty 1o eighty f.ji.-t in height; the first being remarkable for its ligneous shoots which 'It-M end to the ground without leaves or branches, and take >pontaneous root, as if for the support of the parent >iein. It is an exceedingly fine tree for building purpOMS. lieantiful woods for furniture diversity the forests; the hiarree, winch]•., xml nuelv to be found growing amount other trees, is so strongly imbued with poi-on that when it. has been accidentally burnt

mke has oi'len prmed fatal to human life. •2 1 :',. li.iiKinas, pine-apples and plantains, are aiiK'nu the fiuits of this sliore ; but the tama-rind, the irnava, and the aviato pear, are its choicest productions. The guava is a round

lemon-coloured fruit, containing a red pulp, ge- nerally made into jellies, the solid coating of which is of the substance of an apple, and similarly used by the settlers. The aviato or avagato pear bears a fruit in shape like our English pear, but of a pale green colour, having the taste of a peach. The useful shrubs com- prise the cotton bush, which bears two crops annually ; the coffee bush, which also bears two crops, each tree yielding about a pound and a half at a crop ; the palma christi, or castor bush, which bears nuts of a triangular form covered with a thin brown fur, the kernels yielding, by expression, the well-known castor oil ; the cas- sava shrub, of which the roots are ground into meal and form an excellent bread, but the bitter cassava, though it becomes a wholesome food when boiled or baked, is a fatal poison in its raw state. The curetta, or silk-grass plant is a curious species of aloe, abounding here, con- taining in its leaves a saponaceous pulp, inter- spersed with strong white silky filaments, which are used for making nets, and fine cordage. Other species of the

aloe, the caruna shrub, whose kernel is a slow poison ; the troolies shrub and the nibbees, are also common. The troolies bears a leaf of from twenty to thirty feet in length, and two or three feet broad, which grows from its short roots close to the ground, and is so tough and useful as to form the prin- cipal thatch of many of the houses of the colony ; from which it will turn for years the heaviest rains of the wet season. The nibbees is a sort of natural rope growing to immense lengths, and running from six to eighteen inches in circum- ference, sometimes twisted together like the wrought ropes of Europe, and at other times crossed in its texture like net-work. It is used for many of the ordinary purposes of rope. The Indian yarn also abounds here; and the ipecacuanha and ginger roots.

214. The coast is rich in amphibious animals. The sea-cow is perhaps the most curious of them, being sixteen feet or upwards in length, and having a head like that of a hog, the nos- trils of an ox, the breast of the human female, and the tail of a whale. It seldom quits the water, but when taken is considered very pala- table food. The tapira is an inferior hippopo- tamus, not bigger than an ass; it is not often seen, but considered very fine eating. The head is that of a horse, with a long upper lip, bristly mane, and very thick skin. Alligators are some- times found here measuring twenty feet in length, but they are generally very harmless animals. The laubba, or aquatic hare, sometimes called the paca, or spotted cavey, is peculiar to this coast. It has the head, and is about the size, of a white French dog ; its flesh, when killed, eats like the finest pork, and is generally very fat. Another amphibious animal of these regions is remarkable for its mode of propagation : it is called the pi pa, and is an ugly creature of about the size of a duck, covered with a brown shri- velled skin, and having a remarkably loud shriek. The young are said to be hatched in watery cells on the back of the female, or placed there, ac- cording to some accounts, as tadpoles, by the assistance of the male; certain it is they ar*

found nestling in this situation until they assume the shape and appearance of their species.

215. Of the reptiles that are found here we need only mention the rattle-snake, whip-snake, dipsas, and oroocookoo, all of which are highly venomous ; the bite of the last has been known to be fatal in a few minutes. Here is also a large amphibious serpent, called the

aboma, measuring from thirty to forty feet long when full grown, and three to four feet in circumfe- rence. It is not venomous, but very voracious, and will attack animals of all sizes, not even ex- cepting lions, by surprise, and crush them in its slimy folds.

216. The eagle, vulture, falcon, owl, and butcher-bird, are the principal species of the feathered tribes that haunt this shore. Beautiful parrots, mackaws, and the flamingo in im- mense flocks and very tame, are found every- where; together with the agame or trumpeter, a native turkey of this climate ; the sun-bird, a kind of patridge, sometimes kept in the houses to destroy ants; the peacock-pheasant, resem- bling our turkey in size and taste ; the humming- bird ; mocking-bird ; and bat. The varieties of the humming-bird are nowhere exceeded in beauty. The most common is not bigger than a full-sized cherry, and the smallest of a black and green plumage, tufted with gold, is one-third less than this, and weighs not more than fifty grains. The mocking-bird is remarkable for contriving to place its nest out of the reach of its enemy, the monkey, at the extremity of the remotest twigs of the forest. These nests are sometimes fifteen or sixteen inches long, by eight or nine in circumference. The bat has been known to open the veins of the human feet when persons were asleep, and satiate itself with their blood.

217. Among the fish of this coast the galvanic eel is very common, and generally measures about two feet in length by one foot or fourteen inches in circumference. Its flesh is much es- teemed by the natives. The frog-fish is, how- ever, the most remarkable of the finny tribes. It is said to pass successively through the forms of a frog, a frog-fish, and lastly a fish ; in which size it is about eight or ten inches long without

‘scales and very delicate food. Stedman thinks the progress is reversed, and that it proceeds from the form of a fish to that of a frog.

218. The insects of Guiana are its greatest pest. They consist of musquitoes, scorpions, centipedes, cock-roaches, ants, a peculiar kind of bee, (which is said regularly to attack strangers, but never to molest the inhabitants,) grasshop- pers, and enormous spiders. The ant-hills are a natural curiosity of the coast, and are often so high as to resemble, at a distance, the appearance of a black or brown bear. They have even been found of the height of fifteen or twenty feet, and 100 feet in circumference. Some of their inha- bitants grow to the size of an inch in length, and give a most painful bite.

219. The native tribes of Indians, on this coast, exhibit very striking peculiarities. Notwith- standing all the efforts of the Dutch during

their long possession of these colonies, and the

devotion of a considerable annual sum to the purchase of hatchets, blue cloth, beads, and trinkets, as presents to them, (a system which has been scrupulously followed and improved since the district has come into the hands of the British) these ancient possessors of the soil re- main shy of the colonists. Sometimes they will engage in their service as wood-cutters, but will often suddenly depart into the interior, and have little application to any steady employ. To the negroes, however, they have a still greater anti- pathy than to their masters, and having imbibed the liberal notions of those who consider them an inferior species, will frequently assist the colonists in getting them back from the woods. As independent traders they appear at the set- tlements with ebony, canoes, cotton hammocks, wax, baskets, coarse earthen-pots, balsam of capivi, arnetto, wild nutmeg, cinnamon, parrots, monkeys, the beautiful birds, and curious woods of these forests, and their prisoners of war as slaves ; for which they take back rum, fire-arms, hatchets, gunpowder, knives, scissars, looking-glasses, fish-hooks, combs, needles, pins, beads, chequered cloth, &c. They are divided into six principal tribes, of which the Accawaws, who live near the sources of the Berbice, Demerara, and Essequibo, are the most sagacious ; they are tall in stature, of a light dun complexion, and have intelligent and rather agreeable features, straight black hair, without beards, high cheek- bones, and broad shoulders. The Caribs, of similar appearance, who dwell between the Essequibo and Orinoco, are the largest and most warlike of these tribes. They have an in- veterate animosity against the Spaniards, but the Dutch generally conciliated their favour. The use of poison in their weapons is common to all these tribes, and the Caribs have been said to indulge the horrid practices of cannibalism. At home their dwellings are surrounded with well- cultivated fields of cassava and plantains, and they are fond of hunting and fishing. The Wor- rows are found on the coast between Surinam and Demerara. They are the most barbarous and disagreeable in appearance, as well as the most filthy in their habits, of any of its inhabi- tants ; and so lazy that their slight clothing is generally nothing better than the bark of trees, while they are said to live principally on raw shell-fish and water. Behind their habitations toward the interior, reside the Arrowaws, a do- cile and very friendly race ; comparatively hand- some in their persons, and fond of intercourse with the European settlers. Other tribes more remote are the Taiiras and Piannocataws, the former as peaceable and indolent as the latter are warlike aˆd determined in their hatred against all the colonists of the coast. On the whole, it is hardly to be doubted that the liberal British policy of diffusing the blessings of our

empire wherever we maintain its sway, will ul- timately render our connexion with this coast an epoch of abiding comfort and conciliation to its native tribes, possessing as they do some of the most promising dispositions towards civiliza- tion ; while in the present situation of the world, and particularly of the neighbouring Spanish colonies, these settlements, duly cultivated, may

become important emporiums of British com- merce.

220. The agricultural system of the whole dis- trict is much alike. The colonial establishments and plantations are generally on the banks of the rivers and creeks, and contain from 500 to 2000 acres each, divided into sugar, coffee, cocoa, and cotton grounds. The low situation of the plantations has induced the colonists to adopt a similar mode of drainage to that which is pursued in the fenny counties of England. Straight deep ditches, defended by sluices, carry off the re- dundant water to the rivers, while similar ones intersect every part of the farms, and are navi- gated by flat-bottomed boats which carry the produce to and fro. The beds between these and smaller trenches are sometimes not more than from thirty to thirty-two feet in breadth ; and being raised by the excavated earth, they are found to contain the best spots in the colony for the cotton tree, which is planted in rows six feet asunder. The coffee plant is cultivated under the shades of the plantain or some loftier tree, in rows at from nine to twelve feet distance from each other. The soil is universally clayey, and whenever it becomes impoverished is left under water for a time, perhaps a year or two, while another piece of woodland is cleared, manure being wholly unknown here. Agricul- tural labour is chiefly performed by the negro slaves. Expedients, however, are more frequently necessary to diminish the richness of the soil. This is done by cropping it two or three years with plantains, and then with sugar-canes ; the latter of which, for two or three crops, will sometimes be so luxuriant as to be unfit for any thing but the manufacture of rum. Abundance of fresh-water fish are found in the rivers, and at some seasons of the year there is a plentiful sup- ply of turtle.

221. In consideration of the nabits and in- terests of the Dutch parts of the population, pe- culiar privileges in favour of intercourse between these settlements and the kingdom of the Nether- lands are secured to them by 56 Geo. III. c. 91. The entire number of acres in cultivation through- out the whole district has been recently estimated at

1,500,000. For CAYENNE, the French island and settlement, see that article.

We have thus devoted that considerable space to the consideration of America, geography, and politics, which we conceive their importance on the scale of nations, an importance every day increasing, to demand. Some of the most in- teresting occurrences, and noblest lessons of history, have been supplied by the progress of these regions to civilization and liberty, within the last fifty years. Half a century ago the northern continent was just emerging from ob- scurity, and buckling on her armour for the struggle of independence of Great Britain. France, in yielding her aid on that occasion, im- bibed involuntarily a portion of her spirit; the French followed the North American revolution; and if the licentiousness of her new liberty ended in the temporary establishment of a despot in France, her measures in the Peninsula, and the conflicts of Europe arising out of these impor tant changes, gave, in return, to South America, opportunity and encouragement to break her chains. It must be obvious that the complete emancipation of so large a portion of the globe from its original barbarism, and more recent colonial tyranny, is full of bright hopes for pos- terity; that the infant nations of the southern continent in particular have a noble destiny to fulfil, and that the western world is assuming a magnificence in her political character and prospects fully commensurate with her geo- graphical features.

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AMERICAN COMPANY, the RUSSIAN, a company originally projected in the middle of the last century, by two Russian mercantile houses of the names of Schelikoff and Golikoff, and formed in 1785 into a regular company, to encourage the fur-trade. Schelikoff himself was the commander of its early adventures. They erected a chain of factories protected by forts on most of the Aleutian islands. The emperor Paul was at one time disposed to suppress the association, when the company pledged itself, through its agent M. Von Itesanoff, to more regular proceedings. The late emperor took it under his particular patronage ; and his intelli- gent minister Romanzofi' introduced many useful changes in its constitution. The con- dition if

the fur-collectors of the company, called proiniischleniks, is said, however, to be

still wretched, and only to be exceeded by that of the oppressed Aleutians, who are, in turn, their slaves, and from whom their staple-trade has been almost entirely wrested.

AMERICANA, in entomology, a species of American chrysomela, and of which a variety is found in the south of France. The general colour is greenish gold, with five sanguineous red lines upon the wing-cases. Fab. fy Gmel. It feeds on the lavandula.

AMERICANORUM, in entomology, a spe- cies of American apis, described by Fabricius. It is hairy and black ; anterior part of the tho- rax yellow ; abdomen yellow, black at the end. Fab. Spec. Ins.

AMERICIMA, in zoology, a species of lizard in Brazil, very small, being not above two inches and a half long, and of the thickness of a swan's

quill. Its body appears square and is covered with glossy scales ; its feet are not thicker than hogs' bristles. It is reckoned poisonous.

AMERICUS VESPUCIUS, or VESPUCCI. See VESPUCCI, and AMERICA, section 6.

AMERIMNUM, or AMERIMNON, in botany, a genus of the diadelphia decandria class and order, of the natural order of papilionacere or leguminosse ; the characters of which are : CAL. a one-leafed perianthium, tube bell-shaped, five- toothed, the teeth sharp : COR. papilionaceous, standard with an oblong claw, roundish, heart-shaped, expanding and convex, wings lanceo- late, shorter than the standard, and keel short ; the stamina have ten filaments conjoined, anthers roundish : PIST. a germ pedicelled, oblong, compressed, leafy, varicose, with lateral veins, within woody, not gaping ; cells disposed longi- tudinally within : SEEDS solitary, kidney-shaped, thicker at the base, appendicled at the top. There are two species, viz. 1. A. Brownei, a native of Carthagena, Jamaica, and Domingo. 2. A. Ebenus, prickly A. or Jamaica ebony, pterocarpus sessilifolius of Lin. p. buxifolius of Murray and Aiton.

AMERKOTE, or AMARAKATA, the fort of the immortals. A town in the province of Sinde, situated about thirty miles east from the river Indus. Lat. 26° 23′ N., long. 70° 24′ E. It was formerly an independent principality, held by the Jada Rapoots ; but, standing on the frontier of Joudpoor and Sandi, was seized by the rajah of Joudpcor, to whom it now belongs. The emperor Akbar was born here.

AMERONGIN, a lordship and town of the Netherlands, in the district of Zeyst, province of Utrecht, fourteen miles east-south-east of Utrecht. Inhabitants about 1000.

AMERSFORT, a city of the Netherlands, in Utrecht, seated on the Ems, twelve miles east of Utrecht, and thirty-two south of Amsterdam. The most remarkable buildings are the town- house ; the grand palace, which is triangular ; and the great church, dedicated to St. George. It had a vote among the states of the province before the revolution ; but afterwards became the capital of the quarter of Zoesdyk, in the depart- ment of Utrecht; and was made in 1810 the head of a canton in the French department of the Zuyder Zee. The land to the east and south is very fruitful ; on the north there is pas- ture ground, and on the west it is woody. It has a manufacture of dimity and bombazines, a glass-house, and a good trade in corn. Popu- lation about 8000. Long. 5° 40′ E. lat. 52° ll'N.

AMERSHAM, or AGMONDESHAM, an ancient borough and market-town in Buckinghamshire, consisting of about 500 houses, with a free school, and four alms-houses. It is situated on the Chiltern hills, near the river Coin, and con- sists of a long street on the road-side from UxHridge to Buckingham, divided in the middle by a shorter cross street. In the angle stands the church, a Gothic structure. It lies twelve miles from Aylesbury, twenty-six south-east of Buckingham, and twenty-six north-west of Lon- don, and is the best rectory in the county. It sent two members to parliament ; has a market

on Tuesday ; two fairs, on Whit-Monday and 29th September ; and has a good trade in black lace. The market-house is a very handsome structure with a lantern.

AMES (William, D. D.), a learned Calvinistic divine, in the reigns of James I. and Charles I. famous for his controversial writings, which are now but little known. He was of a respectable Norfolk family ; born in 157fi. He died at Rotterdam in 1633. He wrote, 1. A fresh Suit against the Ceremonies. 2. Lectiones in Psalmos Davidis. 3. Medulla Theologiae ; and several scientific pieces.

AME? (Joseph), secretary to the society of anti- quaries, was originally a ship-chandler in Wap- ping. He devoted himself to the study of anti- quities, in which he acquired great eminence, and published a work, entitled Typographical Antiquities, being an historical account of print- ing in England, with some memoirs of our ancient printers. His principal works are: — 1. Cata- logue of English Printers from 1471 to 1700. 4to. 2. An Index to Lord Pembroke's Coins. 3. A Catalogue of English Heads, or, an account of 2000 English prints, describing what is peculiar to each. 4. Parentalia, or Memoirs of the family of Wren, 1750, folio. He died in 1759.

AMES (Fisher), one of tne most celebrated na- tive writers of the United States, was born April 9, 1758, at Dedham, nine miles south of Boston. His father, Dr. Nathaniel Ames, a physician, died in 1764, leaving his mother with four sons and one daughter ; Fisher being the youngest : and though his mother was left in narrow cir- cumstances, she determined to afford him a good education. He accordingly began to study the Latin when he was six years of age, and in July, 1 770, was admitted to Harvard College. Here the singular union of modesty and vivacity in his manners endeared him both to his companions and his instructors. Mr. Ames was early ce- lebrated for extemporaneous eloquence. Though resolved to practise the law, he was several years before he entered on a course of professional study ; and maintained himself at this period chiefly by teaching a school. At length he commenced his professional career at Dedham in 1781, and was soon distinguished as a su- perior pleader. In the contest between the colonies and the mother-country Mr. Ames steadily opposed the forcing a depreciated paper currency on his countrymen ; and took a consi- derable share in the convention for ratifying the federal constitution in 1788. He was chosen the same year a member of the house of repre- sentatives ; and for eight years continued a firm supporter of Washington's administration. In the controversy which took place between Britain and America respecting the privileges of neutral powers during war, he espoused the cause of the belligerent, pleading warmly for the exercise of the maritime rights of Britain in their full extent, and steady in his hostility to the policy of France. He retired from public business in 1796, but continued to furnish the press of the United States with some of its best political essays until 1802. He died on the 4th of July

1804.

AMESBURY, or AMBRESBCRY, a market-

town in Wiltshire, in the hundred of the same name, six miles north from Salisbury and seventy- seven from London. It is seated on the Avon, and but two miles from the famous Stonehenge. The church is in the centre of the town at the intersection of the two streets of which it is com- posed. Good pipe-clay is found in the neigh- bourhood, and the Avon abounds with loach. The charity school is endowed for fifteen boys and as many girls. It is said to have derived its name from king Ambrosius Aurelius, who rebuilt the monastery and abbey which was destroyed by the Saxons. This establishment was afterwards changed into a Benedictine con- verii, to which queen Eleanor retired, and died there. When it was surrendered, in the thirty- second Henry VIII., it was valued according to Speed at £558 10s. Id. per annum. Ruins of this place are still seen. Mr. Addison was born at Milston near this place. Inhabitants about 1000. There was a large Roman encampment near Amesbury defended on both sides by the Avon. See STONEHENGE.

AMESBURY, a town of Massachusetts in North America, in Essex county, standing on the north- west bank of the Merrimac. It is about four miles north-west of Newbury Port. Population about 2500.

AMESTRATA, or AMESTRATOS, in ancient geography, a town of Sicily, called also Amastris, and Multistratos: now Mistretta, in the Val di Demona, on the river Halesus. It was a very strong fort of the Carthaginians, and besieged in vain by the Romans for seven months; but at .eneth, after another siege, taken and rased.

AMESTRIS, in ancient history, wife of Xerxes, king of Persia. She cut off the nose, ears, lips, breast, tongue, and eyebrows, of her husband's mistress. She also buried alive four- teen noble Persian youths, to appease the deities under the earth. Herodot. 1. 7, c. 61. 1. 9. c. 111.
AM'LTIIYST, 1 'A/j,i9vˆoQ, non ebrius, a AMETHV—TINK. i n'lˆv, from wine; restraining from wine. Applied to the name of a certain jewel according to Pliny, because it resists drunkenness ; an opinion which Plutarch rejects. Si/m. i. 3.

A precious stone of a violet colour, bordering on purple. The oriental amethyst is the hardest, scarcest, dm! most valuable ; it is generally of a dove colour, though some arc purple, and others white like the diamond. The German is of a violet colour, and the Spanish arc of three sorts ; the hest are the blackest or deepest violet ; others arc

almost quite white, and .some few tinctured with yellow. The amethyst is not extremely hard, hut easy to be engraved upon, and is next, in value to the emerald. Savory. Chambers. Some stones approached the granate complexion ; and several nearly resembled the amethyst.

Woodward.

Pl.N. Alack, alack, his lips be wond'rous cold; Dear MH:! lie 's lost his colour : have ye seen A straying heart ? all crannies, every drop Of blood is turned ii> an amrthi/xt , '%Vhich married bachelors hang in their ears.

I-'urd's Hriiki'n Heart, act iv. sc. 2. From thee the sapphire, solid ether, takes I's hue cerulean ; and, of evening; tinct, The purple streaming amethyst is thine.

Thomson's Summer.

High on silver wheels

The iv'ry car wim oˆure sapphires shone, — The pearl, th' empurpled amethyst, and all The various gems, which India's mints afford, ˆD deck the pomp of kings.

Glover's Leonldas, book ir,

A kind of amethystine flint, not composed of crys- tals or grains, but one entire inassy stone. Grew.

AMETHYST, among mineralogists, is more par- ticularly described as a transparent gern of a purple or violet colour, composed of a strong blue and a deep red ; and, according as either prevails, affording different tinges of purple, ap- proaching to violet, and sometimes fading to a pale rose colour. It is also found colourless, and may at any time be easily made so by put- ting it into the fire ; in which state it so resem- bles the diamond, that its want of hardness seems the only way of distinguishing it. The notion that it prevented intoxication, however imaginary, prevailed to that degree among the ancients, that it was usual for great drinkers to wear it about their necks. The larger sorts were formed by the lapidary into cups, that were highly prized for the same supposed quality, which is made the subject of a smart epigram in the Anthology The ancient artists also took this gem for the figure of Bacchus, to whom the stone was sa- cred, and for Bacchanalian subjects. It is found of various sizes, from the bigness of a small vetch to an inch and a half in diameter, and often to much more than that in

length. Its shape is extremely various, sometimes roundish, sometimes oblong, and at others flatted, at least on one side ; but its most common appearance is in a crystalli-form figure, consisting of a thick co- lumn composed of four planes, and terminated by a flat and short pyramid of the same number of sides ; or else of a thinner and longer hexan- gular column ; and sometimes of a long pyramid without any column. It appears most beautiful in the last of these states, but is hardest and most valuable in the roundish and pebble-like form. The amethyst is found in the East and West Indies, and in several parts of Europe. Mr. Morin showed Dr. Lister a large piece of French amethyst, which weighed between 200 and SOOlbs ! Mr. Ray “peaks of a mountain of amethysts ! The oriental amethysts, at least some of the finer specimens, are so hard and bright as to equal any of the coloured gems in value ; but all the European ones, and not a few of those brought from the East and West Indies, are very little harder than common crystal.

De Boot (Hist. Gemmarum) mentions an ame- thyst, rendered colourless, estimated at 200 rix- dollars, which being cut to the same pattern, and set in a similar manner as a diamond of the value of 18,000 gold crowns, so nearly equalled it in lustre, that he could not tell the difference between them. Spars and crystals tinged red and yellow, &c. are sold for amethysts. The false ones come from Germany, are tinged by vapours in the mines, and contain some lead. Amethysts may be counterfeited by glass, to which the proper stain is given. There were fine ones made in France about the year 1690, which may even impose on connoisseurs, un- less the stone be taken out of the collet. — The

method of giving this colour to glass is as follows : take ten pounds of cleat g.ass or paste, made without manganese, and fuse it down with one ounce and a half of black manganese, and one drachm of zaffar. The process recommended by Porta is one drachm of manganese to one pound of frit.

AMETHYST, in heraldry, signifies the same co- lour in a nobleman’s coat, that purpure does in a gentleman’s.

AMETHYST, in medicine, a term used by some authors for an antidote

against inebriety.

AMETHYSTEA, amethyst; in botany, a genus of the monogynia order, belonging to the dia-ndria class of plants ; in the natural method, ranking under the forty-second order, verticillatae. The characters are: CAL. a single-leaved perianth, bell-shaped, angular, semiquinquefid, and per- sistent: COR. monopetalous; the border quin- quepartite, the lowest division more expanding : STAM . two slender filaments approximated ; the anthers simple and roundish : FIST, a four-cleft germen; style, the size of the stamina: STIGM. two, acute : SEEDS four, gibbous, and shorter than the calyx. — There is only one known spe- cies, a native of Siberia, from whence the seeds were sent to the imperial garden at Petersburgh, and thence brought to Britain. It is an annual plant, with an upright stalk, which rises about a foot high. Towards the top it puts forth two or three small lateral branches, garnished with tri- fid leaves, sawed on their edges, of a very dark green colour.

AMETHYSTINA, in entomology, a species of chrysomela ; above of a blue violet, and be- neath of green and violet colour. Shells with scattered hollow dots. Thorax large, antennae short and black. Fabricius.

ˆAMETHYSTINUS, in conchology, a species of Venus, of an ovate shape and violet colour, with perpendicular striae. It is about two inches in length and breadth.

AMETHYSTINUS, in entomology, an insect of the apis genus : nearly naked ; black ; wings violet: a native of the East Indies. Also a species of carabus that inhabits Cayenne; the •wing-cases and abdomen blue ; the head and thorax shining bronze. The antennae hany, fer- ruginous at the base ; wing-cases streaked. Fabricius.

AMETHYSTINUS, in ornithology, a species of trochilus, or humming-bird, of Cayenne; its colours green gold, variegated beneath with gray and brown ; throat amethystine blue; tail forked. Gmelin. Size of the red-throated hummine- bird.

AMETHYSTIZONTES, in mineralogy, the best sort of carbuncle. Plin. 1. 37. c. 9.

AMGAILA, or AMGAILAM, in ancient botany, a name given by Avicenna and others to a plant called acantha arabica, and amicantha by the Greeks. It is described as a prickly herb, with roots like those of the cypress, formed of several joints. It is also called sucaha and

zucahai. The roots of this plant, called alsobunkon, were much used by the Arabian physicians in stoma- chic and cardiac compositions. They were chosen by tneir lightness and smell.

AMHAK, or AMHARA, a province of Abyssinia,

said formerly to extend forty leagues from east to west, and considered as the most important in the empire, both on account of its being the usual residence of the Abyssinian monarchs, and its dialect being the language of the court and of the higher classes. Here was the famed rock Amba-geshen, where the young princes were formerly confined. See AMBA-GESHEN. This name has been latterly given to a more limited province, lying immediately south of Lasta and Begemder, 120 miles in length and about forty in breadth. The district is mountainous ; it contains a large portion of nobility, and the men are reckoned both the handsomest and bravest in Abyssinia. They boast that their troops are supe- rior to double the number from any other province.

AMHERST (Jeffery), lord, descended from an ancient family at Sevenoaks in Kent, was born in 1717. In 1741 he was aid-du-camp to General Ligonier, at the battles of Dettingen, Fontenoy, and Rocoux. In 1756 he was ap- pointed colonel of the fifteenth regiment of foot ; and as major-general in 1758 he went to Ame- rica and commanded at the siege of Louisbourg. The same year he was appointed commander-in-chief of all the forces in America, and governor of Virginia. On the accession of George III. he was made knight of the bath, and in 1763 re- turned to England. In 1771 he was appointed governor of Guernsey, and the year following lieutenant-general of the ordnance. In 1776 he was created Baron Amherst of Holmsdale, and in 1778 was commander-in-chief of the British army in England. In 1782 he received the gold stick from the king ; but on the change of ministers his military appointments were transfer- red to other hands. He was again appointed to the command of the army of Great Britain in 1793, but in 1 795 resigned, to make way for the Duke of York, when his lordship was made field-mar- shal. He died in 1798, and his remains were in- terred in Sevenoaks church. The character of lord Amherst will always stand high in the military history of England. Though a strict discipli- narian, he was the soldier’s friend, and his private character was very respe«table. He was twice married ; but leaving no issue, the title devolved to his nephew.

AMHERST, one of the Magdalen Isles in the Gulf of St. Lawrence.

AMHERST, a county of Virginia, North Ame- rica, between the Blue

Ridge and the tide waters, on the north of James's River and containing 13,700 inhabitants, including 5300 slaves.

AMHERST, the shire town of Hilsborough county, New Hampshire, is a town of note, formerly Souhegan West, and originally granted from Massachusetts. It was incorporated ip 1762 ; and in 1790 the Aurean academy was founded here. It stands on a northern branch of the Souhegan, sixty miles west of Portsmouth, and fifty-three north-west of Boston.

AMHERST, a township in Cumberland county, Nova Scotia, on Chignecto basin, on the south side of La Planch River. Also a township in Hampshire county, Massachusetts, containing 1233 inhabitants; ninety miles westerly from Boston, and about eight north-easterly from. Northampton.

AMIIERSTBURG, a town and fort of Upper Canada, on the east side of the river Detroit, at is entrance into lake Erie. Long. 82° 56′ W. fit. 4-2° 36′ N.

AMIIURST (Nicholas), an English poet and political writer, was born at Marclen in Kent, and entered of St. John's College, Oxford; whence he was expelled for irregularity. He was the author of Oculus Britannioe, and a book entitled Terra Filius, a Satire on the University ; also of the Convocation, a poem in five cantos ; but is best known by his contributions to the celebrated political paper called the Crafts- man. He died neglected in 1742.

AMIA, in ichthythology, the name, 1. of a genus of abdominal fishes, of which there is but one known species, the arnia calva of Carolina ; 2. of a species called also glaucus, and by others leccia, which resembles a salmon, grows to a very large size, four or five feet long, and is common in the Mediterranean ; 3. of a species of the SCOMBER, in the Linnsean system, which see.

AM'IABLE, ") Amo, to love, — amabilis. AM'IABLY, Amiable is Latin, and lovely

AM'IABILITY, Saxon forthe same idea. As AM'IABLENESS, ˆ our Latin words are of later importation they mostly be- long to the written or

orato- ric style, and are applied only in metaphor — Physical good we can call lovt-ly ; moral qualities we call amiable. Ami- cable, l.at. aiiiicus, a friend, sometimes con- founded with amiable, friendly, is Saxon, and amicable, Latin for the same idea.

For, as sayth Salomon, the amiable-tonge is the tree of lif ; that is to say, of lit' spirituel.

Chaucer. The Personnes Tale.

The shepeherdes, by reason of the vnwovnt and sodain miracle, wer all at ons throughly taken with a verui gival teare. But, the aurigell anon taketh awai this leare with speaking amiably vnto them.

Udull. Luke, cap. ii.

I'xven those who break the peace cannot but praise it: how much more should they bid for it, that are it ; and to that amicablenest that /},,. Hall's Peace-Makerˆ whatsoever we can love any one, for that we tvieiid ; and since every excellency is a of amiability , every such worthiness is a just oper motive of friendship or loving conversa- Bp. Taylor on Friendship. which is (jood in the actions of men, doth not

AM'ICABLE, AM'ICABLY, AM'ICABLENESS,

ily delight as protital

but

amiable also.

Hooker.

Sbe told her, while she kept, it, T would make \ieriiiiiiiihlc, subdue my father Entirely to her love ; but if she lost it, Or made a gilt of it, my father's eye

.uld IK

herh

Shakcsp. Othello.

1 to neglc ct,

•v’il without respect.

.’,/.// join

But when the graft no longer does remain, The dull stock lives ; but never bears again.

Dry den’s Conquest of Granada, part2d.

Then drest by thee more amiably fair,

Truth the soft robe of mild persuasion wears ;

Thou to assenting reason giv’st again

Her own enlighten’d thoughts.

Thomson’s Winter.

AMIANTHUS, EARTH-FLAX, or SALAMAN- DER’S HAIR, in natural history, a fibrous, flex- ible, elastic, mineral substance, consisting of short abrupt and interwoven filaments. It is found in Germany, in the strata of iron ore, sometimes forming veins of an inch diameter. Its fibres are so flexible that cloth has been made of them, and the shorter filaments that separate in the washing of the stone, may be made into a paper in the common manner. For the method of its preparation for manufacture into cloth, see ASBESTOS. Amianthus is classed by Kirwan in the muriatic genus of earths, because it contains about a fifth part of magnesia. Its other con- stituents are flint, mild calcareous earth, barytes, clay, and a very small portion of iron. It is fusible per se in a strong heat, and also with the common fluxes. It differs from asbestos in con- taining some ponderous earth. There are four species of this genus, two of which are composed of large, and two of small filaments. Dr. Chal- mers observes, that ‘it has been a common error to confound the different species of this genus with one anotner, and all of them with the several species of the asbestos ; in consequence of which the art of spinning and working the asbestos into incombustible cloth has been lost,’ or at least neglected. It is not soluble by acids, and it is said to resist poison and cure the itch. See ASBESTOS.

AMICABLE BENCHES, scamna amicabilia, in Roman antiquity, were, according to Pitiscus, lower and less honourable seats allotted for the judices pedanei, or inferior judges, who, upon being admitted of the

emperor's council, were dignified by him with the title amici.

AMICABLE NUMBERS, such as are mutually equal to the sum of one another's aliquot parts. Thus the numbers 284 and 220 are amicable num- bers : for the aliquot parts 1, 2, 4, 5, 10, 11, 20, 22, 44, 55, 1 10, of 220, are together equal to the other number 284 ; and the aliquot parts 1, 2, 4, 71, 142, of 284, are together equal to 220. From the number 2 itself, the first or least pair of ami- cable numbers is thus derived : — 1, subtracted from three times this sum, gives the number 5; from six times this sum 1 1 ; from eighteen times its square 71, multiplying which by 4, the double of the assumed number, we have 284 for one of the amicable numbers, the sum of whose aliquot parts is 220, the other. 18,416 and 17,296 ; 9,437,056 and 9,363,584 are two other pairs of amicable numbers.

Some properties of amicable numbers of the Cartesian form, have been investigated by Mr. Gough, (Ley bourne's Month. Repos. No. 7.) « x and a y z are amicable numbers of a common measure, «, multiplied by the primes x,y, and z. Dividing a pair of amicable numbers, according to this author, by their greatest common mea- sure, and increasing the prime divisors of these quotients by unity, the products of the two sett

thus augmented, will be equal. Put q = the sum of the divisors of a, then if a be given q is given ; but q must be less than a ; and if two sets of primes, d, x, and r, y, z, can be found, which will make (1 X d) (1 X *) — (1 X r) (1 X y) (1 X z), &c.; and also give the follow- ing proportion, as a ; q '. '. (1 X d) (1 x *) : r,y, ar,— (1 X d X *) then will a d x, a r y z, be amicable numbers. In the amicable numbers of Descartes, no two of the primes x, y, and z, can be equal ; nor can any of them be — 2 ; nor can a be a prime : q must be less than o, yet greater than J a, and must be a power of 2. If the primes x, y, z, be given, making x x 1 = (j/ x 1) (z X 1), to find if they can constitute amicable numbers: divide z x 1 by y x 1, and call the quotient p ; then if p be not 2, nor a power of 2, the thing is impossible ; but if p be the same power as 2, divide y X 1, by p x 1, and put the quotient — /; then if /be neither 2, nor a power of 2, the thing is im- possible; but if/~ 2 n, the common multiplier a= If. AMICABLE SOCIETY. See ASSURANCE.

AM'ICE, 1 Amicio, amictus, to clothe. Ap- AMYTTE'.] plied to the first of the six vest- ments common to the bishop and presbyters, which was fastened round the neck and spread round the shoulders.

Men knowing ye worde of God thinke also that this costly gray amices of calaber are very superfluous and vayn. Bale's Images of both Churches, p. 14.

[In the ceremonies of the mass.] The amice on the head is the kercheue that Christ was blyndfolded •with when the souldiors buffeted him, and mocked him saying ; prophecie vnto vs who smote thee ?

The whole workes of Wm. Tyndall, fyc. i. 277, c. ii. Thus passed the night so foul, till morning fair Came forth, with pilgrim steps, in amice gray; Who with her radiant finger still'd the roar Of thunder, chas'd the clouds, and laid the winds.

Milton's Par. Reg. b.iv. How quick ambition hastes to ridicule ' The sire is made a peer, the son a fool. On some, a priest, succinct in amice white, Attends ; all flesh is nothing in his sight.

Pope's Dunciad.

AMICITIA, Lat. friendship, in law, is ap- plied to a tenure of land, styled a tenure in ami- citia, when granted freely and of mere good will, to be enjoyed at the discretion of the donor.

AMICO (Bernardino), an Italian artist of Gallipoli, in the kingdom of Naples, who be- coming prior of a convent at Jerusalem, made drawings of the holy city and its suburbs. On bis return to Italy he published a splendid folio, entitled Trattato delle Piante e Imagini de' Sacri edifizi di Terra Santa. Rome, 1620, folio: now a scarce and valuable work. Plates were en- graved from his designs by Callot.

AMICONI (Giacomo), an historical and por- trait painter of Venice, who came to England in 172Q, and painted many fine pieces for the principal nobility. Ke afterwards went to Spain, where he received the appointment of portrait painter to the king, and died there in 1752. Lord Orford condemns his taste.

AMICTUS, in Roman antiquity, was any t'pper garment worn over the tunica.

AMICU, a lake of South America, in the provinceˆof Cumana, whose waters run south- wardly through the Parima river into the Ama- zons.

AMICULATUS, in conchology, a species of chiton, having shells of eight valves, kidney- shaped, and very brittle ; the external covering is a scabrous coriaceous membrane ; length, six inches. It inhabits the Kurile islands.

AMICULUM, in Roman antiquity, a wo- man's upper garment, which differed from the pala. It was worn both by matrons and courte- sans.

AMICUS CURIˆE, i. e. the friend of the court, a law term, for a bystander who informs the court of a matter in law that is doubtful or mistaken.

AMID , 1 Ang. Sax. On-middan, on-middes. AMIDST . $ Chaucer amiddes, in media, in the mid or middle.

The riche Cresus whilom king of Lide, Of whiche Cresus, Cirus sore him dradde, Yet was he caught amiddes all his pride, And to be brent men to the fire him ladde.

Chaucer. Monkes Tale.

Amid the bowels of the earth full steep, And low, where dawning day doth never peep, His dwelling is. Spenser.

The boar amidst my crystal streams I bring, And southern winds to blast my flow'ry spring.

Dryden.

Amata's breast the fury thus invades, And fires with rage amid the sylvan shades.

Dryden.

What tho' no real voice nor sound Amid their radiant orbs be found ? In reason's ear they all rejoice, And utter forth a glorious voice, For ever singing, as they shine, ' The hand that made us is divine.*

Addison. Of the fruit

Of each tree in the garden we may eat ; But of the fruit of this fair tree amidst The garden, God hath said, Ye shall not eat.

Milton.

Lo! where the stripling, wrapt in wonder roves Beneath the precipice o'erhung with pine ; And sees, on high, amidst th' encircling groves,

From cliff to cliff the foaming torrents shine : While waters, woods, and winds, in concert join, And echo swells the chorus to the skies.

Beattie's Minstrel

AMID AMID, a ridge of Abyssinian mountains, supposed to have formed part of the Monies Lunae of the ancients. It is the centre of a triple ridge, composed of the Aformasha, Amid Amid, and Litchambara mountains, rising in the form of three concentric circles, the Amid Amid being of an elevation of about half a mile. The whole are covered with beautiful pasturage, and the in- habitants are said by Bruce to have preferred to cultivate the tops, as rendering them more secure from their hostile neighbours. Villages are scat- tered over them, according to this writer, built of a white kind of grass, which makes them very conspicuous at a distance.

AMIDA, an idol of the Japanese,who has many temples erected to him, of which the principal a at Jedo. The Japanese have such a confidence

in this deity that they hope to attain eternal just as the gate was opened. While the guard

felicity by the frequent invocation of his name. AMIDA, or AMMOENA, in ancient geography,

was busy in gathering up the nuts, the Spaniard? entered and became masters of the town. It

called also Constantia in honour of Constanti- was taken by Henry IV. who built a citadel in

us, a principal city of Mesopotamia, situated it. The definitive treaty of peace between the

on a high mountain, on the borders of Assyria, different European powers, in 1802, was nego-

on the Tigris, where it receives the Nymphius. ciated here. The Amiennois is a fertile district,

It was taken from the Romans, in the time of once a generalite, aad comprising the greater

the emperor Constans, by Sapores king of Persia, part of Picardy Proper, the Boulonnois, and

The siege is said to have cost him 30,000 men ; Calaisis. It was originally a county under the

however, he reduced it to such ruin, that the bishop of Amiens, by grant from the king ; it

emperor afterwards wept over it. According to then passed through private hands into the family

Ammianus Marcellinus, the city was rased ; the of the count of Flanders, who undertook a war

chief officers were crucified ; and the rest, with for its defence against the French crown. Charles

the soldiers and inhabitants, either put to the VII. granted it to Philip of Burgundy, but

sword or carried into captivity, except our Louis XL again annexed it to France, and since

historian himself, and two or three more, who, 1585, when Charles V. formally renounced all

in the dead of the night, escaped through a title to this district, it has remained in the pos-

postern, unperceived by the enemy. In A. D. session of that power. M. Neckar calculated

501, it again sustained a dreadful siege by the its area at 458 square leagues; its revenue at Persians, but was restored shortly after to the empire ; it relapsed again to the Persians on the

15,200,000 livres, and population at 533,000.

AMIENS, or AMIENT, a Roman gold coin,

decline of the Roman power, and finally fell worth seventeen shillings and one penny far- thing.

AMILCAR, or HAMILCAR, the name of se-

to the Saracens and Turks, the latter of whom

call it Diarbekir and Kara-amid.

AMIDANO (Pomponio), a painter of Parma, veral Carthaginian captains. The most cele-

in 1600, who is supposed to have studied under brated of them is Amilcar Barcas, the father of

Hannibal, who during five years infested the coast of Italy ; when the Romans sending out

Parmegiano. He painted historical subjects in a fine style, and the heads of his figures exhibit considerable taste and grandeur.

their whole naval strength, defeated him near

AMID-SHIPS, asea term denoting the middle Trapani, 242 years before Christ; and this put

an end to the first Punic war. Amilcar began the second, and landed in Spain, where he sub- dued the most warlike nations ; but as he was preparing for an expedition against Italy, he was

of the ship, either as to length or breadth.

AMIENNOIS, a ci-devant county of France, containing great part of the country anciently inhabited hv the Ambriani. See next article.

AMIENS, a populous town of France, in killed in battle, U. C. 526, A. A. C. 228. He the department of Soiume, situated on the road left three sons, whom he had educated, as he from (,‘alais to Paris, ten leagues south-east of said, like three lions, to tear Rome in pieces; Abbeville, and 139 south west of Aras. It stands and made Hannibal, his eldest son, swear an on the river Somme, and is said to have received eternal enmity against the Romans. its Latin name Ambiamun, from being every- AMILJA, one of the Aleutian islands, about when; encompassed with water. Amiens is a forty -four miles in length from east to west. It place of great antiquity ; being mentioned by is narrow, naked, and mountainous, particularly

in the centre ; and is thinly inhabited.

AMILICTI, in the Chaldaic theology, a kind of intellectual powers, or

persons in the divine hierarchy. They are represented as three in

Ca/;ar as a town that luid made a vigorous re- sistance against the Romans, and where he con- vened a general assembly of the Gauls, after having made himself master of it. The empe- rors Antoninus and Marcus Aurelianus enlarged

number ; and constitute one of the triads, in the

it; and Constantine, Constans, Julian, and se- third order of the hierarchy. veral others, resided here. It was prior to the AMINADAB, or AMMINADAB, the son of revolution the see of a bishop, and the chief Aram, great grandson of Judah, and the father town of the Amiennois, as well as of the whole of Naashon, one of the progenitors of the royal of Picardy It is now the capital of the depart- house of David. He was also the father of merit of the Somme, which is navigable to the Elishema, the wife of Aaron, and thus the pro- town, and contains a population of about 40,000 genitor in the maternal line of the high priests, inhabitants. It is a pleasant well-built place, as well as of the kings of Judea, in the pa- havnrj several regular squares, a strong citadel, ternal.

AMINEUM ACETUM, a name used by some medical writers for white wine vinegar, to distin- guish it from other kinds.

AMINEUM VINUM, Aminean wine, highly esteemed by the ancients for imbecilities in the stomach. Macrobius thinks it the same with

a distinguished rank in the trading towns of the Falernian wine; but Virgil (Georg. 1. 2, v. pe; nor is it destitute of interest in the 96.) distinguishes them.

AMINIAS, the brother of JEschylus the poet, and the saviour of his life when condemned for blasphemy. See /ESCHYLUS.

AMIOT (Father), a Chinese missionary from

a cathedral, and other public buildings. A con- siderable trade in serge and other woollen stuffs, manufactured in the neighbourhood, is carried on hv the inhabitants. Here also are manufac- turers uf ribbon-, linen, green soap, &c. ; so that, in a commercial point of view, Amiens has long

It was taken by the Spa-

the following stratagem :

like peasants, conducted a

• “‘I 1 ‘ a Iviiof them fall

trance, was born at Toulon ;n 1718, and died in 1794, aged 77. He arrived at Macao in 1750, •was invited to Pekin in 1751 by the emperor of China, and remained in that capital forty-three years. By continued application he soon be- came acquainted with the Chinese and Tartar languages, and sent from time to time the result of his attainments and collections to France. His works are, a Chinese Poem in praise of the city of Moukden, by the emperor Kien Long, translated into French, 8vo. Paris, 1770. The Chinese Military Art, 4to. Paris, 1772. Letters on the Chinese Characters. On the Music of the Chinese. The Life of Confucius. Diction- naire Tartar Mantcheou Francois, 3 vols. 4to. Paris, 1789.

AMIRANTE ISLANDS, a small group of isles in the Indian Ocean, lying to the south-west of the Seychelles, and about thirteen degrees to the north of Madagascar. They possess very little either of culture or population.

AMIRANTE, m the Spanish polity, a great officer of state, answering to our lord high-ad- miral.

AMISS’, n. & adv. Ang. Sax. missian, to err ; Dutch missen, to err; German missen, to want. Miss, as well as amiss, is found in Chaucer. Error, fault, deceitfulness, deficiency. Aftur fyftene dawes, pat he hadde y ordeyned J?is To London he wende, for to amend Jjat Jjer was amys. R. Gloucester, p. 144.

‘ O deuel,’ said jˆe kyng, ‘ }>is is a foltid man, Whan he with trechettyng bi nyght away so ran. yei red him alle a, mysse, bat conseil gaf berte.’ “• Wenes he oui men Inglisse for to trecthei so ?’

R. Brunne, p. 164.

Every people, nation, and language, which speak any thing amiss against the God of Shadrach, Me- shach, and Abednego, shall be cut in pieces, and their houses shall be made a dunghill ; because there is no other God that can deliver after this sort.

Daniel, iii. 29.

We hope therefore to reform ourselves, if at any time we have done amiss, is not to sever ourselves from the church we were of before. Hooker.

0 ye powers that search

The heart of man, and weigh his inmost thoughts, If I have done amiss, impute it not ! Addison,

Your kindred is not mnch amiss, ‘tis true ; Yet I am somewhat better born than you. Dryden.

I built a wall, and when the masons played the “knaves, nothing delighted me so much as to stand by, while my servants threw down what was amiss. Swift ,

AMISUS, the chief city of the ancient king- dom of Pontus, built by the Milesians, and peo- pled partly by them, and partly by a colony from Athens. It was at first a free city, like the other Greek cities in Asia ; but afterwards subdued by Pharnaces king of Pontus, who made it his me- tropolis. It was taken by Lucullus at Eupatoria a neighbouring city, in the Mithridatic war. Several medals of Adrian, Sabina, ˆElius Caesar, Antoninus Pius, &c. were struck here. Some of the inscriptions show its alliance with the town of Amastris, as does a medal of which the an- nexed is a diagram, represent- ing two Amazons standing by an altar with their right hands joined, one bearing an axe, and the other a spear; to denote

that these two towns, which deduced their origin from the two Amazons, Amisus and Amastrus, entered into alliance with each other.

AMIT,) A, milto, to let out, let go. To

AMIS’SION, $ send away, to lose. Obsolete.

But ice is water congealed by frigidity of the air whereby it acquireth no new form, but rather a con- sistence or determination of its diffluency, and amit- teth not its essence, but condition of fluidity.

Brown’s Vulgar Errours.

If any shall further queery why magneticall phi- losophy excludeth decussations, and needles trans- versly placed do naturally distract their verticities ? why geomancers do imitate the quintuple figure in

their mother's characters of acquisition and omission, &c. * *"

He shall not fall on trite or trivial disquisitions.

Brown's Garden of Cyrus.

AMITERNUM, a town of the Sabines, in Italy, now extinct. The ruins are to be seen on the level ridge of a mountain, near S. Vittorino, not far from Aquila, which rose out of the ruins of Amiternum.

AMITTERE LEGEM TERRJE, among lawyers, a disablity to appear as witness in any court. Such was the punishment of a champion over- come or yielding in battle, of jurors found guilty in a writ of attaint, of a person outlawed, &c.

AM'ITY. Fr. amitie; from amo. Friendly intercourse between nations ; opposed to a state of warfare : denoting also agreement, and ab- sence of discord among lesser bodies of people, and friendship between individuals.

For excellent and wonderful art thou (O Lord) and thy face is full of amyte.

Bible,\539, Ester, ch. xv

Debateful strife, and cruell enmity,

The famous name of knighthood fowly shend ;

But lovely peace, and gentle amity,

And in amours the passing howres to spend,

The mightie martiall handes doe most commende. Spenser's Faerie Queene, b. ii. c. 6.

LAP. I have then sinned against his experiencey and transgressed against his valour, and my state that way is dangerous, since I cannot yet find in my heart to repent. Here he comes, I pray you make U3 friends, I will pursue the amity.

Shahspeare's All's Well that ends Well.

Nothing is so strong a tie of amity between nation and nation as correspondence in laws, customs, man- ners, and habits of life. Burke.

AM-KAS, in history, a spacious saloon in the palace of the Great

Mogul, where he gave au- dience to his subjects, and appeared on solemn festivals with extraordinary magnificence.

AMLI, one of the Aleutian islands in the North Pacific Ocean, forty-four miles in length.

AMLIAK, another of the Aleutian islands. Long. 187° 14′ E., lat. 53° 30′ N.

AMLWCH, a town of North Wales, on the north side of the isle of Anglesey, eighteen miles from Holy head, and 261 north-west of London. Since the discovery of copper mines in this neighbourhood, the town of Amlwch, or Anlwick has risen into considerable impor- tance. The harbour was made at the expense of the Parys Mine Company, and cut out of the solid rock. It is capable of admitting thirty vessels of two hundred tons burden each. The mines are about two miles from the town. Here is an elegant modern qhurch, consecrated by the

late bishop of Bangor in 1801, and said to have been erected at the expense of £4,000, the whole of which was defrayed by the Mine Com- pany. Population 4629. It has an annual fair on the 1 2th of November.

AM MA, among ecclesiastical writers, a term used to denote an abbess or spiritual mother.

AMMA, in authors of the middle age, a spiri- tual mother; an abbess or superior of a nun- nery.

AMMAILARE, in old records, to enamel.

AMMAN (John Conrad), a native of Schaff- hausen, was born in 1669, and distinguished himself by his success in teaching the deaf and dumb to speak. He published Surdus Loquens, 8vo. Haerlem, 1692, and De Loquela, 12mo. Amsterdam, 1700: also an edition of Coelius Aurelianus, in quarto 1709 ; and died in 1724 at Marmund in the Netherlands.

AMMAN (John), son of the above, was fellow of the Royal Society in

London, and member of the Academy of Sciences at Petersburgh. He

Eublished Stirpium rariorum in imperio Rutheno ponte Provenientium icones et Descriptiones, in 4to. and died in 1740.

AMMAN (Paul), was a native of Breslaw, who settled in 1674 at Leipsic, where he gave lec- tures on physiology, history, and botany. He is the author of Character naturalis Plantarum. Irenicum Numre Pompilii cum Hippocrate, 8vo. Paramesis ad discentes occupata circa Institutio- mun Medicarum emendationem, in duodecimo. Archeas Syncopticus, Eccardi Leichneri. And died in 1691.

AM MAN I A, in botany, a genus of plants of the monoCOR. is cither wanting or consists of four ovate expand- ing petals inserted in the calyx : STAM. four bristly filaments the length of the calyx ; the antheroe are didymous ; FIST, a large ovate ger- men, above ; the stylus simple and very short; thp stigma headed : IT.K. a roundish four-celled capsule, covered by the calyx: the seeds are numerous and small. Of this genus there are throe species enumerated; all of them natives of warm climates.

AMMKK, in geography, a powerful but in- famous tribe of Arabs, who, according to Dr. Shaw, inhabit the province of Constantina, in Africa ; and, contrary to the practice of their bre- thr-n, prostitute their wives and daughters. Also :i ran ‘.re of moiiiitaiii’- in the above neighbour- small lake of Bavaria, near the foot about half uay between the Iser

. market town with two Bavaria, circle of the Iser, dis- hausi n, n’-ar the lake of Wurm. r A N i APT 11 AS, a town of the north-west of the Bagmutty district of Mocwanpoor, ten miles st place, and in N. lat. 27° 31’, E.

AMMERSEE, a lake of Upper Bavaria, in the circle of the Iser. It is nine miles lotig, four and a half broad, and very abundant in fish.

AMMI, BISHOP’S WEED, in botany, a genus of the digynia order, belonging to the pentandria class of plants ; and ranking in the natural me- thod under the forty-fifth order, umbellatae. The characters are : CAL. the universal umbel mani- fold ; the partial one short and crowded ; die involucra pinnatifid, with numerous leaflets : COR. radiated, and all hermaphrodite : STAM. five capillary filaments; the anthera roundish: PIST. a germen beneath : the STYLI two and re- flected ; and the stigmata obtuse. There is no pericarpium; the fruit roundish, polished, striated, small and partible. The seeds are two, plane-convex, and striated. Of this there are three species: 1. A.

Copticum, or Egyptian bishop's weed, now no otherwise known than by the figure of its seeds, which were formerly used in medicine. 2. A. glaucifolium, with all its leaves cut in the form of a spear, is perennial, and very hardy. 3. A. majus, or common bi- shop's weed, the seeds of which are used in medicine, an annual plant. , AMMI is also a name of the sison ammi, the cicuta bulfera, the seseli ammoides, and sium falcaria of Linnaeus.

AMMIANUS (Marcellinus), a Grecian and a soldier, as he calls himself, was born at An- tioch, and flourished under Constantius and the succeeding emperors, as late as Theodosius. He served under Julian in the east ; and wrote in Latin an interesting history, from the reign of Nerva to the death of Valens, in thirty-one books; of which only eighteen remain. Though a pagan, he speaks with candour and moderation of Hie Christian religion, and even praises it: his hero is the emperor Julian. He died about A. D. 390. The best edition of his history is that of Gronovius, in 1693.

AMMINEA UVA, in botany, the grapes of a wild vine, common in the hedges of Italy, and other places.

AMMION, in chemistry, cinnabaris.

AMMIRATO (Scipio),an eminent Italian his- torian, born at Lecce in Naples, in 1531. After travelling over a great part of Italy, he was en- gaged by the grand duke of Tuscany, to write the history of Florence : for which he was pre- sented to a canonry in the cathedral there. His works while in this station are, 1. Arguments, in Italian verse, 4to. Venice, 1548. 2. II De- calione Dialogo del Poeta, 8vo. Naples, 1560. 3. Istorie Florentine, dopo la Fondatione di Fie- renze insino all, anno 1574. He died in 1601.

AMMITES, in mineralogy, a kind of figured stone of a loose open contexture, formed of a number of small globular stones. It is found in different parts of Germany, of various colours and degrees of hardness. It is by some reckoned the same with the ammodytes.

AMMOC(ETUS,in ichthyology, the sand-eel. See AMMODYTES.

AMMOCHOSIA, from a/i/toc, sand, andgtw, to lie along, a remedy prescribed by ancient phy- sicians, which consisted in laying the patient on warm sand, and covering him with it.

AMMOCHRYSOS, from awioc, sand, and

AMMONIA.

old, a stone very common in Germany, and seeming to be composed of a golden sand. It is of a yellow gold-like colour, and its parti- cles are very glossy, being all fragments of a co- loured talc. It is usually so soft as to be easily rubbed to a powder in the hand ; but sometimes requires grinding to powder in a mortar, or otherwise. It is used as sand to strew over writing. There is another kind of it less com- mon, but much more beautiful, consisting of the same sort of glossy spangles, not of a gold co- lour, but a bright red, like vermilion.

AMMOCHYSUS, in natural history, a kind of gem supposed to be the same with the avanturine.

AMMODYTES, fromaˆoc, sand, and SVTTJQ, a diver : sand eel, in ichthyology, a genus of fishes, belonging to the order of apodes. This fish resembles an eel, and seldom exceeds a foot in length. The head is compressed, and narrower than the body ; the upper jaw larger than the under ; the body cylindrical, with scales hardly perceptible. There is but one species, viz. : Ammodytes tobianus, or the launce, a native of Europe.

AMMODYTES, in zoology, a species of serpent, by some called serpens cornutus, from a protu- berance on its head. It is yellow or sand co- loured, and about the size of a viper ; its jaws are wide, and the upper part of the head has a wart-like excrescence, resembling a horn. It is principally found in Lybia and some parts of Illyria.

AMMOIDES, in botany, the name given by Boerhaave, to the bishop's weed. See AMMI.

AMMON, an ancient city of Marmarica, in which stood the temple of Jupiter Ammon, round which there was nothing but sandy wastes. Pliny says, that the oracle of Ammon was twelve days' journey from Memphis, and among the Nomi of Egypt he reckons the Nomos Am- moniacus : Diodorus Siculus, says, the district where the temple stood, though surrounded with desarts, was watered by dews which fell no- where else in all that country. It was agreeably adorned with fruitful trees and springs, and full of villages. In the middle stood the acropolis or citadel, encompassed with a triple wall ; the first and inmost of which contained the palace ; the others the apartments of the women, the re- lations and children, as also the temple of the god, and the sacred fountain. Without the acropolis, at no great distance, was another temple of Ammon, shaded by a number of tall trees; near which there was a fountain, called Solis Fons, or the fountain of the

sun, because subject to extraor- dinary changes according to the time of the day ; being at morning and evening warm, at noon cold, and at midnight extremely hot. A kind of fossil salt was said to be naturally produced here. It was dug out of the earth in large oblong pieces, sometimes three fingers in length, and transpa- rent as crystal. It was thought a present wor- thy of kings, and used by the Egyptians in their sacrifices. From this our sal ammoniac has taken its name.

AMMON, pgK, Heb. i, e. the son of my people, or Ben-Ammi, the son of Lot, by his youngest daughter. He was the father of the Ammonites,

and dwelt to the east of the Dead Sea, in the mountains of Gilead. See AMMONITES.

AMMON, or HAMMON, in heathen mythology, the name of the Egyptian Jupiter, worshipped under the figure of a ram. The fable is, that Bacchus, having subdued Asia, and passing with his army through the desarts of Africa, was in great want of water : but Jupiter his father, assuming the shape of a rani, led him to a foun- tain, where he refreshed himself and his army ; in gratitude for which Bacchus built there a temple to Jupiter, under the title of Ammon, from the Greek a/a/xoc; and alluding to the sandy desart where it was built.

AMMONIA. This name has been given to a material which has actually been classed among the alkalies, in consequence of the pro- perties it possesses, in common with these last, of uniting with acids to form neutral compounds, of converting vegetable blues to green, and yellows to red : it is moreover attracted to the negative pole of a voltaic battery as are the other alkalies ; and hence its alkaline nature being considered as demonstrated, it has been termed volatile alkali, this last name and ammonia being employed as synonymous.

This material (ammonia) when pure exists in a gaseous condition, and it does not become liquid, according to Guy ton, till the temperature to which it is exposed be reduced to 56° of Fahrenheit; and even then its liquefaction is attributable, according to the opinion of other chemists, to the hygrometric vapour it contains, and from which the pure gas is separated with extreme difficulty. The specific gravity of ammonia, at 60° Fahrenheit, is stated to be 0,000,715, being to that of atmospheric air as 590 to 1000; 100 cubic inches of it weigh, ac- cording to Kirwan 18.2 ; according to Davy 18.4 ; and according to Biot, and Arago 19.6 grains. Its smell is extremely pungent ; it inflames the skin, and animals are immediately killed by im mersion in it.

Its constituents are hydrogen and nitrogen, the former principle being in very large pro- portion to the latter; it appears probable (says Mr. Brande), that one volume of ammonia is resolved by electric decomposition into two volumes of a mixture of hydrogen and nitrogen, consisting of three volumes of hydrogen and one volume of nitrogen ; and Dr. Prout, in the 38th number of the Annals of Philosophy, gives the theoretical proportions of three atoms of hydro- gen f one azote (nitrogen). Its composition, however, was not discovered by its synthetic formation ; for when hydrogen and nitrogen are mixed together in a gaseous state, the elasticity of each gas is an obstacle to their mutual affinity; nor can their combination be effected, as is the case with some other mixed gases, by transmit- ting the electric spark through the mixture, or exposing them to a high temperature.

It may be, and very generally is, obtained by heating a mixture of quick-lime and sal ammo- niac (muriate of ammonia). Two parts of the former, and one of the latter are to be introduced into a small glass retort; and upon the applica- tion to this mixture of a gentle heat, the gas passes over, which must be collected over mer-

cury. It is also produced by more indirect pro- cesses, as from the decomposition of animal matter by heat. Bones exposed to a high tem- perature give out ammonia, from the combina- tion of portions of the hydrogen and nitrogen of the animal matter contained in them. Other animal substances in decomposition form also ammonia ; as do, indeed, some varieties of vege- table matter. Coal soot, for instance, which is of vegetable origin, yields it in combination with some of the acids. But when the material in question is obtained by these processes, it is mixed with an empyreumatic oil, which gives it a foetid odour ; thus, what is usually called the spirit of hartshorn, from its having been obtain- ed in abundance from the horns of the hart, is only different from liquid ammonia by the latter being without and the former combined with this empyreumatic oil. See AMMONIAC SAL (Sal Ammoniac, or muriate of Ammonia).

Ammonia is inflammable, and by this pro- perty is it said to be distinguished from all other substances possessed of alkaline proper- ties. When a kindled match is immersed in it, the flame, before it is extinguished, is enlarged, and is of a pale yellow colour at the edges ; if mixed previously with two-thirds of atmospheric air it kindles, and

gives a white lambent flame. It detonates with oxygen gas ; this detonation is effected only when the two gases are in a certain proportion. With a greater proportion of oxy- gen gas to ammonia than that of three to one, or of ammonia to oxygen than that of three to i.4, the mixture does not inflame. But within these limits it is inflamed readily by the electric spark. The results are different according to the proportion. If the volume of oxygen gas be double that of the ammonia, the latter is entirely consumed ; its hydrogen combines with the re- quisite quantity of oxygen, forming water, and /ts nitrogen partly remains with any redundant oxygen, and is partly combined with a portion of oxyuen forming mine aeid, which uniting with ammonia forms a dense vapour. If the ammonia exceeds considerably the oxygen, no nitric acid is formed ; it' the proportion of oxygen is that which is just necessary to saturate the hydrogen, nitrogen remains : but if the proportion be even lower than tins, still the whole of the ammonia is decomposed; part of its hydrogen combines with the oxygen, and the remaining hydrogen, •with the nitrogen, form a mixture which, on the addition of a fresh quantity of oxygen, may be inflamed by the electric spark. No mixture of ammonia, in any proportion, with atmospheric air can be inflaun d by the electric spark; but the mixture of it \ith oxygen, even when diluted •with six times its bulk of atmospheric air, burns. Ammonia introduced from a small aperture in a

ube into oxygen e-;i> sutlers slow combustion, burning uitii a pah; yellow flame. Nitrous oxide, and mine oxide uasos form mixtures with I'.T.iiionui \luch aie capable of being inflamed.

Alurnii/.

Although, as wo have said, ammonia, when

pure, e\i>ts naturally in a Caseous condition, it

ir, ust iie c?(.) tunes the volume of the

material; and the usual state in which it is em-

ployed, as well in chemistry as in medicine, is in solution ; this solution in the London Phar- macopo3ia bears the name of liquor ammoniae, and may be obtained by passing the gas into water in a proper apparatus, or by distilling over the water and gas together.

Mr. R. Phillips, in his remarks on the Lon- don Pharmacopeia, recommends the following process for obtaining this liquid ammonia, which Mr. Brande, in his valuable work entitled A Manual of

Chemistry, quotes and approves. On nine ounces of well-burned lime pour half a pint of water ; and, when it has remained in a well-closed vessel for about an hour, add twelve ounces of muriate of ammonia in powder, and three pints and a half of boiling water; when the mixture has cooled, pour off the clear portion, and distil, from a retort, twenty fluid ounces. The specific gravity of this solution, which is sufficiently strong for most purposes, is 0.954. It should be preserved in well-stopped glass bottles, since it loses ammonia when exposed to the air, and absorbs carbonic acid.

The first clue to the discovery of the proper- ties by which ammonia is characterised, was given by Dr. Priestley. He first produced an alkaline air by a mixture of lime and sal ammo- niac, which was absorbed by water, forming ‘ volatile spirit of sal ammoniac, much stronger than that produced by other means ;’ he observ- ed, also, that on taking the electric spark or ex- plosion in this air over quicksilver, its volume is enlarged, until it occupies three times its original space ; and that its properties also, as well as its volume, are changed, no longer being ab- sorbed by water, and becoming moreover inflam- mable. Dr. Priestley afterwards found, that by heating certain metallic oxides in this air, they were reduced to the metallic state, water being developed, and the residual air being apparently nitrogen gas.

The theory (says Murray) of these experi- ments, is now sufficiently evident. By the action of the electric spark, or of a red heat, the gas is resolved into its constituent elements, hydrogen and nitrogen ; hence the enlargement of volume and change of properties. The reduction of the metallic oxides is owing to the oxygen of the oxide combining with the hydrogen of the am- monia, and forming a small portion of water, the metal of course appearing in its metallic state ; while the nitrogen, the other component principle of the alkali, being freed from its state of combination, assumes the gaseous form.

After the splendid discoveries respecting the composition of alkalies (see ALKALI), it was con- ceived that ammonia would prove to contain oxygen ; but hitherto experiment has failed in showing this to be the case, although weight has been supposed due to the inference from ana- logy : and on this supposition, says a modern chemist, it must be inferred that either hydrogen or nitrogen must be a compound, and contain oxygen as a constituent element. Assuming, likewise, from analogy the metallic base of am- monia, and proceeding on the principle of Richter, that all metallic bases saturating the same quantity of an acid must contain the same portion of oxygen combined with them; the

proportion of oxygen in ammonia must be 47 in W)0 parts, according to Berzelius, who con- siders the nitrogen as the furnisher of it. Berzelius adds some other arguments of an analogi- cal nature to strengthen the inference of oxygen being contained in ammonia; which has also been supposed, from analogy with the other alkalies, to have a metallic base ; but we want experi- ments from which to predicate either that oxygen is a constituent of this substance, or that it con- tains metallic matter ; although the ammoniacal hydrurets of mercury and potassium, obtained by subjecting quicksilver and potassium mixed with liquid ammonia to voltaic agency, present results which are exceedingly interesting in re- ference to the analogy between ammonia and other alkalies.

In the article chemistry, and in alphabetical order, we shall treat of the several substances which enter into combination with ammonia to form distinct compounds ; but we deem it ex- pedient to attach to this paper a particular account of sal ammoniac, on account of this substance being the material from which ammo- nia may be more directly produced, because this substance is used in the arts for a variety of purposes, especially in certain metallurgic ope- rations, and because it constitutes an extensive manufacture. We cannot better accomplish this purpose (which falls indeed into our alphabetical arrangement), than by extracting, verbatim, the account given by Dr. Ure of this material in the Dictionary of Chemistry lately published by that highly meritorious author.

AMMONIAC SAL (SAL AMMONIAC), MU- RIATE OF AMMONIA. This salt was originally fabricated in Egypt. The dung of camels and other animals constitutes the chief fuel used in that country. The soot is carefully collected ; globular glass vessels, about a foot in diameter, are filled within a few inches of their mouth with it, and are then arranged in an oblong furnace, where they are exposed to a heat gradually in- creased. The upper part of the glass balloon stands out of the furnace, and is kept relatively cool by the air. On the third day the operation is completed, at which time they plunge an iron rod occasionally into the mouths of the globes to prevent them from closing up, and thus endanger the bursting of the glass. The fire is allowed to go out; and, on breaking the cooled globes, their upper part is found to be lined with sal ammoniac in hemispherical lumps about two inches and a half thick, of a grayish white co- lour, semi-transparent, and possessed of a degree of elasticity ; twenty-six pounds

of soot yield six of sal ammoniac. The ordinary mode of manufacturing sal ammoniac in Europe, is by combining with muriatic acid the ammonia re- sulting from the igneous decomposition of animal matters in close vessels. Cylinders of cast iron are charged with bones, horns, parings of hides, and other animal matters ; and being exposed to a full red heat, an immense quantity of an im- pure liquid carbonate of ammonia distils over. Mr. Minish contrived a cheap method of convert- ing this liquid into sal ammoniac : he digested it with pulverised gypsum, or simply made it per- colate through a stratum of bruised gypsum ;

whence resulted a liquid sulphate of ammonia, and an insoluble carbonate of lime. The liquid evaporated to dryness was mixed with muriate of soda, put into large glass balloons, and decom- posed by a subliming heat. Sal ammoniac was found above in its characteristic cake, with sul- phate of soda remaining below.

M. Leblanc, of St. Denis near Paris, in- vented another method of much ingenuity, which is described by a commission of French chemists in the 19th volume of the Annales de Chimie, and in the Journal de Physique, for the year 1794; he used tight brick-kilns instead of iron cylinders, for holding the materials to be decom- posed. Into one he put a mixture of common salt and oil of vitriol ; into another animal mat- ter. Heat extricated from the first muriatic acid gas, and from the second ammonia; which bodies being conducted by their respective flues into a third chamber lined with lead, and con- taining a stratum of water on its bottom, enter- ed into combination, and precipitated in solid sal ammoniac on the roof and sides, or liquid at the bottom.

In the 20th volume of the Annales a plan for employing bittern or muriate of magnesia to furnish the acid ingredient is described. An in- genious process on the same principles was some time ago commenced at Borrowstounness in Scotland, by Mr. Astley. He imbued in a stove-room, heated by brick flues, parings of skins, horns, and other animal matters, with the muriate of magnesia, or mother water of the sea salt works. The matters thus impregnated and dried, were subjected in a close kiln to a red heat, when the sal ammoniac vapour sublimed, and was conducted either in a solid form into an adjoining chamoer or chimney, or else into a stratum of water on its bottom. Muriate of magnesia at a red heat evolves muriatic acid gas ; an evolution probably aided in the present case by the affinity of ammonia.

From coal soot likewise a considerable , quantity of ammonia in the

state of carbonate and sulphate may be obtained, either by sub- limation or lixiviation with water. These ammoniacal products can afterwards be readily converted into the muriate as above describee!. M. Leblanc used a kettle or eolipile for project- ing steam into the leaden chamber to promote the combination. It is evident that the exact neutralization essential to sal ammoniac might not be hit at first in these operations ; but it could be afterwards effected by the separate ad- dition of a portion of alkaline or acid gas. As the mother waters of the Cheshire salt-works con- tain only 3£ per cent, of muriate of magnesia, they are not suitable like those of sea-salt works for the above manufacture. For the medicinal properties of sal ammoniac, see MATERIA ME- DICA and MEDICINE.

AMMONIAC, GUM. This is a gum resin which consists, according to Braconnot, of 70 resin, 18.4 gum, 4.4 glutinous matter, 6 water, and 1.2 loss, in 100. parts. It forms a milky solu tion with water ; is particularly soluble in alco- hol, and entirely so in a;ther, nitric acid, and alkalies. Specific gravity, 1.200. It is obtained from a plant of the group called Peucedaneee.

AMMO'NIAC,) «/i/ioe, sand : "A/i/wr, a

AMMONI'AC AL. } name of the Lybian Jupiter, in which country these substances are found. The name of a drug ; also of a salt called sal ammo- niac, to which the adjective exclusively applies.

Human blood calcined yields no fixed salt ; nor is it a sal ammoniac ; for that remains immutable after re- peated distillations •, and distillation destroys the am- maniacal quality of animal salts, and turns them alka- line ; so that it is a salt neither quite fixed, nor quite volatile, nor quite acid, nor quite alkaline, nor quite an*moniacal ; but soft and benign, approaching nearest to the nature of sal ammoniac. Arbuthnot.

AMMONITE, in natural history. See COR- NU AMMONIS.

AMMONITES, a people descended from Ammon the son of Lot. They destroyed the giants or princes called Zamzummims (Deut. ii. 17 — 21), and seized upon their country. God forbade Moses, and by him the children of Israel (ib. 19), to attack the Ammonites, because he did

not intend to give their land to the Hebrews. Before the Israelites entered Canaan, the Amorites had taken great part of the countries belonging to the Ammonites and Moabites. These Moses retook from the Amorites, and divided between the tribes of Gad and Reuben. The history of the Ammonites is scattered through the books of Judges, Samuel, Kings, &c.; and the prophet Ezekiel denounces their entire destruction. Nebuchadnezzar, in fulfilment of this threatening, made war against the people that dwelt upon the confines of Judea, A.M. 3420. Antiochus the Great took Rabboth, their capital, demolished the walls, and put a garrison in it, A.M. 380(5. During the persecu- tions of Antiochus Epiphanes, Josephus informs us that the Ammonites showed their hatred to the Jews, and exercised great cruelties against such of them as lived aoout their country; but Origen assures us that in his time their very name was extinct, and the i'e\ remnants of this people were known only under the general appellation of Arabians. Their limits to the west and north were the river Jabbok, whose course is no- where determined; tlionuh Josephus says that it runs between Rabboth-Ammon, or Philadelphia, and (ierasa, and tails into Jordan. They had also the river Arnon on the west, which divided them from the land of Giiead, or the tribe of Gad; on the- south ihey had the Ishmaelites, on' .he east ilie deserts of Aiabia, asd on the north the lulls of Giiead and Hashan.

AMMONJi S, surnamed Lithotomus, a cele- brated surgeon of Alexandria; so called from his inventing the operation of extracting the stone from the bladder.

AMMOMUS, surnamed Saceas, was born in Ah xandria, and flourished about the beginning of the third century. He was one of the most celebrated philosophers of his age ; and, adopting with alterations the Eclectic philosophy, laid ECLECTICS and }JLVVOMS.M. This learned man was born of Christian parents, and educated in their leiiˆion: the outward profession of which, it i— sai'1, lit- :uj»er deserted. As his genius was vast and comprehensive, so were his projects bold and singular ; tor he attempted a general coalition oi' all sects, whether philosophical or

religious, by framing a system of doctrines whicli he imagined calculated to unite them all, the Christians not excepted, in the most perfect har- mony. In pursuance of this design, he main- tained that the great principles of all philosophical and religious truth were to be found equally in all sects ; that they differed from each other only in their method of expressing them, and in some opinions of little or no importance ; and that, by a proper interpretation of their respective senti- ments, they might easily be united into one body. Accordingly,

all the Gentile religions, and even the Christian, were to be illustrated and explained by the principles of this universal philosophy ; the fables of the priests were to be removed from Paganism, and the comments and interpretations of the disciples of Jesus from Christianity. In conformity to this plan, he in- sisted that the religious systems of all nations should be restored to their original purity, and reduced to their primitive standard, viz. the ancient philosophy of the east, preserved uncor- rupted by Plato : and he affirmed that this pro- ject was agreeable to the intention of Jesus Christ, whom he acknowledged to be an excel- lent man, the friend of God ; whose sole view in descending upon earth was to set bounds to the reigning superstition, to remove the errors that had blended themselves with the religions of all nations, but not to abolish the ancient theology from which they were derived. He therefore adopted the doctrines which were received in Egypt concerning the universe and the Deity, considered as constituting one great whole ; con- cerning the eternity of the world, the nature of souls, the empire of Providence, and the govern- ment of the world by daemons. He also estab- lished a system of moral discipline, which allowed the people in general to live according to the laws of their country and the dictates of nature ; but required the wise to exalt their minds by con- templation, and to mortify the body, so that they might be capable of enjoying the presence and assistance of the daemons, and of ascending after death to the presence of the Supreme Parent. In order to reconcile the popular religions, and particularly the Christian, with this new system, he made the whole history of the heathen gods an allegory; maintaining that they were only celestial ministers, entitled to an inferior kind of worship. This plausible system, so flattering to the easy and indifferent in regard to religion, and so comprehensive and complying in its pro- gress, was the source of innumerable errors and corruptions in after times. At its first establish- ment it is said to have had the approbation of Athenagoras, Pantsenus, and Clemens the Alex- andrian, and of all who had the care ‘of the public school belonging to the Christians at Alexandria. It was afterwards adopted by Lon- gimis (the celebrated author of the treatise on the Sublime), Plotinus, Herennius, Origen, Porphyry, Jamblicus the disciple of Porphyry, Sopater, Edisius, Eustathius, Maximus of Ephesus, Priscus, Chrysanthius the master of Julian, Ju- lian the apostate, Hierocles, Proclus, and many others both pagans and Christians. Ammonius left nothing in writing behind him ; and imposed a law upon his disciples, it is said, not to divulge his doctrines among the multitude.

AMM

AMMONIUS, the grammarian, flourished at Alexandria at the end of the fourth century. A lexicon of Greek synonymes, printed at Venice in 1497, is attributed to him.

AMMONIUS (Levinus), a Carthusian monk in Flanders, was greatly esteemed by Erasmus and other eminent men for his learning and piety. He died at Ghent in 1556.

AMMOPHILA, in entomology, the sand- wasp; a genus of animals of the class insectae, order hymenoptera. Generic Character : snout inflected ; jaws forcipated ; antennae filiform ; eyes oval ; wings planed ; sting concealed in the abdomen. The species of this genus resemble the sphex in economy as well as in form.

AMMOSCHISTA, in natural history, a genus of stones of a laminated structure, which split only horizontally into flat plates. There are six species. They are coarse, harsh, and rough, of a very loose and porous texture ; are pretty heavy, and composed of a large obtuse-angular grit, surrounded and in part held together by an earthy spar. They effervesce violently with aquafortis, but do not easily strike fire with steel.

AM’MUNI’TION. Lat. munio. munitum, to fortify ; ap,vvn>, to look after. Chases a munition, things foi the fortresses ; military stores, or any hostile materials to be used in defence.

The colonel staid to put in the ammunition he brought with him, which was twelve barrels of pow der, &c. Clarendon.

As Jove’s loud thunderbolts were forg’d by heat,

The like our Cyclops on their anvils beat j

All the rich mines of learning ransack’d are,

To furnish ammunition for this war ;

Uncharitable zeal our reason whets,

And double edges on our passions sets.

Denham’s Progress of Learning.

My uncle Toby was sadly put to it for proper am- munition • I say proper ammunition, — because his great artillery would not bear

powder.

Sterne’s Tristram Shandy.

AMMUNITION, anns, utensils of war, gun- powder, imported Without licence from his majesty, are, by the laws of England, forfeited, and triple the value. And such licence obtained, except for furnishing his majesty’s public stores, is to be void, and the offender to incur a premu- nire, and be disabled to hold any office from the crown.

AMMUNITION BREAD, in military affairs, such as is contracted for by government, and served in camp, garrison, and barracks

AMMUNITION SHOES, stockings, shirts, stocks, &c., such of those articles as are served out to the private soldiers by government.

AMMUNITION WAGONS are generally four- wheel carriages with shafts ; the sides railed in with staves and raves, and lined with wicker- work, so as to carry bread and all sorts of tools. The ammunition cart is of a similar construction, drawn by two horses.

AMNA, in natural history and medicine, water of a whitish colour impregnated with lime, and found in limy places of England and elsewhere. The word is much used in this sense by Para- celsus, &c.

AMNESIA, in medicine, loss of memory; sometimes the consequence of febrile diseases, when it generally recedes as the patient gains

strength. As the consequence of old age it can hardly be expected to be cured.

AM’NESTY. ‘Afj-vnˆia ; a, privative particle, nvao{j.cu, to remember ; Fr. amnistie. Forgetful- ness ; abolition ; act of oblivion ; general pardon to rebels or deserters.

We learn from ancient history that Thrasybulus passed a general amnesty for all ; and first introduced that word, as well as practice, into Greece.

Hume’s Essays.

AMNION, AMNIOS, Lat. perhaps from dpvbc. The innermost membrane with which the foetus in the womb is immediately covered, and with which the rest of the secundines, the chorion, and alantois, are ejected after birth. It is whiter and thinner than the chorion. It also contains a nutritious humour, separated by glands for that purpose,

with which the foetus is preserved. It is outwardly clothed with the urinary mem- brane and the chorion, and has its vessels from the same origin as the chorion. See FCETUS.

AMNION, in botany, the liquor in the suc- culus colliquamenti, or vesicle of the seed, from which the cotyledons are formed.

AMNIOTIC FLUID or LIQUOR — Two species of amniotic liquor have been examined by the French chemists : that afforded by the human female, and that procured from the cow. The first is slightly saline to the taste, of a dilute white colour, though by filtration it becomes transpa- rent. It froths by agitation ; becomes semiopake when heated ; changes the colour of tincture of violets to green, and slightly reddens that of turn- sole. The acids clarify it ; alcohol throws down a light precipitate, infusion of gall-nut, a brown one very copiously, and nitrate of silver a white * one, insoluble in nitric acid. It appears, there- fore, to be composed of an albuminous matter, similar to that of the blood ; a muriatic salt, probably muriate of soda ; and a small quantity of free or carbonated alkali. Its specific gravity is 1 .005. The liquor obtained from the amnios of the cow is of a brownish red colour, an acid bitterish taste, a viscous consistence, and an odour much like that of vegetable extract. It reddens the tincture of turnsole, gives an abun- dant precipitate with muriate of barytes, and de- posits a large quantity of reddish matter by the action of alcohol. Its specific gravity is 1.028. On evaporation a thick scum rises to the sur- face, and after being reduced to a quarter of its bulk, a number of long, acid, needle-form crys- tals are produced as the liquor cools ; on con- tinuing the process, till the matter is brought to the consistence of honey, a fresh deposition of crystals takes place, which differ in form from the preceding, and are sulphate of soda. The extractive matter, on separation, has the appear- ance of a compact adhesive cement, of a reddish brown colour, and a peculiar indescribable fla- vour; and the crystal first obtained, exhibiting properties different from those of all the known acids, has received the denomination of the amniotic acid, an acid first discovered in the amniotic liquor of the cow ; it combines readily with the caustic alkalies, forming a very soluble salt, but will not decompose the carbonated alka- lies without the assistance of heat. It is sepa- rated from its alkaline combinations by the mi- neral acids, in form of a white crystalline pow-

der, and produces no change in the aqueous so- luti'on of die alkaline

earths. It is destroyed by heat, leaving behind a spongy coal. Annales de Chiniie, vol. xxxiii. p. 269.

AMNON, the eldest son of David king of Israel, by Ahinoam of Jezreel. His ungovern- able passion for his sister Tamar, and its conse- quences, are narrated in 2 Sam. xiii. These events happened about A.M. 2974 and 2976.

AMfEB-EtJM, in ancient poetry, a kind of poem representing a dispute between two per- sons, who are made to answer each other alter-

to the bodies of the Egyptians embalmed wiu it. The ancient amomum was certainly of various kinds ; but the Armenian was most es- teemed. It was a heater, drier, and astringent ; used as a narcotic to appease pain,cure poison- ous bites, inflammation of the eyes, &c.

AMON, a small river of Scotland, which di- vides the counties of Edinburgh and Linlithgow, and falls into the Frith of Forth at the village of Nether Cramond.

AMON, the son of Manasseh, the fourteenth king of Judah. His wicked and short reign of

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nately ; such as the third and seventh of Virgil's two years, with his murder by his own servants,

and the vengeance taken of them by the people, of A. D. 3308, are recorded in 2 Kings xxi. and 2 Chron. xxxiii.

eclogues.

AMOENBURG, a town and bailiwick Upper Hesse, Germany. The bailiwick compre- nends the town of Neustadt, and contains alto- gether 19 villages, and 9000 inhabitants.

AMOGLOSSUS, in ichthyology, a species of jemanj fish resembling the sole, and in some parts of msenjan England called the lantern. It is flat, very

slender, pellucid, and white; never exceeds three so ˆ to make part of the aggregate, inches in length ; and is extremely smooth to the in Our old writers.

AMONG’, adv. & prep. 1 According to Tooke AMONGST’. > the preterperfect of

jemonj, or among, amang, from to mix. Hence mixed, placed with other persons or things ; conjoined with others

Amonges

touch.

AMOK, or AYMACK. See AMUCK.

AMOL, or JIHON, a river of Tartary, in Bukharia.

AMOL, or AMU, a town of Asia, in Great Bukharia, seated on the river Amol, or Jihon, taken in 1392 by Tamerlane, and still a con- siderable place. It is distant 150 miles west of Samarcand, and 300 north of Herat.

AMOL, in Persia. See AMUL.

AMOMI, in commerce, Jamaica pepper.

AMOMUM, GINGER, a genus of the mono- gynia order, belonging to the monandria class of plants. The characters are: CAL. an obscure three-toothed perianthium above : COR. mono- petalous ; the tubus short; the limbus tripartite: STA.M. an oblong filament, with the anthera ad- joining : FIST, a roundish germen beneath; the stylus filiform; the stigma obtuse : PER. leathery, subovate, trigonous, trilocular, and three-valved : SEEDS numerous. Of this genus there are four species, si?.. 1. A. Cardamomum, or cardamom, a native of India, little known in this country except by its seeds, winch are used in medicine. 2. A. Grana Paradisi, likewise a native of the East Indies. 3. A /erumbet, or wild ginger; and 4. A. Xingiber, or common ginger, is a native of the east, and also of some parts of the West Indies ; where it urows naturally without culture. — The commentators on Pliny and Dioscorides differ about the ancient amomum; but most of them suppose it to be a fruit different from ours. Some suppose it to have been the rose of Jeri- cho. !•’. Camelli is positive he has discovered the real amomum of Dioscorides in the tugus, birao, or cfiropi, of the Philippine islands; the grains

He tok his suerd in hand, pe croyce let he falle, And medeled him in pe pres, among pebarono alle. R. Brunne, p. 18.

pis lord was deled a pre among pre sones y wys.

R. Gloucester, p. 23. I stonde as one amongest all Whiche am oute of hir grace fall.

Gotoer, Con. A. b. viii.

But it is not so among you, but whoever wole be

maad grettere schal be youre mynystre : and who ever

wole be the firste among you schal be servaunt of alle.

Wiclif. Mark. c. x.

BlL. Marry, my good lord, quoth he, your lord- ship shall ever find amongst an hundred Frenchmen, forty hot shots ; amongst an hundred Spaniards, threescore braggarts ; amongst an hundred Dutchmen, fourscore drunkards ; amongst an hundred Englishmen, fourscore and ten madmen ; and amongst an hundred

Welchmen

BlAN. What, my lord ?

BlL. Fourscore and nineteen gentlemen.

Martton's Malcontent, act iii. sc. 1.

AMONOOSUCK, UPPER and LOWEB, two

rivers of New Hampshire, North America, which have retained their Indian name. They rise in the White Hills, the former on the northern, and the latter on the western side. After a course of fifteen miles, the Upper Amonoosuck approaches the Amoriscoggin river within about three miles, across which there is a carrying place. It now runs south-west and west about eighteen miles into the Connecticut at Northumberland. The latter, sometimes called the great Amonoosuck, and remarkable for the virtues of its streams, also falls into the Connecticut, after receiving from the Franconia and Lincoln mountains a consi- derable stream, about forty yards wide at its

or berries whereof are worn by the natives about junction with this river, called the Wild Amo- noosuck. This is about two miles from its mouth, which is just above the town of Haver hill, in Lower Coos, and is 100 yards wide.

AMONTONS (William), a French mechanic, born in Normandy in 1663, who, contracting a deafness that almost excluded him from

their necks, both on account of their agreeable odour, and of their supposed virtue in preser- ving from infection, curing the sting of the sco- iopcmlra, Sec. Phil. Trans. N°. 248. Scaliger is confident that the amomum of the ancients was not a fruit, but the wood itself, which bore

some resemblance to a bunch of grapes, and sation, applied himself closely to geometry and v,a- particularly used in embalming of bodies, the construction of mathematical instruments j. ˆ hence, says he, the term MUMMY was given He invented a hygroscope, and contrived a sort

of telegraph: besides which he wrote Remarques e{ Experiences Physiques sur la Construc- tion d'une Nouvelle Clepsydre, sur les Barome- tres, Thermometres, et Hygrometres ; and several contributions to the Journal des Sfavans. He died in 1705.

AMOR/EANS, from -IOK, dixit, he hath said, a sect of gemaric doctors, or commentators on the Jerusalem Talmud. The Amoraeans succeeded the Mischnic doctors. They subsisted 250 years; and were succeeded by the Seburaeans.

AMORISACH, or AMERBACH, a town of Ger- many, with 1500 inhabitants, a castle and upper fcailiwick, in the Odenwald ; twenty miles north- east of Heidelberg, near the Benedictine abbey of the same name, and at the conflux of the small rivers Mudt and Bilbach. The bailiwick con- tains, besides the town, seventy 'villages and 18,000 inhabitants, on an extent of 200 square miles. It has considerable forests, and yields about £5200 of yearly revenue. The abbey was very rich, its total income being little below £14,000 a- year. In 1802 the town and bailiwick were granted in indemnity to the Prince of Lei- ningen; from him they went to Baden, and from Baden to the grand duke of Hesse.

AMORE, in ichthyology, a genus of fishes of which there are three species, all fit for eating, but the pixuma is esteemed the best : viz. 1 . A. guaca of an oblong figure, and about six inches in length. Its head is thick, gills large, and teeth small. 2. A. pixuma has a broad head

and large mouth, but no teeth. 3. A. tinga, like the guaca, but much smaller, and covered with whitish scales spotted with brown spots. All the three species are found on the coast of America, particularly that of Brasil.

AMORETTE',") Fr. amour, love. This entire

AM'ORIST, class of words has a reference

AM'OROUS, [ˆ more or less to intrigue, gal-

AM'OROUSLY, j lantry, or excessive fondness.

AM'OROIJSNESS, Amorous and its derivatives

AMOUR'. j also signify easily inspiring,

or inspired with love.

Of armes he was desyrous, Chiualrous and amorous. And for the fame of worldes speche, Strange auentures wolde he seche.

duiriT, Con. A. b. i. For also well woll loue be sette, Under ragges as riche rotchette ; And eke as well by amorettes,

ˆ In mourning black, as bright burnettes

Chaucer's Romaunt of the Rose, f. 138. c. lii.

For whosoever esteemeth too much of amorous affection, quitteth both riches and wisdom.

Lord Bacon's Essays.

MEL. And will she not return ? then may the sun Stable her horses ever, and no day Gild the black air with light ! If in mine eye She be not placed, what object can delight it?

TAS. Excellent amorist. Here's to thee, melan- choly. Nabbet's Microcosmus. act. iii.

Luc. Are you so formal, Sir ? well, I must wait, And watch withal; for, but I be deceiv'd, Our fine musician groweth amorous.

Sha/apeare'e Taming of the Shrew, act. iii. sc. 1.

I shall range all old amorous dotards under the denomination of

grinners. Steele.

No man is of so general and diffusive a lust, as to prosecute his amours all the world over; and let it

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burn never so outrageously, yet the impure flame will either die of itself, or consume the body that harbours it. South.

When amorets no more can shine, And Stella owns she ‘s not divine, Then sense and merit shall supply, The blushing cheek, the sparkling eye.

Dr. J. Warton’s Poems. Chauntress of night, whose amorous song First heard the tufted groves among ; Warms wanton Mabba to begin Her revels on the circled green.

Dr. Warton’s Ode on the Nightingale. AMORGE, in natural history, aˆopyjj. 1. The fseces of expressed oil. 2. The purple dye made in the island of Amorgos.

AMORGINON, in antiquity, apopyivov, or, in the feminine Afiapyiva ; a vestment made of the amorgis or flax in the island of Amorgus.

AMO’RGIS, dˆopytc, was the flax, not unlike byssus, from which the d/topytva were made in the island of Amorgus.

AMORGOS, or AMURGUS, in ancient geo- graphy, now Morgo, not far from Naxus to the east, one of the European Sporades ; the country of Simonides the Iambic poet. To this island criminals were banished. It was famous for a fine flax called amorgis. AM’ORILY. Merrily.

The second lesson Robin Redbreast sang, Haile to the God and goddes of our lay j And to the lectorn amorily he sprang, Haile (qd.eke.) O fresh season of May.

Chaucer. The Court of Love, f. 355, c. iii. AMORIS, POMUM, in botany, the solanum lycopersicum of Linnaeus.

AMORISCO, in music, in a Moorish style ; an expression applied to old English ballads, meaning that the air is to resemble a Moorish dance.

AMORISCOGGIN, a river of Maine, in the United States, North America, which runs into the Kennebeck.

AMORITES, a people descended from Amo- rhaeus, according to the

Septuagint and Vulgate ; Emoraeus, according to other expositors ; Hae- mori, according to the Hebrew ; or Emor, ac- cording to our version of the Bible, who was the fourth son of Canaan, Gen. x. 16. They first peopled the mountains lying to the west of the Dead Sea, and had likewise establishments to the east of it, bftween the brooks of Jabbock and Ar- non, from whence they forced the Ammonites and Moabites. Numb. xiii. 30. xxi. 29. Josh. v. 1. and Judges xi. 19, 20 Moses made a conquest of this country from their kings Sihon and Og. A.M. 2553

AMORIUM, a town of Phrygia Major, near the river Sangarius, on the borders of Galatia. It was taken from the Romans by the Saracens in 668, but soon after retaken. A war breaking out again between these two nations, A.D. 837, the Roman emperor Theophilus, destroyed Sozopetrj the birth-place of the caliph Al Motasem, not' withstanding his earnest entreaties to spare it This so enraged the caliph, that he ordered all his men to engrave upon their shields the word Amorium, the birth-place of Theophilus, which he resolved at all events to destroy. Accoi dinghy he laid siege to the place, but met with a vigor*

ous resistance. At length it was betrayed by one of the inhabitants who had abjured the Christian religion. The caliph now put the men to the sword, carried the women and children into captivity, and levelled the city with the ground. His forces being distressed for want of water on their return home, the Christian pri- soners rose upon some of them, and murdered them ; upon which the caliph put 6000 of the prisoners to death. According to the eastern historians, 30,000 of the inhabitants of Amorium were slain, and as many carried into captivity.

AMOROSO, in music, denotes a slow and soft movement ; a tranquil and tender expression in the melody. The notes should be blended to- gether, and gently accented.

AMORPHA, false indigo, in botany, a genus of the decandria order, belonging to the diadel- phia class of plants ; and in the natural method ranking under the thirty-second order, papilio- naceae. The characters are : c A L. a single-leaved perianthium, tubular and

persistent : COR. an ovate, concave, erect petal, scarcely larger than, and placed on the upper side of the calyx : STAM. of ten erect equal filaments, longer than the co- rolla ; the antherse simple : PIST. a roundish germen ; the stylus subulated, and the length of the stamina; the stigma simple : PERI, a lunated unilocular legumen, reflected, larger than the calyx, and tuberculated : the seeds are two, and kidney-shaped. By the corolla alone this genus may be distinguished from all known plants. The petals are the banner, the wings and keel are wanting; which is very singular in a papi- lionaceous corolla. There is only one known species, a native of Carolina, where the inhabi- tants formerly made from it a coarse kind of in- digo, whence the plant took its name.

AMORT. ˆ Fr. amorti, participle?

AMOH'TIXE, or /(from amortir) : as though " AMORTISE, ˆ dead, depressed, spiritless.

AMOUTIXA'TION, i Amortir, to destroy, kill,

A M o u T i •/. E M F NT. j d eaden .

But for as rnorhe as the goode. werkes that men don while they ben in food lif, hen all amortized by •inno following, and eke with all the good werkes hat men don while they ben in dcdly sinne, ben utterly dcd, as for to have the lit' perdurable.

Chaucer. The Pcrsonnes Tale, vol. ii. p. 296.

My Lord of Bristow's re-entry into the court (who the !ast week carried the sword before the the king), lilleth us with new discourse as if he should be restored to the viee-chamberlainship vvich yet lyeth iiiniirttzi-d in your noble friend. Rflir/ulese Wottonianae.

Every one of the, religious orders was confirmed by one pope or other ; and they made an especial provision for them, after the laws of amortisation were devised and put in use by princes.

Aylijf's Parrrijon Juris Canonic!.

Tliis did concern the kingdom, to have farms suf- ficient to maintain an able body out of penury, and to nmirrtixc part of the lands unto the yeomanry, or middle part of the people. Bacon.

Now wheiv's the bastard's braves and Charles his -leeks?

What, all a-mort ? Roan hangs her head for grief, That such a valiant company are (led.

SJuikyjieare. Fir.it part of Henri/ VI. act iii. sc. 2.

I)IN. Do not dissemble I know vou arc hiuh and jovial. —

Nov. Jovial! doctor; No, I am all amort, as if I had fem Three days in my grave already.

Massinger's Par. of Love, act iv. sc. 5. Chaerea, when he came from Pamphila's house, and had not so good welcome as he did expect, was all amort. Burtons Anatomy of Melancholy.

AMORTIZATION, from amortir, Fr. to extin- guish, in law, the alienation of lands or tene- ments to a corporation or fraternity and their successors. See MORTMAIN.

AMOR'WE, 1 On the morrow. In the AMOR'NINGS. S morning.

bobe kynge's men nuste amorwe, wer he was bi come, Heo ferde as wodemen, and wende he were ynome.

R. Gloucetter, p. 159.

And amor ewe it was don that the pryncis of hem, and the eldere men, and scribis waren gaderid in ierusalim. • Wicklif. Dedis, chap. iv.

A-morwe whan the day began to spring, Up rose our hoste, and was our aller cok, And gaderd us togeder in a fiok.

Chaucer. The Prologue, vol. i. p. 34 GENT. On with it, Jacques, thou and I Will live so finely in the countrey, Jacques, And have such pleasant walks into the woods Amornings, and then bring home riding rods, And walking staves.

Beaumont and Fletcher. Nolle Gent, act ii. AMORY (Thomas), a dissenting minister of some eminence, and pastor of the Old Jewry meeting, was born at Taunton in 1701, and died in 1774. His works consist of sermons, A Dia- logue on Devotion ; Forms of Devotion for the Closet ; The Life of Mr. Henry Grove ; Me- moirs of Dr. Benson, and of Dr. Sam. Chandler. AMOS, D1JQN> Heb. i. e. burdening. The third of the twelve minor prophets, who in his youth had been a herdsman, and retired to Tekoa, his native place, where his principal predictions were delivered about B. C. 787. Bishop Lowth pronounces him nearly equal to the very first of the prophets in elevation of

sentiment and lofti- ness of spirit, and scarcely inferior to any in splendour of diction and beauty of composition. De Sac. Poesi, Heb. Proel. xx.

AMOTAPE, a town of Peru, in the corregimi- ento of Piura, on the coast of the South Sea, about a mile from a river of the same name. It is in the direct road to Piura, and there are some valuable mines of naphtha in the neighbourhood, that furnish a considerable trade. S. lat. 4° 50*. Long. 30° 42'.

AMOUALA, a sea-port on the north-east of Madagascar, opposite to the isle of Nosse. It is governed by a chief, who is subject to the queen of the Seclaves. The country produces a great quantity of wax and tortoise-shells j in the former of which it pays tribute.

AMOUNT, v. & n. Old Fr. amonter, (sup- posed to come from the Latin ad montem, to the mountain,) to arrive at an end, or point in an ascending course. To come to in the whole, or altogether.

And William wist of alle, what it suld amminte Of lordying and of thralle pe extente porgh acounte.

R. Brunne, p. 83. I not what ye fortune acoumpte, But what thinge danger maie amounts I wot wel : for I haue assaied.

Gotver, Con. A. b. vhi.

S.< up he rose, and thence amounted straight, Which when the carle beheld, and saw his guest Would safe depart, for all his subtile sleight ; He chose an halter from among the rest, And with it hung himselfe, unhid, unblest.

Spenser'i Faerie Queene, b. i. c. 1.

The errors of young men are the ruin of business ; but the errors of aged men amount but to this, that more might have been done, or sooner. Bacon.

Judgments that are made on the wrong side of the danger, amount to no more than an affectation of skill, •without either credit or effect.

L’Estrange.

Let us compute a little more particularly how much this will amount to, or how many oceans of water •would be necessary to compose this great ocean roll- ing in the air without bounds or banks.

Burnet’f Tlieory.

And now, ye lying vanities of life, Where are you now, and what is your amount ? Vexation, disappointment, and remorse. Thomson, I thought, I’ll swear, I could have loved no more

Than I had done before ; But you as easily might account, Till to the top of numbers you amount

As cast up my love’s score.

Cowley’s Poems. Increase.

AMOVE, •> jˆat amoveo to remove from a

AMOVAL, > t or station.

AMO TION, j ‘

Whan she had herd all this, she not ameved Neyther in word, in chere, ne countenance, (For as it semed, she was agreved) She sayde.

Chaucer. The Clerke’s Tale, vol. i. p. 339.

Therewith amoved from his sober mood,

‘ And lives he yet/ said he, ‘that wrought this act,

And doen the heavens afford him vital food.

• He lives,’ quoth he, ‘ and boasteth of the fact,

Ne yet hath any knight his courage craokt.’

Spenier’s Faerie Queene, b. ii. c. 1.

AMOVENDO CUSTODE. amoving a guardian. See CUSTODE.

AMOUSES, in chemistry, counterfeit gems.

AMOUSHE, RASEL, the Battal of Edrisi, a large cape formed by the mountains of the She- nooah, on that part of the sea-coast of Africa,

called the province of Tlemsan. At a small dis- tance is the Mers ‘el Amoushe, or port of Amoushe, which is safe in westerly winds. Vide Shaw’s Travels.

AMOY, EMOUY, or HIAMEM, an island in the province of Fokien, in the south-east of China, where the English formerly had a factory : it is about fifteen miles in circuit, and has a fort formed between the island and the main, which was resorted to formerly by Europeans, but abandoned when foreign commerce was restricted to Canton. Here there are several temples, par- ticularly one of great celebrity dedicated to the god Fo, whose statue of colossal size is con- tained in it. Long. 118° 22′ E., lat. 24° 30′ N.

AMPANA, a genus of plants in ihe Hortus Malabaricus, the BORASSUS of Linnaeus, which see.

AMPELION, in medicine, vine leaves, which are good for making pessaries. Hippocrat* de Nat. Mulieb.

AMPELIS, in botany, the vine. See VITIS.

AMPELIS, in ornithology, the chatterer, a genus of birds belonging to the order of passeres ; the distinguishing characters of which are, that

the tongue is furnished with a rim or margin all round, and the bill is conical and straight. There are seven species, all natives of foreign countries, except the garrulus, which is a native both of Europe and the West Indies.

AMPELIS is also the name of a species of magpie, called by some ornithologists garrulus bohemicus. See GARRULUS.

AMPELITES, CANAL COAL, or CANDLE- COAL, called also PHARMACITIS, a hard, opaque, fossile, inflammable substance, of a black co- lour; it does not effervesce with acids. The ampelites, though much inferior to jet in many respects, is yet a very beautiful fossil ; and, for a body of so compact a structure, remarkably light. Examined by the microscope it appears composed of innumerable very small and thin plates, laid closely and firmly on one another and full of small specks of a blacker and more shining matter than the rest, which is evidently a purer bitumen. There is a large quarry of it near Alenfon in France. It is dug in many parts of England, but the finest is in Lancashire and Cheshire : it lies usually at considerable depths. In the fire it flames violently at first, continues red and glowing hot a long time, and finally is reduced into a small portion of gray ashes. It is capable of a very high and elegant polish ; and, in the countries where

it is produced, is manufactured into toys, snufT-boxes, and the like, which bear all the nicety of turning, and are made to pass for jet. Husbandmen smear their vines with it, as it kills the vermin which infest them. It is likewise used for dyeing hair black. In medicine, it is reputed good in cholics, against worms, and as being in general an emollient and discutient.

AMPELODESMOS, in botany, from a/tirt\ojr, a vine, and Stffpbc, a band ; a kind of herb with which the vines in Sicily used to be tied.

AMPELOLEUCE, in botany; the name of a white sort of vine mentioned by Pliny. Nat. Hist. I. 23. c. 1.

AMPELOPRASUM, in botany, from apire- Xoc, a vine, and irpaaov, a leek ; a herb growing among vines, also called leek-vine, a species of the allium of Linnaeus.

AMPELUSIA, in ancient geography, a pro- montory of Mauritania Tingitana, now Cape Spartel. Long. 5° 56′ W., lat. 36° 0′ N.

AMPFING, a parochial village on the Iser, in Lower Bavaria, circle of the Iser, district of Muhldorf, near which Frederick of Austria was defeated in 1322, and taken prisoner. It is fif- teen miles south of Dingelfingen.

AMPHEMERINE ; from aˆl, about, and ripepa, a day ; in medicine, a daily distemper, such as a quotidian ague or fever that returns every day.

AMPHERES, or AMPHERICUM; from dˆi, on both sides ; in antiquity, a kind of vessels wherein the rowers plied two oars at the same time, one with the right-hand and another with the left.

AMPHIARAUS, m pagan mythology, call- ed the son of Apollo, a celebrated prophet, who possessed part of the kingdom of Argos. He was said to excel in divining by dreams, and to have been the first who divined by fire. Am-

phiaraus knowing, by tlie spirit of prophecy, that he should lose his life in the war against Thebes, nid himself in order to avoid engaging in that expedition; but his wife Eriphyle, being bribed by a present, discovered the place in which he had concealed himself; so that he

was obliged to accompany the other princes. This proved fatal to him : for the earth being split asunder by a thunderbolt; both he and his chariot were swal- lowed up in the opening. Amphiaraus, after his death, was ranked among the gods ; temples were dedicated to him ; and his oracle, as well as the sports instituted to his honour, were very famous. See EUIPHYLE.

AMPHIARTHROSIS; from aˆi, both, and apOpoxrtc, articulation ; in anatomy, a term for such junctures of bones as hav° an evident mo- tion, but different from the diarthrosis, &c. Of this kind is the articulation of the ribs with the vertebrae, and that of the carpus with the metacar- pus. See DIARTHROSIS.

AMPHIBALUM. See AMPHIMALLUM.

AMPHIBALUS, a monk, who is said to have converted the bishop protomartyr St. Alban, and to have suffered with him in the tenth persecu- tion under Dioclesian. A work entitled Ad Instituendam Vitam Christianam, and several homilies are attributed to him. Boeth. Hist. Scot. 1. 6. — See AI.BAN, ST.

AMPHIBIA, in zoology, the name of Lin- na?us's third class of animals ; including all those which live partly in water and partly on land. This class he subdivides into four orders, viz. 1. amphibia reptiles; 2. amphibia serpentes ; 3. amphibia nantes ; and 4. amphibia meantes. See /OOLOGY. In the last edition of the Systema Nat uni- , by Gmelin, the amphibia class consists of two orders, reptilia pedata, and serpentes apodes, which are distinguished by the reptiles being furnished with feet, and the serpents being destitute of them. The nantes pinnati, or breath- ing tishes, being placed in their natural order amongst the pisces, under the title chondro-])teryuii; that order thus includes the genera aeipenser, chimitra, squalus, raja, and petromy- 7.011 : the lopliius uenus is separated from the others, and arranged amongst the pisces bran- fhiostegi. The reptilia comprehend testudo, the tortoise:, covered with a shell ; draco, the dragon, having w'nvˆs and a tail ; rana, the frog or toad ; laeiTta, the crocodile, alligator, lizard, newt, sa- lamander, chameleon, eft, the siren, which is two-tooted, tailed, and naked. Serpentes com- prehend crotalus, the rattle-snake; boa, without a rattle ; coluber, the viper, having plates on the belly and seales on the tail ; anguis, the snake, having seales under the tail ; amphisbaena, having rings on the body; crecilia, having wrin- kles on the body and tail ; acrochordus, having tubercles. This is the arrangement of Gmelin, to which must be added the genus siren, a kind ot reptile, whose ambiguity of character induced l.mna'us to form the new order meantes. Linn. Aimm. Aead. vii. p. 31 1 .— et Syst. Nat.

vol. i. part li. Addend. (Imelin has consigned this creature to the first genus of fishes, muraena; and I)r. Shaw restores it to the siren genus in the appendix to his Zoology, vol. iii. p. 2. Amp. It itus been a question, whether the animals com-

monly called amphibious, live most in the waf«»r or on land. The terms aˆl, utrinque, both ways, and /3ioc, vita, life, from which the word amphibious is derived, should indicate that such animals are capable of living as well by land, or in the air, as by water; or of dwelling in either constantly at will : but it will be difficult to find any animal that answers this definition. Dr. Parsons therefore, in a paper inserted in the Transactions of the Royal Society, from consi dering their economy respectively, divides them into two classes, viz. 1. Such as enjoy their chief functions by land, but occasionally go into the water. 2. Such as chiefly inhabit the water, but occasionally go on shore. What he advances on this subject is curious, and deserves the at- tention of the reader. Of the first order, this writer particularly considers the phocae; and en- deavours to show, that none of them can live chiefly in the water, but that their principal en joyment of the functions of life is on shore. See PHOC.S. These animals, he observes, are really quadrupeds ; but as their chief food is fish, they are under the necessity of going out to sea to hunt their prey, and to great distances from shore ; taking care, however, that rocks or small islands are at hand, as resting places when they are tired, or when their bodies become too much macerated in the water : and they return to the places of their usual resort to sleep, copu- late and bring forth their young. It is well known, he adds, that the only essential difference, as to the general structure of the heart, between amphibious and land animals, or such as never go into the water is, that in the former the fora- men ovale remains always open. If such as are without this aperture were immersed in water but for a little time, respiration would cease, and the animal must die ; because a great part of the mass of blood passes from the heart by the pulmonary artery through the lungs, and by the pulmonary veins returns to the heart, while the aorta is carrying another part of the mass to the head and extremities, Sec. Now, while respiration is gentle and moderate, the blood passes through the lungs in a continual unin- terrupted stream ; but when it is violent, the circulation is interrupted, for inspiration and ex- piration are now carried to their extent ; and in this state the blood cannot pass through the lungs either during the total inspiration or total expi- ration of the air in breathing : in the former case, the inflation compresses the returning veins; and, in the latter, by the collapsion of the iungs, these veins are interrupted also ; so that it is only be- tween these two violent actions that the blood

can pass : and hence it is that the lives of ani- mals are shortened, and their health impaired, when they are subjected to frequent violent re- spiration. Thus it is also that when animals have once breathed, they must continue to respire ever after. There are three necessary and principsL uses of respiration : — the first is, that of promo- ting the circulation of the blood through the whole body and extremities. The force of the heart in fishes is alone capable of sending tha blood to every part, as they are not furnished with those limbs or remoter extremities, which have need of assistance in the circulation. Thus

we see, Aat in persons subject to asthmatic com- plaints, the circulation of the extremities is lan- guid, the legs become cold and cedematous, and other parts suffer by the defect in respiration. A second use of breathing is, that in inspiration, a variety of particles, of different qualities, which float always in the air, are drawn into the lungs, and insinuated into the mass of blood; being highly necessary to temperate and cool the agi- tated mass, and to contribute a refined pabulum, which, meeting with the daily supply of chyle, serves to render its constitution the fitter for supporting life. Therefore it is that valetudina- rians, by changing foul or unwholesome air far a purer and more open atmosphere, often recover from lingering diseases. A third prin- «ipal use of respiration is, to promote the exhi- bition of voice in animals. The economy of nature, therefore, in the phocse requires them to make the land their principal residence. But there is another reason also why they reside on shore the greatest part of their time ; namely, the flesh of these creatures is analogous to that of other land animals, and, by long maceration, added to the fatigue of their chasing their piey, •would suffer such a relaxation as would be fatal. It is well known, that animals which have long lain under water are reduced to a lax and even putrid state ; the phocae therefore enjoys the air on shore. While the solids are at rest, they ac- quire their former degree of tension, and the vigour of the animal is restored ; and while he has an un- interrupted placid respiration, his blood is re- freshed by the new supply of air, as explained above, and he is rendered fit for his next cruise. Let us now examine by what power these creatures are capable of remaining longer under water than land animals. All of them have the oval aperture open between the right and left auricles of the heart; and, in many, the canalis arteriosus also : and while the phoca remains under water, which he may continue to do an hour or two, his respiration is stopped ; and the blood, not finding the passage through the pul- monary artery free, rushes

through the arterial canal, being a short passage to die aorta, and thence to every part of the body, maintaining the circulation: but, upon rising to come ashore, the blood finds its passage again through the lungs the moment he respires. Thus the foetus in utero also during its confinement, having the lungs compressed, and consequently the pulmo- nary arteries and veins impervious, has the cir- culation of the blood carried on through the fo- ramen ovale and the arterial canal. So far then the phoca in the water, and the fetus in utero, are preserved by analogous provisions of nature; but they differ in other material circumstances. One is, that the foetus, having never respired, remains sufficiently nourished by the maternal blood circulating through it, and continues to grow till the time of birth, without any want of respiration ; but the phoca, having respired at the moment of its birth, cannot live long with- out it, for the reasons given before; and this aperture and canal would be closed in them, as it is in land animals, if the dam did not, soon after the birth of the cub, carry it very frequently into the water to keep them open. Another dif-

ference is, that the phocae, as was said before, would be relaxed by maceration in remaining too long in the water; whereas the foetus in utero suffers no injury from continuing its full time in the amniotic fluid, because while water is a powerful solvent, and penetrates the pores of the skin of land animals, the liquor amnii is an insipid soft fluid, impregnated with particles more or less mucilaginous, and utterly incapable of making the least alteration in the cutis of the foetus. It has been supposed on these grounds, that if the whelp of a true water-spaniel were, im- mediately after its birth, immersed in water, and respiration thus interrupted for a little time every day, that the dog might be made capable of re- maining as long under water as the phoca. On the other hand, frogs, how capable soever of re- maining in the water, yet cannot avoid living on land, for they, like the phocse, respire ; and if a frog be thrown into a river, he makes to the shore as fast as he can. The lizard kind, such as may be called water-lizards (see LACERTA), are all ob- liged to come to land, in order to deposit their eggs, to rest, and to sleep. Even crocodiles, who dwell much in rivers, sleep and lay their eggs on shore; and while in the water are compelled to rise to the surface to breathe ; yet, from the texture of their scaly covering, they are capable of remaining in the water longer by far than any species of the phoca, whose skin is ana- logous to that of a horse or cow. The hippopo- tamus (see HIPPOPOTAMUS), who wades into the lakes or rivers is a quadruped, and remains un- der the water a considerable time; yet his chief residence is upon land, and he must come on shore for respiration. The testudo, or sea-tortoise, (see TESTUDO,) though he goes out to sea

and is often found far from land, yet, being a respiring animal, cannot also remain long under water. He has indeed a power of rendering himself spe- cifically heavier or lighter than water, and can therefore let himself down to avoid an enemy or a storm ; yet he is under a necessity of rising frequently to breathe, for reasons given before ; and his most usual situation, while at sea, is upon the surface, feeding upon various floating substances. These animals sleep securely upon the surface, but not under water; and can re- main longer at sea than any other of this class, except the crocodile, because, as it is with the latter, his covering is not in danger of being too much macerated; yet they must go on shore to copulate and lay their eggs. Such are the inte- resting peculiarities noticed by this writer in the first order of the class of amphibious animals.

The second order of amphibia, according to Dr. Parsons' division of them, comprehends such as chiefly inhabit the waters, but occasionally go on shore. These are but of two kinds : the eels and the water-serpents or snakes of all descrip- tions. It is their form that qualifies them for loco- motion on land, and they know their way back to the water at will, having by their structure a strong peristaltic motion, by which they can ra- pidly go forward; whereas all other kinds of fish, whether vertical or horizontal, are incapable of a voluntary loco-motion on shore. Let us now examine into the reason why these vermicu- lar fish, as they may be called, or eels and ser-

pcnts, can live a considerable time on land, and the vertical and horizontal kinds die almost im- mediately when taken out of the water. All land animals have lungs, and can live no longer than while these are inflated by the ambient air, and alternately compressed for its expulsion ; that is, while respiration is duly carried on, by a regular inspiration and expiration of atmo- spheric air. In like manner, fish in general have, instead of lungs, gills or branchiae : and, as in ,and animals, the lungs have a large portion of the mass of blood circulating through them, which must be stopped if the air has not a free ingress and egress into and from them ; so in fish there is a great number of blood-vessels that pass through the branchia>, and a great cir- culation of blood through them, which must in like manner be totally stopped, if the branchiae are not perpetually wet with water. The air then is to the lungs of land animals a constant assistant in

circulation ; so is the water to the branchiae of those of the rivers and seas : for when these are out of the water, the branchiae grow crisp and dry, the blood-vtssels are shrunk, and the blood is obstructed in its passage: as when the former are immersed in water, or otherwise prevented from respiration, the circu- lation ceases, and the animal dies. Again, as land animals would be destroyed by too much maceration in water, so fishes would, on the other hand, be ruined by too much exsiccation on land ; the latter being, from their general structure and constitution, made fit to bear and live in the water ; the former, by their constitu- tion and form, to breathe and dwell in the air. It" it be asked why eels and water-snakes are ca- pable of living longer in the air than the other kinds of fish ; it is answered, that without this their loco-motion would be useless as many of them iind food on land. Their branchiae also are well covered from the external drying air; while a slimy mucus hinders their skin from be- coming crˆp and dry for many hours. If any fish, when brought out of the water, have their gills and the surface of their skin kept constantly wet, they may lie preserved alive a considerable time, even without any water to swim in.

On the principles advanced in the former part ot this article, it has been conjectured that man might, by art, be ivndered amphibious. The lu'tus lives in utero without air, and the circula- tion is there continued by means of the foramen ovule; preserve this passage open, it has been said, after lurt.h, and the same faculty would con- tinue: accustomed to hold the breath a consider- able tune every day. the blood might be forced to resume its pristine passage. This conjecture seems in some measure supported by the prac- tiee of divers, who are taught from childhood to hold their breath, and keep long under water. A (alahnan monk ut Madrid formerly laid claim to this amphibious qualiiv, and ottered to the king of Spain to continue twice twenty-four hours under water, without ever coming up to take luvath. lurcher gives an account of a Si-

the manner of a fish than a man. The pearl- fishers also arrive at a high degree of perfection in this art.

AMPIII'BIOUS, dnl, a. Greek preposition of extensive application, signifying, in its pre- sent relation, about, on each side, doubtful ; and /Sice, life. An epithet usually confined to that class of animals which pass their lives partly on land, and partly in water.

Traulus of amphibious breed, Motley fruit of mungrel seed ; By the dam from lordlings sprung, By the sire exhaled from dung. Swift

Fishes contain much oil, and amphibiotu animals participate somewhat of the nature of ashes, and are oily. Arbuthnut.

Would you preserve a numerous finny race,

Let your fierce dogs the ravenous otter chase ;

Th' amphibious monster ranges all the shores,

Darts through the waves, and every haunt explores j

Or let the gin his roving steps betray,

And save from hostile jaws the scaly prey.

Gay's Rural Sports, cant. i.

AMPHIBLESTROIDES; from fy0i/3Aif- '•rpov, a net, and dSoc, the form : the retina, or net-like coat of the eye.

AMPHIBIOLITHUS, a genus of petrifac- tions in the Linnaean system, so called from its being the part of an amphibious animal petrified. The species most common are, 1. testudo, the tortoise; 2. rana, the toad; 3. crocodilus the crocodile, which last have been found both in England and France.

AMPHIBOLITES, in geology, trap rocks, the basis of which is amphibole or hornblende.

AMPHIBO'LOGY,-\ 'A/t0'i, about; /3oXXw,

AMPHIBOLO'GICAL, f^to cast; and \oyoc,

AMPHI'BOLY, {speech. A phrase or

AMPHIBOLOUS. J sentence that will bear two meanings, distinguished from equivocation which refers to single words only.

He hath nat wel the goddes vnderstoude, For goddes speke in amphibologies. And for o sothe they tellen twentie lies.

Chaucer. Troilus and Creseide, b. iv. f. 183. c. iii.

Now the fallacies whereby men deceive others and are deceived themselves, the ancients have divided into verbal and real ; of the verbal, and such as conclude from mistakes of the word, there are but two worthy of our notation ; the fallacy of equivocation and

amphibology.

Brown’s Vulgar Errours.

Never was there such an amphibolous quarrel, both parties declaring themselves for ye king.

Howell.

AMPHIBOLOGY; from «ˆ0t/3o\oc, ambiguous, and Xoyoc, discourse; in grammar and rhe- toric a term used to denote a phrase susceptible of different interpretations. Amphibology arises from the order of the phrase, rather than from tha ambiguous meaning of a word. Of this kind was that answer which Pyrrhus received from the oracle : ‘ Aio te, j*Eacida, Romanes vincere posse;’ where the words ‘ te’ and ‘ Romanos,’ may either of them precede, or either of them follow, the words ‘ posse vincere,’ indifferently ; and therefore the response of the oracle could bear to be translated, either that ‘ Pyrrhus should conquer the Romans,’ or that ‘ the Ro- mans should conquer Pyrrhus.’ As the English language usually runs in the natural order, it is

not easily capable of amphibology, as the French and most other modern tongues.

AMPHIBRACHYS; from aˆt, both, and /3paxt’C> short ; in ancient poetry, the name of a foot consisting of three syllables, whereof that in the muddle is long, and the other two short ; such is the word amare*.

AMPHIBRANCHIA, in anatomy, parts about the tonsils, or kernels in the jaws, which serve to moisten the throat.

AMPHICAUSTIS, in botany, a sort of wild barley.

AMPHICEDA, in entomology, a species of tne papilio. Its principal characters are that it is brown, with its wings indented above, with a connected disk of cinereous waved with brown, beneath the tips are gray with black lunated marks. Above, the base and margins entirely brown ; cinereous in the middle, with two undu- lated waves, the first brown, the second black. Beneath, it is pale at the base with rufous spots, and undulated lines, and its apex is gray with a row of lunated

black marks.

AMPHICOME ; auˆ/Ko/u;, Gr. i. e. hairy on both sides ; in natural history a kind of rugged figured stone, celebrated for its use in divination. It is also called Erotylos, ‘EpwruXoc, Amatoria, and is mentioned by Democritus and Pliny. Mercator considers it the same with the lapis lumbricatus, of which he gives a figure.

AMPHICTYON, the son of Deucalion, or as others say, of Helenus, the supposed institutorof the council of the Amphicty ons. See next article.

AMPHICTYONS, in Grecian antiquity, an assembly composed of deputies from the different states of Greece ; and resembling, in some mea- sure, the diet of the German empire, or the late states general of the United Provinces. Some suppose the word ‘Anfyucriovte to be formed of a/*0i, about, and KTUIV or KTI&IV, to dwell, be- cause the inhabitants of the country round about met here in council ; others, from Amphictyon, son of Deucalion, whom they suppose to have been the founder of this assembly ; others again will have Acrisius, king of the Argives, to hare been the first who gave a form and laws to it. — Authors give different accounts of the number of the Amphictyons, as well as of the states who were entitled to have their representatives in this council. According to Strabo, Harpocration, and Suidas, they were twelve from their first institution, sent by the following cities and states; the lonians, Dorians, Perrhaebians, Boeotians, Magnesians, Achaeans, Phthians, Melians, Do- lopians, jEnianians, Delphians, and Phocians. .ZEschines reckons no more than eleven ; instead of the Achseans, jEnianians, Delphians, andDo- lopians, he only gave the Thessalians, Oetians, and Locrians. Lastly, Pausanias’s list contains only ten, viz. the lonians, Dolopians, Thessa- lians, JEnianians, Magnesians, Melians, Phthians, Dorians, Phocians and Locrians. In the time of Philip of Macedon, the Phocians were excluded the alliance for having plundered the Delphian temple, and the Lacedaemonians were admitted in their place ; but the Phocians, sixty years after, having behaved gallantly against Brennus and his Gauls, were restored to their seat in the Amphicty onic council. Under Augustus, the

city of Nicopolis was admitted into the body and to make room for it, the Magnesians, Me- lians, Phthians, and TEnianians, who till then had distinct voices, were ordered to be num- bered with the Thessalians, and to have only one common representative. Strabo speaks as r? this council were extinct in the times of Augus- tus and Tiberius : but Pausanias, who lived many years after, under Antoninus Pius, assures us it remained entire in his time, and that the number of Amphictyons was then thirty. The members were of two kinds. Each

city sent two deputies, under different denominations ; one called upopvrinwv, hieromnemon, whose busi- ness seems to have been more immediately to in- spect what related to sacrifices and the ceremonies of religion ; the other 7rv\ayop.ac, pylagoras, charged with hearing and deciding of causes and differences between private persons. Both had an equal right to deliberate and vote in all that related to the common interests of Greece. The hieromnemon was elected by lot ; the pylagoras by plurality of voices. Though the Amphi- ctyons were first instituted at Thermopylae, M . de Valois maintains that their first place of meet- ing was at Delphi; where, for some ages, the tranquillity of the times found them no other em- ployment than that of being gua-dians of the temple of Apollo. In after-times the approach of armies frequently drove them to Thermopylae, where they took their station, to be near at hand to oppose the enemy's progress, and to order timely succour to the cities in danger. Their ordinary residence however was at Delphi. Here they decided all public differences and dis- putes between any of the cities of Greece ; and before they entered on business, jointly sacrificed an ox cut into small pieces, as a symbol of their union. Their final deteiminations were received with the greatest veneration by all their consti- tuents. At their admission the Amphictyons took a solemn oath never to divest any city of their right of deputation ; never to avert its run- ning waters ; and to make war against them if any attempts of this kind were made by others : more particularly, in case of any attempt to rob the temple of any of its ornaments, that they would employ hands, feet, tongue, and their whole powers, to revenge it. This oath was enforced by terrible imprecations against such as should violate it : e. g. may they meet the ven- geance of Apollo, of Diana, and of Minerva; may their soil produce no fruit, their wives pro- duce monsters, their adversary prevail in every law suit ; may they be conquered in war, their houses be demolished, and themselves and their children delivered to the ravages of the sword. The form of this oath was, according to jEschines, settled by Solon. The stated times of their meet ing was in spring and autumn ; the former being called iapnn} irvXaia, earine pylaia, and the latter /wrwTrwpivj), metoporine. On extraordi- nary occasions, however, they met at any time of the year or even continued sitting all the year round. Philip of Macedon usurped the right of presiding in the assembly of the Amphictyons.. and of first consulting the oracle, which was called irpopavrtia, promanteia. The Romans never suppressed their meetings.

AMPHID/EUM, v, Gr. in anatomy, .fie orifice of the womb.

AMPHIDIARTIIKOSIS, in anatomy, an articulation of the lower jaw, partly by a gin- glymus, and partly by an arthrodia.

AMPIIIDROMIA ; from aptf, and (Spojtoe, i. e. a double course ; a feast celebrated by the an- cients on the fifth day after the birth of a child, when it was carried round the fire and presented to the household gods.

AMPIIIDRYON, in ancient churches, a cur- tain or veil drawn usually before the BEMA, which see.

AMPHIJENE, in mineralogy, a species of garnet.

AMPHILA, BAY OF, a bay in the Red Sea, on the eastern coast of Abyssinia, extending six- teen miles along the shore, and nearly twelve miles in depth. It contains thirteen small islands, composed of marine alluvies, strongly cemented together, and formed into a solid mass, resem- bling rock, covered in a few places only with a thin layer of soil. They have no inhabitants, but contain camels, goats, kids, and other ani- mals, and are sometimes visited by fishermen. The shores to windward are steep, and often difficult of approach ; those to leeward contain groves of rack trees, and are easy of access.

AMPIIILOCIII, the people of Amphilochia. See next article.

AMPIII r.OCHIA, or AMPHILOCHIUM, in an- •nent geography : 1 . The territory of the city of Argos, Amphilochium inAcarnania; called Am- philochi, from the people, in the lower age. 2. A town of Spain, in Gallicia, built by Teucer, and denominated from Amphilochus, one of his companions: now called Orense.

AMPllIUH.‘IIirS, bishop of Iconium, in the fourth century, the intimate friend of St. Gregory Nazianzen and St. Basil. lie assisted at the. first ‘.reneral council of Constantinople in 3151, and presided at the council of Sidae. Being desirous of suppressing Arian assemblies, and finding the emperor Theodosius unwilling to (.omply with his wisher., lie adopted the follow- ing expedient : Whilst, in the palace with other bishops, who wen- paying their respects to Theo- dosius, he took no notice of his son Arcadius, who had lately been declared Augustus. When the emperor reminded him of this seeming dis- respect, Amplnlochius said, that he had paid re .spirt to him, and that was sufficient. The emperor was displeased, and said, that a slight put upon his son was an indignity to himself. * > on are ai>‘_:Ty/ replied Amphilochius, ‘with those who slight i/in/r son, and cannot endure it; persuade youiselt’ tlu-n, thai (lie God of the whole world is oH’emled

with those who blaspheme his only-lii'irtiiit-n Sou, and hales them as ungrateful to then. Sa\ lour aii'l Benefactor.' This produced the wi>hcd-tbr effect : and Theodosius soonafter- .sanl<, A. I). I!:'.."), forbade the assemblies of he- n-tics. He died A. 1). ;;'.>4 ; and his works were published in (.reek and Latin at Paris, in 1664, by I ranci< ('nmbcM-i.

"A M 1 M 1 1 I .(K ' 1 11 S. son of Amphiarnusand Eri- ph\ !'•, was a celebrated diviner. An altar was eie, ;c,| to luin ,it Atheii>, and an oracle at Mal- "u> in Cilin.i, \liii ii city w.is founded by him

AMP

in conjunction with Mopsus. The answers of this oracle were given by dreams; the party en- quiring passing a night in the temple, and that night's dream was the answer !

AMPHIMACER; from dˆl, both, and >«- rpoc, long, in ancient poetry, a foot consisting of three syllables, whereof the first and last are long, and the middle one short, such as the word Omnium.

AMPHIMALLUM ; irom api and /*a\Aoc, a fleece of wool; among ecclesiastical writers a covering or garment worn by the priests ; but according to Magri, peculiar to the bishops. It was also called Amphibalum and Amphibolum.

AMPHIMASCHALI ; apfifidffxaXof, in an- tiquity, a name given to coats with two sleeves, worn by none but freemen; and distinguished from the trtpo/iffaxaXot, or coats with one sleeve only ; the peculiar dress of slaves.

AMPHIMERINA FEBRIS, in medicine, a ter- tian remittent fever.

AMPHIMONE, in entomology, a species of phalaena, of the bombyx family. The wings are entire, of a pale ash colour, with two black streaks, and a fulvous dot in the middle of the anterior pair. It inhabits Terra del Fuego. The antennae are greatly pectinated, body hairy, two yellowish lines on the thorax, abdomen with black belts, a single straight streak on the posterior wings beneath.

AMPHINOME, in entomology, a species of papilio, with indented wings, above black, clouded with numerous blue marks : an oblique white bar across the anterior wings ; beneath, the lower wings radiated with red. It is a native of South America.

AMPHINOMUS, and his brother Arapius, called by ./Elian $i\ovo/ioc

and KaXAtae, were surnamed Pii Fratres, because they carried their father and mother on their shoulders through the flames which arose from an eruption of ./Etna. ‘ They received divine honours after their death.

AMPHION, in mythology, the son of Ju- piter and Antiope ; who, according to the poets, made the rocks follow his music ; and, at his harp, the stones of Thebes danced into walls and formed a regular city.

Saxa Cythaeronis Thebas agitata per artem Sponte sua in muri membra coisse ferunt. — Propert. 1. 3. eleg. 2.

AMPHION, in entomology, a species of hespe- ria, with wings entire, blue, and margins black : beneath cinereous, with black ocellated spots ; posterior wings, with red lunated marks, black points, and golden characters. It is a native of Germany.

AMPHIPHOREUS ; from dˆl and 0spw, to carry; in antiquity, a vessel with two handles. See AMPHORA.

AMPHIPLEX, in anatomy, die part between the seratum and the anus.

AMPHIPNEUMA, in medicine, the Dis- pnoea.

AMPHIPOLES ; from dˆl, and TroXte, a city; in antiquity, the principal magistrates of Syra- cuse, who were established by Timoleon in the 109th Olympiad, after the expulsion of the tyrant Dionysius. They governed Syracuse for above 300 years ; and Diodorus Siculus informs us that they existed in his time.

AMPHIPOLIS, a city of Macedonia, an Athenian colony, on the Strymon, but on which side of the river is not certain : Pliny places it in Macedonia, and Scylax in Thrace. The name of the town Amphipolis, however, seems to reconcile the difference ; Thucydides observes, it was washed on both sides by the Strymon, which dividing itself into two streams, the city stood in the middle, and on the side towards the sea there was a wall built from channel to chan- nel. It was considered to belong to the Athe- nians ; and Philip of Macedon, when he had taken it, promised to restore it to them, though he afterwards obtained possession of it by treaty. Its ancient name was ‘Evvka bdol, the Nine \Vays. It was afterwards called Christipolis ;

now Chri- sopoli, orChisopoli.

AMPHIPOLIS, a town of Syria, on the Eu- phrates, built or renewed by Seleucus, and called by the Syrians Turmeda, and the same with Thapsacus.

AMPHIPPI; from apipi, and tWoc, a horse, in Grecian antiquity, soldiers who, in war, used two horses, without saddles, and were dexterous enough to leap from one to the other. Horn. Od. xv. v. 684.

AMPHIPROR7E; from ap$l, and Trjxipa, a prow ; in the naval affairs of the ancients, vessels with a prow at each end, used chiefly in rapid rivers and narrow channels, where it was not easy to tack about.

AMPIIIPROSTYLE; fromdˆi, about, -n-po, before ; and

AMPHISBJENA AQUATICA, in entomology, a name given by Bertrutius, Albertus, &c. to the seta aquatica, and vermis setarius. It derives its name amphisbama, from its going backwards or forwards with equal ease and celerity. The usual size is four or five inches long, and the thickness of a large hair. It seems to be bred in the common black beetle.

AMPIIISUˆXA from; d/t

AMPI1ISCII, Lat. d/40i

AMPHISMELA, or AMPHISMILA ; from aptyl, on both sides, and

AMPHISSA, in ancient geography, the capi- ta’ of thp I.ocri Oxola, 120 stadia, or 15 miles,

to the west of Delphi ; so called, because sur- rounded on both sides by mountains. On the summit of a hill near the town was a temple dedicated to Minerva, with her statue in bronze. Amphissa was taken and destroyed by the Pho- cians in the holy war. — Also a town of Magna Grsecia, at the mouth of the Sagra, on the coast of the Farther Calabria, situated between Locris and Caulona; now called Rocelia.

AMPHISSALI, or AMPHJSSII, the inhabitants of Amphissa, who plundered the temple of Delphos.

AMPHITANE, among ancient naturalists, 3 stone said to attract gold as loadstone does iron. According to Pliny it was found in that part of the Indies where native gold lay so near the sur- face of the earth as to be turned up in masses. His description plainly points out the well-known

fossil, called, by Dr. Hill, pericubium, and by others tincal.

AMPHITAP.E, in antiquity, a kind of car- pets, or clothing, having a soft warm nap on each side, on which persons slept.

AMPHITHALAMUS, in antiquity ; from dˆl and 0dAayuoc, the marriage-bed ; the maid-servant's room on both sides that of her mistress.

AMPHITHEATRE ; from d/ˆ.0larpoj> ; dˆl, around, and Otaopai, to see. The ancient theatres were constructed in the shape of a parabola of a cone, or nearly semicircular, and an amphitheatre consisted of two theatres joined together.

The amphitheatre begun by Vespasian, but finished and dedicated by Titus, -was one of the most famous j the height whereof was such, that the eye of man could hardly reach it. Hakewill's Apologie.

He [Theseus] first enclosed for lists a level ground.

The whole circumference a mile around ;

The form was circular ; and all without

A trench was sunk, to moat the place about.

Within, an amphitheatre appear'd

Raised in degrees, to sixty paces rrar'd

That when a man was placed in one degree,

Height was allow'd above for him to see.

Dryden's Palamon and Arctic.

Conceive a man placed in the burning iron chair at Lyons, amid the insults and mockeries of a crowded amphitheatre, and still keeping his seat ; or stretched upon a grate of iron, over coals of fire, and breathing out his soul among the exquisite sufferings of such a tedious execution, rather than renounce his religion,, or blaspheme bis Saviour. Addison.

AMPHITHEATRES, in antiquity, were at first built only of wood ; and it was not till the reign of Augustus, that Statilius Taurus built one, for the first time, of stone. The lowest part was of an oval figure, and called the arena, because, for the conveniency of the combatants, it

was usually strewed with sand ; and round the arena were vaults styled caveac, in which were confined the wild beasts appointed for the shows. Above the caveae was erected a large circular peristyle, or podium, adorned with co- lumns. This was the place of the emperors, senators, and other persons of distinction. The rows of benches were above the podium. Their figure was circular : and they were entered by avenues, at the end of which were gates called vomitoreae. Their theatre was built in form of

a semicircle only exceeding a just semicircle by one-fourth part of the diameter; and the amphitheatre was nothing else but a double ‘..heatre, or two theatres joined together; so that the longest diameter of the amphitheatre was to the shortest as 1£ to 1. There are amphitheatres still standing at Rome, at Pola, at Nismes, &c. The amphitheatre of Vespasian, called the Coliseum, and that of Verona in Italy, are the most celebrated now remaining of all antiquity. Remains of amphitheatres are shown also at Aries, Bourdeaux, &c. The amphitheatre at Pola, an ancient republic of Istria, is very entire : it consists of two orders of Tus- can pillars, one over the other. The lower have pedestals, which is extraordinary; this order having scarce ever more than bases to support them. The amphitheatre of Vespasian is the largest, but that of Verona the best preserved : for though most of the best stones of the outside are picked out, yet the great vault, on which the rows of the seats are laid, is entire; the rows also (which are forty-four in number) are entire. Every row is a foot and a half high, and as much in breadth ; so that a man sits conveniently in them ; and, allowing for a seat a foot and a half, the whole will hold 23,000 persons. Pliny mentions an amphitheatre built by Curio, which turned on large iron pivots ; so that of the same amphitheatre two several theatres were occa- sionally made, whereon different entertainments were sometimes presented at the same time. Mr. Brydone (vol. i. 295) mentions an amphi- theatre at Syracuse, the theatre of which is so entire, that the gradini for seats still remain; but it i > small, he says, in comparison of the others.

The podium in these erections was fenced with iron spikes, .‘vc. to prevent the hunted .inimals from leaping over. Attention was paid to order of rank in the distribution of seats; married men had seats distinct from those that were unmarried, and youths of respectability sat with their tutors. The upper galleries, being considered inferior places, were occupied by plebeians, who stood behind tire women.

The amphitheatres, being open buildings, were ex- posed to considerable inconvenience occasionally, by the changes of the elements, and were fur- nished with various inventions to meet them. l)o\ n the edges of the lunches adjoining the stairs, channels were cut to drain off the rain- water, \hieh communicated with ample drain- age-pipes below : an awning, or canopy, which would protect the whole circumference of the building, was drawn at comemence over the heads of the spectators, and fountains refreshed the air with the aromatic -s of the cast. On some occaMonˆ we read of the whole furniture of the amphitheatre da/./liii'j; the e\e, with ornaments of u'old, silver, or amber; and the net-work in front of the podium, in tin- time of Carinus, is said to have been formed of uold wire. To these bixuiiaiit innovationˆ in the manner of conducting the public amusements, we find the poets fn '[iieiith allude. Thus Ovid,

Tiiin- intuit- iu;irniot(n pondtbant vela theatre,

\ita rubra. croco ;

Illic quas tulcrant, nemorosa Palatia, frondcs

Simpliciter positae : scena sine arte fuit. In gradibus sedit populus de cespite factis, Qualibet hirsutas fronde tegente comas. The cunei, compartments or sets of seats, were under the protection of officers called the locarii ; and the building was placed under the general superintendance of a villicus amphitheatri. Ar- tificial forests were also planted in the midst of the circus ; and mountains and caves which appeared to abound with the wild inhabitants of the deserts of Africa and the east. In these thousands of beasts have on some occasions been introduced and slain. Afterwards the centre of the amphitheatre was sometimes sud- denly converted into an immense basin of water, and sea-fights exhibited on a consi- derable scale.

A. U. 490 is the period celebrated for the in- troduction of gladiatorial combats, which were first exhibited by M. and D. Brutus on the de- cease of their father. The practice of hunting wild animals in the amphitheatre was introduced in A. U. 502, as Pliny says, to inure the Romans to despise the elephants of the Carthaginian and Asiatic armies. The elephants taken in the first Punic war from the Carthaginians are said to afford the earliest instance of wild beasts being brought into the forum. Pliny considers the first exhibition to have been those taken in Sicily by Metellus.

According to Homer, Iliad lib. xxiii., it had long been customary to sacrifice their enemies to the manes of great men, and to immolate

slaves at their funerals; but it was for the Romans to exhibit the combats by which this was effected, as a public sport. Immediately upon its intro- duction, the spectacle became the favourite of the people ; the heir of every considerable estate was expected to indulge the citizens with a tra- gedy of this description ; and the candidates for office found no readier mode of obtaining the public favour.

The introduction of the first regular amphi- theatres as the scene of these sports, is attributed to Julius Caesar, or his friend Cains Curio. A singular contrivance in the exhibition of the games at the death of Curio's father, suggested the oblong shape which amphitheatres ever after- wards retained ; whilst the Theatrum Venato- rium, or hunting theatre, which Caesar erected at the dedication of the forum, is the first build- ing known to have been distinguished by the name of amphitheatre. Curio on the occasion alluded to, having entertained the people with dramatic representations until noon in two of the ordinary theatres, which, although semicircular, exceeded a semicircle by one-fourth of the diameter, suddenly caused them both to be wheeled round without disturbing the spectators, and exhibited the gladiatorial combats between them. All the early amphitheatres, after this circumstance, assumed the shape of two of the ancient theatres joined in front. Improvements were made upon the newly-invented plan : a building which passed by this name, partly built of stone, is ascribed, as we have seen, to Statilius, one of the courtiers ol Augustus ; and the emperor himself is said to have projected a still more permanent erection

on the site afterwards occupied by the Coliseum. During the reign of Tiberius we read of a thea- tre constructed by Atilius, at Fedena, a short distance from the city, which would contain from 50,000 to 60,000 persons. This amphi- theatre, overcrowded on a particular occasion, fell to pieces, and maimed a great majority of the spectators. Suetonius says that 20,000 per- sons perished by the accident ; and the circum- stance seems to have given rise to a decree of the senate, that for the future no man who was not worth 400,000 sesterces, should presume to ex- hibit gladiators to the public. These erections, generally of timber, are scarcely, however, to be regarded as more than an ingenious scaffolding for the public accommodation, until under the auspices of Vespasian and Titus, the Roman architecture united with the imperial magnifi- cence to produce that stupendous monument of fallen greatness, the Coliseum. This celebrated building

called by some writers the Flavian am- phitheatre, from its immense size and magnificent appearance, forms the most stupendous monument of ancient Rome. Embosomed in the heart of the city, it towered above every other object. Modern authors speak of it as one of the most sublime exhibitions of majesty in ruins in architecture, far exceeding the pyramids of Egypt and all the wonders of the ancient world. Ammianus speaks of it as a solid mass of ma- sonry, whose summit the eye can hardly reach. According to Eutropius, 5000 beasts, and ac- cording to Dio even 9000, at its dedication were sacrificed in the area. It has been calculated that 10,779 wild beasts of the description usually exhibited there, might stand within its limits. Suetonius says 5000 were actually exhibited there by Titus in one day. The circumference of this fabric measured 1770 feet, including a superficial area of 246,661, being something more than four acres and a half of land. Its extreme height was 164 feet, and the exterior elevation is said to have been composed of three stories of arcades, exhibiting successively the Doric, Ionic, and Corinthian orders. The longer diameter was 61 5£ English feet, and the shorter 510. The accommodation of the spectators occu- pied a width of 157 feet, leaving for the larger dia- meter of the arena 281, and for the shorter 176, allowing twenty feet for the walls, &c. of the building. The first or ground-floor was elevated three feet and a half, and from this to the top of the cornice of the column was thirty-three feet and a half. The second story was thirty-nine feet high ; the third, thirty-eight ; and the Corin- thian pilastrade, which crowned the whole at the top, about forty-six feet. The exterior walls •were of Travertine stones cramped together with iron and without cement. The piers and arches were of brick, mixed with the same kind of stone ; whilst various kinds of stucco and marble facings adorned the inner front. Many seats of the podium were of marble, decorated with magni- ficent cushions and drapery. The vomitories, which opened into the area of the building, were sixty-four. Lipsius tells us, that there were seats in the interior capable of containing 87,000 peo- ple, and that the galleries above, with the spacious passages and platforms, held from 25,000 to

30,000 more. The erection of this edifice com- menced in the eighth consulate of Vespasian, and was completed by Titus within the space of three yeaps. All the upper works of the interior were of wood, since we read of a fire that destroyed them in the year A. D. 219 ; and of another which did considerable damage in the reign of Decius.

For upwards of three centuries human blood flowed in the Coliseum, mingled with that of almost every beast in the forest ; and here many of the primitive martyrs suffered. Constantine on his conversion put down all gladiatorial ex- hibitions ; and in the reign of Honorius was

abolished the profession of gladiator. The hunt- ing of wild beasts in the arena was continued, though not upon its former scale of magnificence, and the seats of distinguished families were pre- served as late as the sixth century. Tilts and tournaments were held in most of the amphi- theatres during the middle ages ; but the ruined grandeur of the Coliseum, as it now stands, is the principal surviving link between ancient and modern Rome. • While stands the Coliseum, Rome shall stand, is the language of a modern poet, quoted from the venerable Bede, who re- lates, ‘ Quamdiu stabit Colysaeus, stabit Roma ; quando cadet Colysceus, cadet et Roma ; quando cadet Roma, cadet et mundus ; ‘ as a saying of the Anglo-Saxon pilgrims, who visited Rome in the eighth century, and considered the Coliseum the most remarkable memorial of her grandeur and barbarity.

In the time of Justinian this edifice began to feel the effects of time, and was considerably damaged by the earthquakes and floods of the seventh century. About the thirteenth century privileges were granted to the different factions to dig out stones from the Coliseum, as a kind of quarry.

From the twelfth century, the excavated walls had been occasionally fortified, and it furnished a frequent retreat to the popes. In 1312 we find it as a regular fortress, surrendered to the emperor Henry VII. ; and ten years afterwards, it was formally ‘ declared to be the property of the Roman senate and people.’ At this time a celebrated bull-feast, mentioned by Gibbon, was held within this noble ruin; several orders of benches were restored, and a general invitation circulated throughout Italy to invite the nobles to join in the gallant sport. A writer, nearly contemporary with the scene, Lud. Buon. Mo- naldesco, has given a very interesting sketch of the devices and adventures of the knights, and the families and pretensions of the Roman ladies who crowded to the exhibition.

The porticoes on the south side, and towards the arch of Constantine, are supposed to have been overthrown in the earthquake of 1349. In 1381 a third part of the building, and a juris- diction over the whole, was granted by the senate and people to the society of Sancta Sanctorum, who formed an hospital within it, and exercised their rights to the year 1510. Their arms, which are still seen on what are now exterior arcades towards the church of St. Gregory, demonstrate that the outer circles had fallen down at the time of their occupation of the building; and, therefore, that ‘ the whole exterior circumference

<*ould not be ' entire and inviolate,' as stated by Mr. Gibbon, to the middle of the sixteenth cen- tury. Some of the finest buildings of modem Rome are said to have been constructed out of a small part of these magnificent ruins; in 1531 portions of the stones were exposed to public sale ; but ' all lesser plunder has been oblite- rated,' says Mr. Hobhouse (in his celebrated Historical Illustrations of the Fourth Canto of Lord Byron's Childe Harold), ' by the more splendid rapine of the Farnese princes.' The baths of Constantine, the forum of Trajan, the arch of Titus, the temple of Antoninus and Faustina, the theatre of Marcellus, added their marbles to the spoils of the Coliseum ; and the accounts of the Apostolic chamber record a sum of 7,317,888 crowns expended between the years 1541 and 1549, upon the gigantic palace of Campo di Fiore alone.

Pope SixtusV. according to Fontana, advanced 15,000 crowns to the merchants of Rome, to establish a woollen manufactory here ; but the project was relinquished. In 1594 it waj partly occupied by mechanics ; and ‘ this majestic relic,’ continues the above writer, ‘ which had been protected as a barrack, a hospital, and a bazaar, and which more enlightened ages con- sidered only as a convenient quarry, seems never to have been estimated in its true character, nor preserved as the noblest monument of imperial Rome, until a very late period.’

Marangoni, a Romish canon, who composed a woik entitled Delle Memorie Sacre e Profane dell’ Antiteatro Flavio dal Canonico, in the mid- dk- of the hist century, gives us an account of numerous martyrs whom the faitli of the Catho- lic church has assigned to this spot. Here, be- sides the memorable triumph of four females over the lions of the amphitheatre (who refused, he declares, to touch them), we have an account of the temptations of St. Philip Neriby the devil, who appeared to him in the Coliseum in the shape of a naked woman ; Pius V. used to speak vif the earth of the arena being cemented with holy Mood ; and a modern cardinal (Uderic Car-” peuna) is said always to have stopped his coach opposite to the ruins, and to repeat over the names of all the martyrs who had suffered there, before he would proceed. The Passion of our Saviour, the resurrection, and various other pious farces (‘ sacra farsa,’ says a Catholic historian), were sometimes performed here from the dose of the tifteeritli century to the pontifi- cate i_-f Paul 111.; and at about, the former date a small church, which, with its adjacent hermitage, is still k, he seen within the ruins, was conse- crated b\ a hishop of (Irossetto. Clement X. in the juliilee of 16T/i, solemnly set apart this Imililinir as a monument to the martyrs. The following, according to .Mr. Hobhouse, is one of

the inscriptions of that period, which still ap- pears :

A in) ih it luat ruin Flavium Nun lam dprris mule rt artiticio ac vcterum

Sjiertucu lorn in nicmoria t,hi;im Sacrn Iiinumeraliilium Martyrum

Criinrc illustre

\ em-rabumlus hospos ingrcdcre *)'.: in Aueusto majnitudiiiis 'iguana: inuuumcnto

Execrata Cassarum saevltia Heroes Fortitudinis Christianas suspice

Et exora'

Anno Jubilaei. MDCLXXV.

The arcades were now carefully blocked up from the public; and in 1727 a petition wa» presented to the reigning pontiff to permit the solitary hermit who had charge of the buildings, * to let out the grass which grew in the arena.' In 1742, after an attempt to assassinate the her- mit, it was consecrated anew by Lambertini, and several severe edicts were published, forbidding its spoliation. Pius VII. has added some solid buttresses to the tottering walls at a considerable expense, and sentinels now protect the ruin ; but our countrymen who have lately visited it, pre- dict its speedy dissolution.

The other amphitheatres of the ancient world, were all more or less modelled upon the plan of the Coliseum; but those of Verona, Capua, Nismes, and Autun, alone approached the am- phitheatre of the capital in the style of their de- corations. That of Verona measured 506 En- glish feet in the longer diameter, in the shorter, 405 feet ; and the arena was 247 feet long by 145 wide — the whole building including a cir- cuit of 1,451 feet, and a superficial area of 204,930 feet ; equal to about four-fifths of the size of the Coliseum itself. Its entire height, consisting of three stories of arcades, was about 90 English feet. The amphitheatre at Nismes was 430 English feet long ; by 338 wide, in- cluding an area of nearly three acres ; here were two stories of arcades, reaching to about 65 feet in height. Its history forms, to this day, one of the most extensive monuments of Roman an- tiquity in all France. Other buildings of this description, as at Pola in Istria, at Poestum in Lucania, and at Italica in Spain, enclosed one, two, and three acres of ground ; and sometimes the sides of adjacent hills were seated, and adapted to the purposes in question : as at Co- rinth, and Gortina in Candia. Vestiges of am- phitheatres, on a smaller

scale, are found at Alba; at Otricoli in Umbria; at Puzzuoli; at Syracuse, Agrigentum, and Catania in Sicily ; and at Sandwich in Kent, and Caerleon in Monmouthshire.

AMPHITHURA, in ecclesiastical antiquity, the vail which divided the chancel from the rest of the church ; so called because it opened in the middle like folding doors.

AMPHITRITE ; d/ˆtrptrij, from apfi, and rpi'£w, to sound; in heathen mythology, the daughter of Ocean and Thetis, the wife of Nep- tune and the goddess of the sea ; sometimes used in poetical language for the fea.

AMPHITRITE, in natural history, a genus of animals of the class vermes, order mollusca. Generic character : body annulate ; peduncles small ; feelers two ; eyes none. The species of this genus are remformis, pencillus, ventilabrum, auricoma, cristata, chrysocephala, and plumosa. AMPHITRYON, the son of Alcaeus, from whom Hercules derived his name Alcides, more distinguished by the amour of Jupiter with his wife Alcmena, than by any exploits of his own See ALCMENA. AMPHODONTA; from aˆi, and Wo£-c, a

xooth ; in zoology, an appellation given to animals which have teeth both in the upper and under jaw.

AMPHORA, in antiquity, a liquid measure among the Greeks and Romans. The Roman amphora contained forty-eight sextaries, equal to about seven gallons one pint English wine mea- sure ; and the Grecian or Attic amphora con- tained about one-third more. The amphora is represented on the coins of Athens, of which city it is supposed to be sym- bolical, as in the annexed diagram, representing Ju- piter Fulgurator,the darter of lightning; the inscrip- tion is A6E, i.e. 'AOqvaiuv, Atheniensium. It is called by Homer amphiphorseus, and by contraction amphorus, on account of its having two handles. Amphora was also a dry measure used by the Romans, containing about three bushels.

AMPHORA, in Venice, is the largest measure *ed for liquids, containing about sixteen quarts. As a wine measure it contains four bigoncia, and a bigoncia contains four quantari, 116 secchie, or

256lbs. peso groso.

AMPHORARIUM VINUM, in antiquity, wine preserved or used in amphorae or pitchers; by way of distinction from vinnm doliare, or cask wine. The Romans had a method of keeping wine in amphorae for many years to ripen, by fastening the lids tight down with pitch or gypsum, and placing them either within the reach of smoke or under ground.

AMPI1ORARIUS, in antiquity ; from a/iˆopa, a cup, or tankard bearer.

AMPHORITES, in antiquity, a sort of lite- rary contest in ./Egina, wherein an ox was the prize bestowed upon the writer who produced the best dithyrambic verses in commendation of Bacchus.

AMPHOTIDES, in antiquity, a kind of ar- mour or covering for the ears, and, as some say, the nose, worn by the ancient pugilists, to pre- vent their adversaries from laying hold of that part.

AMPHRYSUS, or AMPHBYSSUS, in ancient geography, 1 . A river of Phthiotis, in Thessaly, running by the foot of mount Othrys, into the Enipeus at Thebes in Thessaly. 2. Another in Phrygia, which, according to Pliny, rendered women barren. 3. A town of Phocis, at the foot of mount Parnassus, encompassed with a double wall by the Thebans, in the war with Philip.

AMPIˆ. LABIENA LEX, in ancient history, a law which gave Pompey the Great the privi- lege of appearing at the Circensian games in triumphal robes and a golden crown, and with a praetexta and golden crown at the theatres. It was enacted by Ampius and Labienus, then tribunes of the people. A. U. C. 693.

AMPLA, in conchology, a species of voluta. The generic characters are, that the shell is elongated, the aperture large, the lip acute, and the wreaths of the spire scarcely visible.

Lat. Ampius, large in quantity, or extent. Spread out, expanded, as a small quantity of gold in bullion ‘may be beaten out into la- mina? or leaves to a great extent ; spacious ; capa- cious.

AM’PLE,

AM’PLENESS, AM’PLIATE, AMPLIA’TION, AM’PLITUDE, AM’PLY, AM’PLIFY, AM’PLIFIER, AMPLIFICATION. } He [Daniel] cxpresseth the frute of y* kyngs repen- tance, that is to wete, God to geue miehe more ample giftis to the repentat then hg toke from them, as y* see

him to haue done to Job.

The Exposition of Daniel by George Joye, c. iv. And underneath his feet was written thus, Unto the victor of the gods this be : And all the people in that ample hous Did to that image bowe their humble knee, And oft committed fowle idolatrie.

Spenser' t Faerie Queene, b. iii. c. 11. As for the cathedral of Lincoln, whose floor is higher than the roof of many churches, it is a magnificent structure, proportionable to the amplitude of the diocese. Fuller's Worthies. Lincolnshire.

If you will tarry, holy pilgrim, but till the troops

come by,

I will conduct you wh< re you shall be lodg'd , The rather, for I think I know your hostess As ample as myself.

Shalupeare's All's Well that ends Well, act iii. sc. v.

As new waked from soundest sleep, Soft on the flow'ry heit I found me laid, Straight toward heav'n my wandering eyes turned I, And gazed awhile the ample sky. Mi/ton.

Now let us leave this world, and lift our eye To the large convex of yon azure sky j Behold it like an ample curtain spread, Now streak'd and glowing with the morning-red, Anon at noon in flaming yellow bright, And chusing sable for the peaceful night.

Prior's Solomon, b. 1.

Say, proud arch,

Built with divine ambition ; in disdain Of limit built ; built in the taste of heav'n. Vast concave ! ample dome ! wast thou design' d A meet apartment for the Deity ? Not so : that thought alone thy state impairs : Thy lofty sinks and shallows thy profound, And straitens thy diffusive. Young'sNt. Thought*. The great Creator ! Him ! who now sublime, Wrapt in the solitary amplitude Of boundless space above the rolling spheres, Sits on his silent throne and meditates.

Kvrke White's Poems.

AMPLEPUIS, a town of France, in the de- partment of the Rhone, and arrondissement of Ville Franche, twelve miles east of Rouanne. A great

quantity of linen is manufactured here and exported, and the place has a considerable inland trade. It is also celebrated for producing excellent wines. Population 3300.

AMPLIATION, in Roman antiquity, the defer- ring to pass sentence in certain causes; which •was done by pronouncing the word amplius or writing the letters N. L. non liquet ; thereby signifying that the cause was not clear.

AMPLIATOR, a title given to the emperor Antoninus Pius, on account of his having ex- tended the jus civitatis, or right of citizenship to many states and people before excluded from that privilege.

AMPLIFICATION, in rhetoric, part ot a dis- course or speech, wherein a crime is aggravated, a praise or commendation heightened, or a nar- ration enlarged, by an enumeration of circum- stances ; so as to excite the proper emotions in the minds of the auditors. Such is the pas- sage of Virgil, where, instead of saying merely that Turnus died, he amplifies the circumstance of his death.

— Ast illi solvuntur frigore membra,

Vitaque cum gemitu fugit indiiinata sub umbras. It has been divided into amplification by words, j. e. metaphors, hyperboles, &c. &c.amplification of things, as where a multiplication of causes, circumstances, &c. is introduced.

AMPLITUDE, in astronomy, an arch of the ho- rizon intercepted between the east or west point, and the centre of the sun, or a planet, at its rising or setting ; and so is either north and south or ortive and occasive. The amplitude of a heavenly body may be found trigonometrically by saying, as the cosine of the latitude, to radius, so is, the sine of the declination of the body, to ‘.he sine of its amplitude.

AMPOTIS, fyTi-ortc, Gr. literally the ebb of the tide, but applied metaphorically by Hippo- crates to the recess of humours from the circum- ference of the body to the internal parts.

AMPSAGA, in ancient geography, a river of Africa, separating Mauritania Caesariensis from Numidia Propria.

AMPSANCTUS, or AMSANCTUS, a lake of the Hirpini, i-n Italy, celebrated for the mephitic odour which issues from it, now called Mufiti, from the god Mephitis, who had a temple there. Vinjil (.Ln. vii. 565) makes the Fury Alecto to •descend down to hell by this lake; and Swin- burne describes an oval pond, from which a sul- phurous vapour issued in his time ‘ with a loud rumbling noise.’

A MPT, in Danish polity, a subdivision oi districts in Denmark, over whieh a provincial governor is placed, called the amptsman, and stifts-amptsman. The latter is a post of conside- rable authority.

A MPTI1UJL, a town in Bedfordshire, plea- santly situated between two hills, fifteen miles from London, between the roads from thence to Buckingham and Iloyston. It is almost in the centre of the country, but in a barren soil. It lias two fairs, May 1th arid December llth, and a weekly market, on Thursday. It was for some tm,c the residence of Catherine queen of Henry \ 111. lo \ho sory erected a Gothic crass in 1774, whose site is now occupied by an obelisk, containing a pump ! The niHMMOii of Amptliill, the seat of lord lloll.mil, was built by Sir John Cornwall, in the rn-ii nt’ Henry VI. out of the spoils taken from the 1 Tench. Near the entrance of the park, stoncl the celebrated pear-tree, under which, it is ˆ:i;d. “ 1″ M;I Snlnev wrote his Arcadia.

AMPTITX, AMTITZ, or AMPTLITZ, a market town, castle, and lordship, of Lower Lusatia in the circle ot’(iul > en, between the fivers Lubs, and A’eisse. The lonWnp consists of seven villages, and cuntain > fruitful corn and pasture fields, PH I’l’r. ti\ e ii-.heiics and forests, a’ld a conside-

rable quantity of iron ore. It is five miles south of Guben.

AMPUGNANO, a town and district of Cor- sica, containing 4140 inhabitants.

AMPUJIS, an old town and lordship of France, now included in the department of the Rhone, arrondissement of Lyons. I icon tains a castle and about 300 houses ; the adjoining country produces excellent vines.

AMPULLA, among ecclesiastical writers, one of the sacred vessels used at the altar. It was also used for holding the oil in chrismation, con- secration, coronation, &c. and frequently ap- pears in the inventory of church furniture. This was also the name of an ancient drinking vessel.

The ampulla is still a distinguished vessel in the coronation of the kings of England and France. In the history of countries, miracles •are

alleged to be connected with these portions of the regalia. In France the holy oil was brought from heaven by a dove, sayeth the le- gends, ‘ no other doubtless than the Holy Spirit,’ adds one historian, and it was renewed in the ampulla by a standing miracle until the revolu- tion ! On the late coronation of Charles X. the public papers stated, that a phial containing some of this invaluable unction had even sur- vived that catastrophe.

Our English ampulla was said to have been originally received by Thomas a Beckett, well filled with oil from the Virgin Mary : The vessel now in use is an eagle with expanding wings standing on a pedestal, near seven inches in height, and weighing about ten ounces. It is of the purest chased gold ; and passing through va- rious hands to the Black Prince, was by him de- posited in the Tower. Henry IV. being the first king anointed with it.

AMPULLA, in conchology, a species of bulla, found in the Indian seas.

AMPULLA, St., KNIGHTS OF, a ci-devant or- der of knighthood in France, instituted by Clovis I.

AMPURA, a province of the kingdom of Peru, before its conquest by the Spaniards : said to have been conquered by Virachoca the eighth inca.

AMPURDAN, a district of Spain, in Cata- lonia. It produces flax, but is in general a bar- ren country.

AMPURIAS, a sea-port and walled town ot Catalonia, in the district of Ampurdan, of which it is the capital. It stands near the mouth of the river Fluvia, sixty miles north-east of Bar- celona. It was formerly a place of considerable note. In the neighbourhood is the Castello de Ampurias. Population 22,000.

AM’PUTATE,) Amputo. am from the

AMPUTA’TION. J Greek dfjupi, and puto, to pare round ; to cut off.

The Amazons, by the amputation of their right breast, had the freer use of their bow.

Brown’s Vulgar Errours.

Admitting the same doctrine of an original body, we must, however, observe, that living men may lose several of their limbs by amputation.

Beanie's El. of Moral Sciences,

Amongst the cruizers, it was complained, that their surgeons were too active in amputating fractured members. Wiseman's Surgery.

AMPUTATION. See SURGERY.

AMPYX, in antiquity, a kind of golden chain, which served to bind the hair of horses, and sometimes of men or women, on the forehead. Homer describes by this ornament the steeds of the god of war, calling them xpvffapTrvKtf.

AMRAM ; CDˆBK, Heb. i. e. a high people ; »he son of Kohath, and grandson of Levi; the father of Aaron, Moses, and Miriam. He died in Egypt, aged 137.

AM RAN, a town and fortress of Hindostan, with a district adjacent, situated in the Gujrat peninsula. Lat. 22° 35′ N., long. 70° 35′ E.

AMRAPHEL; SfllJDK, Heb. i. e. a speaking destruction ; the king of Shinar, or Babylonia. See Gen. xiv. 1.

AMRAS, or AM BRAS, once a strong castle of Germany, in the Tyrol ; by some German wri- ters called Arx Ambrosiana, and by others Ombras. It was long remarkable for its beautiful galleries, and an extensive collection of antiquities, a great part of which were sent to this place by Charles V.

AMRETSIR; i. e. the pool of Immortality; a town of Hindostan, in the province of Lahore, and forty miles south-east of the city of that name. It is the capital of the Seik nation. Lat. 31° 34′ N., long. 74° 25′ E. Some Seik authorities ascribe the foundation of this place to Gooroo Ram Dass, who died A. D. 1581, but it was known before his time, under the name of Chak. Gooroo Ram Dass added much to its population, and built the famous reservoir or tank, named Amretsir, which, in the course of time, became the name of the town. Amretsir is now about eight miles in circumference, and though the streets are narrow, the houses, in general, are lofty and built of burnt bricks. It is the grand emporium for the shawls and saffron of Cash- mere, and various other commodities from the Deccan and eastern parts of India ; hence

it is the resort of opulent merchants, and contains several respectable banks. Its manufactures are a few coarse cloths and inferior silks. The sacred basin, to bathe in which is considered by the Seiks and many Hindoo tribes as a complete moral purification, is about 135 paces square, and built of burnt bricks. In the centre stands a temple, dedicated to Gooro Govind Singh, and within is lodged, under a silken canopy, the book of laws, written by that Gooroo. There are from 500 to 600 akalies, or priests, belonging to this place. This town is on the high-road be- tween Cabul and Delhi.

AMRU-EBN-AL-AS, one of the most fa- mous of the first race of Saracen leaders, was in the early part of life a zealous opponent of Mahommedanism, but became a zealous convert to that faith, and joined Mahomet, when a fugi- tive prophet at Medina. After several displays of his military valour, he rose to the station of chief in Irak ; and during the caliphate of Omar served in Palestine. In A.D. 638 he took Csesarea, and reduced to subjection all the ma- ritime towns of Syria. Afterwards, attended

only by 4000 Arabs, he took Pharma, 01 Pelu- sium, and besieged Misrah, the ancient Memphis, which he took by storm ; and on its site erected the present Old Cairo. After this victory, the majority of Egyptian natives being Coptic Chris- tians and enemies to the Catholic Greeks, sub- mitted to Amru, and engaged to provide quarters and support for the Mussulman army. Amru pursued the Greeks to Alexandria, which, afte • a siege of fourteen months, he took, A.D. 640, Amru observed a wise and equitable policy in Egypt ; and died in this government, A. D.

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AMSBURY, or AMBEBSBURY. See AMES- BURY.

AMSCHELBEORG, a market town of Bo- hemia, in the south-east part of the coast of Beraun, twenty-four miles south of Prague.

AMSDORFFeducated as a Roman Catho- lic Priest, became a Protestant, and an associate of Luther. He is said to have broached the absurd doctrine that good works are prejudicial to sal- vation, and gave name to the AMSDORFIANS, an evanescent sect of the reformation.

AMSEGETES, in antiquity, those whose grounds abutted on the highway.

AMSTADTEN, a market town of Lower Austria, in the west quarter of

the forest ot Vienna, on the Lentz road. It has a post-office and iron works.

AMSTEL, a river of Holland, at the mouth of which Amsterdam is built. It enters the Zuyder Zee by the Wye arm.

AMSTELLAND, a district of Holland, in which stands the city of Amsterdam. It is bounded on the east by Gooeland, by Rhinland and Utrecht south, the lake of Haerlem west, and Waterland north.

AMSTELVEEN, a small town of Holland, near the Amstel, and six miles south of Amster- dam.

AMSTERDAM, a large .populous and com- mercial city of Holland, formerly the capital of the United Provinces, and now of the king- dom of the Netherlands. This city is seated on the mouth of the Amstel, where it falls into an arm of the sea, called the Y, or Wye ; sixty-five miles north of Antwerp, 175 east by north of London ; 240 north by east of Paris, and 560 north-west of Vienna. Lon. 4° 44′ E., lat. 52° 25′ N. Amsterdam, being seated on a marshy soil, is built on piles of wood ; and intersected throughout by numerous canals, which contribute both to its convenience and cleanliness. These canals are deep, the sides are lined with hewn stone, they have generally rows of trees planted on each side, and many stone-bridges over dif- ferent parts of them. The finest is called the Ammarack, which is formed by the waters of the Amstel, into which the tide comes up, and on the sides of which are two large quays. This canal has several bridges. Next the sea is the Pont-Neuf, or new bridge, 600 feet long, and 70 broad, with iron balustrades on each side ; it has thirty-six arches, of which eleven are very high, and eight are shut up to enclose yachts. From this bridge there is a most charming pro- spect of the city, port, and sea. The port is a mile and a half in length, and above 1000 paces

in breadth. The streets in general are well-paved, but narrow, and the houses built of brick or stone. The Heeren-gragt and Prissen-gragt contain some noble buildings. Towards the sides of the haven the city is enclosed with piles joined by large beams placed horizontally. There are openings to let the ships in and out, which are shut every night at the ringing of a bell. Out- side of the piles lie the heavy laden ships, in what is called the Laag. The city occupies altogether an extent of 892 acres, and is 3,758 toises in circumference ; or, according to another

estimate, about 18,790 geometrical feet in the area, and nine and a half English miles round. The Amstel divides it into two parts, the Eastern or Old, and the Western or NewTown.

In 1204 on the site of Amsterdam there was nothing but a small castle, called Amstel, (from the river,) which its lords made a retreat for fishermen, who lived in huts covered with thatch : in the fourteenth century it became considerable, had a bridge and towers built about it, and rose into a commercial town; though, till the year 1490, it was only surrounded with a weak pali- sado. The walls were then built with brick, to defend it from the incursions of the inhabitants of Utrecht : but some months afterwards it was nearly reduced to ashes. In 1522, being un- successfully besieged by the people of Guelder- land, they set fire to the ships in the harbour; and in 1525 an Anabaptist leader, with six hundred of his followers, seized the city in the night-time, and took possession of the town- house, from which they were with difficulty dis- lodged. About ten years after, another tumult was raised here by fanatics, consisting of men and women, who ran about the streets naked, and endeavoured to make themselves masters of the town. Amsterdam was one of the last cities that embraced the reformed religion. It was attacked by the Hollanders in 1578, and sub- mitted after a siege of ten months. One article of the capitulation was, a free exercise of the Homan Catholic religion ; but this was not ob- served by the Protestants; who, still smarting under the persecutions of the Papists, adopted one of their worst principles, that of keeping no faith with heretics. They accordingly soon drove the ecclesiastics, monks, and nuns, out of tin; city, broke the images, and demolished the altars. From this time it became the general rendezvous of all nations, and quickly rose to its modern rank among the commercial cities of Europe. The stability of its trade was however finally fixed by the erection of the bank, insti- tuted by the States of Holland in 1609, and which combining with the decline of Antwerp, through tin: shutting up of the Scheldt, rendered Amsterdam the grand central point of European commerce. In 1757 a number of buildings in the town \ere destroyed by the explosion of a powder magazine ; and in 1787 this city surren- dered, after SOUK; opposition, to the Prussians, who continued to occupy it until the following •vear. In 1705 it received the French with open arms, many of the inhabitants being at that time adverse to the house of Orange. It was ascer- tained at this period that the boasted treasures of Che famous banking establishment were merely

imaginary ; the cash having been lent out by the directors to different public bodies, wnose bonds were deposited in the bank in lieu thereof. From 1810 to the fall of Buonaparte, Amsterdam was the chief town

of the French department of the Zuyder Zee, and the third in the French empire, taking rank after Paris and Rome. Its popula- tion amounted in 178f to 230,000, but was re- duced in 1812 below 100,000; the number of houses in the latter year was 26,000, exclusive of the suburbs. All the religions of Europe are tolerated in their respective professions here. There are eleven churches for the Dutch of the established or Calvinistic persuasion, with two French, and one High Dutch ; also one English, one Scotch, one Arminian, two Lutheran, and three Baptist churches ; no less than twenty-four Catholic chapels, and a Quaker meeting. The Jews divide themselves into two branches, the Portuguese and the German, who both possess splendid synagogues. Of the public commercial establishments, the principal are the arsenals and dock-yards ; here is also an excellent public academy, and grammar school ; an anatomical surgical college ; work-house, house of correc- tion or rasp-huis, an orphan-house, an hospital for aged men, and an establishment for widows, a lunatic asylum, botanic garden, &c. &c. on the most liberal foundations. There are likewise several literary societies in Amsterdam, which are supported with great spirit. The principal institution of this nature is the Felix Meritis, devoted to philosophy and the fine arts. It occupies a noble building, of which the music room has been much admired. The most splen- did edifice in the whole of Holland, perhaps, is the stadthouse of Amsterdam. It stands nearly in the centre of the town, on an open square, and is said to have cost £300,000 sterling. It is built of freestone, with the exception of the ground floor, which is of brick. It is 282 feet long, 235 broad, and, without reckoning the tower, 116 high. It is built on a foundation of 13,659 piles, and has seven porticos representing originally the Seven United Provinces; but has no grand entrance, an omission, we are told, occasioned by the prudence of the magistrates, who had the superintendance of the building, for the purpose of preventing free access to the populace in case of tumult. The principal ar- chitect was John Van Kempen, who acted under the control of four burgomasters. The first of the numerous piles on which it is erected was driven on the 20th of January, 1648, and the last on the 6th of October following, when the first stone was laid. It was finally completed in 1655. The burgomasters' cabinet and retiring rooms, the treasury chamber, painter's chamber and the council of war chamber, are splendid apartments. The burgher's hall is a magnificent room, with sides of marble, 120 feet long, 57 broad, and' 80 high, having galleries 21 feet in width. It is entered under a Corinthian colon- nade of red and white marble, by massy bronze gates and railing finely executed. On the floor the terrestrial and celestial globes are delineated, in circles of 22 feet in diameter, by inlaid work of brass and variegated marbles.

There are three of these circles ; two of which are devoted

to the hemispheres of the earth. At one end is a colossal Atlas, supported by Vigilance and Wisdom, and bearing the globe on his shoulders. From this hall a double staircase leads to the tribunal, another principal apartment of the stadthouse, which occupies a large portion of the ground floor. Its walls are also of white marble, adorned with figures in bass relief, sym- bolical of the purposes lo which it is devoted. The centre of the grand saloon was drawn by Huygens ; but, unfortunately, its basement has been injured. On the front of the exterior is a marble pediment, on which is a female figure supporting the city arms ; her chair supported by two lions. On each side are Naiads, pre- senting her with crowns, and different sorts of fruit. There is also a Neptune, accompanied by tritons, a sea-unicorn, and a sea-horse. Over these are three bronze statues, representing Jus- tice, Strength, and Plenty ; and on the top of the whole a round tower, adorned with statues, and containing a chime of bells. This magnifi- cent edifice formerly contained prisons both for criminals and debtors ; but they have been lately transferred to more suitable abodes; and the sfadthonse has become a royal palace.

Other edifices which deserve attention are the East and West India houses, the bank, the admiralty, the three weigh-houses, the corn-exchange, the tower, known by the name of Herrings-pakkerstooren, and various magnificent private dwellings. The Old Church, in which is a chapel, with windows of painted glass, and the New Church, containing the tombs of the celebrated De Ruyter, admiral Bentink, and the poet Vondel, are the parish churches of the city. The exchange is a plain but commodious fabric of freestone, covered with tiles, in length 230 feet, and in breadth 130. It will contain about 4500 persons ; and like that of London is principally resorted to after midday. For the accommodation of foreigners, each of the forty- six compartments below the gallery is destined for the transaction of different sorts of bvisiness : thus Nos. two and three are occupied by the German Jews ; Nos. four and five by the tobacco merchants; Nos. eight, nine, &c. by traders from the south of Europe ; the middle part by British and French merchants, &c. The go- vernment of Amsterdam is vested in a council or senate, consisting of thirty-six members, and twelve burgomasters. The members sit during life, and fill up by their own suffrages the va- cancies that occur in their numbers. The burgo-masters, who are chosen by the citizens out of a double number first

nominated by the council, sustain the active magistracy of the city in rota- tion, the government of each lasting three months ; and the four who are to preside during the year being annually appointed burgomasters' regent, an office very similar to that of the Lord Mayor of London. There is also a court of burgo- masters, which decides all criminal cases ; but in civil causes there is an appeal to the pro- vincial council. The senate of Amsterdam for- merly appointed the deputies to the states- general, in which this city only held the fifth rank, although it sent four representatives, or

double the number of any other of the cities of Holland.

With the general commerce of Holland that of Amsterdam declined for many years previous to the late settlement of Europe. This has been ascribed to different causes, such as the supe- riority of the British navy, and the control of British conquests in our wars with Holland ; the exactions of the French during the revolutionary law, &c. Certain it is that this celebrated port exhibits nothing like the ‘ forest of masts ‘ that formerly appeared here: Yet is its general com- merce very considerable, and perhaps reviving, especially in the various productions of neigh- bouring countries — gold, silver, jewellery, and spices. Adjacent are manufactures of velvets, carpets, stuffs, damasks, galoon, lace, and woollen cloths ; tanneries ; sugar-refineries, &c. There is also a Lombard, or deposit-house in the city, on a very respectable foundation. The water in the neighbourhood is said to be so unfit for culi- nary purposes, that water-merchants, who bring gallon-bottles of that necessary of life from Utrecht, drive a good trade; and those who cannot afford to buy of them are obliged to use rain water.

Amsterdam in modern times has been trans- ferred to various masters : it was the capital of the Batavian republic, under the authority of France, in 1795 ; the seat of royal government under Louis Buonaparte in 1806; and incorpo- rated into the French empire with the rest of Hol- land on the abdication of Louis, in July, 1810. In 1813 it led the way in recalling the house of Orange to its ancient sway ; a provisional go- vernment was formed here 18th November; and in December William Frederic, Prince of Nassau and Orange, was first declared sovereign Prince, and by act of congress in May, 1815, king of the Netherlands.

AMSTERDAM, a town of what may now be called British, formerly Dutch Guiana, once the seat of government of the colony of Berbice. Dr. Bancroft, in his history of Guiana, places it 100 miles from the sea-coast, a circumstance which, together with the difficult navigation of the river Berbice, on which it stands, induced the Dutch to resolve on transferring the seat of government to a more convenient spot, so far back as the year 1766 ; and a suitable site was accordingly fixed upon on the northern shore of the river, about a mile from its mouth. On the conquest of the colony, however, by the British, in 1796, the town was just emerging from the marshes of the neighbourhood.

AMSTERDAM, NEW, is the name that was given to the new capital of Berbice. It stands at the confluence of the Berbice and Canje rivers, in N. lat. 6° 20’, W. long. 57° 15’; and is laid out with every kind of attention to convenience, which the long experience of its projectors

could be supposed to suggest. Each house faces one or other of the rivers, and is surrounded by a quarter of an acre of land, bounded by a trench or dike, which regularly receives the tide, and while it carries off the offals of the establish- ments,* promotes the circulation of air throughout the town. Within this enclosure a kitchen

generally appears. The houses of the Dutch inha- bitants are thatched with the leaves of the troolie or plantain tree ; the former being a prodigy of nature peculiar to this part of the world. They are leaves which generally grow from one stem close to the ground, (the stem terminating in the rib, as it were, of the leaf,) and extend to twenty-five or thirty feet each in length, and from two to three feet in breadth. But the English inhabitants uniformly prefer a shingle roof, from the great annoyance that they find in the insects and vermin of the thatch. The houses are long and narrow, protected on each side with galle- ries to shade them from the sun, and seldom more than two stories high. The government houses and public offices, are built of brick, in a superior European style ; and surmount with an imposing effect the agreeable line of islands that stretches along the Berbice to the extent of a mile and a half.

AMSTERDAM ISLAND, a small island on the north-west coast of Ceylon, five miles long, and two in breadth. Long. 8° 1′ E., lat. 9° 50′ N.

AMSTERDAM ISLAND, an island of the South Pacific Ocean, first visited by Von Vlaming, a Dutch navigator, in 1697, and explored in 1793 by the gentlemen attached to Lord Macartney's embassy to China. It lies in E. long. 76° 54', and S. lat. 38° 42'. Of the shape of a horse- shoe, nearly closed at the points ; it contains a harbour or basin in the centre, the entrance to which might easily be made navigable to vessels of any burden. The length of the island from in nh t» south is upwards of four miles; its adth from east to west, about two miles and a f; and its circuit about eleven miles. The hour, with its surrounding rocks, is of the pr of an elliptical funnel, or inverted cone, whoso longest diameter at the water's edge is 1 100 yards, and the shortest about 850 ; its cir cumference being 3000 yards, or about a mile and a half. At the top it is about two miles round. A fertile but very soft and spongy soil (overs the island, which bears everywhere such unquestionable marks of volcanic origin, that the scientific gentlemen above alluded to, had no doubt of the harbour itself having once

formed un immense crater. The island is inacces- sible on every side but the east, or through the narrow strait by winch the basin communicates with the sea; it stands 200 feet out of the water, as seen from the outward shores ; and the land slopes upward all round to its internal edge,, or the mouth of the crater, which is formed of layers of lava rising about 730 feet from the water be- 1 < >\>. (hi the western side, which is nearly perpendicular, the depositions of successive erup- tion> may be distinctly traced ; a glassy layer beni'.; lowest, the compost next, the cellular next abo\e it, and over it volcanic ashes and lighter substances, covered by a layer of vegetable mould, lathe same quarter, and toward the south-west, an: Tour small volcanoes, with regu- larly formed craters, containing lava of recent formation, and constantly emitting elastic va- pours. The ground in this part of the island is tremulous under the feet, which cannot be kept in one place for a quarter of a minute together,

and stories thrown sharply on the surface return a hollow sound. The island generally is pene- trated by fissures, from which smoke issues in the day, and flames at night ; the latter giving an awful appearance to the surrounding scenery, as seen from our ships in the offing. Several springs of hot water were visited by our country- men on the occasion above-mentioned, of which the average heat was above 212° Fahrenheit's ther- mometer ; and a large party regaled themselves with tench, bream, and perch, taken with a hook and line from the basin, and boiled in about fif- teen minutes in the water of the adjacent springs, as it flowed from the ground. One gentleman, in the suit of Lord Macartney accidentally plunged his foot through the layer of mould on the western side, and it was severely scalded. The holes that have been made by various vi- siters have been built in by the sea-birds that abound in the neighbourhood ; which, in no small degree, increases the annoyance of the walk across the island. Near the centre is an area of about 200 yards square, where the heat of the soil is so great as to admit of no vegeta- tion. Here one of the hot springs is supposed to take its rise, and to break through the inter- stices of lava to its mouth, which is just above the water in the great basin below. All the springs of hot water, except one, are brackish ; this is a pretty strong chalybeate, and flows to some distance in a small collected stream, through a crust of ochre which it has deposited. Its temperature is not above 1 1 2°, and the water is very safe for use. Large beds of moss of the marctantia and lycopodium species, variegate the surface of the island in some places ; and on part of it being torn away, it disclosed, in 1 793, a thin hot mud, in which a thermometer rose immediately to the boiling point. This substance overspreads the barren spot in the centre of the island ; and on

removing it copious streams of vapour arise, while the sound of bubbling water may be heard in applying the ear to the ground.. Veins of vitrified matter, in a liquid state, were seeta running down in many places into the basin. This reservoir, which, if once the crater of a volcano, was one of the largest in the world, receives the tide regularly through its mouth, at the rate of about three miles an hour. Within the basin, it rises perpendicularly eight or nine feet at the full and change of the moon ; and during the winter months, all kinds of storms and agitations pervade this place. Sometimes the whole mass of waters seem to heave upward from the bottom, and whirlwinds scatter them in immense sheets above the surface of the sur- rounding rocks. The entrance appears to have been formed by a recent eruption of the sea ; for, in 1697, Von Vlaming noticed a low bar across it, upwards of five feet above the surface of the ocean ; it is still shallow, and accessible only to boats. The shores of this island abound with seals of the phoca ursina species. The ships of the embassy, in fact, were induced to stop here by the appearance of two men making signs from the precipice, who proved to be part of an American crew left to procure seal skins for the Canton market. The whole party consisted of

five, two American sailors, (originally from En- gland), and two Frenchmen, commanded by a native of France. They had been here about five months, and had gathered 8000 skirls ; cal- culating upon 17,000 more before the return of their vessel from Nootka Sound. These are worth, at Canton, from one to three dollars each. The animal B killed as it is found basking in the sun, and the carcase is left to putrefy before the skin is taken off. Our people, who were here early in the year, found these disgusting objects scat- tered all round the island, and the stench from them intolerable. The summer is the season for their appearance, when they come ashore in droves of from 800 to 1000 ; sometimes plunging instantly back at the sight of man, at other times erecting themselves into a menacing posture, and remaining barking on the rocks until struck down. This is accomplished by a slight blow on the nose with a stick; and if 100 could thus be taken during the day, the adventurers above- mentioned were content, as it was the full employ of five men to pin them down afterwards in a proper manner. Some of the oil they yield was gathered, and served as butter. It is remarkable, that the proportion of female to male seals, which came ashore here, is more than thirty to

one. In winter these animals keep in deep water, and amongst the weeds, which seem to shelter them from its inclemencies ; while the sea-lions (phoca leonina of Linnaeus) appear in great numbers, and take their place upon the rocks. They are as large as from eleven to eighteen feet long, and make such a prodigious howling round the shore, that the British ships could dis- tinctly hear them at their anchorage, a mile distant. Whales, sharks, cod, and craw-fish also abound in the neighbourhood.

AMSTERDAM, or TOXCATABOO, an island in the South Sea, said to have been discovered by Tas- man, a Dutch navigator. It is better known in modern geography by the latter name, which see.

AMTSHITKA, one of the Aleutian islands, about sixty miles in length. The eastern side is more rocky than the western ; on the north there is a cluster of islands, and to the east and west rocky detached islets. It is altogether a barren spot.

AMTSZELL, a market town, castle, and parish, in the district of the lake of Constance, and kingdom of Wirtemberg, containing 2130 inhabitants. The town lies between Wargen and Ravensburg, eight miles east of the latter.

AMU GIIION, AMI, or Oxus, a river of Inde- pendent Tartary, formed by streams which issue from the mountains of Belur, on the confines of India and Persia, and flowing west by north through Bucharia. It enters the south extremity of the lake Aral after a course of 1200 miles.

AMUCHTA, one of the Aleutian islands, about twenty-seven mile's long, containing a volcano.

AMUCK, or AMOK, an Indian term for slaughter, and an exclamation of certain Batavian slaves, who, when irritated, intoxicate themselves with opium, and run frantic about the streets. It is called running a- muck or amok : and Steele is supposed to have borrowed his tale of the mohock-club in the Spectator from this practice.

AMUCTICA, in medicine ; from afivvau, to vellicate, medicines which vellicate the bronchia, and promote coughing.

AMUL, a town and district of Persia, in the province of Mazanderan. The former stands in a fertile plain at the foot of a hill, on the river Arasbei, and was formerly one of the best-forti- fied towns in Persia. There are still some re- mains of a castle, which the inhabitants say is 4000 years old. The building of the town itself is ascribed to Shah

Suhak, a celebrated Persian chief, in the eleventh century. The Arasbei is crossed by a fine bridge of stone, erected in the year 1680, by a Mahommedan priest. After it was finished at his sole expe.r.e, he is said to have pronounced an anathema against all those of elevated rank who should cross it on horseback which to this day is religiously avoided. In the suburbs there is a palace two stories in height, said to have been built by Shah Abbas. There are also three sepulchral towers, supposed to have been fire temples of the ancient Guebres A population of about 800 subsist by the culti- vation of rice and cotton ; or by working at the several iron founderies and forges of the neigh- bourhood. Distant from Casbin about 12G miles E. N. E.

AMULA, in antiquity, a small vessel, with lustral waters in it, usually carried in the pocket by the ancient Romans, for purification and ex- piation, whence some derive the word AMULET.

AM'ULET. Amuletum (Vossius), from amo- lior, amolitus, (from a, and moles, a heap of moss), to move away, to expel. Hence, a driving away ; a preservative against [diseases], a charm.

Amulets, made up of relics, with certain letters and

crosses ; to make him that wears them invulnerable.

Bp. Hall's Cases of Conscience.

That spirits are corporeal, seems at first view a con- ceit derogative unto himself ; yet herein he establish- eth the doctrine of lustrations, amulets, and charms. Brown's Vulgar Errows.

They do not certainly know the falsity of what they report ; and their ignorance must serve you as an amulet against the guilt both of deceit and malice.

Government of t lie Tongue.

AMULETICS, or SYMPATHETICS, in medi- cine, are chiefly used to stop bleedings ; such as the persicaria, lapis haematites, dried toads, &c.

AMULETS, in the days of superstition, were much esteemed as charms or preservatives against mischief, witchcraft, and diseases. They were made of stone, metals, vegetables, animals, and, in a word, every thing that imagination suggest- ed. Sometimes they consisted of words, cha- racters, and sentences, ranged in a particular order, and engraved upon wood, &c. and worn about the neck, or some other

part of the body. See ABRACADABRA, and ABRASAX. The Greeks called this species of amulets ˆvXorrJjpia, phy- lacteries. Sometimes they were neither written nor engraved ; but prepared with many super- stitious ceremonies, great regard being usually paid to the influence of the stars. The Arabians have given to this species of amulet the name of talisman. All nations have been fond of amulets. The Egyptians had a great variety ; and the Jews had an early propensity to using them. Compare Deut. xviii. 1O — 12, with J?r

viii. 17. In later times the Mishna allowed an amulet to be worn which had previously been three times successful. The Chaldeans, Per- sians, and oriental nations, also held them in the highest estimation. Amongst the Greeks, amu- lets were much used in exciting and conquering the passion of love ; and Pliny mentions many that were in use among the Romans. Ovid speaks of Mount Caucasus as yielding the ne- cessary plants,

An qua

Lecta Prometheis dividit herba jugis ; and Colchis is mentioned by other poets as noted for similar productions. They were also sometimes appended to the bodies of beasts, for medical and other purposes. Among the Chris- tians of early ages amulets were made of the wood of the cross, or ribbands with a text of scripture written in fhem, as preservatives against diseases. The pope is still supposed to have the faculty of making successful amulets, which he exercises in the consecrating of Agnus Dei, &c. The sponge which has wiped his table was for- merly in great veneration as a preservative from wounds, and even death itself: on this account it is said to have been sent with great solemnity by Gregory II. to the duke of Aquitain. Amu- lets are now justly exploded ; but the great Mr. Boyle alleges them as an instance of the influx of external effluvia into the habit, in order to show the irreat porosity of the human body ! He ulds, that he is persuaded some of these exter- nal medicines do answer; for that he himself, having once been subjected to bleed at the nose and having applied several remedies to check it, found the moss of a dead man's skull (though only applied so as to touch the skin till the moss was warm thereby), the most effectual of any ! ' Burton ( )n Melancholy' prescribes some, while he deprecates the use of others, as cures for it. ' I say with Rcnodeus, they are not altogether to be rejected ; 1'iony (he adds) doth cure epi- lepsie; pretious stones most diseases; a wolf's

dune, born with one, helps the colick; a spider an au'uf,' ivc.

It will assist the readers of our early poets, to peruse a curious extract fro in the scarce work of Ri'gnuld Scot, on the Discoverie of Witchcraft, with respe;:t to what was onee thought to be the specific virtues of certain stones worn as amulets: ' An auat (iliev sauj hath vertue against the bitinj; of scorpions or serpents. It is written (but 1 will not ˆtantl to it) that it maketh a man eloquent, and procured! the favour of princes; yea, that the fume thereof dooth turn awaie tem- pests ! Chelidoiiius is a stone taken out of a swallowc which curcth melancholic! Amethy- sus maketii a droonken man sober, and refresh- vth the wit! The eorall preservelh such asbeare it fro m Fascination or bewitching, and in this respect they art: handed about children's necks! A topase healeth the lunatike person of his pas- sion of hmacie! Aitites, if it be shaken, soundeth as if there were a little stone in the bellie thereof: it is piod for the falling sicknesse, and to pre- vent o.ntmuTie birth ! ('halcedonins maketh the bcar>T luck it: in law , quiekeneth the power of the bi.uie, and is aK< > < >t force against the illusions of ti.cdneil, an-1 :>han!;i:,tieall LOgitationi! Cor-

S AMU

neolus mitigath the heate of the mind, and qua- lifieth malice, it stauncheth bloudie fluxes ! Iris helpeth a woman to speedie deliverance, and maketh rainebows to appeere.' He more wisely adds: ' Hereby ye may understand, that as God hath bestowed upon these stones, and such other like bodies, most excellent and woonderful vertues ; so according to the abundance of hu- mane superstitions and follies, manie ascribe unto them either more vertues, or others than they have.' See Dray ton's Muse's Elysium, 9//t Nymphal, which is in fact a parody of the above.

AMUND, or AAMUND, in old law; from a pri- vative, and the Saxon munde, tuition ; a person discharged from tuition or wardship.

AMUR, or JAMUR, a considerable river in Asiatic Russia, which is formed by the junction of the rivers Argun and Schilk, and falls into the sea of Okhotsk, about 53° N. lat. It was formerly named Charan-Muran, but at present the Chinese call it Sagahn-Ula and Gelong-Kiang, or the Dragon river. It has a course of 400 miles.

AMURACORY, a corps of Turkish soldiers belonging to the order of the Janissaries.

AMURATH, or AMURAT I., the fourth em- peror of the Turks, and one

of their greatest prinees, succeeded Solyman in 1360. He took from the Greeks Gallipoli, Thraro, ind Adriario- ple, which last he chose for the place of his re – sidence. He is said to have gained thirty-six battles ; and, in order to form a body of devoted life-guards, appointed his officers to seize annually the fifth part of the Christian youth taken in war These, after being instructed in the Mahom- medan religion, inured to obedience by severe discipline, and trained to warlike exercises, formed the first corps of Janissaries, or New Soldiers, who soon became the chief strength of the Ottoman armies. At length the death of Lazarus, despot of Servia, who had endeavoured in vain to stop the progress of Amurath's arms, touched Milo, one of his servants, in so sensible a manner, that in revenge he stabbed the sultan in the midst of his troops, and killed him upon the spot, A. D. 1389, after he had reigned twenty-three years.

AMURCA, in pharmacy, an astringent medi- cine made of the refuse of expressed olives. Hippocrates applies the word to a putrid state of the liver.

AMUSE', \ Fr. muser, amuser, sup AMUSE'MENT, f posed to derive its origin AMU'SIVE, {from the Latin musa. Hence AMU'SIVELY. * it may mean to cultivate an acquaintance with the Muses by way of relax- ation from severer studies and employments ; to entertain by directing the attention to lighter subjects ; to promote pleasure ; to lull by quiet and soothing occupations ; to entertain ; to divert; to recreate. In an old sense it was synonymous with ' to muse,' which see.

Suffryinge yourselues to be deceyued throughe the volupte and delectation of youre eares, as they do that amuse thcmselfe sonner to heare the sophistes and logyeyans to dispute, than to heare speake of the affaire* of the cytie.

Translation of Thwulida, b. iii. p. 80.

Flowers of rhetoric in sermons and serious dis- courses are like the blue and red flowers in corn, pleasing to those who come only for amusement, but prejudicial to him who would reap profit from it.

Pope.

I yesterday passed a whole afternoon in the church-yard, the cloisters, and the church, amusing myself with the tomb-stones and inscriptions that I met with in those several regions of the dead.

Addison.

In latter ages pious frauds were made use of to amuse mankind. Id.

But amaz'd,

Behold th' amusive arch before him fly, Then vanish quite away. Thornton.

As Atlas groan 'd

The world beneath, we groan beneath an hour ; We cry for mercy to the next amusement : The next amusement mortgages our fields. Young. To me 'tis given, whom fortune loves to lead Through humbler toils to life's sequesterM bowers : To me 'tis given to wake th' amusive reed, And soothe with song the solitary hours.

Whitehead's Elegies, 3.

We never consider ourselves as possessed at once of time sufficient for any great design, and therefore indulge ourselves in fortuitous amusements. Rambler. Happy are they whose amusement is knowledge, and whose supreme delight is the cultivation of the mind. Hawhesworth's Telemachut.

But hail, ye mighty masters of the lay, Nature's true sons, the friends of man and truth, Whose song sublimely sweet, serenely gay, Amused my childhood and informed my youth.

Beattie's Minstrel.

AMUSETTE, in military affairs, a species of offensive weapon, invented by the celebrated Marshal Saxe. It is fired off in the same man- ner as a musquet, but is mounted nearly like a cannon, and it was found of considerable use to the French and Prussians during the late war. They armed their horse artillery with it. The ball with which it is loaded is from one pound and a half to two pounds weight.

AMUTURI, a large river of South America, in the new kingdom of Granada, which, being uniied to the Cazanare, enters the Orinoco on the north side.

AMY, I-‘r. a friend ; in law, a person next of kin to an orphan, and who is to be intrusted for him ; called also AMY PROCHEIN.

AMY ALIEN, a foreigner residing in Britain, but subject to some power in alliance with us.

AMYCHE, in medicine ; efya > x»} > from apvaau), to scratch ; a superficial exulceralion or scarifi- cation, according to Hippocrates.

AMYCL/E, in ancient geography, a city in Laconia, distant about eighteen miles from the metropolis, famed for the birth of Castor and Pollux. It sent a considerable colony of its in- habitants into Upper Calabria, who built there a city which they called by the same name. See next article.

AMYCL.S, a city of Italy, in Calabria, situated Between the Cajeta and Terracina. According to Pliny and Solinus, its territory was so infested with vipers and othei serpents, that the inhabi- tants were obliged to abandon their original uwellings. Among the ancient poets they ob- tained die epithet of taciti^or silent, from a law

which forbade any one under severe penalties to mention the approach of an enemy. In the end this proved the ruin of Amyclae ; for the Dorians appearing unexpectedly under the walls, no one ventured to transgress the law, and the city was easily taken.

AMYGDALA, in natural history, a species of echinus marinus, of the genus of the brissoides. See ECHINUS.

AMYGDALA, in anatomy, two glands of the fauces, called tonsils

AMYGDALA, in surgery, superfluous flesh growing at the root of the tongue.

AMYGDALATE, in pharmacy, an artificial milk or emulsion made of almonds.

AMYGDALO1DES LAPIS, in natural history, a stone which resembles the kernel of an almond. It is no natural fossil, but the petrified spine of an echinus marinus, or sea-urchin, of the nature of the lapis judaicus, but wanting the pedicle or stalk.

AMYGDALOID, in mineralogy, a com- pound mineral, composed of spheroidal particles or vesicles of lithomarge, green earth, calc spar, and steatite, imbedded in a basis of fine grain- ed green stone, or wacke, containing also some- times crystals of horneblend.

AMYGDALUS, in botany, the ALMOND and PEACH ; a genus of the monogynia order, be- longing to the icosandria class of plants ; and, in the natural method, ranking under the 36th order, Pomaceae. The characters are : CAL. a single-leaved perianthium beneath, tubular, and quinquefid : COR. five oblong petals, which are inserted into the calyx : STAM. thirty slender erect filaments, half the length of the corolla, and inserted into the calyx ; the antherae are simple : PIST. a round villous germen above ; a simple stylus, the length of the stamina ; and the stigma headed: PER. a large roundish villous drupa, with a longitudinal furrow : the seed an ovate compressed, not perforated in the pores. There are, , 1. A. communis, or common almond, a native of Africa, near twenty feet high ; and whether planted singly in an open place, or mixed with others in clumps, shrubbery quarters, &c. one of the finest flowering trees in nature ; 2. A. mana, the dwarf almond, a native of Asia Minor ; 3. A. persica, or the peach, said to be a native of Europe ; but of what place is not known. Cul- tivation has produced many varieties of this fruit; of which the following are the most esteemed :

1. Admirable.

2. Beautiful Che- vreuse.

3. Bellegarde.

4. Bloody Peach.

5. Bourdine.

6. Catherine.

7. Chancellor.

8. Early Purple.

9. Great French Mig-

non.

10. Late Admirable.

11. Late Purple.

12. Malta.

13. Monstrous Pavy.

14. Montauban.

15. Nivette.

16. Old Newington

17. Persique.

18. Portugal.

19. Rambouillet.

20. Red Magdalen.

21. Red Nutmeg.

22. Rossanna.

23. Royal.

24. Small Mignon.

25. Smith’sNewingtou

26. Venus’s Nipple.

27. Vineuse.

28. White Magdalen.

29. White Nutmeg.

30. Yellow Alberge..

AMY 150

4. A. inn i-persiea, or the nectarine, which, ac- cording to Liniuvus, is only a variety of the peach, having a smooth coat, an accident origin- ally. Of this many varieties are now cultivated ; and the following are esteemed:

5. Newington.

AMZ

1. Elruge.

2. Golden. 6. Roman. :3. Italian. 7. Scarlet. 4. Murrey. 8. Temple’s.

AMYLACEOUS, in natural history; from amylurn, starch ; a term applied to the tine flour of farinaceous seeds, in which consists their nutritive part.

AMY'LUM, { A privative, and /tvX?j, a AMVI.A'CEOUS. S mill. The substance called starch obtained from wheat without using a mill. The epithet is also applied to the mealy sub- stance of potatoes, arrow-root, &c. used in medicine and domestic economy.

AMYMONE, in mythology, the daughter of Danaus and Europa, famous for an amour with Neptune, who raised a fountain in the place where he first beheld her. She is said to have married Enceladus, son of /Egyptus, and to have murdered him on the bridal night.

AMYN, a learned Persian author of the seventeenth century. His principal work is Heft Iclym, or the Seven Climates, being, it is said, a correct description of the countries, cli- mates, &c. of the east.

AM YNTAS, in entomology, a species of Iles- peria.

AMYNTH A KMPT.ASTKA, in pharmacy, de- fensative, or strengthening piasters.

AMYOT (James), bishop of Auxerre and meat almoner of 1 ranee, was born of an obscure family at Melun in l."> H, and studied philoso- phy at Paris, in the college of Cardinal Le Moine. lie was naturally dull, but diligence made amends for his defects ; and he left Paris at the aˆv of twenty-three, for lUmrges with the Sietirl'olin, \ho was at the head of the Abbey •ot'St. Ambrose. At the recommendation of this abbot, Amyot was first received into the house of one of the kind's ministers as tutor to his children: where he obtained the patronage of Margaret, duchess of Herrv, sister to Erancis I. throuuh \hosr intlnence he was made professor of Greek and Latin in the I 'niversity of Bourges. Here he tran-!; > ted into l'n»r,ch the Amours of d ('harielea, from the. Greek oflle- . imj; accompanied Morvillier to embassy t'rom llemy II. to that isitrd Home, and resided with for two years. Soon : ardinal Tournon his two younger ie translated the < 1 \. uave him the npei'_rne, and made ml bishop of curator of the made him oly Ghost. — was asked to \\hirh he replied, \vnte their ks are, 1 . A

Translation of Heliodorus, folio. 2. Diodorus Siculus, folio. 3. Daphnis and Chloe, from Longus, 4to. 4. Plutarch's Lives and Morals, 2 vols. folio. 5. Lettre a M. de Morvillie, con- taining an account of the author's journey to Trent. 7. CEuvres Mele"es, 8vo. 8. Projet de 1′ Eloquence Royale, 8vo.

AMYRALDISM, a name given in the seven- teenth century to the doctrine of universal grace as explained and asserted by Moses Amyrault and his followers, which was in substance, that God desires the happiness of all men, excluding none by a divine decree ; that he refuses to none the power of believing, but that he does not grant to all his assistance, that they may improve this power to saving purposes.

AMYRAULT (Moses), a French protes- tant divine, born at Bourgueil in Touraine in 1596. He studied at Saumur, where he was chosen professor of theology. His works gained him the esteem of Catholics as well as Pro- testants, and the friendship of Cardinal Riche- lieu, who consulted him on a plan of re-uni- ting their churches, which was altogether unsuc- cessful. He published a treatise on the doctrine of predestination and grace ; an Apology for Protestants ; a Paraphrase on the New Testa- ment ; and several other works.

AMYRBERIS, in botany, a name used by some authors for the barbery tree.

AMYRIS, a genus of the monogynia order and decandria class of plants. The characters are : CAL. a small single-leaved perianthium, four- toothed and persistent : COR. four oblong petals, concave and expanding: STAM. eight erect sub- ulated filaments: A NTH. oblong, erect, length of the corolla : PIST. ovate germeu above : STY. thickish, length of the stamina : STIG. four-corner- ed : PERICARP, a round drupaceous berry : SEED globular glossy nut. The most remarkable species are : — 1. A. balsamifera, or rose-wood, found in Jamaica and the West India Islands. 2. A. ele- mifera, or shrub which bears the gum elemi, a native of South America. 3. Gileadensis, or opo- balsamum, found in Arabia Felix. 4. A. toxifera, or poison wood, found in Providence, llathera, and others of the Bahama Islands. From the amyris elemifera, which is called by the na- tives of the Brazils icicariba, is obtained the resin improperly called gum elemi, or gum lemon. This drug is brought to us from the Spanish West Indies, and sometimes from the East Indies. The amyris gileadensis yields the balsam of Mecca, of Syria, or of Gilead, the most fragrant and pleasant of any of the balsams. The true balsam-tree is found near Mecca.

AMZEL, in ornithology, the name of a bird of the merula, or black-bird kind, of which there are two species ; the ring amzel, or merula tor- quata, and the merula montana, called simply the amzel. The ring amzel is a little larger than the common black-bird. The back dusky blackish brown, throat and breast variegated with white, the lower part of the throat surrounded with a broad white ring, whence the

bird derives its name. The wings and tail are blackish, but in the female variegated with white. This bird feeds on in- sects and berries, and is common about the Peak of Derbyshire, where it is called the rock ouzel.

AN, Ang.-Sax. Eine, one ; the original article a, or rather an.

Robert verst Courtehese hys gode suerd adrou, And sniotte anne vp pe helm, and sucha stroke him-

&* >

pat pe scolle, and tep, and pe necke, and be ssoldren he to clef. R. Gloucester . D. 401.

Thoroue lyvar and longs bathe

The sharp arrowe ys gane, That never after in all his lyffe days,

He spayke mo wordes but one ; That was Fyghte ye, my merry men, whyllys ye may,

For my lyffe days ben gan.

Percy’s Reliquet, vol. i. p. 11.

It is certain that odours do, in a small degree, nourish ; especially the odour of wine ; and we see men an hungred do love to smell hot bread. Bacon.

A wit’s a feather, and a chief a rod,

An honest man ‘s the noblest work of God. Pope.

AN ; the imperative An of the verb Anan, to

grant :

Tooke.

An ay bi it selue for fiue schillynges was bouht, A pere for penyes tuelue, or pei had it nouht.

R. Bntnne. p. 175.

And eftsoone he denyede with an ooth for I knowe not the man.

Widif. Matthew, c. xxvi. p. 22. Lady Helen ran to the deip draw-well,

And knelt upon her kne. My bonny sir Hew, an ze be here I pray thee speak to me.

Percy's Reliquts, v. i. p. 40.

Q. Pyx. Nay, an thou dalliest, then I am thy foe, And fear shall force what friendship cannot win. Ben Jomon's Poetaster.

ANA. A plural termination in the Latin lan- guage, and properly denoting a book, or collec- tion of the short sayings, maxims, and criticisms of wise men, taken from their conversations and posthumous papers, &c. They are called books in ana, of which Wolfius has given a complete history in his preface to the Casaubo- niana, where he observes, that though the name be new, the composition is more ancient than is commonly imagined. It appears from D' Herbelot's Bibliotheque Orientale, that the east- ern nations have always been in the habit of preserving the maxims of their sages. Xeno- phon and Plato collected the sayings of Socrates. Caesar compiled the apophthegms of Cicero. Caius Melissus recorded the observations of Maecenas. Arian collected the aphorisms of Epictetus, although the Enchiridion is now lost in the lapse of time. The numerous maxims and observations scattered in Plutarch, Diogenes Laertius, and others, evince an extreme solici- tude in Greece to preserve the ideas and senti- ments of illustrious men. Aulus Gellius has filled his Noctes Atticse with anecdotes and observa- tions of eminent characters whose society he frequented in Rome. De Jocis Cicero was a work of three volumes. De Vassan commonly wrote down whatever things of importance he heard Scaliger say. In some cases the minute- ness of such a practice misht be highly proper. Had the pertinent remarks that dropped from the orators, statesmen, and sasres of Greece and Koine, been handed down to us, or at least a se- lection of them, they would have been attended with considerable practical utility — would have furnished the polite world with a fund of short

truths and sentiments on every subject in the most perfect form — would have relieved the inanity of conversation ; and, being perfectly classical, would have exercised an imperceptible influence on the formation of taste ; in short, would have been a Colloquia Mensalia,

through which we might see the ancients and enter into the spirit of their conversations. ‘ The conversa- tions of the ancients,’ says a late author, ‘ would have been of more use to us than all their vo- lumes, and would have more effectually blended instruction and entertainment.’ The proverbs of Solomon, copied by the scribes of Hezekiah, of which those in Scripture are a selection, afford, perhaps, the first instance of this species of writing. The Gemara of the Jews, the Me- morabilia of Xenophon, the dialogues of Plato, the Enchiridion of Diogenes, the small collec- tions of Laertius, Athenaeus, and Plutarch, are all of this description; as also the Orphica, Pytha- goraeae, /Esopica, Pyrrhonea, &c. The term ana seems to have been applied to such composi- tions as far back as the fifteenth century. Poggio Bracciolini, being secretary to five successive popes, used to attend, with a number of eminent persons, in the common hall adjoining the Va- tican, to converse freely on all subjects. This place they termed a place of recreation ; Poggic called it Mendaciorum Officina. The jests and anecdotes related at this meeting were formed by Poggio into a collection, and called the Poggi- ana. Some of them are evidently taken from ancient authors, and not a few from the Fabliaux of the Troveurs. The Fabliau La Culotte des Cordeliers is the Braccae Divi Francisci of Poggio. Le Meunier d’Aleus is Poggio’s Quinque Ova. Du Vilain et de sa Femme is his Mulier Demersa, and Du Pre” Tondu is the Pertinacia Muliebris of the Facetiae. The Scali- gerana, containing the observations of Scaliger, was the first work that was actually published to the world under the title of ana, and led the way to that class of publication. It consists of two collections, Scaligerana Prima and Scali- gerana Secunda. The first was collected by Francis Vertunien Sieur de Lavau, who at- tended the family of the Messieurs Chateigner where Scaliger resided. The work lay in manu- script many years after the compiler’s decease, and was at length purchased by M. de Sigogne, and published in 1669 under the title of Prima Scaligerana, nusquam antehac edita. Scaligerana Secunda was published three years before the work just mentioned, although compiled more recently ; and was collected by two brothers of the name of Vassan, who went to complete their studies at the university of Leyden, of which Scaliger was at that time one of the professors. Being particularly recommended to Scaliger, they were received into his house, and enjoyed his daily conversations, which they wrote down, and soon made up a large manuscript volume. It was published by Isaac Vossius under the title of Scaligerana, sive excerpta ex ore Josephi Scali- geri. About the beginning of the eighteenth century this species of literature was much cul- tivated. The Menagiana is of its kind thought valuable. Menage was a person of good sense, a communicative disposition, and ot’ extensive

information. He lived in the best and most polished society, and had a meeting of literary characters at his house on every Wednesday. During the latter part of his life he daily received persons of that description, and being lively in conversation, and at the same time judicious and happy in his opinions, his friends, who had been themselves improved by his remarks, re- corded them for the benefit of others. A col- lection was published shortly after his death, 1 693 ; and in 1715 augmented by M. La Monnoye, under the title of Menagiana. The Valesiana is a collection of the literary opinions of the histo- riographer Adrian Valois, published by his son, and contains many valuable historical observa- tions. The Perroniana and Thuana are incon- siderable. The Fureteriana contains few topics or criticisms on subjects generally interesting, but alludes chiefly to the dispute which arose between himself and the French Academy, of which he was a member.

The Chevraana, so called from M. Chevreau, evinces considerable erudition; and contains, among other interesting articles, a learned and ingenious commentary on the works of Malherbe, to whom the French language and poetry were highly indebted. The Parrhasiana is the work of Jean Le Clerc, a professor of Amsterdam. It contains much learned philological disqui- sition, and a dissertation on poetry and elo- quence. The Huetiana contains the detached thoughts and criticisms of Huet, bishop of Yvrauehes, a person of extensive reading, who had enjoyed the society of many distinguished characters. ‘Being attacked in the decline of I il’e !>v a malady which impaired his memory, lie employed himself in committing to paper de- tached observations; which were published after his death, by the A bin’- d’ Olivet, under the name of Huetiana. Many parts of this work are valuable ; and if some of his opinions in matters of taste display singular or defective (‘relinks, there are others which are just and refined. The Casauboniana contains the mis- cellaneous observations of the celebrated Isaic » a

‘1 he most important native publication which e in br assigned to this class, is the Walpoliana, transcribed i’rom the literary conversations of IIo- ia

friendly conversation. He was a gouty subject ; and probably indulged in the pleasures of con- versation to pass away the hours which would otherwise have been tedious and melancholy. It is related of him, that

when living at Straw- berry hill, he generally rose from table about five o'clock, and taking his place on his drawing- room sofa, would beguile away the hours till two o'clock in the morning, in miscellaneous conver- sations, full of singular anecdotes, strokes of wit, and acute observations. These after his death were collected, and published in two volumes, under the title of Walpoliana. The Baconiana Atterburyana will enliven the weary scholar in his heavy hours; but Horace Wal- pole was one of the most enlightened spectators of his age. Political characters and subjects were brought under his daily review ; and being endowed with a vivacity of temperament beyond most other men, he sketched the most lively pictures of the morals and manners of the reigns of George the II. and III.; and was better cal- culated than any other man, to lead the way in this species of composition.

The Colloquia Mensalia of Luther compre- hends certain conversations between Luther and his friends; and was first published in 1566. The emperor of Germany at the instigation of the Pope issued an edict to suppress the pub- lication, inasmuch as it contained much sar- casm on the popish miracles, relics, &c. It was long supposed that all the copies were destroyed ; but in 1626 Van Sparr, a German, having occasion to build on the foundation of a house formerly belonging to his grandfather, found a printed copy of the Colloquia in a deep hole wrapped up in a linen cloth. This he trans- mitted to his friend Captain Bell in England, who undertook a translation of it.

The next work of this description is Selden's Table Talk, written during twenty years' acquaint- ance by his Amanuensis. It contains many curious facts and opinions respecting the po- litical and ecclesiastical history of his time. The sentiments are perspicuous and agreeable ; and Clarendon acknowledges the author to be ' a clear discourser, who possessed the faculty of making difficult things easy, and of presenting them clearly to the understanding.' Boswell's Life of Johnson, and Cowper's Table Talk, have their several excellencies. The Italians in their Motti e Burle, and occasionally in their ˆovels, have recorded the opinions and witticisms of their artists. Manso, in his life of Torquato Tasso, has made one book full of the sayings of thai poet. His conversation, however, was neither gay nor brilliant. Goldoni's drama of Torquato Tasso thus contrasts his writings and conversation :

Ammiro il suo talento gradisco e carme suoi Ma piacer non trovo a conversar con lui. The Italians have not distinguished themselves in ana ; they want that mobility of imagination and strict vivacity of expression which forms the charm of social life. The Spaniards have

dis- tinguished themselves less than the Italians The most perfect form of these works is that oi the French. Upon the whole this kind of wri- ting is calculated to pourtray the most lively

images of distinguished persons ; and as men generally drop the mask in society, and converse in a manner quite unpremeditated, we shall find for the most part in books of ana the turn of mind and manner of thinking peculiar to those whose conversation they detail ; they fur- nish, however, no data of their opinions. To support conversation, display ingenuity, surprize by paradoxes, and dazzle by shining metaphors, often beguile men in the hour of colloquial en- joyment, and prompt them to lay down positions which they never held in sincerity, and perhaps had never seriously examined. Dr. Southey has recently given a new application of the word ana in two volumes of miscellaneous observa- tions, gleaned from some of the best fields of literature, under the appropriate title of Om- niana.

ANA, an East Indian coin worth one shilling and eleven-sixteenths of a penny sterling.

ANA, in medicine, avd, a term used in pre- scriptions for each, which is commonly written A or A A.

ANA CAPRI, a small town of the Neapolitan Island of Capri, belonging to the principata di Salerno. • See CAPRI.

ANAB, a city in the hill country of Judah, south of Jerusalem, where Joshua extirpated the Anakim, supposed to be the same with Nob.

ANABAPTISM. See ANABAPTISTS.

ANABAPTISTS ; from ava, over again, and Sa-n-Tiˆf/f, a baptizer; in ecclesiastical history, a name that has been sometimes given to all those Christians who consider baptism by any other mode than that of immersion, or adminis- tered to any other subject than one who can give a confession of faith, invalid. For a de- tailed account of this denomination of Chris- tians, the reader must refer to the word BAPTISTS, and BAPTISM. We shall here give a few general observations explanatory of the historical sense of the term. It is certain that some of the earliest seceders from the Catholic church denied the validity of its baptism; and received none into their communion without re-baptizing them. Such was the conduct of the

Novatians, Do- natists, and others. The Catholics, on the other hand, denied the baptism of heretics to be valid; aud many instances occurred, especially in the eastern churches, of re-baptism. Some German Baptists, especially in modern times, are said to have administered baptism more than once to the same individual ; who, after having been excommunicated, was again received on a pro- fession of repentance. The term, however, is chiefly applied in history to that body of reli- gionists who disturbed the peace of Germany early in the sixteenth century ; and greatly re- tarded the progress of the Reformation. The Catholics attribute to the worldly ambition of Luther the whole of that memorable war of the peasants, in which the Anabaptists took the lead; although it is well known that Luther protested against any connection with such parties. The ringleaders of this sect were three, Nicholas Storck, Mark Stubner, and Martinus Cellarius. They pretended that they were positively sent of God to teach, that they could foretell future events, and that they wrre on a footing with the

prophets and apostles. Storck was a baker, and had chosen twelve of his o\vn trade as his parti- cular associates, whom he called twelve apostles, and seventy-two disciples. Cellarius had asso- ciated himself with Munzer, at Zwicka, in freaks of the wildest enthusiasm. Both these men were ignorant mechanics ; Stubner had some learning, which he employed in perverting the Scriptures to subserve his purposes. Luther on his return from banishment, after an interview with these enthusiasts, dismissed them with these remark- able words : ‘ The God whom I serve and adore will confound your vanities.’ It is evident from Melancthon’s Epistle that they rejected the bap- tism of infants. Munzer after appeared at Alsted, on the borders of Thuringia, in the elec- torate of Saxony, where he inveighed against both the pope and the Reformation, asserted a divine commission to institute a new political community, took an oath of his followers to put to death all wicked parsons, to appoint righteous magistrates, and to institute a new and holy so- ciety. The design however being discovered, he fled to Nuremberg; and on his expulsion thence retired to Mulhausen, where he had al- most succeeded ; for in 1525 vast numbers of peasants from Suabia, Thuringia, and Franconia, entered into his schemes, and the princes were at last compelled to unite their forces and have recourse to military measures before this despe- rate insurrection was quelled. Munzer, however, being slain in the battle, the few remaining pea- santry dispersed, after a series of skirmishes and commotions, which cost the provinces 50,000 men.

Their opinions, according to Fueslin, were digested into the following points of doctrine : That the church of Christ ought to be exempt from

all sin ; that all things among the faithful should be in common; that all usury, tithes, and tribute ought to be abolished; that infant baptism was an invention of the devil ; that every Christian was invested with a power of preaching, and that the church stood in no need of ministers and pastors ; that in the kingdom of Christ civil magistrates were useless ; that God still continued to reveal his will by dreams and visions to chosen persons ; and that Christ was now about to assume the reins of civil govern- ment. Several laws against them were esta- blished in Saxony, Switzerland, and other parts of Germany, from the year 1525 to 1534. About the latter period they attracted considerable at- tention in Westphalia, under John Matthias of Haerlem and John Boccold of Leyden, two very able and intrepid leaders, one being a baker^ and the other a journeyman tailor : both however are said to have possessed natural ora- tory in a considerable degree, bold and confi- dent address, and many pretensions to superior sanctity. Having gained over a Protestant preacher of the name of Rothman, who had introduced the Reformation doctrines into Mun- ster, and one Cnipperdoling, a citizen of influ- ence and respectability, they determined to make that city one of the first rank in the empire, and the centre of their future effort? Accordingly one night in February, having first stized the arsenal and senate-hcuse, they rau

through the city, brandishing their drawn swords and crying, ‘ Repent and be baptized,’ and also, ‘ Depart ye ungodly ;’ on which the consuls, the senate, ihe nobility, ecclesiastics, &c. fled with all possible precipitation. Matthias now as- sumed the supreme authority; ordered all the convertible property of the city to be collected into one common fund, and appointed deacons to distribute to the common necessity. All the people who declared themselves of the brother- hood had all things in common. Every one ca- pable of bearing arms was trained for military duty, and every hand that could work employed either for the fortification of the city or the re- plenishing the magazines. Invitations were is- sued in all directions, calling upon all their brethren dispersed abroad to assemble for the purpose of prosecuting and sharing their triumphs. The city of Munster was now digni- fied with the name of Mount Zion ; and assu- rances were held out that from this favoured spot their leaders would go forth and conquer all nations of the earth. Count Waldeck, the bishop and sovereign of Munster, nevertheless, in about three months surrounded the city with a consi- derable army ; but Matthias sallying out with a chosen band put a large party of the besiegers to the sword, and

returned in triumph into the city. Uplifted with his past success, he declared his intention to venture his life on his spiritual pretensions ; and believing himself like Gideon, the chosen servant of heaven, he went forth with only thirty men to overthrow the host of his enemies. He soon, however, learnt his error, for they were all cut to pieces. Notwithstanding lhe sensation which this failure produced in the city Boccold, his coadjutor, quickly allayed the agitation of the public mind. Visions and pre- dictions were continually announcing the ap- proach of some great event, when Boccold stript himself naked and ran through the city, pro- claiming ‘ that the kingdom of Sion was at hand ; that the highest things on earth must be brought low, and the lowest exalted.’ This was followed by the levelling of churches, the degrading of his most respectable associate, Cnipperdoling, even to the office of a common hangman. In the ni’inth of June it was declared by a fellow pro- phet to have been revealed to him from heaven, that John Boccold was called to the throne of !)a\id, and must be immediately proclaimed king < >t Sion ; Hoeeold on his knees declared the .line important circumstance to have been com municated to himself. He therefore accepted e divine intimation, was clothed in purple, dignified with a superb crown, and before him v.as publicly carried a Bible in one hand and a drawn sword in the other He coined money bearing hi* own likeness, appointed body-guards and officers of state, and from his own household set apart twelve judues, in imitation of the judges of Israel. Doubts were hinted shortly atier \iib respect to the obligation of matrimony, ie int’li ‘.ability of taking no more wives than one. which were lolloucd by a solemn declara- ‘i it su< b restraint was an innovation on the ri'dit. of

cessor, was dignified with the name of queen. Freedom of divorce, and licentiousness the most degrading, succeeded. The siege of the city, however, became at last a close blockade ; the supplies of the city were interrupted, and famine prevailed. New visions and revelations sustained the faith of the multitude ; unbelief was punished with death ; and Boccold, in the presence of all his family, cut off the head of one of his wives for having expressed some doubts of the divine authority of his mission. At length deserters from the besiegers, who had been taken into the service of the besieged, escaped from the city and returning to the bishop, informed him of a weak place in the fortification. On June the 24th, being entrusted with a detachment, he as- cended the wall and seizing one of the gates the city was broke up, and reverted to its rightful sovereign. Thus ended the kingdom of the Anabaptists at Munster, after a precarious do- minion of fifteen months. Boccold and Cnip- perdoling were taken prisoners ; and the former, having been the chief instigator of their plans, was loaded

with fetters, paraded in mock ma- jesty through all the neighbouring towns, and exposed at last to the most excruciating tor- tures. It is but just to say, the reformers of Wirtemberg testified against this revolt during the whole period of its continuance ; and stimu- lated the prince of Germany to suppress so vile a system of rebellion.

AN ABASH, in antiquity, couriers mentioned by St. Jerome, who were sent on horseback or in chariots, with despatches of importance.

ANABASIS, in botany, a genus of the class pentandria, order digynia. Its essential cha- racters are : — CAL. a three-leaved perianthium, leaflets obtuse and spreading : COR. five-petalled :. STAM. filaments filiform, longer than the corolla- ANTH. roundish : PIST. a germ roundish, acu- minate, styles two : STIG. obtuse : PERICARP. a berry roundish, seed single and screw-shaped. There are four species : — 1 . A. aphylla, leafless A. a perennial plant found wild on the shores of the Caspian. 2. A. foliosa, leafy A. found wild on the shores of the Caspian. 3. A. tamarisci- iolia, tamarisk-leaved A. a native of Spain. 4. A. spinosissima, thorny A. its native place of growth is unknown.

ANABASIS, in medicine, an increase of fe- ver.

ANABASIUS, a name given by Pliny to the Usnea, or long hairy tree moss.

ANABATA, in ancient customs, a sacerdotal vest, covering the back and shoulders of the priest.

ANABATHRA; from dvaˆaivu, I ascend; in antiquity, a kind of steps or ladder to ascend some eminence. In this sense we read of the anabathra of theatres, pulpits, &c. Anabathra appears to have been sometimes also applied to ranges of seats rising gradually over each other, and a kind of stone blocks raised by the highway side to assist horsemen in mounting or alighting.

ANABATICA, in medicine, ava/Sarucd, a continued fever increasing in malignity.

ANABIBAZON, in astronomy, the dragon’s head, or northern node of the moon.

ANABLEPS, in ichthyology, the trivial name of a species of cobitis. See COBITIS.

ANABOL./EUM, ANABOLE, in antiquity, a kind of upper coat usually worn over the tu- nica.

ANABOLEUS, in antiquity, an appellation given to those who assisted their masters in mounting their horses. The ancients had no stirrups.

ANABROCHISMUS ; from &v&, upwards, and /3p6%oe, a loop ; in ancient surgery, the ope- ration of fastening up hairs in the eyelids when offensive to the eyes, the manner of performing •which is described by Gorraus.

ANABROSIS, or DIABROSIS, in medicine, the issuing of blood at a hole worn in a vein by the corrosion of acrid humours

ANACA, in ornithology, a Brazilian species of paroquet, of the size of a lark. The beak is brown and crooked, the head covered with fea- thers of a liver colour, and there are brown circles about the eyes ; throat gray ; the upper part of the neck and sides are green ; the belly is of a reddish brown ; back green, with a pale brown spot; and the tail also is of a pale brown. There is a deep blood-red mark at the top of each wing ; the rest of the wings being green, except the extremities, which are bluish. The thighs are covered with green feathers, and the legs and feet are gray.

ANACALYPTERIA, from ai/aeoXvTrrav, to uncover; according to Suidas, festivals celebrated three days after marriage, when the bride first uncovered her face in the presence of men. Be- fore marriage the Greek women were rarely permitted to appear in public, or converse with the other sex; and when allowed that liberty, they wore a veil over their faces, termed /coXvjr- rpov, or jcaXwjrrpa. The presents at that time given were also called avaKaXvirriˆia.

ANACAMPLOS, in Greek music, a succes- sion of notes from acute to grave, and thus op- posed tc the euthia, which proceeds from grave to acute.

ANACAMPSEROS, in botany, a synonyme of the portulaca and several other plants.

ANACAMPTERIA, in ecclesiastical anti- quity, edifices adjacent to churches, designed for the entertainment of strangers and the poor.

ANACAMPTIC, an ancient name for that part of the science of optics

which treats of re- flection. See CATOPTRICS.

ANACANDAIA, in zoology, a species of ser- pent found in the Island of Ceylon ; also called bubalinus, i. e. the destroyer of cattle.

ANACARDII, in entomology, a species of papilio, tribe parnassius. The wings are glassy and greenish ; posterior pair brown at the tips, with two spots. Inhabits South America.

ANACARDIUM, or CASHEW-NUT TREE, in botany, a genus of the monogynia order, belong- ing to the decandria class of plants ; and in the natural method ranking under the twelfth order, Holoracae. The characters are : CAL. divided into five parts, the divisions ovate and deci- duous : COR. five reflected petals, twice the length of the calyx : STAM. ten capillary filaments shorter than the calyx, one castrated : ANTH. small and roundish : FIST, a roundish germen:

STYL. subulated, inflected, and the length of the corolla: STIG. oblique: PER. none: RECEP. very large and fleshy ; seed, a large kidney- shaped nut placed above the receptaculum. Only one species is known, viz., A. occidentale. It grows naturally in the West Indies, and arrives at the height of twenty feet in those places of which it is a native, but cannot be preserved in Britain without the greatest difficulty. The fruit is as large as an orange, and full of an acid juice which is frequently made use of in making punch. To the apex grows a nut of the size and shape of a hare's kidney ; but it is much larger at the end which is next to the fruit than at the other. The shell is very hard, and the kernel which is sweet and pleasant, is covered with a thin film. Between this and the shell is lodged a thick, blackish, inflammable liquor, of such a caustic nature in the fresh nuts, that if the lips chance to touch it, blisters will imme- diately follow, which the West Indians use as a cosmetic. The kernels are eaten raw, roasted, or pickled. The milky juice of this tree will stain linen of a good black, which cannot be washed out. The plant is easily raised from the nuts.

ANACATHARSIS ; from av&, upwards, and Ka.9a.ipio, I purge ; in medicine, a purgation by spitting ; in which sense it stands contradistin- guished from catharsis, or evacuation down- wards. Some include amongst anacathartic medicines, all those which work upwards, by the glands of the head, whether vomitories, ster- nutatories, or masticatories.

ANACATHARSIS is also a name given by writers on civil law, to the basilicon repetitse praelec- tionis, made by the emperor Constantine Por- phyrogenitus. It was thus called as being a review, or correction

of the basilicon.

ANACATHARSIS is likewise applied by divines to the clearing up of obscure passages of Scrip- ture, by a spiritual or anagogical interpretation.

ANACEIA, an Athenian festival, in honour of Castor and Pollux. It took its name from those deities who were also called ‘Avaicee, and honoured with a temple called Anacseum. The sacrifices offered at that time, were named &tvi

ANACEPHAL/EOSIS, in rhetoric ; from dv&, again, and KeQaXaiw, to rehearse ; recapitulation, or the summing up the heads of a discourse.

ANACHARSIS, a famous ‘ Scythian philoso- pher, who travelled to Athens in the time of Solon, and, wishing for his acquaintance, he sent him word that a Scythian was at the door, and requested his friendship. Solon replied, that friends were best made at home : ‘ Then let Solon who is at home, make me his friend,’ was the smart retort of Anacharsis ; and struck by its readiness, Solon admitted him. He was the only stranger ever admitted by the Athenians to the honour of citizenship. Croesus invited him to Sardis, with the offer of riches, but he refused, saying, that he came to Greece for improve- ment, not for money. Upon his return from his travels, he attempted to change the ancient cus-

toms of Scythia, for those of Greece; which proved fatal to him ; for the king his brother, despising his innovations, shot him dead in a wood with an arrow. Statues were erected to him after his death. He is said to have first Aiggested the use of the anchor. Anacharsis flourished about A. M. 3420.

ANACHIS, in mythology, one of four deities among the Egyptians, and to whom they ima- gined the peculiar care of each person was com- mitted at his birth ; the other three were Dymon, Tyches, and Heros. They were also called Dynamis, Tyche, Eros, and Ananche ; i. e. power, fortune, charity, and necessity.

ANACIIITES, in mineralogy, the name of the gem adamas, or diamond, so called on ac- count of its being anciently supposed to expel fear from the mind.

ANACHORET; from avaxuptu, I retire into a solitary place ; in ecclesiastical history, a her- mit, or solitary monk, who retires from the so- ciety of mankind into some desert, with a view to avoid the temptations of the world, and to be more at leisure for meditation and prayer. Such were Paul, Anthony, and Hilarian, the first founders of the monastic life in Egypt and Pales- tine. Anachorets among the Greeks consist principally of monks, who retire to caves or cells, with the leave of the abbot, and an allow- ance from the monastery; or who, weary of the fatigues of the monastery, purchase a spot of ground, to which they retreat, never appearing igaiti in the monastery, unless on solemn occa- •sions. When a number of these cells lay in the '•aaie wilderness contiguous to each other, they were called by tin; general name of launa, which dili'rivd from the coenobium or convent inasmuch ;is it consisted of many separate cells, where •. ;ich monk supported himself and lived apart .'mm all human society; whereas the latter was 11 habitation where the monks lived in company, iii.l had all tilings in common. The cells of the s.iuia were called anchor-hotels, anchor-houses, ind destina ; and were, according to the most ancient rules of the order, to be not more than ;\.'Ke feet, square, to contain three windows; • mi' for the administration of the sacrament, one 'or the reception of food, and one for the ad- misMoii of liulit ; and to be walled upon the i.nachorel from the outside, that, thus bricked up in this kind of grave, he might be the more etlectually cut off from the possibility of human intercourse, and live in constant seclusion from the world. In proportion to their supposed piety, the anachorets, besides the common restric- timis of the order, imposed upon themselves ad- ditional tortures, tending in their opinion to the more complete mollification of the flesh. St. i hinstan, at Glastonbury, lived in a cave of only live feet lonu', two and a half broad, and the height ot a man. \Vulfnic, of Ilaselborough, irn merged himself in a tub of cold water every ni'Jit to say tin1 psalter. Others vowed eternal ileuee; and oppressed themselves by constantly \Mamij; heavy chains, bracelets, fetters, &c. This kind of life had been growing into repute ever since the tune of Simeon Stylites, about the dox,' „) tin; fourth century, a wretched being, who at \]\f aue of thirteen entered into a mo-

nastery, where he passed a noviciate unusually severe ; and afterwards confining himself by a heavy chain, within the space of a mandarin, or circle of stones, ascended a column gradually raised from the height of nine to sixty feet, and sat upon the top of it the remainder of his life, a period of about thirty years. Crowds of pil- grims thronged around his pillar from all parts of the world, to witness so extraordinary an in- stance of piety ; and are said to have been proud of the honour of

supplying his necessities.

After his death many others affected to aspire after an equal degree of sanctity ; the mountains became full of hermits; and nothing was so fashionable as retirement from the world. In the seventh century the anachorets were distin- guished from the hermits, and formed into a separate order. The general councils dwelt largely on its importance, represented the sub- jects of it as by far the most perfect sort of monks, extolled the piety of Paul, the first who had ever devoted himself to this life of solitude, and finally modified the practice into a system, honoured by the illustrious names of St. Anthony and St. Hilarian. The people also revering their piety presented the devotees with large sums of money.

To render the order more venerable, the monks would frequently select from among themselves, in their different abbeys, a brother who was thought to be exemplary, and devote him to this unreserved seclusion as one of the most dis- tinguished honours they could confer upon him; affording him an opportunity of showing his contempt of the world, and indulging incessantly in religious contemplation. The following, which was the usual mode of initiation into this kind of life, we copy from the Trullan canons : —

Those who affect to be anachorets shall first, for three years, be confined to a cell in a mo- nastery ; and if, after this, they profess that they persist, let them be examined by the bishop, or abbot ; let them live one year at large : and if they still approve of their first choice, let them be confined to their cell and not be permitted to go out of it, but by consent and benediction of the bishop in case of great necessity.

The setting apart of a devotee was accompanied • by an august ceremony ; and much deep investi- gation as to the motives and principles by which he was actuated. A short account of this cir- cumstance we shall insert from Fosbrooke's Monachism, 4to. 1817.

‘ The anachoret was to be advised by the bishop, or some other priest, to examine his conscience, whether he acted from piety sincere or feigned ; and if the answer was favourable, the priest was, by order of the bishop, to shut him up. Provision was first to be made for his con- fession ; and on the day preceding the cere- mony, he received the refection of bread . and water. On the night following he passed devout vigils in the church nearest the hermitage. On the morrow, after an exhortation to the people and the anachoret, the priest began a responsary ; and, upon the conclusion of it, prostrated himself with his ministers before the step of the altar, and said certain psalms. After

these, the mass was celebrated in the neighbouring church, and

Xwptw, to go away, to retire. One who betakes himself to solitude.

an especial prayer said for the anachoret. After the gospel, he offered a taper, which was to burn upon the altar at the mass. The anachoret then read the schedule of his profession (which con- sisted only of the vows of obedience, chastity, and stedfastness), at the step of the altar ; and . if he was a layman, the priest read it for him. Hf then made a sign of his intention, and offered it upon the altar, kneeling. The priest conse- crated the habit; and sprinkled that and the anachoret with holy water. Then followed mass and litany ; after which they went in procession to the hermitage. The priest took him by the right hand and led him to the house, which was then blessed and shut from without. The priest, with the assistants, retired, leaving the anachoret within, and advised the by-standers to pray for him.'

ANACH'ORETTE,")

ANACH'ORTTE,

ANACHORET'ICAL,

AN'CHORET,

AN'CHORITE,

AN'CRESS, or

AN 'c HO R ESS,

AN'CRE, or

AN'CHOR.

Sometime I am religious, Now like an anker in an hous.

CJuiucer. Tlte Romaunt of the Rose, fol. 146. ci. 1.

And it followed (saith Maurdine) as the virgine had spoken : which virgin vowed to Hue a religious life, and became an ancresse at

Crowland.

Stowe's Chro. Howe's Ed. 1641.

Call not these wrinkles graves ; if graves they were, They were love's graves ; or else he is no where. Yet lies not love dead here ; but here doth sit, Vow'd to this trench, like an anchorit.

Donne's Elegy. The Autumnal.

ANACHORITA, among ecclesiastical writers, a name given to the cells of recluses, which could not be erected without consent of the bishop.

ANACHREMPSIS, in ancient medicine; from avaxp«ˆ7rro/tai ; to strain up a purgation of the lungs by expectoration.

ANACH'RONISM, } 'Av&, and xpovoc,

ANACHRONISTIC. { time. Deviation from

the order of time.

There are in scripture of things that are seemingly confused, carrying semblance of contrariety, anachro- nismsˆ metachronisms, and the like, which brings in- finite obscurity to the text. Hole's Golden Remains.

Among the anachronistic improprieties which this poem contains the most conspicuous, is the fiction of Hector's Sepulchre. Warton's English Poets.

This leads me to the defence of the famous ana- chronism, in making JEne&s and Dido cotemporaries : for it is certain, that the hero lived almost two hundred years before the building of Carthage.

Hryden.

ANACHRONISM also stands opposed to para- chronism, whereby a fact is placed later and lower than it should be.

ANACHYTIS, in natural history, a species of echinus, of the second order of vermes, mol- lusca; it is heart-shaped, oblong, and conic; base flatfish ; its divisions are ten ; its mouth subrotund, surrounded with an elevated margin; #ent oval and notched below.

ANACLASIS, that elevation of the arm which makes it and the humerus appear as but one bone.

ANACLASTIC GLASSES, a kind of sonorous phials, or glasses, chiefly made in Germany, which, being flexible, emit a vehement noise by means of the human breath. They are a low kind of phials with flat bellies, resembling in- verted funnels, whose bottoms are very thin, not quite flat, and a little convex. Upon applying the mouth to the orifice, and gently sucking out the air, the bottom gives way with a loud noise, and from convex becomes concave. Upon re- spiring or breathing gently into the orifice of the same glass the bottom with no less noise bounds back to its former place, and becomes convex as before. It is to be observed that if the bot- tom be concave at the time of inspiration, the glasses will burst; as also if it be convex at the time of expiration.

ANACLETERIA; from

ANACLETICUM, in the ancient art of war, a particular blast of the trumpet, whereby the fearful and flying soldiers were rallied, and re-called to the combat.

ANACLETUS, bishop of Rome, succeeded Linus in the second year of Titus, A. D. 79. He is said to have suffered martyrdom, after governing the Roman church thirteen years.

ANACLETUS, an anti-pope, set up by Roger, king of Sicily. After a violent ‘contest with In- nocent II. who was supported by the emperor Lotharius, the latter gained the papal chair, and Anacletus died in obscurity in 1138.

ANACLINOPALE ; from avct, icXivw, I re- cline, and o?rXa, arms ; in antiquity, a kind of wrestling on the ground, in which the com-batants fought by pinching, biting, scratching, and other such methods of offence. The Ana- clinopale was contradistinguished from the Or-thopale, wherein the champions stood erect.

ANACL1NTERIA, in antiquity, a kind of pillows on the diriing-bed, whereon the guests leaned. The ancient tricliniary beds had four pillows, one at the head, another at the feet, a third at the back, and a fourth at the breast. That on which the head lay was properly called by the Greeks dva.K\ivTi’ipiov, or avajcXivrpov, by the Romans fulcrum, and sometimes pluteus.

ANACOINOSIS ; from dva, and jcoivw, I communicate ; communication, a figure in rhe- toric, when we consult the adversary, or appeal to the judges what ought, or could have been done on such an occasion.

ANACOLLEMA; from avaicoXXaw, to agglu- tinate ; a composition of astringent powders, ap- plied by the ancients to the head, to prevent defluxions on the eyes.

ANACOLUTIION ; from dvaK6\»Goˆ inco- herent; among ancient grammarians, incohe- rence, or a construction which does not hang together.

ANACOMIDE, in medicine, a word fre- quently used by Hippocrates to denote restora- tion of strength after illness.

ANACONDA, in natural history, is a name

given in the Isle of Ceylon to a very large and terrible rattle-snake, which often devours the unfortunate traveller alive, and is itself account- ed excellent and delicious fare. It is supposed to be the same as the boa of Linnaeus.

ANACOSTE, a sort of woollen diaper made in Flanders and Holland, similar to the serges of Caen.

ANACREON, a Greek poet, born at Teos, a city of Ionia, flourished about A. A. C. 532. Polycrates, tyrant of Samos, invited him to his court, and made him share with him in h'is busi- ness and his pleasures ; which however he after- wards quitted for Athens, where he remained in great favour with Hipparchus, until the death of his patron obliged him to return to his native city ; whence he retired to Abdera on the break- ing out of the disturbances under Histiaeus ; and died there, being choked it is said with a grape stone, at the age of eighty-five. The odes of Anacreon, says Rapin, are perpetual graces ; it is familiar to him to write what is natural and to the life ; and the air of his poetry is so deli- cate, so easy, and so graceful, that among all the ancients there is nothing comparable to them. We have but fragments remaining either of his life or works ; but it appears from these that he was a voluptuary, both in practice and in princi- ple ' at once,' as it has been well said, ' one of the many who practised what he taught, and of ihe few who would dare to teach all that he practised.' His poetry, for the most part in praise of wine, and of the appetites which have been so often and improperly dignified by the name of love, has been frequently translated into English. Cowley has

given an excellent ver- sion of twelve of his odes ; and Fawkes a literal out spiritless one of the whole of them. Mr. Youn'jj and Mr. T. Moore have made more re- cent attempts at a version of Anacreon, and with very different success. The production of the former is coarse and revolting; while that of the latter is not only elegant, graceful, and most harmonious, but executed in a spirit but too congenial with that of his author. We will pre- sent our readers with oue extract from this fas- (.•inalinn writer :

Ki'c TO ctlv Tru'fii'.

II yij ftiXaiva TTU'H,

Ili'i'fi < > fti'fnt' uvT>)v.

lln'H 9ti\affff

() f i'i\ioc GaXaffffav,

T/ir <'" ///\«ii' fffX»jj'?j'

Ti /«H n

Ode xx.

Thus rf-n:':;red by a translator in Bland's An- thology :

The Muc',. earth drinks the falling rain, Trees drink ihe moiston'il earth again; Ocean drinks the mountain gales ; On-aMi's self the sun inhales ; And the sun's hri'. lit ray ; as soon Arc shallowed hy the thirsty moon. All iiatiir • drink-,- -if I vould sip, \Vh\ dash the nectar from my lip?

AX \r i! !•".( )NTIC Vn;sr, in ancient poetry, a k;ic! of \crsi' so caili-1 alter Anacreon. It • (.'ir-ists "!' tY/i •>• fi -..t and a caesura: the first is

usually a spondee 01 iambus, sometimes an ana- pest : but the second and thiid are always iam- buses. Such are those of Prudentius :

Ades | pSter | Ruprejnie,

Quern ne|mo vi|dtlt unjquam.

ANACRISIS ; from avd, and epivw, I judge ; among the ancient Greeks, a kind of trial or ex- amination, concerning their family, property, &c. which the archons, or chief magistrates of Athens underwent before their admission into that office. The anacrisis performed in the senate-

house, stands distinguished from the doci- masia, which was a second examination in the forum. Some suppose all magistrates under- went the anacrisis.

ANACRISIS, in the civil law, an investigation of the truth, especially as made by torture.

ANACROSIS, in antiquity, the first part of the Pythian song, wherein the combat of Apollo and Python are described. It contained the preparation to the fight.

ANACTES, a title assumed by the brothers of the king of Cyprus, who administered go- vernment.

ANACTORION, in botany, another name for the gladiolus of Linnaeus.

ANACYCLUS, in botany, a genus of the po- lygaraia superflua order, and syngenesia class of plants ; and, in the natural method, ranking under the forty-ninth order, composite discoides. The characters are : CAL. hemispheric and im- bricated : COR. radiated : STAM. five very short capillary filaments : ANTHERS, cylindric and tubular: PIST. an oval germen : STYL. filiform: STIGMA, bifid in the hermaphrodites : STIGMATA double and reflected in the females : PERICAR. none: CAL. unchanged: SEEDS solitary, with membraneous wings : RECEPTACULUM chaffy. The species are : A. creticus, &c. trailing ana- cyclus, an annual, native of Crete. A. orientalis, eastern anacyclus, native of the East. A. aureus, golden-flowered anacyclus, an annual or peren- nial, native of the south or east of Europe. A. valentinus, fine- leaved anacyclus, an annual, native of Valentine. A. Alexandrinus, an annual, native of Egypt.

ANADAVADjEA, in ornithology, a barba- rous name of a species of alauda. See ALAUDA. ANADEMA, in antiquity, an ornament of the head, wherewith victors at the sacred games had their temples bound, and also worn by the Grecian women.

AN'ADEME, 'Avdd,)na ; from avadiu, to bind round. See DIADEM. A garland. The virgin-huntress sworn to Dian's bow, Here in this shade her quarries did bestow, And for their nymphals, building amorous bowers, Oft drest this tree with anadems of flowers.

Drayton's Owl.

ANADENDROMALACHE, in botany, the same as Althaea.

ANADENDRON, in botany, the same as Althsea.

ANADENIA, in botany; from a, without, and aSi}v, a gland ; because the nectariferous glands, usual in some neighbouring genera, are wanting : CAL. none: COR. petals four, equal, regular; their summits dilated ; concave, bearing the stamens: STAM. filaments four, very short : AN-

THERS roundish : PIST. germ superior, stalked, half-ovate, erect, without any gland at the base : STYL. cylindrical, incurved : STIG. vertical, co- nical : PERICARP, follicle stalked, of one cell : SEED solitary, compressed, without a wing. The species are three : 1 . A. pulchella, elegant anadenia ; this, as well as the two following species, is a native of the south coast of New Holland. 2. A. bifida, three-cleft anadenia. 3. A. ilicifolia, holly-leaved anadenia.

ANADESMA, a bandage to bind up wounds.

ANADIPLOSIS ; from ava, again, and SiTrXooj, I double; in medicine, the return of the paroxysm of a fever, chiefly of a semitertian. It is also called epanadiplosis and epanalepsis.

ANADIPLOSIS, in rhetoric, a reduplication of the last word or foregoing member of a period ; as, ‘ he retained his virtues amidst all his mis- fortunes, misfortunes which only his virtues brought upon him.’

ANADIPLOSIS is also frequently used in poetry, thus:

Additse sociam timidisque supervenit JEgle,

Naiadum pulcherrima.

-Sequitur pulcherrimus Astur,

Astur equo fidens.-

I count it higher pleasure to behold —

The hills and mountains raised from the plains, The plains extended level with the ground,

The grounds divided into sundry veins,

The veins enclosed with rivers running round ;

These rivers making way through natures chains, With headlong course into the sea profound :

The raging sea, beneath the valleys low, Where lakes and rills and rivulets do flow.

Walton.

ANADIRSKOI, a town belonging to Russia, seated on the Anadir. Long. 165° 14'. E. lat. 66° 9′ N.

ANADOSIS ; from dvd, and di5vp.i, I give; in ancient medicine, denotes the distribution of the aliment by the vessels of the body.

ANADROME, in medicine, a recess of pain from the inferior to the superior parts of the body.

ANADROMOUS, among ichthyologists, a name given to such fishes as go from the sea to the fresh waters at stated seasons, and return back again ; such as the salmon.

ANADUOMENE VENUS, in the Grecian my- thology, answered to the sea Venus in the Ro- man, and was the appellation given to one of the chief deities of the sea. The most celebrated pic- ture in all antiquity was that by Apelles, of this goddess coming out of the sea, wringing her wet hair. This picture Augustus bought of the Coans, and placed in the temple of Julius Caesar. Being a little defaced in one place, no painter could be found at Rome to repair the damage. The famous Venus d' Medicis is also a Venus Anaduomene.

ANADYSIS, among ancient divines, denotes the ceremony of emersion in baptism, as distin- guished from KarddvaiG, or immersion.

AN/EDEIA; from dvaidua, impudence, or according to Junius, from dvairiˆ, innocence; in antiquity, a denomination given xo a silver stool in the Areopagus, on which the defendant or person accused was seated for examination.

The plaintiff or accuser was placed on an oppo- site stool called hybris, or injury.

ANESTHESIA, in medicine, a privation of the senses, and insensibility to the touch.

ANvETHETUS, in ornithology, a name some- times given to a species of tern found in Ja- maica, the sterna solida of Linnaeus.

ANAGALL1S AQUATICA, in natural history, brook-lime.

ANGALLIS, PIMPERNAL : in botany, a genus of the monogynia order, and pent?ndria class of plants ; and, in the natural method, rank- ing under the twentieth order, Rotacese. The characters are : CAL. a quinquepartite perianth, persistent: COR. one rotated petal: STAM. five erect filaments shorter than the corolla : ANTH. simple : PIST. a globular germen : STYL. slightly declinated : STIGMA, headed : PERICARP, a glo- bular capsule, unilocular and circumcised; seed numerous and angled ; receptaculum globular and very large. There are four species, easily propagated by seeds ; and when their seeds scatter, they become troublesome weeds. All the species are eaten by cows and goats, but re- fused by sheep ; small birds feed on the seeds. Great medicinal virtues were formerly attributed to the first two species ; but they are now justly disregarded. 1. A. arvensis, or common pim- pernel has a red flower, and is common in corn- fields, and other cultivated places in Britain. It makes a pleasant sallad, and in some places is used as a pot-herb. 2. A. fcemina has blue flowers, and is sometimes found wild in the fields. 3. A. latifolia, or Spanish pimpernel, is a native of Spain, and likewise produces blue flowers. 4. A. monelli, or narrow-leaved pim- pernel, is a beautiful small perennial plant, and produces numbers of fine blue flowers. 5. A. tenella, bog pimpernel : it is perennial, and flourishes on wet heaths and bogs.

ANAGLYPHA, in ancient writers, vessels or other things adorned with sculpture in basso re- lievo.

ANAGLYPHICE, or ANAGI.YPTICE; from aVay \ttyw, exsculpo, I carve; that species of sculp- ture wherein the strokes or figures are prominent or embossed, in distinction from diaglyphice, where the strokes are indented.

ANAGNI, a town of ˆtaly, situated in the Campagna di Roma, thirty-six miles east from Rome, anciently called Anagnia. Near it are the hot waters, formerly called Thermae Aninse. Long. 13° 45′ E., lat. 42° 48′ N.

ANAGNIA, in ancient geography, a town of Latium, capital of the Hernici; which, after a faint resistance, submitted to the Romans, and was admitted to. the freedom of the city without the right of suffrage. It was afterwards a colony of Drusus Caesar, walled round, and its territory assigned to the veterans. Here Antony struck a medal when he divorced Octavia, and married Cleopatra.

ANAGNOSES, or ANAGNOSMATA ; from avu, and yivwericw, I know ; an ecclesiastical book, in the Greek church, containing the lessons appointed for divine service.

ANAGNOSTA, or ANAGNOSTES, in antiquity, kind of literary servant, whose chief business it was to read during meals. They are first

mentioned by Cicero. Atticus, according to Cor- nelius Nepos, always had an aˆnostes at his supper ; and the same custom was kept up by Charlemagne, who at table had the histories and acts of ancient kings read to him. The ancient Greeks also had the praises of their great men and heroes sung while at table. The ancient monks and clergy retained the same Custom, as we are informed by St. Augustine.

AN AGOG I A, in antiquity, solemn sacrifices to Venus, at Eryx, in Sicily, where she was ho- noured with a magnificent temple.

ANAGO'GICKS, ˆ 'Avaywy/}, from '\vdy

ANAGO'GICAL. $ dvd aya>; to lead, or draw upwards. Terms used in what is styled the transcendental philosophy and theology, to de- note what is calculated to elevate the mind to lofty, sublime, and mysterious speculations and contemplations.

The allegory is appropriate to fayth, and the ana- gogicall to hope, and things aboue.

The Whole Workes of W. Tyndall, Sfc. f. 166, c. i.

ANAGOGY, in medicine, the return of hu- mours, or the rejection of blood from the lungs by the mouth.

AN'AGRAM, ˆ Gr. Avd and ypa/t/m,

ANAGRAMMAJ'ICAL, a letter. Applied to ANAGRAMMAT'ICALLY, (the formationof words ANAGRAM'MATISM, Tof a different signifi- ANAGRAM'MATIST, ' cation by the trans- ANAGRAM'MATIZF.. J position of the letters of words already in use.

KKA, And see where Juno, whose great name Is I'nio, in the aniii/

riiin, Displays her »;litt. rinir state and chair, As she riili^htcn'd all the air.

lii'n Johnson's ilfus. of Hymen.

When the- ini.iijriiiniuiitixt takes a name to work upon, tie considers it at first as a mine not broken up, which will not shew the treasure it contains, un- til lie shall have spent many hours in the search of it; for it is hi* business to tind out one word that conceals itself in another, and to examine the letters in all the variety of stations in which they can be possibly ranged. Spectator, No. 60.

ANAGKAMS. Those who adhere strictly to the definition of an anagram, take no other li- berty than that of omittinu; or retaining the letter ft at pleasure; whereas others make no scruple to use c for «•, r lor ?r, s for z, and c for /c; and vice versa. V> e meet with another kind in an- e.ient writers, made by dividing a single word into several ; thus sus tinea mus, are formed out •it the word siistineamus. Anagrams are some- times also made out of several words: such as "ii the question put by I'ilute to our Saviour, veiitas .' whereof we have this admi- nible ana'jTam, \i/. j'.st vir qni adest. The < nioM- the Jews are professed ana- urammati.Nts. '1'ims, of nj, the letters of Noah's nanii', they make p race, and of nvjQ the Mesial), rr:U", '" shall ivjoiee. The French are saiil to h i\,; had thr honour of introducing •• :irt, as it i^ now practised, in the reign of ^•; we tind thr appointment of ana- giammatist to Louis MIL was worth 1200 livres |»T annum. Of this species of lite- rary tritlm/, many examples occur. Thus, the anagram of Gale.nii> is angelus ; that ofLo-

gica caligo ; that of Loraine, alerion, on which account the family of Loraine took alerions for their armoury ; and that of Sir Edmunbery Godefrie, (the name, or nearly, of a gentleman found murdered by the Papists, as it was alleged, in Charles II. reign, ' By Homes rude finger die ! ' Calvin, in the title of his Institutions, printed at Strasburg in 1539, calls himself Al- cuinus, which is the anagram of Calvinus, and the name of an eminently learned person in the time of Charlemagne, who contributed greatly to the restoration of learning in that age.

ANAGRAPIIE ; from dvd and ypa^w, I write ; a register, inventory, or breviate.

ANAGROS, in commerce, a measure for grain used in some of the cities of Spain, parti- cularly at Seville ; forty-six anagros make about lOJth quarters, London measure.

ANAGYRASIUS, in mythology; a name given, according to Suidas, to a certain hero, Agyrus, afterwards worshipped as a god ; who, in revenge for an affront which an old man offered to his grove, inflamed the man's wife with a passion for his son, whose eyes he put out from jealousy, after which he hung himself ; and the woman, who accused the youth falsely, threw herself into a well.

ANAGYRIS, in botany, stinking bean trefoil : a genus of the monogynia order, and decandria class of plants ; and, in the natural method, ranking under the thirty-second order, papilio- nacea;. The characters are : CAT., a bell-shaped perianth : COR. papilionaceous ; the vexillum cordated, straight, emarginated, and twice as long as the calyx; the alse ovate, and longer than the vexillum ; the carina straight and very long : STAM. ten filaments : ANTH. simple : PIST. an oblong germen : STYL. simple : STIGMA, villous : PERICARP, an oblong legumen : seeds are six or more, and kidney-shaped. Of this genus there are three species, viz. A. foetida, a native of the southern parts of Europe, grow- ing to the height of eight or ten feet, and flowering in April or May. 2. A. cretica, a native of Candia and other islands of the Archipelago. 3. A. inodora, a native of Cochin-China, larger than the other species.

ANAGYRUS or ANAGYRIS, a district inAttica, of the tribe Erechtheis, so called, according to some, from the god Anagyrasius ; or, according to others, because there the anagyris grew in great plenty, and the more it was handled the stronger it smelled : hence commovere anagyrum, signi- fies to bring a misfortune on one's self.

ANAII, a town of Diarbeck in Asiatic Tur- key, pleasantly situated in a country producing abundance of corn and fruit. It stands on a stream that flows into the Euphrates, eighty miles W. N. W. of Bagdad, and 240 S. S. E. east of Diarbekir. Long. 42° 28′ E., lat. 34° 6′ N.

ANAHUAK, the original name of New Spain.

ANAITIS, in mythology, 'Avairit, a goddess worshipped by the Lydians, Armenians, and Persians, whose festival was celebrated by the grossest debaucheries, for which the most beauti- ful of their women were selected as priestesses. Pliny says, that when the temple of this goddess at Acilisene was plundered by the Romans, un- der Marc Antony, her statue of massy gold was

carried off, and broken to pieces. A report pre- vailed, that the first man who touched the god- dess, instantly fell down dead. Augustus, supping a long time after this event, with an old soldier, who had shared the plunder, questioned him concerning the truth of the fact ; the latter replied, ‘ Caesar, it is the goddess Anaitis’s leg you are now eating for supper, and all I have in the world I owe to her.’

ANAK ; pjjt, Heb. i. e. a collar ; the father of the Anakim, was the son of Arba, who gave his name to Kirjath-arba, or Hebron, Josh. xiv. 15. He had three sons, Sheshai, Ahiman, and Tal- mai, (chap. xv. 14, and Numb. xii. 22,) who, as well as their father, were giants.

ANAK SUNGEI, a district in the Island of Su- matra, on the south-west side, extending along the sea-coast, fromManjuta river to that of Urei. The chief bears the title of Sultan ; and his capi- tal is Mocomoco, a poor towi.. The authority of the monarch is very limited, the greater part of the country being inhabited by the native Su- matrans, under their own chiefs, who attend the sultan at certain periods, and pay him a tax or contribution.

ANALCIME, in mineralogy, cubic zeolite. — This mineral is generally found in granite, gneiss, trap rocks and lavas, at Calton Hill, Edinburgh, at Talisker in Skye, in Dumbartonshire; in the Hartz, Bohemia ; and in the Ferroe Islands. From its becoming feebly electrical by heat, it has got the name analcime. Its specific gra- vity is less than 2.6. It consists of fifty-eight silica, eighteen alumina, two lime, ten soda, eight and a half water, and three and a half loss in 100 parts.

ANALECTA, ANALECTES ; from avaXiyo), I gather ; in antiquity, a servant whose employment it was to gather up the offals of tables, which were picked up, and not swept away, as the pavements of the Roman floors were too finely inlaid to admit of sweeping.

ANALECTA, ANALECTE, in literature, is used to denote a collection of small pieces ; as essays, remarks, &c.

ANALEMMA, in geometry, a projection of the sphere on the plane of the meridian, ortho- graphically made by straight lines and ellipses, the eye being supposed at an infinite distance, and in the east or west points of the horizon. Analemma denotes likewise an instrument of brass or wood, upon which this kind of projec- tion is drawn, with an horizon and cursor fitted to it, wherein the solstitial coluze, and circles pa- rallel to it, will be concentric circles ; all circles oblique to the eye, will be ellipses ; and all circles whose planes pass through the

eye, will be right lines. This instrument is used in common astro- nomical problems ; but is not very exact unless very large. It is also useful for laying down the signs of the zodiac, with the length of days, and other matters of furniture, upon dials.

ANALEPSIS, in medicine, the augmentation or nutrition of an emaciated body.

ANALEPSIS, in surgery, the method of suspend- ing a dislocated arm in a string.

ANAL FIN, in ichthyology, the fin placed between the vent and tan, which expands per- pendicularly.

”(M II.

ANALIS, in entomology,a specific name occur ring in several genera in the Linnrean and Fa- brician systems. It is the name: 1. Of a species ofscarabeus; 2. Of a species of coccinella; 3. Of a species of chrysomela; 4. Of a species ot cerambyx; 5. Of a -species of cryptocephalus ; 6. Of a species of staphylinus; 7. Of a species of cimex; 8. Of a species of phrygania; 9. Of a species of sphex ; 10. Of a species of vespa ; 11. Of a species of apis.

ANALOGISTA, in civil law, a tutor who is not obliged to give an account of his conduct. ANAL’OGIZE, “^ ‘AvaXoyia, from avu and ANAL’OGY, Xoyof. To institute a com-

ANALOG’ICAL, (parison ; to ascertain a ra- ANAL’OGOUS, ftio,proportion, resemblance. ANAL’OGAL, | The significations may be ANALOGOUSLY. J more particularly collected from the following illustrations.

He calleth the Lordes body the congregation re- demed with Christns body as he dyd before, and also in the chapter followyng, fetching his analogie and si- militude at the naturall body.

The Whole Workes of Tyndall, tfc. f. 473. c. 1. Besides the express laws of our religion, there is an universal line and limit to our passions and designs, which is called the analogy of Christianity ; that is, the proportion of. its sanctity, and the strictness of its holy precepts. Jeremy Taylor.

There is placed the minerals between the inani- mate and vegetable province, participating something analogical to either. Hale’s Orig. of Mankind.

Every one knows that analogy is a Greek word, used by mathematicians to signify a similitude of pro- portions. For instance, when we observe that two is to six, as three is to nine, this similitude or equality of proportion is termed analogy.

Bp. Berkeley't Minute Philo.

When a word, which originally signifies any par- ticular idea or object, is attributed to several other objects, not by way of resemblance, but on account of some evident reference to the original idea, this is peculiarly called an analogical word ; so a sound or healthy pulse, a sound digestion, a sound sleep, are so called, with reference to a sound and healthy consti- tution ; but if you speak of sound doctrine, or sound speech, this is by way of resemblance to health, and the words are metaphorical. Watts's Loijick.

The unction of our Lord was the descent of the Holy Ghost upon him at his baptism. This was analo- gous to the ceremony of anointing. Horsley's Sermons.

ANALOGY, in philosophy. A great part of our philosophy has no other foundation than ana- logy. It is natural to mankind to judge of things less known by some similitude, real or imagina- ry, between them and things more familiar or better known. And where the things compared have really a great similitude in their nature, when there is reason to think that they are sub- ject to the same laws, there may be a consid*1- rable degree of probability in conclusions drawn from analogy. Thus we may observe a very great similitude between this earth which we in- habit, and the other planets, Saturn, Jupiter, Mars, Venus, and Mercury. They all revolve round the sun, as the earth does, although at different distances, and in different periods. They all borrow their light from the sun, as the earth does. Several of them are known to re- volve round their axis like the earth, and by that

means must have a like succession of day and night. Some of them have moons that serve :c> give them light in the absence of the sun, as ur moon does to us. They are all in their motions subject to the same law of gravitation, as the earth is. From this general similitude, it is not unreasonable to think, that those planets may, like our earth, be the habitation of various orders of living creatures : there is even

great probability in this conclusion from analogy. But perhaps no author has made so just and happy a use of this mode of reasoning as bishop Butler in his Analogy of Natural and Revealed Religion. In that excellent work, the author does not ground any of the truths of re- ligion upon analogy, as their proper evidence : he only makes use of analogy to answer objec- tions against them ; shewing that when objec- tions are made to religion, which may be made with equal strength against what we know to be true in the course of nature, such objections can have no weight. Analogical reasoning, there- fore, may be of excellent use in answering ob- jections against truths which have other evidence. It may likewise give a greater or a less degree of probability in cases where we can find no other evidence. But, as this kind of reasoning can af- ford only probable evidence at best, unless great caution be used, we are apt to be led into error by it. To give an instance of this : early anato- mists seldom dissected human bodies; but very often the bodies of those quadrupeds whose in- ternal structure was thought to approach nearest to that of the human body; and were led into many mistakes by their arguing on a greater simi- litude between the structure of men and of ani- /nals than there is in reality. Arguments drawn from analogy become weak, as the disparity be- tween the things compared increases; and there- fore must be weakest of all when we compare body with mind, because there are scarcely two things in nature more unlike. Yet is there no subject on which men have always been so prone t< > form their notions by analogy, as in what re- .ates to the mind. We form an early acquaint- mce with material things by means of our senses, .‘iid an.- bred up in a constant familiarity with tin-in. Hence we are apt to measure all things “v them; and to ascribe to things most remote ‘>•’»» untter, qualities that belong only to mate-. :iil tilings. It is for this reason that mankind vi’, in all ages, been so prone to conceive the I’M’id itself to lie some subtile kind of matter: tiiat they have been disposed to ascribe human t’i‘4’uiv, and human organs, not only to angels but even to the Deity. Thus contrary motives are compared to the weights in the opposite scales of a balance ; and there is not perhaps ;i;iy instance that can be named of a more stri- ding analogy between body and mind. The phrases of weighing motives, and of deliberating i:pon actions, are common to all languages. As the balance it is said cannot incline to one side more than the other, when the opposite weights are equal, so a man cannot possibly determine hims’ili it the motives on both hands are equal; ;.nil as the b:d-iiiee inu-t ii>’“essarily turn to that idt nhich h:i> most weight, so the man must ec(

motive is strongest. And on this foundation some of the schoolmen maintained, that if a hungry ass were placed between two bundles of

hay equally inviting, the beast must stand still and starve to death, being unable to turn to either, because there are equal motives to both ! The principal uses of analogy in the investiga- tion of physical and moral truth, according to our author, have been reduced to the four fol- lowing : 1 . By means of our senses to improve, first our own judgment, and afterwards that of others, with respect to intellectual subjects. 2. To deduce a general from a particular truth. Having discovered and proved the truth of a proposition with respect to any particular ob- ject, examine whether this truth flows from a quality peculiar to this single object, or com- mon to several objects. In the latter case all these objects may be comprehended under one general idea, founded on their common quality. Substitute this general idea instead of the parti- cular object, and the proposition will become general without ceasing to be true ; because whatever evidently and solely results from the identity, on which an analogy is founded, must necessarily be true with respect to aH those ob- jects in which the analogy is the same. 3. To prove the truth or falsehood of propositions which cannot be otherwise demonstrated. 4. To discover new truths in both natural and moral philosophy.

‘Avct and Xww, to loosen. To resolve a compound sub- stance into its ele- ments or first prin- ciples.

AN’ALYZE, v.

ANAL’YSIS,

AN’ALYST,

ANALYTICAL,

ANALYTICALLY,

ANALYT’ICK, n. & adj.

AN’ALYZER.

What the sun compoundeth, fire analyseth, not transmuteth. Brown’s Hydriotaphia.

As Stellus, late dictator of the feast,

The nose of haut-gout and the tip of taste,

Critiqued your wine, and analyzed your meat,

Yet on plain pudding deign'd at home to eat.

Pope's Moral Essays.

There is an account of dew falling, in some places, in the form of butter, or grease, which grows ex- tremely fetid ; so that the analysis of the dew of any place may, perhaps, be the best method of finding such contents of the soil as are within the reach of the sun. Arbuthnot.

We cannot kncrw any thing of nature, but by an analysis of its true initial causes ; till we know the first springs of natural motions, we are still but igno- rants. Glanville.

To investigate truth with success, in mathematics, in natural philosophy, and, indeed, on every occasion where it is difficult to be found, the analytic method must be employed.

Bolingbroke's Essay on Hum. Know.

To analyze the immorality of any action into its last principles ; if it be enquired, Why such an action is to be avoided ; the immediate answer is, Because it is sin. Norris's Miscell.

Analytic method takes the whole compound as it finds it, whether it be a species or an individual, and leads us into the knowledge of it, by resolving into its first principles, or parts, its generic nature, and its special properties ; and therefore it is called tlic method of resolution. Watts's Logic*

ANALYSIS.

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Analysis consists in making experiments and obser- vations, and in drawing general conclusions from them by induction, and admitting of no objections but such as are taken from experiments, or other certain truths.

Newton's Optics,

The great work of which Justinian has the credit, consists of texts collected from law books of approved authority ; and those texts are digested according to a scientifical analysis ; the names of the original authors and the titles of their books being constantly cited.

Sir William Jones.

ANALYSIS, in chemistry, is a term applied to the process by which a separation is effected of the constituent principles of any substance: it has been divided into proximate and ultimate. When we have a compound of two or more in- gredients, these ingredients themselves being also compounded, the separation of the com- pounds from each other has been named the proximate analysis of the body ; while ultimate analysis is an expression by which is understood the separation of these compounds into their components. A further division has likewise obtained among chemists of analysis into simple or true, and complicated or false. When a body is exposed to a certain degree of heat, the principles of which it is compounded may be so far interfered with that they shall separate ; and their volatility being different in degree, the one which is most volatile shall be the first to pass off or be expelled. In other cases, how- ever, a body, will resist this endeavour at separa- ting its constituent principles by the most intense heat ; but if treated with some other chemical ag«nt, this last agent may, by combining with one of its component parts, effect the desired separation. Such, then, are instances of simple or true analysis, for in these cases the re-union of the constituent principles may be brought about by withdrawing the interfering agency, or the body may be again formed by bringing its component parts under circumstances favourable to combination : but in complicated or false analysis the composition of the compound is, as it has been expressed, not only subverted, and its individual existence destroyed, but, from the combination of its principles in new modes and proportions, it is impossible to re-produce it by the union of the products of the analysis.

It must ever be recollected that ‘when the analysis or separation of any substance has been carried so far as possible, we arrive not properly at its absolute essence, we only detect its ele- ments ; and even this term must be carefully taken as not implying any thing more than that we are at present incapable of decomposing fur- ther. Many bodies are daily crumbling into component principles under the powerful grasp of modern science, which had long been con- sidered as simple or elementary ; and, in the ex- pectation of still greater discoveries, there is no point at which we may stop. It may here, by the way, be incidentally remarked, that one of the great errors of ancient philosophy consisted in its unwarrantable assumption of simple elementary existence, as of air, earth, fire, and water. See CHEMISTRY.

Analysis of course is made to apply both to organic and inorganic matter ; but in the former

case we cannot uninterruptedly proceed beyond the proximate principles of the substance upon which our experiments are instituted ; for when we attempt the ultimate separation of organic compounds, we are liable to obtain the results of an entirely new arrangement of principles, or an arrangement different from that presented to us by the hand of nature. In this case, then, we cannot always, as in bodies of the mineral kingdom, proceed from a knowledge of their components to the actual formation of the sub- stances themselves. It is not probable, indeed, that we shall ever attain the power of imitating nature in these operations. For in the functions of a living plant a directing principle appears to be concerned, peculiar to animated bodies, and superior to, and differing from, the cause which has been termed chemical affinity. So it is, and with somewhat still of more force and complication, in the animal world ; for chemical agency applied to animal substances gives origin to a set of bodies which had no existence in the subject of experiment, the ultimate elements of which are thus disunited, and are recombined in a new manner. Bones, for example, though they contain no volatile alkali, are yet composed in part of its elements (nitrogen and hydrogen) which at a high temperature unite and generate ammonia. See AMMONIA.

On especial analysis we shall have to treat in the article CHEMISTRY, and the composition of the several materials that come under the co- gnizance of chemical science will be incidentally stated as these substances fall before us for con- sideration in alphabetical order : we shall in this place confine ourselves to remarking that very considerable improvements, and apparently much nearer approximations to truth, have lately taken place in reference to the analysis even of those materials which in their aggregate are the result of organic agency. The object of these improved methods to which we now re- fer, and which are equally applicable to vegeta- ble and animal substances, is to convert the whole of the carbon which enters into their composition into carbonic acid, and the whole of their hydrogen into water, by means of some compound containing oxygen in so loose a state of union, as to give it up to those bases at the temperature of ignition. The oxygen too, con- tained in these bodies, may be detected by ex- amining what quantity of oxygen has been lost by the oxide employed to effect decomposition; and if this fall short of the oxygen contained in the carbonic acid, and in the water, then the quantity required to make up the amount must have previously existed in the subject of ana- lysis. In a few vegetable substances, moreover, and in all animal ones, azote or nitrogen exists as a component, and its quantity requires to be determined. With a proper

attention to the details of the process, this fourth element may be obtained in the condition of gas, which remains after absorbing the carbonic acid by solution of potass, and the oxygen, if any, by a fit agent.

Gay Lussac and Thenard, to whom we are principally indebted for the processes now ad- verted to, first employed as their agent the chlorate of potass, but the former chemist subse-

quently substituted the peroxide of copper, es- pecially in the analysis of animal compounds. The mode of applying this substance to effect the objects intended we shall describe in another place; see CHEMISTRY : it may be here sufficient to state, that all the analyses which have been performed by these improved methods, conspire to make us believe that the elements of or- ganized, like those of inorganic matter are united in definite proportions; and further, that the laws of simple multiples hold strictly with respect to the elements of organic bodies. See ATTRACTION and ATOMIC THEORY.

Under the term mineral, it is usual to com- prehend all (hose substances which are not the results of organization ; and for the purposes of analysis a division has been proposed of these substances into earths, salts, inflammable fossils, and metals with their ores ; difficulty of solution being the characteristic of the first, compara- tively easy solubility of the second, inflamma- bility of the third, and the fourth are charac- terized by a high degree of specific gravity, metallic lustre, malleability, fusibility, &c. But the line of distinction between these substances is not capable of being drawn out with accu- racy or precision ; indeed, the recently detected metallic base of the earths and some of the sa- line class would be sufficient to prove that the above division, however convenient for the pur- poses of analytical examination, can lay no claim to absolute rectitude.

Increa>e of temperature, minute division of different materials, admixture, and more recently voltaic electricity, are the principal agents em- ployed for resolving minerals into their consti- tuent elements ; and we shall have occasion in the article CHEMISTRY to dwell upon the very important improvements lately introduced into the science, in reference to these particulars. Under the word

MINERAL also, this subject will be resumed and enlarged upon. The mode of analyzing mineral waters will be treated of par- ticularly in the article WATERS; and the means of detecting and analyzing those materials that are regarded as poisonous (an enquiry which has lately much occupied the attention of physi- cians and chemists) will be discussed separately and at larye under the head of POISONS.

AN.U.Y>I-, in literature, is also used forakind of syllabus, or table of the principal heads or articles of a continued discourse, disposed in their natural order and dependency. Analyses are more scientitical than alphabetical indexes ; but they are less used as being more intricate. Analysis is likewise used for a brief, but metho- dical, illustration of the principles of a science; in which sense it is nearly synonymous with what we otherwise call a synopsis.

AN U.YM-, in mathematics, is properly the method of resolving problems by means of alge- braical equations ; hence we sometimes find that thi> t\vo words analysis and algebra are used as synonymous. Or, Analysis may be dis- tiii',uishrd into the ancient and the modern. The undent analysi< is the method of proceeding from fie thin.: sought as taken i'or granted, thiougb – iMTiM-qu< nces, to srniflhinˆ that is real!) "..n-i-d or kiio'.vn. T!i«; p:i;i.-i;.al authors .HI

the ancient analysis, as recounted by Pappus, in the seventh book of his Mathematical Collections, are Euclid in his Data, Porismata, &c de Locis ad Superficiem; Apollonius de Sectione Ratio- nis, de Sectione Spatii, de Tactionibus, de Incli- riationibus, de Locis Planis, & de Sectionibus Conicis ; Aristaeus de Locis Solidis ; and Era- tosthenes de Mediis Proportionalibus : from which Pappus gives many examples in the same book. To these we may add Pappus himself. This kind of analysis has also been successfully cultivated by many moderns; as Fermat, Vi- viani, Getaldus, Snellius, Huygens, Simpson, Stewart, Lawson, &c. and more especially Hugo d'Omerique, in his Analysis Geometrica, in which he has endeavoured to restore the analysis of the ancients. Dr. Pemberton says, that ' Sir Isaac Newton used to censure himself for not following the ancients more closely than he did; and spoke with regret of his mistake, at the be- ginning of his mathematical studies, in applying himself to the works of Des Cartes, and other al- gebraical writers, before he had considered the Elements of Euclid with that attention so excel- lent a writer deserves : that he highly approved the laudable attempt of Hugo d'Omerique to re- store the ancient analysis.' In the application of the ancient analysis to geometrical problems, every thing cannot be brought within strict rule ; nor any directions given, by which we may suc- ceed in all cases ; but some previous preparation is necessary, a kind of mental

contrivance and construction, to form a connection between the data and quaesita, which must be left to every one's fancy to find out ; being various, according to the various nature of the problems proposed : right lines must be drawn in particular directions, or of particular magnitudes ; bisecting perhaps a given angle, or perpendicular to a given line ; or perhaps tangents must be drawn to a given curve, from a given point ; or circles described from a given centre, with given radius, or touch- ing given lines, or other given circles ; or such- like other operations. Whoever is conversant with the works of Archimedes, Apollonius, or Pappus, well knows that they founded their ana- lysis upon some such previous operations ; and the great skill of the analyst consists in discover- ing the most proper affections on which to found his analysis : for the same problems may often be effected in many different ways ; and that which leads to the conclusion by the most obvious and satisfactory steps, is the one which ought to be adopted Modern analysis consists chiefly of algebra, arithmetic of infinities, infinite series, increments, fluxions, &c. ; which form a kind of arithmetical and symbolical analysis, depending partly on modes of arithmetical computation, partly on rules peculiar to the symbols made use of, and partly on rules drawn from the nature and species of the quantities they represent, or from the modes of their ex- istence or generation.'

The modern analysis is a general instrument by which the finest inventions and the greatest improvements have been made in mathematics and philosophy, for near two centuries past. It furnishes the most perfect examples of the man- ner in wl-.ich the art of reasoning should be

employed ; it gives to the mind a remarkable skill in discovering things unknown, by means of a small number that are given ; and by em- ploying short and easy symbols for expressing ideas, it presents to the understanding things which otherwise would seem to lie above its sphere. By this means geometrical demonstra- tions are greatly abridged : a long train of argu- ments, in which the mind cannot without the greatest effort of attention discover the connec- tion of ideas, is converted into visible symbols ; and the various operations which they require, are simply effected by the combination of those symbols. And, what is still more extraordinary, by this artifice a great

number of truths are often expressed in one line only ; instead of which, by following the ordinary way of explanation and demonstration, the same truths would occupy whole pages or volumes. And thus, by the bare contemplation of one line of calculation, we may understand in a short time whole sciences, which otherwise could hardly be comprehended in se- veral years. From a comparison of the peculiar natures of the ancient and modern analysis, it results that the ancient method may, in some respects, be regarded as more perspicuous than that of the moderns ; though the latter be far superior to it in point of despatch and facility of invention : that the former is the most proper for one who is entering upon mathematical pur- suits, as it will accustom him to a pure, clear, and accurate mode of investigation, and demon- stration ; but that the modern analysis should be recommended to his attention, as soon as proper habits of reasoning are established, be- cause he may thereby be enabled to extend his views, and to strike out new improvements and discoveries. Or, adopting the conclusion of a late judicious writer on this subject, we may say, that, ‘ if mental discipline and recreation are sought for, they may be found in both me- thods ; neither is essentially inaccurate ; and, although in simple enquiries the geometrical has greater evidence, in abstruse and intricate inves- tigations the analytical is most luminous ; but, if the expeditious deduction of truth is the ob- ject, then the analytical calculus ought to be preferred. To arrive at a certain end, we should surely use the simplest means; and there is little to praise or emulate in the labours of those who resolutely seek truth through the most diffi cult paths, who love what is arduous, because it is arduous; and, in subjects naturally difficult, toil with instruments the most incommodious.’ Phil. Trans. 1822, part I.

ANALYSIS RESIDUAL is a branch of the alge- braic art, invented by the late Mr. John Landen, and applied to the solution of those problems which have, of late, beta more generally solved by the doctrine of fluxions. This method was called the residual analysis, because, in all cases where it is made use of, the conclusions are ob- tained by means of residual quantities. In this analysis a geometrical or physical problem is reduced to another purely algebraical; and the solution is then obtained without any suppo- sition of motion, and without considering quan- tities as composed of infinitely small particles. The residual analysis p-acesds by taking the dif-

ference of the same function of a variable quan- tity in two different states of that quantity, and expressing the relation of this difference to the difference between the two states of the said variable quantity itself. This relation being first expressed generally, is then considered

in tho case when the difference of the two states of the variable quantity is $=0$.

Mr. Landen published the first book of his Residual Analysis in 1764, and therein exempli- fied its usefulness in several algebraic enquiries, and in determining the tangents, evolution, ordi- nates, points of contrary flexure, double and tri- ple, &c. points, asymptotes, centres, &c. of curve lines. In the second book it was intended to show the application of this analysis in a variety of mechanical and physico-geometrical enquiries : but that book was never published. Analysis of powers is the same as resolving them into their roots, and is otherwise called evolution. Ana- lysis of curve lines shows their constitution, nature, and properties.

ANALYTIC METHOD. The analytic method in logic stands opposed to the synthetic. In natural philosophy, as in mathematics, the in- vestigation of difficult things by the analytic method ought to precede the method of compo- sition. It consists in making experiments and observations, and in drawing general conclusions therefrom by induction ; and admitting of nr objections against the conclusions, but such a; are drawn from experiments and other certain truths : and though the reasoning from experi- ments and observations by induction be no de- monstration of general conclusions, yet it is the best method of reasoning of which the nature of things admits, and may be esteemed so much the stronger as the induction is more general ; and, if no exception occur from phenomena, the conclusion may be pronounced general. By this way of analysis, we may proceed from com- pounds to their ingredients; from motions to the forces producing them ; and in general from effects to their causes, and from particular causes to more general ones, until we arrive at those which are the most general. This is the analytic method according to the illustrious Newton. The synthetic method consists in assuming the causes discovered and received as principles, and by them explaining the phenomena proceed- ing from them, and proving the explanations. See SYNTHESIS.

ANAM, a town of Hindostan, in the province of Oude, district of Lucknow, from the capital of which it is distant thirty-five miles W. S.W. N. lat. 25° 32', E. Ion. 80° 29'.

ANAMABOA. See ANNAMABOA.

ANAMANI, ANAMANES, or AMANES, in an- cient geography, were friends and allies of the Romans, who inhabited Cisalpine Gaul, at the foot of the Apennines to the south of the Po, having Trebia to the

west, and Tarns for their principal rivers. In the extent of their country were found Placentia, Veleia, Florentia, and Julia Fidentia.

ANAMBAS, a cluster of islands in the China Sea, the largest of which is only twenty miles in circumference. They are skuated about kit. 3° N., long. 106° 50′ E.

ANAMfMS, according to Bochart, were the sixteen miles distant, was made governor. The

people that dwelt in the parts adjacent to the Russians took Anapa by storm in 1791, when it

temple of Jupiter Ammon, and in the Nasamo- had nothing but ramparts of earth; but when re-

nites. Cahnet thinks the Amanians and Gara- stored to the Turks they fortified it with a strong

mantes were descended from the Anamims. wall : both this town and the other now belong

ANAMMELFCII, an idol of the Sephar- to the Russians. Distant seventy miles E. S. E.

vaites, who are said in Scripture to have burnt of Theodosia. Long. 37° 10′ E., lat. 44° 40′ N.

their children in honour of Adrammelech and ANAPyEST, in ancient poetry, a foot con-

Anammelech. These idols probably signified sisting of two short syllables and one long : such

the sun and moon. is the word Snlmos. It is the reverse of the

ANAMNESEIS, (from dvd and jivao/iai, I re- dactyl.

member) in ancient authors, denote encomiums ANAPHE, in ancient geography, an island in

of persons who behaved well in war, or on other the Cretan Sea, near Thera, now called Nansio.

occasions, rehearsed before the emperors of Con- Its name is derived from the sudden appearance

stantinople. of the new moon to the Argonauts in a storm.

ANAMNESTICS, or REMEMORATIVES, in Apollo was worshipped here by the title of

medicine, signs which tend to discover the pre- Anaphaeus.

ceding state of a patient's body, in opposition to ANAPHORA, dvaˆopd, in rhetoric, a fi-

PROGNOSTICS, which give an idea of the future, gure, when several c.auses begin with the same

The word is also applied to spirituous and other word, or sentence ; as, The voice of the Lord is

medicines for restoring the memory. powerful : the voice of the Lord is full of ma-

ANAMORPHOSIS, in perspective drawing, jesty : the voice of the Lord breaketh the cedars;

See OPTICS, INDEX, and PERSPECTIVE. yea, the Lord breaketh the cedars of Lebanon:

ANANAS, in botany, the trivial name of a the voice of the Lord divideth the flames of fire :

species of bromelia. See BROMELIA. the voice of the Lord shaketh the wilderness, &c.

ANANC/EON, in rhetoric, dvayeaiov, a ANAPHORA, in astrology, the second house

figure by which what is necessary only is ex- or that part of heaven which is 30° distant front:

pressed, to the exclusion of all ornament. the horoscope.

ANANCIT1S, in antiquity, a kind of figured ANAPHORA, in ecclesiastical writings, the host stone, otherwise called synochitis,

celebrated for offered in the eucharist. It is also used to de- its mauical virtue of raising the shadow of the note the rehearsing a person's name from the infernal uods. diptyches in the liturgy. It is likewise a title

ANAM'S, three small islands in the Grecian given to those Syriac liturgies, wherein are con- Archipelago, about nine miles S. \.of the island tained the prayers after the osculum pacis. Ig- ofMilo. natius, patriarch of the Marionites, enumerates

AN AN IKS, in music, the, aticient term for the forty of these anaphora.

modes of the Greek church. ANAPHORODISIA ; from a and 'A0po5fro;

ANANIAS, the son of Nebedeus, a high-priest impotence, or want of power to procreate. See

of the JCUN about A. 1). 4S. His treatment of IMPOTENCE. Paul,

brought before him, recorded in ANAPHUS, in entomology, a species of pa-

ilio, in the division plebeii urbicolae, inhabiting urinam. It has no tail, and is uniformly AN AN ISA I>TA, or ANAMSAPTA, a magical brown, except the apex of the lower wings, >rd, frequently found inscribed on coins and which is yellow.

ANAPLASIS ; from av& and 7rXdANAPLEROSIS, in surgery, denotes reple- l.at. 14° 42′ N., tion. It is more particularly used to signify that part of surgery whereby things wanting are and small town of supplied; in which sense anaplerosis amounts Sseristo, situated on to the same with prosthesis.

amulet—, suppo.M'd to have a virtue of preserving the \earerfrom the plamie.

ANANTAPOTonoN, in in \iueh some part is understood.

AN ANT POOU, a town in the c< ded territory, district of Wundicotta, fifty-five mile— S. K. from Piellary. Ion-. 77° 4o' K.

AN AM I! I, a fortress < !eor_ria, m the di>trict

>rt\ miles N.N. \V ANAPA, a fort i lie

fortress eonsists of a ANAPLEROSIS, in the civil law, is a name, feet

high, with round which some give to the four last books of Justi-
utruns three churches, nian's Code.

!'iet deep, lined inter- ANAPLEUSIS, in medicine, avairXivmc, the ! t'ie
roof level with the exfoliation or rotting away of the bones from a
aperture for the redundance of humours.

ANAPPES, a town and district of French Flanders, on the river
Marque, in the arrondisse- ment of Lisle. It is distant six miles from
Lisle. Population 2000.

ANARCHII, "Avapxoi, in antiquity, a name

Hi'! exit of the smoke. •fTeflis.

to\n of Circassia, on a called Sundjik Hay. It is ruit, has a trood
harbour,

les ;

on a considerable trade. The fort given by the Athenians to four
supernumerary

ear 17U4 by the Turks. A days in their year, during which they had no

-idmu at Tschutchukelee, or magistrates, or rather were employed in
electing

•

u titled town, about new ones. The Attic year was divided into tvn

parts, according to the number of tribes, to

whom the -precedency of the senate fell by turns.

Each division consisted of thirty-five days;

what remained after the expiration of these, to

make tlie lunar year complete, which, according

to their computation, consisted of 354 days,

were employed in the creation of magistrates.

AN’ARCHY, n. ~) A, without, apx»), begin-

ANARCH’ICAL, j ing. Hence denoting the

ˆANARCH’ICK, (evils occasioned by the ab-

AN’ARCHISM, f sence of first principles.

AN’ARCHIST, ! Confusion, mismanagement.

AN’ARCH. J Particularly applied to the

want of laws essential to social order.

All France swarmed with dissolute soldiers of sundry nations, which having no generall made hauocke at their pleasure. They were called people without an head, and by innumerable insolencies made the wretchedness of anarchy apparent.

Speed’s History of Gt. Britain. Where eldest Night And Chaos, ancestors of Nature, hold Eternal anarchy, amidst the noise Of endless wars, and by confusion stand. Milton.’ Arbitrary power is but the first natural step from anarchy, or the savage life ; the adjusting power and freedom being an effect and consequence of maturer thinking. Swift.

But is not freedom — at least is not ours Too apt to play the wanton with her pow’rs, Grow freakish, and o’erleaping ev’ry mound, Spread anarchy and terror all around.

Cowper’s Table Talk.

ANARGYRI, in ecclesiastical history, an ap- pellation given to saints of the Greek church, who, having been physicians, gave not only their advice, but their remedies, gratis. They are also called argentinopes.

ANARGYRUS ; from a, and ˆEpyvpoc, money ; in ancient writers, denotes a person without ready money, though possessed of land and other effects,

ANARHAPHE, (from dv

ANARRHICAS, in ichthyology, a genus of fishes, of the order of apodes. There is but one species of this genus ; sometimes, however, di- vided into two or three, according to their size, viz. lupus, or sea-wolf : which seems to be con- fined to the northern parts of the globe,

and is found in the seas of Greenland, Iceland, and Norway ; on the coasts of Scotland and of York- shire ; and in that part of the German Ocean which washes the shores of Holland. It is a ravenous and fierce fish ; and, when taken, fas- tens on any thing within its reach ; the fisher- men dreading its bite, endeavour as soon as possible to beat out its fore teeth, and then kill it, by striking it behind the head.

ANARRIIINON, in botany, the name given by Pliny and some of the ancients to the Ly- chnis agria.

ANARRIKEA, in medicine, a species of fluxion, wherein the humours regurgitate up- wards ; and so opposed to catarrh ..

ANARRHEGNIMIA, or ANARRHEXIS; in medicine; from ava, again, and pr/yvvfii, to break ; u i'rtih fracture or opening of a wound.

ANARROPIA, among physicians, a tendency of the humours to the head or superior parts.

ANARTHRA; from a, and apfyov, a joint ; a class of naked insects, distinguished by having neither wings nor limbs. To this class belong all kinds of worms and leeches.

ANAS, in ancient geography, a river of Spain, now the GUADIANA, (which see,) rising in the ancient Laminium, now the province of La Mancha.

ANAS, in ornithology, a genus ot birds be- longing to the order of anseres. The beak of this genus is a little obtuse, covered with an epidermis or skin, gibbous at the base and broad at the apex : the tongue is obtuse and fleshy, and the feet are webbed. There are ninety-eight different species, besides many varieties described by ornithologists. Of these the following are the principal : viz. — 1. A. aborea, or black -billed whistling duck of Edwards, of a reddish brown, with a sort of crest on the head ; the belly spotted with black and white ; a native of America. 2. A. acuta, pin-tail, or sea-phea- sant of Ray, which has a long accumulated tail, black below, with a white line on each side of the back part of the head. It is a native of Europe. 3. A. americana, American wigeon, le canard Jensen of Buffon, rather bigger than our wigeon. 4. A. anser, the goose. We shall only describe two of this numerous species, the anser ferus, or wild goose, and the anser mansuetus, or tame goose. (1 .) A. anser ferus, the wild goose or gray lag, is two feet nine inches in length, and five feet in extent. The bill large and ele- vated, of a flesh colour, tinged with yellow ; the head and neck cinereous, breast and belly whitish, clouded with gray

of an ash colour; back, gray ; the legs of a flesh colour. This species resides in fens, and towards winter col- lects in great flocks. On the continent they are migratory. (2.) A. anser mansuetus, or tame goose, is the gray lag in a state of domestica- tion, and from which it varies in colour, though much less so than either the mallard or cock, being ever more or less verging to gray ; though in all cases the whiteness of the vent, and upper tail coverts, is manifest. They are frequently found quite white, especially the males. In general it breeds only once a year, and is said to be very long-lived. Geese are sometimes pluck- ed five times in the year, and vast numbers are driven annually to London. 5. A. bernicla, of a brown colour, with the head, neck, and breast black, and a white collar. It frequents our coasts in winter, and those of Holland and Ire- land, where they are taken in nets placed across the rivers. They fly in the shape of a wedge, and with great clamour. They are common also in America. 6. A. boschas, common wild duck of Ray, or mallard ; the intermediate tail feathers of the drake are turned backward, and the bill is straight. 7. A.canadensis, brown; its neck and head black, and the throat white. It measures three feet and a half in length, and is found du- ring the summer in Hudson's Bay, and parts be- yond; in Greenland; and in the summer months in various parts of Nortli America, as far as Carolina. This species is now pretty common, n a tame state, both on the Continent and in

England, where they are though* a great orna- ment to the pieces of water in many gentlemen's seats. 8. A. Candida, the snow goose, is in length two feet eight inches, and weighs between five and six pounds. The bill is somewhat ser- rated at the edges ; the upper mandible scarlet, the lower whitish ; the general colour of the plumage is snow white, except the first ten quills, which are black with white shafts ; the legs of a deep red. The young are blue till they are a year old. These are very numerous at Hudson's Bay, and called by the natives way-way, and wapha-whe-whe. They visit the Severn in May, and stay a fortnight, but go farther north to breed. They return to the Severn Fort the beginning of September, and stay to the middle of October, when they depart for the south, and are attended by their young in amazing flocks. 9. A. casarca, or ruddy goose, is larger than a mallard, and seems even larger than it really is, from its length of wing, and standing high on its legs. This species is found in all the southern parts of Russia and Siberia. In winter it mi- grates into India, and returns northward in spring. The flesh is thought very delicate. 10. A.

clangula, or golden eye of Ray, variegated with black, white, and blackish green feathers ; it has a white spot near the mouth, and the eyes arc of a shining gold colour. It is not unfre- quent on our sea-coasts in winter, and appears in small flocks ; but passes to the north in spring, in order to breed. It inhabits Sweden .ind Norway during the summer, is an excellent diver, und feeds on small shells. It has been attempted to be domesticated, but seems out of its clement on land. 11. A. clypeata, or shove- lar of Hay, has the. end of its bill broad, round- ed, and furnished with a small hook. It is in length twenty-one inches, the female smaller. Moth sexes vary much in colour: the male like- wise (litters from the female inwardly, having ju-t above the divarication of the windpipe, where it passes into the lungs, an enlargement, or, as it is called l>y some, a labyrinth. These birds are sometimes, though not very commonly, met with in Limlaud. It- is found in most parts ol (lermany, and throughout the Russian domi- nions, and in North America, in New York and Carolina during winter. 1:2. A. creca, or com- mon teal, lias a c or io^erhcad goose, is in length thirty- two inches, and weighs from twenty to thirty pounds. It inhabit* the Falkland Islands, Staaten Land, \c.. and is mostly seen in pairs. it. A. cy-noidcs, has a semicylmdrical bill, gib- h'Mis wax, and tumid eyebrows. It is the swan •,'()(is' • ol Ray, from (luinea. Then: is likewise a variety of this •species, of a less size, called the ^oo,e ot Muscovy. This species inhabits China, and is common at the Cape of (iood Hope. 15. A. cyunus, nr the swan. Of this species there are sevi ral varieties, of which we shall only)venti.i|i two, vi/.., the (ems and the mansuetus. M } A. (_.nu«, fi HI.-, .i] t!u wild swan, has a

semicylindrical black bill, yello.v wax, and a white body, is the whistling or wild swan of English authors, and is less than the tame 01 mute species, being about five feet in length. What is most remarkable, is the peculiar figure of the windpipe, which falls into the chest, then turns back like a trumpet, and after- wards makes a second bend to join the lungs. It thus is enabled to utter a very loud and shrill note. It is from this species that the ancients have drawn the fable of the swan being endued with the powers of melody. The eggs are accounted good food ; and the flesh, especially that of the young, is much esteemed. (2.) A. cygnus mansuetus, or mute swan, the largest of British birds. It is found wild in Russia and Siberia, and is held in high venera- tion by the Mahommedans. It is a very strong bird, and, when fierce, has been known to throw down and trample under feet youths of fifteeen or sixteen years of age. It is also very long- lived. No bird, perhaps, makes so inelegant a figure out of the water, or has the command of such beautiful attitudes on that element, as the swan. Almost every poet, indeed, has taken notice of it, particularly Milton.

16. A. ery- thropus, or laughing-goose of Edwards, is a na- tive of Europe and America. Its length about two feet four inches. It visits the fens during winter in small flocks, and disappears by the middle of March. Linnaeus makes this goose the female of the bernacle; but Mr. Pennant thinks his opinion not well founded. 17. A. fabalis, the bean-goose, is two feet seven inches in length ; in extent four feet eleven inches. This species arrives in Lincolnshire in autnmn, and letreats to the north of Europe in May. It is called the bean-goose, from the likeness of the nail of the bill to a horse-bean. 18. A. ferina, pochard, dun-bird or red-headed wigeon of Ray, has a lead-coloured bill. It is a fen bird of England ; and brought up to the London mar- kets in considerable numbers. 19. A.fuligula, or tufted duck of Ray. This species is through- out the north of Europe. 20. A. fusca, the brown or velvet duck, has a white spot behind the eyes, and a white line on the wings. The male is distinguished by a gibbosity at the base of the bill. It is the black duck of Ray, in length about twenty inches, and frequents Hud- son's Bay in summer, where it breeds. It is now and then seen on the coasts of England, but more frequently on the continent, in Den- mark and Russia. 21. A. galericulata, or Chi- nese teal of Edwards, a most singular and ele- gant species, a native of China and Japan, where it is kept by the inhabitants for the sake of its beauty. It is known in Japan by the name of kimnodsui. The English in China give it the name of mandarin duck. 22. A. glacialis, or long-tailed duck. These birds breed in the most northern parts of the world, and only visit our coasts in the severest winters. 23. A. histrio- nica, or dusky-spotted duck of Edwards; in- habits from Carolina to Greenland. In winter it seeks the open sea, flies high and swiftly, and is very clamorous. 24. A. magna, the great goose, of a very large size, weighing near twenty- five or thirty Russian pounds. It is found in the east of Siberia, from the Lena to Kamt-

schatka ; and is taken in great numbers. 25. A. maula, or scaup duck, less than the common duck, These birds are said to take their name from feeding on scaup, or broken shell fish ; they differ infinitely in colours, so that in a flock of forty or fifty there are not two alike. 26 A. mersa, or Ural duck of Pallas, somewhat bigger than the common teal. This species is not un- trequent in the greater lakes of the Ural moun- tains, and the rivers Ob and Irtisch. It is not seen on the ground, as from the situation of its legs it is unable to walk. 27. A.

minuta, or little white and brown duck of Edwards, found both on the old and new continents, but seldom in large rivers or waters. 28. A. mollissima, or eider duck, is double the size of the common duck, has a cylindrical bill, and the wax is di- vided behind, and wrinkled. The feathers, which are very soft and valuable, fall off during incu- bation. The male is white above, but black below and behind; the female greenish. This species is found in the Western Isles of Scot- land, and on the Faro Isles : but in greater num- bers in Norway, Iceland, and Greenland ; and yields the down known by the name of eider or edder. In America this bird is found as far south as New York, and breeds on the desert isles of New England ; but is most common everywhere to the north. They are very nu- merous in the Esquimaux lands, where and in Greenland they are called mettek. 29. A. mos- chata, or Muscovy duck of Ray, is a native of India. The name arises from their exhaling a musky odour, which proceeds from the gland placed on the rump in common with other birds. 30. A. nigra, the black goose, or scoter, has a gibbosity at the base of the bill ; the tail resem- bles a wedge : the female is brownish. It is the lesser black diver of Ray, and is found on the northern coasts of England and those of Scot- land in the winter season : also on the French coasts, in prodigious numbers. 31. A. quer- quedula, garganey, or first teal of Aldrovandus, has a green spot on the wings, and a white line above the eyes. It frequents the fresh waters of Europe, and in many places it is called the sum- mer teal. 32. A. ruficolis, or red-breasted goose, is in length twenty-one inches ; weight 3 Ibs. troy. Bill is small, and brown ; the tail black ; the irides yellow-brown ; fore part of the head and crown black, passing backwards in a narrow stripe quite to the back. On the breast is a narrow band of white feathers with black ends, forming a band of white, and another of black. The sides are striped with black ; back and wings black, the last even with the tail ; legs black. This most elegant of geese is found to breed from the mouth of the Ob, along the coasts of the Icy Sea, to that of the Lena. 33. A. spec- tabilis, the gray-headed duck of Edwards, and the king duck of Pennant. This beautiful spe- cies is found at Hudson's Bay, at Churchill River, and, though scarce, at York Fort ; in winter it is met with as far south as New York. It is pretty frequent in the north of Siberia and Kamtschatka. and on the coast of Norway. 34. A. sponsa, or summer duck of Catesby, is a most elegant species. It inhabits Mexico, and some of the West India Isles, and is often kent tame

in our menageries. 35. A. strepera, or gad-wal, has the wings variegated with black, white, and red. It inhabits England in the winter months, and is in various parts of France and Italy. It migrates as far as Sweden, to breed ; and is found throughout Russia. 36. A.

tadorna, or shieldrake, has a flat bill, a compressed forehead, a greenish black head, and the body variegated with white. This species is found as far north as Iceland. 37. A. tetrax, or campestris, though it bears the name of anas, does not belong to this genus. It is common in France, where it is also called canne petriere. It runs very swiftly, and sits on the ground as the duck does in the water, whence it has its name, Anas.

ANASARCA, in medicine ; from ava, through, and

ANASCHOVADI, in botany, the elephan- topus scaber of Linnaeus.

ANASSAS, in natural history, a fruit very- common in Guinea, and other parts of Africa. It is said to be very beautiful to the eye, and no less agreeable to the taste and smell. From the descriptions given of it, which are very imperfect, it appears to be a species of the pine-apple.

*ANASSUS, orAxAXUs, in ancient geography, a river in the territory of Venice, now called the Piave, which, rising from the mountains of Tyrol, not far from the borders -of Carinthia, runs from north to south through the territories of Cadorina, Belluno, Feltre, and, after running from west to east through Trevigi, falls into the Adriatic fifteen miles to the south-east of Venice.

ANASTASIOPOLIS, in ancient geography, the name of five cities ; one in Syria, another in Phrygia, a third in Caria, a fourth in Galatia, and a fifth in Thrace.

ANASTASIS, a term among ancient phy- sicians, for the passage or migration of any humour from one part to another.

ANASTASIUS I. emperor of the east, suc- ceeded Zeno A.D. 491. The Manicheans and Arians were alike in hopes of being supported by the new emperor ; the former, because his mother was their friend ; and the latter,- because the emperor’s uncle was of their opinion : but he was distinguished by his moderation in regard to all the contentions of this kind which agitated the church during his reign, and banished Euphemius and Macedonius because he considered them to trespass upon this principle. In his civil govern- ment he bears a high character. He repealed a very heavy tax, called chrysargyrum, under which the people had long groaned ; he pro- hibited the barbarous custom of fighting with wild beasts, raised several useful public buildings, and avoided being involved in dangerous wais

Before his advancement his temperance and in- tegrity were so well known, that, upon his re- ceiving the diadem in the circus, the people exclaimed with one voice, ‘ Reign, Anastasius, as you have lived.’ Anastasius reigned twenty- seven years and about a quarter, and died July the 10th, A.D. 518, in the eighty-eighth year of his age.

ANASTASIUS II., whose proper name was Ar- temius, was raised to the throne of Constanti- nople from the station of a secretary, by the free voice of the senate and Roman people. He was deposed by Theodosius, also a person of low birth, in 719, when Leo was emperor. Anastasius, renewing his claim to the throne, was, with his chief associates, put to death by that prince.

ANASTASIUS, surnamed Bibliothecarius, a Roman abbot, keeper of the Vatican library, and one of the most learned men of the ninth century, assisted in 869 at the fourth general council, the acts and canons of which he trans- lated from the Greek into Latin. He also com- posed the lives of several popes, and other works ; the best edition of which is that of the Vatican, 4 vols. fol. 1718.

ANASTATIA, ST., a small island on the coast of East Florida, south of Mastances inlet, and north of St. Augustine’s bar.

ANASTATICA, in botany, the Rose of Jcncho : a genus of the siliculosa order, belong- ing to the tetradynamia class of plants; and, in the natural method, ranking under the thirty- ninth onliT, siliquosie. The characters are: CAL. a perianth, consisting of four leaves, persistent: cm:, four cruciform petals : STAM. six subulated tilam. nt> the length of the calyx: ANTHERS roundish: I-IST. a small bifid germen : STYLUS liiiuTonated and oblique: STIGMA headed: PERI- c.ut I-. a short bilocular filicle, retuse, and crowned on the margin with valvuloe twice as long as the partition: M:I.DS solitary and roundish. Of this genus there are two species. 1. A. hierochuntica, a native of the sandy parts of Palestine and the lied Sea; a low annual plant, dividing into many irregular woody branches near the root. When the seeds of this plant are ripe, the branches draw up and contract; so that the whole plant forms a kind of hall or globular body, which will ex- pand on laying it a short time in warm water, ‘i In- property it retains for many years, on which account it is preserved as a curiosity by some pf’l’li-: and from tins the monks have given it

e name of [{ˆ.i Maria’, pretending that the

wers op, M on the night in which our Saviour . A. Syriacn, a native of Syria, not cultivated or known in Britain.

-IATK A, in natural history, a species of ‘Ha, in the fifth order of vermes, infusoria.

i< c'lmpnund, \\ith bill-shaped (lowers; foot- -(1;il.v ""1 n-rid : I.mna us and Mull. It ";i'l species of clustering polvne d.M.V . ! i.v Tr.-nbl.-y.

(;1(liiASlS, in chemistry, a resolu- 111111 ”’ I’o’litˆ HIM tii r,- lir.-i principles.

ANASTOMOSIS, in medicine, Av

by anastomosis into the uterus; also the inoscu-, lation of vessels, or the opening of one vessel into another ; as of the arteries into the veins.

ANASTOMOSIS, in entomology, a species of phalaena of the bombyx tribe.

ANASTROPHE, in rhetoric; avo-rpoAjy, a preposterous placing, from avarpsˆw; a figure whereby words which should have been prece- dent are postponed.

ANASTROPHE, in the ancient military art, de- notes the return of a battalion to its former sta- tion, after an evolution to the right or left. It stands opposed to the epistrophe.

ANASTROUS SIGNS, in astronomy, an ap- pellation given to the duodecatimoria, or twelve portions of the ecliptic, which the signs possessed anciently, but have deserted, by the precession of the equinoxes.

ANASUS, or ANISUS, in ancient geography, now the ENS, a river of Germany, which see.

ANATAJAN, or ANATACAN, one of the La- drone islands, about ten miles in circumference. It is high and mountainous, of productive soil, but destitute of fresh water, and uninhabited. Long. 145° 50′ E., lat. 17°20’N.

ANATASE, in mineralogy, octohedrite, oxide of titanium rutile, and titane rutile. It is the titanum ruthila of Linnaeus. This mineral shows

a variety of colours by reflected light; from indigo to red-brown. It appears a greenish- yellow by transmitted light, and is found usually in small octohedron crystals ; and, in France, in granite, gneiss, &c.

ANATES, m medicine, a disease of the anus.

ANATH'EMA, -\ 'Avcl, otherwise avu,

ANATH'EMATISM, f up, and riQnpi to put or

ANATH'EMATIZE, £ place, to suspend or hang

ANATH'EMATIZER, J up, (as a votiv.e offering.) Hence a person or thing devoted to, or set apart for, the service, or the vengeance of the Divinity ; in which latter sense it is to be more commonly understood. In conformity with which signifi- cation it often means the curse pronounced on the excommunicated.

If a man be gracious and courteous to strangers, it shows he is a citizen of the world, and that his heart is no island cut off from other lands, but a continent that joins to them : if he be compassionate towards the affections of others, it shows that his heart is like the noble tree that is wounded itself when it gives the balm : if he easily pardons and remits offences, it shows that his mind is planted above injuries, so that he cannot be shot : if he be thankful for small benefits, it shows that he weighs men's minds, and not their trash : but, above all, if he have St. Paul's perfection, that he would wish to be an anathema from Christ, for the salvation of his brethren, it shows much of a divine nature, and a kind of conformity with Christ himself. Bacon's Essays.

Above all examples is that of the Jews, who put to death the Lord of life, and made their nation to be an anathema for ever until the day of restitution. ' His blood be upon us, and upon our children.'

Bp. Taylor's Sermons.

Her bare anathemas fall but like so many brutaftd- mina upon the schismatical ; who think themselves shrewdly hurt, forsooth, by being cut off from the body, which they choose not to be of.

South'i Sermons.

AN ATHEMA, in pagan antiquity, was an offering or present made to some deity,

the temple ; see the etymology of the word above. Whenever a person left off his employment, it was usual to dedicate his tools to the patron deity of his calling or profession. Persons too who had escaped from imminent danger, as ship- wreck or the like, or had met with any remark- ahle instance of good fortune, testified their gratitude by some present of this kind. Thus the shepherd would dedicate his pipe to Pan, the fisherman his net to Neptune, the retired soldier his shield to Mars, and the by-gone beauty her mirror to Venus.

ANATHEMAS were only directed in the primitive church against notorious offenders; the form of that pronounced by Synecius against one Andronicus is as follows : ‘ Let no church of God be open to Andronicus; but let every sanctuary be shut against him. I admonish both private men and magistrates, to receive him neither under their roof nor to their table ; and priests more especially, that they neither converse with him living, nor attend his funeral when dead !’ Several councils have pronounced anathemas against such persons as they thought corrupted the purity of the faith ; and their de- cisions have been couched in the following form : ‘ Si quis dixerit, &c. anathema sit.’ There were two kinds of anathemas, one judiciary, and the other abjuratory. The former was denounced by a council, a pope, or a bishop ; the latter made a part of the ceremony of abjuration ; the convert being obliged to anathematize the heresy he abjured.

ANATHOTH, a hamlet of Palestine, about three miles and a half north of Jerusalem ; the ruins of which are still to be seen. It was the birth-place of the prophet Jeremiah.

ANATHYMIASIS, tvaOvniaaic, Gr., in che- mistry, an exhalation or evaporation.

ANATICULA, a diminitive of anas, used by the old Roman authors as a term of fondness or affection. It signifies literally, my little duck. There is another of the same kind from a different bird, Palambula.

ANATIFERA COXCHA, the trivial name of a species of the lepas, a testaceous animal. See LEPAS.

ANATINA, in conchology, a species of mya, found on the shores of Guinea, and other parts of Africa, and bearing some affinity to the

solen anatinus. Also a species ofostrea, that inhabits the Nicobar islands.

ANATINUS, in conchology, a species of solen, found on the sandy shores of the Indian Ocean, and named by Rumphius rostrum anatis. Like- wise a species of mytilus, very common in the rivers of England, and known by the name of duck, or small horse-muscle. Donov. Brif. Shells.

ANATOCISM ; anatocismus, Lat. avaroKurpbe', an usurious contract, wherein the interest arising from the principal sum is added to the principal itself, and interest exacted upon the whole. It

is in fact an ancient name for compound interest. This was reckoned the worst kind of usury, and severely condemned by the Roman and common law. Yet after all, it is difficult to discover wherein the injustice lies, in taking interest upon interest, any more than in taking it upon the principal. It is allowed on all hands, that the creditor who lends money may exact the interest the day it is due, and lend it out as a principal sum to another person, or to the same person, if he makes a new contract for it ; in which case, the interest just drawn bears interest anew, and thus compound-interest arises. ' Compound interest,' says Dr. Paley, ' though forbidden by the law of England, is agreeable enough to natural equity; for interest detained after it. is due, becomes, to all intents and purposes, part of the sum lent.' Moral Philosophy, vol.* p. 160.

ANATOLIA, a province of Turkey. See NATOLIA.

ANATOLIUS, bishop of Laodicea, was a native of Alexandria, and flourished under the emperors Probus and Carus. He succeeded Eusebius about the year 270, and was un- doubtedly a Christian long before he became bishop ; for he was upon terms of intimate friendship with Eusebius about the year 263, when Bruchium, or Pyruchium, one of the quar- ters of Alexandria, was besieged. See ALEX- ANDRIA. Eusebius speaks of him as having, with universal consent, pre-eminence above all the magistrates or senators of Alexandria that were in Bruchium. Soon after this Anatolius left Alexandria for Syria; and was ordained bishop by The(?tecnus of Caesarea, and appointed his colleague; out in his way to a council at Antioch he was detained at Laodicea, and ap- pointed bishop of that city. Anatolius, though not an extensive author, was eminent for his learning, and a distinguished ornament of the Christian church. A work of his on Easter, en- titled The Paschal Canon, is cited by Eusebius ; and an ancient Latin version of it, said to be Rufinus's, was

published by ./Egidius Bucherus, in folio, at Antwerp, in 1634. Of his ten books of Institutes of Arithmetic, extracts are preserved in a collection, entitled Theologumena Arith- metica; and some fragments of his philosopical writings are collected by Fabricius ; from which it appears, that, after the example of Pythagoras, Plato, and Aristotle, he made mathematical learning subservient to philosophy. This learned Alexandrian concurred with other Christians in a high respect for the scriptures of the Old and New Testament. The time and manner of his death are not certainly known ; but some have supposed that he died a martyr. Euseb. Hist. Ecd. lib. vii. c. 32. p. 284. ed. Vales. Cave's H. L. vol. i. p. 136. Fabr. Bibl. Gr. lib. iii. c. 11. torn. ii. p. 273 — 278. Brucker's Hist. Phil, by Enfield, vol. ii. p. 30o. Lardner's Works, vol. iii. p. 265—269.

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ANATOMY.

ANATOMIZE, v. 'Av&, through, and T'I\I-

ANAT'OMY, 1 vo>, to cut. To reduce

ANAT'OMIST, f the whole to its consti-

ANATOM'ICAL, rtuent parts by cutting.

ANATOM'ICK, \Chiefly applied to the

ANATOM'ICALLY. dissection of the human

subject ; when that of a mere animal is meant,

the epithet comparative is prefixed to the word.

Our industry must even anatomise every particle

of that body, which we are to uphold. Hooker.

I speak but brotherly of him, but should I anaio-

mixe him to thee as he is, I must blush and weep,

and then must look, pale and wonder. Shaksp.

It is proverbially said, Formicae ma bilis inest, habet

ct mtuca rplenem ; whereas these parts anatomy hath

not discovered in insects. Brown's Vvlg. Err.

Then dark distinctions reason's light disguised, And into atoms truth anatomised. Denham.

Hence when anatomists discourse, How like brutes' organs are to ours ; They grant, if higher powers think fit, A bear might soon be made a wit ; And that, for any thing in nature, Pigs nlight squeak love odes, dogs bark satire.

Prior.

Anatomists adjudged, that if nature had been suf- fered to run her own course, without this fatal inter- ruption, lit; mis;ht have doubled his age. Howel. \ hen wo are taught by logic to view a thing com- pletely in all its parts, by the help of division, it has tlie use of an aniitumiciil knife, which dissects an ani- mal l»Hlv, and separates the veins, arteries, nerves, muscles, membranes, \o. and shows us several parts winch

Watts's Logic.

There is a natural, involuntary distortion of the muscles, which is the anatomical cause of lauehter, but there is another cause of laughter which decency V'Mjiiires. Swift.

It is therefore in the anatomy of the mind, as in !ha' of the body , more <:oo is as will for ever rscapu our observation. Pope.

I. ANATOMY, the ;irt of dissecting an orga- nized body for the purpose of ascertaining the shape, structure, situation, connexion, and gene- ral fabric of its several parts. The uses, more- over, ot the parts thus discovered, constitute one, and indeed the main, object of the science and art in question; hut, strictly speaking, ana- tomy itself comprises merely the structure of living beings, while physiology investigates their functions.

. Anatomy has usually been divided into Human and Comparative: the first, as its name implies, confining its researches to the human body; the second, comprehending the whole annual creation. Recently, however, a more philosophical division has been proposed of ana- tomical science into Animal and Vegetable ; and in consistency with this arrangement we ha\e iiiiovc defined the art to be that of dis- S,T tmu or_rain/.ed (indies ; or'_ram/ed being an ad- l'cir.e term, which comprehend all substances that po-st s \u,il properties, as opposed to in anim itfj m, tlter.

3. For the most part anatomical and physio- logical science have been blended, even in those treatises which nominally profess to limit them- selves to one department. We think, however, with a modern author of great eminence, that a more strict division of these two branches of enquiry is productive of material advantage to either. ‘ The descriptive detail of the structure of living bodies (this division being adopted) is no longer distracted and obscured by superfi- cial and unconnected views of their functions ; nor their functions carelessly discussed in the form of occasional and uninstructive commen- taries on the descriptions of their structure. Each is made the subject of separate and parti- cular investigation ; and not only has anatomy been thus rendered more accurate and precise, but a more regular and philosophic form has been given to physiology, and its progressive improve- ment rendered more sure.’

4. In the present article we shall treat of ana- tomy as the term is vulgarly applied, viz. Hu- man Anatomy. Under COMPARATIVE ANATOMY we shall give the anatomy of other animals ; and in the article BOTANY, pursue the enquiry into the vegetable creation, leaving the functions of these respective departments of organized nature to be investigated both generally and in detail, under the comprehensive word PHYSIOLOGY .

HISTOB.Y OF ANATOMICAL SCIENCE.

5. What Celsus says of medicine may per- haps, with the same propriety, be predicated of anatomy, ‘ nusquam non est:’ it must al- ways have been in existence, since the curiosity natural to mankind, with the practices of the very earliest ages in reference to the slaughter of beasts for sacrifices and other purposes, could not have failed of eliciting some information, however rude and imperfect, on the subject of animal structure and function. In the progress of time the circumstances of war, and the va- rious methods of slaying criminals, would tend to promote and facilitate the acquisition of ana- tomical knowledge ; but it is next to impossible to fix the precise period at which anatomy first began to be regularly studied as a branch of science.

6. Certain it is that prior to the time of Homer some progress had been made in its study : various passages in the writings of that poet imply that this was the case, and even prove that he himself had some knowledge of the body’s structure. Machaon and Podalirius, sons of Esculapius, are stated by Homer to have accompanied the Greeks in their attack upon Troy : these individuals would communicate to others what they had learnt from their parent, and gathered in the

progress of their own obser- vations ; and thus by the time that Homer wrote, anatomy would have advanced to some extent.

7. The writings of the early Grecian philoso- ohers and historians, Plato and Xenophon in

particular, prove that the structure of the human body formed part of their philosophical investiga- tions ; and there is a passage in the works of the former that contains, to say the least of it, an in- timation of the motive powers of the heart ; he indeed calls this organ the spring or fountain by which the blood is impetuously conveyed through conduits, like those which are drawn through gardens, and thus is nourishment car- ried to every part of the body.

8. But it is into the writings of Hippocrates that the enquirer must look for the most ample information of the time to which we now allude on the subject of anatomy. This great man em- ployed every means in his power to acquire a knowledge of the structure and functions of the body; and he is generally thought to be the first who wrote systematically on anatomy as a branch of the medical art. His description of the human bones is considered to this day tole- rably correct, although he only once had the op- portunity of seeing a skeleton ; but his account of other parts and organs are, as must necessa- rily have been the case, highly imperfect. He does not, for instance, distinguish accurately be- tween nerves, arteries, veins, and tendons ; and he conceives the heart and lungs to be in part the immediate receptacle of the fluids that are taken in by the mouth.

9. After the time of Hippocrates the science con- tinued to advance with no very rapid steps, im- peded as it was by the prejudices and supersti- tion of mankind. Athens and Alexandria be- came the two schools for Grecian education, and in the former Aristotle and Theophrastus were exceedingly conspicuous : shortly, however, after their time the cultivation of all branches of na- tural science fell into disrepute at Athens ; the studies subservient to elocution being those only to which much attention was given ; and ana- tomy of course shared the fate of other collateral knowledge.

10. But while science declined in Greece it flourished in Alexandria under the patronage and protection of the Ptolemies ; and in this school Erasistratus and Herophilus became highly dis- tinguished by

the zeal and success with which they cultivated anatomy. They possessed, and they were probably the first to possess uninter- ruptedly, opportunities for actual dissection of human bodies ; and they consequently had it in their power to correct many errors of their pre- decessors, whose opportunities for observation were so much more limited.

11. The early history of the Roman empire does not furnish any accounts of anatomy having been particularly attended to in that celebrated city. The first Greek physician established in Rome was Archagathus; and about a century after- wards, in the time of Pompey, Asclepiades be- came conspicuous. Cassius, who succeeded to him, and who is commonly thought to have been his disciple, was the first to speak of the crossing of the nerves from the brain. In the writings of Rufus, Ccelius Aurelianus, Aretaeus, Pliny, and others, we meet with remarks on anatomy in connexion more especially with medicine ; but the era to which we are now alluding is not to be regarded as taking a very prominent station in the rank of anatomical discoveries.

12. The celebrated Galen revived and sys- tematized anatomical lore to an astonishing de- gree ; but without, as it appears, the advantage which his great predecessors Erasistratus and Herophilus had enjoyed of dissecting freely the human subject ; so fhat many of his descriptions of parts are taken from the inferior animals. He describes however the brain and its membranes, presents a view of the whole nervous system, connects the organization with the functions of the eye, the ear, &c. traces the contents of the thorax and abdomen, gives the origin and insertion of muscles, and a full system of os- teology.

13. The works of this great man continued to be the standard of appeal for a considerable length of time, not much advance being made by means of new cultivators of the science : at length Greek and Roman learning was over- whelmed by the barbarism of the conquering nations from the north. Arabia became now the seat of learning, and the Greek authors were translated into the Arabic languages. This was occasioned by the Saracenic invasion of Spain, and by the destruction of Alexandria. In the general way, however, the Arabians limited themselves, as far as anatomical science was concerned, to translating and commenting upon their great authorities, so that very little advance was made for a considerable length of time. About the commencement of the thirteenth cen- tory Abdollaliph, however, exposed many of Galen's errors in respect to the form of the bones, by visiting the burial-grounds and com- paring the description with the reality ; yet he seems to have had no idea of dissecting a fresh subject, being probably prevented by the pre- vailing

prejudices of the times, which prejudices indeed continued in preventive force until the revival of European learning.

14. At length appeared the great Vesalius, who commenced his laborious and ambitious career early in the sixteenth century. This celebrated man was the first fully to expose the errors of Galen ; and he did this to such an extent, and with such freedom, that many of his contempo- raries began to complain of him as innovating and ostentatious, rather than really desirous of improvement. The disputes that thence arose be- tween Vesalius and his rivals occasioned mutual appeals to the human body, and thus did the controversy assist very materially the progress of anatomical learning.

15. About the year 1540 Vesalius gave to the world his anatomical plates, which, while they called forth much admiration, excited likewise, as we have above intimated, much envy and op- position. Sylvius of France, and Eustachius of Italy, with several other anatomists of repute, declared themselves public enemies of Vesalius, and accused him of misrepresentation, arrogance, and even impiety. Fallopius, who had been a pupil of Vesalius, conducted his opposition to some of the tenets of his master with much more moderation and liberality, and Vesalius sensible of the difference between the opposition of Fal- lopius, and that of Sylvius especially, replied to him in the same spirit of moderation and for- bearance. In spite of all opposition Vesalius continued to increase in renown, and the empe-

ror Charles V. conferred on him the honour of appointment to be the- first physician, and kept him always ;it court ; when an unfortunate oc- currence took place, which deprived him of all iiis honours ; although afterwards, upon the death of Fallopius, he was called by the senate of Venice to fill the chair, which then became Vacant : he was shipwrecked on his voyage to Padua, on the island of Xante, and there actu- ally perished with hunger. He died in the year 1564, in the fiftieth year of his age. The event to which we have alluded, was his having opened the body of a Spanish gentleman, whom he had attended in sickness, it having been asserted by some of the persons present that the heart was seen to palpitate upon being laid bare.

16. From the time of Vesalius the value of actual dissection came to be appreciated, though still opposed by the prejudices of the people ; from tin’s time anatomical science assumed a new aspect, and soon

diffused itself far and wide. Fallopius and Eustachius, contemporaries with Vesalius, the one by his Observationes Anato- micae published at Padua, the other by his Opuscula Anatoinica published at Venice, proved themselves great proficients in the science. The larger plates ‘of I’.ustachius were not present- ed to the world till more than a century and a half after his death ; they were at length dis- covered and puUisl.c-d by the pope’s physician, l.ancisi, with adcscrij timi of his own (Lancisi’s) appended to them, t’u; wilting of Eustachius not having been found.

17. In tin- year Itiir, Dr. Harvey gave an entirely new complexion to anatomical re- searches by teaching tin; doctrine of the blood’s circulation: it is not in pi. ice here to enter into the grounds upon \hich this gre.it reformation of the science was suuuested and substantiated; sntiicc it to s.iy, that it has been considered by far the most nnpoit’int advance that has ever been made in the knowledge of animal functions, and that it was soon followed by the discovery of thi’ lacteal vessels, a discovery which tended to confirm and establish the greater one of Har- \ey. It \vas Asellius, an Italian physician, who first nave an account of the lacteals, in a work published in ltj‘27; and in lG,r>l Picquet, iii I lame, traced these vessels to the thoracic duct, ami thence into the circulation Rudbec

• md I’artholine, the latter a Danish, the former a Swedish anatomist, almost simultaneously de- tected t’ne existence ot’ihe lymphatics, very soon after the discovery of the thoracic duct; and ti’nm that time to the present anatomical science has been pursued with abundant ardour and

laiu’e success.

I he very recent improvements it has un- ‘uone, having however more particular con- • <:iou \\ith physiological discovery and specu- lation, the subjects which such improvements involve, together with the daf.es of the discove- rie> and the names of the discoverers, will fall to he noticed and commented on with more pro- priety in other pans of our work. We shall therefore here close our history of the science, and proceed to treat of its several parts in the v t!» celebrated anatomist hove adverted to as having1

taught the propriety of separating anatomical description from physiological discussion ; at least we shall take his arrangement for our gene- ral directory, occasionally making those devia- tions that may suit incidental purposes. The individual to whom we refer is the late Dr. Gordon of Edinburgh.

We shall first then treat of anatomy generally, and afterwards enter into detail.

OF THE PROGRESS OF THE BODY FROM THE PERIOD OF CONCEPTION.

19. Soemmering has represented the changes from the first to the fifth month of impregnation in an admirable series of engravings. In these representations an embryo of three or four weeks appears to the naked eye somewhat like a mus- tard seed just commencing to shoot out; the head appearing like the body of the seed, and the trunk, &c. like the radicle. But with a magnify- ing glass a little dark circle is perceptible in the region of the eyes, and a small slit corresponding to the orifice of the mouth. On the trunk four little prominences are observable in the situation of the four extremities; and between the two lower there is a curious prolongation like a tail, which has been named the coccygeal protube- rance.

20. At about seven weeks from conception the form of the body is quite apparent. Two small pores are seen in the region of the nose; and the superior extremities seem divided into the arm and fore-arm.

21. In an embryo of eight weeks a small pore is discoverable by the microscope in the region of each auricle ; a shoulder, arm, fore-arm, and hand, with five small tubercles in the situation of the fingers, can be easily distinguished with the naked eye; and, in the lower extremities, parts can be seen corresponding to the thigh, leg, and foot; but the toes do not yet appear.

22. At the end of nine weeks there is a pro- tuberance in the region of the nose ; part of the auricles is formed ; the toes have appeared ; the pudenda begin to be distinguished, and the coc- cygeal protuberance disappears.

23. The younger the uetus the larger is its head compared with other parts, the smaller its face in proportion to other parts of the head, and the smaller its limbs relatively to the trunk. During the first, second, and third months the upper extremities are larger than the lower; about the fourth they are equal ; towards the fifth the lower have become larger than the upper. Hair generally begins to appear on the eye-brows, and in the region of the head and temples, about the end of the fifth month ; but in respect of this particular there is much variation.

24. The male foetus differs from that of the female, in having its head

larger in proportion to the body, less rounded, flatter in the crown, and more pi /minent behind. In the male the breast is much more prominent than the umbi- lical region, while the reverse is the case in the female. The trunk of the body between the upper parts of the loins is arched in the male, but hollow in the female. The upper extremities of the male are longer; the arms less cylindrical; the fore-arms fuller; the wrists broader; and the ends of the fingers less pointed. At the haunches

the circumference of the body is less in the male than in the female ; the thighs are more slender ; the feet longer; the malleoli and heels more pro- minent; and the great toe exceeds the others much more in length. All these distinctions it will be observed correspond in embryo with what is more fully developed iu after life.

OF THE PROGRESSIVE STATURE OF THE BODY.

25. According to Soemmering the most rapid increase of the foetus takes place during the first weeks after conception. It does not, however, grow in a uniform ratio ; it is a little retarded during the second month; accelerated during the third ; again somewhat retarded at the be- ginning of the fourth ; from the middle of the fourth to the sixth, again accelerated ; and from this period to the end of the ninth month, once more retarded.

26. The average dimensions of the male and female differ even in the foetal state. The mean length of sixteen male children, born at the full time, was 20 j§ inches; and of eight female children, only 20 4

27. At the period of maturity the mean height of the male is about five feet eight inches ; that of the female about five feet five inches.

WEIGHT OF THE BOOT.

28. The average weight of the foetus in the earlier months is uncertain ; it has been stated to be about two ounces in the twelfth week, about one pound in the sixth month, and about four or five pounds troy in the eighth month. About seven pounds avoirdupois is stated to be the mean weight at birth. The difference between the weight of the male and female, at birth, is about nine ounces. In cases of twins it has been observed, that the combined weight is greater than that of a single child, but the weight of each twin less. There are, however, exceptions to this last rule.

29. The writer from whom we extract the above statements remarks, that he has examined a register of the weights of about fifty full-grown males of the average stature, and finds their mean weight to be about one hundred and forty pounds English troy. The average weight of an equal number of adult females, he supposes, would be found to be about thirty or forty pounds less.

30. We now proceed to take a general survey of the body’s structure :

and we shall first remark, anatomically, on the CIRCULATING ORGANS, the ABSORBENT or ASSIMILATING ORGANS, and the NERVOUS SYSTEM. We shall then go on to speak of the Textures which enter into the composition of the frame under the de- nominations of MUSCLE, TENDON, BONE, CAR- TILAGE, CELLULAR SUBSTANCE, ADIPOSE SUB- STANCE, MEMBRANE, SKIN, and HAIR.

CIRCULATING SYSTEM.

31. The circulating systeai is constituted by the heart, the arteries, and the veins; the first of which,

32. The heart, is a body composed of muscu- lar and membranous substance, in some measure of a conical form, and situated transversely at

the lower part of the chest. It is divided into two cavities, or ventricles, which are separated from each other by a fleshy septum : these ven- tricles are vulgarly called right and left ; but they are, more properly speaking, anterior and posterior, or pulmonic and systemic. Each of these ventricles has two orifices : one communi- cating with its corresponding auricle, or sac, at the basis ; the other being the commencement, or root, of the large arteries; the pulmonaic, or that going to the lungs from the right ventricle ; the aorta, or that supplying all the parts of the body from the left ventricle.

33. Many experiments have been instituted for the purpose of ascertaining the capacities of these ventricular cavities, but they are all liable to fallacy ; in some of those most to be relied on, it was found that the right ventricle of an adult heart contained two ounces and a half of water, while the left held two ounces.

34. All the external surface of the heart is covered with serous membrane, and this mem- brane is thicker and stronger at the auricles than elsewhere.

35. Under this membrane, on some parts of the heart’s surface, adipose substance is seen shining through it, giving to the heart at these parts a straw colour.

36. And under both these textures is situated what is called the muscular coat of the organ ; and within this, lining the whole surface of the heart, is found the inner membrane ; which last is exceedingly thin, perfectly transparent, and without any appearance of fibrous structure. Neither blood-vessels, absorbents, nor nerves, have yet been detected in it. In some parts of the right auricle, and through the

whole of the left, this inner membrane is described as of a dif- ferent character; being here whiter, and con- siderably thicker and stronger, than serous mem- brane, and being connected to the muscular coat by cellular substance.

37. The most important peculiarity of the foetal heart is the oval hole found in the septum which divides the two auricles ; the communi- cation however, between the auricles through it, is not direct ; for if we examine the heart of a foetus about the fourth month, we shall find that there is a thin pellucid membrane laid over the oval hole like a valve, on the side next the left auricle. The insertion of this valve below, is into the very edge of the lower third of the oval hole itself; but, above this, its attachment is into the surface of the septum, next the left auricle, extending farther and farther out from the margin of the hole as it ascends. When it gets on a level with the upper border of the hole, it begins to incline inwards again, and after run- ning a short way stops, leaving a free curved edge, turned upwards and a little to the left.

38. As this valve, then, is longer than the oval hole, it is obvious that if it were stretched tight across it, like the parchment of a drum, it would prevent all communication between the auricles. But it is twice as broad as the space included within the line of its insertion, so that it admits of being pushed a considerable way to- wards the cavity of the left auricle. When this is done, a short canal is formed between thp

upper part of the valve, another portion of the septum immediately above the oval hole, open- ing into the left auricle by an orifice, of which the floating edge of the valve forms fully two- thirds. The axis of this canal corresponds ex- actly with the axis of the inferior vena cava.

39. Whether there be any period prior to the fourth month, at which the oval hole has no valve, or at which it is smaller, we have not had satisfactory means of ascertaining. But Haller mentions that his friend Bergen had found none in a fa-tus of two months ; and Senac believes that there is none prior to this at least; and ex- presses himself certain, that if its rudiments exist in two months, they are extremely small. After this period, according to him, it grows by degrees, and its margin approaches nearer and nearer to the upper border of the hole.

40. It is very probable that this description is correct ; but as we have found that the valve even in the fourth month is very easily broken, unless the heart be dissected with great care, nothing but actual observation will satisfy us on this point.

41. The hole and the valve are pretty nearly in the state we have described, until about the commencement of the ninth month, when a considerable change begins to take place. The valve becomes thicker and tighter, and its free margin narrower ; consequently the passage be- tween the auricles becomes smaller. The sides of the hole itself are at the same time thickened. The valve at last becomes so much tighter, and its upper border so much narrower, that the parts assume the appearance of the oval fossa, with a small slit at top as already described. How loiii; this process is in being completed we have not ascertained ; but we suspect, from an examination of several hearts, that it is not until two or three month? afterbirth at least.

•12. We have gone rather more into detail in reference to this point than may be considered consistent with the general view which we now profess to give; but we knew not how better to pnsent the reader with a view of this main ilitTerence between the fcrtal and adult heart, than by copying the above statement of it from Dr. (iordon ; the reader may reperuse it after he shall have read the more; particular descrip- tion of the heart which will be found in the second division of the present article. We shall also refer to it when treating on the adult and lu'Kil circulation under the head of PHYST- 01 01, Y.

1::. The fiftal heart has its auricles larger in pro portion to the ventricles than is the case with the adult. The whole of the right and left side ot the organ are more in correspondence than after birth, the left side being probably rather the largest..

Artirn s. — Tito arterial system has beer: compared to the trunks and branches of two tree's. One of these trunks, the pulmonary artery, arises, as we have above said, from the n.'it ventricle ot the heart: the other, the aorta, from the left. They an: both about an inch and a quarter in diameter; and their sides about a twelttth ot an inch thick. Immediately after their origin they begin to ramify; and by suc

cessive ramifications the who.e body is at length supplied with blood.

45. The terminations of arteries have been described by anatomists as many ; for instance, they are said to end in open capillary vessels which pour out a fluid into surfaces internal and external, in glands, in cells ; but it is only their termination into the venous system that is

capable of absolute demonstration. Other termi- nations are rather inferred than proved.

46. Different anatomists have described the coats of these vessels in a different manner: while some have contended that the whole tube is con- structed of nothing but cellular tissue, others have contended for the existence of five separate layers or tunics. The most accredited anato- mists, however, consider their coats as three, an inner, middle, and outer one.

47. The inner coat is considerably like that which we have said lines the heart, but is more elastic. The middle coat is the thickest, and it is composed of slender fibres, laid closely to- gether, surrounding the artery. If the inner coat be peeled off from the artery, the fibres of the middle tunic may be raised with the forceps in successive strips. The outer coat consists of slender white shining fibres, very dense and tough, closely compacted together, and so interwoven that they cannot be separated and made to peel in any regular manner.

48. The cellular coat of arteries, which some anatomists have added to the others, cannot with propriety be deemed such ; for it is not univer- sally present, and is rather therefore an accidental and partial than a proper and peculiar covering.

49. The very small arteries are supposed from analogy to consist of the same parts as the larger ones : even when, from their minuteness, this cannot be demonstrated: some have considered them more fibrous and less membranous than the larger branches.

50. The Veins. — In describing the ramifica- tions of these, it is usual to invert the order observed in tracing the arteries, and to consider the trunks as successively formed by the union of the branch. By microscopic observations upon a well-injected subject, we can see minute veins arising from equally minute arteries ; and this is the only origin of veins that has been actually demonstrated. They are supposed, like the terminations of arteries, to have several other modes and points of communication. In the large veins two coats can be distinctly shown ; and, in some, portions of a third texture intervene between these two.

51. The inner coat of veins, although trans- parent like that of the arteries, is a little thicker and much stronger; and it is separable into dense slender fibres. The outer coat is, like that* of the arteries, fibrous ; but its fibres are not so close, and the whole structure of the coat is thinner than that of the artery.

52. In most of the larger branches of veins a substance is found between the two proper coats ; but it does not always completely sur- round the vessels. It is much thicker in some parts than in others. Its texture is said to be intermediate between the external and middle coat of an artery.

A T u “M Y.

ABSORBENT SYSTEM.

53. When treating on Physiology we shall have to state that a difference of opinion obtains among anatomists, even in the present day, in

eference to the organs subservient to the function of absorption. As our present business, how- ever, is mere description, we shall limit oxirselves jn this section to the mention of lymphatic ves- sels and glands ; the first of which are, a system of tubes distributed throughout the body in the manner of the blood-vessels. Like the veins, the lymphatics are observed at first as exceedingly minute tubes ; their commencement, however, has never been shown to the naked eye. Cruik- shanks once finding the absorbents of the alimen- tary canal after death tinged with a milky fluid, (here indeed this system of vessels takes the name of lacteals), traced vast numbers of them to their origin, which seemed like circular ori- fices. But it is only in this part of the body that the commencement of these vessels has been detected even with the aid of the microscope.

54. The structure of the lymphatics is not so susceptible of demonstration as is that of the veins ; but they are supposed to consist of one coat only, similar to the inner coat of the veins, the valves, which are very numerous in these vessels, seeming to be mere prolongations of their coat. The termination of the absorbents is into the thoracic duct on the left side, which empties its contents into the left subclavianvein; of this, however, we are to speak more particu- larly afterwards, as well as of another occasional termination of these vessels.

55. The glands of the absorbents, or, more properly speaking, the absorbent glands, consist of a peculiar substance enclosed in a capsule : this capsule is a thin and pellucid membrane without colour, but very vascular and resolvable by maceration into fine whitish fibres. The lymphatics before entering a gland divide, ac- cording to Mascagric, into branches. Some of these penetrate directly into the central parts of its substance, while others are distributed towards its

surface. The larger branches are bent, con- voluted, and interwoven in every direction ; they communicate freely with each other, and become suddenly narrow in some parts, while they swell out into little cells at others ; so that when the gland is injected with quicksilver, its whole outer surface seems as if covered with little round eminences. The smaller branches subdivide, and form a net-work on the surface, and then either dip down between the cells of the larger ones or open into them. Various small vessels, on the other hand, are seen either arising from these cells, or ascending from between them, and, after winding about, uniting together into larger branches, which at last constitute the vasa af- ferentia. Sometimes the absorbent vessels of a gland preserve a pretty uniform diameter through- out, so that there is little or no appearance of cells in any part of it.

NERVOUS SYSTEM.

56. In treating of the nervous system, anato- mists generally speak of the brain and spinal cord, as the central mass ; and then of the nerves as in a manner proceeding from these. In the article Physiology it will, however, be seen that

somewhat different views have lately been taken of the connexion between the several portion? of the nervous organization.

57. Brain. — The average weight of the brain is from two and a half to three pounds avoirdu- pois. There is some variety in this, but not in proportion to the stature or weight of the indivi- dual. It is divisible into two halves, which are very nearly alike. It is divided into the upper portion, or brain proper, or cerebrum ; and the lower one called cerebellum. The weight of the first is from thirty-five to forty ounces ; and of the last from five to eight. The brain is made up almost entirely of a peculiar substance that has been called nervous matter, embraced by delicate membranes. This nervous matter has been divided into white, and brown or cineri- tious. The white matter of the brain has recently been described as fibrous. Other anatomists have, from microscopic observations, stated it to consist of extremely small globules, having the appearance of cells, filled with proper medullary substance. The white nervous matter is said by some to possess considerable vascularity ; others deny that the vessels go beyond the fine investing membranes of the brain.

58. The brown nervous matter is softer than the white; it is said, however, to be in like manner with the white globular when examined

with the microscope. These two kinds of matter are intermingled in the brain in various ways : in some parts a covering of the one surrounds a mass of the other ; in others they are alternated in laminae or strata ; and in others, they traverse each other in the form of cords ; there is, however, a conside- rable uniformity in the disposition of each parti- cular part. It has been said, that the gray matter in the cerebellum is in greater proportion than in the cerebrum ; by others we are told that this seeming difference merely arises from the different manner in which it is in this part mixed with the white.

59. Membranes of the brain. — The dura mater, the pia mater, and the arachnoid membrane, are usually stated as membranes of the brain ; others discard the first, and regard it merely as a mem- brane of the cranium. The pia mater is a vascular covering, made up entirely of blood- vessels for the supply of the brain. Dr. Gordon tells us that he cannot perceive the cellular tissue in it that Bichat has described ; nor have any ab- sorbents or nerves been discovered in it. It presents an appearance at some parts of very fine white dense threads, where it is loosely connected with the arachnoid membrane, but it is uncertain whether these are not blood-vessels

60. The arachnoid membrane differs much from the pia mater in structure as” well as in dis- tribution. It is as thin as a cobweb, (hence it? name,) dense, colourless, and almost perfectly transparent; it does not seem to be vascular, at least blood-vessels have never yet been detected in it, nor have absorbents or nerves.

61. Relative proportions and progressive dimen- sions of the brain before and after birth. — The Wenzels have paid particular attention to this ; and they have reported, that both the brain pro- per and the cerebellum increase rather more in length and in breadth during the six months im- mediately preceding birth, than during the firs»

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seven years after birth; that these dimensions arrive at their maximum at the age of seven ; and that they suffer no change during the whole of after life. They have ascertained that the weight of the whole brain most commonly arrives at its maximum at the age of three years, and remains without diminution during the whole of after life; the maximum being in general from 20,000 to 22,000 grains, and seldom

exceeding 24,000. The weight of the brain proper at the age of three years, they found does not exceed in general 21,000 grains; nor that of the cerebellum 2000 grains. 1 he younger the foetus, they found the greater was the ratio of the weight of the brain proper to that of the cerebellum. This ratio, it appeared, was usually about seven to one at the age of three years, and remained so ever after.

62. The spinal cord contains both kinds of nervous matter ; but it has an additional mem- brane which has been called the serrated mem- brane, which is whitish and semi-transparent, thinner, but still stronger, than the pia mater. Its inner border, which is straight, is intimately connected with the pia mater; while its outer one presents a series of angular projections or teeth, each of which is attached firmly to the dura mater of the spinal canal. It does not reach the extremity of the cord which is mem- branous, but ends at the lower part of what has been considered the dorsal portion of the cord, the cord being divided into three parts; the first or cranial portion; the second or cervical; the the third or dor-al : of \vhich see more in the second part of this article.

(5.3. 'I'/n apinn/ fonl In fore nut] after maturity. — It has been said, that the nervous matter of the cord is proportionally shorter in the child than in the adult ; others deny that this has been proved. Chaussier supposes this nervous matter is (inner at birth than at any other period of life. In the dei line of life the brown nervous matter diminishes, and at length in old persons disappears, its place being occupied by white matter.

('•4. \i ITCS. — These are composed of filaments of nervous matter, enclosed in sheaths of a pecu- liar nature, called neurilema. These filaments are of different si.:es in different nerves; they seldom, however, are thicker than a hair, and in ueneral arc smaller than the finest fibre of silk or cotton. They are placed side by side; and in their com-s-e divide and subdivide, and re-unite and run into each other, forming the most inti- mate connexions. The neurilema investing the fibres of the nerves, and tying them as it were in bundles or laseicuii, seems to be a species of cel- lular texture. Nerves have what are called plexuses- and *>ran- of various nerves, so that each individual nerve is m a manlier lost. The gan- elia are , ..n-'ituted of knots or tumors of nervous sulistaii; e ot various s-|inp,.s and si/es, some ex- tt hdmc to nearly an inch. In these last the fas- MMili nf nervous filaments are first separated and then n e, unbilled ; ami it appears as if every u'.iis i,t every ncrvt- which emerges from a ^aiiuli titained mm-" < >r fewer filaments from*

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seems still obscure. The gray or yellowish matter that is found between the fasciculi ot nerves going through ganglia, has been sup- posed by some to be similar to the gray portion of the brain and spinal cord. Others say that there is not the slightest similitude between them.

TEXTURES OF THE BODY.

65. Muscle. — This term is applied to a com- pound of delicate fibres, or solid diaphanous filaments, formed into bundles by a species of cellular substance ; and which fibres being plen- tifully supplied with blood-vessels, nerves, and absorbents, have a red and highly vascular ap- pearance. The diameter of the ultimate fibres has been considered so small as not to exceed the forty-thousandth part of an inch ; these fibres are placed parallel to each other, and are united in the first place into fasciculi of a certain size, the largest not exceeding the eighth of an inch, and the smallest not being under a sixteenth. In point of length these fasciculi are various ; but it has been affirmed by Prochaska, that he has traced them from one end of one of the longest muscles of the body to another. These fasciculi may be considered primary ; they are usually found united together into longer fasciculi or se- condary ; these often into ternary, and so on.

66. Tendon. — This substance is constituted of very delicate white silvery-looking fibres col- lected into bundles, which are united with each other in various ways. Sometimes they are tied together longitudinally ; at other times inter- woven, almost with the same regularity as the threads in a piece of cloth ; and at other times intermingled in every direction. This substance not only forms those appendages to muscles which are called tendons, but it expands itself into ligaments, stretches over bone, and is there called periosteum — over muscles forming the aponeurosis or tendinous fascia; and in other parts constitutes more positive membranes. Bichat indeed has named this texture systeme 1'ibreux ; but an objection has very properly been taken against this denomination on the ground that other textures are as well as this fibrous.

67. Bone. — This is a uniform substance, of a firm texture, without fibre, plates, or cells, but penetrated throughout by very delicate vessels ; it is capable of being rendered artificially softer or harder, without any abstraction or addition of its substance that is perceptible. It is externally lined by a membrane which is called periosteum generally, and pericranium in the bone of the skull.

68. Cartilage. — This substance, as well as bone, when viewed with a microscope appears uniform and homogenous in its structure like jelly, and without fibres, laminae, or cells. No blood-vessels are seen in it in its finest

form ; but in those pieces of cartilage that are attached to the edges or extremities of growing bone, blood-vessels may be often seen ramifying, even without the aid of injection.

69. Cellular substance. — Improperly so named perhaps, since the cellular structure which it ex- hibits when distended, may probably be the mere effect of accidental separation of layers of

the substance, always accompanied with more or less laceration of parts. If we lay hold of a mass of it between the fingers, and pull it gently, it immediately separates itself into innumerable transparent laminae, finer than the finest cobweb, which intersect each other in every direction, and leave space or cells between them of various shapes. The same effect may be produced with a blow-pipe ; but the instant the distension is discontinued, the parts collapse, and the cellular appearance vanishes. Microscopic observation of this substance shows nothing but exceedingly delicate fibres interwoven in every direction.

70. Adipose Substance. — This texture is made up of an oily matter,and a vascular texture formed into cells, in which cells the oily matter is contained. This containing substance seems still more delicate in its texture, than what is called cellular substance. The oily matter that consti- tutes the fat, exists most probably in the living body in a fluid state.

71. Membranes. — This term might with some propriety be applied to parts of animal tissue generally ; but it more strictly means expansions over surfaces internal or external, from which flows or is secreted a peculiar matter. Thus we have mucous membrane, serous membrane, and synovial membrane. ; to which is added, perhaps not in strict propriety, fibrous membrane.

72. Mucous membrane, says Bichat, pre- sents two surfaces ; the one adhering to the adja- cent organs, the other free covered with villi : its structure displays in all parts the form of a membrane ; it is never met with in fasciculi. Be- sides its vascular structure generally, it is fur- nished with glands of various size, which in general assume a spherical form. These glands do not seem to be enveloped by any membrane ; they are supported by cellular tissue, and are 'soft and vascular.

73. Serous membrane.ˆ This substance, like the mucous system, is also truly membranous, never, like the muscular organization, being seen in fasciculi. The serous membrane as well as the mucous has one of its

surfaces free, the other attached. Bichat regards serous membrane as probably nothing else than an interlacement by means of cellular tissue of absorbents and exha- lents, and considers that they are possessed of a small number of blood-vessels only, what are generally called their arteries being no other than trunks twining over their external surface, susceptible of being detached and not forming part of their structure. Dr. Gordon tells us, that the membrane itself is made up of arteries, veins, and absorbents. Whether he says it con- tains any thing else but vessels, remains to be ascertained.

74. Synovial membrane. — This like serous mem- brane is a thin transparent substance, with one surface free and the other attached ; or, as it has been better expressed, having one surface turned towards certain cavities of the body, and another connected by delicate cellular substance to the sides of these cavities, or to the parts contained in them. Synovial membrane possesses in its healthy state but very little vascularity. Bichat says indeed, that its vessels, like those of the se- rous membranes, are rather exterior to its actual

substance than part of it. It approaches more than the serous membrane to a fibrous structure.

75. Fibrous membrane. — Under the word ten- don we have mentioned that Bichat proposes the introduction of fibrous tissue, systeme fibreux, as characterizing one order of mem- branes ; and the objection of another anatomist is there stated to this designation, inasmuch as the term equally applies to nerve, muscle, and even cellular substance; and ligaments, perios- teum, aponeuroses,fascieE, &c. have an equal claim to the appellation. Indeed the ultimate structure of the body may be supposed & fibre, or the whole of the texture ultimately fibrous. The compound membranes consist of a mixture' of two or more of the simple ones.

76. Skin. — This consists of two substances placed one above the other in the form of layers, or laminse, the inner of which is called the true skin, the outer, scarf skin or cuticle, or epidermis. A light coloured membrane has been usually des- cribed under the name ofretemucosum between the cutis and cuticle, but Dr. Gordon tells us he has not, after the minutest examination, been able to discover this membrane in the inhabitants of this country, nor in those of other European cations, resembling them in colour ; but he admits that there is in the Negro, Caffre and Malay, and he supposes in all black men, a black membrane, in- terposed between the epidermis and true skin, upon which the dark colour of these people seems to depend.

77. With respect to the structure of the skin, the cuticle is transparent and

of a slightly yel- lowish-gray colour. It is entirely destitute of blood-vessels, absorbents, and nerves. It is not naturally laminated or fibrous. The true skin seems daiefly made up of a species of very small dense fibres closely interwoven with each other ; its outer surface is more vascular than the inter- nal parts; and this surface seems to owe its colour entirely to the blood circulating in its vessels. The absorbent vessels of the true skin are also large and numerous.

78. Hair. — All the hairs of the body appear to be cylindrical, and regularly taper from the root to the point. The bulbs of the hair are always situated under the true skin; but so close to its inner surface that no part of the hair is perceptible between it and the bulb. Immedi- ately after leaving the bulb the hair is received into a canal in the true skin, which is constantly observed to be more or less oblique. A small hole in the cuticle corresponds to this canal ; and the hair passing through it also reaches the outer surface of the skin. In its passage through the true skin it seems to adhere to the sides of the canal. The hairs appear to be quite solid : that part, however, of its root which is lodged in the bulb contains probably a conical cavity. In the whiskers of the seal this is certainly the case. The bulbs of the hair probably consist of two coats ; an inner one of a tender consistence, very vascular, and embracing immediately the root of the hair; and the exterior one, firmer and less vascular.

79. Nails. — These are of a compact texture, and transparent like horn. Like the cuticle they are insensible and without vessels. They seem

to be formed by different layers of unequal size arranged one over the other, each layer being composed of longitudinal fibres. In each nail we may distinguish the root, the body, and the extremity'; to the root, which is comparatively soft and thin, the scarf-skin firmly adheres.

80. Parynchcma. — This name has been applied to that combination of membrane and vessel, which together forms the whole substance of vis- cera : thus we speak of the parynchema of the lungs, of the liver, &c. as distinct from their in vesting or lining membranes This parynchema is sometimes glandular or secretory, as in the in- stance of the liver ; sometimes not, as in the case of the spleen. We may here take occasion to say that

81 . Glands, or secreting org(i»s have been di- vided into Follicular,

Conglobate, and Conglo- merate. The first are said to be cylindrical tubes continued from the ends of arteries, and opening upon membranes external or internal. Of these, however, much has been stated from merely hy- pothetical notions. The second term has been applied to the glands of the lymphatic system above described (See 55). The third or con- glomerate is a term applied to such glands as the salivary ; the liver too and kidneys are conglo- merate : these glands are unlike the lymphatic, inasmuch as they have distinct ducts for convey- ing away the peculiar and respective something which they secrete. These parts, indeed, con- stitute the essence of a gland ; namely, a sepa- rating organization, and a duct or channel for conveying away the fluid or matter separated : now in the follicular glands it is supposed that one simple organization effects both purposes ; while in the conglomerate gland one portion of the structure is employed in manufacturing, and the other in transmission.

82. Having thus presented the reader with a general view of the substances entering into the composition of the human body, we now proceed to particularize the organs which these substances variously modified go to the formation of; in other words, we now descend from the anatomy of composition to the anatomy of detail. In commencing, however, with the bones, it will be necessary in the. first place to represent these in tlieir totality. First then,

Or THE SKKI.F.TON.

«:i. This has been properly defined the solid frame-work which supports and contains the •-otter parts. It is made up of 254 separate pieces of osseous substance, most of which con- tain a quantity of matter called marrow, and arc surrounded \itha membrane denominated periosteum. These separate pieces are called bones, \liicli are connected in various ways. The bones are composed of a compact part, and, nm-t of them, likewise of a reticulated portion, tonned by tine plates intersecting each other and having small spaces between them. The marrow of bones is an oily substance, the pro- perties of \vhich have not yet been sufficiently investigated, and the periosteum is of a tendinous structure. Tins periosteum in general covers tb- whole outer surface of the bones, except at the pi. ice of their union.

84. The connections of bones are of two kinds , those that admit of motion, and those which do not. Where bones are united so as to allow of union, their touching surfaces are either provided with prolongation of cartilages, or they are united to one common intermediate substance, which is flexible and admits of compression. The surfaces of cartilage which enter into the composition of joints, are always as smooth as the finest polished ivory. It has been said by several anatomists, that those surfaces are covered by a

very delicate prolongation of synovial mem- brane : this by others has been supposed not the case.

85. All articulated bones are held together partly by means of ligaments. These are formed of tendinous substance, and may be divided into fasr.icular and capsular. The first are disposed in cords, at intervals, around the joint; the second form a continuous web, including the united surfaces in a kind of sheet.

86. In all the intervals between fascicular li- gaments, portions of synovial membrane are found filling up these intervals. They are at- tached to the ligaments on the one hand and to the articulated bones on the other, just at the edge of the cartilaginous surfaces. It is doubtful whether this membrane be continued over the inner surface of the fascicular ligaments, and how it is disposed in joints, of which the ligaments are of the capsular kind.

87. The bones which are united without arti- culation and with an intermediate substance, are principally the small bones of the spine, called vertebrae ; the portions of these bones, de- nominated their bodies, are directly connected with pieces of a flexible and compressible sub- stance, somewhat between cartilage and tendon in Its nature, one piece being common to two vertebrae.

88. The connections that admit of motion are divided into two kinds, suture and synchondrosis. In the first the bones are united by direct con- tact, the contiguous parts being indented or ser- rated, and the projecting parts of the one being fixed into holes or grooves of the other ; the pe- riosteum merely passing over the line of junction. In the union by synchondrosis a piece of car- tilage, or some similar substance, is interposed between the surfaces of the bones, which are joined together, and their connexion is further strengthened by ligaments ; an example of this junction we have in the ossa innominata with the sacrum.

89. Dimensions and weight of the skeleton. — The skeleton of an individual who had been five feet eight inches will be found in general to be about five feet seven. The average weight of the skeleton, according to Soemmering, is from 150 to 200 ounces. The female skeleton, accord- ing to the same author, averages from 100 to 150 ounces.

90. The skeleton before and after maturity. — An embryo of seven or eight weeks distinctly shows parts that correspond with the adult skeleton. But at this period no bony substance is present. In the place of future bones we find either a pellucid substance like jelly, or else a simple membrane resembling the periosteum.

Some bones are wholly gelatinous, others wholly membranous, and otheis partly in the one and partly in the other state.

91. Tha process of ossification commences at about the end of the second month, but not in all parts of the skeleton. In some parts the pro- cess does not begin till after birth. For the mode in which ossification proceeds, refer to the article PHYSIOLOGY. Marrow does not appear in its proper form till after birth ; indeed this fluid does not acquire the consistency of true medullary oil until the period of maturity. In old persons the membrane common to the mar- row becomes less vascular, and the oil itself ac- quires a yellow colour. The periosteum is thicker, • more tender, and more vascular in the foetus than in the adult ; in old persons the reverse is the case. As soon as the soft rudiments of the future bones are visible in the foetus, divisions may be observed in them corresponding to the articula- tions and synchondrosis, but none to the sutures. The ligaments and synovial membranes in the young person differ only in size from those of the adult.

ANATOMY OF PARTICULAR PARTS OF THE SKELETON.

92. Bones and sutures of the cranium. — The bones of the cranium are eight; or, according to some, ten in number. The difference of enumeration depending upon whether the petrous portion of the temporal bones are regarded, or not, as dis- tinct bones. The eight bones are, the os frontis ; the two parietal bones ; the os occipitis ; the ossa temporum ; the os sphenoides ; and os ethmoides.

93. Os Frontis. — This forms the upper and fore part of the cranium. It .is outwardly con- vex, its concave surface being towards the brain. Its lower parts compose the superior portions of the orbits of the eyes. In the centre of the in- ferior part of this bone is placed also the ethmoid bone, which is situated at the top of the cavity of the nostrils. On the exterior surface of the frontal bone there are five processes : one placed at the bottom and narrowest part is called the nasal. The four others are called angular or orbitar processes, which assist to form the or- bits.' In the middle of the bone, above the os ethmoides, most commonly a thirf spine, by which this part of the bone is strengthened. This is not always present, but wben it is absent the skull is thicker than usual at this part and from its middle externally a process issues which supports the bones of the nose. Immediately above the ethmoid bone, in this bone, is a small blind hole through which a vein passes into the longitudinal sinus of the dura mater ;

and, on the upper edge of each orbit, a small perforation or notch is found, through which nerves and an artery pass to the forehead. There is also a small foramen in each orbit, through which passes a branch of what are called the fifth pair of nerves. This bone is, almost throughout its whole sub- stance, composed of two tables, which separating from each other under the eyes form two cavities, one on each side of the bone, called fiontal si- nuses. In these sinuses a mucus is secreted from their internal membrane, which constantly

passes through two small holes into the nostrils, which it serves to moisten.

94. The parietal bones are two : in some places they are thin and almost transparent. They are of an irregular square figure, and are bordered with indentations through their whole circumference, except at the lower part. These bones form a kind of vault to the cranium'. On their inner surface the marks of the vessels of the dura mater are observed, and at their upper edge is found the groove for the superior longitudi- nal sinus.

95. The occipital bone forms the back and in- ferior part of the skull ; it has considerable in- dentations. At its inferior portion is a large foramen, through which the medulla oblongata passes into the spine, or into the brain, as some anatomists would express themselves. This bone is bounded by the temporal, sphenoidal, and parietal bones. In its inside is a conical spine impressed by the longitudinal and lateral sinuses ; and on the outside, opposite to the mid- dle of this spine in some bodies, is an apophysis ; and from that down to the great foramen a small thin spine : in most skulls a foramen is found behind each apophysis; thiough these pass sinuses from the lateral sinus to the external cervical veins.

96. The temporal bones are two, or according to some anatomists four, the petrous portions being considered by these last as distinct bones These bones have several processes and cavities ; one anterior called the zygomatic ; one pos- terior called the mastoid, or mamillary, from its resemblance to a nipple ; and one inferior named the styloid, because it is shaped like a stiletto or dagger.

97. The cavities of the temporal bones are the meatus auditorius externus ; 2. a large fossa, which serves for the articulation of the lower jaw ; it is before the meatus, and under the zygomatic process ; 3. the styloi-mastoid foramen, so named from its situation between the styloid and mastoid process ; it is likewise called the aquedect of Fallopius, and affords a passage for the portio dura of the seventh pair of nerves ; 4. below, and on the fore-part of the last fora- men, we observe part of the jugular fossa, in which the beginning of the internal jugular vein is lodged. Anterior and superior to this is the orifice of a foramen through which passes the carotid

artery ; and at this part of the bone the opening of the Eustachian tube is to be seen, a canal passing from the ear into the pharyngal cavity.

98. The petrous portion of this bone is of a triangular figure which separates two fossae ; one superior and anterior, the other inferior and posterior ; the latter of these composes part of the fossa in which the cerebellum is placed ; and the former a portion of the last fossa for the bases of the brain. On the posterior side of the parspe- trosa is observed the meatus auditorius externus, into which enters the double nerve of the seventh pair. On the under side of this process part of a hole appears, which is common to the tem- poral and occipital bones ; through it the lateral sinus, the eighth pair and accessory nerves pass.

99. This hard portion of the temporal bones contains the bones of the ear. The temporal

ing the parietal bones together ; it issues from the central upper part of the frontal bone, and is

bones are joined to the ossa malarum, to the continued over the head to the occipital bone, parietal bones, to the occipital bone, and to the sphenoid bone.

100. The os ethmoules, or sieve-like bone, is about two inches in circumference; it is situated

In children the frontal bone is divided into two by a continuation of this suture through the os frontis down to the nose ; this is sometimes the case in the adult, when the frontal bone is of

in the anterior part of the basis of the skull. It is course divided like the parietal into two. 3. the

pierced by a number of foramina, through which the olfactory nerves pass. From its middle arises

squamous suture is formed by the upper part of the temporal and sphenoidal bones wrapping

a large process named crista galli, and opposite over the lower edge of the parietal bones.

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to this a thin one, which in part divides the nose. The greater part of the laminae spongiosx in the nose belongs to this one.

101. The os sphenoides is of a very irregular

shape ; it is seated in the middle of the basis of malarum. the skull, and is bounded by the os frontis, eth- moides, vomer, occipitis maxillae superioris, ossa parietalia, palati, malarum, and temporum. In its inside, next the brain, is a cavity named sella turcica, which is bounded by four processes called clinoid ; under the two foremost of which pass the internal carotid arteries, and from their outsides are continued two thin long processes upon that part of the frontal bone which sepa- rates the anterior from the posterior lobes of the brain. Opposite to the cella turcica is a process which makes part of the exterior of the nose. On the outside of the skull, adjoining the upper jaw, are two processes of this bone on each side, named pterygoid, from which arises one on each side near the palate, which have no name. Over these pass the tendons of the pterygostaphalini ext'Tiii muscles; and more towards the occiput, between these and the styloid processes of the temporal bones, arise two small rugged processes. I n

5. The transverse suture runs through the bot- toms of the orbits, and joins the lower edge of' the frontal bone to the os sphenoides, maxilla; superioris, ossa nasi, unguis, plana, palati, and

t in children consisting only substance as is seen in the bones. At t'.ie inside of anterior clinor,! processes which are the first fora- through these the optic under these, towards the i irregular slits, named .•conn foramina of the nerves and blood-ves- h T these, towards the mamma, making the s ner \es to the face. i he occiput are two are tlie fourth fora- pass the largest nerves. Very little -, called the fifth, – of the carotid ei u ecu the sphe- ol the temporal i.'lar foramina, in •• en ; and from under the ptery- •:mall apertures the hack of the

'" are the fol- •' v. hicli joins the ; it i cms across the "t the .sphenoidal igittal suture join-

BONES OF THE FACE AND MOUTH.

103. The face is divided into the superior and inferior maxilla. The first, that is the upper jaw, is formed of thirteen bones exclusive of the teeth ; these are the two superior maxillary, two nasal, two palatine, two malar, two inferior spongy, two lachrymal, and the vomer; these are united to the cranium and to one another by harmony. The inferior maxilla, or under-

jaw, is formed of one bone.

104. The superior maxillary bone consists of two parts ; is in fact two bones, although some- times described as a single one. It has two processes, which join the os frontis and con- stitute part of the nose ; and a third which joins to the cartilage of the septum nasi. Its upper and outer parts compose the lower portions of the orbits; its inferior sides all that part of the face and the cheeks, eyes and nose, to the mouth, and two-thirds of the roof of the mouth. A little below the orbits are two holes, and behind the incisores teeth one more, which divides into two as it opens into the nose on each side of the septum nasi. Between the posterior molares and the orbits are two great sinuses, called antra maxillae superioris, which open into the upper part of the nose. In the lower edge of this jaw are the sockets or alveoli for the teeth. All the body of this bone is hollow, forming a large sinus, which is commonly named antrum high- morianum. This antrum appears in the separate bone to have a large aperture into the nostrils ; but in recent subjects it is so covered at its back part by the palate-bone, in the middle by the inferior sponge-bone, and anterior by a strong membrane, that one, and sometimes two holes, scarcely so large as a crow-quill, are only left at the upper part, which after a short winding process open into the nostrils between the two spongy bones. At the bottom of this cavity we may often observe some protuberances in whicr the small points of the roots of the teeth are con- tained. The cavity and the sockets of the teeth are often divided by the interposition of only a very thin bony plate.

105. The ossa malarum form the anterior, in- ferior, and outer parts of the orbits. They have each a short process, which joins the processus jugales of the temporal bones, and form arches which have been named ossa jugalia. The whole of the malar bone is by some indeed called jugal.

1 06. The ossa nasi constitute the upper part of the nose, and form that arch which is called the bridge of the nose.

107. The ossa unguis, or lachrymalia, are situ- ated immediately below the frontal bone towards the nose and within the orbits, the anterior and inner parts of which they help to compose. Be- tween each of them and the upper jaw a fora- men is found, as large as a goose-quill, for the passage of the lachrymal duct into the nose.

108. The ossa palati are small and of a very irregular figure; they form the back part of the roof of the mouth, and a small part of the bottom of each

orbit. Between the palatine and maxil- lary bones, near the pterygoid process of the sphenoid, are two small foramina, through which arteries and nerves pass to the palate.

109. The spongy bones are situated in the sides and lower part of the nostrils ; they are consi- dered by some as merely the spongy laminae of the ethmoid : and some anatomists further de- scribe two planar bones which are also rather parts of their spongy surfaces than properly se- parate bones.

110. The vomer, so called from its supposed resemblance to the ancient plough-share, is placed between the bones of the palate and the sphenoidal bone. It divides the nostrils into two parts, forming with its cartilage the septum nasi.

111. The inferior maxillary, or lower jaw- bone, occupies the whole inferior and anterior part of the face. The shape of the bone is something like that of a horse-shoe. It is arti- culated with the temporal bones by the condy- loid processes. Near these arise two others called coronal ; and at the inside of the chin a small rough process called processus inomina- tus. In the inside of this bone, under each coro- nal process, is a large foramen which runs under the teeth and passes out near the chin. Through this the vessels pass which belong to the teeth ; and in the upper edge of the jaw are the alveoli, or sockets for the teeth.

THE TEETH.

112. These are hard bones, partly covered with a peculiar substance called enamel, and fixed in the upper and under jaw in such sort, that in the adult there are sixteen belonging to each.

113. Each tooth is divided into a crown, which is covered by the enamel ; a nut, or the part embraced by the gum ; and a root, or fang, which last is hidden within the socket.

11 4. The teeth are of four kinds; viz. incisores, cuspidati, bicuspides, and molares. The first are eight in number, four in each jaw ; they are placed in the front of the mouth, are flat, and sharp-edged ; the roots, or fangs, are simple : those of the upper jaw are fixed obliquely back- wards, so that they generally cover a small part of the incisores of the under jaw. The cuspidati are four in number, one cuspidatus being placed on each side of the incisores. The fang of these teeth is single, and goes a considerable way under the jaw, especially the two of the upper jaw «vhich have been called the eye-teeth, under the supposition that the fangs reached the eye. The

end of these teeth is pointed, their bodies being rounded. The bicuspides are

eight, as there are two on the side of each cuspidatus ; they appear, at both extremities, as if formed by the junction of two incisores. The molares are twelve, three are situated at the extremities of each jaw. The fangs of these are varied ; those of the under-jaw have two, and of the upper-jaw three. Their oral ex- tremities are full of irregularities. The two last are called sapientiae, from the lateness of their appearance.

1 15. The first set of teeth consists of twenty. For the rationale of dentition, and mode in which the first are displaced to make way for the second set, consult the article PHYSIOLOGY.

Os HYOIDES.

116. This is a detached bone, placed at the root of the tongue, and has some resemblance to the Greek letter u, whence its name. This bone is convex, and irregular at its fore part ; and un- equally concave at its interior surface. Its uses are to support the tongue, and give attachment to a considerable number of muscles ; some of which are proper to the tongue, while others be- long to the fauces and larynx. At birth this bone is principally cartilaginous.

BONES OF THE TRUNK.

117. The trunk is formed of the spine, the thorax, and the pelvis ; the first of which is made up of twenty-four bones called vertebrae ; to which are added the sacral bone, and os coccy- gis. The vertebrae are divided into cervical, which are seven ; into dorsal, which are twelve ; and into lumbar, which are five in number. The first vertebra of the neck is called atlas. The bodies of these vertebrae are smaller, and of a firmer texture than the other vertebrae. From the middle of the posterior part of each vertebra, except the first, stands a process which is named spinal ; and from every one there is a process on each side called transverse ; while there are two upper and two under ones that are shorter, which are named the superior and inferior oblique processes. The fore part of the seven ver- tebrae of the neck, and two upper ones of the back, are anteriorly flat. The third and fourth of the back are acute. The spinal processes of the second, third, fourth, and fifth, of the cervi- cal vertebras are forked ; the two last long and horizontal, as are the three or four upper ones of the back : these last, however, are a little de- clining. The middle ones of the dorsal run obliquely downwards, and the processes of the remaining vertebrae become successively thicker, stronger, and less declining, those of the loins being horizontal. The transverse processes of the cervical vertebrae are perforated for the ad- mission of the cervical blood-vessels. The eight or nine superior ones of the back receive the upper ribs; and the rest, with those of the loins, serve only for the origin and insertion of muscles.

118. The os sacrum has two upper oblique processes, some small spinal processes, and two foramina in each interstice of the bones which compose it, both before and behind.

1 1 9 . The os coccygis i* formed of a chain of bones,

each piece becoming smaller as it descends ; it is convex behind, and concave anteriorly ; it is triangular in its form. At birth it is cartila- ginous ; and in old age the separate pieces of which it is made up become firmly united ; and with the os sacrum become one continued mass of bone.

120. Through every bone of the spine, the os coccygis excepted, there is a large foramen, which, together, make up the long channel for the passage of the medulla-spinalis, and in each space between the vertebra; are two large fora- mina for the passage of the several nerves.

121. The bodies of the vertebrae are all con- nected by strong ligaments or intervening carti- lages. In the cervical portion of the bony column, the oblique processes are wrapped over those of the receiving bone. It is the same with the dorsal vertebra. The vertebrae of the loins are received into deep cavities, and are attached by strong ligaments.

122. The ribs are twelve in number on each side ; the seven uppermost being generally called true ribs, their cartilages reaching the sternum ; and the five lowest are called false. They are articulated to the twelve vertebrae of the back, and all, except the two or three last ones, are articulated to the transverse processes of the ver- tebrae. The substance of the ribs is cellular and spongy, with a thin lamellated surface, which, as it approaches the vertebra;, becomes thicker ;uid stronger. To the fore end of each rib, a IOULT, broad, and strong cartilage is fixed, and thence reaches to the sternum, or is joined to the cartilage of the next rib. These cartilages make a considerable curve, their concave part being upwards; in old persons they often become very much ossified.

123. The att'rnuiii, or breast-bone, is mostly composed of three spongy bones, sometimes of more. To tins two of the cartilages of the ribs are attached. At the inferior extremity of the sternal bone, what is called the ensiform carti- lage is attached. This is situated at the part which is called the pit of the stomach. The number of the vertebnv, and also of the ribs, is subject to slight variations.

I '24. The /) < /I-/'*.— This is so named from its resemblance to a basin

formerly used by barbers. It ((institutes in a manner the base of the skele ton's trunk. Four bones enter into its compo- sition : \i/.. two ossa inominata, the os sacrum, ;">d the ox

I'J.-'i. 'I h.-n; is a considerable difference in the ['••mi and cavity of the male and female pelvis, iu the latter the serial bone is shorter and I'l-oader, and the iliac portions of the ossa inomi- nata aie more expanded ; so that the brim of

the sacrum ; the ischia, too, are more separated from each other in the female pelvis, so that the lower part of the pelvis is likewise wider than in man, and the sacrum though shorter is more hol- lowed ; while the os coccygis is more moveable, from being more loosely connected with the sacrum.

BONES OF THE LOWER EXTREMITIES.

126. Each lower extremity is divided into three parts, the thigh, the leg, and the foot; to which the patella or knee-bone may be added.

127. Osfemoris, or femur, is the single bone by which the thigh is formed. It is a long cy- lindrical bone, situated between the pelvis and the leg; its head, which as we have just said is received into the acetabulum, has a small depres- sion in the middle for the attachment of the round or restraining ligament. The neck, which is between the body of the bone and its head, is rough and gives attachment to the cap- sular ligament. What is called the great tro- chanter of the femur is a large unequal eminence below its neck ; and then there is another named the small trochanter. The body of the os femc- ris is smooth and convex before and hollow pos- teriorly, where there is a rough line called linea aspera.

128. The leg consists of three bones; the tibia, the fibula, and the patella.

129. The tibia is a long, thick, triangular and cylindrical bone placed between the femur and tarsus in the anterior and inside of the leg. It is thickest at its upper extremity. Its anterior ridge or angle is called the spine or shin ; at the lower end of this bone a considerable process is found which forms the inner ancle.

130. The fibula is a longitudinal bone situated at the outer part of the leg by the side of the tibia. The process which is at the lower extre- mity of this bone forms the outer ancle. It is connected to the tibia by an interosseous liga- ment.

131. The patella rotula, or knee-pan, is a small triangular spongy bone, situated between the interior extremity of the thigh bone and upper part of

the tibia. It is connected to the condyles of the femur and also to the tibia.

132. The foot bones are distinguished into three orders : viz. the tarsus, metatarsus, and toes. The tarsus consists of seven small bones placed between the leg and metatarsus ; they are called astragalus, os calcis, os naviculare, os cuboides, and three ossa cuneiformia. The as- tragalus is the upper bone of the foot; it is large and articulated both with the tibia and the fibula supporting the tibia, and being sup- ported itself by the os calcis. This last is of a very irregular figure, and is the largest bone of the foot. Behind it is formed into a considerable tuberosity called the heel. On the internal sur- face of the os calcis there is a considerable sinu- osity which affords a passage to a tendon, and to its hind part a very strong tendinous chord is attached called the tendo Achilles. The navi- cular bone is concave at its posterior part so as to receive the astragalus; anteriorly it is con- nected with the cuneiformi bones, and laterally with the 03 cuboides, which last, as its name

imports, is of cube shape and is connected with the heel bone; it also supports the two last bones of the metatarsus, and joins the third cu- neiform and the navicular bone.

133. Each of the cuneiform bones resembles a wedge. They are placed next to the meta- tarsus, are united to the navicular bone, and sup- port the three first metatarsal bones. The whole of these bones in connection form the upper part of the foot, the mass being convex above and concave underneath.

*134. The metatarsus is composed of five bones ; the first of these, which is much larger *Jian the rest, supports the great toe ; the others are pretty nearly alike in size, and correspond with the other toes, the junction of them all oeing at one end with the cuneiform bones and os cuboides, and at the other with the toes. The bodies of these bones are somewhat triangular.*

135. The toes consist of three bones, except- ing the great toe which is made up of only two ; the three bones are called phalanges.

136. There are several bones called sesamoid, occasionally found among the bones of the toes ; they are usually situated on the joints of the great toe; their size is ordinarily about that of asmall pea.

BONES OF THE UPPER EXTREMITIES.

137. These hang from the superior parts of the sides of the chest and are composed of the bones of the shoulder, arms, fore-arm, and hand.

138. The shoulder is made up of two bones, viz. the clavicle or collar-bone, and scapula or shoulder-blade ; these are united together imme- diately over the top of the os humeri, and thus form what is properly termed the shoulder.

139. The clavicle is a long roundish bone, shaped like the letter S, and situated obliquely in the upper and lateral part of the chest.

140. The scapula, or blade-bone, is triangu- lar, and placed in the upper and lateral part of the back. Its anterior and internal surface is irregularly concave ; its posterior and external surface is convex, and divided into two unequal

of the ulna is a process called styliform, and a round head which is received into the radius.

144. The radius is received at its upper end into the ulna. A little below its head a large tubercle is found. There is likewise a thin edge into which the transverse ligament is fixed, which arises from the ulna. The radius is connected to the humerus, the ulna, and the carpus.

145. The carpus, metacarpus, and fingers, compose the bones of the hand ; as the tarsus, metatarsus, and toes, do those of the feet. Each hand has thus twenty-six bones.

146. The carpus or wrist is situated between the fore-arm and metacarpus. It is composed of eight bones, which lie close to one another in a double row, one of which is superior, the other inferior ; in the superior row are the os navicu- lare or scaphoides,os lunare, os cuneiforme, and os orbiculare or pisiforme. In the lower row are the trapezium, trapezoides magnum, and cuneiform bones. All these bones are convex towards the back, and slightly concave towards the palm of the hand ; they bear some resem- blance to the names given to them, but are not easily known when seen separately.

147. The metacarpus consists of four bones, which sustain the fingers, and one shorter bone for the thumb.

148. The fingers are situated at the inferior extremity of the metacarpus, and consist of the thumb and four fingers, properly so called. These last consist of three separate parts, called phalanges ; the thumb is only divided into two phalanges. Each phalanx of the fingers is broadest at its upper extremity, and formed into a superficial cavity ; the body or middle part is

convex outwardly and concave anteriorly. The lower extremity is rounded.

OF LIGAMENTS, CARTILAGES, &c.

For the general structure and constitution of ligaments, see § 66 et seq.

149. Ligaments of the head. — The condyle of the under jaw has a capsular ligament, which

parts by a ridge or process called the spine of is connected with the temporal bone. There is the scapula; the fore part of this process is also a lateral ligament extending between the named the acromion, to which the clavicle is posterior maxillary foramen, and the petrous fixed. Near this process is another called cora- portion of the temporal bone. Within the joint coid, and close to this is a semicircular niche or there is an interarticular cartilage. A general groove for the passage of blood-vessels. capsular ligament surrounds the condyles and

141. The shoulder joint is formed by the connects the skull with the cervical vertebra, large round head of the humerus and the shal- Between the occipital bone and upper part of low articular cavity of the scapula.

142. The arm consists of one long bone, the humerus just mentioned which occupies the space between the junction of the clavicle with the scapula, and the fore-arm. It is a long cy- lindrical bone, thickish at its ends, and distin- guished into body and extremities. The humerus is connected to three bones, with the scapula, the radius, and the ulna.

143. The fore-arm is made up of two bones, the ulna and radius ; the first forms the internal and posterior, and the second the external and anterior part. The ulna, at its upper extremity, has one large process named olecranon, and a small process on the fore part ; and on one side between these is also a small cavity which receives the i-onor PT,f| Of tne radius. At the lower end

the tooth-like process of the second cervicai vertebra, there is a perpendicular ligament. There are two ligaments also which have been named lateral ; these arise from each side of the tooth-like process, and are inserted into the oc- cipital bone before the condyles. There is also a circular ligament arising from the edge of the spinal foramen, and inserted into the edge of the foramen magnum.

150. Ligaments of the vertebra,. — There are tendinous extensions between the spinous and transverse processes of the vertebrae ; and a strong fibrous ligament runs along the fore parts of the vertebra?, which becomes broader as it approaches the sacral bone ; it is formed by a number of intervertebral

ligamentous fibres: between the spinous processes of the neck, a» elastic yellow

ligament passes ; and there is an internal trans- verse ligament of the atlas. All the bones of the vertebrae, and every joint that is without motion and not joined by a suture, are joined by intervening ligaments, or, as they are com- monly called, cartilages.

151. Ligaments of the ribs and sternum. — Capsular ligaments unite the ribs to the vertebrae behind, and to the sternum before ; and the car- tilages of the ribs are united to each other by a perpendicular ligament. There are likewise in- ternal and external ligaments of the necks of the ribs. The former arise from the superior mar- gin of the neck of the ribs, and are fixed into the inferior surface of the transverse processes of the dorsal vertebrae immediately above; and the latter, which arise from the upper margin of the ribs, are inserted into the external margin of the inferior oblique process of the vertebrae above. The sternum is invested with a ligamen- tous sheath, and there are also ligaments arising from the cartilages of the seventh rib, and are fixed into the ensiform cartilage.

152. Ligaments of the pelvis. — The os coccy- gis is united to the sacral bone by a capsular li- gament. The ossa innominata are tied by very strong ligaments which run from the back of the spines of the ossa ilia to the os sacrum, and other ligaments which go from the os sacrum, and os coccygis to the acute and obtuse processes of the ossa i.schia. Towards the great foramen of the ossa innominata the acetabulum has a notch, across which runs a ligament that completes the socket. From the edge of the ilium to that of the os pubis, runs a ligament which is contigu- ous to, and seems to constitute a part of, the tendons of the muscles of the abdomen. The pu- bic bones are united by an intermediate cartilage somewhat like the intervertebral cartilage, and tin n • isu capsular ligament of the symphysis pubis.

l.Vi. Ligaments of the hip-joint. — There is a capsular ligament to this joint, which encloses imt only the head, but also the whole neck of the thiˆh bone ; a ligament is also found within the joint nearly of a triangular shape; and a double cartiLiˆo-lig.uncntous membrane is stretched across tiic breach in the inner and anterior part <•[the acetabulum; the bony margin of the aceUlmlum is further encircled by a ligament \\iiich adds considerably to its depth, and which i> called tin; cotyloid ligament. The cavity of the acetabulum is likewise lined by a synovial membrane, the (•;!

•_ >s of which are retained in their situation by small li-amcntous fibres.

I.”. . I.iˆiiim n/~ , >f the l:m; joint. —The knee joint ha- a ea|»ular li_ra:iiciit, and lateral liga- ments which are retledions of the first; and, •- other smaller ligainerits, there are two 1 cria :al, which cross each other; and there •cent-like cartilages eiitt.rin;.* into the com pnsitmii of this joint; they surround the two 1 ivities at the hi-ad of the tibia: the patella too d in IK t’lace by the tendon of the exterior t!iiiN(lr<, ,:nd by a strong li-ament which is in- 1 mi" the anterior tnbeiosity of the tibia. 'vi.d m-mbrane of the knee-joint covers t'l-

I.‘KI l.iˆi, nn.nl-, ri t/i, /m, luitus, metatarsus,

and toes. — Between the tibia and fibula a strong interosseous ligament is extended, and the upper extremity of the latter bone is connected by a capsular ligament to the outer surface of the tibia; there are several ligaments also which unite the inferior extremity of the fibula and tibia. A capsular ligament is fixed to the margin of the articular cavity of the tibia and fibula, going over the astragalus ; it is strengthened by a great many other ligamentous fibres. The as- tragalus is articulated by two cartilaginous planes to the os calcis, and there are lateral and inferior ligaments fixing together the tarsal bones. The bones of the metatarsus and tarsus are united by capsular ligaments, and also by other short liga- ments called, from their situation, dorsal, plan- tar, and lateral ; and, according to the direction of their fibres, straight, oblique, and transverse. There are also capsular and lateral ligaments to the phalanges of the toes ; and the tendons, which pass from the flexor and exterior muscles of the leg to be inserted into these parts, are en- closed in vaginal ligaments.

156. Ligaments of the clavicle and scapula. — The clavicle is connected to the sternal bone by a capsular ligament, and within the joint there is an outer articular cartilage ; a ligament like- wise passes across the sternum connecting one clavicle to the other. The shoulder joint has a capsular ligament ; and from the coracoid process of the scapula a ligament arises which passes up obliquely and divides into two parts, one fixed into the clavicle, and one into the first rib. There is also an anterior proper ligament of the scapula, which passes between the coracoid pro- cess and acromion ; while another, called the posterior, is stretched across the semilunar notch of the bone. There is a synovial apparatus to the capsular ligament of the shoulder joint as in other joints of this description.

157. Ligaments of the elbow-joint. — The cap- sular ligament of this joint is much less extensive than that of the shoulder. On each side of it there are lateral ligaments; and there is an an- nular ligament including the neck of the radius, and which is fixed to the opposite sides of the semilunar cavity

of the ulna. Some other liga- mentous bands passing over the capsular liga- ment have been named accessory.

158. Ligaments of the arm, carpus, metacarpus, and fingers. — Between the radius and ulna there is a strong ligamentous membrane, as in the case of the leg ; and a capsular ligament encloses the carpal extremity of the ulna, which arises from the edges of the semilunar cavity at this end of the bone. A capsular ligament is also found connecting the glenoid cavity of the radius with the scaphoides, lunare, and cuneiform bones : and between the upper and under rows of bones which compose the carpus there is also a capsu- lar ligament; and there are lateral, oblique, transverse, and perpendicular ligaments, common to the carpus. The carpal bones joining the metacarpus are united to the latter by capsular ligaments ; and ligamentous bands extend be- tween the bases of the metacarpal bones ; at the heads .of these bones interosseous ligaments are also placed ; and there are vaginal ligaments which enclose the tendons of the flexor muscles,

as also crucial ligaments binding down these ten- dons ; while the tendons of the extensor muscles are united by transverse ligaments near to the heads of the metacarpal bones

OF THE PARTICULAR MUSCLES.

159. In this division of our subject we pursue the plan of our predecessors, viz. that of present-

ing the several muscles in a tabular form, in order to avoid unnecessary circumlocution. It is proper, however, to premise that all the mus- cles of the body 'are not included in this view ; those belonging to the eyes, the internal ear, and the intestinum rectum, are described in other parts of the present article.

TABLE OF THE MUSCLES.

160. MUSCLES SITUATED UNDER THE INTEGUMENTS OF THE CRANIUM.

Name.

. Occipito-fron- talis.

2. Corrugator su- percilii.

1. Orbicularis palpebrarum.

2. Levator pal- pebrae supe- rioris.

1. Attollens au- riculam.

2. Anterior auri- culae.

3. Retrahentes (A) auriculae.

1. Tragicus.

2. Anti-tragicus.

3 Transversus auriculae.

4. Helicis major.

5. Helicis minor.

Compressor (B) naris.

Origin.

From the transverse ridge of the as occipitis.

From above the joining of the os frontis, os nasi, and os maxillare.

Insertion.

Into the skin of the eye-brows.

Into the inner part of the occipito-fronta- lis.

161. MUSCLES OF THE EYE-LIDS.

From around the edge of the Into the nasal process

orbit. of the os maxillare.

From the bottom ,of the orbit Into the cartilage of

near the optic foramen. the upper lid.

Use.

To pull the skin of the head backwards, and to raise the eye-brows and skin of the fore- head.

To draw the eye-brows towards each other, and to wrinkle the forehead.

To shut the eye. To open the eye.

162. MUSCLES OF THE EXTERNAL EAR.

From the tendon of the occipi- to-frontalis, near the os tem- poris.

From near the back part of the zygoma.

Into the upper of the ear.

part To raise the ear.

Into an eminence be- hind the helix.

From the outer and back part of Into the convex part the root of the mastoid pro- of the concha, cess.

163. MUSCLES OF THE CARTILAGES OF THE EAR.

From the outer and middle part of the concha near the tragus.

From the root of the inner part of the helix.

From the upper part of the con- cha.

From the upper, anterior, and acute part of the helix.

From the lower and fore part of the helix.

Into the upper part of the tragus.

Into the upper part of the anti-tragus.

Into the inner part of the helix.

Into the cartilage of the helix, a little a- bove the tragus.

Into the helix, near the fissure in its car- tilage.

164. MUSCLE OF THE NOSE.

From the upper part of the root Into the nasal process of the ala nasi. of the os maxillare,

nnd anterior extre- mity of the os nasi.

To raise this eminence and to pull it for- wards.

To stretch the con- cha, and pull the ear backwards.

To depress the con" cha, and pull the point of the tragus a little outwards.

To dilate the mouth of the concha.

To stretch the con- cha and scapha, and likewise to pull the parts it is connected with towards each other.

To depress the upper part of the helix.

To contract the fis- sure.

To straighten the nos- trils, and likewise to corrugate the skin of the nose.

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Name.

1. Levator labii superioris, a- Ixque nasi.

2. Levator angu- li oris.

3. Zygomaticus major.

4. Zygomaticus minor.

5. Buccinator.

6. Depressor la- bii superioris, alaeque nasi.

7. Depressor an- guli oris.

8. Depressor la- bii inferioris.

9. Levator labii inferioris.

10. Orbicularis oris (c).

1. Temporalis.

2. Masseter (r.).

3. Pterygoideus

interims.

•I. I’teryiroideus externus.

ANATOMY.

165. MUSCLES OP THE MOUTH AND LIPS.

Origin.

From the outer part of the or- bitar process of the os maxil- lare, and from the nasal pro- cess of that bone, where it joins the os frontis.

From the os maxillare superius, between the orbitar foramen and the first dens molaris.

From the os malae, near the zy- gomatic suture.

Intertion.

Into the upper lip and ala of the nose.

Into the orbicularis oris at the angle of the mouth.

Into the angle of the mouth.

Immediately above the origin of Into the angle of the the zygomaticus major. month

From the alveo’.i of the denies molares in the upper and lower jaws.

From the os maxillare superius, immediately above the gums of the denies incisores.

At the side of the chin from ihe lower edge of the maxilla in- ferior.

From the lower and anlerior part of the maxilla inferior.

From near the gums of the in- cisores and caninus of the

maxilla inferior.

mouth.

Into the angle of the mouth.

Into the root of the ala nasi and upper lip

Into the angle of the mouth

Into the upper lip.

Into the under lip and skin of the skin.

166. MUSCLES OP THE LOWER JAW.

From part of the os bregmatis and os frontis ; squamous part of the os temporis ; back part of the os malse, and the tem- poral process of the os sphe- noides (o).

From the malar process of the os maxillare, and the lower edi,res of the os malac, and of the zygomatic process of the os temporis.

From the inner surface of the outer wing of the pterygoid process of the os sphenoides, and from the process of ihe os pahiti, that helps to form the pterysioid fossa.

From the external ala of the pterygoid process, a small part of the adjacent os max- illare, and a ridge in the tem- poral process of the os sphe- noides.

Into the coronoid pro- cess of the lower jaw.

Into the basis of the co- ronoid process& that part of the j aw which supports that and the condyloid process.

Into the lower jay on its inner side and' near its angle.

UK.

To draw the upper lip and skin of the nose upwards and outwards.

To raise the corner of the mouth.

To raise the angle ot the mouth, and make the cheekprominent, as in laughing.

To raise the angle of the mouth obliquely outwards.

To contract the mouth and draw the angle of it outwards and backwards.

To draw the ala nasi and upper lip down- wards.

To draw the corner of the mouth down- wards.

To draw the under lip downwards and somewhatoutwards .

To raise the under lip and skin of the chin.

To shut the mouth by constringing the lips.

*To move the lower * jaw upwards*

To raise and likewise to move the jaw a little forwards and backwards.

To raise the lower jaw, and draw it a little to one side.

Inlo the fore part of the condyloid pro- cess of the lower jaw, and likewise of the capsular liga- ment.

Ifi7. Mrsci.KS SITUATED AT THE FORE PART OP THE NECK.

From the cellular membrane Into the side of the covering thu pectoral, del- chin and integu- toid, and trapezius muscles. ments of the check.

To move the jaw for- wards and to the op- posite side (F) ; and at Ihe same time to prevent the ligament of the joinl from be- ing pinched.

To draw the checks etnd skin of the face downwards ; and, when the mouth is snut, to draw all that part of the skin to which it is con- nected below the ,vr,.. ;~v. ,,. Wan!s.

ANATOMY.

Name. Origin.

2. Mastoideus From the upper part of the /H). sternum, and from the upper

and fore cart of the clavicle.

Insertion.

Into the mastoid pro- cess, and as far back us the lambdoidal suture.

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Vie.

To move the head to one side, or, when both muscles act, to bend it forwards.

168. MUSCLES SITUATED BETWEEN THE TRUNK AND TEE Os HYOIDES

1. Omo-hyoide- us (i).

2. Sterno-hyoi- deus.

3. Hyo-thyroide-

us.

4. Stemo-thyroi- deus.

5. Crico-thyroi- deus.

From the upper costa of the scapula near its niche ; from part of a ligament that extends across this niche, and some- times by a few fibres from the coracoid process.

From the cartilage of the first rib, the inner and upper part of the sternum, and a small part of the clavicle.

From part of the basis and horn of the os hyoides.

From between the cartilages of the 1st and 2d ribs, at the upper and inner part of the sternum.

From the anterior part and side of the cricoid cartilage.

Into the basis of the os hyoides.

To draw the os hyoi- des in an oblique di- rection downwards.

Into the basis of the To draw the os hy- os hyoides. oides downwards.

Into a rough oblique

line at the side of the

thyroid cartilage.

Immediately under

the hyo-thyroideus.

To raise the thyroid cartilage, or depress the os hyoides. To pull the thyroid cartilage down- wards.

Into the lower part To pull the cricoid and inferior horn of cartilage upwards the thyroid carti- and backwards, or lage. the thyroid for-

wards and down- wards.

169. MUSCLES SITUATED BETWEEN THE Os HYOIDES AND THE LOWER JAW.

1. Diagastricus (K).

2. Stylo-hyoi- deus (L).

3. Mylo-hyoi-

deus (M).

4. (N.) Genio- hyoideus.-

5. Genio-glos- sus.

6. Hyo-glossus (o).

7. Lingulis

8. Stylo-glossus.

9. Stylo-pha- ryngaeus.

10. Circumflex- us-palati.

11. Levator pa- lati.

From a fossa at the root of the mastoid process, and likewise from the os hyoides.

From the basis of the styloid process.

From the basis of the lower jaw, between the last dens molaris and the chin.

From the inside of the chin.

From the inside of the chin.

From the horn, basis, and ap- pendix of the os hyoides.

Laterally from the root of the tongue.

From the styloid process, and sometimes also from a liga- ment that extends from thence to the angle of the lower jaw.

From the basis of the styloid process.

From near the bony part of the Eustachian tubes and from the spinous process of the os sphenoides

From the membranous part of the Eustachian tube, and the extremity of the os petrosum.

Into the lower and anterior part of the chin.

Into the side and fore-

Sart of the os hyoi- es near its base. Into the basis of the os hyoides.

Into the base of the os hyoides.

Into the tongue and basis of the os hyoi- des.

Into the tongue late- rally.

Into the extremity of the tongue.

Into the side of the tongue from the root to near its tip.

Into the side of the pharynx and poste- rior part of the thy- roid cartilage.

Into the semilunai edge of the os palati, and the velum pen- dulum palati (P).

Into the velum pen- dulum palati.

To draw the lower jaw downwards.

To draw the os hyoi- des obliquely up- wards.

To move the os hyoi- des to either side, forwards or up- wards.

To move the os hyoi- des forwards or up- wards.

To move the tongue in various directions.

To draw the tongue downwards and in- wards.

To shorten the tongue and draw it back- wards.

To move the tongue backwards and to one side.

To raise the thyroid cartilage and pha- rynx, and likewise to dilate the latter.

To dilate and draw the velum obliquely downwards.

To pull the velum backwards.

170. MUSCLES SITUATED ABOUT THE FAUCES.

Xame. 1. Palato-pha- ryugctus.

Origin. From the lower and anterior part of the cartilaginous ex- tremity of the Eustacliian

Insertion. Into the upper and posterior part of the thyroid cartilage.

Uu.

To raise the pharynx and thyroid carti- lage, or to pull the

tube (Q); the tendinous ex-

velum and uvu-

pansion of the circumflexus

la backwards and

palati ; and the velum pen-

downwards.

dulum palati near the basis

and back part of the uvula.

2. Constrictor is- thmi faucium.

From near the basis of the tongue laterally.

Into the velum pen- dulum palati, near

To raise the tongue and draw the velum

the basis and fore-

towards it (R).

part of the uvula.

3. Azygos uvu- lae.

From the end of the suture that unites the ossa palati.

Into the extremity of the uvula.

To shorten the uvu- la, and bring it for-

wards and upwards.

171. MUSCLES SITUATED AT THE BACK PART op THE PHARYNX.

1. Constrictor

From the cuneiform process of

Into the middle of the

To move the pha-

pharyngis su- perior.

the occipital bone ; the ptery- goid process of the os sphe-

pharynx.

rynx upwards and forwards, and to

noides, and from each jaw

compress its upper

near the last dens molaris (s).

part.

2. Constrictor

From the horn and appendix of

Into the middle of

To draw the os hy-

pharyngis me- dius (T).

the os hyoides, and from the ligament that unites it with

the processus cunei- formis of the occi-

oides and pharynx upwards, and to

the thyroid cartilage.

pital bone, about

compress the latter.

its middle and be-

/

fore the great fora-

men.

3. Constrictor

From the cricoid and thyroid

Into the middle of the

To compress part of

pharyngis in-

cartilage.

pharynx.

the pharynx.

ferior (u).

172. MUSCLES ABOUT

THE GLOTTIS.

1. Crico-arytic-

From the side of the cricoid

Into the hasis of the

To open the glottis.

noideus late-

cartilage.

arytaenoid cartilage

ralis.

laterally.

•

-2. Crico-arvta'-

From the cricoid cartilage pos-

Into the basis of the

To open the glottis.

noides jms'ii-

teriorly.

arytaenoid cartilage

cus.

posteriorly.

3. Arvta noideus

From the basis of one of the

Near the extremity of

To draw the parts it

obliquus.

arytiuioid cartilages.

the other arytaenoid

is connected with

cartilage.

towards each other.

4. Arvta noideus

From one of the arytaenoid car-

Into the other arytae-

To shut the glottis.

transversus.

tilages laterally.

noid cartilage late-

rally.

:”). Tlivreo-ary-

From the posterior and under

Into the arytaenoid

To draw the arytae-

Uuioidcus.

part of the thyroid cartilage.

cartilage.

noid cartilage for-

wards.

6. Arytirno-epi-

From the upper part of the

Into the side of the

To move the epiglot-

o-lottideus.

aryUinoid cartilage laterally.

epiglottis.

tis outwards.

7. Th\rfo-epi-

From the thyroid cartilage.

Into the side of the

To pull the epiglot-

glottideus.

epiglottis.

tis obliquely down-

wards (w.) 17:$. Mi scr.i-.s AT THK FORE PART OP THE NECK, CLOSE TO THE VERTEBRAE.

1. lit i in- rajuti- From the anterior extremities of Into the fore part of To bend the head for-

tlic transverse processes of the cuneiform pro- wards.

the live lowermost cervical cess of the os occi- pitis.

From the anterior and upper Near the basis of the To assist the last de- part of the fust cervical ver- condyloid process scribed muscle. tfl-ni'. of the occipitis.

From tin- anterior and upper Into the os occipitis, To move the head to

part of the transverse process opposite to the sty- one side

ol tin: first cervical vertebra. lo-mastoid foramtn.

3. Uectus capitis laterals.

ANATOMY.

Name. 4. Longus colli.

1. Obliquus ex- ternus

2. Obliquus in- ternus.

3. Transversalis.

4. Rectus abdo- minis.

5. Pyramidalis (e).

1. Pectoralis ma- jor.

2. Subclavius.

3. Pectoralis mi- nor (g).

4. Serratus mag- nus.

1. Diaphragma (h).

2. Levatores cos- tarum.

Insertion.

Into the second cer- vical vertebra ante- riorly.

Origin.

Within the thorax, laterally from the bodies of the three upper- most dorsal vertebrae ; from the basis and fore part of the transverse processes of the first and second dorsal ver- tebrae, and of the last cervical vertebra ; and lastly from the anterior extremities of the transverse processes of the 6th, 5th, 4th, and 3rd cervical vertebrae.

174. MUSCLES AT THE PCRE PART OP THE ABDOMEN.

From the lower edges of the Into the linea alba (r), eight inferior ribs, near their ossa pubis (z), and cartilages. spine of the ilium

(a).

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Use.

To pull the nerk to one side (\V

From the spinous process of the three lowermost lumbar ver- tebrae, the back part of the os sacrum, the sprite of the ilium, and back part of Fallopius's ligament (c).

From the cartilages of the seven inferior ribs; the transverse processes of the last dorsal, and four upper lumbar ver- tebrae ; the inner part of Fal- lopius's ligament, and the spine of the ilium.

From the upper end of the pu- bis and the symphysis pubis.

Into the cartilages of all the false ribs, li- nea alba (b), and fore part of the pu- bis.

Into the linea alba and cartilage ensi- formis.

Into the cartilages of the 5th, 6th, and 7th ribs, and the edge of the cartilage en- siformis (d).

Into the linea alba and inner edge of the rectus, commonly about two inches above the pubis.

175. MUSCLES AT THE FORE PART OF THE THORAX. Into the upper and

From the anterior and upper part of the pubis.

From the cartilaginous ends of the 5th and 6th ribs; the sternum and anterior part of the clavicle.

From the cartilage of the first rib.

inner part of the os humeri (f).

Into the under sur- face of the clavicle.

From the upper edges of the Into the coracoid pro- 3d, 4th, and 5th ribs. cess of the scapula.

From the eight superior ribs. Into the basis of the

scapula.

176. MUSCLES THAT CONCUR IN FORMING THE THORAX.

To compress and sup- port the viscera, as- sist in evacuating the faeces and urine, draw down the ribs, and bend the trunk forwards,or oblique- ly to one side.

To assist the obliquus externus.

To compress the ab- dominal viscera.

To compress the fore part of the abdo- men, and to bend the trunk forwards.

To assist the lower portion of the rec- tus

To draw the arm for- wards, or obliquely forwards.

To move the clavicle forwards and down- wards, and to assist in raising the first rib.

To move the scapula forwards and down- wards, or to elevate the ribs.

To bring the scapula forwards.*

From the transverse processes of the last cervical, and the eleven upper dorsal vertebrae.

Into the upper side of To move the ribs up- each rib near its wards and out- tuberosity. wards.

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Name.

? Intercostales externi.

4. Intercostale interni (i).

5. Sterno casta- les (k).

1 . Trapezius (1), or cucullaris.

2. Rhomboideus (n).

3. Latissimus

dorsi.

4. Serratus infe- rior posticus.

5. Levator sca- pula1.

6. Serratus supe- rior posticus.

7. Splenius (o).

ANATOMY.

8. Complexus

9. Trachelo mas- toidcus (q).

10. Rectus capi- tis posticus ma- jor.

1 1 . Rectus capi- li> po>ticus mi- nor.

1‘2. <)bliqmis su- perior eapitis.

1’,]. (Mibquus in- ferior cav.it is.

14. Saero-lumba Us (r).

Origin

From the lower edge of each upper rib.

Insertion.

Into the superior edge of each lower rib.

Use. To elevate the ribs.

From the cartilage ensiformis, and the lower and middle part of the sternum.

177. MUSCLES AT THE BACK PART

From the middle of the os oc- cipitis, and .the spinous pro- cesses of the two inferior cer- vical, and of all the dorsal vertebrae (m).

From the spinous processes of the three lowermost cervical and of all the dorsal vertebrae.

From part of the spine of the os ilium, the spinous processes of the os sacrum and lumbar vertebrae, and of six or eight of the dorsal vertebrae : also from the four inferior false ribs near their cartilages.

From the spinous processes of the two lowermost dorsal, and of three of the lumbar vertebrae.

From the transverse processes of the four uppermost verte- bra1 colli.

From the lower part of the liga- inentum colli, the spinous process of the lowermost cer- vical vertebra, and of the two superior dorsal vertebrae.

From the spinous processes of the four or five uppermost vertebrae of the

back, and of the lowermost cervical ver- tebra.

From the transverse processes of the four or five uppermost dorsal, and of the six lower- most cervical vertebrae.

From the transverse processes of the first dorsal vertebrae, and four or five of the lower- most cervical vertebra.

From the spinous process of the second cervical vertebra.

From the first vertebra of the neck.

Into the cartilages of the 2d, 3d, 4th, 5th, and 6th ribs.

OF THE NECK AND ThUNK. .

Into the posterior half of the clavicle part of the ancromion, and the spine of the scapula.

Into the basis of the scapula.

To depress the carti- lages of the ribs.

To move the scapula

Into the os humeri, at the inner edge of the groove for lodg- ing the long head of the biceps muscle.

Into the lower edges of thelkree or four lowermost ribs near their cartilages.

Into the upper angle of the scapula.

Into the second, third, and fourth ribs.

Into the transverse processes of the two first cervical verte- brae, the upper and back part of the ma- stoid process, and a ridge on the os occipitis.

Into the os occipitis.

Into the mastoid pro- cess.

Into the os occipitis.

Into the os occipitis.

From the transverse process of Into the os occipitis.

the first cervical vertebra. t

From the spinous process of the Into the transverse

second cervical vertebra. process of the first

cervical vertebra.

! rom the back part of the os Into the lower edge sacrum, -pine of the ilium, of each rib.

spinou-; processes, and roots of the transverse processes of the \t rtebni- of the loins.

To move the scapula upwards and back- wards.

To draw the os hu- meri downwards and backwards, and to roll it upon its axis.

To draw the ribs out- wards, downwards, and backwards.

To move the scapula forwards and up- wards.

To expand the thorax.

To move the backwards

head

To draw the backwards.

To draw the backwards.

head

head

To extend the head and draw it back- wards.

To assist the rectus major.

To draw the head backwards.

To draw the face to- wards the shoulder, and to move the first vertebra upon the second.

To drawthe ribs down- wards, move the body upon its axis, assist in erecting the trunk, and turn the neck backwards, or

Name.

15. Longissimus dorsi (s).

16. Spinalis dor- si.

17. Semi-spinalis dorsi.

18. Multifidus spinae (t).

19. Semi-spinalis colli.

20. Scalenus (u).

81. Inter spinales

00-

22. Inter-trans- versales (y).

Origin.

The same as that of the sacro- lumbalis.

From the spinous processes of the uppermost lumbar and lowermost dorsal vertebrae.

From the transverse processes of the 7th, 8th, 9th, and 10th vertebrae of the back.

From the os sacrum, ilium, ob- lique and transverse processes of the lumbar vertebrae, trans- verse processes of the dorsal, and four of the cervical ver- tebrae.

From the transverse processes of the five or six uppermost dorsal vertebrae.

From the transverse processes of the five inferior cervical vertebrae.

From the upper part of each of the spinous processes of the six inferior cervical vertebrae.

From the upper part of each of the transverse processes of the vertebras.

Insertion. Into the transverse

5 recesses of the orsal vertebrae. Into the sninous pro- cesses of the nine superior dorsal ver- tebrae.

Into the spinous pro- cesses of the four uppermost dorsal,& lowermost "of the cervical vertebrae.

Into the spinous pro- cesses or the lumbar, dorsal, and six of the cervical verte- brae.

Into the spinous pro- cesses of the2d, 3d, 4th, 5th, and 6th cervical vertebrae.

Into the upper and outer part of the first ribs.

Into the under part of each of the spinous processes of the ver- tebrae above.

Into the under part of each of the trans- verse processes of the vertebrae above.

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Use.

To stretch the verte- brae of the back,ind keep the trunk erect- To extend the verte- brae.

To extend the spine obliquely back- wards.

To extend the back, and draw it back- wards or to one side

To stretch the neck ob liquely backwards

To move the neck

forwards, or to one

side. To draw the spinous

processes towards

each other

To draw the transverse processes towards each other.

178. MUSCLES WITHIN THE CAVITY OP THE ABDOMEN, ON THE ANTERIOR AND LATERAL

PARTS OF THE SPINE.

1. Psoas panrus (z).

9. Psoas magnus.

3. Iliacus inter- ims.

4. Quadratus lumborum (a).

5. Coccygseus.

From the sides of the transverse processes of the uppermost lumbar vertebra, and some- times of the lowermost dor- sal vertebra.

From the bodies and transverse processes of the last dorsal and all the lumbar vertebrae.

From the inner lip, hollow part, and edge of the os ilium.

From the posterior part of the spine of the illium.

From the posterior aud inner edge of the spine of the is- chium.

Into the brim of the peivis, at the junc- tion of the os pubis with the ilium.

Into the os femoris, a little below the tro- chanter minor.

In common with the psoas magnus.

Into the transverse processes of the four uppermost lumbar vertebrae, the infe- rior edge of the last rib, and the side of the lowermost dor- sal vertebra.

Into the lower part of the os sacrum, and almost the whole length of the os coc- cygis laterally.

To bend the forwards.

loins

To bend the thigh for- wards.

To assist the psoas

magnus. To support the spine,

or to draw it to one

side.

To draw the os coc- cygis forwards and inwards (b).

179. MUSCLES ON THE SCAPULA AND UPPER PART OP THE os HUMERI.

1. Deltoides (c).

2 Supra spina- tus.

VOL. II.

From the clavicle, processus acromion, and spine of the middle part of the scapula.

Into the anterior and middle part of the

To raise the arm

From the basis, spine, and up- per costa of the scapula.

os humeri.

Into a large tuberosi- ty at the head of the os humeri.

To raise the arm.

0

194 ANATOMY

Name Origin. insertion. Use.

3 Infra snina- tus

From the basis and spine of the scapula.

Into the upper tuberosity.

and middle part of the

To roll the os huraeri ‘ outwards.

4 Teres minor

From the inferior costa of the scapula.

Into the lower part of the tuberosity.

To assist the infra spi- ‘ /^ natus.

5 Teres major.

From the inferior angle, and in- ferior costae of the scapula.

Into the ridge at the inside of the groove formed for the long arm.

To assist m the rota- tory motion of the head of the biceps.

6 Subscapularis.

From the basis, superior and inferior costa of the scapula.

Into the upper part of the a small tuberosity at the head of the os humeri.

To roll the arm in- wards.

7 Coraco-brachi- From the coracoid process of Into the middle and To roll
the arm for- alis (e). the scapula. inner side of the os wards and upwards.

humeri.

180. MUSCLES ON THE Os HUMERI.

1. Biceps flexor By two heads, one from the co- Into the tuberosity at To
bend the fore arm, cubiti. racoid process, and the other, the end of the ra-

or long head, from the upper dius. and outer edge of the glenoid cavity of
the scapula.

2. Brachialis in- From the os humeri, below, Into a small tuberosi- To assist
in bending ternus. and at each side of the ten- ty at the fore part the fore-
arm

don of the deltoids. of the coronoid pro-

cess of the ulna.

3. Triceps cxten- By three heads : the first from Into the upper and To
extend the fore- =or cubiti. the inferior costa of the sea- outer part of the
arm.

pula; the second from the olecranon.

upper and outer part of the

os humeri ; and the third

from the back part of that

hone.

Isl. MUSCLES ON THE FORE ARM.

Supinator Ion- From the outer ridge and ante- Into the radius near To assist
in turning trus. vioi surface of the os humeri, its styloid process. the palm of
the

a little above its outer con- hand upwards.

dyle.

•_\ F.xtcnsnr ear- Immediately below the origin Into the upper part To
extend the wrist. of the supinator longus. of the metacarpal

bone of the middle finger.

3. Fxtensor ear- From the outer and lower part Into the upper part To assist the extensor of the outer condyle of the os of the metacarpal longus. luiineri, and the upper part of bone of the middle the radius. finger.

•1. F.xtr-nsoi • dici- From the outer eondyle of the Into the back part of To extend the fingers. torum coinniu- >s humeri. all the bones of the

m—. four fingers.

1 mm the outer condyle of the Into the bones of the To extend the little

>> humeri. little finger. finger.

From the outer condyle of the Into the metacarpal To assist in extending ˆ hiinieri. bone of the little the wrist.

finger. From the (niter condyle of the Into the outer edge of To extend the fore-

o> humeri. the ulna. arm.

From the inner condyle of the Into the os pisiforme. To assist in bending K huinen, and anterior edge the hand.

of tin olecranon (i().

From the mm r condyle of the Into the internal an To bend the hand.

nular ligament, and aponeurosis palma- ris (A).

ie inner condyle of the Into the metacarpal To bend thf> hana. bone of ‘the fore finperi

ANATOMY.

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Name. Origin.

1 1 . Pronator ra- From the outer condyle of the dii teres. os huraeri, and coronoid pro-

cess of the ulna.

12. Flexor subli- mis perforatus CO-

13. Supinator ra- dii brevis.

14. Abductor pol- licis longus.

From the inner condyle of the os humeri, inner edge of the coronoid process of the ulna, and upper and anterior part of the radius.

From the outer condyle of the os humeri, and posterior sur- face & outer edge of the ulna.

From the middle and back part of the ulna, interosseus liga- ment, and radius.

15. Extensor mi- From the back part of the ulna, nor pollicis. and interosseus ligament, and

radius.

16. Extensor ma- From the back of the ulna and jor pollicis. interoeseus ligament.

17. Indicator.

18. Flexor pro- fund us perfo- rans.

19. Flexor longus pollicis.

20. Pronator ra- dii quadratus.

From the middle of the ulna.

From the upper and fore part

of the ulna and interosseus

ligament. From the upper and fore part

of the radius. From the inner and lower part

part of the ulna.

Insertion.

Into the anterior and convex edge of the radius near its mid- dle.

Into the second bone of each finger.

Into the anterior, in- ner and upper part of the radius.

By two tendons into the os trapezium, and first bone of the thumb.

Into the convex part of the second bone of the thumb.

Into the third and last bone of the thumb.

Into the metacarpal bone of the fore fin- ger.

Into the fore part of the last bone of each of the fingers.

Into the last joint of the thumb

Into the radius oppo- site to its origin.

To roll the hand in- wards.

To bend the second joint of the fingers.

To roll the radius out- wards.

To stretch the first bone of the thumb outwards.

To extend the second bone of the thumb obliquely outvards.

To stretch the thumb obliquely back- wards.

To extend the fore- finger.

To bend the last joint of the fingers.

To bend the last joint of the thumb.

To roll the radius in- wards and of course to assist in the pro- nation of the hand.

182. MUSCLES ON THE HAND.

1. Lumbricales.

(*).

2 Abductor bre- vis pollicis.

3. Opponens pol- licis.

4. Flexor brevis pollicis.

5. Abductor pol- licis.

6 Abductor in- dicis.

7. Palmaris bre- vis

8. Abductor mi- nimi digiti.

9. Flexor parvus minimi digiti.

10. Abductor me- tacarpi minimi digiti.

From the tendons of the perfo- rans.

From the fore part of the inter- nal annular ligament, os scaphoides, and one of the tendons of the abductor lon- gus pollicis.

From the inner and anterior part of the internal annular liga- ment & from the os scaphoides

From the os trapezoides, inter- nal annular ligament, os mag- num, and os uncifonne.

From the metacarpal bone of the middle finger.

From the inner side of the first bone of the thumb, and from the os trapezium.

From the internal annular liga- ment, and aponeurosis palma-

From the internal annular liga- ment and os pisiforme.

From the os unciforme and in- internal annular ligament.

From the os unciforme and in- ternal annular ligament.

Into the tendons of To bend the first, and

the extensor digito- rum communis.

Into the outer side of the second bone of the thumb near its root.

Into the first bone of the thumb.

Into the ossa sesamoi- dea & second bone of the thumb.

Into the basis of the second bone of the thumb.

Into the first bone of the fore finger pos- teriorly.

Into the os pisiforme, and the skin cover- ing the abckictor minimi digiti

Into the side of the first bone of the lit- tle finger.

Into the first bone of the little finger.

Into the metacarpal bone of the little finger.

to extend the two last joints of the fingers (/).

To move the thumb from the fingers.

To move the thumb inwards and to turn it upon its axis.

To bend the second joint of the thumb.

To move the thumb towards the fingers.

To move the fore fin- ger towards the thumb.

To contract the palm of the hand.

To draw the little fin- ger from the rest.

To bend the little fin- ger.

To move that bone towards the rest.

Inter tian.

Name. Origin.

11. Interossei in- Situated between the raetacar- Into the roots of the terni. pal bones. fingers.

12. Interossei ex- From between the metacarpal Into the roots of the terni. bones on the back of the hand. fingers.

183. MUSCLE AT THE BACK PART OP THE PELVIS, AND UPPER PART*

1. Glutaeus(n)

maximus

2. Gluteus dius.

3. Gluteus mi- nimus.

4. Pyriformis (o).

5. Gemini (p).

6. Obturator in- ternus.

7. (juadratus ((/) feinons.

1 . Biceps flexor.

From the spine of the ilium, posterior sacroischiatic liga- ments, os sacrum, and os coc- cygis.

From the spine and superior surface of the ilium.

From the outer surface of the ilium, and the border of its great niche.

From the anterior part of the os sacrum.

By two portions, one from the outer surface of the spine of the ischium, the other from the tubcrosity of the ischium and posterior sacro-ischiatic ligament.

From the superior half of the inner border of the foramen thyroideum.

From the tuberosity of the is- chium.

Into the upper part of the linea aspera of die os femoris.

Into the outer and back part of the great trochanter of the os femoris.

Into the upper and an- terior part of the great trochanter.

Into a cavity at the root of the trochan- ter major.

Into the same cavity as the pyriformis.

Into tVn same cavity with the former.

To extend the fingers and move them to- wards the thumb

K)

To extend the fingers; but the first draws the middle finger in- wards, the

second draws it outwards, the third draws the ring finger inwards.

OP THE THIGH.

To extend the thigh and draw it out- wards.

To draw the thigh out- wards and a little backwards, and when it is bended, to roll it.

To assist the former.

To roll the thigh out- wards.

To roll the thigh out- wards, and likewise to confine the ten- don of the obtura- tor intemis, when the latter is in action

To roll the thigh out- wards.

To move the thigh outwards

Into a ridge between the trochanter ma- jor and trochanter minor.

184. MUSCLES OP THE THIGH (r).

By two heads, one for the tube- Into the upper and To bend the leg. rosily of the ischium, the back part of the other from the linea aspera fibula (s). near the insertion of the glu- 1 tt-us maximus.

?. Semi-tendino- From the tuberosity of the is-

sus. chuim.

3. Semi-memtora- From the tuberosity of the is-

nosnv chuim.

•1 1'i-iiMir \abn- From the superior and anterior

n. r ti-in«>n> spinous process of the ilium.

S;irli)rius.

!• rom tin- superior and anterior spinous process of the ilium.

By two tendons ; one from the anterior and inferior spinous process of the ilium, the other from the posterior edge of the cotyloid ravity.

I rom tin- tore part of the is- fliimn and pultis.

I rom th,' anterior and lower part of the great trochanter, and the outer edge of the linea aspera.

Into the upper and in- ner part of the tibia.

Into the upper and back part of the head of the tibia.

Into the inner side of the fascia lata which covers the outside of the thigh.

Into the upper and in- ner part of the tibia.

Into the upper and fore part of the ro- tula,

Into the upper and in- ner part of the tibia.

To the upper and out- er part of the rotu- la.

To bend and draw the

leg inwards. To bend the leg.

To stretch the fascia.

To bend the leg in- wards (u). To extend the leg.

To bend the leg. To extend the leg.

ANATOMY.

197

Nome.

9 Vastus inter- ims.

10. Cruraeus (y}.

11. Pectinalis.

12. Adductor longus femo- ris (>*

13. Adductor brevis femo- ris.

14. Adductor magnus femo- ris.

15. Obturator externus.

1. Gastrocnemi- us (aa) exter- nus.

2. Gastrocnemi- us (66) inter- ims.

3. Plantaris (cc).

4. Popliteus (dd).

5. Flexor longus digitorum pe- dis.

6. Flexor lon- gus pollicis pedis.

7 Tibialis pos- ticus.

8. Peroneus lon- gus.

9. Peroneus bre- vis.

Origin. From the inner edge of the linea

aspera, beginning between

the fore part of the os femoris

and the root of the lesser

trochanter. From the outer and anterior

part of the lesser trochanter. From the anterior edge of the os

pubis, or pectmis, as it is

sometimes called

From the upper and fore part of the os pubis.

From the fore part of the ramus of the os pubis.

From the lower and fore part of the ramus of the os pubis.

From part of the obturator liga- ment, and the inner half of the circumference of the for- amen thyroideum.

Insertion.

Into the upper and in- ner part of the rc- tula.

Into the upper part

of the rotula. Into the upper and

fore part of the linea

aspera.

Near the middled

and back of the

linea aspera. Into the inner and

upper part of the

linea aspera. Into the whole

length of the linea

aspera. Into the os femoris,

near the root of the

great trochanter.

185. MUSCLES OF THE LEG

By two heads ; one from the in- ner condyle, the other from the outer condyle of the os femo- ris.

By two heads; one from the back part of the head of the fibula, the other from the upper and back part of the tibia.

From the upper and posterior part of the outer condyle of the os femoris.

From the outer condyle of the thigh.

From the upper and inner part of the tibia.

From the back part, and a little below the head of the fibula.

From the back part and outer edge of the tibia, and like- wise from the interosseous ligament and adjacent part of the fibula.

From the outer side of the head of the tibia, and also from the upper, anterior, and outer part of the perone or fibula, to which it adheres for a con- siderable way down.

From the outer and fore part of the iibula.

By a great round ten- don, common to this and the follow- ing muscle.

By a large tendon (the tendo Achillis) com- mon to this and the former muscle, into the lower and back part of the os calcis.

Into the inside of the back part of the os calcis.

Into the upper and inner part of the ti- bia.

By 4 tendons, which, afterpassingth rough the perforations in those of the flexor digitorum brevis, are inserted into the last bone of all the toes, except the great toe.

Into the last bone of the great.toe.

Into the inner and up- per part of the os naviculare, and side of the oscuneiforme medium.

Into the metatarsal bone of the great toe.

Into the metatarsal bone of the little toe.

Use. To extend the leg.

To extend the leg.

To draw the thigh in- wards, upwards, and to roll it a little out- wards.

To draw the thigh in- wards, upwards, and to roll it a little out- wards.

To move the thigh outwards in an ob- lique direction, and likewise to bend and draw it inwards.

To extend the foot.

To extend the foot.

To assist in extending the foot.

To assist in bending the leg, and rolling it inwards.

To bend the last joint of the toe.

To bend the great toe.

To move the foot in- wards

To move the foot outwards.

To assist the last de- scribed muscle.

Name. Origin. Insertion. U»e.

10. Kxtensor Ion- From the upper, outer, and fore By four tendons into To extend the toes. gus digitorum part of the tibia, interosseous the first joint of the

pedis. ligament, and inner edge of smaller toes.

the fibula. |

1 1 . Peroneus ter- From the fore part of the lower Into the metatarsal To bend the foot, tins. half of the fibula, and from bone of the little

the interosseous ligament. toe.

12. Tibialis anti- From the upper and fore part Into the os cuneifor- To bend the foot. cus. of the tibia. me internum.

13. Kxtensorpro- From the upper and fore part Into the convex sur- To extend the great prius pollicis of the tibia. face of the bones of toe.

pedis. the great toe.

186. MUSCLES ON THE FOOT.

1 . Extensor bre- From the upper and anterior By 4 tendons, one of To extend the toes. vis digitorum part of the os calcis. which joins the ten-

pedis. don of the externus

longus pollicis, and the other three the tendons of the ex- tensor digitorum longus.

2. Flexor bre- From the lower part of the os By 4 tendons, which, To bend the second vis digitorum calcis. after affording a pas- joint of the toes,

pedis. sage to those of the

flexor longus, are inserted into the se- cond phalanx of each of the small toes.

r'rom the inner and lower part Into the first joint of To move the great < >l the IK calcis. the great toe. toe from the other

toes.

ie outer tubercle of the Into the outer side of To draw the little toe calcis, :he root of the me- the first joint of the outwards. tatarsal hone of the little toe, little toe. and also from the aponeuro- MS phmtans.

tendons of the flexor Into the tendinous To draw the toes in- lonu'us digitorum pedis. expansion at tne wards.

upper part of the toes.

mm the inferior and anterior By two tendons into To bend the first joint pan of the os calcis, and also the first joint of the of the great toe hum ilie inferior part of the great toe. ;>s cuneiforinc externum.

I 'mm near the roots of the me- Into the outer os sesa- To draw the great bones of the 2d, 3d, moideum, or first toe nearer to the joint of the great rest, and also to toe bend it.

mm the outer and under part Into the inner os sesa- To contract the foot t the anterior end of the me- moideum,and ante- atarsal bone of the little toe. rior end of the me- tatarsal bone of the great toe.

s of the mctatar- Into the first joint of To bend the little toe. the little toe. the little toe.

Situated between the metatarsal

187. NOTES REFERRED TO IN THE FOREGOING TABLE

(A) These are three small slender muscles. The inferior one is sometimes wanting.

(B) The nose is affected by the fibres of the occipito-frontalis, and by several muscles of the face ; but this pair, the compressores, is the only one that is proper to it.

(c) This muscle is in a great measure, if not wholly, formed by the buccinator, zygomatici, depressores, and other muscles that move the lips. Its fibres surround the mouth like a ring.

(D) Some of its fibres likewise have their origin from a strong fascia that covers the mus- cle, and adheres to the bone round the whole circumference of its origin. When we remove

'this covering we find the muscle of a semicir- cular shape, with its radiated fibres converging and forming a strong middle tendon.

(E) So called from its use in chewing, its de- rivation being fiaaiffaofjiai,

manduco, to eat.

(F) This happens when the muscle acts singly. When both act. the jaw is brought horizontally forwards.

(G) This broad and thin muscular expansion, which is situated immediately under the com- mon integuments, is by Winslow named musculus cvtanevs. Galen gave it the name of 7rXarvf, musculus, and tiSoQ forma.

(H) This, on account of its two origins, is by Albinus described as two distinct muscles, which he names sterno-mastoideus and cleido-mastoideus.

(i) As this muscle does not always arise from the caracoid process it seems to have been im- properly named caraco-hyoides by Douglas and Albinus. Winslow calls it omo-hyoideus on account of its general origin from the scapula.

(K) From Su and ya?rip (biventur), because it has two fleshy bellies with a middle tendon. This tendon passes through the stylo-hyoideus.*

(L) In some subjects we meet with another muscle, which, from its having nearly the same origin, insertion, and use as this, has been named stylo-hyoideus alter.

(M) So named from its arising near the dentes morales (fivXoi), and its being inserted into the os hyoides.

(N) From yivfiog mentum, the chin.

(o) From Ktpa£, cornu, and y\w

(p) This muscle in its course forms a round tendon, which, after passing over a kind of hook formed by the inner plate of the pterygoid pro- cess of the sphenoid bone, expands into a tendi- nous membrane.

(Q) The few fibres that arise from the Eusta- chian tube are described as a distinct muscle by

Albinus, under the name of salpingo-pharyngaus. They serve to dilate the mouth of the tube.

(R.) This muscle and the palato-pharyngaus likewise serve to close the passage into the fauces, and to carry the food into the pharynx.

(s) The three orders of fibres here mentioned, with a few others derived from the tongue, have given occasion to Douglas to describe them as four

distinct muscles under the names of cepha- lo-pharyngaus, mylo-pharyngceus, plery-pharyn- g&us, and glossy-pharyng&us.

(T) Douglas makes two muscles of this, the hyo-pharyngosus, and syndesmo-pharynagus.

(u) The crico-pharyngaeus and thyro-pharyn- gaeus of Douglas.

(w) When either this or the preceding muscle acts with its fellow the epiglottis is drawn di- rectly downwards upon the glottis.

(x) When both muscles act the neck is drawn directly forwards.

(Y) The linea alba is that tendinous expan- sion which reaches from the cartilago ensiformis to the os pubis. It is formed by the interlace- ment of the tendinous fibres of the oblique and transverse muscles, and on this account some anatomists have considered these as three di- gastric muscles.

(z) A little above the pubis the tendinous fibres of this muscle separate from each other, so as to form an opening called the ring of the obliquus externus, and commonly though im- properly the ring of the abdominal muscles, there being no such aperture either in the transversalis or obliquus internus. This ring in the male subject affords a passage to the sper- matic vessels, and in the female to the round ligament of the uterus.

(a) From the anterior and upper spinous pro- cess of the ilium, this muscle is stretched ten- dinous to the os pubis, and thus forms what is called by some Fallopius's, and by others Pou- part's ligament. The blood-vessels pass under it to the thigh.

(b) The tendon formed by the upper part of this muscle, in its way to the linea alba, is di- vided into two layers. The posterior layer runs under, and the anterior one over, the rectus muscle.

(c) From this part it detaches some fibres, which extend downwards upon the spermatic chord, and form what is described as the cremas- ter muscle.

(d) The fibres of the rectus are generally di- vided by three tendinous intersections. The two upper thirds of this muscle passing between the tendinous layers of the obliquus internus, are en- closed as it were in a sheath ; but at its lower part we find it immediately contiguous to the peritonaeum, the inferior portion of the tendon

of the transversalis passing over the rectus, and adhering to the anterior layer of the obliquus internus.

(e) This muscle is sometimes wanting.

(f) The fibres of this muscle pass towards the axilla in a folding manner, and with those of the latissimus dorsi form the arm-pit.

(g) This and some other muscles derive their name of serratus, from their arising by a number of tendinous or fleshy digitations, resembling the teeth of a saw (seirn).

(h) For a description of the diaphragm, see Sect. 281.

(i) The origin, insertion, and use of the inter- nal intercostals, are similar to those of the exter- nal. The reader, however, will be pleased to observe, that the intercostales externi occupy the spaces between the ribs only from the spine to their cartilages; there being from thence to the sternum only a thin membrane, which is spread over the intercostales interni ; and that the latter, on the contrary, extend only from the sternum to the angles of each rib.

The fibres of the external muscles run oblique- ly forwards ; those of the internal obliquely back- wards. This difference in the direction of their fibres induced Galen to suppose that they were intended for different uses; that the external in- •prcostals, for instance, serve to elevate, and the internal ones to depress the ribs. Fallopius seems to have been the tirst who ventured to dispute die truth of this doctrine, which has since been revived by Boyle, and more lately still by Ham- beryer, whose theoretical arguments on this sub- ject have been clearly refuted by the experiments of Haller.

(k) These consist of four, and sometimes of five, distinct muscles on each side. V'esalius, and after him Douglas and Albinus, consider them as forming a single muscle, which, on ac- count of its shape, they name triangularis. Ver- heven, \inslo\v, and Haller, more properly describe them as so many separate muscles, which, on account of their origin and insertion, llii-y name all rno-costulcs.

1) So named by Hiolanus, from rpatrt^a, on account of its quadrilateral shape. Columbus and oilieis give it the name of cucitllaris, from its

*i < '*e:iiMaiice to a monk's hood.*

Cm) The tendinous fibres of this muscle, united v. ith those of its fellow m the nape of the neck, t"Mii what i-; called the (igamcnttim colli.

M) This muscle consists of two distinct por- tions, which are described as separate muscles by Albums, under the names of rltomboideus tinniir and rhiimbuideus major.

Co; According to some writers, this muscle '.•"tten its name from its resemblance to the spleen ; others derive it from splenium splint.

named on account of its complicated

'in ils origin !iom the neck • insertion into (he mastoid

(r) Several thin fasciculi of fleshy fibres arise from the lower ribs, and terminate in the inner side of this muscle. Steno names them muscult ad sacro-lumbalem accessorii. The sacro lumbalis likewise sends off a fleshy slip from its upper part, which by Douglas and Albinus is described as a distinct muscle, under the name of cervicalis dcscendens. Morgagni has very properly con- sidered it as a part of the sacro-lumbalis.

(s) At the upper part of this muscle a broad thin layer of fleshy fibres is found crossing, and intimately adhering to it. This portion, which is described by Albinus under the name of trans- versalis cfrvicis, may very properly be considered as an appendage to the longissimus dorsi. It arises from the transverse processes of the five or six dorsal vertebrae, and is inserted into the transverse processes of the six inferior cervical vertebrae. By means of this appendage the longissimus dorsi may serve to move the neck to one side, or obliquely backwards.

(t) Anatomists in general have unnecessarily multiplied the muscles of the spine. Albinus has the merit of having introduced greater sim- plicity into this part of myology. Under the name of multifides spi?ia, he has very properly in- cluded those portions of muscular flesh inter- mixed with tendinous fibres, situated close to the back part of the spine, and which are described by Douglas under the names of transversus colli, dorsi, and lumborum.

(u) The ancients gave it this name from its resemblance to an irregular triangle (ff/coAijvoc). It consists of three fleshy portions. The anterior one affords a passage to the axillary artery, and between this and the middle portion we find the nerves going to the upper extremities. The mid- dle is in part covered by the postenor portion, which is the longest and thinnest of the three.

(x) In the generality of anatomical books we find these muscles divided into inter-splnales cervicis, dorsi, and lumborum, but we do not find any such muscles either in the loins or back.

(y) These muscles are to be found only in the neck and loins ; what have been described as the inter-transversales dorsi being rather small tendons than muscles.

(z) This and the following pair of muscles derive their name of psoas from \f/oa, lumbuSj on account of their situation at the anterior part of the loins.

(a) So called from its shape, which is that of an irregular square.

(b) Some of the fibres of this muscle are united with those of the levator ani, so that it assists in- closing the lower part of the pelvis.

(c) So named from its supposed resemblance to the Greek A reversed.

(d) This and the following pair are called tertt, from their being of a long and round shape.

(e) this muscle affords a passage to the mus- culo-cutaueous nerve.

(/') So called from CITKWV, cubitus.

(g) Between the two origins of this muscle we find the ulnar nerve going to the fore-arm.

(A) The aponeurosis palmaris is a tendinous membrane that extends over the palm of the hand. Some anatomists have supposed it to be a production of the tendon of this muscle, but without sufficient grounds ; for in some subjects we find the palmaris longus inserted wholly into the annular ligament, so as to be perfectly dis- tinct from this aponeurosis; and it now and then happens that no palmaris longus is to be found, whereas this expansion is never defi- cient.

(i) This muscle is named perforatus, on ac- count of the four tendons in which it terminates, being perforated by those of another muscle, the perforans.

(/c) So named from their being shaped some- what like the lumbricus or earth-worm.

(/) Fallopius was the first who remarked the two opposite uses of this muscle. Their extend- ing power is owing to their connexion with the extensor communis.

(m) The third interosseus internus (for there are four of the externi and three of the interni) differs from the rest in drawing the middle finger from the thumb.

(n) From y\«roc, nates.

(o) So named from its pear-like shape.

(p) The two portions of this muscle having been described as two distinct muscles by some anatomists, have occasioned it to be named gemini. The tendon of the obturator internus runs between these two portions.

(

(/•) The muscles of the leg and thigh are co- vered by a broad tendinous membrane called fascia lata that surrounds them in the manner of a sheath. It is sent off from the tendons of the glutsei and other muscles, and, dipping down between the muscles it covers, adheres to the linea aspera, and spreading over the joint of the knee gradually disappears on the leg. It is thickest on the inside of the thigh.

(s) The tendon of this muscle forms tne ham-string.

(0 So named on account of its origin, which is by a broad flat tendon three inches long.

(w) Spigelius was the first who gave this the name of sartorius, or the tailor's muscle, from its use in crossing the legs.

(x) The vastus externus, vastus internus, and crurseus, are so intimately connected with each other, that some anatomists have been induced to consider them as a triceps, or single muscle with three heads.

(y) Under the cruraeus we sometimes meet with two small muscles, to which albinus has given the name subcrureei They terminate on each side of the rotula, and prevent the capsular ligament from being pinched. When they are wanting, which is very often the case, some of the fibres of the curraeus are found adhering to the capsula.

(z) This and the two following muscles have been usually, but improperly, considered as forming a single muscle with three heads, and on that account named triceps femoris.

(aa) ra

(66) This muscle is by some anatomists named soleus, on account of its

being shaped like the sole fish.

(cc) This muscle has gotten the name of plan- tans, from its being supposed to furnish the aponeurosis that covers the sole of the foot ; but it does not in the least contribute to the forma- tion of that tendinous expansion.

(dd) So called on account of its situation at the ham (poples).

(ee) This muscle, about the middle of the foot unites with a fleshy mass, which, from its having first been described by Sylvius, is usually called massa cornea JACOBI SYLVII.

(ff) The interossei interni are three in num- ber; their use is to draw the smaller toes towards the great toe.

(gg) The interossei externi are four in num- ber ; the first serves to move the fore toe towards the great toe ; the rest move the toes outwards. All the interossei assist in extending the toes

We now pioceed to place before the reader Dr. Barclay's proposal for change m the nomenclature and arrangement of muscles ; but it is necessary firs to state the mode in which he describes the base of the body*

TABULAR OUTLINE OF BARCLAY'S NOMENCLATURE.

I. GENERAL TERMS.

USED AS ADJECTIVES.

New Termt. Old Terms.

Mesial. Lateral.

Dcxtral.

Sinistral. Peripheral. Central.

Coronal. Basilar. Glabellar. Inial.

Antinial.

Internal. External.

Right.

Left.

External, Superficial. Internal, Deep-seated.

USED AS ADVERBS.

New Terms. Old Terms.

Mesiad. Inwards, within.

Laterad. Outwards, without.

Dextrad. Towards the right.

Sinistrad. Towards the left.

Peripherad. Outwards ; towards the surface

Centrad. Inwards, within.

II. TERMS PROPER TO THE HEAD

{ Superior in Man.

i[Anterior in Quadrupeds.

V Inferior in Man.

$ Posterior in Quadrupeds.

4 Anterior in Man.

{ Superior in most Quadrup.

(Posterior in Man and most

{ Quadrupeds.

{ Anterior 4″ inferior in Man.

) Anterior in most Quadrup.

Coronad. Basilad. Glabellad. Iniad.

< Upwards, above in Man.

(Forwards, before in Quadrup. { Downwards, below in Man.) Backwards, behind in Quadrup.

< Forwards, before in Man.

\ Upwards, above in most Quad.

< Backwards, behind.

*$ Forwards fy downwards in Man. I Forwards in most Quadrup**

TIE. TERMS PROPER TO THE NECK AND TRUNK

^ Siijifrior in Man.

f A/if rinr in (Quadrupeds.*

\ hi/I rinr in Man.

t I'n.-i/i rinr in Quadruped's.

S . !///» /•/')/• in Man.

f Ii/Jirmr in Quadrupeds.

) /'!'.•>/(/v'n/1 111 Man.

I Sup, rinr 111 ivHiadrupeds.

Atlantad. Sacrad. "Sternad. Dorsad.

^ Upwards, above in Man.

i(Forwards, before in Quadrup.

(Downwards, below in Man.

) Backwards, behind in Quad.

5 Forwards, before in Man.

(Downwards, below in Quadrup.

{ Backwards, behind in Man.

Upivards, above in Quadrup. l\ 'I T.i: MS COMMON TO BOTH KINDS OF EXTREMITIES.

Proximad. Upivards, above in most cases.

Distad. Downwards, below in most cases.

IKHMS P150PF.11 TO THE ATLANTAL OR SUPERIOR EXTREMITIES.

iir or external, accord- ing a>ilir palm of the hand R i- j is turned towards the thigh

r TnvrK-d iiirwards.

iiiirorintt rnnl, as above. Ulnad.

ri'>r, as above. Anconad. or

f Fonvards or outwards ; before

< or without, according to the C. direction of the palm.

< Backwards or inwards; behind I or within, as above.

$ Outwards or backwards; with- \ out or behind, as above. $ Inwards or forwards ; within or I before, as above.

It.MS I'Koi'l It 10 THE SACRAL OR INFERIOR EXTREMITIES.

Tibiad. Fibulad. Itotulad. Poplitead.

Inwards, within. Outwards, without Forwards, before. Backwards, behind

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VII. TERMS PROPER TO THE SANGUIFEROUS SYSTEM

USED AS ADJECTIVES.

New Termt.

/'Veins. \Sinus.

Oil Terms. Vents Cav(£.

USED AS ADVERBS.

New Terms. Old Termt.

Sinus.

Pulmonad. Towards the lungs

r, , – / , • . Right or An-

Pulmomc. < Auricle.

J Ventricle. I Ventricle.

vArteries. Pulmonary Artery and its branches Pulmonary Veins. Left or Pos- f Sinus.

terior. < Auricle. Systemad. Towards the general system.

V. Ventricle

r Veins. \ Sinus.

Systemic. -. Auricle. / V7entricle.

vArteries. Aorta and its branches.

TABLE OF THE MUSCLES OF THE HUMAN BODY,

ARRANGED ACCORDING TO THE BONES TO WHICH THEY

ORIGINS. I. OS FRONTIS.

Ossa Occipitis, Temporum et Epicranius. it, alarum.

Orbicularis palpebrarum.

Corrugatores Supercil.

Ossa sphenoides, temporum et Temporales. malarum.

II. OSSA PARIETALIA.

Ossa front is, sphenoides, tempo- Temporales. rum et malarum.

III. OSSA TEMPORUM.

Sternum and clavicles. Sternomastoidei.

Transverse processes of the neck. Trachelomastoidei.

Spinal processes of the neck. Splenii capitis.

Ossa occipitis etfrontis. Epicranius.

Ossa frontis et sphenoides. Parietalia et malarum. Ossa malarum.

Ossa temporum. Eustachian tubes. Ot sphenoides.

Ossa tctnpunt/it.

Orbicularis palpebrarum.

Temporales.

Masseteres.

Biventres maxilla.

Stylohyoidei.

Styloglossi.

Stylopharyngei.

Levatores puluti mollis.

Laxatores tympanorum.

Tensor es tympanorum.

Stapedii.

Anteriores auricularum.

Retrahentes auricularum.

IV. MALLEI.

Laxatores tympanorum. Tensores tympanorum. Externi malleorum.

ARE ATTACHED.

INSERTIONS.

Skin, orbiculares palpebrarum, corrugatores superciliorum, levatores labii superioris ala- rumque nasi.

Skin, epicranius and corrugator supercil.

Epicranius.

Basilar maxilla.

Basilar maxilla.

Skin, orbic. palpeb. corrugat. supercil. levator. lab. super, alarumq. nasi.

Skin, epicran. corrugat. super- cil. levator. lab. super, ala- rumq. nasi.

Basilar maxilla.

Basilar maxilla.

Basilar maxilla and os hyoides.

Os hyoides.

Tongue.

Pharynx.

Soft palate.

Mallei.

Ditto.

Stapedes.

Auricles.

Ditto.

V. STAPEDES.

Stapedii.

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Origini.

Spinous processes of the neck and back.

Spinous processes of the neck.

Transverse processes of the neck and back.

Spinous process of second cervi- cal verteb.

Spinous process of atlas.

Transverse processes of the neck.

Atlas.

Transverse processes of atlas.

Spinous process of atlas.

Ossafrontis et temporum.

Ossa temporum, parietalia, ma-

larum, frontis. Corona maxilla. Qsta palati.

Osfrcnlis, punch din, spheiurides. Ossa tcHiporum.

()-, spltenoidcs.

O.? sphcnoitU'S ami coi

ilia.

(Ksv syj/ii tioidea it pal ilur teihin he I

rum, inii- oides. mi. nial majc-

ti.

n the skin pectoral

ANATOMY.

Mutclei.

VI. OS OCCIPITIS.

Trapezi;.

Splenii capitis. Complex!.

Recti capitis postici majores.

Recti cap. post. min. Recti cap. intern, min. Recti cap. intern, maj. Recti cap. lateral. Obliqui. cap. super. Epicranius.

Constrictores pharyngis.

VII. OS SPHENOIDES.

Temporales.

Pterygoidei externi. Pterygoidei interni. Pterygo-pharyngei. Circumflexi palati. Externi mulleorum Levatores palpeb. super. Obliqui super, ocul. Recti attollentes ocul. Recti abductores ocul. Recti adductores ocul. Recti depressores ocul.

VIII. OSSA MALARUM.

Temporales. Masseteres. Zi/gomatici majores. Zygornatici minordS.

IX. CORONAL MAXILLA.

Compressores narium. Levatores lab. sub. alarumq. nasi. Levatores

angulorum orts. Depressores alarum nasi. Ihiccinatores, Mylopharyngei. Pterygoidei externi. Obliqui inferior, ocul.

X. OSSA PALATI.

Pterygoidei interni. Azygus uvulae.

XI. BASILAR MAXILLA.

Temporales.

Masseteres. Tterygoidei externi.

Pterygoidei interni. Latissimi colli.

liiventres maxillae Mylohyoidei. (ieniofn/oidei. Geniohyngloisi.

Scapulae Clavicles.

Skin, orbic. palpeb. corrugat.

supercil. Os hyoides pharynx.

Basilar maxilla.

Ditto.

Ditto.

Pharynx.

Soft palate and uvula.

Mallei.

Coronal eyelids.

Eyes.

Ditto.

Ditto.

Ditto.

Ditto.

Basilar maxilla. Ditto.

Orbicularis oris. Ditto.

Skin.

Alae nasi and orbicular oris.

Orbicular oris.

Alae nasi and upper lip.

Orbicular oris.

Pharynx.

Basilar maxilla.

Eyes.

Basilar maxilla Uvula.

Depressores angulorum oris,

Os hyoides.

Ditto.

Tongue.

Origin. Coronal maxilla*

Ossa temporum. Basilar maxilla. Ossa temporum. Basilar maxilla. Thyroid cartilage. Sternum. Scapules. Os occipitis.

Basilar maxilla.

Dorsal vertebra. “1

Transverse processes of the >

neck. J Atlas

Spinous processes of the neck. Transverse processes of the neck

and back. Ditto.

Transverse processes of the back. Spinous processes of the back.

Spinous process of second cervical

vertebra.

Spinous process of atlas Spinous process of 2nd cervical

vertebra. Spinous processes of the back.

Transverse processes of the neck.

Spinous processes of the back.

Transverse processes of the back.

Ribs.

Spinous process of second cervical

vertebra. Transverse processes of the back.

Transverse processes of the back.

Ditto

Transverse pi'ocesses of atlas.

Transverse processes of the neck.

Transverse processes of atlas.

Dorsal vertebra.

Ilia.

ANATOMY.

Muscles.

Huccinatores.

Depressores angulorum ons. Depressores labii inferioris. Levatores menti. Mylopharyngei.

XII. OS HY01DES.

Biventres maxillae.

Mylohyoidei.

Stylohyoidei.

Geniohyoidei.

Thyrohyoidei.

Sternohyoidei.

Omo-hyoidei.

Hyopharyngei.

Hyoglossi.

Geniohyoglossi.

XIII. VERTEBRAL COLUMN.

1. CERVICAL VERTEBR.S.

Longi colli.

Recti capitis interni minores. Os occipitis.

fl. SPINOUS PROCESSES.

Interspinales colli. Multifidi spinae.

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Insertions. Orbicularis ons. Ditto. Ditto.

Fat and skin of the lower lip. Pharynx.

Basilar maxilla.

Tonguo, Ditto.

Semispinales colli.

Seinispinales dorsi.

Trapezii.

Splenii capitis.

Recti capitis postici majores.

Recti capitis postici minores. Obliqui capitis inferiores.

Serrati postici superiores Rhomboidei minores.

•>. TRANSVERSE PROCESSES.

Intertransversarii colli. Splenii colli. Transversales cervicis. Cervicales descendentes. Obliqui capitis inferiores.

Semispinales colli.

Multifidi spiruE.

Complexi.

Trachelo-mastoidei.

Obliqui capitis superiores.

Recti capitis interni majores

Recti capitis laterales.

Scaleni.

Longi colli.

Levatores scapulanan.

Levatores breviores 2 costarum.

2. DORSAL VERTEBRA:. Quadrati lumborum.

Transverse processes of last ver- Psoae magni. tebra; last dorsal vertebra; transverse process of the loins.

Spinous process of the loins. Transverse processes of the back. Transverse processes of the back and loins.

(I. SPINOUS PROCESSES.

Spinales dorsi. Semispinales dorsi Multifidi spinae.

Spinous processes of the back. Os occipitis, scapulae, clavicles Ossa temporum. Os occipitis.*

Ditto.

Transverse processes of atlas.

Ribs.

Bases of scapula;.

Transverse processes of atlas.

Spinous processes of the neck.

Ditto.

Os occipitis.

Ossa temporum.

Os occipitis.

Ditto.

Ditto.

Ribs.

Cervical vertebrae.

Scapulae.

Ribs.

f Transverse processes of the 2 loins; last dorsal vertebrae; C. last ribs. Thigh bones.

Spinous processes of the neck

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Origins.

Spinoiis processes of the neck. Spinous processes of the loins and sacrum ; eristic of t lie ilia ; ribs. Spinotts processes of the loins. Spinoiis processes of the neck.

Transverse processes of the back.

Cristie of ilia ; spinous and trans- verse jtrocesscs of sacrum and loins.

ANATOMY.

Muscle. Trapcxii. Latissimi dorsi.*

Sejrati postici inferiores. Serrati postici supcriores. Rhomboidet major es. Splenii colli. Biventres cervicis.

b. TRANSVERSE PROCESSES.

Longissimi dorsi. Semispinales dorsi.

Scapula, clavicles, os occipilis. Humeri.

Ribs.

Ditto.

Bases of scapulae.

Transverse processes of the neck.

Os occipitis.

Ribs.

Spinous processes of the back and neck.

Transverse processes of the neck. Spinous processes of the back and

neck.

Transverse processes of the neck. Transverse processes of the back.

Ribs.

Last vertebra, transverse processes of Last dorsal vertebra.

.\icfuni ; transrei.se processes of

tin: loins. Hi", spinonx procctiSi .s of .mcriini,

/. i///x n, ni linck, rili. */ihn>ns /'/'on X.MS <)//•"•(Intel;, l/in, r/// x, a/in/. /urrrxxf > o/ sn-*

criini, sin/lints n/iil /rniisri rsi

Multifidi spinte. Semispinales colli. Complexl. Kiventres cervicis.

Trachelo mastoidei. Transversales cervicis.

3. LUMBAR VEa

Diaphragm, magni.

PSOIE parvi.

a. SPINOUS PROCESSED.

Multifidi spinae. Latissimi dorsi.

Sen-ati postici inferiores. Sacroliimbales.

Longissimi dorsi. Obliqui c.rtcrni abdominis.

/'. TRANSVERSE PROCESSES.

Quadrat! lumborum.

Sacrolumbales.

Mnltifidi spina.

Ob/iqui ijite.rni abdominis.

Transversi abdominis.

4. SACRUM. (I. SPINOUS PROCESSES.

*l.iitis*inii dorsi.*

()li/i(ji

II.

*I 'in. /•//'.<, *IIIH. mill trn:i.n>c.*

>t' /'HUH.

Ili-i. C,IIYJ/I, trami-trm proc. <;t'

aticrum. Hi'/. /r///).r

Mnltijidi spina.

". I II, \NSVERSE PROCESSES.

Ditto.

Spinous processes of the neck.

Os occipitis.

Ditto.

Ossa tempoium.

Transv. processes of the neck.

Thigh-bones. Ribs

Humeri.

Ribs. Ditto.

Do. and trans, proc. of back. Ribs and linea alba.

Last ribs, last dorsal vertebrae. Ribs and trans. proc. of the back.

Ribs.

Spinous proc. of loins and back, Linea alba and ribs.

Ditto

Humeri.

Ribs and linea alba.

Transv. proc. of back and rib. Ribs.*

Thigh-bones and femoral vagina. Spinous processes of loins.

Thigh-bones and femoral vagnttt.

Origim Ilia, spin. proc. of sacrum.

Ilia.

lichia. Sacrum.

Ischia.

Ribs.

fmnsv. proc. of back.

Transv. proc. of back and neck.

Sternum ensiform cartilage.

Spinous proc. of back and neck.

Spin. proc. of back and loins.

Ilia, sacrum spin, and trans, proc.

of loins. Ditto. Ilia.

Ilia and pubes.

Ilia, sacrum, obliqui externi, spin.

and trans, proc. of loins. Trans, proc. of neck. Ilia, obliqui externi, trans, proc.

of loins.

Clavicles and sternum.

Ilia, sacrum, spin. proc. of loins and back.

Lumbar vertebra.

First ribs.

Os occipitis, spin, proc . of iteck

and back. Sternum. Ditto.

Ditto and ribs. Spines of scapula .

Os occipitis, spin. proc. of neck

and back.

Spin. proc. of neck and back Transverse processes of neck. Ribs. Ditto.

Clavicles.

Clavicles scapula Scavulte

ANATOMY.

Muscles.

Multtfidi spin

Cunatores coccygis. Pyri formes.

i. COCCYX

Coccygei.

Curvatores coccygis. Levator ani.

XIV. RIBS.

Intercostales.

Levatores longiores costarum.

Levatores breviores costarum.

Triangulares sterni.

Serrati postici superiores.

Serrati postici inferiores.

Sacrolumbales.

Longissimi dorsi. Quadrati lumborum.

Obliqui externi abdominis. Obliqui interni abdominis.

Scaleni.

Transversi abdominis.

Subclavii.

Pectoralfs majores. Serrati antici. Serrati magni. Latissimi dorsi.

Accessorii ad sacrolumbalem. Diaphragm.

XV. CLAVICLES.

Subclavii. Trapezii.

Sternomastoidei. Sternohyoidei. Pectorales. Deltoidei.

XVI. SCAPULAE. Trapezii.

Rhomboidei.

Levatores scapularura.

Serrati antici.

Serrati magni.

Coraco-hyoidei.

Supraspinati.

Infraspinali.

Teretes majores.

Teretes minores.

Subscapulares.

Deltoidei.

Coraco-brachiales.

Tricipites brachiorum (long hds.)

Bicipites brachiorum.

XVII. HUMERI.

Deltoidei. Supraspinati.

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fruertiout.

a processes of loms Coccyx. Thigh-bones.

Sphincter ani, accelerators uri- nae, transversales perinei.

Transv. processes of the back. . Transv. proc. of loins, last ribs,

last vertebrae. Linea alba. Ditto.

Linea alba.

Clavicles.

Humeri.

Scapulae.

Ditto.

Humeri.

Sacrolumbales

Scapulae.

Ossa temporura. Os hyoides. Humeri. Ditto.

Clavicles

Os hyoides.

Humeri capsules of the joints

Ditto.

Humeri.

Ditto and capsules

Ditto.

Humeri. •

Ditto.

Ulnae and humeri.

Radii and cubital apoueuroses

Articular capsules.

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Ditto.

Ditto.

Ditto.

Clavicles, ribs, sternum.

Scapula.

Spin. proc. of sacrum, loins, and back, ilia, ribs.

ANATOMY.

Hfuacles. Infraspinati. Teretes majores. Teretes minores. Subscapulares. Coraco-brachiales. Pectorales. Tricipites brachiorum (long

heads). Latissimi dorsi.

Tricipites brachiorum (short

heads).

Brachiales externi. Anconei.

Brachiales interni Supinatores longi. Radiales externi longiores. Supinutores breves. Radiales externi breviores. Extensores communes digitorum. Extensores proprii auricularium. Ulnares externi. Palmares longi.

Radiales interni. Ulnares interni.

Pronatores teretes. Sublimes.

XVIII. ULNjE.

Tricipites longi.

Tricipites breves.

Brachiales externi.

Brachiales interni.

Extensores communes digitorum.

Extensores proprii auricularium.

Ulnares externi.

Radiales externi breviores.

Jndicatores.

Palmares longi.

Radiales interni. Ulnares interni.

Pronatores teretes. Sublimes.

Profundi.

Abductores longi pollicum.

Extensores minores pollicum.

Extensores majores pollicum.

XIX. RADII.

Bicipites. Supinatores longi. Ilium 1 1, uln it, articular capsules.
Supinatores breves

Vi,l,- simr:i in humeri t-t ulna. \ ˆronatores teretes.

t rronatpres quadrati. M1Pra Ulnares externi.

Exlcnaores communes digitorum. F/ciores longi pollicum. Sublimes.

Vine and articular capsules.

Kudial condyles of humeri.

Ditto.

Ditto.

Ditto.

('Inar condyles of humeri.

Ditto. Ditto.

Ditto.

Radii and common origins of pulmares longi, $c.

Ditto.

Ditto.

Ditto.

Radial condyles of humeri.

Ditto.

Ditto.

Ditto

I'lna.

I'lniE condyles of humeri.

Ditto. Ditto Ditto.

"""""""'•'V- Vldt"-"'m.

Insertions. Articular capsules

Articular capsules Ditto.

Ulna.

Ulnse.

Ditto.

Ditto.

Ditto.

Ditto.

Metacarpi of fore-fingers ,

Radii.

Metacarpi of middle-fingers.

Digital phalanges.

Phalanges of little-fingers.

Metacarpi of little-fingers.

Palmar aponeuroses, annular ligaments.

Metacarpi of fore-fingers, ossa trapezia. >.'•;

Ossa pisiformia, annular liga- ments.

Radii.

Middle digital phalanges.

Articular capsules.

Ditto.

Ditto.

Ditto.

Digital phalanges.

Phalanges of little-fingers.

Metacarpi of little-fingers.

Metacarpi of middle-fingers.

Phalanges of fore-fingers.

Palmar aponeuroses, annular ligaments.

Metacarpi of fore-fingers, ossa trapezia.

Ossa pisiformia, annular liga- ments.

Radii.

Middle digital phalanges.

Distal digital phalanges. Metacarpi of the thumbs, and

sometimes ossa trapezia, and

abductores breves. Proximal phalanges of the

thumbs. Distal phalanges of the thumbs ,

Cubital aponeuroses.

Metacarpi of the little-fingers. Digital phalanges. Distal phalanges of the thumbs. Middle phalanges of the fingers,

ANATOMY.

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Origins.

Mutcles,

Iniertions.

Annular ligaments.

XX. CARPI.

1. OSSA PISIFORHIA.

Ulnares interni. Metacarpi of the ring-fingers

and annular ligaments. Abductores digitorum auricula- Proximal phalanges.

Vine, radii, inter oss. ligaments. Ossa magna et unciformia. Ligaments of carpi.

Metacarpi of the thumbs, and sometimes of the fore-fingers.

Ossa magna ei unciformia me- tacarpi of the fore, middle, and ring-fingers.

Vide supra

Ossa magna et trapezoidea me- tacarpi of the fore, middle, and ring-fingers.

Ligaments of carpi.

Ditto.

2. OSSA TRAPEZIA.

Abductores longi pollicum. Opponentes pollicum. Abductores breves pollicum.

Abductores indicum.

3. OSSA TRAPEZOIDEA.

Flexores breves pollicum.

4. OSSA UNCIFORMIA.

Ulnares interni. Flexores breves pollicum.

Metacarpi of the thumbs.

Ditto.

Proximal phalanges ot the

thumbs. Proximal phalanges, tendons

of the extensores.

Proximal phalanges.

Ossa pisiformia, metacarpi of

the ring-fingers. Proximal phalanges

Adductores metacarpi. digitorum Metacarpi of the little-fingers

auricularium.

Flexores parvi digitorum auri- Proximal phalanges of the little-

cularium. fingers.

Annular ligaments, ossa trape- zia, magna et unciformia. Vln(E radii, interosi> ligaments.

Ossa trapezia, and sometimes me- tacarpi of the fore-fingers.

Humeri. Ditto.

*Ossa trapezia, trapezoidea, magna et unciformia, metacarpi of the fore, middle, and ring-fingers**

Metacarpi of the fore and ring- fingers.

Metacarpi of the little fingers.

XXI. METACARPI.

1. OF THE THUMBS.

Opponentes pollicum. Abductores longi pollicum. Abductores indicum.

2. OF THE FORE-FINGERS

Radiales externi longiores. Radiales interni. Interossei.

Flexores breves pollicum.

3. OF MIDDLE FINGERS.

Radiales externi breviores. Interossei.

Abductores pollicum.

4. OF THE FORE-FINGERS.

Interossei.

5. OF LITTLE FINGERS.

Vide supra. Ulnares externi.

Ossa unciformia, annular hga- (Adductores metacarpi. ments. \ Digitorum auricularium.

Interossei.

Proximal phalanges of the fore- Angers.

Proximal phalanges and tendons of the common extensors

Ditto.

Proximal phalanges of the thumbs

Proximal phalanges and tendons of the common extensors

Ditto

Origins.

Ulna; interosseous ligaments.

Ossa unciformia, trapezoidea, magna, metacarpi of the fore, middle, and ring-fingers.

Ossa trapezia, and annular liga- ments.

Metacarpi of middle fingers.

Ulna, interosseous ligaments. Ditto and radii.

Vide supra in humer. et uln.

Tendons ofprofundi. Metacarpi.

Vide supra.

Ulna, interosseous ligaments.

Vide supra.

Ossa unciformia, annul, liga- ments.

Ossa pisiformia, annul, ligaments.

*r/Hrf. **

Ossa trapezia, metacarpi of the thumbs.

Spinous]/roc(sscs of sacrum, loins,

and back ; ribs. Sacrum, sphious and transverse

}>roccsscs of loins, Ditto. Ossa pubii. Oblii/ui < ttenii, sacrum, spin. and

fransnrse proc. of loins. Ohlujiti cxterni, trans, proc. of

louts, llio Lumbar ligaments.

Sacrum (sometimes).

Ditto.

I)itto, cocyx, sacra-lumbar ligam .

ANATOMY.

Mittclei. XXII. DIGITAL PHALANGES.

1. OF THE THUMBS.

a. PROXIMAL PHALANGES.

Extensores minores pollicum. Flexores breves pollicum.

Abductores breves pollicum. Adductores pollicum.

b. DISTAL PHALANGES.

Extensores majores pollicum. Flexores longi pollicum.

2. PROPER DIGITAL PHALANGES. a. IN GENERAL.

Extensores communes.

b. PROXIMAL PHALANGES.

Lumbricales. Interossei.

C. MIDDLE PHALANGES.

Sublimes.

d. DISTAL PHALANGES.

Profundi.

C. PECULIAR MUSCLES.

Extensores proprii digitorum auricularium.

Flexores parvi digitorura auri- cularium.

Abductores digit, auricular.

Indicatores.

Abductores indicum.

XXIII. ILIA.

Latissimi dorsi.

Longissimi dorsi.

Sacrolumbales.

Obliqui externi abdomims.

Obliqui interni abdominis.

Transversi abdominis. Quadrat i lumborum.

Jliaci interni. Pyriformes. G/utci magni. Glntei medii. G lute i parvi.
Tensores vaginarum. Sartorii. I&cti crurum.

XXIV. OSSA PUBES.

Psotf parvi.

Rccti abdominis.

Pyramidales.

Pectinei.

Graciles

Adductores longi. Adductores brevet.

Lnserttun.*

By intervention of sessamoid bones.

Tendons of common extensor. Ditto.*

Proxima phalanges

Proximal phalanges. Tendons of common extensors. Proximal phalanges.

Humeri.

Ribs, transverse proc. of back.

Ribs.

Ribs, linea alba.

Ditto.

Ditto.

Trans, proc. of loins, last ribs,

last dorsal vertebrae. Thigh-bones. Ditto.

Ditto, and femoral vagina. Thigh-bones. Ditto.

Ditto, rotula, tibia. Tibia. Ditto.

Last dorsal vertebrae and first

lumbar. Ribs.

Recti, lineee albae. Thigh-bones. Tibiae.

Thigh-bones. Ditto.

Origins.

Ischia. Ditto. Ditto.

JTngh-borKS. Pubes.

Pubes. Ditto.

Ilia, sacrum, coccyx.

Ilia.

Ditto.

Ilia, sacrum.

Ischia.

Ditto, and pubes.

Ditto.

Ischia.

Ilia.

Pubes.

Ditto.

Ditto.

Ditto, and ischia.

Vertebra and trans, proc. of 'loins,

last vertebra and trans, proc.

of back. Ilia, sometimes sacrum.

Capsules of knee-joints. C-apsules and semilunarcartilages .

Ilia.

Pubes.

Ischia.

Ditto.

Ilia.

Thigh-bones

Ditto.

Ditto.

Ilia.

Interosseous ligaments.

Fibula.

Ditto.

Ditto, and interosseous ligaments.

Ditto.

Ischia and thigh-bones. Tibia, femoral vagina, and ten- dons of bicipites.

'fibia. Ditto.

ANATOMY.

Muscles.

Adductores magni. Obturatores externi. Obturatores intend.

XXV. ISCHIA. Gemini. Semitendinosi. Semimembranosi. Bicipites crurum. Adductores magni. Quadrati femorum. Obturatores externi. Obturatores interni.

XXVI. THIGH-BONES.

Glutei magni. Glutei medii. Glutei parvi. Pyriformes. Gemini.

Obturatores extern!. Obturatores interni. Quadrati femorum. Tensores vaginarum. Pectinei.

Adductores longi. Adductores breves. Adductores magni. Psoae magni.

Iliaci interni.

Vasti externi.

Vasti interni.

Crurei.

Gemelti.

Plantares.

Bicipites crurum, (short heads).

Poplitei.

XXVII. TIBLE. Sartorii. Graciles. Semitendinosi. Semimembranosi. Recti crurum. Crurei. Vasti interni. Vasti externi.

Tensores vaginarum femorum. Tibiales antici.

Extensares longi digitorum pedum

*Solei. **

Flexores longi digitorum pedum.

Tibiales postici.

XXVIII. FIBULAE,

Bicipites crurum. Peronei longi.

Peronei breves.

Peronei tertii.

Extensores longi digitorumpedum.

Extensorespropriipollicumpedum.

Vlcxores longi pollicum pedum.

Iniertions.

Ditto. Ditto. Ditto.

Ditto.

Tibiae.

Ditto.

Fibulae.

Thigh-bones.

Ditto.

Ditto.

Ditto.

Femoral vagina, rotulae & tibiw.

Rotulie and tibiae.

Tibiae and rotulae.

Ditto.

Ditto.

Ossa calcis.

Ditto.

Fibulae.

Tibiae. •

Rotulse,

Ditto.

Ditto.

Ditto

Thigh-bones and rotulae.

Os cuneiforme internum and me- tal arsi of the great-toes.

Phalanges of the lesser toes.

Ossa calcis.

Distal phalanges of the lesser toes.

Ossa navicularia, unciformia, in- terna, media, externi, cuboi- dea, and calcis, metatarsi of the third toes.

Metatarsi of the great toes, ossa

cuneiforma prima. Metatarsi of the little toes. Ditto.

Phalanges of the lesser toes. Phalanges of the great toe?. Distal phalanges of the great toes. P2

2-2 ANATOMY,

(Jrigins_ Mncle. Insertion..*

XXIX. TARSI.

1. OSSA CALCIS.

Thigh-bones. Gemelli.

Tibix and fibula. Solei.

Thigh-bones, capsules, and semi- Plantares.

Kctensores breves digitorum Tendons of long extensors, ex-

pedum. • cept those of the little toes.

Flexores breves digitorum pedum. Middle phalanges of the lesser

toes.

Massts carruE Jacobi S'ylvii. Tendons of the long flexors.

Ossa cuneiformia tertia. Flexores breves pollicum pedum. Proximal phalanges.

Ligaments round the astragali. Abductores pollicum pedum. Ditto.

Ossa cuboidea,cuneiformiu tertia, Adductores pollicum. Ditto.

tendons ofperanei longi. i

*Metatarsi of the little toes, and Abductores mmtmorum digito- Proximal phalanges of the little plantar aponeurosis. *wi. toes.*

2. OSSA NAVICULA.RIA.

Fibula and interosseous liga- Tibiales postici. Ossa cuneiformia, and calcis,

menis, metatarsi of the third toes.

3. OSSA CUBOIDEA.

f Ossa navicularia et cuneifor- j)itto Tibiales postici, < mia ; often ossa calcis, &c.

C. Metatarsi of the third toes. Ossa cuboidea et cuneiformia ter- Adductores pollicv m pedum. Proximal phalanges.

tia, sometimes metatarsi of 4th, 3rr/, and Ind toes, trochlear ligaments ofperonei longi. Trochlear ligaments, metatarsi Flexores breves digitorum mini- Proximal phalanges of little toes.

of little tort, and sometimes morum. plantar aponeuroses.

4. OSSA CUNEIFORMIA PRIMA.

7'i'iW and iriterossrus ligaments. Tibiales antici. Metatarsi of great toes.

Tibia', fibiiLe, fcmitral raginee, Peronei longi. Ditto.

anil tendons of bicipites.

Tihicf, fibula,' and intcrosseus Tibiales postici. Ossa navicularia, cuneiformia,

ligaments. secunda, tertia, cuboidea et

calcis, metatarsi of third toes.

Mt/iitnrti of first and second Abductores indicum pedum. Tibial sides of proximal phalan-

ges.

5. OSSA CUNEIFORMIA SECUNDA.

Tibi

gmni iits. prima, tertia cuboidea, et cal-

cis metatarsi of third toes.

6. OSSA CUNEIFORMIA TERTIA.

Plantar aponcitrosrs, ossa cuboid. Flexores breves pollicum. Proximal phalanges.

and ligaments between the cu- btnd, cuneiform and heel bones.

‘s and /i«ii>ncnts of as- Abductores pollicum. Ditto

*stragali. **

XXX. METATARSI.

I. OF THE GREAT TOES.

Transversales pedum. Metatarsi of little toes, &c.

i\ femoral ragi,,,i, Peronei longi. Ossa cuneiformia prima.

mid t, mlons <_>/ bicipitcx.

•n «f seeinnl toes, mid Abductores indicum pedum. Tibial sides of proximal phalan-

ges

2. OF SECOND TOES.

•K.S-, and «»ii Abductores indicum. Ditto.

cunriformiit jirn/i/t.

Adductores indicum. Fibular sides of proximal pha-

langes.

ANATOMY.

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Origins

Metatarsi of fourth toes.

Metatarsi of little toes. Fibula.

Trochlear ligaments and ossa cu~

boidea. Ossa calcis and plantar aponeu-

roses.

Muscles.

3. OF MIDDLE TOES.

Abductores digitorum tertiorum. Adductores digitorum tertiorum.

4. OF FOURTH TOES.

Abductores digitorum quartorum. Adductores digitorum quartorum.

5. OF LITTLE TOES.

Peronei tertii. Transversales pedum.

Flexorcs breves digitorum mini-

morjan. Abductores digitorum minimo-

rwn. Adductores digitorum minimo-

n:m.

Insertion.*

Tibial sides of proximal pha- langes. Fibular sides.

Tibial sides. Fibular ditto.

Metatarsi of great and little toes

Adductors of great toes. Proximal phalanges of little toes.

Fibular fides of proximal pha- langes. Tibial ditto.

XXXI. PHALANGES OF THE TOES.

1. PROXIMAL PHALANGES OF GREAT TOES.

Fibula.

Extensores proprii, pollicum pedum.

Flexores breves pollicum pe- dum.

Ossa calcis, cuboidea et cuneifor-

mia tertia. Ossa calcis and ligaments of as- Abductores pollicum pedum.

stragali. Ossa, calcis cuboidea et cuneifor- Adductores pollicum pedum.

mta tertia, sometimes metatarsi

of fourth, third, and second

toes, trochlear ligaments.

Ossa Cfclos. Extensores breves digitorum pe-

dum.

Distal phalanges. Proximal phalanges.

Tendons of extensores proprii pollicum, et extensores longi, except those of the little toes.

2. DISTAL PHALANGES OF GREAT TOES.

Fibula. Ditto.

Tibia and Fibula. Ossa calcis.

Tendons oflongjlexors.

Extensores proprii pollicum pe- dum. Flexores longi pollicum pedum.

3. PHALANGES OF LESSER TOES. 0. IN GENERAL.

Extensores communes longi. Extensores breves.

b. PROXIMAL PHALANGES.

Interossei. Lumbricales.

Proximal phalanges.

Tendons of extensores, propra pollicum, et extensores longi, except those of the little toes.

Tendons of long flexors. Ditto.

C. MIDDLE PHALANGES. ft

Ossa calcis and plantar aponcu- Flexores breves perforati. rotes

d. DISTAL PHALANGES.

Tibia and Fibula. Flexores perforantes.

4. PECULIAR MUSCLES.

Trochlear ligaments, metatarsi Flexores breves digitorum mi- Proximal phalanges. of little, toes, onsa cuboidea. nimorum pedum.

The following tahle of muscles, arranged according to their compound motions, we likewise copy from the Encyclopaedia Perthensis, which is extracted from Dr. Barclay's work on Muscular Motions. It will be seen, that in reference to the particular muscles, we have combined an account of the uses of these organs with their structure and localities ; thus departing from the principle of limiting this article to mere Anatomy. The reason of so doing, must, however, be obvious to the reader ', for it is clear that the physiological account of muscles cannot, in the article Physiology, Lfr b(yond the rationale ol muscular agency generally.

TABLE OF THE COMPOUND ACTIONS OF THE PRINCIPAL MUSCLES OF THE HUMAN BODY.

THE HEAD IS MOVED

STKRNAD by DORSAD by ROUND ON THE NECK by LATERAD generally by

Recti capitisinternimi- Recti capitis postici. Latissimi colli. Those muscles which

nores. Obliqui capitis superio- Splenii capitis.

Recti capitis interni res.

majores. Splenii capitis.

Recti capitis interni la- Complexi.

terales. Trachelo-mastoidei.

Latissimi colli. Trapezii (partly).

Biventres maxilla seu

digastrici. Sterno-mastoidei . Mylo-hyoidei. Genio-hyoidei. Genio-hyoglossi.

Splenii colli.

Recti capitis postici

majores. Obliqui capitis inferio-

res. Trachelo-mastoidei, all

of which draw the

head dextrad. Sterno-mastoidei . Complexi. Trapezii (partly). All drawing sinistrad.

move it sternad and dorsad, acting in con- cert, opposing each other, and in some measure by one of each pair, acting without its fellow of the opposite side.

STERNAD by Latissimi colli.

Mylo-hyoidei.

(lenio-liyoidei.

(Jenio-hyo^lossi.

C'oraco-hyoidei.

Sterno-hyoidei.

Thyro-hyoidei.

Sterno-mastoidei.

Recti capitis interni mi-

nores.

Recti capitis laterales. l.on-i eolli. Scaleni antiei.

DORSAD by

Trapezii (partly).

Rhomboidei minores.

Serrati postici superio- rcs.

Splenii capitis.

Splenii colli.

Complexi.

Trachelo-mastoidei

Cervicales descenden- tes.

Transversales cervicis.

Spinales et semispinales cervicis.

Multiiidi spina}.

Recti capitis postici mi- nores.

Kocti capitis postici ma- jores.

Obliqui capitis supe- riores.

Obliqui capitis inferio- res.

Sealeni postiei.

l.evatores scapula.'.

THE NECK IS MOVED

DEXTRAD by

SINISTRAD by

The dextral muscles on The sinistral muscles on

the sternal and dorsal the sternal and dorsal

aspects acting at the aspects acting at the

same time. same time.

THE TRUNK IS MOVED

1 rape/11

Rliomboidei majores. Rectus abdominis. I .atiN-qnu dorsi. Psoae.

Srnati |io-tiei sup rio- Latissimus dorsi. Serratus posticus-.

himis MI- Serrati postiei infcrio- Sacro umbalis.

DEXTRAD by the dex- SINISTRAD bj

trot

Obliqui abdominis. The sinistral muscles of

the same names, when not acting at the same time with theirfellows on the dextral side.

1 I1M.

pin, ies ct semispi- na.l.", dorsi. Mnhitiili

Longissimus dorsi.

(iuadratus lumborum, when not acting at the same time with thfir fellows on the tinistrul side.

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THE SCAPULA IS MOVED

ATI.ANTED by

STERNAD by

MESIAD by

Trapezius, partly

Serratus magnus.

Serratus anticus.

Levator scapulae.

Serratus anticus.

Pectoralis, partly.

Rhomboideus.

Pectoralis.

Latissimus dorsi.

Levator scapulae.

Rhomboideus.

Subclavius.

SACRAD by

DORSAD by

LATERAD by

Serratus anticus.

Serratus magnus.

Pectoralis. Latissimus dorsi.

Trapezius, partly. Latissimus dorsi.

Levator scapulae.

Subclavius.

Rhomboideus.

DORSO-MISIAD by

Trapezius.

THE HUMERUS IS MOVED

STERNAD by

DORSAD by

MESIAD by

Deltoideus, partly. Supraspinatus.

Deltoideus, partly. Teres major.

Pectoralis, partly. Latissimus dorsi.

Infraspinatus.

Teres minor.

Subscapularis.

Triceps brachii (long

uATERAD by

Biceps flexor cubiti.

head).

Deltoideus.

Coraco brachialis. Pectoralis, partly.

Latissimus dorsi.

Supraspinatus. Infraspinatus.

Subscapularis.

Biceps flexor cubiti

Coraco-brachialis .

In a Rotatory Motion. RADIAD by

Supraspinatus. Infraspinatus. Teres minor. Deltoideus partly. Coraco-brachialis. (in a slight degree).

In a Rotatory Motion. ULNAD by

Subscapularis. Deltoideus, partly. Pectoralis,

dorsi, Teres major

THE FORE-ARM IS MOVED

THE RADIUS IS ROLLED

THEN AD (or bent) by

AXCONAD (or extended)

ULNAD (or to the prone

by

position) by

Biceps flexor cubiti.

Triceps brachii.

Pronator teres.

Brachialis internus.

Anconeus.

Pronator quadratus.

Supinator longus.

Palmaris longus.

Ulnaris internus.

Radialis internus.

Palmaris longus.

Sublimis,

Pronator teres.

Radialis internus.

Sublimis.

THE CARPUS

IS MOVED

THENAD by

ANCONAD by

RADIAD by

Radialis internus.

Radialis externus lon-

Abductor pollicis lon-

Ulnaris internus.

gior.

gus.

Palmaris longus.

Radialis externus bre-

Extensor pollicis minor.

Sublimis.

vior.

Radialis externus lon-

Profundus. Flexor pollicis longus.

Extensor pollicis major. Indicator.

gior, Radialis externus bre-

Extensor digitorum

vior.

communis.

Radialus internus.

Extensor digiti auricu-

lar is.

RADIAD (or to the supine position by)

Biceps flexor cubiti. Supinator brevis. Extensor major pollicis.

ULNAD by

Ulnaris externus. Extensor minimi digiti. Extensor digitorum

communis. Ulnaris internus. Sublimis. Profundus.

THE THUMB IS MOVED

TliENAD by

Abductor pollicis lon- gus.

Abductor pollicis bre- vis.

Opponens pollicis.

Flexor pollicis longus.

Abductor indicis.

ANCONAD by

Adductor pollicis. Flexor pollicis brevis. Extensor pollicis minor.

RADIAD by

Abductor pollicis lon- gus.

Abductor pollicis brevis.

Extensor pollicis minor.

Flexor pollicis brevis (partly).

ULNAD by

Opponens pollicis. Abductor pollicis brevis. Abductor pollicis. Flexor pollicis brevis. Extensor pollicis major.

THE FINGERS ARE MOVEE

THENAD (or bent) by

Sublimis. Profundus. Lumbricales. Interossei. Abductor indicis. Flexor digiti minimi

brevis. Abductor digiti minimi.

ANCONAD (or extended) by

Extensor digitorum

communis. Indicator. Extensor digiti minimi.

Some of them RADIAD

by

Abductor indicis. Adductor metacarpi di- giti minimi. Interossei.

Some of them ULNAD by

Abductor digiti minimi, Interossei.

THE THIGH IS MOVED

l)uRS\r>, or extended by

Glutens maximus.

(ilutcus medius (part- ly).

Gluteus minimus (part-

1,1).

1'yriformis.

Obturator interims.

(n-miiii.

(jiiailratus femnns.

AbduclormagnusCparf-

/,/).

Mict-jis cruris (partly).

Senuttndinosus.

Semimembranosus.

STERNAD, or inflected by

Sartorius.

Gracilis.

Tensor vagina; femoris.

I'ectineus.

Adductores, longus et

brevis. Adductor mvi.gn\is(part-

ly).

lliacus internus. Psoas major. Obturator externus. Gluteus minor.

LATERAD, or abducted by

Tensor vaginae femoris. Glutei omnes Pyriformis Sartorius.

Obturator internus. Gemini.

MESIAD, or adducted by

Adductores omnes. Pectineus. Quadratus femoris, Gracilis. Semiteridinosus. Semimembranosus Biceps cruris (partly). Obturator externus. Psoas major, lliacus internus.

THE THIGH IS ROLLED

I'lIU'LiD by

Gluteus maximus. Glutens medius (part-

('/)• Gluteus minimus (part-

ly).

I'yritormis. Gemini.

Obtnratores utriqui. Quadratus femoris. lliacus internus. Psoas major. Adductores omnes. liici-jis rruris (pnr-

tinlli/, iclir.n the leg

is c rlcnded).

'TIBIAD by

Tensor vaginae. Gluteus medius (part-

ly)-

Gluteus minimus. Sartorius. Gracilis.

Semitendinosus (when the leg it extended)

THE LEG IS MOVED

STERNAD, or extended by

Rectus cruris.

Vasti utriqui.

Cruralis.

Tensor vaginae femoris.

Gluteus maximus.

DORSAD, or inflected by

Gracilis.

Sartorius.

Semitendinosus.

Semimembranosus.

Biceps cruris.

Gemellus.

Plantaris.

Popliteus.

Tensor vaginae femoris.

Gluteus maximus.

RoruLAr by Tibialis anticus. Extensor digitorum

longus. Extensor pollicis pro-

prius. Peroneus tertius.

THE TARSUS is MOVED

POPLITEAD by

Gemellus. Soleus. Plantaris.

Flexor digitorum lon- gus.

Flexor pollicis longus. Tibialis posticus. Peroneus longus. Peroneus brevis.

FIBULAD by

Peronei omnes. Extensor digitorum longus.

TIBIAD by

Tibialis posticus. Extensor pollicis pio-

prius. Flexor digitorum loa-

gus.

ROTULAD, or extended by

Ex'ensor digitorum brevis.

Extensor digitorum longus.

Extensor pollicis pro- prius.

Lumbricales (occa- sionally).

Interossei (occasion- ally).

THE TOES ARE MOVED

POPLITEAD, or inflected FIBULAD by

by

Flexor digitorum Ion- Interossei fibulares

gus. Flexor digitorum bre- Transversi pedis.

vis. Flexor pollicis longus. Adductor pollicis.

Flexor pollicis brevis. Abductor minimi digiti. Adductor pollicis.

Abductor pollicis. Flexor minimi digiti

brevis.

Abductor minimi digiti. Lumbricales) (occa- Interossei $ sionally)-

TiBun ly

Interossei tibiales. Abductor pollicis.

OF THE ORGANS OF SENSE AND PABTS CON- NECTED WITH THEM.

In the following description of the organs of sense, it will be seen that we comprehend the eye, the ear, the nose, and the mouth, or the organs of sight, of hearing, of smell, and of taste. The organ of the remaining sense, namely, that of general feeling, if there be any propriety in considering this a distinct sense, is usually said to be the skin, or common integument, with which the surface of the body is everywhere covered, and which is described in another part.

188. The eye. — Under this denomination we include the eye-ball, the nerve of the eye, its muscles, the eye-lids, the eye-brows, the lachry- mal gland, and the passages for the tears.

189. The eye-ball. — This is made up of certain coats and humours, as they are called. It re- sembles somewhat a sphere ; its average dimen- sions have not been satisfactorily ascertained The coats proper to this substance are described as three proper and one adjunct. The three pro per coats of the organ are the sclerotica, the choroid, and the retina. The humours are the aqueous, the crystalline, (lens), and the vitreous.

190. The adjunct or conjunct coat of the eye. ,Tunica conjunctiva OTodnata.) — This is merely a it-flection of the skin from the lids of the eye, which passes over the fore part of the eye-ball ; it does not appear, however, to he continued over the transparent portion of the eye which is called the cornea, although many anatomists have stated this to be the case. There is a small

contraction and dilutation of the pupil to depend upon their action: other anatomists have de- scribed them as mere doublings of the choroid coat, their extremities hanging loose in the aqueous humour.

196. On the internal surface of the cboroid coat, between it and the retina, a substance is found called nigrum pigmentum ; this is thicker*

quantity of cellular substance found between and darker in the negro than it is in the Euro-

this reflected coat and the sclerotic.

191. The sclerotic coat.— This is white and opaque : it is of a compact fibrous ˆstructure

pean ; the choroid coat, with the margin of the iris, is connected with the sclerotic by a gray ring of thick cellular membrane, which is named

and completely envelopes the ball of the eye, the ciliary circle or ligament ; and a triangular

excepting" the corneal or transparent part. This last, the cornea, is then the convex transparent portion of the eye-ball ; it is made up of several lamina; united together by cellular substance, and has by some been described as the transpa-

canal has been described by Fontana and others as running along the ciliary ligament, and as being partly formed by the groove at the edges of the cornea and sclerotic coat.

197. Optic nerve. — Anatomists hare generally

rent part of the sclerotic ; it is, however, distinct described these nerves as originating from the

thalami nervorum opticorum ; others have con- sidered their origin to be from the nates and testes (see the anatomy of the brain pan). The two nerves unite at the fore part of the cella turcica, and, then separating, pass obliquely for- ward through a foramen in the sphenoid bone, entering, as we have before said, the globe of the eye, to be expanded into the retina. The optic nerves are of a very considerable size ; they are very white, and are enveloped by the membranes of the brain.

198. Muscles of the eye-ball. — Five of the six muscles which are destined for the motion of the eye take their origin from the sides of the optic foramen ; the sixth takes its origin from the anterior part of the orbit. They terminate in broad thin tendons upon the sclerotic coat under the tunica conjunctiva, about one-sixth of an inch from the cornea. The muscles are the levator oculi, or rectus superior ; depressor oculi, or rectus inferior; the abductor and adductorˆ and the superior and inferior oblique muscles.

199. The levator oculi is the thinnest of the recti muscles ; it begins from the upper part of the side of the optic foramen.

200. The depressor takes its rise from the lower part of the optic foramen; and is fixed opposite to the insertion of the former in the sclerotic coat.

201. The abductor oculi originates from the lower and baclc part of the fissure of the orbit, and becomes fixed in the ball of the eye opposite to its outer angle. The adductor (which is the shortest and thickest, as the levator is the thin- nest of the straight muscles) originates from the side of the optic foramen, and terminates oppo- site to the inner angle of the eye.

202. The superior oblique arises from the side of the optic foramen ; its tendon passes through a cartilaginous pulley, fixed behind the internal angular process of the frontal bone ; it is after- wards reflected under the levator muscle, and is fixed in the sclerotic coat between the insertion of the levator, and entrance of the optic nerve. The inferior oblique arises from the anterior edge of the orbitar process of the upper maxillary bone ; and is inserted in the sclerotic coat between the entrance of the optic nerve and the insertion of the abductor muscle.

203. The uses of the first four muscles may be inferred from their names : viz. to raise, depress,

in its structure from that membrane.

192. The choroid coat. — This is less firm and dense than the sclerotic. It is exceedingly vas- cular. The ancients supposed it to be a conti- nuation of the pia mater, as they imagined the sclerotic to be of the dura mater.

193. The retina is still considered by many anatomists an expansion of the optic nerve : certain it is, that the nerve thus named expands into, or is, as it were, lost by the formation of a very delicate pulpy substance, which extends from the posterior part of the eye forward as far as the greater diameter of the capsule of the crystalline lens, immediately to be noticed.

U»4. The huiiicura of the ci/e. — Of these the ui/7/tous is Mtuated foremost.' It is remarkably pellucid: ii is divided, as we shall immediately see, into two chambers, the anterior and poste.- rior. The cnˆ/ulliiif lens is situated behind the aqueous humours, and its posterior portion is imbedded in the vitreous humour. The lens is made up of concentric layers united to each other by cellular -substances. Its .shape is spheroidal, more (onvex behind than before. The vitreous humour occupies the greater share of the whole !.y"ball. It is gelatinous, resembling the un boiled white1 of an eˆu. It lies behind the lens; and its anterior part is rendered concave by the It us beni'j, as we have said, imbedded in it. I he lens and the vitreous humour are each con- tained in diMmct membranes called capsules, \hicii art thin and pellucid.

l '.c>. The ins. — This is an opaque membrane l\m_' behind the cornea, and floating in the < humour. It is of different colours in diMeietit individual-;, and is that part of the eye li'ini winch the colour of the orˆan is designated. In 'he tentre ot this membrane there is a perfo- ! the pupil of the eye. The iris is ~cular, and inherently moveable. stance that the aqueous humour mti rior and posterior chambers; I between the back part of the iris ; the ice of the iris Immediately es are found ; circumference vlier vascular supposed the

It

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bring the ball in towards the nose, and pull it towards the temple. By the superior oblique the pupil is turned downwards and outwards ; and upwards and inwards by the inferior.

204. Eye-lids. — These are composed of mus- cular fibres, adeps, and common integuments ; and are lined, as we have said, by the tunica con- junctiva, which is thenc'e reflected and spread over the eye itself. Each lid has a cartilage at its edge, forming what is called the tarsus, which is broadest in the centre, and the edge is so shaped as to form a groove for the tears when the lids are closed. On the edges of these lids a row of hairs is implanted which are called cilia or eye-lashes, and those of the upper lid are longer than those on the lower ; their direction is also rather upwards, while the cilia of the under eye- lid are turned downwards. At the roots of these hairs, between the tarsus and lining of the lid, are found a number of follicles called ciliary glands.

205. Eye-brows. — These are arched eminences covered by hair, extending from the nose to the temples. They are formed of a thick folding of the common integuments. They have a muscle attached to them by which their motions are considerably regulated. This, the corrugator su- percilii, with other muscles near and in connection with it, will be found described in the general description of the muscles. The eye-brows are well nigh peculiar to the human species.

206. Lachrymal gland. — This is of a yellowish colour, and consists of many lobules ; it is found at the outer and upper part of the orbit ; it has ducts which pass out from the fore part of the gland separately ; they are usually found to be five or six in number, and they terminate on the inner side of the upper eye-lid near to the outer angle of the eye.

207. Lachrymal passages. — As the lachrymal gland is situated at the

outer and upper angle of the orbit, so at the inner corner of the eye between the eyelids is found a small reddish body, which is called caruncula lachrymalis ; and close to this caruncle, but separated by it, are two puncta or holes, one in each eye-lid; they are orifices to canals which pass into the lachrymal sac ; they sometimes unite and form a common duct, which passes behind the tendon of the orbicularis mus- cle ; but generally their termination is into the sac separately. The lachrymal sac is lodged in a groove formed by the os unguis, and superior maxillary bone ; it is of an irregular shape, ap- proaching somewhat to an oval ; at its lower ex- tremity, where it is connected with the,nasal duct, it is a little contracted. Its composition is that of a tough mucous membrane. The nasal duct is enclosed in a bony canal, which runs from the sac downwards and obliquely backwards, and terminates at the lower end of the inferior turbi- nated bone on the schneiderian membrane of the nostrils.

208. The blood-vessels and nerves of the eye will be found described in another place, where their general distribution is traced.

209. Of the ear and its appendages. The ear of the human subject is usually distinguished into external and internal : the first including that part which is vulgarly called the ear, with

the passage from this as far as the tympanum, or drum ; and the second those parts which are interior in reference to the tympanum.

210. The external ear is made up principally of cartilage ; but it is attached to the temporal bone by integuments, by ligament, and by muscles. The strictly cartilaginous portion of the exter- nal organ, is called ala, or wing, to distinguish it from the fleshy pendent portion below, which is named the lobe. The outer border of the car- tilaginous part is called helix, and the semicircle within this is named antihelix. The little move- able cartilage placed immediately before the entrance into the meatus is named tragus, and an eminence opposite to this, at the extremity of the antihelix, is called antitragus. The cavity between the helix and antihelix is the innomi- nata; and the boat-like cavity between the limbs of the antihelix is called scapha, or fossa, navi- cu'aris. The central hollow whence proceeds the meatus is named concha. Upon the car- tilages of the ear are implanted a few thin fibres ; but the muscles which move the whole external cartilage of the organ are the following : The attollens aurem, or temporo-auricularis, which arises by a curved line from the tendinous aponeurosis of the temporal muscle, and by a broad tendinous expansion it is fixed to the eminence on the inner side of the antihelix. This muscle serves for the purpose of raising the car- tilage of the ear; but very few persons possess much extent of power over it. The zygomato- auricularis, or anterior auris. This arises from that portion of the temporal muscle which covers the

middle of the zygoma ; it passes backwards and downwards, and is implanted into the inner side of the helix, which it draws forward. The retrahentes aurem, or mastoido-auricularis forms three muscles, which originate from the back part of the root of the mastoid process, and are inserted into the projection. which corresponds with the hollow of the concha : they have power over the width of the concha. The five small muscles on the external cartilage of the ear have been named the tragicus, antitragicus, the trans- versus auris, and the helix major and minor ; the situations of which may be known from their names.

211. The meatus auditorius at its opening is cartilaginous ; and through its course to the mem- brane of the drum it is lined with a thin secre- tory membrane ; it is not straight, but bends for- wards and inwards. The membrana tympani is of an oval shape ; it is placed obliquely in a groove of bone, the upper part of it being directed out- wards, and the under inwards. This membrane has recently been considered fibrous, the fibres of it radiating.

212. Internal parts of the ear. — There are two cavities in the internal ear, viz. the tympanum and the labyrinth. The first of these cavities communicates with the back part of the fauces by means of the Eustachian tube, which com- mences at the upper and anterior part of the tym- panum, and is directed forwards and inwards ; the narrowest part of this tube is that in connection with the tympanum, as it approaches the fauces it becomes wider, and is here cartilaginous. Like the meatus externus it is lined by a vascular

membrane. The Eustachian tube is the internal meatus of the car.

213. The tympanum further communicates at its upper and posterior part with the cells of the mastoid process of the temporal bone.

214. Across the tympanum four bones are, as it were, stretched : these are named the malleus, incus, orbicular bone, and stapes. They are each covered by periosteums, and connected together by capsular ligaments. The malleus is so named from its resemblance to a hammer. The incus, to which the malleus is articulated, is likewise named from its resemblance to an anvil ; this last consists of a body and two crura, the shorter of which extends backwards, and has a ligamentous connection with the edge of the mastoid opening ; while its long process is articulated to the os or- biculare, which thus joins the stapes, or stirrup bone : this is placed horizontally, and

is divided into a head, crown, and base. These several bones are moved by the following muscles, viz. the levator tympani, the tensor tympani, and the stapedius. The first, also called obliquus ex- ternus, arises from the spinous process of the sphenoid bone, and passing through a fissure in me temporal bone, is fixed in the long process of the malleus. The tensor tympani arises from the cartilaginous part of the Eustachian tube, and is fixed into the posterior part of the handle of the malleus. This muscle is also named obliqiius in- terims or trochloaris. The stapedius arises from a channel in the petrous bone near the cells of the mastoid process ; its tendon passes onto be inserted into tin; hack part of the head of the stapes. The uses of these bones and muscles we shall con- sider more at large in the article PHYSIOLOGY.

•21,r). The labyrinth is of an irregular form; it is much smaller than the tympanum. Its whole internal surface is said to he lined with a very delicate membrane, which sometimes exhibits an appearance uf considerable vascularity, and adheres everywhere to the bone. Within this are found in the vestible two membranous sacs, which do not seem to have any communication with each other ; but from the larger one, which is more oblong than the other, three membranous canals extend into the three semicircular canals of the bone. The membranous sacs and the membranous canals appear to contain a thin watery tlnid ; and between them and the vascular lining of the labyrinth already mentioned, there seems to he a small quantity of a similar fluid.

'21 r>. The three semicircular canals just named communicate with the vestible by five openings, two ot them having ;i common termination, 'i hey are improperly named .rsi •inhViiice to a shell, which is made up of two complete turns and a half. These turns are se p.inted from each other by a partition into two windings; th.- one communicating with the tym- •j'.imim, tin/ other \ith the- vestible. It is to the ,e of these part- that the term labyrinth is ' '» '> 'J'he proper nerve of the organ s the portio mollis of the seventh part, ich branches upon the internal cavities >t the -,u. Tin; othci ni'iAo of the ear, with

the blood-vessels, &c. will be found traced in other parts of the present article.

217. Organ of smell. — The nose is made up of bony and of soft parts. The bones which enter into the composition of this organ will be found stated under the general description 01 bones. We may here mention that the frontal bone, the os nasi, and the maxillary bones form tne upper and fore part of the organ. The eth- moid and the ossa unguis make up its lateral portion ; while the under, inner, and posterior part is formed by the superior maxillary, the inferior spongy, the sphenoidal, and the palatine

bones, with the vomer. The septum of the nose, by which it is divided into two cavities, is composed of the descending plate of the ethmoid bone of the vomer, and a connected cartilage.

218. What are called the internal nares are two cavities placed between the outer nares and the posterior openings of the organ into the throat. Of the opening into the nose one is found above the turbinated processes of the eth- moid bone, one between these and the inferior spongy bones, and one below the infenor tur- binated bones : through this last a probe may be easily passed into the throat.

219. The soft part of the nose is made up of fine cartilages, ligaments, membranes, muscles, and integuments. The largest cartilage is placed in the middle, and is the base upon which the lateral cartilages are fixed. This also constitutes, as we have said, a share of the septum ; it is fixed to the vomer, to the spinous processes of the upper maxillary bones, and to the fore part of the nasal plate of the ethmoid. The lateral cartilage, which is placed anteriorly, is bent for- ward to form the tip of the nose ; and the pos- terior cartilages constitute the ala nasi.

220. The muscles which move the nose are that part of the occipito-frontalis which is fixed into the nose, the compressor narium, and the levator and depressor of the upper lip, and ala nasi. The membrane, by which the whole in- ternal cavity of the nose is lined, has its free surface vascular and villous ; its attached sur- face is smooth and silvery, like tendon. The membrane lining the cells and sinuses which communicate with the nose is considerably dif- ferent, being thinner and not so vascular; its free surface is likewise less villous, and the other surface does not show any tendinous ap- pearance.

221. The olfactory nerves are traced by ana- tomists from the corpora striata of the brain ; these will be found in the general description of the nervous system.

OF THE MOUTH, PHARYNX, &c.

222. When the jaws are closely shut, the mouth may be regarded as consisting of two regions ; an external and internal, separated from each other by the teeth and gums. The external re- gion is formed by the cheek and lips without, and by the teeth and gums within. The internal region is bounded before and laterally by the teeth and gums, below by the tongue, above by the hard palate, and behind by the soft palate. Between the soft palate, however, and posterior part of the tongue there is an opening, variable

in its dimensions according to the will of the individual which leads into the pharynx or fauces.

223. The palate or roof of the mouth is con- stituted of hard and soft parts ; the hard portion consists of the palatine portion of the upper maxillary bones, and of the palate bones, form- ing together an arch : it is throughout lined by a membrane which is similar in structure to the gum, and indeed a continuation of it. What is called the soft palate is that membranous fleshy substance, which is suspended from the middle of the palate bones over the basis of the tongue, and from the centre of which that pendulous conical-shaped body named uvula takes its ori- gin. The two bodies called tonsils are placed one on each side the lateral edge of the palate ; these are soft and grayish-coloured glands, of an oval shape, nearly of the size of an almond ; they arc cellular in structure, having external open- ings, and are lined by the membrane which lines the general cavity of the mouth. Besides the ton- sils, there is a number of small glands about the soft palate which have been called palatine; these are similar to the labial glands.

224. The tongue is supported, as we have be- fore said, by the os hyoides ; its sides are fixed to the styloid processes, and to the inferior max- illa, by ligaments. The organ itself is made up of various muscles, lined by a membrane con- tinued from the gums; aad under this mem- brane, towards the root of the tongne, the small lingual glands are situated. These, with the labial and and pharyngeal glands, constitute the smaller glands of these parts ; but the more im- portant and proper salivary glands are the three bodies called the parotid, the submaxillary, and sublingual.

225. The parotid occupies the space between the angle of the lower jaw, the meatus of the ear, and the mastoid process ; its form is oval ; from its upper part it sends out a large duct, which is of a paler colour in the adult than in the foetus. This gland is made up of several lobes, which are united by intermediate cellular substance, each lobe being again composed of several lobuli or parts ; these send out ducts which eventually unite into the large or proper duct of the organ, which takes a horizontal direction over the mas- seter muscle, pierces the buccinator muscle, and opens between the second and third of the upper molares teeth. The duct is small in diameter : it has two coats ; the external one cellular, the in- ternal muco-membranous.

226. The submaxillary gland is situated more under the jaw ; it is, however, often continued on as far as the angle of the jaw, and connected

with the lower portion of the parotid. The duct perforates the membrane of the mouth by the side of the fraenum linguae ; it is comparatively large.

227. The subitngual gland is placed immedi- ately under the tongue ; its duct opens into the duct of the submaxillary, or a little to the out- side of the frsenum linguae.

228. The pharynx is situated behind the tongue, upon the bodies of the cervical vertebrae, with which it has a connection by a cellular sub- stance. It is connected to the sphenoid and occipital bones superiorly ; below it is attached

to the gullet, and the larynx is situated anteriorly to it. The sides of the pharynx are bounded by the pterygoid processes of the os sphenoides, and the horns of the os hyoides.

229. On the top and anterior part of this ca- vity the right and left cavities of the nose open. Immediately below is the soft palate, and to this succeeds the pharyngeal orifice into the mouth. Below this orifice again, is situated the opening of the glottis with the epiglottis on its upper and fore part; and under this there is a slight con- vexity, which terminates the pharynx anteriorly. On each side of the pharynx, at the top are found the cartilaginous orifice of the Eusta'chian tubes leading into the ears. The pharynx is lined at its roof by a membrane similar to that which lines the hard palate. The membrane of its posterior and lateral parts is similar to that which covers the inner orifice of the cheeks.

230. Fascia of the Head.— The fascia of the head is constituted by the tendinous expan- sions of the occipito-frontalis, and the other muscles which lie under the integuments of the cranium ; over the surface of the bones, and in immediate connection with them, is extended the membrane which is called pericranium ; it is the same as the periosteum in other parts; this membrane, the periosteum, being a general co- vering to the external surface of bones.

OF THE PARTS AND ORGANS CONTAINED IN THE CAVITY OF THE THORAX, WITH THE EXCEP- TION OF THE HEART AND GREAT BLOOD-VES- SELS, AND OF THE EXTERNAL PARTS OF THE

THORAX.

231. The Lungs. — 'These organs,' says Dr Gordon, ' may be regarded as consisting of two parts ; a peculiar substance and a serous mem- brane called the pleura, which covers the whole outer surface of this substance.' This membrane, the pleura, is reflected back upon the whole in- ternal surface of the thoracic cavity, so as to be an interior lining to this, as well

as an external co- vering to the lungs themselves. The reflection of this membrane over the lungs is in such sort, that each side has a complete investment, so that one lobe does not communicate with the other. The right and left lobe of the lungs are not how- ever exactly equal, the right being broader and shorter than the left. Where the two reflections of the pleura meet at the anterior part of the chest, the partition, called anterior mediastinum, is formed, which is connected with the sternum and cartilages of the ribs of the left side of the chest. These reflections of the pleura, which thus form the mediastinum anterior, are not in actual contact with each other; the substance called the thymus gland being placed between them; there is another separation of these re- flected portions of the pleura to form a triangular space at the posterior part of the chest's centre. This is called the mediastinum posterior, and within it are found the aorta, the oesophagus, the lower end of the windpipe, lymphatic glands, and nerves.

232. The mass of the lungs corresponds in figure with the thorax which contains them. They are in themselves, as unconnected with blood, of a grayish or pale colour. They ccramu-

nicate to the touch u spongy feeling. The lobes are subdivided into three on the right side and two on the left. Of the air-cells, which are terminations of the bronchial tubes, nothing certain has been ascertained respecting their shape and size ; it is also still uncertain whether

The tin/raid, which is the largest, and occupies the fore part and sides of the organ; it consists of two wings, which, being united anteriorly, form that prominence in the fore-part of the neck which is much more observable in the male than in the female, and is called the pomum Adami.

they communicate directly with each other by The cricoid, which constitutes the base on which lateral openings or otherwise. Towards the sur- the thyroid and arytenoid are fixed through the face of the lungs they are evidently without this media of articulating surfaces. Its lower part, communication. It is supposed by some of the being placed horizontally, is connected with the best informed anatomists, that each air-cell is superior portion of the trachea. The two aryte- directly and distinctly supplied by an actual noids ; these constitute the most important part continuation of a bronchial tube. Neither is the of the larynx. They are of a triangular form, precise manner ascertained in which the minute with their points directed backwards. They are arteries and veins terminate and commence connected with each other by the laryngeal mem- brane, and by muscular fibres; they

are also united to the epiglottis by a fold of membrane on each side, which constitutes the lateral parts

with respect to the air-cells. It has been esti- mated that their surface is much greater than that of the whole skin.

233. The trachea, or wind-pipe, is placed at of the superior opening of the larynx. The the anterior part of the neck ; it divides nearly epiglottis ; this, although described by some opposite to the third vertebra of the back into anatomists as one of the laryngeal cartilages, two great branches, called bronchi, one of which is merely the defence of the opening into the goes to die left, the other to the right lung ; the larynx ; it is of a ligamento cartilaginous struc- left of the bronchi is the smallest in diameter ture; it in figure somewhat resembles the tongue; and longest; it passes under the arch of the aorta when raised it is placed perpendicularly, but before it enters the substance of the lungs ; the when the tongue is depressed, or the individual right dips immediately into the lungs. These swallows, it is pressed down, and thus made to

cover the passage into the larynx. This sub- stance is connected laterally to the whole length of the arytenoid cartilage, and at its under end it is united by a ligament to the thyroid gland. This last substance, the thyroid gland, is placed immediately under the larynx, on the outside of the trachea ; it is covered by the sterno-thyroid, sterno-hyoid, and omo-hyoid muscles. It is made up of two distinct lobes, and these lobes are subdivided into smaller lobules. The bronchial glands are those bodies of a dark purple appear- ance which are found at the inside of the trachea, where the division is made into its two great branches.*

EXTERNAL PARTS OF THE THORAX.

235. The external parts of the thorax are constituted of the ribs laterally, sternum an- teriorly, and vertebrae posteriorly, as the bony portion ; the pectoral and intercostal, and other muscles, as the fleshy portion ; and over the whole are placed the common integuments or skin. The mamma, or breasts, while they are covered anteriorly by common integuments, ad- here by their internal surface to the great pec- toral muscle, through the intervention of cellular membrane ; the breasts of the male, which are comparatively small and simple in their struc- ture, are termed mamillse ; in the female they vary much in size and appearance at different periods and under different circumstances. At birth, indeed, they are of equal size in both sexes; they are composed of glandular or se- cretory follicles, lactiferous ducts, adipose sub- stance, blood-vessels, nerves, and lymphatics. Before their development they consist of mere cutaneous tubercles, of a reddish colour, called nipples, being surrounded by a

brownish disc termed areola. When the breast of the female is de- veloped at puberty, its glandular portion is sepa- rated into parts from which the lactiferous ducts originate ; these, in their course, are accompanied*

two terminations of the trachea divide into a great number of small branches ; and eventually, us above intimated, terminate in the air-cells of the organs. Now the trachea itself is made up of several cartilages connected together by liga- mriituus membrane, they are continued round about two-thirds of the circumference of the or-'an; its back part, where it is in connection with tlic • u'sopha^us being not cartilaginous. The cartilages when the division is made into bronchi become regular segments, and the smaller divi- sions of the bronchi form new membranous U'bes. The traehea is lined by a very irritable membrane of the mucous kind, which is con- tinued down through the ramifications of the bronchi. Its cartilages, as we have said, are connected by a liu'amentous membrane; and be- tween this and the mucous lining', muscular libre?, are described by some anatomists, as arranged circularly and longitudinally; others 'ire not satisfied that these exist.

2.'M. The '(fri/itx, of which the trachea is a ^ort of continuation, is placed between this and the sexes, beni'j; considerably broader in the main than in the female, and more prominent ' It contains,' says Dr. Gordon, 'U.i compartments, an upper and a lower, which communicate with each other by a narrow passage The upper compartment is usually tin, and the aperture by which, it com- numicates \nh the lower OIK;, the riina of the

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by a ligamentous elastic substance, which ter- minates with them at the nipple. That portion of the mammae which is not glandulai- consists of adeps, and on the under surface of the areola sebaceous glands are situated.

OF THE ALIMENTARY CANAL, AND ABDOMINAL VISCERA.

236. The alimentary canal commences with the pharynx and terminates at the rectum. The pharynx has just been described. The gullet or oesophagus, the stomach, and the intestines, re- main to be noticed in this division of the subject.

237. The (esophagus is placed oehind the trachea, between it and the cervical vertebrae, first making an inclination to the left, but from the fifth to the ninth vertebra inclining rather to the right side, in order to accommodate itself to the descending aorta. It is of musculo-mem- branous construction ; and composed, according to some anatomists, of five, according to others of four coats ; viz. an outer cellular structure ; a fibrous tunic, these fibres being placed longi- tudinally in the first instance, and circularly under ; then there is what some describe as the nervous, others cellular coat, which connects the fibrous with the mucous or interior surface ; this lies in some parts in folds, and it is plentifully supplied with mucous follicles or secretory orifices, which orifices are especially numerous at the part where the organ terminates in the stomach.

238. The stomach. — The figure of this capa- cious organ has been compared to the bag of a bagpipe, large and capacious at one end, con- tracted and small at the other. It is placed immediately below the diaphragm, obliquely, between the spleen on the left, and the liver on the right side ; it occupies the larger share of the epigastric region, and a considerable portion of the left hypochondrium. It has two arches or curvatures ; one large, running along the largest convexity of the organ, the other small, being directly opposite to the former. Its two open- ings are, first, the cardia, which constitutes its junction with the oesophagus; the second, or exit opening, is called the pylorus, by which it joins the commencement of the intestinal canal. The coats of the stomach, like those of the gullet, are differently conceived and described, accord- ing as the cellular matter connecting the muscular with the internal tunic is, or is not, considered distinctly ; some have called this the nervous coat. The peritoneal coat, however, the fibrous, and the internal, or villous, are unequivocal. These fibres are longitudinal and circular. The innermost, or villous coat, is of much more am- ple surface than the others, and lies in folds, which are especially numerous about the pylorus. The internal

surface of the stomach is a mucous membrane, and otherwise secretory of a peculiar liquor, see PHYSIOLOGY. Careful dissection discovers a fine net work of veins between the villous and muscular coats of the stomach.' The peritoneal tunic of this organ is throughout pretty uniform in thickness, but both the fibrous and the villous coats vary as to this particular, both in different stomachs, and in different parts

of the same stomach. Whether this is the case before death, seems, however, uncertain.

239. The intestines in their whole length are five or six times the length of the whole body. Their coats are the same as those of the stomach, peritonea!, muscular, and villous or mucous ; this last is also much more extensive in its sur- face than the others, and therefore falls into plaits or folds forming what are called the valvulse conniventes. The names of the intestines are duodenum, jejunum, ilium, caecum, colon, and rectum ; the three first constituting what are called the small intestines, the others the large.

240. The duodenum is so named from its being about twelve inches long. It commences from the pylorus, and first turns upwards and backwards a little, then directly down under the neck of the gall-bladder ; it takes then an oblique direction to the right side, and again crosses the lumbar vertebrae to appear in the left hypocon- drium ; it ends in the jejunum.

241 . The jejunum is called thus from its gene- rally being found empty. Its precise commence- ment from the duodenum is not defined; its situation is in the umbilical region, and it con- stitutes a little more than a third of the small intestines.

242. The ilium, so named irom its numerous turns and twinings commencing from the jeju- num, lies in the umbilical and hypogastric re- gions, and partly in the cavity of the pelvis ; its large circumvolution covers the csecum, which is the first of the large intestines ; it opens into its left and posterior part.

243. The cacum. — This is rather a paunch at the commencement of the colon than of and in itself one of the intestines. It is placed in the cavity of the os ilium on the right side. At tins part there is a valve found, which is made up by two folds of the internal coat of the intestine si- tuated transversely. There is a little appendix to the caecum, called from its resemblance to a worm, the vermiform appendix ; it is cylindrical in its shape, is about four or five inches long, and ends in a cut de sac.

244. The colon ascending from the caecum passes over the right kidney,

goes upwards and backwards under the liver, then crosses the body from right to left under the gall bladder, stomach, and spleen ; on the left side it descends, and in its descent at the lower part forms what is called its sigmoid flexure ; from this the intestine after- wards descends into the pelvis and forms the bowel named

*245. The rectum; this, indeed, in strictness of language is an actual continuation of the last wind of the column ; it is irregularly cylindrical, *nd falls into doublings. It is capable of con- siderable extension, and thus with the colon lodges the faces. Its extremity is called anus, which is provided with the following muscles. The sphincter, the levator, and the transversalis perin&i.*

246. The sphincter ani consists of two layers of fibres, which cross each other and are tm'ited in a point. It is connected posteriorly to the os coccygis by a ligamentous substance, and hence has been named the coccygi-cutaneo sphincter. It has likewise connexion anteriorly with the

accelerator urinzr, the transversalis perincei, and levator ani.

247. The levator ani takes its rise from the

part of the peritonaeum which passes off double from the concave part of the liver to the lesser curvature of the stomach is the omentum

arch of the pubes, from the obturator internus parvum or hepato-gastricum ; near the com-

aponeurosis, from the os coccygis, and from the mencement of this there is an opening through

spine of the ischium. In its insertion it is in- which the finger may be passed, and the whole

corporated With the fibres of the sphincter and paunch distended with air. This opening has accelerator nrinae.

248. The (runsversalis perince'i originates' from

been named, or rather the part into which it leads, the capsule of Glisson. The omentum

the interior of the tuberosity of the ischium, and colicum commences at the

anterior part of the

is inserted into the back part of the accelerator caecum and right side of the colon : it forms a

urinx. The use of the two first muscles may be

inferred from their names. This last assists the

motions of the rectum, and serves to dilate the

bulb of the urethra.

249. The large intestines differ from the small

by having on their outside three ligamento mem- branous bands externally, which run through

their whole length ; on the rectum they unite

and form but two; these bands support the

pouches into which the large intestines are di-

sort of membranous coat to the colon and caecum.

OF THE ASSISTANT CHYLOPOETIC VISCERA: viz, THE LIVER, GALL-BLADDER, SPLEEN, AND PANCREAS.

254. The Liver, which is the largest gland of the body, has its situation principally in the right hypochondrium, but it stretches also across the epigastric into the left hypochondria region. It is naturally of a brownish red colour.

It

vided. In the lesser intestines there is a sort of varies in size and weight in different individuals;

valvular formation, and these valves are most nu- its average weight however is said to be between

merous near the stomach. The duodenum, or two and four pounds troy. The exterior sur-

first of the small intestines, differs from the others face of the liver is convex, its interior is concave,

in being more capacious, more curved, provided and in contact with the exterior surface of the

with a greater number of valvulae conniventes, diaphragm. This organ is fixed in its situation by

and being fastened in its position posteriorly, peritonaeal processes which are named ligaments.

while the others are loose and moveable. A glandular structure is evident through the whole course of the intestines.

OF THK PKKITON.SUM, MESENTERY, AND OMENTUM.

with some analogical impropriety. That mem- branous which connects the upper side of the organ with the diaphragm is called the suspen- sory or falciform ligament. The lateral portions of this suspensory ligament which are fixed to" the sides of the body have been called distinctly ligamenta lata. What is called the round liga- ment of the liver (ligamentum teres) is that por-

250. The Peritoneum. — As the thoracic cavity and contents have a lining and enveloping mem-

brane, so has the abdominal cavity and the prin- tion of the falciform which constitutes its under cipal parts of its contents; this last is the perito- rounded part; it is merely the umbilical vein

naeurn which is a firm though thin membrane lining the parietes of the abdomen and then reflected over the viscera. This, like the pleura, is a serous, not a mucous membrane ; it is expanded in different places into a kind of ligamentous support to the

of the foetus condensed or shrivelled into mem- branous substances : it connects the liver with the navel. The coronary ligament is that reflection of the peritonaeum which connects its posterior and middle part with the diaphragm; a

MM eia ; this is especially the case with respect to portion of the membrane stretching between the the liver; it has also several productions, as they liver and the right kidney, has been named the are termed, or doublings, the principal of which hepatic renal ligament; and another portion of arc — the mesentery, mesocolon, and omentum.

2:">1. The iiHwutrrii is that doubling of the peritonaum back upon itself after having enve- loj.td the intestines, which, passing from one portion of

the vertebrae to the other, at once hinds them down from entanglement, and per- mits a certain extent of floating motion. That pan of thi> pentonrval production which thus en-

es the convolutions of the small intestines is named mesentery peculiarly, while that which

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peritonaeum which extends from the organ across the duodenum to the colon has been called the hepatico-colic.

The liver is divided into two great lobes : the right and the left ; the first being by far the largest. There is a prominence on its under surface, something in form and appearance like the tongue ; this has been named the third lobe or lobule of Spigelius. Between this and the right or large lobe there is a passage for the vena cava, and upon its under surface, in a de- pression, are likewise lodged part of the colon, the right kidney, and renal capsule.

256. The gall-bladder also is situated upon the under and concave part of the liver. This organ is of a pear-like shape, but varies much both in magnitude and figure in different individuals; it has a peritonaea! investment and a mucous membrane externally, and between these tunics there is likewise a fibrous structure : upon its in- ternal surface there are a great many rugae which give the appearance to the part somewhat like a 11 as omentum magnum. That honey-comb. The gall-bladder stretches itself

;Une urpose to the colon is denomi- the mesentery is fixed to the

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i" pcntorr.euin ; this membrane instead of being fixed falls loosely over the surface of the in test i- It is divided into three portions by e omentum magnum, The greatest omentum d<\\n from the greater curvature of the h and is fixed to the colon ; it is there- alled umeiitum L: astro colicum or colico

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out into a neck which, doubling as it were upon itself, gives origin to a duct (the cystic) which joins the duct from the liver, immediately to DC described, (the hepatic) and the junction being made, the duct, receives the name of ductus corn- munis choledicus, which passes on into the duo- denum, entering this gut obliquely, about three or four inches from the pylorus. These dutts have fibrous and mucous coats. They are re- markably dilatable. The muscular structure of the ducts has been questioned by some, and the fibres are for the most part very small and pale. The hepatic duct is equal in size to a common writing pen. The cystic duct is smaller. At the part where the common duct enters the duodenum there is a small projection upon the bowel.

257. Respecting the structure of the liver, ‘ a good deal, (says a modern author of eminence) is stated as fact which I apprehend is yet matter of conjecture. Besides the absorbents which it possesses in common with other organs, four systems of vessels are distributed through it ; viz. the ramifications of the hepatic artery, the hepatic veins, the portal vein (vena porttz) and the biliary vessels. Injection enables us to trace each of these systems to a great degree of minuteness within the substance of the liver; but the exact termination or commencement of any of them is not known. In forming our opinion in the mean while on this subject, it will he proper to keep in recollection, the direction in which the fluids have been ascertained to flow within these different vessels in the living body. By two of these systems, viz. the hepatic artery and the portal vein, (see the description of these vessels in the account of the circulation) blood is constantly entering the liver, and by the other two, viz. the hepatic veins and the biliary vessels, fluids are perpetually leaving this organ. It is exceedingly improbable therefore that the branches of the two former should communicate with each other as those of the two latter.

258. ‘ Whether the hepatic artery and portal vein communicate with the hepatic veins alone, or both with the hepatic veins and biliary duct, cannot, it seems to me, be decided by simply injecting a thin fluid like water into either of the trunks in the dead body, and observing by what channel it escapes. For in the first place, trans- udation is a source of fallacy in all experiments of this kind; and secondly, allowing that no transudation took place, a direct communication between any two of these opposite systems of vessels might open an indirect channel for the fluid through the branches of the other two.

259. ‘ The portal vein has been said somewhat to resemble an artery in its structure; but I have never been able to discover any similarity between them. It has always appeared to me to have the same composition as the

other veins of the body.'

260. Beside the peritonaea! coat which invests the liver there is also a sort of condensed cel- lular texture which surrounds it, and dips into its substance, enveloping some of the larger branches of its blood-vessels. The blood-vessels, nerves, &c. of this organ are described in other parts of the present essay.

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261. The spleen is situated in the .eft hypo- chondrium, between the stomach and the false ribs. It is of a spongy consistence, generally of rather an oval form, and like the liver con- vex upon its upper surface to answer to the con- cavity ot tne diaphragm ; its length is usually about five or six inches. Sometimes it is divided into lobules. It has two coats, one peritona- al and the other proper to it. Its natural colour is rather livid ; it has been compared to cast-iron. It has no excretory duct. It is connected to the pancreas by blood-vessels and membranes.

262. The pancreas, or sweet-bread, is a gland which resembles the salivary glands. It lies across the upper and posterior part of the abdomen before the aorta, vena cava, part of the vessels belonging to the spleen, and part of the duo- denum. Its length is about six inches. Its shape has been compared to a dog's tongue. It is divided into lobules each of which has a duct which joining, form the principal duct of the organ ; this beginning from the left extremity becomes gradually larger, and runs along to the duodenum to be inserted together with, and in some instances only very near to, the ductus communis choledicus, into the duodenum. Where this gland is connected with the curvature of the duodenum a sort of process or elongation is found which has a separate duct that eventually how- ever joins the larger duct. Sometimes it enters the duodenum separately.

OF THE KIDNEYS, AND THEIR APPENDAGES, AND OF THE Up.INARV BLADDER.

264. The kidneys are situated at the sides of the spine, in the upper part of the loins ; the right one being a little lower than the left on ac- count of the liver being of greater bulk than the spleen; the right kidney being placed just under the former, the left under the latter organ. They are about five inches long ; they resem- ble in figure the kidney bean. When cut into, the kidney exhibits two different substances, one called cortical, the other tubular ; the last is of a lighter colour than the first, and is composed of small tubes ; the first is in appearance granu- lar, and more like the appearance of the paren- chyma of the liver. The small tubes of the tubular portion of the organ are represented a?. collected into conical-shaped bodies, named pa-

pillae, and thence into larger tubes, or infundi- tula ; these last being eventually combined into three large trunks, constitute the cavity called the pelvis of the organ. From these the ureter takes its origin, which is a tube about the size of a goose-quill, and about a foot in length, which thus arising from the pelvis of the kidney, runs down to be inserted into the bladder. There is one of course to each kidney -occasionally there are two. The ureter, as it enters the urinary bladder runs some way obliquely between its coats.

265. The glandule renales, as they are impro- perly called, are two bodies situated immediately above the kidneys, to which they adhere by cel- lular substance ; they have no excretory duct, but in their interior is found often a sooty- coloured or bilious-looking fluid. These bodies scarcely attain any increase of size after birth

In a younir fiftns they are seen larger than the kidney.

*•206. The urinary Madder * placed in the lower part of the pelvis behind the ossa pubis, to which it is connected by a cellular structure, and by ligaments. Itis nearly of a triangular figure, when undistended. Its size is proportionably larger in infancy than in adult age. Its coats are three, or accord ing to some four, viz. The peritonscal, which howeverj is not a complete investment, only the upper and back part of the organ being covered by peritoneum. The muscular or fibrous, and the internal or mucous membrane. Between the tunicsthere is a considerable quantity of cellular membrane, which is by some anatomists consi- dered as a distinct investment or separate coat. The inner membrane of the bladder is exceedingly sensible. It is strictly, however, a mucous sur- face. The muscular fibres, which are about the neck of the bladder, constitute what is called the sphincter of the organ. The detrusor urinae is constituted by its fibrous coat.*

OF THE GENERATIVE ORGANS IN THE MALE 267. These are partly within and partly with-

>ut the abdomen. They consist of the testes and /heir appendages, the vesiculte seminalis, and the jienis.

•J»>8. The testes. — These are loosely situated in a sort of membranous pouch, called the scro- I n ni. This testicle has properly but two coats, \i. the tunica rapinalis, and tunicaalbuginea. Tin- scrotum it-fit' is membranous, and highly

ontiaetile; and some authors speak of the mem- lc;ir.iHis and muscular substance of this pouch u> mats <>t' tin- testicle, the latter under the name ot' darto> : they are, however, not strictly

*7///Vs of the oruan; and indeed the substance e.ilK-d dartos, seems rather membranous than !!n;.< islar. The vaginal tunic is continued from the]K ntondem : and, enclosing the testicle, forms a *hort sac. Witliin this coat thealbuginea is tound, ulnch i< tliick and white, and closely ad heres to the body of the testicle. The testicles are of a glandular structure and brown colour.*

•jr.'.. The r<;s (/ft'crt'in. On the upper part of 'lie testicle the (pididi/»iis is situated, which is a h trd convoluted body, from the posterior and int'i'Mor part of \\hich originates the vas deferens uhieh parses from the epididymis along with the*

l»od-\essels of the origan, from which it sepa- iates wlini it has arrived among the abdominal IIIIIM les, and passing downwards and backwards alonu' the p

\itli its fellmv in the vicinity of the prostate

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ot a tubular structure, but which appear as ey were composed of irregular vesicles or They are placed obliquely under the der, near its n>'ek, in such a manner as st to touch at their points; they terminate

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ra, near the n.-(k of the bladder.

1 . 1 ii> -pi " t'lli i:/itinl lies between the vesiculae

seminalis and penis, under the pubic bones ; it ift of a firm dense structure, somewhat like a chest- nut in figure, and is divided by a fissure into two lobes. It is connected to the rectum. Part of the levator ani muscle stretches its fibres over the substance, and the muscle thus formed is called the compressor of the prostate. Several ducts leading from the prostate open obliquely into the urethra around the openings from the seminal ducts.

272. The bodies called Cmvper's glands, which are found on each side of the bulb of the urethra are about the size of a pea, each having a separate duct which likewise enters into tho urethra, in an oblique manner. These

glands are not always to be found.

273. The penis is composed of two parts, the cor- pora cavernosa, and corpus spongiowm. The former are two tubes, which make up the greatest por- tion of the organ ; they are united laterally to each other by an imperfect partition, so that there is a communication between them ; posteriorly these divisions of the organ divaricate from each other, and becoming gradually smaller and smaller, they are attached to the inferior portions of the os pubis on either side. The corpus spon- giosum of the penis begins from the prostate, and surrounds the canal of the urethra ; it ter- minates in that exterior expansion which is called the glans, an exceedingly vascular part. The penis is covered by common integuments ; the skin, being reflected back from the glans, covers it when the organ is in a relaxed state ; and this covering is named prepuce, which is tied down to the inferior part of the glans by a process of integument, named frtznum. The urethra is a membranous canal, which passes the whole way from the neck of the bladder, tjhrough the penis ; its direction is first under and then before the pubis. The muscles of the organ are the erector penis, and the accelerator urime, the first taking its origin from the tuberosity of the ischium, and terminating by a flat tendon into the part where the corpora cavernosa are in conjunction ; the second originates tendinous from the commence- ment of the corpus cavernosum of the penis> being connected within the sphincter ani, and is inserted at the middle of the bulb of the urethra. These muscles are in pairs.

THE FEMALE ORGANS OF GENERATION.

274. These are divided into external and in- ternal, the latter including the vagina, uterus, ovaria, and appendages ; the first comprising the mons veneris, the labia, external and internal, and the clitoris.

275. The vagina, which is the channel of com- munication between the uterus and external organs, is placed between the urinary bladder and the rectum; its texture is membranous, the internal surface being rugous, and secreting a mucus ; its orifice is about half an inch below the conjunction of the pubic bones, termed the symphisis; in virgins its aperture is very small, being contracted by a fold of membrane of a se- milunar shape, named hymen, in the superior part of which there is an opening, in some cases exceedingly small, in others larger. This mem- brane is ruptured by coition.

276. The uterus, between the urinary bladder and the rectum, is situated at

the termination of the vagina. It in figure bears some resemblance to a flattened pear ; in the virgin state it is not of greater capacity than to contain the kernel of a nut ; but after impregnation it is much larger, never falling again into its original smallness. It is divided into fundus, body, neck, and mouth, the last being named ox tincee. The uterus is connected to the sides of the pelvis by ligaments, and by cellular membrane ; a doubling of the peritonaeum, extending from the sides of the uterus to either side of the pelvis, forms the ligamenta lata of anatomists. The sides of the uterus are exceedingly thick, so that its internal cavity bears but a small proportion to its exter- nal bulk. It is lined internally by a vascular and mucous membrane, which at its neck are formed into rugae; the mucous follicles are at this part likewise in greater numbers than at other parts of the organ. The parietes of the uterus are fibrous in their structure.

277. The ovaria. These have been denominated by some the female testicles. They are two spongy yellowish-coloured bodies, situated near the sides of the uterus ; they are of a flattened oval form, and somewhat resemble the testes of the male, but not much more than half their size, even at the time of their greatest magnitude.

278. The Fallopian tubes are two canals of a cone-like shape, included in doublings of the li- gamenta lata, each being fixed by its narrowest extremity to the corners of the fundus uteri, into which it opens by an exceedingly small orifice : from this it goes in rather a curved manner to- wards the ovaria, and expands eventually into fimbriated or fringe-like processes, which em- brace the ovaria during coition.

279. The mom veneris is placed upon the symphisis of the pubis, it is a considerable rising of fat, which is covered by hair, and there is a doubling of the skin on each side descending from the symphisis pubis, and uniting about an inch from the anus ; these doublings form the ex- ternal labia pudendi. Upon separating these a small red body is seen, about an eighth of an inch in length, of a spongy texture, and of a form and internal construction a good deal like the penis of the male. This is the clitoris, which possesses very great sensibility, has a praeputium and glands like the male penis, and is attached to the symphisis pubis by a suspensory ligament. Its commencement is by two crura from the ossa ischia. It has no perforation. The internal labia, or nymphee, are internal doublings of the skin which descend from the frsenum of the clitoris on each side the orifice of the vagina. These parts are exceedingly vascular. They are occasionally extended so as to project be- yond the external labia. The nymphse being separated, an orifice is seen about an inch below, which is the commencement of the urethra, this is found just above the orifice of the vagina.

OF THE EXTERNAL PARTS OF THE ABDOMEN, AND OF THE ABDOMINAL AND PELVIC FASCIA.

280. The term abdomen is applied to all that part of the body which is situated between the thorax and the pelvis. Behind it is bounded by

a portion of the spinal column and muscles of the loins, and at its sides and front by abdominal muscles, a description of which will be found in another division of this treatise. Then we have the common integuments over the whole, and the external parts are divided by anatomists in a sort of geographical manner, for the purpose of more accurately indicating the localities ot the different viscera and internal parts. An imaginary line is drawn from the one to the other cartilage of the eighth rib, and the middle of the space above this line is named the epigas- tric region, the lateral parts being called the hypochondrias right and left. Then another line is drawn between the anterior spinous processes of the ossa ilia, the central part above this line being called the umbilical region, and the lateral spaces the lumbar ; the middle part below the line is named the hypogastric region, while the lateral spaces of the same division are called the iliac regions. It is necessary for the student to retain these divisions in his memory, because anatomical and medical teachers make use of them in their discourses and writings.

281. We may here take occasion to say that the abdominal and thoracic cavity are separated internally by the diaphragm, or midriff, which is chiefly made up of muscular fibres, but its mid- dle portion is tendinous. By the expansion of this fibrous membrane between the chest and abdomen a plane transverse division is not effected, but the direction of the organ is such as to form a kind of vault, the fore part of which is attached to the sternum, while the posterior, which is its lower portion, is attached to the ver- tebrae of the loins : laterally it is fixed to the lowest of the true ribs and to all the false ribs. Through the tendinous portion of this muscular septum, pass the great blood-vessels, &c. as de- scribed in other parts of the present treatise.

282. There are two fasciae peculiar to the ab- domen, the one of which is superficial and membranous, and is seen immediately upon removing the common integuments from the ab- domen ; it is described by some as taking its rise from the inferior part of the tendon of the external oblique muscle, see Table of MUSCLES, 174 ; it extends down, covers the spermatic cord and ligaments of the uterus, and also some of the inguinal glands, occasionally being traceable for about six or eight inches down the thigh.

283. Pouparfs ligament, according to morj> modern phraseology the crural arch, is consti» tuted by a process of the tendon belonging to the

external oblique muscle of the abdomen, which is stretched thicker and stronger than in any other part of it between the symphisis of the pubis, and the anterior superior spinous pro- cesses of the ilium, it is somewhat rounded, es- pecially towards the os pubis. About an inch, or sometimes considerably more from the sym- phisis of the pubis, the tendon of the external oblique muscles is generally divided into an upper and under column, and between these a space intervenes, rather of an oval figure, which has been usually called the spermatic ring, but which some have proposed to name the under inguinal, or abdominal aperture. To this a thin

portion of tendon is fixed, which passes down- wards, and is attached to the glutoeus maximus and triceps adductor muscles of the thigh. The interior or posterior margin of the crural arch is intimately interwoven with the tendinous fascia that covers the iliacus internus, and psoas mag- nus muscles, which is connected to the crista of the ilium, and to the pubic ligament ; it is also connected with that membranous fascia which it>vers the transverse muscles as far as that part •f the thigh where the iliac artery emerges from the pelvis. On the side of the anterior iliac vein, next the pubis, there is an aperture called rrura/,which is nearly of an oval figure, and larger in the female than in the male. It is further ne- cessary to state that the muscles of the thigh are covered by a strong tendinous aponeurosis called fascia lata, which takes its rise from the outer rounded portion of the crural arch from the pubis, and from the spine of the ilium. Upon these membranous extensions, tendinous inser- tions, fasciae, and foramina, we shall have occa- sion to enlarge in the article SURGERY, especially under the head of HERNIA.

OF THE HEART AND OF THE BLOOD-VESSELS.

In the first part of the present essay the reader will find a general description of the heart ; we now proceed to particularize.

284. The heart is generally described as being contained in a capsule called the pericardium; in strictness, however, of language, the organ may he said to be outside this membrane, which is double, and r< fleeted back upon itself. The pericardium is of a fibre-tendinous structure, exceedingly smooth on its internal surface, and constantly lubricated by a serous fluid. The external coat of this membrane is constituted by a reflection of the pleura. The pericardium adheres also to the tendinous part of the dia- phragm, and

in part to its muscular portion, and is moreover connected with the anterior mediastinum.

•jrr>. The situation and connections of the heart are the following : its lower surface is somewhat flattened, resting upon the diaphragm ; its anterior surface is opposed to the sternum; it is placed behind the breast-bone, and the car- tilages of the true ribs, having its base turned towards the ri-jht side of the breast-bone, and its ;ipex directly forwards, and towards the left side .o tl.;tt when its point is raised by the actions of thr" oruan, it is raised between the lobes of l«.ft Innu', and is t'elt striking the side be tueeii ti,e tit'ih and sixth rib.

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self; its columnia; carnise in their arrangement have been thought to resemble the teeth of a comb, and have thence been named musculi pectinati. The parietes of the auricle are not so thick as those of the ventricle. Into this auricle the venae cavae and the coronary vein enter; the first returning the blood from all parts of the body, the second from the heart itself. Be- tween the auricle and ventricle a valve is found, which consists of a circular fold of thin mem- brane, so constructed as to fall close down upon the sides of the cavity when the blood is enter- ing the ventricle from the auricle ; this valve, from being divided into three portions, is called tricuspid ; it is raised up by the contraction of the ventricle.

287. The pulmonary artery proceeds directly from the anterior ventricle ; at the exit of this vessel from the ventricle there are likewise valves, formed by reflections or doublings of its internal coat; they are also three in number, of a somewhat semilunar figure, and yield in the same manner as the tricuspids to the stream of blood, opposing also in like manner its reflux.

288 The posterior or systemic ventricle is much thicker than the other, it is likewise rather smaller in its cavity, and more rpunded in its shape; the valve of this ventricle, that is the valve which is situated between it and its corre- sponding auricle, is composed of only two parts, instead of three like the other, and it has been named mitral from its having been supposed to resemble the mitre of a bishop. Into the auricle of this part of the heart open the four pulmonary veins from the lungs; and from this ventricle issues the large artery of the body named aorta. In the size and form of the two auricles there is not much difference, the anterior one is rather the broadest, while the posterior one is a little longer than the other. At the commencement of the aorta are valves similar to those found at the mouth of the pulmonary artery.

289. We now proceed to treat on the distri- bution of the Mood vessels ; but it will be neces sary first to trace in very general terms the course of the blood to, through, and from the heart : the rationale of the circulation or disquisi- tion upon the principles by Which this is effected we defer till the drawing up of the article PHY- SIOLOGY.

The blood returning from all the parts of the body, is poured into the anterior auricle by means of the superior and inferior cava ; the first bringing it from that part of the body which is above the heart, the second from the larger and lower part ; from the anterior auricle the blood is transmitted into its corresponding ventricle ; from this it is sent to the lungs

by the pulmonary artery ; from the lungs it is transmitted through the pulmonary veins into the posterior auricle, thence into the posterior ventricle, and from this last by the medium of the aorta through all portions of the body, with the exception of the lungs.

It is then with this large main trunk of the blood-vessels, that we shall commence our ac • count of their ramifications.

290. Immediately at the commencement of the aorta from the heart, two branches of arteries arise which are distributed upon the heart itself.

These are called the coronary arteries ; the right coronary artery is the largest of the two ; this supplies the anterior portion, the other the posterior portion of the heart. Having sent off these branches, the aorta rises upwards and a little to- wards the right side, and soon forms a curve or arch, from which three large trunks originate ; these are the arteria innominata which is the right subclavian and carotid in one trunk, and the left carotid and left subclavian in the other.

29 1 . The carotid arteries ascend on each side of the cervical vertebrae, between the internal jugular vein and the trachea, and they divide nearly op- posite to the upper margin of the thyroid gland into two great branches ; the external and in- ternal : the external branch passing behind the angle of the lower jaw, while the internal one forms a tortuous course before it enters the ca- rotid canal. The branches of the external carotid are the superior thyroid the lingual, the phuryn- geal, the ascending palatine, the distribution of which may all be known from their names; smaller branches likewise are sent out, which scarcely require to be particularized : the trunk of the carotid then continuing to rise up upon the angle of the maxilla, takes the name of facial or external maxillary ; from this part branches are sent off to the muscles of the face, and the artery anastomeses with branches of the ocular and frontal arteries ; a large branch is transmitted to the under lip which anastomeses freely with its fellow on the opposite side ; it has been called the inferior labial. Then the coronaries are sent off which are distributed around the lips, and one to the back of the ear. The occipital is a considerable branch from the carotid, which passes across the jugular vein, and subdivides into many branches which ramify upon the mid- dle and back part of the head. There is a branch of this artery called auricular, which sup- plies the lobe of the ear ; and another branch passes downwards to be distributed upon the trachilo-mastoid and adjacent muscles.

292. The temporal artery is a large branch of the external carotid, which, passing between the maxilla and the meatus auditorius, lies superfi- cially under the skin, and is here called the su- perficial temporal artery. The deeper-seated branch of the temporal goes behind the condyle, and passes under the aponeurosis of the temporal muscle. The superficial temporal divides, after crossing the zygoma, into anterior and poste- rior branches ; the one supplying the integuments of the fore, the other the back parts of the head. The last great branch of the external carotid has been named the internal maxillary ; it takes its rise between the condyloid coronoid process of the inferior maxillary bone, and sends off several branches as it ascends towards the back of the antram; these branches supplying the jaws, the teeth, the antrum, the palate, and the nasal ca- vities.

293. The internal carotid, having passed through the carotid canal, is first directed up- wards, then assumes a horizontal direction, and at length perforates the dura mater, sending off small ramifications on this membrane and to the cavernous sinus ; the ocular or ophthalmic artery is a branch of the internal carotid, after it has perforated the dura mater, which ramifies into

the orbit of the eye, forming the arterial circle of the iris, and supplying the muscles of the eye- balls, with other parts about the eye and nose. The anterior arteries of the cerebrum, and the medium arteries, or arteriae fossae sylvii, supply- ing the lobes of the brain, are branches of the internal carotids. These join with large branches of the vertebral arteries, and form, together, the circle of Willis on the base of the brain.

Having thus followed the course of the arteries which branch from the aorta to supply the exter- nal and internal parts of the head, we now pro- ceed to trace the ramifications to the upper ex- tremities.

294. The right subclavian and carotid, gene- rally, as above said, originate from the aorta as one trunk; the left subclavian comes by itself im- mediately from the aorta. The right trunk, or arteria innominata, ascends and crosses over the trachea; about two inches from its origin it di- vides into the subclavian and carotid. These arteries on each side give off the internal mam- mary, which sends off many smaller branches that ramify down upon the mediastinum, peri- cardium, intercostal muscles, and even upon the diaphragm ; then emerging from the thorax, the mammary anastomeses with the epigastric ar- tery, and now bending downwards between the scaleni muscles, it sends off the anterior and posterior cervical, which supply the muscles of the neck . Then there is the dorsalis scapula for the supply of the dorsum of the scapula and shoulder- joint. The superior intercostal principally rami- fying upon the first and second ribs, giving branches to the oesophagus and spinal marrow, and anastomosing

with the inferior intercostalis ; and now the subclavian artery, passing behind the collar-bone and over the first rib into the axilla, takes the name in this situation of axillary artery. This, the axillary artery, sends off first the external mammary or thoracic, which ramifies upon the breast muscles, the axillarˆ glands, the internal parts of the shoulder-joint, the great deltoid muscle, Sic. As the artery (the axillary passes along the origin of the subscapulary mus« cle, it gives off the infra-scapularis ; then the articularis posterior, which takes its origin be- tween the subscapularis and teres major muscles; the circumflexa anterior, which passes around the anterior part of the cervix of the os humeri ; all these branches ramify into other smaller ones, in- osculate with each other, and extensively supply the scapula, the shoulder joint, the deltoid, and neighbouring parts.

295. The axillary artery, quitting the axilla, pursues its course along the inner side of the biceps and over the brachialis muscle, here taking the name of humeral artery, which transmits the profunda humeri ; this, passing spirally round the os humeri, appears at the back of the arm, and inosculates with reflected branches from the ra- dial, ulnar, and interosseous arteries. The next considerable branch from the humeral artery is the profunda minor, or inferior, which takes its rise near the middle of the arm on the outer side, and passes down to supply the parts about the external condyle of the hurr erus. About an inch below the elbow-joint the h\ meral artery divides into the radial and ulnar. The ulnar passing- along the ulna bone, first gi ing off the recurrent-

to supply the anterior and inner side of the elbow-joint, sends off the intcrosseous posterior, then (interior, with other smaller branches, to supply the wrist, and is then continued over the annular ligament to form the superficial palmar arch, from which are given off the three digital branches for the fingers ; one is also sent to the thumb, and one called the ulnarls profunda, which anastomoses with the deeper-seated arch formed by the radial artery. This, the radial artery, passing along the fore part of the radius, lies at the wrist very superficially close on the bone, where the pulse is generally felt, several small branches being transmitted in its course down the arm; a little below the wrist, having passed through the abductor indicis, the artery divides into magna pollicis, supplying the inside of the thumb, the radialis indicis for the fore- finger, and the palmaris profunda, which passes between the roots of the raetacarpal bones and flexors of the fingers, to assist in forming the deep-seated palmar arch.

(.The above is the general course of the sub- clavian and its branches ;

occasionally there are found pretty considerable deviations.)

‘296. We now proceed to trace the aorta de- tcrndens. From the arch of this vessel, of which we have above spoken, the aorta passes down on tin’ left side of the vertebrae towards the abdo- men ; before it reaches this cavity it sends off ihf lirnnchial, rig/it and left, which is principally to supply tlie inner membrane of the trachea and bm.:s. The tiKup/iti^icti/ arteries either arise di- rectly I’M mi the aorta, or are transmitted from the bronchial ; they an,’ principally for the gullet, some branches gomcr down to the pericardium. Tin- xi/jitriur iiiterciixtul artery is a branch from /iif thoracic aorta, three: lar^e branches of which arc lodged in the UTOOYCS of the ribs, and the smaller ones supply the spinal marrow and dorsal muscles. The inferior intercostals or aortic in- .iVn/.v are ei_rht or ten pair ; they rise from the posterior and lateral parts of the aorta, and run in grooves in the under ed’_re,s of the ribs. ‘I he.,; arteries send branches to the spine and intercostal muscli’s : they likewise anastomose \ith the external mammary arteries. The peri- eardnie nrti /•/(>•, superior and posterior, some- 111111-: pass otj from the thoracic aorta; they sometimes, however, arise from the subclavian and internul mammary arteries. The bronchial :md intercostal arteries uHierally are found to be .mons in tin ii- origins and course’.

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from the first, principally supply the stomach, the pancreas, and the duodenum ; and the hepa- tic before it actually enters the liver gives nff the cystic branch to the gall-bladder. The splen; c artery goes on transversely from the caeliac to thr spleen, taking its course along the pancreas, aii'<. supplying this organ with several small branches : and there is a pretty considerable branch goei off from the splenic called the inferior gastric, which passing along the curvature of the stomach communicates with the right gastric.

298. About a quarter of an inch below the cseliac artery, and behind the pancreas, originates from the aorta the superior mesenteric artery, which branches out principally among the layers of the mesentery aud the small intestines ; the larger branches on the left side being principally destined for the jejunum and ilium; while those on the right side, viz. the colica dextra, media, and ileo colic, are mainly distributed, as their names import.

299. The inferior mesenteric artery takes its rise from the aorta considerably lower down, and descends upon the psoas muscle ; it gives out a branch, which communicating with the colica media, forms the mesocolic arch. The heemorr- hoidalis interna is also from the inferior mesen- teric, which is directed towards the sigmoid flexure of the colon and rectum.

300. Between the superior and inferior mesen- teric arteries the renal or emulgent arteries are sent off from the aorta ; these go without any ramifications from them immediately to the kid- neys, and are distributed minutely through its substance, as the hepatic artery is through the substance of the liver. Then there are two other long and single arteries from the aorta, viz. the spermatic, which are directed down through the abdominal apertures to be minutely dispersed upon the epididymis and testicle.

301. Having sent off these branches, the aorta divides opposite to the third vertebrae of the loins into the two iliacs, each of which passes down- wards and outwards, and at about the distance of two inches subdivides into the anterior and posterior iliac.

302. The principal branches of the posterior or internal iliac are posteriorly the arteria glut

passes behind the rectus muscle of the abdomen, and meets some of the smaller branches from the internal mammary artery ; it sends branches also to supply parts in and about the pelvis. The circumflexa ilii is another branch of the external iliac, which arises opposite to the epigastric on the outside, and takes an upward and circuitous course towards the ilium, and among the oblique and transverse muscles of the abdomen.

303. The femoral artery, about two inches under the crural arch, divides into two branches, which are nearly equal in size ; the one contain- ing, as it were, the trunk of the vessel, retains the name of femoral artery, or superficial femoral; the other, which sinks deep among the muscles, is named the profundafemoris. The superficial, or femoral artery, descends obliquely towards the inner side of the thigh, and the sartorious muscle passes across it; while the profuuda passes backwards and gives off the two circumflex arteries, and four arteritE perforantes. These supply principally the muscles of the thigh.

304. The femoral artery passing on, reaches the back part of the thigh bone and .descends into the ham, where it becomes the popliteal, and sends out five articular arteries, as they are called, principally for the supply of the knee- joint ; the trunk of the artery then is continued through the gastrocnemii muscles, and, opposite to the under edge of the popliteus muscles, divides into two branches, called the anterior and posterior tibial arteries ; the first, passing down the fore part of the leg, goes under the annular ligament, and is distributed to the upper part of the foot ; at the root of the first metatarsal bone it passes through to the sole of the foot, communicating with the external plantar artery.

305. The posterior tibial, which follows the course of the tibia to the lower end of the bone, goes round to the bottom of the foot, and di- vides into the internal and external plantar ar- teries ; the first of which is placed on the inner side of the sole of the foot ; the second, which is the largest of the two, goes between the flexors of the toes till it reaches the metatarsal bone of the little toe.

306. Besides the anterior and posterior tibial there is an artery of the leg called the fibular ; this passes off from the posterior tibial about an inch below the main division, and running down along the fibula to the foot, communicates with a branch from the anterior tibial called the mal- leolar, and at the foot is lost in what are called the peroneal branches.

307. This, which we have above described as the general course of the arteries, supplying the Jower extremities, is, like that of the upper ex-

tremity, subject to considerable variations.

308. A few words remain to be said on the pulmonic system of arterial distribution. Al- though, indeed, the aorta is the root of all the arteries of the body, and being so we have com- menced our account of the arterial system with it; yet, in one sense, the pulmonary artery pos- sesses a prior right to notice, inasmuch as the blood must go through the lungs before it is fitted for the general circulation.

309. The pulmonary artery, as we have said, takes its rise from the anterior or right ventricle;

it passes upwards behind the sternal bone, and divides very soon into two great branches, one of which is distributed to the right, and the other to the left, lobe of the lungs. The right and left pulmonary arteries are not, however, of exactly the same length or dimensions ; the right being longer and larger than the left. The pulmonary artery, as will be more particularly stated in the article physiology, is directed through the lungs for an especial purpose in the animal economy, while the bronchial, and other branches from the aorta already described, seem the proper arteries of the lungs themselves.

310. Veins. — As the arterial course has been traced from its commencement at the aorta and pulmonary artery, so may we, in the first place, say generally, that all the returning blood from the lungs is conveyed by the large trunks of the pulmonary veins into the anterior auricle, and from the body by the vena cava, inferior and superior.

311. The return of the blood from the head is in the following manner : — the smaller branches of the veins of the brain unite with the termina- tions of the arteries; but in the larger branches instead of answering, as in other parts of the system, to the general course of the arteries, pass between the convolutions of the brain, and ter- minate obliquely in what are called sinuses; which are triangular canals, constituted by doublings of the dura mater, and which are mainly divided into longitudinal, lateral, and torcular Herophili, the first of which takes its rise at the crista galli of the aethmoid bone, runs along the centre of the head, and terminates or divides into the two lateral sinuses, opposite the most prominent portion of the occipital bone ; these last follow a tortuous course, and at length terminate in the internal jugular vein. The fourth sinus, or torcular Herophili, is a short canal, commencing where the falciform process of the dura mater joins the expansion of it, called the tentorium ; it passes downwards and back- wards, and joins the lateral sinus. The internal jugular vein, commencing then from the lateral

sinus (and thus receiving blood from the interior of the eye, as well as immediately from the brain), passes down the neck from the foramina lacera, being enclosed in the same sheath with the carotid artery ; in its passage it receives blood from veins about the occiput, larynx, pharynx, and tongue, and at length terminates in the subclavian.

312. The blood from the external parts of the head is returned as in other parts from corres- ponding veins. The external jugular vein, thus at length formed, lies beneath the platysma myoides muscle, passes down the neck and termi- nates, as well as the external jugular, in the subˆ clavian. This, the subclavian, joins with its fellow on the opposite side, opposite to the cartilages of the first ribs, and together form the vena cava superior, which as we have already stated, enters the anterior auricle of the heart. But the sub- clavians are not formed by the cerebral and cer- vical veins alone ; the veins of the superior extremities and the thoracic vessels go to their formation. In the superior extremity there are two sets of veins, the superficial and the deep-

seated. The superficial veins that are seen on the back of the hand, go principally to the su- perficial radial and ulnar veins ; the upper- most or outermost of these, as they take their course along the arm, are called cephalic, the innermost the basilic, and the middle one the median ; this last divides below the elbow into the median cephalic and median basilic, the former going to the cephalic, the latter to the basilic vein. The deep-seated veins accompany the arteries, and joining with those just named form the axillary, which then becoming the subclavian runs along between the clavicle and the first rib.

313. In the inferior extremities there are like- wise two sets of veins, the one subcutaneous or superficial, the other deep seated. The two trunks which the former unite are called saphcmte ; the saphana minor, being situated on the outer side of the ancle, runs up on the back of the leg ; the saphana major runs along the inner edge of the tibia, to the inner and upper part of the thigh. The deep-seated veins, like those in the upper extremities, accompany the arteries ; and when the femoral vein becomes formed, it ascends and passes under the crural arch, then receiving the name of anterior iliac, which joining with the posterior iliac constitutes the commencement of the vena cava inferior, which at its origin re- ceives the sacral and lumbar veins. This, the \ena cava, then ascends through the abdomen and chest, to be inserted, as before observed, into the anterior auricle of the heart.

314. In respect of the abdominal veins there is this peculiarity, that the large trunks of the mesenteric, gastric, and splenic, corresponding with their respective arteries, unite together into one large trunk, which trunk, instead of falling into the vena cava, immediately enters the liver at its porta, and hence the vessel is called vena porta ; before it reaches the liver it receives likewise the cystic veins; it then divides into two main branches, one supplying the right and the other the left lobe of the organ. The blood that is conveyed to the liver by this channel, as well as that which is carried into it by the he- patic artery, is returned into the cava by veins which are named the hepatic cava ; these open into the cava itself, by two or three trunks, at the part where the vessel passes through the diaphragm.

The veins proper to the chest are the inter- costal, which correspond in size and direction with the intercostal arteries ; then there is beside the vena azygos, or vena sine pari, which is con- stituted of the intercostal and bronchial veins, and which enters the cava near its insertion into the auricle. There is a left or smaller vena azygos which terminates in the left subclavian. The heart itself has a coronary vein correspon- ding with the artery of that name.

The following table has been constructed from Dr. Barclay's work on the Arteries, in which he professes to give more appropriate and scientific appellations, than those in common use, to these vessels.

TABULAR VIEW OF THE PRINCIPAL HUMAN ARTERIES.

•V< >. Names and Synu- nymes

Origin.

Distribution.

1. IVi.MONioARTERY. From the pulmonic ven- To the lungs. Sy. Pulmonary Ar- tricle of the heart. tery.

II. SYSTEMIC ARTERY. From the systemic ven- Aorta. tricle.

III. Cardiac arteries. ('•orotutri/ A.

IV. Cephalic arteries. CinnmonCarotidA.

V. ('encephalic nes.

tjttTlltl (

A.

>t id

From the root of the systemic artery.

From the arched por- tion of the systemic artery ; the left di- rectly from this ar- tery ; the right from the common trunk tailed anonymous.

Slernad and mesiad tiom the preceding.

To every part of the system.

To the muscular sub- stance of the heart.

Rise along the atlantal and lateral parts of the neck, between the wind-pipe and jugu- lar veins, to nearly the atlantal margin of the thyroid cartilage.

Crossing the next la- terad, atlantad, and dorsad, below the an- gle of the basilar jaw, and dorsad of the bi- venter maxillsc and stylohyoideus mus- cles, towards the pa- rotid gland.

Connection.

i

Everywhere accompa- nied by the ramifica- tions of the syste- mic or pulmonary veins.

Abdominal portion ac- companied by the great pulmonic vein, or vena cava.

Inosculate with each other.

Laterad and sternad, with the internal ju- gular veins; laterad and dorsad with the 8th pair of nerves; dorsad with the great sympathetics ; and sternad with thelatis- simi colli, and other muscles.

No. Names and Syno- nymet.

VI. Atlanto-thyroid ar-

tery.

Superior thyroid A , Gives off the

Laryngeal artery.

VII. Lingual artery Gives off the

Sublingual A.

VIII Pharyngeal ar- tery.

Ascending phu- ryngeal A.

IX. Labial artery.

Facial, angular, or or external max- illary A. Gives off the

Palatine A.

Submental A.

Buccal

Coronary A. of the lips.

X. Occipital artery.

Origin. From the preceding.

Second branch of the Pericephalic.

From the pericephalic between the pharynx and the rectus capi- tis internus major muscle.

From the pericephalic, with or near the pre- ceding.

XI. Auricular artery Gives off the Stylomastoid A.

XII. Orbito- maxillary

artery.

Internal maxilla- ry A.

Gives off the Geniomaxillary or inferior max- illary A. Mcningial A. Buccal A. &c.

XIII. Temporal artery Gives off the

Deep temporal A. Transverse of the

face.

Orbicular A. Anterior Auricu- lar A. &c.

Behind the biventcr maxillae from the pe- ricephalic.

From the pericephalic (of which it is the smallest branch) near the extremity of the styloid processs.

From the pericephalic near the neck of the condyloid process of the basilar maxilla.

Continuation of the pe- ricephalic.

Distribution.

Below the omohyoideus and sternothyroideus sacrad, mesiad, and sternad, to the thy- roid gland and mus- cles of the larynx.

Commencing beside the pharynx, passes me- siad in a winding course, penetrating the genio-glossus, to the basilar part of the tongue, and adjacent parts.

Ascends to the base of the skull to supply the pharynx and parts adjacent.

Passes atlantad and sternad to the basilar maxilla, which it crosses near the an- tinial margin of its ramus to the lip and nose

Runs laterad and dor- sad, to the space be- tween the atlas and the mastoid process ; theuce dorsad and mesiad to the space between the splenii. Supplies the occiput and contiguous parts.

Passes through the pa- rotid gland iniad and laterad, to the space between the rnastoid process and the root of the auricle.

Passes mesiad to the spheno-maxillary fis- sure and the inial part of the orbit; thence antiniad along the maxillary canal, and through the infraorbitary hole. Supplies the teeth and gums, muscles, and other parts in its neighbourhood

Runs coronad through the parotid gland, across the zygomatic arch, above which it divides into two branches, spreading coronad and iniad, and coronad and gla- bellad. Supplies the muscles and all the parts in its neigh- bourhood.

Connection.

Inosculates with the branches of its fel- low, and with those of the sacro-thyroid.

Inosculates with its fel- low.

Passes between the zy- gomatic and bucci- nator muscles ; and inosculates with the nasal branch of the Ophthalmic.

Crosses the internal ju gular vein sternad Inosculates with its fellow, and with branches from the temporal and auri- cular.*

Inosculates with the occipital and tem- poral.

Inosculates with the branches from the la- bial, ophthalmic, ana temporal arteries.

Inosculates witn its fel- low, and with the oc- cipital,auricular, and ophthalmic.

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Xfu. Kanift and Syrut-

nymei.

XIV. Encephalic arte- ry.

Internal carotid, or cerebral A. (Jives off the Ophthalmic A. (Communicating

A. Sylvian A. &c.

XV. Brachial artery. Subclavian, axilla- ry, and- humeral A.

Divided into

1 . Subclavian portion, Giving off the

Vertebral A. Spinal arteries ; First intercostal A. Sternal or internal

mammary A. Sacro-thi/roid A.

2. Axillary portion, (Jiving otl' inc.

Thoracic arteries ; Scup/i/ur A. Circumflex A. :t. Humeral portion, (living oil tin: />.<•/) A. of III,: htl-

iinr/is.

A’////-/V(n//.s- A. »!’ the hiniicntx.

ANATOMY.

Oriyiu. Dittribution.

From the cephalic, close to the pericephalic.

On the right side from the anonymous A., and on the left from the arch of the syste- mic artery, laternd of die cephalic.

From tilt; humeral por- tion of the brachial artery, on the ulnar side of the arm.

From tlio Immoral por- tion of the brachial artery, on the radial side of the arm.

\

XIV I’lin me arteries. <

i the thoracic por-

n of the systemic

ery.

•rally from the ab-

iiiinal portion of

• systemic artery,

netirru-s from the

Passes through loose cellular substance to the base of the skull, and entering by the carotic hole, through the carotic canal and cavernous sinus, to the optic hole of the sphenoid bone. Con- tributes with the ver- tebral artery to sup- ply the Encepha- lon.

Rises atlantad (more so on the right), bends laterad to the axilla; on approaching the humerus, runs be- tween the biceps and the long head of the triceps, and runs be- tween the tendons of the pectoralis and la- tissimus dorsi. Ge- nerally continues un- divided from the ax- illa to the bend of the elbow, though it may divide into two or three branches at any place within this interval.

Runs between the sub- limis, profundus and flexor ulnaris mus- cles, radiad of the os pisiforme, crosses the carpus radiad, and ei- ther forms an arch, or gives out branches in the palm of the hand.

Runs thenad and more peripherad than the preceding, between the supinator radii longus and flexor ra- dialis, resting on the flexor longus pollicis till it reaces the car- pus, when it passes anconad to the back of the hand.

To the bronchi of the lungs.

To the concave surface of the diaphragm and neighbouring organs.

Connection.

Inosculates with the vertebral artery to form the circle of Willis.

Passes dorsad of the Brachial veins, then through a plexus of the great Sympathe- tic; in the axilla is surrounded by the nervous plexus, veins and glands, of that hollow; runs cen trad of the fascia of the arm, and ulnad of the biceps muscle.

Passes beside the ulnar nerve and basilic vein. Inosculates in- the palm with the radial artery.

Inosculates with the branches of the pre- ceding.

Inosculate with twigs from the pulmonic artery.

Inosculate with the ster- nal and intercostal arteries.

No. Names and Syno-

nymes. XX. Cceliac artery.

XXI. Gastric arteries.

XXII. Hepatic artery Gives off the Right gastro- epiploic A.

XXIII. Splenic artery Gives off the

Left gastro epi- ploic A. vasa brevia, &c.

XXIV. Greater mesen-

teric artery.

Superior me-

senteric A.

XXV. Lesser mesente-

ric artery. Inferior mesen- teric.

XXVI. Renal arteries. Emulgcnt A.

XXVII. Spermatic ar- teries.

XXVIII. Lumbar ar-

teries.

XXIX. Sacro – median

artery.

XXX. Crural arteries. Common iliac A. Divided into

1. Lumbar portion, in-

cluding the Hypo- iliac or hypogastric A. Giving off the

Gluteal A.

Jschiatic A.

Ilio-lumbar A.

Sacro-latcral.

Uterine A.

Vesical A.

Htemorrhoidal A.

Pudic A.

2. Iliac portion, or ilr-

ternal iliac A. Giving off Epigastric A. Circumflex A.

Origin.

From the abdominal portion of the syste- mic A.

Generally from the cce- liac.

In most cases from the cceliac.

From the cceliac.

From the abdominal portion of the syste- mic artery sternad, and sacrad of the cce- liac.

From the sternal side of the abdominal syste- mic artery sacrad of the preceding.

From the sterno-lateral parts of the abdomi- nal systemic A. sa- crad of the preced- ing.

Generally from the ab- dominal systemic ar- tery on its sternal aspect, near the pre- ceding.

From the lateral parts of the abdominal sys- temic A.

Sternad from the bifurc- ated termination of the abdominal syste- mic artery.

Terminate the abdomi- nal systemic artery.

The hypo-iliac arises at the junction of the sacrum with the ili-

Co ineclion.

Inosculate with the vaie brevia, from the sple- nic and neighbouring arteries.

Distribution.

Common trunk or root of the three succeed- ing.

To the concave arch of the stomach, the car- dia, and the pylorus.

Entering by the fossa of the vena portas, sup- plies the substance of the liver and some of the neighbouring parts.

To the spleen and neighbouring parts.

To the small intestines, the coecum, and right colon.

To the left colon and rectum.

To the kidneys chiefly.

To the testes.

To the parietes of the abdomen.

Runs mesiad and sa- crad to the coccyx, supplying the sa- crum- Pass sacrad and late- rad, the left keeping on the left side of the crural vein, while the right crosses the great pulmonic vein (vena cava).

The hypo-iliac strikes into the pelvis to sup- ply the urinary and genital organs, with the musles and liga- ments of the pelvis.

The iliac portion ex- The iliac portion runs The iliac portion has tends from the June- mesiad of the psoae the crural nerve la- muscles and laterad terad. of the crural vein, giv- ing off few branches till it reaches the li- gament.

Inosculate with the gas- tric arteries.

Communicates with branches from the cceliac.

Inosculates with the branches from the ad- jacent arteries.

Cross the epigastric ar- teries sternad.

Inosculate with the neighbouring arte- ries.

tion of the ilium and sacrum to Poupart's liguraent.

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No. Names and Kyno-

nymet.

3 Inguinal portion, or Common Femoral

artery,

Giving ofi' the Circumflex A. oft lie

femur. Deep A. of the fe-

. Femoro – tibial por- tion, or Superfi- cial femoral A., Giving off the Perforant A Anastomatic A.

5. Femoro – popliteal portion, or po- pliteal artery, Giving off the Articular arteries ; Gastrocnemial A. Tibial A. Peroneal A, Plantar A.

ANATOMY.

Origin.

The inguinal portion extends from 1'ou- part's ligament to the groin.

The femoro-tibial por- tion extends from the groin to the tendon of the adductor mag- nus muscle.

The femoro – popl iteal portion commences at the above tendon.

Distribution.

The inguinal portion runs centrad of the fascia and inguinal glands, mesiad of the crural nerve and iliacus inter- nus muscle, and laterad of the cru- ral vein and pec- tineus.

The femoro – tibial portions runs po- plitead behind the fascia, the sortorius muscle, and the aponeurosis, pas- sing from the vas- tus internus to the adductor magnus.

The last portion runs distad and fibulad, then distad be- tween the con- dyles of the fe- mur, peripherad of the capsular li- gament and popli- teus muscle, and centrad of the gas- trocnemius exter- nus muscle, divid- ing into two tibials, the one running rotulad, the other poplitead to the foot.

Connection.

The branches from the crural arteries inos- culate freely with each other.

LvMI'IlATIC AND LACM.AI. ABSORBENTS.

:>lti. The general termination of these vessels ^ mto the Thoracic Duct; for an account of •heir immediate origin, see the first part of the present article. They are much more numerous than the blood-vessels, and they communicate frequently and freely \vith each other. In their :TCSS they are connected with the glands be- fire described; like the veins they are superficial 1 i/i i y-s(nttil. The first consists of very nu- rous \essels, which lie between the skin and 1 cellular membrane, and the muscles under the skin ; \lnle the second set accompanies the ar- teiies and supply all the internal parts by exten- sive and minute ramifications.

ill?. In commencing our account of the lym- phatics Irom the lower extremities, we may state that ,i \ery Teat number of the superficial lym phatic accompany the -jreater snphna vein. They may be first triced from the toes, where they inn somewhat like arteries and veins, they lonn a phxus over the toes, from which brandies are transmitted over the top of the foot to the inner part of liic let; ; another set on the outer side ol the foot cross over the front of the tibia, and . nt> I uhat are called popliteal glands, which •jic situated loimd the popliteal artery; on the

inner side of the thigh a large number of these vessels are found, which lead to the lymphatic glands of the groin, some passing on without en- tering these glands. The deeper-seated lympha- tics of the lower extremities first accompany the plantar arteries, and run up the leg by the sides of the posterior tibiaˆ artery ; other, but less nu- merous branches, accompany the tibial and fibu- lian arteries ; these lymphatics are first connected with the popliteal glands, from which three or four large branches peep upwards along the fe- moral artery to become connected with the in- guinal glands. These glands likewise receive the lymphatics from the sciotum, the penis, the glutei muscles ; and into the upper series of them many lymphatics also enter from the su- perficial parts of the abdomen and pelvis.

318. The lymphatic vessels of the upper ex- tremity scarcely need to be described, as they for the most part in their course accompany the veins, where they are superficial, and the arteries when deep-seated. Some of them pass into small glands in the vicinity of the puminal artery, but for the most part they do not enter any glands until they reach the axilla ; some pass on between the pectoral and deltoid muscles to be inserted into glands at the under part of the cla- vicle. Into the axiliary and clavicle glands.

pass also the greater number of lymphatics from the sides of the thorax, and from the mamma?. From these glands, (the axillary,) large lym- phatic vessels pass out, and by their union form a trunk, which on the left side of the body leads to the thoracic duct near to its termination. On the right side, the trunk thus formed by the lym- phatic vessels, principally of the upper extremity, joins with the large lymphatic trunk, called the trunk of steno.

319. The Thoracic duct. — This is formed by the lymphatic vessels of the lower extremity, and by the trunk formed from the lacteal vessels. It first appears in the form of a sac, called the re- ceptacle of the chyle, which is a bag of a pyriform shape, placed on the first or second vertebra of the loins ;

it is about two-thirds of an inch in length ; towards its upper part it gradually con- tracts, and at length forms the tube which is properly the duct ; this is not above a line in diameter ; it passes up from the sac close to the spine, at first behind the aorta ; it then per- forates the diaphragm, and is found on the right side of the aorta, passing on between that vessel and the vena-azygos, and at length termi- nating at the junction of the internal jugular and subclavian veins of the left side of the body.

320. The lacteal vessels, like the lymphatics, are found in two sets, which communicate with each other. They take their rise from the villi of the intestines, pass obliquely through their coats, uniting, as they pass out, so as to form larger and larger branches. From the intestines they run along the mesentery towards the spine ; passing through glands on the mesentery, and at length uniting, they form two or three trunks which accompany the superior mesenteric ar- tery, till they reach the right side of the aorta, and here they terminate in the thoracic duct. The lacteals of the small intestines are more nu- merous than those of the larger. Their course likewise, and termination, are somewhat diffe- rent; some from the lattei accompany the in- ferior mesenteric artery, and communicate with the large lymphatic vessels near its root.

321. It now remains for us to trace the tho- racic and abdominal lymphatics. In the lungs there are two sets also of lymphatics, the super- ficial and the deep-seated. The former running chiefly between the lobules, some passing over them, and all going to the bronchial glands, where they are joined by the deep-seated lymphatics, that go along the branches of the trachea and the pulmonary artery. Having passed through these glands, the principal part of those from the left lung forms a trunk which terminates in the tho- racic duct, behind the division of the trachea ; then there are other lymphatics of the left lobe which pass through glands behind the arch of the aorta, and which are likewise common to those of the heart, the lymphatics of which organ accompany the carotid arteries. These last vessels are much smaller than those of the lungs. The absorbents of the right lung, after leaving the bronchial glands, form three or four principal trunks, one of which commonly ascends on to the fore part of the vena cava superior, and opens into the duct of steno that terminates in the veins on the right side of the neck.

322. In describing the abdominal lymphatics we shall trace them from the termination of those from the inferior extremities ; these having reached the trunk of the body, and passed under Poupart's ligament appear upon the sides of the pubic bones near the pelvis. A part of them passes up along with the iliac artery upon the brim of the pelvis ; and another dips down into the pelvic cavity joining the internal iliac artery, near the sciatic notch. At this place they are joined by the lymphatics of the pelvic viscera,

particularly of the bladder, and vesicula seminales of the male, and from the uterus in the female; and there are likewise several branches which pass through the sciatic notch from the neigh- bourhood of the glutcei muscles, branches be- fore referred to.

323. On the outside of the iliac artery upon the psoas muscle several considerable branches of lymphatics likewise pass ; of these, one part passes up to the loins, and goes under the aorta in different branches, getting from the left to the right side and joining the thoracic duct; and another passes under the iliac arteries, and appears upon the sacral bone. The lymphatic vessels from either side, having in part joined upon the right lumbar region form here a large plexus, and pass through several glands; into this plexus large branches are received from the left plexus ; and having at length got up as high as the second vertebra of the loins, the junction here of the lymphatics and the lacteals constitutes the thoracic duct, before described.

324. All the abdominal viscera have both su- perficial and deep-seated lymphatics; the sto- mach has two sets, the one running upon its les- ser, and the other upon its greater, curvature. Of these the former accompanies the coronary artery, and passes through some glands which lie by its sides. The other set passes from the great curvature of the stomach, partly to the left and partly to the right side. Those on the left side receive the lymphatics of the first half of the great omentum, and pass through some lympha- tic glands which lie close upon the right gastric artery, and near the lesser curvature of the duo- denum, form a considerable plexus. Into this plexus the lymphatics from the spleen enter, as also those from the gall-bladder, and the deeper- seated lymphatics of the liver ; and from it se- veral branches proceed, which open into the thoracic duct, near the termination of the large trunk of the lacteals ; this duct, we have said, being thus the common receptacle of the absot- bent and lacteal vessels. The lymphatics of the liver lie, the one set upon the surface of the or- gan, and the other by the branches of large blood-vessels in its centre ; they however com- municate with each other very freely. Most of the lymphatics that lie upon the convex surface of the liver, run towards its falciform ligament, and pass through the diaphragm into the glands, which are situated on the anterior part of the pericardium. Others of them run towards the lateral ligaments of the liver, where they pass through the diapraghm, and afterwards run on its upper surface to unite with those from the liga- mentum latum. There is however here, as else- where, considerable variety in the course and dis-

tribution of these vessels. From the glands on the anterior part of the pericardium just men- tioned, a large trunk ascends behind the ster- num in the anterior mediastinum, and usually joins the thoracic duct near its termination. Sometimes there are two trunks or more on each side of the chest ; those on the left side ending in the thoracic duct, those on the right going into the lymphatic trunk on that side of the neck. The lymphatics on the concave surface of the liver, run towards the porta of the organ ; having joined those from the centre of the liver, they pass into glands on the vena portae ; and af- terwards end in the thoracic duct, near the root of the superior mesenteric artery. The lympha- tics of the kidney run from its outer towards its inner edge, and pass through the lumbar glands. Into the plexus of lymphatics belonging to the kidneys, ihe lymphatics also of the glandule re- tialcs enter. The lymphatic vessels of the kid- neys are very small in their natural state, and scarcely visible excepting under circumstances of disease. The lymphatic vessels of the spleen pass from the concave side of that viscus, and join branches which run along the sinuosity of the pancreas.

325. The Lymphatic glands, it will be inferred from the above description of the vessels to which they are attached, are much more nu- merous in some than in other parts. They es- pecially abound in the axilla, in the groin, at ihc sides of the neck, and at the great division of i lie aurt.i into the two iliac vessels.

BKAIN AMI NKRVKS.

32o. For an account of the general structure aiid composition of those, organs, we refer our readers to the commencement of this article. The brain, properly so called, occupies all the upper part of the cavity of the skull, and in its form or figure corresponds with the form of the cranium. It is divided into two portions, called lit Htispfitivs, each of which is again subdivided into lobes which are three in number, the an- ti rior one resting upon the orbitar process of the frontal bone, the middle occupying the ca- vity formed by the sphenoid and temporal bones, and the po>terior resting upon that expanse of the dura mater which is called the Icntorium ccrebclli. Tlie division of the brain into two hemis- pheres only uoes down to a certain extent; it is effected by what is called the falciform in-ocimt of the dura muter, and if, according to tin common mode of demonstrating the brain, the tun hemispheres are sliced oil' and removed, tlie tlattfiied surface presenting itself, or the \hiti- portmii of it, is niinied centrum ovule ; but first, upon taking out the dividing membrane truni between the hemispheres, a broad white plate uniting these hemispheres is perceived; thi- i-; turned the corpus c'll/osum, along which a groove pa-.,es longitudinally, transmitting trans verse til. res. I'nder the corpus callosurn the •///•(, •/, – are simat.'il, which are divided into n_ht and left by an e\(

eedinˆly thin mem- lir.uu' nai.ii .1 siptit/// lucid'i'ii : this membrane is pl'i ttween the corp is < allosum and the

'/•//<;, \\inch l;i-t is forme 1 by a. sort of conti- nuation of the posterior beiid of the corpus cal-

losum : it has a division into four parts, called crura; the under surface of the fornix is im- pressed by a number of grooves, so disposed as to resemble in some measure the strings of a lyre. When it is removed the lateral ventricles of the brain are fully exposed to view, and the following parts now come into view : the corpora striata, which are two prominences of a striated appearance, from being composed partly of white and partly of brown matter; and the two tha- lami nervorum opticorum, which intervene between the posterior parts of the corpora striata ; these bodies are united by what is called the com- missura mollis from its soft texture and medullary appearance. In each lateral ventricle there is likewise found lying upon the thalami a con- geries of vessels called plexus choroides, which are stretched over the pineal gland and the cor- pora quadrigemina : these last, which are like- wise called nates and testes, come into view upon removing the plexus at the back part of what is named the third ventricle ; the other body (the pi- neal gland) is placed over the nates. The third ven- tricle is a deep fissure situated under the commis- sura mollis, and from it the funnel-like cavity called infundibulam runs forward towards the pituitary gland, which is a small oblong-shaped substance situated upon the sphenoidal bone. Under the anterior part of the body of the fornix, and over the fore part of the third ventricle, the lateral ventricles communicate with each other by a small oval fo- ramen. In what are called the descending cor- nua of the ventricles, there are two rounded bodies which are joined to the posterior extre- mity of the corpus callorum ; these are named pedes hippocampi. The sharp point at the ex- tremity of each of the posterior cornua of the lateral ventricle is called ergot.

327. The cerebellum, or smaller brain, occupies the inferior cavities of the occipital bone, and i» found covered by the tentorium, under the pos- terior lobes of the proper or large brain. Like the brain itself, the cerebellum is divided into two great lobes or hemispheres, each being sub- divided into lobules; a vertical section of this part discovers the fourth ventricle, which extends from the testes on to the back part of the cerebel- lum ; at the under part of this (the fourth ven- tricle) an angular impression is found, which is called calamus scriptorius. The cerebellum is joined to the cerebrum by chords which are in- serted into the substance of the cerebellum, and the fibres of which are described as being in- termixed with those of the medulla oblongata.

328. This (the medulla oblongata) is a combi- nation of the cerebrum and

cerebullum ; it is of a conical shape, with its base next to the brain, and it is extended on as far as the large foramen of the occipital bone, when it takes the name of spinal chord, or medulla spinalis. It is on the under surface of the brain that the medulla ob- longata is placed, and can therefore only be seen by inverting the whole mass. There are four crura or processes from the cerebrum and the – cerebellum, which first form by their junction the tuber annulare or pans variolii ; and the me- dulla oblongata is the cone-like substance between this and the spinal chord.

329. The spinal chord then, or, as it is vul-

garly called, spinal marrow, is continued from the medulla oblongata through the foramen magnum occipitalis down the cavity of the spine ; it is covered by the same membranes as the brain; is likewise composed, like the brain, of brown and white matter. It has been divided into cervical, dorsal, and lumbar portions, where there are en- largements for the lateral transmission of nerves as we shall immediately see ; and its lower extremity is expanded out into several filaments, which, together, are called cauda equina. It is necessary to say, that each nerve derived from the spinal marrow, as it is transmitted, consists of an anterior and posterior bundle of fibres, and that in the posterior bundle, as distinct from the anterior, a ganglion is found.

330. Having thus given a general description of the brain and spinal chord ; or, as some speak, the cranial and spinal brain, we now proceed to trace the nervous ramifications ; and in so doing we shall pursue the ordinary method of anato- mists, reserving for the article PHYSIOLOGY the discussion of the questions that have recently been agitated respecting the mode in which they actually originate, or are connected with the brain and spine, and with each other; as likewise the combined and separate purposes they serve in the animal economy.

331. The nerves, then, have been divided into two main classes, viz. the cerebral and spinal nerves, or those from the brain directly, and those from the spinal chord ; the first set are princi- pally from the basis of the brain, or medulla ob- longata ; of these there are nine, or, according to some, ten pairs; the tenth being, or being not considered a nerve of the spine.

332. The^/jrs^ pair, or olfactory nerves, take .heir rise from the corpora striata, and running under the anterior lobes of the brain approach each other as they pass forwards, and are at length ramified upon the turbinated

processes of the ethmoid bone, and upon the septum narium.

333. The second or optic arise, according to some, from the thalami nervorum opticorum, ac- cording to others from the nates and testes ; they form a junction at the sella turcica, and after- wards dividing, pass out at their proper orifice in the sphenoid bone to be expanded upon the retina of the eye.

334. The third, or motores oculorum, are traced from the inferior part of the crura cerebri ; they pass out at the foramen lacerum, and are distributed upon most of the muscles of the eye.

335. The fourth pair arise from over the pas- sage to the fourth ventricle; they likewise pass on through the foramen lacerum, and are spent upon the larger oblique muscle of the eye.

336. The fifth pair, or trigemini, arise by the side of the tuber annulare ; and, having perforated the dura mater, divide into three great branches; tie ophthalmic or orbitar, the maxillaris superior, and the maxillaris inferior.

337. The ophthalmic branch, as it passes through the foramen lacerum, and is about to enter the orbit, transmits a small branch which assists in the formation of the great intercostal ; it then passes on to the lachrymal gland and parts about the eye, sending off one considerable branch to the membrane of the nose and integu- ments of the forehead.

338. The superior maxillary branch pass»a through the large round foramen of the sphenoid bone, and gives nerves to the palate, sphenoida! sinus, and nostrils ; the trunk of the nerve passes through at the top of the antrum, gives branches to the teeth of the upper jaw, and is at length spent upon the orbicularis palpebrarum muscle, the nose, and upper lip ; here it is that the branches of this nerve seem to unite with those of the seventh.

339. The inferior maxillary branch passes out at the foramen ovale and is distributed, as its name implies ; but besides sending branches to the muscles about the lower jaw, and to the sali- vary glands, it likewise supplies the external ear, uniting with the portio dura of the eighth pair, and likewise with the ninth pair.

340. The sixth pair, or abducentes, arise from the tuber annulare ; they pass within the ca- vernous sinuses, and then through the foramen lacerum to the abductor muscle of the eye ; a branch from this nerve, joining with the ophthal- mic branch of the fifth pair, is described as forming the origin of the intercostal.

341. The seventh pair, or auditory, arising by the side of the tuber

annulare, goes into the mea- tus auditorius internus, one part loses its firm coat, and is ramified upon the internal parts of the or- gan of hearing ; this is the portio mollis of anato- mists ; the other, the portio dura, goes through the canal of Fallopius, and comes out of the skull with its investments, supplying the muscles about the pharynx and neck, and communicating with the maxillary branches of the fifth pair.

342. The eighth pair arise from the medulla ob- longata, and consist on each side of the par vagum and glosso-pharyngeus, both of which pass out from the skull at the foramen common to the temporal and occipital bones ; a branch from the glosso-pharyngeal nerve joins with the di- gastric branch of the portio dura; branches like- wise are given off from the glosso-pharyngeus, which, uniting with the pharyngeal branches of the other division of the nerve, form the plexus, which lies over the internal carotid artery, and from which nerves go to the heart. The glosso- pharyngeal then supplies the tonsil, the upper part of the pharynx, the epiglottis, and the root of the tongue.

343. The par vagum runs straight down the neck, near the carotid artery and jugular vein, in its course giving off several branches to the pharynx and larynx. When it has entered the thorax it splits into two portions, the anterior of which supplies the pericardium, sends branches to join with those of the intercostal that go to the heart, and then it takes a winding and retrogade course, on the right side turning round the sub- clavian, and on the left the ductus arteriosus ; it then again mounts upwards on the side of the oesophagus to be lost in the larynx. This is called the recurrent nerve. The other branch of the right pair goes to the supply of the oesopha- gus, the lungs, and the stomach, and joins the intercostal immediately below the diaphragm.

344. The ninth pair appear first at the lower part of the corpora pyramidalia, they pass out through the superior condyloid foramina ; the nerves of the opposite side are conjoined with the suboccipital neive by a cross branch; it theu

descends down the neck and transmits a branch called the dcm-rndensnoni, the trunk of the nerve then passing upon the hyoglossus muscle divides into branches which join the lingual branch of the fifth pair, to be lost in the substance of the tongue.

345. The tenth pair, considered by some as the first of the cervical nerves,

take their rise from the very beginning of the spinal chord, and their branches are expanded upon the oblique and extensor muscles of the head.

346. Before describing the spinal nerves and their branches, it will be right to trace the rami- fications of the intercostal, which together with the par vagum of the eighth pair constitutes the great sympathetic nerve of anatomists. We have already said that the ophthalmic branch of the fifth pair transmits a small branch which assists in the formation of the great intercostal, and that this is joined by a branch from the sixth pair subservient to the same purpose; these, when they have left the petrous bone, are joined by branches from the eighth, ninth, and tenth pairs, as well as with the first and second of the spinal nerves ; these together form a very large ganglion, from which the nerve, now first named intercostal, goes out, and descends down the neck with the carotid artery, supplying in its course the rlexor muscles of the head and neck, and communicating with the cervical nerves. As it is about to enter the thorax, another ganglion < >r plexus is found which supply the trachea and the heart, joining, as we have before inti- mated, \ ith branches of the eighth pair, to furnish these cardiac nerves. Then the main nerve runs

:UT. \ e now proceed to trace the spinal KiTir.v. These have been divided into four orders \ i/.. -even of the neck or the cervical 7>t ri-t s ; twelve of" the back or dorsal nerves; live ot the liiina or lumliiir ntrvcx ; and six of the os sacrum or am- nil m ;TI s : making in all thirty jniir: \ e have already said, and it is important to observe, that each nerve transmitted from the •-pine, consists of an anterior and posterior bun- dle of fibres.

. '1 lie jirs/ ci'rricdl nrrrr passes out from

u\een the tirst and second vertebra; and after M'lidin,' otl' branches, which communicate with the tenth and second vertebral is spent upon some of the muscles of the neck, and on the 01 i ipital integuments.

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the ninth from the brain, and with the first and

thud of the neck ; it. likewise joins by branches

the portio dura of the seventh pair, and partly

up] lies the parotid uland and external ear.

nnl ftrrii-nl is transmitted from

luien tin: third and fourth vertebra;, soon

communicating with the second, and sending down a large branch, which, being joined by another from the fourth, constitutes the phrenic nerve, which runs along the pericardium, and is spent upon the diaphragm. Its other branches are transmitted to the integuments ana muscles of the shoulder

351. The fourth cervical, after sending off branches to help in the formation of the phrenic, runs straight to the axilla, where it meets with the fifth, sixth, and seventh cervicals, and with the first dorsal ; all these sink into the interstices of the scaleni muscles ; and all of them are so often conjoined and blended after they have given off nerves to the muscles of the neck, shoulder, arms, and chest, and to the integuments, that when the several ramifications go off in the axilla to the different parts of the superior extremity, it is impossible to determine which of them the branches belong to. The considerable branches into which they have been divided are six ; and to each of these distinguishing names have been given, viz.

352. The cutaneus, which runs down the fore part of the arms, and supplies the integuments as far as the palm of the hand and fingers.

353. The perforans casserii, or musculo cuta- neous, which passes through the coracobrachialis muscle ; and, after supplying the biceps and the brachialis internus, is spent upon the wrist and back of the hand.

354. The ulnar. — This nerve runs along the ulna, after supplying the extensors of the arm and integuments of the elbow, and is at length lost in the back of the hand, among the interosseous muscles, and the little and ring finger.

355. The radial or median goes down the fore part of the arm along the radius, giving branches as it passes to the neighbouring muscles; then, dividing at the annular ligament of the wrist, it is spent upon the back of the hand, and upon the thumb, fore finger, middle finger, and one half of the ring finger.

356. The muscularis. — This runs down the fore part of the arm to be lost in the flexors oi the wrist and fingers.

357. The articular, which runs almost round the top of the os humeri, and supplies the ex- tensors and retractors of the arm, and elevators of the humerus.

358. To these may be added, the subscapularis which gives nerves to the muscles of the scapula ; descending upon the fore part of the spine of that bone, it is lost among the muscles that lie upon its dorsum.

359. The twelve dorsal nerves of each side as soon as they escape from between the vertebne send a branch forward to join them all; and they soon likewise give branches backwards to the muscles that raise the trunk of the body, thei- principal trunk being extended outwards to come at the furrow in the lower edge of each rib, in which they run towards the anterior part of the chest, between the internal and external inter- costal muscles, giving off branches in their course to the muscles and ligaments of the thorax.

360. Thefrst dorsal, it has already been said, contributes to form the brachial nerves ; and it is further particular in this circumstance that the

two branches of the intercostal which come down to the thorax form a considerable ganglion with it.

361. The six lower dorsal nerves give branches to the diaphragm and abdominal muscles.

362. The twelfth joins with the first lumbar, and gives nerves to the musculus quadratus lumborum, and iliacus internus.

363. The five lumbar nerves on each side com- municate with the intercostal, and with each other, and give branches backward to the loins.

364. The first communicates with the last dorsal, sends branches to the abdominal muscles, to the psoas iliacus, and to the anterior parts of the thigh, while its principal branch joins with the other nerves to form the crural nerve.

365. The second passes through the psoas muscle, and is distributed nearly in. the same manner as the former ; as is likewise the third.

366. Branches of the second, third, and fourth, make up one trunk, which runs along the fore part of the pelvis, and passing through the notch at the anterior part of the foramen magnum, ischii, and pubis, goes to the triceps, and to the teguments on the inside of the thigh. This nerve is commonly called the obturator or posterior crural.

367. By uniting branches from the first , second, third, and fourth lumbar nerves, the anterior crural nerve is formed, which, running along the psoas muscle, escapes from the abdomen along with the external iliac vessels, below the ten- dinous arch of the external oblique muscles. This nerve is distributed principally to the mus- cles and teguments on the fore part of

the thigh. One branch, however, runs down the leg to the upper part of the foot, keeping near the saphena vein.

368. The remainder of the third and fourth lumbar join with the fifth to help in the constitu- tion of the largest nerve of the body, viz. the sciatic or ischiatic ; which is further composed of the first, second, and third of the sacral nerves : this nerve, after sending large branches to the different parts of the pelvis, and to the external parts of generation, as likewise to the muscles of the hips, passes behind the greater tuber of the os ischium, and then over the quadrigemini muscles, to run down near to the bone of the thigh at its back part, giving off nerves to the neighbouring muscles and teguments some way above the ham, where it has the name of popli- teal nerve ; it here divides into two or sends off a large branch, which passes over the fibula, and, sinking among the muscles on the fore and outer part of the leg, runs down to the foot to be distributed about the upper part of the toes, supplying in its course the neighbounng muscles and teguments. The main branch, after giving nerves to the muscles and teguments above the ham and knee, and sending a large cutaneous nerve down the calf of the leg to supply the out- side of the foot, sinks below the gemellus muscle, and distributes nerves to the muscles on the back of the leg ; continuing its course it passes behind the internal malleolus, and in the internal hol- low of the os calcis it divides into the plantar nerves, external and internal ; the internal being sent to the toes in the same manner as the radi-

alis in the hand ; while the external, like the ulnaris of the hand to the palm and concave surface of the fingers, is distributed upon the sole of the foot and outer part of the toes.

369. The fourth sacral nerve is much smaller than the three just described ; this is soon lost upon the urinary bladder and rectum.

370. The fifth, which is likewise as small, is distributed mainly to the levatores ani.

371. These sacral nerves, together with the sixth and last, all proceed from what has been called the Cauda Equina, or, indeed, the nervous branches constitute the cauda.

372. In the instance of the muscles and the arteries it will have been observed, that, after tracing and naming them according to the ordi- nary method and nomenclature, we have given concentrated views of proposed improvements in reference to these particulars. With respect to the nerves, as some views that have lately been taken of them refer rather to their

func- tions than their distribution, we shall consider this proposed reformation in the article PHY- SIOLOGY.

Dr. Gordon's tabular distribution of the nerves we however subjoin.

' There are eight pairs of cerebral nerves : — The olfactory. The optic. The common oculo-muscular, motores conmu-

nes oculorum. The internal oculo-muscular nerves, the fourth

pair according to the old enumeration, nervi

pathetici

The external oculo-muscular, abductores oculo- rum. The trigeminal, the fifth pair according to the

old enumeration. The facial, the portio dura of the seventh pair

according to the old enumeration. The auditory, the portio mollis of the seventh

pair.

There are thirty-four pairs of spinal nerves : — The glosso pharyngeal. The pneumo-gastric, the eighth pair of the central

nerves according to the old enumeration. Par

vagum. Nervi vagi. The hypo-glossal. The accessory. The suboccipital. The cervical, seven pairs. The dorsal, twelve pairs. The lumbar, five pairs. The sacral, five pairs.

' We have purposely,' says our author, ' avoided applying any numerical appellations to the pri- mary nerves, which arise from the brain and the top of the spinal chord, in order that there might be the less risk of their being mistaken by those who have been long accustomed to the old but very inaccurate numerical nomenclature.'

373. It is usual to append to treatises on anatomy, directions for inspecting the various parts and organs of the body after death ; but these directions, we think, will be more appro- priately introduced under the head of SURGERY, to which, therefore, we refer our readers.

374. In recommending the best books for the anatomical student to consult, we cannot but

lament that this country is deficient in respect of a full systematic treatise on the science of anatomy, which shall meet every want of the vmpil ; the systems of anatomy, however, pub- lished by Charles Bell, and that more lately pre- en ted to the world by the third Dr. Monro, bave both sufficient merit to entitle them to a place in the anatomical student's library. We are also not wanting in exceedingly £ood man- uals for the guidance of the dissector. Shaw's, Green's, and Stanley's Compendia, are all of them meritorious productions, and one or other of them it behoves the pupil to possess. Fyfe's anatomy in three large volumes with plates, has long enjoyed a considerable reputation ; but the graphical part is not nearly so well executed as ought to nave been the case in a work of this magnitude. The abridgment of this work, by its author, in three small thin volumes, consti- tutes an exceedingly useful manual for the stu- dent; indeed we know not of any production which contains so much in so small a compass. For the combination of elegance and fidelity in anatomical delineation, recourse must be had to Mr. Charles Bell's separate illustrations of the blood-vessels, the nerves, &c. This last author, indeed, possesses a delicacy of pencil which has scarcely ever been equalled. For accurate delineations of the brain, the larger work of Gall and Spurzheim may be consulted with the greatest satisfaction and advantage; and at this moment a series of anatomical plates is in the progress of publication, by Lizars of Edinburgh, winch, when finished, will perhaps be superior in their totality to any thing that has hitherto ap- peared in Britain.

:!?.">. With respect to accredited works of less recent standing, and not confined to our own country, we may mention from among many others the large folio books of Che- K-lden and Albums on the bones; the latter author's tine work on the muscles; and an ele- gant volume from Cowper on the same subject II, iller's folio work on the blood-vessels; and the second Monro's account of the nervous system. Soemmcring on the brain is a work also of con- siderable merit; and Hunter's delineations and description of the gravid uterus is a masterly performance.

o?o. A small work has lately been published bv Mr. Turner, entitled Medico Chirurgical Kducation, the object of which is to give the anatomical student a better notion of the con- luctnl and relatiir situation of parts, than trea- tises in the abstract can afford. The idea is a IT1 >od one, and, as t'ar as it has been carried out by the author, the plan is judiciously pursued \ e think, however, that he would do well to extend the design, and be

somewhat more par- ticular in the execution of its several parts.

KXI'LAXATION OF PLATE I. FKOM vii. w 01 mr. SKI.I.FTON. — 1. Cranium. ?. Cervical vertebra . '.',. Clavicles. 4. Acro- mions. i. Humerus. 7. Radius. 8. Ulna. '.>. Carpus. 10. Metacarpus. 11, 12. Sternum. 13. Ribs. II. Lumbar vertebra;. 15. Os sa- ciuiii. Iti. Oasa innominata. 17. Ossa ilia.

18. Ossa pubis. 19. Ossa ischia. 20. Os femoris. 21. Patella. 22. Tibia. 23. Fibula. 26. Os calcis. 27. Tarsus. 28. Metatarsus. 29. Phalanges of the toes.

BACK VIEW OF THE SKELETON. — 1. Cranium. 2. Os occipites. 3. Cervical vertebrae. 4. Sca- pula. 5. Clavicles. 6. Dorsal vertebrae. 7. Lumbar vertebrae. 8'. Humerus. 9. Radius. 10. Ulna. 11. Olecranon. 12. Carpus. 13. Metacarpus. 17. Ossa innominata. 19. Os sacrum. 20. Great trochanter. 21. Femur. 22. Tibia. 23. Fibula. 24. Os calcis. 25. Phalanges of the toes.

EXPLANATION OF PLATE II.

FRONT VIEW OF THE OUTERMOST MUSCLES VIEWED ANTERIORLY. — a, Platysma myoides. b, Deltoides. c, Biceps brachii. d, Pronator radii teres. e, Supinator radii longus. /, Flexor carpi radialis. g, Palmaris longus. h, Flexor carpi ulnaris. i, Pectoralis major, k, Ob- liquus descendens externus. /, Linea Semi- lunaris. m, Linea Alba, n, Poupart's liga- ment, o, Sartorius. p, Tensor vaginae femoris. q, Graoilis. r, Iliacus internus. $, Pecti- nalis. t, Triceps adductor femoris. «, Psoas magnus. v, Vastus externus. w, Vastus in- ternus. x, Rectus.

BACK VIEW OF SUPERFICIAL MUSCLES. — a, Trapezius. b, Latissimus dorsi. e, Deltoides. d, Triceps extensor cubiti. e, Gluteus maximus. f, Biceps flexor cruris. g, Semitendinosus. h, Semimembranosus. i, Grastrocnemius ex- ternus.

EXPLANATION OF PLATE III.

HEART AND BLOOD-VESSELS IN SITU, WITH SOMI OF THE MUSCLES.

Muscles, tfc. Superior Extremity. — a, Mas- seter. e, Thyroid gland, g, Trapezius. k, Biceps flexor cubiti cut. 1, Coraco-brachialis. m, Triceps extensor cubiti. n, n, Heads of the pronator teres, flexor carpi radialis, and flexor digitorum sublimis cut. o, Flexor carpi ulnaris, cut at its extremity. P, Flexor digitorum profundus. q, Supinator radii longus, cut at its extremity, r, Ligamentum carpi transversale. s, Extensores carpi radiales. t, Latissimus dorsi. u, Anterior edge of the serratus anticus major. V, V,

Inferior part of the diaphragm. X, X, Kidneys. Y, Transversalis abdominis. z, Os ilium.

Inferior Extremity. — c, Fleshy origin of the tensor vagine femoris.

HEART AND BLOOD-VESSELS. — A. The heart with the coronary artery and veins. B. The right auricle of the heart. C. The aoita ascen-

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ANATOMY.

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•iens. 1). The left subclavian artery. E. The left carotid artery. F. the common trunk which sends off the right subclavian and right carotid arteries. G. The external carotid. II. Facial artery, which sends off the coronary arteries of the lips. I. Arteria temporalis profunda. K. Aorta descendens. L, L. The iliac arteries, which send off M, M. the femoral or crural arteries. N. B. The other arteries in this figure have the same distribution as the veins of the same name ; and generally, in the anatomical plates, the de- scription to be found on the one side, points out the same parts in the other. . The frontal vein. 2. The facial vein. 3. Vena temporalis pro- funda. 4. Vena occipitalis. 7. The vascular arch on the palm of the hand, which is formed by the radial artery and vein, and the ulnar artery and vein. 10, 10. Cephalic vein. 12. Median vein. 13. The

humeral vein, which, with the median, covers the humeral artery. 14, 14. The external thoracic or mammary arteries and veins. 15. The axillary vein, covering the ar- tery. 16. The subclavian veins, which, with the jugulars, form 17, the vena cava superior. 18. The cutaneous arch of veins on the fore part of the foot. 20. The vena profunda femo- ris, covering the artery. 21. The upper part of the vena saphena major. 22. The femoral vein. 23, 23. The iliac veins. 24, 24. Vena cava inferior. 25, 25. The renal veins, cover- ing the arteries. 26, 26. The diaphragmatic

EXPLANATION OF PLATE IV.

Fig. 3. THORACIC DUCT AND PRINCIPAL TRUNKS OF THE ABSORBENTS. — 1. Neck. 2, 2. Jugular veins. 3. Vena cava superior. 4, 4, 4, 4. Subclavian veins. 5. Aorta pulled to the left side by ligature. 6. Branches from the curva- ture of the aorta. 7, 7. Carotid arteries. 8, 8. First ribs. 9,9. Trachea. 10, 10. Spine. 11, 11. Vena azygos. 12. Descending aorta. 13. Cceliac artery. 14. Superior mesenteric artery. 15. Right cms of the diaphragm. 16, 16. Two kidneys. 17. Right emulgeut artery. 18. Ex- ternal iliac arteries. 19. Internal iliac artery. 20. Cavity of the pelvis. 22,21. Spine of the os ilium. 22, 22. Groins. 23. Lymphatic glands in the groin into which lymphatic vessels are seen to enter. 24. Lymphatic vessels of the lower extremities passing under Poupatts' liga- ment. 25. Plexus of lymphatics. 26. Psoas muscle with lymphatics. 27. Another plexus of lymphatics. 28. Lymphatics passing over the os sacrum. 29. Right psoas with plexus on its in- side. 30. Plexus on each side of the spine. 31. Spaces occupied by lymphatics. 32.. Trunk of the lacteals on the under side of the superior mesenteric artery. 33. The same divided into two branches, one of which passes each side of the aorta. 34. Thoracic duct rising. 35. Passing v.?fder the right emulgent artery. 36. Penetrat- ing the thorax. 37. Lymphatics joining it. 38. Passing under the aorta. 39. Plexus of lym- phatics.

Fig. 2. THORACIC AND ABDOMINAL VISCERA. 1. Vertebrae of the neck. 2. Jugular veins. 3. Subclaviaii veins. 4. Descending cava. 5.

Right auricle. 6. Right ventricle. 8. Pul- monary artery. 10, 11. Lungs 13. Liver. 14. Broad ligament. 15. Gall-bladder. 16. Sto- mach. 17. Intestines. 18. Spleen.

Fig. 1. ABDOMINAL VISCERA. — 1. Liver. 2, Round ligament. 3. Gall-bladder. 4. Pancreas. 6. Kidneys. 7. Aorta. 8. Vena cava. 10. A probe passed under the inferior mesenteric and spermatic vessels. 11. Parietes of the ab- domen. 12. A portion of the same reflected. 13. Rectum. 14. Bladder of urine.

EXPLANATION OF PLATE V.

BRAIN, SPINAL CHORD, AND NERVES. — A, A- Anterior lobes of the cerebrum. B, B. Lateral lobes of the cerebrum. C, C. The two lobes of the cerebellum. D. Pons varolii, or tuber annulare. E. The passage from the third ven- tricle to the infundibulum. F. the medulla oblongata, which sends off the spinal chord. G, G. That part of the os occipitis which is placed above (II, H,) the transverse process of the first cervical vertebra. I, I, &c. The seven cervical vertebrae, with their intermediate car- tilages. K, K, &c. The twelve dorsal vertebrae, with their intermediate cartilages. L, L, 8tc. The five lumber rertebrae, with their interme- diate cartilages. M. The os sacrum. N. The os coccygis.

NERVES. — 1, x. The first pair or olfactory. 2, 2. The second or optic. 3, 3. The third or motores oculorum. 4, 4. The fourth or pathe- tici. 5, 5. The fifth or trigemini, its three branches being the opthalmic, the superior max- illary, and the inferior maxillary. 6, 6. The sixth or abductores. 7, 7. The seventh or audi- tores, composed of the portio dura, and portio mollis. 8, 8. The eighth or par vagum. 9, 9. The ninth for the tongue, 10, 10. The intercos- tal or great sympathetic. 11, 11. The ac- cessoreus. 12, 12. The first cervical nerves. 13, 13. The second cervical. 14, 14. The third cervical. 16, 16. The brachial plexus 17, 17. The twelve dorsal, or, as they have been named, proper intercostal. 18, 18. The five lum- bar. 19, 19. The sacro sciatic. 20. The sto- machic plexus. 21, 21. Branches of the cceliac or solar plexus. 22, 22. Branches of the supe- rior and inferior mesenteric plexuses. 23, 23. Nerves accompanying the spermatic ehord. 24, 24. The hypogastric plexus.

EXPLANATION OF PLATE VI.

Fig. 1. ORGANS OF SENSE. — Lachrymal ca- nals, &c. the common integuments and bones having been taken away, a, Lachrymal gland. b, Puncta lachrymaiia. c, Lachrymal sac. rf, Lachrymal duct, e, Its opening into the nose. /, Caruncula lachrymalis. g, Eye-ball.

Fig. 2. NERVES AND MUSCLES OF THE RIGHT EYE, after part of the bones of the orbit has been cut away. — A, Eye-ball. B, Lachry- mal gland. C, Abductor muscle. D, Attollens. E, Levator palpebrae superioris. F, Depressor oculi. G, Adductor. H, Obliquus superior. I, Its insertion into the sclerotic coat. K, Front

of the obliquus inferior. L, Anterior part of the frontal bone cut. M, Crista galli of the ethmoid, bone. N, Posterior part of the sphenoid bone. O, Transverse spinous process of the ethmoid bone. P, Carotid artery, divided where it passes through the bone. Q, The artery within the cranium. II, Ocular artery.

Fig. 3. AN INTERIOR VIEW OF THE COATS AND HUMOURS OF THE EYE. — aaaa, Tunica sclerotica cut in four angles and turned back. bbbb, Tunica choroides adhering to the inside of the sclerotic, c c, Retina which covers the vi- treous humour, dd, Ciliary processes which are continued from the choroid. ee, Iris. /, Pupil.

Fig. 4. EYE-BALL WITH ITS MUSCLES. — a, Optic nerve, b, Trochlearis muscle, c, Part of the os frontis to which the trochlea or pulley is fixed, through which d, the tendons of the troch- learis pass, e, Attollens oculi. /, Adductor oculi. g, Abductor oculi. A, Obliquus inferior, i, part of the superior maxillary bone to which it is fixed, k, Eye-ball.

Fig. 5. ANTERIOR PART OF THE RIGHT EX- TERNAL EAR, CAVITY OF THE TYMPANUM, ITS SMALL BONES, COCHLEA, AND SEMI-CIRCULAR

CANALS. — a, Malleus, b, Incus with its longhead resting upon the stapes, c, Membrana tympani. d e, Eustachian tube covered by part of ff, The musculus circumflexus palati, 1, 2, 3, Semicircu- lar canals. 4, Vestible. 5, Cochlea. 6, Portio mollis of the seventh pair of nerves.

Fig. 6. MUSCLES WHICH COMPOSE THE FLESHY SUBSTANCE OF THE TONGUE. — aa, Tip of the tongue. 6, Its root, c, part of the mem- brane of the tongue which covered the epiglottis. dd, part of the hyo-glossus muscle, e, lingualis or genio-glossus. gg, Part of the stylo-glossus.

NERVES, a a, Optic nerve, b, Third pair, c, Its joining with a branch of the first branch of the fifth pair to join /, the lenticular ganglion which sends off the ciliary nerves, d, e e, Fourth pair, f, Trunk of the fifth pair, g, First branch of the fifth pair. A, Frontal branch of it. t, Its ciliary branches along with which the nasal twig is sent to the nose. A, Its branch to the lachrymal gland. /, Lenticular ganglion, m, Se- cond branch of the fifth pair, n, Third branch of the fifth pair, o, Sixth pair of nerves, which sends off p, the beginning of the great sympa- thetic. ˆRemainder of the sixth pair spent on c, the abductor oculi.

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jrience, in its most comprehensive sig- 1111. ,«uuu, implies (as we observed at the com- mencement of our article on ANATOMY) a know- ledge of the structure of all organic existence ; but it is more usually limited in its signification to animal conformation, with the exception of man ; and it is called comparative anatomy be- cause it makes the structure of the human frame the standard of its comparisons.

2. This science is not only interesting in itself, as constituting a highly important part of scien- tific research, but it is also pregnant with utility to the individual whose enquiries are principally directed to the structure and organization of the human body; and it ought indeed to be re- garded in all courses of anatomical instruction as an essential part of the teacher's duty to illus- trate the human, by comparisons with the ana- tomy of the inferior animals, tracing the grada- tions from those which approximate nearest in structure to our own species, down to that part of the animal creation which almost blends itself with the vegetable tribe of existences. To the student in natural history and physiology com- parative anatomy will prove of the most essential aid ; for classification of organized beings must

necessarily take anatomical structure as part of its basis, and a thorough insight into the ra- tionale of function can only then be obtained, •when we compare the functional peculiarities of one class of organized being with those of another.

3. Comparative anatomy, in its most limited signification, comprises of course an astonishing number and variety of particulars ; and the best mode of arranging or classifying these particu- lars into a system of totality, constitutes, per- haps, even in the present day, a problem of no easy solution. All classification indeed that is founded upon the principles of possession and exclusion must necessarily be more or less de- fective; and no generalization can be adopted which shall be absolutely correct both in admis- sion and omission.

4. Systematics have, for example, as we shall immediately see, proposed a main division of animals into those which have, and into those which are without vertebrae ; but part of the de- finition of the vertebral class applies to the non- vertebral, and so, we repeat, it must ever be in all schemes of artificial arrangement; and yet these arrangements are necessary, inasmuch as without them the objects of research would pos- sess in detail an intricacy and complication be- yond the compass of the most analytical mind to grasp, or the best memory to retain.

5. In the present article we shall adopt the method of arrangement proposed and pursued by the justly celebrated Blumenbach ; indeed, we do not know how better to present to our readers a system of comparative anatomy that shall be in accordance with our limits, than by abridging Mr. Lawrence's translation and commentary of Blumenbach's work, with the introductory essay that is appended to it.

6. Animals, in this system, are distributed into two leading divisions ; those which have a verte- bral column and red blood ; and those which are without vertebrae and are white blooded.

7. Animals of the first division have always an interior skeleton ; that is a bony structure covered by muscle and skin ; they have a spinal marrow or cord contained in the vertebral canal ; never more than four members, of which one, or both pairs, are in some instances wanting. The brain is contained in a cranium ; there is a great sym- pathetic nerve, five senses, two moveable eyes, and three semicircular canals in the ear. The circulation is performed by one muscular ventri- cle at least; or rather it should be said, that animals of this last class have a heart with at least one ventricle. There are lymphatics, as well as blood-vessels. The jaws being placed hori- zontally, the mouth is opened by their moving from above downwards, or from before back- wards. There is a continuous alimentary

canal, peritonaeum, liver, spleen, pancreas, two kidneys, and renal capsules, and two testicles.

8. The vertebral animals are subdivided into those which have warm, and those which have cold blood.

9. Warm-blooded vertebral animals have twc ventricles to the heart, and a double circulation ; that is, a pulmonary and general circulation; they breathe by means of lungs. The cranium is completely filled by brain. The eyes are closed by eye-lids. The tympanum of the ear is hol- lowed out of the cranium, and the labyrinth is excavated in the bone. Besides the semicircular canal there is a cochlea. The nostrils communi- cate with the fauces, and allow the passage of air into the lungs. The trunk is constantly furnished with ribs.

10. In the vertebral animals with cold blood the brain never entirely fills the cranium. The eyes seldom possess moveable eye-lids. When the tympanum exists, it is on a level with the surface of the head. There is no cochlea. The different parts of the ear are connected with the cranium but loosely.

1 1 . The first of the above subdivisions, or the warm-blooded animals, contains two classes : mammalia, and birds.

12. The mammalia are viviparous, and suckle their young (from which circumstance the name is derived). They have an uterus with two cornua; and the male has a penis.

13. There are two occipital condyles, a very complicated brain ; four little bones in the ear, and a spiral cochlea. The skin is covered with hair. A muscular diaphragm separates the chest from the abdomen. There is an epiglottis. The lower jaw only moves. The fluid in the lacteals is white, and passes through several conglobate glands. There is an omentum.

This class has the following orders : — i. BIMANUM, two-handed, of which, homo, man is the only genus.

ii. QUADRUMANA, four-handed ; having a se-

purate thumb on both extremities Teeth like a very large sternum and anterior extremity those of a man,except that the cuspidati are usually adapted for flying.

longer. The genera are: 1. Simia, apes, mon- They have three eyelids; no

external ear; a

cochlea conical, but not spiral, a single ear-bone ; body covered with feathers. Lungs attached to the surface of the chest, and penetrated by the air, which goes all over the body ; a larynx at each end of the trachea; no epiglottis. Jaws

iv. CHEIROPTERA, having the fingers elongated covered with a horny substance. Chyle trans- fer the expansion of a membrane, which acts as parent; no mesenteric glands, nor omentum.

keys, baboons. 2. Lemur, macauco.

iii. BRADYPODA. Slow moving animals. Ge- nera: 1. Hradi/pus, sloth. 2. Myrmicophaga, unt-eater. 3. Manis, scaly lizard, or panygolin. /. Dam/pus or Tutu, armadillo.

a wing. Genus : Vespertilio, bat.

No urinary bladder; the ureters terminating in a

GLIRES, gnawing animals, having two long bag through which the eggs and faeces come, viz, and very large incisor teeth in each jaw, with an the cloaca, interval behind unoccupied by cuspidati. Genera:

1. Sciurus, squirrel. 2. G/ts, dormouse. 3.

This class of birds, is subdivided into first, TERRESTRIAL, and second, AQUATIC BIRDS. The

Mus, mouse and rat. 4. Marmota, marmot, following are the orders : —

5. Caviu, guinea-pig. 6. Lepus, hare and rabbit. 7. Jaculits, jerboa, 8. Castor, beaver. 9. Hys- trix, porcupine

15. I. — OF THE TERRESTRIAL. i. ACCIPITRES. Birds of prey; with strong

•,, • hooked bills, and large curved talons, a mem-

vi. I- EH, predacious and carmverous animals. branousstom'ach > andsLrt caeca. Genera: 1 Vul- \ery strong and large canine teeth ; molares, forming pointed prominences. Short and sim- ple alimentary canal. Genera: 1. Erinaceus, hedge-hog. 2. Sorer, shrew. 3. Talpa, mole. 4. Moles, badger. 5. Ursus, bear. 8. Didel- vhis, opossum, kanguroo. 7. Vivura, weasels, 'ferret, polecat, civet. 8. Mustela, stunk, stoat, &c. 9. Cants, dog, wolf, jackal, fox, hyena.*

2. Falco, falcon, eagle, hawk, kite. 3. Strix, owl. 4. Lanius, shrike or butcher-bird.

ii. LEVIROSTRES, light-billed birds, having a large hollow bill. Genera: 1. Psittacus, parrot kind. 2. Ramphastos, toucan. 3. Buceros, rhi- noceros bird.

iii. PIC.E. (This and the two following orders

5. Trochilus,

10. Felix, cat, lion, tiger, leopard, lynx/ pan- are not clearly characterized.) Genera: 1. Picu,, ther, &c. 11. Lutra, otter. 12. P/Wa, seal, woo.dpecker. 2. Jynx, wryneck. 3. &tta, nut- or sea-calf.

VH. Soi. i iirsc.ri.A, animals with hoof; ha\ in-: a single toe on eaeh foot, large in- an enormous caecum. (ienus : Equus, horse

hatch. 4. Alcedo, kingfisher, a divided humminS birds> &c- &c-

iv. CORACES. Genera : 1. Corvus, crow, ra- ven, jackdaw, magpie, jay, &c. 2. Coracias, roller. 3. Paradisea, birds of paradise. 4. Cuculus, cuckoo, &c. &c.

v. PASSERES, small singing birds, genera : — 1. Alauda, lark. 2. Sturnus, starling. 3. Turdut, thrush, blackbird. 4. Emberiza, bunting. 5. Fringilla, finches, canary bird, linnet, sparrow. 6. Motacilla, nightingale, red-breast, wren. 7. Hirundo, swallows, martins, &c. 8. Caprimul- gus, goat-sucker, &c.

vi. GALLING, gallinaceous birds, mostly domes-

- an unshapely form, and ticatec!' aving a lar, crop; strong muscular gizzard. Genera: 1. Columba, pigeons. 2. Tetrao, grous, quail, partridge. 3. Numida, guinea- fowl. 4. Meleagris, turkey. 5. Pavo, peacock, 6. Otis, bustard.

vii. STRUTHIONES, struthious birds. The largest of the class ; possessing extremely small wings, and therefore incapable of flight ; but run very swiftly. Genera : Strnthio, ostrich. 2. Cassu- arius, cassowary or emu.

16. II. — AQUATIC BIRDS.

i. GRALL«, waders, frequenting marshes and streams ; long naked legs ; long neck ; cylin- drical bill, of different lengths. Genera: 1. Ardea, crane, stork, heron, bittern. 2. Scolopax, woodcock, snipe, curlew. 3. Tringa, lapwing ruffs, and reeves. 4. Charadrim, plover. 5. Fulica, coot. 6. Rallus, rail. 7. Phoenicopterus, flamingo. 8. Tantalis, ibis, &c.

ii. ANSERES, swimming birds, web-footed, bill broad and flat, covered by a somewhat soft sub- stance, on which large nerves are distributed Genera : 1. Colymbus, diver. 2. Larus, gull. 3. Procelluria, petrel. 4. Diomedta, albatross. 5. Pelecanus, pelican, cormorant. 6. Anas

te-itines, and particularl liicisores in both jaw and a-s.

viii. l'i (op. \ or lii-r i r A, with undivided hoof. No mi ison-s in the upper jaw; stomach consist- uiu of tour cavities. Kuminating their food; : 1. Ctiinelus, camel. 3. Antelope, antelope, liuli'alo. 5. (iira/fa, gi- o. (.Vnvc, elk, deer, hind.

Mon; than tv,o toes; .imi.1 cases enormous] i-. 2. Tupir. 3. .«. ;"). Hippopotamus, sea.-

inorstj or walrus, manati

whales living entirely in the ned like fishes: hut breathing by it the top of the head, called the tiirou.yh which they throw out the enters their month with the food. eriii'j: a thick layer of oily fat. ar. A c (implicated stomach. Mul- it\s, laivnx of a pvramidical shape iwinu-hole. Testes within '.omen. Mamma at the -ides of the vulva. e anterior extremity concealed, and -kin so as' to form a kind of fin. '/< >/;, narwhal, sea-unicorn. • proper whale. 3. Phi/^ctcr. 4.

•nil division of warm-blooded ••• oviparous ; having a single •capital eundvle ;

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swan, duck, goose. 7. Mergus, gossander. 8. Alca, awk, puffin. 9. Aptenodytes, penguin.

18. AMPHIBIA and FISHES constitute the two classes of COLD-BLOODED VERTEBRAL ANI- MALS.

THESE AMPHIBIA differ very materially from each other, having very few characters in common; for, in different instances, they walk, fly, swim, and crawl. There is no external ear, nor cochlea; the brain is always very small. The lungs are in the same cavity with the other viscera ; no epiglottis, omentum, or mesenteric glands. Two ovaries and two oviducts. Cloaca, through which the faeces and urine are expelled ; and in which the organs of generation terminate. Neither hair, feathers, nor mammae.

19. REPTILIA, having four feet. Genera: 1. Testudo, tortoise, turtle. 2. Rana, frog, toad. 3. Lacerta, lizard, crocodile, chamaeleon, newt, salamander, iguana, &c.

20. SERPENTIA. No external members ; body of an elongated form, and viscera of a similar shape. They are oviparous ; but the egg is sometimes hatched in the oviduct. Both jaws moveable. Genera: 1. Crotalus, rattle-

snake ; 2. Boa, immense serpents of India and Africa; 3. Coluber, viper; 4. Anguis, blind- worm; 5. Amphisb&na; 6. C&cilia.

‘ 21. FISHES breathe by means of branchiae or gills ; having no trachea nor larynx. Organs of motion consisting of fins. Nose unconnected with the organs of respiration. Ear entirely en- closed in the head ; the tympanum, &c., being absent. Both jaws moveable. The place of the pancreas supplied by the pyloric caeca. An urinary bladder. Two ovaries. Heart consist- ing of a single auricle and ventricle. This class may be distributed into two leading divisions ; the cartilaginous ; whose skeleton consists of car- tilage ; the bony, where it is formed of a more firm substance.

22. CARTILAGINOUS FISHES.

i. CHONDROPTERYGII, having no gill cover; an uterus with two oviducts. Genera: 1. Petro- myzon, lamprey. 2. Gastrobranchus. 3. Raia, skate, torpedo, sting-ray. 4. Squalus, shark, saw-fish. 5. Lophius, sea-devil, frog-fish. 6. Batistes, file-fish. 7. Chimara.

ii. BRANCHIOSTEGI, having a gill cover. Genera: 1. Accipenser, sturgeon, beluga. 2. Os- tracion, trunk fish. 3. Tetrodon. 4. Diodon, porcupine fish. 5. Cyclopterus, lump-sucker. 6. Centriscus. 7. Syngnathus, pipe fish. 8. Pegasus.

23. BONY FISHES.

i. APODES. No ventral fins. Genera: 1. Mu- rana, eel-kind. 2. Gymnotus, electric eel. 3. Anarrhichas, sea-wolf. 4. Xiphias, sword-fish. 5. Ammodite, launce. 6. Ophidium. 7. Stro- mateus. 8. Trichiurus.

ii. THORACICI. Ventral fins directly under the thoracic. Genera:!. Echeneis, sucking-fish. 2. Coryptuena, dorado. 3. Zeus, dory. 4. Pleuronectes. flounder, plaice, dab, holibut, sole, turbot. r. Chtztodon. 6. Sparus. 7. Perca.

8. Scomber, mackarel, bonito, tunny. 9. Mullus, mullet, &c. 8cc.

iii. ABDOMINALES. Ventral fins behind the thoracic; (chiefly inhabit fresh water). Genera: 1. Cobitis, roach. 2. Silurus. 3. Salmo, salmon, trout, smelt. 4. Esox, pike. 5. Clupea, her- ring, sprat, shad. 6. Cyprinus, carp, tench, gold-fish, minow, &c. &c.

ir. JUGULARES. Ventral fins in front of the thoracic. Genera : 1. Gadus, hadock, cod, whiting, ling. 2. Uranoscopus, star-gazer. 3. Blennius, blenny. 4. Callionymus, dragonet. 5. Tachinus, weaver.

24. The animals without vertebrae are not pos- sessed of so many characters in common, as the vertebral. Their hard parts, when they have any, are generally on the outside of the body. The centre of the nervous system, instead of being enclosed in a bony case, lies in the same cavity with the viscera. The oesophagus is generally surrounded by a nervous chord coming from the brain. Their respiration is not carried on by lungs ; they have no voice. Their jaws move in various directions. They have no urinary se- cretion.

25. This class of animals was divided by Lin- naeus into insects and worms (vermes), but a re- cent subdivision has been adopted of the insects into Crustacea and insecta ; and of the vermes into molluca vermes and zoophyta.

26. The CRUSTACEA have a hard external co- vering, and numerous articulated members. A long nervous chord beset with ganglia; compound eyes ; antennae and palpi like those of insects ; a heart and circulating vessels, and gills. Teeth in the cavity of the stomach. Genera: I. Cancer, crab, lobster, cray-fish, shrimps, 2. Monoculus.

27. The INSECTA have articulated members and antennae. Those which fly are subject to what is called a metamorphosis, they pass through certain intermediate states of existence before they assume the last or perfect form. From the egg proceeds the larva, or caterpillar; this changes to the chrysalis, nympha, or aurelia; from which the perfect insect is produced. Ner- vous system consisting of a chord beset with ganglia ; no heart, nor blood-vessels ; respiration carried on by means of tracheae.

i. COLEOPTERA, having a hollow horny case, under which the wings are folded. Genera : 1. Scarabteus, beetle. 2. Lucanus, stag-beetle. 3. Dermestes. 4. Coccinella, lady-bird. 5. Curculio, waevil. 6. Lampyris, glow-worm. 7. Mela, Spanish fly. 8. Staphylinus. 9. Forsicula, ear- wig.

ii. HEMIPTERA. Four wings, either stretched straight out, or resting across each other. Ge- nera: 1. Blatta, cock-roach. 2. Gryllus, locust, grasshopper. 3. Fulgora, lantern-fly. 4. Cimex, bug, &c. &c.

iii. LEPIDOPTERA. Soft hairy body and four expanded wings, Genera: . Papilio, butterfly,

2. Sphinx. 3. Phalena, moths.

iv. NEUROPTERA. Four reticulated wings. Ge- nera: 1. Libellula, dragon-fly. 2. Ephemera, &c.

v. HYMENOPTERA. Generally possessing a sting. Genera: 1. Vespa, wasp,

hornet. 2. Apis, bee,

3. Formica, ant. 4. Termes, white-ant. 5. IcA neumon, &c. &c.*

vi. DIPTERA ; two wings. Genera: 1. (Estrus gad fly. 2. Musca common flies. 3. Culex gnat, musquito. 4. Hippobosca, horse-leech, &c.

vii. APTERA, no wings : 1. Podura, spring-tail. 2. Pediculus, louse. 3. Pulex, flea, chigger. 4. Acana, tick, mite. 5. Aranea, spiders. 6. Scorpio, scorpion.

28. The MOLLUSCA derive their name from the soft fleshy nature of their body. This class in- cludes those pulpy animals which may be either destitute of an external covering (die mollusca nuda), as the bug ; or may be enclosed in one or more shells, as the snail, oyster, &c. when they are termed testacea.

29. The animals of this class have no articu- lated members ; they have blood-vessels, and a true circulation. They respire by means of gills. They have a distinct brain giving origin to nerves and a spinal marrow. Genera : 1 . Sepia, cuttle-fish. 2. Argonauta. 3. Nautilus. 4. Li- max, slug. 5. Aplysia. 6. Doris. 7. Clio. 8. Patella, limpet. 9. Helix, snail. 10. Haliotis. Venus' ear. 11. Murex, caltrop, or rock spell. 12. Strombus, screw. 13. Buccinum, whelk. 14. Ascidia. 15. Thalia. 16. Ostrea, oyster. 17. Solen, razor-shell. 18. Cardium, cockel. 19. Mytilus, muscle, &c. 8cc.

30. The VERMES are divisible into two orders : the intestinal, which inhabit the bodies of other animals, and the external.

31. The former are less complicated in their oruani/ation than the latter, so that they are some- linu's arrrmircd in the lowest class, or zoophytes. Tin' external worms have a nervous chord, pos- scs.-inir uaii'ˆlia, an elongated body, composed of nnˆs, and having no distinct head. There are no mi mlxTs. Circulating vessels, but no heart. Mo nerves have been discovered in the intestinal worms.

i. IMT.ˆTIXI. Centra: 1. Gordius, guinea- >vorni. '2. Asi'/n-ix, thread-worm, round worm. '!. Tricoccphtilus. -. Vasciola, fluke. 5. T&nia, tai'ij-worni. t'i. lli/iluti, liydatid.*

u. KVIT.KXT. Cenera: 1. Aphrodite, sea- niniise. 2. Sijuinculiis. 3. llirudo, leech. 4. A /*

o'J. The /ooi>iiYTi> have neither brain nor nerve, no heart, ii"r perhaps blood-vessels; no artiriilatH members.*

i. |-'.r in MUM T.MATA, covered by a hard and loiijh enrneeoiis skin. (ienera : 1. Echinus, :-e;i heiim-hn^. ~2. Atti -rids, star-fish, &c.

n. (.1 i AT iNors. Genera: 1 . !\ftdusa, sea-blub- I • i, >r/;i-ncttles. ~2 . Aftiniu, sea-anemone. 3. 1 1' !//•(••, fie>h-v.ater]e.

i. isi i

. Inhabitants of Corals, Corallines, Sponges,

'.:ms uone through the general ar-

; iiml ela-siiieation of animals, founded

' ir anattmiieal Mnietnre, we now proceed to

• lit "i nur Inint^ in more particular desig-

We commence with the SKELETON OF THE MAMMALIA.

34. The cranial bones of the mammalia are, on the whole, the same as in the human subject. Most of the horned animals have it divided into two equal portions, and in these the two parietal bones are often consolidated into one.

35. The crista occipitulis of the mammalia gene- rally bear a determinate proportion to the size of the jaws. It is wanting in the orang outang, but is very large in the baboon of Borneo. The longitudinal crista is very strongly expressed in the badger, and the transverse ridge is remark- able in the beaver. The sutures of the cranium are generally less intricate than in the human sub- ject. The occipital foramen is in most quadrupeds at the extremity of the cranium, and obliquely, with the posterior border turned up. The facial bones are very different in form and prominence . The upper jaw bones do not, as in man, touch each other ; but are separated by an intermaxil- lary bone, which, both in shape and magnitude, varies much in the different species of the mam- malia. It has been said to be wanting in some of the monkey tribe. In the upper jaw of most pecora there are remarkable impressions near the nasal bones. In several web-footed and digitated mammalia(viz.the otter, beaver, opossum and guinea- pig) there is a peculiar bone interposed between the cheek bone and os temporis. The zygoma is very differently formed in animals, from man — differences which are derived from varieties in the organs of mastication. The elephant possesses only a sort of imitation of the nasal bones. In most apes, and in

the orang outang, there is a single small nasal bone. In the greater number of quadrupeds, however, there are two nasal bones, and of considerable magnitude. The ossa unguis are entirely wanting in the elephant. The orbits have for the most past a lateral direction. In the simia they are directed forwards, as in man. In the beaver they point upwards.

36. The skeleton of quadrupeds deviates more from man in the form of the lower maxilla than in any other part. The form of the chin forms indeed the most peculiar characteristic of the human countenance. Man has also tfie shortest jaw in comparison with the cranium ; the elephant perhaps approaching nearest to him in this particular. There is a marked difference also in the condyles of this bone.

37. The jaws of the mammalia contain teeth, with a few exceptions ; it is said that the proper whales (the balance), the manis (scaly lizard), and American ant-eaters are the only genera entirely destitute of these organs. The whales have in- stead of teeth the peculiar substance called whale-bone, covering the palatine surface of the upper jaw. The enamel of the teeth is wanting in the tusks of the elephant, as also in those of the wal-russ, and of the narwhal; the ivory of the ele- phant's is pecular in its structure.

38. The teeth of mammalia may be distin- guished into three distinct classes : front teeth, corner teeth, and back teeth ; the first are the in-cisores or cutting teeth ; the corner teeth are the cunini or the cuspidati of Hunter; the back teeth are the molares or grinders The term

tusk is applied to such as extend out of the ca- vity of the mouth. The back teeth are the most universal. There is no animal in which the teeth are of such equal height and such uniform arrangement as in man.

OF THE TRUNK. OF THE MAMMALIA, including the spine, pelvis, and chest.

39. The spine is confined to the red-blooded animals. The cervical vertebrae are always the sanˆe in number, being seven, as in the human subject. The atlas is distinguished in the ferte by its immense strength, and by the vast size of its transverse processes. The num- ber of dorsal vertebra is regulated by the ribs, and the lumbar vertebrae vary much in number. The form and proportions of the sacrum are still more various. The cctacea having no pelvis are in strict propriety without a sacrum. The os coccygis is prolonged so as to form the tail of quadrupeds. The pelvis (which is

indistinctly formed, and indeed in no animal but man has the basin-like appearance justifying the name), is constituted of the ossa innominata together with the sacrum. Those apes which most resemble man have these ossa innominata much elongated.

40. The thorax in most, if not in all animals of the class mammalia, is narrower and on the contrary deeper from the spine to the sternum than in man, the ribs being not so curved and the sternal bone longer. In most animals the ribs are more in number than in man. The sternum is generally cylindrical and jointed.

41. EXTREMITIES. — In those quadrupeds that make much use of the front extremities there is a clavicle. Many others, especially the fer

42. As to the posterior extremity, the femur of most quadrupeds is much shorter than the tibia, and hence it hardly projects from the ab- domen. In some few, as in the bear; the femur is longer, as is also the case in some apes. The pecora want the fibula almost universally. In some quadrumana, as the orang-outang, the two posterior phalanges of the toes are remarkably curved in their shape.

43. SKELETON OF BIRDS. — The skull of this

class of animals is consolidated in the adult state into one single piece. Birds have only a single condyle, which is placed at the anterior margin of the great occipital foramen. There is also in this whole class a bone of a squarish figure, by which the lower jaw is articulated with the cranium on both sides, in the neigh- bourhood of the ear. Birds have the ossa unguis, which are of considerable size. The maxillro are completely destitute of teeth ; the upper one has more or less of motion ; in most instances it is connected into one piece with the cranium, by means of yielding and elastic bony plates. The orbits are separated in some of the class, by a membranous partition only ; in others by a more or less complete bony septum. The orbits are of great size in the whole class.

44. The cervical vertebrae of birds are nume- rous and very moveable : the raven has twelve, the cock thirteen, the ostrich eighteen, the stork nineteen, and the swan twenty-three. The dor- sal vertebrae possess but little motion. There are no lumbar vertebrae, nor any coccygeal prolon- gation into a true-jointed tail.

45. The pelvis of birds is chiefly formed by a broad and simple os innominatum ; but this bone does not unite below so as to form a symphisis pubis. The ostrich is an exception to this last rule.

46. Birds have fewer ribs than the mammalia ; their sternum is prolonged

below into a vertical process for the attachment of the strong pectoral muscles. In the ostrich and cassowary this pro- longation is wanting.

47. The wings are connected to the trunk by means of three remarkable bones. The clavicles, which are always strong, constitute straight cylindrical bones. Their anterior extremities are connected to the sternum by means of a bone peculiar to birds, viz. the fork-like bone, or, as it is more commonly called, the merry-thought. The bones of the wing may be compared on the whole to those of the upper extremities in man, or the quadrumana, and consist generally of an os humeri, two bones of the fore-arm, two of fhe carpus, two, which are generally consolidated together, of the metacarpus; one bone of the thumb, and two fingers. The bones of the penguins' wings have a flattened form, as if they had been pressed ; at the elbow there are two supernumerary bones, and the thumb bone is en- tirely wanting.

48. The bones of the lower extremities com- prehend only the femur, and the tibia, the fibula being anchylosed to the libia, one metatarsal bone, and the toes. The psittaci have a peculiar cross bone to the great toe.

SKELETON OF THE AMPHIBIA.

49. Turtles and Tortoises (the testudines) have a kind of os intermaxillare in the upper jaw ; but they are entirely toothless. The cavity con- taining the brain is extremely small in compari- son with the size of the cranium.

50. The trunk is consolidated with the two great shells of the animal ; the dorsal vertebrae and ribs being attached to the upper, the sternurr. being fixed in the lower or abdominal shell. The upper bony covering, or that of the back, consists

of about fifty pieces, which are partly connected together by real sutures.

51. The same bones are found in the pelvis of these animals as in the mammalia ; but the ossa pubis are the largest, while the ilia are the smallest.

52. The scapula is situated towards the under part of the animal, just behind the abdominal shell. The clavicle consists of two pieces, join- ed at an acute angle, to which the humerus is articulated.

53. Frogs and toads have no teeth. Their spine is short ; terminating behind in a straight and single bone, which is received into the mid- dle of the

somewhat forked-like os innominatum. They have no ribs. The scapula is joined to the sternum, with a pair of bones corresponding to the clavicles. The bone of the fore-arm and leg consists of a single piece, solid in the middle, but divided at either extremity into two conical portions, having medullary cavities.

54. The crocodile has jaws of immense size. The anterior part of the upper jaw consists of a large intermaxillary bone, and the lateral por- tions of the lower maxilla are formed of several pieces joined together. This animal has an ab- dominal sternum, which extends from the ensi- form cartilage to the pubis.

55. Serpents have an upper jaw unconnected with the rest of the skull, and more or less moveable of itself. The innoxious species have in the upper jaw four maxillary bones beset with small teeth, forming two separate rows ; one b»'iii'_r placed along the front edge of the jaw, the other is found more internally, and is situated longitudinally on cither side of the palate; the external row is wanting in the poisonous species, and in their stead there are tabular fangs con- nected with the poison-bladder, and constituting bony excretory ducts which convey the venom into the wound, inflicted by the bite of the animal. These animals have most numerous vertebra, sometimes more than 300 ; and they have by far the greatest number of ribs, amounting in some to 2/H) pairs. They are the only red- blooded animals that have no sternum.*

SKELETON 01 FISHES.

."> ("). Fishes in ireneral have a spine which ex- tends from the cranium to the tail tin; and they tor the mo-4 part are uniform in having the other tins particularly those of the thorax and ab- domen, articulated with peculiar bones destined tor thai purpose.

in iu several cartilaginous fish,-

tit , consists of one large piece. In

the bony fishes the component parts of the skull

\ on tiie^ contrary, numerous. The bones in

the head of the perch amount to eighty. Most

ot the bony tishes have a more or less moveable

tinder jaw.

.‘P. Nmic of these genera, as the sturgeon,

are without teeth ; while others, as the shark tribe,

nave very numerous teeth. The white shark has

“lore than “200 lym- in rows, almost like the

KMVfs of an artichoke; those of the front row

aving a perpendicular direction. The

li>h only has teeth implanted in the bone

on botli sides oi the sworj-bhaped organ, with

which its head is armed. In some fishes the palate, in others the tongue bone, and in other* the aperture of the mouth, forms a continuous surface of the teeth. There is, in fact, the greatest variety in the teeth of this class of animals.

59. The spine of long fishes with short fins, consists of a great number of vertebrse, some of the sharks have more than 200. The spinal marrow passes above the vertebral bones in a separate canal at the roots of the spinal pro- cesses. The ribs are articulated to what are called the dorsal vertebrae, generally ; but in cartilaginous fishes, proper ribs cannot be said to exist. Many fishes are furnished with bones that have no other than a muscular connection.

OF THE (ESOPHAGUS AND STOMACH IN THE MAMMALIA.

60. Cheek pouches are common to many spe- cies of the genus simia, and some others. In most of the mammalia salivary glands are found without much variation in structure ; but none possess an uvula except man and the simiae ; the peculiar glandular and moveable bag which is placed behind the palate, has hitherto been only observed in the camels of the old world.

61. The oesophagus of quadrupeds has two rows of muscular fibres, which pursue a spiral course, and decussate each other. This passage in the wolf, and in animals who swallow vora- ciously, is very large. The coats of the stomach, especially the muscular coat, are very strong in the carnivora. In some herbivora the stomach’ has an uniform appearance externally, but inter- nally it is divided into two portions by a re- markable difference in the two halves of its internal coat, as in the horse, or by a valvular elongation of the membrane, as in some animals of the mouse kind, and in the hare and rabbit. In some other mammalia the stomach is posi- tively

divided into two or more portions ; but the most complicated stomach is found in the ruminating animals ; of this, the cow and sheep may be taken as examples. The first stomach, or paunch, is by far the largest in the adult ani- mal; it has numerous rugae on its internal coat. The second stomach is a sort of globular appen- dage to the paunch, the internal coat of which is elegantly arranged into polygonal and acute- angled cells, or superficial cavities. The third stomach has been compared, as to its form, to a hedge-hog rolled up ; its internal coat is con- tracted into very numerous broad duplicatures. The fourth is next in size to the paunch ; the in- ternal coat of this is villous, like the human stomach. A groove-like continuation of the oesophagus connects the three first stomachs in a very remarkable way. The camel and the lama have very numerous cells in the first and second stomach, which are closed and opened at will by muscular bands ; these cavities, have been found in a dead camel capable of holding two gallons of fluids. In the opossum the two open- ings of the stomach are placed near to each other ; and at the orifice of the beaver's stomach there is a peculiar glandular body full of cavities that secrete mucus. The manati have a very

large gland near the oesophagus ; and Home has described a glandular structure near the pylorus in the sea-otter. Macartney has likewise dis- covered an arrangement of glandular bodies round the termination of the oasophagus in the dormouse. The stomach of the pangolin is almost as thick and muscular as that of the gallinaceous fowls.

(ESOPHAGUS AND STOMACH OF BIRDS.

62. The male bustard has what is called the throat-sack under the integuments in front of the neck ; and a remarkable dilatation of the fauces occurs in the pelican ; many carnivorous birds have the oesophagus of great size, and it expands into what is called the crop, just before the ster- num, which organ (the crop) js furnished with numerous mucous or salivary glands ; it exists in all the gallinae, and in some birds of prey. Another glandular and secretory organ, and which is much more common than the crop, is placed before the entrance of the oesophagus into the proper stomach. In the crane, stork, &c. this organ is larger than the stomach ; in galli- naceous fowls it is much smaller. In most birds the stomach lies at the upper part of the abdo- men ; in the cuckoo it lies below ; and so it does in the ramphastos, and in the corvus caryocatactes (the nut-cracker).

63. The gizzard of the cuckoo is covered in- ternally with short, bristly, and spiral hairs,

64. The stomachs of birds which feed on flesh and insects are thin and membranous, while the granivorous tribe have strong muscular stomachs. Every part of the organ is calculated for pro- ducing powerful trituration.

(ESOPHAGUS AND STOMACH OF THE AMPHIBIA.

65. The turtle has a very capacious stomach, and its internal coat is beset with innumerable large, firm, and pointed processes of a white colour. The oesophagus of the crocodile is fun- nel-shaped ; its coat is thick, and its two aper- tures are near each other. In serpents the oesophagus and stomach are scarcely distinguish- able : the oesophagus in this tribe is often of immense magnitude.

(ESOPHAGUS AND STOMACH OF FISHES.

66. In most animals of this class the oesopha- gus is short, it is of great width, and is distin- guished in many with difficulty from the stomach. The coats of the stomach in most fishes are thin, and, for the most part, widely different from that of granivorous birds.

(ESOPHAGUS AND STOMACH OF INSECTS.

67. In most of this tribe, which are subject to a metamorphosis, the stomach in the larva state is of a great size in comparison with the short intestinal canal ; while those on the contrary which take little or no nourishment in their per- fect state, have this organ remarkably diminished, and as it were contracted. In several cases the commencement and termination of the alimentary canal, the oesophagus and rectum, are surrounded by an annular portion of the spinal marrow.

68. In the ear-wig (forjicula auricularia) the upper orifice of the stomach is furnished with two rows of teeth ; in some of the grylli (grass- hoppers) the stomach itself is small, but the oesophagus much larger. In some of that genus it consists of three or four vesicular portionˆ resembling in a degree the stomachs of the ru- minating animals. The lobster and some other species of the genus cancer have several portions of bone connected with the stomach, which con- tains also three teeth, which, together with the stomach itself, are annually produced, at least in the craw-fish.

(ESOPHAGUS AND STOMACH OF WORMS.

69. The aphrodite aculeata (sea-mouse) has a stomach resembling in size and form the date, while in strength and compactness of texture, it approaches to that of granivorous birds. In many of the testacea the oesophagus is expanded into a crop, covered internally with numerous small teeth. The bulla lignaria contains three hard calcareous shells, by

which the animal is enabled to bruise and masticate the other testacea on which it feeds. In most of the mollusca, the stomach is of a simple membranous structure, and of very different comparative magnitudes. It occupies the greatest part of the body in the leech, and it is internally divided into ten sepa- rate portions by imperfect partitions. The armed polypes (hydar) and other similar zoophytes, can scarcely be considered as any thing more than a mere stomach having its opening furnished with tentacula.

INTESTINAL CANAL OF THE MAMMALIA.

70. Carnivorous animals have this generally shorter than the herbivorous; but this rule is not without exceptions.

71. In most mammalia the valvulae conniventes of the small intestines are more faintly marked than in man. In some the villi of the small in- testines are remarkably long and numerous as in, the bear.

72. Many of the carnivora have no caecum ; it is also wanting in some herbivora, but in some of the latter description it is of enormous size. Many are without the vermiform appendix, even some of the simig.

73. In most of the herbivorous mammalia, the colon is long, large, and divided into cellu- lar compartments. This is remarkably the case with the elephant and horse. In a few instances, as in the beaver and slot h, the rectum and urethra have a common termination, which may be. com- pared to the cloaca of birds.

INTESTINAL CANAL OF BIRDS.

74. The alimentary canal in this class is much shorter than in the mammalia ; it is also gene- rally shorter in carnivorous birds, than in such as derive their food from the vegetable kingdom. In birds there is scarcely any perceptible dif- ference between the large and small intestines. Most birds have two caeca ; some only one, and some of the predacious kind want it altogether. The rectum ends in a part called the cloaca, which is an expanded portion, containing the terminations of the ureters, the genital organs, and the bursa Fabricii.

75. INTESTINAL CANAL OF THE AMIMIIIHA. The htmks-bill turtle, (testudo carrctta) has an

intestinal canal five times as long as the whole animal, which has longitudinal folds internally that are covered with an abundance of mucus, (which is the case with the whole class).

76. In the coluber nalriv the whole length of the intestinal canal does not equal the length of the animal. The small intestine forms a very considerable Fallopian valve, by a prolongation at its entrance into the large.

77. INTESTINAL CANAL OF FISHES.

This with a few exceptions, is extremely short. In some as in the torpedo, it is only half as long as the stomach ; but the passage of the chyle is lengthened in this and some other cartilaginous fishes by a spiral valve.

78. The appendices pylorica are common to most fishes ; they sometimes open at the lower orifice of the stomach, but generally at the com- mencement of the intestinal canal, and secrete a digesting fluid. In some these are collected into one glandular body, which has been compared to the pancreas of warm-blooded animals.

79. INTESTINAL CANAL OF INSECTS. The want of mesentery chiefly distinguishes the alimentary canal of this tribe from that of the red- blooded animals. Many of them have the appendices just spoken of. The intestinal canal varies much in the different genera and species of insects; it may be stated on the whole, that a loii'j; and complicated intestinal tube denotes that the insect feeds on vegetables; while the contrary characters indicate animal food. Be- tween the larva, and the perfect insect, great difference is often found.

HO. IXTI > TIX.\I. CANAL OF VERMES. Several of the mti/litscn have the appendices. Ihii-e testaeea which remain fixed in one situa- tion, ha\e a shorter and more simple intestinal • anal than those' which have the power of loco- motion. It has been stated that the rectum passes directly through the heart in most of the bivalves. In the Unia.r (.

1 • ' " : m '-1V1 I'M SiM.r.r.x, AND OMF.XTUM.

—The liver 01' animals in is two peculiarities; first, in some i«'- it transmits all the bile i ra- the duodenum. Secondly, in -•'•vend others a part of this thud is previously Heeled in the -all-bladder. Animals of the ' and L'O'it kiii,!, and the ct-tucca are without a ˆall-bladder. In some animals who have a bladder, as m the horned nitlle, there is a communication betw, en it and the liver. ' and .s-//,,y), the spleen is cellular.— '"ire posses.- ,i proper omentum; liˆclasi is very different from Lie .-am: \ ; -: us in the other classes.

(H) Birds. — In domesticated birds the liver becomes larger than it is in wild ones. Some species of this class, as the pigeon, parrot, &c. are without gall-bladder.

(c) Amphibia. — The liver of this tribe is al- ways large, and in some cases, as the salamander, of immense magnitude. The yellow appendices that are found in the frog on either side of the spine, have been considered a kind of omentum ; but the resemblance is remote.

(D) Fishes. — In many animals of this class, the alimentary canal is surrounded by a long liver. Some fishes have an abundance of oil in this organ ; as for instance the skate and cod. It is wanting in some few species.

(E) Insects. — In animals of this class which have a heart, and in those only, an organ is found which secretes bile, viz. in the genus cancer.

(F) Vermes. — The organs which secrete and contain the fluid of the cuttle-fah have been re- garded as of a biliary nature. Thus the mytis has been called the liver, and the ink-bag the gall-bladder (but this is a mistake).

Several testacea have a liver surrounding the stomach, and pouring its bile into the cavity of that organ. In many snails it occupies the upper turn of the shell.

The pancreas, it may be observed, is nearly the same in the mammalia, birds, and reptiles, as in man. In most fishes the situation of this organ is occupied by the caecal appendices, or pyloric cseca.

82. OF THE URINARY ORGANS.

(A) Mammalia. — In some animals of this class, as the bear, the kidney resembles a bunch of grapes. In most quadrupeds the urinary bladder is more loose in the abdomen than it is in man. It is comparatively much smaller in carnivorous than in herbivorous animals.

(B) Birds. — The urinary bladder is wanting in this whole class, and the ureters open into the cloaca ; the kidneys in most birds form a double row of glandular bodies, placed on both sides of the lumbar vertebrae.

(c) Amphibia. — The testudo, and rana, have an urinary bladder, which is double in many of the frogs, properly so called. The crocodile, and several true lizards, are without it — as are the serpents ; indeed, many contend that what is considered as a urinary bladder in the above- mentioned animals is not actually so.

(D) Fishes. — Some of the genera and species of this class are possessed of an urinary bladder. The glandulae suprarenales are wanting in fishes.

83. OF THE EXTERNAL INTEGUMENTS.

(A) Mammalia. — The cutis of this class varies very much in thickness. In the wing of a bat it is extremely thin and delicate, and enormously thick in the rhinoceros, elephant, &c.

The rete mucosum varies in individuals even of the same species. The skin itself is of very unequal thickness in particular parts of the same animal. Hairs are common to all adult mam- malia. These are commonly cylindrical ; some, however, are. broad, with two sharp edges Others, as the whiskers of the seal, are also flat,

but have rounded and denticulated margins. Some are thick and lirm, but perforated by a narrow tube, as the long stiff whiskers of the phoca ursina.

(B) Birds. — The integuments of these have the same three parts as those of the mammalia ; but the universal and peculiar covering of this class is feather, and the particular differences in its formation are innumerable.

(c) Amphibia. — The integuments of this class consist of shields, rings, scales, or simple skin, all covered externally by a cuticle, which in many of these animals, as in the snake, is fre- quently separated. The skin, indeed, of the toad and frog does not everywhere adhere, but is only attached at a few points.

(D) Fishes. — Scales are the peculiar coverings of this class, which are bare in those that inhabit the open sea, but are covered with a mucous membrane in those which live on coasts or in fresh water. The scales are not changed like hair and feathers, but are perennial, and are said to receive yearly an additional layer. The colour of the skin in some fishes, as in the mul- let, depends upon the liver.

84. ORGANS OF PECULIAR SECRETIONS.

(A) Mammalia. — In the orbit of the dog there is a gland found, which opens by an excretory duct near the last tooth of the upper jaw. The ele- phant has a gland at the temple, which secretes in the rutting season a brownish juice. Several ruminating bisulca have sebaceous sinuses near the lachrymal passages ; and in most of the ru- minantia there are cavities in

the groins contain- ing a sebaceous substance. Some of the mam- malia have pouches on the abdomen : of this kind are the bags near the anus of the badger ; and those peculiar glands and bags at the end of the rectum giving often to the excrement a musk- like odour. Other glands are connected with the genitals. There are in some of the ruminan- tia, excretory ducts opening at the extremities of the toes, from glandular cavities that are covered internally with hair.

(B) Birds. — Some birds have considerable sali- vary glands at the sides of the lower mandible. In those birds of prey that do not drink, the pancreas is of very considerable magnitude. The glands which secrete the oil in the upper part of the tail, are largest in aquatic birds.

(c) Amphibia. — These, many of them, have anal glands, disseminating a strong odour ; and some reptiles, when they are irritated, as in the salamander and toad, exude through numerous pores in the skin an acrid fluid.

(D) Fishes. — Canals, which secrete a mucus, lie near the lateral lines of these animals, and either perforate the scales, or pour out a mucus in the intervals of the scales.

(D) Insects. — Silk is formed by the larvae of phalena?, and several hymenopterous and apter- ous insects secrete a poison, which is formed in a peculiar bag in those insects which have stings, which bag sends a duct to the skin. The wax pre- pared by the honey-bee, and by Indian coccus mellificus are of course peculiar secretions, re- sulting from peculiar structure.

(F) Vermes. — The formation of calcareous

matter in the testacea takes place in a peculiar viscus lying near the heart. Some marine ge- nera have a particular structure for the formation of the celebrated purple colour. Some of the bivalves, under extraordinary circumstances, form pearls on the inner surface of their shells.

For a more particular account of the peculiari- ties of structure and function, see PHYSIOLOGY under the head of Secretion.

85. OF THE HEART AND BLOOD-VESSELS. (A) Mammalia. — The internal structure of the heart is the same as in man, but its situation is more perpendicular. Where the aorta arises from the left ventricle, there are two small bones, in the adult bisulca, and in the pig. A tubero- sity in some of the vessels has been remarked in the common and sea-otters, and in the dolphin, &c. ; and the rete mirabile, formed by the in- ternal carotid at its entrance into the cranium, in several ruminating bisulca is

remarkable. In the slow moving animals, there is a particular division of the arteries in the arms and thighs.

(B). Bi'nfs.— The right ventricle of the heart is provided in these animals with a strong mus cle, instead of a membranous valve, as in the ventricles of the mammalia.

(c) Amphibia. — Frogs, lizards, and serpents have a simple heart consisting of a single ven- tricle and auricle. The turtle has a heart with two auricles, but they both communicate together, and the large arterial trunks arise al- together from the right ventricle only. The aorta, forming three grand trunks, is situated towards the right side and upper part; the pulmonary artery comes as it were from a particular dilata- tion which is not situated in the middle of the bases of the heart, but lower. In the article PHYSIOLOGY we shall have to advert to func- tional peculiarities as connected with structure, and in the present treatise, we abstain from so doing as much as possible.

(D) Fishes. — The heart of these animals con- sists of a single auricle and ventricle. The ven- tricle gives rise to a single arterial trunk which goes straight forward to the branches or organs of respiration. The blood passes from these into a large artery analogous to the aorta, which goes along the spine and supplies the body of the animal. It is then returned by the venae cavse into the auricle.

(E) Insects. — In the genus cancer and monc- culus a heart and system of vessels are found ; but there seems to be no passage of the arterial extremities into the origin of veins.

(F) Vermes. — In the mollusca and testacea there is a manifest heart, but no discoverable connection between arteries and veins.

86. OF THE ABSORBING VESSELS.

(A) Mammalia. — All the parts of that system of vessels which has been commonly considered the absorbent system exist in this class. In dogs, and some of the other quadrupeds, the thoracic duct is double. In many mamma- lia the mesenteric glands are connected into one mass, constituting what has been improperly called pancreas agellii.

(B) Birds. — The thoracic duct is doub'e in this class. The chyliferous vessels are only dis-

ringuishable from the common lymphatics by their situation and office, the chyle being trans- parent. There are no glands in the mesentery.

(c) Amphibia. — Thoracic duct double. There do not seem to be any lymphatic glands.

(n) Fishes. — The lymphatics are also destitute of glands and valves. Thoracic duct double.

87. OF THE ORGANS OF RESPIRATION.

(A) MumimiHa. — The lungs of quadrupeds are nearly like the human ; but in the cetacea, and in the web-footed mammalia, they are not divided into lobes.

(B) Birds. — The lungs themselves are small, and they are, in fact, on the outside of the tho- racic cavity ; a great part of that cavity, as well as that of the abdomen, is occupied by mem- braneous air cells, communicating with the lungs and trachea ; and there are large tubes in the cylindrical bones, and a reticulated texture in the broad ones, communicating also with the lungs in a great measure, but not universally. Some birds have a very large bill, which is like- wise filled with air in its interstices, and the tubes of their quills also contain air which can be filled or emptied at pleasure.

(r). Amphibia. — The lungs of the amphibia are large in size, and loose in texture. In the cluuna-leon they have numerous projecting pro- cesses ; and terminate behind in an elongated bladder in the newt. Serpents in general have i inly a single lung. In the tadpole, and the vounir of such lizards us bring forth in water, there are two orpins which somewhat resemble ilic uills uf a fish ; and there is a canal on the left side uf the head, near the eye, with which Mime tadpoles are furnished for discharging the ••\ater ilu- y take in at the mouth.

‘ nj l-‘tthfii. — This class of animals is furnished v.n’i uilU or branch a- in the place of lungs; (hey are connected with the throat, and the uater “Inch is taken in is afterwards discharged through ‘branchial apertures provided for the purpose. .Many animals of this order possess a >in_le or double swimming bladder, which is placed in the abdomen, and closely attached to the spine; it communicates generally with the U’supiia’_ri:>, and sometime;, with the stomach, by a canal e.ilhd

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has a peculiar muscle arising from the os hyoides. and not found in the human subject ; the mar- gins of this rima are formed by the double li-gament glottidis; between which the ventriculi laryngis are formed. There are certain dense membranes peculiar to these parts in some animals, and in others peculiar cavities opening into the larynx, and sometimes appearing as con- tinuations of the ventriculi laryngis. Some of the cercopitheci, as the C..Seniculus and beelzebub, have the middle and anterior part of the os hyoides formed into a spherical bony cavity, enabling them to produce terrific and pene- trating tones ; these have been called the how- ling apes.

(B) Birds. — These possess what is called a double larynx, or more properly one divided into two parts placed at the upper and lower ends of the trachea. They have also two rimae glottidis. They have no epiglottis, but there are conical papillae placed at both sides of the rima. To the inferior or bronchial larynx there is a second rima glottidis formed by dense membranes, furnished externally with certain pairs of muscles, and with a kind of thyroid gland.

(c) Amphibia. — In some of the testudines the trachea forms different convolutions. It is very short in the frog. In all animals of this class ligamenta glottidis exist. The males of some frogs have peculiar membranous bags about the throat and cheeks. All the amphibia want the epiglottis.

89. OF THE BRAIN AND NERVOUS SYSTEM.

(A) Mammalia. — The peculiarities which dis- tinguish the brain of the human subject from that of all the other mammalia consist chiefly in the circumstance of its possessing a much greater bulk, in proportion to the nerves which arise from it ; and in its being much larger in general, when compared with' the cerebellum and spinal chord. The sandy matter which is found in the pineal gland has been hitherto ob- served in few mammalia besides man.

In the proper quadrupeds the anterior lobes of the brain form two large processes, from which the olfactory nerves proceed. The corpora qua- drigemina and candicantia are different in the herbivorous from the carnivorous quadrupeds. The nates very considerably exceed the testes in size in the former class ; while these proportions are reversed in the latter instance.

(B) Birds. — The brain differs from that of the mammalia in the smoothness of its surface, and in the optic thalami not being contained in the proper brain, but lying behind and below it.

(c) Amphibia. — Their brain is very small and simple, consisting of five roundish eminences. There is no appearance of arbor vitae in the ce- rebellum ; and the spinal marrow compared with the brain is of astonishing magnitude in most amphibia.

(D) Fishes. — The brain does not fill the cra- nium. Between the dura and pia mater there is a salt and greasy fluid contained in a loose cellu- lar texture, which seems to supply the place of the tunica arachnoidea. In most cases the optic nerves decussate. The olfactory nerve some-

times forms a ganglion just before it is distri- buted to the nose. In the electric fishes nerves are sent frort the fifth pair in the torpedo, from the spinal chord in the gymnotus, and from the eighth pair in tne silurus etectricus to membra- nous cells filled with gelatinous substance like the white of an egg.

(E) Insects. — The larvae of insects have a brain consisting of two ganglia, contained in a horny cavity larger than itself; the nervous chord, constituting in the red-blooded animals the medulla spinalis, proceeds from this point along the abdomen, forming in its passage twelve simple ganglia, from which, and from the two ganglia constituting the brain, the nerves derive their origin.

(F) Vermes. — The structure and distribution of the nerves possess in many cases an analogy to those of insects. Those annuals which inhabit corals, and the proper zoophytes are not pos- sessed of an hitherto discoverable nervous or- ganization.

90. OF THE ORGANS -OF SENSE. I. — OF TOUCH.

(A) Mammalia. — In the quadrumana the structure of the organ of touch is more similar to that of man than any other of the class ; the ends of their fingers, especially of the posterior extremities, are covered with as soft and delicately organized a skin as that which belongs to the human species; several of the digitata are pro- bably provided with this sense. Bats have been supposed to be provided with a sixth sense, which gives a particular perceptibility to them, and is probably analogous to the sense of touch. The nerves of the wing are large and numerous, and distributed in a minute plexus between the integuments. The proboscis of the elephant has been supposed to have a peculiar susceptibility of touch, and the ornithorhyncus is said clearly to possess an organ of touch.

(B) Birds. — Geese and ducks, like the animal just mentioned, possess an organ of touch re- siding in a membrane investing their bills ; this membrane being supplied with an abundance of nerves from all the three branches of the fifth pair.

(c) Amphibia. — Doubtful.

(D) Fishes. — Doubtful also, although several fishes seem to have an acute feeling on the ab- domen and in the lips.

(E) Insects. — These probably are furnished with antennae to give them a particular sensi- bility to the impression of external objects.

(F) Vermes. — That this sense resides in the tentacula of worms .seems rather more doubtful.

91. II.— OF TASTE. (Tongue.) (A) Mammalia. — No animal possesses a tongue exactly like the human. In the simiae it is longer and thinner, and has different papillae. In the ant-eater and manis the tongue seems not to be an organ of taste, but merely subservient to the reception of food.

ˆB) Birds. — All kinds possess a tongue ; it

probably, however, serves in a very few genera

as an organ of taste ; in some cases it is horny

and stiff, and not supplied with nerves ; there is,

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however, great variety in the formation of the tongue of the bird tribe.

(c) Amphibia. — The tongue of the crocodile 19 small, and almost motionless. That of the sala- mander resembles this. Some of the testudines have a tongue covered with thick fibrous pa- pillae

(n) Fishes. It is doutful whether any of this class possess a tongue as an organ of taste.

(p) Imect,. > b h al doubtful.

(F) Worms. J

92. III. — OF SMELLING. (Nostrils.)

This is a more extensive sense in the animal creation than that of taste; yet it is doubtful whether the two classes of white-blooded animals possess it.

(A) Mammalia. — The hedge-hog and mole, as well as the animals of the weasel, bear, dog, and cat kind, &c. have a very complicated formation of the ethmoid bone, and almost in this ratio is~ the acuteness of the smell. In the quadrumana, where such acuteness of this sense is not re- quired, the ethmoid bone is remarkably narrow and imperfectly developed. The conchae of the narcs are very large in the bisulca and much convoluted in most animals of prey. The fron- tal sinuses of the elephant are exceedingly large, and the pig, which smells acutely, comes next in orderin this respect. The blowing hole of the ce- tacea seems principally subservient to respiration.

(B) Birds. — These have no proper ethmoid bone, their olfactory nerves come directly through the orbits to the pituitary membrane of the nose.

(c) Amphibia. — In these the organ of smelling, as above intimated, does not seem clearly deve- loped.

(D) Fishes. — Instead of concha narium, these animals possess a plaited membrane on which the olfactory nerves are distributed.

(E) Insects. — The organs by which these ieem to distinguish odoriferous properties in bodies have not hitherto been detected.

(F) Worms. — The same remark applies to these.

93. IV.— OF HEARING (Ears.)

(A) Mammalia. — The four-footed mammalia are the only animals which possess true external ears, and even in these some of the parts are wanting. In those animals that go frequently under water, the external passage to the ear is furnished with a valve. Warm-blooded quadru- peds have the small bones of the ear like the human subject.

(B) Birds. — The apparent deficiency of ex- ternal ear is compensated in birds, particularly in the rapacious tribe, by the regular arrange- ment of feathers round the opening of the mea- tus. Some have a valve at this part as the owls. They have a single ossiculum auditus. They have no cochlea.

(c) Amphibia. — Turtles, frogs, and most of the lizard kind, possess semicircular canals, a tym- panum, and Eustachian tube. The crocodile is the only instance of an external meatus ; and this animal has ossicula. The serpents, with but

b

few exceptions, have neither tympanum nor Eu- stachian tube.

(o) Fmhcu. — In llic cartilaginous tribe there is a sort of rudiment of tympanum ; but the other animals of the class have no similar part ; their organ of hearing consisting of three large canals which usually project into the cranial cavity. The ear grmcs as the animal increases in size.

(E) Insects. — Their organ of hearing is very uncertain, though several of the tribe appear ob- viously to possess the faculty.

(F) Vermes. — It is only in the sepia that any thing like an organ of hearing has been dis- covered

94. V. — OF SIGHT. (Eye.) (A) Mammalia. — The sclerotic coat of the eye in some of the mammalia, is not, as in man, of equal strength throughout. This structure in- fluences the internal changes of the eye ; and in some instances enables the animal to see at va- rious distances, and in different media. The choroid coat consists more plainly in the cetacea than in any other mammalia of two distinct laminae. Towards the back part of the eye this coat, in some of the carnivorous and predaceous animals is coloured with a brilliant yellow green and sapphire blue, forming what is called the tapedum lucidum. It is only partial.

This structure occasions less absorption of light. The iris <;xhibits exceedingly nume- rous varieties. Thorp arc great differences like- wise in the corpus cilia/e. No mammalia have the crystalline lens so slightly convex on the surface us the adult man. A lachrymal gland exists in all animals of this class ; some have no punrtn. The nictating membrane, of which only a rudiment exists in the quadrumana and man, is very large and moveable in some quad- rupeds, especially in the elephant.

(u) Minis.— In birds of prey the eye has the form of the chalice used in the communion ser- vice: the cornea, which is exceedingly convex, fommm the bottom of the cup, and the posterior segment of the sclerotiea resembling its cover. A great peculiarity in the eye of birds is in the ex- isten

(c) A//iphiliia. — The green turtle (testudo mydas) possesses very large lachrymal glands, and a very mo\e;e!>le nictating membrane, in which circum- stance the frog resembles them. In some rep- tiles and serpents, the common integuments form, instead of eyelids, a kind of firm window, be- hind \hnh the eyeball has free motion.

([<) /•.*

(t; /7Wi7>. — Two kinds of eyes are found in mi'-i t^. one Mn.dl and

and appearing like an aggregation of the smaller ones. Further investigation is required to shew how these eyes enable the insect to see.

(F) Vermes. — The cuttle-fish only, in this class, has been hitherto shewn to possess two eyes. ID all other vermes the eyes are wanting, or their existence doubtful. Some have supposed the black point on the horns of the snail to be organs of vision.

95. MOVING ORGANS. (Muscles.)

(A) Mammalia. — The smallness of the muscles on the calf of the leg, and on the buttock com- pared with that of man, constitute peculiarities here. The cutaneous muscular expansion of the trunk, and the suspensorius oculi exist in the mammalia, which are not of the quadrumana species. Some of the simiae tribe of Linnaeus, have extremely "numerous muscles attached to the prehensile tails of the animal. The glutceus maximus of the horse, and the gemellus are re- markable.

(B) Birds. — The pectoral muscles of these animals are remarkably strong and large.

(c) Amphibia. — The muscles of those reptiles in which the trunk of the skeleton possesses but little mobility are very few. In the serpent tribe they

are extremely numerous in connexion with the vertebrae and ribs.

(D) Fishes have muscles of a paler colour than those animals which have lungs for respiration, and their substance is generally destitute of ten- dinous fibres.

(E) Insects. — The number and bulk of their muscles is remarkable. Lyonet reckoned 4061 in the larva of the cossus, and 2186 of these be- longing to the alimentary canal.

(F) Vermes. — Their arrangement ot muscles bears considerable analogy to the larvae of insects. Those which inhabit shells have peculiar muscles attached to their testaceous covering. In the mollusca nuda, and in the zoophytes, a remark- able power exists of shortening the whole body at once. In the gelatinous parenchyma of the latter no muscular fibres can, however, be dis- tinguished.

96. GENERATIVE ORGANS. (Male.)

(A) Mammalia. — A scrotum is not common to all the genera. This is not found in the aquatic animals of this class, nor in the perfect subter- ranea. In several quadrupeds, as the dog, horse, ram, and others, there is a body lying according to the axis of the testicle, and called the corpus Highmori. It is not a canal. Most of the mam- malia have vesiculte seminales ; they do not, how- ever, exist in the dog or cat kind ; nor in bears, opossums, sea-otters, seals, &c. The prostate is common and peculiar to the mammalia. In some species the penis consists of a single corpus cavernosum, without any septum. Some possess a peculiar bone in the penis. In some few, the passage conducting the urine and prostatic secre- tion, is distinct from the passage for the semen In some species, the male penis while unerected turns backward, so that the urine is voided in the same direction as in the female.

(B) Birds. — The testes, which lie near the kid neys, and the duclus dej'ercns, are the only male

organs which are constantly found in the whole class. Instead of a penis most birds have in the cloaca two small papillae, on which the seminal ducts terminate. Some few species have a sim- ple penis of considerable length, which is ordi- narily concealed, and contracted within the cloaca.

(o) Amphibia. — The kidney, testes, and epidi- dymis, lie close together in

the testudines ; these appear to have no vesiculse seminales. Frogs have large vesiculae seminales, and a small pa- pilla in the cloaca instead of a penis. Crocodiles have a simple penis ; lizards have two : the water-newt has no organ of this kind. Serpents have longer and broader testicles ; no vesiculae seminales, hut a double penis.

(n) Fishes. — In the cartilaginous fishes there are manifest testicles, consisting partly of innu- merable glandular and granular bodies, and partly of a substance like the soft roe of bony fishes. They have also vasa dc.ferentia, and a vesicula seminalis, which opens by a papilla into the rectum.

The soft roe supplies the place of testes in most of the bony fishes. Through the middle of this substance a ductus deferens passes, which opens behind into a kind of vesicula seminalis, and this terminates in the cloaca.

(E) Insects. — The generative organs of these animals exhibit great varieties of structure. In the moth of the silk-worms we distinguish testes, long vasa dfferentia, even a kind of vesicula se- minalis, and a considerable penis. In the gryl- lus, a species of locust, the large testicles, with their convoluted fasciculi of vessels, bear a close resemblance to the ovaries.

(F) Vermes, — The ascaris lumbricoides, (intes- tinal worm), has one testes, which, towards the posterior part of the animal, forms a large tube, which becomes connected with the penis, the last organ lying concealed near the tail. The male organs of the cuttle-fish contain, at the spawning season, several hundred small tubular seminal receptacles, which are expelled from the body in an entire- state, when a spiral vessel, which they contain, together with the semen, bursts their thin anterior extremities, from which the semen escapes.

97. GENERATIVE ORGANS. (Female.) 92. (A) Mammalia. — Of the external organs the clitoris is found most invariably. A true hymen has never been found but in the human subject. The vagina of quadrupeds differs from the human in its direction, and in the structure of its internal surface ; it lies in the same axis with the uterus, and its membrane is without

those transverse plaits, which distinguish it in the human female. The uterus of the mammalia is not so thick as in the human female ; that of the simia sylvanus approaches nearest to the hu- man in this particular; the ovaria are in general of an oval form, in some instances the Fallopian tubes are convoluted upon each other in a kind of knob. The fimbriee are sometimes shaped like a funnel, as in the rabbit.

(B) Birds. — In these the external opening of the genitals consists of a transverse slit behind theossapubis ; this leads to the cloaca, into which open the rectum, the two ureters, the vagina, and the bursa Fabricii. The genital tube considerably resembles an intestine ; in it, however, are three distinguishable parts; the vagina, the proper uterus, and the oviduct ; the last terminating in the infundibulum. The ovarium lies under the liver; it resembles in appearance a bunch of grapes, and contains, in a young laying hen, about five hundred yolks, varying in size from a pin's head to their perfect magnitude.

(c) Amphibia. — The tortoise has a manifest clitoris lying in the cloaca. The uterus, oviduct, and ovarium, are considerably like the last class, but they are double. Frogs have a large uterus. Female serpents have double external openings of the genitals. Their ovaria are long and much convoluted.

(D) Fishe.s. — The torpedo has two uteri, communicating with the cloaca by a common vagina. The oviducts form one infundibulura. In the carp the generative organs are placed at the side of the intestines, liver, and swimming bladder, as far as the anus, occupying the same position as the soft roe of the male does.

(E) Insects. — The two large ovaria of the gryllus are connected together at their posterior extremities. In the silkworm moth the ovarium resembles four rows of pearls.

(F) Vermes. — The opening of the genitals in the female ascaris lumbricoides is situated near the middle of the body ; it leads to a short canal which divides into two tubes, which gradually contract into two slender thread-like oviducts. In the cuttle-fish there are two oraria, and a common tube leading to the anus. Zoophytes generate in a manner resembling the growth of buds and branches in trees ; and have neither generative organs nor distinction of sex.

For information on the functions and process of generation in the respective animals, whose organs are above described, and on the. mode in which animals sustain, as well as propagate, their young, the reader is referred to the article PHYSIOLOGY.

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ANATOMY, in chemistry, is used for the ana- lysis of mixed bodies. In this sense the chemists sometimes call their art anatomia spagyrica, spa- gyrical anatomy. Accordingly they speak of the anatomy of vitriol, sulphur, &c.

ANATOMY OF PLANTS may be considered as a branch of comparative anatomy, otherwise called dendronatomy. The parts of plants which come under anatomical consideration are, the roots, wood, bark, pith, fruit, leaves, flowers, &c. The anatomy of vegetables is supported chiefly by the industry of Malpighi and Dr. Grew, though considerably promoted by Ruysch, who by a peculiar method of injection, produced ske- letons or systems of vessels of fruit, leaves, and the like. Something of the same kind has also been done by Thummingius. Some make F. Fabri the father of this science ; and allege that Malpighi took many of his discoveries from him. Dr. Highmore in his book of Generation, Dr. Sharrock on the propagation of plants, and Dr. Hook in his Micrographia,have also given some observations tending this way, though only collaterally.

ANATOMY is also used in a less proper sense, to denote the art of resolving compound bodies into simple ones. In this sense any kind of compound body may be considered as its ob- ject ; that is, any wherein there are divers parts joined together ; even the taking asunder an ar- tificial, political, or moral being, may, in this sense, come under anatomy.

ANAT.OMY, is also used, figuratively, for an ex- act search or examination of the parts of a dis- course, business, or the like : in which sense we say the anatomy of a book, a doctrine, or the like.

ANATONIDES or ANTONIDES, a Dutch apo- thecary, a native of Goes in Zealand, where he acquired the designation of Vander Goes, born in 1647. He was a man of reading and genius, who studied with avidity the best classical au- thors, some of whose works he translated. But is principally known by his poem in honour of the river that flows through Amsterdam, in which city his works were collected and published in 1714, in one quarto volume, just thirty years after his death. They consist of the poem above named, The Invasion of China, a tragedy, and a poetical effusion on the peace of 1667, entitled Bellona chained. For some time previous to his death he enjoyed a post at the Dutch admiralty board.

ANATORIA, in geography, a small town of Greece, anciently Tanagra.

ANATRESIS, in anatomy ; from ava and rtrpaw, perforo ; the operation of trepanning.

ANATRIPSIS ; from ava and rpt/3w, I wear ; in ancient medicine, friction. It is sometimes written simply tripsis.

ANATRIS, in chemistry, mercury or quick- silver.

ANATRON. The jc-ira which swims upon the molten glass in the furnace, sometimes called sal vitri, which, when taken off, melts in the air, and coagulates into common salt. It is also that salt which gathers upon the walls of vaults. Likewise the same with NATRON, which see. Anatron is also a compound salt, made of

*quicklime, alum, vitriol, common salt, and imre, used as a flux to promote the fusion and purifi- cation of metals. It is also used for the terra sa- racenica. **

ANATROPE, avaTpoirrj ; from avarptjrw, to subvert ; a subversion or relaxation of the sto- mach, attended with the loss of appetite, vomit- ing, and nausea.

ANATTOM, the most southern of the New Hebrides. It is of considerable height, with a hilly surface, and from thirty to thirty-six miles in circuit. Long. 170° 5′ E., lat. 20° 3. N.

ANATZARTHON, in ancient geography, an archiepiscopal see of Asia, under the patriarchate of Antioch.

ANAUA, or AN AVA, a city placed by Hero- dotus in Phyrgia, between the rivers Marsyas and Meander, but nearer their sources than their confluences. To the south-west of this city, and near it, was a lake, from which they obtained salt.

ANAUCHIDAS, Avavxˆae, a native of Elis, and a famous wrestler, to whom a statue was erected. Paus. 1. 5, c. 27.

ANAUDIA, among naturalists, denotes dumb- ness, or a want of the use of speech, differing from aphonia, as the former is .owing to a defect in the nerves of the tongue, the latter in the nerves of the larynx.

ANAUDIA, in medicine, another name for cata- lepsis.

ANAVINGA, in botany, a genus of ever- greens of a middle size, that grows in Malabar, in the East Indies, especially about Cochin. Its genric characters, according to La Marck, are. CAL. five oval, concave leaves, opening in a rose, and permanent ; COR. none, but at the base of each foliola of the calyx are two short pedicles, some- what hairy ; STAM. ten, length of the calyx, with their filaments inserted alternately between the pedicles, on the base of the folioles of the calyx ; ANTHERS, small, ovate, divided into two by a furrow, the ovary superior, globular, or oval ; STYLE, short; STIGMA, a spherical head. The fruit is an oval or globular berry, marked by five slight channels, and containing ovate reddish seeds seeds in a pulp. There are two species : 1. A. lanceolata, with alternate leaves, lanceo- lated, slightly serrated, subpubescent beneath, with oval berries longer than the peduncle. 2. A. ovata, with alternate leaves, ovate, acuminated, and serrulate, and globuse berries equal to the peduncle. This is also called talana and ad-, metha. The juice of the berries taken internally, excites sweat, cures malignant distempers, and keeps the body open. A decoction of the leaves in water is recommended as a bath, for pains in the joints.

ANAUMACHION ; from a, negative, vavf, a ship, and /taxo/wi, I fight; in antiquity, the crime of refusing to serve in the fleet.

ANAURUS, or ANAUROS, in ancient geogra- phy, a river of Thessaly, having its source at the foot of Mount Pel ion. It is supposed to derive its name from being undisturbed by the winds. Lucian, b 6. v. 369, thus describes it : —

Quique nee humentes nebulas, nee rore madentem Aera, nee tenues ventos suspirat Anaurou.

ANAX, in ancient writers, a hero, or demi- pod. The word seems formed of

the He- drew anakim, or enakim, which has the same signification. According to Cicero the three eldest sons of Jupiter, called AioffKHpot, were also named anaces.

ANAXAGORAS, one of the most celebrated philosophers of antiquity, was born at Clazo- mene in Ionia, in the first year of the 70th Olympiad. He committed his patrimony to the care of a relation, to be more at leisure for the study of philosophy, and placed himself under the care of Anaximenes at Miletus. When about twenty years of age he went to Athens, where he remained thirty years. Having assumed the character of a teacher of philosophy, he quickly rose to the highest eminence ; and it is said, that among his scholars were Euripides, Pericles, and vhe renowned Socrates. After having for some Hme been persecuted for his opinions with re- gard to the substance of the sun, which interfered with the vulgar notion of the divinity of Apollo, lie was condemned to death; but, through the influence of Pericles, the sentence was changed 10 banishment. He now took up his - residence ;it Lampsacus, where he spent the remainder of his days, teaching philosophy in the school of liis deceased master Anaximenes, and died here ID the year 428 B. C.

ANAXAGORIA, in antiquity, a festival ob- served in honour of Anaxagoras, who dying at Lampsacus, the magistrates of that city asked him 111 what manner he desired his memory to be honoured : he replied, that on the anniver- sary of his death lie wished the boys should have a holiday.

ANAXANDRIDES, king of Sparta, com- menced his reign about ,r>50 B.C. The ephori wished him to put away his wife on account of her barrenness, but IK; retained her oat of affec- tion, and took another who bore him children. His first wife afterwards became the mother of Doriums, Leonidas, and Cleombrotus.

ANAXANDIIIDES, a comic poet of Rhodes, who flourished in the reign of Philip king of Mace- donia, and was starved to death for satirizing the Athenian government.

ANAXAIM 'HI'S, a philosopher of Abdera, and a follower of Democritus, highly esteemed by Alexander the Great. His end was equally tragical and heroic. Having fallen into the bands of Nicocreon, tyrant of Cyprus, he or- dered him to Iv pounded alive in a mortar; whereupon our philosopher replied, 'Beat as thou wilt on the. carcase of Anaxarchus, himself thon canst not hurt.' ( )n this the tyrant threatened to cut out his ton-nc, whereupon the philoso- pher is said to have bit it off, and spit it at him.

.\A\ARKTI'., in ancient mythology, a princess of the family of Teucer, who

having rejected the addresses of Ipbis, a youth of igno- ble birth, he hung himself in despair at her door. She In-held him without any emotion, and was therefore changed into a stone.

ANAX 1 LAS, or A.\A\ii.Ar>, in ancient his- tory, a Messenian. the king of Khegmni, who f uned uith -real justice, and died in the 76th < llympi.ul, A. C. -t?i>. He left his children to

the care of a faithful slave, whom the people obeyed out of regard to his memory, until the sons had reached manhood, when, accordin t to Diodorus, they were deposed in order to irake way for a republic.

ANAXIMANDER, a famous Greek philoso- pher, born at Miletus in the 42d Olympiad. He was the first who publicly taught philosophy, or wrote upon philosophical subjects. It is said that he discovered the obliquity of the zodiac, was the first who published a geographical table and map of the world, and set up the first sun- dial. He died B. C. 547.

ANAXIMANDRIANS, the followers of Anax- imander. Also denominated hylopathii, and opposed to the atomists.

ANAXIMENES, an eminent Greek philoso- pher, born at Miletus, the friend, scholar, and successor of Anaximander, and master of Anax- agoras. He diffused some light upon the ob- scurity of his master's system, and made the first principle of things to consist in the air, which he considered as infinite, and to which he ascribed a perpetual motion. He asserted that all things which proceeded from it were definite and cir- cumscribed ; and that this air was the Deity, since the divine power resided in it and agitated it.

ANAXIMENES, the son of Aristocles of Lam- psacus, an orator, the disciple of Diogenes the Cynic, and of Zoilus the hypercritic on Homer. He was preceptor to Alexander of Macedon, and followed him to the wars. Alexander being incensed against the people of Lampsacus, they sent this philosopher to intercede for them; when the king, knowing the cause of his coming, swore that he would do the very reverse of whatever he desired. Anaximenes begged him to burn Lampsacus and extirpate the inhabitants; upon which Alexander pardoned the whole of them.

ANAXYRIDES, a sort of drawers, worn by the Scythians. The name, according to Hippo- crates, is derived from avaffvpw, to draw up.

ANAZARBA, or ANAZARBUS, a town of Cili- cia, on the river Pyramus, the birth-place of Dioscorides and of the poet Oppian. It was afterwards called Caesarea in honour of Augus- tus, and Justinea in honour of Justinian. This town struck medals of M. Aurelius, L. Verus, Commodus,

Caracalla, Julia Paula, Alexander Severus, Maximinus, Maximus, Gordianus Pius, Trajanus Decius, Herennius Etruxus, Volusia- nus, Valerianus sen., and Gallienus. It was destroyed by a dreadful earthquake in the year 525, together with several other cities ; which were repaired at a vast expense by the emperor Justinian.

AN BAR, a town of Asiatic Turkey, in Irac Arabi, seated on the Euphrates, fifty miles west of Bagdad.

ANBERTKEND, (the cistern of the waters of life,) a celebrated book of the Brahmins, wherein the Indian religion and philosophy arc contained. It is divided into fifty beths, or dis- courses, each consisting of ten chapters. It has been translated into Arabic under the title ol Moral al Maani, i. e. the marrow of intelligence.

ANBLATUM, in botany, the Linnaean U- thraea.

ANC&US, in heathen mythology, the son of Lycurgus and Antinoe, one of the Argonauts who perished in the chase of the Caledonian boar.

ANC.SUS, son of Neptune and Astypalzea, a native of Samos, and an Argonaut. He was once told by one of his servants, whom he pressed with hard labour in his vineyard, that he never would taste of the produce of his vines. No sooner had he got the cup into his hand, and had called for the prophet to convince him of his falsehood, than he was informed that a wild boar was in his vineyard, upon which he threw down the cup and went in pursuit of it, in which he was killed ; whence the proverb, IloXXd itraˆii ir's \tt icvXiicog KOI x«Xt

According to Horace :

Multa cadunt inter calicem supremaque labia.

ANCJEUS, in entomology, a species of papilio found in India, the papilio obrinus of Fabricius. ANCARANO, a town of Italy, in the papal territory and marq. of Ancona, situated five miles north of Ascoli, and eighty-two north-east of Rome. Lon. 13° 29′ E. lat. 42° 48′ N.

ANCASTER, Sax. from an, and ceaster, a castle; a town in Lincolnshire, under a hill, eight miles from Grantham, and 115 north of London. It was

called Croceocalana by the Romans, and situated on the Roman highway. There are some stone quarries in the neighbour- hood.

ANCENIS, a town of France, seated on the Loire, in the department of Lower Loire, twenty miles east of Nantz.

ANC EPS, in botany, an epithet for a stem and a leaf, which has both its edges sharp.

ANCEPS, in conchology, according to Gmelin, a species of patella.

AN'CESTOR, \ Ante, before; cedo, cessum, AN'CESTRY, >to go. One who goes before AN'CESTRAL. 3 in order of time, and from whom we descend by birth and lineage. His purpos was for to bestowe hire hie, Into som worthy blood of ancestrie.

Chaucer. The Reeve's Tale, vol. i. p. 157. That lords do lacke their auncestors good wil, That knights consume their patrimonie still.

Gatcoigne.

In thy great volume of eternitye ; Begin, O Clio, and recount from hence My Glorious Soveraines goodly auncestrye, Till that by dew degrees and long portense, Thou have it lastly brought unto her Excellence. Spenser's Faerie Queene, book iii. c. 3. When we have done our ancestors no shame, But serv'd our friends, and well secur'd our fame, Then should we wish our happy life to close, And leave no more for Fortune to dispose.

Drydens Palamon and Arcite, book iii.

Title and ancestry render a good man more illustri-

ous, but an ill one more contemptible. Addison.

If a man could bequeath his virtues by will, and

settle his sense and learning upon his heirs, as cer-

tainly as he can his lands, a brave ancestor would be

a mighty privilege. Collier.

ANCESTORS. Most nations have paid honours to their ancestors. The custom of embalm- ing among the Egyptians, and enclosing the

body afterwards in wood, when it was lodged in an appointed place in the walls of the principal houses, is mentioned by Herodotus in the Eu- Icrpe ;

and was a species of honour paid to an- cestors. The primitive Greeks (Plato Minoe) seem to have followed this custom of preserving their ancestry about them, so far as to bury them generally in some part of their houses. The Thebans had an ancient law, that no person should erect a house without including in it a repository of this kind.

Philo Byblius, the translator of Sanchonia- thon's History of the Gods, states, that the Phoe- nicians and Egyptians, from whom other people derived this custom, reckoned those amongst the greatest gods who had been the benefactors of the human race ; and that to them they erected pillars and statues, and dedicated sacred festivals. (Euseb. Prsep. Ev. lib. i. cap. 9.) We need not, therefore, be surprised to find that, as a part of this system, all the heroes of antiquity, in due time, were not only gods, or demi-gods after death, but of divine ancestry.

It was properly the departed souls of their forefathers that the Romans worshipped under the denomination of lares, lemures, and house- hold gods. Hence the ancient tombs were a kind of temples, or rather altars, wherein obla- tions were made by the kindred of the de- ceased

The Russians have still anniversary feasts in memory of their ancestors, which they call rodi- toli sabot, q. d. kinsfolks' sabbath, wherein they make formal visits to the dead in their graves, and carry them provisions, eatables, and presents of other kinds.

But the Chinese have distinguished them- selves above all other nations, in the veneration they bear their ancestors By the laws of Confucius, part of the duty which children owe their parents consists in worshipping them when dead. This service, which makes a considerable part of the religion of the Chinese, is said to have been instituted by the emperor Run, the fifth in order from the foundation of that ancient empire. Every family of rank has a temple to the memory of its ancestry; and on the sudden elevation of any member of the community to new wealth, before he builds a palace for him- self, he is directed by the lee-kee to be careful to erect and dedicate a mausoleum to the honour of his ancestors. In almost every house, says SirG. Staunton, is hung up a table of the an- cestors of the persons then residing in it. Refe- rences are afterwards made in conversation to their actions. Their example, as far as it was good serves as an incitement to travel in the same path. The descendants from a common stock visit the tombs of their forefathers together, at stated times. This joint care, and indeed other occasions, collect and unite the most remote re- lations. The child is bound to labour, and to provide for his parents' maintenance and comfort ; and the brother for the brothers and sisters, that are in extreme want : the failure of which duty would be followed by such detestation, that it is not necessary to enforce it by any positive law . Embassy to China

In English law a distinction is made between

ANC 264

the ancestor as a natural antecessor, and a pre- decessor in an office or dignity. Thus in the church of England, and in bodies corporate, there are no ancestors, but predecessors.

Some original and excellent remarks have ap-

ANC

ANCIIILOPS (ayicvXi), contraction, ana «ˆ», eye,) in medicine, denotes an abscess, or collection of matter in the lachrymal sac between the great angle of the eye and the nose. If suffered to remain too long, an ulcer is produced. When

peared in a late number of the Edinburgh Re- the tumor is broken, and the tears flow involun-

view, on the subject of extreme deference to the tarily, whilst the os lacrymale is not carious, it is

opinion of our ancestors. We are far from think- an aegylops ; but when the ulcer is of a long

in" lightly of the respect that is due to most standing, deep, fetid, and the os lacrymale be-

maxims and even prejudices that have been comes carious, it is a fistula. The cure is effected

sanctioned by the concurrent judgment of sue- by restriction and excision, tying it at the root

cessiveages; but there is much matter-of-fact truth in the following observations. Experience is certainly the mother of wisdom, and the old

on the glandula lacrymalis, and when ready, cutting it off". ANCHIROMACHUS, in middle-age writers,

have the least experience. We have added to their experience the experience of many centu- ries ; and, therefore, as far as experience goes, are wiser and more capable of forming an opi- nion than they were. The real feeling should

have of course, a greater experience than the denotes a kind of vessel,

which on account of its young ; but the question is, Who are the old ? swift sailing was used for the conveyance of an- and Who are the young? Of individuals living chors, and other necessary utensils of ships. at the same period, the eldest has, of course, the ANCHISES, in fabulous history, a Trojan greatest experience ; but among generations of prince, the son of Capys, and descended from men the reverse of this is true. Those who come Dardanus. Venus made love to him in the form first (our ancestors) are the young people, and of a beautiful nymph, and bore to him ./Eneas, i. .L- i__ „ ..._: ---- \;~ i — « ˆAAˆA *~ the hero of Virgil's ˆEneid. According to Virgil*

./Eneas took his father on his shoulders and made his escape with him the night on which Troy was taken. The time of his death is much disputed ; according to Virgil he died in Sicily, and was

be not, can "we be so presumptuous as to put buried in mount Eryx, by ./ Eneas and Anchises our opinions in opposition to those of our an- king of the country.

ANCHISES, in entomology, a species of pa- pilio found in America.

AN'CHOR, v. & ra. ~\ Anchora, oyicvpa, from AN'CHORABLE, f ay/ejj, a hook or crook.

AN'CHORAGE, {To connect by means

AN'CHORED. J of an instrument, gene-

rally of iron, with branches curved and pointed. To fasten; to secure; to hold fast; to obtain stability ; to preserve in safety.

Yon eyes that wonted were Light louing lookes to cast,

I give commandment on hir hue

That he be ankred fast. Turbenille.

cestors? but can such young, ignorant, inex- perienced persons, as our ancestors necessarily were, be expected to have understood a subject ;is well as those who have seen so much more, livH so much longer, and enjoyed the experience uf so many centuries ? All this cant then about our ancestors is merely an abuse of words, by transf'Triiii: phrases true of contemporary men to succeeding ages. Whereas (us we have before observed) of living men the oldest has, c&teris IKH-UHIS, tlie most experience; of generations, the yomi;:cst lias artcris ptiribus, the least experience. Our ancestors, up to the conquest, were children in arms;

chubby boys in the time of Edward 1.; striplings under Eli/abeth ; men in the reign of qiit.TU Amir ; and ;/r only are the white-beard- ed, Mlver-headcd ancients — who have treasured up, ami aiv prepared to profit by, all the expe- rirn, r which human life can supply. We are not deputing with our ancestors the palm of ta- lent, in which they may or may not be our su-perior-,, but the palm of experience, in which it m utterly impossible they can be our superiors! I'Atn. Rt r. No. 8-1.

AM '111'., in musk', a reed; also the mouth- piece of a clarinet, and that part of the hautboy or bassoon, to which the reed is attached.

AM 11 Kit (IVter Kofod), a Danish lawyer ol t'.ie eighteenth century, the author of many elementary works on the civil and criminal law of Denmark; the most celebrated of which is, tin- History of Danish Law, from the Time of Harold to that of Christian V, 3 vols. 8vo.

. in ancient geography, A-vˆiaA)/, – A-ˆYKiXor, a town of Cilieia, built, Strabo and most authors, by Sar- ut a< cording to Stephanas, on the Aiieimdoni>, by Anchiala daughter

From pole to pole she her acts resound, And rules an empire by no ocean bound j Knows her ships anchor'd and her sails unfurl'd In other Indies, and a second world.

Prior' Solomon, book i.*

A great stone that I happened to find after a long search by the sea-shore served me for an anchor.

Gulliver's Travels, part 1. chap. viii.

, Having looked aloft while he was speaking, he ob- served that the wind for which he had waited began to blow, he therefore gave orders instantly to weigh anchor ; the sails were spread to the breeze, and the oars divided the flood. Hawkesworth's Telemachus. Roused from repose, aloft the sailors swarm, And with their levers soon the windlass arm : The order given, up springing with a bound, They fix the bars, and heave the windlass rou At every turn the changing pauls resound : Up-torn reluctant from its oozy cave The pond'rous anchor rises o'er the wave.

Falconer's Slupwreck.

The race of life becomes a hopeless flight To those who walk in darkness : on the sea The boldest steer but where their ports invite ; But there are wanderers o'er Eternity Whose bark drives on and on, and anchrr'd ne'e» shall be. Lard Byron't Childe HaroW

ad, i round , > : J

/’„,. //

ANCHOR

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Hope, as an anchor firm and sure, holds fast The Christian vessel and defies the hlast.

Cowpei

ANCHOR, in navigation, is an important strong and heavy instrument of iron, consisting of a shank having at one end a ring to which the cable is fastened, and at the other end two arms, or flukes, with barbs or edges on each side. It is carried on the bows of ships for the purpose of fixing and retaining the vessel in harbour, or in some place of safety where the depth of the water does not prevent the possibility of its being employed.

The anchor is of very ancient use. The in- vention of it is ascribed by Pliny, lib. 8. c. ult. to the Tuscans, and by Pausanias, Attic, lib. i. c. 4. p. 12, to Midas, the son of Gordius, who built the city of Ancyra. The use of it must ha-ve been nearly coeval with navigation itself. The most ancient anchors were of stone, and sometimes of wood, to which was attached a quantity of lead, or some other ponderous sub- stance ; but, as the science of navigation became improved, anchors were constructed of iron fur- nished with teeth or flukes, which, fastening to the bottom of the sea, might serve to keep the vessel from being driven away ; hence oSovrif, teeth, are used for anchors.

The first anchors had a fluke on one side only, whence they were called irtpoaopoi. Eupala- mus, according to Pliny, was the first who made them fluked both ways ; or, according to Strabo, lib. 7. ex Ephor. torn. p. 464, the second tooth or fluke was added by Anacharsis the Scythian. Thus two-fluked anchors were called a/i$i/3o\ot or a/i0iANCHORS, where it is evident the anchor cannot be moved without ploughing up the ground in which it ia embedded, an operation which is called dragging the anchor ; but when the an- chorage is good, the hold is so strong that the cable may rather be expected to part, or the buried anchor to be ruptured, than any dragging of this kind to occur. There are various kinds of anchors, differently denominated according to their sizes and use. Those used in large ships are generally of the form shown in fig. 1, and are distinguished into sheet, best-bower, small- bower, spare, stream, and kedge anchors. In ships of war the sheet anchor is stowed upon the after part of the fore channel, on the larboard

side, with the stock vertical, and one of tb? flukes resting on the gangway. The bower hangs to the cathead with the extremity fixed to the anchor boards, and the spare anchor is stowed away on the starboard fore channel. Ships of the first class carry seven anchors, and smaller vessels, as brigs, cutters, and schooners, only three. Stream and kedge anchors are smaller than those just-mentioned ; and the latter of these is composed of an iron stock passing through a hole in the shank, and preserved by a forelock. In the East Indies, to secure what they call grab vessels, a peculiar kind of ancnor is em- ployed, technically called the mushroom anchor, from its resemblance to that vegetable : see the annexed diagram. Its form dispenses with the necessity of a stock, since fall in what direc- tion it may it is sure to attach it- self to the bottom.

Small European vessels employ what are techni- cally called grapnels, see fig. 2, which have all the advantages of the anchor last described. Two improvements in this useful instrument have lately attracted considerable attention. The first is an invention of Mr. Stuard, exhibited in fig. 3, and requires but one arm, the shortness and ponderosity of which insures its success. The second, which is an invention of Mr. King- ston of Portsmouth, is very peculiar. The cable is not fastened to a ring, but, passing through the centre of the shank, is secured upon the crown of the anchor by a knot of greater diameter than the tube. This composition is of bell-metal, the upper extremity of the tube of the shank being widened, till it assumes a form similar to that of a trumpet.

Mooring anchors are commonly employed in harbours, or other places where ships make their rendezvous, and are generally much larger than the common anchor ; but in some cases the an- chors of large ships are employed, dispensing with one fluke ; and in others larger staves, hav- ing an iron ring fastened through their centre, as in the annexed dia- gram : several of these are sometimes secured together by a wooden frame. Mr. Ilemman of Chatham invented a mooring anchor in 1809, which obtained a silver medal from the Society of Arts ; see fig. 4. Mr. Brown of Woolwich invented a second form of this instrument; see fig. 5. Mr. Park of Portsmouth invented a third, which is exhibited . in the following diagram: a float- ing anchor has long been thought a desideratum to prevent the driv- ing of the ship

before the wind and tide, when the depth of water renders%it impracticable for the common anchor to be employed, which can only be effected by providing an anchor capable of so acting upon

the element as to maintain its position. Dr. Franklin's invention was two cross bars screwed in the middle, having sail-cloth fastened to them in the shape of a parallelogram ; to the centre of these bars the cable was attached ; and the ma- chine being thrown overboard, he considered would, from the resistance it would meet with in the water, preserve the ship from being driven away. No machines of the kind, however, are carried by the royal navy.

The anchor now in general use is the one in- vented by Mr. Perring, clerk of the cheque at Plymouth. The parts of which it is composed are, A the shank, B the arm or fluke, C the palm, D the blade, E the square, F the nut, G the ring, and II the crown. See fig. 6.

The making of anchors is a point of great im- portance to the interests of seamen, whose lives in some situations depend upon the goodness of their anchor. It is on the ground of its import- ance that so great a degree of attention is bestow- ed upon it in the dock-yards of the royal navy.

In fabricating the shank it was formerly the practice to form it of square iron rods, disposed in the form of a cylinder, and encircled by other bars, which were wrought into the shape of parts of sectors of circles ; from which formation it followed, that the mass could not be sufficiently wi-lded to unite firmly the interior bars, without at the same time spoiling the quality of the ex- terior iron. This difficulty was obviated by Mr. Perring, by using bars of the whole breadth of die shank, see diagram, which are placed one upon another ; and being kept in their positions by iron hoops, are welded to- gether in two heats, until the whole is one compact body, which, by this arrangement of the bars or plates, is capable of being effected with- out overworking the iron. The crown is com- posed of bars similar in their disposition to those of the shank. The method of uniting the flukes to the crown is of very great importance, and accordingly much ingenuity has been bestowed upon it. The following is the most improved plan, and now generally adopted : — The bars being made but half the breadth of the anchor, are first separately welded, and then placed side by side, as exhibited in fig. 7. The upper half A is then wrought into one mass, the lower half H bciiii; left disunited, having two iron bars tailed porters n n attached to the extremity of radi division of the end 15. The part B is then hiatcd, and placed in the machine as exhibited fi'_r. H, consisting of a frame of timber firmly faced with a strong iron plate, having four iron pins of considerable strength upon its surface, / li <• f. Between l> l> the end A of the crown is] laced and passed under the strap c. The di vided extremity H is brought between the pins i i, the two parts are separated by means of the porters u a, and bent into the form exhibited in I lie figure ; by which means part of each arm briiii; formed out of the crown, u irreatgr proba- I'tliu is ationled of their heinu united than could I'u obtained in any

other \av. The angular

opening, a a, fig. 9, is filled »p by the chock, formed of short iron bars placed vertically ; and after this has been properly welded, the truss piece, c c, is placed over it, composed of plates similar to those mentioned before, the edges placed horizontally. The truss piece, being half the breadth of the arm, gives a considerable de- gree of strength and compactness, and makes, with the parts ee, the entire breadth at those places. After this has been done the shank is shut on the crown, the square formed, the nuts welded to the mass, the ring placed, and the shank wrought and completed according to the shape exhibited in fig. 6. The blade is com- menced by bending an iron rod into the form a be, fig. 10, fastening a porter to the extremity ; iron plates are laid side by side upon the rod a b c ; an additional plate is laid upon the middle ; the mass is then wrought, and similar plates laid upon the lower side, after which the whole is completely welded. The blade is shut on the palm, the part of the arm attached to the blade joined to the part attached to the crown, when the iron work of the anchor is finished. The shutting in of the several parts of the anchor is performed by a mass of iron called the markey, raised to a certain height, and let fall upon the work in a welding heat ; and also by the hercules, an instrument of a similar nature. Some time ago a plan was devised to perform these opera- tions by steam, under tilt hammers, weighing five tons each, having an extreme fall of sixteen inches. Although the above is the usual mode of fabrication, other improvements have from time to time been proposed with different de- grees of success. Mr. Brunton's plan, it is said, has not been fairly tried. It consists of forging the anchor without welding the arms to the shank, avoiding the danger of a bad joint. This is effected by making the arms in one piece, en- larging them at the crown, and piercing the part thus enlarged with a hole the size of the shank ; the latter part of the anchor (the shank) is made with a shoulder at the extremity near the crown, in such a way that when the lower part is brought through the above-mentioned aperture, the arms bear upon the shoulders. From this construction it is evident, that to unite firmly the arms and the shank it is merely necessary to form the extremity of the latter sufficiently long to enable the smiths to rivet it on the lower end of the crown. The stock of the anchor consist of two solid pieces of oak, tapering from th» middle to the extremities, and fastened across the. beam near the ring ; which serve, by their action upon the water in descending, to guide the flukes in a direction perpendicular to the surface of the ground ; so that, as soon as the anchor falls, on« of them sinks into .ij earth by its own weight, and is preserved in .tat situation by the stock, which, together with the shank, lies flat upon the bottom. For large anchors the side cheeks are usually made of two pieces of tree nailed together, fig. 11 and 12; great care is taken to secure the stocks to the anchor ; and, in small anchors, as also in Mr. Stuard's anchor, the

stocks are of iron. The following is a table of the most ap- proved : —

ANCHOR.

DIMENSIONS OF ANCHOR-STOCKS.

267

1

90 cwt.

70 cwt.

40 cwt.

18 cwt.

9 cwt.

7 cwt.

ft. in.

ft. in.

ft. in.

ft. in.

ft. in.

ft. in.

Diameter at the middle ....

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— at the ends ....

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Opening between the cheeks in >

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Diameter of the bolts

0 H

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0 Of

0 34

0 31

0 3

0 24

0 2±

0 2

Casting the anchor is the act of letting it down into the sea. The cable is ranged along the deck in longcoils, , one end being attached to the bits and the other to the ring of the anchor. The stock-lashing is cast off, the fastenings are removed, and the anchor falls into the sea. In riding at anchor the chief thing that requires at- tention is to see that the ship swings clear of other vessels, and that she does not get a foul hawse.

Weighing the anchor denotes the drawing it up from the bottom of the sea into the vessel; which, in small vessels, is done by means of a windlass ; in large vessels, by means of a smaller rope, called the messenger, the cable being too bulky to admit of the application of the former mode. One end of the messenger being passed with several turns round the capstern, the other is taken forward, and put round the rollers at the fore part of the ship ; it is again brought aft, and the two ends united ; thus the rope, by the heaving of the capstern, will revolve per- petually round the rollers placed in the manger. The messenger is then attached to the cable, by means of short ropes called nippers, from one to two fathoms apart, and, by the efforts of the

men upon the capstern, the latter is forced uj by the operation of the former. As the cabk approaches the capstern, the nippers are removed, and others placed further down it ; and the cable, thus brought into the ship, is carried down the hatch-way, and, as it enters, is coiled within the cable tier. Should the cable be muddy, and the nippers not nip enough, sand or ashes are thrown on the cable. Large ships have a jeer as well as a main capstern, the operations of which are communicated by a viol, acting in the same way as the messenger, with the exception that it is passed through the viol block, which is lashed round the main mast; and that it acts on the

midship side of the cable. When the anchor has been brought above water, the tackle is put upon the shank just within the flukes, the arms are placed upon the anchor- boards and gunnel, and the stock, made vertical, secured by the stock-lashing, &c. One end of the stopper is fastened round the cat-head, and the other brought through the ring, then turned over the stopper cleat, and is belayed round a timber head. The ring is finally fastened to the cat-head, and the operation is finished.

TABLE I.

Weights and Dimensions of the SHANK, SQUARE, and RING of ANCHORS in his Majesty's Navy.

\Veighte.

SHANK.

SQUARE.

RING.

Sizes.

Sizes.

Length.

Throat.

Trend.

Small

Length.

Breadth at the nut.

Hole from end.

Extreme diameter.

Dia. of iron.

cwt. qrs. Ibs.

94 0 0

ft. in.

19 3

R

in.

124

F in.

9J

R

in.

114

F

in. 9i

R in. 9i

F

in.

7f

ft. in.

3 74

R in. 9i

F in.

7J

in.

6

D ft. in.

3 2

d ft. in.

2 10

in. 4i

90 3 0

18 5

Hi

10J

HI

10

9i

74

3 6

10

8i

8

3 2

2 10

4J

73 3 0

17 0

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8J

Hi

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*6**

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ANC

ANCHORS, or ARROWHEADS, in architecture are commonly placed as part of the enrichments of the boukins of capitals of the Tuscan, Doric, and Ionic orders, and also of the boultins of bed-mouldings of the Doric, Ionic,

and Corin- thian cornices, anchors and eggs being carved alternately, whence the echinus or ovolo itself is popularly called eggs and anchors.

ANCHORS, in heraldry, are emblems of hope, and are taken for such in a spiritual as well as a temporal sense, see the extracts under the word. In contrast with that from a late noble poet, our pious readers will remember with pleasure St. Paul's beautiful allusion to hope as ' an anchor of the soul/ Heb. vi. 19, 30 : Socrates said ' To ground hope on a false supposition, is like trusting to a weak anchor ;' and ' ovrt vavv t£ I voc ayKVptov, OVTI fiiov £% fiiaf tXiriEoQ opfii- vtov, a ship ought not to trust to one anchor, nor life to one hope.' Some of our best commenta- tors have overlooked the Apostle's fine con- tinuation of the metaphor in v. 20 : ' Where a forerunner hath entered for us' (Trpofyo/toc). The ' vail' of the nineteenth is the supposed vail or screen of a harbour, as the break-water for instance at Plymouth. The Prodromos is one who goes before, with a boat or otherwise, to cast the anchor within that vail or inner road.

ANCHORA, in entomology, a species of cimex inhabiting Japan, and first discovered by professor Thunberg.

ANCHORAGE, in commerce, the duty paid for liberty of anchoring in a port. It also signifies ground fit to hold a ship's anchor, so that she may ride safely. The best ground for a ship to anchor in is stiff clay, or hard sand ; and the best riding at anchor is when a ship is land- locked, and out of the tide.

ANCDORAGO, in entomology, a species of the Fabrician genus brentus, Linnean circulio from which Gmelin removed it to the genus brentus. It is a native of India. Also a species of cimex inhabiting North America.

ANCHORALIS PROCESSUS, in anatomy, the same with processus covacoides.

ANCHOVY, from anchova, Spanish ; or an- choi, Italian, of the same signification. The English name for the clupea encrasicolus, a fish much used by way of sauce, or seasoning. Sca- liger describes the anchovy, as about the length of a finger, having a pointed snout, a wide mouth, no teeth, but gums as rough as a saw. The fishing is chiefly in the night time ; when a light being put on the stern of the fishing vessels, the anchovies flock round and are caught in nets.

ANCHOVY PEAR, in botany, the fruit of a tree in the West Indies ; the grias cauliflora of Lin- naeus. It is about the size of an alligator's egg, of a brown colour, and commonly used as a pickle.

ANCHUSA, ALCANET or BUGLOSS, in botany, a genus of the monogynia

order and pentandria class of plants ; in the natural method ranking under the forty-first order, asperifoliae. CAL. a quinquepartite perianth, oblong and persistent : COR. monopetalous and funnel-shaped, the throat dosed with scales : STAM. five short filaments : ANTHER oblong and covered : PIP—, four ger-*

mina: STYL. filiform: STIGMA obtuse: PERI- CARP none; the calyx containing the seeds in its bosom : SEEDS four oblong, gibbous, and en-graven at the base. There are eight species, al. of which may be propagateed by seeds. 1. A. angustifolia, or perennial wild borage, seldom more than a foot and a half high. 2. A. cretica, or waited bugloss of Crete, a low trailing annual plant, whose branches seldom extend more than six inches. The plants perish soon after their seeds are ripe. 3. A. officinalis, or greater garden bugloss, a native of France and of the warmer parts of Europe : grows well in Britain. 4. A. orientalis, or eastern bugloss, a native of the Levant, but will grow in the open air in Britain if it has a dry sandy soil. It is a peren- nial plant, with long trailing branches. 5. A. sempervirens, or ever-green borage, is a very hardy perennial plant, with weak trailing branches. It grows naturally in some parts of Britain and Spain. 6. A. tinctoria, or true al- kanet, grows naturally in the Levant, but is equally hardy with the orientalis. 7. A. Virgi- nica, or puccoon, a native of North America. 8. A. undulata, or Portugal bugloss, a biennial plant, which grows to the height of two feet, and sends out many lateral branches. The flowers of the A. officinalis have obtained the name of cordial flowers, as they are cooling and softening as a medicine. The root of the tinctoria affords an elegant red colour to oily substances, and is frequently a colouring ingredient in ointments, plasters, &c. The small roots are to be pre- ferred, as having proportionably more bark than the large ones. The alkanet root which grows in England is greatly inferior to what comes from abroad.

ANCHYLOBLEPHARON, or ANCYLOBLE- PHARON, from ayrvXoc, bent, and /SXtˆapov, the eye-lid : a distemper of the eye-lids, wherein they sometimes cohere to each other, and sometimes to the ball of die eye itself. It is a disorder sometimes brought with an infant into the world, and is always dangerous and difficult of cure. When the eye-lids grow to the cornea it scarcely ever admits of a cure.

ANCHYLOMERIS, in medicine, a concre- tion of the soft parts.

ANCHYLOSIS, in medicine ; from ayruXow, curvo ; a stiffness or immobility of the joints. The mobility of a joint may be more or less in-terrupted by different diseases of the bones, par- ticularly a tumefaction of their extremities, caries, fracture near to or within the joint, dislocation, twisting, and crushing of the bone ; as well as by fleshy excrescences,

aneurisms, hydropical accu- mulations, 8cc. The muscles also may give rise to the stiffness of a joint, when the flexors con- tract so strongly that the extensor muscles lose their force, in which case a contraction, as it is termed, is produced. To effect the cure of this, as of every other disease, we must first discover and remove the original cause, which having been done, emollients, poultices, blood-letting, and the vapour-bath, may be used with success, taking great care to move the joint gently and by degrees, lest any inflammation should arise.

ANCHURUS, the son of Midas, king of Phry- gia, who, to propitiate the gods leaped into a

gulf, whicn an eartnquaKe had opened, and which it was said would never close until his father had thrown in the most precious of his possessions. Midas erected there an altar of stone to Jupiter, which was the first object he turned into gold when he had received the power of so doing from the gods ; and Plutarch speaks of this lump of gold being in existence in his time.

ANCI, in Greek, yaXtayKwvtf, weasel-elbowed ; from ya\»j, a weasel, and ayicwv, an elbow ; an epithet used by Hippocrates, for those who, by the head of the os numeri slipping into the ala, have an arm shorter than it ought to be, and seemingly like the elbow of a weasel ; whence they are called by some mustelani, which fully expresses the Greek words.

AN'CIENT, n. & adj.~\ Immediately from AN'CIENCY, the French ancien,*

AN'CIENTLY, [which is generally de-

AN'CIENTHESS, [rived from the Latin

AN'CIESTRY, antiquus; from ante,

AN'CIENTY. J before. — Old ; but of

more force, and referring to remoter time. An- cient is opposed to modern, as old to new ; the distance of time to which it relates is however •lot strictly denned.

Of noble actcs ancyently enrolde,

Of famous princis and lordes astate, By thy report ar wontc to be cxtold,

Regestringe trewly every forrnarc date.

Percy's Relieves, vol. i. p. 97.

For sage wysdom's sake and for the vse of thynges, :ind also for rcstrainyng the wantonnes of youth, au- thoritic should be committed vnto the ancientes.

Udall. 1. Paul to Timothy, ch. v. Of all nations under heaven, the Spaniard is the most mingled and most uncertain. Wherefore most foolishly do the Irish think to ennoble themselves by cresting their ancientry from the Spaniard, who is unable to derive himself from any in certain.

Spenser on Ireland.

Trebisond anciently pertained unto this crown ; now unjustly possessed, and as unjustly abused, by those who have neither title to hold it, nor virtue to rule it.

Sidney.

The colewort is not an enemy, though that were an- ciently received, to the vine only, but to any other plant, because it ilraweth strongly the fattest juice of the earth. Bacon.

As fur nobility in particular persons, it is a reve- rend tiling to see an undent castle or building not in decay ; or to see a fair timber-tree sound and perfect. Bacon's Essay on Nobility.

The 1'escenine and Saturnian were the same; they wire called Saturnian from their ancientness, when Saturn reigned in Italy. Dryden.

And though the ancients thus their rules invade, -4s kings dispense with laws themselves have made; Moderns, In-ware ! or if you must offend Against the precept, ne'er transgress its end. Pope. AN'I IIM. A corruption of Ensign. See ENSIGN. Not in present use.

In the meane season, they which were besieged 'in Calais] made knownr their state to the French king by signes and tokens; for at Ins first coming, they within the towne si-t up his ancient on the chic test tower of the eastle, and also they set out 1. aimers of the duk. s ;in,l ,-arles of France.

,SV,mv\ Chrn. Howe's Ed. 1614. Tins is Othello's a,irifnf, as I take it,— J

lie sum,- ind.'-.i, a ven v.ilianl fellow. Shalutp.

ANCIENT, a term formerly used for the grand ensign or standard of an army.

ANCIENT DEMESNE. The number of names, &c. of all manors, after a survey made of them, were entered in a book called Doomsday-book, yet remaining in the exchequer ; and such lands as by that book appear to have belonged to the crown at that time, and are contained under the title, terra regis, are called ancient demesne. The tenants in ancient demesne are of two sorts ; the one hold their lands frankly by charter; the other by copy of court-roll, or by the verge, at the will of the lord, according to the custom of the manor. The advantages of this tenure are, 1. That tenants holding by charter cannot be rightly impleaded out of their manor ; and when they are, they may abate the writ by pleading the tenure. 2. They are free from toll for all things relating to their livelihood and husban- dry; nor can they be impannelled on any inquest. These tenants held originally by plough- ing the king's land, plashing his hedges, &c. for the maintenance of his household ; and it was on this account that such liberties were given them, for which they may have writs of monstravenint to such as take the duties of toll, &c. No lands are to be accounted ancient demesne, but such as are held in soccage. The book of doomsday decides whether land be ancient demesne or not.

ANCIENT Music; by this expression is more particularly understood such musical composi- tions as were composed from the time of Pales- trina to that of Handel and J. S. Bach; i.e. from the year 1529 to 1684.

ANCIENTS, in inns of court, import a distinc- tion of a certain degree. Thus in Gray's Inn there are benchers, ancients, barristers, and students under the bar; the ancients are the elder barristers. In the inns of Chancery there are only ancients and students ; and among the ancients one is the yearly principal or treasurer. In the Middle Temple ancients are such as have past their reading.

ANCILLA, in entomology, a species of pha- lasna of the bombyx tribe. This is the Fabrician obscura, and the noctua ancilla of Schmettere. It is a native of Germany according to Gmelin, and of Italy according to Fabricius. The pha- laena ancilla of Cramer is. an Indian insect the noctua dioscorea of Fabricius.

ANCILLARY. Lat. ancilla, (perhaps from the obsolete word ancillare, to administer,) a fe- male servant ; a waiting-woman. Affording as- sistance in an humble capacity ; rendering sub- ordinate aid ; subservient to.

ANCILLON (David), a minister of the re- formed church, born at Metz in 1617. He was entered in his tenth year in the Jesuits' college, where he gave such proofs of his genius, that the heads of the society tried every means to draw him over to their party ; but he continued firm against their attacks. In 1623 he went to Ge- neva, and studied divinity under Spanheim, Diodati, and Tronchin. In 1641 the synod of Charentou gave him the church of Meaux, where he acquired great reputation. He re- turned to Metz in 1653, and remained there till the revocation of the edict of Nantes in 1685. He then retired to Francfort, and about

the end of 1685 became minister at Hanau. A great jealousy in the other ministers tending to make his situation uneasy, he afterwards re- moved to Berlin. Here he died in 1692, aged seventy-five. His library was one of the noblest collections in the hands of any private person in the kingdom. His principal works are, his Apology for the Lives of Luther, Zuinglius, and B £za ; Life of William Farel ; and an Account of the Dispute concerning Traditions.

AXCILLON (Charles), eldest son of the preced- ing was inspector of the French courts of justice at Berlin, and historiographer to the king of Prussia. His public works are, Critical Remarks on the public Edifices of Berlin; the Life of Soliman the Magnificent, a Tract on the Revocation of the Edict of Nantes; Memoirs of the Lives and Writings of the most celebrated modern Cha- racters in the Republic of Letters. He died at Berlin in 1715.

ANC1STRUM, in botany ; rrom ayrwrrpov, a hook ; a genus of thernonogynia order, and dian- dria class of plants of the natural order of rosaces. Its generic characters are, CAL. perianth, one-leafed : COR. superior : STAM. filaments ca- pillary : AXTH. roundish : PIST. germ oblong : STY. filiform : STIC, pencil-shaped : PER. none : SEED single. The species are three : 1. A. de- cumbens ; 2. A. lucidum, shining ancistrum ; 3. A. latebrosum, hairy ancistrum.

ANCLABRIS, among the ancient Romans, a table in temples, whereon the priests eat their portion of the sacrifices and oblations.

ANCLAM, a strong town in the circle of the same name, in Western Pomerania, Upper Sax- ony, and seated on the Pene, thirty-six miles S. S. E. of Stralsund. Its ancient name was Tanglim, whence some have supposed

it to have been the seat of that body of Saxons, called by Tacitus, Angli, some of whom emigrated to South Britain. In latter times it made a figure among the Hanse towns; being advantageously situated amidst excellent pasture lands and fer- tile corn-fields; and the river Pene affording good opportunities of fishing, and exporting their produce. The preacher for the time being in the church of St. Nicolas is superintendent of the Anclam synod, which consists of twenty clergymen. Anclam has several yearly markets ; its manufactures are woollen cloth, and other stuffs, leather, and snuff-boxes. It was first ceded to Prussia by Sweden in 1720, and suf- fered severely during the seven years war, when its works were entirely demolished.

AN CLIFF, a small town in Lancashire, two miles from Wigan. It has a hot spring, called the Burning Well, which is cold and has no smell; yet a sulphureous vapour issues from it upon emptying the well, and the water bubbles up as if boiling : upon putting a lighted candle thereto it immediately catches the flame like spirits ; it burns several hours, and sometimes a whole day, in calm weather, with a heat strong enough to boil a pot, though the water itself remains cold, and will not bum when taken out of the well.

ANCUBF.R, a river and territory on the gold coast of Guinea, west of Axirn.

ANCLOTK, a small island near the coast of

Florida, between Charles Bay and the river St. Pedro. Lontr. 83° 4 1′ W. lat. 29° 4′ N.

ANCLOTE POINT, a promontory on the penin- sula of California. Long. 115° 11′ W. and lat. 29° 17′ N.

ANCOCUS CREEK, a river of North America, in New Jersey, falling into the Delaware, six miles south-west of Burlington. It is navigable sixteen miles from its mouth, and considerable quantities of timber are exported from it.

ANCON, in ancient geography, or Ancona, a celebrated town of the Picene, now well known under the latter name. It was a Sicilian colony, and derived its name from its situation, which resembles the bend of the elbow. A medal of this town represents, as in the annexed figure, an arm embow- ed, or bent, so as to make an elbow. The port built by the emperor Trajan was once the finest in Italy ; and the temple of Venus at this place was greatly celebrated. For its modern history see AXCONA.

ANCON, in anatomy, the gibbous eminence or flexure of the arm, whereon

we rest in leaning, commonly called olecranum.

ANCON, in antiquity, was used by the Car- thaginians, to denote a dark prison or dungeon. Suidas mentions one in which Gelimer used to confine all who displeased him, and from which Belisarius delivered many persons.

ANCON, in architecture, the corner or quoin of walls, cross beams, or rafters. In the ancient architecture it denoted the two branches of a square which meet in a right angle, as well as the brackets or shouldering pieces, called con- soles and corbells by the moderns.

ANCONA, a province in the papal territories in Italy. It lies between the Adriatic on the east, and the Appenines on the west ; Abruzzo on the north, and the duchy of Spoletto and that of Urbino, on the south. The air is indif- ferent ; but the the soil is fruitful, particularly in hemp and flax, and there is great plenty of wax and honey. It contains several large towns, which are all episcopal or archiepiscopal sees.

ANCONA, a sea-port of Italy, the capital of the district of that name, and the see of a bishop; situated fifteen miles north of Loretto, and 115 east of Rome. Clement XII. made it a free port, and built a mole for the security of the harbour upon the ruins of the ancient mole of Trajan. This mole is about 2000 feet in length, 160 in breadth, and sixty in depth below the surface of the sea. The harbour is the best in all the pope's dominions, and abounds witli a peculiar species of shell-fish, called bellari ; and at Rome, becconi di cardinale, or dainties fit for a cardinal. The town is situated on two hills ; one of which is at the point of Cape St. Syraco, whence there is a delightful prospect. On the other stands the citadel, commanding the town and harbour. The streets are said to be narrow and contain few buildings of any hn|K>rtance or architectural beauty. The cathedral is a low structure, but faced with fine marble. The ex- change is a handsome square portico, in which is an equestrian statue of Tnyan. The triura-

phal arch of Trajan of veined marble, which was built upon the inolo, remains almost entire. The Jews are numerous here, and reside in a particular quarter of the city. This town par- took considerably of the late agitations of Europe. In February, 1797, it was taken by General Victor, after the battle of Imola, but restored to the pope by a treaty of peace on the nineteenth of the same month. Little more than two years after this it was blockaded by the Russians and Turks, and in thirteen days

surrendered. In 1801 it was again assigned to the French, who returned it the following year to the pope. In Ancona there is a sugar refinery, a manufacture of white paint and lead introduced from England, and a consi- derable soap-work. Its principal exports are, wool, grain, silk, skins, ship-biscuits, sail-cloth, sulphur, alum, soap, and fruit. It is no uncom- mon thing to find marquesses and counts engaged in commerce. The tide does not rise at An- cona above a foot, and near the Mediterranean is scarcely visible. Lon. ?3° 35 E., lat. 43° 36′ N.

ANCON./EUS MUSCULTTS, in anatomy, the sixth muscle of the elbow, so called as being situated behind the solid of the ancon oj elbow.

ANCONY, in the iron-mills, a bloom wrought into the figure of a flat iron bar, about three feet long, with two square rough knobs, one at each end. About three quarters of cwt. is melted off from a sow of cast iron ; then ham- mered at the forge into a mass of two feet long, and of a square shape, called a bloom ; this is sent to the finery, where, after two or three heats, it is brought to the figure above mentioned, and called an ancony. The middle part is about three feet long, and of the shape and thickness the whole is to be ; this is sent to the chasery, where the ends are wrought to the shape of the middle, and the whole made into a bar. See BAR.

ANCORALIA, in antiquity, the ropes to which the anchors of ships were fixed.

ANCOURT (Florent Carton, d'), a French actor and dramatic writer, born at Fontainbleau in 1661. Hestudied in the Jesuits' college at Paris, and after lie had gone through a course of philo- sophy, applied himself to the civil law, of which he was admitted advocate at seventeen years of a<_re ; but marrying an actress, he embraced her profession ; wrote numerous plays, many of which still keep possession of the French stage ; and was much in favour at the court of Louis XIV. Ancnurt at length quitted the theatre in 171B, and retired to his estate of Courcelles le Koy, where he applied himself wholly to devo- tion, and composed a translation of the psalms in verse and p. sacred tragedy, which were never printed. He died in 1726, aged sixty-five. He wrote in all iifty-two plays, which, in the last edition, 17.'>0, make nine volumes.

ANCOVK, a district of Madagascar, near the centre of the island, on the east side of the great range of mrunuin.s. The air is healthy though thin, and frequently cold. The inhabitants are called Hovas or Amboilambs. The barrenness of the soil renders it impossible for them to sup- port themselves by agriculture, llt-nce the slave

trade is carried on to a much greater extent here than in any other part of

Madagascar. The principal town is very irregular, and called Ta- nane Arrivon, which signifies, thousands of vil- lages united

ANCRE, a small river of France, in the de- partment of Somme.

ANCRE, a town of France, department of Somme, seated on and named after the river ; fifteen miles from Amiens, and twelve west by north of Perone. Here are salt-petre works, and a post office, and small bleaching-fields.

ANC REE, or ANCHORED, in heraldry, a sort of cross so called, because the four extremities resemble the fluke of an anchor.

ANCRUM, a parish of Scotland, in the centre of the county of Roxburgh, extending with Langnewton which is united to it, be- tween five and six miles in length, on the north side of the Teviot, and about four in breadth. It is three miles north of Jedburgh, and forty-five south-east of Edinburgh.

ANCTERES, in ancient medicine, seem to have been the same as our sutures. Some also speak of a strong kind of sticking plaster undei this denomination

ANCUBITUS, among ancient physicians, a disease of the eyes, wherein there is an appear- ance of sand or little stones sprinked on them. It is also called petrification

ANCUS (Martius), the fourth king of Rome, succeeded Tullius Hostilius A. C. 639. He defeated the Latins, subdued the Fidenates, and conquered the Sabines, Volscii, and Veien- tines : he rebuilt the temple of Jupiter Feretrius in a very magnificent manner; and spent the latter years of his reign in improving the city, and enriching its inhabitants : he enlarged Rome by joining to it mount Janicula, and founded the harbour of Ostia. He died about A. C. 615, after a prosperous reign of twenty-four years.

ANCY-LE-FRANC, a small town of France, the head of a canton in Champagne, depart- ment of the Yonne, arrondissement of Tonnerre, thirty miles east of Anderre. It has a beautiful castle and gardens, and about 1200 inhabitants.

ANCYLE, in antiquity, a small brazen shield, said to have fallen from heaven in the reign of Numa Pompilius, a voice being heard at the same time declaring that Rome should be mis- tress of the world while" she preserved that shield. Though there was but one ancyle that fell from heaven, yet there were twelve pre- served ; Numa, by the advice, as it is said, of the goddess Egeria, having ordered eleven others, perfectly like the first, to be made by Veturius Mamurius, that if they should attempt to steal

it as Ulysses did the Palladium, they might not be able to distinguish the true ancyle from the false ones. These ancylia were preserved in the temple of Mars, and committed to the care of twelve priests instituted for that purpose. They were carried every year, in the month of March, in procession all round Rome; and on the thirtieth of that month were again deposited in their place.

ANCYLE, in medicine, a fixation of the joints from a settlement of the humours. See AM-

ANCYLOGLOSSUM ; from ayicvXoc.crooked, and yXwirffa, the tongue ; tongue-tied, a con- traction of the ligaments of the tongue. Some nave this imperfection from their birth, others from disease. In the first case the membrane which supports the tongue is too short or too hard ; in the latter, an ulcer under the tongue, healing and forming a cicatrix, is sometimes the cause. The proper method of treatment is to snip this membrane with scissars in two or three places, taking care not to extend the points of the scissars as far as the fraenulum.

ANCYLOMELE ; from ayicvXog, crooked, and finXn, a probe ; a surgeon's crooked probe, or probe with a iiook.

ANCYLOSIS. See ANCHYLOSIS.

ANCYLUS, in conchology, a name given by Geoffrey to the patella lacustris of Linnaeus.

ANCYRA, in ancient geography, the capital of Galatia, near the river Halys, said to have been built by Midas, king of Phrygia, and named from an anchor found there. This town struck medals of Nero, Nerva. Antinous, Anto- ninus Pius, L. Verus, Commodus, Sept. Severus, Caracalla, Geta, Trajan, Valerianus sen. Gal- lienus Salonina. It was greatly improved by Augustus, deemed the second founder of it, as appears from the Marmor Ancyranum. It is now called Anguri, or Angouri.

ANCYROIDES, oyicupo«5»/c, or coracoides, in anatomy, the process of the shoulder bones in form of an anchor.

ANCYSTRUM, in botany. See AKCISTRUM.

AND. According to Tooke's hypothesis the imperative an-ad of the verb anan-ad. to provide or furnish in a mass. An is often used for and by the chroniclers.

He nome wyj> hym of Engelond jod knyjt monyon, An myd gret poer and muche folc puderward vendc

anon.

So pat he sone come bysyde hys fon echon, An bylenede hym bcr al nyjt, and al hys ost al so, An pojte anon amorwe strong batayle do,

R. Gloucester, p. 319. Sure his honesty

Got him small gains, but shameless flattery And filthy beverage, and unseemly thrift, And borrow base, and some good lady's gift. Spenser. What shall I do to be for ever known, And make the age to come my own? Cowley.

The Danes' unconquerM offspring march behind ;

And Morini, the last of human kind. Dryden.

It shall ever be my study to make discoveries of this nature in human life, and to settle the proper distinctions between the virtues and perfections of mankind, and those false colours and resemblances of them that shine alike in the eyes of the vulgar.

Addison.

ANDA, in botany, a tree of Brazil, the wood of which is spongy and light ; the leaf long, tibrous, and pointed ; the flower yellow and large, and the fruit a gray nut, which encloses two kernels of the taste of chestnuts in a dou- ble rind. The fruit is said to be purgative and slightly emetic : two or three of the kernels sup- ply a dose. Oil is pressed from these kernels, with which the natives anoint their limbs. The rinds of the fruit thrown into ponds kill the fish.

ANDABAT./E; from ava/3arai, mounted"; in antiquity, a sort of gladiators, who mounted on

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horseback or in chariots, fought hood-winked, having a helmet that covered their eyes, whence the proverb ' andabatarum more,' denoting rash inconsiderate measures

ANDACOLLO, a town of the province of Coquimbo, in Chili ; and the seat of the gold mines of the district.

ANDAHUAILAS, a province of Peru, bounded on the north-east by the province of Aimaraez andAbancay and the mountains of the Andes ; on the south-east by Parinacocha, south by Lucanas, and west by Vilcas Huaman. Its length from north-west to south-east is seventy- two miles, and forty-five miles from east to west. Being mountainous, and consequently cold, it produces all the fruits natural to a temperate climate. It produces annually 750000 pounds of sugar. Population 12,000.

ANDALUSIA, the most western province of Spain, bounded on the north by Estremadura, La Mancha, and the Sierra Morena mountains ; on the east by Granada and Murcia ; on the south by Granada, the straits of Gibraltar, and the Atlantic Ocean ; and on the west by Alentejo and Algarva in Portugal, from which it is sepa- rated by the river Guadiana. Its greatest length is 250 miles, and its breadth 160 miles. The chief cities and towns are Seville the capital, Baeza, Gibraltar, Cordova, Cadiz, Medina Si- donia, Jaen, Port St. Mary, &c. It is the best, most fruitful, and the richest part of all Spain ; and abounds in all kinds of fruits, wines, grain, silk, sugar, oil, cinnabar, and other metals. The Andalusian bxills are in great request, and the wool is a considerable article of commerce. It has a good air, a serene sky, a fertile soil, and a great extent on the sea-coast fit for commerce.

ANDALUSIA, NEW. See GUIANA, PARIA, and CUMANA.

ANDALUSICUS, in ornithology, a species of the tetrao inhabiting Andalusia, the Anda- lusian quail of Latham.

ANDALUSITE is a massive mineral, ot a flesh colour, but sometimes rose- red ; occasionally crystallized in four-sided rectangular prisms, ap- proaching to rhomboids. The structure of the prisms is lamellar, with joints parallel to their sides. It is translucent, and scratches quartz ; is easily broken. Its specific gravity is 3.165 ; infusible by the blowpipe ; in which respect it differs from felspar, though called felspath apyre by Haiiy. It is composed of fifty-two alumina, thirty-two silica, eight potash, two oxide of iron, and six loss. It belongs to primitive countries, and was first found in Andalusia in Spain. It is now seen in mica slate in Aberdeenshire, in the Isle of Unst, at Dartmoor, at Killiney near Dub- lin, and at Douce mountain in the county of Wicklow

ANDAMAN, the GREAT, and the LITTLE, are the names of two islands in the Bay of Ben- gal, so far connected with our East India empire as to furnish occasional anchorage, and one very good harbour for ships of war,

during the pre- valence of the north-east monsoon. They are surrounded by numerous islands, of the general name of the Andamans ; these are the two principal ones. The Great Andaman, lying in north latitude 10° 32 , and 92° 3′ east longitude,

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is 145 miles in length, by twenty-five miles in average breadth ; two narrow straits divide it into what might properly be called three islands, and the name of Chatham Island is given to the northern portion, in which Port Cornwallis is situated. The Little Andaman lies southerly of the group, about thirty miles from the Great Andaman, and is twenty-eight miles long by seventeen broad. It contains no harbour for shipping, but good anchorage is found near the shore. The tides are regular here, rising about eight feet in the springs, and the flood setting in from the west.

The population, scattered over the whole group, amounts to about 2300 or 2500 souls. They are described as amongst the ugliest and most barbarous of the human race ; are never clothed but in their own peculiar way of regu- larly in a morning besmearing themselves with mud from head to foot, which, baking in the sun, is found to protect them from the insects that abound here. They live in huts composed of four sticks fastened transversely at top, and covered by branches of trees. Their woolly hair they soak in a mixture of red ochre and water. Their only bed is formed of leaves heaped together. Of religious principles, as far as their habits are known, they have none. The traveller who accidentally sees them crawl into their huts, or receives their curious salutation of lifting IP,) one leg and striking the under part of •Aie thiuii, hardly knows whether he is beholding A creature entitled to the name of man.

A variety of useful woods for masts and ship- building are found here, as well as for furniture and ordinary building. The ichneumon, and a degenerated breed of swine are said to be the only quadrupeds ; the birds also are few ; and the fi—h only abundant in the north-east monsoon. At this period the shell-fish, particularly oysters, are very tine. The inhabitants generally appear half starved, though they are said to shoot and spear fish with u'reat skill.

In 17(.U a llritish settlement was attempted on the northern extremity of the Great Andaman, which was removed in \7'<'.l to Port Cornwallis on the east of the island, and about fifteen miles from its northern point. The design was to establish means for the accommodation of ship- ' iii_i~ during the north-east monsoon, and to make it a place of banishment, for

the criminals of 1'enual. Hut the insalubrity of the air, and disputes with tin' natives, induced the abandon- •fient of the place shortly alter this removal.

ANDAM KNT< >, 1:1 music, denotes one of the three species < >!' subject suited toafuge. Item- bracˆ all the notvs of the key, or even more, and uvneraliy contains i\o or more members, or Tieideiital phrases.

A \ I).\ YIT., in music, signifies a movement nioderati 1\ >lo\v, bet\een larˆo and allegro. Andante l:n_o -i.iuties that though the music inn-t be performed slow, yet the time must be obsi-i \ ed very exactly and the sound of each note kep; dis; met.

ANhAYK, a to\, a of France, in the depart- m< lit of t-hc lower Pyrenees, arrondissement of I! !\i'!ine, famous lor 11- ' iandv. It is seated on

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the mouth of the Bidassoa, opposite Fontar.ibia in Spain, ten miles from Bayonne.

ANDECAVI, ANDEGAVI, or ANDES, in an- cient geography, a people of Gallia Celtica, having the Turones to the east, the Namnetes to the west, the Pictones to the south, and the Aulerci Ccenomani to the north. The province is now called Anjou.

ANDEGAVUM, the capital of the Andegavi, is now called Angers.

ANDELES. See ANDELY.

ANDELFINGEN, a market town and district in the Swiss canton of Zurich, circle of Winter- tnur, between the towns of SchafThaussen and Winterthur. It lies on the river Thur, which is here crossed by a covered bridge. The adjoin- ing country, particularly the Val de Flaach, is rich in corn, wine, and fruits.

ANDELLE, a river of France, in the depart- ment of the Eure. It rises in the neighbour- hood of Forges, and falls into the Seine nine miles above Rouen. Large rafts of timber, cut in the woods of Peitre and Lyons, are carried down this river to Paris.

ANDELY, or ANDELES, a town and arron- dissement of France, in the department of the Eure, divided into two parts by a paved cause- way. Here is a fountain to which pilgrims formerly flocked from all parts on the feast- day of the saint to which it is dedicated. It is twenty-six miles south-east of Rouen, and forty north-west of Paris.

ANDENAS, a small island of Norway, in the government of Drontheim.

ANDEOL, ST. a town of France, in the de- partment of the Lozere, five miles south of St. Viviers.

ANDERA, in ancient writers, a swath in mowing ; as much ground as a man can stride over at once.

ANDERAB, the most southern city of the province of Balkh, possessed by the Usbeck Tartars. It is rich and populous, but of no great strength. The neighbouring mountains yield quarries of lapis lazuli, in which the Buk- hars carry on a great trade with Persia and India. There is no other way of crossing the mountains but by the road through this city.

ANDEREN/E SAL, in natural history, a name given by many of the old writers to the natron of the ancients. See NATRON.

ANDERLECHT, a fortress of Brabant, two miles north of Brussels, and containing 1930 inhabitants.

ANDERNACII, a city of Cologne, in the circle of the Lower Rhine, fortified with a wall, castle, and bulwarks. It lias a trade in stone- jugs and pitchers, many of which are sent to the mineral waters at Dunchstein. Near it is the place of junction of the various small timber floats, intended to form the great float of 1000 feet in length and 90 in breadth, commonly des- tined for Dort in Holland. This immense raft is piloted in its course by 400 men, and when sold produces generally 100,000 florins, £10,000 sterling. There are three monasteries here, and several churches. It is six miles north-west of Colrlentz, and twenty-five S. S. E. of Cologne.

ANDERO, ST. See SANTANDER.

ANDERSON (Alexander), a mathematician of the sixteenth century, who published, 1. A Supplement to Apollonius, entitled Supplemen- tum Apollonii Redirivi, 4to. Paris, 1590;

2. AlnoXofia, pro Zetetico Apolloniani Pro- blematis a se jam pridem edito in Supplemento Apollonii Redivivi, &c. 4to. Paris, 1615;

3. Francisci Viete de Equationum Recognitione et Emendatione Tractatus duo, 4to. Paris, 1615 ;

4. Vietae Angulares Sectionis, Sec. He was born at Aberdeen, and became professor of mathema- tics at Paris.

ANDERSON (Sir Edmund), a younger son of an ancient Scotch family settled in Lincoln- shire. He studied at Lincoln College, Oxford ; and in the Inner Temple. He was appointed queen Elizabeth's serjeant-at-law in the nine- teenth year of her reign ; and in 1582 lord chief justice of the common pleas. He was one of the commissioners to try Mary queen of Scots ; and died in 1605. His works are, 1. Reports of many principal Cases argued and adjudged in the time of queen Elizabeth in the ˆCommon Bench, London, 1644, folio; 2. Resolutions and Judgments on the Cases and Matters agi- tated in all the Courts of Westminster in the latter end of the reign of queen Elizabeth, Lon- don, 1653, 4to.

ANDERSON (Adam), descended of Scottish parents, was many years a managing clerk in the South Sea House, a trustee for the settle- ments in Georgia, and in the court of the Scotch corporation. He published Historical and Chro- nological Deductions of Trade and Commerce, 2 vols. folio ; and died at the advanced age of 75, in 1765.

AXDERSOX (James), brother of the preceding, was minister of the kirk of Scotland to a congre- gation in Swallow-street; and left behind him a treatise on the Constitutions of Freemasonry, and Royal Genealogies, folio.

ANDERSON (John), was born at Hamburgh in 1674, of which city he rose to be syndic, and was employed as negotiator of its concerns in different courts of Europe. He published the Natural History of Iceland, Greenland, Davis's Straits, and other northern regions.

ANDERSON (George), a peasant, born in 1760 at Weston, Buckinghamshire, early displayed such extraordinary mathematical genius, that the Rev. Mr. King of Whitchurch placed him at a grammar school, and afforded him the means of prosecuting his studies at Wadham college, Oxford. On his declining afterwards to take priest's orders, his worthy patron procured him a olace under the Board of Control, whence he rose to be accomptant-general. He published, A General View of the Affairs of the East India Company, since the conclusion of the War, in 1784, in 4to.; and translated from the Greek of Archimedes, Arenarius, or a Treatise on Num- bering the Sand. Mr- A. died in 1796.

ANDERSON (James), an antiquarian of the Scottish bar. was born in 1662, and died in 1728. He wrote, 1. An Essay showing that the Crown of Scotland is Imperial and Inde- pendent, 8vo. Edinburgh, 1705; being an An- swer to Mr. Atwood's book, entitled The Supe-

riority and direct Dominion of the Imperial Crown and Kingdom of England over the Crown and Kingdom of Scotland ; 2. Collec- tions relating to Mary Queen of Scotland, 4 vols. 4to. Edinburgh, 1727 ; 3. Selecrus Diplomatum et Numismatum Scotias Thesaurus, folio, 1739, to which Ruddiman supplied a preface.

ANDERSON (James), a Scottish miscellaneous writer of great eminence, was born about the year 1739 at Hermiston, a village six miles from Edinburgh. His family had long been respect- able farmers ; and our author may be said to have inhaled with his first breath that spirit of agricultural knowledge for which he became so distinguished. Deprived of both his parents while yet young, he was discouraged by his friends from prosecuting his studies beyond a common school education ; and designed to be the plodding occupier of the paternal farm ; but having, as he informs us, read Home's Essay on Agriculture, and finding that he could not un- derstand the reasoning for want of chemical knowledge, he immediately resolved to attend Dr. Cullen's lectures on that science, and found in this learned author a sincere friend, who carefully directed his future studies. He did not, however, neglect the duties of his farm, of which he took the management upon himself about the age of fifteen, assisted by his four sisters. About this time Dr. Cullen delivered a course of lectures on agriculture, in a private manner to a few of his friends and favourite students, of which Anderson was the only per- son who took notes. He now introduced for the first time the small two-horse plough, at pre- sent in universal use over the greater part of Scotland. His friends, soon perceiving that his ardour in the pursuit of literary knowledge was not to be controlled, suggested the propriety of his following the medical profession ; but to this he imbibed a decided aversion, and therefore determined to prosecute his original line of life. Having occupied Hermiston for a few years, he took, while yet a minor, a larger farm in the wilds of Aberdeenshire, consisting of about 1300 acres of land almost in a state of nature. In the midst of the difficulties with which he had to contend in bringing this tract into cultivation he began his career as an author with his Essays on Planting, &c. first printed in the year 1771 in the Edinburgh Weekly Magazine, under the signature of Agricola. His Essays on Agricul- ture, Observations on National Industry, and several of his early writings, were composed during a residence of more than twenty years at Monkshill, the name of the above-mentioned farm. In 1768 our author married Miss Seton, of Mounie, a descendant of the ancient and noble house of Winton, who brought him thir- teen children. By this marriage the estate of Mounie, in Aberdeenshire, came into his posses- sion ; and his merits as an author becoming now generally known, his acquaintance and cor- respondence began to be courted by men of let- ters, and his society sought by persons of the first respectability. In the year 1780 the hono- rary degrees of A. M.

and LL. D. were conferred on him by the university of Aberdeen. In 1783 he removed to the neighbourhood of Edinburgh,

with a view to the better education of his in- creasing family, and about the same year printed and circulated proposals for establishing the Northern British Fisheries. The attention of government being excited to the subject, he was applied to by the treasury to undertake a survey of the western coast of Scotland, for the purpose of obtaining further information on this topic ; to which, with great public spiritedness, he de- voted himself without any recompense. In 1788 lie was deprived of his wife. About this time he was employed in his researches on the subject of sheep, and the improvement of wool, in concert with Sir John Sinclair; his opinions upon which, delivered to the Highland Society, are before the public. We next find him engaged in preparing for the publication of the Bee, a weekly period- ical work designed for the dissemination of use- ful knowledge among all ranks, and which met in the first instance with the greatest encourage- ment from the public. Nothing indeed but great mismanagement in conducting the com- mercial part of the work, for which, like many authors, he was ill adapted, could have caused it to fail in being a very profitable concern to him. His own writings form a conspicuous part of this book, under the name of Senex, Timothy Hairbrain, Alcibiades, and the greater part of the matter without signature. He numbered at this time amongst his correspondents General Washington, Dr. Franklin, Mr. Johnes the ele- gant biographer of Froissart, &c. In the course of this publication Dr. Anderson became in- volved in a dispute with the public authorities, respecting some revolutionary doctrines sup- posed to be contained in it; and having settled most of his family, he removed to the vicinity of London about the year 1797. In April, 1799, appeared the first number of his Recreations, a miscellaneous monthly publication, having for its principal objects agriculture and natural his- tory; it was continued to the extent of 6 vols. 8vo. During the publication of them he wrote and printed separately his Correspondence with General Washington, and a Calm Investigation of the Scarcity of Grain. The 37th number of his Recreations, which appeared in March, 1802, is his last publication. Dr. Anderson died on the 15th of October, 1800, aged sixty-nine. Other works of this writer are, 1. Thoughts on the Privilege and Power of Juries, 8vo.; 2. Re- marks on the Poor Laws in Scotland, 4to. ; :i. A Practical Treatise on Peat Moss, 8vo. ; 4. An account of the different Breed of Sheep in the Russian Dominions, 8vo.; 5. Practical Treatise on Draining Bogs and Swampy Grounds, 8vo. ; 6. On an

Universal Character, 8vo. 7. Observations on Negro Slavery, 8vo. The writings of Dr. Anderson did much to excite that ueneral attention to agriculture which be- caiiio so pievalent throughout Great Britain l.e;oie his (1,-ath. He wrote several articles in UK: I'.r.cyi lo|ia'ilia Britanmcu, and also in a .Monthly Review.

AM .i-.K-oN (Walter), a Scottish clergyman of Chnniside, where he died in 1 BOO ; he wrote 1. A History of France at different periods, 4to. i> vo!-> ; -. 'i lie Philosophy o4' Ancient Greco?*

investigated in its Origin and Progress to the. seras of its greatest celebrity ; &c.

ANDERSON, a county of the state of Tennessee, North America. Population in 1820,4668. Clin- ton is the chief town, 150 miles east by north of Murfreesborough.

ANDERSON'S ISLAND, an island in the North Pacific Ocean, near the north-western coast of America, so named by Captain Cook. Lon. 197° 40' E. lat. 63° 10' N.

ANDES. A stupendous chain of mountains, the most celebrated in the New World, called by the Spaniards ' Cordillera de los Andes ;' which, commencing at the mouth of the river Atrato on the isthmus of Darien, in the eighth degree of north latitude, stretches through the whole con- tinent, from north to south, in a line parallel to the Pacific, as far as Cape Pilares in the Straits of Magellan, a distance of at least 4200 miles. M. Humboldt, and some other writers, extend the parent ridge northward into New Spain, and consider the rocky or stony mountains of North America as forming a continuation of it as far as the northern limits of the American coast on the border of the Frozen Ocean. In this view the Andes form a most important chain, penetrating in its course from north to south almost all the climates of the earth, and presenting in some of its single heights perpendicularly an epitome of all the seasons. Under the equator they attain their greatest altitude, the Chimborazo standing to the elevation of 21,000 feet from the level of the ocean. Near the top respiration is difficult, and the cold more excessive than in any known region of the arctic seas; toward tho base the temperature is warm and luxuriant; and the lower savannas often glow with the utmost heat of the tropics. The plains of the Andes are distinguished by their remarkable elevation, which exceeds some of the loftiest mountains of the old world. Volcanic peaks are numerous in every stage of activity, pouring out their inex- haustible fires in regions of perpetual frost. There are also horrid crevices in the mountains, reaching to the depth often of several thousand feet, from which streams issue in all directions to the surrounding seas. Earthquakes also are 'frequent, some of

which have engulfed whole mountains and cities. So that these regions unite almost every thing delightful with every thing terrific in nature.

The principal chain of the Andes pursues a mean distance of 150 miles from the western shore, traversing New Granada,Quito, Peru, Chi- li and Patagonia. It is rich in metals, and abounds in volcanoes. The mountains of this prodigious range differ exceedingly in shape. In some parts they are crowded together in one entire mass ; in others they exhibit two or three distinct ridges connected by longitudinal valleys. In Chili the Andes are 120 miles broad, and consist of a great number of mountains chained together, all of a prodigious height. The first separation of the main chain southward is in New Granada, which continues in distinct ridges from north lat. 5° 15′ to 2° 30’, forming three lines nearly parallel to each other ; the western one being a continuation of the mountains in the province

of Darien, in some places reaching the height of 4500 feet, and dividing the province of Choco on the west from the river Cauca eastward. The middle ridge is the loftiest of the three, and runs between the latter stream and the waters of the great river Magdalena. Its head is elevated into the regions of perpetual frost, and when il- lumined by the rising or setting of the sun is most magnificent. The three most elevated points are Guanacas, Baragan, and Quindiu moun- tains. The eastern ridge divides the Magdalena from the plains of Meta, but possesses no very lofty mountains. In the province of Popayan these ridges re-unite, and form a line across the equator; but in the province of Quito they se- parate at almost half their altitude into their two most remarkable and most elevated chains, com- prising the Chimborazo, Cayambe Ureu, the Pichincha, Catopaxi, &c. At Cuenca, in three degrees south latitude, they again terminate in the parent range, from which point to their southern extremity the Andes are little known ; but, according to D’Anville, frequently consists of two or three pointed ridges from 100 to 150 miles in breadth, with immense plains between them ; the average height of which from the level of the sea, is, according to Ulloa, from 8000 to 10,000 feet. In Peru the Andes assume with the coast a south-east direction, and divide into several subordinate branches, forming immense plains, called table-land. In the Uplands many remarkable streams have their sources, which eventually uniting form the majestic river Ma- ragnon. The lake Titicaca, or Chucuito, is em- bosomed between two parallel ridges of the Andes, receiving from ten to twelve large rivers into its bosom. It is 240 miles in circumference, and navigable for the largest vessels. The island of Titicaca, pointing up from the waters, is sup- posed to have been once the residence of Manco Capac, and formerly adorned by

the incas of Peru with the celebrated Temple of the Sun. The great river La Plata, we remark, originates in these regions.

In Chili the Andes form three parallel ranges, of which the centre is by far the loftiest, con- taining several single mountains of more than 20,000 feet in altitude. Amongst which may be enumerated the Manflos, in south latitude 28° 45'; theTupungato in 33° 24'; the Desca- besado in 35°; the Blanquillo in 35° 4'; the Longavi in 35° 20'; the Chilian in 36°; and the Corcobado in 43°. The eastern and west- ern ridges are from twenty to thirty miles distant from the principal range. Fourteen volcanoes have been discovered in this part of the Andes ; from one of which an eruption occurred in De- cember, 1760, which rent one of the mountains asunder, and formed a very considerable lake. Throughout the whole province this Cordillera maintains an uniform elevation, and with its plains a breadth of about 120 miles. From the twenty-fourth to the thirty-second degree of south latitude the Andes are wholly desert, when they begin to be inhabited by various bar- barous tribes in alliance with the Araucanians. The Andes of Patagonia, or Terra Magellanica, are in the possession of savage nations.

The stupendous and lofty range of the parent

Andes are described by Humboldt as sending out, at nearly right angles, three dependent branches, called by the Spaniards Cordilleras.

The first of these inferior divisions, «aHt.t sometimes the Cordillera of New Granada, is on the coast of Venezuela. Though this chain is higher in point of general elevation than the others, it is inferior in breadth, and irregularly "bends from the river Atrato to the east, until it reaches the stream of Magdalena, which flows through the province of St. Martha, forming in its course the Sierra of Abibe and of Cauca, and the lofty plains of Tolu. On its approach to- wards the Gulf of Mexico, it becomes contracted progressively until it reaches the vicinity of Cape Vela. This secondary chain, which may be said to terminate off the Galley Point in the island of Trinidad, attains its greatest known elevation where it rears its snowy summit, or Sierra Nevada of St. Martha and of Merida, the former being nearly 16,490, and the latter above 15,201 feet in altitude. These mountains, so near the equator, covered with eternal snow, yet discharging boiling sulphurous water from their sides, are higher than the celebrated Peak of Teneriffe, and have been compared to Mont Blanc. In their descent, leaving the Panamo, or lofty desert of Rosa and of Mucachi, they form on the west side of the lake Maracaibo long narrow vales covered with forests and stretching from south to north. At Cape Vela the mountain-chain divides into two parallel ridges, which form three valleys in the direction of east and west, having all the appearance of having been the

beds of ancient lakes. Of these ridges the northern is the prolongation of the Sierra Nevada of St. Martha, and the southern a continuation of the snowy mountains of Merida, both of which are united again by two dams placed by the hand of nature as dikes for tha confining of the primeval collection of water. These valleys, thus enclosed, are of extreme alti- tude, viz. that of Caraccas to the east is the highest, and was calculated by Humboldt at 2660 feet above the level of the sea. The Ca- raccas lake appears to have forced for itself a passage through the Quebrada or cleft of Tipe. That of Aragua appears to have been gradually dissipated by evaporation, leaving some vestige of its former magnificence in a few pools charged with muriate of lime, and the low islets of Apa- recidas. The medium height of the Cordillera of the coast is about 4000 or 5000 feet. The loftiest summit next to the Sierra Nevada ol Merida is the Silla (or Saddle) of the Caraccas, which Humboldt calculated, from barometrical admeasurement, at the elevation of 8420 feet. Farther to the east the mountain-chain, espe- cially its primitive rocks, become suddenly de- pressed, the beds of gneiss and mica slate meeting with masses of secondary calcareous substances which envelope them, and rise to a considerable altitude. A detached range of mountains, in which no primitive rock can oe found, is formed by an incumbent mass of sand-stone extending from Capelluari.

The second branch, which stretches from the Andes across the American continent, is a chain of primitive mountains, called by Humboldt, who

surveyed them for upwards of 000 miles,, viz. from the Black River to the borders of the Grand Para, the ‘ Cordillera of the Cataracts of Ori- noco.’ It leaves the parent range between the third and sixth degrees of south latitude, and runs eastward from the Panamo, a high desert of Tuquillo and St. Martin, and the sources of the Guaviari, rearing the lofty summits of Umama and Canavami, and pouring forth the mighty rivers Ymerida, Meta, and Zama, which form the tremendous rapids of Ature” and Maypare”, commonly called the Roudals, the only open- ings existing between the interior of the conti- nent and the plain of the Amazons. The chain of mountains again acquires greater elevation and breadth beyond the cataracts, and occupies the track enclosed by the rivers Caura, Padamo, and Cavony, and stretches southward to the boundless forests where the Portuguese gather that powerful drug the sarsaparilla. The remain- ing unexplored wilds and regions are rendered inaccessible by the Guaicas, a dwarfish but very fair race, and the Guajaribos, a most desperate tribe of cannibals, so that the sources of the Orinoco have never yet been seen either by Eu- ropean or by civilized Indian. Don Antonio

Santos, disguised like a savage, his body naked, his skin stained of a copper colour, and speaking tluuntly the several Indian dialects, penetrated from the mouth of the Rio Carones to the lake ';f Parinie and the Amazons, arid by this asto- .iishitm' journey made us acquainted with the continuation of the chain. The ranˆe of moun- tains —inks lower, and contracts its breadth to •200 miles, where it takes the name of Serrania

;.l Dorado (Golden Mountain), of the first vi- sitors oi Sonih America, a lull which is entirely composed of shining \vllow mica. Stretching across tin; enunirv from this point eastward, the chain now meets tht! mountains of Dutch and i'lvnch Guiana, supplying in its course the viurres of the r.sseMiiibo, .Marony, Surinam, .in.l Ilcrbiee rhers. The. highest known point of this chain is the. active volcano of the Sierra Duida, in iat. :i ' 13', about 8,405 feet in alti- ich is surrounded by a rich savanna, ihiekly set. with the tropical pa.lm and anana, and regularly discharges at the close of the rainy season enonnou., volumes oftlame. This chain, as tar as it u as seen bv 1 lumboldt, contained no alluvial iorm;:tions, petrifaction, or organic re- mains. bi:t wa< composed wholly of granite, um.iss, mica slaie, and hornblende. The whole is chain is remarkable for its abrupt preci anl tin1 south. Of the third chain men- lionc.i by llumbohlt, no part was surveyed by his i,-i!-ty, but only Ik-came known to them •i:t of those who had parsed the im- rl ilat, or Pampas, which separates it

iVo'.i th.1 Inn j-oinj; ridu'es. it is called the Cor- 'I'-i'a oi tile (iiiquilos, alul is situated from the

r> i" iiit: 20 "f south la'.itutir, het\t'en the waters ofiiic Maiamiun ami the Hat i. Stretch ing ii'oin the iiiain stem, in a semicircular form, ˆ pa— , – th.oiuh tin ('li. ,(, (uit|iiilos and ', uuiUn th. b.i.-J iimmiLs of Peru and

Chili with the mountains of Brazil and Para- guay.

These subordinate chains, branching ofT from the original, divide that part of the continent over which they stretch into immense plains, called the valley of Orinoco, that of Maragcn, and the Pampas of Buenos Ayres, enclosed on the western side by the original stems, but open on the east and towards the Atlantic Ocean. Orinoco is covered with a coarse reedy herbage, and scattered with palms. Maraguon is covered with dense and impenetrable forests. The subsoil of these immense plains resembles tne compost of the neighbouring mountains. In Orinoco the primitive rock appears wrapt in sand-stone, with calcareous cement, or covered with calcareous concretions. These betray ves- tiges of recent organic remains, but exhibit none of those older impressions, as the belemmites and ammonites of Europe.

The most southern valley, or the Pampas of Buenos Ayres, is a dead flat of great extent, clothed like the vale of Orinoco with coarse herbage, and occupied by wild cattle. It con- tains beds of a secondary formation to an enormous depth, in which the most luxurious fruits are found in perfection.

The mineralogy of the Andes generally has been but little explored. A few particulars may be gathered from the traveller who preceded Humboldt ; but for any clear and satisfactory statement we must refer to that traveller.

According to Helms, the precious metals of Peru and Lima are deposited in veins of quartz or alluvial layers of sand-stone and iron-sand, resting in the argillaceous schistus, of which the great chain of the Andes is, according to this author, principally composed. At Potosi the principal silver mine abounds in ferruginous quartz, bedded in a fine yellow argillaceous slate. In the neighbourhood of the lake of Ti- ticaca, he describes the basis of argillaceous schistus as covered with alluvial deposits of marl, gypsum, and lime-stone ; sand, porphyry, and even rock-salt. Near Guancavilica the mountains are composed almost entirely of sand-stone and lime-stone ; northward of this portion of the Andes they are more calcareous, yet rich in me- tallic ore.

Molina, in his Saggio Sulla Storia Naturale del Chili, describes the enormous masses of the Chilian Andes as consisting of ‘ a quartzose rock, of a composition almost uniform, and in which marine bodies are never found, as they are in the secondary mountains. ‘ On the summit ot Descabesado,’ he says, ‘ a most elevated moun- tain in the midst of the principal chain of the Andes, and which in “height does not appear to be inferior to the famous Chimborazo of Quito, a number of marine shells has been observed, either petrified or calcined, and probably depo- sited by water. The summit of this mountain, which is flat, bears marks of a volcanic eruption : it is now a square plain, each side being about six miles in length ; and in the middle is a lake of extreme depth, which, so far as can be judged by appearances, was the crater of the volcano. All the ridges on the sides of the Andes, as well as those more maritime, or more inland, are of

secondary formation. Their summits are com- monly more rounded ; and they are formed in horizontal beds of various substances and thick- ness. In ail these beds marine bodies abound ; and even impressions of plants or animals are often discovered. I have observed in the exca- vations which have been made, and in the courses of the rivers, that the lowest visible bed

of all these mountains is a kind of cos, or whet- stone, of a reddish colour, and sandy grain ; but sometimes a quartz of sand, or a pretty compact tufa of a dark brown colour. The other beds are clays of different colours, marls, marbles of several kinds, schistus, spars, gypsum, fossil coal ; after which appear metallic veins, ochre, quartz, granite, porphyry, sand-stone, and other rocks more or less hard. The order of the beds is not always the same ; and I have often ob- served considerable derangements — a superior bed in one mountain being inferior in another ; And in these derangements the laws of gravity are by no means observed. Nevertheless, all the beds, in general, effect a kind of regularity in their direction, which is from south to north ; and as they incline a little to the west according to the fall of the sea. they seem to have followed the current of the ocean, which, 011 account of the position of the country, is from south to north. Besides the mountains composed of different beds, there are some of uniform struc- ture ; or homogeneous beds of lime-stone, gyp- sum, talc, cos, or whet-stone ; of granite, of simple and primitive rocks, of basalt, lava, and other volcanic substances; and some of shells, little or not at all decomposed, as mentioned by' Ulloa in his voyage. But all these homogeneous mountains are barren, only producing some lan- guishing shrubs, while the mountains disposed in beds, which are always covered with a crust of good soil, present a vigorous and agreeable vegetation. The exterior form of all the strati- fied mountains furnishes another palpable proof of the incumbence of the ocean ; their bases, which are almost always extensive, enlarging gradually, form gentle vales, whose inflexions and inclinations impress, in a lively manner, the long abode and direction of the ocean. Their salient and retreating angles also correspond. On descending into these vales, it may be perceived, without difficulty, that the organization is the same with that of the stratified mountains, as the same materials and disposition appear throughout, with this difference, that almost all the substances are decayed, or even reduced to earth.'

Humboldt found the whole of his second sub- ordinate branch of the Andes, as we have inti- matedj composed of primitive rock, principally granite, which seems to be the probable base of the entire chain. Comparing this branch with the Cordillera of the coast in the Journal de Phy- sique, he thus gives us the order in which the primary rocks appear. 1. Massive granite, occa- sionally mixed with jad and plumbago; 2. foliated granite and mica slate, interspersed with garnets; 3. primitive slate with beds of native alum; 4. slate mixed with hornblende, green- stone, amygdaloid, and great quantities of por- phyry-slate. The usual arrangement or inclina-

tion of the primitive rocks, is to the north-west. In what he calls the secondary rocks, which compose the Andes of the coast of Venezuela, the granite is succeeded by gneiss and beds of pri'.nitive limestone ; the mica slate is covered wit\i hornblende and limestone, and this agair with beds of

lydian-stone, gypsum, petrisolen and calcareous free-stone. The granite is often stratified in beds from two to three feet thick, and contains large crystals of felspar. Red garnets and sapphire are frequently mixed with mica slate in the primitive rocks, and in the gneiss of the secondary rocks a few green garnets are found. In the Cordillera of the cataracts of the Orinoco large masses of a glowing yellow talc also appear, a substance which gave such celebrity to the El Dorano, in the centre of the Andes, as a golden mountain. Chlorite slate sometimes occurs in this Cordillera, and the most beautiful hornblende occasionally penetrates the streets of St. Thome and Guiana.

The only formations not found by Humboldt were those of roe-stone, chalk, gray-wacke, topaz rock, and the compound of serpentine with gra- nular limestone, so common in some parts of Asia Minor. The supreme ridge of the Andes is generally covered with basalt, porphyry, phonolite, and green-stone ; which, from their being often broken into columns, have at a dis-tance all the appearance of ruined castles. Near the bottom of this ridge are found two different kinds of limestone, viz. one with a silicious base occasionally enclosing coal and cinnabar, the other calcareous concreting secondary rocks. Both of these formations are celebrated for their vast thickness and altitude. In the vicinity ot Santa, the beds of coal occur 8650 feet above the level of the sea, and at Huduco in Peru, even at the altitude of 14,700 feet : gypsum sandstone, shell, limestone, and rock-salt, are found in great abundance on the plains of Bo- gota at the height of 9000 feet : and fossil shells, which in the old continent have not been dis-covered higher than the summits of the Pyre- nees, at the altitude of 11,700 feet, have been found in the vicinity of Micuipampa, in Peru, as high as 12,800 feet and even at 14, 120 feet. At Huancavelica sand-stone also appears. At Pichincha, near Quito, basalt occurs at the height of 15,500 feet, whilst the highest point of Germany where that species of rock occurs, viz. the summit of the Silesian Schneekoppe, has been calculated at the altitude only of 4225 feet. Gra- nite however, which crowns the loftiest European mountains, is not found in any of the mountains of the New World beyond the height of 11,500 feet, and in the provinces of Quito and Peru is scarcely, known at all. The enormous summits of Chimborazo, Cayambe, and Antisana, consist of porphyry, which in the flanks of the Andes forms a mass of from 10,000 to 12,000 feet in depth. Near Cuenca the sand-stone has a thickness of 5000 feet, and immediately west of Caxamarca, the stupendous mass of pure quartz exhibits a perpendicular depth of 9600 feet. The porphyry of these mountains never contains quartz, and but seldom mica, but frequently intermixtures ot hornblende. Petrifactions do not frequently appear upon the Andes, but marine bodies are

often found. Impressions of plants and animals are also frequently discovered. The exterior formation of all the stratified mountains, says Molina, affords also a strong proof of the former superincumhence of the ocean. The same is in- dicated by their bases. On the summit of Des- caliesado, considered by some travellers as equal to the Chimborazo of Quito, a number of marine shells have been observed, supposed to have been deposited by the waters of the deluge. The summit is flat, and exhibits a square plain, each side of which is six miles in length. In the midst is a lake of extreme depth ; it bears all the marks of volcanic eruption, and in short is sup- posed to have been the abyss of the volcano.

The central Andes are said to be extremely rich in all the metals, with the exception of lead. One of the most curious is the pacos, a compost of native silver, the muriate of silver, the oxide of iron and clay. The mines of Mexico and Peru pro- mise to be more productive than ever. The whole Andes chain is, however, subject to the most ter- rible earthquakes : from Cotopaxi to the South Sea are found no fewer than forty volcanoes in a state of perpetual activity; the lower ones eject- ing lava ; others discharging the muriate of am- monia, scorified basalt, and porphyry, enormous t]iirtntities of water, and moya or clay mixed with sulphur and carbonaceous matter: and near Quito the myriads of small dead fishes thrown up in the liquid mud ejected by the volcanoes, ‘iave excited the astonishment of travellers. In ionic parts the imprisoned air let out of these mountains, produces gusts of wind so furious as to sweep every thing before them to an amazing distance. In other instances, the elements con- ‘ending in the interior are betrayed by a doleful mourning noise, or hollow dismal groans, which till the mind of the auditor with an awful fear.

The traveller who ascends the mountains of Switzerland is delighted to witness in the space of a few hours the successive changes of climate, intimated by the numerous corresponding fea- tures of the vegetable kingdom. lie ascends, per- ha;>s, from warm vineyards, and passes through a Mil-cession of chestnuts., oaks, and beeches, ii!’. !M.’ reaches t!ir pints and birches, or treads on pastures bordering upon the dreary and loftier regions of perpetual snow ; less beautiful, but in- fiuitelv more urand and majestic is the scene \ithin the tropics; permanent congelation com- mences ?.r>00 feet higher at the equator than at forty-live decrees of latitude. Ananas and plan- tains ‘^ row with urc.’.t. luxurance near the shore : oranges and limes a little higher ; peas and wheat crop i succeed at length in the lofty vale ot Quito. The traveller experiences a climate analogous to that of Hourdeaux or of Geneva, di- verMtieil with its proper features and produc- tions. From this point commences that series of pl;int> and vegetables which beautifies the central regions of Knrope.

The magnitude of the Andes has much less effect upon tin1 beholder than might be imagined. The impression is diminished by th'> vast altitude at whi'.'h the country altogether is heaved above the le\r'. of the sea. Chimbora/o, Cotopaxi, and Antisa;ia, thoucrli at least (3000 feet higher

than Mont Blanc in Savoy, appear from thf plains of Riobomba and Quito scarcely more sublime. But the central Andes, notwithstanding all their sublimity, are destitute of one feature which in the higher latitudes contributes so highly to the beauty and magnificence of Alpine scenery. They have no glaciers, ihose icy belts dropping from the limits of congelation, and spreading in concrete sheets, or hanging in dis- jointed columns, as formed in more northern regions. This defect is commonly attributed to the uniform temperature near the equator, the sun shining there all the year with nearly equal force, whilst in the higher latitudes the length of time which during summer the sun remains above the horizon, and the augmented force with which he shines, produces a change in the heat of the atmosphere, and consequently in that of the ground. This succeeded by the colds of winter produces that alternate thawing and freezing to which the formation of these translucid phe- nomena is ascribed. It is attributed to the same cause that the Andes, though torn by flaming volcanoes, and convulsed by frequent earth- quakes, are exempt from those avalanches and emboulements which in Switzerland and many of the mountainous regions of Europe often bury the traveller with snow, and batter down whole villages by the sudden discharge of a shower of rocks. Under the equator the variation of tem- perature is insufficient to disturb the solidity of the snow, whilst in the Alps and Pyrenees the snow, loosened by the heats of summer, precipi- tates itself into the plain, sweeping away every thing in its course.

The quebradas, or perpendicular rents or chasms found in every part of the parent Andes, are frightful in the extreme. The noted crevices of Chota and Cutaco are nearly a mile deep, the former measuring 4950, and the latter 4300 feet in a vertical descent. For crossing these tremendous gullies many expedients have been invented. But the common mode is by means of men called cargueros or carriers, fastened to whose backs the travellers sit in chairs. A spe- cies of hanging bridge being thrown over the chasm from mountain to mountain, composed chiefly of the fibres of the agave, strengthened with reeds and cane ; the Indian takes his load, and swinging it to and fro in the blast, hums hig tune, and contemplates around the awful abyss below. Often too these porters climb along the face of precipices bearing loads of from twelve to eighteen stone for a very small remuneration, till their backs are chafed raw with the load.

The Icononzo, beautified by natural bridges, is a small cleft in the mountains, through which the river of the Summa Paz flows, descending

from the highest upland desert. The rocks con- sist of sand-stone, but of two different species ; one extremely compact, the other slaty in tex- ture, and divided into thin horizontal strata. The rent is supposed to have been produced by means of an earthquake, which the more solid portion of the stony mass resisted, and still remains in its primitive position, connecting the upper division of the chasm. This natural arch is 300 feet above the surface of the torrent ; the medium depth of which is twenty feet. It

is "also fifty feet long, forty broad, and eight thick in the middle. Not more than sixty feet below this phenomenon is a second arch composed of three standing rocks wedged together, supposed to be in their formation collateral with the former, and to have struck against the side of the crevice in their descent. A similar pheno- menon, and scarcely inferior, occurs in the United States of America, crossing the Cedar Creek in the county of Rockbridge, 100 miles beyond the Blue Ridge, in the higher district of Vir- ginia. This famous arch is described by Mr. Jefferson. It consists of a divided rock of pure lime-stone, leaving a chasm of about ninety feet in width, the walls of which are 230 feet in height. Viewed from a small distance below it has all the appearance of a Gothic arch, and is of such solidity that before the formation of a more convenient road, loaded wagons used to pass over it.

The water-falls of the Andes are numerous, and occasionally very imposing in their ap- pearance. That of Tequendama in the plains of Bogota, perhaps, all things considered, exceeds any other in the known world : the basin which feeds its stream is the plain already alluded to. It is 74 65 ft. above the level of the sea, and en- circled with lofty mountains, except where the water, aided rperhaps by some territorial con- cussion, has opened for itself a narrow passage. The river Funcha, swelled by numerous feeders, contracts its channel to the breadth of about forty feet; and then suddenly swelling into strength falls at two bounds from a perpen- dicular height of near 600 feet into a gloomy quebrada : it discharges a prodigious volume of water, and stuns the ear by the roar of its crash, while it raises enormous clouds of thick spray and vapour that continually bedew and enliven the vegetation of the neighbouring regions. The whole landscape combines to soften the horrors of this scenery. Luxuriant trees and herbaceous plants reach to the very edges of the numerous precipices around, and display remarkable freshness of vegetation. The climate is temperate in its vicinity, and fine crops of wheat are seen in all parts of the plain ; below, the traveller feels a sensible approach to the ard our of equatorial regions ; delightfully re- lieved, however, by the dashing spray

and dews of the water-fall. A singular tradition of the natives respecting the formation of this cataract is thus given by Captain Bonnycastle : ‘ In remote times, when the sun alone gave the earth light, and the people of the plain of Bogota were savage barbarians, an old man, totally un- like the natives, suddenly appeared amongst them from the east, with a white beard and flowing garments. This was Bochica. He in- structed them in agriculture, &c. ; and with him came a woman, who, as well as himself, had three names; one of which was Chia; she was very beautiful, very malevolent, and overturned every thing Bochica attempted. By her magic she swelled the rivers and overflowed the plain; so that the people, with the exception of a few who escaped to the mountains, perished in the waters. Bochica, exasperated at her conduct, drove Chia from the earth, and she became the

moon. He then, by the mighty force of his arm, broke a passage through the rocks, ai.d constituted the fall of the Tequendama ; by which means the lake formed by Chia was drained, and the plain of Bogota rendered more beautiful arid fertile than it had been before. The appearance of the plain of Bogota, at this moment, justifies the tradition of its having formerly been a lake. Low summits appear here and there like islets, and the whole plain is rendered marshy by the numerous streams which cross it in every direction.’

A lively idea of the cnaracter and grand fea- tures of the Andes may be conceived from the account given by the celebrated Humboldt of his journey across that majestic chain : ‘ The moun- tain of Quindiu, in the latitude of 4° 36’,’ observes this traveller, ‘is considered the most difficult pas- sage in the Cordilleras of the Andes. It is a thick uninhabited forest, which, in the finest season can- not be traversed in less than ten or twelve days. Not even a hut is to be seen, nor can any means of subsistence be found. Travellers, at all times of the year, furnish themselves with a month’s provi- sion, since it often happens, that by the melting of the snows, and th? sudden swell of the tor- rents, they find themselves so circumstanced that they can descend neither on the side of Carthago nor that of Ibague. The highesjt point of the road, the Garito del Paramo, is 1 1,509 feet above the level of the sea. As the foot 01 the mountain, towards the banks of the Cauca, is only 3,150 feet, the climate there is generally mild and temperate. The path-way which forms the passage of the Cordilleras is only twelve or fifteen inches in breadth, and has the appearance, in several places, of a gallery dug, and left open to the sky. In this part of the Andes, as almost in every other, the rock is covered with a thick stratum of clay. The streamlets which flow down the mountains have hollowed out gullies about twenty feet deep. Along these crevices, which are full of mud, the traveller is forced to grope his passage ; the darkness of which is in- creased by the thick vegetation that covers the opening above.

The oxen, which are the beasts of burden commonly used in this country, can scarcely force their way through these galleries, some of which are more than a mile in length ; and if, perchance, the traveller meets them in one of these passages, he finds no means of avoiding them but by turning back, and climb- ing the earthern wall which borders the crevice, and keeping himself suspended by laying hold of the roots which penetrate to this depth from the surface of the ground.

‘ We traversed the mountain of Quindiu in the month of October, 1801, on foot, followed by twelve oxen, which carried our collections and instruments, amid a deluge of rain, to which we were exposed during the last three or four days in our descent on the western side of the Cor- dilleras. The road passes through a country full of bogs, and covered with bamboos. Our shoes were so torn by the prickles which shoot out from the roots of these gigantic gramina, that we were forced, like all other travellers who dislike being carried on men’s backs, to go bare-footed. This circumstance, the continual humidity, thfl

length of the passage, the muscular force re- quired to tread in a thick and muddy clay, the necessity of fording deep torrents of icy water, render this journey extremely fatiguing; but, however painful, it is accompanied by none of tnose dangers with which the credulity of the people alarms travellers. The road is narrow, but the places where it skirts the precipices are very rare.

‘ When travellers reach Ibague, and prepare to cross the forests of Quindiu, they pluck in the neighbouring mountains several hundred leaves of the vijao, a plant of the family of the bananas, which forms a genus approaching to the thalia, and which must not be confounded with the he- liconia bibai. These leaves, which are mem- branous and silky, like those of the musa, are of an oval form, two feet long and sixteen inches broad. Their lower surface is a silvery white, and covered with a farinaceous substance, which falls off in scales. This peculiar varnish enables them to resist the rain during a long time. In gathering these leaves an incision is made in the middle rib, which is the continuation of the foot-stalk, and this serves as a hook to suspend them, when the moveable roof is formed. On hiking it down they are spread out, and care- fully rolled up in a cylindrical bundle. It re- i|iiiri’s about a hundred weight of leaves to cover a hut large enough to hold six or eight persons. M’licn the travellers reach a spot in the midst of a Forest where the ground is dry, and where they purpose to pass the niuht, the cargueros lop a few branches from the trees,

with which they make a tent. In a few minutes this slight tim- ber-woik is divided into squares, by the stalks of some elimbuj.j; plant, or the threads of the auavi , plaeed in parallel lines, twelve or thirteen inehe.s t'roin each other. The vijao leaves mean- v. liilc beeome unrolled, and are now spread over the above work, so a— to eo\< •;• nlikethe tiles of a lio.iv... T;H • !.ut.>, thu:> hastily built, are cool aii 1 eoinino 'ion-. If, during the night, the tra- veller feels th,_> rain, he points out the spot where it i 11!' rs, and a leaf is sutlieient to obviate the imcMM m- nee. \ e pa<>ed several days in the valley of the Pn.quia, under one of these leafy tenK, which was perfect !v dry amidst violent

,ave been rut with great labour in the neighbourhood of Chimborazo, one or wine:! is HHH) miles in lenuth ; and ours of the ancient incas of Peru may .out that province. Over the idero, in llueno^ Ay res, is a singular mad-' ! of n.shes, winch is attributed

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dition, In the more difficult roads the aid of the mule is required. These are sometimes full of holes, from two to three feet deep, in which the mules set their feet, and draw their bellies and their rider's legs along the ground with the utmost caution. Thus they form a species of steps, without which the precipices would fre- quently be impassable. If the mule, winch rarely happens, should accidentally place his foot between two of these holes, or in a wrong situation, the rider falls at whatever peril. Where these holes are wanting, and the tracks are steep and slippery through incessant rains, the traveller is preceded by Indians, who dig small trenches along the path with a peculiar species of spade. On other occasions of a smooth and steep descent, the mules seem to feel the pressing danger, and pause at the top of the eminence, as if to ascertain the best mode of procedure. The animal then carefully closes its fore feet, and stretching them out straight, draws its hinder legs in some degree under its body, and glides down the path with incon- ceivable rapidity. The rider in this instance must keep himself fast in his saddle, and impose no restraint upon his mule, for the least possible movement, by destroying the equilibrium, may precipitate both down the

steep sides of the rocks. Whenever all is thus committed to them- selves, the mules will exactly follow the different windings of the path, and pass the greatest irre- gularities with safety.

The central group of mountains, in the pro- vince of Quito, have hitherto excited in travellers a degree of interest unequalled in any other part of this amazing chain. In this latitude the great chain divides itself into two prodigious ridges, enclosing a plain of immense extent stretching from 0° 13′ to 3° of south latitude. This plain is however interrupted by the bulging summits of inferior mountains of various altitudes ; forming rather a succession of hills and valleys, the loftier parts of which lie 13,900 feet above the level of the sea. This plain, embosomed within the walls and bulwarks of nature, forms a beautiful central kingdom overspread with towns and villages, and tempered by a climate the most delightful of any in the new world. The city of Quito stands to the north. Every town has a large square in the centre, from which the streets proceed in right angles, and give the whole the appearance of an extensive garden. The suburbs are delightfully varied and rendered beautiful by the appearance of every species of vegetation and horticulture. Since the last earthquake the climate has undergone consider- able variation, and the thermometer, which ac- cording to Humboldt before stood at fifteen or sixteen degrees, now stands on an average from four to ten degrees of Reaumur.

The approach to the Andes from die western coasts has always been admired. The road lies through the most beautiful forests, the foliage of which is sweetened by all the charms of diversity, and heightened by the most lovely colouring of nature. As the traveller advances an awful sublimity pervades the mind, and the wide in- terstices and tremendous chasms, together with the cataracts that shelve down their sides from

an amazing altitude, filling the distant view, overwhelm him with astonishment and admira- tion. Still as he advances new dangers appear on every side ; the impetuous torrents that are crossed by frail and precarious bridges formed of matted grass ; and even the best roads lead along the edge of tremendous precipices, and are inaccessible except to a single mule, to whose sagacity his life must be committed.

The enormous mountains of Casitagua,Pichin- cha, Atacazo, Corazan. Chimborazo, Cunam- bay, Carguirazo, and Ilinissa, rear their lofty heads to the west of the great plain already al- luded to ; and Tunguragua, Cotopaxi, Quelen- dama, Ruminaui, Passuchoa, Antisana, Cay- ambe, and

Guamani, stand on the east ; Capa Urcu, or El Altar, is said to have been once more elevated than even Chimborazo. This latter mountain has been geometrically ascer- tained to be nearly 22,000 feet in altitude, and has been thought the highest point of elevation on the surface of the globe. The top is of a conical form, and to surmount it many unsuc cessful efforts have been made. Humboldt ac- complished more than any of his predecessors ; for he succeeded in scaling a ridge of volcanic rocks within 240 toises of its summit, when the ex- treme tenuity of the air, and the fissures by which he was surrounded, prevented the pos- sibility of any further effort. The fogs were intense, every living creature was far below, the blood streamed from his lips and various parts of his face; and he was compelled to retire. The road from Guayaquil to Quito, on the nor- thern declivity of this mountain, leads through the grandest scenery, and approaches to the regions of perpetual winter.

Cotopaxi, between the mountains of Rumi- nani and Quelendama, twelve leagues from Quito, is the next remarkable mountain of the Andes, and the highest volcano in the world. It is of conical shape and is 1,8,898 feet in alti- tude. The first eruption was at the time when the Spanish government subjugated these re- gions. In 1743 it threw up volumes of flame followed by immense torrents of water that inundated the whole country, and, entering the river near Latacunga, caused it immediately to burst its banks and overflow the plains : the eruption succeeded by these torrents continued for three days, when the latter slowly diminished ; but the flames continued to rise for some time, and emitted through the crevices of the mountain a most brilliant nocturnal illumination of the country. In 1768 the whole summit of the mountain was so heated as to discharge at once all its snow ; and poured at the same time such volumes of ashes as obs-cured the light of the sun at Hambato till "three o'clock in the after- noon. The eruption was heard at Guayaquil, a distance of 150 miles, like the roaring of suc- cessive discharges of artillery. Masses of scorified rocks are still thrown frequently into the sur- rounding plains. Humboldt tried to reach the top of the mountain, but in vain. The crater appeared like a wall of black rock round the top of this mountain.

ljichincha is interior in elevation to Cotopaxi, rising only to 15,939 feet from the level of the

the sea. It is a volcano, the crater of which is an enormous gulf three miles in circumference, and has three principal peaks, which overhang its edge. When Corrdamine examined it in 1735, the fires were extinct, and the surrounding ridges covered with snow. In 1802 when Humboldt exam ned it, he found many appearances of vol- canic activity. The surrounding peaks were naked, the heat having melted the snow; and the minor circumference of the crater was black, occasionally emitting smoke and

flames. He prostrated himself on the utmost projection of one of the overhanging peaks to look into the abyss below, and at the depth of about 600 yards from the top several inferior mountains seemed to rise, and he thought the bottom of the crater of equal altitude with the plain of Quito.

Cayambe Ureau rises to an elevation of 19,480 feet from the level of the sea, in the shape of a truncated cone, and is crossed by the equinoxial line. El Corazan also hides its summit in the region of frost and snow : it is 15,795 feet in altitude, and its summit is in the shape of a heart. Ilinissa and Ruminani cross the equa- tor, and stand east and west of the Andes, to the height of 17,000 feet, joining each other by a transverse chain, called Alto de Tiopullo. A tumulus appears on the summit of the chain, supposed to have been the burial-place of some distinguished chief; also the building, supposed to be an ancient Peruvian palace, and tradi- tionally called the palace of Callo, nine miles from the crater of Cotopaxi, and thirty from Quito : its form is square ; the sides are 100 feet in ,length, with four great door-ways, and eight chambers ; the walls are three feet in thickness, and the whole, being in a good state of preservation, affords an exquisite specimen of native architecture. The volcano of Sangai or Mecas, 17,131 feet in altitude, is the most southerly mountain of Quito. Continual fires are seen to rise from its summits, which are covered with snow; and it is remarkable for the loud crashing sounds which it constantly emits, and which are heard, according to Ulloa, at the distance of forty leagues. From the rushing nature of the sounds some have thought them to be caused by imprisoned wind ; but the rattling and crashing noise which is heard on other occasions seems to proceed from internal con- vulsions. The liquid mud, already alluded to, containing many thousands of dead fish, is among the more remarkable productions of this volcano. El Altar or Altair rises to the height of 17,256 feet, and is joined by a lofty desert to another peak called Collanes. Seven leagues north of this is the volcano Tunguragua, famous for its hotsprings, which supply several hot baths erected ill the neighbourhood. It is said by some travellers to be 16,500 feet in altitude. An irruption from this mountain entirely over- whelmed the town of Riobamba. Canguirazo, north-west of Tunguragua, rises 15,640 feet above the level of the sea. We have given the heights of the above mountains from a popular authority, but various estimates have .been formed respect- ing them.

In the year 1734 M. Bouguer, and other ma- thematicians of France and Spain, were com-

missioned from their respective governments to make observations on the figure of the earth in this part of the Andes; a circumstance which supplied numerous interesting particulars. On their arrival at the kingdom of Quito they de- termined to continue the series of the triangles for measuring an arch of the meridian to the south of that city: the company accordingly divided themselves into two bodies, consisting of French and Spaniards, and each retired to the part assigned them. Don George Juan and M. Godin, who were at the the head of one party, went to the mountain of Pambamarca ; while M. Bouguer, de la Condamine, and Don Ulloa, together with their assistants, climbed up to the highest summit of Pichincha. Both parties suffered extremely, as well from the severity of the 'cold as from the impetuosity of the winds, which on these heights blow with incessant violence ; difficulties the more painful, as they had been little used to such sensations. Thus in the torrid zone, nearly under the equi- noctial, where it is natural to suppose they had most to fear from the heat, their greatest pain was caused by the excessiveness of the cold. Their first scheme for shelter and lodging, hi these uncomfortable regions, was, to pitch a field-tent for each company ; but on Pichincha this could not be done, from the narrowness of the summit ; they were therefore obliged to be contented with a hut so small that they could hardly all creep into it. Nor will this appear strange, if the reader considers the bad disposition and smallness of the place, it being one of the loftiest crags of a rocky mountain, 100 fathoms above the highest part of the desert, of Pichincha. Such was the situation of their mansion, which, like all the other adjacent parts, soon became covered with ice and snow. The ascent up this stupendous rock, from the base, or the place where the mules could come, to their habitation, was so craggy as only to be climbed on foot; and to perform it cost them four hours continual labour and pain, from the violent efforts of the body and the subtilty of the air ; the latter being so thin, and probably overcharged with the lighter respirable gases, as to render respiration difficult. The strange manner of living to which our artists were reduced during the time they were employed in a geometrical mensuration of some degrees of the meridian, may not prove un- ciitertaining to the reader; and therefore, the following account is given as a specimen of it: 'I lie desert of Pichincha, both with regard to the operations performed there and its inconveni- ences, differing very little from others, an idea may be very easily formed of the fatigues, hard- ships, and dangers, to which they were conti- nually exposed, during the time they were pro- secuting the enterprise, with the conduct of which they had been honoured. The principal difference between the several deserts consisted in their greater or lesser distance from places where they could procure provisions, and in the inclemency of the weather, which was pro- portionate to the height of ;hr mountains and the season of the yi ar.

Our philosopheis generally kept within their hut. JD'lecd, they were obliged to do this on

account of the intenseness of the cold, the vio- lence of the wind, and their being continually involved in so thick a fog that an object at six or eight paces was hardly discernible. When the fog cleared up, the clouds by their gravity moved nearer to the surface of the earth, and oh all sides surrounded the mountains to a vast dis- tance, representing the sea, with their rock, like an island, in the centre of it. When this hap- pened, they heard the horrid noises of the tempests, which then discharged on Quito and the neighbouring country. They saw the light- nings issue from 'the clouds, and heard the thun- ders roll far beneath them ; and, whilst the lower parts were involved in tempests of thunder and rain, they enjoyed a delightful serenity; ihe wind was abated, the sky clear, and the enliven- ing rays of the sun moderated the severity of the cold. But their circumstances were very different when the clouds rose ; their thickness rendered respiration difficult, the snow and hail fell con- tinually, and the wind returned with all its violence, so that it was impossible entirely to overcome the fears of being, together with their hut, blown down the precipice, on whose edge it was built, or of being buried under it by the daily accumulations of ice and snow. The wind was often so violent in these regions that its velocity dazzled the sight, whilst their fears were increased from the dreadful concussions of the precipice, caused by the fall of enormous fragments of rocks. These crashes were the more alarming, as no other noises are heard in these deserts ; and during the night their rest, which they so greatly wanted, was frequently disturbed by such sudden sounds. When the weather was fair near their hut, and the clouds gathered about some of the other mountains which they had selected for their observations, so that they could not make all the use they de- sired of this interval of good weather, they left their hut to exercise themselves. Sometimes they descended to a small distance ; and at other times amused themselves with rolling large frag- ments of rocks down the precipice ; and these frequently required the joint strength of them all, though they often saw the same effected by the mere force of the wind. But they always took care, in their excursions, not to go so far out, but that, on the least appearance of the clouds gathering about their cottage, which often happened very suddenly, they could regain their shelter. The door of their hut was fastened with thongs of leather, and on the inside not the smallest crevice was left unstopped; besides which, it was very compactly covered with straw ; but, notwithstanding all their care, the wind pe- netrated through. The days were often little better than the nights ; and all the light they en- joyed was that of a lamp or two, which they kept continually burning. Though their hut was small, and crowded with inhabitants, besides the heat of the lamps ; yet the intenseness of the cold was such, that

every one of them was obliged to have a chafing dish of coals. These precautions would have rendered the rigour of the climate supportable, had not the imminent danger of pe- rishing, by being blown down the precipice, roused them, every time it snowed, to encountei

the severity of the outward air, and sally out, with shovels, to free the roof of their hut from the masses of snow which were gathering on it. Nor would it, without this precaution, have been able to support the weight. They were not in- deed without servants and Indians ; but these were so benumbed with the cold, that it was with great difficulty they could get them out of a small tent, where they kept a continual fire. So that all our artists could obtain from them, was to take their turns in this labour ; and even then they went very unwillingly about it, and conse- quently performed it slowly.

*The reader may easily judge what our philo- sophers suffered from the asperities of such a climate. Their feet were swelled ; and so tender, that they could not even bear the heat ; and walking was attended with extreme pain. Their hands were covered with chilblains ; their lips swelled and chapped, so that every motion in speaking, or the like, drew blood ; consequently they were obliged to strict taciturnity and little disposed to laugh, as, by causing an extension of the lips, it produced such fissures as were very painful for two or three days after. Their com- mon food in this inhospitable region was a little rice boiled with some flesh or fowl, procured from Quito ; and, instead of fluid water, their pot was filled with ice ; they had the same resource with regard to what they drank ; and while they were eating, every one was obliged to keep his plate over a chafing-dish of coals, to prevent his pro- visions from freezing. The same was done with regard to the water. At first they ima- gined the drinking strong liquors would diffuse a heat through the body, and consequently ren- der it less sensible of the painful sharpness of the cold ; but, to their surprise, they felt no manner of strength in such liquors, nor were they any greater preservative against the cold than the common water. At the same time they found it impossible to keep the Indians together. On their first feeling of the climate, their thoughts were immediately turned on deserting their mas- ters. The first instance they had of this kind was so unexpected, that had not one of a better dis- position than the rest, staid and acquainted them of their design, it might have proved of very bad consequence. The affair was this: there being on the top of the rock no room for pitching a *ent for the Indians, they used every evening to retire to a cave at the foot of the mountain ; where, besides a natural diminution of the cold, they could keep a continual fire ; and, consequent- ly, enjoy more comfortable*

quarters than their masters. Before they withdrew at night, they fastened, on the outside, the door of the hut, which was so low that it was impossible to go in or out without stooping ; and as every night the hail and snow which had fallen formed a wall against the door, it was the business of one or two of the Indians to come early and remove this obstruction. For though the negro servants were lodged in a little tent, their hands and feet were so covered with chilblains, that they would rather have suffered themselves to have been killed than move. The Indians therefore came constantly up to dispatch this work betwixt nine and ten in the morning ; but they had not been

there above four or five days, when they were not a little alarmed to see ten, eleven, and twelve o'clock come, without any news of their labourers ; when they were relieved by the honest servant mentioned above, who had with- stood the seduction of his countrymen, and in- formed his masters of the desertion of the four others. As soon as the snow was cleared away from the door, they despatched the Indian to the corregidor of Quito, who with equal despatch sent other Indians, threatening to chastise them severely if they were wanting in their duty. But the fear of punishment was not sufficient to in- duce them to support the rigour of this situation ; for within two days they also deserted. The corregidor therefore, to prevent any other incon- venience, sent four Indians under the care of an alcade, and gave orders for their being relieved every fourth day.

Our philosophers spent no fewer than twenty- three tedious days on this rock, without any pos- sibility of finishing their observations of the angles ; for when it was fair and clear weather with them, the others, on whose summits were the signals which formed the triangles for measuring the degrees of the meridian, were hid in the clouds ; and when those were clear, Pichincha was involved in clouds. It was therefore neces- sary to erect their signals in a lower situation, and in a more favourable region. This, however, did not produce any change in their habitation till the beginning of December, when, having finished the observations which particularly con- cerned Pichiucha, they proceeded to others ; but with no abatement either of inconveniences, cold, or fatigue ; for the places where they made their observations being necessarily on the highest parts of the deserts, the only respite in which they enjoyed some little ease was during the short interval of passing from one to the other. In all their stations subsequent to that on Pi- chincha, during their fatiguing mensuration of the degrees of the meridian, each company lodged in a field-tent, which, though small, they found less inconvenient than the hut on Pichincha; though at the same time they had more trouble, being oftener obliged to clear it from the snow, as the weight of it would otherwise have de- molished the tent. At first, indeed, they pitched it in the most sheltered places ; but on taking a resolution that the tents themselves should serve for

*signals, to prevent the inconvenience of having others of wood, they removed them to a more exposed situation, where the impetuosity of the winds sometimes tore up the piquets, and blew them down. Though this mountain is famous for its great height, it is considerably lower than the mountain of Cotopaxi : but it is impossible to conceive the coldness of the summit of the last mentioned mountains from that felt on this; since it must exceed every idea that can be formed by the human mind, though they are both seated in the midst of the torrid zone. In all this range of mountains, there is said to be a constant in- ferior boundary, beyond which the snow never melts ; this boundary, in the midst of the torrid zone, is said by some to be 2,434 fathoms above the level of the sea ; by others, only 2,400 feet. The snow indeed falls much lower, but then it i**

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subject to be quickly molted. Considerable differences in measuring heights are observed in different calculators : the peak of Teneriffe, which, according to the calculations of Varenius, is three miles and three-quarters, or 19,800 feet; according to those of Dr. lleberden, it is only 15,396 feet; and according to those of M. Feuille, is no more than 13,128 feet. From these speci- mens, we can scarcely avoid concluding, that all the methods hitherto invented for calculating the exact height of mountains are insufficient.

The highest deserts of the Andes art- in the north, called Paramos, and in Peru Punas ; but so acute and peculiar is the cold of the air in these places, as rather to pierce the vita'is than affect the exterior feelings. It is no uncommon circumstance to meet with the bodies of travel- lers who have perished in the cold, whose faces have the horrid appearance of laughter, owing to the contraction of the muscles at the period of dissolution. The pine lingers last of the more stately tribes of vegetables, accompanied by a low species of moss. It is found 13,000 feet in altitude above the level of the sea. Numerous orders of the larger trees appear progressively at the height of between 10,000 and 9.000 feet in descending. At the height of 9,200 feet is found the oak, which in the equatorial regions never descends below that of 5,500. It is how- ever said to be found in the neighbourhood of Mexico at th.' height of only 2,620 feet. Euro- pean Drains tlc.urish best between the altitude of C>,000 and '.'.000 IVet. Wheat under the equa- tor will seldom spring up below the elevation of 4,.") 00 feet, or ripen above that of 1,080. Hutn boldt says there are very line harvests of wheat near Victoria, in the Caraccas province, at 1,040 and 1,000 feet abnvo the

level of the sea. At Cuba wheat crops will tlourish and ripen at a small elevation. Rye and barley, from their botanical constitution, are capable of resisting cold better than wheat, and consequently of ripening in a superior altitude. .Maize is culti- vated in the same climate as the banana, but will flourish 0,000 fret above the level of the sea. Oranges, pine-apples, and every diversity of delicious fruits and vegetables, are found on tiie lower ˆrounds of the Andes within the tro- pics. Cassa\a, maize, cacao, coffee, sugar, cot- ton, and indigo, are cultivated with great suc- cess. Indi_ro and cacao, however, require im- moderate heat to ripen them. Cotton and coffee return- a more temperate clime. Suuar arrives at -i superior decree of perfection in the more temperate iv/ions or' the kingdom of Quito.

lor further information we refer our readers, as the best authority, to 1 1 rMHOT.DT, and Journal i/,' riii/ii'ju, , vol. f.lll. for 1801.

ANDKTKU'Vi, AM iirmn M, AXDF.CRIUM, or AM>IU (n M : an inland town of ancient Dal- nritia, situated near Salome, on a strong and inaccessible rock, surrounded with deep valleys and rapid torn nt-; ; 7iow Clista. This town withstood, for a considerable tune, the Romans under Tiliernis.

AXHFA'orRANTK, a lar-e river flowing throu.ii the country of the Iktalimenes, on the east coast of Madagascar. On its banks is situated the chief town, 'icarinˆ the same name,

and able, it is said, to furnish 10,000 fighting men.

ANDICOTTA, a town of Ilindostan, and province of Malabar, thirty-eight miles S. S. E. of Calicut. Lat. 10° 54′ N., long. 76° 9′ E.

AND IRA or ANGELYN, in botany, a tree in Brazil, the wood of which is hard and proper for building. According to Gmelin, andira is a genus of the class diadelphia ; order decandria : its characters are : CAL. urceolated, quindentated ; COR. two petals; fruit a fleshy pod, ovate, fur- rowed, and containing a single seed.

ANDIRA, or ANCIRA-GUACU, in zoology, a kind of bat in Brazil, nearly as big as our pigeons ; called the horned bat, from a sort of excrescence above the beak. The inhabitants reckon the tongue and heart of this animal poisonous ; and it sucks blood with avidity.

ANDIRON. It is contended by some that this word should be written hand or end-iron ; by others it is considered a corruption of brand- iron. Irons at the end of a fire-grate, in which the spit turns ; irons used when there is no grate for wood to burn on.

If you strike an entire body, as an andiron of brass, at the top, it inakcth a more treble sound, and at the bottom a basei. Bacon.

If we place a needle touched at the foot of tongs or and-irons, it will obvert or turn aside its lillie or north point, and confirm its cuspis or south extreme unto the and-iron. Brown's Vulgar Errors.

ANDLAU, a town of Lower Alsace in France, in the department of the Lower Rhine, and arrondissement of Bar. The barons of Andlau held the town as a fief, from the abbess of the convent here, which was appropriated to ladies of the rank of noblesse only ; the abbess had the title of princess of the empire. The abbey was immediately under the government of the pope, but was suppressed at the revolution. Popula- tion 2185. Eighteen miles S. S. W. of Strasburg. Long. 7° 30 E., lat. 48° 24′ N.

ANDLAU, a river of Lower Alsace in Trance, which rises in the Vosges mountains, and falls into the 111, near Figersheim.

ANDOCIDES, an Athenian orator, four of whose orations are extant; upon which Harpo- crates wrote his Lexicon. When Alcibiades was tried for demolishing the statues of Mercury, Anclocides acknowledged the crime, and accused his accomplices. His style is plain and simple, and entirely destitute of ornament.

ANDOMADUNUM, or ANTEMATUNUM, in ancient geography, a city of Gallia Belgica ; now called Langres in Champagne, situated on an eminence, as the termination dunum signifies, on the borders of Burgundy, at the springs of the Maine.

ANDONY, a river of western Africa, in the country of Calabar or Waree, falling into the sea in latitude 4° 30′ north. It has a small town of the same name at its mouth.

ANDORA, a small fortified town of Genoa, which produces excellent wine.

ANDORINHA, in ornithology, the Portu- guese name for the Brazilian swallow, or ta- pera.

ANDORRE, a fruitful valley on the borders of Spain, in the arrondissement of Foix, and

department of the Ariege. It contains a consi- derable quantity of excellent pasture land, and extensive sheep-walks ; it is noted also for its iron works, the fuel for which is supplied from the spacious forests in the

neighbourhood. The little village of Andorre is nine miles north of Urgel in Catalonia.

ANDOVER, a borough and market town in Hampshire, pleasantly situated on the Ande, on the edge of the downs. It is a great thoroughfare between London and Salisbury ; and sends two members to parliament. The market is on Sa- turday, and well stocked with provisions. On two hills in the neighbourhood are the appear- ances of Roman encampments. The town was incorporated by queen Elizabeth. It is governed by a bailiff, a steward, a recorder, ten councillors, and twenty-two burgesses, who choose the bailiff annually, and he appoints two serjeants-at-mace to attend him. It lies ten miles north by west of Winchester, and sixty-five west by south of London. Fairs are held on Thursday and Friday, the third week in Lent, May 12, and Nov. 6. It carries on a manufacture of shalloons, and a large trade in malting.

ANDOVER, a town of Massachusetts, North America, in Essex county, where is an excellent academy, called Phillips Academy, and manu- factures of paper and gunpowder. It is situated on the Shawsheen, twenty miles W.S. W. of New- bury Port, and twenty-two N. N. W. of Boston.

ANDOVER, a town of New Jersey, near the source of Pequest river, five miles S. S. E. from New Town, and sixteen from Wolpack. Also the name of two other small towns of the United States, one in New Hampshire, the other in Vermont County.

ANDRACHNE, BASTARD ORPINE: agenusof the gynandria order, and moricecia class ofplants ; and in the natural order of tricoccae. The cha- racters are : CAL. five-leaved ; COR. none; STYL. three : FIST, germ superior and globose ; stigmas globose; PERICAR. a capsule globose- trilobate, three-celled, cells bivalved, of the size of the calyx ; SEEDS in pairs, rounded on one side, triangular and obtuse on the other. 1. A. ar- borea has a tree-like stalk, native of Campeachy. It has never flowered in Britain. 2. A. fruticosa, or shrubby bastard orpine, a native of China and some places of America. 3. A. Jamaicensis, a species raised by Mr. Millar from seeds sent from Jamaica. It agrees in general with the first sort ; but the leaves are somewhat like the laurel, only much larger. 4. A. telephoides, or herbaceous trailing andrachne, a low plant, a native of Italy and the Archipelago.

ANDRACHNE is also a name given by the an- cients, sometimes to a tree of the arbutus or strawberry tree kind, and sometimes to the herb purslain. Some of the later Latin writers have also called it porcala, and some of the later Greeks cairabotanon.

ANDRACIO, or AXDRACY, a town of Ma- jorca, about nine miles south-west of Bannatatur, rebuilt by James I. It possesses a parish- church, and has a harbour about two miles distant.

ANDRADA (Diego de Payva, d'), or AN-

DRADIUS, a learned Portuguese, born at Conim- bria, who distinguished himself at the council of Trent, where king Sebastian sent him as one of his divines. He died in 1575, aged 47; and wrote, 1. Orthodoxarum Explicationum, Lib. x. 4to. Venet. 1564. 2. Defensio Tridentinae Fidei Catholicae quinque Libris comprehensa adversus Hareticorum Calumnias et prsesertim Martini Chemnitii ; in answer to Chemnitz' Examen Concilii Tridentini. 3. De Conciliorum Auto- ritate. 4. Three Volumes of Sermons.

ANDREA, in botany, a very curious distinct genus of mosses, so named by Ehrhart, in honour of his friend John Gerhard Reinhard Andreae. Class, cryptogamia; order, musci. Its generic characters are: ANTH. three to seven, clearly cy- lindrical, somewhat stalked, interspersed with numerous, jointed, succulent threads, swelling upwards, taller than themselves : SHEATH of several imbricated concave scales, shorter than the fruit-stalk, which is cylindrical, scarcely longer than the capsule, tumid at its base : PERICAR. capsule on a turbinate fleshy base, ovate, somewhat quadrangular, of four equal ob- long valves : column cylindrical, as long as the valves : lid minute, conical, permanent, confining the points of the valves : Veil membranous, pel- lucid, bell-shaped, torn irregularly from its base, and finally turned to one side, crowned with the style : STYLE slightly prominent : SEEDS mi- nute, spherical, brown. Its species are all na- tives of Britain, and are 1. A. alpina, Alpine andraea. 2. A. rupestris, rock andraea. 3. A. rothii, black mountain andraea. 4. A. nivalis, tal), slender, andreea.

ANDRAGHIRA, a river of Sumatra, upon which the Dutch have a factory. It rises from a lake in the native kingdom of Menancabow, whence it issues by the name of Ayer Ambelan, and falls into the sea on the east coast, in about latitude 0° 30′ south. It is navigable to a great distance from the mouth ; and, owing to the flat- ness of the country, the tide flows far up from the sea.

ANDRANOTOMIA, in anatomy; from avijp, vir, and avaro/(>) ; the dissection of a male subject.

ANDRANTSAIES, a people of the interior of Madagascar, south of the Ancoves. They are a pastoral race ; and, being cowardly and unwarlike,

purchase peace by a tribute of cattle. In this part of Madagascar dwarfs are very common, which has given occasion to some travellers to represent them as a nation of dwarfs.

ANDRAPHAX, in botany ; avSpaQaK, stinking orache; the chenopodium vulgare of Linnaeus.

ANDRAPODISMUS, in ancient writers, the selling of persons for slaves.

ANDRAPODISTES, a dealer in slaves, more particularly a kidnapper, who steals men or children to sell them ; a crime the Thessalians were noted for.

ANDRAPODOCAPELI, in antiquity, a kind of dealers in slaves. The andrapodocapeli were accustomed to take off moles, &c. from the faces of the slaves they kept for sale, by rubbing them with bran. At Athens several places in the forum were appointed for the sale of slaves.

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Upon the first of evˆry month, the merchants brought them into the market and exposed them to sale, whilst the crier, standing upon a stone erected for that purpose, collected the people together

ANDRARUM, a town of Sweden, in South Gothland, ten miles south of Christianstadt, where there is the greatest alum-works in the kingdom.

ANDRASTADT, or ANDRE, ST. a town of Lower Carinthia, in Austria, also called Lavant, from a river of that name which flows through it. It belongs to the archbishop of Saltzburg, and is the seat of a provost and bishop, who was formerly a prince of the empire, and who takes the title of bishop of Lavant, at St. Andre, twenty miles E. N. E. of Clagenfurt, and thirty- two south-east of Mahran.

ANDRE (Major J.), an adjutant-general in the British army, originally a merchant's clerk, and possessed of some literary ability, being the author of an ingenious poem, entitled The Cow Chase. Employed to negociate the defection of the American General Arnold and his troops, he was apprehended in disguise on the 23d September, 1780, within the American lines, and sent pri- soner to General Washington, who submitted his case to the examination and decision of a board of general officers, consisting of Major- general Green, Lord Stirling, the Marquis de la Fayette, &:c. Major Andre was examined before them, and the particulars of his conduct enquired into ; when it was determined that he ought to be considered as a spy from the enemy; and that, agreeable to the law and usage of nations, he should suffer death. Major Andre was hanged at Tappan, in the province of New York, on the second of October. He met his fate with great

firmness, after having in vain solicited a more military death. A monument is erected to his memory in Westminster Abbey.

ANDRIvT, (John Gerhard Reinhard), an inge- nious naturalist of Hanover, was born in 1724. lie travelled during his father's life through i'm-ˆia, Holland, Germany, and Switzerland; and aUc visited Kngland. In 1748 he returned tn Ihiii'Ver, and on his father's death he suc- ceeded :n n in the business of an apothecary. He jiub! -s'led a Tour in Swit/erland 1776, 4to. ; and a Treatise on the several kinds of earth in Hanover 177'. >. He died in 1793.

ANDKF.AS < James), an eminent German re- former, born in the duchy of \\irtemberg, in l.i'2H. In l,')-lti, he was appointed minister of the church of Stuurard. He was at the diet of Katiˆhon, and was one of the secretaries at the cont'erc'iice at Worms. He also assisted at the diet ot Augsburg; and was soon after appointed chancellor and rector of the university of Tubin- gen. He died in 1">90. He was the author of several learned treatises, particularly one on Concord.

ANDIM-AS (John), a celebrated canonist in the fourtcetrh century, was born at Mugello near V'loiemr. He became professor of canon law at I'adua, I'isa, and afterwards at Bologna. An- drea-i had a daughter named Novella, whom he

sed t'i send to read lectures to the students

when he was himself unable ; and lest her beauty should prevent the attention of the hearers, she had a little curtain drawn before her. The first work of Andreas was his Gloss upon the Sixth Book of the Decretals, which he wrote when he was very young. He wrote also Glosses upon the Clementines ; and a commentary In Regulas Sexti, which he entitled Mercuriales, because he inserted his Wednesday's disputes in it. He en- larged the Speculum of Duraut in 1347; and died of the plague at Bologna in 1348, after he had been a professor forty-five years : he was buried in the church of the Dominicans. An- dreas has been called Archidoctor decretorum, and in his epitaph, Rabbi doctorum ; lux, censor, normaque morum; Rabbi of the doctors, the light, censor, and rule of manners. Pope Boni- face called him lumen mundi, the light of the world.

ANDREAS (John), was born a Mahommedan, at Xativa in the kingdom of Valentia, and succeeded his father as alfaqui of that city. He was con- verted to the Christian religion by hearing a ser- mon in the great church of Valentia on the day of assumption, in 1487. Upon this he desired to be

baptized; and, in memory of the calling of St. John and St. Andrew, he received the name John Andreas. After this he was made a canon ; and at the desire of Martin Garcia, bishop of Barcelona, undertook to translate from the Ara- bic, into the language of Arragon, the whole law of the Moors. Having finished this under- taking he composed his famous work of The Confusion of the Sect of Mahomet.

ANDREAS, St. the name of a small group of islands in the gulf of Venice, north of Ragusa, to which state they formerly belonged. The principal island contains a small town of the jsame name.

ANDREASBERG, a mining town in the prin- cipality of Grubenhagen, in the Hartz, Hanover, near which is a valuable silver mine, employing 130 hands; and also mines of iron and cobalt, to which water is supplied from an ingeniously- constructed reservoir. Population in 1810, 3359. Ten miles S. S. E. of Goslar.

ANDREINI (Isabella), a native of Padua, one of the best Italian comedians, who flourished towards the beginning of the seventeenth century. The Intenti of Pavia admitted her as a member of their society. Her poetic effusions were much admired, especially by cardinal Aldobrandini. Just before her death she visited Paris, where she attracted great attention, and was favourably received at court, but died on her return at Lyons in 1604. Besides her sonnets, madrigals, songs, and eclogues, there is a pastoral of hers entitled Myrtilla, and Letters, printed at Venice in 1610. ANDRENA, in entomology, according to Fabricius, a division of the genus apis, consist- ing of those insects of this tribe which have the tongue three-cleft.

ANDREOLITE, in mineralogy, cross-stone a species of stone of the zeolite family.

ANDREOSSY ISLAND, an island so named by the French, twelve or thirteen miles long, on the south-west coast of New Holland, near the mouth of Buonaparte's gulf.

ANDREW, ST. the apostle, born at Beth-

saida in Galilee, brother to Simon Peter. He had been a disciple of John the Baptist, and followed Jesus upon the testimony given of him by the Baptist. His history, so far as it is recorded in the Gospels, we need not here repeat. Scythia is said to have been subsequently the sphere of this apostle's labours. According to Eusebius, after he had planted the gospel in several

places, he came to Patrce in Achaia, where, endeavouring to convert the proconsul TEgeas, he was by that governor's orders scourged, and crucified. Both the Greek and Latin churches agree in cele- brating his festival on the thirtieth of November. His body, which is said to have been embalmed, and decently interred at Patrse by a lady of qua- lity, was afterwards removed to Constantinople by Constantine the Great, and buried in the church which he built to the honour of the apostles.

ANDREW, ST. a town of Germany. See ANDRA- STADT.

ANDREW, ST., KNIGHTS OF, an order of knights, more usually called the order of the thistle. See THISTLE. The knights of St. Andrew form also an order instituted by Peter the Great of Mus- covy in 1697, the badge of which is a golden medal ; on one side whereof is represented St. Andrew's cross, with these words, Tzar Pierre monarque de tout la Russie : it is suspended by a blue ribbon from the right shoulder.

ANDREW'S CROSS, ST. one in fornj of the letter X. See CROSS.

ANDREW'S DAY, ST. in ecclesiastical history, a festival of the church, celebrated on the thirtieth of November, in honour of the apostle St. An- drew.

ANDREWS (Lancelot), bishop of Winchester, was born at London in 1555, and educated at Cambridge. He was first bishop of Chichester, then of Ely, and in 1618 was raised to the see of Winchester. He was considered one of the best preachers and completest scholars of his age. Being once at dinner at court, king James asked aloud, Whether he might not take his sub- jects' money when he needed it, without all this formality of parliament? Neale, bishop of Dur- ham, replied, ' God forbid you should not ; your majesty is the breath of our nostrils.' On which the king said to the bishop of Winchester, ' Well, my lord, what say you ?' ' Sir,' replied the bishop, ' I have no skill of parliamentary cases.' The king answered, ' No puts-off, my lord ; answer me presently.' 'Then, Sir,' said he, ' I think it lawful for you to take my brother Neale's money, for he offers it.' This great prelate died at Winchester-house in 1626, aged seventy-one, and was buried in St. Saviour's church. Milton, at seventeen years of age, wrote a beautiful Latin elegy on his death. Bishop Andrews had, 1. A share in the translation of the Bible, from Gene- sis to 2 Kings, inclusively. He also wrote, 2. Tortura Torti, in answer to a work of cardinal Bellarmine, in which that prelate assumed the name of Matthew Tortus. 3. A Manual of Pri- vate Devotions : and, 4. A Manual of Directions for the Visitation of the Sick : besides Sermons and Tracts, in English and Latin, published after his death.

ANDREWS (James Pettit), a miscellaneous writer,

was born at Newbury, in Berks, in 1737, and died at Brompton in 1797. He wrote, 1. A Pamphlet in behalf of the Chimney-sweepers in 1788. 2. Anecdotes Ancient and Modern, with Observations, 8vo. 1789; and a Supple- ment to it, 1790. 3. History of Great Britain, with Notes, &c. 4to. 1794. 4. An Account of Saxon Coins found in Kintbury Church-yard, Berks. 5. The Account of Shaw, in Mr. More's Berkshire Collections. 6. The Savages of Europe, a novel translated from the French. Mr. A. also contributed several papers to the Archaeologia.

ANDREWS (Miles Peter), the son of an eminent merchant of London, coming into a considerable fortune by the death of an elder brother, devoted himself to writing for the stage. His dramas are Belphagor, a comic opera; Summer Amuse- ments, ditto ; Fire and Water, ditto ; Best Bidder, a comedy; The Election, a musical interlude; The Mysteries of the Castle, a co- medy ; Dissipation, ditto ; Baron of Kinker-vankotsdarsprackengotchdern, ditto ; Better Late than Never, ditto. Mr. Andrews in the late war was lieutenant-colonel of the St. Mar- tin's volunteers ; and maintained a splendid table, at which men of letters were ever welcome. His death, which was sudden, took place in 1814.

ANDREWS, ST. a royal borough of Fifeshire in Scotland, formerly the metropolis of the Pictish kingdom. It is seated in a bay, on the top of a small hill, thirty-nine miles from Edin- burgh, commanding a view of the German Ocean. Lon. 2° 45′ W., lat. 56° 18′ N. If w* may credit the legend, St. Andrews owes its origin to a singular accident. St. Regulus, or St. Rule, as he is likewise called, a Greek of Achaia, being warned by a vision to leave his native country, taking with him the relics of St. Andrew, and to visit Albion, he obeyed, and was shipwrecked on the coasts of Otholania, in the territories of Ungus, king of the Picts, A. D. 270. On hearing of the arrival of the strangers the king immediately gave orders for their re- ception, afterwards presenting the saint with his own palace, and building near it the church, which still bears the name of St. Regulus. St. Regulus is said to have established here the first Christian priests of the country, called Culdees. This church was supreme in the kingdom of the Picts ; and the cross of St. Andrew became the badge of the country. In 518, after the con- quest of the Picts, the episcopal see was re- moved to St. Andrews, and the bishop was styled ' maximus Scotorum episcopus. In 1441 it was erected into an archbishopric by Sextus IV. at the intercession of James III. It contained the greatest part of the shire of Fife, with a part of Perth, Forfar, and Kincardine shires, and a great number of parishes, churches, and chapels in other dioceses. The town of St. Andrews was erected into a royal borough by David I. in the year 11 40, and their privileges were afterwards confirmed. The charter of Malcolm II. written on

parchment, is preserved in the tolbooth. Here also are kept the silver keys of the city, which for form's sake are delivered to the king if he should visit the place. The town underwent a siege in 1337; vhen possessed by

the English, and other firm partisans of Baliol ; but the loyalists, under the earls of March and Fife, by the help of battering machines made themselves masters of it in three weeks.

The cathedral of St. Andrews was founded by bishop Arnold in 1161, but did not attain its full magnificence till 1318. Its length from east to west was 370 feet ; that of the transept 322. But though this vast pile was 157 years in building, in June 1559 it was so effectually demolished in a day, that nothing now remains but part of the east and west ends, and of the south side. Near the east end is the chapel of St. Regulus ; the tower of which is a lofty equi- lateral triangle, of 20 feet each side and 103 feet high ; the body of the chapel remains. The priory was founded by Alexander I. in 1122; and the monks (canons regular of St. Augustine) were brought from Scone, in 1 140, by Robert, bishop of this see. By an act of parliament in the time of James I. the prior had precedence of all abbots and priors, and on the days of fes- tival wore a mitre and other episcopal orna- ments. Dependant on this priory were those of Lochleven, Portmoak, Monimusk, the Isle of May, and Pittenweem, each originally a seat of the Culdees. The revenues of the house were C'2237. 2.;. W\d. in money, and above 440 chal- drons of grain and meal : besides the produce of ieo acre? of land. Nothing now remains of this splendid establishment except the walls of 'he precinct. The other religious houses were, fine of Dominican?, founded in 1274 by bishop ˆ ishart : another, of Observantines, founded by bishop Kennedy, and finished by his successor Patrick draham in l'.7f!; and the Carmelites, according to some writers, had a fourth. In the evarch of St. Salvator ;< a most beautiful tomb of bishop Kennedy, who died an honour to his i.imily in 1-100. Within this tomb were discover- ed, in 1683, s:\ magnificent maces, which had i.een concealed in troublesome times. One was •ivtn to each of the other three Scotch univer -ities. and three are preserved here. The parish eluirch is a spacious structure, 102 feet in length !:y 03 in breadth, and capable of containing 2500 pi rsonv. Here is a lofty monument of white :iurble erected to the memory of archbishop •M'arp, and representing in rude sculpture the : radical circumstances connected with it. St. Andrews also rnnuuns two places of worship for di-senters, and one for episcopalians.

The remains of the castle are still to be seen < >i> the east side of the

city, on a rock overlook- ing the -'-i. This fuitres> was founded in 1401 I'V l>Mi >;i Trail, \h<> uas buried in the high .mar of th<' cathedra1; and was afterwards the of cardinal !!eaton; who, after the c.'iath nf the I'niteMaiH martyr, (i<'or_,re Wishart, •tpp/ein ieii:u -<>i;ie d,m_vr. caused it to be [image]

" onrn for the

domestics one by one. Then turning them out of the castle, they advanced without violence to the apartment of this prelate, and, in the lan- guage of Dr. Robertson, ' delivered their coun- try, though by a most unjustifiable action, from an ambitious man, whose pride was insupport- able to the nobles, as his cruelty and cunning were great checks to the reformation.' The conspirators were afterwards besieged in this castle by the regent, earl of Arran; and in 1547 it was reduced and demolished. The window was long shown from which the cardinal beheld the cruel martyrdom of Wishart, who was burnt on a spot beneath.

St. Andrews is a mile in circuit, and contains three principal streets. On entering the west port, a well-built street, straight, and of a vast length and breadth, appears ; but presenting many traces of decayed magnificence. St. An- drews has, however, recently increased in the number of its inhabitants, who amount to near 5000. The trade, so late as the reign of Charles I., employed thirty or forty trading vessels, and was connected with a herring and white fishery, which had for ages been the source of consider- able wealth. After the death of the king, this whole coast, and St. Andrews in particular, be- came a scene of plunder and rapine. At pre- sent the harbour, whose narrow entrance is guarded by piers, gives shelter to perhaps eleven or twelve vessels regularly employed in its trade ; but it is much exposed to north-east winds. The game of golf is greatly practised in this neighbourhood ; and there is a manufac- tory of golf-balls in the town, from which, after supplying the demand at home, 9000 are yearly sent to other places. Here is also a manufac- tory of sail-cloth, from which 16,000 yards have been sometimes yielded annually.

ANDREWS, ST. (University of). The cele— brated university of this city was founded in 1411 by bishop Waidlaw ; and the next year he obtained from Benedict III. the bull of con- firmation. It consisted at one time of three colleges: 1. St. Salvator's, founded in 1458 by bishop Kennedy ; this is a handsome building, with a court or quadrangle within ; on one side of which is the church, on another the library. 2. St. Leonard's College, founded by prior Hepburn in 1522. This is now united with the last, and the buildings conrerted into private houses. 3. The New, or St. Mary's College, established by archbishop Hamilton in 1553 • but the house was built by James and David Bethune, or Beaton, who did not live to com-

plete it. The university is governed by a chan- chellor, an office originally designed to be perpetually vested in the archbishops of St. An- drews ; but since the reformation he is elected by the two principals and the professors of loth colleges. The rector is the next great officer, to whose care is committed the privileges, disci- pline, and statutes of the university. The colleges have their rectors, and professors of different sciences, who are indefatigable in theit attention to the instruction of the students, and to that essential article, their morals. The classes and discipline of the two colleges are, quite distinct; and each has its respective prin-

cipal and professors. But the library is com- mon to both, and is entitled to a copy of every work entered in Stationers' Hall. Fifty-six bursanes, or endowments, are conferred on stu- dents belonging to this university, whose num- bers have never exceeded 300 : in 1816-17 they were 175.

ANDREWS, ST. a town and island in the bay of Passamaquoddy, North America, and part of the territory claimed by both the United States and Great Britain. If belonging to the latter it would be included in New Brunswick.

ANDRIA, a city and P bishop's see in the territory of Ban, in the kingdom of Naples. It is seated on a spacious plain, four miles from the Adriatic coast, and five west by south of Trani ; giving the title to a duchy.

ANDRIA, in Grecian antiquity, called also $ihna ; public entertainments first instituted by Minos of Crete, and, after his example, appoint'- ed by Lycurgus at Sparta, at which a whole city or a tribe assisted. They were managed with great frugality, and considered as schools of temperance and sobriety, persons of all ages -vere admitted to them.

ANDRION, the hall or place of eating, where public entertainments were held in Crete, and in the uppermost part of which was a table set apart for strangers.

ANDRISCUS, a man of mean extraction, who pretending to be the son of Perseus, the last king of Macedonia, took the name of Philip, and was called Pseudo-Philippus. After a complete victory over Juventus, the Roman prator, he assumed the kingly power, which he exercised with great cruelty. At last the Romans obliged him to fly into Thrace, where he was betrayed into the hands of Metellus, whose triumph he served to grace, walking in chains before him.

ANDROAS, or ANDRODAMAS, among ancient naturalists, a kind of pyritse, to which they at- tributed certain magical virtues.

ANDROCLEA, daughter of Antipcenus of Thebes, who, with her sister Alcida, sacrificed herself in the service of her country ; the oracle having promised a victory to the Thebans if any one of noble birth devoted himself for the glory ol the nation. Antipcenus refused to do it, and hb daughters cheerfully accepting it received groat honours after death. Hercules dedicated to them the image of a lion in the temple of Diana. J'aus. ix. c. 17.

ANDROCLUS, or AKDRODUS, a Dacian slave, who being exposed to a lion in the circus, the animal forbore to hurt him because he had formerly taken a thorn out of its foot. He was in consequence liberatedˆ and led the lion about the streets of Rome. Aid. Geil. 1. v. c. 14 ; M. Hist. Anim. 1. vii. c. 48.

ANDROGEUS, in fabulous history, the son of Minos king of Crete, murdered by the youth ot Athens and Megara, who envied his being always victor at the Attic games. Minos hav- ing taken these towns, obliged the inhabitants to send him an annual tribute of seven young men and as many young virgins, to be devoured by the Minotaur ; from winch tribute Theseus delivered them by killing the monster.

AND

ANDROGYNA, in botany, plants bearing male and female flowers on the same root.

ANDROGYNES, in natural history, a name given to those human creatures who have ap- peared to unite in themselves the attributes of the two sexes. See HERMAPHRODITE.

ANDBOGYNES, in the heathen mythology, were creatures of the above kind who had also two heads, four arms, and two feet ! The rabbinical writers also pretend that Adam was created double, one body being male, the other female, which in their origin not being essentially join- ed, God afterwards did nothing but separate them. Plato adopts the same 'idea in his Banquet, and says the gods originally formed man with two bodies and two sexes ; but that being also endowed with a gigantic force he became inso- lent and made war against the gods. Jupiter, exasperated, debilitated this double being by disjoining the male from the female, and leav- ing each half to subsist with its own powers alone. This fable of Plato has been used with great ingenuity by a modern French poet, who attributes the sexual passion to the natural ar- dour which each half of the androgynes feel for

re-union ; and the inconstancies of love to the difficulty which eacli of the separated parts en- counters, in its effort to recover its proper and original half. If a woman appears to us ami- able, we instantly imagine her to be that moiety with whom we should only have constituted cmi- whole :

The heart, with fond credulity impress'd Tells us the half is found, and hopes for rest; But 'tis our curse, that sad experience shows, We neither find our half, nor gain reposo.

ANDROGYNUM BALNEUM, in antiquity, denotes a bath common to both sexes.

ANDROIDES; from av»jp, a man, and tiSoc, form ; in mechanics, a human figure which by certain springs or other movements is made to perform some of the natural motions of a living man. The construction of an androides is justly supposed to indicate great skill in mechanics, and, with that of various other automata, has frequently engaged the attention of ingenious and curious minds. See AUTOMATON, under which we describe and classify all those various self-moving figures

ANDROLEPSY, in Grecian antiquity, an action allowed by the Athenians against such as protected persons guilty of murder. The rela- tions of the deceased were empowered to seize three men in the city or house whither the male- factor had fled, till he was either surrendered or satisfaction made to them.

ANDROMACHE, the wife of the valiant Hector, the mother of Astyanax, and daughter of Action king of Thebes in Cilicia. After the death of Hector and the destruction of Troy, she married Pyrrhus ; who afterwards gave her to Helenus the son of Priam, with part of Epirus.

ANDROMACHI THERIAGA, or treacle of Andromachus, in pharmacy, an alexipharmic composition called also Venice treacle.

*ANDROMACHUS, Avfyo/*axoc, father of the historian Timaeus* who founded the city of Tauremaenium near Naxos, where he had assem- bled the Naxians who fled fuom trie tyranny of*

Diorysius. He also assisted Timoleon in res- cuing Syracuse from the power of Dionysius in the 105th Olympiad, A.C. 360.

ANDROMEDA, in astronomy, a northern constellation behind Pegasus, Cassiopeia, and Perseus. It represents the figure of a woman chained. The stars in this constellation in Pto- lemy's catalogue are twenty-three, in Tycho's twenty-two, in Bayer's twenty-seven, in Mr. Flamstead's no less than eighty-four.

ANDROMEDA, in botany, the marsh cystus : a genus of the monogynia order, belonging to the decandria class of plants, and in the natural method ranking under the eighteenth order, bi- cornes. The characters are: CAL. a quinque- partite perianthium, small, coloured, and per- sistent; COR. monopetalous, campanulated, and quinqufid, with reflected divisions ; STAM. ten tubulated filaments, shorter than the co- rolla; ANTH. two-horned and nodding; PIST. a roundish germen ; a cylindric stylus larger than the stamina, and persistent, and an obtuse stigma : PER. a roundish five-cornered capsule, with five cells and five valves ; SEEDS very nume- rous, roundish, and glossy. There are fifteen species, of which the following are the principal : 1. A. arborea, a native of Virginia and Carolina, whore it is called the sorrel tree. 2. A. caly- culata, a native of Siberia, and likewise of'North America. 3. A. mariana, a native of North America, a low shrub sending out many woody stalks from the root. 4. A. paniculata, a native of Virginia and Carolina, growing in moist places. 5. A. polifolia, a low plant growing naturally in bogs in the northern countries.

AN PROM EDA, in mythology, the daughter of Cepheus and Cassiopeia, the wife of Perseus. Minerva translated her into the heavens. — This was also the name of a celebrated tragedy of Euripides, admired by the ancients above all the other compositions of that poet, but now lost.

ANDROMEDA, in entomology, a species of Pa- pilio (Parnassus) found in India, according to Fabricius and (jmelin.

ANDROMEDA, in natural history, a species of Medusa amongst the vermes mollusca.

ANDROMEDA, in wrilers of the middle age, a kind of garment made of ram-skins.

ANDRON, in Grecian antiquity, denotes the apartment in houses designed for the use of men; in which sense it stands opposed to gynaeceum, the female apartment. The Greeks also gave their dining-rooms the title of audron, because tho men alone feasted there.

ANDRONA, in antiquity, a street, or public place, where people met and conversed together. In some writt TS androna is more expressly used for the spaee between two houses; and the (•reeks use the term for the way or passage be- tween two apartments.

ANDRONA, in eeeiesiastical writers, that part in churches destined for the men. Anciently men and women had separate apartments in places of worship, where they performed their devotions asunder; which method is still religiously ob- served in the Greek church. The avSpiov, or androna, was on the southern side of the church, and the women's apartment on the northern.

ANDRONICUS 1. Comnenus, emperor of

the East, was the son of Isaac, and grandson of Alexis Comnenus. He w «f an active martial mind, and eloquent : out naa many vices. The emperor Manuel, who was his cousin, gave him a considerable command in Cilicia: but he was discovered in a treasonable correspondence with Germany and Hungary, and thrown into prison, where he continued twelve years. From this he escaped to Russia, and engaged the Russian prince to join his troops with those of Manuel in the invasion of Hungary. By this artifice he obtained a free pardon ; but soon after incurred the imperial displeasure, which was increased by various intrigues till Manuel's death in 1163, and the accession of his son Alexis II. who being quite a youth, Andronicus was chosen partner in the government. The innocent Alexis soon fell a sacrifice to his coadjutor's thiist of power, having scarcely reigned two years, when the people, exasperated at his cruelties, pro- claimed Isaac Angelus emperor, and having put Andronicus in irons, thrust out his eyes ; he was now led through the city in derision, and at last stabbed in 1185 aged seventy-three.*

ANDRONICUS, PAL.KOLOGUS II., surnamed the Elder, succeeded Michael VIII. in 1283, and was driven in 1325 from the throne to a cloister by his grandson. He conceived such an aversion to his father for

attempting to bring about an union of the Greek and Latin churches, that he would not suffer him to be interred. — Gregor. 1. iv. &c.

ANDRONICUS, I. of Cyrrhus, an astronomer of Athens, constructed an octagon tower, with figures carved on each side, representing the eight principal winds. A brass triton at the summit, with a rod in its hand, turned with the wind, and pointed to the quarter whence it blew. From this circumstance the custom 01 placing weathercocks on steeples is supposed to be derived. Until very recently it served as a mosque for the Turks.

ANDRONICUS, of Rhodes, a peripatetic philo- sopher, who nourished B. C. 63, and to whom we are indebted for restoring and publishing the works of Aristotle in the time of Sylla. He also wrote commentaries on some of that philoso- pher's works.

ANDRONION, in physic, the name of a pastil, invented by an ancient physician named Andro. Its ingredients, according to ./Egineta's prescription, are the squamjE of copper, aes us- tum, sal ammoniac, alumen rotundum, shavings of verdigrise, and frankincense, wrought up with wine.

*ANDROPHAGI ; from avrjp, a man, and (pay**, I eat. See ANTHROPOPHAGI.*

ANDROPOGON, or MAN'S-BEARD, in bo- tany, a genus of plants of the moncecia order and polygamia class; in the natural method ranking under the fourth order, Gramina. The hermaphrodite calyx is a one-flowered bivalved glume: COE. a bivalved glume awned at the base: STAM. of three capillary filaments; anthe- rae oblong and bifurcated: PISTIL, ah oval ger- men ; with two capillary styli coalesced, and villous stigmata: no PERICARP. : SEED solitary, and covered. The male calyx, corolla, and sta- mina, the same with the hermaphrodite; but the

forolla without the awn. There are above eigh- teen species ; of these the most remarkable is A. nardus, which produces the Indian nard, or spikenard of the shops. See SPIKENARD.

ANDROS, in ancient geography, an island between Tenedos and Eubcea; one mile distant from the former, and ten from the latter, and one of the ancient Cyclades. It had the various names of Cauros, Lasia, Nonagria,

Epagris, Atandros, and Hydrusia. Here was formerly a city of great note, bearing the same name, and situated very advantageously on the brow of a hill. In this city, according to Strabo and Pliny, stood a temple dedicated to Bacchus, near which was a spring, called the Gift of Jupiter, the water of which had the taste of wine during the feasts of Bacchus. But if they were carried to a place whence the temple could not be seen, they lost their flavour. Pausanias says, that during the feast of Bacchus, wine flowed, or was at least by the Andrians believed to flow, from the temple of that god.

The Andrians were the first of all the islanders who joined the Persians at the time Xerxes in- vaded Greece : Themistocles, therefore, after the victory at Salamis, resolved to attack this city. Having landed his men on the island, he sent heralds to the magistrates, acquainting them that the Athenians were coming against them with two powerful divinities, Persuasion and Force ; and therefore they must part with their money to one or other. The Andrians replied, that they likewise had two mighty deities who were very fond of their island, viz. Poverty and Impos- sibility; and therefore could give no money. Themistocles having laid siege to the town, pro- bably made himself master of and destroyed it ; as we are informed by Plutarch, that Pericles, a few years after, sent thither a colony of 250 Athe- nians. Being retaken by the Persians, on the overthrow of that empire by Alexander the Great, it submitted to him, and on his death sided with Antigonus, who was driven out by Ptolemy. We next read of it as besieged by Attalus, king of Pergamus, at the head of a Roman army; and on his death the republic claimed the whole island.

Andros is now subject to the Turks ; and con- tains a town of the same name, with many vil- lages, but most of the inhabitants are of the Greek communion. It is the most fruitful island in the Archipelago, and yields a great quantity of silk, wine, oil, and barley. There are said to be about 10,000 inhabitants. It is the appanage of a sultana, and the revenue is worth about 30,000 piastres.

ANDROS, or THE HOLY GHOST ISLANDS, (Isles del Espiritu Santo, as they were first called by the Spaniards,) a group of isles extending in the form of a crescent, for upwards of fifty leagues in the neighbourhood of the Great Bahama Bank, and amongst the Bahamas; in N. lat. 24° to 25° 30', and W. long. 77° to 78° 20'. On the west side of these islands is the most northern extremity of the bank. The passages through them are dangerous to navigate ; and northward they terminate in the line of the Berry Islands, which it is always preferable to go round in making Cuba from this quarter; the passage be- tween them and the most northern of the Andros

Isles having not above eight feet of water. On the east of these islands there is no soundings at any distance from the shore. The principal Andros island

has its northern point between ten and eleven leagues W. N. W. and its most south- ern, called High Point, about eight leagues S. of the west end of New Providence. It contains a sort of swamp, in which the only fresh water of the Bahamas is found, and abounds with timber, which the danger of approaching in ships of burden has effectually protected from the axe. Attempts have nevertheless been made to colo- nize this island. In 1788, 200 inhabitants, in- cluding slaves, were settled here ; and previous to May, 1803, lands were granted from the crown, to applications, amounting to 16,025 acres. It has the privilege of sending one member to the house of assembly of the Bahamas.

ANDROSACE, in botany, a genus of the mo- nogynia order,and pentandria class of plants ; rank- ing in the natural method under the twenty-first order, precise . The essential characters are : the male calyx is five-leaved : COR. is five-petalled : STAM. five, inserted on the rudiment of the sty- lus : the female calyx five-leaved ; COR. wanting ; the styli three : capsule trilocular : seeds two. Of this genus Linnaeus reckons six species : — • 1 . A. carnea, growing naturally on the Helvetian mountains, the Alps, and in Siberia, but seldom more than three inches high. 2. A. elongata. 3. A. lactea, a native of the Alps, like the car- nea, and of the same height. 4. A. maxima grows in Austria and Bohemia, among the corn. 5. A. septentrionalis. 6. A. villosa: these grow also on the Alps, in Siberia, and the mountains of Switzerland, and do not exceed three inches.

ANDROSˆEMUM, in botany, St. John's wort.

ANDROUET (du Cerceau, J.), an architect of France, bdrn at Orleans, or, as others state, at Paris, in the sixteenth century. He built the triumphal arch at Pola, in Italy, the gailery of the Louvre, and began the Pont Neuf at Paris. His writings are, 1. Livre d' Architecture, con- tenant les Plans et Dessins de Cinquante Bati- mens, &c. 2. Second Livre d'Architecture. 3. Les Edifices Remains, &c.

ANDRUM, in medicine, a kind of hydrocele, to which the people of Malabar are very sub- ject.

ANDRYALA, downy sow-thistle, in botany, a genus of the polygamia aequalis order, and syn- genesia class of plants ; and, in the natural method, ranking under the forty-ninth order, compositae- semiflosculus. The essential characters are : the receptacle is villous : CAL. many parted, sub- equal, and rounded; the pappus simple and sessile. The species are, 1. A. integrifolia, an annual, growing naturally in the south of France, Spain, and Italy. 2. A. lanata, a native of Sicily, and of the country round Montpelier. 3. A. ragusina, a native of the Cape of Good Hope. 4. A. sinuata grows in Spain and Portu- gal ; the leaves broader, longer, and

more downy, than either of the other sorts.

ANDUINNA, in entomology, a species of papilio (Nymph Phal.), found in Russia.

ANDU JAR, a city of Andalusia, in the pro- vince of Jaen in Spain. It is situated on thˆ

southern declivity of the Sierra Morena, on the banks of the rivet Guadalquivir near the junc- tion of the .landula. Being protected by the Sierra from the north winds, and well irrigated, the country around it is highly productive in wheat, wine, oil, honey, and wax; and has some excellent pasture for cattle. From a white clay found near it some extensive manufactories of earthen ware are established, and especially those j'irs of a porous nature, which are highly esteemed in the hotter parts of Andalusia, from the pro- perty of cooling their liquors in the most intense heats. It was a Roman station, and the road constructed by those former masters of Spain passes through the city ; where is a magnificent bridge, of modern erection, upon the foundations laid by the Romans. Its latitude is 38° 1′ 32″ north, and its longitude 4° 28′ -25″ west from London. The population is about 13,000 souls.

AND USE, a town of France in Langued'oc, the head of a canton, in the department of the Gard, arrondissement of Alais. It is eight leagues and a half from Nismes, and eleven north of Montpelier, on the banks of the Gardori; and has a population of about 5000 persons, chiefly Protestants, employed in the manufacture of woollen stuffs, stockings, and hats.

AXF.AIC. On, near.

Thr r:ir.!inal confmurs to pursue me; and to fright

!: • Her y as inn 'li as In- can ;'n>;n coming aneur me.

l'i>. Attcrbury's Letters.

< i'artliolomi \v;, ;i learned native of

l"

- piMi'e>«i>r ai, i.vo;.-, where he secretly

i! tV1 di.ct/iir. •; of tin: reformation for a

iic; liui on the f.sti\al of the Holy Sacra

u'Mi 111 |."> i) . as i in1 pruiv.s.uon was passing

'i-.vanU tiic collt jy, a. l:i:'.,:j stone was thrown

•.HI (>f ib" '.'.ni'lows upon the host and the

' v\!iti carried H. Th p.Mjple," enraged at

!>!•;, '.mlxi: into tlie <:i>lh j;i i;i-l assassinated Mr.

'• .a;:, \!i >:.. i!'-v i:n:.';'ii,i ! t>. have been the

;".i-'oi,of tl,i. ii-U!. ! ;.-. v. .it:n-sa,re, I. Chant

ii.ii. 4to. I… I,, ::VO ;i.u ! I.V>0; '2. i.yon Mar

; i' i's !'.,ii!>lems trans

.. ! \uii—, i.Vl'i ;. i 15.5B; 4. Picta

i. i.nt ;">. A translation

• 1.:, I'aris and Lyons;

•Ilinvvrliair. Piior.

:ii !i ! tn .it of the li- i:j.. down my history in a rlifst no Is to the death Cumberland.

ie\ I'l'iiiainiiiL' anecdote* i.'.ir.1.! i.ii.! sedentary as MIK.HI'S i.ifc, (if Gray. ; i.HMSure for grain, i lance. At Lyons it ;l" i ' •'•!:;•: n <|i!:iniiiy of winu, which is • ii a— can ca.'i-y ..; once ; and is fixed

>' 'jiiai'i-. l.n_!i,!i w.iiL-iij(-asure. AN i .f . XI)A, MIL i,f tip —..al!cr 'ii-gin Isles, ,i>t MI l ..rl(. I'KM, ! . ,,';i ..ightoen miles '"H ";i! ; •'!"' '!• . .1. I iiiiinliaU'.ed,

being generally under water in high tides It ;s dependent on Virgin Gorda. Lat. 18° 46′ N., long. 64° 22′ N.

ANKGADIZOS, a river of South America, in the province of Choco, which runs directly from east to west into the Pacific Ocean, near the point of Salinas.

ANELE,' - Ang. Sax. On elan. To oil ANEILE, or > or rub with oil; to anoint; to ANOYLE. j perform the rite of extreme

unction, observed in the Catholic church.

Last of all cometh the anoyling wythout promise,

and therefore without the spirite and without profiet,

but altogether vnfruitful and superstitious.

The wMe Workes of W. Tyndall, f. 153. c. i. S. Gregory is also pretended in objection ; for he

gave dispensation to the priests of Sardinia, ut bapti-

eatos unyant, to anneal baptized people.

Taylor's Episcopacy asserted.

ANELLA, in entomology, a species of pha- Ijena, of the tinea tribe, inhabiting Austria ; it is large, and has a ferruginous abdomen.

ANELLO. See MASSANIELLO.

ANEMIUS FURNUS, among chemists, a wind furnace ; used to make fierce fires for melting, &c.

ANEMOCHENE, in music, is a name which has been given to the J^OLIAN HARP, which see.

ANEMOMACHIA ; from avtpoc, wind, and (na'xia, fight; in some ancient writers, denotes a whirlwind, or hurricane.

ANEMOMETER; £/ioc and jwrpov; an instrument contrived to measure the strength or velocity of the wind. Various instruments have been invented for measuring the velocity and power of the wind on a given surface, denominated generally anemometers or wind-gages. The first instrument of this description has been attributed to Wolfius, and was described by him in his Aerometry, in 1709, and afterwards in two or three other works of this author ; but con- siderable improvements have since been made upon its construction. The one represented in the an- nexed diagram is the celebrated 13. Martin's improvement on Wolfius's anemometer. — An open frame of wood, A B C D E F G II 1, is sup- ported by the shaft or arbor I. In the two cross-pieces II K, L M, is moved a horizontal axis Q M, by means of the four nails, ah, cm, Of, gh, exposed to the wind in a pro- per manner. Upon this axis is fixed a cone of wood, M N () ; upon which, as the sails

move round, a weight It, or S, is raised by a string round its superfices, proceeding from the smaller to the larger end NO. Upon this larger end or base of the cone is fixed a rocket-wheel A, in whose teeth the click X falls, to prevent any retrogade motion from the depending weight. — The structure of this machine sufficiently shows that it may be accommodated to estimate the variable force of the wind; because the force of the weight will continually increase as the string advance? on the conical surface, by acting at a greater distance from the axis of motion; consequently,

0

ANE

if such a weight be added on the smaller part M, as will just keep the machine in equilibrio in the weakest wind, the weight to be raised as the wind becomes stronger will be increased in proportion, and the diameter of the cone, N O, may br> so large in comparison to that of the smaller end at M, that the strongest wind shall but just ,aise the weight at the greater end. — If, for example, the diameter of the axis be to that of the base of the cone, N O, as one to twenty- eight ; then, if S be a weight of one pound at M on the axis, it will be equivalent to twenty-eight pounds when raised to the greater end : if there- fore, when the wind is weakest, it supports one pound of the axis, it must be twenty-eight times as strong to raise the weight to the base of the cone. If therefore a line of scale of twenty- eight equal parts be drawn on the side of the cone, the strength of the wind will be indicated by that number on which the string rests.

One of the most ingenious and convenient, methods for measuring the force of the wind is to employ its pressure in supporting a column of water : an instrument of this kind was, we be- lieve, first proposed by Dr. Lind, and is described by him in the Phil. Trans., vol. Ixxv., a brief account of which is as follows : A B, C D, in fig. 60, PNEUMATICS, are two glass tubes, which should not be less than eight or nine inches long, the bore of each being about -4 of an inch in diameter ; they are connected together by a small bent glass tube, ab, only one-tenth of an inch in diameter, to check the undulations of the water, caused by a sudden gust of wind. On the upper end of the leg A B is fitted a thin metal tube, having its end open to receive the wind blowing horizontally into it. The two tubes, or rather the two branches of the tube, are con- nected to a steel spindle, K L, by slips of brass near the top and bottom, by the sockets of which, at e and j, the whole instrument turns easily about the spindle, which is fixed into a block by a screw in its bottom, by the wind blowing into the orifice at F. When the instrument is used, a quantity of water is poured in till the tubes are about half full ; then exposing the instrument to the wind, this, by blowing in at the orifice F, forces the water down lower in the tube AB, and raises it

so much higher in the other tube ; and the difference between the heights of the surfaces of the water in the two tubes, estimated by a scale of inches and parts, H I, placed by the side of them, will be the height of a column of water, whose pressure is equal to the force or momentum of the wind, blowing or striking against an equal base. Now, as a cubic foot of water weighs 1000 ounces, or 62£ pounds, the twelfth part of which is 5ˆ Ibs. nearly ; therefore, for every inch the surface of the water is raised, the force of the wind will be equal to so many times 5\ Ibs. on a square foot. Thus, suppose the water to stand 3 inches higher in one tube than in the other, then 3 X 51 — 15f Ibs. will be equal to the pressure or force of the wind on the surface of a square foot.

This instrument of Dr. Lind's, it may be said, measures only the force or momentum of the wind, but not its velocity. The velocity of the wind, however, may be deduced from its force

so obtained, by help of some experiments per- formed by Dr. Button at the Royal Military Academy, in the years 1786, 1787, and 1788; from which it appears that a plane surface of a square foot suffers a resistance of twelve ounces from the wind, when blowing with a velocity of twenty feet per second ; and that the force is nearly as the square of the velocity. Hence then, taking the force of 15jj pounds, above found, for the force of the wind when it sustains three inches of water, and taking the square roots of the forces, it will be as v'i : \/l5l '•'• 20 : 91J the fourth proportional, that is, a velocity of 91 J feet per second, or 62 miles per hour, is the rate or velocity at which the wind blows, when it raises the water three inches higher in the one tube than the other. And farther, as the said height is as the force, and the force as the square of the velocity, we shall have the force and velocity corresponding to several heights of the water in the one tube above that in the other, as in the following table : —

TABLE of the corresponding height of Water, Force on a square foot, and velocity of Wind.

Height of Water.

Force of Wind.

Velocity of Wind per hour.

Inches.

Pounds.

Miles.

°i

1.3

18.0

OJ

1

2.6 5.2

25.6 36.0

2

10.4

50.8

3 4 5

15.6

20.8 26.0

62.0 76.0 80.4 –

6

31.25

88.0

7

36.5

95.2

8

41.7

101.6

9

46.9

108.0

10

52.1

113.6

11

57.3

1192

12

62.5

124.0 .... – 1

In one instance Dr. Lind found that the force of the wind was such as to be equal 34$ pounds, on a square foot ; and this by proportion, in the foregoing table, will be found to answer to a velocity of 93 miles per hour !

ANEMONE, WIND-FLOWER, in botany, a ge- nus of the polygamia order, and polyandria class of plants ; ranking in the natural method under the twenty-sixth order, multisiliquae. It has its name from the Greek avtpoe, signifying the wind because the flower is supposed not to open unless the wind blows. The characters are : no CAL. : COR. petals of two or three orders, three in each series, oblong : STAM. numerous capillary filaments ; the antherae didyraous and erect : PIST. numerous germina collected into a head ; the styli pointed ; the stigmata obtuse : no PERICARP, the receptaculum is globular : the seeds are very numeious. Of this genus Lin- nseus enumerates twenty-one species ; those valuable on account of the beauty of their flowers are the following : 1. A. appennina,, a native of

Britain, growing in woods. 2. A. coronaria ; quadrant, is a small spring which catches at every 3. A. hortensis, natives of the Levant, particu- notch corresponding to each degree, as the wind larly of the Archipelago islands,

where the bor- shall, by pressing against the sail, raise it up ; ders of the fields are covered with them. 3. A. and prevents the falling back of the sail, upon nemorosa, growing wild in the woods in many lessening of the force of the wind. At the bet- parts of Britain, where it flowers in April and torn of the wooden tube is an iron index, which

May. This genus has received much improve- ment and illustration from the pen of professor de Candole (De Cand. Syst. v. i. 188.) who enu- merates forty-five species.

ANEMONE, SEA. See ANIMAL FLOWER,

ANE'MONY. Gr. ave/iovij, the wind-flower, from (U'f/toc, the wind ; because says Minshew, when the wind blows the flower opens.

Upon the top of its single stalk, surrounded by a loaf, is produced one naked flower, of many petals, v ith many stamina in the centre ; the seeds are col- lected into an oblong head, and surrounded with a ./'the velum, g the graduated copious down. The principal colours in anemonies quadrant, h the Counterpoise are white, red, blue, and purple, sometimes curiously

Miller.

moves round a circular piece of wood fastened to the top of the pillar on the pedestal, on which are described the thirty-two points of the com- pass. The figure is given in the annexed diagram : where a is the pedestal, b the pillar on which the iron axis is fitted, c the circle of wood on which are described the thirty-two points of the compass, e the wooden tube upon its axis,

intermixed.

Wind flowers are distinguished into those with broad and hard leaves, and those with narrow and •ioft ones. The broad-leaved anemony roots should be planted about the end of September. Those with small leaves must not be put into the ground till the end of October. Mortimer.

From the soft wing of vornal breezes shed,

Anemonies, auriculas, cnrich'd

With shining meal o'er all their velvet leaves.

Thornton.

See yonder anemonies their leaves unfold, With rubies flaming ami with

living gold ; While crystal showers from weeping clouds descend, Enjoy the presence of thy tuneful friend.

Sir \V. Jones's Turkish Ode of Metihi

ANKMOSCOPF,, (from avfpoc and

machine invented to foretel the changes of the wind or weather, and sometimes showing by an index what the present direction of the wind is. ( )f this latter sort, it seems, was that used by the ancients, and described by Vitruvius; and we have many of them at present in large or public buildings, where an index withinside a room or hull points to the name of the quarter from whence the wind blows without ; which is simply (•Heeled by connecting an index to the lower end of the spindle of a weather-cock. The term has likewise been used to denote what is now com- monly railed an hygrometer. We add a de- scription of one contrived by the late Mr. 1'ickorinpr, and published in the Philosophical Transactions, i'o. 473. This anemoscope is a machine four fort and a quarter high, consisting of a l>riiail and weighty pedestal, a pillar fastened into it, and an iron axis of about half an inch diameter fastened into the pillar. Upon this axis turn-; a wooden tube ; at the top of which is placed a vane of the same materials, twenty-one riches Ion1.:, consisting of a quadrant, graduated mil shed with an iron rim, notched to each de- Linl, r.hnse plan.' i one fool si mare, made of can- 1 ••!-, —in ic 'In il upon tour battens and painted. On >i: n;iiii I..IU.H, i,. ,t in the shod lim of the

of the vane of the velum, which takes off; a is the plane, b the spring, c the wooden radii, d d the holes through which the pin in the centre of the quadrant goes. The inventor of this ma- chine tells us, that he carefully examined what dependence may be had upon it during several severe storms, and found that it answered ex- ceedingly well; for that in such winds as the sailors call violent storms, the machine had six degrees to spare for a more violent gust before it comes to a horizontal position.

ANEMUR, CAPE, the southern extremity of Caramania, opposite the Isle of Cyprus ; on the promontory are the ruins of the ancient city Anemuriam : N. lat. 36° 15', E. long. 32° 36'.

ANEMURIUM, in ancient geography, Avtfin-

piov, now Scalemura, a town and promontory of

Cilicia, which struck medals of Domitian, Do-

mitia Longina, Caracalla, Alexander Severus,&c.

with the addition sometimes of the name of their

praetors, as on a medal of Severus. CT. ANTON.

ANEMOYPIEQN, i. e. Pr&tore Antonio Anemu-

riensium ; the types are mostly a turreted head,

or a figure of Diana Alphaea, or of Bacchus.

ANEN', prep.~\ No satisfactory etymology

*ANENST^ I has been given of these wo*ds,*

ANENT', \nor is their signification ac-

ANEN'TIS, i curately defined. Anentis, in

ANEYN'TIS. j Wicklif s New Testament, is

equivalent to with. With regard to ; on the part

of; answering to the Latin apud.

Anenst, says archdeacon Nares in his Glossary, is a Chaucerian word, signifying against.

And Jhesus bihcld hem and seyde anentis men it is impossible, but not (mentis God ; for alle thingis ben possible anentis God. Wicklif. Mark x.

Therfor anenst their cstatis I wol in no mancre Deme ne determyn. Chaucer. Pardonere and Tapstere. AN-END, in marine affairs, as applied to a mast or beam, expresses its perpendicular situa- tion : thus the topmast is AN-END, when hoisted to its usual situation at the head of the lower mast. ANETHINUM VINUM aut OLKUM, in medi- cine, avnOivof oivof, a preparation of wine or oil with anethum.

ANETHOXULA, in botany, the woody rout

ANET, a town of France in the department of the Eure and Loire, arrondissement of Dreux, and the chief place of a canton. It has 240

houses, and 1570 inhabitants, with a beautiful castle, erected by Henry IV. for his favourite, the duchess of Valentinois. It was stripped of its most valuable ornaments in the course of the revolution. In the neighbourhood is a large iron forge. Anet is three leagues north of Dreux, and ten north of Char tres.

ANETHUM, DILL and FENNEL, in botany, a genus of the digynia order, and pentandria class of plants ; ranking in the natural method Under the forty-fifth order umbellatas. The essential characters are: the fruit oval, com- pressed, striated; petals five, involute, entire, ind very short. 1. A. feniculum, or fennel, of which there are two varieties, the common and the sweet. 2. A. graveclens, or dill, an annual plant ; the root long, slender, and white ; the leaves are divided into a multitude of fine, long, narrow segments, like those of fennel, but of a bluish green colour, and less strong smell. Of the first species, the fennel, both the seeds and roots are used in medicine. The seeds of both the fennels have an aromatic smell, and a moderately warm pungent taste : those of the sweet fennel are in flavour most agreeable, and have also a considerable degree of sweetness; hence our colleges have directed the use of these only. They are ranked among the four greater hot seeds, and not undeservedly looked upon as good carminatives.

ANEURIN, a celebrated British poet, called the sovereign of bards and of flowing music, who flourished about the beginning of the sixth cen- tury. He was a chieftain among the Otodinian Britons, who behaved valiantly at the battle of Cattraeth, which he celebrates in a poem pre- served in the Welsh archaeology. This, with another piece entitled the Odes of the Months, is all that now remains of his works. He died about A.D. 570.

ANEURISM, avivpwu, a disease of the arteries, in which they become excessively di- lated, or by a wound through their coats the blood is extravasated among the adjacent cavi- ties. It may be more accurately defined a throb- bing tumour, distended with blood, and formed by a dilatation or rupture of an artery. See SURGERY, Index.

ANEW. Of new. See NEW.

In vain therefore dost thou now take m hand To call, to count, or weigh, his works anew; Whose counsel's depth thou canst not understand ; Since of things subject to thy daily view Thou dost not know the causes nor the courses due.

Spenser,

Nor, if at mischief taken, on the ground Be slain, but pris'ners to the pillars

bound, At either barrier plac'd ; nor, captives made, Be freed, or, arm'd anew, the tight invade. Dryden. I That, as iu birth, in beauty you excel,

The muse might dictate, and the poet tell : V uu i- art no other art can speak ; and you, To show how well you play, must play anew. Prior. The miseries of the civil war did, for many years, deter the inhabitants of our island from the thoughts cl engaging a -.etc in such desperate undertakings.

Addison..

He who begins late is obliged to form anew the whole disposition of his soul, to acquire new habits of life, to practise duties to which he is utterly a stranger.

*Roger**

ANEWST, or > Nian, Ang.-Sax. near, is ANEUST. \ proposed by Skinner. Sax.

neber-r, neighbourhood. Used in the dialect of the western counties, as aneust the matter; suitably ; in a becoming manner ; approaching to perfection.

ANFELDTHYDE, or ANFEALTHILE, in the old Saxon law, a simple accusation ; for the Sax- ons had two sorts of accusation, viz. simplex and triplex. That was called single when the oath of the criminal and of two more was sufficient to discharge him ; but his own oath, and the oaths of five more, were required to free him a triplice accusatione.

ANFILOCHA, a town of ancient Epirus, now Jeroirlia. It was almost ruined during the wars between the Venetians and Turks.

ANFOSSI (P.), a musical composer of eminence in the last century, a pupil of Sacchini and Pic- cini. After composing several operas which met with great success at Rome, his L'Olympiade en- countered a most unfavourable reception. An- fossi in consequence visited Paris in 1 780, where his Cams Marius was performed, and afterwards London. He died at Rome in 1795. L'Avaro is considered his chef d'mivre.

ANFRACTUOSE, ad. } Lat. anfractus, or ANFRAC'TUOUS, >amfractus, from am,

ANFRAC'TUOUSNESS. j the inseparable pre- position (Gr. afKja) around, andfrango, fractum, to break. Applied to the interruption of a circuitous course by frequent breaks, indenta- tions, or chasms. The turning, bending, or winding of a way in and out. Anfractus Ja~ diciorum, Cicero, the

cunning tricks or windings of chicanery.

Behind the drum are several vaults and anfractuose cavities in the ear-bone, so to intend the least sound imaginable, that the sense might be affected with it ; as we see in subterraneous caves and vaults, how the sound is redoubled. Ray.

ANGAD, a desert track, eighty-four miles in length and fifty-four in breadth, the eastern ex- tremity of the territory of Algiers, which it separates from that of Morocco. It contains nume- rous springs, and supports a considerable and war-like population.

ANGALA-DIAN, in natural history, a name given by Buffon to the certhia lotenia of Gmelin.

ANGAR, ANGAN, or HINDSHAM, an island in the Persian Gulf south of Kishma, about twelve miles in circuit. It is covered with pits of salt and metalic ores, but is barren and uninhabited.

ANGARA, a river of Siberia, which rises in the lake Baikal, and after passing Irkutsk with a rapid course receives the Oka ; and changing its name to Toungooska falls into the Enissey, or Yenesei : it is navigable to Yeneseisk. Also a town of Thibet, 20 miles N.N.W. of Dharm- saleh.

ANGARAES, a province of Peru, bounded on the north by Jauja, or Xauxa, on the west by the Andes, and on the east by the province of Huanta. It is seventy-two miles in length fron.

cast to west, and twelve in width, being ot an irregular figure. Jt abounds in wheat and other grain, and is watered by some of the head streams of the Apurimac, which runs into the Amazons, and by this river has an easy commu- nieation with the Atlantic. The sugar-cane, and some fruits and herbs, are found in the tem- perate parts, and a kind of hay, which serves as fuel for the ovens in which they extract the quicksilver. The province also abounds in cat- tle of every kind, and produces a great variety of coloured earths for painting, such as amber, vermilion, &c. Guancavelica is the chief town. ANGARI, or ANGARII, in antiquity, public couriers appointed for the carrying of messages. The ancient Persians, Budaeus observes, had their ayyap«ov fyo/Mj/aa, a set of couriers on horse- back, posted at certain stages, always in readi- ness to receive the despatches from one and for- ward them to another with celerity, answering to what the modern call posts, q. d. positi, as being at certain places or stages. The

angari were also called by the Persians astandae ; by the Greeks, »7jKf pofycytoi, on account of the long journeys they made in one day, which, according to Suidas, amounted to no less than 1500 stadia.

ANGAIIIA, in Roman antiquity, was a kind of public service imposed on the provincials, v.hich consisted in providing horses and car- . i.i_res for the conveyance of military stores and other public burdens. It is sometimes also used .‘or a i;uuid of soldiers lasted for the defence of .t place; and, in a more general sense, for any l.-nd of service performed through compulsion.

A”\< 1AU 1 A' 1 11)/> , Ani;‘ario, Gr. ayjaptvtiv, from «yyed;uieu 10 uuthoruy. generally usurped and ..iila.iul.

iiu; it’, in tli. ‘si- earthly ani/iiricitions, one mil”, ac- ...ulmc to t.ui- S;,\i. i,n-‘s couTiirl, m;iy bring on ii]“tli ..ii ;.ivv;;i’ iiiiou ‘.i ivsi..!\ vd spirit.

J!ji. Hull’s Temptations Repelled.

ANC-l’. !)r S;. ilosAi.rr, an Augustine monk, \a.— horn nt lllois in H>.V>, and died in 17’J’i. lie \vmte ih.’ History of the House of h-aace, ;in,l of th.’ Giv’it (Miices of the Crown, published after his death in nine i-olui!.e* folio, lie was likewise the author of ih.- Stale ot I ranee in live \ul \imes 12mo.

AV.r.mVA, a s’.ual! island in the Indian ; leean, (ti’]’;•• coast of Mahhar, belonging to the l’or!u_uese. It i., (‘•{) miles S.S.I:’., of Goa. Lou-. 71- IJ’ ! •’.., Kit. 14 4:V N.

A\(. !•’.!( )!.()(i V, in anaii. my, the description o.K ; e. g. the nerves, M’iiK, .n 1 1 ymphati: s. S: • ANAICMY, Index.

AN! rl-‘.lO’i O.NIY, in Muvery, implies the open-

., a \iin ur artery, ;.- ii, Meeding ; and conse- i|iieiitiy inchuli > ‘i.ith aru riotorny and phlebo- tomy.

AN’til’.J., //. \ mii-~\ AvyfXnc, one sent to

AM. M’K \i, f deliver a message ; from

AM. i I’M, ryyf\o). Particularly ap

AN’I.IHH, i plied to the messengers

Am II’ANC, i t. _* ..)t(‘.(id. Ang.-Sax. Codes

i’.renil-Li’ast ; (lud’s errand uiiost. Sometimes

ux't! nt lallen spirits. In an acquired sense,

uhatevt i r- tian:-C'rn lenllj licautitiil or lovely.

Als allc pis sorow and wo was in pc gynnyng ; Died S. I)u ust. -in, men herd pe unyelt syng.

U. Brunne, p. 38. Some holy angel

Fly to the court of England, and unfold His message ere he come. Shakspeare.

I have mark'd

A thousand blushing apparitions Start into her face ', a thousand innocent shames In angel whiteness bear away those blushes. Id. Or virgins visited by angel powers, "With golden crowns, and wreaths of heav'nly fiow'rs. Pope' Rape of the Loch*

It discovereth unto us the glorious works of God and carrieth up, with an angelical swiftness, our eyes that our mind, being informed of his visible marvels may continually travel upward. < Raleigh t

Others more mild, Retreated in a silent valley, sing With notes angelical to many a harp Their own heroic deeds, and hapless fall By doom of battle. Milton.

My fancy form'd thee of angelic kind, Some emanation of th' all-beauteous mind. Pope.

It may be encouragement to consider the plea sure of speculations, which do ravish and sublime the thoughts with more clear angelical contentments.*

Wilkins's Deedalvt.

Had we such a knowledge of the constitution of 'man, as it is possible angels have, and it is certain his Maker has, we should have a quite other idea of his essence. Locke.

Talents angel bright,

If wanting worth, are shining instruments In false Ambition's hand to finish faults Illustrious, aud give infamy renown. Young.

ANCEL, AyytXoc Gr., •jxˆB Heb. messengeˆ ' Nomen non naturae sed officii,' a name not of nature but of office, and applied to men acting officially with respect to each other ; 2 Sam. ii. 5. Luke vii. 24. 2. To

human messengers acting under a divine commission; Matt. xi. 10. Haggai i. 13. 3. To officers and representa- tives of the Christian church; Rev. i. 20. ii. 1. 4. To inanimate creatures and inferior agents of the Almighty's power ; Psal. civ. 4. 5. To a higher order of spiritual and intelligent crea- tures, of whose nature and employments we have but a very imperfect knowledge; Psal. xc. 1 — 11. ciii. 20. Heb. ii. 7., and other parts of the sacred scriptures. 6. To the Messiah the sent of God, who is often distinguished by The Angel of the Lord, The Angel of the Covenant, &c. Some imagine that the same person is intended with the word archangel, there being only one archangel mentioned in Scripture.

The popular application of the term is, to the spiritual and intelligent beings to which we have already referred, and who are considered to oc- cupy the first rank of creatures, though they have generally assumed a human form.

The angels are in Daniel, iv. 13, &c. called O1ˆ) or watchers, from their vigilance : for the same reason they are in the remains we have of the prophecy attributed to Enoch, named Egre- gori; which imports the same in Greek. The apostle calls them ' ministering spirits,' and from their being set in opposition to the nature of man, in Heb. ii. 16., we conclude them capable of the highest employments and happiness, &c

The existence of angels is incapable of being proved, a priori; but has, nevertheless, in all re- ligions maintained an universal prominence. The ancient Sadducees denied the existence of all spirits, and yet the Samaritans and Caraites, reputed of that class, openly allow them, as ap- pears from Abusaid's Arabic version of the Pen- tateuch, and a comment upon the Pentateuch by Aaron a Caraite Jew, both extant in manuscript in the library of the king of France. In the Al- coran we find frequent mention of angels, which in the faith of the Mussulmen are of different orders, and destined to different employments, both in heaven and in earth. They attribute to the angel Gabriel the power of descending from heaven to earth in the space of an hour, and of overturning a mountain with a single feather of his wing. Esrafil, they describe as standing with a trumpet in his mouth ready to proclaim the day of judgment. The highest order of this heavenly hierarchy is named Azazil, to which Satan, so called in the Alcoran, (as also Eblis or perdition,) is said to have originally belonged ; and also the Gabriel and Michael of holy writ. Here too are placed Azrael, the angel of death or destiny, to whom is committed the care of de- parted souls ; and Esrafil the angel of the resur- rection, mentioned above. Subordinate are Monker and Nakir, whose office it is to enquire into the

true condition of departed souls on their decease. To every man on earth two guardian angels are assigned. • Jin, or genii, are a lower race, formed of grosser fire than the superior orders ; they are subject to the passions and appetites of man, propagate their species, and according to the modern theology of the Ara- bians are subject to death.

The heathen philosophers generally agreed with regard to the existence of those intelligences, as is shown by St. Cyprian in his treatise of the vanity of idols, from the concurrent testimonies of Plato, Socrates, Trismegistus, and others ; Epi- curus being the only philosopher who is said ab- solutely, to have rejected them. In the earliest fragments of the poetry of Greece, we find allu- sions to the agency of these distinguished beings. Hesiod furnishes no incorrect description of their powers and office ; Op. et Dies, i. 246.

'Eyyvg ydp tv dv9pti>Troiffiv iovreg

'AOavaroi \tvacrovciv, offoi CKoXiyai Siic 'AXX?y\ovc rpiflovffi, Otwv UTTIV OVK akk-yo Tpie 7"P jutfptot slaw 67ri \0ovi 7Tov\v(BoTtipy 'A.Oava,Toi KJJVOC, QvXaictG QVTIT&V avOpUTrwv, O't pa .v \daaovaiv rt SiKat; KO.L (T^erXia ?pyci, 'Hepa Efftrayzsx'oi, iravrg (poirwvreg tir dlav. Thus given by Cooke,

a world of holy daemons made,

Aerial spirits, by great Jove designed To be on earth the guardians of mankind ; Invisible to mortal eyes they go, And mark our actions, good or bad, below j Th' immortal spies, with watchful care preside, And thrice ten thousand round their charges glide, They can reward with glory, or with gold ; A power they by divine permission hold.

Spirits, or daemons, were believed by the Greeks to hold a middle rank between the gods and mankind, Hav TO Saipoviov [itraZv tan Otov rt KM QvtjTov, Plato in Symp.; and Plutarch says,

' those seem to me to have solved very many and great difficulties, or doubts, who place the dtemons ev \t-iQty Gt(t>v KM avOptoTrwj/.' De De feet. Orat. The word daemon was generally used in a good sense ; great and wise men were reported to hold familiar intercourse with the tu- telary agents of the gods. The tutelary genius of Socrates, of Numa, and of Augustus, are well known in history. Sometimes the terms daemon and genius appear to have been used by the Greeks and Romans in an evil sense; ' Juxta usurpatam penes Graecos loquendi consuetudinem tarn sancti sunt daemones quam profesti et infidi,' says Calcidius. Thus we find the evil genius of Brutus appearing before him the night before the battle of Philippi.

The ancient Persians, according to Mr. Sale, were so learned in the ministry of angels in this lower world, that they assigned them distinct charges and provinces, giving their names to the months and days of the months. Thus, as Mi- chael was considered the prince of the Jews, Ra- phael became the prince of the Persians. Hyde, lleb. Vel. Pers. e. 19. 20. The Jews after their return from the captivity in Babylon, infected by the wisdom of the Chaldean sages, who peopled the air with agencies of this description, began to find numerous names and distinct orders of angels ; of which, four principal ones are reckoned. That of Michael, the first in order ; Gabriel the second ; Uriel the third ; and Ra- phael, the fourth. In the apocryphal book of Tobit the last is made to say, ' I am Raphael, one of the seven holy angels which present the prayers of the saints, and which go in and out before the glory of the Holy One.' Ben Mai- mon, and other writers, speak of ten degrees, or orders of angels, anciently acknowledged by the Jews. Calmet, Diet. Bib., affirms, that the Jews did not know the name of any angel before the Babylonish captivity, there being none mentioned in the books written before that event.

From these various sources, the Christian fa- thers received and adopted many strange notions on this subject. Some of them imagined that angels had bodies ; of which opinion were Cle- mens Alexandrinus, Origen, Caesarius, and Ter tullian. Others regarded them as pure spirits, who could assume bodies at pleasure ; amongst whom were St. Athanasius, Basil, Gregory Ni- cene, Cyril, and St. Chrysostom. Very common amongst them was the heathen notion of a race of beings, who were born either from the love of gods or angels for women ; or the love of men for goddesses. This they thought to be the mean- ing of Gen. vi. 2. which, according to some co- pies of the Septuagint, is said, to read ' angels of God.' Ecclesiastical writers in the middle ages, divided these intelligences into nine orders, constituting three hierarchies. The first including cherubim, seraphim, and thrones; the second, dominions, virtues, and powers ; and the third, principalities, angels, and archangels. Hence Milton, in his inimitable use of angels, as in- struments in the machinery of his ' Paradise Lost/ has the following passage ;

' Hear all ye angels, progeny of light ;

Thrones, dominations, princedoms, virtues, powers,

Hear my decree.'

Similar distinctions have been thought to be sustained by the language of inspiration in such passages as Ephes. i.21 ; Col. i. 16, &c. Bishop Horsley, in one of the latest of his sermons, hasa passage upon this subject, which we cannot for- bear extracting, as an able summary of numerous opinions upon this point. It is from Dan. iv. 17. ‘ This interpretation of these words (that the watchers and Holy Ones are principal angels) is founded upon a notion which got ground in the Christian church many ages since, and un- fortunately is not yet exploded ; namely, that God’s government of this lower world is carried on by the administration of the holy angels ; that the different orders (and those who broached this doctrine could tell us exactly how many orders there are, and how many angels in each order), have their different departments in go- vernment assigned to them ; some, constantly at- tending in the presence of God, form his cabinet council; others are his provincial governors; every kingdom in the world having its appointed guardian angel, to whose management it is en- trusted ; others, again, are supposed to have the charge and custody of individuals. This system is, in truth, nothing better than the pagan polytheism somewhat disguised and qualified; for, in the pagan system, every nation had its tutelar deity, all subordinate to Jupiter, the sire of gods and men. Some of those prodigies of ignorance and folly, the Rabbin of the Jews, who lived since the dispersion of the nation, thought all would be well, if for tutular deities they sub- stituted tutelar angels. From this substitution, the system which I have described arose : and from the Jews, the Christians, with other fooleries, adopted it.’

Authors are divided as to the time of the crea- tion of angels; some will have it to have been before the creation of our world, or even before all ages, that is, from eternity ; this is Origen’s opinion, who, according to Leontius, held that all spirits, angels, devils, and even human souls, were from eternity. Others hold angels to have been created before the world, yet not from eter- nity. Others, again, maintain that they were created at the same time with our world, but on what, day is disputed. Theodoret and Ephipha- nius fix their date from the first day.

The concluding sentence of the narrative of the creation, ‘ Thus the heavens and the earth were finished, and all the host of them,’ would cer- tainly seem to include them among the works of tlie MX days. It is peculiar to Jehovah to have liren alile to say, ‘ Hefore the day was, 1 am He.’ Their (nullifications are to be inferred from the facts ivconled of them, as ascending in fire, pass- ing through prisons, the doors flying open at their presence, shutting the mouths of lions, smiting tens of thousands of men in a night, and other notable instances of power over nature recur. led in the .-acred scriptures.

‘I heir number is vast as appears from many parts of tlie ( )ld and New

Testaments, and espe- cially from the term ‘ hosts of heaven.’ The prophet Daniel represent^ them as a thousand thousand, ami ten thousand times ten thousand; intended no doubt to express an indefinite nuin- i.er in \lueh the imagination is A>st. Of the

few facts of their history it appears, that at their creation the angels were perfect and lived in heaven, but numbers of them afterwards sinned and were banished to heL. The nature of their crime though nowhere stated, is thought capa- ble of being inferred from 1 Tim. iii. v. 6.; and as they are reserved for future judgment, the facts of their case may be in analogy to ours. Fallen angels appear to be of different orders, subject to one chieftain more powerful and wicked than the rest, distinguished by the epithet JCtP Satan, &a/3o\oc, a traducer, an accuser, the prince of the power ot the air, the God of the world, and the like expressions. He is said to have instigated their rebellion, to have tempted our first parents, to persecute the church, and on account of his subtlety is called the Old Serpent.

The employment of angels is various, depend- ing perhaps upon their different ranks and de- grees of capacity. The case of individual pre- servation and of the persecution of the church ; the plagues of Egypt, the destruction of Sodom, the delivery of the law, the different appearances of angels during the old dispensation, and other important inferences recorded of them, illustrate this remark ; but doubtless, a noble portion of angelic employment, is that of unceasing adora- tion and praise. Their power to suspend the laws of nature, and the astonishing command they assume over the material elements, render it highly probable that they will, according to some intimations of Scripture, be employed in the closing scenes of time — to raise the dead, to at- tend the last judgment, to purify the universe, to assist in reforming that fresh and glorious system which St. Peter saw stretched along the perspective of prophecy.

Dr. Pye Smith of Homerton, in his excellent work on the power of Christ, has devoted a section of chapter iv. vol. 1. to an enquiry respecting who was the person denominated the Angel of Jehovah ? with certain remarkable attributes and ascrip- tions in the Old and New Testament. He recites Gen. xvi. 7 — 13. xxii. 11 — 18. xxxi. 11—13. xlviii. 15 16. Exod. iii. 2. 15. xxiii. 20, 21. Ps. xxxiv. 7. Is. Ixiii. 8, 9. Zech. iii. 1 — 4. xii. 9. and Mai. iii. 1., as the most re- markable passages, and thus brings together the principal features of his character as contained in them : ‘ The person described claims an uncontrolled sovereignty over the affairs of men. He has the attribute of omniscience and omni- presence. He uses the awful formula by which the Deity on various occasions condescended to confirm the faith of those to whom the primitive revelations were given; He sweareth BY HIMSELF He is the gracious Protector, the Redeemer froir evil, and the Author of the most desirable bless- ings : His favour is to be

sought with the deepest solicitude, as an enjoyment of the highest im- portance to the interests of men : He is the ob- ject of religious invocation : He is in the most express manner, and repeatedly declared to be JEHOVAH, GOD, the ineffable I AM THAT I AM : Yet this mysterious Being is represented as dis- tinct from God, and acting (as the term angel imports) under a divine mission.

‘ Are there then,’ asks the learned a ithor, ‘ two Jehovahs ? — Revelation and enlightened reason

reject the notion. Three other modes of solu- tion have been proposed : 1 . That the angel of the divine presence was some eminent, celestial, creature, sent to convey the messages of the divine will to those who were the immediate subjects of revelation; acting therefore, on be- half of the Deity ; and allowed to personate the Deity in the assumption of the attributes and forms of address which are distinctive of him. To this he offers various objections. 2. That the expression is nothing but an Hebraism to denote God himself, or some mira- culous token of the divine presence. This is Dr. Priestley’s, and Mr. Belsham’s, opinion. The phrase ‘ angel of Jehovah,’ means either the visible symbol of the divine presence, or Jehovah himself.’ But this decision leaves unaccounted for the very strong attribution of intelligence, will, power, and all personal properties; which it would be perfectly absurd to apply to a visible splendour, or any symbolical phenomenon what- ever ; and it overlooks the essential part of the case, the clear and marked distinction which is preserved between the personal angel and him who sent him. It is this distinction, so widely different from the idea of a symbolical token, which makes the difficulty upon the Uni- tarian hypothesis. 3. That the being eminently called the angel of Jehovah is one who is, in certain respects or properties, distinct from God ; and yet is, at the same time, truly and essentially THE SAME with God ! And to this third conclu- sion he evidently considers the balance of evi- dence to incline. See Dr. J. P. Smith on the Person of the Messiah, vol. i.

ANGEL, in commerce, a gold coin formerly current in England, so named from having the representation of an angel upon it. It weighed four pennyweights, and was twenty-three carats and a half fine. It had different values in different reigns ; but is now only an imaginary sum, or money of account implying ten shil- lings.

ANGELS, used metaphorically, are titles ap- plied to bishops of several churches. In this sense St. Paul is to be understood where he says, \ omen ought to be covered in the church because of the angels. Dr. Prideaux observes, that the minister of the synagogue who officiated in offering up the public prayers, being the mouth of the congregation, delegated by them as their representative, messenger, or angel, to speak to God in prayer for them, was therefore, in the Hebrew language, called the angel of the church; and thence the bishops of the seven churches of Asia are called the angels of those churches.

ANGEL-FISH, in ichthyology, the pivr) of Aris- totle, squatina of Pliny, monk or angel-fish of Ray, and the squalus squatina of Linnaeus, a fish which connects the genus of rays and sharks. It differs from both in the situation of its mouth, which is at the extremity of the head ; is ex- tremely voracious and fierce, and like the rays feeds on flounders and flat fish.

ANGELET, an ancient gold coin equal to half an angel.

ANGELI (Peter), a distinguished Latin poet of the fifteenth century, a native of Barga in

Tuscany. He became professor of ethics and politics in the university of Pisa, where he died in 1596, and wrote 1. Cynegeticon, or of the Chace, 1568 ; 2. Syrius, or the Expedition of Godfrey of Bouillon, for the recovery of the holy land, 1591 ; 3. De privatorum publicc- rumque Urbis Romse e verso ribus Epistola, 4to 4. Poesie Toscani, 8vo; 5. Letters in Latin an(. Italian, to be found in various collections; 6 Memoirs of his own life, &c.

ANGELIC GARMENT, angelica vestis, among our ancestors, was a monkish garment which laymen put on a little before their death, that they might have the benefit of the prayers of the monks.

ANGELICA, in botany, a genus of the digy- nia order, and pentandria class of plants ; rank- ing in the natural method under the forty-fifth order, umbellatae. The essential characters are . the fruit roundish, angled, solid, with reflected styli: COR. equal, and the petals incurvated. 1. A. arch- angelica is a native of Hungary and Germany. The leaves are much larger than those of the common angelica, and the flowers yellow. 2. A. atro- purpurea, 3. A. lucida, these two species are natives of North America, and have the additional epithet of Canadensis, from their abounding in Canada. 4. A. sativa, or common angelica, which is cultivated in gardens for medicinal use. 5. A. sylvestris grows na- turally in moist meadows, and by the sides of rivers in Great Britain.

For the purposes of medicine, Bohemia and Spain produce the best kinds of

angelica. The London college directs the roots brought from Spain to be alone made use of. Angelica roots are apt to grow mouldy, and to be preyed upon by insects, unless thoroughly dried and fre- quently aired. It is probable that the roots which are subject to this inconvenience, might be preserved by dipping them in boiling spirit, or exposing them to its steam, after they are dried. All the parts of angelica, especially the root, have a fragrant aromatic smell, and a plea- sant bitterish warm taste. Angelica is one of the most elegant aromatics of European growth, though little regarded in the present practice.

ANGELICA WATER, a compound water in which the angelica root is the chief ingredient.

ANGELICA, WILD. See A'GOPODICM.

ANGELICA, in Grecian antiquity, a celebrated dance performed at their feasts. It was thus called from ayyeXog, nuncius, messenger; be- cause, as Pollux assures us, the dancers were dressed in the habit of messengers.

ANGELIC/E, or ANGELICS, a congregation of nuns, founded at Milan in 1534, by Louisa Torelli, countess of Guastalla. They observe the rule of St. Augustine.

ANGELICO DA FIESOLE (Giovanni), an Italian historical painter, was born at Fiesole in 1387, and died in 1455. He studied under Giottino, but afterwards became a monk of the order of St. Dominic. Pope Nicholas V. em- ployed him in his chapel, and in miniature designs.

ANGELICS, ANGELICI, an order of knights, instituted in 1191 by Isaac Angelus Commenua emperor of Constantinople. Alsoii: church hif-

tory, an aticient seel of heretirs, so called from their excessive veneration of angels ; or accord- ing to others, from their maintaining that the world was created by angels.

ANGELICA'S PULVIS, in chemistry, a name given by Schroeder and others to mercurius vitae.

ANGELIERI (Bonaventure), a Sicilian monk of the order of St. Francis, who became vicar- general of his order at Madrid. He lived at the latter end of the seventeenth and beginning of the eighteenth centuries, and is author of Lux magica Celestium, Terrestrium, et Inferorum, 1685, 4to; Lux

Magica Academica, pars se- cunda, 1687, 4to.

ANGELIS (Peter), an eminent artist of Dunkirk, born in 1695. He painted landscapes with figures and conversation pieces. He came to England about 1712, and afterwards went to Rome, where his works were much esteemed. On his return from Italy he settled at Rennes in France, where he died in 1734.

ANGELITES, in ecclesiastical history, a sect of heretics in the reign of Anastasius, and pon- tificate of Symmachus, so called from Angelium, where they held their first meetings. They were called likewise Severites, from Severus, who was tin- head of their sect; and Theodosians. They iield that the persons of the Trinity were not distinctly divine, but only joint participants of i common deity.

A\<;i-',l.\, or A\c,u N, a distiictof Selswick, IVnmark, between the bay of Rensberg and the ri\er Schley. [t is about eighteen miles quare, and contains a population of 20,000 in Habitants. The ancient nmahitants assisted the Unions against the 1'icts, and are thus supposed

• • have .riven its present iijiue to Kngland.

A V . !;.i.O (.Michael de liuonarrotti), an in-

• •mpaiable painter, si ubptor, and architect, born

n i !7-l, iu ihe territory of Arez/o in Tuscany.

il> wa-; the clisM.il'> of Dom.inico Ghirlandaio,

mil erected an aeademx of painting and sculp-

fuiv in i ioi,.;ice, mi.ierthe patronage of Lorenzo

d«:' Mi hei; which, upon the troubles of that

i- ohiiue ! to remove to Bologna.

N-""nt i ::•; time in lormed a Cupid, which he

•-He ' •• > i'oiue. broke oif o;ie of its arms, and

• urii'i] ii in .1 place he knew would soon be dug

• I'liM- th • aim b\ bim. it was accord- .-' md, ;ui'i snM so v'ai.imul St. Gregory torai! mti(|ue; until Michael, to their confusion i::d his o\vn (iv, lit, (iiMv.vered th'e artifice and •oii'irnu-d it h\ the detieieiit arm which he

pro- ‘ine-.d. At l!n ;h’ire of pope Paul I I [. lie ex

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iielument. M. Aiigelo ha- the character of

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However i”iei|iial I feel m

iv’MiM !r. el in the Mepsof that r;reat master:

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which I should pronounce in this academy, and from this place, might be the name of Michael Angelo.’ Discourse to the Students of the Royal Academy, 1790. He died immensely rich at Rome in 1654.

This is also the name of another painter of Milan, who has left a fine picture in the Domi- nican church of Antwerp.

ANGELO ST. a town in the province of Capi- tanata, Naples. It stands on a high mountain of the same name, in the cave of which there is a church dug out of the solid rock. The town is the see of a bishop, suffragan of Conza. Po- pulation 11,500. It is ten miles N. N. E. of Lauvia.

ANGELO St., a considerable town of Italy, in the duchy of Milan, and district of Lodesano, on the Lambretto, six miles S. S. W. of Lodi.

ANGELO, CIVITA DI ST., a town andmarqui sate of Naples, in the province of Abruzzo Ultra, situated on a mountain, and belonging to the ancient family of Pinelli, fifty miles E. N. E. of Aquila, and eighty-four north of Capua.

ANGELO IN VADO, ST., a town of Italy, in the duchy of Urbino, on the

river Metra, with a bishop, whose metropolitan is the archbishop of Urbino, twelve miles S. W. of Urbino.

ANGELONI (Francesco), a native of Terni in Italy, of which he wrote the history, 4to, 1646. He is principally known by an elaborate work published in folio, 1685, on the history of Rome,ˆ illustrated by ancient medals. He died at Rome in 1652.

ANGELOS, Los, a province of Mexico, the ancient republic of Tlascala, of which a city called Tlascala was once the capital. That city is now reduced to an inconsiderable town, and has given place to another called Puebla des los Angelos, or the city of angels.

ANGELOT, in coinage, an ancient English gold coin, struck at Paris while under the sub- jection of the English. There was another cbin of the same denomination struck under Philip de Valois.

ANGELOT, in commerce, a small, fat, rich sort of cheese, formerly brought from Normandy.

ANGELUCCI (Theodore), a native of Bel- forte, in Ancona, author of Deus canzone spirit- uale di Ccelio magno, and a translation of Vir- gil's j'Eneid into Italian in verso sciolto, 12mo ; also a work entitled Capitolo in code d«»lla Pazzia ; Sententia quod Metaphysica sit eadem- que Physica, 4to; Ars Medica, 4to; Exerclta- tionum cum Patricio; and a treatise on the cure of malignant fevers. He died in 1600.

ANGELUS (Christopher), a native of Greece

who after suffering many hardships and crueltie'

from the Turks, came over to England where he

was well received. He taught Greek in the

university of Oxford, and wrote several books ;

particularly an acconnt of his own sufferings,

which is very interesting. It was printed in

Greek and English in 1617. He died in 1638.

AN'GER, v. & n.~\ A'ng.-Sax. Anje, which

*AN'GERLY, * with the Greek ayxtiv and*

AS'GRY, (Latin angere, Wachter de-

AN'GRILY J rives from the German (or

Teutonic) : Eng. bound ; contracted. Pain in

the subject arising from an inability to dilate

itself, or expand to the extent desired. Hence applied to the body, signifying inflammation. In its other sense usually appropriated to the re-action of the mind with respect to an object which has excited displeasure.

And for so inuche as ye thynkye your selues to bee wyse, I will anger you with a kynde of people, which in your iudgement is folyshe and beastlye, thereby to make you more enuyous.

Udall. Paul to the Rom. x. That he, whichc erst a man was formed, In to a woman was forshape : That was to hym an angry iape, But for that he with anger wrought, His anger angerlicke he brought.

Gower. Con. A. book iii.

For an angrie man kindleth variaunce, and the un- godly man disquyeteth frendes, and putteth discorde ainonge them that be at peace.

Bible, 1539. Syrack. c. xxviii. Whenne ich ne may have be maishe, suche melan- cholic suche take bat iche catche berampe. be car- diacle som tyme. ober an ague in suche an angre.

Vision of Pier's Plouhman.

Who would anger the meanest artisan, which car- rieth a good mind. Honker.

Sometimes he angers me, With telling me of the moldwarp and the ant.

Shahspewe. Anger is like

A full hot horse, who being allow'd his way, Self-mettle tires him. Id.

Why, how now, Hecat? you look angerly.

Id.

Such jesters' dishonest indiscretion is rather cha- ritably to be pitied, than their exception either angerly to be grieved at, or seriously to be confuted. Carew. So when the generous lion has in sight His equal match he rouses for the fight ; But when his foe lies prostrate on the plain, He sheaths his paws, uncurls his angry mane, And pleased with bloodless honours of the day, Walks over and disdains th' inglorious prey.

Dry den's Hind and Panther.

The maxim which Periander of Corinth, one of the seven sages of Greece, left as a memorial of his knowledge and benevolence, was yoKo'j xpotrei, be master of thy anger. Johnson.

Would'st thou Mundano prove too great, too strong, For peevish Fortune's angry brow to wrong ; Renounce her power ; banish fortune hence, And trust thee to the hands of Providence. Quarles. Whatever private views and passions plead, Xo cause can justify so black a deed. These, when the angry tempest clouds the soul, May darken reason and her course control. Thomson. Next anger rush'd, his eyes on fire, In lightnings own'd his secret stings j In one rude clash he struck the lyre And swept with hurried hand the strings. Collins. ANGER, as a passion, has been called either deliberative or instinctive, and has its natural manifestation and uses as well as its unnatural and unjustifiable excesses. Bishop Butler ob- serves that anger is far from being a selfish pas- sion, since it is naturally excited by injuries offered to others as well as to ourselves ; and was designed by the author of nature not only to excite us to act vigorously in defending our- selves from evil, but to interest us in the defence or rescue of the injured and helpless, and to raise us above the fear of the proud and mighty op- pressor. Neither, therefore, is all anger sinful ;

and hence the precept, ' Be ye angry and sin not.' It becomes sinful, however, when it is conceived upon slight provocations, and conti- nues long ; being then contrary to the amiable spirit of charity, which ' suffereth long, and is not easily provoked.' Hence these other pre- cepts of Scripture, ' Let every man be slow to anger ;' and ' Let not the sun go down upon your wrath.' Such precepts suppose the passion of anger to be within our power ; which consists not so much in any faculty we have of appeasing our wrath at the time, (for we are passive under the smart which an injury or affront occasions, and all we can then' do is to prevent its break- ing out into action,) as in so mollifying our minds by habits of just reflection, as to be less irritated by impressions of injury and to be sooner pacified. Our pious readers will re- member the delicate and beautiful exhibition of this passion mingled with grief in the only per- fect example of Christians. His whole soul was glowing with benevolence, he was watched, and accused by scribes and pharisees of profanity iii the exercise of that benevolence —

when Jesus Christ looked round about on them with anger, being grieved for the hardness of their hearts.' It was as when in nature the same cloud that contains the storm yields also the salutary and extinguishing shower. Dr. Paley, in his Moral and Political Philosophy, suggests many excel- lent considerations to allay this passion, as ' the possibility of mistaking motives ; how often our offences have been the effect of inadvertency,' &c. ' But the reflection, calculated above all others,' he says, ' to allay anger, is that we our- selves are or shall be suppliants for mercy ana pardon to the judgment-seat of God. Imagine our secret sins all disclosed ; imagine ns thus humbled, trembling under the hand of God; casting ourselves on his compassion ; crying out for mercy — imagine such a creature to talk of revenge, refusing to be entreated, disdaining to forgive, extreme to resent what is done amiss ; and you can hardly feign to yourself an in- stance of more impious and unnatural arrogance.' Physicians and naturalists instance many extra- ordinary effects of anger. Borrichius cured a woman of an inveterate tertian ague, which had baffled the art of physic, by putting the patient in a furious fit of anger. Valeriola made use of the same means with the like success in a quar- tan ague ; and this passion has been sometimes equally salutary to paralytic, gouty, and even dumb persons ; to which last it has sometimes given the use of speech. On the other hand the instances are not few in which it has proved in- jurious to the whole system. We meet with several instances of princes who have died in excessive fits of rage : e. g. Valentinian I., Wencessaus, and Matthias Corvinus king of Hungary. There are also instances wherein it has produced the epilepsy, jaundice, cholera morbus, diarrhoea, 8cc. It quickly throws the whole nervous system intfe preternatural com- motion, by violent stricture of the nervous and muscular parts; and surprisingly augments, not only the systole of the heart and of its contigu- ous vessels, but also the tone of the fibrous parts in the whole body. It is likewise certain that*

this passion, by the spasmodic stricture it pro- duces, exerts amazing power on the stomach and intestines, the biliary and hepatic ducts, &c.

ANGER, a market town in Lower Austria, in the quarter of Lower Mannhartsberg, on the Morawa. It belongs, as well as the castle of Angermuhlen, to the family of Kinsky. Eight miles south of St. Polten.

ANOERAP, a river of Prussia, which unit- ing with the Inster, near

Instersburg, forms the navigable river, Pregel.

ANGERBURG, a considerable town, the seat of a court of justice in East Prussia, circle of Schensten. It has a castle, 250 houses, 2400 inhabitants, and takes its name from the river Angerap. Adjoining is the lake of Grossmauer, famed for its eels. A considerable linen trade is carried on by the inhabitants ; and they ma- nufacture various articles of leather. It is fifty- five miles S. E. of Konigsberg. Long. 21° 55′ E., lat. 54° 7′ N.

ANGERMANIA, or ANGERMANLAND, a pro- vince of Sweden, in Nordland, 150 miles long, and from twenty-five to eighty broad, the widest part being to the east on the gulf of Bothnia. It is mountainous and woody, and in it are conside- rable iron-works. The chief town is Hernosand.

AXGF.RMANXIA, a river of Sweden, rising in the province of Asele Lappmark, and falling into the unit' of .Bothnia. It is one of the noblest streams of Sweden, and is in some places as much as ;ui Knidish mile and a half broad.

ANGERMONU, or ANC.F.RMUNDE, a town of the duchy of Berg, in Germany, on the east side of the Rhine, nine miles north, now included in the grand duchy of the Lower Rhine, and belonging 10 Prussia. Seven miles north of Dusseldorf.

ANGERNA,in mythology, a Roman god- dess, so called, as some suppose, because she was s;iid to drive away the disease, angina, the quin/y. She is represented with her mouth co- vered, to denote patience, nnd refraining from complaints. Her statue was set up, and sacri- hcvd to, in the temple of the goddess Volupia, to show that a patient enduring affliction leads to pleasure.

*A.\(i !•'.!{(*XAI.i A, in antiquity, solemn feasts held by the Unmans the twenty-first of Decem- ber, in honour <,f Anirorona, the goddess of pa- 1 lence and silence.*

ANGKRS, a city of]-'rance, in the department »t Maine and Loire, situated near the confluence ot the Sarte, the I .one and Maine, sixty-six miles west of Tours. This |;IM rn er divides die city into two equal parts. An-ers contains about 5420 houses, an I v>;VJ7 inhabitants. It suffered ureatly iluring the \ cndean war, and was the ••rat ot a revolutionary tribunal. The castle MainU on a rock, inaccessible on the side of the river, and Hanked by eighteen towers and a half- moon. Hi-lore the revolution there was here a celebrated university, frequently resorted to by ('cnnun princes, as well as a royal academy of •>elles letires. 'I he latter enjoyed the same ho- nours and pri\ ilexes as the Academic Francaise, and was composed of thirty

members. Inde- pendently ot tin: governor-general of Anjou, who wa:i at the same time commandant of the town,

Angers was the scat of a royal lieutenant, a bailiage, a prevote, a tribunal de commerce, a mint, and a government depot for salt and to- bacco. And it contained, exclusive of the cathe- dral, seven other chapters, seven abbeys formales and one for females, with a great number of con- vents for both sexes. The cathedral church is dedicated to St. Maurice, and is not less remarka- ble for its length than for the height for its nave, which is accounted one of the finest in France. Several ecclesiastical councils of note have been held in this town, particularly one in 1583. — Here are also manufactured fine camblets, beauti- ful stamine, serge, and other stuffs, hats, and all sorts of leather goods. Trade is flourishing, and the exports through the medium of the Loire, consist in white wine, brandy, grain, hemp, flax, fruit, and honey. The arrondissement of Angers comprises the middle of the western portion of the department, and has a population of 92,500 persons. The university of Angers was founded in 1398, and the academy of Belles Lettres, in 1683. At the end of the suburbs of Bresigny are the quarries of Angers, famous for fine slates, of the thickness of a crown piece, and a foot square. All the houses in Angers are covered with this slate, which has gained it the appellation of the black city. Much of the walls, with which king John of England surrounded it in 1214, remain, and are of very great circumference. Lon. 0° 30′ W., lat. 47° 28′ N

ANGERSTEIN (John Julius), a distinguished patron of the fine arts, born at St. Petcrsburgh in 1735, and who first came to England under the patronage of A. Thompson, esq. with whom he was partner in business upwards of fifty years. His celebrated collection of paintings, esteemed in- ferior to none of the same extent in Europe, has been purchased since his death by the English government at an expense of £60,000. Mr. A. died at Woodlands, Blackheath, January 22, 1822, aged ninety-one.

ANGETENAR, in the Arabian astronomy, a fixed star of the fourth magnitude, in the body of Cetus, or the whale.

ANGHIARI, a well-built town of Italy, in the grand duchy of Tuscany. Also a town near the Adige, in the Lombardo-Venetian kingdom, where the French were defeated by the Austrians in 1799.

ANGHIERA, a populous and fruitful country in Upper Italy, bounded by the Italian districts of Switzerland on the north, the provinces of Vercelli and Novara to the south, Milan Proper to the east, and the valley of Aosta to the west. It gives the title of a viscount. By the treaty of Worms in 1743, the empress Maria Theresa con- sented to make over to the king of Sardinia the part lying west of the Lago Maggiore, the re- maining small

division continuing annexed to Milan. Long. 8° 27′ E., lat. 45° 38′ N. Also, a small town of Italy, on the east bank of the Lago Maggiore, where the Ticino issues from that lake. Thirty miles N. W. of Milan.

ANGI, among physicians, tumours or buboes in the groin.

ANGIGLOSSI; from ayXiw, to lie strait, and yXwffffa, the tongue ; those who speak with hesitation or stammering.

ANGILDUM, in ancient authors; from an, one, and gild, price. Sax.; a simple gild, that is the simple value of any thing. It is distinguished from twigildum, a double compensation ; trigil- dum, a triple compensation ; &c.

ANGINA, in medicine, violent inflammation of the throat, otherwise called quinsy. See ME- DICINE, Index.

ANGINA GANGRENOSA, or aquosa, the ulce- rated, malignant, putrid sore throat, on which there are various treatises by Fothergil, Huxham, Northcoat, &c.

ANGINA LINI, in botany, -a name used by some of the later Greek writers to express what the more ancient writers called linozostis ; and the Latins epilinum ; this was the cuseuta or dodder growing on the flax, as that on the thyme was called epithymum. It was called angina lini, the quinsy of flax, from its choking that plant.

ANGIOLELLO (John), an historian, was born at Vicenza. Being taken captive by the Turks, he was made slave to Sultan Mustapha, whom he accompanied in an expedition to Persia in 1573. He wrote the history of Mahomet II. in the Italian and Turkish languages ; also the his- tory of Ussun Cassan.

ANGIOPTERIS, in botany ; from ayyoe, a vessel, and irrepiG, a fern. Class and order, cry- ptogamia filices ; sect, exannulatae. Nat. ord. fili- ces dorsiferae. Ess. Ch. capsules aggregate, in elliptical, crowded, masses, obovate, of two equal valves, and one cell, without a ring. This is one of those genera of ferns, which like dansea, glei- chenia, and marattia, bear their capsules on the back of the leaf, or frond, without either a ring or involucrum. Those of the antiopteris, indeed, are not of many cells, like those of danaea and marattia, but perfectly simple. The only species described is, A. erecta, tall angiopteris, a native of the Society and Maria's islands.

ANGIOSPERMIA, in the Linnsean system of botany, the second order in the class didynamia. It consists of those plants of that class whose seeds are enclosed in a pericarpium. In this order the stigma is generally obtuse. They are the personati of Tournefort.

ANGITIA, the sister of Medea, who taught antidotes against poison and serpents, according to Sil. Italicus ; though Servius on Virgil says that Medea herself received this name for the same reason.

ANGITIˆE Lrcus, or NEMUS, in ancient geo- graphy, a town of Naples, situated on the west side of the Lacus Fucinus, now called Luco.

AN'GLE, n. ~}

AN'GLED,

AN'GULAR, Lat. Angulus, Gr. ayyvXoi/,

ANGULAR'ITY,) > from ayyvXow, to curve, to

AN'GULARLY, | bend.

AN'GULATED, j

AN'GULOUS. J

Another answcr'd, and said, it might wel be

Naturrelly by compositions

Of angles, and of slie reflections ;

And saide that in Rome was swiche on.

Chaucer. The Squiere's Tale, v. i. p. 428.

A master cook! why he's the man of men,

For a professor! he designs, he draws,

He paints, he carves, he builds, he fortifies,

Makes citadels for curious fowl and fish : VOL. II.

Some he dry-ditches, some motes round with broths ', Mounts marrow-bones ; cuts fifty angled custards.

Ben. Jonson's Mai. Nep. Tn. The cyclops followed ; but he sent before A

rib, which from a living rock he tore : Though but an angle reach'd him of the stone The mighty fragment was enough alo&e To crush all Acis. Dryden. Ovid's Met

Jewellers grind their diamonds with many sides and angles that their lustre may appear many ways.

Derham .

Topazes, amethysts, or emeralds, which grow in the fissures, are ordinarily crystallised, or shot into angulated figures ; whereas, in the strata, they are found in rude lumps, like yellow, purple, and green pebbles. Woodward.

ANGLE is otherwise denned the inclination ot' two lines meeting one another in a point. See GEOMETRY.

ANGLE Acute, Curvilineal, Rectilineal. See GEOMETRY.

ANGLE of Direction, Elevation, &c. See ME- CHANICS.

ANGLE OF INCIDENCE, in optics, the angle which a ray of light makes with a perpendicular to that point of the surface of any medium on which it falls ; though it is sometimes understood of the angle which it makes with the surface itself.

ANGLE OF LONGITUDE, in astronomy, the an- gle which the circle of a star's longitude makes with the meridian at the pole of the ecliptic.

ANGLE OF PARALLAX, in astronomy, the angle made by two lines supposed to be drawn from the centre of a planet to the surface of the earth.

ANGLE OF REFRACTION now generally means the angle which a ray of light, refracted by any medium, makes perpendicular to that point of the surface on which it was incident; but has also been understood of the angle it makes with the surface of the refracting medium.

ANGLE of the Tenaille, Polygon, &c. &c. See FORTIFICATION.

To ANGLE. See ANGLING.

ANGLER, in ichthyology, the English name of a species of lophus. See LOPHUS.

ANGLES, an ancient German nation, originally a branch of the Suevi ; who, after various mi- grations, settled in that part of Denmark, and duchy of Sleswick, which to this day is called Angel, and of which the city of

Flens- bourg is the capital. Here they were known, even in the time of Tacitus, by the name ox Angli. The origin of this name is variously accounted for. According to Saxo-Grammaticus, they were called Angli from one Angulus, son to Humblus king of Denmark. Widischind,aSaxon writer, will have them to be called Angli, from an island in the corner or angle of the sea which they conquered. Goropius derives their name from the Saxon word Angel or Engel, signifying a fish-hook ; the Angles, like the other Saxon nations, being greatly addicted to piracy. To this nation the British ambassadors are said to have applied when soliciting succours against the Scots and Picts. The Angles, therefore, came over in greater numbers than any other Saxon nation ; and accordingly had the honour of giving the name of Anglia to England. See ENGLAND

ANGLES, a town of France, in the departmeul of Tern, near Castres, seated on a mountain ne.ir the river Agout.

A.

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A N G L K S !• Y.

ANGLES, in astrology, denote certain houses of a figure, or scheme of the heavens. Tims the horoscope of the house is termed the angle of the east.

ANGLESEY, or ANOLESEA, an island and county of North Wales, in the Irish Sea, sepa- laled from the main land of Britain by a narrow strait called Menai. It was the Mona of Tacitus (a name derived from the ancient British, Mon), and the Tir-mon of the Welsh. In figure it is an irregular triangle, indented with bays and creeks, and extending from north-west to south- east twenty miles, and about seventeen miles in breadth from north-east to south-west, calcu- lating its length from Garnet's point to Bangor ferry, and its breadth from Llandwn abbey to Penroon priory. It includes a superficial area of about 402 square miles, or 200,000 acres. It has been, known in history by various names. Its Roman name, Mon, is supposed by Rowland, in his Mona Antiqua Restaurata, to allude to its forming the remote termination of the British territories in this direction. Its name Ynys Dowyll, or the shady island, alludes to its hav- ing been formerly covered with woods and groves. It was called Ynys y Cedeirn, from its powerful chiefs. Its present name originated from its conquest by Egbert, when it was called Angle-spy, or the island of the Angles. Bede calls this and the island of Man the Menavian Isles.

From the accounts we have of the conquests of this island, both by the Romans and the Eng- lish, the channel of Menia was probably much

narrower than at present ; and traces which still remain of an isthmus near Porlhaethwy, have led some geographers to imagine that the island once joined the main land of Caernarvonshire. There is a curious historical document contained in the British Triadsiste to that effect: 'The three original islands adjoining to Britain were Orkney, Man, and Wight; and afterwards the sea broke the land, so that the Mon became an island ; and in like manner Orkney was broken, so that there were a multitude of islands ; and other places on the coasts of Scotland and Wales were broken by the sea, and became islands.' There is undoubted evidence of the encroach- ments of the sea upon the shore ; the Lavan sands, in the bay of Beaumaris, formed a habi- table hundred in the sixth century, when they wen: suddenly overwhelmed by the sea. The surface of this island is gently undulated, and the soil is nearly uniform, consisting of loam of dif- ferent degrees of tenacity and fertility ; that in the centre being a reddish earth. It is watered by twelve rivulets, the principal of which are the Aiau, Llivon, Ffraw, Cefni, Ikaint, and Dulas. There were five ferries across the Menai straits, of which Port-hamul, or the (iloomy ferry (so called from the dense woods which in former times overshaded its banks), is celebrated as the place where. Suetonius landed when he extir- pated the Dnnds. Near Aberffraw, where the Ffraw enters the sea, is the lake hlyngoron, about two miles in circumference. abounding with trout, gwyniaid, and other excellent tish. Off the eastern point is the steep rocky island of Priest-holme, or Puffin' s island, which is frequented during

the summer by various migratory birds. The puffin breeds there in immense numbers. Im- mediately to the north of Anglesey is the isle of seals, the sides of which are frequented by seals, and large shoals of fish on which they prey. At the time when Wales was divided into six coun- ties by Hen. VIII., this island formed one of them, and was subdivided into three hundreds. At present it comprises six hundreds, containing seventy-seven parishes; and, according to the returns of 1821, the number of houses was 7183, inhabited by 7706 families, of which 5376 were chiefly employed in agriculture, 1453 in manufac- tures, and 877 otherwise. The number of male inhabitants was 17,444; of females 19,601. There are five market towns, Beaumaris, the county town, Newborough, Llanerchymedd, IIo- lyhead, Amlwch, and Llangefi. The island sends two members to parliament, viz. one from the borough of Beaumaris, and the other from the county. It is in the province ot Canterbury, and diocese of Bangor, and pays one part of the land-tax.

Thecliniate is temperate, but is liable to fogs, in autumn, producing agues; while its exposure to the sea is said to render it unfit for the growth of the larger vegetables. That part of the island which lies on the borders of the Menai is finely wooded ; and there are some rich farms in the interior, and also along the coast opposite Caer- narvonshire; but much of the land lies

undrain- ed, and the general face of the country is fiat and unpleasant. The harbours on the coast, at Beaumaris, Amlwch, Cremlyn, Dulas, Red-wharf, Holyhead, &c. are convenient; Dulas bay is a considerable outlet for the lead mines. Aberffraw was anciently a port of consequence, and the chief seat of the princes of North Wales. The vegetable productions of this island are wheat, barley, and oats, of which 100,000 bushels are frequently exported in a year. ‘ Mon Mam Cymry,’ Anglesea is the mother of Wales, says Euller, was a proverb in former times, ‘ because when other counties fail she plentifully feedeth them with provision,’ and is said to afford corn enough to sustain all Wales. Three thousand ” head of cattle were annually sent to England from this island one hundred and fifty years ago, a number which, forty years since, was augmented to from twelve to fifteen thousand, and now amounts to 25,000. Lerge trunks of trees, pre-served entire, and as black as ebony, are fre- quently found in digging for turf, which are ca- pable of being converted to domestic uses. An- glesey is rich in minerals, many of which are curious and valuable. Quarries, yielding excel- lent breccia for millstones, and some few marble quarries, are worked with success ; the latter principally of the gray, white, and verete antico. A green amianthus, or brittle asbestos, is de- scribed by Pennant as growing in a marble of the same colour near Rhoscolin. Besides com- mon limestone, white marble, and blue-veined marble, sulphate of barytes, an earth containing two-fifths of pure magnesia, steatite, serpentine, fullers’ earth, and native surphur, are frequently found. Coal-mines have been opened at Mal- traeth, Berw, and other places, which have been wrought with advantage ; the depth of coal in

proportion to the whole depth sunk being three feet and a half in seventy-seven feet. An un- common appearance in the natural history of this fossil is met with in Anglesey, viz. pedicles of loose coal of several tons weight : copper ore is found within a few feet of the surface of the earth, and instead of being disposed in veins, forms a connected mass in some places sixty feet thick, It is said to contain about 25 per cent, of metal ; and the quantity annually ob- tained from the mines was formerly from 40,000 to 80,000 tons yearly, giving employment to 1500 miners. Of late they have not been equally productive : twelve or fifteen years ago 1000 miners were still employed; but in 1809, the number had decreased to 600, but was again in- creased to 1200. The. mines of the Parys Moun- tain were ultimately explored in 1768, since which time they have been a source of incalcula- ble wealth to the proprietors. See PARYS MOUN- TAIN.

Abundant supplies of fish are found on the shores of Anglesey, and shell-

fish in great varie- ties. The oysters are thought excellent, and the capture of herrings has been a great source of profit.

From the port of Holyhead the packets with the London mails sail regularly for Ireland ; in consequence of which it has received consider- able attention from government within the last ten years ; and the long entertained project of throwing a chain bridge across the strait of Menai, to connect the island with the main land, has been completed. See MENAI BRIDGE and HOLYHEAD.

Anglesey, according to several ancient chroni- cles, was the original seat of British Druidism, a fact which the book entitled Mona Antiqua Re- staurata was written by Rowlands to prove. Here, therefore, was the abode of the sovereign Pontiff, or Arch Druid. One of its ancient names Ynys Dowyll is supposed by some to allude to the Druidical groves. On this island are twenty- eight cromlechs, conceived by some antiquarians to be the bloody altars consecrated by the Druids to those sacrifices which found so promi- nent a feature in their system, while others look on them as sepulchral. These consist of a vast superficial stone or table in an inclined position, supported by from five to nine large pillars or stones. Instances also occur of the double cromlech, which is formed by a smaller one placed close to the end of the other, both being in an inclined position and surrounded by others at a short distance to the number of eight or nine. These are found in England, Ireland, and Scot- land, but no where so frequently as ia Anglesey. The most perfect stands in the marquis of Angle- sey's paifc at Plas-Newydd.

Suetonius Paulinus invaded this island, A. D. 59, transporting his troops across the strait in flat-bottomed boats, while the cavalry swam over on horseback, and attacked the Druids in their last retreat. Before the Romans had well landed, the Druids called their votaries of both sexes around them. The women were seen with their dishevelled locks running amongst their countrymen with torches in their hands, echoing the horrid imprecations of their priests,

whose followers made a vain resistance. Their cruel practice of sacrificing their captives, and consulting the gods in offering up the bodies of men, together with the opposition he met with, so incensed the Roman general that he cut down all the groves dedicated to their superstition, overturned many of their altars and temples, and threw all that escaped from the battle into fires which they had prepared for the destruction of himself and his army. The recall of the Romans to Britain by an unexpected revolt of some of the provinces, prevented at that time the final ex- tirpation of Druidism. This memorable event was retarded for fifteen years, when, after a great loss both of blood and treasure, Julius Agricola subdued the island.

After the departure of the Romans from Bri- tain, the Cambrian princes resumed their ancient sovereignty and Cadwallen, of the eldest branch of the Cynethian line of Druids, made Aberffraw the capital of the northern principality, which his successors retained as the centre of their au- thority, till the conquest of the island by Egbert, and the formation of the Saxon heptarchy, when the ancient line of their princes ceased in the person of Llewellyn, A.D. 1282. Tbe army of Egbert passed over by a bridge of boats at the same place where the Romans invaded the island (now called Mole y Don), one of the five ferries from the Welsh shore. Caswallon Llaw- hir, a prince of British origin, being sent here about the year 450, to expel some invaders, esta- blished a sovereignty in the island. Mr. Rowland affirms that he saw one of his charters. His descendants are said to have long retained the royal power, and to have given birth to Cad- wallader, the last king of the Britons. In the reign of William Rufus the earls of Chester and Shrewsbury assisted the inhabitants to repress an invasion of Griffith ap Conan prince of Wales. About this time Magnus, king of Nor- way, made a descent upon the island. Anglesey was now under the sway of its own sove- reigns or subject to Wales. Tomb-stones have been found denoting the interment of princes, amongst whom Cadvan and Pabo have been particularized. Edward I. put himself in pos- session of the island without much difficulty, and established a bridge of boats across the Menai at the place where Agricola had crossed over into the island ; but no sooner had the tide flowed up between the English army and the bridge, than the Welsh descended from their mountains and attacked it with great slaughter. The British sovereign retained possession of the island, and to overawe the natives fortified Beau- maris with a wall, and built a castle within the town, which was long governed by a constable and captain. Henry VIII. incorporated this island with his hereditary dominions, and after- wards constituted it a county of England en- dowed with the privilege of parliamentary re- presentation. In 1648 it made a noble stand in favour of Charles I. when all the male inhabi- tants from sixteen to sixty took up arms in the royal cause. Since that period it has gone through many stages of improvement; and though com- paratively of small dimensions, has been fo m 1 an important accessioa to the British crown.

ANGLING.

Besides the cromlechs already alluded to, sup- posed by some to be sepulchral monuments, and by others altars of sacrifice, there are several remains of architectural and monumental anti- quity ; and coins, implements and arms, both Roman and British, are consequently dug out of the earth. The copper-mines of Parys Mountain, and others in this part of the island, are supposed to have been known and worked by the

Romans, a pool on the top of the mountain, having been distinguished, long before the present works were formed, by the name of the mine-pool.

Anglesey lies at the average distance of 250 miles N. W. of London, Beaumaris 241, Holy- head, 260.

ANGLESEY, earl of, son of the first viscount Valentia, took an active but not an honourable part in the troubles of king Charles I.'s reign ; and, after siding alternately with the rebels and royalists, at length contributed materially to the restoration. He wrote, 1 . Truth unveiled in be- half of the Church of England, &c. 4to. 1767.

2. A Letter from a Person of Honour in the Country written to the Earl of Castlehaven, &c.

3. The Privileges of the House of Lords and Commons, &c. 4. The King's Right of Indul- gence in Spiritual Matters, &c. 5. Memoirs in- termixed with Moral, Political, and Historical Observations, &c. 8vo. 1693. The family of Paget now derive title of marquis from this island.

ANGLIA, EAST, one of the kingdoms of the heptarchy, founded by the Angles that landed on the coasts of Britain under twelve chiefs ; the survivor of whom, Vffa, assumed in 571 the title of king of the East Angles. This kingdom was bounded on the north by the Ilumber and the German Ocean, on the east '-y the same ocean, on the south by the kingdom of Essex, and on the west by Mercia. Its greatest length was eighty, and its greatest breath fifty-five miles. It contained the two counties of 'Norfolk and Suffolk, with part of Cambridgeshire. The chief towns were Norwich, Thetf'ord, Ely, and Cam-

bridge. Earpwold, the fourth monarch, is said to have been converted to Christianity by the influence of Edwin, king of Northumberland ; but his wife, who was an idolatress, soon brought him back to her religion. After his death, and the interregnum that followed, Sigebert, who had been educated in France, restored Christianity, and introduced learning among the East Angles. Some writers state, that he founded the Univer- sity of Cambridge. Ethelbert, who was the last sovereign of this kingdom, and who received his crown from Etheldred in 790, was treacherously murdered by Offa, king of Mercia, in 793 ; and from that time East Anglia was united with Mercia.

ANGLICA, in entomology, a species of pime- lia, found in England, but very rarely. It is described by Fabricius, in his last arrangement, under the genus helops, and specific name pi- melia. Gmelin makes a subdivision o £the genus pimelia under the name helops, in which this is included. Also,

a species of chrysomela, found in England. Forst. Nov. Ins. — Fabricius.

ANGLICANA, a species of altica, in the Fa- brician arrangement, found in England.

ANGLICANUS SUDOE, the sweating sickness.

AN'GLICISE, v.) Modern Latin Angus,

AN'GLICISM. J an Englishman, from An- glia, the Latinised name of England while under the dynasty of Saxon kings. To make English.

The same place and powers which y had in the Greek language, he [the letter U] stood fully enti- tled to in the English ; and that therefore of right he ought to be possessed of the place of y even in all Greek words Anglicii i. Edward's Cam. Crit.

They corrupt their language with their untutored Anglicisms. Milton.

ANGLICUS (Gilbertus), an eminent English physician, who flourished about the end of the thirteenth century. He wrote a Compendium of Physic.

ANGLIN, a river of France in the depart- ment of Vienne.

ANGLING.

AVGUNG, ˆ Ang. Sax. Anjel, anook;

AN'GU:, Vor the Bclgic Anghel,or hang-

A > Y,i.r.R. 3 hel, hanghen, to hang. To

entice by hanging out a bait; to endeavour to

captivate; to allure ; to entice.

And this is the most hcauy fruit of y' pleasure y, is

delectable in outward appearaunce and promising

swete irearo, I wote not what, while it hideth vnder

the baite of pleasure the very angling hoke of death.

Udall. James, vol. 2.

And I found that a woma is bytterer the death for she is a very unjli' her herte is a nett and her handes mill,', 15:59. The Preacher, c. vii. I in these

flowery meads would lie; These crystal streams should solace me j '!« whose harmonious bubbling noise I with my ani/l, would rejoice, Sir here, and see the turtle-dove Court his chaste mate to aits of love.

Wnlttm in Kllix, v. iii. p. 127.

\hat! shall I have my son a stager now; an •.ii.jhlf for players ' a gull, a rook, a shotclog, to make

suppers and be laughed at ? Publius, I will set thee

on the funeral-pile first.

Ben Joruon's Poetaster, act i. sc. i.

The ladies angling in the crystal lake,

Feast on the waters with the prey they take. WaUer. She also had an angle in her hand ; but the taker

was so taken, that she had forgr>tten taking. Sidney. Give me thine angle, we '11 to the river there,

My music playing far off, I will betray

Tawny-finn'd fish ; my bending hook shall pierce

Their slimy jaws. Shakspeare.

The patient fisher takes his silent stand,

Intent, his angle trembling in his hand ;

With looks unmoved he hopes the scaly breed,

And eyes the dancing cork and bending reed. Pope. A soldier now he with his sword appears ; A fisher, next, his trembling angle bears.

Pope's Vertumnus and Pomona. Seest thou the wary angler trayle along His feeble line, soon as some pike too strong Hath swallowed the baite that scorns the shore, Yet now, near baud, cannot resist no more.

Bp. Hall. Satire v.

ANGLING.

Of all ambitions man may entertain,

The worst that can invade the sickly brain

Is that which angles daily for surprise,

And baits its hook with prodigies and lies. Coirper.

ANGLING, as a species of amusement, has been pursued by amateurs of distinguished ge- nius in the most enlightened parts of the globe, beguiled the solitude of poets and philosophers, and supplied the lover of nature with a fund of national and elegant enjoyment ; while as a fish- .ng trade it has been practised with superior suc- cess by the ruder tribes of mankind. To this agreeable recreation men deeply immersed in the world often have recourse, that they may forget the tumult of life. It has been called the ‘ Contemplative Man’s Recreation’ by Isaac Wal- ton, who has furnished the only text book of this recreation in the language.

Since angling assumes different modifications according to the fish for which it is intended, those usually taken by anglers first require illus- tration. \Ve enumerate them alphabetically.

The BARBEL is a dull heavy fish of considera- ble size and strength, and derives its name from its four barbs, two of which are at the corners of its mouth, and two at its snout. They shed their spawn about the middle of April, and come in season about a month or six weeks after that time. They root with the nose like a pig. Their usual haunts are among weeds. In sum- mer they frequent the most powerful and rapid currents, and settle among logs of wood, piles, &c. ; but in the winter they return to their deep bottoms. The baits are the spawn of trout, sal- mon, or almost any other fish, provided it be fresh; but as the barbel is very cunning, the pastes in imitation of it must be well made, and of fresh flavour. It is also recommended to bait the water over night by spawn or cut worms. The cob- worm, gentles, and cheese soaked in honey, are alike palatable to this fish ; and he will ‘bite at them eagerly. In angling for the barbel, the rod and the line must both be ex- tremely long ; and as the fish swims very close to the bottom, a running plummet should also be attached to the latter. By a gentle inclination of the rod, you may easily ascertain when there is a bite. Strike immediately, and the fish will seldom escape, unless he breaks the line.

BREAM shed their spawn about midsummer, and though they are occasionally met with in slow rivers, are generally considered a pond fish, where they thrive in the greatest perfection, often weighing from eight to ten pounds. Dr. Shaw tells us that this fish is a native of many parts of Europe,

abounding in the still lakes and rivers, and is occasionally found in the Caspian Sea. They are angled for near the bottom ; and the angler should" take all possible care to keep con- cealed.

The BLEAK or BLAY, so called from its bleak or white appearance, is a common river-fish that spawns about March. It is fond of many of the bait? for trout, and is usually caught with a small artificial fly of a brown colour, to which the size of the hook should be proportioned. This fish, though highly valued by epicures, seldom ex- ceeds six inches in length. Beads are made of its scales.

The BULL-HEAD, or MILLER'S-THCMB, is a small ugly fish, hiding in brooks or rivers under a gravelly bottom. They spawn in April, and their average length is from four to five inches Their flesh like the cray-fish turns red when boiled ; and when their gill-fins are cut off they serve as good baits for pike and trout.

The CARP is a fish, that, by its frequent spawning and quickness of growth, is chiefly used to stock ponds, where it thrives better and lives longer than in rivers. It is supposed to be very long lived. Gesner, in particular, speaks of one which lived to be 100 years old. They spawn three or four times a year ; but the earliest time is in the commencement of May. They live a long while out of water, and in Holland are frequently kept alive for three weeks or a month, by being hung with wet moss in a net, and fed with linseed steeped in milk. In angling for carp it is necessary to make use of strong tackle, with a fine gut next the hook, and a float formed of goose-quill. They are found near the bottom, and are rarely caught if angled for in a boat. From the subtlety which this fish pos- sesses, it is frequently called the water-fox. The river-carp in the winter haunts the quietest and broadest parts of the stream, and in the summer lives in the deep holes and nooks under the roots of trees, and among great banks of weeds. The pond-carp loves a rich and fat soil. In Germany this species yields considerable income to the gentry. Its introduction to England has been ascribed to Mascall, who wrote a treatise on angling ; but Pennant, in his British Zoology, disputes this claim, and quotes the following lines from the Book of St. Albans, by which he endeavours to prove that this fish was known here as early as 1496 : —

Turkies, carps, hops, pickerel, and beer Came into England all in one year.

The CHUB or CHEVIN is like the perch a very bold biter, and will rise eagerly at a natural or artificial fly. They spawn in June, or at the latter end of May, and are then easily caught either by the fly, a large snail, or beetle with his legs and wings cut off. When they are fished for at mid-water or at bottom, a float should be made use of; when at top the proper

way is to dib for them, or to use a fly in the same way as in trout-fishing. As they are a heavy fish, strong tackle is requisite, and they usually require a landing-net to pull them out. This fish is the squalus of Varro, and is common throughout England and the eastern part of the United States. The average length is from ten to four- teen inches.

The DACE, DART, or DARE is a very active and cautious fish. They rise to a fly, but in an- gling for them it is needful to remain in conceal- ment as much as possible. They spawn in February and March, and their flesh is of inferior flavour. They frequent clayey and gravelly bot- toms, and deep holes if well shaded. The Thames is well known to abound in dace : the graining of the Mersey is thought to be of the same species.

The EEL is not very often angled for, but is commonly taken by the process of sniggling or

bobbing with night lines. As this fish is fond of quiet during the day, all who would enjoy the sport of eel-fishing must devote their evenings and even whole nights to the pursuit. The me- thod generally employed is the following : — take a common needle, attached in the middle by fine wax twine to a line of packthread; on a strong small hook fixed to this line of pack- thread place a large lob-worm by the head end, and draw him on to his middle : affix ano- ther needle to the end of a long stick, and guide your bait with it into any of the known haunts of the fish ; give him time to gorge the bait, and then by a sharp twitch fix the needle across his throat or the hook into his body ; tire him well and your triumph is certain.

Bobbing is a rougli species of angling. To effect it, provide yourself with a considerable number of good-sized worms, and string them from head to tail by a needle on fine strong twine, to the amount of a pound or upwards in weight. Wind them round a card into a dozen or fifteen links. Then secure the two ends of each link by threads. Tie a strong cord to the bundle of string-worms, about a foot from which put on a bored plummet, and angle with a line from two to three feet long, attached to a stout tapering pole. The two counties most celebrated for eels and pike an; Lincolnshire and Cambridge- shire. Of two rivers in the former county is ieiate-1 the old proverb: —

AnUiam ccl ;uul Witlunn pikf, In ;ill England is none like.

In tiie county of (.'ambridge the Isle of Ely i> supposed to have been denominated after this fis.li. Naturalists have been divided in their opinions

\vitli respect to the manner in which this lislt is propagated. Walton imagined them to be bred of corruption, in the same way as u asps and some kinds of bees are; others con- tend for their being viviparous; but no certain information has at present been acquired upon the subject.

The lamprey is a species of eel, in high esti- mation ; so called, says tiie quaint author of the Worthies of F.Trjland, ‘ a lambendo petras,’ from lickiir: the rock. it is common in Worcester- shire and (iloucesters’.nre. The Severn lam- prey perhaps excels. A pie is made of this fish annually by the city of (iloircestcr and presented tn the kmu”. In windy gloomy weather eels bite at the lob and uarden worm desj…,;’! for other lish. They ;nv never out of va>on, and will at any time ta.ke a. lamprev, waˆp-ˆrubs, min- now., &c.

The (JKAYIIM; or I’MIIKI: spawns in May,

and is in the best condition about tin; month of

November. They will greedily take all the baits

that a trout does, and commonly frequent the

same streams. They must be angled for with

• as l’iey are a timrd fish, and

v, !;e;i hooked must be managed witli care, as

th” hold iii tie- month of this iHi easily gives

v.,r. ; in that ca-e however they will speedily re-

;|r;i I” ”•”. bait. They are on an average from

-•^\leen to eighteen inclusionˆ: delicious to the

- nd i., ha\e the flagrant smell

The GUDGEON, famous both for the flavour and sport, is a very simple fish, and easily al- lured with any kind of bait. It is fond of gentle streams with a gravelly bottom; is generally from five to six inches long, and spawns two or three times a year. Before angling for gudgeons the bottom should be well stirred up to rouse them, and collect them in shoals together. The fish ‘should not be struck on the first motion of the float, as they commonly nibble the bait be- fore they swallow it.

The LOACH or GROUNDLING sheds its spawn in April, and remains in the

gravel, where it is easily taken with a small red worm. They are about three inches in length, of delicate flavour, and abound mostly in the north of Britain, and in the streams of the mountainous parts.

The MINNOW is one of the smallest of river- fish, seldom exceeding two inches in length. They spawn once in two or three years, and crowd together in large shoals, chiefly in shallow waters, where, from their frequency in biting, they are easily taken, and serve as excellent baits for trout, pike, chub, perch, and many other kinds of fish.

MULLET take nearly the same bait as the trout, and will rise to an artificial fly. They are found in the river Arun, Sussex.

The PAR or SAMLET is called on the river Wye a skirling; in Yorkshire a brandling; in Northumberland a rack-rider ; and in other parts of England a fingerling, from the resemblance of its spotted streaks to the human finger. Par or samlet is the name given it in Scotland, where it is best known. It has been supposed to be generated by the blended spawn of the trout and salmon, an opinion which receives great proba- bility from the circumstance of their frequenting the same haunts with salmon and sea-trout, and their being forked in the tail like the former. They are taken mostly in the same way.

The PERCH is a bold-biting fish, and affords excellent amusement to the angler. He is dis- tinguished by the beauty of his colours, and by a large erection on his back which he can raise or depress at pleasure. Thus defended, he bids defiance to the attacks of the enormous and most ravenous pike. They are from eight to fourteen inches long, and spawn about the beginning of March. In fishing for perch with a minnow or brandling the hook should be run through the back tin of the bait, which must hang about six inches from the ground. A cork float is used, which is leaded about nine inches from the hook. They refuse a fly.

The PIKE, LUCE, or JACK, is a fish of enor- mous size and of the greatest voracity, so much so as to be called the fresh-water shark. They are great breeders. The account of their having been brought to England first in the reign of Henry VIII. is fallacious, although at that time they were esteemed great rarities. They shed their spawn about March, and usually in very shallow waters. The finest pike are those which feed in clear rivers, those of the fens being of very inferior quality. In the latter places, however, they grow to a vast size, and feed prin- cipally on frogs and such like nutriment. The] like for longevity is the most remarkable of all

fresh-water fish; is solitary and melancholy in his habits, commonly swimming alone, and re- maining in his haunt till compelled to roam in quest of food. Gesner, in his letter to the emperor Ferdinand, introduced as a sort of pre- face to his book De Piscibus, relates that near Haileburne, in Germany, a pike was taken up in 1497 with the following curious inscription on a brass collar attached to his neck, ‘ Ego sum ille piscis huic stagno omnium primum impositus per mundi rectoris Frederici Secundi manus 5 Octobris anno 1230.’ A high wind or dark cloudy day commonly affords the best sport in angling for this fish, as their appetite is keener at those times.

The PINNOCK, or AIELEY, is a species of sea- trout, usually from nine to fourteen inches long, and is most frequent in Scotland. The whiting, another species, is from sixteen to twenty-four inches long. They will both rise at an arti- ficial fly, but commonly require a more showy one than the trout.

There are three ways of taking pike by the ledger, the trolling or walking bait and the trim- mer. The ledger is a bait fixed by a stick driven into the ground, or the angler’s rod may be so secured ; a live bait is attached to the hook, as the dace, gudgeon or roach, and on some occasions a frog is employed. A sufficient length of line is left free to allow the pike to carry the bait to his haunts. If fish are used as baits, the hook must be securely stuck through the upper lip, and the line should be from twelve to fourteen yards long. If a frog, the arming wire of the hook should be pst in at the mouth and out at the side, and the hinder leg of one side should be fastened to it with strong silk. The method of trolling for pike is the most diverting way of catching them. There are several small rings affixed to the trolling-rod, and on the bottom and thickest joint a reel is placed, with twenty or thirty yards of line upon it. The line after passing through each ring of the rod, is joined to the gymp or wire to which the hook or hooks are suspended. Two large hooks, about the-size adapted for perch-fishing, are commonly em- ployed, which are placed back to back. Between the two hooks hangs a little chain, at the end of which is a leaden plummet fastened in the mouth of a dead fish, the hooks being left exposed on the outside. The bait being moved about in the water so as to resemble a living fish, the pike in perceiving it, immediately darts at it with all his velocity, and drags it to his hole, and in a few minutes voraciously devours it. The hooks by this means being fastened in his body, all that remains is for the angler to weary him out, and afterwards drag him slowly to the shore, being careful to avoid his bite, which he will not scruple to attempt. The third mode by which they are caught, is by means of a wooden cylinder, called a trimmer, round which about the middle in a smaller diameter

twenty or thirty yards of line are wound, a yard or more being suffered to hang down in the water with the bait. The trimmer is now permitted to go wherever the current tends, and the angler silently follows, until a fish has approached the bait, when he comes up and secures him.

The new method of taking pike by means of fox-hounds, as he calls them, was originally sug- gested by Col. Thornton, and has been practised with considerable success. ' I make use,' says he, 'of pieces of cork of a conical form, all dif- ferently painted and named after favorite hounds. The mode of baiting them is by placing a live bait, which hangs at the end of a line a yard and a half long, fastened so slightly that on the pike's striking, two or three yards more run off so as to enable him to gorge his bait. If more line is used it will prevent the sport that attends his diving and carrying under water the hound, which being pursued in a boat down the wind, the course they always take affords very ex- cellent amusement, and where pike or large perch, or even trout are in plenty ; before the hunters (if I may so term these fishers) have run down the first pike, others are seen coming towards them with a velocity proportionable to the fish that is at them.' Whatever fish are em- ployed in catching pike, they must be fresh, and preserved in a tin-kettle, which if the water be changed frequently will improve them. Pike are denominated jack till they attain the length of twenty-four inches.

The POPE or RUFF is a fish very similar in its nature and appearance to the perch, and is fre- quently caught when fishing for the latter. They spawn in March and April, and are taken with a brandling, gentles, or caddes. They are ex- tremely voracious in their disposition, and will devour a minnow which is almost as big as themselves. In their favourite haunts of gentle deep streams overhung by trees, they swim in shoals together, and you may fish for them either at the top or the bottom of the water, as they will bite in almost any weather or almost any situation. The average length of this fish is from six to seven inches.

ROACH are frequently taken with flies under water. They are a simple and foolish fish, and will bite at any of the baits that are provided for chub or dace. They spawn in May, and turn red when boiled. The compactness of their flesh gave rise to the proverb, ' sound as a roach.' They haunt shallow and gentle streams; and particularly the mouths of all small streams which run into larger ones. In angling for the roach the tackle must be strong, and the float large and well leaded.

The RUD, or FINSCALL, is a very scarce fish found only in the river Charwell in Oxfordshire, and a few lakes in Lincolnshire 'and Yorkshire. It sheds its spawn in April, will take all kinds of worms, and rise at an artificial fly. Its co- lour is a yellowish brown, and its average length from

nine to fifteen inches: it has been seen longer than this.

SALMON are accustomed to quit the sea at the commencement of April, and take to the rivers, and generally quit the freshwater and retire again into the sea at the approach of winter ; but the Wye and Usk in Monmouthshire, and the Exe in Devonshire, have them in season all the six wintry months. The best and finest species of this fish is caught in the Exe, the Thames, and the Tamar ; but they are not so numerous as in many other places. They prefer, generally speak-

ing, colder 'streams, and are therefore more numerous in the rivers of Scotland, particu- larly the Tweed, Tyne, Clyde, and Tay. In the latter they are often found seventy pounds in weight, and in the Tweed and Clyde fifty or sixty pounds. They are found in all the great rivers and streams of Europe [north of 51°, and in America north of 41°; but in the American rivers they seldom exceed fifteen to twenty pounds in weight. They appear for some time in the river before they are in a healthy state, owing perhaps, in some degree, to the changes of water. The best time for the angler to begin to take them is the close of May, and the early part of June. In September and October they de- posit their spawn, and grow very sickly both in appearance and flavour. Just before spawning, they retire to brooks and streams which branch out from the main river, or remain in the shal- lows scarcely covered with water, where they fabricate a kind of trough for the female to de- posit her eggs in, which being done, the male sheds a whitish fluid over them, and afterwards the male and female unite to cover the whole with gravel, and conceal them with the greatest industry. The male is so diligent in this, that he frequently kills himself with fatigue, and always is longer in recovering than the female. The vivitication of the spawn takes place with great rapidity about the commencement of April, when tin: sun has acquired sufficient strength to warm the bottom of the shoals where they are deposited. When the shoals are swelled by the spring floods, the younu' fry hurry downward to the sea. About July and August they return to the same rivers and remain till December, when they revisit the sea, and upon their return to the fresh waters the iK'\t summer, they attain the size, appearance, .mil flavour of salmon. They rarely or never forsake their parent streams. These fish are said to be forced from their salt-water residence by an insect which adheres closely to their bodies, railed tlie sea-louse, which however drops off on their return to the fresh waters. After their se- cond return to the fresh waters, they are subject to a gradual decline in health and appearance; tl

ut ; their llesh becomes loose and insipid ; ir scales seem almost rubbed off, and their 1s ;ire dreadfully infested with the lionea sal- nea. jn this sta<:e they are called shotten inon, and in their departure for the sea they ike frequent stops, and seem almost unable of oceoilmu. The male shoots out a grisly excres- sence tiniii the lower jaw, which sometimes pe- netrates through tii'.' upper, greatly resembling ihe heal, of a bird. Although they are delighted \\itli clear rivers, which take1 their rise in moun- t.uiis havin.; a deep Liravelly bottom, they uni- loniily av«id streams which How upon ore, or amongst calcareous formations. When the \\aimih is intense, they retire beneath the shelter nt trees ; and are so susceptible of the vicissitudes

lie with their heads pointing up the river, and never swim down the stream, unless during their emigration to the sea. The extraordinary" leaps ot this fish, as well as its characteristic food, have excited much attention. Being both bow and arrow,

In angling for salmon the rod should be from seventeen to twenty feet in length. The reel should be made of brass, constructed with the utmost nicety, and capable of the swiftest cir- cumvolutions. The line may be of silk or horse- hair, having a loop at the end of the wheelj and another at the cast line, to fasten them to each other. The last should be very carefully twisted, and shorter than the rod, that none of the knots may come within the rings. The line should be small towards the hook, where they are com- monly made of three small round twisted silk- worm guts, or a few strong horse-hairs. Of flies, the natural ones that are proper are men- tioned in the table; the artificial ones should be large, and of a gaudy glittering colour, com- posed of hairs, furs, and wool, mingled with the tail-feathers of cocks and game, secured together by gold and silver thread, plated wire, marking silk, bees' wax, shoemakers' wax, &c. The wings may be of fowls' feathers of a showy co- lour. A raw cockle or muscle, taken out of the shell, have been successfully employed as baiu for salmon. The proper way of using them is to drop the line into some shallow, near the edge of some hole of a considerable depth, and let it be carried in by the current.

Considerable difficulty is experienced by young anglers in throwing the line. It should be cast across the river on the off side of the spot where you imagine the salmon will rise. When you think he has been struck, let him have time to swallow the bait securely, and afterwards stick the hook firmly in him by means of a gentle twitch. He will then plunge and spring with great violence; perhaps run away with considerable length of line, which should always be kept in a relaxed state so as to yield easily to his obstinate resistance. If he become sullen and quiet in the water, rouse him by throwing in stones, and when he again commences resistance, let him have plenty of line, following him down the stream till he exhausts himself, taking every opportunity to wind up your line till you approach him in this

weary state, and take him gently by the gills out of the water. The most favourable time is when the sun shines watery, and when there is a fresh wind after a flood ; also, when the water is slightly urged by the tide, so as it be not thick or muddy.

SMELTS rise to a small fish on a paternoster line, or one armed with many hooks at suitable

distances ; though being properly a sea-fish, they are not often caught with a line in rivers. In 1720 such an abundance of them occurred in the Thames, that the women and children lined the banks to angle for them between London and Greenwich. See Walton, editor of Bax- ter's edition.

The STICKLEBACK spawns in May, and is found in rivers, ponds, and ditches. Trout and pike rise easily at them, and when the prickles are cut off, they make excellent baits.

TENCH are considered pond-fish, though often found in the river Stour. They shed their spawn in July, and are in season from September till May. They bite freely during the summer months, but must be fished for near the bottom ; and give them time to gorge the bait. Use strong tackle and a good goose-quill float, without cork. They are in general from twelve to four- teen inches long, though some have been caught as heavy as ten pounds.

TROUT are thought the finest river-fish in the country. They are of the most beautiful colours, varied according to the season of the year, and the rivers they frequent. They are found in the generality of our streams, and are usually taken with an artificial fly. They differ in weight from half a pound to three, and afford excellent diver- sion. They come to their size sooner than any other fish that we know, and are very short-lived. The time of shedding their spawn generally is about October and November, before which they often force a passage against the stream, through wears and flood-gates ; and how they overcome some of these obstacles has been the subject of much conjecture. In some of the lakes of Ireland trout of large sizes have been caught : Walton quotes an instance of one being taken up forty-six inches long. They are gene- rally found in eddies, where they remain con- cealed behind a stone, or a log, or a bank that projects into the stream. In the latter part of the summer they are frequently caught in a mill- tail, and sometimes under the hollow of a bank, and under the roots of a tree. In angling for trout, observe, 1 . That the day be a little windy and the sky partially overcast; the south wind is the most desirable.

2. The angler should stand at a proper distance from the stream, and fish it downwards, the line never touching the water lest it should disturb the fish. 3. Clear streams are the most desirable, and a small fly with slender wings is the most appropriate. 4. The line should be about twice the length of the rod, except where trees, or other intervening objects, preclude the possibility of a successful throw at any distance. 5. The fly should suit the season. After a shower, when the water is of a brown appearance, the orange-fly is best ; in a clear day the light-coloured fly ; and in a gloomy day, in overshadowed streams, a dark fly. In angling with the fly it is important to strike on the first rise of the fish. The trout may be caught at the top, the middle, or the bottom of the stream. In angling for him at the top with a natural fly, use the green drake-fly and stone-fly, at least during the months of May and June. This mode of angling is called dip- oing. If there be no wind use a line halMhc

length of the rod ; but if there be a wind increase the length of the line. Let the line fly with the wind up or down the stream, and when you see a fish rise, guide the fly over him. In case ot striking a fish, as you have no length of line with which to weary him, the capture must be ef- fected by force. At midwater angling for the trout is performed by means of a small minnow, caddis, grub or worm. If a minnow be used, the mo- derately sized and whitest ones are the best, and should be placed upon a large hook, that it may be able to turn itself about when drawn against the stream. The hook may be inserted in the mouth and drawn out at the gills. It should be again drawn through the mouth with the point to the tail of the minnow, and the hook and tail neatly tied together, that the evolutions of the bait may be more naturally performed. The slack of the line should then be pulled back, that the body may be nearly straight on the hook. If he do not turn nimbly enough, let the tail be turned to the right or left, which by enlarging the orifice made in the body of the minnow, will greatly facilitate its movements. In angling with a worm or caddis, the finest tackle must be employed and a cork float. The lob-worm is the best in muddy water, and in clear streams the brandling. The first is used for large trout, the second for smaller ones.

There are two methods of angling at the bot- tom, with the float or with the hand. The latter is effected by means of a ground bait and long line, having one hair next the hook, and a little higher on small shot for a plumb. The brand- ling should be well secured and always in mo- tion, drawn towards the person who is fishing. Only one worm is to be fastened on the hook at a time. To angle at the bottom with a float use the caddis, two or three of which may be put upon the hook at a time. It is often joined to the worm, and sometimes to an artificial fly. Fine tackle must be employed ; and this mode of angling will afford diversion and success at all seasons of the year. In fishing with the cad- dis at the top of the water, the insect may be

imitated by forming the head of black silk, and the body of yellow chamois leather ; but the trout will seldom rise at the caddis when the stream is at all muddy. These observations are drawn from the most usual habits of successful fishermen, and are made with a view to prac- tical convenience. For a more detailed and scientific account of the fish themselves, the reader is referred to the article ICHTHYOLOGY, as a branch of Zoology, and tne separate articles respecting them.

We shall now give a few directions with re- spect to the tackle usually requisite for success- ful angling.

In the choice of his rod the angler will be directed by looal circumstances. Cane rods are the lightest, and, generally speaking, should have the preference. In country places, where the angler commonly makes his own rods, the best wood that can be used is the common hazel. To this, however, should be added a sound ash stock, and a whalebone top. Practical anglers should, in the decline of the year, furnish them- selves with eight or nine wands of hazel, taper-

ing toward the size of each other, m sets of three or four, and dry them during the winter in a chimney. By sloping oft' the ends of these to the length of two or three inches, arid fastening them together with a waxed thread, a useful rod may be quickly formed. The whole should then be varnished over with Indian rubber dis- solved in linseed oil, and a small quantity of seed or shell lac superadded, which will be an excellent preservative against the weather. Sal- mon rods are sometimes made wholly of ash, with a whalebone top. Excellent rods may also be formed thus : a yellow deal joint of seven feet ; a straight hazel joint of six feet ; a piece of fine-grained yew, tapered to a whalebone top, and measuring together about two feet. Expe- rienced anglers always carry a jointed rod, when not in use, tightly looped up.

The line should gradually diminish towards the further extremity. No materials answer better than strong clean horse-hair, plucked from the middle of the tail, especially of a young and healthy gray or white stallion. Before plaiting they should be well sorted that the hair of every link may be of equal size with each other, and if washed should not be dried too rapidly. For ground fishing, however, brown, or at any rate dark hairs, are to be preferred, from their similarity to the colour of the bottom. Silk lines are seldom of much practical utility ; they soon rot, and catch weeds.

The hook should be so tempered as readily to bend without breaking, an i have a sharp point. It should be long in the shank and deep in the bed, the point straight, and true to the level of the shank, and the barb long ; the size and sort de- pending on the kind of lish for which you pro- pose to angle. The angler should be always provided with a variety.

Flouts are formed of cork, porcupine quills, goose and suan quills, &<;. In slow water, and for light lisli, a quill I'.oat is best. For heavy lish or strong streams a cork rloat, which is best made by taking a sound cork, bore it through the centre lengthways with a small red-hot iron, round the top, and taper it down across the grain two -thirds the length, forming the whole into the shape of a pear. The rloat should be so loaded as to sink just below the surface of the water.

Although UK: origin of this art is involved in considerable obscurity, it is evidently of ancient date as appears from the allusions made to it k and Roman writers, and in the oks of the Bible; as those of Job, llabbakuk, tvc. A spirited turn is prophetic descriptions of the de- g\ pt in bishop I. ovuh's Isaiah: sh;il! n;uiini Mini huiii'jit ; i th,' rivi-r.

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tony, lie, according to Plutarch, having in the presence of the queen toiled all day and taken nothing, gave secret orders to some of his atten- dants to dive into the water and fasten several fine large fishes to his bait, Cleopatra per- ceived the stratagem, and, while she applauded his successes, privately sent down one of her slaves to hang a large salted fish of the Euxine upon his hook. When Antony thus detected exhibited considerable displeasure at being ex- posed to ridicule, she threw her arms round him, exclaiming, ' Resign, dear general, this kind of sport to us petty princes of Pharos and Canopus; your game is cities, provinces, and kingdoms.' It has been well said,

What gudgeons are we men,

Every woman's easy prey, •

Though we Ve felt the hook, again

We bite, and they betray.

Angling came into general repute in England about the period of the reformation, when both the secular and regular clergy being prohibited by the common law from the amusements of hunting, hawking, and fowling, directed their attention to this recreation. The invention of printing assisted in exciting attention to this sub- ject, and made known its importance ‘ to cause the helthe of your body, and specyally of your soul,’ as the first treatise concludes. Wynkin de Worde gave the world in 1496 a small folio republication of the celebrated Book of St. Albans. It contained for the first time a curious tract entitled the Treatyse of Fysshinge wyth an Angle, embellished with a wood-cut of the angler. This treatise is imputed to Dame Ju- liana Berners or Barnes, prioress of a nunnery near St. Albans. ‘ The angler (she observes) atte the leest hath his holsom walke and mery at his ease, a swete ayre of the swete sauoure of the meede floures that makyth him hungry ; he hereth the melodyous armony of the fowlls, he seeth the yonge swannes, heerons, duckes, cotes, and many other fowles, with their brodes, whych me seemyth better than alle the noyse of houndys, the blastes of hornys, and the scrye of fowles, that hunters, fawkeners, and foulers, can make. And if angler take fysshe, surely thenne is there noo man merier than he is in his spyryte.’ The Book of St. Albans contains ‘ Treatises perteynynge to Hawkynge and Hunt- ynge,’ as well as ‘ Fisshynge with an Angle; and several editions of it were pripted in the sixteenth and seventeenth centuries, as that un- der the title of The Gentleman’s Academic, in 1595 ; The Jewel for Gentrie, in 1614; and The Gentleman’s Recreation, in 1674. Mr. Hasle- wood, a learned bibliographer, has recently favoured the public with a well finished fac- simile reprint of the work, but he disputes the claim of the fair lady above mentioned to be the authoress of the above treatise on angling, and only assigns her a small portion of the treatise on hawking, the entire treatise on hunting, a list of the beasts of chase, and another of birds and fowls.*

The only original works published betweeu this performance and that by the celebrated Walton, were, A Book of Fishing with Hooke and Line, and of all other instruments thereunto

belonginge, made by L. M. (Leonard Mascall, a gentleman of Plumstead in Sussex), 4to. Lond. 1590. Certain Experiments concerning Fish and Fruit, practised by John Taverner, gent, and by him published for the benefit of

others, 4to. Lond. 1600. The Secrets of Angling, teaching the choicest Tooles, Baytes, and Seasons for the taking of any Fish in Pond or River, practised and familiarly opened in three bookes, by J. D. Esq. (John Dennys or Davons), Lond. 1613, wherein is some beautiful poetry, quoted by Walton ; and the Pleasures of Princes, or Good Men's Recreations; containing a Discourse of the general Art of Fishing with the Angle, and of all the hidden secrets thereunto belonging. Anon. 4to. Loud. 1614. Gervase Markham's Countrey Contentments, 4to. 1633.

Walton's Inimitable Discourse on Angling was first printed in 1653 "in an elegant duode- cimo, with plates of the most considerable fish cut in steel. This edition and three subsequent ones consisted wholly of what is now called part the first of the Complete Angler, or Walton's individual portion of the work. While engaged in 1676, being the eighty-third year of his age, in preparing the fifth edition, he received from his friend, Charles Cotton, Esq. a gentleman in Derbyshire, instructions how to angle for a trout or grayling in a clear stream, as they were first called, which afterwards became Part the Second of this joint publication.

Angling has been thought of sufficient im- portance to be protected by statute. This first occurred in the reign of Edward I. when im- prisonment and treble damages were awarded against all that should trespass on the rights of authorised fishers. By the 31st Henry VIII. c. ii. s. 2, it was enacted, If any evil-disposed persons shall fish in the day time, from six in the morning to six in the evening, in any ponds, stews, or moats, with nets, hooks, or bait against the will of the owners, they shall, on conviction thereof, at the suit of the king, or the party aggrieved, suffer imprisonment for the space of three months, and find security for their good behaviour. By the 5th of Elizabeth, c. xxi. s. 2, it is enacted, I'f any person shall unlawfully break or destroy any head or dam of a fish-pond, or shall wrongfully fish therein, with intent to take or kill fish, he shall, on conviction at the assizes or sessions at the suit of the king, or the party injured, be imprisoned three months, and pay treble damages ; and after the expiration of the said three months, shall find sureties for good behaviour for seven years to come.

By the 22d and 23d Charles II., c. xxv. s. 7, it is enacted, That if any person shall, at any time, use any casting-net, drag-net, shove-net, or other net whatever ; or any angle, hair, noose, troll, or spear ; or shall lay any wears, pots, nets, fish-hooks, or other engines ; or shall take any fish by any means whatsoever, in any river, stew, moat, pond, or other water, or shall be aiding thereunto, without the consent of the owner of the water, and be convicted thereof, within one month after the offence committed, such offender shall give to the party injured such satisfaction as a justice shall apr.'jint, not exceeding treble damages ; and pay the overseers of the

poor such

sum, not exceeding 10s., as the justice shall think fit: in default of payment, the said penalties to be levied by distress ; or the offender to be com- mitted to the house of correction, for a term not exceeding one month, unless he enter into a bond, with surety, in a sum not exceeding £10 never to offend in like manner. Justices are also authorised to destroy all such articles as before recited and adapted to the taking of fish, as may be found in the possession of offenders when taken. Persons aggrieved may appeal to the quarter sessions, whose judgment shall be final.

And by the 4th and 5th William and Mary, it is enacted, That no person (except makers and sellers of nets, owners of a river or fishery, au- thorised fishermen and their apprentices) shall keep any net, angle, leap, pike, or other engine for taking of fish. The proprietor of any river or fishery, or persons by them authorised, may seize, and keep to his own use, any engine which shall be found in the custody of any person fish- ing in any river or fishery, without the consent of the owner or occupier. And such owner, oc- cupier, or person authorised by either, sanctioned by the consent of any justice, in the day-time, may search the houses or other places of any unqualified person, who shall be suspected of having such nets, or other engines, in his posses- sion, and the same to seize and keep to their own use, or cut in pieces and destroy.

Stealing fish in disguise is made felony by the 9th George I. c. xxii. If any person armed and disguised shall unlawfully steal, or take away, any fish out of any river or pond (whether armed or not), shall unlawfully and maliciously break down the head or mound of any fish-pond, whereby the fish shall be lost and destroyed, or shall rescue any person in custody for any such offence, or procure any other to join him therein, he shall be guilty of felony without benefit of clergy. This (commonly called the Black Act) is made perpetual by 31st Geo. II. c. xlii.

By the 5th Geo. III. c. xiv. s. 1, it is enacted, That if any person shall enter into any park or paddock enclosed, or into any garden, orchard, or yard, belonging to, or adjoining to, any dwelling-house, wherein shall be any river, pond, moat, or other water, and, by any means what- soever (without the consent of the owner) steal, kill, or destroy, any fish, bred, kept, or preserved therein, or shall be assisting therein, or shall re- ceive or buy any such fish, knowing them to be such, shall, upon conviction, be transported for seven years. Persons making confession of such offence, and giving evidence against an accom- plice, who, in pursuance thereof, shall be con- vie ed, will be entitled to a free pardon.*

And by the same act, s. 3, it is provided, That if any person shall take, kill,

or destroy, or at- tempt to take, kill, or destroy, any fish in any river or stream, pool, pond, or other water (not being in any park or paddock enclosed, or in any garden, orchard, or yard, belonging or ad- joining to a dwelling-house, but in any other enclosed ground, being private property), such person, being thereof convicted by confession, 01 the oath of one witness ˆfore a justice, shall forfeit five pounds to the owner of the fishery of such river or other water ; and in default thereof

shall be committed to the house of correction for a time not exceeding six months.

By the 1st Eliz. c. xvii. all fishermen are for- bidden to destroy the fry of fish, small salmon, and trout, under a penalty of 20. ; and by the 4th and 5th Anne, for the protection of salmon in the counties of Southampton and Wilts, no salmon shall be taken between the 1st of August and 12th of November. Statutes of George I. and II. forbid the same fish to be taken in the*

rivers Severn, Wye, Ware, Ouse, &c.f under 18 inches long. It is held that where the lord of the manor has the soil on both sides of a river, as in the case of the Severn, the right of fishing goes with it ; and he who intrudes thereon must prove his claim of a free fishery ; but when the tide ebbs and flows, and the river is an arm of the sea, as in the case of the Thames, the right is presumed to be common, and he who claims a privilege must prove it,

ANGLO-CALVINISTS, a name given to the members of the church of England, because their doctrinal articles are built on the system of Cal- vin ; though some modern writers allege that the doctrinal system of the English church is Ar- minian. The Anglo-Calvinists make one of the four branches of divisions of Calvinists, and stand distinguished from the pure Calvinists, the Piscatorians, and the Arminians.

ANGLO-SAXON, an appellation given to the language spoken by English Saxons ; in contra- distinction from true Saxon, as well as modern English.

ANGOL, a pleasant and well -watered city of South America, in the province of Chili, 125 miles north of Baldivia. Lon. 78° 20′ W., lat. 38o 10′ N.

ANGOLA, in geography, a small kingdom on the coast of West Africa, situated to the south of Congo. The limits are variously described by

geopraphers. M. Degrandpre, a recent traveller in that quarter, states that the whole coast from (.'ape Lope/. Gonsalvo to St. Phelipe de Ben- guela, extending from about the first to the twelfth decree of south latitude, is generally de- nominated the, eoast of Angola, while the whole of the interior has the name of Congo; and ac- cording to the expedition under Capt. Tuckey, the inhabitants of all this line of coast speak the same hmu'uau'e, ami are similar in their charac- ter, habits, and manners. The principal rivers are the 1)anda and the Coan/a, diverging widely in tiir interior, but approaching to a contiguity of not moiv than seventy or eighty miles, whence they enter the Atlantic. The former is supposed to be navigable tor about thirty leagues, and re- ceives the LeucaleanJ several inferior streams in its progress to ihe coast. The latter is a much larger stream, and has been navigated l,r>0 miles inward as tar as Cambambo, a Portuguese for- It is upwards of a league wide at its mouth, and is for several leagues upwards adorned with various islands. A remarkable i an<_" of mountains commences from the southern limits of Angola, now Cape Negro, running up the interior in a north-east direction. Their | teaks are ot considerable altitude, and are covered with perpetual snow; which melting in the summer rushes from them with great rapi- i!n\, forming several lakes and sheets of water conliuuous to their base. Their exact dimen- MOHS ha\e never been calculated; but, from their li"hl and snowy appearance, the Portuguese have called them Monti I'reddi, and Monti Ni \osi; and the highest summit Cambambo, on vhieh i- a .ilx'ei mine, guarded by the Portu

guese with great jealousy. Large herds of wild cattle and mules adorn the plains, whilst lions, tigers, elephants, and several species of the rhi- noceros infest the surrounding country. Between eight and twelve degrees of south latitude are found most of the tropical productions, particu- larly maize or Turkey wheat, together with the manihoc, imported from the West Indies, which forms a coarse kind of bread. The palm, the banana, and bocova trees, abound everywhere, and attain a height and beauty unusual in other countries. The most common of the palm spe- cies is a tree the fruit of which contains many kernels about the size of a filbert, of exquisite taste, and yielding an agreeable eating oil. Around the stem of this tree, which yields by in- cision a pleasant liquor, grows a beautiful downy moss ; the leaves are large and strong, and are mostly used to thatch houses. Another plant found here resembles our apple-tree, affording a medicinal wax, or thin wax, in great esteem amongst the natives; and in the province of Chissama are some fine salt-pits, from which oblong cakes of salt, taken by the inhabitants, form an article of inferior merchandise. This country exhibits some valuable mineral produc- tions ; lead, silver, and even gold, being found" here. The mines wrought by the Portuguese at Cabezzo are spacious. Large quantities of ore are also washed down by the mountain

torrents, which the natives intercept by laying straw and other substances across the stream. Angola Pro- per was formerly a province of Congo, bounded by the river Danda on the north, the Coanza on the south, and extending to unknown limits of the interior on the east. The sorereigns of this district, however, becoming independent, con- quered the kingdom of Benguela in the south as far as Cape Negro, in S. lat. 16° 21', and ex- tended the limits of Angola to its present dimen- sions.

The Portuguese writers relate that the coun- try was originally divided into seventeen pro- vinces ; eleven of which, in the fifteenth and sixteenth century, became subject to the king of Portugal ; also, that they found the natives a wretched cannibal race, preferring for food the flesh of man to that of animals, and always sacri- ficing human victims at their funerals, practices to which some of the southern tribes are still ad- dicted. Twenty thousand natives, indeed, were said to have been converted to Christianity by the Portuguese missionaries between the years 1580 and 1590. Christianity, however, has made but little abiding impression upon them. In the first instance, from the disputes at that time

ripening between the kings of Congo and Angola, the Portuguese readily established themselves, and afterwards fanned the flames of war to pro- cure slaves for their South American territories. In 1584 an army of 120,000 Angolians is said to have been routed by 500 Portuguese soldiers, with the assistance of 1,000 Congese ; and in the following year 10,000 were defeated by 200 of the Portuguese. These raw undisciplined armies formed the militia of the country, of which the king of Angola compelled every chief to furnish a quota for the public service. Their instruments of warfare are the bow, the sword, the target, and the dagger, accompanied by the drums and Eu- ropean music introduced by their pious conquer- ors. In common with the other African tribes, they attack with savage shouts and violent fury, but a slight steady resistance defeats them. Not only the conquerors, but the natives, form them- selves into parties and roam for captives in the interior. On some occasions they take with them considerable herds of cattle, which they drive towards a quarter where th? population is nume- rous; after this they conceal themselves in the long grass, and, when the natives come to take the cattle, rush out upon them and carry them away.

St. Paulo de Loanda is a considerable and well-built town, the capital of

the Portuguese settlements in this direction, and the see of a bishop. It is remarkable for the magnificence with which the Catholic church festivals are at- tended, as well as for that of its ecclesiastical and charitable edifices. Here is also a commo- dious port, with a sheltered roadstead half a mile in breadth ; opposite to which is the island of Loanda, which supplies the city with water. This island is five leagues in length and one in breadth, presenting with its fine churches and convents a noble prospect from the sea. See LOANDA.

The commerce of the whole coast, and nearly our whole acquaintance with it, has arisen from the disgraceful traffic in slaves. Immense num- bers of these unhappy beings are employed in the Portuguese provinces, whence they are con- tinually transported to the Brasils. The Jesuits, who are the priests of the districts, are said to have at least between 1,000 and 2,000 under their control ; and of those who are sold to Eu- ropean traders, this district has always afforded a copious supply.

Great Britain, during her long connexion with this trade, had no considerable intercourse with this part of the coast, and but one establishment in the neighbouring region ; viz. at the mouth of the Congo. From the success of the Portuguese the Dutch were tempted hither ; and the French, till the period of the revolution, largely shared in the slave adventures to Loanda, carrying off from 15,000 to 18,000 victims annually. Since the abolition of the slave trade by the Bri- tish parliament, the trade on this coast has been concentrated in the hands of Spanish and Portu- guese merchants, involving on an average the transportation of upwards of 40,000 human be- ings annually, of which the finest species are said to be procured from Malemba.

After having passed Cape Verde, the voyage

to Angola is performed by one of two routes the short route in which the vessels steer due east as far as Cape Lopez Gonsalvo; or what mariners call the long route, which after a south- west course from the Cape crosses the line about the twenty-third degree of west longitude, and in this direction continues as far as between the twentieth and twenty-fifth degrees of latitude; when the vessels commonly fall in with a pro- pitious wind and tide for the coast of Africa. In the former course they have usually in the morning a land breeze, in the afternoon a south- west wind, and during the night a dead calm. The success of the short route depends upon the currents ; if these are favourable the vessels are soon wafted to the haven ; if otherwise, they are kept at sea for eight or ten months. The latter course, though it shows a greater extent of sea, being remarkably uniform in its winds, is sub- ject to few vicissitudes, and may be calculated upon to a few days.

ANGOLENSIS, in ornithology, a species of falco, according to Gmelin, found in Angola, half as large again as the kite. It is described at length by Mr. Pennant, as found in the col- lection of It. Parry, Esq. Also a species of me- rops according to Gmelin ; the apiaster ango- lensis, and le geuspier d Angola of Brisson, or Angola bee-eater of Latham. Also a species of luxia inhabiting Angola the black grosbeak of Edwards, and Angola grosbeak of Latham. It is also the name of a species of emberiza, inha- biting Angola ; the gros-bec a poitrine couleur de feu of Salerne, Latham, and Gmelin. This is the vengoline of BufTon and the Hon. D. Bar- rington. Linaria Angolensis of Brisson, and An- gola finch of Latham.

ANGOLI, a name given by Buffon and others to the Madras gallinule, fulica maderaspatana of Gmelin.

ANGON, in the ancient military art, an engine of the bow kind. Others speak of it as a kind of javelin used by the French, the iron head of which resembles a fleur de lis. Hence it is the opinion of some writers, that the arms of France are not fleur de lis, but the iron-points of the angon, or javelin of the ancient Franks.

ANGONˆEUS, musculus. See ANCON.KUS, ANGONIA, or ANGOR, among ancient physi- cians, a concentration of the natural heat, oc- casioning palpitation of the heart.

ANGOSCIOLA (Sophonisba), a celebrated female artist born at Cremona, in 1533, of a noble family. Her instructors were Barnardino Campi and Bernardo Gatti, called Soiora. One of her first performances was the portrait of her father placed between his two children, which obtained universal applause. She also designed several historical subjects. In 1561 Sophonisba went to Madrid with her three sisters, and while there painted the portrait of Queen Isabella, which the king sent to Pope Pius IV. She re- turned to her native place in 1575, where, by continual application to her profession, she lost her sight. In this state she was visited by Van- dyck, who used to say that he had received more practical knowledge of the principles of his art from a blind woman, than by studying all the works of the best masters in Italy. She died at Cremona

in 1626. She had three sisters, viz. Lucia, Europa, and AnnMaria, all celebrated painters of their time.

ANGOSTURA, a town of South America, in the province of Carthagena and kingdom of Granada. It is situated on the Magdalena, 140 miles north of Santa Fe de Bogota.

ANGOT, a province or kingdom of Abyssinia, bounded on the west by Amhera and Begemder, and on the east by the Dobaand Foltol, barbarous tribes inhabiting the coast of the Red Sea. This province formerly was rich and fertile, when under the dominion of Abyssinia, but is now al- most ruined by the Gallas, a nation wandering in the internal parts of Africa.

ANGOU, a province of Congo, situated on the northern bank of the river Zaire. The ca- pital, Bomangor, is situated on the Zaire ; but the chief commerce is carried on at Calenda.

ANGOULAM, in botany, a large and beau- tiful tree of Malabar, the juice of the root of which kills worms.

ANGOULEME, a city of France, the capital of the department of Charente sixty miles from Bourdeaux, and fifty miles west of Limoges. It is seated on the top of a hill, surrounded with rocks, at the foot of which runs the Charente. The inhabitants are about 14,000, and carry on a considerable trade in paper, which is their chief manufacture. There were formerly here ten convents and two abbr-ys, in one of which the old counts of Angouleme are interred: also a famous college of the Jesuits, ami a large hospital. l.on. <)• 14' K., lat. 4,r>° 39′ N.

ANCOTMOIS, a ci-devant province of France now include;! in the departments of Charente, the Charente Interior, the Dordogne, and the Deux Sevres.

ANGOl'RA, or Avivr.A, anciently Ancyra, a town of iS'atolia, in Asiatic Turkey, remarkable for its remains of antiquity. It is at present one of the best and neatest cities of Anatolia, and contains perhaps 40,000 inhabitants. The castle, which is as large as a small town, and well in- habited both by Christians and Turks, has a triple enclosure, and is built of white marble, and stone resembling porphyry. The streets are causewayed by blocks of granite ; but they have no foot-paths. Here are seven churches belong- ing to Greek and Armenian Christians, besides several mosques for the Mahommedans. The country produces very good red wine, and ex- cellent nee grows on the banks of some of the rivers. Opium, honey, and wax, are also consi- derable articles of trade in this part. In this neighbourhood there is the finest breed of goats in the world ; their hair or wool is of a pure daz- •/ling white, about nine inches long, and almost as tine as silk ; a great trade is carried on in this article, anil the finest stuffs, especially camblets, are made' of it. The- .shawls of Angola rival those of

Cashmire. .Most of the inhabitants are employed in this manufacture. Angoura is 212 miles S.E. of Constantinople, and numerous ca- ravans continually pass through this city.

ANGKA, a city of Tcrceira, and the capital of the A/ores, and the residence of the governor. It is seated on the south side, on the edge of the sea. The harbour is of the form of a crescent, the cytiuinlii.'S of which are defended by two

high rocks, that run so far into the sea as to render the entrance narrow, and easily covered by the batteries on each side. From this harbour the town is said to derive its name, the word angra signifying a creek, bay, or station for shipping. The opening of the port is from the east to the south-west ; and, according to Frezier, it is not above four cables length in breadth, and not two of good bottom. Here ships may ride in great safety during the summer ; but as soon as the winter begins, the storms are so furious, that the only safety for shipping is the putting to sea with all possible expedition. Be- fore these storms come on, the Pico, a high mountain in another of the Azores, is overcast with thick clouds, and grows exceedingly dark ; but the most certain sign is the fluttering and chirping of flocks of birds round the city for some days before the storm begins. The town is well built and populous, the see of a bishop, under the jurisdiction of the archbishop of Lisbon. It is comprised of five parishes, and contains a cathedral, four monasteries, as many nunneries, besides an inquisition and bishop's court, which extends its jurisdiction over the Azores, Flores, and Corvo. This town was formerly surrounded by a good wall and strong fortification, but these through neglect are now in ruins. The old castle was celebrated for the imprisonment of king Alphonso VI. by his brother Peter II. in 1668. At Angra are the royal magazines, naval and military. All ma- ritime affairs are under the inspection of an officer called desembergrador. The English, French, and Dutch, have each a consul residing here, though the commerce of any of these na- tions with the Azores is very inconsiderable, being only for wood, corn, and other provisions. Long. 27° 13′ W., lat. 38° 38′ N.

ANGRA DE LOS REYES, a city of Brasil, in the province of Rio Janeiro, situated on the coast of a small bay of the same name. It has two churches and a monastery. It is twelve leagues S. W. of the river Janeiro. Long. 44° 11′ W., lat. 23° 4′ S.

ANGRJLCUM, in botany ; the epidendrum ovatum et scriptum of Linnaeus.

ANGRIVARII, a people of ancient Germany, who inhabited that part of the country situated between the Weser and the Ems.

ANGROGNA, or ANGROGNE, a fertile moun- tainous district of Piedmont, accessible only by two passes from the south and east, and memo- rable for affording a safe retreat to the Waldenses many centuries before the reformation. The caves under the rocks afforded a safe asylum both to the people and their pastors. — There is here a small town of the same name, seven miles west of Pignerol. — Also, a small river which runs through the valleys of Piedmont, in the district of Angrogna.

ANGSANA, or ANGSAVA, in botany; an In- dian tree, which yields a gum often sold for the sanguis draconis, or dragon's blood. It is ?s- teemed an astringent, and an excellent remedy in the aphthae.

ANGUEAH, or ANGUIEAH, a district of Abyssinia, through which runs a considerable river of the same name, which falls into the

Tacazze, fifty miles east of Axum. When Mr. Bruce crossed this river near Kellah it was fifty yards broad, although but three feet deep.

ANGUELLA, in ichthyology, the atherina hespetus of Linnaeus.

ANGUIFER, or ANGUITENENS, in astronomy, a cluster of stars, so called from its resembling a man holding a serpent.

ANGUILLA, the most northerly of the Car- ribee islands, so named from its snake-like form ; about ten leagues in length, and three in breadth. It was first discovered by the English in 1650, when it was filled with alligators and other noxious animals ; but finding the soil fruitful they settled a colony on it. But the colony not being settled under any public go- vernment, the island became a prey to every ra- pacious invader. Their chief suffering was from a party of wild Irish, who landed here after the revolution, and treated them worse than any of the French pirates who had attacked them before. The people of Barbadoes, and other English Caribbees, knowing the value of the soil, several of them removed to Anguilla, where they remained for many years, and even carried on a profitable trade, though without any government either civil or ecclesiastical. In 1745 their militia, though not exceeding 100 men, defended a breast-work against 1000 French who came to attack them ; and at last obliged them to retire with the loss of 150 men, besides carrying off some of their arms and colours, as trophies of their victory. Since that time the inhabitants have subsisted mostly by fanning, though they still plant sugar ; and the island is said to be capable of great improvements. It lies 100 miles N. of St. Christopher's. Long. 63° 10′ W., Lat. 18° 15′ N.

ANGUILLA, one of the smaller Bahama or Lucayos Islands, on the

Anguilla Bank, which is, in fact, a collection of rocky islets to the north-west. This is about twenty miles long by five broad. Lat. 23° 36′ N., Long. 78° 50′ W.

ANGUILLA BAY, a bay on the north side of the island of St. John's, in the Gulf of St. Law- rence, opposite the Magdalen Isles. To the north-west it has Port Chimera and St. Peter's Pool in the south-east.

ANGUILLA, CAPE, a promontory on the west side of Newfoundland, in the Gulf of St. Law- rence, distant from Cape Ray, the south-western extremity of the island, about six leagues. Lat. 45° 58′ N.

ANGUILLABA, a small town of Italy, in the papal territories, seventeen miles N. W. of Rome.

ANGUILLARA, a small town of Padua, situated on a lake of the same name, and containing 2860 inhabitants, six miles N. E. of Rovigo.

ANGUILLARIA, in botany, a name given to the ardisia excelsa and zeylanica of Linnaeus.

ANGUILLARIS, in ichthyology, a species of the silurus of Linnaeus.

ANGUILLIFORMES ; from anguilla, an eel, and forma, shape ; in ichthyology, a class of fishes which are soft and lubricous like the eel, and have no scales. Most of the fish comprised

in this class are long-bodied also like the eel Several of these, as the sea-serpent, conger, &c. are now included with the eel, in the Liimsean arrangement, in the genus murasna, and the others are chiefly referred to that of ammodytes ophidium, or petromyzon. The -word is also applied to some kinds of worms.

ANGUINA, in botany, the calla and tnco- santhes anguina of Linneeus.

ANGUINA, in conchology, a species of serpula that inhabits the Indian Ocean. The serpula muzicata of Born is a variety of this species.

ANGUINA, in natural history, a species of ser- tularia, called the snake coralline by Ellis ; a native of the Mediterranean Sea.

ANGUINA, in zoology, a species of lacerta. This is vermis septentiformis ex Africa of Seba, and chalcides pinnata of Laur. This is com- mon in muddy places about the Cape of Good Hope.

ANGUINA, in entomology, a species of phalsena, of the bombyx family, found in North America by Abbot, and described by Dr. Smith.

ANGUINEAL HYPERBOLE, in geometry, an hyperbola of a serpentine figure of the second order of curves.

ANGUINEI VERSUS, in poetry, verses the words or letters of which may be read back- wards ; such as the following : Otto tenet mappam, madidam mappam tenet Otto.

ANGUINUM OVUM, the adder-stone, a fabu- lous kind of egg, said to be produced by the saliva of a cluster of serpents, and possessed of certain magical virtues. The superstition in respect to these was very prevalent among the ancient Britons, and there still remains a strong tradition of it in Wales. Pliny gives a similar account of it, lib. xix. cap. 3. Mason, in his Caractacus, thus perpetuates the description of Pliny.

When in undulating twine,

The foaming snakes prolific join ,

When they hiss, and when they bear

Their wond'rous egg aloof in air

Thence, before to earth it fall,

The Druid in his hallow'd pall Receives the prize, And instant flies,

Follow'd by the envenom'd brood,

Till he cross the crystal flood.

This wondrous egg seems to have been nothing more than a bead of glass, used by the Druids as a charm to impose on the vulgar ; whom they taught to believe that the possessor would be fortunate in all his attempts, and that it would gain him the favour of the great. The method of ascertaining the genuineness of this was no less extraordinary. It was to be enchased in gold, and thrown into a river ; and if it was ge- nuine it would swim against the stream. Our modern Druidesses, says Mr. Pennant, give much the same account of the ovum anguinum, glain neidr, as the Welsh call it, or the adder- gem, as the Roman philosopher does ; but seem not to have so exalted an opinion of its powers, using it only to assist children in cutting their teeth, or to cure the chincough, or to drive away an ague. These beads are of a very rich blue colour; some plain, others streaked.

ANGUINUS, in entomology, a species of curculio found in Germany.

ANGUIS, or SNAKE, in zoology, a genus belonging to the order of amphibia serpentes. The cliaracters of the anguis are these : they are squamous or scaly in the belly, and under the tail ; without any scuta. The species, according to Gmelin, are striatus, meleagris, colubrinus, miliaris, jaculus, maculatus, reticulatus, cerastes, nasutus, lumbricalis, laticauda, scytale, eryx, fragilis, ventralis, platuros, lineatus, clavicus, annulatus, scutatus, corallinus, rufus, hepaticus, and tessellatus.

ANGUIS BIPES., or two-footed snake, is a native of the Indies ; it has two short feet, with two toes near the anus. Gmelin has referred this, and also the anguis quadrupes, to the genus lacerta.

ANGUIUM LAPIS, a name given to a sup- posed stone in Germany similar to the anguinum ovum.

ANGUIUM SENECTJE, in natural history, the exuviae, or cast-off skins, of serpents, a decoction of which is good for pains in the ear, &c.

ANGULAR MOTION, in astronomy, is the in- crease of the distance between any two planets revolving round any body as the common centre of their motion. The quantity of this motion is expressed by two right lines, drawn from the centre to the revolving bodies ; which will open wider, and consequently the angle will grow greater, as the revolving bodies part farther from one another. The angular motions of revolving bodies are as their real or absolute motions di- rectly, and as their radii of motion inversely : they are also reciprocally proportional to the periodic times.

ANGULAR IS AUTERIA, in anatomy, another name for m ixillaria.

Axnri.AAn SCAPUIJE, in anatomy, another name for the levator scapula1.

ANGULATA, in zoology, a small species of lacerta, first discovered in America by Rolander.

ANGULATA, in entomology, a species of hispa found in Cayenne. Also a species of phalaena of the bombyx tribe. Also a species of pimelia inhabiting Egypt, the tenebrio asperrimus of Pallas. Also a species of phalocna of the geo- rnttra tribe. Also a species of cantharis found in the

South Sea Islands. Also a species of aranea.

ANGVLATA, in conchology, a species of tellina found in the Indian Ocean. Also a species of anomia generally found in a fossil state.

ANGULATL'S, in /oology, 1. a species of coluber; ~2. a species of gryllus.

AN'GUOl'R, n.\ Anˆumir, Fr. angoisse. AN'GIISH, (From the same root as an

A.'Giistir.n, i ger. Denoting excessive AN'r.nsnors. 3 vexation and distress of mind ; distinguished from anxiety.

•pe fader k\ng Henry [the second] in hcrte had he

pay IKS

And anyuised greuously, pat Thomas was so slayn. R. Brunne, p. 132.

A>;he rorynthis, ˆhe hen not anijnischid in us, but g!ie hen iiminischid in ghonrc ynwardiiessis.

Wicklif. Corynth. vii.

Some with grete processyon in gret anguysse and fere Wepynde byuore be kyng, and her relykes myd hem

here, And ober holy chyrche bynges bare vorbe cchon.

R. Gloucester, p. 177.

There is perhaps not in all the stores of ideal an- guish a thought more painful than the consciousness of having propagated corruption by vitiating principles; of having not only drawn away others from the paths of virtue, but blocked up the way by which they should return ; of having blinded them to every beauty but the paths of pleasure ; and deafened them to every call but the alluring voice of the syrens of destruction. Rambler.

Let no man who owns a Providence grow despe- rate under any calamity or strait whatsoever; hut compose the anguish of his thoughts upon this one consideration, that he comprehends not those strange unaccountable methods by which Providence may dis- pose of him- South,

At his control,

Despair and anguish fled the struggling soul, Comfort came down the trembling wretch to raise, And his last faultering accents whisper'd praise.

Goldsmithˆ

ANGURIA, the water-melon : a genus of the diandria order, and monoecia class of plants ; natural order, thirty-fifth, cucurbitaceao. The essential characters are : CAL. quinquefid : COR. quinquepetalous : the female calyx and corolla the same : PERICAR. a pome beneath, with two cells : SEEDS, numerous. Of this genus, Linnseus reckons three species, viz. 1. A. pedata. 2. A. trifoliata. 3. A. trilobata. Of these only one species is known in this country, by the name of citrul. The fruit is cultivated in the warm countries of Europe ; as also in Africa, Asia, and America ; where it is esteemed on account of its wholesome cooling quality ; but in England it is held in little estimation.

ANGURIA CITRULLUS, in botany, the cucurbita atrullus of Linnaeus.

ANGUS, a district of the county of Forfar in Scotland; formerly an earldom in the Douglas family, now extinct. See FORFAR.

AN'GUST, adj. Lat. angustus, narrow. Nar- row, constrained, straitened.

As Peter Nonius will have the aire be so angust, what proportion is there betwixt the other three ele- ments and it ? To what use serves it ? Is it full of spirits which inhabit it, as the Paracelsians and Pla- tonists hold the higher the more noble, full of birds, or a mere vacuum to no purpose ?

Burton's Anat. of 3fel.

The cause may he referred either to the grumous- ness of the blood, or to obstruction of the vein somo where in its passage, by some angustation upon it by part of the tumour. Wiseman.

ANGUSTATA, in entomology, a species of cassida, a native of India. Also a species of pi- melia, a native of the southern parts of Russia and Egypt, and is supposed to be the tenebrio longicornis of Pallas.

ANGUSTATA, in conchology, a species of lepas. Also a species of cypraea.

ANGUSTATUS, in entomology, a species of curculio, sometimes found in England. Also a species of cryptocephalus according to Gmelin, the cistella of Fabricius; a native of England Also a species of carabus, a native of Germany Also a species of cimex.

ANH

ANGUSTICLAVIA; from angnstus, narrow, or small, and clavus, a stud; in Roman antiquity, a tunica embroidered with small purple studs. It was worn by the Roman knights, as the lati- clavia was by the senators.

ANGUSTURA CORTEX, a species of bark which comes from the Spanish main, and is a very powerful bitter. It is imported here in convex pieces, about an inch and a half in breadth, and about six inches long. It is hard and compact, of a yellowish-brown colour, and covered with a whitish uneven epidermis. In powder it has the yellow appearance of rhubarb ; its taste is bitter and aromatic, and its odour, when recent, is said to be not ungrateful.

ANGUSTUS, in entomology, a species of cimex, a native of China.

ANGUSTUS, in conchology, a species of murex.

ANHALDIN,or ANHALDINA, an epithet given to various medicines, formerly kept as secrets in the family of Anhalt.

ANHALT, or AN HOLT, an island of Denmark, in North Jutland, lying in the Categat, eight miles from the coast of Jutland, and ten from Zetland. The coast is dangerous for seamen, for which reason there is a light-house erected on it. The English took possession of it in 1810, aniJ made it a place of rendezvous for the North Sea squadron. They were attacked by three divisions of Danes, with gun-boats ; but the Danes were repulsed with the loss of two divisions and several gun-boats.

ANHALT, a principality of Germany, in the circle of upper Saxony. It is a long narrow tract, situated for the most part betwixt the rivers Elbe and Saal, about sixty miles in length from east to west, but of unequal breadth, the greatest being on the east side, which is twenty- five miles, and other parts not exceeding nine. It is bounded on the south by Halberstadt, on the east by the duchy of Saxony, and on the north by the duchy of Magdeburg. It abounds in corn, and is watered by the Salde and Mulda ; its principal trade is in beer. Cattle and wood form the chief articles of export ; but the quan- tity of the manufactures is not proportioned to the size of the country. The religion, both of the inhabitants and of the reigning princes, is the Calvinist, but Lutherans are by no means un- common. The house of Anhalt, from whence the electors of Saxony and Bradenburg are said to derive their original, is a very ancient family. They deduce their origin from Berenthobaldus, who made war upon the Thuringians in the sixth century. Joachim Ernest, who died in 1586, left five sons who divided the principality among them, and thus gave rise to the five branches of the

family of Anhalt, viz. 1. Anhalt- Bernburg, 2. Anhalt-Coethen, 3. Anhalt-Dessau, 4. Anhalt-Schaumburg ; Anhalt-Zerbst is now entirely extinct. All these princes having chil- dren, and being of equal authority, they unanimously agreed to submit to the eldest of the iamily, which is Anhalt-Dessau, who has the supreme government. The inhabitants of these little independent sovereignties live in great affluence. These petty princes possess lands sufficient for their expenses, the revenues being reckoned about half a million of dollars. The

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tax on lands is 4 per cent., which, rating them at twenty years purchase, is not quite one shil- ling in the pound. Upon an emergency the subjects are able to raise half a million extraordi- nary. The towns in these little states are not so numerous in proportion to the extent of country as in Saxony, but better peopled.

ANHALTINA, in medicine, those medicines which promote perspiration ; also a cordial dis- tilled from aromatic ingredients.

ANHANG', v. To hang. See HANG. And right anon, the ministers of the toun, Han hent the carter, and so sore him pined, And eke the hosteler so sore engined, That they beknew hir wickednesse anon, And they were anhanged by the necke bon. Chaucer. The Nonnes Preestes Tale, vol. ii. p. 184.

' Do way,' said Guy, ' therof speake nought !

By him that all this world hath wrought,

I had liever thou were anhong !

Ac thou hast armes great plente ;

I wis thou must lend me

One of thine axes strong.'

Ellis. Romance!, vol. ii. p. 84. ANHELATIO, or ANHELITUS, among physicians, a panting, or shortness of breath.

ANHIMA, in ornithology, a Brasilian bird somewhat resembling the crane. On its head is a long single horn inserted a little above the origin of the beak, and standing forwards, a little bent downwards. This is of two or three fingers breadth long, and is slender and round, of a bony substance, and fine white colour ; and on the front of each wing it has two other such

trowing from the substance of the bone. It is >und about waters, and is a very voracious bird, but feeds only on vegetables. It is longer than a swan ; and is of a mixed colour of black, gray, and white, with a little yellow in some places. They are always seen male and female together; • and the male is twice as large as the female, which is here described, and is larger than our swan. It makes a very loud noise, often repeat- ing the notes, vyhu, vyhu. It is the palamedia cornula of Linnaeus.

ANHINGA, in ornithology, an elegant Bra- silian water-fowl, about the size of the common duck. Its beak is straight and sharp ; its head is small, and its neck slender and long ; its legs are short, and its toes connected by a membrane, as in the cormorant and duck kind ; its wings, when folded, reach not more than half the length of the tail ; its head and neck are yellowish, and covered with extremely soft velvet-like feathers ; its breast, belly, and thighs, are of a silvery white; the upper part of its back is brown spotted with yellow, and the rest all black ; it is common on the Brasilian shores, and feeds on fish. It is a species of the plotus.

ANHLOTE, in law, a term used to express, that every one should pay, according to the cus- tom of the country, his part and share, as scot and lot, &c.

ANHUBA, in botany, the sassafras tree.

ANHYDRITE, in mineralogy, anhydrous gypsum. The varieties of it are six: 1. Com- pact : the colours are white, blue, and red. 2. Granular or scaly ; colours blue, of a pearly lustre. Both these are found in salt-mines, in

Europe. 3. Fibrous; colour nearly white. 4. Radiated ; blue, spotted with red. 5. Sparry, or cube spar; milk white, found in Switzerland. 6. Siliciferous, or vulpanite ; bluish or whitish

gray.

ANHYDROS, in botany, a name given by the ancient Greeks and Romans to one of those kinds of strychna, or night-shade, which, when taken internally, caused madness.

ANI, in ornithology, the name of a Brasilian bird, somewhat allied to the paraquet kind. It is about the size of a thrush, and is all over black. It is

very common in the woods, but is not eaten. This is a species of crotophagi.

ANIAN, a barren sandy desert lying on the east coast of Africa, containing but very few inhabitants except wandering Arabs.

ANIANE, a town of France, in the depart- ment of Herault, arrondissement of Montpelier, at the foot of the mountains, near the river Arre.

ANIBA, in botany, the cedrota of Linnaeus.

ANICETON, in medicine, a plaster described by Galen. Also an epithet for the anisum and anethum.

ANICETUS, a Syrian who succeeded pope Pius I. A. D. 156, in the reign of the emperor Antoninus, according to the chronicle of Alexan- dria. According to Eusebius he died A. D. 167, having governed the church for eleven years.

ANK'irS, the first Roman senator who em- braced the Christian faith.

ANK ' 1 1 (! Vter), an ingenious mathematician, born at (Jherperzutr, near Inspruck, in 1723. He made an elegant pair of globes for the university of Inspruck, and constructed different mathema- tical instruments, lie also drew maps and charts with the greatest accuracy and neatness. He died in 1766, and the empress queen,- as a a testimony of regard to his merit, settled a pension of fifty florins a year on his sister.

ANICIIIN1 (Lewis), a celebrated seal en- graver, a native of Ferrara in Italy, whose me- dal of the interview between Alexander the Great and the High Priest at Jerusalem, was SO exquisitely engraved, that Michael Angelo de- clared that the art was arrived at the height of perfection.

ANIC1A, the surname of 1'roba Falconia, the wife of Amet'tus, and the mother of the consuls Olibrius and 1'robus. From different parts of the verses of Virgil, collected into cantos, she composed a life of Christ, which has been much admired tor its mjr-mnlv.

ANK I i,.\, in coneholony, ihe conus mona- chus of i.mir.riis.

ANK I I.I S, in entomology, a species of can- cer, the largest of the family of parasitici.

AYJIl.NT, r. > ,. » . . / . I i. iniiuiittr, to annihilate.

That \ikked lirhe. and wilfulliche, wolde mercy an,/e,,te. 77,, 'ixi,,,, ,,f Pier's Pluiihnmn.

ANK.IIT'. Onniuht. In the night. A-; Kdn, ond sat m\d \s ost «7

And p. k, of (i_,'s l.;it;i\le, lion \< t invite he <;dd : Au olde kny^i y,T ! •.)•; vp, liy wore liys folc stodc.

A'. (fl,»umitter, p. 305.

AN1

H>! mot one of two thynges chese, Where he woll haue hir suche on night, Or els vpon dales light. For he shall not hauc both two.

Gower. Con. A. b. i.

Sir Toby, you must come in earlier aniyhts ; my lady takes great exceptions at your ill hours.

Shahspeare.

ANIGOZANTHUS, in botany ; from avoiyw, to expand or be apparent, and avOog, a flower. Order monogynia, class hexandria. Its gene- ric characters are : CAL. none : COR. monopeta- lous : STAM. filaments six awl-shaped ; anthers li- near oblong : FIST. germ, inferior, oval : STYLE, thread-shaped ascending, on a level with the stamina, deciduous : STIGMA, undivided, tumid : PERIC. capsule nearly spherical, of three cells and three valves, crowned with the permanent corolla, bursting at the summit : SEERS nume- rous, angular, and inserted into the inner angle of each cell. The species are two, viz. 1. A. rufa, red anigozanthus. 2. A. flavida, russet- green anigozanthus. Both these are natives of New Holland.

ANIL, in botany, the indigbfera tinctoria of Linnaeus.

AN'ILITY, n. Lat. anus, an old person. So called from length of years ; old age ; dotage.

Since the day in which this formation was begun, by how many strange and critical turns has it been perfected and handed down, if not ' entirely without spot or wrinkle/ at least without great blotches or marks of anility. Sterne's Sermons.

ANJEDIVA. See ANGEDIVA. ANJENGO, a small town and factory, with a fort, on the coast of Travancore, in the penin- sula on this side the Ganges, belonging to the East India Company. The fort is small, but neat and strong. At the close of the seventeenth century (1694), the English East India Com- pany obtained leave of the queen of Attenja to fortify this spot (enclosed by a deep and broad natural stream) for the protection of their

pepper and cardamonis trade with the rajah of Travan- core. The works have been since kept in good condition. Not far from the town is Attenja, the residence of the queen of Travancore, a title which is taken by the king's eldest sister. Good cables are made here of the Laccadive cocoa nut. This settlement supplies our East India Com- pany with pepper and calicoes ; and its situation is also very convenient, for giving proper intelli- gence to our ships touching here from Europe, or India. Long. 76° 51′ E., lat. 8° 29′ N.

ANJIRIC, a considerable village on the Java shores of the Straits of Sunda, where ships may be supplied with every kind of refreshment, but they seldom touch here, as the calms which frequently occur would occasion delay. At this place Colonel Cathcart is interred, who died on his way to China as ambassador in 1785.

ANIMA, among divines, the soul, or princi- ple of life, in animals. See SOUL.

AN i MA, in music, with life and spirit, a degree of movement similar to vivace, being a medium between allegro and largo.

AN i MA, in chemistry, is applied to bodies ex- alted by solution and extraction to a high degree of power. In this sense we meet with aninia aloes, anima saturni, anima veneris, &c.

ANIMALS.

ANIMA HEPATIS, sal martis.

AJ.IMA MUNDT, in philosophy, the soul of the world or universe, a certain pure etherial sub- stance or spirit, which was said by some ancient philosophers to be diffused throughout all nature, and to operate in the uniting, organizing, and sustaining its various parts. Plato treats at large of the, ij/vxn TU Koapov, in hiaTimseus; and even is supposed to be the author of the dogma ; but whether Plato derived it originally from the Egyptians, or more directly, according to the opinion of Gale, from higher and purer sources, is very doubtful. It also pervaded the systems of the earlier Indian sages, of Pythagoras, the Pe- ripatetics, and the Stoics. Of this soul or foun- tain of spiritual existence, the souls of men, in particular, were held to be an emanation, subject to various transmigrations and purifications; after which it should return to its original foun- tain or spring-head. See the article PLATO.

AMMA SATURNI, a white powder obtained by pouring distilled vinegar on litharge, of conside- rable use in enamelling.

ANIMADVERT,

ANIMADVER'TOE, AXIMADVER'SAL, AXIMADVER'SION, AMMADVER'SIVE.

ment or opinion and

censure.

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Animadverto, ani- mus, adverto. To turn the mind to ; to direct the attention to, in order to form a judg- generally ; to pronounce

He dismissed their commissioners with severe and sharp animadcertiom. Clarendon.

J wish, Sir, you would do us the favour to animad- vert frequently upon the false taste the town is in with relation to the plays as well as operas. Steele.

These things fall under a province you have partly pursued already, and therefore demands your animad- versions for the regulating so noble an entertainment as that of the stage. Steele.

I should not unidmad~ert on him, who was a pain- ful observer of the decorum of the stage, if he had not used extreme severity in his judgment of the incom- parable Shakspeare. Dryden.

When a bill is debating in parliament, it is usual to have the controversy handled by pamphlets on both sides ; without the least animadversion upon the authors. Swift.

ANIMALS.

ANIMAL, n.&cadj. "1 Lat. animus ; Gr.

ANIMAL'XTY, I avefiof, spirit; to give

AS'IMAST, life, breath, or spirit,

AS'IMATE, v. & adj. }>both literally and me-

body of animals, but is composed of men only and not of horses. Ibid,

-What is this world ?

AXIMA'TED,

AXIMA'TION,

ANIMA'TOR.

I taphorically ; to im- I part animation and J vigour.

And as Job setteth the resurreccion ayenste the sorrows and pains of death, so dothe Daniel here for our consolacion sette it ayenste our persecucion whiche did so animate the faithfull in tymes paste, that thei refused the delyuerance from death of bodye for that lyfe and resurreccion to come.

The Expoticion of Daniel, by Joye, p. 231.

Kynge Edwarde beeyng nothyng abasshed of thys email chaunce, sente good woordes to the Earle of Pembroke, animatynge and bydynge hym to be of a good courage. Hall. Edward iii. f. 201.

The British have a lively animated aspect. Steele.

Some would be apt to say he is a conjurer ; for he Lag found that a republic is not made up of every

What but a spacious burial-field unwall'd, Strewed with death's spoils — the spoils of animals, Savage and tame, and full of dead men's bones.

Blair.

A friend of mine, who is profoundly skilled in the theory of music, well acquainted with the animal economy, and singularly accurate in his inquiries into nature, assures me, that he has been once and again wrought into a feverish fit by the tones of an .ffiolian harp. Beattie.

Can storied urn or animated bust, Back to its mansion call the fleeting breath ? Can honour's voice provoke the silent dust, Or flattery sooth the dull cold ear of death ?

Gray,

The celebrated Mr. Ray gives the two follow- ing tables of animals :

ANIMALS are either

Sanguinous,

that is, such as have blood ; which breathe, either by

Or

Exsanguinous, that is, without blcod; which may be divided into

Lv

having f Two1′ in the andth

f

“gs, j either

A,

Or

Gills as all sanguinous fishes, except the whale kind.

Greater, and and those either

Lesser, as insects of all sorts, ei- ther

A.

Ventricles Or ir heart, ose either

v

•\ But one Ven- tricle in their heart as frogs, tortoises, and serpents.

Naked, Or

i

covered with a tegument.

Terrestrial, as naked snails.

Aquatic, as the poulp, cuttle- fish, &c. f

Crustaceous, Or Tes1 as lobsters ei and crab- fish.

.aceous ther

. T.,,-K;

Viviparous, Or

Oviparous,

f

f.

Aquatic, Terrestrial,

as the as Quadru-

whale peds. kind.

as limpets, as oys- nate, a ters, periwin- muscles, kles, cockles. snaib,&c

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ANIMALS.

Viviparous hairy ANIMALS, or Quadrupeds, are either.

Hoofed, which are either

Or

Whole-footed, or hoofed, as the horse and ass;

Or

Cloven-footed, having the hoof divided into either.

Two principal parts, called bisulca, either

A

Or

Such as chew not the cud, as swine ;

Or Ruminant, i. e. such as chew the cud; divided into

Clawed or digitate, having the foot di- vided into either

Two parts or toes, Or Many toes haring two nails, or claws ;

as the camel kind ; either

Four parts, or Quadris- ulca, as the hippopota- mus.

Beef kind, Sheep kind, & Goat kind, ous horns, as

the deer kind.

Undivided as the ele- phant ;

Or

Divided ; which have either

Broad nails, and a human shape, as apes;

Such as have perpetual And Such as have

and hollow horns ; as the solid, branch-

- *v ed & decidu-*

Or

Narrower, and more pointed nails.

In respect of their teeth, they ate divided into

Such as have many foreteeth, or cutters in each jaw, viz.

And

The greater, which have either

A

And

The lesser, the ver- mine or weasel kind.

A shorter snout Or &: rounder head, as the cat kind ;

A longer snout, as the dog kind.

THE ANIMAL KINGDOM, Animate Regnum, of Linnsus, is one of the three principal divisions of organised nature, consisting of classes, orders, genera, and species. Animals were by him di- vided into six classes, namely, Mammalia, or such as suckle their young, mostly quadrupeds— Aves, birds, which are oviparous — Amphibia, amphibious creatures, living either on land or in the water — Pisces, fishes, which live only in the water, arid are covered with scales — Insecta, insects, which have few or no organs of sense, and a bony coat of mail — Vermes, worms, which have mostly no

feet.

THE FIRST CLASS, OR MAMMALIA,

Consist of seven orders : namely, the Primates, liruta, Feric, ("Hires, Pecora, Belluinre, and Cetie.

The first order, or Primates, is divided into four genera: namely, Homo, the man. Simia, the ape, the baboon, and the monkey. Lemur, the lemur. Vespei-tilio, the bat.

The second order, or Bruta, comprehends the following genera : namely, Bradypus, the sloth. Myrmecophaga, the ant-eater. Dasypsus, the armadillo. Rhinoceros, the rhinoceros. Soko- tyro. F.lephas, the elephant. Trichechus, the morse, walrus. IManis.

The third order, or Fenn, lias ten genera: namely, 1'hoca, the seal. Canis, the dog, the

Such as have Only two large and re- markable foreteeth, all which are phytivorous, and are called the hare kind.

wolf, the fox, and the hyaena. Felis, the lion, the tiger, the leopard, the tiger-cat, the lynx, and the cat. Viverra, the weasel, the shunk, the civet, the genet, and the fitchet. Mustela, the otter, the marten, the ferret, the polecat, the er- mine, and the stoat. Ursus, the bear, the badger, the racoon, and the glutton. Didalphis, the opussum, marmose, phalanger, and the kan- garoo. Talpa, the mole. Sorex, the shrew. Erinaceus, the hedge-hog.

The fourth order, or Glires, has the following genera, namely : Histrix, the porcupine. Cavia the cavy. Castor, the beaver. Mus, the rat, the musk-rat, and the mouse. Arctomys, the marmot. Sciurus, the squirrel. Myoxus, the dormouse. Dipus, the jerboa. Lepas, the hare and the rabbit. Hyrax.

The fifth order, or Pecora, has the following genera, namely, Camelus, the camel, the lama. Moschus, the musk. Cervus, the stag, the deer the moose, or elk. Camelopardalis, the cameleo pard or giraffe. Antilopus, the antelope. Capra, the goat. Ovis, the sheep. Bos, the ox.

The sixth order, or Belluinae, has the follow- ing genera : namely, Equus, the horse, the ass, and the mule. Hippopotamus, the river-horse. Tapir, the tapir. Sus, the hog.

The seventh order, or Cetae, has the following genera : namely, Monodon, the monodon. Pa- laena, the whale. Physeter the cachelot. Del-

phinus, the porpoise, the dolphin, and the grampus.

THE SECOND CLASS, OB AYES,

Birds, is divided into six orders, namely : Accipi tres, Picae, Anseres, Grallae, Gallinae, Passeres. The first order, or Accipitres, has four ge- nera: namely, Vultur, the vulture and the condur. Falco, the eagle, the kite, the buzzard, the falcon, and the hawk. Strix, the owl. Lanius, the shrike, the butcher-bird, and the woodchat.

The second order, or Picae, has the following genera : namely, Ramphastos, the toucan. Mo- motus, the motmot. Psittacus, the parrot, the maccaw, the parroquet, the cockatoo, and the lory. Scythrops. Buceros, the horn-bill. Cro- tophaga, the ani. Glaucopis, the wattle-bird. Corvus, the crow, the rook, the raven, the jack- daw, and the jay. Coracias, the roller. Oriolus, the oriole. Gracula, the grackle. Paradisea, the bird of Paradise. Bucco, the barbet. Tro- gon, the curucui. Cuculus, the cuckoo. Yunx, the wryneck. Picus, the woodpecker. Sutta, the nuthatch. Todus, the toddy. Alcedo, the kingfisher. Galbula, the jacama. Merops, the bee-eater. Upupa, the hoop or hoopo. Certhia, the creeper. Trochilus, the humming- bird. Buphuga.

The third order, or Anseres, has the follow- ing genera : namely, Anas, the swan, the goose, the duck, the shoveller, and the teal. Mergus, the merganser, the goosander, the dunn-diver, and the smew. Alca, the auk or razor-bill. Aptenodytes, the penguin. Procellaria, the pe- trel. Diomedea, the albatross, or man-of-war bird. Pelicanus, the pelican, the corvorant, the shag, the crane, the gannet, and the booby. Plotus, the darter. Phaeton, the Tropic bird. Colymbus, the guillemot, the diver, and the grebe. Larus, the gull, and the tarrock or kittiwake. Sterna, the tern. Rynchops, the skimmer.

The fourth order, or Grallae, has the follow- ing genera : namely, Phcenicopteros,the flamingo, Platalea,the spoon-bill. Palamedea,the screamer. Mycteria, the jabiru. Cancroma, the boat-bill. Scopus, the umbre. Ardea, the heron, the crane, the stork, and the bittern. Tantalus, the ibis. Corrira, the courier. Scolopax, the curlew, the whintrel, the snipe, the woodcock, the godwit, and the red- shank. Tringa, the sandpiper, the phalarope, and the purre. Charadrius, the plover and the dotterel. Recurvirostra, the avocet. Hcematopus, the sea-pie or pied oyster, and the catcher. Glareola, the pratincole. Fulica, the gallinule, the moor-hen, and the coot. Vaginalis, the sheath-bill. Parra, the jacana. Rallus, the rail, the

crake or sand-rail, the brook-ouzel or water-rail, and the soree. Psophia, the trum- peter.

The fifth order, or Gallinae, has the following genera : namely ,'!Otis, the bustard. Struthio, the ostrich, and the cassowary or emu.' Didus, the flodo. Pavo, the peacock. Meleagris, the tur- key. Penelope, the guam and the yacou. Crax, the curassow. Phasianus, the pheasant. Nu- midia, the pintado or Guinea-hen. Tetrao, the grous, the moorcock, the partridge, the quail, and the tinamou,

The sixth order, or Passeres, has the following genera : namely, Columba, the pigeon, the ring- dove, the turtle-dove, &c. Alauda, the lark. Sturnus, the stare or starling, and the crake or water-ouzel. Turdus, the thrush, the field-fare, the blackbird, and the ring-ouzel. Ampelis, the chatterer. Colius, the coly. Loxia, the gross- beak, the crossbill, and the haw-finch. Em- beriza, the bunting. Tanagra, the tanajer. Fringilla, the finch, the chaffinch, the siskin, the redpole, the linnet, the twite, and the sparrow. Phytotoma, the phytotoma. Muscicapa, the fly-catcher. Motacilla, the wagtail or warbler, the nightingale, the hedge-sparrow, the wren, the white-throat, the wheat-ear, and the red-start. Pipra, the minnakin. Parus, the titmouse. Hirundo, the swallow and the swift. Capri- mulgus, the goatsucker.

THE THIRD CLASS, OR AMPHIBIA,

Amphibious animals, is divided into two or- ders : namely, Reptilia, reptiles, and serpentes, serpents.

The first order, or Reptilia, reptiles, compre- hends the following genera : namely, Testudo, the tortoise and the turtle. Rana, the toad, the frog, and the natter-jack. Draco, the flying-dra- gon. Lacerta, the crocodile, the alligator, the lizard, the guana, the newt, the salamander, the chameleon, the eft. Siren.

The second order or Serpentes, serpents, has the following genera: namely, Crotalus, the rattle- snake. Boa. Coluber, the viper and the asp. Anguis, the snake and the blind-worm. Am- phisbo3na. Ccecilia. Achrocordus, the waited snake.

THE FOURTH CLASS, OR PISCES,

Fishes, into six orders: namely, apodal, jugular' thoracic, abdominal, branchiostegous, chondro- pterigious.

The first order, or Apodal, has the following genera : namely, Mursena, the eel. Gymnotus. Trichiuris. Anarhicas, the wolf-fish. Am- modytes, the launce. Stromateus. Xiphias, the sword-fish. Sternopfyx. Leptocephalus, the

morris. Stylephorus. Ophidium. Gym- nothorax.

The second order, or Jugula has the following genera : namely, Callionymus, the dragonet. Uranoscopus. Trachinus, the sting-bull or weaver. Gadus, the cod-fish, the bib, the whiting, the coal-fish, the hake, the barbot, and the rock- ling. Blennius, the blenny. Kurtus.

The third order, or Thoracic, has the following genera, namely : Cepola. Echineis, the suck- ing-fish. Coryphoena. Gobius, the goby. Cot- tus, the bull-head, the father lasher, and the miller's thumb. Scorprena. Zeus, the John Doree. Pleuronectes, the hollibut, the flounder, the plaise, the dab, the sole, the smear dab, the pearl, and the turbot. Chaetodon. Sparus, the gilthead, the pudding-fish. Scarus. Labrus, the wrasse, the goldfinny, the camber, and the cook. Sckena. Perca, the perch, the basse, the luffe, the black fish, and the squirrel-fish. Trachych- thys. Gasterosteus, the stickleback. Scomber, the mackerel, the thunny, the scad, and the yel- low-tail. Centrogater. Mullus, the surmullet.

Trigla, the gurnard, the piper, and the tub-fish. Lonchiurus.

The fourth order, or Abdominal, the following genera : namely, Cobitis, the loche and the mud- fish. Amia. Silurus. Teuthis. Salmo, the salmon, the trout, the salmon-trout or bull-trout, charr, the smelt, the gurniad, and the lavaret. Fistularia, tlie tobacco-pipe-fish. Esox, the pike and the garfish. Elops. Argentina, the argen- tine. Atherina, the atherine or silver-fish. Mugil, the mullet. Excocoetus, the flying-fish. Polynemus. Clupea, the herring, the pilchard, the sprat, the shad, and the anchovy. Cyprinus, the carp, the barbel, the gudgqon, the tench, the crucian, the gold-fish, the dace, the roach, the finscale or rud, the red eye, the bleak, the brear, the minnow, and the graining. Loncaria.

The fifth order, or Branchiostegous, the fol- lowing genera : namely, Mormyrus. Ostracion. Tetrodor, the sun-fish. Diodon. Singnathus, the pipe-fish and the needle-fish. Pegasus. Centriscus. Balistes. Cyclopterus, the sucker. Lophius, the fishing-frog, and the angler or frog- fish.

The sixth order, or Chondropterigious has the following genera : namely, Acipenser, the stur- geon. Chimccra, the sea-monster. Squalus,the shark, the dog-fish, the tope, the sea-fox, and the angel-fish. Pristis, the saw-fish. Raia, the ray, the skate, the thornback. Petromyzon, the lam- prcy, and the pride. Oastrobranchus, the hag or hag-fish.

THE FIFTH CLASS, OR INSECTA,

Insects, i? divided into seven orders: namely, C'oleoptera, hemiptera, lepidoptera, neuroptera, hymenoptera, diptera, and aptera.

The first order, or Coleoptera, contains the fol- lowing genera : namely, Scarabaeus, the beetle. l.ucamis. Dermestes, the leather-eater. Syno- dendron. Hostriehus. Melyris. Ptmus, the death-watch. Hister. (lyrinus, the water-flea. Uyrrhus. Anthrenns. Sil[)ha, the carrion bee- tle. Mitidula. Opatnun. Titroma. Tetra- toiuu. ('assida. ('oc(;inella. Chrysomela. Cry- ptocephalus. Hispa. IJruelius. Pausus. Zy- gia. Xonitis. Apalus. P>rentus. Curculio. Hlimomacer. Attelabus. Notoxus. Cerambyx. Calopus. heptnra. Necydalis. Lampyris, thi! fire-fly, Ilos-ia. Cucujus. Cantharis. Ser- rupalpus. Klaii:r. Cucindela. Bupestris. Hy- drophilus, ihe. water-clock. Dytiseus. Carabus. Tern-lino. Pimeiia. l.ytta. Aleloe. Mordella. Staphylinus. 1'orticula, the ear-wig. Erodius. Manticoia. Alurnus.

'I hi- M-eoiiil order, or Hemiptera, lias the follow- ing uenera : namely, I ilatta, the cockroach. Pneu- niori. Mantis. (ir\llus, the locust, the grass- hopper, and the (. ricket. l"ulironi, the lanthorn- ih. Cicada, \otoiiect.i, the hoat-rly. Nepa, '.he \ater-scorjnnii. (.'iinex, the bug. Macro- 'ephalus. Aphis the plant-louse. Chcrmes. < OCCIL>, the cm iiMie.u. Thnps.

The t!nrd order, or Lepidoptera, the following .••ncra: n;):ml\, I'apilio, the butterfly. Sphinx,

oiiriti order, or .Nemopleni, the following

MI i.i it.iine.ly, I il.iellui.i, the draffou-rly. Ephe-

mera, the day-41y. Phryganea. Hemerobius Myrmeleon, the lion-ant. Panorpa. Ilaphidia-

The fifth order, or Hymenoptera, has the fol lowing genera : namely, Cynips, the gall-fly Tenthredo, the saw-fly. Sirex, the tailed wasp Ichneumon, the ichneumon. Sphex. Ammo phila. Scolia. Thynnus. Lucopsis. Tiphia. Chalcis. Chrysis, the golden fly. Vespa, the wasp. Apis, the Bee. Formica, the Ant or Emmet. Mutilla.

The sixth order, or Diptera, has the following genera : namely, CEstrus, the gad-fly and the breeze. Tipula, the crane-fly. Diopsis. Mus^ ca, the fly. Tabanus. Culex, the gnat. Em- pis. Stomoxys. Conops. Asilus. Bombylius, the humble-bee. Hippobosca.

The seventh order, or Aptera, the following genera : namely, Lepisma. Podura, the spring- tail. Termes, the white ant. Pediculus, the louse and

crab-louse. Acarus, the tick, the harvest-bug, and the itch-mite. Phalangium. Aranea, the Spider. Scorpio, the scorpion. Cancer, the crab, the lobster, the prawn, the shrimp, and the squill. Monoculus. Oniscus. Scolopendra. Julus. Pulex, the flea. Hy- drachna.

THE SIXTH CLASS, OR VERMES,

is divided into five orders : namely, Intestina, Mollusca, Testacea, Zoophyta, and Infusoria.

The first order, or Intestina, has the following genera : namely, Ascaris. Trichocephalus. Fi- laria. Scolex. Ligula. Strongylus. Echino- rynchus. Cucullanus. Caryophyllaeus. Lin- guatula. Fasciola, the gourd-worm or fluke. Taenia, the tape-worm. Furia. Godius, the hair-worm. Lumbricus, the earth-worm, the dew-worm, and the lug. Planaria. Sipunculus, the tube-worm. Hirudo, the leech. Uncinaria. Haenica.

The second order, or Mollusca, has the following genera : namely, Limax, the slug or snail. On- chidium. Laplisia, the sea-hare. Doris, the sea-lemon. Aphrodita, Spio. Amphitrite. Terebella. Nereis. Nais. Ascidia. Salpa. Dagysa. Clava. Actinia, the sea-daisy, the sea-marigold, and the sea-carnation. Mammaria. Pedicillaria. Tethys. Plerotrachea. Derris. Holothuria. Lobaria. Triton. Lernaea. Scyl- Isea. Clio. Sepia, the cuttle-fish. Lucernaria. Medusa, the sea-nettle. Physsophora. Asterias, the star-fish and the sea-star. Echinus, the sea- urchin.

The third order, or Testacea, Shells, the fol- lowing genera : namely, Chiton. Lepas, the acorn-shell. Phloas. Mya. Solen, the razor- sheath. Tellina. Cardium, the cockle. Mac- tra. Donax. Venus. Spondylus. Chama. Area, the ark. Ostrea, the oyster. Anomia. Mytilus, the mussel. Pinna. Argonauta. Nau- tilus. Conus, the cone. Cypraea, the cowrie or gourie. Bulla. Voluta, the mitre or volute. Buccinum, the whelk. Strombus. Murex. Trochus. Turbo, the wreath. Helix, the snail. Nerita, the nerite. Haliotis, the sea-ear. Par- tclla, the limpet. Dentalium, the tooth-shell. Serpula. Teredo. Sabella,

The fourth order, or Znophytu, lias the following genera: namely, Tubipora, tlic tubipore. Ma-

drcpora, the madripore. Millepora, the Mille- pore. Cellepora, the cellepore. Isis, the coral. Antipathes. Gorgonia, the red coral. Alcy- onium. Spongia, the sponge. Flustra, the hornwrack. Tubularia. Corallina, the coral- line.

Sertularia. Pennatula, the sea-pen. Hy- dra, the Polype.

The fifth order, or Infusoria, the following genera: namely, Branchionus. Vorticella. Tri- choda. Cercaria. Bursaria. Gonium. Col- poda. Paramecium. Cyclidium. Vibrio. Ba- cillaria. Enchelis. Volvox. Monas. Leuco- pera.

ANIMAL FLOWER, in zoology, a name given to several species of animals belonging to the genus Actinia of Linnaeus. They have like- wise been distinguished by the names of urtica marina, or sea-nettle, from their supposed pro- perty of stinging ; and sea-anemone, from their claws or tentacles being disposed in regu- lar circles, and tinged with a variety of bright lively colours, resembling the petals of some of our most beautiful flowers : as to one species particularly, mentioned by Abbe Dicquemarre, in the Philosophical Transactions for 1737, Art. 37, the purest white, carmine, and ultramarine are said to be scarcely sufficient to express their brilliancy. The bodies of some of them are he- mispherical, of others cylindrical, and of others shaped like a fig. Their substance likewise dif- fers ; some are stiff and gelatinous, others fleshy and muscular; but all of them are capable of altering their figure when they extend their oodies and claws in search of food. They are found in many of the rocky coasts of the West India Islands, and likewise on some parts of the coast of England. They have only one opening, which is in the centre of the uppermost part of the animal ; round this are placed rows of fleshy claws ; this opening is the mouth of the animal, and is capable of great extension. The animals themselves, though exceedingly voracious, will bear long fasting. They may be preserved alive a whole year, or perhaps longer, in a vessel of sea-water, without any visible food ; but when food is presented one of them will successively devour two muscles in their shells, or even swallow a whole crab as large as a hen's egg. In a day or two the crab-shell is voided at the mouth, perfectly cleared of all the meat. The muscle shells are likewise discharged whole, with the two shells joined together, but entirely empty, so that not the least particle of fish is to be per ceived on opening them. An auemone of one species will even swallow an individual of another species ; but after retaining it ten or twelve hours will throw it up alive and unin- jured. Through this opening also it produces its young ones alive, already furnished with little claws, which, as soon as they fix themselves, they begin to extend in search of food. One of the extremities of the sea-anemone resembles the outward leaves of that flower; while its limbs are not unlike the shag or inner part of it. By the other extremity it fixes itself, as by a sucker, to the rocks or stones lying in the sand ; but it is not totally deprived of the power of progres- sive motion as it can shift its situation, though rery slowly.

In Hughes's Natural History of Barbadoes is an account of a Remarkable

species. ‘ In the middle of the basin [of a cave] there is a fixed stone or rock which is always under water. Round its sides, at different depths, seldom ex- ceeding eighteen inches, are seen at all times of the year issuing out of little holes certain sub- stances that have the appearance of fine radiated flowers, of a pale yellow or a bright straw-colour, slightly tinged with green, having a circular border of thick set petals, about the size of, and much resembling, those of a single garden mari- gold, except that the whole of this seeming flower is narrower at the discus, or setting on of the leaves, than any flower of that kind. I have attempted to pluck one of these from the rock, to which they are always fixed, but never could effect it ; for, as soon as my fingers came within two or three inches of it, it would immediately contract close together its yellow border and shrink back into the hole of the rock ; but if left undisturbed for about four minutes it would come gradually in sight, expanding, though at first very cautiously, its seeming leaves, till at last it appeared in its former bloom. However it would again recoil with a surprising quickness when my hand came within a small distance of it. Having tried the same experiment by at- tempting to touch it with my cane and a small slender rod the effect was the same. Though I could not by any means contrive to take or pluck from the rock one of these animals entire, yet I once cut off (with a knife which I had held for a long time out of sight, near the mouth of a hole out of which one of these animals ap- peared) tw,o of these seeming leaves. These, when out of the water, retained their shape and colour; but being composed of a membrane- like substance, surprisingly thin, it soon shrivelled up and decayed.

In the Philosophical Transactions, vol. Ivii. is a letter by Mr. Ellis to the late lord Hills- borough, describing another species. ‘ This compound animal, which is of a tender flesh) substance, consists of many tubular bodies, swelling gently towards the upper part, and end- ing like a bulb or very small onion ; on the top of each is its mouth, surrounded by one or two rows of tentacles or claws, which when contracted look like circles of beads. The lower part of all these bodies have a communication with a firm, fleshy, wrinkled, tube, which sticks fast to the rocks and sends forth other fleshy tubes which creep along them in various directions. These are full of different sizes of these remarkable animals, which rise up irregularly in groups near to one another. This adhering tube, that secures them fast to the rock or shelly bottom, is worthy of our notice. The knobs that we ob- serve, are formed in several parts of it by its in- sinuating itself into the inequalities of the coral- rock or by grasping pieces of shells, parts of which still remain in it with the fleshy substance grown over them. This shows us the instinct of nature, that directs these animals to preserve themselves from the violence of the waves, not unlike the anchoring of muscles, by their fine silken filaments that end in suckers ; or rather like the shelly basis

of the serpula, or worn shell,

the tree-oyster, and the slipper-barnacle, &c. whose bases conform to the shape of whatever substance they h'x themselves too, grasping it fast with their testaceous claws to withstand the fury of a storm. When we view the inside of this animal dissected lengthwise, we find like a little tube leading from the mouth to the sto- mach, from whence rise eight wrinkled small guts, in a circular order, with a yellowish soft substance in them ; these bend over in the form of arches towards the lower part of the bulb, from whence they may be traced downwards to. the narrow part of the upright tube till they come to the fleshy adhering tube, where some of them may be perceived entering into a papilla, or the beginning of an animal of the like kind, most probably to convey it nourishment till it is pro- vided with claws : the remaining part of these slender guts are continued on in the fleshy tube, without doubt for the same purpose of producing and supporting more young ones from the same common parent. The many longitudinal fibres that we discover lying parallel to each other on the inside of the semi-transparent skin, are all in- serted in the several claws round the animal's mouth, and are plainly the tendons of the mus- cles for moving; and directing the claws at the will of the animal : these may be likewise traced down to the adhering tube. As this specimen has been preserved in spirits, the colour of the animal when living cannot be certainly known ; it is at present of a pale yellowish brown. With regard to its name, it may be called actinia so- ciata, or the cluster animal-flower.'

The Abbe Dicquemarro, by many curious though cruel experiments, related in the Philo- sophical Transactions for 1773, has shown, that these animals possess, in a most extraordinary degree, the power of reproduction; so that scarcely any thing more is necessary to produce as many sea anemonies as we please than to cut a single one into as many pieces. A sea anemone being cut in two by a section through the body, that part where the limbs and mouth are placed ate a piece of a muscle offered to it soon after the operation, and continued to feed and grow daily for tli roe months after. The food sometimes passed through the animal ; but was generally thrown up again, considerably changed, as in the perfect sea-anemone. In about two months two rows of limbs were perceived growing out of the part where the incision was made. On offering food to this new mouth, it was laid hold of and cat; and the limbs continually increasing, the animal gradually became as perfect as those which had never been cut. In some instances, however, he found, that when one of these creatuies was cut through, new limbs would be produced from the cut place, those at the mouth remaining

as before ; so that a monstrous animal was the consequence, having two mouths, and teed mi;- at both ends. Having put some of them into a pan of water sot over a slow fire, he found that they lost their lite at fifty degrees of Reaumur's thermometer. To avoid the impu- tation of cruelly in these experiments, the author argues the favourable consequences that have attended Ins operations on the sea-anemonies, '.viiich have been so fortunate as to fall into his

hands : as he hath not only multiplied their ex- istence, but also renewed their youth ; which last, he adds, ' is surely no small advantage.' The reproductive power of the Barbidoes animal flower is prodigious. Many people coming to see these strange creatures, and occasioning some inconvenience to a person through whose ground they were obliged to pass, he resolved to destroy the objects of their curiosity ; and, that he might do so effectually, caused all the holes out of which they appeared, to be carefully bored and drilled with an iron instrument, so that we cannot suppose but their bodies must have been entirely crushed to a pulp : neverthe- less, they again appeared in' a few weeks from the very same places.

ANIMAL STRENGTH. The strength of men and horses, is very frequently employed as a first mover of machinery, and hence the subject of animal power and its effects become a col- lateral branch of mechanics, which is very inte- resting and important. But animal strength being less uniform in its operation than weights or water as moving powers, is necessarily more difficult to estimate according to determinate laws ; yet even here a careful examination of the principal modes in which animals are employed, with a comparison of certain experiments made under various circumstances by different authors, will enable us to lay down some rules and prin- ciples important to engineers and other practi- cal men. Investigations purely analytical are of little use in such cases ; we select therefore a few of the best-conducted experiments that have been made with reference to this subject.

According to Desaguliers a man can raise water, or any other weight, about 550 Ibs. (or one hogshead, the weight of the vessel included) ten feet high in a minute; but this statement, although he says it will hold good for six hours, appears from his own facts to be too high, and is certainly such as could not be continued one day after another. Mr. Smeaton considers this work as the effort of haste or distress ; and re- ports that six good English labourers will be required to raise 21,141 solid feet of sea-water to the height of four feet in four hours; in which case the men would raise very little more than six cubic feet of fresh water each to the height of ten feet in a minute. Now the hogshead containing about 8^ cubic feet, Smeaton's allow- ance of work proves less than Desaguliers' in about the ratio of 6 to

8J. And his good En- glish labourers, who can work at this rate, are estimated by him to be equal to a double set of common workmen ; it appears, therefore, that with the probabilities of voluntary interruptions and other incidents, a man's work for several successive days ought not to be valued at more than half a hogshead raised ten feet high in a minute. Mr. Smeaton also states that two ordi- nary horses will do the above work in 3J- hours, which is at the rate of little more than 2J hogs- heads ten feet high in a minute ; so that if these statements can be depended upon, one horse will do the work of five men.

Emerson contends that a man of ordinary strength turning a roller by the handle, can act for a whole day against a resistance equal to 30 Ibs.

weight; and if he work ten hours per day, he will raise a weight of 30 Ibs. through 3^ feet in ;• second of time ; or, if the weight be greater, ne will raise it to a proportional less height ; so mat, under all circumstances, 30 x 3£ :=: 105, the momentum of his effort. If two men work at a windlass or roller they can more easily raise up 70 Ibs. than one man can 30 Ibs., provided the elbow of one of the handles be at right angles to that of the other. Men accustomed to bear loads, such as porters, will carry from 150 Ibs. to 200 Ibs. or 250 Ibs., according to their strength. A man cannot well draw more than 70 Ibs. or 80 Ibs. horizontally; and he can- not thrust with a greater force acting horizontally at the height of his shoulders than 27 Ibs. or 30 Ibs. But one of the most advantageous ways in which a man can exert his force is to sit and pull towards him, as in rowing.

That accurate experimental philosopher, M. Coulumb, in a memoir communicated to the French Institute, states that the quantity of ac- tion which a man can produce, when during a day he is employed in mounting a flight of steps without a burden, is double that which the same man could produce if loaded with a weight of 223 Ibs., continuing his exertions in both cases through the day. Hence it appears how much, with equal fatigue and time, the total or absolute effect may obtain different values, by varying the combination of effort and velocity. It will of course be observed by the reader that the term effect here denotes the total quantity of labour necessary to raise not only the burden but the man himself; the useful effect is very different, and it is this, as M. Coulumb observes, which it is most important to determine. For instance, we have seen that the total effect is the greatest when without a burden, but the useful effect is then nothing ; it is also nothing when the man is so loaded as not to be able to move ; and it is between these limits that the useful effect is a maximum; this we have

already de- termined analytically in the foregoing part of this article, but the above results of Coulumb will be found to change somewhat of the ultimate value ; the principle, however, remains, and other expe- riments are perhaps still necessary to arrive at a satisfactory conclusion. From an examination of the work of men walking on a horizontal path, with or without a load, the same author concludes that the greatest quantity of action takes place when the men are unloaded ; and it is to that of men loaded with 190 Ibs. nearly as seven to four. The weight which a man ought to carry to pro- duce the greatest useful effect, or that effect iu which the quantity of action relative to the carry- ing his own weight is deducted from the total effect, is 165 Ibs.

A particular case should be noticed which ob- tains with respect to burdens carried in towns ; where the men, after having carried their load, return home unloaded. The weight they ought to carry in this case, according to M. Coulumb, is about 200 Ibs. Here the quantity of useful action, compared with that of a man who walks freely, and without a load, is nearly as one to five; or, in other words, he employs to pure loss four-fifths of his power. By causing a man to

mount a flight of steps freely and without a bur- den, his quantity of action is at least double of what he affords in any other way of employing his strength. This seems to be understood by our coal-merchants, who thus employ manual labour in emptying the coal vessels of their loads in the river Thames, where we frequently see four or five men perpetually ascending a step-ladder and jumping down, so as by their weight to bring up the coals from the hold by means of a lope passing over a pulley. Here the useless action is in ascending, and the use- ful in descending.

When labour is applied to cultivating the ground, the whole quantity afforded by one man during a day amounts to about the same as 328 Ibs. raised 1094 yards; and M. Coulumb comparing this work with that of men employed to carry burdens up an ascent of steps, or at a pile-engine, finds a loss of about ˆth part only of the quantity of action, which may be neglected in researches of this kind. In estimating these and other mean results, we should not determine from ex- periments of short duration, nor should we make any deductions from the exertions of men of more than ordinary strength. The mean results have also a relation to climate. M. Coulumb observes, that he has directed extensive works at Martinico where Fahrenheit's thermometer is seldom less than 77°, and similar works in France ; and he affirms that not more than half the work can be done in similar cases in the one climate to what can be effected in the other.

Amongst quadrupeds, the most useful, as a first mover of machinery, is the horse. The strength of this animal is, perhaps, about six times that of a

man. Desaguliers states the pro- portion as five to one, coinciding with our pre- ceding deductions from Smeaton's results. French authors commonly reckon seven men as equivalent to one horse, and probably, upon the whole, one to six may be stated as a fair propor- tion ; the strength of a man, at a dead pull, being therefore estimated at 70 Ibs.; that of a horse, under like circumstances, will be 420 Ibs. The fact is, however, that it is very difficult to make a comparison between two animals whose powers are so differently exerted. The worst way of applying the strength of a horse is to make him carry a weight up a steep hill, while the oiganisa- tion of man fits him very well for this kind of labour. Hence, three men climbing up such a hill, with the weight of 100 Ibs. each, will pro- ceed faster than a horse with a load of 300 Ibs., as was first stated, we believe, by La Hire.

We are not acquainted with any series of ex- periments which have been made with a view ot determining the weights horses can carry, when moving up sloping roads, making given angles with the horizon ; but, fortunately, this deficiency is not of much consequence, because, as we have stated, the carrying of weights is far from the best manner of employing the strength of these animals. It is known however, in general, that a horse loaded with a man and his equipage, weighing at a medium about 224 Ibs., may without being much forced, travel in seven « eight hours the distance of 43,000 yards or

about 25 miles, on a good road. When a horse travels day after day without cessation, either the weight he carries, or the distance passed over, must undergo some diminution, as well as the time actually employed in travelling ; but we cannot undertake to assign a mean value of his capabilities.

M. Amontons, in the Memoirs of the French Academy for 1703, has given some comparative observations on the velocity of men and horses ; in which he states the velocity of a horse loaded with a man, and walking, to be rather more than 5J feet per second, or 3ˆ miles per hour; and when going a moderate trot with the same weight, to be about 8J feet per second, or 6 miles per hour. These velocites are however, we think, rather less than might have been safely assumed in these cases.

The most advantageous manner of applying the strength of man is most unfavourable for a horse ; and so it is found that the most disad- vantageous to the former will be the most favourable for the latter, that is, when they are employed in drawing loads in carriages. A horse put into

harness, and making an effort to draw, bends himself forwards, inclines his legs, and brings his breast nearer to the earth, and this so much the more, as his effort is more considerable; so that when lie is employed in drawing, his effort will depend, in some measure, both on his own weight and that which he carries on his tiack. Indeed, it is highly useful to load the back of a draught horse to a certain degree, though this, on a slight consideration, might be thought unnecessarily to augment the fatigue of the animal ; but it must be considered, that the mass with which the horse is charged vertically, is in part added to the effort which he makes in the direction of traction, and thus dispenses with the necessity of his inclining so much forward as lie must otherwise do, and may therefore, in this point of view, relieve the draught more than to compensate tor the additional fatigue occasioned by the vertical pressure. Carmen and wagoners in ueiuTul are aware of this, and are commonly very raivful to dispose of the load in such a manner that the shafts shall throw a due propor- tion of the \ei-lit on the back of the shaft-horse.

The best disposition of the traces during the tune a horse is drawing is when they are perpen- dicular to the position of the collar upon his breast and shoulders. When the horse stands at his ease, this position of the traces is rather in- clined upwards, from the direction of the road; but \hen he lean-; forward to draw the load, the traces should then become nearly parallel to the pi. me \hich the tarriaire is to be drawn;

or, it In- be employed in drawing a sledge, or any thin'.;- without wheels, the inclination of the es with the road, supposing llto be horizontal, be about U'.J"; and even when wheels .ire employed, as • ve. cannot conceive faction to !>.j \holly destroyed, 11 is obvious that a slight urn tin: parallel position of the Traces upwards would ;>e rather advantageous ic contrary; although it is difficult, if not i'.i!po.sii,l,., t,, , ˆinnate ii!,' deure, o! that inclina t'on. \hatu. havt s;ud ai'o\e is vith reference i»i'ily to one luu-s. . v, hen several are harnessed

together in a line so as all to draw at the same load, and the slope on which they are drawing changes, we must resolve the line of direction 01 each horse into two others, the one parallel and the other perpendicular to the plane of the car- riage, and thus estimate the ultimate result. Gregory's Mectumics, vol. ii.

We may here observe, that when a horse is made to move in a circular path, as is often practised in mills and other machines, it is requi- site to give to the circle which the animal has to walk round, the greatest diameter that is con- sistent with the local and other conditions to which the motion must be subjected. It is ob- vious, indeed, that since a rectilinear motion is the most easy for the horse, the less the line in which he moves is curved

the greater will be the ease with which he will effect his purpose. Ex- periment has shown, that in the cases to which we have above alluded, although a horse may draw in a circle of eighteen feet diameter, it will be much better if the diameter be extended to twenty-five or thirty feet, and even forty feet diameter would be preferable to either of the former.

Desaguliers, in the first volume of his Experi- mental Philosophy, states that a horse employed daily in drawing nearly horizontal, can move, during eight hours in the day, about 200 Ibs., at the rate of about 2ˆ miles an hour, or 3f fee per second. If the weight be augmented to about 240 Ibs., or 250 Ibs., the horse cannot move more than six hours in the day, and that with less velocity. And, in both cases, if he carry some weight, he will draw better than if he carried none. Sauveur estimates the mean effort of a horse at 175 Ibs. French, or 189 Ibs. English avoirdupois, with a velocity of rather more than two feet per second. But these are all probably too high to be continued for eight hours. In another place Desaguliers states the mean work of a horse as equivalent to raising a hogshead of water fifty feet high in a minute. But Smeaton, who examined every circumstance connected with his profession with great accuracy, reduces this effect to a height of forty feet. And by certain experiments, made before the Society for the Encouragement of Arts, it was concluded that a horse moving with a velocity of three miles per hour, can continue to exert a force of 80 Ibs. But these experiments have not been detailed at sufficient length to give much satisfactory infor- mation on the subject. Indeed, it is an investi- gation extremely difficult to carry on with mathematical accuracy ; much depends upon the size, strength, and condition of the horse, the opinion of the person making the experiment, as to what the animal is capable of performing, the time that he may be employed, &c., so that little correct information is perhaps to be ex- pected on this point; but with regard to the mechanical advantage or disadvantage of the direction in which his power is applied, this is a subject which comes fairly within the province of mechanics, and may be determined with all the precision appertaining to that branch of science.*

We subjoin a few feats of animal strength, natural or artificial. Extraordinary power whether natural or artificial, car.aot but be cor. •

sidered as an interesting subject for philosophical reflection ; amongst the best authenticated are those recorded by Desaguliers, of Thomas Top- ham, a man, at the time he exhibited before the author, thirty-one years of age, but who had practised the same feats for five or six years pre- ceding that

time. The exploits of this man, which were witnessed by Desaguliers, were as follow :

1 . ‘ By the strength of the fingers (only rubbed in cold ashes to keep them from slipping) he rolled up a very large pewter dish.

2. ‘ He broke seven or eight short and strong pieces of tobacco-pipe with the force of his middle finger, having laid them on the first and third finger.

3. ‘ Having thrust in under his garter the bowl of a strong tobacco-pipe, his legs being bent, he broke it to pieces by the tendons of his hams without altering the bending of his legs.

4. ‘ He broke such another bowl between his first and second finger, by pressing his fingers together sideways.

5. ‘ He lifted a table six feet long, which had half a hundred weight hanging at the end of it, with his teeth, and held it in a horizontal position for a considerable time. It is true the feet of the table rested against his knees ; but, as the length of the table was much greater than its height, that performance required a great strength to be exerted by the muscles of his loins, those of his neck, the masseter, and temporal (muscles of the jaws), besides a good set of teeth.

6. ‘ He took an iron kitchen poker, about a yard long and three inches in circumference,

and, holding it in his right hand, he struck upon his bare left arm, between the elbow and the wrist, till he bent the poker nearly to a right angle.

7. ‘ He took such another poker, and holding the ends of it in his hands, and the middle against the back of his neck, he brought the two ends of it together before him ; and, what was yet more difficult, he pulled it almost straight again : because the muscles which separate the arms horizontally from each other are not so strong as those that bring them together.

8. ‘ He broke a rope of about two inches in circumference, which was in part wound about a cylinder of five inches in diameter, having fastened the other end of it to straps that went over his shoulders. But he exerted more force to do this than any other of his feats, from his awkwardness in going about it : for the rope yielded and stretched as he stood upon the cylinder, so that when the extensors of the legs and thighs had done their office in bringing his legs and thighs straight, he was forced to raise his heels from their bearing, and use other muscles that were weaker. But, if the rope had been so fixed that the part of it to be broken had been short, it would have been broken with four times less difficulty.

9. ‘ I have seen him lift a rolling-stone of about 800 Ibs. with his hands only, standing in a frame above it, and taking hold of a chain that was fastened to it. By this I reckon, he may be almost as strong again as those who are com- monly considered as very strong men.’ — Desa- gulier’s Experimental Philosophy.

ANIMALAYA, or hill of elephants (so called from the abundance of these animals in the neighbourhood), a town in the district of Coim- betoor, Hindostan, on the west side of the river Al’me ; eighteen miles from Coimbetoor, and twenty from Pelicaudcherry. Dr. Buchanan describes it as containing about 200 houses ; having extensive forests of teak and other useful timbers in the neighbourhood, where the ele- phants are on the increase, little attention having been paid to these woods of late years. The Ali me is an insignificant stream, and no other water carriage for the transportation of timber is near. There is a modern fort at a short dis- tance westward of the town, and standing oppo- site a pass between the mountains that run north from Cape Comorin and the Ghauts of Carnata ; this is the great thoroughfare between Malabar and the southern parts of Arcot.

ANIMALCULE. The word in general sig- nifies a little animal ; and thus the term might be applied to every animal which is consi- derably inferior in size to ourselves. It has been customary, however, to distinguish by the name of animalcules only such animals as are of a size so diminutive, that their true figure cannot be discerned without the assistance of glasses ; and more especially it is applied to such as are altogether invisible to the naked eye, t:md cannot even be perceived to exist but by :he assistance of microscopes. By the help of

magnifying glasses we are brought into a kind of new world ; and numberless animals are dis- covered, which from their minuteness must otherwise for ever have escaped our observation: and how many kinds of these invisibles there may be, is still unknown ; as they are discerned of all sizes, from those which are barely invisible to the naked eye, to such as resist the action of the microscope, as the fixed stars do that of the telescope, and with the best magnifiers hitherto invented appear only as so many moving points. The smallest living creatures our instruments can show are those that inhabit the waters ; for though possibly animalcules equally minute, or perhaps more so, may fly in the air, or creep upon the earth, it is scarce possible to bring such under our examination ; but, water being trans- parent, and confining the creatures in it, we are able, by applying a drop of it to our glasses, to discover, to a certain degree of smallness, all that it contains. Some of the most curious of these animalcules, which have been described by microscopical observers, we shall here men- tion.

When paste is allowed to stand till it becomes sour, it is then found to be the habitation of numberless animalcules, like eels, which may be discerned by the naked eye ; and though their form cannot be perfectly distinguished, their motion is very perceptible, and the whole paste will seem to be animated

The most remarkable property of these insects is, that they are viviparous. If one of them is cut through near the middle, several oval bodies of different sizes will be seen to issue forth. These are young anguillae, each of them coiled up and enclosed in its proper membrane, which is so exquisitely fine, as scarcely to be discernible by the greatest magnifier, while it encloses the embryo animal. The largest and most forward immediately break through this covering, unfold themselves, aud wriggle about in the water nimbly ; others get out, uncoil, and move them- selves about more slowly ; and the least mature continue entirely without motion. The uterus, or vessel that contains all these oval bodies, is composed of many ringlets, not unlike the as- pera arteria of land animals, and seems to be considerably elastic ; for as soon as the animal- cule is cut in two, the oval bodies are thrust out with some degree of violence, from the springing back or action of this bowel. Upwards of 100 young ones have been seen to issue from the body of one single eel, whereby the prodigious increase of them may be accounted for ; as pro- bably several such numerous generations are produced in a short time. They seem to be all prolific ; and unless the trial happens to be made upon one that has brought forth all its young, or when the paste has been kept for a very long time, the experiment will always succeed. — This property of these eels being viviparous renders it highly improbable that they ever become flies. Animalcules of a similar kind are likewise found in vinegar ; and, like those already described, are found to be viviparous.

It is not only in acids that animalcules are seen. In some fields of wheat, many grains may be observed that appear blackish outwardly, as if scorched ; but, when opened, are found to contain a soft white substance, which attentively considered, appears to be nothing else than a congeries of threads or fibres lying close to each other in a parallel direction, much resembling the unripe down of some thistles on cutting open the flower-heads before they begin to blow. This fibrous matter discovers not the least sign of life or motion, unless water is applied ; but immediately on wetting, provided the grains of wheat have been newly gathered, the supposed fibres separate, and appear to be living creatures. Their motions at first are very languid; but gradually become more vigorous, twisting and wriggling

themselves somewhat in the manner of the eels in paste, but always slower than they, and with a great deal of regularity. If the grains of wheat are grown dry by keeping, and in that condition are cut open, the fibrous matter is very distinguishable ; and, on putting water to it, will separate with great readiness, and seem like fine tubes or threads tapering at both ends ; but not the least motion will be perceived till they have been in water for several hours, and sometimes they will never move at all. Hut if the same grains are steeped in water for three or four hours, or buried for some days in the earth till they are fully saturated with mois- ture, and then opened with a penknive; on taking out. a small portion of the white matter carefully, and spreading it thin upon a slip of

glass, the animalcules will be seen bundled together, and extended longitudinally but without motion ; and though, upon the appli- cation of water, they will not revive so soon as those taken from fresh grains whose moisture has never been exhaled ; yet, after remaining an hour or two in the water, they are constantly found alive and vigorous, even though the grains have been kept in a dry condition for several years. It is necessary, however, to adapt in some measure the time of continuing the grains in water or earth to the age and dryness of them; for if they are not opened before they are too much softened, the animal- cules will be dead ; and unless the husks are opened to let those creatures out after they have been steeped, they inevitably perish in them : otherwise they will continue alive in water for many months ; and, should the water dry away, may be revived again by giving them a fresh supply.

ANIMALCULES OF INFUSION, animalcula infu- soria, take their name from being found in all kinds either of vegetable or animal infusions. Indeed, there is scarce any kind of water, unless impregnated with some mineral substance, but what will discover living creatures. M. Lewen- hock says, that at first he could discern no living creatures in rain-water ; but, after standing some days, he discovered innumerable animalcules, many thousands of times less than a grain of sand, and in proportion to a mite as a bee is to a horse. In other rain-water, which had like- wise stood some time, he found the smallest sort he had ever seen ; and, in a few days more, met with others eight times as big as these, and al- most round. In another quantity of rain-water, that had been exposed like the former, he disco- vered a kind of animalcules with two little horns in continual motion. The space between the horns was flat, though the body was roundish, but tapering a little towards the end ; where a tail appeared four times as long as the body, and the thickness of a spider's web. He observed several hundreds of these within the space a grain of sand would occupy. If they happened on the least filament or string, they were entan- gled in it ; and then would extend their bodies into an oblong round, and struggle hard to dis- engage their tails. He observed a second sort of an oval figure, and

imagined the head to stand at the sharpest end. The body was flat, with several small feet moving exceeding quick, but not discernible without a great deal of attention. Sometimes they changed their shape into a per- fect round, especially when the water began to dry away. He met also with a third sort, twice as long as broad, and eight times smaller than the first; yet in these he discerned little feet, whereby they moved very nimbly. He perceived likewise a fourth sort, a thousand times smaller than a louse's eye, and which exceeded all the rest in briskness ; he found these turning them- selves round, as it were, upon a point, with the celerity of a top ; and he says there were se- veral other sorts. The production of animalcula infusoria is very surprising. In four hours' time, an infusion of cantharides has produced animal- cula less than even the tails of the spermatic

animals described in the next section. Neither do they seem to be subject to the fate of other animals; but several kinds of them at least, by dividing themselves in two, enjoy a sort of im- mortality. Nor do the common methods, by which other animals are destroyed, seem to be effectual for destroying their vital principle. Hot mutton gravy, secured in a phial with a cork, and afterwards set among hot ashes to destroy, as effectually as possible, every living creature that could be supposed to exist in it. has never- theless been found swarming with animalcules after standing a few days. In the Philosophical Transactions, vol. lix. we have the following cu- rious account, given us by Mr. Ellis, of animal- cules produced from an infusion of potatoes and of hempseed : ' On the 25th of May, 1768, Fahrenheit's thermometer seventy degrees, I boiled a potatoe in the New River water till it was reduced to a meally consistence. I put part of it, with an equal proportion of the boiling liquor, into a cylindrical glass vessel that held something less than half a wine pint, and co- vered it close immediately with a glass cover. At the same time I sliced an unboiled potatoe, and, as near as I could judge, put the same quantity into a glass vessel of the same kind, with the same proportion of New River water not boiled, and covered it with a glass cover, and placed both vessels close to each other. On the twenty-sixth of May, twenty-four hours after- wards, I examined a small drop of each by the first magnifier of Wilson's microscope, whose focal distance is reckoned at one-fiftieth part of an inch ; and, to my amazement, they were both full of animalcules of a linear shape, very distin- guishable, moving to and fro with great celerity; so that there appeared to be more particles of animal than vegetable life in each drop. This experiment I have repeatedly tried, and always found it to succeed in proportion to the heat of the circumambient air; so that even in winter, if the liquors are kept properly warm, at least in two or three days

the experiment will succeed. What I have observed are infinitely smaller than spermatic animals, and of a very different shape ; the truth of which every accurate observer will boon be convinced of, whose curiosity may lead him to compare them, and I am persuaded he will find them no way akin. At present I shall pass over many curious observations which I have made on two years' experiments, in order to proceed to the explaining a hint which I re- ceived last January from M. de Saussure, of Geneva, when he was here ; which is, that he found one kind of these animalcula infusoria that increase by dividing across into nearly two equal parts. I had often seen this appearance in various species a year or two ago, as I found upon looking over the minutes I had taken when I made any new observation; but always sup- posed the animal, when in this state, to be in coition. Not hearing, till after M. de Saussure eft this kingdom, from what infusion he had made his observations, his friend Dr. de la Roche of Geneva informed me, the latter end of February last, that it was from hempseed. I immediately procured hempseed from different seedsmen in different parts of the town. Some of it I put into New River water, some into dis-

tilled water, and some I put into very hard pump- water. The result was, that in proportion to the heat of the weather, or the warmth in which they were kept, there was an appearance of millions of minute animalcules in all the infusions ; and sometirre after, some oval ones made their ap- pearance. These were much larger than the first, which still continued ; these wriggled to and fro in an uudulatory motion, turning them- selves round very quick all the time that they moved forwards. I was very attentive to see these animals divide themselves ; and at last I perceived a few as represented by the first mag- nifier of Wilson's microscope ; but I am so well convinced by experience that they would sepa- rate, that I did not wait to see the operation. The proportion of the number of these animals which I have observed to divide in this manner, to the rest is scarcely one to fifty ; so that it ap- pears rather to arise from hurts received by some few animalcules among the many, than to be the natural manner in which these kinds of animals multiply ; especially if we consider the infinite quantity of young ones which are visible to us through the transparent skins of their bodies, and even the young ones that are visible in those young ones while in the bodies of the old ones. But nothing more plainly shows them to be zoo- phites than this circumstance, That when, by accident, the extremity of their bodies has been shrivelled for want of a supply of fresh water, the applying more fresh water has given motion to the part of the animal that was still alive ; by which means this shapeless figure has continued to live and swim to and fro while it was sup- plied with fresh water.

The discovery of living animalcules in the se- men of most animals is claimed by Mr. Lewen- hock and Mr. Nicholas Hartsoeker; who both say

they published it about the end of the year 1677, or beginning of 1678; but Mr. Lewenhock having made by far the greatest number of ex- periments concerning them, the discovery is commonly attributed to him. According to this naturalist, the animalcules are found in the semen masculinum of every kind of animal ; but their general appearance is much the same, nor doth their size differ in proportion to the bulk of the animal to which they belong. The bodies of all of them seem to be of an oblong oval form, with long tapering slender tails issuing from them ; and as by this shape they resemble tad- poles, they have been frequently called by that name; though the tails of them in proportion to their bodies are much longer than the tails of tadpoles : and, it is observable, that the animal- cules in the semen of fishes have tails much longer and more slender than the tails of those in other animals ; insomuch that the extremity of them is not to be discerned without the best glasses and the utmost attention. The numbers of these animalcules are inconceivable. On viewing with a microscope the milt, or semen masculinum, of a living cod-fish, innumerable multitudes of animalcules were found therein, of such a diminutive size that he supposed at least 10,000 of them capable of being contained in the bulk of a grain of sand; whence he con- cludes, that the milt of this single fish contained more living animalcules than there are to be

people living in the whole world. To find the comparative size of these animalcules, Mr. Lewenhoek placed a hair of his head near them; which hair, through his microscope, ap- peared an inch in breadth ; and he was satisfied, that at least sixty such animalcules could easily lie within that diameter ; whence, their bodies being spherical, it follows that 216,000 of them are but equal to a globe whose diameter is the breadth of a hair.. He observed, that when the water wherewith he had diluted the semen of a cod-fish was exhaled, the little bodies of the ani- malcules burst in pieces ; which did not happen to those in the semen of a ram ; and this he imputes to the great firmness and consistency of the latter, as the flesh of a land animal is more compact than fish. These animalcules appear to be very vigorous, and tenacious of life ; for they may be observed to move long after the animal from which they are taken is dead. They have this peculiarity also, that they are continually in motion, without the least rest or intermission, provided there is fluid sufficient for them to swim about in. These animalcules are peculiar to the semen : nothing that has the least token of life being discovered by the best glasses, either in the blood, spittle, urine, gall, or chyle. Great numbers, however, are to be found in the

whitish matter that -'irks between the teeth; some of which are of an oval figure and others resemble eels.

Animalcules are said to be the cause of various disorders. The itch, from several experiments, is affirmed to be a disorder arising from the irritations of a species of animalcules found in the pustules of that disease ; whence the communi- cation of it by contact from one to another is easily conceived, as also the reason of the cure being effected by cutaneous applications. On this foundation some have attributed the small- pox, measles, and other infectious diseases, and others the epilepsy, &c., to animalcules. Languis goes farther, and pretends to reduce all diseases in general to the same principle. A late writer at Paris, who assumed the title of an English physician, has done more. lie not only accounts for all diseases, but for the operations of all medicines upon the hypothesis of animalcules, lie had peculiar animals for every disease; scor- butic animalcules, podagric animalcules, variolous animalcules, &c., all at his service. Journ. des Srav. torn. Ixxxii. p. ,r>35, &.c. But as most discoveries in natural philosophy have laid a founda- tion for the warm imaginations of some men to form visionary theories, to the great prejudice of real knowledge, so those relating to animalcules have been drawn in, however improperly, to support the most whimsical and chimerical systems.

For more on this subject the reader may con- sult tin- papers of Lewenhoek, Baker, &c., in the Philosophical Transactions, Baker on the Micro- scope, Kanmacher on the Microscope, &c.

ANI MAS, Rio D i. i.os, or River of Souls, a river of Mew Mexico, rising on the western side of that ri(l'_re of mountains which intervenes between the rivers that flow into the gulf of Mexico and those \liich run into the Pacific Ocean, li join> the mer Nebajoa, a little below its junction with the II io Colorado.

ANIMATED MERCURY, among chemists, quick- silver, impregnated with some subtile and spiri- tuous particles, so as to render it capable of growing hot when mingled with gold.

ANIMATED NEEDLE, a needle touched with the loadstone.

ANIMATION has been more accurately defined the informing an animal body with a soul. — The different hypotheses of physicians and philoso- phers, concerning the time of animation, had their influence upon penal laws made against ar- tificial abortions ; till Charles V.. by a constitu- tion published in 1532, introduced the distinction between a vital and non-vital foetus. Accordingly a foetus is said to be animated when it is per- ceived to stir in the womb, which usually hap- pens about the middle of the term of

gestation.

ANIMATION, in alchemy, the operation of fer- menting any metal by its conjunction with mercury.

ANIME, a resin exuding from the trunk of a large American tree, called by Piso jetaiba, by the Indians courbaril, a species of hymenaea. This resin is of a transparent amber colour, a light agreeable smell, and little or no taste. It dissolves entirely in fire, but not very readily in spirit of wine ; the impurities, which are often great, remaining behind. The Brasilians are said to employ anime in fumigations for pains and aches proceeding from cold ; with us, it is rarely, if ever, made use of for any medicinal purposes. There are two species of it, viz. 1. Eastern anime, distinguished into three kinds; the first white ; the second blackish, in smell like myrrh; the third pale, resinous, and dry. 2. Western anime, which is transparent, and of' a colour like that of frankincense ; its smell is very agreeable, and it easily consumes in the fire.

ANIME, in heraldry, a term used when the eyes of a rapacious creature are borne of a different tincture from the creature itself.

ANIMELL7E, the glands under the ears, &c., called also lacticinia.

ANIMETTA, in ecclesiastical writers, the cloth wherewith the cup is covered in the eu- charist.

ANIMO CORDE, a keyed instrument, or clavier, invented by John Jacob Schnell in 1798.

ANIMOS'ITY. Lat. animosus, from anima, or animus ; denoting the vigorous and courageous disposition of the soul. Applied to the exercise of a malevolent feeling.

How apt nature is, even in those who profess an eminence in holiness, to raise and maintain aninwtities against those whose calling or person they pretend to find cause to dislike. Bp. Hall's Letter of Apology.

They were sure to bring passion, animotity, and malice enough of their own, what evidence soever they had from others. Clarendon.

If there is not some method found out for allaying these heats and animosities among the fair sex, one does not know to what outrages they may proceed.

Addison.

ANIMUS, the mind, the rational faculty, in distinction from anima, the soul, where that faculty resides.

ANINGA, in botany, an aquatic plant grow- ing in the Carribee islands, the root of which is much used in the refinement of sugar. The

decoction of this root is a more certain, as well •>.s more safe method of clarifying sugar, than sublimate and arsenic, which were used for this purpose before the discovery of the aninga. From this root is also compressed an oil of great medicinal use in fermentation.

ANIO, or AKTEN, in ancient geography, a river of Italy, now IL TEVEROXE, which see.

ANJOU, a ci-devant province of France, which, in conjunction with the late provinces of Maine and Touraine, now forms the four departments of Maine Sarte Maine, Loire, Indre and Loire. It was bounded by Tou- saine, Poictou, Bretagne, and Maine ; and ex- tended seventy-five miles in length, and sixty in breadth. Through it run five navigable rivers ; the Loire, the Vienne, the Foue, the Mayenne, and the Sarte. The air is temperate, and the country agreeably diversified with hills and meadows. It produces white wine, wheat, bar- ley, rye, oats, peas, beans, flax, hemp, walnuts, chestnuts, cider, and fruit trees of all kinds, and pasture proper for horses. Its greatest riches consist in cows, oxen, and sheep. There are also several coal and iron mines; quarries of marble, slate, and stone for building. It has also several saltpetre works and glass-houses. The remarkable towns, besides Angers the capi- tal, are Saumur, Brissac, Pons dc Cea, Le Fleche, and Beaufort. St. Louis bestowed on his brother Charles this province in 1246, but in 1328 it again fell to the crown with Philip IV. John I. raised it to the rank of a ducal peerage, and gave it to his son Louis I. ; but in 1480 it re- verted once more to the crown. Different princes of the blood bore subsequently the title of Anjou, till Louis XV. conferred it, together with the pro- vince, on his grandson Louis Stanislaus, also count of Province, afterwards Louis XVIII.

ANIRAN, in mythology, one of the Persian Genii, supposed to preside over weddings, and take cognisance of every occurrence on the 30th day of the month, on which account this day is called Aniram, and kept with much solemnity as a festival.

ANISATUM SACCHARUM, in medicine, sugar of anise. It is a good carminative.

ANISCALPTOR, in anatomy, the latissimus dorsi.

ANISE, anisum, Lat. A species of apium or parsley, with large sweet-scented seeds. This plant is not worth propagating in England for use, because the seeds can be had much better and cheaper from Italy.

ANISE-SEED, in medicine, the seed of the plant anise, containing essential oil. It is car- minative, expelling wind, given either at the mouth or in clysters. It is useful against cold affections of the lungs, difficulty of breathing, and asthma. It is often used as a corrector of the strongest purgatives. The oil distilled from the seed is used for the same purposes, and is often applied outwardly in carminative and anodyne liniments ; particularly for the pleurisy and other pains in the side.

ANISE-SEED, STARRY, anisum stellatum, aseed brought chiefly from Tartary, much used by the Dutch and Chinese in their tea, by them called zingi or dainor.

ANISIFOLIUM, the limonia acidissima of Linnaeus.

ANISOCYCLA, in antiquity, a machine con- structed of unequal circles, by means of which the ancients discharged their scorpions, or cross- bows.

ANISOMELES, in botany ; from avwoc, un- equal, and /xjjXo, the cheeks, or parts around the mouth, alluding to the corolla having unequal lips. Class, didynamia; order, gymnospermia ; natural order, verticillata. Its essential cha- racters are : CAL. quinquepartite, tubular : COR. upper lip smallest, lower tripartite : BTAM. pro- minent ascending : ANTHERS, double cells, longer ones halved : SEEDS smooth. The species are, 1. A. Moschata, musky anisomeles. 2. A. Ino- dora, scentless anisomeles. 3. A. Salvifolia, sage- leaved anisomeles. These three are natives of New Holland. 4. A. Ovata, broad-leaved ani- someles, a native of the East Indies.

AN1SOPOGON, from aviffoc, unequal, and Tr&jywv, a beard, alluding to the inequality of the awns. Class, triandria ; order, digynia ; natural order, gramina. Its essential characters are : CAL. two membranous, ribbed, equal valves, single-flowered: COR. stalked, two-valved. There is but one species, A. avenaceus, oat-like aniso- pogon

ANIVA, or TAMBAOUORA, a large commo- dious bay at the southern extremity of the pe- ninsula of Saghalin, bounded by Cape Aniva and Cape Crillou. The shores are steep, and in- accessible mountains are at a very

short distance. The Japanese have a settlement here. They build their houses of wood, one story high, and instead of glass they use oiled paper. They employ the natives, whom they keep in a state of slavery, in catching and drying fish. Long. 144° 20'. E., lat. 46° 10 N.*

ANKER, (Ancker, Dut.) A liquid measure chiefly used at Amsterdam. It is the fourth part of the awn, and contains two stekans ; each stekan consists of sixteen mengles ; the mengle being equal to two Paris pints.

ANKER, in English measure, contains about thirty-two gallons.

ANKERSTROM (John James), a Swedish officer, who having been convicted of holding a treasonable correspondence with the Russians, during the Swedish war, assassinated king Gur- tavus at a masked ball in 1792 ; although he had received a pardon for this offence : he was be-headed in the same year, after first; having lost his right hand.

AN'KLE, n. -> ˆncleop. The joint which

An KLED, (joins the leg to the foot.

AN KLE-BONE. JJ

In the name of Jesus Chryst of Nazareth, ryse vp and walke ; And he toke hym by the ryght hande, and lyfte hym vp. And immediately his fete and ankle-bones receaued streght.

Bible, 1539, Actet, in.

These manacles upon my arm, I, as my mistress' favours wear ; And for to keep my ankles warm, I have some iron shakles there. Loyalty confined, Percy' Reliques, vol. ii. p. 335. One of his anklet was much swelled and ulcerated on the inside, in several places. Waeman,*

My simple system shall suppose,

That Alma enters at the toes ;

That then she mounts by just degrees

"Jp to the ankles, legs, and knees. Prior.

ANKLE, in surgery. The ankle is subjected to be luxated, either inward or outward, back- ward or forward. When the ankle is luxated inward the bottom of the foot is turned outward ; and vice versa, when it is luxated outward the bottom of the foot is turned inward ; which latter case is, indeed, much more frequent than the others. If it is dislocated forward, the heel be- comes shorter, and the foot longer than it should be ; and if backward, the contrary signs to these will appear. The ankle, however, can scarce possibly be luxated outwards, unless the fibula be separated from the tibia, or else quite broken, which may happen to the external ankle to be attended with very grievous symptoms, especially when occasioned by some great external violence. Nor can it indeed well happen otherwise in this case, since the distortion of the foot must ne- cessarily overstrain the adjacent tendons, liga- ments, and nerves, and thence excite very violent pains and other bad symptoms ; or the veins and arteries may also be very easily lacerated, which will occasion a large extravasation of blood about the whole foot, and too often give rise to a gan- grene. It is, however, necessary to observe, that the ankle is not always luxated after it has been violently strained by leaping, or turning the foot on one side ; for it sometimes happens that the ankle is not dislocated on these occasions, but only on the parts violently contused and strained. The ankle, when truly luxated, is more or less difficult to be reduced, according to the violence of the force by which the accident was occasioned. The most ready way, however, of reducing a luxation of the ankle, is to place the patient upon abed, seat, or table, letting the leg and foot be extended in opposite directions by two assistants, while the surgeon replaces the bones with his hands and ringers in their proper situation. When the foot is by this means re- stored to its proper position, it is to be well bathed with oxycrate and salt, and then carefully bound up with a proper bandage. The patient must be enjoined to keep his bed for a conside- rable time, till the bad symptoms are gone, and the ankle has recovered its strength, so far as to bear the weight of the body without any uneasi- ness or danger. We have an account of the menses regularly evacuated at an ulcer of the ankle, in the Edinburgh Medical Essays, vol. iii. art. 9.

ANLACE, a falchion, or sword, shaped like a scythe.

ANN (‘AIT,, that point of land which forms the north side of Massachusetts Bay, so named in honour of Ann wife of .lames 1. Lat. 42° 45′ N., long. 70’: 17′ W.

ANN I’oiii, a fortress, the head of Wood Creek, New York. It lies two leagues and a quarter from Skenesborough 1’ort, and ten miles east-south-east from I’ort George. When Gene- ral Burgoyne attempted to pass through this part of the country to Kurt Kdward, his army could only proceed at the rate of a mile a day, so wild was the country and so

interpersed with

*marshes and woods. They had no fewer th*n forty log-bridges to construct, one of which was two miles in length ; circumstances 'which in the present improved state of the country will appear hardly credible.*

ANN, or'ANNAT, in Scotch law, half a-year's stipend, which the law allows the executors of ministers of the church of Scotland, over and above what was due to the minister himself for his incumbency.

ANN, ST. a river of Lower Canada, flowing from the mountains north of Quebec, and falling into the St. Lawrence about fifty miles above that city. The length of its whole course does not exceed seventy miles, and the navigation is much impeded by falls, rapids, and shallows ; but at its junction with the St. Lawrence, it at- tains a breadth of 400 yards, and is a noble stream. Here lie the islands of St. Marguerite, Ignace, Dutage, and Durable, abounding in rich pasture and meadow land, and on the eastern shore of the main land is a village named St. Ann, containing a handsome church, chapel, and about fifty houses. Another river, flowing into the St. Lawrence opposite the island of Orleans, is also called by this name.

ANN, ST. a port on the east side of the island of Cape Breton, much frequented by fishing vessels ; on the north-west of the entrance into Labrador Lake, N. lat. 47°, W. long. 60°.

ANN, ST. a town on the river St. John's, in the province of New Brunswick, eighty-one miles from St. Johns Town.

ANNA, of pjn» Heb. gracious, a Jewish pro- phetess, the daughter of Phanuel, of the tribe of Asher. She had been early married, and had lived seven years with a husband. After his death she devoted herself to the service of God ; and it was while thus employed, that, finding the virgin Mary with her infant son in the temple, she joined with the venerable Simeon in thank- ing God for him, and in bearing testimony to him as the promised Messiah.

ANNA, a province of Arabia Deserta, and one of the three principalities into which it is di- vided.

ANNA, or ANAH, one of the chief cities of the above principality, situated on the west bank ot the Euphrates, in a fruitful and pleasant soil, 220 miles south-east of Aleppo, and consists of one street, about five miles long, but thinly peo- pled. Every house has a garden belonging to it, and these are loaded with fruit trees, bearing le- mons, oranges, citrons, quinces, figs, dates, pome- granates, olives, &c. in great plenty. Some of the flat grounds are sown with corn and other grain, which yield likewise considerable

crops. In 1807 this place was attacked by the Waha- bees, who perpetrated the most horrible cruel- ties. They massacred the greater part of the in- habitants, set the town on fire, and then retreated \vith the plunder, carrying off at the same time several women and children into slavery. This city is the common rendezvous of the robbers that infest the country, and from which they dis- perse themselves into all parts of the Desert. It is with great difficulty that the Turkish aga, and the janissaries who are kept here, can levy the tribute on the commodities carried through this

city, which is one of the great thoroughfares for the passage of the caravans to and from Aleppo, Tripoli, Damascus, Bagdad, and some other

Earts of the Turkish empire. Lon. 41° 15′ E., it. 33° 30′ N.

ANNA, the daughter of Belus king of Tyre, and sister of Dido, whom she accompanied in her flight. After her death she attempted to return to Tyre, and is said to have been thrown on the coast of Italy, where she was well received. Some say that she leaped into the river Numicus to escape from Lavinia the wife of j£neas, who was jealous of her. She was worshipped by the ancient Romans under the title of Anna Pe- renna ; and sacrifices were offered to her.

ANNA, or ANNE IVANOVNA, empress of Rus- sia, was the daughter of the czar Ivan Alexiovitch, born in 1693. She married Frederick William, duke of Courland, in 1710, who died the follow- ing year and left no issue ; when she formed an intimacy with Ernest John Biren, a man of low family. On the death of Peter II. in 1740, the last of the male issue of Peter the Great, she suc- ceeded to the throne of Russia. She was herself naturally meek and merciful, and her reign was in some respects prosperous; but she was com- pelled to many acts highly repugnant to her in- clination by the wretch to whom she had yielded up her affection. She died in 1740, aged 47, and left her crown to her grand nephew Ivan, under the guardianship of Biren, as he was then only two years of age.

ANNABERO, ST., a mining town of Saxony, in the circle of the Erzgeberg, in Misnia, twenty one miles from Freyberg, and thirty-six from Dresden. It contains about 600 houses, and 4500 inhabitants, most of whom are employed in the lace-trade, as the mines are now nearly ex- hausted. The public establishments are a mine- office, an academy, an orphan-house, and a large machine for the twisting of red silk. In the vi- cinity of this

town stands the huge basalt rock, called Pilberg, and also the hill of Schrecken- berg, in which was formerly a mine of silver, which gave name to an old German coin which is now disused. In 1731 this town sustained great loss from fire.

ANNAGH, an island on the coast of Ireland, about five miles in circumference, between the isle of Achil and the main land.

ANNAGH-NAN,or ANN ACHNAN,a small island in the south-west coast of the county of Galway^ Ireland, twenty-two miles west from Galway.

ANNAGOONDY, or ANNA GUNDI, the mo- dern or Canara name of the ancient city of Bijanagur, in the Balaghaut ceded districts. It stands on the north bank of the Toombuddra, in north latitude 15° 14', and east longitude 76° 34′ opposite the city of Allpatna, which is some- times considered as a portion of the same place ; and distant 260 miles from Seringapatam.

The ruins of the walls of this place enclose an area of eight miles in circuit ; and the remnants of streets of from thirty to forty yards in width, of which one is almost left entire, would indicate its ancient size to have been much larger

The Portuguese historians attribute the origin of this place to a prince Boka, who flourished A. U. 1200, but more credible accounts assign it

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to Belaldro king of the Carnatic, who is said to have built it in 1343, to strengthen the northern frontier of his dominions. It afterwards became the capital of an independent sovereignty, and in modern times was found by Hyder Ali tributary to the Mahratta chicks.

A rajah of nominal power then and ever since has dwelt here, but Tippoo in 1786 burnt his palace to the ground, and destroyed the records of his empire. After various struggles the rajah recovered his dominions in 1799, and shortly after submitted to the English, who allow him 1500 rupees per annum.

ANN ALE, in the church of Rome, a term ap- plied to the masses celebrated for the dead during a whole year.

ANNALES, in writers of the middle age, de- note cattle under two years of age. Also a yearly rent, or annual revenue.

ANNALEsBACULi,akind of wooden almanacs used among our ancestors,

called also runstocks.

ANNALES LIBRI, in the civil law, books where- in the acts of a whole year were contained, in distinction from semestres libri, wherein the acts of six months only were contained.

ANNALIFFEY, a river of Ireland, in the pro- vince of Leinster, which rises in the county of Wicklow, and, by a circuitous course, runs into the county of Kildare ; thence passes through the Leinster aqueduct under the great canal, and is precipitated from the rock of Leixless in a beau- tiful waterfall; whence it passes through the county and city of Dublin, and falls into Dublin Bay.

ANNALIS ACTIO, in the civil law, denotes an action which may be put in practice any time within the year. In the like sense we meet wita annale decretum, annalis rescissio, 8cc.

ANNALIS CLAVUS, a nail which the prsetor, consul, or dictator, drove into the wall of Jupi- ter's temple annually upon the ides of September, to show the number of years. This custom was changed upon reckoning . years by consulships. The ceremony was afterwards occasionally per- formed to avert the plague.

ANNALIS EXCEPTIO, an iniquitous privilege anciently granted the people of Italy, that who- ever had made a contract could not be compelled to the performance, of what had been agreed on, within the year. Some "extended this privilege to the year exclusive of all holidays.

AN'NALIZE, v. \ Lat. annalis. To recite

AN'NALIST, > events that happened every

AN'NAL. j year, from one year to

another, concisely, without giving all the parti- culars.

Could you with patience hear, or I relate, O nymph ! the tedious annals of our fate f Through such a train of woes if I should run, The day would sooner than the tale be done.

*Dryde**

Their own annalist has given the same title to that of Syrmium. % Atterbury.

Let not Ambition mock their useful toil, Their homely joys, and destiny

obscure ; Nor Grandeur hear with a disdainful smile, The short and simple annals of the poor.

Gray.

ANNALS. The difference between annals ana history is variously assigned by different authors.

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Some sny that history is properly a recital of things which the author has seen, alluding to the etymo- V)gy of the word : history in the Greek signifying the knowledge of the tilings present, for CTO- pfiv properly signifies to see. On the contrary, annals, say they, relate to the transactions of others, and such as the writer never saw. Of this opinion the great annalist, Tacitus himself, seems to have been ; because the first part of his work, which treats of former times, he calls an- nals ; but when he comes down to his own times, he changes its title, and calls it history. Asellio, however, and the moderns in general, entertain the very opposite idea, and restrict annals to a bare relation of what passes each year ; whereas history relates not only the transactions them- selves, but also the causes, motives, and springs of them. The annalist merely states his facts, but the historian reasons and descants on them. Annals require brevity ; history demands orna- ment. Of this last opinion seems Cicero to be, when he styles annalists, ‘ non exornatores re- rum, sed tantum narratores.’ He adds, that his- tory in its original was the composition of annals. He thus relates the origin of annals: To pre- serve the memory of transactions, the pontifex maxinuis wrote what passed each year, and ex- posed it on a table in his own house, where every one was at liberty to read it. This they ailed annales maximi ; and this custom was kept up till the year of Home 620. These an nales maximi consisted of eighty books. They were mo-it of them destroyed in the burning of the city by the Gauls. Similar annals were kept from the earliest ages by the Egyptians, Babylo- nians, Persians, Chaldeans, &c. Authors, in imitation of these, adopted this simple and naked way of relating facts; and were hence denomi- nated annalists. Such were Cato, Pictor, Piso, Antipater, &c.

ANNAMABOE, a large native town on the Gold Con.st of Africa, containing a population ot 10,000 inhabitants, and once a very considerable market for slaves, has given name to a British fort in this part of the world, which ranks next to that of C.’.ipe Coast Castle, and is maintained by tin.’ Afrit nn Company at an expense of about {.‘1900 per annum. In 1808 the Ashantees, a powerful modern race of conquerors

from the interior, came down upon this coast in great numbers, and the inhabitants of the town of Annamaboe having espoused the cause of the Igniters against the invaders, the king of Ashantee, after defeating the former, marched with his whole, forces upon this place, which be burnt to the ground, and immediately attacked the fort of the I'>ntish. His army is said to have amounted at this time to upwards of 20,000 men. Subsequent opportunities afforded to our countrymen ot remarking its organisation, make the result truly surprisinfnlly rr>istid the attack — a circum- stanee \lneli made o respectable an impression on tli' mind of the kinu'. as to induce him to court our friend-liip. and ultimately to receive an embassy iV ('ape (. Ya-t ('a-tle.

Tin I'rum nf the imam I uas the protection

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which the Fantces had afforded two chieftains of the interior, who had beheaded the messen- gers of the king. Being defeated at every encounter with the Ashantees, the Fantecs at last prevailed upon the Annamaboes to receive and support Cheeboo and Apoutay. ' At this period,' says Mr. Meredith, ' the governor at Cape Coast Castle being under some apprehension for the safety of the British settlements, was inclined to send a flag of truce with a message to the king of Ashantee, who was now (May, 1806) at Abrab, and only fifteen or twenty miles from the coast.' This plan was opposed by the Annamaboes, and the governor, though anxious to know the disposition of the king, and to offer his mediation between the parties, gave way for the moment to their confident anticipations of victory. A division of the Ashantee army soon after attacked and destroyed the Dutch fort at Cormantine, and the captain of the division established his residence there. This being the first time the Ashantees had extended their cou- quests to the ocean, the captain is said to have been so much elated, that he went and dipped his sword three times in the sea, some of which he conveyed to the king as a proof of his success. A British flag of truce being now sent to the king of Ashantee, to ask his purpose in approach- ing the coast, he sent word, that when the governor would send him twenty barrels of gun-powder, he should be told what were the king's designs !

After a week had elapsed without farther intel- ligence, the Ashantee commander at Corman- tine endeavoured to establish himself at Agah, a village about a mile eastward of Annamaboe, when the whole of the inhabitants of the latter town marched out for the purpose of repulsing him. The British governor could now observe every movement of this new and formidable enemy from the walls of the fort. The Ashantee fire was powerful, regular, and well-directed; and the division, though not more in number than a third of their assailants, held the Annamaboes for a long

time in check, and retreated in excel- lent order.

On the morning of the 15th the whole of the Ashantee army was observed to be in motion, and the utmost alarm prevailed at Annamaboe ; the inhabitants had neglected the advice of the governor to protect the avenues of the place, as well as his invitation to send the women, children, and helpless natives into the fort. Vollies of musquetry seemed to approach nearer and nearer; about eleven P. M. the whizzing of the bullets was distinctly heard within the fort, whither the defenceless part of the inhabitants now rushed by hundreds, while the Ashantees were pursuing the rest into the town in all directions.

In vain were the great guns fired over the town with a view of intimidating the assailants. A twenty-four pounder discharged grape-shot along the beach and did immense execution amongst them, in vain; a three-pounder, which flanked the eastern gate, also fired grape-shot. The Ashantees pressed to the very muzzle of the guns, and every man who was not protected by the works, was marked by their well-conducted fire and killed or wounded. The governor ot

thf! fort at this time was struck by a ball, which passed through his mouth, taking away four of his teeth, and shortly after was wounded in his left arm. An officer and two men were wounded about the same time, and one man killed.

‘ Things now assumed a more serious and dangerous aspect than was apprehended, and gave the garrison a strong assurance of the dis- position of the enemy, who, it was evident, intended to bend his utmost efforts against the fort. The Ashantees were confident that, by gaining possession of it, a large booty would be obtained. However, the small number that com- posed the garrison of Annamaboe at this period, consisting of governor White, Messrs. Meredith, Swanzy, Smith, and Baynes; also four free Mulattoes, and twenty men including soldiers, artificers, and servants, were confident of the security of their situation ; the walls being high, and accurately flanked, and the gates secured and well barricadoed. The governor, from the nature of his wound and from great debility in consequence of much effusion of blood, being con- strained to rotire, and the command of the fort having devolved on the senior officer, who per- ceiving that the cannon in one quarter could not be used with effect, for the

enemy fired with such precision as to cut off every man who was ex- posed at an embrasure, depended solely on the musquets ; and another man having been killed about noon and two more wounded, the gar- rison was reduced to the small number of eight, including officers, who could be depended upon ; and the Ashantees were using every effort to force the western gate, but were twice repulsed with no small loss. A third time they attempted it and endeavoured to apply fire to the gate ; but the man who brought the materials for that purpose, extinguished the fire by falling a corpse upon it. In all their attempts they were de- feated by musquetry alone, and notwithstanding that their efforts to gain an entrance into the fort proved ineffectual, the combat was continued until six o'clock. After the cessation, and before that darkness came on, the garrison used all pos- sible energy in repairing injuries and preparing for the defensive, in case of hostilities being renewed in the night.' Next morning it was discovered that of 15,000 souls which the town contained, two-thirds had perished in the con- flict; about two thousand of every description took refuge in the fort. See ASHANTEE.

ANNAMOOKA, one of the Friendly Islands, in the Polynesian group of the South Sea. It was discovered by Tasman, a Dutch navigator, in 1643; and visited by Captain Cook in 1774 and 1777; by Captain Bligh in 1787, and Cap- tain Edwards in 1791. It is well cultivated in many places. The plantations of yams and plantains are extensive and often enclosed with neat fences of reeds. The bread fruit and cocoa trees are interspersed with little order, but gene- rally near the habitations of the natives ; and the other parts of the island, especially towards the sea, are covered with trees and bushes of a luxu- riant growth. The inhabitants are friendly and hospitable, but addicted, like most barbarous tribes, to pilfering from their European visitors. Annamooka is of a triangular form, from ten to

twelve miles round, and of a similar character and productions with the whole group of the FRIENDLY ISLANDS, which see. In the centre is a large salt-water lake. The shores of the island are environed with sand-banks and islets ; but ships, in passing, generally call for wood, of which it contains a great abundance. There is one tree called by the natives Faitanoo, a spe- cies of pepper, so inflammatory to the eyes and any part of the body with which it comes in con- tact, that the most violent effects have frequently been produced by the attempting to cut it down. The inhabitants of this island are of a more licen- tious disposition than those of the rest of the group: cutaneous disorders abound, and self- mutilation is practised in cases of death or cala- mity to an unusual degree. Long, about 174°0′ W., lat. 20° 0′ S.

ANNAN, a river of Scotland, which rises about four miles north of Moffat, in a remarkable hill in the county of Peebles, which also gives rise to the

Tweed, the Clyde, and the Evan, and, after a course of forty miles through Dumfrieshire, falls into the Solway Frith. It abounds with salmon from thirty to forty pounds weight, trouts, eels, roaches, &c. and a peculiar species of spotted eels called rampars, which, it is said, will attack both men and cattle when in the water.

ANNAN, the capital of Annandale, in Scotland, and situated on the river of that name. This place is a royal borough, and has some trade in wine, corn, and timber. Vessels of about 250 tons can come within half a mile of the town ; and of sixty as high as the bridge, which consists of five arches. A fabric for carding and spin- ning cotton has succeeded here, and the popula- tion is upon the increase. Here was formerly a castle, which was built by the Braces after they became lords of Annandale. It sends a member to parliament in conjunction with Dumfries, Kircudbright, Lochmaben, and Sanquhar. Lon. 3° 4′ W., lat. 55° 0′ N.

ANNAND (William), dean of Edinburgh, was born in 1633, and died in 1689. He wrote, 1. Fides Catholica, quarto, London, 1661. 2. Pa- nem Quotidianum, in Defence of the Book of Common Prayer, quarto, 1661. 3. Pater Noster, a Treatise on the Lord's Prayer, &c.

ANNANDALE, a district of Dumfries, Scot- land, of which Lochmaben castle was formerly the chief fortalice. It is a fertile vale, twenty- four miles long, and about fourteen miles broad. From its vicinity to the English border, the greatest part of it was, until a recent period, overrun by depredators of all kinds, unculti- vated and common ; but within the last forty years the wastes and commons have been divided and brought into culture. Annandale formed a part of the Roman province of Valentin; and Severus's wall ending here, it abounds with Roman stations and antiquities. The camps at Pirrens in Middlebie, and on the hill of Bruns- wick, are entire ; and the traces and remains of a military road are visible in different parts of the country. The ruins of the house or castle of Auchincass, in the neighbourhood of Moffat, once the seat of that potent baron Thomas Ran- dolph, earl of Murray, lord of Anuandale, and regent of Scotland, in the minority of David II

covers above an acre of ground, and conveys an idea of the plan and strength of the building : and the ancient castle of Comlongan formerly be-

longing to the Murrays, earls of Annandale, is still in a tolerable state of preservation ; but most of the other fortresses are sank into decay.

ANNAPOLIS, the chief town of Maryland in North America. St. Mary's was once the capital of this state ; and the town of Annapolis was known by the name of Severn, and so called after the river on which it stands. It received its present name in 1694, when it was made a port town, and the residence of a collector and naval officer. It is at present a small but thriving city, being very advantageously situated on the borders of the Chesapeake bay. The State- house is in the centre of the town, from which well-built streets branch off in all directions. It is distant thirty miles south of Baltimore, and thirty-two east by north of Washington. Popu- lation about 2000.

ANNAPOLIS River, in Nova Scotia, North America, a small stream rising amongst the head waters which principally pass into the basin of Minas : Annapolis River takes its course into the bay of Fundy, through a basin called after its own name. It is navigable ten miles for ships of any burden, and about five miles further for vessels of 100 tons ; the tide flows up it about thirty miles, and boats reach within twenty miles of Horton.

ANNAPOLIS County, a county of Nova Scotia, adjoins King's County, and contains the town- ships of Clare, Monckton, Wilmot, Granville, and Annapolis, of which the first two are the chief.

ANNAPOLIS REAL, or Royal, to which the name of Port Royal was given by the French, and more remotely that of Severn by the English army, who first settled here in the reign of Queen Anne, is a handsome city of Nova Scotia, stand- ing on tho shores of the Bay of Fundy, on the south side of the mouth of the River Annapolis, and commanding one of the finest natural ports in the world. The basin is large enough to contain several hundred ships, being two miles in length, by about one broad ; nor has it any where less than from four to five fathoms of water ; in most places six or seven ; and on one side as much as eighteen fathoms. In the centre is (Joat Island, winch, with the mouth of the harbour, is frequently enveloped in fogs, a cir- cumstance which renders the latter at some pe- riods of tin1 year very difficult to e.n'er with safety. The- city is regularly fortified and incapable of attack, except from bombardment ; many hand- some public offices and private houses meet the eye, Imt the place has never flourished as a com- mercial eiiti< pot, and is not much enlarged since it- first establishment in the reign of Queen Anne. The complement of the uarrisoa is about 100 men. The French attacked ;md took this place by an expedition from Santa Cni/. in the year loO."><, when they made it 'the very Dunkirk of Amenca,' siyˆ AUedo, 'serving as an asylum lor privateeis and cruisers to the ruin of com- mcru-and the ioheiic-.' The fact is, they en-

deavoured to t slablish it as a principal port for the whale-fishery of the neii;!;b, Hiring seal;. It

was soon, however, retaken by the British under colonel Nicholson. See BRITISH AMERICA.

ANNAS, or ANN ANUS, the son of Seth, high priest of the Jews, and father-in-law to Caiaphas who also enjoyed that office. Both of them were persecutors of our Lord and his apostles. Anna! was high priest eleven years in all ; but as that office was then only annual, he alternately succeeded and was succeeded by his son-in-law, and four of his sons, under Augustus and Tiberius.

AN NAT (Francis), a French Jesuit, and con- fessor to Louis XIV. was born in 1590. His writings are numerous in the Latin and French languages. He distinguished himself parti- cularly against the provincial letters of M. Pascal. He died at Paris in 1670. His works have been collected in three volumes folio.

ANNATS, in ecclesiastical history, were first ex- acted by Antonius,bp.of Ephesus from all bishops consecrated by him, proportionately to the annual revenue oftheirsees. The council of Ephesus, in 400, condemned this exaction. The time when an- nats were first introduced into Europe is no known ; some refer it to the pontificate of Alexan- der IV. ; others to that of John XXII. who, in the first year of his papacy, obtained a year's revenue of all the cathedral benefices. Clement V. was the first pope, who imposed annats on Eng- land. Matthew Paris, in his History of England for 746, relates, that the archb. of Canterbury, in virtue of a grant of the pope, received annats of all the benefices in England. Among the laws of king Ina, who began his reign in 712, there is an order for the payment of them. In after times, the holy see took the annats from the bishops and archbishops, and appropriated them to themselves ; but the parliament under Henry VIII. gave them to the crown, and queen Anne restored them to the church, by appropriating them to the augmentation of poor livings.*

ANNE, queen of Great Britain, second daughter of James II. by his first wife lady Anne Hyde, daughter of the earl of Clarendon, was born in 1664. In 1683 she married prince George of Denmark, jy whom she had several children, but they all died young. Upon the invasion of England by the prince of Orange, and the retreat of the king, prince George, who was under the influence of lord Churchill, (afterwards duke of Marlborough,) with some other persons of distinction, joined the camp of the advancing prince. When this news reached London, the princess Anne, dreading the king's displeasure, withdrew herself, in com- pany with the bishop of London and lady Churchill, to Nottingham. The intelligence of her flight

was the occasion of great distress to her father. ‘ God help me,’ cried he, in the ex- tremity of his agony; ‘ my own children have forsaken me! ‘ Upon her disappearance, so vio lent were the prejudices that prevailed, that James was thought to have put her to death; and if the truth had not been seasonably disco vered, the populace, and even the king’s guards themselves, might have been engaged, in revenge, to commence a massacre of the priests and ca- tholics. When the settlement of the crown, in 1689, on the prince and princess of Orange

took place, it was enacted that the princess of Denmark should succeed after the death of the prince and princess of Orange. In 1702 she ascended the throne, and her reign was a conti- nued blaze of public glory. Though naturally a feeble character, and consequently unfit to act decidedly for herself, she was fortunate in having some of the ablest statesmen in the world. The domineering power of the French was com- pletely subdued by the valour of her troops, commanded by the duke of Marlborough ; and an end put to a tedious war by the peace of Utrecht in 1713. But one of the greatest and most important events of this reign was the union of the English and Scottish nations. Amidst all its prosperous events, however, much party contention prevailed during the greatest part of her reign ; and towards the close of it, her high church predilections, and her desire to provide for the re-instatement of her own, the Stuart fa- mily threatened to throw the nation into confu- sion, which was prevented by her death in 1714, in the 55ti> year of her age. Queen Anne, too much the dupe of her ministers and favour- ites, in her private character was amiable, and not without understanding ; and was sufficiently beloved by her subjects to have been commonly designated the good Queen Anne. From the number of literary characters who flourished at this period, it has been styled the Augustan age of Britain.

ANNE OF AUSTRIA, queen of France, was the daughter of Philip III. king of Spain, and in 1615 married Louis XIII. On her cousin’s death, his son being under age, she became sole regent of France during the minority. She, however, brought upon herself the contempt and hatred of the nation, by her bound- less confidence in cardinal Mazarine, and was forced to flee from Paris. In a little time matters were accommodated ; and when her son took the reins of government into his own hands, in 1661, she gave up all concern with public affairs, and spent the remainder of her life in retirement. She died in 1666.

ANNE OF BEAUJEU, daughter of Louis XL king of France, was married to

the duke of Bourbon, and during the minority of her brother Charles VIII. was appointed regent. She was an active and enterprising princess. She died in 1522.

ANNE OF CLEVES, the wife of Henry VIH. king of England, was the daughter of John III. duke of Cleves. A portrait of her, drawn by Holbein, having been shown to the English mo- narch by Thomas Lord Cromwell, he demanded her in marriage ; but it was not long before he was disgusted with the ‘ Flanders Mare,’ as he con- temptuously called hei, and a divorce ensued; when Anne, without seeming much disconcerted, returned to her own country, where she died in

1557.

ANNE’S DAY, St. a festival of the church, ce- lebrated by the Latins on the 26th of July, and by the Greeks on the 9th of December, in honour of Anna the mother of the Virgin Mary.

ANNEAL’, v. \ Ang. Sax. Anjelan. To heat

ANNEAL’ING. J in order to produce a proper temper ; applied to metal and glass.

Assub, he saith, thilkc same,

The whiche in sondrie place is found

Whan it is fall downe to grounde,

So as the fire it hath aiieled,

Like vnto slime, whiche is congealed.

Gotcer, Con. A. book vni.

It is much suspected aneyling of glass, especially of yellow, is lost in our age as to the perfection thereof. Fuller’s Worthies, Kent.

But when thou dost anneal in glass thy story,

then the light and glory

More rev’rend grows, and more doth win, Which else shews wat’rish, bleak, and thin.

Herb.

When you purpose to anneal, take a plate of iron

made fit for the oven ; or take a blue stone, which

being made fit for the oven, lay it upon the cross bars

of iron. Peacltam.

Which her own inward symmetry reveal 'd,

And like a picture shone in glass anneal'd.

Dryden.

ANNEALING OF GLASS, by the workmen called nealing, consists in placing the bottles, &c. whilst hot, in a kind of oven or furnace, where they are suffered to cool gradually ; they would otherwise be too brittle for use. Metals are rendered hard and brittle by hammering : they are therefore made red hot, in order to recover their malleability ; and this is called nealing. — The difference between unannealed and annealed glass, with respect to brittleness, is very remark- able. When an unannealed glass vessel is broken, it often flies into a small powder, with a violence seemingly very un pro portioned to the stroke it has received. In general, it is in greater danger of breaking from a very slight stroke than from one of some considerable force. One of those vessels will often resist the effects of a pistol bullet dropped into it from the height of two or three feet ; yet a grain of sand falling into it will make it burst into small fragments. This takes place sometimes immediately on dropping the sand into it ; but often the vessel will stand for several minutes after, seemingly secure ; and then, without any new injury, it will fly to pieces. If the vessel be very thin, it does not break in this manner, but seems to possess all the properties of annealed glass. The same phenomena are still more strikingly seen in glass-drops or tears : they are globular at one end, and taper to a small tail at the other ; they are the drops which fall from the melted mass of glass on the rods on which the bottles are made, and fall into the tubs of water which are used in the work : the greater part of them burst immediately in the water. When those that remain entire are examined, they discover all the properties of unannealed glass in the highest degree. They will bear a smart stroke on the thick end without breaking ; but if the small tail be broken, they burst into powder with a loud explosion. They appear to burst with more violence, and the powder is smaller in an exhausted receiver than in the open air. When they are annealed, they lose those properties. Glass is one of those bodies which increase in bulk when passing from a fluid to a solid state. If allowed to crystallise regularly, the particles are so arranged that it has a fibrous texture : it is elastic, and susceptible of long-

continued vibrations; but when a mass of melted glass is suddenly exposed to the cold, the surface

crystallises, and forms a solid shell round the interior fluid parts ; this prevents them from ex- panding when they become solid. They, there- fore, have not the opportunity of a regular crys- tallisation; but are compressed together with little mutual cohesion : on the contrary they press outward to occupy more space, but are prevented by the external crust. In consequence of the effort of expansion in the internal parts, the greater number of glass drops burst in cooling ; and those which remain entire are not regularly crystallised. A smart stroke upon them com- municates a vibration to the whole mass, which is nearly synchronous in every part ; and there- fore the effort of expansion has little more effect than if the body were at rest ; but the small tail and the surface only are regularly crystallised. If the tail be broken, this communicates a vibra- tion along the crystallised surface, without reach- ing the internal parts. By this they are allowed some expansion ; and, overcoming the cohesion of the thin outer shell, they burst it and are dis- persed in powder. In an unannealed glass vessel the same thing takes place. Sometimes the vibration may continue for a considerable time before the internal parts overcome the resistance. If the vessel be very thin the regular crystallisation extends through the whole thickness ; or at least the quality of compressed matter in the middle is so considerable as to be incapable of bursting the external plate. By the process of annealing the glass is kept for some time in a state ap- proaching to fluidity ; the heat increases the bulk of tht' crystallised part, and renders it so soft, that the internal parts have the opportunity of expand- ing and forming a regular crystallisation.

A.\ .\ K A r i M ; OF 1 uo N . — A similar process is used for rendering kettles and other vessels of cast iron less brittle. The greater number of metals diminish in bulk when they pass from a thud to 11 solid stale; iron, on the contrary, ex- pands. When cast iron is broken it has the appearance of being composed of grains ; forged or bar iron seems to consist of plates. Forged iron lias long been procured, by placing a mass of ca«t iron under laru'e hammers, and making it undergo violent, and repeated compression. A process is now used for converting cast iron into forced, by heat alone. The cast iron is pkieed in an air furnace, and kept for several hours in ;i decree of heat, by which it is brought mar to a fluid slate. It is then allowed to cool unulually, and is loiind to be converted into forced iron. This process is conducted under a patent ; although, it Reaumur's experiments upon cast iron be consulted, il will appear not to be a in w discovery. Hy

these experiments it is ascertained that it ca-t iron be exposed for any length "t time to a he;st considerably below its me!tm_; point, the texture and properties arc not changed; but 11 it be kept in a heat near the nieltm- pi'int, the suri'ace soon becomes lamel- lated like foiled iron; and the lamcllatcd M rue! u iv extend-; i'.irthui mtn the m:is< in pro- portion In the !ell;:t';l of lime 111 which it is expn.vjd In that de.nve of heat. When it is continued lor :i siuiic-n nt time, and then allowed !o cool •.. i:idr. di\ , it i-. lipimd to possess the la- ;nejl,;ted structure thiou;.;liou1 Ca-t iron, then,

is brittle, because it has not had the opportunity of crystallising regularly. When it is exposed to cold while fluid, the surface becoming solid prevents the inner parts from expanding and arranging themselves into regular crystals. When cast iron is brought near to the melting point, and continued for a sufficient length of time in that degree of heat, the particles have the oppor- tunity of arranging themselves into that form of crystals by which forged iron is distinguished, and by which it possesses cohesion and all its properties. There appears, therefore, to be no other essential difference between forged and cast iron, except what arises from the crystallisa- tion. Cast iron is indeed often not sufficiently purified from other substances which are mixed with the calx. It appears also to contain a con- siderable quantity of calx unreduced ; for during the process for converting it into forged iron by heat alone, a pale flame rises from the metal till near the end of the process. This is owing to fixed air which the heat forces off from the calx. The expulsion of this air reduces the calx, and thereby frees the metal from that injurious mixture. That this explanation of the annealing of iron is probable appears also from the well- known fact of forged iron being incomparably more difficult of fusion than cast iron. A piece of forged iron requires a violent heat to melt it ; but when it is reduced to a small powder, it melts in a much lower degree of heat. Iron diminishes in bulk when it passes into a fluid state, while most other metals increase in volume. The expansion which heat occasions to bring them to their melting point, will be favourable to their fluidity, by gradually bringing the par- ticles to the same state of separation in which they are when the mass is fluid ; but the expansion of iron by heat removes it farther from that state, and keeps it in the state which is favour- able to the continuance of it in a crystallised form. It will not melt till the heat expand it so much that the cohesion of crystallisation be overcome. When it is reduced to a minute powder before it be exposed to the heat, it melts sooner. The crystals having been destroyed, that cohesion has no effect in preventing it. from passing into a state of fluidity. Upon the same principles may be explained the almost peculiar property of welding possessed by iron, and the conversion of forged iron into steel.

ANNEALING OF PLATINA. — The principles of annealing might perhaps also be applied to pla- tina, a metal which has lately gained much

attention. It possesses some of the properties of iron, but is more difficult of fusion than that metal. It is susceptible of being welded. The natural grains of it can scarcely be melted in the focus of the most powerful burning glass ; but when it is dissolved in aqua regia, and precipi- tated by the vegetable alkali, it has been melted in small globules by the blow-pipe. When precipitated by sal ammoniac, it has been melted in a considerable mass in the heat of a furnace ; but it is said to be hard and brittle. Many attempts have been made to procure a mass of it in a malleable state, but without success.

ANNEBAUT, a market town of Upper Nor- mandy, France, with the title of marquisate, in-

eluded in the department of the Eure, arron- disscment of Pont Audemer. It is seated on the river Rille, six miles south-east of Pont Aude- mer. Inhabitants about 500.

ANNECY, a city of France, the capital of the Savoy part of the duchy of Genevois. It is si- tuated on the road between Geneva and Cham- berry, about thirty miles from the former, in a delightful country, at the extremity of the lake of the same name. The canal of Thioux runs through the town, in its passage from the lake to the river Sier. Population 3440. Lon. 5° 57′ E., lat. 45° 56′ N.

ANNECY, a lake in the heart of the Genevois, in Savoy, about twelve miles in length, and two in breadth. It is very deep and cold, being formed of the melted snow from the surrounding mountains.

ANNECY LE VIEUX, a village in Savoy, on the site of an ancient town of that name, and one mile and a half north-east of the new town.

ANNESLEY (Samuel), a non-conformist di- vine, born in Cumberland in 1620. He was the grandfather by the mother's side, of the famous John Wesley, founder of the Methodists, and was educated at Queen's college, Oxford. His vehemence against the crown and the church procured for him a presentation to the vicarage of St. Giles, Cripplegate ; but from this he was ejected, in 1662, for nonconformity. He died in 1696, aged 76. Some of his sermons were printed. ANNET or ANNEY, one of the Scilly Isles, a mile from St. Agnes. It is uninhabited, but at low water the foundations of ruined habitations are visible, which are supposed to have been de- stroyed by the sea. There are some Druidical relics upon it.

ANNEX', v. & n.~\ Annecto, annexum; ad, ANNEX'ARY, I necto ; to join one thing ANNEXATION, > to another by a knot, or ANN EX'ION, V by

knitting, or by hooking

ANNEX'MENT. J on. To fasten additionally ; to unite to.

Perchaunce there bee manye that are desirous of dignitie, but for al that, thei weigh not with theselfes, wh at carke and care dignitie hath annexed vnto it.

Udall, 1 Timothie, chap. iii. If loue be well searched and sought, It is a sicknesse of the thought Annexed and knedde betwixt tweine, With male and female with o cheine. Chaucer. The Romaunt of the Rose, f. 138. c. 4. Where countries are annexed only by acts of state and submission, such submissions are commonly grounded upon fear, which is no good author of con- tinuance ; besides the quarrels and revolts which do ensue upon conditional and articulate subjections.

Bacon's Essays.

How annexations or benefices first came into the church, whether by the prince's authority or the pope's licence, is a very great dispute.

Ayliffe's Parergon.

Majesty

Dies not alone, but like a gulf doth draw What's near it with it. It's a massy wheel Fix'd on the summit of the highest mount ; To whose huge spokes ten thousand lesser things Are mortis'd and adjoined ; which when it falls, Each small annexment, jetty eonsequence, Attends the boisterous ruin.

Shaksp. Hamlet, act iii. sc. 8.

I omit to speak of the habitual intemperance wbich is too commonly annexed to festival and delicious tables, where there is no other measure or restraint upon the appetite but its fulness and satiety, and when it cannot or dare not eat more.

Jeremy Taylor.

It is necessary to engage the fears of men, by the annexation of such penalties as will over-balance temporal pleasure. Rogers.

ANNEXATION, in law, the uniting of lands or rents to the crown.

ANNI'HILATE, v. & adj.ˆAd : nihilum,

ANNIHILATION, > to nothing. To

ANNI'HILABLE. 3 reduce to no-

thing, to deprive of existence, power, or effi- cacy.

Suche lawes made by hym as kyng Henry the sixth, had caused to be abrogated and adnichilated, he [Edward IV] agayne reuiued and renouated.

Hatt, Ed. IV. {. 226.

There is nothing more certain in nature, than that it is impossible for any body to be utterly annihilated ; as it was the work of the omnipoteacy of God to make somewhat of nothing, so it requireth the like omni- potency to turn somewhat into nothing.

Bacon's Essays.

It is impossible for any one to live in good humour and enjoy his present existence, who is apprehensive either of torment or of annihilation, of being miser- able, or of not being at all. Spectator.

Ye Gods, annihilate but space and time, and make two lovers happy '. — was a pious and passionate prayer; but just as reasonable as many of the serious wishes of grave and solemn politicians.

Burke.

ANNIHILATION. — Christians, Heathens, Jews, the Siamese, Persians, &c. have their peculiar sentiments, conjectures, not to say dreams, con- cerning annihilation ; and we find great disputes among them about the reality, the means, and ends, of annihilation. The first notions of the production of a thing from, or reduction of it to, nothing, Dr. Burnet shows, arose from the Chris- tian theology ; the words creation and annihila- tion, in the sense now given to them, having been alike unknown to the Hebrews, the Greeks, and the Latins. The ancient philosophers, in effect, den led annihilation as well as creation, resolving all the changes in the world into new modifica- tions, without supposing the production of any thing new, or the destruction of any thing old. By daily experience they saw compounds dis- solved ; and that in their dissolution nothing perished but their union or connection of parts : when in death the body and soul were separated, the man they held was gone, but that the spirit remained in its original the great soul of the world, and the body in its earth from whence it came ; these were again wrought by nature in- to new compositions, and entered new states of being which had no relation to the former. The Persian brahmins hold, that after a certain period of time, consisting of seventy-one joogs, God anni- hilates the whole existing universe, and after a certain interval a new creation

arises, to subsist seventy-one joogs more, and then to be annihi- lated in its turn. Thus they hold there have been almost an infinite number of worlds : but how many joogs have elapsed since the last crea- tion they cannot certainly tell ; only in an al- manac written in the Sanscrit language in 1670,

the world is said to be then 3,892,771 years old from the last creation. The Siamese heaven is exactly the hell of some Socinians and other Christian writers ; who, shocked with the horri- ble prospect of eternal torments, have taken re- fuge in the system of annihilation. It is counte- nanced, they say, by the words of Scripture ; for death, destruction, and perishing, whereby the punishment of the wicked is most frequently ex- pressed, do most properly import annihilation and an utter end of being. To this Tillotson answers, that these words, as well as those cor- responding to them in other languages, are often used, both in Scripture and other writings, to signify a state of great misery and suffering, without the utter extinction of the miserable. Thus God is said in Scripture to briug destruc- tion on a nation when he sends judgments upon them, but without exterminating or making an end of them. So in other languages it is frequent, oy perishing, to express a person's being made miserable ; as in that known passage in Tiberius's letter to the Roman senate: Ita me dii dese- que omnes pejus perdant, quam hodie perire me sentio. As to the word death, a state of misery, which is as bad or worse than death, may pro- perly enough be called by that name ; and thus the punishment of wicked men after the day of judgment is, in the book of Revelations, fre- quently called the second death. Some Chris- tian writers contend, that the most terrible tor- ments will be inflicted hereafter on sinners for a long time, and after that suppose that there shall be an utter end of their being. Irenxus appears to have been of this opinion. But Tillemont, Petit, Didier, and others, endeavour to defend Irenoais from this imputation, as being too fa- vourable to the wicked. It has been much dis- puted among divines, whether, at the consum- mation of all things, this earth is to be annihi- lated, or only purified and tilted for the habita- tion of some new order of beings. Gerard in his Common Places, and Hakewil in his Apology, contend earnestly for a total abolition or annihi- lation. Ray, Cahnet, and others, think the sys- tem of renovation or restitution more probable, and more consonant to Scripture, reason, and in- finite mercy. The fathers who have treated on the question are divided ; some holding that the universe shall not be annihilated, but only its external i'aee changed ; others asserting that the substance of it shall be destroyed. The senti- ments of mankind have differed very widely as to the possibility and impossibility of annihilation.

According to some, nothing so difficult ; it re- quires the infinite power of the Creator to effect it : sonic go further, and seem to put it out of the]io \cr of (.od himself! According to others, there is nothing so easy : existence is a state of violence; all things are continually endeavour- ing to return to their primitive nothing; annihi- lation requires no power at all; it will accom- plNi itself ; nay, what is more, it requires an in- lii.ih: power tu prevent it. Many authors consi- der preservation a continual re-production of a thinu, which, subsisting no longer of itself, would every moment return into nothing. Gassendi on the contrary asseits, that the world may indeed '? annihilated ! > y the same power which first

created it, but that to continue it there is no oc- casion for any power of preservation. Some divines, of which number was the learned bishop King, hold annihilation for the greatest of all evils, worse than even the utmost torments of a future world ; while others, with some of the eastern philosophers, consider it as the ultimate pitch of happiness ! that sovereign good, that absolute beatitude, so long vainly sought for by the philosophers ! The above prelate proposes it as a question, Whether suffering eternal tor- ments be a greater evil than not existing? He thinks it highly probable that the heirs of future misery, while feeling their own torments in the most exquisite degree, will rather choose to be, and to be what they are, than not to be at all. Mr Bayle endeavours to refute him on this head ; but might, one would think, have saved himself the trouble. ‘ Between the system of destruc- tion and the system of eternal misery,’ says the late Dr. Evans, in his popular Sketch of the Denomination of the Christian World, ‘ a middle hypothesis of the final destruction of the wicked (after having suffered the’ punishment due to their crimes) has been adopted more particularly by the Rev. Mr. Bourne, of Norwich ; and Mr. John Marsom, in two small volumes, of which there has been a second edition with additions. They say that the Scripture positively asserts this doctrine of destruction ; that the nature of future punishment (which the Scripture terms death) determines the meaning of the words ever- lasting, eternal, for ever, &c. as denoting endless duration ; because no law ever did or can inflict the punishment of death for a limited period ; that the punishment cannot be corrective, be- cause no man was ever put to death either to convince his judgment or to reform his conduct; that if the wicked receive a punishment appor- tioned to their crimes, their deliverance is neither to be attributed to the mercy of God nor the me- diation of Jesus Christ, but is an act of absolute justice ; and, finally, that the mediatorial king- dom of Jesus Christ will never be delivered up, since the Scripture asserts that of his kingdom there shall be no end. Those who maintain these sentiments respecting the destruction of the wicked, are accused of espousing the doctrine of annihilation ; but this accusation they repel, al- leging that, philosophically speaking, there can be no annihilation, and that destruction is the express phrase used in the New

Testament. O. this sentiment there have been many advocates distinguished for their erudition and piety.'

ANNI NUBILES, i.e. marriageable years, in law, denotes the marriageable age of a woman, viz. after she has arrived at twelve.

ANNIVERSARY, n. & adj. } Lat. annus, ANNIVERSAR'ILY, >a year, and

AN'NIVEKSE. J verto, to turn.

Something done or observed every year at a cer- tain time ; returning with the revolution of the year.

Shall an unruverte

Be kept with ostentation to rehearse A mortal prince's birth-day, or repeat An eighty-eight or powder-plot's defeat ?

Hale on Christmas Day.

The heaven whirled about with admirable celerity, most constantly finishing its anniversary vicissitudes.

Ray.

They deny giving any worship to a creature, as in- consistent with Christianity ; but confess the honour and esteem for the martyrs, which they expressed by keeping their anniversary days, and recommending their example. StUUngfleet.

ANNIUS of Yiterbo, or John Nanni, a Do- minican friar, born in 1432, and highly distin- guished for his learning. He was made master of the sacred palace by pope Alexander VI., and died, as it was suspected, of poison, at the insti- gation of Caesar Borgia in 1502. He is princi- pally remarkable for his ingenuity as an impos- tor, having employed his leisure in the con- struction of fragments, which he palmed on the world as the remains of several ancient writers, in seventeen Books of Antiquities. The first edition of this work, dedicated to Ferdinand and Isabella, was printed at Rome in 1498, and in 1552 republished in 8vo. at Antwerp. The im- position passed for some time, and evinced great ability.

ANNO DOMINI, in chronology (abbreviated A. D.), the computation of time from the incar- nation of our Saviour, which is used as the date for all public deeds and writings in England, on which account it is called the ‘ vulgar era.’ It is generally allowed to be three years later than the real time of our Saviour’s incarnation.

ANNOBON, a small island of Africa, on the coast of Loango, belonging to the Portuguese ; it is about 300 miles west of Cape Lopez. Ac- cording to Pyrard, it is about five or six French leagues in compass ; but Bandrand says it is ten leagues round. Here are two high mountains, the tops of which being continually covered with clouds, occasion frequent rains. On the south- east of the island are two rocks ; one of which is low, and upon a level with the surface of the sea, the other higher and larger ; but both dangerous in the night to shipping; but between them the channel is deep and clear. These rocks are in- habited by vast numbers of tame birds. The in- habitants of Annobon are a mixed race of Portu- guese and negroes. Lon. 5° 20′ E., lat. 1° 50° S.

ANNOISANCE, in law, the same as nui- sance.

ANNONA, in antiquity ; from annus, a year ; signified properly a year’s produce from land ; but it is also taken for the provision of corn, and whatever else was necessary for the sustenance of man ; hence annonae caritas signifies dearness of provisions, or a dear market. Cic. in Verr. 3. c. 92, annona militaris, the public allow- ance of bread, fodder, &c. ; and annonae, in the plural, the loaves themselves. Lamprid. in Sever, c. 41. ; Cod. Theodos. de Erag. Mil. Annon.

As NONA, in botany, the custard-apple ; a ge- nus of the polysynia order and polyandria class of plants, ranking in the natural method under the fifty-second order, cordunatae. The charac- ters are: CAL. a triphylous perianthium : COR. six heart-shaped petals : STAM. having scarcely any filaments ; anthers numerous sitting on the receptatulum : PIST. a roundish germen; no tyli ; the stigmata obtuse and numerous : PERI- CARP, a large roundish unilocular berry, co- vered witli a scaty bark : the SEEDS numerous.

There are eight species ; viz. 1. A. Africana, pro- ducing a smooth bluish kind of apple. 2. A. Asiatica, or purple apple, growing in Cuba in great plenty. The trees rise to the height of thirty feet or more. 3. A. cherimola, a native of Peru. 4. A. muricata, or sour-sop, rarely rising above twenty feet high, but well furnished with branches. 5. A. palustris, or water-apple. 6. A. reticulata, or custard-apple, a native of the West Indies. 7. A. squamosa, or sweet-sop, seldom higher than fifteen feet. 8. A. triloba, or North American annona, a native of the Bahama Islands, called by the

inhabitants papaw.

ANNON .E Pn-tFEcrrs, in Roman antiquity, an extraordinary magistrate, whose business it was to prevent a scarcity of provision, and to re- gulate the weight and fineness of bread.

ANNONA STRUCTOR, the steward of the mi- litary provisions among the ancient Romans.

ANNONAGE, ANNONAGIUM, a tax on corn.

ANNONARIUS, in Roman antiquity, the dis- tributor of provisions among the soldiers ; also a monopolist.

ANNONCE, in music, an introductory prelude to a plain chant, or psalm.

ANNONAY, a town of France, the head of a canton in the arrondissement of Tournon. It is seated at the confluence of the Cauce and Deume, twelve miles south-west of Vienne, and was formerly the capital of the Upper Vivarois, in Lower Languedoc. A great paper manufac- ture is carried on in this, town, which is famed for being the place where M. Montgolfier, the proprietor, first launched his air balloons. See AERONAUTICS. Beside the paper-works here, are also extensive manufactures of silk, leather, and dye-stuff. The town was in the sixteenth cen- tury the scene of frequent conflict between the Catholics and Protestants, but they now live very harmoniously together. Population about 5800.

ANNONE, a fort and town of Italy, belonging to Montferrat, on the borders of the Milanese ; seated on the Tanaro, nine miles east from Asti.

ANNOT, a small town of France, in the de- partment of the Lower Alps, the head of a canton, and contains about 1000 inhabitants.

ANNOTATING, v.~\ Ad, noto ; supposed

ANNOT A'TOR, f by Vossius to be deriv-

AXNOTA'TION, t ed from no turn, the su-

ANNOTA'TIONIST. J pine of nosco, to know. To make notes, marks, or observations.

At length hee, M. Tyndall, beethought hymselfe of Cutbert Tunstall then Byshop of London, and especially for the great commendatio of Erasmus, who in his annotations so extolleth him for his learn- ing. The WhoU Workesof Wm. TyndaO, Sfc.

Henry Savile carefully collected the best copies of books written by St. Chrysostom, from various parts of the world, and employed learned men to transcribe and make annotations on them.

Wood's Athenee Oronientet.

It might appear very improper to publish annota- tions, without the text itself whereunto they relate.

Boyle.

I have not that respect for the annotatort which they generally meet with in the world.

Felton on the Classic.*

ANNOTATION, in civil law, denotes a kind of rescript or grant of the emperor, signed with his own hand. It took its name from the note

or subscription at the bottom, which was' .in red letters.

ANNOTATION, in medicine, is the first be- ginning of a febrile paroxysm, when the patient grows chill, shudders, yawns, is drowsy, and the like.

ANNOTO, a river of Jamaica, flowing into a bay of the same name, on the north side of the island, between the mouths of the Blowing and Palmito.

ANNOTTO, in botany and dyeing, the pel- licles of the seeds of the bixa orellana, a cilici- ous shrub, from fifteen to twenty feet high, brought into Europe in red masses under the names of Annotto, Orlean, and Roucou. As commonly met with, it is moderately hard, of a brown co- lour on the outside, and a dull red within. It is with difficulty acted upon by water, and tmges the liquor only of a pale brownish-yellow colour. In rectified spirit of wine it very readily dis- solves, and communicates a high orange or yel- lowish-red. Hence it is used as an ingredient in varnishes, for giving more or less of an orange cast to the simple yellows. Alkaline salt renders it perfectly soluble in boiling water, without altering its colour. It is used for colouring cheese.

ANNOUNCE', v. } Annuncio ; ad, nuncio; ANNUN'CIATE, > to bring news to. To make ANNUNCIA'TION. j known, to inform, to de- clare

publicly, to proclaim.

Lo Sampson, which that was annunciat, By the angel, long or his nativitee : And was to God Almighty consecrat, And stodc in noblesse while he mighte see.

Chaticcr. The Monke's Tale, vol. ii. p. 139. Those, mighty Jove, mean time, thy glorious care, Who model nations, publish laws, announce Or life or death ; and found or change the empire.

Prior. Hymn of Callimachus, Of tho Messiah I have heard foretold By all the prophets ; of thy birth at length Announced by Gabriel with the first I knew.

Milton.

We might with as much reason doubt whether the sun was intended to enlighten the earth, as whether he who has framed the human mind intended to an- nounce righteousness to mankind as a law. Blair.

ANNOY', v. & n. ~\ Derived by successive ANNOY'ANCE, ˆcorruptions, and through ANXOY'ITI., (various mediums, from the

ANNOY'OIX J Latin nocerc, to hurt. To

hurt, harm, vox, discompose.

And bo Romaynes beb uin/ed of here trauail so sore,

Of perel on sc, & eke on lond, bat heo mil come her

no mure.]{. Gloucester, p. 100.

But ccrtes ye han sodeinly cleped to your conseil,

a grct multitude of puple ful chargeant & ful anoy-

»us for to here.

Cfmitcer. T.ilc of IMibcnts, vol. ii. p, 94 But the cheer of the Lord is on men that douen yuelis, and who is il thai schal utmye you if ye ben soureis and loureis of goodnesse.

Wiclif. Peter i. c. 3. Then is your careless courasre accoy'd, \ our careful herds with cold be annoy'd.

Xpcnscr. S/i,'/,. KjL Feb. 47. No other noise, nor people's troublous cries,

A:> stjll are v.unt to uniioi/ the vailed town,

Might there be heard ; but careless quiet lies Wrapt in eternal silence far from enemies.

Spenser.

Nothing is so sovereign -which being prevented may not annoy instead of benefit jig us.

Hall's Contemplations.

Sleep, Richmond, sleep in peace, and wake in joy j Good angels guard thee from the boar's annoy.

Shakspeare.

All pain and joy is in their way ; The things we fear bring less annoy Than fear, and hope brings greater joy ; But in themselves they cannot stay.

Donne.

What then remains, but, after past annoy, To take the good vicissitude of joy ? Dryden. Nor stood unmindful Abdiel to annoy The atheist crew, but with redoubled blow Ariel and Arioch, and the violence Of Ramiel, scorch'd and blasted overthrew.

Milton.

Where houses thick, and sewers, annoy the air, Forth issuing on a summer's morn to breathe Among the pleasant villages and farms Adjoin'd, from each thing met conceives delight.

Id,

Crows, ravens, rooks, and magpies, are great an- noyances to com. Mortimer. From labour health, from health contentment springs' Contentment opes the source of every joy. He envied not, he never thought of kings, Nor from those appetites sustained annoy.

Beattie't Minstrel

O shun the annoyance of the bustling throng, That haunt with zealous turbulence the great ; There coward Office boasts unpunish'd wrong, And sneaks secure in insolence of state. Id

ANNUA PENSIONS, a writ formerly issued from the king to an abbot or

prior, demanding an annual pension due for his chaplains.

AN'NUAL, n. & udj.~) Annuus, from annus, AN'NUALLY, j a year. Yearly, hap-

AN'NUARY, I pening every year :

ANNUITANT, {Annual sometimes sig-

ANNU'ITY, I nifies that which lasts

ANNU'ELLER. J only a year, particular-

ly applied to plants which do not generally live more than a year.

There must be masses, dyrges, ther muste be anu- aries bead me.

Bale's Image of both Churches, p. 91. Get all the town to help that will be hired, Their pains I'll turn to annual holiday, If it shall chance, but one bring word of her.

Beau, and Fletch. Love's Pilgrimage, act v. The dying in the winter of the roots of plants that are annual, seemeth to be caused by the over-expence of the sap; which being prevented, they will super- annuate if they stand warm. Bacon. Every year may in some sense be said to be an annual plant ; both leaf, flower, and fruit proceeding from the coat, that was superinduced over the wood the last year. Ray. He was generally known to be the son of one earl, and brother to another ; who supplied his expence beyond what his annuity from his. father would bear.

Clarendon.

By two drachms they thought it sufficient to sig- nify a heart ; because the heart at one year weighet two drachms, that is, a quarter of an ounce; anj unto fifty years annually encreaseth the weight of one drachm. Brown's Vulgar Errors,

Ere the progressive course of restless age Performs three thousand timrs its annual sta,

ANNUITIES,

May not our power and learning be suppressed, And hearts and empire learn to travel west.

Prior's Solomon, book i.

The whole strength of a nation is the utmost that i prince can raise annually from his subjects.

Swift.

Supply anew

With annuary cloaks the wand'ring Jew.

John Hall's Poems.

An annuity is a thing very distinct from a rent- charge, with which it is frequently confounded : a rent-charge being a burden imposed upon and issu- ing out of lands ; whereas an annuity is a yearly sum chargeable only upon the person of the grantor.

Blackstone's Commentaries.

ANNUAL PLANTS, in botany, or simply an- nuals, are such as only come up in spring, and die in autumn ; and therefore must be renewed every year.

ANNUAL RENT is used, in Scots law, to denote the interest due for a sum of money to a credi- tor, and was the original method of burdening lands with a yearly payment for the loan of money, before the taking of interest was allowed by statute.

ANN U ALIA, in ecclesiastical affairs, 1. Yearly oblations anciently made by the relations of de- ceased persons on the day of their death, and on which mass was celebrated with great solemnity : 2. The priest's salary for celebrating mass an- nually.

ANNLEL OF NORWAY, of whicn mention is made in the acts of parliament of king James III. was an annual payment of 100 marks sterling, which the kings of Scotland were obliged to pay to Norway. It was first established in 1266; in consideration whereof the Norwegians renounced all title to the succession of the isles of Scotland, and paid till the year 1468, when, with all its arrears, it was renounced in the contract of mar- riage between king James III. and Margaret daughter of Christian I. king of Norway, Den- mark, and Sweden.

ANNUENTES MUSCULI ; from annuere, to nod, in anatomy ; a pair of transverse muscles at the root of the vertebrae of the back, called also recti interni minores.

ANNUITIES.

ANNUITIES, if in strict propriety of language they cannot be called a science, being only a branch of practical arithmetic, or rather of algebra, founded upon probabilities drawn from facts, yet are of such acknowledged importance in the present state of society, entering largely into our habits as a commercial, and our happiness as a domestic, nation, that they have employed the pens of many eminent calculators, and have been treated of in connection with the purest sciences.

DEFINITION AND DIVISIONS OF ANNUITIES.

Annuities imply any periodical income, arising from money lent, or from houses, lands, salaries, pensions, &c. payable from time to time, either annually, or at other intervals of time. They may be divided into such as are certain, and such as depend on some contingency, as the con- tinuance of a life, &c. Annuities are also divided into annuities in possession, and annuities in re- version ; the former meaning such as have com- menced ; and the latter such as will not commence till some particular event has occurred, or till some given period of time has elapsed. Annui- ties may be farther considered as payable yearly, or half-yearly, or quarterly, &c. And annuities may be supposed to be improved, either in the way of simple, or compound interest. The last of these hypotheses, being the most equitable both for seller and buyer, is commonly assumed. But the most general and important division of ihis subject is into annuities certain or contingent : and the latter has been applied principally lo the contingency of life : we therefore treat in this article of certain annuities, and refer the reader forward to ASSURANCE and to LIFE ANNUITIES ior the treatment of all those parts of this subject 1 hid1 reˆt on contingencies.

On the subject of certain annuities let the reader bear in mind the following preliminary data: —

*If the rate is 5 per cent., £l improved at simple interest during one year, will amount to £l-05 ; and the same sum in the second year will be augmented in the same ratio of 1 to 1-05 ; the amount then will therefore be 1-05 X 1‘05, or (1-05)2 — 1-1025. In this manner it appears that the last amount, improved at interest during the third year, will be increased to (1-05)3 =: 1-157623 ; the fourth year it will be (1-05)4 ; the fifth (1.05)5, and so on ; the amount at the end of any number of years being always determined, by raising the number which ex- presses the amount at the end of the first yttir, to the power of which the exponent is the number of years. So that when the rate of interest is 5 per cent., £l improved at compound interest, will in seven years, amount to (1-05)7, and in twenty-one years to (i-05)21. But if the rate of interest were only 3 per cent., these amounts would only be (1.03)7, and (1-03)*1 respectively.*

The present value of £l. to be received cer- tainly at the end of any assigned term, is such a less sum, as, being improved at compound in- terest during the term, will just amount to one pound. It must therefore be less than ,£l, in the same ratio as £l is less than its amount in that time ; but in three years, at 5 per cent., £l. will amount to £(1-05)3 (1). And (V05)3 :!::!:

so that

— 0-863838

(1.05)3′ w (1.05)3~ 1-157625

is the present value of £l to be received at the

expiration of three years.

In the same manner it appears that, at 4 per cent, interest, the present value of £l to be re- ceived at the end of a year, is- — 0-961538;

and if it were not to be received until the expi- ration of twenty-one years, its present value

would be * M — (0-961538)51 — 0-438834.

Hence it appears, that if unity be divided by the amount of £l, improved at compound in- terest during any number of years, the quotient will be the present value of £l to be received at the expiration of the term ; which may also be obtained by raising the number which expresses the present value of £l receivable at the expira- tion of a year, to the power of which the expo- nent is the number of years in the term.

When a certain sum of money is receivable annually, it is called an annuity, and its quan- tum is expressed by saying it is an annuity of so much ; thus, according as the annual payment is £l, £10, or £100, it is called an annuity of £l, of £10, or of £100. And when the annual payment does not depend upon any contingent event, but is to be made certainly, either in per- petuity or during any assigned term, it is called an annuity certain. In calculating the value of an annuity, the first payment is always considered to be made at the end of the first year from the time of the valuation, unless the contrary be ex- pressly stated.

The whole number, and part or parts of one annual payment of an

annuity, which all the future payments are worth in present money, is called the number of years purchase, the annuity is worth ; and, being the sum of the present values of all the future payments, is also the sum which, being put out and improved at compound interest, will just suffice for the payment of the annuity. Hence it follows, that when the an- nuity is £l, the number of years purchase and parts of a year is the same as the number of pounds and parts of a pound in its present value.

If each payment of an annuity of £l could be put out as it becomes due, and improved at com- pound interest (luring the remainder of the term, it is evident that at the expiration of the term, the payment then due will be but £l, having re- ceived no improvement at interest. That re- ceived one year before will lie augmented to the amount of £1 in a year; that received two years before will be augmented to the amount of £l in two years; that received three years before to the amount of £l in three years, and so on until the tirst payment, which will be augmented to the amount of £l in a term one year less than that of the annuity.

The excess of an annuity certain above the interest of the purchase-money, is the sum which, being put out at the time of each payment be- coming due, and improved at compound interest until the expiration of the term, will just amount to the purchase-money originally paid. But, while everything thing else remains the same, the li nicer the term of the annuity is, the less must its excess above the interest of the purchase- money lie, because a less annuity will suffice for raising the same sum within the term. There- fore, the proportion of that excess to the annual interest of the purchase-money, continually di- minishes as the term is extended ; and when the annuity is a perpetuity, there is no such excess.

Tl»' reason \liy the vahu of an annuity is in-

creased by that and the interest being both pay- able more than once in the year, is, that the grantor loses, and the purchaser gains, the inte- rest produced by that part of each payment, which is in excess above the interest then due upon the purchase-money, from the time of such payment being made, until the expiration of the year. Hence it is obvious, that the less this ex- cess is, that is, the longer the term of the annuity is, the less must the increase of value be.

And when the annuity is a perpetuity, its value will be the same, whether it and the inte- rest of money be both payable several times in the year, or once only. When the annuity is not payable at the same intervals at which the interest is convertible into principal, its value will depend upon the frequencies both of pay- ment and conversion ; but its investigation with- out algebra would be too long, and of too little use, to be worth prosecuting

here

OF ANNUITIES CERTAIN.

The present value of an annuity, is that sum, which, being improved at interest, will be sufficient to pay the annuity. The present value of an annuity certain, payable yearly, is calcu- lated in the following manner : Let the annuity be 1, and let r denote the amount of £t for a year, or £l increased by its interest for one year. Then, 1 being the present value of the sum r, and having to find the present value of the sum 1, it

will be, by proportion thus, r ‘, 1 \ \ 1 ; — the

present value of £l due a year hence. In like man- ner, — will be the present value of £l due two

years hence ; for r ‘. 1 ; ; — ; — . In like maiv r r

ner,— -, — , ~, &c. will be the present value of £l due at the end of 3,4,5, &c. years respectively; and in general, — will be the vaiue of £l to be received after the expiration of n years. Conse- quently the sum of all these, or — + - 5 + — j +

— + &c. continued to n terms, will be the pre~ r

sent value of all the n years annuities. And the value of the perpetuity is the sum of the series continued ad infinitum.

But this series, it is evident, is a geometrical progression, whose first term and common ratio

are each — , and the number of its terms n ; and

r

therefore the sum s of all the terms, or the pre- sent value of all the annual payments, will be

1 1 1

e — _ w _

o — . S\ •

i — 1 r — 1 r* When the annuity is a perpetuity, it is plain

that the last term — vanishes, and therefore

X — also vanishes ; and consequently the

expression becomes barely s — _ ; that is,

r — 1

ANNUITIES.

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any annuity divided by the interest of £l for one year, is the value of the perpetuity.

I f the annuity is not to be entered on immedi- ately, but after a certain number of years, as m years ; then the present value of the reversion is equal to the difference between two present values, the one for the first term of m years, and the other for the end of the last term n ; that is,

equal to the difference between—- — —

1111 1

x — and X > or = –

- *n” r — 1 r — 1 r» r — 1*

X (ˆ— — — Y Hence also the present worth of perpetuity in

™

,.4.—!

Theorem 4. M = P – P X (

EXAMPLE.

Let the rate of interest be 4 per cent, and the term 5 years ; and consequently r ~ 1‘04, n — 5, P — 25 ; and also let m zz 12, or the interest payable monthly in theoiem 1 ; then the present value of such annuity of £l a-year, for 5 years, according as it is supposed payable £l yearly, or one-half of a pound every half-year, or one-fourth of a pound every quarter, or one-twelfth of a pound every month, or one-twelfth part of a year, will be as follows : —

reversion,

1

alter m years, is, X

of £1

1

r”’

to commence

Annuities certain differ in value as they are made payable yearly, half-yearly, or quarterly. — And by proceeding as above, using the interest or amount of a half-year, or a quarter, as those for the whole year were used, the following set of theorems will arise : where r denotes, as before, the amount of £l and its interest for a year, and n the number of years, during which any annuity is to be paidˆ also P denotes the perpetuity

Y =: 25 — 25 x H — 25 — 25 X Q — 25 — 25 x

M =: 25 — 25 x

•821928 = 4-4518 •820248 = 4-4913 •819543 =: 4-5114 •818996 = 4-5251

1

r— 1′

Y denotes

r — 1

X — the

value of the annuity supposed payable yearly, H the value of the same when it is payable half- yearly, and Q the value when payable quarterly ; or universally : M the value when it is payable every m part of a year.

*Theorem 1. Y = P — P x (*)». ˆ r*

*Theorem 2. H = P — P x (—J**

Theorem 3. Q = P — P x (— —)V

Annuities may be considered as in arrears, or as forborne for any number of years ; in which case each payment is to be considered as a sum put out to interest for the remainder of the term after the time it becomes due. And

as £l due at the end of one year amounts to r at the end ot another year, and to r2 at the end of the third year, and to r3 at the end of the fourth year, and so on ; therefore, by adding always the last year's annuity, or 1, to the amounts of all the former years, the sum of all the annuities and their in- terests will be the sum of the following geometri- cal series, l+r + rs + rs+r4 to r»— ',

continued till the last term be r" — ', or till the number of terms be n, the number of years the annuity is forborne. But the sum of this gecine-

trical progression is """" which therefore is

the amount of £l annuity forborne for « years. And this quantity being multiplied by any other annuity a, instead of 1, will produce the amount of that other annuity.

TABLE I.

AMOUNT OF AN ANNUITY OF II. AT COMPOUND INTEREST.

Yrs.

at 3 per cent.

3ˆ per cent.

4 per cent.

4 J per cent.

5 per cent.

6 per cent.

1

1-00000

1-00000

1-00000

1-00000

1-00000

1-00000

2

2-03000

2-03500

2-04000

2-04500

2-05000

2-06000

3

3-09090

3-10623

3-12160

3-13703

3-15250

3-18360

4

4-18363

4-01494

4-24646

4-27819

4-31013

4-37462

5

5-30914

5-36247

5-41632

5-47071

5-52563

5.63709

6 6-46841

6-55015

6-63298

6-71689

6 80191

6-97532

7

7-66546

7-77941

7-89829

8-01915

8-14201

8-39384

8

8-89234

9-05169

9-21423

9-38001

9-54911

9-89747

9

10-15911

10-36850

10-58280

10-80211

11-02656

11-49132

10 | 11-46388

11-73139

12-00611

12-28821

12-57789

13-18079

11

12-80780

13-14199

13-48635

13-84118

14-20679

14-97164

12

14-19203

14-60196

15-02581

15-46403

15-91713

16-86994

13

15-61779

16-11303

16-62684

17-15991

17-71298

18-88214

14

17-08632

17-67699

18-29191

18-93211

19-59863

21-01507

15

18-59891

19-29568

20-02359

*20*78405*

21-57856

23-27597

16

20-15688 20-97103

21-82453

22-71934

23-65749

25-67253

17

21-76159

22-70502

23-69751

24-74171

25-84037

28-21288

18

23-41444 | 24-49969

25-64541

26-85508

28-13138

30-90565

19

25-11687

26-35718

27-61123

29-06358

30-53900

33-75909

‘ 2:> 26-87037 ‘ ‘28-27968 ! 29-77«08

31-37143

33-06595

36-78559

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ANNUITIES.

TABLE I. — Continued.

Yrs.

at 3 per cent

3j per cent.

4 per cent.

4J per cent.

5 per cent.

6 per cent.

21

28-67649

30-26947

31-96920

33-78314

35-71925

39-99273

22

30-53678

32-32890

34-24797

36-30338

38-50521

43-39229

23

32-45288

34-46041

36-61789

38-93703

41-43048

46-99583

24

34-42647

36-66653

39-08260

41-68920

44-50200

50-81558

25

36-45926

38-94986

41-64591

44-56521

47-72710

54-86541

26

38-55304

41-31310

44-31174

47-57464

51-11345

59-15638

27

40-70963

43-75906

47-08421

50-71132

54-66913

63-70577

28

42-93092

46-29063

49-96758

53-99333

58-40258

68-52811

29

45-21885

48-91080

52-96629

57-42303

62-32271

73-63980

30

47-57542

51-62268

56-98494

61-00707

‘ 66-43885

79-05819

31

50-00268

54-42947

59-32834

64.75239

70-76079

84-80168

32

52-50276

57-33450

62-70147

68-66625

75-29883

90-88978

33

55-07784

60-34121

66-20953

72-75623

80-06377

97-34316

34

57-73018

63-45315

69-85791

77-03026

85-06696

104-18375

35

50-46208

66-67401

73-65222

81-49662

90-32031

111-43478

36

63-27594

70-00760

77-59831

86-16397

95-83632

119-12087

37

66-17422

73-45787

81-70225

91-04134

101-62814

127-26812

38

69-15945

77-02889

85-97034

96-13820

107-70955

135-90421

39

72-23423

80-72491

90-40915

101-46442

114-09502

145-05846

40

75-40126

84-55028

95-02552

107-03032

120-79977

154-76197

41

78-66330

88-50954

99.82654

112-84669

127-83976

165-04768

42

82-02J20

92-60737

104-81960

118-92479

135-23175

175-95054

43

85-48389

96-84863

110-01238

125-27640

142-99334

187-50758

44

89-04841

101-23833

115-41288

131-91384

151-14301

199-75803

45

92.71986

105.78167

121-02939

138-84997

159-70016

212.74351

4(3

96-50146

110-48403

126-87057

146-09821

168-68516

226-50812

47

100-39650

115-35097

132-94539

153-67263

178-11942

241-09861

48

104-40840

120-38826

139-26321

161-58790

188-02539

256-56453

49

108-540(35

125-60185

145-83373

169-85936

198-42666

272-95840

50

112-79689

130-99791

152-66708

178-50303

209-34800

290-33590

51

117-18077

136-58284

159-77377

187-53566

220-81540

308-75606

52

121 -(39(320

142-36324

167-16472

196-97477

232-85617

328-28142

03

12(3-34708

148-34595

174-85131

206-83863

245-49897

348-97831

54

31-13750

154-53806

182-84236

217-14637

258-77392

370-91701

.-,... -.,_!

TABLE II.

THE PRESENT VALUE OF AN ANNUITY OF Ifl,

Yrs.

ill 3]),T CVIlt.

3J per cent.

4 per cent.

4g per cent.

5 per cent.

6 per cent.

1

0-97087

0-9(3618

0-96154

0-95694

0-95238

0-94340

2

1-01317

1-80966

1-88610

1-87267

1-85941

1-83339

3

2-888(31

2-80164

2-77059

2-74896

2-72325

2-67301

4

3-71710

3-137308

3-62990

3-58753

3-54595

3-46511

4-57071

4-51505

4-45182

4-38998

4-32948

42-1236

C

5-41710

5-32855

5-24214

5-15787

5-07569

4-91732

7

6-23028

(3-1 1454

6-00205

5-89270

5-78637

5-58238

8

7-01969

6-87396

6-73274

6-59589

6-46321

6-20979

o

7‘78r,l 1

7-00760

7-43533

7-26879

7-10782

6-80169

10

8-53020

8-31661

8-11090

7-91272

7-72173

7‘36009

1

0-252(32

0-00155

8-76048

8-52892

8-30541

7-88687

•i

0-05400

9-66333

9-38507

9-11858

8-86325

8-38384

3

10-65596

10-30274

9-98565

9-68285

9-39357

8-85268

-)

1 1-20(307

10-02052

10-56312

10-22283

9-89864

9-29498

5

11-03794

11-51741

11-11839

10-73955

10-37966

9-71225

ANNUITIES.

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TABLE II. — Continued.

‘ Yrs. (at 3 percent.

3g per cent.

4 per cent.

4£ per cent.

5 per cent.

’” 1

6 per cent.

16 1 12-56110

1209411

11-65230

11-23402 i 10-83777

10-10590

17

13-16612

12-65132

12-16567

11-70719

11-27407

10-47726

18

13-75351

13.18968

12-65930

12-15999

H‘68959

10-82761

19

14.32380

13-70981

13-13394

12-59329

12-08532

11-15812

20

14-87747

14.21240

13-59033

13-00794

12-46221

11-46992

21

15-41502

14-69797

14-02916

13-40472

12-82115

11-79498

22

15-93692

15-16712

14-45112

13-78442

13-16300

12-04158

23

16-44361

15-62041

14-85684

14-14777

13-48857

12-30338

24

16-93554

16.05837

15-24696

14-49548

13-79864

12-55040

25

17-41315

16.48151

15-62208

14-82821

14-02394

12-78336

26

17-87683

16.89035

15-98277

15-14661

14-37519

13-00317

27

18-32703

17-28536

16-32959

15-45130

14-64303

13-21053

28

18-76411

17-66702

16-66306

15-74287

14-89813

13-40616

29

19-18845

18-03577

16-98371

16-02182

15-14107

1359072

30

19-60044

18-39205

17-29203

16-28889

15-37245

13-76483

31

20-00043

18-73628

17-58849

16-54439

15-59281

13-92909

32

20-38877

19-06887

17-87355

16-78889

15-80268

14-08484

33

20-76579

19-39021

18-14765

17-02266

16-00255

14-23023

34

21-13184

19-70068

1841120

17-24676

16-19290

14-36814

35

21-48722

20-00066

18-66461

17-46101

16-37419

14-49825

36

21-83225

20-29049

19-90828

17-66604

16-54685

14-62099

37

22-16724

20-57053

19-14258

17-86224

16-71129

14.73678

38

22.49246

20-84109

19-36786

18-04999

16-86789

14-84602

39

22-80822

21-10250

19-58448

18-22966

17-01704

14-94907

40

23.11477

21-35507 .

19.79277

18-40158

17-15909

15-04639

41

23-41240

21-59910

19-99305

18-56611

17-29437

15-13802

42

23-70136

21-83488

20-18563

18-72355

17-42321

15-22454

43

23-98190

22-06269

20‘37079

18-87421

17-54591

15-30617

44

24-25427

22-28279

20-54884

19-01838

1766277

15-38318

45

24-51871

22-49545

20-72004

19-15635

17-77407

15-45583

46

24-77545

22-70092

20-88465

19-28837

17-88907

15-52437

47

25-02471

22-89944

21-04294

19-41471

17-98102

15-58903

48

25-26672

23-09124

21-19513

19-53561

18-07716

15-65003

49

25-50166

23-27656

21-34147

19-65130

18-16872

15-70757

50

25-72976

23-45562

21-48218

19-76201

18-25593

15-76186

51

25-95123

23-62862

21-61749

19-86795

18-33898

15-81308

52

26-16624

23-79576

21-74758

19-96933

18-41807

15-86139

53

26-37499

23-95726

21-87267

20-06634

18-49340

15-90697

54

26-57766

24.11330

21-99296

20-15918

18-56515

15-94998

THE USE OF TABLE I.

To find the amount of an annuity forborne any number of years.

Take out the amount from the first table, for the proposed years and rate of interest; then multiply it by the annuity in question , and the product will be its amount for the same number of years, and rate of interest.

And the converse to find the rate of time. Examp. 1. — To fold how much an annuity of £50

will amount to in twenty years at 3£ per cent.

compouna interest.

On the line ot twenty years, and in the column of three and a half per cent,

stands 28-27968, which is the amount of an annuity of £l for the twenty years ; and therefore 28‘27968 multiplied by 50, gives 1413-984/., or £1413 19s. 8d. for the answer.

Examp. 2. — In what time will an annuity of £20 amount to £1000 at four per cent, compound interest 1

Here the amount of £1000, divided £20 the annuity, gives fifty, the amount of £l annuity lor the same time and rate. Then the nearest tabular

number in the column of four per cent, is 49-96758, which standing on the line of twenty- eight, shows that twenty-eight years is the an- swer.

Examp. 3. — Required to find at what rate of interest an annuity of £20 will amount to£lQQO, forborne for twenty-eight years.

Here 1000 divided by twenty gives fifty as before. Then looking along the line of twenty- eight years for the nearest to this number fifty, I find 49-96758 in the column of four per cent, which is therefore the rate of interest required.

THE USE OF TABLE II.

Examp. 1. — To find the present value of an an- nuity of £50 which is to continue twenty years tit three and a half per cent.

By the table the present value of £l. for the same rate and time is 14-21240; therefore, 14-21240 X 50 = 710-62/., or £710. 12s. 4d. is the present value sought. Examp. 2. — To Jind the present value of an an- nuity of £20 to commence twenty years hence ; and then to continue for forty years, or to ter- minate fifty years hence, at four per cent in- terest.

In such cases as this, it is plain we have to find the difference between the present values of two equal annuities for the two given times ; which therefore will be effected by subtracting the ta- bular value of the one term from that of the other, and multiplying by the annuity. Thus, tabular value for 50 years 21-48218 tabular value for 10 years 8‘1 1090

the difference 13-37128 multiplied by 20

gives 267-4256 or £267. 8.s. fx/. the answer.

To the docrine of certain annuities it does not appear that any material

additions can be made. The best modern writings on the subject are, unquestionably, those of Mr. Milne and Mr. Bailey.

ANN CITIES, GOVERNMENT. Borrowing upon

annuities is one of the methods employed by

civilised governments for raising supplies. Of

tins tin ‘re are two methods ; that of borrowing

upon annuities for terms of years, and that of

borrowing upon annuities tor “lives. During the

rt-ign nt kiiu V\ illiaui and queen Anne, large

sums wen- frequently borrowed upon annuities for

terms ot years, which were sometimes longer and

sometimes shorter. In 1093 an act was passed

f’iv borrowing one million upon ;>.n annuity of

i ‘iirleen per eent., or .t’l :0,0(.<0 a year for six-

v<'ars. in lii'.il an act was passed for bor-

- ‘<• ">i!!ion upon annuities fur lives, upon

terms uhidi m Uic piv.sunt times uould appear

ver\ Lnhantageous. lint the subscription was

•i up. In the ibliowinvr year the deri-

wa> made iroud \\ borrowing upon an-

loi lives at fourteen per cent, or at little

more than -even years’ purchase. In 1695, the

persons who had purchased these annuities were

allowed to i.::dumˆe them for others of ninety-

six years, upon paying into the exchequer sixty- three pounds in the

hundred, that is, the difference of fourteen per cent, for life, and fourteen per cent, for ninety-six years, was sold for sixty-three pounds, or four years' and a half purchase. Such was the supposed instability of government, that even these terms procured few purchasers, In the reign of queen Anne, money was upon dif- ferent occasions borrowed both upon annuities for lives and upon annuities for terms of thirty- two, of eighty-nine, of ninety-eight, and of ninety- nine years. In 1719 the proprietors of annuities for thirty-two years were induced to accept in lieu of them South Sea stock to the a-nount of seven and a half years' purchase of the annui- ties, together with an additional quantity of stock equal to the arrears which happened then to be due upon them. In 1720 the greater part of the other annuities for terms of years both long and short were subscribed into the same fund. The long annuities at that time amounted to £666,421 . 8s. 3Jd. a year. On the 5th of January, 1775, the remainder of them, or what was not subscribed at that time, amounted only to £136,153. 12s. Qd. During the two wars which began in 1739, and in 1755, little money was borrowed either upon annuities for terms of years, or upon those for Kves. An annuity for ninety-eight or ninety-nine years, however, is worth nearly as much money as a perpetuity, and should, therefore, one might think, be a fund for borrowing as much. But those who, in order to make family settlements, and to pro- vide for remote futurity, buy into the public stocks, would not care to purchase into one of which the value was continually diminishing ; and such people make a considerable proportion both of the proprietors and purchasers of stock. An annuity for a long term of years therefore, though its intrinsic value may be ve^y nearly the same with that of a perpetual annuity, will not find nearly the same number of purchasers. The subscribers to a new loan, who mean generally ta sell their subscription as soon as possible, prefer greatly a perpetual annuity redeemable by parliament, to an irredeemable annuity for a long term of years of only equal amount. The value of the former may be supposed always the same, or very nearly the same ; and it makes, therefore, a more convenient transferable stock than the latter. During the two last-mentioned wars, annuities, either for terms of years or for lives, were seldom granted but as premiums to the subscribers to a new loan, over and above the redeemable annuity or interest upon the credit of which the loan was supposed to be made. They were granted, not as the proper fund upon which the money was borrowed, but as an additional encouragement to the lender. Annuities for lives have occasionally been granted in two different ways ; either upon separate lives, or upon lots of lives, which in French are called Tontines, from the name of their invento1 When annuities are granted upon separate lives, the death of every in- dividual annuitant disburdens the public revenue so far as it was affected by his annuity. When an- nuities are granted upon tontines, the liberation of the public revenue does not commence till the death of all the annuitants comprehended in onf

lot, which may sometimes consist of twenty or thirty persons, of whom the survivors succeed to the annuities of all those who die before them ; the la«>t survivor succeeding to the annuities of the whole lot. Upon the same revenue more money can be raised by tontines than by annui- ties for separate lives. An annuity with a right of survivorship, is really worth more than an equal annuity for a separate life; and from the confidence which every man naturally has in his own good fortune, the principle upon which is founded the success of all lotteries, such an an- nuity generally sells for something more that it is worth. In countries where it is usual for go- vernment to raise money by granting annuities, tontines are upon this account generally pre- ferred to annuities for separate lives. The expe- dient which will raise most money, is almost al- ways preferred to that which is likely to bring in the speediest manner the liberation of the public revenue. In France, before the late re- volution, a much greater proportion of die public debts consisted in annuities for lives than in England. According to a memoir presented by the 'parliament of Bourdeauxto the king in 1764, the whole public debt of France was estimated at 2400 million of livres ; of which the capital, (for which annuities for lives has been granted,) •was supposed to amount to 300 millions, the eighth part of the whole public debt. The annui- ties themselves were computed to amount to thirty millions a year, the fourth part of 120 millions, the supposed interest of the whole debt. It was not the different degrees of anxiety in the two govern- ments of France and England for the liberation of the revenue, which occasioned this difference in their respective modes of borrowing; it arose altogether from the different views and interests of the lenders. In the former, the money- lenders were, in general, either court bankers, farmers general, or tax gatherers, who, from a mean origin, had arisen to great riches, and who, being too1 proud to marry their equals or infe- riors, were despised by those haughty nobless, who considered themselves as their superiors, and therefore resolved to live bachelors. To such persons who had no prospect of, or care • for, posterity, nothing was more convenient than to exchange their capital for a revenue that would last just as long and no longer than they wished. But in Great Britain, the seat of government be- ing the greatest mercantile city in the world, the merchants are generally the people who advance money to government. By advancing it they do not mean to diminish, but on the contrary, to increase, their mercantile capitals; and unless they expected to sell with some profit their share in the subscription for a new loan, they never would subscribe. But if by advancing their money they were to purchase, instead of perpetual annuities, annuities for

lives only, whether their own or those of other people, they would not always be so likely to sell them with a profit. Annuities upon their own lives they would always sell with loss, because no man will give for an annuity upon the life of another whose age and state are the same with his own, the same price which he would give for one upon his own. An annuity upon the life of a third person, indeed, VOL, II.

i«, no donl't, of equal value to the buyer ap-l the seller ; but its real value begins to diminish from the moment it is granted, and continues to do so more and more as long as it subsists. It can never, therefore, make so convenient a trans- ferable stock as a perpetual annuity, of which the real value may be supposed always the same, ot very nearly the same.

ANNUL', v. Ad ; nullum (ne ullus), to no- thing. To reduce to nothing, render useless, and of no effect.

Truly the like y ban might to do good, and done it not, y* crown of worship shal be take from hem, with shame shal they be annulled.*

Chaucer. Tett. of Looe, book iii. f. 309, c. 1 . Light, the pure work, of God, to me 's extinct, And all her various objects of delight Annull'd, which might in part my grief havejeased.

Milton.

That which gives force to the law, is the authority that enacts it ; and whoever destroys this authority, does in effect annul the law. Rogert.

ANTVULAR, > Annulu$, Lat. That which is

AN'NLLARY. $ in the form of a ring.

That they might not, in bending the arm or leg, rise up, he has tied them to the bones by annular ligaments. C/ieyne.

Because continual respiration is necessary, the windpipe is made with annulary cartilages, that the sides of it may not flag and fall together. Ray.

ANNULAR CARTILAGE, the second cartilage of the larynx; called also cricoides.

ANNULAR FINGER, the fourth or ring finger.

ANNULAR LIGAMENT, a strong ligament, en- compassing the wrist after the manner of a bracelet ; also the ligament of the tarsus. The sphincter muscle of the anus is also called annu- laris from its figure.

ANNULAR PROCESS, a process of the medulla oblongata; so called because it surrounds the same much like a ring.

ANNULARIA, in entomology, a species of phalaena, a native of Germany.

ANNULARIS, a species of cerambyx, in the section callidium, according to Gmelin. Also a species of tenthredo, a native of Austria.

ANNULARIS, in ichthyology, a species of chae- todon ; the ikan batoe Jang aboe, and ikan pam- pus cambodia of Valent. Ind. &c.

ANNULATA, in entomology, a species of cassida, a native of India. Also 1. A species ot chrysomela. 2. A species of nepa. 3. A spe- cies of sphinx, according to Linnaeus; or zy- gaena according to Fabricius. 4. A species o. phryganea. 5. A species of phalrena. 6. A species of apis. 7. A species of tipula. 8. A species of con ops. 9. A species of podwia. 10. Two different species of tenthredo, described by Gmelin; one is the Linnaan species of that name, the other the mantissa of Fabricius.

ANNULATA, in conchology, a species of ostrea, found in the northern seas. Also 1 . A species ofvolnta. 2. A species of helix.

ANNULATORIUS, in entomology, a species of ichneumon, a native of Great Britain.

ANNULATUM, in conchology, a species of dentalium.

ANNULATUS, in conchology, a species of trochus, inhabiting the Indian seas. Also a shel of the turbo genus.

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ANNULATUS, in entomology, a species of curculio, a native of America. Also 1. A spe- cies of cerambyx, of the family stenocorus. 2. A Fpecies of gryllus, of the family locusta, a na- tive of America. 3. A species of cimex, a na- tive of Virginia, belonging to the family of spi- nosus. 4. Another species of cimex, in the fa- mily of reduvius. 5. A species of ichneumon, a native of Europe. 6. A species of asilus, a na- tive of India. 7. A species of culex, a natire of Germany and Denmark.

ANNULATUS, in ornithology, a species of oriolus, a native of America.

ANNULATUS, in zoology, a species of coluber. Also a species of anguis.

ANNULET ; from annul us, a little ring ; in Heraldry, a difference or mark

of distinction which the fifth brother of any family ought to bear in his coat of arms. Among the Romans it represented liberty and nobility. It also denotes strength and eternity by reason of its circular form. Annulets are also a part of the coat- armour of several families, and were anciently reputed a mark of nobility and jurisdiction, it being the custom of prelates to receive their in- vrstiture per baculun et annulum. In architec- ture, the small square members in the Doric capitals, under the quarter ground, are called an- nul ts. Annulet is also used for a narrow flat mouldmcr, common to other parts of the column ; so called because it encompasses the column.*

AN NU LOS A; from annulus, a ring or seg- ment ; a term applied by Cuvier and some other modern writers to animals whose bodies are more or less divided transversely into seg- ment. This type of animals was proposed in "lie of the last volumes of the Annales de Mu- st um, by M. G. Cuvier, and comprehends five c!;^-es; the leading characters of which are:-

Class i. Crustacea. Hranchitu or gills for respiration. l.eus for motion.

(lass 2. Myriapoda. Trachea? or air-tubes for respiration, l.eus more than eight. Head distinct from the thorax. Antenna' two.

(lass :;. Araehnides. Tracheae for respiration. I .eus eiu'ht or six. Head not distinct from the ihnrax. Antenna' none.

(lass 1. Insecta. Trachea1 for respiration. l.eus six. Head distinct from the thorax. An- iunr.e two.

(lass ."> . Vermes. Trachea1 for respiration. l.eus none. Antenna1 mine. See ZOOLOGY.

. .\i 1.OS1 S, in entomology, a species of icmii'umo;i, a n;ili\e of Kurope.

ANN I 1,1 S, a rinu', in geometry, the area of

ivhifh i- equal to the difference of the areas of

Her and inner circles ; or it. may be found

• v multiplying the sum of their diameters by the difference, and the product by 7tt."> 4.

ASM i is, in concholouy, a species of cypraa. The thorn ieuir, qiiadratum of Kumphuis ; found or the -.'non-s of Amboyna and Alexandria.

SM'irs in entomology, a species of cas-

ida, a native of Cayenne. Also a species of

J'is, ;. native of Knrnpe.

'NTNCIADA, or ANXT-NTIATA, l.A reli-

der, instituted m 1 -.v',2 by seven Floren

hants called Servites, Servants. 2. A

• -. t'"!::il, ,| !iV .loan (uieen of

France after her divorce from Louis XII. 3. A nunnery founded by a Genoese lady in 1600. 4. A friary founded by cardinal Torrecremata at Rome in 1460; the managers of which give fortunes of sixty Roman crowns to above four hundred girls, on the anniversary of the Annun- ciation. 5. The knights of the annuntiatia, a mili- tary order, instituted in 1362 by Amadeus VI. duke of Savoy, in memory of Amadeus I. who defended the isle of Rhodes against the Turks. It was at first called the order of the True Lovers Knots, in memory of a bracelet of hair pre- sented to the founder by a lady ; but upon the election of Amadeus VIII. to the pontificate, its name was changed for that of the Annunciada in 1435. The great collar of the order which the knights wear on public occasions weighs 250 crowns of gold, and the motto engraved on it is F. E. R. T. The initials were supposed to stand for the words Fortitude Ejus Rhodum Tenuit, alluding to the defence of Rhodes against the Turks by Amadeus the Grand. This how- ever was long after the house of Savoy took that device, as appears from the coins of Louis de Savoy, baron de Vaud, who died in 1301.

ANNUNCIATION ; ad, to, and nuncio, I de- clare; the tidings which the angel Gabriel brought to the Virgin Mary of the incarnation o. our Saviour. The Greeks call it tvayytXioytoc, good tidings ; and xaipiu

ANNUNCIATION DAY ; the day celebrated by the church in memory of the angel's salutation of the Blessed Virgin, solemnised with us on the 25th of March. This festival appears to be of great antiquity ; it is certain that it was ob- served before the time of the council of Trullo, in which there is a canon forbidding the cele- bration of all festivals in Lent, excepting the Lord's Day and the Feast of the Annunciation ; so that we may date its origin from the seventh century. In the Romish church on this feast the pope performs the ceremony of marrying or cloistering a certain number of maidens, who are presented to him in the church clothed in white serge, and muffled up from head to foot : an officer stands by with purses containing notes of 50 crowns for those who make choice of mar- riage,

and notes of 100 for those who choose the veil. The eastern churches celebrate it at a different season from those of the west. The Syrians call it Bascarah, search, inquiry ; and mark it in the calendar for the 1st of December. The Armenians hold it on the 5th of January ; but the Greeks in Lent. Annunciation is also a title given by the Jews to part of the ceremony of their passover, viz. that wherein they explain the origin and occasion of that solemnity. This explanation they call mm, haggada, the annun- ciation.

ANNUNCIATOR, in the Greek church, an officer whose business is to give notice of the feasts and holydays to be observed.

ANOA, in zoology, bos bubalus anoa, a va- riety of the buffalo, mentioned by Pennant. It is about the size of a sheep, living in herds and sheltering itself in caverns in the mountains. It is a native of Celebes.

ANOBIUM, in entomology, a genus of co- leopterous insects in the Fabrician system, hav-

ing four clavatc feelers; obtuse and dentated jaws ; lip entire ; and antennae filiform ; with the three extreme joints elongated, and thicker than the others. This genus includes some few insects of the Linnaean ptinus and dermestes ge- nera, and byrrhus of Geoffroy ; besides some new species not described by either.' The spe- cies contained in this genus are tessellatum, striatum, rufipes, castaneum, pertinax, boleti, molle, paniceum, abietis, planum, capense, minutum, micans, and nitidum.

ANOCHEILON, in anatomy, the upper lip.

ANOCHUS, in medicine, a stoppage of the discharge of the bowels.

ANOCTORON, in ecclesiastical history, a name used by some writers for a church. Anoc- tora properly import Roman halls, many of which were converted into churches.

ANOCYSTI, in natural history, a class of the echina marina, which have an aperture of the anus at the top of the shell. Some of these approach to a hemisphere or spheroidal figure, others flatter, and in shape somewhat resembling a shield.

ANODUS, in chemistry, a nutritious matter separated by the kidneys-

AN'ODYNE, n. & adj. A privptive, and oSvvri, pain. That which soothes or mitigates pain.

Yet durst she not too deeply probe the wound, As hoping still the nobler parts were sound : But strove with anodynes t' assuage the smart, And mildly thus her med'cine did impart.

Dryden.

Anodynes, or abaters of pain of the alimentary kind, are such things as relax the tension of the af- fected nervous fibres, as decoctions of emollient sub stances ; those things which destroy the particular acrimony which occasions the pain ; or what deadens the sensation of the brain, by procuring sleep.

Arbuthnot.

Or who in sweet vicissitude appears Of mirth and opium, ratafie and tears, The daily anodyne and nightly draught, To kill those foes to fair one's time and thought. Pope's Moral Essays.

\NODYNE ; from a privative, and oSwij, pain ; a term applied to medicines which ease pain and procure sleep. They are divided into three sorts, viz. 1. Paregorics, or such as assuage pain. 2. Hypnotics, or such as relieve by pro- curing sleep. 3. Narcotics, or such as ease the patient by stupifying him. Opiates and nar- cotics taken too frequently diminish sensation; in large doses they destroy life. In particular diseases, and in proper doses, they are excellent medicines. Some hypnotics and paregorics, as nitre, camphor, &c. procure ease and sleep by removing the offending cause. Camphor is said to be the best anodyne in nervous cases and at the decline offerers. But opium, properly ad- ministered, is the best of anodynes, excepting in cases where costiveness, a full habit, or the like, prohibit the use of it. The doses of all these medicines are generally regulated by the pulse. Anodynes should be given with great caution, and not on a full stomach, nor in drop- sies. Hemlock procures ease and sleep, with- out causing that head-ach next morning, usually complained of after taking opium. Certain

compound medicines in the shops are also pre- pared with this intention. Such is the anodyne balsam A ready way of preparing a useful, safe, and efficacious anodyne, is as follows : take half an ounce of opium, dissolve it in a gentle heat in three ounces of water, strain the solution and evaporate it to a dry substance. Grind this to powder in a glass mortar, with twice the quan- tity of loaf-sugar, and of this preparation three or four grains may be given for a dose. By dissolving the opium thus in water, we get rid not only

of its gross parts but also of its resin- ous, which are found more pernicious than the rest ; and by dividing it afterwards, and mixing it with sugar, the medicine is rendered more uniform, soluble, and miscible with animal fluids.

ANODYNE BALSAM is made of Castile soap, camphor, saffron, and spirits of wine, digested in a sand heat. It is recommended not only for procuring ease in the most racking extremi- ties of pain, but also for assisting in discharging the peccant matters that occasioned it. This balsam is much the same with the modern opo- deldoc.

ANOINT', v. ~\ Fr. oindre ; participle oint.

ANOINT'ED, /To rub with oil, or any fat or

ANOINT'ING, £ greasy substance, and by

ANOINT'MENT. J means of this ceremony to consecrate, set apart, or sanctify.

And the women as soone as it was lawfull to worke, prepared their annoyntments with all diligence.

The whole Worltes of Tyndall, $c. f. 261. c. i.

For verili eroude and pounce pilat with hethene men and peple of israel, camen togidre in this citee agensthin hooli child ihesu whom thou anoyntidist to do the thinges that thin hond and thi conseil demyden to be don.

Wiclif. The Dedis of the Apostlis.

Anointed let me be with deadly venom. Shaksp.

Thou shall have olive trees throughout all thy coasts, but thou shalt not anoint thyself with the oil ; for thine olive shall cast his fruit.

Deut. xxviii. 40.

Warm waters then in brazen caldrons borne,

Are pour'd to wash his body joint by joint,

And fragrant oils the stifien'd limbs anoint.

Dryden.

I would not see thy sister In his anointed flesh stick bearish fangs.

Shabspeare.

Our blessed Lord himself, who united in his own person the three-fold character of king, priest, and prophet, was distinguished by the name of the Messiah, which, in the Hebrew language, signifies the anointed.

ANOINTERS, a religious sect, formerly sub- sisting in some parts of England, and so called on account of their anointing all persons before they admitted them into the church. They founded this practice upon Jam. v. 14, 15.

ANOINTING is also a term used by painters. It implies their method of restoring the effect of colours, after the oil has been drained out of them, by the absorption of the ground of the picture, or the former coat or layer of colours, whilst they were drying ; termed improperly the sinking of the colours. The anointing is per- formed by means of varnish, oil, or both toge- ther, rubbed in with a hard hogVhair tool. When newly laid on, it promotes softness and

union ; ami when almost, but not perfectly dry, it disposes the picture to receive smart or crank touches. NVithout an application of this nature

her and comparison. Thus the substantive annals wants the singular, and sir wants the “plural. The adjectives good and evil instead of forming

it would be imi>ossible for the painter of delicate their comparatives and superlatives according to

works to proceed with any degree of certainty ; the usual rule, by adding er and est (which

and the best mixture is an equal quantity of would make gooder, goodest, eviler, evilest),

strong drying oil and mastich varnish united, have the very irregular degrees of better, best,

This will retain its clammy nature long enough and worse, worst. The adjective little affords

for the purpose of the artist, while he covers with an instance of a double anomaly in its compa-

paint the anointed portion. Such artists as pro- rison, being both irregular in the formation of

ceed more slowly with the pencil than is usual, its degrees, less and least, and redundant, by

will do well to use a small quantity of fat linseed having another comparative, lesser

oil with the mixture we have mentioned.

ANOMALOUS VERBS, in grammar, such as are

ANGLE, in zoology, a species of lizard com- not conjugated conformably to the paradigm of

mon in the West Indies about houses and plan- tations. It is of the size of the common Eu-

their conjugation. They are found in all lan- guages. In Latin the verb lego is the paradigm

•opean lizard, but its head is longer, its skin of of the third conjugation ; and runs thus, lego, a yellowish colour, and its back variegated with legis, legit : by the same rule fero should be green, blue, and gray lines running from the feris, ferit ; fero is therefore an anomalous verb, neck to the tail. They creep into holes at night, In English the irregularity relates often to the and make a continual and very disagreeable preterite tense and passive participle : for exam- noise : in the day they are always in motion. pie, give, were it formed according to rule, ANOLYMPIADES, in antiquity, a name would make gived in the preterite tense and given by the EHans to those Olympic games passive participle ; whereas in the former it makes which had been celebrated under the direction gave, and in the latter given, and Arcadians. The Elians

of the Pisaeans and Arcadians, claimed the sole right of managing the Olympic games, in which they sometimes met with com- petitors. The 104th Olympiad was celebrated by order of the Arcadians, by whom the Elians were at that time reduced very low ; this as well as those managed by the inhabitants of Pisa, they called «i'oXi>/i7rirtCac, that is, unlawful Olym-

piads ; and left them out of their annals, wherein the names of their victors and other occurrences were registered.

AIS'OMAI.ISTIO'AL YI-.AR, in astronomy, is al>o called the periodical year. The space of time belonging to this year is greater than the tropi- cal year on account of the precession of the (•(jhinnxe?. See ASTRONOMY.

A'. <' ••: A) o! s iN'or.Ns. In those languages nouns are declined by genders, 1 cases, such as the Greek and arc a vast number of anomalous • either defective, redundant, or or other of these particulars. irmawant. the singular; aerand ; chaos wants the genitive; sup- petr.i \\ants four cases, and dicis five; caetera wants the masculine, quisquis the feminine, and plir. loth; and cerium, plural Ctt'li ; and locus, loci or loca are variable; and materia, materies, alher, ;•. i!ira. iVc. arc' redundant. But it is not in iuile \ion or declension alone that nouns are anomalous. Adjectives are also frequently so in comparison : thus bonus, by the regular rule ot comparison should have.' bonior, bonissimus, in the comparative and superlative dc stead ot which it has melior and optimus. same adjective is equally anomalous i •k, as well as extremely redundant; aya Tthan seven comparatives, a/it M us KVfiiiKijj', /cpftrciiv, \v, and

Gr. Avw/taXj;c, not plain, a & o/taXoc, plain. Devia- tion from the general rule,

ANOM'ALY, n.

ANOM'ALOUS,

ANOM'ALOUSLY. irregularity.

Eve was not solemnly begotten, but suddenly framed, and anomalously proceeded from Adam.

Brown's Vulgar Erroun.

There will arise anomalous disturbances, not only in civil and artificial, but also in military officers.

Id.

He being acquainted with some characters of every speech, you may at pleasure make him understand anomalous pronunciation. Holder.

Metals are gold, silver, copper, tin, lead, and iron ; to which we may join that anomalous body, quick- silver or mercury. Locke.

If we should chance to find a mother debauching her daughter, as such monsters have been seen, we must charge this upon a peculiar anomaly and base- ness of nature. South.

I do not pursue the many pseudographies in use ; but intend to show, how most of these anomalies in writing might be avoided, and better supplied.

Holder.

Every language has its anomalies, which, though inconvenient and in themselves unnecessary, must be tolerated among the imperfections of human things. Dr. Johnson's Preface to his Dictionary.

The poetical dialect, consisting chiefly in certain anomalies, peculiar to poetry ; in letters and syllables added to the ends of words ; a kiud of licence com- monly permitted to poetry in every language.

Lowth's Isaiah. Preliminary Disc.

ANOMALY, in astronomy ; from av

ITOC, /JtXriToe, spa- Mean or simple anomaly is where a planet ih are completely describes an ellipsis about the sun, placed in one 1 n the English Ian- of the foci, and is the time it takes up in moving enders nor cases, the from its aphelion to the mean place or point of . are only

the

between the line of the apsides, or transverse diameter, and a line drawn from the sun to the centre of the planet.

Eccentric anomaly, or of the centre, is an arch of the eccentric circle cut off by a right line drawn perpendicular to the transverse diameter of the orbit.

True or equated anomaly is the distance of the sun from his apogee, or a planet from its aphelion, seen from the sun ; that is, the distance of a planet in signs, degrees, minutes, &c. from that point of its orbit which is farthest from the sun. It is a very difficult, and, at the same time, a very useful problem, to find directly the true anomaly from the mean one given ; the motion of the earth being in an elliptical orbit, its true anomaly will differ from the mean; this difference is called the equation of the centre,

S'.nd is the correction to be applied to reduce the mean motions to the true ones. See Hutton's Mat. and Phil. Diet. vol. i. p. 120.

ANOMATHECA, in botany ; from avo(io£, out of rule, and Oipcq, a case ; so called because the capsule is distinguished by its papillary roughness: class, triandria; order, monogynia : nat. ord. ensatse. Its generic characters are, CAL. sheath inferior, bivalved; valves concave, leafy : COR. one petal, superior, salver-shaped ; tube longer than the sheath, nearly cylindrical, a little dilated at the mouth ; limb not quite re- gular, six segments : STAM. three filaments, in- serted into the tube, thread-shaped, erect, short ; anthers vertical, converging: PIST. germ round- ish : STYL. thread-shaped, the length of the stamens: STIG. three: PERIC. roundish-ovate capsule, three cells, trivalved ; its surface cover- ed with small papillary tubercles : SEEDS nume- rous and round. Its essential characters are, sheath bivalved : COR. salver-shaped : STIG. three, divided ; capsule tuberculated. There is but one species : A. juncea, cut-leaved anoma- theca ; found by Thunberg at the Cape of Good Hope.

ANOMIA., or bowl-shell, in zoology, a genus of insects belonging to the order of vermes tes- tacea. The shell is bivalve, and the shells are unequal. One valve is perforated near the hinge, and affixed by that perforation to some other body. ' Twenty-five species of the anomia have been enumerated ; the following are the most remarkable : 1 . A. ephippium, of the habits of an oyster ; the one side convex, the other flat ; perforated; adherent to other bodies, often to oyster-shells, by a strong tendinous ligature. The colour of the inside is perlaceous ; the size near two inches in diameter. 2. A. squamula, with shells resembling the scales offish; very delicate and silvery ; much flatted ; perforated, and very small. It adheres to oysters, crabs, lobsters, and shells. The species of this genus are commonly called beaked cockles. 3. A. electra, amber bowl- shell, differing from the ephippium principally in its colour. 4. A. cepa, onion-peeled bowl- shell. 5. A. aculeata, prickly bowl-shell. 6. A. undulata, striated bowl-shell. 7. A. psittaca, parrot-beak bowl-shell. This shell, which is very rare, is of a blackish horn colour, semitranspa- rent, oval, rather convex, with numerous very fine regular longitudinal ribs; the sides abruptly

turned in and flattened, without the ribs, but. marked with a few irregular striae ; the front margin a little indented on each side and pro- jecting in the middle ; one valve produced into an elongated incurved and pointed beak, like a parrot's bill ; the other oval and rather flat ; the perforation somewhat triangular : inside dull grayish-white, with a strong tooth-like projec- tion each side a little below the beak, and reach- ing down the incurvature of the sides in a strong rib-like form : length nearly an inch and a quar- ter ; breadth an inch ; specimens have been found on the shore near Teignmouth after a se- vere gale : and it is supposed to come from

very great depdis.

ANOMIA, the fossile. These are uncommonly numerous in this island, in chalk-pits and lime- stone quarries ; in Gloucestershire they are as common on the ploughed lands as pebbles.

ANOMCEANS, in ecclesiastical history, the name by which the stricter Arians were called in the fourth century, in contradistinction to the Semi-Arians. The word is formed from the Greek avopoiog, dissimilar : for the strict Arians asserted that the Sou was of a nature different from, and in nothing like that of the Father : whereas the Semi-Arians acknowledged a like- ness of nature in the Son ; at the same time that they denied the consubstantiality of the Word.

ANOMORRHOMBOIDIA ; from avw/zaXoc, irregular, and po/ij3otft;£, a rhomboidal figure ; in natural history a genus of spars. The bodies of this genus are pellucid crystalline spars of no determination or regular external form ; but always breaking into regularly rhomboidal masses; easily fissile, and composed of plates running both horizontally and perpendicularly through the masses, but cleaving more readily and evenly in an horizontal than in a perpendi- cular direction ; the plates being ever composed of irregular arrangements of rhomboidal con- cretions. Of this genus there are five known species ; viz. 1. A white, bright, and shattery one, found in great quantities in the lead mines of Derbyshire, Yorkshire, and Wales; 2. A milk- white opaque and shattery one, found in some parts of France, and very plentifully in Germany, and sometimes in Wales and Scotland, and in the hills of Yorkshire ; 3. A hard, dull, and snow white one, found in some of the mines in Derby- shire, and in many of our northern countries ; 4. A hard, gray and pellucid one, found in the lead mines of Yorkshire, and very common in Germany ; and 5. A pellucid and colourless one, this is found in the lead mines of Derbyshire and Yorkshire. All these in some degree have their double refraction of the ICELANDIC CRYSTAL, which see.

AN'OMY. ai'o/ua Hellenistic Greek ; A, pri- vative, and vo/xof, a law ; Fr. anomie, without law. Obsolete.

If we have respect unto the infinite mercy of God ; and to the object of this mercy, the penitent and faithful heart, there is no sin, which to borrow the word of Prudentius, is not venial ; but in respect of the anomy or disorder, there is no sin which is not worthy of eternal death.

Bp. HaU't Polemical Work.*

If sin be good, and just, and lawful, it is no more evil, it is no sin, no anomy. Bramhall against Hobbet.

ANON', ad. On An, on or in one : in one, formerly been its principal defence, nearly sur- fminute] immediately, in an instant : the reply rounds the town. In some places it is between of waiters at an inn was formerly, 'Anon, Sir;' thirty and forty feet thick. On the south is a

brick fort, of considerable size, containing loop- holes for the use of bows and arrows, but inca- pable of defence by cannon. This place com- mands a fine view of the Ganges, and of the Cummoes, or Snowy Mountains (distant 200 miles) to the north-east, from which the bleak winds frequently bring agues. Eastward the lands are annually overflowed by the river, and are productive of grain, cattle, and game. Anopsheher has a good cotton and indigo trade, and receives from the Sambler lake considerable supplies of salt. It stands in lat. 28° 21′ N. long. 78° 13′ E. The Ganges is fordable here in December.

ANOREXY ; from o neg. and opt&jc, appe- tite ; in medicine, is either original or symptom- atic. When it is original, its causes are bad diet, too free drinking, voraciousness, &c. : in which cases, a vomit of ipecacuanha may be taken ; after which temperance, a light but cor- dial nourishing diet, and daily exercise, persisted in, will generally effect a recovery. But it is more frequently a symptom of some other dis- order; and then the cure depends on the re- moval of the original one.

ANOSMIA, in medicine; from a privative, and offfiri, smell, i. e. without smell ; a disease attended with a diminution or loss of smell.

ANOSSI, a province of the island of Mada- gascar, lying between lat. 23° 18', and 26° S. It is watered by many rivers. In 1642 Captain Rivault obtained a permission to establish a colony in this part of the is.and, and accord- ingly he took possession of it in the name of the king of France, in September. The French landed 200 men, well armed, and provided with stores of ammunition and other necessaries for building a fort, which they immediately set about; but no sooner did the natives observe their intention, than they used their utmost art to prevent their design from taking effect. This created a war, in which the French were victors ; and, the natives becoming in time much better reconciled to them, they intermarried, and lived in several towns at some distance from one ano- ther, not above five or six in a place. This tranquillity lasted for some years ; but at last the natives growing jealous, resolved to free them- selves from a foreign yoke, and accordingly formed a conspiracy to cut off all the French in one day ; which they soon after effected, not leaving a single person alive. In 1664, Fort Dauphin was erected, in lat. 25° 6'S. Many buildings were erected behind the fort, adjoining to the governor's house,

with great enclosures that produced every sort of fruit and kitchen herb. In 1656 this fort was accidentally destroyed by fire, but was soon after repaired ; and not- withstanding the above catastrophe the French maintained a garrison here until the neighbour- ing settlements of Bourbon and Mauritius fell in the late war into the hands of the English.

equivalent to, ‘ Coming, Sir.’

Right now the highe windes blowe, And anon after thei ben lowe.

Gawer. Con. A. the Prologue. And Arcite anon his honde up hafe.

Chaucer. Knyghtes Tale, i. 8. c. i. But this that is sowen on the stoney lond : this it is that hereith the word of God, and anon with joie takith it. Wiclif. Matt. c. xiii.

He was not without design at that present, as shall be made out anon ; meaning, by that device to with- draw himself. Clarendon.

Still as I did the leaves inspire, With such a purple light they shone, As if they had been made of fire, And spreading so would flame anon. Waller.

A little snow tumbled about. Anon becomes a mountain. Shalup.

Will they come abroad anon? Shall we see young Oberon 1 Ben. Jonson.

However, witness heav’n ! Heav’n witness thou anon! while we discharge Freely our part. Milton.

Full forty (lays he pass’d, whether on hill Sometimes, anon in shady vale, each night, Or harliour’d in one cave, is not rcveal’d. Id. r > ’]\M in ;i chair the beau impatient sits, \ !nlc spouts run clattering oVr the roof by fits ; And ever and nn

Swift’s Description tif a City Shower.

AXOYYMOl S,ˆ A, not, and ovopa, a

ANO.N’YMOUSLY, > name; without a name:

ANON \ MAI.. .) particularly applied to

vnitin-s from \liicli the names of the authors are

withheld.

I would know whether tho edition is to come otitarao- nyiiioitxlt/, ainons:

complaints of spurious editions. Swift. sc diumulciilcs serve ;il>i> for food to another n-'iiiiiiiiiiis insect of the \vnters. Ray.

They v.iiuld forthwith puhlish slanders unpublished, .jii'hors brim: H7i< tiymiiu.i, the immediate pub li>ht i-s tliereof sculkiiiL'. \i>tc,i nil the J)imciad.

AM.N YMOI , in commerce. Before the late revolution, partnerships in trade in France were styled anonymous, wh< n they were not carried "ii under any particular name, hut wherein each nt the partner traded visibly on his own ac- < omit, and in his ivin persons of for sited sums of money, in tii and loss. Those who ad no trouble in carrying hrir names appear to he

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nding anony- ney, \c. is felony

(,,o. I. cap. -J-J.

1 1 , in chemi>Uy, a spirit ex-

tovtn of Ilin- i>tnct of Bareily nd pro- im oin-

ANOTH'ER,«.

ANOTH ANOTII

ANO III

,«. -, Onother;

ER-GAINS, f oundcd

*ER-GOESS, f **

ER-GATES. J

ˆobsolete

ANQ

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ANS

For if he that cometh prechith anothrr Crist whom we prechhidden not, or if ghe taken a nothir spyryt whom ghe tooken not, or a natter gospel which she resseyuyden not rightli she suldem suffre.

Wiclif. 2 Corynth. ch. xi.

For stature one doth seem the best way to hear ; Another for her shape, and to stand beyond compare ; Another for the fine composure of a face ; Another short of these, yet, fora modest grace, Before them all preferM.

Dray ton's Polyolbion, song xxvi.

A fourth ?

What ! will the line stretch out to th crack o' doom ? Aother yet ? — a seventh ? Ill see no more.*

Shakspeare.

If one man sin against another, the judge shall judge him. 1 Samuel ii. 25.

AVhy not of her ? prefer'd above the rest By him with knightly deeds, and open love professM, So had another been, where he his vows address'd.

Dryden.

Oh Hocus! where art thou? it used to go in anotheryufss manner in thy time. Arbuthnot.

He that will not lay a foundation for perpetual disorder, must of necessity find another rise of govern- ment than that. Locke.

When the soul is beaten from its station, and the mounds of virtue are broken down, it becomes quite another thing from what it was before. South.

The sphere in which we move, and act, and un- derstand, is of a -wider circumference to one creature than to another, according as we rise one above another .n the scale of existence. Spectator.

ANOTTA, ASOTTO, or ARNOTTA. See AN- KOTTO.

ANOURAMA, a river of Brasil, in the pro- vince of Para, which, running east, joins the Amazons between the Urupi and Maracupuca.

ANOUT, a small island in the Scaggerrac, or that part of the sea of Denmark, which has Norway on the north, Jutland on the west, and the isle of Zealand on the south. Long. 13° 0′ E., lat. 56° 36′ N.

AN PITS, in the military art, in writers of the middle age, a breast-work, or barbacan.

ANQUETIL (Louis Peter), a French his- torian, and political writer, was born in 1723, and died in 1808. His principal writings are, 1. Histoire Civile et Politique de la Ville de Rheims, 3 vols. 12mo. 1756,1757. 2. Almanach de Rheims, 24mo. 1754. 3. L'Esprit de la Ligue, &c. 3 vols. 12mo. 1767. 4. Intrigue du Cabinet sous Henri IV. et sous Louis XIII. &c. 4 vols. 12mo. 1780. 5. Louis XIV. sa Cour et le Regent, 4 vols. 12mo. 1789. 6. Vie du Ma- rechal Villars, ecrite par Lui-meme, suivie du Journal de la Cour de 1724 a 1734, 4 vols. 12mo. 1787—1792. 7. Precis de 1'Histoire Uniyerselle 9 vols. 12mo. &c.

AXQUETIL DE PERRON (Abraham Hyacinth), brother of the subject of the last article, was born in 1731. In order to gratify his thirst after Oriental literature, he quitted all thoughts of the ecclesiastical profession, in which he had very excellent prospects, and actually joined the expedition fitting out for India in 1754, as a private soldier. At Chandernagore, Pondicherry, and Surat, though interrupted by illness, he em- ployed every moment of his leisure in the study of the Sanscrit, and made sufficient progress in that tongue to translate the Yendidad Sade.

On the taking of Pondicherry by the English, he returned to Europe, visited London and Oxford, and succeeded in 1762 in conveying the various manuscripts he had obtained to Paris. He was then appointed Oriental interpreter in the king's library, with a pension, and devoted himself to the publication of his works, which are, A Life of Zoroaster, prefixed to a translation of the ce- lebrated Zend Avesta, attributed to that sage, in 3 vols. 4to. 1771; Legislation Orientale, 4to. 1778 ; Recherches Historiques et Geographiques sur 1'Inde, 1786; A Treatise on Commerce, 1789; L'Inde au rapport avec 1'Europe, 1798, 2 vols. 8vo ; and Secrets not to be Revealed, a Latin translation, in two 4to. volumes, from the Persian. He died, 1805, three years before his brother.

ANS/E, or ANSES, in astronomy, the parts of Saturn's ring, projecting beyond the disc of the planet. The word is Latin, and properly sig- nifies

handles ; these parts of the ring appearing like handles to the body of the planet : also in music the finger-boards of organs.

ANSARIANS, a people of Syria, so called in that country, but styled in Delisle's maps Ensarians ; and in those of Danville Nassaris. The territory said to be occupied by the Ansarians is that chain of mountains which extends from Antakia to the rivulet called Nahr-el-Kahi, or the Great River. The history of their origin is little known. The following account, taken from the Bibliotheque Orientale of Assemani, is drawn from the best authorities : 'In the year of the Greeks 1202 (A.D. 891), there lived at the vil- lage of Nasar, in the environs of Kousa, an old man, who, from his fastings, his continual prayers, and his poverty, passed for a saint ; several of the common people declaring themselves his partisans, he selected from among them twelve disciples to propagate his doctrine. But the commandant of the place, alarmed at his pro- ceedings, seized the old man, and confined him in prison. In this situation he excited the pity of a girl who was a slave to the gaoler, and she determined to give him his liberty : an oppor- tunity soon offered to effect ner design. One day when the gaoler was gone to bed intoxicated, and in a profound sleep, she gently took the keys from under his pillow, and, after opening the door to the old man, returned them to their place un- perceived by her master : the next day when the gaoler went to visit his prisoner, he was extreme- ly astonished at finding he had made his escape, as he could perceive no marks of violence. He therefore concluded he had been delivered by an angel, and spread the report, to avoid the repre- hension he merited ; the old man, on the other hand, asserted the same thing to his disciples, and preached his doctrines with more earnest- ness than ever. He even wrote a book in which, among other things, he says, ' I, such a one, of the village of Nasar, have seen Christ, who is the word of God, who is Ahmad, son of Moham- med, son of Hanasa, of the race of AH ; who also is Gabriel : and he said to me, Thou art he who readeth (with understanding) ; thou art the man who speaketh truth; thou art the camel which preserveth the faithful from wrath ; thou art the beast which carrieth their burden ; thou

art the (Holy) Spirit, and John, the son of Zachary ! Go, and preach to men that they make four genuflections in praying ; two before the rising of the sun, and two before his setting, turning their faces towards Jerusalem : and let them say, three times, God Almighty! God Most High! God Most Great! Let them ob- serve only the second and third festival; let them fast

but two days annually ; let them not wash the prepuce: nor drink beer, but as much wine as they think proper; and, lastly, let them abstain from the flesh of carnivorous animals.'

The Ansarians, according to Volney, are di- vided into several tribes or sects ; among which are distinguished the Shamsia, or adorers of the sun; the Kelbia, or worshippers of the dog; and the Kadmousia. Many of them believe in the metempsychosis; others reject the immor- tality of the soul. Their country is divided into three principal districts farmed by the chiefs called Makaddamim. Their tribute is paid to the Pacha of Tripoli, from whom they annually re- ceive their title. Their mountains are in general not so steep as those of Lebanon, and con- sequently are better adapted to cultivation ; but they are also more exposed to the Turks, and hence, doubtless, it happens that with greater plenty of corn, tobacco, wines, and olives, they are more thinly inhabited than those of their neighbours the Maronites and the Druses ; which see.

ANSARTUM, or ANSTRIVM, in civil law, a duty on all provisions carried in vessels with ans;v, or handles

ANSAKT (Andrew Joseph), a French eccle- siastical writer and historian, born in 1723. He first became a Benedictine monk; but having been appointed procurator of one of the houses of that order, disappeared with the funds. He afterwards attached himself to the order of Malta, and became an advocate and doctor of laws of the faculty of Paris, and finally prior of \ illanova. His principal works are: Dialogues sur ITtilite des Moines Rentes, 1763, 12mo. ; l-Aposition sur les Cantiques de.s Cantiques de Solnman, 1770, 12mo. ; The Histoires of St. Maur, St. Heine, d'Alise, St. Fiacre, &c. ; and the Bibliotheque l.itteraire du Maine, 1784, Bvo. lie died in 1700.

ANS.\Tl.TM TKI.VM, in ancient warfare, a dart or javelin, with an amentum fastened to it. Ansie of a javelin are those two eminences about the middle of the cuˆpis, or point, which hinder llie \eapou from piercing through the whole body.

ANS ATI S, in conchology, a species of mu- rex. It is brown, transversely striated; spire sharp-pointed; whorls convex, distant, and knotty at the base; beak long. — Gmelin. The length of this slid! is about five inches and ; half, and the strne are lame and small alternately.

ANSI",, mi ancient town of France, in the department of the Rhone and Loire, ten miles north of Lyons, and twenty-rive south bv west of Macon.

ATS'SKI.M, llans/J.elm, Teut. i. o. a defender

f his companion, archbishop of Canterbury in 'lie r.-iu'ns of \Villiain I. ;md Henry]., born in . 1! • became a monk in*

the abbey of Bee, in Normandy, of which he was afterwards chosen prior and then abbot. In 1092 he was invited over to England by Hugh earl of Chester ; and in 1093 was made afch- bishop of Canterbury. He enjoined celibacy on the clergy, .for which he was banished by Wil- liam, but recalled by Henry at his coming to the crown. He refused to consecrate bishops invested by the king, flatly denying it to be the king's prerogative ; for this he was again banished, till the pope and king agreeing, he was recalled in 1 1 07. This prelate, from the day of his conse- cration to his death, was continually contending for the prerogative of the church against that of the crown, and for that purpose spent much of his time in travelling backwards and forwards be- tween England and Rome for the advice and di- rection of the pope. At the council of Bari in Naples, the holy father being perplexed by the arguments of the Greeks against the Holy Ghost's proceeding from the Father, he called upon An- selm, who was present, and he discussed their objections with great applause. The pope after- wards deserted Anselm, who went to Lyons, where he resided till the death of William, when he returned to England and was received with great respect ; but a new rupture arose, by the archbishop refusing to be re-invested by the king ; on which a reference was made to the pope, who decided in favour of Anselm. This induced the nobility to advise the king to break absolutely with the pope, in consequence of which some of them were excommunicated. At length the pope made a concession, by allowing the English bishops and abbots to do homage to the king for their temporalities, which restored Anselm to fa- vour. The priests call him a resolute saint ; to other people he appears to have been an obsti- nate and insolent priest. He wrought many mi- racles, if we believe the author of his life, both before and after his death, which happened at Canterbury in the seventy-sixth year of his age, anno 11 09. He was canonised in the reign of Henry VII. Anselm, though we may disregard him as a saint, deserves to be remembered as one of the principal revivers of literature after three centuries of profound ignorance. His works have been printed in different years, and at different places ; but the best edition is that of father Gerberon, Paris, 1675.

ANSELM of Parma, a celebrated magician, or rather juggling impostor, said by Derio, in his Disquisitiones Magicae, to have performed mira- culous cures by what is called St. Anselm's art, or by merely touching the linen that covered them.

ANSER AMERICANUS, the toucan.

ANSER, in astronomy, a small star of the fifth or sixth magnitude, in the

milky way, between the swan and eagle, first brought into order by Ilevelius.

ANSEK, Lat. the goose, in ornithology, a Spe- cies of Anas. See ANAS.

ANSERES, in zoology, the name which Lin- naeus gives to his third order of birds, having thi bill somewhat obtuse, and covered with a skin gibbous at the base ; the mouth toothed ; the tongue fleshy ; feet palmate, formed for swim- ming. It includes the following genera : namely,

I'elecanus Eivthrorynehus Ri>uah Billed frlinm .

YOL-2.HAGE 36O .

Canadeusis . Canada

Mbsrbata ~Mttfa>vj> Duck

ANS

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1. Those having a bill with teeth, as — Anas, goose, swan, duck. &c. ; bill convex, obtuse ; three fore toes connected — Mergus, merganser; bill hooked at the point; feet four-toed; the outer toe longest — Phaeton, tropic-bird; bill sharp-edged ; hind toe turned forwards — Plotus, darter; bill pointed; feet, all the toes connected.

2. Those having a bill without teeth, as — Ryn- chops; the bill upper mandible much shorter, »wer truncate — Diomedea, albatross; bill, upper mandible hooked, lower truncate ; feet four-toed, all placed: forward— Aptenodyta, penguin ; bill ˆharp-edged ; feet fettered, four-toed — Alca, auk ; mil short, compressed ; feet, mostly three-toed — Procellaria, petrel ; bill hooked at the point, mandibles equal; feet, the back toe pointing downwards — Pelicanus, pelican; bill furnished with a nail ; feet, all the fore toes palmate — Larus, gull ; bill sharp-edged ; feet, back toe small — Sterna, tern ; bill pointed ; feet, back toe small — Colymbus ; bill subulate'; feet fet- tered.

ANSERMA, SANTA ANA DE, a city of South America, m the province of Popayan, fifty leagues N. E. of the city of that name.

ANSIBARII, or ANSIVARII, an ancient peo- ple of Germany, situated in the neighbourhood of the Chauci. All we know of their history is, that, in the reign of Nero, they were driven from their own possessions by the Chauci. They then took possession of some uninhabited lands, which had

been used as pasture for the horses of the Ro- man soldiers, and they were led by one Boioca- lus, a man of great valour, and of known fidelity to the Romans. He remonstrated to the Romans, who objected to their taking possession of these lands, that the territory in dispute was large, and requested that it might be allowed to an un- happy people driven from their own habitations; that at the same time wide tracts might be re- tained for the horses and cattle of the soldiers to graze in ; that it was inconsistent with humanity to famish men in order to feed beasts, &c. ; and at last, lifting up his eyes to heaven, he asked the celestial luminaries how they could behold a desolate soil, and if they would not more justly let loose the sea to swallow up usurpers, who had engrossed the whole earth. To this the Roman commander, Avitus, replied, that the weakest must submit to the strongest; and that since the gods, to whom they had appealed, had left the sovereign judgment to Rome, they were resolved to suffer no other judges than them- selves. To Boiccalus himself, however, he pri- vately offered lands as a reward for his long at- tachment to the Romans : but this offer the brave German rejected, as a price for betraying his people ; adding, ' A place to live in we may want, but a place to die in we cannot.' The Ansibarii now invited the neighbouring nations to join them against the Romans ; but they, dreading the power of that nation, refused to give them any assistance ; and being every- where driven out as enemies and intruders, these unhappy people were reduced to wander up and down till every one of them perished.

ANSLA1G1IT', or) Ang. Sax. On-ruasan,

ONSLAUGHT'. S past tense of on-nlagan,

It or beat against, dashed or beaten against.

That done, awhile they made a halt

To view the ground, and where the assault

Then call'd a council which was best,

By siege or onslaught, to invest

The enemy ; and 'twas agreed '

By storm and onslaught to proceed.

Butler's Hudibras.

ANSON (George), the son of William Ansori, Esq. was born in 1697, at his father's seat iu Staffordshire. Showing an early inclination to the sea, he

received a suitable education. The first command he enjoyed was that of the Weasle sloop in 1722; but the most memorable action of his life, and the foundation of his future good fortune, took place on his receiving the command of five ships, a sloop, and two victuallers, equipped to annoy the Spaniards in the South Seas, and to co-operate with admiral Vernon across the isthmus of Darien : an expedition the principal object of which failed, by the unac- countable delay in fitting out the squadron. He sailed however in September, 1740; doubled Cape Horn in a dangerous season ; lost most of his men by the scurvy ; and with only one re- maining ship, the Centurion, crossed the great Pacific Ocean. If no considerable national ad- vantage resulted from this voyage, Commodore Anson made his own fortune, and enriched .his surviving companions, by the capture of a rich galleon on her passage from Acapulco to Manilla, with which he returned home round the Cape of Good Hope. He was no less fortunate in es- caping a French fleet then cruising in the chan- nel, by sailing through it during a fog. He arrived at Spithead in June, 1744. He was soon after appointed rear-admiral of the blue, and a lord of the admiralty. In April, 1745, he was made rear-admiral of the white, and the following year vice-admiral of the blue ; when he was also chosen M. P. for Heydon. In 1747, being on board the Prince George of ninety guns, in com- pany with admiral Warren, and twelve other ships, he intercepted, off Cape Finisterre, a powerful fleet, bound from France to the East and West Indies ; when he again enriched him- self and his officers, and at the same time strengthened the British navy, by taking six men of war and four East-Indiamen. The French admiral, M. Jonquiere, on presenting his sword to the conqueror, said, ' Monsieur, vous avez vaincu 1'Invincible, et la Gloire vous suit:' ' Sir, you have conquered the Invincible, and Glory follows you ;' pointing to the ships, named the Invincible and the Glory, he had taken. For his signal services George II. created him Baron Soberton, appointed him vice-admiral of the red, and, on the death of Sir John Norris, made him vice-admiral of England. In 1748 he was made admiral of the blue; afterwards first lord of the admiralty; and at length admiral and commander- in-chief of his majesty's fleet ; in which rank he continued, with a very short interval, until his death. The last service he performed was to convey queen Charlotte to England. He died in June, 1762. No performance ever met with a more favourable reception, than the account of Anson's voyage round the world. Though printed in the name of his chaplain, i: was composed under his lordship's inspection, and from tb-3

materials he himself furnished, by Mr. Benjamin Robins. Lord Anson was a cool and steady man, but too fond of gaming, of which knowing little, he was the constant dupe of sharpers; which made the wits observe 'though he had been round the world, he never was in it.'

ANSON, an interior county of North Carolina, in Fayette district, having Mecklenburgh county, north; and Bladen and Cumberland counties, west.

ANSON'S BAY, a small bay, with a sandy beach, on the west coast of Norfolk island.

ANSPACH, ANSBACH, or ONOBZBACH, a dis- trict in Franconia, formerly bounded on the north by Wurtzburg, Bamberg, Bayreuth, and Schwartzenberg ; on the west by Hohenlohe and Suabia ; on the south by Pappenheim, Oettin- gen and Eichstadt, and on the east by the Upper Palatinate and territory of Nuremberg. It was governed by a margrave, and was divided into fifteen upper bailiwicks; but this distribution was altered in 1797, when it was formed into five districts or circles, each of which had its own exchequer-chamber and courts of justice. The surface contained about 1800 square miles, on which were built one fortified place, sixteen towns, twenty-eight boroughs, 324 villages, 879 hamlets, and 536 farm houses and mills. The population of the whole was reported in 1774 to be 124,445, whereof 4500 were Jews; but in 180;> this number was found, partly by a more exact survey, partly by an increase in the inter- val, to be augmented to 252,295, including 8534 Jews. The public revenue used formerly to be computed at M!50,000 tlorins, but from the new accessions, and the better policy of the Prussian government, to whom this principality for some time belonged, it was raised to 1,000,000 florins, or £100,000 sterling. Here an.- cultivated corn, fruit, wine, and hops ; the first in considerable quantities. The breed of horses has been greatly improved by intermixture with those of England; ami that of oxen and cows with those of Switzer- land. Numbers of fattened oxen are yearly sent to Alsace. Manufactures tlourish in the towns of Kurtii, Schwabarh and l! <>th; the established religion is the Lutheran. The military contin- gent of tins principality and Bayreuth, when in tiie possession of Prussia, \as two regiments of infantry, one of hussars, and one battalion of Irjit infantry. In 1701 the last margrave of Anspach retired to Kn.'land, and the principality became an integral part ot the Prussian monar- chy. It wasgiujn to Havana by Bonaparte in, ii'Oo, and has been confirmed to that power

y recent treaties, an indemnity having been •.:i\en elsewlu i>- to Prussia. Part of it was lonued in 1 ;;o;(into the c'nc.lo of I !e/.at, contain- in^, •uith the additions made to it from an adja- cent territory, 2Hyc>4 inhabitants. The other part of the maiiri-avate, containing about 100,000 inhabitants went to the circles of the Altmuhl the kingdom of Bavaria. le in 1810, •les

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bredt, son of duke Gosbert I. who founded here a monastery of Benedictines. This establish- ment was secularised in 1563, previous to which the town, which had been gradually formed around it, was purchased by the burgrave of Nuremberg. It has four suburbs and about 100 houses. The prince's castle and gardens, the church of St. John with the tombs of the princes, a well endowed orphan house for sixty children, and a hospital, are worthy the traveller's notice. The prince's library and cabinet of medals were begun to be collected by the margrave William Frederic in 1720; the former contains 15,000 volumes, but the latter has been transported to Berlin. The academy, which received conside- rable additions after the dissolution of that of Heilbronn, consists of six classes, and has an in- spector, three professors, and five other teachers. The articles principally manufactured are woollen and cotton cloths, earthenware, white-lead and playing cards. This town contained, in 1807, including the neighbouring communes, 11,924 inhabitants. It was created, the following year, the capital of the circle of Rezat in Bavaria, and at the same time the head of a district, which contains 126 square miles, and 14,000 inhabi- tants. What was called the circle of Anspach does not now therefore exist. The town stands about thirty miles south-west of Nuremberg. Long. 10° 33′ E., lat. 48° 12′ N.

ANSPESSADES, or LANSPESSADES, in the French army, before the revolution, a kind of inferior officers in the foot, below the corporals, but above the common centinels. The word is formed of the Italian, lancia spezzata, i. e. broken lance; as they were originally disbanded gen- darmes, who, for want of other subsistence, sued for a place of some distinction in the infantry. There were usually four or five in each company.

ANSTEY (Christopher), an ingenious poet of the eighteenth century, was the son of the Rev. Christopher Anstey, D. D. and born in 1724. lie was educated at Bury St. Edmunds, whence he removed to Eton, and succeeded in 1742 to a scholarship in King's college, Cambridge, and in due time to a fellowship. In 1754 he succeeded to his patrimonial property, when he resigned his fellowship, and married Ann, daughter of Felix Calvert, esq. of Albury Hall, Herts, by whom he had thirteen children, eight of whom

survived him. He then devoted himself to lite- rary pursuits, but after a while resided for the most part at Bath. He had long cultivated poetry, but most of his early productions were Latin translations of English popular poems, one of ˆwhich was Gray's elegy. It was not until 1766 that his humorous production, the New Bath Guide, was published, which at once be- came highly popular. He also wrote an Elegy on the Death of the Marquis of Tavistock, 1767 ; The Patriot, 1768; An Election Ball, 1776; A. C. W. Bamfylde, Arm. Epistola, 1777 ; Envy, 1778 ; Charity, 1779; all of which, with many other productions, are collected in a splendid edition of his entire works, edited by his son, with a judicious sketch of his life. He died at Bath in 1805, in his eighty-first year — Life by /its Son.

ANSTIS (John), an English antiquary, was

born at St. Neot's in Cornwall, in 1669. He was educated at Oxford, from whence he removed to the Inner Temple. In 1702 he represented the borough of St. Germains in parliament. In 1714 he received the appointment of Garter king at arms, which he held till his death in 174-1. He published, 1. A Letter on the Honour of the Earl Marshal, 8vo. 1706 ; 2. The Form of the Installation of the Garter, 8vo. 1720; 3. The Register of the most noble Order of the Garter, 2 vols. fol. 1724; and, 4. Observations introduc- tory to an Historical Essay on the Knighthood of the Bath, 4to. 1725.

ANSTIS (John), son of the above, was educated at Corpus Christi college, Oxford, and took the degree of LL.D. He was joined with his father in the office of Garter; and in 1725 he obtained the post of genealogist, and register of the Bath. He died in 1754.

ANSTRUTHER EASTER, a parish of Scot- land, in the county of Fife, situated between those of Kilrennie and Anstruther Wester. Though episcopacy has long been abolished, part of the minister's stipend arises from the tithes of the fish caught on the coast.

ANSTRUTHER EASTER, a royal burgh of Scot- land, situated on the south-east coast of Fife, in the parish above-mentioned, twenty-six miles north-east from Edinburgh. A custom-house was established in it in 1710, and a new quay was built in 1753. Ship-building is carried on to a considerable extent in it. It has also a thread manufacture.

AXSTRUTHER WESTER, a parish (f Scotland, on the south-east coast of Fifeshire, seated in a valley, whence the name of both the parishes and the boroughs ; struther, in the Celtic language, signifying a valley. It contains about 540 acres of arable land, and seven or eight of common. A small river divides it from Anstruther Easter. Though the air is moist, the climate is healthy ; and, although the soil neither agrees with a wet nor a dry season, it yields considerable crops in favourable weather ; so that, besides maintaining the inhabitants, quantities of wheat, barley, and beans are exported ; though they are obliged to import oats, which do not agree with the soil. Agriculture, and the breed of catjle, are much improved.

ANSTRUTHER WESTER is a royal borough of Scotland, situated in the above parish, on the south-east coast of Fife, about twenty-five miles from Edinburgh. Its charters of erection are dated 1554 and 1583. It suffered much during the civil wars in 1645; as well as by an inun- dation of the sea in 1670, which choked up the harboi'r, washed away the bulwarks, and ren- dered many of the houses uninhabitable. A si- milar inundation happened about the end of last century, which destroyed about a third part of the town. But the Union, however advantageous to Scotland in general, hurt Anstruther, and most of the towns situated on the coast of Fife, as much, if not more than either wars or inunda- tions, as it almost totally annihilated their trade. Before the Union, the two Anstruthers had twenty-four ships, and thirty fishing-boats, em- ployed in the fishery'; whereas in 1764 there were only three ships of forty tons burden, and

logy; Goth, andswor, • Sax. anr-painan; Dan.

answarer. To reply to 'a question, objection, or

five boats belonging to both. It had, however, revived considerably before 1792, for there were then twenty ships, and ninety-four men employed by the two towns ; of which six were engaged in the foreign trade, thirteen in the coasting, and one in the fishery ; and whose tonnage amounted to 1172 tons. Of these, eight ships, of 552 tons, and thirty-six men, belonged to Anstruther West- er. This burgh is governed by three bailiffs, a treasurer, and an uncertain number of coun- sellors. The two towns have three fairs, on the first Tuesday after the llth of April, 5th July and 1 2th November. Lon. 2° 25′ W. lat. 56° 20′ N.

ANSWER, v. & n.\ Of unsettled etymo

AN'SWERER,

Ax'SWERABLE,

AN'SWERABLY,

Ax'SWERABLENESS.

any tiling asserted. To justify, to satisfy ex- pectations.

He went to be kyng of France, and schewed him

his resons ;

borgh ber ordenance }?er duzepers gaf respons. Bifore Sir William be duzepers gaf ansuere.

R. Brume, p. 141.

Thy profession is of hygh excellencye, but to frame thyself answerabty like vnto it, thou hast nede much diligently to watche about thee.

Udall, Pool to TimotJtie,c. vi. The silver soundine instruments did meet,

With the base murmur of the water's fall ;

The water's fall with difference discreet,

Now soft, now loud, unto the wind did call,

The gently warbling wind low answering to all.

Spenser.

What is truth ? said jesting Pilate ; and would not stay for an answer. Bacon's Estays.

Goodness answers to the theological virtue charity, and admits no excess but error. Id.

It was a right answer of the physician to his pa- tient, that had sore eyes : If you have more pleasure in wine than your sight, wine is good. Locke.

How can we think of appearing at that tribunal, without being able to give a ready answer to the ques- tions, which he shall then put to us, about the poor and the afflicted, the hungry and the naked, the sick and imprisoned? Atterbury.

How they have been since received, and so well improved, let those answer either to God or man, who have been the authors and promoters of such wise council. Temple.

It is very unfair in any writer to employ ignorance and malice together ;

because it gives his answerer double work. Swift.

I know your mind, and I will satisfy it ; neither will I do it like a niggardly answerer, going no further than the bounds of the question. Sidney.

There can be no merit, no recompense, answerable to a good man's prayer. Hall's Contemplations.

If I pay money to a banker's servant, the banker a answerable for it ; if I pay it to a clergyman's or a physician's servant, whose usual business it is not to receive money for his master, and he embezzles it, I must pay it over again.

Blaekstone's Commentaries.

That he might render the execution of justice strict and regular, Alfred divided all England into coun- ties; these counties he sub-divided into hundreds, and these hundreds into tithings. Every householder was answerable for the behaviour of his family and his slaves, and even of his guests if they lived above three days in his house. Hume.

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ANT

The blackbird whistles from the thorny brake,

The mellow bulfinch answers from the grove.

Thomson.

When a man asks me a question, I have it in my

power to answer, or be silent ; to answer softly or

roughly, in terms of respect, or in terms of contempt.

Seattle's Essay on Truth.

ANSWER, in music, a term used in the con- struction of fuges, denoting the entrance or intro- duction of a suoject by another part after the f.rst ; but this term more particularly applies to the counter fuge, denoting the introduction of the subject by inversion.

ANT, n.) Contracted and corrupted from

ANT'-HILL. } Ang.Sax.emett, Amer, furnish ed, provided, from the verb

Ametan.

We '11 set thee to school to an ant, to teach thee there is no labouring in the winter. Shakspeare.

Methinks, all cities now but ant-hills be, Where, wheu the several labourers I see, For children, house, provision, taking pain, They 're all but ants, carrying eggs, straw, and grain.

Donne.

On ev'ry side are seen descending down, Thick swarms of souldiers loaden from the town ; Thus, in battalia, march embody'd ants, Fearful of winter, and of future wants ; 'I" invade the corn, and to their cells convey The plundt'r'd forrage of their yellow prey; The sable troops, along the narrow tracks, Scarce bear the weighty burthen on their backs. Some set their shoulders to the pond'rous grain; Some uuard the spoil, some lash the lagging train ; •Ynd ply their several tasks, and equal toil sustain.

Dryden,

Learn each small people's genius, policies ; Hie tints' republic, and the realm of bees. Pope.

Put blue llowers into an

Ray.

ANT, or emmet, in entomology, the formica • if l.iiiiKi-us, a gregarious and most industrious mhr of inserts, whose habits have in all ages at- tracted the attention and admiration of mankind. Like many other hymenopterous insects, ants have a three-fold distinction of sex; or rather are male, female, and neuter, or of no sex — a peculiarity never yet observed in any other de- partment of ttie animal, and wholly unknown to the vegetable kingdom. The neuters exercise all the ordinary otlices necessary for the existence and welfare of the community to which they be- long ; it is they who collect supplies of food, who explore the country for this purpose, and sri/.c upon every animal substance, whether living or dtad, which they can lay hold of, and trans- pnit to tin- common abode of the tribe. It is they who construct every part of the dwelling-place, who attend the hatching of the eggs, the feeding of tin: larva', and their removal to different situations, as occasion may require, and who con- duct all the operations both of offensive and de- tcnsi\e warfare; in fact, all the laborious and perilous dutifv of this singular commonwealth. I here is every reason, however, to believe that i he helot- and fermale-; of this tribe of insects are niiuinallv and substantially of the same sex, and tiiii the development of the sexual

organs in (tie Litter i> tin con-r<|iii'!ice of some difference MI the circum>tances in which the larva is placed

during its growth.' In all the features of in- ternal structure the supposed neuters agree with the female, and in the number of articulations composing the antennae. Thus we find thirteen in the male, twelve only in the female, and twelve in the neuter. In the male ant the ab- domen has seven rings, in the female and neuter only six. In the two latter classes the head is broader and the mandibles very large and power- ful compared with those of the male, and fur- nished with serrated edges, and a sharp and often hooked point. The external sexual organs of the female and of the neuter are so nearly similar in appearance, that Latreille declares he was unable to perceive the least difference be- tween them. On the other hand it is to be ob- served, that in the neuter the principal deviation from the model of the female consists in the ab- sence of wings — a circumstance which may be conceived to be connected with a certain condi- tion of the sexual organs, as are the horns of deer and the beard of men.

Ants certainly possess a greater share of mus- cular strength than almost any other insect of the same size. Of this we are witnesses from childhood in the incessant toil which they un- dergo, and the great loads they are seen to carry, often exceeding ten or twelve times their own weight. This apparently is continued with a corresponding share of sensation, seen in their great susceptibility to all changes of tempera- ture, to moisture, and other conditions of the at- mosphere. In the perfection of their sight they are also remarkable ; the males and females being provided with both the descriptions of eyes pe- culiar to this class, namely, the composite and the simple eyes. The labouring ants, indeed, who never fly, are frequently destitute of the latter kind. Latreille describes two species of ants in which he could not discover the least ap- pearance whatsoever of eyes, although he em- ployed a high magnifying power in examining them. One of these (the formica caeca) is a foreign species, inhabiting the forests of Guiana, and of which the history is therefore little known. The other (the formica contracta) is met with in the vicinity of Paris. These interesting crea- tures possess also considerable acuteness of smell, which appears to be useful not only in directing them to their food, but also, as Bonnet first re- marked, in enabling them to follow by the scent the track of their companions. If the end of the finger be passed two or three times across the line of their march, so as to brush off the odorous particles with which the ants who had already passed that way may have impregnated the track, those who follow immediately stop on arriving at the place where the experiment has been made, and afterwards direct their course irregularly, till they have passed over the space touched by the finger, when they soon find the path, and proceed with the same confidence as be- fore. Bonnet repeated this experiment frequently, always with the same result. Latreille has en-

deavoured to discover the seat of smell, which had long been suspected to reside in the antennae. He, with this view, deprived several labouring' ants of these organs, and replaced them near their nests. When thus mutilated, they wandered,

to and fro in all directions as if they were deli- rious, and utterly unconscious of where they were going. Some of their companions were seen to notice their distress, and approaching them with apparent compassion, applied their tongues to the bleeding wounds of the sufferers, and anointed them with a liquor which they caused to flow from their own mouths. This trait of sensibility was repeatedly witnessed by Latreille, while he was observing their actions with a magnifying lens.

In all insects the antennae are organs evi- dently of the greatest utility in conveying impres- sions from external objects. But in the ant, in- dependently of their importance as organs of touch, they appear to be of still greater conse- quence, by being the chief instruments which enable them to communicate to one another in- telligence in which they are mutually interested, and on which they are called upon to act. Mr. Huber, to whom we are indebted for a variety of curious observations on this subject, has given the name of Language Antennal to this species of intercourse. The situation of the antennae, which are placed in front of the head, their great mobility, their peculiar mechanism, which presents a series of phalanges having great free- dom of play, and endowed with exquisite sensi- bility, conspire to fit them admirably for the function which he assigns to them — that of pro- ducing a variety of different impressions, when applied in different ways to the antennae, or other parts of those ants, with which they come in contact. Thus the signal of danger, which consists in the ant which gives the alarm striking its head against the corselet of the other, is pro- pagated from ant to ant with astonishing quick- ,ness, throughout the whole society. For a few minutes a general ferment prevails, as if they were deliberating what measures to pursue ; but their resolution is soon formed, and they are ready to rush in a body against the enemy. Any small animal that is discovered to have inso- lently invaded their repose, is certain of falling a victim to their resentment; unless he can make a precipitate retreat, which he seldom ef- fects without being covered with the bites of these furious insects. They are not, however, equally jealous of the intrusion of every kind of insect, for wood-lice are often found in the interior of the nest, to whom, according to Latreille, they offer no molestation. Ants appear to be incapable of emitting sounds, so as to communicate with one another at a distance ; and there is indeed, no

evidence that they possess the sense of hearing.

Many erroneous opinions are prevalent with regard to the food of ants, which have often been supposed to consume corn, and to do great injury to plants by devouring their roots or stems. The truth is, that they are chiefly carni- vorous insects, preying indiscriminately on all the softer parts of animals, and especially the viscera of other insects, whom they will often at- tack when alive, and overpower by dint of num- bers, upon which they devour their victim on the spot, or drag him prisoner into their nests; or if the game should be too bulky to be easily transported, they make a plentiful meal, and exert liku tlw bee a power of disgorging a por-

tion, and of imparting it to their companions at home. It appears that they are even able to retain at pleasure the nutritious juices un- changed for a considerable time. The rapidity with which they consume, and in fact anato- mise the carcasses of any small bird or qua- druped that happens to fall in their way, is well known ; and furnishes an easy method of obtain- ing natural skeletons of these animals, by placing their dead bodies in the vicinity of a populous ant-hill. In hot climates, where they multiply to an amazing extent, their voracity and boldness increase with their numbers. Bosnian, in his description of Guinea, states that in one night they will devour a sheep, leaving it a fine ske- leton ; while a fowl is for them only the amuse- ment of an hour. In these situations they will venture to attack even living animals of consi- derable size. Rats and mice often become their victims. The sugar-ants of Granada cleared every plantation which they visited of rats and other vermin, which they probably effected by attacking their young. Poultry, or other small stock, could not be raised without the greatest difficulty ; and the eyes, nose, and other emunc- tories of the bodies of dying or dead animals, were instantly covered with them. They gene- rally, indeed, begin their attacks on the most sensible parts, which have the finest cuticle : and accumulating in great numbers about the nos- trils, destroy the animal by interrupting re- spiration. Negroes with sores had difficulty in keeping the ants from assailing them. Their power of destiuction keeping pace with their in- crease of numbers, it is hardly possible to assign limits to either; and the united hosts of this di- minutive insect have often become formidable to man himself. A story is related by Prevost, in his Histoire General. des Voyages, of an Italian missionary resident in Congo, who was awaked by his negroes in great alarm at the house being invaded by an immense army of ants, which poured in like a torrent, and before he could rise had already mounted on his legs. They covered the floors and passages, forming a stratum of considerable depth. Nothing but fire was ca- pable of arresting their progress. He states that cows have been known to be devoured in their stalls by these daring devastators. Smith, in his Voyages to Guinea, reports that at Cape Corse the castle was attacked by legions of ants, who were preceded by thirty or

forty, apparently acting as guides. It was at day-break when they made this incursion, entering first by a chapel, on the floor of which some negro servants were lying. Assailed by this new enemy, they fled with precipitation, and gave the alarm to their master, who, on awaking, could hardly recover from his astonishment at beholding the advancing multitude, which extended for a quarter of a mile before him. There was not much time for deliberation ; and a happy expedient was adopted of putting a long train of gunpow- der across the line of their march, and extending it to their flanks, which had already began to deploy, and setting fire to the whole, millions were destroyed at one blow; which so intimidated the rest, that the whole army retreated in dis- order, and did not renew the attack. At Sierra

Leone the travelling ants, or marchers as they are called, will sometimes approach the settlements in lines of two or three miles long; they will cross considerable streams; and, entering a house, are perfectly irresistible except by fire. But even this, many of the inhabitants find it impossible to employ, and allow them to pass through, which they will do in a comparatively short time, clearing the apartments they enter of all other insects.

Ant-hills of immense size are described by travellers who have visited tropical regions. Campbell (author of Travels in South Africa, published in 1815) observed in the district of Albany, at the Cape, an ant-hill five feet high and twelve in circumference. In the forests of Guiana, according to M. Malouet, they attain the height of from fifteen to twenty feet, re- sembling the rude huts of savages ; but contain- ing a race more ferocious than the savage or the tiger himself: for they cannot be approached by men without the utmost danger of being de- voured. The new settlers, who, in clearing the country, meet with any of these in their progress, immediately desist from their task, and even abandon the neighbourhood unless they can speedily destroy this formidable enemy. The onlv method of accomplishing this, is to dig a uviK-h all round the ant-hills, and after having tilled it with dry wood, and .set fire to it on •.•very side by lighting it quickly in different places, to rut otf all retreat to the ants, and h. liter do\ n the edifice.

The only vegetable substance which seems illinium to their appetite is sugar. They not (inly eat it in substance, but are fond of all fluids I hat contain it, such as the secretions which (•vide from many trees, and compose what has turn termed the honev-dew ; and the saccharine 1'iice, which is excreted from the bodies of many of the inserts In-lonu'inˆ to the genus aphis. Thi< latter species ef food they appear to relish ihove all others ; it resembles honey in its quali- ties, and is sucked with avidity from the insect \\hich

yields it, and which appears in no respect to sulier from the operation. Boissierde Sauvages was the first who noticed this singular fact; and Mr. I'. 1 1 uber lias ascertained a number of curious circumstances attending it. lie conceives that the liquor i> u'lveii out voluntarily by the aphis, iit ihe solicitation of the ant, \lio for this pur- pose strikes it ';vni!y an:! repeatedly with its antenna', usiiiu tiie same motions as it docs when t.iievsni'j, its yoiui'j;; and remarks that the aphis retains this hqnor for a longer time where the nil-; are not at hand to receive it. A single .iphiˆ may often be seen surrounded by three or lour ants, \ho are feeding on tin; honey, and dermii'j; from it a plentiful meal. It does not appear that the aphis uses any exertion to avoid the ants, \lto are thus dependant on its bounty; provided \% it.ii \ni'j>, \hich would '.e them to i -,. ,q>e, are quite as passive

dec theM; circumstances as the rest. Ripe

are often ,'Uacki d by ants on account

i., I the sujar they contain; and for the same

reason the luid- of trees are in'.'cMed \ith these

N: I'Kl then.1 i~ no evidence that they at

any !:nie d-ed upon cern or vegetable seed.

This point has been well established by Mr Gould ; and Bonnet, who kept a colony of ants prisoners in his study, observed that however long they had been kept without food they never touched the corn that he put before them. Honey and sweetmeats have strong attractions for ants, who, if they once discover their way to a maga- zine of these dainties, will immediately communi- cate the tidings to the rest of the society, and, leading them to the spot, a regular path will soon be established, which will continue to be crowded with a train of depredators so long as any thing remains to be pilfered. It is however certain, notwithstanding the assertion of Bomare, who compares them to the miser, whose chief pleasure consists in contemplating the riches he has amassed in his coffers, that ants are not in the habit of hoarding provisions for future con- sumption. They grow torpid when the cold ex- ceeds 27° of Fahrenheit, and in that state require no food, and the aphis affords them sufficient nourishment at other periods of the winter.

In the construction of their nests, each species of ant employs different materials, and follows its own peculiar mode of construction. Many form them of clay, and particularly the smaller species ; one set building up a regular series of apartments in successive stories, often forty in number,

with materials which are furnished to them by another set of workers, who are exca- vating the 'ground. The ceilings are supported throughout by small pillars in some parts, and by vertical walls in others ; while broad arches are in other places raised, in order to protect larger spaces, and to admit of lengthened pas- sages of communication throughout a long ex- tent of apartments. These ants proceed in their building only at such times as the earth has been softened by rain or dew, and the atmosphere is at the same time sufficiently moist to allow of the materials cohering firmly before they dry; and such are probably the ants which Pliny mentions as working by moon-light. On one occasion, when the ants, under the inspection of Mr. II uber, had discontinued their labours on account of too great dryness in the atmosphere, he succeeded in getting them to renew their operations by sprinkling water upon them with a wet brush, in imitation of a natural shower. These insects close the doors of their habitations every night, in order to prevent the intrusion of others ; and a few are said to remain on the out- side during the night as sentinels. Some ants collect fragments of leaves, bark, or straw, with which they construct more permanent and arti- ficially constructed nests than the former. Others employ the fine powder which they collect from decayed wood; and some for greater security establish themselves under a large stone, or in the crevices of decayed buildings. Many tribes ot ants, on the other hand, penetrate into the solid substance of wood, which they scoop out into numerous cells, leaving only such thin inter- mediate partitions as would crumble into powder when pressed externally ; but which will support their fabric.

The fecundation of the ant is effected very generally during the flight of the females, in which they are accompanied by the males; botli

appearing to be provided with wings chiefly for this object. A certain number of impregnated females are also, by the assistance of their wings, enabled to reach distant situations, where they become respectively the founders of new colo- nies ; while the males, having fulfilled the office for which nature had destined them, are left to perish on the spot where they descend, being removed from those who formerly administered to them food, and being destitute of the means of procuring subsistence for themselves. Swarms of ants, of immense size, are occasionally met with ; some have been recorded of such pro- digious magnitude as to darken the air like a thick cloud, and to cover the ground where they settled to a considerable extent. Mr. Gleditsh, in the History of the Berlin Academy for 1749, describes shoals of a small black ant, which ap- peared in Germany, and formed high columns in the air, rising to a vast height, and agitated

with a curious intestine motion, somewhat re- sembling the Aurora Borealis. A similar flight of ants is spoken of by Mr. Acolutte, a clergy- man of Breslaw, which resembled columns of smoke, and which fell on the churches and the tops of the houses, where the ants could be gathered by handfuls. In the German Epheme- rides Dr. Charles Rayger gives an account of a large swarm, which passed over the town of Poscn, and was directing its course towards the Danube. The whole town was strewed with ants, so that it was impossible to walk without trampling on thirty or forty at every step. And more recently, Mr. Dorthes, in the Journal de Physique for 1790, relates the appearance of a similar phenomenon at Montpelier. The shoals moved about in different directions, having a singular intestine motion in each column, and also a general rotatory motion. About sunset they all fell to the ground ; and were found on examination to belong to the formica nigra of Linnaeus.

The infant colonies consist of very small num- bers, and are perhaps wholly the offspring of a common parent, who has migrated alone, or with but a few companions. A number of im- pregnated females alighting in the neighbourhood of the nest, are laid hold of by the labouring ants, who immediately deprive them of their wings, and drag them to the nest, where they keep them prisoners till they deposit their eggs. She is in the interim respectfully attended by a numerous retinue of labourers, who are solici- tous to anticipate all her wants. When first de- posited, the eggs are very small, but become considerably larger before the larva is excluded ; being apparently nourished by ab^'.ption; for the ants, to whose care they are confided, are continually licking them with their tongues. At the end of a fortnight the larva comes forth, and appears in the form of a transparent maggot, with a head and wings, but withoit any external organs of motion. They are now fed by their nurses, with a fluid disgorged from their sto- machs ; and in the course of their whole trans- formation to the state of nympha, and of perfect insect, are still dependant upon their assistance.

Almost incredible instances of sagacity have been related of different tribes of ants. Some,

according to Huber, who are fond of the honev which exudes from the aphis, convey many of these insects into their own nests, lodge them near the vegetables on which they feed, but as- sign them distinct apartments in the recesses of their dwellings, and keep them close prisoners. As if conscious of the future advantages they may derive from these insects, they collect then- eggs, and superintend their hatching with tiie same care which they bestow on their own.

Scenes of ferocious contention are occasi- onally exhibited between the inhabitants of neighbouring nests, and tend to check their otherwise

excessive increase of number. Their weapons of offence are the jaws, (which are ca- pable of inflicting a deep bite,) and in some species a sting, after using which they instil into the wound a highly acrid liquor. This liquor is well known to possess acid properties, and was long supposed by chemists to contain a peculiar acid, which was denominated the Formic ; but it has been shown by Fourcroy and Vauquelin to consist of the acetic and malic acids, combined with a portion of acid animal matter, to which it owes its peculiar taste and smell. It is extremely volatile and pungent, and is capable of being thrown out by the ant, when irritated, in considerable quantities. Frogs have been killed by the vapour' from an ant's nest in less than five minutes; and persons breathing it, when of a certain intensity, are nearly suffocated. The most daring and' cou- rageous species, such as that which M. Huber calls the Amazon-ant, make it the business of their lives to attack the nests of the weaker ants, and live by plundering them of their eggs and larvae. These are hatched and reared by ants of the same species as themselves, who may be con- sidered as auxiliaries to the Amazons, and who had themselves, at some former period, been kidnapped from their parent nest by the Ama- zons. Thus a society is formed among dif- ferent species of insects, to which no parallel exists but in the human race.

The principal enemies of the ant are the ant- eaters, dasypus, and manis, or pangolin, who, with the tribe of wood-peckers, devour a very large proportion. The formica leonis, or myr- melion, feeds almost wholly on them. Ac- cording to Mr. Campbell, the bees at the Cape frequently drive out the ants from their nests, of which they take possession. Ants are also in- fested by lice, which, as may well be imagined, are so minute as to be invisible without the as- sistance of a very high magnifying power : they are stated by Redi, who discovered them, to resemble in shape those of the fowl and the dove. Boiling water poured into their nests has been found the most effectual mode of de- stroying ants. The perfect insects, their eggs and larvae, are thus scalded to death, and those who, being from home, escape their general ca- tastrophe, finding it impossible to repair the loss, abandon the spot. The addition of soot or urine, or still better of tobacco, which may be infused in the water, will render it much more efficacious. A decoction of walnut-leaves, or lime-water, will also answer. Arsenic is exceedingly destructive to ants, and affords

another ready mode of getting rid of those tliat intrude into cupboards or pantries ; it may, for this purpose, be mixed with sugar, or any knead- ed kind of provision, and placed in the paths they frequent. Corrosive

sublimate is also highly poisonous to them, and myriads of the sugar-ants at Granada have been destroyed by means of it. The ants become so outrageous, even when they only come m contact with the poison, that they frequently attack and destroy each other. The ancients often noticed the habits and economy of ants. Solomon sends the sluggard to them for a pattern : Aristotle and Pliny state that their labours are in a great measure regulated by the phases of the moon ; and the latter men- tions a species found in the northern parts of India, whose size was said to equal that of the wolves of Egypt, whose colour was the same as that of the cat, and whose occupation in winter consisted in digging up gold from the bowels of the earth ; while the inhabitants in the summer robbed them of their treasures, after having de- coyed them by stratagem from their nests. In later times, from the circumstance of the' larva of ants bearing a resemblance to grains of corn, it lias been confidently stated that these insects hoard up wheat as a provision for winter con- sumption. The form of the eggs and of the larva-, and the attention paid to them by the ants, u (:n: described by Dr. King in the twenty- thinl number of the Philosophical Transactions; but I .euwenhoeck was the first who distinguished, with precision, the different forms which the inject successively assumes. He traced with care the changes from t!..1 egg to the larva?, the nymph, and the peri'ecl insect. Swammerdam pursued these successive developments with greater minuteness ; and, unrivalled in the art of microscopic dissection, discovered the won- deri'ul encaseiiu nt of all the parts of the future ant at every preceding stage. Linnaeus (Me moirs of the 1 loyal Academy of Sciences at Stockholm, vol. ii.) ascertained some of the leading facts with regard to the distinction be- tween the sexes, and determined that the ants which are furnished with wings, are the only individuals that exercise the sexual functions. Several particulars with regard to the economy of ants were published by Mr. Gould in a book entitled An Account of Knglish Ants, of which an abstract is '_rivi-n in the Philosophical Tiaiisactions for 17-17, by the Hev. Dr. Miles. The tacts are here stated with tolerable cor- rectness; but some errors have; been committed by tollowing too closely the analogy with bees. The most complete sent s of observations on the natural hisjorv of these insects, is that of the celebrated Swedish entomologist l)e (Jeer (Me- moires pour servir a 1'llistoire des Insectes).

1 lie I .IK \ clopedie Mcthodique has an able ar- ticle ' Fourmi.' M . liarbotean, in the Journal de Ph\s:que, \iils. ix. and x. Bonnet, in the second \oluiue of his Observations sur les In- sectes, and several modern French naturalists, have ably elucidated the habits of this curious m-ect. The mosi methodical account of therri that has ye! appeared, is that of Latreille, in his li-tnire Natuielle des Fourmis, published at P. ins in l!Hi'2; \hile perhaps, the most copious

collection of facts relative to the habits and eco- nomy of ants, is that of M. Iluber, of Geneva, entitled Traite des Mceurs des Fourmis Indi- genes, published in 1810. He contrived an apparatus which admitted of his obtaining a view, whenever he pleased, of the inmost re- cesses of their habitation ; and was thus enabled to observe with minuteness some of the most important and interesting features of their his- tory.

ANTAB, or AINTAB, a large town of Syria, supposed to be the ancient Antiochia ad Taurum in Comagena, constituted a small kingdom by the Romans. It is about three miles in circum- ference, situated on two hills, and the houses are built chiefly of stone. A small river, the Sejour, is conveyed to the higher parts by aqueducts, which branch out from above the town ; and streams are thus made to ran through the streets. The inhabitants, for the most part, live on the hills, and have their shops in the valley, which being built at the foot of the hill, with flat roofs, a passenger descends on them before he is aware. On the north side there is a strong castle on an artificial elevation, with a deep ditch surrounding, cut out of the rock ; and within the fosse is a covered way, part of which is excavated, and the rest built and arched with stone. From this covered way the hill is cased all the way up with hewn stone also. The castle is garrisoned by a body of janissaries. On the south there is an extensive cemetery, which at a distance resembles large suburbs. Aintab is in- habited both by Mahommedans and Christians ; the latter Armenians. They have a church here, and there are five principal mosques. The chief trade is in coarse-stamped calicoes and coloured woollens, leather and raw hides ; and skins dyed red and yellow, into what is called Turkey lea- ther. Aintab is governed by a mutselim ap- pointed by the Porte. Many medals of the Syrian kings, and those of Cappadocia, are found in this town, which is between Bir and Aleppo; forty miles north of the latter, and 130 south-west of Diarbekir.

ANTAC/EUS, in ichthyology, a name first given by jTilian and Strabo to the ichthyocolla piscis, the isinglass fish, or huso ; and after- wards by Johnston and others, not only to this fish, but to the common sturgebn.

ANTACHATES is used by some naturalists for a kind of bituminous stone of the nature of amber, though of a different colour, which in burning yields a smell like myrrh.

ANT7EUS, in fabulous history, a giant of Libya, the son of Neptune and Terra. Design- ing to build a temple to his father, of men's skulls, he slew all he met; but Hercules fighting him, and perceiving the assistance he received from his mother (for by a touch of the earth he refreshed himself when weary), lifted him up from the ground, and squeezed him to death.

ANTAG'ON Y, n. ~\ A.VTI, against, ayo»v»a,

ANTAG'ONIST, > agony. Contention, strug-

ANTAGOMS'TIC. j gling one against another.

PRAC. His valour will take cold, put on your doublet.

COM. His valour will keep cold, you are deceived ; And relish much the sweeter in your ears ; It may bo too, in the ordinance of nature,

Their valours are not yet so combatant Or truly antagonittic, as to fight.

Ben Jonson's May. Lady, act iii, sc. 4.

Sir Francis Bacon observes, that a well written book, compared with its rivals and antagonists, is like Moses' serpent, that immediately ate and devoured those of the Egyptians. Spectator, No. 10.

As the controversies on every subject grew daily warmer, men united themselves more intimately with their friends, and separated themselves wider from their antagonists. Hume's History of England.

ANTAGONIST MUSCLES, in anatomy, those which have opposite functions ; as flexors and extensors, abductors and adductors, &c.

ANTALGIC ; from O.VTI, against, and aXyoj, pain. That which softens pain ; anodyne.

ANTALIUM, in natural history, a small sea- shell of a tubular form, whence it is also deno- minated tubulus marinus. The antalium, antale, or antalus, is about an inch and a half long ; the thickness of a large quill at one end, and of a small one at the other; fluted from end to end, of a white or greenish white colour, is found on rocks, and at the bottom of the sea. It is alka- line, and said to be of some medicinal use as a resolvent and dryer, at least by the ancients. The antalium bears a near affinity, both in ori- gin, structure, and use, with the dentalium.

ANTAJVACLASIS, (avravcucXainc, from av- ravaK\au>, to drive back.) 1. A figure in rhe- toric, when the same word is repeated in a dif- ferent, if not in a contrary signification ; as, in thy youth learn some craft, that in

old age thou mayest get thy living without craft. Craft, in the first place, signifies science or occupation ; in the second, deceit or subtlety. 2. It is also a returning to the matter at the end of a long pa- renthesis ; as, shall that heart (which does not only feel them, but hath all the motion of his life placed in them), shall that heart, I say, &c. — Smith's Rhetoric.

ANTANAGOGE; from avri, and avoywyof, contumacious; a figure in rhetoric, when, not being able to answer the accusation of the ad- versary, we return the charge by loading him with the same or other crimes ; which is usually called recrimination.

ANTANDROS, an JEolian general, who founded the town of Antandros.

ANTANDROS, in ancient geography, a town of Mysia, on the sea-coast, at the foot of mount Alexandria. It was a town of the Leleges, an- ciently called Edonis, then Cimmeris, and now S. Dimitri.

ANTANISOPHYLLUM, in botany, hog- weed.

ANTAPHRODISIACS, in pharmacy, medi- cines proper to diminish the semen, and conse- quently to lessen the incitement to venery.

ANTAPOCHA, in the civil law, denotes one's acknowledgment in writing of money paid, in the way of rent, pension, interest, or the like incumbrance. Such instrument, or antapocha, the debtor gives upon making payment to the creditor, to serve as a proof of the charge or incumbrance for futurity, and exclude any claim of prescription against the payment of it. The antapocha differs from the apocha, in that this Ittter is given by the creditor to the debtor.

ANTAPODOSIS, in rhetoric, the counterpart, VOL. II.

or latter clause of a similitude, answering to the former.

ANTAR, an Arabian prince of the 6th cen- tury, and one of the seven poets whose suc- cessful verses, embroidered in gold upon silk, were suspended at the door of the Caaba. He describes in his Moallaka his warlike deeds, and love for Ablu. His works were translated into English by Sir William Jones, and into German by Hartmann. In the original romance of Antar, the author, Asmai, a renowned gram- marian and theologian at the court of Haroun al Raschid, in the 9th century, who first collected the old Arab traditions, has added to the name and heroic adventures of Antar, the most chi- valrous deeds of the Arabians. There are seven copies of this curious work preserved ; the most perfect is in the imperial library at Vienna. From the history of Antar the most complete idea of the manners, life, opinions, and super- stitions of the early Arabs, before the time of the prophet, may

be collected, and a similitude per- ceived to those of the modern Bedouins. It is written in the present Arabic, ranked amongst the classics of Arabian literature, and preferred by scholars to the Arabian Nights. A trans- lation of it was also made by Mr. Hamilton, secretary to the British embassy at Constantinople.

ANTARCTIC, adj. > AVTI, against, apicroc,

AKC'TIC. j the bear. Opposite to

the bear.

ANTARCTIC CIRCLE is one of the lesser circles of the sphere, parallel to the equator, at the dis- tance of 23° 30′ from the south pole.

ANTARCTICA, in entomology, a species of sphex, about the size of the common wasp. It is black, with ferruginous legs and antennae : and inhabits the Cape of Good Hope. — Gmelin.

ANTARCTICA, in ornithology, a species of pro- cellaria found within the antarctic circle. It is the antarctic petrel of Forster and Cook ; petrel antarctique, ou damier brun, of Buffon ; and petrel brun et blanc of Bongaino. Also a spe- cies of aptenodytes, called by Forster the antarc- tic penguin. It inhabits the South Sea from forty-eight degrees to the antarctic circle, and is frequently found on the icy mountains and islands in those regions, according to Foster, Ellis, and other naturalists.

ANTARCTICUS, in entomology, a species of tabanus that inhabits America.

ANTARES, in astronomy, the name of a star of the first magnitude, called also the scorpion's heart. Its longitude is 60°, 13′ 14′ of Sagitta- rius ; and its latitude 4° 31′ 26′ S.

ANTASTROPHE ; from avn, and rpt^w, I turn ; in rhetoric, a species of anteposition.

ANTAVARE, a province of the island of Ma- dagascar, lying about 21° 30′ S. lat. and bounded by the province and cape of Manousi. The great- est part of it is watered by the river Mananzari, whose source is in the red mountains of Ambo- nitsmene.

ANTE, a river of France, in the ci-devant province of Normandy, which rises beyond Fa- laise, and after a course of four miles falls into tne Vire.

ANTE, in heraldry, denotes that the pieces are let into one another in such

form as ia there ex

pressed ; for instance, by dove-tails, rounds, swallo'v-tails, or the like.

ANTEAMBULONES ; from ante, before, and ambulo, to walk ; in Roman antiquity, servants who went before persons of distinction to clear the way for them. They used this formula, ' Date locum domino meo,' i. e. Make way for my master.

ANTECANIS, in astronomy, the constellation otherwise called canis minor, or the star procyon. It is thus denominated as preceding, or being the forerunner of the canis major, and rising a little before it.

ANTECEDE',v.) Ante, before, and ANTECE'DEKCE, I cedo, to go: to go be

ANTECE DENCY, {Jbre. To precede is in

ANTECEDENT, n. & adj. f more frequent use ANTECED'ANEOUS, | than antecede, and

ANTECES'SOB. j is employed in the

same sense.

And th' antecedent shall you fynde as true when you rede ouer my letter as himself cannot say nay, but that the canscusyon is formal.

Sir Tho. More's Works, fol. 1115, c. 2.

The seventeen centuries since the birth of Christ are antecedent to the eighteenth, or the one which we live in ; but it is the seventeenth only which we call the preceding one. Trusler.

Little attention was paid to literature by the Ro- mans in the early and more martial ages. I read of no collections of books antecedent to those made by Kruilius Paulus and Lucullus. Cumberland.

ANTECEDENCE, in astronomy, an apparent motion of a planet towards the west, or contrary to the order of the signs.

ANTECEDENT, in mathematics, is the first of two terms of a ratio, or that

which is compared with the other.

ANTECEDENTS, in rhetoric, are such proposi- tions as being once allowed, others necessarily or very probably follow. This is one of the six- teen topics, enumerated by Cicero and Quin- tilian.

ANTECEDENT SIGNS, in medicine, are such symptoms of disorder as appear before a distem- per is so formed as to be reducible to any parti- cular class, or proper denomination.

ANTECESSOR was an appellation given to those who excelled in any science. Justinian applied it particularly to professors of civil law ; and, in the universities of France, the teachers of law, before the revolution, took the title antecessores in all their theses.

ANTECCENIUM, in antiquity; from ante, and ccenum, supper; irpodtiwov, a collation before supper, or the first course of supper, con- sisting of eggs, herbs, &c. customary among the Greeks and Romans.

ANTECURSORES, in the Roman armies, a party of horse detached before, partly to get in- telligence, provisions, &c. and partly to choose a proper place to encamp in. These were also called antecessorgs, and by the Greeks pro- dromi.

ANTEDATE, v. & n. Ante, before; do, datum, given. To take beforehand, to fix a time for an event before it actually happens ; to an- ticipate.

So we win of doubtful Fate :

And if good she to us meant, We that good shall antedate ; Or if ill, that will prevent.

Andreas Marvell, in Ellis, v. iii. p. 297.

To doubt,

Is worse than to have lost -, and to despair, Is but to antedate those miseries, That must fall on us.

Massinger't Duke of Milan, act i, sc. 2. Andromache ! my soul's far better part, Why with untimely sorrow heaves thy heart? No hostile hand can antedate my doom, Till fate condemns me to the silent tomb : — Fix'd is the term of all the race of earth.

Pope. Iliad 6th. v. 624. Our joys below it can improve, And antedate the bliss above. Pope.

Now thou hast loved me one whole day ; To-morrow, when thou leav'st, what wilt thou say Wert thou then antedate some new-made vow, Or say, that now We are not just those persons which we were ?

Donne.

ANTEDATE, among lawyers, a spurious or false date prior to the true date of a bond, bill, or the like.

ANT EDILUVIAN.

ANTEDILU'VIAN, n. & adj. Lat. ante, against, prefixed to many words. A frequent prefix to words retaining its simple meaning, and modifying the annexed word with respect to time, or condition. Ante, before, and diluvium the deluge ; from dilut), to wash away.

'Hie sinners of the antediluvian world, abusing the 1 01 IL; spare of one hundred and twenty years which he allowed for their repentance, perished at the end ill' it without, merry. 1'ortfux's Lectures.

A sickness that leads the way to everlasting life, i. better than the health of an nntedili/rian.

Cmcper's Letters.

ANTKDIl.rYIANS, in ancient history, a term usually applied to that part of the human r;ic < which existed before the ,iood ; and whose rcii.'i •••;. i'istvy, polity. > lno:ujlo.;y, an-', longe-

vity have in all ages awakened feelings of interest in the intellectual part of mankind.

The religion of mankind even at this early period was at no time purely natural, as that of unassisted reason, but assumed three distinct features: 1. It was revealed. 2. It was sacri- ficial. 3. It was social and sabbatical. Tra- ditions of this period have long vanished, but we have no authenticated instance of idolatry before the flood. The antediluvian sacrifices and formal institutions of worship no doubt bore the same relation to the New Testament as the ceremonial dispensations of the Jews, and sha- dowed forth the sacrifice of the son of God. In this view Abel's offering was considered a more excellent sacrifice than Cain's, Heb. xi. 4. ; or, according to Wickliffe's testament, ' a much

*more sacrifice.' The acceptance of sacrifices was denoted by fire descending from heaven to consume it. Kennicott and others after Fagius, contend that in the history of Cain and Abel's sacrifices, Q^JD' ¥pKl ought not to be rendered ' in process of time,' but ' at the appointed time or season.' So that although we have nowhere any express command till the time of Moses for the posterity of Adam to observe the Sabbath-day, it evidently was observed from the reason as- signed Exod. xx. 11, as appears from the fa- miliarity with which it was introduced into the Jewish law ; also from the fact of a septennial division of time having obtained over many ancient nations, coeval in their origin with the Jews, but totally unconnected with them. Places of worship appear to be sanctioned by the term * presence of the Lord,' which indicates that the divine presence was more distinctly manifested in some particular places than others ; and the fact noticed Gen. iv. ' Then began men to call on the name of the Lord,' appears to argue both social and public religion, although Maimonides and other critics consider this as a profane calling upon the divine name, Lord.*

The government, at least in the early part of antediluvian history, appears to have been pa- triarchal. The longevity of this period would strengthen the ties of kindred and the consequent claims of paternal authority. To be an outcast or a vagabond from such society constituted a formidable part of the punishment of Cain. This state of peace and harmony was interrupted by the mighty ones or tyrants that arose in the latter part of antediluvian history, whose rapine and oppression brought on the catastrophe of the deluge. These ' men of renown,' are va- riously described in the scripture by the appel- lation of, 1 . C3^?3J, Nephalim — Naphal — fallen ones ; apostates, yiyavTtc, according to the LXX. literally earth-born. 2. tD1~O5 Gibborim — gabar — victorious heroes or conquerors. 3- OEW ITJX — men of name, deriving surnames from their unworthy deeds — men not content with the simple family distinctions of their ancestors, and who, by their oppressions, destroyed that original order for which the early ages were remarkable.

With respect to the manners of the antedilu- vians, their happiness seems very remarkable during the early part of their history, and their licentiousness during the latter. The murder of Abel was however an awful instance of human depravity, but it is connected with a reflection on the general rectitude, ' every one that findeth me shall slay me.' Lamech, the fifth in descent from him, introduced polygamy.

The attainments of the antediluvians in the arts appear to have been considerable. The smelting of metals is mentioned, and a sort of community, who in the time of Tubal Cain, the seventh in descent from Adam, were artificers in brass and iron. In the same family we read of the successful cultivation of the science of music, and the terms used are

probably generic ; that which we render harp meaning all stringed in- struments, and that which we call organ meaning all wind instruments. Cain built a city, and as he had been cursed in his former occupation

of agriculture, appears to have cultivated the other arts in which his family became so pro- ficient. Joseph us mentions the skill of Seth in the science of astronomy; hieroglyphic pillars of his erection being, as that historian tells us, ex- tant in his own time. The astrology of the Chaldeans perhaps arose from connecting with his observations, so far as they were perpetuated, a mythological superstition; and the Hindoo observations, recently known to us, argue a very early acquaintance with the heavens, and might possibly be derived from the same source. The successful cultivation of agriculture removed many a thorn from the lot of the antediluvians,, and the posterity of Seth anticipated the emi- nence of Noah, perhaps with a view to his talents in this respect, Gen. v. 29. But the most unequivocal proof of the state of antedi- luvian science is found in the celebrated work of Noah, viz. the building of the ark. Allowing eighteen inches to the cubit, this vessel would be of the enormous burden of 42,413 tons, equal to that ot eighteen of our first-rate ships of war, not to say that some authors, with at least a show of probability, calculate the cubit at twenty- two inches. To construct such a vessel as this, to arrange the vast and the minute of the me- chanism, to ventilate, to enlighten, and to render it manageable, would argue in modern times some considerabls acquaintance with ship- building. The ark, it must be remembered, rode the most awful storms that ev«r raged.

The final corruption of the antediluvians brought on this memorable event. The historian, after having traced the posterity of Cain to La- mech, Gen. iv. abandons that line of the family of Adam, and in the next chapter details the posterity of his third son, Seth, down as far us Noah. ‘ The sons of God,’ mentioned in this text, were thought by the fathers to intend either angels or the daemons of the heathen world, who were represented by Socrates as the fathers of the heroes, (apud Platon. Cratyl.) and as ‘ all of them born from love, either of a god with a mortal woman, or of mortal man with goddesses.’ This pagan sentiment it was one great effort of the Jews to prove consistent with the Mosaic account of the early ages, nor were the Christian fathers in this respect far their inferiors. Dr. Wall and other late writers have imagined, that when men began to multiply upon the earth, ‘ the chief men took wives of all the handsome poor women that they chose,’ and powerful men having unlawful intercourse with inferior women, the children of this illicit commerce were the heroes and gods of antiquity. Critics consider that the passage refers to the degenerate race of the pious Seth, forming matrimonial connexions with the family of Cain. The corruption at length became universal. Eutychus has pre- served several traditions of the grossness of an- tediluvian licentiousness, and the

Scriptures relate in general that they were eating, drinking, marrying, and giving in marriage, to the day that Noah entered into the ark.

With respect to the means by which a know- ledge of the antediluvians was obtained by Moses the first sacred historian ; Adam, it will be seen, died in the year of the world 930, and

was, therefore, fifty-six years contemporary with l-amech, the father of Noah ; Shem, the son of Noah, would be fifty years contemporary with Isaac, and Isaac dying at 188, in the year of the world 2288, would be fifty-three years contem- porary with Levi, the great-grandfather of Moses : so that all the knowledge perpetuated with re- spect to the antediluvians, would have to travel but through one single person, viz. Lamech to Noah.

question of population, on the probable amount of which numerous opinions have been formed . The length of the lives of the antediluvians ex- ceeding the present standard in the proportion of ten to one, the human family must then have doubled themselves in one-tenth part of the time required for that purpose at present. Allowing this, the number of mankind would easily amount to upwards of one hundred thousand millions, even according to the Samaritan chro-

cient world •

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The longevity of the antediluvians has, of late nology. The following table on these pnn- years, excited considerable attention. An ab- ciples, drawn up by Mr. Whiston, exhibits one surd attempt has been made to consider the calculation of the numbers of people m the ah. scriptural year lunar and not solar, but the year, as well ascertained by Dr. Hales and others, ap- pears to have been reckoned at 360 days in all parts of the ancient world. Josephus and others are of opinion that this remarkable age fell to the lot of only a few individuals. Some have imputed it to the sobriety of the antedilu- vians and their simplicity of diet. Others again attribute it to the strength of the stamina, or first principles of their bodily constitution; whilst not a few ascribe it to the excellency or the pu- rity of the earth, some peculiar virtue in the herbs and plants of those days, &c. The theory

of Buffon, on the antediluvian longevity, is as follows : The surface of the globe was, in the first ages of the world, less solid and compact; be- cause, gravity having acted only for a short time, terrestrial bodies had not acquired their present density and consistence. The produce of the earth, therefore, must have been analagous to its condition. The surface being more loose and moist, its productions would of course be more ductile and capable of extension : their growth therefore, and even that of the human body, would require a longer time of being completed. The softness and ductility of the bones, muscles, &c. would probably remain for a longer period, because every species of food was more soft and succulent. Hence the full expansion of the human body, or when it was capable of generating1, must have required 120 or 130 years; and the duration of life would be in proportion to the time of growth, as is uni- formly the case at present: for if we suppose the age of puberty among the first races of men to have been 130 years, as they now arrive at that age in fourteen years, the age of the antedilu- vkins will be in exact proportion to that of the present race ; since, by multiplying these two numbers by seven, for example, the age of the present race will be ninety, and that of the an- tediluvians will be 910. The period of man's existence, therefore, may have gradually dimi- nished in proportion as the surface of the earth acquired more solidity by the constant action of gravity; and it is probable, that the period from the creation to the days of David, was sufficient to give the earth all the density it was capable of receiving from the influence of gravitation ; and consequently that the surface has ever since re- mained in the same state, and the terms of growth in the productions of the earth, as well aˆ the duration of lift, have been invariably fixed from that period.

The longevity of the antediluvians, it will be readily perceived, bears upon the important

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30

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128

42

12

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256

56

14

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512

72

16

8

1024

90

18

9

2048

110

20

10

4096

132

22

11

8192

156

24

12

16,384

182

26

13

32,768

210

28

14

65,536

240

30

15

131,072

272

32

16

262,144

306

34

17

524,288

342

36

18

1,048,576

380

38

19

2,097,152

420

40

20

4,194,304

462

42

21

8,388,608

506

44

22

16,777,216

552

46

23

33,554,432

600

48

24

67,108,864

650

50

25

134,217,728

702

52

26

268,435,456

756

54

27

536,870,912

812

56

28

1,073,741,824

870

58

29

2,147,483,648

930

60

30

4,294,967,296

992

62

31

8,589,934,592

1056

64

32

17,179,869,184

1122

66

33

34,359,738,368

1190

68

34

68,719,476,736

1260

70

35

137,438,953,472

1332

72

36

274,877,906,944

1406

74

37

549,755,813,888

1482

76

38

Mr. Cockburn objects to the above calcula- tions of Mr. Whiston, on the following grounds : 1. It is laid down as a fundamental principle, that the antediluvians would double them- selves every forty years. This, he observes, would have been the case after there came to be 100 marriages, a progression which if the au- thor had observed in his computation, by adding forty years to every former period of the age of the world, the amount at the year 1656, the age of the world at the deluge, according to the

Hebrew writers, which he contends for, instead of two millions of millions, &,c. wjuld have been above five millions of millions. 2. It is sup- posed that the period of doubling must have been much shorter in the earliest ages, and much longer in the latter, which is contrary to reason and fact. 3. The period of puberty, and the time of nursing are quite overlooked. The pe- riods of puberty and the time of gestation, &c. this author contends bear a just proportion to the length or shortness of human life; and on this principle, he considers that the antediluvians would be mere youths at the age of 150 or 160 years, that period bearing much the same pro- portion to the extent of their lives as twenty does to ours. After much ingenious reasoning, he gives the following tables, the first of which is brought down to the year 2050, and the second to the year 2020 : the remaining portion of time to the flood, according to the first table, 206 years, and according to the second, 236, he con- siders would afford no proportionate increase, owing to the violence and oppression in the earth.

TABLE I.

Years of

Number of

the World

. Mankind.

500

200

550

400

600

800

650

1600

700

3200

750

6400

800

12,800

850

25,600

900

51,200

950

102,400

1000

204,800

1050

409,600

1100

819,200

1150

1,638,400

1200

3,276,800

1250

6,553,600

1300

13,107,200

1350

26,214,400

1400

52,428,800

1450

104,857,600

1500

209,715,200

1550

419,430,400

1600

838,860,800

1650

1,677,721,600

1700

3,355,443,200

1750

6,710,886,400

1800

13,421,772,800

1850

26,843,545,600

1900

53,687,091,200

1950

107,374,182,400

2000

214,748,364,800

2050

429,496,729,600

TABLE II.

Years of

Number of

the World

Mankind.

500

200

540

400

580

800

Years of the World.

620

660

700

740

780

820

860

900

940

980 1020 1060 1100 1140 1180 1220 1260 1300 1340 1380 1420 1460 1500 1540 1580 1620 1660 1700 1740 1780 1820 1860 1900 1940 1980 2020

Number of

Mankind.

1600

3200

6400

12,800

25,600

51,200

102,400

204,800

409,600

819,200

1,638,400

3,276,800

6,553,600

13,107,200

26,214,400

52,428,800

104,857,600

209,715,200

419,430,400

838,860,800

1,677,721,600

3,355,443,200

6,710,886,400

13,421,772,800

26,843,545,600

53,687,091,200

107,374,182,400

214,748,364,800

429,496,729,600

858,993,459,200

1,717,986,918,400

3,435,973,836,800

6,871,947,673,600

13,743,895,347,200

27,487,790,694,400

54,975,581,388,800

Burnet, in his Theory of the Earth, has sup- posed that the first human pair might have lei at the end of the first century, ten married couples, and from these, allowing them to mul- tiply in the same decuple proportion as the first pair did, would rise in 150 years a greater number of persons than the earth was capable of holding. He, therefore, suggests a quadruple multiplication only, and then exhibits the follow- ing table of increase during the first sixteen cen- turies, which, according to the chronology of archbishop Usher, preceded the flood.*

I. . . .

. . 10

II. . . .

... 40

III. . . .

. . 160

IV. . . .

. . 640

V. . . .

. . 2560

VI. . . .

. . 10,240

VII. . . .

. . 40,960

VIII. . . .

. . 163,840

IX. . . .

. . 655,360

X. . . .

. . 2,621,440

XI. . . .

. . 10,485,760

XII. . . .

, . . 41,943,040

XIII. . . .

. . 167,142,160

XIV. . . .

, . 671,088,640

XV. . .

. . 2,684,354,560

XVI 10,737,418,240

The calculation, though the most moderate that has ever been made upon the subject, ex- ceeds the highest calculation of the present number of mankind, which, we believe, has never been supposed to amount to more than from eight hundred to one thousand mil- lions.

The common epoch of the deluge has been of late controverted with much apparent success in the laborious work of Dr. Hales on Chronology. Having produced 120 different opinions respect- ing the epoch of the Mosaic cosmogony, and re- viewed the most celebrated systems of chrono- logy, ancient and modern, this author finally suggests the year B.C. 5411, as the period of the formation of the world; and that of B.C. 3155, as the epoch

of the deluge. The authors of the Universal History had previously re- jected the Usherian period, and preferred that of the Samaritan Hebrew text, which adds 650 years to the common date; but the principal opinions brought together by Dr. Hales, in the following table, will be seen to differ in their extremes almost to the amount of the entire era of the antediluvian world according to that date:

Epochs of the Deluge.

B. C.

Septuagint Version 3246

Jackson . . 3170

HALES 3155

Josephus 2146

Persian 3103

Hindoo . . . 3102

Samaritan . . . 2998

Howard . . . 2698

Playfair 2352

Usjtr.n and English Bible . . . 2348

.Murshain . 2344

Petavius 2329

Strauchius 2293

Hebrew 2288

Vulgar Jewish 2104

!)r. Hales, it will he seen, approaches much nearer to the Septuairint than the Hebrew calcu- lation, which latter is the foundation of the Usherian chronology. He founds the basis of Ins chronological system on the harmonised chronology of Jnseplms and Thcophilus bishop A. I). If]!',; finding his punctum)irth of Cyrus, 15. C. 599, which led ion to the Persian throne, H. C. 559; 5. C. .'>.> I ; and of liabylonia, B. C. n1 from

these several dates,' he adds, and critically ascertained and verified, the several -ind respecti kingdoms I. ranched off; cially, the destruction o Nebuehadne/xar, I). ('.

uhieh led to it-, foundation, li. C. K/27; thence to the 1-Ao.le. B.C. It; l!',; thence to Abraham's inrth, 1«- C. "Jl."i:'»; thence to the reign ofNim- r.'d, I'.. C 2...VI; then" to the Deluge, B. C. "l.V> ; dienee to the creJlion, B. ('. .VI 1 1.'

chronologies of these nd from the last espe- Solomon's temple by »<;, its corrector date,

The Line of the Antediluvian Patriarchs I. According to the Hebrew text.

Began his life in the year of the world.

ySad his son in the fear of his life.

Lived after the birth of his son, years.

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Died in the year of) the world. '-J

Adam .... Seth . . .

1 130 235 325 395 460 622 687 874 1056

130 105 90 70 65 162 65 186 182 500

800 807 815 840 830 800 300 782 595

930 912 905 910 895 962 365 979 777

930 1042 1140 1235 1290 1422 987 1656 1651

Enos .... Cainan .... Mahalaleel . . . Jared • . . . . Enoch .... Methuselah . . Lamech .... Noah. . . .

II. According to the Samaritan text.

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Adam ....

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130

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Seth ....

130

105

807

912

1042

Enos ....

235

90

815

905

1140

Cainan ....

325

70

840

910

1235

Mahalaleel . . .

395

65

830

895

1290

Jared ....

460

62

785

847

1307

Enoch ....

522

65

300

365

887

Methuselah . .

587

67

653

720

1307

Lamech ....

654

53

600

653

1307

Noah

707

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III. According to the Septuagint .version.

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Adam ....

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Seth

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912

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Enos

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715

905

1340

Cainan ....

625

170

740

910

1535

Mahalaleel . . .

795

165

730

895

1690

Jared ....

960

162

800

962

1922

Enoch ....

1122

165

200

365

1487

Methuselah . .

1287

187

782

969

22.56

Lamech ....

1474

188

565

753

2227

Noan

1662

500

1

ANTEDILUVIAN.

375

Dr. Hales has shown that there could be ori- ginally no difference between the. Hebrew and Greek chronologies; since the computation of Josephus was, in his time, conformable to both ; and consequently that the chronology of one or the other of the writings of Josephus must have been since adulterated. He alleges, on the au- thority of Ephraim Syrus, who died in the fourth century of the Christian era, that a great and designed alteration has taken place in the He- brew text; a tradition being current, says Ephraim, that the Messiah should appear in the sixth millenary of the world : ‘ the Jews sub- tracted 600 years from the generations of Adam and Seth, 8cc. that their own books might not convict them upon the point.’ According to Dr. Hales, the patriarchal lives of this period stand thus :

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Adam ....

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700

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930

Seth ....

280

205

707

912

1442

Enos ....

435

190

715

905

1840

Cainan . . .

625

170

740

910

1534

Mahalaleel . .

795

165

730

895

1690

Jared ....

960

162

800

962

1922

Enoch ....

1122

165

200

365

1487

Methuselah . .

1287

187

782

969

2256

Lamech . . .

1747

182

**595*

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**777*

f753

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f2227

Noah ....

1656

500

Deluge . . .

2256

600

Heb.

t LXX.

The confirmation which the sacred narrative receives from the testimony of Berosus, a Chal- dean historian, is too important to be omitted. He first conveyed the astrology of his country into Greece ; and fragments of two writing are preserved in Josephus, Tatian, and Eusebius ; and Sanchroniathon, who is said to have com- posed a history of the Phoenicians, the first book of which only is extant, in Eusebius. Berosus gives an account of ten kings who reigned in Chaldea before the deluge, evidently correspond- ing with the ten patriarchs of the Old Testa-

ment. The first of them lie calls Alorus, and the last Xisuthrus, whom he states to have re- ceived a revelation in a dream, that mankind would be destroyed by a flood, and to have been commanded to build a ship for his own preser- vation, that of his friends, and of certain fowls and four-footed

beasts. The flood being sur- vived by Xisuthrus and his companions, they sent out some birds on its abating, who at first returned quickly to the vessel ; shortly after they were sent out a second time, and came back with mud on their feet ; but being let go a third time, they returned no more. Understand- ing from this, that the earth was appearing above the waters, Xisuthrus is said to have taken up some of the planks of his vessel, and to have found that it had grounded on a mountain. Sanchoniathon, extolled as he is by Porphyry, and commented upon at great length by bishop Cumberland, has nothing equal to the distinct- ness of this short account. After a rambling cosmogony of the creation, he tells us that all mankind were the descendants of Protogenus and ./Eon, the latter of whom discovered the food that may be gathered from trees. Their children were Genus and Genea, who intro- duced the worship of the sun, calling him Beel- samen, the lord of heaven, on account of a me- morable drought. Their offspring were Phos, Phor, and Phlox, or Light, Fire, and Flame, who first discovered the use of fire by rubbing two pieces of wood together ; and had sons of vast stature, who gave their names to mounts Cassius, Libanus, Antilibanus, and Brathys. The children of these giants were Memrumus, Hyp- suranius, and Usous; Hypsuranius being the inventor of huts made of reeds and rushes, and Usous the first worshipper of fire and wind. In the days of these latter chiefs, women first be- came licentious in their manners. The inven- tions of hunting, fishing, and working iron, are traced to various of their descendants until we come to Chrysor, who introduced all descrip- tions of fishing tackle, and first ventured out in a boat to sea, for which exploit he was deified. He goes on to trace the history of this family until he comes to Misor, the father of Troth or Taautus, the Mercury of the Egyptians, whom he notices to be eleven generations in descent from Protogenus; Moses makes twelve from Adam to Misraim, whom he places at the head of that nation. Sanchroniathon making no other mention of the flood than the exploit of Chrysor may be supposed to contain by way of an al- lusion.

ANTEJURAMENTUM, or PRˆJURAMEN- TUM, called also juramentum calumniae; an oath which the accuser and the accused were an- ciently obliged to make before purgation, or the trial by ordeal ; the one that he would prosecute Jhe criminal, the other that he would defend his innocence. If the accuser failed, the accused was discharged ; if the accused, he was ac-

counted guilty, and was not admitted to purge himself by the ordeal.

ANTEJUSTINIANEAN, an appellation given to the ancient Roman law, as it stood before the time of the emperor Justinian.

ANTELABIA, in anatomy, the extremities of the lips.

i. e. against, or exposed to the sun; in antiquity, an idol placed at the doors of houses, and sup- posed to have the guardianship or protection of them.

ANTELIX, in anatomy, that part of the ear •which is opposite to the helix.

ANTELOPE, in zoology. See CAPRA.

ANTELUCAN, in ecclesiastical writers, is applied to things done in the night, or before the day : thus, antelucani ccetus, meetings of the ancient Christians in times of persecution for re- “igious worship.

ANTELUDIA; from ante, and ludus, game; in antiquity, a day of show or parade preceding the circenses, wherein the preparations made for those solemnities were exposed with great pomp.

ANTEMURALE ; from ante, and mums, a wall ; in antiquity, a kind of outer wall envi- roning the other works of a place, and prevent- ing the too near access of the enemy to them. It is called by Isidore promurale, for the defence of the wall, and is used to denote any work without the rampart of a place ; in which sense it amounts to the same with the counterscarp. In ecclesiastical writers it signifies the vestibule or entrance of the presbyterium, or bema.

AYi’ENATI, in English history, the subjects of Scotland born before the accession of James I. to the English crown and alive after it; those who were born after the accession being deno- i.mriUd postnati. Tin1 anlenati were consi- dered as aliens in Kimiand ; the postnati (I, timed the privilege of natural subjects.

AYIT’.NATI S i. > used for a son, the issue of .1 loinier marriage. Anteintus is also used in la\-writcix for the first -born.

AYl’l. \C1.KMA. in oratory, is where the \vhole defence of the person accused turns on criminating the accuser. Such is the celebrated defence of Alilo by Cicero. See RECRIMINA-

I I (I .N .

A NT1 A 1)1. 1 X IS, in medicine, a contra-indi- i ation ; when a turn

takes place contrary to the lirsi indication, as an inflammation indicates phlebotomy, but the weakness of the patient may be a contrary indication.

ANT!, \ I'M I'.M.S, a people inhabiting the —oath-east coast of Madagascar.

AYri-'.YYK, in entomology, slender bodies \ith uhicli nature has furnished the heads of in- set ts, being the same w ith what are called horns

or hedeis. See I '.N 1 OMOI.OC. V.

ANTENOK, a Trojan prince, nearly related

to I'riam, who, after the destruction of Troy, tame to Italy, expelled the F.nganians on the river I'o, and built the city of Antenoria, now called |';idiia, \licre his tomb is said still to be MsiMc.

A.NTEON, m /oology, a genus of insects of thi.: order hyniunoptera, and family proctotrupii. Its ueuene character is: antenna; of the male, ten articulations : abdomen depressed, ovate with •i distinct abrupt peduncle: upper wings with a large, perfect, triangular areola, occupying the base, stiuina broad.

AVIT.PAI iMl'.N'l'A, in the ancient architec- •ure, the jarnbs of a door. Tiny are also orna- s "iiu in earved work, made either of wood or

aUTK , nii-1 s<:t (in l;:e archil r:i\C.

ANTEPANNI, or ANTIPANA, in antiquity, from the modern Greek avnirava; the band with which the anterior part of the garment was fastened.

ANTEPENULT; from ante pane ultimam (sc. syllabam) ; the syllable of a word before the last but one.

ANTEPILANI, among the ancient Romans the hastati or principes of a legion. They are supposed to have been thus called because ranged before the pilani or triarii.

ANTEPILEPTICS, in medicine, are chiefly the roots of pccony, valerian, the flowers of the lime- tree, misletoe of the oak, opium, musk, cam- phor, aether, volatile alkali, and the aromatics in general : or remedies against the epilepsy.

ANTEPOSITION, a grammatical figure whereby a word which, by the ordinary rules of syntax ought to follow another, comes before it; as when

the verb is put before the nominative, the substantive before the adjective, &c. This figure was frequent among the Greeks and Latins, whose language, by its variety of termi- nations, admitted of the artificial order without confounding the sense of the words; but in the English and most modern languages, where the natural order is necessarily used, it is very sel- dom adopted, except in such expressions as, said I, quoth he, and the like.

ANTEQUERA, a city of Andalusia, in the province of Seville in Spain, on the confines of Grenada ; into which kingdom, when pos- sessed by the Moors, it was the only accessible- road on the western side. It is situated on the banks of the river Guadalhoree amidst stu- pendous masses of marble rocks, which elevate their heads far above the surface of the land, and beautiful streams of limpid water which irrigate and fructify the many small portions of land which are within their influence. It is of very ancient origin, was a Roman munici- pium in the time of Antoninus, and noted in his itinerary by the name of Antiquaria. It was a most important place during the preponderance of the Moorish power, and has been as often the theatre of those predatory wars which prevailed at that period, as any place in Spain. There are abundant remains of both the military in- vading nations to be seen, and the lover of an- tiquities here revels in the enjoyment of his favourite pursuits. At present it contains a population of 25,000 inhabitants, who chiefly depend on agriculture ; though there are ma- nufactures of baize and hats, each on a small scale. Near the city is an internal lake of salt water, four miles in length and two in breadth, where by the beat of the sun alone crystallisation is performed, and it supplies the inhabitants with that necessary of life, salt.

ANTERIDES, in the ancient architecture, buttresses erected to support a wall. They were also called antes, sometimes crismse, and by the Greeks tpatr/iara. They answer to what the modern builders call counterforts; archbutants,&c. and the Italians barbicane and speroni, or spurs.

ANTEHIOR,) Anterior, the comparative

ANTERIORITY. \ degree of the Latin adverb ante. Formerly applied to tune.

If that be the anterior or upper part, wherein the •eases are placed, and that the posteriour and lower l-art which is opposite thereunto, there is no

inferior or former part in this animal ; for the senses, being placed at both extremes, make both ends anterior; •which is impossible. Brown'i Vulgar Errors.

But our poet (Homer) could not have seen the prophecy of Isaiah, because he lived 100 or 150 years before that prophet ; and this anteriority of time makes this passage the more observable.

Pope's Iliad, xiv. note on line 93. Among the many cavils that have been devised against the demonstrated existence of a first, intelli- gent, self-existent, Cause of all things, this has been one — that things known must be anterior to knowledge. Bolingbroke's Essay on Human Knowledge.
ANTEROS, in mythology, one of the two principal Cupids. They are placed at the foot of the Venus of Medici ; this is represented with a heavy and sullen look, agreeable to the poetical description of him as the cause of love's ceasing. The other was called Eros.

ANTEROTES, a name given by some of the ancient writers on gems to a species of the ame- thyst. Some think they meant by it a sort of opal ; but Pliny expressly contradicts this, making the anterotes the fifth kind of amethyst in value.

ANTERY, or ANTARI, a large walled town of Agra, in a district of Hindostan, on the Dialoo, fourteen miles south of Gualior, be- longing to the Mahratta territory. N. lat. 26° 16', £., long. 78° 17'.

ANTESIGNANI, in the Roman armies, sol- diers placed before the standards to defend them, according to Lipsius; but Caesar and Livy mention the antesignani as the first line, or first body, of heavy armed troops. The velites, who used to skirmish before the army, were likewise called antesignani.

ANTESTARI, in Roman antiquity, signifies to bear witness against any one who refused to make his appearance in the Roman courts of ju- dicature on the day appointed, and according to the tenor of his bail. The plaintiff finding the defendant, after such a breach of his engage- ment, was allowed to carry him into court by force, having first asked any of the persons pre- sent to bear witness. The person asked to bear witness in this case, expressed his consent by turning his right ear, which was instantly taken hold of by the plaintiff, and this was to answer the end of a subpoena. The ear was touched upon this occasion, says Pliny, as being the seat of memory, and therefore the ceremony was a sort of caution to the party to remember his en- gagement.

ANTESTATURE, in fortification, a small retrenchment made of palisadoes,

or sacks of earth, with a view to dispute with an enemy the remainder of a piece of ground.

AN'TEVERT. Lat. anteverto ; from ante, be- fore, and verto, to turn. To turn round before, so as to hinder or prevent. Obsolete.

Doubtless to prevent some enormous act, which may follow upon our silence, or upon the urging of careful authority, when we are called to give evi- dence concerning a fact questioned, or to antevert some great danger to the public, to ourselves, to our friends, we may, and must, disclose our knowledge of a cloae wickedness. Bitfvsp Hall's Cases of Conscience.

ANTHALIUM, in ancient botany, the uaXi- vaQaXrj of Theophrastus, a root growing in dry places, and about the bigness of the fruit of the medlar ; it was dug up for food, and esteemed very wholesome.

ANTHELIA, in zoology, a genus of the class polypi, order tubiferi. Generic character : the common substance extended over marine bodies in a thin flattening mass, polypi not retractile, slightly prominent, erect, occupying the surface of the mass. Tentacula eight, pectinated. Sa- vigny, who established this genus, describes but one species — A. glauca, native of the shores of the Red S.ea.

ANTHELION ; from avrt, and tjXioc, the sun ; in physics, signifies a mock or spurious sun, a meteor, not very common, of a luminous ap- pearance, somewhat resembling the sun, and seen through clouds, sometimes four or five times big- ger than the solar disc. The most generally re- ceived opinion relative to the formation of this kind of meteor, attributes the phenomenon to a multitude of minute icy or spowy particles sus- pended in the air, and either refracting or re- flecting the solar rays in such a manner as to multiply the image of the sun. See Phil. Trans, in. p. 1.

ANTHELMIA, Indian pink.

ANTHELMINTICA, in medicine, vermi- fuges, or remedies against worms.

ANTHEM, Sax. antepn, written by Chaucer, antem ; corresponding with the Gr. avriˆwvia, and the French antienne, alternate singing; a holy song.

Whilst thus I spake, behold ! with happy eye

I spyde where at the idoles feet apart,

A bevie of fayre damzels close did lye,

Wayting when as the antheme should be sunger hye. Spenser' Faerie*

Qveene, b. iv. c.2.

Nor you, ye proud ! impute to these the fault

If Memory o'er their tomb no trophies raise,

Where through the long-drawn aisle or fretted vault,

The pealing anthem swells the notes of praise.

Cray. God Moses first, tnen David did inspire

To compose antJiems for his heavenly quire. Den.

There is no passion that is not finely expressed in those parts of the inspired writings which are pro- per for divine songs and anthem. Addito*.*

ANTHEM ; from avri, and vpvof, a hymn ; a church song performed in cathedral and other service by the choristers, divided for that pur- pose into choruses, who sing alternately. The word was originally used both for psalms and hymns, when thus performed.

ANTHEM, in modern church music, seems to answer to the antiphone singing of the primitive church. Ignatius is said to have introduced them into the Greek, and St. Ambrose into the western church. They now form a sort of third division of sacred music, differing equally from the me- trical psalmody of our churches and chapels on the one hand, and the psalm or chanting of ca- thedrals on the other. They consist of a por- tion of scripture set in what is technically called ' florid counterpoin ' and are either full verse, or solo anthems. The full anthem is a constant chorus, except at the leading off the fugue or a new point of imitation ; verse-anthems have solos for different voices or sides of the choir ,

solo-anthems sometimes have symphonies or ritornels for particular stops on the organ. The last are called motets in the Romish church, murdered Anthemius, 472. Many medals or

daughter to Ricimer, who took up arms agahist his father-in-law, carried Rome by storm, and

They were introduced into the reformed churches coins were struck of

Anthemius the emperor,

in queen Elizabeth's time

ANTHEMA, in antiquity, a Greek dance,

accompanied with singing.

ANTHEME (St.) a small town of France, in

Auvergne, the head of a canton, in the depart- nian employed in building the church of St. So-

ment of the Puy de Dome arrondissement of phia in Constantinople, and other structures. He

was a good mathematician and experimental phi- losopher, and so successfully imitated an earth- quake, that he frightened Zeno out of his house.

bearing the inscription D. N. ANTHEMIUS p. p. AUG. &c. ; on the reverse, SALUS KEIPUB- LICJE, Sec. ANTHEMIUS, a famous architect, whom Justi-

Ambert, sixteen leagues south-east of Clermont- Ferrand.

ANTHEMIS, in botany, camomile ; a genus

of the polygamia superflua order, and syngenesia It is said also that he made a burning glass.

class of plants, ranking in the natural method under the forty-ninth order, composita discoides. The essential characters are these : receptaculum chaffy ; no pappus ; the CAL. hemispheric and

ANTHERA, among botanists, that part of the stamen which is fixed on the top of the filamen- tum within the corolla : it contains the pollen or fine dust, which when mature it emits for the im-

eubequal ; and the florets of the ray are more pregnation of the plant, according to Linnaeus,

than five. Of this genus Linnaeus enumerates The apex of Ray, Tournefort, and Rivinus ; cap-

seventeen species, of which the most remarkable : sule staminis of Malpighi. 1. A. Arabica has a branching empalement. The

seeds of this species were brought from Africa by Dr. Shaw, and distributed to many curious botanists in this and other countries of Europe.

2. A. nobilis, or common camomile, grows in plenty upon commons and other waste land.

3. A. pyrethrnm, or pellitory of Spain, a peren- nial plant, which prows naturally in Spain and 1'ortuual, from whence the roots are brought to Britain. 4. A. tinctoria, with sawed-winged leave ; a perennial plant, which flowers from June to November.

Tlic nobilis and the pyrethrum are chiefly used in medicine. The first have a strong, not ungrateful aromatic smell, and a very bitter nauseous taste. They are accounted carminative, aperient, emollient, and in some measure ano- dyne, and stand recommended in flatulent colics; sometimes they have been employed in intermit- tent fevers and the nephritis. The flowers are dso frequently used externally in discntient and antisceptie fomentations, and in emollient glys- ters. They enter the decoctum pro anemate and decoetuin pro fomento of our pharmacopoeias. An essential oil was formerly directed to be pre- pared I'm m them, but it is now omitted. A sim- ple watery infusion of them taken in a tepid state is frequently employed to promote the operation of emetics. The root of the pyrethrum is the only part endowed with medical virtue. It has no sensible smell ; its taste is hot and acrid, but less so than that of arum or dracunculus : the juice expressed from it has scarce any acrimony, nor is tin root itself so pungent when fresh as after it lias been dried. Water assisted by heat extracts some share of its taste, reetitied spirit the whole; neither of them elevate any thing in dis- tillation. The principal use of the pyrethrum in the present practice, is as a masticatory for pro- moting the salival tlux, and evacuating viscid humours from the head and neighbouring parts: by this means it often relieves the tooth-ach, pains of the head, and lethargic complaints.*

AYl'lll.MH S, emperor of the. West, was the grand-son of Anthemius, minister of Thcodosius the younger. I5y his marriage with the daughter i if the emperor Marcian he rose to the highest of- ticcs, and in -io7 was railed to the throne amidst the general ,ipplau>e of the people, lie gave his

ANTHERA, in medicine, medicines so called from their florid red colour.

ANTHERICUM, in botany, spider-wort ; a genus of the monogynia order and hexandria class of plants, and ranking in the natural me- thod under the tenth order coronariae. The cha- racters are : no calyx : COR. six oblong petals, which are expanding: STAM. six subulated erect filaments ; the antherae small and furrowed : PIST. a three-cornered germen, a simple

stylus, and obtuse stigma : PERICARP, an ovate trisulcated capsule, with three cells and three valves: the SEEDS numerous and angular. Of this genus Linnreus reckons nine species, but only the three following seem to deserve notice : 1 . A. fructe- scens, with a shrubby stalk, formerly known among the gardeners near London by the name of onion-leaved aloe. 2. A. liliago; perennial plants, natives of Spain, Portugal, and other warm countries : they were formerly pretty com- mon in the English gardens. 3. A. ramosum, with a branching stalk.

ANTHERINUS, m entomology, a species of cryptocephalus, in Gmelin's arrangement. The tenebrio pedicularis of the tenth edition of the Linnaean Systema Naturae, and meloe antherinus of the twelfth, and the Fauna Suecica. Fabricius places it in his genus lagria, in the species insectorum : it is very small and lives on flowers.

ANTHERMUS, in ancient history, a Chian sculptor, son of Micciades and grandson to Ma- las. He and his brother Bupalus made a statue of the poet Hipponax which caused universal laughter, on account of the deformity of its coun- tenance. The poet, being incensed upon this, satirised the statuaries with so much bitter- ness that they hung themselves. — Pliny.

ANTHESIS, in botany ; avBtiffif, efflorescen- tia, efflorescence; that state of vegetation in which the flower is completely developed.

ANTHESPHORIA, in antiquity ; from avQof, flower, and 0£pw, I carry ; a Sicilian festival insti- tuted in honour of Proserpine, that goddess be- ing taken off by Pluto when she was gathering flowers. Festus does not ascribe the feast to Proserpine, but says it was thus called by reason of ears of corn carried on this day to the tem- ples. It seems to be the same with the floriser-

turn of the Latins, and answers to the harvest- home among us.

ANTHESTERIA, in antiquity, was a feast celebrated by the Athenians in honour of Bac- chus. It lasted three days, the eleventh, twelfth, and thirteenth of the month, each of which had a name suited to the proper office of the day. The first day was called TriOotyia, i.e. opening of the vessels; because on this day they tapped the vessels and tasted the wine. The second xool> congii, the name of a measure containing the weight of ten pounds ; on this day they drank the wine prepared the day before. The

third X«rpoi, kettles ; on this day they boiled all sorts of pulse ; which, however, they were not allowed to taste, as being offered to Mercury.

ANTHESTERION, in ancient chronology, the sixth month of the Athenian year. It con- tained twenty-nine days, and answered to the latter part of our November and beginning of December. The Macedonians call it daesion, or desion. It had its name from the festival anthe- steria kept in it.

ANTHIA, in zoology, a name by which some improperly call the falx venetorum, or sickle- fish, a long anguilliform fish of the taenia kind.

ANTHIAS, in zoology, the name of a fish approaching the turd us or wrasse kind, of which Rondeletius and some other authors have de- scribed four species. Linnxus makes it a spe- cies of the labrus.

ANTHINE, or ANTHIXOS, among ancient naturalists, is an appellation given to certain species of wine and oil ; vinum anthinos, otvof avQivoc, was that prepared with certain fragrant flowers to give it the more agreeable odour.

ANTHISTIRIA, in botany: a genus of the trigynia order, and triandria class of plants ; ranking, in the natural method, under the fourth order, gramina. The characters are: CAL. a four-valved glume equally cleft to the base : COR. a two-valved glume : STAM. three short slender filaments : the anthera oblong and erect : PIST. an oblong germen ; the styli two ; and the stigmata are clavated and hairy : no pericarpium, except a closed calyx ; SEED is oblong and furrowed. There is only one species of this grass, the ciliata or fringed anthistiria, a native of India.

ANTHOCEROS, or HORN-FLOWER, inbotany, a genus of the order of algae, and cryptogamia class of plants ; ranking in die natural method under the fifty-seventh order, algae. The essen- tial characters are : CAL. of the male sessile, cy- lindric and entire ; the anthera (one) is subu- lated, very long, and two-valved : CAL. of the female, monophyllous, divided into six parts, and expanding : SEEDS about three, naked and roundish. There are three species, viz. 1 . A. levis, a native of Europe and America. 2. A. multifidus, a native of Germany, found in moist shady places, and on heaths. 3. A. punctatus, or spotted anthoceros, a native of Britain.

AATHODIUM, in botany, the calyx commu- nis of Linnaeus, and the common perianth or calyx, which contains a great number of flowers that appear but as one, as in leontodon taraxa- cum, blue-bottle ; centaurea cyanus, sun-flower, Sec.

ANTIIOLOGION, in ecclesiastical affairs, a

service-book used in the Greek church, and con- taining the offices sung throughout the year, on the festivals of our Saviour, the Virgin, &c.

ANTHOL'OGY, > Gr. avfloXoyia; from

AXTHOLOG'ICAL. J avQog, a flower, and Xtyw, to gather ; a collection of beautiful speci- mens of poetry. Also a book of devotions in the Greek church.

There is in the Greek anthology a remarkable men- tion hereof [sneezing] in an epigram upon one Proclus. Brown's Vulgar Errors.

He [Robert Stafford] published a geographical and onthological description of all empires and kingdoms, both of continent and islands in this terrestrial globe, &c- Wood's Athen. Oxon.

ANTHOLYZA, in botany, mad-flower: a ge- nus of the monogynia order, and triandria class of plants ; ranking in the natural method under the sixth order, ensatae. The essential characters are these : CAL. tubular, irregular, and bent back ; and the capsule is beneath the flower. 1 . A. ringens, whose flower-slips spread asunder. 2. A. spicata, with narrow-furrowed leaves, in shape and size like the vernal crocus, but the outer skin thin and white.

ANTHOMYIA, in zoology, a genus of insects of the order diptera, and family muscides of Latreille. The antennae are shorter than the head ; head hemispherical, transverse ; vertex inclined, body not much elongated. A. Pluvialis, a British insect of this genus, is often seen in crowds dancing in the air, especially a short lime before rain. It inhabits woods.

ANTHONY, ST. is said to have been born in Egypt in 251, and to have inherited a large for- tune, which he distributed among the poor. After this he retired into solitude, founded a re- ligious order, built many monasteries, and died anno 356. Many ridiculous stories are told of his conflicts with the devil, and of his miracles ; and seven extant epistles are attributed to him. He is sometimes represented with a fire by his side, signifying that he relieves persons from the in- flammation called after his name ; but always accompanied by a boar, on account of his having been a swine-herd, and curing all disorders in that animal. His pictures on the walls of houses have been supposed to preserve from the plague ; and the Italians, who do not know the true sig- nification of the fire painted at his side, conclude that he preserves houses fro'n being burnt. Both painters and poets have made very free with this saint and his followers : the former by many ludicrous pictures of his temptation ; and the latter by a few epigrams on his disciples.

ANTHONY (Francis), a famous empiric, born in London in 1550, and educated at Cam- bridge, where he studied chemistry. He made a great fortune by the sale of a nostrum, called the auram potabile, concerning which he wrote a treatise, printed at Hamburgh in 1598. He was twice imprisoned and fined for imposture. His son John succeeded him in the sale of his medicine, from which he received a handsome income. He wrote Lucas Redivivus, or the Gospel Physician, 1656, 4to. and died in 1665.

ANTHONY, ST. a cape on the coast of the pro- vince of Buenos Ayres. It forms the south point of entrance into the Plata. There are

three other capes of the same name, one of which forms the western extremity of the island of Cuba. Long. 84° 56′ W., lat. 21° 54′ N.— Another on the coast of Todos Santos in Brasil. Long. 38° 37′ W., lat 13° S.— Another on the coast of the straits of Magellan, between the bay of Arenas and the bay of Santa Catalina.

ANTHONY, ST., FALLS OF, in the Mississippi, North America, about 2000 miles from its mouth, and in lat. 44° 50′ N., were first seen and named by Hennepin, a French missionary in 1680. The river is 627 yards broad above the fall, and immediately below it is contracted within a channel of 209 yards. The perpendicular height of the fall is 16£ feet, besides 58 feet more of a rapid below, so that when viewed from a distance it appears to be much higher than it really is. In the middle of the stream above stands a small island, on which grow a few hem- lock and spruce trees, and about half way be- tween this island and the eastern shore is a rock, lying at the very edge of the fall, in an oblique position, about five or six feet broad, and thirty or forty long. The surrounding country is ex- tremely beautiful. At a little distance below the fall is a small island, about 1£ acre, covered with oak trees, on the branches of which are nu- merous eagles' nests, secure on account of the rapids nbove from the attacks either of man or beast. When the Mississippi is full the appear- ance of these falls is very sublime.

ANTHONY'S, ST. ISLAND, the most northern of the Cape Yerd Islands. Topazes are found, in one of its mountains, and it is said to con- tain mines of gold and silver. The inhabitants, chierly negroes, are about 580 in number.

ANTHONY, ST. (Knights of), a military order, instituted by Albert, duke of

Bavaria, Holland, and /ealand, when he designed to make war against the Turks in 1‘382. They wore a collar of gold made in form of a hermit’s girdle, from which hung a stiek like a crutch, with a little bell, as they are represented in St. Anthony’s pictures.

A.VIHONY gives the denomination to a religi- on-; order founded iri France about the year 10’.).”), for the cure of those afflicted with St. Anthony’s tire. These monks, it is said, assumed to themselves the power of giving, as well as re- moving, the ignis saeer, or erysipelas.

ANIHONY’S Finr, in medicine, a kind of ery- sipelas, which is named after St. Anthony of 1’adua. It is known, that anciently diseases had ihe’v peculiar saints : thus, in the ophthalmia, persons had recourse to St. Lucia; in the tooth .11 h io St. Apollouia ; in the hydrophobia to St. Hubert, See.

ANTHOI’IIORA, in botany, a genus of in- stris of the order hymenoptera, and family ajuana. (ieneric character: mandibles uniden- late within ; maxillary palpi, with six articu- ations.

AXTHOPHORA Ri TUSA, the apis retusa of Lin- na-usand Kirby, is a British insect, and builds it nest 111 hard hanks of clay or gravel, and even, according to Hay, in stone walls. It contains several oval cells, lined with a thin white mem- liiaiu-, each about three quarters of an inch long, aid It ss than halt an inch in diameter.*

ANT11)Pll V LI. I, (i AN IOPHALI, in botany,*

a denomination sometimes given to the large) species of cloves.

ANTHOPHYLLITE is a massive mineral o. a brownish colour ; sometimes also crystallised, in thin flat six-sided prisms, streaked lengthwise. It has a false metallic lustre, glistening and pearly. In crystals, transparent. Massive, only translucent on the edges. It does not scratch glass, but fluate of lime. Specific gravity 3-2. Somewhat hard, but exceedingly brittle. Infusi- ble alone before the blowpipe, but with borax it gives a grass-green transparent bead. It con- sists of 56 silica, 13‘3 alumina, 14 magnesia, 3-33 lime, 6 oxide of iron, 3 oxide of manga- nese, 1-43 water, and 2‘94 loss in 100 : found at Konigsberg in Norway.

ANTHORA, in botany, the trivial name of a species of aconitum. See ACONITUM.

ANTHORISMUS, in rhetoric, a contrary de- scription or definition of a thing from that given by the adverse party.

ANTHOS ; av0os, Gr. a flower; byway of ex- cellency appropriated to

rosemary.

ANTHOS, in chemistry, the quintessence or elixir of gold, or a medicine extracted from pearls.

ANTHOS PHILOSOPHORUM, a method of trans- muting metals by means of vitriol.

ANTHOS MI AS, among ancient naturalists, a rich odoriferous kind of wine. It differs from anthinos, as the latter imports a medicated wine, scented with odoriferous herbs, whereas anthos- mias derived its fragrancy from the native grapes.

ANTHOSPERMUM, in botany, the amber- tree; a genus of the dicecia order, and poly- gamia class of plants, ranking in the natural me- thod under the forty-seventh order, stellatae. — The essential characters are : CAL. a hermaphro- dite flower is divided into four parts ; no corolla : STAM. are four, and the pistilli two ; the germen beneath the flower. Male and female on the same or separate plants. Of this genus Linnaeus mentions three species, viz. 1 . A. sethiopica. 2. A. ciliare. 3. A. herbacea. The fruit is most generally known in the gardens of the curious. Its beauty consists in its small evergreen leaves, which grow as close as heath.

ANTHOXANTHUM, in botany, vernal-grass, a genus of the digynia order, and diandria class of plants ; ranking in the natural method under the fourth order, gramina. The essential cha- racters are: CAL. a bivalved gluma, with one flower ; the corolla bivalved, obtuse, and without any awn. There are three species, viz. 1. A. Indicum, a native of India. 2. A. odoratum, or spring-grass, a native of Britain ; one of the earliest spring grasses. 3. A. Paniculatum, a native of the southern parts of Europe.

ANTHRACITE, in mineralogy, blind coal, Kilkenny coal, or glance coal. There are three varieties : 1 . Massive, the conchoidal of Jameson : its colour is iron-black, sometimes tarnished on the surface with a splendent metallic lustre. Fracture conchoidal, with a pseudo-metallic lustre. It is brittle and light. It yields no flame, and leaves whitish ashes. It is found in the newest floetz formations, at Meissner in Hesse, and Walsall in Staffordshire. 2. Slaty anthracite Colour black, or brownish-black. Imperfect

*slaty in one direction, with a slight metallic lustre. Brittle. Specific gravity 1*4 to 1-8. Consumes without flame. It is composed of 72 carbon, 13 silica, 3‘3 alumina, and 3-5 oxide of iron. It is found in both primitive and secon- dary rocks ; at Caiton Hill, Edinburgh ; near Walsall, Staffordshire ;*

in the southern parts of Brecknockshire, Caermarthenshire, and Pembrokeshire, whence it is called Welsh culm ; near Cumnock and Kilmarnock, Ayrshire ; and most abundantly at Kilkenny, Ireland. 3. Columnar anthracite. In small short prismatic concretions of an iron-black colour, with a tar- nished metallic lustre. It is brittle, soft, and light. It yields no flame or smoke. It forms a thick bed near Sanquhar, in Dumfrieshire ; at Saltcoats and New Cumnock, in Ayrshire, and also at Me- issner in Hesse. It abounds in Pennsylvania.

ANTHRACOSIS, in medicine, a corrosive scaly ulcer, either in the bulb of the eye or the eye-lids.

ANTHRAX, in medicine, is the same with what is otherwise denominated carbo and car- bunculus. Some limit the latter to the glandular parts, and the former to all the others. But the distinction is scarcely worth making. — The word is sometimes also used for lithanthrax or pit- coal. See LlTHANTHRAX.

ANTHRENUS, in entomology, a genus of the class insecta, order coleoptera. Generic character : antennae clavate ; feelers unequal ; jaws membranaceous ; lip entire ; head hid under the thorax. The principal species are : A. denti- cornis, which inhabits Santa Cruz. A. Histrio, found in Germany, &c.

ANTHRIBOS, in entomology, a division of the genus curculio, comprehending those species which have the lip bifid, jaw bifid, and snout short.

ANTHROPOD7EMON, in ancient writers, a demon supposed to be concealed under the figure or appearance of a man.

ANTHROPOGLOTTUS, among zoologists, an appellation given to such animals as have tongues resembling those of mankind, particularly to the parrot kind.

ANTHROPOGRAPHY denotes the de- scription of the human body, its parts, structure, &c. See ANATOMY.

ANTHROPOLATRˆi, in church history, an appellation given to the Nestorians, on account of their worshipping Christ, notwithstanding that they believed him to be a mere man.

ANTHROPOLITES, in natural history, a term denoting petrifactions of the human body, as those of quadrupeds are called zeolites. It has been doubted whether any real human pe- trifications ever occur, and whether those which have been supposed such were not mere lusus naturae. But the

generality of naturalists best versed in this branch assure us of real anthropolites being sometimes found. And indeed, as it is universally admitted that the zeolites are frequently seen, what negative argument can be brought against the existence of the others ? The component parts of the human body are nearly similar to those of the brute creation, and correspondent matter in?;/ therefore be subject to, and acquire, the like accidental changes,

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wherever the same power or causes concur to act. If the former are not so common, it may be accounted for, in some measure, by reflecting that human bodies are generally deposited in select and appropriated places; whereas the bones of animals are dispersed everywhere, and falling into various parts of earth, at greater or less depth, there is more probability of their encountering the petrifying agent. Some au- thors tell us of entire bodies and skeletons that were found petrified. One in particular, discovered at Aix en Provence anno 1583, in 9. rocky cliff, the cerebrum whereof, when struck against a piece of steelˆ produced sparks, the bones being at the same time friable. But the reports of Happel and Kircher are too absurd for relief. Van Helmont's strange relations, together with those of Jean a Costa, must also be rejected as fabulous. Scheuhzer has published an engraved figure, which he calls the An- tediluvian man. But it is a known fact, thai detached parts, osteolithi, are sometimes found . especially in situations where either the water, the soil, or both, have been observed to possess a strong putrescent quality. The vertebra, fragments portions of the tibia, and even the whole cranium itself, have been seen in an ab- solute state of petrification. Some of these are said to appear vitriolated or mineralised. The petrified bones of pretended giants are more properly real zeolites, or the bones of the larger animals. See PETRIFACTION.

ANTHROPOL'OGY ; avOˆvos, a man, and \oyoc, a discourse ; a treatise on human nature. It is sometimes equivalent to the expression in theology ' speaking after the manner of men.'

.ANTHROPOM ANC Y ; from aj/0pw:roc, a man, and fiavTtia, divination ; a species of divination performed by inspecting the entrails of a human creature.

ANTHROPOMETRIA, a description of the human body, with its several parts and members.

ANTHROPOMETRICA MACHINA, a name which Sanctorius gave to his weighing chair, con- trived for measuring the quantity of insensible

perspiration.

ANTHROPOMORPHA, a term formerly given to that class of animals which have the greatest resemblance to the human kind.

ANTHROPOMOR'PHITE,) Av0Pu>7roc, a

ANTHROPOMOR PHITISM, > man,and /iop0ij, a form. One who ascribes a human figure and bodily form to God.

The doctrine of the anthropomorphites, and the euchi- tae,proceeded from the literal sense of some texts of Scripture. Taylor' '» Polem. Discourses.

Christians as well as Turks, have had whole sects contending that the Deity was corporeal and of human shame ; though few profess themselves anthropomor- phites, yet we may find many amongst the ignorant of that opinion. Locke.

But because I know you are not swayed by names and authorities, I shall endeavour to show you a little more distinctly, the inconveniences of that anthropo- morphitism, which you have embraced.

Hume's Dial, concerning Nat. Religion.

ANTHROPOMORPHITES, in church history, a sect of ancient heretics, who taking every tiling spoken of God in scripture in a literal sense, particularly that passage of Genesis in which

it is said ' God made man after his own image,' maintained that God had a human shape. They

of Africa, and even some parts of Asia. Herrera speaks of great markets in China furnished

are likewise called Audeni, from Audens their wholly with human flesh. Marcus Paulus speaks leader. ˚f similar practices in the kingdom of Goncha

ANTHROPOMORPHOUS, something that towards Quinsay, and the island of Zapengit ;

bears the figure or resemblance of a man. Na- turalists give instances of

anthropomorphous plants, anthropomorphous minerals, &c. These generally come under the class of what they call lusus naturae, or monsters. Anthropomorphous stones make a species of figured stones. The word is applied to the mandrake.

ANTHROPOPATHY, in theology, a figure,

others of the inhabitants of Java, of the kingdom of Siam, of the island of Sumatra, and of the islands in the Gulf of Bengal, being anthro- pophagites. When America was discovered this practice is said to have been found almost uni- versal there, insomuch that several authors have supposed it to be occasioned through a want of other food, or through the indolence of the

expression, or discourse, whereby some passion people to seek for it ; though others ascribe its

origin to a spirit of revenge : and much is to be subtracted from all these accounts in al- lowance for the propensity of the early con- querors and missionaries to make the worst of the picture. It appears pretty certain, however, from Dr. Hawkesworth's Account of the Voyages to the South Seas, that the inhabitants of New Zealand, a land not unfurnished with the ne- cessaries of life, eat the bodies of their enemies. Mr. Marsden also informs us that this horrible custom is practised by the Battas, a people of Sumatra. ' They do not eat human flesh,' says he, ' as a means of satisfying the cravings of nature, owing to a deficiency of other food ; nor is it sought after as a gluttonous delicacy, as it would seem among the New Zealanders. The Battas eat it as a species of ceremony; as a mode of showing their detestation of crimes, by an ignominious punishment; and as a horrid indication of revenge and insult to their unfortunate enemies. The objects of this barbarous repast are the prisoners taken in war, and offenders convicted and condemned for capital crimes. Persons of the former descrip- tion may be ransomed or exchanged, for which they often wait a considerable time; and the latter suffer only when their friends cannot re- deem them by the customary fine of twenty been- changs, or eighty dollars. These are tried by the people of the tribe where the fact was com- mitted, but cannot be executed till their own particular raja or chief has been acquainted with the sentence; who, when he acknowledges the justice of the intended punishment, sends a cloth to cover the delinquent's head, together with a large dish of salt and lemons. The unhappy ob- ject, whether prisoner of war or malefactor, is then tied to a stake : the people assembled throw their lances at him from a certain distance ; and when mortally wounded, they run upon him, as if in a transport of passion, cut pieces from the body with their knives, dip them in the dish of salt and lemon-juice, slightly broil them over a fire prepared for the purpose, and

swallow the morsels with a degree of savage enthusiasm. Sometimes, according to the degree of their ani- mosity and resentment, the whole is devoured ; and instances have been known, where, with bar- barity still more aggravated,they tear the flesh from the carcase with their mouths. To such a depth of depravity may man be plunged, when neither religion nor philosophy enlightens his steps ! All that can be said in extenuation of the horror of this diabolical ceremony is, that no view appears to be entertained of torturing the sufferers, of

is attributed to God, which properly belongs only to man ; a signification similar to anthro- pology.

ANTHROPOPII'AGI. Av0pawoc, a man, and £>ayw, to eat : man-eater.

Upon slender foundations was raised the anthropo- phagy of Diomede's horses. Brown's Vulgar Errors.

Go, knock, and call ; he'll speak, like an anthro- pophaginian, unto thee ; knock, I say. Shahsp.

*The cannibals that each o*her eat, The anthropophagi, and men whose heads Do grow beneath their shoulders. Shaksp. Othello*

ANTHROPOPHAGI. That there have been in almost

ill auvs of the world, nations who have followed ;lus barbarous practice, we have abundant tes- , imony. The Cyclops, the Lestrygons, arid Srylla, are all represented in Homer as anthro- :io|i!i:iM-i. or man-eaters; and the female phan- toms, Circe and the Cyrens, first bewitched with .1 show of pleasure, and then destroyed. This, i.ike the other parts of Homer's poetry, had a foundation in the manners of the times preceding 'us own. According to Herodotus, among the K-sedonian Scythians, when a man's father died, Mie neighbours brought several beasts, which they killed, mixed up their flesh with that of the deceased, and made a feast. Among the Mas- sa-etT, when any person grew old they killed •lim and cat his flesh ; but if he died of sickness they buried him, esteeming him unhappy. The •.amo author aKo assures us, that several nations MI the Indies killed all their old people and their iick to teed on their rlesh; he adds, that persons in health were sometimes accused of being sick t< > atl'onl a pretence for devouring them. Ac- cordiirj to Scxtus Kmpirieus the first laws that were made were for the prevention of this bar- i.arous practice, which the (ireek writers represent L- universal before the time of Orpheus. The }>hi!u:.o]>hers Diogenes, Chrysippus, and Zeno, fnlluvied by the whole sect of Stoics, affirmed noting unnatural in the eating of and that it was very reasonable to dead bmlies for food, rather than to give n a jirey to worms ;md

putrefaction. In •r to make the trial, however, whether there any real repugnancy in nature to the feeding in animal \ith the l\< > >}\ of its own species, naidus rioroventuis fed a hog with hog's i. and a dn_ with dou's rlesh; upon which i-lle- of the hog to fall off', and become fidl of ulcers", practice of anthropophagy in later i:i\e the totiiimmes of all the Romish s who have visited the internal parts

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'ncreasing or lengthening out the pangs of death ; the whole fury is directed against the corse, warm indeed with the remains of life, but past the sensation of pain. I have found a difference of opinion in regard to their eating the bones of their enemies slain in battle. Some persons long resident there, and acquainted with their pro- ceedings, assert that it is not customary ; but as one or two particular instances have been given by other people, it is just to conclude that it sometimes takes place, though not generally. It was supposed to be with this intent that raja Neabin maintained a long conflict for the body of Mr. Nairne, a most respectable gentleman and valuable servant of the India Company, who fell in an attack upon the campong of that chief, in the year 1775. The annals of Milan furnish an extraordinary instance of anthropophagy. A Milanese woman, named Elizabeth, from a de- praved appetite, had an invincible inclination to human flesh, of which she made provision by en- ticing children into her house, where she killed and salted them ; a discovery of which having been made, she was broken on the wheel and burnt in 1519.

ANTHROPOSCOPIA; from av0po>™c, and ffjcoTTtw, I consider ; the art of judging or disco- vering a man's character, disposition, passions, and inclinations, from the lineaments of his body. In which sense, anthroposcopia seems of some- what greaterextent than physiognomy, or meto- poscopy. Otto has published an Anthropo- scopia, sire judicium hominis de homine ex lineamentis externis.

ANTHROPOTHYSIA, the inhuman practice of offering human sacrifices. See SACRIFICE.

ANTHUMON, in the ancient materia medica, a name given to the epithymum, or dodder, grow- ing upon thyme.

ANTHUS, in ornithology, a synonyme of a species of loxia. See LOXIA.

ANTHUS, in zoology, a name by which Aldro- vand and some other authors have called that species of the cenanthe known in England by the name of the whin-chatt.

ANTHYLLIS, in botany, kidney-vetch, or lady's finger : a genus of the decandria order, and diadelphia class of plants; ranking in the natural method under the thirty-second order, papilionacee. The essential characters are : CAL. ventricose, and the legumen is roundish and covered. Linnseus enumerates nine species; of which the following seem to be most worthy of attention. 1. A. barba jovis, or silver-bush, which has its name from the whiteness of its leaves. 2. A. cytisoides, or shrubby wound- wort, has long been known in the English gar- dens. 3. A. montana, or herbaceous wound- wort, with winged leaves, grows naturally in the mountains in the south of France, and in Italy. 4. A. vulneraria, with unequal winged leaves, is a native of Spain and Portugal, as also of Wales.

ANTHYPOMOSIA, in ancient writers, an oath taken by a prosecutor or accuser, declaring that the absence of the party accused is not for any just cause, and therefore demanding that judgment may no longer be delayed on that account.

ANTHYPOPHORA, in rhetoric/stands op- posed to hypophora, e. g. If the hypophora be, grammar is indeed a little difficult to obtain ; the anthypophora would be ; grammar is indeed a little difficult to attain, but then us use is infinite. See HYPOPHORA.

ANTI. Avn, against; a prefix to many words which are derived from the Latin and Greek, they however, always maintain the signi- fications which belongs to them out of compo- sition, as Antichrist, Antitrinitarian.

My little sones, the last our is, and as he has herde that antichrist cometh, now many anticristes ben maad, wherefore we witen, that is the last our.

Wiclif. 1. Jon. ch. 2. p. 140.

If once that antichristian crew,

Be crush'd and overthrown, We'll teach the nobles how to crowch,

And keep the gentry down.

Francis Qnarles in Ellis, v. 3. p. 123.

When the antichristian powers attack religious es- tablishments by the

sword they may and must be defended. Hartley's Sermons.

ANTIA LEX, in antiquity, a law made for the suppression of luxury at Rome. Its particulars are not known. The enactor was Antius Restio, who never afterwards supped abroad for fear of being himself a witness of the profusion and ex- travagance which his law meant to destroy, but without effect.

ANTIADES, in anatomy, the glandules, or kernels, more commonly called tonsils, and al- monds of the ears.

ANTIADIAPHORISTS, opposite to the Adiaphorists ; from ov«, and a&a $opoc, indif- ferent; an appellation given in the sixteenth century to the rigid Lutherans, who disavowed the episcopal jurisdiction, and many of the church ceremonies retained by the moderate Lutherans.

ANTIBACCHIUS, in ancient poetry, a foot consisting of three syllables, the two first long, and the last one short ; such as the word virtute.

ANTIBALLOMENA, medicines which may be substituted for each other.

ANTIBARBARA, and ANTIBARBARUM, ti- tles given to several works levelled against the use of barbarous terms and phrases, chiefly in the Latin tongue. Erasmus, Nizolius, and Cellarius, have published Antibarbara; Noltenius a Lexi- con Antibarbarum, consisting of observations made by the grammarians of latter ages in rela- tion to the purity and corruption of Latin words. Sixtus Amama has given an Antibarbarus Bi- blicus, wherein he pretends to have discovered seven sources of the barbarisms which have got footing of late ages in the Bible. Peter du Moulin used the title antibarbarous for a book against the use of an unknown tongue in divine service.

ANTIBARI, a town of European Turkey, si- tuated upon a hill, on the coast of the Adriatic Sea. It has a harbour at the foot of the hill, but is thinly peopled.

ANTIBES, an old town of Provence in the department of the Var, on the Mediterranean, with a commodious harbour and a strong citadel, six miles from Nice. It was founded by a co-

.tony of Marseillese, 340 years B. C. and named Antipolis. It suffered severely from the Saracens, and now contains about 500 houses, with 5270 inhabitants, who are chiefly employed in the sardel fishery, and in the manufactory of earthen- ware. It is an important barrier fortress on the side of Italy, and was besieged without effect by the Austrians and English in 1747. The har- bour is about 1012J feet long, 270 broad, and 4050 in circumference. The trade of the place is of little consequence, but it contains a number of Roman antiquities, and is the chief town of a canton. Antibes is remarkable for being the only place where the French soldiers refused to join Buonaparte on his landing from Elba in 1815. Lon. 7° 11 E., lat.43° 35′ N.

ANTIBIBLOS, in civil law, an instrument or signature whereby the defendant owns he has re- ceived the libel, or a copy of it, and notes the day whereon he received it. This is usually done on the back of the libel.

ANTIBURGIIER SECEDERS, a numerous and respectable body of dissenters from the church of Scotland, who differ from the esta- blished church chiefly in matters of church government, and who differed from Burgher Seceders, with whom they were originally united, chiefly if not solely respecting the lawfulness of taking the burgess oath. For an account of their origin and principles, see SECEDERS.

ANTICAUMIA, a species of mineral cadmia, sometimes also called pseudo-cadmia. It takes this denomination, not as being opposite in qua- lity to the cadmia, but because it is used as a substitute for it.

ANTICARDIUM, in anatomy; from avn, and Kaptia, the heart; that hollow part under the breast, just against the heart, commonly called the pit of the stomach : called also scrobiculus cordis.

ANTICATARRHAL, an epithet given to me- dicines prescribed for catarrhs.

ANTICATEGORIA, in oratory, denotes a re- crimination or mutual accusation ; where the two parties charge eacli other with the same crime. Apollodorus considers the anticategoria as two several causes or actions.

ANTICAUSOTICS, among physicians, me- dicines against hot fevers.

ANTICHEIR, in anatomy; avnˆfip; the Greek name for the pollex, or thumb.

ANTKJOLK.‘A ; from avn and ˆoXteoc; me- dicines against the colic.

ANTICIIORUS, in botany; a genus of the inono<_rynia order, and octandria class of plants, of which the essential characters are : CAL. a

four-leaved periauthium: COR. four expanding petals: I'EKICARP. a capsule, above, subulated, with four cells, and four valves : the seeds very numerous. There is but one species — A.pressus, a native of Arabia.

AMTK'H KI-'.SIS, in the civil law, a covenant or convention, whereby a person borrowing .Money of another, engages or makes over his .mils or goods to the creditor, with the use and occupation thereof, for the interest of the money lent ; it was allowed by the Romans, among whom usury was prohibited : and was afterwards called mortgage, to distinguish it from a simple

engagement, where the fruits of the ground were not alienated.

ANTICHRIST, among ecclesiastical writers, denotes a great adversary of Christianity, who is to appear upon the earth towards the end of the world. There have been demonstrations, dispu- tations, and proofs, in great number, both that the pope is, and that he is not antichrist. F. Calmet is very full in describing the father and mother of antichrist, his tribe and pedigree, his wars and conquests, his achievements against Gog, Magog, &c. Some place his capital at Constantinople, others at Jerusalem, others at Moscow, and some at London ; but the genera- lity at Rome, though these last are divided. Grotius and some others suppose Rome pagan to have been the seat of antichrist, and Caligula or Nero the person : most of the Lutheran and reformed doctors contend earnestly for Rome Christian, under the papal hierarchy. In fant, the point having been maturely debated at the council of Gap held in 1603, a resolution was taken thereupon to insert an article in the con- fession of faith, whereby the pope is formally declared to be antichrist. — Pope Clement VIII. was stung to the quick with this decision ; and even king Henry IV. of France was not a little mortified to be thus declared, as he said, an imp of antichrist. M. le Clerc holds, that the rebel Jews and their leader Simon, whose history is given by Josephus, are to be reputed as the true antichrist. Lightfoot and Vanderhart rather apply this character to the Jewish sanhedrim, Hippolitus and others held, that the devil him- self was the true antichrist ; that he was to be incarnate, and make his appearance in human shape before the consummation of all things. — Father Malvenda, a Jesuit, published a large work entitled Antichristo, in which he relates all the opinions of the fathers with regard to antichrist ; and finally contends that he is to be a Jew, of the tribe of Dan. Hannius and some others have written upon the unity of an- tichrist, and assert that there is to be both an eastern and a western antichrist. How endless are conjectures ! Some of the Jews, we are told, actually took Cromwell for the Christ; while some others have laboured to prove him anti christ himself ! Psaffius assures us, he saw a folio book in the Bodleian library, written on purpose to demonstrate this latter position. Mo- dern writers have added to the conjectures re- specting antichrist: Mr. Faber

finds one in revolutionary France ; and some obscurer inter- preters have awarded that honour, we believe, to Buonaparte personally. Upon the whole, the antichrist mentioned by the apostle John, 1 Epist. ii. 18. and more particularly described in the. book of Revelations, seems evidently to be the same with the Man of Sin, &c. characterised by St. Paul in his second epistle to the Thessalo- nians, chap. ii. And the entire description lite- rally applies to the excesses of papal power. Had the right of private judgment, says an ex- cellent writer, been always adopted and main- tained, antichrist could never have been; and when the sacfed right comes to be universally asserted, and men follow the voice of their own reason and consciences, antichrist can be no more.

ANTICHTHON ; from avn, and X0wv, earth; ni ancient astronomy, a globe of earth resem- bling ours, and supposed to be moving round the sun, but invisible to us, because on the op- posite side ; that luminary being always exactly interposed between this other earth and ours. This idea was asserted by Pythagoras and his disciples, as is testified by Aristotle, Plutarch, &c. They reasoned from the supposed perfection of the number ten, and concluded there must be just so many spheres; and as our senses only discover nine, viz. the seven planets, the sphere of the fixed stars, and our earth, they imagined a tenth opposite to ours. Some of the fathers, who endeavoured to accommodate the doctrine of the heathen philosophers to those of Christ- ianity, assert that this Pythagorean earth is no other than the heavens of the righteous.

ANTICTUONES, or ANTIGENS, in geography, those who inhabit countries diametrically op- posite to each other. In which sense it is synonymous with what we more usually call antipodes.

ANTI'CIPATE, ˆ Anticipo, from ante, be- ASTICIPA'TION, > fore, and capio, to take. To ANTI'CIPATORY. j possess or to take mentally before the act has been performed, or the event has happened in the order of time : to have be- forehand, to forestal, to prevent.

This payment was called an anticipation, which is to say a thing taken, or a thing comyng before his tyme or season. This tenne •was new to y comt nalue, but thei payd wel for their learnying, for the* money was paied out of hand w*out delay.*

HaU. Henry VIII. Time, thou anticipat'st my dread exploits ;

The flighty purpose never is o'ertook,

Unless the deed go with it. Shakspeare.

God hath taken care to anticipate and prevent every man, to draw him early into his church ; to give piety the pre-possession, and so to engage him in holiness. Hammond.

If our apostle had maintained such an anticipa- ting principle, engraven upon our souls before all ex- ercise of reason ; why did he talk of seeking the Lord, seeing that the knowledge of him was innate and perpetual ? Bentley.

Why should we

Anticipate our sorrows ? 'tis like those, That die for fear of death. Denham.

ANTICIPATION; from ante, before, and capio, I take ; in logic, a presumption, prejudice, or pre- conceived opinion.

ANTICIPATION, in medicine, is applied to dis- eases, wherein some of those symptoms which regularly belong to some future period, appear in the beginning.

ANTICIPATION, in philosophy, denotes the first idea of a thing, without which we can neither name, think, doubt, or even enquire concerning it. It is also denominated prenotion, and in this sense makes the second of Epicurus's criterions of truth.

ANTICIPATION, in rhetoric, a figure otherwise called prolepsis.

ANTICIPATION, in music. A sound is said to be anticipated, when a composer wishes a note to be heard before its time, in plain counterpoint. Anticipation, in the treble, requires suspension in the base, and e contra. There are several

kinds of anticipation in music : first, in passing notes, of which no notice is taken in the base; but this must be done diatonically, not by dis- tant intervals or leaps. Secondly, when the chord is struck on a rest, before the base. Thirdly, in serious and fundamental discords that are to be regularly prepared and resolved, the anticipation in the treble is striking the se- cond before it becomes a third, by the descent of the base. And anticipation in the base, or inferior parts, is when the base rises before the treble falls ; as from the eighth to the seventh, or tenth, (octave of the third,) to the ninth.

ANTICK, v. n. & adj. ˆ Supposed to be

AN'TICKLT, > derived from the

AN'TICKNESS. j Latin antiquus, an-

cient ; and therefore exhibiting habits and forms differing from the actual mode; old fashions, grotesque, uncouth; like a buffoon, odd, singu- lar.

At the entrying into the palace before the gate, on the plaine greene, was buylded a fountaine of embowed worke, gulte with fyne golde, and bice ingrayled wyth aniicke workes, the olde god of wyne called Baccus birlying the wyne, which by the conduytes in the earth ranne to alle people plentiously with red, white, and claret wines. Grafton, v. 2. p. 303.

HlP. Tis strange, my Theseus, what these lovero speak of.

THES. More strange than true. I never may believe These antick fables, or these Fairy toys ; Lovers and madmen have such seething brains, Such shaping fantasies, that apprehend more Than cooler reason ever comprehends ; The lunatick, the lover, and the poet. Are of imagination all compact.

Shaktpeare. Midsummer Night't Dream. K. RICH. For within the hollow crown

That rounds the mortal temples of a king,

Keeps death his court ; and there the antick sits,

Scoffing his state and grinning at his pomp.

Shakfpeare. K. Rich. IT. But let my due feet never fail To walk the studious cloyster's pale, And love the high embowed roof, With antic pillars massy proof, And storied windows richly dight, Casting a dim religious light. Milton.

As i ic, in sculpture and painting, a fantas- tical composure of figures of different natures, sexes, &c. as men, beasts, birds, flowers, fishes, and things merely imaginary. It amounts to much the same thing with what the Italians call grotesca, and the French grotesque.

ANTICLEA, in classical history, a daugh- ter of Autolycus and Amphithea. Her father, a famous robber, permitted Sisyphus, son of TEolus, to enjoy the favors of his daughter, and Anticlea was really pregnant of Ulysses when she mar- ried Laertes king of Ithaca. Laertes was never- theless the

reputed father of Ulysses: Ulysses is reproached by Ajax in Ovid's Metamorphoses as being the son of Sisyphus. It is said that Anticlea killed herself when she heard a false report of her son's death. — Homer. Odys. xi. 19.

ANTICNEMION ; from cam, and Kvˆn, ˆ shin-bone; in anatomy, the shin, or the fore prominent part of the tibia.

ANTICOR, or ANTICOEUR, among horses, an inflammation in a horse's throat, is the same with the quinsy in mankind. See FARRIEBY.

ANTICOSTI, an uninhabited island of consi- derable size at the mouth of the river St. Law- rence, included in the government of Newfound- land. Its eastern point is in 62° W. long, and N. lat. 49° 5'. Its west point in W. long. 64° 35′ and N. lat. 49° 48'. Throughout its entire ex- tent of 125 miles in length and 30 in breadth, it possesses not a single harbour where a vessel can safely ride. The forest wood that is found on it is stunted in growth ; and the climate from its severity, and the soil from its general unfruit- fulness, have hitherto deterred the British autho- rities from attempting a permanent settlement here. The French are said to have formed an establishment on the island during their posses- sion of Canada; no trace of it however now remains: but in 1809 two officers were appointed to reside at different parts of the coast to relieve vessels in distress, receive shipwrecked mari- ners, &c.

ANTICUM, in architecture, a porch before a door ; also that part of a temple which is called the outer temple, and lies between the body of the temple and the portico. It is sometimes < ailed antffi.

ANTICYRA, in ancient geography, a town in 1'hocis, on the Corinthian bay, opposite to ('irrha, to the west on the same bay. The Pho- cians seizing the temple of Apollo at Delphi, a war, called the sacred, commenced, and lasted ten years ; when Philip, father of Alexander the Great, avenged the uod by destroying many of ihe cities of the pillagers. Anticyra was one of them. It was again taken and subverted by At- tihus, a Roman general, in the war with the Macedonian.';. It afterwards became famous for its hellebore, 1 his drug was the root of a plant, the- chief produce of the rocky mountains above the city, and of two kinds; the-

black, which had i purgative finality ; and the white, which was .'.n emetic. Sick peisons resorted to Anticyra '" take the medicine, which was prepared there '•\ a peculiar and very excellent recipe : hence ihe adaje, NavLvt Antieyram. Hy the port in ine second ci.ntury was a temple of Neptune, not large, but built with Delected stones, and > ' inside \vhite\vaos ot the same im-tal ; and above it was a with a spniv.,% sheltered from the sun by a ;'"ot supported by columns. A little higherwas r.onuinetit formed with such stones as oc- M!, an'! designed, it was said, for the son of lp:iitus. One of these, Si heclius, was killed by I lector, while ti-jhtm for tin; body of I'atroelus, ii;:t h;< iiories were transported to Anticyra; his brother died after his return from About two stadia, or a quarter of a mile s a h:_ i ruck, a portion of the moun- :'i!i on whiiii a temple ot' Diana stood, the ,r_antie woman nia-ic by Praxiteles. Ihe walls and other edifices at Anticyra were e ten I • of Neptune,

•'•1th stones 01 peui'k; Tli,. 1,1 1-.. is now culled

'v-pro-pitia, or I lie White Houses; and some

i.iiiidin'_'s fiom which it was so

The port i- l.u. (Mocked, and

' ei-. is ,or corn. ,xˆ up

*"-•'in !h" *'.a >.i n fni.rtam.*

ANTIDACT YLUS ; from avn, and Sa, dactyl ; a name given by some to the anapaest, which is the reverse of a dactyl, and consists of two short syllables and one long : e. g. pte'as

ANTIDˆEMONICA; from avn, and Saipov, damon; in ecclesiastical history, a sect who denied the existence of devils, or evil spirits ; also all spectres, incantations, witchrafts, &c.

ANTIDESMA, in botany, a genus of the dicecia order, and pentandria class of plants. CAL. of the male five-leaved ; no corolfa ; die antherae bifid : female CAL. five-leaved ; the corolla wanting : STIGM. five; the berry cylindric and one-seeded. There is but one species, viz. A. alexiteria, a native of India.

ANTIDICOMARIANITES; from avriduof, adversary, and Mapta, Mary; an ancient sect, esteemed heretics, who denied the perpetual virginity of the virgin Mary, and asserted that she had several children by Joseph after our Saviour's birth. They were the disciples of Helvidius and Jovinian, and appeared in Rome towards the close of the fourth cen- tury.

ANTIDORON, in ecclesiastical writers, a name given by the Greeks to the consecrated bread, out of which the middle part marked with the cross, wherein the consecration resides, being taken away by the priest, the remainder is distributed after mass to the poor. On the sides of the antidoron are impressed the words Jesus Christus vicit. The word is formed from dwpov, donum, a gift, as being given away loco muneris, or in charity. The antidoron is also called panis praesanctificatus.

ANTIDOSIS; from avri, and SiSwpi, to give; in antiquity, denotes an exchange of estates, practised by the Greeks on certain occasions, with peculiar ceremonies, and first instituted by Solon. When a person was nominated to an office, the expense of which he was not able to support, he had recourse to the antidosis ; that is, he was to seek some other citizen of better substance than himself, who was free from this and other offices, in which case the former was excused. In case the person thus substituted denied himself to be the richest, they were to exchange estates after this manner : the doors of their houses were close shut up and sealed that nothing might be conveyed away ; then both took an oath to make a faithful discovery of all their effects, except what lay in the silver mines, which by the laws was excused from all imposts ; accordingly, within three days, a full discovery and exchange of estates were made. ANT1DOTARY is used by some writers for a dispensatory. We have antidotaries of several authors, as those of Meuse, Rhasis, &c.

ANTIDOTE, v. & n. } Avrt, against, and ANTI'DOTAL, ftiorov, given, froir.

AXTI'DOTALLY. » diSwpi, to give, Some-

thing given to prevent the effects of what has been already received ; a preventive ; a counter- poison.

Particular discontents and grievances are cither of body, minde, or fortune, which, as they vround the soul of man, produce this melancholy and many great inconveniences, by that untidote of good counscll and] crswasion may be eased or expelled.

Burton's Anatomy of Melancholy,

The universal antidote for all the judgments of God is our humble

repentance. Hall's Contemplations.

To wake thy dead devotion was my point;

And how I bless night's consecrating shades.

Which to a temple turn an universe ;

Fill us with great ideas, full of heaven,

And antidote the pestilential earth.

Young's Complaint. Night 9th. Trust not the physician ;

His antidotes are poison, and he slays

More than you rob. Shakspcare.

What fool would believe that antidote, delivered by Pierius, against the sting of a scorpion ? to sit upon an ass, with one's face towards his tail.

Brown's Vulgar Errors, Poison will work against the stars : beware ; For ev'ry meal an antidote prepare. Drydenjun.

Thus am I doubly ann'd, my death and life,

My bane and antidote, are both before me.

This in a moment brings me to an end ;

But this informs me I shall never die.

Addium's Cato.

The safe and general antidote against sorrow is em- ployment. Rambler. ANTIDOTE. The Indian physic consists much in the use of antidotes. The root mungo, and the viper-stone, are held sovereign antidotes against the bite of the cobra di capello, and other venomous creatures.

ANTIENNE, in music, the commencement of a chant ; preliminary verse of a psalm ; a species of prelude. Each church mode is an- nounced by an antienne ; and each antienne has its peculiar mode for the purpose of blending itself with the following chant or psalm. In ordei to ascertain the mode peculiar to those psalms which do not always commence with the tonic, the cadence is indicated by the word evovffi. The connexion of the antienne with the following psalm is expressed in ancient Ro- man Catholic music by a figure of two notes, and the word evovae is written to show the

com- mencement of the cadence, which governs the key or mode. But this rule is not strictly ad- hered to in the compositions of plain chant of later date. Rousseau, in his Dictionary of Music, simply says, That the antiennes have been thus called because they were sung originally by two choirs answering each other alternately, and that under this title was understood the anonce to the hymns and psalms sung in churches.

ANTIGENIDAS, a celebrated Greek musician of Thebes, and flute master to Alcibiades, until his pupil discarded the instrument on account of the distortion it produced in his countenance. Antigenidas is said to have held the taste of the commonalty in such contempt, that hearing a flute player at a distance saluted with a violent burst of applause, he observed, ‘ There must be something very bad in that man’s performance, or those people would not be so lavish of their approbation/

ANTIGGA, PUNTA DE IA, a cape on the north coast of the island of Guadaloupe.

ANTIGNY, a town in the Swiss canton of Fribourg, eight miles S. W. of the town of that name.

ANTIGONE, in fabulous history, the daughter of CEdipus king of Thebes, who led her father when blind and banished. She was slain

by the usurper Creon, whose son Haemon, being in love with her killed himself upon her tomb. Her death was avenged upon Creon by Theseus.

ANTIGONEA, or ANTIGONIA, in ancient geography, . A city of Bithynia, so called from Antigonus the son of Philip, and afterwards Nicaea. 2. In Epirus, to the north of the Montes Ceraunii, opposite the city of Oricum. 3. In Arcadia, so called in honor of’ king Antigonus.

4. In Macedonia, in the territory of Mygdonia.

5. In Chalcidice, in Macedonia, on the east side of the Sinus Thermaicus. 6. In Syria, built by Antigonus, not far from Antioch, on the Orontes ; but soon after destroyed by Seleucus, who re- moved the inhabitants to Seleucia, a town built by him. And 7. One in Troas, called Alex- andrea, in Pliny’s time.

ANTIGONUS, king of Asia, one of the cap- tains of Alexander the Great, was the son of Philip, a Macedonian nobleman. Upon the death of Alexander, when a division of the provinces took place, Pamphylia, Lycia, and Phrygia Major, fell to his lot ; and after the death of Perdiccas that of Lycaonia was added. He was entrusted with the command of the Macedonian household troops, and when Eumenes was de- clared a public

enemy, he was ordered to prose- cute the war against him with the utmost vi- gor. Eumenes was defeated at the beginning of this war, and forced to retire with 600 brave followers to an inaccessible castle on a rock; and his friends, having assembled a new army for his relief, were also routed by Antigonus, whose ambitious projects began now to be mani- fest. After Antipater's death, Polysperchon suc- ceeding as tutor to the young king of Macedon, Antigonus aspired at the lordship of all Asia. The power of Eumenes made Antigonus greatly desire his interest; but that faithful commander, escaping from the fortress in which he was blockaded, raised an army, and was appointed the royal general in Asia. In conjunction with the governors of Upper Asia, he was successful in several engagements against Antigonus ; but was at last betrayed and put to death, and the governors who had joined him submitted to Anti- gonus. After this, seizing the treasures at Baby- lon, Seleucus fled to Ptolemy, with whom, and Lysimachus and Cassander, he entered into a confederacy for the purpose of curbing the power of Antigonus. But the latter, with his son De- metrius, prevailed in subduing Syria and Phoe- nicia, in forcing the Nabathaean Arabs near Ju- dea to his terms, and in expelling Seleucus from Babylon. Upon which the confederates were obliged to allow him the possession of all Asia, except the Greek cities, which were to continue free. This treaty was soon violated ; and Pto- lemy made a successful descent in Lower Asia, and on some islands of the Archipelago, but was defeated by Demetrius, who took Cyprus with many prisoners. On this victory Antigonus as- sumed the title of king, and bestowed the same on his son; and from this time, A.A.C. 306, his reign in Asia, Ptolemy's in Egypt, and Alex- ander's other captains in their governments, pro- perly commence. He had not long borne thi

title when Cassander, Selcucus, and Lysima- chus, again combining against him, defeated the forces under him and his son at Ipsus ; and in this battle he fell, in the eighty-fourth year of his age, A. A. C. 301, Antigonus was ardent in his passions, and often used improper means for their gratification ; but he was a sagacious, active, brave, and fortunate warrior, and in private con- cerns strictly just.

ANTIGONUS, king of Judea, the son of Ari- stobulus. He entered into an alliance with the king of the Parthians and besieged Jerusalem. He cut off his uncle Hyrcanus's ears to incapa- citate him for the high-priesthood, and put Jo- seph, Herod's brother, to death. At length He- rod took him and

sent him to Mark Antony ; who to gratify Herod cut off his head, and thereby extinguished the Asmonean race, who had reigned 126 years. This happened A.A.C. 36.

ANTIGONUS GONATAS, son of Demetrius Poli- orcetes, and grandson of Antigonus king of Asia. He was eminently distinguished by his filial affection, humanity, and mild disposition. At his father's death, which he greatly lamented, he succeeded him in all his European dominions, as well as in the kingdom of Macedon and oilier cities in Greece. The Gauls having in- vaded liis country, he defeated and expelled them ; but not long after Pyrrhus, king of PLpirus, routed him. Yet when Pyrrhus was slain at Ar- gos, and liis head brought to Antigonus by his son, he \vas much displeased ; and covering it with liis robe, ordered the body to be searched for and honorably interred. His kind treatment of 11 clonus, the son of that unfortunate king who had fallen into his hands, was equally singular. The taking of the city of Corinth by intrigue was the meanest action of his reign, but by this he maintained the freedom of the small states of Greece and eidarged his own dominions. By cultivating the arts of peace, lie not only secured the atl'eetions of his subjects to himself, but to his descendants. His designs were opposed by the Aehuans, headed by Aratus, who recovered Co- rinth ; but he pmsned liis plan, and left his kingdom in peace about the eightieth year of his life and thirty-fourth of his reign, A.A..C. 243, and \va> succeeded by liis son Demetrius II.

AVI I.M>M-S the Second, surnamed Boson, king of Macedonia, the son of Antigonus I. succeeded his brother Demetrius II., A. A. C. 225; and was soon after chosen commander-in-chief of the A< Im-au forces by sea and land. The league be- ing UTeatly strengthened by the accession of the Kpnotcs, Huiotians, Phucians, Arcadians, and Thessalians, Cleomeno. III. king of Sparta, raided a u'leat army to oppose Antigonus; but bciiiu: deserted by his allies, the Argives, he was obliged to [-(-treat to defend his own kingdom after de-troyinj; Megalopolis. Antigonus, after taking a number tit' cities, completely defeated Cleomenes at Selasia, \vho tied to Egypt after the battle, leaving I, aceda-inon open to the vic- torious aimy, A.A.C. '2'2. Antigonus, how- (••. t-r, used his victory \vith irreat moderation, givinu' the Spartans a free republican govern- ment, and restoiui'4 their ancient laws, which their late ˆovereiu'ii had greatly altered. After this the barbarians having attacked Macedonia, Antiˆonu:.; returned and put them to flight, but did not lonu (-njoy his good fortune, for he died*

next year and was succeeded by his nephew Philip VI. A.A.C. 220.

ANTIGRAPHE; from avri, and ypaˆw, I write ; in antiquity, denotes a law- suit about kindred, whereby a person claimed relation to a particular family.

ANTIGRAPIIUS, in antiquity, an officer of Athens who kept a counterpart of the apodecti, or chief treasurer's accounts, to prevent mis- takes, and keep them from being falsified.

ANTIGRAPHUS, in ecclesiastical writers, an abbreviator of the papal letters, in which sense the word is used by pope Gregory the Great in his register.

ANTIGRAPHUS, or ARCHIGRAPHUS, in writers of the middle age, a secretary or chancellor so- called, on account of his writing answers to the letters sent to his master.

ANTIGRAPHUS is also used by Isidorus for one of the notes of sentences marked with a dot, to denote diversity of sense in translations.

ANTIGUA, formerly written Antigoa and Antega, one of the largest of the Leeward Car- ribee islands, and the residence of the governor or captain general. It lies about ten leagues north-east of Montserrat, and twenty east of St. Christopher ; is upwards of fifty miles in cir- cumference and contains according to Edwards 59,838 acres of land, an estimate followed in 1813- by Mr. .Colquhoun. Of these, 44,838 acres are in a state of cultivation ; 34,000 of them being laid out in sugar plantations ; tobacco, cotton, and wool, are the other staple productions of the island, which also has some good pasturage, and grows large quantities of provisions in favorable seasons. The numbers of slaves in this island were reported by the Privy Council, in 1788, as amounting to 36,000 ; in 1817 there were but 31,451: the»free blacks 438, the free people of color 1747, and the whites, exclusive of troops, 2102. Edwards considered the island to be in a declining state at the period of the publication of his valuable work ; but it is remarkable that since the abolition of the slave trade, i. e. from 1807 to the present period, the slaves have multi- plied to the number of about an additional 1200.

The soils of the island are a black mould on a substratum of clay, and a stiff clay on a sub- stratum of marl. When the former is sufficiently irrigated it is extremely rich, but the island is occasionally subject to excessive droughts, and contains not one single rivulet or spring. The latter description of soil is less productive, and so much over-run with an irradicable species of grass that some estates, once in tolerable cultiva- tion, have been entirely abandoned, and others converted into pasture lands, as a dernier resort. It is not possible from these causes to obtain any regular estimate of the annual quantity of sugar and other productions growing in Antigua They vary into all proportions: in 1779 were shipped 3,382 hogsheads, and 579 tierces: in 1782, 15,102 hogsheads and 1 ,600 tierces : in the years 1770, 1773, and 1778, there were no crops, severe droughts

having destroyed all the canes and nearly exposed the negroes to absolute famine. The climate is warmer than that of Barbadoes, and fully as much exposed to hurri- canes. The abbe" Raynal thinks that a good season should produce eighteen or twenty mil- lions'weight of raw sugar and a. proportionable quantity of rum : Mr. Edwards thought 17,OOO

hogshead ; of sugar of sixteen cwt. is a good crop. Black cattle, hogs, and fowls, are plentiful ; and the rain-water, that is preserved, remarkably pure and light.

The island of Antigua was discovered, with St. Christopher's, by Columbus in his second voy- age : the brother of that great navigator notices that its Indian name was Jamaica, signifying, in the dialect of the Carribs, a land abounding with springs : Alcedo the Spanish geographer says that the English discovered them. It is certain, however, that no such tidings ever reached the mother country. Columbus called the island Antigua from the church of St. Maria de la An- tigua at Seville; and from this period to 1632 we hear nothing of its history. The French, who had been accidentally established at St. Chris- topher's, seem at that time to have first enter- tained the idea of settling in Antigua. A few English families, however, first removed thither, and attempted the cultivation of tobacco. Amongst them was an ancestor of the family of Warner, which still possesses considerable es- tutes on the island. In 1663 the first regular grant of this island was made by king Charles II. to Lord Willoughby, of Parham, the go- vernor of Barbadoes ; who nominated his kins- man Henry Willoughby as his deputy. Several French families had by this time arrived at An- tigua; and, various quarrels arising between them and the new governor, they are said to have induced their countrymen at Martinique to pro- ject an expedition against the island. An over- powering French armament at any rate arrived here in 1666, which desolated the colony nearly to utter ruin ; the plantations were entirely de- populated of their negroes, the houses and pro- duce committed to the flames, and the proprie- tors plundered and massacred without respect to age, sex, or condition. In 1668 the treaty of Breda restored Antigua to the English ; but its entire recovery from the depredations of the French, is attributable to the exertions of Colonel Codrington of Barbadoes, who strongly advised and countenanced the introduction of the sugar-cane into the colony. This measure he followed up with every possible exertion in favor of Antigua, when subsequently appointed captain-general and commander-in-chief of the Leeward Carribee Islands; so that in 1690 it commanded a disposable force of 800 men, ' a quota,' says Mr. Edwards, 'which gives room to estimate the whole

number of its white inha- bitants, at that time, at upwards of five thousand.' If this be a just estimate, the island would ap- pear to have attained a degree of prosperity it has not latterly known.

*At the beginning of the last century we find the assembly of Antigua at issue with the govern- ment at home, on the subject of the currency of the island. But this dispute was soon forgotten iu a more remarkable transaction, that exhibits *he spirit of its inhabitants, and the equity of the mother country in an interesting point of view. Daniel Park, Esq. a native of Virginia, had, through the interest of the Duke of Marlborough, been appointed to the government of the Lee- ward Isles. He was a debauchee in early life, but having served successfully under that great*

general in the Netherlands, and being deputed to bring home tidings of the victory of Hochset to queen Anne, he attracted the notice of the court, and was appointed to succeed general Matthews, the successor of colonel Codrington in 1706. The colonists received him with great cordiality as a court favorite; arid the assembly at Antigua added £1000 to his income ; in re- turn for which his whole conduct as a governor exhibited but one train of public and private out- rages. Having seduced the wife of one of the most respectable inhabitants, who had the mis- fortune shortly afterwards to kill a man by ac- cident, he endeavoured to procure a verdict of wilful murder against the incensed husband, in- terfered most indecently in the impannelling of the jury, and declared it to be amongst his pre- rogatives to direct the mode of their formation, as well as that of the election of the assembly. ' It was soon observed of him,' says Edwards, ' as it had formerly been of another detestable tyrant, that he spared no man in his anger, nor woman in his lust.' The respectable part of the inhabitants, to the number of eighty, now de- manded his recal, and after various abortive ef- forts to procure it from the hands of his patrons at home, they at last had the satisfaction of see- ing their agents arrive from England with letters of dismissal, and a commission to examine wit- nesses respecting the matters of complaint. But Park had now the assurance to refuse to obey the Queen's letters, and issued orders for the disso- lution of the assembly. He declared he should remain in the government for the sake of vindica- ting his innocence, and surrounded himself with all the troops he could prevail upon to obey him. The night of the dispersion of the assembly, and all the following day, were occupied by its most active members, in summoning the people of the interior to their aid. The populace were now enraged against him beyond measure ; the as- sembly continued sitting until he surrounded their house with soldiers, whose principal com- manders refused to act, not knowing whom to obey ; and all the affairs of the island were sinking into anarchy. We give the result in the words of Mr. Edwards : —

' On Thursday the 7th of December, 1710, early in the morning, about five

hundred men ap- peared in arms in the town of St. John's, where colonel Park had been making provision for re- sistance in case of attack. He had converted the government-house into a garrison, and sta- tioned in it all the regular troops that were in the island. On the approach of the inhabitants, however, his courage failed him. The sight ot an injured people coming forward as one man, with deliberate valor, to execute on his person that punishment which he must have been con- scious his enormities well merited, overwhelmed him with confusion and terror. Although he must have been apprised that his adversaries had proceeded too far to retreat, he now for the first time, when it was too late, had recourse to con- cession. He despatched the provost-marshal with a message, signifying his readiness to meet the assembly at Parham, and to consent to what- ever laws they should think proper to pass for the good of the country. He offered at the saimt

*time, to dismiss his soldiers, provided six of the principal inhabitants would remain with him as hostages for the safety of his person. The speaker of the assembly and one of the members of the council, unwilling to carry matters to the last extremity, seemed inclined to compromise, and proposed themselves as two of the hostages required by the governor ; but the general body of the people, apprehensive that further delay might be fatal to their cause, called aloud for im- mediate vengeance, and instantly marched for- ward in two divisions. One of these led by Mr. Piggot, a member of the assembly, taking posses- sion of an eminence that commanded the go- vernment-house, attacked it with great fury. The fire was briskly returned for a considerable time, but at length the assailants broke into the house. The governor met them with firmness, and shot Piggot dead with his own hand, but received in the same moment a wound which laid him prostrate. His attendants, seeing him fall, threw down their arms ; and the enraged populace, seizing the person of the wretched go- vernor, who was still alive, tore him into a thou- sand pieces, and scattered his reeking limbs in the street. Mesides the governor, an ensign, and thirt-en private soldiers who fought in his cause, *,ere killed outright, and a lieutenant and twenty-four privates wounded: of the people thirtv-two were killed and wounded, besides Mr. L'overnor's death instantly put an*

it at homo, with a wisdom d sufficiently into the its representative to i'tnd it most fla- f vindication ; • on to all persons •;

ieed, is the principal ar captain-general of i lere he holds a lin causes arising within u eonii;:il, who, by their – mess during his : in the other alone. There :ua, of common i.dature is com- :' twelve, and an live members. Ithadtheho nlinv to Neuro slaves the right ; and the more equivocal privi- in all capital •sing of the fatal into execution. ,ii! 1 two of militia, ii'iiit'.iry establish- :i battalion of ar- '>o;is are raised on is ioeeive here, as from the island. ii , svhieh run to a . i ur south-west, tviess finer "'. .ini;u'>, Parham, • ti iiu ipal ; the first ntrv, and the first At Kn.dish harbour,

is a royal arsenal and dock-yard, with conve- niences for careening large vessels.

Internally, Antigua is divided into eleven dis- tricts and six parishes, containing six towns of moderate size. St. John's (the capital), Parham, 1'almouth, Willoughby Bay, Old Road, and James Fort.

Very meritorious exertions lor the civilisation of the negroes have been made in this island by the Moravians, who in Edwards's time ranked be- tween 5,000 and 6,000 slaves among their con- verts. The practical good habits and the know- ledge of the useful arts which these missionaries have the happy faculty of promoting, in union with their religious objects, cannot be too much held up to the imitation of their competitors in this field of benevolent labor.

In the year 1809 the official value of the im- ports of Antigua were £198,121 : the exports £216,000: in 1810, imports, £285,458 ; exports £182,392. In 1813 Mr. Colquhoun estimated the aggregate value of its productions at £898,220.

The quantities of coffee, sugar, rum, and cot- ton-wool, exported into Great Britain from An- tigua in 1809 and 1810, were as follows :

COFFEE.

SUGAR.

RUM.

COTTON-

WOOL.

British

For.

British

For.

plant.

plant.

plant.

plant .

1809 1810

cwt.

309 40

cwt.

3,983 2,164

cwt.

106,150 188,799

cwt .

629 3,821

gall.

143,223 77,092

Ibs.

112,016 39,880

ir -.—t India id. slid

ANTIGUGLER is a crooked tube of metal, bent so as to be easily introduced into the necks of bottle?, and used in decanting liquors without disturbing them. For this purpose the bottle should be a little inclined, and about half a spoonful of the liquor poured out, so as admit an equal quantity of air; let one end of the bent tube be stopped with the finger whilst the other is thrust into the body of the liquor near to the bubble of air already admitted. When the fin- ger is taken off the bottle will have vent, and the liquor will run out steadily and undisturbed. See SIPHON.

ANTIIIECTICS ; from avn and ncriKOf ; in pharmacy, medicines good in hectical disorders.

ANTIHECTICUM POTERII, the name of a medicine formerly much celebrated, but now laid aside in common practice. It was prepared from a mixture of tin with the regulus of anti mony, and fixed with saltpetre.

ANTIHYPNOTICS; avn, and VTTVOTUCOS sleepy ; medicines that prevent sleep.

ANTIHYPOCHONDRIACS; from UVTI, and vTroxovSpiaicos, hypochondriac; medicines against melancholy.

ANTILEGOMENA, in Scripture criticism, an expression denoting doubtful, but acknow- ledged by most to be genuine, one of the three classes into which Eusebius has distributed the books of the New Testament ; the other two are

nomologoumena, i. e. of undoubted authority, and notha or spurious. To this class he refers the Epistles ascribed to James and Jude, the se- cond of Peter with the second and third of John, whether they were written by the evangelist, or by another person of the same name. He is of opinion that these books may be received as genuine productions of the apostolic age, even if they were not written by the evangelists.

ANTILEPSIS, in surgery, the hold of a bandage to keep it from slipping.

ANTILEXIS; from avriXeyw, I contradict; in antiquity, denotes a new trial granted in the Athenian judicatories, where judgment had be- fore passed against a party for non-appearance.

ANTILIBANUS, in ancient geography, a mountain of Ccelosyria, which bounds it on the south, running parallel with Libanus ; they both begin a little above the sea, Libanus near Tripo- lis, Antilibanus at Sidon, and terminate near the mountains of Arabia, which run to the north of Damascus, and the mountains of Traconitis, and there end in other mountains. In the Scriptures no distinction is made between Libanus and An- tilibanus, both being denominated by the com- mon name Lebanon.

AKTILLARUM, in conchology, a species of nerita very frequent on the

shores of the Antilles Islands.

AXTILLARUM, in ornithology, a species of falco, described in 1'Histoire des Antilles, torn. ii. p. 252, under the name of mansfenny, after Buf- fon ; and called le feucon des Antilles by Bris- son, Orn. i. p. 361. This is the falco Antillarum of Gmelin, and mansfenny of Latham. It is found in the Antilles or Carribee Islands, &c.

ANTILLES, (formed, as some writers sup- pose, of ante islas, i.e. islas ante el Continente, islands before the Continent,) a name that has been variously applied to the West India Islands, but principally to the whole group which di- vides the Carribean sea from the Atlantic, situ- ated between the tenth and twenty-fourth de- grees of north latitude, and extending from the coast of Brasil to that of Florida. These again have been distinguished according to their size, in- to the Greater and Less Antilles, and the Windward and Leeward Islands. The Windward Islands, according to the general understanding of Bri- tish mariners, stretching from Trinidad to Marti- nico, and the Leeward Islands from Dominica to Porto Rico. The Spanish word Antilles, therefore, is of little actual utility in geographi- cal classification. Many of these were originally called the Carribean islands by Columbus, from the warlike character of their original tribes. The French call the whole the Windward Islands, as being toward the east of America; and Mr. Pinkerton proposes the new but very proper designation of the Isles of Colon, the original name of the discoverer of America. We shall be careful to attend to each of their claims on our notice in their alphabetical order.

ANTILOCHUS, the eldest son of Nestor by Eurydice. He went to the Trojan war with his father, and was killed by Memnon the son of Aurora: Homer, Od. 4. Ovid, Heroid. says he was killed by Hector. — A poet who wrote a pa- negyric upon Lysander, and received a hat filled

with silver ; Pint, in Lys. : and an historian commended by Dionys. Halicarn.

ANTILCEMICS; from mm, and Xoi/tec, the pestilence ; medicines against the plague.

ANTILOGY, avriXofia, a contradiction. Ti- rinus has published a large index of the seeming antilogies of the Bible, i. e. of texts which ap- parently contradict each other, but which are all explained and reconciled by him in his com- ments on the Bible. Dom. Magri, a Maltese of the oratory in Italy, has attempted the like, but he has done little more than rehearse what occurs of that kind in the principal commentators.

ANTILUTHERANS, a sect among the an- cient reformers who maintained opinions, chiefly in relation to the eucharist, different from those of Luther. Such were Carolostadius and his fol- lowers, called Sacramentarians ; and those of Zuinglius denominated Zuinglians. The sect of Antilutherans, at first confined within nar- row bounds, in a few years time subdivided into six or seven inferior sects, and ere long into a larger number more variously denominated.

ANTILYSSUS PULVIS, in medicine, is com posed of equal parts of the lichen cinereus terres tris et piper niger. It is reckoned useful in pre- venting the rabies canina.

ANTIMACHUS, a poet, a native of Colophon, who is supposed to have laved in the fifth cen tury before Christ. He ranked in reputation next to Homer ; and the emperor Adrian, who placed Ennius before Virgil, even preferred him to that poet, a circumstance which renders the loss of his writings a subject of great regret. The names of two of his works, the Thebaid and the Lydian, are preserved, and a fragment of Anti- machus is to be found in the Analects of Brunck : the rest of his remains were published in 1786 by Schellenburgh, under the title of Antimachi Colophonii Reliquiae. — Vossius. Fabricius.

ANTIMENSIUM, a consecrated table-cloth, occasionally used in the Greek church in places where there is no proper altar. It answers to the altare portabile, or portable altar, in the Latin church. The origin of the antimensia is thus described by Meursius : when the bishop had consecrated a church, the cloth which had been spread on the ground and over the communion table, was torn in pieces and distributed among the priests, who carried each a fragment away to serve to cover the tables in their churches and chapels; not that it was necessary that such clows should be laid on all tables, but only on those which either were not consecrated, or whose consecration was -doubtful.

ANTIMENSIUS, an ancient officer m the Greek church, whose business was to introduce and place the communicants at the eucharist.

ANTIMERIA; from avri, and /xfpoc a part; in grammar, a figure where one part of speech is used for another : e. g. velle suum cuique est, for voluntas sui cuique est ; also, populus late rex, for populus late regnans. Antimeria, in a more restrained sense, is a figure whereby the noun is repeated instead of the pronoun. The antimeria is frequent in the Hebrew, and is sometimes retained in our version of the Old Testament : e. g. ‘ hear my voice, ye wives ot Lamech,’ for my wives. Gen. iv. 23.

ANTIMONY.

ANTIMETABOLE, in rhetoric, a figure which «<:ts two things in opposition to each other. The word is Greek, compounded of avn, against, and ft£ra/3o\ij from ˆtra/SaXXw, I shift or transfer; i. e. a shifting, or setting two things over against each other. This figure is beautifully exempli- fied in an apophthegm of Musonius; which, on account of its excellence, is called aureum mo- nitum, the golden maxim or precept : "Av ri 7rpa£»;c KabXv jutra TTOVH, 6 p,iv TTOVOQ otˆtrat,

TO Si KCl\OV fltVtl. “AV Tl TTOltJ(TT]g Ulff^OV filTO.

t’/Sovijˆ, TO fjiiv t’lSv oiˆirat, TO St aiff\(tov p.£vu- q. d. ‘ Allowing the performance of an honor- able action to be attended with labor, the labor is soon over, but the honor immortal ; whereas, should even pleasure wait on the com- mission of what is dishonorable, the pleasure is soon gone, but the dishonor eternal.’

ANTIMETATHESIS; from a™ and /wran- Qt)[u, I transfer ; in rhetoric, is the inversion of the parts or members of an antithesis. Such is that of Cicero against Verres, lib. iv. c. 52. ‘ Compare this peace with that war, the arrival of this governor with the victory of that general, his profligate troops with the invincible army of the other, the luxury of the former with the tem- perance of the hitter ; you will say that Syra- cuse was founded by him who took it, and taken by him who held it when founded.’

AINTI MlSlUM,in antiquity, a table placed be- fore the Unman tribunal or judgment-seat. What relation this has to the antimensia in the Greek church does not appear : some writers suppose them the same.

ANTIMONAIICIIOMACIII, } fromavn/to- AXTIMONAIICIIOMACHISTS; S vaci\oy, and /’

ANTIMONIAL Cui-, a cup made either of plass of antimony, or of antimony prepared of alt petre. Though a substance indissoluble by the stomach, it will give a strong cathartic or i inetie quality to any liquor poured into it, with out any diminution of its own weight.

ANTIMONY, in mineralogy, the ?iˆt/u of Dioscorides ; IVi/i/u yvvaiKtMv, Gr. ; Stibium .larbasnn,]/,it. ; S|)iessglas, Spiessglanx, Germ. ; Spn<_d.is Sued.; Spidsglas, Dan.; Pisgotz, I'uiiu. ; Antimoinc, !• 'r. ; Antimonio, Ital. ; An- iimo-ija, Kuss.; Proteus, leo ruber, plumbum 1 1 km m, balneum reds, lupus metallorum, Al- ' hi'in. It has been thought to be the Ttrptiyuvov i.f Hippocrates ; the lapis spuma: candidae niten- iiM|ue, non tain* it I ranslneemis, of Pliny; and die antimonium nf Ba/i! Valentine, a metallic solid, heavy, brittle, substance, probably so <.ilh-d from in-rt, auaiust,

and fwvov, alone, • < ,in t ii..in\ to Militudc, because it. is very Idtnii I'M,[image] purr, bill mixed with some \i:tniioi:v i – mosllv found of a

dusky white color, very brittle, and of a plated or scaly texture.

The ores of antimony, it is thought, have not been analysed with sufficient accuracy to admit of arrangement according to the nature of their contents. Their external characters must there- fore be considered : I. Native antimony, of whicn there are two species ; dodecahedral, and octahe- dral. 1. Dodecahedral. Color tin-white. Mas- sive and crystallised in an octohedron and dode- cahedron. Harder than calcareous spar. Sp. gr. 6.7. It consists of 98 antimony, 1.0 silver, and 0.25 iron. It is found in argentife- ros veins in the gneiss mountains of Chalanches in Dauphiny, and at Andreasberg in the Hartz. 2. Octohedral antimony ; of which there are two sub-species, the antimonial silver, and arsenical silver. II. Antimony Glance. Under this genus are ranged the following species, sub-species, and kinds : 1. Compact gray antimony. Co- lour light lead-gray. Massive. Soft. Easily frangible. Sp. gr. 4.4. Found in Iluel Boys mine in Cornwall. 2. Foliated gray antimony. Color like the preceding. Cleavage prismatic. Not particularly brittle. Sp. gr. 4.4. 3. Radi- ated gray antimony. Color common lead-gray. Massive and crystallised in four and six-sided prisms, and sometimes in acicular crystals. Lustre metallic. Sp. gr. 4.4. It melts by the flame of a candle. Its constituents are, antimony 75, sulphur 25. These minerals occur in veins, in primitive and transition mountains. This occurs in Glendinning, in Dumfriesshire, in Cornwall, &c. 4. Plumose gray antimony. Color between dark lead-gray and smoke-gray. Massive, and in capillary glistening crystals. Lustre semi-metallic. Very soft. It melts into a black slag. It contains antimony, sulphur, arsenic, iron, and silver. It occurs in veins in primitive rocks, at Andreasberg in the Hartz, &c. 5. Axifrangible antimony glance or Bournonite. Color blackish lead-gray. Massive and crys- tallised. Primitive form, an oblique four-sided prism, which occurs variously modified by trun- cation, 8cc. Lustre metallic. Cleavage axifran- gible. Fracture conchoidal. Brittle. Sp. gr. 5.7. Its constituents are, lead 42.62, antimony 24.23, copper 12.8, iron 1.2, sulphur 17. — Hatchett. It is found near Endellion in Corn- wall. 6. Prismatic antimony glance. Color blackish lead-gray. Primitive form, an oblique four-sided prism. Lustre metallic. Cleavage in the direction of the smaller diagonal of the prism. Sp. gr. 5.75. III. Antimony ochre. Color straw-yellow, incrusting crystals of gray antimony. Dull. Fracture earthy. Very soft Brittle. Whitens and evaporates before the blow- pipe. It occurs in veins in Saxony, &c. IV. Nickeliferous gray antimony. Color steel-gray. Massive. Shining. Cleavage double rectangular. Fragments cubical. Brittle. Sp. gr. 6 to 6.7. It melts before the blowpipe, emitting white vapor of arsenic. It communicates a green color to nitric acid. It consists of antimony ivith arse- nic 61.68, nickel 23.33, sulphur 14.16, silica, with

silver and lead 0.83, and a trace of iron. It occurs in veins near Freussberg in Nassau. V. Prismatic white antimony. Color white. Mas- sive and crystallised, in a rectangular, four-sided

prism, an oUique four-fided prism, a rectangu- lar four-sided table, a six-sided prism, ana in acicular and capillary crystals. Lustre pearly or adamantine. Cleavage in the direction of the lateral planes. Translucent. Sectile. Sp. gr. 5.0 to 5.6. It melts and volatilises in a white vapor. Its constituents are, oxide of antimony 86, oxides of antimony and iron 3, silica 8. It occurs in veins in primitive rocks in Bohemia and Hungary. VI. Prismatic antimony-blenue, or red antimony, a. Common. Color cherry-red. Massive, in flakes, and crystallised. Pri- mitive form, an oblique four-sided prism. Crys- tals delicate capillary. Adamantine. Translu- cent on the edges. Brittle. Sp. gr. 4.5 to 4.6. It melts and evaporates before the blowpipe. It consists of antimony 67.5, oxygen 10.8, sulphur 19.7. Klapr. It occurs at Braunsdorf in Saxony, b. Tinder antimony-blende. Color muddy cherry-red. In flexible tinder-like leaves. Feebly glimmering. Opaque. Streak shining. Friable. Sectile and flexible. It contains oxide of antimony 33, oxide of iron 40, oxide of lead 16, sulphur 4, with some silver. Link. It occurs in Carolina and Dorothea mines at Clausthal.

The most beautiful specimens of the ores of antimony, according to a late intelligent natu- ralist, are, with their several descriptions, as fol- lows : 1 . Species II. variety the third of former eminent naturalists a sulphurated A. Gray anti- monial ore, var. striated. Strahliges graues spiessglaserz, Germ. Antim. mineraliz. gris. ra- diatum, Werner. Its color is light steel-gray, passing into a blackish gray, azure blue, golden yellow, and other splendid iridescent tints. It occurs disseminated, or in glandular mamillated and stalactitic masses or crystallised. The pri- mitive form of its crystals has not yet been ascer- tained. Haiiy has shown that they are most easily and neatly divisible in one direction only, parallel to their axes ; other natural joints are, nowever, discernible by the varying reflection of light from these surfaces when held before a can- dle. The only crystalline form that has hitherto been determined, is a compressed hexahedral prism, terminated by obtuse tetrahedral pyra- mids with trapezoidal surfaces (antimoine sul- phure sexoctonal of Haiiy). Born also mentions specimens from Hungary and Norway, of trun- cated tetrahedral prisms. The surface of the crystals is generally marked longitudinally, with delicate striae, and possesses much lustre. The internal lustre both of the amorphous and crys- tallised kinds is metallic and bright, or little shining. Its fracture is striated either broad or narrow, radiating, diverging, or implicated. When broken, it flies into

irregular prismatic, or long granular fragments. Is soft and brittle. Specific gravity from 4.13 to 4.51. Its com- ponent parts, according to Bergman, are, 74 antimony, 26 sulphur.

100

2. The fourth species of the same naturalists ure red antimony. Rothes spiessglaserz, Germ. Ssoufre dore natif strie, et Kermes mineral natif, Delisle. Antimoine hydrosulfure, Haiiy. An-

timonmm aunpigmemo mmeralizatum, Cron- stedt. Antimonium mineraiizatum rubrum. Werner.

The color of red antimony is a deep crimson approaching to blood-red, sometimes, though seldom, clouded with iridescent blue. It occurs generally in minute short hair, or needle-form crystals, radiating or implicated ; sometimes also it is found massive or disseminated. Its lustre is vitreous, little shining. Its fracture is fine, and irregularly diverging fibrous. It is opaque, brittle but somewhat elastic : sp. gr. 4. to 4.7.

The V. species of the same naturalists are, white antimony. Muriated antimony, Kirwan. Weiss spiessglaserz, spiessglanzspath, Germ. Muriate d'antimoine, Born. Antimoine oxyde, Haiiy. Antimonium mineraiizatum album, Werner.

The color of white antimony passes irom snow-white through grayish and yellowish white into ash gray. It is seldom found massive, often radiating like zeolite, but generally crystallised in small and long quadrilateral prisms or rectangu- lar tables, which are accumulated together in bundles or cells. The surface of the crystals is plain, or longitudinally striated, and bright shin- ing or specular. Internally this mineral is much shining, or shining with a vitreous lustre passing into pearly. Fracture straight foliated. It flies, when broken, into irregular, not particularly sharp-cornered, fragments. Is translucid, soft, brittle, and heavy.

In whole crystals it decrepitates before the blowpipe ; but when powdered, it melts quietly and without difficulty, giving out a white smoke, and by degrees totally evaporates. Between two coals it is reducible to the metallic state.

From the analysis of Klaproth, it seems to con- sist of antimony and muriatic acid ; but the aci- cular variety from Dauphine afforded Vau- quelin,

86 oxide of antimony, 3 oxide of iron and oxide of antimony 8 silex, 3 loss.

This beautiful, but uncommonly rare fossil, was first discovered in 1782 by Mongez the younger at Allemont in Dauphine, mixed with .native antimony; afterwards, in 1787, by Ross- ler at Przibram on the surface of galena: it occurs at Malazka in Hungary, with the red and sulphurated antimony.

Native antimony is a mineral of very rare occur- rence ; it was first found in 1748 by Schwab, in the silver mines of Sahla in Sweden, with a gangue of calcareous spar ; and has since been detected by Sage embedded in quartz in the mines oi Allemont in Dauphine.

All the antimonial ores are easily reducible before the blowpipe on charcoal ; and by a con tinuation of the heat they exhale a dense smoke of a white or yellowish color, with little or no arsenical odor, and deposit yellowish flowers on white needle-form crystals, on the surface of the charcoal. A more certain method of ascertain- ing the presence of this metal is to reduce 200 grains of the ore to a fine powder, and to digest

it in a moderately diluted nitro-munatic acid, in whicli the nitrous is not more than one-third of the muriatic part. After this process has been continued an hour, the clear liquor is to be de- canted, and reduced by evaporation to about half its quantity, and then poured into a vessel of distilled water. A copious white precipitate of antimonial oxide immediately takes place, which when edulcorated, and mixed with an equal weight of crude tartar, is to be put into a small lined crucible, fitted with a cover, and by a mo- derate red heat the oxide will be red uced into a metallic button. The pure metal was called re- gulus of antimony ; but in the reformed nomen- clature, simple antimony, and is obtained from the native sulphuret, consisting, according to Bergman, of antimony and sulphur, in the propor- tions of seventy-four of the formerto twenty-six of the latter. Numerous methods have been pro- posed for the separation of the metal, which have been arranged under three heads — I. Reduction by roasting. II. Reduction by scorification ; and III. Reduction by dry parting, or precipi- tation. The following are the substances which have been found mixed with antimony : viz. iron, silver, lead, copper, arsenic, sulphur, silex and alumen, the two hist composing the stony gangue, uhich cannot, always be separated previous to •maUsis. Native antimony was examined by Klaproih, who on 100 grains of the pulverised mineral poured stioniinitric acid, which attracted it with M •hemenre, and converted into

an oxide, wlni'h, being diluted with waterand precipitated, he then tilu-ivd. The clear liquid was treated with muriatic acid, which threw down the silver • iv>ent in the state of muriate, equivalent to one grain of the previous metal. Frussiate of pot- ,:m Andreasbcrg con>isted of metallic anti- inonv '.i!?, silver 1, iron 0.25, which equalled

The sune philosopher digested 100 grains of >nm^ red aiitiir.onial ore with muriatic acid, i\ed with a few drops of the nitrous in a long- c Ktii matrass. There was a gray residuum of , '.rams of sulphur. The antimony contained the solution was precipitated in a state of niti- oxide by diluting it with water, antl the n. ill portion vet remaining by means of potash. oxide redi- sohvd in muriatic, and the solu- 'ii wa< diluted with six times its quantity of aler, ami a'_ram \MI!I as large a portion of the - v. as netdful to redissolve that Htn n oi ;Lj oxide which the afiused water had iveipitated. Alter the dilute solution had in - manner been again rendered clear, the in- dient antimony was reproduced as metallic timnny by nnmer-nm polished iron in the iior, and when collected, edulcorated, and ..supplied <\7\ grains. From the above re- it, and '1 henard's >4att nient of the constitution oxide, this chemist inferred that the mineral plained ot m'!:d!ic antimony o?.T>, of oxygen .'*. I't Milphur I1.!.?. It tin.' pulverised sul*

phuret of antimony be acted upon by nitric acid with heat and water, he afterwards added, a precipitate will fall, consisting of oxide of anti- mony, with sulphur and sulphate of lead. Sul- phate of silver will remain in the liquid, but muriate of soda, if the solution be hot and a little dilute, will throw down the silver without affecting the lead, which may be precipitated by sulphate of soda, or by hydrosulphuret of am- monia. The sulphuric acid resulting from acidification of the sulphur, may be ascertained by muriate of barytes, and the iron by fero- prussiate of potash. If on the first precipitate by water the muriatic acid be digested, the oxide of antimony will be taken up, and may be re- newed in the metallic state by immersing zinc or iron in the muriatic solution ; and sulphur may be separated from sulphate of lead by ustu- lation. The best method of obtaining metallic antimony from the sulphuret is by igniting it after ustulation with half its weight of crude tartar, when the metal will be found at the bottom of the crucible ; or the ustulated oxide mixed with oil, fat, and powdered charcoal, may be ignited till drops of the metal begin to ap- pear, when it will be proper to inject nitre equal to one-sixteenth of the weight of the oxide ; or we may form a martial regulus of antimony by adding sixteen ounces of the sulphuret to six ounces of iron nails, ignited to whiteness in a crucible. When the whole are in fusion, inject gradually two ounces of pulverised nitre, cover the crucible, urge the heat, and seven or eight ounces of regulus will be found lying at the bottom, which may be further purified by a repetition of the process.

Professor Proust differs from Bergman, and makes the sulphuret contain 26 per cent, of sul- phur. He heated 100 parts of antimony and 100 parts of sulphur in a glass retort, till the whole was well fused and the excess of sulphur expelled. The sulphuret remaining was 135. Berzelius makes it 100 antimony and 37.25 sul- phur. Others 30, 33, 35 to 100. The propor- tion given by the equivalent ratio is 100 + 36.5. The specific gravity of antimony, according to Brisson, is about 6.7021, and, according to Berg- man, 6.86. The white fumes which rise on its oxidisation by heat, and which may afterward be volatilised a second time, or fused into a hyacinthine glass, were formerly called argentine flowers of regulus of antimony. In closed ves- sels the antimony rises totally without decompo- sition. Its oxides are .a little soluble in water ; and in this respect they resemble the oxide of arsenic, by an approach toward the acid state. There are three, and probably four, combina- tions of antimony and oxygen. 1. The protoxide of Berzelius is a blackish-gray powder, obtained from a mixture of powder of antimony and water, at the positive pole of a voltaic circuit. By heat this oxide rapidly absorbs oxygen, and is converted into the tritoxide. According to Berzelius it consists of 100 of metal, and 4.65 oxygen. 2. The deutoxide may be obtained by digesting the metal in powder in muriatic acid, and pouring the solution into water of potash. Wash and dry the precipitate. It is a powder of a dirty white color, which melts at a mode-

rate red heat, and crystallises as it cools. Accord- ing to Berzelius it consists of 84.3 metal + 15.7 oxygen. 3. The tritoxide, or antimonious acid, is the immediate product of the combustion of the metal, called, from its fine white color, the argentine flowers of antimony. It may also be formed by digesting hot nitric acid on antimony. When fused with one-fourth of antimony, the whole becomes deutoxide. It forms the salts called antimonites with the different bases. Ac- cording to Berzelius, the tritoxide consists of about 80 metal + 20 oxygen. 4. The peroxide, or antimonic acid, is formed when the metal in powder is ignited with six times its weight of nitre in a silver crucible. The excess of potash and nitre being afterwards separated by hot water, the antimoniate of potash is decomposed by muriatic acid, and the insoluble antimonic acid of a straw-color obtained. Nitro-muriatic acid likewise converts the metal into the peroxide. Though insoluble in water, it reddens the vege- table blues, and does not combine with acids. At a red heat oxygen is disengaged, and anti- monious acid results. Berzelius infers its com- position to be 73.5 metal f 26.5 oxygen. It is difficult to reconcile the above three portions of oxygen to one prime equivalent for antimony. The number 11 gives the best approximation to

Berzelius's analysis. We shall then have the

mony are those of lead and tin ; the former con- stitutes type metal, and contains about one- sixteenth of antimony ; the latter is employed for making the plates on whicn music is engraved. The salts of antimony are of two different orders : in the first, the deutoxide acts the part of a sali- fiable base ; in the second, the tritoxide and peroxide act the part of acids, neutralising the alkaline and other bases, to constitute the anti- monites and antimoniates. The only important combination of the first order is the triple salt called tartrate of potash and antimony, or tartar emetic, which, by M. Gay Lussac, wo-uld be styled cream-tartrate of antimony. It is a valuable and powerful medicine ; but, in an undue dose, is capable of acting as a poison.

The composition of this salt, according to M. Thenard, is 35.4 acid, 39.6 oxide, 16.7 potash, and 8.2 water. The presence of the latter in- gredient is obvious, from the undisputed phe- nomenon of efflorescence. If we adopt the views of M. Gay Lussac, this salt may be a compound of a prime equivalent of tartar n 23.825, with a prime equivalent of deutoxide of antimony — 1 3 . On this hypothesis we should have the following proportions :

Metal.

Oxy.

In 100 parts.

Protoxide . . . Deutoxide . . . Tritoxide . . . Peroxide . . .

11 11 11 11

1

2 3 4

01 2

y i .3

84.6 78.6 73.4

8-i

15.4 21.4

26.6

The second and fourth numbers agree with experiment ; the first oxide is too imperfectly known to enter into any minutiae ; and the third number, though it indicates a little more oxygen than Berzelius assigns, gives less than Proust. Chlorine gas and antimony combine with com- bustion, and a bichloride results. This was formerly prepared by distilling a mixture of two parts of corrosive sublimate with one of anti- mony. The substance which came over having a fatty consistence, was called butter of antimony, and is frequently crystallised in four-sided prisms. It is fusible and volatile at a moderate heat ; and is resolved by water into the white oxide and muriatic acid. It is eminently corrosive, like the bichloride of mercury, and consists of 45.7 chlorine + 54.3 antimony, according to Dr. John Davv's analysis, when the composition of the sulphuret is corrected by its recent exact analysis by Berzelius. But 1 1 antimony + 2 primes chlorine ~ 9.0, give the proportion per cent, of 44.1 f 55.5; a good coincidence, if we consider the circuitous process of Dr. Davy's analysis. For making butter of antimony, three parts of corrosive sublimate, and one of metallic antimony, are the equivalent proportions. Iodine and antimony combine by heat into a solid iodide of a dark red color. The phosphuret of tliis metal is obtained by fusing it with solid phosphoric acid, and is a white sernicrystalline substance. The only important alloys of anti-

2

prime acid . . —

16.75

45.4

1

prime potash . —

5.95

16.2

1

prime water . . —

1.125

3.1

1

oxide of antimony —

12.00

35.3

36.825

100.0

The deutoxide seems to have the property of combining with sulphur in various proportions. To this species of compound must be referred the liver of antimony, glass of antimony, and crocus metallorum of the ancient apothecaries. Sulphu- retted hydrogen forms, with the deutoxide of antimony, a compound which possessed at one time great celebrity in medicine, and of which a modification has lately been introduced into the art of calico printing. The compounds formed by the antimonious and antimonic acids have no . yet been applied to any important use.

*ANTINE (Maur Francois d'), a Benedictine monk, was born at Gourieux, in the diocese of Liege, in 1688. He published the first five volumes o*f DuCange's Glossary in 1736 ; besides which he was the author of a work entitled the Art of Verifying Dates, 4to, 1750 ; printed again in folio, 1770. He died in 1746.*

ANTINOEIA, in antiquity, annual sacrifices, and quinquennial games in memory of Antinous the Bithynian, instituted at the command of Adrian, to be held at Mantinea in Arcadia. See ANTINOUS.

ANTINOMASIA, a figure in rhetoric, where an appellation is used for a proper name.

ANTFNOMIANS; avn, against, and vo/iof, the law ; in ecclesiastical history, those who are supposed to supersede the use and obligation of the moral law by their mode of stating the gospel. The term was first applied by Luther in 1538 to John Agricola, a doctor of some eminence among the reformed, and his followers, who are accused of having pushed the Lutheran doctrine of justi-

fication by faith to this extreme. Not only were good works according to their system considered unnecessary to salvation, but the attempting of them was detrimental to it : and they were never to be preached or enforced from the law, but only from the gospel; the former being wholly abrogated as a rule of life. Luther strongly in- veighed against this doctrine

; and Agricola is said by some writers to have recanted his opinions ; by others, to have complained that he was wholly misrepresented. • Be this as it may, various shades of these opinions have been pro- fessed among small numbers of Protestants since ; and the term itself has been used extensively as a mark of opprobrium where the sentiments have never obtained. It appears to rank among those terms of polemical divinity, from whose entire extinction the sober student of controverted questions would su-ffer no loss, as it has been far more frequently used to affix to persons those consequences of their opinions which they never draw than for any other purpose. After Agricola, Amsdorf, in the following century, fell under similar imputations with the above. See AMS- DOKFJANS. In England, real Antinomranism would seem to have disgraced the profession of religion underthe commonwealth; and Dr. Crisp, i writer of the seventeenth century, whose works are edited by Dr. Gill, has been considered, with the exception perhaps of some living authors, the most decided Antinomian writer of modern times. Uishop Hull, one of the earliest oppo nents of this system, defines it thus: 'That the faith whereby we are justified is nothing else but a. recumbence or reliance upon Christ; or, which is a worse dehnition, that it is only a firm belief and persuasion that our sins are already pardoned, and we already justified; and, conse- quently, that the justification spoken of in Scripture is nothing else but the sense and knowledge of our justification as decreed from

• 'ternity: that Christ obeyed the law and suf- fered in our persons, and that his righteousness is formally ours, and consequently that there is no necessity of 'any righteousness in ourselves in

• Tiler to our sahation: that the moral law, iliongh Christ himself hath taken the pains to oxplain and press it on us, concerns not us Christians, us a law obliging \is sub periculo mania, under penalty of damnation ; but is only a contrivance to frightrn sinners, to convince them tit thrir sins, and to show them their impo- tence and weakness : that we are to work, not lor lite but from life, as they phrase it ; and, con- sequently, ih;it all our uood \orks are, after a ort, work< of supererogation, to which no neces -n v oMi-etii us, but only uratmule freely in-

• lini – u-.' The men that taught these sad pro- positions were called Antinoinians.

I his is a sy-'tem into which it would easily be se< u that the disciples of C'alvin are at least very li.iMe to tall. It is remarkable, however, that an alarm respecting sonic modern tendencies to Antinomianism has been sounded more loudly tiom this SLCt than any other. An eloquent writer of Calvinistic principles, who would do honor to any sect, the Rt'v. Kobert Hall of l.'icester, having been reproved for using the •iiri conditions re-

jiectin;: oiu salvation, thus

replies: 'When the term conditions of salvation, or words of similar import, are employed, he wishes it once for all to be clearly understood, . that he utterly disclaims the notion of merito- rious conditions, and that he intends by that term only what is necessary in the established order of means, a sine qua non, that without which another thing cannot take place. When thus defined, to deny there are conditions of sal- vation is not to approach to Antinomianism merely, it is to fall into the gulf. It is nothing less than a repeal of all the sanctions of revela- tion, of all the principles of moral government. Let the idea of conditional salvation, in the sense already explained, be steadily rejected along with the term, and the patrons of (he worst of heresies will have nothing- further to demand. That repentance^ faith, and their fruits in a holy life, supposing life to be continued, are essential pre-requisites to eternal happiness, is a doctrine inscribed as with a sun-beam in every page of revelation ; the author is at a loss to conceive on what principle, or for what reason, dangerous concessions are due to Antinomianism — that thick-skinned monster of the ooze and the mire, which no weapon can pierce, no discipline can tame. Danger is to be repelled by intrepid resis- tance, by stern defiance — not by compliances and concessions : it is to be opposed, if opposed successfully, by a return to the wholesome dialect of purer times. Such is the intimate alliance betwixt words and things, that the solicitude with which the term condition, and others of similar import, have been avoided by some excel- lent men, has contributed more than a little to the growth of this wide-spreading pestilence. As almost every age of the church is marked by its appropriate visitation of error, so, little penetra- tion is requisite to perceive that Antinomianism is the epidemic malady of the present, and that it is an evil of gigantic size, and deadly malig- nity. It is qualified for mischief by the very properties which might seem to render it merely an object of contempt — its vulgarity of concerj- tion, its paucity of ideas, its determined hosti- lity to taste, science, and letters. It includes within a compass which every head can contain, and every tongue can utter, a system which can- cels every moral tie, consigns the whole human race to the extremes of presumption or despair, erects religion on the ruins of morality, and im- paits to the dregs of stupidity all the powers of the most active poison. The author will ever feel himself honored by whatever censure he may incur through his determined opposition to such a system.' — As far as there is any reality in the danger of which this author speaks, we know of nothing better calculated to meet it than his own able reasoning, except the diligent and impartial study of the whole of God's revealed will.

ANTINO'MY, avTivopM. ; from avri, and vo- poc, a law against; the opposition of one law to another, or opposition to an express law, by disobedience or by a directly contrary practice.

*If he once will'd adultery should be sinful, and to be punisht with death, all his omnipotence will not al tow him to will the allowance that his holiest peo- ple might, as it were, by his own a*tinomief or coun-*

himself esteem'd it according to our common ex- plainers. Milton's Doct. and Dis. of Divorce.

For humility, poverty, meanness, and wretched- ness are direct antinomies to the lusts of the flesh, the »usts of the eyes, and the pride of life.

Taylor's Great Exampler, p . 50.

Antinomies are almost unavoidable in such variety of opinions and answers. Baker.

ANTINOUS, the favourite of the emperor Adrian, born at Claudiopolis in Bithynia. There never was a more boundless and extravagant

ier-statute, live unreproved in the same fact, as he sions ; whereby it became at last so infamous,

that ' to live after the manner of Daphne/ was used as a proverb to express the most volup- tuous and dissolute way of liring. So remark- able was the Daphne of old that the metropolis itself was distinguished by it and called Antioch, near Daphne.

This place has been subject to numerous cala- mities. In the year A. A. C. 145, the people being disaffected to the person and government of Demetrius their king, that prince obtained from the Jews assistance under Jonathan one of the

passion than he entertained for this youth. After Maccabees, killed 10,000 inhabitants, and set his death, Adrian ordered divine honors to be fire to the city.

paid to him, and named a city after him. About the year 115, in the reign of Trajan, it

ANTINOUS, in astronomy, a part of the con- was almost entirely ruined by one of the most stellation Aquila. dreadful earthquakes mentioned in history,

ANTINOUS DI BELVIDERE, in sculpture, a beau- Trajan himself happened

to be there at that tiful statue, formerly in the museum at Paris, time, on his return from an expedition against restored at the peace to its situation in the Bel- the Parthians, so that the city was then full of videre Palace at Rome. It is by some called a troops, and strangers come from all quarters. Mercury. The earthquake was preceded by violent claps of

ANTIO, a promontory in the pope's territo- thunder, unusual winds, and a dreadful noise ties, in the middle division of Italy, so named under ground. The shock was so terrible that from the ancient city of Antium. It has a for- great numbers of houses were overturned, and tified tower, and a convenient harbour was lately others tossed like a ship at sea. Those who built near it. happened to be in their houses were foi the most

ANTIOCH, Avrto%£ia, a city of Syria, Ion. part buried under their ruins ; those who were 35° 17′ E., and lat. 36° 6′ N. ; situated in the walking in the streets or in the squares were by present province of Sourne in Asiatic Turkey, the violence of the shocks dashed against each This city was originally founded by Seleucus other, and most of them either killed or danger- Nicator, founder of the Syro-Macedonian em- ously wounded. This earthquake continued, pire, of which it became the capital, on the with some small intermission, for many days south bank of the Orontes, in this place about and nights, so that vast numbers perished. The fifty yards wide, and about fifteen or twenty most violent shock, according to the acts of St. miles from the shores of the Mediterranean. It Ignatius, was on a Sunday, December 23. By was reckoned about 700 miles from Alexandria this Trajan was much hurt, but escaped through and Egypt. This is the town mentioned in the a window. Dio Cassius pretends that he was Bible ; and according to St. Jerome was formerly taken out of the window, by one who exceeded called Riblah, Acts xi. Hieron. in Ezek. xlvii. the human size in tallness. The same historian The Turks call it Antaki or Antakil. This city adds that mount Lison, which stood at a small was founded by Antigonus, who succeeded Alex- distance from the city, bowed its head and ander in Syria"; and it was called Antigonia by threatened to fall upon it; that other mountains him. But Seleucus, after vanquishing Antigonus, fell ; that new rivers appeared ; and others, that altered the situation as not being strong enough had flowed before, forsook their course and va- for a capital ; and with the materials of the town nished. When the earthquake ceased a woman built another city which he named Antiochia, was heard crying under the ruins, which being after his father. It was long celebrated as one immediately removed she was found with a of the first cities of the east : it was the resi- living child in her arms. Search was made for dence of the Macedonian kings of Syria, and others, but none were found alive except one subsequently of the Roman governors, after the child which continued sucking its dead mother. Romans had succeeded in extending their power Trajan, who was an eye-witness of this terrible to distant provinces. It is

frequently men- calamity, contributed towards the re-establish- tioned by the authors of the books of the New ment of Antioch in its ancient splendor. In Testament. Antioch was also known by the 155 it was almost entirely burnt by accidental name of Tetrapolis, being divided into four cities, fire ; when it was again restored by Antoninus each surrounded by its proper wall, besides a Pius. In 176 or 177, the inhabitants having common one which enclosed them all. The first sided with Cassius, the above-mentioned Roman of these was the city built by Seleucus Nicator ; general who had revolted from M. Aurelius, the second by those who nocked thither on its that emperor published a severe edict agains being made the capital of the Syro-Macedonian them, deprived them of all their privileges, sup- empire ; the third by Seleucus Callinichus ; and pressed their public assemblies, and took from the fourth by Antiochus Epiphanes. About four them the shows and spectacles, to which they or five miles distant stood a place called Daphne, were greatly addicted ; although his anger was which was nevertheless reckoned a suburb of soon appeased. In 194, having sided with Antioch. Here Seleucus planted a grove, and Niger against Severus, the latter deprived them in the middle of it built a temple which he con- of all their privileges, and subjected Antioch, as secrated to Apollo and Diana, making the whole a mere village, to Laodicea ; but, however, par- an asylum. To this place the inhabitants of doned them next year at the entreaty of his Antioch resorted for their pleasures and diver- eldest son, then a child.*

When the Roman empire began to decline Antioch became the bone of contention between them and the eastern nations; and accordingly on the breaking out of a Persian war it always suffered. In 242 it was taken and plundered by Sapor; and eighteen years after underwent the same misfortune in the time of Valerian ; and after the defeat and captivity of Valerian, being taken by the Persian monarch a third time, he not only plundered it, but levelled all the pub- lic buildings with the ground. About the divi- sion of the Roman empire by Constantine in 331, it was afflicted with a dreadful famine. In the year 347 Constanstine II. at an immense expense, caused an harbour to be made at Se- leucia for the convenience of Antioch. When the emperor Julian set out on his expedition against the Persians he made a long stay at Antioch ; during which time many of the Roman provinces were afflicted with a famine, but which raged more violently in Antioch than in any other place. The ecclesiastical writers of those times say that this famine followed Julian from place to place ; and, as he continued longer at Antioch than any other city, it raged there more violently, Julian fixed the price of corn, by which means the famine was

greatly increased, the merchants conveying their corn privately to other placrs, so that this metropolis was reduced to a most deplorable situation. In 381, in the reign of Theodosius the Great, Antioch was again visited by a famine accompanied with a grievous plague: the latter soon ceased; but, llie famine still continuing, the bishop, Libanius, applied to learius count of the east, requesting him by some mean.; or other to relieve the poor who had flocked to all parts of the metropolis, ami were tiaih perishing in great numbers; but to this learius wave no other a.iswer than that they were ;;bhovn.d, and justly punished by the gods. fins inhuman ansuxr raised great disturbances, winch, however, \vere terminated without blood- she I. In :i;',7 Theodosius, to celebrate the fifth year of the reign of his son Areadius and the tenth of his own, laid ;>n extraordinary tax upon the people. Tlii- people of Antioch crowded to the house of 1'lavianu.s their bishop to implore ins protection. Heing unable to timl him they returned to the forum, and would have torn the governor in pieces had HOT. the officers who at- lendid him kept back witli great difficulty the enraged innliitudi1 till he made his escape. Upon tin-, they l>roke some of the einperor's statues and dragged others through the city, but were dispersed by a body of archers. The governor proceeded auanist the offenders with the ut- ino-t cruelty, exposing some to wild beasts in tl;e theatre, and burning others alive. lie did not spine i ven the children who had in- sulted the emperor's statue>; and caused several pei-ons tu he executed \no had only been spec- tator^ of ihe. di-'ovder. I n the mean tune a report v\;:s spread that a h<>dy of troops was at hand, with ordei , to plunder the eity and put all to the sv.ord without distinction of sex or age; upon which tin citizens abandoned their dwellings in the , I conhiMon, reining to the neigh- : 'Inn v>i\esand families.

> .i' •> ;.i,;M. -o some of them

returned ; but the greater part, dreading the cruelty of the governor and the displeasure of the emperor, continued in their retreats. To those who returned St. Chrysostom preached some homilies, which have reached our times and are greatly admired, and which are said by St. Chrysostom himself, as well as some contempo- rary writers, to have had a considerable effect in reforming the lives of this licentious and disso- lute people. On hearing the news of this tumult Theodosius commanded the city to be destroyed, and its inhabitants to be put to the sword with- out distinction ; but this order was revoked : the judges, however, punished the offenders with such severity, and condemned such num- bers, that the city was thrown into the ut- most consternation. On this occasion St. Chry- sostom and the hermits drew up a memorial to the emperor in favor of the citizens, and being joined by Flavianus obtained a ge- neral pardon and had the city restored to all its former privileges. In 458 Antioch was almost entirely ruined by an earthquake, which happened on the 14th of September;

scarcely a single house being left standing in the most beautiful quarter of the city. A similar misfor- tune happened in 525, during the reign of the emperor Justin ; and fifteen years after, being taken by Cosrhoes king of Persia, that naughty tyrant gave it up to his soldiers, who put all they met to the sword : the king himself seized on all the gold and silver vessels belonging to the great church, and caused all the valuable statues, pictures, &c. to be taken down and conveyed to Persia, while his soldiers carried off every thing else. The city being thus completely plundered Cosrhoes ordered his men to set fire to it ; which was accordingly done so effectually that none of the buildings even without the walls escaped. Such of the inhabitants as escaped slaughter were carried into Persia, and sold as, slaves. Notwithstanding such great and repeated cala- mities the city of Antioch soon recovered its ancient splendor; but in 587 underwent its usual fate, being almost entirely reduced by an earthquake, by which 30,000 persons lost their lives. In 634 it fell into the hands of the Sara- cens, who kept possession of it till the year 858, when it was again annexed to the Roman em- pire, and continued so till it was taken by the Turks. The crusaders, who conquered this part of Syria about the close of the eleventh century, constituted a principality under the name of Antioch in 1098. It was first ruled by Boemond prince of Tarento, who was taken by the Turks in 1101. Tancred was invited to the provisional government and died the following year. Boe- mond was liberated in 1103. In 1148 the sultan Noureddin occupied the whole principality of Antioch, except the metropolis; and his troops in 1160 took Boemond III. prisoner, who was detained in captivity at Aleppo till 1175, when through the intercession of his brother-in-law, Manuel the Greek emperor, he was liberated, and died in 1201. Boemond was created a knight by Louis XI. of France at Jaffa. In 1257 he espoused the cause of the Venetians against the Genoese, which led to the expulsion of the Christians from the Holy Land. The city of

Antioch was taken by Bendocdar or Bibars, sultan of Babylon, in 1268, which event put an end to the principality. Antioch was after- wards incorporated with the Turkish empire. A great part of the city was thrown down by an earthquake in 1759, and again in 1822.

Antioch is no more than a ruinous town ; the houses are mean and low, and the general ap- pearance melancholy. The steep banks of the Orontes are covered with numerous plantations ; but the soil of the plain though excellent is un- cultivated. The city stands about 600 yards distant from

the base of a mountain, and is sur- rounded by walls enclosing a space of more than a mile and a half in diameter, including hills with ancient fortifications. They consist of stone in a decaying state, flanked at unequal distances with towers. The ancient gate leading to Aleppo is magnificent but much decayed ; and of the original city a small portion only, with some kitchen gardens, is contained within the present enclosure. The streets are narrow with very elevated footpaths on each side, and the houses are built with stone and covered with tiles, which is unusual in Syria. The city is governed by a mohassel, dependent on the pacha of Aleppo, but appointed by the porte. The population is estimated at 3000 Christians, 15,000 Mahomme- dans, and 150 Jews. This city is the residence of a patriarch of the Greek church. It is pre- tended that St. Peter established the patriarchal see in the year 38 ; and that after him the bishops, who have successively held it, received the title of patriarchs of the east. A council was held here in 56 A. D. in which the apostles are supposed to have regulated the discipline of the church. It has been the seat of several councils since.

ANTIOCHE, PERTUIS D', a strait on the west coast of France, which separates the island of Oleron from those of Rhe and Aix, and is defended by Fort Samblanceau. It was here that the Bellerophon lay till Buonaparte surrendered himself to the British on the 15th July, 1815.

ANTIOCH ETTA, a town of Turkey in Asia, in Caramania, with a bishop's see, over against the island of Cyprus. Long. 32° 15′ E., lat. 36° 42'. N.

ANTIOCHIA, in ancient geography, the name of, viz. 1. a town of Assyria, situated between the rivers Tigris and Tornadodas : 2. of Caria, on the Meander ; called also Anthopo- lis, Athymbra, and Nyssa or Nysaby Stephanus ; but Strabo says, that Nysa was near Tralles : 3. of Cilicia Trachea, on mount Cragus : 4. the capital of Syria, distinguished from the cities of the same name either by its situation on the Orontes, by which it was divided, or by its proximity to Daphne, hence called Epidaphnes : 5. a town of Comagene, on the Euphrates : 6. of Lydia, called also Tralles by Pliny : 7. of Margiana on the river Margus, named from An- tiochus son of Seleucus', who rebuilt it, and walled it round, being before called Alexandria, from Alexander ; in compass seventy stadia ; whither Orodes carried the Romans after the defeat of Crassus: 8. in Mesopotamia, on the lake Callirrhoe, the old name of Edessa : 9. on the river Mygdonius in Mesopotamia, situated at the foot of mount Masius, and the same with Nisibis.

It was the bulwark and frontier town of the Ro- mans against the Parthians and Persians, till given up to the Persians by Jovian, by an igno- minious peace: 10. the capital of Pisidia, a Ro- man colony with the appellation Caesarea : 1 1 . at mount Taurus, mentioned by Ptolemy, but by no other

author.

ANTIOCHIAN ACADEMY, or SECT, a name given to the fifth academy, or branch of acade- mies. It took this denomination from its having been founded by Antiochus, the philosopher. The Antiochian academy succeeded the Phi- Ionian. As to doctrine the philosophers of this sect appear to have restored that of the ancient academy, except that in the article of the criterion of truth, Antiochus was really a stoic, and only nominally an academic.

ANTIOCHIAN EPOCHA, a method of computing time from the proclamation of liberty granted the city of Antioch, about the time of the battle of Pharsalia.

ANTIOCHUS of Ascalon, a celebrated phi- losopher, the disciple of Philo of Larissa, the master of Cicero, and the friend of Lucullus and Brutus. He was founder of a fifth academy ; but, instead of attacking other sects, he en- deavoured to reconcile them together, particularly the sect of the stoics with that of the ancient academy.

ANTIOCHUS, the name of various kings of SYRIA. See that article.

ANTIOCO, St. the Euosis of the ancients, an island in the Mediterranean, about fourteen miles in length, and from two to four in breadth, lying at the distance of two miles from the south-west coast of Sardinia. It is thinly peopled, but has good pastures, and a fine breed of horses, many of which run wild in the fields and woods.

ANTIOPE, in fabulous history : 1. The wife of Lycus king of Thebes, who, being deflowered by Jupiter in the form of a satyr, brought forth Amphion and Zethus. 2. A queen of the Ama- zons, who, with the assistance of the Scythians, invaded Athens, but was vanquished by Theseus, who married her.

ANTIOQUIA, or ST. FE DE ANTIOQUIA, a town in the new department of Cauca, Colum- bia. It is seated on the banks of the river Cauca, about 200 miles N.N. W. of St. Fe de Bogota.

ANTIPˆEDOBAPTISTS ; from avn, against, Traic, TrcuSog, child, and /3a7m£w, baptize, whence /SaTrriTije ; a denomination given to those who object to the baptism of infants; because they say infants are incapable of being instructed, and of making that profession of faith which entitles them to this ordinance and an admission into church communion. See BAPTISTS.

ANTIPAPINUS, or ANTIPAPINIANTJS, avri- irairiviavoc. A title given by

the Greek lawyers to the fourth part of the Digest, including four books, beginning with the title, De Pignoribus. It was so denominated, as being in opposition to Papinian, because it served in the schools in lieu of the books of that lawyer, pursuant to an edict of Justinian.

ANTI PARALLELS, in geometry, are those lines joining the two legs of an angle, which make the same angles like parallel lines, but in

opposite directions. M. Leibnitz, however, calls those lines antiparallels, which cut two parallels so that the outward angle being added to the inward one, the sum may be equal to a right angle.

ANTIPARASIASIS, in rhetoric, a figure by which one granting something to his opponent, thereby turns it to deny more strongly.

ANTIPARASTASIS; from aj/rt, and irapaˆa- «i£, of n-apiTJj/u, I exhibit ; in rhetoric, a reply made to an opponent by allowing part of his argument, and denying the rest, e. g. ‘ you may paint whatever you please, provided the public suffer no prejudice from it, but you must not if it does.’

ANTIPAROS, an island in the Archipelago, opposite to Paros, in a western direction, and from which it is separated by a strait about seven miles over. It is the Olearos, or Oliaros, men- tioned by Strabo, Pliny, Virgil, Ovid, &c. ; and was, according to Heraclides Ponticus, as quoted by Stephanus, first peopled by a Phoenician colony from Sidon. — According to Mr. Tourne- fort’s account, is about sixteen miles in circum- ference, producing wine and cotton, with as much com as is necessary for the maintenance of sixty or seventy families, who live together in u village at one end of the island. This island is remarkable for a subterraneous cavern or grotto, accounted one of the greatest natural curiosities in the world. It was first discovered in the last century by Magni an Italian traveller, who has sriven us the following account of it : — ‘ Having been informed,’ says he, ‘ by the natives of Pa- ros, that in the little island of Antiparos, which lies about two miles from the former, of a gigantic statue that was to be seen at the mouth of a cavern in that place, it was resolved that %\o (the French consul and himself) should pay it a visit. In pursuance of this resolution, after we had landed on the island, and walked about four miles through the midst of beautiful plains and sloping woodlands, we at length came to a little hill, on the side of which yawned a most horrid cavern, that, with its gloom, at first struck us with terror, and almost repressed curiosity. Recovering the first surprise, how- ever, we entered boldly; and had not

pro- ceeded above twenty paces when the supposed statue of the giant presented itself to our view. \N e quickly perceived, that what the ignorant uutives hail been teirified at as a giant, was nothing more than a sparry concretion, formed by the water dropping from the roof of the cave, and by degrees hardening into a figure that their tears had formed into a monster, Incited by this extraordinary appearance, we were induced to proceed still further in quest of new adven- iure< i.'i this subterranean abode. As we pro- ' vcded, new wonders oliered themselves; the -pars, formed into trees and shrubs, presented a kind of petrified grove; some white, some green, and all receding in due perspective. They '-truck us with the more amazement as we knew them to be mere productions of nature, who, bitlieito in solitude had, in her playful moments, dressed the scene as it' for het own amusement. lJut we had as yet seen but a few of the wonders o.f this place; and we were introduced as yet

only into the portico of this amazing temple. In one corner of this hajf- illuminated recess the>t appeared an opening of about three feet wide, which seemed to lead to a place totally dark, and that one of the natives assured us contained nothing more than a reservoir of water. Upon this we tried, by throwing down some stones, which rumbling along the sides of the descent for some time, the sound seemed at last quashed in a bed of water. In order, however, to be more certain, we sent in a Levantine mariner, who, by the promise of a good reward, with a flambeau in his hand ventured into this narrow aperture. After continuing within it for about a quarter of an hour, he returned, carrying some beautiful pieces of white spar in his hand, which art could neither imitate nor equal. Upon being informed by him that the place was full of these beautiful incrustations, I ventured in once more with him, for about fifty paces, anxiously and cautiously descending by a steep and dan- gerous way. Finding, however, that we came to a precipice which led into a spacious amphi- theatre, if I may so call it, still deeper than any- other part, we returned ; and being provided, with a ladder, flambeaux, and other things to expedite our descent, our whole company, man by man, ventured into the same opening, and, descending one after another, we at last saw ourselves altogether in the most magnificent part of the cavern. Our candles being now all lighted up, and the whole place completely illuminated,, never could the eye be presented with a more glittering or a more magnificent scene. The roof all hung with solid icicles transparent as glass, yet solid as marble. The eye could scarcely reach the lofty and noble ceiling ; the sides were regularly formed with spars, and the whole pre- sented the idea of a magnificent theatre, illumi- nated with an immense profusion of lights. The floor consisted of solid marble ; and, in several places, magnificent columns, thrones, altars, and other objects, appeared as if nature had designed to mock the curiosities of art. Our voices, upon speaking or singing, were*

redoubled to an astonishing loudness ; and, upon the firing of a gun, the noise and reverberations were almost deafening. In the midst of this grand amphi- theatre rose a concretion of about fifteen feet high, that, in some measure, resembled an altar, from which, taking the hint, we caused mass to be celebrated there. The beautiful columns that shot up round the altar, appeared like candle- sticks; and many other natural objects repre- sented the customary prnaments of this sacrament. Below even this spacious grotto there seemed another cavern, down which I ventured with my former mariner, and descended about fifty paces by means of a rope. I at last arrived at a small spot of level ground where the bottom appeared different from that of the amphitheatre, being com- posed of soft clay, yielding to the pressure, and in, which I thrust a stick to about six feet deep. la this however, as above, numbers of the most beautiful crystals were formed, one of which particularly resembled a table. Upon our egres from this amaiing cavern, we perceived a Greek inscription upon a rock at the mouth, but so obli- terated by time that we could not read it : it*

seemed t . import that one Antipater, in the time of Alexander, had come thither, but whether he penetrated into the depths of the cavern he does not think fit to inform us.' From this account Mr. Tournefort's differs somewhat. Mr. Magni mentions only one descent or precipice from the entry of the cave to the grotto, or most magnifi- cent part. Mr. Tournefort says that there were many very dangerous precipices and rugged ways, through which they were obliged to pass, sometimes on their back and sometimes on their belly; but gives no particular account of his journey till he comes to the grand cavern. This indeed he describes very pompously ; but as by it he evidently wants to support a favorite hypo- thesis, namely, the vegetation of stones, perhaps the particulars are not altogether to be depended upon. He informs us, that, at the entry into the cavern, he met with a Greek inscription almost defaced, containing a good number of proper names ; and that there was a tradition among the inhabitants that these were the names of some who had conspired against Alexander the Great, and, having missed their aim, had taken refuge in this grotto. The most particular account of this famous grotto that has hitherto been pub- lished, appeared in the British Magazine, in a letter of Mr. Charles Saunders's, dated February 24th, 1756 — 1757. 'Its entrance lies in the side of a rock, about two miles from the sea-shore, and is a spacious and very large arch, formed of rough craggy rocks, overhung with brambles, and a great many climbing plants, that give it a gloominess which is very awful and agreeable. Our surgeon, myself, and four passengers, at- tended by six guides with lighted torches, entered this cavern about eight o'clock in

the morning in the middle of August last. We had not gone twenty yards in this cavity, when we lost all sight of day-light ; but, our guides going before us with lights, we entered into a low narrow kind of alley surrounded every way with stones, all glittering like diamonds by the light of our torches ; the whole being covered and lined throughout with small crystals, which gave a thousand various colors by their different re- flections. This alley grows lower and narrower as one goes on, till at length one can scarce get along it. At the end of this passage we were each of us presented with a rope to tie about our middles: which when we had done, our guides led us to the brink of a most horrible precipice . The descent into this was quite steep, and the place all dark and gloomy. We could see nothing, in short, but some of our guides with torches, in a miserable dark place, at a vast distance below us. The dreadful depth of this place, and the horror of the descent through a miserable darkness into it, made me look back to the lane of diamonds, if I may so call it, through which we had just passed; and I could not but think I was leaving heaven to descend into the infernal regions. The hope of something fine at my journey's end, tempted me, however, to trust myself to the rope and my guides at the top, to let myself down. After about two minutes dangling in this posture, not without much pain as well as terror, I found my- self safe, however, at the bottom ; and our friends ill soon followed the example. When we had VOL. II.

congratulated here with one another on our safe descent ; I was inquiring where the grotto, a? they called it, was. Our guides, shaking their heads, told us, we had a great way to that yet; and led us forsvard about thirty yards under a roof of ragged rocks, in a scene of terrible dark ness, and at a vast depth from the surface of the earth, to the brink of another precipice, much deeper and more terrible than the former. Two of the guides went down here with their torches first ; and by their light we could see, that this passage was not so perpendicular indeed as the other, but lay in a very steep slant, with a very slippery rock for the bottom ; vast pieces of rough rugged rock jutting out in many places on the right hand in the descent, and forcing the guides sometimes to climb over, sometimes to creep under, and sometimes to go round them ; and on the left a thousand dark caverns, like so many monstrous wells, ready, if a foot should slip, to swallow them up for ever. We stood on the edge to see these people with their lights descend before us ; and were amazed and terrified to see them continue descending till they seemed at a monstrous and most frightful depth. When they were at the bottom, however, they hallooed to us; and we, trembling and quaking, began to descend after them. We had not gone thirty feet down, when we came to a place where the rock was perfectly perpendicular; and a vast cavern seemed to open its mouth to swallow us up on one side, while a wall of rugged rock threatened to tear us to pieces on the other. I was quite disheartened at this terrible prospect, and declared

I would go back ; but our guides assured us that there was no danger; and the rest of the company resolving to see the bottom now they were come so far, I would not leave them: so on we went to a corner where there was placed an old slippery and rotten ladder, which hung down close to the rock ; and down this, one after another, we at length all descended. When we had got to ihe bottom of this we found ourselves at the entrance of another passage, which was terrible indeed ; but in this there was not wanting something of beauty. This was a wide and gradual descent; at the entrance of which one of our guides seated himself on his breech, and began to slide down, telling us we must do the same. We could discover by the light of his torch, that this passage was one of the noblest vaults in the world. It is about nine feet high, seven wide, and has for its bottom a fine green glossy marble. The walls and arch of the roof of this being as smooth and even in most places as if wrought by art, and made of a fine glistening red and white granite, supported here and there with a deep blood-red shining por- phyry, made, with the reflection of the lights, an appearance not to be conceived. This passage is at least forty yards long ; and of so steep a de> scent, that one has enough to do, when seated on one's breech, not to descend too quickly. Our guides, that we kept with us, could here keep on each side of us ; and, what with the prodigious grandeur and beauty of the place, our easy tra- velling through it, and the diversion of our now and then running over one another whether we would or not : this was much the pleasantest part

of onr journey. When we had entered this pas- sage, I imagined we should at the bottom join the two guides we had first set down : but, alas, when we were got there, we found ourselves only at the mouth of another precipice, down which we descended by a second ladder not much better than the former. I could have ad- mired this place also, would my terror have suffered me; but the dread of falling kept all my thoughts employed during my descent. I could not but observe, however, as my com- panions were coming down after me. that the wall, if I may so call it, which the ladder hung by, was one mass of blood- red marble covered with white sprigs of rock-crystal, as long as my finger, and making, with the glow of the purple from behind, one continued immense sheet of amethysts. From the foot of this ladder we slided on our bellies through another shallow vault of polished green and white marble, about twenty feet ; and at the bottom of this joined our guides. Here we all got together once again, and drank some rum, to give us courage before we proceeded any farther. After this short

re- freshment, we proceeded by a strait, but some- what slanting passage, of a rough, hard, and somewhat coarse stone, full of a thousand strange figures of snakes rolled round, and looking as if alive ; but in reality as cold and hard as the rest of die stone, and nothing but some of the stone itself in that shape. We walked pretty easily along this descent for near 200 yards; where we saw two pillars seemingly made to support the •oof from tailing in : bat in reality it was no such '.lung; for they were very brittle, and made of a fine glittering yellow marble. When we had passed these about 200 yards, we found ourselves at the brink of another very terrible precipice : but this our guides assured us was the last; and there being a very good ladder to go down by, we readily ventured. At the bottom of this steep wall, as I may call it, we found ourselves for some way upon plain even ground ; but, after about forty yards walking, were presented by our guides with ropes again ; which we fastened about our middles, though not to be swung down by, but only for fear of danger, as there are lakes and deep waters all the way from hence on the left hand. \ ith this caution, however, we en- tered the last alley ; and horrible work it was in- deed to get throuuh it. All was perfectly horrid and dismal here. The sides and roof of the passage were all of black >tone; and the rocks in our way were in some places so steep, that we were forced to lie all alonˆ on our backs, and slide do\n; and so nmuli, that they cut our clothes, wild bruised us mily in passing. Over our heads there were nothing hut rapped black rocks, some of tin in looking a< if ihey were every mo- ment ready to fall in upon us; and, on our left hand, the light of oui- guides' torches showed us continually the surfaces of dirty and miserable looking lakes of water. If i had heartily re- pented of my expedition often before, here I assure you I was all in a cold sweat, and fairly gave myself over for lost ; heartily cursing all the travellers that had writt. u of this place, that they had described it so a; to tempt people to see it, and never told us of the ho;v>rs that lay in the

way. In the midst of all these reflections, and in the very dismallest part of all the cavern, on a sudden we lost four of our six guides. What was my terror on this sight ! The place was a thousand times darker and more terrible for want of their torches; and I expected no other but every moment to follow them into some of these lakes, into which I doubted not but they were fallen. The remaining two guides said all they could, indeed, to cheer us up ; and told us we should see the other four again soon, and that we were near the end of our journey. I don't know what effect this might have upon the rest of my companions ; but I assure you I believed no part of the speech but the last, which I expected every moment to find fulfilled in some pond or preci- pice. Our passage was by this time become very narrow, and we were obliged to crawl on all fours over rugged rocks ; when in an instant, and in the midst of these melancholy apprehen- sions, I heard a

little hissing noise, and saw my- self in utter, and not to be described, darkness. Our guides called indeed cheerfully to us, and told us that they had accidentally dropped their torches into a puddle of water, but we shouH. soon come to the rest of them, and they would light them again ; and told us there was no dan- ger, and we had nothing to do but to crawl for- ward. I cannot say but I was amazed at the courage of these people; who were in a place where, I thought, four of them had already pe- rished, and • from whence we could none of, us ever escape; and determined to lie down and die where I was. Words cannot describe the horror, or the extreme darkness, of the place. One of our guides, however, perceiving that I did not advance, came up to me, and, clapping his hand firmly over my eyes, dragged me a few paces forward. While I was in this strange con- dition, expecting every moment death in a thou- sand shapes, and trembling to think what the guide meant by this rough proceeding, he lifted me at once over a great stone, set me down on my feet, and took his hand from before my eyes What words can describe at that instant my as- tonishment and transport ! Instead of darkness and despair, all was splendor and magnificence before me; our guides all appeared about us; the place was illuminated by fifty torches, and the guides all welcomed me into the grotto of Antiparos. The four that were first missing, I now found had only given us the slip, to get the torches lighted before we came ; and the two had put out their lights on purpose, to make us enter out of utter darkness into this pavilion of splen- dor and glory. I am now come to the proper business of this letter; which was, to describe this grotto. But I must confess to you that words cannot do it. Of the amazing beauties of the place it is impossible for the most brilliant imagination to form a correct picture. The best account with which I can furnish you, how ever, pray accept of.

The people told us the depth of this place was 485 yards. The grotto, in which we now were, is a cavern of 120 yards wide, and 113 long, and seems about sixty yards high in most places. These measures differ something from the accounts travellers in general give us ; but

you may depend upon them as exact, for I took them with my own hand. Imagine, then, an immense arch like this, almost all over lined with fine and bright crystallised white marble, and illuminated with fifty torches ; and you will then have some faint idea of the place I had the plea- sure to spend three hours in. This, however, is but a faint description of its

beauties. The roof, which is a fine vaulted arch, is hung all over with icicles of white shining marble, some of them ten feet long, and as thick as one's middle at the root : and among these there hang 1000 festoons of leaves and flowers of the same substance; but so very glittering, that there is no bearing to look up at them. The sides of the arch are planted with seeming trees of the same white marble, rising in rows one above another, and often en- closing the points of the icicles. From these trees there are also hung festoons, tied as it were from one to another in vast quantities; and in some places among them there seem rivers of marble winding through them in a thousand meanders. All these things are only made in a long course of years from the dropping of water, but really look like trees and brooks turned to marble. The floor we trod upon was rough and uneven, with crystals of all colors growing irregularly out of it, red, blue, green, and some of a pale yellow. These were all shaped like pieces of saltpetre ; but so hard, that they cut our shoes ; among these, here and there, are placed icicles of the same white-shining marble with those above, and seeming to have fallen down from the roof and fixed there ; only the big end of these is to the floor. To all these our guides had tied torches, two or three to a pillar, and kept conti- nually beating them to make them burn bright. You must guess what a glare of splendor and beauty must be the effect of this illumination among such rocks and columns of marble. All round the lower part of the sides of the arch are a thousand white masses of marble in the shape of oak trees. Mr. Tournefort compares them to cauliflowers, but I should as soon com- pare them to toad-stools. In short, they are large enough to enclose, in many places, a piece of ground big enough for a bed-chamber. One of these chambers has a fair white curtain, whiter than satin, of the same marble, stretched all over the front of it. In this we all cut our names, and the date of the year, as a great many people have aone before us. In a course of years afterwards, the stone blisters out like this white marble over these letters. Mr. Tournefort thinks the rock grows like oak or apple-trees for this reason ; but I remember I saw some of the finest cockle and muscle shells in the rock thereabouts, that ever I saw in my life. I wonder whether he thinks they grow there too. Besides, if this rock grows so fast, the cavern ought to be all grown up by this time ; and yet, according to his measures and mine, the cavern seems on the other hand to be turned larger since. Indeed, all that I can gather from his account of this glorious place is, that he had drank a bottle or two too much be- fore he went down into it.'

ANTIPASCHA, in ecclesiastical writers, de- notes the first Sunday after Easter, It is also called Dominica in albis.

ANTIPASIS, among physicians, revulsion.

ANTIPATER, a native of Macedon, a dis- ciple of Aristotle, and a faithful

minister to Philip and Alexander. He was a man of great abilities, and a lover of the sciences ; but the following anecdotes say more for him than any pen could say at this date : — Philip coming rather late one day to the levee, said, ‘ I have slept sound this morning, but then I knew An- tipater was waking.’ — Some person having re marked to Alexander that all his officers of stat wore purple except this prime minister, ‘ Yes, replied he, ‘ but Antipater is all purple within.’ Alexander left the government of Macedon to Antipater while he was abroad; who by his prudent conduct kept all Greece in subjection. On the death of his master, in the division of territories, the European provinces were assign- ed to Antipater. Soon after the confederate states of Greece attacked him, but he subdued them and completely overturned their democra- tic forms of government, on which he was called the father of Greece. He died A. A. C. 318, aged eighty. Having chosen Polyperchon as his successor, his last advice to him was, never to allow a woman to meddle in state affairs.

ANTIPATER, a grandson of the preceding, and son of Cassander, by Thessalonice the sis- ter of Alexander the Great ; a monster, who murdered his mother with his own hand, because she favored his. brother Alexander’s claim to the crown; although she begged for her life, and showed him her breasts that had suckled him.

ANTIPATER, an Idumaean of illustrious birth, and possessed of great riches and abilities, taking advantage of the confusion into which the two brothers Hyrcanus and Aristobulus had plunged Judea by their contest for the office of high- priest, took such measures to gain Hyrcanus that office, and under his government to obtain the absolute direction of all affairs, while his great abilities and application to business made him so considerable, that he was honored as much as if he had been invested with the roya) authority inform; but he was at last poisoned by a Jew named Malichus, forty-three years before the Christian aera. He left, among his other children, the famous Herod king of the Jews.

ANTIPATER (Coelius), a Roman historian, who wrote a history of the Punic war, much valued by Cicero : the emperor Adrian preferred him to Sallust.

ANTIPATER of Sidon, a stoic philosopher and poet, commended by Cicero and Seneca, who flourished about the 171st olympiad. Several of his epigrams are extant in the Anthologia.

ANTIPATER, bishop of Bostra, in Arabia, about the end of the fifth century. He wrote an answer to Eusebius's defence of Origen.

ANTIPATHES, among the ancient natural- ists, was used to express any stone or gem, which according to their superstitious ideas of the vir- tues of gems at that time, was supposed to have a power of resisting the force of enchantments. Pliny mentions a very valuable gem, called by the ancients antipathes for this very reason ; and the black coral had the same name on the same

account.

ANTIPATHCS, a species of the gorgonia, in the order of zoophytes.

ANTIPATHY, -} AVTI, against, and 7ra0oc,

ANTIPATHET'ICAL, (feeling. Feeling opposed

ANTIPATHET'IC, {to that of another person ;

ANTIP'ATHOUS. J an interior sentiment of discordance, dislike.

Tyed upon the sledge, a papist and a protestant in front, two and two together, being two very disparate and antipathetic companions. Icon Libell.

No contraries hold more antipathy, Than I and such a knave. Shakspeare.

Let no man weakly conceive, that just laws and true policy have any antipathy ; for they are like the spirits and sinews, that one moves with the

other.

Lord Bacon's Essays.

FRED. What sublunary mischief can predominate A wise man thus ? or doth thy friendship play (In this antipathous extreme) with mine, Lest gladness suffocate me ?

Beau, and Fletch. Four Plays in One.

The soil is fat and luxurious, and antipathetical to all venomous creatures. Howell's Vocal Forest.

To this perhaps might be justly attributed most of the sympathies and antipathies observable in men.

Locke.

A man who talks with intrepidity of the monsters of the wilderness while they are out, will readily con- fess his antipathy to a mole, a weasel, or a frog. Thus he goes on without any reproach from his own reflections. Johnson.

There is one species of terror which those who arc unwilling; to suffer the reproach of cowardice have wisely dignified with the name of antipathy. Id.

ANTIPATHY, in physiology, is not used to signify such incompatibilities us are merely phy- sical; but rather to express the aversion which an animated or sensitive being feels at the real or ideal presence of particular objects. In this point of view, antipathy signifies a natural horror and detestation, an insuperable hatred, an involuntary aversion, which a sensitive being feels for some other object, whatever it is, though the person who feels this abhorrence is entirely ignorant of its cause, and can by no means account for it. Such is, they say, the natural and reciprocal hostility between the salamander and the tortoise, between the toad and the weasel, or between sheep and wolves : sucli is the invincible aversion of particular persons against cats, mice, spiders, &c. a pre- possession which is sometimes so violent, as to make them faint at the sight of these animals. Of which and a thousand other antipathies the ancient naturalists, the schoolmen, and the vul- gar, form many legends.

ANTIPATR1S, a town of Palestine, anciently called Caphar Saba, according to Josephus, but named Antipatris by Herod the Great, in honor of his father Antiputer. It was situated in a pleasant valley near the mountains, in the road from Jerusalem to Cavsarea; forty-two miles from the former, twenty-six from the latter, and seventeen from Joppa.

according to Josephus. The apostle Paul and his guard stopped at this place, on their way to Ca-sarea. Acts xxiii. 31.

ANTIPAXO, ANTIPASSO or ANTIPACKSU, a small island in the Ionian Sea, near Corfu, and one le;iu'ue south of Paxo. Now included in the republic of the Ionian Isles, though not specified by the name in the i.-num-ration.

ANTIPKLARGIA, among the ancients, a law whereby children are obliged to furnish ne- cessaries to their aged parents. The ciconia, or stork, is a bird famous for the care it takes of its parents when grown old. Hence, in some Latin writers, this is rendered lex ciconiaria, or the storks' law. Passavant published a dissertation De Antipelargia, Basil, 1672. 4to.

ANTIPERISTALTIC; from avrt, against, Trepi, about, and ToXrocog, that which has the power of compressing ; in anatomy, a motion of the intestines, contrary to the peristaltic motion. As the peristaltic motion is a contraction of the fibres of two intestines from above, downwards ; the antiperistaltic motion is thˆir contraction from below, upwards. Physicians, ancient as well as modem, have usually had recourse to the notion of an antiperistaltic motion, to account for the action of vomiting, and the phenomena of the iliac passion. The cause of the antiperistaltic motion is usually assigned to be a stoppage of some of the intestines, but chiefly of the ilium. Mr. Littre urges many arguments in favor of this doctrine; but some late ingenious authors have overturned the whole antipetistaltic system, and shown this motion imaginary, as well as un- necessary for accounting for these disorders. Mess. Chirac and Du Verney have endeavoured to prove this in respect of vomiting; Messrs. Ha- guent and St. Andre, in the iliac passion.

ANTIPHATES, in entomology, a species of papilio found in America, and described by Fabricius, from a specimen in the British Museum.

ANTIPHERNA, among the ancient Greeks, denoted a kind of settlement made on a wife in case of surviving her husband, as an equivalent for her dowry. This word seems to answer what in our law is called a jointure.

ANTIPHILUS, a famous painter and the rival of Apelles. He is celebrated for many fine pictures, but most of all for one representing a youth blowing a spark of fire ; from which it would appear that the ancients were not igno- rant of the magical effects of the chiaro obscuro.

ANTIPHLOGISTIC ; from avn, and 0Xoyi£w, to inflame ; against inflammation ; cooling.

AN'TIPHON, n. & adj-\ Nearly synony-*

AHTIP'HONAL, fmous with ANTHEM,

ANTIP'HONER, > which see. Alter-

ANTIPHON'ICAL, I nate singing in sa-

ANTIP'HONY. J cred music. Oppo-

sition of sound.

This litel childe his litel book lerning, As he sate in the scole at his primere, He alma redemptoris herde sing, As children lered hir antiphonere.

» Chaucer. The Prioresses Tale, vol. ii. p. 52.

Item, II. antiphoners of parchmente bought by Mr. Parret for the queere.

T. Warton's Life of Sir T. Pope, App. No. XVII.

Antiphonal singing was first brought into the church of Milan, in imitation of the custom of the eastern churches. Christian Antiquities

Alternate psalmody, for its division into two parts, was commonly called antiphony. /<••

A sort of office, or service to Saint Edmund, con- sisting of an anttphone, versicle, response, and collect. Warton's Hist. Eng. Poet. II. 56.

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ANTIPHON, the Rhamnusian, an Athenian orator. He flourished about the year 430 A.A.C. and is said to have been the first who laid down rules of oratory. It is also said he was concerned in establishing the tyranny of the four hundred, and that on this account he was put to death, A.A.C. 411. In the collection of an- cient orators there are sixteen orations under his name.

ANT?HONALLY ; from avn, and ˆwvij, voice ; in respect of church music, imports as much as alternately, or anthem-wise. The Greeks have a method of singing antiphonally, antiphonatim, called by them irapatcoraKviov, wherein two persons sing together, and then are silent, and succeeded by two others, who sing awhile and then are silent, and so on.*

ANTIPHONARIUM, ANTIPHONARV, a ser- vice book, which contained all the invitatories, responsaries, collects, and whatever else was sung or said in the choir, except the lessons. This is otherwise called responsarium, from the responses therein contained. The author of the Roman antiphonary was pope Gregory the Great. We also find mention of nocturnal and diurnal antiphonaries, for the use of the daily and nightly offices ; summer and winter antiphonaries ; also antiphonaries for country churches, &c. By the provincial constitutions of archbishop Win- chelsey, made at Merton A. D. 135, it is re- quired that one of these should be found in every church within the province of Canterbury. These and many other popish books were forbid to be used by the third and fourth of Edward VI. cap. 10.

AKTIPHOSY, in music, the answer made by one choir to another, when the psalm or anthem "s sung between two. The word sometimes de- notes a species of psalmody, wherein the con- gregation being divided into parts, repeat the psalms verse for verse alternately. In this sense antiphony differs from symphony, where the whole congregation sings together. It also dif- fers from responsarium, wherein the verse isonlv spoken by one person, whereas in the former he verses are sung by the two choirs alternately. The origin of antiphonal singing, in the western churches, is referred to the time of St. Am- brose, who, about the year 374, is said to have first introduced it into the church of Milan, in imitation of the eastern church, where it appears to be of greater antiquity ; though, as to the time of its institution, authors are not agreed ; it was most probably introduced at Antioch between the years 347 and 356. Antiphony also denotes the words given out at the beginning of the psalm, to which both the choirs accommodate their singing. It signifies in a modern sense, a kind of composition made of several verses, extracted out of different psalms, adapted to express the mystery solemnised on this occasion.

ANTIPHRASIS is defined by Sanctius to be a form of irony, whereby we say a thing by denying what we ought rather to affirm it to be : as when we say, it did not displease me; or, he is no fool; meaning, 1 was pleased with it; or, he is a man of sense. On this principle the antiphrases ought to be ranked among the figures of sentences, and not among those of words. It

is a common error to make antiphrases consist in single words ; as when we say, that the Parcae are thus called by antiphrases, because they spare nobody, Parcae qui nemini parcunt. St. Jerome, in his epistle to Riparius against Vigi- lantius, says, he ought rather to be called Dor- mitantius per antiphrasin, than Vigilantius, because he opposed the Christians holding wakes at the tombs of the martyrs. Sanctius holds it im- proper to call these antiphrases ; because phrasis is not applicable to a single word, but signifies orationem, loquendi modum.

ANTIPHTHISICA ; from avn, and 9i

ANTIPHTHORA, in botany ; from avn, and 00opa, corruption; a species of wolf's-bane, which resists corruption.

ANTIPHYSICA, in medicine, from avn, and $v

ANTIPHYSON, from avn, and ˆuo-ic,- na- ture ; an epithet for the loadstone.

ANTIPLEURITICS, medicines against the pleurisy.

ANTIPODAGRICS ; from avn, and Trotaypa, the gout ; remedies for the gout.

ANTIPODES,) Avn, against, and 7rove,a

ANTIP'ODAL. \ foot. In geography, those whose feet are opposed to ours on the other side of the earth's surface. Inhabitants of the globe living on opposite sides of it.

Unto other habitations the same point will be both east and west, as unto those that are antipodes, 01 seated in points of the globe diametrically opposed. Brown's Vidgar Errors.

We should hold day with the antipodes, If you would walk in absence of the sun. Sliahspeare.

So shines the sun, tho' hence remov'd, as clear

When his beams warm th' antipodes, as here.

Waller.

ANTIPODES lie under opposite meridians, and opposite parallels ; in the same degree of la- titude, but of opposite denominations, one be- ing north and the other south. They are 180 degrees distant from each other every way on the surface of the globe ; have nearly the same degree of heat and cold, and days and nights of equal length ; but in .opposite seasons. It is noon to one when midnight to the other ; and the longest day with the one is the shortest with the other. Plato is said to be the first person who thought it possible that antipodes existed ; asserting at the same time the rotundity of the earth. The ancients in general treat this opinion with the highest contempt ; Lactantius and Au- gustine perplexed themselves in particular with thinking how men and trees could hang pendu- lous in the air ! And Boniface, archbishop of Mentz, legate of Pope Zachary in the

eighth century, declared a bishop of that time a heretic for maintaining the existence of antipodes. In fact, until the rotundity of the earth was a doctrine of science fully established, and some con- sistent ideas of gravitation were connected with it, the supposition of their existence must hare been startling enough.

ANTIPODIA, in poetry, a figure by which one foot is changed for another, if both be of equal measure.

ANTIPOL1S, in ancient geography, a colonv

of the Massilians, near the river Verus, in Gallia Narbonensis. It is now called ANTIBES, which see.

ANTIPOPE, he that usurps the popedom.

This house is famous in history for the retreat of an antipope, who called himself Felix V. Addison.

ANTIPOPE. Geddes gives the history of no less than twenty-four schisms in the Romish church, caused by antipopes : some took their rise from a diversity of doctrine or belief, which led different parties to elect each their several pope ; but the greater part from controverted rights of election, the fruits of chicane and ambition.

ANTIPRAXIA; from UVTI, and n-parrw, I perform ; in the ancient physic, denotes a con- trariety of functions, temperaments, &c. in dif- ferent parts of the body, invented to account for that contrariety of symptoms which frequently concur in hypochondriac cases ; when e. g. the liver is said to be immoderately hot, and the stomach excessively cold. The moderns, particularly Etmuller, refuse the notion of an anti- pvaxia on this principle, that the blood circula- ting duly through the whole body, warms all the parts, as well the stomach as liver proportien- ;ibly. To which some advocates for the ancient system object, that this is confounding the pre- ternatural state with the natural.

ANTIPROBABILISM,the doctrine of those •uho hold it unlawful to follow the more probable opinion, in opposition to the less probable one.

ANTIPROBOLE, in rhetoric, a figure where- by tin: defendant adopts or

admits the charge brought against him by the prosecutor: e.g. supposing the prosecutor's 7rpo/3o\?; to be, Titus lias killed Cains; the defendant's antiprobole maybe, 1 have killed him ; but undesignedly.

ANTIPROPEMPTICON, in poetry, a poem wherein a person going a journey addresses him- self to his friends. Such is that of Ovid, lib. i. Trist. —

Cum suhit. illius tristissima nortis imago, &c.

AA'Tl PROTASIS, in rhetoric, a solution of the protasis.

ANTI PSORA ; from aim, and ;//wpa, itch ; in pharmacy, remedies against the itch.

ANTLPTOSIS, avrnrTdtaiQ, a figure in gram- mar, by which one case is put for another.

ANTIPYRETON ; from aim, and wp, fire; among physicians, an appellation given to the medicines against fevers.

AiNTlQrA, in entomology, a species of pha- 'aiia found in Furope.

A1'TI(VU 'AM S, or AXTIGUANTS, in orni- tholouy, a species of lanius, the Antiguan shrike of Latham, and pie-greische d'Antigue of Son- nerat. It inhabits Panay, one of the Philippine i>hmds, but is chiefly found about Antique, one (>f the provinces thereof.

AYl'lQl AKK, amon'^ Roman lawyers, the rejeciinu' ot' a new law, or refusing to pass it ; in wliii h sense antiquating differs from abrogating; as the latter imports the annulling an old law. Aiitit|iiare is also used for a law growing obso- lete, either by aue or non-observance.

In the chief cities of (Greece and Italy, there

IN ere pi r>on< ot distinction called antiquaries,

*wtiiiM' bu-iiH v-, ii was to *huw strangers the anti-*

'jniii – ii- pl.ii e, to explain the ancient in-

.- them all the assistance

they could in this department of learning. Pau- sanias calls them. EfyyrjTai. There is said to have been a college of antiquaries erected in Ireland 700 years before Christ, and to this the Irish historians attribute the correct transmission of the history and antiquities of that kingdom from

remote ages. Sir H. Spelman speaks of a society of antiquaries in his time, founded by archbishop Parker, Camden, Sir Robert Cotton,, Stowe, and others, who applied in 1589 to queen Elizabeth for a charter. But the death of that princess interrupted their designs, and James I. appears to have disapproved of it.

In 1717 the attempt was revived, and a most respectable society became incorporated by the king's charter in the year 1751, by the name o. the President, Council, and Fellows of the So- ciety of Antiquaries of London ; their council consisting of twenty-one persons, ten of whom are annually changed : the election of members is by ballot, a certificate signed by three or more fellows being previously exhibited for six ordi- nary successive meetings, except in the case of peers, members of the privy council, and judges, who may be proposed by a single member, and ballotted for the same day ; and the choice is determined by a majority of two-thirds. Every member pays an admission fee of five guineas, and two guineas a year, or an additional sum of twenty-one guineas. They have weekly meet- ings on Thursday, from seven of the clock in the evening until nine. The society began to pub- lish its discoveries, &c. in 1770, under the title of Archseologia. An Edinburgh society of anti- quarians was founded in 1780, and received a royal charter in 1783.

Henry VIII. gave John Leland the title of his antiquary ; a title which, says the author of his life, nobody ever enjoyed besides himself; abroad, however, it has not been uncommon. M. Schott, we find, had the title of antiquary to the king of Prussia ; P. Pedruzzi, that of antiquary to the duke of Parma ; M. Galland resided some time in Turkey, under the title of antiquary of the king of France. The university of Oxford may be said still to have their antiquary under the denomination of custos archivorum • •

ANTIQUARII was a name given to copiers of old books in religious houses, who were ge- nerally regulars, and lived in monasteries. Some of them were industrious men continually em- ployed in this way, and superseded the poorer librarii, or common scriptores.

ANTIQUARIUM, in antiquity, a place or apartment wherein antique monuments were preserved.

ANTIQUARTAN, a medicine prescribed by Riverius against the quartan ague. It is a pre- paration of mercurius dulcis, aurum fultninans, sulphur of antimony, and scammony. It is also used for remedies for the quartan ague in gene- ral.

ANTIQUARTIUM PERUVIANUM, Jesuits' bark.

ANTIQUATA, in conchology, a species of area found in the Mediterranean, Indian, and American Seas.

AM iyuATA, a species oi chama. found in the Atlantic.

ANTIQUATE, ˆ Lat. antiquo, an-

ANTIQUA'RIAN, n. & adj. \ tiquus, from ante. AN'TIQUARY, n. & adj. To regard as too AN'TIQUATENESS, [old, out of date,

ANTIQUA'TION, Told -fashioned, or

ANTIQ'UE, n. & adj. obsolete; to refer

ANTIQ'UENESS, I to a remote period,

ANTIQ'UITY. J as far back as to

Grecian and Roman times.

An antiquarian, or antiquary, is one who is devoted to the study or pursuit of that which is old or ancient. Whoso lust to know more touching the certeyntie and truth of these matters may reade the booke of the ex- cellent antiquary John Leyland, intituled the Asser- tion of Arthur, wkere euerie thing is more at large discoursed. Grafton, vol. i. p. 85.

In what estimacio the woorde of God was had in old tyme, may euidently appere by those rites and ceremonies as yet be used in ya church, left vnto vs of old antiquitie. Vda.ll. Pref. to John.

The land which warlike Britons now possess, And therein have their mighty empire raised, In antique times was savage wilderness, Unpeopled, unmanured, unproved, unpraised.

Spenser.

Looke backe, who list, vnto the former ages, And call to count what is of them become : Where be those learned wits and antique sages Whiche of all wisedome knew the perfect somme,

Spenser's Ruines of Time,

An Egyptian priest having conference with Solon, said to him, You Grecians are ever children ; you have no knowledge of antiquity, nor antiquity of know- ledge. Bacon's Apophthegms.

Here's Nestor,

Instructed by the antiquary times ; He must, he is, he cannot but be wise. Shakspeare. The growth of Christianity in this kingdom might reasonably introduce new laws, and antiquate or abro- gate some old ones, that seemed less consistent with the Christian doctrines. Hale.

Milton's Paradise Lost is admirable. But cannot I admire the height of his invention, and the strength of his expression, without defending his antiquated words, and the perpetual harshness of their sound ?

Dryden.

My copper lamps at any rate, For being true antique I bought ; And wisely melted down my plate, On modern models to be wrought. Prior.

Almighty Latium, with her cities crown'd, Shall like an antiquated fable sound. Addison.

The sun was hot, but the spirit of antiquarianism gave us strength and courage to climb up to the plat- form of Saint John de Alfarache.

Stvinburn, Trav. through Spain.

ANTIQUE is chiefly used among architects, sculptors, and painters ; who apply it to such pieces of buildings, sculpture, painting, &c. as were made at the time when the arts were in their greatest perfection among the ancient Greeks and Romans ; viz. from the age of Alexander to the time of the irruption of the Goths into Italy, A. D. 400. In this sense the word stands op- posed to modern. Thus we say, an antique building, or a building after the antique ; an an- tique bust, or bas-relievo ; the antique manner, taste, &c. Antique is also contra-distinguished from ancient, which denotes the lesser degree of antiquity, when the art was not in its utmost purity. Thus antique architecture is distin- guished from ancient architecture. Bacon calls

antiquities the wrecks of history, or such parti- culars as industrious and learned persons have collected from genealogies, inscriptions, monu- ments, coins, names, etymologies, archives, in- struments, fragments of history, &c. The study of antiquities forms a very extensive science, or rather comprehends a general acquaintance with all the sciences, as including an historical know- ledge of the edifices, magistrates, offices, habili- ments,

manners, customs, ceremonies, worship, and other objects worthy of curiosity ; of all the principal ancient nations of the earth: and the study of them is not matter of mere curiosity, but indispensable to the successful pursuit of many departments of knowledge, to the theologian, who ought to be thoroughly acquainted with the antiquities of the Jews, to enable him properly to explain numberless passages in the Olii and New Testaments : to the student of Kmhsh law, who, without a knowledge of tla« antiquities of Greece and Rome, can never well understand the foundation of many of out legal maxims and principles; to the histomn, the orator, the painter, &c. In- estimalvJe works in this department of literature have bfn left us by Gronovius, Gravius, Mont- faucon, Count Caylus, Winckleman, and D. Iken of Biemen.

ANTIQUO-MODERN, a term of reproach applied to the old Gothic churches, and other buildings ; in distinction from those of the Greeks and Romans.

ANTIQUUS, a species of murex found in the northern seas of Europe, and by some ranked as a British shell.

ANTIRATIONALISTS, a name sometimes given to divines, who in matters of religion are for humbling reason, and making it bend to faith.

ANTIREPUBLICAN, opposed to a common- wealth, or democratic government.

ANTIROYALIST. See ANTIMONARCHICAL.

ANTIRRHETICUM, in literary history, a refutation.

ANTIRRHINUM, SNAPDRAGON, or CALVES- SNOUT ; a genus of the angiospermia order, be- longing to the didynamia class of plants ; and in the natural method ranking under the fortieth order, personatae. Its generic characters are : CAL. five-parted perianth, divisions oblong, the two lower gaping : COR. monopetalous, tube ob- long, nectary at the base of the corolla produced downwards and prominent : STAM. filaments four, two short: ANTHER, converging ; PISTIL, round- ish germ ; style simple, stigma obtuse : PERI- CARP, roundish capsule, bilocular: SEEDS nume- rous. The essential characters are: CAL. five- leaved ; the basis of the COROLLA bent backwards, and furnished with pectoria; CAPSULE bilocular. There are fourteen species of the antirrhinum, ten of which are natives of Britain. 1. A. ar- vense, the corn-blue toad-flax. 2. A. cymbalaria, the ivy-leaved toad-grass. 3. A. elatine, the sharp-pointed fluellin. 4. A. linaria, the common yellow toad-flax, said to be cathartic and diure- tic, but not used in the shops. 5. A. majus, the greater snapdragon. 6. A. minus, the lesser

toad-flax. 7. A. monospermum, the sweet-smel- ling toad-flax. 8. A. orontium, the lesser snap-

dragon. 9. A. repens, the creeping toad-rlux. 10. A. spurium, the round-leaved fluellin.

ANT1RRHIUM, in ancient geography, a pro- montory at the mouth of the Corinthian bay, where it separates the ./Etolians from the Pelo- ponnesus ; so called from its situation opposite to Rhium in Peloponnesus ; both are now called the Dardanelles of Lepanto.

ANTISABBATARIANS, a modern religious sect, who deny the necessity of observing the Sabbath day. The chief arguments of the anti- sabbatarians are, 1. That the Jewish sabbath was only of ceremonial not moral obligation; and consequently is abolished by the coming of Christ : 2. That no other Sabbath was appointed to be observed by Christ or his apostles ; that therefore, although Christians are commanded ‘ not to forsake the assembling of themselves together,’ they ought not to hold one day more holy than another. See SABBATH.

ANTISAGOGE, in rhetoric, a figure differing little from concession. The following passage from Cicero is an excellent instance of it : ‘ Dif- ficilis ratio belli gerendi ; at plena fidei, plena pietatis : et si dicas, m;ignus labor, multa peri- cula proponuntur: at gloria ex his immortalis est conˆecutura. Sot; CONCESSION.

AM’ISANA, a hamlet of the Andes, in the kingdom of Quito, elevated according to Hum- boldt 13,500 feet above the level of the sea. . It is the highest inhabited spot on the surface of the globe.

ANTISCEPTIC, something opposed to the reasonings and system of Pyrrhonisis, or sceptics.

ANTISCII; from avn andffcia; in geogra- phy, the people who inhabit different sides of the equator, and who, consequently, at noon have their shadows projected opposite ways. Antiscii is also used, among astrologers, for two points of the heavens equally distant from the tropics: thus the signs Leo and Taurus are held antiscii to each other.

ANT1SKPT1C ; from avn and ffrjTrroc, pu- trid ; an appellation given to

such substances as resist putrefaction. Sir John Pringle has made some curious experiments in relation to antisep- tic substances, to ascertain their several virtues. Thus, in order to settle the antiseptic virtue of salts, he compared it with that of common sea- salt ; which, being one of the weakest, he sup- poses equal to unity, and expresses the propor- tional strength of tin: rest by higher numbers, as in the following table.

Saline mixture . 3

Nitre .... 4 +

Salt of hartshorn 4-f- Salt of wormwood 4 +

liorax .... 12 +

Salt of amber . 20+

Aluin .... 30+

In the above table the proportions are marked in i Neural numbers: only to some there is added tiie -i .a f, to >! low, that those .alts are possessed nt' a >tro]rjer anti—ptic virtue than the number in the tabli- expresses, by SOUK- tractions; unless in the thrue la-t, \hciv the same si'^n imports that the sail m, iy be strmr^er by some units. Some tvsinous and <>tiu r Siih

antiseptic virtues of the neutral salts ; thus myrrh, asafetida, terra japonica, and aloes, are at least twelve times more antiseptic than sea-salt. Two grains of camphor are equivalent to sixty grains of that salt. An infusion of a few grains of Vir- ginian snake-root, in powder, exceeds twelve times its weight of sea-salt. Peruvian bark and camomile dowers have nearly the same extraor dinary quality. Besides these, pepper, ginger, saffron, contrayerva-root, are twe've times more antiseptic than sea-salt. Dried sage, rhubarb, the root of the wild valerian, mint, angelica, ground ivy, senna, green tea, red roses, worm- wood, mustard, and horse-radish, were likewise found more antiseptic than the standard. To the class of antiseptic medicines may likewise be added fermented liquors, acids, spirits, and even those plants called anti-acids, and erroneously- supposed hasteners of putrefaction, particularly horse-radish. Vegetables, possessing this virtue, are the more valuable, that being usually free of acrimony, they may be taken in much . greater quantities than either spirits, acids, resins, or even the neutral salts. Antiseptics are prescribed in all putrid, malignant, and pestilential cases. It is to be remarked, however, that different kinds of them are to be given in different diseases, and in different stages of the same disease. Thus, the bark is a specific in a gangrene, when the ves- sels are relaxed, and the blood resolved or dis- posed to putrefaction ; but will fail, if the vessels- are too full, or the blood be too thick. With the same

caution is the bark to be used in wounds, viz. chiefly in cases of absorbed matter, when it infects the humours, and brings on a hectic fever. By the great antiseptic virtue of alum, the bark, and other astringents, it should seem that astrio tion had no small share in the cure of putrid disorders ; and, indeed, the very nature of putre- faction consists in a separation or disunion of the parts. But as astringents are improper to be administered in many cases, contrayerva-root, snake-root, camphor, &c. may supply their place; which, though highly antiseptic,, have very little, if any, of an astringent quality.

ANTISIGMA, among ancient grammarians, a sign affixed to those verses whose order was to be changed.

ANTISPASMOD1C; from avn, against, and (nraapoe, tne cramp ; that which has the power of relieving the cramp. Antispasmodics are more accurately defined medicines proper for the euro of spasms and convulsions. Opium, balsam of Peru, and the essential oils of many vegetables, are the most useful of this class of medicines. Opium excels for its immediate effects : Peruvian balsam, in many instances, produces more last- ing and certain benefit than opium. As anti- spasmodics, the essential oils differ from opium, in that they,act more on some particular part than on the system in general, and have no so- porific effect. Some medicines remove spasms by immediate contact, as asses' milk, cream, oil of almonds; others by repelling heat, as sulphur, nitre, sal ammonia, &c. Where the strictures are produced by inanition and a defect of vital heat, spasms are best removed by those medi- cines that. restore the natural heat, such as vale- rian, castor, musk, &c.

ANTI-TRINITARIANS.

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ANTISPASTUS, a poetical foot, consisting of four syllables; the first short, the second and third long, and the fourth short.

ANTISTANCARIANS, German protestants who oppose the doctrine of Stancarius, who as- serted that justification was the sole effect of Christ's humanity, exclusive of his divinity.

ANTISTATIS, in antiquity, denotes the gib- bous part of the liver in the Grecian victims.

ANTISTATIS, in oratory, a defence of an action from the consideration that, had it been omitted, worse would have ensued.

ANTISTES; from ante, before, and sto, I stand; in ecclesiastical writers, a

title usually given to bishops, though sometimes also to priests, or presbyters. Among the ancient Romans an- tistes was an appellation given to the chief of the priests in the provinces. Females of this rank were called antistae.

ANTISTHENES, a Greek philosopher, foun- der of the sect of the cynics. He was born at Athens, and passed the early part of his life as a soldier. His first preceptor was Gorgias, the sophist, but he afterwards became an attendant on the lectures of Socrates. Antisthenes affected great austerity, and often attended Socrates in an old ragged cloak; he permitted his beard to grow, and was scarcely to be distinguished from a common beggar. He prided himself upon the most rigid virtue, and thought himself obliged to attack the vicious wherever he found them. Socrates perceiving this said to him, ' Why, O Antisthenes, art thou so ostentatious; through thy rags I discover thy vanity.' Laertius informs us there were ten volumes of his works ; and he has given us many of his apophthegms.

ANTISTITIUM, a term used in ancient chro- nicles for an abbey or monastery.

ANTISTOECHQN, or ANTISTOICHON ; from avn and

ANTISTROPHE; from avn, the contrary way, and 7{)o0»j, turning; in an ode supposed to be sung in parts, the second stanza of every three, or sometimes every second stanza ; so called, because the dance turns about.

ANTISTROPHE ; from avri, and Tpt^w, to turn ; a kind of dance in use among the ancients; wherein they stepped sometimes to the right and sometimes to the left, still doubling their turns or

conversions. It was customary among the Greeks, on some occasions, to dance round the altars, whilst they sung the sacred hymns, which con- sisted of three stanzas or parts ; the first of which, called strophe, was sung in turning from east to west ; the other, named antistrophe, in returning from west to east. They then stood before the akar, and sung the epode, which was the last part of the song.

ANTISTROPHE, in grammar, a figure by which two things mutually depending on one another, are reciprocally converted; as, the servant of the master, the master of the servant.

ANTISTROPHE, in rhetoric. See EPISTROPHE.

ANTITACTVE, or ANTITACTICI ; from avrt- TctTTw, to oppose ; in church history, a branch of Gnostics, who held, that God was good and just, but that a creature had created evil ; and consequently that it is our

duty to oppose this author of evil, in order to avenge God of his adversary.

ANTITAURUS, a chain of mountains in Cappadocia, extending from Mount Taurus to the Euphrates.

ANTITHENAR, in anatomy, a name given to divers muscles, otherwise called adductors, or adducent muscles ; because they act as antago- nists to the thenars or abductors. See ANATOMY and ABDUCTOR.

ANTITHESIS; from «iTtn0q/u, I oppose. Opposition, contrast.

I see a chief, who leads my chosen sons, All arm'd with points, antitheses, and puns. Pope.

ANTITHESIS, in rhetoric, a contrast or opposi- tion of words or sentiments. Such is that of Cicero, in his second oration against Cataline : — ' On one side stands modesty, on the other impudence; on one fidelity, on the other deceit; here piety, there sacrilege ; here continency, there lust,' &c. Such also is that of Augustus to some seditious young men: — Audite, juvenes, senem, quern juvenem senes audivere. St. Augustine, Seneca, and many other ancient writers, greatly affect antitheses ; but among the moderns they are generally decried.

ANTITHETARIUS, a term applied to one who endeavours to discharge himself of the fact of which he is accused by recriminating, or by charging the accuser with the same fact.

ANTITHETON. See ANTITHESIS.

ANTITRAGICUS, muscles of the ear oppo- site to the Tragus.

ANTI-TRINITARIANS.

ANTI-TRINITARIAN is a term which will obviously include all those professing Christians who deny the doctrine of the trinity ; but for an exposition of that doctrine, and for the leading arguments by which it is supported, we must refer to the terms TRINITY and TRINITARIAN. Anti-trinitarians have been usually divided into Arians and Socinians, or Unitarians ; (A) the former attribute to Jesus Christ a nature super-human, though not strictly divine ; and to their opinions we propose to devote a distinct article, ˆsee AKIANS); of the latter, the name Socinian

is not only considered as a term of reproach (which it is our object altogether to avoid), but also very inaccurately describes the sentiments of those who, in the present age, maintain that Christ was and is but a mere man. These par- ties indeed usually call themselves Unitarians ; a

denomination on the other hand, which is not recognised by trinitarians, as indirectly imply- ing that such parties only maintain the unity of the Divine Being, a supposition that concedes the point at issue, and which Trinitarians there- fore utterly deny. Under such circumstances,

to avoid giving offence on either hand, and con- sidering ourselves, as Encyclopaedists, to be rather witnesses than judges between the parties, we have adopted the general and matter-of-fact term Anti-trinitarian ; and under this head pro- pose to give a brief historical sketch of the con- troversy between the advocates of the simple humanity of Jesus, and those who maintain his complex nature, as both God and man.

Upon the evidence produced by Anti-trini- tarians in favour of the humanity of Jesus their opponents have no controversy with them. It is freely admitted by Trinitarians that our Saviour was made ‘ in all things like unto his brethren.’ But they find it difficult, not to say impossible, to consider Him as a mere man to whom are attributed the names and titles, attri- butes and perfections, usually ascribed to Deity, and to whom heaven and earth, angels and men, are represented as paying worship.

*To account for this much has been attributed *o the disposition for hyperbole prevalent in eastern nations ; much to the warmth of zeal and attachment among the first Christians toward their Master ; and it has been hinted ‘that the -.vriters of the New Testament, even St. Paul himself, reasoned sometimes inconclusively, and were therefore liable to error. (B)*

It is nevertheless on all hands admitted that Jie evangelists and apostles, after the memorable •‘ay of Pentecost, had correct notions of the person and character of Jesus Christ, and that \ve must in the first instance derive our know- ledge from their writings, widely as we may differ in our method of interpreting them. No conclusions certainly can be more opposed than those which different sects of Christians profess to have drawn from their writings, and this va- riety of interpretations has led to an enquiry into the testimony of the Christian fathers of the first two or three centuries, which, being far more extensive than the books considered as inspired, might possibly, it has been thought, be more cxplieit, at least on points which then began to be warmly controverted ; and, being nearer the period of the introduction of Christianity, their doctrines were supposed more likely to be cor- rect than those of the succeeding and middle ages. Trinitarians and Anti-trinitarians have therefore minutely examined these records of an- tiquity, yet unhappily have no more agreed in their report than in their

interpretations of the more early writings, considered as sacred or inspired. Thus the controversy has been ex- lended and protracted, instead of being brought to a more speedy or certain determination.

Anti-trinitarians, no less than believers in the trinity, consider their sentiments as not only current in the apostolic age, but as being main- tained by some persons in almost every age since. This in point of fact is conceded ; only trinitarians rank these doctrines amongst the hereMes of the tune. It is very clear that even (luring the life of St. John there were certain parti« assumed the Christian name, whom the majotitv nt" Christians siix e have considered as a|)o-tatrs from the Christian faith. Such were othns, according to the >i antiquity, though Dr.

Priestley reckons thera among the professors o pure and primitive Christianity.

Cerinthus is considered as the predecessor of Ebion, the reputed father of the Ebionites, and flourished early in the second century, if not before. He believed in the proper humanity of our Saviour ; that at his baptism the Holy Ghost descended upon him (which he called the Christ), and that Jesus thereby became endued with mi- raculous powers : that he truly suffered and died ; but that for the Christ to die'was impossible, (c)

Whether the Ebionites received their name from a leader of the name of Ebion, or from the Hebrew word meaningpoor, and either implying an affectation of poverty, or a reproach for its reality, is not important; it is freely admitted that their sentiments were not more orthodox than those of Cerinthus and many other heretics (so called) of the same and the preceding age.

Theodotus, the learned tanner of Byzantium, is supposed by many to have been the first who advocated the simple humanity of Jesus ; con- sidering him as a mere man, both in his nature and origin. He flourished toward the latter end of the second century, and was a leader of con – siderable eminence among the Anti-trinitarians of his age. (D)

In the third century Paul of Samosata, bishop of Antioch, imbibed and defended sentiments very similar to the preceding, and was accordingly excluded by the orthodox from their communion. He believed in the proper humanity of Jesus ; and held but one person in the Godhead, namely the Father ; though he seems to have ad- mitted a latent existence of the Son and Holy Spirit, as properties, or faculties of Deity, on the union of which to the man Christ Jesus he sup- posed all the divinity of his character to depend. It seems also that he denied the miraculous con- ception, as well as the pre-existence of the Saviour. (E)

Until afterthe reformation this doctrine appears to have had but few advocates comparatively with the number of Arians and Sabellians. At that period it was adopted by some of the noble family of the Sozzini, namely Laelius Socinus, and his nephew Faustus. The former, who was a man of amiable character, chiefly threw out hints by way of doubt and enquiry ; but his papers afterwards falling into the hands of his nephew Faustus, who was more bold, the latter wrought his opinions into a system, which has ever since been distinguished by his name. Of these there can indeed be no doubt. He believed Jesus to be the true Messiah, and therefore the Son of God, which title he considers as expressive only of his office. He admits the miraculous concep- tion ; that Jesus Christ was a prophet of the highest rank, and an example of the purest philanthropy ; he explains the priesthood of Christ as consisting in the means he uses to save us from the punishment of our sins ; and his kingdom as extending to all the concerns of his church, an honor to which he was raised as a reward for his sufferings, and by which he is entitled to a subordinate degree of worship. He denied the pre-existence of Christ in any superior nature ; but accounted for his being said to come ' down from heaven,' and the like expressions,

by supposing that after his baptism he was taken up into heaven, and there remained some time to receive instructions in the nature of his sacred office, and the miraculous powers neces- sary to fulfil it. The Holy Spirit he considered, not as a distinct person from the Father, but as the exertion of divine power and energy. That, however, we may not misrepresent Socinus, we shall give his own words from the most unex- ceptionable authority.

' It is my judgment,' says he, ' that Christ was a man (Rom. v. 15), conceived and formed in the womb of the Virgin, without the intervention of a man, by the power of the divine Spirit (Mat. i. 20, 23. Luke i. 35), and that being thus born, he was at first capable of suffering and mortal (2 Cor. xiii. 4), till having discharged here on earth the duty assigned him by God, he afterwards ascended into heaven and became immortal, and no longer liable to sufferings ˆRom. vi. 9). (G)

Speaking of the ' Son of God,' and the import of that title, he says, ' But Jesus is thus styled principally because he is the person whom his name indicates him to be, namely Christ. Jesus is a name applicable to him merely as a man, but Christ is the name that points out the great eminence and excellence of character conferred on him by God; for the word God is every- where to be understood after it, as if it had been expressly written,

the Christ of God.' (H)

Referring to the texts usually produced in favor of the pre-existence of Christ, Socinus says, ' these passages might refer to a prior existence, if they could not be applied to Christ as a man. Nothing is more probable, and more agreeable to the very words of Christ here and elsewhere, than that Christ himself, after he was born, and before he entered on the office assigned him by his Father, was, in consequence of the divine counsel and agency, in heaven, and remained there for some time; that he might hear from God, and being with him, as the Scripture says, might see the things which he was to announce and lay open to the world in the name of God him- self. The words of Christ himself, John iii. 13, vi. 62, are spoken of him as Man, or the Son of Man.' (K)

It is well known that Socinus rejected the re- ceived doctrine of the atonement, as well as the proper divinity of our Saviour, and thus he ex- plains himself on the subject : ' The eternal priest- hood of Christ is his office and perpetual care for expiating our sins ; and Christ expiates our sins, as he frees us from the punishment of them. This deliverance from the punishment of our sins has nothing in common with a satisfaction for them, but is rather repugnant to it. Foras- much as we are thus saved from the punishment of our sins by Christ, because by his great power in heaven and earth he brings it about, that no proper punishment shall reach us.' (L)

It is unnecessary to go farther into the peculiar notions of Socinus ; they appear to have origi- nated in making human reason the judge, not only of the evidences of divine revelation, but of the truth or error of the doctrines revealed ; and on this subject Dr. Wallis has quoted him as fcayin?, ' as lor me, though it (the doctrine of

satisfaction) were found written in the sacred monuments, not once, but many times, I would not believe it to be so.' (M) This was a case, therefore, in which he, Socinus, considered it lawful to have recourse to unusual tropes ('inusi- tatos tropes'), rather than admit a doctrine which he considered as irrational. Trinitarians, how- ever, draw a distinction here ; and though they do not admit evident contradictions, they conceive it their duty to reject no point of revealed doc- trine, because they cannot exactly reconcile it to their pre-conceived notions or opinions.

Michael Servetus, the martyr of Socinianism in 1553, was a physician of great talents; and is said by some to have anticipated our immortal Harvey in die discovery of the circulation of the blood. Without yielding him this honor, it must be confessed that he was a man of conside- rable eloquence and acuteness, of great learning and scientific knowledge, and of good morals. He was contemporary with Lalius Socinus, and died just before

him. Though more bold and daring than either of the Sozzini, his opinions are not so clearly to be ascertained, being often veiled in mystery, and tinctured with fanaticism. In his philosophy he is accused of being a materialist, (N) a name which at that period was considered as synonymous with atheist. He also agreed with Socinus in rejecting infant baptism, on account of which the Socinians, and many other parties, who assented with them in hardly any point besides, were at this period all con- founded under the general name of Anabap- tists, and occasioned that body to be charged with almost every heresy in existence.

Anti-trinitarianism now chiefly spread in Poland, where it was introduced by Gonesius, though it is probable he did not embrace all the notions of Servetus ; and its advocates enjoyed a free tole- ration, and full liberty of the press to circulate their opinions. Among these Polish brethren, as they were called, were many varieties of opi- nion, from those of the ancient Arians to those of Servetus and Francis David (of whom pre- sently), but all of them denominated themselves Unitarians, and were certainly Anti-trinitarians.

Sienienius, palatine of Podolia, also conferred upon them a settlement in the city of Racow, which became the centre of their operations. Here, in 1572, they produced a new translation of the Bible in the Polish language correspond- ing with their principles ; and two years after a catechism, usually called the Racovian cate- chism, drawn up by George Schoman, which henceforth became the common standard of the party, and from which, therefore, we shall give two or three brief extracts.

‘ Our mediator,’ say they, ‘ before the throne of God, is a man who was formerly promised to our fathers by the prophets, and in these latter days was born of the seed of David, and whom God the Father has made Lord and Christ ; that is, the most perfect prophet, the most holy priest, and the most triumphant king, by whom he created the new world, by whom he sent peace upon earth, restored all things, and reconciled them to himself; and by whom also he has bestowed eternal life upon his elect ; to the end that, after the Supreme God, we should believe

in him, adore and invoke, hear his voice, imi- tate his example, and find in him rest to our souls, (o)

‘ The Holy Ghost is the energy or perfection of God, whose fulness God the Father bestowed upon his only begotten Son, our Lord, that we, becoming

his adopted children, might receive of his fulness.' (p)

The following extract will show that the sen- timents of the Socinians, on the doctrine of merit and divine influence, were less heterodox, not only than that of the modern Unitarians, but even than many who class themselves among the orthodox : ' Justification,' say they, ' consists in the remission of all our past sins, through the mere grace and mercy of God, in and by our Lord Jesus Christ, without our merits and works, and in consequence of a lively faith ; as also in the certain hope of life eternal, and the true and unfeigned amendment of our lives and conver- sations, through the assistance of the Divine Spi- rit, to the glory of God the Father, and the edi- fication of our neighbours.' (Q) At this period also it appears, that the Socinians admitted of prayer to Jesus Christ, though of a kind subordi- nate to that offered to the Supreme Father.

Francis David was superintendant of the So- cinian churches, as they were afterwards called, in Transylvania about the year 1572, and endea- voured farther to refine upon the doctrines of Socinus by denying the lawfulness of prayer, or of any kind of religious worship to Jesus Christ ; a proposition which seemed so shocking to Faus- tus Socinus, that he opposed it with all his might, as ' impious and detestable — pestilential and poisonous,' and called the followers of this man ' Semi-Judaizers,' and therefore but half Christians at the best. (R)

David was in consequence thrown into prison, where he died at an advanced age in 1579. And if Socinus did not betray this man into the hands of his enemies and procure his imprisonment, it is admitted that he agreed to his suspension, and advocated the lawfulness of imprisonment for heretical opinions when obstinately maintained, though he resolutely denied that this could in any way apply to himself.

The Polish anti-trinitarians, being, as already hinted, but very loosely united in opinion, were ultimately distinguished into three classes. Some adhered nearly to the Arian system, and were de- nominated Farnovians, from their leader Farno- vius; others kept more closely to the hypothesis of Socinus, and were called after him; while a third party, formed by Budnams, assumed his nam'i (Budna-ans), and went the full length of Francis l)a\id, or the late Dr. Priestley. A con- siderable number of their tracts were collected about the middle of the seventeenth century, and published in >ix \< >ls. folio, under the title of liililiotheca Fratrum Polonorum, the two first of which contain the writings of Socinus.

1'rom Poland thoe Anti-trinitarians spread into (iermany, Holland, and F.nˆland, in each of which they made a few disciples, in England the most considerable wi.re Mr. John Jiiddle, M. A. of Oxford, and master of the

grammar school at Gloucester ; and Mr. Thomas Firmin, <; most benevolent layman. The latter chiefly

contributed to the cause by the excellency of his character, and by the devotion of his property to the circulation of their tracts ; but the writings of the former against the trinity excited so much attention as to involve him in much personal trouble, which his zeal supported with the spirit of a martyr. Mr. Biddle's \vritings produced a very severe ordinance of parliament against he- resy, and he was cast into prison; at length Cromwell, who was no friend to persecution, in order to save his life, and calm the public mind, banished him to St. Mary's castle in one of the Scilly Isles. In 1658, however, he was recalled ; but after the restoration, was again apprehended for his religious opinions, and died in prison in 1662. (s)

Dr. John Owen was the chief polemical anta- gonist of Mr. Biddle ; and the Socinians after- wards met with very powerful opponents in bishop Stillingfleet, Mr. Alsop, and other writers, both in and out of the establishment ; so that the system did not gain much ground among us in the seventeenth century, the chief Anti-trinitarians of that period adopting the Arian or Semi-Arian system. About the middle of the eighteenth cen- tury, however, arose Dr. Joseph Priestley, whose energy, talents, and fame as an experimental phi- losopher, made him the champion of the party ; and a controversy was now raised which merits our particular attention, and will chiefly occupy the remainder of this article.

Dr. Priestley, accord ing to his own account, was originally a Calvinist, and a zealous Trinitarian, till nearly 20 years of age, when he became an Arian. In this persuasion he continued fifteen or sixteen years, till at length the course of his own enquiries, and the publications of Socinian writers, led him into their system, on which he continued to refine, till he rested in believing the simple humanity of Jesus, and the homogeneous nature of man. (T)

In 1769 this writer commenced his Theological Repository, which was for several years the great repository of Anti-trinitarianism, and particularly of Socinian writers ; besides which, the Doctor, who was a most indefatigable author, published a surprising number of pamphlets, tracts, and even volumes, on subjects of polemical theology, biblical criticism, miscellaneous literature, and experimental philosophy.

About the commencement of the year 1783, Dr. Priestley printed in two volumes his History of the Corruptions of Christianity, which com- menced the controversy whereon we are now about to enter. This work (at least at that time) he considered as the most valuable of all his writings. Its avowed

object was, to trace the rise and progress of the doctrine of the trinity, and to show that Unitarianism (in his sense of the term) was the general faith of Christians in the apostolic age, independent of the evidence which arose from its being the doctrine of the Scrip- tures, (u)

In order to establish this point (the only one at present with which we are concerned), Dr. Priestley affirms that the prophets predicted the Messiah only as a man of the house of David, and the tribe of Judah ; and that the apostles considered and represented him only as a man —

'a man approved of God.' 'We are then intro- duced to the body of Jewish Christians of the first age, who were (as Dr. P. believes) called Nazarenes, as the disciples of Jesus of Nazareth ; and Ebionites from their poor and mean con- dition ; just as some of the reformers from popery were called Beghards, or beggars. The Doctor cites the authorities of Origen and Epiphanius to prove that both these denominations relate to the same people, differing only (like the early So- cinians) in receiving or rejecting the fact of the miraculous conception ; and neither of them, he contends, were reckoned as heretics by any writers of the first two centuries.

Afterwards, according to this historian, Unita- rians were divided into two classes : the Docetae who denied the real humanity of Jesus ; and the Ebionites who maintained that he was a mere man and nothing more ; but St. John ranks the former only among those who denied or misre- presented his true character. The doctrine of Christ's divinity he concludes therefor? to be an error, arising from the personification of the Logos, which, from being an emanation of Deity, was raised to be a divine person. This he further traces to the propensity for allegory and personi- fication which he observes in the apostolical fathers, and even in the principal writer of the New Testament himself, of whom he says, ' The apostle Paul, especially if he be the author of the Epistle to the Hebrews, has strained very much, by the force of imagination, to reconcile the Jews to the Christian religion, by pointing out the analogies which he imagined the rites and cere- monies of the Jewish religion bore to something in Christianity. Clemens llomanus, but more especially Barnabas, pushed this method of alle- gorising still farther. But the fathers who fol- lowed them, by employing both methodsˆ and mixing their own philosophy with Christianity, at length converted an innocent allegory into what was little better than pagan idolatry.' (x)

This work attracted the notice of Dr. Horsley, then archdeacon of St.

Albans, a man of consi- derable literary and scientific eminence, and a most masterly controversial writer. In a charge soon after delivered to his clergy, the archdeacon severely animadverted on several things contained in it, and afterwards published the charge. His censures of Dr. Priestley were comprised under the following heads : reasoning in a circle — quota- tions misapplied — and testimonies perverted (as is alleged) through ignorance of the Grtek lan- guage, of the Platonic philosophy, and of the phraseology of the earliest ecclesiastical writers. Of these faults he selects nine instances, such as he conceives completely to destroy the credit of Dr. P. as an ecclesiastical historian. In the fol- lowing June, Mr. S. Badcock, a learned dissent- ing minister, and one of the writers in the Monthly Review, furnished to that work a masterly cri- tique on Dr. Priestley's book, and took the same side of the controversy with Dr. Horsley. In the autumn appeared Dr. Priestley's first series of letters to the archdeacon in answer to his charge, which were replied to in the summer of 1784 by a series of letters from Dr. Horsley.

Dr. Priestley had strongly urged his opponent to go into a general view of the trinitarian contro-

versy, but the archdeacon steadily confined him- self to the former topics of discussion, and some incidental matters arising from them : particularly the authority of the writings' that go under the name of the apostolical fathers ; the rise of the two sects of the Nazarenes and Ebionites; the distinction between the two, and the difference of both from the orthodox Hebrew Christians.

The Unitarian champion had boldly asserted that the doctrine of the trinity, as now generally received, was of no greater antiquity than the council of Nice. (Y) Dr. Horsley, on the con- trary, contended, that the Christian church was universally trinitarian before that period, and always reckoned those who denied that doctrine, to be heretics. On this position he appealed to the writings of St. John and Clemens Romanus ; to the Epistles of Barnabas and Ignatius, (z) Dr. Priestley replied by giving a different interpreta- tion to the passages quoted from the apostle and St. Clement ; and, admitting the pieces ascribed to Barnabas and Ignatius to be genuine in the main, he asserts that they bear evident marks of interpolation in what relates to this subject, (a) As to the fact of the primitive church being Anti- trinitarians, Dr. Priestley asserts that the Ebionites and Nazarenes were Jewish Christians of the earliest age, and did not believe the divinity of Christ, but held him to be simply a man inspired of God. Dr. Horsley, on the contrary, contends that those who were called Ebionites did not exist in the age of the apostles ; and also that, though they believed the simple humanity of Christ, they probably held some mysterious ex- altation of his nature after his ascension, which made him the object of prayer to them ; a

cir- cumstance which Dr. P. considers as destitute of all evidence, or probability, (b) Dr. P. regards the term Nazarenes as another name for the Ebionites, or the Jewish Christians in general ; (c) while the orthodox writer insists that, though the first Hebrew Christians might be sometimes called Nazarenes by the heathen (as in Acts xxiv. 5), yet they did not acknowledge the name ; that the sect claimed by Dr. Priestley, under that name, as Unitarians, did not exist till after the time of Adrian (in the second century) ; that they had their name from Nazareth, the place where they settled after they were then driven from Jerusa- lem ; and that even these were believers in the divinity of Christ, although they may be charge- able with some errors and inconsistencies, (d)

In this part of the debate, Dr. Priestley quoted the authority of Origen for the assertion that the first Hebrew Christians were Ebionites, and the Ebionites Unitarians. Dr. Horsley endeavours to show that the words of this father would bear a different interpretation ; or, if not, that in this case they are of little weight, as they are coupled with an evident falsehood, viz. that the Hebrew Christians had not renounced the law of Moses ; and we fear Origen is not the only father who would venture to make an assertion adapted to answer his end in controversy, without much re- gard to its truth and accuracy. On this occasion indeed the archdeacon goes so far as to unite with Mosheim in saying, ‘ I would not believe this witness on his oath ;’ (e) which his antagonist resents so seriously as to call Dr. H. a falsifier

ofhistory, and a defamer of the character of the illustrious dead. (/)

Dr. P. contends, that the great body of Chris- tians in early times being Unitarians, they could not have been considered as heretics, or persons out of communion with the Catholic church. On the contrary, Dr. Horsley, as we have already observed, denies the assumption, and maintains that the Unitarians were always considered such ; and that they were by Justin Martyr included among those heretics whom he charges with blasphemy, (g)

Dr. Priestley having quoted a passage from Athanasius, in which that father represents the apostles as cautious in explaining the divinity of Christ to the Jews, on, account of their general belief that the Messiah was to be a man only ; (A) he assumes that these were Christian Jews, of which he produces no evidence, and thence con- cludes, that the first Christian Jews were Unita- rians, which the archdeacon considered as totally without

foundation. That the first preachers were not so cautious as is here represented, Dr. Horsley infers from the instance of Stephen, whom he considers as a martyr to this doctrine ; (f) and that those who are said to have ‘ waited for salvation in Israel,’ expected their Saviour to be a divine person, of which he finds evident traces among the Scribes and Pharisees themselves.

Dr. Priestley thinks that there was ‘ a grada- tion in the sentiments of learned Christians, re- specting the Logos, and that the first idea of it was that of something emitted from the divine mind, similar to the supposed emission of light from the sun. But prior to this emission, they considered this Logos as the same principle with reason, or some other intellectual power, so that ‘ by the generation of the Son,’ they meant a change of state, viz. from a mere attribute to a proper person ; and in their idea this first took place with a view to the creation of the world.’(A:) Dr. Horsley , however, asserts, that the Logos was never considered a mere attribute of the Deity previous to its assuming a proper per- sonality ; but he does not, as Dr. P. states, maintain, that ‘by the generation of the Son was meant the display of hi powers in the produc- tion of material brings,’ as some of the fathers might do ; but without curious enquiries into the mysterious nature of the divine Being, the archdeacon satisfies himself with believing the eternal existence of the sacred Three, in the scripture relation of Father, Son, and Holy Ghost. (/)*

Dr. Horsley admits, as do all Athanasians, that though the Three Persons in the Trinity have each of them equally all the perfections of Deity, the Father, as \i-.- fountain of the Divinity, has some inexplicable pre-eminence in the divine economy. On the contrary, Dr. Priestley con- tends, that ‘ pre-eminence is inconsistent with sriy proper equality ; and that if the members .»f this trinity be properly equal, they must ne- . >.ssarily be three duds as well as three persons.’ On &.is subject Dr. P. remarks, that the three creeds adopted by the church of England were ‘drawn up at different times, and all contain different and inconsistent doctrines.’ (?«)

U: Ilorsley having intimated that the Unita-

*rians (anti-trinitarians) do not even pretend that the general tenor of Scripture ‘ is in their favor, but that they derive it only from parti- cular passages, to which they give a figurative interpretation.’ Dr. P. thinks this must have been advanced ‘ without much reading or much thinking,’ it being evident to all acquainted with their writings, that * they constantly appeal to the general tenor of Scripture, and the plain ob- vious sense of it. On the contrary, they say, that the Trinitarians cannot find their doctrine either in the general tenor of Scripture, or in any clear passages of it ; but that they deduce it only from particular expressions and circumstances,*

which, when rightly explained, do by no means authorise their conclusions.' (n) So different are the inferences of different persons from the same premises; so various their conclusions from the same evidence ! It is one thing to infer this argumentatively and in controversy, as Dr. Priestley has done in this instance, and another thing to charge such inferences on parties hold ing the supposed premises whether they acknowledge them to be just inferences or not. There is a singular, and, as we think, a very indeco- rous instance of the latter in the article HORSLEY, Dr. Rees's Cyclopaedia.

Lastly, Dr. Priestley having repeatedly insi- nuated that the doctrine of the trinity was the great barrier to the conversion of Jews and Mahommedans, Dr. Horsley expresses his opinion that the former were most unlikely to admit of his method of expounding the New Testament, and there- fore not likely to become converted to his system. As to the Mahommedans, he freely admits the harmony between their creed and that of the modern Unitarians, as it respects the character of Jesus, and yet the experiment has been tried without success : a Socinian has become a Ma- hommedan, but no Mahommedans have become Socinian Christians. Nor does he conceive it more likely to proceed in the conversion of Deists, however nearly their opinions may ap- proximate, but apprehends Dr. P.'s system of materialism has a tendency rather to lead men still farther from Christianity — even to atheism itself, (o)

This charge, however, Dr. Priestley attributes to ' ignorance or malevolence ; ' conceiving it hardly possible that such can he the serious con- viction of his opponent, and treating it as ' utterly unworthy of reply.' And as Dr. Horsley had repeatly charged his antagonist with incom- petency for the undertaking, Dr. P. concludes by an appeal ' to all the learned world, whether any man, pretending to scholarship, ever under- took the discussion of a question of literature less prepared for it, or acquitted himself so wretchedly in it as the archdeacon.' (p)

The controversy, of which we hare given so brief an abstract, was continued in various suc- cessive publications from the commencement of 1783 to 1786. Dr. Priestley's first piece, in vin- dication of Unitarian ism, contained eight letters to the archdeacon, with a postscript and an ap- pendix, published in 1 783. To these the learned dignitary replied in seventeen letters; and in taking leave of his antagonist, expressed his de- sign of proceeding no farther in the controversy.

*In the following autumn, Dr. Priestley rejoined in a second set of letters to Dr. Horsley, wherein the ‘ charge of insufficiency * was warmly re- torted, and the archdeacon was stigmatised, (as already remarked,) as a falsifier of history, and a defamer of the illustrious dead. Under these reproaches Dr. Horsley remained silent about eighteen months; but at length renewed the controversy by a sermon at St. Mary’s, Newing- ton, on Christmas day 1 785 ; which was followed in the ensuing spring by his ‘ Remarks on Dr. Priestley’s Second Letters to the Archdeacon of St. Alban’s, with proofs of certain facts asserted by the Archdeacon.’ This tract contained, 1. A collection of new specimens of Dr. P.‘s temerity in assertion; and, 2. Arguments in support of the attack upon Origen, and defending the exis- tence of a body of Hebrew Christians at JElia, after the time of Adrian. It farther animadverted upon the decline of Calvinism among dissenters, and the spirit of Dr. Priestley’s writings. These remarks on the second set of Dr. P.‘s letters, produced from the latter a third set, in which were farther considered the veracity of Origen, and the existence of a church of orthodox He- brews at JElia.*

In 1789 Dr. Horsley collected the preceding tracts into a volume, with some additional notes and supplementary disquisitions ; and here .the controversy on the part of that dignitary closed, as he did not think proper to notice Dr. Priestley’s 4 History of early Opinions concerning Christ,’ then just published in four volumes 8vo. and in- deed declared he did not think it worth his while to read them.

In the mean time Dr. Priestley published a fourth series of letters to Dr. Horsley, then pro- moted to the see of St. David’s, and intimated a design of collecting the whole into a volume, with an appendix, after the example of his Right Reverend antagonist, but which was probably prevented by his removal to America.

It will have been but too evident to our readers from the foregoing abstract, that much personality was mingled with this controversy, which may justly be esteemed one of the most memorable of the eighteenth century. Both parties claimed the victory, and each was no doubt ‘ well satis- fied ‘ that he was entitled to it ; as were the respective parties of whose opinions they were the able advocates. Accordingly, when both writers were silent in the dust, and their works in some measure rested with them, the friends of each revived and re-animated the contest. In 1812 the tracts of Dr. Horsley were reprinted by his son, the Rev. Heneage Horsley, prebendary of St. Asaph, with an appendix, containing farther remarks on some particular points in de- bate, and on some more recent opinions and :emarks of the learned Jeremiah Jones and Mr. Thomas Belsham. This latter gentleman, equally zealous for his friend and his opinions, as was the Prebendary for those of his Right Reverend Father, immediately published a new edition of Dr.

Priestley's tracts in this controversy, with four additional letters to the bench of Bishops, which had not been before printed.

On the same side with Dr. Priestley, and nearly contemporary with him as a controver-

sialist, appeared another writer in tne Anti- trinitarian controversy, a convert from the Established Church, whose name and publica- tions are too remarkable to be omitted, even in this slight sketch of its modern history ; we re- fer to the Rev. Theophilus Lindsey, M. A. It is remarkable, and noticed as such by his bio- grapher (Mr. Belsham), that even after he had ' formed a design of resigning his preferment,' he should solicit a change of living, which re- quired the renewal of his subscription ; and that not for interested purposes, but for conveniency — the conveniency of residing near Archdeacon Blackburne, and some other esteemed friends. Here (at Catterick) Mr. L. remained for nearly ten years ; and though he disbelieved the doc- trines of the Trinity, as taught in the articles and creeds, and practically avowed in the devotional offices of the church, he reconciled himself to the use of it on the Sabellian principles ; persuading himself that they were in fact Unitarian, though Trinitarian in expression, (q)

Mr. Lindsey was, however, a conscientious man, and could not longer satisfy himself by this subterfuge. In 1773, therefore, he resigned the vicarage of Catterick, seceded from the church, and published his well-known 'Apology' in defence of his Anti-trinitarian sentiments in January, 1774. The design of this work was not only to justify his conduct, but his principles ; and contained what his friends considered as a powerful attack on the established faith. This was speedily met and repelled by ' A Scriptural Confutation of the Arguments against the One Godhead of the Father, Son, and Holy Ghost, produced by the Rev. Mr. Lindsey in his late Apology,' the production of a Mr. Burgh, mem- ber of the then Irish parliament. Though pro- nounced by Mr. Belsham to be ' trifling in the extreme,' the work was well received at the time, and highly approved of by Dr. (afterwards Bishop) Hurd, and other respectable members of the Established Church, (r)

Another answer was published by Mr. Bing- ham of Dorsetshire, entitled, ' A Vindication of the Doctrine and Liturgy of the Church of Eng- land,' &c. ; and a third by Dr. Randolph, then Lady Margaret's professor of divinity at Oxford. To all these Mr. Lindsey replied in a ' Sequel to his Apology/ of which, as it is considered ' the most elaborate of all his publications,' and a ' standard' (s) of modern Unitarianism, we shall give a very brief analysis.

The work opens with some account of the trial and sufferings of Mr. Ellwall

for heresy and blasphemy in the reign of George the First, fol- lowed by extracts from Hopton Haynes, Esq. an Anti-trinitarian writer of the same period. Then follows an examination of the subordinate wor- ship of the Arians and Socinians, demonstrating that it has no foundation in the New Testament ; and chapters third and fourth explain the Logos to be the ‘ wisdom and power of the Father.’ The author next examines critically the. passages from the New Testament, and particularly from St. John, in favor of the pre-existence of Christ ; and in the sixth chapter combats the ingenious hypothesis of the Rev. Henry Taylor, author o. a series of letters under the signature of ‘ Benja-

mm Ben Mortlccai, a converted Jew.’ The seventh chapter proves what is no part of this controversy, that our Saviour was truly a man ; the eighth considers the testimony of the aposto- lical fathers in relation to the person of Christ ; and the last attempts to prove that the creation ascribed to Christ in the New Testament, intends only ‘ the new creation, or the moral renovation of the world.’ (f)

In 1779 Mr. L. published Two Disserta- tions, 1. On the Preface to St. John’s Gospel. 2. On praying to Jesus Christ. In the first of these (as in his Apology) he explains the Logos, not of Jesus Christ (as the Socinians used to do) but of ‘ the word, wisdom, and power of God, communicated to him, and manifested by him.’ In the second, Mr. L. maintains that religious worship is not due to Jesus Christ, because ‘ he is a man and not God — that he never taught men to worship himself — that worship is not deduci- ble from his offices and powers — that the apostles never teach it — that there is no sufficient prece- dent or example in the New Testament ; under which head the learned writer gives an able, and in general (says his biographer) a very satisfac- tory analysis of those texts commonly produced in favor of the worship of Jesus Christ.’ (u) Trinitarians, however, continued to think differ- ently, though they admitted the consistency of rejecting the worship of Christ in those who had rejected his divinity.

In 1781 Mr. Lindsey published a 12mo. work called The Catechist, which he threw into the form of dialogues between Artemon and F.usebes, on the unity of God, and in which he boldly maintains that, ‘ It is a thing utterly im- possible that a being should be God and man ; Creator and creature ;’ &c. ‘ These things (he adds) are not compatible: we should be shocked at their absurdity if they were not instilled into us be to re we beuan to make use of our reason, and if many were not afterwards afraid to make use of

it. about them, suffering themselves to be da/./.led by "Teat names and authorities, and im-]> < >ed on by high antiquity, which can give no prescription to what is unintelligible and im possible.' (r)

In the spring of 17815 Mr. Lindsey committed to the press a work which he had been long pre- paring, and which he entitled, An Historical View of the State of the Unitarian Doctrine and 'Worship from the Reformation to our own Times. ' This,' says his biographer, is ' an elaborate work, one of the most interesting and important of Mr. L's publications.' (?< >) We shall introduce Mr. Belsham's analysis of its contents:

' In pursuance of his design the worthy au- thor begins with representing the state of the I nitarian doctrine at the beginning of the Re- formation, and exhibiting the superior advan- tages then enjoyed for understanding the Scrip- ture in this respect; he then notices the pro- mising stale of the I nitarian doctrine in England at the time of the Reformation, with the \iolent means used to suppress it; he next treats < >f the worship of Jesus Christ by Socinus u:d In-, followers, and particularly enlarges upon t'ne controversy on this subject between Faustus Soeimis and I rancis David, and upon the seve-

rity exercised towards David and others for re- fusing to acknowledge Christ as an object of re- ligious worship. In this chapter Mr. Lindsey introduces a section in reply to some severe and unfounded remarks of bishop Newton upon the Unitarians. The succeeding chapter exhibits the state of the Unitarian doctrine in the reign of queen Elizabeth and of the Stuarts : and the author here explains the cause of the great si- lence concerning the Divine Unity during this period, and gives some account of that truly eminent confessor John Biddle, M. A. of the university of Oxford, who, for the profession of his principles, was banished by Cromwell to the Scilly Islands, and afterwards died in prison. Then follows an account of the state of the Uni- tarian doctrine and worship from the Restoration to the close of the seventeenth century, in which is included a brief memoir of the celebrated Mr. Thomas Firmin, merchant of London, a disciple of Biddle, and his protector and friend ; a man eminently useful in his day; the friend of Whichcote, Burnet, and Tillotson ; an avowed and zealous Unitarian, but who hesitated not to conform to the worship of the Established Church, justifying his conduct, but surely erro- neously, upon the principles of Dr. Wallis and the Oxford divines in the controversy with Dr. Sherlock, that the three persons in the Trinity were nothing more than three different charac- ters, or relations of one and the same Being. In the following chapter the author describes the state of the Unitarian doctrine and worship in the eighteenth century : and here he gives a particular account of the opinions and writings of Emlyn, of Whiston, of Dr. Samuel Clarke, of Bishop Hoadley, of Sir Isaac Newton, and of Abraham Tucker,

*the author of a curious and profound work entitled The Light of Nature pursued, by Edward Search, esq. The con- cluding chapter contains a relation of some cir- cumstances favorable of late years to the pro- gress of the doctrine of Divine Unity, in which the worthy author, after representing the benefit accruing to the cause of truth from *an open de- fence and maintenance of it, records some recent public declarations in favor of the Unitarian doctrine and worship, by an open and avowed separation from the worship of the Church of England. And in particular he relates the cir- cumstances of the first rise of the church of Unitarian Christians assembling in the chapel in Essex-street, to which he annexes a brief memoir of some eminent persons who had honorably, and from a sense of duty, avowed Unitarian principles, and some of whom had for conscience- sake resigned lucrative situations, and fair pros- pects of preferment in the national church. In this honorable catalogue are the highly re- spected names of Dr. Robertson, Dr. John Jebb, Dr. Chambers, Mr. Tyrwhitt of Jesus College Cambridge, Mr. Evanson, Mr. Maty, Mr. Harris, and Dr. Disney.' (x)*

It is certainly to the honor of these worthies, as Mr. Belsham calls them, that they sacrificed their interest to their conscientious scruples; but this weighs not a feather in the scale of ar- gument, as Trinitarians have certainly done as much; and this kind of argument, if brought

forward on the opposite side, would probably have been called ' trifling in the extreme.' It it is not the suffering but the cause that consti- tutes the martyr.

In September following a society was esta- blished for Promoting the Knowledge of the Scriptures by critical and anti-trinitaran expo- sition ; but notwithstanding Drs. Disney, Jebb, Kippis, Price, Calder, Toulmin, Law, £c. were among its members, it did not succeed accord- .ng to expectation, which is chiefly attributed to Dr. Priestley's resumption of his Theological Repository. At their dissolution however, they left a monument of their labors in two volumes of Commentaries and Essays, among which were some by Messrs. Lindsey, Dodson, Evanson, Tyrwhitt, and Henry More, (y)

In 1785 Mr. Lindsey published, without his name, an Examination of Mr. Robinson of Cam- bridge's Plea for the Divinity of our Lord Jesus Christ, by a late member of the university. The tract here referred to had been published nearly nine years without meeting with a reply, the first edition being dated in 1776. During that period it had been extensively read, and admired by Trinitarians, both in and out of the establishment. Among the

former were Dr. Hinchcliffe, bishop of Peterborough; Dr. Halifax, afterwards bishop of Gloucester; Dr. Goddard, master of Clare Hall ; Dr. Ogden, Woodwardian professor ; Dr. Cooke, provost of King's College ; Dr. Beadon, afterwards bishop of Gloucester, at that time public orator; and Dr. Tucker, dean of Gloucester ; and, it was pretty generally agreed, that the plea was the best defence of the divinity of Christ which had been published. Among the dissenters, Drs. Stennett and Evans, Messrs. Daniel Turner and Josiah Thompson, (of Clapham), admired the work, and compli- mented the author, (z) Archdeacon Blackburn, who was a kind of middle man, thus writes in the year 1781 — 'When Mr. Lindsey's Apology came out, I read it, and thought some things in it well enough. In other passages he seemed to me to be infirm in his proofs. I then read several answers to him, which, among a few to- lerable hits, had a considerable mixture of weak- ness and absurdity. About five years ago, I know not what chance threw in my way a pam- phlet, entitled a Plea for the Divinity of our Lord Jesus Christ. I perused this pamphlet with care and attention, and was both surprised and concerned to find so many of my friend Lindsey's arguments and positions totally sub- verted, a fundamento, providing the pleadings, reasonings, and authorities were well-grounded. To prove this to myself, I consulted a number of the texts he had cited, and found his superstruc- ture bottomed upon a rock. It is now six years since this pamphlet was first published. I have looked in every newspaper, review, magazine, &c. I met with, and could never find an answer to it, either from Mr. Liudsey, Dr. Jebb, Dr. Priestley, or even Mr. Evanson, who, I think, is one of the best writers among the Socinians, either ancient or modern. Indeed, so far as concerns the Socinians. I think it unanswer- able. (a)

The effect of this piece on the Unitarian (or Voi. II

Anti-trinitarian) writers seera to have been a.r tounding. They looked at each other, and all agreed it was ' very superficial,' ' and needed no confutation,' yet they all wished it were answered, and ' thought a reply of some kind advisable,' though no one appeared willing to undertake the task. At last Mr. Archdeacon Blackburn asked Mr. Lindsey in triumph ' How can you go on in Essex street without confuting this work?' This roused his zeal, and he wrote to the ' Cam bridge men,' but they declined to interfere. ' I often wonder at myself,' said he, in a letter to a friend, 'and am often not a little drooping, to think how I should venture on the public, when certain persons, so much more able and capable, are silent.' (b) Yet the formidable work he was about to reply to was but a pamphlet, (we be- lieve published at eighteen-pence) which, accord- ing to Mr. Belsham, ' breathes throughout a most amiable spirit of candor;' but which, in point of argument, was ' egregiously trifling, very su- perficial, and would not long deceive any one ; ' or, according to Mr. Lindsey himself, was com- sed of '

triumphant nonsense and declamation.'

This tract, however, it may be proper to in- form our readers, was neither mere declamation nor dry reasoning. It placed the New Testament first in the hands of a Jew, then of a Gentile, and considered in what light the argument for Christ's divinity must appear to the one and to the other. This method of arguing was somewhat new, and, as appears to us, very forcible, while the style in which it was exhibited gave it the effect of a charm upon the reader. We must now, how- ever, attend to the reply of Mr. Lindsey, which will give the reader a further insight into the tract of his opponent, and the train of his reasoning.

'The learned writer, in his examination of the Plea, pursues Mr. Robinson's method, and ex- amines and sifts his popular opponent's defence of the divinity of Christ, argument by argument, and text by text. Accordingly, he enquires in order, whether the sacred writers speak of God in peculiar appropriated terms? — whether Jesus Christ is the supreme God ? — whether the same titles are given to Christ in the Christian Scrip- tures which are given, to God in the Jewish Scriptures ? — whether the perfections which are ascribed to Christ are the same with those which are ascribed to the supreme God? — whether the like worship is given, or commanded to be given, in the Scriptures to Jesus Christ as to Almighty God ? — whether there be any passages in the Old Testament, and applied to Jesus Christ in the New, which prove Jesus Christ to be Jeho- vah the supreme God ? — whether the Scriptures which foretell the destruction of idolatry by the gospel have not been fulfilled although Jesus Christ be wrongly worshipped as God? — whether, if Jesus Christ be not the supreme God, Maho- med has written more clearly on the nature of Jesus Christ than the apostles have? — whether numberless passages of scripture have no sense, or a very absurd one, if Jesus Christ be a mere n:an ? — and, finally, what is the source o(men's erroneous opinions concerning the person of Christ, according to the author of the Plea.' (d)

'After Iv.ivinc,' says Mr. Bel sham, 'with great ability and learning discussed these important questions,' Mr. Lindsey 'animadverted with a warmth and severity more than usual with him upon the presumption, the ignorance, and the dogmatical spirit of the writer,' which appears to us rather extraordinary, since this same Mr. Belsham tells us Mr. Robinson's plea was 'written with great ingenuity, and breathes throughout a most

amiable spirit of candor.' (e) But there are many extraordinary things in religious con- troversy.

'The success of this examination,' says Mr. Belsham, ' was complete. From the time that it was published, no person who had the least pretension to biblical learning, was heard to open his lips in defence of the famous plea for the Divinity of Christ ; not a syllable was written in confutation of the reply.' (f) It will not be necessary to suppose this was on account of that reply being 'egregiously trifling,' or 'very su- perficial ;' the reason given by the author of the plea, perhaps influenced others. ' I do not intend,' said he, ' to answer the anonymous ex- aminer. He hath not touched my arguments; and his spirit is bitter and contemptuous. His faith stands on critic-isms; and my argument is, that if the doctrine require critical proof, it is not popular, and therefore not divine. Yes, they will have the last word, and let them.' I'pon the subject of criticism, it was indeed Mr. H's opinion that, 'criticism is a good thin.- in its place,' that is, by way of il- lustration ; ' but woe be to the system that rests upon it.' (g) And if Christianity be intended for the common people, the multitude, there seems to us considerable force in the argument; for these can in few cases be critics. Indeed, Anti-trinitarian writers have often adopted this mode of argument themselves, when it has suited their design. The doctrine of the trinity cannot be true, they say, because it is above the capacities of the common people, (h) It is ad- mitted, however, that Mr. Robinson changed Ins opinion on this _nom< ntous subject, but not, so Car as appears, in (onse<|iience of Mr. Lind- sey's reasoning. Truth, however, is not affected \>\ the versatility of man. Jf'tlie arguments of Ro- binson are unanswerable, as many still think, his •h:ui'_e of opinion will not invalidate them any •nor , than the conversion of an Anti-trinitarian to the orthodox faith will prove the doctrine of the trinity.*

Mr. l.indsey's next publication was, an Ad- dress to the Students of the two F.nulish Universi- ties in vindication of his friend Dr. Priestley from the attack of llishup Horn,., then Dean of Can- terbury and president of Magdalen College, in wlneh he appears to havu fully embraced Dr. P's opinions, i \vn to dri \iii_: the inspiration of the Sinpter, lira -. , •, n] addr, ss Mr. I.indsey

attack- the BaMjit.Mi Lectures of Mr. Hawkins "ii lii" TriniH ; .md attributes, as J)r. P. had don", the nj'.eutmii »f that doctrine to "I" hm "f Justin Martyr.' In ihl nubbealiMii Ml I .inds< \ aib i(l>s to the last*

opinions of Dr. Watts, which are supposed to have been materially changed. Mr. Belsham, however, candidly confesses that Watts never regarded himself as a Socinian, but would pro- bably to the latest day of his life have starlet1 from the imputation with horror ! (i)

We have said that Mr. Lindsey latterly went into the sentiments of Dr. Priestley to their full extent, or nearly so, though for some time he objected and remonstrated against their publi- cation. ‘ Concerning it I would first say,’ said he, ‘ that granting him to have proved this fact, that our Saviour was as much in the dark as the most vulgar among the Jews about possessions, and believed them in the gross literal sense ; and if also he was in ignorance of the Scriptures of the Old Testament, and misapplied them, yet our friends had no call whatever to tell this to the world, because it would increase the prejudices of multitudes against him, and hinder others less indisposed from reading his works.’ (j) ˆIf our friend had been pressed upon this point in the way of controversy,’ he adds, ‘ I should have said nothing against his de- livering the sense of his own mind ; but as things now stand, to go on to attack a character (Jesus Christ) held in such different universal estimation, unprovoked, seems to me likely to do harm and no good.’ (k) If this indeed be modern Anti-trinitarianism, well might Mr. Bel- sham say, not only that Dr. Watts would have started from it with horror, but even Socinus himself.

In the year 1786 Mr. Lindsey had opened a correspondence with the Anti-trinitarians in the United States of America, and received infor- mation that an Episcopal Church at Boston, bad lately adopted a reformed Liturgy, similar to that used by Mr. L. in Essex-street chapel; and the pleasing news of the spread of Uni- tarian ism in America, probably prepared the way for Dr. Priestley’s emigration in 1794, where we shall leave him to return to notice the two last works of Mr. Lindsey, his Conversations upon Christian Idolatry, and on the Divine Go- vernment.

The former are said to have had some founda- tion in fact, and relate, as will easily be antici- pated, to the supposed criminal practice of wor- shipping Jesus Christ. The last work is also in dialogue, and contains conversations between the same parties as the preceding, and embraces the several topics of miracles — the goodness of Pro- vidence— the Mosaic History — excellence of the Gospel — divine appointment of natural and moral evil — human responsibility — universal salvation — and terminating in Pope’s celebrated maxim in reference to the doctrine of necessity, that, ‘ whatever is, is right. This work, however, has little reference to our subject; and its con- tents are only mentioned to show the points arising from the doctrines of Anti-trinitarianism, and to what the system may lead. Upon ex- isting controversies, and the merits of living writers, in an article designed to be historical, we forbear to enter.

NOTES TO THE FOREGOING ARTICLE.

(A) The Noetians and Sabellians take a middle course ; and, though they do not believe in a trinity of persons, they admit the union of Jesus to the divine nature. See, in the article TRINITY, Indwelling Scheme.

(B) See Priestley's Corruptions of Christianity, vol. ii. 370. ' I would also refer to what I have written under the signature of Paulinus in the Theological Repository, in which I think I have shown that the apostle Paul often reasons incon- clusively ; and therefore that he wrote as any other person of his turn of mind and thinking, and in his situation, would have written, without any particular inspiration.'

(c) Lardner's Hist, of Heretics, pp. 147. 150. (n) Mosheim's Comment (by Vidal), vol. ii. p. 202, &c.

(E) Ibid. p. 365.

(F) Mosheim's Eccles. Hist. Cent. III. p. 12. ch. v. 15.

(G) Mosheim's Eccles. Hist, by Maclaine, Cent. XVI. sect. iii. pt. 2. ch. iv.

(H) Quoted (from Soc. Op. torn. i. p. 654) Toulmin's Mem. of Socinus, p. 178.

(i) Ibid. 179.

(K) Ibid. 182.

(L) Ibid. 185.

(M) Wallis's Letters on the Trin. let. iii. p. 47.

(N) See Mosheim's Hist. Mich. Served ; and Eccles. Hist. Cent. XVI. sect. iii. pt. 2. ch. iv. 5.

(o) Mosheim's Eccles. Hist. Cent. XVI. sect, iii. pt. 2. ch. iv. Note 2.

(p) Ibid.

(Q) Ibid.

(R) Toulmin's Socinus, p. 81. &c. It is re- markable that Dr. T., in an apology for Socinus, has recourse to exactly the same arguments that others have in vain employed in defence of Cal- vin in the matter of Servetus. See pp. 94.

105. 112.

(s) See Toulmin's Life of Biddle.

(T) Preface to Letters to Dr. Horsley, p. v. &c.

(u) Ibid. p. vii.

(x) Priestley's Hist, of Corrupt, vol. i. p. 24.

(Y) Hist, of Corrupt, vol. i. pt. 1 & 3.

(z) First Letters to Priestley, let. x.

*(a) Priestley's Tracts, p. 16*2. 472.*

(b) Ibid. pp. 162, 473.

(c) Hist, of Corrup. vol. i. p. 7. Tracts, pp.

111. 196. 470.

(d) Horsley's Tracts, pp. 32. 180, &c.

(e) Horsley's let. vii. in reply to Priestley, and note p. 178.

(/) Priestley's Tracts, p. 474.

(g) Priestley's Tracts, pp. 35. 205. Henley' do. let. ix.*

(h) Priestley's Tracts, pp. 476-7.

(i) Horsley's Tracts, let. xi, xii.

(k) Priestley's Tracts, p. 45, &c.

(/) Horsley's Tracts, pp. 58, &c., and Dis- quisit. iv. p. 513.

(m} Priestley's Tracts, pp. 165. 481.

(n) Ibid. 482.

(0) Horsley's Tracts, let. xvi. (p) Priestley's Tracts, p. 482.

(q) Belsham's Mem. of Lindsey, p. 23 and note.

(r) Ibid. pp. 129, 130.

(s) Belsham's Lindsey, pp. 132 — 134.

(0 Ibid.

(M) Belsham's Lindsey, p. 150.

(v) Ibid. 154.

(w) Belsham's Lindsey, p. 158.

(x) Ibid. p. 161—163.

(y) Ibid. 178.

(?) Dyer's Life of Robinson, p. 109.

(a) Archd. Blackburn's Works, appendix to Memoir.

(b) Belsham's Lindsey, p. 186, note.

(c) Ibid. 179, 185, 186.

(d) Belsham's Lindsey, pp. 187, 188.

(e) Ibid. p. 179.

(f) Ibid. 189.

(g) Dyer's Life of Robinson, p. 113, and Belsham's note, p. 190.

(h) Dyer's Robinson, p. 397.

(1) Belsham's Lindsey, p. 217. (j) Ibid. p. 223.

(k) Ibid. 224.

ANTITYPE; avn and TVITOC- The rude sketch or outline of any work.

He brought forth bread and wine, and was the priest of the most high God ; imitating the anti-type, or the substance, Christ himself. Taylor.

When once upon the wing he soars to an higher pitch, from the type to the antitype, to the days of the Messiah, the ascension of our Saviour, and, at length, to his kingdom and dominion over all the earth.

Burnet's Theory.

ANTITYPE, among divines, is variously in- terpreted. It occurs twice in the New Testa- ment ; viz. in the epistle to the Hebrews, ix. 24, and in St. Peter, 1 Ep. iii. 21, where its genuine import has been much controverted. The for- mer says, ' Christ is not entered into the holy places made with hands, which are (avTirvira) the figures or (antitypes) of the true, now to ap- pear in the presence of God for us.' Now TWITCH;

signifies the pattern by which another thing is made ; and as Moses was obliged to make the tabernacle, and all things in it, according to the pattern showed him in the mount ; the taberna- cle so formed was the antitype which was shown to Moses ; any thing, therefore, formed of a mo- del or pattern, is an antitype. In the latter passage, the Apostle, speaking of Noah's flood, and the deliverance only of eight persons in the ark from it, says, Q KM »//«£ avrnvitov vvv au&i ftairTifffM, 'baptism, being an antitype to that, now saves us ; not the putting away the filth of the flesh, but the answer of a good conscience towards God, &c.'*

ANTITYPE among the ancient Greek fathers, and in the Greek liturgy, is also applied to the symbols of bread and wine in the sacrament. Hence it has been argued by many protestants, that the Greeks do not really believe the doctrine of transubsxantia-

tion ; because they call the broad and wine an- titypes, avTiTVTra, q. d. figures, similitudes ; and this even after the consecration.

ANTIVA1U, a strong fortified town of Alba- nia, in European Turkey, seated on a rock in the Adriatic Sea. It was taken from the Vene- tians by the Turks in 1573. It is the see of a Catholic archbishop, and lies thirty-eight miles south-east of Ragusa.

ANTIVEDUTO, in biography, an eminent painter born in 1552 near Rome, and educated under the care of Giovanni Dominico Perugino. He became a portrait-painter of the highest re- putation, and was employed by the Medicean family. He had likewise a considerable talent for historical

painting.

ANTIVIRGILIAN HUSBANDRY, a name that has been sometimes given to the drill-hus- bandry of Mr. Tull.

ANTIUM, in ancient geography, a city of the Volsci, situated on the Tuscan Sea, with a har- bour. At a neighbouring hamlet called Ceno, the Romans gained their first naval reputation against the Antiates ; part of whose ships they conveyed into the arsenal of Rome, and part they burnt; and with their beaks or rostra adorned the pulpit erected in the Forum, thence called rostrum. Addison says, there were two Fortuna; worshipped at Antium. It was destroyed by the Saracens, and is now extinct, but a vestige of the name still remains in Capo d'Anzo, or Antio. This town is distinguished on one medal by the inscription ANTI, and an effigy of Hercules with his club ; and as a Roman colony on a medal of Nero inscribed COL. ANTIAT. LEG. III. ITALICA.

ANTIUS, a son of Hercules, and the sup- posed founder of Antium.

ANTLER,) Fr. andoillier, or antoillier.

ANT'LERF.D. { Properly the first branch of a deer's horns ; but more frequently applied to the branches severally.

tirown old, they grow less branched, and first lose their hrow antlers, or lowest furcations next the head.

Brown.

A well-grown stag, whose anthers risp High o'er his front, his beams invade the skies.

Dryden.

Bright Diana Brought hunted wild goats' heads, and branching

antlers Of stags, the fruit and honour of her toil. Prior.

A stag sprang from the pasture to his call, And kneeling lick'd the wither'd hand that tied A wreath of woodbine round his antlers tall, And hung his lofty neck with many a flowret small. Beattie's Minstrel, book xi.

They found

Ulysses, dear to Jove, hemm'd all about By Trojans, as the lynxes in the hills, Adust for blood, swarm round the antler'd stag, Pierc'd by the archer.

Cowper's Homer's Iliad, book xi .

ANTLER, among sportsmen, a start or branch of a deer's attire. — Antler bes, the branch next above the brow antler. — Antler brow, the branch next the head.

ANTLIA, an ancient machine, supposed to be the same with the pump. Hence the phrase, in antlium condemnari, denotes a kind of pu- nishment, in which criminals were condemned to drain ponds, ditches, or the like.

ANTCECI, Lat. from avn and ouetw, to inha- bit : in geography, those inhabitants of the earth, who live under the same meridian, and at the same distance from the equator ; the one towards the north, and the other to the south. Hence they have the same longitude, and their latitude is also the same, but of a different denomination. They are in the same semicircle of the meridian, but opposite parallels. They have precisely the same hours of day and night, but opposite sea- sons ; and the night of the one is always equal to the day of the other.

ANTOINE, a town of France, in the depart- ment of Isere, with a celebrated abbey. It is seated among the mountains, thirteen miles east of Lyons.

ANTOINETTE.

ANTOINETTE (Mario Josephe Jean de Lor- raine), the late amiable and unfortunate queen of France, was the daughter of Francis the First, id the celebrated Maria vember 2, 1735, the lake at Lisbon; a , dun IT.; the progress of frequently recurred to :irs of aye she lost her ;;rgetic character of her ispired her with admira- have conciliated little if the affection of her children. Madame Cam- pan, to whose interesting ' Memoirs of Marie Antoinette,' we shall be considerably indebted in this sketch of her life, says, ' She never de- sired to "lace between IK.I- nun children and her- •,e!t that i/t.iiiuicc which hud existed in the im

perial family. She cited,' continues this writer. ' a fatal consequence of it, which had made upon her such a powerful impression as time had never been able to efface. The wife of the emperor Joseph II. was taken from him in a few days, by an attack of small-pox of the worst kind. Her coffin had recently been deposited in the vault of the imperial family. The archduchess Jose- pha, who had been bethrothed to the king of Naples, at the instant she was quitting Vienna, received an order from the empress not to set off without having offered up a prayer in the vault of her forefathers. The archduchess, persuaded that she should take the disorder to which her sister-in-law had just fallen a victim, looked upon this order as her death-warrant. She loved the young archduchess Marie Antoinette tenderly; she

took her upon her knees, embraced

her with tears, and told her she was about to leave her, not for Naples, but never to see her again ; that she was going down then to the tomb of her ancestors, and that she should shortly go again, there to remain. Her anticipa- tion was realised ; a confluent small-pox carried her off in a very few days, and her youngest sister ascended the throne of Naples in her place.' The marriage of the young archduchess with Louis XVI. then dauphin of France, was a poli- tical measure of the duke de Choiseul ; and the marquis de Durfort, as proxy, performed the ce- remony at Vienna, in the name of that prince, in the spring of 1769. On the arrival of the young bride at Kehl,on the frontiers of France, a species of established etiquette was attended to, which will appear curious to some of our readers. By this it had been long decreed that a foreign princess who married a son or prince of France, was to be met at the frontiers with her wedding-clothes ; the young princess was to be undressed at the pavilion usually erected at the frontiers on such an occasion, and every article of her apparel, without exception, was changed. Marie Antoinette was met at Kehlby the coun- tess de Noilles, as her future maid of honor ; the duchess of Cosse, the bishop of Chartres, and the usual suite of a dauphiness of France. To the first of these ladies, as a perfect mistress of the art, was assigned the task of instructing the dauphiness in the then rigid etiquette of the French court ; while of her early and Austrian guides she retained about her person the abbe de Vermont. The influence of both these per- sonages will be seen to have deeply affected her future conduct and destiny. The old and wretched Louis XV. is said to have been en- chanted with this blooming accession to the charms of his court. He put into her hands the valuable jewellery of the late dauphiness ; the princesses, his daughters, made her magnificent presents ; and she seems early to have conciliated more of sincere personal attachment in the royal family than is usually found in court circles. Her husband only was rigidly cold and insensible to all her attractions. United with her by the ties of ceremony, and in receiving the public de- monstrations of homage and joy upon their mar- riage, he is said to have allowed his indifference to degenerate during the early part of their union, even into occasional rudeness. The duke de Choiseul and his party had, by the successful in- trigues of their rivals, been driven from court — a divorce is stated to have been in contemplation : and the accurate chronicler of this unhappy princess's history and feelings above alluded to, assures us, that for a period of above eight years, he had avoided to consummate that union ! In May, 1774, terminated the mortal career of Louis "XV. It was customary on such occasions for the whole of the royal family to leave the

pa- lace : the horses therefore were ready harnessed in the stables against the expected event; to whose keepers the signal of extinguishing a ta- per at the king's window, was to announce his actual decease. Custom also required the body to be opened and embalmed ; and the first gen- tleman of the bed-chamber, the duke de Ville- quier, on leaving the room, ordered the chief sur-

geon to perform the operation. His majesty died of a confluent small-pox ; and the death of the operator, it was apprehended, must have en- sued. ' I am ready,' replied he, therefore, ' but while I operate, you must hold the head, a dutv which your office imposes on you.' The duke went off without saying a word more, and the body was neither opened nor embalmed ; a few under-servants and poor workmen only continu- ing with it, and paying the last duty to their master.

Upon the political works of the new reign we shall enter no further than may be necessary to illustrate the character of this princess. She ex- hibited some anxiety for the recal of M. de Choiseul ; but this was over-ruled by the king's prejudices against him, and the young queen was severely lectured by the abbe de Vermont, for venturing to communicate her sentiments on such a subject to M. Campan. The king, on the other hand, scarcely ever deigned to communi- cate with the abbe". Marie Antoinette first became unpopular, it is said, by her carelessness of the long-established etiquette of the court ; a species of restraint which the buoyancy of her spirits and the simplicity of her taste conjoined to make intolerable to her.

She enjoyed every species of natural and in- nocent recreation, abridged or abolished every burdensome formality that was imposed on her, and was the warm advocate for ' simplicity be- neath the diadem, and paternal confidence in her subjects/ But her smiling at the childish pranks of one of her women on the first of her court-days, was pronounced to be deriding the respectable persons that were pressing forward to pay her homage ; the epithet moquesque was freely applied to her; and, more than fifteen years after, Madame Campan heard some old ladies in Auvergne attribute the beginning of her misfor- tunes to this unpardonable error. She had the credit, however, at this time, of being the only person in the royal family who was said to have given the king and his brothers the ' rash advice' to be inoculated. The operation, then unusual in France, was performed by a Dr. Jauberthou, and was quite successful.

The toilette of a queen of France had become a master-piece cf etiquette ; every thing was to be performed by official persons, and in a pre- scribed manner. The effect was sometimes lu- dicrously inconvenient. A dame d'honneur and the tire-women usually attended, assisted by the principal

lady in waiting and two inferior wo- men. But if a princess of the royal family made her appearance during the important procedure of attiring the queen, the honors of the service were to be transferred to her through the medium of the chief lady in waiting ; and if one of higher rank than the first appeared, to her again were the honors transferred.

1 One winter's day,' says our authoress, ' it happened that the queen, who was entirely un- dressed, was just going to put on her body linen ; I held it ready unfolded for her; the dame d'honneur came in, slipped off her gloves, and took it. A rustling was heard at the door, it was opened: and in came the duchess d'Orleans; she took her gloves off, and came forward to

4->2

ANTOINETTE.

take tlic garment ; but us it would have been wrong in the dame d'honneur to hand it to her, she gave it to me, and I handed it to the prin- cess : a further noise — it was the countess de Provence ; the duchess d'Orleans handed her the linen. All this while the queen kept her arms crossed upon her bosom, and appeared to feel cold : Madame observed her uncomfortable situation, and merely laying down her handker- chief, without taking off her gloves, she put on the linen, and in doing so, knocked the queen's cap off. The queen laughed to conceal her im- patience, but not until she had muttered several times: 'How disagreeable! how tiresome!'

The queen naturally led the fashions of the day, and made it an occupation of no small mo- ment at the commencement of her reign. She in particular introduced head-dresses, that super- structure of gauze, feathers, and flowers, which obtained so great a degree of altitude in the times of our good aunts and mothers, so that in Paris the ladies could with difficulty find carriages high enough to admit them ; and they were often seen stooping, kneeling, and even holding their heads out of the windows, to manage these splendid incumbrances without danger. One of the customs most disagreeable to her at court, was that which required the royal family to dine every day in public. She submitted to it only while she was dauphiness. On the day of the coronation of tiie young king and queen at Hhcims, it is s:iid that the former put his hand to his head at the moment of the crown being placed upon it, and said, ' It pinches me.'

Soon after this event she was called upon to attend in the chamber of the countess d'Artois to witness the birth of a ynunt: prince, an event at which all the royal family of France were ex- pected to be present. It is said, as connected with her own peculiar situation, to have pro- duced feelings of

the most poignant anguish in her mind. In the winter of 177(5 she first be- came acquainted with the princess de Lamballe, whose heroic attachment to her, and tragical fate, will ever rank amount the most interesting and Mnking events of the Fivnch revolution, and for whom she revived the office of ‘ superinten- dant.’ of the queen’s household.

Auahist the character and happiness of Marie Antoinette intrigue was always silently at work. Shortly after the accession “of Louis” XVI. the minister ot the kind’s household was informed that a nio-t oiieu-ivr libel against the queen was a!, out to appear. The lieutenant of police deputed a man named (ionpil, an inspector of police, to l.iinu to litrht this libel: lie came, soon utter, to say that lie had found out the place u la re the work was bein<_r printed, and th.it it was at a country-house near Yverdun. He lud already u< >t po.—ession of two sheets, which contained calumnies the most atrocious, but comeyrd with a degree of art which might make them \ery dangerous to the queen’s repu- tation. This (ionpil said that he could obtain the re>t, but that he ˆliould want a considerable sum tor that purpose. Three thousand louis were <.:iven him, and very >oon afterwards he hronj.t the uhole nunuˆcript, and all that had ‘it.cn printed, t-> the lieutenant of police. He

received a thousand louis more as a reward for his address and zeal ; and a much more impor- tant office was about to be given to him, when another spy, envious of Goupil’s good fortune, gave information that Goupil himself was the author of the libel ; that, ten years before, he had been put into the Bicetre for theft; and that madame Goupil had only been three years out of the Salpetriere, where she had been placed under another name.

Another woman, named Cahouette de Villers, whose husband held the office of one_ of the treasurers of France, being very irregular in con- duct, and of a scheming turn of mind, conceived the mad wish to appear in the eyes of her friends at Paris, as a person in favor at court, to which she was not entitled either by birth or office. She adopted, as her lover, Gabriel de Saint Charles, intendant of her majesty’s finances, and easily procured, through his means, patents and orders signed by her majesty : she then set about imitating her writing, and composed a great number of notes and letters, as if written by her majesty, in the tenderest and most fami- liar style. For several months she showed them as great secrets to several of her particular friends. Afterwards she made the queen appear to write to her as before, to procure her various fancy ar- ticles. Under the pretext of wishing to execute her majesty’s commissions faithfully she gave these letters to the tradesmen to read ; and suc- ceeded in having it said, in several houses, that the queen had a particular kindness for her. She then enlarged her scheme, and represented the queen as desiring her to borrow 200,000

francs, which she had need of, but which she did not wish to ask of the king from his private funds. This letter being shown to M. Beranger, farmer-general, took effect; he thought him- self fortunate in being able to render this as- sistance to his sovereign, and lost no time in sending the 200,000 francs to madame de Villers. This first step was followed by some doubts, which he communicated to people better informed than himself, of what was passing at court, and who added to his uneasiness ; he then went to M. de Sartine, who unravelled the whole plot. The woman was sent to Saint Pelagic ; and the unfortunate husband was ruin- ed, by replacing the sum borrowed, and paying for the jewels fraudulently purchased in the queen's name.

In 1777 the celebrated countess de Polignac first appeared at court, and at once attracted the admiration, and won the heart of the queen. She was personally of a retiring character, and of narrow fortune : had merely natural talents ; no presumption, or display ; and no affectation of knowledge. M. de Campan, who was some- what of a judge, says, 'she had not one of the failings which usually accompany the title of a favorite ? In her society Marie Antoinette ap- pears to have made severe efforts to enjoy a real and personal friendship. 'I will enjoy,' said she, ' the comforts of private life, which exist not for us, unless we have the resolution to secure fhem for ourselves.' This cherished friend suc- ceeded, in a short time, to the post of governor of the children of France; and the duke her hus-

band, became superintcndant of the post and first equerry of the queen.

Mane Antoinette was never a distinguished patron of literature, or of the fine arts generally ; her own education had been neglected, and she naturally wished to hide its defects. But, at one period, she was the successful encourager of musical compositions ; and the first company of comic actors in Paris was collected to gratify her taste. This brought to the capital, in succession, Gluck, Piccini, and Sacchini. From 1775 to 1781, says her biographer, she passed the pleas- antest part of her life, and that in which she indulged most in the gratifications presented to her. Among these was the visit of her brother the emperor Joseph II., who arrived at Paris in 1779, under the title of count Falkenstein. But his manners were any thing but agreeable to the court of France generally, or to the king. He refused an apartment at the palace; his valet, he said, had made up his camp-bed in a ready-furnished house, and there he would lodge. To the queen's occasional mortification he made extremely free observations on all around him ; remonstrated with the king on his ignorance of what was

passing in Paris, especially as a repo- sitory of art ; for not having visited the hotel des Invalids, the military school, &c. It is quite clear that his good brother-in-law entered but too correctly into the defects of this amiable but weak monarch. Of his sister he said publicly, at the Italian theatre, — ‘ Your young queen is very giddy ; but luckily you Frenchmen have no great objection to that.’

At length the queen became pregnant; and on the 1 1th December, 1778, gave birth to Madame, the king’s daughter. The picture of the state- room, in which the queen of France at this time became a mother, we must subjoin from the ‘pen of her ‘ first woman.’ The royal family, princes of the blood, and great officers of state, passed the night in the rooms adjoining the queen’s bed- chamber. Madame, the king’s daughter, came into the world before mid-day on the 19th of December. The etiquette of allowing all per- sons indiscriminately to enter at the moment of the delivery of a queen, was observed so literally, that at the instant when the accou- cheur, Vermond, said aloud, La reine va s’ac- coucher, the torrents of inquisitive persons who poured into the chamber were so great and tumul- tuous, that the rush was near destroying the queen. During the night the king had taken the precau- tion to have the enormous tapestry screens, which surrounded her majesty’s bed, secured with cords: had it not been for this foresight they certainly %vould have been thrown down upon her. It was impossible to move about the chamber, which was filled with so motley a crowd that any one might have fancied himself in some place of public amusement. Two Sa- voyards got upon the furniture to get a better sight of the queen, who was placed opposite the fire-place, upon a bed prepared for the moment of delivery. The noise, and the sex of the in- fant, which the queen was made acquainted with by a signal previously agreed on, as it is said, with the princess de Lamhalle, or some error of

of the accoucheur, brought on symptoms which threatened the most fatal consequences.

Nature seems at last to have triumphed in the heart of the king. He became a lover after having been nine years a husband; and occu- pied himself with the care of preserving his wife. A pretty little madrigal has been preserved on the birth of this princess, who was not of course quite so welcome at court as a son would have been :

A dauphin we asked of our queen, A princess announces him near ; Since one of the Graces is seen, Young Cupid will quickly appear.

One hundred maidens of Paris were portioned and married on this occasion at Notre Dame. In the close of 1780 the queen of France received the tidings of her mother’s decease, for whose memory she seems to have

cherished the highest veneration. She soon testified the regret she felt in thinking that the numerous duties of that august parent had prevented her watching in person over the education of her daughters ; and modestly said that she herself should have been more worthy of her station if she had had the good fortune to receive lessons directly from a sovereign so enlightened.

On the 22d of October, 1781, the queen gave birth to a dauphin, a circumstance which elated the king to unusual animation. The duke d' Angouleme meeting his father at the entrance of the Dauphin's apartment said to him ' O papa, how little my cousin is !' ' The day will come when you will think him great enough, my dear,' answered the prince. One honest poet wrote on this occasion :

This infant prince our hopes are center'd in, Will, doubtless, make us happy, rich, and free ;

And since with somebody he must begin, My fervent pray'r is — that it may be me !

At Petit Trianon, a palace presented to her soon after the accession of the king to the throne, Marie Antoinette adopted with enthu- siasm a country life. She traversed the neigh- bourhood in a plain white gown, straw hat, and gauze kerchief, her favorite dress; seeing the neighbouring manufactories at work, the cows milked, or fishing in the lake, were her plea- sures ; and every year she showed an increasing aversion to the more pompous excursions to Marly until the latter were wholly discontinued. At Trianon she could enter the sitting-room with- out driving the ladies either from their music or embroidery, and gentlemen would continue their billiards or backgammon. The place was too small for either her ladies of honor, or of the bed-chamber, to have accommodations in it; they therefore repaired to her, on her requisition for Versailles, whither the king came also to her every night to sup. Here she soon established a private theatre, in which the royal family were the performers and only spectators.

The period of the birth of the dauphin was distinguished by the application of the American deputies to the court of France for assistance. La Fayette, and many other young soldiers and ardent lovers of liberty, it is well known, warmly

espoused their cause; but the queen and pro- bably the king, personally, viewed their cha- racter and manners with considerable distaste. Madame Campan says of Franklin, — his strait unpowdered hair, his round hat, his

browm cloth coat, formed a contrast with the laced and em- broidered coats and the powdered and perfumed heads of the courtiers of Versailles. This no- velty turned the enthusiastic heads of the French women. Elegant entertainments were given to doctor Franklin, who, to the reputation of a most skilful philosopher, added the patriotic virtues which had invested him with the noble character of an apostle of liberty. I was present at one of these entertainments, when the most beautiful woman out of three hundred was selected to place a crown of laurels upon the white head of the American philosopher, and two kisses upon his cheeks. Even in the palace of Versailles, Franklin's medallion was sold under the king's eyes, in the exhibition of Sevres porcelain.

The queen spoke out plainly as to the unge- nerous attack the French were now induced to make on the power of England. In 1782 ihe Russian grand duke Constantine (afterwards Paul I.) and his consort appeared at the court 01' 1; ranee as the count and countess de Nord ; and about the same time came the king of Sweden. The queen of France remarked how much more difficult it was to play the sovereign amongst sovereigns, or of princes born to be- come so than before courtiers on ordinary occa- sions. A series of splendid entertainments were given to these distinguished guests. In 1783, on the peace with England, France attained a height of political consequence which she never afterwards reached during this unfortunate reign ; and the winter was an extremely brilliant one at court. The navy as well as the army of France iiad assumed an imposing attitude; and, in as- sisting to wrest from Great Britain her colonies, had crippled that power which alone had with- stood succes.-fully the ambitious views of Louis Xl. 'Ihe Bourbon family had every prospect of a numerous and lonˆ-continued succession: but the seeds of the Devolution were already giM-minatinˆ, the finances were disordered, and ihe court was iigitated to its centre by the ap- pearance of a comedy and the alleged indiscre- tions ot the queen.

*The reputation of Beaumarchais, since the in- troduction of his Barber of Seville, had become most distinguished ; and his Memoirs against M. < ioesman had covered with ridicule a parliament which was everywhere detested. He now at- tempted a higher flight, and became ambitious of tile reputation of giving an impulse to the minds ot the Parisians by a drama in which the most uncient and respected institutions should be Held up to derision. The new philosophers had prepared the minds of the French for the strange miMure of criticism and sarcasm now produced ; so that \\luu his Marriage of Figaro was com- pleted, crowds of respectable persons thronged to hear it read. The people were universally anxious to see it. performed : but the police "mild not license it. One of its most remark- pbra.M s, ' *

ferent to its censures ; and the king determined to have it privately lead to

him. For this task Madame Campan was selected.

I began — the king frequently interrupted me by remarks, which were always just, either of praise or censure. He frequently exclaimed, ‘ That’s in bad taste ; this man continually brings the Italian concetti on the stage.’ At that soliloquy of Figaro, in which he attacks various points of government, but aims most particularly at state-prisons, the king rose up, and said indignantly, ‘ That’s detestable ; that shall never be played : the Bastile must be de- stroyed, before the licence to act this play can be any other than an act of the most dangerous folly. This man scoffs at every thing that is to be respected in a government.’ Surely the king here gave a decision to which experience must have reconciled all the enthusiastic ad- mirers of the whimsical production in question. ‘ It will not be played, then ?’ said the queen. ‘ No, certainly,’ replied Louis XVI. ; ‘ you may rely upon that.’

The piece was attempted to be performed privately at the theatre of the Hotel des Menus- Plaisir; but the king, on the morning of the day fixed, signed a lettre de cachet prohibiting this. The wits of Paris were in an uproar; public liberty, according to the political part of them, was attacked. When the author gave out that the passages offensive to government were suppressed, and M. de Vandreil a friend of the duchess de Polignac, under color of wishing to judge of this, obtained permission for the perse- cuted piece to be performed at his country-house. There was no material omission; but the au- thor’s friends avowed that there was : and the court was weak enough to be cajoled into a per- mission for its public performance; and the audience enthusiastically applauded it.

Shortly after this the character of the queen was involved in the celebrated affair of the neck- lace, purchased by cardinal de Rochan. This prince had been ambassador at Vienna, whence he was recalled for his profligate conduct, and being out of favor at court was the easy dupe of a Mad. Lamotte in a pretended method of obliging the queen. Boehmer, her majesty’s jeweller, had been for some time collecting a diamond necklace, which he proposed to sell the queen for 1,600,000 francs. He had entreated her personally to take it, and the king wished to present it to her ; but Marie Antoinette appears steadily to have refused it from principles of economy. Madame Lamotte went to the car- dinal, and told him that the queen had recently a strong desire for this jewel ; that she wished to pay for it by instalments out of her savings ; and would afford the prince a proof of her returning good will, by commissioning him to make a bargain for it in her name She produced a forged order to this effect, signed Marie An- toinette de France ; the necklace was purchased, and taken to the house of Lamotte at Versailles, where a messenger from the queen was to meet and receive it. The cardinal took it himself; and a man in the habit

and resembling the person of the queen's confidential valet de chambre received it of him. When the first instalment was

becoming due, Lamotte pretended that the queen became anxious because she was not quite sure of the means of paying it, introduced a money-lender to the cardinal, to whom the queen's order was shown, and the plot thus thickened. A new order was procured for this M. A. James to advance the money for the ijueen ; but the most audacious part of this fvoman's scheme was, the obtaining a Parisian actress, Mad. d'Oliva, to personate the queen to the cardinal, and give him a meeting in her name in the groves of Versailles.

The cardinal, Lamotte, and her husband, it is well known, were brought to trial for this strange business, when de Rohan was acquitted, La- motte condemned to be whipped., branded, and imprisoned for life, and her husband sent to the galleys. The queen was exceedingly indignant that the cardinal should so easily escape.

Marie Antoinette first concerned herself in public affairs when the archbishop of Sens came into the ministry. He was the friend of her loner-cherished tutor de Vermont ; and their in- stigation, connected with the imbecility of the king, gradually brought her to the vortex, so fatal finally to her character and life. She fre- qently regretted her new situation, Mad. Cam- pan assures us, and looked upon it as a misfor- tune which she could not avoid. ' There is an end of all happiness for me,' she said one day ' since they have made an intriguer of me.' When the assemblies of the notables had proved so fruit- less, and, combined with the distracted state of the parliament, had induced the necessity of calling together the states-general, it was much discussed at court whether Versailles, or some more distant spot forty or sixty leagues from the capital, should be the place of meeting. The queen advocated the latter; but M. Neckar's opinion prevented, and Versailles was fixed upon. At the opening of the states-general, Marie Antoi- nette appeared for the last time in her life in regal state ; but was ill-received by the people. Deputies from the Tiers-etat soon arrived to inspect the court-establishments : the most absurd prejudices seemed to fill their minds, and they returned astonished at the plainness of all the queen's apartments, it is said, particularly those of her retreat at Trianon. On the fourth of June, 1789, died the first dauphin, a prince who never enjoyed good health, and with a pre- cocious mind united a lame and weak person. The insurrections of the eleventh, twelfth, and fourteenth of July this year soon opened the revolutionary drama; and, while the whole

mo- narchical authority was becoming gradually un- dermined, the popular odium was more par- ticularly directed against the queen and the count d'Artois, now Charles the tenth. This prince is said to have shed bitter tears on the assassination of M. Launay. On the evening of the fifteenth, the populace having demanded to see the queen and her son in the balcony of the Thuilleries, Mad. Campan mingled in the crowd in the court-yard, when a woman whose face was covered with a black veil seized her by the arm with violence and said, ' I know you Very well ; tell your queen not to meddle with go- UTiinient any longer; let her leave her husband

and our good states-general to work out the happiness of the people.' At the same moment a person dressed as a market-man, with his hat pulled over his eyes, seized her by the other arm and said, ' Yes, yes ; tell her over and over again that it will not be with these states as with the others, which produced no good to the people ; that the nation is too enlightened in 1789 not to make something more of them : and that there will not now be seen a deputy of the Tiers-etat making a speech with one knee on the ground ; tell her this, do you hear?' I was struck with dread ; the queen then appeared in the balcony. ' Ah !' said the woman in the veil, ' the duchess is not with her.' ' No,' replied the man, ' but she is still at Versailles : she is working under ground, mole-like ; but we shall know how to dig her out.' The detestable pair moved away from me, and I re-entered the palace scarcely able to support myself. I thought it my duty to relate the dialogue of these two strangers to the queen, who made me repeat the particulars of it to the king.

Another of the people exclaimed under the windows of the throne-room, ' Here is that crown, the vestiges of which will soon be sought for in vain.' On the 16th it was first agitated whether the king and1 royal family should not at once depart from the scene of the rising storm with the army, which, in a spirit of extreme for- bearance, he had ordered to quit Paris. The queen warmly controverted this measure, but was over-ruled, and received the orders for packing up with haste. Her friend, the duchess de Polignac, emigrated with her family the even- ing of this memorable day. The next day, on the king's going to Paris from Versailles, the queen shut herself up in the room, and declared her firm opinion that he never would return With a dignity that never forsook her, she pre- pared for this event, and wrote a short address to the assembly, to which she, in that case, meant to have repaired. The king did return in the evening. ' Happily,' said he, ' no blood has been shed ; and I swear that never shall a drop of French blood be spilt by my order :' a deter- mination he but too rigidly fulfilled. The rea- der may remember that this unhappy monarch only appeased his enemies this day by placing the tri-colored cockade in his hat ; on which Baily, the mayor of Paris, observed, ' Henry the Fourth conquered his people, and here are the people conquering the king.' A few days after this

M. Foulon, an ardent loyalist, was assassi- nated at the hotel de Ville, within the hearing of the Assembly ; his body dragged about the streets, and his heart carried by women in the midst of a bunch of white carnations. At about this date the queen was compelled by the jealousies he excited in the ruling party, to dismiss her old fa- vourite the abbe" Vermont.

In the course of July the regiment of French guards in attendance upon the king at Versailles, abandoned its colors, joining the national guard at Paris, so that the royal family rising in the morning found no guard whatever at any of the posts. In August and September the basis of a new limited monarchy was agreed upon, which it was conceived would secure the public trar.-

quillity ; hut the early part of October dissipated this illusion. The pretext was, a scarcity of bread ; but the friends of the royal family regard- ed the insurrection of the fifth and sixth as directed against the queen in particular. ' I shudder even now,' says Madam Campan, 'at the recollection of the poissardes, or rather furies, who wore white aprons, which they screamed out were intended to receive the bowels of Marie Antoinette, and that they would make cockades of them ; mixing the most obscene expressions with these horrible threats ; such are the atro- cious sentiments with which the ignorance and cruelty to be found in the mass of every popu- lace can inspire them in times of disturbance ! so necessary is it that a vigorous and parental authority should, while it defends good citizens against their own failings, also guard them against all the calamities brought on by faction.

The queen went to bed at two in the morn- ing, and went to sleep, being tired out with the events of so distressing a day. She ordered her two women to go to bed, always imagining there was nothing to dread, at least for that night; lint the unfortunate princess was indebted for her life to that feeling of attachment which pre- vented their obeying her. My sister, who was one of the two ladies in question, informed me the next day of all that 1 am about to relate.

On leaving the queen's bed-chamber, these ladies called their femmes de chambre, and all the ftuir remained sitting together against her majesty's bed-room door. About half-past four in the morning they heard horrible yells and discharges of fire-arms ; one ran in to the queen to awaken her and tret her out of bed; my sister flew to the place from which the t.umult

seemed to proceed ; she opened the door of the anti- chamber which leads to the great guard-room, and beheld one of the body-guard holding his musket across the door, and attacked by a mob, who were sinking at him; his face was covered with blood ; he turned round and exclaimed, Save the queen, madanie ; they are come to as- sassinate. her. She hastily shut the door upon the unfortunate victim of duty, fastened it with the great bolt, and took the same precaution on leaving the next room; on reaching the queen's chamber, she cried out to her, get up, madame ; don't stay to dress yourself; rly to the king's apartment. The terrified queen threw herself out of bed, they put a petticoat upon her without iMiiˆ it, and the two ladies conducted her to the 1:11 II – eye. A door which led from the queen's toili t-i IMM t to that apartment had never before "tn la-h ned ! m on her side. "What a dread- !|d mo;. lent ! it was found to be secured on the other side. They knocked repeatedly with all their strength ; a servant of one of the king's valets de chambrc came and opened it: the queen < ntcred the kind's chamber, but he was not tin re. Alamied ini the queen's life, he had 'oi;> • dov. n the staircase and through the corri '!»!'- under the bull's eye. by means of which he wa< a (u-t imed to uo to ilv- queen's apartments,

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expose their lives, told them to wait a few minutes, and afterwards sent to desire them to go to the bull's eye. Madame de Tourzel, at that time governess of the children of France, had just taken Madame and the Dauphin to the king's apartments. The queen saw her children again. The reader must imagine this scene of tenderness and despair.

It is not true that the assassins penetrated to the queen's chamber and pierced the bed with their swords. The fugitive body-guards were the only persons who entered it ; and if the crowd had reached so far they would all have been massacred. Besides, when the rebels had forced the doors of the anti-chamber, the foot- men and officers on duty, knowing that the queen was no longer in her apartments, told them so, with that air of truth which always carries conviction. The abandoned horde in- stantly rushed towards the bull's eye, hoping, no doubt, to intercept her on her way.

In the morning the mob insisted that the king and royal family should accompany them to Paris. La Fayette, at the head of the Parisian guard,

commanded this memorable procession, in the midst of which the heads of two of the king's body-guards, who had been murdered, were carried upon poles. The poissardes ex- claimed, ' We shall have bread now ! we have the baker, the baker's wife, and the baker's boy with us.' The royal family were taken to the hotel de ville, and then to the Thuilleries, where they had a guard appointed over them ; but the As- sembly and the mob alike affected to wish that they should consider themselves free ; and the political schemes that now occupied the National Assembly and the king, afforded them some personal quiet. Ihe queen resumed her usual habits. Her mornings were employed in super- intending the education of Madame, and she began to work large pieces of tapestry, finding her needle rather than any books the best em- ployment to divert her mind. Twice a week she received the court, and on those days dined in public with the king ; but she had no concert, and did not go to the play till after the accepta- tion of the constitution in 1791.

Various plans of escape were secretly offered to the royal family during this and the preced- ing year ; and every insult was added to fheir injuries that could stimulate them to attempt it. Some ' conquerors of the Bastile,' as they were called, preceded by military music, came to pre- sent the Dauphin a new year's gift at the begin- ning of 1 79 1 . It was a box of dominos made of the stone and marble of that fortress, and in- scribed on the lid, ' Stones from those walls which enclosed the victims of arbitrary power; converted into a toy, and presented to you, Mon- seigneur, as a homage of the people's love, and to teach you the extent of their power.' Ma- dames, the king's aunts, set out from Bellevue at this time for Rome. It was an event that created some sensation, and was designed to sound the public mind as to a projected depar- ture of the king. This was at last attempted on the 20th of June, but nothing was ever more injudiciously managed. The preparations for it were made without caution; and, while extensive

in trifling matters, did not even include a sound carriage for the king and queen. The beginning of the journey presented nothing remarkable; but, at about twelve leagues from Paris the king's carriage required repairing, and this, with his majesty's determination to walk up some hills, detained the travellers three hours beyond the time at which they were to have been met by an escort near Varennes. At St. Menchould this unfortunate prince looked out of the carriage and was recognised by the post-master from his resemblance to the impression of his head upon the assignats. This person rode forward and carried the tidings to Varennes the next post town. The

royal party, therefore, found the town-guard called out, and the bridges blocked up with carts. But the king's escort had arrived here before him, and the commandant asked the king whether he chose to effect a passage by force ? 'Would it be a brisk action?' asked his majesty. ' It is impossible to prevent it, sire,' said M. Goguelat. The king now, therefore alighted, steadily declining to force his way, and entered into a fruitless explanation of his motives with the mayor of the place, a grocer : while, such was the humiliation of royalty on this occasion, the queen seated herself among parcels of soap and candles at the end of the shop, and en- deavoured to prevail with his wife to favor their escape. ' Bless me, Madame,' said this good lady, ' it would be the destruction of M. Sauce. I love my king ; but by our lady I love my hus- band too, you must know : and he would be answerable, do you see.' Soon arrived from Paris the aid de camp of La Fayette in pursuit of the fugitives, who were hastened back ; their three body-guards being bound and fastened upon the seat of the carriage.

They were for some time kept such close pri- soners that guards were placed inside the door of the queen's bed-chamber. ' The first time I saw her majesty,' says madame Campan, ' after Varennes journey, I found her getting out of bed ; her features were not very much altered, but, after the first kind words she uttered to me, she took off her cap, and desired me to observe the effect which grief had produced upon her hair. It became in one single night as white as that of a woman of seventy. Her majesty showed me a ring she had just had mounted for the princess de Lamballe ; it contained a lock of her whitened hair, with the" inscription — bleached by sorrow ! '

We cannot pursue the details of the new in- dignities offered to this unhappy family on their return ; yet the attempted flight produced on the whole less sensation at Paris than might have been expected. The Assembly proceeded in new modelling the constitution. On the 14th of Sep- tember, at mid-day, the king accepted it in the midst of the National Assembly, accompanied by the queen. She acutely observed on the oc- casion, ' These people will shortly have no sove- reign ; we shall fall before their treacherous and well-formed tactics ! They are demolishing the monarchy stone by stone.' There was, however, now some faint prospect of future tranquillity. Paris and the Thuilleries were magnificently illuminated. Their majesties went to the opera and were highly applauded.

At the latter end of the year 1791 the king and queen had reason to entertain such serious apprehensions of being poisoned, that all their food passed for a time through the hands of Ma- dame Campan, who procured it from various parts of Paris, and contrived that neither of her royal patrons should eat or drink that which the other servants had prepared for them. About Easter 1792 Dumouriez obtained an interview with the queen,

offering to abandon the Jacobins and devote himself to her service. She appears, however, to have doubted his sincerity. On the 20th of June the mob once more broke, in over- whelming numbers, into the royal apartments, and rushed towards that of the king. His life was only saved by his being placed in a recess of the window with benches before him. The queen was in like manner preserved by being placed with the dauphin behind a great table : but the poor little prince, as well as the king, was obliged to place on his head an enormous bonnet rouge. After this the queen occupied herself with constructing a breastplate for the king. It was formed of 15 folds of Italian taffety, which were found to resist all thrusts of a dagger, and even to turn a pistol ball. Madame Cam- pan, in July, never went to bed ; and one morn- ing, at one o'clock, overheard the scuffle between an assassin and the queen's valet de chambre ; the former having approached the door of her majesty's chamber. On another occasion, the poor queen reproved her attendants for not having called her in the night, when the king and other branches of the family had been alarmed. Ma- dame Campan excused herself, saying, that she required to have her strength recruited. ' It is not diminished,' said the queen nobly, ' misfor- tune gives us additional strength. Elizabeth was with the king, and I was asleep; I, who am determined to perish by his side. I am his wife ; I will not suffer him to incur the smallest risk without my sharing it.' At length arrived the memorable 10th of August, when possession of the Thuilleries was regularly contested between the mob and the Swiss guards, who were almost all cut to pieces. Two hundred of the old no- bless also nobly fell on this occasion in defence of the royal family. The result is well known. The king, queen, and their family, were obliged to fly to the hall of the National Assembly. The stairs, apartments, and every part of the Thuil- leries, streamed with Wood. This was in fact the final overthrow of a throne that had been established for eleven centuries. The National Assembly was as inadequate, as many of its members were unwilling, to support the king. The cannon of the Paris mob dictated its decrees. Louis was now therefore suspended from his functions, and transferred with his family as pri- soners to the Temple. The massacres of Sep- tember followed, during which prisoners were taken one by one from their confinement, tried before a mock jury of the mob, and despatched. Among the rest the amiable Princess de Lam- balle was thus massacred, and, being the well-known friend of Marie Antoinette, her head was exhibited under the 'windows of the Temple, iwa it might meet the eyes of the unhappy queen On the 1 1th of December the king took his niock

trial. See the article Louis XVIth. But the French nation was to disgrace

itself by an act of still greater barbarity than the murder of this amiable prince. His faithful and innocent queen was destined to follow him to the scaffold. She had been removed from the Temple on the 1st of August 1793, to a miserable apartment in the prison of the Conciergerie, and was brought before

the revolutionary tribunal on the 15th of Octo- ber. The accusations against her were some of them so infamous, and all of them so absurd, as to be wholly unworthy of detail. Her judges had long before her mock-trial decided upon her death; which she met with a noble and elevated dignity, in the Place de la Revolution on the fol- lowing day.

ANTOING, a market town and barony of Hainault, in the Netherlands, with an old castle, situated on the Scheldt, five miles from Tournay. Population 1600. At the adjoining village of Fontenoy, the allies under the duke of Cumber- land and count Konigsegg fought the well-known battle of that name with the French under mar- shal Saxe.

ANTON, a town of Peru, lying between the rivers Choru and Colorado, which abounds in provisions with which it supplies the city of Panama.

ANTON A, a river of Britain, mentioned by Tacitus, which Camden supposes to be a faulty reading for Avuona, or Ausuona, the Avon.

ANTONGIL,a large bay in the island of Ma- dagascar, which is safe and commodious for ships.

ANTONIA, daughter of Mark Antony and Octavia, equally virtuous, but equally unfortu- nate with her mother. While young, she was married to Drusus, brother of Tiberius, who died on his return from Germany to receive a triumph for his victories. Disconsolate at her loss, An- tonia would never enter into a second marriage, Imt devoted herself to the education of her three children. The death of her son Germanicus, from the jealousy of Tiberius, and the ill conduct of her younger son Claudius, and her daughter Li villa, were sources of new misery to her. She died at Rome in the reign of her grandson, the infamous Caligula.

AMOMA, a citadel of Jerusalem. Hyrcanus, the tirˆt high-priest of that name, built, near the temple, a house with turrets, where he generally resided. Ilerod afterwards fortified it for the security and defence of the temple ; and in honor of Mark Antony, who then commanded in the oast, called it Antonia.

AVIOMJV, ST. a town of France, in the depart- ment of the Torn, whose fortifications are demo- lished. It is sealed on the river Aveiron.

ANTOMANO (Silvio), professor of belles Ifttivs at Koine, was born there, of low parentage, in I.V40. The duke de Ferrara coming to con- gratulate Marcellus 11. upon his being raised to the pontificate, was charmed with the genius of Antoniano while yet a youth, and provided able masters to instruct him in the sciences at Fer- r.ira. From thence he was sent for by Pius IV., who made him successively professor of belles lettn's, and rector of the Sacred college. After the d.ath of 1'ius IV. he joined himself to Philip i\;Ti, and accepted the oth'co of secretary to the <••'>! leuv, \luch he executed tor twenty-five years with ureat refutation. He refused a bishopric i;o:ii (inuory XIV., but Clement VIII. made luii -us chamberlain, and afterwards a cardinal.

He died in his sixty-fourth year. He wrote, it is said, with such ease and fluency, that he never made an erasure.

ANTONIAN WATER, in the materia medica, a mineral water of Germany, composed of cal- careous earth, carbonated soda, and common salt.

ANTONINA, the wife of Belisarius, who not only repeatedly dishonored her husband by her infidelities, but persecuted her own son Photius, with the utmost virulence, because he had dis- covered her intrigues, and revealed them to his injured stepfather. In the language of Mr. Gibbon, who gives her history in his Decline and Fall of the Roman Empire, ' she was, in the various situations of fortune, the companion, the enemy, the servant, and the favorite of the em- press Theodora,' a woman as wicked and worth- less as herself. 'These loose and ambitious females,' adds Gibbon, ' had been connected by similar pleasures, they were separated by the jealousy of vice, and at length reconciled by the partnership of guilt.'

ANTONINUS (Aurelius Fulvius), surnamed Pius, the Roman emperor, was born at Lanu- vium in Italy, A. D, 86, of a family originally from Nismes in Languedoc. His character was in all respects one of the noblest that can be imagined; and he had the title of Pius given him by the senate. We have no regular account of the transactions of his reign, as Capitolinus has written in a very confused manner ; and we have only an abridgement of Dion Cassius's his- tory by Xiphilin now remaining. He managed the public revenues with great frugality, yet was extremely generous ; was fond of peace, and in war preferred the reputation of justice to all the advantages which might be gained by victory. He was more intent upon preserving the bounds of his empire than extending them ; and he often made use of Scipio's expression, that he chose rather to save one citizen than kill a thousand enemies. By this conduct he made himself universally esteemed and revered in that age, and admired by posterity. This great and good emperor died in 161, aged seventy-five, having reigned twenty-three years.

ANTONINUS (Marcus Aurelius), surnamed the philosopher, the Roman emperor, born at Rome the 26th of April, A. D. 121. He was called by several names till ne was admitted into the Aurelian family, when he took that of Marcus Aurelius Antoninus. Adrian, upon the death of Cejonius Commodus, turned his eyes upon Marcus Aurelius; but, as he was not then eighteen years of age, and consequently too young for so important a station, he fixed upon Antoninus Pius, whom he adopted upon condi-

tion tliat he should likewise adopt Marcus Aure- lius. The year after this adoption Adrian ap- pointed him questor, though he had not yet attained the age prescribed by the laws. After the death of Adrian, Aurelius married Faustina, the daughter of Antoninus Pius, by whom he had several children. In the year 139 he was invested with new honors by the emperor, in which he behaved in such a manner as endeared him to that prince and the whole people. Upon the death of Pius, which happened in 161, he was obliged by the senate to take upon him the government; in the management of which he took Lucius Verus as his colleague. Dion Cas- sius says, that the reason of doing this was, that he might have leisure to pursue his studies, and on account of his ill state of health ; Lucius being of a strong vigorous constitution, and con- sequently more fit for the fatigues of war. The same day he took upon him the name of Anto- ninus, which he gave likewise to Verus his col- league, and betrothed his daughter Lucilla to him. The two emperors went afterwards to the camp, where, after having performed the funeral rites of Pius, they pronounced each of them a panegyric to his memory. They discharged the government in a very amicable manner. It is said, that soon after Antoninus had performed the apotheosis of Pius, petitions were presented to him by the Pagan priests, philosophers, and governors of provinces, in order to excite him to persecute the Christians ; which he rejected with indignation and interposed his authority for their protection by writing a letter to the com- mon assembly of Asia, then held at Ephesus. Eusebius has preserved a copy of this letter, Hist. Ecc. lib.iv. c. 13, which he ascribes by mistake to Antoninus Pius. The happiness which the empire began to enjoy under these two emperors, was interrupted in the year 162 by a dreadful inundation of the Tiber, which destroyed a vast number of cattle, and occasion- ed a famine at Rome. This calamity was fol- fowed by the Parthian war; and at the same time the Catti ravaged Germany and Rhstia. Lucius Yerus went in person to oppose the Parthians ; and Antoninus continued at Rome, where his presence was necessary. During this war with the Parthians, about the year 163 or 164, Antoninus sent his daughter Lucilla to Verus, she having been betrothed to him in mar- riage, and attended her as far as

Brandusium : he intended to have conducted her to Syria ; but, it having been insinuated by some persons, that his design of going into the east was to claim the honor of having finished the Parthian war, he returned to Rome. The Romans hav- ing gained a victory over the Parthians, who were obliged to abandon Mesopotamia, the two emperors triumphed over them at Rome in 166; and were honored with the title of fathers of their country. This year was fatal on account of a terrible pestilence, which spread itself over the whole world, and a famine under which Rome labored ; it was in this year that the Marco- manm, and many other people of Germany, took • up arms against the Romans ; but the two em- perors, having marched in person against them, obliged the Germans to sue for peace. The war,

however, was renewed the year following, and the two emperors marched again in person ; but Lucius Verus was seized with an apoplectic fit, and died at Altinum. The Romans were now de- feated with great slaughter ; and the emperor not choosing to burden his subjects with new taxes, exposed to public sale the furniture of the palace, the gold and silver plate belonging to the crown, his wife's splendid garments embroidered with gold, and a curious collection of pearls which Adrian had purchased during his long progress through the provinces of the empire, and was cal- led Adrian's cabinet. In 170 Antoninus made vast preparations against the Germans, and carried on the war with great vigor. During this war, in 174, a very extraordinary event is said to have happened, which, according to Dion Cassius, was as follows : — Antoninus's army being blocked up by the Quadi, in a very disadvantageous place, where there was no possibility of procuring water ; in this situation, being worn out with fatigue and wounds, oppressed with heat and thirst, and in- capable of retiring or engaging the enemy, in an instant the sky was covered with clouds, and there fell a vast quantity of rain. The Roman army were about to quench their thirst, when the ene- my came upon them with such fury, that they must certainly have been defeated, had it not been for a shower of hail, accompanied with a storm of thunder and lightning, which fell upon the ene- my without the least annoyance to the Romans, who by this means gained the victory. The Pa- gans as well as Christians have acknowledged the truth of this prodigy, but have greatly differed as to the cause of such a miraculous event ; the for- mer ascribing it to magicians. On Antoninus's pillar the glory is ascribed to Jupiter the god of rain and thunder. But the Christians affirmed, that God granted this favor at the prayer of the Christian soldiers in the Roman army, who are said to have composed the twelfth legion ; and, as a mark of distinction, we are told that they received the title of the Thundering Legion, from Antoninus. Euseb. Eccles. Hist. lib. v. cap. 5. Mr. Moyle, in the letters published in the second volume of his works, has endeavoured to explode this story of the Thundering Legion ; which oc- casioned Mr. Whiston to publish an answer in 1726. In 175 Antoninus

made a treaty with se- veral nations of Germany. Soon after, Avidius Cassius, governor of Syria, revolted from the em- peror: this insurrection, however, was put an end to by the death of Cassius, who was killed by a centurion named Anthony. Antoninus be haved with great lenity towards those who had been engaged in Cassius's party : he would not put to death, nor imprison, nor even sit in judg ment himself upon any of the senators engaged in this revolt ; but he referred them to the se- nate, fixing a day for their appearance, as if it had been only a civil affair. He wrote also to the senate to act with indulgence rather than se- verity ; not to shed the blood of any senator or person of quality, or of any other person what- soever, but to allow this honor to his reign, that, even under the misfortune of a rebellion, none had lost their lives, except in the first heat of the tumult. In 176 Antoninus visited Syria and Egypt : the kings of those countries, and am-

bassadors from Parthia, came to visit him. He staid several days at Smyrna ; and, after he had settled the affairs of the east, went to Athens, on which city he conferred several honors, and ap- pointed public professors there. From thence he returned to Rome with his son Commodus, who was chosen consul for the year following, though he was then but sixteen years of age. On the twenty-seventh of September, the same year, he gave him the title of Imperator ; and on the twenty-third of December he entered Rome in triumph, along with Commodus, on account of the victories gained over the Germans. Dion Cassius tells us, that he remitted all the debts which were due to himself and the public trea- sury, during forty-six years, from the time that Adrian had granted the same favor, and burnt all the writings relating to those debts. He ap- plied himself likewise to correct 'many enormi- ties, and introduced several excellent regulations. In 179 he left Rome with his son Commodus, to go against the Marcomanni, and other barba- rous nations ; and the year following gained a considerable victory over them, and would, in all probability, have entirely subdued them, had he not been seized with an illness, which carried him off on. the 17th of March 180, in the fifty- ninth year of his age, and nineteenth of his reign. The whole empire regretted the loss of so va- iuable a prince, and paid the greatest regard to his memory : he was ranked amongst the gods, and almost every person had a statue of him in their houses. His book of Meditations has been much admired.

ANTO.MNUS'S COLUMN, a circular pillar of white marble, raised in honor of the emperor Antoninus, at Rome, 168 feet high above ground, besides seven feet under ground. It has a stair- case within, consisting of

198 steps, and illumi- nated with fifty-six small windows. Its shaft is adorned with a basso relievo, running in a spiral line its whole length, and containing a brief history of the emperor's reign.

ANTONINUS'S WALL, the third rampart that had been built by the Romans against the incur- sions of the North Britons. It is called by the people in the neighbourhood Graham's Dyke ; from the notion that one Graham, or Grimus, first made a breach in it after the retreat of the Romans out of Britain. The first barrier erected by the Romans was the chain of forts built by Agricola, from the frith of Forth to that of Clyde, in the year 81, to protect his conquests from the inroads of the Caledonians. See AGRICOLA. The .second was tin; vallum or dyke thrown up by Adrian in the year 121. See ADRIAN'S WALL. It t.nninnted on the western side of the king ••l(im at Axelodunum, or Burgh, on the Solway Sunds ; and was supposed to have reached no further than Tons .Khi, or Newcastle, on the eastern side. But, from an inscription lately dis- covered, it appears to have extended as far as the wall of Severn-,. See Sr.vr.uus's WALL. This ram;>an (if Adrian's was situated much farther south than Agncola's chain ; the country to the north having been either, according to some authors, recovered by the native Britons after the departure of Agricola ; or, according to others, voluntarily .slighted by Adrian. However, this

work of Adrian's did not long continue to be tl. extreme boundary of the Roman territories t< the north in Britain. For Antoninus Pius hav- ing, by his lieutenant Lollius Urbicus, recovered the country once conquered by Agricola, com- manded another rampart to be erected between the friths of Forth and Clyde, in the tract where Agricola had formerly built his chain of forts. The great number of inscriptions which have been found in or near the ruins of this wall, to the honor of Antoninus Pius, leave us no room to doubt its having been built by his orders. Ii the fragment of a Roman pillar with an inscrip- tion, now in the college library of Edinburgh, belonged to this work, as it is generally sup- posed to have done, it fixes the date of its exe- cution to the third consulship of Antoninus, which was A.D. 140, only twenty years after that of Adrian, of which this seems to have been an imitation. This wall, as some imagine, reached from Caerridden on the frith of Forth, to Old Kirkpatrick on the Clyde; or, as others think, from Kinniel on the east, to Dunglasg on the west. These different suppositions hardly make a mile of 'difference in the length of this work, which, from several actual mensurations, appears to have been thirty-seven English, or forty Roman miles. Capitolinus, in his life of Antoninus Pius, affirms, that the wall which that emperor built in Britain was of turf. This is unquestionably true ; though it is evident from the vestiges of it still remaining, (which not very many years ago were dug up and examined for near a mile together), that the foundation was of stone. Mr. Camden also tells us, from the papers of one Anthony Pont, that the principal rampart was faced with square

stone, to prevent the earth from falling into the ditch. The chief parts of this work were: 1. A broad and deep ditch, whose dimensions cannot now be discover- ed with certainty, though Mr. Pont says it was twelve feet wide. 2. The principal wall, about twelve feet thick at the foundation, but its origi- nal height cannot now be determined. This wall was situated on the south brink of the ditch. 3. A military way on the south side of the principal wall, well paved, and raised a lit- tle above the level of the ground. This work, as well as that of Adrian, was defended by garrisons placed in forts and stations along the line of it. The number of these forts whose vestiges were visible in Mr. Font's time, were eighteen, situ- ated about two miles from each other. In the intervals between the forts, there were watch towers ; but their number and distances from each other cannot now be discovered. It is not a little surprising that, though it is now more than 1660 years since this work was finished, and more than 1300 since it was slighted, we can yet discover, from authentic monuments which are still remaining, by what particular body of Ro- man troops almost every part of it was executed. This discovery is made from inscriptions upon stones, which were originally built into the face of the wall, and have been found in or near its ruins, and are carefully preserved. The number of stones with inscriptions of this kind now ex- tant is eleven ; of which six may be seen at one view in the college of Glasgow, one in the col-

lege of Aberdeen, one in the college of Edin- burgh, one in the collection of Baron Clerk, one \t Cochnoch house, and one at Calder house. Fiom these inscriptions it appears in general, that this great work was executed by the second legion, the vexillations of the sixth legion, and of the twentieth legion, and one cohort of auxili- aries. If these corps were all complete, they would make in all a body of 7800 men. Some of these inscriptions have suffered greatly by the injuries of time and other accidents ; so that we cannot discover from them with absolute cer- tainty, how many paces of this work were exe- cuted by each of these bodies of troops. The sum of the certain and probable information con- tained in these inscriptions, as it is collected by the learned Mr. Horsley, stands thus :

Paces.

The second legion built 11,603

The vexillation of the sixth legion . . 7,411 The vexillation of the twentieth legion 7,801

All certain . . . 26,815

The vexillation of the twentieth legion, the monument certain, and the num- ber probable 3,41 1

The same vexillation, on a plain monu- ment, no number visible, supposed . 3,500

The sixth legion, a monument, but no

number, supposed 3,000

Cohors prima Cugernorum 3,000

Total

39,726

or 39 miles 726 paces, nearly the whole length of the wall. It would have been both useful and agreeable to have known how long time these troops were employed in the execution of this great work ; but of this we have no information : neither do we know what particular bodies of troops were in garrison in the several forts and stations along the line of this wall, because these garrisons were withdrawn before the Notitialm-. perii was written. Though we cannot discover exactly how many years this wall continued to be the boundary of the Roman territories in Britain, yet we are certain it was not very long ; for we are told by Dion Cassius, that ' Commodus, the son of Antoninus, had wars with several foreign nations, but none so dangerous as that of Britain : for the people of the island, having passed the wall which divided them from the Romans, at- tacked them, and cut them in pieces.' This was about A.D. 180.

ANTONIO (Nicholas), knight of the order of St. James, and canon of Seville, was born at Se- ville in 1617, being the son of a gentleman whom Philip IV. made president of the Admiralty in hat city in 1626. After having gone through a :ourse of philosophy and divinity in his own country, he went to study law at Salamanca ; where he attended the lectures of Francisco Ra- mos del Manzano, afterwards counsellor to the king, and preceptor to Charles II. Upon his return to Seville, he employed himself several years in writing his Bibliotheca Hispanica, hav- iDg the use of the books of Benriet de la Serra, aobot of the royal monastery of Benedictines. In 1659 he was sent to Rome by Philip IV7. in

the character of agent-general : he had also pai ticular commissions from the inquisition of Spain, the viceroys of Naples and Sicily, and the governor of Milan, to negociate their affairs at Rome. The cardinal of Arragon

procured him, from Pope Alexander VII. a canonry in the church of Seville, the income whereof he em- ployed in charity and purchasing books; of which he had above 30,000 volumes in his li- brary. By these means, and his own indefatiga- ble application, he was at last enabled to finish his Bibliotheca Hispanica in four volumes folio, two of which he published at Rome in the year 1672. The work consists of two parts ; the one containing the Spanish writers who flourished before the fifteenth century, and the other those since the end of that century. After the publica- tion of these two volumes, he was recalled to Madrid by Charles II. to take upon him the office of counsellor to the crusade; which he discharged with great integrity till his death, in 1684. He left nothing but his vast library, which he had brought from Rome to Madrid ; and his two brothers and nephews being unable to pub- lish the remaining volumes of his Bibliotheca, sent them to cardinal d'Aguirre, who paid the charge of the impression, and committed the care of it to Monsieur Marti, his librarian, who added notes in the name of the cardinal.

ANTONIO (di Messina), a native of Messina, who flourished about the year 1430. He was the first Italian who painted in oil, which art he learned from John Van Dyck in Flanders. When he returned to Italy he imparted his secret to Bellini and Dominico, the last of whom revealed it to Andrew del Castagno, who, from a thirst of gain, basely assassinated him. These incidents, however, spread the art of oil-painting over Italy.

ANTONIO, ST. a Dutch fort in Axim, on the gold coast of Africa. It stands on a high rock, which projects into the sea in form of a penin- sula, and is so environed by rocks and dangerous shoals, as to be inaccessible to an enemy but by land, where it is fortified by a parapet, draw bridge, and two batteries of heavy cannon. Be- sides this it has a battery towards the sea. The three batteries consist of twenty-four cannon. Its form is triangular ; the building is neat, strong, and commodious for its extent, which is but small, on account of the narrowness of the rock on which it is built. The garrison is usu- ally composed of twenty-five white men, and an equal number of negroes, under the com- mand of a sergeant. It is maintained at the expense of the West India Company, and when well stored with provisions is capable of making a long defence against any number of negroes. It is, however, as well as all other forts on this coast, liable to inconveniences from the heavy rains, which damage the walls, and render fre- quent reparations necessary. This obliges the Dutch always to keep ready a quantity of lime made of calcined oyster-shells, of which the coast produces great numbers. This settlement was first founded by the Portuguese during the reign of Emmanuel. They fixed at first upon a small point ; where, finding themselves insecure, they built the fort where it now stands. They were

driven out by the Dutch in 1642 ; and upon the conclusion of a peace with the states-general the fort remained by treaty in the hands of the Dutch West India Company, who have kept possession of it ever since.

ANTONIO, ST. one of the Cape de Verd Islands, separated from St. Vincent's by a narrow navi- gable channel, fifteen miles broad. On the north side it has a good road for shipping, with a col- lection of fresh water rising from springs, which, however, scarcely merits the name of a pond. The island stretches from north-east to south- west, and is filled with mountains ; one of which is of so extraordinary a height, as to be com- pared with the Peak of Teneriffe. Its top is con- stantly covered with snow ; and notwithstanding the clearness of the sky is generally hid in clouds. Here are produced a variety of fruits ; oranges, lemons, palms, melons, &c. and some sugar- canes. The potatoes and melons are particularly excellent, and are much sought after by mari- ners. But notwithstanding all this plenty, the inhabitants live in the most wretched poverty. They are in number about 500, chiefly negroes, under the Portuguese, whose language they speak, and whose manners they imitate. To the nurth-west stands a village, under the direction of a irovernor, or, as they call him, a captain, a pricM, and a schoolmaster. Long. 0Q 26′ E., hit. 18° •!' N.

ANTON m, ST. a city of Mexico, capital of the province c-f Texas; situated near the source of a river of that name, and containing about 2000 inhabitants. The houses are wretched, but about four miles distant are three missions, which are in a flourishing state.

ANTONIO, ST. IH.I.I.A FLORIDA, a town in Chili, in the province of Maule. Long. 71° 41′ W., lat. 30° 20′ S.

ANTONIO, ST. DK T.OS CUES, a populous town of Mexico, on the road from Orizaba to Oaxaca, celebratei 1 for the remains of some ancient Mexi- can fortifications.

ANTONIO, ST. a small island on the coast of Brasil, near the island of Santa Cataliria, where the Portuguese have a fort.

ANTOMl'S (Caiusj, the son of Marcus the orator, and uncle to the triumvir; had the com- mand of some troops of horse under Sylla, and plundered many places in (ireece.

AVIONH.'S (JNvi'iio, a native of Gaul, who came to Koine and taught rhetoric and poetry in the house of Julius C-asar while he was but a boy.

His school v.as frequented by Cicero and other <_rreat men. lie set no price upon his la- bors, which ma.de his scholars the more liberal to him.

A vi ON n •< (Julius), the son of Marcus, was consul ;i|oii'4 -with Panlus Fabius Maximus, to whom Horace, addresses the second Ode of his fourth book.

AN ION ii -^ (Marcus), a famous Roman orator. While he tilled the office of pralor, Sicily fell to his lot, and he cleared the seas of the pirates which infested that coast. He was made consul with A. 1'osthumius Albinus in the year of Rome !'>.'>3 : \vheu he opposed the turbulent designs of Si'xtus Titus, tribune of the people, with great resolution iip-j success. Some time after he was

made proconsul of Cilicia, and obtained the ho- nor of a triumph on his return. To improve his talent for eloquence, he attended the greatest orators of Rhodes and Athens, in his way to Cilicia, and on his return to Rome. Soon after he was appointed censor : which office he dis- charged with great reputation. He was one of the greatest orators ever known at Rome ; and it was owing to him, according to the testimony of Cicero, that Rome might boast herself a rival even to Greece in eloquence. He defended, amongst many others, Marcus Aquilius; and moved the judges in so sensible a manner, by the tears he shed, and the scars he showed upon the breast of his client, that he carried his cause. He never would publish any of his pleadings, that he might not be proved to say in one cause, what might be contrary to what he should ad- vance in another. He affected to be a man of no learning. His modesty, and many other qua- lifications, rendered him no less dear to many persons of distinction, than his eloquence made him universally admired. He was killed during those bloody confusions raised at Rome by Marius and Cinna. He was discovered in the place where he hid himself, and soldiers were sent to despatch him; but his manner of address- ing them had such an effect, that none but he who commanded them, and had not heard his discourse, had the cruelty to kill him. His head was exposed before the rostra, a place which he had adorned with his triumphal spoils. This happened A. A.C. 90.

ANTONIUS (Marcus), the triumvir, grandson to the former. When the civil war broke out, Antony was persuaded by Curio to take Caesar's part, for which he was made a tribune of the people, and in that office did Caesar great ser- vice. Caesar having made himself master of Rome, gave Antonius the government of Italy ; and at the battle of Pharsalia confided so much in him, that he gave him the command of the left wing.of his army, whilst he himself led the right. After Caesar was made dictator, he made Anto- nius general of the horse, in which station he exerted his power with the utmost violence. He was made consul, when Caesar enjoyed that ho- nor for the

fifth and last time. On Caesar's death he harangued the populace with great art, and raised their fury against his murderers, nat- tering himself that he should easily get into the place which Caesar had filled ; but his haughty behaviour made him lose all the advantages his affected concern for Caesar had gained him. His ill-treatment of Octavius, and quarrel with him, produced another civil war, which ended in an accommodation between him, Octavius, and Le- pidus, fatal to the peace of Rome. They agreed to share the supreme power among them ; and many of the most illustrious Romans were sa- crificed by proscription to cement this bloody league, which is known by the name of the ' second triumvirate.' But the triumvirs were too ambitious, and hated one another too much to be long united. Antonius went into Asia to raise money for his soldiers ; during his absence, Fulvia his wife quarrelled with Octa- vius. When Antonius was in Asia, indulging himself in all manner of luxury, the famous

Cleopatra inspired him with the most violent passion. Hearing of the quarrel between Ful- via and Octavius, and finding Octavius was become publicly his enemy, Antonius entered into a confederacy with Sextus Pompeius, who was still master of Sicily. He then went into Italy to meet Octavius in battle, but Fulvia, who had been the promoter of this war, dying, Octavius and Antonius came to an agreement. 'One of the conditions of this] new peace was, that they should together attack Pompey, though the former had lately made an alliance with him. Antonius then married Oc- tavia, sister to Octavius, as pledge of their renewed friendship ; but returned soon after to his beloved Cleopatra, and lived with her in Alexandria. Octavius took hold of this pre- tence to inveigh against him, and begin the war again. At last they engaged in a sea-fight at Actium, in which Octavius gained a complete victory. The infatuated Antonius fell upon his own sword ; and Cleopatra stung herself to death with an asp, to avoid gracing the victor's triumph at Rome.

ANTONOMA'SIA; avri and ovopa. A mode of speaking in which a person is addressed or described by some appropriate or official desig- nation, but not by his surname ; as, in the House of Lords, ' the Noble Lord ;' in the House of Commons, ' the Honorable Gentleman.'

This way of speaking, -which the grammarians call antonomasia, and which is still extremely common, though now not atall necessary .demonstrates how much mankind are naturally disposed to give one object the name of any other which nearly resembles it, and thus to denominate a multitude, by what was originally intended to express an individual.

A . Smith on the Formation of Languages.

ANTONI, a small town of France, in the department of the Seine,arrondissement of Sceaux, it is two leagues S. S. W. of Paris, chiefly noted for candle manufactories, and containing 1,200 inhabitants.

ANTOPHYLLUS, in botany, the fruit of the clove-tree.

ANTOSIANDRIANS, a sect of rigid Luthe- rans, who oppose the doctrine of Osiander re- lating to justification. They deny that man is made essentially, but only imputatively, just; or, that he is not really made just, but only pro- nounced so.

ANTRAIN, a town of France, in the depart- ment of Ille and Vilaine, seated on the Coues- non, on the borders of the ci-devant province of Normandy, fifteen miles south of Avranches.

ANTRE. Lat. antrum. A cave or den ; used both in Latin and English only in poetry.

With all my travels history. Wherein of antres vast, and desarts idle, It was my bent to speak. Shakspeare.

ANTRIM, a country in the province of Ulster in Ireland, comprising the northern extremity of that island. Its greatest length is about fifty-four miles, and breadth thirty-five ; being bounded on the north and east by the sea, on the south by Lough Neagh and the county of Down, and on the west by that of Londonderry. The general features of this county are mountainous, diversi- fied by numerous bogs, rivers, and lakes, and, on

the whole, more deserving of notice for their pic- turesque appearance than for cultivated scenery.

From Fair Head to Glenarm, in particular, with the exception of a portion of bog, in the vicinity of that gigantic promontory, the scenery is exceedingly beautiful. Along the sea-side, from Creshendall to Glenarm, passing by Red Bay, the road presents the most romantic and lovely prospects. ‘ On the one hand,’ says Mr. ^‘akefield, ‘ magnificent and widely extended views of the ocean, which on this coast rolls its swelling waves towards the shore with a peculiar and dangerous rapidity ; and on the other, rocky mountains of considerable height, whose hanging cliffs, as the road extends partly up their sides, seem to threaten the traveller with destruction, and which, in some places, are thickly clothed with woods, through the openings between which, the eye is sometimes surprised by the sight of a village. As the road winds round a great many spacious bays,

which abound on this part of the coast, few rides can be more agreeable.' Between Larne and Carrickfergus, the country displays every sign of active and well-remunerated in- dustry, and, of course, an abundant and happy population. The interior of the county, towards the eastern side, is very mountainous, and is scantily planted. But on the borders of Antrim and Down, between Lisburn and Belfast, the scenery is grand and striking, the land well cul- tivated, and adorned by elegant villas and flou- rishing plantations. The whole northern shore of Belfast lough is also dotted with the white country residences of the merchants and manu- facturers of Belfast. Between that populous and enterprising town and Armagh, the common price of land is thirty years' purchase. The landed property is nearly all held of the crown. The Marquis of Hertford's estate contains, it is said, 64,000 acres of arable ground, besides bog and mountain. The other great proprietors are the Antrim family, the marquis of Donegal, Lord Templeton, and Lord O'Neil. Antrim has long been celebrated for its linen manufacture. A few years ago not less than 11,000 acres of flax were grown, yielding at the average rate of thirty stones per atre. The manufacture of cotton cloth has, however, of late years in some degree superseded the staple of Antrim, and given em- ployment to nearly 30,000 persons ; and as Ger- man linens are found to obtain a decided prefe- rence to the foreign market to those which are made in any part of Great Britain, it is probable that the culture of flax will gradually give way to the importation of cotton.

The population of this county is estimated at 250,000, exhibiting an increase of near 100,000 in the space of thirty years. It contains a greater proportion of Protestants than any other county of Ireland ; and as the inhabitants are chiefly of Scottish extraction, the majority of them are presbyterians.

The exports of Antrim consist, in addition to its linen, principally of provisions. In the year 1811, not fewer than 70,000 pigs, weighing at least 200lbs. each, were carried to Belfast. A branch of trade, it should be added, which has been much diminished by the continuance of peace.

ANTWERP.

The only remarkable mineral of this district is the fossil wood, or wood coal, as it is more com- monly called, and which is found under masses of basaltic rock. Mr. Playfair, of Edinburgh, in arguing for the vegetable composition of coal, refers it to some specimens procured in the Isle of

Sky,the same geological structure with Antrim, which presented in one small fragment both per- fect wood coal and perfect mineral coal ; thus, in his mind, establishing the identity of the two species, and also their common vegetable origin. In this portion of Ireland the fossil wood pre- sents itself with its original structure so entire that there is no difficulty in ascertaining its place as a member of the forest tribes. The bark and knots are quite distinct : and the rings, denoting the annual growth of the tree, may still be counted. It is a circumstance, however, worthy of remark, that notwithstanding the ligneous ori- gin of the Antrim coal, it is so fully impregnated with bitumen as to be thought unfit for the pur- poses of the arts, and even for the humbler uses of domestic life.

ANTRIM, a town and parish in the baronies of Antrim and Tooma, in the county of Antrim, Ireland. It consists of one broad avenue, adorned with a handsome church, chapel, and a market- house. The six mile water flows by this place, where it is crossed by a substantial stone bridge, and the noble and navigable sheet of water called Lough Neagh, lies at a short distance. Linen is manufactured extensively in this vici- nity. The living is a vicarage, in the diocese of Connor. Here is a beautiful seat of lord Mas- sarena, and a few miles distant is Shanis Castle, the residence of earl O'Neil. Antrim was anciently an episcopal see ; Durtract, a disciple of St. Patrick, founded a monastery here; and, adja- cent to the town, stands one of the ancient Irish pillar towers. This was also a borough return- ing two members to the high parliament, but disfranchised by the Act of Union. The ancient family of M'Donnell, of Glenam, enjoy the title of earls of Antrim.

' ANTROS, a small island at the mouth of the Garonne, on the west coast of France, containing the light-house of Corduan.

ANTRUM, one of the Alps of Switzerland in the Valais, across which is a road from Valais to Lombardy.

ANTRIM ; Lat. a den or cave ; in anatomy, a cavity ; in which sense it gives name to several parts of the body : as, antrum buccinosum, the cochlea of the ear; antrum genac, a large cavity in the fourth bone of the upper jaw, called by l)r. llighmore, autrum maxilla; superioris : an- trum highmorianum is a cavity within the sinus of each axillary bone, sometimes mistaken fora canes of tin; bone. Antrum pylori, a large cavity at the bottom of the pylorus, thus denominated by Willis, who assigned it the office of keeping the first digested chyle, till that which was later taken into the stomach be digested ; though if what Dr. \Varton suggests, that there are lacteals at the bottom of the stomach, be true, such a provision seems unnecessary.

ANTNVKRP, Antwerpen.Germ. Dutch. An- verˆ, Fr. Amberes, Sp. a

province of the Nether-

lands, situated between 4° 13′ and 5° 16′ E. Ion., 51° and 51° 32′ N. lat. having North Bra- bant on the N. and N. E. Limburgonthe S. E. South Brabant on the S. and East Flanders on the W. It contains 191J sqnareG. M. and is so low a level, that water is found every where at the depth of ten or twelve inches. The soil is sandy throughout, but is well cultivated and watered by the Scheldt, Dyle, Senne, Great and Little Nethe, and the Rupel, besides the two ca- nals of Brussels and Louvain. The climate is so moist, that the quantity of rain which falls an- nually amounts from 28 to 28J inches. The grain raised is about the quantity required for its owh consumption. The average crops are : wheat 73,347 cwt. ; rye 415,568 cwt.; barley 109,267 cwt. ; and oats 237,921 cwt. They also grow, on a large scale, buckwheat, beans, pota- toes, turnips, carrots, flax, hemp, rape-se«d, and madder. Here are 136,014 acres of arable land, 27,000 acres of wood, 40,345 acres of natural, and 13,155 acres of artificial grass. Much atten- tion is paid to cattle, and the horses are large and strong, but not handsome. They have many hives of bees, and remove them from place to place to improve the honey. Theirmanufactures are numerous, and some of them in great esteem ; as, for instance, the point-lace of Mechlin. The exports consists of lace, hats, cloths, ticking, woollen wrappers, sugar, starch, leather, beer, brandy, &c. The population in 1815 amounted to 287,347; which gives 1500 for every square mile. The majority are Walloons, who profess the Roman Catholic religion, and have twenty- four parishes and 131 curacies. The province sends five deputies to the States-General, belongs to the foueth military division, and is under the jurisdiction of the High Court of Justice at Brus- sels. The provincial states consist of sixty members, of whom fifteen are sent by the no- bility, twenty-four by the towns, and twenty-one by the country. The province contains the three circles of Antwerp, Mechlin, and Turnhout, seventeen districts and 141 communities.

ANTWERP, ANVERS, or ANTORFJ, the capital, situated on the Scheldt, was formerly the place of greatest trade in Europe. In 1553, the epoch of its prosperity, it was not unusual to see 2000 vessels at one time in the port. But the wars of the low countries, and the persecutions of the Duke of Alva, forced the most industrious part of the population to emigrate ; and an article in the treaty of Munster, in 1648, stipulated that no large merchant vessels should sail up to this city, but that the cargo should be first unloaded in the Dutch ports, and thence conveyed in small craft to Antwerp. According to Guicciardini, the po- pulation of Antwerp was formerly 100,000 ; but Busching, a better authority, raises the number to 200,000. It contains at present 61,800. It is still, however, a large and well-built city, hav- ing 200 streets, and twenty-two spacious and elegant squares. The mere is one of the widest streets in Europe ; the cathedral is a

very noble pile, and contains the celebrated Descent from the Cross, of Rubens. The exchange cost 300,000 crowns, and is reckoned the handsomest building of its kind in existence.

Antwerp, until its occupation by the French, was an open town, defended only by a citidal, erected by the Duke of Alva, in the year 1568. Its chief improvements were formed under the Spanish government, when it also enjoyed all its ancient privileges. The Spaniards were dispos- sessed by the victories of the Duke of Marl- borough, after which the Empress Queen was put into possession, which she retained until the occupation of the French Army. Upon the fall of the Imperial Government of France, Antwerp was assigned to the new kingdom of Holland, and continued part of that state until the Belgic revolution. The Dutch transferred the trade of this place to Amsterdam ; but, it is admirably adapted for an extensive commerce, the harbour being capable of receiving 1000 vessels, and communicating, by canals, with every part of the city.

ANVARI, a Persian poet of the twelfth cen- tury, who acquired such renown that the sur- name of king of Khorasan was bestowed upon him. He was at first much attached to astro- logy, but, having once made a false prediction, he retired from court and wrote a poem in which he altogether renounced astrology and prediction. He died at Balk about 1200.

ANU BIS, a symbolical deity of the Egyptians, generally represented in the form of a man with a dog's head, bearing a branch of palm in one hand, and a caduceus in the other. Cynopolis, the present Mineh, situated in the lower Thebais, was built in honor of Anubis, but the temple wherein he was worshipped no longer exists. The priests celebrated his festivals with great pomp, and consecrated the dog to him as the living representation. Anubis, says Strabo, is the city of dogs, the capital of the Cynopolitan prefecture. These animals are fed there on sacred aliments, and religion has decreed to them a worship; but Cambyses having slain the god Apis, and thrown his body into a field, all animals respected it except the dogs, which alone ate of his flesh. This impiety diminished the popular veneration. Rome having adopted the ceremonies of Egypt, the emperor Commo- dus, to celebrate the Isiac feasts, shaved his head, and himself carried the statue of the god Anu- bis, which was of massive gold. A figure of this god is given OH the reverse of a medal of Faustina, with the sistrurn in one hand, and the caduceus in the other. The signification of this emblemati- L;il deity is thus explained by Plutarch : ' the circle which touches and separates the two hemispheres, and which is the cause of this division, receiving the name of horizon, is called Anubis. He is represented under the form of a dog, because that animal watches day and night.' Others pretend that these animals, the

faithful guardians of men, indicate the trophies which guard the sun on the south and north like porters. According to the former of these interpretations, the priests, regarding Anu- bis as the horizon, gilded his statue ; to mark that this circle, receiving the first rays of the sun, appears sparkling with brightness on bis rising,

ANY

and that at his setting he reflects his last rays upon the earth. According to their sacred fables Anubis was the son of Osiris, but illegitimate : he only gives to the earth a borrowed light ; and cannot be esteemed, like Horus, the father of the day, or the legitimate offspring of Osiris. It would seem that Anubis at first was only a symbolical image, invented by astronomers to give a sensible expression of their discoveries : that afterwards, the people accustomed to see it in their temples,, which were the depositories of science, adored it as a deity; and that the priests favored their ignorance by connecting it with their religion. The worship of Anubis intro- duced that of the dog as his emblem. ANVEILER. See ANWEILER. ANUI, GREAT and DRY, two large rivers of Siberia, falling into the Kolyma, or Kovyma, nearly opposite to the fortress Nischney Kolymsk. The course of the former is 600 miles, and that of the latter 330. The banks of both are inha- bited by a tribe called Yukagirians.

AN'VIL,) ˆEnpille, Anpile, from aen, on, AN'VILLE. $ and feallan, to fall, so called (ac- cording to Skinner) from the frequent strokes of the hammer falling on the block. The mass of wrought iron used by smiths to forge or hammer their metal on.

Although I could not make so well Songs ne knew the art all, As coud Lamekes son Tuball, That found out first the art of song ; For as his brother's hammers rong Upon his anuelt vp and down, Therof he toke the first sowne.

The Dreame of Chaucer, fol. 244. c. i.

Here I clip

The amil of my sword, and do contest Hotly and nobly. Shaktpeare.

I saw a smith stand with his hammer, thus, The whilst his iron did on his anvil cool. M.

It must be told ;

Yet ere you hear it, with all care put on The surest armour anvil' d in the shop Of passive fortitude ; the good Oleander, Your friend is murtherM.

Beau, and Fletch. Lover's Progress, act iv. On their eternal amils here he found The brethren beating, and the blows go round.

Dry den.

Several members of our house, knowing what was upon the anvil, went to the clergy, and desired their judgment. Swift.

Now Cyclopean chief ! Quick on the anvil lay the burning bar. And, with thy lusty fellows, on its sides Impress the weighty stroke.

Jago's Edge Hill, book iii. ANVIL. The face or upper surface must be very flat and smooth, without flaws, and so hard that a file will not touch it. At one end there is generally a beak-iron for the rounding of hollow work. The whole is usually mounted on a firm wooden block. Forged anvils are better than those of cast work, and the best have the upper part made of steel. Locksmiths have a smaller kind of anvil called the stake, which is moveable, and placed ordinarily on their wood bench. Its use is for setting small cold work straight, or to cut or punch on with the cold chisel or cold punch.

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ANV1LLE (Jean Baptiste Bourguignone d'), geographer to the king of France, was born at Paris in 1697. He was a most industrious student, and it is said he labored fifteen hours every day for fifty years, in the improvement of geography. He died in January, 1782. His maps and charts, especially those connected with ancient geography, are in the highest esteem for their accuracy, and the learning and research evinced in their composition. Of his other works, the principa. are, Particulars of Ancient Gaul, from the Remains of the Romans ; Ancient and Modern Egypt, with a description of the Arabian Gulf; a Treatise on the Extent and To- Dography of ancient Jerusalem ; an Abridg- ment, in 3 vols., of Ancient Geography, and a Companion to his maps; a Dissertation on an- cient and modern Itinerary Measures ; on the European Governments which rose out of the fall of the Roman Empire ; a Proposition for the Mensuration of the Globe ; a Geographical Ana- lysis of Italy ; Considerations on the Ottoman Empire; Memoirs of the Empire of China; Treatise on the Caspian Sea.

ANVII.LE ISLAND, an island in the gulf of Ceoriiia, on the west coast of North America, first discovered by captain Vancouver, and so called from its shape. Long. 237° 3′ E., lat. •Hi 30’.

ANUROGRAMMUM, in ancient geography, ihe capital and royal residence of Taprobane, Ceylon, on the north side not far from the western coast, now called Anarodgurro, but in ruins. Ptol. vii. 2.

AXIS, iu anatomy, the lower extremity of the intestinum rectum, or orifice of the funda- ment. See ANATOMY, Index. Also a small hole in the third ventricle of the brain.

Axrs, diseases of the, are a listula, the pro- (••’!(ntia or prolapsus atii ; to which may be add- i d the ha-rnorrhoids, or piles. Imperforated anus : when children are born without an anus, it is very difficult to find the right part for mak- ing a perforation in the rectum, because the extremity of the

ANT-, in botany, the posterior opening of a monopetalous flower.

AM s, in entomology, a species of murex, in the class venues.

AN\ Kl Ll’.R, a town of the duchy of Deux 1’outs, on the (Jueich ; six miles from Landau. It was originally a free city of the empire, but brought under the dominion of the counts Pala- tine in \ :>/.]( ). The inhabitants, about 1800 in number, are partly Catholic and partly of the reformed religion. The Queich is a medium of communication between this place and Landau. The only manufacturing establishments are tan- i:’ nes. l,on. 8]•’., hit. 4’.»’ i:j’ N.

ANX A, m ancient ˆeoˆraphy, the Roman name of the anciwit (Jallipolis. and modern Gal-

)Anxictd$, Lat. fr which appears to derive its

ANXI’ETY,

ANX’IOUS,

AN’XIOUSLY, £ origin from ay\at, to strait-

*AN’XIOUSNKSS. *en. Anxiety, anger, and an- guish, are cognate words. Anxiety is an inter- mitting pain arising from doubt and uncertainty as to an event, or series of events, calculated to afflict us and interrupt our peace of miud.*

And albeit that God comaunded y’ we should chiefly seke for heuen, and

promiseth that if we do so, all other thlges that we nede shal be cast vnto vs, and would that we should in no wise Hue in anxyete, and trouble of mind, for any fere of lack.

Sir Tlumas More's Works, fol. 197. c. ii. His pensive cheek upon his hand reclin'd,

And anxious thoughts revolving in his mind.

Dry den.

With beating hearts the dire event they wait, Anxious, and trembling for the birth of fate. Pope.

To be happy, is not only to be freed from the pains and diseases of the body, but from anxiety and vexa- tion of spirit ; not only to enjoy the pleasures of sense, but peace of conscience and tranquillity of mind.

TiUotson.

In anxieties which attend fevers, when the cold fit is over, a warmer regimen may be allowed ; and, be- cause anxieties often happen by spasms from wind, spices are useful. Arbuthnot.

The story of a man who grew gray in the space of one night's anxiety, is very famous. Spectator.

How much better is it to take our lot where it shall please Providence to cast it, without anxiety !

Cvwper's Letters.

How little we know of a state to which we are all destined ; and how does the obscurity, that hangs over that undiscovered country, increase the anxiety we sometimes feel as we are journeying towards it !

Id.

ANXUR, in ancient geography, a city of the Volsci in Latium; called Tarracina, by the Greeks and Latins : now Terracina, situated on an eminence.

ANXURUS, AXURUS, or AXYRUS, epithets of Jupiter worshipped at Anxur, as a beardless boy.

A'NY, 1 Eine, one. Applied to every

ANY'WHERE. S individual of a given number, without distinction.

He beod for to jeue hym ys dojter in spousyng J?e noblest damesel f>at was in eny londe.

JR. Gloucester, p. 65.

Neyther besemeth it suche as are in Christes strde to be anywhere oftener than in the temple.

Udall. Marke, c. xl.

Far from me and my friends be such, frigid philo- sophy as may conduct us indifferent and unmoved over any ground which has been dignified by wisdom, bravery, or virtue. Johnson.

I do not like to see any thing destroyed ; any void produced in society ; any ruin on the face of the land.

Burke.

ANYTUS, an Athenian rhetorician, who, in conjunction with Melitus, distinguished himself by the rancor with which he persecuted Socra- tes. His machinations at length succeeded in procuring the death of his enemy ; but popular opinion soon changing, the persecutor in his turn was condemned to exile at Heraclea, and, according to some accounts, stoned to death in that city. The ridicule thrown upon Socrates bv Aristophanes, in The Clouds, is said to have originated in his instigation.

AOR

ANZAR, a town of Northern China, in which Tamerlane died.

ANZI, a small town and marquisate in the province of Basilicata, Naples, belonging to the prince of Belvedere, of the family of Caraffa, eight miles S. E. of Potenza.

ANZICO, or Micocco, an extensive region of the west coast of Africa, in the interior, imme- diately behind Congo. It is very little known, nor have we any more recent accounts of it than those given in the sixteenth century, by the Por- tuguese travellers Lopez and Merolla. The people are said to be brave, active, and of the most extraordinary agility, but savage and cruel in a degree almost unparalleled, fluman flesh is said to be commonly exposed in their markets ; they devour not only the prisoners taken in war, but their own slaves ; and it is considered as an homage due to their sovereign, that his subjects should offer themselves to him to be used as food. To balance

these reports, which wear somewhat of a fabulous aspect, we learn that they are in- dustrious, and manufacture cloths, both from silk and from the palm tree. They carry on an extensive trade both with Congo and with the interior, and seem to have the most commercial spirit of any nation in this part. Their language entirely differs from that of Congo.

ANZO, ANZEO, or ANTIS, CAPE, a promon- tory of Italy, in the Campagna di Roma, on which there is a strong tower. Pope Benedict XIV. formed a commodious harbour here, an undertaking which had been ineffectually at- tempted by Innocent XII. The ruins of the town of Antium, from which it takes its name, cover a considerable space.

AON/E, or AON i AN s. a people of Bceotia, in ancient geography ; the name of Aonia was some- times given to Boeotia.

AONIAN MOUNT, the hill Parnassus, fabled to have been the residence of the Muses.

AONIDES, in mythology, one of the many appellations of the Muses ; so called from Aonia.

AONIS, in entomology, a species of papilio, a native of India.

AOR, a small island lying off the east coast of Malacca. Lat. 2° 25′ N., long. 104° 35′ E. Ships bound from China to the straits of Malac- ca generally anchor here if they can make the island in the morning. It stands very high above the sea, and is covered with a thick and lofty wood. Here is a small village of Malays, who supply vessels with cocoa nuts and vege- tables.

AORASIA; from a, negative, and opaw, to see; in antiquity, the invisibility of the gods. The opinion of the ancients with regard to the appearance of the gods to men, was, that they never showed themselves face to face, but were known from their very manner as they withdrew. Neptune assumed the form of Calchas to the two Ajaxes ; but they knew him not till he turned his back to leave them, and discovered the god by his majestic step as he went from them. Venus appeared to Aneas in the character of a huntress, but her" son knew her not till she de- parted from him, her divinity was thenr betrayed by her radiant head, her flowing robe, and her majestic pace.

AORIST ; aopi

AORISTIA, in the sceptic philosophy, de- notes that state of the mind

wherein we neither assert nor deny any thing positively, but only speak of things as seeming or appearing to us in such a manner. The aoristia is one of the great points or terms of scepticism, to which the phi- losophers of that denomination had continual recourse by way of explication or subterfuge. Their adversaries, the Dogmatists, charged them, however, with asserting the principles and posi- tions of their own sect to be true and certain.

AORNUS, a high rock of India, which derives its name from its extraordinary height, as being above the flight of a bird. Its circuit is above two miles, its height eleven furlongs, and the way leading up to the top artificial and narrow. This rock was taken by Alexander the Great, in whose time there was a report that Hercules had at- tempted it in vain. While the Macedonian mo- narch was preparing all things necessary for the siege, an old man with his two sons, who had long lived in a cave near the summit, came and offered to show him a private way of ascending. This being readily accepted, Ptolemy with a con- siderable body of light-armed troops, was des- patched with them, with orders, in case they suc- ceeded, to entrench themselves strongly upon the rock in the wood to which the old man was to direct them, before they ventured to attack the Indians. Ptolemy exactly executed his orders ; and gave notice, by a lighted torch set upon a pole, that he had got safely up. Upon this Alexander gave immediate orders for a body of troops to attempt the passage by which the rock was commonly ascended ; but they were repulsed with great slaughter. The next day, when Alex- ander renewed the attack, though Ptolemy at- tacked the Indians in the rear, the Macedonians were again repulsed on both sides. At last the king, perceiving that the strength of the Indians lay in the straitness and declivity of the way by which they were attacked, caused a great quantity of trees to be felled, and with them filled the cavities between the plain on which the Indians were encamped and the highest of his own advanced posts. The Indians at first derided his undertaking ; but at length sent de- puties to propose terms of capitulation. Alex- ander, suspecting that their design was only to amuse him till they made their escape, withdrew his guards from the avenues. As soon as he knew the Indians were descended, he, with 700 of Ptolemy's light-armed foot, took possession ot the deserted rock, and then made a signal for his forces to fall upon the flying Indians. They, set- ting up a loud shout, so terrified the fugitives, that numbers of them fell from the rocks and precipices, and were dashed to pieces, while the greatest part of the remainder were cut off in the roads.

AORTA, aopTi); the great artery which rises immediately out of the left ventricle of the heart. Aorta is divided into two grand trunks, distinguished by the epithets ascending and ties-

ccnding. See ANATOMY. The annexed diagram represents a part of the trunk of the Aorta turned inside out ; a «, the glandulous membrane ; b b, the vascular membrane ; c, the internal tunic.

AORTF., or ORTEVILL.E, an ancient town of Gascony, now included in the department of the Landes, arrondissement of Dax. The number of houses about 200. Four leagues south of Dax.

AOSTA, a duchy in Piedmont, separated by the Alps from Savoy and the Valais, and bounded on the east and south by the Novaresse, and the provinces of Biella and Ivrea. The aspect of trie country is mountainous, but there are several valleys of great extent, particularly the Val d' Aosta. These low grounds are very fruitful in wine, oil, and pasture. The mountains yield iron and copper, and forges for these metals are very numerous. The inhabitants amount to about 66,000. A prince of the royal family C frequently the king's brother) takes his title from this duchy.

AOSTA, the chief town, is seated on the Doria, at the foot of the Alps, where the great commer- cial roads from Savoy and the Valais to Piedmont, over the Great and Little St. Bernard, meet. The bishop is subordinate to the arch- bishop of Milan. The town is large, but ill built and thinly peopled : the only edifice of note is the episcopal palace. Population 5550. Twenty-five miles N. \V. of Ivrea, 150 N. N. W. of Turin.

AOSTA, a town of Syria, the residence of a Maronite patriarch, and thirty-five miles south of Tripoli.

AOTUS, in botany; fiom a, without, and ac, r, an ear; Class arid order, decandria mo- no'iynia. Natural order, papilionaceae of Lin- luvus; Leguminosaj of Jussieu. 1 t.s generic cha- racter: CAI,. perianth inferior, one leaf, bell- shaped: con. papilionaceous, five petals : STAM. filaments ten, separate, awl-shaped, ascending, nearly equal, smooth, deciduous; antheree oval, of two cells: i'is-| . germen roundish, with the rudiments of two seeds; style thread-shaped, parallel to the stamina, but rather longer, twisted alter impregnation, stigma simple, bluntish : I'Miic. legume nearly orbicular, acute, of one cell and two concave linn valves : SEEDS two, elliptical, insetted into the middle of the upper inai'mn ol each \alvc, without any crest or ap- pet](l;r_e. K.vsential characters: CAT,, simple, live-cleft, two-lipped : con. papilionaceous; wings >hortei- linn the standard : STAM. decidu- ous : vn LI, thread-shaped: STK;. obtuse : LEG. ot one cell, and two \alves: SET.DS two, with- out a irest; is nearlv allied to Pultensea, and had previously been confounded therewith, but besi the

want of appendages to the calyx, and 'if a strophiolmn, or a cat, to the seeds, the style

is not awl-shaped, but almost capillary, variously twisted as soon as the flower falls, rather swelling upwards, and the stigma is obtuse. One species only has been described : A. villosa, hairy aotus.

AOUTA, the name of the paper mulberry tree of Otaheite, in the South Sea, from which a cloth is manufactured that is worn by the principal inhabitants. The bark of the trees is stripped off and soaked ; the fibres of the inner coat are then carefully separated from the rest of the bark ; they are placed one by the side of another, till they are about a foot broad ; and two or three layers are laid one upon the other. It is after- wards beaten on a smooth piece of wood with instruments marked length-ways, with small grooves of different degrees of fineness; and by means of this becomes as thin as muslin. After bleaching it in the air to whiten it, it is fit for use. This cloth is cool and soft, but as liable to be rent as paper. The colors with which it a dyed are principally scarlet and yellow. APACE'. On pace, in speed, in haste. When sparkling stars, amid the heaven's face, With twinkling light shone on the earth apace, That while they brought about the nightes chare, The dark had dim'd the day ere I was ware.

Mirror for Magistrate, 1587. Or when the flying libbard she did chace, She could then nimbly move, and after fly apace.*

Spenser.

Ay, quoth my uncle Glo'ster, Small herbs have grace, ill weeds do grow apace : And since, metblnks, I would not grow so fast, Because sweet flow'rs are slow, and weeds make haste.

S/takspeare,

He promis'd in his east a glorious race ; Now, sunk from his meridian, sets apace. Dryden. Is not he imprudent, who, seeing the tide making haste towards him apace, will sleep till the sea over- whelm him. Tillotson.

Night wears apace, And day-light must not peep on dark designs.

Dry den's Duke of Guise. The baron now his diamonds pours apace ; Th' cmbroider'd king, who shows but half his face, And his refulgent queen.

Pope's Rape of the Lock.

Gallop apace, bright Phrebus, through the sky, And dusky night, in rusty iron car, Between you both shorten the time I pray, That I may see that most desired day, When we may meet these traitors in the field.

Marlow's Edward II.

Borne on the swift, though silent, wings of time, Old age comes on apace to ravage all the clime.

Beattie't Minstrel.

APACHES, a people of New Mexico in North America, who revolted against the Catholic king, massacred several of his officers, and committed the greatest devastation, and have ever since re- mained the allies, not the subjects, of the Spa- niards.

APACTIS ; Afl-aicroc, abductus,from airajw, in botany. Class, dodecandria. Generic character : CA L. none : COR. four-petalled : PET. roundish, con- cave, unequal, two broad : STAM. filaments from sixeen to twenty : PIST. germ superior : STYLE none. Essential character : COR. four-petalled : CA i.. none. There is but one species, the A. Ja- ponica.

, illiterate persons. This term was particularly used among the French in the time of Huet ; when the men of wit at Paris were divided into two factions, one called, by way of reproach, apaedeutae, and the other eruditi. The apaedeutae are represented by Huet as persons who, finding themselves either incapable or un- willing to undergo a severe course of study, in order to become truly learned, conspired to decry learning, and turn the knowledge of antiquity into ridicule, thus making a merit of their own incapacity. The apredeute were, in fact, the men of pleasure ; the eruditi the men of study. The apaedeutae preferred the modern writers to the an- cient, to save themselves the trouble of studying the latter : the eruditi derided the moderns, and valued themselves wholly on their acquaintance with the ancients.

APJEDUSIA; from a, and ircutiui, instruction; ignorance or unskilfulness in what relates to learning and the sciences.

APAGMA, a term used by some writers in chirurgery, for the thrusting of a bone, or other part, out of its proper place. But it is more properly used for

a fracture of a bone at or near the part where it is articulated with another.

APAGOGE; from avo, and ayw, I bear; in the ancient Athenian law, the carrying a criminal to the magistrate. If the accuser was not able to bring him to the magistrate, it was usual to take the magistrate to the house where the criminal lay concealed, or defended himself.

APAGOGE, in mathematics, is sometimes used to denote a progress or passage from one propo- sition to another; when the first, having been once demonstrated, is afterwards employed in the proving of others.

APAGOGICAL ; airayuyij ; from OTTO, and oyw, to lead away. See its application in the following citations.

If this be not admitted, I demand a reason •why any other apagogical demonstration, or demonstration ad absurdum, should be admitted in geometry rather than this ; or that some real difference be assigned between this and others, as such.

Berkeley' Work. Analytt.*

There are two sorts of mathematical demonstration. The one is called direct, and takes place when a con- clusion is inferred from principles which render it ne- cessarily true : and this, though a more perfect or more simple sort of truth, is not more convincing than the other ; which is called indirect, apagogical, reducens ad absurdum, and which takes place, when, by sup posing a given proposition false, we are necessarily led into absurdity. Beattie't Moral Science, vol. ii.

APAKOOKIT, a town in the district of Que- dah, Malay peninsula, six miles south-east from Allestar, inhabited chiefly by Chuliass. The soil is sandy and light, but produces abundance of grain.

APALACHE BAY, a bay in the Gulf of Mexico. Lone. 84° 30′ W., lat. 29° 50′ N.

APALACHES, or ST. MARK'S RIVER, a river of North America, rising in East Florida, in north latitude 31° 30', near the north-west source of Great Satilla river, running south-west through the Apalachy country into the bay of Apalachy in the jrulf of Mexico, about fifteen miles below St. Mark's. Its course is about 135 miles, and it falls into the bay near the mouth of the Apalachicola river.

APALACHIAN MOUNTAINS. SeeALLEGA NY MOUNTAINS.

APALACHICOLA, a river of America, run- ning between East and West Florida, which, after a course of 300 miles, falls into the gulf of Mexico at Cape Blaize.

APALACHINE, in botany, a name given by some authors to the shrub cassine vera Florida- norum of other writers. This plant is used as tea, and much celebrated.

APALACHY COUNTRY extends across Flint and Apalaches rivers in East Florida, having the Seminole country on the north-east. Apalachy or Apalachia is also the name of a town and har- bour in Florida, ninety miles east of Pensacola, and the same distance west from Del Spiritu Santo River. The tribes of the Apalachian In- dians lie round it.

APALUS, in entomology, a genus of the cc- leoptera order. There is but one species, the A. bimaculatus, or pyrochroa bimaculata of De- geer; found early in the spring in the sandy parts of Sweden.

APAME, the daughter of Artabazus the Per- sian, wife of Seleucus Nicator, and mother of Antiochus Soter king of Syria,

APAMEA, or APAMIA, a city of Bithynia, formerly called Myrlea, from Myrlus, general of the Colophonians ; destroyed by Philip VI. king of Macedon, and given to his ally Prusias, who rebuilt it, and called it Apamea, from the name of his queen Apama. Stephanus says, that Ni- comedus Epiphanes, son of Prusias, called it after his mother ; and that it had its ancient name from Myrlea, an Amazon. The Romans led a colony thither, called Colonea Apamena.

APAMEA,' called also Cibotos, a city of Phrygia, seated at some distance from the Meander, or, as would seem from a coin of Tiberius, on the Meander ; so named from Apame, the daughter of Artabazus. The rise of Apamea was owing to the ruin of Celenae.

APAMEA, now called Famia, a strong city of Syria, below the confluence of the Orontes and Marsyas; situated in a peninsula formed by the Orontes, and a lake. ' It was here,' says Strabo, ' that the Seleucidae had established the school and nursery of their cavalry.' The soil of the neighbourhood, abounding in pasturage, fed no less than 30,000 mares, 300 stallions, and 500 elephants ; instead of which, the marshes of Famia at present scarcely afford a few buffaloes and sheep. To the veteran soldiers of Alexander, who here reposed after their victories, have suc- ceeded wretched peasants, who live in perpetual dread of the oppressions of the Turks and the inroads of the Arabs. Such are the effects of despotism an.d ignorance.

APANAGEˆ or APENKAGE, in the ci-devant French customs, lands assigned by a sovereign for the subsistence of younger sons, which re- verted to the. crown upon the failure of male issue in that branch to which the lands were granted.

APANORMIA, a populous town and pro- montory on the north-west coast of the Turkish island of Santorin, in the Archipelago, six miles N.N.W. of Scaro. Small vessels cannot anchor in the harbour of this town on account of th»

extreme depth of the water. Long. 25° 24′ E., lat. 36° 38′ N.

APANTHROPY', in medicine, denotes a love of solitude, and aversion for the company of mankind. Apanthropy is reckoned among the species or degrees of melancholy ; and also passes for an ill indication in leucophlegmatic cases.

APARGIA, a genus of the class and order syngenesia polygamia scqualis. The essential character is : CAL. subimbricate, with linear, parallel, unequal scales : DOWN plumose, sub- sessile : RECEPTACLE naked, subvillose. There are seven species so much resembling the dande- lion that they were formerly confounded. See HEDYPNOIS.

APARINE; from pivq, a file; because its bark rasps like a file. Cleavers, or goose-grass. This plant, which is common in our hedges and ditches, is the galium aparine; carinatis scabris retrorsum aculeatis, geniculis venosis, fructu hispid o, of Linnaeus. The juice has been given with advantage as an aperient and diuretic in incipient dropsies ; but the character in which it has of late been chiefly esteemed is that of an ;.nticarcinomatous remedy. A tea-cup full, gradually increased to half a pint two or three times a day, is said to be good in cancers.

APAIUTHMKSIS ; from a-Trapifyitw, I num- ber; in rhetoric, is a figure whereby that which might be expressed in few words is branched out into several particulars, by means of the particles firstly, thru, or moreover, finally, &c.

APART', } In part, apart distinct from

AI'AUT'MFNT. $ another part, orthe remainder. Aside, unconnected, not

in contact. Apartment, a division defined by some distinct boundary; applied to a suite of rooms. Lodgings.

For apart i we knowen, and njiarti we proficien, but whame that schal lice that in \ arfaitc, that thing that is of parti schal be auoidcd.

Wiclif. 1 Corynth. ch. xiii.

1 never sawe my lady laye

Surrey, p. 328. So please you, madam,

To pul tt;iarf li.ese your attendants. Shakspeare.

'Je is so very !;_urative, that lie requires a gram- mar uiiart to construe Iiim. Dryden, The Urant shall demand yon sacred load,

And <:old ana vessels, set n/i'urt for God. Prior.

Since I eni-r into that question, it hehovcth me to uive ivason for my opinion, with circumspection; he- cause I walk aside, and iu a way it[tart from tlie mul- titude. Raleiyh.

The party

Clarendon. A private '-allcry V..i\t. lh' ,ip(/i-i;nrnf.i led,

Not 10 the h,e yet known. Kr J. Denham.

A massy portcullis gate leads to the ruins of what was once the habitable part, of the castle, in which a large \aulted hull is the most remarkable uparfment. dill/in' Tour to the Lakes.*

AI'ARTKM I',\! S, or Ai'Airi ISMKNUS, in the .-j'.eient poetry, mi appellation given to a verse •-vliirh comprehended ;m entire sense or sentence .•i its, If

of which is, that they have filiform feelers ; on« tooth in each jaw ; membranaceous lip; and pet- foliated antennae. This genus includes some of the Linmean dermestes, as capucinus and do- mesticus.

AP'ATHY, ^ AwaQtia ; a, privative, and

APATHET'IC, >va9og, feeling. Want of

APATHIS'TICAL. J feeling; absence of passion ; insensibility.

What is called by the stoics apathy, or dispassion ; by the sceptics indisturbance ; by the Molinists quiet- ism ; by common men peace of conscience ; seems all to mean but'great tranquillity of mind.

Sir Wm. Temple's Work.*

Of good and evil much they argued them, Passion and apathy, glory and shame. Milton.

To remain insensible of such provocation, is not constancy, but apathy. South.

In lazy apathy let stoics boast

Their virtue fix'd ; 'tis fixed as in frost,

Contracted all, retiring to the breast;

But strength of mind is exercise, not rest. Pope. I am not to be apathetic like a statue.

Harris on Happinest.

Fontenelle was of a good-humored and apathiiti- cal disposition. Seward's Anecdotet.

APATHY, among the ancient philosophers, implied an utter privation of passion, and an in- sensibility to pain. The stoics affected an en- tire apathy : they considered it as the highest wisdom to maintain perfect calmness and tran- quillity of mind; incapable of being ruffled either by pleasure or pain. In the first ages of the church the Christians adopted the term apathy to express a contempt of all earthly concerns, or a state of mortification. Quietism is only another name for apathy disguised under the appearance of devotion.

APATIT, a mineral, divided by the German mineralogists into two varieties, the crystallised and earthy. The usual color of the crystallised is some combination of the colors green, blue, and red ; that of the earthy a yellowish or gray- ish white. More than ninety parts in a hundred of this mineral consist of lime and phosphoric acid. It is found in Saxony, Bohemia, an(J Spain. It is the phospholite of Kirwan.

APATURIA; fromaTrarjj, fraud; in antiquity, a solemn feast celebrated by the Athenians in honor of Bacchus. It is said to have been in- stituted in memory of a fraudulent victory ob- tained by Melanthus, king of Athens, over Xanthus, king of Bceotia, in a single combat, which they agreed upon

to put an end to a de- bate between them relating to the frontiers of their countries. Hence Budaeus calls it festum deceptionis, ‘ the feast of deceit.’ This feast lasted four days: the first day those of the same tribe made merry together; and this they called dopTria. The second day, which they called avappwric, they sacrificed to Jupiter and Minerva. The third day, which they called sspswrtc, such of their young men and maids as were of age were admitted into their tribes. The fourth day they called £7rt/35jjc.

APAULETERIA, in antiquity, a garment presented by the bride to the bridegroom on the second or third day of a marriage.

APAULIA, in antiquity, the third day of a marriage solemnity. It was thus called, because

the bride, returning to her father’s house, did cnravX&aQai ria vvfiˆna, lodge apart from the bridegroom. On that day the bride presented her bridegroom with a garment, called a-xav- \rjrrjpia.

APAUME, in heraldry, a hand opened, and a full palm appearing, with the thumb and fingers extended. It is seen in the arms of a baronet of England.

APE’, A A word supposed to be ver-

APE’ISH, fnacular in the country from

APE’ISHLY, (which the animal so called

APE’ISHXESS.) originally came. By others derived from the German aben, to imitate, from the well-known propensity of apes.

Sith it is no new thinge a fonde ape to make mockes

and mowes, I wyl as I say leaue of thys felowes

folishe apishenesse, and I shall goe to the matter self.

Sir Thos. More’s Works, fol. 736. ch. i.

But this is a meruail that this good religiouse pa- rishioners at Easter time do seke some by chappel, or some mock Christian mok whiche may prepare and deliuer vnto them the apish and coutrefet supper.

Caluyne.

I will be more newfangled than an ape ; more giddy in mv desires than a moukey. Shakspeare.

Writers report, that the heart of an ape worn near the heart, comforteth the heart, and increaseth auda- city. It is tme that the ape is a merry and bold beast. Bacon.

With glittering gold and sparkling gems they shine ; But apes and monkeys are the gods within. Grancille. Celestial beings, when of late they saw

A mortal man unfold all nature's law,

Admir'd such knowledge in a human shape,

And show'd a Newton, as we show an ape. Pope. Fashion, leader of a chattering train,

Whom man for his own hurt permits to reign ;

Who shifts and changes all things but his shape,

And would degrade her votary to an ape ;

And, when accomplished in her wayward school,

Calls gentleman, whom she has made a fool.

Cowper.

APE, in zoology, the general English name of a very numerous race of animals, comprehend- ing apes properly so called, or such as want tails ; and monkeys and baboons, or such as have tails, the former long, and the other short ones. See SIMIA.

APE, SEA, a name given by Steller to a marine animal which he saw on the coast of America.

APECHEMA, cnrtxWi m medicine, the same with contrafissure.

APEE, one of the new Hebrides in the South Sea, near Mallicolo, of considerable height from the sea, and beautifully diversified with wood and herbage. It is 24 miles long, and about 60 in circumference. Long. 168° 32′ E., lat. 16° 42′ N.

APEEK, in navigation, a term to express the tightness of the cable bringing the vessel right on the anchor.

APELLA, among physicians, a name given to those whose prepuce is either wanting or shrunk, so that it can no longer cover the glans. Many authors have supposed this sense of the word apella warranted from the passage in Horace, credat Judseus Apella, Non ego.

APELLES, one of the mosfcelebrated painters of antiquity. He was born in the Isle of Cos, ami tlourished in the time of Alexander the

Great, with whom he was in great 'avor. He executed a picture of this prince holding a thun- derbolt in his hand ; a piece finished with so much skill and dexterity, that it used to be said there were two Alexanders; one invincible, the son of Philip; the other inimitable, the produc- tion of Apelles. It is well known also that Alexander forbade any one to paint his portrait beside Apelles. Alexander having employed him to draw Campaspe, one of his mistresses, and found that he had conceived an affection for her, he resigned her to him ; and it was from her, as a model, that Apelles is said to have drawn his Venus Anadyomene. Grace was the charac- teristic of this artist. His pencil was so famous for drawing fine lines, that Protogenes discovered by a single line that Apelles had been at his house. Protogenes lived at Rhodes: Apelles sailed thither, and went to his house with great eagerness, to see the works of an artist who was known to him only by that name. Protogenes was gone from home; but an old woman was left watching a large piece of canvas, which was fitted in a frame for painting. She told Aptlles that Protogenes was gone out; and asked him his name, that she might inform her master who had inquired for him. 'Tell him,' says Apelles, ' he was inquired for by this person ;' at the same time, taking up a pencil, he drew on the, canvas a line of great delicacy. When Protogenes returned, the old woman acquainted him with what had hap- pened. The artist, upon contemplating the fine stroke of the line, immediately pronounced that Apelles had been there ; for so finished a work could be produced by no other person. Proto- genes, however, himself drew a finer line of another color; and, as be was going away, ordered the old woman to show that line to Apelles if he came again, and say, ' This is the person for whom you are inquiring.' Apelles returned, and saw the line: he would not for shame be overcome ; and, therefore, in a color different from either of the former, he drew some lines so exquisitely delicate, that it was utterly impossible for finer strokes to be made. Proto- genes now confessed the superiority of Apelles, flew to the harbour in search of him, and re- solved to leave the canvas with the lines on it, for the astonishment of future artists. An in- timate friendship subsisted ever after between Apelles and Protogenes, a thing of rare occur- rence in the history of rivals. But Apelles was incapable of jealousy or envy. He acknow- ledged that Protogenes was in some respects superior to himself; but that in one particular himself excelled, viz. in knowing when to take his hand from the picture; an art which Protogenes had not yet learned, and*

therefore over-worked his pieces. Apelles equally disapproved of too elaborate diligence, or too hasty negligence in execution. A studied work of Protogenes he esteemed less on the one account; and on the other, when a painter once brought him a picture, and said, ‘ This I painted in a hurry ;’ he re- plied, ‘ Though you had not told me so, I per- ceived it was painted in haste; but I wonder you could not execute more such pieces in the same time!’ It was customary with Apelles to expose to public view the works which he had finished,

*and to hide himself behind the picture, in order to hear the remarks passed on it by persons who chanced to view it. He once overheard himself blamed by a shoemaker, for a fault in the slip- pers of some picture: he corrected the fault which the man had noticed : but, on the day following, the shoemaker began to animadvert on the leg; upon which, Apelles, with some anger, looked out from behind the canvas, and bade him keep to his own province; ‘ Ne sutor ultra crepidam.’ A remarkable proof is given of this painter’s freedom in expressing the mortification he felt, when a work of his was not sufficiently commended. ‘ Alexander,’ says JEAian, ‘ having viewed the picture of himself, which was at Ephesus, did not praise it as it deserved. But when a horse was brought in, and neighed at seeing the figure of a horse in the picture, as though it had been a real horse; ‘ O king!’ said Apelles, * this horse seems to be by far a better judge of painting than you.’ In finishing a drawing of this animal, a remarkable circum- stance is related of him. He had painted a horse returning from battle, and had succeeded to his wishes, in describing every other mark that could indicate a mettlesome steed, impatient of restraint; there was wanting nothing but a foam of a bloody hue, issuing from the mouth. I le again and again endeavoured to express this, but his attempts were unsuccessful. At last, with vexation, he threw against the reins of the horse a sppjige, which had in it many colours ; a mixture of which coming out of the sponge, and tinging the reins, produced the very effect desired by the painter. The most celebrated of the works of Apelles were the picture of Alex- ander in the temple of Diana at Ephesus, and that of Venus emerging from the sea. Alex- ander was drawn with thunder in his hand; and such relief was produced by the chiaroscuro in this piece, that the finger seemed to shoot for- ward, and the thunder-bolt to be out of the picture. His Venus Avaˆvoˆitvri was esteemed llu.’ most exquisite figure which the pencil could create.*

Ai'ELi.ES, a heretic, who flourished about A. I). 178, who taught that there was a good and a bad principle; denied the resurrection; and pretended that the prophets contradicted each other; and that Christ, having received his body from the elements, left it dissolved in the air, and ascended into heaven without one !

AI'ELI.KS, in entomology, a species of scara- kuus, found at the Cape of Good Hope. Also, a species of hespericae, one of the papilio pleb. rural, of Linnaeus, a native of New Holland.

Al'ELLICON, a peripatetic philosopher, to whom the world is, in a great measure, indebted lor the works of Aristotle ; he having purchased them at a. very high price about ninety years be- fore Christ. He brought his purchase from Scepsis to Athens, where he caused the MSS. to be copied. They were afterwards seized by IScylla, and carried to Rome.

APELMAN (Barent), a Dutch painter, born at the Hague in 1640. He excelled in painting landscapes; his scenes are mostly taken from \K\S about Rome and other parts of Italy; the figures in lu> pieces are but indifferent. On

his return to Holland, he was employed by the Prince of Orange; in the hall of whose palace at Soesdyck are several of his landscapes, and a few of his best portraits. He died in 1686.

APENE, mri]vr], chariot, in antiquity; a kind of chariot, wherein the images of the gods were carried in procession on certain days, attended with a solemn pomp, songs, hymns, dancing, 8cc. The apene, or sacred chariot of the Greeks, is called tensa. It was very rich, made of ivory or silver, and variously decorated.

APENNINES. See APPENNINES.

APENNIS, in ancient laws, a deed or instru- ment made in favor of a person, who has los» the title-deed to his house or land, by fire, or other accident. In such case an assembly of the people of the neighbourhood being called, and an exact enquiry being made before the judge, another instrument was framed, to confirm and secure the person's right.

APENRADE, a town of Denmark, in the duchy of Sleswick, seated at the bottom of a gulph in the Baltic Sea, between Flensbourg and Hadashleben, twenty-six miles north from Sles- wick. Long. 9° 26'. E, lat. 55° 3′ N.

APENZEL. See APPENZEL.

APEPSY, a defect in the stomach, which prevents the aliment taken in from

affording a proper chyle for supplying the blood, and nourishing the body. Abstemiousness and ex- cess are alike causes of indigestion. The me- thod of treatment in the apepsy is the same as in the anorexy.

APER (Marcus), a Roman orator of the first century. Some writers have attributed to him the ‘ Dialogue of Orators,’ which has been fre- quently printed with the works of Tacitus and Quintilian. He died about 83.

APER, in ichthyology, the name of a sea-fish, called by some strivale and Hondo. It ap- proaches very much in shape to the dory, but is much smaller.

APER, in zoology, a synomyme of the sus scrofa.

APER MOSCHIFERUS, a name by which many authors have called the tajacu of America.

APER PISCIS, a name by which some authors have called the capriscus.

APEREA, in zoology, a small American ani- mal, of the rabbit kind, and seeming to be of a mixed nature between the rabbit and the mouse, having exactly the short roundish ears of the mouse, and all the other particulars of the rabbit. It grows, at its full size, to ten or twelve inches long, and its hair is of the color of the hare on the back and sides, and whitish on the belly. •

APERIENS, CROCUS MARTIS, saffron of iron, a preparation of iron plates or filings, made by exposing them to the rain or dew, till they con- tract a rust ; which is reckoned a fine aperient medicine.

APERIENS PALPEBRAM REcrus,a name given by some anatomists to the levator palpebrae su- perioris. See AN ATOMY.

APERIENTS, in the materia medica, are medicines that facilitate the circulation of the humors by removing obstructions. The five aperient roots of the shops are smallage, fennel, asparagus, parsley, and butcher’s broom. The

five lesser aperients are, madder, grass, eryngo, capers and chammoc.

APERISTATION ; from a, without, and irt- pi«ra(Tic, unfavorable

circumstance ; in the ancient physic, denotes a mild ulcer, not attended with any severe symptom.

APERT, -N Aperio, apertum ; ad, and pario,

APER'TION, / to bring forward, or into view.

APERT' LY, \Public, unconcealed. All the

APERT'NESS, i included words are obsolete,

AP ERTURE. j excepting the last word, which

signifies an opening, and is usually confined to

physical space.

Holi churche, quath Pandulf, so ntzuol is and was,

That he ne sal no prelat sette adoun without aperte

trespas. R. Gloucester, p. 501.

Si ben he went to Durham and gaf Saynt Cuthbert,

Londes and libes with chartir aperte.

R. Brunne, p. 29.

Thus seest thou apertly thy son-owe into wele mote ben chaunged, wherefore in such case to better euer- laore encline thou shouldest.

Chaucer. Test of Love, bk. ii. fol. 304. ch. i.

Whiche asketh not to ben apert, But in silence and in couert Desyreth for to be beshaded.

Gower. Con. A. bk. iv. p. 119. An aperture in the mountains brought us into ano- ther wild recess.

Gilpin'i Tour to the Lakes of Cumberland, 8fc. The freedom or apertness, or vigour of pronouncing, and the closeness of muffling, and laziness of speak- ing, render the sound different. Holder. The plenitude of vessels, otherwise called the ple- thora, when it happens, causeth an extravasation of blood, either by ruptiou or apertion of them.

Wiseman.

APERTIONS, in architecture, are the open- ings in a building ; as doors, windows, stair- cases, chimneys, outlets and inlets for light, smoke, &c. The apertions should be as few as may be ; it being a rule, that all openings are weakenings ; and they should not approach too near the angles of the walls.

APERTOR OCULI, in anatomy, a name given by Spigelius to the levator palpebrse superioris.

APERTURA FEUDI denotes the loss of a feudal tenure, by default of issue to him to whom the feud or fee was first granted.

APERTURA TABULARUM, in ancient law books, signifies the breaking open a will.

APERTURE, in geometry, the space between two right lines which meet in a point and form an angle.

APERTURE, in optics, around hole in a turned bit of wood, or plate of tin, placed within the side of a telescope or microscope, near to the object-glass, by means of which more rays are admitted, and a more distinct appearance of the object is obtained. According to Huygens, the size of the aperture of an object-glass of thirty feet is as thirty to three ; i. e. as ten to one, so is the square root of the focal distance of any lens, mul- tiplied by thirty to its proper aperture. Mr. Aout says, he found the proper apertures of tele- scopes ought to be nearly in the sub-duplicate ratio of their length. Object-glasses, however, will admit of greater apertures, if the tubes are blackened on the inside, and their passage fur- oished with wooden ring',

APEUCTIC; from afl-twˆo/tat, I deprecate; i» ancient poetry, a kind of poem or prayer pre- ferred to the Deity for the averting some evil.

A'PEX; from the obsolete apere, vmculo com- prehendere ; a kind of cap ending in a pointed top, such as was worn by the priests of Mars, called salii. It very nearly resembled the mitres of our bishops. Figuratively, and in its general sense, the top, summit, highest degree, of any thing.

APEX, in antiquity, the crest of a helmet, but more especially a kind of cap worn by the Flamens.

APEX is used, by grammarians, for a long accent or mark, to denote that a syllable is to be pronounced long. See ACCENT.

APHACA, in ancient geography, a town in Syria, situated between Heliopolis and Byblus, near Lebanon ; celebrated for a temple of Venus called Aphacitis, near which was a lake round which fire usually burst

forth, and its waters were so heavy that bodies floated on them. The temple was destroyed by Constantine, as being a school of incontinence.

APH./ERESIS, aˆaiptfftc ; a figure in gram- mar that takes away a letter or syllable from the beginning of a word.

APH.ERESIS, in medicine, denotes a necessary taking away or removal of something that is noxious. In surgery it signifies an operation whereby something superfluous is taken away.

APHANES, a genus of the monogynia order, and tetandria class of plants, and, in the natural order, senticosae. The essential characters are : CAL. divided into eight parts : COR. none : SEEDS two, and naked. There is only one species : A. arvensis, or parsley-piert, a native of Britain. It is extremely common in corn-fields. The stalks rise five or six together ; they are three inches long, hairy, and procumbent : the leaves stand very thick upon them, and are roundish, but divided, as it were, into three parts, and those deeply serrated at the edges. The flowers come out in a double series, arranged all along the branches, and are of a greenish white, and the whole plant is of a grayish or whitish green color.

APHANITE, the name given by Haiiy to a compound rock, in which amphibole is the pre- dominant principle. It is a green-stone, the distinction of whose parts is indiscernible. Apha- nite is included by older mineralogists among the rock called corneennes, or lapis corneus trapezius.

APHASIA ; from a, and 0jj/u, I speak ; in the sceptic philosophy, denotes a state of doubt. In this sense, aphasia stands opposed to phasis, under which are included both assertion and negation.

APHELANDRIA, in botany, a genus of plants discovered by Mr. Brown. They derive their name from aˆfXqc, simple, and avqp, a male, expressing the simple structure, or single cell, of the antherse, one of the most distinguish- ing characters of this genus. Class, didynamia; order, angiospermia. Natural order, personatae, Linn. ; acanthi, Juss. ; acanthaceae, Brown. Its general characters are : CAL. perianth inferior, one leaf, in five erect segments : COR. one petal.

limb in two unequal acute lips : STAM. filaments four, erect, inserted into the tube of the corolla, two long ; antherae incumbent, acute at each end, of one cell : PIST. germ superior, ovate ; style thread-shaped ; stigma simple : PERIC. capsule oblong, two cells : SEEDS two in each cell,

roundish. Its essential characters are : CAL. five deep unequal segments : COR. lower lip un- divided : ANTHERS single-celled ; capsule bi- valved, and with two cells : SEEDS subtended by spines. 1. A. cnstata. Dense-spiked aphelan- dria; a native of Cayenne and the Caraccas. 2. A. pulcherrima, downy-leaved aphelandria; a native of South America. 3. A. scabra, rough- leaved aphelandria, a native of South America.

APHELIA ; from atptXrjg, simple ; in rhetoric, simplicity of diction.

APHELIA, so called from as\r)s, simple, in allusion to the great simplicity of the structure of the flower. Class, monandria ; order, monogy- nia. Natural order, restiaceae, Brown. Its ge- neric characters are : CAL. sheath of several im- bricated scales ; the lower ones longer than the rest : c OR. one membranous valve ; STAM. one capillary filament ; simple anther: PIST. germ. single-seeded; one, thread-shaped style; stigma solitary and undivided: PERIC. membranous capsule, one valve, and one cell : SEED solitary. Its essential characters are : scales two-ranked, single-flowered : COR. one valve : ANTHER sim- ple : srii.MA one: CAPSULK bursting longitudi- nally, at one side : SEED solitary. There is but one known species: A. cyperoides cyperus, spiked aphelia, a native of the south of New Holland.

APHELION; from <7-o, and 77X100, the sun; that part of the orbit, or planet, in which it is at the point remotest from the sun. This also ap- plies to a satellite ; for the moon has her aphe- lia as well as tin; planets.

APHERNOUSL1, a species of pine growing wild on the Alp. The timber is large, and the planks made of it are of a. finer grain, and more beautifully variegated, than common deal ; and Miay thuretore be applied to many uses. It _;n>\vs m bleak and barren ground, and most re- sembles that which is railed in England the \ eymouth pin*1.*

A 1 '1 1 1'.S I S ; from n^nipi, I remit ; in the Athe- nian laws, was implied to the case of a person

- '

deeply

the debt,

'uymetit.

F.TK'MA, in the ancient military art, a engines used in the besieeing of towns. Miidas does not mention their particular form or structure. Aojiiina proier tile kind.

Al'IHLAXTHUOPY. See APANTHROPY.

IOC 1 . M. a composition made principally icnip be-fore they rlower. It is rnonu the Arabs, and has the in- it\ of opium.

Armor, or APHIUM, Karahis- Naiolia, in Asiatic Turkey; so se it produ 1 aphinr.i 1.

patrimony of (tthman, the founder -h moiiaicliv. This town is three

miles in circuit, surrounded by walls, and de- fended by a castle surmounting a rock of prodi- gious height. The principal article of commerce is opium, which is obtained from incisions of the head of the white poppy. This plant is raised from seed sown in gardens round the town, and then transferred to more extensive fields. Small transverse slits are made in July, and continued to the end of summer, which oc- casion the exudation of a milky juice, soon growing brown, and acquiring more consistence. Population 60,000. Long. 30° 18'E., lat. 38° 46′ N.

APHIS, in entomology, an interesting and very extensive genus of insects of the Linnaean order hemiptera ; called also plant-louse, vine-fretter, puceron, &c. The great Swedish naturalist de- fines the generic character of the aphis, thus : — beak inflected, sheath of five articulations, with a single bristle ; antennae setaceous, and longer than the thorax ; either four erect wings, or none ; feet formed for walking; posterior part of the abdomen usually furnished with two little horns. Geoffrey says the aphides have two beaks, one of which is seated in the breast, the other in the head ; this last extends to, and is laid upon the base of, the pectoral one; and serves, as that writer imagines, to convey to the head a part of that nourishment which the insect takes, or sucks in, by means of the pectoral beak. The species enumerated by Linnaeus and Gmelin are : longirostris ribis, arundinis, ulmi, papaveris pastinacse, pruni, sambuci, solidaginis, cerasi rumicis, acetosse, ligustici, lychnidis, capreae padi, rosae, hortensis, picridis, aegopodii, dauci, urticata, nymphaeae, corni, tiliae, juniperi, bras- sicae, craccae, lactucae, sonchi, cirsii, cardui, achil- lese, tanaceti, absinthii, millefolii, evonymi, avenae, fraxini, jaceae, betulae, alni, roboris, fagi, quercus, pini, pineti, salicis, vitis, populi, tremulae, vi- burni, mali, bursaria aparines, urticae, aceris, atriplicis, pistacise, persicae, polyanthis, saligna, plantaginis, archangelicae, leucanthemi, scabiosae, fabse, genistae, coryli, juglandis, balsamitae, galla- rum, farinosa, xylostei, and mayeri. The whole of these are found in Europe, and infest an end- less variety of plants. It has been generally believed that each species is attached to one kind of vegetable only ; hence these insects have been hitherto named after the species, or genus

hud' of h

red the people to remit of plants, on which it feeds, or has been found; his disability to for some species are rather uncommon and little known. They abound with a sweet and grateful moisture, and are therefore eagerly devoured by ants, the larva of coccinellae, and many other creatures, or they would become very probably

m to have been of the more destructive to the whole vegetable creation than any other race of insects. The production of this moisture, generally called honey-dew, and their equivocal generation, are the circum- stances which have attracted the particular atten- tion of modern naturalists, and in which they seem to be distinguished from all other parts of the animal world.

They had long been considered among the great quantity of true androgynes; and if Bonnet was not the ie Turks. It was first naturalist who discovered the mysterious course of their generation, his experiments, to- gether with those of his countryman Trembley

tended to confirm, in the most satisfactory man- ner, its almost incredible circumstances. He shut up a young aphis, at the instant of its birth, in the most perfect solitude, and it brought forth in his sight ninety-five young ones. The same experiment being made on one of the in- dividuals of this new family, it soon multiplied like its parent; and one of this third generation, in like manner brought up in solitude, proved no less fruitful than the former. Repeated ex- periments in this respect, as far as the fifth or sixth generation, all uniformly presenting the observer with fecund virgins, were communi- cated to the Royal Academy of Sciences ; when an unforeseen and very strange suspicion, im- parted by Mr. Trembley to Mr. Bonr,et, en- gaged him anew in a series of experiments on the habits of this wonderful creature. In a let- ter from the Hague, dated 27th January, 1741, his friend wrote thus : ' I formed, since the month of November, the design of rearing seve- ral generations of solitary pucerons, in order to see if they would all equally bring forth. In cases so remote from usual circumstances, it is allowed to try all sorts of means ; and I argued with myself — who knows but that one copula- tion might serve for several generations ? This ' who knows,' avouching nothing, was sufficient, however, to induce Mr. Bonnet to bring the matter to the test of experiment. If the fecun- dity of aphides was owing to the secret copula- tion suggested by Mr. Trembley, his previous experiment proved that it

served at least five or more successive generations. Mr. Bonnet there- fore now reared to the amount of the tenth generation of solitary aphides, and had the pa- tience to keep an account of the days and hours of the births of each. In short, it was discovered, that they are really distinguished by sexes : that there are males and females among them, whose amours are the least equivocal of any in the world : that the males are produced only in the tenth generation, and are but few in number ; that these, soon arriving at their full growth, copulate with the females ; that the vir- tue of this copulation is not exhausted at least until the tenth generation ; that all these gene- rations, except the first from the fecundated eggs, are produced viviparous ; and all the individuals are females, except those of the last generation, among whom, as we have already observed, some males make their appearance, to lay the founda- tions of a fresh series. These circumstances have been confirmed by other naturalists. In particu- lar, we have a curious and accurate detail of them by Dr. Richardson of Rippon, in the Philosophi- cal Transactions, vol. xi. art. 22, an extract of which we shall here insert, in order to give the reader as full an insight into the nature of these singular insects as can be done by a mere detail of facts in themselves utterly unaccountable. Mr. Curtis has also contributed an excellent paper on this subject to the Linnaean society. Vide Transactions of Linn. Soc. vol. vi.

Dr. Richardson says, the great variety of spe- cies which occur in the insects now under con- sideration, may make an enquiry into their particular nature seem not a little perplexed : having them, however, skilfully reduced under

their proper genus, the difficulty is, by this means, considerably diminished. All the insects com- prehended under any distinct genus, we may reasonably suppose to partake of one general nature ; and, by diligently examining any of the particular species, may thence gain some insight into the nature of all the rest. With this view I have chosen, out of the various sorts of aphides, the largest of those found on the rose tree ; not only as its size makes it the more conspicuous, but as there are few others of so long duration. This sort, appearing early in the spring, conti- nues late in the autumn ; while several are limited to a much shorter term, in conformity to the different trees and plants from whence they draw their nourishment. If, at the beginning of February, the weather happens to be so warm as to make the buds of the rose-tree swell and appear green, small aphides are frequently to be found upon them, not larger than the young ones in summer when first produced. But there being no old ones to be found at this time of the year, which in summer I had observed to be viviparous, I was formerly not a little per- plexed by such appearances, and almost induced to give credit to the old doctrine of equivocal generation. That the same kind of animal should at one time of the year be viviparous, and at

another time oviparous, was an opinion I could then by no means entertain. . This, however, frequent observation has at last convinced me to be fact; having found those aphides which appear early in the spring to proceed from small black oval eggs, which were deposited on the last year's shoots in autumn ; though, when it hap- pens that the insects make too early an appear- ance, I have observed the greatest part to suffer from the sharp weather that usually succeeds by which means the rose-trees are some years in a manner freed from them. Those which with- stand the severity of the weather seldom come to their full growth before the month of April ; at which time they usually begin to breed, after twice casting off their exuviae or outward cover- ing. It appears then that they are all females, which produce each of them a very numerous progeny, and that without having intercourse with any male insect. As I observed before, they are viviparous ; and, what is equally un- common, the young ones all come into the world backwards. When they first come from the parent they are enveloped by a thin membrane, having in this situation the appearance of an oval egg; which, I apprehend, must have in- duced Reaumur to suspect that the eggs dis- covered by Bonnet were nothing more than mere abortions. These egg-like appearances ad- here by one extremity to the mother ; while the young ones contained in them extend the other ; by that means gradually drawing the ruptured membrane over the head and body to the hind feet. During this operation, and for some time after, by means of something glutinous, the fore part of the head adheres to the vent of the parent. Being thus suspended in the air, it soon frees itself from the membrane in which it was confined, and, after its limbs are a little strength- ened, is set down on some tender shoot, and then left to provide for itself.' ' In the spring

months there appear on the rose-trees but two generations of aphides, including those which immediately proceed from the last year's eggs ; the warmth of the summer adds so much to their fertility, that no less than five generations suc- ceed one another in the interval. One is pro- duced in May, which casts off its covering ; while the months of June and July each supply two more, which cast off their covering three or four times, according to the different warmth of the season. This frequent change of the out- ward covering is the more extraordinary as it is the oftenest repeated when the insects come the soonest to their growth; which I have some- times observed to happen in ten days, where warmth and plenty of nourishment have mutu- ally conspired. From which considerations I am thoroughly convinced that these various coverings are not connate with the insect ; but that they are, like the scarf-skin, successively produced. Early in the month of June some of the third generation, which were produced about the middle of May, after casting off their last covering, discover four

erect wings, much longer than their bodies; and the same is observable in all the succeeding generations, which are pro- duced during the summer months ; without, however, distinguishing any diversity of sex, as is usual in several other kinds of insects. These winged ones have the peculiarity that the num- ber of them does not seem so much to depend on their original structure as on the quantity or quality of the nourishment with which they are supplied ; it being frequently observed that those on a succulent shoot have few or none with wings among them, while others of the same generation, on a less tender branch, are most of them winged; as if only the first rudiments of wings were composed in the former, while nature thought proper to expand them in the latter, that they might be more at liberty to supply their wants. The increase of these insects in the summer time is so very gieat, that, by wounding and exhausting the tender shoot, they would frequently suppress all vegetation, had they not many enemies to restrain them. To enumerate these would exceed the bounds of the present design: there is one, however, so singular in the manner of executing its purpose, that I cannot pass by it without some further notice. This is a very small black ichneumon fly, with a slender body, and very long antennae, which darts its pointed tail into the bodies of aphides, at the same time depositing an egg in each. This egg produces a worm which feeds upon the containing insect till it attains its full growth ; when it is usually changed to that kind of fly from whence it came. In this, however, it is sometimes prevented by another sort of small Mack fly, which wounds this worm through its pearl-like habitation; and by laying one of its eggs therein, instead of the former fly, produces its own likeness. I must, however, further ob- ser\e, notwithstanding these insects have many enemies, they are not without friends; if we may consider those as such who were very officious in their attendance, for the good things tin v expect to reap thereby. The ant and the hee are both of this kind, collecting the honey in

which the aphides abound ; but, with this differ- ence, that the ants are constant visitors, the bee only when flowers are scarce. To which let me also add, that the ants will suck in the delicious nectar while the aphides are in the act of dis- charging it from the anus ; but the bees only collect it from the leaves on which this honey- dew has fallen.

4 In the autumn I find three more generations of aphides to be produced ; two of which make their appearance in the month of August, and the third usually appear before the middle of Sep- tember. As the two first differ in no respect from those which we meet with in summer, it would be wasting time to dwell any longer upon them ; but the third, differing greatly from all the rest, demand sour giving it a more serious atten- tion. Though all the aphides which have hitherto appeared were females, in this tenth generation are found several male insects ; not that they are by any means

so numerous as the females ; being only produced by a small number of the former generation. To which I must further add, that I have observed those which produce males, pre- viously to have produced a number of females ; which, in all respects resembling those already described, I shall decline taking into any further consideration. The females have at first altoge- ther the same appearance with those of the former generation ; but in a few days their color changes from a green to yellow, which is gradually con- verted into an orange color before they come to their full growth. They differ likewise in another respect, at least from those which occur in sum- mer, that all those yellow females are without wings. The male insects are, however, still more remarkable, their outward appearance readily dis- tinguishing them from the females of this and of all other generations. When first produced they are not of a green color like the rest, but of a reddish brown; and have afterwards, when they begin to thicken about the breast, a dark line along the middle of the back. These male insects come to their full growth in about three weeks time, and then cast off their last covering; the whole insect being after this operation of a bright yellow color, the wings only excepted. But after this they soon change to a dark yellow, and in a few hours to a very dark brown ; if we except the body, which is something lighter colored, and has a reddish cast. They are all of the winged sort ; and the wings, which are white at first, soon become transparent, and at length appear like very fine black gauze. The males no sooner come to maturity than they copulate with the fe- males ; in which act they are readily discovered, as they remain in conjunction for a considerable time, and are not easily disturbed. The com- merce between them continues the whole montk of October, and may be observed at all times o the day, though I have found it most frequen about noon ; especially when the weather is mo- derately warm, and the sun overcast. The fe- males, in a day or two after their intercourse with the males, I have observed to lay their eggs ; which they usually do near the buds, when they are left to their own choice. Where there are a number crowded together, they of course interfere with each other ; in which case they will frequently de-

posit their eggs on other parts of the branches, or even on the spines with which they are beset.' The observations of Mr. Curtis are chiefly in- tended to show that the aphides are the principal cause of blights in plants, and the producers of honey-dew. After observing, that in point of number the individuals of the several species composing it surpass those of any other genus in the country, he says, ' These insects live intirely on vegetables. The loftiest tree is no less liable to their attack than the most humble plant.

They prefer the young shoots an account of their ten- derness ; and, on this principle, often insinuate themselves into the very heart of the plant, and do irreparable mischief before they are dis- covered. But for the most part they beset the foliage, and are always found on the under side of the leaf, which they prefer, not only on ac- count of its being most tender, but as it affords them protection from the weather, and various injuries to which they would otherwise be ex- posed. Sometimes the root is the object of their choice, which, from the nature of these insects, one would not, a priori, expect ; yet I have seen the roots of lettuces thickly beset with them, and the whole crop rendered sickly and of little value ; but such instances are rare. They rarely also at- tach themselves to the bark of trees, like the aphis salicis, which being one of our largest species, and hence possessing superior strength, is enabled to penetrate a substance harder than the leaves themselves.'

'In 1793 they were the chief, and in 1798 the sole cause of the failure of the crops of hops. In 1794, a season almost unparalleled for drought, the hop was perfectly free from them, while peas and beans, especially the former, suffered very much from their depredations. Beans in 1798 were almost wholly cut off by them ; indeed, they suffer more or less every year by a black species of aphis, particularly the latter crops. To pota- toes, and even corn, they prove in some years highly detrimental, and not less so to melons. To plants in stoves, green-houses, and frames, where, from the warmth and shelter afforded them, a preternatural multiplication takes place, they prove extremely injurious ; and many rare and valuable plants also in the open ground of our botanic gardens fall victims to these general depredators. ' Seeing, therefore,' continues this writer, ' that our necessaries, as well as luxuries of life, are so materially affected by the insects of this genus, an attempt to ascertain some curious and important facts relative to their history, and to make them more generally known, will not, we trust, be unacceptable. Such inquiries lead to the means of obviating the injuries they occa- sion ; and if they fail in this, they tend at least to correct the erroneous notions entertained of blights, not by the vulgar and illiterate merely, but even by persons of education, who may be frequently heard to maintain that these insects are brought by the east winds ; that they attack none but sickly plants ; with other notions, all as false in fact as unphilosophical in principle.' While locusts and caterpillars are furnished with strong jaws, by means of which they devour the foliage of plants the aphis destroys them in a different way. It is provided with a hollow-

pointed proboscis, which, when the animal is not feeding, folds under the breast. With this instrument it pierces the plant, and imbibes its juice to support itself; it follows that, when these juices are drawn off, the plant, exhausted, flags and perishes, being, in fact, literally bled to death by these

leech-like animalcules. It most com- monly happens, that if they do not wholly de- stroy a plant, they deface it; and a small number of aphides is sufficient to produce this effect.'

But the excremental fluid voided by these insects is, perhaps, their most extraordinary pe- culiarity. Were a person accidentally to take up a book, in which it is asserted that in some countries there were animals which voided liquid sugar, he would lay it down, regarding it as a fabulous tale ; yet such is literally the truth. Mr. Curtis collected this production on a piece of writing paper from a brood of the aphis salicis, and found it to be as sweet as sugar ; and ob- serves, that were it not for the wasps, ants, flies, and other insects, that devour it as quickly as it is produced, it might, no doubt, be collected in considerable quantities ; and by the processes used with other saccharine juices, be converted into the choicest sugar or sugar-candy. The sweetness of this excrement, the glossy appearance it gave the leaves it fell upon, and the swarms of insects this matter attracts, led him first to imagine the honey-dew of plants was no other than this se- cretion, and further observation fully confirmed it; and he became convinced that it neither falls from the atmosphere, nor issues from the plant itself. If it fell from the atmosphere, it would cover every thing indiscriminately, whereas we never find it but on certain living plants and trees. We find it also on plants in stoves and green-houses covered with glass. If it exuded from the plant, it would appear, on all the leaves generally and uniformly ; whereas its appearance is extremely irregular, not being alike on any two leaves of the same tree or plant, some having none of it, and others being covered with it but partially. As far as the writer's observations ex- tended, there never exists any honey-dew but where there are aphides ; though such often pass unnoticed, being hid on the underside of the leaf; and wherever honey-dew is observable upon a leaf, aphides will be found on the under- side of the leaf or leaves immediately above it, and under no other circumstance whatever. If by accident any thing should intervene between the aphides and the leaf next beneath them, there will be no honey-dew on that leaf: and thus he conceives it is incontrovertibly proved that aphides are the true and only source of honey-dew.

It has been recommended as the best and surest method of extirpating aphides, to put on the trees infested with them some larvae of the plant louse- lion, or aphidivorous flies. (See COCCINELLA, ICHNEUMON, HEMEROBIUS, &c.) For those vo- racious larvae destroy every day a great number of these insects, and that with so much more facility, as the latter remain quiet and motionless in the neighbourhood of these dangerous ene- mies, who range over heaps of plant-lice, which they gradually diminish and extirpate. Powders or liquids, however fatal to aphides, must ever

OP ineffectual, from the trouble and difficulty of applying them, so that

they may come in contact with the insects. The smoke of common vege- tables, however powerful, is found inadequate to tneir destruction, and the only one yet employed with success is that of tobacco. In this they should be completely enveloped, which iryˆreen- houses and stoves may be tolerably well accom- plished. Mr. Louden speaks of fumigating bellows, employed for this purpose ; and recom- mends excessive watering as another means of destroying aphides.

APHLASTUM ; from a and 0Xa

APHONIA, among physicians, signifies a sup- pression or total loss of voice from apoplexy, or any other such cause.

APH'ORISM,"! Artoni<7/ioc, OTTO, from, opi£w,

APH'OUISF.R, Mo bound. ' The twofold act

Arii'oRis!. 3 of circumscribing and de- taching when it is exerted by the mind on sub- jects of reflection is to uphorise, and the result an aphorism.' — Coltriilˆc. A sententious saying ; an important doctrine concentrated in few words ; a sagacious observation.

*Thr writing in a}>/inri*nis hath many excellent vir- tues, whrroto the writing ifi method doth not approach.*

Bacon's Essays,

Thaddeus Ha<.;e:esms. in his Metoposcopia, hath Certain aphorisms derived from Saturn's lines in the forehead, by which he collects a melancholy disposi- tion. Kvrttm'n Anatomy of Melancholy,

Our appetites do prompt to industry, as inclining to things not attainable without it ; ac'cordins; to that :i/ihnrism of the wise : The desire of the slothful kill- eth him, for his hands refuse to labor.

Barrow's Sermons.

As this one u/ihorimn, .Tesus Christ is the Son of (•(id, is virtually and eminently the whole gospel j so to confess or deny it is virtually to embrace or reject '.he whole round and series of gospel truths. South.

Ai'iionisM ; from «';,O;H->, to separate or define; a sintenre comprehending, within a few words, all the properties of a thing. Aphorisms are chiefly n-eil in medicine and law, as the apho- ri.-nis of llippornitt's, of Hoerhaave, Sec.

API M{ ACT I : from

AP11 KITI-‘,. I’.artli foam or schaumerde. This carbonate of lime js usually found in a iriahle slate; lmt somutimps solid. In color it is oi a silvery white shining lustre, very soft, and easily cut. It is usually found in calcareous veins at (Jera in Misnia, and Kisleben in Thurin- uia. It consists, according to Bncholz, of 51-5 lime, M1.’ ;, < id. 1 water, ,V7 siliea. 3-;} oxide of iron.

Al’IIKODlSIA, in antiquity, festivals in ho- nor ot the goddess A0oofcr?j, or Venus. There

APH

are several of these aphrodisja observed in divers parts of Greece ; the most remarkable was that at Cyprus, first instituted by Cinyras, out of whose family certain priests of Venus were elected, and for that reason named Kivvpa&u. At this so- lemnity several mysterious rites were practised : all who were initiated to them offered a piece of money to Venus as a harlot, and received, as a token of the goddess’s favor, a measure of salt, and a a \of ; the former because salt is a con- cretion of sea-water, to which Venus was thought to owe her birth ; the latter because she was the goddess of wantonness. Aphrodisia also signi- fies the age of puberty.

APHRODISIAC E, a name given to a gem, supposed to have a power of procuring love to the person who wore it about him ; according to Pliny it was of a pale-flesh color ; but the stone is now wholly unknown.

APHRODISIUS, in chronology, denotes the eleventh month in the Bithynian year, commen- cing on the 25th of July.

APHRODITA, in zoology, an insect of the order vermes mollusca. The body of the aphro- dita is oval, with many small tentacula or pro- tuberances on each side, which serve as so many feet : the mouth is cylindrical, at one end of the body, and capable of being retracted, with two bristly tentacula. The eyes are four in number. There are four species of this insect, viz. 1 . A. acu- leata, by some called the sea-mouse, with thirty- two tentacula or feet, an inhabitant of the Euro- pean seas, and often found in the belly of the cod-fish. It feeds upon shell-fish. 2. A. imbricata is very like the squamata, only its scales are more glabrous. It inhabits the Northern Ocean. 3. A. scabra, of an oblong shape, scabrous on the back, with twenty tentacula. It inhabits the Belgic Sea. It is sometimes taken off Bright- helmstone, an inch long. 4. A. squamata, with twenty-four feet, and scaly on, the back. The mouth is wrapt up in an aperture, and the tail is terminated by a very few short bristles. Jt inhabits the European Ocean.

APHRODITARIUM, in ancient pharmacy, a medicine compounded of frankincense, the scales of copper, ceruss, starch, and pomegranates, mixed in equal quantities. The name is also given to a kind of colly riurn mentioned by Galen.

APHRODITE, in mythology, a name of Ve- nus, derived from aˆpoc, froth ; because, accord- ing to the poets, Venus is supposed to have been produced from the froth of the sea.

APHRODITES, in natural history, a name given by some authors to the finest species of amethyst. See AMETHYST.

*APHROGALA ; from aˆpoc, froth, and jw*Xa, milk ; in ancient physic, milk converted into froth ; recommended by Galen in inflammatorj disorders of the stomach.*

APHROLITRUM, in ancient physic, the froth of nitre.

APHRONITRE; from apoc, and virpov nitre ; a kind of nitre, mentioned by the ancients ; supposed to be the lightest part thereof, emer- ging to the top. Some modern naturalists rather take the ancient aphronitre to have been a native salt-petre,now called salt-petre of the rock. Greek

authors expressed two different substances by the word aphronitrum ; the one the native nitre of those ages ; and the other the spume of the vessels in which they purified their nitre. Galen plainly tells us that these were two different substances. APHROSELENOS, among ancient natural- ists, a denomination given to the selenites, or lapis specularis.

APHTH/E, in medicine, small, round, and su- perficial ulcers arising in the mouth. See ME- DICIXE.

APHTHARTODOCETJE; from a£0aproc, in- corruptible, and coKtw, to imagine ; a sect who held that the body of Jesus Christ was incor- ruptible, impassible, and not capable of death. They arose among the Euiychians, and made their first appearance in the year 535.

APHUA COBITES, in ichthylogy, the name of a small fish common in the Mediterranean. It never exceeds three or four inches in length, its body is round, and flatted a little on the back : its color is white variegated with black spots. Also a species of cyprinus that inhabits in shoals the shores of the northern European seas.

APHYLLANTHES, leafless flower, or blue Montpelier pink ; a genus of the monogynia or- der, and hexandria class of plants ; natural or- der, fifth, tetrapetaloidae. In character it dif- fers not from the Juncus or rush, but in having a calyx of six petals, whereas the juncus has no calyx. There is only one species ; viz. Montpe- liensis, a native of France. The root consists of a number of slender, hard, woody, long, and contorted fibres : the radical leaves are very nu- merous, two inches long, extremely narrow, and wither very quickly. The stalk is round, smooth, without a joint or knot, naked, and tolerably firm ; at its top stands a single and very beauti- ful blue flower, arising from a compound imbri- cated cup.

APHYLLION, in botany, the broom rape. APHYTEIA; from a, and £wroc; a plant, hav- ing neither root, stem, nor leaves. Class, mona- delphia ; order, triandria. Its generic characters are : CAL. perianth mono phyllous, funnel-shaped : COR. rudiments of three petals, growing to the divisions of the calyx: STAM. filaments, short: ANTHER*, convex: PIST. inferior germ : STYLE, thick and short : STIGMA, triangular : PER. a berry, one-celled : SEEDS, numerous. There is one species, viz. A. hydnora, a vegetable without leaves, stem, or root ;. parasitical, consisting of a single fructification, which is four inches over, succulent. The ripe fruit, which is not unplea- sant to the smell, is eaten, both raw and roasted, oy the Hottentots. First discovered by Thun- berg at the cape of Good Hope.

APIAN, or APPIAN,PETER, surnamed Biene- witz, an astronomer and mathematician, born in 1495, and died in 1552. He wrote, among other things, 1 . Astronomicum Caesareum, fol. Ingolst. 1540. 2. Cosmographia, 4to. 1529, 1575, &c. He was the first who discovered that the tails of comets are always projected in a direction from the sun, and records his obser- vations upon five which appeared in the years 1531, 1532, 1533, 1538, and 1539- He was treated with great respect by the emperor Charles V who both enriched and ennobled him. VOL. II.

APIARIA, in natural history, a species of fly found only in autumn, and frequently met with on parsley ; it is two-winged, of a deep and shining black, and gathers wax on its legs in the manner of the bee. It is a species of the attela- bus. This is the clerus, with red wings, and three bluish bands of Fabricius ; the clerus nigro-vio- laceus hirsutus, &c. of Geoff. Clerus ;ceruleo- violaceus of Degeer ; and dermestes apiarius of Schranck. Also a species of musca, the syrphus apiarius of Fabricius, a native of Italy.

APIARY ; Latin apis, a bee ; a place where bees are kept. The objects to be attained in the construction and management of an apiary are connected with the whole economy of the bee-hive ; and will meet our attention at length in the article APIS. But a general summary of them and of the best apiaries that have as yet been constructed may be useful here. It will be

clear then that to secure the prosperity and multiplication of the bees, to increase the amount of their productive labor, and to obtain their products in the readiest manner, and with the least possible detriment to the stock, are the powerful points of consideration. The apiary should afford to the bees the best shelter against moisture and the extremes of heat and of cold, and especially against sudden vicissitudes of temperature : it should protect them against their enemies ; afford them every facility of con- structing their combs, and rearing their young ; . allow of every part of the combs being inspected, and being capable of removal when requisite ; and, while due attention is paid to economy, it should be made of materials that will ensure its durability.

Some cultivators of bees have been chiefly anxious to promote their multiplication, and to prevent the escape of the swarms in the natural way, by procuring what they have termed artifi- cial swarms, — which they effected by separating a populous hive, previous to its swarming, into two parts, and allowing to each greater room for the extension of their works; others have con- templated only the abundance of the products which they yielded, and the facility of extracting them from the hive, without showing any par- ticular solicitude as to the preservation of the bees themselves. Another class of apiarians have had it more particularly in view to facili- tate the prosecution of researches in the natural history and economy of bees. Mr. Huber's hive is peculiarly calculated for the last of these objects, and its construction is founded on an accurate knowledge, of the habits of these in- sects. He has given it the name of Ruche en livre ou en feuillets, from its opening and shut- ting somewhat in the manner of the leaves of a book. This book or leaf-hive is composed of from eight to twelve square wooden frames, placed vertically, and joined together sideways like the hoops of a cask. Each frame consists of two uprights, one inch in thickness, a foot in height, and an inch and a third in width, con- nected by an upper and lower cross bar, ten inches long, and of the same breadth and thick- ness as the former ; so that all (he frames may be joined together, without leaving any interval. The two external frames are closed each by »

pane of glass, which is covered by a shutter on the outside : and the whole is properly secured m its place, and further protected by an external cover. An aperture must of course be left in the lower part of one of the frames to serve as a door. In order to determine tlve bees to con- struct their combs in the plane of each leaf, a small piece of honey-comb is fixed, by means of

pegs, to the top of each in the proper po- sition ; as it is well known the bees always complete their work in the direction in which they find it begun, unless they meet with some insurmountable obstacle. A proper distance is thus preserved between the lateral surfaces of the perpendicular combs'; and the external ones, being only three or four lines distant from the glass panes, may be easily inspected by opening the shutters ; and also, by opening in succession the different divisions of the hive, both surfaces of every comb may at pleasure be fully brought into view. No difficulty is ex- perienced in introducing swarms into hives of this construction ; and after the lapse of a few days, when the colony is fully established, the bees will very patiently submit to be daily inspected. This hive, therefore, allows us to judge by in- spection, whether the population is sufficient to admit of division, — if the brood is of the proper age, — and if males exist, or are ready to be produced, for impregnating the young queen; all which circumstances are of material conse- quence to the success of the operation. It is essential that some of the larva: should not have been hatched above three clays before this at- tempt is made. The frames must then be gently separated at the middle of the hive, and two empty frames be introduced in the interval be- tween the former ; each of these new frames having a partition which closes them completely, so as to enalile the two portions to be entirely separated without leaving any opening. " The door of that portion, in which the queen hap- pens to be at this time, may remain open; but the one belonging to the other part must be elosed, so as to retain the bees that have no queen, prisoners for four-and-lwenty hours, allowing still, however, sufficient circulation of air. Alter this interval they appear to have for- gotten their queen ; at least they are no longer anxious to seek for her, but bestow all their so- licilude in the education of the larva1, so as to convert a certain number of them into queens to supply the loss they have sustained. This they accomplish in ten days or a fortnight after the operation. The two colonies are now per- fectly distinct, and are never found afterwards to intermix. I'urther advantage attending a hive of this construction consists in its enabling us to force the bees to produce a much greater quantity of wax than they would naturally do. The in- terval which eparates the combs, when the bees have not 1" (ii disturbed in their operations, is constantly the same, namely, about four times. V. ere t!:i,y too distant, it is evident that the bses would be much dispersed, and unable to communicate their heat reciprocally, and the brood would 'mt. !u preserved in a sufficient deuree ni' warmth. \Yere the combs too close, c:i t! :ir:.i. i!. <- b;i-, c.vuld in.it fp ,iy tra

verse the intervals, and the work of the hive would suffer. It is evident that we may avail ourselves of this instinct, and, by separating farther asunder the combs that are already built, induce the bees either to extend the breadth of those they had begun, or to build others in the interval, if

sufficient space be allowed them for this purpose. Thus, by interposing three empty frames, one between every alternate interval of the combs in a hive containing six combs, three additional combs, if the proper season be chosen, will be obtained at the end of a week ; and if the weather continue favorable, the operation may be repeated, and the same number of additional combs procured the week after.

The obstacles to the general employment of Mr. Huber's hives are the expense of constructing them, and the greater degree of attention which they require. It has also been objected that the flatness of the roof was prejudicial, by allowing the moisture which exhales from the bees to collect at the top, and to fall in drops at different parts, to the great injury of the subjacent con- tents of the hive. Fˆburier proposes therefore the employment of frames in the form of a tra- pezium, so that the roof shall be considerably inclined to the horizon. He borrows this shape from Bosc, whose hive consists, however, only of two boxes joined together sideways, and sepa- rable in order to form artificial swarms. This was an improvement upon Gelieu's hive, which was formed of two square boxes united laterally. Delator had recommended a still more simple form than that of Bosc. though less convenient, namely, that of a triangle resting on its base. Mr. Ravenel's hive consists of three square boxes instead of two ; Mr. Scrain's is also made up of three boxes; but they are low and of great length, and are joined endways : a com- munication being established between them by apertures made in the divisions which separate the boxes. But it is now well established that partitions of any kind are detrimental to the prosperity of bees. The same objection applies, though perhaps in an inferior degree, to storied hives. A great variety of the latter description, however, have been recommended by different cultivators. In France they are known by the name of ruches en hausses. Mr. Thorley's im- proved hive, of which there is an account in the article APIS, is of this class : and Mr. Lombard's ruche villageoise may also be referred to the same head, although it be of much simpler con- struction than any other compound hive. Mr. Lombard's hive is composed of two parts, a body and a cover, forming together an elevation of from seventeen to twenty inches on a uniform diameter of one foot, excepting the upper part which ought to be convex. The body is formed of bands of straw, similar to that of the cottages in this country. At the top and bottom of the body is placed an exterior band which forms a projecting border on each end, the lower one giving the hive a firm station on its pedestal ; the upper one contributing to secure the attach- ment of the cover, or allowing of another similar body being placed above the first, if such an addition should be deemed necessary. At the top of the body, and even with the upper band,

is placed a flooring-board, made of a light plank ten inches in breadth in all directions ; and the four corners of which are sawed off in such a manner that the breadth along the diagonal mea- sures one foot. This board is fixed by nails in- serted in the upper double band and entering a little into the front. The four openings that are left on the sides are necessary for the passage of the bees and for the escape of the vapors which are exhaled from them in winter. A flat rod traverses the hive immediately under the board ; and projecting from the two sides about an inch and a half affords handles for lifting the hive, and facilitates the fastening of the cover which has also a projecting rod corresponding with that of the hive. At the bottom is an opening, two inches broad and nine lines in height, for the ingress and egress of the bees. The cover is formed in the shape of a dome, with a vertical handle at the top and a cross-bar at the lower part, by the projecting ends of which it may be tied to the ends of the bar in the body; and which serves also as a support to the combs that are constructed in the cover. For the latter purpose also two other bars are placed cross- ways one above the other. All the hives, and all the bases of the covers, are to be made of one uniform diameter, in order that the hives may, if occasion require it, be placed upon each other, and the covers be adapted to any of the hives that may happen to be at the top.

Ducouedie's pyramidal hive differs but little from that of Mr. Thorley. A common straw hive is taken, containing a swarm, which is al- lowed to remain till the spring of the following year; it is then placed on the top of a square box, with which it is made to communicate by a round aperture at the top of the box. In this state it is termed by the French la ruche Ecos- saise, or, ruche de M. de la Bourdonnaye. On the following spring a second box is placed under the first, and the whole now assumes the name of la ruche pyramidale. The bees are still al- lowed no other ingress or egress but by a single hole made in the lowest story. The upper sto- ries may then be removed in succession, while further room is allowed below by the addition of fresh boxes. It it stated, by M. Ducoue"die, that the bees in his pyramidal hive never perish by hunger or by cold, for they always abound in provisions, and are too numerous to be affected by the most rigorous winter. When the bees are in groupes they maintain the necessary warmth in the hive ; and the brood on the return of spring is hatched one month sooner than in any other hive. Mr. Huish, the latest and best writer perhaps on this subject, has, however, made it clearly appear that these advantages are much exaggerated, while its inconveniences are passed over in silence. It is difficult, if not im- possible, to proportion the hives in all cases to the magnitude of the swarms, or to the energy with which they labor. The honey being taken from the oldest cells is deteriorated by an ad- mixture of pollen, communicating to it a degree of bitterness of which it is difficult to

deprive it; and is less abundant in consequence of the diminished capacity of the cells in which the coccoons of successive bees, in their state of

nympha, have accumulated. From their being divided into different stories the bees are obliged to live as it were in different families ; while their own preservation, and that of the brood, re- quires them to live in the strictest union. The heat is also lessened by the division of the bees into different groupes. The upper part of these hives being all necessarily flat (except the first or straw-hive), occasions a serious inconvenience by allowing moisture to collect and drop down into the middle of the hive instead of trickling down the sides. The injury which this does to the combs and to the bees themselves who are constantly exposed to its influence is, according to Mr. Huish, the most common cause of the loss of the hives during the winter. The bees, he observes, always begin their work in the most elevated point of the hive, and seek for that pur- pose the central part of the roof. If the top be flat, and especially if it be as spacious as in the hives called pyramidal, the bees will not find this centre ; they will work one year in one part, and the following year in another. This is, without doubt, one of the causes which oblige a pro prietor to wait three or four years before anj honey can be gathered from these hives.

Mr. Huish's hive is very similar in form to that used in Greece : k is a straw basket in the shape of a flower-pot, that is, of a broader dia- meter above than below. Eight pieces of well- seasoned wood, about eight inches broad and half an inch thick, are laid parallel to one another at equal distances over the top of the basket, and fastened to an outer projecting band : they are then covered with net-work, over which is placed a circular board, or, what is better, a convex cover of straw extending over the whole of the top of the hive. This net-work obliges the bees to fasten their combs to the transverse boards, by means of which each comb can easily be lifted up without interfering with any other part of the hive, or occasioning the loss of a single bee ; and the whole of the inte- rior of the hive is thus open to inspection, and we are enabled to trace the devastations of the moth, or to ascertain the presence of any other enemy.

APIASTELLUM, in botany, the name of two different species of plants with different authors; Dodonaeus expressing by it the common bauni, and Apuleius the black bryony.

APIASTER, in ornithology, the bee-eater, a species of the merops. This is merops galilseus of Hasselquist, ispida cauda molli of Kramer, guepier of Buffon, schaeghaghi of Forskal, and common bee-eater of English writers.

APIASTRUM, in botany, a name given by the ancients to two different plants. The one of these plants was the poisonous water crowfoot the other

the common garden baum, so called b these writers from their having observed that the bees were very fond of it.*

APICES, the same with antherse. See As- THERA. .

APICIUS, a Roman surname, famous, or rather infamous, for producing three remarkable gluttons. The second is the most celebrated of the three. He lived under Tiberius, spent im- mense suras on his belly, and invented divers

sorts of cakes which bore his name. He kept, as it were, a school of gluttony at Rome. After having spent two millions and a half in entertain- ments, finding himself very much in debt, he ex- amined into the state of his affairs ; and seeing that he had but 250,000 livres remaining, he poisoned himself, out of apprehension of star- ving with such a sum ! lie had prostituted him- self when very young to Sejanus.

APICULUM, in antiquity, a kind of thread, or fillet,' which the flamens wore in lieu of the apex.

APIE'CES,) In pieces; in separate parts.

APIECE'.) On piece, in a separate part or share.

Men, in whose mouths at first sounded nothing but mortification, were come to think that they might lawfully have six or seven wives apiece. Hooker.

The people of Egina, and the Athenians, had but small ones, and the most of them consisted but of fifty oars apiece. Hobbe's Thucidydes.

I have to-night despatched sixteen businesses, a month's length apiece, by an abstract of success.

Shakspeare.

One copy of this paper may serve a dozen of you, which will be less than a farthing apiece. Swift.

They (Sir John Elliot, Hollis, and Valentine) were condemned to be imprisoned during the king's pleasure, to tind sureties for their good

behaviour, to be lined, the two former a thousand pounds apiece, the latter live hundred.

Hume's History of England.

APIFORMJS, in entomology, a species of musca, found in Germany. Also a species of sphinx, in the Linmtan system, and sesia in that of Fabricius. This is sphinx scopigera of Sco- poli ; sphinx crabroniformis, Wien. Schmet- terl ; and sphinx apiformis, hornet sphinx, Do- nov. Brit. Irs.

APIOCHAMA, a large rapid river of Peru,

which, after running to the north of the city of LaPaz, enters the west side of the river Beni.

APIOL/E, in ancient geography, a city o. Italy, which was taken by Tarquin the Proud, and with the stones thereof, according to Pliny, he founded the Roman capitol.

APION, a celebrated grammarian and critic, born in Egypt in the reign of Tiberius. He had all the arrogance of a mere pedant, and amused him- self with inquiries difficult in their investigation, and insignificant in their consequences. In order to trace the family and country of Homer, he had recourse even to magic, and asserted that he had successfully invoked the appearance of shades to satisfy his curiosity, whose answers he was not allowed to make public. He valued himself on having discovered that the two first letters of the Iliad, considered numerically, amounted to forty- eight, and he fancied that the poet had used these letters designedly to express the number of books. Hence he concludes, that the opening of the poem was last written. The most celebrated of his works is one entitled the Antiquity of the Jews, to which people he op- posed himself with the hereditary resentment of an Egyptian. The reply of Josephus, against Apion, has survived the attack. He was accus- tomed to boast that those to whom he dedicated his works were thereby rendered immortal ; the vanity and falsehood of which time has remark- ably proved, as no one of his works are now known but through the medium of some other author.

APIOS, in botany, a name given by many authors to those species of the tithymal, or spurge, which have tuberose roots, the juice of which is purgative. Apios is also the name given by Boerhaave to some of the leguminous plants comprised by Linnaeus under the name Glycine.

APIS.

APIS, in astronomy, the bee > a southern con- stellation, called also musca.

APIS, in mythology, a divinity worshipped by the ancient Egyptians at Memphis, under the form of a living ox, having certain exterior marks ; in which animal the soul of the great Osiris was supposed to subsist ! This animal had the pre- ference to all others, as being the symbol of agri- culture, for the improvement of which that prince had done so much. According to several learned writers on the Kgyptum religion Apis was only a symbolical deity. 'Amongst the animals conse- crated to ancient rites,' says Ammianus Marcel- linus, ' Mnovis and Apis are the most celebrated; the first is an emblem of the sun, the second of the moon.' Porphyry informs us, that Apis bore the characteristic signs of both; which opinion ? U;uTohius confirms. According to the Egyp- i':ms this bull owes his birth to celestial fire. Pliny has thus described the characters which distinguish tins saered bull : ' A white spot, re- M;iiililni < 4 a crescent, on the right side, and a knot under the tongue, were the distinguishing marks

of Apis.' When a cow, tlverefore, which was, thought to be struck with the rays of the moon produced a calf, the sacred guides went to exa- mine it, and if they found it conformable to this description, they announced to the people the birth of Apis. ./Elian informs us, that as soon as a calf of the above description was produced, ' the Egyptians immediately built a temple to the new god, facing the rising sun, according to the precepts of Mercury, where they nourished him with milk for four months. This term ex- pired, the priests repaired in pomp to his habi- tation, and saluted him by the name of Apis. They then placed him in a vessel magnificently decorated, covered with rich tapestry, and re- splendent with gold, and conducted him to Ni- lopolis, singing hymns, and burning perfumes. There they kept him for forty days. During this space of time women alone had permission to see him. After the inauguration of the god, in this city, he was conveyed to Memphis with the same retinue. There they completed the cere- monies of his inauguration, and he became sacred

to all the world. Apis was superbly lodged, and the place where he lay was called the bed. Strabo having visited his palace thus describes it : ' The edifice where Apis is kept is situated near the temple of Vulcan. He is fed in a sacred apartment, before which is a large court. The house in which they keep the cow that produced him, occupies one of its sides. Sometimes, to satisfy the curiosity of strangers, they make him go out into this court. It was said that he predicted future events, by various signs. 'Apis,' says Pliny, ' has two temples, called beds, which serve as an augury for the people. When they come to consult him, if he enters into a particu- lar one it is a favorable presage, and fatal if he passes into the other. He gives

answers to indi- viduals, by taking food from their hands. He refused that offered him by Germanicus, who died soon after.' The anniversary of his birth •was always celebrated for seven days ; at which time the people assembled to offer sacrifices of oxen. The bull, Apis, however much honored in his life, was not permitted to live above a certain time, fixed by the sacred books. Accord- ing to Pliny, when he has attained that period, they drewn him in the fountain of the priests. When this event happened he was embalmed, and privately let down into the subterraneous places destined for that purpose. In this cir- cumstance, the priests announced that Apis had disappeared ; but when he died a natural death, they proclaimed his death, and solemnly con- veyed his body to the temple of Serapis, which strangers were forbidden to approach, and where the priests themselves only entered wheu Apis was interred. ' It was then,' says Plutarch,

- *that they opened the gates called Lethes and Cocytus (of oblivion and lamentation), which made a harsh and piercing sound.' According*

• o Plutarch, the term prescribed for the life of Apis was twenty-five years; which number marked a period of the sun, and of the moon, and the bull was consecrated to these two bodies. Syncellus, in his Chronography, when he comes down to the thirty-second Pharaoh, called Aseth, says, ' Before Aseth, the solar year consisted of 360 days. 'This prince added five to complete its course. In his reign a calf was placed among the gods, and named Apis.' From these facts, M. Savary infers, that Apis was the tutelary di- vinity of the new form given to the solar year, and of the cycle of twenty-five years discovered at the same time. This deity had a marked re- lation to the swelling of the Nile, as is testified by a great number of historians. The new moon which followed the summer solstice, was the era of this phenomenon, on which the eyes of every body were fixed. And Pliny speaks as follows on this subject : ' Apis had on his right side a white mark, representing the crescent ; ' this mark,' continues JElian, ' indicated the commencement ftf the inundation.' If Apis possessed the cha- racteristic signs which proved his divine origin, te promised fertility and abundance of the fruits of the earth. It seems demonstrated, therefore, M. Savary adds, that this sacred bull, the guar- dian of the solar year of 365 days, was also re- garded as the genius who presided over the overflowing of the river. The priests, by fixing

the course of his life to twenty-five years, and by- making the installation of a new Apis concur with the renewal of the period above mentioned, had probably perceived, as the result of ionˆ meteorological observation, that this revolution always brought about abundant seasons. No- thing was better calculated to procure a favor- able reception of this emblematical deity from the people; since his birth was a presage to them of a happy

inundation, and of all the treasures of teeming nature. That which was renewed every year towards the 12th or 13th of the month Payn, which corresponds with the 17th or 18th of June, was called the birth of Apis.

This deity is frequently re- presented' on medals in the form of a bull, in company with Osiris, who is here repre- sented adorned with the lotus, having a spear in his right hand, and a sistrum in the left.

APIS (THE BEE), in zoology, a genus of in- sects belonging to the order of insecta hymen- optera. The mouth is furnished with two jaws, and a proboscis infolded in a double sheath ; the wings are four in number, the two foremost covering those behind when at rest ; in the anus or tail of the female and working bees there is a hidden sting. These insects are distinguished into several species, each of which has its pecu- liar genius, talent, manners, and disposition. Variety prevails in the order of their architecture, and in the nature of their materials. Some live in society, and share the toils ; such are the com- mon bee. Others dwell and work in solitude, building the cradles of their families ; as the leaf-cutter bee does with the rose-tree leaf ; the upholsterer with the gaudy tapestry of the corn-rose ; the mason bee with a plaster; the wood- piercer with sawdust. All are employed in their little hermitage with the care of providing for their offspring. The species enumerated by Linnaeus are no fewer than fifty-five; of which the following are the most remarkable : A. Brasilia- norum, or pale red hairy bee, with the basis of the thighs black. This is a very large bee, every- where covered with a testaceous skin. It is a native of America. A. cariosa is a yellowish hairy bee ; and the feet and front are of a bright yellow color. It builds in the rotten trees of Europe. A. centuncularis, leaf-cutter, or black bee, having its belly covered with yellow down. The nests of this species are made of leaves, cu- riously plaited in the form of a mat or quilt. There are several varieties of the leaf-cutting bees, all equally industrious. They dig into the ground, and build their nests, of which some have the form and size of thimbles inserted one within another, others the size and shape of goose-quills. These nests are composed of pieces of leaves. Each sort of bees cuts into its own materials ; some the rose-tree leaf, others the horse-chestnut. A careful observer may dis- cover rose-tree leaves cut, as it were, with a pinking-iron ; and there he may procure himself the pleasure of seeing with what dexterity a bee, destitute of any mathematical instrument, cuts out a circular piece, fit to be either the bottom

or the lid of one of those nests; others it cuts out QUEEN BEE, DRONE BEE, and WORKING BEE ; into ovals and semi-ovals, which form the sides for though this last kind is, strictly speaking, the of the nests, into each of which it deposits one only honey bee, yet as all the three kinds are egg.

with ready prepared victuals. A. dentata, found, and seem to be necessary, in every com- or shining green bee, with black wings, and a munity or hive of bees, they go under the same kind of teeth on the hind thighs. The tongue of general name of APIS MELLIFICA, while at the this bee is as long as its body. A. ferruginea, or same time, they differ so much from each other, smooth black bee, with the feelers, mouth, belly, (more indeed than some different species of the and feet, of an iron color. This is a small bee, same genus of other animals,) that a particular and supposed to be of an intermediate kind be- and separate description of each is necessary, tween the bee and wasp. It is a native of This we cannot give more accurately than in the Europe. A. florisomnis, or black bee, with a language of Mr. Bonner, one of the latest writers cylindrical incurvated belly, having two tooth- on the subject. ‘ The DRONES,’ says this gentle- like protuberances at the anus, and a kind of man, ‘ may easily be distinguished from the prickles on the hind legs. This bee sleeps in common or working bees. They are both larger flowers ; whence the name. A. lapidaria, or red and longer in the body. Their heads are round, hairy bee, with a yellow anus; builds in holes of their eyes full, and their tongues short. The rocks. A. mellifica, or domestic honey-bee, form of the belly differs from those of both

queen and common bees; and their color is darker than either. They have no sting, and they make a much greater noise when flying than either the queen or the common bees ; a pe- culiarity of itself sufficient to distinguish them.’ Other writers on this subject have asserted, that the dissection of the drone gives as great proof of its being the male, as that of the queen does of her being female. In this creature there is no ap- pearance of ovaries or eggs, nor any thing of the structure of the common working bees, but the whole abdomen is filled with transparent vessels, winding about in various sinuosities, and contain- ing a white or milky fluid. This is plainly ana- logous to that fluid in the males of other animals, which is destined to render the eggs of the female prolific; and the whole apparatus of vessels, which much resemble the turnings and windings of the seminal vessels in other animals, is plainly intend- ed only for the preparation and retention of this matter, till the destined time of its being emitted. On squeezing the hinder parts, also, may be forced out the penis, a small and slender fleshy body, contained between two horns of a somewhat harder substance, which join at their base, but gradually part asunder as they are continued in length. These parts, found in all the drones, and none of them in any other bees except these, seem to prove very evidently the difference of sex. If a hive is opened in the beginning of spring, not a single drone will be found in it; from the middle of May till the end of June hundreds of them will be found, commonly from 200 or 300 to 1000; but from August to the following spring it would be in vain to seek for them. They go not out till eleven in the morning, and return before six in the evening. But their

expeditions are not those of industry. Their rostrum and feet are not adapted for collecting wax and honey, nor indeed are they obliged to labor. They only hover ice, and very upon flowers to extract the sweets, and all their nativu of Ku- business is pleasure. Their office is, to impreg- nate the eggs of the queen after they are deposited in the cells. And while their presence is thus at the bottom of necessary, they are suffered to enjoy the sweets of in each cell, love and life; but as soon as they become useless in the hive, the working bees declare a war of ex- ‘ termination against them,and make terrible slaugh- ter of them. This war affects not only the drones already in life, but even the eggs and maggots in the drone cells ; for after the season proper for in-

But the particulars concerning this valuable spe- cies are so numerous and interesting as to re- quire a separate article for their detail; which tlic reader will therefore find at due length under the I’.nglish name, BEE. A. muscorum, or yel- Imv liaii’v bee, with a white belly, builds in mossy grounds. The skill displayed by these builders is admirable. In order to enjoy the pleasure of string their operations, let a nest be taken to pieces, and the moss conveyed to a dis- tance. The bees will be seen to form themselves into a chain, from their nest to the place where the moss has been laid. The foremost lays hold nt some with her teeth, clears it bit by bit with her feet (which circumstance has also procured them the name of carding bees) ; then, by the help ol her feet, she drives the unravelled moss under her belly, the second in like manner PU.-MICS it on to the third. Thus there is formed an uninterrupted chain of moss which is wrought and interwoven with the greatest dexterity by ihn-ti: tiiat abide by tin; nest; and that their nest may not 1, > the sport of the winds, and may >he!ter them from rain, they throw an arch over it, \hich thev compose with a kind of wax, ten- taceons, though thin in substance, which is neither the unwrought bees-wax nor the real wax. Unsolved in oil (.!’ turpentine, it may be used in taking ol!’ impressions. A. lostrata is distin- guished by the upper lip being inflected and of a pe. ‘i he vinlacea is said to perforate trees, and hollow tin m out in a longitudinal direction, tin v lieu m to build their (

plants and

creasing the number of bees is past, every vestige of the drones is destroyed, to make room for ho- ney. Besides these large drones, Maraldi and Reaumur long ago asserted that there were others of a lesser size, not exceeding that of the common working bees. The fact, however, was Hot supposed to be ascertained before the expe- riments of Mr. Debraw seemed

to put it beyond a doubt. It is well known that the large drones never appear in the hive before the middle of April ; that they are all dead before the end of August, when the principal breeding season ter- minates; and that they are destroyed, together with all their worms or nymphs, by the working bees to save honey : yet it is equally certain that the bees begin to breed early in the spring, some- times in February if the weather is mild ; and that many broods are completed before these drones appear. But if drones of a smaller size are suffered to remain, which in a time of scarcity consume less honey than the others, these will answer the purpose of supplying the early broods, and the larger drones are pro- duced against a time of greater plenty. Some observers affirm, that the smaller drones are all dead before the end of May, when the larger species appear and supersede their use. These circumstances accord with the suggestion of Abbe Le Pluche in his Spectacle de la Nature, — that a small number of drones are reserved to supply the necessaries of the ensuing year ; and that these drones are very little, if at all, larger than the common bees. Mr. Bonnet, however, not only doubts the long-established doctrine of the fecundating powers of the drones in general, but denies the existence of Mr. Debraw's little drones altogether. He urges the following argu- ment on both subjects : ' Although almost all agree that they are the males, and couple with the queen, yet they acknowledge that they never saw an instance of any one of them in the act with her. It is surely wonderful if the drones are the males that they should have escaped the prying eyes of philosophers in all ages; whereas, almost every eye has detected smaller insects in the act. Swammerdam, sensible of this, to shelter himself flies to that false refuge that the smell of the drones answers the same end as copulation. Others say, that their heat is necessary for hatching the young bees. But this argument has no weight with me ; as bee-hives have most part of their bees bred, and are well- nigh swarming, before any number of drones ap- pear in the hive. Besides, by the time that they become numerous, so as their heat might do good in that respect, the heat is generally so great that the bees have too much of it, and therefore often fly out in the fore part of their hive to get air. It is therefore plain that they need not be at the expense of maintaining a parcel of idle gluttons for the sake of increasing what would do them more harm than good. That the queen stands in no need of their as- sistance, to fecundate or impregnate her, appears plain from this consideration, that she lays eggs, which produce young bees, without having had any previous communication with the drones. I will not, however, suppose that the drones are of no use in the hives ; but that the queen lays

eggs which produce young bees, without so rnucn as seeing a drone, I can with the utmost con- fidence affirm. The advocates for the old doc- trine, that the drones are males, allege that they impregnate the queen before

their brethren kill them. According to this theory, she should continue for no less a period than seven or eight months, with about 12,000 impregnated eggs in her ovarium, which would certainly make her appear very large during the whole of that period. But it is unnecessary to waste arguments in refutation of this doctrine, as I have repeat- edly had queens breed and lay eggs, and those eggs become bees, although these queens were bred seven months after all the drones were dead, and some weeks before any new ones were hatched. See BEE, QUEEN. These experiments, I think, are sufficient to silence all the arguments advanced by the advocates for the drone system. Mr. Debraw, indeed, creates little drones, and gives them power to live all the year, and to im- pregnate the queen at pleasure. But as room does not permit me to narrate the experiments whereby he attempts to prove this, I shall con- tent myself with stating his sentiments in as few words as possible. He asserts, that, besides the common large drones, which every person ac- quainted with bees knows at first sight, there is a small kind of drones, which are, to all ap- pearance, like the common bees, there being nc visible difference, except that they have no sting, which he discovers by immersion in water, and pressure. After relating an experiment on this head, he says, ‘ I once more immersed all the bees (of a small swarm) in water ; and, when they appeared in a senseless state^ I gently press- ed every one of them between my fingers, in order to distinguish those armed with stings from those that had none, which last I might suspect were males. Of these I found fifty-seven, ex- actly of the size of common bees, yielding a little whitish liquor on being pressed between the fingers.’ He farther alleges, that if there be only a queen and bees that have stings in the hive, although the queen lays eggs, yet if she has no drones to inject the seminal matter upon them, the eggs will still remain unproductive, and will decay, even although there were 1000 bees with stings in the hive. In answer to this, I shall here narrate an experiment I made several years ago. On the first of September, 1788, I took all the bees out of a hive that was breeding very fast, and in which I found only four drones, which I killed. I put the bees into a hive that had nothing in it but empty combs. After waiting ten days, upon looking between the combs, I found maggots newly sealed up in these cells. I then took out all the bees, and shook them into a tub full of water, from which immersion I recovered them gradually, and while doing this, I pressed each bee individually, to try if I could discover any of these stingless little drones ; but not one appeared, all of them having stings, to the number of 3000. After this I searched the old hive I had taken them out of, and cut out all the combs that had eggs or young in them ; among which I found some cells that had new eggs in them ; others whose eggs were converted into a small worm, and

other some “with maggots in them. I then re- stored the queen and all the bees, putting them into the same hive again, but without leaving a single egg in it. During the succeeding twenty days I inspected the hive, and found the bees, in fine weather, working with great alacri- ty, a sure sign that the queen was breeding again. After this, on turning up the hive, and cutting out one of the brood combs, I found new-laid eggs in some of them ; others contain- ing maggots, besides some young bees almost ready to emerge from their cells. I made another experiment about the same time upon a hive that had some brood combs, but had not had a large drone for several weeks preceding. This hive did not contain above 500 bees, a circum- stance that was in my favor, as, being less nume- rous, the trouble was proportionally less. I carried the hive into a close room in my house that not a single bee might escape me ; but after repeating the former experiment of immersing them in water, recovering and pressing them one by one, I found that every one of them had a sting. I think these experiments may satisfy any unprejudiced person, that there is no such crea- ture in existence as a small drone bee; unless it be in Mr. Debrav/s brain. But if Mr. Debraw, who says lie can find fifty-seven in a small swarm of bees, will send me the odd seven, I will give him one of my best hives for them, and I think he will not say that they are ill sold.’

‘ The Qrr.r.\, continues Mr. Bonner, is easily distinguished from all the other bees in the hive, by the form, size, and color of her body. She is considerably longer, and her wings are much shorter m proportion to her body, than those of the other bees. The wings of both com- mon bees and drones cover their whole bodies, whereas those of the queen scarcely reach beyond the middle, ending about the third ring of her belly. Her hinder part is far more tapering than those of the other bees : her belly or legs are yellower, and her upper parts of a much darker color than their?. She is also furnished with a stni;;’, though some authors assert that she has none, having been induced to form this opinion because she is extremely pacific ; so much so indeed, that one may handle her, and even teaze ner as much as he pleases, without provoking her resentment. For my part, I never can excite a queen lice to draw her stine, nor could I even get a siˆht of it, hut when 1 pressed her body. The omniscient governor of nature has wisely or- damed this majestic insect to be of a pacific dis- position ; for, were she otherwise, were she like the other !•<•(•< 01' so irritable a temper as to draw her sting on every occasion, and to leave it in the body ot In r antagonist, it would prove of dange- rous and often fatal consequence to the whole hive ; for every bee, after losing her sting, dies withm a dav or two at tin; utmost. The queen !>te i-; solemn and calm m her deportment. A youii‘4 r|uecn K a u’tcat deal smaller in size than a lull u’i’own one; benrj; not. much longer than a <'immnn her, and is therefore not so easily

ob- served when sought tor. When only three or Ion r days "Id, she is very quick in her motions, and runs very fast ; but when pregnant with eggs, v»j heroines verv laiirr, and her bodv is heavy.

*When travelling, she drags along in a very s\o*r manner, and is not very expeditious in flying. That this majestic animal is a female, the very designation she bears, of queen, seems to imply that modern authors are convinced, though many of the ancients were of a different opinion. But as it is also now unanimously admitted, that she lays every egg in the hive, she ought rather to be called the mother bee. For, indeed, from the best observation that ever I could make, she possesses and exerts no sovereignty over the other bees. She evidences the greatest anxiety for the good of the commonwealth with which she is connected ; and, indeed, every member of it shows an equal regard for her welfare. But I never could observe, that she issues any positive orders, to be punctually obeyed by the other bees. The truth seems to be, that she and the other bees are all equally acquainted with their duty by instinct, and have an equal pleasure in performing it, without waiting for orders from each other. That there is, nevertheless, the greatest order and regularity among them, is cer- tain ; for they lay their plans and execute them, in the best possible manner, by the influence of the above powerful substitute for reason. Almost all writers are of opinion, that the queen lays three different kinds of eggs, viz. one kind for the production of a queen bee ; another species for that of the working bee, and a third for produ- cing the drones. It was also long a received opinion, that no queen could lay eggs, that were capable of producing bees, without the assistance of drones. Schirach refutes this doctrine, and entirely denies such a use of the drones. He advances this opinion, that 'the queen lays eggs, which produce young bees, without any commu- nication with the drones ; and affirms that all the working bees are females in disguise ; every one of whom, in an early stage of her existence, was capable of becoming a queen ; from a knowledge of which fact, swarms may artificially be obtained, from the early months of spring, and in any suc- ceeding month even to November.' His expe-* riments have been very numerous, and obviate every doubt and objection. He performed the operation, upon one and the same stock, for at least fifty or sixty times, from mere fragments of the combs, &c. This novel and wonderful doc- trine excited no small contention, and not a few counter experiments among naturalists on the continent, without being decided even by the great Bonner. He asserts, which is indeed the grand and decisive proof, that ' the practice of this art, of raising artificial queens, has already extended itself through Upper Lusatia, the Palati- nate, Bohemia, Bavaria, Silesia, and several parts of Germany, and even of Poland.' That a queen can be raised from an egg in a common cell; or, in other words, that the same egg is capable of being reared up to be either a queen or a common bee, as the*

bees please, appears to me, from my own experiments, to be past a doubt ; and that a queen who never saw a drone can lay eggs, which will produce bees, is equally certain. Both these facts, will, I flat- ter myself, appear to the curious and learned reader to be clearly ascertained by the following experiments : Long before I heard of Mr. Schi-

tach's theory, or experiments, I had often taken off swarms without leaving any queens or royal cells in the mother hive ; notwithstanding which they bred young queens, which surprised me greatly how they had obtained them, as the re- ceived opinion then was, that they could not breed a queen bee if the old queen was taken away before a royal cell was erected. But after seeing Schirach's sentiments on this subject, I thought his theory extremely probable, according to what I had observed among my own bees ; and, resolving to ascertain the truth of it, I made many experiments of my own, which all suc- ceeded to my wishes. But, in order to put the matter beyond all doubt, I shall relate an expe- riment I made with a hive in spring 1780, two months before the usual time of swarming, and which clearly ascertains both the facts at once. The hive was beginning to carry well, and to breed fast, but it was not half full of bees. It had only one queen, but neither drone nor royal cell ; neither of which could be expected at that season of the year, as it was about the middle of April. I took out the queen, and most part of the bees, and left the hive with only some com mon bees, to hatch out the young brood in the cells, and provide themselves with a queen, but without leaving one single drone. They did not disappoint me ; for as soon as the melancholy intelligence pervaded the hive, that their loving mother was torn from them, they made a mourn- ing kind of noise for their great loss for about two hours: after which they all fell busily to work, and exerted themselves amazingly for two days ; some being employed in forming the royal cell, and others injecting into it a large quantity of thick whitish liquid stuff, pretty much resem- bling cream. At the end of the third day the royal cell was completely formed ; and, in the mean time, the common cells were sealed up by the other bees, who all continued busily em- ployed. On the fifth day the royal cell was considerably enlarged, and I observed as much of the aforesaid white stuff in it as would have almost half filled a thimble, with awhile maggot lying on the top of it. On the seventh day the bees sealed it up, and, on the seventeenth day, the young queen came forth out of her little pa- lace, in all her pomp and majesty. On the twenty- fourth day the young queen became a mother, and laid eggs ; on the thirty-first day these eggs were sealed, and on the forty-third day a number of young bees emerged from the cells. About the same time I repeated this experiment with other two

hives, which both succeeded equally well. I made another experiment with a different hive, out of which I took the queen and most part of the bees. This hive had neither a royal cell nor drones in it, yet, in seventeen days after, a queen was reared, and on the twenty-fifth day she laid eggs. I then took out the young queen again, leaving some new-laid eggs in the old hive. Within eight days after there was another royal cell erected and sealed up. This I imme- diately took out of the hive ; but, upon inspect- ing the hive eight days after, I found neither queen, egijs, nor royal cell, none of which indeed I expected. Upon taking a piece of comb, however, with eggs in it, out of another hive, and

putting it into this hive, the bees erected another rbyal cell, which in due time produced another young queen. The advocates for the doctrine of the drones being males, and their aid being ne- cessary for the propagation of bees, may perhaps plead, that although there were no drones in the hive, when I took the queen from it, yet there might have been eggs laid in drone cells, which would come forward to be drones as soon as the young queen, and so impregnate her, and render her fit for breeding. But the contrary is the fact : for, when the old queen was taken out of the hive, there was not a single egg in any of the drone cells. If there had, I should have s'een the bees sitting upon the cells of the drone combs, as they did on those of the common bees, and on the royal cell. Besides, I turned up the hive every second day, during the whole period of forty-three days, in order to determine how long the bees took to erect the royal cell, and seal it up ; how many days elapsed before an egg pro- duced a queen ; how old the queen was before she began to lay eggs ; how many days passed before these eggs produced common bees ; and, above all, whether the queen needed the agency of the drones to enable her to become a mother. To arrive at a certainty on this point, I often turned the bees over in the hive with a small stick, in search of young drones in drone cells, but could never discover the smallest vestige of them. But the young queen, on the tenth day of her age, began to lay eggs in drone cells, which produced young drones in the hive about sixteen days after. As I have repeated this last experiment again, and again, I can now affirm, with the utmost confidence and certainty, ' that the common, or working bees, are endued with the powerful faculty of raising a queen bee from an egg in a common cell, when their com- munity stands in need of one. Their method is this : they make choice of a common cell with an egg in it, and inject some white liquid matter, from their proboscis, of a thickish substance. — They then begin to build upon the edges of the cell, and enlarge it. On the third day it appears fairly on the outside of the comb, in the form of a royal cell, and may now be properly so denomi- nated. On the fifth day, the cell being now greatly enlarged, and a great deal of the whitish matter thrown into it, the royal maggot appears in the form of a semicircle, not unlike a new moon,

being biggest in the middle part, and small at each end. In this form it is to be seen for two days, swimming on the top, and in the midst of the said matter in the cell ; and on the seventh day it is sealed up. During this period, our prin- cess undergoes various metamorphoses. I have opened the royal cell on the tenth day, and have found the maggot still on the top of the white liquor ; and having taken it into my hand to show it to any friend, it would have moved for a short time, although at this period it had not the smallest resemblance to a bee, being still only a maggot, but on the fourteenth or fifteenth day the meta- morphosis is so complete, that, instead of a gross white worm, forth comes a charming young queen bee, arrayed in all her glory. From the whole of these experiments, therefore,which I have repeated 'Xi various occasions, I can positively affirm, that

the queen bee is capable of becoming a mother, •without so much as seeing a drone ; and that the doctrines of almost all former writers on this sub- ject, (Schirah, and one or two more excepted,) who affirmed that the queen cannot breed without the Agency of the drones, or males, as they call them, is founded on a mistake. For a small piece of comb, with common eggs in it, may be taken and put into a box along with 400 common bees, and transported 1000 miles from a drone ; and yet the bees will rear a queen from one of those eggs, and that young queen will lay eggs, which in due time will produce queens, commons, and drones. But whether every egg in the common cells of the hive can be nourished up to produce a queen I dare not positively say, although I am much inclined to think so : as I can safely affirm, that not above one in a dozen of my ex- periments, in rearing queens from what are called common eggs, i. e. eggs that commonly produce working bees, has ever yet failed, when I either made the trial by way of experiment, or adopted the plan as a matter of economy. Some- times a single egg has failed in making the ex- periment ; but this might have happened from some other accidental cause. As a proof of this, 1 ofi'er to rear twenty queens, if not thirty, out of one hive, during the course of one sum- mer. For within these last six years I have caused the bees to rear from eggs taken from ;:oiiiinon cells, which the bees would otherwise have reared up for working bees, no fewer than 200 artificial queens; and which queens laid eˆirs, that came forward to be bees, in the same manner as other queens, which may for distinc- tion's sake, be styled natural ones. When a queen dies by any accident, the bees of her hive immediately cease working, consume their own honey, fly above their own and other hives at unusual hours when other bees are at rest, and fiine away if not soon supplied with another sovereign. Her loss is proclaimed by a clear and uninterrupted humming. This sign should be a warning to the

owner of the bees to take what noney remains in the hive, or to procure them another queen. In this last cose, the stock in- stantly revives ; pleasure and activity are ap- parent, through the whole hive ; the presence of the queen restores vigor and oxertion, and her voice commands universal respect and obedience, of such importance is the queen to the existence and prosperity of the community. The dissec- tion of the queen bee shows, evidently, that she lays many tlxmsand cgn's. It is computed that the ovaria of a queen lice contains more than ,'>000 enus at one time; and therefore it is not difficult to conceive that a queen bee may pro- duce lo, IKK) or 1-2,(KK) bees, or even more, in '.he space of two months.

The wiuiKiN<; or IOMMON IU:K, is smaller than either tin- qui en or the drone bee; and, as \cll as these, consists of three parts, viz. the head, which is attached by a narrow kind of neck to the rest of the body; the breast, or middle part ; and the belly, which is nearly separated Iroin the hi vast by an niM.-clioii or division, and jonnected \itii it by another narrow neck or j.-iictiou. There are two t yes in the head, of an idilunˆ h-uie, Mack, trans] larent, and iminove-

able. The mouth and jaws, like those of some species of fish, open to the right and left, and serve instead of hands to carry out of the hive whatever encumbers or offends them. In the mouth there is a long proboscis, or trunk, with which the bees suck up the sweets from the flowers. They have four wings fastened to their middle part, by which they are not only enabled to fly with heavy loads, but also to make those well-known sounds and hummings to each other that are supposed to be their only form of speech. They have also six legs fastened to their middle. The two foremost of these are the shortest, and with these they unload themselves of their treasures. The two in the middle are somewhat longer : and the two last are longest. On the outside of the middle joint of these last, there is a small cavity in the form of a narrow spoon, in which the bees collect by degrees, those loads of wax they carry home to their hives This hollow groove is peculiar to the working bee. Neither the queen nor the drones have any resemblance of it. The tibiae of the hind legs are ciliated, and transversely streaked on the inside. Each foot terminates in two hooks, with their points opposite to each other; in the middle of these hooks there is a little thin ap- pendix, which, when unfolded, enables the in- sects to fasten themselves to glass, or the most polished bodies. This part they likewise employ for transmitting the small particles of crude wax which they find upon flowers, to the cavity in their thighs. The belly is ornamented with six rings ; and contains, besides the intestines, the honey-bladder, the venom-bladder, and the sting. The honey-bladder is a reservoir, into which is deposited the honey that the bee1 sips from the cups of the flowers after it has passed through the proboscis, and through the narrow pipes that connect the head, breast, and belly of the bee. This bladder, when full, is of the size of a

small pea ; and is so transparent, that the color of the honey can be distinguished through it. The sting is situated at the extremity of the belly, and the head or root of it is placed contiguous to the small bladder that contains the venom. It is connected to the belly by certain small muscles, by means of which the bee can dart it out and draw it in with great force and quickness. In length it is about the sixth part of an inch. It is of a horny substance ; is biggest at the root, and tapers gradually towards the point, which is ex- tremely small and sharp ; and, when examined by the microscope, appears to be polished ex- ceedingly smooth. It is hollow within, like a tube, that the venomous liquor may pass through it when it strikes any animal, which it does the very instant that the sting pierces the skin, and insinuates itself into the wound ; which proves mortal to many small animals, as well as to the bee herself, when she leaves her sting in the wound; as it draws after it the bladder, and sometimes part of the entrails of the bee. These working bees may be said to compose the whole community, except in the season of the drones, which hardly lasts three months. During all the other nine months there are no other bees in the hive except them and the queen. The whole labor of the hive is performed by them. They

build the combs, collect the honey, bring it home, and store it up ir. their waxen magazines. They rear up the eggs to produce young queens, common iiees, and drones ; they carry out all incumbrances that are in the hives; they defend the comn-unity against enemies of every kind, and kill all the drones.

In the Philosophical Transactions, No. clxxii. vol. 1 ., we have an account of a species of honey- bee found in some parts of America, very dif- ferent in form and manners from the common bee of Europe. Their combs are composed of a series of small bottles or bladders of wax, of a dusky brown or blackish color ; and each nearly of the size and shape of a Spanish olive. They hang together in clusters, almost like a bunch of grapes, and are so contrived that each of them has its aperture, while the bees are at work upon it: but as soon as it is filled with honey this aperture is closed, and the bees leave it and go to work upon another vessel. Their lodgings are usually taken up in the hollow of an old tree, or in some cavity of a rock by the sea side. They are sagacious in choosing the most secure re- treats, because their honey is so delicious a bait, that they are hunted after by many animals ; and they have no power of defending themselves, having no stings as our bees have. The combs are brittle, and the honey is clear and liquid like rock-water. It is used by the natives rather as a drink with their food

than as honey. They use it also in medicine as a purge, drinking half a pint cf I", in the morning fasting. Clavigero, in his history of Mexico, mentions a species in every respect similar to ours, but without a sting This is the bee of, Yucatan and Chiapa, which makes the fine clear honey of Enstabentu, of an aromatic flavor, superior to that of all the other kinds of honey with which we are acquaint- ed. Another species, described by the same author, resembles in its form the winged ant, but is smaller than the common bee ; and without a sting. This insect, which is peculiar to warm and temperate climates, forms nests in size and shape resembling sugar loaves, and even some- times greatly exceeding these in size ; which are suspended from rocks, or from trees, and parti- cularly from the oak. These hives are much more numerously peopled than those of the com- mon bee. The nymphs of this bee, which are eatable, are white and round, like a pearl. The honey is of a grayish color, but of a very fine flavor.

With regard to the age of bees, the large drones live but a little while, being destroyed without mercy by the working bees, probably to save honey. But of the other sort, said to have been lately discovered, no larger than the working bees, and not easily to be distinguished from them, the age has not yet been ascertained. And, if Mr. Bonner's statement of the- fact be just, it will first be necessary to ascertain their existence. As to the age of the working bees, writers are not .agreed. Some maintain that they are annual, and others suppose that they live many years. Many of them, it is well known, die annually of hard labor; and though they may be preserved by succession in hives or colonies for several years, the most accurate observers are

of opinion, that their age is but a year, or at the utmost not more than two summers.

These industrious insects, Mr. Bonner re- marks, have their vices as well as their virtues. The most savage Indian tribes do not wage more deadly wars than the bees of different hives, and sometimes of the same hive, occasionally do. In these battles, their stings are their chief wea- pons ; and great skill may be discovered in their manner of pointing them between the scaly rings which cover their bodies, or to some other easily vulnerable part. The bee which first gains the advantage, remains the conqueror; though the victory costs the victor his life, if he has left his sting in the body of the enemy ; for with the sting so much of the body is torn out, that death inevitably follows. Bees have very severe con- flicts when whole hives engage in a pitched battle, and many are slain on both sides. Their fighting and plundering one another ought chiefly to be imputed, as Mr. Thorley observes, to their perfect abhorrence of sloth and idleness, or to their insatiable thirst for honey ; for when in spring or autumn the weather is fair, but no honey can be collected from plants, and is to be found only in

the hives of other bees, they will venture their lives to get it there. Dr. Warder assigns another cause for their fighting ; which is, the necessity that the bees are reduced to, when their own hive has been plundered, at a season when it is too late to repair the loss by any industry in the fields. Sometimes one of the queens is killed in battle : in this case, the bees of both hives unite as soon as her death is generally known among them. All then become one people; the vanquished go off with the robbers, richly laden with their own spoils, and return every day with their new associates to pillage their old habitation. This causes a throng, unusual for the season, at the door of the hive they are plundering ; and if the owner Jifts it up at night, when all are gone home, he will find it empty of inhabitants ; though there per- haps will remain in it some honey, which he takes as h-s property. When two swarms take flight at the same time, they sometimes quarrel, and greo numbers are destroyed on both sides, till one of the queens is slain. This ends the con- test, and the bees of both sides unite under the surviving sovereign.*

Mr. Wildman,by his dexterity in the manage- ment of bees, some years ago surprised the whole kingdom. He caused swarms to light where he pleased almost instantaneously ; he ordered them to settle on his head, then removed them to his hand, and commanded them to de- part and settle on a window, table, &c., at plea- sure. We subjoin the method of performing these feats, in his own words : ‘ Long experience has taught me, that as soon as I turn up a hive, and give it some taps on the sides and bottom, the queen immediately appears to know the cause of this alarm ; but soon retires again among her people. Being accustomed to see her so often, I readily perceive her at first glance ; and long practice has enabled me to seize her instantly, with a tenderness that does not in the least endanger her person. This is of the utmost importance ; for the least injury done

to her brings immediate destruction to the hive, if you have not a spare queen to put in her place, as I have too often experienced in my first at- tempts. When possessed of her I can, without injury to her, or exciting that degree of resentment that may tempt her to sting me, slip her into my other hand, and returning the hive to its place hold her there, till the bees missing her are all on wing and in the utmost confusion. When the bees are thus distressed, 1 place the queen wherever I would have the bees to settle. The moment a few of them discover her, they give notice to those near them, and those to the rest ; the knowledge of which soon becomes so general, that in a few minutes they all collect themselves round her ; and are so happy in hav- ing recovered this sole support of their state, that they will

long remain quiet in their situa- tion. Nay the scent of her body is so attractive to them, that the slightest touch of her, along any place or substance, will attach the bees to it, and induce them to pursue any path she takes.' This was the only witchcraft used by Mr. Wildman, and is that alone which is prac- tised by others who have since made similar ex- hibitions.

When the bees begin to work in their hives they divide themselves into four companies; one of which roves in the fields in search of materials; another employs itself in laying out the bottom and partitions of their cells ; a third is employed in making the inside smooth from the corners and angles ; and the fourth company brings food for the rest, or relieves those who return with their respective burdens. But they are not kept constant to one employment ; they often change the tasks assigned them ; those that have been at work, bein<4 permitted to go abroad; and those duit have been in the fields already take their places. They seem even to have signs by which iliuv understand each other; for when any of them want food, it bends down its trunk to the bee from whom it is expected, which then opens its honey bag, and lets some drops fall into the •other's mouth, which is at that time opened to receive it. Their diligence and labor are so great, that in a day's time they are able to make cells, which lie upon each other, numerous enough to contain 3000 bees. In the plan and formation of these cells they discover a most wonderful sagacity. In constructing habitations \\itlun a limited compass, an architect would inive three objects in view; first to use the mallest possible quantity of materials; next to give the edifice the greatest capacity in a de termined space; and thirdly to employ the spot ni such a manner that none of it may be lost. On examination it will be found that the bees have obtained all these advantages in the hexa- gonal form ol their cells; for first, there is econo- my of wax, as the circumference of one cell makes part of the circumferences of those con- tiguous to it ; >ecoii(lly, the economy of the spot, as these cells, which join to one another, leave no void between them; and thirdly, the greatest '•,ipaeity or space ; as of all the figures which can bo (ontijuou>, that with si\ sides gives the largest area. This thnttmess prompts them to i.'iiike the partitions of their cells thin ; yet they

are constructed so that the solidity may com- pensate for the scantiness of materials. The parts most liable to injury are the entrances of the cells. These the bees take care to strengthen, by adding quite round the circumference of the apertures a fillet of wax, by which means this mouth is three or four times thicker than the sides ; and they are strengthened at the bottom by the angle formed by the bottom of three cells falling in the middle of an opposite cell. The combs lie parallel to each other ; and there is left between every one of them a space which serves as a street, broad enough for two bees to pass by each other. There are holes which go quite

through the combs, and serve as lanes for the bees to pass from one comb to another, without being obliged to go a great way about. When they begin their combs, they form at the top of the hive a roof or stay to the whole edi- fice, which is to hang from it. Though they generally lay the foundations of the combs so that there shall be no more between them than what is sufficient for two bees to pass, yet they sometimes place those beginnings of two combs too far asunder ; and in this case, in order to fill up part of the void space arising from that bad disposition, they carry their combs on ob- liquely, to make them gradually approach each other. This void space is sometimes so consider- able that the bees build in it an intermediate comb, which they terminate as soon as the origi- nal combs have only their due distances. As the combs would be apt, when full, to overcome by their weight all the security which the bees can give them against falling, they who prepare hives set in them, cross-ways, sticks which serve as props to the combs, and save the bees a great deal of labor. It is not easy to discover the particular manner of their working ; for, notwithstanding the many contrivances used for this purpose, there are such numbers in continual motion and succeeding one another with such rapidity that nothing but confusion appears to the sight Some of them, however, have been observed carrying pieces of wax in their talons, and run- ning to the places where they are at work upon the combs. These they fasten to the work by means of the same talons. Each bee is employed but a very short time in this way ; but there is so great a number of them that go on in a constant succession, that the comb increases very per- ceptibly. Besides these there are others that run about beating the work with their wings and the hinder parts of their body, probably with a view to make it more firm and solid. Whilst part of the bees are occupied in forming the cells, others are employed in perfecting and polishing those that are new- modelled. The operation is performed by their talons, taking off every thing that is rough and uneven. These polishers are not so desultory in their operations as those that make the cells ; they work long and diligently, never intermitting their labor, except to carry out of the cell the particles of wax which they take off in polishing. These particles are not allowed to be lost; others are ready to re- ceive them from the polishers, and to employ them in some other part of the work.

One of the chief uses of the cells is to be

nurseries for the young. The cells for those who are to be working bees are commonly half an ;nch deep ; those for drones three quarters of an inch ; and those which are intended only for keeping honey still deeper. This

accounts for the inequalities observed in the surface of combs. The queen bee is generally concealed in the most secret part of the hive, and is never visible but when she lays her eggs in such combs as are ex- posed to sight. When she does appear, she is always attended by ten or a dozen of the com- mon sort, who form a kind of retinue and fol- low her, wherever she goes, with a sedate and grave step. Before she lays her eggs she examines the cells where she designs to lay them ; and if she finds that they contain neither honey, wax, nor embryo, she introduces the posterior part of her body into a cell, and fixes to the bottom of it a small white egg, which is composed of a thin white membrane, full of a whitish liquor. In this manner she goes on till she fills as many cells as she has eggs to lay, which are generally many thousands. Sometimes more than one egg has been deposited in the same cell ; when this is the case, the working bees remove the supernumerary eggs, and leave only one in each cell. On the first or second day after the egg is lodged in the cell, the drone bee, or, according to Mr. Bonner the working bee, injects a small quantity of whitish liquid, which in about a day is absorbed by the egg. On the third or fourth day is produced a worm or maggot ; which, when it is grown so as to touch the opposite angle, coils itself up in the shape of a semicircle, and floats in a proper liquid, whereby it is nourished and enlarged in its dimensions. This liquor is of a whitish color, of the thickness of cream, and of an in- sipid taste like flour and water. Naturalists are not agreed as to the origin and qualities of this liquid. Some have supposed that it consists of some generative matter, injected by the working bees into each cell, in order to give fecundity to the egg : but the most probable opinion is, that it is the same with what some writers have called the bee-bread ; and that it is a mixture of water with the juices of plants and flowers, collected merely for the nutrition of the young whilst they are in their weak and helpless state. Whatever be the nature of this aliment, it is certain that the working bees are very industrious in supplying the worms with a sufficient quantity of it. The worm is fed by the working bees for about eight days, till one end touches the other in the form of a ring ; and, when it begins to feel itself uneasy in its first posture, it ceases to eat and begins to unroll itself, thrusting that end forwards to the mouth of the cell which is to be the head. The attendant bees, observing these symptoms of ap- proaching transformation, desist from their labors in carrying proper food, and employ themselves in fastening up the top of the cell with a lid of wax, formed in concentric circles, and in cherish- ing the brood and hastening the birth by their na- tural heat. In this concealed state the worm ex- tends itself at full length, and prepares a web of a sort of silk, in the manner of the silk-worm. This web forms a complete lining for the cell, and affords a convenient receptacle for the trans-

formation of the worm into a nymph or chrysalis. Some naturalists suppose

that, as each cell is destined to the successive breeding of several worms, the whole web, which is composed of many crusts or doubles, is in reality a collection of as many webs as there have been worms M. Maraldi apprehends that this lining is formed of the skin of the worm thrown off at its entrance into the nymph state ; but it is urged that, if the cells are opened when newly covered by the bees, the worm within will be found in its own form, and detected in the act of spinning its web ; and by means of glasses it will be found composed of fine threads regularly woven together, like those of other spinning animals. In the space of eighteen or twenty days the whole process of transformation is finished, and the bee endeavours to discharge itself from confinement, by forcing an aperture with its teeth through the covering of the cell. The passage is gradually dilated ; so that one horn first appears, then the head, and afterwards the whole body. This is usually the work of three hours, and sometimes of half a day. The bee, after it has disengaged itself, stands on the surface of the comb till it has acquired its natural complexion, and full maturity and strength, so as to become fit for labor. The rest of the bees gather round it in this state, congratulate it on its birth, and offer it honey out of their own mouths. The exuviae and scattered pieces of wax which are left in the cell are removed by the working bees; and the matrix is no sooner cleansed and fit for new fecundation, but the queen deposits another egg in it ; insomuch that Mr. Maraldi says, he has seen five bees produced in the same cell in the space of three months. The young bees are easily distinguished from the others by their color.; they are gray, instead of the yellowish brown of the common bees. The reason of this is, that their body is black, and the hairs that grow upon it are white, from the mix- ture of which seen together results a gray ; but this color forms itself into a brownish yellow by degrees, the rings of the body becoming more brown and the hairs more yellow. The eggs from which drones are to proceed are, as already ob- served, laid in larger cells than those of the work- ing bees. The coverings of these cells, when the drones are in the nymph state, are convex or swelling outward, whilst the cells of the working bees are flat. This, with the privilege of leading idle effeminate lives, and not working for the pub- lic stock, is what distinguishes the drones. The bees depart from their usual style of building when they are to raise cells for bringing up such maggots as are destined to become queens. These are of a longish oblong form, having one end big- ger than the other, with their exterior surface full of little cavities. Wax, which is employed with so geometrical a thriftiness in the raising of hexa- gonal cells, is expended with profusion in the cell which is to be the cradle of a royal maggot. They sometimes fix it in the middle, and at other times on one side of a comb. Several common cells am sacrificed to serve as a basis and support to it. 1 is placed almost perpendicular to the common cells, the largest end being uppermost. The lower end is open till the season for closing it comes, or till the maggot is ready for transformation. It*

would be difficult to conceive how a tender mag- got can remain in a cell turned bottom upmost, if we did not find it buried in a substance scarcely fluid, and if it was not in itself, at first, small and light enough to be suspended in this clammy paste. As it grows it fills all the upper and larger part of the cell. As soon as the young queen comes out of her cell, that cell is destroyed, and its place is supplied by common cells; but, as the foundation of the royal cell is left, this part of the comb is found thicker than any other. There are several such cells prepared ; for, if there was only one reared in each hive, the swarms might often want a conductress. Many accidents might also destroy the little maggot before it becomes a bee. It is therefore necessary that a number of such cells should be provided ; and accordingly there are observed several young queens in the begin- ning of the summer, more than one of which often takes flight when a swarm departs. A young queen is in a condition to lead a swarm, from a hive in which she was born, in four or five days aftei she has appeared in it with wings. The bees of a swarm are in a great hurry when they know that their queen is ready to lay. In this case they give their new cells but part of the depth they are to have, and defer the finishing of them till they have traced the number of cells requisite for the present time. The cells first made are intended only for working bees; these being the most necessary.

Besides the instincts above mentioned, bees are possessed of others, some of which are equally necessary for their preservation and happiness. They anxiously provide against the entrance of insects into the hive, by gluing up with wax or propolis the smallest holes in it. Some stand as sentinels at the month of the hive, to prevent in- sects of any kind from getting in. Hut if a snail or other large insect should uet in, notwithstand- ing all nsisiance they sting it to death ; and then cover it over with a coat of propolis, to prevent the bad smell or maˆsots which might proceed vi'om the putrefaction of such a large animal. I ices seem to be warned of the appearance of bad weather l;y some particular feeling. It some- tinu > happens, even when they are very assiduous and busy, that they on a sudden cense from their work ; not a single bee stirs out ; and those that an- abroad huny home in such prodigious crowds, thai the doors of their habitations are too small I.) admit them. On such occasions, if we look up to the sky, we shall soon discover some of those black clouds which denote impending rain. Whether they see the clouds gathering, as some imagine, or whether (as is more probable) they iu:l —onie peculiar sensation upon their bodies, is not yet determine,! ; but it is alleged, that no bee is c\t< caii.;ht ev. :i in what we call a sudden has ;>, in at a very great distance t'om the hi\e, 01 has in i n before injured by some '•'< cid'.'iit, or be sickly and unable to fly so fast

as 'he rest. Cold is very hurtful to bees'. To de- :vi'd themselvi ; against its ell'ects during a hard winter, they < ro\v;l tou< iher in the middle of the ••/. about, and I hereby excite a warmth, \\liieh is oficii perceptihh; by laving the hand windows ot 'the hive. They seem •'<; HP |rr-tat!'l one another bv the motions of their

wings : when the queen wants to quit the hive she gives a little buzz ; and all the others imme diately follow her example, and retire along with her.

The habitations of bees ought to be very close ; and what their hives want from the negligence or unskilfulness of man, these animals supply by their own industry ; so that it is their principal care, when first hived, to stop up all the crannies. For this purpose they make use of a resinous gum, which is more tenacious than wax, and differs greatly from it. This the ancients called propolis. It will grow considerably hard in the hive, though it will in some measure soften by heat; and is often found different in consistence, color, and smell. It has generally an agreeable aromatic odor when it is warmed ; and by some it is considered as a most grateful perfume. When the bees begin to work with it, it is soft ; but it acquires a firmer consistence every day, till at length it assumes a brown color, and be- comes much harder than wax. The bees carry it on their hinder legs : and some think it is met with on the birch, the willow, and the poplar. How- ever it is procured, it is certain that they plaster the inside of their hives with this composition.

Various experiments have been made of late years, by which new light has been thrown upon the subject of the generation of bees. Swam- merdam and Maraldi having discovered in the structure of the drones some resemblance to the male organs of generation, from thence concluded that they were males ; but neither of those accu- rate and industrious observers could detect them in the act of copulation, as Mr. Bonner has justly observed. Swammerdam, therefore, enter- tained a notion, that the female or queen bee was fecundated wi thout copulation ; that it was suf- ficient for her to be near the males; and that her eggs were impregnated by a kind of vivifying aura, exhaled from the body of the males, and absorbed by the female. However, Mr. Reaumur thought that he had discovered the actual copu- lation of the drones with the female bee, and he has very minutely described the process of it. M. Barbut, in his Genera of Insects, (p. 268.) without taking any notice of recent discoveries, seems to have adopted the same idea. ' The office of tne males or drones,' says he, ' is to ren- der the queen pregnant. One single female would in the midst of 700 or 800 males, one would think, be incessantly assailed. But nature has provided against that inconvenience, by ma- king them of a constitution extremely frigid. The female chooses out one that pleases her ; she is obliged to make the first advances, and excite him to love her by her caresses. But this favor

proves fatal to him ; scarcely has he ceased from amorous dalliance but he is seen to perish. These observations may be made, by putting a female with several males into a bottle.' Others again, as M. Schirach, M. Hattorff, and Mr. Bonner, reject the drones as bearing no share at all in the business of propagation, and assert the queen bee to be self-prolific. But for what purpose then should the drones be furnished with that large quantity of seminal liquor? to what use so large an apparatus of fecundating organs so well described by Reaumur and Maraldi ?

The above gentlemen seem to have founded their opinion upon observations, that hives are peopled at a time of the year when (as they supposed) there are no drones in being. But, if Mr. De- braw's discoveries be true, nature has provided drones of different sizes for the purpose of impregnation, adapted to different times, occasions, and circumstances : and the opinions of Messrs. Schirach and Hattorff seem to have been founded upon their missing the large sized drones, and not being acquainted with, or not adverting to, the other sort, so hardly distinguishable from the working bees. Mr. Bonner's laborious but fruit- less searches, however, for these little drones, render the matter at least still dubious, if they do not entirely overturn Mr. Debraw's whole system. Many of the ancients as well as moderns have supposed, that the eggs of the female bee are not impregnated with the male sperm while in the body of the creature, but that they are de- posited unimpregnated in the cells ; and that the male afterwards ejects the male sperm on them as they lie in the cells, in the same manner as the generation of fishes is supposed to be performed, by the males impregnating the spawn after it is cast out by the females. M. Maraldi long since conjectured that this might be the case ; and he was confirmed in this opinion by observing a liquid whitish substance surrounding each egg, at the bottom of the cell, a little while after it had been laid ; and that a great number of eggs, which were not encompassed by this liquor, re- mained barren in the cell. This method of im- pregnation has been lately attempted to be esta- blished by the observations of Mr. Debraw of Cambridge. Having put some bees into glass hives, with a large number of drones, he observed on the first or second day (always before the third), from the time in which the eggs were placed in the cells, which the queen generally lays on the fourth or fifth day after they are put into the hive, that a great number of bees fastened themselves to one another, and formed a kind of curtain from the top to the bottom of the hive, probably in order to conceal the process of gene- ration. Mr. Debraw, however, could soon per- ceive several bees, whose size he was not able to distinguish, inserting the posterior part of their bodies each into a cell, and

sinking into it ; after a little while they retired, and he could see with the naked eye a small quantity of whitish liquor, left in the angle of the base of each cell, contain- ing an egg ; this liquor was less liquid than honey, and had no sweet taste. In order to prove further, that the eegs are fecundated by the males, and that their presence is necessary at the time of breeding, Mr. Debraw made the following experiments. He left in a hive the queen, with only the working bees, without any drones, to see whether the eggs she laid would be prolific. To this end he took a swarm, and shook all the bees into a tub of water, leaving them there till they were quite senseless ; by which means he could distinguish the drones, without any danger of being stung : leaving these out, therefore, he restored the queen and working bees to their for- mer state, by spreading them on a brown paper in the sun ; after this he replaced them in a glass hive, where they soon began to work as usual.

The queen laid eggs, which, to his great surprise, were impregnated ; for he imagined he had sepa- rated all the drones or males, and therefore omit- ted watching them ; at the end of twenty days he found several of his eggs had, in the usual course of changes, produced bees, while some had wi- thered away, and others were covered with honey. Hence he inferred that some of the males had escaped his notice, and impregnated part of the eggs. To convince himself of this he took away all the brood comb that was in the hive, to oblige the bees to provide a fresh quantity, being deter- mined to watch narrowly their motions after new eggs should be laid in the cells. On the second day, after the eggs were placed in the cells, he perceived the same operation repeated, of the bees hanging down in the form of a curtain, while others thrust the posterior part of their bodies into the cells. He then introduced his hand into the hive, and broke off a piece of the comb, in which there were two of these insects ; he found in neither of them any sting: upon dissection, with the assistance of a microscope, he discovered the four cylindrical bodies which contain the glutinous liquor, of a whitish color, as observed by Maraldi in the large drones. He was there- fore now under a necessity of repeating his expe- riments, in destroying the males, and even those which might be suspected to be such. He once more immersed the same bees in water; and when they appeared in a senseless state, he gently pressed every one, in order to distinguish those armed with stings from those which had none, and which of course he supposed to be males : of these last he found fifty-seven, and replaced the swarm in a glass hive, where they immediately applied again to the work of making cells ; and on the fourth or fifth day he had the pleasure to see the queen bee deposit her eggs in those cells. He continued watching most part of the ensuing days, but could discover nothing of what he had seen before. The eggs after the fourth day, in- stead of changing in the manner of caterpillars, were found in the same state that they were the first day,

except that some were covered with honey. A singular event happened the next day about noon : all the bees left their own hive, and at- tempted to get into a neighbouring hive, probably in search of males; but the queen was found dead, having been killed in the engagement. To be further satisfied, Mr. Debraw took the brood comb, which had not been impregnated, and di- vided it into two parts : one he placed under a glass bell, marked No. 1. with honey-comb for the bees' food, taking care to leave a queen, but no drones among the bees confined in it : the other piece of brood comb he placed under an- other glass bell, No. 2. with a few drones, a queen, and a proportionable number of common bees. The result was, that in the glass No. 1. there was no impregnation, the eggs remained in the same state they were in when put into the glass ; and on giving the bees their liberty on the seventh day, they all flew away, as was found to be the case in the former experiment : whereas in the glass No. 2., the very day after the bees had been put into it, the eggs were impregnated by the drones ; the bees did not leave their hives on receiving their liberty ; the eggs at the

usual time underwent die necessary transforma- tions, and a numerous young colony was pro- iluced. Naturalists have observed, that the queen tees are produced in a manner peculiar to them- selves, and different from the drones and working Dees. Some have supposed, that the eggs laid by the queen in a hive, and destined for the produc- tion of queen bees, are of a peculiar kind ; but though this is not the case, as M. Schirach has lately discovered, yet there are particular cells ap- propriated for this purpose. These cells are generally near the edges, and at the bottom of the combs, and sometimes on the sides of a honey- comb : they are of an oblong orbicular form, and very strong ; and are more or less numerous in different hives, as occasion seems to require. It has been also supposed, that the matter with which they are nourished is of a different kind and quality from that employed for the nourish- ment of the other bees ; that which has been col- lected out of the royal cells being of a gummy glutinous nature, and of a deep transparent red, and dissolving in the fire rather than crumbling to powder. It was long supposed that the queen bee was the only female contained in the hive ; and that the working bees were neutral, or of neither sex. But M. Schirach has lately establish- ed a different doctrine, which has been also con- tinued by the latter observations of Mr. Debraw and Mr. Bonner. According to M. Schirach, all the working or common bees are females in dis- guise ; and the queen bee lays only two kinds of eggs, vi/.. those which are to produce the drones, and those from which the working bees are to proceed ; and from any one or more of these, one or more queens may be produced ; so that every worm of the latter or common kind, which has been hatched about three days, is capable, un- der certain circumstances, of becoming the queen, or mother of a hive. In proof of this doctrine, new •ind singular as it may seem, he alleges a number of .satisfactory and decisive experiments, which have been since verified by those of Mr. Debraw and Mr. Bonner. The final result of these ex- periments is, that a colony of working bees shut up with a piece of common brood comb, not only hatch it, but are found, at the end of eight- teen or twenty days, to have produced from thence one or two queens; which have apparently proceeded from worms of the common sort, pitched upon by tltem for that purpose ; and which, if they had remained in the old hive, (there is reason to suppose) would have been changed into common working bees. Hence we may justly inter, that the government of the bees is not a jure divino, or hereditary monarchy, but an elective one, in which the choice of their fu- ture ruler is made by the body of the people, while she is yet in the cradle, or in embryo; who are determined by motives of preference, which will perhaps for ever elude the penetra- tion of the most

sagacious naturalists. The i""iic!u>i<>ns drawn by M. Schirach, from expe- riments of this kind, often repeated by himself, Mr. Homier, and others, with the same success, arc, that all the common or working bees were originally of the female sex; but that when they have undergone their last metamorphosis, they arc condemned to a state of perpetual virginity,

and the organs of generation are obliterated; merely because they have not been lodged, fed, and brought up in a particular manner, while they were in the worm state. These authors sup- pose that the worm designed by the community to be a queen, or mother, owes its metamorpho- sis into a queen, partly to the extraordinary size of its cell, and its peculiar position in it, but principally to a certain appropriate nourishment found there, and carefully administered to it by the working bees while it was in the worm state ; by which, and possibly other means unknown, the development and extension of the germ of the female organs, previously existing in the em- bryo, is effected ; and those differences in its form and size are produced, which afterwards so remarkably distinguish it from the common working bees. This discovery is capable of rw»- ing applied towards forming artificial swarms, or new colonies of bees, by which means their num- ber might be increased, and their produce in honey and wax proportionally augmented. We cannot conclude this subject without taking no- tice of a conjecture, suggested by Mr. Bonner, or rather by a friend of his, respecting the fecunda- tion of the queen bee, which, however singular it may appear, is not without analogy in the na- tural history of insects. See APHIS. Mr. Bon- ner mentions, that in a conversation with two intelligent gentlemen after seeing his experi- ments, proving that queens lay eggs, which pro- duce queens, commons, and drones, without having ever seen a drone, they asked him, ‘ What then is the use of the drone f ‘ In answer to this, I candidly acknowledged, that I could not tell, as any conjecture that I could form respect- ing their use appeared to be attended with in- surmountable objections. We all agreed, how- ever, that they certainly must be of some use, as nature, or, more properly speaking, the God of nature, does nothing in vain. One of the gentle- men said, that perhaps bees might be like some other insects, whose males were not necessary in every act of generation ; and that, perhaps, al- though a queen bee who had never seen a drone c8uld lay an egg which would produce a queen, and that queen again do the same, and thus the production of queens and bees be continued with equal success, for perhaps six, eight, or ten ge- nerations, yet it might perhaps turn ‘out, that these queens would gradually become more and more unfruitful, and at last grow altogether bar- ren, unless they should cohabit with the drones. The other gentleman, however, was of opinion, that if one queen was fruitful without the agency of the drones, every other one would be so like- wise to the end of the world. There is one thing, however, that seems to favor the former gentleman’s conjecture ; viz. that

some hives, which had not a single drone in them, have been known to breed well for one summer, pretty well the next, and even tolerably the third ; but at last have bred drones, and thereby turned out much more prolific thereafter; although it must be owned that such hives generally fail at last. Seeing the drones are great consumers of honey, though they do nothing to provide any ; should the above conjecture, therefore, turn out to be true, a practical inference may be drawn, that a

hive may thrive fully as well, or rather better, for three or four years, without drones than with them ; after which period, they might again be introduced into the hive, for the purpose of re- newing the prolific powers of the queen, and preventing the royal race from becoming barren or extinct. It may be farther observed, as an additional argument in favor of the above con- jecture, that although the queen and her daugh- ter, none of whom ever saw a drone, might lay abundance of eggs, which would all produce bees, yet they might probably have laid a great many more, had the drones been in the hive with them. I must confess it appears somewhat pa- radoxical, to say that females will breed succes- avely for several generations without the assist- ance of the males ; and yet at last prove barren, and give over breeding altogether, till their pro- lific powers are renewed by fresh males cohabit- ing with them. But however paradoxical or un- accountable it may appear, that is not a sufficient reason to reprobate the supposition ; as there are many of the arcana of nature that are equally wonderful and unaccountable, and the elucida- tion of which has hitherto baffled the investiga- tion of the most penetrating geniuses, and deep- est inquirers into the secrets of natural philoso- phy.' Mr. Bonner adds, that one of these gentlemen offered him the use of his hives to try an experiment in proof of this theory, which he promises to execute the first leisure opportunity, and lay the result before the public ; which, if it shall prove satisfactory, will entirely set aside Mr. Debraw's doctrine of the little drones ; the existence of which is utterly denied by Mr. Hunter, a late English writer upon the subject, as well as by Mr. Bonner. Mr. Hunter con- siders the doctrine as merely calculated to fur- nish a convenient link in the chain of a favorite hypothesis.

Honey is originally a juice digested in plants, which sweats through their pores, and chiefly in their flowers, or is contained in reservoirs in which nature stores it. The bees sometimes pe- netrate into these stores, and at other times find the liquor exuded. This they collect in their stomachs ; so that, when loaded with it, they seem, to an attentive eye, to come home without any booty at all. Besides the liquor already mentioned, which is

obtained from the flowers of plants, another substance, called honey-dew, has been discovered, of which the bees are equally fond. Of this substance there are two kinds, both deriving their origin from vegetables, though in very different ways. The first kind, the only one known to husbandmen, and which passes for a dew that falls on trees, is no other than a mild sweet juice, which, having circulated through the vessels of vegetables, is separated in proper reservoirs in the flowers, or on the leaves, where it is properly called the honey-dew ; some- times it is deposited in the pith, as in the sugar- cane ; and, at other times, in the juice of pulpy summer fruits when ripe. Such is the origin of the manna which is collected on the ash and maple of Calabria and Briancon, where it flows in great plenty from the leaves and trunks of these trees, and thickens into the form in which it is usually seen. The second kind of honey-dew, VOL. II.

which is the chief resource of bees, after the spring flowers and dew by transpiration on leaves are past, owes its origin to a small insect, (see APHIS,) the excrement thrown out by which makes a part of the most delicate honey we ever taste. From whatever source the bees have collected their honey, the instant they return home they seek cells in which they may disgorge and deposit their loads. They have two sorts of stores ; one of which consists of honey laid up for the win- ter, and the other of honey intended for acci- dental use in case of bad weather, and for such bees as do not go abroad in search of it. Their method of securing each of these is different. They have in each cell a thicker substance, which is placed over the honey to prevent its running out of the cell ; and that substance is raised gra- dually as the cell is filled, till the bees, finding that the cell cannot contain any more, close it with a covering of wax, not to be opened till times of want, or during the winter.

The queen and working bees are armed with stings ; when the whole sting is examined by a microscope along with a small needle, which has received the finest polish that human art can give it, the sting exhibits all over the most beau- tiful polish, without the least flaw, blemish, or inequality; while the needle appears full of holes, scratches, and ruggedness, like an iron bar from a smith's forge. Yet this fine polished in- strument is only the sheath of others still more exquisitely fine and curious. This fine horny sheath, or scabbard, includes two bearded darts. This sheath ends in a sharp point, near the ex- tremity of which a slit opens, through which, at the time of stinging, the two bearded darts are protruded beyond the end of the sheath : one of these is a little longer than the other, and fixes its beard first ; and the other instantly following, they penetrate alternately deeper and deeper, taking hold of the flesh with their beards or hooks, till the whole sting is buried in the flesh ; and then a ve- nomous juice is injected through the sheath, from a little bag at the root of the sting. Hence the wound occasions an acute pain and swelling of the part, which sometimes continue several

days. These effects are best remedied by enlarging the wound directly, to give it some discharge. This poison seems to owe its mischievous efficacy to certain pungent salts. Let a bee be provoked to strike its sting against a plate of glass, and there will be a drop of the poison discharged, and left upon the glass. This being placed under a double microscope, as the liquor evaporates the salt will be seen to concentrate, forming oblong, pointed, clear crystals. Mr.Derham counted on the sting of a wasp tight beards on the side of each dart, somewhat like the beards of fish- hooks ; and the same number is to be counted on the darts of the bee's sting. When these beards are stuck deep in the flesh, if the wounded per- son starts, or discomposes the bee before it can disengage them, the sting is left behind sticking in the wound : but if he have patience to stand quiet, the creature brings the hooks down close to the sides of the darts, and withdraws the weapons, in which case the wound is always much less painful. The danger of being stung by bees maybe in a great manner prevemea oy

a quiet composed behaviour. A thousand bees will fly and buzz about a person without hurting him, if he stand perfectly still and forbear dis- turbing them even when near his face, in which case he may observe them for hours together without danger ; but if he molests or beats them away, he usually suffers for it. It has been af- firmed, that a person is in perfect safety in the midst of myriads of bees, if he but carefully keep his mouth shut, and breathe gently through the nostrils only ; the human breath, it would seem, being peculiarly offensive to their delicate or- gans : and merely with this precaution, the hives may be turned up, and even part of the comb cut out, while the bees are at work.

A hive of bees has often been likened to a well-peopled city, consisting of between 15,000 and 18,000 inhabitants; and its government has been generally supposed to be an absolute mo- narchy, wherein the queen governed with unli- mited sway. But Mr. Bonner shows that it is rather a republic, or at most a large family of dutiful children, over whom the queen-mother presides with a mild and parental authority ; the far greater part of her subjects being in fact her own offspring. When a hive is become too much crowded by the addition of the young brood, a part of the bees think of finding them- selves a more commodious habitation ; and with that view single out the most forward of the young queens. A new swarm is, therefore, con- stantly composed of one queen at least, and of several thousand working bees, as wellas of some hundreds of drones. The working bees are some old, some young. Scarce has the colony arrived at its new habitation, when UK: working bees labor with the utmost diligence to

procure ma- terials for food ,unl building. Their principal aim is not only to have cells in which they may deposit their honey; but a stronger motive seems to animate them — they seem to know that their queen is in haste to lay her eggs. Their in- dustry is such, that in twenty-four hours they will have made combs twenty inches long, and wide in proportion. They make more wax during the first fortnight, if the season is favor- able, than they do during all the rest of the year. Other bees are at the same time busy in stop- ping all the holes and crevices they find in the new hive, in order to guard against the entrance of insects which covet their honey, their wax., or themselves; and also to exclude the cold air; for it is indispensably necessary that they be lodged warm. When the lees first settle1 in swarming; indeed, when they at any time rest themselves, I here i-s something very particular in the method of taking their repose. It is done by collecting themselves in a heap, and hanging to each other liy their feet They sometimes extend these heaps to a considerable length. It would seem probable to us, that the bees from which the others lisiut; must have a considerable weight suspended to them. All that can be said is, that the bees i.nist find thU to lie a situation agree- able IM themselves. They, perhaps, have a me- thod ot' distending themselves \itll the. air,

thereby to less. .n then specific > ˆr;\ ity ; as fishes do, to alter their v;i ;.\ it v compared with water. Vv hen ,i —warei i!j . i ; – ,ntc •>•,(, ni more bands,

which settle separately, this division is a sure sign that there are two or more queens among them. One of these clusters is generally larger than the other. The bees of the smaller cluster, or clusters, detach themselves by little and little, till at last the whole, together with the queen or queens, unite with the larger cluster. As soon as the bees are settled, the supernumerary queen, or queens, must be sacrificed to the peace and tranquillity of the hive. This execution gene- rally raises a considerable commotion in the hive; and several other bees, as well as the queen or queens, lose their lives. Their bodies may be observed on the ground near the hive. The queen that is chosen is of a more reddish color than those which are destroyed ; so that fruitfulness seems to be a great motive of pre- ference in bees; for the nearer they are to the time of laying their eggs, the bigger, redder, and more shining are their bodies.

Plate I. APIS. Fig. 1. represents the queen bee. 2. The drone. 3. The working hee. 4. The bees hanging to each other by the feet, which is their method of taking repose. 5. The pro- boscis or trunk, which is one of the principal organs of the bees, wherewith they gather the honey, and take their nourishment. 6. One of the hind-legs of a working bee, loaded with wax. 7. A comb, in which the working bees are bred. The cells are the smallest of any. Two of them have the young bees enclosed. A royal cell is

*suspended on one side. 8. A comb in which the drones are bred, being larger than the former; the young drones being included in several of them, with two royal cells suspended on one side. 9. A similar comb, in which the royal cell is fixed in the middle of the comb; and several common cells are sacrificed to serve as a basis and support to it. In general, the royal cells are suspended on the side of a comb, as in fig. 7, 8. On the side of fig. 9, two royal cells are represented as begun, when they resemble pretty much the cup in which an acorn lies. The other royal cells have the young queens in- cluded in them. Fig. 10 exhibits the sting and all its parts, as seen through the miscroscope, viz. a, the sheath and two shanks, united to each other, and terminating in a sharp point, so as to look like a single part, b, The poisonous bag. c, The tube that serves to convey the poison from its bag to the thickest part of the sheath. d d, The two shanks of the sting mutually con- veying to each other, e e, The sheath of the sting, ff, The thickest end of the sheath, where the tube opens into it, by which it receives the insect's poison, g, The extreme point of the sting, formed by the two shanks of that organ, that are in this place closely united, h h, The beards with which the shanks of the sting are armed at their extremities. *', The tube that selves to secrete the poison, which it discharges into the poison bag. k k, The two blind extre mities of the said tube. / / / /, Two pair of cartilages, of different forms, which are for the most part of a deep black, and articulated among themselves and with the shanks of the sting. m w?, Two other cartilages, almost entirely mem- branaceous, but less conspicuous than the for- mer, with one pair of which they are articulated.*

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nnnnnnnn, Eight places, in winch the fore- going cartilages are articulated among them- selves, and with the shanks of the sting d d. — oooo, Four muscles serving to move the sting different ways, by the assistance of the same car- tilages pp, Two muscles which draw the shanks of the sting into its sheath, q q, Two appendages of the sting which are moved along with it, and seem to answer no other purpose but that of ornament. Fig. 11, The ovary. Fig. 12, Six eggs drawn nfter nature, and placed on their ends :

these eggs are oblong, very -slender, but somewhat thicker on their upper parts. Fig. 13, An egg viewed with a microscope : it resembles the skin of a fish, divested of its scale, but still retaining the marks of their insertion. Fig. 14, Worms of bees of different sizes, drawn parent parts that lie over it. i, A worm lying on its back, and beginning to draw in the hinder part of its body, and move its head. Fig. 15, A full-grown worm viewed with a microscope. a a, Its fourteen annular incisions or divisions. h, The head and eyes, 8cc. ccc, Ten breathing holes. Fig. 16, The worm forming its web. a a, The sides of the cell that contains it. b, The bottom of the cell, c, The entrance or door of the cell. The worm is here represented as making its web in the properest manner to shut up this entrance. Fig. 17, The worm taken out of the web in which it had enclosed itself, and just ready to cast its skin. Fig. 18, A cell con- taining the worm changed into a nymph, and perfectly lined with the said worm's web. Like- wise the said web entire, with the nymph con- tained in it, as they appear on opening the cell. a a, The sides of the cell lined with the worm's web. b, The mouth of the cell, perfectly closed by the web. c, The bottom of the cell, d, The web entire, as it appears on opening the cell, which it greatly resembles in form, e, The upper part of the web, of a convex form. This part shows its filaments pretty distinctly, f, The enclosed nymph appearing through the transparent sides of the web. g, The bottom of the web, answer- ingtothatofthewax'cell. Fig. 19, A worm changed to a nymph, of its natural size and form, yet so as to exhibit its limbs, which are folded up in a most wonderful manner. Y- r. 20, The nymph of the bee viewed with the microscope, displaying, in a distinct manner, all the parts of the enclosed insect, and the beautiful manner in which they are laid up. a, The head bloated with humors. b b, The eyes, projecting considerably, r c, The antennae, or horns.

not to be found, as they remain m the skin it sheds on quitting the nymph state. //, The se- cond pair of legs, m m, The wings, n n, The blade bones, o o, The last pair of legs, p p, The abdominal rings, q, The hinder part of the body. The sting projects a little in this place, r, Two little parts accompanying the sting. », The anus. Fig. 21. a, A cell full of bee-bread, placed in layers, b, Little grains, of which that substance, viewed with the microscope, appears chiefly to consist.

The balls which we see attached to the legs of bees returning to the hives, are not wax, but a powder collected from the stamina of flowers, not yet brought to the state of wax. The substance of these balls, heated in any vessel, does not melt as wax would do, but becomes dry, and hardens; it may even be reduced to a coal. If thrown into water it will sink, whereas wax swims. To reduce this crude substance into wax, it must first be digested in the body of the bee. Every bee, when it leaves the hive to collect this precious store, enters into the cup of the flower, particularly such as seem charged with the greatest quantity of this yellow farina. As the

animal's body is covered over with hair, it rolls itself within the flower, and quickly becomes quite covered with the dust, which it soon after brushes off with its two hind legs, and kneads it into two little balls. In the thighs of the hinder legs, there are two cavities, edged with hair ; and into these, as into a basket, the animal sticks its pellets. Thus employed, the bee flits from flower to flower, increasing its store, and adding to its stock of wax, until the ball upon each thigh becomes as big as a grain of pepper ; by this time having got a sufficient load, it returns, making the best of its way to the hive. After the bees have brought home this crude substance, they eat it by degrees ; or, at other times, three or four bees come and ease the loaded bee, by eating each of them a share, the loaded bee giving them a hint so to do. Hunger is not the motive of their thus eating the balls of waxy matter, especially when a swarm is first hived; but it is their desire to provide a speedy supply of real wax for making the combs. At other times, when there is no immediate want of wax, the bees lay this matter up in repositories, to keep it in store. When this waxy matter is swallowed, it is by the di- gestive powers of the" bee converted into real wax, which the bees again disgorge as they work it up into combs; for it is only while thus soft and pliant from the stomach, that they can fabri- cate it properly. That the wax thus employed is taken from their stomach, appears from their making a considerable quantity of comb SOOP after they are hived, and even on any tree 01 shrub where they have rested but a short while before their being hived; though no balls were visible on their legs, excepting those of a few which may be just returned from the field. This is farther confirmed by what happeued in a swarm newly hived : for two days together, from the time of their quitting their former home, it rained constantly, insomuch that not one bee was able to stir out during that time; yet, at the end of two days, they had made a comb fifteen

or sixteen inches long, and thick in proportion. The crude wax, when brought home by the bees, is often of as different colors as are the flowers from which it is collected : but the new combs are always of a white color, which is afterwards changed only by the impurities arising from the steam, &c. of the bees. Bees collect crude wax also for food ; for, if this was not the case, there would be no want of wax after the combs are made; but they are observed, even in old hives, to return in great numbers loaded with such mat- ter, which is deposited in particular cells, and is known by the name of bee-bread. We may guess that they consume a great deal of this substance in food, by the quantity collected ; which, by com-

Sutation, may in some hives amount to a hun- red weight in a season, whilst the real wax in such a hive does not exceed perhaps two pounds. Mr. Hunter, in vol. Ixxxii. of the Philosophi- cal Transactions, asserts that ‘ the bee-bread is the substance intended for the nourishment of the young animal when it escapes from the egg. The wax,’ he says, ‘ is an external secretion from the body of the bee, and discoverable between each of the scales of the under side of its belly. A quantity of these thin portions collected toge- ther, and held to a candle on a pin’s point, im- mediately melted into a little globe ; whilst no such effect followed the exposure of farina from the hind leg of the bee.’ Mr. Thorley says the bees carry the wax home from the fields in fine small scales between the folds of their bodies. ‘ Upon the belly of a bee,’ says he, ‘ within the plaits, were fixed six pieces of solid wax, per- fectly white and transparent like gum.’ Mr. Bonner combats these opinions, and argues 4 that Mr. Thorley, and probably some others, have seen bees carrying such white scales, or pieces of solid wax, on their bodies, once or twice perhaps in their lives, I will not dispute. I myself have seen the same phenomenon, once, or at most twice, during an experience of thirty years. But it certainly would be absurd to infer from these rare cases, that all the wax which the combs are made of, is carried into the hive in this manner. The contrary inference must be drawn, were it from nothing else but the consi- deration that these white scales have been so very seldom observed.. It is also well known, that when a young swarm is newly set down, within a short time thereafter, small scales of fine white wax will be seen on the stool ; which is a cer- tain proof that the bees are beginning to build combs : and perhaps a few of the bees may pick up some of these scales, to prevent them from being lost. But if every bee that is employed in carrying wax for building the combs, either within or on the outside of her body, could be observed, we should see thousands thus loaded every day after a young swarm is first set down, instead of observing only one or two solitary instances in the course of twenty or thirty years. If a natural or artificial swarm is confined twenty-four hours in a hive, after it is newly pvit into “it, the bees will be found busily employed in making combs. I’rom this it in;vy he argued, that the bees, having eaten a quantity of bee-bread on purpose, before they lett their own hive, and having it still in their stov>;idis, had made wax of it to erect the*

combs. Of this fact any person may ccnvinc6 himself, by driving the bees out of any hive into an empty one, and confining them twenty-four hours ; after which, \ipon examining the hive at- tentively, he will find a piece of comb, perhaps six or eight inches long, besides several hundreds of scales lying on the stool. It is evident, then, that these scales could not be brought from the field, as Mr. Thorley supposes, seeing the bees were out of the hive : and it is farther to be ob- served, that when they are at full liberty to work in the fields, and when a young swarm is most busily employed in

rearing combs, nothing can be seen on their bodies of these scales, or any thing else. I have sometimes, indeed, been in- clined to think, that the wax might be an excres- cence, exudation, or production from the bodies of the bees ; and that, as the queen bee can lay eggs when she pleases, if need require, so the working bees can produce wax from the sub- stance of their own bodies. If this conjecture be right, it will follow of course that all the food which the bees take contributes to the formation of wax, in the same manner as all the food which a cow eats contributes to the production of milk; or, to adopt a more near simile from the insect tribe, as all the food which a spider takes con- tributes not only to the nourishment of the ani- mal, but to the production of the substance of the cobweb from its body. Numberless other analogies in nature might be adduced in favor of the probability of this theory. The silk, for in- stance, produced from the body of the silkworm, is a substance as different from that of the animal itself, or of the mulberry leaf it feeds on, as wax is from that of the body of the bee, or of the honey or flower she sucks. And the excrescence produced in the human ear, which also goes by the name of wax, is certainly a substance as dif- ferent from that of the body which produces it, as either the one or the other. Upon the whole, until I meet with a more probable theory, sup- ported by facts, I must give it as my humble opinion, that the wax is either produced from the bodies of the bees alone, or rather that the bees can speedily convert what they bring from the flowers into it, and therewith build their combs, and seal up both their young and their honey.'

Many authors have written on bees. Among the ancients, Aristomachus is said to have studied them fifty-eight or sixty years. Philiseus retired into a desert wood, that he might observe them to better advantage. Aristotle made a great number of curious observations on this insect, which Virgil put into Latin verse, and which have been enlarged and confirmed by Pliny, Columella, Varro, and others. Theophrastus has a fragment still extant, irtpi ptXiTTwv, con- cerning bees ; or, as entitled in Laertius, irtfi fiiXiToe, of honey. Among the moderns, prince Frederic Cesi, institutor of the Roman Academy of Sciences, wrote expressly on bees ; but it is not known what became of the MS. nor of that promised by Swammerdam on the anatomy of the bee, the want of which has been much re- gretted. Schirach, Bonnet, Maraldi, Reaumur, and other foreigners have also largely treated of bees. Among the English, Butler, Gurnaj.

Mil.s, Levels Thorley, Southern, Remnant, Harthh, Rusden, Warder, White, T. and D. Wildman, Purchas, Geddie, Bradley, Keys, S. and W. White, &c. have written treatises on bees ; and among the Scots, Messrs. Maxwell and

Bonner ; the latter of whom has published two treatises on the subject.

Having thus described the natural history, economy, instincts, labors, &c. of these in- sects, as well as enumerated the principal au- thors who have written upon them, we now pro- ceed to give an account of the best methods of managing them ; and of the most improved in- ventions whereby we may save their lives, while we appropriate the product of their labors to our own use. This branch of the subject com- prehends the whole of what some authors style Bee Husbandry ; and includes directions respect- ing, 1 . the Apiary ; 2. the Erection ; and 3. the purchasing of Hives; 4. the Hiving of Swarms; 5. the Uniting of Swarms ; 6. the Shifting the Hives ; 7. the Feeding of Bees ; 8. the Taking their Honey and Wax, the Preservation of their Lives, &c.

Under the article APIARY are digested the best modern observations on the subject; we have only to add here those of Columella. He directs, that the apiary face the south, and be situated in a place neither too hot nor too much exposed to the cold ; that it be in a valley, in order that the loaded bees may with the greater ease descend to their homes ; that it be near the mansion-house, on account of the conveniency of watching them; but so situated as not to be exposed to noisome smells, or to the din of men or cattle; that it be surrounded with a wall, which, however, should not rise above three feet high ; that, if possible, a running stream be near them ; or, if that cannot be, that water be brought near them in troughs, with pebbles or small stones in the water, for the bees to rest on while they drink ; or that the water be confined within gently declining banks, that the bees may have safe access to it; as they cannot produce either combs, honey, or food for their maggots, without water ; that the neighbourhood of rivers or basins of water with high banks be avoided, because winds may whirl the bees into them, and they cannot easily get on shore from thence to dry themselves ; and that the garden in which the apiary stands be well furnished with such plants as afford the bees plenty of good pasture. The trees in this garden should be of the dwarf kind, and their heads bushy, that the swarms which settle on them may be the more easily hived. Columella enumerates many plants fitted to a warm climate; such as thyme, the oak, the pine, -he sweet-smelling cedar, and all fruit trees. Ex- perience has taught us, that furze, broom, mus- Jird, clover, heath, &c. are excellent for this pur- pose. Pliny recommends broom in particular, as a plant exceedingly grateful and very profit- able to bees. Mr. Bonner has a long chapter on the pasturage proper for bees ; for which we must refer the reader to his work.

As to their erection, ‘ Hives/ says Mr. Bonner, ‘ or the habitations in which bees live, breed, and work, have been made of different materials, and in different forms, according to

the fancy of people of different ages and coun- tries. Melissus, king of Crete, is said to have been the first who invented and taught the use of bee-hives. Not only straw, which experience now proves to be rather preferable to every thing else, but wood, horn, glass, &c. have been used for the construction of hives. Single box hives, however, when properly made, answer very well, and, when painted, last long. They have several advantages above straw hives: they are quite cleanly and always stand upright ; they are proof against mice ; and are cheaper in the end than straw hives; for one box will last as long as three of them. I have known many bee-masters who never used any other kind of hives, and whose bees thrived very well. I believe, however, they are rather colder in winter, but a proper cover- ing will prevent all danger from that quarter. But straw hives are easiest obtained at first, and have been used and recommended by the most of bee-masters. As to the size, a hive that will hold about 2ˆ pecks, Linlithgow measure, will hold a pretty large swarm ; but there is no certain rule to judge what hive will be exactly filled by a swarm. Much depends upon the succeeding season. If the swarm be early and large, it will require a large hive ; but if otherwise, the hive should be proportionably less. If a swarm be put into one of the size above mentioned, and the bees fill it soon, and appear to want more room, it can easily be enlarged, by putting an eek below it : but if it be heavy enough for a stock hive, it will do, although it should not be quite full of combs. A straw hive, when made, should have a piece of wood fixed in the under- most roll, four inches long, with a notch cut out of it, three inches long, and one high, for an en- try to the bees. The straw of rye or wheat is best for making hives. The heads of the straw should be cut off. The rolls should be drawn very tight, and wrought together with small wil- lows or brambles, split and properly dressed, with the pith taken out of them. The hives should be made as smooth as possible, without leaving any projecting straws ; which, when not cut or singed away, (as should always be done when the hives are rough) would occasion much unnecessary trouble to the bees, when put into them, to gnaw them off. When the hives are made, and, if ne- cessary, gently singed with straw, four small sticks should be fixed across the inside of them, at proper distances, in order not only to keep the hive firm, but also to prevent the combs from falling down, (which they would other- wise do by their own weight,) or from being shifted out of their places, when the hives are rapped upon, or disturbed accidentally.' Mr. Bonner next describes Colony Hives, which, however, he does not much approve of, and says, ' they have never yet been, and he is persuaded never will be, extended to general use, although it is nearly two centuries since they were first invented by John Geddie, Esq.' He admits, however, that they have ' one ad- vantage as they afford an opportunity to the inquisitive philosopher of seeing the bees carry on their labor.' Messrs. Thorley and White, by their improvements of them, have obtain- ed the additional advantage of saving

of llieir bees. To these directions we shall add those of the celebrated Mr. Wildman, as they differ from Mr. Bonner's in sereral particulars: k My hives,' says he, 'are seven inches in height and ten in width. The sides are upright, so that the top and bottom are of the same diame- ter. A hive holds nearly a peck. In the upper row of straw there is a hoop of about half an inch in breadth; to which are nailed five bars of deal, full a quarter of an inch in thickness, an inch and a quarter wide, and half an inch asunder from one another : a narrow short bar is nailed at each side, half an inch distant from the bars next them, to fill up the remaining parts of the circle ; so that there are in all seven bars of deal to which the bees fix their combs. The space of half an inch between the bars allows a sufficient and easy passage for the bees from one comb to another. To give great steadiness to the combs, so that upon moving the hive they may not fall off, or incline out of their direction, a stick should be run through the middle of the hive, in a direction directly across the bars, or ut right angles with them. When the hives are made, a piece of wood should be worked into the. lower row of straw, long enough to allow a door for the bees of four inches in length, and half an inch in height. The proprietor of the bees should provide himself with several flat covers of straw worked of the same thickness as the hives, and a foot in diameter, that so it may l>e of the same width as the outside of the hives. He lore the cover is applied to the hive a piece of clean paper, of the si/.e of the top of the hive, should be. laid over it; and a coat of cow-dung, which is the least apt to crack of any cement easily obtained, should be hud all round the circumference of the hive. Let the cover be laid upon this, and made fast to the hive with a pack- ing-needle and pack-thread, so that neither cold nor vermin may enter. Kach hive should stand siu;_!e on a piece of deal or other wood, some- what larger than the bottom of the hive. That part of the stand which is at the mouth of the hi\e should project some inches, for the bees to rest on when they return from the field. This stand should lie supported upon a single post, t \o feet and a half high, to which it should be '•civwed very securely, that high winds, or other accidents, may not blow down both stand and inu1. A quantity of soot mixed with barley i :.atl should be strewed on the ground round the] ost ; which will eHectually prevent ants, slugs, .:iid other vermin, from rising up to the hive. I lie soot and chaff sh.ould from time to time be icncwed as it is blown or washed away ; though, as it is sheltered by the stand, it remains a consi- d. fable time, especially if care be taken that no weeds rise through it.' Weed, indeed, should not lie pet mitted to rise near the hive; for they may ui\e shelter to vermin which may be hurtful

to the bees. The stands for bees should be four yards asunder; or, if the apiary will not admit ot so much, as far .isunder HS may be, that the bees of (, ne hive ma\ noi mterten with those of another hive, ax i> ometimes the case when hi\es ;uv near one another, or on the same si.un! i ior the bees, mistaking then own hives, light :;omeXm;i.s at the wroni; door, and a fray

ensues, in which one or more may lose their lives.'

On the purchasing of hives. ' Any person, says Mr. Bonner, ' who intends to erect an apiary, must take particular care to have it filled with pro- per inhabitants. He must be peculiarly attentive to this, as all his future profit and pleasure, or loss and vexation, will in general depend upon it. He must therefore pay the utmost attention to the choice of his stock hives ; for the man who takes care to keep good stock hives will soon gain con- siderably by them ; but he who keeps bad ones, will, besides a great deal of trouble, and little or no success, soon become a broken bee-master. In September every stock hive ought to contain as much honey as will supply the bees with food till June following; and as many bees as will preserve heat in the hive, and thereby resist the severity of a cold winter, and act as so many valiant soldiers, to defend the community from the invasion of foreign enemies in spring. There- fore the bee-master should purchase a proper number of hives in August or September, when they are at the cheapest rate. They should be full of combs, and well stored with bees and honey ; and should weigh at least thirty pounds each ; if heavier, so much the better ; for light hives run a great risk of perishing by famine, unless the bees are supplied with food ; which will cost as much expense, and a great deal more trouble, besides a considerable risk of their dying at last, after all this extraordinary trouble and expense. Whereas, a well-chosen hive of thirty pounds weight, allowing twelve pounds for the empty hive, bees, combs, &c., will contain eighteen pounds of honey, which will supply the bees with food till next June ; a time, when it may be presumed, they will find abundance of provisions for themselves among the flowers. When a choice can be obtained, the youngest hive should always be preferred, because old hives are liable to vermin, and other accidents. But although a hive should be four or five years old, it should not be rejected if it possesses these two essential qualities' — plenty of bees, and abundance of honey ; but, if either of these be wanting, the purchaser will regret his bargain when it is too late.' And Mr. Wildman advises that ' the purchaser should examine the combs, in order to know the age of the hives. The combs of that season are white, those of the for- mer year are of a darkish yellow ; and where thˆ. combs are black the hives should be always rejected. If the number of hives wanted were not purchased in autumn, it will be necessary to remedy this neglect after the severity of the cold is past in the spring. At this season, bees which are in good condition will get into the fields early in

the morning, return loaded, enter boldly, and not come out of the hive in bad wea- ther; for if they do this it shows they are in great want of food. By the loudness of their humming we judge of their strength. The summer is an im- proper time for buying bees, because the heat of the weather softens the wax, and renders the combs liable to break, if they are not very well secured. The honey, too, being then thinner, is more apt to run out of the cells, which is attended with a double disadvantage ; namely, the loss of the

honey and the daubing of the bees, whereby many of them may be destroyed. A first and strong .swarm may indeed be purchased ; and, if leave can be obtained, permitted to stand in the same garden till autumn ; but, if leave is not ob- tained, it may be carried away in the night after it has been hived.'

Bees, as has been observed, never swarm till the hive be too much crowded by the young brood. They first swarm in May, or in the end of April, but earlier or later according to the warmth of the season. They seldom swarm be- fore ten in the morning, and seldom later than three in the afternoon. We may know when they are about to swarm by clusters of them hanging on the outside of the hive, and by the drones appearing abroad more than usual : but the most certain sign is when the bees refrain from going into the fields though the season be inviting. Just before they take flight there is an •uncommon silence in the hive; after this, as soon as one takes flight, they all follow. Before the subsequent swarmings, there is a great noise in the hive, which is supposed to be occasioned by a contest, whether the young or the old queen should go out. When the bees of a swarm fly high, they will descend lower, upon throwing handfuls of sand or dust among them, which they probably mistake for rain. For the same purpose it is usual to beat upon a kettle or frying- pan. This practice may have taken its rise from observing that thunder or any great noise prompts bees in the fields to return home. As soon as the swarm is settled the bees which compose it should be got into a hive with all convenient speed to prevent their taking wing again. If they settle on a small branch of a tree easy to come at, it may be cut of and laid upon a cloth, the hive being ready immediately to put over them. If the branch cannot be conveniently cut, the bees may be swept from off it into the hive. Lodge but the queen into the hive and the rest will soon follow. If the bees must be considerably disturbed in order to get them into a hive, the most advisable way is to let them remain in the place where they have pitched till the even- ing, when there is less danger of their taking wing. If it be observed that they still hover about the tree they first lighted upon, the branches may be rubbed with rue, elder-leaves, or any other thing distasteful to them, to prevent their returning to it. The hive employed on this occasion should be cleaned

with the utmost care, and its inside rubbed with fragrant herbs or flowers, the smell of which is agreeable to the bees, or with honey. The hive should not be immediately set on the stool where it is to remain, but kept near the place at which the bees settled iill the evening, lest some stragglers should be lost. It should be shaded either with boughs or with cloth, that the too great heat of the sun may not annoy the bees. We sometimes see a swarrn of bees, after having left their hive, and even alighted upon a tree, return to their first abode. This never happens but when the young queen did not come forth with them, for want of strength, or perhaps courage to trust to her wings for the first time ; or possibly from a consciousness of her not being impregnated.

When a swarm is too few in number for a hive, another may be added or united to it. The usual method of thus uniting swarms is very easy. Spread a cloth at night upon the ground close to the hive in which the two casts or swarms are to be united ; lay a stick across this cloth ; then fetch the hive with the new swarm, set it over the stick, give a smart stroke on the top of the hive, and all the bees will drop down on the cloth in a cluster. This done, throw aside the empty hive, take the other from off the stool, and set this last over the bees, who will soon ascend into it, mix with those already there, and become one and the same family. Others, instead of striking the bees down upon the cloth, place, with its bottom upmost, the hive in which the united swarms are to live, and strike the bees of die other hive down into it. The former of these hives is then restored to its natural situa- tion, and the bees of both hives soon unite. If some bees still adhere to the other hive they may be brushed off on the cloth, and they will soon join their brethren. Or one may take the follow- ing method, which gives the less disturbance to the bees : set with its mouth upmost the hive into which the young swarm has been put, and set upon it the other hive. The bees in the lower hive, finding themselves in an inverted situation, will soon ascend into the upper. Though all writers acknowledge, that one of the queens is constantly slain on these occasions, and generally a considerable number of the working bees ; yet none of them, Columella excepted, has proposed the easy method of killing the queen of the latter cast or swarm before the union is made ; a means by which the lives of the working bees may be preserved. This may be done either by intoxica- ting them and then picking her out, or by search- ing her out when the bees are beaten down upon the cloth ; for this being done in the night, to prevent the battle which may otherwise ensue, there will be no great difficulty in finding her. A large swarm may weigh eight pounds, and so gra- dually less to one pound ; consequently a very good one may weigh five or six pounds. All such as weigh less than four pounds should be strengthened, by uniting to them a less numerous swarm. The size of the hive should be propor- tioned to the number of the bees ; and, as a ge- neral rule, it should be rather under than

over sized, because bees require to be kept warmer than a large hive will admit.

Respecting methods of changing the situa- tions of bees, great improvements may certainly be made in the essential article of providing them plenty of pasture. A rich corn country is a barren desert for them during a great part of the year; and therefore the practice of other nations in chang- ing the situation of their bees, well deserves our imitation. Columella informs us, lib. ix. c. 14., that as few places are so happily situated as to afford the bees proper pasture both in the beginning of the season and in the autumn, Celsus advised that, after the vernal pastures are consumed, the bees should be transported to places abounding with autumnal flowers, as was practised by con- veying the bees from Achnia to Attica, from Euboea and the Cyclades to .Scyrus ; and also in Sicily, where they were brought to Hybla from

other parts of the island. We find by Pliny that this was likewise the practice of the Italians in his time. ‘ As soon,’ says he, ‘ as the spring food for bees has failed in the valleys near our towns, the hives of bees are put into boats, and carried up against the stream of the river, in the night, in search of better pasture. The bees go out in the morning in quest of provisions, and return regu- larly to their hives in the boats, with the stores they have collected. This method is continued till the sinking of the boats to a certain depth in the water shows that the hives are sufficiently full; and they are then carried back to their former homes, where their honey is taken out of them.’ This is still the practice of the Italians, who live near the banks of thePo, the river which Pliny instanced particularly in the above-quoted passage, lib. xxi. c. 12. M. Maillet relates, in his curious Description of Egypt, vol. ii. p. 24., that in spite of the ignorance and rusticity which have got possession of that country, there yet re- main in it several footsteps of the industry and skill of the ancient Egyptians. One of their most admirable contrivances is, their sending- their bees annually into distant countries, to pro- cure sustenance, at a time when they could not find any at home; and their afterwards bringing them back like shepherds who should travel with their flocks and make them feed as they go. It was observed by the ancient inhabitants of Lower Egypt, that all plants blossomed, and the fruits of the earth ripened, about six weeks earlier in Upper Egypt than with them. They applied this remark to their bees ; and the means then made use of by them, to enable these usefully industrious insects to reap advantage from the more forward state of nature there, were exactly the same as are now practised, for the like pur- pose, in that

country. About the end of Octo- ber, all such inhabitants of the Lower Egypt as have hives of bees embark them on the Nile, and convey them up that river quite into Upper Egypt; observing to time it so, that they arrive there just when tiie inundation is withdrawn, the lands have been sown, and the flowers begin to hud. The hives thus sent are marked and numbered by their respective owners, and placed pyramidi- cally in bouts prepared for the purpose. After they have remained some days at their farthest station, and are supposed to have gathered all the •wax and honey they could find in the fields, within two or three leagues around, their con- ductors convey them in the same boats two or three leagues lower down, and there leave the laborious insects so long as is necessary for them to collect all the riches of that spot. Thus the nearer they come to the place of their more permanent abode, they find the productions of the earth, and the plant', which afford them food, forward in pro- portion. In fine, about the beginning of February, after having travelled through the \shole length of I"gvpt, gathering all the rich produce of the de- lightful banks of the Nile, they arrive at the mouth of that river, towards the ocean; from whence they set out, and from whence they are now rrtuined to their several homes; for care is taken to kerp an exact register of every dis- trict, from whence the hives were sent in the be- ginning oi the se.tion ; of their numbers, of the

names of the persons \r ho sent them, and likewis the mark or number of the boat in which they were placed.' In many parts of France, floating bee-houses are very common. They have on board one barge sixty or a hundred bee-hives, well defended from the inclemency of an accidental storm. With these the owners suffer themselves to float gently down the river, the bees continu- ally choosing their flowery pasture along the banks of the stream ; and thus a single floating bee-house yields the proprietor a considerable income. They have also a method of transport- ing their bees by land, well worth our imitation in many parts of this kingdom. Their first care is, to examine those hives, some of whose honey- combs might be broken or separated by the jolt- ing of the vehicle ; these are made fast one to the other, and against the sides of the hive, by means of small sticks, which may be disposed differently as occasion will point out. This be- ing done, every hive is set upon a packing-cloth, or something like it, the threads of which are very wide ; the sides of this cloth are then turned up and laid on the outside of each hive. As many hives as a cart built for that purpose will hold, are afterwards placed in this vehicle. The hives are set two and two, the whole length of the cart. Over these are placed others ; which make, as it were, a second story or bed of hives. Those which are stored with combs should always be turned topsy-turvy. It is for the sake of their combs, and to fix them the better, that' they are disposed in this manner ; for such as have but a small quantity of combs in them, are placed in their natural*

situation. Care is taken in this stowage not to let one hive stop up another, it being essentially necessary for the bees to have air ; and it is for this reason that they are wrap- ped up in a coarse cloth, the threads of which were wove very wide, that the air may have a free passage, and lessen the heat which these in- sects raise in their hives, especially when they move about very tumultuously, as often happens in these carts. Those used for this purpose in Yevre, hold from thirty to forty hives. As soon as all are thus stowed, the caravans set out. If the season is sultry, they travel only in the night ; but a proper advantage is made of cool days. These caravans do not go fast. The horses must not be permitted even to trot: they are led slowly and through the smoothest roads. When there are not combs in the hives sufficient to support the bees during their journey, the owner takes the earliest opportunity of resting them wherever they can collect wax. The hives are taken out of the cart, then set upon the ground, and after removing the cloth from over them, the bees go forth in search of food. The first field they come to serves them as an inn. In the evening, as soon as they are all returned, the hives are shut up; and being placed again in the cart, they proceed on their journey. When the caravan is arrived at the journey's end, the hives are distributed in the gardens, or in the fields adjacent to the houses of different peasants, who, for a very small reward, undertake to look after them. Thus it is that, in such spots as do not abound in flowers at all seasons, means are found to supply the bees with food during the

whole year. These instances of the great advan- tages which attend the shifting of bees in search of pasture afford an excellent lesson to many places in this kingdom : they direct particularly the inhabitants of the rich vales, where the harvest for bees ends early, to remove their stocks to places which abound in heath ; this plant continu- ing in bloom during a considerable part of autumn, and yielding great plenty of food to bees. Those also in the neighbourhood of hills and mountains will save the bees a great deal of labor by shifting their places of abode. Mr. Bonner, who has had long practice in this branch of bee husbandry, advises, ' when the distance is great, and there is a considerable number of hives to be transported, (perhaps to the distance of six, twelve, twenty, or fifty miles,) into an inland country, carriages that move on springs are by all means to be preferred. When these cannot be obtained, the hives may easily be carried on carts or wagons, in cold weather, by placing them with their bottoms upmost on large quan- tities of straw, hay, or any other soft article. By this method I have carried twenty hives at one time, with very little damage, either to the bees or the combs.' Mr. Bonner recommends '

the utmost care, that no opening be left for the bees to get out at ; as they would be rendered so irritable by the jolting of the carriage, that they might, by stinging the horses, endanger the lives of both horses and driver. And to prevent such risk he particularly recommends water carriage, wherever it can be obtained, by sea, lakes, canals, or rivers ;' and adds, that, ' in winter, 1764-5, he carried twenty hives on ship board 5000 miles;' and that he would rather carry bee-hives 400 miles by sea, than 100 by land.'

The methods of feeding bees are various. — Providence has ordained that insects which feed on leaves, flowers, and green succulent plants, are in an insensible or torpid state, from the time that the winter's cold has deprived them of the means of subsistence. Thus the bees during the winter are in so lethargic a state that little food supports them ; but as the weather is very changeable, and every warm or sunny day revives them and prompts them to return to ex- ercise, food becomes necessary on these occa- sions. Many hives of bees which are thought to die of cold in winter in truth die of famine : •/.hen a rainy summer has hindered the bees from laying in a sufficient store of provisions. The hives should therefore be carefully examined in autumn, and should then weigh at least eighteen pounds. Columella describes an annual distemper which seizes bees in the spring when the spurge blossoms and the elm discloses its seeds ; for being allured by the first flowers, they feed so greedily upon them that they surfeit themselves, and die of a looseness if they are not speedily relieved. The authors of the Maison Rustique impute this purging to the bees feed- ing on pure honey, which does not form a food sufficiently substantial for them unless they have bee-bread to eat at the same time ; and advise giving them a honey-comb taken from another hive, the cells of which are filled with crude wax or bee-bread. There is still, however, a want of experiments to ascertain both the time and the

manner in which bees should be fed. The com- mon practice is to feed them in autumn, giving them as much honey as will bring the whole weight of the hive to near twenty pounds. To this end the honey is diluted with water, and then put into an empty comb, split reeds, or, as Columella directs, upon clean wood, which the bees will suck perfectly dry. But the dilution with water makes the honey apt to candy, and candied honey is prejudicial to bees. The fol- lowing directions, given in the Maison Rustique, (torn. i. p. 435.) seem to be very judicious. Re- plenish the weak hives in September with such a portion of combs full of honey, taken from other hives, as shall be judged to be a sufficient supply for them. In order to do this turn up the weak hive, cut out the empty combs, and put the full ones in their place, where secure them with pieces of wood run across in such a manner that they may not fall down when the hive is returned to its place. The bees will soon fix them more effectually. If this method be thought too troublesome,

set under the hive a plate of liquid honey, unmixed with water, with straws laid across it, and over these a paper pierced full of holes, through which the bees will suck the honey without daubing themselves. This should be done in cloudy or rainy weather, when the bees stir least abroad ; and the hive should be covered to protect the bees from rob- bers who might be allured to it by the smell of the honey. Another circumstance which may render it very necessary to feed the bees is, when several days of bad weather ensue immediately after they have swarmed ; for then, being destitute of every supply beyond what they carried with them, they may be in great danger of starving. In this case honey should be given them in proportion to the duration of the bad weather. The degree of cold which bees can endure has not been ascertained. We find that they lire in the cold parts of Russia, and often in hollow trees, without any care being taken of them. Their hives are frequently made of the bark of trees which does not afford them much protection from cold. Mr. White, therefore, judiciously observes, that bees which stand on the north side of a building, whose height inter- cepts the sun-beams all the winter, will waste less of their provisions (almost by half) than others which stand in the sun ; for coming sel- dom forth they eat little ; and yet in the spring are as forward to work, and swarm, as those which had twice as much honey in the autumn before. The owner should, however, examine their state in winter; and if he finds that instead of being clustered between the combs, they fall down in numbers on the bottom of the hive, tht- hive should be carried to a warmer place, where they will soon recover. He must be cautious in returning them again to the cold lest the honey should candy. When the winters are extremely severe, the authors of the Maison Rustique ad- vised to lay on the bottom of an old cask the depth of half a foot of very dry earth, powdered and pressed down hard, and to set on this the stool with the hive : then to preserve a commu- nication with the air, which is absolutely neces- sary, to cut a hole in the cask opposite to the

mouth of the hive, and place a piece of reed or alder made hollow, from the mouth of the hive to the hole in the cask ; and after this to cover the hive with more of the same dry earth. If there be any reason to fear that the bees will not have a sufficiency of food, a plate with honey, covered as before directed, may be put under the hive. If the number of hives be great, boxes may be made of deals nailed together deep enough to contain the hives when covered with dry earth. The bees will thus remain all the winter free from any danger from cold, hunger, or enemies. Mr. Bonner allots three whole chapters of his new plan to this part of our sub- • ect for which we must refer the reader to his

The method of taking the honey and wax from bees, in this country, is usually accom- panied with robbing them also of their lives. The common method is, that when those which are doomed for slaughter have been marked out, (which is generally done in September,) a hole is dug near the hive, and a stick, at the end of which is a rag that has been dipped in melted brimstone, being stuck in the hole, the rag is set on fire, the hive is immediately set over it, and the earth is instantly thrown up all around, so that none of the smoke can escape. In a quarter of an hour all the bees are seemingly dead ; and they are rendered soon after irrecoverably so, by being buried in the earth that is returned back into the hole. By this last means it is that they are absolutely killed ; for it has been found, by experiment, that all the bees which have been affected only by the fume of the brimstone recover again, excepting such as have been singed or hurt by the flame. Hence it is evi- dent that the fume of brimstone might be used for intoxicating the bees, with some few precau- tions. The 'heaviest and the lightest hives are alike treated in this manner; the former, be- cause they yield the most profit with an imme- diate return; and the latter, because they would not survive the .severity of the winter. Those hives which weigh from fifteen to twenty pounds are thought to he the fittest for keeping. More humane and judicious methods were practised by the ancients; (See Columella lib. ix. c. 15. and Yarro de Rustica, lib. iii. c. 16.) and the following simple method is at this day practised in Greece, degenerated as it is. Mr. Wheeler, in his Journey into Greece, p. 411, tells us tlm ' Mount Hymethus is celebrated for the best honey in all Greece. This mountain was nut less famous in times past for bees and admi- rable honey ; the ancients believing that bees were first bred hen-, and that all other bees were but colonies from this mountain ; which if so, we as.Mired ourseUes that it must be from this part of the mountain that the colonies were sent; both because the honey made here is the best, and that here they never destroy the bees. It is ot a good conscience, of a uold color, and the same quantity sweetens more water than the like quantity of any other doth. 1 no sooner knew that they never destroy or impair the stock of bees, in taking away tin ir honey, but I was in- quisitive to understand their method of ordering the bee? : \hieh. bemi; an art so worthy the

knowledge of the curious, I shall not think it irrelevant to relate what I saw, and was inform- ed of, to that effect, by such as had skill in that place. The hives in which they keep their bees are made of willows or osiers, fashioned like our common dust-baskets, wide at top and narrow at the bottom, and plastered with clay or loam within and without. They are set as in plate I. APIS. fig. 22., with the wide end uppermost. The tops are covered with broad flat sticks, which are also plastered over with clay ; and to secure them from the weather they cover them with a tuft of straw as we do. Along each of these sticks the bees fasten their combs ; so that a comb may

be taken out whole without the least bruising, and with the greatest ease imaginable. To in crease them in spring time, that is in March or April until the beginning of May, they divide them ; first separating the sticks, on which the combs and bees are fastened, from one another with a knife ; so taking out the first comb and bees together on each side, they put them into another basket, in the same order as they were taken out, until they have equally divided them. After this, when they are both again accommo- dated with sticks and plaster, they set the new basket in the place of the old one, and the old one in some new place. And all this they do in the middle of the day, at such time as the greatest part of the bees are abroad; who at their coming home, without much difficulty, by this means divide themselves equally. This de- vic« hinders them from swarming and flying away. In August they take out their honey. This they do in the day-time also, while they are abroad ; the bees being thereby, say they, dis- turbed least : at which time they take out the combs laden with honey, as before ; that is, be- ginning at each outside, and so taking away till they have left only sucn a quantity of combs in the middle as they judge will be sufficient to maintain the bees in winter; sweeping those bees that are on the combs into the basket again, and then covering it with new sticks and plaster.' The Greek method above related was introduced into France in 1754, as we are informed by M. De Reaumur and Du Hamel, in the Memoirs of the Royal Academy for that year, p. 331. In our own country Mr. Bonner has long saved the lives of his bees ; and throughout his New Plan repeatedly reproaches the barbarous practice of murdering them. Various methods have also been adopted in England to attain the desirable end of getting the honey and wax without de- stroying the bees ; the most approved of which we shall now describe as concisely as possible.

Mr. Thorley, in his Enquiry into the Nature, Order, and Government of Bees, thinks colonies preferable to hives, for the following reasons : first, the more certain preservation of very many thousands of these useful creatures; secondly, their greater strength, which consists in numbers, and consequently their greater safety from robbers ; thirdly, their greater wealth, arising from the united labors of the greater number. He tells us that he has in some sum- mers taken two boxes filled with honey from one colony'; and yet sufficient store has been left for their maintenance during the winter ; each

box weighing forty pounds. Add to these ad- vantages the pleasure of viewing them, with the greatest safety, at all seasons, even in their busiest time of gathering, and their requiring a much less attendance in swarming

time. The bees thus manased are also more effectually se- cured from wet and cold, from mice and other vermin. His boxes are made of deal, which, being spongy, suck up the breath of the bees sooner than a more solid wood would do. Yellow dram deal thoroughly seasoned is the best. An octagon, being nearer to a sphere, is better than a square form ; for as the bees, in winter, lie in a round body near the centre of the hive, a due heat is then conveyed to all the out parts, and the honey is kept from candying. The dimen- sions which Mr. Thorley, after many years' ex- perience, recommends for the boxes, are ten inches deep, and twelve or fourteen inches breadth in the inside. He tried boxes containing a bushel or more, but found they did not answer the design like those of a lesser size. The lar- ger are much longer in filling, so that it is the later ere one can reap the fruits of the labor of the bees ; nor is the honey so good and fine, the effluvia even of their own bodies tainting it. The best and purest honey is that which is ga- thered in the first five or six weeks : and in boxes of less dimensions one may take within a month, provided the weather be favorable a box full of the finest honey. The top of the box should be made of an entire board, a full inch thick after it has been planed ; and it should project on all sides, at least an inch be- yond the dimensions of the box. In the middle of this top there must be a hole five inches square, for a communication between the boxes ; this hole should be covered with a sliding shut- ter, of deal or elm, running chiefly in a groove over the back window. The eight pannels, nine inches deep, and f of an inch thick when planed, are to be let into the top so far as to keep them in their proper places ; to be secured at the cor- ners with plates of brass, and to be cramped with wires at the bottom to keep them firm ; for the heat in summer will try their strength. There should be a glass window behind, fixed in a frame, with a thin deal cover, two small brass hinges, and a button to fasten it. This window will be sufficient for inspecting the progress of the bees. Two brass handles, one on each side, are necessary to lift up the box ; these should be fixed in with two thin plates of iron, near three inches long, so as to turn up and down, and put three inches below the top board, which is nailed close down with sprigs to the other parts of the box. Those who choose a frame within, to which the bees may fasten their combs, need only use a couple of deal sticks of an inch square, placed across the box. and supported by two pins of brass; one an inch and a half below the top, and the other two inches below it; by which means the combs will quickly find a rest. One thing more, which perfects the work, is a passage four or five inches long, and less than half an inch deep, for die bees to go in and out at the bottom of the box. In keeping bees in colonies, a house is necessary, or at least a shade ; without which the weather, especially the heat of the

sun, would soon rend the boxes to pieces. The house may be made of any

boards, but deal is the best ; and it must be painted, to secure it from the weather. The length of it for six co- lonies should be full 12ˆ feet, and each colony should stand a foot distant from the other. It should be 3£ feet high, to admit four boxes one upon another ; but, if only three boxes are em- ployed, two feet eight inches will be sufficient. Its breadth in the inside should be two feet. The four corner posts should be made of oak, and well fixed in the ground, that no stormy winds may overturn it ; and all the rails should be of oak, supported by several uprights of the same, before and behind, that they may not yield or sink under 600, 700, or 800 weight, or upwards. The floor of the house, about two feet from the ground, should be strong and smooth, that the lowest box may stand close to it. This floor may be made with boards or planks of deal the full length of the bee-house, or, which is preferable, w:th a board or plank to each colony, of two feet four inches long, and fixed down to the rails ; and that part which ap- pears at the front of the house may be cut into a semicircle, as a proper alighting place for the bets. Plane it to a slope, that the wet may fall off. When this floor to a single colony wants to be repaired, it may easily be removed, and another be placed in its room, without disturbing the other colonies, or touching any other part of the floor. Upon this floor, at equal distances, all the colonies must be placed, against a pas- sage cut in the front of the house. To prevent any false step, that as the top board of the box (being a full inch broader than the other part) will not permit the two mouths to come together, cut a third in a piece of deal of a suf- ficient breadth, and place it between the other two, so close that not a bee may get that way into the house. Fix the said piece of deal to the floor with two lath nails ; which will be ot service, when there is occasion either to raise a colony, or take a box of honey, and may prove a means of preventing a great deal of trouble and mischief. The house must next be covered with boards, fine slates, or tiles placed so as to carry off the wet, and keep out the cold, rain, snow, or whatever might any way hurt or pre- judice them. The back doors may be made of half-inch deal, two of them to shut close in a rabbet cut in an upright pillar ; which may be so contrived as to take in and out by a mor- tise in the bottom rail, and a notch in the inside of the upper rail, and fastened with a strong hasp. Place these pillars in the spaces between the colonies. In a house made after this model, without front doors, a weather board will be very necessary, to carry the water off from the places where the bees settle and rest. Painting will also be a great preservative. Paint the mouths of the colonies with different colors, as red, white, blue, yellow, &c. in form of a half moon, or square, that the different bees may the better know their own homes. Such diversity will be a direction to them. Thus the bees will be kept warm in the coldest winter ; and in the hottest summer greatly refreshed by the cool air, the back doors being set open, without any air

holes made in the boxes. Dr. Warder observes, that in June, July, and August, when the co- lonies come to be very full, and the weather proves very hot, the appearance of a shower drives the bees home in such crowds, that, pres- sing to get in, they stop the passage so closely, that those within are almost suffocated for want of air ; which makes these last so uneasy that they are almost mad. In this extremity he has lifted the whole colony up a little on one side ; and by thus giving them air, has soon quieted them. He has known them, he says, come pouring out, on such an occasion, in numbers sufficient to have filled at once two or three quarts ; as if they had been going to swarm. To prevent this inconvenience he advises cutting a hole two inches square, about the middle of one of the hinder pannels of each box. Over this hole, nail, in the inside of the box, a piece of tin-plate punched full of holes so small that a bee cannot creep through them ; and place over it, on the outside, a very thin slider, made to run in grooves ; so that when it is thrust home all may he close and warm ; and when it is opened, in very hot weather, the air may pass through the holes, and prevent the suffocating heat. Or holes may be bored in the pannels themselves, in such an emergency, in a c»lony already settled. Such a thorough passage for the air may be convenient in extreme heat, which is sometimes so great as to make the honey run out of the combs. The Memoirs of the Berne Society, for 1784, record a particular in- stance of this, that occurred in 1761, when many in Switzerland were obliged to smother their bees, when they saw the honey and wax trickling down, not knowing any other remedy for the losses they daily sustained. Some shaded their hives from the sun, or covered them with cloths wet several times a day, and watered the ground all around.

The best time to plant the colonies, according to this gentleman, is, either in spring with new stocks full of bees, or in summer with swarms. If swarms are used, procure, if possible, two of tho same day ; hive them either in two boxes, or in a hive and a box ; at night place them in the bee-house, one over the other ; and with a knife and a little lime and hair, stop close the mouth of the hive or upper box, so that not a bee may be able to go in or out but at the front door. Within a week or ten days the combs will appear in the boxes ; but if it be a hive, nothing can be seen till the bees have wrought down into the box. Never plant a co- lony with a single swarm, as Mr. Thorley says he has soon sometimes done, but with little suc- cess. \ hen the second box, or the box under the hive, appears full of bees and combs, it is time to raise the colony. Tin's should be done in the dusk of the evening, and in the following manner : place the empty box, with the sliding shutter drawn back, behind the house, near the colony that is to be

raised, and at nearly the height of the rloor : then, lifting up the colony as quickly as possible, let the empty box be put in the place where it is to stand, and the colony upon it ; and shut up the mouth of the then jpper box with lime and hair, as before di-

rected. When, upon looking through the win- dows in the back of the boxes, the middle box appears full of combs, and a quantity of honey sealed up in it, the lowest box half full of combs, and few bees in the uppermost box, proceed thus : about five o'clock P. M. drive close with a mallet the sliding shutter under the hive or box that is to be taken from the colony. If the combs are new, the shutter may be forced home without a mallet ; but be sure it is close, that no bees may ascend into the hive or box to be re- moved. After this shut close the doors of the house, and leave the bees thus cut off from the rest of their companions for half an hour or more. In this space, having lost their queen, they will fill themselves with honey, and be im- patient to be set at liberty. If in this interval, upon examining the box or boxes beneath, all appears to be quiet in them, it is a sign that the queen is there and in safety. Hereupon raise the back part of the hive or box so far, by a piece of wood slipped under it, as to give the prisoners room to come out, and they will return to their fellows : then lifting the box from off the colony, and turning its bottom uppermost, cover it with a cloth all night ; and the next morning, when this cloth is removed, the bees that have remained in it will return to the colony. Thus a box of honey is procured, and all the bees are preserved. If the bees do not all come out in this manner, Dr. Warder's method may be fol- lowed, especially if it be with a hive ; viz. to place the hive with the small end downwards, in a pail, peck, or flower pot, so as to make it stand firm ; then to take an empty hive, and set it upon the former, and to draw a cloth tight round the joining of the two hives, so that none of the bees may get out ; after this, to strike the full hive so smartly as to disturb the bees that are in it, but with such pauses between the strokes as to allow them time to ascend into the empty hive ; which must be held fast whilst this is doing, lest it fall off by the shaking of the other. When, by the noise of the bees in the upper hive, it is perceived that they are got into this last, carry it to a cloth spread for this pur- pose before the colony, with one end fastened to the landing place, and knock them out upon it : they will soon crawl up the cloth, and join their fellows, who will gladly receive them.

The method which Mr. Thorley has pursued with great success for many years, and which he recommends to the public as the most effectual for preserving bees in common hives, is incorpo- ration, or uniting two stocks into one, by the help of a peculiar fume or opiate, which will put them entirely in the bee-master's power, for a time to divide and dispose of at pleasure. But as that dominion over them will be of short du- ration, he must be expeditious in this business. The queen is immediately to be

searched for and killed. Hives which have swarmed twice, and are consequently reduced in their number, are the fittest to be joined together, as this will greatly strengthen and improve them. If a hive is both rich in honey and full of bees, it is but dividing the bees into two parts, and putting them into two boxes instead of one. Examine whether the stock, to which the bees of another

is to be joined, have honey enough to maintain the bees of both : it should weigh full twenty pounds. The narcotic, or stupifying fume, is made with the fungus maximus or pulverulentus, the large mushroom, commonly known by the name of bunt, puck-fist, or frog-cheese. It is as big as a man's head, or bigger, when ripe ; it is of a brown color, turns to powder, and is ex- ceeding light. Put one of these pucks into a large paper, press it therein to two-thirds or near half the bulk of its former size, and tie it up very close ; then put it into an oven some time after the household bread has been drawn, and let it remain there all night : when it is dry enough to hold fire, it is fit for use. The man- ner of using it is this : cut off a piece of the puck, as large as a hen's egg, and fix it in the end of a small stick slit for that purpose, and sharpened at the other end, which place so that the puck may hang near the middle of an empty hive. This hive must be set with the mouth upward, in a pail or bucket which should hold it steady, near the stock intended to be taken. This done set fire to the puck, and im- mediately place the stock of bees over it, tying a cloth round the hives, that no smoke may come forth. In a minute, or little more, the bees will be heard falling like drops of hail into the empty hive. Then beat the top of the full hive gently, to get out as rrany of them as possible : after this, loosing the cloth, lift the hive off to a table, knock it several times against the table, several more bees will tumble out, and perhaps the queen among them. She often is one of the last that falls. If she is not there, search for her among the main body in the empty hive, spread- ing them for this purpose on a table. Proceed in the same manner with the other hive, with the bees of which these are to be united. One of the queens being secured, put the bees of both hives together, mingle them thoroughly, and drop them among the combs of the hive which they are intended to inhabit. Then cover it with a coarse cloth, which will admit air, and let them remain shut up all that night and the next day. It will easily be known when they are awaked from this sleep. The second night after their union, in the dusk of the evening, gently remove the cloth from off the mouth of the hive, and the bees will immediately sally forth with a great noise ; but, being too late, they will soon return : then inserting two pieces of tobacco-pipes to let in air, keep them confined for three or four days, after which the door may be left

open. The best time for uniting bees is after their young brood are all out, and before they begin to lodge in the empty cells. As to the hour of the day, Mr. Thorley advises young practitioners to do it early in the afternoon, in order that, having the longer light, they may the more easily find out the queen. He never knew such combined stocks conquered by robbers. — They will either swarm in the next summer, or yield a hive full of honey.

Mr. N. Thorley, son of the above-mentioned clergyman, has added to the edition which he has given of his father's book, a postscript, pur- porting, that persons who choose to keep bees ;n plar? hives may, after uncovering the whole at

the top of a flat-topped straw hive, place th« glass over it so close that no bee can go in 01 out but at the bottom of the hive. The glass hive must be covered with an empty hive, or with a cloth, that too much light may not pre- vent the bees from working. As soon as they have filled the straw hive or box, they will begin to work up into the glass hive. He tells us that he himself has had one of these glass hives filled by the bees in thirty days in a fine season ; ane» that it contained 381bs. of fine honey. When the glass is completely filled, slide a thin plate be- tween it and the hive or box, so as to cover the passage, and in half an hour the glass may be taken off with safety. The few bees that remain in it will readily go to their companions. He has added a glass window to his straw hives, to see what progress bees make ; which is of some importance, especially if one hive is to be taken away whilst the season still continues favorable for their collecting of honey : for when the combs are filled with honey the cells are sealed up, and the bees forsake them, and reside mostly in the hive in which their works are chiefly carried on. Observing also that the bees were apt to extend their combs through the passage of communica- tion in the upper hive, whether glass or other, which rendered it necessary to divide the comb when the upper hive was taken away, he now puts in that passage a wire screen, or netting, the meshes of which are large enough for a loaded bee to go easily through them. This prevents the joining of the combs from one box to the other, and consequently prevents the necessity of cutting them, and of spilling some of the honey, which, running down among a crowd of bees, used to incommode them much, it being difficult for them to clear their wings of it. — Plate I. APIS, fig. 23.

The Rev. Mr. White informs us, that his fond- ness for these little animals put him upon en deavouring, if possible, to save them from fire and brimstone ; that he thought he had reason to be content to share their labors for the pre- sent, and great reason to rejoice if he could at any time preserve their lives, to work for him another year; and that the main drift of his ob- servations and experiments has therefore been, to discover an easy and cheap method, suited to the abilities of the common people, of

taking away so much honey as can be spared, without destroy- ing or starving the bees ; and by the same means to encourage seasonable swarms. In his directions to make the bee-boxes of his inventing, he tells us, speaking of the manner of constructing a single one, that it may be made of deal or any other well-seasoned boards which are not apt to warp or split. The boards should be near an inch thick; the figure of the box square, and its heighth and breadth 9| inches every way mea- suring within. With these dimensions it will con- tain nearly a peck and a half. The front part must have a door cut in the middle of the bottom edge, three inches wide, and near half an inch in height, which will give full liberty to the bees to pass through, yet not be large enough for their enemy the mouse to enter. In the back part cut a hole with a rabbet in it, in which fix a pane of the clearest and best crown glass, about five inches

in length, ami three in breadth, and fasten it with putty : let the top of the glass be placed as high as the roof within, that the upper part of the combs, where the bees with their riches are mostly placed, may be seen. Thus we can judge of their state and strength, better than if the glass was fixed in the middle. The glass must be co- vered with a thin piece of wood by way of a shutter, which may be made to hang by a string, or turn upon a nail, or slide sideways between two mouldings. Such as are desirous of seeing more of the bees' works, may make the glass as large as the box will admit without weakening it too much ; or they may add a pane of glass on the top, which must likewise be covered with a shutter, fastened down with pegs, to prevent acci- dents. The side of the box, which is to be joined to another box of the same form and dimensions, as it will not be exposed to the internal air, may oe made of a piece of slit deal not half an inch thick. This he calls the side of communication ; because it is not be wholly enclosed : a space is to be left at the bottom the whole breadth of the box, and a little more than an inch in height; and a passage is to be made at the top, three inches long, and more than half an inch wide. Through these the bees are to have a communi- cation from one box to the other. The lower communication being on the floor, our laborers, with their burdens, may readily and easily ascend into either of the boxes. The upper communi- cation is also intended as a passage between the boxes, resembling the little holes or narrow passes, which may bo observed in the combs formed by our sagacious architects, to save time and shorten the way, when they have occasion to pass from one comb to another; just as in po- pulous cities there are narrow lanes and alleys passing transversely from one large street to another. Next provide a loose board, half an inch thick, and large enough to cover the side where the communications are made. Then have

in readiness several iron staples, an inch and a half Ion?, with the two points or ends bended down more than half an inch. Next fix two sticks crossing the box from side to side, and crossing each other, to be a stay to the combs ; one about three inches from the bottom, and the other the :;ame distance from the top ; and when the whole is painted to make it more durable, the box is finished. The judicious bee-master will here observe, that the form of the box now described is as plain as possible for it to be. It is little more than live square pieces of board nailed together ; so that a poor cottager who has but ingenuity enough to saw a board into the given dimensions, and to drive a nail, may make his own boxes well enough, v\ ill, out the help or expense of a carpent'T. \o directions are necessary for ma- kin- the other box, winch mint lie of "the same form and dimen-ioii?. The two boxes differ from each other only in this, that, the side of commu- nication of the one must be on the right hand ; that of the other on the k>ft. l'iu. 2-L. plate 1. APIS, represent-; t\o of these boxes, with their open- ings of communication,, ready to join each other. Mr. \ Kile's method of hiving into boxes, &c. iy; Take the loose board, and fasten it on one of the boxes, so as to stop the communi-

cations. This may be done by three of the sta- ples mentioned; one on the top of the box near the front ; the two others on the back, near the top and near the bottom. Let one end of the staple be thrust into a gimlet-hole made in the box, so that the other end may go as tight as can be over the loose board, to keep it from slipping when it is handled. The next morning, after the bees have been hived in this box, the other box should be added, and the loose board should be taken away. This will prevent a great deal of labor to the bees, and some to the proprietor. Be careful to fasten the shutter so close to the glass, that no light may enter through it; for the bees seem to look upon such light as a hole or breach in their house, and on that account may not so well like their new habitation. But the principal thing to be observed at this time is, to cover the box as soon as the bees are hived with a linen cloth thrown closely over it, or with green boughs to protect it from the piercing heat of the sun. Boxes will admit the heat much sooner than straw hives ; but if the bees find their heat too great for them, they will leave it. If the swarm be larger than usual, instead of fastening the loose board to one box, join two boxes together with three staples, leaving the communication open from one to the other, and then hive the bees into both. In all other re- spects they are to be hived into boxes in the same manner as into common hives. The door of the second box should be carefully stopped up, and kept constantly closed, that the bees may not have an entrance but through the first box. When the boxes are set in the places where they are to remain, they must be screened from the summer's sun, because the wood will otherwise be heated to a greater degree than either the bees or their works can bear; and they should likewise be*

screened from the winter's sun, because the warmth of this will draw the bees from that le- thargic state which is natural to them, as well as many other insects in the winter season. For this purpose, and also to shelter the boxes from rain, our ingenious clergyman has contrived the following frame : Fig. 25 represents the front of a frame for twelve colonies, a a are two cells of oak lying flat on the ground, more than four feet long. In these cells are fixed four oaken posts about the thickness of such as are used for drying linen. The two posts b b in the front, are about two feet six inches above the cells ; the other two, standing backward, five feet eight inches. Next nail some boards of slit deal horizontally, from one of the fore posts to the other, to screen the bees from the sun. Let these boards be seven feet seven inches in length, and nailed to the in- side of the posts ; and be well seasoned, that they may not shrink or gape in the joints, c c are two splints of deal, to keep the boards even, and strengthen them. Fig. 26 represents the back of the frame, d d d d are strong boards of the same length with the frame, on which place the boxes. Let the upper side of them be smooth and even, that the boxes may stand true upon them or it may be still more advisable ; to place under every pair of boxes a smooth thin board, as long as the boxes, and about a quarter of an inch wider. The bees will soon fasten the boxes to

this board in such a manner that the boxes and hoard may be moved or weighed together, with- out breaking the wax or resin, which for many reasons ought to be avoided. These floors must be supported by pieces of wood nailed from post to post at each end. They should also be well nailed to the frame, to keep them from sinking with the weight of the boxes, f represents the roof, which projects backward about seven or f-i\rht inches beyond the boxes, to shelter them from rain. Next cut niches or holes in the frame, ever against each mouth or entrance into the boxes, at h h h, fig. 25. Let these niches be nearly four inches long ; and under each nail a small piece of wood for the bees to alight upon. The morning or evening sun will shine upon one or both ends of the frame, let its aspect be what it will ; but it may be prevented from over- heating the boxes by a loose board set up be- tween the posts, and kept in by two or three pegs. Mr. White, with great humanity, observes, that no true lover of bees ever lighted the fatal match without much concern ; and that it is evidently more to our advantage to spare the lives of our bees, and be content with part of their stores, than to kill and take possession of the whole. Mr. Bonner repeatedly expresses the same hu- mane sentiment throughout his work, and earn- estly recommends never to kill a single working bee. Mr. White's plan for saving their lives is this : About the end of August, by a little inspection

through the glasses, we may easily discover which of the colonies may be laid under contribution. Such as have filled a box and a half, with their works, will pretty readily yield the half box. But we must not depend upon the quantity of combs without examining how they are stored with honey. The bees should have eight or nine pounds left them by way of wages for their sum- mer's work. The most proper time for this business is the middle of the day; and no armor is needed, except a pair of gloves. The operation is very simple, and easily performed thus : Open the mouth of the box intended to be taken ; then with a thin knife cut through the resin, with which the bees have joined the boxes to each other, till they are separated ; after which, thrust a sheet of tin gently in between the boxes. The communication being hereby stopped, the bees in the fullest box, where it is most likely the queen is, will be a little disturb- ed at the operation ; but those in the other box, where the queen is not, will run to and fro in the utmost hurry and confusion, and send forth a mournful cry, easily distinguished from their other notes. They will issue out at the newly-opened door ; not in a body as when they swarm, nor with such calm and cheerful activity as when they eo forth to their labors ; but by one or two at a time, with a wild flutter and visible rage and disorder. This, however, is soon over ; for as soon as they set abroad and spy their fellows, they fly to them instantly and join them at the mouth of the other box. By this means, in an hour or two, (for they go out slowly,) a box of pure honey will be got, without leaving a bee in it ; and likewise without dead bees, which, in burning them, are often mixed with the honev. aiid botli waste and damasre it.

Mr. White acknowledges that he has sometimes found this method fail, when the mouth of the box to be taken away has not been carefully closed : the bees will in this case get acquainted with it as an entrance ; and when the mouth is opened, that they may leave this box, many of them will return, and, the communication being stopped, will in a short tune carry away all the honey to the other box ; so much do they abhor a separation. When this happens he has re- course to the following expedient, which he thinks infallible : he takes a piece of deal, a little larger than will cover the mouth of the box, and cuts in it a square niche, somewhat more than half an inch wide. In this niche he hangs a little trap-door, made of a thin piece of tin, turning upon a pin, with another pin crossing the niche a little lower, so as to prevent the hanging door from opening both ways. This being placed close to the mouth, the bees which want to get out will easily thrust open the door outwards, but cannot open it the other way to get in again ; they will therefore readily make to the other box, leaving this in about the space of two hours, with all its stores, justly due to the tender-hearted bee-master as a ransom for their lives. What led Mr. White to prefer collateral boxes to those before in use, was, to use his own words, his compassion for

the poor bees, who, after traversing the fields, return home weary and heavy laden, and must perhaps deposit their burden up two pair of stairs, or in the garret. The lower room, it is likely, is not yet furnished with stairs : for, as is well known, our little architects lay the foundations of their structures at the top, and build downward. In this case the weary little laborer has to drag her load up the sides of the walls; and when she has done this, she will , travel many times backward and forward, as I have frequently seen, along the roof, before she finds the door or passage into the second story j and here again she is perplexed with a little puzzling labyrinth, before she gets into the third. What a waste is here of that precious time which our bees value so much, and which they employ so well ; and what an expense of strength and spirits, on which their support and sustenance depend. In the collateral boxes they are all on the ground floor ; and because I know my bees are wise enough to value convenience more than taste, I have made them of such a moderate, though decent height, that the bees have much less way to climb to the top of them, than they have to the crown of a common hive.

We have already alluded to Mr. Wildman's hives. A good swarm will soon fill one of these, and therefore another hive may be put under it the next morning. The larger space allowed the bees, will excite their industry in filling them with combs. The queen will lay some eggs in the upper hive ; but so soon as the lower hive is filled with combs, she will lay most of them in it. In little more than three weeks all the eggs laid in the upper hive will be turned into bees ; and, if the season is favorable, their cells will be soon filled with honey. As soon as they want room a third hive should be placed under the two former ; and in a few days after the end of three weeks from the time the swarm was put

into the hive, the top hive may be taken away at noon in a fair day ; and, if any bees remain in it, carry it to a little distance from the stand, and turning its bottom up, and striking it on the sides, the bees will be alarmed, take wing, and join their companions in the second and third hives. If it is found that the bees are very un- willing to quit it, it is probable that the queen remains among them. In this case, the bees must be treated in the manner directed in Mr. VVildman's method of taking the honey and the wax. The upper hive now taken away should be put in a cool place, in which no vermin, mice, &c., can come at the combs, or other damage happen to them, and thus be kept in reserve. When the hives seem to be again crowded, and the upper hive is well stored or filled with honey, a fourth hive should be placed under the third, and the upper hive be taken

off the next fair day at noon, and treated as already directed. As the honey made during the summer is the best, and as it is needless to keep many full hives in store, the honey may be taken out of the combs of this second hive for use. If the season is favorable, the bees may still fill a third hive. In this case a fifth hive must be put under the fourth, and the third taken away as before. The bees will then fill the fourth for their winter store. As the honey of the first hive is better than the honey collected so late as that in the third, the honey may be taken out of the combs of the first, and the third may be preserved with the same care as directed for that. In September the top hive should be examined; if full, it will be a sufficient provision for the winter; but, if ii-dit, that is, nut containing twenty pounds of honey, then, in the month of October, the fifth hive should be taken away, and the hive kept in reserve should be put upon the remaining one, tn supply the bees with abundant provision for the winter. Nor needs the owner grudge them tin's ample store ; for they are faithful stewards, and will In proportionally richer and more for- ward in spring and in summer, when he will reap an abundant profit. The fifth hive should lie carefully preserved dunns: winter, that it may b>- restored to the .same stock of bees when an additional hive i> wanted next summer ; or the first s\nrm that comes oft' may be put into it. Tlie combs in it. it' kept free from filth and ver- min, \ill save much labor, as they will at once serve tlie bees for collecting honey. When the hives are changed, a cover, as already directed, should be put upon every upper hive ; and when a lower hive becomes ;in upper hive, the door of it should be shut up, that so their only passage "in may be by the lower hive; for otherwise the <;ueen would be apt to lay eggs in both indis- criminately. The whole of the above manage- mriit of one hive may be extended to any num- bt r. It may be proper to keep a register of each M r, because in restoring hives to the bees they in.iv be better pleased at receiving their own la- t'ors, than those of other st-nks. It' in autumn the owner has sonic weak hives, which base neither provision nor numbers suth'cient for the winter, r is advisable to join the bees to richer hives ; tor tiie -Rater number of bees will be a mutual advantage to one another during the winter, and*

accelerate their labors much in the spring. For this purpose carry a poor and a richer hive into a room a little before night ; then force the bees out of both hives into two separate empty hives, as directed by Mr. Wildman ; shake upon a • cloth the bees out of the hive which contains the fewest ; search for the queen, and as soon as she is secured with a sufficient retinue, bring the other hive which contains the greater number, and place it on the cloth on which the other bees are, with a support under one side, and with a spoon shovel the bees under it. They will soon ascend, and while under this impression of fear, will unite peaceably with the other bees; whereas, had they been added to the bees of the richer hive, while in

possession of their castle, many of the new comers must have paid with their lives for their intrusion.

It appears from the account of the manage- ment of bees in Mr. Wildman's hives, that there is very little art wanting to cause the bees to quit the hives which are taken away, unless a queen happens by chance to be among them. In that case, the same means may be used as are neces- sary when we would rob one of the common hives of part of their wealth. His method is as follows : Remove the hive from which the wax and honey are to be taken into a room ; into which admit but little light, that it may appear to the bees as if it were late in the evening. Gently invert the hive, placing it between the frames of a chair or other steady support ; and cover it with an empty hire, keeping that side of the empty hive raised a little, which is next the window, to give the bees sufficient light to get into it. While the empty hive is held steadily supported on the edge of the full hive, between your side and your left arm, keep striking with the other hand all round the full hive from top to bottom, in the manner of beating a drum, so that the bees may be frightened by the continued noise from all quarters ; and they will in conse- quence mount out of the full hive into the , empty one. Repeat the strokes, rather quick than strong, round the hive, till all the bees are got out of it, which in general will be in about five minutes. The fuller the hive is of bees the sooner they will leave it. As soon as a number of them have got into the empty hive, it should be raised a little from the full one, that the bees may not continue to run from the one to the other, but rather keep ascending upon one another. So soon as all the bees are removed, the hive in which they now are must be placed on the stand from which the other hive was taken, to receive the absent bees as they return from the fields. If this is done early in the sea- son, the operator should examine the royal cells, and preserve such of them as have young in them, as well as the combs which have young bees in them, which should on no account be touched, though to preserve them a good deal of honey should also be left behind. Then take out the other combs with a long, broad, and pliable knife, such as the apothecaries use. The combs should be cut from the sides and crown as clean as possible, to save the future labor of the bees, who must lick up the honey spilt, and remove every remains of wax ; and then the sides

of the hive should be scraped with a table-spoon, to clean away what was left by the knife. During the whole of this operation, the hive should be placed inclined to the side from which the combs are taken, that the honey which is spilt may not daub the remaining combs. If some combs were

unavoidably taken away, in which there are young bees, the parts of the combs in which they are should be returned into the hive, and secu- red by sticks in the best manner possible. Place the hive then for some time upright, that any re- maining honey may drain out. If the combs are built in a direction opposite to the entrance, or at right angles with it, the combs which are farthest from the entrance are to be preferred ; because they are best stored with honey, and have the fewest young bees in them. The next business is to return the bees to their old hive ; and for this purpose place a table covered with a clean cloth near the stand, and giving the hive in which the bees are a sudden shake, at the same time striking it pretty forcibly, the bees will be shaken on the cloth. Put their own hive over them immediately, raised a little on one side, that the bees may the more easily enter ; and when all are entered place it on the stand as before. If the hive in which the bees are, be turned bottom uppermost, and their own hive be placed over it, the bees will immediately ascend into it, especially if the lower hive is struck on the sides to alarm them. As the chief object of the bees during the spring, and beginning of the summer, is the propagation of their kind, honey during that time is not collected in such quan- tity as afterwards ; and on this account it is scarcely worth while to rob a hive before the end of June ; nor is it safe to do it after the middle of July, lest rainy weather should pre- vent them from restoring the combs they have lost, and laying in a stock of honey sufficient for the winter, unless there is a chance of carrying them to a rich pasture.

Hornets and wasps are very formidable ene- mies of bees, and their nests should be carefully destroyed. Mice should be guarded against, by diminishing the entrance into the hives when the cold comes on, and the bees are less able to de- fend themselves ; and the hives may be placed in such a manner, that it will be impossible for the mice to reach them. Spiders and caterpillars are also very destructive to bees ; a species of the latter (called the wax-worm, or wax-moth, because it feeds on wax) lays its eggs in the hive, which turn to maggots that are very noisome and prejudicial. Hives of bees that have swarm- ed more than once, and such as contain little honey, are most exposed to these insects ; for the empty combs serve them for shelter, and the wax- supplies them with food. These hives should be cleaned at least once a week ; and the stools on which they rest, where the moths are laid by the bees, should be cleaned every morning. But they cannot be entirely destroyed without taking away the infected hive, removing the bees, and clean- sing it of the moths, before it is restored to its for- mer occupiers. Bees are often troubled with lice, which may be destroyed by strewing tobacco over them. The depredations of birds, and particu- larly of the house-lark and swallow, should be

carefully prevented. Ants, woodlice, and ear- wigs are also enumerated by Mr. Bonner among the enemies of the bees. Mr. Keys says, ‘ The earwigs steal into the hives at night, and drag out bee after bee, sucking out their vitals, and leaving nothing but their skins, like so many scalps or trophies of their butchery.’ Mr. Bon- ner proposes, as ‘ the best way to extirpate wasps, to destroy their queen or mother in spring, wherever she can be found ; for wasps, in this respect, as well as in some other particulars, re- semble bees ; and therefore, when a mother wasp is killed, a whole nest of them is in effect de- stroyed. Their nests, however, should also be carefully sought out, and as many of them de- stroyed as possible, by burning, scalding, or drowning them; lest, like the bees, the wasps should also possess the power of raising a queen- mother from a common egg.’ But ‘ of all the enemies,’ says Mr. Bonner, ‘ the bees have hitherto had to encounter, man may justly be considered as the greatest : for while he follows the old barbarous custom of killing whole hives of that industrious race for the sake of their ho- ney, (a custom which, in many nations, has be- gun to yield to a more economical, as well as a more humane practice,) he certainly destroys more of these his faithful servants annually, than any other class of animals whatever ; or, indeed, than all the other beasts, birds, and insects united, ever did. Nor are those prejudiced murderers of the bees their only enemies among mankind. The predatory class, who steal either their honey or the whole hives, prove equally destructive to them. But it is to be hoped, that as self-interest and humanity equally unite in exploding the practice of the murderers, so the effectual exe- cution of the laws will >prove a sufficient protec- tion from the thieves.’

Before entering upon the observations of some later writers on the habits of these interest- ing creatures, we give a short summary of their physiological peculiarities and structure :

Their organs of nutrition, or those by which they collect and appropriate food, are extremely complex ; comprising instruments adapted to the reception of liquid, as well as those fitted for the division of solid aliments. For the former pur- pose they are provided, in common with all hy- menopterous insects, with a long and flexible proboscis or trunk, which may be considered as a lengthened tongue, though, strictly speaking, it is formed by a prolongation of the under lip. It is not tubular, as Swammerdam had supposed, but solid throughout; and the minute depression at its extremity is not the aperture of any canal through which liquids can be absorbed. Cuvier, in his Le9ons d’Anatomie Compared, has not marked this distinguishing feature in the pro- boscis of the bee, but speaks of it in common with the tubular trunks of the other hymenop- tera, and describes its aperture as being situated in the lower part. But Reaumur has very satis- factorily shown that the trunk of the bee per- forms strictly the office of a tongue, and not that of a tube for suction ; for when it takes

up honey or other fluid aliment, the under or the upper surfaces are more immediately applied to it, and rolled from side to side, and the bee thus

licks up what adheres to it, while the extremity of the trunk is frequently not applied at all to the substance taken up. The trunk is supported on a pedicle which admits of being bent back, or propelled forwards, and thus can retract or stretch out the trunk to a considerable extent. Protection is given to it by a double sheath ; the external consisting of two scales furnished by the expansion of one of the portions of the la- bial palpi, and the internal, formed by the pro- longation of the two external portions of the jaw. The whole member thus consists of five principal parts, on which account Fabricius termed it lingua quinquefida.

For the purpose of dividing solid materials, the mouth is furnished with two strong mandibles and four palpi, of great use in enabling the in- sect to seize and break down hard substances. In the working bee these are of larger dimen- sions than in the other kinds. The teeth are two in number, and have the form of con- cave scales with sharp edges ; they are fixed to the ends of the jaws, and play horizontally as in other insects. Reaumur describes and delineates a large aperture above the root of the proboscis, which is so surrounded with fleshy parts as not to be readily seen, unless the proboscis be ex- tended and bent downwards. This he considers as the mouth or orifice of the gullet ; on the up- per side of which, and opposite to the root of the proboscis, a small fleshy and pointed organ is seen, which he regards as the tongue, assisting in the deglutition of the food. Through this orifice, it is presumed, all the aliment, whether liquid or solid, passes ; the former being conveyed to it by the trunk, which, by its contractile power, presses forward the fluids it has collected between itself anil the inner sheath, and the latter being re- ceived directly after its comminution by the teeth, behind which it is situated. Latreille, however, whose authority is great on a point of this nature, thinks that Reaumur has deceived himself with regard to such an aperture, and dis- believes its existence. lie conceives that the food simply passes on by the sides of the tongue, finding its wny from thence into the oesophagus, •mil si) on to the stomach.

'I lie bee has two stomachs: the first a large transparent membranous bag, pointed in front, and swelling out into two pouches behind. It performs an office, in some respects, analogous to that of the crop in birds ; for it receives, and retains for a time, the fluid of the nectarea, which does not

appear to differ, in any respect, from honey. Mr. Hunter observes, that, what- ever time the contents of this reservoir maybe retained, he never found them altered, so as to give the idea of digestion having taken place. The coat- of this reservoir are muscular, by vhieh means it is capable of throwing up the honey into the mouth, so that it is regurgitated into the honey cells, or imparted to other bees. None of n ever pusses out from the extremity o! the trunk, as Swannnerdum had believed. I- or the purpose ot digestion a second stomach is provided, which takes its origin from the mid- dle of the two posterior loh-s ,,| the former, and is of a lengthened cylindrical shape. Its com- munication with the intestine is not direct, but

takes place by a projecting or inverted pylorus, thickest at its most projecting part, with a very small opening in the centre, of a peculiar con- struction. This inward projecting part is easily seen through the coats of the reservoir, especially if full of honey. A similar kind of structure takes place at the communication of the first with the second stomachs, and, having the properties of a valve, must effectually prevent all regurgi- tation from the latter into the former.

The physiology of their external senses, though a subject of the long- continued observa- tion of naturalists, is very imperfectly under- stood. They possess, it is clear, organs appro- priated to unknown kinds of impressions, and which must open to them avenues to knowledge of various kinds, to which we must be ever total strangers. Who will compare our thermometers, electroscopes, or hygrometers, however elabo- rately constructed, with those refined instruments with which the lower classes, and particularly in- sects, appear to be so liberally provided ? The antenna, so universally met with in this class of animals, are doubtless organs of the greatest im- portance in conveying impressions from without. Their continual motion, the constant use which is made of them in examining objects, the total de- rangement in the instincts of those insects which have been deprived of them, point them out as exquisite organs of more than one sense. To impressions of touch, arising from the immediate contact of bodies, they are highly sensible ; but their motions evidently show that they are af- fected by distant objects. They are no doubt alive to all the tremulous motions of the air, and probably communicate perceptions of its other qualities. Exceedingly flexible in every direc- tion, they can readily embrace the outline of any body that the bee wishes to examine, however small its diameter, and follow all its movements. It is by means of these instruments that bees are enabled to execute so many works in the interior of the hive, from which the light must be totally excluded ; and, aided by them, it builds combs, pours honey into its magazines, feeds the larvae, and ministers to all those wants which it dis- covers and judges of solely by this species of touch. The antennae are also the principal means of mutual communication, and constitute a sort of language which appears to be

suscepti- ble of a great variety of modifications, and of supplying every species of information. It is in this way they satisfy themselves of the presence of their queen, or communicate the alarming in- telligence of her absence. On many occasions, the sense residing in the antennae appears to be supplementary to that of vision, which in bees is less perfect than in many larger animals. During the night, therefore, they are chiefly guided in their movements by this sense. It is singular to observe by moon-light the mode in which bees guard the entrance of the hive against the intru- sion of moths which flutter in the neighbourhood. As vigilant sentinels they extend their antennae at this time to the utmost, moving them alter- nately to the right and to the left. Woe to the unfortunate moth that comes within their reach. The moths adroitly endeavor to avoid the slightest contact, and to insinuate themselves

between the bees so as to get unperceived into the hive, where they riot upon the honey. In full day-light bees appear to enjoy the sense qf vision in great perfection. They will recognise their own habitations from a great distance, and distinguish them at once from many others. On quitting the hive it flies towards the field which is most in flower; and, as soon as it has deter- mined on its course, it takes as direct a line as a ball issuing from a musket. When it has col- lected sufficient provision it rises in the air to discover its hive, and then darts forward with the velocity of an arrow, and with unerring precision in its aim. Their perceptions of heat and cold, generally referred to the sense of touch, appear to be extremely delicate. In several experiments of Huber's, the influence of the rays of the sun excited them to a vigorous action of the wings. It is well known that great cold reduces them to a state of torpor, and inferior degrees of it are evidently unpleasant to them. By their conduct they show that they are sensible of alterations in the weather for some time before we can perceive them. Sometimes, when working with assiduity, they will suddenly desist ; none will stir out of the hive, and all the working-bees that are abroad hurry home, and press forward so as to obstruct the entrance of the hive ; while we, in the mean- time, can distinguish no alteration in the state of the atmosphere. Gathering clouds sometimes produce this effect on them ; but perhaps they possess some species of hygrometrical sense, un- connected with any impression of vision. It is said that no bee is ever caught in a sudden shower, unless from some cause it has wandered very far from the hive, or been disabled by acci- dent from returning to it. Huber supposes that it is the rapid diminution of light that alarms them ; for if the sky be uniformly overcast they proceed on their excursions, and even the first drops of a soft shower do not make them return with any great

precipitation.

Their taste is rather singularly the most im- perfect of their senses. They exert hardly any discrimination in the collection of honey, being not repelled by the scent or flavor of such as are extremely offensive to our organs, and not scrupling to derive supplies from such as are highly poisonous. The qualities of honey are, indeed, observed to vary much, according to the particular situation from which it is obtained. The most stagnant and putrid waters are resorted to by bees with the same avidity as the purest ; and in the selection of flowers they are guided by the quantity of honey they expect to meet with, and iu no respect by its quality. When the scythe has cut down all the flowers which before yielded them a plentiful supply, they discontinue their excursions, although the weather be in all respects propitious. Their smell must therefore enable them to discover the presence of honey at great distances. Direct experiment has indeed proved this to be the case. Mr. Huber found that they proceeded immediately towards boxes which contained honey concealed from their view; and such in fact is the situation of the fluid of the nectarea in flowers. Some odors, especially the fumes of tobacco, and indeed all kinds of smoke, are highly obnoxious to them :

this is the case also .ˆith the smell of oil of tur- pentine, alcohol, ammonia, the nitric and mu- riatic acids, and several other volatile chemical agents ; upon receiving the impressions of which, they immediately set about ventilating them- selves. But nothing excites their displeasure m a greater degree than the breath of the spectator; as soon as they feel which, they show signs of anger, and prepare to revenge it as an insult. The odor of the poison of their sting produces similar effects, exciting them to immediate rage and hostility.

It is sufficiently clear that many insects possess the power of smell, yet the particular organ of this sense has nevw been ascertained. Various opinions have been supported more by argu- ments drawn from the analogy of what happens in other classes of animals than by any direct ex- periments on insects themselves. We know that in all animals respiring by means of lungs, the organs of smell are placed at the entrance of the passages of the air ; and it has often been con- cluded that, in like manner, the stigmata, or the orifices of the air-tubes, were the seat of this sense in insects. By others the antenna have been assigned as the organs through which these impressions were conveyed to the sensorium. The experiments of Huber have proved that neither of these opinions is correct ; and have satisfactorily shown that in the bee this sense re- sides in the mouth itself, or in its immediate vicinity. Here indeed would be its proper sta- tion, if this faculty be intended, as we may rea- sonably suppose it to be, to apprise the individual of the qualities of the food prior to its being eaten. When the

mouth of a bee was plugged up with paste, which was allowed to dry before the insect was set at liberty, it remained quite insensible to the same odors at which it had before manifested the strongest repugnance.

Bees, it is generally supposed, possess the sense of hearing; but the evidence is by no means conclusive; for we find that they are noways dis- turbed by a loud clap of thunder, or by the re- port of a gun, or any other noises that may happen to arise around them. It is, however, certain that they are capable of emitting a variety of sounds, which apptar expressive of anger, fear, satisfaction, and other passions, and it would seem that they were even capable of communi- cating certain emotions to one another in this manner. Huber observed that the queens, during their captivity, sent forth a peculiar sound, which he supposes to be a note of lamen- tation. A certain cry, or humming noise from the queen, also strikes with sudden consternation all the bees in the hive. Hunter has noticed a number of modulations of sound emitted by bees under different circumstances, and has in- stituted an inquiry concerning the means em- ployed by them in producing these sounds, for an account of which see his paper in the Philo- sophical Transactions.

Buffbn refuses to allow bees any portion of in- telligence, and contends that the actions we be- hold, however admirably they are directed to certain ends, are in fact merely the results of their peculiar mechanism. Other philosophers, such as Reaumur, have gone into the opposite

extreme, and have considered them as endued with extraordinary wisdom and foresight, ani- mated by a disinterested patriotism, and a variety of moral and intellectual qualities of high order. The truth, no doubt, lies between these opinions. ‘ In no department of natural history,’ says an able contemporary, ‘is it more necessary to be aware of the proper import of the term instinct, than in studying the phenomena presented by the bee ; for nowhere is it more difficult to discrimi- nate between the regular operation of implanted motives, and the result of acquired knowledge and habits. The most striking feature of their history, and the one which apparently lays the foundation for those extraordinary qualities which raise them above the level of other insects, is the disposition to social union. It may in general, indeed, be remarked, that animals which associate together so as to form large communities, display a higher degree of sagacity than those who lead a solitary life. This is especially observable among insects. The spider and

formica leonis may exhibit particular talents, or practise parti- cular stratagems in the pursuit and capture of their prey ; but their history is limited to a single generation, and embraces none of those interest- ing relations which obtain between individuals composing the gregarious tribes, such as the ant, the wasp, and the bee. Among these we trace a community of wants and desires, and a mutual intelligence and sympathy, which lead to the constant interchange of good offices, and which, r>y introducing a systematic division of labor, amidst a unity of design, leads to the execution of public works on a scale of astonishing magni- tude. The attachment of bees to their hive, which they defend with a courage and self-devo- tion truly admirable, their jealousy of intruders, their ready co-operation in all the labors re- quired for the welfare of the community, their tender care of their young, the affection and homage which they bestow on their queen, and which they manifest on all occasions in the most unequivocal manner, imply qualities such as we could hardly persuade ourselves could animate a mere insect, on which we are in the habit of proudly looking down as placed in one of the lowest orders of created beings.'

More has been written on the history and economy of this insect, than on those of, perhaps, any other animal. To the foregoing particulars the experiments of Huber, Iluish, and Howison have added some remarkable facts. On the sub- ject of their fecundation Linnaeus seems originally to have suggested the right idea; i.e. that after all that has been said respecting its similarity to that of fishes, an actual union takes place be- tween the queen and the drones. He seems also o have suspected that tins union proved fatal to the latter. This opinion has in both points been now verified. In numerous experiments made by Huber during the years 1787 and 1788, he found that the young queens are never im- pregnated so lung as they remain in the interior uf the hive : if confined within its walls they continue barren, though amidst a seraglio of males. To receive the approaches of the male the queen auars high in the air, choosing; that time of day when the heat has induced the drones

to issue from the hive ; and love is now ascer- tained to be the motive of the only distant jour- ney which a young queen ever makes. From this excursion she returns in the space of about half an hour, with the most evident marks of fecundation ; for, far from being satisfied with the prolific aura of Swamrnerdam, she actually carries away with her the ipsa verenda of the poor drone, who never lives to see his offspring, but falls a sacrifice to the momentary bliss of his aerial amour. The most complete proof of these facts is afforded by the detail of a number of concurring experiments. It is curious that Bon- ner should have remarked those aerial excursions of the young queens, without ever suspecting their real object, or observing the marks of fecun- dation upon their return to the hive. M. Huber also assigns a cause for the existence of such a great number of males. As the queen is

obliged to traverse the expanse of the atmosphere, he observes, it is requisite the males should be nu- merous, that she may have the chance of meeting some one of them. But the reason why impreg- nation cannot be accomplished within the hive has not yet been ascertained ; nor is the cause here assigned for the great number of males quite satisfactory.

M. Huber also states his accidental dis- covery of the very singular and unexpected consequences, which follow from retarding the impregnation of the queen-bee beyond the twen- tieth or twenty-first day of her life. In the natural order of things, or when impregnation is not retarded, the queen begins to lay the eggs of workers forty-six hours after her intercourse with the male, and she continues for the subsequent eleven months to lay none but these; ‘ arid it is only after this period, that a considerable and uninterrupted laying of the eggs of drones com- mences. When, on the contrary, impregnation is retarded after the twentieth day, the queen begins, from the forty-sixth hour, to lay the eggs of drones ; and she lays no other kind during her whole life.’ It would be tedious to detail the experiments ; they were numerous, and the re- sults uniform. ‘ I occupied myself,’ says M. Huber, ‘the remainder of 1787, and the two subsequent years, with experiments on retarded fecundation, and had constantly the same re- sults. It is undoubted, therefore, that when the copulation of queens is retarded beyond the twentieth day, only an imperfect impregnation is operated; instead of laying the eggs of workers and of males equally, she will lay those of males only.’ This discovery is entirely M. Huber’s own. A single interview with the male appears sufficient, according to this writer, for fecundi- fymg the whole eggs that a queen will lay in the course of at least two years. ‘ I have even reason to think,’ he adds, ‘ that a single copula- tion will impregnate all the eggs that she will lay during her whole life ; but I want absolute proof for more than two years.’ A similar fact, we have seen, occurs in the economy of the aphis, which, by a single impregnation, is well known to produce several successive generations. See APHIS.

A queen, in ordinary circumstances, lays about 3000 eggs in the space of two months,

which is at the rate of fifty a-day. It was not correctly ascertained whether the queens, whose impregnation was retarded, laid a number of drone eggs corresponding to the whole number of eggs, both of workers and drones, which they ought to have deposited ; but it is certain that they laid a greater number of drone eggs than they ought naturally to have done. The

hives in which only drones were produced, always failed; and, indeed, generally broke up before the queens had done laying ; for, after the lapse of some time, the workers rinding themselves overwhelmed with drones, ‘ fruges consumere nati,’ and receiving no increase of their own number, abandoned the hive, and at the same time despatched their unfortunate sovereign. In order to throw some light on this curious subject, M. Huber suggests the propriety of instituting analogous experiments on other insects; by re- tarding, for example, the impregnation of the females of other species of bees, of wasps, and of butterflies.

In the course of additional experiments, some other curious points in the natural history of the bee were accidently illustrated. Thus a queen, twenty-seven days old, having been impregnated on the 31st of October, did not begin to lay at the expiration of forty-six hours, apparently on account of the weather having, in the mean time, become extremely cold. She was confined in a hive all the winter; and, on the 4th of April ensuing, prodigious numbers both of larvae and pupae were, found ; and all of them produced drones.

M. Huber had also an opportunity of correct- ing those naturalists who maintain, that the working bees are charged with the task of con- veying into proper cells such eggs as may be misplaced by the queen. He put a queen, who was ready to lay workers’ eggs, into a prepared hive, which contained only the cells of drones, but which communicated by a narrow tube, suf- ficient to permit workers to pass, but too small for the queen, with another hive, which con- tained plenty of the cells of workers. The queen, taught by nature the kind of eggs she was about to lay, searched about for suitable cells ; hut, finding none, she chose rather to drop her eggs at random, than place those of workers in the cells of drones. The eggs thus dropped, soon disappeared; and careless observers might have concluded that they were carried off by the workers to the proper cells; but none were to be seen there; and the author soon ascertained that they were really eaten up by the workers. Thus it was proved, that the care of depositing pro- perly the respective kinds of eggs is left entirely to the instinct of the queen, and that the workers running off with misplaced eggs, in order to de- vour them, has been mistaken for their tenderly conveying them to the right cells.

The working-bees had for ages been consi- dered as entirely destitute of sex; and hence, in the writings of many authors, they are deno- minated neuters. From the experiments of Schirach and of Huber, it seems now te be clearly ascertained that the %vorkers are really of the female sex ; but that the organs of generation are small and imperfect, being capable, however,.

of development, if the larvae be fed with royal jelly.

M. Huber confirms the curious discovery of M. Schirach, that when bees are by any acci- dent deprived of their queen, they have the power of selecting one or two grubs of workers, and of converting them into queens.

M. Huber next relates some experiments which confirm the singular discovery of M. Riems, concerning the existence, occasionally, of common working-bees that are capable of laying eggs ; which, we may remark, is certainly a most convincing proof of their being of the female sex. Eggs were observed to increase in number daily in a hive in which there were no queens of the usual appearance ; but small queens considerably resemble workers, and to discriminate them re- quired minute inspection. ‘ My assistant,’ says M. Huber, ‘ then offered to perform an opera- tion that required both courage and patience, and which I could not resolve to suggest, though the same expedient had occurred to myself. He proposed to examine each bee in the hive sepa- rately, to discover whether some small queen had not insinuated herself among them, and escaped our first researches. It was necessary, therefore, to seize every one of the bees, notwith- standing their irritation, and to examine their specific character with the utmost care. Thi« my assistant undertook, and executed with great address. Eleven days were employed in it ; and, during all that time, he scarcely allowed himself any relaxation, but what the relief of his eyes required. He took every bee in his hand ; he attentively examined the trunk, the hind limbs, and the sting ; and he found that there was not one without the characteristics of the common bee ; that is, the little basket on the hind legs, the long trunk, and the straight sting.’ They afterwards seized a fertile worker in the very act of laying.

The origin of these supplementary queens, as they may be called, is accounted for, from their having passed the vermicular state in cells con- tiguous to the royal ones ; and from their having, at an advanced period, devoured some portion of the stimulating jelly which was destined for the nourishment of the royal brood. They are objects of jealousy and animosity to the queen- bee ; but how they become impregnated has not been ascertained. It has not, indeed, been di- rectly ascertained that all fertile workers proceed from larvae that have received portions of the royal food; but M. Huber observed that they were uniformly such as had passed the vermi- cular state in cells contiguous to the royal ones. ‘ The bees,’ he remarks, ‘ in their course thither, will pass in numbers over them, stop, and drop some portion of the jelly destined for the royal larvae. This reasoning, though not conclusive, is plausible. The result is so uniform, that M. Huber says, he can, whenever he pleases, pro- duce fertile workers in his hives.

When a supernumerary queen is produced, or introduced into a hive in the course of experi- ment, either she or the rightful owner soon perishes. The German naturalists, Schirach and Riems, imagined that the working-bees

assailed the stranger and stung her to death. Reaumur

considered it as more probable, that the sceptre was made to depend on the issue of a single com- bat between the claimants ; and this conjecture is verified by the observations of Huber. The same hostility towards rivals, and destructive ven- geance against royal cells, animates all queens, whether they be virgins, or in a state of impreg- nation, or the mothers of numerous broods. The working-bees, it may here be remarked, remain quiet spectators of the destruction, by the first- hatched queen, of the remaining royal cells ; they approach only to share in the plunder presented by their havoc-making mistress, greedily devour- ing any food found at the bottom of the cells, and even sucking the fluid from the abdomen of the nymphs before they toss out the carcases. The following fact, connected with this subject, is one of the most ourious perhaps in the whole history of this wonderful insect : Whenever the workers perceive that there are two rival queens in the hive, numbers of them crowd around each : they seem to be perfectly aware of the ap- proaching deadly conflict, and willing to prompt their amazonian chieftains to the battle ; for, as often as the queens show a disinclination to right, or seem inclined to recede from each other, or to fly off, the bees immediately surround and detain them ; but when either combatant shows a disposition to approach her antagonist, all the bees forming the clusters instantly give way to allow her full liberty for the attack. It seems strange that those bees who in general show so much anxiety about the safety of their queen, should, in particular circumstances, oppose her preparations to avoid impending danger — should seem to promote the battle, and to excite the fury of the combatants.

When a queen is removed from a hive, the bees do not immediately perceive it; they con- tinue their labors, 'watch over their young, and perform all their ordinary occupations. But, in a few hours, auilation ensues; all appears a scene of tumult in the hive ; singular humming is heard ; the bees desert their young; and rush over the surface of the combs with a delirious im- petuosity.' They have now evidently discover- ed that their sovereign is gone ; and the rapidity with which the bad news spreads through the hive, to the opposite side of the combs, is very remarkable. On replacing the queen in the hive tranquillity is almost instantly restored. The bees, it is worthy of notice, recognise the indivi- dual person of their own queen. If another be palmed upon them they seize and surround her, so that she is either suffocated or perishes by hun- uer ; tor it is very remarkable, that the workers are never known to attack a queen-bee with their stinus. If, however, more than eighteen hours have elapsed before tin:

stranger queen be in- troduced, she has some chance to escape : the bees at first seize and confine her; but less rigid- ly ; and they soon begin to disperse, and at length leave her to reign over a hive in which she was at t'n>t treated as a prisoner. If twenty-four hours have elapsed, the stranger v. ill be well re- ceived from the first, and at once admitted to the sovereignty of the hive. In short, it appears that the bees when deprived of tlie:r queen, are thrown into great agitation ; that they wait about

twenty hours, apparently in hopes of her return; but that after this interregnum, the agitation ceases ; and they set about supplying their loss by beginning to construct royal cells. It is when they are in this temper, and not sooner, that a stranger queen will be graciously received ; and upon her being presented to them, the royal cells, in whatever state of forwardness they may hap- pen to be, are instantly abandoned, and the lar- vae destroyed. Reaumur must therefore have mistaken the result of his own experiments, when he asserts, that a stranger queen is instantly well received, though presented at the moment when the other is withdrawn. He had seen the bees crowding around her at the entrance of the hive, and laying their antennae over her ; and this he seems to have taken for caressing. The struc- ture of the hives he employed prevented him from seeing further : had he used the leaf-hive, or one of similar construction, he would have perceived that the apparent caresses of the guards were only the prelude of actual imprison- ment.

After the season of swarming, it is well known, a general massacre of the drones is commenced. Several authors assert that the workers do not sting the drones to death, but merely harass them till they be banished from the hive and perish. M. Huber contrived a glass table, on which he placed several hives, and he was thus able to see distinctly what passed in the bottom of the hive, which is generally dark and concealed : he witnessed a real and furious massacre of the males, the workers thrusting their stings so deep into the bodies of the defenceless drones, that they were obliged to turn on themselves as on a pivot, before they could extricate them. The work of death commenced in all the hives much about the same time. It is not, however, by a blind or indiscriminating instinct that the work- ers are impelled thus to sacrifice the males ; for if a hive be deprived of its queen no such mas- sacre takes place in it; but the males are allowed to survive the winter.

From Mr. Huish and Dr. Howison's writings on this subject we shall select a few concluding practical observations. The first of these gentle- men objects decidedly to the crowding of hives together in an apiary. During the swarming season it is often attended with very destructive consequences. He was once requested by a gentleman to perform an experiment upon a hive, which was placed on the same bench with six others, and in

attempting to move the hive des tined for the operation, the others were agitated, and the whole apiary became in a little time in a state of confusion. The easy access also, which the bees of one hive have to those of an- other, promotes quarrels and murderous battles. It is an erroneous opinion, he says, though held by some skilful apiarians, that all the bees of one apiary know each other, and that it is only the bees of a foreign apiary with whom they quar- rel. Mr. Huish having been often witness of the destructive animosity of these little insects, and the wars which they wage upon the weaker hives in their own establishment, endeavours to impress it strongly upon the attention of every apiarian, to place every hive upon a respective

pedestal. Another advantage particularly arises from the use of a single pedestal, which is, that the hive may be chained down and locked.

The apiary and all its contents should be kept particularly clean; all noxious weeds carefully removed, and no rubbish be left in which the enemies of the bees can conceal themselves. A few low trees or shrubs, planted in the vicinity of the apiary, will be found useful in arresting the flight of the swarms, for they very often alight on espalier trees, or on currant and goose- berry bushes. It is essential, however, to ob- serve, that the apiary should not be incommoded with herbs or plants, which rise to a height equal to or exceeding the entrance of the hive ; because the bees, on their arrival from their journeys, being much fatigued, are impeded by these plants, and regain their habitation with difficulty. If they touch these plants on passing they often fall to the ground and become victims to their ene- mies, or are unfortunately trodden under foot. Such plants also serve the purpose of a ladder for the enemies of the bees to ascend into the hive, and especially the ants, which in some districts are particularly numerous. These little insects are a great detriment to a hive, and they baffle the most vigilant attention of the apiarian to prevent their depredations. A small leaden reservoir of water, encircling the bottom of the pedestal, is of great service in preventing the ascent of these insects. The vicinity of great towns is not a proper situation for bees. The smoke of a city is very detrimental to them, and the chimneys are in general the resort of the swallows and martens, who are great destroyers of these insects.

The position of hives, according to Dr. How- ison, should be such as to receive the rays of the rising as well as meridian sun ; heat and light appearing the principal stimulants to the action of bees. A hive so situated as not to be touched by the sun until some hours later than the other hives

in the same garden, would, in the course of the season, lose a proportional number of days' labor. Hives should stand at some distance from walls and hedges. These are often much infested with snails in summer, and mice in winter. Huish recommends placing every hive upon a single pedestal, and at two or three feet distance from each other. By this means when any thing happens to one hive, the others are less likely to be disturbed than when placed on a shelf in a bee-house; and the hive may be chained down and locked. It is usual to have three or four legs or supports to the bee boards, but those who have tried one will never resort to more, as one is a much better protection from vermin and insects.

The annexed diagram repre- sents the figure of this gentle- man's hive, which is thus des- cribed : It is so constructed interiorly that each comb may be extracted by itself without deranging the rest ; the combs being attached to slips of board placed across the mouth or top of the hive, any one of them may be lifted up, and to effect this operation the taper-

ing construction of the interior is favorable. To prevent the bees from working between the slips, air is admitted by means of pierced plates of tinned iron ; and to prevent human thieves from carrying off the whole hive, it is chained and padlocked to a strong post, which serves also as a fulcrum. The inventor of this hive has tried it, he says, for nearly twenty years. ' At any time and season when I require some honey- comb, or at the end of the season when I deprive my bees of their superfluous store, I open the top, and take the side-boards out, from which having cut the honeycomb, I replace them in the hive, and the operation is facilitated by hav- ing some vacant boards ready to supply the place of the full ones. This operation is very easily and speedily performed ; it has the advantage of not disturbing the middle combs, and I have often deprived these hives of their honey with- out the loss of a single bee, excepting those few who left their stings In various parts of my dress. Two very considerable advantages arise from the use of this hive : in the first place, there is never any occasion to make an addition to the hive at the bottom, when the bees, by lying out in clusters, declare that they stand in need of room ; for the operation of depriving them of a part of their combs from the top, will 'give them the room which they require, and which they will soon replenish with honey. In the common hive it is customary, in this case, to place, what is called in Scotland an eek, which consists of from four to six bands of the same diameter as the hive; but, on taking away this eek in the autumn, I have seen the most injurious consequences result to the hive. It is in general performed by cutting the combs with a wire between the hive and the eek, and then whilst one person lifts up the hive, another draws the eek away ; the hive then rests on the stool. Few persons, however, consider that, as the combs are cut parallel with the bottom of the hive, they will all touch the stool on which it stands, and I have thus known a whole hive perish. The

second advantage is, that the whole of the interior of the hive is open to your inspec- tion, and you are thus enabled to examine the de- vastation of the moth, or to ascertain the presence of any other enemy.' — Treatise on Bees, p. 85.

Dr. Howison's hive, figs. 1 to 3, for obtain- ing the honey without killing the bees, ' consists of two distinct hexagons, figs. 1, 2; one placed above the other. The under is formed of six panes of half-inch deal, each measuring ten inches in width and eight in depth, and covered with a thin board at top. This forms a box that will contain two pecks' measure of corn, and which he considers sufficient for the largest swarm. This is intended for the breeding, as well as winter habitation, of the bees. The upper is of the same dimensions and form as the under at bottom, but in order to give it a conical shape, for the more conveniently fixing thereon a coat of straw, the panes at top are only five inches wide, which is also covered by a piece of board. The upper box has a moulding, fig. 1, a, fixed to its under part, which projects about a quarter of an inch,, and so exactly embraces the upper part of the lower box, as to join these two firmly to- gether. In the deal which forms the top of tlie

lower box, are cut four oval holes, fig. 2, c, each one inch wide and two inches long, through which the bees pass into the upper. This communica- tion, when not wanted, is shut by a board which moves on a nail in its centre. The small pane

Fig. 1.

Fig. 2.

of glass, fig. 1, b, in the top of the upper box. admits of seeing the progress the bees have made in it, without separating it from the lower one. This pane i:j covered to exclude light and cold or heat by a small shutter c. When the swarm is first put into the lower box, the com- munication is shut with the upper, until the bees have completely filled the lower with combs. The communication is then to be opened,whenthe bees will ascend ; and, if the season is favorable and the swarm numerous, they will fill it also, but not until they have completely stocked the lower. 15y removing the straw covering, and looking through the glass in the upper box, it may be seen what honey has been collected. Should a part or the whole of it be wanted, it will only be necessary carefully to separate the upper from the lower box, and shut the board of communication. The upper box is then to be removed

*to some distance, and the bees contained in it driven off, on which they will immediately join their companions in the lower. So soon as the honey is taken from the box, it can be re- placed, and if early in the season, the communi- cation opened for making more honey, but if late, it must be kept shut until the hive has swarmed next summer. Hoth the lower hexagon, tig. 2, and the upper, fig. 3, contain the usual cross horizontal sticks ««««for supporting the combs. It honeycomb early next season is pre- ferred to a swarm, then the communication must be opened about the beginning of June. All "'ic honey procured in this way is remarkable 1*0 r its purity, none of the cells having been ever polluted by the hatching of young bees. The greatest advantages, however, from this method, are the early and large swarms; the consequence of not killing the bees.'*

' Alter all that has been done in England, V ranee, and Italy,' says Mr. London, 'the bee is still more successfully cultivated and finer honey produced in Poland, by persons who utv r saw -i book in on the subject, or heard of

*the mode of depriving bees of their honey with- out taking their lives.' The Polish hive appears to this writer second in merit to the ' straw, thimble, or flower-pot hive placed in an inverted position: and perhaps,' he says, ' it may deserve the preference, if the mode of using it were gene- rally known. It is simply the trunk of a tree, of a foot or fourteen inches in _^*

diameter and about nine feet long. It is scooped out (bor- ing in this country would be better) for about six feet from one end, so as to form a hollow cylinder of that length, and of six or eight inches diame- ter within. Part of the cir- cumference of this cylinder is cut out during the greater part of its length, about four inches wide, and a slip of wood is made to fit the open- ing. On the sides of this slip or segment (a) notches are made every two or three inches, of sufficient size to allow a single bee to pass. This slip may be fur- nished with hinges and with a lock and key ; but in Poland it is merely fastened in by a wedge. All that is wanting to complete the hive is a cover at top to throw off the rain, and then it requires only to be placed upright like a strong post in the garden, so as the bottom of the hollow cylinder may be not nearer the ground than two feet, and the opening slip look to the south. When a swarm is to be put in, the tree, with the door or slip opened, is placed obliquely over it ; when the bees enter the door is closed, and the holes stopped with clay till the hive is planted or placed upright. When honey is wanted, the door is opened during the finest part of a warm day, when most of the bees are out ; its entire state is seen from top to bottom, anil the operator, with a segar in his mouth, or with a lighted rag, to keep off the bees from his hands, cuts out with a crooked knife as much comb as he thinks fit. In this way fresh honey is ob- tained during the summer, the bees are never cramped for room, nor does it

become necessary to kill them. The old comb, however, is an- nually cut out to prevent or lessen the tendency to swarming, which, notwithstanding this and the size of their dwelling, they generally do once a year; for the laws of nature are not to be changed. Though it be a fact, that a small swarm of bees will not do well in a large hive, yet if the hive extend in length and not in breadth, it is admitted both by Huber and Huish, that they will thrive in it. ‘ If too great a dia- meter,’ says Huber, ‘ be not given to the abode of the bee, it may without danger be increased in the elevation.’

We subjoin Dr. Howison’s mode of manage- ment as one of the simplest and most effectual for the common end in view. If the lives of the bees are to be saved, then some of the other hives may be tried ; and the most suitable for this purpose is, perhaps, the Polish hive ; the most ingenious, and the fittest for an amateur, is uo doubt that of Huish. But as the latter author

justly remarks, ‘ there is no certain method, nor will one ever be discovered, by which a great harvest of wax and honey, and great swarms can be obtained at pleasure : these are chimera, which it is folly to pursue ; because the former depends on the seasons being more or less fe- vorable to the secretion of honey, on the coun- tries which the bees inhabit being more or less wooded and covered with flowers, and the latter on the fecundity of the queen. Hence that an- nual difference between the harvest of honey and wax, and the largeness or smallness of the swarms which is found in all countries. To the same causes may be attributed the fact, that a mode of treatment which has succeeded one year, will not succeed the next, although the circumstances be almost the same in appearance. It is these differences and variations, which, for the period of fifty-five years, have given rise to hives of dif- ferent forms and materials, which have only tended to instruct us, that bees can inhabit, work, and collect provisions in vessels of every form, from the excavated trunk of the tree, as it is used in Poland and the northern countries, to the expensive and useless glass hive, or to the hive of Du Hamel ; and, where no hollow trunk rf the tree can be found, in the holes of walls, in chimneys, and under the roofs.’

*To the common observer, all working bees, as to external appearance, are nearly the same ; but *o those who examine them with attention, the difference in size is very distinguishable ; and they are in their vicious and gentle-, indolent and active natures, essentially different. * Of the stock which I had in 1810,’ says Howison, ‘ it required 250 to weigh an ounce ; but they were so vicious and lazy, that I changed it for a smaller variety, which possesses much better dispositions, and of which it requires 296, on an average, to weigh an ounce. Whether size and disposition are in- variably connected, I have not yet had sufficient experience to determine.*

Hives made of straw, as now in use, have a great advantage over those made of wood or other materials, from the effectual defence they afford against the extremes of heat in summer and cold in winter. That the hives in size should correspond as nearly as possible with that of the swarms, has not had that attention paid to it which the subject demands, as much of the suc- cess in the management of bees depends on that circumstance. From blind instinct, bees endea- vour to fill with combs whatever hive they are put into, before they begin to gather honey. Owing to this, when the hive is too large for its inhabitants, the time for collecting their winter store is spent in unprofitable labor ; and starva- tion is the consequence. This evil also extends to causing late swarming the next summer; it being long before the hive becomes so filled with young bees as to produce a necessity for emigration, from which cause the season is too far advanced for the young

colonies to procure a winter stock. I should consider it as a good rule in all cases, that the swarm should fill two-thirds of the hire. The hives used by me for my largest swarms, weighing from five to six pounds, will contain two pecks' measure of corn, and will yield, in" a good season, eight Scots pints of honey, and for

smaller swarms in proportion. Hives with empty combs are highly valuable for second swarms, aa the bees are thereby enabled much sooner to begin collecting honey.

As to the feeding of bees, near the sea little honey is collected after the first week in August ; but in high situations, where the flowers are later and heath abounds, the bees labor with advantage until the middle of September. These are the proper periods, according to situation, for ascer- taining if the hives intended to be kept contain a sufficient winter stock. The killing of the drones perhaps marks this time with more pre- cision. If a large hive does not weigh thirty pounds, it will be necessary to allow it half a pound of honey, or the same quantity of soft sugar made into a syrup for every pound that is deficient of that weight; and in like pro- portion to smaller hives. This work must not be delayed, that time may be given for the bees to make the deposit in their empty cells before they are rendered torpid by the cold. I must here notice, that sugar simply dissolved in water (which is a common practice), and sugar boiled with water into a syrup, form compounds very differently suited for the winter store of bees. When the former is wanted for their immediate nourishment, as in spring, it will answer equally as a syrup ; but if to be laid up as a store, the heat of the hive quickly evaporating the water, leaves the sugar in dry crystals, not to be acted upon by the trunks of the bees. I have known several instances of hives killed by hunger while some pounds' weight of sugar in this state remained in their cells. The boiling of sugar into syrup forms a closer combination with the water, by which it is prevented from flying off, and a con- sistence resembling that of honey retained. I have had frequent experience of hives not con- taining a pound of honey, preserved in perfect health through the winter, with sugar so prepared, when given in proper time, and in sufficient quantity.

Bees are evidently natives of a warm climate, a high temperature being absolutely necessary to their existence; and their continuing to live in hollow trees during the severe winters of Russia and America, must depend on the heat produced from the great size of the swarms which inhabit these abodes. From my own observations, the hives which are best covered during winter, al- ways prosper most the following summer. In consequence, about the end of harvest, I add to the thin covering of straw put on the hives at the time of swarming a thick coat, and shut up the aperture through which the bees entered, so that only one can pass at a

time. Indeed, as a very small portion of air is necessary for bees in their torpid state, it were better, during severe frosts, to be entirely shut up, as numbers of them are often lost from being enticed to quit the hive by the sunshine of a winter day. It will, how- ever, be proper at times to remove, by a crooked wire or similar instrument, the dead bees and other filth, which the living at this season are unable to perform of themselves. To hives whose stock of honey was sufficient for their maintenance, or those to which a proper quantity of sugar had been given for that purpose, no

further attention will be necessary, until the breeding season arrives. This, in warm situa- tions, generally takes place about the beginning of May, and in cold, about a month after. Owners of hives are often astonished, that, at this advanced season, when their bees had, for weeks preceding, put on the most promising ap- pearance, after a lew days rain they become so weak and sickly as to be unable to leave the hive, and continue declining until they at last die. From paying attention to this subject, I am convinced that the cause is as follows : The young bees for a short time previous to their leaving their cells, and some time after, require being fed with the same regularity that young birds are by their parents; and if the store in the hive be exhausted, and the weather such as not to admit of the working-bees going abroad to collect food in sufficient quantity for them- selves and their brood, the powerful principle of affection for their young compels them to part with what is not enough for their support, at the expense of their own lives. To prevent such accidents, I make it a rule, that if during the breeding season it rains for two successive days, to feed all the bees indiscriminately, as it would be difficult to ascertain those only who require it.

‘ For several years past,’ continues Dr. H. ‘ my hives have uniformly sent forth their first swarms during the second week in July, from which it appears that early or late swarming, in the same situations, is not so much regulated by good or bad seasons as might have been expected. Near the sea this will of course take place some weeks earlier. The first swarming is preceded by the appearance of drones, and hanging out of working-bees. The signs of the second are more equivocal, the most certain being that of the queen, a day or two before swarming, at intervals of a few minutes, giving out a sound a good deal resembling that of a cricket. It frequently hap- pens that the swarm will leave the old hive and return again several times, which is always owing to the queen not having accompanied them, or from having dropped on the ground, being too young to fly to a distance. In such cases I have seen her found near the old hive, and on being taken up and placed in the new one, the swarm instantly settled. When a hive

yields more than two swarms, these should uniformly be joined to others that are weak, as from the lateness of the season, and deficiency in number, they will otherwise perish. This junction is easily formed by inverting at night the hive in which they are, and placing over it the one you intend them to enter. They soon ascend, and apparently with no opposition from the former possessors, as I have never observed fighting to be a consequence. It being very universally believed, that two queens cannot live together in the same hive, I have for several days after this forced junction, searched for the murdered queen, but never with success. Should the weather for some days after swarm- ing be unfavorable for the bees going out, they must be fed with care until it clears up, other- wise the young swarm will run a great risk of dying. — llowison in Mem. Ca/cd. Hnrt. Soc.

Taking the heney may be effected even with

hives of the common construction, by three modes — partial deprivation, total deprivation, and suffocation.

Partial deprivation is performed about the beginning of September. ‘ Having ascertained the weight of the hive, and consequently the quantity of honeycomb which is to be extract- ed, begin the operation as soon as evening sets in, by reverting the full hive, and placing an empty one over it ; particular care must be taken that the two hives are of the same diameter ; for if they differ in their dimensions, it will not be possible to effect the driving of the bees. The hives being placed on each other, a sheet or large table-cloth must be tied round them at their point of junction, in order to prevent the bees from molesting the operator. The hives being thus arranged, beat the sides gently with a stick or the hand ; but particular caution must be used to beat it on those parts to which the combs are attached, and which will be found parallel with the entrance of the hive. The ascent of the bees into the upper hive will be known by a loud humming noise, indicative of the pleasure in finding an asylum from their enemy : in a few minutes the whole community will have ascended, and the hive, with the bees in it, may be placed upon the pedestal from which the full hive was removed. The hive, from which the bees have been driven, must then be taken into the house, and the operation of cutting out the honeycomb commences. Having extracted the requisite quantity of comb, this opportunity must be embraced of inspecting the hive, and of cleaning it from any noxious matter. In cutting the combs, however, parti- cular attention should be paid not to cut into two or three combs at once; but having com- menced the cutting of one, to pursue it to the top of the hive; and this caution is necessary fo- two reasons : If you begin the cutting of two or three combs at one time, were you to extract the whole of them, you would, perhaps, take too much ; and, secondly, to stop in the middle of a

comb, would be attended with very pernicious consequences, as the honey would drop from the cells which have been cut in two, and then the bees, on being returned to their native hive, might be drowned in their own sweets. The bees also, in their return to their natural domicile, being still under the impression of fear, would not give so much attention to the honey which flows from the divided cells; and as it would fall on the board, and from that on the ground, the bees belonging to the other hives would im- mediately scent the wasted treasure, and a ge- neral attack upon the deprivated hive might be dreaded. The deprivation of the honeycomb being effected, the hive may be returned to its former position, and reversing the hiye which contains the bees, and placing the depurated hive over it, they may be left in that situation till the morning, when the bees will be found to have taken possession of their native hive ; and, if the season proves fine, may replenish what they have lost. — Huish's Treatise on Bees.

Total deprivation is effected in the same man- ner, but earlier in the season, immediately after the first swarm ; aud the bees, instead of being

returned to a remnant of honey in their old hive, remain in the new empty one, which they will sometimes, though rarely, fill with comb. By this mode, it is to be observed, very little honey is obtained, the bees in June and July being occupied chiefly in breeding, and one, if not two, swarms are lost

Suffocation is performed when the season of flowers begins to decline, and generally in Oc- tober. The smoke of paper, or linen rag soaked or smeared with melted sulphur, is introduced to the hive by placing it on a hole in the ground, where a few shreds of these articles are undergo- ing a smothering combustion; or the full hive may be placed on an empty one, inverted as in partial deprivation, and the sulphurous smoke introduced by fumigating bellows, &c. The bees will fall from the upper to the lower hive in a few minutes, when they may be removed and buried to prevent resuscitation. Such a death seems one of the easiest, both to the insects them- selves and to human feelings. Indeed, the mere deprivation of life to animals not endowed with sentiment or reflection, is reduced to the precise pain of the moment, without reference to the past or the future ; and as each pulsation of this pain increases in effect on the one hand, so on the other, the susceptibility of feeling it diminishes.

‘ Much has been said about the cruelty of killing bees,’ says Mr. Loudon, ‘ but if man is entitled to deprive them either totally or par- tially of their food, he has an equal right (and, in truth, by that very act exercising it) of de- priving them of their lives. For of the hives

sists of one leaf ; and the petals are inflected and equal. There are only two species, the culture of which is well known, viz. 1. A. graveolens, or smallage, a native of Britain ; and 2. A. pe- troselinum, or common parsley, a native of Sar- dinia. The roots and seeds of the petroselinum are used in medicine. The root of parsley is one of the five aperient roots, and in this inten- tion is sometimes made an ingredient in apo- zems ; if too liberally used, it is apt to occasion flatulencies; and thus, by distending the viscera, to produce a contrary effect to that intended by it : the taste of this root is somewhat sweetish, with a light degree of warmth and aromatic fla- vor. The seeds are an ingredient in the electuary of bay berries. The roots of smallage are also in the number of aperient roots, and have been pre- scribed as an ingredient in aperient apozems and diet-drinks, but are at present disregarded. The seeds of the plant are moderately aromatic, and were formerly used as carminatives ; in which intention they are, doubtless, capable of doing service, though the other warm seeds, which the shops are furnished with, render these unneces- sary.

APIVORUS, a species of falco. See FALCO. APLACE’. In place.

For there is but a God of all,

Whiche is the lorde of heuen and helle.

But if it like you to telle,

Howe suche goddes come aplace,

Ye might mochell thanke purchase.

Gower. Con. A. bk. v.

APLANATIC, a term applied to that kind ol

that have been partially or wholly deprived of refraction which completely corrects the abber- their honey, it may be safely affirmed, that there ration of the rays of light, and the color depend- is not one in ten that does any good. If they ing thereon, in contradistinction to Achromatic, live till the succeeding spring, they are com- in which there is only a partial correction of monly too weak to collect food or to breed, and, color. Dr. Blair, of Edinburgh, discovered in being plundered by their neighbours, dwindle 1791, that a mixture of solutions of ammomacal away, till at last the hive

is without inhabitants, and mercurial salts, and also some other sub- A prompt death is surely preferable to one so stances, produced dispersions proportional to protracted.' Some judicious observations on this that of glass, with respect to the different colors ; subject will be found in Huish's book, extracted and he proceeded to construct a compound lens,

consisting of a semi-convex one of crown glass, with its flat side towards the object, and a me- niscus of the same materials, with its convex side in the same direction, and its flatter con- cave next to the eye ; and the interval between these lenses he filled with a solution of antimony in a certain proportion of muriatic acid. The lens thus artificially adapted did not manifest the slightest vestige of any extraneous color.

APLANES ; ajrXavijc, not wandering ; the fixed stars, so called in opposition to the planets.

APLIGHT. Supposed to be the same as In plight. In good plight or condition.

Anon fire she a-light, And wanned it well aplight ; She gave it suck upon her barm, And sith then laid it to sleep warm.

Lay de Frame, in EUit'i Romance. Nou is Edward of Carnarvon, King of Engelond all aplight,

from the works of La Grenee, a famous French apiarian.

APIS, in numismology. The bee was repre- sented on the coins of many cities, as the symbol of new colonies ; as in the annexed figure of an Ephesian coin :

APITES, APITIS VINUM; from airtof, the pear-tree ; perry. See PERRY.

APIT'PAT. From pit, to sink, and pat, to strike. The motion of the heart in a state of anxiety.

O, there he comes. Welcome, my bully, my buck '. A gad, my heart has gone apitpat for you. Congreve.

APIUM, PARSLEY, a genus of the digynia order, and pentandria class of plants; natural

God lete him ner be worse man, Then his fader, ne lasse of myht.

Percy't Reliquet, vol. ii.

APLUDA, a genus of the monrecia order, be-

order forty-fifth, umbellate. The fruit is of an longing to the polygamia class of plants ; and oval shape, and streaked; the involucrum con- the natural method ranking under the tourtu

order, gramina. The calyx is a bivalved gluma; the floscules of the female are fossile, and the male floscules are furnished with pedunculi; the female has no calyx ; the corolla has a double valve ; there is but one stylus, and one covered seed. The male has three stamina. There are three species, viz., A. aristata, A. mutica, and A. zugites, all natives of the Indies.

APLUSTRUM, the ancient ensign carried in sea vessels. It was sometimes used as an orna- ment for the frieze, the pediment, and porticoes of temples dedicated to Neptune. ,

APNCEA ; from a, and TTVIU, I breathe ; in medicine, loss of rispiration ; used to denote the respiration when very small and slow, so as to seem quite gone, as is the case in the suffocation of the uterus, apoplexies, &c.

APO, a name given to an extensive shoal in the Indian Sea, lying between Mindoro and the Calamianes, and extending about twenty-eight miles from north to south, and eight from east to west. Long. 120° 36′ E., lat. 12° 27′ N.

APOBAMINA is used by chemists for a liquor wherein pieces of gold, heated red-hot, have been extinguished.

APOBATANA, the metropolis of Media, where the kings kept their treasure ; supposed to he the same with Ecbatana.

APOBATEKLON ; from aTro/Saivw, I de- part ; among the ancients, a farewell speech, or poem, made by a person on his departure out of his own country, or some other place where he had been kindly received and entertained. Such is that of /Kueas to lielenus and Andromache, -Kn. lib. iii.

APOBA.THIIA, a place nearSestos, the land- ing place where Xerxes’s ships were frozen and stuck in the ice.

APOBATIIK/K, in antiquity, a kind of little bridges or stairs joining the land to ships, or one ship to another.

APOBEE, in botany, the name given by the natives of Guinea to a species of corn-marigold, called by Petiver chrysanthemum acaulon Gui- nei'iise foliis longis angustis.

*APOBOMIOI ; from OTTO, below, and /3w/*oc, altar; in antiquity, sacrifices offered on the bare earth without altars.*

Al'OC'ALYPSK, } A;roicaXt;i//»e ; from

APOC'ALYPTICAL, £ a/ro, from, and jca-

Ai'ocAi.vp'-nc, ?/.&, (ul j. j XVTTTU, to cover, to conceal. Revelation, disclosure, manifestation. The hist book of the sacred canon.

*dod the fadir seynge the tribulaciouns whiche Looli chirchi! was to satire, th:it was founded of the apostlis in Crist, the stoou disposide the Souc and the Hooli (• mst, to sihewe hem that me drede hem the lesse, ai d ;il the trynyte schewide it Crist on the manheed, .•11 d Cn*t to io,m by an aungell, and ioon to hooli rl irclio, of which reuelacion ioon made this book, wherforc tins book is reid ti/iocalips, that is to seie, reaclacioan. Widif. 1'ref. to Apocalipi, p. 143.*

1 1 was concluded by some, that Providence design- ed him the npwalyptic anire], which should pour out one of tin' vials of wrath upon the beast.

tyi'imfr on Prodigies, p. 314.

If we could understand that scene, at the opening of this tipoaili/jitifiil theatre, we should liud it a repre- sentation of the majesty of uur Saviour.

liurnct'n T'tcury of the Earth.

The divine apocalyptic writing, after Jerusalem wa» ruined, might teach them what the second Jerusalem must be, not on earth, but from heaven.

Lightfoot's Mlscellaniet.

APOCALYPSE; from airoicaXvirTtj, to reveal; Revelation, the name of the last of the sacred books of the New Testament, containing an ac- count of the visions which John saw in the Island of Patmos, whither he had been banished by the emperor Domitian, or, as some suppose, by Nero. According to Irenaeus, it was written about A. D. 96 ; but Sir Isaac Newton places the writing of it earlier. Some attribute this book to Cerinthus ; but the ancients unanimously ascribe it to John the son of Zebedee, and brother of James, whom the Greek fathers call the Divine by way of eminence, to distinguish him from John the Baptist, &c. It has not at all times been

esteemed canonical. There were many churches in Greece, as St. Jerome informs us, which did not receive it ; neither is it in the catalogue of canonical books prepared by the council of Laodicea, nor in that of St. Gyril of Jerusalem ; but Justin, Irena-us, Origen, Cy- prian, Clemens of Alexandria, Tertullulh, and all the fathers of the fourth, fifth, and the following centuries, quote the Revelation as then acknow- ledged to be canonical. The Alogians, Mar- cionites, Cerdonians, and Luther himself, re- jected this book ; but the Protestants have for- saken Luther in this particular ; and Beza has strongly maintained against his objections, that the Apocalypse is authentic and canonical.

It is a strong reflection, doubtless, on the zeal or knowledge of modern Christians, that a book expressly entitled a ‘ Revelation,’ should have been so variously interpreted by a large body of writers, and so often resigned to its supposed ob- scurity, in despair, by very able critics on other parts of Scripture. One of the latest and most learned of modern commentators on the New Testament says : ‘ I do not understand it ; and in the things which concern so sublime and awful a subject, I dare not, as my predecessors, indulge in conjectures. I have read elaborate works on the subject, and each seemed right until another was examined. I am satisfied that no certain mode of interpreting the prophecies of this book has yet been found out; and I will not add another monument to the littleness and folly of the human mind, by endeavouring to strike out a new course. I repeat it : I do not understand the book ; and I am satisfied that not one who has written on the subject knows any thing more of it than myself.’ — Dr. Adam Clarke’s Comment. Preface to the Revelations.

This is candid at any rate : yet does not this author in the least doubt the authenticity or in- spiration of this book. So little indeed has it to fear from examination on this point, that Sir Isaac Newton long ago remarked, ‘ there is no other book of the New Testament so strongly at- tested ;’ and Dr. Priestley (no mean critic when his own peculiar sentiments were not concerned) has declared, he thinks it impossible for any in- telligent and candid person to peruse it without being struck, in the most forcible manner, with the peculiar dignity and sublimity of its compo- sition, superior to that of any other writings what-

ever ; so as to be convinced that, considering the a?e in which it appeared, it could only have been written by a person divinely inspired. Of the

external evidence of its authenticity, &c. the fol- lowing is a brief summary. It is cited or plainly alluded to by the following wnters in the apos- tolic age: Hermas, A.D. 100 ; Ignatius, A. D. 107 (as Dr. Woodhouse has lately shown); Polycarp, A.D. 108; Papias (perhaps) A.D. 116. By these writers of the second century : Justin Martyr, A.D. 140; Melito, bishop of Sardis, A D. 177 ; by the churches of Lyons and Vienne, A.D. 177; by Irenaeus, A.D. 178; Athenagoras, A.D. 181; Apollonius, A. D. 186 er!87; Clement of Alexandria and Tertullian. In the third century by Hippolytus, Ori- gen, Gregory of Neo-Caesarea, Cyprian ; the Novations, Commodian, Victorinus, Methodius, the later Arnobius. By the Donatists, Lactan- tius, and the Arians, in the fourth century ; at the beginning of which period, in the time of Eusebius, its claims were disputed, principally on account of its internal difficulties. On this ground it seems to have been omitted in the catalogue of Cyril, bishop of Jerusalem, A . D. 340, and that of the council of Laodicea, A. D. 364 ; but in this century, and in the Greek church itself, it is supported by the testimonies of Athanasius, Basil, Epiphanius, Gregory of Nyssa, and Gregory Nazianzen. Thus, to borrow the elegant language of Bishop Woodhouse, ‘ We have seen its rise as of a pure fountain from the sacred rock of the apostolical church ; we have traced it through the first cen- tury of its passage, flowing from one fair field to another, identified through them all, and every- where the same. As it proceeded lower, we have seen attempts to obscure its sacred origin, to arrest or divert its course, to lose it in the sands of antiquity, or bury it in the rubbish of the dark ages. We have seen these attempts repeated in our own times, and by a dexterous adversary. But it has at length arrived to us, such as it flowed forth at the beginning. We may add that the reality of Christ’s sufferings is explicity asserted (Rev. i. 5. T. 7) in conformity with the accounts of the evangelists, and the con- stant tenor of the New Testament. Whence it is evident, that the Apocalypse could not have been written by the heresiarch Cerinthus, as some early writers have asserted ; for he maintained that Christ did not suffer, but only Jesus.’

There have been several other works published under the title of Apocalypses. Sozomen men- tions a book used in the churches of Palestine, called the Apocalypse, or Revelation of St. Peter. He also mentions an Apocalypse of St. Paul ; which the Cophtae retain to this day. Euse- bius also speaks of both these Apocalypses ; St. Epiphanius mentions an Apocalypse of Adam; Nicephorus an Apocalypse of Esdras ; Gratian and Cedrenus an Apocalypse of Moses, another of St. Thomas, and another of St. Stephen ; St. Jerome an Apocalypse of Elias. Porphyry, in his life of Plotin, makes mention of the Apoca- lypses or Revelations of Zoroaster, Zostrian, Ni- ccthjEus, Allosrenes, &c.

APOCARITES; from aTrojcapw, I cut off ; in ecclesiastical history, a sect that asserted that the human soul is part of, or derived from, the sub-

stance of God. They are ranked as a branch of the Manicheans.

APOCARPASUM, in natural history, a name given by the ancient Greeks to a poisonous drug, the exudation of a tree growing in the country of the Abyssines, and 30 much like the finest myrrh, that it was often mixed with it.

APOCATASTASIS ; from <»rocaei?9/u, I restore ; denotes the entire restitution, or redinte- gration of a tiling. In this sense, we read of the apocatastasis of the world ; the apocatastasis of all things.

APOCATASTASIS, in astronomy, the period of the annual revolution of a planet, or the time wherein it returns to the same point of the zodiac from which it set out.

APOCATHARSIS, the same with catharsis, or expurgation.

APOCHA ; from awo, and eˆu, I have ; in civil law, an acquittance, or receipt given by the creditor to his debtor for money paid, as distin- guished from antapocha, which is given by the debtor to the creditor.

APOCHULISMA, APOCHYLISMA ; from arc, and xfXi£o>, I extract ; in pharmacy, the inspis- sated juice of vegetables.

APOCLASM, in surgery, the same with ab- ductio.

APOCOPE ; from avo, and KOVTU, I cut ; a figure in grammar, by which part of a word is cut off, as die for dice, due for duce.

APOCRISARIUS, or APOCRISIARIUS ; from airoKpifftc, answer ; in antiquity, an officer ap- pointed to deliver the messages, orders, and an- swers, of a prince or emperor. He was also the emperor's chancellor, and secretary for foreign affairs ; the same with what Vopiscus calls nota- rius secretorum.

APOCRISIARIUS, in ecclesiastical history, the pope's deputy, who resided at Constantinople to receive the pope's orders, and the emperor's an- swer, and thus performed the office of the mo- dern nuncio. St. Gregory was apocrisiary of pope Pelagius, when he composed his morals on Job. This office seems to have commenced when, the emperors being become Christians, foreign churches had more occasion to promote their suits at court. We find the office established by law in the time of Justinian. It was ordered that, as no bishop was to be long absent from his church without special command from the em- peror, if any one had occasion to negociate any ecclesiastical cause at court, he should prefer his petition by the apocrisiarius of his church. Almost every monastery had its apocrisiarius

likewise, whose business was to act as proctors for their monastery, or any member of it, when they had occasion to enter any appearance at law, before the bishop, under whose jurisdiction they were. The heresies of the Monothelites and the Icono- clasts broke off the custom of having a papal apocrisiary at Constantinople.

APOCRISIA, in physic, the ejection of su- perfluities out of the body.

APOCRISIS, airoKfurtg, literally denotes an answer. Under this denomination were anciently included, not only the rescripts of the emperors / to the petitions of parties, but all kinds of de- crees or mandates. We have several books ex- tant under the title of Apocrises.

*APOCRYPHA, * AiroK(>vti ; from airo, APOC'RYPHAL, >and Kpuirrw, to hide. A APOCRYPH'ICAL. J thing hidden from, con- cealed, secreted.*

The other (bookes) folowynge, whiche are called apocripha (because they were wot to be reade not openly and in commen, but as k were in secrete and apart) are neyther founde in the Hebrue nor in the Chalde. Bible, 1539. Pref. to Apocriplta.

SHAT. This same duke is but Apocryphal, there's no creation That can stand where titles are not right.

Beau, and Fletch. Noble Gentleman, act iii. Jerom (who saith that all writings, not canonical, are apocryphal) useth not the title apocryphal, as the rest of the fathers ordinarily have done ; whose cus- tom is, so to name (for the most part) only such, as might not publicly be read or divulged. Hooker.

To speak of her in the words of the apocryphal writers ; wisdom is glorious, and never fadeth away.

Addison.

APOCRYPHAL. Among the Romans the books of Sibyls were anciently called apocryphal, as being committed to the trust of the decemviri alone; and for the like reason the annals of the Egyp- tians and Tyrians were called by the same name.

Yossius observes with regard to the sacred books, none are to be accounted apocryphal ex- cept such as have been admitted neither into the synagogue

nor the church, so as to be added to the canon, and read in public.

In the original meaning of the word, all the writings deposited in the temple were called apocryphal ; because they were kept secret from the people.

\Yhen the Jews published their sacred books, they only gave the appellation of canonical and divine to such as they thus made public ; and such as were still retained iu their archives they called apocryphal, for no other reason but be- cause they were not public ; so that they might be really sacred and divine, though not pro- mulgod as such.

Hence in respect of the Bible, all works came to be called apocryphal which were not inserted in the Jewish canon of Scripture; and it is in (Ins sense that St. Kpiphanius is to be under- stood when he says, that the apocryphal books are not put in the ark among the other inspired writings. l>y the ark he is supposed to have meant not the ark of the covenant, but the com- mon archives ; for, according to Josephus, there was no ark in the second temple. Nevertheless, the sacred writings were locked up in the tem- ple ; and the apocryphal books were without doubt deposited in a distinct archive from that in which the canonical books were kept. To this purpose Trrtullian, speaking of the book of Knoch, says, that some did not own it, ‘ quia inr in Jiidaicuin armoriuin admittitnr;’ and St. AuMm (di! Civ. l)ci, 1. 1.’).) that the canonical books ot the Old Testament were preserved in the Jewish temple by tin- carefulness of the priests, who succcrdrd one another. Hence it is probable that tin- holy books were lodged in the temple in our archive, and the apocryphal in another place.

The word itself, though of Greek original, cannot bo explainrd by a tirrtk etymology, ac- vordm-..: to which it \ould convey a much higher

idea, and signify writings preserved in the sa- cred recesses of the temple. It is rather a trans- lation of the Rabbinical word flJJ, which sig- nifies ‘ laid aside,’ so as not to be read in the synagogue, e. g. if a copy of the Bible had two rristakes in one and the same page, it was al- lowable to correct them ; but if there were three mistakes, the book must be laid aside (vhv Ml), and they used the same expression for books which were not supposed to be of divine authority. However the terms ?1JS, and airoicpv- 0oc, though similar in their original meaning, are very different in their use and application. The word |U5 was applied to books divinely in- spired, but we apply the term oiroepv^oc, apo- cryphal, to those whose divine inspiration is de- nied. It is true that the ancient Jews made a distinction, which varied at various periods, be- tween books that were to be read, and books that were not to be read in the synagogue, which latter the rabbin called O*tUJ, but these were included in the sacred canon, whereas we apply the term apocryphal to those that are excluded from it; and this term, as applied by*

modern writers to such books as have relation to the New Testament, signifies in general ‘ spurious or supposititious/ and in this sense differs jn a still higher degree from fUJ as applied to the books of the Old Testament. This term is ap- plied by Jerome to books which by their title or otherwise make SOILC claim to be a part of sa- cred Scripture, but are destitute of a right to be so esteemed ; and generally, or oftentimes, they are spurious. It is necessary, however, to dis- tinguish between the terms apocryphal and spu- rious : a spurious work is that which is ascribed to an author who did not compose it ; and apo- cryphal, whether written by the author to whom it is ascribed or not, is used in much the same sense with uncanonical. Michaelis uses the term apocryphal for authentic, as distinguished frrm inspired ; and merely in opposition to ca- nonical ; and he cautions against considering it as a term of contempt, or as depreciating a book to which it is applied. The exclusion, he says, of books called on this account apocryphal, frorp the canon, by no means derogates from their real worth ; and although there are many under this title which are manifestly spurious, there are others again which are highly deserving our esteem. Apocryphal books, according to the definition of St. Augustine (Contr. Faust. 1. xi. c. 2. and De Civ. Dei, 1. 15. c. 23. n. 4.), are not such as are of authority (or received by the church), and are kept secret; but they are books whose original is obscure, and which are destitute of proper testimonials; their authors being unknown, or their character either hereti- cal or suspected. The term apocryphal, which is variously used, is sometimes applied to those books that are not in the canon, (see CANON :) and of these there are two classes, viz. that of useful books, which may be read for the edifica- tion of the faithful, though doubtful and opposed, and that of the spurious pieces which are here- tical and full of errors. Origen calls all the books which are out of the canon, apocryphal. Eusebius seems to use it for those books that

were composed by heretics, and which he dis- tinguishes from those which are cited by ecclesi- astical writers. Gregory Nazianzen, Athanasius, Epiphanius in the eighth Heresy, Ruffinus, and most of the modern Greeks, give the name apocryphal to such books only as are apparently spurious and wicked ; and usually denominate those which are good and useful ecclesiastical, though they were not received by all the churches as canonical. On the other hand, Cyril, Epi- phanius in his Treatise of Weights and Mea- sures, Jerome, the African fathers, most of the Latins, and Antiochus among the Greeks, attri- bute the term apocryphal in general to all the books which are not in the canon. St. Austin distinguishes two sorts of canonical books ; those which are received by all the churches, and those which are only received by some. Sixtus of Sienna likewise

*distinguishes them into two classes; the proto-canonical, which have been always received and were never questioned; and the deutero-canonical, which were forrwly doubted, but have been since admitted into the canon. All the rest, according to this author, wo apocryphal, truvˆ >V< * term had been some **rru>« implied oirty to neretical books. Mr. Jones lays down the following criteria or tests, oy which we may determine whether any books are apocryphal or spurious, or not. That book is apocryphal in which are found any contradic- tions,— which either contains any histories, or proposes any doctrines contrary to those which are certainly known to be true : — which contains things ludicrous or trifling, fabulous or silly rela- tions : — which mentions facts that were later than the time in which the author, whose name it bears, lived : — the style of which is different from, or contrary to, the style of the author whose name it bears in his known and un- doubted writings : — the idiom and dialect of which are different from the known idiom or dialect of the author whose name it bears, or the country where he lived : — which manifests a disposition in its author different from the known temper of the author whose name it bears : — and which for the most part is transcribed or stolen out of another.*

The number of books in the Jewish canon was equal to the number of Hebrew letters, or twenty- two ; and that this number might not be ex- ceeded, the book of Ruth was joined to that of Judges, and the Lamentations to the prophecy of Jeremiah. The books, therefore, that were not contained in this number were excluded from the canon, and deemed apocryphal. The ancient catalogues of the canonical books of the Old Testament, which are to be met with in Chris- tian writers, whether Greeks or Latins, are con- formable to the canon of the Jews, and contain no other books ; such are those of Melito bishop of Sardis, of Origen, of the council of Laodicea, of Jerome, &c. &c. The first catalogue in which the books of Wisdom, Ecciesiasticus, Tobit, Judith, and the two Maccabees were admitted as canonical, and as having the same authority, is that of the third council of Carthage, A. D. 397, which confirms the decree of the council of Hippo, A. D. 393, in which these books were received into the canon. St. Augustine, ac-

cording to the authority of the African church, reckons all these books as canonical. Pope In- nocent I. on behalf of the church of Rome, places the same books in the canon of the Old Testament, as did also pope Gelasius in the council held A. D. 494 ; and moreover the de- cree of pope Eugenius, and the canon of the council of Trent, agree with the canon of the council of Carthage, and with the decree of pope Innocent, and rank the above- mentioned books among those of the Old Testament. See ECCLE- SIASTICUS, JUDITH, &c.

Among the books which have been wholly thrown out of the canon of holy scripture, we may mention a part of the book of Daniel, which the Jews rejected, containing the prayer of Azarias, and the song of the three children in the fiery furnace, which begin at the twenty- fourth verse of the third chapter, and end at the ninety-first : the history of Susanna, related in the thirteenth chapter ; and of Bel and the Dra- gon, in the fourteenth and last. These are not in the Hebrew or Chaldee text, nor in the Greek version of the Septuagint, but are taken out of the Gree version of Theodotion, which was then used by the church, in Daniel's prophecy, as St. Jerome has observed. Theodoret, in his Exposition of Daniel, mentions neither the history of Susanna, nor that of Bel and the Dra- gon. However that which is related in these two chapters is cited under Daniel's name, and as part of his prophecy, by Irenseus, Clement of Alexandria, Tertulliaa, Origen, Cyprian, Didy- mus, Hilary, Basil, Gregory Nazianzen, Am- brose, Augustine, the author of a homily er- roneously attributed to Chrysostom, Fulgentius, Avitus, and Bede. Sulpitius Severus, and the author of the Synopsis of Athanasius, mention these histories as part of the sacred text ; though the latter owns that the history of Susanna is one of the dubious books. Ambrose quotes the words of Daniel, related in the third chapter, as being certainly of divine inspiration ; and Ruf- finus upbraids Jerome for having cut off from Daniel the song of the three children, the history of Susanna, and that of Bel and the Dragon. The council of Trent, (session four,) declared the following six books to be canonical, viz. Tobit, Judith, Wisdom, Ecciesiasticus, and the first and second of Maccabees ; but joined Baruch with Jeremiah, so that the whole number amounts to seven. The apocryphal books enumerated in the sixth article of the church of England, are the third and fourth of Esdras, the book of To- bias, that of Judith, the rest of the book ot Esther, that of Wisdom, that of Jesus the son ot Sirach, Baruch the prophet, the Song of the Three Children, the Story of Susanna, of Bel and the Dragon, the prayer of Manasses, and the first and second books of Maccabees. These, by the same article, the church doth read for example of life and instruction of manners, but doth not apply them to establish any doctrine. Ac- cordingly in the table prefixed to the Common Prayer, and appointing the lessons, they are di- rected to be read in the months of Septembei, October, and November. It appears, however, that in the Common Prayer of Edward VI. there was for November 22nd and 23rd, no Bel and*

Dragon, nor History of Susanna ; but the order proceeded from Baruch to

Jeremiah. The apocryphal books are prohibited in the other reformed churches. The Puritans, in the reign of queen Elizabeth, disliked and objected to the reading of these books in the church.

The spurious and apocryphal books, composed in the early days of Christianity, published under the names of our Saviour, Fiis apostles, their companions, &c. and mentioned by the writers of the first four centuries, under the titles of gos- pels, epistles, acts, revelations, 8cc. are nume- rous. Most of them have been long lost, and some few are still extant, to which class belong our Saviour's letter to Abgarus ; his letter, which fell clown from heaven at Jerusalem, directed to a priest named Leopas, in the city Eris ; the constitutions of the apostles ; the creed of the apostles ; the apostolical epistles of Barnabas, Clemens, Ignatius, and Polycarp ; the shepherd of Hernias ; the gospel of the infancy of our Saviour ; the gospel of the birth of Mary ; the prot-evangelion of St. James ; the gospel of Ni- codemus ; the martyrdom of Thecla or acts of Paul ; Abdias's history of the twelve apostles, or the acts of Pilate ; St. Paul's epistle to the Laodiceans, and St. Paul's six letters to Se- neca, &c. ; the others, that are not extant, are enumerated by Mr. Junes. See Jones's Ca- jion, vol. i. & ii. Dupins Complete History of the Canon, &c. ch. i. Lardner's Works in various places. Michaclis's Introd. vol. i. p. 170. p. 376.

APOCYMA; from OTTO, and KVfia, wave; in antiquity, a name given by Greek authors to a sort of cement, used to daub over the bottoms of their ships, to preserve them from the water; also called zopissa. It was a mixture of bees- wax and pitch melted together, and, after it had been soaked some time in the sea-water, it was supposed to have peculiar virtues, and was used in many compositions.

APOCYNUM, ATTOKVVOV ', of O.TTO, and Kvvof, a dog ; because the ancients believed this plant would kill dogs. Dogsbane: A genus of the di- gynia order, and pentandria class of plants ; na- tural order thirtieth, contortaj. The essential characters are : COR. is bell-shaped ; and the filaments are five, alternate with the stamina. Of this genus botanical writers enumerate eleven species ; of which the following are the most remarkable: 1. A. cordatum has a climbing stalk, and was discovered with the villosum, at La Vera Cruz in New Spain, by Dr. William Hous- toun, who sent their seeds to England. They are both climbers and mount to the top of the tallest trees. The cordatum has produced flowers se- veral times ; but the rillosum never showed an appearance of any. 2. A. speciossimum, the savannah flower, has large flowers, and is a na- tive of Jamaica and of Savannah. It rises three or four feet hiuh, having woody stalks which send out a few lateral branches, garnished with smooth oval leaves, placed by pairs opposite, of a shining green color on the upper sides, but pale and veined underneath. The flowers are produced from the sides of the

branches, upon long foot-stalks : tlu-re are commonly four or live buds at the- end of each ; but there is seldom more than one of them which comes to the

flower. The flower is very large, Laving a tube which spreads open wide at the top, of a bright yellow, and makes a fine appearance, es- pecially in those places where the plants grow naturally, being most part of the year in flower. 3. A. venetum has an upright herbaceous stalk, and grows on a small island in the sea near Venice, but is supposed to have been originally brought from some other country. There are two varieties of this ; one with a purple, and the other with a white flower. The roots creep very much, and by them only it is propagated ; for it seldom produces any seeds either in the gardens where it is cultivated, or in those places where it grows naturally. The stalks rise above two feet high, and are garnished with smootli oval leaves placed opposite ; the flowers grow at the top of the stalks, in small umbels, and make a very pretty appearance. The flowers appear in July and August. This species is hardy enough to live in England in the open air, pro- vided it is planted in a warm situation and dry soil. The best time for removing and planting its roots is in spring, just before they begin to push out new stalks. 4. A. villosum, a native of Vera Cruz. This and the two first species are propagated by seeds, but are so tender as to require being kept constantly in a stove.

All the species of the apocynum abound with a milky juice, which flows out from any part of their stalks and leaves when they are broken ; this is generally supposed to be hurtful if taken inwardly, but does not blister the skin when ap- plied to it, as the juice of spurge and other acrid plants do. The pods of all the sorts are filled with seeds, which are for the most part com- pressed and imbricated ; these have each a loot? plume of a cottony down fastened to their crowns, by which, when the pods are ripe and open, the seeds are wafted oy the wind to a con – siderable distance, so that the plants become very troublesome weeds. This down is in great esteem in France, for stuffing of easy chairs, making of quilts, &c. ; for it is exceedingly light and elastic. It is called by the French delarvad , and might probably become a vendible com- modity in England, were people attentive to the collecting of it in Jamaica where the plants are found in plenty.

APODACRYTICA ; from airo, and tfajcpv, a tear ; in pharmacy, medicines to excite tears, and carry off superfluous humors from the eyes.

APODECT.'E; from airoSfx0?01 I receive; in antiquity, a denomination given to ten general receivers, appointed by the Athenians to receive the public revenues and taxes. The apodectae had also a power to decide controversies arising in relation to money and taxes ; but there was an appeal to the courts of judicature.*

APODECT./EI, in the Athenian government, officers appointed to see that the measures of corn were just.

APODES ; from a, and irove ‘, m a general sense, denotes things without feet. Zoologists apply the name to a fabulous sort of birds, said to be found in some of the islands of the New World, which, being entirely without feet, support themselves on the branches of trees by their crooked bills. The Germans and Dutch have also their apodes, a sort of birds, somewhat like

swallows, whose legs and feet are so very small, that they seem rather formed for creeping than running.

APODES, in the Linnaean system, the name of the first order of fishes, or those which have no belly fins. See ZOOLOGY.

APOD1OXIS, in logic ; from airot «oew, to ex- clude ; the rejection of such things as do not necessarily belong to the. question to be consi- dered.

APOCIOXIS, in rhetoric, a figure whereby we either pass over a thing slightly, or refer treating of it to some other time or place. It is called by Latin writers, rejectio ; e. g. Quid ego se- natum defendam, judices ? Equidem debeo, &c.

APODIX’IS, > AfotfiKwm; OTTO, and ctiK-

APODIC’TICAL, >vr/u, ctt£w, to show, to mani-

APODIC’TIC. j fest, to demonstrate. Manifes- tation, demonstration.

Holding an opodictical knowledge, and an assured knowledge of it ; verily, to persuade their apprehen- sions otherwise were to make an Euclid believe, that there were more than one centre in a circle.

Brown’s Vulgar Error.*

‘ We can say all, at the number three ; therefore the world is perfect.’ ‘ Tobit went, and his dog fol- lowed him , therefore there is a world in the moon,’ were an argument as apodictical. Glaneilie.

There’s no apodictical argument to prove, that any particular man will die ; but yet he must be more than nian who can presume upon immortality

here, when he finds so many generations already gone to a man. WoUatton't Religion of Nature.

APODIXIS, in writers of the middle age, a receipt for money paid.

APODOSIS; from airotitupi, I apply; in rhe- toric, makes the third part of a complete ex- ordium, being properly the application, or re- striction of the protasis. The apodosis is the same with what is otherwise called axiosis, and stands opposed to protasis. Apodosis is also used, in speaking of similes, for that part which makes the application of them.

APODYTERIUM ; from avocviiv, to undress ; in antiquity, an apartment at the entrance of baths, wherein persons dressed and undressed.

APOGEE ; from airo, from, and yi;, the earth ; a point, in the heavens, in which the sun, or a planet, is at the greatest distance possible from the earth in its whole revolution. The ancient astronomers, regarding the earth as the centre of the system, chiefly regarded the apogaeon and perigaeon, which the moderns, making the sun the centre, change for the aphelion and peri- helion.

APOGRAPHE; from airo, and ypa^w, to wrke; a copy or transcript of some book or writ- ing. Apograph stands opposed to autograph, as a copy to an original.

APOGRAPHE, in ancient law, was, when a per- son being: sued for money, supposed due to the public, pleaded that the charge was unjust, and produced his accounts.

APOGRAPHE, or APOGRAPHON, in the Roman law, was used to denote a catalogue, or inven- tory of goods.

APOLDA, a town and bailiwick of Saxony,

in Thuringia, four miles from Jena. It belonged

in former times to the Vitzthum family, but in

1631 it became the property of the duke of

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Saxe-Weimar, who gave it to the university of Jena, which now exercises the sole jurisdiction.

APOLEPSIS; from airoXappavw, I retain; in the ancient physic, the tying a vein or artery to stop an haemorrhage.

APOLEPSIS; fiom awo\ftirw, I leave; in the Athenian law, an action of divorce; brought when a woman had fled from her husband.

APOLIDES, in antiquity ; from a, negative, and 7roXi£, a city ; persons condemned for life to the public works, or exiled into some island, and thus divested of the privileges of Roman citizens.

APOLLINARES LUDI, in antiquity, a gene- ral name given to all scenical games. They were also called ludi liberates, and scenici. They differed from the ludi theatrales, in that the former were celebrated with all sorts of plays, farces, poems, recitations, Sec. the latter only by dancing and music. This kind of Apollinarians had their share in almost all the solemn games. See next article.

APOLLIXARIAN GAMES, in Roman antiquity, were instituted in the year of Rome 542. The occasion was a kind of oracle, delivered by the prophet Marcus, after the fatal battle at Cannae, declaring that, to expel the enemy, and cure the people of an infectious disease, which then pre- vailed, sacred games were to be annually per- formed in honor of Apollo ; the praetor to have the direction of them, and the decemviri to offer sacrifices after the Grecian rite. The senate or- dered that this oracle should be observed the rather, because another prophecy of the same Marcus, wherein he had foretold the overthrow at Cannae, had come true ; for this reason they gave the praetor 12,000 ases out of the public funds, to defray the solemnity. There were sa- crificed an ox to Apollo, and two white goats and a cow to Latona ; with their horns gilt. Apollo had also a collection made for him, besides what the people, who were spectators, gave voluntarily. The first pnetor by whom they were held was P. Cornelius Sylla. For some time they were movable or indictive ; but at length were fixed, under P. Licinius Varus, to the fifth of July, and made perpetual. The men, who were spectators at these games, wore garlands on their heads ; the women performed their devotions in the tem- ples at the same time ; and at last they caroused together in the vestibules of their houses, the doors standing open. The Apollinarian games were merely scenical ; and at first only observed with singing, piping, and other sorts of music ; but afterwards, there were also introduced all manner of mountebank tricks, dances, and the like ; yet so as that they still remained scenical, no chariot races, wrestling, or the like laborious exercises of the body, being ever practised.

APOIXINARIAXS, or APOLLINARISTS, called also by Epiphanius DIMJERITJE, ancient heretics, who denied the proper humanity of Christ, and maintained that the body which he assumed was endowed with a sensitive, and not a rational, soul, but that the diviue nature supplied the place of the intellectual principle in man. This sect derived its name from

Apollinaris, bishop of Laodicea. The Apollinarians have been charged with other opinions, such as the Milleuarian and Sabellian, the pre-existence of

the body of Christ, and the passion of his deity ; but ecclesiastical writers are not agreed with re- spect to these and other particulars. Their doctrine was first condemned by a council of Alexandria in 3b'2, and afterwards in a more formal manner by a council at Rome in 375 ; and by another council in 378, which deposed Apollinaris from his bishopric. Notwithstanding all these cen- sures, his doctrine spread through most of the churches of the east ; and his followers were sub- divided into various sects. In 388 the emperor Theodosius enacted a law, forbidding them to hold assemblies, to have any ecclesiastics or bishops, or to dwell in cities. The rigorous ex- ecution of this law, in concurrence with the decrees of different councils, reduced them to a very small number, and their doctrine and sect at length dwindled away.

APOLLINARIS, a bishop of Laodicea, in the fourth century, who was deposed for his hereti- cal opinions, A. D. 378. See last article.

APOLUNARIS (Caius Sulpicius), a very learned grammarian, born at Carthage, lived in the se- cond century under the Antonines; he is supposed to be the author of the verses which are prefixed to the comedies of Terence, and contain the arguments of them. lie had for his successor, in the profession of grammar, Kelvins Pertinax, who had been his scholar, and was at last emperor.

APOLLINARIS SmoNirs (Caius Lollius), an eminent Christian writer and bishop in the fifth century, was born of a noble family in France. He was educated under the best masters, and made a prodigious progress in the several arts and sciences, and particularly in poetry and polite literature. After he had left the schools hi- applied himself to the profession of war. He married I'apianilla the daughter of Avitus, who was consul and afterwards emperor, by whom he had three children, lint Majorianus, in the year 4/)7, having deprived Avitus of the empire, and taken the city of Lyons, in which our author resided, Apollinaris fell into the hands of the •'iirniy. However, the reputation of his learning softened Majorianus's resentments, so that he treated him with the utmost civility, in return for which Apollinaris composed a panegyric to Ins honor; which was so highly applauded that lie had a statue erected to him at Rome, and was honored with the title of Count. In the year lfj~ the emperor Anthemius rewarded him for the p.i legyric, which he had written in honor of- hit i, by raising him to the post of governor of IJ< me, and afterwards to the dignity of a patrician an I senator, and erecting a statue to him. But lie soon quitted these secular employments for the sen ice of the church. The bishopric of < 'lennont being vacant in 4?:>, by the death of Kpan 1ms, Apollman<, who was then only a lay- 'tian, was chosen to succeed him without any nlerest or solicitation on Ins pait, in which see e acted with the urealest integrity. Clermont i>-ing besieged by the (Joths, he animated the ; •' '"pie to the defence of that city, and would

vei consent to the surrender of it ; so that

In i: it. was taken, about the year 480, lie was

il to retire; but lie was soon restored by

'•'van 'es km- oi tin (iutiis, and continued to

govern the church as he had done before. He died in 487 ; and his festival is still observed in the church of Clermont, where his memory is had in great veneration. He is esteemed the most elegant writer of his age, both in prose and verse. He wrote a great many minor pieces ; but preserved only those which he thought were worthy of being continued down to posterity.

He collected, himself, the nine books which re- main of his letters.

APOLLINARIUS (Claudius), a learned bi- shop of Hierapolis, who, about the year 170, presented to Marcus Aurelius an excellent apo- logy for the Christians.

APOLLINARIUS (the Younger), thus called to distinguish him from his father, was at first lector or reader of Laodicea, and afterwards bishop of that city. He wrote a treatise against paganism which he sent to the emperor Julian, who re- turned it, saying, ‘ I have read, understood, and condemned ; ‘ to which the bishop replied, ‘ You may have read, but cannot have understood, or you would not have condemned.’

APOLLO, in mythology, a pagan deity, wor- shipped by the Greeks and Romans. Cicero mentions four of the name : the most ancient ot’ whom was the son of Vulcan ; the second a sou of Corybas, and born in Crete ; the third an Ar- cadian, called Nomian, from his being a legislator ; and the last, to whom the greatest honor is as- cribed, the son of Jupiter and Latona. Apollo had a variety of other names, either derived from his principal attributes, or the chief places where he was worshipped. He was called the Healer, from his enlivening warmth and cheering in- fluence; Paean, from the pestilential heats ; No- mius, or the shepherd, from his fertilising the earth, and thence sustaining the animal creation ; Delius, from his rendering all things manifest; Pythius, from his victory over Python ; Lycias, Phoebus, and Phaneta, from his purity and splen- dor. Whether Apollo was ever a real personage, or only the great luminary, many have doubted. Vossius has taken great pains to prove this god to be only a metaphorical being, and that there never was any other Apollo than the sun. ‘ He was styled the son of Jupiter,’ says this author, ‘ because that god was reckoned by the ancients the author of the world. His mother was called Latoua, hidden ; because, before the sun was created, all things were wrapped up in the ob- scurity of chaos. He is always represented as beardless and youthful, because the sun never grows old or decays.’ It appears, however, from many passages in ancient authors, that there was some illustrious personage named Apollo, who, after his apotheosis, was taken for the sun. Of the four Apollos mentioned by Cicero, it appears that the three last were Greeks, .and the first an Egyptian; who, according to Hero- dotus, was the son of Osiris and Isis, and called Orus. Pausanias is of the same opinion as He- rodotus, and ranks Apollo among the Egyptian divinities. The testimony of Diodorus Siculus is still more express; for in speaking of Isis, after saying that she had invented the practice of medicine, he adds, that she taught this art to her son Orus, named Apollo, who was the last of the gods that reigv.ed in Egypt.

APOLLO.

The musical contests of tins «fod must not be wholly unnoticed. His contest with Pan is among the most celebrated. Pan, who thought he excelled in playing the flute, offered to prove that it was an instrument superior to the lyre of Apollo. The challenge was accepted ; and Midas, who was appointed the umpire in this con- test, deciding in favor of Pan, was rewarded by Apollo, according to the poets, with the ears of an ass, for his stupidity. This fiction seems founded upon history. Midas, according to Pausanias, was the son of Gordius and Cybele ; and reigned in the Greater Phrygia, as we learn from Strabo. He was possessed of such great riches, and such an inordinate desire of increasing them by the most contemptible parsimony, that, according to the poets, he converted whatever he touched into gold. However, his talent for accumulation did not extend to the acquirement of taste and knowledge in the fine arts; and, perhaps, his dulness and inattention to these provoked some musical poets to invent the fable of his decision in favor of Pan against Apollo. The scholiast upon Aristophanes, to explain the fiction of his long ears, says, that it was designed to intimate that he kept spies in all parts of his dominions. Marsyas, another player on the flute, was still more unfortunate than either Pan or his admirer Midas. Having engaged in a musical dispute with Apollo, he chose the people of Nysa for judges. Apollo played at first a simple air upon his instrument; but Marsyas, taking up his pipe, struck the audience so much by the novelty of its tone, and the art of his performance, that he seemed to be heard with more pleasure than his rival. Having agreed upon a second trial of skill, the performance of Apollo, by accompanying the lyre with his voice, was allowed greatly to excel that of Mar- syas upon the flute alone. Marsyas, with in- dignation, protested against the decision of his judges ; urging that he had not been fairly van- quished according to the . rules stipulated, be- cause the dispute was concerning the excellence of their several instruments, not their voices ; and that it was wholly unjust to en. ploy two arts against one. Apollo denied that he had taken any unfair advantages of his antagonist, since Marsyas had employed both his mouth and fingers in performing upon his instrument; so that, if he was denied the use of his mouth, he would be still more disqualified for the conten- tion . The judges approved of Apollo's reasoning, and ordered a third trial. Marsyas was again vanquished ; and Apollo, inflamed by the violence of the dispute, flayed him alive for his presumption. Pausanias says that Apollo ac- cepted the challenge from Marsyas,. upon con- dition that the victor should use the vanquished as he pleased. Diodorus informs us, that Apollo, soon repenting of the cruelty with which he had treated Marsyas, broke the strings of the lyre, and by that means put a stop for a time, to any farther progress in the practice of that new in- strument. Possibly the fable of Marsyas might originate from

some musician of that name, who, by too frequent and violent exertions upon a ipfc> or other wind instrument, might have hurt is constitution, especially in a hot climate, and

thus, by a gradual decay, have reduced himself to mere skin and bone. The next important incident mentioned in the history of Apollo, is his defeat of the serpent Python. The waters of Deucalion's deluge, which had overflowed the earth, left a slime, from whence sprung innume- rable monsters ; and among others the serpent Python, which made great havoc in the country about Parnassus. Apollo, with his darts, put him to death ; which, physically explained, implies, that the V.eat of the sun having dissi- pated the noxious streams, those monsters soon disappeared : or, if this fable be referred to history, the serpent probably was a robber, who, haunting the country about Delphos, and very much infesting those who came thither to sacri- fice ; one of the priests of that god put him to death. This legend gave rise to the institution of the Pythian games, so frequently mentioned in the Grecian history; and it was from this, that the god himself was named Pythius, and his priestess Pythia. As Apollo was the god of the fine arts, those who cultivated them were called his sons. Of this number was Philammon of Del- phos, whom the poets and mylhologists make the twin brother of Autolychus, both sons of the nymph Chione, but by different fathers. Phi- lammon, a great poet and musician, was reported to be the offspring of the god who presides over those arts ; and Autolychus, from the craftiness and subtlety of his disposition, was said to have sprung from Mercury, the god of theft and fraud. Philammon is one of the first, after Apollo, upon fabulous record, as a vocal per- former, who accompanied himself with the sound of the lyre : his son was the celebrated Thamyras. The wolf and hawk were conse- crated to Apollo, as symbols of his piercing eyes; the crow and the raven, because these birds were supposed to have the faculty of pre- diction ; the cock because by his crowing he announces the rising of the sun ; and the grass- hopper on account of his singing all summer without food, like those men who, dedicating themselves to the Muses, forget the common concerns of life. The swan was regarded by the ancients as a bird sacred to Apollo ; first, as being gifted with the spirit of prediction, and, secondly, for his extraordinary vocal powers ; the sweetness of whose song, especially at the ap- proach of death, was extolled by the ancient poets.

APOLLO BELVIDERE, one in the first class of the ancient statues. The excellence of this statue consists in the expression of something divine, whereas the rest excel only in things that are common to men. This statue may perhaps justly claim the preference, even in the superior and distinguished class of the best remains of all antiquity. There are about twenty ancient statues which the moderns have discovered that are referred to the last class, and considered each as the chief beauty in its kind.

APOLLODORUS, a celebrated grammarian of Athens, the son of Asclepiades and disciple of Aristarchus. He wrote many works not now extant ; but his most famous production was his Bibliotheca, concerning the origin of the gods. The work consisted of twenty-four books, but only three are now extant.

ApoiLonouus, a famous painter of Athens, who, about A.A.C. 408, invented the art of mingling colors, and of expressing lights and shades. He was admired also for his judicious choice of subject ; and for the beauty and strength of coloring surpassed all the masters that went before him.

APOLLODORUS, a native of Damascus, an eminent architect under Trajan and Adrian. He had the entire direction of the bridge of stone which Trajan ordered to be built over the Danube, A.D. 104, which was esteemed the most magnificent of the works of that emperor. When Trajan was once discoursing with this architect upon the buildings he had raised at Rome, Adrian offered his judgment, and showed that he understood nothing of the matter. Apollodorus bluntly said to him, ‘ Go paint ci- truls, for you understand nothing of the subject we are talking upon. Adrian at this time boasted of his skill in painting citruls. When Adrian sent him the design of a temple of Venus, which he luul just built, the architect observed, that it was too small for the size of the statues, and said, ‘ that if the goddess should wish to rise and go out, she could not.’ This freedom after- wards cost Apollodorus his life,

APOLLON, an instrument of the lute species, with twenty springs, invented in 1678 by M. Promt.

AI’OLLONIA, feasts sacred to Apollo, in- stituted upon the following occasion : Apollo, having vanquished Python, went with his sister Diana to /Kgialea ; but, being driven from llKj:iee, they removed to the island Crete. The ;l-‘.gialeans were soon after visited with a plague; upon which, consulting the soothsayers, they \ere ordered to send seven young men and as many virgins, to appease these deities and bring them hack into their country. Apollo and Diana f.eing thus appeased, returned to Kgialea: in memory of which they dedicated a temple to !‘itho, the goddess of persuasion; whence a (ustom arose of choosing every year seven young men, and as many virgins, to go as it were in M -arch of Apollo and Diana.

Ai'oi i .ONI A, the name of a colony of the Mi- ji >.::ns in Thrace, from which Lucullus took

A:IV a colossus of Apollo, and placed it in the

< .ij.iiol. The greatest part of the town was situ-

iiti.l m a small island on the Euxine, in which

- a temple of Apollo. Pliny says the co-

v-'-us was thirty cubits hisrh, and cost 500

t ill lilS.

Ai'oi.i.oMA, an English fort in the kingdom

i Amanhea, on the (iold Coast of Africa, about !\i lily-eight miles east of the river Ancobra. It !•• tlic fourth or fifth of our establishments on this i-»ast in point of importance', being maintained at an annual expense' of about i'OOO. Apollonia •eems i.nmnly to have been the name of a i, alive kingdom here.

APOLLONIAN lJviMiuu)i,A,and PARABOLA,

See Ilvi-Fiiiioi A, PARAIIOI A, &c. APOLLON ICON, a celebrated organ, con- structed by _ Messr-i. Plight and Kobson, with • of considerable magnitude. In this mstnmient arc also five rows of keys, placed L'!:iuays fronting the proscenium.

APOLLONIUS, author of the Aixonautics, surnamed the Ilhodian, from the place of his residence, is supposed to have been a native of Alexandria, where he is said to have recited some portion of his poem while yet a youth. Finding it ill received by his countrymen, he retired to Rhodes ; where he is conjectured to have polished and completed his work, supporting himself by the profession of rhetoric, and receiving from the llhodians the freedom of their city. He at length returned to the place of his birth, and succeeded Eratosthenes in the care of the Alexandrian library, in the reign of Ptolemy Euergetes, about A.A.C. 246. That prince had been educated by the famous Aristarchus, and rivalled the preceding sovereigns of his liberal family in the munificent encouragement of learning. Apollonius was a disciple of the poet Callimachus ; but their con- nexion ended in the most violent enmity, which was probably owing to some degree of contempt expressed by Apollonius for the light compositions of his master. The only work of Apollonius which has descended to modern times is his poem above mentioned, in four books, on the Argonautic expedition.

The ancient scholia upon his Argonautics, still extant, are extremely useful, and full of learning. The best editions of his poems are those of Oxford, 2 vols. 4to. 1777, and of Brunck, in 12mo. Henry Stephens published an edition in 1574, 4to. ; it has been translated into English verse by Dr. Ekins, late dean of Carlisle, and by the late W. Preston, Esq.

APOLLONIUS of Perga, in Pamphylia, a great geometrician, under Ptolemy Euergetes, from the 133d Olympiad to the 139th. He studied at Alexandria, under the disciples of Euclid ; and composed several works, of which that only of the Conies remains, which was first published by Commandinus at Bologna in 1566. Dr. Hal- ley gave a noble edition in 1710 at Oxford, in folio.

APOLLONIUS, of Tyana in Cappadocia, a Py- thagorean philosopher, who flourished about the beginning of the first century. At sixteen years of age he became a strict observer of the rules of Pythagoras, renouncing wine and flesh, letting his hair grow, and wearing nothing but linen. He soon after set up for a reformer of mankind, and chose his habitation in a temple of / Escula- pius, where he is said to have performed many wonderful cures. Philostratus has written the life of Apollonius, in which there are numberless fabulous stories recounted of him, too numerous and too ridiculous to be inserted in a work of this description. The heathens were fond of op- posing the pretended miracles of this man to those of our Saviour ; and by a treatise which Eusebius wrote against one Hierocles, we find that the drift of the latter, in the treatise which Eusebius refutes, seems to have been to draw a parallel betwixt Jesus Christ and Apollonius, in which he gives the preference to this philosopher. M. Dupin has written a confutation of Philos- tratus's life of Apollonius. Apollonius wrote four books of judicial astrology; a treatise upon the sacrifices, showing what was proper to be offered to each deity; and a great number of letters ; all of which are now lost.

APOLLONIUS (Dyscolus, or the Lean), agiam-

marian of Alexandria, in the second century. He wrote in Greek a book on syntax, which was printed first at Venice in 1495, and afterwards at Frankfort in 1590. There is likewise ascribed to him a collection of historical curiosities, printed at Basil in 1568, and at Leyden in 1620.

APOLLONIUS, a Christian martyr of the second century. He was a member

of the Roman senate, and a man of great eloquence and learn- ing.

APOLLOXIUS, a stoic philosopher of Chalcis, who, coming to Rome, was sent for by the em- peror Antoninus Pius, to be preceptor to Marcus Aurelius, on \vhich the philosopher rudely said, that it was the place of the scholar to wait on the master, and not the master on the scholar. The emperor mildly observed, that he was surprised Apollonius should find it farther from his lodg- ings to the palace than from Chalcis to Rome.

APOLLOS, in Scripture history, a Jew of Alexandria, who came to Ephesus during the absence of St. Paul, who was gone to Jerusalem (Acts xviii. 24), and who is described as an eloquent man, well versed in the Scriptures.

APOLLYON, a Greek word that signifies the destroyer, and answers to the Hebrew Abaddon. Revelations ix. 11. See ABADDON.

APOLOGETIC, in literary history, the title of a work of Tertullian, of great strength and spirit.

AP'OLOGUE,) For derivation see APO-

AP'OLOGCER. f LOGY. A fable or tale in- vented and related to enforce or explain moral truths.

An apologue of jEsop is beyond a syllogism j and proverbs more powerful than demonstration.

Brovo.Ss Vulg. Error.*

Some men are remarked for pleasantness in rail- lery ; others for apologues, and apposite diverting stories. Locke.

A mouse (saith an apologer) was brought up in a chest ; there fed with fragments of bread and cheese, thought there could be no better meat, till coming forth at last, and feeding upon a variety of other viands, loathed his former life.

Burton's Anatomy of Melancholy.

APOL'OGY, From airoXoytw, or airo-

APOL'OGISER, ^ Xoyt^o/wti; atro, and Xtyw,

APOL'OGIST, f to say. To reply, in order

APOL'OGISE, (to vindicate, to excuse, to

APOLOGET'ICAL, \ defend, justify, to plead in

APOLOGET'IC. favor of.

For in ye bookc that is called mine apology, it is

not required by the nature of that name, that it be

any aunswere or defence for mine owneselfe at all,

but it sufficeth that it be of mine owne making an

aunswere or defence for some other.

Sir Thos. More't Workes, fol. 932. ch. i. It is not my intention to make an apology for my poem : some will think it needs no excuse ; and others will receive none. Dryden.

I shall neither trouble the reader nor myself, with any apology for publishing of these sermons : for, if they be (in any measure) truly serviceable to the end for which they are designed, I do not sec what apology is necessary ; and if they be not so, I am sure none can be sufficient. Tillotson.

In her face excuse

Came prologue, and apology too prompt ; Which, with bland words at will, she thus address'd.

Milton.

The translator needs not apologise for the choice of this piece, which was made in his childhood.

Pope's Preface to Statiut.

I design to publish an essay, the greater part of which is apologetica! , for one sort of chymists. Boyle.

But for this practice (detraction), however vile, some have dared to apologize, hy contending that the report by which they injured an absent character was true. Hawkeacorth.

APOLOGY has therefore the sense of refutation, and of defence, generally. Although Christianity is in itself so excellent as, properly speaking, to require no apology, yet the infidelity and wicked- ness of mankind have rendered apologies for it necessary in all ages since its first appearance,

and in none perhaps more than in the present. The principal ancient apologies in favor of the Christians are those of Quadratus, written about the year 124, and addressed to the emperor Adrian ; of Aristides, written soon after the for- mer ; two of Justin Martyr, one of which was written in the year 150, and addressed to An- tonine, and the other in 166, addressed to the Roman senate ; one of Athenagoras, to the em- perors M. Aurelius and Lucius Verus ; the apolo- getic of Tertullian ; and the dialogue of Minutius Felix, called Octavius, written in the third cen- tury. It would be endless to enumerate the various works which have been published in modern times, that might be classed under this title. Robert Barclay's Apology for the People 'in scorn called Quakers,' is one of the most celebrated ; but the last and best perhaps that expressly bear it are the late bishop of Landaff 's Apology for Christians, addressed to Gibbon ; and his Apology for the Bible, in a series of letters addressed to Thomas Paine.

APOLUSIS, or APOLYSIS ; from airo\via, I release; in a general sense, the solution, or re- solution of any thing. Thus we read of the apolusis of a disease, the apolusis of a bandage, or the like. Apolusis. in a more particular sense, denotes the exclusion of any thing. Thus we read of the apolusis of the foetus, the fecun- dines, and the like.

APOMECOMETRY ; OTTO, from, /HJKOC, dis- stance, and fiirniu, to measure ; the art of mea- suring things at a distance.

APOMELI, among ancient physicians, a de- coction of honey and vinegar, much used as a detergent promoter of stool, urine, &c. among the Greeks.

APOMYOS DEUS ; from OTTO, and /iwa, fly ; in the heathen mythology, a name under which Jupiter was worshipped at Elis, and Hercules, as well as Jupiter, at the Olympic games. These deities were supplicated under this name, to destroy or drive away the vast number of flies which always attended at the great sacrifices. The usual sacrifice was a bull.

APONEUROSIS, in surgery ; from airo, from, and v£«pov, a nerve ; an expansion of a nerve into a membrane. Aponeurosis is also used for the cutting off a nerve ; and sometimes for the tendon itself.

APONEUROTICUS MuscuLus,m anatomy, a name given by Spigelius, and some others, to a muscle of the thigh, called by Cowper and Winslow the musculus lati tendinis, and muscu- lus fasciae late. Winslow has called it, with

more propriety, the tensor vagina femoris. See ANATOMY.

APONIA; from a, and trovof, labor; among physicians, a state of indolence, or the absence of pain. In which sense the word amounts to the same with anodynes. Hence, also, aponia is used by some for medicines which do not excite pain.

APONO (Peter d'), one of the most famous philosophers and physicians of his age (the thirteenth century), born in a village about four miles from Padua. He studied some time at Paris. When he came to practise as a physi- cian, he is said to have insisted on very large sums for his -visits. It is affirmed that he would not attend the sick from home under 150 florins a-day ; and when he was sent for by Pope Ho- norius IV. he demanded 400 ducats for each day's attendance. Being suspected of magic, he was prosecuted by the Inquisition on that ac- count. ' The common opinion of almost all authors,' says Naude, ' is, that he was the greatest magician of his age; that he had acquired the knowledge of the liberal arts, by means of the seven familiar spirits, which he kept enclosed in a, crystal; and that he had the dexterity to make the money he had spent come back into his nurse!' The same author adds, that he died before tin; process against, him was finished, hfinj; then in the 80th year of his age; and that, alter Ins death, he was burnt in effigy, in the public place in the city of Padua; his body was ordered to be disinterred, and bumt ; but a fe- 'iiale servant contrived to have it removed to another church during the night-time. Among his works were, 1. 'Conciliator Differentiarum Philoscphorum et pnvcipue Medicorum, Venet. 1471. '2. De Venenis, I'orumque Remediis. 3. ••'.Npositio 1'roblema.tum Aristotelis, 4to. Mant. 1*7.”). 4. I .a Kisionomie (hi Conciliator Pierre

e Apoiio, !',vo. Padua., 1471. />. Hippocrates

Medicorum Aslrolo-'ia I.ibellus, from the

>,;,<. k into Latin, 4to. Yenet. 1458. (i. Qiues-

iioi;.'>de 1'ebribiis, 14H-, Patav. ; a manuscript

in i!:.; Imperial library. 7. (leumantia, 8vo.

; (net. i;>l<». &c.

M1', >M)(. KT<)N, in botanv, a ˆenus of plants '. i i;i;- claˆs dodecandria, tdrauynia. Natural order, inundata1 ; naiailes, ,lus.>ieu. (ieneral cha- racter: < \i. none, except, a spathaceous scale iirroimdm'j;

the tlouer: con. none: STAM. fila PH lit-; eleven to iiinetten, 111 the upper flowers

••v.er, in-i rt.il !ie!u(fii the spat he and the cap- sules, subulate, smooth, \hite, many times shorter than the si.athc: MST. uerm usually !< >ur : s'n i . none : MM., subulate, bent inwards :

iM i'. capsules four, selcluia three or live, ovate,

iilnilatc, acute, uibbou-: on the outside, flat on

• inner -idr, Mnooth. one-ceiled: SEl.DS, three

in '-ai ii capsule, attache, 1 to its base. Essential

-,< neral cliaracl.T : i \ i.. an amentum : COR. none:

. three- seeded. The >pe

monostaehyon, single-spiked aponogeton : spike

Minplr. OlisiTvid by Koeni'j; to be common in

the iiehU of the Ka-t Indies that are Hooded for

. A. distacliyoii, broad leaved apono

.•ft'in: .pike bilid. Thunberg t'ound it in brook, at the Cape of (iood Hope, whence it u;*.- H :;IM!IH.I .1 in re b\ Mr. I1'. Masion in 1788.

3. A. angustifolium, narrow-leaved aponogeton : spike bifid. It flowers during the greatest part of the year.

APQNUS, a fountain and village near Pata- vium in Italy, now Abario. The waters were hot and salutary in cases of disease, as we learn from an idyl of Claudian. Lucan, (lib. 7, ver 193,) also alludes to it,

Euganeo, si vera fides memorantibus, Augur Colle sedens, Aponus terris ubi fumifer exit, Atque Antenorei dispergitur unda Timavi.

This place was encircled with walls by order of Theodoric, king of the Goths. Suet, in Tiber 14. Sil. lib. 12, ver. 18.

APOPEMPTIC ; from a-iroTrfp.irt», to dismiss; in the ancient poetry, a hymn addressed to a stranger on his departure from a place to his own country ; or to the gods, as supposing them re- turning each to his own country. Hence it was, that among the Delians and Milesians we find feasts

of Apollo, and among the Argians feasts of Diana, called Epidemiae, as supposing these deities then more peculiarly resident among them. On the last day of the feast they dis- missed them, following them to the altars with apopemptic hymns.

APOPHASIS. A figure of rhetoric, in which a brief allusion is made to a thing which we de- cline to speak of fully and distinctly. Also, a term in civil law.

APOPHASIS BONORUM, iu antiquity, an in- ventory, or properly an account taken of estates when they were exchanged, in order to avoid public employments; for it was a custom among the Greeks, when any man would excuse himself from a troublesome office by casting it upon another richer than himself, to challenge him to make an exchange of estates, and thereby compel him to fill the office he wished to avoid.

APOPHLEGMATICS, in medicine, airo- rpXtyfiariff^of ; from atro, and ^Xty/ia, phlegm ; medicines to promote the carrying off' phleg- matic humors. They are of two kinds ; one administered by the mouth, and intended to operate by spitting ; the other by the nostrils, to operate by sneezing, &c.

APOPIIORKTA; from airofapu, I carry away; in antiquity, presents made to the guests at a feast, or other entertainments, which they carried away with them. Martial gives a copious ac- count of them in his fourteenth book of Epigrams, bearing this title. Mart, in Apoph. ; Suelon. in Cat. c. 55.

APOPHRAUES; from airoppac, unfortunate; in physic, or rather in superstition, unhappy days, wherein either no crisis, or an ill one is to be expected.

APOPHTHEGM, or^ Airo^Oe^a ; from

AP'OTHEGM, ^ (nroipdiyynfjiaijo speak

APOTHEG'MATICAL, iout from, to sound

APOTHF.C, MATIST. 'apart.. A detached sentence replete with meaning delivered as a moral rule, such as many of the Proverbs of Solomon ; those of Plutarch ; &c.

Julius Caesar did write a collection of apophthegm, as appears in an epistle of Cicero ; so did Macrobius, a consular man. I need say no more for the worth of a writing of that nature. Certainly they arc of 1 xccllent use. Cicero prettily called them salinou*

salt-pits, that you may extract salt of, and sprinkle it •where you will. They serve to be interlaced in con- tinued speech. They serve to be recited upon occa- sion by themselves. They serve, if you take out the kernel of them and make them your own.

Lord Bacon's Works, vol. i. p. 529.

We may magnify the apophthegms, or reputed replies of wisdom, whereof many are to be seen in Laertius and Lycosthenes. Brown's Vulg. Errors.

I had a mind to collect and digest such observations and apophthegms, as tend to the proof of that great assertion, ' All is vanity.' Prior.

In a numerous collection of our Saviour's apoph- thegms, many of them referring to sundry precepts of the Jewish law, there is not to be found one example of sophistry or of false subtilty, or of any thing ap- proaching thereunto. Paley's Evidences.

APOPHYGE ; airotyvyri, flight, or escape; in architecture, that part of a column where it be- gins to spring out of its base ; and was originally no more than the ring or ferrel, which anciently bound the extremities of wooden pillars, to keep them from splitting, and were afterwards imitated in stone work. We sometimes call it the spring of the column.

APOPHYLLITE. Ichthyophthalmite, or fish-eyestone. It is found both massive and crystallised in square prisms, whose solid angles are sometimes replaced by triangular planes, or the prisms are terminated by pyramids consisting, of four rhomboidal planes. Structure lamellar and uneven. Semitransparent. Moderately hard and easily broken. Specific gravity, 2'49. It consists of 51 silica, 28 lime, 4 potash, and 17 water. It is found in the iron-mine of Utoe, in Sweden ; at the copper-mine at Fahlun, at Arendahl, Faroe, the Tyrol, and Isle of Sky.

APOPHYSIS, aTTofvau; ; io anatomy, the prominent parts of some bones; the same as process. It differs from an epiphysis, as it is a continuance of the bone itself; whereas the latter is something adhering to a bone, and of which it is not properly a part.

APOPHYSIS, in botany, an excrescence from the receptacle of the musci.

APOPLANESIS ; from airoirXavau, I de- ceive; in oratonr, a kind of fallacious defence, or darkening, and concealing things, in order to blind the judge or the audience. , It also implies that species of evasion, wherein the speaker pro- mises to answer what the adversary objects in another place, Sec.

APOPLECTIC VEISS, a name given to the jugulars ; sometimes also denominated among ancient writers, soporales.

APOPLECTICA, apoplectical medicines, a name used by some for what are more properly called Antapoplectics.

APOPLECTICAL BALSAMS, a sort of sweet- scented balms, prepared of distilled oils and used by way of perfume.

APOPLEXY, in medicine, airoTr\T)£ia ; from OTTO, and TrXrjffffu, to strike ; that disorder which suddenly surprises the brain, and takes away all sense and motion. The cause is generally a re- pletion, and indicates evacuation, joined with stimuli. Cullen ranks it in the class neuroses, and order comata. When it takes place from a congestion of blood, it is termed anoplexia san- guinea : and when there is an abundance of

serum, as in persons of a cold temperament, apoplexia serosa; if it arise from water in the ventricles of the brain, it is called apoplexia hydrocephalica; if from a wound, apoplexia traumatica; if from poisons, apoplexia venenata; if from the action of suffocating exhalations, apoplexia suffocata; if from passions of the miud, apoplexia mentalis ; and when joined with catalepsy, apoplexia cataleptica. See MEDICINE.

APOPOMPJE, in antiquity, certain days in which sacrifices were offered to the gods called Pompaei. Who these deities were is doubtful.

APOPSYCHIA ; from airo\Lv\w, I expire in astrology, is understood of effluvia emitted from the sun, moon, and other heavenly bodies; to which their influence on sublunary things was ascribed.

APORIA ; cnrooui ; in rhetoric, a figure by which the speaker shows that he doubts where to begin for the multitude of matter, or what to say in some strange or ambiguous thing; and does, as it were, argue the case with himself. Thus Cicero : ‘ Whether he took them from his fellows more impudently, gave them to a harlot more lasciviously, removed them from the Roman people more wickedly, or altered them more presumptously, I cannot well declare.’ Smith’s Rhetoric.

APORIME, APORON ; from ajropoc, difficult, impracticable ; in mathematics and philosophy, a problem difficult to resolve, and which has

never been resolved, though it be not in itself impossible ; such as the quadrature of the circle, the duplicature of the cube, the trisection of an angle, Sec. When a question was proposed to any of the Greek philosophers, especially of the sect of Academists ; if he could not give a solu- tion, his answer was, ATI-OPEN, ‘ I cannot see through it.’ This word is also used by some law writers for an inexplicable speech or discourse.

APORRHCEA, in astrology, is when the moon separates from one planet and applies to another.

APOKRHXEA, in physic, is used for morbid or contagious miasmata, or effluvia from unwhole- some bodies. The word is also used to denote a shedding or falling off of the hair. See ALO- PECIA. Also, in philosophy, sulphureous efflu- via, or exhalations, emitted from the earth and subterraneous bodies.

APOS, in ornithology, the sea-swallow.

APOSCEPARNISMUS; from a™, and «*- TTopvov, a hatchet ; in surgery, a species of frac- ture of the skull or other bone, wherein a piece is taken clearly off, as if cut out with a hatchet.

APOSIOPESIS ; from airo, from, and eua- itata, to be silent ; in rhetoric, a form of speech, by which the speaker through some affection, as sorrow, fear, anger, or vehemency, breaks off his speech before it is all ended. A figure, when speaking of a thing, we yet seem to conceal it, though indeed we aggravate it; or when the course of the sentence begun is so stayed, as thereby some part of the sentence not being uttered, may be understood. It is commonly used to denote the same with ellipsis, but JuL Scaliger distinguishes them.

APOSITION ; from airo, and enroc, food ; in medicine, an aversion to food. It amounts to much the same with anorexia; though some

make a difference ; alleging that the latter im- ports an inappetency, or want of desire to eat ; the former an aversion or loathing of it.

APOSPASMA ; from airoairau), I tear off; in medicine, denotes a solution of continuity in some organical part, as a membrane, ligament, or the like.

APOSPHACEL1S, or APOSPHACELISIS ; from asroff^aictXof, mortification ; in the ancient phy- sic, denotes a mortification of a fleshy part, happening in cases of wounds and fractures from too light a ligature.

APOSPHARAGISMA; from OTTO, and a^ay- i£w, to seal ; in antiquity, the figure or impression of a seal. It was forbidden among the ancients to have the figure or image of God on their rings and seals. To this purpose the precept of Py- thagoras, Ev da.KTV\u» tiKova Ota fir) irtpi^fptiv. But in process of time, this was little regarded ; it was usual to have the figures of Egyptian and other deities, as well as of heroes, monsters, friends, ancestors, and even brutes, on their dactyli, or ring seals. Thus Caesar had the image of Venus, Pollio of Alexander, Augustus of the sphinx, 1'oir.pey of a frog, Lentulus of his grand- father, &c.

APOSPONGISMUS, among ancient physi- cians, the application of a sponge, whether dry or soaked with water, either to cleanse a part, or to ease pains, allay itchings, or refresh the spirits. APOSTACY, v. i± it. \ A APOS'TA n/.r, f nounce sentiments,

APOSTAI'ICAI,. _) to desert former opi-

nions or practices. I'sually applied to one who lias forsaken his religion. .See APOSTATE.

lint Lucifer lie put ;i\vt ie, With al the route «/<(w/<;y(Vv/, Of In ID that hen t.» him allied, Whiche out of in auen into belle, From angels into fclldes fellr.

(juiver. Con. A. hook viii. The affable archanp 1 hud forewarn'! Adam, by due example, to beware Afxistuxy ; by what, befel in heav'n To those apostates. Milton.*

Vice in U-, were not only wickedness, but apostasy, degenerate wirkedness. Sprat.

'I'lie canon law dei!n.s parture iVom that slat- of faith which any person has prof' 5-.! d himself to hold in the Christian church.

Aylijfe's Parergon.

Aj'iin'.iti .v in point of faith are, according to the

civil law, subject unto all punishments ordained

against h r, tics. Id.

V\ Loevi r do pye dilVen lit \nrships, must bring in

nan-,- ˆods ; which is an a[nifttif;i from one God.

Stilling fleet.

I he angel-;, ter di-i.b (iieiu, , tliou hast reserved to a miserable immortality; lut, unio man, equally re- qu;.;ly ,fti.,. it!,' u'om thce and goodness, Tiven ,i Saviour. llnyers'i Sermons.

AI'OSTAd.M.A ; ;V(,ni «7roT<»:,'w, 1 distil; in natural hi>tory, the juice \vhi<:h runs from the umprs before i.iry me tioddcn or pressed. It is aUu (ailed ap'olal. rˆiii.i.

APOSTASY: i;om ,,,,;,.-,,/,,, 1 depart, &c.; :i physic, tin sain '.'..;:; ;ii>s n.urhni matter, in tlic)! . 1:1.' ui, <, used hy Hip-

pocrates for a fracture of a bone, wherein som

APOSTATACAPiKNno, in the English law, a writ that formerly lay against a person, who, having entered into some order of religion, broke out again, and wandered up and down the country.

APOSTATE. There is this difference be- tween an apostate and a heretic ; that the latter only abandons a part of the faith, whereas the former renounces the whole.

Among the Romanists, apostasy signifies the forsaking of a religious order, whereof a man had made profession, without a lawful dispensation.

The ancients distinguished three kinds of apostasy : the first, a supererogatione, is com- mitted by a priest, or religious, who abandons his profession, and returns to his lay state ; the second, a mandatis Dei, by a person of any con- dition who abandons ,the commands of God, though he retains his faith ; the third, a fide, by him who abandons not only his works but also the faith. .

The primitive Christians distinguish several kinds of apostasy. The first was that of those who relapsed from Christianity into Judaism ; the second, that of those who blended Judaism and Christianity together ; the third, that of those who so far complied with the Jews as to com- municate with them in many of their unlawful practices, without making a formal profession of their religion ; and the fourth, was that of those who after having been Christians voluntarily re- lapsed into Paganism. The perversion of a Christian to Judaism, Paganism, or other false religion, was punished by the emperors Con- stantiuˆ and Julian with confiscation of goods; to which

the emperors Theodosius and Valen- tinian added capital punishment in case of the apostate's perverting others to the same iniquity ; a punishment, says Blackstone, too severe for any temporal laws to inflict upon any spiritual offence, and yet the zeal of our ancestors im- ported it into this country ; for we find by 13racton, that in his time apostates were burnt to death. It is also said to have been anciently punishable in England by burning, and tearing to pieces by horses. Thus I-'leta, 'lib. i.e. 37, sect. 2., ' apostati et sacrilegi, et hujusmodi, detractari debent et comburi ; ' and, sect. 4. ' Si inde convincantur, detractentur, et suspendan- tur.' Where PU Cange interprets, detractari, by tirer a quatre chevaux.

This punishment has long ago become obso- lete, and the offence of apostasy was for a long time the object only of the ecclesiastical courts, which corrected the offender pro salu«.e anim;v Nevertheless, it was enacted by statute 9 and 10 Will. III. c. 32. that if any person educated in, or having made profession of, the Christian leligion, shall, by writing, printing, teaching, or advised speaking, deny the Christian religion to be true, or the Holy Scriptures to be of divine authority, he shall, upon the first offence, be rendered incapable to hold any office or place of trust; and, for the second, be rendered incapable of bringing any action, being guardian, executor legatee, or purchaser of lands, and shall suffer three years' imprisonment without bail. To give

APOSTLE.

room, however, for repentance, if within four months after the first conviction, the delinquent will, in open court, publicly renounce his error he is discharged for that once from all disabi- lities. Such, however, is the spirit of toleration which has prevailed in this country, that penal statutes in the province of religion, have generally lain dormant, and find few advocates in modern tiroes.

APOSTEME,AP05TCME; aTTorij/ia; a hollow swelling, filled with purulent matter ; an abs- cess.

APOSTERIGMA ; from OTTO, and s-jjpˆu;, I support ; in the ancient physic, denotes a sup- port for a diseased part, without binding.

A POSTERIORI, or demonstration a poste- riori. See DEMONSTRATION.

APOSTIL, APOSTILLA, in literary matters, a marginal note to a book.

APOSTLE, "l AiroffroXoc : from OTTO-

APOS'TLESHIP, j oriXAw, to send a messen-

APOSTOL'ICAL, | ger. Particularly applied

APOSTOL'ICALLY, ˆto the disciples of Christ

APOSTOI.'JCALXESS, I invested with his special

APOSTOL'ICK. | authority to preach the

APOS'TOLATE. J gospel.

And whanne the day was come, he clepide hise disciplis and chees twelve of hem, whiche he clepide also apottlis. Widif. Lvk. ch. vi.

But all his mind is bent to holiness ;

His champions are the prophets and apostle.*

Shaktpeare.

Their oppositions, in maintenance of public super- stition against apostolich endeavours, were vain and frivolous. Hooker.

Or where did I at sure tradition strike,

Provided still it were apostolick ? Dryden.

I am far from pretending infallibility j that would be, to erect myself into an apostle ; a presumption in any one that cannot confirm what he says by mira- cles. Locke.

We kno-v but a small part of the notion of an apot- tle, by knowing barely that he is sent forth.

Watu't Logic.

Last in the papal standard they display' The triple cro'jrn, and apostolic key ; Sev'n thousand valiant Romans marched behind, And great Cammillo had the charge assign'd.

Brooke' Jerusalem Delivered, bk. i.*

From such apostles, O ye mitred heads, Preserve the church, and lay not careless hands On sculls that cannot teach, and will not learn.

Coicper.

APOSTLE, a— oChrist personally to preach the gospel. These, who were

twelve in number, were selected from the aesrregate of the disciples by our Saviour, that they misht be with him more particularly than the rest of the disciples, for the purpose of learning his doctrine, and seeing his miracles ; that they mic.rht thereby be prepared to propa gate his religion. Their names were, Simon Peter, and Andrew his brother ; James the greater, and John his brother, who were sons of Zebedee; Philip of Bethsaida, Bartholomew, Thomas, Matthew, James the sou of Alpheus, commonly called James the less ; Lebbeus his

brother, who was surnamed Tn.iJdeus, and was called Judas, or Jude ; Simon the Canaanite, and Judas Iscariot. Of this number, Simon Peter, John, James the greater, and Andrew, were fishermen, and Matthew a publican or tax-gatherer. This choice was designed to glo- rify the cause; for, had men of eloquence, birth, or fortune, been employed, the world might have attributed the success of the gospel to na- tural causes. There are various conjectures as to the reason oT his choosing exactly twelve. The most probable is, that it might be in allusion to the twelve patriarchs, as the founders of their several tribes ; or to the twelve chief rulers of those tribes, of which the body of the Jewish nation consisted. This opinion seems to be countenanced by what our Saviour tells his apostles, that ‘ when the Son of man shall sit upon the throne of his glory, they also shall sit upon twelve thrones, judging the twelve tribes of Israel.’ Our Lord’s first commission to his apostles was in the third year of his public minis- try, about eight months after their election ; at which time he sent them out by two and two. They were to make no provision of money for their subsistence ; to declare that the kingdom of heaven, or the Messiah, was at hand ; to con- firm their doctrine by miracles ; to confine their preaching to the people of Israel, and to avoid going either to the Gentiles or the Samaritans. In obedience to their master they went into all parts of Palestine, and then returned to Christ. Their second commission was of a more extensive na- ture, viz. to ‘ go and teach all nations, baptizing them in the name of the Father, and of the Son, and of the Holy Ghost.’ Accordingly they began publicly, after our Lord’s ascension, to exercise their ministry, working miracles in proof of their mission, and converting great num- bers to the Christian faith. They were appre- hended by the Sanhedrin, and, being examined before the high priest and elders, were command- ed not to preach any more in the name of Christ. But they continued daily in the temple, and private houses, teaching and preachn g as before.

After the death of Judas another was added in his room ; and, after the rejection of the gospel by the Jews, Paul and Barnabas were selected without any regard to the number — twelve, and set apart as apostles of the Gentiles. To con- stitute an apostle it was necessary that he should have seen our Lord alive after his crucifixion, because they were to testify of his resurrection. When Paul saw him is uncertain. Some ima- gine it was at the

time of his conversion at Da- mascus; others think it was when he returned to Jerusalem the second time after his conver- sion, Acts xxii. 17. where he was called to the ministry, and directed to the Gentiles, Acts xxvi. 16 — 20.

After the apostles had preached twelve years in Judea, tradition says they dispersed themselves into different parts of the world, for which they were supernaturally qualified by the power of speaking different languages and of working miracles. No authentic history affords any veiy distinct knowledge of the provinces assigned to each ; nevertheless Eusebius, Hist. Ecc. lib. i. c. 1 ; and Socrates, Hist. Eccl. lib. i. c. 19- affirm,

that Thomas took Parthia ; Matthew, according to the latter, took Ethiopia ; Bartholomew, In- dia. The former assigns Scythia to Andrew, and Asia Minor to John ; James the less became bishop of Jerusalem, and the apostle Paul preach- ed the gospel from the metropolis of Palestine to Tllyricum. Other writers relate, that St. Peter went into Pontus, Galatia, and some places adjacent ; St. Andrew into the vast north- ern countries of Scythia, and Sogdiana; St. John into the Lesser Asia; St. Philip into the Upper Asia, and some parts of Scythia and Col- chis ; St. Bartholomew into Arabia Felix ; St. Matthew travelled into Chaldsea, Persia, and Parthia ; St. Thomas into Hyrcania, Bactria, and India; St. Simon travelled into Egypt, Cyrene, Libya, and Mauritania; St. Jude, sur- named Thaddeus, or Lebbeus, into Syria and Mesopotamia; and St. Matthias into Cappa- docia and Colchis. Many of the apostles suf- fered martyrdom — Peter was crucified with his head downwards ; Paul was beheaded under Nero, ;it Rome. Heraclion, the Valentinian, reckons among the apostles who did not suffer martyrdom — Thomas, Philip, Matthew and Levi, probably meaning Lebbeus, surnamed Thaddeus.

The apostles arc commonly represented with ilieir several badges, or attributes : St. Paul with •t sword; St. Jude with a club ; St. Simon with :i saw ; St. Matthew with a hatchet; St. James 'he Greater with a pilgrim's staff and a gourd bottle; St. Thomas with a lance; St. Matthias with a battle-axe; St. Philip with a long staff, the upper end of which rs formed into a cross; St. Hartholomew with a knife; St. James the I.ess with a fuller's pole; St. John with a cup and a winged serpent. Hying from it; St. Andrew with a cross or saltier; St. Peter with the keys. The testimony of men who were not apostles was admitted no farther than that of common historians.

Ai'ovn.r. is applied in an inferior sense to or- dinary travelling ministers in the church. See Horn. \i. ?. TcrUillian, in this sense, calls all the seventy

disciples, apostles. Clement, in this vˆnse, applies the term to liarnabas, and is him- •M'H' thus distinguished. Salvian calls Timothy an apostle. Those who planted the gospels in any particular place are likewise called apostles: thus Dionysius of Corinth is called the apostle ot France; Xavier, the apostle of the Indies; Boniface, an Englishman, the apostle of Germany; and die Jesuit missionaries, the apostles of the Last Indies. Formerly the pope was, in a way ot eminence, called the apostle ; and Sir Henry Spelman informs us that the sune word was an- ciently used for admiral. Those who were sent b) the churches to carry thrir alms to the poor ot other churches were likcv, ise (ailed apostles, according to the usaue of the Jewish synagogues. Thus Kpaphrnditus is called tlie apostle of the Philippians. Phil. ii. '2,">.

Ai'o-ii r is thought by SOUK; authors to have been the original name for bishops. Thcodoret says, the

ATOM i. r, amonir the Jews, was the name of officers sent into the several pnuinces as com-

missaries to collect money for repairing the tem- ple, to see that the laws were properly observed, and to gather the Roman tribute. They were 3 degree below patriarchs. Some authors affirm, that before his conversion, St. Paul filled this office, and that he alludes to this circumstance in the beginning of his epistle to the Galatians.

APOSTLE, in the Greek liturgy, is the name of a book containing the epistles of St. Paul arranged in the order in which they are appointed to be read in churches. A similar book containing the gospels is called EuayyeXtov, Gospel ; and ano- ther, containing the Acts of the Apostles and their epistles, is called LTpa£a?ro

The APOSTLES' CREED, though it has not the shadow of authenticity as a composition of the apostles, contains an early summary of doctrines. It is very similar to the creed of Jerusalem, the most ancient epitome of the Christian faith now extant. The whole form, as it stands in the English liturgy, is contained in the works of Ambrose and Ruffinus, who lived in the fourth century. In the early ages it made no part of the liturgy, although the catechumen subscribed to it before he was admitted to baptism. The repetition of it in public worship was first in- stituted in the Greek church at Antioch, and in- troduced in the Romish church in the eleventh century, whence it passed to the church of Eng- land at the reformation.

APOSTOLES ISLANDS are situate in the straits of Magellan, at its entrance into the Pa- cific, near Cape Deseado. They are twelve in number ; from which circumstance their name is derived. They are all small, barren, and desert ; their shores, though they abound with good shell- fish, are very

dangerous, from being rocky. Long. 75° 6′ W., lat. 52° 34′ S.

APOSTOLIC, APOSTOLICAL, something that relates to the apostles, or descends from them. Thus we say, the apostolic age, apostolical doc- trine, &c. Apostolic, in the primitive church, was an appellation given to all such churches as were founded by the apostles ; and even to the bishops of those churches, as being the reputed successors of the apostles. These were four, viz. Rome, Alexandria, Antioch, and Jerusalem. In after-times other churches assumed the same quality, and bishops held themselves successors of the apostles. In progress of time the bishop of Rome growing in power above the rest, and the three patriarchates of Alexandria, Antioch, and Jerusalem, falling into the hands of the Sa- racens, the title apostolical was restricted to the pope and his church alone. Though some of the popes and St. Gregory the Great, not contented to hold the title by this tenure, began, at length, to insist, that it belonged to them by another and peculiar right, as being the successors of St. Peter. The country of Rheims in 1049 declared that the pope was the sole apostolical primate of the universal church. And hence a great num- ber of apostolicals : apostolical see, apostolical nuncio, apostolical notary, apostolical brief, apos- tolical chamber, apostolical vicar, &c.

APOSTOLICAL FATHERS, in ecclesiastical his- tory, is an appellation usually given to the writers of the first century, who employed their pens in the cause of Christianity. Of these writers, Co- telerius, and after him Le Clerc, have published a collection in two volumes, accompanied both with their own annotations, and the remarks of oiher learned men.

APOSTOLICI, or APOSTOLICS, a name as- sumed by three different sects, on account of their pretending to imitate the practice of die apostles. 1. The first apostolici, called Apo- tactitae and Apotactici, rose out of the Encratilae and Cathari in the third century. They made piofession of abstaining from marriage, the use of wine, flesh, money, &c. 2. Gerhard Saga- relli was the founder of the second sect. He obliged his followers to go from place to place, as the apostles did, to wander about, clothed in white, with long beards, dishevelled hair, and bare heads, accompanied with women, whom they called their spiritual sisters. They likewise renounced all kinds of property and possessions, inveighed against the growing corruption of the church of Rome, predicted its overthrow, and the establishment of a purer church on its ruins. Sagarelli was burnt alive at

Parma in 1 300, and was succeeded by Dulcinus, who added to the character of an apostie those of a prophet and a general, and carried on a sanguinary war for more than two years against Raynerius, bishop of Vercelli. He was at length defeated, and put to death in a barbarous manner, A. D. 1307, This sect, however, subsisted in France, Germany, and in other countries, till the beginning of the fifteenth century, when it was totally extirpated under Boniface IX. 3. The last apostolici were of the twelfth century. These also condemned marriage, preferring celibacy, and calling them- selves the chfste brethren and sisters; though each was allowed a spiritual sister, with whom he lived in a domestic relation ; and on this ac- count they have been charged with concubinage : they held it unlawful to take an oath ; they set aside the use of baptism ; and in many things imitated the Manichees. Bernard wrote against this sect.

APOSTOLICUM, a peculiar kind of song or hymn, anciently used in churches. It is men- tioned by Greg. Thaumaturgus, as used in his time. Yossius understands it as spoken of the apostles' creed.

APOSTOLIUS (Michael), a learned Greek of the fifteenth century. He wrote a collection of apophthegms of wise men, and another of pro- verbs ; but only abridgments of them have been published ; of the former in 1619, and of the latter in 1538.

APOSTOLORUM UNGI-EXTIM, in phar- macy, the apostles' ointment, is a kind of deter- gent, or cleansing unsruent, composed of twelve drugs, whence its name. It was invented by Avicenna, and is also called unguentum veneris. The ingredients are turpentine, wax, gum ammo- niac, birthwort roots, olibanum, bdellium, myrrh and galbanum, opoponax, verdigris, litharge, oil of olives, and vinegar.

APOSTOOL, a minister ammiˆ the Menno- nites at Amsterdam, who founded a new sect,

which first sprung up in 1664. They concurred with the Mennonites in doctrine.

APOSTROPHE,-) Airo-rpoQn,; from airo,

APOS'TROPHIZE, >and ffrpuj>w, to turn. A

APOS'TROPHICK. j turning away from the regular course of a speech, or discourse, to ad- dress some person or thing present or absent. In grammar, the contraction of a word by means of a comma at the beginning or ending of a word ; as 'tis, for it is ; tho', for though ; David's for the ancient genitive Davides, &c.

Apostrophe is a sudden change in our discourse, svhen, without giving previous notice, we address our- selves to a person or thing different to that to which we were addressing ourselves before.

Beattie's Elements of Moral Science.

There is a peculiarity in Homer's manner, of apos- trophising Eumxus, and speaking of him in the second person : it is generally applied only to men of account.

Pope.

APOSTROPHE, in rhetoric, is in boldness a de- gree lower than the address to personified objects (see PERSONIFICATION); since it requires a less effort of imagination to suppose persons presenV, who are dead or absent, than to animate insen- sible beings, and direct our discourse to them. The Poems of Ossian abound with beautiful instances of this figure. ' Weep on the rocks of roaring winds, O Maid of Inistore! Bend thy fair head over the waves, thou fairer than the ghost of the hills, when it moves in a sun-beam at noon over the silence of Morven ! He is fallen ! Thy youth is low; pale beneath the sword of Cuchullin !' Cicero, in his oration for Milo, ad- dresses himself to the great patriots who had shed their blood for the public, and calls them to the defence of his client. The same orator, in his first Catilinarian, directs himself to Jupiter the protector of the city and empire, and beseeches him to repel the parricide, &c. His apostrophe to Tubero, in his oration for Ligarius, is judged one of the finest passages in his works. That apostrophe of Demosthenes, wherein he addresses himself to the Greeks slain at the battle of Ma- rathon, is also famous : cardinal Perron says, it has procured the orator as much glory as if he had raised them from the dead. The apostrophe also frequently occurs in the sacred writings, 'Hear, O heavens,' says Isaiah, ch. i. 2, 'and give ear, O earth ! for the Lord hath spoken.' ' Be astonished, O ye heavens ! at this.' Jer. ii. 12.

APOSTROPHE, in medicine, a loathing of food.

APOSYRMA; from airoovpu, I take off; in medicine, denotes a disquamation or scaling of the skin ; in which sense the word amounts to much the same with abrasion.

APOTACTICI, or APOTACTITJE; formed from airoTafffti), to renounce; an ancient sect, who, affecting to follow the evangelical counsels of poverty, and the examples of the primitive Christians, renounced all their effects and pos- sessions. It does not appear that they fell into any errors during their first state : some ecclesi- astical writeis assure us, they had

divers martyrs, under the persecution of Djoclesian, in the fourth century, but they afterwards fell into the opinion of the Encratita?, and taught that the renouncing of all riches was not only a matter of advice, but

of precept rind necessity. And therefore the sixth law in the Theodosian code joins the Apo- tactitaj with the Eunomians and Arians.

APOTEICHISMUS ; from airorixifa, to raise a wall ; in the ancient military art, a line of circumvallation drawn round a place to be- siege it. It was the first operation the ancients performed, and sometimes consisted of a double wall, or rampart, raised of earth ; the innermost to prevent sudden sallies from the town, the outermost to keep off enemies from coming to the relief of the besieged. It answered to what we call lines of contravallation and circumvailation.

APOTELESMA ; from aTroreXtw, to per- form ; an effect of some cause ; also a prognos- tic, or prediction of an event; in which sense Scaliger speaks of the apotelesmata of Hippo- crates. The answers of astrologers deduced from the considerations of the stars are also called apotelesmata.

APOTELESMATICA, in philosophy, the art of foretelling future events from the aspects of the heavenly bodies ; in which sense the word amounts to the same with judicial astrology.

Al> <)TELESMATICI, astrologers.

APOTlll'XJAJUUS, in writers of the middle age, denotes a shop-keeper, or warehouse- keeper. Apothecarius is also used to denote a store-keeper, or officer appointed to have the direction of a magazine, granary, &c. In which sense apothecarii is sometimes rendered by 1 o- rearii and rationarii.

APOTHECARY. A7ro0jjicjj; a repository; from fiTro, and riOrjfii, to put. A person who sells drugs and administers them according to his own knowledge of medicine, or under the direction of a physician.

Give mo an ounce of civpt, good apothecary, to sweeten my imagination. Shakspeare's King Lear.

They have no other doctor, but the sun and the fresh air; and that, such an one, as never sends them to the uputhccary. South.

Wand 'ring in the dark,

Physicians, for the tree, have found the bark;

They, lab'ring for relief of human kind,

With sharpen'd sight some remedies may find ;

Th' apothccary-tTaia is wholly blind. Dryden.

AxniircAKY, in modern times, is particularly one who practises the art of pharmacy. In London the apothecaries are one of the city companies. They were incorporated by a char- ter from James I. procured at the solicitation of Dr. Mayerne and Dr. Atkins: till that time they only made a part of the grocers' company; plums, sugar, spine, Venice treacle, mithridate, &c. were sold in the same shop, and by the same person. 'I he reason of separating them was, that medi- cines might lie better prepared, and in opposition to divers persons \ho imposed unwholesome re- medies upon the people.]>y an act which was made perpetual in the w and arrow, l>eMriiling a py'iLoii , their supporters two nnieorns, and the crest a ihino- 1:1 ros >ur;uoiin!iirj a torce and in !met. The motto 'Opiter per

ed to make up their medicines according to the formulas prescribed in the college dispensatory ; and are liable to have their shops visited by the censors of the college, who are empowered to destroy such medicines as they think not good. They have a, hall in Blackfriars, where there are two fine laboratories, out of which all the sur- geons' chests are supplied with medicines for the. British royal navy. His Majesty has two apo- thecaries ; and two belong to the royal household. The benevolent dispensation of medicines by the Chinese is well deserving attention. In. the public squares of their cities they have set up a stone ten cubits in height, on which they have engraved the names of all sorts of medicine, with the price affixed to each ; and when the poor stand in need of any relief from physic they go to the treasury, where they receive the price of the medicine they want.

APOTHEOSIS. A7ro0£o»ffic; from OTTO, and, fltoc, a God ; a placing among the gods. The ceremony observed among the ancients at a dei- fication, or adding any hero or great man to the number of the gods.

As if it could be graved and painted omnipotent, or the nails and the hammer could give it an apotheons.

South.

Allots the prince of his celestial line, An apotheosis, and rites divine. Garthf

Among the Romans, the ceremony of deifying their emperors was, according to Herodian, as follows : After the body of the deceased had been burnt with the usual solemnities, an image of wax, exactly resembling him, was placed on an ivory couch, where it lay for seven days, at- tended by the senate and ladies of the highest quality ; then the young senators and knights bore the bed of state through the via sacra to the old forum, and thence to the campus martius, where it was deposited upon the edifice built in form of a pyramid. The bed being thus placed amidst a quantity of spices and other combusti- bles, and the knights having made a solemn pro- cession round the pile, the new emperor, with a torch in his hand, set fire to it, whilst an eagle, let fly from the top of the building, and mount- ing in the air with a firebrand, was supposed to convey the soul of the deceased to heaven ; and thenceforward he was ranked among the gods ! We often meet with the consecration or apotheo- sis of emperors represented on medals, where we see the pyramids of several stories, each growing less and less ; the eagles flying away with the souls of the deceased emperors ! A gem in the museum of Brandenburg represents the apothe- osis of Julius Caesar, mounted upon the celestial globe, and holding a helm in his hand, as if he were now the governor of heaven, as before of the earth. See DEIFICATION. After the apo- theosis, temples, altars, and images, were erected to the new deity ; sacrifices, &c. were offered, colleges of priests instituted, and the devotees swore by his name ! It was one of the dˆtrines of Pythagoras, which he had borrowed from the Chaldees, that virtuous persons after their death were raised to the order of the gods. And hence the ancients deified all the inventors of tmngs useful to mankind, and those who had done any important service to the commonwealth. Tibe-

rius proposed to the Roman senate the apotheo- sis of Jesus Christ, as is related by Eusebius, Tertullian, and Chrysostom ; but the senate, though generally very obsequious to the emperor, and extremely ready to adopt the gods of even conquered nations, did not agree to this propo- sal. Juvenal rallying the frequent apotheoses, introduces poor Atlas, complaining that he was ready to sink under the burden of so many new gods as were every day added to the heavens. Seneca ridicules the apotheosis of Claudius with admirable humor.

APOTHERAPIA; from avoOtoairtvu, to cure ; in physic, properly denotes a complete or finished cure.

APOTHERAPIA, in the gymnastic art, the last part of all regular exercises, viz. friction or unction with oil, before and after bathing ; partly to cleanse the skin from any filth or dust it might have contracted during the exercise, and partly to remove weariness.

APOTIIERMUM; from airo, and Stppoc, hot ; in ancient writers, a sharp kind of sauce, prepared of mustard, oil, and vinegar, or of vine- gar alone.

APOTHRAUSIS, in surgery, the removal of a fragment of fractured bone. Gorr. Defm. Med.

APOTOME, in music, a small interval re- maining after a limma is taken from a major tone, expressed by |$g. The ancients thought that the greater tone could not be divided into two equal parts, for which reason they called the first apo- lome, and the second limma (\tijifia), the re- mainder.

APOTOME, in mathematics ; from avortfivu, I cut off; the remainder or difference between two lines or quantities which are only commensu- rable in power. Such is the difference between

1 and ˆ2, or the difference between the side of the square and its diagonal. It is used by Euclid, and a pretty full explanation of such quantities is given in the 10th book of his Elements, where he distinguishes six kinds of apotomes, and shows how to find them all geometrically. The first apotome is, when the greater is rational, and the difference between their squares is a square number, as in the numbers 6 + »/20, 6 — ,/20 is the apotome. The second apotome is when the less number is irrational, as ˆ/18 — 4, the difference between the squares 18 and 16, is

2 and the ,/2 is as 1 to 3. — The third apotome is when both the numbers are irrational,

for the difference of their

as ˆ24 —

squares 24 and 8 is 6, and ˆ/6 is to ˆ/24 as 1 to 2. — The fourth apotome is when the greatest number is rational, and the square root of the difference of the squares has DO ratio to it, such is 4 — ˆ/3, where the difference of the squares 16 and 3 is 13, and ,/13 has no ratio in num- bers to 4. — The fifth apotome is when the least number is rational, and the square root of the difference of the squares of the two numbers has not a ratio in numbers to the greatest, as ˆ/6 — 2, where the difference of the squares 6 and 4 is 2, and v/2 to»y 6 has not a ratio in numbers. — The sixth apotome is when both the numbers are ir-

*rationals, and the square root of the difference of their squares has not a ratio in numbers to the greatest, as ˆ/6 — ˆ2, where the difference of the squares 6 and 2 is 4, and ˆ/4 to *J6 is not a rational ratio. Euclid. Elem. b. 10, prop. 80, et seq. ; Papp. Math. Coll. Introd. 1. 7.*

APOTREPˆEA; from avorpiiru, to avert ; in the ancient poetry, verses composed for averting the wrath of incensed deities.

APOTREP/EAN GODS, Deities invoked to avert any threatened misfortune; called also Alexiaci and Averrunci.

APOZEM ; airo, from, and &w, to boil ; in medicine, a decoction; an infusion made by boiling ingredients.

APTAIR. Sax. apaenan ; to overthrow, to spoil. The word now in use is IMPAIR, which see.

He had a sonne Harold, beyre of his tenement, Engle his wife he drofe away, and held in peyrment. Robert Brume, p. 58.

For what profitith it to a man, if he wynne al the world, and do peyrynge to his scale ?

Widif. Mark. ch. viii.

Sith that, their hope gan fail, their hope to fall, Their power appeir, their goddesse grace withdraw.

Surrey. Aena-is. bk. ii.

APPAL', 1 Compounded of ad, and pal-

APPAL'MENT. { leo, to make pale. Todismay, to decay, to droop, to wither.

*And amonge other of his famous dedis he (Ered- bertusˆ leuyued and quickened agayn the fayth of Crist, jf1 in some placis of his kyngedome was sore appallyd. Fabian**

It was rather an execution then a fight upon them, insomuch as the furious slaughter of them was a great discouragement and appalemeni to the rest.

Bacon't King Henry VI t

Whilst she spake, her great words did appal My feeble courage, and my heart oppress, That yet I quake and tremble over all. Faerie Queenc.

Give with thy trumpet a loud note to tVoy, Thou dreadful Ajax j that th' appalled air May pierce the head of thy great combatant.

SHattpeare.

The House of Peers was somewhat appalled at this alarum : but took time to consider of it, till next day.

Clarendon.

Does neither rage inflame, nor fear appal, Nor the black fear of death, that saddens all ? Pope.

The storms of sad confusion that may grow Up in the present for the coming times, Appal not him, that hath no side at all, But of himself, and knows the worst can fall.

Daniel's Poemi. The monster curls

His flaming crest, all other thirst appaU'd ; Or shiv'ring flies, or chok'd at distance stands.

Thornton.

*Guilt hears' appaU'd, with deeply troubled thought ; And yet not always on the guilty head Descends the fated flash. U**

If wearied nature sinks, His sleep is troubled ; visions of the night Appal his spirit ; starting, he forsakes A thorny pillow ; rushes on the deck With lamentations to the midnight moon.

Glocer't Athenaid, bk. i.

Him who ne'er listen 'd to the voice of praise, The silence of neglect can ne'er appal.

Beattie't Minttrtt.

APP

51C

APP

No kind star

To-night will guide tlico, traveller! and the roar Of winds and elements on

thy head will break, And, in thy agonizing ear the shriek Of spirits, howling on their stormy car, Will often ring appalling. Kirke White's Poems.

APPALACIIICOLA, a river of North Ame- rica, rising in the north point of Georgia, in the Apalachian mountains, about ten miles from Tungaloo, the upper branch of Savannah river. From its source to latitude thirty-one north, where it is joined by Flint river, a distance of 300 miles, it is called Chata-Uche, or Chatahooche river, and forms the boundary line between Georgia and West Florida. Thence it runs south near 80 miles, and falls into the bay of Appalachicola, in the gulf of Mexico, at Cape Blaize, and forms the boundary between East and West Florida. Long. 84° 50′ W., lat. 29° 52′ N.

APPAMATOX, or APPOMATOX, the southern branch of James river in Virginia, which is na- vigable to Petersburgh, about twenty miles above its junction with James river, below Richmond.

APPARATUS. I.at. uppumtits: from apparo, ! make preparation. Now applied to the com- ponent parts of machinery, or the utensils em- ployed for eflectinu' any purpose.

APPARATUS, in literary matters, is a title of nooks in the form of catalogues, bibliothecas, dictionaries, &c. for the ease and conveniericy of study. 'The apparatus to Cicero is a kind of concordance, or collection of Ciceronian phrases, Jcc. The apparatus sacer of I'ossevin is a col- lection of all kinds of ecclesiastical authors, printed in Ifill, in three volumes. Glossaries, comments, Jvc. are also frequently called appa- ratuses.

APPARATUS, in surgery, the bandages, medi- caments, and dressings of a part; or the several matters applied for the cure of a wound, ulcer, or the like. The word is also used for the opera- tion of cutting lor the stone. For this there are three sorts of apparatus, viz. the small, great, and high apparatus. See SIKOI.KY.

APPAR'KL, r. \ n. \ 1'r. appareiller, from

Ai'i'\u.\ v I.MI.VI. $ the l.at. upparure, to prepare. To prepare, to provide with what is requisite or suitable', to dres<, to array.

'I hou that art prmvde of honour, shape, or kynnc, I hat hrpest vp tliis \retehed worldes treasure. Thy tini'ers shrynrd with trold, thy tawny skynne \ itli tresh n\i]i(irijli' Lr;iniished out of measure, .And wencst tu haue t'ortune at tliy pleasure, < a-t vp 'h\ne eye, and like liow slipper rhauncc Ilhidrth lier men with chaun-e and varvannce.

S;> Tlmx. Moore.

And whannr. sum men seideri of the temple that it was up, ,ir, l,,l with - oodc stoones, and pfus, lie seide, !»///•. Luke. ch. vxi. p. 52. The maid« :i is ready for to ride

Iu a tu!i richc

-J/..r.', .\rtlnir. Kids' Romances, vol. i.

It is much that this ,!.[, raved custom of painting

•" l"iu' ei'-:;pc the penal laws, both

.' , which have been very severe

Bacon.

You may have t.rees apparelled with flowers, by boring holes in them, and putting into them earth, and setting seeds of violets. Id.

KING RICH. Ill give my jewels for a set of beads, My gorgeous palaces for a hermitage, My gay apparel for an almsman's gown, My figured goblets for a dish of wood ; My sceptre for a palmer's walking-staff, My subjects for a pair of carved saints, And my large kingdom for a little grave.

Shakspeare. King RicJutrd II.

With such robes were the king's daughters, that

were virgins, apparelled. 2 Sam. xiii. 18

Both combatants were apparelled only in their

doublets and hose. Hay>r

Our late burnt London, in apparel new, Shook off her ashes, to have treated you. Waller. At public devotion, his resigned carriage made re- ligion appear in the natural apparel of simplicity.

Tatlsr.

APPA'RENCE,^ Fr. apparence; Lat. uppu- APPA'RENCY, / reo, appareas, from ad and APPA'RENT, \pureo, from the Greek ira- APPA'RENTLY, i ptw, to be present. To come APPARI'TION. J into sight or view, to seem, to look, to be likely. Apparition, an ideal ex- istence perceived by the imagination, a seeming being. Apparent, connected with the word heir, means the next in succession to an estate or property, whose right, in point of heirship, can- not be defeated — as the eldest son. Apparent, in

astronomy, is opposed to real; as apparent conjunction, &c. •

He made Edwyn his leutcnant, Whiche heire was apparant, That he the londe in his absence Shall rewle. Gower. Can. A. bk. i:.

Another rowned to his felaw low, And sayd, he lieth, for it is rather like An apparence ymade by som magike, As jogelours plaien at thise festes grete.

Chaucer. The Squire's Tale.voL i. p. 427. But we preache of a heauenly wisedom which hath an outeward apparance of that which is not within it; but is inwardelye mighte and effectuall.

('dull. 1 Corm. ch. ii.

Draw thy sword in right.

I'll draw it, as apparent to the crown ;

And in that quarrel use it.

Shahspeare't Henry VI. Horatio says, 'tis but our phantasy, Touching this dreaded sight, twice seen of us : Therefore I have intreated him, That, if again this apparition come, He may approve our eyes, and speak to it.

Id. Hamlet. I have mark'd

A thousand blushing apparitions To start into her face ; a thousand innocent shames In angel whiteness bear away those blushes.

Shaktpeare.

He is the next of blood, And heir apparent to the English crown.

Id. Henry VI.

As well the fear of harm, as harm apparent, In my opinion ought to be prevented.

Id. Richard III. Arrest him, officer ;

I would not spare my brother in this case, If he should scorn me so apparently.

Id. Comedy of Errors.

When suddenly stood at my head a dream, Whose inward apparition gently moved My fancy. Milton.

The heavenly hands Down from a sky of jasper lighted now

In Paradise, and on a hill n>ade halt;

A glorious apparition, had not doubt

And carnal fear that day dinim'd Adam's eye.

Milton.

My retirement tempted me to divert those melan- choly thoughts, which the new npparitiong of foreign invasion and domestic discontent gave us. Denham.

Vices apparently tend to the impairing of men's health. Tillotton.

What secret imaginations we entertained, is known to God : this is apparent, lhat v«c have not behaved ourselves as if we preserved a grateful remembrance of his mercies. Atterbury.

The outward and apparent sanctity of actions should flow from purity of heart. Rogers.

The perception intellective often corrects the report

of phantasy ; as in the apparent bigness of the sun, in

the apparent crookedness of the staff in air and water.

Hole's Origin of Mankind.

This is creation's melancholy vault,

The vale funereal, the sad cypress gloom,

The land of apparitions, empty shades ; All, all on earth is shadow ; all beyond is substance !

Young.

There is something captivating in spirit and intre- pidity, to which we often yield, as to a resistless power ; nor can he reasonably expect the confidence

of others who too apparently distrusts himself. Rambler.

In futurity, events and chances are yet floating at large, without apparent connexion with their causes ; and we therefore easily indulge the liberty of gratify- ing ourselves with a pleasing choice. Id, Oft from apparent ill our blessings rise.

Seattle's Minstrel.

APPARENT, in astronomy, is an epithet ex- tensively applied to things as they appear to the eye, in distinction from what they really are, as in regard to the conjunction, diameter, distance &c., of the heavenly bodies. The apparent con- junction of the planets is when they appear to be placed in the same right line with the eye of the spectator. The apparent diameter is the angle under which we see the sun, moon, and stars, as when we see S

the sun, S, under the angle DOE. This angle is the sun's apparent diameter, which is the least when he is in 03 , and the greatest when in J£- The apparent place of a planet is that point in the sphere of the world at which you see the centre of the sun, moon, or stars, from the surface of the earth. The apparent station is the position or appearance of a planet or comet in the same point of the xodiac for several days successively.

APPARENT DISTANCE, in optics, tance which we judge an object to be from us when seen from afar off, which may be very dif- ferent from the real distance; thus the heavenly bodies appear to be at the same distance, al- though there is the difference of many thousand miles between their distances. Apparent mo- tion, that motion which we perceive in a distant body that is moving whilst the eye is either at rest or in motion; or that motion which an ob- ject at rest seems to have whilst the eye itself only is in motion ; thus very swift motions, as those c-f the luminaries, may not appear to be

that dis-

any motions; and on the other hand, supposing the eye to move forwards in one direction, anv remote object at rest will appear to move in a parallel line the contrary way. The more oblique the eye is to the line or plane which a distant body moves in, the more will the apparent motion differ from the true one. Suppose a body to revolve equably in the circum- ference of a circle, A B F C E D, describing equal arcs in equal times, and the eye be at O in the plane of that circle, when at the point A it seems for some time to stand still, and constantly afterwards to move faster till it gets to the point F, where the motion appears to become the greatest ; after which it appears to decrease till the body comes to C, when it will again

seem to stand still ; and then its apparent motion will increase backwards till the body ar- rives at E, where it will seem again to move fastest. The apparent magnitude of an object, the magnitude as it appears to the eye, the mea- sure of which is the quantity of the optic angle ; as suppose D to be an object viewed by the eye at A B, then C A D is the appa- rent magnitude of the object when viewed at A, and C B D the appa- rent magnitude of that object viewed at B. The apparent place of the image of an object, that in which the image of an object appears to be which is made by the reflection of a speculum. This, according to Euclid and others, is when the reflected rays meet the perpendicular drawn from the object to the speculum.

APPARENT HEIRS, in law, are such, whose right of inheritance is indefeasible, provided they outlive the ancestors ; as the eldest son or his issue, who must by the course of the common law be heirs to the father whenever he happens to die. Heirs presumptive are such, who, if the ancestor should die immediately, would in the present circumstances of things be his heirs : but •whose right of inheritance may be defeated by the contingency of some nearer heir being born ; as a brother or nephew, whose presumptive suc- cession may be destroyed by the birth of a child ; or daughter, whose present hopes may be hereafter cut off by the birth of a son. Nay, even if the estate hath descended, by the death of the owner, to such brother, or nephew, or daughter; in the former cases, the estate shall be divested and taken away by the birth of a posthumous child ; and, in the latter, it shall also be totally divested by the birth of a posthumous son.

APPARITION, in astronomy, denotes a star or other luminary becoming visible, which before was hid. The heliacal rising is rather an appa- rition than a proper rising.

APPARITIONS. Several instances of appari- tions occur in trie Bible ; that of Samuel raised by the witch of Endor, has occasioned great dis-

putes, and great controversies liave existed in relation to the reality, the existence or non-ex- istence of apparitions generally. The Chaldeans, Jews, and other nations, have been steady be- fievers in apparitions ; the denial of which is by some made one of the marks of infidelity, if not of atheism. Most of the apparitions on record were doubtless mere delusions of the sense, and others fictitious, contrived merely to amuse, or answer some purpose. Partial darkness, or ob- scurity, being the most powerful means by which the sight is deceived, night is the proper season for apparitions. Indeed the state of the mind, at that time, prepares it for the admission of these delusions of the imagination. The fear and caution which must be

observed in the night ; the opportunity it affords for ambuscades and assassinations ; depriving us of society, and cutting off many pleasing trains of ideas, which objects in the light never fail to introduce, are all circumstances of terror; and perhaps, on the whole, so much of our happiness depends upon our senses, that the deprivation of any one may he attended with proportionable horror and un- easiness. The notions entertained by the ancients ropecting the soul, may receive some illustra- tion from these principles. In dark, or twilight, the imagination frequently transforms an inani- mate body into a human figure; on approaching, the same appearance is not to be found; hence they sometimes fancied they saw their ancestors; hut not finding the reality, distinguished these illusions by the name of shades. Many of these t'ahiilons narrations might originate from dreams. '1 here are tunes of slumber when we are not sen- sible of being asleep. On this principle llobbes has ingeniously accounted for the spectre which is said to have appeared to Brutus. ' We read,' says in-, 'of M. Brutus, that at Philippi, the niubt helore he u'ave battle to Caesar, he saw a leartul apparition, which is commonly related by historians as a vision ; but, considering the cir- eum>tan

able a narrative, for the strength of its evidence as any yet supplied upon this subject.

This is a subject, after all, admitting no a priori reasoning ; and one respecting which the actual truth or error of the popular belief will never be demonstrated. It is a question of tes- timony and of fact, involving phenomena, as it is alleged, with which our acquaintance is very limited. It is not to be forgotten that Luther, Baxter, and Dr. Samuel Johnson, contended for the really spiritual character of some of these appearances ; nor, on the other hand, that fever and intoxication leave behind them a diseased imagination, under the effects of which, voices are heard and objects seen, that assuredly have no outward existence. Even intense study, that ' suspension of all thought,' as Mr. Coleridge calls it, ' in the perplexity of thinking,' seden- tary habits, and the deranged digestion and ner- vous irritability often accompanying them, have a tendency to produce the same effects. ' It would appear incredible,' says this last gen- tleman, ' to persons not accustomed to these subtle notices of self-observation, what small and remote resemblances, what mere hints of like- ness, from some real external object, especially if the shape be aided by color, will suffice to make a vivid thought consubstantiate with the real object, and derive from it an outward percepti- bility. Even when we are broad awake, if we are in anxious expectation, how often will not the most confused sounds of nature be heard by us as articulate sounds? For instance, the bub- bling of a brook will appear for a moment the voice of a friend, for whom we are waiting, call- ing out our own names, &c.' — ' A lady once asked me, if I believed in ghosts and appari- tions?' I answered with truth and simplicity, ' No,

Madam, I have seen far too many myself.' • — Coleridge.

APPAK'ITOR. The officer who serves the process in the Spiritual Court.

Was it to go about indeed with a band of working officials, with cloak-bags full of citations, and pro- cesses to be served by a corporation of griffin-like promoters and apparitur s. •

Milton. Reform in England, book i.

APPARITOR, in some ancient English laws, a judge or justice.

APPARITOR COMITATUS, was formerly an of- fice for which the sheriffs of Buckinghamshire had a considerable yearly allowance ; and in the reign of queen Elizabeth there was an order of court for making that allowance.

APPARITORES, in antiquity ; homappareo, to appear, or be at hand; public officers, so called because they were always at hand to wait upon the magistrates. Under this general name were included the Scribes, Accensi, Pracones, &c. They also acted as lictors to the priests, according to an inscription in the Appian way, APPARITORI PONTIFICUM PARMULARIO. — Cic. th Verr. act. iii. c. 78. Serv. in Virg. &n. 1. xii. v. 850.

APPAY", Ital. appagare ; Fr. payer, to sa- tisfy. The intensive of to pay, used particularly in Chaucer.

Be ghoure maneris withoute couetise apaied with present thingis. Wiclif. Ebrewis, ch. xiii.

APPEAL.

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Ye shuld have warned, or had Igon, That he you had an hundred frankes paide, By redy token : and held him evil apaide, For that I to him spake of chevisance.

Chaucer. Shipmanne's Tale, vol. ii. p. 4. Yet when at last thy toils but ill apaid Shi.ll dead thy fire, and damp its heavenly spark, Thou wilt be glad to seek the rural shade, There to indulge the muse, and nature mark.

Thornton. Cattle of Indolence, canto i. APPE'ACH, } APPEACH'MENT, >See IMPEACH. APPEACH'ER. 3

As if there -were twoo men that had sworne the death of another, because they cannot brynge it aboute, they imagyne how thei may bryng him to all

the shame and vexacion that they can, and thereupon they apeache him of hiresye.

Sir Thos. More's Works.

For the lawe is not the authour of synne, bvt the vtterer and apeacher therof, wherof before the lawe gyuen we wer in manner ignorant.

Udall. Romaynes, ch. vii.

He did, amongst many others, appeuch Sir William Stanley, the lord chamberlain. Bacon's Henry VII.

Were he twenty times My son, I would appeach him.

Shakspeare's Richard II. Disclose

The state of your affection ; for your passions Have to the full appeached. Shakspeare.

For, when Cymocles saw the foul reproach, Which them appeached ; prick'd with guilty shame

And inward grief, he fiercely gen approach Resolv'd to put away that lordly shame.

Faerie Queene.

This binds thee, then, to further my design ; As I am bound by vow to further thine : Nor canst, nor dar'st thou, traitor, on the plain, Appeach my honor, or thine own maintain, Since thou art of my council, and the friend Whose faith I trust, and on whose care; depend.

Dryden's Pal. and Arcite. book i.

APPEAL', v. & n.

APPEAL'ER,

APPEAL'ABLE,

APPEAL'ANT,

APPEAL'MENT,

APPEL'LANT, n. & adj.

APPEL'LATE,

APPEL'LATION,

APPEL'LATIVE, n. & udj.

APPEL'LATIVELY.

Appello, to call to or upon. To call for help, or legal protection ; to apply to superior judges ; to address discourse to, supplicate, ac- cuse. An appel- lant is also one who J challenges another

to fight. Appellation, though formerly used for appeal, now only means a name.

"f hat dare no counsaile auaile, The pledour and the plee shall faile, The sentence of that ylke daie Maie none appele sette in delaie.

Gower. Con. A. book ii.

And he [Richard the 2d] framed there also an

appellation, and there it was ordeyned that certeine

a-ppellers should lay vnto them high treason in open

parliament. Grafton, p. 464.

To appeal is lawful, from the first cogitations of

men to their second j and from the nearer times to

the times farther off. Bacon's Essays.

Except where ordinary means fail us, it is no ap-

pealing to the immediate help of God \ we may not

seek to the postern, but where the common gate is

shut. Hall's Contemplations.

The casting up of the eyes, and lilting up of the

hands, is a kind of appeal to th;: Ui ity, the- author of

wonders. liuco

VOL. IT.

This is the day appointed for the combat ;

And ready are th' appellant and defendant,

Th' armourer and Jus man, to enter the lists.

Shakfpeare , The duke's unjust, Thus to retort your manifest appeal , And put your trial in the villain's mouth, Which here you come to accuse. ///.

Hast thou, according to thy oath and bond,

Brought hither Henry Hereford, thy bold son ;

Here to make good the boist'rous late appeal

Against the duke of Norfolk ? Id.

One but flatters us,

As well appeareth by the cause you come ;

Namely, t' appeal each other of high treason. Id. Lords appealants,

Your differences all shall rest under guage,

Till we assign you to your days of trial. Id.

This ring

Deliver them ; and your appeal to us,

There make before them. Id. Henry VIII.

Our reason prompts us to a future state,

The last appeal from fortune and from fate,

Where God's all-righteous ways will be declar'd.

Dry den.

Nor shall the sacred character of king Be urg'd, to shield me from thy bold appeal ; If I have injur'd thee, that makes us equal. Id.

There are distributors of justice, from whom there lies an appeal to the prince. Addison.

He that shall use the appellative name for God, either in the Scythian, Egyptian, or any other lan- guage which he hath been brought up in, will not offend. Cudworth's Intellectual System.

Long have we sought t' instruct and please mankind With studies pale, with midnight vigils blind ; But thank'd by few, rewarded yet by none, We here appeal to thy superior throne ; On wit and learning the just prize bestow, For fame is all we must expect below.

Pope's Temple of Fame.

They that love to talk of the mercies of the Lord, and to recount his good things, cannot but have ob- served that God delights to be called by such appella- tives which relate to miserable and afflicted persons.

Jeremy Taylor,

Force, or a declared sign of force, upon the person of another, where there is no common superior on earth, to appeal to for relief, is the state of war ; and it is the want of such an appeal gives a man the right of war, even against an aggressor, though he be in society, and a fellow subject. Locke.

Words and names are either common or proper. Common names are such as stand for universal ideas, or a whole rank of beings, whether general or special ; these are called appellatives : so fish, bird, man, city, river, are common names j and so are trout, eel, lob- ster ; for they all agree to many individuals, and some to many species. Watts? Logic.*

A busy-headed man gave first light to this ap- peachmentj but the earl did avouch it. Hayuiard.

APPEAL, in law, the removal of a cause from an inferior to a superior court or judge, when a person thinks himself aggrieved by the sentence of the inferior judge. Appeals lie from all the ordinary courts of justice to the House of Lords. In ecclesiastical cases, if an appeal is brought before a bishop, it may be removed to the arch- bishop ; if before an archdeacon, to the court of arches, and thence to the archbishop ; and from the archbishop's court to the king in chancery. Appeal, in common law, also denotes the accu- sation, by a private subject against another, foi some heinous crime; demanding punishment

rather on account of the particular Injury suf- fered, than for the offence against the public. This private process, for the punishment of pub- lic crimes, had probably its original in those times, when a private pecuniary satisfaction, called a weregild, was constantly paid to the party injured, or his relations, to expiate enor- mous offences, and was derived to the English, in common with other northern nations, from their ancestors the ancient Germans : among whom, according to Tacitus, luitur homicidum certo armentorum ac pecorum numero ; recipit- que satisfactionem universa domus. In the same manner by the Irish law, in case of murder, the brehon or judge was used to compound between the murderer and the friends of the deceased who prosecuted him, by causing the malefactor to give unto them, or to the child or wife of him that was slain, a recompence which they called an eriach. In the laws of Henry I we have an account of what offences were redeemable by weregild, and what were not so. As therefore, during the continuance of this custom, a process was certainly given, for recovering the weregild by the parry to whom it was due; it seems that, when these offences by degrees grew no longer redeemable, the private process was still conti- nued, in order to insure the infliction of punish- ment upon the offender, though the party injured was allowed no pecuniary compensation for the offence. But though appeals were thus, in the nature of prosecutions for some atrocious injury, committed more immediately against an indivi- dual, yet it was also anciently permitted, that any subject might appeal another subject of high treason, either in the courts of common law, or in parliament, or (for treasons committed be- yond the seas) in the court of the high constable and marshal. The cogni/.ance of appeals in the latter long continued in force ; and so late as loin, there was a trial by battle awarded in the court of chivalry, on such an appeal of treason : but that 111 the first was virtually abolished by the statute's /> F.ilvv. III. c. 0. and 2 Edw. III. c. 24. ; and in the second expressly by the sta- tute 1 Hen. IV. c. 14. So that the only appeals, until recently, in force, for things done within the realm, were appeals of felony and mayhem.

lint this appeal, v\hieh had almost fallen en- tin ly into disuse, has been recently abolished by -tatnte .v.i. Ceo. :!. e. 40. intitleil, ' An act to abolish appeals of murder, treason, felony, or other offences, and wager of battel, or joining issm; and trial by battel, in writs of right,' passed 2'2dJuno, 181 9, which, after reciting, ' Whereas appeals of murder, treason, felony, and other offences, and the manner of proceeding therein, have been found to be oppressive; ;ind the trial by battel in any suit, is a mode of trial unfit to be used ; and it is expedient that the same should lie \holly abolished;' enacts, 'that from and after the passing of this act, all appeals of treason, murder, frlony, or other offences, shall cease, determine, and heroine void; and that it shall not be lawful for anv person or persons, at any time after the passing ot this ;ict, to commence, lake, or Mie appeal : !' treason,

murder, felony, or other oti'eiii.e, agaiii-t any oilier person or persons whomsoever, i tit thai all sueli appeals

shall, from henceforth, be utterly abolished ; any law, statute, or usage, to the contrary in any wise notwithstanding.' ' And be it further enacted, that from and after the passing of this act, in any writ of right now depending, or which may hereafter be brought, instituted, or commenced, the tenant shall not be received to wage battel, nor shall issue be joined nor trial be had by battel in any writ of right; any law, custom, or usage to the contrary notwithstanding.'

The last case of an appeal of murder was that of Ashford v. Thornton, and as rather remarka- ble, we subjoin it from Burns :

*In Michaelmas Term, 55. Geo. III. 1817, William Ashford, the eldest brother and heir at law of Mary Ashford, spinster, deceased, brought a writ of appeal against Abraham Thornton, for the murder of his said sister, of which offence the defendant had been tried and acquitted at Warwick summer assizes preceding, under cir- cumstances of strong suspicion, (though not absolutely conclusive), of his having ravished, and afterwards thrown her into a pit of water where the body was very recently found. The appellee, upon being called upon to plead, pleaded * not guilty ; and I am ready to defend the same by my body : ' and thereupon taking his glove off, he threw it upon the floor of the court. The appellant afterwards delivered in a counter plea, to which there was a counter plea, a general demurrer, and joinder therein. After very long and elaborate arguments, the court of King's Bench held that the appellee had a right to wage his battel, the appellant not having brought him- self within any of the established cases which entitle him to decline the wager of battel ; namely, where the appellant is an infant, or a woman, or above sixty years of age, or where the appellee is taken within the mainour, or has broken prison, or where great and violent pre- sumptions of guilt exist against the appellee, which admit of no denial or proof to the con- trary. The appellee was afterwards discharged.*

APPEAR', v. & n.~\ Lat. appareo, from ad

APPKAR'ER, (and pareo; Gr. Trap-tw,

APPEARING, £to be near to, or present.

APPKAR'INGLY. J To be in sight, or visible, to be the object of perception, to seem, to look as if possessing the qualities, &c. ascribed.

Kindly hraucn when merry weather is aloft appear- et/i in inannes iye of colour in blewe, steadfastnesse in peace, betokening within and without.

Chaucer. Test of Love, fol. 306. ch. ri

To whom in slepe the wonted godheds forme Gan ay appere, returning in like shape As seined him : and gan him thus uduisr. Like unto Mercury in voice, and hue With yelow bushe, and comely lymmes of youth,

Sitrreii

In strait estate appear thou hardy and stout.

Earl of Surry's Poems

PER. Here will I wash it in the morning's dew Which she on every little grass doth strew In silver drops against the son's appear, 'Tis holy water, and will make me clear.

Beau, and Fletch. Faithful Shepherdets.

Outward appearances are deceitful guides to our judgment or atl'ections. – Hall's Contemplations.

In yonder nether world where shall I seek

His bright appearances, or footstep trace. Milton.

APP

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APP

Twas in the dead of night, when sleep repairs Our bodies worn with toils, our minds with cares, When Hector's ghost before my sight appears ; A bloody shroud he seem'd, and bath'd in tears, Unlike that Hector who return'd from toils Of war, triumphant with ˆEacian spoils. Dryden.

The peacock in all his pride does not display half the color that appears in the garments of a British lady, when she is either dressed for a ball or birth- day. Spectator, No. 265-

Elegance, the most undoubted offspring and visible image of fine taste, the moment it appears, is univer- sally admired. Usher.

Tis listening fear, and dumb amazement all, When to the startled eye the sudden glance Appears far south eruptive through the clouds ; And following slower, in explosion vast, The thunder raises his tremendous voice. Thomson. Who can paint

Like nature ? Can imagination boast,

Amid his gay creation, hues like these ?

And can he mix them with that matchless skill,

And lay them on so delicately fine,

And lose them in each other as appean

In every bud that blows ? Id. Spring.

When glory-like the dazzling eagle stood, . Perch'd on my beaver in the Granic flood,

When Fortune's self my standard trembling bore, . And the pale Fates stood frighted on the shore,

When each immortal on the billows rode,

And I myself appear'd the leading god.

Lee's Alexander the Great, act ii.

In the mid-air appeared JEolus, busy, restless, and vehement, his wrinkled and morose countenance, his hoarse and threatening voice, his shaggy brows, which hung down to his beard, and the sullen austerity that gleamed in his eyes, awed the hurricane to silence, and drove back the clouds to the horizon.

Hawkesworth's Telemachus.

'Tis granted, and no plainer truth appears, Our most important are our earliest years ; The mind impressible and soft, with ease Imbibes, and copies what she hears and sees, And through life's labyrinth holds fast the clue That education gives her, false or true. Coieper.

The poor worm

Shall prove her contest vain. Life's little day Shall pass and she is gone — while I appear Flush'd with the bloom of youth through heaven's eternal year. Mason on Truth.

APPEARANCE, in law, signifies a defendant's filing a common or special bail, on any process issued out of a court of judicature.

APPEARANCE, in perspective, the representa- tion or projection of a

figure, body, or like object, upon the perspective plane.

APPEARANCE DIRECT, in optics, the view or sight of any object by distinct rays ; without either refraction or reflection-

APPEARANCES, in astronomy, &c. are more usually called phenomena and phases.

APPEASE', -\ Fr. appaiser ; to make

APPEAS'ER, (peace, to pacify. To calm,

APPEASE'MENT, £ allay, still, quiet, moderate,

APPEAS'ABLE. J soothe.

But father, now ye sitten here In loue's stede I you beseche That some ensample ye me teche Wherof I male my selfe appease.

Cower. Con. .,4. book iii.

By his council he appeaseth the deep, and planteth islands therein. Ecclvs. xliii. 23.

Ensr.ana nad no leisure to think of reformation, till the civil wars were appeased, and peace settled.

Dalies on Ireland.

So Simon was appeased towards them, and fought no more against them. 1 Mac. xiii. 47.

O God ! if my deep prayers cannot appease thee, yet execute thy wrath on me alone.

Shakspeare. Richard III. The rest shall hear me call, and oft be warn'd

Their sinful state, and to appease betimes

TU' incensed deity. Milton,

Who taught the parrot human notes to try,

Or with a voice endued the chattering pie ;

Twas mighty want ; fierce hunger to appease :

Want taught their masters, and their masters these.

Dryden. The rest

They cut, in legs and fillets, for the feast ; Which drawn and served, their hunger they appease.

Id.

APPEASING REMEDIES, in medicine, are those which assuage the pain in a disease, and give the patient some rest, and at the same time contribute to the cure. These amount to the same with what we otherwise call anodynes, &c. APPELLANTS, in church history, those among the French clergy, who refused to subscribe the bull unigenitus, issued by Clement XI. in 1713, and appealed from it, either to the pope better informed, or to a general council. The French bishops, priests, monks, and even nuns, were divided into appellants and non-appellants. The Jansenists and their followers were generally appellants.

APPELLATIONS. Nothing can be more foreign to the original meaning of many words and proper names, than their present appellations, frequently owing to the history of those tilings being forgotten, or an ignorance of the language in which they were expressed. Who, for instance, would suppose that the head on the French coast, near Calais, called by our seamen Blackness, could be so entitled from its French name of Blanc Nez, or the White Headland? Henry VIII. having taken the town of Boulogne in France, the gates of which he brought to Hardes in Kent, the flat- terers of that reign highly magnified this action, which, like Porto Bello, became a popular subject for signs ; and the port or harbour of Boulogne, called Boulogne Mouth, was accordingly set up at a noted inn in Holborn : the name of the inn long out living the sign and fame of the conquest, an ignorant painter, employed by a no less igno- rant landlord to paint a new one, represented it by a bull and a large gaping- human mouth (answering to the vulgar pronunciation of Bull and Mouth). The same piece of history gave being to the bull and gate, originally meant for Boulogne gate, and represented by an embattled gate or entrance into a fortified town. The spectator has explained the sign of the Bell Sa- vage inn plausibly enough, in supposing it to have been originally the figure of a beautiful female found in the woods, called in French la belle sauvage. But another reason has since been assigned for that appellation, namely, that the inn was once the property of Lady Arabella Savage, and familiarly called Bell Savage's inn, probably re- presented by a bell and a savage or wild man, which was a rebus for her name; rebusses being much in fashion in the sixteenth century. Th<;

appellation of Lombard was formerly all over Europe considered as synonymous to that of usurer. At the institution of yeomen of the guards, they used to wait at table on all great so- lemnities, and were ranged near the buffets ; this procured them the name of buffetiers, not very unlike in sound to the jocular appellation of beef- eaters, now given them ; though probably it was rather the voluntary misnomer of some wicked wit, than an accidental corruption arising from ignorance of the French language. The oppro- brious title of bum-bailiff, so constantly be- stowed on the sheriffs' officers, is, according to Judge Blackstone, only the corruption of bound bailiff, every sheriff's officer being obliged to enter into bonds and to give security for his good behaviour, previous to his appointment. A cord wainer seems to have no relation to the occupation it is meant to express, which is that of a shoe-maker. But cordonier, originally spelt cordaunier, is the French word for that trade; the best leather used for shoes coming originally from Cordua in Spain. Spanish leather shoes were once famous in England. Of a piece with these corrupted appellations, is that of the usual proclamation of ' O yes, () yes!' in our courts of law, commanding silence; which is a corrup- 1 ion of the French word Oyez, listen, and has been retained ever since the pleadings were held in that language.

APPELLEE, in the civil law, properly be- longs only to the judge before whom the ap- peal is brought.

APPEND', APPEN'DAGE, APPEN'DANCE, APPEN'DA.NT, n. &: adj. APPEN'DENCY, API'EX'DICATE, APPENUICA'TIOX, APPF.X'IJIX. j

Lat. appendo ; ad, and pcndo, to hang to, to weigh. To hang, fix, or fasten to.

Modesty is the. appendage of sobriety, and is to chastity, to temperance, and to humility, as the fringes are to a garment. Taylnr's Rule of Living Holy. The plainest truth and purity of religion is a thing that seldom pleasrth and suiteth to the curiosity and appetite of men : they are always fond of something annexed or njipcnilicatt'ii to religion to make it pleasing to their appetite. Hall's Contemplations.

The French tongue hath divers dialects, viz. Pi- eardy, that of Jersey and (iiiernsey, appendices once at" Normandy. ' Hun'ell'.i Letters.

He has too much good sense, taste, and talent, to -.et his mind upon

ribands, stars, titles, and other aiijtendayc.i, and idols of rank.

Sheridan's Character of Pitt. AITKNDICUUE ASTEKIARUM, wires of as- U'l-ra , a mime given by the writers on natural history, to certain small branches which are placed in a circular order at different distances upon the column of the asterist.

ENDITIA, the appendage of an estate. APPENDIX, in literature, a treatise or sup- plement ;idded at the end of a work, to render it inure complete

APPlvNMXKS, a ch-iin of mountains in Italy, beginning near mount Apio, one of the maritime Alps in the territory of Genoa, and winch atiu- rii 11111114- ea>uvaid for a considerable way, traverse Italy in its uhole length, frutn north to

south, dividing it east and west into nearly equal parts. Near the end of their course they separate into two branches, one of which ad- vances to the south-east to Capo di Leuca, in the Terra di Otranto, and the others westward to the strait of Messina. This great chain re- ceives different appellations in its progress : in the state of Genoa it is called Monte Semola and Monte Bergera; on the confines of Nice, Monte Acuto, &c. The lesser groups connected with the Appennines have been classed by mo- dern geologists into four divisions. The first lies between the valleys of the Arno, the Chiano, and the Tiber, and occupies the whole of the ancient Senese, with a part of St. Peter's patri- mony. It receives the name of the Sub Appen- nino di Toscana, arid consists of three distinct groups standing on the same base. The second division is called the Sub Appennino Romano, and has the valleys of the Salso, the Velino, and the Nera to the north, that of the Tiber to the west, and those of the Liri and the Garigliano to the south. It is of considerable length, and ter- minates at Capo di Gaeta. The country around Mount Vesuvius, comprising the volcanic islands of Ischia, Ponza, and others, forms the Sub Appennino Vesuviano. Lastly, Mount Gargano, which rises abruptly on the Adriatic above the surrounding plains, has been not unfitly denomi- nated the Sub Appennino Delia Puglia. Many of these mountains are either extinct or expended volcanoes, but they are in general of less eleva- tion than the Alps, and covered with trees to their very tops. The snow and ice on the highest ridges furnish the inhabitants of Naples with a cooling draught during the violent heats of summer ; and it is from one part or other of the Appennines that almost all the rivers by which Italy is watered take their rise. The Ap- pennines gave name to a department in the ci- devant French empire, which comprised the eastern part of the territory of Genoa with the district of Bobbio, in the duchy of Parma. It contained in 1810, 214,746 inhabitants.

' In point of general scenery,' says Mr. Eustace, ' the district through which

the Ap- pennines pass is nowhere exceeded. Its moun- tains present every variety of shape and magni- tude, of rugged precipices, woody declivities, snowy summits, winding bases, and all the pos- sible materials of picturesque beauty. Even the plains are varied by gentle swells and bolder elevations ; while the extraordinary purity of the atmosphere, and consequent brightness of the light, give a distinctness to every object, which cannot be conceived by those who are accus- tomed to the dimness of a vapory sky. Its views, in short, we are assured by the concur- ring testimony of the most intelligent observers, never disappoint the traveller, or fall short of his expectations. The highest picturing of the imagination, the brightest descriptions of poetry do not surpass the effect produced by viewing the vale of Clitummus, the falls of the Anio, the banks of the Nar, the waters of Tiber, the groves of Albano, the plains, hills, coasts, and bays of Campania Felix.'

APPENSA, or APPENDED REMEDIES, such as are outwardly applied, by hanging about the

neck. The word comes from ad, and pendo, I hang to. Such are amulets, necklaces, phy- lacteries, &c.

APPENZELL, a canton in Switzerland, en- vironed on all sides by that of St. Gall. The principal river by which it is watered is the Sitter. It contains eight large villages and a number of scattered hamlets ; the whole divided into twenty-three parishes, nine of which belong to the inner rood or company, haying 126 square miles and 16,000 inhabitants; and twenty to Jie outer rood, with 200 square miles, and 39,414 inhabitants. The former division is Ca- tholic, the latter Calvinist. It was formerly sub- ject to the abbey of St. Gall, from whose yoke, however, the inhabitants succeeded in freeing ihemselves, and joined the Swiss confederacy in 1452 ; but it was not recognised as the thirteenth canton till 1513. Each of these roods or divi- sions of the canton has its own constitution and magistrates, and is entirely independent. The form of government is a democracy ; the su- preme power being vested in the common coun- cil, which meets annually in April, and in which all males above the age of sixteen have a right to sit and vote. Here each rood chooses its own chief magistrate, who remains in office for two years. The inhabitants of the inner rood subsist chiefly by the rearing of cattle; those in the outer by the manufacture of linen, muslin, and other fine cotton stuffs. The annual expense of the administration is

very trifling, not £200 sterling a-year for the whole canton. The late wars have been very destructive of the prospe- rity of this canton, which was formerly reckoned among the most opulent of Switzerland. In re- gard to natural aspect Appenzell is singularly wild and romantic, consisting of a continued series of hills and dales, valleys and mountains, the summits of which are covered with luxuriant pastures. Of the two roods, however, the outer is by far the more mountainous.

APPF.NZELL, the principal town or village of the canton, is seated on the Sitter, and has a po- pulation of 3000. It owes its rise to a chapel built here in 647 by the abbot of St. Gall, which nad the name of Abtszelle, or Abbot's Cell, me- tamorphosed, by an easy transition, into its pre- sent name. Here are many manufactures and bleach fields for linen. Forty miles east of Zurich.

APPERCE'IVE, •} Fr. appercevoir ; Lat. per- APPERCEI'VING, fcipio; to perceive; the in- APPERCEP'TION. j tensive or more forcible word for to perceive. See PERCEIVE.

With so glad chere his gestes she receiveth, And conningly everich in his degree, That no defaute no man apperceiveth, But ay they wondren what she might be.

Chaucer. The Clerkes Tale, bk. vi. p. 362.

Right to the world's end, as that it were, When apperceived had she this, she cry'd, A thogh she through girt had be with a spere.

Browne's Shepherd's Pipe, EC. i.

The philosopher [Lebnitz] makes a distinction be- tween perception and what he calls apperception, the first is common to all monads, the last proper to the higher orders, among which are human souls.

APPER'IL. A peril. See PERIL.

Now don constable

I am to charge you in her majesty's name, As you will answer it at your apperil, That forthwith you raise hue and cry in the hundred. For all such persons as you can despect, By the length and breadth of your office ; for I tell

you,

The loss is of some value; therefore look to 't. .

Ben Jonson's Tale of a Tub, act ii.

APPERTAIN, . Lat. adpertineo,

APPERTAIN'MENT, } which is com-

APPERTEN'ANTE, or f pounded of per,

APPUR'TENANCE, ?by, and tcneo, to

APPER'TISCENT, or \ hold. See PER-

APPUR'TENANT, n. & adj. TAIN. To belong

to, to bear a relation to.

The father, t' whom (in heav'n supreme) Kingdom, and power, and glory appertain, Hath honor'd me according to his will.

Paradise Lott.

Who values the fortune of him that is brought

forth upon the stage to act the part of a prince though

he be attired there, and atteiided as such, hath all

the garb and ceremony, the ensigns and appurtenances

of majesty, about him 1 Barrow's Sermons.

And they roasted the passover with fire, as apper-

tainethj as for the sacrifices, they sod them in brass

pots. 1 Esdrat.

Both of them seem not to generate any other effect

but such as appertaineth to their proper objects and

senses. Bacon.

It is expected, I should know no secrets

That appertain to you.

Sliahspeare. Julius Caesar. You know, how apt our love was to accord, To

furnish him with all appertinents, Belonging to his honor. Id. Henry V.

All the other gifts appertinent to man (as the malice of this age shapes them), are not worth a gooseberry. You that are old consider not the capacities of us that

are young. AP'PETE, AP'PETENCE, AP'PETENT, AP'PETENCY, AP'PETIBLB, APPETIBIL'ITY, AP'PETITE, v. & n. APPETI'TION, AP'PETITIVE.

Id. Henry IV. part ii. Lat. appeto ; to seek after, from ad and peto, to seek. To wish for. and endeavour to obtain. ˆ-Appetite is the natural desire applied to the con- cupiscible faculty, gene- rally, but particularly to the desire of food. Let take a cat and foster hire with milke, And tendre flesh, and make hire couche of silke, And let hire see a mous go by the wall, Anon she weiveth milke and flesh and all, And every deintee that is in that hous, Swiche appetite she hath to eat the mous.

Chaucer. Manciple's Tale. For certainly our appetites here, Be it of werre, or pees, or hate, or love, All is this ruled by the sight above.

Id. The Knightes Tale, vi. p. 67′ As matire appeteth forme alwaie, And from forme to forme it passen may. Id. The Legend of Good Women, fol. 205, ch. ii. But in my deske, what was there to accite, So ravenous and vast an appetite 1

Ben Jonson's Execration upon Vulcan When fierce temptation seconded within By traitor appetite, and armed with darts, Tempered in hell invades the throbbing breast, To combat, may be glorious, and success Perhaps may crown us, but to fly is safe. Cotrper.

Power oemg the natura. appetite of princes, a limit- ed monarch cannot gratify it. Swift.

The gusts of appetite, the clouds of care, And storms of disappointment, all o'erpast, Henceforth no earthly hope with heav'n shall share This heart, where peace serenely shines at last. about fifty miles gouth of Rom6) an(j eighteen

ttte' from the Three Taverns ; where the Christians of Rome came to meet

Paul in his journey from Puteoli to that metropolis. It was situated upon

passengers resting seats, and enable equestrian travellers to mount, there being then no stirrups used. Great part of this road still remains en- tire.

APPEI FORUM, a town on the S.W. of Italy,

Vice, and her dependants, are impudent and fraud- ful, insinuating and officious, skilful in dissimulation, 'and ready to renounce all principles, and to violate every tie, when it becomes necessary to the gratifica- tion of the appetites of a prince.

Hawkestoorth's Telemachus.

Our physical well-being, our moral worth, our journey to Brundusium : social happiness, our political tranquillity, all depend on that control of all our appetites and passions, which

the Appian way, between Suessa Pometia to the N. W., and Terracina at some distance to the S. E. Horace mentions it in his account of his

the ancients designed by the cardinal virtue of tem- perance. Burke,

APPETITE ; from ad, to, and peto, to crate ; in medicine, is used to denote a natural period- ical desire to eat and drink, in order to repair what had been wasted by the excretions of the body. A loss of appetite is called anorexia. An appetite for things not proper for food is called pica. An immoderate appetite is called bulimia. Some, however, distinguish between the /SnXi/ita, and canine appetite ; making it the distinguishing character of the latter, that it is attended with a lientery, or other cceliacal flux.

APPIADES, in mythology, five divinities so called because their temples were at Rome near the fountains of Appius, viz., Venus, Pallas, Vesta, Concord, and Peace.

APPJAN, an eminent historian under the reign of Trajan and Adrian. He was a native of Alexandria in Egypt ; whence he went to Rome, and distinguished himself so well by his forensic abilities, that he was chosen one of the procurators of the empire, and the government of a province was committed to him. His Ro- man history was not written in a continued series; but in separate histories of nations con- quered by the Romans. His style is plain and simple, and, in the opinion of Phocius, he has shown the greatest knowledge of military affairs, and the happiest talent at describing them, of any of the historians of that time. Of all this volu- minous work, there remains only the Punic, Syrian, Parthian, Mithridatic, and Spanish wars, together with those against Hannibal, the civil wars, the wars in

Illyneum, and some fragments of the (iallie wars. His works have gone through several editions, the principal of which are the i'olio, Geneva, l.VJ'2; one in t\o vols. 8vo. Am- sterdam, 1670; and another, printed at Leipsic in 17!M, in three vols. 8vo.

Al'l'lA \ i A, an ancient highway from Rome through Capua to Brundnsium, between 330 and 3,r>0 miles long. Appius Claudius, and Caucus the Censor, A. V. C. 441, carried it from the I'orta ('apena to Capua ; Julius Casar from Capua to Henevento ; and Augustus thence to Hrundusium. It was laid with hard stone brought from a groat distance, large, and squared so exactly, as to need no cement ; and it was sufficiently uide fur several wagons to uo abreast. Statins calls it the queen of roads, (is course is described by Horace, Strabo, ami Antonine. Cams (iiacciius placed stones along it, called «'ippi and termini, to mark the milts, afford foot

•inde forum Appii

Diftertum nautis, cauponibus atque maliguis. To Forum Appii thence we steer, a place Stuff'd with rank boatmen, and with vintners base.

Francis,

APPIN, a parish of Scotland, in Argyleshire, united to that of Lismore, the two together form- ing an extent of sixty-three miles in length, by ten. The population of Appin, in 1791, was

2405.

APPIUS (Claudius). See CLAUDIUS. APPLANA, in entomology, a small species of phalaena, of the tortrix family, found at Kiel and in other parts of Europe.

APPLAUD', -\ Ad, plaudo, to clap hands APPLAUD'ER, ˆto. To express approbation APPLAUSE', (by any movement of the APPLAUS'IVE. 3 hands or feet. To clap, to praise, to approve.

DUKE. Now by the honour of my ancestry, I do applaud thy spirit, Valentine, And think thee worthy of an empress' love.

Shakspeare. Two Gentlemen of Verona, I would applaud thee to the very echo, That should applaud again. Id. Macbeth.

Sylla wept,

And chid her barking waves into attention ; And fell Charybdis murmur'd

soft applause.

Milton.

Those that are so fond of applause, how little do

they taste it, when they have it ! South.

See their wide-streaming wounds ! They neither

came

For pride of empire, nor desire of fame, Kings fight for kingdoms, madmen for applause ; But love for love alone, that crowns the lover's cause.

Dryden's Fable.*

Nations unborn your mighty names shall sound, And worlds applaud, that must uot yet be found.

Pope.

I had the voice of my single reason against it, drowned in the noise of a multitude of a/rplauders.

Glanville's Scepsis.

The most impious, if prosperous, are always ap- plauded ; the most virtuous, if unprosperous, are sure to be despised. Spectator.

Applause and admiration are by no means to be counted among the necessaries of life ; and, therefore, any indirect arts to obtain them have very little claim to pardon or compassion. Rambler.

APPLAUSE, in antiquity, differed from accla- mation, as the latter was articulate and perform- ed with the voice, the former with the hands. Among the Romans applause was an artificial musical kind of noise, made by the audience or spectators to express their satisfaction. There were three species of applause, viz., bombus imbrices, and testae; the first a confused din,

made either by the hands or the mouth ; the second and third, by beating on a sort of sound- ing vessels placed in the theatres for this pur- pose. Persons were instructed to give applause with skill ; and there were even masters who professed to teach the art. At the end of the play a loud peal of applause was expected, and even asked of the audience, either by the chorus or the person who spoke last. The formula was spectatores plaudite, or valete et plaudite. The plausores, or applauders, were divided into chori, and disposed in theatres opposite to each other like the choristers in cathedrals, so that there was a kind of concert of applauses. Seneca has described the different modes of applauding with the hands : Aversae inter se manus collisae non plaudunt, sed palma cum palma collata, plausum fecit. Et plurimum interest utrum cavae concu- tiantur, an planae et extentae.

APPLE. Ang.-Saxx. Aril, aenriel ; derived by Wachter from a, the intensive particle, and bal, any thing round. All the Celtic dialects call round fruits by this name, even those that are not apples in the common signification. • • • Whan Adam of thilke apple bote, His sweete morcell was to hole.

Gower. lib. vi. fol. 127. col. 2. Tall thriving trees confess'd the fruitful mold

; The redd'ning apple ripens here to gold.

Pope's Odyssey.

He instructed him ; he kept him as the apple of his eye. Dent, xxxii. 10.

Cantabrian hills the purple saffron show, Blue fields of flax in Lincoln's fenland blow ; On Kent's rich plains green hop-grounds scent the

gales,

And apple groves deck Hereford's golden vales. Scott. APPLE, the fruit of the pyrus malus. See PYRUS. APPLE, BITTER. See COLOCYNTHIS. APPLE ISLAND, a small uninhabited island on the south side of the river St. Lawrence, between Basque and Green Islands. The surrounding rocks make it difficult of approach.

APPLE JUICE. The juice of apples is a men- struum for iron. A solution of iron in the juice of the apples called golden rennets, evaporated to a thick consistence, proves an elegant chaly- beate, which keeps well.

APPLE, MARCHASITE, so called by Dr. Grew on account of its figure, as being round except on one side, where it falls in, and having a stalk like a young apple.

APPLE, OAK, an excrescence or exudation of the juice of the oak, joined with a degree of putrefaction.

APPLE OF LOVE. See LYCOPERSICON. APPLE-TREE ; from apple and tree. The fruit of this tree is for the most part hollowed about the foot stalk ; the cells enclosing the seed are separated by cartilaginous partitions ; the juice of the fruit is sourish, the tree large and spreading; the flowers consist of five leaves, expanding in form of a rose. There are a great variety of these fruits. Those for the dessert are, die white juncating, Margaret apple, summer pearmain, summer greening, embroidered apple, golden reinette, summer v, hite Colville, summer red (,'olville, silver p:p; in, aromatic pippin, the

gray reinette, la haute-bonte1, royal russeflng, Wheeler's russet, Sharp's russet, spice apple, golden pippin, nonpareil, and 1'api. Those for the kitchen use are, codling, summer, marigold, summer red pearmain, Holland pippin, Kentish pippin, the hanging body, Loans pearmain, French reinette, French pippin, royal russet, monstruous reinette, winter pearmain, pomone violette, Spencer's pippin, stone pippin, oaken pippin. And those generally used for cider are, Devonshire royal wilding, redstreaked apple, the Whitsour, Hertfordshire underleaf, John apple See PYRUS MALUS.

APPLEBY, or APULBY, anciently ABALLABA, a town in the county of Westmoreland, plea- santly situated on the Eden, and almost sur- rounded by it. It was a Roman station in the time of Aurelian, and is situated on the Roman military road, which crosses the county from Stainmore to Cumberland. It is the only borough in Westmoreland, and sends two members to parliament. It has four fairs ; on Whitsun Eve, Whit-Monday, the 10th of June, and the 10th of August, with a market every Saturday From the old English statutes, it appears that parlia- ments were formerly held in it. It was once a very considerable town, and had great privileges; but it is long ago gone to decay, and now only consists of mean houses in one broad street, which runs with an easy ascent from north to south, and at the head of which is the castle. It has two churches, a town-hall in which the as- sizes are held, a county-jail, and an hospital for a governess and twelve widows, founded in 165: by a daughter of lord Clifford. It is governed by a mayor, twelve aldermen, a common council, and two serjeants-at-mace, &c., and is said to have the best corn-market in these northern parts. It lies ten miles S. E. of Penrith, and 266 N. N. W. of London.

APPLECROSS, a parish of Scotland in Rosshire, which derives its name from an ancient proprietor, in memory of whom five apple trees were planted crossways, and have ever since been perpetuated by his successors. It was formerly called Comrick. A flock ot forty or fifty deer are often seen together on the hills. There is a copper mine in this parish, reckoned by Mr. Williams as rich as any in the kingdom.

APPLEDORE, a small port in Devonshire, on the coast, the first harbour widiin the bar of Barnstable.

APPLE FLY, in natural history, the name given by authors to a small green fly found sometimes within an apple, and hatched of a worm or maggot, very frequently found infesting that fruit.

APPLEGIRTH, a parish of Scotland in Dum- frieshire. It is situated about eleven miles from Dumfries, twelve from Annan, its nearest sea-ports, and sixty from Edinburgh and Glas- gow. It exports barley to Liverpool and oats to Greenock.

APPLICATION, in mathematics, the bring- ing one thing near to another for the purpose of measuring it. Thus a longer space is measured by the continual application of a les>s, as a yard

by a foot or inch. The number 24 is measured or divided by the application of 6 ; or the rec- tangle a b applied to the line c gives — . Appli- cation, irapafioXi], a terra to express the fitting of two quantities whose areas are equal but figures different, as when Euclid shows how on a given line 7rapa/3aXA«v, to apply a parallelogram, equal to a right-lined figure given. Euclid Elem. 1. 6, prep. 28, &c. The application of one science to another, is the employing the rules and principles of the one for perfecting the pther; as of algebra to geometry, when geo- metrical theorems are solved by algebraical in- vestigations; the application of mechanics to geometry, &c.

APPLICATION, in astrology, the approach of two planets to each other.

APPLICATION, in geometry, is used either for division, for applying one quantity to another, whose areas, but not figures, shall be the same ; or, transferring a given line into a circle, or other figure, so that its ends shall be in the perimeter

APPLICATION, in theology, is used by some divines for the act whereby our Saviour transfers to us what he had earned or purchased by his holy life and death. By this application of the merits of Christ we are to be justified, and en- titled to grace and glory.

APPLOT'. To scheme. See PLOT. A wise and thrifty invention, sure and well con- trived, and rightly applotted according to every man's as they suspect his bill to amount Taylor's Dissuasive from Popery. ^\ Lat. applico; ad, and plica ; from TrXf KW, to form plaits or folds. To fold or lay one thing with another, to connect, jlo place in contact

AIM' I A",

AP'PLICATK, APPLICA'TION,

AP'PLICA r, i.r., Ap'pr.ifAi'.i.i'.N r. APPI.ICA in L'ITY

Ap'l'I.IfA'I IVE,

AP'PHCATORY, n. &, adj. or juxta-position, to

knit. Figuratively, to address, to have recourse to, to be constant in some employment,, to fix J the attention, to de-

AP'PLICATOUILY, AP'PLIEU,

APIM I'I.DI.Y, APPLI'MENT, APPLI'ARLK, APPLI'AXCE. >te to some purpose.

A varlet running towards hastily, Whose Hying feet so fast their way apply' d, That round about a cloud of dfcst did fly.

Spenser's Faerie Qtteene. Yes thou must o nohle to conserve a life

In 1),

Shakspcare. p'ratc grown,

relieved. Id.

u ehafd ?

'tis the appliance onlv, . "id

t to the value or rist ; it hath 110 s of ellicacy unto itself iniinite, in Hooker.

, and thine oars Pruv. xxiii. 12.

The birds their quire apply ', airs, vernal airs, Breathing the smell of field and grove, attune The trembling leaves ; while universal Pan, Knit with the Graces and the Hours in dance, Led on th' eternal spring. Milton.

God at last

To Satan (first in sin) his doom app/y'd-

Tho' in mysterious terms, judg'd as then best. Id.

There are but two ways of applying the death of Christ : faith is the inward applicatory, and if there be any outward, it must be the sacraments.

Taylor's Worthy Communicant.

What he says of the portrait of any particular per- son, is applicable to poetry. In the character there is a better or a worse likeness ; the better is a panegyric, and the worse a libel. Dryden.

It were happy for us if this complaint were applica- ble only to the heathen world. Roger.*

The knowledge of salts may possibly, by that little part which we have already delivered of its applica- blenets, be of use in natural philosophy.

Boyle.

All that I have said of the heathen idolatry, is ap- pliable to the idolatry of another sort of men in the world. South.

If a right course be taken with children, there will not be much need of the application of the common rewards and punishments. Locke.

Every man is conscious to himself, that he thinks ; and that which his mind is applied about, whilst thinking, is the ideas that are there. Id.

It is a sign of a capacious mind, when the mind can apply itself to several objects with a swift succes- sion. Watts. Sacred vows and mystic song apply'd,

To grisly Pluto and his gloomy bride. Pope.

His continued application to such public affairs as may benefit his kingdoms, diverts him from pleasures.

Addison.

Ex nihilo nihil fit, is a maxim that applies itself in every case where deity is not concerned.

Cowper's Letter.*

APPOGGIATURA, from appoggiare, Ital. to lean on, in music, a small note inserted by the practical musician, between two others, at some distance; or a species of ornamental note. The Italians are so accustomed to the appoggiatura that composers neglect to write it.

APPOIDIARE, in old records, to lean, or prop up.

APPOINT, ˆ Fr. appointer ; from the

APPOINT'ER, ˆLat. ad punctum, to a point.

APPOINT'MENT.J To point, to bring to a point, to settle or fix the point of time or place, to de- termine, to allot, to prescribe, to ordain ; also to furnish in all points, to provide with all things necessary. Appointment, as applied to office or emolument, is a modern application of the word, from the French.

He said, appoint me thy wages, and I will pay it.

Genesis.

Now there was an appointed sign between the men of Israel and the Hers in wait. Judges xx. 38.

The ways of death be only in his hands, who alone hath power over all flesh, and unto whose appoint- ment we ought with patience meekly to submit our selves. Honker.

That good fellow,

If I command him, follows my appointment ;

I will have none so near else. Sfuikspeare

played.

APP n

The accusations against Columbus gained such credit in a jealous court, that a commissioner was appointed to repair to Hispaniola, and to inspect into his conduct. Robertson.

When any contest arises among the neighbouring States, they frequently make a common deposit of the territory in question, in the hands of Boeticans, and appoint them arbitrators of the dispute.

Hawkesworth's Telemachus. APPOINTEE, a foot soldier in the French army, and distinguished before the revolution; who, for long services, received pay above private sentinels. This regulation, however, has long been suppressed, except in the regiment of French guards, where forty appointees were still retained to each company of 150 men. Till 1670 they had also captains and lieutenants, under the appellation appointees, who without residing in the regiment received their pay. See ANSPES- SADES.

APPOINTEE, in heraldry, is when two or more things are placed touching each other at the points.

APPOINTMENT, denotes a pension, given by princes to persons of worth, to retain them in their service. The term was chiefly used among the French before the revolution. The kings of France gave large appointments to officers in their service. They differed from wages, in that the latter were fixed and ordinary, being paid by the ordinary treasurers, whereas appointments were annual and granted by brevet, for a time un- certain, and paid out of the privy purse.

APPOLE, a town of Hindostan, in the dis- trict of Dinagepoor, in the province of Bengal, 80 miles N. N. E. of Moorshedabad.

APPORTION, i Oldfr.apportioner;

APPOR'TIONATENESS. $ from the Lat. ad por- tionem. To settle the share, part, or allotment, of each.

Try the parts of the body, which of them issue sp' edily, and which slowly ; and, by apportioning the t/.ne, take and leave that quality, which you desire.

Bacon.

To these it were good, that some proper prayer were apportioned, and they taught it. South.

An office cannot be apportioned out like a common, and shared among distinct proprietors. Coll.

APPO'SE, or 1 Lat. apponere, ad and pono,

APO'SE. $ to place to or near. In our

usage to put questions to. It sometimes signi- fies opposition, but the word is altogether ob- solete.

Some procure themselves to be surprised, at such times ; as it is like the party, that they work upon, will come upon them : and to be found with a letter in their hand, or doing somewhat which they are not accustomed ; to the end they may be opposed of those things, which of themselves they are desirous to utter.

Bacon.

By malign putrid vapours, the nutriment is render- ed unapt of being apposed to the parts. Harvey.

APPOSAL OF SHERIFFS, is the charging them with money received on their account in the ex- chequer, 22 &. 23 Car. II. c. 22.

APPOSER ; from ad, to, and pono, to put, an examiner. In the couit of exchequer there is an officer called the foreign apposer. In the office of confirmation, in the liturgy of Edw. VI. (hi; Rubric directs the bishop, or such as he shall appoint, to appose a child ; and a bishop's ex-

amining chaplain was anciently called his poser See last article.

AP'POSITE, -v Of the same derivation as

AP'POSITELY, / appose, but of a different

AP'POSITEN ESS A signification. Placed near,

APPOSI'TION, I or side by side, suited, fitted,

APPOS'ITIVE. J or adapted.

The duke's delivery of his mind was not so sharp, as solid and grave, and appetite to the times and oc- casions. Wotton.

Neither was Perkin (for his part) wanting to him- self, either in gracious and princely behaviour, or in ready and appetite answers. Bacon.

Remarkable instances of this kind have been : but it will administer reflections very apposite to the design of this present solemnity. Atterbury.

We may appositely compare this disease, of a pro- per and improper consumption, to a decaying house.

Harvey.

When we come into a government, and see this place of honor allotted to a murderer ; another, filled with an atheist or a blasphemer ; may we not appo- sitely and properly ask, ' Whether there be any vir- tue, sobriety, or religion, amongst such a people ?'

South.

Judgment is either concerning things to be known, or of things done, of their congruity, fitness, right- ness, appositeness. Hole's Origin of Mankind.

Pope's Essay on Man is the finest philosophical poem in the world ; but it seems to me to do more honor to the imagination than to the understanding of its author : I mean, its sentiments are noble and affecting, its images and allusions apposite, beautiful, and new ; its wit transcendently excellent j but the scientific part of it is very exceptionable. Beattie.

APPOSITION is used in physics, in speaking of bodies which derive their growth from the ad- junction or union of neighbouring bodies. Most bodies of the fossil or mineral kingdom are formed by juxta-positions, or the apposition of parts brought to join and adhere to each other.

APPOSITORIUM, in chemistry, a vessel made of earthenware or glass, of a conical figure, whose biggest end receives the neck of a green retort, while

the narrower is inserted into the re- ceiver. Its use is, where a strong open fire is required, to prevent the red-hot retort, by the immediate contact of its neck, from bursting the receiver.

APPRAISE, or -v Fr. apprecier ; to. set a APPRIS'E, / price ; from the Lat. ad

APPRAISER, > and pretium. To judge

APPRAISE'MENT, orl of the current value of APPRIS'EMENT. J things. By law they (the purveyors) ought to make but one apprisement by neighbours in the country ; by abuse they make a second appritement at the court gate.

Bacon.

On poems by their dictates writ, Critics as sworn appraisers sit ; And mere upholsterers in a trice, On gems and paintings set a price.

Green's Spleen.

APPRAISERS are not a separate profession; appraising being practised by brokers of house- hold furniture, to whom the name is chiefly ap- plied. Upholsterers and joiners are also em- ployed, or any person who is supposed to be skilled in the commodities which are to be ap- praised or valued. They are employed in cases of death, executions upon goods, or of stock

be transferred, or divided, and are called sworn appraisers, from their taking an oath to do justice between parties. They sometimes ap- praise on behalf of both sides, each party agreeing to have the same appraiser ; sometimes in oppo- sition, each party choosing one or more of a side, and sometimes by commission or deputation of trustees, masters in Chancery, &c. If they value the goods too high, they shall be obliged to take them at the price appraised, stat. 11 Edw. I.

APPRECIABLE, in acoustics, opposed to inappreciable sounds. See APPRECIATION.

APPRECATION,) Lat. apprecor, appre-

AP'PRECATORY. \ catum ; ad and precor, to pray to, in order to obtain one's wish. A be- seeching, a praying to.

The heathen Romans entered not upon any public civil business, without a solemn apprecation of good success. Bp. Hall's Art of Divine Meditation.

APPRE CIATE, } Fr. apprecier. To define

APPRECIATION. S the value at which things should be estimated.

To the finishing of his course let every one direct his eye ; and let him now appreciate life according to the value it will be found to have when summed up at the close. Blair.

APIT.F.CIATION, in music. Our organ of hear- ing is unable to judge of sounds beyond a cer- tain degree of gravity and acuteness. The octave below double C, the lowest note of the addi- tional keys in the base of piano-fortes, is ex- tremely difficult to tune; and the additional high notes s>eem more the production of wood than wire. However, the great mathematician, Kuler, gives the extent of eight octaves to human perception ; or from the highest appreciable sound to the lowest ; but Rousseau says we seldom, in practice, exceed five octaves, the common compass of keyed instruments. There is a decree of force or loudness, which we can- not appreciate. The sound of a great bell, for instance, gives no distinct and certain tone, but a confusion of harmonies, which we cannot dis- tinguish in the belfry from the fundamental. It is the same with a wind instrument overblown, and a voice that is forced beyond its natural power; so that those who try to sing loud with a feeble voice are always out of tune.

APPREHEND',

Lat. apprehendo; to

take hold of, to catch. Figuratively, to receive a mental impression, generally of fear, or danger.-

\PPREHEX'DEH, APPREHF.N'SIBLE, APPREIIEN'SION, APPREHEN'SIVE,

AiM'v.rii IN'SIVF.I.V,

A IM1 II Kill.' N S I V I. N r.SS . _

Oh who can h.;ld a tire in his hand, I'y tlunkiiii: on the frosty Caucasus .' Or cloy the hungry ed<_re of appetite, By hare iniaL'ination of a feast ? Or wallow naked ir. December snow, l!y thinking on fantastic summer's beats? Oh no ! the npi-reh, nfi"tt of the jrood (Jives but the greater feeling to the worse.

S/uikxpeare. Richard II, act i. L)ar'>t tbou die ?

Th • sense of death is most in appri'licntion ; And the poor beetle that we tread upon, In corporal sulTerance, feels a panˆ as rreat As when a ˆlant dies. Id. Measure for Measure.

In n;v ailhc linns, knowledge f//)ˆn'/(cnrfa \ iin i> ilie aulli'.ir, \vhat the cauM,- and < ills .

It finds that patience is my sad relief,

And that the hand that caused can cure my grief.

Quartet.

Whenever our neighbour's house is on fire it can- not be amiss for the engines to play a little on our own. Better to be despised for too anxious appre- hftuioru, than ruined by too confident a security.

Burke.

Our natural sense of right and wrong produces an apprehension of merited punishment, when we have committed a crime. Blair.

APPREHENSION, in logic, differs from notion, as the act of the mind whereby a notion is formed, differs from an act of the mind whereby we attend to a notion already formed. Appre- hension is likewise used to express an inade- quate and imperfect idea, in contradistinction to comprehension; and thus it is applied to our knowledge of God.

APPRENTICE, v. & n.ˆ Fr. apprenti, a f learner; from ap-

i prendre, to learn ; J Lat. apprehendo, to

APPREN'TISAGE, APPREN'TICEHOOD, APPRENTICESHIP. take hold of.

Must I not serve a long apprenticehood To foreign passages, and in the end, Having my freedom, boast of nothing else But that I was a journeyman to grief ?

Shaktpeare.

Love enjoined such diligence, tkat no apprentice, no,

no bond slave, could ever be more ready than that

young princess was. Sidney.

He found him such an apprentice as knew well

enough how to set up for himself. Wotton.

This rule sets the painter at liberty ; it teaches him

that he ought not to be subject himself servilely, and

be bound like an apprentice to the rules of his art.

Dryden't Dvfreawy.

Him portion'd maids, apprenticed orphans blest, The young who labour, and the old who rest. Pope.

APPRENTICE, a person bound by indenture to a tradesman, who, upon certain covenants, is to teach him his trade or mystery. Adult apprentices are sometimes taken; but the con- tract is generally made for and by youths of fourteen years of age and upwards.

By common law no infant or person under twenty-one years of age can bind himself ap- prentice so as to entitle his master to an action of covenant; which usually renders it necessary for some of his friends to be bound for him ; but, by the custom of London, an infant un- married, and above fourteen years of age, may bind himself apprentice to a freeman of London, by indenture with proper covenants ; which covenants, by the custom of London, are as binding as if he had been of full age.

By a statute of Elizabeth, it was enacted that no person who had not served an apprentice- ship for seven years, or served as an apprentice, should exercise any art, mystery, or manual occupation : this section of Elizabeth's act was repealed by the 54 Geo. III.; saving the cus- toms and bye-laws of London, and of other cities, and of corporations legally established. Apprenticeship, which sometimes denotes the contract by which an apprentice is bound, and sometimes the term of his service, was unknown to the Roman law ; and arose in modern times out of that system of corporations which formed so distinguishing a feature in the domestic policy

of the middle ages. The principle upon which it was founded, is obviously the notion that labor employed in mechanicid trades requires more skill and experience than are requisite in husbandry. There is no Greek or Latin

word that expresses the idea we attach to this term. Seven years seem anciently to have been, all over Europe, the usual term established for the duration of apprenticeships in the incorporated trades. All such incorporations were once called universities ; the proper Latin name for any in- corporation whatever. The university of smiths, the university of tailors, &c.are, therefore, expres- sions which we commonly meet with in the old charters of ancient towns. This principle of incorporation was also extended to the learned professions. Barristers, in our old law books, are called apprentices, apprentici ad legem, though their novitiate extended to sixteen years, after which they might be called to the state and de- gree of Serjeants, servientes ad legem. And in those learned incorporations, still known by the name of universities, the term of apprenticeship was the same as that prescribed in other arts; seven years being the period allotted for a stu- dent to become a master, and for entitling him to have scholars or ' apprentices ' under him,

In France, before the revolution, the duration of apprenticeships was different in different towns and in different trades. In Paris, five years was the term required in a great number ; but before any person could be qualified to exercise the trade as a master, he was obliged, in many of them, to serve five years more as a journeyman. During this latter term he was called the companion of his master, and the term itself was called his companionship; a kind of anticipation of the equality that has since taken place. In Scotland there is no general law which regulates universally the duration of apprentice- ships. The term differs in different incorpora- tions. Where it is long, a part of it may be generally redeemed by paying a small fine. In most towns, too, a very small fine is sufficient to purchase the freedom of any corporation. The weavers of linen and hempen cloth, the princi- pal manufactures of the country, as well as all other artificers subservient to them, wheel- makers, reel-makers, &c. may exercise their trades in any town corporate without paying any fine. In all towns corporate, all persons are free to sell butchers' meat upon any lawful day of the week. Three years is in Scotland a com- mon term of apprenticeship, even in some very nice trades ; and, in general, there is no country in Europe in which corporation laws are so little oppressive.

Long apprenticeships Dr. Smith considers as altogether unnecessary. Arts, which are much superior to common trades, such as those of making clocks and watches, contain no such mystery as to require a long course of instruction. The first invention of such beautiful and useful machines, indeed, and even that of some of the instruments employed in making them, must, no doubt, have been the work of deep thought and longtime, and may justly be considered as among the happiest efforts of human ingenuity; but when both have been fairly invented, and are well un-

derstood ; to explain to any young man, in the completest manner, how to apply the instruments and how to construct the machines, cannot well require more than the lessons of a few weeks ; perhaps those of a few days might be sufficient. In the common mechanical trades, those of a few days might certainly be sufficient. The dexterity of hand, indeed, even in common trades, cannot be acquired without much practice and experi- ence. But a young man would practice with much more diligence and attention, if, from the beginning, he wrought as a journeyman, being paid in proportion to the little work which he could execute, and paying in his turn for the materials which he might sometimes spoil through awkwardness and inexperience. His education in this way generally would be more effectual, and always less tedious and expensive. The master, indeed, would be a loser ; he would lose all the wages of the apprentice, which he now saves for seven years together. In the end, per- haps, the apprentice himself would be a loser. In a trade so easily learnt he would have more competitors ; and his wages, when he came to be a complete workman, would be much less than at present. The same increase of competi- tion would reduce the profits of the master as well as the wages of the workmen. The trades, the crafts, the mysteries, would be all losers; but the public would be a gainer; the work of all artificers coming in this way much cheaper to market. See Smith's Wealth of Nations, book i. c. 10.

In reply to this it has been well remarked that Dr. Smith seems disposed to overrate the practical effect of these expedients, by which trades and corporations have been always en- deavouring to secure special advantages to them- selves. According to the nature of human society, as it is so admirably explained in Dr. Smith's Work, monopoly can never succeed on so great a scale ; and, on the same principle, we may justly question if the contract between the apprentice and his master had been merely the device of corporations, whether it ever could have come into such universal use throughout Europe. Its best defence, as a system, is that almost all the mechanical trades require, through- out their various operations, such nicety and exactness, that the necessary habits are not formed by the training of years, in place of weeks or days, as stated by Dr. Smith. And it is for the troublesome superintendence of the apprentice during this period that the master exacts compensation, without which he would employ none but finished workmen. But he puts up with the awkwardness of his apprentice, because he expects to be benefited by his labor after he shall be better instructed ; on the same principle that the farmer lays out his capital on the improvement of his land, in expectation of a future increase of produce. The law, indeed, takes cognisance ot the contract, and enforces its fulfilment ; and it may also have encumbered it with absurd regulations. But the contract it- self stands independent both of law and usage, having its origin in the plainest principles of reciprocal expediency. We have

considerable uartialities for the system arising out of its moral

effects on a large and inva.uable class of society. The apprentice becomes the adopted child of a good master. He is a family inmate; subject to restraints, and moulded into habits of obe- dience and virtue; as well as afforded a protec- tion from the vices of youth, not so well to be •ecured in any other way. Indentures were formerly subject to a variety of duties which were imposed by successive acts, and these duties necessarily gave rise to a series of intricate enactments, which frequently occasioned much perplexity and inconvenience. . By the 44 Geo. III. c. 98, s. 8, all those numerous duties were consolidated into one simple duty on the stamp, which varies from fourteen shillings to nineteen guineas, according to the premium which is paid with the apprentice. By the 43 Geo. III. c. 161, an annual duty is imposed of £l. Is. on every apprentice who pays a premium above £20.

APPRESSED, in botany ; appressus, pressed or squeezed close ; an epithet for a leaf calyx and peduncle. Thus, folium appressum is used for a leaf, the disc of which approaches so near the stem as to seem pressed to it ; calyx appressus, for a calyx that presses the peduncle ; and pe- dunculus appressus for a peduncle close to the branch or stem.

A P P RI Z E', v . & n . > From appris, past par-

APPUIS'AL. \ ticiple of the Fr. verb,

apprcndrc, to learn. To inform, to give notice of.

He considers the tendency of such a virtue, or vice ;

ho is well apprised that the representation of some

of these things may convince the understanding, and

some may terrify the conscience. Watts.

It is lit he be apjirised of a few things that may

prevent his mistaking. Cheyne.

But if apprized of the severe attack, The country be shut up, lured by the

scent, On church-yard drear (inhuman to relate) The disappointed prowlers fall. Thomson.

In play the chance of loss and gain ought always to be equal, at least each party should be apprized of the force employed against him. Ste.ele.

AIM-RISING, in Scots law, the name of that action by which a creditor formerly carried off the estate of his debtor for payment. It is now abolished, and adjudications are appointed in place of it.

AIM' ROACH', i\ &, ??.\ YT.approcher ; from Arrr.o Y< n'rit, tproche. Ital. appro

APPUOACH'ABLE, I dare; to draw nigh

Ai'i'iio \< II'MLNT. J or near, to advance.

The way to death is wide1, th' approaches near.

Drydcn's Virgil.

Comets in their afymiarhes towards the earth are imagined to cause diseases, famines, and other such like judgments of (iod. Denham.

Thrice happy they beneath their northern skies, M hn that worst fear, the fear of death, despise; Provoke approaching fate, and bravely scorn To spare iliat life which must so soon return. Rowe. The soul, considered witli regard to its Creator, is like i ne lit" those mathematical lines that may draw nearer to another, for all eternity, without a possi- bility of iniiching it : and can there be a thought so transporting as to consider ourselves in these perpe- tual approaches to Him, who is not only the standard of prrf'Ttion, but of happiness! Spectator.

Hirst is the man' who dares approach the bower, Where dwelt the Muses at their natal hour ;

Whose steps have pressed, whose eye has rnark'd afai The clime that nursed the sons of song and war.

Lord Byron't English Bards and Scotch Reviewers. APPROACH, in mathematics, the curve of equable approach, accessus a quabilis, was first proposed by M. Leibnitz. It is to find a curve, wherein a body descending by the sole power of gravity shall approach the horizon equally in equal times. This curve has been decided by Bernoulli, Varignon, Maupertuis, and others, to be the second cubical parabola so placed that its point of regression is uppermost.

APPROACHES, in fortification, the works thrown up by the besiegers, in order to get nearer a fortress without being exposed to the enemy's fire. See FORTIFICATION.

APPROACHING, in fowling, a term used to express such devices as are contrived for the getting within shot of shy birds. The best method of approaching is by means of three hoops tied together at proper distances according to the height of the man that is to use it, and having boughs of trees tied all around it, with cords to hang it over his shoulders ; a man get- ting into this, conceals himself, and approaches by degrees towards his game in the form of a moving bush. Geese, ducks, and teal, quit the . waters in the evening, and pass the" night in the fields ; but at the approach of morning they return to the water again, and even when on the water they will retire to great distances, on the approach even of a horse or cow, so that the business of the stalking horse is of little use . but this device of approaching by the moving bush succeeds tolerably well with them.

APPROACHING, in gardening, the inoculating or ingrafting the sprig of one tree into another, without cutting it off the parent tree.

AP'PROBATE, v.-) Approbo, from ad and

APPROBATION, >ˆro6o.AccordingtoTooke

APPRO'BATORY. J from Ang.-Sax. prof-ian,

to prove, to try. To accept, like, or allow after

examination, to assent, to express satisfaction, to

commend.

The cause of this battaill, euery man did allowe and approbate ; and to the settynge forth of the same, promysed their Industrie, labour, and all that they could make. Hall. Henry VII. fol. 23. ch. i.

How many now in health Shall drop their blood in approbation Of what your reverence shall incite us to. Shaktpeare. The wise man is happy when he gains his own ap- probation ; the fool when he commends himself to the applause of those about him. Spectator.

APPROBATION, in civil law. It is a maxim among civilians, approbare dicitur qui non improbat. He is judged to approve who does not disapprove. By the civil law, a mere approbation of a crime after commission, does not make a person guilty ; but an approbation attended with fact is equivalent to a command.

APPROBATION, in ethics, a state or disposition of the mind wherein we put a value upon, or become pleased with, some person or thing. The Epicureans will have it to be only self- interest ; according to them, that which deter- mines any agent to approve his own action is its apparent tendency to his private hnppiness. Others resolve approbation into a moral sense, or a principle of benevolence. Dr. Adam

Smith thinks it needless to introduce any new power of perception, in order to account for the principle of approbation ; and apprehends that sympathy is sufficient to account for all the ef- fects ascribed to this peculiar faculty. This system places virtue in utility ; and accounts for the pleasure with which the spectator surveys the utility of any quality, from sympathy with he happiness of those who are affected by it. But the foundation of this, and every similar

Erinciple, can only be ascribed to education and abit; which, as they vary ir> Jifferent countries, sufficiently account for the vs.ious and opposite motives of approbation and disapprobation that take place among mankind.

APPROBATION, in literary history, is used in speaking of recommendations of books, given by persons qualified or authorised to judge of them. Those appointed to grant licences, and imprimatures, under arbitrary governments, fre- quently express their approbation of books. Books were formerly subjected to a licenser in England, by the 13th Car. II. c. 33, which act is long since expired ; and being incompatible with the noble principles of the revolution, has never since, and we hope never will be revived.

APPROMPT, v. Ad and promptus ; from promo, to bring out. To bring or draw out; to make ready for use.

Neither may these pleas serve only to approm pt our invention, but also to direct our inquiry.

Bacon on Learning, book ii.

APPROPINQUATION,) Lsit.appropinquo,

APPROPINQUE'. \ to draw near a

boundary ; from prope, near. An approaching,

progressive nearness.

There are many ways of our appropinquation to God. Bp. Hall's Sermons.
The clotted blood within my hose, That from my wounded body flows,
With mortal crisis doth portend My days to appropinque an end. Hudibras.

APPRO'PRE, -v Yr.approprier;

APPROPRIABLE, j ad, and proprius ;

APPROPRIATE, v. n. & adj. V that which is APPROPRIATION, i one's own, pecu-

APPRO'PRIATELY. ./culiar, proper,

suitable, possessed by a firm, lasting, or natural claim. To appropriate, is to apply to one's own use. The adjective has acquired a relative sig- nification derived from the principal, and means belonging to, suitable, becoming.

Wherof touchende this partie Is rhetoric the science Appropred to the reuerence Of wordes thac ben reasonable.

Gotcer. Con. A. book vii.

He doth nothing but talk of his horse, and make a great appropriation to his good parts, that he can shoe him himself.

Shakspeare . Merchant of Venice. He did institute a band of fifty archers, by the name of yeomen of his guard ; and that it might be thought to be rather a matter of dignity, than any matter of diffidence apprupriate to his own case, h« made an ord nance not temporary, but to hold in suc- •er. Bacon.

it, applied unto the original of man, ining of the world, is more justly appro- ts end. Broicn's Vulgar Errors.

tension for

This cone and the begi pliable unto

The heathens themselves had an apprehension of

the necessity of some appropriate acts of divine wor- ship. StiUingfleet.

Some they appropriated to the gods, And some to public, some to private

ends.Rogcommon.

Marks of honor are appropriated to the magistrate, that he might be invited to reverence himself.

Atterbury.

APPROPRIARE AD HONOREM, in law, signifies to bring a manor within the extent and liberty of an honor.

APPROPRIARE COMMUNAM, in law, signifies to separate and enclose any parcel of land, which before was open common.

APPROPRIATE, in law, is understood of a church or benefice, the patronage whereof is an- nexed to some church dignitary, who appoints a vicar to serve the cure ; the patron receiving the chief produce of it. See APPROPRIATION."

APPROPRIATION, in the canon law, the annex- ing a benefice ecclesiastical to the perpetual use of a religious house or chapter. Appropriations seem to have sprung from the policy of the mo- nastic orders, who were never deficient in subtle inventions for the increase of their own power and emoluments. At the first establishment of parochial clergy, the tithes were distributed in a fourfold division ; one for the use of the bishop, another for maintaining the fabric of the church, a third for the poor, and the fourth to pro- vide for the incumbent. When the sees of the bishops became otherwise amply endowed, they were prohibited from demanding their usual share of these tithes, and the division was into three parts only. Hence it was inferred by the monasteries, that a small part was sufficient for the officiating priest; and that the remainder might well be applied to the use of their own fra- ternities, (the endowment of which was con- strued to be a work of the most exalted piety), subject to the burden of repairing the church and providing for its constant supply. At this period, therefore, they begged and bought, for masses and obits, and sometimes even for money, all the advowsons within their reach, and then appro- priated the benefices to the use of their own corporation. To complete such appropriation, the king's licence, and consent of the bishop, wore usually obtained ; because both the king and the bishop might at some future time have an interest, by lapse, in the presentation to the benefice ; an event which can never happen if it be appropriated to the use of a corporation, which never dies. The appropriation thus made, the appropriators and their successors became perpetual parsons of the church, and must sue and be sued in all matters concerning the rights of the church, by the name of Parsons. See PARSON. At the dissolution of monasteries by statutes 27 Hen. VIII. c. 28, and 31 Hen. VIII. c. 13. the appropriation of several

parsonages, which belonged to these respective religious houses, amounting to more than one-third of all the parishes in England, would have been, by the rules of the common law, disappropriated, had not a clause in those statutes intervened, to give them to the king in as ample a manner as the abb ots, See. formerly held the same at the time of their dissolution. This was not without ei- ample in former reigns, for alien priories (that

is, such as were filled by foreigners only) had been dissolved and given to the crown. And trom these two roots hare sprung all the lay im- propriations or secular parsonages now in the kingdom ; they having been afterwards granted out from time to time by the crown. In modern times, that which is an appropriation in the hands of religious persons has been usually called an impropriation in the hands of the laity. It is computed that there are in England 3845 im- propriations. APPROVE', -i

APPRO'VER, Ang.-Sax. prof-ian, to

APPRO'VEDLY, | prove, to try, and the inten- APPRO'VABLE, ˆ sive particle a prefixed. To APPRO'VAL, [testify excellence or value as APPRO'VANCE, the result of experiment, to APPROVEMENT, I think or judge favorably. APPROOF'. J

A man of his learning should not so lightly have been carried away with old wives' tales from approv- ance of his own reason. Spenser.

There can he nothing possibly evil, which God approvcth, and that lie approveth much more than he doth command. Hooker.

What power was that, whereby Medea saw, And well npjiroi-cil, and praised the better course, \ hen her rebellious sense did so withdraw Her feeble pow'rs.that she pursued the worse?-Da«e.*

() most perilous mouths

That bear in them one and the self-same tongue Either of condemnation orappronf! Shakspeare.

\ am sorry

That he appr-iri-n the common liar, Fame, Wliti speaks him thus at Home.

Id.

Wnuld'st thou a/i/trote thy constancy? Approve First thy obedience. Milton.

For this was all thy care

To stand npprnrnl in sight of God, though worlds Judged thee perverse. Milton.

When past all olVerings to Feretrian Jove,

lie Mars deposed, and arms to gowns made yield. Successful councils did him soon approve, As tit fur close intrigues as open field.

Dri/dcn's Dt'iitk of Oliver Cromwell. liefer all the actions of this short life to that state which \ill never end; and this will upprove itself to he wisdom at the last, whatever the world judge of it now. Tillotson.

There is a censor of justice and manners, without whose nppruval no capital sentences arc to be exe- cuted. Temple.

Should she seem

Suft'niriL' the h ast upprw-unct' to bestow, 'I heir colours burnish, and, by hope inspir'd, They brisk advance. Thomson.

APPROVEMENT, or APPUOVI AMENTUM, is some- times used in ancient writers for an improve- ment, or rise of the value and worth of a tiling. Hence, in some ancient statutes, bailiffs of lords in their franchises are called their approvers. — Approvement is more particularly used where a man lias common in the lord's waste, and the lord enclose part of the waste for himself; leav- ing sufficient common, with egress and regress for tlie commoner.

APPROVER, in common law, one that being indicted of felony, confesses of himself, and appeals or accuses one or more others to be innlty of the same ; so called, because he must prove what he hath alleged in his appeal. This proof was anciently either by battle, or by the

country, at the choice of the appellee ; and the form of this accusation may be found in Cronipt. Just. 250. But as all appeals of battle are now abolished, the approver can plead no confession at the bar ; and his right to indemnity rests onlj on usage. According to the opinion of Judge Blackstone, an approver ought not to be pro- secuted for that or any previous offence of the same degree. But it has since been decided that an

accomplice has no claim to mercy beyond the offences in which he has been connected with the prisoners, and concerning which he has previously undergone an examination, as appears from the following cases : —

George Duce, a prisoner in Nottingham gaol, for felony, was admitted king's evidence against Richard Barber, tried at the Lent assizes, 1801, for the town of Nottingham, before Graham B. for receiving stolen goods from a bleaching ground; and on his evidence, fully and satisfac- torily given, Barber was convicted. Duce was of course discharged from the gaol at Nottingham ; but being under a charge of horse-stealing at Derby, he was sent to the gaol of that county, and afterwards tried before the same learned judge for that offence ; was convicted, and re- ceived sentence of death, with respite for trans- portation. But a doubt arising whether his case did not fall within that equitable claim to mercy, which is usually indulged to accomplices becom- ing witnesses for the crown, the question was submitted to the judges, who were unanimously of opinion, that the pardon was not to extend to offences for which the party might be liable to prosecution out of the county, and the prisoner underwent his sentence.

At Northampton Lent assizes, 1818, Thomas Lee, an accomplice, was, upon application by the counsel for the crown, taken before the grand jury, and examined as a witness on the trial of William Franklin and Abraham Cook, for a highway robbery, and conducted himself with propriety, and told the truth. On the subsequent day, the said Thomas Lee was tried and con- victed of burglary. Garrow B. submitted to the judges whether it were proper to prosecute him after he had been received as a witness for the crown: the judges held, that there was no legal objection to the prosecution, nor any gene- ral rule upon the subject ; and the prisoner has been transported for life.

APPROVERS OF THE KING, are those who have the letting of the king's demesnes in small ma- nors, &c. In the statute of the 1st of Ed. V. c. 8. sheriffs are called the king's approvers.

APPROXIMATE, w. & adj. } Ad, andprar-

APPROXIMA'TION, >imus, nearest.

APPROX'IMANT. j To approach,

to bring or come near.

Unto the latitude of Capricorn, or the winter sol- stice, it had been a spring ; for, unto that position, it had been in a middle point, and that of ascent or ap- proximation. Brown's Vulgar Errors.

The approximations and recesses of some of the little stars I speak of, suit not with the observations of some very ancient astronomers. Derham.

Shakspeare approirimatet the remote, and familiar- ises the wonderful, the event which he represents will not happen j but, if it were possible, its effects would probably be such as he has assigned. Johnson.

APPROXIMATION.

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APPROXIMATION, among arithmeticians and algebraists, a continual approach nearer and nearer to the root or quantity required, while doubtful of the possibility of ever arriving at it exactly. Various methods of performing this have been given by mathematical writers, which, as it is nothing but an infinitely converging series, some come quicker, others slower towards the truth. Although by such an approximation the perfectly exact value of a quantity cannot be discovered, yet, for practice, it may be found sufficiently correct, thus ˆ72 = 1-41421356, &c. =

41 4

the approximating series 1 + — -I 1 — —

10 100 lOOO

2 1

+ Toooo + ' &c- or suPP°sin§ ˆ — To' equal to

4142

the series lx — H — 3 + ~3 H j-'~l~°cc. = .r +

4 r — » + x— 3 + 4 x— s + 2 a—4 +, &c. Ap- proximation is probably most simple and most generally performed by the rule of Double Position, or, as some call it, the Method of Trial and Error ; but, among the numerous me- thods for finding the roots of pure powers, undoubtedly the best is that which was dis- covered by Dr. Hutton, and published in the first volume of his Mathematical Tracts, for it is not difficult to perform, and it is easily remem- bered. It is this : If N denote any number, out of which it is wished to extract the root whose index is denoted by r, and if n be the near-

,. r + 1. N 4-r — l.n'

est root first taken ; then shall • — ; –

r — 1. N +r+l. nr

X n be the required root of N very nearly; or as r — 1 times the given number added to r+1 times the given number added to r — 1 times the nearest power, so is the assumed root n, to the required root very nearly. But if a root still nearer is required, this last value, thus found, is to be used for n in the same theorem, and the operation repeated with it ; and so on repeating the operation as often as is' necessary. Which theorem comprehends all the rational formulae of Iladley and De Lagny. — For example, Let it be required to double the cube, or to find the cube root of the number 2. Here r=3 ; consequently r+l=4, and r— 1=2 ; and therefore the gene-

4N + 2ra3 2N + n3

ral theorem becomes X n or

2x +4w3 N + 2»3

X n for the cube root of N ; or as N + 2/i3 ; . 2.\ + n3 : ; n ; the root sought nearly. Now, in this case, N = 2, and therefore the nearest root n is 1, and its cube «3 = 1 also: hence N + 2rH = 2 + 2 = 4, and 2N + n3 = 4 + 1 = 5 ; therefore, as 4 ' 5 ' : 1 : \ or 1J = 1"25 the first

5

approximation. Again, taking n = — • , and n3 =

125 U ,03—0. 25°-

—— ; hence N + 2«3 = 2 + ^

64

and

125

64

381

= ; therefore, as 378

64 '

I 381, or as 126 : 127 : '. | I ^=1'25992, which is the cube root of 2, true

in all the figures.

And if —be taken for a new value of n, and

the process repeated, fresh numbers will arise.

The method by which Sir Isaac Newton per forms the approximation of roots is this: First, take a value of the root, as near as can be dis- covered, by trials, either less or more ; then, as- suming another letter to denote the unknown difference between this and the real ralue, sub- stitute the sum or difference of the approximate root or unknown letter into the equation, in place of the unknown letter or root of the equa- tion, by which a new equation will be produced, having only the assumed small difference for its root or unknown letter ; and, from this equation, the nearest value of this small assumed quantity must by every means be found. Next, for the small difference between this last value and the real one, assume another letter, and unto the last equation substitute their sum or difference, which will produce a third equation, involving the second assumed quantity, the near value of which is found as before. Carrying on the process as far as we choose, and connecting all the near values together by their proper signs, a series will be formed, approaching successively to the real value of the root of the first or proposed equation. There are various ways of finding the approxi- mate values of the small assumed differences: the following is Sir Isaac Newton's method : The quantity sought being small, its higher powers decrease more and more, so that disregarding them will lead to no error of consequence. All the terms having in them the second and higher powers, he therefore neglects, retaining only the first power and the absolute known term ; and from this simple equation he always finds the near value of the assumed unknown letter, in a manner the most concise and facile. — For ex- ample, suppose it were required to find the root of the equation x2 — 5x=3l,orx — 5x — 31 = 0: Here the root x, it is evident, is nearly = 8; for x therefore take 8 + z, and substitute 8 f z for x in the given equation, and the terms will be thus:*

*x1— 64 + 16z + 2**

— 5x— — 40 — 5z

— 31= — 31 _

*the sum is — 7 + llz + z2— 0. Then, rejecting z\ it is 11.Z — 7 = 0, and * = £ = '6363, &c. or = 6 -nearly. Assume now z = '6 + y : then*

11 = 6-5 + \y —7 =—7*

-

the sum — -04 + 12-2y + / = 0,

‘04

where y r: – = -003278 nearly.

12-2

Assume y = -003278 — v : then

y» =. -000010745284 — -006556u + v2 12-2y = -0399916 — 12‘2 — v

— -04 = — ‘04

the sum ‘000002345284 — 12-206556?; + tf — 0, -000002345284 .^o^gs.

12-206556

Hence then, collecting all the assumed differ- ences, with their signs, it is found that x = 8 + y — v— 8 + -6 + -003278 — -000000192133=: 8-6003277607867 the root ot the equation re- quired, by Newton’s method. In another ex

APP

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APR

ample, taking the cubic equation y3 — 2y — 5 — 0, he proceeds thus :

y is nearly — 2 ; take it therefore y — 2 + p ; then y3— 8 + 12/j + 6/r + p3 — i=— 4— 2>

— 5 ~ — 5

the sura —1 + 10p + 6pf + p3 = 0; hence p rz, = -1 nearly. Assume p n -1 +9; then p’ = 0-001 + O-OS + °‘3?* + 9 + 6>2 r= 0-06 +1-2 +6 + 10^ —1 +10

-

the sum 0-061 +11-23? +6-3ja + 53 = 0. hence q — — 0‘0054

nearly. Assume q •=. — 0-0054 + r ; then 93n— 0-000000 1 57464 + 0- 00008748r,&.c + 6-3?5=:+0-000183708 +0‘06804r, 8tc. + 11-23?=— 0-060642 +ll‘23r

-

the sum +0-000541550536 + 1 M6204748r; hence r — — 0-000048517, &c. Hence, y— 1 + /) +

‘ =z 2 +0-1 — 0-0054 — 0-000048517

— 2-094551483,

the root of the equation »/3 — 2y ~ 5. And the approximation of the roots of literal equations is performed by Sir Isaac Newton in the same manner.

Other methods of approximation to the roots of equations may be seen in Clairauts Algebra, in Newton’s, Simpson’s, Bonnycastle’s, and Freud’s Algebra, and in Iluttou’s Course of Mathematics. Consult also J. Bernoulli, Ope- rum torn. iii. Taylor, in 1’hil. Trans, an. 1717, Simpson’s Essays, his select Exercises, and La Grange in Mem. Acad. Berlin, an. 1767 : see also EQTATIO.NS.

APPROXIMATION, in medicine, a magnetical kind of cure, or method of transplanting a disease into sonic other subject, whether animate or vegetable, by bringing it in immediate contact with the patient.

AI’Pl I, in the menage; q. d. rest or stay upon the hand ; is the reciprocal effort between the horde’s mouth and the bridle hand, or the sense of the action of the bridle on the hand of the hoist-man. A just appui of the hand is the nice bearing up or stay of the bridle, so that the horse, being awed by tin; sensibility and tender- ness of his mouth, dares not rest too much upon the bit-mouth, nor check or beat upon the hand to withstand it. A horse is said to have no ap- pm when he is too apprehensive of the hand and cannot bear the bit. He is said to have too much .ip|iui when he re>ts or throws himself too much upon the bit. Horses designed for the army “M’jht to have a full appui upon the hand. To •jive a horse a good appui he should be galloped, and put often back.

A1TI l.SI‘7,) Ad, pclli>, pulsum, to beat or

AriT:.’.-roN. S dash. A beating or dashing against.

A i. h.Tiir fever i-; the innate heat kindled into a destructive; fire, through the (ippnhe of sahne steams.

Harvey-

In vowels, the passage 'if the mouth is open and free, svirhout any ajifiiilw of an organ of speech to another ; l.ut. iii all consonants, there is an apjmlsc of

Holder.

APPULSE, in astronomy, the approach of any

flanet to a conjunction with the sun, or a star, t is a step towards a transit, occultation, con- junction, eclipse, &c. M. Flamsteed, M. de la Hire, and others, have given observations of the moon's appulses to the Pleiades.

APPURTENANCES, or APPERTINANCES, in common law, things belonging to some other as their principal. Appurtenances may either be things corporeal, as hamlets belonging to a chief manor; or incorporeal, as liberties and services of tenants.

APREECE, AP RHYS, or RHESE (John), native of Wales, an eminent antiquary born in the early part of the sixteenth century, and in 1534 graduated in civil law at Oxford. One of his principal works, entitled Fides Historiae Britanniae, is preserved in manuscript in the Cotton library. His other productions are: Historiae Britanniae Defensio, printed in 1573; A Description of Wales, in quarto, 1663; a treatise De Variis Antiquitatibus, and Defensio Regis Arthuri. He died in the reign of queen Mary.

APRI, the name of a kind of vermes found in the intestines and lungs of the boar.

APRICARIUS, in ornithology, a species of charadrius, about the size of the golden plover, found in the northern parts of Europe. It is the pluvialis aurea freti Hudsonis of Brisson; pluvier dore a gorge noire of Buffon ; spotted plover of Edwards ; and alwargrim plover, Arct. Zool. and Lath. Gen. Syn.

APRICOT, in botany. See PRUSUS.

APRICOT WATER. To a quart of water put six or eight apricots sliced, and the kernels bruised ; boil the whole to extract the taste ; and when cold add four or five ounces of sugar. When that is dissolved, strain it.

APRIES, or PHARAOH HOPHRA, the son of Psammis king of Egypt; prophesied against by Jeremiah and "Ezekiel. He oppressed his sub- jects, ruined Sidon, and some say he put Jere- miah to death. He thought neither God nor man could dethrone him ; which, however, was done by Amasis,

and he himself was strangled. See AMASIS.

APRIL, in chronology, Aprilis, i. e. Aperilis, because the spring, aperit, opens or commences with this month. Virg. Georg. 1. 1, T. 217.

Candidas auratis aperit cum cornubus annum Taurus.

When, with his p olden horns in fall career, The Bull beats down the barriers of the sea, And Argo and the Dog forsake the northern sphere.

Dryden.

It was the second month of Romulus' year and the fourth of Numa's year, which began in January. Romulus consecrated this month to Venus, the mother of ./Eneas. Ovid. Fast. 1. 1, v. 39. April is represented by a young man in green, with a garland of myrtle and hawthorn buds ; in one hand primroses and violets, in the other the sign Taurus. It is the second month according to the computation of astronomers It contains thirty days.

A PRIORI, a kind of demonstration. See DEMONSTRATION.

APS

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APT

A'PRON,) Of unsettled etymology; per- A"PRONED. i haps from the Fr. naperon, a large cloth. In the Celtic, apparn is found. A cloth hung before to keep the other dress clean.

Give us gold, good Timon : hast thou more? — Hold up, you sluts,

Your aprons mountant. Shakspeare.

The nobility think scorn, to go in leather aprons.

Id.

How might we see Falstaff, and not ourselves be seen? — Put on two leather jerkins and aprons • and wait upon him at his table as drawers. Id.

In these figures, the vest is gathered up before them, like an apron, which you must suppose filled with fruit. Addison.

APRON, in naval architecture, is a piece of curved timber fixed behind the lower part of the stern, immediately above the foremost end of the keel.

Apron is also a name given to a plat- form or flooring of a plank, raised at the en- trance of a dock, against which the dock gates are shut.

APROSIO (Angelico), a monk of Genoa, the author of several books, chiefly under fictitious names ; but best known by a curious work en- titled Bibliotheca Aprosiana, Bologna, 1673. He died in 1681.

APSINTIIATUM, in physic, a kind of potion to strengthen the stomach. See ABSINTH ITES.

APSIS ; aˆ/tc, Gr. or absis, Lat. ; the arched roof of a house, room, or oven, &c.; also the ring or compass of a wheel.

APSIS, in ecclesiastical history, the inner part in the ancient churches, wherein the clergy sat, and where the altar was placed. It is supposed to have been thus called because covered with an arch. The word is more particularly used for the bishop's throne, in ancient churches ; called apsis gradata, because raised on steps above the ordinary seats. Apsis is also used for a reliquary, or case wherein the relics of saints were anciently kept, which was round or arched at the top, and commonly placed on the altar : it was usually of wood, sometimes also of gold and silver, with sculptures, &c.

APSIS, apsides plural, aˆ/ic, is applied, in astronomy, to two points in the orbits of planets, in which they are at the greatest and the least distance from the sun or earth. The higher apsis is more particularly denominated aphelion, or apogee ; the lower, perihelion, or perigee.

APSYCHIA; from a privative, and i/wˆ?;, soul ; in medicine, a swooning or fainting away, called also lypopsychia and apopsychia.

APSYCTOS: from «, and iˆv\it>, to cool; a word used by the ancients as the name of a stone found in Arcadia, and of the color of iron, the quality of which they say was, that when once heated red hot it would never grow cold again. We have some stones indeed in England, that when once heated will retain a warmth a long time, but all the other accounts seem groundless ; our warming stone used in Corn- wall and Yorkshire to lay at the feet of people's beds, will retain warmth eight or ten hours; and \here is a sort of red stone cut out of the salt mountains near Cordova, and formed into broad tiles called ruggiolos by the Italians, which, be- ing once well heated, will retain a sensible

warmth twenty-four hours ; but these do not all come up to the qualities of this imaginary stone of the ancients.

APSYRTUS, in the materia medica of the an- cients, a name given to the common marrubium. or horehound.

APT', v. & adj. -\ Apto (Gr. a?rra/), to make

AP'TITTJDE, I things fit, to put in order.

APT'LY, f^-0 Jom> nt> render suitable

APT'NESS, i or convenient. Hence to

AP'TISE. j possess the requisites for an

office, or employment, or situation. To manifest readiness or dexterity.

PHILOST. A play, there is, my lord, some ten

words long,

Which is as brief as I have known a play ; But by ten words, my lord, it is too long ; Which makes it tedious ; for in all the play There is not one word apt, one player fitted.

Shaksjteare. Midsummer Night't Dream.

HAM. Haste me to know't, that I, with wings »«s

swift

As meditation, or the thoughts of love, May fly to my revenge.

GHOST. I find thee apt,

And duller should'st thou be than the fat weed That roots itself in ease on Lethe's wharf, Would'st thou not stir in this. Id. Hamlet.

Devotion, when it does not lie under the check of reason, is apt to degenerate into enthusiasm.

Addison.

We should compose our minds into a frame of re- verence and awful regard to the majesty of God, into a lowly, calm, and tender disposition of heart, apt to express all respect due to his presence, fit to admit the gracious'illapses of his Holy Spirit ; very susceptive of "all holy and heavenly affections, which are suitable to such a communion or may spring from it. Barrow.

It has been said, that certain melodies and harmo- nies have an aptitude to raise certain passions, affec- tions, and sentiments in the human soul. Beattie.

APT, a town in Upper Provence, situated on the river Calaron, and now the capital of an ar- rondissement in the department of the Vaucluse. In the time of the Romans it was a place of con- siderable note, and it still contains a number of Roman antiquities. Here are considerable ma- nufactures of woollen cloth and wax candles ; and a trade is carried on in wine and fruit, particularly plums. Population by the last returns 4621. The arrondissement comprises the eastern part of the department, and has about 48,800 inha- bitants. Ten leagues north of Aix, and ten and a half east of Avignon. Long. 5° 28′ E., lat 430 50′ N.

APTA. See APT.

APTERA, a classical name ; from a negative, and irTtfov, awing; used by Linnaeus for the seventh order of insects, comprehending such as have no wings. It consists of fourteen genera and 297 species. Hill divides this order into two classes : viz. 1. A. anarthra, insects which have neither wings nor limbs ; and 2. A. poda- ria, insects which have limbs but no wings.

APTERA, in entomology, the specific name of an insect of the ptinus genus.

APTERA, or APTERON, a town of Crete, on the west side of the island, twelve miles south of Si- don, and as many from the Sinus Amphimales. According to Stephanus, it was so called from the Sirens, who, being there vanquished by the

Muses in singing, stripped themselves of their wine;s and leaped into the sea.

APTERUS, in entomology, a species of lus- ter found in Italy. Also a species of curculio, the curculio cruciatus of Degeer, found at the Cape of Good Hope. Also a species of cimex, found in Europe by Fabricius.

APUA, in ichthyology, the name of a small sea-fish, supposed by many to be produced by the slime and mud of the shores. There are two species of

this fish: viz. 1. A. phaleriea; and 2. A. vera.

APUA MEMBRAS, in ichthyology, a name by which some have called the pilchard.

APULEIUS (Llicius), a Platonic philosopher, universally known by his celebrated work enti- tled the Golden Ass. He lived in the second cen- tury under the Antonines, and was born at Madaura, a Roman colony in Africa. He studied first at Carthage, then at Athens, and afterwards at Rome, where he learned the Latin tongue without the help of a master. He was a man of an inquisitive disposition, especially in religious matters : this prompted him to take several journeys, and to enter into several different societies of religion. He spent his whole fortune almost in travelling ; so that at his return to Rome, when he was about to dedicate himself to the service of Osiris, he had not money enough to defray the expense attending the ceremonies of the reception, and was obliged to pawn his clothes to raise the necessary sum. He sup- ported hiu, suit' afterwards by pleading causes; and as lie was a great master of eloquence, and of a subtle genius, many considerable causes were entrusted to him. He married a widow named Pudentilla, who was very rich. This mar- riage brought upon him a troublesome law-suit. The lady's relations, pretending he made use of sorcery to uain her heart and money, accused him of being a magician before Claudius Maxi- mus, proconsul of Africa Apuleius was under no ureat difficulty of making his defence. ' Do you nvike a wonder (said Apuleius in his de- fence i that a woman should marry again, after having lived a widow thirteen years? it is much more wonderful that she did not marry again sooiu r. You think that magic must have been employed to prevail with a widow of her age to marry a young man ; on the contrary, this very circumstance shows how little occasion there was lor nnuic.' The Apolojry is still extant, and is reckoned a very fine piece. Apuleius was inde- fatigable in his studies ; and composed several books in verse and prose; but most of them are lost. He took great pleasure in declaiming, and was heard generally with great applause. When he declaimed at Oeca, the audience cried out with one voice, that they outrlit to confer upon him the honor of citi/en. The citizens of Car- thaue heard him with great satisfaction, and erected a statue to him ; and se\eral other cities did him the . > amc honor. Several critics have publish 1 nntes mi Ajmleins's (iolden Ass, and there li;ive been translations of it into different lanmnu'es. T!n < humorous production was by many lu-htved to],.• a true history ; and among the rest St. Augustine entertained his doubts, while bishop \ arburton deems it a work writ

ten in opposition to Christianity, and with a view to recommend the Pagan religion ' as a cure for all vices.' The same learned author also explains the beautiful allegory of Cupid and Psyche, which makes a long episode in the

Golden Ass, upon the same principles. Dr. Lardner was of a different opinion, and probably Bayle comes nearest the truth, who regards this eccentric pro- duction as a mere satire on the frauds of the dealers in magical delusion, and on the tricks of priests, and other crimes, both of a violent and deceptive character, which are so frequently practised with impunity.

APULIA, now called Puglia, a territory of Italy, bordering on the Adriatic, and extending from the river Frento to Tarentum in length, and from the Adriatic to the Lucani in breadth. It was divided into Apulia Daunia, now called Puglia Pinna, or the Capitanata ; and Apulia Peucetia, now Terra di Barri. Apulia abounded in sheep, which yielded the finest wool.

APULUS, in entomology, a species of sphinx, a native of Surinam.

APURE, a large river of South America, in New Granada, which has its rise in one of the ridges that diverge from the eastern chain of the Andes, and penetrate the Caraccas in a north- east direction to the Atlantic Ocean. The moun- tains in which it has its source are in the neighbourhood of St. Christopher, a dependency of the province of Santa Fe. The length of this river is 170 leagues, of which forty are from north-east to south-east, and the remainder from west to east. It then takes its course to the south, to join the Orinoco ; and in its course the volume of its waters is increased by a number of other rivers, of which some are navigable, and the more useful, because, after having irrigated a greater part of Venezuela, they serve for the conveyance of the produce which springs from the luxuriance thus afforded to the soil. These rivers are the Tinaco, San Carlos, Cojeda, Agua- blanca, Acarigua, Areyaruo, Hospiria, Abaria, Portuguesa, Guanure, Tucupido, Bocono, Mas- parro, La Yuca, St. Domingo, Tisnados, &c. These successively confound their waters in the immense plains of Venezuela. Almost the whole of them are united above Santiago, and form a considerable volume of water, which, at twelve leagues below that place, throws itself into the Apure, at the distance of twenty leagues to the north of the Orinoco. This quantity of water, being too much for the bed of the Apure to contain, is forced into a division of many branches, and so falls by several mouths into the Orinoco. Its rush is so violent that the Orinoco, although it be a league in width, resigns its cur- rent entirely to the influence of the waters of the Apure for upwards of a league. The shock of the two streams is so violent, that it occasions a great agitation in the middle of the river ; and such dreadful eddies and whirlpools are formed, that even the crafty and dexterous Indian has been known to shudder at them. The Apure runs for the space of three leagues more, amicably with the Orinoco, though its waters are still distinguish- able from their bright and crystal appearance, until they become at length confounded with the dark stream of the Orinoco. Upon the banks of

•he Apure, and its tributary streams, there are numerous commons, the animals of which are very much esteemed. They are composed of beeves, horses, and mules, but principally of the fast. Their exportation is naturally by Guiana, on account of the advantage afforded by the pastures in that route to the very mouth of the Orinoco. All that portion of Venezuela which at the present day forms the new province of Varinas, and all the southern part of the province of Venezuela itself, are induced, by the easy means of conveyance afforded by the river, to send their coffee, cotton, and indigo to Guiana, instead of carrying them on the backs of mules to Caraccas, or to Porto Cabello, and travelling 100 leagues in a country almost impassable, and inundated by rivers that continually overflow their banks. See Humboldt's Personal Narrative, vol. iii.

APURIMA, or APURAMAC, a rapid river of Peru, in South America. It rises in the pro- vince of Abancay, in Peru ; and afterwards pursues a northerly course, passing through Cuzco : after running 120 leagues through the mountains of the Andes, it enters the Ama- zons under the name of the Ucayale, in such an augmented stream that it is not easy to say which is the tributary one. It traverses the high road which leads from Lima to Cuzco, and is crossed by a bridge made of thong or cords of 80 yards long and three wide, at which there is paid a toll for all goods passing.

APURWACA, a river of Guiana, in South America, which is one of the most considerable in the country.

APUS, Avis Indica, in astronomy, a constel- lation of the southern hemisphere, placed near the pole, between the triangulum australe and the cameleon, and supposed to represent the bird of paradise. The number of stars contained in this constellation is eleven in the British cata- logue ; in Bayer's maps 12; but more numer- ous in La Caille's catalogue : the largest is only of the fifth magnitude.

APUS, in ornithology, a species of hirundo, commonly known by the name of swift or black marten. This is hirundo apus of Aldrovandus ; martinet noir, and grand martinet of Buffon. They inhabit the whole of the European conti- nent, and have also been noticed at the Cape of Good Hope, and Carolina in North Ame- rica.

APUS, in entomology, a species of monocu- lus. It is the binoculus cauda

biseta .of Geof- froy ; binoculus (palustris) oculis superis, testa postice truncata, cauda biseta of Mull. Zool. Dan.; limulus palustris, Mull. En torn. ; and apus cancriformis, Scaef.

APUTTASY, in botany, a name given by the people of Guinea to a tree, a decoction of which is greatly used among them for washing the mouth to cure the scurvy in the gums, and preserve the teeth.

APYCNI, in ancient music, was used for such chords or sounds of the scale as could never enter the spissum. They were stabiles, or fixed. Apycni suom, in music, sounds dis- tant one or more octaves, and yet concord.

APYCNOS, in music, is said of the diatonic

genus, on account o. Us having spacious inter- vals, in comparison of the chromatic and enhar- monic.

APYRENOS properly signifies without ker- nels. The Greek writers, however, did not always keep strictly to this sense of the word, but sometimes applied it to such fruits as had fewer and softer kernels than others of the same kind.

APYREXY, in medicine ; from the privative a, and Trvp, heat ; the intermission of a fever, or ague.

APYROI, in antiquity, a denomination given to altars whereon sacrifice was offered without fire.

APYROMETALLUM, in metallurgy, aname by which some authors have called gold, from its resisting the force of fire.

APYRON, something that has not undergone the fire. In this sense, sulphur vivum, or native sulphur, is particularly denominated apyron. — Some authors also give the denomination apyron to a modern process for making aethiops mineral, without fire, by trituration alone.

APYROUS, a word applied to denote that pro- perty of some bodies, by which they resist the most violent fire without any sensible alteration. Apyrous bodies ought to be distinguished from those which are refractory. Refractory substances are those which cannot be fused by violent heat, whatever other alteration they may sustain. But a body, properly speaking, apyrous, can neither be fused by heat, nor can undergo any othet change. Diamonds were long thought to be possessed of this property. But some late expe- riments have shown, that diamonds may be en- tirely dissipated or evaporated by heat, and are therefore not entitled to be ranked among apyrous substances. Perhaps there is no body in nature essentially and

perfectly apyrous. But it is sufficient that there be bodies apyrous relatively to the degree of fire which art can produce, to entitle them to that name.

AQUA. Latin. A word signifying water, very much used in chemical writings.

AQUA is by some supposed to be compounded of a and qua, i. e. from which ; alluding to the opinion that water is the basis of all bodies. The word frequently makes part of the name of medi- cines and other menstruums, which, though in a liquid form, possess powers and qualities very different from those of water.

AQUA CHRYSULCA, a subtle kind of aqua regia, called also aqua pugilum. Three parts of sal ammoniac, and two of nitre, injected into a tubu- lated retort made red hot, yield this acid com- pound spirit.

AQU BAJALUS, an ancient name for the clerk officiating under the chief minister, whose busi- ness was to assist him in carrying the holy water. The office corresponding to it at present is that of the parish clerk.*

AQU CALIDJE, the ancient name of the city of Bath, mentioned by Ptolemy as belonging, to the ancient Belgse, and famous for its hot 'waters. See BATH. "**

AQU CALID*, a Roman colony between the rivers Serbetes and Sams in Mauritania Cre- sariensis.*

AQU.Y CELEN i.t, AQUA CILINJE, an ancient vil- lage in Gallicia, seated on the Minho, mentioned by Ptolemy and Antonine as famous for its mine- ral waters. It is now named Caldas.

AQU.K CuTiMvE, a lake of the Sabines, in the territory of Reate, said by Seneca and Pliny to have had a floating island on it. Varro calls it

distilling putrified nitre with calcined vitriol, or rectified oil of vitriol, in a strong heat ; the liquor, which rises in fumes red as blood, being collected, is the spirit of nitre or aqua fortis; which serves as a menstruum for dissolving silver, and all other metals except gold. It is divided into double

and single, the single being

Lacus Cutiliensis,and supposed it to be the centre only half as strong as the other. Artists who are

of Italy. The waters were medicinal, and ex- in the habit of using these two sorts of acids,

tremely cold, good for a weak stomach and in call them generally aqua fortis ; and only the

weak nerves ; they seemed to act by a kind of more concentrated acid, which is much stronger

suction which approached to a bite. Vespasian than even the double aqua fortis spirit of nitre,

used them every summer ; and died there. It The aqua fortis used by dyers, brass-founders,

is now called Lago di Contigliano. AQUEDUCT. See AQUEDUCT.

&c., is not only weaker than spirit of nitre, but contains a portion of vitriolic acid. It may

FLAVIN, a town on the confines of Gal- be made by distilling crude nitre with calcined licia and Portugal, so called from the Vespasians. vitriol, equal parts. The nitrous acid expelled by It is now called Chiaves, and is a mean hamlet : the vitriolic, will rise in red fume, and pass into but the ruins of its bridge testify of its former the receiver. The vitriolic acid, uniting with the

grandeur.

AQU a: GRANII, the ancient name Chapelle.

AQU/E II. \rsius, in the civil war, a right of draw- ing waterand carrying it through another's ground.

AQU.E HEI.VKTIJE, a place described by Taci tus as a municipal town, and much frequented for its excellent water ; and though he does not mention its name, Cluverius supposes it to be Baden in Switzerland, on the rivulet Limat, which soon after falls into the Aar. It is called the Upper, to distinguish it from another called tiie Lower Baden, in Alsace.

AQU.F. M ANIL IS ; from aqua, water, and ma- IHIS, hand; is used, in ecclesiastical writers, for

alkaline basis of the nitre, forms vitriolated tar- of Aix-la- tar ; but, there being myre vitriolic acid than is requisite to saturate the alkali, the surplus rises with the nitrous acid; aqua fortis, therefore, is a mixture of these two acids. It may also be made by distilling crude nitre, with somewhat more than half its weight of oil of vitriol ; or by mixing one part of oil of vitriol, with nine parts of pure spirit of nitre.

AQUALICULUS, in anatomy, a name given by some to the region of the body wherein the trunk terminates, and the thighs commence.

AQUA MARINA, of the Italian lapidaries, is of a sea or bluish green. This stone seems to me to be the beryllus of Pliny. It ranks but low in

a laver, anciently placed in the vestibules of value among precious stones, but was often used

churches to wash the hands in. by gem sculptors.

AQU.S MF.UOM, a place famous for the defeat of AQUAMBOE, one of the greatest kingdoms

.labin: supposed to be the lake called Sama- on the coast of Guinea in Africa, stretching

twenty miles in breadth, and ten times that space in length, from east to west. According to Bos- man, the coast is divided into a great number of petty royalties, but all of them subject to the

chonitis, or Semechoaitis, by Josephus ; into \vhich the river Jordan falls, before it comes to the sea of Galilee.

AQU.-V. PAN xox i.t, the ancient name for Baden.

AQU.-K P.vi AVIN.I:, baths in the territory of king of Aquamboe, who indiscriminately uses an

unlimited authority over them, and the meanest

Venice, near Padua, called 1'ontes Aponi, by]. ivy and Martial ; now bairn i d'Abano.

Aqu.r. I'AVOII is used by some for the hydro- phobia.

AQI .r. (ifivriAN.i:, a place put by Ptolemy, ;.i room of the Aqua- Cilina: of Antonine; and now suppo>ed to be Sama, a town of Gallicia, on a rivulet of the same name, three leagues south of Lu.;o.

Ai..r.r. SEXTI/T;. SeeCivriAS AQTKNSIS.

A'jr.t Si n ir.i.L.T,, or AQU/T, STATIELLORUM, ' town in l.iicuria, on the river Bormia ; now i ailed Af Qri. which see.

A'.ir.r. TAD; i, ai anciuit town in Tuscany.

i'unous fnr its luiiis, at tiie distance of three

miles from the sea, said to have been discovered

'vabr.il, v.hetice tin' appellation. The ruins

f these i alii.- are still to be seen. The town

.S DOW' called Ai i.H \1'1.MH NIK, V. hicll SCJ6.

AQI.'A IAIIM i A, extinguished water, is aqua •orus into \hich water has been poured, in order ' > qualify it, and render it less coriuiive. It is ••e,d to si-p,ir,:te tiie silver from the aquafortis smeli had been employed in parting the gold ' -om it.

AQI \ ['onus a coiTiisive lirnor, made bv

of his subjects. His despotism gave rise to a proverbial saying, that ' that there are only two ranks of men at Aquamboe, the royal family and slaves.' The natives of this country are haughty, turbulent, and warlike ; and their power is formidable to all the neighbouring na- tions. They grievously infest such nations as are tributaries to the king of Aquamboe, enter- ing their territories by troops, and carrying oft from the inhabitants whatever they, think proper; nor do they ever meet with any opposition from the inhabitants, as they are sensible the king would not tail to resent this as an indignity offered to him.

AQUA MERCURIALIS, a preparation of aqua regia and sublimate of mercury, with a little mercury, placed in a sand heat, till the solution of the mercury be made. It is a mark of per- fection of the aqua mercurialis, if it turn a piece of copper cast into it, of a silver color. It is by this water that the alchemists pretend all metal- line bodies may be reduced to their first matter, or mercury.

AQUA MIRABILIS, the wonderful water, is prepared of cloves, galangals, cubebs, mace, car-

d mums, nutmegs, ginger, and spirit of wine, digested twenty-four hours, then distilled.

AQUA NAPH.K, is a name given to the distilled water of orange-flowers.

AQUAPOISE; from aqua, and poids, Fr. weight ; an instrument for examining the weight of liquors.

AQUA RFGIA, or AQUA REGALIS, an acid water, so called because it dissolves gold, the king of metals. Its essential ingredient is com- mon sea-salt, the only salt which will operate on

with pure water. It is employed in several arts to clean the surface of metals and certain stones and for various other purposes.

AQUA SICCA PHILOSOPHORUM, a cant term, invented by some alchemists for the flowers of zinc, called by several other as unmeaning names by these writers ; as sericum, philosophic cotton, and talc. A preparation of these flowers by means of vinegar, has also been called oil of talc, and many great properties assigned to it ; but it is truly no other than the oil of the grape,

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,. f – . . J wn»v*» luciii uiv, \jn \ji tuc l;la.ljc,

gold. It is prepared by mixing common sea- from which the vinegar was made, and has no

salt, or sal ammoniac, or the spirit of them with title to any thing that has been said of it

spirit of nitre, or common aqua fortis. It is AQUA SULPHURATA, sulphur water, a new

composed of nitrous and marine acid, in diffe- name for what was originally called gas sulphu-

rent proportions according to the purpose for ris by Van Helmont See GAS

which it is intended. When made with sal am- AQUATIA, in writers of the middle age, a

momac, the common proportion is one part of right of fishing three days in the year. In an-

this salt to four parts of nitrous acid ; but to dissolve platina, equal parts are requisite. A purer aqua regia may be made by simply mixing the two acids. Aqua regia likewise dissolves all other metals, except silver. The gold dissolved in aqua regia is, in fact, dissolved in the de- phlogisticated marine acid only, which, being de- prived of its phlogiston by the nitrous acid, recovers it from the gold, and thus renders gold soluble ; for metals are not soluble in acids until they lose a part of their phlogiston. See CHE- MISTRY, Index.

AQUARIANS, 1. Christians in the primitive church who consecrated water in the eucharist instead of wine. This they did under pretence of abstinence, or, because they thought it univer- sally unlawful to eat flesh or drink wine. Epi- phanius calls them Encratites, from their absti-

cient deeds we find divers grants of this privilege of aquatia, aquatura, or aquaria. In some writings, aquatia also signified a fee, or service, paid for the privilege of fishing.

AQUAT'ICK, -x , t

AQUAT'ICAI., / Lat. aˆa, water. Applied to

AQ'UATILE /that which grows or delights

AQ'UEOUS.') in water" Aqueous, watery.

We behold many millions of the atjuatile or water frog, in ditches and standing plashes.

Brow i' a Vulgar Errors.

The vehement fire requisite to its fusion, forced away all the aqueous and fugitive moisture.

Ray on tlie Creation.

Brutes may be considered as either aerial, terres- trial, aquatic, or amphibious. Aquatic are those whose constant abode is upon the water. Locke.

AQUATILES Dir, in the mythology, aquatic

nence ; St. Austin, Aquarians, from their use of gods ; such as Neptune, Amphitrite, the Tritons water; and Theodoret, who says they sprang Naiads, &c. Tatian, Hydroporostatae, because they

from

offered water instead of wine. 2. There was

another sort of Aquarians, who did not reject

AQUATINTA, a method of etching on cop- per, by which a soft and beautiful effect is pro- duced, resembling a fine drawing in Indian ink ;

the use of wine as unlawful ; for they adminis- one of the many valuable improvements which

tered the eucharist in wine at evening service; but, in their morning assemblies, they used water for fear the smell of wine should discover them to the heathens.

AQUARIUS, the water-carrier, in astronomy, the eleventh sign in the zodiac, reckoning from Aries ; from which also the eleventh part of the ecliptic takes its name. The sun moves through Aquarius in the month of January ; it is marked thus, XX by astronomers. The poets feign that Aquarius was Ganymede, whom Jupiter ravish- ed under the shape of an eagle, and carried away into heaven, to serve as a cup-bearer in the room of Ilebe and Vulcan ; whence the name. Others hold that the sign was thus called, because, when it appears in the horizon, the weather usually proves rainy. The stars in this constellation, in Ptolemy's catalogue, are forty- five ; in Tycho's forty-one ; in Hevelius's forty- seven ; in Flamsleed's 108.

AQUARTIA, in botany, a genus of the tetan-

were made in the fine arts, towards the end of the eighteenth century. Previous to the opera- tion on the plate, the following powder must be prepared : Take equal parts of asphaltum and fine transparent resin, and powder them sepa- rately in a mortar. Sift through a-muslin sieve, upon a sheet of paper, a thin stratum of the as- phaltum, above which sift a similar layer of the resin, and upon this another layer of the asphal- tum, continuing these, alternate layers till both of the powders are exhausted. Then pass the mixture both together through the same sieve so as to mix them sufficiently for use. Some, in- stead of the above mixture, use powdered gum sandarach only. A copper- plate being polished in the usual way, lay the etching ground upon it, and etch the outlines of the design in the manner directed under the article ETCHING. Then soften the ground with grease, and wipe it off with a rag, leaving as much grease upon the plate as just to dim the copper. Next sift

dria monogynia class. The calyx is campanu- the powder upon the surface of the plate; after

lated ; the corolla is rotated, with linear divisions ; and the berry is four-

seeded. There is but one species ; viz. A. aculeata, a native of America and the West Indies.

AQUA SECUNDA, aqua fortis much diluted

which, strike the other side of it pretty smartly against the edge of a table to discharge it of the loose powder. Then hold the back of the plate with a hand-vice over a chafing-dish of burning charcoal, till it become so hot as to give pain

upon being touched with the back of the hand , and the powder which adhered to the grease will now be fixed to the plate. The plate being then suffered to cool, take turpentine varnish mixed with ivory-black ; and, with a hair pencil dipped in it, cover all the lights or places where there is no work or shade. A border of bees' wax is now to be raised round the plate ; and having diluted a quantity of aqua fortis to a proper weakness with water, pour it on, and let it stand five minutes for the first or lightest shade ; after which, pour it off; and having washed the plate with water, set it edgeways to dry. Then with varnish stop out all the light shades, pour on the aqua fortis for the second tint, and let it stand five minutes more ; proceeding in the same manner for every tint till you produce the darkest shades. If a bold open ground is wanted in any part, this requires an after operation. The ground must be laid as in the other case, by sifting on the powder ; only this powder must be much coarser, and the plate more heated, that the par- tides of the powder may spread, and form small circles; good clean resin will do by itself. In t telling landscapes, the sky and distant objects are a i

as \el; a> ii,er,e a general wipe when charged \ith all the tints. The art of engraving in aqua- iiuta is kept a secret by those artists who prac- ti.-e it. In order to succeed in it, great care and judgment are requisite; and much depends upon a certain nicety of management which is only .ii'.aiiiable by practice.

AI.U A T:.n ..\, called also Aqua della Tof- i.mma, <>r aqua della tola, from its supposed mventros ; aqua de] petesino ; aquetta di Na- 1'i'ii, or simple aquetta. A poisonous liquor c.:..d to .1 i. (.y rrn .1′ e\t. nt at Naples and Komt

during the latter half of the seventeenth century. More people, according to Gmelin, were destroyed by it than by the plague, which had prevailed a short time before ; and Tofania is said to have confessed she had used it to

poison more than 600 persons. The aqua tofana is described as being as limpid as rock water, and perfectly tasteless, so that it could be administered without exciting the least suspicion.

The abbe Gagliani and Archenholz more re- cently state it to have been a preparation of cantharides and opium ; but this is perfectly in- consistent both with its appearance and effects. By no preparation cah the smell and taste of opium, in sufficient quantity to produce any effect, be concealed ; and the acrimony of can- tharides is equally connected with its activity. The one of these drugs is highly stimulant, the other sedative, and neither of them capable of re- maining latent in the system. Erndtel has conjectured that the chief ingredient was lead. Halle, (Die deutchen giftpflanzen, Berlin, 1783) believes that it was prepared from the frothy saliva gathered round the mouth of a person tortured to death. Garelli, on the contrary, positively asserts it to have been nothing but a solution of crystallised arsenic in a large quantity of water, with the addition, for some unknown reason, of a very innocent herb, the antirrhinum cymbalaria. The same account is given by Ber- tholinus, and the most judicious writers on the subject.

It is one, however, of considerable obscurity ; and it was generally believed that the effect of taking it was certain death ; and that it could be so tempered or managed as to prove fatal in any determinate time, from a few days to a year and upwards. Four or six drops were reckoned a sufficient dose, and were said to produce no vio- lent symptoms, or vomiting, and but very seldom pains, inflammation, or fever ; but only a feeling of indisposition, without any definite symptoms, except sometimes inextinguishable thirst ; the victim sunk into a languid state, became dis- gusted at all kinds of food, and weariness of life succeeded ; the nobler organs then gave way, the lungs were wasted by suppuration, and death closed the miserable scene.

The original retailer of this poison was a Sicilian by birth, and first resided at Palermo. When or where she began to exercise her hor- rible profession, is not known ; but it will appear, that it must have been at a very early age, and before 1659. She was extremely liberal of her preparation, chiefly it is said, to ladies tired of their husbands ; and, the better to con- ceal the nature of her gift, it was put up in small flat phials, inscribed Manna of St. Nicholas of Bari ; being ornamented on one side with an image of the saint, that it might pass for a liquid said to drop from his tomb at Bari. The vice-roy of Naples, then Count Daun, only made the discovery of her detestable practice in 1709. She was now extremely cautious, and often changed her abode or retired into convents. At last she was betrayed, and, although in a convent, seized, and carried to the Castel del Uovo. On this, cardinal Pignatelli, then archbishop of Naples, indignant at the violation of a religious sanctuary,

threatened to excommunicate the city, if she was not delivered up to him. But the viceroy caused a report to be spread, that she and her accomplices had determined upon the same day to poison all the springs in the neighbourhood, the grain and fruits brought to market, &c. When the credulous populace became clamorous for her punishment, a kind of compromise was entered into with the cardinal ; in consequence of which after being strangled, her body was conveyed at night into the court of the convent. Garelli, however, says she was alive in prison at Naples, when he wrote to Hoffmann, not long before 1718; and Keysler, who visited Naples in 1730, asserts that she was then living in prison, and few strangers left the city without going to see her.

It is said that the Roman ladies extensively availed themselves of Tofania's discovery, and that a society of young married women, having for their president an old woman of the name of Hieronyma Spara, was detected and brought to punishment. Spara, who was a Sicilian, had acquired her knowledge from Tofania at Palermo, and was hanged with her assistant Gratiana. This poison was, it is said, exported from Italy to Paris at the close of the century ; and Godin de Sainte Croix, living in a scandalous intimacy with the Marchioness Brinvillier, furnished her with it as a means of poisoning her father and her two brothers, besides others on whom she tried the effect of her preparations. One of these afterwards was called from her by the name Eau de Brinvilliers. She is also said to have employed a powder called Poudre de Succession. De Croix was suffocated accidentally, we are told, by the fumes of his own poisons ; and the Marchioness was executed for her share in these transactions. At this period, the practice of- secret poisoning became so extensive in Paris, that a court called the Chambre des Poisons, and Chambre Adente, was established to check it. See POISON.

AQUATUM, in physical writers, medicine diluted with water.

AQUATUM OVORUM is used by some natural- ists for what is otherwise called grando, but more usually chalaza.

AQUA VIT.E, Latin. It is commonly un- derstood of what is otherwise called brandy, or spirit of wine, either simple or prepared with aromatics. But some appropriate the term brandy to what is procured from wine, or the grape ; aqua vitse, to that drawn after the same manner from malt.

AQUA VITRIOLICA CERULEA, a form of me- dicine in the London Pharmacopoeia, made in the following manner : Take blue vitriol three ounces, alum and strong spirit of oil of vitriol of each three ounces, water a pint and a half; boil the salts in water till they are dissolved, and then add the oil of vitriol, and finally strain the whole through paper.

AQUAVIVA (Octavio), cardinal and arch- bishop of Naples, was descended of an illus- trious family of that kingdom, and distinguished himself by his love of letters and learned men. He entertained several of them in his service, and had a particular friendship for the learned Peiresc. Pope Clement VIII. gave him the le-

gation of Avignon, where he governed with great moderation and wisdom.

AQUAVIVA (Claude), the son of the duke of Atri, was born in 1542. He entered into the society of the Jesuits, of which he became general in 1581. He was the author of some pieces relating to his order and religion, the best of which is one on the cure of mental diseases. He died about 1607.

AQ'UEDUCT ; from the Lat. aqua, and duco ductum, to lead. A contrivance for the convey- ance of water.

Into this lonely vale our steps we bend, I and my sullen discontented friend; The marble caves and aqueducts we view, But how adult'rate now and diff'rent from the true.

Dryden't Juvenal,

Hither the rills of water are convey 'd In curious aqueducts; by nature laid, To carry all the humour. Blackmore.

AQUEDUCT, in anatomy, a bony canal, or passage, in the os petrosum, supposed to con- tribute to the purposes of hearing. It is called aqueduct not only on account of its form, but, as some also imagine, from its serving to dis- charge any foreign matters collected in the inner cavities of the ear. It is sometimes also called aqueductus Fallopii, from Fallopius its first discoverer. See ANATOMY.

AQUEDUCT, aqueductus, Latin. A convey- ance made for carrying water from one place to another ; made on uneven ground, to preserve the level of the water, and convey it by a canal. Some aqueducts are under ground, and others above it, supported by arches.

Architects have distinguished aqueducts into the visible and the subterraneous, formed by piercing mountains and elevated grounds. They were built of stone, hewn, or rough ; and covered above with vaults, or flat

stones ; and divided sometimes into double and triple aque- ducts ; that is to say, such as were supported by two or three ranges of arcades. Such was the aqueduct which Procopius records to have been built by Cosroes king of the Persians, for the city of Petra in Mingrelia. Aqueducts of every kind were long ago the wonders of Rome ; the vast numbers of them which they erected, the prodigious expense employed in conducting water by them from one place to another, some- times to the distance of thirty, forty, and even 100 miles, may well excite our admiration. Appius Claudius the censor advised and con- structed the first aqueduct. His example was soon followed ; and the force of prodigious and indefatigable labor diverted the course of rivers and floods to Rome. Agrippa, in the year when he was aedile, completed the magnificence of these works. The aqueduct of the aqua Mar- tia had an arch of sixteen feet in diameter. It was composed of three different kinds of stone. Above, there appeared two canals; of which the highest was fed by the new waters of the Tiverone, and the lower by what they called the Claudian river. The entire edifice was seventy Roman feet high. Near this aque- duct, Father Montfaucon gives the plan of another with three canals; the highest sup plied by the Aqua Julia, that in the middle

from Tepula, and the lowest from the aqua to that church. They returned to Asia, and Martia. The arch of the aqueduct of the dwelt in or near Ephesus ; and were there when aqua Claudia of hewn stone was very beautiful ; Paul wrote his second epistle to Timothy. Acts

the aqueduct of the aqua Neronia was of brick ; each of them being seventy-two Roman feet in height. The consul Frontinus, who superintend-

xviii. Rom. xvi. 4, 5. 2 Tim. iv. 19.

AQUILA, in astronomy, the eagle, a constella- tion of the northern hemisphere ; usually joined

ed the aqueducts under the emperor Nerva, with Antinous. The stars in the constellation mentions nine of them which had each 13,594 Aquila and Antinous, in Ptolemy's catalogue, pipes of an inch in diameter; and Vigerus are fifteen; in Tycho's nineteen ; in Hevelius's observes, that, in the space of twenty-four hours, forty-two ; in the Britannic catalogue seventy- Rome received by means of these erections one.

500,000 hogsheads of water. The general de- AQUILA, in chemistry, has several significa-

clivity of the aqueduct, according to Pliny, was tions according to the epithets joined with it :

one inch ; and according to Vitruvius half a foot such as, Aquila alba, a combination of mu-

in a hundred. The principal Roman aqueducts riatic acid with mercury, called mercurius

now remaining are the aqua Virginia, repaired dulcis, calomel, &c. Aquila philosophorum, a

by Pope Paul IV. and the aqua Felici, con- term used by alchemists to signify the reducing

structed bv Pope Sextus V. See ROME.

of metals to their primitive matter, &c.

In modern times that of Segovia may be com. AQUILA, in geography, a fine large city of

pared with the most admired labors of antiquity. Italy, anciently called Avia or Avella, and the

At a recent period there remained 159 arcades, capital of Abruzzo, seated on a hill on the

wholly consisting of enormous stones joined with- banks of the river Alterno, or Pescara, near its

out mortar. These with the remains of the edifice source. It has an ancient castle, and is a bishop's

were 102 feet high, in two ranges one above see immediately under the pope. The land ad- nnother. Louis XIV. caused an aqueduct to be jacent produces plenty of saffron. If was almost begun in 1684, near Maintenon, for carrying water from the river Eure to Versailles; but the works were abandoned in 1688. This would

destroyed by an earthquake in February, 1703. The first shock was so terrible that the inhabi- tants abandoned the city ; but returning to ves-

have been, perhaps, the largest aqueduct in the pers, it being Candlemas

day, the shocks fol-

world ; the whole length being 60,000 toises ;

the bridge being 2070 fathoms in length, 220 feet

in height, and consisting of 63‘2 arches.

lowed one another with such violence, that 24,000 people perished, and great numbers were wounded ; 800 were killed in one single church :

AQUEFORT, a small settlement of New- many other churches, monasteries, noble build-

foundland, on the east side of the southern ex- tremity of the island. N. lat. 47° 5’, E. long. 52° ;?:$’.

AQUENSIS CIVITAS, AQU/E AUCUST.T, or Agr.y, TAIIBII T.IC.V., a town of ancient Gaul, celebrated for its baths. It was situated on the Adour, in the ci-devunt province of Gascony,

ings, and the town house, were either swallowed up or overturned, together with the greater part of the city and its walls. It is situated thirty- five miles west from the Adriatic, ninety-three north of Naples, and about sixteen from the confines of the Pope’s dominions. Aquila was formerly an important barrier fortress ; but the

which now forms a part of the department of works are all demolished, with the exception of

a small fort. The French troops forced their way through the gates of the town on the 16th of December, 1798; and on the following day the garrison of the fort surrendered as prisoners of war.

AQUH.A, in ornithology, a’ synonyme of eagle« See FAI.CO.

AQUILA ARBOR, in botany, a name given by some authors to the tree whose wood is the agallochum, or lignum aloes of the shops.

AQUILANUS (Sebastianus), an Italian phy- sician, was born at Aquila, in the kingdom of Naples. He practised with considerable repu- tation at Padua, and died there in 1543. lie wrote several pieces on physical subjects, and was a zealous defender of Galen.

AQUILARIA, in botany, from Aquila, an eagle, a large tree affecting a lofty situation. Class, decandria; order, monogynia. General character: CAL. perianth. one-teafed, perma- nent : COR. none ; nectary one-leafed,

pitcher- shaped, of the length of the tube of the calyx STAM. filaments ten, alternating with the clefts of the nectary ; anthera; oblong, versatile : PIST germ, ovate: STYLE none: STIGM. simple: PER. capsule on a very short pedicle : SEEDS solitary, oblong. Essential general character : CAL. five-cleft: COR. none; nect. pitcher-shaped : sr.Kiv.,

Gers. Jt is now called ACQS, which see.

AQTETTA. See AQI A Toi ,Y.\A.

AQUICALDENSIS, or Aor,y, CAM™, the undent name of a town of (lullidu ; formerly in great repute fnr its public baths. Its ruins still retain marks of its ancient Roman grandeur. It is IKI\V culled < (reuse, and lies on the Minho, fifty-four miles S. K. of Compostella.

AQUIGNY; a town und baiony of France, in Normandy, situated near the conflux of the Knre and I ton, in the department of the Eure, unondissement of J.ouviers, from which it is distant three: miles. Population 1500.

AQlll.A, a Jew, horn in Pontus. He, with Ins wife1 Prisdllu, had, for their business, to make leathern tents for the Roman troops. After they bad resided , leave it, uiv.l return to Co- rinth : where Paul lodged with him, and wrought at their business, till, probably to please the (ientiles he went and 1

d-rc-il

with Justus. They where they exposed n ; and instructed ,ord more perfectly, r ; win ‘re a meeting

ir. their house and an!, in his epistle

solitary. Species 1. A. ovata. This is a large tree covered with grayish bark. Its leaves are entire, smooth, veined, about eight inches long, and stand on short hairy footstalks. The flowers terminate the branches, on many-flowered pe- duncles. A native of the mountains of Malacca and Cochin China. The wood of this tree has been long used as a perfume ; and was formerly an article of the materia medica, under the name of agallochum, lignum aloes, or aloes wood.

AQUILEGIA, COLUMBINE, a genus of the pentagynia order, and polyandria class of plants; natural order sixteenth, multisiliquae : CAL. none ; petals five, with a horn-like nectarium inserted between each ; and there are five separate cap- sules. There are four species: viz. 1. A. alpina, with long oval flowers, grows near Ingle- borough hill in Yorkshire. The flowers are much larger than those of the garden columbine.

2. A. Canadensis, or Canada columbine, flowers almost a month before the other sorts, and there- fore is preserved in the gardens of the curious, though not at all remarkable for its beauty. There is a variety of this with taller flower steins.

3. A. inversa, or garden columbine. Of this there are great varieties, not only in the color and fulness of their flowers, but also in their form. Tl>ese are commonly called rose colum- bine ; the colors are chestnut, blue, red, and white, and some are finely variegated with «two colors. There are others with sharp-pointed petals in form of a star, and of these there are single and double flowers of the same colors with the former. 4. A. vulgaris, or wild co- lumbine, with blue flowers, is found growing wild in some woods of England. All these species are propagated by sowing the seeds, or parting the old roots ; but the former method is chiefly practised, for the old roots are very apt to degenerate. The seeds should be sown in a nursery bed in August or September ; for those which are kept till the spring seldom grow well, or at least remain in the ground for a whole year. The spring following the pi ants will appear above ground, and should be kept clear of weeds ; and, if the season proves dry, they must be watered. In the middle or latter end of May, they will be strong enough to transplant ; for which purpose some beds of good undunged earth should be prepared, planting them therein at eight or nine inches distance from each other. In the following autumn, by which time the plants will have acquired strength enough to flower the year following, the roots should be carefully token up and planted in the borders of the flower garden : but where their roots are designed to be preserved in perfection, all the flower stalks must be cut off as soon as the flowers are past. In order to keep up a succession of good flowers, fresh seeds should be sown every year; and it. will likewise be advantageous to get an exchange of seeds from a distant place. Columbine has been looked upon as aperient; and was formerly in great esteem among the common people for throwing out the small- pox and measles. A distilled water, medicated vinegar, and conserve, were prepared iVom the floweis; but they have long given place to me- dicines of greater efficacy.

AQUILEIA, an ancient and large city of tne Carni, or Veneti, in Italy, seated on the rivers Natiso and Turrus, about thirty miles west of Trieste. A Roman co.ony was settled in it be- tween the first and second Macedonian wars, to be a bulwark against the neighbouring barba- rians. It was

afterwards increased with 2500 families by a decree of the senate ; from which it became a very famous port. The emperor Julian ascribes the appellation to the augury of an eagle at the time of building it ; but Isaac Vossius on Mela, to the great plenty of water, as if the town were called Aquilegia. The har- bour at the mouth of the Natiso is distant sixty stadia from the city ; so that ships of burden are towed up the river. In 452 it was besieged by Attila with an innumerable host of barbarians. The walls were assaulted by a formidable train of battering-rams, movable turrets, and engines that threw stones, darts, and fire ; and the mo- narch of the Huns employed the forcible im- pulse of hope, fear, emulation, and interest, to subvert the only barrier which delayed the con- quest of Italy. Aquileia was at that period one of the richest, the most populous, and the strongest of the maritime cities of the Adriatic coast. Three months were consumed without effect in the siege ; till the want of provisions, and the clamor of his army, compelled Attila to re- linquish the enterprise, and reluctantly to issue his orders that the troops should strike their tents the next morning and begin their retreat. But as he rode round the walls pensive, angry, and disappointed, he observed a stork preparing to leave her nest in one of the towers, and to fly with her infant family towards the country, lie seized, with the ready penetration of a statesman, this trifling incident which chance had offered to superstition ; and exclaimed in a loud and cheerful tone, that such ˆ domestic bird, so constantly attached to human society, would never have abandoned her ancient seats unless those towers had been devoted to im- pending ruin and solitude. The favorable omen inspired an assurance of victory : the siege was renewed and prosecuted with fresh vigor; a large breach was made in the part of the wall from whence the stork had taken her flight ; the Huns mounted to the assault with irresistible fury ; and the succeeding generation could scarcely discover the ruins of Aquileia. An at- tempt was indeed made to restore it to its former grandeur in 1765; but owing to the unhealthi- ness of the situation, and other causes, it failed of success. In the place, however, which is still called Aquileia there are several inscriptions and antiquities to be seen, which are worthy of a traveller's notice: and, though dwindled into a poor village, it gives a title to the patri- arch of Aquileia. The patriarch is named by the Venetians, and resides at Udina, because Aquileia belongs to the house of Austria.

AQUILICIUM, AQUˆLICIUM, or AQUILICI- ANA, in antiquity, a sacrifice celebrated among the Romans in time of excessive droughts, to obtain rain of the gods.

AQUILI Dn, an epithet of some of the hea- then gods, supposed to be black complexioned.

AQU1LIFER; from aquila, an eagle, ard

fero, I bear; among the Romans, an ensign- bearer, who carried the standard on which the eagle was represented.

AQ'UILINE ; Lat. aquila, an eagle. Curved like the beak of an eagle. Used as follows : His nose was aquiline, his eyes were blue,

Ruddy his lips, and fresh and fair his hue.

Dryden's Palemon and Arcite.

Gryps signifies some kind of eagle or vulture ; from whence the epithet grypus for an hooked or aquiline lose. Brown.

AQUILO is used by Vitruvius for the north- east wind ; or that which blows at 45° from the north towards the east point of the horizon. The poets gave the name of aquilo to all stormy winds dreaded by the mariner.

AQUILONDI, or AQUILUNDA, a lake said to exist on the eastern frontier of the kingdom of Congo, which some writers even make the source of the Congo or Zaire ; but the authenti- city of the narrations concerning it are very much doubted.

AQU1LUS, in ornithology, a species of pe- lican.

AQUIMINARIUM, in antiquity, a kind of lustral vessel, wherein the Romans carried their holy water for expiation, and other religious offices.

AQUINAS (St. Thomas), styled the Angelical Doctor, was of the ancient family of the counts of Aquino, descended from the kings of Sicily

quired much reputation by his knowledge of t'ne Hebrew language, which he taught at Paris in the reign of Louis XIII. as well as by his Dictiona- rium Hebrseo-Chaldseo-Thalmudico-Rabbinicum.

AQUINO (Anthony d'), first physician to Louis XIV. and grandson of Philip D'Aquino.

AQUINO, a town of Italy, in the kingdom of Naples, and Terra di Lavora; a bishop's see but ruined by the emperor Conrade, and now consisting of about thirty-five houses. It was the birth-place of the poet Juvenal, and of Tho- mas Aquinas. It lies thirty miles north-west of Capua. Lon. 14° 30′ E., lat. 41° 32′ N.

AQUINUM, in ancient geography, a large municipal town, and a Roman colony on the borders of the Samnites, washed by the river Melpha. It is now called Aquino.

AQUIQUI, in natural history, the name of a particular species of monkey, called by the people of Brasil the king monkey, as being much larger than all the other monkeys.

AQUISGRANUM, one of the ancient names of AIX-LA-CHAPELLE (which see), so called from Claudius Granius, the brother of Nero, who frequented its baths and built a tower in it.

AQUITAINE, the ancient name of Guienne, a ci-devant province of France, which now forms the two departments of Gironde, and of Lot and Garonne. It formerly belonged to the kings of England, as descendants of William the Con- queror. Jersey and Guernsey are all that r.ow

and Arragon ; and was born in the castle of belong to the king of Great Britain of the an-

Aquino, in the Terra di Lavora in Italy, A. D. 12‘24 or 1225. He entered into the order of the Dominicans ; and, after having taught school di- vinity in most of the universities of Italy, at last settled at Naples; where he spent the rest of his lift; in study, reading lectures, and acts of piety ; and was so far from the views of ambition or profit, that he refused the archbishopric of that city when it was offered him by pope Clement IV. lie died in 1274, leaving an amazing number of writings, which were printed at Venice in seventeen folio volumes, A. D. 1490. He was canonised by pope John XXII. in the year 1IJ23; and Tins V., who was of the same order with him, crave him in 1567 the title of the; Fifth Doctor of the church, and appointed his festival to be kept with the same solemnity as ihu.-e of the other lour doctors. His authority lias always been of great importance in the schools of the Roman Catholics. Lord Herbert, in his life of Henry VII I., tells us, that one of the principal reasons which induced that king to write against Luther was. that the latter had spoken contemptuously of Aquinas. On a visit in Koine. Aquinas distinguished himself by a nca-t repartee: being in a closet with Innocent ! V., when an officer brought in a large sum of money produced by the sale of absolutions and indulgences: ” Von see, young man,” said the pope, ‘• the a ‘.re of the church is past in which .-he said ‘ Silver and gold have I none.’” “True, holy father,” replied the doctor, ” but the age is also past, when she could say to a paralytic — ‘ 1! ise up, and walk.’”

AQl’lNO (Philip d’), called in Latin Aquinas or Aquinius, having turned

from Judaism, had .; p-'ii-ion t, <;ui the cK.ruy of France and ac

cient dominions of Aquitaine and Normandy. See AQUITANIA and GUIENNE.

AQUITANIA, in ancient geography, one of the three principal divisions of Gallia Comata, described by Caesar, as bounded by the Garonne, the Pyrenees, and the ocean : this is the Aqui- tania Vetus, or Caesariana. Augustus set dif- ferent boundaries, viz. the Loire, the Cevennes, the Pyrenees, and the ocean. It was called Gallia Aquitanica by Pliny, and the old No- titiffi, Provincia Aquitanica. It now comprises Guienne (which seems to be a corruption of Aquitania) and Gascony.

AQUO, in ichthyology, a name by which some authors have called the agonus, a fish much approaching to the nature of the alausa or shad.

AQUULA, the name of a disorder of the eyes, called also hydatis.

AR, in ancient geography, the metropolis of Moab, in Arabia Petraea, and the royal resi- dence; situated on the east side of the river Arnon. It was called also Rabbi ; and, to dis- tinguish it from Rabba of the Ammonites, Rab- bat Moab. On coins it is called Rabbath Moma. Eusebius says it was called Areopolis in his time from Ar and Polis. St. Jerome says that this city was entirely destroyed by an earthquake when he was a young man.

ARA, in astronomy, a southern constellation consisting of eight stars.

ARA, in ornithology, a generic name given by Brisson and Buffon to several psittaci of Lin- nseus. Also the name given by the natives of the Society Islands to the cuculus tahitius of Gmelin.

AIIA PARVA, the little altar, a denomination, in the ancient _surgery, given to an elegant

kind of bandage, said to have been invented by Soslratus.

ABA THURIBULI, Uie altar of incense, in as- tronomy, a southern constellation net visible in our hemisphere, consisting, according to Pto- lemy, of seven stars ; and according to Sharp's catalogue, annexed to that of Mr. Flamsteed, of nine stars.

ARABANT AD CCRIAM DOMINI ; from aro, I plough; in law, was

intended of those who held by the tenure of ploughing and tilling the lord's lands within the manor.

ARABESQUE, or ARABESK, something done after the manner of the Arabians. Arabesque, grotesque, and moresque, are terms applied to such paintings, ornaments of friezes, &c. wherein there are no human or animal figures, but which

consist wholly of imaginary foliages, plants, stalks, &c. The words take their rise from hence, that the Moors, Arabs, and other Mahom- medans use these kinds of ornaments ; their reli- gion forbidding them to make any images of men or other animals. Arabesc is used by Stephen Riou, Esq. in his book on Architecture, for that style of building vulgarly called modern Gothic, which he also terms Saracenic and Moresc ; the introduction of which he ascribes to the Moors, Arabians, or Saracens. This manner of building was introduced into Europe through Spain. The crusades gave the Christians an idea of Arabic architecture, which they afterwards imitated. Sir C. Wren distinguishes the heavy Gothic as Anglo-Saxon, the lighter as Arabesc.

ARABIA.

ARABIA, in ancient and modern geography, a considerable country of Asia, of quadrangular appearance, forming by the proximity of the Euphrates to the Mediterranean one of the largest peninsulas in the world. It is bounded on the south by the Indian Ocean, on the west by the Red Sea, on the east by the gulf of Persia, and on the north by Syria and the river Euphrates. From the north-east extremity on this river to Cape Babelmandel, Arabia is 1500 miles in length : the southern coast, from the mouth of the Red Sea to the Persian Gulf, extends 1200 miles, and its breadth between Bussorah and Suez is 900. The country between the two last mentioned seas, is almost entirely a desert, and is occupied by tribes who have no fixed abode. This region, which extends northwards to the banks of the Euphrates, and westwards and east- wards to the confines of Syria, and the Arabian Irak, is entirely occupied by Arab tribes, and is properly, at least in part, the Rocky Arabia (Petraa) of the ancients. The continual warfare and wandering habits of these tribes will readily account for the different limits assigned to Arabia by different ancient writers ; but the most con- venient division is that which would be formed by a line drawn from the head of the Arabian to the head of the Persian Gulf, nearly in the pa- rallel of 30° north latitude. The earlier Greek geographers divided Arabia into two parts, the Happy and the Desert (Felix and Deserta). Ptolemy adds a third division, the Rocky (Petraea), and his partition has been generally followed. But the Arabia Petraea of Ptolemy is the southern part of the great Syrian ,Desert, and beyond the imaginary

limit of Arabia assigned above. Arabia Felix contained the fertile, habitable regions to the south and west ; Deserta, the barren countries intervening between them and the Syrian Desert.

Curious and learned etymologies have been given of the original name of this kingdom. Some affirm that the most ancient name was Kedem, the East; whence the Arabians were called Beni Kedem, ‘ Children of the Fast.’ It was aftfrruards known by the name of Arabah,

which some derive from the Hebrew 3”1K, arab, or ereb, signifying the west, a mixture, or mer- chandise, or traffic ; others from Jarab, the son of Joktan, and grandson of Eber; and others again from Arabah, or Arbah, a district of Te- hama, a desert, Ezek. xxv. 11. 21. Chron. ix. 14, inhabited by Ishmael. By the Syrians and many of the orientals it was called Arabistan ; in our sacred books it is sometimes denominated the land of Cush. Moses styles the western Arabia Arabah, affording a presumption that the name was derived from its situation; and when the Ishmaelites reduced the adjacent parts, the ap- pellation was applied to the whole peninsula. We learn from Scripture that the first part of the peninsula of the Arabs was divided into Kedem and Arabah ; the former comprehending the Arabia Felix and Arabia Deserta of Ptolemy, and the latter the country called Arabia Petraea, from Petra its metropolis, by Ptolemy ; Arabia Citerior, from its situation with respect to Italy, by Pliny ; and Arabia Vetus by Stephanus and Procopius. Moses determines the boundaries of this kingdom, when he tells us that on the south it reached to the sea of Suph, or the Red Sea ; on the west to Paran and Tophel ; on the north to Laban, Hatseroth, and Di-zahab, that is to the borders of Syria ; and on the east to Kadesh- Barnea, eleven days’ journey from Mount Horeb. The first inhabitants of Arabah, or the western Arabia, were the Casluhim, descended from Mizraim, the Caphtorim, and the Horites, who occupied Mount Seir, before they were expelled from thence by Esau and his posterity. After- wards Ishmael and his descendants settled here ; and last of all, the Edomites or Idumaeans. Ke- dem, or the eastern Arabia, was first peopled by the sons of Joktan, who are reputed the aborigi- nal Arabians; though, in process of time, the Ishmaelites spread themselves over this country. Some of the Cushites also gained early possession of part of it ; and the children of Abraham by Keturah contributed, as sacred history informs us, to augment the number of its inhabitants.

The ancients seem mostly to have followed the geography of Ptolemy, who divi les the superfices

of the peninsula into Arabia Felix, Arabia Petraea, and Arabia Deserta.

PRESENT DIVISIONS. — The present divisions of the country made by native geographers are as follow : —

1. Yemen, or Yaman, including the Happy Arabia of the Greeks, contains the districts of Mahrah, Hadramaut, Yemen Proper, and Teha- yim el Yemen, in which is included the Sheh'r of Abu'l-feda, the whole lying between 12° and 18° north latitude, 41° and 43° east longitude. 2. Hejaz, (Hedsjas, Hegias, or Hedjaz,) includes part of Rocky Arabia. It contains the celebrated cities of Mecca and Medlnah, and is the holy land of the Mussulmans 3. Nejed, (Nedsjed, or Nadjed,) between Hejaz and the Arabian Irak, has the Syrian desert to the north, and Yemen to the south. At the N. W. extremity, Darayyeh, the head quarters of the Wahhabls. The moun- tains of this country are fertile, but, like most of those in Arabia, deficient in water. 4. Yema- mali, or Aru'd, to the S. W. of Hejaz. 5. El Ali su, or 11 ajar, (Lachsa, lladsjar, or Hadschar,) between Bahrein and IS'ejed, extending to Irak Arab! on the north, and Oman on the south. f>. Bahrein (i. e. the two seas) includes the islands and a sandy district on the western shore of the Persian (Julf, famous for a considerable pearl fishery. 7. Oman, the eastern extremity of the peninsula, the capital of which is Maskat. The Arabian landscape, generally speaking, is arid and sterile, destitute of cooling rivers and perennial lakes and springs to temper the cli- mate and refresh vegetation. The hills are bar- ren and unwooded ; and the plains appear one continued wilderness spotted, like the deserts of Africa, with beautiful oases of verdure resembling islands. The shores, nevertheless, are fruitful, bordered by beautiful plains, which become of a deeper given in proportion us they approach the sea, where they are washed by warm vapors and showers, and rendered healthy and agreeable by cooling n oisturo.

RivK.i'.s. —The F.uphrates and the Tigris to the north-eaM are almost the only rivers that water any part of the kingdom. Their other rivers are merely brooks and streams, occasioned by the mountain torrents, or periodical rains, and thrrefoie dry up in the summer. That de- scribed in the maps as discharging its waters into the lVrM;:n (inlf, is an instance. Scarcely a. sinule stream reach's the sea, and the coursa of the river near Sanaa, described in the map as passing through Hadramaut and falling into the Indian ( )cean at Khanjah, is without authority. The I 'rim, de>eribed as emptying itself near the (iulf of Curia Muria (i. e. Khnrtfm wa Murtan) should be written Terim, as appears, from Idrisl. Then; are one or two saline lakes, surrounded by prominent lulls, winch relieu: in some measure the general appearance of the peninsula. Vege- tation lies tresli uj.< >n the banks, and the vapors winch '.rather from these \saiers bathe the sur- rounding verdure, and revive the faded coloring dC nature.

Mm MAINS.— The mountains of Arabia run ,'.rirallel with its shores; one important range « xceptt (1, \liirh seems to stretch across fro .1 'ii'.li'rein on the east, to the vicinity of Mecc ',

on the west. The most important chain runs in a direction parallel with the Red Sea. The hills of Oman appear to be a continuation of those on the other side of the Persian Gulf; and the isles of that gulf have been thought by some geographers to be summits of that range. In the country of Arabia Petraea is the celebrated moun- tain Sinai, the two lofty summits of which are composed of red granite ; and a range of hills in the country of Hadramaut; have been long ce- lebrated for the production of frankincense. The Arabian mountains are for the most part craggy and precipitous, abounding with basaltic co- lumns, calcareous rocks, gypsum, schistus. and iron stone.

MINERALS. — Silver and gold are said to be found in the lead mines of Oman. Yemen pro- duces the onyx, and Damar the saidonyx, cor- nelian and agate : alabaster, selenite, and various species of spars, are natives of Ajemen. Their pearls, together with most of their precious stones, spices, and metals, for which this coun- try was so celebrated, are thought to have been for the most part imported from the Indies.

VEGETABLES. — Arabia, notwithstanding its arid temperature, presents some interesting objects for botanical investigation. The most remarkable belong to the genera of aloe, mesembryanthe- mum, euphorbia, stapelia, and falsola, and are refreshed only by the night dews. In the plains contiguous to the Red Sea are found many In- dian and Persian plants, distinguished by their beauty and usefulness ; among which may be enumerated the tamarind and cotton trees, the pomegranate, the banyan or Indian fig-tree, the sugar-cane, several species of melons and gourds, the coffee-tree, and the amyris opobalsamum, which yields the balm of Mecca. Of the palms, Arabia has several species, as the cocoa-nut, the date, and the great fan palm. It has also the orange, the sensitiva, the papaw, the mimosa nilotica, the bead-tree, the sycamore fig, the plantain, the almond, the apricot and peach, the recinus, the liquorice, the senna, the balsam, globe amaranth, the white lily, and the greater pancratium, with many other shrubs and herbs of beautiful appearance and delightful odor. Escu- lent roots and seeds are also found in consider- able variety ; and the celastrus-edulio, or kat tree, is common in the coffee plantations, the green leaves of which are chewed as a preservative from the plague. Agriculture is chiefly employed in the cultivation of wheat, maize, durra, barley, beans, lentils, rape, tobacco, indigo, uars (a plant used in dyeing yellow), and fua, which dyes a beautiful red So fruitful is the soil in some parts of Arabia that the inhabitants reap three successive harvests in the year. The different de'grees of elevation, and consequently of temperature, produce a great

diversity of ve- getation. Forskal, in the small space of country which he examined, discovered several new ge- nera ; and had not the celebrated Seetzen fallen a victim to the rapacity and jealousy of the dolah of Mokha, he would have probably con- tributed greatly to our botanical knowledge of this celebrated country.

QUADRUPEDS. — The principal treasure of Ara- ! ia consists of flocks and herds. The oxen and

sows are very similar to those of India, and have a hunch of fat above their shoulders. The flesh is ill flavored, and the latter yield little milk. The sheep are also ill flavored, and the wool indifferent. The goat yields milk in abundance; and in a measure supplies the deficiency occa- sioned by the comparative dryness of the cows. In the mountains of Arabia Petraea is found the rock-goat and the antelope, whose slight and elegant formation has been so justly celebrated in Oriental poetry. The Jerboa rat (yerbuu), the most beautiful of the opossum species, is common in the sandy deserts, together with lions, panthers, wild oxen, wild boars, hysenas, leopards, tigers, wolves, and almost every spe- cies of ferocious and predatory animals, who reign undisturbed in the deserts and occasionally descend, committing great ravage and slaughter among the flocks and herds. Numerous monkies are found in the woods of Yemen ; jackals (be- nat-el-wawi) and foxes towards the Persian Gulf. The civet cat, musk rat, and various other ani- mals are domesticated. Of all the quadrupeds of Arabia the horse is the most celebrated ; the genuine breed of which is to be met with only amongst the Arabs of the desert. Zimmerman (Zool. Geog. 1777, 4to. p. 140.) asserts, that these animals are found wild in the deserts north of Hadramaut, but owing to their fleetness and sa- gacity they are seldom taken. The horses of Ara- bia are distributed into two classes : the kadischi, or common kind; and the kochlani, or noble kind. The breed of the latter is an object of particular attention, and their genealogy has been preserved for 2000 years, descending, as they affirm, from the stalls of Solomon. The preservation of their breed is carefully and au- thentically witnessed. The grooms are very careful in preserving a register of all the sires and dams, by which the pedigree of a horse may be traced up to the most ancient date. The duke of Newcastle affirms that the ordinary price of an Arabian horse of the kochlani breed is from 1000 to £3000, and that the owners are as careful in preserving the genealogy of their horses as princes are in recording that of their families. The off- spring of- Kochlani stallions by the ignoble race, are considered kadischi, and are bold, powerful, and impetuous ; and to great sagacity and affection add the capability of bearing great fatigue.

The camel is a native of Arabia, and is the most common beast of burden. There is also a superior breed of asses, sold at very high prices

BIRDS. — Arabia abounds with eagles, storks, vultures, falcons, plovers, and hawks. Nume- rous species of sea-fowl are found upon the coast of the Red Sea. Ostriches inhabit the deserts ; and an island in the Arabian Gulf exhibits the native pelican. Of poultry they have almost every species : pigeons, partridges, pheasants, and bustards (olis hubara), are common; and the Guinea fowl are so numerous in the hilly dis- tricts that the boys kill them with stones and take them to market. A bird of the thrush kind, denominated by Mr. Forskal ‘ turdus seleucus,’ and by the natives ‘ samarman,’ or ‘ samargog,’ is useful in destroying locusts; and is thought to come annually from Khorasan.

INSECTS AND REPTILES. — Arabia swarn.s \vith insects, many species of which have never been described. Locusts are both numerous and de- structive : they are called by Mr. Forskal ‘ gryl- lus gregarius,’ and are supposed to be different from the ‘ gryllus migratorius ‘ of Linnaeus. They are made an article of food, and the red sort are thought by the Arabs peculiarly deli- cious. In flying, the vast swarms of these crea- tures darken the air, making a tremendous noise, like that of a water-fall ; and, when they alight upon a field, the verdure of it is soon consumed. There is also a small insect, commonly called ‘ arda,’ (the ‘ termes fatale’ of Linnaeus,) which, by destroying the trees and herbage, is a great scourge to the country. A species of the ‘ sco- lopendra’ is a great annoyance to the Arabians, tormenting those on whom it fixes with burning pains. ‘ The women are said to swallow three of these creatures fried in butter every morning and evening, in order to acquire that plumpness which, in the east, is thought a beauty.’ Ser- pents are also numerous in this country, and of these the ‘ baetan’ is the most formidable. It is about twelve inches long, spotted with black and white, and its bite is said to be so venemous as to produce instant death. The bruised leaves of the Aristolochia Sempervireus (Ghakah and Legyyah) are said to be an antidote for the bite of serpents ; and a decoction of them a sufficient preservative. The Arabian Gulf abounds with marine insects and fishes, many of the species of which have never been ascertained. The most numerous are priapi, salha, fistulares, medusa, &c. Mr. Forskal became more and more con- vinced, in the course of his observations, that the immense numbers of these animals contribute to produce the refulgence which is perceived at night in sea water.

CLIMATE. — The climate of Arabia is various and the elevation of the interior relieves the ex- cessive heats common in the same parallels of la- titude, and renders frost and snow in the night not uncommon. Whilst the low sandy plains which stretch along the district of Tehamah, and the barren rocky provinces of Hejaz and Nejed, are intemperate in the summer,

and are deluged with torrents of rain in the winter; at Mecca and Mokha the drought and heat are such as would destroy all vegetation whatever, were it not for the falling of the heavy night dews. The province of Yeman, commonly known under the title of Arabia Felix, and celebrated by antiquity ' for the fertility and richness of the soil, and the happiness of its climate, is exsiccated by burning heats and destitute of inhabitants, except where the shade of mountains cools the temperature, and renders it healthy and agreeable. It is dif- ficult to conceive how it acquired the name of happy. Hejaz, formerly known under the name of the Madranite, or Arabia Petraea, although its mountains are fertile, is perhaps the most barren and worthless province of the whole empire ; and so parched as to afford neither water, fruits, nor genial harvests. It nevertheless ranks first in point of importance, partly from the resort of many thousand pilgrims, and partly from the in- fluence of many memorable traditions; both which circumstances have largely contributed tc

its wealth and celebrity. At Mecca, in this pro- vince, Mahomet was born ; at Medina he found an asylum from his persecutions, and is said to have conversed with God. It was in Hejaz, the Arabians affirm, that the patriarch Abraham laid the foundation of the most ancient temple in the world : it was here that Ishmael retired when he left his father's house : it was here that Moses fled after he had killed the Egyptian, and became acquainted with Jethro, a priest of this province, whose daughter he afterwards married : it was here the angel appeared in the burning bush; and here are still to be seen the celebrated moun- tains of Horeb and Sinai, from which the Al- mighty delivered his laws to the ancient seed of Abraham. The waters of the rocks in this part of Arabia are said to be bitter.

The sandy province of Tehama being low in its situation, reflects the most vehement heat ; but is nevertheless rendered fertile by the springs and rivulets everywhere to be found in it, and produces the luxuries of life in great abundance. The Nejed, or highland country, is extremely barren and but little known, consisting, probably, of a vast sandy plain, interspersed with naked rocks. There are in Arabia but two seasons in the year, the rainy and the dry, which, like the monsoons of India, are the converse of each other on the opposite sides of the peninsula, which proves the centre an elevated plain. The wind from the sea is accompanied by refreshing showers, while that from the deserts is dry and unwholesome. In the northern districts a pesti- lential wind is common, called sam or samiel, and is attended sometimes with great mortality. Its approach is indicated

by an unusual redness in the air, upon which the Arabians immediately throw themselves flat upon the ground, and thus escape its deadly consequences.

GOVERNMENTS. — The governments of Arabia are divided among numerous imams and sheiks. That of Yemen is the best regulated, and affords a general idea of the others. The title of imam, denoting vicar, is ecclesiastical ; and is consider- ed synonymous with caliph and emir el mume- nin, or prince of the faithful. The subordinate governments are under the direction of sheiks, a term signifying old man. The throne is here- ditary ; and the imam or emir is considered as supreme. The next in rank are the fakis, or gentlemen. The district governors are called dolas, and, if of noble birth, vvalis, a term which is almost synonymous with the Turkish pasha. The governor or chief magistrate of a small town is called sheik, and in villages ha- kim. The buskateb is the officer of the revenue ; the cadis are judges in the several districts, and depend upon the chief cadi at Sana, as those of Turkey do on the mufti. The prince himself is the high priest.

MAN NT. us AND CUSTOMS. — The people of Ara- bia are divided into two distinct classes, the in- habitants of the cities, and the inhabitants of the desert, commonly called Bedowins. In general they are of a middle stature, thin and sallow in their appearance, with black sparkling eyes. They drink no fermented liquors, and are sbstemious in their diet; their chief articles of ••.xury consisting of coffee and pillau, which is

made from fowl, or mutton boiled in rice. The smoking of tobacco and h'ashishah (or hemp leaves) is common, by which they are often as much intoxicated as northern nations are by the improper use of stimulating liquors. At dinner they sit down upon the floor; and a piece of cloth or leather being placed before them, on which the dishes are set, they help themselves with their fingers. Their general mode of living, however, produces the most beneficial conse- quences, so that diseases are but little known among them ; and the prevalence of the leprosy, in some places, can only be attributed to the ignorance of their physicians. The customs of anointing themselves, of burning incense, and of sprinkling their clothes with sweet-scented waters, are still common in Arabia, as in most Mahommedan countries. The houses are mostly built of stone ; and the floors of the poor are spread with straw mats, those of the rich with fine carpets. The men generally inhabit the front of the houses, the women the back parts. The latter, according to the law of Mahommed, are kept in great seclusion ; and when a stranger is introduced, the master of the house goes in before him, and cries, ' Tarik/ on which all fe- males instantly retire. This, however, is not thought a hardship ; retirement and concealment being as necessary in the eyes of Mahommedan women, as

decent clothing in the eyes of an European. In marriage the Arabs are extremely careful with respect to the wife's virginity, which if they see reason to suspect, they de- mand a compensation from the father, and, in case of refusal, return his daughter. Polygamy is allowed, but not generally practised. The rich voluptuous, however, on some occasions, marry as many as four wives, and keep a number of concubines. A lawful wife enjoys considerable liberty arid power in the family, and is entitled to demand a divorce whenever she considers her- self used ill by her husband, in which case the whole of her property is reserved to her.

Gravity, which has always been a distinguish- ing feature in the Arabs, is in a great measure the effect of education. Boys leave the haram, where they were under the instruction of the women, at about the age of seven or.eight years; after which they are accustomed to think and speak as men, and pass whole days in the com- pany of their fathers and preceptors. Circumci- sion is practised upon both sexes. Dancing and music are esteemed indecent, and thus the mind, from the earliest dawn of reason, is trained to pensive and serious habits. An Arab seldom laughs but strokes his beard.

The dress of the Arabs is light and simple, consisting for the most part of a blue and white striped shirt, with wide sleeves, large white trow- sers, a short jacket without sleeves, a leathern girdle, a capot thrown over the shoulders, a turban, consisting of a cap, with a shawl twisted round it, and a pair of slippers: a short knife is also stuck into their girdle, and the poor carry their smoking utensils there. The dress of both sexes is extremely similar, with the exception of veils, nose and ear-rings, ancle-rings, bracelets, &c. which are peculiar to the women ; who, in ad- dition to these ornaments, are at considerable

pains to heighten their beauty by making black punctures in the face, staining the circle of the eyes and eye-lashes with black-lead ore, or sti- bium, and their nails with the red juice of the alhenna. Their lips, feet, and hands are stained of tile color, the different shades of which indi- cate their several degrees of rank and situation.

The Arabians, in their disposition, are said to be very revengeful, and are particularly jealous of the honor of their women, and their beards. An indecent action or a contemptuous word can only be expiated by the blood of the offender; they will wait whole months and years for an opportunity of retaliation ; and, in cases of gross insult, will take vengeance on the relations of the offender. They look upon robbery as an act of retributive

justice ; and they apply the principle as well to individuals as caravans. When an Arab sees a stranger, he rides up to him, and says, ‘ Undress thyself, thy aunt (my wife) is without a garment;’ and a ready sub- mission prevents any further injury. They pre- tend, that in the division of the earth, the rich and fertile climates were given to the other branches of the human family, and that the posterity of Ishmael may recover, by fraud, the inheritance of which their progenitor was unjustly deprived. Upon this principle they proceed to licentious- ness of rapine and plunder, without even the consciousness that they are doing wrong ; but in case of murder the accused must undergo the operation of licking a hot iron with his tongue, and if burnt, he is considered guilty, and pays a camel to the judge.

There is, however, a mixture of hospitality and beneficence in all their cruelty. Fires are lighted up at night in the inhabited districts for the use of travellers that have lost their way, or are fatigued with their journey ; who, on retiring to these stations, are politely received and enter- tained till the morning, when they are sent on their way . The man just robbed by the Arabs, by becom- ing suppliant and submissive, has been introduced to their tents, refreshed with the provisions of his host, and the next morning sent on his iourney with blessings and with gifts. The hos- pitality described by Homer is still common in the tents of the Arabians, while those who live in cities have greatly degenerated by the exactions and oppressions of their numerous princes and priests. A tradition, still extant in their national records, is beautifully descriptive of the character and heroism of the Arabians : Three men, dis- puting in the court of Caaba, Who was the most beneficent of the Arabs, singled out three : Ab- dallah, Kais, and Arabah; to one of whom they all agreed that tribute was justly due, although to which was a point in which no two could coalesce in opinion. In order to ascertain this, they re- solved to make the experiment. The first went to Abdallah, who was about to commence a journey, and was then in the act of mounting his camel. ‘ Son of the uncle of the apostle of God,’ said he, ‘ I am a traveller, and in distress.’ The patriarch instantly dismounted, presented the pilgrim with his camel, its rich caparison, some robes of silk, 4000 pieces of gold, and a sword of still greater value. The second went to Kais, and on his ar- rival a servant told him that his master was

asleep, but gave him 7000 pieces of gold, as- suring him that was all the money in the house, and directed him to go to those who kept his master’s camels, and request a camel and a slave. Kais when he awoke, for this generous act, gave the slave his freedom, lamenting that he had not waked him, adding, that if he had been awake, he should have given him more. The third person went to Arabah, who, being blind, was leaning on two slaves on his way to attend prayer at the mosque. He lamented that he had no money, but insisted on his taking the two slaves, and groped along by the wall. The Mahommedan moralisers unanimously voted the last the

most generous of the three.

In addition to their hospitality, the Arabs are commonly celebrated for the great affection sub- sisting between parents and children, and for the sanctity with which they observe an oath, a vio- lation of which dooms the perpetrator to impe- rishable ignominy ; and they are said to sign their alliances in blood, that they may be more impressed by the obligation of observing them.

In politeness the Arabs vie with the Persians, and imitate that people in their general manners, as European nations do the French. The form of their visits is attended with much etiquette. Subjects are not allowed to sit down in the pre- sence of the imam, as appears from Niebuhr's plates of his audience at Sanaa. According to the common courtesy, inferiors kiss the hand of their superiors, equals embrace by putting cheek to cheek. The common salutation is Es-salam aleikuro, ' God save you ;' a compliment which they refuse to Christians. They commonly sit cross-legged, and in the presence of their supe- riors sit upon their heels.

HISTORY. — The early mode of patriarchal go- vernment among the Arabs, clearly proves them to be a very anciejit people, and must have pre- vailed in the ages bordering on the deluge. Their history divides them into two classes, the old lost Arabians and the present.

The former were very numerous, and the most famous of them were Ad, Thamud, Tasm, Jadis, the former Jorham, and Amalek ; and are sup- posed to have sunk in the mass of the other tribes. The present Arabians are sprung from three stocks ; two of them Kahtan, or Joktan, the son of Eber, and Adnan, descended in a direct line of genealogy from Ishmael: the descendants of the former are called Al Arabi, or the pure Arabians ; the latter Al Arab al Mostareba, na- turalised, or insititious Arabs. The third class are said to have been descended from Cush, the son of Ham, whose posterity inhabited the banks of the Euphrates and the Persian Gulf, after they left Chuzestan or Susiana, the original settlement of their father.

Yarab, one of Joktan's sons, after the confu- sion of languages at Babel, succeeded his father in the kingdom of Yemen ; whilst Jorham, his brother, founded the kingdom of Hejaz, where his posterity filled the throne till the time of Ishmael. The kingdom of Yemen, after having been long governed by princes of the tribe of Hamyar, son of Saba, and great-grandson of jcktan, passed to the posterity of Cahlan his brothe., still re- taining the title of king of the Hamyaif.es, called

ny the Greeks Homerites. After this kingdom had stood 2020 years, the inundation of Aram, soon after the time of Alexander the Great, dis- lodged many of the tribes, who, in their migration, founded the kingdoms of Ghassan and Ilira. The founders of the former in Syria Damascena Deigned, according to Abulfeda, something more than 600 years. Five of these princes were called Hareth ; according to the Greeks Aretas. A governor of one of these was the person who ordered the gates to be shut to apprehend the apostle Paul, when he was let down out of a win- dow by a basket and effected his escape. The kingdom of Hira, founded in Irak or Chaldea, continued nearly 630 years, till the caliphate of Abubeker.

The kingdom of Hejaz remained in possession of the posterity of Jorham till the time of Ish- mael, who married the daughter of prince Modad, and had twelve sons, to one of whom, Kidar, the crown was bequeathed. Some historians, however, observe that the posterity of Ishmaei ˚xpelled the .lorhamites, and the latter returning to Jo-‘ huinah were destroyed by an inundation. At Mecca an aristocracy prevailed ; but the tribe of Koreish retained the chief management till the time of the celebrated Mahomroed. The Egyp- tians, Persians, Greeks, and Romans, have made fruitless efforts to subdue them ; but the people still remain a living testimony to the truth of the Scriptures, and a fulfilment of the original pro- phecy with respect to Ishmaei and his posterity.

The learning of the Arabians is neither very extensive nor profound. The seeds of the sciences seem, nevertheless, to have sprung up in Arabia before they were known to other nations. Ro- ving under a serene sky, tending their flocks on the open plains or on the tops of mountains, it was natural to suppose they would observe the rising arid setting of the stars, the changes of the moon, together with the different appearances and situations of the planets. Different from all other nations, whose observations have been commonly confined to the planets, they restricted themselves chiefly to the consideration of the lixed stars. They are thought to have named ‘lie constellations which are called after the dif- ”•Ti’iit species of animals known in these parts. Tin: stars by which they chiefly observed the weather were twenty-eight in number, and were called ‘Auwn,’ or houses of the moon. These divided the /odiac into so many parts, through each of which the moon passes every night; and observing the changes of the atmosphere to depend in a un-at measure upon the relative situations of these, they ascribed to them a divine power, and used to suy, the rain wa

The extensive circulation of the Arabic lan- guaire, in consequence of tile conquests of Ma-‘

hommed, have rendered it an object of polite attention among the learned in Europe. It is derived from the same stock with the Hebrew Syriac.and Chaldaic, tongues; and bears the same affinity to the Hebrew as the Doric does to the Attic Greek ; and it is affirmed by learned au- thority, that in its original and unsophisticated state it was pure Hebrew. The natives ascribe it to Kahtan (the Joktan of Scripture), the father of Yemen, and son of Eber. Its name and grammatical construction to Yarab, son of Jok tan, supposed to be the same that is mentioned Gen. x. 26. See Hunt. Orat. de Antiq. et Eleg. Ling. Arab. p. 1. Bochart in Geog. Sacr. c. ii. c. 15. Golius in Lex. Arab. Schultens in Orig. Hebr. Pococke Spec. Hist. Arab. p. 29. It belongs to the class of languages called by the German philologers, Semitic; and, together with the Ethiopic, forms the southern division of it It is, however, one of the most ancient languages in the world ; and since the Arabs have inhabited this country almost from the deluge, without intermixing with other nations, their speech must have been formed about the time of the confusion of languages at Babel ; although the earliest spe- cimens which have been preserved do not extend much higher than the time of Mahomet.

The language is said to have descended from the deluge, a period of 3000 years, in its original purity ; the changes and supplementary idioms acquired "by intercourse with neighbouring na- tions having varied nothing more than the cir- cumstantial inflexions and dialects ; while the substance of the language, comprehending its letters, government, and prosody, remained en- tire. The learned Dr. Robertson, professor of oriental languages in the University of Edin- burgh, has prefixed to his Clavis Pentateuchi, a dissertation De Origine, Antiquitate, Con- servatione, Indole, et Utilitate Linguae Arabicae, in which he powerfully advocates the purity of the Arabic. The learned Schultens also, in his Orig. Heb. vol. ii. p. 20, 21. Orat. Ling. Arab. 28, and many others, are of the same opinion. Their chief arguments are drawn from the Arabic lan- guage itself, the structure of which they affirm is eminently adapted to the preservation of its ge- nius; and its nature, too isolated to coalesce very readily with other tongues, and degenerate, as the French and Italian have done, from the purity of the Latin.

Mahomet maintains that the language of the Koran was the same as that anciently used by Abraham and Ishmaei ; and Dr. Robertson con- siders the language used by the prophet the same as that used by the Joktanites and Ishmaelites ; in confirmation of which he refers to ancient monu- ments found near Aden, in Arabia Felix; an account of which was published by Schultens in his Monumenta Vetustiora Arabiae, 4to. Leyden, 1740 ; and also to seven poems suspended in the temple of Mecca, entitled Moallekat, copies of which are extant at Paris and Leyden. Hyde also considers it the most unmixed of all lan- guages, with the exception of a

few Persian and Latin terms, perfectly pure; which he ascribes to the number of books and writers, to the great care of the Arabs in the cultivation of it, to the very great love of poetry and eloquence, and to

the peculiarities of their local and political situation.

The copiousness of this language is so great, that the Arabians affirm, no uninspired person ran be a perfect master of it. It had originally 500 names for a lion, and above 1000 for a sword. Dr. Robertson observes, that the genius of the Arabic resembles the Hebrew, its primi- tive words being composed of different combi- nations of consonants by triads ; on %vhich prin- ciple the various combinations and copulations of three letters form more than 10,000 roots, in- dependent of those which may arise from the collision of gutturals. Sir William Jones, in the Asiatic Researches, vol. ii. p. 6. observes that the Arabic roots being triliteral, the composition of the twenty-eight letters of the alphabet would give 22,000 elements of the language ; and al- though many of its roots are lost, if we neverthe- less suppose 10,000 of them to exist, indepen- dent of quadriliterals, and each of these admit- ting of only five variations, we shall then have an aggregate of 50,000 words, each of which may receive a multitude of changes by the rules of grammar. This consideration alone shows the surprising extent of the language. The Ara- bians, however, confess that the greatest part of their language has been lost, an opinion which is rendered probable from the late period in which the art of writing was introduced among them. Learning has also been on the decline for the last four centuries in Asia, and the Arabic has suffered a proportionate deterioration. Many of its grammatical forms have decayed ; its copious- ness of expression has been contracted ; the dual number has nearly fallen into disuse, and words generally used in the literal Arabic are now used only in the dialects of particular pro- vinces. The relation of ancient to modern Ara- bic has been compared to that of the Greek in the age of Pericles, to the style of the most recent Byzantine authors. Gruber's Encyclopzdia and Gesenius in Ersch. But as the more polished Arabs, like the Greeks of the lower empire, em- ployed the literal Arabic in their literary and epistolary correspondence, much of the co- piousness and beauty of the language still re- mains in the higher circles ; and a modern letter is essentially the same as one written eleven hun- dred years ago. The language of the common people is, nevertheless, extremely provincial and deteriorated. The passive voice is seldom used ; and the personal pronouns are united with the word to which they belong, by a particle rarely used in the pure Arabic metaa ; (taa in Mal- tesse) ktat m'taal for blaa in the western dia- lects kitabi, my book ;

ktab btaa, '1 ab, for kitab'1-ab, the father's book. The dialects of some provinces are much more corrupt than those of others. Those in the north-west of Africa and Malta are the most corrupt of an»- and are distorted by transpositions, and dis- figured by barbarisms, distortions, Spanish and Berber words. Such, however, is the effect of reading the Koran, and the languages derived from it, that according to Burckhardt, the shnikiyyah transcribe with as much elegance as the best scribes in Cairo. The principal dialects were those of H'imyar (or Homelr, whence the VOL. II.

Homerifce), and that of Koneish ; the former spoken in Yemen and the south, the latter in thˆ north-west; and is referred to Ishmael as its author, who, as Dr. Pococke imagines, after he had married into the family of Jorham, formed it of their language, and the original Hebrew. The Himyaritic greatly resembled the Ethiopic and Syriac, and was more remote from the true genius of the Arabic than the Korelsh. The latter is said to have been the pure Arabic, con- forming to the native Hebrew. It was one of the most polite and finished of the oriental lan- guages, being spoken in Mecca, the centre of Arabia ; where the natives had little intercourse with foreigners, and that country being frequent- ed by Arabs from all the provinces. The Ko- reish, from the conversations and verses of their brethren, took the purest and most elegant ex- pressions, and thus the beauties of the whole tongue were transfused into a single dialect, and the Korefsh became the purest, richest, and most polite of all the Arabian idioms. • In this language the Koran was written ; by which means it became studied in all parts of the continent, and current as far as the prophet's voice was heard.

The spoken language of the Korelsh is more nearly allied to the Hebrew than the written language, which the following observations per- haps will sufficiently illustrate. Every noun in the Hebrew or Syriac terminates in a consonant or long vowel, without a change of termination, as in the Greek and Latin, to indicate a change of case. In this respect the spoken Arabic cor- responds with them ; melik, for instance, signifies rex, regis, regi, and yemlik, answering to the Latin verb regno, with or without a negative. But it is otherwise with the written language, for this takes a short vowel at the end of the word, changes the case in nouns, and the mode in verbs; thus meliker signifies rex, a king; meliki regis, of a king ; melika regem, a king ; yemliku, he does, or he will reign ; yemlika, he may reign; Ian yemlik, he shall not reign. To this it has been objected that the terminations, being marked in short vowels, which are not usually expressed in their writings, are merely optional and arbitrary. Such words as abl, aba, fl, and fa, discover the same distinction by long vowels, which are always expressed ; and the most ancient poems exhibit the use of the tenwiti, or nasal termination of the final vowels; all which considerations demonstrate the use of these terminations much more ancient than Mi- chaelis and other

philologists supposed.

There was also considerable variation in the pronunciation of letters, not only in the different dialects, but even in the same dialect. Further information on this subject may be found in De Sacy's Grammaire Arabe, I. p. 18, sq WahTt Elementrabuch, p. 54, Ara.b. ; Anthologieˆ p. 12, sqq. ; Herbiu's Principes, Pref. ii. sqqˆ. ; Aryda't Arab. Grantm. Savory's Grammutre Arabe, par Langles ; Dombay Gramm ., Mattro, Arabica.

The principal modern dialects are as follow 1. The Syriac, which, in addition to its contain- ing many peculiar words, is of a softer enuncia- tion than the Egyptian. See Aryda's Arab.

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ARABIA

Gramm. Gr. Arab. Maronitarum ; Anton, ab Aquila Arab. Ling. Novas et Method. Institut; Fabbrica o vvero Dittionario della Lingua Volgare Arabica dat P. Germano de Silesia, &c. It pre- fixes b or in to the first person future. 2. The Egyptian, which is a purer dialect, and uses maye for ma, water; and pronouns jem and kat like g. Savary's Grammaire de 1'Arab Vulgaire pub- lished by Langles ; Ruphy Dictionaire Francois Arabe. 3. The Tripolitine, which is very cor- rupt, many foreign words having been introduced, and the sounds elif and aln confounded. Lyon's Travels in Northern Africa, passim ; Tully's Narrative of a Ten Years' Residence at Tripoli. 4. The Algerine, which is similar to the Tripoli- tine. Bombay's Gramm. Mauro-Arabica. 5. The dialect of Melinda (Adelung's Mithridates ; p. 382. iv. 112), which is pure Arabic, or nearly so, a specimen of which is given by D'Avity. 6. The dialect of Felh' an in the territory of Sheh'r, which according to Ibu Bat Utah adds the syllable la to every word. There are also other dialects as Yemen, Oman, Mapulian, &c. of which there is nothing remarkable mentioned by late travellers. Niebuhr's Beschreibung von Ara- bian,)>. 83. sqq. &c.

Since the time of Mahomet all the dialects of the Arabic have been less pure, and even the Koran now is become a dead language, and stu- died only in colleges as Greek and Hebrew by Europeans.

Writing is said to have been known among the Uamyarites at a very early period. The characters, however, were greatly perplexed, and the alphabet corresponded in number and order to the lettrrs of the Hebrew. Chardin thinks that vowel points were also known among them. Some ancient inscriptions are said to be still re- maining of this character upon

monuments, to which .lob i— supposed to refer, eh. xix. v. 23, 24. Some authors have imagined that the Arabs were the inventors of letters, and Sir Isaac Newton im. Cities Moses learned the alphabet from the Midiam'tes, who were Arabians. The present characters were invented by Moramer Ebn Morru, of Anbar, a city of Irak, and brought to Meica by liashar the Kendian just before the time of Mahomet, and called the Curie character from (.'ufa a city of Irak. These were improved by Ahuali Kim Moklah, vi/ ier to the caliph of Bagdad, :HH> years after Mahomet, and perfected by All Kim JJowab, \uio died A. 1). 1022. \ o\vel points an.- said to hav:> been introduced about the tenth century, '1 he Arabians seem to have had con-.;derable sensibility to the beauties or poetry and eloquence. They allowed no na- tion te Arabian orators. Their POI tr\ lar exceeds the Koran in composition; it i darini:, rapid, sublime, and delights in asto-*

nishing the mind and filling it with' lofty ideas. The only remains of the ancient history of the Arabs is a collection of poems, in which the laws of Arabian prosody are strictly observed. See Sir W. Jones in As. Res. 2. 4. 8vo. Al Khatel ibu Ah'med a Ferahldl lived in the eighth cen- tury, and is said to have been the first who col- lected the principles of Arabian prosody into regular laws. The technical terms employed were supplied from the same source as their imagery. Every verse or distich is called bert or tent, and eonsists of two hemistichs or misraas, wings of a folding door, corresponding with each other in measure, and often in sentiment and expression. In the same poem all the distichs have a similar measure or termination, kafiyeh ; and in the ghazals and kasidahs, or sonnets and elegies, the two first hemistichs also rhyme. The agreement of rhyme should extend to the three last letters. The metres, ejza, consist of three or five syllables called sebebon wated, ropes or stakes, to pin down the sides of the bert or tent. Quantity is determined in the following manner : Every syllable consisting of a consonant followed by a short vowel is a short foot, if another conso- nant be added it becomes a long foot ; thus me is a short syllable, med is a long one ; and medlnun is a bacchius, medfunun a molossus : quiescent letters are considered as consonants. There are no fewer than sixteen different kinds of versifi- cation or metres, which are called Buh'flr, seas ; and these have various subdivisions and licences. The Arabs delight in rhyming cadences, a sort of measured prose, and the constant recurrence of those transcendent beauties it is that renders the Koran so highly esteemed among the Arabians The paronomasia, or play upon words, and the antithesis, are rhetorical figures in which they delight, beauties for which Asiatic compositions have always been distinguished, and which, when properly employed, will always be read with pleasure, so long as human nature has taste to relish, or wisdom to direct its admiration.

Little comparatively is known of Arabian his- tory after the decline of the

Roman empire. Mahomet, propagating his doctrine by the sword, converted great numbers, and opened a new era in 621, called the hegira by his fol- lowers. After Mahomet several sovereigns appeared upon the stage. In 1720 a sheik called Mahomet Ibu Abdoulwehhab was borri, who propagated doctrines of reformation. Hav- ing converted Ibu Saaoud, prince or grand sheik of the Arabs, about 1747, the new prin- ciples were extended, towns reduced to ashes, and immense multitudes of people massacred. Abdelaazis, son of Saaoud, sent his son Saaoud in the beginning of the present century to take Mecca. He rased every thing to the ground except the sacred temple, and afterwards took Medina; and on the assassination of his father in that city took possession of the immense treasures which had been accumulating for ages, and is now master of the whole of Arabia.

ARABICI, a sect who sprung up in Arabia, about A. D. 207, whose distinguishing tenet was, that the soul died with the body, and also rose again with it. Eusebius relates that a council was called to stop the progress of this rising sect ; and that Origen assisted at it, and convinced them so thoroughly of their error that they ab- jured it. Vide Euseb. 1. vi. c. 37.

ARABICUM GUMMI, in chemistry, gum Ara- bic, i

ARABICUS LAPIS, in mineralogy, a stone like ivory, blemished with spots.

ARABICUS SINUS, the Red Sea.

ARABIS, in botany, bastard tower-mustard, a genus of the siliquosa order, and tetradynamia class of plants ; ranking in the natural method under the thirty-ninth order, siliquosse. The generic marks consist in four nectiferous glands, which lie on the inside of each leaf of the calyx. There are eight species ; but none of them re- markable for their beauty or their properties. Only one of these, viz. A. thaliana, or the mouse- ear, is a native of Britain. It is a low plant, seldom rising more than four or five inches high, branching on every side, and having small white flowers growing alternately, which have each four petals in form of a cross, succeeded by long slender pods filled with small round seeds. It grows naturally on sandy ground or old walls. Sheep are not fond of it, and swine refuse it.

AR'ABLE,) Lat. aro, to plough. Land

ARA'TION. J which has been, or may be ploughed.

His eyes he opened, and beheld a field,

Part arable, and tilth ; whereon were sheaves

New reap'd. Milton.

But if the sullen earth, so press'd, repines

Within its native mansion to retire,

And stays without, a heap of heavy mire ;

Tis good for arable, a glebe that asks

Tough teams of oxen, and laborious tasks.

Dry den's Virgil, Gear. ii.

Having but very little arable land they are forced o fetch all their corn from foreign countries.

Additon.

ARABLE LAND, anciently called Aralia; from arare, to plow ; land for tillage or plough- ing, or which has been ploughed up.

ARABOG, a sea-port town of Arabia, on the Red Sea, at the northern extremity of Beled el Haram, or the Holy Land of the Ma- hommedans. The first ceremonial of trie pil- grimage to Mecca commences here, or bathing in the sea, and making a general ablution with the water and sand, repeating a prayer while naked, and being clothed in a garment without a seam. Long. 38° 52'. E. lat. 22° 31′ N.

ARABS, in entomology, a species of eastern Tenebrio. It is black ; thorax serrated ; anten- nae and legs testaceous brown. Fabricius. Gmelin

ARABS, a species of cimex found in South America. The thorax is spinous ; body ovate, livid; end of the abdomen bidentated. Linn. Fab. Gmel. It is called by Sloane, cimex syl- vestris fcetens viridis triangularis-

ARAB?, in ornithology, a species of otis that inhabits Arabia Felix, which Dr. Latham con- cludes to be the flj ing ostrich of Le Maire and Ailanson ; though Burton supposes that bird to

be the Linnaean otis atra. Its specific character is very concise, ' ears with

erect crests.' Gmelin. Brisson calls it 1'outarde d'Arabie ; and Buffon, le lohong, ou 1'outarde husspe d'Arabie ; it is likewise the Arabian bustard of Edwards and Latham.

ARAC, or ARRACK. See ARACK.

ARACA-PUDA, in botany, a species of the drosera of Linnaeus. — Araca guam, a species of the goava tree. — Araca miro, a shrub growing in Brasil, the fruit of which has a sweetish musky taste, and somewhat the savour of mulberries.

ARACAN, or RECCAN. See ARRACAN.

ARACARI, in ornithology, the name of a Brasilian bird of the .woodpecker kind. It is of the size of our common green woodpecker, and has a very large, sharp, and somewhat hooked beak. See Picus.

ARACARI, a river of South America, which enters Rio Negro. It is also the name of a town, on the Rio Negro, and of a small island on the coast of Brasil.

ARACHIS, in botany, a genus of the diadel- phia order, and decandria class of plants ; rank- ing in the natural method under the thirty-second order, papilionaceas. There is only one species, viz. A. hypogea, an annual plant, and a native of Brasil and Peru. The stalks are long, trail upon the ground, and are furnished with winged leaves, composed of four hairy lobes each. The flowers produced singly on long peduncles, are yellow, of the pea kind, and each contains ten awl-shaped stamina, nine of which are tied to- gether, and the upper one stands off. In the centre is an awl-shaped stylus, crowned with a simple stigma. The germen is oblong, and be- comes an oval oblong pod, containing two or three oblong blunt seeds. This plant is culti- vated in all the American settlements for the seeds, which make a considerable part of the food of the slaves. The manner of perfecting them is very singular ; for as the flowers fall off, the young pods are forced into the ground by a na- tural motion of the stalks, and there they are en- tirely buried, and not to be discovered without digging for them ; whence they have obtained the name of ground nuts.

ARACHNE, in fabulous history, a young maid of Lydia, the daughter of Idmon, said to have been the inventress of spinning. She is fabled to have been so skilful in this art, as to have challenged Minerva at it; who tore her work, and struck her; which disgrace driving her to despair, she hanged herself. Minerva, from compassion, brought her to life, and transformed feer into a spider, which srill employs itself in spinning.

ARACHNIDES, in zoology, a class of ani- mals, between the Crustacea and

insecta, and in- cluding the Linnean genera oniscus, julus, sco- lopendra, lepisma, podura, pediculus, Scorpio, aranea, phalangium, acarus, hydrachna. See ZOOLOGY.

ARACHNOID MEMBRANE, membrana arach- noidea ; from apaˆvij, a spider, and «&>c, like- ness ; so named from its resemblance to a spi- der's web. 1. A delicate membrane of the brain, situated between the dura and pia mater, and surrounding the cerebrum, cerebellum, medulla

oblongata, and medulla spinalis. 2. The crys- talline lens and vitreous humor of the eye. Also an appellation given to one of the coverings of the spinal marrow. See ANATOMY, Index.

ARACHNOIDES, in natural history, the name of one of the genera of the echini marini ; the distinguishing characters of which are, that it is of a circular circumference, but variously broken in at the edges. The mouth is round, and placed in the centre of the base, and the aperture ibr the anus is quadrangular, and situated in one of the sides, on the upper superfices, but near die edge.

ARACHNOIDES, a species of madrepora, found fossil : the stars are very small, crowded, and flattened ; the rays undulated, short, and equal.

ARACHNOIDEUS, in botany, cob-webbed; an epithet for the ring of the fungi, which is composed of a very white web ; also of a leaf, a peduncle, and a calyx, when they are covered with a thick interwoven pubescence, resembling a cob-web.

ARACK, ARRACK, or RACK, a spirituous li- quor imported from the East Indies, used by way of dram and in punch. The word arack, ac- cording to Mr. Lockyer, is an Indian name for strong waters of all kinds ; for they call our spirits and brandy English arack. But what we understand by the name arack, he affirms is really no other than a spirit procured by distillation from a vegetable juice called toddy, which flows by incisions out of the cocoa-nut tree, like tlie birch juice procured among us. The toddy is a pleasant drink by itself, when new ; when stale, it is heady, and makes good vinegar. The I'.nglish, at Madras, use it as leaven to raise their bread with. There aie several kinds of arack distinguished by different names, either from the places where they are made, or from their color ur quality : such as,

AI:ACK, BATAVIA, said to be a vinous spirit obtained by distillation from rice and sugar, fer- mented with the juice of cocoa-nuts. It is a slron-j; spirit, but being made in copper stills, is not so agreeable as the Goa arack.

AKACK, BITTER; ARACK, BLACK, two kinds, little known in Europe.

A RACK, COLUMHO, a hot spirit, little valued •

AUACK, GOA, is said to be made from the toddy ; there is likewise a kind of shrub from v, Inch it is made. Goa and Batavia are the eliii'f places for arack. At Goa it is to be ob- tained, single, double, ami treble distilled. The double distilled, which is that commonly sent abroad, is but a weak spirit in comparison with Batavia arack ; yet, on account of its peculiar and agreeable flavor, is preferred to all the other aracks of India. Its flavor is attributed to the earthen vessels used at Goa to draw the spirit; whereas at Hatavia they use copper stills. In iho best Goa arack ;;ie spirits of the cocoa juice nuike about a sixth or an eighth part. The man- ner of making it is said to be this : The juice of the trees is not procured in the way of tap- ping; but the operator provides himself with earthen p'.-ts, ha', ini: bellies and necks like our ordinary bird bottles, and makes fast a number of these to his girdle. Thus equipped, he climbs

up the trunk of a cocoa tree in the evening ; when he takes out a knife, and cutting off one of the small knots or buttons, applies the n.omh of the bottle to the wound, fastening it to the. bough with a bandage ; in the same manner he cuts off other buttons, and fastens on his pots, till the whole number is used. Descending the tree, he now leaves them till the morning ; when he takes off the bottles, which are mostly filled, and empties the juice into the proper receptacle. This is repeated every night, till a sufficient quantity is produced ; and the whole being then put together, is left to ferment, which it soon does. When the fermentation is over, and the liquor or wash becomes a little tart, it is put into the still, and a fire being made, the still is suf- fered to work as long as that which comes over has any considerable taste of spirit. The liquor thus procured is the low wine of arack ; and this is so poor that it will soon corrupt and spoil, if not distilled again, to separate some of its phlegm; they therefore immediately after pour back this low wine into the still, and rectify it to that very- weak kind of proof spirit, in which state we find it. The arack we meet with, notwithstanding its being a proof test, according to the way of judging by the crown of bubbles, holds but a sixth, and sometimes but an eighth, part of al- cohol or pure spirit ; whereas our other spirits, when they show that proo", are generally es- teemed to be one-half pure spirit. There is a paper of observations on arack, in the Melanges d'Histoire Natur. torn. v. p. 302. By ferment- ing, distilling, and rectifying the juice of the American maple, which has much the same taste as that of the cocoa, the author says he

made arack not in the least inferior to any that comes from the East Indies ; and he thinks the juice of the sycamore and of the birch trees would equally answer the end.

house belonging to the customs or excise, and bring the person offering the same before any justice of the peace, to be committed to prison, and prosecuted for the penalties incurred by such offence. The person seizing such goods may prosecute in his own name ; and on recovery is entitled to one-third part of the gross produce of the sale ; and the commissioners are, if desired, upon a certificate from the justice of the of- fender's being committed to prison, to advance to the seizer fifteen shillings per gallon for the arack so seized. Arack (except for the use of seamen, two gallons each) found in any ship or vessel arrived from foreign parts, at anchor, or hovering within the limits of any port, or within two leagues of the shore ; and not proceeding on her voyage (unless in case of unavoidable neces- sity and distress of weather, notice thereof must be given to the collector or chief officer of the port upon the ship's arrival), is forfeited with the boxes, casks, or other package, or the value thereof.

ARACK, TUNGUSIAN, is a spirituous liquor, made by the Tartars of Tungusia, of mare's milk, left to sour, and afterwards distilled twice or thrice between two earthen pots closely stopped, •whence the liquor runs through a small wooden pipe. It is more intoxicating than brandy.

ARACTHUS, a river of ancient Epirus, on which Ambrachia was seated, now called Spag- magmurisi.

ARACUS, in botany, wild vetch. See VICIA.

ARACUS AROMATICUS, in the materia medica, a name given by some authors to the vanilla, used in making chocolate.

ARAD, a king in the south of Canaan. The Israelites having advanced towards the land of Canaan, (Numb. xxi. 1.), Arad opposed their passage, defeated them, and took a great booty from them ; but they destroyed this country as soon as they became masters of Canaan.

ARAD, in ancient geography, a city of Arabia Petnea, laying south of Judah. Eusebius places it in the neighbourhood of Kades, at the distance of twenty miles from Hebron. In modern geo- graphy, a district and town of Hungary.

ARAD-VARMEGYE, a county in Hungary, forty-eight miles long, and from nine to fourteen broad. It is bounded on the south by the river Maiosch, which separates it from Temeswar, on the north by the county of Sarand, on the west by Ischanad, and on the east by Transylvania. A great proportion of it is mountainous, woody, and full of game. But the valleys are fruitful, and the sides of the hills are covered with vine- yards. The cattle are in good condition. The inhabitants, mostly Wallachians, are taken, with the county of Sarand, at 152,938. In the whole county there are six market towns, and forty-one villages, six Catholic, and forty-two Greek parishes.

ARAD, OLD, a market town of Hungary, on the Marosch, with a catholic and Greek parish church, the capital of the foregoing county. Jt Avas greatly enlarged in 17G5. Not far hence is the strong ensile of Arad, which gives name to the town and county, but is now in ruins. It is twenty -four miles north of Temeswar, and 1 95 south-east of Presburg.

An AD, NEW, on the oar.ie liver, is two :;,i!'js

and a half distant, and surrounded with fo-ti Men- tions, forming a perfect square, completed in 1776. The inhabitants are, for the most part, Germans ; but the two suburbs, at some distance from the town, are peopled by Russians. It is a post town, and does not properly belong to the county of Arad-Varmegye, but to the circle of St. Andrew, in the county of Temeswar. The breeding of cattle and culture of tobacco form the main occupation of the people in the neigh- bourhood. Long. 21° 3′ E., lat. 46° 11′ N.

ARADOS, a word used by Hippocrates for that perturbation which is excited in the stomach by concocting meats of different qualities. Ara- dos also signifies any internal perturbation caused by purging medicines, vehement exercise, &c.

ARADUS, in ancient geography, an island between Phoenicia and Seleucis, twenty stadia from a dangerous coast. It is a rock sur- rounded by the sea, in compass seven stadia; and formerly a very powerful city and republic. It is now called Romad ; but not a single wall is remaining of all that multitude of houses which, according to Strabo, were built with more stories than even those of Rome. The liberty enjoyed by the inhabitants had rendered it very popu- lous; and was supported .by naval commerce, manufactures, apd arts. At present the island is deserted ; nor has tradition even retained the memory of a spring of fresh water in its environs, which the people of Aradus discovered at the bottom of the sea, and from which they drew water in time of war, by a leaden bell and a leathern pipe fitted to its bottom.

ARADUS, in zoology, a genus of insects, of the order hemiptera, family cimicides. Its generic character is antennae cylindrical, inserted into the sides of the projecting anterior portion of the head. Body much depressed, membra- naceous. Head stretched out, elongated at the fore part. Thorax having the margins often eroded or denticulated.

AREOMETER, from apowc, thin, and /xtrpov, measure ; an instrument wherewith to measure the density or gravity of fluids. The araeometer, or water-poise, is usually made of glass ; consist- ing of a round hollow ball, which terminates in a long slender neck hermetically sealed at top ; there being first as much running mercury put into it as will serve to balance or keep it swim- ming in an erect position. The stem is divided into degrees, and by the depth of its descent into any liquor, the lightness of that liquor is con- cluded : for that fluid in which it sinks least must be heaviest, and that in which it sinks lowest, lightest. Homberg invented a new araeometer, described in Phil. Transact. No. 262 : thus, A is a glass bottle or matrass, with so slender a neck that a drop of water takes up in it about five or six lines, or half of an inch. Near that neck is a small capillary tube D, about six inches long, and parallel to the neck. To fill the vessel, the liquor is poured in at the mouth B (which is widened to receive a funnel), till it runs out at D, that is, till it rises in the neck to the mark C, by which means you have always the same bulk or quantity of liquor ; and, con- sequently, by means of the balance, can easil\ 'a:!!, when different liquors fill it, which weighs

0 6 — 11 0 32

most, or is most intensely heavy. Some regard, however, is to he had in these trials to the season »f the year, and degree of heat and cold in the weather ; because some liquors rarefy with heat and condense with cold more than others, and accordingly take more or less room. See HY- DROMETER. By means of this instrument, which weighs, when empty, one dram twenty-eight grains, the ingenious author has made a table to show the different weights of the same bulk of the most considerable chemical liquors both in summer and winter, as follows : —

Weighed in summer. In winter,

oz. dr. gr. oz. dr. gr. The araeometer full of) Quicksilver. J

Oil of tartar .... 1 3 8 — 1 3 31

Spirit of urine . . .1 0 32 — 1 0 43

Oil of vitriol . . . .1 3 58 — 1 4-3

Spirit of nitre . . . . 1 1 40 — 1 1 70

Spirit of salt . . . . 1 0 39 — 1 0 47

Aquafortis .... 1 1 38 – 1 1 55

Yinegar 0 7 55 — 0 7 60

Spirit of wine . . .0 6 47 – • 0 6 61

River water . . . . 0 7 53 – • 0 7 57

Distilled water ... 0 7 50 – 0 7 54

In Fahrenheit's araeometer the uncertainty arising from the erroneous division of the scale is obviated, no division being required. The form of the instrument is similar to that of many others, only at the top there is a small cup into which weights are put, so as to bring the surface of the denser liquid to a fixed mark on the stal'k ; when the instrument is placed :n a liquid of less density, 'ome of the weights are taken •Hit till the mark again comes to the surface. Suppose the weight of the instrument and of the weights in the cup together equal to 1000, when sunk k> the mark in distilled water at a certain temperature ; the instrument is taken out of the water and immersed in a liquid, where ten must be Jaken out of the cup in order to bring the mark to the surface ; the immersion in water indicates that a volume of water weighs 1000; the immersion in the second liquid shows that an equal volume of this liquid weighs 990 ; when the volumes of bodies are equal, the speci- fic gravities are directly as the absolute weights

<; \v

- ~ — , consequently the specific gravity of the

si '('011(1 liquid is PPO, that of water being 1000. To save computation, it is convenient that the whole weight of the apparatus, when in distilled water, at a certain temperature, should be repre- sented by 1000 ; for this purpose the instrument- maker divides the weight of the apparatus into 10u< > parts, and forms small weights consisting of one, ! wo, three, &c. of these thousandth parts, the relation of which, to the ounce or pound, does not require to be known; tin; weights thus formed arc to be used \itli the instrument.

The anrometer of Nicholson is like that of l-';)hieii!;.'it, \ith ihe addition of an immersed

cup, whereby it is rendered proper for ascertain- ing the specific gravity of so- lids. Suppose that it requires 400 grains in the exterior cup to sink the instrument to the mark in distilled water, at sixty degrees of Fahrenheit's thermometer: 1. The body under examination is put into the exterior cup, and weights (say 300 grains) are taken out till the mark again stands at the surface ; this gives the absolute weight of the body 300 grains. 2. The body is then put into the immersed cup S, taking care to brush off any air bubbles with a hair pencil, and, in order to bring the mark to the surface, a weight (say 100 grains) must be put into the exterior cup, that is, the weight of a volume of water equal to the body, is 100 grains. The first part of the process gave the absolute weight of the body 300 grains, and, the volumes being equal, the specific gravities are as the absolute weights, consequently the specific gravity of the body is 300, that of water being 100. This araeometer may be used to find the specific gravity of liquids ; the process, in that case, is the same as that described above in speaking of the areome- ter of Fahrenheit. The araeometer of Nicholson is useful to the mineralogist for ascertaining the specific gravity of minerals; the specific gravity being a convenient character for distinguishing one kind of mineral from another. It is some- times made of tinned iron, but, where more accuracy is required, copper is the material employed. When put together it does not ex- ceed a foot in length, and therefore is suited to travelling. See HYDROMETER.

AR7EOSTYLE; from apatoc, and

ARjEOTICS, in medicine, remedies which rarefy the humors, and render them easy to be carried off by the pores of the skin, such as sudo- rifics, &c.

ARJLPHILJENON, or ARJEPHILˆNORUM, altars, according to Strabo, south of Syrtis Ma- jor, but, according to Peutinger, more westerly, and south almost of the Syrtis Minor. On a dispute about limits between the Cyreneans and Carthaginians, it was agreed that two of each people should set out on the same day, and that where they should happen to meet, there the li- mits of both should be fixed. The Philaeni, two brothers Carthaginians, undertook it for Car- thage: these, after having advanced many- miles into the territory of the Cyreneans, were met by their antagonists ; who, enraged at their being beforehand with them so far, gave them the op- tion of their returning back, or of being buried alive on the spot. Like zealous patriots they chose the latter; and there the Carthaginians raised two altars in honor of the Philaeni. In Strabo's time the altars were not extant, but a village of this name stood on the spot.

ARAFAII, the ninth day of the last month of the Arabic year, named Uhoulhegiat ; on which

the pilgrims of Mecca perform their devotions on the mountain ARAFAT.

ARAFAT, or GIBEL EL ORPHAT, 'the moun- tain of knowledge,' or of gratitude, a mountain in Arabia, near Mecca. The Mahommedans say this was the place where Adam first received his wife Eve, after they had been expelled from Paradise, and separated from each other 120 years ! On the summit is a chapel ascribed to Adam ; the interior of which was rifled by the Wahabees in 1807. This mountain not being large enough to contain all the devotees that come annually on pilgrimage to Mecca, stones are set up all round it to show how far it reaches. The pilgrims are clad in robes of humility and mortification, with their heads uncovered. They seem to be much affected ; the tears flow down their cheeks, and they sob and sigh most bit- terly, begging for remission of sins, and promi- sing to lead a new life. On the 17th of February, 1807, this ceremony was performed by an assem- blage of 80,000 men, 2000 women, and 1000 children ; in whose service were employed about 70,000 camels, horses, and asses. The hill and its whole environs, were covered by this vast multitude, of which one portion consisted of 45,000 Wahabees mounted, and almost entirely naked. The pilgrims must approach the foot of the hill to await the setting of the sun ; and an evening prayer must also be said an hour and a half afterwards, at a chapel six or seven miles distant, not later than the last moment of twilight. A dreadful noise and tumult ensues as the sun disappears, from such a disorderly assemblage ; but accidents seldom happen.

ARAGON (Tullia d'), a poetess of the six- teenth century, descended from an illegitimate branch of the royal family of Spain. Her father, cardinal d'Aragon, placed her first at Ferrara, and afterwards at Rome, where her fine taste received the highest degree of cultivation. Her works are, Rime, in one 8vo. vol. printed in 1547; Dialogo dell' infinita d'Amore, which ap- peared in the same year ; and II Meschino oil Guerino, 4to. in 1560. Her beauty and accom- plishments were the theme of several poets of her age.

ARAGONA, a principality of Italy, in the Val di Mazara, belonging to Sicily.

ARAGUAIA, a large river of Brasil, in the province of Para, which enters

the Tocantins.

ARAGUAYA, a river of Brasil, which sepa- rates the province of Malto Grosso on the east from that of Goiaz. It has its spurce in the nineteenth degree of south latitude, and, running north, flows into the great river Tocantins, in the sixth degree of south latitude. Both thus united in one ample stream continue their course for 370 leagues, when they fall into the Amazons in 1°40′ south latitude, twenty leagues west of the city of Para.

ARAUUM, or HARAHUM, in ancient writers, denotes a place consecrated or set apart for holy purposes. Hence the phrase in araho jurare, or conjurare, 'to make oath in the church;' be- cause, by the Ripuarian laws, all oaths were to be taken in the church, on the relics of the saints. «

AltAJA (Francisco), a. Neapolitan musician and composer, who catered the service of the

empress Catherine of Russia, and produced at St. Petersburg, in 1755, Cephalo et Procris, the first opera ever written in the Russian language. Having amassed property he returned to Italy°m 1759, and died at Bologna.

ARAICHE, EL, or LA R ACHE, a seaport of Morocco, in the province of El Garb, at the mouth of the river El Kos. The surrounding country is fertile and beautiful, producing corn, wax, and oil, as well as timber for ship-building. The river has a bar of sand at its entrance ; after passing which, the depth is sufficient to admit vessels of 100 tons. It was formerly a town of considerable trade ; and there are still to be seen remains of spacious houses. But in the year 1780 the emperor Seedy Mahommed issued orders for all Europeans to quit the town, and it has ever since remained shut against them. This has a castle and batteries, which are in good condition ; inhabitants about 3000.

ARAIRE, a small plough used in Provence and Languedoc, in France.

ARAIS ALNIL, in botany, the name given by the people of Egypt to the faba Egyptia, or heads of the nilufar.

ARAISE'. Ang.-Sax. aresian, to raise. See RAISE.

Whose simple touch Is powerful to arayse king Pippen, nay To give great Charlemaine a pen in's hand And write to her a love line.

Shakspeare. All's Well that Ends Well.

ARAL, the largest lake in Asia next to the Caspian, extends from forty-

three to forty-seven degrees of north latitude, and fifty-eight to sixty- two east longitude. Its length is from sixty to seventy geographical miles, and breadth, which on the southern is twice as great as on the northern side, not more than thirty ; its circum- ference about 150. Its name signifies 'the Lake of Eagles.' It is separated by a sandy isthmus, from 150 to 200 geographical miles wide, frpm the Caspian, with which it closely corresponds in character. Around are sandy deserts, and it is only navigable by flat-bottomed boats ; and, having no inlets or harbours, it is little used in a . commercial view. It is filled with islands, and two large rivers, the Amu (Jaih'un or Oxus), and Sirr (Jaxartes), discharge their waters into it. It is probably the Lake Oxianes of Ptolemy, and the Oxia Palus of Ammianus Marcellinus, though the ancients commonly supposed the Oxus and Jaxartes to flow into the Caspian. Some have therefore supposed that the Aral did not exist, as a separate body of water, at that period. The saltness of the water, marine pro- ductions, and sandy bottom of this and the Cas- pian are difficult to account for, except on -the supposition of their having, in very remote times, formed a part of the Mediterranean. There are still extant strong indications of the ancient junction between this lake and the Caspian, in the narrowest part of the isthmus between them, which does not exceed eighty geographical miles. The same kinds offish are found in Aral that are found in the Caspian sea. It is called the Lake of Islands by the Tartars.

ARALIA, in ancient law writers, arable lands. They are also denominated aratoria, and aratu- ria. In Doomsday for Essex we meet with*

decem acras prati, duos luncal. quatuor aralia; where aralia seems to denote land fit for plough- ing or tillage, in contradistinction to runcalia, which was overrun with briars and thorns.

ARAMA, in botany, the angelica tree. A genus of the pentagynia order and pentandria class of plants, ranking in the natural method under the forty-sixth order, hederacex. The essential characters are : the involucrum is an umbella : CAt. quinquedentated, and above the fruit : COR. five petals ; and the berry five seed- ed There are five species of aralia, all natives of the Indies. The principal are: 1. A. nu- dicaulis having a stalk. This grows three or four feet high ; the leaves have two large trifolia ted lobes, which are sawed on their edges : 2. A. spinosa, with a prickly stem, is a very ornamental shrub, and a native of Virginia. The height to which this tree will grow, if the soil and situation wholly agree with it, is about twelve feet. This tree will spawn, as the gardeners denominate it ; i. e. after loosening

the mould about the roots young plants will arise, the broken roots sending forth fresh stems: nay, if the roots are planted in a warm border, and shaded in hot wea- ther, they will sometimes grow; but if planted in pots, and assisted by a moderate warmth of dung, or tanners' bark, they will be pretty sure of suc- cess ; so that the propagation of this tree is very easy. But the general method of propagating it, and by which the best plants may be had, is from seeds, which must be procured from America, for they do not ripen in Biitain; and, after having obtained them, they must be managed in the fol- lowing manner : The time that we generally re- ceive them is in the spring ; when we must be furnished with a sufficient number of large pots. These must, be filled with fine mould, taken from a rii.li border. The seeds must be sown in these pots as soon as possible after their arrival, hardly half an inch deep, and then the pots should be plunged in a warm place, their whole depth in the soil. Care must he taken to break the mould in the pots, and water them as often as it has a tendency to crust over; and if they are shaded in hot weather, the plants will frequently come up the first summer. But, in any case, the pots .should be plunged in a shady place; for they will ilourish after that better in the shade ; and thede- MU'II of plunging them in a warm place at first was "iily with ;i view of setting the powers of vegeta- tion at work, that, havin.y natural heat, artificial shade also may be given them, and water like- wise, the three grand necessaries for the purpose. The pots, whether the plants are come up in them or not, should he removed into shelter in Octo- ber, either into a green-house, some room, or under a hot-bed frame; and in the spring, when all danger of frost is over, they should be plunged into the natural ground their own depth in a shady place Those that were already come up •ˆi!l ha \e shot strong by the autumn following; ,ind if none of them have appeared, they will come up now. Whether they are young seedlings, : small plants of a former summer's growth, they .mist be kept clean of weeds, and watered in the lime of drought, until autumn. In October they iiniM b, ;!,:;ini removed either into a green-house, (Si:, a:- tM'itue. or fixed in a warm place, and

hooped, that they may be covered with mats in frosty weather. In the end of March following, they should be planted in the nursery way, to gain strength before they are finally planted out. The ground for this purpose, besides the natural shelter, should have a reed hedge, or something of the like nature, the more effectually to prevent the piercing winds from destroying the young plants. In this place the plants may be set in rows ; in each of which, furze bushes should be stuck the whole length ; and all these together will ensure their safety. But here one caution is to be ob- served ; not to stick the furze so thick but that the plants may enjoy the free air in mild weather, and not to take them away too early in spring, lest, being kept warm the whole winter, and being deprived of their protection, a

cutting frost should happen, as it sometimes does even in April or May, and destroy them. Weed and water them in dry weather in summer. They may be guarded again with furze bushes in the winter ; though it will not be necessary to do it in so close a manner ; and with this care, still diminishing in proportion the number of furze bushes, they may continue for three or four years, when they may be planted out into the warmest parts of the plantation. With this management, these plants will be inured to bear our winters in well-shel- tered places. The spines which grow on the branches and the leaves admonish us, for our own safety, not to plant this tree too near the sides of walks.

ARALIASTRUM, in botany, ginseng.

ARAM, OIK, i. e. highness, a name pretty common among the patriarchs : e. g. 1 . The fifth son of Shem, father of the Aramites, the founder of Aram ; 2. the son of Kemuel, and grandson of Nahor, Abraham's brother ; and 3. Aram, or Ram, the son of Hezron, and great- grandson of Judah.

ARAM (Eugene), a native of Yorkshire, in Eng- land, who, though very scantily educated by his parents, through natural genius and industrious perseverance acquired a considerable knowledge of the mathematics, and of the Latin, Greek, Hebrew, and Chaldee languages. In 1744 he became a teacher of Latin and writing at a school in London, where he continued two years, and afterwards was assistant in a boarding-school at Hayes in Middlesex. Some time after he was employed in transcribing the acts of parliament to be registered in chancery ; and in 1757 as- sisted in the free-school at Lynn. About this time he studied history, antiquity, heraldry, and botany. Besides which, he was no inferior poet. He investigated the Celtic, as far as possible, in all its dialects; and had begun to form collections, and make comparisons between the Celtic, Eng- lish, Latin, Greek, and Hebrew, and to form a Comparative Lexicon. But in the midst of these learned and laborious enquiries he was, in 1758, apprehended at Lynn for murdering one Daniel Clarke, thirteen years before, and carried to York castle. At his trial, in August 1759, he made a very able defence, but was found guilty, and next morning confessed the crime, which he ascribed to his jealousy of Clarke. When his irons were taken off, his arm was found cut in

two places with a razor ; and he was taken thus to the gallows at York, and hanged.

ARAM, or the ARAM.EAX REGION, in ancient geography, the Hebrew

name of Syria, so called from the son of Shem. Nor was this name of ancient Syria confined to the Hebrews, for it is remarkable that Hesiod and Homer, two of the most ancient Greek authors extant, call the Syrians, Aramaeans. Aram accordingly made a part of several divisions of ancient Syria : such as,

1. ARAM BETH-REHOB, that part of Syria which lay to the north of Palestine ; because Rehob was its boundary towards that quarter. It was allotted to the tribe of Asher, where it joins Sidon.

2. ARAM-DAMMESEK, or Syria Damascena, a principal part of Syria, which took its name from Damascus, the principal city.

3. ARAM-MAACHA, a district of Syria, at the foot of Mount Hermon, on the borders of the half tribe of Manasseh, on the other side of the Jordan, called the coast of Maachathi.

4. ARAM-NAHARAIM, i. e. Aram, or Syria of the Rivers, or Mesopotamia, situated between the Euphrates and Tigris ; whence the name.

5. ARAM-SOBA, or ARAM-ZOBAH, the country which David conquered, was situated where Palmyra afterwards stood. The Euphrates bounded it on the east, Canaan and Syria Da- mascena on the west.

ARAMAEANS, or ARAMITES, the ancient in- habitants of Syria. See ARAM.

ARAMONT, a town of France, in the depart- ment of Garde, seated on the Rhone, five miles west of Avignon, and twenty south-east of Uzes. Lon. 5° 0′ E, lat. 43° 54′ N.

ARAMPO, or MAX-£ATER; in zoology, a name given by the negroes on the African coast, to a long slender animal, shaped somewhat like a weasel. It has -a long tail bushy at the end. It gets its name from digging up graves and feeding on human flesh.

ARAN, a valley among the Pyrenean moun- tains, which is crossed by the river Garonne, before it enters the Comines.

ARANDA DE DUERO, a town on the Duero, or Douro, in Spain, in the province of Burgos, on the great road from Burgos to Madrid ; thirty-five miles south of the former place, and ninety north of the latter. It is fortified, has two parish churches, a collegiate church, four religious houses, and 3500 inhabitants. Corn and wine are raised in the vicinity.

ARAXEA, in entomology, the SPIDER; a genus of insects belonging to the

order of aptera, or insects without wings. Most of the known species have eight legs, with three joints in each, and terminating in three crooked claws : eight eyes ; two before, two behind, and the rest on the sides of the head ; but some few have only six eyes. In the forepart of the head, at the mouth, there is a pair of sharp crooked claws or forceps : these stand horizontally; and, when not exerted for use, are concealed in two cases contrived for their reception, in which they fold like a clasp- xmfe, and there lie between two rows of teeth. A little below the point of each claw there is a small hole, through which Leuwenhoek supposes tiie spider emits a kind of poison. But Dr. Mead,

*in his Essay on Poisons, dissents wholly from this opinion, having never been able, on repeated examination, to discover any such opening, not even in the claws of the largest foreign spider ; which, being above fifty times bigger than any of the European spiders, would more easily have afforded a view of this opening, if nature had allotted any to this part of the animal. Repeated observation also convinced him that nothing dropped out of the claws, which were always dry while the spider bit any thing, but that a short white proboscis was at the same instant thrust out of the mouth, which instilled a liquor into the wound. And the same author observes, that the quantity of liquor emitted by our com- mon spiders, when they kill their prey, is visibly so great, and the wounding weapons so minute, that they could contain but a very inconsiderable portion thereof, if it were to be discharged that way. These claws are the weapons with which they kill flies, &c. for their food. The belly or hinder part is separated from the head and breast by a small thread-like tube. The skin or outer surface is a hard polished crust. Spiders fre- quently cast their skins, which may be found in the webs perfectly dry and transparent; and from such skins the forceps, or claws, for they are always shed with the skins, may easier be separated, and examined with much greater ex- actness, than in the common spider wkile living. Spiders have five tubercles or nipples at the ex- tremity of the bell), > *hose apertures they can enlarge or contract at pleasure. It is through these that they spin a gluey substance, of which their bellies are full. They fix the end of their threads by applying these nipples to any sub- stance, and the thread lengthens in proportion as the animal recedes from it. They can stop the issuing of the threads by contracting the nipples, and re-ascend by means of the claws of their feet, much in the same manner as some men warp up a rope. When the common house-spider begins her web, she generally chooses a place where there is a cavity, such as the corner of a room, that she may have a free passage on each side, to make her escape in case of danger. Then she fixes one end of her thread to the wall, and passes on to the other side, dragging the thread along with her (or rather the thread fol- lows her as she proceeds), till she arrives at the other side, and there fixes the other end of it. Thus she passes and repasses, till she*

has made as many parallel threads- as she thinks necessary for her purpose. After this, she begins again and crosses these by oilier parallel threads, which may be named the woof. These are the toils or snares which she prepares for entangling flies, and other small insects which happen to light upon it. She also generally weaves a small cell for herself, where she lies concealed watch- ing for her prey. Betwixt this cell and the large web she has a bridge of threads, which, by com- municating with the threads of the large one, both gives her early intelligence when any thing touches the web, and enables her to pass quickly in order to lay hold of it. There are many other methods of weaving peculiar to different species of spiders, all intended for the same purpose. The darting out of long threads, which has

been observed by the naturalists, and by means of which some species of spiders can convey themselves to great distances, deserves particular notice. Dr. Lister tells us, that attending closely to a spider weaving a net, he observed it sud- denly to desist ; and turning its tail to the wind, it darted out a thread with the violence and stream we see water spout out of a jet : this thread, taken up by the wind, was immediately carried to some fathoms long; still issuing out of the belly of the animal. By-and-by the spider leaped into the air, and the thread mounted her up swiftly. He made the like observation on near thirty different species of spiders; and found the air filled with young and old, sailing on their threads, and doubtless seizing gnats and other insects in their passage, there being often manifest signs of slaughter, legs and wings of flies, &c. on these threads, as well as in their webs below. Dr. Hulse remarked the same thing at about the same period. Dr. Lister thinks there is a hint of the darting of spiders in Aristotle, (Hist. An. lib. ix. cap. 39 ; and in Pliny, lib. x. cap. 74.) But with regard to their sailing, the ancients are si- lent, and he thinks it was first seen by him. He also observes of those sailing spiders, that they will often dart, not a single thread only, but ‘ a whole sheaf at once, consisting of many filaments ; yet all of one length, all divided each from the other, and distinct until some chance either snap thorn off or enlarge them. But for the most part the longer they grow, the more they spread, and appear to a diligent observer like the numerous rays in the tail of a blazing star. As for that which carries them away in the air, so swift off- hand, it is partly their sudden leap ; partly the length and number of the threads projected, the stream of the air and wind beating more forcibly upon them, and partly the posture and manage- ment of their feet, which, at least by some sort of them, I have observed to have been used very like wiiv^s or oars, the several legs, like our fin- gers, being sometimes close joined, at other times opened, again bent, extended, &c. according to the several necessities and

will of the sailor. To fly they cannot be strictly said, they being carried into the air by external force ; but they can, in case the wind sutler them, steer their course, and perhaps mount and descend at pleasure : and for the purpose of rowing themsrJves along the air, it is observable that they ever take their flight backwards; that, is, their head looking a con- trary way, like a sculler upon the Thames. It is scarcely credible to what height they will mount; which yet is precisely true, and a thing easily to- be observed by one that will fix his eye some tune on any part of the heavens, the white webs, at a vast distance, very distinctly appearing from '.lie azure sky ; but this is in autumn only, and that in vi-ry fair and calm weather.' In a letter to Mr. Ray, In' further observes, ' Last October, &LC. 1 took notice that the air was very full of webs; I forthwith mounted to the top of the highest steeple on the Minster, (in York,) and could there discern them yet exceedinghigh above me.' Me then siw, that they not only thus shoot their threads upward, and mount with it in a line almost perpendicular; but also project them :n a hue paral! < 1 to the hori/on, as may be seen

by their threads running from one wall to another in a house, or from one tree to another in the field, and even from wall to wall across gardens of considerable extent. The matter of which the threads are formed, is a viscid juice, elaborated in the body of the animal, and emitted from pa- pillie situated at the extremity of the belly ; which are furnished with numerous apertures that do the business of wire-drawers, as it were, in forming the threads. Of these apertures, M. Reaumur observes, there are enough in the com- pass of the smallest pin's head to yield a prodi- gious quantity of distinct threads. M. Reaumur has often counted seventy or eighty with a mi- croscope; but has perceived that there were infi- nitely more than he could tell. In effect, if he should say that each tip of a papilla furnished a thousand, he is persuaded he should say far too little. The part is divided into an infinity of little prominences, like the eyes of a butterfly, &c. Each prominence no doubt makes its several threads ; or rather between the several protube- rances there are holes that give vent to threads ; the use of the protuberances, in all probability, being to keep the threads at their first exit, before they are yet hardened by the air, asunder. In some spiders those protuberances are not so sen- sible ; but in lieu thereof there are tufts of hair which may serve the same office, viz. to keep the threads apart. Be this as it will, there may threads come out at above a thousand different places in every papilla; consequently the spider, having five papilla, has holes for above five thousand threads. Such is the tenuity of the threads in the larger sort of spiders. But if we examine the young produced by those, we shall find that they no sooner quit their egg than they begin to spin. Indeed their threads can scarcely be per- ceived, but the webs may : they are frequently as thick and close as those of house spiders ; and no wonder, there being often 400 or 500 little spiders concurring to the same work.

How mi- nute must their holes be ; the imagination can scarce conceive that of their papilla ! The whole spider is perhaps less than a papilla of the parent which produced it. But there are even some kinds of spiders so small at their birth, that they are not visible without a microscope. There are usually found an infinity of these in a cluster, and they only appear like a number of red points : and yet there are webs found under them, though well nigh imperceptible. What must be the te- nuity of one of these threads ! Mr. Leuwenhoek has computed that 100 of the single threads of a full-grown spider are not equal to the diameter of the hair of his beard ; and consequently, if the threads and hair be both round, ten thousand such threads are not bigger than such a hair. He calculates farther, that when young spiders first begin to spin, 400 of them are not larger than one of a full growth ; allowing which, 4,000,000 of a young spider's threads are not so big as the single hair of a man's beard.

The generation of spiders varies in different species. As these insects prey upon each other, except during the time of their amours, they dare not come within reach of one another but with the utmost caution. They may sometimes be seen stretching out their legs, shaking the web,

and tampering with each other by a slight touch with the extremity of their feet ; then, in a fright, dropping hastily down their thread, and returning in a few moments to make fresh trial by feeling ; when once they are well assured of each others sex, the approaches of the feet, in order to feel, become more frequent, confidence takes place, and amorous dalliance ensues. ' We can- not,' says Lyonnet, 'but admire how careful they are not to give themselves up blindly to passion, or venture on an imprudent step which might become fatal to them.' Lister and Lyonnet, two accurate observers, say, that the extremity of those arms or claws, which the male spider uses to grasp his prey with, suddenly opens, as it were by a spring, and emits a white semen. Spiders frequently change their color, which varies much in respect of season, sex, age, &c. ; but they are in general more beautifully varie- gated in autumn ; a season not only most oppor- tune and plentiful respecting their prey, but the time when they arrive at their greatest magnitude, and are in their height of vigor.

Garden spiders, particularly the short-legged species, yield a kind of silk, which has by some been judged scarcely inferior to that of the silk- worm. M. Bon of Languedoc, about eighty years ago, contrived to manufacture from it a pair of silk stockings and mittens, of a beautiful gray color, which were almost as handsome and strong as those of silk ; and he published a

dis- sertation concerning tke discovery. But M. Reau- mur, being appointed by the Royal Academy, to make a farther enquiry into this new silk work, raised several difficulties and objections against it, which are found in the Memoirs of the Academy for the year 1710. The sum of what he has urged amounts to this : the natural fierce- ness of the spider renders them unfit to be kept together. Four or five thousand being distributed into cells, fifty in some, one or two hundreds in others, the big ones soon killed and eat the less, so that in a short time there were scarce left one or two in each cell ; and to this inclination of mutually eating one another M. Reaumur as cribes the scarcity of spiders, considering the vast number of eggs they lay. But this is not all ; he even affirms that the spider's bag is inferior to that of the silk-worm both in lustre and strength, and that it produces less matter to be manufactured. The thread of the spider's web, he says, only bears a weight of two grains with- out breaking ; and that of the bag bears thirty-six. The latter, therefore, in all probability, is eighteen times thicker than the former ; yet it is •weaker than that of the silk-worm, which bears a weight of two drams and a half. So that five threads of the spider's bag must be put together to equal one thread of the silk-worm's bag. Now it is impossible these should be applied so justly over one another as not to leave little va- cant' spaces between tnern, whence the light will be reflected ; and of consequence, a thread thus compounded, must fall short of the lustre of a solid thread. Add to this, that the spider's thread cannot be wotfnd off as that of the silk- worm may, but must of necessity be carded ; by which means being torn in pieces, its evenness, ivhich contributes much to its lustre, is destroyed.

In effect, this want of lustre was taken notice of by M. de la Hire, when the steckings were pre- sented to the academy. Again, spiders furnish much less silk than the worms : the largest baˆs of these latter we;eh four grains, the smaller three grains ; so that 2304 worms produce a pound of silk. The spider's bags do not weigh above one grain ; yet, when cleared of their dust and filth, they lose two-thirds of their weight. The work of twelve spiders, therefore, only equals that of one silk-worm ; and a pound of silk will require at least 27,648 spiders. But as the bags are wholly the work of the females, who spin them to deposit their eggs in, the number must be doubled. Yet will this only hold of the best spiders ; those large ones ordinarily seen in gar- dens, &c., scarce yielding a twelfth part of the silk of others ; 280 of these, he shows, would not yield more than one silk-worm ; 663,552 of them would scarce yield a pound.

The species of aranea enumerated by natural- ists amount to upwards of fifty ; of which it may here suffice to mention a few of the most re- markable. 1. A. aquatica, or the water-spider, of a livid color, with an oval belly, a trans- verse line, and two hollowed points. It frequents the fresh waters of Europe. But it is in some sort amphibious. 2. A. avicularia, has a

convex round breast, hollowed transversely in the mid- dle. It is a native of America, and feeds upon small birds, insects, &c. The bite of this spider is as venomous as that of the serpent. 3. A. calycina, with a round, pale, yellow belly, and two hollow points. It lives in the cups of flowers, after the flower leaves have fallen off; and catches bees, and other flies, when they are in search of honey. 4. A. cucurbitina, has a globular yellow belly, with a few black spots. It makes its abode among the leaves of trees, and encloses its eggs in a soft nest. 5. A. diadema, the largest spider which this country produces. The abdomen is of an oval form, downy, and of a ruddy yellow color, which is very variable in different seasons; being sometimes pale, at others very dark colored. The upper part is beautifully adorned with black and white circles and dots, having a longitudinal band in the mid- dle, composed of oblong and oval-shaped pearl- colored spots, so arranged as to resemble a fillet, similar to those worn by the eastern kings. The ground upon which this fillet and the white dots are laid, when viewed with a glass, and the sun shining thereon, is beautiful and rich beyond all description. There are varieties of color of this spider when young; some have their abdomen purple, ornamented with white dots, the legs yellow and annulated with a deeper color; others have their abdomen of a fine red, likewise ornamented with white, but their legs of a fine pale green color, annulated with daik purple or black. It inhabits the birch tree. 6. A. fasciata, with yellow bands round the belly, and dusky- rings on the legs, a native of Barbary, and as large as the thumb. 7. A. fimbriana, has a black oblong belly, with a white line on each side, and dusky colored legs. It lives in water, upon the surface of which it runs with great swiftness. 8. A. holobericia, has an ovalish belly covered with a down like velvet; at the base or under part:

it has two yellow spots. It is found in the folded leaves of plants. 9. A. labyrinthica, with a dusky oval belly, a whitish indented line, and a forked anus. The web of this species is hori- zontal, with a cylindrical well or tube in the middle. 10. A. ocellata has three pair of eyes on its thighs. It is about the same size with the tarantula, of a pale color, with a black ring round the belly, and two large black spots on the sides of the breast. It is a native of China. 1 1 . A. saccata has an oval belly, of a dusky iron color. It lives in the ground and carries a sack with its eggs wherever it goes. This sack it glues to its belly, and will rather die than leave it be- hind. 12. A. tarantula has the breast and belly of an ash color ; the legs are likewise ash-colored, with blackish rings on the under part ; the fangs or nippers are red on the inner side, the rest being blackish. Two of its eyes are larger than the other, red, and placed in the front; four other eyes are placed in a transverse

direction towards the mouth ; the other two are nearer the kick ; it lias two antennce or feelers. It is a native of Italy, Cyprus, Barbary, and the East indies. It lives in bare fields, where the lands are fallow, but not very hard ; and, from its an- tipathy to damp and shade, chooses for its resi- dence the rising part of the ground facing the fast. Its dwelling is about four inches deep, and half an inch wide; at the bottom it is curv- rd, and there the insect sits in wet weather, and cuts its \ay out if water gains upon it. It weaves a net at the mouth of the hole. These spiders do not live quite a year. In July they shed their skin, and proceed to propagation ; which, from a mutual distrust, as they frequently devour one another, is a work undertaken with great circum- spection. They lay about 730 eggs, which are hatched in the spring; but the parent does not live to see her progeny, as she expires early in the winter. The ichneumon fly is their formi- dable enemy.

The bite of the tarantula is said to occasion an inflammation in the part, which in a few hours brings on sickness, difficulty of breathing, and universal faintuess. The person is afterwards afllicted with delirium, and sometimes is seized with a deep melancholy. The same symptoms return annually, in some cases, for several years, and at last terminate in death. Music, it has been pretended, is the only cure. A musician is brought, who tries a variety of airs, till at last lie hits upon one that urges him to dance ; the violence of which exercise produces a propor- tionable agitation of the vital spirits, attended with a consequent degree of perspiration, the i' rtam consequence of which is a cure. Such aie the circumstances that have been generally lelated, and long credited, concerning the bite of this animal. Kircherus, in his Musurgia, gives ,: very particular account of the symptoms and (lire, illustrated by histories of cases. Among these lie mentions a uiil who, being bitten by this insect, could he cured only by the music of a drum ; ami relates, that, a certain Spaniard, trusting to the t ilicacy of music in the cure of the ireii/.y ocia>ione

sessed of different qualities. The venom was no sooner diffused about his body, than the symp- toms of the disorder began to appear; upon which, harpers, pipers, and other musicians were sent for, who by various kinds of music endea- voured to rouse him from that stupor into which he was fallen; but here it was observed that the bites of the two insects had produced contrary effects ; for by one he was incited to dance, and by the other he was restrained therefrom ; and in this conflict of nature the patient expired. The same account is given in his Phonurgia Nova, with the addition of a cut representing the insect in two positions, the patient in the ac- tion of dancing, together wit,h the musical notes of the tune or air, by which, in one instance, the cure was effected. Other writers have averred equally wonderful things of this spider. The honorable Robert Boyle, in his Treatise of Lan- guid and Unheeded Motions, speaking of the bite of the

tarantula, and the cure of the disease which follows it, by means of music, says, that having himself had some doubts about the matter, he was, after strict enquiry, convinced that the re- lations in the main were true; and Dr. Mead, in his Mechanical Account of Poisons, has given an essay on the tarantula, containing the sub- stance of the above relations, which he endea- vours to confirm by his own reasoning.

In the Philosophical Transactions for 1672, p. 406, is an extract from Dr. Thomas Cornelto, a Neapolitan physician, to J. Doddington, Esq., his majesty's resident at Venice, communicated by the latter, in which, speaking of his intention to send to Mr. Doddington some tarantulas, he says, ' Meanwhile I shall not omit to impart to you what was related to me a few days since by a judicious and unprejudicate person ; which is, that being in the country of Otranto, where those insects are in great numbers, there was a man who thinking himself stung by a tarantula, showed in his neck a small speck, about which in a' very short time there arose some pimples full of a serous humor ; and that, in a very few hours after, the poor man was sorely afflicted with very violent symptoms, as syncopes, very great agita- tions, giddiness of the head, and vomiting ; but that without any inclination at all to dance, and without a desire of having any musical instru- ments, he miserably died within two days. The same person affirmed to me, that all those that think themselves bitten by tarantulas, except such as for evil ends feign themselves to be so, are for the most part young wanton girls, whom the Italian writers call Dolce di Sale ; who, by some particular indisposition, falling into this melancholy madness, persuade themselves, ac- cording to the vulgar prejudice, to have been stung by a tarantula.' Serao, an Italian physi- cian, has written an ingenious book, in which he has effectually exploded this opinion as a popH- lar error : and in the Philosophical Transactions, No. lx., for the year 1770, p. 236, is a letter from Dominico Cirillo, M. D., professor of natural history in the university of Naples, wherein, taking notice of Serao's book, he says, that hav- ing had an opportunity of examining the effects of this animal in the province of Taranto, where it is found in great abundance, he finds that the

surprising cure of the bite of the tarantula by music, has not the least truth in it ; and that it is only an invention of the people, who want to get a little money by dancing when they say the tarantism begins. He adds, ' I make no doubt but sometimes the heat of the climate contri- butes very much to warm their imaginations, and throw them into a delirium, which may in some measure be cured by music; but several experi- ments have been tried

with the tarantula, and neither men nor animals after the bite have had any other complaints, than a very trifling inflam- mation upon the part, like that produced by the bite of a scoipion, which goes off by itself with- out any danger at all. In Sicily, where the summer is still warmer than in any part of the kingdom of Naples, the tarantula is never dan- gpruus ; and music is never employed for the cure of the pretended tarantism.' Mr. Swinburn, when in the country of the tarantula, was de- sirous of investigating minutely every particular relative to that insect ; but the season was not far enough advanced, and no tarantati (persons bitten or pretending to be bitten by the tarantula) had begun to stir. He prevailed, however, upon a woman who had formerly been bitten, to act the part, and dance the tarantata before him. A great many musicians were summoned, and she performed the dance, as all present assured him, to perfection At first she lolled stupidly on a chair, while the instruments were playing some dull music. They touched, at length, the chord supposed to vibrate to her heart ; and she sprung up with a most hideous yell, staggered about the room like a drunken person, holding a handker- chief in both hands, raising them alternately, and moving in very true time. As the music grew brisker her motions quickened, and she skipped about with great vigor and variety of steps, every now and then shrieking very loud. The scene was far from pleasant ; and, at his desire, an end was put to it before the woman was tired. W herever the tarantati are to dance, he informs us a place is prepared for them, hung round with bunches of grapes and ribands. The patients are dressed in white, with red, green, or yellow rib- ands, for those are their favorite colors ; on their shoulders they cast a white scarf, let their hair fall loose about their ears, and throw their heads as far back as they can bear it. They are exact copies of the ancient priestesses of Bacchus. The orgies of that god, whose worship under various symbols was more widely spread over the globe than that of any other divinity, were no doubt performed with energy and enthusiasm by the lively inhabitants of this warm climate. The introduction of Christianity abolished all public exhibitions of these heathenish rites; and the women durst no longer act a frantic part in the character of Bacchantes. Unwilling to give up so darling -an amusement, they devised other pretences; and accident may have led them to a discovery of the tarantula. Upon the strength of its poison, the Puglian dames stiH enjoy their old dance, thouˆn time has effaced the memory of its ancient nune and institution : and this Mr. Swinburn takes to be the origin of so strange a practice. If at any time these dancers are really and involuntarily affected, he supposes it can be

nothing more than an attack upon their nerves, a species of St. Vitus's dance; and he inclines the more to the idea, as there are numberless churches and places throughout these provinces dedicated to that saint. Many sensible people of the country, however, differ in opinion from Dr.

Serao and other authors, who have ridiculed the pretended disorder, and affirm that the venom of this species of spider can produce no effects but such as are common to all others. The Brindisians say, that the tarantulas sent to Naples for the experiment, were not of the true sort, but a much larger and a more innocent one; and that the length of the journey, and want of food, had weakened their power so much as to suffer the doctor or others to put their arm into the bag where they were kept with impunity. They quote many examples of persons bitten as they slept out in the fields during the hot months, who grew languid, stupid, deprived of all courage and elasticity, till the sound of some favorite tune roused them to dance, and throw off the poison. These arguments, however, Mr. Swinburn thinks of little weight ; for they ac- knowledge that elderly persons were more frequently affected than young ones; and that most of them were women, and those unmarried. No person above the lowest rank in life was ever seized with this malady, nor is there an instance of its causing death. The length of the dance, and the patient's powers of bearing such exces- sive fatigue in the canicular season, prove no- thing; because, every day at that time of the year, peasants may be seen dancing with equal spirit and perseverance, though they do not pre- tend to be seized with the tarant'sm. The illness may therefore be attributed to nysterics, exces- sive heat, stoppage of perspiration, and other effects of sleeping out of doors in a hot summer air, which is always extremely dangerous, if not mortal, in most parts of Italy. Violent exercise may have been found to be a certain cure for this disorder, and continued by tradition, though the date and circumstances of this discovery have been long buried in oblivion ; a natural passion for dancing, imitation, custom of the country, and a desire of raising ' contributions upon the spectators, are probably the real motives that inspire the tarantati. Before Serao's experiments, the taraatula had been proved to be harmless, from trials made in 1693 by Clarrizio, and in 1740 at Lucera by other naturalists.

Gmelin has enumerated more than 120 spe- cies of this genus, which are separated into distinct sections, according to the number and position of their eyes.

A. Eyes placed : : : :

B. Eyes •:::•

C. Eyes . ~ ”' .

D. Eyes : : :

E. Eyes .::.

F. Eyes : :

G. Eyes : :

ARA

558 :

ARA

known.

II. Eyes I. Eyes K. Eyes L. Eyes M. Eyes N. Eyes ()., Eyes

P. Eyes, number and position un-

ARANEA, in mineralogy, a silver ore found only in the mines of Potosi, or in the single mine there of Catamite. It owes its name to some resemblance it bears to a cobweb, being composed of threads of pure silver, which ap- pear like a silver lace, when burned to separate the silk from it. It is the richest of all kinds of silver ore.

ARANKA CONCHA, in natural history, the name cf a kind of sea-shell, of which there are several species : we call them in English the spiders' shells : they are of the family of the murex, and their peculiar character is the having digitated lips. The several species have different numbers of fingers, from the lip of the shell, as four, five, six, seven, or eight.

AKAXF.A TUNICA. See ARACHNOIDES.

AKANEIFORMIS, in entomology, a species of cerambyx which inhabits South America.

ARANEIFORMJS, in natural history, a species of echinus. It is echinometra multipes s. spi- nosissima Americana of Seba ; and spinnekopf. 1'hels. Zee- egel. It inhabits the American seas.

AKANEUS, in medicine, a low pulse, ac- cording to Galen. The won1 is used by Hip- pocrates for a flaky urine, having films like cob- webs iti it.

Ai-iANKL'S MAIUNTS, the sea spider, a name !>y which some have called the fish more usually known by the name of draco marinus, and sup- posed to have something venomous in the spines of its back fin.

AitANJUEX, a town and palace of the kings of Spain, situated on an island formed by the T^uus, the Xarama, and a canal, in the pro- viuee of Toledo, <>i Spanish leagues from Madrid. The town of Aranjuez was first in-

debted for its enlargement to Ferdinand VI. It is built in the Dutch style, having broad parallel streets, with fine pavements, and the intersec- tions at ri'j;ht angles. The houses are two >torii-s hiu'h, painted white1, with green doors and Window-shutters, and having generally double rows of trees before them. The prin- cipal in the u'eat squan are the church, a Fran- oi'- ean monastery! and coveted market-place. The inhabitants derive handsome incomes from the residence of the court. The hicrh road from Aru!:juL'/ to Madrid is said to have cost three mill, .in-; ,,f reals (i'^V^O sterling). It was lieiiun under Ferdinand VI. Population of the t.iwn. duriiii: the re-idence of the court about

10,000. The country around is one of the most delightful in Spain. The ground of the palace was appropriated by Charles I. and the foundation laid by his son Philip II. Suc- ceeding monarchs, in particular Ferdinand VI. and Charles II. contributed their share to its enlargement and embellishment ; and it contains an excellent collection of paintings, of ancient and modern busts, marble staircases, superb mirrors from the manufactory of St. Ildefonzo, and an apartment filled with beautiful speci- mens of porcelain from the works at Madrid. But -these are exceeded in interest by the gardens, which are in the form of a star, and excite the admiration of every observer. The elm-tree alleys are particularly fine, being so wide that four car- riages can go abreast, while between each double row there flows a small canal. The main alley is between 600 and 700 paces long, and twelve feet broad, and is enclosed with a lofty hedge. At every seventy or eighty paces are resting places in the form of squares or hexagons, while fountains and jets d'eau play beautifully in every corner. The water is brought by an aqueduct from the small lake called Mar de Ontigola, about a mile distant. Near this is the village of Ontigola, the usual residence of foreign minis- ters when the court is at Aranjuez. The com mon practice is for the court to move hither a little after Easter, and to remain till the end of June.

ARANYOS GYERES, a market town of Tran- sylvania, on the river Aranyos, with a reformed church. It is the head-quarters of the frontier cavalry of the Austrians.

ARANYOS, GREAT AND LITTLE, two rivers in Transylvania. The first rises near Clausenburg, the other not far from Offenbanya, and after uniting their streams at St. Kirali, they flow into the Marosch, above St. Emmerick. The beds of these rivers yield particles of gold, which is extracted by the gipsies ; hence they are fre- quently called the golden aranyos.

ARAP ABACA, a name given by Plumier to the spigelia of Linnaeus, or worm grass.

ARAQUI, in geography, a river of Georgia, next in importance to the Cyrus, or Kur, which, rising near the gates of Caucasus, flows to the south, and after dividing into two equal parts, the southern range of mount Caucasus, falls into the Kur, at the town of Tsgette, twenty- five miles above Teflis.

ARAR, or ARARIS, in ancient geography, a river of Celtic Gaul, which rises out of mount Vogesus, on the confines of Lorraine, runs through the Franche Comte and Burgundy, and falls into the Rhone below Lyons. It is so incredibly slow, that the eye cannot distinguish which way it moves, (Caesar) ; and therefore Pliny calls it the Sluggish River. Ammianus calls it Sancotia, which has since been changed to Saone. It runs from north to south. It is famous for a bridge of Caesar, which was built by the soldiers in one day. It is navigable equally with the Rhone. Its gentleness is thus celebrated.

Rhodani qui gurgite gaudent Quorum serpit Ararper rura pigerrimus amnii.

Sil. Hal. lib. xv, v. 500. qua Rhodanus raptum velocibus undis In mare fcrt Ararim. Luc. lib. i. v. 434.

*ARARAT, 18”Y1K, in ancient geography, the mountain on which Noah’s ark rested after the abatement of the waters of the universal deluge. Concerning this mountain there are various con- jectures ; though it is almost universally allowed to be in Armenia Major. Some are of opinion that it is one of the mountains which divide Ar- menia on the south from Mesopotamia and that part of Assyria inhabited by the Curds ; from *hom these mountains took the name of Curdu or Cardu, by the Greeks turned into Gordyaei, &c. Others, that it lies towards the middle of Ar- menia, near the river A raxes, above 280 miles distant from the above-mentioned mountains, making it belong to mount Taurus; but the Ar- menians are positive that Noah’s Ararat is no other than a mountain to which they now give the name of Masis, which lies about twelve leagues to the east of Erivan, and four leagues from the Aras. It is encompassed by several petty hills ; on the tops of which are found many ruins, the buildings of the first men, who were afraid to descend into the plains. It stands by itself, in form of a sugar-loaf, in the midst of a very large plain, detached, as it were, from the other mountains of Armenia, which make a long chain ; and consists, properly speaking, of two hills ; the higher, on which it is said the*

ark rested, lying to the north-west, and rising far above the neighbouring mountains. The most distinct account we have of this mountain is that given by Mr. Tournefort; who tells us, that this mountain is one of the most disagreeable sights upon earth, without either houses, con- vents, trees, or shrubs; and seems as if con- tinually wasting and mouldering away. Struys, a Dutch writer, went five days journey up mount Ararat, to see a Romish hermit ; passed through three regions of clouds ; the first dark and thick, the next cold and full of snow, and the third colder still : he says he advanced five miles every day ; and when he came to the place where the hermit had his cell, breathed a very serene and temperate air. He farther states, that the hermit gave him a cross made out of the wood of the ark, with a certificate of its au- thenticity.

ARARAUNA, in ornithology, the name of a Brasilian bird of the macaw kind : a species of psittacus.

ARAS, or ARAXES. See ARAXIS.

ARASCH A, a rapid river of Mingrelia, which has its source near the village of Kemme, and unites on the borders of the Iberian lordship of Sa Schilio with the Hippus, which rises in the highest mountain of the Soani not far from the source of the Phasis, flows through Letsghumi, divides Mingrelia from Iberia, and enters the Phasis near the Tredia.

ARSASIE, a town of Italy, in the territory of Genoa, but belonging to Piedmont. It is popu- lous and has a good harbour, where it is common for travellers to hire vessels for different ports of Italy. Five miles south-west of Albenga.

ARATEIA, in antiquity, a yearly festival ce- lebrated at Sicyon on the birth-day of Aratus wherein divers honors were paid by a priest consecrated to this service, who for distinction's sake wore a riband bespangled with white and

purple spots. It was solemnised with much pomp of music, the choiristers of Bacchus at- tending.

ARATHAPESCOW INDIANS, a nation in North America, who carry on constant wars with the western Dog-ribbed Indians.

ARATICU, a river of the province of Para, in Brasil, which runs north between the Jacunda and Tocantins, and flows into the Amazons at its mouth.

ARATO-BAFABEN, a fixed 'star of the se- cond magnitude in the head of the dragon.

ARATU3VI TERR.E, in our ancient law books as much land as can be yearly tilled with one plough. — Hoc manerium est triginta aratorum.

ARATARA, a river of South America, which has its source in the mountains of Itamaca, and discharges itself into the sea on the south bank of the great river Orinoco. Its mouth is narrow, but it is navigable about ten leagues, and on its banks are found great quantities of fine woods.

ARATURA TERRJE, ancient service which the tenant was to do his lord by ploughing his land.

ARATUS, a celebrated Greek poet, born at Soli in Cilicia. He flourished about the 124th or 126th Olympiad, in the reign of Ptolemy Philadelphus king of Egypt ; and discovered in his youth a remarkable poignancy of wit, and capacity for improvement. Having received his education under Dionysius Heracleotes, a Stoic philosopher, he espoused the principles of that sect. Aratus was physician to Antigonus Go- natas king of Macedon, who admitted him to great intimacy. The poem, Phenomena, of Aratus, which is still extant, gives him a title to the character of an astronomer as well as a poet. In this place he describes the nature and motion of the stars, and shows the particular in- fluences of the celestial bodies. It was trans- lated into Latin by Cicero. There is also a translation by Germanicus Caesar, and another by Festus Avienus. A quarto edition of the Phenomena was published by Grotius at Leyden, in 1 600, in Greek and Latin, with the fragments

S Cicero's and the two last-named versions, e was certainly much esteemed by the an- cients, since we find so great a number of com- mentators upon him. Several other works are also ascribed to Aratus. Suidas mentions hymns to Pan ; Astrology and Astrothesy ; a composi- tion of Antidotes; an EjriSvrtKov on Theopro- pus; an HQoirout on Antigonus; an Epigram on Phila, the daughter of Antipater, and wife of Antigonus; an Epicedium of Cleombrotus; a Correction of the Odyssey; and some Epistles in prose. Virgil in his Georgics has imitated or translated many passages from this author ; and St. Paul quoted a passage from Aratus in his speech to the Athenians, Acts xvii. 28. wherein he told them, that some of their own poets have said Ta yap KM ytrog ffffttv ; ' For we are also his offspring.' These words are the beginning of the fifth line of Aratus's Phenomena.

ARATUS, a famous general of the Achaeans, who at twenty years of age commenced the at- tempt to deliver Greece from its tyrants, and es- tablish one general republic among the different states. He began by expelling Nicocles the

tyrant of his native country, Sicyon ; which he thereby joined to the Achaean league, A. A. C 253. Two years afterwards he took the fort of Acrocorinthus, and delivered Corinth from the Macedonian yoke. Being afterwards repeatedly elected praetor, or general of the leagues, he delivered Argos and several other Grecian states from their tyrants. But in the midst of this suc- cessful career, while the league was flourishing throughout all Peloponnesus, it was deserted by the Lacedaemonians, whose king, Cleomenes III. joined the ./Etolians and defeated Aratus; A. A. C. 235. By the advice of Aratus the Achaeans called in the assistance of Antigonus II. king of Macedonia, who joined the league and defeated Cleomenes : but Aratus was afterwards poisoned by his ungrateful successor Philip VI. whom he had newly restored, in the second year of the 141st Olympiad, and the sixty-second of his age. He was interred at Sicyon, and received the greatest honors from his countrymen. See ARA- •IT.[A. Polybius gives us a high character of Aratus's Cotiimentaries on History, which are lost.

ARATUS, the son of the above, was also praetor 6f the Achaean league, and poisoned by the un- grateful tyrant of Macedonia.

ARAU, a town of Switzerland, in the canton of Aargau, lying on a hill on the Aar. A co- vered bridge serves to unite the two sides of the river. Linen, cotton, and silk manufactures are considerable for the size of the place. It became subject to the canton of Berne in 1415, and has been commonly chosen for the general assembly of the Protestant cantons. During the French revolution it was at different times the seat of the Helvetic government ; and, since the erection of Aargau into a separate canton, it has been its chief town. Thirty miles N. N. E. of Berne. Inhabitants 2000. Long. 7° 54′ E., hit. 47° 23′ N.

ARAVA, the name of, 1. a district, 2. a fortress, and 3. a river, in Upper Hungary. The fort is seated seventy-two miles north-west of Cassovia. Long. 20° 6′ E., lat. 49° 20′ N.

ARAUCANIANS, a nation of Indians of the kingdom of Chili, who inhabit a delightful coun- try, situate between the rivers Biobio and Val- divia, and between the Andes and the sea, ex- tending from 36° 44′ to 39° 50′ of S. lat. They derive their appellation of Araucanians from the province of Arauco, which, though th° smallest in their territory, has given its name to the whole nation. The Spaniards were never able to re- duce them. The progress of the new republics in tliis direction may be expected to turn the na- tural advantages here possessed to better ac- count. Some curious details are given of their manners; and their history is interesting. Their

country is divided into tour nearly equal dis- tricts or portions, called in the language of the country mapus, deriving their names from their relative situation with regard to the sea or the Andes : as the Lanquen Mapu, or the maritime division; Lelbun Mapu, or plain country; Jna- l>ire Mapu, or country near the Andes; and I'm- Mapu or country of the Andes. These great divisions arc again subdivided into pro- v ni«cs, ;u:tl t'.e provinces into districts, which

might be termed counties. The Puelches, once a distinct nation, now compose a tribe in union with the Araucanians. The three different divi- sions of the kingdom into tetrarchates, provinces, and districts, lay the foundation for three dif- ferent orders of nobility by which they are re- spectively governed. These gradations are, be- ginning with the highest dignity, toques, apoul- menes, and ulmenes. The first presides over a tetrarchate, and of course commands the inferior officers who govern the provinces or counties which it contains; the second governs a pro- vince, and has under him the governors of the counties which his province includes ; and to the third only a county is allotted. These titles and privileges are hereditary, following the law of primogeniture in the male line, and have their respective badges of distinction : the toqui a stone hatchet; the apo ulmen a silver-headed baton, encircled by a ring on the middle ; and the ulmen a baton simply with a silver head. The common people seem to be jealous of their freedom, and eagerly disposed to resist encroach- ments on their privileges. The criminal juris- prudence is defective, and, like that of most bar- barous nations, permits the offended party to punish, in his own name and authority, the per- son who has done him injury. Murder may be compounded for by a remuneration to the friends of the deceased ; and the patria potestes extends to the father the privilege of putting his children to death without enquiry or condemnation. The Araucanians are distinguished for their spirit, their invention, and their wise regulations in the military system. Upon a declaration of war the whole armies of the state are entrusted to the command of a generalissimo, who is invested for the time with very extensive authority, and has the selection of his officers and inferior agents. They now announce their resolution to their neighbours by means of a bundle of arrows tied with a red string, and solicit assistance or al- liance. The number of men that, upon emer- gency, they can bring into the field is variously stated, but generally does not exceed 5 or 6000- men. In their contests with the Spaniards, they felt the destructive effects of cavalry, and saw that for their defence a similar species of force was necessary. Accordingly we are told that in a few years afterwards they could muster severaV squadrons of horse. Their army is divided into bodies of 1000 men each, and these bodies are again subdivided into companies of 100. They •wear no uniform, but are provided with a kind of armour composed of hardened

leather. Their offensive weapons consist of swords and lances for their cavalry, of clubs and pikes for their in- fantry. They are fatally acquainted with the use of gunpowder, as in their contests with the Spaniards it spread destruction among their ranks ; but they are totally ignorant of the art of manufacturing it. In the field they display great intrepidity, and after victory commit many atrocities. Among these, what is called the pru- loncon, or death-lance, is the most shocking. After battle a circle of officers surround the battle-axe of their general, guarded by four lances, representing the four grand divisions of the state Into this circle the captive is igno-

mimously conducted upon a horse deprived of its ears and tail ; and having his face turned to his native land, is compelled to throw, into a hole that he has dug in the earth, a number of sticks, mentioning at each throw a celebrated hero of his country. This furnishes the victors with an opportunity of cursing the person of the inimical chiefs ; and, when the list is finished, the sticks are covered up as if to represent their interment. When the captive has finished this ceremony, his own doom follows. His brains are dashed' out with a club by his barbarous foes; the heart extracted while yet quivering with life, and a part of its blood sucked in succession by the ring of officers who preside at the sacrifice. His bones are then formed into flutes for playing their war music, and his skull is first carried round on a pike amid the shouts of the soldiery, and then, if not entirely shattered by the blow of the club, used as a drinking cup for the re- velry that follows. ' When a treaty of peace with Europeans is the object, a plain between the Bio-Bio and the Duqueco has been generally appointed for a congress with the Spanish pre- sident. Each of the tetrarchates sends a deputy to this assembly ; and without the concurrence of all, no peace can be concluded. The chief toqui opens the conference, by presenting a branch of the cinnamon tree as the emblem of peace, and accompanying the ceremony with a speech. To this the Spanish president replies. The treaty is then ratified by the sacrifice of camels ; and, in token of mutual friendship, the authorities on both sides dine together, and exchange presents. The religious belief of the Araucanians is simple, and their religious ceremonies few and not fre- quently performed. They have placed over the world a supreme being, and under him many subordinate divinities with, a distribution of power similar to what prevails in their own political state. The inferior divinities are of different sexes; and, as they do not stand in need of the assistance of their worshippers, they do not trou- ble them with their homage. Hence they are indifferent, and indifference produces toleration. They believe in the immortality of the soul, the existence of

ghosts, and the power of sorcerers. They have funeral ceremonies not unlike those of the Romans. In the division of the year they make twelve months of thirty days each, and dispose of the five intercalary days by placing them in the last month. Their year commences on the 22d of December, at the solstice of Capri- corn. Their arts and sciences are of course con- fined within very narrow limits. A species of forcible and figurative oratory is much practised among them, as among most savages, and the gift of poetical talent is held of the same estima- tion, and employed in the same service, as among other natives in a similar stage of civilisation. The medical art among all rude nations is highly prized, and generally forms an alliance with sor- cery or divination. Here it maintains similar honors, and enters into similar connexions. In their domestic state and manners, the Arauca- uians are not much raised above the other tribes of the new continent. Polygamy is permitted oy their laws; and the only limitation to the number of women is formed by the disposition VOL. H

or the fortune of the husband, who, recording to the custom of savages, pays a dowry orpurclias- money to the father of every woman he marries Although one man may have a number of wives, all joined to him by the same ceremonies, the first married is always regarded as the legitimate one, and the rest in a certain sense subordinate to her. Each wife is obliged to prepare a dish for her husband in her own separate kitchen, and ‘ the number of fires a man keeps,’ becomes thus the measure of his opulence. Their houses are generally neat and cleanly. In their persons they are said to be well formed, strong, and ac- tive. The females are celebrated for their beauty, and the elegant dress that heightens their charms. Their food consists principally of Indian corn and potatoes, with a very sparing use of flesh, which they either simply boil or roast. Although they could command plenty of fish, they seem averse to the use of it. Their drinks are mostly beer or cider; but when they can obtain wine they testify a great fondness for it. In general they are temperate, perhaps from necessity ; but at their public entertainments revelry and riot frequently preside. Unacquainted with the use of precious metals as money, barter is their usual mode of effecting transfers. Their principal trade is derived from an intercourse with the Spaniards, with whom they exchange horses, horned cattle, ostrich feathers, &c. for iron-ware, cutlery, grain, and wine. They are said to sell to the Spaniards 40,000 of the cloaks called ponchi every year.

About the year 1 450, an inca of Peru attempt- ed the conquest of Chili, and consequently of Araucania along with it; but his army retired on being defeated in a sanguinary engagement. A century later the Spaniards resolved to extend their conquests in this direction, but were op- posed by the Araucanians with a body of 4000 men, led beyond their own confines ; and whose conduct impressed the Spaniards with a fear of them that has never been extinguished. At length some settlements were formed within

their boundaries ; but about the year 1553 a period of bloody warfare ensued; and the resentment of the Araucanians was inflamed against the Spaniards by their barbarous mutilation of those unfortu- nate prisoners who fell into their hands. One of their bravest commanders, Caupolican, being be- trayed after a gallant resistance, was condemned to be impaled alive, and shot with arrows : when brought to the place of punishment, and behold- ing the ignominy that awaited him, he hurled the executioner from the scaffold, exclaiming, ‘ Is there no sword, and some less cowardly hand to be found to put to death a man like myself? This has nothing of justice in it, — it is base re- venge.’ Various successes and discomfitures en sued, when, about the termination of the sixteenth century, the Araucanians besieged the enemy in the fortress of Puren. Unable to reduce the place so speedily as he desired, their chief pre- sented himself before it, mounted on a fine horse recently taken from the governor, and challenged the commander, Don Garcia Ramon, to single combat at the end of three days. The defiance being accepted, the chieftains met, each accom panied by a small body of men who stood at a dis- tance. Putting spurs to their horses, they ad-

vanced impetuously, but at the first encounter the Araucanian toqui was pierced through the body by his adversary’s lance. Refusing to ac- knowledge himself vanquished, he endeavoured to remount his horse, but in doing so expired. These events were followed by the siege of Vil- larica, a rich and populous city belonging to the Spaniards, which, after a resistance of two years and eleven months, fell into the hands of the Araucanians. A similar fate awaited Imperial and Osorno, cities of equal importance, and their inhabitants were led into captivity.

Incessant wars, with very short intervals of re- pose, occupied almost the whole of the seven- teenth century, and thousands after thousands fell in their prosecution : during these wars the Araucanians received an important accession to their strength, in the union of a warlike tribe called Puelches, before alluded to. The eigh- teenth century did not open more auspiciously ; for, although a cessation of hostilities had pre- vailed some time, the Araucanians became sen- sible that it afforded opportunities for the Spa- niards to form new and permanent establishments within their territories : the arrogance of those \vho resided among them, under

pretence of pro- tecting the missionaries, had also excited their indignation. Villumilla, a man of low origin but distinguished abilities, was appointed military toqui, or commander-in-chief, and formed a plan for expelling the Spaniards from the whole coast. Hut his attempt to raise his own and the neigh- bouring countries, in the year 1723, proved abortive, and the war was marked by nothing except some inconsiderable skirmishes. Peace having been restored, the Spanish governor con- ceived a scheme for the civilisation of the Arau- canians (regarded as chimerical by those best acquainted with them), by persuading them to live in cities. They agreed, however, to build a city, and were supplied with materials by the Spaniards, who also had assistants and superin- tendents on the spot, but suddenly seizing their inns they killed their overseers. Peace was once more interrupted by repeated encounters, ami at length a bloody battle ensued in the year 1773. The Spaniards found themselves unable 10 retain any settlement within the Araucanians' territories, and the natives, in opposition to all the skill and force employed against them, have ever since been abk1 to keep possession of the district. See !\Iolina on the Matural and Civil History of Chili, Alcedo's Geographical and 1 listorical Dictionary, ice.

AKAVACOUKCIIY, or AHRIVACOURCUY, (the seat of Arava, a former chief of the Bagda

• •ast,) a small town of Hindostan, in the district

• if Coimbetoor, distant twenty miles east of ;)arpornm, and lifty-tliree west of Trichnipoly.

AUAl'CAIMA, in botany, a genus of the "lass and order diu'cia, monadelphia. Male: ' AI.. scales of an ament, terminated by a leaflet; rorolless; anthcru} tin or twelve without fila- ments, i' finale: i A i . an ament with many germs;

• orolless •- 1 K,M . t\o-val\ cd unequal ; seeds nu- nirous m a roundish cone. The only known

• : f(les is a native of ('hili.

! N.Mi, or OIINAN, the Jebusite, a pub- lic-s: ml. H! husbandman under David king of

Israel, who generously offered the king a free gift of his threshing-floor, wheat, oxen, and field, when he heard of David's intention of pur- chasing them to build an altar. See 2 Sam. xxiv. and 1 Chron. xxi. Araunah's field was afterwards the site of the temple.

ARAURE, a city of Venezuela, in South America, situated on the shores of the Acarigua, and north-north-east of the city of Truxillo. The establishment of this city was the result of the mild and enlightened policy of the first Ca- puchin missionaries, who by persuasion brought the Indians under the restraints of civilised life, and collected them on this spot. The surround- ing country is fertile. The principal occupation of the inhabitants is rearing of cattle, with which they unite the cultivation of cotton and a little coffee. The streets of the town are straight, and the houses well-built. It has a handsome square and church.

ARAUSIO, CIVITAS ARAUSIENSIS, or ARAU- SICORUM, in ancient geography, the capital of the Cavares, in Gallia Narbonensis. It is called Colonia Secundanorum, by Pliny and Mela, be- cause the veterans of the second legion were settled in it. It was then a very important place, and had a triumphal arch, erected by Marius and Batulus, upon their victory over the Cimbri and Teutones. It is now called Orange, and has still the remains of a fine amphitheatre, and some aqueducts. See ORANGE.

ARAXES, now ARAS, a river of Armenia Major, which takes its rise in a mountain called Albosj where the Euphrates also has its origin From this mountain it runs south-east across Ar- menia and part of Persia, in a serpentine course ; discharging itself into the Caspian Sea, after a run of upwards of 500 miles, during which it re- ceives some considerable rivers. Walker de- scribes it as falling into the Kur or Cyrus, be- fore it arrives at the ocean. Some have imagined that it has its rise in mount Ararat; butTourue- fort assures us that it comes no nearer that moun- tain than twelve miles. The Araxes is a very rapid river, and is supposed to be the Gihon mentioned by Moses. Besides this extreme ra- pidity it is very apt to overflow after rains ; sc that the endeavours to build bridges over it have proved abortive; though some of them appear, from the few arches remaining, to have been built of the best materials, and in the strongest manner. Such is the vehemence of its current after the thawing of the adjacent snows, or some fierce rains, that neither banks nor dykes can resist it. Nothing can exceed the noise and vio- lence of its waves at such times ; but in winter, when its waters are low, it is fordable in some places on camels.

ARAYA, a cape of South America, which forms the north point of the Orinoco. It con- contains salt pits, from which the Dutch used to supply themselves freely, till 1605, when their ships were destroyed by the Spaniards, who, in 1622, built a fort upon it.

ARBA, a city of the Anakims, afterwards called Hebron.

ARBACES, a governor of Media under Sar- danapalus. Seeing him spinning

among a com- pany of his women, he stirred up his people to

revolt, and dethroned Sardanapalus, who there- upon burnt himself in his palace. Arbaces being crowned, began the monarchy of the Medes, which lasted 317 years under nine kings, till Astyages was expelled by Cyrus. Arbaces reigned twenty-two years, and died A. M. 3206. See MEDIA.

ARBAI, a name that has been given to a cluster of islands in the South Pacific Ocean, including Annamooka and some others.

ARBALET, in the ancient art of war, a cross- bow made of steel, set in a shaft of wood, with a string and trigger, bent with a piece of iron fitted for that purpose, and used to throw bullets, large arrows, darts, &c. Also a mathematical instru- ment called a Jacob's Staff, to measure the height of the stars upon the horizon.

ARBALETE a jalet, Fr. a stone bow. ARBALETRIER, Fr. a cross-bow man. ARBALETRIER d'une galiere, Fr. that part of a galley where the cross-bowmen were placed during an engagement.

AR'BALIST, -\ Fr. arbaleste; one who

AR'BALISTER, (casts or shoots from a bow,

AR'CUBALIST, fa bow-man, an archer. Ar-

ARCUBAL'ISTER. Jcubalist, from barbarous

Lat. arcubalista, from arcus, a bow, and /3a\Xw,

to throw. One who throws or casts from a bow.

An arbalaxter (or archibalister), standing upon the

wall, and seeing his time, charged his steel bow with

a square arrow, or quarrell, making first his prayer to

God, that he would direct that shot, and deliver the

ianocency of the besieged from oppression.

Speed. RicJtard I.

It is reported by William Brito, that the arcubalista or arbalist was first showed to the French by our king Richard the first ; who was shortly after

slain by a quarrel thereof. Camden.

ARBE, an ancient city, the capital of the island of that name, situated on a rising ground between two harbours, which form a peninsula. It is the seat of a bishop, under the metropolitan of Zara. The inhabitants, who amount to 1400, maintain themselves by the tillage of the ground, the breeding of cattle, and fishing. Salt is ob- tained in great quantities from the sea water, and forms, with fruit and cattle, an object of traffic.

ARBE, or AREA, in ancient and modern geography, an island of Illyria, in the gulf of Quarnero. It is about thirty Italian miles in circuit, and contains 4000 inhabitants, whose dwellings are scattered in various parts of the island. The part next the coast of Morlachia is mountainous, and uninhabited ; but the four, great valleys are uncommonly pleasant and fruit- ful. Besides corn and olives, they yield excel- lent wine and figs ; but the severity of the climate in winter and spring, and especially the sharp north wind, often blasts the prospects of the hus- bandman. Hides, wool, sheep, hogs, fish, and excellent horses, are its principal exports.

The climate of Arbe is none of the happiest ; the winter season is horrid, especially when agi- tated by the violent northerly winds, which some- times transform the intermediate seasons into winter, and cause the summer itself to disappear. These furious winds do great damage to the island, particularly in the winter and spring. Some few years ago about 12,000 sheep perished in one night by cold, in the common pastures of

the mountain, where, according to the custom of all Dalmatia, they are left in the open air the whole year round. The salt fog raised by the dreadful commotion of the waves, which often roars between the mountains of Arbe and the opposite Alps, in the narrow channel of Mor- lacca, consumes all the buds of the plants and corn, if it happens to be driven upon the island by the wind, and is followed by a scarcity of every kind of product. This calamity communi- cates its baneful influence even to the flesh of the animals left on the pastures ; and it becomes ill- tasted, in consequence of the bitterness and bad nourishment of the food. Abstracting from these irregularities, the air of Arbe is healthful ; nor ought the constant summer fevers among the inhabitants to be attributed to its influence, as they are, more probably, derived from unwhole- some food.

Among the most remarkable curiosities of the island, the Arbegiani were until lately very proud of the head of S. Cristofano their protector, and the three heads of Shadrach, Meshech, and Abednego! In the last century there was a learned bishop of Arbe, named Ottavio Spaderi, who would not

permit the reliques of S. Cristo- fano to be exposed to the public veneration on the solemnity of the saint's day, because he doubted of their authenticity. The mob rose and was going to throw him down from the top of the hill on which the cathedral stands ; nor did the tumult cease after the day was past. The government sent an armed vessel to deliver the prelate from the danger he was in ; and the pope thought proper to give him a more tractable spouse in Italy. That Arbe was inhabited by civilised people in the time of the Romans is evident by the inscriptions frequently discovered, and others that still remain at Arbe. In the lower ages it partook of all the calamities to which the neighbouring countries were sub- jected, but recovered itself even after dissolution. The archives of the community of Arbe contain some ancient papers that are truly valuable, and are kept with great jealousy ; by them it ap- pears that in the eleventh century gold and silk were not rare among the inhabitants. Arbe was subject to the kings of Hungary ; afterwards it became dependent on Venetian feudatories ; and at last was taken under the immediate dominion of that republic, until its possessions passed to the Austrians.

ARBELA, in ancient geography, a city of Assyria, famous for the third and decisive battle fought near it, between Alexander the Great and Darius Codomanus. It is seated on the Lysuc, on a fine plain, sixty miles south-east of Mousul, the ancient Nineveh, and is now called Irbil. This great battle was fought A. A. C. 331, and the event of it determined the fate of the Persian empire. Arrian relates that Darius's army con- sisted of 1,000,000 of foot and 40,000 horse; ac- cording to Diodorus there were 200,000 horse and 800,000 foot ; Plutarch relates that the horse and foot together made up 1,000,000 ; and Justin gives us exactly half Diodorus's number. The Macedonian army, according to Arrian, con- sisted of 40,000 foot and 7000 horse. Upon re- ceiving notice of the vast strength of the enemy,

Alexander expressed neither surprise nor appre- hension ; but having (according to Dr. Gillies in his Hist, of Anc. Greece) 'commanded a halt, lie encamped four days, to give his men rest and refreshment. His camp being fortified by a good entrenchment, he left in it the sick and infirm, together with all the baggage ; and, on the even- ing of the fourth day, prepared to march against the enemy with the effective part of his army, which was said to consist of 40,000 infantry and 7000 horse, unincumbered with any thing but their provisions and armour. The march was undertaken at the second watch of the night, that the Macedonians, by joining battle in the morn- ing, might enjoy the important advantage of having an entire day before them, to reap the full fruits of their expected

*victory. About half way between the hostile camps some eminences intercepted the view of either army. Having ascended the rising ground, Alexander first be- held the barbarians, drawn up in battle array, and perhaps more skilfully marshalled than he had reason to apprehend. Their appearance, at least, immediately determined him to change his first resolution. lie again commanded a halt, summoned a council of war; and different mea- sures being proposed, acceded to the single opinion of I'armemo, who advised that the foot should remain stationary until a detachment of horse had explored the field of battle, and care- fully examined the disposition of the e*emy. Alexander, whose conduct was equalled by his courage, *md both surpassed by his activity, per- formed those important duties in person at the head of his light horse and royal cohort. Having returned with unexampled celerity, he again as- sembled his captains, and encouraged them by a short speech. Their ardor corresponded with his osvn ; and the soldiers, confident of victory, were commanded to take rest and refreshment. Mean- while Darius, perceiving the enemy's approach, kept his men prepared for action. Notwithstand- ing the great length of the plain, he was obliged to contract his front, and form in two lines, each of which was extremely deep. According to the i'er>i,m custom the kins occupied the centre of the first line, surrounded by the princes of the blood and the threat officers of his court, and de- fended by his horse and foot guards, amounting to 15,000 chosen men. These splendid troops, who si emed fitter for parade than battle, were flanked on either side by the Greek mercenaries and other warlike battalions, carefully selected from the whole army. The right wing consisted of thi! Medes, I'arthians, llyrcanians, and Sacse:; the left was chit-fly occupied by the 13actrians, Persians, and Cardusians. The various nations composing this immense host uere differently armed, with swords, spears, clubs, and hatchets; while the horse and foot of each division were promiscuously blended, rather from the result of accident than by the direction of design. The armed chariots fronted the first line, whose centre was farther defended by the elephants. Chosen squadrons of Scythian, Hadrian, and Cappadocian cavalry, advaiirt-d before either wing, prepared i< > in in.: on the action, or, after it began, to at- lactv !!>•.: enemy !'i rlank and rear. The unex- j. '.-(.tud appi'ui.Ja of .\ir\amlfr within sight of*

his tents prevented Darius from fortifying the wide extent of his camp ; and, as he dreaded a nocturnal assault from enemies who often veiled their designs in darkness, he commanded his men to remain all night under arms. This unusual measure, the gloomy silence, the long and anxious expectation, together with the fatigue of a restless night, discouraged the whole army, but inspired double terror into those who had witnessed the miserable disasters on the banks of the Granicus and the Issus. At day-break Alexander dis- posed his troops in a manner suggested by the

superior numbers and deep order of the enemy. His main body consisted in two heavy-armed phalanxes, each amounting to above 16,000 men. Of these the greater part formed into one line ; behind which he placed the heavy-armed men, reinforced by his targeteers, with orders, that when the out-spreading wings of the enemy pre- pared to attack the flanks and rear of the first line, the second should immediately wheel to receive them. The cavalry and light infantry were so disposed on the wings, that while one part resisted the shock of the Persians in front, another, by only facing to the right or left, might take them in flank. Skilful archers and darters were posted at proper intervals, as affording the best defence against the armed chariots, which (as Alexander well knew) must immediately be- come useless whenever their conductors or horses were wounded. Having thus arranged the seve- ral parts, Alexander, with equal judgment, led the whole in an oblique direction towards the enemy's left ; a manoeuvre which enabled the Macedonians to avoid contending at once with superior numbers. When his advanced bat- talions, notwithstanding their nearness to the enemy, still stretched towards the right, Darius also extended his left, till fearing that by con- tinuing this movement his men should be drawn gradually off the plain, he commanded the Scy- thian squadrons to advance, and prevent the farther extension of the hostile line. Alexander immediately detached a body of horse to oppose them. An equestrian combat ensued, in which both parties were reinforced, and the barbarians finally repelled. The armed chariots then issued forth with impetuous violence ; but their ap- pearance was only formidable ; for the precautions taken by Alexander rendered their assault harm- less. Darius next moved his main body, but with so little order that the horse mixed with the infantry, advanced, and left a vacuity in the line, which his generals wanted time or vigilance to supply. Alexander seized the decisive moment, and penetrated into the void with a wedge of squadrons. He was followed by the nearest sec- tions of the phalanx, who rushed forward with loud shouts, as if they had already pursued the enemy. In this part of the field the victory was not long doubtful ; after a feeble resistance, the barbarians gave way; and the pusillanimous Darius was foremost in the flight. The battle, however, was not yet decided. The more re- mote divisions of the phalanx, upon receiving intelligence that the left wing, commanded by Parmenio, was in danger, had not immediately followed Alexander. A vacant space was thus left in the Macedonian line, through which some

squadrons of Persian and Indian horse penetrated with celerity, and

advanced to the hostile camp. It was then that Alexander derived signal and well-earned advantages from his judicious order of battle. The heavy-armed troops and targe- teers, which he had skilfully posted behind the phalanx, speedily faced about, advanced with a rapid step, and attacked the barbarian cavalry, already entangled among the baggage. The enemy, thus surprised, were destroyed or put to flight. Meanwhile the danger of his left wing recalled Alexander from the pursuit of Darius. In advancing against the enemy's right, he was met by the Parthian, Indian, and Persian horse, who maintained a sharp conflict. Sixty of the companions fell ; Hephaestion, Ccenus, and Me- nidas, were wounded. Having at length dissi- pated this cloud of cavalry, Alexander prepared to attack the foot in that wing. But the busi- ness was already effected, chiefly by the Thes- salian horse ; and nothing remained to be done, but to pursue the fugitives, and to render the victory as decisive as possible. ' According to the least extravagant accounts, with the loss of 500 men he destroyed 40,000 of the barbarians, who never thenceforth assembled in sufficient num- bers to dispute his'dominion in the east. The in- valuable provinces of Babylonia, Susiana, and Per- sis, with their respective capitals of Babylon, Susa, and Persepolis, formed the prize of his skill and valor. The gold and silver found in those cities amounted to thirty millions sterling ; the jewels and other precious spoil belonging to Darius, sufficed, according to Plutarch, to load 20,000 mules and 5000 camels.' The consequences of this victory the reader will find under the artic'e PERSIA.

ARBERG, or AARBERG, a fortified town of Switzerland, in the canton of Bern, with an an- cient castle. It is seated on the Aar, in a kind of island, ten miles N. W. of Berne.

AR'BITER, v. &n.

AR'BITRESS,

AR'BITRABLE,

AR'BITRARY,

ARBITRARILY',

ARBITRARINESS,

ARBITRA'RIOUS,

ARBITRA'RIOUSLY,

AR'BITRATE,

ARBITRATION,

ARBITRA'TOR,

Lat. arbiter ; accord- ing to eminent etymo- logists, from ad, ar for the sake of euphony, and the ancient bito, for eo, to go. One who goes to examine or settle differences for another, either in a court of justice, or chosen by contending parties to adjust their

ARBIT'REMENT.

respective claims amicably. Arbitrary, and the words more immediately connected with it, signify that the decision of the arbiter is made in con- sequence of his own uncontrolled will, or in consequence of reasons which do not appear.

Contrarhvhe, certain T.aodiceans, and lukewarm persons, think they raav accommodate points of reli- gion by middle ways, and taking part of both, and •witty reconcilements ; as if thf v would make an arlii- irement between God and man.

Lvrd Bacon's Essays.

Let the rule of justice be the laws of the land ; an impartial arbiter betv.- een the king and his people, atiti between one subject and another. Id.

But now the arbitrator of despairs, Just death, kind umpire of man's miseries, ' With sweet enlargement doth dismiss me hence.

Shaktpc.ire. The end crowns all ; And that old common arbitrator, Time, Will one day end it. Jd.

K. RICH. There shall your swords and lances ar- bitrate

The swelling diff'rence of your settled hate ; Since we cannot atone you, you shall see Justice decides the victor's chivalry.

Id. Richard II.

I know the knight is incensed against you, even to a mortal arbitrement ; but nothing of the circum- stance more. M.

Stand fast ! to stand or fall Free in thine own arbitrament it stands : Perfect within, no outward aid require, And ali temptation to transgress repel. Miltcm.

Next him, high arbiter,

Chance governs all. U.

His majesty, in this great conjuncture, seems to be

generally allowed for the sole arbiter of the affairs of

Christendom. Temple.

He governed arbitrarily : he was expelled, and

came to the deserved end of all tyrants. Dry den.

The ordinary revenue of a parsonage is in land,

called the glebe ; in tythe, a set part of our goods,

rendered to God ; in other offerings, bestowed upon

God by the people, either in such arbitrable proportion

as their own devotion moveth them, or as the laws or

customs of particular places do require them.

Spelman.

‘ As the satisfactions arising from memory are less arbitrary, they are more solid j and are, indeed, the only joys which we can call our own. Rambler.

Albion, sea-embraced,

The joy of freedom, dread of treacherous kings, The destin’d mistress of the subject main, The arbitrea of Europe, now demands Thy presence, goddess.

Glover’i London, p. 20. It is a sign from Jove. Now follows war with all its woes again, Or peace between us, by his lix’d award, For Jove is arbiter of both to man.

Cowper’t Iliad, book iv.

ARBITER. Also a judge nominated by a ma- gistrate to decide diflerences between parties. The civilians make a difference between arbiter and arbitrator, though both found their power on the compromise of the parties ; the former being obliged to judge according to the customs of the law, whereas the latter is at liberty fo use his own discretion, and accommodate the difference in the manner that appears to him most just and equitable.

ARBITRARY PUNISHMENT, in law, denotes such punishments as are by statute left to the dis- cretion of the judge. It is a general rule in arbitrary punishments that the judge cannot in- flict death. Hence, all punishments that are no» capital, have acquired the name of ai bitrary punishments, even although they he expressly pointed out by statute.

ARBITRATION, in law, is where the parties, injuring and injured, submit all matters in di.s- pute, concerning any personal chattel or person.il wrongs, to the judgment of two 01 more arbiters or arbitrators, who are to decide the controversy : and if they do not agree, U is usual to add, ti;a.t*

another person be called in as an umpire (impera- tor or impar), to whose sole judgment it is then referred. Sometimes there is only one arbitrator originally appointed. This decision, in any of these cases, is called an award: and thereby the question is as fully determined, and the right transferred or settled, as it could have been by the agreement of the patties, or judgment of a court of justice. See LAW.

ARBITRIO, in music, is equivalent to ad libitum, al suo arbitrio, at your pleasure; al suo commodio, at your convenience; as in lessons and solos, and in the solo parts of concertos, where all the other parts wait at a pause or close, on the pleasure of the principal performer.

ARBLASTER, a cross-bow.

ARBOGA, an ancient and neat inland town of Sweden, in Westmania, seated on the Stora, a little above where it falls into the Maerler Lake, sixty-six miles west of Stockholm. A canal, called the canal of Arboga, brings it into com- munication with Stockholm, through the lake of Mulur; and with Orebro, through the lake of llielma. The chief objects of trade are saddlery, and the iron wrought in the neighbouring forge at .ladcr. In the vicinity of the town there is still to be seen a sacred grove, and other remains of Pagan worship. The country round is infe- rior to no part of Sweden.

ARBOIS, a small populous town of France, in Franche Comte, famous for its wines. It is situated eighteen miles south-east of Dole, and contains liOOO inhabitants.

ARMOI.KTKS, CIK.NI-CA ni: i.os, a port of South America, on the

Atlantic, in the province of Carthagena. It is sheltered from every wind, and irrigated by a small river of delicious water.

AKB\, a town in the Swiss canton of Thurgaii, on the lake of Constanee, which atone time belonged to (lie bishop of Constance, and is now the capital of a district. Here is a castle which was the residence of the governor. The inhabitants, who are almost all Calvinists, en- joy extensive liberties, and are joined in a friendly compact with other places in Switzerland. The parish church is the joint property of the Cal- vinists and Catholics, six of the town counsellors bruiir of the one denomination, and a like number ol tlu; other. It is a place of some trade : seven miles north of St. Call.

ARMOlt, AUHOUKS, in botany, a tree. Trees are by I.inir.vus classed in the seventh family of the vegetable kingdom, and are distinguished Irnni shrubs in that their steins come up with buds on them ; but this distinction does not bold uuivcrsalK, there beiii'j; rarely any buds on the l.irˆe trees in India.

Anr.oi: Americana (Va \mitblu.s, in botany, the s\ icicnia mahaˆoni o!' l.inmvns.

AKIIOR aquatica Hrasiliensis, in botany. See Arbor aromatiea Mau« llnniea, winter's bark, or uild cinnamon-tree; the winter aro- maticu dt J.inna'iis. Arbor camphorifica Japo- inYa ; the huinis (aiiiplmi;; of l.imm- us. Arbor < ivpitan-: the hunt crepirms of l.inmcus. Arbor in aqua naseens, the nyssa denticulata of Lin- rurus. Arbin Jndi- ; the cercis of Linnaeus. Arbor lanrifoha \rnrn.iia; the poison tree.

Arbor saponariu, the sapindus saponaria of Lin- naeus. Arbor Virginiana benzoinum fundens ; the laurus benzoin of Linnaeus. Arbor vitae ; the thuja of Linnaeus. Arbor zeylonica; the chionanthus zeylonica of Linnaeus.

ARBOR, in chemistry, or ARBOR PHILOSO- PHICA, is a name common to several metalline crystallizations ; thus called, from their ramifica- tions resembling a tree. Albertus Magnus is said to have produced a tree before th6 king of France while he sat at dinner. This passed at that time for a palingenesia, or resuscitation ; but it may more naturally be referred to the species of germinations by crystallization.

ARBOR, in mechanics, the principal part of a machine which serves to sustain the rest : also the axis or spindle on which a machine turns, as the arbor of a crane, windmill, &c.

ARBOR DIAN.K, or ARBOR LUN.K, a kind of crystallization, in which aqua fortis, incorporated with silver and mercury, being put in water, ex-

pands and shoots itself into an appearance of a tree, with branches, leaves, and flowers. See CHEMISTRY.

ARBOR GENEALOGICA, tree of genealogy, or consanguinity, signifies a lineage drawn out under the resemblance of a root, stock, branches, &c.

ARBOR HERMETIS, i. e. the tree of Hermes ; among chemists, a process of the revivification of mercury.

ARBOR MARTIS, in chemistry, is a germination of iron, resembling a natural plant. It is the invention of the younger Lemery. On a disso- lution of iron filings in spirit of nitre contained in a glass, he poured oil of tartar per deliquium : upon this, the liquor soon swelled very consi- derably, though with very little fermentation. When this subsided there appeared branches adhering to the surface of the glass, which, con- tinuing to grow, at length covered it all over. The form of the branches w,as so perfect, that a kind of leaves and flowers were easily dis- covered.

ARBOR MARTIS, in natural history, is applied to coral, because it grows like a tree in the sea.

ARBOR PORPHYRIAN A, among the schoolmen, a fanciful literary figure, consisting of three columns of words ; the middlemost whereof contains the series of genera and species, and bears analogy to the trunk ; and the extremes, containing the differences, to the branches of a tree. Thus, e g.

SOCRATES.

Greeks ANTONINUS, &c. Roman

Rational ani- MAN. Irrational ani-

mals mals

Animate bo- ANIMALS. Inanimate bo-

dies dies.

Thinking sub- BODY. Extended sub-

stances stances

SUBSTANCE.

ARBOR SCIENTIJE, a general scheme of science. ARBOR VINE. See CONVOLVULUS. ARBOR VITJE. See THUYA. AR'BORATOR, "l Arbor, a tree. The ter- ARBO'REOUS, I minations or and ist, as ARBORES'CENT, [

usual, denote agency. — AR'BORET, fThe other endings are

AR'BORIST, | obviously applied as epi-

AR'BOKOUS. J tbets.

ARE

5b7

ARB

Now hid, now seen,

Among thick woven arborefs, and fiow'rs Irabroidcr'd on each bank. Milton.

From under shady arboroiis roof. Soon as they forth were come to open fight Of day-spring and the sun. Id.

They speak properly who make it an arboreous ex- crescence, or rather a superplant bred of a viscous and superfluous lop, which the tree itself cannot assi- mulate. Brown's Vulgar Errors.

The nature of the mulberry, which the arborists ob- serve to be long in the begetting his buds ; but the cold seasons being past, he shoots them all out in a night. Howel's Vocal Forett.

In the time of this work would our ingenious ar- borator frequently incorporate, mingle, and unite, the arms and branches of some young and flexible trees, which grow in consort, and near to one another.

Evelyn. Syha,

Nonius supposes the tall rosea (arborescent holli- hocks) that bears the broad flower, for the best. Id.

ARBOREA, in entomology, a species of podura described by Scopoli and others. It in- habits trees in Europe. — Linrunis. Gmelin

ARBOREA, in ornithology, a species of anas that inhabits Jamaica, and is called by Ray, Sloane, and Edwards, the black-billed whistling duck. It is the anas fistularis Jamaicensis of Brisson; canard siffluer de la Jamaique of Buffon PI. Enl. ; and siffleur a bee noir. Nat. Hist. Ois. of the same author.

ARBOREA, in ornithology, a species of the alauda genus. See ALAUDA.

ARBOREA, in zoology, a species of rana, called the tree-frog : defined by Gmelin as having itsbody granulated beneath, and the feet cleft. He enumerates eight supposed varieties of this species.

ARBORESCENS, in natural history, a spe- cies of doris (vermes mollusca), that inhabits the Norway seas. The feelers are ramose ; back gibbous, and beset with protuberances. — Mull. Zool. Gmelin.

ARBORESCENT, an epithet applied to such objects as resemble trees, or that grow up in the form of trees. See ARBOR.

ARBORESCENT STAR-FISH, in zoology, a spe- cies of asterias. See ASTERIAS.

ARBORETI, in entomology, a species of curculio, that inhabits Cayenne. It is of a cine- reous color ; thighs of the anterior legs toothed ; wing-cases striated with punctures. — Fabricius. Gmelin.

ARBOREUM, in natural history, a species of alcyonium (vermes zoophyta), found in the Nor- way and Indian seas.

ARBOREUS, in entomology, a species of cimex.

ARBORI BONZES, in modern history, priests of Japan, who live an erratic life, and subsist on alms. They dwell in caverns, and cover their heads with bonnets made of the bark of trees.

AR'BOUR, v. & n. From arbor, a tree. Ac- cording to Ilickes from an air-bower. Skinner writes herber and herberg, a haven or harbour. A place of retirement in gardens or pleasure- grounds, a nook which shades or shelters. Ac- cording to the last derivation, a nook formed of branches is not an arbour, but a bower.

Afte- diner we walked into ye gardine, and there shi rte.y sitting in an wber begane to go forth in our muuer, Si,- Thos. Mare's Works, fol. 177.

Downc fro the toure she gan to rennc. In to an herber all his owne, Where many a wonder wofull mone, She made. Gower. Con. A . book iv.

Nay, you shall see mine orchard ; where, in an ar- bour, we will eat a last year's pippin of my own graf- fing- Skakspeare.

Let us divide our labours ; thou where choice Leads thee or where most needs ; whether to wind The woodbine round this arbour, or direct The clasping ivy where to climb. Milton.

ARBOUR, in gardening, a kind of shady bower, formerly in great esteem ; but of late rejected on account of its being damp and unwholesome. To prevent this, arbours have an opening to admit of free ventilation, as well as the rays of the sun. They are distinguished into natural and artificial. Artificial arbours and cabinets are made of lattice-work, borne up by standards, cross-rails, circles and arches of iron. For these arbours they use small fillets of oak, which be- ing planted and made straight, are wrought in checkers and fastened with wire. Natural arbours are formed only of the branches of trees inter- woven artfully, and borne up by a strong lattice-work, poles, hoops, &c. which make galleries, halls, porticoes, and green vistas, naturally covered. The trees wherewith these arbours are formed are usually the female elm, or lime-tree ; because they easily yield, and by their great quantity of small boughs, form a thick brush- wood : the lower parts are usually filled up with horn-beams, honeysuckles, jasmines, &c.

ARBRISSEL (Robert d'), founder of the ce- lebrated abbey of Fontevraud, was born about the year 1047, in the village of Arbrissel, Bri- tanny, and studied in the university of Paris. The bishop of Rennes constituted him archpriest and official in his diocese, where he labored with so much zeal for the reformation of the priesthood, that the canons regarded him with great ill-will, and he retired to teach divinity at Angers. At length, disgusted, it is said, at the general corruption of manners, he withdrew into a desert, in order to lead a life of austerity ; but the baron of Craon, moved by one of his ser- mons, founded an abbey for him. After two or three years he resigned his abbacy, and resumed his avocation of promiscuous preaching, when the multitude of his followers of both sexes be- coming considerable, he resolved to fix them in the forest of Fontevraud, and was soon enabled to erect the monastery which rapidly became so rich and flourishing. Of his influence in the conversion of libertine women, the most extraor- dinary tales are told; and curious letters, ad- dressed to him on this subject, by Geoffry abbot of Vendome, and Marbodus bishop of Rennes, are preserved; from which it appears, that he was accused of the vain-glory of fre- quently passing a night with them, in order to evince his resistance of temptation. The pro- duction of the letters of prior Geoffry, by father Sirmond in 1610, produced a violent contro- versy. D'Arbrissel died in 1117, and was bu- ried in his own abbey.

ARBROATH. See ABERBROTHOCK.

ARBURG, or AARBURG, a town of Switzer- land, in the canton of Bern, on the Aar. It is small but very strong, being seated on a rook.

and defended by a good fortress cut out of the rock.

ARBUSCULA is used by Bradley to denote a dwarf tree, above the rank of shrubs, but below that of trees, such as the elder.

ARBUSTIVA, in botany, the thirty-ninth order of plants in the Fragmenta Methodi Na- turalis of Linnaeus.

ARBUSTORUM, in conchology, a species of helix ; a land-snail found in hedges and shrubbe- ries in Europe. Also, in entomology, a species of musca.

ARBUSTUM, in ancient horticulture, implies a number of trees planted for the sake of the fruit. The word was more peculiarly applied tp a place planted with trees for fastening vines to, which are hence called by Columella arbustivae. Ar- bustum is sometimes also used to denote an orchard, or field wherein trees are planted at such distance that there is room for ploughing and growing corn between.

ARBUTE, arbutus or strawberry tree. See AKBUTUS.

AKBUTF.LLA, in entomology, a species of phakfiua, the tinea of Linnaeus.

ARBITHNOT (Alexander), principal of the university of Aberdeen, in the reign o/ James VI. of Scotland, was born in 1533. He studied first at Aberdeen; and was afterwards sent over to France, where, under the famous Cujacius, he applied himself to the civil law. In 1563 he re- turned to Scotland and took orders. In 1568 he was appointed minister of Arbuthnot and Logie- Buchan ; and in 1509 made principal of the King's College at Aberdeen. In the general assembly which met at Edinburgh in 1573 and 1.577, lie was chosen moderator; and, to the end of Ins life, was an active supporter of the reformed religion. lie died in 1583, in the forty-fifth year of his a '.re; and was buried in the College Church of Aheuleen. We are told in the Biographia that lie was eminent as a poet, a philosopher, a mathematician, a lawyer, a divine, and a phy- sician. Rewrote Orationes de Origme et Dig- nitate Juris, printed at Fdinburgh, 1572, 4to. His contemporary Thomas Maitland wrote a copy of Latin verses on the publication of this book: they are printed in the Delic. Poetar. Scot. He published Buchanan's History of Scotland in

1582.

Ainu niNor (John), M. I), was born in the parish of Arbuthnut, and was educated, and gra- duated at Aberdeen. He was the son of Alex- ander Arbuthnot, episcopal minister of that pa- rish. \lio \vas deprived for nonconformity in The difficulties in which his family was iMvnlved, on

account of their political principles, determined him to co to London, where for some rime In- tau.iht mathematics; and while he was Cms employed, he published his Examination of i)r. V. oodward's Account of the Deluge. This tract, v.hich abounded with learning and good sense, made him known. He published soon ;i;ter, his K>say on ihe I'.vfulncss of Mathematics, in the profession of physic, he advanced by slow but .iii re dc.rr-Ts; and his reputation in :t was at h ii-th fully established, by a successful c v.'uh be peiiornit'd on Prince George of i Y.'iiii.irk

appointed him one of her physicians in ordinary in 1709; and, some years before this, his exten- sive knowledge had procured his admission into the Royal Society. His talents and worth were his strongest recommendations to men of wit and learning; and he entered into particular con- nexions with Pope and Swift, with whom he joined in publishing several volumes of miscel- lanies ; among which are the well-known Me- moirs of Martinus Scriblerus, a satire of infinite humor on the abuses of human learning. In 1715 he assisted Pope and Gay in the Three Hours after Marriage ; a dramatic performance, which was brought upon the stage without suc- cess. In 1727 he published Tables of ancient Coins, Weights, and Measures ; a work of great use and real erudition. In 1732 his valuable tract concerning The Nature and Choice of Ali- ments appeared ; which, the year after, was fol- lowed by his remarks on The Effects of Air on Human Bodies. A constitutional asthma had distressed him at different periods of his life, and proved fatal to him in 1734. Dr. Arbuthnot ap- pears to have been in all respects a most accom- plished and amiable person. He has showed himself equal to any of his contemporaries in wit and teaming, and he was superior to most men in the moral duties of life, and in acts of huma- nity and benevolence. His letter to Mr. Pope, written as it were upon his death-bed, and which no one can read without emotion, discovers such a noble ˆfortitude of mind at the approach of his dissolution, as could be inspired only by a clear conscience, and the calm retrospect of an unin- terrupted course of virtue. In 1751 came out, in two vols. 8vo. printed at Glasgow, The Mis- cellaneous Works of the late Dr. Arbuthnot ; which are said to comprehend, with what is in- serted in Swift's Miscellanies, all the pieces of wit and humor of this admirable author; but the greater part of them is denied by his son to be his composition. When his attention was at- tracted by any singular occurrence, he generally wrote his thoughts upon it in a large folio which he kept in his parlour ; and from this probably some slight and imperfect essays, which had slipt from his memory, might get abroad into the world. A vein of good-natured pleasantry runs through all his pieces of this kind ; and serves to confirm the character Swift gave of him to a lady desiring to know his opinion of Dr. Arbuthnot : ' He has more wit than we all have, and his hu- manity is equal to his wit.'

ARBUTI, in entomology, a species of pha- laena (Noctua Linn.) found in

England.

ARBUTUS, in botany, the strawberry tree : a genus of the monogynia order, and decandria class of plants ; ranking in the natural method under the eighteenth order bicornes. The calyx is divided into five parts : the corolla is ovated ; and the fruit is a berry with five cells There are five species: viz. 1. A. Acadiensis, a native of Acadia. 2. A. Alpina, or mountain strawberry-tree, a native of Britain. 3. A. adrachne, or the oriental strawberry ; so called, because it grows plentifully in many parts of the East ; where the natives use it for various pur- poses. It grows to a very large size. 4. A. unedo, or common strawberry-tree, a native of

Italy, Spain and Ireland; and now very com- mon in the British gardens. 1. A. unedo, the double-blossomed, differs from the others only in that the flowers are double ; but this difference is so inconsiderable, that it will not be seen without looking into the flower. 2. A. unedo, the oblong-fruited, grows to be a middle sized tree in some countries ; for we read of the large uses its wood has been applied to ; such as, Ar- buteae crates, &c. Arbutean harrows, &c. With us it may be kept down to any size. 3. A. unedo, the red-flowered, differs in no respect from the common sort, only the flowers are red, and these constitute a variety from the other sorts of flowers ; but the contrast is not so great between their fruit and them as of the other sorts, their color approaching too near to a sameness. 4. A. unedo, the round-fruited, has pitcher-shaped flowers, which are succeeded by a round scarlet fruit, as wide as they are long ; and this is all the difference between this and the oblong-fruited sort.

All the above varieties thrive best in a wet soil, and tire seldom hurt by hard winters, though the young and tender branches are often de- stroyed by frost; but, however dead the trees may appear, they ought always to be suffered to remain till the following summer shows what are living and what are dead. The method of propagating the varieties of the unedo is by layers and cuttings : the species itself may be raised from seed. — 1. The operation by layers must be performed on the youngest twigs ; and in some soils they will strike root pretty freely, whilst in others they can hardly be made to grow at all : but until they have lain two summers they need scarcely be looked for. When the roots are struck, the layers should be carefully taken off in the spring, and planted in separate pots ; and after well watering them they should be plunged up to the rims in a hot-bed, and this wrll set them forward ; for without this as- sistance many of the layers will be lost ; since they are difficult plants to make grow. After the hot-bed

has forced the seeds into a state of vegetation, the pots may be taken out, and plunged up to the rims in some natural mould, to keep them cool and moist ; and here taey may stand for two or three years, or longec •:" the pots are large enough, without ever remori.ig or shel- tering them in winter ; for they are hardy enough to resist our severest cold. When they are to be finally set out, all the mould may be turned out of the pots hanging to the roots; and having proper holes made ready, they may be planted in them, and the plant will be ignorant of its new situation. 2. The cuttings must be planted in pots, and have the benefit of a good bark bed : in which, being constantly shaded and duly watered, many of them will grow. As the plants raised this way will be rather tender by being forced in the bark bed, it will be necessary to remove them into the green-house, or to place them under a hot-bed frame during the first win- ter : and after that the pots may be set up to the rims in the ground, and, like the layers, the plants may be turned out at a convenient time into the places where they are to remain. 3. To r.use them i'ruiu seeds, these must be taken from

the oblong or round-fruited sort. The seeds» which will be ripe some time in November or the beginning of December, (for they will not be ripe at the same time in all places,) must be then gathered ; and, as they should not be sowed until the spring, it will be proper to nut them into a pot or jar, mixing with them a quantity of drift sand; and this will preserve them sound and good. The beginning of March is the best time for sowing the seeds ; and the best soil for them is maiden earth, taken from a rich pasture at least a year before, with the sward ; and this, by constant turning, being well rotted and mixed, will be ready to receive them. Having filled a sufficient number of pots with this fine mould, let the seeds be sown, and but just covered, scarcely a quarter of an inch deep. A dry day should be chosen for the business ; and no watering by the hand should be given them, as it will endanger the setting the mould hard in the pots. Leave them abroad until some rain falls, which at that time may be hourly expected ; and after that, having a hot-bed ready, plunge the pots therein. In less than six weeks the plants may be ex- pected to appear ; when much air should be af- forded them, and frequent waterings, in small quantities, gently sprinkled over them. After this they may be hardened to the air by degrees, and the pots set up to the rims in the natural mould, in a shady place. In October they should be removed into the green-house, or some shelter, in frosty weather; though they should always be set abroad in mild open weather. In the spring they may be shook out, and planted in separate pots ; and they should have the advan- tage also of a hot-bed to set them a growing : their future management may be the same as was directed for the layers. When these trees are to be planted out, very little regard need be paid to the soil or situation ; for they will grow almost anywhere, and resist our severest northern blasts. One thing, however, the gardener must con-

stantly observe, to continue his trees in their beauty, viz. As often as a heavy snow falls, to shake the boughs ; for it will lodge amongst the leaves and branches in such great quantity as to weigh down and split the largest branches ; the deformity of which afterwards may be easily con- ceived. Besides, many years must expire before the tree will, if ever it should, grow to its former beauty; to preserve this, therefore, makes it highly necessary to watch these trees narrowly in snowy weather.

ARBUTUS UVA URSI is a plant lately discovered in the highlands of Scotland, and which for- merly was thought not to be a native of Britain.

ARC', 1 Arcus, a bow or arch. See

AR'CUATE. } ARCH.

The cause of the confusion in sounds, and the in- confusion of species visible, is for that, the sight work- eth in right lines ; but sounds, that move in oblique and arcuate lines, must needs encounter and disturb the one the other.

Bacon' Natural History.*

In the gullet, where it perforateth the midriff, the carneous fibres are inflected and arcuate.

Ray on the Creation.

Load some vain clmrch with old theatric state, Turn urcs of triumph to a garden gate.

Pope't Moral Euayt.

ARC, or AUCK, a river of France, in the department of Mount Blanc, which rises in the Maurienne, and falls into the Isere. It has a very rapid course, and is full of cascades.

ARCA, in zoology, a genus of the class con- chifera, order dimyaria, and family arcaceae, in Lamarck's system. Its generic character is shell transverse, subequivalve, inequilateral ; nates distant, separated by the area of the liga- ment. Hinge linear, straight, not ribbed at the extremities. Teeth numerous, arranged closely in a line. Ligament entirely external.

The Linnsean genus of this name corriprehended those shells which now form the family arcacese, and consist of the genera cucullaea, area, pectunculus, nucula. Area Nose, and A. bar- Data, are both English species of the restricted genus. The species enumerated by Gmelin are, tortuosa, note, barbata, modiolus, pella, ovata, pellucida, rostrata, striata, pulchella, afra, fos- silis, cancellata, minuta, lactea, nodulosa, anti- quata, senilis, granosa, corbicula, decussata, aequilatera, pallens, cucullus, magellanica, reticu- lata, Candida, indica, jamaicensis, campechiensis, lata, senegalensis, undata, pectunculus, pectina- ta, glycymeris, pilosa, nummaria, nucleus, rhom- boidea, marmorata, angulosa, scapha.

ARCA CYROORAPHICA, in archaeology, a com- mon chest, with three locks and keys, kept by certain Christians and Jews, wherein all mort- gages, &c. belonging to the latter were kept to prevent fraud, by order of Richard I. Hoved. Annul.

ARCA CORDIS is used by some anatomists to denote the pericardium.

ARCADE'. Fr. arcade, an arch. A term of architecture.

Or call the winds, through long arcades to roar; Proud to catch cold at a Venetian door. Pope.

Sec distant mountains leave their valleys dry, And o'er the proud arcarle their tribute pour, To liive imperial Rome. Thomson. Liberty.

ARCADE, in architecture, is also used to denote any opening in the wall of a building formed by an arch.

AltCADKS, or ARCADIANS, the inhabitants of ancient Arcadia. Virgil greatly commended them for their love of, and skill in, music. 'To imitate the Arcadians,' is to labor and toil for tlie benefit of others, never conquering their o\vn, hut the enemies of others. This probably look its rise from the ancient Arcadians being accustomed to hire themselves out as merce- naries to foreign nations. Homer commends llieir martial prowess, their pastures, their sheep, and their well-watered country. They boasted of their great antiquity, and that they were older than the sun and moon ! They were the lirst \lio had a year of three months, and were therefore called 1'roceleni, because their year was prior to that adjusted in (J recce to the course of the moon.

ARCADIA, in ancient

brate 1 by pastoral poets, who feigned Pan the god of shepherds, to be the guardian of ii. It was bounded on the north by Achaia ; on tin: east by Argos and Laconia ; by Messenia on the south, and Elis on the west.

According to Pliny, the wine of this country cured barrenness in women, and inspired the men with rage ; and the berries of the yew gathered there were so strong a poison, that whoever slept or took re- freshment under that tree were sure to die. In Strabo's time there were few cities remaining in it, most of them being destroyed in the Grecian wars. Eustathius says, that the country was anciently called Pelasgia, from Pelasgos, who brought the people, from roots, herbs, and leaves of trees, to feed on acorns, especially beech- mast ; as Artemidorus observes, that the Arca- cadians usually lived on acorns. It was also called Lycaonia, Gigantis, and Parrhasia. It is now called Traconia, and still abounds in corn, pastures and woods.

ARCADIA, a sea-port of the above province, near the gulf, and almost opposite to the Isle of Zante, sixty-four miles S. W. of Corinth.

ARCADIUS, emperor of the east, succeeded his father Theodosius the Great in 395, at which period his brother Honorius was emperor of the west. He died in 408.

ARC./E CUSTOS, a title anciently given to the archdeacon on account of his having the custody of the church's chest, or treasure.

ARCANE',) Lat. arcanum; perhaps from

ARCA'NUM. \ arceo, to keep in. A secret, a thing that nobody must be apprised of.

Have I been disobedient to thy words ? Have I bewray'd thy arcane secresy.

Tragedy of Locrine, v. 4.

In some mysterious paragraphs certain arcana are joined for brevity sake, which in the operation must be divided. Swift's Tale of a Tub.

ARCANGIS, in the Turkish armies, an in- ferior kind of infantry, which serve as enfans perdus, and to harass and pillage the enemy's frontiers. The Arcangis are an order inferior to the Janisaries ; and when any of them dis- tinguish themselves, are usually preferred into the Janisaries order.

ARCANIUS, in entomology, a species of pa- pilio.

ARCANNA, in natural history, a kind of red chalk, called by physiologists rubrica jabrilis, as being used by carpenters to color their lines, for marking timber, &c.

ARCANUM, among physicians, any remedy, the preparation of which is industriously con- cealed, in order to enhance its value. There are also standing official compositions under the denomination ; such as, 1. Arcanum coralli- num, a preparation of red precipitate ; made by re- peatedly distilling it with the spirit of nitre, till a fine red powder be procured, which being boiled, the water poured off, and tartarised spirit of wine put to the powder, two or three co- hobations are made ; which leave a powder, said to be of use in the gout, dropsy, scurvy, &c. operates chiefly by stool. 2. Arcanum dupli- catum, or double secret, is prepared of the caput rnortuum of aqua fortis, by dissolving it in hot water, filtrating, and evaporating it to a cuticle ;

and then leaving it to shoot. It is extolled as a diuretic and sudorific. The recipe was pur- chased at the expense of 500 dollars, by that great virtuoso the duke of Holstein. Schroder, that prince's physician, writes wonders of its great uses in hypochondriacal cases, and in continued and intermitting fevers, stone, scurvy, &c. Mixed with the paste employed in binding books, it secures them effectually against all injury from that mischievous insect, the book- worm. 3. Arcanum duplicatum catholicum, a compound medicine administered by Wedelius and others, with great success, in a pestilential fever attended with dysentery, which raged for many years in Germany, and yielded to nothing so easily as to this medicine. It was composed of bezoar, plantain root, and the root of col- chicum. 4. Arcanum Jovis is made of an amal- gam of mercury and tin, digested in spirit of nitre ; which being drawn off, the remaining matter is wetted with spirit of wine, and the spirit burnt several times, till the pungent taste is wholly gone : what remains is used as sudori- fic. 5. Arcanum tartari is a neutral salt soluble in water and spirit of wine, formed from the combination of vinegar with fixed alkali.

ARCANUM, in ancient geography, a villa of Q. Cicero, the orator's brother, in Latium ; now Arce, in the Terra di Lavora, in the kingdom of Naples, on the borders of the Campagna di Roma, on the river Melpis, between Arpinum and Aquinum.

ARCAS, in heathen mythology, the son of Jupiter and Callisto, who was turned into a she- bear by Juno.

ARCBOUTANT; from arc, and bouter, to abut, Fr.; in building, an arched*

buttress. See BUTTRESS.

ARCliLLA, in entomology, a species of phalaena (tinea) Gmelin. Inhabits Germany.

ARCEN-BARROIS, a town in France, in the department of Cote-d'Or, seated on the Au- jon, thirtv-five miles north of Dijon, and thirteen N.' W. of Langres. Long. 5° 7′ E., lat. 47° 55′ N.

ARC-EN-QUEUE, in ornithology, the name of the Linnsean oriolus annulatus, in Buffon's Hist. Nat. des Ois.

ARCES, a town of France, in the department of Lower Charente.

ARCESILAUS, a celebrated Greek philoso- pher, born at Pitane, in ./Eolis, about A. A. C. 300. He founded the middle academy, called the second school, was a man of great erudition, and well versed in the writings of the ancients ; but was called a caviller, or sceptic. See Pers. Sat. iii. v. 78.

Non ego euro

Esse quod Arcesilas, aerumnosique Solones, Obstipo capite, et iigcutcs lumine terrain, Murmura cum secum, et rabiosa silentia rodunt, Atque exporrecto trutinantur verba labello, -/Egroti vctcris ineditantes soninia j gigni Do nihilo nibil, in nibilum nil posse reverti.

Cicero calls him Philosophise eversor. Arce- silaus was remarkable for the severity of his cri- ticisms ; but knew how to accommodate himself to the age, and pursue the allurements of pleasure. He had a gieat number of disciples. His doctrines

were different in several respects from those of the ancient school ; and perhaps he was led into this diversity of opinions by many capital errors in that school, and the incredible arro- gance of the dogmatists, who pretended to as- sign causes for all things ; from the mysterious air they had thrown upon the doctrine of ideas ; the entirely discarding the testimony of the senses ; the objections of the Pyrrhonists, who now began to broach their opinions; and the powerful opposition of the Stoics and Peripa- tetics, who discovered the feeble parts of the academic philosophy. The middle school, there- fore, laid it down as a principle, that we could know nothing, nor even assure ourselves of the certainty of this position ; from whence they in- ferred, that we should affirm nothing, but always suspend our judgment. They insisted that a philosopher was able to dispute upon every subject, and bring conviction with him upon contrary sides of the question. Arcesilaus was succeeded by his disciple Lacydes.

ARCEU1L, a village three miles south of Paris, remarkable for an aqueduct, built in 1624, by Mary de Medicis. See AQUEDUCTS.

ARCEUTHOS, in botany, the juniper tree.

ARCEUTUM is used in some ancient law- writers, for a procuration due to a bishop, abbot, or archdeacon, from their clergy, in time of en- tertainment.

ARCH', v. & n.ˆ T . „

AH'CIIPD f Lat arcus> a bow' To

- i »i till.!. It. h -• •

ARCH'LIKE, £bow or cur,ve> l? form lnto ARCH'WISE. } some circular shape.

Fine devices of arching water without spilling, and making it rise in several forms of feathers and drink- ing glasses, be pretty things to look on, but nothing to health and sweetness. Bacon.

Gates of monarchs

Are arch'd so high, that giants may get through.

Shahspeare.

I see how thine eye would emulate the diamond ; thou hast the right arched bent of the brow. Id.

The court of arches, so called ab arcttata ecclesia, or from Bow church, by reason of the steeple or clochier thereof, raised at the top with stone pillars, in fashion of a bow bent archwise. Ayliffe's Purer.

The proud river, which makes her bed at her feet, is arched over with such a curious pile of stones, that considering the rapid course of the deep stream that roars under it, may well take its place among the won- ders of the world. Howell. Let the arched knife,

Well sharpen'd, now assail the spreading shades

Of vegetables. Philipt

The nations of the field and wood

Build on the wave, or arch beneath the sand.

Pope.

ARCH , ~) Arch, from Gr. apˆoc, chief,

ARCH'LY, > is a prefix to many words, and

ARCH'NESS. 3 its effect is to denote pre-emi- nence in general. When out of composition it signifies pre-eminence in that which is shrewd, roguish, or waggish.

The tyrannous and bloody act is done ;

The most arch deed of piteous massacre, '

That ever yet this land was guilty of. Shakspeare. There is sprung up

An heretick, an arch one, Cranmer. Id.

Eugenio set out from the university ', he had the reputation of an arch lad at school. Swift.

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ARCHANGEL.

John, when his master's knock he heard, Soon in the dressing-room appeared, Archly he look'd, and slyly leer'd.

Someroille'i Poenu.

ARCH, in architecture, a concave or hol- lowed piece of building, constructed in such a manner that the several stones of which it is composed keep one another in their places. The terms arch and vault properly differ only in this, that the arch expresses a narrower, and the vault a broader, piece of the same kind. The prin- cipal difference in the form of arches is, that some are circular, and others elliptical ; the former having a larger or smaller part of a circle, the other of an ellipsis. What are called straight arches, are those frequently used over doors and windows, the upper and under edges of which are straight and parallel, and the ends and joints all pointing toward a centre. The space between two piers of a bridge is called an arch, because usually arched over. Triumphal arches are magnificent entries into cities, erected to adorn a triumph, and perpetuate the memory of the action. The arches of Titus and Constantine make at this time a great figure among the ruins of old Rome.

ARCH, in geometry, any part of the circum- ference of a circle or curved line lying from one point to another, by which the quantity of the whole

circle or line, or some other thing sought after, may be gathered.

ARCH OF A CIRCLE is a part of the circum- ference thereof, less than a half, or semicircle.

ARCH OF DIRECTION, in astrology, a portion of the equator lying between two points in the heavens, one of which is the significator and the other the promissor.

ARCH OF PROGRESSION, in astronomy, is an arch of the ecliptic, which a planet seems to pass over, when its motion is according to the order of the sign.

ARCH or RETROGRADATION is an arch of the ecliptic, described while a planet is retrograde, and moves contrary to the order of the signs.

ARCH OF VISION is the sun's depth below the horizon, at which a star, before hid in his rays, begins to appear again.

ARCILKOGRAPHIA, the science or study of antique's, so denominated by Spon, comprehend- ing a knowledge of ancient coins, medals, in- scriptions, sculptures, statues, ike.

ARCHAIOLOGY ; from mˆaicc, ancient, and Xoyoc, a discourse; a discourse on antiquity.

ARCHAISM is when either an obsolete word, declension, or conjugation is used : also an un- usual and obsolete construction in discourse.

ARC1IANGKL, in botany, the English name of the angelica archangelica.

ARCHANGEL, according to some divines, meant an angel occupying the eighth rank in the ce- i.stial hierarchy. See AM,EL, and HIERARCHY. ! >ut others, not without reason, reckon it a title only applicable to our Saviour. Compare Judc '.», with Daniel xii. 1.

AIK HANOI.!,, or ARCHANGELSKOE, a govern- ment of Russia, containing, with Nova Zcmbla, -."H>, 100 square miles, and 115,000 inhabitants. The climate is severe, and the country sterile ; Hi principal sinmort is from the fisheries. The

wild animals of the forests yield some fur, how- ever, for trade, and the breed of domestic cattle is esteemed. This government contains the eight circles of Archangel, Onega, Cholmegar, Schen- kursk, Senega, Kola, Meson, and Kem. Long. 38° 56′ E. lat. 64° 40′ N.

ARCHANGEL, in geography, a city of Russia, in the province of Dwina, the capital of the above province, is situated on the east side of the river Dwina, about six miles from the White Sea, 300 north of Moscow, and 400 north-east from Petersburgh. It extends about three miles in length and one in breadth. This city rose from a castle built on the spot by I wan, or John Basilowitz II. to protect the increasing trade, brought there, by the discovery of the White Sea by the English, and took its name from a monastery built in honor of the archangel Mi- chael. Before this period the commercial inter- course between Russia and the northern parts of Europe had been carried on by the Hanseatic towns. The ships usually sailed to Revel or Narva, and from thence passed through Dorpt to Plescof and Novogorod, where their factories were established. The discovery of Archangel, in 1553, deprived the Hanseatic towns of a great part of this commerce, and transferred it to the English. On the llth of May, that year, three ships sailed from Deptford, to explore the northern seas, under the command of Sir Hugh Willoughby. Two of these vessels penetrated as high as the seventy-second degree of latitude, to the coast of Spitzbergen ; and being afterwards forced by stress of weather into the bay of the river Arzina in Russian Lapland, both their crews were frozen to death. Richard Chancellor, who commanded the other ship, called the Bonaven- ture, discovering the country bordering upon the White Sea, landed near the mouth of the Dwina, in a bay, which he denominated the Bay of St. Nicholas from a convent of that name, near the present port of Archangel. The czar being in- formed of his arrival, invited him to his court, entertained him hospitably, and indulged the English with a free trade in his dominions. In consequence of this permission, a company of merchants was incorporated in London ; and being encouraged by particular privileges from the czar, set on foot a considerable commerce, to the mutual advantage of both nations. This traffic the English fqr some time enjoyed without competition. The Dutch, however, and other nations, gradually insinuated themselves into it, and carried it on at a very great disadvantage, not being favored with those privileges which the czar had granted to the English company. These were at last suddenly annihilated by Alexis Michaelowitz ; who, in 1648, banished the English merchants from all his dominions. The cause of this expulsion was imputed to the resentment which the czar felt against the English for the execution of Charles I. with whom he was closely connected by leagues of amity and al- liance : but in fact he abolished the company's privileges the year before that event ; and his in- dignation against the English for their rebellion, was only a political pretext ; the real motive be- ing derived from the offers made by the Dutch to pay duties of export and import to the amount

of 15 per cent, if they were indulged with the Liberty of carrying on as free a trade as the English throughout his dominions. For not long afterwards the czar suffered William Prideaux, Cromw ell's agent, to reside at Archangel ; and permitted the English to renew their commerce in that port upon the same footing with other foreigners. And upon this footing alone our merchants ever after continued to trade. The commodities chiefly imported into Archangel were, gold and silver stuffs and laces, gold wire, cochineal, indigo and other drugs for dyeing, wine, brandy, and other distilled spirits. The customs arising to the czar were computed at 200,000 rubles a-year, and the number of foreign ships at 400 annually. But upon the building of Petersburgh, Peter the Great abolished the immunities of Archangel, and removed the com- merce of the White Sea to the havens of the Baltic. Still, however, its exports of tar were considerable ; in 1730 to the amount of 40,000 lasts, of eleven barrels each. In 1752 Elizabeth again restored the ancient immunities of Archan- gel ; and its present trade is not inconsiderable. It now contains about 1200 houses, for the most part of wood, of which, strange to say, the pavement sometimes is composed. As a place of commerce it is much frequented by alt na- tions, but in particular by the English, the Dutch, and the inhabitants of Bremen and Ham- burgh. A large stone building is destined for the reception of such foreign goods as would be in danger of fire. But it has never regained the prosperity which it enjoyed during the latter half of the seventeenth century. There is an imperial dock-yard, and ships of war were built here for- merly. Archangel is the chief deposit of foreign articles destined for Siberia. The. foreign ves- sels come round the North Cape in June or July, and remain at Archangel till September or Oc- tober. During this interval is held the great market, in which train oil, tallow, tar, linseed, furs, wax, iron, and coarse linen, are exposed to sale, chiefly for the accommodation of foreigners. A considerable number of large vessels of this port trade to Holland and England ; and about sixty smaller ones are employed in the fisheries. Upwards of 100 foreign ships enter the port yearly; but the harbour is very inconvenient, and even dangerous, through an extensive sand bank, with only twelve feet and a half of water. There are here eleven Russian churches, one Lutheran, and one Calvinist. Population, in its flourishing state, 30,000 ; at present, from 5000 to 7000.

ARCIIANGELIC.E, in entomology, a species of aphis, found on the plant angelica archange- lica, and described by Scopoli.

ARC HARD, in commerce, a kind ,of green fruit, pickled.in vinegar, much valued through- out the East Indies. The best are those brought from Persia, in bottles, much like small cucum- bers among us.

ARCHASIA, or ARCHESIA, in entomology, a species of papilio found in Java.

ARCHBISHOP ; a bishop of the first class, whosuperintendstheconductofotherbishops in his suffragans. Archbishops were not known in the east till abo the year 320 ; and though there were some soon after this who had the title/yet

that was only a personal honor, by which the bishops of considerable cities were distinguished. It was not till later that archbishops became metropolitans, and had suffragans under them. Athanasius appears to be the first who used the title Archbishop, which he gave occasionally to his predecessor. Gregory Nazianzen, in like manner, gave it to Athanasius ; not that either of them were entitled to any jurisdiction, or even any precedence in virtue of it. Among the Latins, Isidore Hispalensis is the first that speaks of archbishops. He distinguishes four orders or degrees in the ecclesiastical hierarchy, viz. patriarchs, archbishops, metropolitans, and bishops. The archbishop, besides the inspec- tion of the bishops and inferior clergy in the province over which he presides, exercises epis- copal jurisdiction in his own diocese. He is guardian of the spiritualities of any vacant see in his province, as the king is of the temporalities, and exercises ecclesiastical jurisdiction in it. He is entitled to present by lapse to all the eccle- siastical livings in the disposal of his diocesan bishop, if not filled within six months. He has likewise a customary prerogative, upon conse- crating a bishop, to name a clerk or chaplain to be provided for by such bishop ; in lieu of which it is now usual to accept an option. He is said to be enthroned when vested in the archbishopric ; whereas bishops are said to be installed.

The ecclesiastical government of England is divided into two provinces, viz. Canterbury and York. Canterbury has the following suffragan bishoprics appertaining to it, St.Asaph, Bangor, Bath and Wells, Bristol, Chichester, Lichneld and Coventry, St. Davids, Ely, Exeter, Glou- cester, Hereford, Landaff, Lincoln, London, Nor- wich, Oxford, Peterborough, Rochester, Salis- bury, Winchester, and Worcester. To York ap- pertain the bishoprics of Carlisle, Chester, and Durham ; to which may be added the bishopric of Sodor and Man, whose bishop is not a lord of Parliament. See CANTERBURY and YORK. The archbishop of Canterbury had anciently, viz. till the year 1 152, jurisdiction over Ireland as well as England, and was styled a patriarch, and sometimes alterins orbis papa, and orbis Britan- nici pontifex. Matters were recorded in his name thus : Anno pontificatus nostri primo, 8cc. The first archbishop of Canterbury was Austin, appointed by king Ethelbert, on his conversion to Christianity, about the year 598. He was also legatus natus. He even enjoyed some special marks of royalty ; as, to be patron of a bishopric, which he was of Rochester ; and to make knights, coin monies, &c. He is still the first peer

of England, and the next to the royal family ; having precedence of all dukes and all great officers of the crown. It is his privilege, by custom, to crown the kings and queens of this kingdom. He may retain and qualify eight chaplains, whereas a duke is by statute allowed only six. He has, by common law, the power of probate of wills and testaments, and granting letters of administration. He has also a power to grant licences and dispensations in all cases formerly sued for in the court of Rome, and not repugnant to the law of God. He accordingly issues special licences to marry, to hold two

livings, 8cc. and to exercise the right of confer- ring degrees He also holds several courts of judicature ; as, court of arches, court of audience, prerogative court, and court of peculiars. He is addressed with the title of Grace, and most Reverend Father in God ; and writes himself by Divine Providence ; whereas bishops only use by Divine Permission. The archbishop of York has the like rights in his province as the arch- bishop of Canterbury. He has precedence of all dukes not of the royal blood ; and of all offi- cers of state, except the lord high chancellor. The first archbishop of York was Paulinus, appointed by Pope Gregory about the year 622. He had formerly jurisdiction over the bishops of Scotland ; but in 1470 pope Sextus IV. created the bishop of St Andrews archbishop and metropolitan of all Scotland.

Whilst episcopacy prevailed in Scotland it had two archbishops, i. e. of St. Andrew's and Glasgow; of which the former was accounted the metropolitan. Even before it arrived at the dignity of an archbishopric, this see resisted with great spirit all the attempts of the archbishops of York in England to become the metropolitans of Scotland. The sees of Argyle, Galloway, and the Isles, were suffragans to Glasgow ; all the others in the kingdom to St. Andrews. Ireland has four archbishops, i. e. of Armagh, Dublin, Cashel, and Tuam ; of whom the former is primate of all Ireland.

ARCH-BUTLER, one of the great officers of the German empire, who presents the first cup to the emperor on solemn occasions.

ARCH-CHAMBERLAIN, an officer of the empire ; the same with the great chamberlain of England. The elector of Brandenburgh was appointed arch-chamberlain of the empire by the golden bull ; and he bears the sceptre before the emperor, walking on the left hand of the elector of Saxony. At

some solemnities he also serves on horseback like other electors, carrying a basin with a towel in his hands ; which, alighting, he sets for the emperor to wash.

ARCH-CIIANCKLLOR, a high officer who, in ancient times, presided over the secretaries of courts. Under the two first races of the kings of France, when their territories were divided into Germany, Italy, and Aries, there were three arch-chancellors : and hence the three arch- chancellors still subsisting in Germany ; the archbishop of .Menu hein^ arch-chancellor of Germany, the archbishop of Cologn of Italy, and the archbishop ot'Treves of Aries.

AR('1I-C(H'.\T, a title formerly given to the earl of Flanders on account of his great power and riches.

ARCll-D-Al'IFER ; from «,,Xoc, and dapifer, :r ; the chief sewer, a principal officer of the in: of (iermany, whose business it is, upon nn festivals, to see that the dishes be proper- laced on the imperial table. This office be- longs to the Elector, now kiri<_r, of Bavaria, but wa-, formerly claimed by the Count Palatine of the Rhine.

ARC, '11 1)FA(( )N, one who supplies the bishop's place and oliice in such matters as do belong to the episcopal function. The law styles him the bishop's vicar or vicegerent.

An archdeacon is next to a bishop. His juris- diction extends either over the whole diocese or a part of it. He is usually appointed by the bishop himself; and hath a kind of episcopal authority, originally derived from the bishop, but now independent and distinct from his. He therefore visits the clergy ; and has his separate court for punishment of offenders by spiritual cen- sures, and for hearing all other causes of eccle- siastical cognizance. There are sixty archdeacons in England

ARCHDEACON'S COURT is the lowest court in the whole ecclesiastial polity. It is held, in the archdeacon's absence, before a judge appointed by himself, and called his official ; and its juris- diction is sometimes in concurrence with, some- times in exclusion of, the bishop's court of thp diocese. From hence, however, by statute 24 Hen. VIII. c. 12, there lies an appeal to the bishop.

ARCHDRUID, the chief or pontiff of the ancient druids of a nation. See DRUID.

ARCHDUKE, a title given to some sovereign princes, as of Austria and Tuscany. The word is more correctly defined by Chambers, to be ' a duke vested with some quality, pre-eminence, and authority, above other dukes.'

The arch- duke of Austria is a very ancient title. There have also formerly been archdukes of Lorraine and Brabant.

ARCHED LEGS, an imperfection in a horse, when, being in his natural position, he has his legs bent forwards ; so that his whole leg makes a kind of arch or bow. This usually arises from excessive labor, whereby the back sinews are made to shrink up, so that the legs remain arched, and naturally tremble after a little riding; though the disorder is natural to some horses.

ARCHED SKENE, or SCHEME, in architecture, is used to denote a flat arch, less than a semicir- cular one.

ARCHELAUS, a celebrated Greek philo- sopher, a disciple of Anaxagoras, flourished about 440 years before Christ. He read lectures at Athens, and did not depart much from the opinions of his master. He taught that there was a double principle of all things, namely, the expansion and condensation of the air, which he regarded as infinite. Heat, according to him, was in a continual motion. Cold was ever at rest. The earth, which was placed in the midst of the universe, had no motion. It originally resembled a wet marsh, but was afterwards dried up ; and its figure, he said, resembled that of an egg. Animals were produced from the heat of the earth, and even men were formed in the same manner. All animals have a soul, which is born with them ; but the capacities of which vary according to the structure of the organs of the body in which it resides. Socrates, the most illustrious of his disciples, was his successor.

ARCHELAUS, king of Macedon, was the natu- ral son of Perdiccas II. and succeeded him after murdering Alcetas, Perdiccas's brother. He greatly strengthened his kingdom, and he was a liberal encourager of literature and the arts. He entertained Euripides at his court, and employed the pencil of Zeuxis to ornament his palace. He died about A. A. C. 398.

ARCIIF.LAUS, a son of Herod the Great, by Malthace his fifth wife. He was thought the most cruel and bloody of his father's children. Herod having put to death Alexander, Aristobulus, and Antipater, and deprived Herod Antipas of his claim to the kingdom, he appointed Arche- laus his successor, if the emperor agreed to it. At Herod's death, when this was made known to the people, they seemed pleased and promised allegiance. Archelaus interred his father with great pomp, made a solemn mourning for seven (lays, and gave the people a splendid entertain- ment. Having convened them in the court of the temple, he assured them of his mild

govern- ment ; and that he would not assume the royal title till he was confirmed by the emperor. Immediately after (A. D. 1.) a tumultuous assem- bly of the people required him to execute the man who had advised his father to kill a noted zealot for pulling down the golden eagle from the gate of the temple ; at the same time demanding that Joazas should be divested of the priesthood, and loading the memory of his father Herod with bitter curses and reproaches. Provoked at this insult, he ordered his troops to fall upon them, and 3000 of them were killed on the spot. After this he went to Rome, to get himself confirmed in the kingdom ; but his brother Herod Antipas opposed him, insisting on a former will of his father's, constituting him his successor. In con- sequence Of which Augustus delayed giving an answer. The Jewish nation petitioned the empe- ror to set aside the whole family of Herod, and constitute them into a Roman province, subject to the governor of Syria : Archelaus opposed the petition ; and the emperor deferred giving judgment. But a few days after he assigned Archelaus a part of his father's kingdom, with the title of Ethnarch, and promised him the crown if his conduct should merit it. Upon his return to Judea he deposed Joazas the high-priest, and made Eleazer, his brother, priest in his stead. When Archelaus had governed about seven years in the most violent and tyrannical manner, the Jews and Samaritans jointly accused him to the emperor, who sent for him to Rome ; and after hearing him, banished him to Vienne in Gaul, where he died. Alstedius and others say he reigned nine years. To avoid the fury of this monster, Joseph and Mary retired to Nazareth.

ARCHELAUS, the son of Apollonius, one of the greatest sculptors of antiquity, was a native of Ionia, and is thought to have lived in the time of the emperor Claudius. He executed, in marble, the apotheosis of Homer. This master- piece in sculpture was found in 1568, in a place named Fratocchia, belonging to the princes of Colonna, where, it is said, the emperor Claudius had a pleasure-house. Father Kircher, Cupert, Spanheim, and several other learned antiquaries, have given a description and explication of this work.

ARCHELOUS, in ancient geography, now Aspressdamo, a river of Greece, which having its source in Mount Pindus, and passing the gulf of Arta to the south, between the ancient /Etolia and Acarnania, entered the Ionian Sea.

ARCIIEMY is used by some to denote the art of transmuting less perfect metals into the

more perfect. In which sense archemy differs from alchemy, as a part from the whole.

ARCHENDA, in the ancient physic, a kind of powder prepared of alcanna, and leaves of the Egyptian ligustrum, wherewith the people smeared their feet after bathing.

ARCH'ER.) T . T, ,

ARCH'ERESS ' Lat arcus' a bow; Fr- archer> >. , ' 4 one that shoots with a bow ARCHERY, j

Flowers of this purple dye, Hit with Cupid's a/rchery, Sink in apple of his eye !

Shuhspeare. Midsummer Night's Dream.

Draw, archers, draw your arrows to the head. Id.

This Cupid is no longer an archer ; his glory shall

be ours ; for we are the only love-gods. Id.

Thou frequent bring'st the smitten deer , For seldom, archers say, thy arrows err. Prior. Among the English artillery, archery challengeth the pre-eminence, as peculiar to our nation.

Camden.

Blest seraphims shall leave their quire, And turn love's soldiers upon thee, To exercise their archery.

Crashaw's Steps to the Temple. Say, from what golden quivers of the sky Do all thy winged arrows fly? Swiftness and power by birth are thine. 'Tis (I believe) this archery to shew, That so much cost in colors thou, And skill in painting, dost bestow Upon thy ancient arms, the gaudy heavenly bow.

Cowley

ARCHERS, in France, under the old mo- narchy, the officers who attended the lieutenants de police and provosts to make captures, seizures, arrests, &c. They were called archers, though thteii arms were only halberds or carabines. In this sense they had archers of the grand prevot ds 1′ hotel ; of the prevot des marchands; city archers; archers du guet, or of the watch, &c. Small parties of archers, called also gens de marechausse, continually patroled on the great roads, to secure them against robbers. The carriages of Lyons, 8cc. were always escort- ed by a party of archers. To the diligence of these archers it was chiefly owing, that persons travelled in all parts of France in the utmost se- curity ; there being fewer robberies on the

high- way in that whole kingdom in a year, than about London in a week.

ARCHERY is the art or exercise of shooting with a bow and arrow. The origin of this pur- suit is involved in obscurity ; but, according to the fanciful opinion of the poet Claudian, origi- nated with the porcupine, which was observed to cast its quills whenever it was offended. There are many fictitious accounts respecting its early rise. Apollo, according to Plato, Galen, and Callimachus, was the inventor of it ; and Isido- rus remarks that Apollo communicated it to the Cretans. Some few of the modem fictions have equalled the ancients in genuine absurdity ; par- ticularly when the bow and arrow was affirmed to be the instruments with which Cain was killed by Lamech. In Genesis the primary mention of archery occurs, when Ishmael, the natural son of Abraham, is said to have ‘ dwelt in the wilder- ness, and become an archer.’ The Jews, how- ever, were less successful in this pursuit than the neighbouring nations. David, on his

accession to the throne, was, by this national inexperience, induced to issue an order that Ju- dah, the most military tribe, should practise ar- chery. Jonathan, the son of Saul, is reported to have been the most skilful archer of all the Jews. There are also certain passages in the Old Testa- ment, which evince that archery was not only a military pursuit, but engaged in as an innocent pastime, and as the means of divination.

The Persian archers have been celebrated for their skill ; they were usually placed in the rear of the axovTiartu, spearmen ; and these were behind, the SupaicoQopot. But, according to Herodotus, the Scythians were superior to all other nations. If we may use the authority of Homer, in his mi- litary delineations, we should observe that the Greek archers were promiscuously interspersed among their armies in battle, and took their aim with deliberation and success.

In after periods it seems that the archers form- ed part of the i//iXoi, or light armed troops, who were considered inferior to the OTT\ITO.I. To the practice of archery, the Athenians owed, in a great measure, their victories ; and particularly over the Lacedaemonians, in the vicinity of Py- los. Athens was guarded by archers, which was more externally requisite than internally judi- cious. In the age of Scipio Africanus, archery was used in the Numantian contest. Tiberius also conquered Inguominus and Arminius, prin- cipally with the assistance of his equestrian and pedestrian archers. After his time the practice was, in a great degree, discontinued ; although,

according to Herodian and Suetonius, the em- perors Domitian and Commodus were expert bowmen. The Roman sagittarii, or arrow- bearers, formed part of the Velites, which con- sisted of juvencs and pauperes, and occasionally of allies. Their situation in battle was hazard- ous, neing sometimes placed in the front, some- time on the right and left wing, and sometimes in tlie rear; they were chiefly employed, previous to the commencement of the several attacks, in harassing the weakest quarters of the enemy. The Parthians were singular in their archery, and always kept up a. running fight, discharging their arrows in their retreat. The Goths, Huns, nnd Vandals acquired much celebrity in archery ; but previous to the Saxon invasion, the practice seems to have been unknown in Britain ; Os- Man's heroes frequently used the bow. In this island archery was ureatly encouraged in former time-;, and many statutes were made for the re- gulation thereof; whence the English archers became the best in Kmope, and obtained many siunal victories. The Artillery Company of Lon- don, though they have long disused the weapon, are the remains of the ancient bowmen or ar- i her'-. Artillery (artillcne) is a Trench term signifying archery ; as the king's bowyer was in that l.iiiu'uaˆe >tyled artillier du roy. And from that nation the Knjish seem to have learnt at Iraˆl the cross- bow archery. William the Con- queror had a considerable number of bowmen in his a;m\ at the battle of Hastings, when no men- tion is mAde of such troop— on the side of Harold. Ami it is -npposed that these Norman archers shot with t::e nrhalist or cross-how, in which formerly the anow was placed in a uvoove, termed in ! rend] a (Uuuinl, and in F.nulis'i a holt. Of the

time when shooting with the long-bow first be- gan among the English, there appears no certain accounts. Their chronicles do not mention the use of archery till the death of Richard I. who in 1199 was killed by an arrow at the siege of Limoges in Guienne, which Hemmingford men- tions to have issued from a cross-bow. After this, there appears no notice of archery for nearly 150 years, when an order was issued by Edward III. in the fifteenth year of his reignr to the sheriffs of most of the English counties for providing 500 white bows, and 500 bundles of arrows, for the then intended war against France. Similar orders were repeated in the following years, with this difference only, that the sheriff of Gloucestershire is directed to fur- nish 500 painted bows, as well as the same number of white. The famous battle of Cressy was fought four years afterwards, in which our chroniclers state that we had 2000 archers who were opposed to about the same number of French, together with a circumstance which seems to prove, that by this time we used the long bow, whilst the French archers shot with the arbalist. Previously to the engagement there fell a very heavy rain, which is said to have damaged the bows of the French, or perhaps rather the strings of them. Now the long-bow- when unstrung, may

be most conveniently covered, so as to prevent the rain from injuring- it ; nor is there hardly any addition to the weight from such a case ; whereas the arbalist is of a most inconvenient form to be sheltered from the weather. As therefore, in 1342, orders were issued to the sheriffs of each county to provide 500 bows, with a proper proportion of arrows, it seems probable that these were long bows and not the arbalist. At this battle the English as- cribed their victory chiefly to the archers. The battle of Poictiers was fought A. D. 1 356, and gained by the same means." Sometimes the archers gained great victories without the least assistance from the men at arms ; as, particu- larly the decisive victory over the Scots at Ha- milton, A. D. 1402. In that bloody battle, the men at arms did not strike a stroke, but were mere spectators of the valor and victory of the archers. The earl of Douglas, who commanded the Scotch army in that action, enraged to see his men falling thick around him by showers of arrows, and trusting to the goodness of his armour, which had been three years in mating, accompanied by about eighty lords, knights, and gentlemen, in complete armour, rushed forward and attacked the English archers sword in hand. But he soon had reason to repent his rashness. The English arrows were so sharp and sti-ong, and discharged with so much force, that no armour could repel them. The earl of Douglas, after receiving five wounds, was made prisoner ; and all his brave companions were either killed or taken. Philip de Comines acknowledges, what our own writers assert, that the English arch- ers excelled those of every other nation; and Sir John Fortesque says again and again, that ' the might of the realme of England standy th upon archers.' The superior dexterity of their archers gave the English a great advantage over their capital enemies the French and Scots. The French depended chiefly on their men at arms,

and the Scots on their pikemen ; but the ranks of botli were often thinned and thrown into dis- order by flights of arrows before they could reach their enemies. James I. of Scotland, who had seen and admired the dexterity of the English archers, and who was himself an excellent archer, endeavoured to revive the exercise of archery, among his own subjects, by whom it had been too much neelected. With this view, he ridiculed their awkward manner of handling their bows, in his humorous poem of Christ's Kirk on the Green ; and procured the following law to be made in his first parliament, A. D. !424, immediately after his return to Scotland : ' That all men might busk thame to be archares, fra the be twelve years of age ; and that at ilk ten punds worth of land, thair be made bow markes, and specialle near parocbe kirks, quhairn upon halie days men may cum, and at the leist sthute thryse about, and have usage of archarie ; and whasa

usis not archarie, the laird of the land sail rais of him a wedder ; and giff the laird raisis not the said pane, the king's shiref or his ministers sail rais it to the king.' But the un- timely death of that excellent prince prevented the effectual execution of this law. In 1417, Henry V. ascribes his victory at Agincourt to the archers, and directs the sheriffs of many counties to pluck from every goose six wing feathers, for the purpose of improving arrows, which are to be paid for by the king. In 1421, though the French had been defeated, both at Cressy, Poictiers, and Agincourt, by the English archers, yet they still continued the use of the cross-bow ; for which reason, Henry V. as duke of Normandy, confirmed the charters of the balis- tarii, which had been long established as a fra- ternity in Rouen. In the fifth of Edward IV. an act passed, that every Englishman, and Irish- man dwelling with. Englishmen, shall have an English bow of his own height, which is directed to be made of yew, wych, hazel, ash, or aubume, or any other reasonable tree, according to their power. The next chapter also directs, that butts shall be made in every township, which the inha- bitants are obliged to shoot up and down every feast day, under the penalty of a half-penny when they should omit this exercise. In the fourteenth year of this king, it appears by Rymer's Fcedera, that 1000 archers were to be sent to the duke of Burgundy, whose pay was settled at sixpence a day. This circumstance proves very strongly, the great estimation in which archers were still held. In the same year, Edward, preparing for a war with France, directs the sheriffs to procure bows and arrows, as most specially requisite and necessary. On the war taking place with Scot- land eight years after this, Edward provided both ordnance and archers ; so, that though the iwe of artillery, as we now term it, was then training ground, yet that of the bow and arrow was not neglected. Richard III. by his attention to archery, was able to send 1000 bow-men to the duke of Bretagne, and he availed himself of the same troops at the battle of Bosworth. Dur- ing the time of Henry VII. there appears no order relative to gunpowder or artillery ; but in J 488 he directed a large levy of archers to be 5f i;t to Brittany, and that thev should be review- Vot, II.

ed before they embarked. In t'.io ninp'oenlh year of his reign, this king forbad the use of the cross- bow ; because the long bow had been much used in this realm, whereby honor and victory had been gotten against outward enemies, and the realm greatly defended, &c. In the reign of Henry VIII. several statutes were made for the promotion of archery. The eighth Eliz. c. 10. regulates the price of bows, and the thirteenth Eliz. c. 14. enacts, that bow staves shall be brought into the realm from the Hanse towns and the eastward ; so that archery still continued to be an object of attention. In Rymer's Fcedera, there is neither statute nor proclamation of James I. on this head ; but it appears by Dr. Birch's Life of his son, prince Henry, that at eight years of age he learned to shoot both with the bow and

gun, whilst, at the same time, this prince had in his establishment an officer who was styled bow-bearer. The king granted a second charter to the artillery company, by which the powers they had received from Henry VIII. were considerably extended. Charles I. appears from the dedication of a treatise entitled the Bowman's Glory, to have been himself an archer; and, in the eighth year of his reign, he issued a commission to the chancellor, lord mayor, and several of the privy council, to pre- vent the fields near London being so inclosed, as to interrupt the necessary and profitable exercise of shooting ; as also to lower the mounds where they prevented the view from one mark to another. Catharine of Portugal, queen to Charles II. seems to have been much pleased with the sight, at least, of tins exercise ; for in 1676, by the contributions of Sir Edward Hun- gerford and others, a silver badge for the marshal of the fraternity was made, weighing twenty-five ounces, and representing an archer drawing the long-bow to bis ear, with the following inscrip- tion : ' Reginae Catharinse Sagittarii.' The supporters are two bowmen, with the arms of England and Portugal. In 1682 there was a most magnificent cavalcade and entertainment given by the Finsbury archers, when they bestow- ed the titles of duke of Shoreditch, marquis of Islington, &c., upon the most deserving. Charles II. was present, but the day being rainy, he was obliged soon to leave the field. So lately as 1753, targets were erected in the Finsbury fields during the Easter and Whitsun holidays, when the best shooter was styled captain for tht ensuing year, and the second, lieutenant. Though archery continued to be encouraged by the king and legislature, for more than two centuries after the first knowledge of the effects of gunpowder, yet by the end of the reign of Henry VIII. it seems to have been partly considered as a pas- time. Arthur, the elder brother of Henry, is said to have been fond of this exercise, inso much that a good shooter was styled Prince Arthur. We are also informed, that he pitched his tent at Mile-end, to be present at this recrea- tion, and that Henry his brother attended. When the latter became king, he gave a prize at Windsor to those who should excel in this exercise; and a capital shot having been made, Henry said to Barlow, one of his guards, ' If you still win, you shall be duke over all archers *

Barlow, therefore, having succeeded, and living in Shoreditch, was created duke thereof. Upon another occasion, Henry and the queen were met by 200 archers on Shooter's-hill, which probably took its name from their assembling near it to shoot at marks. This king likewise gave the first charter to the Artillery Company, in the 29th year of his reign, by which they are per- mitted to wear dresses of any color, except pur- ple and scarlet, to shoot not only at marks, but birds, if not pheasants or herons,

and within two miles of the royal palaces. They are also en- joined, by the same charter, not to wear furs of a greater price than those of the marten. . The most material privilege, however, is that of in- demnification from murder, if any person pass- ing between the shooter and the mark is killed, provided the archers have first called out ‘ fast.’ The long bow, however, maintained iis place in our armies long after the invention of fire arms. Nor have there been wanting experienced sol- diers who were advocates for its continuance, and who in many cases, even preferred it to the harquebuss, or musket. King Charles I. twice granted special commissions under the great seal, for enforcing the use of the long bow. The first was in the fourth year of bis reign ; but this was revoked by proclamation, four years afterwards, on account of divers extortions and abuses com- mitted under sanction thereof. The second, in 1(>33, in the ninth year of his reign, to William INleade ant! his son, also named William, wherein lie former is styled an ancient archer, who had iresented to the king a warlike invention for mitini: the use of the pike and bow, seen and approved by him and his council of war; where- fore his majesty had granted them a commission ro teach and exercise his loving subjects in the said invention, which he particularly recom- mended the chief officers of his trained bands to learn and practise; and the justices and other chief magistrates throughout bin gland are therein enjoined to use every means in their power to ass^t Meade, his son, and all persons authorised l.y t’nt m in the furtherance, propagation, and j.r.ictiee of this useful invention, lioth thecom- • .’. issmns and proclamation are printed at large in i-‘ynicr. At the breaking out of the civil war the earl of Kssex issued a precept, dated Nov. lii-13, for stirring up all well affected people by benevolence, towards the raising a company of archers for the service of the king and parliament. Since this period it has fallen, as an implement of warfare:, into gradual and entire disuse.

This, however, was not without a .struggle on the part of its advocates. Ilollingshed laments ‘In.’ decay of it : ‘ now,’ says lie, ‘ we have in a manner irenerally uiven over that kind of ar- tillery, and for long bows indeed do practice to shoot compass” for our pastime. C’utes the Frenchman, and Rutters deriding our new archery m respect to their corslets, will not let in open skirmish, it’ any leisure serve, to turn up their tails and cry, ‘ shoot, F.nglishmen,’ and all be- cause our sir-Mil.: .shooting is decayed and laid in l’

&c. Chron. v. i. p. 198. Bishop Latimer in- troduces a curious expostulation on the same subject in his sixth sermon. ‘ The art of shu- tynge hath ben in tymes past much esteemed in this realme; it is a gyft of God that he hath given us to excell all other nacions wythall. It hath been Goddes instrumente whereby he hath gyven us manye victories agaynste oure enemies. But nowe we have taken up horynge in townes insteede of shutynge in the fyeldes. I desire you, my Lordes, even as you love honoure

and glorye of God, and intend to remove his indignacion, let there be sent fourth some proclimacion some sharpe proclamacion to .the justices of peace, for they do not theyre dutye. Charge them upon their allegiance that thys singular benefit of God may be practised ; and that it be not turned into bol- lyiug and glossying and horing wythin the townes ; for they be negligente in executing their lawes of shutynge.'

An arrow weighing from twenty to twenty-four dwts. weight, made of yew, was considered by ar- chers to be the best that could be made. The fea- thers of a goose should be used ; and the bird from which they are taken should be two or three years of age. In an arrow, it is remarkable that two out of three feathers are commonly white ; as they are plucked from the gander, but the third is usually brown or gray, being taken from the goose ; and this difference of color shows the archer when the arrow is properly placed. The expression of the ‘ gray goose’s wing,’ in the old ballad of Chevy Chase, is in allusion to this occurrence. Originally arrows were armed with flint or metal heads ; latterly with iron of dif- ferent forms and names. Henry IV. ordained that all arrows should be well boiled or brased, and hardened at the points with steel. Arrows were usually reckoned by sheaves ; a sheaf con- sisting of twenty-four arrows. They were carried in a quiver, called an arrow-case, which served for the magazine. In ancient times, different species of combustible materials were attached to the heads of arrows, and shot from long bows ; and even subsequent to the invention of gun- powder, this mode has been carried into execu- tion. According to Neade, an archer may shoot an ounce of fire-works from an arrow, twelve score yards. Among the stores at Berwick and Newhaven, in the reign of Edward VI. arrows with wild-fire ; and arrows with fire-works are enumerated. Some slight opinion of the strength of an arrow in its flight, may be formed from the account given by Edward VI. in his journal : he observes, that ‘ 100 archers shot arrows each before him and afterwards altogether; that they shot s.t an inch board : some pierced it through and stuck in the other board, and others pierced it through with the heads of their arrows. There is a curious account of an archer in the poems of Chaucer, and as it is very appropriate on the present occasion, we shall make no apology for the insertion :

And he was clade in cote and bode of grenc ; A sheaf of peacocke arrowes bright and keen, Under his belt he bare full thriftily : Wellcoude he dresse liistakel yewmanly ;

His arwrs Grouped not with fethers lowe, And in his hande he bare a mighty bo we ; A not hed hadde he ; with a hrowne visage Of woodcraft coude he well all the usage. LTpon his arms he had a gaie bracer, And by his side a sword and abokeler; And on the other side he had a gaie daggere, Harneised wel, and sharp as point of spere j A cristofre on his breast of silver shene, A horn he bare, the baudrik was of grene.

In a curious manuscript of the time of queen Elizabeth, is this account of an archer and all his necessary appendages : ‘ Captains and officers should be skilful of that most noble weapon, and see that their soldiers, according to their draught and strength, have good bows, well notched, well strynged, every strynge whippe in their noche ; and in the myddes rubbed with wax, braser, and shuting glove ; some spare strynges trymed as aforesaid ; every man one shefe of arrows, with a case of leather defensible against the rayne ; and in the same fower and twentie arrowes, whereof eight of them should be lighter than the residue ; to gall or astoyne the enemye with the hail-shot of light arrows ; before they shall come within the danger of the harquebuss- shot. Let every man have a brigandine, or a little cote of plate, a skull, or huskyn, a mawle of leade of five foote in lengthe, and a fusee, and the same hanging by his girdle, with a hook and a dagger ; being thus furnished, teach them by musters to marche, shoote, and retire, keeping their faces upon the enemy’s. Sum tyme put them into great nowmbers, as to battle apper- tayneth ; and thus use them oftentimes practised, till they be perfecte ; for those men in battel or skirmish cannot be spared. None other weapone maye compare with the same noble weapon.’

The Genoese and the Flanderkins occasionally resort to the exercise of the long bow. In the for- mation of their bows, the Laplanders are reported to evince great ingenuity. Their usual custom is to flatten two pieces of hard wood and join them by a very tenacious glue. In a similar mode the North Americans construct their bows of three several pieces, and strengthen them with the sinews of the deer, which, when pre- pared, they wrap carefully round the thickest part of the bow.

The Royal Company of Archers in Scotland are said to owe their origin to the commissioners, who were originally appointed by James I. to superintend and regulate the exercise of archery throughout the kingdom. These commissioners, who were generally people of character and re- spectability, picked out, among the number of men under their superintendence, the most ex- pert archers ; and, in cases of emergency, made a present of their services to the government, in- order that they might form the king’s body-guard. While in this situation they gave repeated in- stances of their courage and dexterity. Within seven miles of Edinburgh, the royal company still claim the rank of the king’s chief body-guards. In the year 1677 this company was known under the name and title of His Majesty’s Company of Archers ; and in the same year, and by the same act of the privy council, a piece of plate of the value of twenty pounds was shot for at the an-

*nual parades of the company, called weapon shawings ; this plate was denominated the * king’s prize.’ At the period to which we are at present alluding, the royal company consisted of the principal nobility of Scotland.*

But the revolu- tionary principles to which they so tenaciously adhered, almost annihilated their consequence, and withheld the continuance of the king's prize. Their original magnificence was, however, re- vived on the accession of queen Anne to the throne ; but their attachment to the unfortunate and ill-treated house of Stuart, again proved the declension of their splendor. But these differ- ences, by the annihilation of the family to whom they are attached, have now subsided, and they are now reinstated in all their former conse- quence. In 1788 the annual prize was revived and shot for, in the presence of a numerous body of spectators. We may here observe, that the three principal bodies of archers in England and Scotland are now incorporated in one ; by the union of the woodmen of Arden,the Toxopholites, and the Royal Society of Archers. The prizes, which properly belong to the latter, and which are annually shot for ; are, 1st. A silver arrow, which was presented by the town of Mussel- burgh, which seems to have been shot for as far back as the year 1603. Whoever gains this may take charge of it for a year, at the expiration of which period it is returned with any device that his imagination may suggest. 2. A silver arrow, which, in A. D. 1626, was granted by the town of Peebles. 3. A silver arrow given by the town of Edinburgh, A. D. 1709. 4. A silver punch-bowl, about the value of fifty pounds, made at the expense of the company of Scotch silversmiths. 5. The king's prize, which is the entire property of the winner. These prizes are shot for at what is called rovers : the marks are placed at the distance of 185 yards. The uni- form of the Royal Company of Archers is tartan, lined with white, and trimmed with green and white fringes ; a white sash, with green tassels, and a blue bonnet, with St. Andrew's feather and cross. They have also two standards, on one of which is inscribed, ' Nemo me impune lacessat ; ' on the other, ' Dulce pro patria peri- culum.'

ARCHERY, in our ancient customs, was a ser- vice of keeping a bow for the use of the lord to defend his castle

ARCHES, in heraldry, are borne in coat-armour, both double and single ; and they are drawn as springing from, or supported by, pillars as re- presented in the annexed dia- gram.

ARCHES-COURT; from arches and court; the chief and most ancient consistory that belongs to the archbishop of Canterbury, for the debating of spiritual causes, so called from Bow-church in London, where it is kept, whose top is raised of stone pillars, built archways. The judge of this court is termed the dean of the arches, or official of the arches-court ; dean of the arches, because with this office is commonly joined a peculiar jurisdiction of thirteen parishes in Lon- don, termed a deanery, being exempted from the

a-uhority of the bishop of London, and belong- ing to the archbishop of Canterbury; of which the parish of Bow is one. Some others say, that he was first called dean of the arches, be- cause the official to the archbishop ; the dean of the arches was his substitute in his court, anrl by that means the names became confounded. The jurisdiction of this judge is ordinary, and extends through the whole province of Canter- bury ; so that upon any appeal, he forthwith and without any farther examination of the cause, sends out his citation to the party appealed, and his inhibition to the judge from whom the ap- peal is made. It is proper to add, that from this court there lies an appeal to the king in chancery, that is, to a court of delegates appoint- ed under the king's great seal, by stat. 25 Henry VIII. c. 19, as supreme head of the English church, in the place of the bishop of Rome, who formerly exercised that jurisdiction ; which cir- cumstance alone will furnish the reason why the Popish clergy were so anxious to separate the spiritual court from the temporal.

AR'CIIETYPK, 1 ApxtTVTroQ, arche ti/pux ;

AuYnr.TYi'AL. i from «o\?/, chief, and TUTTOC. form. ' A principal type, figure, form ; the chief pattern, mould, model, example, or sample, whereby a thing is framed ; an authentic or ori- ginal draught.' — (Wg/ var.

Our souls, though they iniuht have perceived images themselves, by simple sense ; yet it seems in- conceivable1, how they should apprehend their arche- types, (rlanville's Scepsis.

As a man, a tree, are the outward objects of our perception, and the outward archetypes or patterns of our ideas; so our sensations of hunu,-'T, cold, are also inward archetypes or patterns of our ideas. But the notions or pictures of these thins;:;, as they are in the mind, are the ideas. Watts's Logic.

Through contemplation's optics I have seen

Him, who is fairer than the sons of men ;

The source of good, the light archetypal. Norris.

AK<;iii.TY!'r. ; from rtjiˆ?;, and TVTTOC, a type; in mechanics the first model of a work, which is copied after to make another like it. Among inmters, it is used fur the standard weight by which the others an: adjusted.

The arc'.ietypal world, unions 1'hitonists, means the world as it existed in the idea of God before the visible creation.

ARCH-EUNUCH, the chief of the eunuchs; one of the principal otliccrs in Constantinople, under the (ireek emperors.

AKCHKUS; probably from apyof; a word by uhich Paracelsus seems to have meant ;i power that presides over the animal economy, distinct from the rational soul : a sort of prirnum mobile, Mipposed by Van llelmont to superin ti ml the animal economy, and preserve it. it is akin to I'lalo's anima muii'li. Neither of these supposit.ons, nor that of Paracelsus, appear to h,i\«. the smallest foundation. Van llelmont eairied his i.ka to a most extravagant height, placinu an an IK us in the stomach to superintend dmestion ; and ascribing sympathies, antipathies, diseases, \c. t0 (':,,• archens being pleased or dis- pleased.

Ai:t ii; i -. in chemistry, the highest spirit that C'.;n !>,: extracted iVom imxcd bo.Ji.'.s.

SO ARC

ARCHEUS, in medicine; opx««oc, ancient; the ancient practice concerning which Hippocrates wrote a treatise. Hippocrates also used the words apx«t»; ˆutric, for the former healthy state, before the attack of the disease.

ARCH-FLAMINES, in antiquity, the chief priests among the ancient Romans.

ARCH-HERETIC, a term of reproach among bigots, applied to the advancer or supporter ot an opposite opinion in religion, whether right or wrong.

ARCHIACOLYTHUS ; from apxoff, chief, and'aicoXwOof, minister; the chief of the acolythi, an ancient dignity in cathedral churches ; the ministers whereof were divided into four orders, priests, deacons, subdeacons, and acolythi; each of which had their chiefs.

ARCHIAS, a poet of Antioch, who wrote a Greek poem on the Cimbrian war.

ARCHIATER, ARCHIATRUS; from opxoc, and tarpof, a physician ; the first physician to a prince who retains several, according to Mer- curialis, Casaubon, and Vossius; or the prince of physicians ; or, which is more probable, it signifies both.

AR'CHICAL. From Gr. opxij. Principal, chief.

Mind and understanding, counsel and wisdom, did not lay the foundation of the universe ; they are no urchical thing? ; that is, they have not the nature of a principle in them. Cudu'orth, p. 73.

ARCHIDAMIA; ApXida/«a; a Spartan wo- man, daughter of Cleadas, who, understanding that it was decreed in the senate to send away the women into Crete, when the city was be- sieged by Pyrrhu's, rushed among the senators sword in hand, declaring that the women were as ready to fight as the men, on which the de- cree was revoked. Pint, in Pyrrh.

ARCHIEROSYNES ; from apXoc, and «fpoc, sacred ; in the Grecian antiquity, a high priest vested with authority over the rest of the priests, and appointed to execute the more sacred mys- terious rites of religion.

ARCHIGALLUS, in antiquity, the high priest of Cybele, or the chief of the eunuch priests of that goddess, called Galli.

ARCHIGERONTES ; from apxoc, and 7tpwv, old ; in antiquity, the masters of the companies of artificers at Alexandria. Some have mistaken the archigerontes for the arch-priests appointed to take the confessions of 'those who were con- demned to the mines.

ARCHIGUBERNETA, ARCHIGI:BF.RMTI>, ARCHIGUBERNTJS, in antiquity, the commander of the imperial ship, or that on which the ern peror was aboard. Some have confounded the office of archigubernus with that of prsefectus classis, or admiral ; but the former was under the command of the latter. Potter takes the proper office of the archiguberneta to have been, to manage the marine affairs, to provide com- modious harbours, and order all things relating to the sailing of the fleet, except what related to war.

ARCHIL, or ARCIIILLA, called also Rocella, and Orsielle, is a whitish moss which grows upon rocks, in the Canary and Cape de Verd Islands, and yields a rich purple tincture, fugitive indeed,

but extremely beautiful. This weed i« imported to vis as it is gathered. Those who prepare it for the use of the dyer grind it betwixt stones so as thoroughly to bruise it, but not to reduce it into powder, and then moisten it occasionally with a strong spirit of urine, or urine itself mixed with quicklime : in a few days it acquires a purplish red, and at length a blue

color. In the first state it is called archil ; in the latter lacmus, or litmus. The dyers rarely employ this drug by itself, on account of its dearness and the perish- ableness of its beauty. The chief use they make of it is for giving a bloom to other colors, as pinks, &c. This is effected by passing- the dyed cloth or silk through hot water lightly impreg- nated with the archil. The bloom thus commu- nicated soon decays upon exposure to the air. Mr. Hellot informs us, that by the addition of a little solution of tin this drug gives a durable dye ; that its color is at the same time changed towards a scarlet; and that it is the more perma- nent in proportion as it recedes the more from its natural color. Prepared archil very readily gives out its color to water, to volatile spirits, and to spirit of wine. It is the substance prin- cipally made use of for coloring the spirits of thermometers. As exposure to the air destroys its color upon cloth, the exclusion of the air produces a like effect in these hermetically sealed tubes, the spirits of large thermometers becom- ing in the compass of a few years colorless. M. I'Abbe Nollet observes, in the French Me- moirs for 1742, that the colorless spirit, upon breaking the tube, soon resumes its color, and this for a number of times successively ; that a watery tincture of archil included in the tubes of thermometers, lost its color in three days ; and that in an open deep vessel it became colorless at the bottom, while the upper part retained its color. See COLOR-MAKING. A solution of archil in water applied on cold marble, stains it of a beautiful violet or purplish blue color, far more durable than the color which it communicates to other bodies. M. du Fay says, he has seen pieces of marble stained with it, which in two years had suffered no sensible change. It sinks deep into the marble, sometimes above an inch, and at the same time spreads upon the surface, unless the edges be bounded by wax or other like substances. It seems to make the marble somewhat more brittle. Linnaeus informs us, in the Swedish Transaction? for 1742, that the true archil moss is to be found on the western coasts of England.

There is a considerable consumption of an article of this kind manufactured in Glasgow by Mr. Mackintosh, and sold by the name of cud- bear. We have seen beautiful specimens of silk thus dyed, the colors of which were said to be very permanent, of various shades, from pink and crimson to a bright mazarine blue.

Litmus is likewise used in chemistry as a test, either staining paper with it, or by infusing it in water, when it is very commonly, but with impropriety, called tincture of turnsole. The per- sons by whom it was formerly prepared gave it the name of turnsole, pretending that it was extracted from the turnsole, heliotropium tricoc- cum, in order to keep its true source a secret. The tincture should not be too strong, otherwise

it will have a violet tinge, which, however, may be removed by dilution.

The light of the sun turns it red even in close vessels. It may be made with spirit instead of water. This tincture, or paper stained with it, is presently turned red by acids ; and if it be first reddened by a small quantity of vinegar, or some weak acid, its blue color will be restored by an alkali.

ARCHILOCHIAN, a term in poetry, applied to a sort of verses of which Archilochus was the inventor, consisting of seven feet; the first four whereof are ordinary dactyls, though sometimes spondees ; the last three trochees ; e. g.

Solvitur acris hyems, grata vice veris et Favoni.

ARCHILOCHUS, a famous Greek poet and musician, was, according to Herodotus, contempo- rary w.ith Candaules and Gyges, kings of Lydia, who flourished about the fourteenth Olympiad, and A. A. C. 724. But he is placed much later by modern chronologists : viz. by Blair in A. A. C. 686, and by Priestley in 660. He was born at Paros, one of the Cyclades. His father Tele- sicles was in so respectable a station, that he was chosen by his countrymen to consult the oracles at Delphos concerning the sending a colony to Thasos ; but his mother, Enipo, was a slave whom Telesicles, notwithstanding his high rank, made his wife. Though Archilochus evinced an early attachment to poetry and music, these arts did not prevent his entering the army ; but, at the first engagement at which he was present, the young poet, like Horace and our own Suckling, lost his buckler though he saved his life by flight. ‘ It is much easier (said he) to get a new buckler than a new existence.’ This pleasantry, how- ever, did not save his reputation ; nor could his poetry or prayers prevail upon Lycambes, the lather of his mistress, to let him marry his daughter though she had been long promised him. After these mortifications, his life seems to have been one continued tissue of disgrace and resentment; so that the rage of Archilocus became proverbial \ and the provoking this satirist was compared to the treading upon a serpent : a comparison not too severe, if it be true that Lycambes and his three daughters were so mortified by his Satire, as to be driven to the commision of suicide. In this piece many adventures are mentioned, i’ull of defamation, and out of the knowledge of the public. There were likewise many loose passages in it; and it is said to have been on account of these that the Lacedaemonians laid a prohibition on his verses. However, Plutarch says there is no bard of antiquity by whom the two arts of poetry and music have been so much advanced as by Archilochus. To him is attri- buted particularly the sudden transition from one rhythm to another of a different kind, and the manner of accompanying those irregular mea- sures upon the lyre. Heroic poetry, in hex- ameter verse, seems to have been solely in use among the more ancient poets and musicians ; and the transition from one rhythm to another, which lyric poetry required, was unknown to them ; so that if Archilochus

*was the first author of this transition he might with propriety be styled the inventor of lyric poetry, which, after his time, became a species of versification wholly distinct from heroic. To him is likewise as**

cril'od the invention of epodes. See EPODE. He is also generally reckoned among the first victors of .h°. Pythic games: and we learn from Pindar that his muse was not always a terma- gant; for though no mortal escaped her rage, yet she was at times sufficiently tranquil and pious to dictate hymns in praise of the gods and heroes. One in particular, written in honor of Hercules, acquired him the acclamations of all Greece ; for he sung it in full assembly at the Olympic games, and received from the judges the crown of victory. This hymn, or ode, was afterwards sung in honor of every victor at Olympia who had no poet to celebrate his par- ticular exploits. Archilochus was at last slain by one Callondax Corax, of the island of Naxos ; who, though he did it in battle, according to the laws of war, was driven out of the temple of Delphi, by command of the oracle, for having deprived of life a man consecrated to the muses. The names of Archilochus and Homer were equally revered and celebrated in Greece, as the two most excellent poets which the nation had ever produced.

ARCHIMAGUS, the high-priest of the Per- sian nr.iuM, or worshippers of fire. lie resided in the highest, tire-temple, which was held in the same \eneration with them, as the temple of Mecca among the Mahommedans. Zoroaster tirst settled it at llalck ; but after the Mahom- medans had overrun Persia in the seventh cen- tury, Arehimau'us was forced to remove from thence into Kerman, a province of Persia, lying on the1 Southern Ocean, where it has continued to tliis day. Darius Hystaspes took upon him- self the1 dignity of Archimagus ; for Porphyry tells us, lie ordered, before his death, that among the other titles, it should be engraven on his mo- nument, ti.at he had been master of the magi; which | lainly implies, that he had borne this oiiiee aiiicurr t'loni ; for none but the Archimagus \as master m' ihc \vhoK; sect. V'rom hence it skeins to have proceeded, that the kings of Persia \vt -re ever alter looked on to be of the sacerdotal tribe, and \verc: alwavs initiated into the sacred order of the ni;iui hftbiv they took on them the crown, and \ere inaugurated into the kingdom.

A!!('ii!MAM)UriT., in ecclesiastical his- tory. \as a name given !>y the ancient Christians to \liat we now call an abbot. Among the (I reeks, by \hoiu it is chietiy used, it is always restricted to the chief of an abbev.

AlU'l 1 1 M Ki) r.S. a celebrated geometrician, burn at Sv;-a; u-e, in the i- land of Sieily, and re- •1 I ' ! liern, kiii/; di' Syracuse. He was re- e lor his i \tranrdinary application to iematicai Mudies; m which he used to be o mil'. h i-11'.iaged, that his servants were often 'i to take him from them by force. And allinned to lliero, if he had another earth uhenon to plant hi> machines he could move tins \luch we inhabit. lie is said to have formed a ulass sphere, of most surprising work- in.. n>hip, wherein ;!;e motions of the heavenly homes v.ere ri pi\ sent* •

up the sides of the bath as he went into it, and was filled with such joy, that he ran naked out of the bath, crying Evpij«ca ! Evpjjiea ! ' I have found it ! I have found it !' By the invention of machines he for a long time defended Syra- cuse on its being besieged by Marcellus. (See SYRACUSE.) On the city's being taken, that ge- neral commanded his soldiers to have a particu- lar regard to the safety of this truly great man ; but his care was ineffectual. ' What gave Mar- cellus the greatest concern (says Plutarch), was the unhappy Archimedes, who was at that time in his museum, and his mind as well as his eyes so fixed and intent upon some geometrical figures, that he neither heard the noise and hurry of the Romans, nor perceived that the city was taken. In this depth of study and contemplation a soldier came suddenly upon him and commanded him to follow him to Mar- cellus, which he refusing to do till he had finished his problem, the soldier, in a rage, drew his sword and ran him through the body.' This happened A. A. C. 208. Cicero, when he was quaestor in Italy, discovered his tomb, on which was carved a cylinder and sphere. Some of the works of this great man are lost : there are pre- served : 1 . Two books of the Sphere and Cy- linder. 2. The Dimensions of a Circle. 3. Of Centres of Gravity, or ./ Equiponderants. 4. Of Spheroids and Conoids. 5. Of Spiral Lines-. 6. The Quadrature of a Parabola. 7. Of the Number of the Sand. 8. Of Bodies that float on Fluids. The best edition of these is that published at London, 1675, 4to. Among the works of Archimedes which are lost, we may reckon the descriptions of the following inven- tions, which we may gather from himself and other ancient authors : 1 . Ilepi rrjc iffTuv, lib. v.) Diodorus Siculus informs us, that he contrived this machine to drain Egypt ; and that by a wonderful mechanism it would empty the water from any depth. 3. The E\t£, by means of which (according to Athenaeus, AHTTVOC, lib. v.) he launched Hlero's great ship.

4. The TpuririiHTTov, of thepower of which Tzetzes gives a hyperbolical relation, Chil. ii. hist. 35

5. The machines he used in the defence of Sy- racuse against Marcellus. Of these we have an account in Polybius, Livy, and Plutarch. 6. His burning- glasses, with which he is said to have set fire to the Roman galleys. Galen, Hepi icpaffeuv, lib. iii. 7. His pneumatic and hy- draulic engines,

concerning which he wrote books, according to Tzetzes.

ARCHIMIME, or ARCHIMIMUS ; from ap^jj, and /u/ioc mimic ; an arch buffoon, or capital mimic. The archimimes, among the Romans, were persons who imitated the manners, ges- tures, and speech both of people living and those who were dead. At first they were only*

employed on the theatre ; but were afterwards admitted to their feast, and at last to their fu- nerals ; where they walked after the corpse, counterfeiting the gestures and behaviour of the person who was carried to the funeral pile.

ARCHIPELAGO, in geography, a general term, implying a sea interrupted by a great num- ber of islands, and formed by corruption of ,£geopelagus, Aiyotov IlfXayoc, the jEgean Sea ; a name originally given it by the Greeks ; but for what reason it is not agreed on. See JEGEAX SEA. To this sea, however, the name is now in some measure appropriated. It is called the White Sea, in contradistinction to the Euxine, or Black Sea; and is that part of the Mediterra- nean, which lies between Europe and Asia ; hav- ing the Morea, Livadia and Macedonia on the west, Romania on the north, Natolia on the east, and the isle of Candia on the south. It con- tains a great number of islands ; such as Andros, Antiparos, Argentiera, Cerigo, Delos, Lemnos, Milo, Metelin, Naxia, Negropont, Paros, Pat- mos, Rhodes, Samos, Santorin, Scio, Scyros, Tenedos, Tina, &c. All these Ire between the thirty-fifth and fortieth degrees of north latitude. Some of them are called Cyclades, because they !orm as it were a crown and circle round Delos ; others are called Sporades, as being dispersed without any order between Asia and the isle of Candia. These islands are under the dominion of Turkey, and the rapacity and stupidity of their governors is proverbial. The public burdens are great : most of them are included in the government of the capudan-pacha, or grand-admiral of the Turkish fleet ; but Mity- lene, Scio, and Makronisi, are differently cir- cumstanced ; the revenue of the first going to the sultana mother, that of the second to the sister of the grand seignior, and that of the third, with the tribute of the city of Athens, to the kis- laraga, or commander of the black eunuchs. The professed religion is that of the Greek church ; but not a few are members of what is called the united Greek and Catholic church.

ARCHIPELAGO, COLUMBIAN, a name that has been sometimes given to the West Indies.

ARCHIPELAGO NORTHERN, extends between the east coast of Kamschatka and the west coast of America, and comprehends four clusters of islands : viz. 1. Sasignan, containing five islands.

2. Khoa, including eight islands; both these groups together are called the Aleutian islands.

3. The Andreanoffski Ostrova comprises sixteen islands. 4. The Lyssie, or Fox islands, include

also sixteen islands. Modern geographers men- tion other Archipelagos, as follows : —

ARCHIPELAGO OF LAZARUS, near the coast of Malabar and Malacca.

ARCHIPELAGO OF THE GREAT CYCLADES, a cluster of islands in the South Pacific Ocean, so named by Bougainville, the French navigator, and afterwards called New Hebrides by captain Cook. See HEBRIDES, NEW.

ARCHIPELAGO OF THE PHILIPPINES, called by some the Great Archipelago, containing the Philippines, the Moluccas, Celebes, &c.

ARCHIPELAGO OF THE RECHERCHE, several groups of islands, rocks, and shoals on the south coast of New Holland, extending from between 34° to 34° 3tf south latitude, and 121° 30′ to 123° 20′ east longitude. The largest islands were named by the French, Mondrain and Mid- dle Island.

ARCHIPHERACIT^l; formed of opxoc, chief, and the Hebrew or Chaldee p”13, division or chapter ; ministers in the Jewish synagogues, appointed to read and interpret the Perakin, 01 titles and heads of the law and the prophets Grotius supposed them the same with the ArchL synagogues ; but they were rather the chiefs o) these.

ARCHIPPUS, in entomology, a species of papilio that inhabits South America.

ARCHIPRESBYTER, or ARCH-PRIEST, t priest established in some dioceses with a supe riority over the rest. He was anciently chosen out of the college of presbyters at the pleasure of the bishop. These archpresbyters were much of the same nature with deans in the cathedra] churches, as the college of presbyters answers to the chapter. See PRESBYTER.

ARCHISTRATEGUS, the generalissimo, or captain-general of an army. See STRATEGUS.

ARCHISYNAGOGUS, the chief of the syn- agogue ; the title of an officer

among the Jews, who presided in their synagogues and assem- blies. The number of these officers was not fixed nor the same in all places; there being seventy in some, and in others only one. They are sometimes called princes or angels of the synagogue, and had a power of whipping or ex- communicating such as deserved these punish- ments.

ARCHiTECTOGRAPHIA, the description of ancient buildings, temples, ˆtheatres, arches, pyramids, baths, gates, aqueducts, tombs, &c.

ARCHITECTONICS; apXtr£«-ovMci,, Gr See ARCHITECTURE.

ARCHITECTURE.

AR'CHITECT,

AR'CHITECTIVE,

ARCHITECTO'MCAL,

ARCHITECTO'NICK,

AR'CHITECTOR,

AR'CHITECTRESS,

ARCHITECTURE,

ARCHITEC'TURAL.

An irreligious Chief architect and

From apˆoc, and rtK- TWV, from Ttv\u, to build. A chief builder. One who plans, con- trives, directs and super- intends a building ac- cording to the rules of J his art. Moor, plotter of these woes.

Sitaktpeare.

The hasty multitude

Admiring entered ; and the work some praise, And some the architect ; his hand was known In heav'n, by many a toVred structure high ; Where scepter'd angels held their residence, Aud sat as princes. Milton.

Our fathers next, in architecture skill 'd, Cities for use, and forts for safety build ; Then palaces and lofty domes arose ; These for devotion, and for pleasure those.

Blacltmore

ARCHITECTURE.

How could the bodies of many of them, particularly the last mentioned, be furnished with architective ma- terials? Derham. Physico-Theoloyy.

Architecture is divided into civil architecture, called by way of eminence architecture ; military architecture, or fortification ; and naval architecture, which, besides building of ships and vessels, includes also ports, moles, docks, &c. Chambers.

Rome will bear witness that the English artists are as superior in talents as they are in numbers to those of all nations besides ; I reserve the mention of her architects a» a separate class. Cumberland.

ARCHITECTURE, aˆrtKrovia, Gr.; ar- chitectura, Lat. ; the art or science of inventing and drawing designs for buildings : in other words, as the Greek etymology of the term ex- presses, the art of designing well according to just and harmonious rules and proportions.

2. Architecture, strictly speaking, may be di- vided into three separate classes: civil, military, and naval. 'Die former, to the consideration of which this article will be limited, has appro- priated to itself, emphatically, the general name of the art ; the second class, which respects FOR- TIFICATION, will be found treated of under that head ; and for the third, including, besides the building of ships and other vessels, the forma- tion of ports, moles, docks, i'

INTRODUCTION.

3. Amongst all the arts which the inventive ingenuity of mankind has at different periods originated, to administer to the wants and weak- nesses of human nature1, this must surely be ranked in the very highest class: not only does it contribute in the first decree to the blessings and eomfurt< of civili/.ed life; not only does it give a tangible shape, a ' local habitation and a name,' to the soft endearments of home — but it affords likewise a pregnant subject for the eye of taste to dwell on ; and is largely instrumental in exciting that refined and imaginative pleasure which .springs from the contemplation of abstract beauty and1 proportion.

4. Civil architecture, or, as we shall at once term it, architecture, is itself divisible into a number of different branches, according to the .Civics adopted by the various nations prac- tising it, and according to the several eras in v\hich it has been practised. An intelligent Irene!) \ntcr on architecture, of the present day, iˆives us the following enumeration: — !

v.:yptiau, Indian, IVrsian, 1'henieian, Hebraic, t'hmese, (.reek, l'o;r.an, and Gothic, to which list may be a.ddtd, the Ktrusean, the Moorish or Saracenic, the Saxon, and the F.nglish. With regard to epochs, the characteristics arising from ihese may be ranged i:ndrr four great heads, namely, ancient architec ture, that of the lower empire', that of the middle ages, and modern ar- chitecture.

."> . Before we proceed to the investigation of these varieties, in the eouise of which we shall trace back the progress of our interesting art to its earliest dawn, and aceo!i;pany it through ":e ' changes and chances' by .ldch it rose to .iH-Tidian splendor amongst tin: Greeks and Ro- ...iiis; declined witli the corresponding decline

of intellect in its second great stage ; and srnlc into barbaric darkness in the third; not, how- ever, to rise no more ; — it may not be amiss !•> impress still more strongly on the imaginatio-i of the reader or student the manifold and grt;.t advantages derivable from its cultivation.

6. Architecture may be regarded both as an art and as a science; and the practitioner wiil find it necessary to bear both definitions con- stantly in view; since otherwise he would be in danger, on the one hand, of degenerating into a mere artizan ; or, on the other, of becoming a theorist, whose designs are bounded tjy the pic- turesque, and extend not to the practical or use- ful. The great architects of Greece and Rome understood construction as well as effect; as is abundantly proved by those illustrious mo- numents which still survive to indicate their su- periority.

7. By the means of architecture we are fur- nished with a test from which may be inferred the comparative cultivation and progress of in- tellect between man arrived at a high state of civilization and his ruder forefathers ; and the opinion of Plato should not be forgotten, that even the study of politics and legislation began with the building of cities. The lofty and stu- pendous pyramids, obelisks, and temples of Egypt, bear witness to the truth of history and tradition which represent the grandeur and nu- merical strength of the ancient dwellers on the banks of the Nile. The relics of ancient Athens attest the veracity of those authors who attributed to its population a refined and elegant taste, and an unsurpassable perception of beauty and har- mony. The work of the sculptor, nay, in some instances, even of the painter, defies oblivion, introduced on the walls of the architect; and the magic powers of Apelles receive our faith, since they are vouched for by the same historians who had taste to perceive, and eloquence to describe, the architectural beauties which remain to excite similar sensations in ourselves.

PART I. HISTORY OF THE ART.

8. Great caution must be observed in specu- lating on the state of this art among the nations of antediluvian celebrity. It may, we think, safely be conceded, that they did possess a sys- tem of architecture; but it was probably of a very rude and unsophisticated description. The Mosaic account affords but little light to guide us on this subject; and whether the deluge was an unique occurrence, or, as some philosophers are inclined to imagine, was several times re- peated, we are still left in the dark as to the height which the arts and manners of civilized life had obtained among the primeval races who previously lorded it over our globe.

9. It is a curious fact, that although most of the known countries of the world concur in be- lief and affirmation of a universal deluge, yet each differs, according to its prevailing opinion and traditions, both with regard to date and cir- cumstances ; and in the only record which we ourselves possess of a period nearly equalling iu

extent the whole of the Christian era hitherto, the history of that period is altogether comprised in six short chapters.

10. This is not the place to enter at greater length on this disquisition ; and we have only alluded to it here, for the purpose of rendering it manifest that we must be content to remain in ignorance as to the peculiarities which distin- guished, or the general features of resemblance which amalgamated, the antediluvian populations from or with their successors on the face of the earth.

1 1 . If indeed we were to give loose to ima- gination, we might be induced, from certain statements of an astounding and picturesque na- ture, introduced into that brief chronicle, to award to the antediluvian races an extraordinary portion of greatness and skill. ‘ There were giants in those days :’ and the age of man, now limited to the fleeting period of threescore years and ten, was then drawn forth to the majestic duration of eight or nine centuries. In this space, what scope for the intellectual faculties to expand and break forth, as well as the physical ones! Fancy pic- tures to us the existence of temples, vast in com- parison with ours, as their superior longevity ; of domes high, almost, as the visible heavens; of cities sufficiently splendid and imposing to re- ceive the ‘ sons of God,’ when they descended to breathe the aspirations of love towards the ‘ daughters of men.’

12. But we will waive all further considera- tion of this undefined era, and

proceed to exa- mine, generally, the incipient attempts of archi- tecture, and the rough originals from which the refinements both of ancient and modern art were deduced. Moses speaks, in describing the tribes which descended from the children of Noah, of numerous cities built by them in the ages imme- diately succeeding the flood. These primitive towns were, it is probable, like all others, the product of rude populations, made up of small straggling huts, thrown irregularly about, built of turf or rough stones, thatched with reeds or straw, and lighted only by the aperture used as a door, the entrance by which required the inha- bitant, from its lowness, to gain admission in an inclined posture.

13. It has frequently been said, that the first materials employed in building were twigs of trees, wherewith men constructed huts, such as the wigwams in use at this day among the Ame- rican Indians. This, however, may be disputed; as the natural shelter afforded by hollows in the sides of mountains or rocks would, it may be imagined, much more readily suggest the idea of using stones or earth as the materials for building houses. Even in America, where the human race has perhaps appeared in the rudest form, they were no sooner collected into great bodies, under the emperors of Mexico and Peru, than stone buildings began to be erected. We are not, indeed, to look for the origin of architecture in any single nation ; but in every one, when the inhabitants begin to leave off their savage way of life, and to become civi- lized.

14. 'Anciently,' says Vitruvius, 'men lived ."i woods, and inhabited caves ; but in time,

taking example perhaps from birds, who witf» great industry build their nests, they made them- selves huts. At first they made these huts, very probably, of a conic figure ; because that is a figure of the simplest structure ; and, like the birds, whom they imitated, composed them of branches of trees, spreading them wide at the bottom, and joining them in a point at the top ; covering the whole with reeds, leaves, and clay, to screen them from tempests and rain. — See first example in plate III.

15. ' But finding the conic figure inconvenient on account of its inclined sides, they changed both the form and construction of their huts, giving them a cubical figure, and building them in the following manner : having marked out the space to be occupied by the hut, they fixed in the ground several upright trunks of trees to form the sides, filling the intervals between them with branches closely interwoven and covered with clay. The sides being thus completed, four large beams were placed on the upright trunks; which, being well joined at the angles, kept the sides firm, and likewise served to sup- port the covering or roof of the building, com- posed of many joists, on which were laid several beds of reed, leaves, and clay. — See

second ex- ample in plate III.

16. ‘ Insensibly mankind improved in the art of building, and invented methods to make their huts lasting and handsome as well as convenient. They took off the bark and other unevennesses from the trunks of trees that formed the sides ; raised them, probably, above the dirt and humi- dity, on stones ; and covered each of them with a flat stone or slate to keep off the rain. The spaces between the ends of the joists were closed with clay, wax, or some other substance ; and the ends of the joists covered with thin boards cut in the manner of triglyphs. The position of the roof was likewise altered ; for being, on account of its flatness, unfit to throw off the rains that fell in great abundance during the winter season, they raised it in the middle; giving it the form of a gable roof, by placing rafters on the joists, to support the earth and other materials that composed the covering. — See third example in plate III.

17. ‘ From this simple construction the orders of architecture took their rise. For when build- ings of wood were set aside, and men began to erect solid and stately edifices of stone, they imi- tated the parts which necessity had introduced into the primitive huts ; insomuch that the up- right trees, with the stones at each end of them, were the origin of columns, bases, and capitals ; and the beams, joists, rafters, and strata of mate- rials that formed the covering, gave birth to archi- traves, friezes, triglyphs, and cornices, with the corona, the mutules, the modillions, and the dentils.’

18. ‘ The first buildings were in all likelihood rough and uncouth ; as the men of those times had neither experience nor tools : but when, by long experience and reasoning upon it, the artists had established certain rules, had invented many instruments, and by great practice had acquired a facility in executing’their ideas, they ‘made quick advances towards perfection, and at length dis-

covered certain manners of building, which suc- ceeding ages have regarded with the highest veneration.’

19. Perhaps the earliest cultivators of archi- tecture, as a fine art, were the Assyrians, whose empire was founded by Nimrod, the builder of the far-famed Nineveh. About the same era Troy is said to have been founded by Scamander ; while Mizraim, the son of Ham, led a colony into Egypt, and laid the fouudation of a kingdom. Bajbylon, the chef-d’oeuvre of the Assyrians, is related by Pliny to have been a magnificent city, sixty miles in

circumference ; that its walls were 200 feet high and 50 thick, and that the temple of Jupiter Belus was standing there in his time. (Plin. lib. vi. c. 26.) Herodotus states it to have been 480 furlongs in circumference, and speaks of a hundred gates of brass; if these existed, it is unquestionably proved that the fusion of metals was known and practised in those days, and, as may fairly be supposed in consequence, many other arts too often held peculiar to later and more refined ages.

20. From Assyria the arts passed into Egypt, one of the most ancient nations in the world, and to which, it is probable, we may fairly at- tribute the rise of the habits and pursuits of cul- tivated life into a tangible and definite form. The genius of Egypt was grand and stupendous; the moral character of its inhabitants sententious and grave. The architectural monuments which sprang up amongst them partook largely of these characteristics. The far-descried obelisk, whose proud and lofty top seems to emulate the mad ambition of the tower of Babel ; the immense pyramid, whose far-spreading base and uncouth shape loads the earth like a tremendous incubus; the colossal sphinx, whose huge staving counte- nance is awful even by reason of its magnitude and ugliness: — these ail bear witness to the heavy, yet sublime taste, by which they were engendered.

21. Kgvptian architecture may indeed be said, generally speaking, to be characterised by mas- sive solidity uiul stillness of contour; and yet it is the parent of lightness and the most bewitch- ing grace, it is itself solemn, sepulchral, over- ['0\ering: from it has sprung the airy elegance of the Grecian, and, by another remove, the lordly splendor of tiie Roman style. In Egypt, the capitals of columns were formed from branches of palm, or from ka\es of the papyrus or lotus, ;. hints native to the country; in Greece the sug- gestion \v;is adopted, but the Grecian plant sub- stitu'ul, as in the instance of the acanthus.

•J\2. Several ingenious speculations have been put lorth in order to account for this prevailing character of Fgyptian art. For ourselves, we think, in the first place, that considerable stress may be hud on the eti'ects of climate. The heavy burning atmosphere, which hangs so much over the land of Egypt, no doubt induced its primeval inhabitants to excavate for themselves cool dwell- ings in the recesses of the rocks ; and hence may base originated their style of building, massy and sepulchral. In the second place, it must be rerolleeted that the Egyptians flourished ante- i edi'iitiy to the (1 reeks. ;u.d duit the first achieve- ments if mankind, in any art, tend to the rude

and solid, and have an eye to the wants and conveniences rather than to the elegancies and luxuries of life. Besides, the Egyptians were ignorant of the construction of the arch, and were consequently compelled to provide

for its ab- sence by an accumulation of clumsy pillars and heavy architraves, extremely offensive to the eye of a just taste.

23. It must be allowed, however, that the ancient Egyptian buildings, with all their defects, had an air of vast magnificence. They attest, indeed, rather the great exertion of the physical than of the intellectual power ; and it may be remarked, that mere extent is one considerable principle of grandeur ; but nevertheless, when we read of such edifices as the portico of Hermopolis, 120 feet long and 60 feet high, each one of its columns 35 feet in circumference, and the whole enriched with appropriate ornaments, all harmo- nising with the general effect of the building ; — when, again, we contemplate the recorded glo- ries of the temple of Dendera or Tentyra, which splendid structure — splendid, although simple in design — was covered with bassi-relievi, hiero- glyphics, and sculptures of mystical and historical subjects ; — when works such as these, together with their baffling labyrinths and endless colon- nades, are referred to, it is impossible for the mind to remain unimpressed by a conviction that the genius of the arts had unveiled no small portion of her loveliness to the eyes of the dusky dwellers on the banks of the Nile.

24. The different kinds of edifices peculiar to the Egyptains are : the subterranean grotto ; the pyramid ; the obelisk ; the labyrinth, that im- mense collection of halls, of which Herodotus, Pliny, and Strabo, have left us descriptions ; the monolithal chamber (constructed of a single stone) ; and their stupendous temples covered with hieroglyphics, paintings, ana sculptures, and preceded by ranges of carved animals, of sphinxes, or of obelisks.

25. The walls of Egyptian buildings were ex- tremely thick, the ceiling or roof often consisting of a single block of stone. These roofs of course required a great number of pillars for their sup- port, which were sometimes square, sometimes octagon, or even with sixteen faces, and often round. The proportions of the columns, as well as of their ornaments, varied greatly. They had commonly either no base, or one constructed on a very simple plan. The form of the capi- tal was likewise quite arbitrary. In some in- stances it presented nothing but a square slab, heaped with hieroglyphics; hi others (sec the specimens given in plate V.) it was adorned with foliage, or represented a vase placed upon the column, or a bell reversed. There is neither frieze nor architrave, strictly speaking ; but an equivalent for the latter is found in the stones placed upon the columns. The inter- colummation rarely exceeds three feet or three feet and a half. The doors frequently offer a peculiar construction, called by Pococke pyra- midal ; and which consists in the hinges being farther from each other at top than at bottom.

26. We have already stated that the Egyptian architects were unacquainted with the formation of the arch. They have, however, found parti-

sans desirous of vindicating them from this spe- cies of ignorance. Dr. Pococke is among these, but he produces no satisfactory reason to account for his conviction. The late intrepid traveller Belzoni ranges himself on the same side, and discovered some rude specimens at Thebes and at Gournon. But the strength of the argument is against them.

27. However conjectural the origin of the Egyptian style may be, thus far at least is cer- tain, that it is the fountain whence all succeeding people have drawn their most copious draughts, and is deserving of minute investigation. This style bears all the marks of freshness of invention drawn from native materials and national sym- bols. It is in the country of its origin that those colossal wonders, the pyramids, are situated; and, without dwelling on a long description of structures so monstrous, we think we cannot do better, before we take leave of this branch of our subject, than present the reader with a succinct account of the principal of those time-defying piles, which, after all, form the most prominent peculiarity of Egyptian architecture.

28. The largest of the three, which is some leagues distant from Cairo, forms a square, each side of whose base is 660 feet ; its external cir- cuit being, therefore, 2640 feet, and is nearly 500 feet in height. The dimensions of the great pyramid differ extremely in different authors, as may be seen in the following table.

Ancients.

Herodotus . .

Strabo . . .

Diodorus . .

Pliny . : .

Moderns.

Le Bran . . Prosp. Alpinus

Thevenot . .

Niebuhr . . .

Greaves . , .

Height. Width 1 side.

800 feet .... 800 625 . . .ˆ; 600 600 some inches 700

, . , . 708

616 625 520 440 444

704 750 612 710 648

Number of the layers or steps.

Greaves says . 207 Pococke 212

Maillet ... 208 Belon . 250

Albert Leivenstein 260 Thevenot 208

As a general idea of this stupendous building, it is nearly the size at its base of the area of Lincoln's-Inn Fields, London, which has been said to have been made by its architect Inigo Jones of that size for the purpose of illustration, and its apex nearly one-third higher than the summit of the cross of St. Paul's cathedral. The summit of this largest pyramid at present finishes by a platform of about sixteen or seven- teen feet square. This amazing mass of masonry is constructed with stones of an extraordinary size, many of them being thirty feet long by four in heijh', and three in thickness. Herodotus, Diodorus, and Pliny, say, that the stones em- ployed in building the pyramid were brought from Ethiopia and Arabia. This fact M. Goguet with much probability doubts; for in the first place, he says, it is not likely that the kings of Egypt, having excellent materials at hand, should have unnecessarily expended immense sums to bring them from afar. Again, the stones of the

pyramid have too near a resemblance to those which are found in the neighbourhood, for us to imagine that they were not taken thence. Yet it is probable that the stones referred to by these ancient authors may have been the marble with which the outside of the pyramids were covered, and may have been procured from the neigh- bourhood of the Red Sea, and from Upper

Egypt-

29. Near to these pyramids is the colossal head called the Sphinx of Ghiza, the face of which resembles a woman, and the body that of a lion. This

extraordinary figure is said to have been the sepulchre of the Egyptian king, Ama- sis; and is one entire stone, being sculptured out of a solid rock.

30. Under the sway of the Ptolemies, the taste respecting architecture in Egypt, altogether changed ; and their buildings were constructed, in a great degree, on the principles of Grecian art. Indeed, there can be little doubt but that at length Grecian artists were employed to de- sign them, although their style was modified somewhat by that which had preceded them, and the remains of which still lingered about the na- tives of the country.

31. The monuments of ancient Indian archi- tecture whicli remain to gratify the ardent spirit of inquiry awake at the present period, consist chiefly of excavations from the rock. Of this description we meet with spacious halls and lofty columns, and solemn temples, constructed in such a manner as to excite in the beholder the strongest emotions of admiration and surprise.

32. These works are many of them, according to all tradition, of primeval antiquity ; and, from the strong resemblance of style, appear to make out an early connection between India and Egypt. M. Meiners has indeed sought to show that these monuments are referable to no remoter a period than the commencement of the vulgar era, when the Indians might have received from the Greeks the elements of the arts and sciences. This, however, can scarcely be the case ; since, in that event, they would not, in all probability, have been dug out of the rocks, but constructed in stone. Besides, the execution; the style, both of ornament and figures ; in short, the tout ensemble ; — are too far removed from the elegance and har- monious proportions of the Greeks to warrant us in giving evidence to the affinity sought to be established.

33. On the other hand, ‘ the pyramids, the colossal statues, the obelisks, the mummy pits, the subterranean temples with colossal fig- ures, and the lion-headed sphinxes, discovered by Belzoni in Egypt, indicate the style and system of mythology to be akin to those of the indefatigable workmen who formed the. vast excavations of Canarah, Elephanta, and Ellora ; — the various immense pagodas, pillars, and colossal images of Buddha and other Indian idols.

34. One of the most remarkable specimens of these Indian excavations is to be found in the little island of Elephanta ; perhaps so called from the circumstance of an elephant of black stone, of the size of life, being encountered near the landing-place. The ele»ated situation of this

temple, wrought in a nill of stone, and ap- proached through a quiet and solemn valley, is very striking and impressive. It forms nearly a square of from 130 to 135 feet, and is about fourteen feet and a half in its interior height. The roof is supported by ranges of columns, dis- posed with sufficient regularity ; and upon the walls gigantic figures are sculptured in relievo.

35. The shape of the columns, although cer- tainly not competing in beauty and proportion with the fine productions of Greece, are still more agreeable and in a better taste than those of the Egyptians. The capitals may be likened to circular cushions depressed by the weight above them.

36. The island of Salsette (some ten miles to the north of Bombay) presents another instance of the stupendous achievements of Indian archi- tecture. These excavations are situated in the neighbourhood of the village of Ambola. The temple, strictly speaking, describes a square of about twenty-eight feet, and is approached by a long walk, or alley, at the end of which stands the outer gate or doorway, twenty feet high, ad- mitting the visitor to the grand vestibule, by which he is led to the inner door of the temple. On each side of this door are various figures sculp- tured in relief. The roof of the temple or pagoda is sustained by twenty columns, about fourteen feet in height, and resembling in form those at Klephanta, which however they scarcely equal, from the circumstance of the sculptures being wrought in a softer rock.

37. The excavations at Ellora, at Canarah, and other places, are of a similar character. The regular, systematic style in which they are con- structed; the real beauty of many of the sculp- tured figures and columns; in a word, the aitist-like appearance displayed by them in so many respects, leads us to conclude that they are the works of an ingenious as well as a power- ful people, of whom the present natives of the country ailurd but a very tame and indifferent ivprrsentation. It' the excavated temples of In- dia are compared with those built in Egypt after the regular fashion, the similitude of style will be exceedingly apparent. Among the elements of both, we observe close intercolumniations, rudely sculptured columns, and clumsy architraves. The column of Mcnares, however, amongst others, stands out conspicuously from the mass of Indian relics. This beautiful monument, respecting the workmanship of which conjecture has been ex- tremely active, combines the elegance of (ireciari taste with the general elements of the Indian style. Its shaft, base, and capital, are decidedly Hindu: the sculptured and other ornaments which decorate it, as decidedly Grecian. The (I recian honeysuckle is iound on its pedestal, while the angular parts of the shaft display the holy water-leaves of the

iirahman mythology; ;ibove, airain, are Doric liutes, and the haver; of the Greek acanthus em- hellish the. capital.

'•}'". The rums of aucit nt Persian architecture, although they do not indicate any great superi- ority as products of art, are yet remarkable when we consider the former greatness and splendor of the empire in \huh th-.-y were erected. The most distinguished are those of Perseopolis,

once famous for containing a magnificent palace, the relics of which for a long while comprise^ forty pillars or columns, and were thence deno- minated by the inhabitants of the country chehul minar, or tschil minar, i. e. the palace of forty columns. Of these, however, the number has been gradually reduced, until it has fallen under one half of that quantity. Probably the name was originally given on the Mahommedans pe- netrating into that part of Persia. There have been some learned disputes as to whether the edifice to which these ruins appertain had been the residence of the kings of Persia, or a grand temple devoted to purposes of religious worship. The fact, however, of the Persians having an- ciently paid their adorations in the open air, added to the extent and multiform character of the mass, seems to accredit the former supposi- tion. The style of architecture, the huge size of the blocks of stone, the great number of orna- ments and of inscriptions (many rudely executed) all attest the high antiquity of these remains. They are constructed of a species of deep gray marble, very hard, which is susceptible of a beautiful polish, and thence becomes almost black. The adhesion of the stones is accom- plished, not by means of cement, but of cramp- ing irons, several traces of which remain. Great care and considerable skill appear to have been exercised in this respect.

39. There is undoubtedly some resemblance of style perceptible between the ruins of Perse- polis and the ancient architectural relics of Egypt; but a practised eye will not fail to discover marks of distinction. The love of adornment seems to have prevailed in the Per- sian style in the greater degree, a fact which may be traced to the luxurious disposition of the people. Thus we find upon these ruins an im- mense number of figures sculptured in relief, with a greater or less degree of skill, most of which are supposed to refer to the history and ex- ploits of their king, Dsjemschied, by whom tra- dition states the original pile to have been erected.

40. These noble ruins are now the shelter of birds and beasts of prey. Among the inscrip- tions still preserved, are several in Arabic, Per- sian, and Greek. Dr. Hyde has observed that the inscriptions are very rude and unartful ; and that some, if not all, of them, are in praise of Alexander the Great.

41. Our next inquiry into the earlier stages of architecture leads us to take a glance at the productions of the Phoenicians. This primitive pesple, who possessed the arts of civilization at an extremely remote epoch, had several large cities, famous for their riches, manufactures, and extended commerce. The well-known names of Sidon, and Tyre its colony, of Joppa, of Damas- cus, and of Baalbec, vouch for the greatness and artistical eminence of this ingenious nation, which has been supposed to be the same as the ‘ land of Canaan,’ so often spoken of in holy writ. Herodotus makes mention of a temple of Her- cules at Tyre, on the beauty and richness of which he is very lavish of his encomiums. It is to be regretted that the extreme remoteness of the period of Phoenician prosperity deprives us of

the means whereby to ascertain the peculiar characteristics of its structure ; but that they were peculiar is pretty obvious from the circum- stance of an ancient authority (Strabo) in speak- ing of Tyre and Aradus, two isles in the Persian Gulf, adding that they had temples ‘ resembling those of the Phoenicians.’

42. There is reason for supposing that the Phoenician architects were much in the habit of employing timber instead of stone, Mount Leba- nus, amoiiii other places, furnishing them with an abundant supply of the former material ; and hence we are led to a consideration of Hebraic archi- tecture, inasmuch as Phoenician artists were doubtless engaged in the building of Solomon’s temple, a great portion of which was in all pro- Lability constructed of wood.

43. The Hebrews, or Israelites, acquired a considerable degree of civilisation during their residence in Egypt. After their deliverance from captivity, it was suggested to them by the temples they had seen in Egypt, to construct a place which they might dedicate to the worship of the true God. Owing to the necessity pre- scribed by their wandering kind of life, this assumed the shape of a spacious tent, and was denominated the tabernacle. The whole struc- ture, according to the best authorities, covered a space of 100 biblical cubits, by 50 cubits wide; and the enclosure, five cubits high, was formed of wooden columns with brass bases and silver capitals, having curtains of tapestry suspended hetween them. These columns were sixty in number; twenty on each side, which lay north and south, and ten on each end, which faced the east and west. The Jews used this moveable temple for a length of time after the conquest of Palestine.

44. Under the reign of Solomon the grand temple was erected, preparations

for which had been commenced by David, that monarch's father. The details afforded us by the Bible of this vast edifice are not very clear, and do not suffice to alford us any precise notions on the subject.

45. The summit of Mount Moriah formed a plain of 36,310 square feet. They began by levelling the top and sides of the mountain, against which they afterwards built a wall of free- stone 400 cubits high. The circumference of the mountain at the foot was 3000 cubits. Upon the plain was built the temple, divided, like the tabernacle into two divisions, by a partition of cedar. Under the second, or the sanctuary, it appears they preserved the treasures of the temple.

46. In the principal front was the ulam, pro- bably a grand portico, such as they had formerly seen in several Egyptian temples. The temples of the ancients were generally without windows : but that of Jerusalem appears to have had them, and of the same form as those observed in the ruins of the great temple of Thebes. The tim- bers of the ceiling were of cedar, and it appears that the roof was flat like the Egyptian temples.

47. Round the temple was a wall or enclo- sure, and the space between that and the temple was occupied by a porch divided into three stories. The principal edifice was preceded by two courts • the first and lurgest was for the

assembly of the people : in the second, called the priests' court, was the temple. It was sur- rounded with apartments or houses, which were for the lodgings of the priests, for the preservation of the instruments used in sacrifice, and to con- fine the beasts, &c.

48. Before the ulam were two pillars of brass, whose capitals resembled, according to the expression of the Bible, ' lily work,' which in- dicates some resemblance to the Egyptian capi- tals, composed from the lotus flower. There is no mention mide of bases, and it is probablp that they had none. These were no doubt in- tended as a decoration to the whole, like the obelisks which were placed before the Egyptian temples.

49. The exterior walls of the temple were of stone, squared at right angles, and ornamented with the figures of cherubim, palm-leaves, flow- ers, &c. sculptured probably in the stone like the Egyptian hieroglyphics. The roof was covered with plates of gold, and the interior decorated in the richest manner ; the Hebrews following the custom at that time of all civilised people in ornamenting their temples, they used a great quantity of gold and precious stones. Besides this temple, Solomon erected many other works, as the walls of Jerusalem, several public granaries, stables, &c.

50. It is remarkable that the dimensions of the two pillars, Jachin and Boaz, set up by Solomon, very nearly correspond with those of the Doric order, first invented by the Greeks, and which originally came from their colonies settled in Asia Minor. The height of Solomon's pillars, without the chapiter, was eighteen cubits ; that of the chapiter itself was five cubits ; the cir- cumference was twelve cubits ; from whence, according to the Scripture language, we may reckon the diameter to have been exactly four cubits. Had they been a single cubit higher, they would have been precisely of the same height with columns of the original Doric order.

*5*1. We do not mean positively to affirm that this famous temple gave a model of architecture to the whole world ; although it is scarcely con- ceivable but that imitations of it, as far as it could be known, must have taken place among many nations. But that no such imitations had reached Greece, and that Grecian architecture was in no great state of improvement for some ages after Solomon, is certain ; since Homer, who was contemporary with Jehoshaphat, and whom some chronologists place even so low as Hezekiah, gives us no account of any thing like columns of stone in all his writings ; but uses a word which makes it probable that the columns in his time were nothing better than bare wooden posts.*

52. Of Chinese architecture, the original types and models appear to have been pavilions or tents, and evidences of this derivation are con- stantly visible in almost all their buildings. The materials chiefly employed by them are various kinds of wood, together with bricks and tiles burnt, or dried in the sun. The prevailing style of Chinese architecture, as has been observed by Mr. Elmes, ' must be familiar to every one who has drank from a China tea-cup, or who has seen many of the signs of grocrrs' shops, Sir Willis- -i

Chambers's pagoda in Kew Gardens, or Mr. Nash's pavilion at Brighton.'

53. The fact is, that the peculiarities of the climate operate to prevent the free use of stone or marble, houses built of which would be unin- habitable for more than half the year even in the northern provinces. The governing rule of Chi- nese architecture, strange as it may seem, is not an abstract principle of taste, but the result of prescriptive police regulations. These state, with the most scrupulous accuracy, .how the palace or lou should be built of a prince of the first, second, or third order of the imperial family, of a mandarin, or of a grandee of the empire; and not content with this, they proceed to regulate the public edifices of the capital, and also of provincial cities and towns, according to their different ranks or grades in

the empire.

54. These laws of course produce a dull uni- formity, and prevent the art from spreading into elegance or originality. One thing observable in the architectural usages of this people is their abundant use of pillars, which are employed literally as supports to the roofs, and are com- monly of timber, with marble or stone bases, destitute of capitals, and occasionally with wreathed shafts. When used externally they support a kind of veranda or outer roof, which being too low for a house, the architect is in- duced to construct a second roof, within the peristyle, much higher. The palaces of China are remarkable for their great extent, as well as for the number of courts, galleries, halls, porti- coes, &c.

:”).’). But the most gigantic work of Chinese architecture is their celebrated wall, compared witli which those of the 1’icts, the Romans, &c. sink into great inferiority. This stupendous fabric exceeded 2000 miles in length, and com- prised 4j, 000 towers. We must not omit noticing, likewise, the science and mechanical skill dis- played in the laying out of their canals, as well us in the construction of their bridges. But, taken altogether, there is little to recommend this light and weak style to the eye of the enlightened connoisseur.

.56. We shall now proceed to investigate, after the brief manner to which our limits confine us, the origin and progress of Grecian art, the prototype of which is unquestionably to be sought in the more cumbrous, but still imaginative architec- ture of ligypt. Vitruvius, it is true, does not willingly give into this opinion; and adopts certain ingenious hypotheses calculated to in- crease the claims of the Greeks to undisputed originality. These hypotheses, however, carry great doubt on the very face of them ; neither does the talented country whose champion he thus constitules himself stand in need of the realization of such claims. Their merit is con spicuous enough as it is. The genius of man is, and always has been, progressive; and he who, taking up a preconceived idea, new moulds and shapes it, and renders it eminently more con- ducive to beauty and utility, may fairly challenge merit oven more exalted than his who in the first place struck it out.

57. Cadmus, who flourished about 1500 years before the Christian a:ra, is reported to have in- troduced the arts and sciences into Greece, be-

tween 500 and 600 years after die building of the walls of Babylon. He built a city called, after the celebrated one in Egypt, Thebes, and it is not at all probable that he was satisfied with borrowing merely the name. The kingdoms of Athens, Argos, Sparta, and Thebes, were suc- cessively founded by Cecrops, Cadmus, Inachus, &c.

58. Art having begun to shed its beams steadily over these distinguished, though at first unimportant, colonies, their radiance was soon diffused throughout the whole country, and a taste gradually sprang up, the correctness and loveliness of which has been subscribed to by all subsequent ages ; and which, not seeking to astonish by gigantic and useless productions, se- lected the choicest materials of preceding styles, and founded thereon that exact proportion, that perfect harmony of parts, which soon rendered the disciples of the Egyptians as completely their masters as ours.

59. It would occupy us too long to enter into a minute detail of the causes which operated to produce this superiority. One of the chief of them may be traced to the fact that, in Egypt, and we may add in Judea also, law and religion both were exerted to depress and restrain the progress of art. Contented not to retrograde, they had no desire to advance ; whilst, on the other hand, the lively and enterprising popula tions of Greece were disposed to push every ad- vantage presented to them to its utmost ; and the arts were cultivated with the energy and passion proper to a young and free people, en- joying a climate of happy and exuberant beauty. The religion of Greece, likewise, drest in the most captivating colors of a splendid mythology, presented abundant subjects whereon to exer- cise the skill and taste of the painter, architect, or sculptor — the multiplicity of deities necessarily occasioning a want of places for their worship.

60. The Lacedemonians, that rigid and vir- tuous people, however simple and plain might be the exterior of their private dwellings, were not deficient in elegance and convenience, either of works of art or of furniture within. Desiring a handsome and healthy race of children, without deformity of limb or feature, they embellished the chambers of their females with the most exqui- site models of loveliness and symmetry that their wives, having their imaginations tilled with ideas of beauty, might bring forth a beautiful race. Thus did all the cities of Greece, particularly Athens, encourage the genius of the peaceful arts, which has given immortality to heroes, and has ennobled even voluptuousness. The people of Greece consecrated woods and dedicated tem- ples ; and the arts peopled them with images of the gods. This is a slight and rapid sketch of some of the causes which contributed to elevate to perfection the arts of Greece.

bl . It is vain to endeavour to fix any precise date to the age of Homer. It may, however, be certainly regarded as nearly contemporaneous with an event most important in the history of Greece : we mean the return of the Heraclidae to the Peloponnesus, and the circumstances attend- ing the conquest of the peninsula, which oc- casioned a change equally extensive both in the manners and political condition of the inhabi-

tants. The Dorian invaders, and the sanguinary wars introduced by them, repressed that spirit of refinement which had already begun to distin- guish the Grecian states ; nor was it until a long time after the return of the descendants of Her- cules, that we are enabled to dwell with any degree of certainty on the progress of the orna- mental arts.

62. In the absence of authentic information, engendered by this unhappy state of things, Vi- truvius endeavours to fill the void with a relation of the origin of the several orders constituting the main charm of Grecian excellence, which re- lation, although interesting, from its author and its subject, cannot be looked on as any other than a well-concerted fable. According to this state- ment of the learned Roman, Dorus, son of Helenus and of the nymph Optice, built a temple to Juno, in Argos, which, from mere chance, was decorated with columns assuming •the proportions of the Doric order, at that time utterly unknown. Subsequently, says he, on the arrival in Asia of the Ionian colonists, they, desirous of erecting a temple to Apollo Panio- nius, and ignorant of the proper way to set about it, bethought them of measuring the human foot; and, having discovered that to be the sixth part of a man's height, adopted at once this propor- tion for the columns of the order, which thence- forth became known by the appellation of Doric. The same people, on building a temple to Diana, resolved to appropriate the style of it more par- ticularly to themselves, and to apply to it their own name ; with which intent they increased the height of the columns to eight diameters, thus rendering their appearance more airy and slender, and more indicative of the delicacy of the female than the robustness of the male. Bases were substituted for the abrupt termination of the former order ; the volutes and ornaments of the capital resembled the head-dresses of the time, and the method of fluting the shaft was copied from the folds incidental to the draperies of the matrons of that era. Vitruv. 1. iv. c. 1.

63. The Corinthian order differs from the Ionic, according to the same authority, only in its capital ; the Ionic capital having no more than one-third of the diameter of the column for its height, while the Corinthian capital is allowed one entire diameter, which gives to the column a noble but delicate grandeur. The other mem- bers placed on the Corinthian pillar are common to the Doric and Ionic orders, for it is, in a man- ner, no more than a third order risen out of the former two, with nothing peculiar to itself but the capital.

64. In his explanation of the origin of the Doric and Ionic orders, Vitruvius

has certainly told no tale that looks like an abandonment of ilic unvarnished course of historical truth for the alluring regions of romance. Although these different modes of building may, as has been ima- gined, have received their present appellation, not at the time of their invention, but long since that period, still there is nothing in the detail at variance with sound reason, or calculated to ex- cite incredulity. With respect to the Corin- thian order, hov.over,- the case varies. \il- kins, ii deed, set .ms to think it, of all Vitruvius's

statements, the most probable one ; let the reader judge for himself: —

65. A marriageable young lady of Corinth fell ill and died. After the intermei.t her nurse collected together sundry ornaments which pleased her while living, put them in a basket, and placed it on the top of her tomb, covering it with a tile, in order that it might endure the longer in the open air. Now it chanced that the basket was placed upon a root of acanthus, which, in spring, shot forth its leaves ; and as the plant was depressed in its centre by the superincumbent weight, these encircled and twined round the sides of the basket ; but being resisted by the angles of the tile, they convolved at the extremities in the form of volutes. This circumstance was observed by the ingenious sculptor Callimachus, as he passed by ; and he, struck by the novelty and beauty of the figure, and by its graceful and appropriate shape, de- vised therefrom a new capital to some columns he had sculptured for Corinth.

66. 'In the whole history of architecture amongst the Greeks (says Lord Aberdeen, in his admirable Introduction to Wilkins' Vitruv. Ar- chitec.), nothing was more calculated, at the pe- riod of its adoption, to produce a greater revolu- tion in the practice of the art; or which, from its many advantages, has been more universally preserved and admired in modern times, than the use of the arch, constructed on scientific princi- ples. An endeavour, therefore, briefly to ascer- tain the origin and date of this important inven- tion may not be altogether misplaced. A differ- ence of opinion has prevailed on this question ; but, after submitting the subject to a good deal of inquiry and reflection, it appears most pro- bable that the era of the Macedonian conquest nearly coincides with that of the first introduction of this rema- kable feature of Grecian architecture. Much has '.ndeed been written to prove that the use of the arch was not only familiar to the earliest artists of Greece, but was even to be traced throughout the yet more ancient monuments of Egyptian labor. In adducing this proof the most obvious mistakes and the grossest blunders have been committed : drawings and engravings of the actual remains of the antiquities of these countries have been referred to; and thewretched cabins of the Arabs, and the towers and steeples of the modern Greeks, have been gravely repre- sented by some as forming part of the ancient temples, among which these

fabrics are frequently to be discovered. The selection of those travellers whose accounts are to be received has not al- ways been judicious ; to the authority of such writers as Paul Lucas, and some others of his nation, no particle of credit is due : his truth and accuracy are declared by a recent traveller, his countryman, to be only worthy of comparison with the Arabian Nights' Entertainments. In like manner the assertions contained in works of late date, composed under the Roman empire, have been implicitly adopted respecting the na- ture of buildings which either never had any existence at all, or which had been utterly de- stroyed long previous to the times in which their pretended descriptions were published. The tales of the hanging gardens of Babylon, of t!ir

labyrinth of Crete, of Lemnos, and of Porsenna, are equally fallacious and incredible. Strabo and Pliny, who undertake the detail of the wonders of these edifices, had no other object in view than to convey the notion of vast and stu- pendous works ; the display of arches and of domes was best calculated in their own day to produce this effect, and accordingly they did not hesitate abundantly to employ these forms in the account of buildings which no one had ever seen.

67. ' In considering this question, it is neces- sary to keep in mind the difference between an arch constructed of wedge-formed stones whose joints, if prolonged, would meet in a centre ; and one produced merely by the gradual projection of horizontal courses of stones until they meet : of this inartificial description examples may per- haps be found in all ages ; but, as abundant ma- terials and massive proportions are required in its formation, little was gained .by the adoption of this method, and it is therefore rarely seen. The galleries in the walls of Tiryns, as well as the section of the treasury of Atreus, afford us examples of the most remote antiquity ; and Mr. II. Smirke has communicated a similar instance of what we may call a Cyclopiaii arch existing in Italy. It is preserved quite entire, and has formed a gateway in the wall of the ancient city of Arpinum. This arch is somewhat more ela- borately constructed, but possesses the same character, and is probably much more recent than the Tirynthian calleries. But it is not only in (ireece and in Italy that we lind arches of this description : for, as if they were the natural result of the endeavours of a half-civilised people to obtain height and strength in the interior of their buildings, we meet with them equally amongst nations the farthest separated from each other, — in lv-cypt, and in India, in the rude works of our British ancestors, and even in the monuments of the original inhabitants of the New World. With respect to the arch scientifically

constructed, we may safely assert that no specimen is to be met with before the age of Alexander, either in the existing remains of art in (ireece, or described in the works of those writeis who flourished pre- viously to that peri'od.'

68. The character of the genuine architecture of the Greeks, in their brightest days, in the days i)t' 1'ericles, of Alexander, and of Phidias, is that of striking grandeur, combined with, indeed \ve may say produced by, a noble simplicity. Harmony of proportion, the result of a fine taste and a correct eye, together with the most con- summate eletcance of detail, and a thorough coincidence of parts, united in weaving the charm so justly and so enduringly powerful.

69. The first material used by the Greeks in their sacred buildings was timber ; next brick, the art of making which they learned from the Kgyptians ; subsequently stone was employed, as in the temple of Apollo, built by Amphyction ; and, ultimately, the most enduring as well as the most beautiful of all substances applied to the purpose was abundantly introduced, namely, marble.

70. The Greeks carried sacred architecture to its hi-hest point of perfection. In fact, the in-

stnnces which remain to illustrate the purity and glories of their style may be said, almost every one of them, to fall under this class of the art.

71. As mechanical skill advanced, cubical and oblong stones were devised, by means of which two methods of construction were introduced. The first, called Isodomon, was, as the word im- plies, with courses of equal length and thickness. The other, Pseudisodomon, admitted of a differ- ence in the heights, or thicknesses, and lengths of the courses. The first method was unquestiona- bly the most beautiful, and consequently used in the grandest of their buildings ; the latter ob- tained where the work was of less importance and executed in a more homely manner. A. third mode was still ruder in its character, and denominated Emplecton ; in which manner of construction the front stones only were wrought, and the interior left rough and filled in with stones of various sizes, or with rubble. This was chiefly employed in walls of great thickness : ' those, for example, surrounding cities. Some- times, they constructed their walls of brick or common stone, and faced them with marble.

72. The Greeks do not appear to hare made any great use of cement, the necessity for which was obviated by the size and weight of the blocks, and the precision with which they were squared.

73. A very important observation with refer- ence to the ancient Greek architects, and the consideration of which may serve as a key to some of their most distinguishing excellencies, is that every ornament introduced by them was in concord and harmony not only with the peculiar order employed, but with the character and ob- ject of the edifice ; to which latter, indeed, the order itself was appropriated. This, if the reader will suffer his imagination to dwell awhile on it, was sure to prove a grand source of beauty. It is calculated to produce in the beholder a sense of pleasure and admiration, which perhaps the mere abstract form of the mass before him is in- sufficient to account for ; and which, if he were studiously to analyse it, would be found to spring from those more latent properties of fitness, of proportion, and of utility, which the structure possessed, and which would necessarily stimulate corresponding ideas or associations in the re- cesses of the spectator's mind.

74. Again, trfeir external embellishments were bold although simple, and never redundant. The pediment of the temple and the metopes of the frieze were usually (as in the temples of Mi- nerva and of Theseus at Athens, and of Jupiter Panhellcnius at Egina), decorated with bassi relievi, and the angles of the walls with pilasters or ante. Their public squares were commonly surrounded with porticoes, in which were exhi- bited pictures, statues, and other works of art; and these seem to have been more profusely or- namented than the temples, theatres of declama- tion, or gymnasia.

75. It would seem, however, that the perfection of architectural beauty which was the pride and ornament of Greece, was in a very considerable degree confined to the edifices devoted to public purposes, and that individuals were restrained by some prescriptive principle, or implied law, from making costly displays of this kind. The feeling

arose probably from an apprehension that it might be deemed incompatible with the apparent equality of the citizens of a democratic state. Demosthenes conceived it to be a reasonable ground of accusation against Midias that he had erected a dwelling at Eleusis which threw all the others in that place into the shade. The same great orator likewise observed elsewhere, that so scrupulous was the public policy in this parti- cular, that even the residences of Miltiades, Aristides, and other illustrious citizens, were quite undistinguishable from the houses of their neighbours. (Demost. Olynth. iii. p. 38, 39.) At the same time he regrets that this salutary regulation had been greatly deviated from in his own age. The city

habitations of the Romans, in their earlier and more powerful era, seldom boasted of much exterior architectural embellish- ment ; and Julius Caesar may be said to have trenched on the old simplicity of his predecessors in more ways than one, since he applied to the senate for a decree enabling him to adorn his house like the front of a temple, and add to it a fastigium or pediment ; a distinction previously appropriated to the gods alone.

76. The temples of Greece were principally quadrilateral buildings, differing only in size, order of architecture, number of columns, and disposition of porticoes, which either ornamented the front alone or ran round pvery side. Pre- viously to the Macedonian conquest the Doric order appears to have obtained almost solely throughout Greece and her colonies, as well as in Italy and Sicily ; together with one general form of building their temples, varied slightly in Barticular parts. This general form was an ob-

ong square of six columns by thirteen, or eight oy seventeen, enclosing a walled cell, of small proportions, in some instances left open to the sky, in others covered by the roof common to ihe entire edifice. In fact the system of Grecian architecture, as has been before observed, derives one of its main charms from its graceful simplicity.

77. Almost coeval with the rise and progress of architecture in Greece is the formation of the Etruscan school. The Etruscans are by some an- tiquarians said to have been originally a Grecian colony; and to have received, as a matter of course, the arts and sciences from the parent state. Whether this be so or otherwise is not much to our present purpose to inquire. It is certain that their architecture possesses pecu- liarities which entitle it to a separate notice ; and it also demands observation from the circum- stance of its having been the parent of the Roman style, with which indeed it became, at a very early period of the history of that great people, closely identified, one of the two orders superadded by the Romans (the Tuscan) dedu- cing its name therefrom.

78. The invention of atrke is one of the dis tinguishing marks of Etruscan architecture. These are court-yards in front of the houses; and the appellation is said to have been derived from the Etruscan colony of Adria, or Atria, where they were first introduced. Their plan was simple, consisting of a parallelogram, sur- rounded by a portico, and supported by rough columns.

79. In the most ancient specimens of this school we find abundant use made of the arch, the construction of which was evidently well known to

their architects. Their columns dif- fered in shape and proportion from those of anv other nation, and Vitruvius has awarded to them the honor of having formed a new order, which however is only a variation, and by no means an improvement on the Grecian Doric.

80. The tomb of Porcenna, king of Etruria, founded by him in the city of Clusium, is re- corded in the thirty-sixth book of Pliny's Natural History, as a surprising specimen of their art; which was, however, applied to purposes of greater utility in the construction of the Cloaca Maxima, the Capitol, &c. at Rome. The Etrus- cans are likewise said to have erected circuses, but of these no traces remain.

81. At a subsequent period of their history the Romans improved on the ruder models which they had adopted from their Tuscan neighbours, by their connexion with Greece itself; and, at a period considerably antecedent to that at which Vitruvius's treatise was composed, they could boast of possessing many good architects. In- deed one of these, Cossutius, was employed by Antiochus, about two centuries before the Chris- tian era, in the construction of a work of first-rate importance (the temple of Jupiter Olympus) at Athens itself.

82. In noticing the best examples of Roman architecture, produced at its most flourishing period, we observe, in addition to the square plans of the Greeks, circular temples crowned with domes. The Corinthian order was evidently the favorite one, and was practised with great skill and success, particularly when not tortured into their own modification of it — the composite.

83. The most prominent features of the pure Grecian style are invention, elegance, and a se- vere beauty, at the same time not destitute of richness, which has left to succeeding ages the finest models for imitation. If we turn to the Roman school, which succeeded it, we are struck by the display of splendor, vastness of extent, carelessness of expense, and redundancy of orna- ment. Great caution, howevei , must be observed in undervaluing their productions. It should be borne in mind that they have never been excelled with regard to scientific construction generally ; or equalled in masterly control over the vault, the cupola, and the arch.

84. Their improvements in these branches of the art, indeed, led to the formation of marvellous works. They enabled the architects to whom they were due to uplift in air the pile self- balanced ; to throw over the immense area of the Pantheon the pensile vault ; and to create those stupendous aqueducts which are amongst the noblest of Roman inventions, and were utterly unknown to the Greeks.

85. In a word — if Grecian architecture, consi- dered as a fine art, must be admitted to have reached the highest point of taste and refinement, we are equally bound to ascribe to the Romans the power and credit of increasing and embel- lishing the practical comforts of life, and of ren- dering grandeur and luxury subservient to the daily uses of existence

86. The triumphal arches of the Romans con- stitute a leading feature in their architecture. In the designing of these nothing was overlooked which might tend to perpetuate the fame of the conquerors. Some were constructed with two, others with three openings. The Forums like- wige occupy a considerable place in a review of this style. The Roman Forum, which was the most renowned spot in all the ancient city, ex- ceeded all the rest in size, splendor, and archi- tectural beauty. Of the others, that of Trajan occupies the foremost rank, the Trajan Column forming one of its chief ornaments.

87. The earliest buildings of the Romans were destitute of columns ; the greater part of their temples circular and covered with cupolas ; as those of Romulus, of Cybele, of Vesta, of Mars, of the Sybils, &c. Even after they had adopted Greek proportions of the orders their old methods of construction were still preserved. The CP- lumns, pediments, and cornices, instead of being, as among the Greeks, principal and necessary component parts, \vere introduced merely as ex- traneous ornaments. This mistake became the prolific source of abundant affectations and con- ceits. Vespasian's temple of Peace exhibits a vault of ground arches (a figure in itself suffi- ciently unsightly), sustained at the springing of each groin by a single Corinthian column, a sup- port, with respect to the vault, as trifling and in- adequate as misapplied and absurd. Thus also we find, in the Colosseum and the theatre of Marcellus, sundry stories of arcades, whilst the intermediate piers are adorned with engaged columns, whereby the order, losing its proper character as essential to the building, is degraded into an idle, and consequently meretricious orna- ment. The Colosseum, indeed, vast and mighty and sublime as it is, even in ruins, has many errors in detail, which our space will not admit of our pointing out.

88. The Romans differed materially from the Greeks in methods of construction. The prin- cipal parts of most of their temples, including ihe body and columns, were formed of small bricks or stones, united by a very strong cement, and cased on every side with different marbles, and those

exceeding' hard stuccoes produced by their important discoveries in the art of making calcareous cements. These incrustations they adorned vith a lavish hand. The pilasters and panels of the second story of the interior of the Pantheon present a specimen of this kind of work, to which the Italians have given the name of innlrdtilc.

HO. It does not fall within our scheme to pursue the gradual variations in the several >pecies of ornamental architecture, nor to trace in a particular way the decline, and final extinc- tion, ot that beauty and grace which appeared for awhile to hi inlu rent in the works of the Greeks and Romans. \ e must content ourselves with observing that, subsequently to the Macedonian conquest, although the increase of mechanical science in (irercu must doubtless have enlarged their facilities of execution, architecture does not seem to l.avr advanced as a fine art. Its most brilliant period, in this point of view, was com- prised in the brief space of 200 years, including*

the respective ages of Pericles and Alexander. From the era of the latter's death its deterioration may be said to have begun. On the transmi- gration of the arts into Rome the purity of ar- chitectural style was, as we have before observ- ed, much more largely encroached on ; and thu corruption proceeded, with greater or less de- grees of rapidity, until every vestige of beauty or propriety was lost in the dreary period which succeeded the incursions of barbarism.

90. When Constantine established the Lower Empire at Byzantium, instead of embellishing the cities with theatres, temples, and works of peace, all the exertions of the architects were engrossed by towers, fortifications, and other military edifices. He however stripped the im- perial city of all that could be removed, to adorn his own capital. At a subsequent period when Rome had been sacked by Alaric and his com- panions, the successor of Constantine repaired and carried away whatever remained of any value, loading several vessels therewith, which being driven into Sicily by a tempest, and their commander killed, the Saracens, then masters of the country, carried their spoils to Alexandria.

91. The Saracens, in their buildings in Egypt, appear to have availed themselves, in a very small degree only, of the style of the aboriginal inhabitants. Their style may be justly regarded as the immediate precursor of the Gothic, and is distinguished by the lofty boldness of its vault- ings ; the slenderness of its columns ; the pecu- liar mixed form of its curves; the variety of its capitals; and the immense profusion of its orna- ments. The greatest peculiarity, however, lies in the small clustered pillars and pointed arches, formed by the segments of two intersecting circles (see plate VIII). The Egyptian Saracenic varies from the Spanish chiefly in the form of the

arch, as will be apparent from comparing the gate of Cairo with that of the Alhambra, in Grenada, or the great church at Cordova.

92. The genuine style of Gothic architecture is grand, characteristic, and impressive. What it wants in chasteness and simplicity is made up by solemnity, and a grace peculiarly its own. A Doric temple, as has been justly observed, differs from a Gothic cathedralas Sophocles does from Shakspeare. ‘ The principle of the one,’ says Mr. Hazlitt, ‘ is simplicity and harmony; that of the other richness and power. The one relies on form and proportion ; the other on quantity and variety, and prominence of parts. The one owes its charm to a certain union and regularity of feeling ; the other adds to its effect from complexity and the combination of the greatest extremes. The classical appeals to sense and habit ; the gothic or romantic strikes from novelty, strangeness, and contrast. Both are founded in essential and indestructible principles of human nature.’ The elements of this style are spires, pinnacles, lofty-pointed windows, and elevation, as opposed to the horizontal line ot the Greeks. They appear to be derived, in al- most every instance, from its type — the pyramid or cone. ‘ Thus,’ as Mr. Elmes observes, « all we see in it is pyramidal. Its shafts shoot up- wards; its arches are shaped like points of lancets ; its windows form themselves into pyra-

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midal tracety ; and it has been not inaptly com- pared to a grove of trees.’ An excellent illus- tration of the hypothesis of the pointed arch being formed by the intersection of two Roman or semicircular arches, is to be found in the abbey church of Malmsbury, in Wiltshire; an eccle- siastical

fabric of great antiquity and beauty.

93. Our own country appears to be the one in which this eminent style of architecture has been practised with the greatest success ; and we shall therefore now turn an eye to the progress of the art in England.

94. The Roman style of architecture, there can be little doubt, preceded all others in this island, the primeval cabin or hut alone excepted. The Roman legions were constantly attended by a train of artisans and artists of every description ; and they are known to have constructed in Bri- tain a number of convenient and even costly buildings for their own use, and at the same time to have stimulated the natives to copy and rival them. It is true, the stupendous remains – of Druidical art, if art it may be called, seem to challenge a belief in the skill and power of the ancient Britons: but it must be borne in mind, that these edifices, although stupendous, were probably extremely simple in plan ; and evince a disposition rather to excite the wonder attending vastness of extent, than the admiration which is called forth by regularity, harmony, and system.

95. Soon after the final departure of the Ro- mans from Britain, the purer taste in architecture was wholly superseded by new and vitiated styles ; the first of which that demands notice from us is the Saxon. This has been deduced, and not un- fairly, from the Roman system, polluted by the barbarisms of the middle ages. It is charac- terised by round, clumsy pillars and semicir- cular arches, surmounted by others of a round shape. See plate VIII.

96. The variations of the art in this country may thus be delineated. The first epoch may comprise that space of time between Augustan excellence and the total expulsion of the Romans from the island. The second would commence with the introduction of the Saxon style; the third, with that of the Gothic, including all its varieties, from the plainness of the Norman to the meretricious enrichments of the florid, which latter obtained in all its splendor, until the re- vival of classical taste in the reign of queen Eliza- beth; and the fourth epoch may be dated from that period when Roman, or to speak more cor- rectly, Italian architecture began once more to mingle with our native English style.

97. Another theory has been put forth, that the Saxon churches, after they began to be built with stone, consisted only of upright walls, without pillars or arches, the construction of which, it is alleged, they were entirely ignorant of. But it is highly improbable, that the Saxons could be ignorant of so useful a contrivance as the arch. Many of them, built by the Romans, they must have had before their eyes ; and it is not to be believed, that once knowing them and their con- venience, they would neglect to use, or,

having used, would relinquish them. Besides, as it ap- pears, from undoubted authorities, they procured workmen from the Continent, to construct their

capital buildings ‘ according to the Roman manner ;’ this alone would be sufficient to confute that ill-founded opinion ; and at the same time prove that what we commonly call Saxon is in reality The offspring of Roman architecture.

98. This style of building was practised all over Europe, and continued, to be used by the Normans long after their arrival here, so that there seems to be little or no ground for a dis- tinction between the Saxon and the Norman architecture. The ancient parts of most of our cathedrals are of this early Norman work, the characteristic marks of which are these:

99. The walls are very thick, generally without buttresses ; the arches, both within and without, as well as those over the doors and windows, semicircular, and supported by very clumsy co- lumns, with a kind of regular base and capital. In short, plainness and solidity constitute the striking features of this method of building. Yet the architects of those days sometimes devi- ated from this rule. Their capitals were adorned with carvings of foliage, and even animals ; (See specimens in Plate VIII.) their massive columns exhibited small half columns united to them, there surfaces were ornamented with spirals, squares, lozenge net-work, and other figures, either engraved or in relievo.

100. Various instances of these may be seen in the cathedral of Canterbury, particularly the under croft, the monastery of Lindisfarn or Holy Island, the cathedral at Durham, and the ruined choir at Orford in Suffolk. The columns, fig. 1, 2, 7, 8, pi. viii. are at the monastery of Lindisfarn or Holy Island. Those marked fig. 3, 4, 5, are in the ruined chancel at Orford, in Suffolk. Fig. 6 is at Christ Church, Canterbury. Fig. 9 is a co- lumn with two remarkable projections like claws in the south aisle of Romsey church, Hampshire.

101. With respect to the origin of the pointed arch, a question which has occasioned so many hypotheses, little can be said confidently. Inter- secting arches were probably an early, and undoubtedly a very widely spread mode, of embellishing Norman buildings, and were occa- sionally constructed in situations and with blocks ot stone which required centres on which to turn them. Now the construction of such centres could not have proceeded but from the employ- ment of something corresponding to compasses; and thus, even were we to adopt the unlikely supposition that the arches were constructed without previous delineation, the centres must have led to the invention of the pointed arch. If we go, in detail, into the

examination of a consi- derable number of Norman buildings, it will ap- pear that the superior lightness and elegance of the pointed arch, once hit on, was constantly undergoing improvements. In fine, we may re- mark that the arches arising by necessity in some plans from Norman groining would be pointed.

102. Again, the pointed arch has been ima- gined to be of Arabian extraction, and to have been introduced into Europe by some persons returning from the crusades in the Holy Land. Sir Christopher Wren was of this opinion; and it has been in fact, subscribed to by most writers who have treated on the subject. Other arguments have been, adduced to prove that this style of

architecture was introduced into Spain by the Moors, and from that country passed by the way of France into Britain.

103. Leaving this point to be decided by antiquarians, we shall proceed to describe more at large the progress of architecture in ancient Britain. It appears from history that, before the Roman invasion, the natives of Britain had no bet- ter lodgings than thickets, dens, and caves. Some of the caves, which were their winter habita- tions, and places of retreat in time of war, were rendered secure and warm by art, like those of the ancient Germans, which are thus described by Tacitus : ‘ They are used to dig deep caves in the ground, and cover them with earth, where they lay up their provisions, and dwell in winter for the sake of warmth. Into these they retire also from their enemies, who plunder the open country, but cannot discover these subterraneous recesses.’ Some of the subterraneous, or earth houses, as they are called, are still remaining in the western isles of Scotland, and in Cornwall.

104. The summer habitations of the most an- cient Britons were very slight ; and, like those of the Finnians, consisted only of a few stakes driven into the ground, interwoven with wattles, and co- vered over with the boughs of trees. When Caesar invaded Britain, the inhabitants of Cantium (now Kent), and of some other parts in the south, had learned to build houses a little more substantial and convenient. They daubed the wattled walls with clay, to h’ll up the chinks, and make them warmer ; and they white-washed the clay, after it was dry, with chalk. Instead of the boughs of trees, they thatched these houses with straw, as a much better security against the

weather. They next formed the walls of large beams of wood, instead of stakes and wattles. This seems to have been the mode of building in Britain, when it was first invaded by the Romans. ‘ The Bri- tons,’ says Diodorus Siculus, who was con- temporary with Caesar, ‘ dwell in wretched cot- tages, which are constructed of wood, covered with straw.’ These wooden houses were not square but circular, with high tapering roofs, having an aperture at the top. for the admission of light, and the emission of smoke.

105. At the time of Caesar’s invasion, our an- cestors had nothing answering to our ideas of a city or town consisting of contiguous houses, regular streets, lanes, &c. Their dwellings, like those of the ancient Germans, were scattered about the country, and generally situated on the brink of rivulets, for the sake of water, and on the skirt of some wood or forest, for the convenience of hunting and pasture for cattle. As these in- viting circumstances were more conspicuous in sonui parts of the country than others, the princes and chiefs made choice of such places for their residence; and a number of their friends and fol- lowers, for various reasons, built their houses as near to them as they could with convenience. I’ll is produced an ancient British town, which is described by Ciusar and Strabo as ‘ a tract of woody country, surrounded by a mound and ditch,’ for the security of its inhabitants against the incursions of their enemies. ‘ The forests,’ it is added, ‘ of the Britons are their cities ; for, when they have enclosed a very large circuit with

felled trees, they build within it houses for them” selves and hovels for their cattle. These build- ings are very slight, and not designed for long duration.’ The palaces of the British princes were probably built of the same materials, and on the same plan, with the houses of their subjects, and differed from them only in solidity and magnitude.

106. Although the intercourse between Britain and the continent was more free after the first Roman invasion than it had been before, and some of the British princes and chieftains even visited Rome, then in its greatest glory ; it does not appear that the Britons made any considerable improvements in their manner of building for at least 100 years after that invasion. For when the renowned Caractacus was carried prisoner to Rome, A. D. 52, and observed the beauty and magnificence of the buildings in that proud me- tropolis of the world, he is said to have expressed great surprise, ‘ that the Romans, who had such magnificent palaces of their own, should envy the wretched cabins of the Britons.’ But, as soon as the Romans began to form settlements and plant colonies in this island, a sudden and ex- cellent change ensued in the state of architecture. The decline of the art on the abandonment of Britain by the Romans has been already men- tioned. All the provinces of the Western Em- pire, indeed, participated in this decline : a circumstance partly owing to the building of Constantinople, which drew

many of the most famous architects and other artificers into the east, and partly to the irruptions and depreda- tions of the barbarous nations. The people left behind in these islands, having neither skill nor courage to defend their numerous towns, forts, and cities, suffered them first to be plundered, and then destroyed, by their ferocious invaders. Thus, the many noble structures with which provincial Britain had been adorned by the art and industry of the Romans were ruined or defaced in a very short time ; and the unfortu- nate Britons were equally incapable of repairing them, or of building others in their room.

107. The most wanton and extensive devasta- tions were those committed by the Anglo-Saxons; among whom it seems to have been a maxim to destroy all the towns and castles which they took from their enemies, instead of preserving them for their own use. It cannot be supposed that a people, who wantonly demolished so many beautiful and useful structures, had any taste for the arts by which they had been erected. The truth is, that the Anglo-Saxons, at their ar- rival in this island, were almost totally ignorant of these arts ; nor did they much improve in the knowledge of architecture for 200 years after their arrival. ,

108. During that period masonry was quite unknown and unpractised in this island ; and the walls even of cathedral churches were built of wood. The first cathedral of York was built of the same materials ; and a church of stone was esteemed a kind of prodigy in those times, that merited a place in history. Masonry was restored, and some other arts connected with it introduced into England, towards the end of the seventh century, by two clergymen, who wero great tra

vellers, and had often visited Rome, where they had acquired some taste for architecture. These were the famous Wilfrid, bishop of York and afterwards of Hexham, and Benedict Biscop, founder of the abbey of Weremouth.

109. In the other parts of this island architec- ture was in a still less flourishing state. After the ancient Britons had retired to the mountains of Wales, in consequence of the incursions of the Danes, the spirit of architecture seems to have been almost totally extinct. Such was the poverty of Britain at this period, that a royal re- sidence or palace in Wales, with all its offices, was valued at £5 and 80 pence of the money of that age, equal in quantity of silver to £16 of our money, and in efficacy, to £160 ! Even the castles in Wales, that were built for the safety of the

country, were constructed of the same materials as those of which their palaces consisted ; namely, of wands, with their barks peeled off, wrought into wicker in the manner of our bas- kets ! Such were the flimsy materials which formed the side walls of edifices designed for de- fence even against the attacks of an enemy, and hence it was that the laws required the prince's vassals to come to the building of these castles with no other tool than an axe.

110. The arts of building among the Scots and Picts, at this period, do not seem to have under- gone much improvement. In the beginning of the eighth century, however, they began to make some advances, as appears from some edifices yet re- maining in Scotland. These buildings are all circular, and so extremely various in style, that they rather seem to be works of different ages and nations, than of one age and country.

111. Architecture, in the twelfth century, re- ceived very great improvements, in consequence of the religious zeal of the clergy, who inspired all ranks of people with an ardor for pulling down the old churches, and building more ele- gant and splendid ones in their stead. In the time of Henry I. all the ancient edifices that had been raised in the days of Edgar, Edward, &c. were demolished, and others of greater magni- tude and magnificence, and of more elegant workmanship, erected. A similar spirit pervaded Scotland, in proportion to its extent and riches. King David I. alone, besides several cathedrals and other churches, built no fewer than thirteen abbeys and priories, some of them very magnifi- cent.

112. The sacred architecture of the Anglo- Normans in the beginning of this period, did not, as has been already noticed, differ much in its style and manner from that of the Anglo- Saxons : their churches being in general plain, low, strong, and dark ; the arches both of the doors and windows semicircular, with few or no ornaments. By degrees, through much practice, our architects, who were all monks or clergymen, improved in their taste and skill, and ventured to form plans of more noble, light, and elevated structures, with a great variety of ornaments; •vhich led to that bold magnificent style of build- ing commonly called the Modern Gothic.

113. It is not improbable that our monkish ar- chitects were assisted in attaining this style of building by models from foreign countries, or

by instructions from such of their own number as had visited Italy, France, Spain, or the East. Its first appearance in England was towards the latter end of the reign of Henry II. But it was not at once thoroughly adopted, some short solid columns and semicircular arches being retained and mixed with the pointed ones. In the reign of Henry III. however, this manner of building seems to have gained a complete footing; the circular giving way to

the pointed arches, and the massive pillars giving place to the slender columns : and such was their passion for this fresh taste that many of their strong ancient buildings were pulled down, and re-constructed after the model of the new architecture.

114. The present cathedral church of Salis- bury was begun early in this reign, and finished in 1258. Its style is Saracenic, and according to Sir Christopher Wren, it is one of the finest pro- ductions of architecture of the age in which it was built. It is built on one entire plan, and at one time, by which it distinguishes itself from some other cathedrals, which have been built at different periods, and in various styles. From this time till Henry VIII. the fashionable pillars were of Purbec marble, very slender and round encompassed with marble shafts a little detached, having each a capital adorned with foliage, which, joining, formed one elegant capital for the whole pillar. The windows were long and narrow, with pointed arches and painted glass. In this cen- tury lofty steeples, spires, and pinnacles, were much the taste in building churches.

1 15. In the fourteenth century, pillars consisted chiefly in an assemblage of shafts not detached, but united, forming one solid and elegant co- lumn. Their windows, especially those of the east and west ends, were large, and divided by stone mullions running into ramifications above, and forming numerous compartments in various fanciful shapes. Those windows were filled with stained glass of the most lively colors, on which were represented kings, saints, and martyrs, and their histories. Yet, notwithstanding the perfec- tion to which architecture had attained in these instances, this art, as applied to common dwel- ling-houses, did not receive a proportionate de- gree of improvement, if any at all ; for even in the city of London, towards the end of the twelfth century the houses of mechanics and common burgesses were built of wood, and co- vered with straw or reeds.

116. Towards the close of the reign of Henry VII. a new kind of low pointed arch was much in use. It was described from four centres, (see Plate VIII), was very round at the haunches, and the angle at the top was very obtuse. This sort of arch is to be found in all cardinal Wolsey's buildings ; also at West Sheen ; an ancient brick gate at Mile End, called King John's Gate ; and iu the great gate of the palace of Lambeth.

117. The later style of Gothic architecture, the progress of which we have just traced, has been more particularly subdivided into the Early English, the Decorated English, and the Perpen- dicular English.

118. The first-mentioned style, immediately superseding the Norman gothic, extended to the reign of Edward I. in 1307. Its peculiar cha-

racteristics are pointed arches, and narrow long windows without mullions; to these may he added a singular kind of embellishment, some- what resembling the teeth of a shark.

119. The second, or Decorated English, ob- tained until the conclusion of Edward the Third's reign in 1377, and probably a little later. This style is peculiarised by very large windows, having pointed arches divided by mullions : the tracery does not run perpendicularly, but in un- dulating lines which describe arches, circles, and other figures : the ornaments are numerous, and carved with great nicety.

120. The Perpendicular English seems to have been practised, in the way of additions to build- ings, even down to the middle of the seventeenth century, although the most recent complete edi- fice fairly belonging to it is of the age of Henry VIII. The essential features of this style are clearly expressed by its title, the mullions of the windows and the ernamental pannellings running in perpendicular lines, and thus forming a va- riety radically opposed to the manner last men- tioned. The carvings in these buildings are commonly executed with great delicacy and beauty ; but an injudicious profusion of orna- ments often interferes with the gracefulness and boldness of the design.

120. We will here make some mention of two singularly constructed towers which have hitherto received but little notice; namely, that -of the old church of St. Peter's, at Barton in -Lincolnshire, and that of Clapham church, in Bedfordshire. We have already taken occasion to observe, that the Saxon and early Norman styles are so blended that it is almost impossible to distinguish them; and indeed extremely doubtful whether any genuine specimens of the former still exist to exemplify or disprove the position. The towers now alluded to, however, certainly bear the appearance of being, at least in part, of real Saxon workmanship.

121. The first is short and thick, with ex- tremely thick walls, originally of three stages; the two lower of which are adorned with per- pendicular stripes of stone, projecting from the face of the wall, and breaking into arches near the top of each stage ; the lower set of arches se- micircular, and the perpendicular lines spring- ing from a stone set on the top of the arch. The second set are straight-lined arches, running up to a Hat string or tablet, on which is the third plain stage with but two small arches, as in the second stage. On the summit of these three stages is another, plainly belonging to the early Norman style, having in it a double Norman window

with shaft and capital in the centre. Now this stage being clearly Norman, from which the whole arrangement of the substructure so widely differs, we. arc led to infer that it was an mldition to the original building. At about !:”>0 yards’ distance stands the new church of St. Mary’s, a Norman edifice, with an early F.nglish tower and chancel, and a very early de- corated east window ; which style in the new building certainly throws us hack at all events to the Conquest for the date of the old one.

l‘2‘2. The other tower in question, namely that of C’lapham church, in Bedfordshire, is noticeable

chiefly for the extraordinary simplicity ana even rudeness of its construction. It consists of a square tower, destitute of tablet or buttress, of the height of three squares or thereabout, with a rude round arch door, and over it two heights of small round arched windows. Above this part, with a plain set-off inwards, is a Norman portion with a Norman window, separated into two divisions by a central shaft, plain, and of early character, which portion is surmounted by a battlement and cornice of later date.

123. There appears to have existed a disposi- tion in the architects who succeeded the Nor- mans to preserve the doors of their predecessors • and to this tendency do we owe the many noble although roughly-finished specimens of ability in that way now remaining. This door has a semi-circular arch, and the numerous bands of mould- ing, increasing the depth of the arch, produce an effect at once bold and rich. In those cases wherein shafts are employed, an impost mould- ing is generally introduced above them, before the spring of the arch mouldings. These are usually much ornamented ; and among the orna- ments we almost constantly find that of a zigzag or waving form, together with a large round moulding with heads on the outer edge partly projecting over. The exterior moulding, in many instances, descends no lower than the spring of the arch, in this way forming an ap- parent dripstone; the door itself is sometimes square, and the interval to the arch filled with carvings. Iffley-church, near Oxford, is probably the best example of the Norman door, as it con- tains three specimens, each differing from the other: the south door, indeed, is almost unique, from the flowers in its interior mouldings. The cathedrals of Durham, Rochester, Ely, Worces- ter, &c. possess likewise fine Norman doors. The Norman windows, which, except in buildings of considerable extent, are generally small, may be termed, as regards their ornaments, diminu- tive doors. The doors of the early English style, ‘if we except some small interior ones with flat tops, may be said to have uniformly the pointed arch.

124. The Norman towers were short and thick. The steeple was mostly a

massive tower, not often rising beyond a square in height, (if so much) above the roof of die building to which it belonged. The early English towers and steeples shot up to a far greater height, and were sur- mounted by the elegant and heaven-pointing spire, some of the most admirable specimens of which belong to this age. The spire of Salisbury cathedral, which ‘ dallies with the clouds,’ and fascinates the eye of the traveller while distant many miles, must altogether be included in the early English style; although many of its ornaments seem to refer its erection to the pe- riod at which that was superseded by the deco- rated. Wakefield steeple is also beautifully pro- portioned, and remarkable for its machicolations in the top of the tower.

125. The general character of early English building is magnificent : its richness arising from the number of parts rather than from its details. In the structures which contain very long win- dows, great effect is produced by (he loftiness of

the divisions ; in lesser buildings great simplicity of appearance is obtained. In the subsequent styles there are abundant evidences of inferior workmanship. In this, on the contrary, the ar- tincers seem to have acquired the utmost perfec- tion of skill.

126. The early English style has not been, in any great degree, either imitated or restored, although it is undoubtedly very applicable to country churches, and may be worked almost entirely plain. If the transition was gradual from the Norman style to the early English, that from the latter to the decorated was still more so ; and several examples of this transition on an ex- tensive scale remain. Westminster Abbey has been justly considered early English in almost all its parts ; but the cloisters present many in- dications of gradation. A very beautiful speci- men of accommodation between the two styles is exhibited in the lady chapel at Lincoln, which is obviously decorated, yet in such a taste as to blend most harmoniously with the antecedent manner by which it is surrounded.

127. Perhaps the clearest marks of the deco- rated style are to be sought for in the shape and ornament of the windows, which are extremely various, although all on one principle. An arch is separated by one or more mullions into se- veral lights, and these mullions run into tracery of different kinds, but not in perpendicular lines, through the head. In small churches it is not unusual to find windows of two or three lights : whilst in those of a larger description four or five lights for the aisles and clerestory

windows ; five or six for transepts and the ends of aisles; and seven, eight, or nine for the east and west windows, are found. The east window of Lincoln cathedral, and the west window of York, have each eight lights; whilst the west window of Exeter and the east window of Carlisle ca- thedrals are of nine ; almost, if not quite, the largest windows remaining. Two branches of tracery may be observed. In the first the circles, trefoils, quatrefoils, &c. are all worked with the same mouldings, by no means regularly joining each other, but often touching at parts only. This species of tracery may be denominated geo- metrical ; and of this description are the windows of the nave of York, the eastern choir of Lincoln, the greater part of the windows of Exeter, and a good deal of the tracery in the cloisters at Westminster-abbey. The second branch may with great propriety be designated flowing tra- cery. York-minster, Newark-church, the Min- ster, and St Mary's at Beverley, together with several southern churches, exhibit very beautiful examples. In the richer windows of this style, and in both branches, the chief moulding of the mullion has occasionally a capital and base, thus becoming a shaft.

128. As the term decorated is employed to particularise this style, and as that which suc- ceeded it has been denominated, par excellence, florid, which would seem to imply that it was still richer in embellishment, it may be as well to state that the ornaments of this department of English architecture, like those of Grecian pu- rity, may be omitted without prejudice to the main design of the edifice ; whilst those of the

perpendicular style consist more frequently of a minute division of parts of the building, of pan- nels, for instance, buttresses and such like. Thus, in some of the more splendid decorated structures, although a profusion of flowered carvings is displayed, yet no effect of overload- ing is perceptible ; while, on the other hand, some of the later perpendicular buildings, with much less flowered carvings, still appear crowded with ornament from the offensive subdivision into mi- nute parts, which interferes with, and obscures the harmony of, the general plan.

1 29. A great number of edifices in the per- pendicular style appear to have been erected in the reign of Henry VII., one of the most celebra- ted of which is the chapel which takes the name of that prince. The main source of ornament in this style is pannelling. In fact, the interior of most rich buildings presents a regular series of it. King's College, Cambridge, is all pannel, except the floor ; the doors and windows being nothing else than pierced pannels, included in the general design, and the roof itself a series of them of various shapes.

130. The number of buildings of the perpen- dicular style now in a state of the best preser- vation is uncommonly great. Amongst the spe- cimens of the

earliest date is the choir at York ; which, although in its general arrangements re- sembling the nave, is decidedly of perpendicular character, if we consider its ornaments, the win- dows, and the gallery underneath them, or the interior pannelling. Of a later date, are the three most tasteful specimens of the style, King's Col- lege ; Henry Vll.'s Chapel ; and St. George's, Windsor. The adornments of these are di§tri- buted with an unsparing hand ; and whilst the buildings partake of one general character, enough of diversity is exhibited. Great variety of com- position distinguishes St. George's. In the King's College chapel the roof and line of wall demand particular notice; and the details of Henry VII.'s, from their delicate richness, will ever excite the wannest admiration.

131. With respect to old buildings of a do- mestic nature, it is impossible to give any con- fident account, since none remain unaltered, if at all, of an early date. Hampton Court, in the county of Hereford, is probably one of the most ancient specimens. It is the family seat of lord Coningesby, and was built by king Henry IV. when Duke of Hereford, about 400 years ago. It was restored and repaired, about 100 years since, by the then lord Coningesby, at consider- able expense ; the house, at that time, contained seven noble state apartments, magnificently fur- nished, together with numerous convenient pri- vate dwelling rooms : — there were fine gardens, a large park, and noble demesnes ; a well-stocked decoy, and every other desideratum.

132. With the decline of the perpendicular style Gothic architecture generally declined, and was soon after supplanted by a mixed style, if we may venture to call it so ; wherein the Gre- cian and Gothic, however discordant and irre- concileable, were jumbled together. Concerning this mode of building Mr. Warton remarks, that ' although the Roman or Grecian architec- ture did not begin to prevail in England till tht

time of Inigo Jones, yet our communication with the Italians, and our imitation of their manners, produced some specimens of that style much earlier. Perhaps the earliest was Somerset house in the Strand, built about the year 1545, by the duke of Somerset, uncle to Edward VI.' In 1613 the magnificent portico of the schools at Oxford was erected, in which, along with the old Gothic style, the architect has affectedly dis- played his skill in the Grecian and Roman ar- chitecture ; and has introduced all the five or- ders together.

133. One of the most memorable events in the general history of modern architecture, is the establishment, about the year 1400, of the aca- demy at Florence, which comprised many per- sons of first-rate talent, who, by examining the magnificent ruins of ancient Roman art, once more upraised architecture from the long abase- ment into which she had been plunged.

134. Among the earliest works of this academy was the celebrated church of Santa Maria da Fiori, at Florence, an edifice originally designed by Arnolfo, assisted by Laurentio Ghiberto, by profession a goldsmith and sculptor. He leaving it unfinished, it was taken in hand by Filippo Brunelleschi, born in 1377, who may be re- garded as the founder of the modern classical style. Having prepared his mind by a careful study of the writings of ancient authors, and of the ruins of Roman edifices, he discovered the proportions of the orders, and, impressed by a deep sense of the simple gracefulness of the an- cients, struck out a system upon lasting prin- ciples.

135. By this architect was erected the cupola of the church before mentioned, an undertaking beyond the abilities of any other individual then living. This cupola, rising from an octangular plan, is of great elevation, inferior in size only to that of St. Peter's, at Rome. In consequence of the performances of this accomplished archi- tect, a study was commenced of the writings of Vitruvius, and taste again began to diffuse itself amongst the long benighted Italians.

136. Leo Baptista Alberti, and Bramante, both followed in the footsteps of Brunelleschi, and contributed to the advancement of restored art. The former is rendered eminent by his excellent treatise on architecture, which procured for him the title of the modern Vitruvius. To the latter Pope Julius II. committed the execution of his superb project for the rebuilding of St. Peter's ; and it was he who conceived the idea of sur- mounting that gigantic structure with its lofty pyramid. Raffaelle, San Gallo, and Michael Angelo, were successively engaged in this stu- pendous work ; and to the

latter, who excelled equally as painter, sculptor, architect, and poet, its completion is principally attributable.

137. In the sixteenth century architecture was practised with uncommon success by the great masters, Vignola, Serlio, Palladio and Scamozzi ; and the list may be almost said to close with Bernini, who flourished in the seventeenth cen- tury.

138. In the neighbouring country of France, the first architect who abandoned the Gothic for the revned antique style, was Pierre Lescot,who

flourished in the commencement of the sixteenth century. About the same age lived Philibert de Lorme, who had studied the antiquities of Rome, and wrote on the art, as well as practised it. But perhaps the greatest architectural genius that France has produced, was Fraiˆois Man- sart, born in 1598. One of this artist's chef- d'oeuvres is the chateau de Maisons, near Saint Germains. He would have been a still more able artist, had he possessed consistency a.id stability, as well as genius ; but the want of this virtue not only rendered his works inharmonious, but kept him from being employed on several important undertakings Jules Hardouin Man- sart, nephew of the preceding, was Louis XIV.'s principal architect, and executed the chief works of that splendid reign ; among his best perform- ances are the palace of Versailles, St. Cyr, and more particularly the place and church of the invalidsˆ

139. The facade of the Louvre, one of the most beautiful specimens of modern architecture, was the work of Claude Perrault. Blondel, born in 1617, is celebrated for his knowledge of the sciences, and of the theory of architecture. His most famous building is the port St. Denis. If to these we add the eminent name of Soufflot, architect of the church of St. Genevieve, which has been denominated the pantheon of Paris, we shall have mentioned the most conspicuous among the modern followers of the art in France.

140. The Roman, or rather Italian, style of architecture, as adapted to domestic purposes, was first introduced amongst us in a systematic manner by Inigo Jones, whose masterpiece of Whitehall chapel, although faulty in detail, as well as his magnificent works at Greenwich and Covent Garden, suffice to establish his reputatioa in the very first class of English artists. Sir Chris- topher Wren, an eminent mathematician and phi- losopher, whose enlightened mind had devoted its treasures to the pursuit of architecture, fol- lowed ; and to him we stand indebted for most of the finest public buildings which embellish our metropolis. This great man had, on receiving from Charles II. the appointment of royal archi- tect, entered on a tour through France to Italy and Greece ; but had not proceeded beyond the

first-mentioned country, when he was recalled by intelligence of the fire which desolated Lon- don.

141. Wren, it should be remembered, was not regularly educated as an architect. Perhaps, on. the whole, his taste did not exceed Jones's; but in the science of construction he stands unrival- led. St. Paul's cathedral, the architectural glory of our metropolis, was the undivided product of this great man's mind. Yielding to no other modern temple, except St. Peter's, in magnitude, it surpasses that sublime building in unity of plan and consequent completeness of effect, as well as in masterly execution. St. Stephen's, Walbrook, is ingenious and novel, though its purity of taste may be questioned ; but no hesitation need be felt in speaking of the spire of Bow church as the most perfect thing of the kind, taken alto- gether, known either in this country or on the continent.

142. Vanbrugh was contemporary with trie

latter portion of Wren's career; and unques- tionably produced several works indicative of great power and grasp of imagination. His mind was evidently attracted by the genius of gloomy grandeur ; and was utterly unable even to appre- hend the graces of lightness and elegance. Thus his structures impress the beholder with a sen- sation of ponderosity and stateliness by no means consistent with the idea of comfort or ease. His houses seem calculated to be the abode only of ' privileged dullness;' and even the magnificence of Blenheim fails to tempt the gazer to enter within its walls. This character of style is strange enough, too, when we reflect on the social nature of the architect, on his lively come- dies, and accomplished table-talk. The epi- grammatic epitaph on him, by the caustic Swift, although well-known, is so very happy, that, as it possesses the additional merit of brevity, we will subjoin it :

Lie heavy on him, earth ! for he Laid many a heavy load on thee.

143. In proceeding to the consideration of the actual existing state of architecture amongst us, we must not omit to notice, by the way, the dis- tinguished names of Lord Burlington, of Kent, of Gibbs, and of Hawksmoor (the pupil of Wren). From the period at which they flourish- ed, to the nomination of Sir William Chambers, as royal architect, in the early part of the late reign, nothing presents itself worthy of remark. Chambers was an able man, originally a naval officer; and although not qualified to improve either the practice or theory of the art to which he afterwards

dedicated himself, at least had sufficient judgment to ‘ eschew the evil, and choose the good,’ as abundantly appears from a perusal of his work on Civil Architecture, with the exception of that part wherein he underva- lues the pure Grecian style, which he does not appear to have understood. We cannot forget, however, that to Sir William is owing the intro- duction of the barbarities of Chinese taste, which was most likely regarded by him as a sort of spurious bantling for which he had contracted an affection in travelling among the savages of that unpicturesque land.

144. We have now arrived towards the con- clusion of our rapid sketch, and have brought the consideration of the subject down to a period immediately connected with our own. The scientific and tasteful Wyatt, having enriched his natural genius by contemplation of the spirit- stirring relics of antiquity, returned to engraft upon the talent of his fellow-countrymen a purity of taste, and a relish for the best classical models, never before spread amongst them. Nor did he stop here, but extended his regards to the archi- tecture proper to the land ; and evidences of his masterly hand are to be found not only in the houses, villas, and mansions, w’»h which he has adorned the face of the country, but in finely- conceived restorations of such venerable piles as Salisbury cathedral and Windsor castle.

145. Our late, and present monarch, have been (and we feel proud and happy in saying that the latter still is), munificent patrons of the a ts. From the foundation of the Royal Academy,

and other works of princely encouragement, has sprung up a set of men well calculated to do honor to the national taste, and to elevate the character of British art. Holland, Dance, Mylne, Soane, Harrison of Chester, Wilkins, Smirke, Gwilt, Savage, Nash, &c. are names which warrant us in feeling a sensation of great pleasure at the degree of fruition, and the still greater degree of promise, presented by the exist- ing condition of British architecture.

146. The recent improvements in the metro- polis have been principally entrusted to the ar- chitect last mentioned ; and, whatever difference of opinion may exist with respect to particular portions, it must be admitted that their general effect is noble and striking. The sweep of that line of buildings commonly known by the appel- lation of « the new street/ and comprising Re- gent-street, the Quadrant, Waterloo-place, &c. is extremely bold and magnificent ; whilst a genuine artistical display is exhibited by the variety of elevations on either hand, which pre- vent the vapid appearance of mere isolated houses, and give to each different range the harmonious effect of an extensive and ornamental facade.

147. Within the last ten years, indeed, a great deal has been done towards the architectural em- bellishment and advantage of the capital. Whole neighbourhoods of narrow streets and smoky houses, the haunts of depraved and lawless cha- racters, have been cleared away, and their places supplied by spacious and handsome rows of build- ings. Nor must we omit to allude to the princely structures rising in such quick succession to grace the enclosure and boundary of the Mary-le-bone Park, and which, being erected by the govern- ment, are unexcelled both in material and work- manship. This vast space is, in fact, to be belted with groups of these mansions, the eleva- tion of each group to have the effect of one palace ; and those which are finished give a satisfactory earnest of the splendid spirit in which the whole is to be accomplished. We need not hesitate to say, that there will be nothing equal to it in Europe. The separate villas in the in- terior of the park are planted out from the view of each other, so that the inhabitant of each seems in his prospect to be lord of the surround- ing picturesque scenery.

148. Until these undertakings, our domestic architecture appeared selfish and exclusive. Windows undecorated externally, and calculated solely to afford air and light to the interior ; and doors placed in square brick holes, whose only service seemed to be to shut out the stranger ; — such were the most observable features of modern English domestic buildings. It is time that this reproach should be wholly removed ; and the liberal administration of the present government, seconded by the ability of their chief architect, has prepared the way for its being so.

149. Among recent English works of a pub- lic nature, the portico of Covent-garden theatre, imitated in form from the tetrastyle portico of the Agora at Athens, but copied in detail from the temple of Minerva-Parthenon, is probably the most chaste in style, though that style is too severe and heavy for the nature of tie fabric to

which it is applifxl. The Ionic portico to the house of the Board of Control is one of the purest and best applied in London, and is taken from the Ilyssus. Another exquisite specimen of the same order is in a chapel near Grosvenor Place, designed by Smirke.

~\50. On the whole we are delighted to see that oiir noble city, already unrivalled in popula- tion, commerce, and wealth, bids fair to become, at no great distance of time, equally conspi- cuous for its glories of architectural display ; and that the seeds of a fine and correct taste are

*rapidly spreading throughout the whole nation, * bringing forth fruit after their kind.'*

PART II.

OF THE FIVE ORDERS OF ARCHI- TECTURE.

SECT. I. — OF THE SEVERAL PARTS AND MEM- BERS OF AN ENTIRE ORDER.

151. The principal parts of an entire order are three; the pedestal, shaft, and entablature. Each of these are again subdivided into three smaller parts : the pedestal contains the plinth, the dado, and the cornice. The column in- cludes the base, the shaft, and the capital. The entablature consists of an architrave, a frieze, and a cornice. These names require illustration.

152. l.The plinth takes its appellation from Tr\tv9o(;, a brick or rial square stone, on which columns in the most early state of architecture are supposed to have stood. 2. The dado, or dye, is so called because it is of a cubic form. ,'J. The cornice is derived from coronis, a top or summit ; because the cornice is the extreme end or finishing of the pedestal. 4. The base of the column is from /3aeric, a foundation or footing for the column. ,5. The shaff, that long and straight part of a column comprehended between the base and capital, is so named from cr/caTrra), to dig, in the manner of a well, round and deep, whose inside resembles the shape of a pillar (5. The capital, from KtQaXt], or caput, the head, which the capital is to a column 7. The architrave, from apˆoc, chief or principal, and trabs, abeam, because the architrave is the chief support to the whole entablature. 8. '£he frieze is so called from Qiflpov, a border or fringe, which some of the an- cients used to call £o0op< >£, because their friezes were usually enriched with the figures of animals. 0. The cnj-nice of the entablature, or the crowning part of the entire border, is explained above.

153. These nine principal parts of a complete order, the dado and shaft excepted,are composed of small members, which constitute all that simple and pleasing variety of mouldings which adorned ihe works of the ancients. The names of these mouldings allude tj their forms, and their forms are adapted to the purposes for which they were intended.

151. The names of the members, with their origin and use, are as follows :

1. The /il/tt, from the French word fil, thread.

•J. Thr cit:initui,H, or c\ ina recta, from tcvfta-

rtov, a wave ; because this member resembles the swelling and concavity of

a wave.

3. The cyma reversa, the preceding member inverted.

4. The corona, or crown, because it is the principal member of the cornice, and serves as a shelter to the smaller mouldings of the entabla- ture.

5. The ovolo, from ovum, an egg ; because this member by the ancients was frequently carted in the form of an egg.

6. The cavettb, from cavus, hollow.

7. The capital, or upper fillet of the tri-

8. The triglyph, from rp«yXtˆ>oc, three engrav- ings, compounded of rpt, three ; and yXvˆw, to carve or engrave ; in conformity to winch the triglyph has two entire channels, and two halt ones, with three spaces between.

9. The metope, from ptTOTrn, the space be- tween one aperture or hole and another ; the tri- glyphs being supposed to be joists that fill the apertures : hence the space between the tri- glyphs, which forms an exact square, is termed the metope.

10. The fneze is explained above, sect. 152.

11. The band is the same as the fillet.

12. The gutt

13. The architrave. See the explanation, sect.

152.

14. The facia, or face; of these there are rwo in the architrave

15. The abacus, from a/3a$,- a shelf or table ; or, as some suppose, d tile, on which the ancient Greek mathematicians strewed dust, to draw their geometrical schemes on.

16. The ovolo of the capital, which in this si- tuation must be considered as the basket round which the acanthus grew.

17. The annulets; so called because these small fillets encompass the capital, like rings joined to each other. The moderns, in place of these, generally have a small cavetto.

18. The colorino, the collar, or neck of the capital.

19. The astragal, from a-rpayaXoc, a bone of the heel, or the curvature of the heel, which this member resembles. The hollow which follows is termed cnro^vyij,, the escape, because this part of the column appears to fly off.

20 and 21. The upper and lower torus, from ropoc, a cable, which this moulding somewhat resembles.

22. The scotia, from OKOTM, darkness ; be- cause of the strong shadow which its concavity produces, and which is increased by the project- ing torus above.

155. In some of the Doric entablatures are mutules, from mutuli, modillions, which are placed perpendicularly over each triglyph, and are of the same width ; and whose projection in the corona is the same, forming a perfect square. In others are dentiles, as in the theatre of Mar- cellus at Rome. These are so named from den- tes, teeth, which they resemble ; and the flat members on which these dentiles are placed is termed denticulus. The capitals of the Ionic, Corinthian, and Composite, (See plate II.) have

each of them volutes, so called from volutum, to roll round, as on a staff. Some call the volutes the horns of the capital, because they resemble the twisting of rams' horns.

156. Those parts of the different orders pro- perly termed mouldings, are only eight in num- ber. (See plates IV. & IX.) viz. The scotia. The fillet or cincture to bind the parts. The as- tragal also and torus, resembling ropes or cables, are strong builders and fortifiers of the parts vrith which they are connected. The ovolo is strong at its extremities, and is therefore fit to support projecting parts. The cyma recta, in- versa, and cavetto, are covering mouldings, which serve to shelter the other smaller members. There are various methods of describing the con- tours of these ; but the simplest, and perhaps the best, is to form them of quadrants of circles.

157. An assemblage of what are called essen- tial parts and mouldings is termed a projile. The most perfect profiles are such as are com- posed of few mouldings varied in form and size, and so disposed that the straight and curved ones succeed each other alternately. When or- naments are employed in mouldings some of them should be left plain, in order to give a pro- per repose ; for when all a~e ornamented the figure of the profile is lost

SECT. II. OF THE DIMINUTION OF COLUMNS.

158. The ancients, in effecting the diminution of the shaft of a column, adopted a variety of methods ; beginning sometimes from the foot of the shaft, and at others from one quarter, or one third of its height; the lower part being per fectly cylindrical. The former of these was most in use amongst the ancients ; and, being the most natural and graceful, ought to have the preference, though the latter has been more uni- versally practised by modern artists.

159. M. Auzoult is of opinion, hat the first architects probably made their columns in straight lines, in imitation of trees ; so that their shaft was a frustum of a cone ; but, finding this form abrupt and disagreeable, they made use of some curve, which, springing from the extremities of the superior and inferior diameters of the co lumn, swelled beyond the sides of the cone, and by that means gave a more pleasing figure to the contour.

160. Vitruvius mentions this practice, but in so obscure and cursory a manner that his mean- ing has not been understood ; and several of the modern architects, intending to conform them- selves to his doctrine, have made the diameters of their columns greater in the middle than at the foot of the shaft.

161. Leon Baptista Alberti, and others of the Florentine and Roman architects, have carried this to a very great excess ; for which they have oeen justly blamed, as it is neither natural, rea- sonable, nor beautiful. M. Auzoult observes that a column, supposing its shaft to be the frustum of a cone, may have an additional thick- ness in the middle, without being swelled there beyond the bulk of its interior parts ; and sup- poses the addition mentioned by Vitruvius to signify nothing but the increase towards the mid- dle of the column occasioned by changing the

straight line, which at first was in use, for a curve.

162. This supposition is extremely just, and founded on what is observed in the works of an- tiquity ; where there is no instance of columns thicker in the middle than at the bottom, though all have the swelling hinted at by Vitruvius, each of them being terminated by curves ; some granite columns excepted, which are bounded by straight lines; a proof, perhaps, of their anti- quity, or of their having been wrought in the quarries of Egypt.

163. M. Blondel, in his work entitled Reso- lution des Quatre Principaux Problemes d'Archi- tecture, teaches various manners of diminishing columns ; the best and simplest of which is perhaps by the instrument which Nicomedes invented to describe the first conchoid ; for this, being applied at the bottom of the shaft, performs at one sweep both the swelling and the diminution ; giving such a graceful form to the column, that it is universally

allowed to be the most perfect practice hitherto discovered. The columns in the Pantheon, accounted the most beautiful among the antiques, are made in this manner; as appears by the exact measures ot one of them to be found in Desgodetz's Anti- quities of Roi' e.

164. To give an accurate idea of the opera tion, it will be necessary first to describe Vig nola's method of diminution, on which it is grounded. Having determined the height of the shaft, draw a line indefinitely from D (PI. IX.) through C, perpendicular to the axis O P of the column; take then I D, half the inferior or largest diameter of the column, and place one foot of the compasses exactly on the extremity of the superior or smallest diameter, as at R, and depress the other, till it come into the axis or centre line of the shaft, as at S under O; through these two points draw a line indefinitely and produced till it cut the line D C, as at A ; from A, the centre, draw any number of lines through the axis O P, as S, r, S, r, &c. ; and on each of these place half the larger diameter of the shaft set off from the axis or perpendicular line O P, through which points, thus found, if a curve line be drawn, it will describe the swelling and proper diminution of the column.

165. Although this method be sufficiently ac- curate for practice, especially if a considerable number of points be found, yet, strictly speaking, it is defective ; as the curve must either be drawn by hand, or by applying a flexible rule to all the points; both of which are liable to variations. Blondel, therefore, to obviate this objection, after having proved the curve passing from O to R through the points r, r, to be of the same nature with the first conchoid of the an- cients, employed the instrument of Nicomedes to describe it ; the construction of which is as follows : This instrument is made of wooden lathes in the triangular form described by PO, PC, and ABR, (PI. IX.) the base and perpen- dicular of which are joined together at P, and has a stay : the upright O P has a groove cut in it. (see the fig.) To the lath A B R at S is fixed a button, (see the fig.) which passes along the groove from P to O ; in the moving lath A B li

is a common groove, cut through from A to B ; and at A, in the lath D C, is fixed a button at the centre A, as described in the first method. The length of the groove A B must exceed the difference of the length AS to A P ; conse- quently, as the bottom S works in the groove O P, the groove A B permits it to move forward to P, by which the former swelling and diminu- tion will be most correctly performed when a pencil is fixed at R, at a distance from the but- ton S equal to half the largest diameter of the column.

165. It must be owned, that if the centre were moved considerably towards P, this method would not describe a perfect curve or an agree- able diminution ; for, in this case, the curve at the top of the shaft will proportionally approach to a straight line, and at last almost become an inverted curve. This, however, is no reasonable objection to the use of the instrument when ap- plied to the diminution of columns ; for the greatest quantity of diminution that can in any case be allowed, will not have the least per- ceptible effect on the curve ; and therefore we may venture to affirm, that no other method yet discovered, nor any other instrument that can be invented by man, is likely to exceed it. It is farther to be observed, that Nicomedes's instru- ment may be made to answer shafts of any di- mensions, by making the respective grooves capable of extension by the use of sliders and movable centres, which any architect is capable of contriving. In the remains of antiquity the quantity of diminution is various ; but seldom less than one eighth of the inferior diameter of the column, nor more than one sixth. The last of these is esteemed the most perfect by Vitru- vius ; and is generally adopted by modern ar- chitects.

SECT. III. — OF THE ORIGIN, CHARACTER, USE, AND PROPORTIONS OF THE DORIC ORDER.

166. The Doric order, as has been already noticed, obtained its name from the Dorians, a nation of ancrent Achaia, from whom it un- questionably received those parts and propor- tions, by means of which it has been distin- guished from subsequent orders. The character of the Doric is robust and masculine, and it has hence been termed the Herculean order. Ac- cordingly the ancients used it almost exclusively in their temples dedicated to Juno, Minerva, Hercules, or Mars.

167. From its peculiar character, this order is well calculated for town- halls, gates of cities, and other public buildings destined for purposes of utility rather than ornament. Among the ancients it was almost uniformly executed without a base. Vitruvius is of opinion that the base was first, introduced in the Ionic order, and designed to imitate the sandals worn on women's feet. Scamozzi, on the other hand, vindicates the use of abase to the Doric column; and he has with him the opinion of most modern practisers of the art.

168. l)e Chambrai lias observed that the Doric column is constructed on the model of a strong man, who is always represented bare- footed. In conformity with this notion, he

generally remarks, that the base to a column stands in the place of a shoe to a man. Le Clerc admits that the most ancient Dorics were without bases; but I must own (says he) I cannot consi-'er a column without a base, in

comparing it to a man, but I am at the same time struck with the idea of a person without feet rather than shoes, for which reason I am inclinable to believe, either that the architects of antiquity had not yet thought of employing bases to their columns, or that they omitted them in order to have the pavement clear ; the angles and projection of bases being stumbling blocks to passengers, and so much the more troublesome, as the architects of those times frequently placed their columns very near each other ; so that had they been made with bases, the passages between them would have been ex- tremely narrow and inconvenient ; and it was doubtless for the same reason that Vitruvius made the plinths of his Tuscan columns round ; that order, according to his construction, being particularly adapted to servile and commercial purposes, where convenience is preferable to beauty. However this be, persons of good taste will grant, that a base not only gives a graceful turn to the column, but is likewise of real use, serving to keep it firm on its plan; and that if columns without bases are now set aside, it is a mark of the wisdom of our architects, rather than an indication of their being governed by prejudice, as some adorers of antiquity would insinuate.'

169. Agreeably to these and such like argu- ments, enforced by the usage of Palladio and other modern architects of distinction, an attic base has been introduced to this order, but in our opinion the custom is a very needless one, and in bad taste. Why vary from the purity of the order, as practised by the people who best understood its character and form, and whose eye for proportion and effect has never been equalled ? In the relics discovered at Athens by our illustrious countryman Stuart, we find the Doric column, .always without a base, applied to edifices of the most unquestioned and consum- mate beauty. Are we mad enough to imagine that the Greeks merely overlooked this pecu- liarity ? Can it be for a moment supposed that they who had taste sufficient to outvie all other people on the face of the earth, were unac- countably ignorant and barbarous in this indi- vidual instance? Besides, the character of the order, from its strength and severity, seems ac- tually opposed to the introduction of the base, an addition harmonising well enough with the more delicate and exuberant beauty of the other two Grecian orders.

170. The shaft of the ancient examples was decorated with a number of channellings or flutings peculiar to itself. In the other orders an interval or fillet is introduced between each fluting, but here it is different. Hence has sprung the censure of Scamozzi, that this method of fluting is imperfect by reason of the pro- jecting angles separating each flute, which ren- ders the shaft tender and more liable to decay. The strength of this objection, however, will be greatly abated, when it is remembered that these

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flutings are shallow, having their centre from the summit of an equilateral triangle, whose sides are equal to the width of the flute; consequently it is but little more than one-fourth of the depth of the other kinds of fluting, which are perfect semicircles. The Grecian temples, let us also bear in mind, were constructed either of marble or very hard stone, not subject to decay, and kept free from external violence with re- ligious, nay, even superstitious caution ; and without some degree of care, the angles even of the Ionic or Corinthian fluting will fall an easy prey to the injuries of outward violence.

*171. The triglyph and mutule are other mem- oers essentially characteristic of the Doric order. The latter is considered as a memorial or imita- tion of the original hut, (see plate III, 2d. and 3d. examples, the beams of which are observed to pro- ject outwardly beneath the roof. The triglyph is supposed by some to be emblematical of the use of the firsttemple built according to this order, and dedicated to Apollo, to whose harp this ornament bears a kind of resemblance. The metope, or space between the triglyphs, has been enriched in many different ways. The ox's scull was employed for this purpose by Palladio, with a lighted torch suspended from each horn, and placed alternately with paterae, expressive *f the sacrificial offerings made to the heathen gods. There is a variety of other ornaments,*

however, which may be used with good effect either in public or private edifices. In the latter we may introduce with propriety crests and badges of dignity, heads, vases or paterae, encircled with garlands of oak or laurel : in military structures, heads of Medusa, of Mars, or of the furies, are in good place. When this order is employed in churches and other religious buildings, the metope should be embellished with cherubs, doves, cha- lices, garlands of palm and olive, and other de- vices, emblematical of moral qualities ; but the most elevated parts of all these should project Httle beyond the triglyph. This regulation was scrupulously adhered to by the ancients, who rarely gave their ornaments further projection than that of the borders in which they were en- closed. In conformity with this idea, the soffits of the corona (see plate IX.) have their orna- ments within the thickness of the borders which receive them.

172. The following are the proportions of the principal parts of this order, see the specimen, plate III. The whole height of the entire order is divided into five equal parts, one of which is the height of the pedestal ; and the remaining four, which are assigned to the column and entablature, are likewise to be divided into five. One of these belongs to the entablature, and the remaining four being divided into eight equal parts, one of them will be the inferior diameter of the column. Or we may express it thus :

173. The whole height of the order, including its pedestal, is twelve modules and a half, reckon- ing the module a whole diameter. The pedestal is two and a half; the base, shaft, and capital, eight ; and the whole entablature two modules. Dividing the large diameter into sixty equal parts, called minutes; thirty are given to the base, thirty

to the capital, thirty to the architrave, forty-five to the metope, and forty-five to the height of the cornice, including the upper fillet or capital of the triglyph. In this order, when the mutules are introduced in the entablature, as in the ex- ample referred to, fifty-seven minutes are as- signed for the projection of the cornice. The pro- jection of the mutules is equal to their width, being thirty minutes: the width of the triglyphs is exactly the same, and their distance from each other equal to the height of the metope, which by this division forms a perfect square. The sides of the channels of the triglyphs are at right angles with each other. The manner of dividing and drawing them, together with the conic drops, may be learned from plate IX. The soffit of the mutule, and that of the corona, are frequently ornamented ; the former with conical drops, si- milar to those under the triglyphs, and the latter with roses in square lozenge compartments, (see plate IX.) The proportions of the smaller parts, and of the several mouldings which com- pose the whole, must in this, and every other order, be learned by reference to plates I. II. III.

SECT. IV.— THE IONIC ORDER.

174. The Ionic Order is said to have been first used in the temple of Diana at Ephesus. This column is more slender and graceful than the Doric. Its ornaments are in a style of compo- sition partaking at once of the plainness of the latter and the richness of the Corinthian. Its general effect is that of simple elegance.

175. The Ionic Order was employed by the ancients in the temples dedicated by them to Diana, Juno, Fortune, Concord, and deities of a similar nature. Le Clerc has ingeniously ob- served, that its style is particularly calculated for buildings dedicated to repose and tranquillity. The best examples of this order are to be found in the temples of Minerva Polias at Pryene; Ilyssus, at Athens; and among the Romans, in that of Fortuna Virilis, and in the theatre of Marcellus. The form of the Ionic profile seems to have been determined with greater precision than that of any other order.

176. The proportions of the principal parts of the Ionic column are as follow : the height of the entire order is divided into five equal parts. One of these parts is assigned to the height of the pedestal ; and the remaining four are divided into five, for the column and entabla- ture. One of these is appropriated to the entabla- ture, and the remaining four are for the column, including its capital and base. These four being divided into equal parts, one is assigned for the inferior diameter. The cornice is fifty-four mi- nutes in height, and its projection the same. The drip in the under side of the corona is chan- nelled out one minute deep, and two minutes from the front ; and before the cyma reversa, one minute.

177. The shaft of the column is sometimes fluted, and sometimes plain. Twenty, or twenty- four are the number of flutes allotted, not only to this, but to every other order. In general, however, twenty-four are preferable. The plan

of the flutes may be rather more than a semi- circle, as they will then appear more distinct. The fillets, or intervals between them, must not be broader than one-third of the flutes, nor less than one-fourth ; and it should further be ob- served, that in the capital of rich compositions, over each flute is placed an ove or egg. For the other particulars recourse must be had to plate I. In exterior works, when the building is large, the entablature may be enlarged to one- fourth of the whole column, without

its pedestal, as was sometimes practised by the ancients. Palladio, however, makes no distinction of this nature; but allows only one-fifth part of the height of the column in all cases.

178. The volute is a principal member of the Ionic column, and presents a very different ap- pearance in the Grecian and Roman specimens. In the latter, the small size of the volutes, coming down scarcely lower than the sculptured echinus (which is as high as the first spiral of the volute), occasions the omission of that beautiful hem which hangs so gracefully over the Greek original. The Grecian volute presents a double fillet, winding round to its eye, which, by the partings or spaces between, creates a various play of light and shade, and gives to the entire convolution additional beauty.

179. A singular example of this order, among the Romans, and in illustration of the heteroge- neous and defective taste which too frequently obtained in their works, is met with in the temple of Concord ; the cornice of which has mutules or inodillions, like the Doric ; dentiles like the Ionic; and three faciae to the frieze, like the Co- rinthian— thus stealing from all its neighbours The capital has angular volutes, and an angular abacus, like the Corinthian, with a necking and row of leaves which we should find it difficult to refer to any order whatever. Both Grecian mid Roman examples are square on the front, but present entirely a different aspect when viewed on their sides. (See the plan in plate I.). However greatly the eye of a pure taste may, in our opinion, prefer the Greek manner, as regards this beautiful order, it is but just to say, that the majority of modern architects seem to adopt a contrary notion, and to draw their models from the relics of Roman art.

1 80. The manner of drawing the volutes, accord- :'ng to Goldman's method, is as follows : (see plate IX.) Draw the perpendicular F A, termed the cathetus, and make its length equal to fifteen minutes. On the centre describe a circle, whose diameter is three minutes and a-half. Draw next a geometrical square, having its sides equal to the radius of the circle, as 1, 2, 3, 4. From the angles 2, 3, draw diagonals to the centre at (‘. Divide die side of the square 1, 4, into six equal parts, at .ri, 0, 12, 8; and from these points draw parallel lines to the diagonals, as shown in the eye of the volute ; whence will be obtained twelve centres, by which every arch composing the volute may be accurately drawn, eaeli of them coinciding with the other. Thus, on the centre 1, tix one foot of the compass, and extend the other to I1′ ; and with this opening describe the arch F G. On the centre 2, with the other foot extended to G, describe the arch

G II. On the centre 3, extending it to II, de- scribe the arch H I ; and, on the fourth centre, describe the arch I K, which completes one re- volution.

Proceed then in the same way to the centres 5, 6, 7,8, for the second revolution; and to 9, 10, 11, 12, for the third revolution. Thus it appears that the whole convolution consists of twelve quadrants of circles, of so many different diameters.

181. To graduate the fillet, construct a tri- angle at O, of which the side F A is equal to that part of the cathetus contained from A to F ; and the side V F equal to half the side of the square in the eye of the volute a, C, 1 . Draw then the line S T, at a distance from V F, equal to the breadth of the fillet at F S, which may be two minutes, or one and seven-eighths. Take the space S T, and place it each way from the centre of the volute, as from C to 3. Divide S T into three equal parts, as at 1, 2, 3, in the eye of the volute, and from these points draw parallel lines to the diagonals, which will find twelve new centres ; and proceeding from one to the other, as was done in drawing the exterior contour, the regular diminution of the fillet may be accurately performed.

SECT. V. — THE CORINTHIAN ORDER.

182. This order is evidently derivable from the architecture of Egypt, adapted, refined, and nationalized. Cecrops, the founder of Athens, was an Egyptian ; and Daedalus, the earliest Athenian artist, visited the shores of the Nile to study the principles of the fine arts. Added to these facts, it is likewise well known that the Greeks borrowed their laws, manners, and cus- toms, from the Egyptians, and purified them in the alembics of their own brighter genius.

183. The Egyptian origin of the Corinthian capital can scarcely be denied : their elements are incontestably the same ; namely, a vase sur- rounded by flowers and covered with an abacus. (See Plate III.) The story handed down by Vi- truvius, and related at sect. 65, was most proba- bly the invention of a Grecian poet. M. Quatre- mere de Quincy, indeed, imagines that the Ionic also was taken from the Egyptians, and is merely a beautiful adaptation of their capitals of the head of Isis. The ears of the Egyptian capital he meta- morphoses into the Grecian volute ; the braids of hair on the forehead into the helixes or threads of the capital ; the throat into the colarino, or necking, and so on. Following up this hypo- thesis, the Doric may also be said to have been drawn from the rude types or prefigurations of the Egyptians.

184. The Corinthian did not appear until long after the other two orders ; and was employed in Corinth, its parent city, and other ancient states, in works requiring magnificence and delicacy, such as palaces, public squares, theatres, ban- queting rooms, &c. The temples dedicated to female deities, and in some instances those of Jupiter, Mercury, and Mare, were also built

of this order. The Roman examples of the Corin- thian order do not differ from the Grecian in any thing like a corresponding degree with the others : indeed, the most perfect examples may probably be found among the ruins of the eternal city,

We doubt, for instance, whether any other specimen can rival, for tasteful richness and ex- quisite proportions, the three columns in the Campo Vaccino at Rome, supposed to be the re- mains of the temple of Jupiter Stator.

185. The ancients were in the practice of in- troducing into the frieze representations of various figures. (See plate 11). A full display of these may be found in Stuart's Antiquities of Athens. When the entablature is thus enriched, the shafts must be invariably fluted ; and the flutings may be filled with cablings, one third from the bottom of the whole height of the shaft, as in the in- terior of the Pantheon. The base of the column may be either Attic or Corinthian. The olive- leaf is frequently substituted, in the Roman ex- amples, for the acanthus, which is more peculiarly applied to the Composite order.

186. The following are the general proportions of this order : the whole height of the entire order is divided into five equal parts, and one is given for the height of the pedestal. The re- maining four are divided into five equal parts; one is assigned for the entablature, and the re- maining four are assigned to the height of the column, including its base and capital ; which are again divided into ten equal parts, one of which is for the inferior diameter. The base is thirty minutes, and the capital seventy in height. The cornice is sixty minutes in height, and fifty-eight in projection.

187. The soffit of the corona is worked in square compartments, as in the Composite ; but the soffit of the modillion (see plate 5) is orna- mented with an olive or acanthus leaf, the same as in the capital. The breadth of the mo- dillion (see plate V.) is ten minutes and a half; and the space between each modillion twice their width. The abacus of the capital is sometimes plain, and sometimes fluted. In some capitals the volutes rise higher than the under side of the abacus, but the capital looks best when they are bounded by its under surface.

188. To determine the plan of a capital ac- cording to the ancients, draw a geometrical square whose sides are one diameter and a half. To this square draw diagonals; and on these place from the centre, or their intersection, a

space equal to one diameter, through which point lines being drawn at right angles with the diagonals will determine both the projection and thickness of the volutes. For the curvature of the abacus, extend the compasses from one angle to the other of the side of the abacus ; and with this opening intersect two arches described from the angles of each horn of the abacus ; and the point of intersection will be the centre, by which, with the same opening of the compasses, the concavity of the abacus will be accurately drawn. See the plan in plate II.

SECT. VI. THE TUSCAN ORDER.

189. Of the Tuscan Order little historical can be said ; neither is there any regular example of it among the remnants of antiquity. Piranesi has given a drawing of a Tuscan base found at Rome, but of what date is uncertain. Vitruvius has stated the general proportions, but not in a very distinct manner, and does not refer to a single example. It is the most solid and simple of all the orders, and on that account is often

treated of first ; an arrangement which has not been adopted in this work, because we regard the Tuscan order more as a derivative from the Doric than as an original invention. The Tra- jan and Antonine columns at Rome have been reckoned of the Tuscan order, though their height is eight diameters, and the torus and capitals are certainly more ornate than is con- sistent with Tuscan plainness. The fluting to the necks, likewise, are according to the most ancient Doric examples.

190. The Doric, divested of a few mouldings, its triglyphs, and a diameter or two of height, will answer every purpose for which the Tuscan can be required. The purest specimen of the latter in England, perhaps in the world, is the church of St. Paul, Covent-Garden, which has been by some lauded as a prodigy of art, and by others designated as a mere ornamented barn. This order, with its huge projection of the crown members over the long cantalivers, may be ap- plied with the greatest propriety to market-places, stables, and such-like structures.

191. The proportion of the Tuscan column, (with its pedestal and entablature,) is as follows : Divide the whole height of the entire column into five equal parts, one of which is for the height of the pedestal ; and the remaining four are assigned for the base, shaft, capital, and en- tablature, which being again divided into five equal parts, one is given for the entablature, and the remaining four being divided into seven equal parts, one is for the inferior diameter of the shaft. In massy buildings a more heavy en- tablature may be used, as was customary amongst the ancients. They divided the whole height as- signed to the base, shaft, capital, and entablature, into four equal parts, and gave one to the en- tablature. The

profiles of Vignola and Pal lad io have this proportion.

192. Take half of the inferior diameter, for the height of the base, including the plinth ; and the same for the height of the capital, exclusive of the astragal. Take the inferior diameter, and divide it into sixty equal parts, which are called minutes. A module is considered by some to be only half a diameter ; but others extend it to a whole one, which has been adopted as the most simple and entire. Palladio uses the whole diameter in every order except the Doric. Vi- truvius also employs the large module, reckoning the proportion of the column by the lower or inferior diameter of the shaft ; and we do not see that either the semi-diameter,or the twenty minutes contrived by some, will more nearly answer to the different parts of the column.

SECT. VII. — THE COMPOSITE ORDER.

193. This order is obviously derived from the Ionic and Corinthian, but it cannot, we think, in any case, be applied with superior effect to the latter. It was first employed by the Romans in the triumphal arches erected by them to exhibit to posterity their dominion over their conquered provinces.

194. The Composite unquestionably derives its origin from that constant solicitude after no- velty which always renders the mind of man restless in enlightened and highly cultivated ages. The desire of variety and novelty, stretched to a

point beyond the judicious, engaged the Roman architects to combine with the proportions and enrichments of the Corinthian order the angular volute of the Ionic, and thus to compose a new order.

195. We have placed the Composite order last of the five, on account of its more recent inven- tion and compound nature. On the same prin- ciple we have placed the Doric first, as its priority both of character and employment de- manded. At the same time, it is proper to observe that, in instances where order upon order is introduced, as in some extensive and magnifi- cent structures, we see first the Tuscan, then the Doric, next the Ionic, fourthly the Composite, and lastly the Corinthian. We will also give Sir William Chambers's remark on the subject : ' Most authors give the last place to the Compo- site order, as being the last invented, and a com- pound ; which of course ought to be preceded by all the simples. I have followed Scamozzi's method, his arrangement appearing to me the most natural : for his orders succeed each other according to their degrees of strength ; and in the progression that must absolutely be observed,

whenever they are employed together.'

196. There are numerous examples of the Composite order remaining at Rome. Probably the best is that of the arch of Titus, fine casts from every part of which have been introduced into this country by Mr. Joseph Gwilt.

197. The following are the general proportions of this order : the height of the entire order is divided into five equal parts, one of which is ap- propriated for the height of the pedestal, and the remaining four for the column and entablature. These four parts being again divided into five, one is for the entablature, and the remaining four for the height of the column, including its base and capital. The height of the column is divided into ten equal parts, one of which is given to the inferior diameter. The base is thirty minutes, the capital seventy, in height, adorned with acanthus leaves, and volutes, drawn by the same method as those of the Ionic : and the plan of the capital is similar to that of the Corinthian order. (See plate II. and sect. 188.)

198. The soffit of the corona is divided into square compartments, cut out of the solid, deco- rated with roses, whose relief must not project more than the borders which enclose them. In rich compositions the soffits of the modillions are also ornamented ; but their relief is not to exceed the horizontal surface, which would greatly injure the effect of the modillion, and render the appearance of the profile of the en- tablature less pleasing.

SECT. VIII. — OF i UK, ORDERS OF SACRED BUILD- IMJS, OR TF.MI>LES OF THE GREEKS.

199. These are seven: 1. the Antis; 2. the Prostyle; 3. the Amphiprostyle ; 4. the Perip- teral; 5. the Dipteral ; G. the Pseudo-Dipteral ; and 7. the Ilypii'thral.

1 . The order of temples called Antis is that wherein the erd of the wall finishes in pilasters, or anta1, and has two columns between them; such is Inigo Jones's fine Tuscan portico ot St. Paul's church, Covent-garden.

2. The second order, called Prostyle, differ? from the Antis by having columns added oppo- site the pilasters, or an tee, of each corner. The foregoing two orders have only porticoes at one end.

3. The Amphiprostyle is the same as the Prostyle ; but, as its name imports, with a pos- ticum, or rear front, the same as the principal front.

4. The Peripteral has also porticoes at both ends, of six columns each, and eleven, counting the angle columns, at each side. It has, as its name shows, columns all round about the cell, as in the temple of Theseus, which, by the

way, has two more columns in flank than the rules of Vitruvius prescribe.

5. The Dipteral, which Vitruvius places after the Pseudo-Dipteral, is octastyle, or eight-co- lumned, like the portico of the Parthenon, but has a double row of columns all round the cell.

6. In the Pseudo-Dipteral, or false dipteral, the porticoes are octastyle, or eight-columned, in front, and on each side fifteen columns, count- ing those at the angles. The Parthenon is of this order of temples, but has seventeen columns on the sides ; for the ancient architects of Greece did not servilely follow every dogmatical rule of the critics, yet in their variations they never lost the true spirit of the original.

7. The Hypaethral order of temples is deca- styJe, or ten-columned, both in front and rear ; the other parts are distributed the same as the dipteral, but it has in its interior a double row of columns, one higher than the other, continued on all sides, and resembling an interior porch, and is called, from its situation, a peristyle. The middle part has no roof. A fine example of this order of temples is to be found in that of Jupiter Olympus at Athens. In Rome there is no ex- ample of it.

200. There are also circular temples, not classing under either of these orders; some of which are called Monopteral, having one row of columns round about them, and no cell. Others are called Peripteral, having a cell, round which the columns are arranged, standing on a con tinued pedestal called a stylobate, like the temple of the Sybil at Tivoli, the choragic monument of Lysicrates at Athens, and the temple of Vesta at Rome.

SECT. IX. — OF THE INTERCOLUMNIATION OF THB ORDERS.

201. Intercolumniation is the manner of dis- tributing the columns according to regulations founded on good taste, reason, beauty, and strength.

202. Columns are either engaged or insulated ; and, when insulated or detached from the wall, they are either very near, or at a considerable distance from it. When they are placed at a considerable distance from the wall, they are destined to support the entablature; and their distance from each other should be consistent both with their real and apparent solidity. En- gaged columns are attached to the wall, and are not limited in their intercolumniations, as they depend on the breadth of the arches, doors,

windows, niches, or other decorations placed in them.

203. The ancients used five different species 01 intercolumniations, which, according to Vi- truvius and Palladio, are as follows :

1. The pycnostyle, of which the interval or space is one and a half of the inferior diameter of the columns. Of this style are the Parthenon and temple of Theseus.

2. The systyle, whose interval is two diame- ters.

3. The eustyle, two diameters and a quarter.

4. The diastyle, three diameters ; and

5. The araeostyle, four diameters.

204. The three first of these were used by the Grecians, in the Doric, Ionic, and Corinthian orders; but the distances of the triglyphs of the Doric determined the intercolumniations of that order, as we shall by and by describe.

205. The ancient Romans preferred the eus- tyle in most cases, as the best medium of the too little and too great intervals of column ; but in their Tuscan works they used a space equal to four, and sometimes six diameters, which inter- columniation was admissible in this order, since the architrave was usually formed of some kind of timber, when the other parts of the entabla- ture were of stone. Palladio says, this interco- lumniation of the Tuscan order was adapted to farm houses and other rustic works, as it afforded a passage for carts, and was attended with the least expense. In structures built entirely of stone, however, they used a shorter interval, more suitable to the length of their marble blocks, and more agreeable to the ponderous fabric which they occasionally supported ; for which reason the diastyle and eustyle modes were sometimes applied to this order. The moderns have, indeed, adopted these two as their general rule, and apply them to every order except the Doric. The areeostyle, however, is sometimes, by a modern contrivance, authorised by a few examples of the ancients, introduced in porticoes and peristyles. This mode of the araeostyle is from Perrault, and is managed by placing two columns together at the angles, so close as to admit the two capitals nearly into contact. This manner, which is termed grouping, takes off from the excessive width of this kind of interval, whilst it adds to it both real and apparent strength, as is exemplified in St. Paul's cathedral in London, and in the palace of the Louvre at Paris.

206. Tl;e intercolumniation of the Doric or- der is often attended with peculiar difficulty, arising from the strict regard that is ever paid to the true widt'i of the_triglyph,, and the perfectly square form of the metopes, or

their intervals. Besides, it is considered requisite that a triglyph should be placed exactly over the centre of every column. l;or these leasons the mutules and triglyphs have been omitted in some capital works, both ancient and modern, as in the Colosseum ;it Rome, and the Royal Hospital at Greenwich.

207. When the capitals and bases of coupled Doric columns have their proper projections, and are at any distance from each other, the metope between them will be rather too wide ; but that Diay be avoided by confining the projections, or

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making the triglyph one minute more than it really should be, and placing or removing its centre a minute within the axis of the column, which trifling differences will not be perceived without the nicest examination.

208. In small buildings, such as temples and other similar ornaments for gardens, the inter- columniations may be determined, without pay- ing a strict regard to the general rules for the distances of columns ; always observing, how- ever, that such works must have an interval that will admit of an easy passage between them.

SECT. X. — Of ARCHES AND THEIR ORNAMENTS.

209. Arches are not so magnificent as colon- nades ; but are more solid and less expensive. They are proper for triumphal entrances, gates of cities, cf palaces, gardens, or parks ; and, in ge- neral, for all openings that require extraordinary breadth. There are various manners of adorning arches. Sometimes their piers are rusticated; sometimes they are adorned with pilasters, ter- mini, or caryatides; and sometimes they are made sufficiently broad to admit of niches or windows.

210. The circular part of the arches is either surrounded with rustic key-stones, or with an archivolt enriched with mouldings ; which, in the middle, is sometimes interrupted by a con- sole, or mask, (See plate IX.) serving at the same time as a key to the arch, and as a support to the architrave of the order The archivolt is some- times supported by an impost at the head of the pier ; and at others by columns placed on each side of it, with a regular entablature, or archi- trave and cornice.

211. There are likewise instances of arcades without piers, the arches being turned on single columns, as in the temple of Faunus at Rome, &c. But this practice ought not to be imitated, as it is neither solid nor handsome. When ar- cades, however, are employed to ornament do- mestic apartments, the breadth of the pier need not exceed a quarter of the opening of the arch.

212. When arches are closed up, to receive doors, windows, or niches, the recess should be sufficient to contain all the projections of what is placed therein, otherwise their appearance is clumsy, and will become too principal, which produces a bad effect in the composition. When arches are large the key stone should never be omitted, but cut in the form of a console, and carried close under the soffit of the architrave, which, on account of its extraordinary length, re- quires a support in the middle. The imposts of arches should never be omitted ; at least, if they be, a platform ought to support their place. If columns are employed without pedestals in ar- cades, they should always be raised on a plinth.

213. In arches of great magnitude the circu- lar part ought not to spring immediately from the impost, but take its rise at such a distance above it as is necessary in order to have the whole curve seen at the proper point of view. The void or aperture of arches should never be higher, nor much lower, than double their breadth; the breadth of the pier should never exceed two thirds, nor be less than one-thiid of the breadth of the arch ; and the ancular pier ought to be

croader than the others, by one-half, one-third, or one-fourth ; the impost should not be more .han one-seventh, nor less than one-ninth of the iperture ; and the archivolt must not be more than one-eighth nor less than one-tenth of it. The breadth of the console must, at the bottom, be equal to that of the archivolt ; and its sides must be drawn from the centre of the arch ; the length of it should not be less than one and a half of its smallest breadth, nor more than double. The thickness of the pier depends on the breadth of the portico ; for it must be strong enough to re- sist the pressure of its vault. But with regard to the beauty1 of the building, it should not be less than one quarter of the breadth of the arch, nor more than one-third. Such are the general dimensions of arches.

214. The proportions peculiar to the Tuscan arch, of which we have given an example, with- out pedestals, are as follow : In height their aperture is seven diameters and a quarter; in width four, and from centre to centre of the co- lumns, six diameters. According to the preced- ing remarks, the archivolt and imposts are half a diameter ; and from the top of the archivolt to the underside of the architrave should not be less than fifteen minutes. The breadth of the key-stone at the bottom is equal to its archivolt ; !>nd its spreading sides are determined by lines drawn from the centre of

the arch, as is shown in plate VII. The plinth is one diameter in height, and the proportions of the column and entablature do not differ from the order. For the proportions of the mouldings of the archivolt and imposts, see plates I. & VII.

215. The Tuscan arch with pedestals is in width four and a half, and in height eight diame- ters and a quarter ; and from centre to centre of each pier is six and three quarters. In every other particular they are subject to the preceding rules.

216. Doric arches, without pedestals, (see plate VII.) are seven diameters and three-fourths high, and in width four diameters and fifteen minutes. The piers are two modules in front, and in thick- ness one module, twenty-two minutes and a half; or in proportion to their distance from the wall. From centre to centre of each pier is six diame- ters and fifteen minutes. Arches of this order, with pedestals, have their apertures, in height, nine diameters and thirty minutes ; and in their width, five diameters, fifteen minutes. The piers are two diameters, fifteen minutes wide in front; ami from centre to centre of each is seven dia- meters and fifteen minutes.*

17. As to the arches peculiar to the other orders, all that is necessary, after what has been remarked on the two preceding ones, is a care ful inspection of plate VII. where the several proportions appear.

Sun. XL— Or PILASTERS AND THEIR USES.

218. 1'ilasters difi'er from columns only in their plan; which is a square, as that of columns is round. Their bases, capitals, and entablatures, have the same parts, with the same heights and projections, as those of columns ; they are also d;<;inguished in the same manner, by the names ot Done, Ionic, Corinthian, Tuscan, and (Jom-

219. The column is undoubtedly more perfect than the pilaster. However, the latter may be employed with propriety on many occasions. Some authors object to pilasters, conceiving that they do not admit of diminution. But this is a mistake ; there are many instances, in the re- mains of antiquity, of their being diminished. Scamozzi always gave his pilasters the same di- minution as his columns : Palladio and Inigo Jones have likewise diminished them in many of their buildings.

220. Pilasters are employed in churches, gal- leries, halls, and other interior decorations, to save room; as they seldom project beyond the solid wall above one quarter of their diameter. They are likewise used in exterior decorations ; sometimes alone, instead of columns, on account of their being less expensive; and sometimes they accompany columns, being placed

behind them to support the architraves, where they enter the building, as in the Pantheon at Rome; or, in the same line with them, to fortify the angles, as in the Portico of Septimius Severus.

221. Pilasters should project one quarter of their diameter beyond the walls, when used alone. When placed behind columns, espe- cially if they be very near them, they need not project above one-eighth of their diameter. But, when placed on a line with columns, their pro- jection must be regulated by that of the columns; and, consequently, it can never be less than a semi-diameter, even when the columns are en- gaged as much as possible.

222. The shafts of pilasters are frequently adorned with flutings in the same manner as those of columns ; the plan of which may be a trifle more than a semicircle : their number must be seven on each face, which makes them nearly of the same size with those of columns. Their intervals', or fillets, must either be one-third or one-fourth of the fluting in breadth. The capi- tals of pilasters are profiled nearly in the same manner as those of columns.

SECT. XII.— OF ATTICS.

223. Attics very properly follow the pilasters , being nothing more than square pillars with their cornices. They had their origin in Athens, where it was for many ages a rule in building to conceal the roof. For this purpose nothing served so well as a kind of low or little order ranged in i continued line, singly, or with the interruption of balusters ; which, rising above the rest of the work and before the roof, hid it perfectly, and substituted something more agreeable to the eye. The place of attics, therefore, is at the uppermost extremity of a building, to which they serve as a crown, or very properly make a finishing for the other ordeis when they have been used in the structure. They must never stand under any thing except such ornaments as are placed at the very top.

224. Attics should never exceed in height one- third of the height of the order on which they are placed, nor be less than one quarter of it. The base, dye, and cornice, of which they are composed, may bear the same proportions to each other as those of pedestals do ; and the base and cornice may be composed of the same mould- ing as those pedestals. Sometimes the attic is

Oil

toniinued throughout; at others it projects, and forms a pilaster over each

column of the order, "fhe breadth of this pilaster is seldom made narrower than the upper diameter of the column below it, and never broader. Its projection may be equal to one quarter of its breadth.

SECT. XIII. — OF ORDERS UPON ORDERS AXD OF BASEMENTS.

225. Having already alluded to the succession of orders generally observed, from the ground upwards; (see sect. 195,) we have now only to re- mark, that in placing columns upon one another, the axis of every column should be perpendicu- lar to that of the other ; at least they must be so in the front view. With regard to the propor- tions of columns placed above each other, Sca- mozzi's rule, ' that the lower diameter of the superior column ought constantly to be equal to the upper diameter of the inferior,' is universally esteemed the best, and gives all the columns the appearance of one long tapering tree cut into so many pieces.

226. We have few examples, however, in this country, of more than two stories of columns in the same elevation; for when there are three it is difficult to avoid some striking inconsistencies, or to preserve the character of each order in its intercolumnial decorations; since the intervals of the upper columns must become too wide, and would neither appear graceful nor solid. Indeed, in our own opinion, the system of heap- ing order upon order is altogether in bad and mistaken taste. Its effect is sometimes striking, but will not bear scrutiny. Independent of the difficulty mentioned above, the elementary and essential object and nature of a row of columns is wholly falsified thereby.

227. Instead of thus employing several orders, one above another, the ground floor is, in some cases, made in the form of a basement, on which the order that decorates the principal story is placed. The proportions of these basements are not fixed, but depend on the nature of the rooms on the ground floor. In some structures the height of the basement is equal to that of the first order. In others it does not exceed two- thirds of the order; and in others again is only half its height. Basements should never be higher than the columns they support, nor less than one half of their height.

228. Basements are usually decorated with rustics, whose height, including the joint, should be half a diameter of the order placed upon them. Their figures are from a square to a ses- quialtera ; and their joints may be either square or chamfered. The square joint is one-eighth of the height of the rustic, and in depth they are equal to their width ; those that are chamfered should form a rectangle; and their joints are one-fourth of the width of the flat part of the rustic.

229. The original intention of architecture being, as we have seen, protection against the

inclemency of the elements, its first attempt? were obviously limited to the accomplishment of that object. The penetration of wind and rain, however, into the recesses of these rough struc- tures would gradually instil the principles of order, solidity, and general proportion ; and the internal beauty and agreeableness of these pro- perties being discovered, the inventive faculty of man was calculated to proceed, step by step, until harmony, regularity, and grandeur, were superadded to convenience and utility.

230. It is one of the 'great rules of our art, that every building should be adapted in appearance and style to the purpose for which it is erected. In this spirit we may distinguish them into three principal classes : namely, 1. Such as are in- tended solely for utility ; 2. Such as are designed altogether for ornament; 3. Such as are meant to comprehend both.

231. Buildings intended solely for utility ought in every part to correspond with that design. Any material deviation from usefulness for the sake of ornament should be strictly avoided. Works of simple usefulness are con- sidered as a mean to some end; and, the nearer they approach to a perfect mean for obtaining that end, the more will such structures gain our applause, though every beauty of ornament be neglected. On the other hand, in works merely calculated for ornament, such as columns, obe- lisks, triumphal arches, &c. beauty alone ought to be regarded. The principal difficulty in architecture lies in combining usefulness and ornament. The most practicable method is to prefer the former to the latter, in proportion as the character of the building requires it. In palaces and large buildings which admit of a variety of useful contrivance, regularity and dis- play ought to be preferred; but in dwelling- houses that are on too small a scale for variety, regularity should give place to usefulness, so far at least as the former is inconsistent with the latter.

232. In considering attentively the beauty of visible objects, we discover two kinds. The first may be termed intrinsic beauty, because it is discovered in a single object, without relation to another. The second may be termed relative beauty, being founded on a combination of rela- tive objects. Architecture admits of both kinds.

233. The appearance of a palace ought to convey an idea of the majesty and grandeur of the monarch : and a like conformity should ap- pear in temples, as well as in those inferior structures erected by art for the accommodation of the various classes of human society. In all cases regard is to be paid to the dignity, rank, and profession of the occupier, rather than to his wealth. The former circumstances are open and obvious, the latter not so.

234. If a building is destined for some parti- cular purpose of a public nature, we should regard that purpose alone. A play-house should have a gay and splendid style, but that of a church should be not only grave and solemn, but also bold and magnificent, affording a proper quantity and equal distribution of light to every part occupied in the time of worship. The ap-

poarance and style of a monument ought to be solemn and gloomy, so ornamented as to awaken the memory of the deceased in the minds of sur- viving friends. Courts of justice, senate-houses, &c. have, in like manner, and on the same principles, their proper styles, which will always be observed by a good architect.

235. Nothing can be more evident, than that the form of a dwelling-house ought io be suited to the climate; yet no error is more common than to copy in Britain the form of Italian houses, not forgetting even those parts that are purposely contrived for collecting air, and for excluding the sun ; witness our colonnades and logics, designed by the Italians to gather cool air, and exclude the beams of the sun, conveni- ences which the climate of this c&untry does not require.

SECT. II. — OF THE BEAUTY ARISING FROM PROPORTION.

236. The proportions of a door are determined by the use to which it is destined. The door of u dwelling-house, which ought to correspond to the human size, is confined to seven or eight feet in height, and three or four in breadth. The proportions assigned to a stable or coach-house are different. The door of a church ought to be wide, to afford an easy passage to a multitude ; and its height should therefore be in proportion, that its appearance may please the eye. The size of windows ought always to be in proportion to the dimensions of the room they are intended to illuminate ; for if the apertures, or openings, be not large enough to convey light in an

equal distribution to every part of the room, the whole will have a deformed appearance. Nothing can be more disagreeable than to see a profusion and glare of liuht in one part of a room whilst the other is under a strong shade ; such contrary effects always prove disadvantageous to the ap- pearance of furniture and other ornaments com- mon to handsome apartments. Steps of stairs should likewise receive a suitable proportion, and be accommodated to the human figure, with- out relation to the magnitude of any other part of the building; and therefore in small and largo houses they are alike in height, because men are nearly alike in stature.

237. The proportion of rooms may be either intrinsic or relative, though in most cases both are included. The intrinsic proportion of a room is its length, breadth and height; which being harmoniously adjusted, we pronounce it of a beautiful proportion, without regard to any other part of the building. JSut the relative beauty of proportion is, as the whole area of the room is to the magnitude of the house of which it composes a part. A room may be well-pro- portioned as to itself, but may, at the same time, be either too laree or too small for the whole edifice. In a sumptuous building the capital rooms ought to be large, otherwise they will not be proportioned to the size of the whole ; and for the same reason a very large room is impro- per in a small house ; yet every house ought to have both large and small rooms, in proportion to itself, liut in things thus related, the mind requiivs nut a precise or single proportion, re-

jecting all others; on the contrary, different pro portions are sometimes equally agreeable 1 1 contemplate. It is only when a proportion be- comes vague and distant, that the agreeablenes^ abates and at last vanishes.

238. With regard to the proportion the height of a room should bear to the length and breadth, it must be rather uncertain in some cases, arising from that deception to which the eye is subject, when its height exceeds sixteen or seventeen feet ; yet if a proper optical allowance be made, we do not think the attainment of a beautiful propor- tion so hazardous or arbitrary a task as some architects would insinuate. A room forty-eight feet in length, and twenty-four in breadth and height, is well proportioned ; but, it is well known, that were we to reduce those to twenty- four and twelve, a room would approach too near the appearance of a gallery. Yet it is evident, that, if the proportion be so adjusted as to be in the medium between these two, a room cannot produce a bad effect as to its size. For instance, if the height and breadth be eighteen feet each, and the length thirty-six feet, this pro- portion of a room is by architects termed har- monic, or agreeable to the eye, answering to diapente, one of the chords in music, which in- cludes the interval from one to five, and is agreeable to the ear.

239. Upon this principle there are seven proportions assigned to rooms, termed harmonics or agreeable*. The cube, cube and half, double cube, the subduple of 4, 3, and 2 — ditto of 5, 4, and 3 — ditto of 6, 4, and 3 — and lastly of 3, 2, and 1. Upon this scale, if the height of the room be eighteen feet, as before, it is of the cube form when the floor, ceiling, and side-walls, are all of one dimension. The second, or cube and half proportion, will be twenty-seven feet long, and eighteen broad ; the third, or double cube proportion, thirty-six feet by eighteen broad ; the subduple of 4, 3, and 2, produces thirty-six feet in length, and twenty-seven in breadth; ditto of 5, 4, and 3, produces thirty feet by twenty-four broad ; ditto of 6, 4, 3, produces thirty-six by twenty-four broad ; ditto of 3, 2, and 1, produces fifty-four by thirty-six broad.

240. To find the produce of these subduples proceed thus : — in every case divide the given height of the room by the smallest numbers, 3, 2, or 1, as may be required. Again, multiply the quotient by the middle numbers 4, 3, or 2, and the produce will be the width of the room. Lastly, multiply the said quotient by the largest numbers 4, 5, 6, or 3, and the produce will give the length of the room of the first sub-duplicate, 4, 3, and 2.

EXAMPLE.

Divisor. Dividend. Quotient.

2) 18 (9

3 middle number multiplied quotient 9 mult, by — the large number 4 27 ft. width of the

room.

36 ft. length of the room.

241. If we propose twelve feet for the height of a room, proceed as above. Yet it should be observed, that the double cube proportion of a

room upon this scale would be twelve feet in height and width, and twenty-four in length, which, though admitted by a certain architect amongst the number of the harmonic propor- tions for rooms, yet it is condemned by him as approaching to the form of a gallery ; which is certainly a self-contradiction, and tends to un- settle and render undeterminate the very doctrine he advances. On the other hand, the cube form, though admitted

into the number of harmonic proportions, would as often be pronounced by the judgment of sight too broad. This however is to be understood only when a room is of large dimensions ; for, when small, it is quite agree- able and convenient.

242. It is evident, 4hen, that the double and single cube are two extreme proportions for rooms, and that each of them requires a cer- tain scale of magnitude to render them beiutiful and useful ; the former being applicable to a large room, the latter to a small one. It is also evident that the doctrine of harmonic proportions of rooms is not perfect, otherwise there could be no exceptions taken in any case. It is not so in the proportion of sounds; every chord is alike pleasing upon any scale; and though some of the chords are less complete than others, yet all of them produce harmony to every ear capable of the sweet sensation of music. We therefore con- clude, that though there exists some agreement between the doctrine of sounds and the dimen- sions of a room, yet they are not analogous; consequently the judicious architect will make bis own exceptions. There is indeed no strict resemblance between the objects of different senses.

243. Figure of Rooms. — It is clear that rooms, consisting of four sides, with right angles, are the best fitted for the reception of light and the distribution of furniture : but when the light is admitted by an aperture in the ceiling, the cir- cular or polygonal form is to be preferred.

SECT. III. — OF THE EXTERNAL PROPORTIONS OF HOUSES.

244. It has been remarked, that to see, on a considerable eminence, the length of a front tri- fling, and the height disproportioned, would be as absurd as to behold a front in a valley long and extended, and elevated only one story. Pro- portion requires our nicest choice, which must be dependent upon rules; for, as the jarring of instalments by blind chance cannot possibly please the ear, so the disproportion of the parts of any object must naturally shock the eye ; and, in both, unerring rules must so proportion the sounds, and dispose the parts, as that the whole may be in complete harmony. Nature has taught mankind, in music, certain rules for pro- portion of sounds; so architecture has its rules dependent on those proportions, or at least such proportions as are in arithmetical harmony ; and those we take to be dependent on nature. The square in geometry, the unison or circle in music, and the cube in building, have all an in- separable proportion, the parts being equal, and the sides and angles, &c. give the eye and ear harmonic pleasure.

245. This theory, however, when applied to

the whole fabric, admits of exceptions ; for the cube must not exceed fifty

feet; the cube-and- half sixty feet, and the double cube eighty feet front. The general rule is, that if the cube be fifty feet front, the depth and height will be the same. The cube-and-half is when the front is sixty feet long; the depth and height each forty feet. The double cube of sixty feet will be thirty feet deep and thirty feet high. In the country, where gentlemen's houses are detached, and are easily viewed in front and depth by an approach- ing traveller, a strict regard to proportion be- comes necessary; for, if the cube form be adopted in very large houses, it will appear un- couth and heavy ; while, on the other hand, it is equally disagreeable to see a dwelling-house as- sume the appearance of a lofty tower.

246. Very high dwelling-houses are exceed- ingly inconvenient ; and, therefore, where beauty of proportion is joined to utility, they ought rather to assume the figure of a parallelopipedon resting on its larger base. Hence that form of building which rather spreads upon the ground than rises in height, is always preferable. In towns the houses, being generally attached to each other, compose together regular streets or squares: in which case the proportions of an individual front are less obvious, and the depth in this respect immaterial. The great object is the uniformity of the whole, when completed ; or of one individual house with the whole. In such situations, the proportions of the houses, and the length and extent of streets, are gene- rally subject to other than to architectural laws.

SECT. IV. — OF THE SITUATION AND INTERNAL DIVISION OF HOUSES.

247. A proper situation for building, where a choice can be had, is highly worthy the attention of an architect. It must be obvious, that a rising ground is much better suited for a magni- ficent mansion than a concealed valley; and that it would be incongruous and absurd to erect a sumptuous building on a wild, uncultivated, and barren ground, destitute of water, wood, hills, or other pastoral beauties which nature has assigned to various portions of the earth. Where such situations are left to the choice of the archi- tect, it becomes him to apply his taste in fixing the precise site and bearings of his intended work, in the execution of which he must attend to the four cardinal points.

248. In the first place, he must see that every internal division, or room, receives a due degree of light and heat, suited to its intended use and the different seasons in which it is more parti- cularly to be occupied. Here the skilful archi- tect must exercise several of those qualifications enumerated by Vitruvius as essentially requisite to the formation of his character. Indeed, the qualifications which are absolutely necessary ir the proper choice of the situation and plan of a town or city, are precisely those which are wanted to complete a country residence.

249. The chief objects of human concern be- ing health, pleasure, and convenience, whatever contributes to these must be studied with atten- tion. Hence, the necessity of a situation best adapted for good air, a sufficient supply of whole-

some water at a convenient distance for family uses, and fertile grounds, whose produce in summer may render salubrious the element in which we breathe. For the same reasons, marshy, low, and barren lands, and more espe- cially stagnant waters, should be avoided.

250. One infallible mark of a good situation for health, is thriving cattle and healthy inha- bitants. In fixing on the precise spot of ground, that which is moderately elevated, if it be conti- guous to some river, will be the best. In such a situation, the air has a constant motion and free circulation, by which it purifies itself as water does by a current, and becomes more salutary to the human frame. And nothing can so much contribute to the excellence of a prospect as a river, especially a winding one ; the beauty of which will, in idea, be heightened by its utility as the means of supplying water.

251. These essential preliminaries being set- tled, the architect proceeds to corisider in what direction his front and flank are to be placed, with respect to the south and north points. This, in many instances, will be closely connected with the internal division of the house. Cool drawing-rooms are suitable for summer; and for this purpose they should be large, and situated toward the north, so as to be screened from the scorching beams of the sun. Warm drawing- rooms are adapted for winter; and, therefore, these should be smaller, and have a place towards the south, or where the rays of the sun have free entrance. Rooms appropriate to spring and autumn may be in a medium situation to these, and should have their windows to look into the different gardens or green walks. Libraries, studies, and morning rooms, should have the same sort of prospect, as being most suitable for morning exercises. If the house be built on so large and magnificent a scale as to admit a similar variety in all the different apartments, the dining-parlours, bed-rooms, &c. will be subject to the same laws of situation, and answer to the different seasons of the year.

252. It has been doubted whether the prin- cipal rooms should lie nearest the grand en- trance, as heiiiL: best suited to give them their full effect. The following reasons have been urged against tins : — To provide a large and spacious room for the immediate reception of the visitor is a bad

contrivance in several respects. 1. When, from the open air, we step into such a room, its size is apparently dimished by contrast ; and it looks little compared with the great canopy of the sky. 2. When it recovers its grandeur, as it soon does, it uives a diminutive appearance to the rest of the house; passing from it, every apartment looks little. 3. By its situation, it serves only ior a waiting-room, and a passage to the principal apartments. — Rejecting therefore this form, a hint may be taken from the climax in writing, for another that appears more suitable.

253. The different offices should be so ar- ranged, as to compose an inferior portion of the whole lnuldinu', not totally detached, yet in such order as to keop the more offensive ones as remote :i< possible from the principal parts of the house. Thi<, iiuh rd, is in conformity with the jirnn,;;' M,.-'iK of mime.

SECT. V. — OF THE VARIOUS ORNAMENTS WHICH CONTRIBUTE TO GIVE A PECULIAR EXPRES- SION, OR AN APPARENT USEFULNESS, TO BUILDINGS.

254. Some writers on architecture have doubted whether a building can admit of any ornaments but such as are useful, or at least have the appearance of being so. But, considering architecture no less as a fine than a useful art, both species may be properly introduced. A private house, it is true, and other edifices where use is the chief aim, do not admit of any ornaments but such as have the appearance of utility. But temples, triumphal arches, and other buildings chiefly intended for show, may be highly ornamented without any loss of their apparent usefulness. Hence, a threefold division of ornaments has been suggested, viz.

255. 1st. Ornaments that are beautiful without relation to use; such as statues, vases, &c. 2d. Objects in themselves not beautiful, but posses- sing the beauty of utility, by imposing on the spectator, and appearing to be useful ; such as blind windows. 3d. Where things are beautiful in themselves, and at the same time assume the appearance of use ; such as pilasters. With re- gard to the first, a statue should be so placed, that it may be seen in every direction, and at various distances, either in receding or advancing. Sta- tues ought not to be placed in the niches or fronts of houses, or on the tops of walls and roofs. Their proper places are in large halls, and in passages that lead to a grand stair-case, &c. To adorn the top of the wall with vases is an ab- surd conceit, by placing a thing, whose natural destination is utility, where it cannot have even the least appearance of it. Firmness and so- lidity being the proper expressions of a pedestal, as lightness and delicacy are of carved work, the pedestal, whether of a column or of a statue, ought to be sparingly ornamented. The ancients never ventured on any bolder ornament than the basso relievo.

256. As for ornaments of the second kind, it is a great error to contrive them so as to make them appear useless. A blind window, there- fore, when necessary for regularity, otight to be so disguised as to appear a real window: when it appears without disguise, it seems a vain at- tempt to supply the want of invention ; it shows the irregularity in a stronger light, by signifying that a window ought to be there in point of re- gularity, but that the architect had not skill sufficient to connect external regularity with in- ternal convenience.

257. With regard to the third species of orna- ments, it is an error to sink pilasters so far into the wall as to remove totally, or mostly, the ap- pearance of use. They should always project so much from the wall, as to have the appear- ance of supporting the entablature over them.

258. Of all the ornaments in great buildings, pillars are the chief. The destination of a pillar ie to support, either in appearance or reality, the entablature. With regard to the form of a pillar it must be observed, that a circle is a more agreeable figure than a square, a globe than a cube, and a cylinder than a parallelopipedon. — This, in the language of architecture, is merely

saying, that a column is a more agreeable figure than a pilaster ; and for that reason it ought to be preferred, when all other circumstances are equal. Another reason is, that a column annexed to a wall, which is a plain surface, makes a greater variety than a pilaster. Besides, pilasters at a distance are apt to be mistaken for pillars ; and the spectator is disappointed on his nearer approach.

259. The only circumstances that can serve to distinguish one order from another, are the form of the column and its destination. To constitute the first a distinguishing mark, without regard to the other, would be to multiply orders without end. Destination is more limited, and leads us to distinguish three kinds of orders : namely, the robust, the elegant, and the rich. These the Greeks have embodied in their Doric, their Ionic, and their Corinthian. The Romans, restless after innovation, and desirous of being themselves originators in the art, would have an order more robust than the robust, and another richer than the rich. Hence their Tuscan, which a mu- sical man would call a variation on the theme of the Doric; and their Composite, which is any thing but an improvement on the Corinthian.

260. The ornaments of these three orders ought to be suited to the purposes

for which they are intended. Plain and rustic ornaments would not a little jar with the richness of the Corinthian order, and sweet and delicate ornaments no less with the strength of the Doric.

261. There are two general rules with respect to buildings of every kind. One rule, dictated by utility, is, that they be firm and stable. Ano- ther, dictated by beauty, is, that they also appear so ; for every thing that appears tottering, or in nazard of tumbling down, produces in the spec- tator the painful emotion of fear, instead of the pleasing emotion of beauty ; and, accordingly, it should be the great care of the artist, that every part of his edifice not only be well supported, but likewise appear to be so. Some have intro- duced a conceit in architecture, by giving parts of buildings the appearance of falling; of this kind is the church of St. Sophia in Constantino- ple : the round towers in the uppermost stories of some Gothic buildings aie in the same false taste.

PART IV.

OF THE OTHER NECESSARY OR OR- NAMENTAL PARTS OF BUILDINGS.

SECT. I. — OF PERSIANS, CARYATIDES, AMD

TERMINI.

202. Along with columns and pilasters, it is sometimes customary to employ representations of the human figure to support entablatures in buildings. The male figures are called Persians ; and the female Carians, or Caryatides. (See plate IX.)

263. The Persians are so called from a vic- tory gained over the Persians by Pausanias, who having brought home prisoners, spoils, and tro- phies to the Athenians, they fixed upon Persian figures for those which should support entabla- tures, and thus kept in mind that there were once Persian slaves in Athens. To represent these

conquered people in the lowest state possible, they loaded them with the heaviest entablature, viz. that of the Doric order. In process of time, however, other figures besides those of Persians were introduced, and other entablatures put over them ; but the name was still retained.

264. The proper Caryatides are women dressed in long robes, after the Asiatic manner; and the origin of the device was similar to the for- mer. The Carians had been long at war with the Athenians ; but, being at length totally van- quished, their wives were led away captive ; and to perpetuate the memory of this event, trophies were erected, in which figures of women,

dressed in the Caryatic manner, were used to support entablatures like the Persians; and, though other female figures were afterwards used in the same manner, the name of Caryatides was always retained.

265. The ancients made frequent use of Per sians and Caryatides, and delighted in diversi- fying them a thousand ways. The modern artists have followed their example ; and there is a great variety of compositions of this kind to be met with in different parts of Europe. In- decent attitudes, distorted features, and all mon- strous productions, of which there are many examples in gothic buildings, ought to be avoided. On the contrary, the attitudes should be simple and graceful, the countenance always pleasing, though varied and strongly marked, and the dra • peries more or less ornate, according to the nature of the order employed in the other parts ol the structure, or according to the general style and destination of the structure itself.

266. At the same time, however, that we give, for the benefit of the student, the preceding re gulations, we cannot avoid expressing our own individual opinion, that this species of embel • lishment is in decided bad taste, inasmuch as it is emblematical of situations and feelings painful and repulsive. The degradation of the human creature, which is. depicted hereby, combined with the degree of physical labor which the ima- gination is constrained to imply, interferes with and contradicts that impression of fitness and agreeableness which it should be the main desire of the architect to excite.

267. Termini (see plate IX.) are sculptured figures, resembling in shape a stone placed up right, and which, increasing in width towards the top, terminates in a bead or bust. These figures, which are also often denominated by the name of Hermes, were generally set up by the ancients to adorn places for the exhibition of gymnastic exercises, of which Mercury, or Hermes, was esteemed a protecting deity.

SECT. II. — OF PEDIMENTS.

268. Among the Greeks, pediments were exclu- sively devoted to ornament the ends of the roofs of their temples. Each end of the roof was finished with a triangular pediment, ornamented with the mouldings and sculpture of the upper part of the entablature; and the flat portion within was decorated by figures in high relief. Such were the pediments of the temple of Mi- nerva Parthenon at Athens, and of the temple, of Jupiter Panhellenius in the island of Egina

•which was recently discovered by Messrs. C. 11. Cockerell and Foster. The fragments of sculp- ture which decorated the former, and are now in the British Museum, are proofs of the high per- fection to which architectural or pedimental sculpture was brought by the Athenians during the brilliant era of Pericles. The Romans, in the time of the Republic, confined the use of pe- diments to their sacred buildings, till Caesar ob- tained leave to cover his house with a roof ter- minated by a pediment, after the manner of temples. (See sect. 75). The use or invention of the pediment arose originally from necessity, being the fastigium or gable end of the building ; but it afterwards became so purely ornamental, that Cicero says (de Oratore, lib. iii. cap. 46.) that if a temple like the Capitol were to be erected in heaven, where it never rains, it would be covered with a roof, and ornamented with pe- diments. Among ancient examples are found two sorts of pediments, the triangular and the circular; the former only in good examples, and the latter in those of an inferior taste. The tri- angular or pointed pediment is promiscuously applied to cover large or small buildings : but the latter, being of a heavier figure, is never used but as coverings to doors, niches, windows or gates. As a pediment represents the termination of the roof, and in the best examples partakes of its shape, it should never be employed but as a finish! 112 to the whole composition.

269. The ancients introduced but few pedi- ments into their buildings; generally contenting themselves with a single one to adorn the middle or principal part, and in the purer times of the Creeks only at the ends. But some of the mo- derns, particularly the Italians, have been so im- moderately fond of them, that their buildings frequently consist of scarcely any thing else.

270. (lirders are the largest pieces or beams of timber used in the construction of floors and ceilings. In a roof this piece is mostly called a Ue-beam, being used for the purpose of tying the lower extremities of the rafters together, and to prevent them from spreading. It is therefore an impropriety in style, and bad construction in architecture, to intermit the horizontal bed-mould- ing of the pediment, which represents this im- portant member, to make room for a niche, an arch, or a window.

271. In good architecture no other form of pediments ought to lie admitted besides the tri- angular and circular. The former is truly the only legitimate one, and the most beautiful ; but Palladio, \ ren, and Chambers, give some autho- rity to the latter as decorations to windows. When a range of such windows are introduced, the triangular and circular pediments may be used alternately; as in the niches of the Pantheon at Home, in those of the temple of Diana at Nismes, in the Strand front of Somerset-house, and

other ancient and modern examples.

272. The proportion of pediments depends upon their size; for the same proportions will not do in all cases. The pediments of the Greeks are lower and in belter proportion than those of the Romans, but both partake of the form of the roof. The less humid clime of (Jreece allowed the roof fo be flatter than that

of Rome ; and it was higher or lower accordinS to the order. The materials of the roof should also be attended to ; for if it be covered with tiles, it will be necessary to raise it more than one quarter of the base, as was the custom of the ancient Etrurians in their Tuscan temples.

273. The tympan or tympanum is the flat part or wall in the interior of the pediment, be- tween the two inclined cornices and the bed- mould, and should always be perpendicular with the front line of the frieze. It forms the ground for the figures, when the pediment is ornamented with sculpture.

SECT. III. — OF GATES, DOORS, AND PIERS.

274. There are two kinds of entrances to buildings: viz. gates and doors. The former serve indiscriminately for horses, carriages, and foot-passengers ; the latter only for the passage of persons on foot. Doors are used as entrances to churches and other public buildings, to common dwelling-houses and apartments; and gates serve for inlets to cities, fortresses, parks, gardens, palaces, &c. The apertures of gates being always wide, the upper parts are generally made in the form of an arch, that figure being the strongest. But doors, which are mostly of small dimensions, are commonly parallelograms, and closed horizontally. The general propor- tion for the apertures, both of gates and doors, whether arched or square, is that the height be about double the breadth.

275. The most common, and indeed almost the only ornaments for gates are the piers by which they are supported ; and which were ori- ginally no more than bare posts into which the hinges of the gates were driven. Though this, however, is the only proper use of piers, it should be concealed as much as possible, and they must seem as if placed there only for orna- ment. (See plate VII.) As they are to be fixed to the wall before the house, so they must be proportioned to it ; and as they are to be seen in the same view with the front of the house, their correspondence with it is equally neces- sary. They should always be placed upon a plinth, and something must be allowed by way of ornament and finishing at the top.

276. A degree of fancy may be employed in the decoration of piers ; but it will be proper to observe this general rule, that the pier being an inferior

structure, it must never be richer in or- nament than the front of the house. If, for in- stance, the front of the house be ornamented with the Doric order, the Ionic must not be used in the piers ; and it may be better to omit co- lumns altogether than to make use of the Tuscan order for piers in any case. If the Ionic or Corinthian orders are employed in the front of the house, the Doric or Ionic may be used with propriety in the decoration of the piers. One piece of ornament is almost universal in gate- piers of large dimensions ; namely, a niche with 3 seat, for the use and convenience of the travellet On this account it will be proper to raise the columns on pedestals, or a stylobate, be- cause the continued moulding from their cornice will form a good ornament under the niche. The base of the columns in such instances, of

\vh itever order they may be, the Doric excepted, are best of the Attic.

*277. Inside doors, however small the building may be, should never be narrower than two feet *ix inches; nor need they in private houses, unless for rooms of large dimensions, ever ex- ceed the width of three feet six inches, which is more than sufficient to admit the most bulky person. The width, however, should always be in proportion to the size of the rooms, and they should never be less in height than six feet three or four inches ; otherwise a tall person, or one •with his hat on, cannot pass without stooping. In churches, palaces, &c. where there is a con- stant ingress and egress of people, the aperture must be larger. The narrowest dimensions that should be given to a gateway are eight feet six inches, or nine feet, which is but just sufficient for the passage of a coach.*

SECT. IV. — Of NICHES AND STATUES.

278. In almost every age, since architecture became subject to rules, it has been customary to enrich different parts of buildings with represen- tations of human figures. Thus the ancients decorated their temples, baths, theatres, and other public edifices, with statues of their deities, heroes, and legislators. The moderns still follow the same custom, and place in their churches, palaces, public halls, and other similar structures, statues of illustrious persons, and even groups composed of various figures, representing cele- brated occurrences and events, related in history or poetry. Sometimes these statues or groups of figures are detached from the ground, or as sculptors call them, in the round, raised on pedes- tals, and placed contiguous to the walls of a building, or in the middle of a room, court, or public square. But they are most frequently placed in cavities

made in the walls, called niches.

279. Niches are of two sorts : the one formed like a parallelogram, covered by an arch in its ele- vation, and semicircular or semi-elliptical in its plan ; the other parallelogrammatic both in plan and elevation. The proportions of both these depend on the characters of the statues, or upon the general form and proportion of the groups to be placed in them. The lowest are at least a double square in height ; and the highest should never exceed two diameters and a half of their breadth. This should be divided into twice the bottom diameter for the body of the niche, and half for the head ; but a better proportion, unless it be to hold a lofty figure, or candelabra, or a statue on a pedestal, is two diameters including the head.

280. When niches are used alone in a compo- sition, they are generally enclosed in a panel, formed and proportioned like the aperture of a window, and adorned in the same manner, with architraves, cornices, and other dressings. In such cas < % the niche or excavated part is to be carved down to the bottom ; but on the sides and at the top, a small space is left between the niche and the architrave of the panel. When inches are intermixed, in the composition, with windows, they may be ornamented in the same manner as the windows, provided that the dress- iii'3's, and other decorations of the niche, be of the

same figure and dimensions as those of the accompanying windows.

281. If the niches be formed before the sta- tues, that is, if the statues have to be made to the niche, and not the niche for the statue, the size of the latter should be in proportion to the dimensions of the niche which is to contain it. It should neither be so large as to have the ap- pearance of beingforced into the niches, like those in Borromini's ill- proportioned church of Santa Maria Maggiore at Rome ; nor so small as to seem lost in them, as in the Pantheon. The best proportion for height is that the eyes of the statue should cover the centre from which the head of the niche is struck. The distance between the outline of the statue and the side of the niche should never be less than one-third of a head, nor more than one-half, whether the niche be square or arched ; and, when it is square, the distance from the top of the head to the crown of the niche should not be greater than the dis- tance on the sides.

282. Statues are generally raised on a plinth, and sometimes on a pedestal. The height of the plinth should be from one-third to one-half of a head ; and that of a pedestal according to the proportion and character of the statue, and de- coration of the niche. Pedestals, however, under statues in niches, always look like an after- thought, or that the niche was too large for the statue. They are more proper, when inscriptions are required, which

may be inserted on the dad: of the pedestal. The character of the statue should always correspond with the character ot the architecture with which it is associated. If the order be Doric, statues of Hercules, Jupiter, Mars, sculapius, and all male statues repre- senting persons of an heroic, robust, or grave nature, maybe introduced; if Ionic, then Apollo, Bacchus, Ganymede, and youthful males of a delicate cast; and if Corinthian, Venus, Flora, and other female deities, of a beautiful nature should be employed.

• *SECT. V. — OF CHIMNEY-PIECES.*

283. Among the remains of ancient architec- ture, there are very few examples of chimney- pieces to be met with. Neither the Italian, French, or German architects, have eminently excelled in compositions of this kind ; but Britain, not using close stoves and hot air-pipes, like the Germans, and requiring more firing than the Italians and French, has, with the aid of many able sculptors, occasionally surpassed all other nations, both in taste of design, and in work- manship. The size of the chimney must be regulated by the proportions of the apartment to which it is to be both of use and ornament. In the smallest rooms, the breadth of the aperture should be from two fert to three feet ; in larger, from three feet, to three feet six inches ; in rooms which are from twenty to twenty-four feet square, or of equal superficial dimensions, they may be from four feet to four feet six inches in width ; in those from twenty-four to twenty- seven feet in length or square, from four feet six inches to five feet; and in such as exceed these dimensions, the opening may be extended to nearly six feet, if in due proportion.

284. The fire-place should always be situated so as to be immediately seen by those who enter the room. The middle of the divisional wall is the most proper situation for the chimney in halls, saloons, and other rooms of passage ; but in drawing-rooms, dressing-rooms, and the like, the centre of the back wall is the most eligible situation. In bed-rooms the chimney is best in the middle of one of the divisional walls ; and in closets, and other very small apartments, to save room, it is often placed in a corner, as an angle-chimney.

285. Whenever two chimneys are used in the same room, they should be placed either directly facing each other, if in different walls ; or if on the same side of the apartment, at equal distances from the centre of the wall. The proportion of the apertures of fire-places of a moderate size is generally a perfect square ; in small ones it is a trifle higher, and in larger ones lower in pro- portion, according to their width.

286. The ornamental or decorative parts of chimney-pieces consist of architraves, friezes, cornices, columns, pilasters, termini, caryatides, consoles, and all kinds of ornamental sculpture, representing animals, vegetables, foliage, ara- besques, &c ; likewise vases, paterae, chalices, armorial trophies, masks, &c. In designing chimney-pieces regard should always be paid to the nature of the place to which they are to be adapted. Such as are intended for the use of halls, saloons, guard-rooms, galleries, and other large places, should be composed of large and simple parts, few in number, of distinct and pure forms, and executed in bold relief. But chimney-pieces for dra\ving-rooms, dressing- rooms, boudoirs, &c. may be of a more delicate and ornamental nature.

SECT. VI. — OF STAIR-CASES AND HAND-RAILS.

287. Stair-cases ought to be so constructed as to make the ascent safe, easy, and agreeable. To fix on a proper and advantageous situation for a stair-case is often attended with difficulty ; but without this the internal convenience and beauty of a house will be much injured. Palla- dio is of opinion, that the entrance to a stair-case ought to be situated so that the principal parts of a building may be seen before we ascend the steps ; and upon this principle it is observable, that a more easy access is gained to the principal apartments on the ground floor.

288. To render stairs easy of ascent, the height of a step, or riser, as it is called, ought not to exceed seven indies, nor in any case to be less than four; but six inches is a very general height. The breadth or tread of the

steps should not be less than twelve inches, if it can possibly be avoided, nor should it ever be more than eighteen; and, to render our ascent free from the interruption of persons descending, the length should never be less than four feet, unless in common and small buildings, whose area will not often allow more than thre : feet ; nor should the length, to be agreeable, ever, except in ex- treme cases, exceed twelve feet. That the ascent may be both safe and agreeable, it is requisite also to introduci- some convenient aperture for light, which rnuht to be as nearly oppositj to

our first entrance to the stairs as the nature of the building will admit. An equal distribution of light to each flight of stairs ought to be particu- larly regarded ; to which end those apertures or windows, at the landing or half spaces; though the whole is sometimes lighted by a cupola sky- light or lantern.

289. Stair-cases which are circular in plan are variously constructed. Some wind round a newel or cylinder in the middle, and the risers of the steps, in some instances, are straight, and in others curvilineal. Others form a well-hole, or void space in the middle, which affords excellent opportunity for a cupola-light from the top. The same observations may be applied to those stair- cases, whose plans are elliptical. The most com- mon forms, however, are those which are square, or oblong, upon the plan. The ancients paid a superstitious regard to an odd number in their flights of steps, as three, five, seven, nine, &c. in order that in their ascent they might begin and finish with the right foot. Palladio, possibly in the same feeling, allows to the stair-case of a dwelling-house, eleven or thirteen steps to each flight.

290. When a stair-case winds round a newel, whether its plan be circular or elliptical, the fol- lowing is a good proportion : — the diameter being divided into three equal parts, two of such partr. are allotted to the steps, and one for the cylinder or newel. But in circular or elliptical staircases, that are open or constructed with a well-hole in the centre, a good proportion is to divide its dia- meter into four equal parts, and allot two for the steps, and two for the void space or well-hole in the centre. Modern stair-cases have often a kind of well-hole of a mixed form ; straight on the two longest sides, and semicircular at the returns of each flight. The length of these well-holes, is, according to circumstances, but their width sel- dom exceeds from eighteen inches to two feet.

291. Hand-rails are necessary accessaries to most stair-cases, as well for safety and convenience as for ornament. The hand-rail generally begins from the bottom on a scrolled or cur-tail step, the form of which it follows supported on a carved baluster or column. This scroll or commence- ment of the hand-rail, if skilfully and tastefully managed, produces a very good effect, and serves to hold a candelabra, lamp, or vase. To assist in the

construction of these difficult, but highly ornamental parts of domestic practical architec- ture or joinery, the following observations are offered to the student for his consideration, illus- trated by the various figures in plate X. Figure 1 describes the plan of the first or cur-tail step (so called from representing the curled tail of a dog or cur, and not, as some writers say, from being curtailed or abridged of its propor- tions ; for on the contrary it is enlarged beyond the size of any of the others), formed with a scroll to receive the newel post and balusters ot the twisted hand-rail : a is the projecting nosing of the step, b the thickness of the bracket, and c the string board. To draw the scroll, the student must proceed as follows : — Let the space 1, 3, in fig. 1, be considered as equal to the spring of the scroll from its centre to the straight part of th& hand-rail, as from O to 1 fig. 3. Divide 1, 3, intc

three equal parts; and drawing the line 4, 3, at right angles to 1,3, make it equal to one more of these parts. Draw then the diagonal 4, 1 ; and from the centre 4, describe the arch 3, 5. Divide the arch into twelve equal parts ; and through these divisions draw the radii till they intersect the line 3, 1, as at 2, 3, 5, 5cc. which completes the scale for drawing the scroll. Supposing that the ieveral radial lines, 1, 2, 3, 4, &c. in fig. 3, are already drawn, proceed thus : take from fig. 2 the space 3, 2, and place it at fig. 3, from the centre O to 2. With the same opening of the compasses fix one of its feet on 2, and with the other strike a short curved line, as at C ; and from 1, with this opening, describe another in- tersecting it at C. From the centre C thus found, draw the arch, 2, 1. Again, from fig. 2, take the space 3, 3, and place it from O on the radial 3 ; with this opening, find the centre as before, and druw the arch 3, 2, proceeding in the same way with the rest. By contracting the line 4, 3, in fig. 2, it is evident that a scroll may be drawn more open, or with less convolution, as in fig. 4 ; consequently by increasing the length, 4, 3, the scroll will acquire more convolution; and there- fore we may, by these means, vary the scroll as we please. In fig. 5 is shown the pitch-board, or raking of the steps, in order to determine the falling mould of the twist. The occult or dotted lines drawn from the hand-rail to the pitch-board, show its width, which is to be kept level as it winds about. The lines a, 3, b, 2, continued round to D, show how much half the width of the rail rises on the pitch-board, from its begin- ning to 3. D exhibits the same pitch-board; and the method of finding the outside mould for the twist of the hand-rail, after its sides are so squared as to be every way in a perpendicular direction to its ground plan. But this cannot be done without first finding the mould for the hand- rail, which may be done thus : — Consider B in fig. 6, as that part of the plan of the hand-rail

comprehended between 1, 3, fig. 5. D is the pitch-hoard, which gives the rake or bevel of the hand-rail ; which, being divided into any num- ber of equal parts, draw ordinates to the plan B, as a, b. From the raking lines, e, d, draw the corresponding ordinates at right angles with it ; and by the two compasses transfer the several ordinates from 3 to G, as a, />, to c, d, and 1, 2, 3, 4, respectively : then, by drawing a curved line through these points, G will become an accurate mould for the upper side of the hand-rail.

292. As, however, the twist of the hand-rail requires a greater substance of material than the straight part, the requisite quantity may easily be determined thus : — Draw the square of the hand-rail on the pitch-board, as a, in fig. 7 ; and parallel lines from the opposite angles will show the thickness required ; as at 1, 2. Agreeably to this, /, m, n, in fig. 8, show the manner of glueing '.he rail with the additional thickness of material before mentioned. It is made of so many pieces, and varied in glueing, to assist in more easily forming the twist. The best method is, in fact, to glue these the straight way of the grain, by which means, if the wood be properly matched, i.ˆe whole will appear when finished as one solid piece. To reduce these pieces properly, and to

produce in the whole twist an agreeable turn, it will be necessary to have a falling mo-ild, that when each part of the twist is so squared, as in every part to answer to a perpendicular line over its plan when placed in its due position, it may be applied to the outside of the rail rou-nd the twist.

293. In fig. 5, therefore, consider D the pitch- board, and O, P, the level of the scroll at 3, 4. Take the stretch of a line supposed to be girted from 1 to 3, which transfer to O, P, at D. Di- vide each side of the angles formed by the raking and level-line into any number of equal parts, as 1,2, 3, each way, and the points produced by the intersection of the lines drawn from each division, will form a curve perfectly easy and sufficiently accurate for the purpose.

294. If a scroll is required to take its spring from any part of the second step, then draw the pitch-board, as described in fig. 6, and proceed in every particular as before. Fig. 9 is a plan of the hand-rail, including steps, as in cylindri- cal stair-cases. M is the quarter plan ; D is the pitch of five steps ; and R the face mould for the hand-rail, if it be cut out of the solid; if other-wise, then veneers are to be glued round a cy- linder, made for the purpose, and on which must be marked each step and riser, as shown art A, that the thin steps at b for the hand-rail, and those at a for the string-board, may be correctly laid down.

SECT. VII. — OF BALUSTRADES.

295. Balustrades, or the plain or carved small columns, or rows of balusters, that protect the edges of stair-cases, balconies, landings, &c. are sometimes of real use in buildings ; and at other times they are only ornamental. Such as are intended for use, as when they are employed on stair-cases, before windows, or to enclose and protect terraces, parapets of bridges, &c. must always be nearly of the same height, varying from three feet, their lowest height, to three feet six inches, their highest. But when they are principally designed for ornament, as when they terminate the parapet or blocking course of a building, they must be proportioned in every respect to their situation, and to the mode or order of architecture which they accompany. Their height should be not exceeding four-fifths of the height of the entablature on which they are placed ; nor should they be lower than two- thirds thereof, exclusive of the zocle or plinth, the height of which must be sufficient to afford a complete view from below of the whole balus- trade.

296. A good method to proportion balus- trades, is, to divide the whole intended height into thirteen equal parts, eight of which are to be appropriated to the height of the baluster, three for the base, and two for the cornice or top-rail. One of these parts may be called a i nodule, and, being divided into nine minutes, may serve to determine the dimensions of the particular members. The distance between two balusters should not exceed half the diameter, measured in its thickest part, nor be less than one-third of it.

297. The breadth of the pedestals that are

1/iaced, both as divisions and supports, between the balusters, and often used to carry figures or vases, when they are placed over columns or pilasters, is regulated by them. The dado, or die, should never be broader than the upper dia- meter of the shaft, nor very much narrower ; and, when there are neither columns nor pilasters in the front, the dado should not be much lower than a square, and seldom higher. On stairs, or other inclined planes, the same proportions are to be observed as in horizontal surfaces.

SECT. VIII.— OF ROOFS.

298. The roof is a most essential part of a building, particularly in a humid climate. In Egypt roofs are often of stone, and sometimes monolithal, or of one single block, even over temples of a large size. To effect the best con-

struction of a roof, a plan of the building which is to be covered should be made, before the ope- ration of roofing is commenced, in order to ascertain the lengths of the various timbers re- quired for the whole. The principal substances used for covering roofs in England, are, lead, copper, zinc, pantiles, plain tiles, and slates of various kinds and modes of laying them. Co- verings of lead are undoubtedly the best and most durable, particularly such lead as was used by our ancestors, before modern art dis- covered the mode of impoverishing its quality by the extracting of every particle, or suspected particle, of silver from its mass. But, on account of its greater expense, this kind of covering is not often used, except for magnificent buildings or for rials, in which latter case any other sorts, (except copper or /me) would not be secure against rain ; its use being superseded almost invariably, even on our new churches and repara- tions of tin1 old, by slate. The pitch or per- pendicular height of a flat roof need not exceed two-ninths of the width of the building, or rather what is termed pediment pitch ; but if wanted to walk upon, it may be lower, so as it affords a current for the water. Pantile coverings may be also used to roofs of a low pitch, if laid to a close ;;au<:e, and well pointed; but their general pitch ouˆht not to he less than three-eighths of the width of the building. Coverings of plain tiles and slates require the highest pitch, because when they are laid on flat roofs the rain will more easily find its way between them. These oti.dit to have a pitch, the length of the rafters of which is three-fourths of its base or tie-beam ; or at least the ridjre of the roof, formed by the junction of the rafters, should be a right angle.

2'J'J. There are also various kinds of circular roofs ; but those most generally used are con- structed in the following manner, being square or parallelogrammatic in their plans and timber framings, as in figs. 7 and H, in plate X, whose principal component parts an; thus named : — A is the tie-beam or girder, which not only sup- ports the principal rafters but ties them in at their feet, and prevents them from spreading. Its geometrical form is the base of a triangle; B the principal rafter or suspar; C the king-post, suspended at ITS head by the principals, and bearing up the mMille of the tie-beam by JTOU collars and screws; I) 1), stiuts. Fig. 1.

is a trussed roof of one pitch, with one king and two queen posts, capable of being thrown over a span of seventy feet. Fig. 2 is a compound roof, called an M roof, having a gutter in the middle, over the centre of the tie-beam, calculated for a span of the same extent. These latter kind of roofs are useful in cases where the span is extensive, and the pitch required low. When there is a middle wall, as is common in large dwelling-houses, the roof is made double, as in fig. 9. Fig. 4, 4, shows the method of piecing or scarfing timber, and securing it by metal bolts ; fig. 5, the me thod of trussing a girder or tie-beam with pieces ; a, b; and fig. 6, of trussing a partition.

300. Beams or girders that exceed twenty feet in length, should be trussed in one or more places, as may he required. Beams should not exceed fifteen feet in bearing, without trussing or under support ; nor common rafters more than ten feet without purlines under them, mor- ticed and tenoned into the principal rafters, and especially in roofs of a very low pitch, whose coverings have a much greater pressure on their rafters than those of higher pitches, and which may therefore exceed ten feet.

301. If the length of a beam of fir timber be thirty feet, its scantlings should be seven inches deep and six inches wide.

If 45 ft. long, 9 inch, deep, and 6 inch, wide, 60 — 10 8J —

75 — 10i — 10 —

90 — 12 10J —

302. If the length of a principal rafter be twenty-four feet, its scantlings should be six inches deep, and five inches wide.

If 36 ft. long, 7 inch, deep, and 6 inch, wide, 41—9 7 —

60 — 10 7i —

72 — 10J 9 —

303. Rafters of these dimensions are generally made about one inch, or one inch and a half, larger at the bottom in depth, which strengthens the roof by admitting larger tenons into the prin- cipal beams, and by becoming lighter at the top.

304. If the rafters be small, as eight feet in length, their scantlings may be four inches and a half, by two inches and a half wide.

If 10 ft. long, 5 inch, deep, and 2£ inch, wide, 12—6 3 —

14 — 6i 3 —

SECT. IX. — OF CEILINGS.

305. Ceilings of churches, halls, temples, gal- leries, and other vast buildings or apartments, occupying the whole of the building, may be con- sidered, architecturally, as the interior surface, or lining of the roof which covers them ; as there is nothing between them but the necessary framing by which the whole construction is sup- ported. For the common apartments of dwelling- houses, such as the dormitories, rooms of actual business, and, in fact, for all rooms hut those of state, the simplest and

most usual form of ceiling is flat. This is generally divided into principal and accessorial compartments, surrounded by mouldings, either recessed into the plane of the ceiling, or raised upon it. The ornaments and mouldings do not require a bold relief; but being

HE.

/V.-////.V

fift.J

fffj

flyjf.

H !>»drn

Fig.2.

ARCHITECTURE.

621

near the eye, they must be designed with taste, and executed with neatness and accuracy.

306. Coved ceilings, for lofty apartments, are more beautiful than flat ones ; but their exe- cution is attended with more expense. They may be used indiscriminately for large and small rooms, and should be from one-fifth to one-third of the height of the room. The figure of the cove should be either a quarter of a circle, or of an ellipsis, taking its rise a little above the cor- nice, and finishing against the border or frame, round the great panel in the centre. The border should project somewhat beyond the coves on the outside ; and on the side towards the pane? it is generally made of sufficient depth to admit the ornaments of an architrave.

307. When the profiles or mouldings of rooms are gilt, the same portions of the ceiling ought likewise to be gilt. The usual method is to gild all the ornaments, and to leave the ground white, pearl color, light blue, French gray, or of any other delicate color that may be proper to set off the gilding to advantage

308. Historical and other paintings are often mtroduced with good effect in the centre and angular compartments of large ceilings ; and of late an invention of painted silk and satin in various ornaments, after the antique, has been used in the decoration of the panellings of rooms with good effect.

These are enclosed in panels, pilasters, and tablets, according to their situation ; and, when they have suitable gilt mould- ings, they produce a very pleasing, and indeed splendid effect.

PART V.

OF THE ERECTION OF BUILDINGS IN

GENERAL.

SECT. I. — OF THE PRINCIPLES TO BE OBSERVED IN ERECTING BUILDINGS

309. The rules of building require that in every fabric there should be solidity, conveni- ence, and beauty ; to which, according to some of the most refined masters, are added, order, disposition, proportion, decorum, and economy. These several particulars are considered by the most skilful architects as absolutely necessary in the planning, erecting, and finishing, an entire fabric.

310. Solidity in architecture implies the choice of a good foundation whereon to build, proper materials wherewith to work, and a ju- dicious application of the two means to the end which is to be obtained. Convenience demands such a disposition of the various parts of an edifice, that they may not so crowd and embar- rass each other as to appear discordant in their proportions, or disagreeable to the eye of the spectator. Of beauty we have already treated in various parts of this article. Order gives to each part of the building a proportionate extent; such as is adapted and agreeable to the whole Disposition is the due arranging, and agreeable union, of all the parts. Proportion is the rela- tion that the whole work has to its constituent parts, and which each part has to the complete idea ; for, in buildings that are perfect in their kind, from any particular oart v/e may form a

tolerable judgment of the whole. Decorum con- sists in making the whole aspect of the fabric so correct, that nothing shall appear but what is founded on the principles of reason, geometry, and delicacy of judgment. It includes design, or the choice of one situation in preference to another ; and directs us to pitch upon different prospects or views for different parts of an edi- fice. Economy instructs the architect to have regard to the expense of his design, which will be greatly effected by a choice of such materials as are not only of a kind proper for his purpose, but of the cheapest of that kind.

SECT. II. — OF FOUNDATIONS.

311. The best foundation is that which con- sists of gravel or stone ; but in order to know whether the inferior strata are sufficient for the support of the building, it will he advisable to sink wells at some little distance. By attending to what is thrown up in the digging of these shafts, the architect will learn what strata lie under the stony or gravelly bed which on the surface seems to promise so much security, and will know what measures to adopt.

312. But, though a stony or gravelly bottom is undoubtedly the best for a foundation, as being the most sure and firm, where all is sound be- neath, there is, at the same time, no kind of ground which may prove more fallacious, or oc- casion such fatal accidents. The reason is, that such soil often contains beneath its surface abso- lute vacuities, that fail when built upon. Nor is rock itself, although < a building founded upou a rock' is strong even to a proverb, free from danger of the same kind. Caverns are very fre- quent in rocky places ; and should a heavy building be erected over one of these, it might suddenly give way and the superstructure fall in altogether.

313. To guard against accidents of this kind, Palladio advises the throwing down great weights forcibly on the ground, and observing whether it sounds hollow, or shakes. He says, if a drum be placed on the suspected ground near to a vessel filled with water, a gentle stroke will not resound nor ruffle the surface of the water, if the earth be solid ; but, if it be hollow, the effects produced will very clearly show it.

314. When the foundation is gravel it will be proper to examine the thickness of the stratum, and the qualities of those strata that lie under it, as they have appeared in digging. If the bed of gravel be thick, and the under strata of a sound and firm kind, there needs no assistance; if otherwise, recourse must be had to various methods in order to supply the defect. In the case of boggy earths, or unfirm sand, piling is one of the most common methods of securing a foundation; and, notwithstanding the natural disadvantages in such a case, piles, when pro- perly executed, are exceedingly firm and secure.

315. In foundations near the edge of waters, Or swampy places, soundings or borings should always be made to the very bottom, as many fatal accidents have happened from the foundation being undermined by water. The same method is to be followed when the ground which is to be built upon has been dug into, or wrought

before. It ought never to be trusted in the con- dition in which it is left; but it must be dug through into the solid and unmoved ground, and some way even into that, according to the nature of the soil, and to the weight and size of the iu- .ended edifice.

316. It will be proper, however, before the architect begins to lay the foundation of his building, to construct such drains as may be ne- cessary for carrying off the rain or other water, that would otherwise be collected and lodge about the house. In forming drains for carry- ing off this water, it will be necessary to make large allowance for the different quantities that may be collected at different times. It must also be considered, that water of this kind is always loaded with a vast quantity of sediment, which, by continually falling to the bottom, will be very apt to choke up the drain, especially at those places where there happen to be angles or corners in its course. The only method of preventing this is by means of certain cavities, disposed at proper distances from one another. Into these cavities the sediment will be deposited, and they are for that reason called cess-pools.

317. All drains ought to be arched over at the top, which is most conveniently executed of brick. According to their different sizes, the following proportions of height and thickness ought to be observed. If the drain be eighteen inches wide, the height of the walls may be twelve inches, and their thickness nine inches, or one brick. The bottom should be paved with brirks laid flat ways, and a little concave, and the arch turned over the top four inches and a half, or half a brick in thickness. If the drain be twenty-two inches wide, the side-walls should then be fifteen inches in height, and the rest constructed as directed above. If it be fourteen inches wide, the height of the walls should not be less than nine inches, and the rise or versed sine of the arch, four inches. A drain or sewer of three feet wide, should be about the same height as it is wide, and the arch which covers it over should be nine inches, or one brick's length in thickness. Upon the same principles and pro- portions, other drains of any size may be con- structed.

:518. The sewers and drains being constructed in a manner proportionable to the size and ne- cessities of the intended building, the architect may next proceed to lay the foundation of the walls. Here his first care ought to be, that the floor of the foundation be perfectly smooth and level. The Italians begin with laying over it an even covering of strong oak plank ; and upon that they lay, with the most exact care, the first course of the materials with which they form the footings. Whether this method of planking the foundations, or of commencing upon the naked soil or floor of the foundation, be adopted, the whole of the footings, with their sets-off laid se- riatim, must be laid with the greatest accuracy by line and rule. When planking, or planking upon sleepers, which go across the foundation at

right angles to the plankings is used, the first course of bricks or stone is best laid without mortar and with the closest cross joints, as mor- tar is deleterious to timber, which otherwise

would endure for ages in a tolerably good soil.

319. The thickness of foundation walls or footings, in general, ought to be double that of the insistent walls, which they have to support, and set off gradually by steps on each side, till they arrive at that of the intended walls ; and this footing ought to be at least six inches, or two courses of bricks, below the level of the floor of the lower story. The looser the ground is, by so much more, in proportion to the badness of the natural foundation, should the thickness and depths of the footings be ; and it will require a similar proportionate addition each way, ac- cording to the intended height of the wall that is to be erected upon it ; or, if a building, of the weight such building is intended to carry. The plane of the ground should be perfectly level, in order that the weight may press equally every- where ; for where it inclines more to one side than another, whether in length or breadth, the wall will split, and occasion what are called set- tlements. The footings or foundation-walls, should diminish seriatim, and equally on each side, as they rise ; and the perpendicular should be exactly kept in the lower and upper parts of the walls ; which caution should be observed all the way up, wherever sets-off or diminutions of thickness occur, with the same strictness. In some soils the foundations may be arched on proper piers, which will save materials and labor, at the same time that the superstructure has an equal security. This practice may peculiarly be adopted when the foundation is piled ; when the piers may be placed in situations accommodated to the necessity of the case, and upon the heads of the piles.

SECT. III. — OF WALLS, CHIMNEYS, ROOFS, AND FLOORS.

320. As the foundation-walls or footings are to diminish in thickness, seriatim, as they rise, so are also the walls which are to be built upon them. This is necessary to save expense, but is not absolutely so to strengthen the wall ; for it would be no less strong though it were conti- nued all the way to the top of an equal thickness, provided the perpendicular be exactly kept. In common dwelling-houses, built of brick, the ge- neral diminution from the bottom to the top is regulated in the metropolis and surrounding neighbourhood, in what is called the bills of mortality, by the standard regulations of the building act of parliament ; but agood proportion, where the provisions of such act do not extend, is to begin in the lower story two bricks in thick- ness ; then one brick and a half ; and lastly, one brick in thickness. In larger edifices the walls must be made proportionally thicker ; but the diminution should be preserved after the same manner. When

stones are used in the construc tion of walls, instead of bricks, regard must be paid to their nature, and to the propriety of their figures for holding one another ; and where the wall is to be constructed with different materials as hewn and rough stone, or stone and bi ick, the heaviest should always be placed undermost.

321. One additional particular respecting the st length of a plain wall is to be observed ; namely.

to fortify its angles. This is best done with good squared stones on each side, which not only afford considerable strength, but a great deal of beauty. Pilasters or piers, properly applied, ewe great strength to walls. Their best distance is about every twenty feet, and they should pro- ject from four and a half to six inches from the surface of the wall. Every opening in a wall contributes to weaken it ; and, as the corners re- quire to be the strongest parts, there should never be a window or a door very near to a corner. — The distance of any opening from an angle should always be at least the width of the open- ing itself.

322. Together with the construction of walls, the management of chimneys should always be considered ; for errors in the construction of these will render the most elegant buildings extremely disagreeable. The common causes of smoking in chimneys are either that the wind is too much admitted into the mouth or lower extremity of the funnel, or that the smoke is stifled below ; and sometimes, a higher building, or a conside- rable elevation of trees or of the ground contigu- ous to the building, is the cause of the mischief ; or, lastly, the room in which the chimney is may be so small or close, that there is not a sufficient current of air to drive up the smoke. The best method is to construct the lower part of the chimneys with an easy chamber for the smoke, to diminish therefrom afterwards with a gentle diminution to the regular flues, which must turn in every respect gently and not suddenly. This will always choke the current of smoke. In fact a well-constructed chimney should resemble in elevation a narrow river in plan ; for where the water would be choked in the one case, the smoke would be so in the other ; and in places where eddies and curls would be formed in the one instance, so would it in the other. For curing smoky chimneys in houses already built, see CHIMNEY.

323. After the walls are finished, the roof is the next consideration. This subject, as far as carpentry is concerned, was treated in sect. V11I. plate 4 ; little more need be said con- cerning it under this section, than that its

weight should be calculated in proportion to the strength of the walls. It should also be so contrived as to press equally upon the build- ing; and the inner or cross-walls should also bear their proportion of the weight as well as the outer ones. A roof should neither be too heavy nor too light ; for being necessary in keep- ing the walls together by its pressure and ties, it will be incapable of doing so if too light or fragile; and if too heavy, it is in danger of throwing them down. Of these two extremes, however, the last is most to be dreaded.

324. Floors are most commonly made of wood ; and it is necessary that it be well season- ed, by being kept a proper time before it is used. The floors of the same story should be all on one level ; without even a threshold rising above the rest ; and if in any part there should be a room or a closet, the floor of which is not per- fectly level, it ought not to be left so, but raised or lowered, as the case may be, to any equality with the rest ; what is wanting of the true floor being supplied by a false one.

325. The lower floors of common cottages or laborers' dwellings, may be made of a compo- sition of clay, bullocks' blood, and a moderate proportion of sharp sand. These three ingre- dients, beaten thoroughly together, and well spread, make a firm good floor, and of an agree- able color. For better houses floors of this nature may be made of plaster of Paris, or cal- cined gypsum, beaten and sifted, and mixed with other ingredients. This cement may be colored to any tint by the addition of coloring materials ; and when well worked and planished with float- ing and finishing trowels, it makes a very beau- tiful floor. Besides these, halls, and some other good rooms, may be paved or floored with mar- ble or stone, either plain or dotted with black or dark-colored quarries. At present the gene- ral use of carpets has, in a great measure, su- perseded the custom of laying ornamented or in- laid floors. In country buildings, floors are very frequently made of a sort of brick called paving bricks, and tiles ; the latter varying from ten to twelve inches square, and about an inch, to an inch and a quarter, in thickness. These, accord- ing to their shapes, may be laid in a variety of figures, as the herring-bone, the alternate oblong, &c. ; and they are also capable of some variety of color, according to the nature of the earth from which they are made. They may be laid at any time of the year, but those of earth or plaster are best made in the beginning of sum- mer, for the sake of drying.

SECT. IV. — OF THE DISTRIBUTION- op THE APARTMENTS OF HOUSES, &c.

326. The distribution of the apartments of houses must, of necessity, be directed by the way of life in which the inhabitants are engaged. In the country their occupation is most commonly farming; and therefore, besides

the house for the family, there are also necessary, barns for the reception of the produce of the ground, stables for the horses, stalls, &c. for the cattle, cart- houses for keeping the vehicles and utensils under cover, and a variety of sheds and stalls for other uses.

327. To accomplish these purposes, a good proportion is, to take a piece of ground of five times the extent of the front of the house, and enclose it in a proper and economical manner. In the central part of the rear of this area place the house ; and in front of the ground the bams and stables, with the adjoining sheds. These are best situated, one range on each side, to the extremities of the enclosed ground. They will thus fill up a part of the entrance, and leave an area about and in front of the house, for the purpose of a farm-yard. From the bams to the stables, a fence, with entrance gates in the mid- dle may be extended. The entrance ought al- ways to be in front of the house.

328. The plan of the house and out-buildings may be arranged as follows : The entrance door should enter into a passage, paved with bricks ; at the end of which the stair-case may be con- veniently placed. On one side of the passage should be the common kitchen ; and on the other side a corresponding large room, that may serve the family by way of dining or living room. Beyond this may be die pantry and dairy, the

last being twice the size of the former ; and both with a northern aspect, and on the same side with the parlor, that they may be away from the heat of the kitchen, which renders it improper to be near them. More rooms may be added on the ground story, as occasion may require; and the upper story divided into bed-chambers for the family, with dormitories, formed in the roof or attic story, for the use of the servants.

329. A gentleman's country house or seat should, of course, be built on a more extensive plan, and after a more ornamental style of archi- tecture. In such case the front may extend from sixty to seventy feet in length ; the depth of the main building may be forty feet, and in each of the wings from forty-five to fifty feet. The offices are best distributed in the wings ; the kitchen and its offices in the one, and the stables in the other. Both of these, however, should corres- pond with each other in every respect, and in style and due proportion with the body of the building to which they are accessorial adjuncts. These wings may project about thirteen or four- teen feet from the main body of the house to which they are to be connected, either by straight or curved lines, or walls or rows of columns. A good

proportion for these wings, if belonging to a house of sixty-five feet front, is about thirty- five feet, with a depth of forty-five feet. If they are smaller, the house will look gigantic; if larger, they will lessen its aspect.

330. It is weil also to have a covered com- munication between the dwelling-house and the wings or ofiices, wiiich should not have the ap- pearanee of a plain blank wall, but should be ornamented by pates, and other openings or breaks. The archway by which the ofiices are connected with the dwelling-house, should be proportioned to the extent of the building ; and there can scarcely be a better proportion than that of five feet within the angles of the build- ings. The wings, which have only a projection of thirteen feet, will appear to have one of eigh- teen, and the light and shade will be agreeably diversified.

331. As to the internal distribution of a house of this kind, the lower story maybe conveniently divided into three front apartments: the hall, which should lie in the centre, may occupy the whole of the projecting part, Slaving a room on each side; the length of the hall should be about twenty- four feet, and its breadth twelve, being a double cube in proportion. The rooms, on eacli side, should be sixteen feet each in length, and elcMii \ide; of these two front rooms, that on the riu'ht hand may he conveniently adapted to the purpose of a waiting-room for persons of rank ; ,uid that on the left-hand as a dressyvj- vooni tor the master of the house. Behind the hall a passage may be constructed of about four Iceland a hah" in width, leading to the apart- mtnts in the rear of the house, and to the stair- case. Th>,e may ' ' disposed as follows: — im mediately 1. Mind t'.e hall and the passage the space tuny l,e occupied by a saloon of twenty- ! Hir ;'eet in length, and seventeen in breadth. On the L'U-hand oi' the passage, behind the hall, is to be phued the principal stair-ease; and, as it will not occupy the whole depth, a pleasant com-

mon parlor may terminate that side of the house. On the other side, the passage should lead to the doorˆof the principal dining-room, which may occupy the whole space.

332. The wing on the right-hand may contain the kitchen and offices which belong to it, and the other the stable offices. The front of the right-wing may be entirely occupied by the kit- chen, which will then be thirty feet long, and sixteen feet and a half wide ; or it may be ren- dered smaller by taking off a small room to the right ; twenty-two feet by sixteen will then be its size. The other room will then have a length of sixteen feet parallel to the depth of the kitchen, and the width to the front will bo seven feet six inches. Beyond the kitchen will be a good si- tuation for a stair-case, for which seven feet six inches will be a suitable allowance ; and to the right of this may be a scullery eleven feet ten inches deep, from the rear front, by

seven feet in depth. To the left of the stair-case is a proper site for the servants' hall, about sixteen feet square, and behind that a larder twelve feet ten inches, by fourteen feet six inches. In the centre of the other wing may be a double coach-house, for which there should be allowed the whole breadth of the wing, with ten feet six inches in the clear, and on each side may be the stables.

PART VI.

OF AQUATIC ARCHITECTURE. SECT. I. — OF STONE BRIDGES.

333. Bridges generally form the continuation of a street or highway over a river, canal, brook, or marshy ground; and sometimes over dry ground, to form a connected street between two rising grounds, such as the North and South bridges of Edinburgh. Bridges that are merely a part of the high road, may be built in a cheap and rude manner ; but when they take their di- rection from a principal street in a capital city, their construction is attended with considerable expense ; and a degree of elegance and durability is required in their formation, that demands the utmost skill and ingenuity of the architect.

334. Palladio, in his third book, tells us that bridges ought to have the same qualities that are j udged necessary in all other buildings, namely, that they should be convenient, beautiful, and lasting. The perfection of a bridge consists in its having a good foundation, which makes it lasting ; an easy ascent to the crown of its cen- tral arch, which makes it convenient; and just proportion in its several parts, which renders it beautiful. When the architect is not absolutely confined to any particular situation, he ought to choose that part of a river which has its course narrow and shallow, and is the most promising for a good foundation. A straight current, where the shore does not wind, and possessing at the same time the farther advantage of a level and rocky bed, is the most eligible.

335. In erecting bridges of stone, there are three or four particulars which should princi- pally claim the attention of the architect : — 1. The abutments should not only receive the pressure of the arches with which they are connected, but they nnis' also be capable of resisting the force of the

whole combined together. Hence the necessity of a solid foundation on tne opposite sides of the river, without which the several arches will be liable at least to partial rents, if the whole does not entirely give way. 2. The direction which the whole structure is to take across the river is to be

attended to ; and this ought always to be at right angles with the current, in order that the stream may more easily pass through each arch without injuring the piers. 3. The size of the piers must be considered, which ought not to be larger than what is essentially necessary for the support of the arches ; because the unnecessary thickness of piers has the effect of contracting the water-way, and increasing the current of the water, and consequently its velocity, thus render- ing the foundation of each pier more liable to be undermined. 4. The architect should decide with mathematical precision upon the dimen- sions, number, and figure of the arches, which are points of great consequence to the whole, in relation to strength, utility, beauty, and eco- nomy.

336. Where there is a strong current and much navigation, with elevated ground on each tide, wide arches are preferable on many ac- counts. They afford a more easy passage to vessels, and, being formed with a smaller number of piers, become less expensive, prove a less hindrance to the current of the water, and in some respects, are safer than those bridges which are built with narrow arches. These, perhaps, were among the reasons which induced many foreign architects to choose only one arch, even in cases where there was sufficient room and occasion for more. We read of a bridge in China, whose" abutments are two opposite moun- tains, having but one arch, the chord of which is four hundred cubits, and its height, or versed sine (we suppose measured from the surface of the water and its perpendicular piers included), five hundred cubits.

337. But, on the other hand, where the ground is low on each side, a very wide arch would not be the most proper, if considered in regard to the road-way over it. For, as a semi- circle is not only one of the most beautiful forms of arches, but at the same time one of the strongest, to choose an extensive radius, would occasion the middle part of the road way to be so high, as to render the passage for carriages extremely diffi- cult. To obviate this, by changing the figure of the arch into an ellipsis, is, in some respects, an impropriety, as it is not so strong nor so beauti- ful as the former; yet it maybe allowed, when a river is narrow and its banks extremely low. In" such case, the danger will often lie in the abut- ments ; for arches, which are either elliptical or small segments of circles, press their abutments in proportion as their height is to their length. When, therefore, the architect cannot depend upon his abutments, though the river be narrow, the number of arches must be increased, and their figure might better be a semicircle; as it is self-evident, that such arches press more per- pendicularly on their piers, and in proportion to their number, will relieve their abutments.

338. The ancients, as well as the moderns, assigned to a bridge an even number of piers,

in order that an arch and not a pier, may be ovei the centre of the river. This is, indeed, not founded merely on the principles of beauty, but of philosophy and utility ; since, in general, it is found that the strongest current runs in the cen- tre of a river; which, therefore, clears itself in the aperture of a bold arch, and makes it less dangerous to the piers nearest the centre.

339. The size of the piers must be governed by that of the arch, and, according to Palladio, they should never be less than one-sixth part of its width, nor more than one-fourth. Piers for bridges are generally hexagonal upon their plan, having two long sides parallel to each other, and at the ends of them are placed two short ones, facing the course of the stream, at right angles to each other, and called cut-waters. Palladio says they may be sometimes made semicircular, facing the stream in order to divide the water, and that those things which are impetuously floated down the river when they strike against them, may be thrown off from the piers, and passed through the centre of the arch.

340. As the proper dimensions of the key- stones or archivolts, the same able architect gives to their height a seventeenth part of the width of the arch. This proportion is somewhat smaller than that allowed by Gautier, an expe- rienced French engineer, who gives to the length of the voussoirs or arch stones, of an arch whose chord or opening is twenty-four feet, a length of two feet, or one-twelfth ; and to arches of the various widths, or the chords of whose arcs are respectively forty-five, sixty, seventy-five, or ninety feet, he gives three, four, five and six feet respectively, and more than this when the stone is of a soft nature. But Belidor, who is a good theoretical authority, gives as a proportion that the length of the key-stones ought always to be a twenty-fourth part of the width of the arch, whether the stone be hard or soft, because, he says, if it be soft their weight is proportion- ably less. This rule, however, is bad in prac- tice, and inferior to that of Gautier, which regu- lates the depth of the voussoir according to the length of the chord of the arch. The practical rule of Perronet, which has been ably followed by Rennie, Dodd, and other recent English bridge builders, of the internal line of the arch forming a different curve from the ex- ternal line of the voussoirs, called the extrados and intrados of the arch, is better than either, and has been well executed over the Seine at Neuilly, near Paris. A better specimen, on the same principles, is Waterloo bridge, executed in fine granite, over the Thames near Somerset-house. The principle of the depth of the voussoir being larger at the springing of the arch than at the key-stone, is founded upon that mentioned in para. 303, in observing upon the propriety of making the bottom part of a rafter larger than the top. Dr. Hutton has given some excellent theoretical rules in a

little treatise, con- cerning the intrados, extrados, and curves of arches, which are worth the most serious at tention of the architectural student, who would design a secure and economical arch.

341. It may appear somewhat strange, that scientific men should differ so widely about the

depth of the key-stone. The most illiterate pre- tenders to the science could scarcely vary more in their opinions respecting the due proportion of the voussoirs and depth of the key-stone, than to make such a difference as between one and two feet hi an arch of only twenty-four feet wide. To what can such an extraordinary dif- ference be attributed, but to sheer ignorance, or to ridiculous caprice. As a proper medium be- tween these extremes, the judicious proportions of Palladio, who, as a learned architect was of course a skilful engineer, may be safely recom- mended to practice, if united with Perronet's im- provement of the diminution of the voussoirs from the bed to the crown. This proportion in a bridge over a river of 180 feet wide between the abutments, he divided into three arches, giving sixty feet to the centre arch, and forty-eight feet to each of the other two. The piers, which he calls pilasters, he makes twelve feet in width, or one-fifth of the width of the middle arch, and a fourth of the smaller ones. The arches he forms of a segment, somewhat less than a semicircle ; and their archivolt, or depth of voussoir, one seventeenth part of the chord of the centre arch; p.nel a fourteenth part of tlu: other two. Accord- ing to this proportion, the key-stone of his centre arch should be three feet six; inches in depth, but upon the principles of Gautier it would be four feet, and upon those of Belider only two feet ten inches. In an arch whose chord is twent-! bur feel. Pallaclio's rule makes the depth of the keystone a trirle more than eighteen inches, which is a much more eligible proportion than either the twelve inches of Belidor, or the twenty-tour inches of Gautier.

34'2. I 'pon the proper thickness of the key- stone, or the depth of the voussoir or arch stones, ancient writers on architecture say nothing; nor have the moderns at present settled any deter- mined rule. Dr. liutton is too theoretical, al- though lie is a profound mathematician ; and the few practical men who have hitherto published their speculations, have been too merely work- men, to uivr true data on which the builder may safely depend in every instance. The union of the architect and the mathematician, so as to unite science with taste, is the desideratum for the

true bniltre-lmilder. This silence of the an- cients upon such a subject, which they practised so well, must arise from a loss of their works, or perhaps they calculated them in common with other rustic works, whose thickness is as four to six

IM3. Tlu: width commonly allowed to bridges of a moderate si/.e is about thirty feet; but in larger ones, near great towns or cities, thirty feet are allowed clear for horses and carriages, besides a raised footway on each side for loot passengers, of six or nine feet each, raised about a foot above: the carriage road; the para- pet walls on each side should be about eighteen inches in thickness, and four feet in height. The line of pavement is sometimes designated on the sides next the water by a cornice,1 either plain or decorated with Mocks or cantalivers. Sometimes balustrades of sti.ne or iron ;ne placed on a block1.1.!;; couiM' instead <.f a plain parapet, as upon most ol the stone bridges o\ el the Thames,

and that at Edinburgh, where the bridge is. of great extent, and built upon a magnificent scale of decoration.

344. The ends of bridges generally open from the middle of the two large arches with two wings, making an angle of forty five degrees with the rest, in order to make their entrance more free. These wings are supported by a continuation of the arches; that which is immediately under each wing being smaller than the rest. But the wings or entrances to bridges are often supported by the solid abutment alone.

SECT. II. — OF LAYING THE FOUNDATION OF

PlERS AND CONDUCTING THE WORK.

345. The most proper season for laying the foundations of a bridge is in autumn, when the waters are lowest, and when the weather is suit- able for aquatic architecture. The ancients used several methods to obtain a durable foundation for their stone bridges. Some of these it will be proper to allude to, that the reader may form his own judgment, by comparing the ancient with the modern practice.

346. Alberti, one of the earliest of those mo- dern architects who have written upon the archi- tecture of bridges, gives the following directions for laying the foundation of a pier : — ' First raise an enclosure to keep off the water by driving a double row of stakes or piles very close and thick set, with their heads above the top of the water like a trench. Then put hurdles within this double row of stakes. Close that side of the row which is next to the intended pier, and fill up the hollow between the two rows with rushes and mud, ramming them together so hard that no water can possibly get

through. Then whatever is found within this enclosure, whether it be water, mud, sand, or whatever else is a hindrance to the works, is to be thrown out, and the earth dug down till you arrive at a solid foundation. Or, if you find it necessary, make a foundation of wooden piles, burnt at the ends, and driven in as close together as possible. And here I have observed, that the best architects used to make a continued foundation of the whole length of the bridge, and not merely under each pier ; and this they did, not by shut- ting up the whole river at once by a single en- closure, but by first excluding one part, then another, and so by joining the whole together by degrees ; for it would be impossible to withstand and repel the whole force of the water at once. We must therefore, while we are at work at one part, leave another part open for a passage for the stream. You may leave these passages either fti the channel itself, or if you think it more convenient, you may frame wobden dams or hanging channels, by which the superfluous water may run off; but, if you find the expense of a continued foundation for the whole bridge too great, you may only make a separate foun- dation for every separate pier, in the form of a ship, with one angle in the stern and another in the head, lying directly even with the current of the stream, that the force of the water may be broken by the angles. We are to remember that the water is much more dangerous to the stern than to the head of the pier.'

A R C II I T K C T (I R E.

347. Palladio, who is the next writer, says ' To lay the foundations of pilasters,' by which he means the piers of abridge, ' if the bed of the river be stone or gravel-stone, you have the foundation without any trouble ; but, in case the bottom be quicksand or gravel, you must dig therein till you come to solid or firm ground ; or if that should be found too laborious, or im- practicable, you must dig moderately deep in ».liR sand or gravel, and then you must drive in oaken piles that will reach the solid or firm ground, with the iron by which their points are to be armed. A part only of the bed of the river must be enclosed from the water, and then we are to build there ; that the other part being left oper, the water may have its free current, and so go on from part to part.'

348. Scamozzi proposes three different me- thods, namely : I. By driving a double row of piles and filling in between chalk or come close materials, and afterwards pumping out the water, and then driving other piles within them to form the foundation of the piers. This being done, a platform of oak plank is to be framed . and laid upon these piles, on which the stone work of the pier is to rest.

349. II. His second scheme is, after having sounded the river and levelled its bed, to make a strong frame, or grillage, as he calls it, of oak, which is

to be buoyed by boats, and, having a thick course of two stones laid upon it, well cramped together with iron and jointed with strong tarrass, he directs it to be let down gently to its place in the bed of the river.

350. III. After having turned the course of the river on one side, by means of fences or channels sunk in the bed of the river, he made a dam with piles entirely across the river, suf- ficiently wide to build the piers in ; and when he had by digging obtained a proper founda- tion, he proceeded to build all his piers to- gether; and having raised them above low- water mark he again turned the channel of the river into its former place.

351. The various circumstances of different rivers seem evidently to have given occasion to these three methods in the course of Scamozzi's practice ; not that he considered any of them alike practicable in all cases. His first method, we presume, was applied in those cases where the river was deep and destitute of a good natu- ral bed. His second was probably adopted when a river was moderately deep, but of a natural good foundation in its bed capable of supporting a heavy pier, founded on a strong frame of oak immediately let down upon it, without the greater trouble and expense of piling, damming, and pumping out of the water. His third me- thod we suppose he meant to apply to the in- stances of fordable, shallow, and narrow rivers, canals, or brooks, &c. where there was a suitable place for turning the course of the water either by a wooden fence placed in a diagonal or sloping direction across the river, or, when the ground on one side of the river form ing a penin- sula, or some form nearly approaching to it, it was not difficult to turn off the stream on one side by digging through the isthmus or neck of iand, and equally ea

352. Sdcli was the situation of Trajan's mag- nificent bridge over the Danube ; of which Dio Cassius gives the following account : ' Trajan built a bridge of stone over the Danube, which in truth one cannot sufficiently admire ; for though all the works of Trajan are very magnifi- cent, yet this far exceeds all the others ; the piers were ten in number, built of square stone ; each of them 150 feet high above the foundation, sixty feet in breadth, and distant from one another 170 feet. Though the expense of this work must have been exceedingly great, yet it becomes more extraordinary by the river being rapid, and its bottom of a soft nature : where the bridge was built was the narrowest part of the river thereabout, for in most other parts it is double or treble the breadth, and although on this account it became so much the deeper, and the stream more rapid, yet no other place was so suitable for this undertaking. The arches were afterwards demolished by Hadrian ; but the piers are still remaining, which seem, as it were, to testify that there is nothing which human inge- nuity is not able to accomplish.' The whole length of this bridge was 1590 yards. Some authors add that it was built in one summer, and that A.pollodorns of Damascus

was the architect, who left behind him a description of this great work.

353. Most of the bridges ui France have been built on the principles of Scamozzi's first method ; namely, by driving oak piles and keep- ing off the water. This enclosure the French architects call a batterd eau, and the English a coffer-dam.

354. The piers of Westminster bridge, built by a Swiss architect and engineer of the name ot Labelye, were founded on an improved kind of coffer-dam, well suited to the necessities of the case. This machine was a kind of pontoon or floated coffer-dam, called a caisson, that was rendered capable of rising again after being sunk to the bed of the river, with two or three of the first courses of stones, laid syste- matically in it for the foundation of the pier. The bed of 'the Thames at Westminster being of the best kind, the architect had little more to do than to level it; for previous to this operation they had driven in large piles all around, about five feet in the clear, larger than the dimensions of the caisson or floating coffer- dam. These piles served both as a defence to the coffer, and to secure them in their places when sunk.

355. Having laid the first course of stones on the bottom of the caisson, and floated it exactly over the proper place, it was sunk by opening a sluice made for the purpose in the bottom of the machine, to emit the water. During about two hours before low water, the pumps were employed to draw off the fluid again, the sluice being closed, by which means the vessel with its contents was again raised to the surface for"1 the purpose of affording the workmen an oppor- tunity of correcting such uneven parts of the foundation as they might have observed in their experiment. To the first course they now adcW two more, cramping each stone together, and filling every joint with tarrass mortar ; and, after

liavi so done, they again opened the sluice and sunk the machine, which deposited the stone- work in the manner just related. By this means they soon brought the masonry to within two feet of low-water mark, and by the succeeding tide were enabled to get above it. The sides of the caisson were so contrived, that by relieving a number of iron wedges, they detached themselves from the bottom, and were at liberty to be used again for another pier, by being again fixed to a new bottom. It should be observed, that when the tide was at the highest the caisson was about six feet under

the surface of the water; but being loaded with three courses of stones, and well secured by ropes fastened to the piles, it remained unmoved by the highest and most rapid tide.

356. In this place, it may be natural to in- quire, why the caissons were not made sufficiently deep to exclude the water at its greatest height ? The answer is easy, when the circumstances are known ; for if it be considered that the water at its full height rose sixteen feet, and that the bed of the river where the pier stood was sunk about six feet, a caisson or coffer of twenty-two feet in height would have been necessary ; which height would have rendered the machine almost unmanageable ; and as they had a sluice in the side of the caisson just on a level with low-water mark, by which all the superfluous water was easily got ri;l of, it was evidently unnecessary to have the machine higher than sixteen feet. The dreumsta-Ke ot' the caisson being so much under water, far from impeding, rather facilitated, the execution of the work ; for all the water above the edges of the caisson cleared itself with greater facility than that within, which passed through the sluice. As for the remaining water below the sluice, it was carried off by a number of chain pumps, so that the workmen were enabled to bring up the masonry of the pier above water with much facility. Thus was every pie-r raised above low-water mark ; and in the course of seven years the whole bridge was complete d.

:>."> 7. Since that period, some of the arches of this line bridge have exhibited symptoms of injury and decay ; and a method of repairing them and of reducing the enormous weight of the stone work, by means of spandrel walls on the back of the damaged arches, was suggested a few years since, by a skilful architect, who calculated that there are not less than five hundred tons of not merely superfluous, but absolutely injurious, weight upon them. I, abelye, its ingenious archi- tect, said of this bridge that, among other qualities, it contained nearly double the quantity of stone which is in St. Paul's Cathedral.

3.")H. The foundation of Kssev bridge, over the I iriey, in Dublin, was laid in 17o3,ina very deep and rapid stream, by Mr. Seinple, who adopted i he following method, as related in a journal kept and published by himself : Round the place where the pier was intended to be built, the workmen drove, at about thirty inches distance <'rn"i inch other both wavs, two rows of strong I i s, v. hc:i were !e;t ;>t !>• heurht of low-water i! i'k. TJK •- : pdes were hurl with planks, v. :t'.ii; v .hiels r.iiey ra:nm.-:i '. quantity of clay,

and thus formed the external wall of the coffer- dam. Within this wall, and at about the same distance, they drove in a row of piles dove-tailed at their edges so as to receive each other, and which formed the extremities of the

plan of the piers at the level of the bed of the river. After having dug to a fine stratum of sand, about four feet lower, within these were driven a great num- ber of oaken piles, as deep as they could possibly be made to penetrate. They next filled un the vacuities or intervals of these piles ; and, in order to produce a solid and petrified foundation, mor- tar or cement of a peculiar quality made up of roach lime, and sharp gravel, was employed ; and with this the workmen began to lay the first course, ramming in large flat stones to about a foot thick. On this first course they laid a plen- tiful coat of dry lime and gravel of the same quality, on which they again laid stones, and then proceeded to lay mortar as at first, and continued to pursue the same processes alternately till they came to a level with the piles. Fastened down to the ends of these piles were laid three beams, stretching the whole length of the pier from ster- ling to sterling, the intervals being filled up with masonry. On this platform, which was four feet six inches under low-water mark, they began to lay the first course of stones for the pier, cramped together and jointed with tarrass as usual, and went forward till they brought up the work to a level with the water at ebb tide.

359. About the year 1765 the foundation of a stone bridge across the river Tees at Stockton was laid by Mr. Shout, an eminent practical bridge-builder of his day ; and we shall here mention those few particulars in which his me- thod differed from the preceding : The workmen began with first making very strong coffers of solid fir timber about ten feet square, which they piled, jointed, and secured one to the other till they had gained a sufficient height to exclude the water at its highest tide. The joints of these timbers were then caulked in the same manner as ships ; when, launching them without any bottoms, they fixed them down to their respec- tive stations in the river. On the outside and inside they drove a number of piles, which t. ay boarded and rammed with clay, to prevent Uu water from oozing in at the bottom of the coffers. This was indeed their greatest difficulty ; fo. owing to quicksands, and other loose strata through which the water sprang in, the labor of digging to the proper kind of foundation was immense. The chain pumps were plied inces- santly; and by a resolute perseverance the work, which at some periods seemed to bid defianqf to human industry and skill, was at length brought above low-water mark ; and the completion of the whole of this difficult undertaking occupied a space of time nearly equal to that of Westmin- ster bridge. The bridge is neat and plain, and continues a proof of the stability of its foundation.

360. In some cases, where there is a great depth of water, and the bed of the river is tole- rably level, or where it can be made so by any contrivance, a very strong frame of timber abont four times as large as the base of the piers may be lowered down, with large stones fixed upon it, round the edges, to make it sink. After fixing it

to a perfect level, piles must be driven round it to keep it in its place ; and then the foundation may be laid in coffers as before, which are to be kept steady by means of ropes tied to the piles.

361. This method of constructing the piers of bridges in deep water has been frequently adopted in Russia; and though the bed of the river should happen not to be very solid, yet such a grating of timber, when once well settled with the weight of the pier upon it, will be even- tually as firm as if piles had been driven under the foundations. But to prevent the water from undermining the footings, and to secure the base of the pier against all accidents, a row of dove- tailed piles should be driven quite round the grating. This precaution being taken, the foun- dation will be as secure as any that can be made.

362. The French architectural engineers make use of another method of constructing a founda- tion of masonry under water ; which is, to drive a row of piles round the intended site, nearer to, or farther from, each other, according as the water is deeper or more shallow. These piles being strongly bound together in several places, with horizontal tie-beams, serve to support a row of dove-tailed piles driven within them. When this is done, and all the works are well secured according to situation and circumstances, they dig the foundation by means of a machine with scoops, made for the purpose, until they come to a solid bed of gravel or clay ; or, if the bed of the river be of a soft consistence to a great depth, it is excavated only to about six feet deep, and a grating of timber is laid upon it, which is to be well secured with piles driven into the opposite corners of each square, without regard whether they exceed the upper surface of the grating much, or not.

363. When the foundation is thus prepared, they make a kind of mortar which they call beton, consisting of twelve parts of pozzuolano or Dutch tarrass, six of good sand, nine of unslacked lime, the best that can be procured, thirteen of stone splinters not exceeding the size of an egg, and three parts tile-dust, cinders, or scales of iron out of a forge. These ingredients being well worked together, must be left standing for about twenty-four hours, or till the mass becomes so hard as not to be separated without a pick-axe.

364. They then throw into the coffer a bed of rubble stone, not very large, which they spread all over the bottom, as nearly level as they can ; a box is next sunk full of this hard mortar, broken into pieces, till it comes within a

short dis- tance of the bottom. This box is so contrived as to be overset or turned upside down at any depth ; which being done, the pieces of mortar soften, and so fill up the interstices between the stones. By these means they sink as much of it as will form a bed of about twelve inches deep all over ; they then throw in another bed of stone, and so continue alternately throwing a bed of mortar, and one of stone, till the work approaches the surface of the water, where it is levelled, when the work is finished with stones in the usual manner. Belidor says, in the second part of his Architecture Hydraulique, vol. ii. p. 188, that M. Mullet de Montville having filled a coffer, containing tv, enty-seven

cubic feet with masonry made of this mortar and rubble stone, he sunk it into the sea, where it was left for two months, and when it was taken out again, the cement was harder than stone itself.

SECT. III. OF WOODEN BRIDGES.

365. Wooden bridges may be constructed by various methods, so as to answer most of the purposes of stone bridges, and even to last a considerable time. See plate X.

366. The invention of wooden bridges was certainly prior to those of stone. Two or three different kinds of them are described by Palla- dio, after the manner of the ancients. Some of these present one continued frame of wood, composed of a number of parts, and connected together by lapoed joints and iron bolts, extend- ing quite across the river, without any pile to support them, depending entirely on the trussed parapets, and on the manner of fixing these frames on the stone abutments. Palladio built one at Bassano, about 200 feet long, by twenty- six broad, which he divided into five apertures, supported and framed like that represented in the plate, which was partly taken from his.

367. The principal and most essential points to be considered in the architecture of timber bridges, are three : first, to season and prepare the wood so as to make it lasting ; second, to construct and connect the various parts together so as to make it firm and convenient; and thirdly, to lay a proper and durable pavement on the top or roadway.

368. The following particulars should be ob- served and attended to, in seasoning the timber. The sudden decay of fir-timber is owing to the sappy nature of its exterior surface, which is by no means capable of being remedied by any im- mediate application of paint, previous to its being seasoned. On the contrary, it has been proved, that such an application is actually in- jurious, since it hinders the free admission of air and heat, which would have the property of extracting that sappy quality which so

much contributes to decay and rottenness. A con- sequence of this practice, is, that the sap strikes inwardly and makes its way to the heart of the timber, the substance of which is presently con- taminated and destroyed.

369. As a means of preventing this evil, some have the timber dried or scorched over a flaming fire, turning it about till every side acquires a sort of crusty surface : in doing which it ne- cessarily follows that the external moisture is dissipated. After this process a mixture of pitch and tar, sprinkled with sand and powdered shells, may be advantageously applied to the parts under water. Those more in sight, after being well scorched, and while the timber is hot, should be rubbed over with linseed oil, mixed with a little tar. This will strike deeply into the grain of the wood, and will soon harden so as to receive as many coats of paint as m&y be necessary. It has been found that fir-timber thus prepared is nearly equal to oak for dura- bility.

370. With respect to the top of the bridge, and the formation of the pavement, the joiuu

that lie on the beams at a, should be nine inches square in scantling, and laid at about eighteen inches apart, projecting out beyond the beam, and forming at the same time a kind of modil- "iion. Upon these joints, six-inch planks should be laid, and brought forward so as to project before the ends of the joints, serving as a corona to the modillion, which, with the beam on which they rest, will form something like an entablature to the whole bridge.

371. The floor or bottom part of the roadway of the bridge should be first covered with pitch and tar, and then with common slates; after- wards with one or two courses of bricks, laid in the best mortar, and lastly finished with the common paving work.

SECT. IV. — OF HARBOURS.

372. The first consideration in the construction of harbours is the situation ; which may be sonic large creek or basin, in or near to the place where the harbour is intended to be made, as at the entrance of a large river, or near to the sea : for a harbour should never be entirely excavated out of dry land, unless upon some extraordinary occasion, where it is impossible to do otherwise, and yet a harbour is absolutely necessary.

373. When a proper situation is found, before it is irrevocably fixed upon,

it should be con- sidered whether ships can lie there safely in stormy weather, especially when those winds blow which are most dangerous upon the coast : whether there be any hills, rising ground, or high buildings, that will cover it. In such cases, the situation is very proper ; but, if there be nothing already that will protect the ships, it must be observed whether any break-water or other covering can be made at a moderate ex- pense ; otherwise it would be useless to con- struct a harbour there.

374. The next thins to be considered is, whe- ther there be a sufficient depth of water for large vessels to enter with safety, and lie there at anchor without touching the ground; and if not, whether tin; entrance and interior might not be

deepened at a moderate ex pens

be scarce, and the expense becomes greater than is allowed for building the harbour, the founda- tion may be made of stone as high as low-water mark, and the rest finished with brick. If this manner of building should still be too expensive, timber must be used; that is, piles driven as close as may be found necessary; which, being fastened together by cross-bars, and covered with strong oak planks, form a kind of coffer, which is to be filled with various species of stones, chalk, and shingle.

377. In preparing and constructing the foun- dation, different depths of water, and various soils, require different and peculiar modes of treatment. When the water is very deep, the best method is to throw in a great variety of stones at random, so as to form a much larger base than would be required upon dry land. This should be continued till it rises to within three or four feet of the surface of the water, where the stones are then to be laid in a regular manner, till the foundation is raised above the water. A great weight of large blocks of stones should next be laid upon it, and left to stand during the winter to settle, as well as to see whether it be firm, and capable of resisting the action of the winds and waves. After which, the superstructure may be finished with large blocks of stone, laid and faced in the usual manner.

378. As this method consumes a great quan- tity of material, it can only be adopted in places where stone is abundant. On the coast of Ire- land and some parts of Devonshire, where gra- nite and marble abound, it is practised with great success. In such manner is the Asylum harbour of Kingstown (Dunleary), in the Bay of Dublin, now being constructed ; and in such manner was the great Breakwater at Plymouth executed. Another mode, where stone is not so abundant, is as follows : namely, a coffer is made with dove-tailed piles of about ninety feet in length, and as wide as the thickness of the foundation is to be ; then the ground is dug and

levelled, and the wall is built of the best mortar. When the mortar is well set and tolerably dry,

or,

sufficient depth of water i-, not to be obtained for large ships, whether the harbour might not be useful for small merchantmen, or packets; for such a one is often of ureat utility, when situate upon a coast much frequented by small roasting vessels.

37.'"). The form of the harbour must be deter- iniiinl in such a manner, that the ships which come in \hen it is stormy weather, may be safe, and so as then: may be suilicient room for as many as puss that way : the depths of water where the piers are1 to be erected must be taken at every ten, litteen, or twenty feet distance, and marked upon piles driven at proper places, in order that ihe workmen may be directed in laying the foun- dation.

376. It should next be considered what de- scription of materials i stone, brick, or timber.

had at a moderate price, it ouuht to be preferred, because the work will be much stronger, more lasting, and need tev.tr repairs, than if con- structed with any other materials. But if stone

in case a the piles at the end of the wall are to be drawn

out, the side rows to be continued to about ninety or a hundred feet further, and the end enclosed; then the foundation is to be cleared, and the stones laid as directed before.

379. But it must be observed, that the end of the foundation which is finished, is to be worked in toothings or offsets, and left rough, that the part next it may be incorporated and bonded with it in a proper manner ; but if it be not very dry, it will incline that way of itself, and bind with the mortar that is thrown in next to it; and this method is to be continued till the whole pier is completely finished. It must likewise be observed, that the piers are not to be made of one continued solid wall; "because, in deep water, it would be too expensive; for which reason, two walls are in such instances to be

to be used, whether built parallel to each other, and the interval be- N\ heu stone can be tween them is to be filled in with shingle, chalk, and stone. As this kind of walls are in danger of bulging out or oversetting by the rough filling in, added to the great, weights often laid upon the pier, they are to be tied or bonded together

hv cross-walls at every thirty or forty yards dis- tance, by which means they support each other in a firm and strong manner.

380. Where there is abundance of stone, piles may be driven in as deep as they will go, at about two or three feet apart; and, when the foundation is sunk or levelled, large stones are to be lowered down, which will bed themselves; but care must be taken to lay them close and bonded, so as to have no two joints over each other; and when the wall is built up to within reach, the stones should be cramped or dove- tailed together.

381. Another method sometimes practised is, to build on coffers or caissons much in the same manner as has been described in building the piers of Westminster-bridge (see para. 354, 355) : but as, in this case, the ends of the coffers must be left in the wall, which prevents their joining so well as to be water-tight, the water that pe- netrates thereby will enter the rubble filling in, and occasion the wall to burst and to tumble down. Another inconvenience arising from this method of construction is, that as there are but few places without worms, which will destroy wood wherever they can find it; by these means the water is let into the pier, and consequently renders the work liable to the same accident as has been mentioned above.

382. The best method to obviate these incon- veniences, is to take the timber away, and joggle the ends of the walls together with large stone, pouring tarrass mortar into the joints. When this is done the water between the two walls is to be pumped out, and the void space filled up with stone, chalk, and shingle, as before de- scribed. Or if these joggles cannot be made water-tight, some dove-tailed piles should be driven in as close to the wall as possible, and a strong sail-cloth put on the outside of them, which, when the water is pumped out, will stick so close to the piles and wall, that no fluid can enter. This method is often adopted in Russia.

383. The thickness of a pier ought to be both such as may enable it to resist the shock of the waves in strong weather, and also of a sufficient breadth above, that ships may be laden or un- laden whenever it is thought necessary. Now, because the specific gravity of sea water is about half that of fresh, and as 2 to 5 in comparison with stone ; and since the pressure of stagnated water against any surface is equal to the weight of a prism of water whose altitude is the length of that surface, and whose base is a right angled isosceles triangle, each of the equal sides being equal to the depth of the water ; therefore a pier built with bricks, whose thickness is equal to the depth of the water, will weigh about four times as much as the pressure of

the water against it ; and one of stone of the same breadth, about six times and a quarter as much. Now this is not the force to be considered, since this pressure is the same within as without the pier ; but it is that force with which the waves strike against the piers, and that depends on the weight and velocity of the waves, which cannot be deter- mined with much precision ; because they vary according to the different depths of water, the

distance from the shore, and according to the tides, winds, and other accidental causes. Con sequently the proper thickness of the piers can- not be determined by any other means than those deduced from practice and experience.

384. Practitioners suppose that if the thick- ness of a pier be equal to the depth of the water, it is sufficient ; but for a greater security they allow two, three, and four feet more. This pro- portion would probably do, if the piers were to be built with solid stones cramped together ; but as this is hardly ever the case, and, on the con- trary, as the inside is mostly filled up with shingle, chalk, rubble, and other loose materials, the rule is not to be depended upon : besides it makes the space above too narrow for loading and unloading of ships, unless in a great depth of water ; so that it does not appear that this method of calculation can be relied upon, except in a very few cases where the water has but little motion.

385. No other materials should be used, when stone can be obtained, because the blocks being always of a larger bulk than brick, they will better resist the waves by their own weight, till the cement is grown hard ; after this is effected, brick will afford a better resistance against the action of sea water than soft stone.

386. The wall should be built with tarrass mortar, or good cement, from the bottom to the height of low-water mark, and the rest finished with cinder or tile dust mortar, which has been found by experience to be sufficiently good for those parts which are wet and dry alternately. The upper part of the pier should be paved with flat hewn stones laid in strong mortar, in order to prevent any water from penetrating it. Iron rings should also be fixed at proper distances, to fasten the ships to, and prevent them from strik- ing against the pier when agitated by the waves.

387. Wooden fenders or piles should be driven on the inside, close to the wall, and cramped to it by iron, to prevent the ships from touching them, or from being worn by their continual motion. Where the sea breaks against the piers with great violence, breakers, or break-waters, should be constructed at proper distances ; that is, two rows of piles are to be driven nearly at right angles with the piers for the length of about twelve or fifteen feet, and at about eight or ten feet distance from each other ; and another

should join the two former. These piles being covered with planks, and the inside filled with shingle and rubble stones, or boulders, then the top is to be paved with stones of about a foot in length, set lengthways, to prevent the waves from tearing them up. This precaution is absolutely necessary where the water ftishes in very strongly.

388. The principal works on architecture that are most useful to the student are the following : — An Enquiry into the Principles of Beauty in Grecian Architecture, by the Earl of Aberdeen, 8vo. Lond. 1822. Robert and James Adam's Works in Architecture, fol. 3 vols. Lond. 1764 and 1822. Robert Adam's Ruins of the Palace of Dioclesian at Spalatro, fol. Lond. 1764. Ro- bert Adam's Buildings in Scctland, fol. 1764; Architectural Remains in Rome, Pola, and Na- ples, from drawings by Clerisseau, under the

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ARCHITECTURE, COUNTERFEIT, that which consists of projectures painted black or white, or in different colors, so as to imitate marble. It is also called scene work, in the painting of columns for decorating theatres, &c.

ARCHITECTURE, in perspective, a kind of build- ing, the parts of which are of various modules, and decrease proportionably to their distance, so that the work may appear longer to the view than it is in reality.

ARCHITRAVE; from apXi?, chief, and trabs, Lat. a beam ; because it is supposed to represent the principal beam in timber buildings : that part of the column, or order of a column, which lies immediately upon the capital, and is the lowest member of the entablature. This member is different in the different orders ; and, in build- ing architrave doors and windows, the workman frequently follows his own fancy. The architrave is sometimes called the reason-piece, or master- beam, in timber buildings, as porticoes, cloisters, &c. In chimneys it is called the mantle-piece; and over jambs of doors, and lintels of windows, hyperthyron.

ARCHITRAVE DOORS are those which have an architrave on the jambs, and over the door upon the cap-piece, if straight ; or on the arch, if the top be curved.

ARCHITRAVE WINDOWS, of timber, are com- monly an ogee raised out of the solid timber, with a list over it ; though sometimes the mould- ings are struck, and laid on ; and sometimes cut in brick.

ARCHITRICLIIS'US, in antiquity, the di- rector of a feast. The architriclinus was some- times called servus tricliniarcha, and by the Greeks Trpoyiwzric, or fore-taster. Potter takes the architriclinus to signify also the same with the symposiarcha.

ARCIIIVAULT, in architecture, the inner contour of a niche, or a band adorned with mouldings, running over the faces of the arch stones, and bearing upon the imposts. It has only a single face in the Tuscan order, two faces crowned in the Doric and Ionic, and the same mouldings as the architrave in the Corinthian and Composite.

AR'CHIVES. The record-office, where the public papers are kept. Sometimes by a com- mon figure applied to the papers themselves. Supposed to be derived from ao^tia, public re- gisters. Transmitted to us by

means of the Latin of the middle ages, and the Norman French, it is not surprising that it should in some degree de- viate from the Gr. apx«ov or ap %£ta, from which it is generally supposed to be derived.

Though we think our -words vanish with the breath that utters them, yet they become records in God's court ; and are laid up in his archives, as witnesses either for or against as. Got. of the Tong.

I shall now only look a little into the Mosaic ar- chives, to observe what they furnish us with upon this subject. Woodward.

ARCHIVES; from area; a chest wherein the records, charters, and other papers and evi- dences of a state, house, or community, are pre- served. The archives of ancient Rome were in the temple of Saturn ; the archives of the court of chancery are in the rolls office.

ARCHIVIST, or ARCHIVISTA, a keeper of ar- chives. Under the emperors the archivist was an officer of great dignity, held equal to the pro- consuls, vested with the quality of a count, styled clarissimus, and exempted from all public offices and taxes. Among the ancient Greeks and Persians the trust was committed to none but men of the first rank ; among the Franks the clergy, being the only men of letters, kept the office among themselves. Since the erection of the electoral college the archbishop of Mentz has had the direction of the archives of the empire.

ARCH-MARSHAL, the grand marshal of the empire ; a dignity in Germany belonging to the elector of Saxony, who, in that quality, goes im- mediately before the emperor on public solemni- ties, bearing a naked sword.

ARCHON ; apxˆv, a commander : one of the chief magistrates of the city and state of the Athenians ; they were nine in number.

ARCHONS, in Grecian antiquity, magistrates of Athens, appointed after the death of Codnis, and the abolition of royalty. See ATTICA. They were chosen from the most illustrious families till

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the time of Aristides, who procured a law to be passed, by which it was enacted, that in electing these magistrates less regard should be paid to birth than to merit. The tribunal of the archons was composed of nine officers. The first was properly archon ; by whose name the year of his administration wa=> distinguished. The title of the second was ftaai\evf, or king: that of the third polemarchos ; from TTOX.S/JOC, war, and apxttv, to command : and to these were added six thesmothetae. These magistrates were obliged to swear before their respective tribes, l.That they

had sprung, both by father and mother for three descents, from citizens of Athens ; 2. That they were attached to the worship of Apollo, the tutelar god of their country ; 3. That they had been respectfully obedient to their parents ; an important and sacred part of their character ; from which it was expected they would be faith- ful servants to their country ; 4. That they had served in a military capacity the number of years which the republic required of every citizen : and this qualification gave the state experienced officers ; for they were not allowed to quit the army till they were forty years old. Their fortune too, of which they were to inform those who examined them, was a warrant for their fidelity. After the commissioners had made a favorable report of them, they were to swear that they would maintain the laws without taking a bribe, which obligation if they neglected, they engaged to send to Delphi a statue of gold of the weight of their bodies. According to a law of Solon, if an archon was convicted of drunkenness, and dared after that to appear with the ensigns of his office, he was to be punished with death. Such magistrates as the Athenian archons were well entitled to respect. Hence it was eternal infamy to insult them ; and Demosthenes observed, that to treat the thesmothetse with disrespect was to show disrespect to the republic. Another quali- fication indispensably required of the second officer of this tribunal, the fiaciXive, or king, was, that he had married the daughter of an Athenian citizen, and that he had espoused her a virgin. This \.as exacted of him, says De- mosthen.rs, because part of his duty was to sacri- fice to the .n'oils jointly with his wife, who, instead of appealing, would have irritated them, if she had not possessed both those honors. The in- quiry into the private title of the nine archons was very severe; as they had a right to take a seat ii> the Areopagus, after they had quitted their office and given an account of their ad- ministration. When an}' obscurity occurred in the laws relative to religion and the worship of the iitids, the interpretation was submitted to the tribunal of the archons. Aristotle observed that S< >!< 11, whose aim was to make his countrymen ha; py. an;! w!:o ionnd their government in his time aristorr.'.tical ; by the election of the nine archons, who were annual magistrates, tempered their power by establishing the privilege of ap- ptaliu.: from them to the people. The archons were the principal officers, not only in civil, but in sat red, matters, and especially in the mysteries of Hacehus. The archons, however, who were surnaiued eponymi, were chiefly employed in uvii affairs ; yet they presided at the great feasts,

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and held the first rank there. Hence they are sometimes styled priests. After some time the qualifications which were required to be an archon were not strictly observed. Adrian, be- fore he was elected emperor of Rome, was made archon at Athens, though a foreigner ; and the same honors were conferred upon Plutarch. The perpetual archons, after the death of Codrus,

were Medon, whose office began B. C. 1070 , Acastus, 1050; Archippus, 1014; Thersippus, 995 ; Phorbas, 954 ; Megacles, 923 ; Diognetus, 893 ; Pherecles, 865 ; Ariphron, 846 ; Thespius, 826; Agamestor, 799; jEschylus, 778 ; Alcmseon. 756 ; after whose death the archons were decen nial, the first of whom was Charops, who began 753; jEsimedes, 744; Clidicus, 734; Hippo menes, 724; Leocrates, 714; Apsander, 704; Eryxias, 694 ; after whom the office became an- nual, and of these annual archons Creon was the first.

ARCHONS, in modern history, divers officers, both civil and religious, under the Greek empe- rors. Thus bishops were sometimes called ar- chontes, as well as the lords of the emperor's court.

ARCHONTICI, in church history, a branch of Valentinians, who maintained that the world was not created by God, but by angels called Archontes, or archangels. They also denied the resurrection.

ARCHONTIUM. See ARCIIONS.

ARCH-PRIEST, or ARCH-PRESBYTER, was anciently the first person after the bishop; he was seated in the church next after the bishop, and acted as his vicar in his absence. In the sixth century there were found several arch- priests in the same diocese ; from which time some will have them called deans. In the ninth century they distinguished two kinds of cures or parishes : the smaller governed by simple priests ; and the baptismal churches by arch-priests, who, beside the immediate concern of the cure, had the inspection of the other inferior priests, and gave an account of them to the bishop, who governed the cathedral church in person. There are arch-presbyters still subsisting in the Greek church, vested with most of the functions and privileges of chorepiscopi, or rural deans.

ARCH-PRIOR, a name sometimes given tc the grand-master of the order of templars.

ARCHTELIN, a corn measure of Rotterdam, containing three pecks, five quarts, and nearly a pint.

ARCH-TREASURER, the great treasurer ot the German empire, and protector of the order of St. John, can raise noblemen and gentlemen to the degree of counts, and also admit as bond- men those that are illegitimately born, and other persons of foreign countries, on their binding themselves to the duties of the electorate and to the payment of a certain tribute. This office was created with the eighth electorate, in favor of the elector Palatine, who had lost his former electorate, which was given to the duke of Bava- ria by the emperor Ferdinand II. who took it from Frederick V.

elector Palatine after the bat- tle of Prague, where he was defeated in maintain- ing his election to the crown of Bohemia. The dignity of arch-treasurer was afterwards con-

tested, but was at last settled upon the elector of Hanover; who claimed it in virtue of his de- scent from Frederic elector Palatine. Accord- ingly his majesty the king of Great Britain bears the title, which is thus contracted upon coin, S. R. I. A. T. ET E. i. e. Sacri Romani Imperii Archi-Thesaurus et Elector.

ARCHWINNITTY SEA, an inlet of the North Sea, which communicates through Haz- ard Gulf with Hudson's Bay.

ARCHYTAS of Tarentum, a Pythagorean philosopher, famous for being the master of Plato, Eudoxus, and Philolaus, lived about A. A.C. 408. He was an excellent mathemati- cian and mechanic: he is said to have made a wooden pigeon that could fly, and to be the first that brought mathematics to common uses. Aristotle was indebted to Archytas for his gene- ral heads of arrangement, entitled his Ten Cate- gories, and probably for that principal idea in his Ethics, ' that virtue consists in avoiding excesses;' for he taught that every extreme is incompatible with virtue ; and he exemplified this doctrine in his life. He asserted that God was the begin- ning, the supporter, and the end of all things. There are two epistles preserved in Diogenes Laertius, one from Archytas to Plato, and ano- ther from Plato to Archytas. He acquired great reputation in his legislative capacity. He like- wise commanded the army seven times, and was never defeated ; but was at last shipwrecked on the coast of Apulia.

ARCILEUT,orARCHiLCTE,alongandlarge lute, having its bass strings lengthened after the manner of the theorbo, and each row doubled, either with a little octave or an unison. It is used by the Italians for playing thorough bass.

ARCINELLA, in conchology, a species of <-vnma found in the Atlantic, generally off the American coast.

ARC ION, in botany, tussilago, or colt's foot.

ARCIS-SUR-AUBE, a small town of France, seated on the river, and capital of the depart- ment of Aube. The population is 2,300; the manufactures are

stockings and caps. Long. 4° 14′ E., lat. 48° 33′ N.

ARCIVjE AVF.S, in antiquity, birds which gave bad omens, either by their flight, noise, or manner of eating. They were called arcivae, sometimes also arculae, quia arcebant ne quid fieret, prevented or forbade things being done.

ARCO, a strong town and castle in the Tyrol, belonging to the house of Austria. It was taken by the French m 1703, and abandoned soon after. It is now included in the Lombardo Venetian kingdom. It stands on the river Sarca, near the northern extremity of the lake Garda, twelve miles south-west of Trent. Long. 1 1° 12′ E., lat. 46° 0′ N.

ARCON.A, a strons town situated on the eland of Rugen in the Baltic. It stood on a nigh promontory, with the east, north, and south sides defended by steep and lofty precipices, and the west by a wall fifty feet high, proportionably thick, and secured by a deep and broad ditch. It was, however, taken in 1168 by Valdemar king of Denmark. One of the conditions im- posed by the conqueror was, that the inhabitants

should destroy a church which they had erected to St. Vitus, and deliver up the vast treasure belong- ing to this tutelary saint. Another was that they should pay forty silver yokes for oxen, by way of tribute, and enter as soldiers in the Danish ser- vice when called upon.

ARCOS, a strong city of Andalusia in Spain, seated on a high craggy rock, at the bottom of which runs the Guadalete, twenty-eight miles north-east of Cadiz. Its strength lies not only in its situation, but in the works erected for its defence, and it is inaccessible on every side but one. The governor resides in an old castle, from whence there is a delightful prospect, which ex- tends very far into the neighbouring country. It contains two parish churches, seven convents, and a population of 12,000 souls. It is the reˆ sidence of the vicar-general of the metropolitan of Seville. The surrounding country is very fruitful. Forty miles south of Seville. Long. 55° 5′ W., lat. 36°40'N.

ARCOT, a city of Hindostan, the capital of the Carnatic, is situated on the south side of the river Palar, which is here half a mile wide, but contains little water in the dry season. The town is extensive and surrounds a large fort, which is in disrepair. Its chief manufacture is cotton cloths. Arcot is supposed to be named by Ptolemy as the capital of the Sorae, or Sora-mundalum, from which Coromandel is corruptly derived ; but the present town is of modern date. The Mogul armies, after they had cap- tured Gingee, were forced to remove, in conse- quence of the unhealthy situation, to the plains of Arcot ; and this circumstance led to the es- tablishment of

the city of Arcot in 1716. An- wanud Deen, nabob of Arcot, having been killed in battle in 174S, the town was taken byˆChun- dasaheb, a candidate for the government, who was supported by the French. In 1751 it was retaken by Lord Clive, then Colonel Clive, with 200 Europeans and 300 sepoys, although the garrison amounted to 1,100 men. The siege in which Colonel Clive afterwards sustained, for fifty days, the attack of the whole army of the French and their allies, though his own force had been reduced nearly one-half, established his military fame. During the war it was again taken possession of by the French can- didate for the nabobship ; but finally surrendered to Colonel Coote in 1760, after the battle oi Wandewash. In 1780 it was besieged by Hy- der Ali, who gained possession of it on the 30th of September, after having defeated the British under Colonel Baillie. The town and district are now rapidly recovering from the destructive effects to which they have been exposed, in con- sequence of having so frequently been the scene of war. Distance from Madras seventy-three miles, from Seringapatam 217. Long. 79° 29′ E., lat 12°52yN.

ARCOT, a large district of Hindostan. It was formerly an independent state, but its supremacy was transferred by the nabob to the British in 1802. It is now divided into two portions, north and south, and includes Sativaid, Pulicat, Coongoody in the Barramahal, part of the Ba- laghaut, Cuddalore and Pondicherry. In 1806 this district was in a very miserable state, but it

has since improved. The exports consist chiefly of arrack, pepper, palmirahs, drawn from Ceylon, Travancor, and Prince of Wales' Island. Large supplies of piece goods are exported to the Isle of France, and a small quantity of ram to Ceylon. The imports are betel nut, pepper, benjamin, camphor, sugar, and elephants' teeth ; besides which, rice from Bengal, and tobacco from Ceylon, in small quantities, are occa- sionally received.

ARCTATIO,or ARCTITUDO, a straitness of the intestines, constipated from inflammation : also a preternatural straitness of the uterus.

ARCTIA, in entomology, a genus of insects of the order lepidoptera and family noctua-bom- bycites of Latreille. It is a subdivision of the Linnrean genus phalsena. The generic character is palpi, scaly; antennae of the males doubly pectinated ; the tongue short, and composed of two distinct

filaments. Latreille divides this genus into two sections, the first including those \vitli ciliated antennae ; the second those in which they are truly pectinated. To the first belong the phalaina (bombyx), caja, villica, plantaginis, and others, known to collectors in this country by the name of tiger moths. In the second di- vision are found the phalaena, salicis, chrysorrhaea, &c. Arctia chrysorrhaea is too well known in this country, by the destruction which has in some years been produced by its larva amongst fruit-trees. The eggs are laid in beautiful rings around the stem of the tree, and in the spring the larva makes its appearance. They are gre- garious, and form a large web to which they retreat at night and in wet weather; they feed in society, and march with great regularity ; and their numbers are sometimes so great as to be- come a serious calamity. In 1783 they were so destructive in the neighbourhood of -London, that subscriptions were opened to employ the poor in cutting off and collecting the webs; and it is asserted, that not less than 80 bushels were collected and burnt in one day in the parish of Clapham.

ARCTIC, in astronomy, an epithet given to the north pole, or the pole raised above our ho- rizon. It is called the arctic pole on ac- count of the constellation of the little bear, in (j reek called CIOKTOI;, the last star in the tail whereof points out the north pole.

A i :c TIC CIRCLE is a lesser circle of the sphere, parallel to the equator, and 23° 28′ distant from the north pole ; from whence its name. This, and its opposite the antarctic, are called the two polar circles; and may be conceived to be de- scribed by the motion of the poles of the eclip- tic round the poles of the equator, or of the world.

AUCTICA, in conchology, a species of My a found in the North Seas. Also a species of argonauta found on the coast of Greenland.

ARCTICA, in ornithology, a species of alca, known in England by the name of puffin. It is the pica marina of Aldrovandus, psittacus mari- nas of Marten, and the macareux of Buffon. See AI.CA. — Also a species of colymbus.

ARCTH'M, Ht IMHHJK, a genus of the poly- gamia order, belonging to the syngenesia class of plants ; and in the natural method ranking

under the forty-ninth order, eompositae-capilatae ; CAL. globular, with seeds, having hooks reflected at the tops. There are three species : viz. A. lappa, A. personata, and A. tomentosum : they are all troublesome weeds. The tender stems of the lappa, or common burdock, however, de- prived of the bark, may be boiled and eat like asparagus. When raw they are good with oil and vinegar. Cows and goats eat this herb ; sheep and horses refuse

it ; swine are not fond of it. The seeds, which have a bitterish subacrid taste, are recommended as very powerful diure- tics, given either in the form of emulsion, or in powder, to the quantity of a dram. The roots, which taste sweetish, with a slight austerity and bitterishness, are esteemed aperient, diuretic, and sudorific ; and said to act without irritation, so as to be safely ventured upon in acute dis- orders.

ARCTOMYS, MARMOT, in zoology, a genus of glires in the class of mammalia : the characters of which are : two cutting teeth in each jaw, five grinders above and four below, on each side ; and that have collar bones. This genus is very properly separated from that of mus, by Dr. Gmelin, after Mr. Pennant. Most, if not all the species, hybernate, or become torpid, during the winter: they wander in quest of food, and for other purposes, during the day, feeding on roots and grain : they are capable of climbing, and dig burrows in the earth for their habitation ; their heads are generally round and convex, hav- ing either very short ears, or none; their bodies are thick, with short hairy tails; the fore feet have each four toes, and a very short thumb, or fifth inner toe ; and the hind feet have each five toes. The caecum, or blind gut, is generally very large. The species are ; A. marmota, mus marmota of Linnseus, Alpine or mountain mouse, Alpine marmot of Pennant, and marmotte of Buffon. It has short round ears; the upper parts of the body dusky brown, and the lower parts reddish. The body thick and short ; the head large and thick, flattened at the top; the two bones of the lower jaw movable on each other; the cheeks covered and surrounded with long hairs ; the muzzle has seven rows of whiskers ; above and below each eye is a black wart, on which are hairs; the legs are short; the tail is straight, and covered with long hairs; the tip of the tail very dark brown, almost black; the body and head measure sixteen inches, and weigh nine pounds; the tail is about six inches long. These animals inhabit the highest summits of the Alps and Pyrenaean mountains, in dry places where are no trees ; feed on insects, roots, and vegetables; are fond of milk, which they take by lapping with a murmuring noise, and drink very little. They live in societies of from five to fourteen, and place a sentinel, which whistles on the approach of danger, when they retire into their holes; or, if they cannot escape, defend themselves with fury. A. bobac, Schrebner, Gmelin, Cuvier. Bobac ou marmotte de Po- logne, Buffon. Bobac marmot, Pennant. Co- vered with greyish fur above, the under parts of the body fulvous ; the tail short and well covered with hair. Its general habits similar to the pre- ceding, and inhabits, says Pallas, ‘ the high,

bu* milder and sunny sides of mountainous countries, which abound with firsill or free- stone rocks, where it is found in dry situations, and such as are full of woods, springs, or sands.' It is very numerous in Poland and Russia, and very frequently in Kamtschatka, but rarely as high as lat. 55°. A. Monax, mus griseus of Pallas, glis fuscus, marmota Americana or Amecan marmot, monax of Edwards and Buffon, and Maryland marmot of Pennant, has short rounded ears, bluish nose and cheeks, body of deep brown color, and longish tail, which is very hairy. The eyes are black and prominent; the feet and legs black, with long sharp claws; the tail is half the length of the body. This animal is about the size of a rabbit, and feeds on vegetables : its flesh is very good, resembling that of a pig. It inhabits the warmer States of North America and the Bahamas. In America it forms holes in the clefts of rocks, and under the roots of trees. A. Empetra of Pallas, Canadian marmot, Quebec marmot of Pennant, of a mixed grey color on the upper parts, of the body, the lower parts orange, with short rounded ears, and a hairy tail. This animal inhabits Canada, Hud- son's Bay, and the other northern parts of Ame- rica. It is rather larger than a rabbit, with a short tail. The cheeks grey ; the face dusky ; on the back the hair is gray at the roots, black in the middle, and whitish at the tips; the belly and legs of an orange color ; the feet are black and naked, with four long slender divided toes, and the rudiments of a thumb on each fore-foot, and five similar on each behind, all armed with pretty strong claws. A. Pruinosa, hoary marmot, with very coarse long hoary fur, whitish cheeks, a black nose, and black legs, having short oval ears. Inhabits the northern parts of America; is about the size of a rabbit; with nose black at the tip; the tail is black, mixed with rust color; with four toes on each fore foot, and five behind, all armed with dusky claws. A. Suslica, Souslik of Buffon, Casan marmot of Pennant, has the upper parts of the body of a yellowish-brown color interspersed with numerous small white spots, very short ears, hairy tail about the length of the thighs. Inhabits Casan as far as Austria, dwells in the desert, digging holes in the black soil of the declivities of the moun- tains; which burrows are seven or eight feet long, winding, with several entries, having at the bottom several apartments, stored with corn, peas, linseed, hempseed, and other grains and seeds, in separate cells, and separate holes in which they live. This animal is about the size of a large rat ; A. citillus, zisel of Buffon, earless marmot of Pen- nant, is of an uniform dark cinereous grey color, has no external ears, a blunt nose, a long slender body, and a very short tail ; inhabits Hungary, Austria, and Poland ; burrows like the former, and is rather larger, being nearly a foot in length. A. zemni, zemni of Buffon, podolian marmot of Pennant, zits-jan of Le Brun, and little earth- dog of Rzaczinski, is of a mouse-grey color, has short rounded ears, five toes on all the feet, and very minute eyes

concealed beneath the fur. Inhabits Russia and Poland ; is larger, stronger, and more mischievous than the former. The fur is very good in the spring, and the flesh

is reckoned tolerable. These animals are preyed on by pole-cats, weasels, hawks, carrion-crows and cranes. They vary considerably both in size and color. Gmelin suggests that this animal may be the same with the mus ponticus of Aristotle and Pliny. A. gundi, gundi of Pen- nant, is of a brick-dust red color, with wide open ears, which appear as if cropt or cut off. Inhabits Barbary, near Massusin, towards mount Atlas. Its size is about that of a small rabbit ; the tail is short ; the upper fore-teeth are large and truncated, the lower ones slender and pointed ; it has four toes armed with claws on all the feet, and uses the sole in walking as far as the heel. A. Hudsonia, Hudson's marmot, tailless marmot of Pennant ; is of a brown-ash color, with short external ears and no tail. In- habits Hudson's Bay. It has two cutting teeth above, and four in the lower jaw ; the 'hairs are tipt with white. A. maulina, Chilese marmot, is of a reddish-brown color, with sharp ears, having five toes on all the feet. Inhabits Chili.

ARCTOPHYLAX, in astronomy, a constella- tion, otherwise called Bootes.

ARCTOPUS, in botany, a genus of the order polygamia ; class, dioecia ; natural order, forty- fifth, umbellate. The umbella of the male is com- pound ; the involucrum consists of five leaves ; the corolla has five petals ; the stamina are five ; and the pistilli, two. The umbella of the her- maphrodite is simple ; the involucrum is divided into four parts, is spinous, large, and contains many male flowers in the disc. There is but one species of arctopus : viz. A. echinatus, prickly- leaved arctopus. A handsome plant from the Cape of Good Hope; introduced in 1774 by Mr. F. Masson.

ARCTOTIS, in botany, a genus of the poly- gamia necessaria order and syngenesia class ot plants; natural order, forty-ninth, compositae- discoides. The receptacle is bristly ; the corona of the pappus is pentaphyllous ; and the calyx is imbricated with scales loose at the top. It is commonly called anemospennos, from the re- semblance of its seeds to those of the anemone. There are sixteen species, natives of Ethiopia, or of the Cape of Good Hope. Of these, 1. A. angustifolia, with spear-shaped leaves, and 2. A. aspera, with wing-shaped woolly leaves, are most remarkable for their beauty, having rays of a fine yellow or deep gold color. They flower in May and June. All the species of acto tis may be propagated by cuttings ; which should be frequently renewed, as the old plants are subject to decay in winter. They may be planted, in any of the summer months in a bed of light fresh earth, observing to shade them from the sun until they have taken root. They should be exposed to the open air until the latter end of October, when they must be removed into the gseen-house.

ARCTURUM INFRA, a small star of the seventh or eighth magnitude, to the south of Arcturus, observed by Mr. Flamsteed, and so named by him. Its place is not determined in the British catalogue.

ARCTURUS, in astronomy, a fixed star of the first magnitude, in the constellation of Arc- tophylax, or Bootes. The word is formed of

.7pKToc, bear, and oupa, tail ; i. e. bear's tail, as being very near it. This star was known to the ancients, and is mentioned by Job, and also by Virgil. Mr. Hornsby concludes that Arcturus is the nearest star to our system visible in the northern hemisphere, because the variation of its place, in consequence of a proper motion of its own, is more remarkable than that of any other of the stars ; and by comparing a variety of ob- servations respecting both the quantity and di- rection of the motion of this star, he infers that the obliquity of the ecliptic decreases at the rate of 58″ in, 100 years; a quantity which nearly corresponds to the mean of the computation framed by Mr. Euler and M. de la Lande, upon the principles of attraction.

ARCTUS; apieroc; in astronomy, a name given by the Greeks to two constellations of the northern hemisphere ; by the Latins called ursa major and minor ; and by us the greater and lesser bear.

ARCTUS, in entomology, a species of cancer, having ciliated antennae with spines.

ARCUALIA OSSA, in anatomy, a name used b- some for the ossa syncipitis, by others for the ossa temporum.

ARCUALIS SfTURA, among surgeons, de- notes the coronal suture.

ARCUANA, in entomology, a species of pha- Irena found in Europe ; the phalaena tortrix, &c. of Linnx'us.

ARCUANUS, in ichthyology, a species of chittodon found on the Arabian coasts.

A ltd.' ARIA, in entomology, the phalaena ('4'eomˆtra) of Gmelin.

ARC U AT A, a species of coccinella, a native of China. Also a species of

cassida found near i' io Janeiro.

AHCUATION, in gardening, the method of aiding by layers such trees as cannot be raised from seed, or that bear no seed, as the elm, lime, alder, willow; and is so called from bend ing down to the ground the branches which spring from the oti'sets or stools after they are planted. Strong mother plants, or stools, must be planted in a clear border and in a straight line, about six feet asunder. When these have shot live or six main branches from the root, and as many collateral branches, the former must be bent to the <_rround and there fastened. The small branches must be covered three inches deep upon the joints, and have a large basin of earth ma'lt round them to hoM the water. About the rni'liile o; September they may be opened, and it' they have tAeii root may be immediately removed into the imiserv ; but i; they have not sufficiently extended their roots they must be suffered to remain till the sprin;, and then trans- planted.

Ai:rr\Tiox; from areus, a 'm\v; is used in snr_:'-ry lor an incurvation oifihe bones; such as we see in the rase of ri;:!,e'<, i'^e.

AitdTiAUSTA, in the military art, a kind

«f b.dista, probably mad'; after the fashion of

".v. It is mentions-! by Vegetius ; but the

'ie-HYi: tion of it i< o-mite-l by him as too well

kn'is\n t:ieii, thoii.: i MOW hard to be discovered.

ARd.'BALlSTAitll, or M \MUALiaTuui, fMchers win fought with the arcubalista.

ARCUCCIO, or ARctrrro, a machine made of a board covered with pieces of hoops, like the tilt of a wagon; used in Italy to prevent children from being overlaid and smothered by nurses or others. Every nurse in Florence is obliged to lay her child in an arcuccio, under pain of excommunication.

ARCUDI (Alexander Thomas d'), a Domi- nican of Venice, who gained considerable fame by his writings. They were mostly biographical, of which the principal is his Gallatina Letterata. The history of Athanasius was his last work. He died about 1720.

ARCUDIUS (Peter), a Greek priest, born in the isle of Corfu. He was sent by Clement VIII. to Russia to settle some religious differences; and he wrote several zealous pieces in defence of the Catholic religion against the Greek and Pro- testant churches. He died about 1632.

ARCUS, in entomology, a species of papilio ; the papilio alcon of Gmelin, found in Surinam.

ARCY (Patrick d'), one of the pensioners of the French academy, marshal of the armies of the king, and knight of the order of St. Louis, was born of Roman Catholic parents at Galway in Ireland, on the 27th September, 1725. He was sent to Paris at the age of fourteen, to the charge of one of his uncles ; and when very young en- tered the French service. He served two cam- paigns in Germany before 1746; and in that year sailed in the expedition sent by the French to aid the Pretender's cause. Though taken prisoner in the fleet, he was not punished for bearing arms against his country, but passed as a French officer. He entered the academy about 1749, with the high reputation which two ad- mired memoirs on mechanics had procured him. In 1750 he published a memoir on artillery, :i subject connected with his own profession. ID 1754 he published another memoir upon the subject of hydraulic machines. In 1767 he vi- sited Ireland; but though importuned by his uncle to remain in his native country, and even offered affluence if he would comply, he re- turned to France. Three years afterwards he was made field-marshal and pensionary of the academy. Before the death of his uncle, by whom he was educated, he inherited a large for- tune, married his niece, and took the title of Count d'Arcy. He died in 1779 with the reputa- tion of great and cultivated powers, and profound views in the mathematical and physical science. ARDA, a species of termes inhabiting Sierra Leone in Africa. The insects of this species are black ; segments of the abdomen white at the tips, legs pale.*

ARDAMA; from ap

ARDARGIE, a village of Scotland, in the parish of Forgandenny in Perthshire, seated on the Ochil hills, and containing about eighteen farm-houses. Near here is a place called the Roman camp, of a square form, ˆabout ninety yards every way, defended on one side by a deep hollow, through which runs a rivulet; and on

A R D E A.

C41

the other three by trenches often yards wide at insects. The natives of Hudson's Bay call this

the top and fourteen feet deep. species, wapaw-uchechauk. 2. A. Argil, or hurgil,

ARDASSES, in commerce, the coarsest of all of Ives is a very large species ; from tip to tip of

the silks of Persia; and, as it were, the refuse of the wings measuring fourteen feet ten inches;

each kind. In this sense they say the legis, the and from the tip of the bill to the claws seven

housets, the choufs, and the payas ardasses, to feet and a half: the bill is sixteen inches round

signify the worst of these four sorts of Persian at the base, of different colors, and nearly of a

silks. triangular shape ; the feathers of the back and

ARDASSINES, in commerce, called in France wings very strong, and of an iron color ; those of

ablaques; a very fine sort of Persian silk, little the breast long; over the belly a great deal of

inferior in fineness to the cherbassis, and yet down of a dirty white; the legs and half the

little used in the silk manufactures of Lyons and thighs are naked ; the naked parts full three feet

Tours, because it will not bear hot water in the winding.

in length. This monster, as Ives terms it, inha- bits Bengal, and is also found at Calcutta; called

ARDCHATTAN, a parish of Scotland, in the at the last place hurgil. The common opinion is

county of Argyle, united to that of Muckairn. that the souls of the Brahmins possess these birds

These united parishes extend twenty-four Scotch The same species has been remarked in Africa,

miles in length and about twenty in breadth, 3. A. ciconia, or white stork of Ray, has naked

and contained in 1792 about 2350 inhabitants, eye-balls, and black prime wing-feathers. The

In the monastery of Ardchattan, the ruins of skin below the feathers, as

also the beak, feet.

which still remain, a parliament was held by king Robert Bruce after his defeats at Methven

and claws, are of a blood color. It is a native of Europe, Asia, and Africa ; but is seldom or

and Dalrie ; and it is said the debates were car- never to be met with in Italy. The ciconia feeds ried on in the Celtic language, which is still the upon amphibious animals. It is such an enemy

common language of the people.

to serpents, that it is reckoned almost a crime to

ARDCLAGH, a parish of Scotland, in the kill a stork. From this favorable treatment, extremity of the shire, and lying south-east of the they are seen in Holland and the Low Countries

town of Nairne ; about eleven miles long and nearly eight broad.

walking unconcerned in the middle of the streets. Storks are birds of passage ; they spend the sum-

ARDEA, in ancient geography, a town of mer in Europe, go off to Egypt, Ethiopia, &c. all Latium, the royal residence of Turnus king of at once before winter, and do not return till about the Rutuli; so called, either from the augury of the middle of March. 4. A. garzetta, or egret, the heron, or from the excessive heat of the crested behind ; the body white, the beak black, country. It was a marshy, sickly, situation, and the feet greenish. It is a most elegant bird ; Virgil says it was built by Danae the mother of a native of the East, but found in the south part Perseus : it lay about five miles distant from the of Europe. The scapulars and the crest were sea and twenty from Rome, and was a Roman formerly much esteemed as ornaments for caps colony. It is now a village in the Campagnia and head-pieces ; so that aigrette and egret came di Roma. to signify any ornament to a cap. 5. A. grus, or

ARDEA, in ornithology, a genus of the order common crane of English authors. This species of grallae. The general characters of this order is far spread, being met with in great flocks are these: the bill is straight, sharp, long, and throughout northern Europe and Asia; in Swe- somewhat compressed, with a furrow that runs den, throughout Russia, and Siberia as far as the from the nostrils towards the point ; the nostrils river Anadyr, migrating even to the arctic circle, are linear ; and the feet have four toes.

Under In winter they inhabit warmer regions. In their this genus Linnaeus comprehends the grus or migrations they frequently fly so high as not to crane, the ciconia or stork, and the ardea or be visible. 6. A. herodias, or cristata maxima heron of other authors. Ninety-six species have of Catesby, crested behind, has a dusky-colored been enumerated and thus subdivided : back, reddish thighs, and the breast speckled

A. Crested: bill scarcely longer than the head, with oblong black spots. It is four feet and a

B. Cranes: head bald. half when erect; the bill is about eight inches

C. Storks : orbits naked. from the angle of the mouth to the end of it; and

D. Herons : middle claw serrate inwardly. the crest is made up of long, narrow, brown

E. Herons : bill gaping in the middle. feathers, the longest being five inches in length, Every quarter of the globe furnishes some spe- which it can erect and let fall at pleasure. It is

cies. We can only notice the following : a native of Virginia, and feeds not only upon fish

1. A. Americana, or hooping-crane of Ed- and frogs, but on lizards, efts, &c. 7. A. leuco- wards, a native of America. The crown of geranos of Pallas, or the Siberian crane of Pen- the head and temples are naked and papillous ; nant, four feet and a half when standing erect, the forehead, nape of the neck, and prime wing- The bill is of a red color; the irides are white : feathers are black ; but the body is white : the the plumage is white as snow, except the ten under part of the head, as far as the lower chap, first greater quills, with the coverts of them,, red; the beak yellowish and jagged at the point ; which are black: the legs are long and red. the feet red and the prime tail-feathers white. In This species inhabits the marshes and lakes of spring these birds go north to breed like the Siberia. 8. A. major, or common heron, a na- common crane, and return like that bird to the tive of Europe. This bird is remarkably light in south in autumn. They lay two white eggs like proportion to its bulk, scarcely weighing three those of the swan, and sit twenty days. They pounds and a half: the length is generally three have a long loud note, ani their food isworms and feet two inches ; the breadth five feet four. This

bird was formerly muca esteemea colored spots of different figures and sizes. It is a native of Europe, and inhabits the fen countries. In the reign of Henry VIII. it was held in much esteem at our tables. Its flesh has much the flavor of a hare, and nothing of the fishiness of that of the heron. 11. A. vio lacea, or crested bittern of Catesby, has a white crest; the body is variegated with black and white, and bluish below. These birds are seen in Carolina in the rainy seasons ; but in the Bahama Islands they breed in bushes grow- ing among the rocks in prodigious numbers. 12. A. nigra has a straight greenish bill and crimson irides. It is frequently kept in mena- geries, being endowed with great gentleness of manners, added to its being an elegant bird. At various time.s it puts itself into strange and uncouth attitudes, especially those which imitate dancing. The name this bird is known by in the east is kurki, or querky. Sometimes it will breed in confinement: one is recorded to have lived twenty-four years at Versailles, where it had been bred. It is a native of Africa and the east. ARDKB1L, or Annr.viL, a town of Persia, in the province of Adeibijan. It was taken and burnt by Jenghix Khan in 1222, when most of the inhabitants were destroyed, but it has been since rebuilt ; and is still ranked for dignity among the best cities of the kingdom, on account of its having been the residence and burying place of some of the Persian kings; particularly the sepulchre of Sheik Sefi is at this place, to which the people resort in pilgrimage. Three or four of the large principal streets have shops, and are planted on each side with elm and linden trees, to keep off the excessive heat of the sun ; but the houses are poorly built, yet most oi' them have the conveniency of a garden. The meidan, or great square, is 1)00 paces long and !.")(> broad, having shops all round; which, when this place was in a florishing condition, wi-re stored with all manner of valuable com- s- r.dities. Through the city two branches of a rivulet pass, which have been sometimes so much swelled by the melting of the snow on the mountains, as to break down the dykes, and

highest of which lits westward, and is always covered with snow. These render the air some- times extremely hot, and at others intolerably t<'ld; which occasion epidemical distempers, that ca;ry otl' great numbers o! people, 'ihe soil

produces no fruit near the city but apples, pears, and peaches ; and yet is good for both corn and pasture; and the sheep are numerous. There are here several sorts of mineral waters, and springs which produce as hot water as if it was boiling, and from which waters are conveyed to the public baths in the city. About half a league from the city, on the right hand of the public road, there is a pool of standing water, which is covered over with salt like ice. Ardebil is situated about twenty-five or thirty miles

east of Tauris.

ARDECHE, a department of France, bound- ed on the east by that of Drome ; on the south by Gard ; on the west by Lozere, and on the north by Upper Loire; and so called from a river of the same name which falls into the Rhone. It contains 2376 square miles, and had, in 1816, a population of 284,743. It now con- tains three arrondissements, namely, those of Privas, Tournon, and Argentiere. This de- partment, with that of the Lozere, forms the diocese of the bishop of Mende. In the southern parts there is raised a great deal of wine and silk. In the northern districts, however, on account of the barren and stony nature of the soil, the inhabitants with equal industry can with difficulty procure a livelihood.

ARDEE, or ATHERDEE, a town of Ireland, in the county of Louth, thirty-four miles north-west of Dublin. It has a mount called Castle-Guard nearly ninety feet high, which seems to have been an artificial work. The main trench is be- tween thirty and forty feet deep : the circum- ference at the top is about 140 ; and round the foundation it is upwards of 600. Some suppose it to have been a sepulchral monument or royal burying place; others that it was a place of assembly for the people to debate on public affairs.

ARDEN, a common name of forests among the ancient Celtae,from the widely extensive one which ranged for 500 miles in length across the country of Gaul, or another which covered more than half the county of Warwick in Britain, and the sites of which still retain the appellation of Arden, to the much smaller one of the ancient Mance- nion, that covered and surrounded the site of the present Manchester. It was written Arduen by Caesar and Tacitus ; in speaking of the'forest in Gaul, as well as by Ossian, who only changes the u into v, in mentioning the woods of Cale- donia. Ard signifies either high or great, and ven or den either a hill or wood. Arduen, Ardven, or Arden, then, means a consider- able wood. Thus the name became applica- ble to such sites as the plains of Warwick- shire and the hills of Scotland ; and it was given, not only to the most extensive forests, to that which was the greatest in Gaul, or so considerable in Britain ; but to many that were important only within their own contracted dis- tricts, as the wood of Mancenion and others.

ARDEN (Edward), a gentleman of good family in Warwickshire, was born in 1532. Becoming a zealous Roman catholic, he was apprehended for a supposed plot against Queen Elizabeth, and executed in 1583. This unfortunate person is now generally supposed to have fallen a victim to the vengeance and implacable malice of that

unworthy favorite of Elizabeth, the earl of Leicester.

ARDENNES, a department in France, bound- ed by the Netherlands and the department of the Meuse to the north and east, the department of the Aisne to the west, and that of the Marne to the south. Its length is computed at twenty- five leagues, and its breadth at eighteen ; and there are 346,000 inhabitants. It is a frontier department, comprehending the ancient French duchy of Rhetelois, the province of Remois, and part of Argonne, the French portion of Namur, and the government of Sedan. The taxes paid by this department exceeded £100,000 sterling. It is watered by the Aisne and Meuse, and pro- duces grain of all kinds, wood, iron, coal, and slate. But its riches lie in its forests, its pas- tures, and its cattle, and tolerable wine may be obtained in some parts of the south. The iron mines are productive, especially those in the arrondissements of Mezieres and Retel. The roads are so narrow in some places, that two waggons cannot pass each other ; and therefore the waggoners are obliged to provide themselves with bells or horns to give one another notice to stop in time.

ARDENNES, a forest in France, formerly of vast extent; but the trees are in many places dug up, and where they stood are built cities, towns, and abbeys. At present it extends from Thionville near the country of Liege, to Donchery and Sedan, on the confines of Champagne. AR'DENT,~\ Lat. ardeo, ardens, to be on AR'DENCY, f fire. Having the property of AR'DENTLY, £ burning, m excessive, heat. The AR'DOUR. .7 warm passions, when perse- vering, are termed ardent, vehement. Also ap- plied to spirituous liquors.

Nor delay'd the winged saint, After his charge received ; but, from among Thousand celestial ardouri, where he stood Veil'd with his gorgeous wings, up-springing light, Flew thro' the midst of heav'n. Paradise Lott.

A knight of swarthy face.

High on a coal-black steed, pursued the chace ; With flashing flames his ardent eyes were fill'd.

Dryden.

The soldiers shout around with gen'rous rage ; He praised their ardour, inly pleased to see His host. Id.

Another nymph with fatal power may rise, To damp the sinking beams of

Cselia's eyes ; With haughty pride may hear her charms confest, And scorn the ardent vows that I have blest.

Prior.

Unmov'd the mind of Ithacus remain'd, And the vain ardours of our love restrain 'd.

Pope.

With tender billet-doux he lights the pyre, And breathes three am'rous sighs to raise the fire ; Then prostrate falls, and begs, with ardent eyes, Soon to obtain, and long possess, the prize. Id. Pray'r ardent opens heav'n, let's dowti a stream Of glory on the consecrated hour Of man in audience with the deity. Young.

Behold, fond man !

See here thy pictur'd life : pass some few years, Thy flow'ring spring, thy summer's ardent strength, Thy sober autumn fading into age, And pale concluding winter comes at last, And shuts the scene. Thomson.

As Descartes has kindly shown how a man may prove to himself his own existence, if once he can be prevailed upon to question it, so the ardent and ad- venturous will not be long without finding some plau- sible extenuation of the greatest difficulties. Rambler. And many a band of ardent youths were seen ;

Some into rapture fired by glory's charms, Or hurl'd the thundering car along the green, Or march'd embattled on in glittering arms.

Beattie .

ARDENTES, in authors of the middle age, an appellation given to those afflicted with the erysipelas ; so called, as seeming to be scorched by the disease. Hence also the abbey of St. Genevieve at Paris was called Domus Arden- tium, by reason, as it is said, of great numbers having been cured of that distemper at the shrine of this saint in the reign of Louis VI.

ARDEOLA, in ornithology, the ardea minuta of Linnaeus.

ARDERN (John), an English surgeon ot Newark upon Trent, whom many extol as the first reviver of surgery in England. He florished in the fourteenth century ; and wrote a treatise on the fistula in ano. In the Sloannian library there is likewise a MS. of his entitled De Re Herbaria, Physica, et Chirurgica. His treatise on the fistula was published in 1588.

ARDERSIER, a parish of Scotland, in the county of Inverness, two miles and a half in length and as much in breadth.

ARDES, a peninsula of Ireland, in the county of Down, nearly surrounded by the Irish chan nel, and the bays of Strangford and Carrickfer- gus. It was anciently a county by itself, as ap- pears from a patent roll of 1 Henry I. A. D. 1400, in Birmingham's tower, Dublin castle, granted to Robert Fitz-jordan Savage, the office of sheriff of Ardes in Ulster.

ARDES, a town of France, in the department of Puys de Dome, a great mart for inland trade. Lon. 3° 107 E., lat. 45° 22′ N.

ARDFERT, a town of Ireland, and the an- cient capital of Kerry. It had a university, which was held in the highest esteem. It is a bishop's see, and borough by ancient prescrip- tion, and has been held in commendam with the bishopric of Limerick ever since the restora- tion. The bishops were anciently called bishops of Kerry. Near the cathedral was an anchorite tower, the loftiest and finest in the kingdom, being 120 feet high: it fell suddenly in 1770 In the ruined churches there are several inscrip- tions round the mouldings of the tomb-stones ; and over an arch, behind Lord Glandore's house, is an inscription in relief in a masterly manner, but the characters are unknown.

ARDGLASS, an ancient bui decayed sea-port town of Ireland, in the county of Down, of which it was formerly the principal city. It has a long range of buildings in die style of a castle, called by the inhabitants the New Works, although they are so old that there is no tra- dition when or for what purpose they were built. This range of fortification extends 250 feet in length and twenty-four in breadth. The walls are three feet thick and have three towers in front, one at each end, and one in the centre, which makes them appear uniform and elegant.

The buildings have been divided into thirty-six apartments, eighteen above and eighteen below ; with a stair-case in the centre. Each apartment on the ground floor has a small Gothic door, and a large square window ; which would seem to indicate that they had been shops or ware- houses, occupied at some very early period b) mercantile people from abroad. Within ten feet of the south tower stands a square fort, called Horn-castle, from the great quantity of oxen and deers' horns found about it. It measures forty feet by thirty, consists of two stories, and, from the fire places, appears to

have been the kitchen and dining-hall belonging to the inhabi- tants. There are also relics of several other castles, towers, and gates, within the north-east point of Ardglass harbour. There is also a curious natural cave on the shore. The duties of this port were farmed so lately as the reign of Charles I. It lies seven miles north-east of Downpatrick.

ARDISIA, in botany, a genus of plants, class pentandria, order monogynia. Generic charac- ters : CAL. five-leaved : COR. hypocrateriform, limb reflexed. Antherae large and erect. Stigma simple. Drupa superior, one-seeded. Of this genus there are several species found in different parts of the world.

ARDKINGLASS, an ancient seat in Argyle- . shire, belonging to the Campbells of that title. The cast'n: of Ardkinglass is very ancient, and is composed of three separate towers, each of them fronting an area within. The space between the towers is defended by a strong wall about fifteen feet high; and the gate by a small tower, immediately above it, called the gate tower. The castle is built in a low situation, and could not stand out against a regular invest- ment. The time in which this castle was built is not known ; but there is certain evidence of its having been repaired in the year 1586. The old residence of the family of Ardkinglass, of •which the ruins can now scarcely be traced, was at a small distance from the present castle, but in a more commanding situation.

ARDOR VENTHICULI, a heat of the stomach, usually expressed by the term heart-burn, or cardialgy.

ARDRA, or ARDRAH, a small kingdom of Africa, in Guinea, on the gulf of St. Thomas. The inhabitants are very licentious, and have neither temple nor any place for religious worship. They are, however, very courageous ; and their king was absolute till lately that the king of Dahomey made war upon this and the neighbour- ing territories, brought them under subjection, and burnt the towns, particularly Ardres. The air is very unwholesome to Europeans ; yet the natives live to a great age; but the small-pox makes great destruction among them. This country is fertile in Indian corn, palm-wine, plants, and fruits, which last all the year; and they make a great deal of salt.

ARDRAII, or ARDRF.S, the capital of the above kingdom. I. on. 1° ,52′ E., lat. 6° 36′ N.

ARDRES, a small but strong town of France, Jn the department of the straits of Calais, arron- dissemont of St. Omers. An interview was held near it between Francis I. and Henry VIII.

king of England,in 1520; and the plain where tht monarchs met was long afterwards called the Field of Gold-cloth, on account of the finery and wealth displayed on that occasion. Ardres is seated in the midst of a morass. Lon. 2° 0′ E., lat. 50° 50′ N.

ARDROSSAN, a parish of Scotland, in Ayr- shire, six miles long from north to south, and between three and five broad from east to west. ‘ The castle of Ardrossan is of unknown anti- quity. Its walls were entire when Cromwell visited this part of the country, and fixed his head-quarters at the county town. That usurper had rendered himself very unpopular by occupy- ing the church of Ayr as an armoury ; and to conciliate the minds of the people to his measures, he, beautified the town, by building the fort and parapet, which are yet standing. For this pur- pose he threw down the walls of the Castle of Ardrossan, and carried the stones in boats over sea; so little were quarries known in those days, in which the county of Ayr almost everywhere abounds. After the restoration, the fort of Ayr, and ground about it, were granted to the family of the earl of Eglintoune in reward of their loyalty, and by way of compensation for the demolition of the castle of Ardrossan.

ARDS, a barony in the county of Down in Ireland. It is a narrow slip of land, in some places three, and in none above six miles broad ; lying between the lake of Strangford and the sea, and in the south part opposite to Lecale.

ARDSTINCHAR, a river of Scotland, in Aryshire, which runs for about twenty-five miles through the county, and falls into the sea at the village of Ballantrae. ‘At the mouth of this river there is a considerable salmon fishery, which yields a rent of above £80 a-year ; but the river, being rapid and shallow, can only admit of small boats. The salmon are thought as good as any in Scotland, and sell upon the spot at a very lo price.*

ARDUBA, an ancient city of the Pannonians. It was taken by Germanicus about the seventh year of the Christian era ; but its reduction was more owing to the disagreement that reigned among the inhabitants than to the valor of the Romans. The greater part of the citizens were for submitting ; but the women, more fond of their ancient laws and liberties than the men, joined some Roman deserters, and falling upon their husbands, killed a great number of them ; but being at last overcome by the men, who then submitted to the Romans, the women either threw themselves headlong from the tops of the walls, or, setting fire to their houses, burnt them- selves and their children to death.

ARD VERT, a town of France, on the coast of Saintonge, in the department of the Lower Charente, and is the head of a canton. A trade is carried on

in salt, wine, and fish, both fresh and salted, particularly sardels. The peninsula of this name has many morasses and forests, but the coasts afford excellent fishing. It includes the tract of country lying between the Garonne, the Seudre, and the sea. Population 2500. Six leagues and a half W. of Sainte.

ARDUINA, BASTARD LYCIUM,. in botany, a genus of the pentandria monogynia class ; the

corolla of which has a single petal ; the stijrna is bifid, and the fruit is a double-celled berry •with a single seed. There is only one species.

AR'DUOUS. Lat. arduus, high. According to Vossius, from ardeo, to burn, because flame ascends, and as it were seeks high places. Diffi- cult, laborious, from the object of pursuit being placed on an eminence; steep and inaccessible.

High on Parnassus' top her sons she show'd. And pointed out those arduoui paths they trod. Pope.

The translation of Homer was an arduous under- taking, and the translator entered upon it with a can- did confession that he was utterly incapable of doing justice to Homer. Cumberland.

In every arduoui enterprise we consider what we are to lose, as well as what we are to gain ; and the more and better stake of liberty every people possess, the less they will hazard in a vain attempt to make it more. Burke.

ARE, in French measure, it a superficial unit, or a square containing 94,831 square feet.

A RE denoted in solmisation the second note of Guido Aretinus, the first space A, bass clef, upon which, in the singing of exercises without words, the syllable re was always sung.

A'REA. From Lat. area, to dry. A thrash- ing floor, or barn floor, where corn mitrht be dried. Any vacant space bounded on all sides, or before a public building has acquired the name.

Let us conceive a floor or area of goodly length, •with the breadth

somewhat more than half the longi- tude. Wotton.

The Alban lake is of an oval figure ; and, by reason of the high mountains that encompass it, looks like the area of some vast amphitheatre. Addison.

In areas vary'd with Mosaic art,

Some whirl the disk, and some the javTin dart.

Pope.

We came to a kind of circus of vast extent, in the middle of a thick forest : within the circus was an area prepared for the combatants, surrounded by a circular bank of fresh turf, on which were an innu- merable multitude of spectators.

Hawketuwrth't Telemachut.

AREA; from areo, to be dry; in architec- ture, denotes the space or site of ground on which an edifice stands. It is also used for inner courts, and similar portions of ground.

AREA, in geometry, the superficial contents of any figure. Thus, if a figure be in form of a square, and its side be 40 feet long, its area is said to be 1600 square feet; or it contains 1600 squares, a foot each every way.

AREA, in medicine, a disease which makes the hair fall off. The area is a general kind of depi- lation; and is distinguished into two species, alopecia and ophiasis.

AREAD'. Ang.-Sax. aj-aedan, to conjecture. To guess, to declare, to explain, to counsel. Knights' and ladies' gentle deeds ;

Whose praises having slept in silence long, Me, all too meane, the sacred muse areads

To blazon broad. Faerie Qiieene.

But mark, what I aread thee now. A vaunt ! Fly thither, whence thou fled'st ! If from this hour Within these hallow'd limits thou appear, Back to th' infernal pit I drag thee chain'd.

Paradite Lost.

AREATA, in entomology, a species of pha- Izena geometra, the phalama area of Cramer. It is found in Surinam.

AREATUS, in entomology, a species of sca- rabaeus cetonia found in Virginia.

AREBO, or ARBON, a town on the slave- coast of Guinea, in Africa, seated at the mouth of the river Formosa. The English had once a factory there, as the Dutch have still. It is a large oblong place, with a considerable popula- tion, and furnished with houses built of reeds and leaves. Long. 5° 8′ E., lat. 5° 58′ N.

ARECA, in botany, the faufel nut, a genus of the order of palmae pennatifoliae. The male has, CAL. none; three petals and nine stamina; the female, CAL. none, the corolla has three petals There are two species, viz. 1. A. catechu, a na- tive of India. It has no branches, but its leaves are very beautiful ; they form a round tuft at the top of the trunk, which is as straight as an arrow. It grows to the height of twenty-five or thirty- five feet, and is a great ornament in gardens. The shell which contains the fruit is smooth without, but rough and hairy within ; in which it much resembles the shell of the cocoa nut. Its size is equal to that of a large walnut. Its kernel is the size of a nutmeg, to which it bears some resemblance. In the centre of the fruit, when soft, is contained a grayish moist substance, which grows hard in proportion as it ripens. The extract of this nut has been supposed to be the terra japonica of the shops ; but, according to later observations, the genuine drug seems to be obtained from the mimosa catechu. The fruit when ripe is astrin- gent, but not unpalatable, and the shell yellow- ish. Of this fruit there is a prodigious consump- tion in the East Indies, there being scarcely any person, from the richest to the poorest, who does not chew it with the leaves of betel, generally mixing with it lime made of sea-shells. When prepared for mastication it is called pinang, a Malayan word used all over the East Indies. The chewing of pinang causes much spitting, whether it be made with dried or fresh areca, and tinges the teeth and spittle of a deep red color. This mastication cools the mouth, and fastens the teeth. When they have done chewing the pinang, they spit out the gross sub- stance that remains in the mouth, and wash their mouth with fresh water, and their teeth then resume the natural color. The Euro- peans who live at Batavia, or Malacca, and in the Sunda and Molucca islands, use pinang as much as the Indians do ; but by washing their teeth they preserve them white. Some assert that areca strengthens the stomach, when the juice of it is swallowed, as most of the Indians do Another property ascribed to it is, its purifying the gums. When eaten by itself, as is some- times done by the Indians, it impoverishes the blood, and causes the jaundice; but not when mixed in the usual way with betel. The best areca of the Indies comes from the island of Ceylon. The Dutch East India Company send a great deal of it to Bengal. There grows in Malabar a sort of red areca, which is very proper for dyeing in that color, and which is sent from

time to time to Surat and Amadabat, for the use of the dyers in the dominions of the Grand Mogul.

2. A. oleracea, or true cabbage palm, is the most beautiful, and perhaps the tallest, of all trees. The trunk is perfectly straight, and marked with rings at the vestigiae of the footstalks of the leaves. Near the ground it is about seven feet in circumference; but tapers as it ascends, and attains the height of 170 or 200 feet- The bark is of an ash color, till within twenty-five or thirty feet of the extremity of the tree ; when it alters at once to a deep sea-green, which continues to the top. About five feet from the beginning of the green part upwards, the trunk is surrounded with numerous branches in a circular manner; all the lowermost spreading horizontally with great regularity, and the extremities of many of the higher branches bend wavingly downwards like so many plumes of feathers. These branches, when full grown, are about twenty feet long ; and ire thickly set. on the trunk alternately, rising gradually superior one to another: their broad curved sockets so surround the trunk, that the sight of it whilst among these is lost, which again appears among the uppermost branches, and is there enveloped in an upright green conic spire, which beautifully terminates its great height. The above mentioned branches are somewhat round underneath, and slightly grooved on the upper side : they are likewise decorated with a great number of green pennated leaves; some of these are near three feet long, and an inch and a half broad, growing narrower towards their points, as well as gradually decreasing in length towards the extremities of the branches. The middle rib in e;>ch leaf is strong and prominent, supporting it on the: under side, the upper ap-])eaiii;u' smooth and shining. The pithy part of the leaf being scraped off, the inside texture appears to be so many longitudinal thread-like filaments. These, being spun in the same manner as hemp or flax, are used in making cordage of every kind, as well as fishing-nets, which are esteemed stronger than those usually made from other materials. Upon removing the large leaves which surround the top of the trunk, a little way above the beginning of the green bark just men- tioned, what is called the cabbage is discovered lying in many thin, snow-white, brittle flakes, in taste resembling an almond, but sweeter. This substance, which cannot be procured without destroying the tree, is boiled, and eaten with mutton by the inhabitants of the West Indies, in the same manner as turnips and cabbage are with us; though it must appear the height of extrava- gance and luxury to fell so stately a tree, which would be an ornament to the most magnificent palace in Europe, to gratify the taste of any epi- cure, especially as there is but a very small part of it eatable. \V hat is called the cabbage flower, grows from that part of

the tree where the ash- colored trunk joins the green part already de- scribed. Its first appearance is a green husky spatha, growing to about twenty inches long, and four broad ; the inside being full of small white stringy filaments, full of alternate protu- berant knobs, the smallest of these resembling a

knotted fringe of coarse white thread : these are very numerous, and take their rise from large footstalks, which are all united to different parts of the large parent stalks. As this husky spatha is opened while young, the farinaceous yellow seed resembling fine saw-dust, is very plenti- fully dispersed among the stringy filaments, which answer the use of apices in other more regular flowers. These filaments being cleared of this dust, are pickled, and esteemed among the best pickles either in the West Indies or in Europe. But if this spatha is not cut down and opened whilst young, but suffered to con- tinue on the tree till it grows ripe and bursts, the enclosed part, which whilst young and tender is fit for pickling, will by that time have become ligneous, grown bushy, bearing many small leaves ; and in time produce a great number of small oval thin-shelled nuts, about the size of unhusked coffee berries : these, being planted, produce young cabbage trees. The sockets, or grooves, formed by the broad part of the footstalks of the branches, are used by the negroes as cradles for their children. On the inner side of the very young footstalks are tender pellicles, of which, when dried, writing paper is made. The trunks serve as gutters ; of the pith is made a sort of sago; and the nuts yield oil by decoction. In the pith also, after the trees are felled, a kind of worm, or grub breeds, which is eaten and esteemed a great delicacy by the French of Martinico, St. Domingo, and other islands.

A'RECHE,) Ang.-Sax. apeccan, to get, to

A'RAUGHT. S obtain, to reach', to take

For ofte shall a woman haue Thyng, whiche a man maie not areche.

Gower. Con. A. book i. Otuel, for wrath, anon Aretght him on the cheek bone ; Alltho fell off that was there, And made his teeth all bare.

Sir Otuel in Ettit, v. ii.

AR'EFY,) Lat. arefacio, to make dry ;

AREFAC'TION. J from area, to dry, and/octo to make.

Heat drieth bodies that do easily expire, as parch- ment, leaves, roots, clay, &c. and so doth time or age arefy, as in the same bodies, &c.

Bacon's Natural History.

From them, and their motions, principally pro- ceed arefaction, and most of the effects of nature.

Bacon.

ARELAS, ARELATE, or ARELATUM, a town of Gallia Narbonensis, situated on the Rhone, called Arelate Sextonorum, because it had a co- lony of the sixth legion. According to Ausonius there was a double Arelas, one on each side of the river, and joined by a bridge. That on the left side is thought to have been built by Con- stantine. It was a favorite place of the Romans, and hence called Gallula Roma. It is now called Aries.

AREM, or AL-AREM (Arab, a dam of water), a mound or dam, which formed a stupendous reservoir above the city Saba, whose eruption caused an inundation.

AREMBERG, a small principality of Ger- many, lying between Cologne, Juliers, and

AREOPAGUS.

Blankenheim, now included in the grand duchy of the Lower Rhine, which belongs to Prussia. It contains 3000 inhabitants, and brings in a re- venue of nearly 30,000 florins. The duke of Aremberg formerly possessed many other terri- tories in different parts of Germany and the Netherlands, from which he derived a revenue of £30,000 sterling. The family of Aremberg is descended from the house of Ligne; they were raised to the dignity of princes of the empire by Maximilian II. and to that of duke by Ferdinand III. They had a seat and vote in the diet of the empire, and in the circular diet of the Lower Rhine. The present duke's situation was modi- fied by Bonaparte ; the greater part of his terri- tories, however, are in the temporary occupation of other powers.

AREMBERG, or AREMBCRG, a capital of thp county, seated on the Are, about twenty-six miles south of Cologne, and defended by a castle.

AREMORICA, or ARMORICA ; from are nioer, Celt. i. e. beyond the sea ; a port of Gaul, placed by Caesar and Hirtius between the Sequana and Ligeris. Pliny says that Aquitauia was formerly called Aremorica; but in this he is singular. In the lower age, Armorica was confined to Bre- tagne in France.

ARE'NA,) Lat. arena, sand ; from areo,

ARZNA'CEOCS. J to diy. The arena was the sanded pit of the amphitheatre, left vacant for the conflict of the combatants, and strewed with sand, whence its name.

In the centre of the edifice, the arena, a stage was strewed with the finest sand, and successively as sumed the most different forms.

Gibbon'i History, vol. il

A piece of the stone of the same mines, of a yel- lowish brown color, an arenaceous friable substance, and with some white spar mixed with it.

Woodward on FottiV '.

ARENA, in anatomy, gratel concreted in the human body.

ARENA, in architecture, the middle of a temple, comprehending the whole space between the ante and the extreme wall of the building.

ARENACEA, in entomology, a species of phalaena bombyx, found at the Cape of Good Hope.

ARENACUM, or ARENACCS, one of the four towns, or larger villages, in the island of the Ba- tavi, mentioned by Tacitus : now Arnheim, in Gelderland. Lon. 5′ 20′ E., lat. 52° 2′ N.

ARENARIA, in entomology, a species of vespa in South America ; and a species of for- mica found in Barbary.

ARENARIA, in botany, sandwort: a genus of the decandria trisynia class; ranking under the twenty-second order, caryophyllei : CAL. five open leaves ; petals five, aud entire : the capsule is unilocular, and contains many seeds. There are seventeen species, seven of which are natives of Britain, viz. 1. A. laricifolia, larch-leaved sand- wort. 2. A. peploides, sea saudwort. 3. A. rubra, purple-flowered sandwort. 4. A. saxati- iis, mountain sandwort. 5. A. serpyllifolia, thyme- leaved sandwort. 6. A. tenuifolia, line-leaved sandwort. 7. A. trinervia. plantain-leaved sand- vort

ARENARIA, in conchology, a species of hell found on the shores of Armenia.*

ARENARIA, in ornithology, a bird called in English the scanderling; and in some places, particularly in Cornwall, the curwillet. It is a water-bird, of the long-legged and open-footed kind, and is a little larger than the tringa minor, or sand-piper. These birds are common about the sea-shore, and generally fly in large flocks.

AREN ARII, in antiquity, gladiators who com- bated with beasts in the arena, or amphitheatre. The arenarii were slaves of the lowest rank ; and though manumitted were not capable of being Roman citizeno, but were ranked with the bes- tiarii.

ARENARIUM, with ecclesiastical writers, a cemetery orburying-ground. The arenaria were pcoperiy a kind of pits or caverns, wherein the primitive Christians held their religious assem- blies in times of persecution.

ARENS, or ARENSHARDE, a district of Den- mark in the duchy of Sleswick, through which runs the famous wall called Danneuske, which Gottric, king of Denmark, built in the ninth cen- tury, across the country from Hollingsted to the Sley (an extent of forty-six miles), as a defence against the inroad of the Saxons and Sclavi. The natives of Arens were the first in the country who professed Christianity; and their church, built in 826, was demolished several times by the idolaters.

ARENSBERG, a town of Germany, the ca- pital of the duchy of Westphalia, seated on the river Roer. Population 2500. Lon. 83 T E., lat. 5° 15′ N.

ARENSBURG, an episcopal and maritime town of Livonia in Sweden, seated in the isle of Osel in the Baltic Sea.

ARENSWALDE, a town of Germany, in the New Marche of Brandenburg, seated on the lake Slauin on the frontiers of Pomerania. Lon. 15° 29 E., lat. 53° 14′ N*

AREOLA, the colored circle around the nipple of the breast.

AREOLATA, in conchology, a species of patella found in die British seas.

AREO PAG US, a sovereign tribunal at Athens, famous for the justice and impartiality of its de- crees, to which the gods themselves are said to have submitted their differences. The court was situated in the town, on a rock or hill opposite to the citadel. The word signifies, strictly, the rock of Mars.

The edifice of the Areopagus was extremely simple ; and its roof, which was at first of the most common materials, remained in that state till the time of Augustus. Orestes was the first who thought of embellishing it. He raised in it an altar to Minerva. He likewise adorned it with two seats of solid silver ; on one of which the accuser sat, and the accused on the other. Epimenides erected altars here to several alle- gorical deities, and soon after a temple, which Cicero mentions in his second book of laws. This temple corresponded with that which Orestes had built to the Furies, who brought him to Athens, and procured him the protection of Minerva.

Epimenides dedicated it – second

time to the Furies, or severe goddesses, as they were termed by the Athenians. A man was thought lost without resource, and a victim to every human ill, if he enforced a perjury by in- voking the sacred name of these tremendous di- vinities. Some ancient writers suggest that these deities had their temple so near the court Areo- pagus, that they might enlighten the judges by their inspiration ; and, by their continual assis- tance, prevent them from committing those errors to which human weakness is liable. The senate appointed their priests. Demosthenes had been nominated to preside over their sacri- fices ; and he thought it very extraordinary, that he, to whom the republic had confided so impor- tant an office, should be publicly impeached. It was natural to associate with the Eumenides the other deities who shared with them the sove- reign empire over the dead. Epimenides placed in their temples the statues of Pluto, of Mercury, and of Tellus. They were all, according to Pau- sanias, of an agreeable form. Each of them was placed upon an altar, on which the citizens, or strangers, who had been acquitted by the Areo- pagus made their grateful offerings. But it was not to gratitude alone that these several deities owed all the incense that smoked upon their altars. They who had been accused before the senate, harassed with superstition, and uncer- tain how these deities would be affected towards them, were lavish of sacrifice to obtain their cle- mency, by which they hoped their judges would likewise be influenced. The tomb of (Edipus was another of the ornaments of the Areopagus. It was in the outward court, where a barge was likewise placed, which made a part of the pomp at the public games.

Plutarch attributes the establishment of the Areopagus to Solon : other authors think, with good reason, that this tribunal was instituted before Solon : but the best authorities allow him the honor of its restoration. The city of Athens, governed till this time by tribunals of a circum- scribed jurisdiction, which were multiplied by the most trilling accidents and circumstances, took no fixed political or civil form, however closely united the members of those tribunals were by their general views towards the public good, and by the common love of their country. As each of those tribunals could only act in pro- portion to the power delegated to it, it was im- possible that so many different and unequal impressions should give to the great machine of the state that uniform and regular movement which, by an impulse always the same, would keep each part in the situation it should main- tain with relation to the whole. To effect this universal and harmonious power, it was neces- sary to unite the different channels of

public authority, which, by being too much distributed, lost its force. This authority Solon collected, and placed it all in the court of Areopagus, which consequently became the main-spring of the government.

The Areopagus assembled in a hall built on the summit of a hill, which was ascended with difficulty by the old men bent with age. How- ever, a; for some time they only assembled cu the three last days of each month, they tore

with patience this inconvenient situation. But public affairs multiplied to such a degree, that they were obliged to add to the three former sit- tings a fourth, which was held on the seventh day of the month, and which was soon succeeded by an assembly every day. Their meetings were so regular that they were not interrupted by the most solemn festivals, till Cephisodotus was archon ; who, in the third year of the 105th olym- piad, made a decree, which obliged the Areopa- gites to celebrate, after the example of other courts, the Apaturian feasts, which lasted five days. This assiduous and painful exercise of their office made the Areopagus feel all the inconvenience of the situation of their tri- bunal, and determined them to remove it to a part of the city called the Royal Portico. It was a square exposed to all the inclemency of the weather. When the judges, who assembled there in profound silence, had taken their places, they were enclosed by a thread, or rather a cord drawn round them, and are stated to have held their assemblies in the night, that their attention to public affairs might not be diverted by exter- nal objects ; or, as Lucian adds, that they might only be influenced by the arguments, and not by the presence and action of the speakers. This circumstance explains a passage in Athenseus, who tells us, that none knew the numbers nor faces of the Areopagites. When all the members of the senate were convened a herald enjoined silence, and ordered the people to retire. As soon as they had departed the assembly pro- ceeded to business ; and, as they deemed the least preference to be a flagrant injustice, the causes which they were to determine were drawn by a kind of lottery ; and the same chance which brought them up distributed them to different numbers of judges, small or great, according to the importance of the several causes. In early times the parties themselves stated their cause in a simple manner. The eloquence of advocates was thought a dangerous talent, fit only to varnish crimes. But afterwards the Areopagites, on this point, relaxed from their severity ; — at first the ac- cused, and soon after the accusers, were permitted to engage those to make the attack and the defence whose profession it was to exert the art of speak- ing, for others, with accuracy and elegance. But it was an inviolable custom of this tribunal to prohibit, in pleadings, all that warm and pic- turesque oratory which seduces the judgment and inflames the passions. The suffrages were col- lected in silence. They voted with a small flint, which they held between the thumb and the two next fingers, and which

they put into one of the two urns that stood in a corner of the hall. One stood before the other. The first was called the urn of death ; the second, the urn of compassion. That of death was of brass, and was termed proper; that of compassion was of wood, and was termed improper. The j udges commonly brought their flint to the assembly, and put them into tht? urn ; but that all the suffrages might be collected, the herald took the two urns, and presented them, one after another, to every senator, commanding him, in the name of the republic no longer to defer his acquittal or condemnation. The thiriy tyrants, to make themselves masters of the de-

cisions of the Areopagus, obliged them to bring their flints publicly, and lay them upon two tables placed before them. The first substances with which they gave their suffrages were not small pieces of the bones of a hog as some authors assert, but sea-shells, for which pieces of brass of the same form, termed spondyla, were afterwards substituted. The substances with which they voted were distinguished by their form and color. Those which condemned were black, and perforated in the middle ; the others were white, and not perforated. The precaution of piercing the black ones tends to prove, what we have already observed, that the court of Areo- pagus sat in the night. The judges were like- wise permitted to multiply at pleasure the dis- tinctions between siens, which essentially dis- tinguished the fates of men. After the suffrages were collected, they were taken out of the two urns, and put into a third vase of brass. They were then counted ; and as the number of white or of black flints was higher or inferior, one of the judges drew with his nail a shorter or a longer line on a tablet with a waxen surface, on which the result of each cause was marked. The short line expressed acquittal ; the long, condemnation. With regard to the emoluments of the judges, they were as moderate as those of the advocates. The length of the process did not enhance its expense ; and, when the decision of a cause was postponed till the next day, the committee were only paid an obolus on that day. Hence, Mer- cury, in Lucian, is surprised that such sensible old men as the senators of Areopagus were, should sell at so low a price the trouble of as- cending so high.

As to the number of the judges which com- posed the Areopagus, some authors attentive only to a part of Solon's regulations, by which he enacted that for the future none but the nine archons should be admitted members of the Areopagus, have imagined that this tribunal was filled anew every year, and that it never con- sisted of more than nine magistrates. This opinion is refuted by the circumstantial account which Diogenes Laertius gives us of the condem- nation of Socrates. That great man had wished to

substitute a rational hypothesis, for the fabu- lous and extravagant system of religion which prevailed in his time. His project, however laudable, appeared impious in the eye of super- stition. Information was laid against him before the Areopagus, and he had as many accusers as fellow-citizens. After the charges and the answers were heard, they proceeded to suffrages. The . r«nions were divided, but not equally, for the number of those who condemned him exceeded by 281 the number of those who declared him innocent. He made an ironical reply to this iniquitous sentence, by telling his judges, that he took it for granted they would admit him to a maintenance in the Prytaneum. On this sar- casm, eighty of those who had voted in his favor forsook him, went over to the opposite narty, and condemned him to die. • Here then we have 361 judges who condemned him ; to whom, if we add those who persisted in acquitting him, the number must be very considerable.

The judges of this court, who, under Draco,

decided only in cases of murder, by Solon's re- gulations took cognizance of crimes of every kind ; and the same tribunal which inflicted ca- pital punishment on murder, poisoning, burning of houses, theft, 8cc. struck at the root of those crimes, by arraigning idleness, luxury, and de- bauchery. Equally attentive to stimulate the indolence of the young, and the languor of the old, these sage judges roused in the one the laudable ambition to serve the state, and restored to the others their former activity. Satisfied that extremes produce the same effect, they thought the republic had as much to fear from the excess of wealth as from the gripe of poverty ; hence they exacted a minute account of the effects of every individual ; and hence their great severity to those idle citizens, who, instead of being use- ful members in a state, are its bane and its dis- honor. Isocrates draws a most beautiful and striking picture of these venerable and astonish- ing men, and the order and harmony which, flourished in Athens by their wise administration. The judges of the Areopagus, says he, 'were more industrious to prevent crimes, by represent- ing them in an odious light, than to establish modes of punishment.' It was their opinion that the enemies of the state were the instruments designed by the gods to punish the wicked, but that it was their province to correct and reform public and private manners. They were vigi- lantly attentive to the conduct of all the citizens, but particularly to that of the youth ; and insisted that it was the duty of inspectors of education to soften the austerity of moral discipline with inno- cent pleasure. The Areopagus divided the city into quarters, and the country into cantons. Every thing passed occasionally under their eyes ; and they were acquainted with the private con- duct of every citizen. By them the rich were obliged to relieve the poor. Corruption in ma- gistrates was suppressed by the punishments de- nounced against it ; and the old men, at the sight of the employments of the young, felt themselves animated

with a degree of juvenile vigor and activity. Religion came likewise under the cog- nizance of the Areopagites. Plato durst never, as we are told by Justin Martyr, divulge his pri- vate opinion concerning the Deity. His dread of the Areopagites, who were attached to the prevailing system, would not permit him even to name those sentiments which opposed the com- mon tradition. The public edifices, the clean- ness of the streets, the pay of the soldiers, the distribution of the public money ; in a word, whatever interested the republic, was under the direction of the Areopagus. The people them- selves, jealous as they were of their power, did nothing without consulting this assembly, and suffered it, without a murmur, to restrain their precipitate measures.

The most important qualifications were re- quired in those who entered into the Areopagus. Solon made a law, by which they who had not been archons for a year should not be admitted members of the Areopagus. To give more force to this law he subjected himself to it, and was only admitted on that title. This was but the first step : the administration of these annual ma- gistrates was investigated ; if their conduct was

found irreproachable they were admitted Areo- pagites with eulogium ; but the smallest miscon- duct excluded them from that honor for ever. Such respect was paid them, that people pre- sumed not to laugh in their presence ; and such was their reputation for equity, that those whom they condemned, or dismissed without granting their petition, never complained that they had been unjustly treated.

Of all the judgments of the Areopagus, the most famous one, excepting that of Mars, was the sentence said to have been passed on Orestes. His trial, which happened under Demophoon the twelfth king of Athens, in 375 of the Attic era, owed all its fame to a remarkable circum- stance , that gave rise to a custom which was ob- served ever afterwards. Orestes had killed his mother. He was accused before the Areopagus, and cited to appear in that court. He would have lost his life in consequence of the equal di- vision of the votes, had not Minerva, moved with his misfortunes, declared herself for those who had absolved him, and joined her suffrages to theirs ! Thus Orestes was saved. In veneration of this miracle, the Areopagites, whenever the suffrages were equally divided, decided in favor of the accused, by granting him what they termed ‘ the shell of Minerva.’ Cephalus and Diedalus were condemned by the Areopagus long before the time of Orestes. We find in ancient authors some decisions of this tribunal, which bear the strongest marks of justice, though their objects are not interesting. There is a singular anecdote in Aulus Gellius, and Valerius Maxi- mus, of a woman who was accused of having poisoned her husband

and her son. She was taken and brought before Dolabella, who was then proconsul of Asia, and no sooner was in his presence than she owned the fact; and added, that she had very good reasons for putting her husband and her son to death : — ‘ I had,’ said she, ‘ by my first husband a son whom I tenderly loved, and whose virtues rendered him worthy of my affection. My second husband, and the son whom I bare to him, murdered my favorite child. I thought it would have been unjust to have suffered those two monsters of barbarity to live. If you think, Sir, that I have committed a crime, it is your province to punish it : I certainly shall never repent of it.’ This affair embarrassed Do- labella. She was afterwards sent to the Areopa- gus; and that court, when they had examined her a long time, ordered her and her accuser to appear before them again a hundred years after, from the first day of her trial. We must not, however, suppose that the Areopagus always preserved its reputation. Pericles, who lived about luo years after Solon, to tiatter the people and \in them to his party, used his utmost eiloits to weaken its authority. He took from it the cogm/ unce of many affairs which had before come under its jurisdiction ; and, to for- ward his design of humbling it, employed the eloquence of Kphialtes, whose talents were for- midable, and who was an avowed enemy to the great men of Athens. The Areopagus itself seemed to second the endeavours of a man who projected its rum, and by its oun misconduct hastened its fall. The old rules of the court, by

which none were admitted its members but those whose unexceptionable conduct would support its majesty, were pronounced too severe. They grew less delicate in their choice ; and presuming that the faults with which they dispensed would soon be reformed in the society of so many good exam- ples, vice imperceptibly crept in among them : corruption, at first secret and timid, grew in- sensibly open and daring, and made such pro- gress that the most shameful crimes were soon exhibited on the stage ; copied not from the low and abandoned multitude, but from those se- nators once the venerable and austere censors of idleness and of vice. Demetrius, the comic poet, wrote a piece which he entitled The Areo- pagite, where he strips the mask off those hy- pocritical legislators, who were now equally apt to be seduced by wealth and by beauty. So much had the Athenian senate degenerated in the days of Isocrates, about 340 years before the Christian era. Before this tribunal St. Paul was called to give an account of his doctrine, and converted Dionysius one of their number. The end of this court of judicature is as ob- scure as its origin, which was derived from very remote antiquity. It existed, with the other ma- gistracies, in the time of Pausanias, i. e. in the second century. The term of its subsequent du- ration is not ascertained; but a writer who lived under the emperors Theodosius the elder and younger, in the fifth century, mentions it as extinct.

AREOTECTONICS, that part of fortification which teaches to attack an enemy safely and fight advantageously.

AREQUIBA, or ABEQUIPA, a city of South America, one of the largest and most beautiful cities in Peru, situated in the valley of Quilca, 217 leagues south-east from Lima, and 20 from the sea, with which it communicates by the river Chili. The entrance into the harbour is rather shallow for ships of great burden ; but when once they are entered, they may ride se- curely in eighteen fathoms water. This city was founded in 1539, by order of Don Francisco Pizarro, in a place known likewise by the name of Arequiba. The houses are built of stone, and vaulted ; they are lofty, neatly furnished within, and finely decorated on the outside. The in- habitants also are exempt from many diseases common in other parts of Peru, owing to their keeping the streets clean by means of canals which extend to the river. The temperature of the air is extremely good ; and, though sometimes a slight frost is perceivable> the cold is never ex- cessive, nor the heat troublesome, so that the surrounding fields are clothed with perpetual verdure. These natural advantages, however, are considerably allayed by its being very sub- ject to earthquakes, by which it has been often laid in rains. Population 40,000. Long. 71° 58′ W., lat. 16° 15′ S.

AREKE. Ang.-Sax. aj-aertin, to rear or raise up, to erect, to incite.

The day is miri, and draweth long

The lark arereth her song ;

To meed golh the damisele,

And faire flowers gadreth fele.

Merlin, in Ettit, vol. .

As the kyng rod wyth duykes and carlis, He mette with two old cheorlis. To the navel theo herd heng : Thus aresoned heom the kyng.

ARES, a term framed by Paracelsus, to ex- strongly in the sea, insomuch that, after piercing press a hidden disposer in the three principles the salt water, it may be sometimes taken up ef things, from which each being

receives its very little affected by it. This fountain Mr. proper form and substance, and assumes its own Brydone thinks the ancients were ignorant of, or specific nature, not that of any other being, they would not have failed to use it as an argu- Paracelsus distinguishes the ares into archeical, ment for the submarine journey of Alpheus. which is natural; and chemical, which is arti- Mr. Swinburne describes this once famous foun- ficial. tain as a large pool of water near the quay, de-

ARESKOUI, the god of war among the fended from the sea by a wall, and almost hidden American Indians. by houses on every other side. The water is

ARESON. Fr. arraisoner, to reason vvith. not salt, but brackish, and fit for no purpose but

washing linen. ‘ This,’ says he, ‘ is the celebrated fountain of Arethusa, whose soft poetical name is known to every reader. The fable of the nymph and her constant lover Alpheus, the ex-

King Alisaunder, in Ellis, vol. i. cenence of the spring, and the charms of its ARETvEUS of Cappadocia, a Greek phy- situation, are themes on which ancient and sician, of the sect of the Pneumatists, lived in modern poets have indulged their fancy, and the reign of Augustus, according to some ; ac- exercised their pens. Alas, how altered ! rub- cording to others, under Trajan or Adrian. He bish chokes up its wholesome sources ; the waves wrote several treatises in the Ionian dialect on have found a passage through the rocks, which acute diseases, and other medicinal subjects ; repeated earthquakes have split ; and not a fish some of which are still extant. The best edition is to be seen in it. Sometimes after an earth- of his works is that of Boerhaave, in Greek and quake, it has been left dry ; and at other times Latin, with notes, printed in 1731 ; that of Wi- tne whole mass of its waters have been tainted gan, printed at Oxford in 1723, in folio, is also by subterraneous effluvia. Its fountain-head much esteemed. probably lies among the neighbouring hills.’

ARETAPHILA of Cyrene, the wife of Mela- ARETIA, in botany, a genus of the class pen- nippus, a priest of that place, whom Nicocrates tandria, order monogynia ; natural order, twenty- murdered for the sake of Aretaphila. The tyrant, first, precise : COR. divided into five parts ; the suspecting that she designed to poison him, put tube ovated : the capsule globular, and consisting her also to the rack to extort a confession, and of but one cell. The species are three : viz. afterwards begged her forgiveness. She, however, A. alpina, alpine aretia. 2. A. helvetica, imbri- managed matters so as to procure his death ; and cated aretia. 3. A. vitaliana, grassy aretia; all ordered his brother, whom she married, to be natives of the Alps.

thrown into the sea. ARETINO (Francis), a celebrated critic on

ARETHUSA, in botany, a genus of the gy- the Greek language. He translated into Latin

nandria diandria class ; natural order, seventh, the Commentaries of St. Chrysostom upon St.

orchideae. The generic character is taken from John, and about twenty Homilies of the same

the nectarium, which is tubular, situated at the father; also the Letters of Phalaris; and wrote a

bottom of the corolla, and the inferior labium treatise De Balneis Puteolanis. He studied at

fixed to the stylus. The species are : 1. A. bul- Sienna, about 1443 ; and afterwards became a

bosa, bulbous arethusa, found in Virginia and teacher of civil law. He displayed his talents

Canada. 2. A. Capensis, Cape Arethusa, dis- chiefly in disputes, in which nobody could with-

coveredby Thunberg at the Cape of Good Hope, stand him. He gave his opinions in law with so

3. A. villosa, villose arethusa, also a native of much confidence as to assure those who consulted

the Cape of Good Hope. 4. A. biplumata, two- him that they should carry their cause : nor did

feathered arethusa, a native of North America. experience contradict him ; for it was a common

ARETHUSA, in entomology, a species of pa- saying at the bar, such a cause has been con-

pilio, the papilio nymphalis of Gmelin, found in demned by Aretin, it must therefore be lost. He

Germany and Prussia. taught also in the universities of Pisa and Ferrara.

ARETHUSA, in fabulous history, the daughter He was at Rome under the pontificate of Sixtus

of Nereus and Doris, and the companion of IV. but soon perceived that the great hopes

Diana, who changed her into a fountain to de- which he had built upon his reputation would

liver her from the pursuit of her lover Alpheus. come to nothing. This pope, however, declared

ARETHUSA, in geography, a celebrated foun- he would have given him a cardinal's hat, had

tain near the city of Syracuse in Sicily, famous be not thought he should have done a public in-

for the quantity of its waters, and the number of jury by depriving the youth of such an excellent

fishes it contained. Many fables were invented professor. When old age would not permit him

by the ancients concerning this fountain. They to go through the duties of his office, they dis-

had a notion that the river Alpheus runs under pensed with his reading of lectures, and his

or through the waters of the sea, without mixing salary was continued. He continued, however,

with them, from Peloponnesus to Sicily. Mr.

Brydone informs us that it still continues to send

forth an immense quantity of water, rising at

sometimes to mount the chair; and, one day, when the students were gone to some public shows, there were but forty persons in his au-

once to the size of a river, but is entirely aban- ditory ; which so mortified him, that he threw

doned by the fishes it formerly contained in such way his book ; and crying out, ' Aretin shall

plenty. At some distance from Arethusa is a never explain law to a few persons,' retired in a

fountain of fresh water which boils up very passion, and would teach no more. He was severe

in his temper, and never kept a servant longer than a month or two ; for it

was a maxim of his, ‘ That new hired servants always serve best.’ He was honored with the title of knight, and spent all his life in celibacy ; and his way of living was so parsimonious that he amassed a great deal of wealth. He had designed this wealth for the maintenance of a college ; but he altered his resolution, and left it to his relations. ARETINO (Guido), a celebrated musician, born at Arezzo in Tuscany, in the thirteenth century. Having been taught music in his youth, and probably retained as a chorister in the service of the Benedictine monastery in that city, he became a brother of the order of St. Benedict. In this retirement he seems to have devoted himself to the study of music, particularly the system of the ancients, and, above all, to reform their method of notation. The difficulties that at- tended the instruction of youth in the church offices were so great, that ten years were generally consumed barely in acquiring the knowledge of the plain song ; and this consideration induced him to labor after some method that might fa- cilitate instruction, and enable those employed in the choral office to perform the duties of it in a correct manner. Being at vespers in the chapel of his monastery, it happened that one of the offices appointed for that day was the hymn of St. John, composed by Paul, a deacon of the church of Aquileia, about A. D. 770.

UT queant laxis . . . REsonare fibris Mlra gestorum . . . FAmuli tuorum SOLve pollutis . . . LAbiis reatum.

Sancte Joannes.

During the performance he remarked the itera- tion of the words, and the frequent returns of VT, RE, MI, FA, SOL, LA, and immediately con- ceived a thought of applying these six syllables to perfect an improvement either then actually made by him, or under consideration, viz. that of converting the ancient tetrachords into hexachords. His interest with the abbot, and his employment in the chapel, gave him an opportunity of trying the efficacy of this method on the boys who were training up for the choral service, and it exceeded his most sanguine expectation. The fame of Guido’s invention soon spread abroad, and his method of instruction was adopted by the clergy of other countries. John XX. or as some writers style him, the XIX. pope of that name, having heard of the fame of Guido, and desiring to see him, sent three messengers to invite him to Rome ; upon their arrival, it was resolved by the brethren of the monastery, that he should be attended by Grimaldo the abbot, and Peter the chief of the canons of the church of Arezzo. Arriving at Rome he was received with great kindness : the pope had several conversations with him, in which he interrogated him as to his knowledge in music ; and upon sight of an antiphonary which Guido had brought with him, marked with the syllables agreeable to his new invention, the pope would not stir from his seat till he had learned perfectly to sing off a verse ; upon which he declared that he

could not have believed the efficacy of the method, if he had not been convinced by the experiment he had him- self made '. >f it. The pope would have detained

him at Rome, but laboring under a bodily dis- order, and fearing an injury to his health from thw air of the place, and the heats of the summer then approaching, Guido left that city upon a promise to revisit it, and explain to his holiness the principles of his new system. On his re- turn homewards he made a visit to the abbot of Pomposa, a town in the duchy of Ferrara, who was anxious that he should settle in the monas- tery of that place ; which invitation he accepted, and it was here that he composed a tract on music, intitled Micrologus, i. e. a short discourse; which he dedicated to Theodald bishop of Arezzo. Martini cites several manuscripts of Guido ; viz. two in the Ambrosian library at Mi- lan, the one written about the twelfth century, the other less ancient : another among the ar- chives of the chapter of Pistoja, a city in Tuscany, and a fourth in the Mediceo-Laurenziano library at Florence, of the fifteenth century. These are clearly copies of the Micrologus. Of the epistle to Michael, with the Argumentum novi Cantus, he mentions only one, which he says is some- where at Ratisbon. Of the several tracts above mentioned, the last excepted, a manuscript is extant in the library of Balliol college in Oxford. Several fragments of the two first in one volume, are also among the Harleian manuscripts now in British Museum, No. 3199; but so much muti- lated, that they afford but small satisfaction to a curious enquirer.

ARETINO (Leonard), one of the most learned men of the fifteenth century, was secretary to the republic of Florence, and translated from the Greek into Latin some of Plutarch's Lives, and Aristotle's Ethics : he also composed three books of the Punic war, as a supplement to those want- ing in Livy ; the history of the transactions in Italy during his time ; that of ancient Greece ; that of the Goths ; that of the republic of Flo- rence ; and many other books. He died in 1443, aged seventy-four.

ARETINO (Peter), a native of Arezzo, who lived in the sixteenth century. He was famous for his satirical writings ; and was so bold as to carry his invectives even against sovereigns, and thus obtained the title of the scourge of princes. Francis I., the emperor Charles V., most of the princes of Italy, several cardinals, and many noblemen courted his friendship by presents, either because they liked his compositions, or perhaps from an apprehension of falling under the lash of his satire. Aretino became thereupon so insolent, that he is said to have got a medal struck, on one side of which he is represented with these words, IL DIVINO ARETINO; and on the reverse, sitting upon a throne, receiving the presents of princes with these words, i PRINCIPI

LORO. He used to boast, that his lampoons did more service to the world than sermons ; and it was said of him, that he had subjected more princes by his pen than the greatest heroes had ever done by their arms. Aretino, however, wrpte many irreligious and obscene pieces. Strange to say, while engaged in these licen- tious productions, he was also writing the lives of St. Thomas of Aquinas, and of St. Ca- therine of Sienna, and composing penitential

nymns and other pieces of devotion. Aretino died at Venice in 1556, aged sixty-five years. In an epitaph written for him by an Italian wit, it is observed, ‘ that he satirised every one ex- cept his Maker, whom he spared only because he did not know him.’

ARETOLOGI, in antiquity, a sect of philo- sophers, chiefly of the Cynic or Stoic tribe, who, having no school or disciples of their own, haunted the tables of great men, and entertained them in their banquets with disputations on virtue, vice, and other popular topics.

AREZZO, anciently Aretium, a city of Italy, in Tuscany, seated in the territory of Florence, on the declivity of a mountain in the middle of a fruitful plain, seventeen miles from Citta di Castello, and lying between it and Florence. It is an ancient city and bishop’s see ; and was fa- mous for a kind of earthenware much esteemed by the Romans. It was greatly fallen to decay when Cosmo de Medicis took it under his pro- tection ; since which it has been recovering gradually. It was the birth-phce of Mecosnas and of Petrarch. It is now a bishop’s see, and contains 8,000 inhabitants.

ARGAL, crude tartar, in the state in which it is taken out of empty wine vessels.

ARGEA, or ARGEI, in Roman antiquity, thirty human figures, made of rushes, thrown annually by the priests, or vestals, into the Tiber, on the day of the ides of May. Plu- tarch, in his Roman Questions, inquires why they were called Argea. Two reasons are as- signed: viz. 1. That the barbarous nations •who first inhabited these parts, cast all the Greeks they could meet with into the Tiber; for Argians was a common name for all Gre- cians ; but that Hercules persuaded them to quit so inhuman a practice, and to purge them- selves of the crime by instituting this solemnity. 2. That Evander, an Arcadian, and a sworn enemy of the Argians, to perpetuate that enmity to his posterity, ordered the figures of Argians to be thus cast

into the river.

ARGEIA, or ARGOLIS, a district of Pelo- ponnesus, situated between Arcadia on the west, the uEgean Sea on the east, Laconia and the Sinus Argolicus on the south, and the ter- ritory of Corinth and the Sinus Saronicus on the north; so called from Argos, the capital: now Romania di Morea-

ARGEII, or ARGivi,the Argives, inhabitants of Argia. They were a colony who migrated, it is said, from 'Egypt, under the command of Inachus. Polemon and Ptolemy Meudesius, ancient Greek writers, inform us that Inachus was contemporary with Amosis, who demolished Avaris, and expelled the shepherds out of Egypt. If, with some learned chronologers, we sup- pose Inachus to have begun to reform the Ar- gives, A. A. C. 1856, and to have died A. A. C. 1808, he must have been coeval with Amosis, who reigned in Upper Egypt fifteen years be- fore the expulsion of the shepherds, and ten years after that event, which happened A. A. C. 1806. Inachus was styled the Son of the Ocean, because of his unknown origin, or be- cause he had come by sea into Greece. Before hig arrival the inhabitants were rude and bar-

barous. These he united and civilised, and in- structed in various arts. His son Phoroneus instituted the lawi of government ; and, on that account, has been called the first king of Argos, the first of men, and the father of mortals. The family of Inachus, after having kept possession of the throne 347 years, were expelled by Da- naus, who arrived A. A. C. 1509, with a colony from Canaan. Acrisius, the last king of Argos died A. A. C. 1313 ; and was succeeded by Per- seus his grandson, who transferred the seat of government to Mycenas, 544 years from the first year of Inachus, in the reign of Cecrops Il.king of Athens, and about the time when Pelops the son of Tantalus king of Phrygia, having been com- pelled by Ilus to leave his native country, came into Greece with great wealth, and acquired su- preme power in the region afterwards called by his name. In the thirty-seventh year of Eury- stheus, grandson of Perseus, the Argonautic ex- pedition happened, A. A. C. 1224. This unjust and tyrannical prince had assigned to Hercules his tasks ; and, after the death of that hero, he banished all his children. These were the He- raclidze who fled to Athens for protection, and who returned to Peloponnesus forty years after the destruction of Troy. In the reign of Aga- memnon the Trojan war commenced ; and it was carried on with vigor, during the space of ten years. In A. A. C. 1184, Troy was taken and the war was concluded. Scarcely had the Grecians settled in their own country, after their return from this dangerous expedition, when the pos- terity of Hercules invaded Peloponnesus, took possession of it, and divided it among themselves. Here the kingdom of Mycenae ended, and that of Sparta was established on its

ruins. See SPARTA.

ARGEMA, or ARGEMON, in medicine, an ulcer about the iris of the eye, comprehending part of the white, and part also of the black. The argemon appears of a red color on the out- side of the iris, and white within it. When it spreads far, and eats deep, it sometimes occasions the uvea to fall.

ARGEMONE, prickly poppy : a genus of the monogynia order and polyandria class of plants; natural order, twenty-seventh, rahreadeae : COR. six petals : CAL. is tryphyllous : CAPS, semivalved. Of this genus there are three species, which are common in many parts of the West Indies, and called by the Spaniards the devil's fig; but they are of no use, and have very little beauty.

ARGEMONION, in botany, a name given by some of the late Greek writers, to the plant called sarcocolla by the other writers of their times.

ARGENCES, a town of France, in the de- partment of Calvados, ten miles east of Caen, seated on theMeance. Lon. 0° 10′ W., lat, 49° 15′ N.

AR'GENT, ˆ Lat. argentum, silver, Gr.

AR'GENTINE, Sopytipov, so called on account

AR'GENTRY. j of ro apyov, the whiteness Silvery, having the appearance of silver.

Rinaldo flings

As swift, as fiery lightning kindled new : His argent eagle, witn her silver wings ID field of azure, fair Krminia knew. Fairfax.

In an argent field, the god of war Was drawn triumphant on his ivory car. Dry den.

ARC

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ARG

Thos" argent fields more likoly habitants, Translated saints, or middle spirits, hold, Betwixt th' angelical and human kind. Milton.

Or ask of yonder argent fields above, Why Jove's satellites are less than Jove ? Pope.

Amid the lustre of meridian day, In slow procession, solemnly advance A hundred youths in spotless tunics white, Sustaining argent wands. Glover' 'i Athenaid.

ARGENT, in heraldry, denotes the white color marked in the coats of arms of baronets, knights, and gentle- men; in the coat of a sovereign the white color is called luna; the arms of the nobility, pearl. It is marked in painting by leaving the field entirely blank, as in the an- nexed figure.

ARGENTAC, a town of France, in the de- partment of Upper Vienne, seated on the Dor- dogne, twelve miles south-east of Tulles.

ARGENTAN, a town of France, in the de- partment of Orne, seated on an eminence in the middle of a fertile plain, on the banks of the Orne. It carries on a considerable trade in corn, fine linen, lawns, gauzes, hats, leather, &c. It is situated twelve miles north-west of Seez, and 110 west of Paris. Lon. 0° 5′ E., lat. 48° 54′ N.

ARGENT ANGINA, the silver quinsy; when a lawyer, being feed by both parties, pretends, while pleading at the bar, to be suddenly taken ill, in order to favor his client's opponent.

ARGENTARIA, a town of ancient Gaul, supposed to have been situated where Colmar now stands. It is remarkable for a great victory gained by the emperor Gratian over the Lentien- ses in May A. U. 378. The Romans being but few in number were at first overpowered, and obliged to give ground ; but soon returning to the charge, they gained in the end a complete victory ; thirty thousand barbarians, with their king Triarius, being killed on the spot.

Ai;(.F,M\iuA CRKTA, silver chalk, in natural history, a very beautiful earth, of a loose friable texture, and perfectly white. It is not properly a chalk, but a species of tripela, dug in Prussia, and is much esteemed for cleaning plate. It has aUo been found in France, and of late in Ireland. The species dug at Mantua is much used by painters, and at Rome is vulgarly called gesso.

AKGENTAIUUS, in civil law, one who adorned military arms with silver or gold.

ARGK.NTAUIUS, in Roman antiquity, a money- changer or banker. The arsrentarii were monied people, who made a profit either by the chang- iii'_r, or lending of money at interest. They had their taberna,, or unices, in the Forum Romanum as early as the reign of Tarquin I. The argen tarii and foeneratores were hated for their covetousness and extortion.

Ar.(;i:x i ARIUS, in writers of the middle age, an officer entrusted witli the custody of money. In this sense argentarius amounts to the same with the (jreek ao-yuoo^i'Xa!;, and our cashier.

AUCK.NTAHIUS MILKS, in our old writers, an

officer of the exchequer, whose business it was to carry up the bag of money from the lower ex- chequer to the higher, in order to its being examined or told.

ARGENTARO MONTE, a cape and promon- tory of Italy, on the coast of Tuscany, twelve miles south of Orbitello. It juts out into the sea like a peninsula, and is a useful landmark.

ARGENTATI MILITES, in antiquity, and mentioned by Livy, lib. vi. are distinguished from aurati. Aquinas supposes these to have been similar to the argyraspides and chrysalpides ; but the descriptions do not agree. Livy only represents the argentati as clothed in white linen coats.

ARGENTEUIL, a town of the Isle of France, seated on the Seine, five miles north-west of Paris. It is a beautiful place, with fine vine- yards. In the environs are quarries of stucco. In the ci-devant Benedictine priory, they pretend to have the seamless coat of Christ, Lon. 2° 28 E., lat. 48° 52′ N.*

ARGENTEUS CODEX, a MS. copy of the four gospels, so named from its silver letters. The leaves are parchment, violet-colored, and on this ground the letters, which are all capitals, have been painted in silver, except the initials, and a few passages in gold. It is supposed to be a copy of the Gothic version, made ty Ulphi- las the apostle of the Goths, in the fourth cen- tury. It is now in the university of Upsal. It is a 4to. size. ' I was convinced,' says Mr. Archdeacon Coxe, ' from a close inspection, that each letter was painted, and not formed, as some authors have asserted, by a hot iron upon leaves of gold and silver. Most of the silver characters were become green by time ; but the golden let- ters are still in good preservation. The codex is mutilated in several places ; but what remains is, for the most part, perfectly legible.

1 This manuscript was, in 1597, first disco- vered in the library of the Benedictine abbey of Werder in Westphalia, by Anthony Marillon, who extracted a few passages, which were in- serted in a commentary on the Gothic alphabet, published by Bonaventura Vulcanius. Soon af- terwards Arnold Mercator observed it in the same library ; and transcribed a few verses, which Gruter gave to the world in his Inscrip- tiones Antiquae. From the abbey of Werder it was transferred to Prague, during the short period in which that town was occupied by Fre- deric, Elector Palatine. At the

capture of Prague in 1648, it was found among the literary spoils by Count Konigsmark, and sent as a most valua- ble present to Christina. The queen is said to have given it to Isaac Vossius ; but most probably the crafty Dutchman took it without permission, among many other rare books and manuscripts, when he pillaged her majesty's library during the confusion which preceded her abdication. On the death of Vossius it was purchased by Count Magnus Gabriel de la Gardie for £250, and presented to the university of Upsala.' — Coxe's Travels in Poland, Russia, Sweden, and Denmark.

ARGENTICOMUS, among ancient astrolo- gers, denotes a kind of silver-haired comet of uncommon lustre, supposed to be the cause of great changes in the planetary system.

ARGENTIERA, or ARGEXTIERE, a small island in the Archipelago, near Milo, so named from its silver mines. It is about eighteen miles in circumference, full of barren mountains, pro- ducing nothing but barley, cotton, and a few grapes fit only for eating. The barley and cotton are sown round the only village in the island. The men all frequent the sea, and in time become good pilots. They have little reli- gion, and are very ignorant. Justice is adminis- tered by an itinerant cadi, who is sometimes the only mussulman in the whole island. It produces the Terra Cimolia, so highly esteemed by the ancients. See CIMOLIA.

ARGEXTIERE, a town of France, in the depart- ment of Ardeche, five miles south-west of Aube- nas, and twenty-one west of Viviers. Population

2000.

ARGENTIL, an old English name for the plant called percipier Anglorum ; in English, parsley piert, or parsley break-stone. See APHANES.

ARGENTINA, in botany, a medicinal plant, nearly resembling cinquefoil, of some use as a cooler and astringent.

ARGENTINA, in ichthyology, a genus of fishes belonging to the order of abdominales. The generic characters are these : the -teeth are in the tongue as well as the jaws ; the bronchiostege membrane has eight radii or rays ; the anus is near the tail ; and the belly fins consist of many rays. There are two species of argentina, viz.

1 . A. Carolina has fifteen rays in the fin near the anus ; the tail is forked, and the lateral lines are straight. It inhabits the fresh waters of Carolina.

2. A. sphyraena has likewise fifteen rays in the fin at the anus ; the air bladder of this species is conical on both sides, and shines like silver : false pearls are sometimes made of it.

ARGENTINUS, a deity worshipped by the ancients as the god of silver coin; as yEsculanus, whom they made his father, was the god of brass money, which was in use before silver.

ARGENTON, a town of France in the de- partment of the Indre. It is divided into two by the river Creuse. It had formerly a castle ; but that was demolished by Louis XIV. Population 3400. Lon. 1° 25′ E., lat. 46° 36* N.

ARGENTORA, ARGENTORATTJM, or ARGEN- TORATUS, an ancient city of the Tribocci, called also Argentina. It was one of the fifty forts built by Drusus on the Rhine. The name was formed by the Romans from the German Argen Strassen, or Straten, ‘ unsafe roads for travellers,’ from the maraud ing parties of the garrisons that infested the roads. It is now called Strasburg.

ARGENTRE (CfiarlesDuplessisd’),alearned French prelate, was born in 1673. By bis la- bors and learning he became doctor of the Sorbonne, almoner to the king, and bishop of Tulles. Among his numerous works, the most interesting is, his Collectio Judiciorum de novis Erroribus, in three volumes folio ; containing nearly the same materials as Bossuet’s large work, L’Histoire des Variations. Argentre died in 1740.

ARGENTUM ALBUM, silver coin, or pieces of bullion that anciently passed for money. By doomsday tenure some rents to the king were

paid in argento albo, common silver pieces of money ; other rents, in libris ursis et pensatis, in metal of full weight and purity : in the next age, that rent which was paid in money, was called blanch fearm, and afterwards white rent ; and what was paid in provisions was termed black mail.

ARGEXTUM DEI, GOD’S PENNY, anciently sig- nified earnest-money, or money given to bind a bargain ; in some places called erles, or arles, and by the civilians and canonists arrhae.

ARGEXTUM MOSAICUM, or ARGENTUM Musr- VUM, amass consisting of silver-like flakes, used for the coloring of plaster figures, and for other purposes, as pigment. It consists of an amalgam of equal parts of tin, bismuth, and mercury. It is to be mixed with white of eggs, or spirit var- nish, and then applied to the intended work, which is afterwards to be

burnished.

ARGEXTUM VIVUM, mercury or quicksilver. See MERCURY.

ARGENVILLE (Anthony Jos. Dezallier d'), an ingenious French writer, was the son of a bookseller in Paris. He became a member of several societies in Europe. He was author of a treatise on Gardening, 4to. 1747; the Lives of the most famous Painters, 4to. 1755 ; a Cata- logue of Fossils found in France ; and other curious works. He also wrote for the Encyclo- pedie. He died in 1766.

ARGESTES is used by Vitruvius for the wind which blows from that quarter of the hori- zon, which is 75° from the south, and westward. Ricciolus uses the term to denote the wind which blows at 22° 30′ from the west towards the north', coinciding with that which is commonly called west-north-west.

ARGETENAR, in astronomy, a star of the fourth magnitude, in the flexure of the constella- tion Eridanus.

ARGIA, in mythology, 1. the wife of Ina- chus, and mother of lo, or Isis ; 2. the daughter of Adrastus, wife of Polynices, and mother of Thersander, one of the Epigoni ; 3. the mother of Argus, the carpenter of the ship Argo.

ARGIA, in entomology, a species of papilio. This is a native of Sierra Leone in Africa ; and is figured by Cramer under the name of cas- siopea.

AR'GIL, ˆ Gr. ApytXXoc, a white

ARGILLA'CEOUS, >pure earth, from apyoc,

ARGIL'LOUS. j white.

Aryill is that part of clay to which this owes its property of feeling soft and unctuous, and of harden- ing in fire ; it is difficultly soluble in acids, and scarce ever effervesces with them. When combined with the vitriolick acid, it forms alum.

Kinrun's Manure*, p. 6

Clayey loam denotes a compound soil, moderately cohesive, in which the argillaceout ingredient predo- minates. Id. p. 9.

Albuquerque derives this redness from the sand and argillcnu earth at the bottom. Brown'* Vvlgar Error*.

ARGIL, in ornithology, a species of ardea.

ARGILLACEOUS EARTHS, such as form with water a tenacious paste, or soft stones ; they burn hard, are corroded by strong coction in the concentrated mineral acids, but not acted upon by moderate digestion. They are the basis

of earthenwares. They vitrify with salts, with arsenic, wit'u gypsum, and difficultly with lead.

ARGIVI, a name for the Greeks in general.

ARGO, in fabulous history, the ship celebra- ted bv the poets wherein the Argonauts, of whom Jason was the chief, sailed in quest of the golden fleece. Jason having happily accom plished his enterprise, consecrated the ship Argo to Neptune; or, as others say, to Minerva, in the isthmus of Corinth ; where, they add, it did not remain long before it was translated into heaven, and made a constellation. The gene- rality of authors represent the ship Argo as of a long make, resembling the modern galleys ; and furnished with thirty benches of rowers. It could not, however, be of any great bulk, since the Aigonauts were able to carry it from the Danube to the Adriatic sea. See ARGONAUTS.

ARGO, or ARGO. NAVIS, in astronomy, the ship Argo, is a constellation in the southern hemi- sphere, whose stars in Ptolemy's catalogue are forty-five ; in Tycho's eleven ; in the Britannic Catalogue, and Sharp's Appendix, sixty-four.

ARGOB, in ancient geography, a canton lying beyond Jordan, in the half tribe of Ma- nasseh, and in the country of Bashan, one of the most fruitful on the other side of Jordan. In the region of Argob there were sixty cities, tailed Bashan-havoth-jair, which had very high walls and strong gates, without reckoning many villages and hamlets which were not enclosed ; Dent. iii. 4. 14. and 1 Kings iv. 13. The capital city of the region of Argob, which, ac- cording to Eusebius, was fifteen miles west from (Jerasa. t

ARGOLI (Andrew), an Italian mathematician, •was born at Tagliacozzo in the kingdom of Naples. In 1636 the senate of Venice appoint- ed him professor of mathematics at Padua, with the title of chevalier. He died in 1653. He published a treatise De Diehus Criticis, in 4to. 1052 ; and Ephemerides, from 1640 to 1700.

ARGOLI (John), son of the above, was professor of jurisprudence at Bologna. He wrote a poem, which is much admired, entitled, Endymion. He

died about 1660.

ARGONAUTA, the name of a species of shell- fish belonging to the order of vermes testacea. Tlif: shell consists of one spiral involuted valve. There are tvso species: viz. 1. A. argo, with a subdented carina, is found in the Mediterranean n.u'A Indian Oceans. This is the famous nautilus of Pliny. The shell seems no thicker nor stronger than a piece of paper; and the fish that inhabits it is a sepia. When it is to sail, it extends two of its arms on hio-h ; and between these supports a r..emhranc, which it throws out on this occa- sion : this serves it for a sail ; and the two arms it hangs out of the shell, to serve occasionally either as oars or as a steerage ; but this last office is generally served by the tail. When the sea is calm it is common to see numbers of these crea- tures diverting themselves with sailing about in this manner ; but as soon as a storm rises, or any thing gives them disturbance, they draw in their legs, and take in as much water as makes them somewhat heavier than the sea-water in which they swim, and they then sink to the bottom. The manner of their voiding tin's abundant water,

when they would rise again, is by a number o. holes, of which their legs are full. 2. A. cym- bium has a blunt plaited carina. This species is very small, and is found in the Mediterranean.

ARGONAUTIC, something belonging to the Argonauts. The argonautic expedition is one of the great epochas, or periods, of ancient history, which Sir Isaac Newton endeavours to settle, and from thence to rectify the anfiient chronology. This he shows, by several authorities, to have been one generation, or about thirty years, earlier than the taking of Troy, and forty-three years later than the death of Solomon. See CHRONO- LOGY. Dr. Bryant, however, rejects the history of the Argonautic expedition as a Grecian fable, founded on a tradition derived from Egypt, and ultimately referring to Noah's preservation, &c. in the ark. But although we are not to believe all the romantic stories which poets, and even some grave historians, have told us of those fa- mous adventurers, yet it seems unreasonable to discredit entirely the Argonautic expedition. See ARGONAUTS.

ARGONAUTICA, in literary history, poems on the expedition of the Argonauts. We have the Argonautics of Orpheus in epic verse, published by H. Stephens; the Argonautics of Apollonius Rhodius, an heroic poem, consisting of four books, 'a work,' as Quintilian says, 'by no means contemptible ;' and the Argonauticon of Valerius Flaccus, in eight books of Latin he- roics, in imitation of Apollonius ; with respect to which Burmann observes, that the imitator has often surpassed the original.

ARGONAUTS, in antiquity, a company of fifty-one heroes, according to

Valerius Flaccus, or, according to Apollonius Rhodius, of forty- four, who embarked along with Jason in the ship Argo, for Colchis, to obtain the golden fleece : but Julius Hyginus, who gives a list of them with their genealogies, enumerates no fewer than sixty-nine Argonauts. Hercules, Theseus, Castor, Pollux, Amphion, Telamon, Meleager, &.c. were of the number. Calais and Zethes, the sons of Boreas, who were said to have had wings at their head and feet, were their pilots. Jason, according to the fable, be- fore he could obtain the golden fleece, had to engage its guardians — a monstrous dragon, and two bulls with brazen feet, which breathed fire from their nostrils ; all which prodigies he per- formed by the help of Medea, daughter of A,etes king of Colchis, and carried off both the fleece and the princess. The occasion of this expedi- tion is thus represented by Greek writers: Phryxus, flying with' his sister Helle from the rage of their step-mother Ino, the daughter of Cadmus, went on board a ship whose ensign was a golden ram, and sailed to Colchis, now Mingrelia, part of Georgia. Hclle was drowned by the way in that sea, which from her was called the Hellespont, now die Dardanelles. This, ac- cording to some, was the ground of the poetical fable, that a ram with a golden fleece swam away with them to Colchis, and that the Argo- nauts undertook their famed expedition in order to find that fleece. But Strabo and Arrian in- form us, that it was the practice of the Colchians to collect gold on mount Caucasus by extend-

Jng fleeces across the beds of the torrent? ; and as the water passed, the metallic particles re- mained entangled in the wool; hence, according to those historians, the adventure was named the expedition of the golden fleece. Sir Isaac New- ton thinks that this expedition was really an embassy sent by the Greeks, during the intestine divisions of Egypt in the reign of Amenophis, to persuade the nations upon the coasts of the Euxine and Mediterranean seas to \take that opportunity of shaking off the yoke of Egypt, •vhich Sesostris had laid upon them ; and that fetching the golden fleece was only a pretence to cover their true design. The most judicious and satisfactory account of the Argonautic ex pedition seems to be that given by Dr. Gillies in his History of Greece: 'The northern districts of Thessaly being peculiarly exposed to the dan- gerous fury of invaders, the petty princes of that province entered into a confederacy for their mutual defence. They assembled in spring and autumn at Thermopylae, a place afterwards so illustrious, and then governed by Amphictyon a descendant of Deucalion, whose name is im- mortalised in the Amphictyonic council. The advantages which the confederates derived from this measure were soon perceived by their neighbours. The central states gradually acce- ded

to their alliance ; and about the middle of the fourteenth century before Christ, Acrisius king of Argos, and other princes of the Peloponnesus, were allowed to share the benefits and security of this useful association. (See AMPHICTYOSS.) After this event the Amphictyons appear to have long confined themselves to the original pur- pose of their institution. The states, whose mea- sures were directed by this assembly, found sufficient occupation in defending their own territories ; and near a century elapsed before they undertook, by common consent, any distant expedition. But it was not to be expected that their restless activity could be always exhausted in defensive war. The establishment of the Am- phictyons brought together the chiefs most dis- tinguished by birth and bravery. Glory and emulation prompted them to arms, and revenge directed those arms against the barbarians. Ja- son, Admetus, and other chieftains of Thessaly, having equipped a small fleet in the harbour of lolcus, and particularly the ship Argo, of supe- rior size and construction to any before known, were animated with a desire to visit foreign lands, to plant colonies in those parts of them that ap- peared most delightful, and to retort on their in- habitants the injuries which Greece had suffered from strangers. The princes of the north having proclaimed this spirited design over the central and southern provinces, the standard of enter- prise and glory was speedily surrounded by the flower ot" the Grecian youth, who eagerly em- braced this honorable opportunity to signalise their manly valor. Peleus, Tydeus, Telamon, and in general the fathers of these heroic chiefs, w!io in the succeeding age shone with distin- guished lustre in the plains of Troy, arc num- bered among the leaders of the Argonauts. They were accompanied by the chosen warriors, and by the venerable prophets of their res;->ettive tribes ; by an ,- tsculapius, t!ie admired father ot

the healing art; and by the divine Orpheus whose sublime genius was worthy to celebrate the amazing series of their adventures. These ad- ventures, however, have been too much adorned by the graces of poetry to be the proper subjects of historical composition. The designs of the Argonauts are veiled under the allegorical, or at least doubtful, phrase of ' carrying off the golden fleece ;' which, though easily explained, if we ad- mit the report that the inhabitants of the eastern banks of the Euxine extended fleeces of wool, in order to collect the golden particles which were carried down by the torrents from mount Cauca- sus, is yet described in such various language by ancient writers, that almost every modern who examines the subject thinks himself entitled to offer, by way of explanation, some new con- jecture of his own. But in opposition to the most approved of these conjectures, we may ven- ture to affirm, that the voyage to Colchis was not undertaken with a view to establish extensive plans of commerce, or to search for mines of gold, far less to learn the imaginary art of con-

verting other substances into that precious metal ; all such motives supposing a degree of specula- tion and refinement unknown in that age to the gallant but uninstructed youth of Thessaly. The real object of the expedition may be discovered by its consequences. The Argonauts fought, conquered, and plundered ; they settled a colony on the shores of ihe Euxine ; and carried into Greece a daughter of the king of Colchis, the celebrated Medea, a princess of Egyptian ex- traction, whose crimes and enchantments are condemned to eternal infamy in the immortal lines of Euripides.'

ARGONAUTS OF ST. NICHOLAS, a military order, instituted by Charles III. king of Naples in 1382 for the" advancement of navigation, or, as some say, merely for preserving amity among the nobles. They wore a collar of shells enclosed in a silver crescent, whence hung a ship with this device, ' Non credo tempori,' ' I do not trust time.' Hence these Argonaut knights came to be called ' knights of the shell.' They re- ceived the order of St. Basil archbishop of Naples, and held their assemblies in the church of St. Nicholas their patron.

ARGONNE, a ci-devant province or terri- tory of France, comprehending all that part of the country that lies between the rivers Meuse, Mame, and Aisne. St. Menehold was the capital.

ARGOPHYLLUM, in botany, WHITE-LEAF: a genus of the monogynia order, belonging to the pentandria class of plants. The capsule is trilo- cular ; the nectarium is pyramidal, pentagonous, and the length of the corolla. There is but ore species, viz. A. nitidum,or the glossy argophyllum, a native of New Caledonia. This species has great affinity with the ivy; but differ? in the nectarium, and perhaps in the fruit.

AllGOS, an ancient name of Peloponnesus ; so called from Argus one of its kings.

ARGOS, an inland town, and the capital of Argolis or Argia. It had different epithets, as Achaicum from the original inhabitants; llip- pium from its breed of horses ; and Inachium from the river Inachus which runs by it. The Arrives related that Inachus was one of the

river gods who adjudged the country to Juno when she contended for it with Neptune, which • leity in return made their water to vanish; the reason why the Inachus flowed only after rain and was dry in summer. The source was a spring, not copious, on a mountain in Arcadia, and the river served there as a boundary between the Argives and Mantineans.

Argos stood chiefly on a flat. The springs were near the surface ; and it abounded in wells which were said to have been made by. the daughters of Danaus. This ancient personage lived in the acropolis or citadel, which was named Larissa, and accounted moderately strong. On the ascent was a temple of Apollo on the ridge, which in the second century continued the seat of an oracle. The prophetess was debarred from commerce with the male sex : a lamb was sacrificed once a month in the night, when, on tasting the blood, she became possessed with the divinity. Farther on was a stadium where the Argives celebrated games in honor of Ne- mean Jupiter and of Juno. On the top was a temple of Jupiter without a roof, the statue off the pedestal. In the temple of Minerva, among other curious articles, was a wooden Jupiter with an eye more than common, having one in the forehead. This statue, it was said, was once placed in a court of the palace of Priam, who fled as a suppliant to the altar before it, when Troy was sacked. In this city was also the brazen tower in which Danae, the daughter of king Acrisius, being confined there by her father, was deflowered by Jupiter, or more probably by one of his priests.

Argos retains its original name and situation, standing near the mountains which are the boun- dary of the plain, with Napoli di Romania and the sea in view before it. The shining houses are whitened with lime or plaster. Churches, mud-built cottages and walls, with gardens and open areas, are interspersed, and the town is of considerable extent. Above the other buildings a very handsome mosque is seen, shaded with cypresses; and behind is a lofty hill, of a conical form, the summit of which is crowned with a neglected castle. The devastations of time and war have effaced the old city. We look in vain, says Mr. Chandler, for vestiges of its numerous edifices, the theatre, the gymnasium, the temples, and monuments, which it once boasted, contending even with Athens in anti- quity and in favors conferred by the gods. It is situated twenty-five miles south of Corinth. It has still a population of nearly 10,000 ; it has also a citadel and a bishop. The Venetians took it 168(3, but lost it in 1716, since which it has continued in the hands of the Turks. Twenty miles south of the bishopric of Strasburg, bailiwic of Dach-Corinth. Long. 22° 47′ E., lat. 37° 48′ N.

AKGOS AMPIIII.OCHICUM, a city of Acarnania, situated on the east side of the Sinus Ambracius; 180 stadia south-cast of Ambracia. It was so named from Amphilochus the son of Amphi- araus, and Arˆos his country. It was also called Argia Amphilochis, and Amphilochia.

AIIC.OS Hii'i'ifM, an ancient name of Arpi ; after -.van Is called Argyrippa, awd Argippa; built

Lat. arguo, to show, to declare, from ap-yoc, clear. To make clear or manifest, to adduce ˆ evidence, the object of which should be to elicit and exhibit truth, to reason, to represent

by Diomedes on the Cerbalus. It was a large and populous city of Apulia ; and is now called Arpi, but in ruins.

ARGOS PELASGICUM, Thessaly; so called from the Pelasgi.

ARGOS PORTUS, a port of Tuscany ; now called Porto Ferraro, in the north of the island Elba. Long. 11° 30′ E., lat. 42° 35′ N.

ARGOSTOL, or ARGOSTOLI, a sea-port of Cephalonia, opposite to Albania. It is the best harbour in the island. It is five miles distant from the fortress, where the proveditor resides.

ARGOW, or AARGOW, a county of Switzer- land adjacent to the Aar, whence its name, and forming the north-eastern part of the canton of Bern.

AR'GUE,

AR'GUER,

AR'GUMENT, v. & n.

ARGUMEN'TAL,

ARGUMENTATION,

ARGUMENTATIVE,

ARGUMEN'TATIVELY,

AR'GUMENTIZE.

as probable or necessary, to convince. To make clear or manifest, in which sense argument is applied to a brief sketch or outline or abstract of a book or treatise. To indicate, to adduce evidence, to allege reasons for or against a doubtful point, to debate, to dispute.

I wote wcl clerkes wol sain as hem lest By arguments, that all is for the best ; Tho I ne can the causes nought yknow, But thilke God that made the wind to blow, As kepe my lord : this is my conclusion, To clerkes lete I all disputison.

Chaucer. Frankeleine's Tale.

HOL. He draweth out the thread of his verbosity finer than the staple of his argument.

Shafupeare. Love's Labour Lost.

Of good and evil much they argued then. Milton.

Forwardness argues insufficiency.

Hall's Contemplations.

What more argues dislike of the person, than the turning back of his present. Id.

First, if we consider what the soul is in its own capacity to happiness, we shall find it to be an ex- cellency greater than the sun, of an angelic substance, sister to a cherub, an image of the divinity, and the great argument of that mercy whereby God did dis- tinguish us from the lower form of beasts, and trees, and minerals. Jeremy Taylor.

When the arguments press equally on both sides in matters that are indifferent to us, the safest method is to give up ourselves to neither. Addiwn.

What object, what event the moon beneath,

But argues or endears an after-scene ?

To reason proves, or weds it to desire ? Youny.

It is not the being singular, but being singular for something, that argues either extraordinary endow- ments of nature, or benevolent intentions to mankind , which draws the admiration and esteem of the world.

Berkeley.

In arguing too, the parson own'd his skill, For e'en tho' vanquish'd, he could argue still ; While words of learned length and thundering sound, Amazed the gazing rustics ranged around.

Goldsmith.

Like Murray he did not conduct the understanding through the painful subtility of argumentation ; nor •was he like Townshend, for ever on the rack of exer- tion; but rather lightened upon the subject, -and

reached the point by the flashings of the mind, which, like those of his eye, were felt, but could not be fol- lowed. Grattan's Character of Lord Chatham.

Were those [the apostles] weak men, who taught a system of opinion, which even the sovereigns of the world, and some of the least cruel, the most learned, and the most politic of them too, thought it their in- terest to bear down and destroy, not with argument, in which it would appear they had no confidence, but with fire and sword ? Seattle.

Thus Rodmond, train'd by this unhallow'd crew,

The sacred social passions never knew ;

Unskill'd to argue, in dispute yet loud,

Bold without caution, without honors proud.

Falconer's Shipwreck.

ARGUIM, or ARGUIN, an island on the coast of Africa, about sixteen, or, as others say, thirty miles from Cape Blanco, scarcely two miles in length ; notwithstanding which, the possession of it was violently disputed for eighty-seven years between the Portuguese, Dutch, English and French ; and, after a variety of fortune, has at last been totally abandoned. Long. 16° 20′ W., lat. 20° 30′ N.

This island was first discovered by the Por- tuguese in 1444 ; a fort was erected on the island, and the Portuguese enjoyed the peaceable possession of it till 1638. At this time the Dutch landed with a body of troops without moles- tation from the garrison, which was too weak to oppose them. The Portuguese, however, de- fended themselves with great intrepidity, and at last surrendered upon honorable terms. The Dutch immediately set about repairing the forti- fications, and securing it in the best manner they could : however, in 1665 the fort was reduced almost to a heap of rubbish by an English squadron ; but it was retaken by the Dutch the next year, who by affording every encouragement to settlers, and by giving extravagant prices for gums, monopolised the gum trade. By this means the gum trade of the French Senegal Company was almost destroyed; upon which they fitted out a squadron, dispossessed the Dutch, and had the island finally ceded to

them by the treaty of Nimeguen. The Dutch how- ever, under pretence of being subjects of the elector of Brandenburg, erected one of the forts which had been demolished, and there maintained themselves in spite of the utmost en- deavours of the French Company to dispossess them. In 1717, however, the French Company having found all their remonstrances ineffectual, fitted out a new squadron ; but this armament did not arrive at Arguim before February 26th, 1721. The Dutch defended themselves with such intrepidity as had almost baffled the utmost efforts of the French ; but the latter having drawn off a Moorish chief from his alliance, the Dutch were obliged to evacuate Arguim, and retire to Portendic, where they fortified them- selves, determining to watch a favorable oppor- tunity for recovering their settlement at Arguim. This soon occurred by the imprudence of Duval the French director; who, having quarrelled with the Moors, was surprised, defeated, and killed by them ; in consequence of which the settle- ment fell again into the hands of the Dutch on the llth of June, 1722. In 1723 the Dutch were attacked by another French squadron under

the command of the Sieur Riguadiere, who boasted that the fort could not hofd out one day ; but though he prevailed so far as to get posses- sion of the cisterns which contained the water of the besieged, he was at last shamefully re- pulsed, and forced to raise the siege with pre- cipitation. The Dutch, however, did not long enjoy the possession which they had so bravely defended; for in 1725 their fort was entirely demolished by the French under Du Casse, and has never since been rebuilt.

ARGUMENT, in logic and rhetoric, an infe- rence drawn from premises, the truth of which is indisputable, or at least highly probable. See LOGIC.

ARGUMENT OF INCLINATION, in astronomy, is an arch of a planet's orbit intercepted between the ascending node, and the place of the planet from the sun, numbered according to the suc- cession of the signs.

ARGUMENT OF THE MOON'S LATITUDE is the distance of the moon's true place from the sun's. By this we find the quantity of the real obscura- tion in eclipses, or how many digits are darkened in any place.

ARGUMENTATION, according to Cicero, is the delivering or unfolding of an argument. The matter of argumentation is propositions ; the form, their due disposition with regard to one another, so as a conclusion may be drawn from them.

ARGUMENTUM AD HOMINEM, is to press a man with consequences drawn from his own principles and concessions.

ARGUMENTUM AD JUDICIUM, an argument ad- dressed to the judgment drawn from any foun- dation of knowledge or probability. Mr. Locke reckons this the best species of argument.

ARGUMENTUM A TUTO, an argument drawn from the consideration that it is more safe to choose the one side of a question than the other, where the evidence seems doubtful or nearly equal on both sides. This species of argument is said to have been first used by Arnobius, and has been since successfully adopted by Paschal, Tillotson, Gastrel, and other advocates for Chris- tianity, against Deists and Atheists ; who, while they endeavour to undermine our faith in the gospel, and our hopes arising from it, give us nothing safe or certain in its place.

ARGCMENTUM BACULINUM literally signifies a cudgelling or knock-down argument; and is applied in cases where compulsion is used instead of reasoning. Every species of perse- cution for opinions, whether religious, political, or philosophical, may be termed an argumentum baculinum.

ARGUNSKOI, a town of Siberia, on the frontiers of Chinese Tartary ; containing mines of silver and lead, and a pearl fishery in the river Argun, on the west bank of which the town is situate. It is seventy miles S. E. of Nert- chinsk. Long. 118° E., lat. 52° 30′ N.

ARGUS, in fabulous history, was the son of Arestor, and had 100 eyes, fifty of which were always open. Juno made choice of him to guard lo, whom Jupiter transformed into a white heifer; but Jupiter pitying lo for being so closely confined, sent Mercury, who with his

fiute charmed Argus to sleep, sealed up his eyes with his caduceus, and then cut off his head ; when Juno, to reward his fidelity, turned him into a peacock, and placed his eyes in his tail.

ARGUS, the son of Jupiter and Niobe, the founder and first king of Argos.

ARGUS, the son of Polybus and Argia, the car- penter and ship-master of the Argo.

ARGUS, in ornithology, a species of pheasant in Chinese Tartary.

ARGUS, in zoology, a kind of animal full of eyes, called in Iceland oscabicorn ; of which Wormius and Jacobus have given descriptions. It is of the testaceous kind, of -an oblong form, resembling a crab's tail, and about two fingers' breadth in length.

ARGUS-SHELL, in conchyliology, a species of porcelain shell, beautifully variegated with spots, resembling those in a peacock's tail.

ARGUTE', ˆ From arguo, argutam,

ARGUTE'NF.SS, Mo make clear. Ingenious,

ARGUTA'TIONS. j skilful, sharp, subtle, witty.

I vis it is not the force of their argutatton that could move me one foot forwards.

Bishop HaUJs Polemical Work.*

There have been those who have not only advanced doubts' concernins; propositions attested to by clearest sense, and inferred by strong discourse, but have by their argute cavillations bid fair to shake the founda- tions of all human science. Barrow's Sermon.*

You arc wrong, said my father, argutely ; and for this plain reason. Sterne's Tristram Shindy.

ARGYLF, or ARGYLL, a county of Scotland, bounded on the south by the Irish Sea and the Frith of Clyde ; on the cast by the counties of Perth and Dumbarton ; on the north-east by Lochaber ; and on the north-west by several islands. It extends in length from south to north between the Mull of Kintyre and the point of Ardnamur- chan, where it joins Inverness-shire, about 114 miles ; and in breadth in some places, including the isles, to seventy. It \vas anciently called Argathelia, and together with Perthshire and the \estern Islands constituted the ancient Kingdom of the Scots, while the rest of Caledonia was subject to the 1'icts and Romans. It com- prehends Kintyre, Knapdale, Argyle Proper, ('owal, and Lome. This country, like most other paits ol' t'ne Highlands, affords a very wild pros- pect of lulls, rocks, huge mountains, and tremen- dous precipices, piled upon each other in a stupendous manner; bare, bleak, and barren to the \ie \v ; or at best covered with shaggy heath, which appears black and dismal, except in sum- mer, when it is variegated with an agreeable bloom of a purple color. The coast of Argyle is lorky; yet indented with bays and inlets, that ufir.nl i,oou harbours for slapping. The country is well watered by rivers, brooks, and 1-akes, a! oundiii'j.- wit'h ti>h ; the vales and rial parts of it are cultivated for corn ; the mountains feed an innumerable*

quantity of black cattle, which run wild amonu the hills in winter, as well as sum- mer; the heath and woods, of which there is a considerable number, afford shelter to deer, roe- bucks, and all sorts of game in great plenty : the circumambient sea, with its lochs, bays, and harbours, pours forth myriads of fish; but the innate wealth of the country is dug from the now els of the mountains in iron, copper, lead,

and other metals and minerals. Argyle is tiie seat of a provincial synod, consisting of five presbyteries and fifty parishes. Argyle-shire is generally peopled by the clan of Campbell ; and contains a great number of castles and seats belonging to gentlemen who hold of the duke, and boast themselves descended from his family. It sends one member to parliament. The resident population in 1801, was 71,859; and in 1811 it had increased to 85,585.

ARGYLE, DUKES OF. See CAMPBELL. The ancient and noble family of Campbell, the most powerful of the Scottish nobility, take their titles of dvike and earl from this county. The duke of Argyle is, by hereditary right, great master of the king's household in Scotland; admiral of the Western Isles ; general of Denoon castle ; keeper of Dunstaffnage and Carrick, and, before the jurisdictions were abolished, enjoyed other here- ditary offices, which rendered him too powerful as the subject of a limited monarchy. JHe still possesses many royalties ; his vassals, even of the name of Campbell, are so numerous, and his influence extends so far, that he could, on occa- sion, bring 3000 or 4000 fighting men into the field.

ARGYLE PROPER is that district of Argyleshire which is bounded by Knapdale and Cowal on the south, Lochaber on the north, Lennox and the Grampian hills on the east, and Lome on the west. It lies between Lochfyn and Lochlow ; which abound with excellent trout and salmon.

AllGYRASPIDES, or ARGYROASPIDES ; from apyvpov, silver, and affirtf, a shield ; in antiquity, soldiers armed with si'ver bucklers, or bucklers silvered. This corps, according to • Quintus Curtius, was the second of Alexander's army ; the phalanx being the first. Justin says, that Alexander having penetrated into India, and extended his empire as far as the ocean for a monument of his glory, ordered the armor of his soldiers, and the housings of his horses, to be adorned with silver. From this author it would seem that Alexander's whole army were called argyraspides. After that prince's death the ar- gyraspides despised all other chiefs of the army, disdaining to obey any other, having borne arms under Alexander.

ARGYRIT.fli AGONII, in antiquity, games in which money was the prize.

ARGYR1TIS, iii natural history, a name given by the ancients to a

substance resembling silver. In this sense argyritis was used to sig nify such litharge as was of a white color, tc distinguish it from that which was yellow, which they dignified with the name of chrysitis, as we do at present with that of litharge gold. The ai- gyritis of modern writers seems to have been th« same with the lapis magnetis of the ancients, mentioned by Theophrastus, and distinguished from the magnet.

ARGYRODAMAS, in natural history, a sort of silver-colored talc, which bears the fire, anil neither burns, melts, nor changes its hue.

ARGYROGONIA is used by alchemists for a kind of argentine, or silver-making seed, pre- tended to be procurable from a solution of that metal perfectly concocted

ARGYROLIBANUS, in the materia medica

of ihc ancient Greeks, a word used to express the white kind of olibanum.

ARGYROPEA, or ARGYROPCETA ; from ao- yupoc, silver, and TTOUW, to make; in alchemy, the art of making silver out of imperfect metals.

ARGYTHAMNIA, in botany, a genus of the class and order moncecia tetandria : the essential character is, male calyx four-leaved : corolla four-petalled : female calyx five-leaved, corolla none, styles dichotomous, capsule nicocceous, solitary seeds. There is one shrubby species a native of Jamaica.

ARHUSEN, or AARHUSEN. See AARHUUS.

ARIA ; Apoa, Gr. martial ; one of the ancient names of Thrace, from the character of the peo- ple, whose country Euripides calls the residence of Mars. It was the birth-place of Sophocles.

ARIA, or ARIAPOLIS, now called Herat, in Chorasan, an ancient town situated on the river Arias, which probably gave name to the country Ario.

ARIADNJEA, in German antiquity, two fes- tivals at Naxos, in honor of two women named Ariadne. In the solemnity dedicated to one of them, they had a show of sorrow and mourning ; and, in memory of her being left by Theseus near the time of child-birth, it was usual for a young man

to lie down and counter- feit all the agonies of a woman in labor. This festival is said to have been first instituted by Theseus, to atone for his ingratitude to that princess ! . The other Ariadne was thought to be of a gay and sprightly temper ; and therefore her festival was observed with music and other ex- pressions of mirth and joy.

ARIADNE, daughter of Minos king of Crete. Theseus being sent to destroy the Minotaur, Ariadne was so taken with him, that, as a testi- mony of her love, she gave Theseus a clue of thread to guide him out of the labyrinth. Theseus, having killed the Minotaur, carried off the Athenians he had relieved, toeether with Ariadne ; whom, however, he afterwards forsook.

ARIADNE, in sculpture, a beautiful statue of Parian marble, now in the Vatican, in which Ariadne is represented sleeping on the rocks of Naxos, where she was left by Theseus. The supposed state of her mind is beautifully repre- sented by the expression of her countenance, al- though in slumber. On the upper part of her left arm is a bracelet, called by the ancients ophis, in the form of a little serpent, which had long occasioned this statxie to be taken for a Cleopatra.

ARIANA, in ancient geography, an extensive country, comprising Paropamisus, Arachosia, Drangiana, and Gedrosia.

ARIANISM, the doctrine of Arius, who lived in the beginning of the fourth century. See

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ARIANNA, a small village, six miles north- east from Tunis, remarkable for a beautiful range of the ancient Carthaginian aqueduct, seventy-four feet high, supported by columns sixteen feet square, and which still increased in grandeur the nearer it approached Carthage. The stone was all diamond cut. Near this spot several ancient m.'tamores, or subterraneous

magazines for corn, have been discovered within these few years, capable of containing 100 bushels, strongly arched with large square stones. The Moors have already begun to demolish them, it being their custom to do so with every monument of art as soon as they discover it.

ARIANO, a town of Italy, in the pope's ter- ritories, seated on a branch of the Po, twenty- two miles north-east of Ferrara. Long. 12° 8′ E , lat. 45° 0′ N.

ARIANO, a town of Italy, in the ulterior prin- cipality of Naples, under the archbishop of Bene- vento, fifteen miles north-east of that town, and ten north-west of Trevico. It is a poor place, without trade or manufactures ;

having decayed since the desolation caused by an earthquake in 1456. It contains about 10,000 inhabitants, and no less than 20 parishes and convents, besides an ill-endowed cathedral. Below the towu is a convent of Dominicans, whose house, within these last 100 years, has been thrice overthrown by earthquakes. The last and most destructive happened in 1732, and was fatal to all the coun- try along the eastern verge of the Appennines.

ARIANS, followers of Arius, a presbyter of the church of Alexandria, about A.D. 315 ; who maintained that the Son of God was totally and essentially distinct from the Father ; that he was the first and noblest of those beings whom God had created, the instrument by whose subordi- nate operation he formed the universe ; and there- fore inferior to the Father both in nature and dignity : also that the Holy Ghost was not God, but created by the power of the Son. The Arians owned that the Son was the Word, but denied that Word to have been eternal. They held that Christ had nothing of man in him but the flesh, to which the Xoyoc or Word was joined, which was the same as the soul in us.

The Arians were first condemned and anathe- matised by a council at Alexandria in 320, under Alexander bishop of that city, who accused Arius of impiety, and caused him to be expelled from the communion of the church ; and after- wards by 380 fathers in the general council ot Nice, assembled by Constantine in 325. The doctrine, however, was not extinguished ; on the contrary, it became the reigning religion, es- pecially in the east, where it obtained much more than in the west. Arius was recalled from banishment by Constantine in two or three years after the council of Nice, and the laws that had been enacted against him were repealed. In 335 Athanasius, his zealous opponent, was de- posed and banished into Gaul, and Arius and his followers were reinstated in their privileges, and received into the communion of the church. In little more than a year after this, he fell a victim to the resentment of his enemies, and died a tragical death, probably occasioned by poison. See Ann:s. The Arian party found a protector in Constantius, who succeeded his father in the east ; and the zeal with which he abetted then produced many animosities and tumults to the time of his death in 362. They underwent various revolutions, persecutions and oppres- sions under succeeding emperors, according tc the degree of interest they had in the civil power, till at length Theodosius the Great exerted every

possible efifo to suppress and disperse them. Their doctrine was carried, in the fifth century, into Africa under the Vandals ; and into Asia under the Goths. Italy, Gaul, and Spain, were also deeply infected with it ; and towards the commencement of the sixth century it was triumphant in many parts of Asia, Africa, and Europe. But it sunk almost all at once when the Vandals were driven out of Africa, and the Goths out of Italy, by the arms of Justinian. However, it revived again in Italy under the protection of the Lombards in the seventh cen- tury. Erasmus seems to have aimed in some measure to restore Arianism, at the beginning of the sixteenth century, in his Commentaries on the New Testament. Accordingly, he was re- proached by his adversaries with Arian interpre- tations and glosses, Arian tenets, &c. To which he made little answer, save that there was no heresy more thoroughly extinct than that of the Arians : ' Nulla heresis magis extincta quam Arianorum.' But the face of things was soon changed. Servetus, a Spaniard by nation, pub- lished, in 1531, a little treatise against the Trinity, which once more revived the opinion of the Arians in tiro west. Indeed he rather showed himself a Photinian than an Arian ; only that he made use of the same passages of Scrip- ture, and the same arguments against the Sa- viour, with the proper Arians. Servetus had not, properly speaking, any disciples; but he gave occasion, after his death, to the forming of a new system of Arianism in Geneva, much more subtle and artful than his own, and which not a little perplexed Calvin. From Geneva the new Arians removed to Poland, where they gained consider- able ground ; but at length became Socinians. The appellation Arian has sometimes been indis- criminately applied, in modern times, to all those who consider Jesus 'Christ as inferior and sub- ordinate to the Father, and whose sentiments cannot be supposed to coincide exactly with those of the ancient Arians. Mr. Whiston was one of the first divines who revived the contro- versy in the beginning of the eighteenth century. He was followed by Dr. Clarke, who published his famous book entitled The Scripture Doctrine of the Trinity, &c. In consequence of which, he was reproached with the title of Semi-Arian. He was also threatened by the convocation andˆ combated by argument. Dr. Waterland, who has been charged with versing towards Tritheism, was one of his principal adversaries. Ancient Arianism admitted many subdivisions of opinion: and in modern times high and low Arians are terms that have been been applied to those who advocate the extremes of the Arian doctrine; the former raising the character of Christ to a kind of subordinate deity; the latter depressing it almost to mere humanity.

The passages of Scripture on which Arians chielly rely for the establishment of their senti- ments are : l'. Such as speak of the supremacy of the Father, as Matt. xv. 32.; xix. 17.; xxvii. 40.; John xx. 17. — 2. Of the inferiority or sub- ordination lt)f the Son: .Mark xiii. 32.; John xiv. 28.; 1 Cor. xi. 3.;

xv. 24.; Ephes. i- 17.: and, 3. Those in which all religious homage is re- ferred to the Father : Matt. iv. 10.; Johniv. 23.;

Acts iv. 24.; 1 Cor. i. 4.; Phil. i. 3, 4. The late Dr. Price was an eminent advocate for the Arian system ; Dr. John Taylor, of Norwich, &c.; and we suppose we may now add the dis- tinguished literary name of the late Dr. Abraham Rees, to the list of modern Arians. See the(Arti- cle PRICE, Rees's Cyclopaedia.

The Arians were divided into various sects, of which ancient writers give an account under the name of Semi-Arians, Eusebians, Aetians, Eu- nomians, Acaciaus, Psathyrians, and others. But they have been commonly distributed into three classes, viz. the Genuine Arians, Semi- Arians, and Eunomians.

ARIARATHES, the name of several ancient kings of Cappadocia. The last of them being overcome by Perdiccas, set fire to his palace, and burnt himself, his family, and effects in it, rather than submit to be carried captive.

ARIAS MONTANUS, a learned Spanish divine, employed by Philip II. of Spain to publish ano- ther edition of the Bible, after that of Cardinal Ximenes ; which he finished with applause, and died at Seville in 1598.

ARICA, a sea-port of South America, in the province of Los Charcas, in Peru. It was for- merly a considerable place ; but was almost en- tirely destroyed by an earthquake in 1605; so that now there are only about 150 families, most of them blacks, mulattoes, and Indians. The houses are made with canes or reeds set upright, and bound together with cords or thongs ; and, as it never rains here, they are covered only with mats, which makes the place look at a distance like a heap of ruins. The vale of Arica is about a league wide, and six leagues long, next the sea, and is all a barren country, except the spot where the old town stood, which is divided into little meadows of clover grass, and plots of sugar- canes, with a few olive and cotton trees inter- mixed. The vale grows narrower as it runs east- ward; and a league up there is a village, where they cultivate pimento or Jamaica pepper, which is planted throughout all the rest of the vale ; and there are several farms which produce no- thing else, that bring in the value of 80,000 crowns yearly. The Spaniards of Peru are so used to this pepper, that they dress no provisions without it. Long. 70° 15′ W., lat. 18° 26′ S.

ARICONIUM, a town of the Silures, a nation of the ancient Britons, now called Hereford. Long. 2° 42′ W., lat. 52° 4′ N.

AR'ID, i Lat. aridus, from area. Dry,

ARID'ITY \ parched, burnt up.

His harden'd fingers deck the gaudy spring,

Without him summer were an arid, waste.

t Thornton.

Salt taken in great quantities will reduce an ani- mal body to the great extremity of aridity or dryness. Arbuthnot on Aliments.

ARIDAS, a kind of taffety, manufactured in the East Indies from a shining thread obtained from certain herbs, whence they are styled aridas of herbs.

ARIDED, or ARIDEF, in astronomy, a fixed star of the second magnitude, in the extremity of the swan's tail. 'It is also called Hierezim and Adigege.

ARIDULLAM, in natural history, a kind of zarnic found in the East Indies. See ZARNIC.

ARIES.

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ARIDURA, in physic, a dryness or want of moisture. The word is also used by some for an aridity, or consumption ; by others, for an hei tic fever ; and more frequently by modern writers, for a wasting of some single member of the body, in which sense it amounts to the same with what is called withering.

ARIEGE, a river of France, which rises in the Pyrenean mountains, and running by Foix and Pamiers falls into the Garonne. Gold-dust is found amongst its sands.

ARIEL, a name of Jerusalem, so called from its warlike force.

ARIERE-BAN, a term used for the procla- mation of war by the ci-devant kings of France.

ARIES, Lat. the ram; one of the twelve signs of the zodiac ; the vernal sign.

ARIES, in artillery, a battering-ram, or a mili- tary engine with an iron head, much in use among the ancients to batter and beat down the walls of places besieged. Of this there were three kinds; the first rude and plain, and no more perhaps than a great beam, which the soldiers bore in their arms, and with one end of it, by main force, assailed the walls. This required great force to work it, but produced little effect. The second or compound

ram is described by Josephus (De Excid. Hierosol. 3.) thus : ‘ The ram is a vast long beam, like the mast of a ship, strengthened at one end with a head of iron, somewhat resembling that of a ram, whence it took its name. This is hung by the middle, with ropes, to another beam which lies across two posts ; and hanging thus equally balanced, is by a great number of men violently thrust for- ward, and recoiled backward, and so shakes the wall with its iron head, nor is there any tower or wall so thick or strong, as to resist the repeated assaults of this forcible machine.’ The third only differed from this, in that it was covered with a %tXuvri, or screen, to guard the soldiers ; whence it was called testudo arietaria.

Mr. Felibien describes a fourth sort of batter- ing-ram, which ran on wheels, and was the most perfect and effectual of them all. Vitruvius affirms that the battering-ram was first invented by the Carthaginians, while they laid siege to Cadiz : theirs was the simple kind first mentioned. Pephasmenos, a Tyrian, afterwards contrived to suspend it with ropes ; and finally, Polydus, the Thessalian, to mount it on wheels, at the siege of Byzantium, under Philip of Macedon. Yet Pliny assures us that the ram was invented at the siege of Troy ; and it was this that gave occasion to the fable of a wooden horse. The invention has been ascribed by some to Artemo- rus a Greek architect, who nourished 441 years before Christ. Some have supposed that the walls of Jericho, mentioned in the book of Joshua, were beaten down by this instrument ; the ram’s horns by which they were overthrown being no other than the horns of the battering-ram.

Plutarch tells us, that Marc Antony, in the Parthian war used a ram of eighty feet long ; and Vitruvius says they were sometimes made 106, and sometimes 120 feet long; to which perhaps the force of the engine was in a great measure owing. The ram was managed at once by a whole century of soldier ; so that it played*

continually and without intermission ; being usually covered with a vinea to protect it from the attempts of the enemy.

The battering-ram is represented in Plate I ARTILLERY, fig. 1. This ram AB is suspended by a rope x to the cross-beam y, at the top of the frame C D. Its head A is fastened to a large beam by three or four bands of iron four feet broad. At the extremity of each of these bands a, was a chain, 6, also of iron, fastened by one end to a hook c ; and at the other extremity of each of these chains was a cable firmly bound to the last link. These cables extended through the whole length of the beam to the end of the ram B, where they were bound firmly together with small ropes. To the end of these cables was fixed another, composed of several strong cords plaited together for some length, and then run- ning single. At each of these several men were placed to balance and work the machine. The unsuspended ram

differed from this only in the manner of working it : instead of being slung by a chain or cable, it moved on small wheels on another large beam.

These battering-rams, by their own weight, and by the action of the men who impelled them, exerted a force which in some cases exceeded the utmost effect of our battering cannon. Dr. Desaguliers (Lectures, vol. i. p. 65.) has demon- strated that the momentum of a battering-ram, twenty-eight inches in diameter, 180 feet long, with a head of cast iron of one ton and a-halC the whole ram weighing with its iron hoops 41,112 pounds, and moved by the united strength of 1000 men, would only be equal to that of a ball of thirty-six pounds weight, shot point blank from a cannon. Mr. Attwood, comparing the effect of the battering-ram, having its metal extremity equal to a twenty-four pounder, with a cannon ball of twenty-four pounds weight, observes, that in order to their producing the same effect in penetrating a wall or making a breach in it, the weight of the ram must exceed that of the cannon-ball in the proportion of the square of 1700, the velocity of the ball, to the square of the velocity with which the battering- ram could be made to impinge against the wall expressed in feet. Estimating this at ten feet in a second, the proportion of the weights will be that of about 2,890,000 to 100, or 28,900 to 1 ; and therefore the weight of the battering-ram must be 346 tons. In this case the battering-ram and the cannon-ball, moving with the velocities of 10 and 1700 feet in a second, would have the same effect in penetrating any obstacle : but, as the weight of the ram was probably never so great as the above supposition states it to have been, the force of a cannon-ball to make a breach in walls must exceed that of the ancient aries : but the momentum of this, or the impetus by which it communicated a shock to the whole building, was far - greater than the utmost force of cannon-balls ; for if the weight of the batter- ing-ram were no more than 170 times greater than that of a cannon-ball, each moving with its respective velocity, the momenta of forces of both would be equal ; but, as the weight of these ancient machines was certainly much greater than 170 times that of our heaviest cannon-ball >

their momentum or impetus to shake or over- turn walls or demolish buildings was much supe- perior to that which is exerted by the modern artillery. And since the strength of fortifications will in general be proportioned to the means which are used for their demolition, the military walls of the moderns have been constructed with less attention to their solidity and massy weight than the ancients thought to be a necessary de- fence against the aries ; that sort of cohesive firmness of texture which

resists the penetration of bodies being now more necessary than in ancient times. Nevertheless it is manifest, that even our solidity or weight in fortifications is also of material consequence to the effectual construction of a wall or battery. The ram was frequently used in the fourteenth century. Sir Christopher Wren employed it in demolishing the walls of the old church of St. Paul's previously to his rebuilding it ; and found no machine so well adapted to this purpose.

ARIETATION. Lat. arieto, to butt, to push or strike like a ram ; from aries, a ram. Butting, pushing. A pedantic word.

The strength of the, percussion, wherein ordnance do exceed all urietations and ancienj inventions.

Bacon.

ARIETUM LFA'ATIO, an ancient kind of sportive exercise, probably the same with what of later times is called running at the quintain.

AUI FRODE, the first historiographer of Ice- land, his native country, was one of the most learned men of his age. lie was born in 1068, and wrote several books of history, the greater part of which have oeen lost ; and all that now remain, are the Scheda? and Landnamabok, the latter of which was finished by Hire after his death.

ARIGHT'. On right, justly. See RIGHT.

Thou woldc be taught aritjht What mischiefe bakbityng dooth.

(loii'fr. Con. A . book ii. If thou liavo led thy life aright,

Death is the end of misery :

If thou in (rod hast thy delight

Tlioti (Host to live eternally.

Eilis's Poets, v. ii. p. 151.

We n, 'liner know God aritjlit , nor seek, love, or \rorship him as we should.

Jinrton't Anatomy of Melancholy. Tin' Chris! ian sneaks, calls it a delight, \ Jay oi luxury, observed tiriyht ;

W hen the i;hul soul is made heaven's welcome guest, Si's banout tiiur, and God provides the feast.

Cowper.

ARIL1.I S, an improper term invented by i.inmens, and defined to be the proper exterior t:oat. or eoverinu'of the seed, which falls off spontaneously. All seeds arc; not furnished with ail arilhis; in many, a dry covering, or scarf-skin, supplies its place. In jessamy, hound's tongue, cynoglossuni ; cucumber; fraxinella, dictamnus; staff-tiee, celastrus ; spindle-tree, euonymus ; Ar'nean spiraea, diosma; and the coffee-tree, cofva, it is very conspicuous. In the genus hound's tongue, four of these arilli, or proper (•cats, each infolding a single seed, are affixed to the stylus; and in tlii.s ciicumstar.ee, says Lin- iiii'ns, dots the essence oi the genus consist. In iiaxinelli the anlhis i . common to two seeds.

The staff-tree has it? seeds only half involved with this cover. The arillus is either baccatus, succulent, and of the nature of a berry, as in the spindle-tree, euonymus. Cartilaginous, cartilagi- nous, or gristly ; as in the African spiraea, dios- ma. Coloratus, colored; as in the staff-tree. Elasticus, endued with elasticity, for dispersing the seeds ; as is remarkable in the African spiraea, diosma, and fraxinella. Scaber, rough and knot- ty; as in hound's tongue. Although covered with an arillus or other dry coat, seeds are said to be naked (semina nuda) when they are not enclosed in any species of pericarpium or fruit vessel : as in the grasses, and the labiati or lipped flowers of Tournefort, which correspond to the didynamia gymnospermia of Linnaeus. Seeds are said to be covered (semina tecta) when they are contained in a fruit vessel, whether capsule pod, or pulpy pericarpium, of the apple, berry, or cherry kind. See SEMEN. This exterior coat of the seed is, by some former writers, styled calyptra. See CALYPTRA. The different skins or coverings of the seed are adapted, say natu- ralists, for receiving the nutritive juices, and transmitting them within.

ARIMANIUS, the evil gorl. of the ancient Per- sians. The Persian Magi held two principles: a good demon, or god, and an evil one: the first the author of all good, and the other of all evil : the former they supposed to be represented by light, and the latter by darkness, as their truest symbols. The good principle they named Yezad or Yezdan, and Ormozd or Hormizda, which the Greeks wrote Oromasdes; and the evil demon they called Ahriman, and the Greeks Arimanius. Some of the Magians held both these principles to have been from all eternity ; but this sect was reputed heterodox ; the original doctrine being, that the good principle only was eternal, and the other created. — Plutarch gives the following ac- count of the Magian traditions in relation to these gods and the introduction of evil into the world, viz. that Oromazes consisted of most pure light, and Arimanius of darkness; and that they were at war with each other : that Oromazes created six gods; 1. the author of Benevolence; 2. of Justice; 3. of Truth; 4. of Contentment; 5. of Pleasure; and 6. of Riches; and that

Arimanius made as many, who were the authors of the op- posite evils or vices : that then Oromazes, tri- plicating himself, removed as far from the sun as the sun is from the earth, and adorned the heaven with stars, appointing the dog-star for their guar- dian and leader ; that he also created twenty- four other gods, and enclosed them in an egg ; but Arimanius having also made an equal num- ber, these last perforated the egg, by which means evil and good became mixed together. However, the fatal time will come when Arima- nius, the introducer of plagues and famine, must be of necessity utterly destroyed by the former, and annihilated ; then the earth being made plain and even, mankind shall live in a happy state, in the same manner, in the same political society, and using one and the sama language. Theo- pompus writes, that according to the Magians, the said two gods, during the space of 3000 years, alternately conquer and are conquered; that for other 3000 years they « -11 wage mutual

war, fight, and destroy the works of each other, till at last Hades, or the evil spirit, shall perish, and men become perfectly happy, their bodies needing no food, nor casting any shadow, i. e. being perfectly transparent.

ARIMASPI, a people of Sarmatia Europea, south of the Monies Rhiphsei, said by Mela to have but one eye ; a fable broached by Aristeas Proconnesius, according to Herodotus.

ARIMATHEA, a town of Judea, thought to be the same with Ramatha (1 Sam. i.), and thus in the tribe of Ephraim. This place is now called Ramla; and is in a very ruinous state, containing nothing but rubbish within its boun- daries. The agaof Gaza resides here in a Serai, the floors and walls of which are tumbling down. He maintains about 100 horsemen, and as many Barbary soldiers, who, says Mr. Volney, are lodged in an old Christian church, the nave of which is used as a stable, and in an ancient khan, which is disputed with them by the scorpions. The adjacent country is planted with lofty olive trees, disposed in quincunxes. The greatest part of them are as large as the walnut-trees of France; but they are daily perishing through age, from the ravages of contending factiops, and even from secret mischief; for, in these countries, when a peasant would revenge him- self of his enemy, he comes by night, and saws or cuts his trees close to the ground, and the wound, which he takes care to cover, draining off the sap like an issue, the olive tree languishes and dies. Among these plantations we meet at every step with dry wells, cisterns fallen in, and vast vaulted reservoirs, which prove that, in ancient times,,this town must have

been upwards of a league and a half in circumference. At present it scarcely contains 200 families. The little land, which is cultivated by a few of them, belongs to the mufti, and two or three persons related to him.- The rest content themselves with spinning cotton, which is chiefly purchased by two French houses established there. The only remarkable antiquity at Ramla is the mi- naret of a ruined mosque on the road to Yafa, which is very lofty ; and by an Arabic inscrip- tion appears to have been built by the sultan Salifeldin.

ARIMINUM, a town of Umbria, or Romag- na, at the mouth of the Ariminus, on the gulf of Venice. The seizing on it by Caesar gave rise to the civil war. It is now called Rimini. Long. 13°58′ E., lat. 44° 10′ N.

ARIOBARZANES I. king of Cappadocia, was chosen by the people of that country A. A. C. 91 ; but, in a short time after, Tigranes, king of Armenia, expelled him. He, however, hav- ing gone to Rome, obtained such assistance as enabled him to recover the crown, which he afterwards resigned in favor of his son.

ARIOBARZANES II. being very much attached to Caesar was declared an enemy by the republic, ;md put to death by Cassius A. A. C. 42.

ARIOBARZANES III. brother and successor of the last-mentioned, was dethroned and put to death by Marc Antony.

AlllOCH,king of Ellasar, an ally of Chedor- l;iori"ier, was one of the nine monarchs who en- saved in the first battle 'of which we have any authentic account. See Gen. xiv.

ARIOLl, in antiquity, a kind of prophets, or religious conjurers, who, according to Origeu and Isidore, by abominable prayers, and horrible sacrifices at the altars of idols, procured answers to their questions concerning future events. These are also called harioli, and their operation hario- lation. Sometimes they were denominated arus- pices, or haruspices. The arioli were distin- guished by a slovenly dress, disorderly and matted beards, hair, &c.

ARION, in fabulous history, an excellent musician and poet, inventor of dithyrambics. Periander entertained him at his court, where, having amassed wealth, and returning to Corinth, the sailors, for the sake of his money, conspired to throw him overboard. In the meanwhile he requested permission to sing one funeral strain before his death ; and having obtained leave, he stood upon the vessel's prow with his instrument in his hand, chaunted with a loud voice, his sweetest elegy, and then threw himself into the sea; when, according to the poets, a dolphin, charmed with his music,

took him on her back, and carried him safe on shore.

ARION, in the mythology, a horse, much ce- lebrated in poetic history. Authors speak va- riously of his origin, though they agree in giving him a divine one. His production is most com- monly ascribed to Neptune. This god, accord- ing to some, raised him out of the ground by a stroke of his trident ; according to others, he begot him upon the fury Erynnys ; according to others upon Ceres, whom he ravished in the form of a horse, she having previously assumed the form of a mare to elude his pursuit. This horse was nursed by the Nereids ; and being sometimes yoked with the sea-horses of Neptune to the chariot of this god, he drew him with incredible swiftness through the sea. He had this pecu- liarity, that his right feet resembled those of a man. Neptune gave him to Capreus, king of Haliartus. Capreus made a present of him to Hercules ; who mounted him when he took the city of Elis, gained the prize with him in the race against Cygnus the son of Mars near Trae- cena, and at last made a present of him to Adrastus. It was under this last master that Arion signalised himself most : he won the prize for racing at the Nemean games, which the princes who went to besiege Thebes instituted in honor of Archemorus; and was the cause that Adrastus did not perish in this famous ex- pedition, as all the other chiefs did.

ARION, in entomology, a species of papilio found in different parts of Europe. The wings are without tails, brown above and gray be- neath.

ARIOSTI (Attilio) a celebrated musician, bora at Bologna. He entered among the order of Dominicans; but afterwards, by virtue of a dis- pensation from the pope, gave up his connexion with them. He was, for some time, an opera composer at Bologna and Venice ; after which he travelled into Germany and England. His performance on a new instrument, called the V iol d'Amore, attracted particular notice. He was much esteemed in England, where he pub- lished a book of cantatas, about 1725 ; and is said to have given lessons to Handel in hi» childhood. The time of his death is not certain.

ARIOSTO (Ludovico), the celebrated author of Orlando Furioso, was born at the castle of Keggio in Lombardy in 1474. His father, who was major domo to duke Hercules, lived to the extent of his fortune, and so left but little at his death. Ariosto, from his childhood, showed great marks of genius, especially in poetry ; and wrote a tragedy in verse on the story of Pyramus and Thisbe, which his brothers and sisters played. His father being

a man of no education, and rather regarding profit than his son's incli- nation, compelled him to study the civil law, in which having plodded some years to no purpose, he quitted it for more pleasing studies; yet often lamented, as Ovid and Plutarch did before him, and our own Milton since, that his father banished him from the Muses. At the age of twenty-four Ariosto lost his father, and found himself perplexed with family affairs. About six years after, his literary attainments procured him a situation under Don Hippolito cardinal of Este. At this time he had written nothing but a few sonnets ; but he now resolved to com- pose an epic poem, and chose Boiyardo's Orlan- do Inamorato for a ground-work. However, he was prevented writing for a great many years, and was chosen to go on an embassy to Pope Julian 1 1. and at his return was highly applauded. He again applied himself to his poem; but soon after incurred the cardinal's displeasure for refusing to accompany him into Hungary ; by which he was so discouraged, that he defer- red writing for fourteen years, till the cardinal's death. After that he finished by degrees, in great perfection, that which he began with great expectation. Duke Astolfo offered him great promotion if he would serve him ; but, prefer- ring liberty to grandeur, he refused this and other great offers from princes and cardinals, particularly from Leo X. from all whom, how- ever, he received large presents. The duke of Ferrara delighted so much in his comedies, of which he wrote five, that he built a stage on purpose to have them acted in his court, and enabled our poet to build himself a house in Ferrura, with a pleasant garden, where he used to compose his poems, which were highly esteemed by all the princes in Italy, who sent him many presents ; but he said, 'he would not sell his liberty for the best cardinal's hat in Rome.' It was a small though convenient house : being asked why he had not built it in a more magnificent manner, since he had given such noble descriptions of sumptuous palaces, beautiful porticoes, and pleasant fountains, in his Orlando Furioso ? he replied, That words were cheaper laid together than stones. In his diet he was temperate ; whether he was ever married is uncertain. He kept company with one Ales- s-andra, to whom, it was reported, he was mar- ried privately, and a lady (Jenevera, whom he often mentions in the twenty-fourth book of his Orlando, as potts intermix with their fictions borne real amours of their own. He translated the Meiiechmi of I'luutus ;un

prologue. He began one of his comedies in his" father's lifetime, when the following incident shows the remarkable talent he had for poetry. His father one day rebuked him sharply, charg- ing him with some great fault. ; but all the while he returned him no answer. Soon after his brother began the same subject ; but he easily refuted him, and with strong arguments justi- fied his own behaviour. ' Why then,' said his brother, 'did you not satisfy my father? ' ' In truth,' said Ludovico, ' I was thinking of a part in

my comedy ; and methought my father's speech to me was so suited to the part of an old man's chiding his son, that I forgot I was concerned in it myself, and considered it only to make it a part of my play.' In person Ariosto, as appears from an admirable picture by Titian, was rather above the middle size; with a countenance grave and contemplative; his head partly bald ; his hair dark and curling ; his forehead high ; his eyes black and spark- ling; his nose large and aquiline; and his complexion inclining to the olive. He was honored with the laurel by the hands of the em- peror Charles V. He was naturally affable, always assuming less than his due, yet never putting up with a known injury even from his superiors. He was so fearful on the water, that, whenever he went out of a ship, he would see others go before him ; and, on land, he would alight from his horse on the least apprehension of danger. He enjoyed the friendship of the most eminent men of learning of his time, most of whom he mentions with great respect in the last canto of his Orlando Furioso. His constitu- tion was but weakly, so that he was obliged to have recourse to physicians the greatest part of his life. He bore his last sickness with great resolution and serenity ; and died at Ferrara, the eighth of July, 1533, according to Sir John Harrington, being then fifty-nine years of age. He was interred in the church of the Benedictine monks, who, contrary to their custom, attended his funeral. He had a bust erected to him, and an epitaph, written by himself, inscribed upon his tomb. His Orlando Furioso has been trans- lated by Sir John Harrington and Mr. Hoole; but the late increased attention to Italian literature gives some reason to hope that a more ele- gant English version will soon be presented to the public.

ARIPPO, a small town and fort on the gulf of Manaar, in the island of Ceylon, principally connected with the pearl fishery. It is the only spot on these shores where good water is to be found. Arippo contains one of the best houses of the governor of Ceylon, a catholic chapel, and some respectable houses for the accommodation of the civil and military authorities who visit i in the fishing season. Long. 79° 40′ E., lal 8° 47′ N.*

ARISARIUM, or ARISARUM, in botany, wake-robin.

ARISE', v, & n.) Ang.-Sax. ajiisan. To

ARI'SING.] mount up, to get up, to

ascend, to spring from, to obtain power, office or celebrity.

This also we humbly and earnestly beg, that hu- man things aas.y not prejudice such as are divine,

A R I S T I D E S.

neither that from the unlocking of the gates of sense, ai.d the kindling of a greater natural light, any thing of incredulity, or intellectual night, may arise in our minds towards divine mysteries. Bacon's Essays.

The early violet will fresh arise

And spreading his flower'd purple to the skies,

Boldly the little elf the winter's spite defies.

Fletcher's Purple Island. He rose, and looking up, beheld the skies

With purple blushing, and the day arise. Dryden.

I know not what mischief may arise hereafter from the example of such an innovation. Id.

So Esdras arose up, and said unto them, ye have transgressed the law. 1 Esd. ix. 7.

And, when he arose against me, I caught him by his beard, and smote him. 1 Sam. xvii. 35.

Another Mary then arose, And did rig'rous laws impose. Cowley.

From Jesse's root behold a branch arise,

Whose sacred flower with fragrance fills the skies,

The etherial spirit o'er it's leaves shall move.

And on its top descends the mystic dove.

Pope's Messiah.

The greatest misfortunes men fall into arise from themselves. Swift.

The greatest part of our ideas arises from the view before or behind us ; and we are happy or miserable according as we are affected by the survey of our life, or our prospect of future existence. Rambler.

ARISH, a Persian long measure containing about thirty-eight English inches.

ARISI, rice, an Indian word, which does not properly signify the plant

which produces the rice, but the seed itself when cleansed from its husk, and rendered fit for use. The Indians call it arisi in this state ; but in the husk, and upon the plant, they call it nellou. See ORISA.

ARISTA, in astronomy, the spica virginis.

ARISTA, in botany, a long needle-like beard, that grows out from the husk of barley or grass ; called also the awn.

ARISTˆUS, the son of Apollo and Cyrene, whom, for the many services he had rendered to mankind by his knowledge of the useful arts, the gods placed amongst the stars ; where he is said to be the Aquarius in the zodiac. The re- semblance of his history to that of Moses has been curiously discussed by Huetius.

ARISTANDER, a famous soothsayer under Alexander the Great, over whom he gained a wonderful influence by the success of his art. He had enjoyed the same office under Philip ; and explained better than his brethren the dream that this prince had after he married Olympias.

ARISTARCHUS, a celebrated grammarian, much esteemed by Ptolemy Philometor, who entrusted him with the education of his son. He applied himself chiefly to criticism, and made a revisal of Homer's poems, but in too magisterial a way ; for such verses as he did not like he treated as spurious. He also criticised on other poets.

ARISTARCHUS, a Grecian philosopher of Sa- mos, one of the first that maintained that the earth turns upon its own centre. We are not sure of the age in which he lived ; and have iione of his works, but a Treatise of the Great- ness and distance of the Sun and Moon, trans- lated into Latin by Frederic Commandme, and published with Pappus's explanations, in 1572.

ARISTARCHUS of Thessalonica, a primitive

Christian, who attended Paul to Ephesus, where he was in danger of his life in the riot raised by Demetrius ; and afterwards to Rome, where he was beheaded along with him.

ARISTEA, in botany a genus of the triandria monogynia class and order. The essential cha- racter is, petals six, style declinate, stigma funnel-shaped and gaping, capsule inferior with nume- rous seeds. There is one species, a native of the Cape of Good Hope.

ARISTIDA, in botany, a genus of the tri- andria digynia class ; and, in the natural method, ranking under the fourth order, gramina. The calyx has a double valve; the corolla has one valve, and three awns at the points. There

are three species of aristida, viz. 1. A. Adscen- sionis, a native of the island of Ascension. 2. A. Americana, a native of Jamaica. 3. A. plumosa, a native of America.

ARISTIDES was the son of Lysimachus, of the tribe of Antiochis, and residing in the village of Alopece in Attica. Like that of his great rival Themistocles, his family was comparatively mean, and there seems to have been no particu- lar advantages of their youth to which either were indebted for their renown : unless, indeed, their constant companionship may be so regarded ; for they appear to have been brought up from the age of boyhood together, and to have developed in their juvenile sports much of that spirit of personal rivalry which afterwards appeared in their history, and prompted them to such impor- tant actions. An innate integrity appeared very early in Aristides, who devoted himself to the study of the Spartan philosophy of Lycurgus. He disdained to flatter an unsteady and unwise populace ; and, although an advocate for the cause of republicanism, he became a supporter of the aristocracy, and indulged perhaps an extreme contempt for the people. Truth, however, was his great object, and justice was his path ; that path which, regardless of the scorns of the weak or the outcries of the wicked, he steadily trod through life. Themistocles, whose motives were those of ambition alone, chose, as might have been foreseen, the readiest way to accomplish his object, by becoming an excessive favorer of the democracy. To this side he was also inclined by his ripening jealousy of Aristides, whose reputa- tion he hoped to destroy by the use of those means which his rival despised. The rise of this aversion between these two eminent men, or rather of the unworthy jealousy of Themistocles against Aristides, it is most important to trace, in forming a just estimate of their actions, as it became the source of great disturbances in the Athenian state, and shook at times the constitution of their coun- try to the centre. Nevertheless, when that country was in danger from foreign tyranny, the talents of both were as warmly united in pro- tecting it. The first, and perhaps the most eminent, occasion which presented itself in illus- tration of their devoted patriotism, was that invasion of Attica by the Persians, which was defeated with so much glory in the battle of Ma- rathon. Aristides and Themistocles were both, on this occasion, amongst the ten generals who commanded the Athenian army, under Callima- chus thp polemarch ; and both signalised their

courage and capacity before and after that cele- brated conflict. Aristides was left in the chief command of those Grecians at Marathon who guarded the prisoners and the spoil. The vast treasures of the enemy now lay at his

complete disposal : he was young as a commander, and well acquainted with the tempting power of gold ; but his personal disinterestedness and the severity of his public justice were alike conspicuous on the occasion. Not only was the minutest part of the conquered treasure unappropriated to his own use, but he exerted every nerve to restrain the private plunder of others, considering the whole spoil as the property of the state.

The aristocracy of the city now began to re- gard Aristides as their wisest adviser and firm support ; whilst the popular outcry was in favor of the more ostentatious merits of Themistocles. The Athenian laws permitted every citizen in his turn to preside in the courts of justice ; ‘ The gods forbid,’ said Themistocles, in regard to this office, ‘ that I should ever preside at a tribunal where my friends should not find more favor than strangers.’ Aristides, on the contrary, held that on a seat of justice, the inflexible rule of right should alone be his guide, unbiassed by fear, by anger, or by favor. On one occasion of this sort, a plaintiff urged in favor of his suit, and in illustration of the evii dispositions of the accused, the wrongs which the defendant had committed against Aristides himself; who in- stantly interrupted him, and exclaimed, ‘ Men- tion your own cause, and the injuries you your- self have received ; for I sit here as judge, and not as accuser ; the suit is yours, and not mine.’ This unbending honesty soon procured to him a title perhaps the most illustrious of all anti- quity—that of THE JUST.

The tremendous democratical power afforded by the trial of ostracism, allowed Themistocles the means of ultimately ruining this great man. This summary mode of popular justice derived its name from ostracon, a tile, the votes of the citizens being at h’rst collected by each one writing on a tile, or earthen vessel, the name of the person he wished to condemn to banishment. Every Athe- nian nti/en possessed the extravagant power of votinir for the condemnation of an individual, without any assigned reason ; and if the name of any person was found to be written on six thou-and tileˆ o;- shells, the sentence was con- tinned by the judges, and the victim of public or private pique was expelled the republic for ten \ears. The chief accusation of Aristides, brought forward at the instigation of Themisto- cles, was that very reputation for justice and honor which the former had so nobly acquired. ‘Aristides,’ said the agents of Themistocles, ‘has insensibly created himself a monarch, although without pomp or guards. From his great repu- tation for justice, he arts every day as umpire between contemtinu; parties ; and what consti- tutes a tyrant but the giving of laws ? ‘ Upon the occasion of this trial, a story is recorded of Aristides most stronsrly exemplifying his phi- I’xo’.ihy, and his proud sense of internal recti- tude. A clown from a village in Attica, who could neither read nor write, dazzled by the eloquence of Themistocles, advanced, during the

trial, towards Aristides himself (with whose per- son he was unacquainted), and requested that he would mark for him the name of the accused upon his shell. Aristides, in surprise, asked the peasant of what crime that Athenian citizen had been guilty? or, ‘ Has he done you any personal injury ? ‘ said this illustrious patriot. ‘ Me in- jury ? ‘ replied the peasant, ‘ No, he has neither done me any injury, nor do I know any public, harm of him ; but I am quite weary with hear- ing every body call him the Just.’ Aristides smiled, took the shell from the man, and wrote upon it, as required, his own name for condem- nation. His banishment took place B. C. 484.

Aristides was recalled from his banishment on the invasion of Xerxes, when he honorably pro- posed to Themistocles to bury their animosities during the contest, for the good of their country, and used all his influence to second the views of his rival at the battle of Salamis. He was also of the greatest service in preserving concord among the confederates at the battle of Platsea ; and after that conflict he terminated a dangerous quarrel concerning the honor of the day, by giving the palm to the Plataeans, and inducing the Lacedaemonians to do the same.

At the request of Themistocles, Aristides and Xantippus were associated with him as depu- ties for the improvement of Athens. He told them that he proposed to widen the Pyraeum port into a capacious harbour for vessels of burden, and then to join it to the city by strong and ex- tensive walls ; considering it preferable for this purpose to the other port, as being already larger as well as farther from the city ; a circumstance important to the morals and subordination of the people : and pressed upon his coadjutors the ne- cessity of increasing the Athenian navy, if they wished to obtain any decided influence in the islands of Greece. Plutarch relates, that in this conference Themistocles communicated to Aris- tides a plan for burning the fleets of the confe- derates, as they lay at anchor in the bay of Pagasae, in Macedonia, and thereby to render the Athenian the only naval power in Greece. Aris- tides, says this historian, in reference to this proposal, answered to the assembly, that in his opinion nothing could be more advantageous to the people than to pursue the advice of Themis- tocles, but nothing more wicked ; and the scheme was therefore abandoned. The defeats at Plataca and Mycale had disabled the enemy from again invading Greece, and it was now the fortune of the confederates, in their turn, to become the as- sailants. The Grecian fleet, consisting of thirty galleys of Attica, and twenty belonging to Sparta and the other Peloponnesian states, were com- manded by Pausanias the Lacedaemonian chief- tain who had distinguished himself at Plataea. — Aristides (in conjunction with Cimon, the son of Miltiades,) commanded the Athenian fleet under him : with this force the allies invaded Cyzicus, where they took and destroyed many towns ; and then proceeded to ravage Byzantiun,, another Colony of the

Persians. Ihe imprudent conduct of the Lacedaemonian leader, on this expedition, was strikingly contrasted with the moderation and the wisdom of Aristides. Pausa- nias insisted upon maintaining the rigid Spartan

discipline tl'oUfjhout the whole fleet; and al lowed no nr.n of the confederates to receive his pay, or his ratio of provisions, until every Spartan had first been served. The authority of such a chieftain could not but prove highly irksome to the minor states, whilst the character of Aristides fhone in full contrast before them ; and, inde- pendently of their wishes to obey the Athenian rather than the Spartan chief, they now began to see clearly that Athens was the more powerful state by sea, while her late fortifications would enable her also to cope with Sparta by land. Im- pelled by these motives, the leaders of the colonists solicited Aristides to interpose his me- diation with Pausanias, and to request of the Spartan a decided change of conduct : an inter- view between these chiefs, however, ended only in a direct insult to Aristides, from all of whose remonstrances Pausanias turned abruptly and haughtily away The captains of the minor states now applied directly to Aristides, intreating him to receive their submission on the part of his country, and offering, if he would uphold them in their resolves, to acknowledge Athens as the principal city of Greece. Aristides, in the first instance, replied, that he saw clearly not only the fitness, but the absolute necessity of their proposition ; for that the general cause of Greece could never prosper under a discipline so tyran- nical as that of the Spartans. He alleged, however, that his duty forbade him to hazard the safety and the honor of Athens, by attempting that in which he had no positive assurance of support. ' Per- form,' continued he, ' some public and decided act, by which you may demonstrate your since- rity ; and such as may fix irretrievably your future conduct beyond the possibility of recalling it. Do this, and the protection that can be afforded by the Athenian arms is yours.' To the discontented Grecians, this declaration was rather an additional encouragement than a re- fusal. Uliades and Antigoras, the Samian and Chian leaders, seized an immediate occasion to run their ships against the galley of Pausanias, as she rode in the station of honor at the head of •the fleet. Pausanias, in return, threatened to punish them severely for this act of insolence and rebellion to himself and to his country ; but these leaders undauntedly replied, that he had better be silent with regard to them, and thank fortune for her favors at Plataea ; for to her, rather than to his own talents, was even that victory owing. The remembrance of that great action only, they now declared, restrained the confederated Grecians from avenging his past tyranny ; and thenceforth they renounced all obedience or submission to him. Pausanias, astonished at this unexpected boldness, had scarcely time to pursue his inquiries respecting it, when the declaration was confirmed by all the

colonists, who now ranged themselves under the command of Aristides, and left the Spartan no other resource than to complain to his own coun- trymen. So imprudent, however, had been the conduct of this leader, that the Lacedaemonians themselves could not resent the insult, nor regain what he had lost for them.

Aristides, on his return to the capital, found himself at the very summit of popularity. But

this great man foresaw that the war with Persia was likely to be of long duration, and that all the skill and resources of Athens would be re- quired to maintain it. She had now a peculiar interest in the war, and a double honor to sup- port— her own supremacy amongst the confede- rates, and her safety from the common enemy. The necessity of a regulated scheme of finance throughout the different states of Greece was therefore now evident to him ; but the difficulty of accomplishing it amongst nations of such va- rious interests, and who were agreed in no one point long together, was also but too clear. Aristides was determined, however, to devote himself to this purpose while his popularity was as high amongst his countrymen a« his general reputation throughout Greece. His arguments for a regular system of finance were no sooner advanced than their truth, and the character of the party proposing them, carried conviction to all(parties ; and the different assessments of the several cities were left unreservedly to Aristides himself. Nor did he show himself unworthy of the power with which he had been honored. He so completely satisfied all the states with the equity of his conduct in this affair, that his taxa- tion was emphatically named ‘ the happy lot of Greece.’ In the conclusion of this business he persuaded the states to a solemn oath of confe- deration and alliance, which they readily took ; Aristides himself personating his countrymen, and throwing wedges of red hot iron into the sea, while he denounced curses from all the ele- ments against those who should ever violate the treaty.

The fame of Aristides was now complete. To the applauses of the populace he added the esteem of all Greece: Themistocles, however, could not endure the settled fame of a rival. In the adversity of Aristides or of his country, he could overlook all jealousies, and had nobly ex- tended his hand to his competitor ; but he was one of those friends whom prosperity rather tries than multiplies. He could not but feel that the origin of the popularity of Aristides was the effect of his good fortune in executing designs not his own, and which had cost Themistocles much of the pain of their conception. ‘ Aris- tides,’ he exclaimed in a general assembly, ‘ pos- sesses the merits, not of a man, but of a money- chest, which only preserves safely what mus.. first be deposited.’ On another occasion, he re- marked to Aristides publicly, ‘ That it was the first excellence in a general to be able to pene- trate the designs of an enemy ;’ to which Aris- tides replied, that ‘

This was indeed a most ne- cessary qualification, but there appeared to him to be another of equal importance — to have clean hands, and not to be a slave to money ;' a re- flection which is said to have touched Themis- tocles to the quick, as he now began to be sus- pected of intrigues with the Persians.

The last public act of Aristides is found in hu generous conduct towards his great rival. He ex- pressed his decided aversion from the conduct o Cimon and Alcmaon his persecutors, who wished to bring that great man to capital punishment ; and was observed, on all occasions, to speak of The- mistocles with more respect than ever. It was

probably througn his determined opposition to the efforts of his accusers that Themistocles was permitted to leave Athens in safety. About four years after this event Aristides died in peace and in glory, in that country to which he had de- voted his whole life, and which, at length, fully repaid his sufferings and his exertions with its full confidence, and with almost unlimited power. The last testimony to his virtues is found in the recorded fact that, although he was at his decease at the summit of his prosperity, he died poor. The expenses of his funeral were defrayed by the state, and portions from the public purse were awarded to his son Lysimachus and his two daughters. Some years afterwards a grandson of Aristides was reduced to obtain- ing a livelihood by explaining divinations and dreams.

ARISTIDES (ˆElius), a celebrated orator, born in Mysia about A. A. C. 129. The best edition of his works is that of Oxford, printed in Greek and Latin, in two volumes, 4to.

ARISTIDES, a painter, contemporary with Apel- les, flourished at Thebes about the 122d olympiad. He was the first, according to Pliny, who ex- pressed character and passion, the human mind, and its several emotions ; but he was not re- markable for softness and coloring. His most celebrated picture was of an infant (on the taking of a town) at the mother's breast, who is wounded and expiring. The sensations of the mother were clearly marked, and her fear lest the child, upon failure of the milk, should suck her blood. Alexander the Great took this picture with him to Pella. Junius, in his Treatise De Pictura Veterum, conjectures that a beautiful Greek epigram of /Kmilianus, of which the fol- lowing is a translation, was written on this picture : — •

Suck, little wretch, while yet thy mother lives, Suck the last drop her

fainting bosom gives !

She dies ! her tenderness survives her breath, And her fond love is provident in death.

ARISTIDES, a very eloquent Athenian orator, who became a convert to the Christian religion, and about the year 124 presented to the emperor Adrian an apology for the Christians, which is praised by Jerome ; but nothing from the pen of this writer has readied modern times.

ARISTIPPUS, a native of Cyrene in Libya, the founder of the Cyrenaic sect of philosophers, the son of Aretades, flourished about the ninety- sixth olympiad. The great reputation of 'Socra- tes induced him to remove to Athens, that he might hear his discourses. He was chiefly de- lighted witli those that related to pleasure; which he asserted to be the ultimate end in which all happiness consists. His manner of life was agreeable to his opinion ; for he indulged himself extremely in all the luxuries of dress, wine, and women. Though he had a good estate and three country seats, yet he was the only one of the disciples of Socrates who took money for teaching; which being observed by the philosopher, he asked Aristippus, how he came to have so much ; who in reply asked i.'im, how he came to have so little. Upon his leaving Socrates, he went to /Kgina, as Athenaeus informs us, where he lived witli more freedom

and luxury than before. Socrates sent frequent exhortations to him, in order to reclaim him ; but all in vain : and with the same view he pub- lished that discourse which we find in Xeno- phon. Here Aristippus became acquainted with Lais, the famous courtesan of Corinth ; for whose sake he took a voyage to that city. He continued at ./Egina till the death of Socrates, as appears from Plato's Phaedon, and the epistle which he wrote upon that occasion. He re- turned at last to Cyrene, where he professed philosophy, and instituted a sect which was call- ed the Cyrenaic, from the place, and the He- donic or the voluptuous, from its doctrines. During the height of the grandeur of Dionysius the Sicilian tyrant, a great many philosophers resorted to him ; and among the rest Aristippus, who was tempted by the magnificence of that court. Dionysius asking him the reason of his coming, he replied, ' That when he wanted wisdom, he went to Socrates ; but now as he wanted money, he was come to him.' He soon insinuated himself into the favor of Dionysius ; for, being a man of an easy temper, he cor formed himself to every place, time, and person, and was a complete master of the most refined com- plaisance. After he had lived a long time with Dionysius, his daughter Arete sent to him, de- siring his presence at Cyrene, to take care of her affairs, as she was in danger of being op- pressed by the magistrates. But he fell sick in his return home, and died at Lipara an ./Eolian island. Diogenes Laertius mentions several

anecdotes of Aristippus during his residence at the court of Sicily. Diouysius at "a feast commanded that all should put on women's purple habits, and dance in them. Plato refused, alleging it would disgrace his manhood; but Aristippus readily submitted and replied, 'At feasts, where mirth is free, a sober mind can never be cor- rupted.' At another time, interceding with Dionysius in behalf of a friend, but not prevailing, he cast himself at his feet ; when being re- proved for that excess of humility, he replied, ' That it was not he who was the cause of that submission ; but Dionysius, whose ears were in his feet.' By this complaisance he gained so much upon Dionysius, that he had a greater regard for him than for all the rest of the philo- sophers, though he sometimes spoke with such freedom to the king, that he incurred his dis- pleasure. When Dionysius asked, Why philo- sophers haunted the gates of rich men, but not rich men those of philosophers ? he replied, Be- cause the latter know what they want, and the others do not. When one recommended his son to him, he demanded 500 drachmas ; and upon the father's replying that he could buy a slave for that sum, ' Do so (said he), and then you'll be master of a couple.' Being reproached, because, having a suit of law depending, he feed a lawyer to plead for him, ' Just so (said he), when I have a great supper to make I always hire a cook.' Being reproved by Plato for his costly feasts, ' I warrant you (said he), that you would not have bestowed three farthings upon such a dinner ;' which the other confessing, ' Why, then,' said he, ' I find that I love my belly, and you love your money.' Having los

a considerable farm, he said to one who seemed to compassionate his loss : ' You have but one field ; I have three left, why should not I rather grieve for you ?' Like Socrates, he re- jected the sciences as they were then taught, and asserted that logic alone was sufficient to teach truth and fix its bounds. He said that pleasure and pain were the criteria by which we were to be determined ; that these alone made up all our passions ; that the first produced all the soft emotions, and the latter all the violent ones. The assemblage of all pleasure, he as- serted, made true happiness, and the best way to attain this was to enjoy the present moment.

He wrote a great many books : particularly the History of Libya, dedicated to Dionysius; various Dialogues ; and four books Of the Luxury of the Ancients. There are four of his epistles extant in the Socratic Collection pub- lished by Leo Allatius. Besides Arete his daughter, whom he educated in philosophy, Aristippus had also a son, whom he disinherited for his

stupidity. Arete had a son, who was named Aristippus from his grandfather, and had the surname of MijrpoStdaicroc, from his mo- ther's instructing him in philosophy. Among his auditors, besides his daughter Arete, we have an "account of ./Ethiops of Ptolemais, and Anti- pater of Cyrene. Arete communicated the phi- losophy which she received from her father to her son Aristippus, who transmitted it to Theodorus the atheist, who instituted the sect called Theo- dorean. Antipater communicated the philosophy of Aristippus to Epitimedes his disciple ; Epi- timedes to Paraebates; Paraebates to Hegesias and Anniceris ; and these two last, improving it by some additions of their own, obtained the honor of giving a name to the Hegesiac and An- nicerian sects.

ARISTO, a Stoic philosopher, the disciple of Zeno, flourished about A.A.C. 260. He differed little from his master. He rejected logic as of no use, and natural philosophy as above the reach of human understanding. It is said, that being bald, the sun burnt his head, and this caused his death. There is a saying of his recorded, which might render the doctrine of Aristippus less odious than it ordinarily is, viz. That a philosopher might do those of his hearers a prejudice who put a wrong interpretation upon good meanings ; for example, that the school of Aristippus might send out debauchees, and that of Zeno, Cynics : which seems to imply, that the doctrine of this philosopher never produced this effect, but when it was misunder- stood.

ARISTOBULUS I. the son of John Hyrca- nus, and nephew of Judas Maccabseus, was the first king of the Jews after their return from the captivity. He was also the first who united the royal and pontifical dignities, A. M. 3845. He leigned little more than a year.

ARISTOBULUS II. the son of Alexander Jan- nasus king of the Jews, succeeded his brother Hyrcanus A.M. 3882, and reigned five years, when he was dethroned and Hyrcanus restored, A.M. 3887.

ARISTOC'RACY, or > From an.-roc

ARISTOC'RATY, j strongest, chief, and

AR'ISTOCRAT, 1

ARISTOCRAT'ICK, f tocracy is that form

ARISTOCRAT'ICAL, j of governmentwhich

ARISTOCRATICALLY. J places the supreme power in the hands of the nobles, to the exclu- sion of king and people. The subsequent clas- sification of words will be best understood from the following citations.

Ockham distinguishes, that the papacy, or ecclesi- astical monarchy, may be changed in an extraordi- nary manner, for some time, into an (rristocratical form of government. Ayliffe.

The aristocracy of Venice hath admitted so many abuses through the degeneracy of the nobles, that the period of its duration seems to approach. Swift.

Thus he, well-cautioned that in Chalcis, power Aristocratick, both in wealth and strength, Outweighed the people. Glover'i Athenaid. b. xv. A true natural aristocracy is not a separate interest iu the state, or separable from it. Burke.

ARISTOCRACY is also often used for the nobility of a country, under a monarchy or any form of government. The ancient writers on politics prefer the aristocratical form of government to all others. Many of the moderns reckon it the very worst. The republic of Venice exhibited an example of a most tyrannical aristocracy, worse than even absolute despotism. Aristocracy seems to coincide with oligarchy ; which, how- ever, is more ordinarily used to signify a cor- ruption of an aristocratical state, where the ad- ministration is in the hands of too few, or- where some one or two usurp the whole power.

ARISTOCRAT or ARISTOCRATE, a noble- man ; a member of the aristocracy. This is the proper and original meaning of the word ; but in France, during the revolution, it was applied to all persons of whatever rank, who favored the claims of the nobility, or pleaded for a distinc- tion of ranks in society.

ARISTOGITON, a famous Athenian, who, with Harmodius, killed Hipparchus tyrant of Athens, about A. A. C. 513. The Athenians erected a statue of him.

ARISTOLOCHIA, in botany, birthwort: a genus of the hexandria order, and gynandria class of plants ; natural order, eleventh, sarmentaceae. CAL. none : COR. one entire petal : CAP. six cells, below the flower. The species are twenty-one ; but only the five following merit description : 1. A. clematitis has heart-shaped leaves, an up- right stem, and the flowers crowded in the axillae The root is long and slender. 2. A. Indica, or contrayerva of Jamaica, is a native of that island, where its roots are used instead of the true con- trayerva. It has long trailing branches, which climb upon the neighbouring plants, and some- times rise to a considerable height. The flowers are produced in small clusters towards the upper part of the stalks, which are of a dark purple color. 3. A. longa is a native of France, Spain, and Italy. It has long tap-roots like carrots; the branches are weak

and trailing, extending little more than a foot; the flowers come out from the wings of the leaves like the other, are of a pale purple color, and are frequently suc- ceeded by seed-vessels like the other. 4. A. ro-

Unula, is also a nutivc of the south of France, Spain, and Italy, from whence the roots are brought for medicinal use. 5. A. serpentaria is a native of Virginia and Carolina, from whence the radix serpentaria, or snake-root, so much used in medicine, is brought over.

The last three species are propagated from seeds which should be sown in the autumn, in pots filled with light fresh earth, and placed under a frame to preserve them from frost.]f they are plunged into a gentle hot-bed in the month of March, the plants will come up the sooner. In summer and in autumn, when the stalks begin to decay, they must be watered. In winter they must be again sheltered; and in March, before the roots begin to shoot, they mu-sl be transplanted into small separate pots filled with light earth, when they may be removed into the open air, and treated as before. The next spring they may be planted in the open air in a warm border; where, in autumn, when their stalks decay, if the border is covered with old tanners' bark to keep out the frost, the roots will be secured ; but without this they will frequently be killed by the frost. The Indica is tender, and therefore must be kept in a stove during the winter, or it will not live in England.

The roots of the long and round sorts, on i>eing first chewed, scarcely discover any taste, but in a little time prove nauseously bitter; the long somewhat less. The root of the cle- matitis is long and slender, rarely exceeding the thickness of a goose-quill : it instantly fills the mouth with an aromatic bitterness, which is not ungrateful. Their medical virtues are to heat, stimulate, attenuate viscid phlegm, and promote the fluid secretions in general: they are principally celebrated in suppressions of fe- male evacuations. The dose is in substance from a scruple to two drams. The long sort is recommended externally for cleansing and dry- ing ulcers and wounds, and in cutaneous dis- eases. The root of the serpentaria is small, light, bushy, and consists of y number of strings or fibres matted together, issuing from one com- mon Lead ; of a brownish color on the outside, and pah'r or yellowish within. It has an aro- matic s:i:i.-l], like that of valerian; but more a. iVralilu, and a warm, bitterish, pungent taste. Tins root is a warm diaphoretic and diuretic; it has been greatly celebrated as an alexipharmic, and esteemed one of the principal remedies in malignant fevers and opi-lemi;: diseases. In these intentions it is given in substance from ten to thirty grains; and in infusion, to a dram or two Both watery and spirituous menstrua extract its virtue by infusion, and elevate some

sliare of its flavor in distillation ; along with the water a small portion of essential oil arises. These articles, however, are now little esteemed; and are all banished from the Ph;»-:nacopoeia of the London college: the clematitis is alone re- taini"! in that of Edinburgh.

ˆARISTOPHANES, a" celebrated comic poet of Athens, was contemporary with Plato, Socrates, and Euripides. According to some writers he was a Ithodian by birth, the son of Philip of Rhodes, and was born about li. (.'. 460. Others stat" tint he was a native of . I'.gina, a small

island opposite to Athens ; and all agree that he was not born an Athenian, though domiciliated there in early life. Plutarch informs us that his rights as an Athenian citizen being called in question by Cleon, a commission was appointed to try the question, and gave a solemn judgment in his favor. Plutarch does not state the grounds of this decision, but relates a characteristic anec- dote of Aristophanes on this occasion, which at- tributes his success to a bon-mot. Parodying two simple lines of Homer, he addressed the judges with great gravity — Je suis fils de Philippe, a ce quo dit ma mere : Pour moi je n'en s

pere ? I am the son of Philip •, at least, so says my good

mother. Who in the name of heaven ever knew his father ?

a witticism, says Brumoy, worth as much to Aristophanes, as the eloquent harangue of Cicero in favor of the poet Archias, upon a similar occasion. Most of his plays were written during the Peloponnesian war. His imagination was warm and lively, and his genius particularly' turned to raillery. He had also great spirit and resolution ; and was a declared enemy to slavery and to all who wished to oppress their country. The Athenians, in his time, were governed by men who had no other views than to make themselves masters of the commonwealth. Aristophanes exposed their designs with great wit and severity upon the stage. Cleon was the first whom he attacked in his comedy of the Equites ; and as none of the comedians would venture to personate a man of his great authority, Aristophanes played the character himself, and with so much success that the Athenians obliged Cleon to pay a fine of five talents, which were given to the poet. He described the affairs of the Athenians in so exact a manner that his co- medies are a faithful history of that people. When Uionysius king of Syracuse desired to learn the state and language of Athens, Plato sent him the comedies of Aristophanes, telling him these were the best representations of them. To Plato is ascribed the following beautiful epi- gram on our poet :

Ai ˆaptrtc rtfiivoQ TI Xafltiv, amp 8%t iriourai, Zr}raaai fyvxrjv tvpov

Aptarotyavuf.

The gracrs in search of a temple which could never fall, found thy tuneful breast, Aristophanes !

He wrote above fifty comedies, but only eleven are extant, which are complete : viz. Plutus, the Clouds, the Frogs, Equites, the Acarnenses, the Wasps, Peace, the Birds, the Ecclesiazusae or Female Orators, the Thesmophoriazusse or Priestesses of Ceres, and Lysistrata. The Clouds, which he wrote in ridicule of So- crates, is the most celebrated of all his co- medies. Madam Dacier tells us, that she was so much charmed with this performance, that after she had translated it and read it over 200 times, it did not become in the least tedious to her, which she could not say of any other piece ; and that the pleasure which she received from it was so exquisite, that she forgot all the indignation which Aristophanes deserved for employing h.s wit to ruin a man who was wisdom itself, and

the greatest ornament of Athens. St. Chrysos- lom thought so highly of his style that he always •slept with his works under his pillow. Aristopha nes having some aversion to the poet Euripides, satirised him in some of his plays, particularly in his Frogs and his Thesmophoriazusae. He wrote his Peace in the tenth year of the Peloponnesian war, when a treaty for fifty years was con- cluded between the Athenians and the Lacedae- monians, though it continued but seven years. The Acarnenses was written after the death of Pericles, and the loss of the battle in Sicily, in order to dissuade the people from entrusting the safety of the commonwealth to such imprudent generals as Lamachus. Soon after he represented his Aves, or Birds, by which he admonished the Athenians to fortify Decelaea, which he calls by a fictitious name, Nephelococcygia. The Vespae, or Wasps, was written after another loss in Sicily, which the Athenians suffered from the miscon- duct of Chares. He wrote the Lysistrata when all Greece was involved in a war ; in which co- medy the women are introduced debating upon the affairs of the commonwealth ; when they come to a resolution not to go to bed with their husbands till a peace should be concluded. His Plutus, and other comedies of that kind, were written after the magistrates had given orders that no person should be exposed by name upon the stage. Atbenaeus asserts that he was so de- cided a votary of Bacchus, as always to have been in a state of intoxication when he composed. He invented a peculiar kind of verse which was called by his name, and is mentioned by Cicero in his Brutus : Suidas says he was also inven- tor of the tetrameter and octameter verse. Aristophanes was greatly admired among the

ancients, especially for the true Attic elegance of his style. The time of his death is unknown; but he was living after the expulsion of the ty- rants by Thrasybulus, whom he mentions in his Plutus and other comedies. There have been several editions and translations of his works. Nicomedus Frischlin, a German, famous for his classical knowledge, in the sixteenth century translated Plutus, the Clouds, the Frogs, the Equites, and the Acarnenses, into Latin verse. Quintus Septimus Florens also rendered into Latin the Wasps, the Peace, and Lysistrata, but his translation is full of obsolete words and phrases. Madame Dacier published at Paris in 1692 a French version of Plutus and the Clouds, with critical notes, and an examination of them according to the rules of the theatre. The best editions of Aristophanes are those of Kuster, Amsterdam, 1710, fol. ; Bergler, 1760, two vols. 4lo. ; Brunck, Strasburg, 1783, three vols. 8vo.; Invernizi, Leipsic, 2 vols. 8vo., 1794. Ao Eng- lish version of the Clouds has been published by Cumberland, and some of his other comedies more recently by Mitchell, and the Birds by Mr. Carey. ARISTOTELIANS, a sect of philosophers called also Peripatetics. The Aristotelians and their dogmata prevailed long in the schools and universities ; even in spite of all the eflbrts of the Cartesians, Newtonians, and other corpuscula- rians. But the systems of the latter have at length gained the preeminence; and the Newtonian philosophy in particular is now generally re- Voi.. II.

ceived. The principles of Aristotle's philosophy the learned agree, are chiefly laid down in his four books De Casio ; his eight books of Physi- cal Auscultation, fyvoiKijg aicpoaatug, belonging rather to logics, or metaphysics, than to physics. Instead of the more ancient systems, he intro- duced matter, and form, and privation, as the principle of all things ; but he does not seem to have derived much benefit from them in natural philosophy. His doctrines are for the most part so obscurely expressed, that it has not yet been sa- tisfactorily ascertained what were his sentiments on some of the most important subjects. He attempted to refute the Pythagorean doctrine con- cerning the two-fold motion of the earth ; and pretended to demonstrate that the matter of the heavens is ungenerated, incorruptible, and sub- ject to no alteration ; and he supposed that the stars were carried round the earth in solid orbs. The reader will find a distinct account of the lo- gical part of his philosophy, by Dr. Reid, pro- fessor of moral philosophy in the university of Glasgow, in Lord Kames's Sketches of the His- tory of Man, vol. ii. and Mr. Harris has pub- lished a sensible commentary on his Categories, under the title of Philosophical Arrangements.

ARISTOTLE, the chief of the peripatetic philosophers, born at Stagira, a small city of Macedon, in the ninety-ninth Olympiad, about 384 years before the birth of Christ. He was the son of Nicomachus, physician to Amyntas, the grandfather of Alexander the Great. He lost his parents in his

infancy ; and Proxenes, a friend of his lather's, who had the care of his education, taking but little notice of him, he quitted his studies and gave himself up to the follies of youth. After he had spent most of his patrimony he entered into the army ; but not succeeding in this profession he went to Delphos to consult the oracle what course he should follow, when he was advised to go to Athens and study philosophy. He accordingly went thither about eighteen years of age, and studied under Plato till he was thirty-seven. By this time he had spent his whole fortune; and we are told that he got his living by selling powders and some receipts in pharmacy. He followed his studies with most extraordinary diligence, so that he soon surpassed all in Plato's school. He eat little and slept less, and that he might not oversleep him- self, Diogenes Laertius tells us, that he lay always with one hand out of the bed, having a ball of brass in it, which, by its falling into a basin of the same metal, awaked him. He had several conferences with a learned Jew at Athens, who instructed him in the sciences and religion of the Egyptians, and thereby saved him the trouble of travelling into Egypt. When he had studied about fifteen years under Plato, he began to form different tenets from those of his master, who became highly piqued at his behaviour. Upon the 'death of Plato he quitted Athens and retired to Atarnea, where he married Pythias the sister of Hermias, prince of Mysia; whom he is said to have loved so passionately that he offered sacrifice to her. Some time after, Her- mias having been taken prisoner by Memnon the king of Persia's general, Aristotle went to Mity-lene the capital of Lesbos, where he remained

till Philip king of Macedon having heard of his great reputation, sent for him to be tutor to his son Alexander, then about fourteen years of age : Aristotle accepted the offer ; and in eight years taught him rhetoric, natural philosophy, ethics, politics, and a certain sort of philosophy, which, says Plutarch, he taught nobody else. Philip erected statues in honor of Aristotle ; and for his sake rebuilt Stagira, which had been almost ruined by the wars. The last fourteen years of his life he spent mostly at Athens, surrounded with every assistance which men and books could afford him for prosecuting his philosophical enquiries. The glory of Alexander's name insured tranquillity and respect to the man whom he distinguished as his friend ; but after his death, the invidious jealousy of priests and sophists inflamed the superstitious fury of the Athenian populace : to avoid whose persecution he withdrew to Chalcis. He seems to have sur- vived his retreat from Athens only a few months ; vexation and regret probably ended his

days.

Besides his treatises on philosophy, he wrote also on poetry, rhetoric, law, &c. to the number according to Diogenes Laertius, of 400 treatises. An account of such as are extant, and of those said to be lost, may be seen in Fabricius's Bib- liotheca Gracca. He left his writings with Theo- phrastus, his beloved disciple and successor in the Lyceum, and forbade that they should ever be published. Theophrastus, at his death, trusted them to Neleus his friend and disciple, whose heirs buried them in the ground at Scepsis a town of Troas, to secure them from the king of Pergamos, who made great search everywhere for books to adorn his library. Here they lay concealed 1GO years, until, being almost spoiled, they were sold to one Apellicon a rich citizen of Athens. Sylla found them at this man's house, and ordered them to be carried to Rome. They were some time after purchased byTyran- niou a grammarian ; and Andronicus of Rhodes having bought them of his heirs, was the first restorer of the works of this great philosopher; for iio repaired what had been decayed, and got them copied.

Many followed the doctrine of Aristotle in the reigns of the twelve C;rsars, and their numbers increased much under Adrian and Antoninus. Alexander Aphrodinus was the first professor of the Peripatetic1 philosophy at Rome, being ap- pointed by the emperors Marcus Aurelius and Lucius Vorus ; and in succeeding ages the doc- trine of Aristotle prevailed among almost all men of letters, and many commentaries were written upon his works. The first doctors of the church disapproved of the doctrine of Aristotle, as allowing too much to reason and sense; but Anatolius hishop of Laodicea, Didymus of Alex- andria, St. Jerome, St. Augustin, and several others, at last wrote and spoke in favor of it. In the sixth century Boethius made it known in tin: west, and translated some of his pieces into Latin. Hut from the time of Boethius to the eighth age, .loamics Damascenus was the onlv man who made an abridgment of his philosophy, or wrote any thinj; concerning him. The Gre- cians, who took ureat pains to restore learning

learned men wrote commentaries on his writings , amongst these were Alfaragius, Algazel, Avicenna, and Averroes. They taught his doctrine in Africa, and at Cordova in Spain. The Spaniards introduced it into France, with the commentaries of Averroes and Avicenna ; and it was taught in the university of Paris, until Amouri, having supported some particular tenets on the princi- ples of this philosopher, was condemned of heresy, in a council held there in 1210, when all the works of Aristotle that could be found were burnt, and reading of them forbidden under pain of excommunication. This prohibition was con- firmed, as to the physics and metaphysics, in 1215, by the pope's legate ; though at the same time he gave leave for his logic to be read, in- stead of St. Augustin's, used at that

time in the university. In 1265 Simon, cardinal of St. Cecil, and legate from the holy see, prohibited the reading of the physics and metaphysics of Aristotle. All these prohibitions, however, were taken off in 1366 ; for the cardinals of St. Mark and St. Martin, who were deputed by Pope Ur- ban V. to reform the university of Paris, per- mitted the reading of those books which had been prohibited ; and in 1448 Pope Stephen ap- proved of all his works, and procured a new translation of them into Latin.

ARISTOXENUS, the most ancient musical writer, of whose works any tracts are come down to us, was born at Tarentum. He was the son of a musician, whom some call Mnesias, others Spintharus. He had his first education at Man- tinsea, under his father, and Lamprus of Erythrae ; he next studied under Xenophilus the Pythago- rean ; and lastly under Aristotle, in company with Theophrastus. Suidas adds, that Aris- toxenus, enraged at Aristotle having bequeathed his school to Theophrastus, traduced him ever after. But Aristocles the Peripatetic, in Eusebius, exculpates Aristoxenus, and assures us that he always spoke with great respect of Aristotle. Aristoxenus lived under Alexander the Great and his first successors. His Harmonics in three books (all that have reached us), together with Ptolemy's Harmonics, were first published by Gogavinus at Venice in 1562, 4to. with a Latin version. John Meursius next translated these three books into Latin from the MS. of Joseph Scaliger. With these he printed at Leyden, in 1616, 4to., Nicomachus and Alypius, two other Greek writers on music. Meibomius collected these musical writers together ; to which he added Euclid, Bacchus senior, and Aristides Quintilianus ; and published the whole, with a Latin version and notes, from the elegant press of Elzevir, Amst. 1652, and dedicated them to Christina queen of Sweden. Aristoxenus is said by Suidas to have written 452 different works, among which those on music were the most esteemed; yet his writings on other sub- jects are frequently quoted by ancient authors, notwithstanding Cicero and others say he was a bad philosopher, and had nothing in his head but music. The titles of several of the lost works of Aristoxenus, quoted by Athenaus and others, have been collected by Meursius in his notes upon this author, by Tonsius and Menage, all which Fabricius had digested into alphabeti- cal ordei.

*ARITH'METICK,-\ Gr. a/*fy«oc, number.*

*ARITHMETICAL, * See die science of aritb-*

ARITHMET'ICALLY, (metic as a branch of

AKITHMETIC/IAN. J mathematics.

On fair ground I could beat forty of them,

But now 'tis odds beyond arithmetick.

Shakfpeare. Coriolamu.

The Christian religion, according to the apostle's ariihmetitk, hath but these three parts of it ; sobriety, justice, religion. Bishop Taylor.

The principles of bodies may be infinitely small, tot only beyond all naked or assisted sense, but be- yond all arithmetical operation or conception. Grew.

The squares of the diameters of these rings, made by any prismatick color, were in arithmetical progres- sion, as in the fifth observation. _V- -r' .,.

ARITHMETIC; from the Greek sub. rt\vri', is the science of numbers. The fol- lowing remarks may be conveniently arranged under the heads of GENERAL THEORY OF NUME- RATION' ; HISTORY OF THE SCIENCE ; PRACTICAL ARITHMETIC ; COMMERCIAL ARITHMETIC ; and EVOLUTION and INVOLUTION.

GENERAL THEORY OF NUMERATION.

1. The power of enumeration, like the other capabilities of the mind which are most required for the purposes of social life, is put in action, and is developed with facility ; both from the aptitude with which numerical truths are per- ceived, and from the perpetual presentation to the sight of objects giving rise to the ideas of number. This facility is the principal cause of the difficulty which is found in tracing the his- tory of the science of arithmetic ; for, as it has probably originated from a multitude of source?, the objects of attention become perpetually more subdivided the higher we ascend. Nor does the manner in which the science has been treated by different nations at all coincide. And it is difficult to collect the general properties, and separate them from the different arbitrary forms which have been given to them by the different races of the earth.

2. In all languages words are found to ex- press the ideas which we denote by the words, one, two, three, &c. These words are simple and uncompounded ; but it is found that the number of simple words denoting the ideas of numbers is not very great in any language. Nor is it possible to retain, without assistance, the idea of the number of a large collection of objects. We find, accordingly, that the system of classification has been universally adopted. By grouping the objects together, the objects of

attention are rendered fewer ; and consequently the idea of the number of objects is more easily retained, as well as more easily expressed.

3- The simplest mode of classifying is by pairs ; it has also probably been the earliest. Its former existence is testified by words which, like our brace and couple, are now confined to particular occupations. The practice of reckon- ing by three's has been adopted, although not to the same extent ; it has been preserved in the term leash, meaning the string- by which three

dogs can be held in the hand. Fishermen fre- quently reckon by four's, and each double pair is named by them a throw or cast. The term warp also denotes, in various trades, a collection of four articles.

4. But although it is easier to enumerate thirty objects, for example, by pairs, and to re- member the number of the pairs, than to num- ber each object separately, and to remember the number of the whole ; and yet easier to enume- rate them by leashes, and still easier by warps ; yet none of these methods materially facilitates the numeration of a much larger number of ob- jects. It becomes therefore necessary again to employ the same process, and to collect the pairs into pairs, or die leashes into leashes, or die warps into warps. In this manner, if we were to take twenty-five pebbles, and take all die pairs out of diem which could be made, we should find twelve pairs of pebbles, and one over:

We might dien suppose each pair to be replaced by a pebble of a larger size, and diese to be again collected into pairs, dius :

Let us now replace each of diese pairs by a pebble of a size yet larger dian die former, and let diese be again collected into pairs, thus :

And if we again perform die same process, using pebbles of a yet larger size, we shall represent die number nineteen in die following manner :

And again substituting for the last pair a larger pebble, die number will be dius expressed :

The number 21 is therefore denoted by one counter of die fifdi order ; one of die tiiird, and one of the first. It is plain dial any number may be treated in exactly the same manner, if diree, four, five, &c. pebbles be replaced by pebbles of a larger size, and so on until die whole numbei n analysed.

In order, however, to perform diis operation widi greater rapidity, where large numbers are to be enumerated, a greater number of counters of one size, as ten or twenty, must be replaced by a counter of die next greater size ; and diis process may perhaps be styled, widi propriety, die first and most simple system of notation. It is to be remarked, that the terms binary,

ternary, quaternary, quinary, senary, septenary, octary, nonary, denary, and duode- nary scales, are applied to die systems in which 2, 3, 4, 5. 6, 7, 8, 9, 10, or 12 of the counters of

inferior denomination arc replaced by the next in magnitude.

„ 6. The next step, and it is a very important one, is to make the value of the counters depend, not upon their size, but upon the places which they occupy. That is to say, if we decpmpose numbers by perpetually pairing as before, on this system we must reckon the value of a counter doubled by being removed from one place to the next in order above it. If we there- fore determine that the counters shall increase in value from the right hand towards the left, the number 2 1 would be thus represented : —

ilili

It is evident that the mode of decomposing a number on this system will be the same as in the last method ; only, instead of perpetually re- placing the pairs by counters of larger size, we must continue to replace them by counters of the same size, but removed to the next place. In the same manner any number may be decom- posed on the ternary, quaternary, quinary, se- nary, or any other scale.

7. This mode of numeration appears to pos- sess threat practical advantages ; it was practised by the most polished nations of antiquity, and was decidedly the most powerful instrument of calculation which they possessed. And, although in Europe its use has been superseded by more convenient and expeditious notation, it is still used, as it has been used for ages, by the Chinese nation. The extension of the same method to frac- tions is easy ; but, as the rules for reducing num- bers from one scale of notation to another will lie given in the article scales of notation, it will not be necessary to enlarge farther on tnis sub- ject, especially as such investigations are of no practical utility, and only derive their value from giving a more correct and extended view of the science of numeration, than can be obtained by any other method.

8. The most important step was now to ex- press by words, and by characters, the various collections of numbers which had been contem- plated in the mode above described. These methods of expressing numbers must, however, be supposed to have originated, in a great de- gree, at the

same time with the science ; exactly as we see language constantly extending itself with the extension of the sciences to which it is applied. Having thus given an outline of the general principles of numeration, we shall pro- (ved to give a concise account of the most authentic hi>torical notices with respect to the .history of the science of arithmetic.

IllSTOIlY or AllITlIMKTIC.

9. It appears from the accounts of various travellers, that there are scarcely any tribes of savayes so unacquainted with the properties of numbers, as not to have attained to what has, in the jirece'linj section, been termed the first stage in the s< lence of numeration, although there are many who are unable to go beyond it. As it uif-refore -appears to be a method immediately

and imperatively pointed out by nature, rather than discovered by an effort of individual genius, it can in no way require the attention of history.

10. The next stage, viz. that in which the ob- jects by which numeration is effected are in- creased or diminished in value according to the place which they occupy, has been attained only by nations who have made considerable advances in civilisation. The Greek nation is the first European nation which we know with certainty to have used it, and of whom we know with precision how they used it. From them it was transmitted to the Romans; and, after the rum of that empire, it was amongst those arts which survived, in the subject provinces, the fall of the power which had introduced them.

11. In order to manage this sort of numeration with facility, the Greeks invented the a/3a£. It was probably merely intended to supersede the necessity of ruling lines on which the counters must be placed every time an arithmetical opera- tion was to be performed. It consisted of a square surface adapted to the reception of beads or counters, in such a manner as to preserve them always in parallel straight lines, whilst it admitted a smaller or greater number »-f counters upon each. It is easy to conceive '.ow arithme- tical operations might be performed upon an in- strument of this nature ; and it would probably be found, after some practice, not to yield much in rapidity to our modern system, at least where the numbers were not very large. It may be observed, that the derivation of the word a/3a£ has been ingeniously deduced from the three firs- letters of the Greek alphabet, A, B, r ; from the circumstance of the board, similar in shape, being used to teach the letters of the alphabet.*

12. From the Greeks the Romans received the o/3a£, and the name of abacus. Operations were performed on this instrument in exactly the same

manner as by the Grecians ; and it appears to have spread with the conquest of the Roman arms into every province of the empire. It may here be remarked, that the Romans, as well as the Greeks, proceeded according to the de- nary system. The use of the abacus is, how- ever, by no means confined to this system, and it is probable, from the figure of some abaci, as discovered on antique monuments, that they had a contrivance, by means of which they could be adapted to the duodenary scale ; for, accord- ing to this system, the Roman as, the jugerum, and the pes, were divided. With regard to the mode of using this instrument, it is sufficient to remark that arithmetical operations were per- formed upon it in exactly the same manner as we are now accustomed to perform them with figures, except that, instead of making a mark expressive of a number, they actually placed the number upon the proper row of the abacus, reckoning each part of ten times the value of the one below it : and, instead of carrying as many units to the next figure as there may be tens contained in the number, they would actually add to the counters on the bar of the higher de- nomination, as many counters as there might be tens contained in the number of counters of the lower denomination. Those who wish to become more accurately acquainted with this curious in-

strument, we shall refer to Mahudel, in Histor. Academ. II. Inscr. torn. iii. p. 390 ; and the Phil. Trans. No. 180.

13. After the fall of the Roman power, the use of the abacus, as has been before observed, was continued amongst most European nations. It took, however, the form of a board divided' into a number of small squares, on which the counters were placed ; thus the term scaccarium, from which was derived the French eschequier, and thence the English exchequer, anciently sig- nified merely a chess-board, being formed from scaccum, denoting one of the movable pieces in that intricate game. The reason of this applica- tion of the term is sufficiently obvious. The table for accounts was, to facilitate the calcula- tions, always covered with a cloth resembling the surface of the scaccarium or abacus.

14. In order to give some idea of the mode in which arithmetic was practised in the middle ages, we shall give an account of this court as it is described by Richard Fitz-Nigel, a writer who lived about the middle of the twelfth cen- tury, about 200 years after its introduction by the Norman conquest. He describes the scacca- rium as a quadrangular table, about ten feet long' and five feet broad, with a ledge or border about four inches high, to prevent any thing from roll- ing over. It was surrounded on all

sides by seats for the judges, the tellers, and other of- ficers. It was covered every year, after the term of Easter, with fresh black cloth, divided by perpendicular white lines at intervals of about a foot/ and again parted by similar transverse lines. In reckoning, they proceeded, he says, according to the rules of arithmetic, using small coins for counters. The lowest bar exhibited pence, the one above it shillings, the next pounds; and the higher bars denoted successively tens, twenties, hundreds, thousands, and ten thou- sands of pounds ; though, in those early times, it very seldom happened that so large a sum as the last ever came to be reckoned. The first bar, therefore, advanced by dozens; the second and third by scores, and the rest of the stock of bars by the multiples of ten. The teller sat about the middle of the table ; on his right hand eleven pennies were heaped on the first bar, and a pile of nineteen shillings on the second ; while a quantity of pounds was placed opposite to him on the third bar. For the sake of expedition he might employ a different mark to represent half the value of any bar, a silver penny for ten shillings, and a gold penny for ten pounds.

15. In early times a chequered board, the emblem of calculation, was hung out, to indi- cate an office for changing money. It was after- wards adopted as the sign of an inn or hostlery, where victuals were sold, or strangers lodged and entertained. We may perceive traces of this ancient practice existing even at present. It is customary in London, and in some provincial towns, to have a chequer, diced with red and white, painted against the sides of the door of a chop-house.

16. It only remains to remark, that in China, a country which appears to have early attained a hi_h degree of civilisation, and then to have

stopped short in the career of improvement, this method of calculation is still used, and has been in use almost from time immemorial. The swan-pan, the instrument used by the Chinese, does not differ essentially from the Grecian afia%, and is used in a very similar manner.

FIGURATIVE ARITHMETIC.

17. It is probable that the use of signs to re- present numbers was prior to the introduction of written language. The most ancient figures with which we are acquainted, are probably the Roman ; they appear to have been introduced into Italy by the Grecian colonies, and continued in use, with little alteration, during many cen- turies. The simple strokes I II 111 were re- peated continually till the reckoner reached ten. The first class was now completed, and to intimate this the carver threw a dash across the stroke, or common unit ; that is, he employed two decussating strokes X to denote ten. It has further been conjectured, that the mark C, ori- ginally Q,

representing a hundred, and the mark [V] for a thousand, were formed on the same principle. Proceeding on the denary system, every time a period was completed another stroke was added.

18. But the division of these marks afterwards furnished characters for the intermediate num- bers, and hence greatly shortened the repetition of the lower ones. Thus, having parted in the middle the two decussating strokes X denoting ten, either the under half /\, or the upper half V> was employed to signify five. Next, the mark Q for an hundred, consisting of a triple stroke, was divided into f~ and [_r either of which represented fifty. Again, the four com- bined strokes (V| , which originally formed the character for a thousand, afterwards assumed a rounded shape (*), frequently expressed thus, C 1 0- This last form, by abbreviation on either side, gave two portions cl and ID to repre- sent five hundred.

19. This was the limit of numeration among the early Romans ; but, in the progiess of re- finement, they repeated the symbols of a thou- sand to denote the higher terms of the denary scale. Thus, c c I a a was employed to repre- sent ten thousand, and ccclooo to signify an hundred thousand. Again, each of these being divided gives I o o for five thousand, and loao for fifty thousand. These characters, however, were often modified and abbreviated in monu- mental inscriptions. By drawing a horizontal line over the letters, their value was augmented one thousand times.

20. It was also customary with them, for the sake of abbreviation, to reckon partly back- wards. Thus, instead of octodecim and novem- decim, the words for eighteen and nineteen, they frequently used duodeviginti and undeviginti, as more elegant and expressive. This practice led to the application of deficient numbers ; an im- provement scarcely to be expected from a people so little noted for invention. Instead of writing nine, thus VIIII, by joining four to five, they counted one back from ten, or placed I before X. In the same way they represented forty

and four hundred, ninety, and nine hundred, by XL, and CD, XC, and CM

21. The Chinese, like the Roman characters, are formed by first representing the first ten num- bers, and then deriving the higher numbers by modifying the form of the original characters. This notation is equally complete with the Roman ; and, although more complicated, it does not re- quire so many characters to express large numbers.

22. The Greeks, after having communicated to the founders of Rome the

elements of the nu- meral characters, which are still preserved, again exercised their inventive genius in framing new systems of notation. Discarding the simple ori- ginal strokes, they sought to draw materials of construction from their alphabet. They had no fewer than three different modes of proceeding : 1 . The letters of the alphabet, in their natural succession, were employed to signify the smaller ordinal numbers. In this way, for instance, the books of Homer's Iliad and Odyssey are usually marked. 2. The first letters of the words for numerals were adopted as abbreviated symbols. Thus, employing capitals only, I being retained us before to denote one ; the letter n of RENTE marked five; the A of AEKA denoted ten; the H of EKATON, anciently written HEKATON, expressed an hundred; the X of XIAIA, a thou- sand'; and the letter M of the word MYPIA, re- presented ten thousand.

23. A simple and ingenious device was used for denoting the powers of those symbols ; a large II over any letter made it signify five thousand times more. Thus, ||A|I denoted fifty thousand, and !|H| five hundred thousand. 3. A mighty stride was made in numerical notation by the Greeks, when they distributed the twenty- tour letters of their alphabet into three classes, corresponding to units, tens, and hundreds. To complete the symbols of the nine digits, an ad- ditional character was introduced into each class. The marks-, called t-iaˆnov, was inserted among the units, immediately after e, the letter denoting live ; and (he koppa and sanpi, represented by 5, 4, or ˆ, terminated respectively the range of tens and of hundreds, or expressed ninety and nine hundred. This arrangement of the symbols, it is obvious, could extend only to the expression of nine hundred and ninety-nine; hut, i>y subscribing: an iota under any character, llie value \vas augmented a thousand fold, or by \ritinir (lie letter AT, or the mark for a myriad, or ten thousand, under it, the effect was increased Ji'ii trues more. Tins last modification was •-•mietiines more simply accomplished by placing ;\u> dots over the character.

•->!. It would extend this article beyond its proper limits, to detail the method of performing calculations with numbers expressed by this no tation. Although much superior to the Roman, its operations are tedious and intricate, espe- rialiv in its application to fractions.

•J.'i. It was to remedy these inconveniences, and more especially the latter, that Ptolemv in- troduced the sexagesimal arithmetic. Every unit \viis supposed to be divided into sixty parts, and each of these into sixty others, and so on : hence •my numbers of such parts were called sexagesi-

mal fractions ; and to make the computation iu whole numbers more easy, he made the progres- sion in these also sexagesimal. Thus, from one to fifty-nine were marked in the common way ; then sixty was called a

sexagesima prima, or first sexigesimal integer, and had one single dash over it; so 60 was expressed thus, I'; and so on to 59 times 60, or 3540, which was thus expressed, LIX'. He now proceeded to 60 times 60, which he called a sexagesima secunda, and was thus expressed I". In like manner, twice 60, times 60, or 7200, was expressed by II"; and so on till he came to 60 times 3600, which was a third sexagesimal, and expressed thus, I". If any number less than sixty was joined with these sexagesimals, it was added in its proper characters without any dash ; thus I'XV repre- sented 60 and 15, or 75 ; IV'XXV is four times 60 and 25, or 265 ; X'H'XV is ten times 3600, twice 60 and 15, or 36,135, &c. Sexagesimal fractions were marked by putting the dash at the foot, or on the left hand of the letter ; thus I,, or 'I, denoted ˆj ; I,, or "I, gˆ» &c.

26. By the introduction of this method many valuable advantages were obtained. The astro- nomers of Alexandria and Constantinople con- tinued to employ it in all their calculations, and were afterwards imitated by succeeding obser- vers among the Arabians and Persians. The mode of working sexagesimals had thus become generally known, and reduced to practice ; but we owe the first distinct treatise on those frac- tions to Barlaam a Calabrian monk, who was the friend and Greek preceptor of Petrarch, and a man of learning and vigorous intellect.

27. About the middle of the fourteenth century the most important and ultimate improvement was conferred on the science of numeration by the introduction of the Arabic numerals. The most important part of this system is the cir- cumstance that the value of each figure is made to depend on the place in which it stands. This discovery, of which the simplicity is not more convenient than its effects are astonishing, is un- doubtedly due to the Arabs. The time of its in- troduction into Europe cannot be fixed with pre- cision. One of the oldest authentic dates thus written, is in the hand- writing of the famous Pe- trarch, on a copy of St. Augustine. The use of these characters had then began to spread in Europe, but was still confined to men of learn- ing. We shall conclude these remarks by ob- serving, that the advantages derived from this system are not the consequences of its having for radix the number ten, as some have ima- gined. On the contrary, the very inferior sys- tems of the Greeks and Romans were equally denary. The grand principle is, as before stated, that of giving a value to the figures ac- cording to the place which they occupy. The cipher, the use of which has also been extolled as the most important point of the Arabic notation, is only useful in as far as it serves to determine the proper places, and consequently the values of the figures. The same advantages would be pro- duced if, instead of using a cipher, a space were left ; but the use of the cypher preserves the uniformity, and perspicuity of the notation.

ARITHMETIC.

NOTATION ASD NUMERATION.

28. Notation is the ex pressing of any proposed number either by words or characters. All numbers are expressible by these ten characters or figures: 123 4 567

One, two, three, four, five, six, seven,

89 0

eight, nine, cipher. The nine first are called digits. When placed singly they denote the simple numbers subjoined to the characters ; and the value of any character is increased in a tenfold proportion, for every place it is removed to the left, among the other figures with which it is connected. Thus, in these figures 333, the first 3 (reckoning from the right to the left) is 3 ones ; the second is 3 tens, and the third is 3 hundreds ; in these 2759, the 9 represents 9 ones, and the 5 represents 5 tens, the 7 is 7 hun- dreds, and the 2 is 2 thousand. And although the cipher signifies nothing by itself, yet when put on the right of any of the other figures, it in- creases their value tenfold, merely by changing

their position from the place of units to that of tens. Thus, though 2 standing alone, or in the first place, represents only two ones, yet when a cypher is written on the right of it thus, 20, it represents two tens, or twenty ; and if another cipher be affixed thus, 200, it will represent two hundreds, &c.

29. Numeration is the reading or writing of any proposed sum or number by means of figures. For the more easy numbering, and ex- peditious reading of large numbers, when they are expressed by figures, they are divided from the right hand towards the left into periods and half periods, each period consisting of six figures ; the common name of the first period being units, or ones ; of the second, millions ; of the third, billions ; of the fourth, trillions, &c. Also the first half of any period is so many ones of it, but the latter half is so many thousands of it The following example exhibits a summary of this whole doctrine, and may be extended to sextillions, septillions, octillions, nonillions, &c. ad inrinitum.

Quintillions. Quadrillions.

Trillions.

Billions.

Millions.

Units.

11

*“•**

-3 3

4

§ ,

c ^

•£ -r .2″

- =. -z

a - . rf ™T

-5 w r» m ^j

*-S ** oT ••*

T5

o -T ~

^ ,° r1 •£ r- ^ — ^ r5 ^*

5J§£

**— .^«*

£ C J r 1 r- ^ ;

HP ^3HH — e

«o

09

3 2 1,9 8 7,

C 3—3

4,3 2 1, 9 8 7,6 5 4. 3 2 1,9 8

**-» < -•*

'S

T3

§ – ~

» -3 7T

iai

S-2

7, 6

5 4,3

c

HP

2 1

30. A number expressing a quantity of one name or denomination, is called a simple num- ber, as 20 pounds, or 17 gallons, or 5 days; and that representing a quantity of several names is called a compound number, as 13 pounds 5 shillings and 6 pence, or 17 "gallons and 2 pints, or 3 hours and 50 minutes.

The following rules for performing calculations with the Arabic or modern notation, are divided into four sections. The first containing the me- thods of operating on simple numbers and frac- tions of simple numbers. The second the mode of reducing compound to simple numbers, and of performing calculations with compound num- bers. The third the commercial rules ; and the fourth the methods of involution and evolution

31. RULE. — To read, or express in words, any

number expressed in figures.

Divide the figures in the given number, as in the general example above, into periods and half periods, by any convenient marks; then begin- ning at the left, the figures are thus read, viz. the first figure of each half period is named by itself, with the word hundreds; but the other two are named

together; and at the end of the first half of each period, the word thousands is named; but at the end of the other half, the common name of the whole period is read, except it be the units period, the name of which is not ex pressed.

32. SIMPLE ARITHMETIC.

Simple Addition is the finding of one simple number equal to several simple number? taken

all together. The number which is equal to se- veral taken together, is called their sum.

SIMPLE ADDITION.

Simple Addition may be performed by this Rule:

1. Place the several numbers to be added underneath each other, so that the figures of the same name, with respect to units, tens, &c. may be directly under each other.

2. Draw a line under the lowest number; then add up the column of units, and consider how many tens afe in the sum, for which you mus< carry so many ones to the next column, writing down only the excess over and above the tens, below the line straight under the column ol units.

3. Add all the columns in the same manner, and the figures will express the sum required.

33. Proof'. — Cut off the uppermost number, by drawing a line below it. Add all the rest ot the numbers together, and set their sum below the sum to be proved. Then add this last found number and the uppermost line together, and the sum will be the same as that found by the first addition, when the work is right.

EXAMPLES.

2591 39481

45927 22

621 6185

13248 17293

7931 26817

70318

680

ARITHMETIC.

34. SIMPLE SUBTRACTION. Simple subtraction is the finding how much one simple number exceeds another, or the taking a less simple number out of a greater. The number to be subtracted is called the sub- trahend ; and that out of which it is to be taken, is called the minuend : also the number remain- ing after the one is taken out of the other, is named their difference.

35. Simple subtraction is performed by the following Rule :

1. Place the subtrahend under the minuend according to the directions given in addition, and draw a line below them.

2. Begin at the right, and subtract each under figure from that which stands above it, writing the remainder immediately under them below the line : all the remainders together will express the difference required.

3. But when any under figure exceeds that tvhich is above it, conceive ten to be added to fiie upper, and subtract the under from the sum; out, in this case, you must add one to the next under figure before you subtract it.

36. Proof. — Add the difference and subtra- hend together, and the sum will be equal to the minuend when the operation is right.

EXAMPLE.

Minuend . . 1 59,327 Subtrahend . . 61,489

97,838

Proof . 159,327

37. SIMPLE MULTIPLICATION.

Simple multiplication is the finding of a simple

number, which shall contain any given simple

number a certain proposed number of times ; and

it is, therefore, a compendious method of addition.

38. The two proposed numbers are in general termed the factors of the multiplication ; but in particular, that which is to be multiplied, is called the multiplicand; and that by which it is multiplied, the multiplier; the number found from the operation is named the product of the two factors.

39. Hcfore proceeding to any operations in this rule, the following table of products must be committed to memory :

MULTIPLICATION TABLE.

1234

5

6

7

8

9

\ 2 4

10

12

14

16

18

3 (i 9 12

15

18

21

24

27

4 ; R i 12 j 16

20

24

28

32

36

5 10 ; 15 20

25

30

35

40

45

(i 12 18 24

30

36

42

48

54

i 7 : 14 21 28

1

35

42

49

56

63

8 It) 24 32

40

48

56

64

72

1 9 : 18 27 3(5

45

,-'.4

03

72

81

4Q. Simple multiplication is performed by one of the two following Rules :

I. To multiply by any number in the first line of the foregoing table of products.

Begin at the right of the multiplicand, and multiply each figure in it by the multiplier, writing down the whole of such products as are less than ten ; but for such as are just equal to a certain number of tens, write down 0, and carry 1 for each 10 to the next product; and for such as exceed a number of tens, write down the ex- cess, and carry for the tens as before.

II. To multiply by a number consisting of several figures.

Write it below the multiplicand, and find the product for each figure in it as in the first case, not regarding in what order the lines are found, provided the first figure in each stand immedi- ately below its respective multiplier.

Add all the lines of products together in the same order as they stand, and the sura will be the whole product required.

41. Proof.— Make the former multiplicand the multiplier, and the multiplier the multiplicand, and proceed as before ; and the due product will be the same as before, when the work is right. Otherwise, add together

the figures in each factor, casting out all the nines in the sums as often as they amount to nine. Multiply the two remainders together, and the nines cast out of their product will leave the same remainder as the nines cast out of the answer, when the work is right.

8576

7

60032

EXAMPLES.

2375 multiplicand. 38 multiplier.

19000 7125

90,250 product. CONTRACTIONS.

I. When there are ciphers at the right of one or both factors, proceed as before, neglecting the ciphers; and to the right of the product place as many ciphers as are in both factors. •

Thus, to multiply 134 by 2700, multiply 134 by 27, and to the product 3168, join two ciphers, and we get 361,800, the product required.

II. When the multiplier is the product of two or more numbers in the table, it is often of ad- vantage to multiply continually by those num- bers, instead of it.

Thus, to multiply 7964 by 72, or the product of 9 and 8, multiply by 9, and the product 71,676 again by 8 : thus we get 573,408,- the product required.

SIMPLE DIVISION.

42. Simple division is the finding how often one simple number is contained in another; or the dividing of any given simple number into any proposed number of equal parts.

43. The containing number, or number to be divided, is called the dividend. The contained number, or the number of parts into which the

dividend is to be divided, is called the divisor. The number of times the dividend contains the divisor, or the number which expresses one of the equal parts, is called the quotient, thus :

Dividend. Divisor 3) 12 (4 Quotient.

44. Division is a compendious subtraction, the quotient being the number of subtractions in the operation.

45. Simple division may be performed by the following Rule :

1. Having written down the divisor and divi- dend in the form above,

consider if the divisor be less than, or equal to, the same number of the left hand figures of the dividend; if so, write the figure expressing the number of times it is contained in the quotient ; but if not, take one place more of the dividend figures than are in the divisor, and write the number of times they contain it in the quotient as before.

2. Multiply the divisor by the quotient figure.

3. Subtract the product from the said dividend figures

4. To the remainder bring down the next figure of the dividend, and write in the quotient the number of times the divisor is contained in this number; multiply the divisor by the last quotient figure, and subtract the product from the last-mentioned number; then proceed as before, till all the dividend figures are used.

46. Proof. — Multiply the quotient by the di- visor; to the product add the remainder, and the sum will be equal to the dividend when the work is right. EXAMPLE.

372) 58247 (156 372

product add the preceding remainder to the same divisor: then multiply the sum by the next pre- ceding divisor, and to the product add the next preceding remainder: proceed in the same manner through all the divisors and remainders , and the last sum will be the remainder, the same as if the division had been performed at once. After this operation is begun, it must be conti- nued according to the description, though some of the preceding divisions should happen to have no remainders. So to divide 42,901,685 by 96, whose component parts are 8 and 12; divide the first by 8, and this quotient by the 12, and the remainders are 5 and 6 ; then 6 times 8 are 48, to which add the 5, and the sum 53 is the whole remainder to the whole divisor 96.

8) 42901685

12) 5362710|

2447 2232

Remainder 215

47. CONTRACTIONS. 1. Division by a single figure, or by any

Quotient 446892>j§

50. IV. Any person rather ready in division, may, even in the largest divisions, subtract each figure of the product as he produces it, and write down only the remainders.

EXAMPLE. 833) 3104679 (3727,$

6056 2257 5919 88

VULGAR FRACTIONS. — DEFINITIONS.

51. A fraction, or broken number, is an ex- pression of one or more parts of any number.

52. The number of parts into which the number is supposed to be divided, is called the denominator; and the number of those parts expressed by the fraction is called the numerator. These two numbers are in general named the terms of the fraction.

53. If the number of which the fraction is a part, or parts, be 1, it is called a simple fraction ; and is denoted by the numerator written above the denominator, with a small line between them : so, i denotes one-third of 1 ; f denotes seven- eighths of 1.

54. But if the number be different from 1, it

figure in the first line of the multiplication table, is called a compound fraction, and is denoted by

may be expeditiously performed by multiplying and subtracting mentally, and writing down only the quotient below the dividend. EXAMPLE. 7) 579325

82760$

48. II. When the divisor has ciphers on the right of it, strike them off, and divide without them ; but the same number of figures must be struck off from the right of the dividend, and af- fixed to the last remainder.

EXAMPLE. 8,00) 5734,21

49. III. When the divisor is the product of two or more small numbers, it is much easier to di- vide continually by those numbers, than by the whole divisor at once. If there be any re- mainders after such divisions, multiply the last remainder by the preceding divisor, and to the

/-equality, ~\ 3 rthe sums are equal,

+ / 2 V addition, f I – \the numbers are added,

V •” .’ onKti-ˆntinn *_ « rt ˆ

subtraction,

.!l°) multiplication, I -a ” i the sums are multiplied, vdivision. s ˆ ˆ~

the word of, and the number subjoined to the numerator and denominator expressed as before. So, £ of 6, denotes one-half of 6 ; | of 8, de- notes two-thirds of 8 ; and f of $, denotes three- fourths of five-eighths of 1.

55. Simple fractions, whose numerators are less than their denominators, are called proper fractions. And those whose numerators are equal to, or greater than, their denominators, are called improper fractions.

56. The expression formed from an integer and a fraction joined together, is called a mixed number. If both the numerator and denominator of a fraction be multiplied or divided by the same number, the fraction will retain its original value. All computations in fractions are founded on this principle.

57. The following signs, being frequently used to avoid circumlocution, require to be here ex- plained : —

4 and 4 = 8

+ 2 = 10

— 2=f 6 H 8 X 2—16

8 r -2 = 4

5 < the less N. is deducted,

_the higher N. is divided,

58. RULE I. — To abbreviate or reduce fractions

to less terms.

Divide the terms of the given fraction by any number which will divide them without a re- mainder ; the quotients will be the terms of a new

fraction equal in value to the former. This may be abbreviated again, and the next again, and so on, till it appear that there is no number greater than 1 that will divide them, in which case the fraction is said to be in its least terms.

42

' 59. EXAMPLE. — Let —— be proposed to be

I At

42 21 7

abbreviated. — — — = — , by dividing first / 2 3o !<£

by 2, and then by 3.

60. If the numerator and denominator, instead of being expressed by single numbers, are ex- pressed by the continual product of several, such numbers as are both in the numerator and the denominator may be left out without changing the value of the fraction :

7×3×8 X 10_3 X 10 _ 30

11

Thus

7 X 8 X 11 11 ~11

61. If the fraction must be brought to its least terms at one division, divide its terms by their greatest common measure, which common mea- sure is found by dividing the greater term by the less, and this divisor by the remainder; and so on, always dividing the last divisor by the last remainder till 0 remain ; then is the last divisor the greatest common measure required.

1 44

62. EXAMPLE. — Reduce —— to its lowest

terms at one division.

96)144(1 96

48)96(2 96

63. Here, as 48 is the last divisor, it will be the greatest common measure of 144 and 240. 144, divided by 48, is equal to 3; and 240, divided by 18, is equal to 5. The fraction

144 . 3

.TTTT ls therefore equal to – , the answer. – i” 5

<">4. I! I’M: !!. — /’<» reduce an improper fraction

tt> i/.s- equivalent irltole or mixed number. Divide the numerator by the denominator, and the quotient will be the integer or mixed number required.

EXAMI’LKS.

11

11

65. Rn i. 111. — To reduce an integer toanecfui

rn/cnt fraction of n ˆiren t/i nominator. Multiply the integer by the given denomina- tor, and the product will be the numerator re- quired.

66. EXAMPLE. — Reduce 7 to a fraction whose denominator shall be 4.

7×4 _28

“~~ 4′

67. RULE IV. — To reduce a mixed number to an

equivalent improper fraction. Multiply the integer by the denominator of the fraction, to the product add the numerator ; then the sum written above the denominator will form the fraction required.

68. EXAMPLE. — Reduce 2if to a fraction. 3 _ 2 X 7 + 3_ 14 + 3_ \7_

7~ 7 ~~7~ ~ 7 ”

69. RULE V. — To reduce a compound fraction to an equivalent simple one.

Multiply all the numerators together for the numerator, and all the denominators together for the denominator of the simple fraction required. If part of the compound fraction be an integer or a mixed number, reduce

it to a fraction by one of the former cases.

70. EXAMPLE — Reduce £ of \ of f of 5 to a simple fraction.

1 .2 3 5 1×2×3×5

2 of30f4°fT=2×8×4xl = (by omitting the common terms, 1, 2, and 3) — .

71. RULE VI. — To reduce fractions of different

denominators to equivalent fractions having a

common denominator.

If the fractions can be conveniently reduced to a common denominator, by multiplying or divi- ding their terms, proceed by that method. But if not, multiply each numerator continually into all the denominators, except its own, for each new numerator ; and multiply all the denomina- tors together for the common denominator. In this and several other operations, when any of the proposed quantities are integers, mixed num- bers, or compound fractions, they must be re- duced by their proper rules to the form of simple fractions.

72. EXAMPLE. — Reduce £, f, and f to a com- mon denominator.

2 3 12 16 , 18

8

73. ADDITION OF VULGAR FRACTIONS. Reduce such of the fractions as require it to ˆsimple ones ; then bring the fractions so pre- pared to a common denominator, and the sum of the numerators placed over this denominator will be the sum of the fractions required.

EXAMPLE. — Required the sum of 2 |, 4, and I off.

First 2J = J, and £ of f = to g. Therefore the fractions are j, jf, and |. 7 X 8 x 5 = 280 } 3X3×5= 45 > numerators. 4×3×8= 96 5

3×8×5=1 20 common denominator.

. , 280 + 45 + 96 421 61 ,

And T.ˆ =-TTˆ = 3— •• the an-

633

SUBTRACTION OF VULGAR FRACTIONS.

74. RULE. — Reduce the fractions, when ne- cessary, to a common denominator, as in addi- tion, then the difference of the numerators, placed over the common denominator, will give the dif- ference of the fractions required.

EXAMPLE. — What is the difference between

3 x 5 X

7 = 21

4 — 20

numerators.

4 X 7 ~ 28 denominator.

21—20 1 .

Therefore – — -the answer.

28 28

MULTIPLICATION OF VULGAR FRACTIONS.

75. Prepare the fractions, by reducing such as require it to simple ones, as in the former rules ; then multiply the numerators together for a nu- merator, and the denominators for a denominator, and it will give the product required.

76. Note. — When one of the factors is a large mixed number, and the other a whole number, it will be best to multiply the parts of the former separately, observing to carry for units to the whole numbers, when necessary.

77. It may here also be further observed, that in the multiplication of whole numbers, the pro- duct will be always greater than either of the factors ; but if two proper fractions be multiplied together, the product will be less than either of the factors.

EXAMPLE. — Required the product of 2J, £, and J of §.

Here2i = |, and Jofgrz-fe.

, the an-

DIVISION OF VULGAR FRACTIONS. 78. Reduce the fractions, when necessary, to simple ones, as in the former rules ; then invert the divisor, and proceed as in multiplication. 79. EXAMPLE 1. — What is the quotient of ij by £?

5

8_ˆ»— sx? = 5 x 15-H— 41, the an- "~ 9 2 9 × 26

swer. 3

2. It is required to divide \ of 19 by f of f . Here 1 of 19 — '3° ; and | of J — & — i- Then '| x ? ~ f — 7jj the quotient required.

DECIMAL FRACTIONS.

DEFINITION, NOTATION, AND NUMERATION OF DECIMALS.

80. A decimal is a fraction, the denomination of which is 1 with a cipher or number of ci- phers annexed; being always one or more 10th parts, lOOdth parts, lOOOdth parts, 10,000dth parts, or the like.

81. The arithmetic of vulgar fractions is tedi- ous, and even intricate to beginners. The dif- ficulty arises chiefly from the variety of denomi- n ators ; for when numbers are divided into different kinds of parts, they cannot be easily compared. This consideration gave rise to the invention of decimal fractions, where all the

units are divided ˆnto similar parts, and the divisions and subdivisions are regulated by the same scale which is used in the arithmetic of integers. The first figure of a decimal fraction signifies tenth parts, the second hundredth parts, the third thousandth parts, and so on.

82. Decimals are written down without their denominators, the numerators being so distin- guished as to evince what the denominators are ; which is done by separating, by a point, so many of the right hand figures from the rest as there are ciphers in the denominator ; the figures on the left side of the point being integers, and those on the right decimals. Thus {jj is written 1-3, and named 1 and 3 tenths; and |fo is writ- ten -25, and named 25 hundredths, or hundredth parts. But if there be not a sufficient number of

figures in the numerator, ciphers are prefixed to supply the defect. So ˆ is written -01, that is 1 hundredth ; and -ˆ thus -015, that is 15 thousandths.

83. The use of ciphers in decimals, as well as integers, is to bring the significant figures to their proper places, on which their value de- pends. As ciphers when placed on the left hand of an integer, have no signification, but when placed on the right hand increase the va- lue ten times each, so ciphers when placed on the right hand of a decimal, have no significa- tion ; but when placed on the left hand diminish the value ten times each.

84. The notation and numeration of deci- mals will be still more obvious from the following examples : —

4-7 ˆ1 f Four and seven tenth parts.

•47 Four tenth parts, and seven hun-

dredth parts, or 47 hundredth parts.

•047 n Four hundredth parts, and seven thousandth parts, or 47 thou- sandth parts.

•407 '3f Four tenth parts, and seven thou- sandth parts, or 407 thousandth parts.

4-07 Four, and seven hundredth parts.

4-007 J LFour, and seven thousandth parts.

ADDITION AND SUBTRACTION OF DECIMALS.

85. Write the proposed numbers under each other, according to the value of their places, as in whole numbers ; in which order the decimal points will stand directly below each other: then add or subtract as in whole numbers, placing a decimal point in the sum or difference, di- rectly below the other points. -j .

EXAMPLES.

169-3 27-48 213-97

•04

from 321-9 sub. 26-481

Sum 410-79 295-419

MULTIPLICATION OF DECIMALS. 86. Write down the factors, and multiply exactly as in integers, placing the decimal point to the product, so as to make just as many de- cimals in it, as there are in both factors together;

‘ and if there be not as many figures in the pro- case there be a remainder after all the dividend

figures are used, the quotient may be continued to any number of decimals by bringing down a cipher continually to the last remainder. And whenever the number of figures in the quotient is less than the required number of decimals, prefix ciphers to supply the defect.

EXAMPLE.

52-3) 73-743 (1-41 523

duct as there ought to be decimals, prefix ci- phers to supply the deficiency.

EXAMPLES.

52-3 5-12

2-41 ‘0098

523 2092 1046

126043

4096 4608

•050176

CONTRACTIONS.

87. When decimals are to be multiplied by 1, with any number of ciphers, it is done by only removing the decimal point so many places far- ther to the right hand, as there are ciphers in the multiplier, and subjoining ciphers if neces- sary.

EXAMPLE. The product of 51‘3 and 1000 is 51300-0.

88. When the product will contain many more decimals than are necessary

for the pur- pose, the work may be contracted thus : — Write the units figure of the multiplier directly under such decimal place of the multiplicand, as the last of the product 'is intended to be, writing the other figures of the multiplier in an inverted order ; then, in multiplying, reject all the figures in the multiplicand which are on the right of the multiplying figures, writing the products down so that their right hand figures fall straight be- low each other, and carrying to such right hand figures from the product of the two preceding figures in the multiplicand thus, viz. 1 from 5 to 15, 2 from 15 to 25, 3 from 25 to 35, &C. and the sum of the lines will he the product to the number of decimals required, and will be seldom wrong even in the last figure.

EXAMPLE.

•27-14086 27-14906

5301 4-29 92-41035

•24434874

542007

108599

•2715

81

14

2508-9280

13574930 8144958 2714986 10859944 542997 4 24434874

2508-9280|650510

DIVISION OF DECIMALS. 80. Divide as in integers : and to know how many decimals must be in the quotient, observe rules.*

I. The first figure of the quotient ess the same place of decimals or inte ilotli that figure of the dividend which •er tiic units place of the first product, i ii 11. The decimal places of the di- and quotient together must be equal in NT to those of tiie dividend. Whence, if ininber of decimals in the divisor be taken the iu::nb(r in the dividend, the remainder ;e the number in the quotient. If, in any

2144

CONTRACTIONS.

92. When the number of figures in the divisor is great, the division at large will be very trouble- some, but may be contracted thus : Having, by the first general rule, found what place of deci- mals or integers the first figure of the quotient will possess, consider how many figures of the quotient will serve the present purpose; then take the same number of the left hand figure of the divisor, and as many of the dividend figures as will contain them (less than 10 times); by these find the first figure of the quotient, and for each following figure divide the last remainder by the divisor, wanting one figure to the right more than before, but observing what must be car- ried to the first product for such omitted figures, as in the second contraction of multiplication ; and continue the operation till the divisor is ex- hausted. When there are not as many figures in the divisor, as are required to be in the quo- tient, begin the division with all the figures as usual, and continue it till the number of figures in the divisor, and those remaining to be found in the quotient be equal, after which use the contraction.

EXAMPLE.

93. Divide 2508‘92806 by 92-41035, so as to have four decimals in the quotient, in which case the quotient will contain six figures.

Common way.

92-4103,5) 2508-928,06(27-1498 66072106 13848610 46075750 91116100 79467850

5539570

Contracted.

92-4103,5)2508-928,06 (27-1498

660721

13849

4608

912

6

To reduce a vulgar fraction to an equivalent decimal.

94. RULE. — Divide the numerator by the denominator, as in division of decimals, and the quotient will be tiic decimal required.

ARITHMETIC.

685

EXAMPLES.

o

- =‘375 r- =

75

-=•04477

REDUCTION.

95. Reduction is the conversion of numbers from one denomination to another, but still re- taining the same value. If the reduction be- to H less denomination, it is commonly called re- duction DESCENDING ; but if to a greater, reduc- tion ASCENDING.

96. RULE. — Consider how many of the less denomination make one of the greater, and by that number multiply the given number if the reduction be descending, but divide if ascending, and the product or quotient will be the value in the other denomination. When there are deno- minations between the proposed and required ones, it is best to reduce the proposed to the next less or greater denomination, and this to the next less or greater again, and so on, till you have reduced it to the denomination required. — When, in reduction descending, the proposed is a compound number, you must add, or take in, the small numbers in the denomination below the greatest, to the same denominations, as you proceed in the reduction. When, in reduction ascending, you have any remainders after divi- ding, they will have the same denominations as their respective dividends, and may be placed after the last quotient according to the order of their denominations, the greatest first ; the com- pound number thus formed will be the answer.

« 97. TABLE OF MONEY.

Farthings. Pence. Shillings. Pound.

4 1

48 12 1

960 240 20 1

This and the following tables are to be under- stood thus : The words at the top are the deno- minations of all the numbers below them ; and all the numbers upon the same line, from right to left, are of equal value : thus in the last line of this table, 960 farthings, 240 pence, 20 shillings, and one pound are all equal to each other.

98. The full weight and value of our gold and silver coin is as below :

GOLD.

VALUE. WEIGHT.

A Guinea Half guinea Quarter guinea

£.

1 0 0

s. d.

1 0 10 6 5 3

dwt. gr.

5 9&

2 16}

SILVER.

VALUE. WEIGHT.

A crown

s. d.

5 0

dwt. gr. 19 8i

Half-crown

2 6

9 16i

Shilling

1 0

3 21

Sixpence

0 6

1 22£

The value of gold is nearly £4 an ounce, or Id. a grain ; and silver is nearly 5s. an ounce. Also the value of any quantity of gold is to that of the same weight of standard silver, in the

proportion of 15 and l-14th to 1, or nearly 15 tol.

99. OF TROY WEIGHT. Grains. Pennyweights. Ounces. Pound.

24 1

480 20 1

5760 240 12 1

By this weight are weighed jewels, gold, silver, corn, bread, and liquors.

100. OF APOTHECARIES WEIGHT. Grains. Scruples. Drams. Ounces. Pound:

20 1

60 3 1

480 24 8 1

5760 288 96 12 1

This weight is so called, because the apothe- caries use it in compounding their medicines ; but they buy and sell their drugs by avoirdu- pois weight. Apothecaries is the same as troy weight, having only some different

divisions.

101. OF AVOIRDUPOIS WEIGHT. Drams. Ounces. Pounds. Quarters. Hundrs. Ton.

16 1

256 16 1

7168 448 28 1

28672 1792 112 4 1

573440 35840 2240 80 20 1

By this weight are weighed all things of a coarse nature ; such as grocery and chandlers' wares, and all metals except gold and silver.

oz. dwt. gr. 1 Ib. Avoirdupois makes 14 11 15 J Troy

1 oz 0 18 5}

1 dr Q 1 3i

4

102. OF LONG MEASURE.

Inches. Feet. Yards. Poles. Furlongs. Mile.

12 1

36 3 1

198 16£ 5J 1

7920 660 220 40 1

63360 5280 1760 320 8 1

By the statute passed in June, 1824, for esta Wishing uniformity in weights and measures, it was ordained that the imperial standard yard shall be to a pendulum vibrating seconds at London, in the proportion of 36 to 39-1393. From the yard, the other measures of length are deduced.

4 inch — a hand. 6 feet, or 2 yards — a fathom. 3 miles — a league.

60 nautical or geographical miles — a degree. 69J statute miles nearly.

360 degrees, or 25,000 miles nearly, are the circumference of the earth.

103. OF CLOTH MEASURE. Inches. Nails. Quarters. Yard.

9 4 1

36 16 4 1

3 qrs. :z: 1 ell Flemish.

5 — — English.

6 — — French.

4 qrs. 1J inch Scotch,

104. OF SQUARE OR LAND MEASURE.

Square Square Square Square Roods. Acre,

inch. feet. yards. poles.

144 1

1296 9 1

39204 2T2J 30 1*

1568160 10890 1210. 40 1

6272640 43560 4840 160 4 1

Square ells.

36

1440 5760

OF SCOTS LAND MEASURE Roods.

Falls.

1

40 160

Acre.

105. OF WINE MEASURE.

Pints. Galls. Tierces. Hhds. Pun- Pipes Ton. cheons. or

Butts.

8 1

336 42 1

504 63 1£ 1

672 84 2 H 1

1008 12G 3 2 1£ 1

201C 252 6 4 3 21

10 gall. — an anker. 18 gall.- — a runlet. 31 £ gall. — a barrel.

By this measure, wines, brandies, spirits, perry, eider, mead, vinegar, oil, and honey are measured.

106. OF ALE AND HEEH MEASURE.

Pints. Galls. Firk. Kilderk. Bar. Hhd.

8 1

68 8i 1

136 17 2 1

272 34 4 2 1

408 51 6 3 H 1

107. In London, the ale firkin contains 8 gal- lons, and the beer firkin 9 : the other measures above it being decreased and increased in the same proportion.

OF l)u Y MEASURE. Pints. Galls. Pecks. Uush. Cinlis. Quar. Wrys. Last.

8 1

1 6 2 1

61 84 1

2.V) 32 16 4 i

512 64 32 8 2 1

2.”> (i() 320 150 40 10 5 1

5120 640 320 80 20 10 2 1

108. i!y the same act it is likewise de- creed that the bushel shall lie the standard measure of capacity, both for liquids and dry poods, not measured by heaped measure: and that it shall contain ten pounds avoirdupois weight of diMilh ‘. water, weighed in air, the barometer beni’.r at 30 inches. From this standard all the other denominations in the \arious trades are deduced as above.

109. The bushel, dry measure, by which coals, rulin, lime, fish, fruit, or potatoes are sold shall be a bushel containing eighty pounds weight avoir- dupois of water; such bushel to be made round,

with a plain even bottom, and to be 19ˆ inches from the outside to the outside ; that such bushel, when used for any of the fore-mentioned articles, shall be duly heaped up in the form of a cone, the outside of the bushel to form the extremity of the base of the cone. That three such bushels shall be a sack, and twelve sacks a chaldron.

110. SCOTS DRY MEASURE.

Lippies. Pecks. Firlots. Bolls. Chaldrons.

4 1

16 4 1

64 16 41

1024 256 64 16 1

111. TIME. Minutes. Hours. Days. Weeks. Month.

60 1

1440 24 1

10,080 168 7 1

40,320 672 28 4 1

The minute is divided into sixty seconds, and the second into sixty thirds, &c.

112. EXAMPLE I. OF REDUCTION DESCENDING.

How many minutes is 29 days 12 hours 45 minutes, or a lunar month ?

29 ds. 12 hs. 45 ms

24

128 58

708 60

42525-

113. EXAMPLE II. OF REDUCTION ASCENDING. How many pounds, &c. in 35682 pence?

12)35682

20) 2973s. 6d.

£148 13s. 6d.

114. REDUCTION OF VULGAR FRACTIONS.

1 . To reduce a fraction of one denomination to that of another which shall have the same value.

RULE. When the reduction is ascending, multiply the denominator by all the different denominations from that given to the one sought; but if it be from a greater name to a less, mul- tiply the numerator by all the denominations as before, and it will give the fraction required.

115. EXAMPLE. Reduce § of a penny to the fraction of a pound.

5 1.1,

— • — the answer

6×12×20 6X12X4 288

required.

2. To find the value of a fraction in the known parts of the integer.

116. RULE. Multiply the numerator by the parts in the next inferior denomination, and di- vide the product by the denominator ; and if any thing remains multiply it by the next inferior denomination, and divide by the denominator as before ; and so on as far as can be done ;

then the quotients, placed in order, will be the answer required.

EXAMPLE. What is the value of 4 of a shilling?

5 12

7)60

8—4

4

7) 16

2 — 2

Answer. Os. 8d. J f

117. REDUCTION OF DECIMALS. To reduce numbers of different denominations to their equivalent decimal values.

118. RULE. Reduce both the given number and the integer, to which it is to be referred, to the same denomination ; then divide the former of these by the latter, as in the case of a vulgar fraction, and the quotient will be the equivalent decimal required.

119. Or write the given numbers under each other in order, from the least to the greatest for dividends. Then opposite to each dividend, on the left hand, place such a number for a di- visor as will bring it to the next superior de- nomination,1 and draw a line between them.

120. This done, begin with the uppermost number, and set down the quotient of each divi- sion as decimal parts, on the right hand of the dividend next below it; and proceed in this manner to the last quotient,

which will give the answer as before.

EXAMPLE. Reduce 15s. 9df to the decimal of a pound. Here 15s. 9df~759 farthings, 20s — 960 farthings. Whence $j = 0,790625 the decimal required ; or,

4 12

20

3

9.75 15.8125.

.7ˆ0625 the answer as before. To find the value of any given decimal in terms of the integer.

121. RULE. Multiply the given decimal by the number of parts in the next denomination, and point off as many places to the right hand as there are places in the decimal.

122. Then multiply the figures so pointed off by the parts in the next inferior denomination, reserving as many places to the right hand as before ; and proceed in this manner through all the denominations to the last, when the several figures standing on the left of the decimal point will be the answer required.

EXAMPLE. Find the value of 37623 of a pound.

‘37623 20

7‘52460 12

6‘29520 4

1‘18080 Answer 7s. 6

123. COMPOUND ADDITION.

Compound addition is the finding the sum of several compound numbers.

RULE 1. Place the numbers of the same de-, nomination under each other according to the directions given in simple addition.

2. Add up the figures in the lowest denomi- nation as in simple addition.

3. Find by reduction how many units of the next higher denomination are

contained in the sum.

4. Write the remainder or overplus under- neath, and carry the ones or units to the figures in the next denomination, whose sum you must find and proceed with as before; and so on, through all the denominations to the highest, whose sum must be all written down, which, to- gether with the several remainders, will express the total required.

EXAMPLES.

Money.

£. s. d.

13 12 4

17 10 3

641

392

40 15 10

Troy Weight.

Ib. oz. dwt.

3 15 5 7

\ 17

17

2

18

23 10 12 61 9 11

COMPOUND SUBTRACTION.

124. Compound subtraction is the finding the difference between two numbers, of which one or both are compound.

RULE 1. Write the less number under the greater, as directed in compound addition.

2. Then, beginning at the least denomination, subtract the under number of each from the upper, writing their respective remainders below them.

3. But if the under number of any of the de- nominations be greater than the upper, add so many to the upper as make one of the next higher denomination ; then take the under from the sum, writing down the remainder as before, and carry or add one to the under number of the next higher denomination before you subtract it.

EXAMPLES.

C. qr. Ib.

12 3 19

4 3 24

7 3 23

A. R. F. E.

15 2 24 18

12 2 36 7

2 3 28 11

125. COMPOUND MULTIPLICATION.

Compound Multiplication is the finding of a number which shall contain a given compound number any proposed number of times.

126. RULE 1. — Write the multiplier under the lowest denomination of the multiplicand.

2. Multiply the number of the lowest denomi- nation by the multiplier, and find how many units of the next higher denomination are con- tained in the product, as in compound addition.

3. Write down the excess, and carry the ones to the product of the next higher denomination, with which proceed as before ; and in like man- ner with all the other denominations to the highest.

EXAMPLES.

£ . s. d. Miles fur. poles.

7 9 8J 31 3 12

7 11

52 7 9£ 345 4 12

S^e more on this subject under PRACTICE.

COMPOUND DIVISION.

127. Compound Division is the dividing com- pound numbers into any proposed number of equal parts.

128. RULE 1. Place the divisor and dividend as in simple division.

2. Begin at the highest denomination and di- vide each by the divisor, writing the quotients under their respective dividends.

3. But if there be a remainder after dividing any of the denominations except the least, find how many of the next lower denomination it is equal to, and add to it the small number (if any) which was in this denomination before; then divide the sum.

EXAMPLES.

£. s. d. yds f. in.

.'5)1 8 6 12)150 1 7

96 12 1 7&

See farther on this subject under PRACTICE.

PROPORTION, OR THE RULE OF THREE. 129. The Rule of Three is that by which a num- ber is found having the same proportion to a given number, which is between two other given numbers. It is called the Rule of Three, because in each of its questions there are given three numbers at least. And from its excellent exten- sive use, it is often named the Golden Rule.

130. RULES for stating, or setting down) the three given Numbers.

1 . \V rite down the number which is of the same kind with the answer or

number required.

2. Consider whether the answer ought to be greater or less than this number ; then write re- spectively the greater or less of the two remaining numbers on the right of it for the third, and the other on the left for the first number or term.

3. Multiply the second and third terms to- gether, divide the product by the first, and the quotient will be the answer.

131. OBSERVATIONS. 1. When you can con- veniently multiply and divide, as in compound multiplication and division, it is better to do so.

!. If not, reduce the compound terms to the lowest name mentioned in them, and the first and third to the same name, if they be not so al- ready ; then the answer will be of the same name with the second term.

3. \ hen there happens to be a remainder after division, reduce it to the name next below the last quotient, and divide by the same divisor, and the quotient will lie so many of the said next name , do this as long as there is any remainder, I ill you have reduced it to the least name, and all the quotients together will be the answer.

•1. If the first term, and either the second or third tan be divided by any number without re- mainder, let them be divided, and the quotients used instead of them.

1 32. Th»re are four other methods of operation besides the above general one, any of which, when possible, performs the work much sooner, viz.

1. Divide the second term by the first, multi- ply the quotient by the third, and the product will be the answer.

2. Divide the third term by the first, multiply the quotient by the second, and the product will be the answer.

3. Divide the first term by the second, divide the third by the quotient, and the last quotient will be the answer.

4. Divide the first term by the third, divide the second by the quotient, and the last quotient will be the answer.

133. EXAMPLE I. To find the value of 14 oz. 8 dwt. of gold, at £3 19s. lid. an ounce.

134. EXPLANATION. Having stated the three terms by the general rule, as

here annexed, the second term is reduced to pence, and the third to dwts. these being their lowest denominations, as above directed. The first term is also reduced to dwts. that it may agree with the third. The se- cond term is then multiplied by the third, and the product divided by the first, according to the ge- neral rule, when the answer comes out 13,809 pence, and twelve remaining over ; which remain- der being reduced to farthings, and these divided by the same divisor, 20, the quotient is 2 farthings, and 8 remaining. Lastly, the pence are divided by 12 to reduce them to shillings, and these again by 20 for pounds ; when the final sum comes out £57 10s. 9d. 2q. for the answer.

oz. £. s. d. oz. dwt.

1 : 3 10 11 :: 14 8 20 20 20

20 79 288

12

959 288

7672 7672 1918

2,0)27619,2

13809,j§ pence, or 12)13809d 2,§5qr. 2,0)115,0S. 9d. 2&q.

Answ. £57 10s. 9d. 2.&q. ‘ ‘-,

135. EXAMPLE II. How many men must bfe employed to finish a piece of work in 15 days, which 5 men can do in 24 days ?

d. m. d.

15 : 5 : : 24

5

15)120(8 men. Ans.

120

COMPOUND PROPORTION, OR THE RULE OF EIVE.

136. This rule is so called, because that in it there are five numbers or terms given, to find a sixth. It is often named the double rule of three, because its questions are sometimes performed by

two operations of the rule of three. Of the five eiven numbers three contain a supposition, and the other two a demand ; one of the terms of sup- position being of the same kind with the num- ber required, and the other two of the same kind as the demanding terms.

137. RULES FOR STATING THE FIVE GIVEN NUMBERS.

1. Write down the term of supposition which is of the same kind with the answer, for the middle term.

2. Take one of the other two terms of suppo- sition, and of the demanding terms, both of a kind ; and from the direction given in the RULE OF THREE, consider which places they would possess if a stating were made of them and the middle term only, and place them accordingly ; do the same with the other term of supposition and its correspondent demanding one, writing the terms under each other which fall on the right and left of the middle term.

138. METHODS OF OPERATION.

1. By two operations. Take the two upper terms and the middle term, in the same order as they stand, for the first stating of the rule of three ; then take the fourth number resulting from the first stating for the middle term, and the two under terms in the general stating, in the same order as they stand, for the extreme terms of the second stating ; and the fourth term re- sulting from it will be the answer.

2. By one operation. Multiply together the terms of which the one is above the other, on Doth sides of the middle term ; then account the two products and the middle term, as they stand, the three terms of a rule of three stating, and the fourth term thence resulting will be the answer. It is generally best to work by the latter method, viz. by one operation. And after the stating, and before commencing the operation, if one of the two first terms, and either the middle term or one of the two last terms, will exactly divide by one and the same number, let them be divided, and the quotients used instead of them ; which will much shorten the work.

EXAMPLE. — If 100 men make 3 miles of road in 27 days, in how many days will 150 men make 5 miles ?

of the rule of three when either the first or third term is 1.

140. When any of the terms contain decimals or vulgar fractions, the procedure is exactly simi- lar ; the rules for reducing, adding, subtracting, &c. decimals and fractions being observed.

141. RULE!. To find the price of any integer

number of things.

When the number is not very great, multiply the price of 1, or the integer, by the given number whose price is to be found, as in compound multiplication and the product: will be the price required.

142. If the multiplier exceed 12, it is com- monly better to multiply successively by its com- ponent parts, as in simple multiplication. But if the multiplier cannot be exactly produced by the multiplication of small numbers, find the nearest to it, either greater or less, which can be so produced; then after having multiplied con- tinually by the component parts of this uumber to or from the last product, add or subtract the product of so many as it is less or greater than the given number.

EXAMPLE. — What is the value of 38cwt. at £l. 11. 4d. percwt.? £.s. d.*

1 11 4 3

150

miles 3

450

d.

27

: 100

5 miles

500

27

4 14 0 12

56 8 0 value of 36 cwt. 328 of 2

Answer £59 108 38 cwt.

143. When the number is very large, as many hundreds or thousands, multiply the price of one continually by ten till it comes to the highest denomination. Then multiply these several pro- ducts by their respective local digits in the given number, which last products place orderly under each other, and add them together for the answer. EXAMPLE.— To find the price of 7985, at 7s. I0\d.

£. s. d. 0 7 10JX5

10

3 18

10

39

9 7 X9

10

450) 13500 (30 days. Ans. The same question by two operations : men d. men miles d. miles

150 : 27 : : 100 3 : 18 : : 5 100 5

150J2700(18 days 3)90(30 days. Ans.

RULES OF PRACTICE.

1 39. By rules of practice are meant certain expeditious methods of casting up accounts : and thev consist of the most general contractions VOL. II.

394 15 10

7

2763 10 10 355 6 3 31 11 8

I 19 5J

X7

‘7000

900

80

5

Answer £3152 8 2| 7985 144. RULE II. — When the price of some certain number is given, to find the price of an inte- ger, or 1.

2 Y

690

ARITHMETIC

Divide the given price by its number, as in compound division, and the quotient will be the price of one as required. When the number or divisor exceeds 12, it is better to divide succes- sively by its component parts, as in simple divi- sion. But if the divisor cannot be produced by the multiplication of small numbers, divide by it after the manner of long division.

EXAMPLE.— If 22 cwt. cost £24 4s, what will 1 cwt. cost?

£. s.

2)24 4

11)12 2 price of 11 cwt.

1 2 – of 1 –

The rent of 172 acres is £197. 16s, what is the rent of 1 acre ?

£. s. £. s. 172)197 16(1 3 Answer,

25 20

516 516

145. RULE III. — If the given price of 1 or the integer be an aliquot part of a penny, shil- ling, or pound.

Take the same part of the given quantity (whose price is to be found by dividing it by the number of times which the given price of 1 is contained in a penny, shilling, or pound) for the answer in pence, shillings, or pounds respec- tively.

EXAMPLE. — 23984 at 4d. or | of Is.

3)23984

20) 7994s. Qd.

£ 399. 14s. Qd. Answer.

146. RUI.K IV. — If the given price be no ali- quot part of a penny, shilling, or pound.

Divide it into several aliquot parts, then work for each by rule III. and their sum will be the an- swer. Or, it may often be divided so, that the less will be aliquot parts of the greater; then take the same parts of the prices found for the greater.

EXAMPLE. — 3274 at 13s. Qd.

3274

148. Rciz VI.— Whtn there i» tome odd weight, or measure, in the quantity.

After having multiplied the price by the num- ber of integers (if there be any), divide the odd quantity into aliquot parts of the integer, or of the price of each other, and add them all together.

EXAMPLE. — 3 tons 5 cwt. 2 qr. at £7. 9s. 3

£. s. (I.

793

3

at 10j. – 3 4d. 5 or

or J /.is 1637 or 1 1. is 545 13 4 of 3s. 4d. is 68 4 2

at 13 9 is £2250 17 6

147. Rri.r. V. — If there be pounds intheprice. Multiply the given quantity by the number of them : mul if tturc lie also some odd money, find its produce by the former rules, and add them together.

l",x,\Mi'i F..— 2,">96 at £'.}. 5s.

2596 3

22

5 cwt. is i of a ton, 1 2 qr. is ˆ of 5 cwt.

9

3|

£24 8 9J Answer.

149. RULE VII.— If there be a fraction in the given quantity.

After having worked for the integral part by any of the former rules, find the produce of the fraction by multiplying the price by the nume- rator, and dividing the product by the denomi- nator ; then add them together for the answer.

EXAMPLE.— 1735f at £l. 5s. £. s.

1 5

8)3 15(

4)1735 0

433 15

9

Answer £21 69 4 4J

TARE AND TRET.

150. Gross weight of any commodity is its own weight together with that of its package, whether it be cask, chest, or any thing else.

151 . Tare is the weight of the package, or an allowance made instead of it. What remains after the tare is taken from the gross may be called tare suttle, if there be more deductions.

152. TRET is an allowance of 4lb. upon every 104lb. of tare suttle, on account of dust or other waste. What remains after tret is deducted may be called tret suttle, if there be any follow- ing deduction.

153. CLOFF is an allowance of 2lb. for every 3 cwt. and some say, for every lOOlb. of tret suttle, to make the weight hold good, when sold by retail.

154. When all the deductions are made, the last remainder is called neat

or net weight. When the tare is at so much per cwt. it will begetter to divide it into aliquot parts of it, as in the Rule of Practice. The tret being 4 to 104, or 1 to 26, will be found by taking the 26th part of the tare suttle. In calculating oil and spirits, 7i Ib. neat are allowed to the gallon.

EXAMPLE.

Gross 17 cwt. 3qr. 14 Ib. tare 12 Ib. per cwt. tret 4 to 104, and doff 2 to 100 or 1 to 50. How much neat ?

ARITHMETIC.

691

Ib.

cwt. qr. Ib. 17 3 14 gross

26 50

1 1 3 0 2 15

1 3 18£ tare

15 3 23i tare suttle 0 2 12f tret

15 1 10f tret suttle 0 1 6f cloff

15 0 4£ neat

INTEREST. .:

DEFINITIONS.

155. Interest is the premium allowed for the loan of money.

156. The sum lent is called the principal. The sum of the principal and interest is called the amount.

157. Interest is allowed at so much per cent, per annum, which premium per cent, per annum, or interest of £100 for a year, is called the rate of interest.

158. Interest is of two sorts, simple and compound.

SIMPLE INTEREST.

159. Simple interest is that which is allowed for the principal lent only.

160. RULE I. To find the interest for a year, multiply the principal by the rate, and divide the product by 100.

161. II. To find the interest for several years, multiply the interest of one year by the number of them.

162. III. To find the interest for any parts of a year, as £, f , &c. take the same proportional parts of one year's interest.

163. IV. For any number of days, multiply the interest of a year by them, and divide by

365.

EXAMPLE.

What is the interest of £225 10s. for6i years, at 4£ per cent, per annum ?

225-5 principal 4-5 rate

100)1014-75

10-1475 interest for a year

6

60-8850 interest for six years 2-536875 interest for £ year

63-421875

or £63. 8s. 5%d. the interest required.

164. The above rules for simple interest serve also to calculate commission, brokage, insurance, the stocks, or any thing else rated at so much per cent

COMPOUND INTEREST.

165. Compound interest is that which is al- lowed, not only for the sum lent, but also for its interest; as it becomes due at the end of each stated time of payment.

166. RULE. — Find the amount of the given principal for the time of the first payment by simple interest ; then consider this amount as the principal for the second payment, whoss amount calculate in the same manner ; and so on through all the payments, still accounting the last amount as the principal of the next payment.

EXAMPLE.

What will £50 amount to in three years at 5 per cent, per annum, compound interest ?

To 50 principal

add 2-5 interest for one year

52-5 principal for second payment 2-625 interest

55-125 principal for third payment 2-75625 interest

57-88125

or £57 17s. 7%d- amount required.

167. In calculating compound interest for parts of times, some authors, for expedition, cal- culate for a complete time, and then take a part of the result proportionate to the part of the time ; but this is not just, as the compound in- terest does not increase in the early period exactly in proportion to its increase in the late or com- plete period. In all such calculations therefore, where it is necessary to calculate compound interest for parts of times, the most expeditious and accurate method is by logarithms; for though it is possible to make such calculations without them, the trouble is immense ; whereas, by logarithms it is as easy to perform the calcu- lations with parts of times of payment, as with whole ones.

DISCOUNT.

168. Discount or rebate is the difference be- tween a sum of money due at a certain time to come, and its present worth. The present value of any sum or debt, due some time hence, is such a sum as, if 'put to interest, would in the time and at the rate for which the discount is to be made, amount to the sum or debt then due.

169. RULE. — As the amount of £100 for the given rate and time, is to the given sum or debt, so is £100 or the interest of 100 for the given time to the present worth, or to the discount of the given sum, respectively.

170. The method used among bankers in dis- counting bills is to find the interest of the sum drawn for from the time the bill is discounted to the time when it becomes due, including the days of grace, which interest they reckon as the discount, thereby making the discount more than it really is. But when goods are bought or sold, and discount is to be made for present payment, at any rate per cent, without regard to time, the interest of the sum as calculated for a year is the discount.

2 Y2

692

ARITHMETIC.

171. EXAMPLE. — What is the present worth of £70C due 9 months hence, discount at 5 per cent, per annum ?

100

3-75 interest for 9 mouths.

103-75 amount of 100/.

£ £ £

103-75 : 700 :: 100

100

178. EXAMPLE. — Two merchants, A and B, trade together: A puts into the stock £60 and B puts in £40. They gain by trading £24. What are their shares of it ? ‘

60

40 £ s.

— r 1 1 60 : 14 8 A’s share.

100: 24 2

C. : : 40 : 9 12 B’s share.

103-75) 70000 (674-6988

or £674 13s. 1 Id. present worth sought.

EQUATION OF PAYMENTS.

172. Equation of payments is the finding a time, when, if a sum of money be paid which is equal to the sum of several others due at different times, no loss will be sustained by either party.

173. RULE. — Multiply each payment by the time at which it is due, then dividing the sum of the products by the sum of the payments, the quotient is the equated time.

174. EXAMPLE. — A debt of £60 is to be paid £30 at 2 months, and £30 at 4 months : but if it be reduced to one payment, at what time must it be paid '!

£

2 X 30— 60 4 X 30 = 120

) 180 (3 months, the time required.

180

COMMERCIAL ARITHMETIC.

INTRODUCTION.

17,"). Although every branch of arithmetic might come under the title commercial,' as the whole science is more or less applicable to com- merce, yet under this head we mean only to comprehend those rules of arithmetic, as they an: commonly called, not yet taken notice of, vv! > ieh are generally inserted in practical treatises on this science ; but which could not with pro- priety he introduced in the preceding parts, and which do not properly come under the articles Auir.iuiA, BOOK-KEEPING, GEOMETRY, or Lo-

GAKITIIMS.

SING i. E FELLOWSHIP.

170. Single fellowship is a rule by which any sum ot- quantity may be divided into any assigned number of parts, which shall be proportional to so many other proposed numbers, each to each. By this rule are adjusted the gain or loss or charges of merchants in company, the effects of

bankrupts, legacies in case of a deficiency of assets, &c.

177. Itri.v.. — Make the sum of the numbers, to which the acquired parts must be proportional, the first term ; the quantity to be parted or di- vided, the second ; and each of the given numbers,

which the required ones must be proportional, tne several thiid terms, of so many rule of three questions; the fourth terms of which will be the i'sj eai'. e p;t:U required.

Proof, £. 24

DOUBLE FELLOWSHIP.

179. When the shares of the partners are continued in company unequal times, they occasion the name fellowship with time, or double fellowship; which is performed by the following

180. RULE. — Multiply each share by the time of its continuance ; then divide the gain or loss in proportion to the products, as in single fellow- ship, by saying, as the sum of the products is to the whole gain or loss, so is each product to each part of it.

181. EXAMPLE. — A had in company £50 for 4 months, B £60 for 5 months, at the end of which time they gained £24. How must it be divided between them ?

4 X 50 = 200

5 X 60r = 300

— c : : 200

600: 24 ˆ

C :: soo

£ s.

9 12 A's share

14 8 B's share.

Proof, £ 24 BARTER.

182. Barter is the exchanging of commodities ; and as neither party is supposed to sustain any loss, when the commodities exchanged are not of

equal value, the defect is supplied with money, &c.

183. CASE I. — When the quantity of one com- modity is given, with its value or that of its integer ; as also the value of the integer, or rate of selling some other commodity to be given for it, to find the quantity of this ; or, having the quantity of the latter given, to find the rate of selling it. If the amount of the given quantity be unknown, calculate it in the shortest manner you can from the given value of its integer; then find how much of the other quantity this amount will purchase at the given rate of selling it; or, if the quantity be given, from thence find the rate of selling it.

184. II. — If the quantities ofboth commodities, with the rate of selling them, be given, to find what quantity of some other commodity or money must be given in case of an inequality of the amount of the first commodities. Calculate the amount of each of the two given commodities ; then their difference is the money, or amount of the third commodity to be advanced; whose quantity, from thence and its rate, is easily found.

185. III. — When, in bartering, one commo- dity is rated above the ready money price, to find the quantity and bartering price of the other commodity. As the ready money price of the one is to its bartering price, so is that ot

the other to its barter price ; then the quantity of the latter commodity may be found either from iie ready money or bartering prices.

These are the most general cases in barter, and such questions as are not contained in them, are easily resolved from a little consideration of their nature.

Loss and GAIN.

186. Questions in this rule are such whose solutions determine the loss or gain upon com- modities ; of which questions there is a great variety ; but they may be all easily solved from a little consideration and the following propor- tion, viz. That the gains or losses are in propor- tion as the quantities of goods, &c.

EXCHANGE.

187. By exchange is meant the bartering or exchanging of the money of one place for that of another, and, like the bartering of wares, it com-

monly consists in finding what quantity of the money of one place will be equal to a given sum of another, according to a given course of exchange.

188. By course of exchange is meant the va- riable sum of the money of one place, which is proposed to be given for a constant piece or sum of that of another, to serve for the present as a rate or proportion by which to exchange other sums ; and it is sometimes above and sometimes below the par.

189. By the par of exchange is meant an in- trinsic equality between two pieces or sums of money, one of which is the constant piece or sum to which the course is compared. The money in the banks of foreign places is finer or purer than that which is current in them; and the difference between any sum, as valued in the one, and its value in the other, is called agio.

190. It is by comparing the bank money with ours, that the par is ascertained. The ex- change is always supposed to be made in bank money; and if there be a necessity for taking currency in case of a defect of the bank to an- swer the bills, the more of it must be received, and that in proportion to the agio.

With Ireland, America, and the Wist Indies.

191. Accounts are kept in Ireland, America, and the West Indies, in pounds, shillings, and pence, as in England; and the exchange per cent, sterling; the par being £108 6s. 8d. Irish per 100/. sterling, has heretofore been £l Is. &d. per pound ; but has recently been reduced to the English standard : 5/. sterling is accounted worth £7 of the currency of the West Indies, because of the plenty of foreign coins thˆre.

With Holland, Flanders, and Germany.

192. In these places accounts are kept some- times in pounds, shillings, and pence, as in Eneland ; and sometimes in guilders, stivers, and pfennings. The money of Holland and Flanders is distinguished by the epithet Flemish, and they exchange by the pound sterling, the par being 33s. 4d. Flemish per pound sterling.

In Holland and Flanders. 16 pfennings make 1 stiver. 20 stivers or 40 pence — 1 guilder or florin.

8 pfennings — 1 grote or penny. 12 grotes or pence — 1 skilling. 20 skillings — 1 pound.

In Germany.

12 pfennings — 1 shilling lubs. 16 lubbish shillings — 1 mark.

6 pfennings — 1 grote flem.

6 lubbish shil. — 1 skil flem.

7J marks lubs — 1 pound flem.

With France.

193. In France accounts are kept in livres, sols, and deniers; exchange being made by the French crown, the par of which is as 2s. 6J sterling, or more accurately, 2s. 5Jd.

1 2 deniers — a sol or sou, value 0 OJ

20 sols — a livre .... 0 9?

3 livres — 1 crown or ecu . 2 5£

With Spain.

194. In Spain they keep their accounts in piastres, rials, and maravedis ; reckoning 372 maravedis to a rial, and 8 rials to a piastre, by which they exchange, and its par is 4s. 6d. sterling.

With Italy.

195. In Genoa and Leghorn they keep their accounts in livres, sols, and deniers, as in France, but exchange by the piastre, as in Spain, which in Genoa is accounted 5 livres, and at Leghorn 6. At Venice too accounts are by some kept in the same manner, and by others in ducats and gross, reckoning 24 gross to a ducat, upon which they exchange, and its par is accounted 4s. 4d. sterling.

With Portugal.

196. In Portugal accounts are kept in mil- reas and reas, reckoning 1000 reas to a milrea, as its name imports ; and they exchange by the milrea, the par of which is about 6s. 8£rf. or 6s. 9d. sterling.

GENERAL RULES, showing in what manner com- putations respecting the comparison of monies are to be made :

I. Reduce the given sum, if necessary, to that kind of money by which exchange is com- puted.

II. Reduce this, according to the given rate of exchange, into the corresponding money of the other country.

III. Reduce the exchange of money thus found, if necessary, to the kind of money re- quired.

197. EXAMPLES. — I. How much sterling money is in 5476 guilders, current exchange, 36s. 3d. Flemish per pound sterling, agio 2J per cent.

102-5 : 100 : : 5776

100 G. Bank.

102-5) 547600 (5342‘4 40

£. s. d.

36s. 3rf. = 435d.) 2136960 (491 5 6

Here, agreeably to the first of the preceding ge- neral rules, we reduce 5476 guilders current to 5342-4 banco, by the proportion of 102£ to 100; this again is brought to pence Flemish by mul-

tiplying by 40, the pence in a guilder ; and since S6s. 3d. or 435d. Flemish is worth £l sterling ; therefore divide by 435, and the quotient. £491 5s. 6d. is the sterling money required.

How many current guilders in £100 sterling, ex. 34s. 8d. flem. per £. ster. agio 2 per cent.

s. d.

£. d. flem. £. 34 8

1 : 416 :: 100 12 100

416

41600 d. Flem. Banco.

100 : 102 : : 41600 102

83200 416000

100) 4243200 •

40) 42432 d. current.

1060 guild. 16 stiv. Ans. ARBITRATION OF EXCHANGES.

198. As the course or rate of exchange be- tween one nation and another is almost conti- nually varying, either by rising or falling, from the variations in the circumstances and balance of trade ; so the design of arbitration is to remit or draw upon foreign places in such a manner, as shall turn out the most profitable.

199. Arbitration is generally divided into two parts, simple and compound.

SiMi'i.F, ARBITRATION.

200. Tn simple arbitration the exchanges among three plaees only are concerned. The par of arbitration, or arbitrated price, is such a rate of exchange between two places as shall be in proportion with the rates assigned between each of them and a third place. After this par of arbitration is computed, by comparing it with the present course of exchange, a person can judge which way to remit or draw to the most advantage, arid determine what the advantage shall be.

201. EXAMPLE. ˆ— The exchange between London and Amsterdam being 33s. 9d. per pound sterling, and the exchange between London and Paris \}~2d: per crown; the par of arbitration be tween Amsterdam and Paris is required.

Aiwnr. — By reduction £l ster.— 240d. Ster. and :j:is. 9r/. Flem. = 404rf. Flem.

COMPOUND ARBITRATION.

2 < > 2. Compound arbitration respects the cases in winch the exchanges between three, four, or more places are concerned.

203. A person who knows at what rate he can draw or remit directly, and also has advice of the course of exchange in foreign places, may trace out a path for circulating his money, thiough more or fewer of riuch places, and also ii > such order, ;is to make a benefit of his skill and credit : and herein lies the great art of such noˆociations.

204. But to determine in what order, and through how many places to circulate a bill, no general rule can be given, as it depends entirely upon a person's judgment, and a close attention to the results of former cases of

the like kind. The following rules, however, may assist in de- termining, whether a direct or an assigned cir- cular draft be preferable.

205. RULE I. — Distinguish the given rates or prices in the circular course into antecedents and consequents ; and place the antecedents in one column, and the consequents in another, on the right, fronting one another, by way of equation. And, in this distribution into antecedents and consequents, each consequent must be of the same kind with the next antecedent, and the first antecedent of the same kind with the last conse- quent, which must be the sum whose value in ex- change is required.

II. Multiply the antecedents continually for a divisor, and the consequents continually for a dividend; and the quotient of the product will be the value of the sum required by such exchange.

Then compute its value by the direct exchange, or by any other circular exchange, and by com- paring the Values together you will perceive the most advantageous method.

206. EXAMPLE. — If London would remit £1000 sterling to Spain, the direct exchange being 42Jd per piastre of 272 maravedis ; it is required whether will be most profitable the di- rect remittance, or by remitting first to Holland at 35s. per £l ; thence to France at 5Qd per crown; thence to Venice at 100 crowns per 60 ducats ; and thence to Spain at 360 maravedis per ducat.

ANTECEDENTS. CONSEQUENTS.

£l sterling. — 35s or 420d Flemisb 58d Flemish = 1 crown 100 crowns n CO ducats 1 ducat i= 360 maravedis

272 maravedis :=: 1 piastre How many piastres — £1000 sterling.

420X60X360X1000 210X30×45×10

Then-

58 X 100 X 272

29 X 17

,2835000 ” 493

*• i **

rr 5750|jjj piastres — the value of

£1000 by the circular exchange.

But 42£d ; 1 piastre ; : £1000 or 240000d.:

480000 96000

— — 5647ˆ piastres, the value by

the direct exchange.

207. Thus it is plain that the circular exchange is the most advantageous, as it produces 103$ piastres more than the other.

ALLIGATION.

208. Alligation is the method of mixing to- gether several simples of different qualities, so that the composition may be of a middle quality : and it is commonly distinguished into two prin- cipal cases, denominated alligation medial, and alligation alternate.

ALLIGATION MEDIAL.

209. Alligation medial is the method of find- ing the rate of the compound, from having the rates and quantities of the several simples given.

ARITHMETIC.

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210. RULE. — Multiply each quantity by its rate ; then divide the sum of the products, by the sum of the quantities, or the whole composition; and the quotient will be the rate of the compound required.

211. EXAMPLE. — A composition being made of 5lb. of tea at 7s. per lb., 9lb. at 8s. 6d. per lb., and 14lb. at 5s. lOd. per lb; what is a pound of it worth?

s. d. £. 5.

7 — X 5 rz 1 15 —

8 6 X 9 = 3 16 6 5 10 X 14 zz 4 1 8

28)913 2(— 6s. 10 Jd. per lb. Arts. ALLIGATION ALTERNATE.

212. Alligation alternate is the method of find- ing what quantity of each of the simples, whose rates are given, will compose a mixture of a given

rate; so that it is the reverse of alligation medial, and may therefore be proved by it.

213. RULE 1. — Write the rates of the simples in a column under each other. 2. Connect, or link with a continued line, the rate of each simple which is less than that of the compound, with one or any number of those which are greater than the compound; and each greater rate with one or any number of the less. 3. Write the difference between the mixture rate and that of each of the simples opposite the rates with which these are linked. 4. Then if only one difference stand against any rate, it will be the quantity belonging to that rate ; but if 'there be several, their sum will be the quantity.

214. It appears from the above rule, that many of the questions of this case will admit of various answers ; but from an algebraic process it appears that they will all have infinite varieties of answers ; after one or more answers are found by the rule, a great number more are found by increasing or decreasing the quantities in any proportion, or by only increasing or decreasing any one or more single pairs in any proportion, and leaving the other rate? as they are ; but that answer is commonly desired which gives the rates in the least integer numbers, and those the nearest to each other.

215. EXAMPLE. — How much corn at 2s. 6a. at 3s. Qd. at 4s. and at 4s. 8d. per bushel, must be mixed together, that the compound may be worth 3s. lOd. per bushel?

*Rates. *. d.*

rr— 30 ˆ 2 10 12 or 2 at 2 6

I — 144 [2 10 12 or 2 at 3 8

1 1 148(4616 2 18 or 3 at 40

_56J 16 2 18 or 3 at 4 8

216. Sometimes one or more of the ingredi- ents, and sometimes the whole composition is li- mited to a certain quantity ; which may be di- vided into the three following cases or limita- tions.

217. LIMITATION "I. — When the whole com- position is limited to a certain quantity, and that is not found from the method of linking, and taking the differences ; augment or diminish the

quantity of each ingredient in the same propor- tion as the given quantity is

greater or less than the total quantity found from the linking, by saying, as the total quantity so found is to the given quantity, so is the quantity of each ingredient found by linking to the required quantity of each.

218. II. When one of the ingredients is limited to a certain quantity, and that quantity is not found by the method of linking; either augment or diminish the quantities of all the rest, in the same proportion as the given quantity is greater or less than the quantity of the li- mited simple found by linking, by stating as in the first limitation; or only augment, or di- minish in the above proportion, that part of the quantity of the ingredients with which the limited one is linked, which is the difference ol the mixture rate and the rate of the limited simple, and add the resulting quantity of the other parts instead of the said difference, keeping the quantities of the other simples un- altered.

219. III. If more than one of the simples be limited, find, by Case I. what will be the rate of a mixture made of the given quantities of the limited simples only ; then consider this as the rate of a limited simple, whose quantity is the sum of the first given limited simple, from which, and the rates of the limited simples, by the second limitation, calculate the quantity of each.

INVOLUTION.

220. A power is a number produced by mul- tiplying any given number continually by itself a certain number of times.

221. Any number is called the first power of itself; if it be multiplied by itself, the product is called the second power, and sometimes the square ; if this be multiplied by the first power again, the product is called die third power, and sometimes the cube ; and if this be multi- plied by the first power again, the product is called the fourth power ; and so on.

Thus : 3 is the first power of 3. 3 x 3 zz 9 is the second power of 3. 3 X 3 X 3 zz 27 is the third power of 3. 3 X 3 X 3 X 3 zz 81 is the fourth power of 3 &c. &c.

222. Involution is the finding of powers ; to do which, from their definition there evidently arises this rule. Multiply the given number, or first power, continually by itself, till the number of multiplication be one less than the index of the power to be found, and the last product will be the power required.

*EXAMPLE I. — What is the cube of 12‘5 ? 12-5 X 12;5 X 12-5 zz 1953 125 Answer. II. What is the square of 3| or *f ? 17 X 17 289*

— — zz zz 11 ‘56. Answer.

5 5 25

EVOLUTION.

223. The root of any given number or power is such a number as being multiplied by itself a certain number of times, will produce the power;

and it is denominated the first, second, third, fourth, 8tc. root, respectively, as the number of multiplications made of it to produce the given power is 0, 1, 2, 3, &c. that is, the name of the root is taken from the number which exceeds the multiplications by 1, like the name of the power in involution.

224. Evolution is the finding of the roots of numbers, either accurately or in decimals to any proposed extent.

225. The power is first to be prepared for ex- traction, or evolution, by dividing it from the place of units, the left hand in integers, and to the right in decimal fractions, into periods, con- taining each as many places of figures as are de- nominated by the index of the root, if the power contains a complete number of such periods : if it does not, the defect will be either on the right hand or left, or both ; if the defect be on the right hand it may be supplied by annexing ciphers, and after this whole periods of ciphers may be annexed to continue the extraction, if necessary ; but if there be a defect on the left, such defective pe- riod must remain unaltered, and is accounted the first period of the given number, as if it were complete.

226. Tliis division may be conveniently made by writing a point over the place of units, and also over the last figure of every period on both sides of it ; that is, over every second figure, if it be the second root, over every third, if it be the third root, &c.

Thus, to point tins number 21035896‘12735;

for the second root it will be 21035896‘127350;

and for the third root thus: 21035896-127350.

227. The root will contain just as many places of figures ;is there are periods or points in the given pouur, and they will be integers, or decimals respectively, as the periods are so from which they are found, or to which

they correspond, that is, there will be as many inte- ger or decimal figures in the root, as there are pe- riods of integers or decimals in the given number. 228. To extract the square root.

I. Having pointed the given number into periods of two figures each, find a square num- ber either equal to, or the next less than the first period, which subtract from it, and place the root of the square on the right of the given num- ber, after the manner of a quotient in division, for the first figure of the root required.

II. To the remainder annex the second pe-

vidend ; and on the left hand of it ible of the root already found, after f a divisor.

•r what figure, which, if annexed and the result multiplied by it, .ay be equal to, or the next less ml, and it will be the next figure

riod for a d write tl'.e d the manner

115. Con to the divi. the])!•• K!U(t than t'.ie div of the root.

1\ . i roni the dividend subtract the product, and t< > the remainder brincj down the next period, tor a new dividend ; to which, as before, find a divisor by doubling the t'uures already found in the root ; and fiom these find the next figure of the root, as in the last article; an:l continuing

the operation still in the same manner, till all the periods be used, or as far as you please.

229. When the root is to be extracted to a great number of places, the work may be much abbreviated, thus : having proceeded in the ex- traction after the common method, till half the required number of figures in the root is found, the rest may be found by dividing the last re- mainder by its corresponding divisor, annexing a cipher to every individual, as in division of deci- mals ; or rather, without annexing ciphers, by omitting continually the right hand figure of the divisor, after the manner of contractions in divi- sion of decimals.

So the operation for the root of 2 to 12 or 12 places may be thus :

2 (1-41421356237 + &c.

1

24

100 96

281 400 1 281

2824

11900 11296

28282

60400 56564

282841

383600 282841

2828423

1007,000 8485269

2828426) ,1590631 (56237 +

176418

6712

1055

206

8

230. By means of the square root also we readily find the 4th root, or the 8th root, or the 16th root, &c. that is, the root of any power whose index is some power of the number 2 ; namely, by extracting so often the square root as is denoted by that power of 2 ; that is, two ex- tractions for the fourth root, three for the 8th root, and so on.

231. To extract the cube root.

1 . Having divided the number into periods of three figures each, find the nearest less cube to the first period ; set its root in the quotient, and subtract the said cube from the first period ; to the remainder bring down the second period, and call this the resolvend.

2. To three times the square of the root just found, add three times the root itself, setting this one place more to the right than the former, and call this

sum the divisor. Then divide the resolvend, wanting the last figure, by the divisor, for the next figure of the root, which anrex to the former; calling this last figure e, and tre part of the root before found caU a.

Gz = 21035-8:r = 7-3,n— 5, A = 20730-716

III. Add together these three products, namely, thrice a square multiplied by e, thrice a multi- plied by e square, and e cube, setting each of

them one place more to the right than the for- G-Arr305'084

mer, and call the sum the subtrahend; which

must not exceed the resolvend ; and if it does,

then make the last figure e less, and repeat the operation for finding the subtrahend.

IV. From the resolvend take the subtrahend, and to the remainder join the next period of the given number for a new resolvend ; to which form a new divisor from the whole root now found ; and from thence another figure of the root, as directed in article II, &c.

231. EXAMPLE. — To extract the cube root of

48228-544.

A = 20730-716

3

3A = 62192-148 2G = 42071-6

As 104263-7 :

G = 21035-8

2

42071-6

305-084 73

915252 2135588

7-3 : -0213605

3 X 3*— 27 3 X 3 X 09

48228-544 (36‘4 root.

27

Divisor 279 21228 resolvend.

3 X 33 X 6 =: 162 ˆ 3 X 3 X 6”=: 324 Vadd 63= 216>

3 X 362 — 3888 3 X 36 = 108

38988

19656 subtrahend

1572544 resolvend

3 X 3 X

X 4 = 15552 X 42= 1728

43 = 64

add

0000000 remainder. 232. To extract any root whatever.

Let G be the given power or number, n the index of the power, find by trials a power nearly equal to the given power or number, and having a rational root. Let this assumed power be A, and its root r, and let R be the required root ofG.

Then as the sum of n + 1 times A and n — 1 times G, is to the sum of n -+• 1 times G and n — 1 times A, so is the assumed root r to the required root II.

Or, as half the said sum of n f 1 times A and n — 1 times G is to the difference between the given and assumed powers, so is the assumed root r to the difference between the true and assumed roots ; which difference added or sub- tracted gives the true root nearly.

That is, n+". A + n— 1 . G : n + 1. G+n— 1. A : : r : R.

Or, n + i.

n — 1. i G : A w» G:

R

And the operation may be repeated as often as we please, by using always the last found root for the assumed root, and its wth power for the assumed power A.

233. EXAMPLE. — To extract the 5th root of 21035-8. Here it appears that the 5th root is between 7-3 and7‘4. Taking 7‘3, its 5th power is 20730-71593. . Hence then we have

104263-7)2227-1132(0213605 the diff. 14184 7-3 = r add

3758 7-321360 = R the root

630 true to the

5 last fig.

234. General rules for extracting any root of a vulgar fraction or mixed number.

1. If the given fraction have a finite root of the kind required, it is best to extract the root of the numerator and denominator for the terms of the root required.

2. But if the fraction be not a complete power, it may be thrown into a decimal, and then ex- tracted. Or,

3. Take either of the terms of the given frac- tion for the corresponding term of the root ; and for the other term of the root, extract the re- quired root of the product, arising from the mul- tiplication of such a power of the first assigned term of the root whose index is less by 1 than that of the given power, by the other term of the given number. This rule will do when the root is either finite or infinite.

4. Mixed numbers may be reduced either to improper fractions or decimals, and then ex- tracted.

POSITION.

235. This rule is also called false position or false supposition, because it makes a supposition of false numbers, as if they were the true ones, and by their means, discovers the true numbers sought. The single rule uses only one suppo- sition, but the double rule two ; whence their names.

236. To the rule of position belong such ques- tions as cannot be solved by the direct process by any of the former rules ; and in which the required number or numbers do not ascend above the first power ; such, for example, as most of the questions usually brought to exercise the reduction of simple equations in algebra. But it will not bring out true answers, when the num- bers sought ascend above the first power ; for then the results are not proportional to their po- sitions, nor the errors to the difference of the true number and each position ; yet in all such cases it is a very good approximation, and in exponen- tial equations, as well as many other things, suc- ceeds better than perhaps any other method.

237. Those questions in which the results are proportional to their suppositions, belong to single position ; such are those which require the multiplication or division of the number sought by any number, or in which it is to be increased or diminished by itself any number of times, or by any part or parts of it. But those in which the results are not proportional to their positions belong to the double rule ; such are those in which the number sought is increased or di- minished by some given number, which is no known part of die number required.

238. RULE. — Take any number, and perform the same operations with it, as in the question are described to be performed with the number sought ; then, if the result be the same with that in the question, the supposed number is the num- ber sought ; but if it be not, say, as the result of the operation is to the position, so is the result in the question to the number required.

239. EXAMPLE. — A person after spending £ and J of his money, has yet remaining £60; what had he at first ?

1 . Suppose he had at first £120. Proof.

Now | of 120 is 40 J of 144 is 48

J of it is 30 J of it is 36

their sum is 70 which taken from 120

their sum 84 taken from 144

leaves 60 as per question. 60 X 120_60 X 12

50 5

leaves 50

Then, 50 : 120 : : 60 : = 12 x 12 = 144.

DOUBLE POSITION.

240. RULE. — Having taken any two convenient numbers for the positions, proceed with each according to the conditions of the question, as if it were the true number sought; and find how much the results are different from the result in the question. Next multiply each of these er- rors or differences by the other's position ; then if the errors be of the same affection, that is, if the results be both either too great or too little, divide the difference of the products by the dif-

ference of the errors, and the quotient will be the answer ; but if the errors be of different affec- tions, that is, if one result be too great and the other too little, divide the sum of the products by the sum of the errors, and the quotient will be the answer.

241. Or, having found the errors, say, As the sum or difference of the errors, according as they are of a different or the same kind, is to the dif- ference of the suppositions, so is the least error to the correction of the supposition belonging to this error ; which must be added to, or subtract- ed from it, according to the following conditions, viz. If the errors be of the same kind, add, or subtract the correction, to or from this supposi- tion, according as it is greater or less than the other supposition ; but if the errors be of dif- ferent kinds, add or subtract, according as the supposition is the less or the greater of the two ; and the sum, or difference, will be the number sought

242. EXAMPLE. — What number is that, which being multiplied by 6, the product increased by 18, and the sum divided by 9, the quotient will be 20 ?

First, suppose 30 to be the number sought.

Then

30 x 6 + 18

= 10 X 2 + 2 =

22 ; but it ought to be 20 ; therefore the error is 2 in excess. Again, suppose 16 to be the number sought,

Then

18 x 6 + 18

= 2×6+2 = 12 + 2

~ 14 ; but it ought to be 20 ; therefore the error is 6 in defect.

And the errors are of different kinds or affec- tions.

30 X 6 + 18 X 2

wru !_.&. i*

Whence, by the first rule,

sought.

And, by the second rule, 2 + 6 I 30 — 18 : :

2 X 12

2 : – = 3ˆ the correction ; then 30 — 3 =

8

27, the number sought.

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ARITHMETIC, INSTRUMENTAL, a species of arithmetic, wherein the common rules are per- formed by means of instruments contrived for expedition ; such as several sorts of scales, and sliding rule?, &c. particularly those denominated NAPIER'S BONE?, which see. The Chinese use instruments in their calculations, and pay little regard to arithmetical rules. See ABACUS, and SWAN- i' AN

ARITHMETIC, TETRACTICAL, is that wherein only the figures 1, 2, 3, and 0, are used. We have a treatise on this arithmetic by Erhard Wei- gel ; but this arithmetic is little better than a curiosity, especially with regard to practice ; in asmuch as the numbers may be much more com- pendiously expressed by decadary arithmetic.

ARITHMETIC, VULGAR, is that conversant about integers and vulgar fractions.

ARIUS, a divine of the fourth century, the nead and founder of the Arians, a sect which denied the eternal divinity and substantiality of tie Word. He is said likewise to have regarded *he Holy Spirit as originally created by the Son. Arius was born in Libya, near Egypt. Eusebius, bishop of Nicomedia, a great favorite with Con- stantia, sister of the emperor Constantine, and wife of Licinius, became a zealous promoter of Arianism. lie took Arius under his protection, and introduced him to Constantia ; so that the sect increased, and several bishops embraced it openly. There arose, however, such disputes in the cities, that the emperor assembled the council of Nice, where the doctrine of Arius was con- demned, A. D. 325. Arius was banished by the emperor, all his books were ordered to be burnt, and capital punishment was denounced against those who dared to keep them. After five years of exile he was recalled to Constantinople, where he presented the emperor with a confession of his faith that fully satisfied him. Notwithstanding this, Athanasius, bishop of Alexandria, refused to admit him and his followers to communion : and Arius now, in his turn, procured that prelate to be deposed and banished. But the church of Alexandria still refusing to admit Arius, the em- peror sent for him to Constantinople ; where, upon delivering in a fresh confession of his faith in terms less offensive, the emperor commanded Alexander, the bishop of that church, to receive him the next day into his communion : but that very evening Arius

died. The manner of his death was very extraordinary : as his friends were conducting him in triumph to the great church of Constantinople, Arius, pressed by a natural necessity, stepped aside, but expired on the spot, his bowels gushing out; owing, as was suspected, to poison. But his opinions did not die with him ; his party continuing still in great credit at court. Athanasius, indeed, was soon recalled from banishment, and as soon removed aˆain ; the Arians being countenanced by the government, and making and deposing bishops as it best served their purposes. In short, this sect continued with great lustre above 300 years ; it was the reigning religion of Spain for above two centuries ; it was on the throne both in the east and west ; it prevailed in Italy, Trance, Pan- nonia, and Africa ; and was not materially checked till about the end of the eighth century. See ARIANS.

ARIZIBO, a town of Porto Rico island, in the West Indies, chiefly inhabited by smugglers. ARK. Lat. area, a chest, or coffer. See the following illustrations.

Arki', a cufer or chest, as our shrines, saue it was ilatte, and the sample of ours was taken thereof.

Tindale's Wmli.es, p. 11.

Make the an arkc of pyne trees, habitacios shall thou li.uke in the arhc, and shall pitch it within and with- out with pitch. Itibli-, 1539. Genesis, c. vi.

The i;re at Macellon, that out of Persie chased Darius, of whose huge power all A sic rong, In the rich nrhc Dan Homer's rimes he placed, Who feigned gestes of heathen princes sone.

Surrey.

Make thee ;mark of gopher-wood : rooms shall thou j.'idki! in tlie urA.and shah pitch it within and without.

Genesis.

The one just man alive, by his command, Shall build a wond'rous ark, as thou beheld 'st, To save himself and household, from amidst A world devote to universal wreck. Milton.

This coffer was of shittim wood, covered with plates or leaves of gold, being two cubits and a half in length, a cubit and a half wide, and a cubit and a half high. It had two rings of gold on each side, through which the staves were put for carrying it : upon the top of it was a kind of gold crown, all

around it ; and two cherubim were fastened lo the cover : it contained the two tables of stone, written by the hand of God.

Calmet.

ARK, a vessel to swim upon the water, usually applied to that in which Noah and his family were preserved from the universal deluge. The ark has afforded several points of curious enquiry among the critics and naturalists relative to its form, capacity, materials, &c. The wood of which it was built is called in the Hebrew gopher-woodland in the Septuagint square tim- ber. Some translate the original cedar, others pine, others box, &c. Pelletier prefers cedar on account of its incorruptibility, and the great plenty of it in Asia ; whence Herodotus and Theophrastus relate that the kings of Egypt and Syria built whole fleets of it, instead or deal. The learned Mr. Fuller, in his Miscellanies, has observed, that the wood whereof the ark was built was nothing but that which the Greeks call KVTrapiffyoc, or the cypress-tree ; for, taking away the termination, kupar and gopher differ very little in sound. This observation the great Bo- chart has confirmed, and shown very plainly that no country abounds so much with this wood as that part of Assyria which lies about Babylon. In what place Noah built and finished his ark is no less a matter of disputation. But the most probable opinion is, that it was built in Chaldea, in the territories of Babylon, where there was so great a quantity of cypress in the groves and gardens in Alexander's time, that the prince built a whole fleet of it for want of other timber. And this conjecture is confirmed by the Chal- dean tradition, which makes Xisuthrus (another name for Noah) set sail from that country. The time taken to build the ark is also much disputed, some making it fifty-two years ; others, 78, 100, and 120. The Mahommedans say it was con- structed in two years.

The dimensions of the ark, as given by Moses, are 300 cubits in length, fifty in breadth, and thirty in height ; which some have thought too scanty, considering the number of things it was to contain; and hence an argument has been drawn against the authority of the relation. To solve this difficulty Buteo and Kircher have proved geometrically that, taking the common cubit of a foot and a half, the ark was abun- dantly sufficient for all the animals supposed to be lodged in it. Snellius computes the ark to have been above half an acre in area. Dr. Arbuthnot computes it to have been 81,062 tons. It contained, besides eight persons of Noah's family, one pair of every species of unclean animals, and seren pair of every species of clean animals, with provisions for them all during the whole year. The former appears, at first view, almost infinite ; but if we come to a calculation, the number of species of animals will be found

much less than is generally imagined ; out of accommodated to the purpose than is here done , .vhich, in this case, are excepted such animals as and hence he concludes that the capacity of the can live in the water; and bishop Wilkins shows ark, which had been made an objection against

that only seventy-two of the quadruped kind needed a place in the ark. By the description Moses gives of the ark, it appears to have been divided into three stories, each ten cubits or fifteen feet high; and it is agreed on as most probable, that the lowest story was for the beasts, the middle for the food, and the upper fur the birds, with Noah and his family ; each

Scripture, ought to be esteemed a confirmation of its divine authority ; since, in those ruder ages men, being less versed in arts and philosophy, were more obnoxious to vulgar prejudices than now ; so that had it been a human invention, it would have been contrived according to those notions which form a confused and general view of things, as much too big as it had been re- story being subdivided into different apartments, presented too little. Besides the places requisite stalls, &c., though Josephus, Philo, and other for the beasts and birds and their provisions commentators, add a kind of fourth story under there was sufficient room, therefore, for Noah's all the rest ; being, as it were, the hold of the household utensils, instruments of husbandry, vessel, to contain the ballast and receive the and seeds to sow after the deluge; for which filth and faeces of so many animals : but F. purposes he might spare room in the third story Calmet thinks that what is here reckoned a story, for thirty -six cabins, besides a kitchen, a hall, was no more than what is called the keel of the four chambers, and a space about forty-eight ships, and served only for a conservatory of cubits in length to walk in . freshwater. Drexelius makes 300 apartments; ARK OF THE COVENANT, a small chest or coffer, F. Fournier, 333 ; the anonymous author of the three feet nine inches in length, two feet three Questions on Genesis, 400 ; Buteo, Tempora- inches in breadth, and two feet three inches in rius, Arius Montanus, Hostus, Wilkins, Lamy, height, in which were contained the golden pot and others, suppose as many partitions as there with manna, Aaron's rod, and the tables of the were different sorts of animals. Pelletier makes covenant. This coffer was made of shittim-wood, only seventy-two, viz. thirty-six for the birds, ' and covered with a lid of solid gold. The ark and as many for the beasts. As to the number was deposited in the holiest place of the taber of animals contained in the ark, Buteo computes nacle. It was taken by the Philistines and de- that it could not be equal to 500 horses ; he tained twenty, some say forty years, at Rirjath- even reduces the whole to the dimensions of jearim ; but the people, being afflicted with eme- fifty-six pair of oxen. F. Lamy enlarges it to rods on account of it, returned it with divers sixty-four

pair of oxen, or 128 oxen; so that, presents. It was afterwards placed in the temple. supposing one ox equal to two horses, if the The lid of the ark was called the propitiatory or am had room • for 256 horses, there must have mercy-seat; over which were two figures of che- bcen room for all the animals. But the same rubim placed, with expanded wings of a pecu- autlior demonstrates that one floor of it would liar form. Here the shechinah rested, both in suffice for five hundred horses, allowing nine' the tabernacle and temple, in a visible cloud; square feet to a horse. As to the food in the and hence were issued the divine oracles by an second story, it is observed by Buteo from Colu- audible voice. The high priest appeared before nella, that thirty or forty pounds of hay ordina- tnis mercy-seat once every year on the great rily suffices for an ox a day ; and that a solid day of expiation ; and the Jews, wherever they cubit of hay, as usually pressed down in our worshipped, turned their faces towards the place hay-racks, weighs about forty pounds; so that where the ark stood. In the second temple there a square cubit of hay is more than enough for was also an ark, made of the same shape and one ox in one day. Now, it appears, that the dimensions with the first, and put in the same second story contained 150,000 solid cubits; place, but without any of its contents and pecu- which divided between 206 oxen will afford each liar honors. It was used as a representative of more hay by two-thirds than he can eat in a the former on the day of expiation, and a repo- year. Bishop Wilkins computes all the carni- sitory of the original copy of the holy Scriptures, vorous animals equivalent, as to the bulk of their collected by Ezra and the men of the great sj- bodies and their food, to twenty-seven wolves ; nagogue, after the captivity, and ail the rest to 280 beeves. For the former ARK OF THE MODERN JEWS, &c. In imitation he allows 1825 sheep; and for the latter 109,500 of the ark of the covenant, the Jews to this day cubits of hay ; all which will be easily contained have a kind of ark in their synagogues, wherein in the two first stories, and a deal of room to their sacred books are deposited. This they call spare As to the third story, nobody doubts of aron. Leo of Modena gives a description of it its being sufficient for the fowls with Noah, his in his Account of the Customs and Ceremonies sons and daughters. Upon the whole, the of those of his nation : « The Jews (says he) in learned bishop remarks, that of the two it ap- the eastern sides of their synagogues have an ark pears much more difficult to assign a number or armoury, called aron, to the memory ot the and bulk of necessary things to answer the ca- ark of the covenant. In this are preserved the pacity of the ark than to find sufficient room for five books of Moses, written on vellum with ink the several species of animals already known to- made on purpose.'— A chest, very nearly resem- have been there. This he attributes to the im- bling the Jewish ark, and called the house of the perfection of our list of animals, especially of God, was found in Huaheine, one of the islands those of the unknown parts of the earth ;

adding, in the South Sea. Sir Joseph Banks could obtain that the most expert mathematician at this day no other information concerning it than what the could not assign the proportion of a vessel better name imports.

*ARK, in geometry, astronomy, &c. See ARC. ARKANSAW, a large river of America, rising in the Rocky mountains, in about the latitude of forty degrees north. Its general direction is to the south-east, and it falls into the Mississippi in about the thirty-third degree of north latitude. This river, according to major Pike, is 1981 miles in length from its junction with the Mis- sissippi to the mountains, and from thence to its source 192 miles more, making the total length of its course 2173 miles. It is navigable by boats for 1950 miles when the river is filled with water from the rains ; but at other seasons at 1500 miles from its mouth it will be found nearly dry. Major Pike calls this river the * Paradise of Savages,' from the number of wild animals of all kinds which are continually wan- dering on its banks. The ground through which the course of this river lies contains vast quan- tities of salt, with which its waters are so copi- ously impregnated that they are unfit for drink- ing. They are also charged with a mixture of reddish earth or mould which is carried along by the rapidity of the stream, and which renders the water extremely unpalatable.*

AIIKEL (Cornelius Van), an eminent Dutch divine, born at Amsterdam in 1670, and edu- cated under Le Clerc. He was much admired as a preacher among the Arminians ; and pub- lished lladriani Junii Homani, Medici animad- versa ejusdemque de Coma Commentarius, &c. lie died in 1774.

ARKENIIOLZ (John), a Swedish author, bom at Ilelsingfors, in 1695. He studied at Upsal, and afterwards made the tour of a great part of Europe. During his stay at Paris he wrote a piece entitled, Considerations sur la France par rappont a la Suede, in which he so severely cen- sured cardinal 1'leury, that he complained of him to the court of Sweden. In consequence of this he lost the place of registrar; but in 1743 ob- tained the otlice of secretary of public accounts. In 17-16 he was keeper of the cabinet of cu- riosities at Cassel ; and some time after was em- ployed in writing the history of Frederick I. which he never completed. He died in 1777. Resides various pieces on political and other subjects, he published the Letters of Grolius to queen Christina, and the Memoirs of that queen.

ARK LOW, a sea-port town of Ireland, in the county of \ icklow, twelve

miles south of ˆA icklow, and thirty-six from Dublin. It had two representatives in parliament. The tide flows very little on its coast. Arklow contains a school for fifty girls, and at the western extremity there are barracks. In May, 1798, this town was attacked and partly destroyed by the insurgents, w.lo were nevertheless dispersed with great loss; and a body of :j 1,000 of them was afterwards defeated in the vicinity by a small regular force on the 10th of June. In 1795 a discovery was male of native gold in a brook that descends from the north-east side of a mountain about 600 yards above the level of the sea, called Kin- shelly, and situate about seven English miles to the west of Arklow. This discovery was made public, and the researches for gold began early in the month of September, and continued till the 18th of October, during which period of

about six weeks, the quantity of gold that is supposed to have been collected amounted to 800 ounces. The gold was of a bright yellow color, perfectly malleable; and it was found in pieces of various weights, forms, and sizes, from the most minute particle to 202-7 dwts. ; one piece of 2 oz. and another of 22 oz. were also found. Two specimens of this gold were as- sayed by his majesty's assay-master in the tower of London ; one of which appeared to contain in 24 carats, 21| of fine gold, 1J of fine silver, and | of alloy, which seemed to be copper tinged with a little iron. The works were taken pos- session of by order of government; and the operations of the peasants, who in great numbers had been industrious in their researches, were discontinued, — Philosophical Transactions, vol. Ixxxvi. p. 34 — 45.

ARKWRIGHT (Sir Richard), the celebrated inventor of machinery for spinning and carding cotton. He was originally a barber at Wirks- worth, in Derbyshire, and in low circumstances. But about 1767 he changed his line of business, and travelled through the country, buying hair; when coming to Warrington he became ac- quainted with one John Kay, a clockmaker. To this man he spoke of some mechanical project he had in view ; and by him his design was changed, and his attention turned to the spinning of cotton. A machine was projected, and they applied to Peter Atherton, esq. now of Li- verpool, who enabled them to construct it. For this machine Mr. Arkwright afterwards took out a patent. He next joined in partnership with a Mr. Smally, of Preston, in Lancashire, but being straitened for money they went to Nottingham. While at Nottingham, he prevailed upon the Messrs. Wrights, bankers, to advance him the sums of money necessary to enable him to go on with his experiments ; but as these gentlemen found the amount required larger than they had expected, Mr. Arkwright applied to Mr. Need of Nottingham, who desired him to carry the model of his machine to Mr. Strutt of Derby, his partner in the stocking patent, by whose re- port he would be guided. Mr. Strutt, a man of great mechanical skill, seeing at a glance the merit of the invention, and how little was re-

quired to render it complete, told Mr. Need that he might with great safety close with Mr. Arkwright. In the year 1769, therefore, Mr. Arkwright obtained his patent for spinning with rollers ; and Mr. Need and Mr. Strutt became his partners in the concerns to be carried on under it. Mr. Arkwright afterwards erected works at Cromford, in Derbyshire ; and acquired a very great fortune. It has been said he enriched himself at other men's expense and ingenuity ; but though much attention had been paid to the invention of machines for spinning cotton, before Mr. Arkwright engaged in it, it had been hitherto unsuccessful ; and the per- fection to which he brought them, overcoming numerous difficulties, shows him to have been a man of great genius, and unwearied perseverance. Upon presenting an' address from the high sheriff and hundred of Wirksworth, he was knighted in 1786, as high sheriff of the county of Derby. " He died at his works, at Cromford, in Derbyshire, August 3. 1793

v03

ARM

ARLANT, or ARLANCE, a small town of France, situated on the river Dore, the head of a canton in the department of the Puy de Dome. The borough of Arlant, though independent of the magistrates of the town, is commonly reckoned part of it, and they contain together about 3350 inhabitants, many of whom are en- gaged in working lace. It is fifteen leagues south-east of Clermont-Ferrand.

ARLAUD (James Antony), an eminent painter, born at Geneva in 1668. He went to Paris in pursuit of his business, where he was much patronised by the king ; and where he painted his Leda, a copy of which he sold in London for £600. Though he could not be in- duced to part with the original of this exquisite production, yet, in a fit of enthusiasm, he destroyed it by anatomically cutting it in pieces. He died in 1743.

ARLES, a large, ancient, and well built town of France, in Lower Provence, on the left bank of the Rhone, where the canal of Crapone unites itself with the river, which here divides into two branches. It was founded by the Romans, and was long the station of the praetorian prefect of Gaul. After various changes it became the capital of the kingdom of Arelat in the year 879. It received from its sovereigns several im- portant privileges, and was a flourishing free town from 1218 to 1251, in which year it was brought under the dominion of the count of Provence, with the preservation, however, of most of its rights. In the thirteenth century the house of Anjou acquired the county of Provence by marriage ; and, on the extinction of that house in 1481, Aries went with the rest of the county to the French crown. Before the revolution it was the capital of one of the eight districts

of Provence, the seat of an archbishop, and of a provincial tax-office. The archbishop had the title of prince of Montdragon, and a revenue of about £1200 sterling. Besides the cathedral church, it has a collegiate church, six parish churches, two abbeys, seventeen religious houses, a Jesuits' college, an hospital, and a royal academy of sciences, founded in 1689. Here hare been held, at different periods, no less than thirteen ecclesiastical councils, of which the most important was that in A. D. 314.

The population of Aries is about 2 1 ,000 . It is the head of a canton, and is nearly 174 miles S. S.TL. of Paris. Long. 5° 43′ E., lat. 43° 4(X N. This town is now principally interesting from some very noble monuments of Roman antiquities. Among these the most remarkable is the amphi- theatre built by the Romans. It is of an oval form, and about 388 yards in circumference, and the front is thirty-four yards in height. The middle, called the arena, is 142 yards wide, and 104 broad. The porticoes or piazzas are three stones, built with stones of a prodigious size. Each of them consists of sixty arches, which still remain ; and the walls are of a sur- prising thickness, but gone to decay. The obelisk is .he only one of this kind to be seen -n France. It seems to be one of the forty Drought from Egypt to Rome, being of the same oriental gianite. They are generally full of hieroglyplrc characters; but this is quite smooth.

In 1675 it was found in a private garden near the walls of the city, not far from the Rhone It consists of one piece ; and is fifty-two feet high, and seven in diameter at the base. It is now supported with four lions made of bronze ; and on the top a blue ball is placed, and over that a sun.

ARLEUX, a town of France in the depart- ment of the north. It is situated in the ci-devant province of Hainault, six miles south of Douay. It was near this that marshal Villars constructed, in 1711, the lines which he declared should prove a ne plus ultra to the duke of Marlborough ; but the duke found means to fix the attention of Villars on a particular point, while he got pos- session of the lines by a night march.

ARLYNG, in ornithology, a name by which the motacilla oenanthe of Linnaeus is called in many parts of England.

Goth, arms, Sax. eann, Lat armus, the whole joint from the shoulder to the fist. All the words excepting the first are derivatives, signifying in their various modifications accessory means of defence or offence to that naturally possessed.

ARM, ARMS, ARMA'DA, AR'MAMENT, AR'MATURE, AR'MORER, AR'MORY, AR'MOUR, AR'MOURY, ARM'Y.

And, when Abram heard that his brother was taken captive, he armed his trained servants, born in his own house, three hundred and eighteen ; and pur- sued them unto Dan. Getietit.

His servant arm'd against such coverture, Reported unto all, that he was sure A noble gentleman of high regard. Spenser.

In all the mid-earth seas was left no road, Wherein the pagan his bold head untwines ;

Spread was the huge armado wide and broad, From Venice, Genes, and towns which them confine.

Fairfax.

So by a roaring tempest on the flood, A whole armado of collected sail Is scatter'd, and disjoin'd from fellowship.

Sliakspeare.

The armorers, accomplishing the knights, With busy hammers closing rivets up, Give dreadful note of preparation. Id,

At length, resolved t' assert the wat'ry ball, He in himself did whole armados bring :

Him aged seamen might their master call, And chuse for general, were he not their king.

Dryden.

Louder, and yet more loud, I hear th' alarms Of human cries distinct, and clashing arms.

Id.

The whole division that to Mars pertains, All traties of death that deal in steel for gains, Were there ; the butcher, armorer, and smith, Who forges sharpeu'd fauchions, or the scythe.

II.

When arjn'rers temper in the ford, The keen edged pole-axe, or the shining sword ; The red hot metal hisses in the lake. Pope.

The sword

Of Michael, from the armory of God Was giv'n him tempered so, that neither keen Nor solid could resist that edge. Milton.

Up rose the victor angels, and to arms The matin trumpet sung. /£

The seas, and rocks, and skies rebound, To arms, to arms, to arms ! Pope.

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ARMADA.

The grace of God is armour and defence enough against the most violent incursion of the spirits of the works of darkness. Jeremy Taylor.

So Mars omnipotent invades the plain, (The wide destroyer of the race of man), Terror, his best loved son attends his course Arm'd with stern boldness and enormous force.

Pope.

And now with shouts the shocking armies closed, To lances lances, shields to shields opposed, Host against host the shadowy legions drew, The sounding darts an iron tempest flew ; Victors and vanquished join promiscuous cries, Triumphant shouts and dying groans arise ; With streaming blood the slippery ground is dyed, And slaughter'd heroes swell the dreadful tide.

Id. Iliad.

Down sinks the warrior with a thundering sound, His broken armour rings against the ground. Id.

Then the progeny that springs From the forests of our land, Armed with thunder, clad with wings, Shall a wider world command. Cowper. Terror is not always the effect of force ; and an irmament is not a victory. Burke.

ARM, ~)

ARM'FULL, j

'• E » v §ee tjie preceding definition. ARM IIOI.F, {

ARM'I-IT, j ARM'I.ET. J

Cursed be the man that trusteth in man, and maketh flesh his arm ; and whose heart departeth from the Lord. Jer. xvii. 5.

O God, thy arm was here! And not to us, but to thy arm alone, Ascribe we all.

Shakspeare. Henry V.

And, when she takes thy hand, and doth seem kind j Dotli search, what rings and armlets she can find.

Donne.

Every nymph of the flood her tresses rending, Throws ofl" her armlet of pearl in the main.

Dryden.

Like helpless friends, who view from shore The lab'ring ship, and hear the tempest roar, So stood they with their arms across. Id.

Amidst our arms as quiet you shall be, As Halcyons brooding on a winter sea.

Id. Indian Emperor.

Lonti- arms of oak an open bridge supplied, And deep the waves beneath them bending glide.

Parnell.

Others hold their plate under the left armpit, the best situation for keeping it warm. Swift.

The trees spread out their arms to shade her face ; lint she on elbow lean'd. Sidney.

Where the tall oak his spreading arms entwines, And with the beech a mutual shade combines. Gay. ARM, in heraldry ; the arm is often borne in coat armour, either erect or cubit, i.e. couped at tin; elbow, or embowcd in armour, that is, couped at the shoulder, bent, grasping a military standard, and the like. A dexter arm embowed in armour, encircled by a tvreath of laurel, and the hand graspinsr a stand of military colors, representing the in- vincible standard of the French taken in Egypt, arc part of the arms of the family of Sir Ralph Anercron.hy, as in the diagram annexed.

ARM, in anatomy. See ANATOMY, Index.

ARM, in gardening, is sometimes used in respect of cucumbers and melons, in the same sense as branch of other plants.

ARM, in horsemanship, is applied to a horse, when, by pressing down his head, he endeavours to defend himself against the bit, to prevent hi? being checked by it. The remedy is, to have a wooden ball covered with velvet, or other mat- ter, put on his chaul, which will so press him between the jaw-bones as to prevent his bring- ing his head so near his breast.

ARM, in magnetism. A loadstone is said to be armed when it is capped, cased, or set in iron or steel, in order to make it take up the greater weight, and also to distinguish readily its poles. See MAGNETISM.

ARM OF AN ANCHOR, the part to which the fluke is set.

To ARM A SHOT, in gunnery, to roll oakham, rope-yarn, or old rags, about the end of the iron bar which passes through the shot.

ARMACALES, ALMARCHUR, or NAARMAL- CHA, a river of Babylon, called also Fossa Regia, or the Royal Trench, by Polybius ; and the Royal River by Ptolemy. It was a cut made by Nebuchadnezzar from the Euphrates, which naturally divides into two channels, one passing through Babylon, the other through Seleucia, and then falls into the Tigris. The factitious channel between these two is the 'Armacales ; which mixes with the Tigris below Seleucia, at Apamea.

ARMACOTTA, a town of Hindostan, in the district of Marawas, in the Southern Carnatic, seventy-five miles south by west of Tanjore. Long. 78° 55′ E., lat. 9° 43; N.

ARMADA, SPANISH; the armada which at- tempted to invade England in the time of Queen Elizabeth. This armada, to which the Spaniards, in confidence of success, gave the name of In- vincible, consisted of 150 ships, most of which were greatly superior in strength and size to any that had been seen before. It had on board nearly 20,000 soldiers and 8000 sailors, besides 2000 volunteers of the most distinguished families in Spain. It carried 2650 great guns, was victualled for half a year, and contained such a quantity of military stores as only the Spanish monarch, enriched by the treasures of the Indies and America, could supply. The troops on board were to be joined by 34,000 move, which the Duke of Parma had assembled in the neighbour- hood of Nieuport and Dunkirk. For transport- ing these, he had, with incredible labor, provided a great number of flat-bottomed vessels, and had brought sailors to navigate them from the towns in the Baltic. Most of these vessels had been built at Antwerp ; and as he durst not venture to bring them by sea to Nieuport, lest they should have been intercepted by the Dutch, he was obliged to send them along the Scheldt to Ghent, from Ghent to Bruges by the canal which joins these towns, and from Bruges to Nieuport by a new canal which he dug on

purpose. This la- borious undertaking was already finished, and the Duke now waited for the arrival of the Spanish fleet ; hoping that, as soon as it should approach, the Dutch and English ships which

cruised upon the coast would retire. When the news reached England, terror and consternation seized the inhabitants. A fleet of not above thirty ships of wai, and those very small in com-] arison, was all that was to oppose it by sea. All the commercial towns of England, however, were required to furnish ships for reinforcing this small navy. The citizens of London, in- stead of fifteen vessels, which they were com- manded to equip, voluntarily fitted out double thenumber; and the gentry and nobility equipped forty-three ships at their own charge. Lord Howard of F.ffiingham was admiral ; and under nim served Drake, Hawkins, and Frobisher, all renowned seamen of courage and capacity. The principal fleet was stationed at Plymouth. A smaller squadron, consisting of forty vessels, English and Flemish, was commanded by Lord Seymour, second son of the protector Somerset, and lay off Dunkirk in order to intercept the Duke of Parma. The land forces of England were more numerous than those of the enemy, but inferior in discipline and experience. An army of 20,000 men was disposed in different bodies along the south coast, with orders to re- tire backwards and waste the country, if they could not prevent the Spaniards from landing; 22,000 foot and 1000 horse, under the command of the Earl of Leicester, were stationed at Til- bury, in order to defend the capital ; and the principal army, consisting of 34,000 foot and 2000 horse, commanded by Lord Hunsdon, was reserved for guarding the Queen's person, and appointed to march whithersoever the enemy should appear. These armies, though all the Spanish forces had been able to land, would possibly have been sufficient to "nave protected the liberties of their country. But as the fate of England, in that event, much depended on the issue of a single battle, all men of reflection en- tertained the most serious apprehensions of the shock of at least 50,000 veterans, commanded by so consummate a general as the Duke of Parma. The queen alone was undaunted. She issued all her orders with tranquillity, animated her people to a steady resistance, and employed every re- source which either her domestic situation or her foreign alliances could afford. She even appeared on horseback in the camp at Tilbury; and riding through the lines, discovered a cheerful and ani- mated countenance, exhorted the soldiers to re- member their duty to their country and their religion, and professed her intention, though a woman, to lead them herself into the field against the enemy, and rather perish in battle than sur- vive the ruin and slavery of her people. ' I know,' said she intrepidly, ' I have but the weak and feeble arm

of a woman ; but I have the heart of a king, and of a king of England too !' The heroic spirit of Elizabeth communicated itself to the army, and every man resolved to die rather than desert his station.

The Spanish armada was ready in the begin- ning of May ; but its sailing was retarded by the deaths of the admiral and vice-admiral. The command of the expedition was then given to the Duke of Medina Sidonia, a man entirely inexpe- rienced in sea affairs. This promotion, in some measure, served to frus'.rate the design which was VOL. 1L

also rendered less successful by ether accidents. Next day, after leaving the port of Lisbon, the ar- mada met with a violent tempest, which sunk some of the smallest of their shipping, and obliged the fleet to put back into harbour. After some tirfie spent in refitting, they put again to sea. Being descried by Fleming, a Scottish pirate, he immediately informed the English admiral of their approach. Eftingham had just time to get out of port, when he saw the Spanish armada coming full sail towards him, disposed in the form of a crescent, and stretching to the distance of seven miles from the extremity of one division to that of the other. The English admiral, considering that the Spaniards would be much superior to him in close fight, by the size of their ships and the num- ber of their troops, he wisely resolved to content himself with harassing them in their voyage, and with watching attentively all the ad vantages which might be derived from storms, cross winds, and such like fortuitous accidents. He soon discerned a favorable opportunity of attacking the vice- admiral Recaldo. This he did in person ; and on that occasion displayed so much dexterity in work- ing his ship, and in loading and firing his guns, as greatly alarmed the Spaniards for Recaldo's fate. From that time they kept much closer to one ano- ther ; noth withstanding which, the English on the same day attacked one of the largest galeasses. Other Spanish ships came up to her relief; but in their hurry one of the principal galleons, whicli had a great part of their treasure on board, ran foul of another ship, and had one of her masts broken. In consequence of this misfortune she fell behind, and was taken by Sir Francis Drake; who on the same day took another large ship, which had been accidentally set on fire. Several other rencounters happened, in all of which the English proved victorious, through the great ad- vantage which they derived from the lightness of their ships, and the dexterity of the sailors, as the Spaniards did not sufficiently understand nautical mechanics to avail themselves of the unusual magnitude of their ships. The English sailed round them, approached, and retired, with a velocity that amazed them, and did immense execution with their cannon; for, while every shot of theirs proved effectual, their ships suf- fered very little damage from the enemy, whose guns being planted too high, generally spent their force in air. The Spaniards, however, still continued to advance till they came opposite to Calais; where the duke de Medina, having or- dered them to

cast anchor, sent information to the Duke of Parma of his arrival, and intreated him to hasten the embarkation of his forces. Farnese accordingly began to put his troops on board ; but, at the same time, informed Medina, that the vessels which he had prepared were proper only for transporting the troops, but were utterly unfit for fighting ; and for this rea- son till the armada were brought still nearer, and the coast cleared of the Dutch ships which had blocked up Nieuport and Dunkirk, he could not stir without exposing his army to certain ruin, the consequence of which would probably be the entire loss of the Netherlands. In com- pliance with this request, the armada was or- dered to advance ; and it had arrived withiu

sight of Dunkirk, between the English fleet on the one hand, and the Dutch on the other, when a sudden calm put a stop to all its motions.

In this becalmed situation the three fleets re- mained for one whole day. About the middle of the night a breeze sprung up ; and Lord Howard had recourse to an expedient which had been happily devised on the day before. Hav- ing filled eight ships with pitch, sulphur, and other combustible materials, he set lire to them, and sent them before the wind against the dif- ferent divisions of the Spanish fleet. When the Spaniards beheld these ships in flames approach- ing towards them, it brought to their remem- brance the havock which had been made by the fire-ships employed against the Duke of Parma's bridge at the siege of Antwerp. The darkness of the night increased the terror with which their imaginations were overwhelmed, and the panic flew from one end of the fleet to the other. Each crew, anxious only for their own preser- vation, thought of nothing but how to escape the present danger. Some of them took time to weigh their anchors, but others cut their cables, and suffered their ships to drive with blind pre- cipitation, without considering whether they did not thereby expose themselves to a greater dan- ger than that which they were so solicitous to avoid. In this confusion the ships ran foul of one another : the shock was dreadful, and several of them received so much damage as to be rendered unfit for future use. When day-light returned Lord Howard had the satisfaction to perceive that iiis stratagem had fully produced the desired effect. The enemy were still in extreme disorder, and their ships widely separated and dispersed. His fleet had lately received a great augmentation by the ships fitted out by the nobility and gentry, and by those under Lord Seymour, who had left Justin de Nassau as alone sufficient to guard the coast of Flanders. Being bravely seconded by Sir Francis Drake, and all the

other officers, he made haste to improve the advantage which was now presented to him, and attacked the enemy in dif- ferent quarters at the same time with the utmost impetuosity and ardour. The engagement began at four in the morning, and lasted till six at night, i lie Spaniards displayed in every rencounter the most intrepid bravery ; but, from the causes al- ready mentioned, they did very little execution against the English, while many of their own ships wen: greatly damaged, and twelve of the largest were either run aground, sunk, or compelled to surrender. It was now evident that the purpose of the armada was utterly frustrated. The Spa- nish admiral, after many unsuccesful rencounters, prepared therefore to make his way home; but as the winds were contrary to his return through the channel, he resolved to take the circuit of the island. The English fleet followed him for some time ; and had not their ammunition fallen short, they would have obliged the armada to surrender at discretion. Such a conclusion of the enterpri/e would have been truly illustri- ous to the English, l,ut the event was scarce less latal to tin1 Spaniards. The armada was at- tacked l>y a violent storm in passing the Orkneys; and the ships, having already lost their anchors, were obliged to keep at sea, while the mariners,

unaccustomed to hardships, and unable to manage such unwieldy vessels, allowed them to drive on the western isles of Scotland, or on the coast of Ireland, where they were miserably wrecked. Not one half of the fleet returned to Spain, and a still smaller proportion of the soldiers and sea- men. Queen Elizabeth ordered medals to be struck on the occasion, with this motto, — AFFIDA- VIT DF.US ET DISSIPANTUR.

ARMA DARE, to give arms, in some ancient charters, signifies to dub, or make a knight.

ARMA DEPONERE, to lay down arms, was a punishment anciently enjoined when a man had committed an offence.

ARMAD1LLA, denoted a squadron of men of war, in the Spanish American navy, formerly maintained on the American coast to prevent foreigners from trading with the Spaniards and the Indians, both in time of war and peace The vessels of this armadilla were commonly called guarda costas.

ARMADILLO, in zoology, a synonyme of the dasypus. See DASYPUS.

ARMADILLO, in entomology, one of the Lin- naean species of the oniscus genus. It is oval, cinereous, brown ; the tail is obtuse, and entire. Found in Europe.

ARMAGEDDON, a Hebrew name, used in Rev. xvi. 16, which has occasioned much dispute among commentators. Its name alludes to Megiddo, where Barak, with 10,000 dispirited, and almost unarmed men, entirely routed, and al- most wholly slew, the mighty host of the Canaanites, and may be interpreted the destruction of troops,

ARMAGH, a county in Ireland, in the pro- vince of Ulster, is bounded north by Lough Neagh, west by Tyrone and Monaghan county, south by Louth, and east by Down county. It is twenty English miles in breadth, by thirty-one in length from north to south, consisting mostly of a fine fertile soil. The chain of mountains called the Fews, of which Slieve Gullian, the highest, is visible at forty miles distance, traverses nearly the whole of this country, in a south-east direction, exhibiting in their progress caverns, glens, and rocks, so wild and romantic, as to present many highly sublime and picturesque scenes. Few minerals or mineral waters have been yet disco- vered ; and, except the great Lough Neagh, there are but two small lakes, the Camlough or Car- lough, and Lough Clay, which supplies Armagh city with water : the chief rivers are the Black- water, Ban, Callen, Tall-water, Cushier, Tynan, Tara, Fleury, Fork-hill, and Fane rivers. The petty farmers of this county are all more or less engaged in the linen manufacture, and on an average of eleven years previous to 1802, the quantity of that article which they annually sent to the linen-hall of Dublin amounted in value to £210,000, exclusive of what they sold elsewhere. This shire sends two members to parliament. Its towns, besides the city Armagh, are Forkhill, Ready, Loughgall, Market-hill, Newtown, Hamilton, Lurgan, Portadown, and Richill. The county is divided into five baronies ; Armagh, Lower and Upper Few, Upper and Lower Orier, Turranny, and O'Neiland barony, containing a total population of 141,381 inhabitants. This*

county lies between 54° 4′ and 54° 30′ N. lat., and between 6° 5′ and 6° 45′ W. long. Armagh is also the metropolitical see of an archdiocese, and an ecclesiastical province of the same name, whose prelate is styled primate of all Ireland, in contradistinction to the archbishop of Dublin, who is simply called primate of Ireland, as determined by an act of council in 1634.

ARMAGH, a city of Ulster, anciently the metro- polis of Ireland, and now the capital of the county of Armagh. It is situated on a hill, sur- rounded by

a highly cultivated and picturesque country, and within less than a quarter of a mile of the river Cailen, to whose banks it once ex- tended. It is the seat of the consistorial court of the archbishop of Armagh, whose see extends into five counties, viz. Armagh, Derry, Meath, Tyrone, and Louth, being seventy-five English miles from north to south, and from twelve and a-half to thirty two in breadth. Armagh was, in the middle centuries, an extensive and populous city, and was celebrated as a place of learning, having at one period, according to the Irish his torians, 7000 students at its college. The cathedral, a large gothic building, 190 feet from east to west, and 125 from north to south, which was originally designed for Augustinian canons, was often damaged by fire, and ravaged by the Danes, who took off or annihilated the archives of this ancient place. From the time of the suppression of the abbeys, with which Armagh abounded, it had dwindled into a very insignifi- cant and neglected town, and in this state it remained until Dr. Richard Robinson, afterwards Baron Rokeby, was promoted to the primacy. By the princely munificence of this prelate, the cathedral was repaired, and the town altogether renovated. He built and endowed an observa- tory, with an excellent astronomical apparatus, a library, and a palace, with a chapel on the glebe adjacent to the city. To his liberality Armagh is also indebted for a parish church, lately built, and for a school where children are to be edu- cated gratuitously, according to the modern im- proved system. The school is in a flourishing condition, and is endowed with 1530 acres of fine land, which in 1804 produced a gross annual rent of £1144. 10s. 5ˆd. A very elegant county court-house, in which the business of the assizes, quarter sessions, &c. is transacted, has been lately built, at the foot of the gentle acclivity on which the observatory stands. In front of this building there are very pleasant public walks, surrounded by trees planted in an elliptic form. On the west side of the city there is a charter-house or elee- mosynary poor school of considerable magnitude, founded in 1758. In addition to the churches already mentioned, the places of worship are, a large Presbyterian church, a church for the Seceders, a large Roman Catholic chapel, and a small house erected by the Methodists. The city before the union, sent two members to Parliament; it now only returns one. Armagh has a very large market every Tuesday : the principal com- modity sold in it is linen cloth in the brown state, the average weekly sales of this article amount to 4500 pieces, of twenty-five yards each, value £5000. There is also a market every Saturday for grain, and all kinds of provisions. By a

census taken in 1817 the number of inhabitants were 7010, of which 2001 are of the Established church, dissenters of various sects 1596, chiefly Presbyterians, and 3413 Roman Catliolics. Number of houses 1268. Distant north from Dublin sixty-two miles, S. S. E. from London- derry forty-eight. Long , according to the most accurate observations, 6° 37 30**

W., lat. 54° 21′ 15″ N.

ARMAGNAC, a fertile and populous county of France, in Gascony, now included in the departments of the Gers and Upper Pyrenees. It was divided into Upper and Lower, and was likewise known by die appellations of ‘ white and black Armagnac.’ The soil is fertile, and produces corn, wine, flax, and fruit. Consider- able traffic is carried on in these productions, and also in poultry, wool, saltpetre, and brandy. The chief town is Auch, now the capital of the department of the Gers.

ARM A LIBERA, free Arms, Lat.; iu ancient law, a sword and a lance given to a servant when he was made free.

ARMAMAXI ; from arma, Lat. arms, and afia$a, Gr. a carriage ; in antiquity, a kind of Scythian chariots, with two wheels, adorned with crowns, shields, and other spoils, carried in pro- cession after the images of the gods and great men.

ARMA REVERSATA, inverted arms, was a pu- nishment when a man was convicted of felony.

ARMARIUM UNGUENTUM, a sympathetic ointment, by which, in the days of credulity, wounds were believed to be cured, however dis- tant the patient, by only anointing the weapons.

ARMASAO, a small town of Brasil, which is a great fishing station for whales. Several piers project from the shore into eighteen to twenty feet depth of water, on which are erected cranes and other machinery ; and hither are the fish which are caught on the coast brought to be cut up and boiled. Long. 47° 20 W., lat. 27° 5′ S.*

ARMATA, in entomology, a species of apis, the melitta armata of Kirby, a native of Europe. Also a species of septura, found in Europe.

ARMATIUM, in ancient physic, a detersive kind of collyrium, of great value in removing asperities of the eye-lids. Its chief ingredients were, aes ustum, gum ammoniac, and the roots of the tree Thus. The preparation is described by Galen, Aetius, Paulus, and Scribonius.

ARMATURA, in the ancient military art, a kind of exercise, performed with missive weapons, as darts, spears, arrows, and the like. Under it were included the throwing of the spear or javelin, shooting with bows and arrows, See. Used per- sonally, it was an appellation given to the sol- diers who were light armed ; as well as those in the emperor’s retinue.

ARMED KNIGHT, a rock at the Land’s End in the county of Cornwall, so

called from its resemblance to a man in armour.

ARMED SHIP, a vessel occasionally taken into the service of the government in time of war, and employed to guard some particular coast, or at- tend on a fleet. She is therefore armed and equipped in all respects like a ship of war, and commanded by an officer of the navy, who has the rank of a master and commander. All ships

of this sort are upon the establishment of the king's sloops, having a lieutenant,' master, pur- ser, surgeon, &c.

ARM RGUM, a town of Hindostan, on the shore of the Carnatic, sixty-six miles north of Madras. On the disputes with the Dutch and with the king of Golconda, which ended in the tempo- rary abandonment of Masulipatam, in 1628-9, the British first established themselves in the Carnatic at Armegum, mounting twelve pieces of cannon on the factory. It stands in N. lat. 14°, E. long. 80° 18'.

ARMENA, in botany, a name given by Pliny to a kind of wild asparagus; but the ancient Greeks used the same word to express the young shoots of all esculent plants.

ARMENE, or ARMINA, an ancient village of Paphlagonia. The inhabitants encompassed it with a wall, because of the coldness of the place, imagining they should by that means render it warmer. But this proving ineffectual, gave rise to the proverb, Armenen muro cingere, used to express some egregious folly.

ARMENIA.

ARMENIA, commonly called Haik, in an- cient and modern geography, a country in the north-east part of the Turkish dominions in Asia. Armenia, its most ancient name, is sup- posed by some to have been derived from Aram, the original denomination of Syria. The Greeks derived it from Armonus, one of the Argonauts who settled in this country. Messrs. Bochart and Bryant, nevertheless, thought differently ; the former supposing it to be a contraction of ˆD"in, liar-mini, the mountain Mini, the name of a province of this country, mentioned by Je- remiah the prophet, ch. li. 27, and placed by him between Ararat and Aschenaz ; and probably re- ferred to by Amos (ch. iv. 3) under the name of HJlxnn, Harmunah, or mountain

of the moon. — Phaleg. 1. i. c. 3. ; and the latter, Aral. Anc. Mythol. vol. iii. p. 2, distinguishing be- tween this country and Aramea, or the land of Aram, which was separated from it by mount Taurus, supposed it to be denominated from Ar-men or Har-men, the mountain on which the ark rested after the Hood.

Armenia was anciently divided into Major and Minor, or the Greater and Lesser. Armenia Major, or Armenia properly so called, was, ac- cording to Strabo, bounded on the south by mount Taurus, separating it from Mesopotamia; on the east by the two Medias; on the north by Iberia and Albania, or that part of Caucasus by which both are surrounded ; and on the west by Armenia Minor, or the mountains Paryadres, by some Pontic nations, and by the Euphrates. Ptolemy divides the whole of Armenia into three districts: the fust, comprehending- that part which lies between the Cyrus and the Araxes; the second, those provinces which extend westward to the bending of the Euphrates ; and the third, all the country lying between the springs of the Tigris, and that part of the Euphrates which separates Commagene from Armenia Major. The most considerable cities of ancient Armenia were Artaxata, Sebas- tia, Armosata, Tigranocerta, Artagera, Carcathi- ocerta, Colonia, and Chorsa. Strabo enumerates six rivers of principal note ; viz. the Lycus and I'liasis, falling into the Pontus ; the Cyrus and Araxes, discharging themselves into the Caspian Sea ; and the Tigris and Euphrates, which dis- embogue themselves into the Persian Gulf. The mo^t considerable mountains were the Moschick,

separating the western parts of Armenia from Colchis ; the Paryadrae, extending from the for- mer to the borders of Armenia Minor and Pontus ; Masius, bounding the province of Sophene to the south, as Antitaiirus does to the north ; Ni- phates, Abus, and the Gordyaean mountains.

Armenia Minor was bounded on the east by the Euphrates, which separated it from Armenia Major ; on the south by Mount Taurus, parting it from Cilicia ; on the west and north by a long chain of mountains, called in different places Mons Scardiscus, Amanus, and Antitaiirus, which divided it from Cappadocia. This is a very mountainous country, but some of the mountains are interspersed with pleasant and fruitful vales, abounding with oil and wine, not inferior to the best in Greece. This country was a part of Cappadocia till the reign of Antiochus the Great, when the distinction between Armenia the Greater and the Lesser was introduced; as we have already mentioned. In the time of the Romans it was divided into four provinces ; viz. Laviana, Mariana, Aravena, and Melitene, each of which had its cities mentioned by Ptolemy ; but those of chief note were Melitene, Nicopolis, Garnace, Aza, Arabyssus, Dascusa, Zimara, and Ladana. The former of these divisions occupied an area of 20,120 miles; the latter from the west of the Euphrates and Armenia Major, extended to Cappadocia and

Cilicia, a portion of which it includes. They were also called first and second Armenia, in reference to the different epochs at which it was conquered by the Armenian princes.

The present boundaries of Armenia are Georgia and Mingrelia on the north, the territo- ries of Julamerick and the province of Azerbijan on the south and east, and the river Euphrates on the west. The natural features of this country are delightful in the extreme. The prospect is varied and highly picturesque; beautified by lakes and rivers, and intersected by branches of the Taurian and Caucasian mountains. It is well known to have been the scene in which was laid the terrestrial paradise or garden of Eden, and combines many geographical and po- litical advantages. The climate is cool and agreeable, owing to its ereat height above the sea, whilst Tournefort observed ice on the stag- nant waters near ErzerQm in the month of July. The valleys are warm ; and those which are well shaded are replenished with a luxuriance of vege-

tation that exceeds description. Three harvests a-year are common, whilst grapes, melons, pome- granates, figs, peaches, almonds, oranges, and other fruits of rich and delicious flavor, every- where abound. The northern part is rendered peculiarly pleasing and romantic by several branches of the Caucasus diverging over the country in different directions, answering to the Montes Moschici of the ancients, and the Childir of the Turks. The ancient Taurus is divided into two distinguished chains, the northern and the southern. The latter is a lofty range running down the country as far as Mesopotamia, and was the mount Masius of the Greeks. That part of it lying between the lake Van and the confines of Media (Azerbijan), was called Ni- phates among the ancients from its being always covered with snow; and the branch west of the above lake is the Gordyaeart range inhabited by the warlike Kurds, who still preserve their an- cient name. The northern and southern Taurus are connected by the mount Ararat, on which Noah's ark rested. This celebrated mountain, forming the eastern extremity of that great chain which extends across the northern regions of Asia Minor, has always been remarkable in the history of the world. The top of it is covered with snow. The lower regions are highly diver- sified with extensive plains and beautiful valleys, while the interior supplies excellent minerals, among which are quarries of pure jasper and marble. The Montes Caspii of the ancients lie on the eastern side of Armenia, towards the Cas- pian Sea, and divide the country from northern Media. There are also other mountains of less note in different parts of Armenia.

The lakes of Armenia are not numerous. Van or Argest lying in a valley of the same name, is a deep and extensive basin formed by the dif- ferent branches of the Taurus. It is the Arcissa Palus of Ptolemy, and the Mantiane mentioned by Strabo. Its length is about eighty miles, and its breadth fifty. Of this lake a modern traveller observes (M. Jaubert, p. 127.), 'The immense extent and tranquillity of its ccerulean waters give it the appearance of a sea which is never ruffled by storms. Its shores are clothed with poplars, tamarisks, myrtles, and oleanders, and many verdant islands inhabited by peaceful anachoretes are scattered over its bosom.' The waters of the lake are extremely salt,and M. Jau- bert, p. 139, affirms that they are continually rising in their level. Rivan lies to the east and north-east of Erivan, at a distance of about sixty miles. Its waters are fresh, as its Persian and Armenian names, Kaghir kuni s'u and Derya'i shirln, seem to indicate. This lake is about twenty-five leagues in circumference, and gives rise to the river Zenge. Numerous springs and rivers are found in every part of the coun- try, arising from the hills with which it is inter- sected. Mineral waters are poured from the foot of the mountains, to which the people resort with their cattle. The Tigris and Eu- phrates are the two great rivers mentioned by Moses as rising in the garden of Eden, and the Araxes and Rhine (or Phasis) are supposed to be ih'e Gihon and Pison.

The northern part of Asia was not well known

to the Greeks, and therefore the accounts which they have left us of its inhabitants are scanty and imperfect. We may, however, learn from them in the general, that the Armenians were a pastoral people, living in a patriarchal man- ner, in open villages or caverns in the moun- tains and maintaining themselves chiefly by the produce of their flocks and herds, as their suc- cessors the Kurds do at the present day. Xen. Anab. iv. 5. Jaubert, p. 177. They sent wine down the Euphrates to Babylon, Herod, i. 194 and likewise furnished Tyre and the trading towns on the Mediterranean with horses and mules, Ezek. xxvii. 14.

As to the origin of the ancient Armenians, Herodotus, and after him Stephanus, derive them from the Phrygians, on account of several Phrygian words that had been blended with the ancient language of the Armenians. Strabo supposes that they were originally Syrians, or that the Syrians and Armenians were two tribes of the same nation ; and in this opinion Bochart acquiesces, as he discovered a great similarity between these two nations in their manners and language. However, in process of time many foreigners settled among them; namely, Phry- gians, Greeks, and Persians.

The present inhabitants have the reputation of being quiet, steady, civil, and abstemious to penury ; on their journeys a little flour, bis- cuit, dried fish, and fruit, constitute their only refreshment. In their habits of industry,

and also in their disposition to migrate to foreign countries, they are not unlike the Jews, and like them also in keeping themselves for the most part distinct, seldom intermarrying with any other people. Armenia is occupied by several tribes, differing from each other in their characters and dispositions, and governed by independent chiefs. Some of these tribes consist of several thousand individuals, but of the total population of the kingdom no proper estimate can be given.

The wives and children of the Armenians are kept in great subjection to their husbands and parents. The women are kept concealed as much as the wives of the Mussulmans, and seem to have almost as much horror at seeing men. Their husbands, however, are commonly sincere in their attachments, and are generally compelled to make one or two journeys will) their relatives before marriage, to try their sincerity. The habit of body amongst the Ar- menians is large and inclined to coarseness ; their features large and distinct, their eyes and complexion dark. Sir Paul Ricaut observes respecting them, that ' the men are naturally of healthy, strong, and robustious bodies, their countenances commonly grave, their features well proportioned, but of a melancholy and saturnine air; but their women, are on the contrary, com- monly ill-shaped, long-nosed, and not one of a thousand so much as tolerably handsome.' Armen. Church, p. 386. In Turkey they are distinguished by a black kalpak, or spherical cap of woollen cloth, and generally wear dark colored clothes.

The Armenians were anciently distinguished for their courage and military enterprise, but of late have turned their attention chieflv to trade

and commerce. They form the chief class of traders in the Persian empire : a large portion of Asiatic Turkey is inhabited by them. They are become, in a great measure, masters of the whole trade of the Levant, and are much concerned in that of other places. It is common to meet with Armenians at Leghorn and Venice, and even in England and Holland ; whilst they are also known, by their commercial dealings, in Persia, Turkey, and Tartary, and indeed all over the east, and perhaps the world. Schah Abas the Great, it is said, with a view of secu- ring the conquest of Armenia, removed into Persia the first Armenians who ever settled there ; and on this occasion about 30,000 families were transported into the province of Ghilan only, whence we have brought the inest Persian silks. He also caused all the / nhabitants of Zulfa, a large city of Armenia, to settle at Ispahan, whence the new Zulfa of Persia took its name. This Zulfa is since be- come the centre of the commerce of the Arme- nians, of which silk has been

considered as the staple commodity ; cotton, hemp, and raw silk, are produced plentifully in Armenia ; and manna honey and wax in sufficient quantities for expor- tation.

The idolatry of the ancient Armenians re- sembled that of the Persians. In the third century S. Savorich or Gregory, by means of his preaching and miracles, converted Tiridates, king of Armenia, to the profession of Christianity. In the following century Mesrob, whose disciple Moses of Chorene has left a valuable history of his native country, caused the Scriptures to be translated from the Greek ; but this translation has unhappily been interpolated from the Syriac and Vulgate versions.

The Armenians are generally considered as Monophysites, or those who confound the two natures in Christ ; but Sir Paul Ricaut thinks that the expression used in their confession of faith is not stronger or more objectionable than that of the Greeks, who certainly do not fall into the heresy of Eutyches. Ric. ubi supra, p. 410. In ecclesiastical decorations and ceremonies their churches bear much resemblance to those of Greece and Rome. They delight in pictures of saints and martyrs, and use crucifixes, but do not pay that sort of external adoration to them that the Greeks and Roman Catholics do. They administer the cup to the laity, and even to children of two or three months old ; the wine unmixed is used to show the single nature of ('hrist. Hut it may be doubled whether this expla- nation is not a gloss put by the Roman Catholics upon the ancient usages of the primitive church, preserved by the Armenians. They do not ad- mit the doctrine of an infallible head of the church, nor acknowledge the authority of more than the three first councils. They baptise by trine immersion, and the priests anoint the child's forehead, stomach, armpits, hands and feet, making the sign of the cross on each part. Whether they hold the doctrine of transubstan- tiation is dubious. They believe in an interme- diate state, but not in puru'atory ; and they pay the same superstitious regard to the pictures of Hie saints as the other Christians of the east.

They keep many and rigid fasts, and some festivals. Christmas they celebrate on the 6th of January. Their church government is episco- pal, and their clergy are subject to the patriarch, who resides at the great monastery of Echmiy- adzin, about ten miles distant from Erivan. That place is also called Uch kiliseh, and maybe considered as the head quarters of the religion and literature of Armenia.

The Armenian language is harsh and rough, and full of foreign words and idioms. It is not more intelligible to the unlearned, than the an- cient Greek is to the present natives of Greece. It has the peculiarity of substituting gh for /, and converting Paulus into Boghos. It abounds in inflections, and in the number of its cases is exceeded by no language but that of the Lap-

landers. The modification of the sense in verbs, and the order of the words in a sentence, seem to have been influenced by a desire to copy Greek models. The language was brought to its greatest degree of perfection by Mesrob and his disciples in the fourth and fifth centuries, and in the writings of the learned is still preserved unaltered. The best work upon it is Schrceder's Thesaurus Linguae Armeniacae, Amsterdam, 1711, 4to.; and one of the most modern, Bellaud's Essai sur la langue Armenienne, Paris, 1812.

Literature has never made any considerable progress in this country, owing to the extreme oppression under which the people have labored. Almost the only book in use among them, ex- cept the Scriptures, of which Sir P. Ilicaut seems to have heard, was a collection of lives of the saints ; and yet the historical and geographical works of Moses of Chorene must have been in the hands of the more learned, and the history of Arekel was actually printed ten years before his book appeared. Since the art of printing was discovered the Armenians have been in this respect gradually improving, and besides the books printed at Rome, Amsterdam, Paris, and Marseilles, have long had presses in constant employment at Echmiyadzin, Constantinople, and Venice. The Armenian convent on the island of St. Lazarus, near the latter place, has a printing-office, which was established in the beginning of the last century, from which, be- sides commentaries and controversial writings, there have issued grammars, dictionaries, mathe- matical, philosophical, geographical, and histori- cal works; most of them, however, are modern compilations. The best account of Armenian literature is to be found in Cirbied and Martin's Recherches curieuses sur 1' Histoire Ancienne de 1'Asie, Paris, 1806, and Martin's Me"moires Historiques et Geographiques sur PArmenie, Paris, 1818. No less than thirty historical writers are enumerated in these works, and if half that number could be at all compared with the faith- ful and intelligent Moses of Chorene, it would be fully sufficient to remove the stigma which has been affixed upon the Armenians considered as an illiterate people. There is likewise another circumstance which gives a considerable degree of interest to the learning of the Armenians ; and that is, their having translations of Greek writers, of whose works the original is lost. Such, for example, is the Chronicle of Eusebius. of which

a Latin translation by Zohrab and Mai was pub- lished at Milan in 1818, and the Armenian ori- ginal, with another Latin version by Dr. Aucher of Angorn, at the convent in the island of St. Lazarus, in the same year. The complete works of Philo Judaeus are also extant in an Armenian version,

and would be published by the members of the convent in St. Lazarus, if sufficient encou- ragement were held out to such an undertaking. Armenia was, at a very early period, advanced to the honor of a kingdom. After the death of Barzanes, the successor of its first king Scytha, it was divided into petty kingdoms Pliny H. N. 1. vi. c. 9. The Armenians were afterwards subdued by the Medes, to whom they were made tributaries by Astyages. During its subjection to the Persians, it was reduced to the form of a province, and its rulers were prefects appointed by the Persian kings. During the minority of Antiochus, Artaxias and Zadriades, two gover- nors of Armenia, united their forces, seized on the country they governed, and, having added to it some neighbouring provinces, erected two kingdoms, viz. that of Armenia Major, which Artaxias reserved for himself, and that of Arme- nia Minor, which was allotted to Zadriades. Antiochus made several attempts to recover the provinces which these governors had appro- priated to themselves, but his efforts were un- successful ; and, by an alliance with the Romans, they secured to themselves and their posterity the continued possession of them. After the death of Artaxias the Armenian history is inter- rupted by a chasm of about seventy years; it is only known that the Armenians had engaged in a war with the Parthians, which terminated to their disadvantage. Little else is related of par- ticular interest till the time of Marc Antony, who put to death the reigning sovereign, and conferred the kingdom on Alexander, his son by Cleopatra. According to some writers, Marc Antony sent Artavasdes to Rome in golden fet- ters. The kingdom was reduced by Trajan to the form of a province, and the Tigris was made the eastern boundary of the empire, which Au- gustus had thought fit to extend no farther than the banks of the Euphrates ; but it soon reco- vered its liberty, and was again governed by its own kings, in the reign of Constantine the Great and his successor, to whom the kings of Armenia were feudatories. In the Persian war, A. D. 365 — 378, the tributary kingdoms of Ar- menia and Iberia, the sovereignty and alliance of which had been solemnly renounced by the Ro- mans, were exposed, without protection, to the arms of the Persian monarch. Armenia was re-

duced to the state of a Persian province by Sapor, and the administration was shared be- tween a distinguished satrap and a favorite eunuch. In the reign of Justin II. it was sub- dued by the Saracens, A.D. 687, who held it till the irruption of the Turks ; and when they took possession of it, about 755 or 884, they gave it the name of Turcomania. The Turks, by invading Persia and other eastern countries, gave the Armenians an opportunity of throwing off the Turkish yoke, and of choosing kings for themselves ; by whom they were governed till the country was again subdued by Occadan or Hec- cata, the son of Cingis, and first cham of the Tartars. The conquest of the Tartars, however, was not so complete as wholly to extirpate from Armenia the race of its own kings; as we read of some of them who reigned

afterwards, and particularly in our own chronicles of Leo king of Armenia, who, in the reign of Richard II., came into England to solicit aid against the Turks, by whom he had been driven from his kingdom. In the year 1472 Uffan Cassanes, king of Armenia, succeeding to the crown of Persia, made Armenia a province of that empire ; and in this state it continued till the year 1522, when it was subdued by Selim II. and made a province of the Turkish empire; from which time it has ever continued subject to the Turks, except the eastern part of it, which belongs to the Persians, and some districts in the south which are ruled by independent chiefs. The Turkish paohalics, or governments, are six : Erzerum, Diarbekir, Akiska or Agalzighe, Kars, Bayazid, and Moosh, of unequal extent and importance, and they are divided into subordi- nate districts. Armenia still contains several large towns, as Erzerum, Diarbekir, Erivan, and many of inferior note ; though they are still considerable, such as Akiska, Van, or Artemita, Bayazid, Argish, and Betlis. The population of Erzerum, which is considered the capital, ex- ceeds 100,000.

Armenia is distinguished on medals by the bow, the arrows, and the tiara or hat, as in the subjoined figures, inscription ARMENIA CAPTA.

Fig. 1.

Fig. 2.

ARMENIAN STONE, a mineral stone, or earth, of a blue color, spotted with green, black and yellow; anciently brought only from Ai- menia, but now found in Germany and the Tyrol. It bears a near resemblance to lapis lazuli, from which it seems only to differ in de- gree of maturity; it being softer, and speckled with green instead of gold. Chambers. See ARMEXUS LAPIS.

ARMENIANS, in ecclesiastical history, a division among the eastern Christians, thus called from Armenia the country anciently in- habited by them.

Some have supposed, that Christianity was established in Armenia by the apostle St. Bar- tholomew; but this is certain, that in the be- ginning of the fourth century the Armenian Christians were in a nourishing state. In this

century T'.ndates the king established an hierarchy ; and in the beginning

of the sixth, under the patriarch Nierses, the Armenian church seceded from other establishments, be- came independent, and embraced the theory of the Jacobites, some few articles of discipline ex- cepted. The schism of the Armenians is placed eighty-four years after the council of Chalcedon, A. D. 535. It was consummated at the end of seventeen years; and it 'is from the year of Christ 552, that the era of the Armenians is dated.

In the fifth century Armenia was divided into fifteen provinces, and subdivided into 191 dio- ceses. In the sixteenth century the church was under three patriarchs, having archbishops and bishops under them. Other spiritual leaders are called by the name of patriarchs without the authority. The supreme head of the Armenian church is the great patriarch of Echmiazin, who authorises these nominal patriarchs to consecrate bishops, and to make every third year, and dis- tribute among their congregations, the holy chrism or ointment, which, according to a con- stant custom among the eastern Christians, is the exclusive privilege of the patriarchs,

The Armenians, though they agree with the oilier Monophysites in the main doctrine of that scot, relating to the unity of the divine and human nature in Christ, differ from them, never- theless, in many points of faith, discipline, and worship ; and hence it comes to pass, that they '•old no communion with that branch of the Monophysites who are Jacobites in the more 'limited sense of that term. As to the Eucharist, they agree with the Creeks, except in this, that they mix no water with their wine, and use un- leavened bread after the manner of the Latins. Infants of two or three months old are admitted to the communion; and the consecrated bread, soaked in the consecrated wine, is distributed with peculiar ceremonies. See ARMENIA. When the priest takes the chalice and pattin, he is fol- lowed by his deacons and sub-deacons with flambeaux and plates of copper furnished with bells: thus accoutred, with a censer before him, he goes in procession round the sanctuary ; he then places them on the altar, pronounces the words of consecration, and turns himself to the people, who fall down, kiss the earth, and beat their breasts; then, after taking the bread him- self, lie distributes it to the people. In the bap- tism of children they practise trine immersion; and then the priest binds a small cord of silk and cotton round the neck of the child, anoints his forehead, stomach, ami- pits, hands, and feet, and makes on each part the sign of the cross. The child, after baptism, is carried home by the godfather with the sound of drums and trumpets. The women do not go to church for forty days after delivery ; and they observe many Jewish customs. rihe Armenians celebrate an annual festival called Cachacouran, which, half Arme- nian and half Persian, signifies the baptism of the cross. It is generally supposed that this is a religious ceremony, like the theophany of the (; reeks, and the epiphany of'the Roman Catholics. It is celebrated on the sixth of January, and the trrris signify ' manifestation ;' but it is not

agreed, whether it commemorates the birth of Christ in his manifestation in the flesh, or his appearance to the wise men when he was mani- fested to the Gentiles, or his manifestation to the Jews by the voice from heaven at his bap- tism. Perhaps it is merely a civil institute, re- sembling the Roman lustrum. The Persians mark this Armenian festival in their almanacs ; their Mahommedan kings attend it ; and some say it is an imitation of the Abhirkan of the Guebres, or Gaurs, i. e. the festival of lustral water, in use among the ancient Persians.

The Armenians abstain very rigorously from eating of blood, and meats strangled, and are much addicted to fasting; insomuch that from their discourse, one would conclude that almost their whole religion consisted in fasting ; the higher the rank of their clergy, so much the greater must be their abstinence. Their monks, every Wednesday and Friday, eat neither fish, nor eggs, nor oil, nor any thing made of milk; and during Lent they live upon nothing but roots; they are allowed wine only on the Saturday in the holy week, and meat on Easter Sunday. Besides the great Lent they have four or five others of eight days each, preparatory for the four great festivals of the Nativity, the Ascension, the Annunciation, and of St. George, during which they are not allowed so much as to speak of eggs, flesh, oil, or butter.

Their monastic order is in great repute among them, since one of their patriarchs introduced that of St. Basil ; but part of them, which have united with the church of Rome, have changed their ancient rule for that of the Dominicans.

ARMENIENSTADT, a regular well-built town of Transylvania, in the county of Solnok. The emperor Charles VI.- gave the Armenians permission to reside here in 1726. It is inha- bited by about 400 families, who trade in cattle and various stuffs. The council-house and the church are handsome buildings, and the town is protected by a strong castle.

ARMENTIERES, asmall but elegant town of France, in the department of the North. It was taken by Louis XIV. in 1667. It is seated on the river Lys, 8 miles N. W. of Lisle.

ARMENUS LAPIS, Armenian stone, in na- tural history, a mineral substance, improperly called a stone ; being no other than an ocherous earth, and properly called blue ochre. It is a very valuable substance in painting, being a bright and lively blue. It was so highly esteemed among the ancients, that counterfeits were very commonly attempted. Theophrastus has recorded it as a thing judged worthy a place in the Egyp- tian annals, which of their kings had the honor of inventing the factitious kind ; and he tells us the genuine native substance was a thing of that

value, that presents were made of it to great per- sons, and that the Phoenicians were accustomed to pay their tribute in it. — It is a very beautiful earth, of an even and regular texture ; and of a fine blue, sometimes deeper, sometimes paler, and frequently mixed with green. It is soft, ten- der, and light ; of an even but somewhat dusty surface ; it adheres firmly to the tongue, and is dry but not harsh to the touch. It easily breaks between the fingers, and does not stain the haud> .

It is of a brackish disagreeable taste, and does not ferment with acids. It is a scarce fossil ; but is found very pure, though iu small quantities, in the mines at Gosselaer in Saxony. It is fre- quently found spotted with green, and sometimes with black ; and very often is mixed among the green ochre, called ‘ berggruen’ by the Germans, which has hence been erroneously called by its uatne. See BICE.

ARMIGER, or ESQUIRE, a title of dignity, belonging to such gentlemen as bear arms ; and these are either by courtesy, as sons of noblemen, eldest sons of knights, or by creation, such as the king’s servants. See HERALDRY.

ARMILAUSA, iu antiquity, a short military coat, reaching down only to the knee ; so called, as being divided both before and behind, and only close about the shoulders. The word is sometimes also written armelausa, armelausia, armicasia, and armilcasia.

ARMILAVSA, in ecclesiastical writers, the sca- pular of monks and canons; so called on account of its hanging from the arms.

ARMILLA, a bracelet for the arm, which cap- tains, among the Romans, gave to their soldiers for their good conduct. Also tne small rings or braces that go round the necking of the Doric capital.

ARMILLA, in zoology, one of the vermes infu- soria, belonging to the genus leucophra, de- scribed by Müller in his Zool. Dan. It is in- visible to the naked eye, annular, and rather thickened above.

ARMILLA MEMBRAXOSA, a name given by some anatomists to the annular ligament.

ARMILLARIS, in zoology, one of the vermes mol- lusca species, in the

genus nereis ; found burying itself in the sands of Norway and Sweden. It is subdepressed, peduncles conic, cirri lenticular.

AKMILLARY. Armilla, a brace or brace- let for the arm. Armillary, armilla, an armillary sphere. A figure consisting of several concentric circles intersecting each other, representing the various lines on an artificial globe ; as the equa- tor, ecliptic, &c.

When the circles of the mundane sphere are sup- posed to be described on the convex surface of a sphere which is hollow within ; and, after this, you iruigine all parts of the sphere's surface to be cut away, except those parts on which such circles are described ; then that sphere is called an armillary sphere ; because it appears in the form of several cir- cular rings or bracelets put together in a due position. Harris't Description of the Globe*.

ARMILLARY SPHERE, an artificial sphere, which revolves upon its axis within a silvered horizon, which is divided into degrees, and mov- able every way upon a brass supporter. The other parts are the equinoctial, zodiac, meri- dian, the two tropics, and the two polar circles. The armillary sphere of glass constructed by Dr. Long, in Pembroke-hall, Cambridge, is eighteen feet in diameter. The lower part of the sphere invisible in England is cut off: the whole apparatus is so contrived, that it may be turned round with as little labor as it takes to wind up ajact.

ARMILLARY TRIGOXOMETER, an instrument first contrived by Mr. Mungo Murray, and im-

proved by Mr. Ferguson, consisting of five semi circles ; viz. meridian, vertical circle, horizon, hour circle, and equator ; so adapted to each other by joints and hinges, and so graduated and divided, as to serve for expeditiously resolving many problems in astronomy, dialling, and sphe- rical trigonometry. For the drawing, description, and method ofusing it, see Ferguson's Tracts.

ARMILLATI MILITES, those who wore bracelets on their left arms bestowed on them by their generals or emperors. The term is more frequently applied to soft and effeminate soldiers, who wore bracelets on their arms, not as the rewards of their prowess, but marks of their fop- pery.

ARMILLATUS, a species of cerambyx, found in India, with four spines on each side of the tho- rax ; the wing-cases ferruginous, and a single tooth on the posterior thighs.

ARMILUSTRIUM, ri Roman antiquity, a feast held among the Romans, in which they sa- crificed, armed, and with the sound of trumpets.

ARMINIANS, a religious sect, which arose ir Holland by a separation from die Calvinists, and so named from ARMIXIUS (see that article), who, thinking the doctrine of Calvin, with regard to free-will, predestination, and grace, inconsistent with scripture, and repugnant to all just ideas of the divine benevolence, began to express his doubts concerning them in the year 1591; and upon farther inquiry adopted sentiments more nearly resembling those of the Lutherans than of the Calvinists. The controversy thus begun became more general after the death of Armimus, in the year 1609, and threatened to involve the United Provinces in civil discord. The Arminian tenets gained ground under the mild and favor- able treatment of the magistrates of Holland, and were adopted by several persons of merit and distinction. The Calvinists, or Gomarists, as they were now called, appealed to a national synod : accordingly the synod of Dort was convened by order of the States General, in 1618, and was composed of ecclesiastical deputies from the United Provinces, as well as from the reformed churches of England, Hesse, Bremen, Switzer- land, and the Palatinate. The principal advocate in favor of the Arminians was Episcopius, at that time professor of divinity at Ley den. It was first proposed to discuss the principal subjects in dis- pute, and that the Arminians should be allowed to state and vindicate the grounds on which their opinions were founded; but some difference arising as to the proper mode of conducting the debate, the Arminians were excluded from the assembly, their case was tried in their absence, and they were pronounced guilty of pestilential errors. In consequence of this decision they were treated with great severity, and deprived of all their posts and employments ; their ministers were silenced, and their congregations were sup- pressed. However, after the death of Prince Maurice in 1625, the AnUinian exiles were re- stored to their former reputation and tranquillity; and, under the toleration of the state, erected churches, and founded a college at Amsterdam, where their first theological professor was Epi- scopius. The Arminian system has very much prevailed in England since the time of Arch-

bishop Laud, and its votaries in other countries are numerous.

ARMINIUS (James), whose name in Low Dutch was James Hermanni, a famous Protes- tant divine, from whom the modern sect of Ar- minians (see the preceding article) take their name, was born at Oude-water, in Holland, 1560. He was ordained minister at Amsterdam on the llth of August 1588; when he soon distin- guished himself by his sermons, which

were re- markable for their solidity and learning, and gained him universal applause. Martin Lydias, professor of divinity at Francker, judging him a fit person to refute a work in which Beza's doctrine of predestination had been attacked by some ministers of Delft, desired Arminius to un- dertake the task ; which he did, but, upon tho- roughly examining the reasons on both sides, he came into the opinions he proposed to destroy, and afterwards went still farther than the minis- ters of Delft had done. In 1600 he opposed those who maintained that ministers should sub- scribe the confession and catechism every year. In 1602 a pestilential disease raged at Amster- dam, during which he acted with the greatest resolution and courage, in assisting the poor and comforting the sick; and Lucas Trelcatius and Francis Junius dying of that disease at Leyden, the curators of that university chose Arminius professor of divinity there, and afterwards made him D.D. Disputes upon the sovereignty of grace were soon after kindled in that university; and he was at length engaged in a new contest, occasioned by a disputation concerning the divi- nity of the Messiah. These contests, his conti- nual labor, and the concern of seeing his repu- tation blasted by a multitude of slanders in relation to his opinions, impaired his health and constitution, and threw him into a fit of sickness, of which he died on the 19th of October, 1609. Arminius was esteemed an excellent preacher : his voice was low, but very agreeable; and his pronunciation admirable: he was easy and af- fable to persons of all ranks, and facetious in his conversation amongst his friends. His great desire \v;is, that Christians would bear with one another in all controversies which did not affect the fundamentals of their religion ; and when they persecuted each other for indifferent points, it gave him the utmost dissatisfaction. The curators of the university of Leyden had so great a regard for him, that they settled a pension upon his widow and children, lie left several works, vi/. l. Disputationes de diversis Christianas religionis capitibus. 2. Orationes, itemque trac- tatus insigniores aliquot. 3. Examen modesti libelli (iulielmi Perkinsii de prasdestinationis modo et online, itemque de amplitudine gratiae ilivuui'. 4. Analysis capitis noni ad Romanes. A. Dusertatio (It- vero et genuino sensu capitis septimi epistohv ad Romanes. 6. Arnica colla- tio c'lim !). Francisco Junio de pra;destinatione per literas habita. 7. Kpistola ad Ilippolytum a collibus.

ARMIP'OTENT. Lat. armipotens, from arma, arms, and potens, powerful. Strong, powerful in arms.

The manifold linguist, and the armipotent soldier.

Shafwpeare.

For. if our God, the Lord armipotent, Those armed angels in our aid down send.

That were at Dathan to his prophet sent ; Thou wilt coine down with them. Fairfax.

*Beneath the low'ring brow, and on a bent, The temple stood of Mars armipotent. Dryden**

ARMIRO, a sea-port town of Macedonia, in European Turkey, seated on the Gulf de Volo, thirty miles N. W. of Negropont. It is the Ere- tria of the ancients.

AR'MISTICE. Lat. arma, arms, and tto-steti, to stand, to cease. A cessation or suspension of arms.

Many reasons of prudence might incline the king of England to this armistice more desirable than a con- tinuance of the war. Lyttletun.

ARMOISIN, a silk stuff, or kind of taffety, manufactured in the East Indies, at Lyons in France, and at Lucca in Italy. That of the Indies is slighter than those made in Europe.

ARMORACIA, in botany, a name given by the ancients to a kind of radish.

ARMORIC, or AREMORIC, something that be- longs to the province of Bretagne, or Britany, in France. See ARMORICA.

ARMORIC LANGUAGE, the language used among the inhabitants of Britany. The French usually call this language Bas-breton. The inhabitants of Britany, of Cornwall, and of Wales, formerly understood each other's speech ; but consider- able diversities have crept in since their separa- tion from each other. The inhabitants of Bri- tany, Mr. Lluyd observes, by their intercourse with the French, have much altered their ancient orthography. There are several words in the Armoric which have no affinity with the Welsh : and both the Armoric and Cornish retain several ancient words and phrases which are now lost in the Welsh. Julian Manoir, a Jesuit, has published an Armoric grammar and vocabulary in French, which has been translated into Eng- lish by Mr. Williams, and published with notes by Mr. Lluyd. Yvon Quillevere published an Armoric vocabulary at Paris, in 1521. Toland has given a catalogue of several Armoric words, which prove to be Irish; also a vocabulary Ar- moric and Irish.

ARMORICA, the ancient name of the whole northern and western coast of Gaul, from the Pyreneans to the Rhine ; under which name it was known even in Caesar's time. The word is of Bas-breton origin, and denotes maritime ; being compounded, according to M. Menage, of ar, upon, and mor, sea.

ARMORUM CONCUSSIO, the clashing of ar- mour practised by the Roman armies previous to an engagement, and intended to strike a panic into their enemies.

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ARMOUR.

ARMOUR more particularly describes any de- fensive habit, used to protect the person of the wearer from the attack of an enemy ; or abstract- edly, to any part of such habit. Armour, in the ajgregate sense, is frequently called harness by the English writers of the fifteenth and sixteenth centuries, as well as in our ancient statutes.

The public has lately been favored with a very valuable acquisition to the history of armour : indeed, when we name Dr. Meyrick's beautiful and copious work on this subject (A Critical Enquiry into Ancient Armour, three vols. large 4to. 1824), we mention the only stanJnH and chronological work of this kind in our language.

Arms, that is to say, offensive weapons and missiles, gave their own character to armour, or the various defensive methods of resisting the weapon or stroke. From the above work, and some private sources, we shall digest a chrono- logical view of these inventions, so important in the ancient modes of warfare, exhibiting in Chapter I. The Arms and Armour of the An- cients and of Barbarous Nations. Chapter II. Those of the British Isles under their native chiefs and successive masters, the Anglo-Saxons, Danes, &c.

CHAPTER I.

OF THE ARMS AND ARMOCR OF THE ANCIENTS AND OF BARBAROUS NATIONS.

SECT. 1. — ARMS OF THIS PERIOD.

The club seems to have been the earliest of offensive weapons. Being used

in close fight, it gave its name $0X0.7% to the compact body of troops so called by the Greeks. The Assyrians and Ethiopians of Xerxes' army had clubs of wood armed with iron. Commodus as Hercules- Romanus is represented on coins with a knotted club, with two square belts of iron ; and Winc- kleman has published one borne by Mars, which consists of a handle with only a round knotty knob. The Scythians united the spiked club with the mace, as exhibited plate I. fig. 15. On the Trajan column the Dacians appear with clubs, as slaves to whom no other arms were allowed. Du Cange mentions the vulgastus, a crooked club ; the plumbata, loaded with lead ; the spontonus, with iron. Our apprentices, ac- cording to Stowe, Douce, &c. used to carry clubs when lighting their master or mistress home : and in the army of Charles I. untrained rustics were denominated clubmen.

The club, says Dr. Meyrick, soon gave way to the mace, which had its name, copvvij, from the little horns or spikes by which it was surrounded. It occurs in Homer. A Greco- Egyptian one has a guard for the hand. Plate I. fig. 6. The As- syrians had them of wood, headed with iron. One of the Greek maces in a horseman's hand occurs on an old coin, and several brazen mace- heads, which prove that the handle was originally of wood, may be seen in the British Museum. The origin of the corporation mace is thus given

by Dr. Clarke : the sceptre of Agamemnon was preserved by the Chaeroneans, and seems to have been used among them after the manner of a mace in corporate towns; for Pausanias relates, that it was not kept in any temple appropriated for its reception, but that it was annually brought forth with appropriate ceremonies, being honor- ed by daily sacrifices; and a sort of mayor's feast seems to have been preserved for the occa- sion ; a table covered with all sorts of eatables being then set forth.

The club also originated the battle-axe ; under which term may be classed the large Egyptian double-axes, used by commanders of ships ; and the battle-axe, plate I. fig. 9. with a weight on the back of the blade ; Greco-Egyptian, as well as the sagares or double-axe of the Scy- thians.— There were also battle-axes termed bi- pennis, or double-bladed ; crescent-formed, with long handles ; with handles knobbed at top, and pointed at bottom; fire-shovel formed, &c. and others have hammers on both sides, or a hatchet and hammer ; broad and sharp on both sides, used by sacrificers, wood-cutters, and sailors in sea-fights. These were Phrygian and Amazo- nian weapons. Plate I. fig. 20, 21, 22, 23, are specimens.

Among the Greeks we read of the KtXtjewf, with a short handle, at its top an axe-blade, and a pike opposite: and the a£iv»j, or pole-axe, formed of a staff, on the end of which was a spike, with an axe-blade on one side, and another spike on the other. With this weapon Agamemnon encountered Pisander.

The invention of the spear has been ascribed to the JEtolians, but it is no doubt beyond the date of history. The Romans, at a very early period, worshipped Mars under the form of a spear; a custom derived from the Sabines. Varro says, that from this came the custom of arming the statues of the Gods with a hasta pura. Spears were kept at home in cases, and it was customary also to put them against a co- lumn ; whence, says Dr. Meyrick, originated the fluted pillars of ancient and modern architec- ture. They were adorned with banderolls, and carried at funerals inverted. To present the spear by the middle was to request a suspension of the battle. Both javelins and spears, although the latter was designed principally for thrusting, were used occasionally either for that purpose, or as missiles. Plate I. fig. 11 is a Greco- Egyptian quiver of javelins, with a throwing stick : fig. 12, is the throwing-stick separate.

The Greco-Egyptian spear had the common myrtle-leaf, as it appears on the bas-reliefs of the temple of Carnac ; but Dr. Meyrick ascribes the era to the Ptolemean dynasty. He has engraved a quiver, containing javelins with a throwing-stick. Plate 1. fig. 25, 26, are Thracian lances or javelins.

The Grecian spear, oyx°C> was generally of ash with a leaf-shaped head of metal, and furnished with a pointed ferrule at the butt, called Saupw

rrjf>, with which it was stuck in the ground, a method used, according to Homer, when the troops rested on their arms, or slept upon their shields.

The a-fKv\a and amentum were javelins which had thongs in the middle for impelling them further. The cestrosphendonus was a Macedonian instrument, much shorter, and darted by two thongs of unequal length. The aclides were short and thick, stuck with points, and pulled back after attack.

Aiyavti;, yvoff^oc, and fiaoc, were javelins, of which the form of the heads may be seen in Stuart's Athens,' iii. 4. ' Several of them, says Dr. Meyrick, ' were loose upon their shafts, in all probability having attached to them a cord, which was held by the side of the wood, so that, when the weapon

once entered the body, the head could not be extracted without the greatest difficulty. I am led to this conclusion from an Asiatic javelin, in my son's collection, on this principle, and which, like them, has just below the blade a hook turned backward to prevent its being withdrawn.' Introd. xxxvii. The dou- ble-pointed lance, mentioned by Homer, was afterwards adopted by the Romans. The Sopv, says Dr. Meyrick, was probably that used by the cavalry, and furnished with a loop of leather, which served the warrior for a support when he chose to let it hang from his arm, and to twist round his hand for the firmer grasp when charg- ing. This strap was called ˆEtrayicvX?;, being put on about the middle.

Hunting spears in Xenophon and Pollux had two salient parts, sometimes three crescents, to prevent the advance of the wounded animal. The French antiquaries distinguish hunting spears from others by their having no barb. The Kovrof was a long lance used in the defence of ships ; some similar were used by the cata- phracti, or heavy-armed cavalry. The mounting spear had a step annexed to the staff', by which the horseman, having leaned the spear against the horse, ascended.

The Roman contus was a hunting spear, short, with a single point; nsr'd as a missile by the contarii. With a CHJOK added it became the contus nautanun, or boatman's hook. The hasta was a spear for darting, one finger thick, four cu- bits and a half Ion;;. The javelins carried by the Velites, or light troops, were about two cu- bits long, with so slender a point that they bent at the first hit, and could not be returned by the enemy. After the conquest of Greece, the javelin more firm, and ratable of being used at both ends, was adopted. The lupus was like a boat- hook to lay hold of besiegers. The pilum was about seven feet long; the head had a hook to retain it in the buckler after piercing: it was thrown just before attack with the sword.

The barbarian spears had sometimes wicker instead of iron tops. The framea was very long, with a short and narrow blade of iron. The Ethiopian, with heads of goat's horns sharpened. The Parthian, a lanje ball at the butt end, a lozenge-shaped blade at the other. Thracian spears had a shaft composed of little bands, per- haps of cane, and becoming larger towards the head, where it tei minuted in a round ball; head

pyramidal, or a spike. The martio-barbulus, or mattium, had on one side a long iron, on the other a hammer. A trident, or three-pointed spear, was adopted by the gladiators from the barbarous nations, and called retiarii.

Diodorus says, that the Gauls for darts cast those called lankia, whose iron blades are a cubit or more in length, and almost two hands in breadth. Propertius attributes to them the gae- sum. On coins the head is barbed,

and re- sembles that of an arrow. The gzesum was the missile lighter than the pilum of the heavy armed, whence two were generally carried. Those of the Franks were spears with a fleur-de- lis head called the angon, whence the royal arms of France.

The Lacedaemonians were the only classical nation of antiquity who used crooked swords ; those of the other nations being uniformly straight. But the Spartan swords were very short and curved. The thin-bladed narrow sword of the moderns was utterly unknown. The distinction between ancient and more recent swords, seems to have been the addition of a guard for the fingers ; for though one of a single bar occurs among the Etruscans, yet no other instance is mentioned by Dr. Meyrick. The Greco-Egyptian was a cutting sword with cord and tassel at the hilt, ARMOUR, plate I. fig. 1 ; a scimitar with double cord to the hilt, fig. 2 ; or a long dagger with double cords, resembling those now used by the Moors and Turks, fig. 5.

The Greeks of the heroic ages wore the sword under the left arm-pit, so that the pommel touched the nipple of the breast. Generally the swora was almost horizontal. It hung by a belt. The length was nearly that of the arm. The scab- bard, of the same breadth as the sword, was ter- minated in a knob. Dr. Meyrick thus describes the Greek swords: 1. The £i0oc, worn at the left hip, suspended from a leathern strap, which passed over the right shoulder. It was straight, intended for cutting and thrusting, with a leaf-shaped blade, and not above twenty inches long; see plate I. fig. 32. It therefore reached only to the thigh. It had no guard but a cross-bar, which, with the KO\£OC or scabbard, was beauti- fully ornamented. The hilts of Greek swords were sometimes of ivory and gold. 2. The Ar- give eoTrtc, fig. 36, from the name seemingly in- tended for cutting, had its edge in the inner curve of the blade. Its scabbard is represented plate I. fig. 33. The Zvivcu or gvqXat, Lacedaemonian swords, were all of the short cutting kind. The acinaces, or curved dagger, with the edge in the inner curve, was borrowed from the Persians at a later period of Greek history. The machaira or dagger was more frequently used for a knife, but worn in the scabbard of the sword. It is mentioned by Homer. Inlaying of sword-blades and hilts with gold is very ancient, being men- tioned by Herodotus. Plate I. fig. 18, are Da- cian and Thracian swords.

The Romans, says Dr. Meyrick, had brazen swords in their infant state. Latterly they veia of iron, the hilts of brass or copper. It -ben:? exceedingly probable, that sword-blades of mixeJ metal hardened were in use among the European nations, both before and since the gladii jrf stee'

ARMOUR.

or iron hardened were the chief offensive weapons of the Roman heavy-armed infantry. The length of the blade was from nineteen to twenty-one inches. Polybius says, that down to the time of Annibal the Romans used the Greek or Etruscan sword ; but that they then adopted the Spanish or Celtiberian steel double-edged cut and thrust, the gladius described above. Plate II. fig. 11, is a Roman sword and scabbard. The ages of Roman swords may be thus ascertained (leaf- shape excepted), the more obtuse the point the older, the last form of the blade being like the modern. The dagger of Bnitus upon his coins certainly tapers broadly downwards, and so do other daggers ; but the parazonium retained the obtuse Greek point. Dr. Meyrick mentions a Roman dagger not a foot long, and much re- sembling a French bayonet blade. The swords had ferrules. On which side the sword was worn appears not to have been settled till the time of Trajan, upon whose column the emperor, pretorian officers, tribunes, and centurions, al- ways wear it on the left ; all others on the right. Under Augustus the right of wearing a sword was confined to military men and certain magis- trates.

The barbarian swords were crooked like sci- mitars ; but straight swords, resembling the Greek, sometimes appear. Those of the Gauls and Celtiberians were also straight. The spatha, a large sword, like the Gaulish below, distin- guishes the Roman auxiliaries. Leaf-shaped swords were used by the Etruscans and Sam- nites. The Cimbri had swords of unusual forms, and, according to Plutarch, long swords, seem- ingly the degans or spads, so highly prized as to be sometimes considered from its cruciform shape, the symbol of Deity. They were sharp, and often inscribed with Runic characters ; and, in order to excite terror, those of the chiefs had proper names. Trie Gauls had very large swords.

The Roman dagger was called pugio and pa- razonium. Centurions and tribunes carried a sword and dacrger. The latter became a mark of imperial sovereign power, and the pretorian pre- fect carried it, sometimes the emperor himself. Galba wore his hung to his neck. Poniards stuck in the girdle are distinctive attributes of the secretaries of the emperors of Constantinople. Tney were called {vx All the barbarous nations were noted for splendid baudricks- That of Darius was cf gold.

Amongst ancient missiles, bows and arrows were conspicuous. The subject of archery has been before treated, but we add the following particulars from Dr. Meyrick. The Greco- Esryptians appear in a car, using the bow. They were also curious in their quivers; plate I. fig. 7, is a quiver with its covering from Denon; tig. 8 is an arrow of the early people. The Ethiopians had bows four cubits long, with ar- rows proportionate, and pointed with sharp stones instead of iron ; the Jews had bows of brass ; the Arabs large

bows made with a handle and two curved horns ; the Persians long ar- rows made of cane and sharp bows; the Par- thians bows made of two pieces, fastened into a handle ; the Indians cane bows and arrows, the latter headed with iron ; the Scythians made co-

erings to their quivers with the skins of the right hands of their enemies ; the Scythian bowa resembled a crescent or the letter C; the Maco tian bow was like the Scythian ; the Sarmatian bows and arrows were of cornel wood, the piles of the latter being of wicker. The Caspians had bows of cane. Plate I. fig. 16, is a Phrygian quiver, bow and arrows; fig. 31, aTheban bow, case and quiver; fig. 34 is a Greek bow.

Greek Buics. — The short bow was made of two long goats' horns, fastened into a handle. The original bow-strings were thongs of leather, but afterwards horse-hair was substituted, whence they were called tirirtut, and, from being formed of three plaits, rpucu«Tic. The knots were termed Koouvr) and were generally of gold, which metal, and silver, also ornamented the bows on other parts. The arrow-heads were sometimes pyramidal, whence the epithet rtrpayovut, and the shafts were furnished with feathers. They were carried in a quiver, which, with the bow, was slung behind the shoulders. Some of these were square, others round. Many had a cover to protect the arrows from dust and rain, and several appear on fictile vases to have been lined with skins. As the Greek bows were small, they were drawn not to the ear but to the right breast.

Roman Bows. — The sagittarii, or archers at- tached to the legion, were of various nations, but chiefly from Crete and Arabia. The arrows which they used had not only their piles barbed, but were furnished with little hooks just above, which easily entered the flesh, but tore it when attempted to be withdrawn. The bow-string was made of horse-intestines. The mode of drawing it was with the fore finger and the thumb, as the Amazons do on the vases.

The term falarica signified variously: — 1. A halberd. 2. A pike with a very long head, and a bowl of lead at the other end. 3. A kind of arrow shot against wooden towers. Sulpitms makes the head iron, and the wood hardened with sulphur, bitumen, resin, and surrounded with tow steeped in oil, in order to be lit and discharged from a balista.

Pliny ascribes the invention of the sling to the Phoenicians, but its true origin is undoubtedly beyond the date of authentic history. The Jewish slingers are said to have been so expert, that some hundreds of them in one army could sling stones to a hair's breadth and not miss, a circumstance which explains the adroitness of David. The Greeks had cucpo/SoXumu, or mount- ed slingers. The ffftvtiovti, or sling, says Dr. Meyrick, was

especially the weapon of the Acar- nanians, the Etolians, and the Achaeans, who inhabited jEgium, Dyma, and Patrae, but the last of these so far excelled, that when any thing was directly levelled at a mark, it was usual to call it AXOUCOV /3fXoc It was sometimes made of wood, and sometimes of leather, and is de- scribed by Dionysius, as having its cup not ex actly hemispherical, but hemispheroidical, de creasing to two thongs at its ends. Out of it were cast stones or plummets of lead called MoXv/3£t&c, or po\vj35i$cu aQaipai, some of which are engraved by Stuart on the upper part of plate XXVII. in the third volume of the Anti- quities of Athens. They are spheroidical, hav-

ing an ornament on one side, and the word Stfac on the other. We are told that s:>me of these weighed no less than an Attic pound, i. e. an hundred drachms. Small ones may be seen in the British Museum. According to the size of them the slings were managed by one, two, or three cords. At a later period the Greeks had a method of casting from their slings irwpo/3o\o» \i0oi, or fire balls, and from their machines fftcvraXia, made of combustibles, fitted to an iron head, which, being armed with a pike, stuck fast into its object, that it might be more surely inflamed. The funditores or slingers of the Ro- man armies were generally, says the same author, from the Balearic Isles, Majorca, Minorca, &c. or Achaeans. Amongst these nations mothers are said to have allowed no food to their chil- dren which they did not beat down with the sling. They shot much larger stones than other nations, and with the powers of a catapult, so that in sieges they grievously palled the troops on the ramparts, and in the field broke the armour in pieces. Froissart says the same thing of them in the middle age. Ovid mentions their use of balls of lead, which, Dr. Meyrick says, they introduced. They appear to have been of the form of olives, and are inscribed with Greek or Latin characters. Aldrovandi has also published others with fugitivi peritis, and ital. and gal. On others are feri. Stones were also used, but as they could not always be got proper, these leaden balls were cast. The Ro- mans, as did the Greeks, called a mounted ring a sling, from the resemblance of the circle of the ring to the leather enclosing the stone, &c. The sling appears to have been a long narrow piece of leather or stuff, the two ends of which were held in the hand, and the stone put in the fold- ing at the bottom, one of the ends having a loop for the ringers, that when the stone was thrown the sling might not slip out of the hand. The Achaian slings were made of a triple cord. The fustibulum was a sling annexed to a stick.

SECT. 2. — ARMOUR OF THIS PERIOD.

Armour, says Dr. Meyrick, had its origin in Asiatic effeminacy. The warlike Europeans at tirst despised any other defence but the shield ; but, in order to he on an equality with their neighbours, were obliged to have recourse to further artificial protection. The progressive kinds of armour appear to have been these: 1. Skins. 2. Hides, padded linen, matted stuff or wood. 3. Leather armour with a rim of metal. 4. Plates or scales. Sealed armour on ancient monuments distinguishes barbarians from Greeks and Romans. \ egetius wonders by what fatality it happened that the Romans, after having used heavy armour to the time of Gratian, should, by their laying aside their breast-plates and helmets, put themselves on a level with the barbaiians.

Of helmets. — It is certain that no helmet ap- pears in classical eras, where the face was wholly covered by the junction of a movable visor and beaver. The first armour of the galerus kind was formed from the head and skin of an animal, especially of the lion ; for the skin of a horse's head with the ears and mane, the mane serving for a crest, while the ears appeared erect on the

head of the wearer, was an Indian and Ethio- pian fashion, whence, thinks Dr. Meyrick, ori- ginated crests and tufts. Diodorus Siculus confirms this by saying that the crests of the royal Egyptian helmets were the heads of the lion, bull, or dragon. Plate I. fig. 3,4, are Greco- Egyptian helmets, from Dr. M. The Milyans had helmets of skins ; those of a fox formed the early Thracian helmet, and this ancient fashion of the heroic ages appears in the galerus of the Roman light troops, and the musicians and standard-bearers on the Trajan column. This custom gave birth to various forms and annexa- tions of helmets and caps. The Phrygian bon- net, plate I. fig. 13 (originally represented by Mr. Jlope), is the most ancient form of helmets ; Dr. Meyrick suggests that the long flaps descend- ing on the shoulders were probably cut originally out of the legs of the animals, whose hide or skin formed the body of the casque ; and thinks this formed the original Trojan helmet. The helmet of Pluto, with a pendant falling upon each shoulder, given to him by the Cyclops in the war with the giants, and again given to Per- seus when he killed Medusa, is a fine specimen. Two curious kinds, being the helmets of the goddess Roma, occur on the coins of the Aure- lia and other families. The Sarmatians pre- served the Phrygian form, with the neck-piece of scales ; and this, which appears on the Tra- jan column, has given birth to a confusion with it of double-chained mail in Mr. Hope's speci- men. F.ate I. fig. 19, is a Dacian helmet. This bonnet, as well as the long trowsers, was among the Greek artists a distinctive attribute of bar- barians. The tiara helmet is Greco-Egyptian, Median, Persian (occurring at Persepolis), Hyr- canian, and Bactrian ; with a flap hanging down behind, so as to form ear-pieces, as well as to protect the head and shoulders, Armenian. But all cylindrical helmets were not of this oriental character.

Other helmets that have been speci- fied by historians, are spiked helmets, like the Chinese. The Scythian conical helmet, and Dacian scull-caps, also with spikes. The casques of the Greek soldiers had only a long point or simple stud ; those of officers crests and plumes. Plate I. fig. 17, represents a Syriac hel- met, from Mr. Hope, much resembling, as Dr. Meyrick observes, that of the modern Chinese. The most extraordinary scull-cap is, however, the Grecian one, with a visor and neck-piece, presumed by Strutt to be anterior to the Trojan war. The conical helmet conformed to the shape of the head (plate I. fig. 14), and next to that demi-oval and sugar-loaf, is the most com- mon form of helmets, but offers no characteristic of era or country. In general the barbarous nations have perpendicular demi-ovals. Horned helmets were worn by the Phrygians, though but rarely. They were adopted by the Greeks (plate I. fig. 30), and, according to Diodorus Si- culus, by the Belgic Gauls. Being formed as typical of the religion of the country, and the horns of the ox or cow being emblematic of the moon, they were a fit accompaniment for the crescent-like shields. The Gauls, says Diodo- rus, wear helmets of brass, with large appenda- ges for thfc sake of ostentation ; for they havc

either horns of the same metal joined to them, or the shapes of birds and beasts. The early Greeks used a helmet called 7r«piee$aXaia, be- cause ic left only an aperture for the sight and breath. The part which came over the face was called AuXwTric- The Samnite helmet is something like the ireptKetyaXaia, but, instead of the visor forming a part of it, it is put on the face like a mask, perforated merely for the eyes, and comes down to the collar bones. It is also furnished with a ridge. See plate II. fig. 5 and 6.

The Carians are said to have invented the crest of the helmet ; but the real origin is that we have given. The earliest Greek helmet, as presumed, is that of Strutt ; and the next apparent era (to judge with Dr. Meyrick from Etruscan speci- mens, which preserved the remains of the ancient Grecian style) is that where they are all ridge and crest, either of leather, strained upon a frame, or cut out of a solid wooden block; for such helmets are ancient. See Meyrick,xvii. xviii. &c. One of these very old helmets has a face- guard. See plate I. fig. 27 ; and plate II. fig. 1 and 4 ; the latter has the horse-tail, recently introduced in our cavalry. The succeeding era shows the visor, Phrygian, bird's neck with horns added. The Etruscan and ancient Greek fashions are known to have been alike ; and some were five-crested, with a horse-tail besides ; for it is noted by Mongez, that Homer never speaks of plumes in crests, only of horse-hair. The continental antiquaries class the Greek and Roman helmets as follows : 1 . Helmets without crests, visors, and cheek-pieces, i. e. scull-caps. These are Etruscan, and of course early Greek. 2. Helmets with crests and panaches (i. e. the

norse-hair appendages), but without movable visors and cheek-pieces. 3. Helmets, with mov- able visors without cheek-pieces. 4. Helmets with cheek-pieces, but no visor. 5. Helmets both with cheek-pieces and movable visors. 6. Singular helmets, with aigrettes, plumes, wings, horns, double crests, double cheek-pieces, (some of which are very ancient, being seen on the Hamilton vases,) and others with fantastical ad- ditions and over-loaded crests,, either, in the main, barbarian, or subsequent to the removal of the seat of empire to Constantinople. Plate If. fig. 9, is a Roman helmet, now in the British Museum; fig. 12 is a more ornamented one, used in the time of the emperors. Meyrick. A quilted pectoral hanging over the breast and shoulders, like a tippet, sometimes very curiously wrought, was the only body-armour of the Egyptians. See plate I. fig. 10. Ancient figures of Minerva have a pectoral of scale ar- mour, with flap sleeves of the same, and among the Libyans, from whom was derived the /Egis, it was merely a skin, with a fringe of leather. The Jews had pectorals, ‘ the coats of mail of our translation of the Bible, probably first of linen, but afterwards of plates of metal, and called thoraces. The Assyrians, Medes, Susians, and Persians, had them of linen. The change of them into brazen thoraces was first made by the latter nation. Dr. Meyrick thinks the thorax of Homer and the Greeks to have been a large breast- plate made of leather, or perhaps brass,

to which the shoulder guards were attached be- hind. Body-armour consists cf thoraces, tunics, cuirasses, girdles, or belts.

The continental antiquaries call the military tunic, that worn under the cuirass. The Jews are presumed to have had a tunic, upon which the thorax was fastened. The Medes and Persians had tunics covered with plates like fish-scales, of scarlet or purple. The latter, in the time of Alexander the Great, had them embroidered with gold, the sleeves adorned with pearls. The Thracians, imitated in the retiarii, had short tunics or cuirasses, which came up to their breasts, and reached nearly half-way of their thighs. The Phrygians wore a tunic with tight sleeves down to the wrists, and covered with flat rings. Some Etruscan spearmen had quilted tunics with short sleeves ; and their archers tunics of leather. Strutt’s bronze Etruscan warrior has a short tunic, with no skirts on the sides below the girdle. It seems to have been made of stiff and rigid leather, but has only one sleeve of that material ; that of the right arm, for the use of the sword, being of more flexible stuff. In Caesar’s time almost all the Roman Equites had quilted, stuffed, or felted tunics, or tegmenta. Some of these stuffed were steeped in vinegar, to render them hard ; others were of leather, and both were edged with iron, round the neck, and sometimes round the line of the abdomen. The light cavalry used such cuirasses. The Ligurian tunics were girt with a belt.

Cuirasses were made, 1. of folded linen or cloth, or felted with salt and vinegar, and used by the Egyptians, Ajax in the Trojan war, the Athenians, Alexander, &c. 2. Of leather sometimes used by the Sarmatian chiefs. Brass and iron were most common, of two pieces, and joined by a buckle at the shoulders. These were altered, through their heaviness, to plates upon leather or cloth; and both these and chain- mail, but not interlaced, says Dr. Meyrick, also occur. Plate I. fig. 28, represents a cuirass with the girdle as passing over the shoulder-pieces. Gold plates distinguished the Greek and Roman generals. The soldiers on the Trajan column wear a short leathern tunic, like a waistcoat, upon which plates of metal were sewed. The plates were sometimes superseded by small chains. The Etruscan cuirasses were plain, scaled, ringed, laminated, or quilted. See plate II. fig. 3. Dependent from their cuirasses were straps, sometimes merely of leather, at others with pieces of metal on them, and these appendages, termed by the French lambrequins, were, together with their plain and laminated cuirasses, adopted by the Romans. But several changes took place afterwards. On the Trajan column we find the lorica of the hastati and principes, consisting of several bands of brass or steel, each wrapping half round the body, and there- fore fastening before and behind on a leathern or quilted tunic. These laminated loricae were 'very heavy. The Roman lorica was frequently enriched on the abdomen with embossed figures, on the breast with a Gorgon's head, for an

amulet, on the shoulder plates with scrolls of thunderbolts, and on the leather border, which

covered the top of the lambrequins, with lion's heads formed of the precious metals. The com- pact cuirass was made to open at the sides, where the breast and back plates joined by means of clasps and hinges. The lorica of the triarii were of leather only. In the time of Marcus .Aurelius they had cuirasses of scales or leaves of iron, called squammatae or plumatse, a fashion first adopted from the Dacians or Sarmatians by Domitian, who, according to Martial, had a lo- rica made of boars' hoofs stitched together. When the lorica was of one piece, whether of leather or metal, and reached to the abdomen, it had the pendent flaps, called lambrequins, before-mentioned, made of leather, fringed at the bottom, and sometimes highly ornamented. At the time of Trajan the lorica was shortened, being cut straight round above the hips ; and then there were overlapping sets of lambrequins to supply the deficiency in length, and generals thus habited may be observed on the Trajan column. The Roman cavalry did not at first wear loricae, but afterwards adopted the Greek

arms, and then were called loricati. Plate II. fig. 7, is a Roman general's lorica with its zone. In the time of Constantino the Great, the ca- taphractes or heavy horse, the same as the Per- sian Clibanarii, had flexible armour, composed of scales or plates ; and rings held together by hooks and chains the lorica hamata, which, however, is much older than the period men- tioned. The Sicilian cuirasses, like those of the ancient Greeks, consisted of back and breast- pieces with lambrequins. Plate II. fig. 2 is a Samnite cuirass and gorget.

Melts, or Girdles, were plated with metal, and covered the body below the pectoral, among the Jews. The Scythian body-armour on the Theo- dosian column consists of a tunic, wadded, witli a girdle and cross-belts of leather studded; the sleeves very short, but secured with two bands, like the holts. The Greek girdle, £wv»;, very rich arid varied, bound the armour together, whence 'favtaQai became a general word to imply putting on armour. In Homer, the girdle was not worn directly above the loins, but just below the chest.

The arms of the Greek warriors (very early ages excepted) appear naked ; but among the Romans of rank, lambrequins or straps richly adorned and fringed protected the upper arms. Plate I. fig. 35, represents the inside and outside of a Grecian greave for the right leg.

Dr. Mcyrick observes that ' in ancient times tlve shape of the shield had much to do with the mythology of the people, and therefore were circular to represent the sun, crescent-like to imitate the moon, &<•.' The ivy-leaf was sacred to Kacchus, and it might be from this people that the Greeks derived the pelta, which Xeno- phon describes as of the same form. The first shields were of basket-work, to which succeeded light wood. Ox leather, covered with metal plates, was, however, the most useful material. The middle had a plate of metal (Latin, umbo), often furnished with a thread of metal, turned in a circle or spirally. At first the shield was carried by a piece of leather, suspended from the neck over the left shoulder. This apparatus

often appears upon Etruscan monuments. The handles of shields, says Herodotus, were inven- tions of the Carians. When, after war, the shields were suspended in the temples, the han- dles were taken away, to prevent their being of service in sedition. JEschylus says that bells were sometimes added to shields, to affright enemies by the sudden sound, but Dr. Meyrick could not find a specimen. The Carians also introduced the ornaments of symbolic or alle- gorical figures, attesting the antiquity of their origin, and the valor of their ancestors. The Peloponnesians engraved their initials upon their shields, in order to distinguish themselves in battle. Thus upon their coins often occurs only a monogram of the two first letters of their

names. The Greeks carried the shield upon either arm, as do some gladiators in Stosch, the paintings of the Villa Albani, &c. – The shields of different nations have almost endless distinctions. The Greco-Egyptian resembled a gate, oblong, with the top rounded, convex and a hole in the middle. Meyrick ii. pi. i. f. 5. — The Ethiopian was made of raw ox-hides. Id. iii. — The Jewish and Philistine was of four kinds at least, all of different sizes. Goliah had two shields, the smaller probably hung at his back by a strap, whence he could easily take it, if required, in time of action. The larger one was carried before him by his armour-bearer. Id. iv. 6. — Plate I. fig. 24, is a Phrygian shield of great elegance. Pig. 29, is a Theban shield, copied from the Persian gerra. The Assyrians and Chaldeans had bucklers after the Egyptian manner. Id. viii. — The Persian shield, or a fiddle-shaped, with an ornament in the centre.- The Scythian oval. Id. xiii.

The Grecian cavalry of the first era used long shields, but Philomaenes introduced a round light one, not wider than necessary to cover the body. The infantry at first used oblong shields, but these Philopoemen changed to the Argolic shield. The original Greek shield was, how- ever, the affTric, a perfect circle, made of several folds of leather, covered with plates of metal, laid one over the other, and about three feet in diameter, in order to reach from the neck to the calf of the leg; on which account Homer calls them ap.ipporac and 7ro3»/v»jmc, the warriors often by kneeling down and bending their heads, concealing themselves behind them. The ca- valry had the \aicrrjtov a lighter and smaller round shield composed of a hide with the hair on. The light infantry used the Pelta.

The hastati and principes (heavy Roman infantry) used the scutum, a hollow hemi-cylin- der shield, a convex hexagon, or that shape, with its side angles rounded off. It was generally tour feet long, by two and a half broad; and made of wood joined together with little plates of iron, and the whole covered with a broad piece of linen, upon which was put a sheep's skin or bull's hide, having an iron boss jutting out in the centre, of great service in close fighting ; plate II. fig. 8, is a specimen. The triarii, and sometimes the principes, used a clypeus or round buckler ; or sometimes one of leather, of a square form, crimped into unduia-

lions. The Velites carried the round shield called parma, about three feet diameter, made of wood, and covered with leather. The cavalry at first had bucklers made of ox hides, resembling, says Polybius, the concave loaves used in sacrifices ; but being of little strength at any time, and utterly

unserviceable when wetted with rain, the Greek arms were adopted instead. Thus Mey- rick xli. — Ivi. Mr. Hope states that the Roman shield seems never to have resembled the large round buckler used by the Greeks, nor the cres- cent-shaped one peculiar to the Asiatics, but to have offered an oblong square, or an oval, or a hexagon, or an octagon, and that the cavalry alone wore a circular shield, but of small dimen- sions, called parma. Costumes, i. 47. Every legion had the buckler painted of a particular color, and charged with distinctive symbols, as the thunderbolt, anchor, serpent, &c. To the symbols were added the peculiar signs of each cohort, and the names of the person to whom each buckler belonged. Veget. ii. 17. To pre- serve the paintings, &c. they were kept in leathern cases. — Dion. Cass. 1. 42. c. 15. Xiphilin. in Do- mitiano. Rec. d'Antiq.28, &c. Votive shields at first consisted of the spoils of an enemy, but at last were offerings made of the richest metals, finely wrought, even sometimes of marble. They were suspended in public places and buildings with peculiar ceremonies, and charged with in- scriptions. Gruter, 441. n. 7. The ancilia, or sacred shields, which Montfaucon has oval, iv. p. i. b. 2. c. 6. are round upon coins of Domi- tian, and one of the muneyer Licinius, as in Ovid, Fasti, iii. 377. In eras posterior to the Antonines, nothing is more common than to see emperors holding a buckler in the left hand, adorned with divers figures; and after Constan- tine with the monogram J. C. It implied the protection which princes owe to their subjects.

Diodorus makes the shields of the Gauls pro- portionable to the height of a man, and garnished with his own ensigns. These Pausanias also calls Thureoi, adding, that they were introduced into Greece by Brennus. He tells us ' the Gauls had no other defence, and used them as rafts on crossing a river.' That carried, however, by the Parisian boatmen in the time of Tiberius Caesar, and found sculptured at Notre Dame in 1711, appears to be hexagonal and convex, though long and narrow. Governor Pownall says, that the Gaulish shields, upon the triumphal arch at Orange, are of a long oval, with the two ends truncated, and had distinguishing marks. Livy and Appian say, that the Gaulish buckler was long and flat, but too narrow to cover a man.

The Scandinavians, and northern nations, had one kind of shield, a long oval, the skiold (whence our word shield) of wood, bark, or leather, and entirely covering- the bearer; the other, smaller, convex, often furnished with a boss of iron, or other metal. They were made of iron or brass, and engraved, painted, or gilt; and sometimes covered with a plate of gold. The large shield served to earn,' the dead or wounded, or to swim across a river. It was white, until the bearer, by some exploit, had obtained permission to bear some distinctive mark. — Meyrick, Ixi.

Goliah had greaves, as had the Lvcian? VOL. II.

Among the Greeks, they were the famous KvripiStf of Homer, of metal, (sometimes of bull' hide,) which rose in front to the top of the knee, nearly behind at the calves, and terminated just above the ancle. They were fastened behind, Dr. Meyrick says, with pieces of metal, ending in buttons, or with thongs or buckles. The Etruscans had them, apparently of rough hides, fastened behind by a single ligature, near the middle of the calf, which greaves subsequently gave way to buskins. The Samnites wore ornamented boots, reaching to the ancle and covering the instep ; and over that on the left leg was placed a plate of brass, fixed upon a wadded wrapper. ServiusTullius introduced the Etrus- can greaves among the Romans; but, from the time of the republic, the word ocrese applied to the boots laced up, which succeeded them. The ocrea is described as a plate of metal, or piece of ox-hide, tied behind ; but exceptions occur. It was common in the later ages to have only one of these greaves, mostly upon the left leg.*

Dr. Meyrick says, that he has read of \npnf, gauntlets, or guards for the hands, but never seen any representation of them. A stiff leather cuff, like that of a coat, with a slit on one side, appears to cover the sword-hand of an ancient Grecian figure, engraved by Strutt. Plate II. fig. 10, is the Roman signum or principal stand- ard for the infantry.

CHAP. II.

Or THE ARMS AND ARMOUR OF THE BRITISH ISLES.

The early Britons had merely bows and reed arrows, with flint or bone heads, quivers of bas- ket-work, oaken spears and javelins, with hone heads fastened by pegs, a flint battle-axe, called bwyelltarvau, plate II. fig. 14 and 17, and a cat, or four-edged oaken c'.ab, fig. 16 and 19. The Phoenicians taught them the art of manufacturing metals ; and then the heads of the spears, javelins, and battle-axes were imitated in bronze, i. e. copper and tin mingled. The javelin, called gwaew fon, or fonwayw, had its blade generally a foot long, of a sword form, with an obtuse point, and short expanding base, and nailed in a slit of the ashen shaft, see fig. 15; the flat-bladed one of Phoenician introduction was called paled. They had also a broad-edged lance, leaf-shaped, called by the Irish lagean, and by the Britons llavnawr. See plate II. fig. 18. The Caledo- nians had a ball, filled with pieces of metal at the end of their lances, in order to make a noise when engaged with cavalry. This was called cnopstara. The third era of spears and battle- axes is, when, in imitation of the Phoenicians, they had shafts, into which the staves were fitted. All these weapons were of bronze, and in the Roman-British time were exchanged for steel, which marks the last era.

Their first body-armour was skins of wild beasts, (say rather of the

brindled ox,) which, Tacitus observes, was exchanged after the Ro- man conquest for the well-tempered leatherr cuirass, an armour which continued till the Anplo-Saxpn era. Tacitus also mentions the

long-swords and small targets of the army of Galgacus, still retained in the claymores and targets of the Highlanders. The spatha-, or two- handed swords of the Gauls, were used both by the Britons and Irish, and were called cheddyv-hir deuddwrn by the former, and dolaimghen by the latter. The Irish had both straight and curved swords ; the Britons straight ones, less than two feet ,in length, both kinds always of bronze. Plate II. fig. 20, is one. The sword was suspended by a chain, and the hilts seem to have been of horn. The scythe-blade of bronze an- nexed to the handle of the covinus, or war- chariot, was about thirteen inches long. After the Phoenician intercourse the shield was of bronze, retaining its circular form, and flat, ra- ther more than two feet in diameter, ornamented with concentric circles and knobs, and held by the centre. See plate II. fig. 13. Their coins represent mounted warriors with scull-caps. The ornament of the Britons was the torque of gold, silver, or iron. There is also reason to suppose that the Britons used wooden slings. The cavalry had no saddles. The chiefs fought from chariots of which the essedum, with two horses, was the most famous. The covinus, with the scythe- bladed axles, was drawn by one horse only. It rud flat circular solid wooden wheels ; the body of box shape was of wicker, and the driver stood upon the shafts. The Welsh were famous archers; their bows were made of wild elm but stout, not calculated to shoot arrows to a great distance, but to iiillict very severe wounds in close fight. Their arrows would pierce oaken boards four finders thick.

Spear-lirads in a sheath of wood have been found in barrows; but some of these weapons were rather perhaps ornamental daggers or knives. They are all pyramidal, narrowing at the base; those in bronze have the shaft, in which the wood enters, riiniiiiiu' up the middle of the blade to the point. Iron spear-heads of a simi- lar form, but without the shafts mentioned, have also hern found. Spear-heads with rivets were kept in a scabbard of wood. Ossian, in his ('ob i a- Don: i, mentions a youth with a shield and pointless spear; aii'!, according to Macpherson, if a man, m on landing in a strange country, came with bis sp-'ar forward, it, betokened hosti- lity ; it' lie traiK-d it behind, friendship.

In the Wiltshire burrows have been found: 1. a two-ed'jed sword two leet

six inches long, and an inch ami three quarters \ ide ; 2. one of iron, which originally bad an oaken handle, the H-'-lo beinu' about eighteen inches long, two wide, and single edited ; .'!. another (\enty inches long in the blade, and two inches wide ; the handle set in wood, without a guard, double-edged, and ter- minating in an obtuse point. It had a wooden scab- bard. Hi ass swords have been found in Wales; some Mat, some quadrangular, several gilt; the bundles piobably of uond. They were from one two lert iomr. See (.louirh's Camd. ii. 554. Tin- Unions bad als< > a (laager, the tyx£t~ ,-ir of the ,M;eat;c in Niphilin, and the dirk of Highlanders. The (iauls had very large von I; but \hetbiT (be one duc_r up at Long, it-ill Abbeville, wa< tin1 *|'ath:i, the long two- uinded swoid of Galu'acns. the en-us sine mu-*

crone of Tacitus, and that of Xiphilin, is no clear. That has been called the Highland clay- more ; but the more ancient weapon, the clay- more, properly speaking, was a great two-handed sword used by the Highlanders; while that adopted by them more recently was called the clay-beg, or little sword. When the two-handed sword was disused, the distinction ceased, and the word claymore was indiscriminately applied to all. The modern basket-hilted broad sword (the basket being used to supply the place of a gauntlet) seems to take date with the reign of Elizabeth. The two-handed swords of later eras had a different origin. The British sword in Dr. Meyriok is leaf-shaped, without a guard, and a truncated cone handle, ending in a coro- net-formed knob.

The battle-axe, or bwyalt-arv, had a single blade, in shape like the modern axe. The cat or club was of two kinds, one with a lozenge head, the other with a mushroom knob, serrated.

The shields of the Britannias on Roman coins are oval, with a spiked boss, and a rim sometimes studded. Others are plain, or have an ox's head, or S. P. Q. R. The umbo of a shield found in a barrow was a concave-sided half cone, ending in a knob. Dr. Meyrick's shield was excavated in Cardiganshire. The supposed curious one of wood, found at Hen Dinas in Shropshire, near a Roman foot in diameter, bound round with iron, and covered with iron net-work, and having the inside lined with three coats of leather, and furnished with a handle or strap to pass over the arm, with an umbo four inches long, terminating in a point, is pro- nounced by Dr. Meyrick to be a buckler of Henry the eighth s time. Ossian says, that he was de- clared General whose shield sounded loudest upon striking. Plate II. fig. 21 and 22, are Bri- tish and Gaulish helmets given by Dr. M.

The Anglo-Saxons, says Dr. Meyrick, un- der Hengist and other followers, wore many of them coriets, i. e. loricae of leather, and pyrami- dal four-cornered helmets ; armour probably ac- quired through the alliance of their

fathers with the Romans, under Carausius and his succes- sors. See plate II. fig. 24, 25 ; fig. 23 is one of the Saxon helmets. Hengist is said to have had scale armour ; and it plainly appears that the early Anglo-Saxons had four-cornered helmets with serrated crests ; broad-bladed spears, and convex shields, with iron bosses, terminating in buttons. They had also swords and daggers. In the mid- dle of the eighth century, they adopted the Phrygian tunic, covered with flat rings. After the conquest of England the lorica fell into dis use, the soldier appearing with only a shield, helmet (in general of leather), sword and spear. Towards the end of the ninth century, the lea- thern corslet, formed of hides, (called corium or corietum), was the armour generally used. See plate II. fig. 27. These were adapted to the shape of the body, and consisted of either one or more suits, put on over each other, the upper- mdst being shortest, and each terminating in leaves like a fringe; or else one suit with these jagged lambrequins dependent from it. When the tunic supplanted the lorica, the Roman pectoral or breast-plate half beaph or beojiˆ, 'neck-guard,

hneort-beben, ' defence for the breast,' and bneopr-riocc, ' breast-plate,' was still retained. The form or materials are not ascertained. Dr. Meyrick thinks, that the vague accounts imply sometimes metal, sometimes wool or hair. Leg- guards, composed of twisted woollen cloth, also occurred among the early Saxons.

*Dr. Meyrick and Strutt observe, that the Eehriyn£e*r> byrin, ringed byrne, which appeared in the eighth century as a tunic of leather, covered with rings, sitting close to the body, with three quarter sleeves, and descending to the knees, was appropriated to kings and principal chieftains. The custom of the Franks confirms this opinion,, and also shows that they adopted this ringed cuirass from the Gauls (however originally Phrygian); for the Britons called it mael, and we are therefore justified in applying to it the French ' cotte de Mailles,' ascribed to the Gauls, especially as the former nation first wore leathern cuirasses like the Saxons, and the soldiers none at all till the next race of kings, which commenced in 752. This tunic of rings became afterwards acomplcte cuirass, sittingclose to the body, and generally terminating with it. The Cyne-healm, or royal helmet of the Anglo- Saxons, has the crown upon a casque ; but that of the nobility is commonly a cone made of metal, which form lasts till the conquest. Sometimes it takes the form of the Phrygian bonnet. The soldiers' head-covering appears to have been a mere cap of leather, with the fur turned out- wards. The form of their shield was oval, but of various sizes ; from a magnitude sufficient to cover the body, to the diameter of a cubit. They are*

generally embellished with rows of studs in the form of a star.

The Anglo-Saxon swords were large and long, of iron or steel ; the hilts of silver or gold ; some- times the sword was suspended from the shoulder, but the prevalent fashion was to gird it upon the side. The sword-belts were often not distin- guished from the common girdle, with which the tunic was usually bound; yet this was not always the case ; and the Saxon writers speak of them as adorned with gold, silver, and jewels. There were several sorts of swords ; the sharp- pointed, the pointless, the two-edged, and the broad-sword. The seax was of the form of a scythe ; and later swords of the Saxons and Danes were short and curved, slung by a belt across the right shoulder. Fig. 28, plate II. is the large shield used in this country by the early Saxon invaders ; behind which are two Anglo-Saxon spears and two swords; above it Edward the Confessor's crown-helmet.

Their spears are of three sorts, the war-spear, the boar-spear, and the hunting-spear; but how they differed from each other is not known. The heads of the Anglo-Saxon spears are exceedingly long, and sometimes dreadfully barbed.

The boiv is said not to have been a weapon of war among the Anglo-Saxons ; but it was used by the contemporary Franks, as the Salic law shows, though historians have advanced the con- trary. They used poisoned arrows ; and thus de- stroyed the army of Quintius. The Anglo-Saxon bow was of the form of the Grecian, though longer. The distinction of Danish from Saxon armour

is very simple. The Anglo-Saxons wore their armour either as a tunic or cuirass, the Danes as a tunic which hung over pantaloons. Their swords were inscribed with mysterious charac- ters, and called by names which might inspire terror. They also pretended to enchanted swords, which would pierce the best armour. Plate II. fig. 26 and 29, are Danish battle-axes ; 30 is a Danish shield ; 31 is a spear of Canute ; 33 that of soldiers in Canute's prayer-book ; 32 and 34 are a Danish sword and stone-mallet.

We now arrange the Norman and English arms and armour in the order of each succeeding reign , WILLIAM I. from A.D. 1066 to 1087.— The body-armour was of two kinds, leather and steel, with the conical nasal helmet. The former seems to be an improvement of the Anglo-Saxon ; and the latter, in one of its forms, together witk the helmet, to bear a strong resemblance to that of the Danes in the time of Canute. The leather, which consists of a tunic, with many overlapping flaps, has close sleeves which reach to the wrists, and was called corium and corietum. The steel armour consists of flat rings placed contiguously,, such as had been worn by the Saxons ; the mascles, such as had been adopted by the Danes It appears to

have been extremely heavy. The Normans, as depicted in the Bayeux tapestry, are for the most part habited in armour, which forms both breeches and jacket at the same time This Dr. Meyrick takes to be the habergeon. The helmet of the Conqueror is of Greco-Roman fashion, conical, with a knob at top, and a rim somewhat resembling a coronet below, with or without a flap or neck-guard.

The principal weapon of the Normani was the lance, to which was sometimes attached the gon- fanon, and sometimes the pennon; other wea- pons were long cutting swords ; the pil, pilx, or pile, machue, club, mace, bow and arrow. The pil or pile (a weapon of the rustics in the army) was a piece of wood, cut smaller at one end than the other, resembling the Irish shillela, or more probably the pilum or- dart. The machue was something of the club kind, but with a large head. Piles and maces were weapons of the Serfs. The adoption of the mace by the knights in general was later than the Conquest. The quivers, which were of a conical form, were worn sometimes on the hip, sometimes on the left shoulder. The bow only became a master arm under the Normans. The Saxons trusted to their infantry and close action ; the Normans to their cavalry. The Normans first introduced the art of shoeing horses as at present practised in England. The Saxon saddles were little more than cushions ; but the Norman, of Asiatic fashion, rose very high before and behind. The Norman spurs differed but little from those of the Franks and Saxons. The neck was somewhat shorter. The pyramidal head was rather concave on every side, which afterwards suggested the ring and spike of the pricked spur ; and the shanks, in- stead of being straight, were curved. The port- cullis was introduced by the Conqueror. The balista was probably only a staff-sling.

WILLIAM II. or RUFUS, from A.D. 1087 to 1 100. — Nothing new in any part of armour ap- pears in this reign, except perhaps the Chapel de

fer, of Saracen origin. It exactly resembles a Tartar cap, being a cone, which projects beyond the head. In offensive arms two curious wea- pons occur. The first is the morning star. The people of South Wales fought with staves, to which were attached iron balls covered with spikes, while those of North Wales had only swords and shields. This singular weapon was probably introduced by the Normans. The second was the oncin, a staff with a hooked iron head, somewhat like one horn of a pick-axe ; the use of which was very serviceable for breaking through the apertures of the

mascles.

HENRY I. from A D. 1100 to 1135.— The hau- berk, as before, with its hood of the same piece, but with sleeves fitting close to the armour, terminating with gloves, manakins, or mufflers, which cover the outsides of the hands and fingers. It also reaches to the knees, and is finished by a broad gilt border. The shoes and hose of the former reign were now abandoned for coverings of the feet and legs made all in one. These were called chausses, and fitted close like modern pantaloons, fastening over the soles will) straps. The mascles of the hauberk and chausses are sometimes square, Itustred armour seems to have grown out of the ringed. It consisted of one row of flat rings, about double the usual size, laid half over the other, so that two in the upper partially covered one below. Scaled armour also occurs ; as does trellised armour. This was made like a vest, with straps of leather laid upon it, :md crossing in opposite directions ; these, by passing over each other, leave large intervening squares placed angularly, in the centre of each of which appears a round knob, or stud of steel. The tunic was of cloth, and in all probability a small plate of iron was fastened within by each stud, while the leather straps were intended to cover the parts at which they met. This light armour appears to have been taken from the Anglo-Saxon cross-gartering, and to have been copied by the Normans. The surcoat may be placed under this reign. The helmet, instead of being exactly conical, has its apex on a line with the nasal. The cylindrical helmet, worn obliquely, with a face-guard of a plate perforated with two crosses for the eyes, nostrils, and mouth, also occurs. The earliest specimen is perhaps that of Charles the Good, earl of Flanders, in 1122. This helmet became more general under the reign of John. In ad- dition to the usual Chapel dc fer, or wide iron conical cap, as well as the nasal heaume, we have now the chap de mailles, or cap of mail, a high tapering cap, but not pointed ; and com- posed, like the hauberk and chausses, of rings set edgeways. Besides this, we have the first at- tempt at a movable visor, copied from Roman sculpture. It is perforated, and the helmet has attached to it cheek-pieces, hollowed out under the eye ; so that they almost approach the nose. The practice of suspending the shield from the neck by a strap called guige and gige, a practice certainly introduced by the Normans, came into general use in this reign. The earliest specimens of hereditary armorial bearings also now appear on the shield ; and the saddle-cloth first occurs in this reiyn, and the long-pointed toe used by the kimrhts.

Of Offensive Armt. — The blade of the spear, ornamented with fluted work, appears to be at least eight inches broad, and twelve or fourteen long, being of the kite shape, inverted ; the jagged or barbed form used by the Saxons having gone quite out of fashion. The gisarme and vVelsh glaives were weapons of this era. The gisarme was distinguished from other

weapons of the bill kind by a rising spike on the back. The Welsh glaives were cutting weapons ; one edge being much in shape like the blade of a pen- knife, and had generally an ornament on the back.

STEPHEN; from 1135 to 1154. — The tegulated armour, consisting of several little plates, now appears covering each other in the manner of tiles, and sewn upon a hauberk without sleeves or hood. The shield of Stephen on the great seal was made to curve outwards at top. The standard on a carriage, of Asiatic origin, was now introduced here. The plastron de fer, an iron plate placed under the hauberk to raise it from the chest, the pressure of the former having been found injurious, was also introduced in this reign.

HENRY II. from 1154 to 1189. — Little or no alteration in this reign.

RICHARD I. from A.D. 1189 to 1199.— Hau- berk of rings set edgeways down to the knees ; chausses of the same ; helmet either conical with its apex somewhat rounded, or cylindrical (which first came into fashion in the latter part of this reign) with an aventaille to protect the face, cy- lindrical, with two horizontal slits for the eyes and mouth, and almost meeting behind. In later times the aventaille was of mail, and attached to the hood of the hauberk. The flat cylindrical helmet, with rather concave sides, of Geoffrey de Magnaville, in the Temple church, is of this reign. Horns of balain, i. e. whalebone, were sometimes annexed to the helmet. The chapel de fer was also worn. Armorial bearings on the shields were quite common.

JOHN; from A.D. 1199 to 1216. — John is the first English king who appears in a surcoat, &c. worn over a hauberk of rings set edgeways. Surcoats, says Dr. Meyrick, seem to have origi- nated with the Crusaders for the purpose of dis- tinguishing the many different nations, and to throw a veil over the iron armour, so apt to heat excessively when exposed to the rays of the sun. They were at first without any mark of distinc- tion, and either simply of one color or variegated. The haketon (quilted) under the surcoat was much esteemed under this reign. Specimens will be found in the monuments of Sir John D'Aubernon, in Stoke Dabernon church, Surrey, and John of Eltham, in Westminster abbey. King John appears in a cylindrical helmet, with- out any covering for the face; other instances have the nasal revived and cheek pieces. The effigy ascribed to Robert Curthose, in Gloucester cathedral, which cannot be prior to this reign, but looks much more like the work of the next, perhaps presents the earliest specimen of a co- ronet worn with armour, and of chaussons or breeches over the chausses. The spur of this period is fastened by a single leather, which passes through an aperture at the end of each shank and buckles on the top of the in.

HESRY III. from A. D. 1216 to 1272.— Of tne body-armour of this period the pourpoint ori- ginated in France. The threads seem to have been knotted outside, so as to form a kind of embroidery. It had sleeves, and occurs as early as the twelfth century. It was called also coun- terpoint. The military, temp. Henry III. and Edward I. are almost always depicted in it. A hauberk and chausses of it first appear on Henry's great seal It was probably adopted from the rusting of metal armour during service ; and continued to be used from the middle of this to the conclusion of the next century. A hauberk with hood and chausses of flat contiguous rings appears, and is perhaps the latest example of such armour being worn. The heavy cavalry were covered with mail, the face and left hand excepted. The knights wore gamboised armour with surcoats ; and the men at arms had poleyns or knee-pieces. The spearmen were protected merely by pectorals or tunicles of scales thrown over their tunics. The archers, both mounted and on foot, had hauberks of edge-ringed work with sleeves to the elbow, over which were placed leathern vests (called cuirenae or cui- reuiae, or the jacks or jackets which originated with the English), each vest being ornamented with four circular plates. There also occur ringed armour, the rings set edgeways all one way ; whereas, in general, they were sewn in so that one row might lie to the left and another to the right alternately. The single chain mail was introduced in this reign from Asia, where it is still worn. The first great seal of Henry III. represents his helmet as with the visor or aper- ture for sight not in the aventailie but in the helmet itself, while the latter has merely perfora- tions for the breath, and is therefore fixed at the lower part. His second seal exhibits him in a cylindrical helmet of a more perfect form, the aventaille, which contains both the before-men- tioned conveniences, being apparently made to open and shut by means of rings and a clasp. Some horsemen appear with visors, consisting of a convex plate of steel, in which is a cros> with perforations for the sight and punctures for the breath, which plate is tied upon the head. Scull- caps occur, but are not the latest representation; cylindrical helmets were common. During the latter part of this reign the shape of the helmet underwent a partial change, i. e. into a barrel form without the convex sides, or that of a trun- cated cone on the top of a cylinder ; and as the apertures for the sight were horizontal, and pierced in the transverse part of a cross, which ornamented the front, it was probably occa- sioned by the Crusade. The change in the form of the helmet occasioned a corresponding one in that of the hood, which we find from that pe- riod takinsr the shape ot the head. In the emeries of William Longespee, earl of Salisbury, the hood of mail covers the mouth. The flat coif worn in this reign was nnde of interlaced chain. The Saxon convex shield had been used as late as the reign of Stephen. The buckler suc- ceeded in the thirteenth century, which,

though circular, was flat or nearly so. The shield of the era is semi-cylindrical held by the hand in the caˆ.iy of the umbo. The lower part was

called soute. The cointise or military scarf worn by knights (coming over one shoulder and under the arm of the other) was introduced in this reiam. The alcato and collarium formed armour for the throat. The first was of Arabic origin, and derived from the Crusaders. The latter was probably part of the capuchon or hood, which covered the throat, made in three folds of cloth, or a collar of steel. The epauliere was a col- lection of plates placed upon the shoulder. Ca- parisons of horses of the long flowing kind first occur in 1219. Spurs with rovvels appear, from the engraving of his seal, to have been contem- porary with Henry III. but none occur on se- pulchral monuments before the time of Ed- ward II.

The martel de fer, a hammer with one point shelving, probably first used by Charles Martel of France, was common in this reign. The slingers preceded the army, and began the battle with their slings. They do not appear to have had any kind of armour, being generally formed of the poorest classes in society, and carried merely their sling, consisting of a thong fastened to the end of a staff, from which they threw a very large stone. The cross-bow men had a short sword, with at least a crooked-ended scab- bard, called baselard. The epee a 1'estoc, or stabbing sword, of French origin, was hung from the pommel of the saddle, and in the thir- teenth century occurs the earliest instance where it accompanies the long sword. The German swords were extremely large, and large swords were now very fashionable. Flails, as weapons of war, and two handed swords, were in use in the German army as late as the time of Maxi- milian I. The lance and sword, though con- fined to freemen, were yet allowed to serfs on joining the army, though not on ordinary occa- sions. There were also in use the faussar, a small curved sword with its edge inside, of clas- sical antiquity, or perhaps the same as the faul- chion. The geesum, which Dr. Meyrick thinks was a bladed weapon, not a spear ; the haunet, a kind of lance ; the guibet, a broad-bladed wea- pon, resembling a pointed spud, probably the same as the anelas ; the anlace or anelas, a short knife with a very broad blade tapering to a point, and the besague, or cornuted short staff.

EDWARD THE FIRST; from 1272 to 1307. — The compactness and pliability of the chain- mail soon rendered its use almost universal. Clamucium, camisia, chemise de maile, corset o mail, were several names of the shirt of mail. The men at arms bad on their heads steel hel- mets, and were also clad in the wambais, i. e. a tunic wadded with wool, tow, or old cloth, and stitched longitudinally. The parallel lines are well denned in the knight in Hitchendon church, Bucks. Upon it they wore an iron shirt, that is, a garment, formed of iron rings inter- laced, through which it was impossible for any bow to send an arrow so as to wound a man. The

gambeson was also worn by itself, as well as under the armour; for knights appear in gamboised coats and chausses. The monument of Thomas de Berkeley, in Gough's Monuments, who died in 1243, contains the earliest speci- men if the camail, attacked by a cord to trie

round scull-cap. It was the hood deprived of its coif, and was so named from its resemblance to a kind of tippet made of camel's hair, that •was styled by the Greeks of Constantinople Ka/ifXav«ov. Gloves with separate fingers, and covering the wrists, first appeared in this reign, ind may be considered as the prototype of iauntlets.

Helmets. — A scull-cap, made in the form of the coif de mailles, was invented by Michael Scott, domestic astrologer to the emperor Fred- erick, and was called coiffe de fer, Cerveillera, and capitellum de Ferro. From the top of these scull-caps sometimes depended a bunch of horse- hair. The basinet, formed like the human head, was not a helmet, but worn under it. Some- times visors were affixed to them, and then they served for hehnets ; others have an aventaille movable on pivots. In one monument (Meyrlck, pi. xxiii. p. 161.) the Cerveillere is 'worn under the coif. This is probably the last monument of the rings set edgeways. The prototype of the conical helmets, introduced in this reign, is somewhat like the Phrygian bonnet, and has a square compartment, pierced with round holes opposite the face.

The Tdsticrt;. a hcad-ˆipce, intended for a crest, fixed on the head ot the horse between the ears, first occurs in this reign, and chanfrons to fit on the horses' heads, are first mentioned about the year 1'295. Little bells were hung round the bridles of the Just players. Interlaced chain- mail \MIS also used for horse armour. Of of- fensive arms the cultellus served both for knife and dauber ; the faux were in the later eras called hills; the pile is the iron ferrule which covered the arrow ; in a general view, a dart. Tin' pile, often called pelote and pilote, also signified a dub, and seems to have been the weapon used by the archers before they were enjoined to carry the mallet or maule; the croc is somewhat like the onein, but more bent down in the form of a shepherd's crook; the dagger is worn with the sword as early as the time of Kichard 1 . — Swards. The cross-bar in this reign is otten made to descend on each side; the canipulus was a sort of dagger-knife ; the estoc was a little sword, not that worn with the coutel or military knife; the scabbards were adorned witli small shields of arms ; the falchion is of this age; and the pole-axes are now of the form of a broad axe; blade on the end of a pole, and a spike juttinu out on the opposite side. The arms ot the irallo-trlas.-ts or Irish infantry at this period consisted

of shin-pieces, but of leather only (introduced by the Danes, and retained ever sincej ; a helmet somewhat conical ; a tu- nic wi'Ji .short sleeves ; and a gorget, which just covers the shoulders. These last are either quilted, or merely plaids. For arms, some had a battle-axe, others a sword suspended by a belt.

KiAv.Mjn II. from 1307 to 1327. — Now com- mences the mixed mail and plate. The Flo- rentine annals consider the year 1315 as re- markable for a new regulation in armour, by whirl) every hoiisenrm v.ho went to battle was to ha\e his helmet, breast-plate, gauntlets, nusH's, Hiidjambe<. a1' of iron, a precaution

which was taken on account of the disadvantages which their cavalry had suffered from their light armour at the battle of Catina. This usage did not find its way into general practice in Europe for at least ten years after. The armour at the close of this reign consists of a conical helmet, a surcoat of arms, complete mail with elbow-plates and knee-pieces of plate. The archers, mounted archers, and cross-bowmen, wore hauberks, and chausses of gamboised work, with surcoats over them, and conical helmets with visors affixed, each made of perforated plate. The gorget is called goccon at this period, and greaves of one plate were now introduced.

The helmet on the great seal of Edw. II. is of a cylindrical form with a grated or pierced aventaille and visor attached. The clasp which fastens this on the right side is very visible ; and it is probable that on the other it was retained by hinges. The basinet at first was worn, as being lighter than a helmet, when the knight expected an attack, but wished to be prepared. When visors were made to them they, for a time, superseded the use of the helmet. The chapella de fer of this era is of a sugar-loaf form, with sides rather concave, and a ridged rim. Helmets round, with barred convex tnnbrils ; heraldic crests and the cointise floating behind, and the barbiere, a head-piece whence a person wearing armour was said to be barbed, also occur. The offensive arms now in vogue were — the scimitar borrowed from the Turks ; the thin-bladed dagger, called rmsericorde, because more easily inserted into the interstices of the armour ; the falchion, a large sword ; the war-knife or dagger ; the mell, maule, or mallet of arms, and the godenda or godendac, a kind of pole-axe, with a spike at its end ; the javelin, javrelot, gavielot, or gave- lot, very like a dart, but with no feathers ; the small mace, called mazara, by the French ma- zuete, by the English mazuelle; the bill or fal- castrum ; the gisarme was used in 1291 ; but it is recommended in sea-fights, that there be scythes firmly fixed to very long spears, from which originated the bills at this time ; the ca- tajae, barbed darts or spears, each having a string at the end to recover it; and the mace, with four sides, armed with iron nails. The infantry were armed with spears, bills, gisarmes, and pole-axes.

The pieces of horse armour were the flanchiere, which covered the flanks ; the piciere, a breast- plate ; the crouppiere, the covering which went over the horse's-tail, and hinder parts ; gam- boised housings, with armorial bearings on them ; esquivalents or estivals, armour for the legs ; chanfrons or champfreins, pieces of steel or leather to cover the horse's face; testieres, distinct from the chanfrons, and meaning the plate betwixt the ears, which was affixed to the chanfron by means of hinges. From the con- quest to the time of Richard III., says Dr. Mey- rick, the fashion was to ride with the toes down ; after which period the heel was dropped and the toe raised.

EDWARD III. from 1327 to 1377. — Armour in this reign became exceedingly splendid, and occasioned many knights to be killed, purely for the sake of obtaining it. In all the figures. PX-

ccpt in the rare instance of cuirasses, the plate appears to be limited to the limbs, and that but partially ; the shoulders and elbows have circu- lar or other plates ; some pieces down the arms ; the legs, feet, and knees have plate ; the body and throat are in pourpoint or gamboised work, or mail, as we loosely call it. Cuirasses also occur, and in 1362 an author speaks of double ones, the prototypes of the breast-plate with placcate, and such as were worn in the time of Henry V. The helmet is conical. In general not a surcoat, for that had been relinquished through its length entangling the wearer ; but a cyclas, painted with the armorial bearings, covers the body-armour. The cyclas was succeeded by the jupon, gyppon, jupas, guipone, juppel, alguba, an exterior garment of Moorish origin, made of silk or velvet, charged with the armorial bearings. Sometimes it was laced down the side. Some light is thrown on the armour of this reign by the woman's gambeson ; the body is like a pair of stays, to which is annexed a ' square petticoat, like a bell, stitched horizontally ; the women wore it to regulate their shape. The origin of leaving off the single hauberk, and sub- stituting plated armour, was the weight of the chain-mail with its accompanying torments ; this was sometimes so great that the knignis were suffocated in it. Most of the army during this reign consisted of stipendiary troops. Hobilers were in much request. Their arms were a horse, haqueton, or armour of plate, a basinet, iron gauntlets, a sword-knife or lance. There were also hobiler archers. This sort of troops lasted till the time of Henry VIII. The men at arms, a title which had been in former reigns some- times conferred on the heavy-armed infantry, under this became of a mixed character, express- ing the knights fighting both on horseback and on foot. They often performed their chief service while dismounted. Froissart calls them lances, from their being armed with this weapon ; and this latter

name became afterwards peculiarly appropriated to them. The armour of the cross- bowmen, at this period, consisted of scull-caps, plate on the legs and arms, and jackets with larse pendant sleeves.

The king on his seal has a cylindrical helmet, with a knight's cap and crest upon it; but the usual form at this period is pointed. The basinets were formed into a sharp point, with a camail attached; and sometimes had an ornament on the peak resembling foliage. The coiffette of plate was a smaller or lighter kind of head-piece. The visored helmet usual for battle is conical, with a very singular ventaille, a wen-like protu- berance, to cover the face. The herne-pan, or iron-pan, seems to have been a kind of scull-cap worn under the helmet. The cylindrical helmet appears not to have lasted much longer than this reign. The pavise was a large covering shield, convex and heater-shaped, protected with broad bands or edgin?s of iron, and embellished with arms. The shields were generally of wood, co vered with a skin, called paune, pane, penne, and penna. A broad band of iron was frequently laid on near the edge. The belt by which the shield was suspended is called giga, guige, or gui2gia.

The oitintive ar«j mcˆt in vosue were (omitting

those mentioned under preceding reigns) pob- axes, maces, masuelles, battle-axes (often sus- pended from the bow of the saddle, instead of the short sword, called estoc). Short swords, broad-bladed ; some with texts of Scripture in- scribed on them, a fashion which continued to the time of Henry VIII. clubs and shields, glaives, half-glaives or glavelots, gisarmes, and hand-gisarmes. The saddle of the horse-armour was like the back of an arm-chair, the cloth very splendid. The stirrups in the form of Gothic ellipses, and called sautoures ; whence Du Cange supposes was derived the sauloir or saltier in heraldry. The caparison of silk, which was thrown over the poitral and croupiere of mail, was called cointise. In this reign prisoners of war surrendered by delivering up one of their gauntlets. It was the practice of the esquires to bind up the wounds of knights, when they were hurt. Men of rank, killed in battle, were carried off on their shields. The garter, as a badge of the famous order, seems in reality to have been a mere symbol of union ; and it is not represented on monumental military effigies, till after the time of Edward III.

RICHARD II. from 1377 to 1399.— The tabard was a pure military garment, which seems to have become more general during this reign, and continued in fashion until the time ot Henry VIII. It was a kind of tunic, which covered the front and back of the body, but was generally open a the sides, from under the shoulders downwards. It was emblazoned like the surcoat with armorial bearings. The long tabards were peculiar to the English, and some- times called midlags, as they reached to the middle of*

the legs.

The helmet now most commonly used in battle is an ogee cone with a peaked penthouse umbril, and long neck flap behind. The invention on the edge of the basinet for covering the cord of the camail was not introduced till this reign. Tilting helmets vary, but they always appear very much to be matters of fancy.

The sword and dagger were attached by chains from the military girdle. The baston was a truncheon, or small club, used instead of the mace in regular fight. The glare consisted of a large blade at the end of a pole, and differed from the bill in having its edge on the outside curve.

HENRY IV. from 1399 to 1413. — In this reign commences the armour of plate. The effigy of Sir John Lysle who died in 1407, on a brass plate in Thornton Church, Hampshire, and en- graved in Cough's Monuments, is the general fashion of this and the next reign. No jupon is worn over it, nor any chain apron at the bottom of the tassels, but these are increased in number, and therefore extend lower. Not only are there the plates below the knee-caps, but correspond- ing ones are placed above. There is no mail at all used, but instead of the gussets to protect the arm-pits, circular plates are attached by points, which are tied at their centre. The basinet has nothing to protect the face, from which we may conclude that the uniber was put on and taken off at pleasure. To the elbow pieces, but ou the inside, are attached large fan-like ornamenui to protect the arm when straightened The git-

die is not used, but, instead, a baudrick or orna- mented belt, coming from the right hip to the left thigh diagonally, and to this is appended the sword, a curious circumstance, as it shows the shape of the baudrick at this time. Chire- feddin, a Persian living in 1401, describes the cavalry of Europe, all armed in steel, from head to feet, so that nothing can be seen but their eyes ; their armour being fastened by a padlock, which, except they open their cuirass and hel- met, cannot be taken off. Froissart somewhat sanctions this statement by observing, ' armed from foot to head,' because armour when put on was begun at the feet.

The improvements and alterations can best be decided by investigating matters in detail. The first approach towards making pauldrons (the single pieces which cover both the shoulder and upper arm) appears in the several over-lapping shoulder-plates or epaulieres, being extended greatly in front.

The plate below the genouil- lere likewise occurs, but those worn below the knees are much larger than those worn by the Black Prince, and therefore they were necessarily fastened by a strap, which passed round the jamb. Tuilles, or plates over the thighs, now also appear for the first time. The lower ends of the juppons were made to terminate in various kinds of leaves, and the cloaks and sleeves are so peculiarly marked by indented edges, as to be distinctive characteristics of this and the next reign. The tilting helmet assumes a new form. The upper part is no longer a truncated cone, but is convex over the head, and the face- covering, anciently called the ventail, is made to project considerably above the ocularium, or aperture for the eyes. On the top of the hel- met is a crest formed of feathers, not a plume, which did not come in till the next reign. The •war-helmet, so prevalent soon after this reign, is higher in the apex, and shows the intermediate form of the uniber (that which contains both bea- ver and visor), between the conical one of the early part of this reign, and the convex one of the next. Collars of knighthood were introduced in this reign: no earlier instance appears. Collars of SS. were not taken from St. Simplicius but more pro- bably from Souveraine, the motto of Henry while earl of Derby, and seemingly prophetic. Footed stirrups occur in this reign ; the solerets being omitted. Bridles with bells, and necks of horses thus ornamented were now also introduced from Asia. The offensive arms were the Besague, a larˆe martel, seemingly more used for throwing than for close combat ; the harsegaye, a kind of demi-lance, the same as arze-gaye, and the favo- rite weapon of Greek troops at this time, and evidently of Asiatic origin.

HI.MIY V. from 1413 to 1422. — Black armour was used in this reign, not only for battle but for mourning. According to some illuminations the archer of this period has a cuirass or hauberk of chain-mail, with a salade on his head, which was a kind of basinet, but projecting much behind, and a sabre suspended at his side. Accord- ing to Dr. Meyrick, there appears now to have been two kinds of body-armour contemporary; on>% a flexible cuirass, made of overlapping bands of steel, and of the fashion of a pair of stays; the other a globose breast-plate. The latter was

introduced from the Low Countries, and first occurs in paintings of the earls of Holland, which appear to have been done at this time, and are now at Utrecht. The first steps towards ornamenting the breast-plate, viz. curved lines ending in scrolls, appear in this reign; and the helmet presents sometimes a wreath on the basinet and an inscription on the fore-head plate.

The coutel is a weapon of this period, having a sharp edge on one side, and the point forming somewhat like a right angle. It has a handle of stag's horn, below which is a fox or squirrel, or whatever may be the cognizance

of the owner, and was generally worn behind, just over the right hip. Swords for tournaments were larger and heavier than those for war. A pole-axe, or staff, with a cheese-knife or crescent blade, was carried by commanders, without any variation, from this reign to that of Edward IV. The badelaire, or baudelaire, was a little portative •knife. Two-handed swords witrL flaming blades, though never common, first occur in this reign. They were probably intended more for state than war, though they certainly have been used in battle.

The manefaire, or protection for the horse's neck, first appears on the great seal of Henry V. The chanfron or champfrein took a different form from that of the last reign, and not only wraps round the nose, but has cheek pieces. It how- ever reaches only to just above the nostrils. On the top of the chanfron, or rather on that part of it which now acquired the exclusive appellation of testiere, are placed the fore-legs of the lion, the king's crest. On all preceding occasions the crest had been fixed on the head-stall. The bow of the saddle is protected by a plate of steel reaching below the knees.

HENRY VI. from 1422 to 1461. — The armour is now completely of plate. The great distinc- tion appears to be tuilles or flaps, appended by 'straps to the taces, and hanging over the upper parts of the thighs ; the pouldrons, elevated or turned up at the edges, like the standing collar of a coat, so as to form the prototypes of pass guards ; and several circular elbow-pieces, tegu- lated over each other, the largest reaching to the upper arm. The monument of John duke of Somerset, who died in 1444, affords a specimen of splendid armour. Dr. Meyrick has placed in his hand one of those pole-axes so generally used at this period, and the distinction of command- ers ; besides which he has a very long sword, and large rowelled spurs. After 1458 wearing the sword in front, and cropped hair, were intro- duced ; also several fantastic Lombard fashions in armour and military attire. Maces, feathered javelins, pole-axes, glaives, and spears, are of great variety. Splendid tents, both circular and oblong, occur. The knights invariably ride with long stirrups, and their toes pointed down, a fashion which, as before observed, lasted from the Conquest to the time of Henry VII. The necks of the spurs, too, are uncommonly long.

Tilting helmets, surmounted by crests, appear under the heads of sepulchral effigies. We find also the cappeline, a scull-cap, some visored, called steel hats, with an ornamental apex, like a fleur-de-lis, and a long slit for si

projecting brims ; the salade, called by the Italians celata. This, it has been

supposed, was so called from its concealing the head, whereas the reverse was precisely the case ; for it only covered the upper part of the head. Its origin therefore is probably from the German word" schale. Flattened helmets were introduced about this period, and continued to be much worn in the next reign, and occasionally until the close of that of Henry VII. The tilting helmet is without a movable visor to meet the beavor. The shield is now made not only to bend for- wards at top, but a smaller piece is put at the bottom to prevent the lance, when struck against it, from slipping, down and so injuring the thigh. Pavises were shields of the heater form, and convex, sufficient to cover a man inclining, who held it before a cross-bow man. They were called paniers, on account of their construc- tion, which was this : the interior was formed of osiers, over which was placed a cover of aspin- wood, or the black poplar, the wood of which is white, and very light : sometimes indeed this exterior surface was winding, and then the osiers were more closely interwoven. The talevas or talvan was a pavise of an oblong form. There were also square shields. Knights are also mentioned with oval shields or targets, and it is pro- bably from this period that we should date the introduction of the target, instead of a shield, borne by an esquire of the champion at coro- nations.

The coustille or cultellus served the purpose of a knife and dagger. The voulge or bouge was a large two-handed sword with a leaf-shaped point, and there is some reason to conclude that it was the same as the gisarme. There was -certainly a two-handed sword, but not quite so early as this period ; and this sword was used in boar-hunt- ing. Two voulges are in the armoury of Lle- welyn Meyrick, esq. having blades much wider than those of a sword, which swells a little in the middle of each side, and have the leaves as an ornamental termination at the bottom. Swords with flat circular guards occur, and falchions exactly like scythe-blades. The flagel or flail, called by the French flagau or fleau, from the Lat. flagellum, was used at this time, as well as in that of Henry III. and his son. Spears ornamented in a spiral manner occur. The espiet, espiot, espieu, or espiton, was a kind of small glaive. It seems to have been the origin of the kind of sword called the espadon, and was pro- bably a sort of sword-blade, fixed at the end of a short staff. The lance was a word sometimes used at this period to signify a banner. The javelin was used in this reign : the kind called couffort was a sort of demi-glaive. Axes with a blade, resembling some of the old halberds, also occur.*

The chanfron of the earl of Warwick's horse is (vithout cheek-pieces, but longer on that account ; and just where it terminates above the nostrils is a kind of proboscis rising upwards. This proboscis, which, after being turned up as high as between the eyes, was then bent forward, was at the close of this reign superseded by the invention of a spike, made to rise at once from between the eyes, a fashion whic'n continued as long as

that species of armour lasted, namely till the end of Elizabeth's reign.

EDWARD IV. from 1461 to 1483. — The ar- mour of this period, which seems to have passed from Italy and Germany through France to England, has the peculiarities of very globulai protuberant breast-plates ; tuilles, only one for each thigh, very large, of sharp angular form ; and immense elbow-plates; but there are in- stances where none of these appear. The men- at-arms are in complete armour, but instead of a helmet wear a capelline, the crown of which is convex, and the rim cut into angles, before, be- hind, and at the sides. Swords and bucklers used by archers commence with this reign. Bri- gandines were now first worn by the troops called Brigands, after whom they were named. The brigandine jacket was composed of square iron plates, quilted within linen, and used by the archers from the latter part of the reign of Henry VI. to that of queen Elizabeth.

The morion now first appears. The men-at- arms wore feathers in their helmets ; and scrolls, supposed in imitation of torn cointises, now occur, instead of the latter, on the helmet. The shields used by the cavalry at this period were continued with scarcely any alteration to the middle of the reign of Henry VII. One of these made of wood, covered with a skin and lined with leather, having on it a hook and rings fc« the guige, is in Mr. L. Meyrick's armoury. It is curved outwards for the convenience of the bridle-arm, has three ridges down its front, and is wider at bottom than at top. The bouche, or mouth for the lance to pass through, is at the left upper corner.

The lances of the cavalry were exceedingly long. The lances d'armes were those used by the men-at-arms in battle, in contradistinction tc those for the tournament. Coronels, pointless lances. ' Speris garneste, that is cornall, vam- plate, and grapers, A. of acise.' i. e. spears gar- nished or furnished. The halbert, if the weapon so named was really a halberd and not a pole-axe, is now frequently mentioned, though its name had long been known to the nations of the North. The waroquian was a kind of strong heavy quarter-staff, carried by the poorest class, who followed the camp. The voulge or vouges were staves, at one end of which was a long blade, pointed, but made to cut, and broad in the middle, resembling glaives. The sword- blade anterior to the middle of the reign of Henry VIII. tapered from the guard, gradually to a point. In the time of Edward IV. they were nearly flat, but in earlier times a section of them would have presepted the face of a lo- zenge. In that of Henry VII. they had a ridge on each side, and at the commencement of that of Henry VIII. instead of the ridge were thick- ened towards the point. In the army were men called coustillers or cutlers, who were armed with long knives. Large two-handed swoids were used at this period, and until the close of die reign of Henry VIII. ; also rebated swords for tilting and exercise ; from the French rebat- tre. Rebating the points of

swords gave origin to the buttons at the end of fencing foils. Spears and swords in this state were called epees gra-

cieuses, glaives courtois, armes courtoises. The gayne-painc was a sword used in tournaments.

Behind the saddle on the middle of the crup- per of the horse, on the great seal of Edward IV. is a round ball, apparently for ornament, but in- tended to enable the tilter to recover his seat and not be pushed down behind by the lance. This invention appears to have been what was called a rere-brake ; as such a thing is stated in one of the Paston MSS. as requisite for a tilter, and is described as made of, or accompanied with, a ‘ roule of leather’ well stuffed. At a later period, a large bell was substituted for this at the tour- nament. The chanfron with a spike projecting from it was adopted at least in 1467; probably this is the earliest date. It succeeded the pro- boscis, and was general from the time of Henry VII.

EDWARD V. anno 1483. — The armour on one arm differs greatly from that of the other. The figure of a man-at-arms has a shield of a singular shape (viz. a long quadrant or quarter of an oval) with the word ‘ anime’ written upon it ; and the guige or strap unbuckled. One elbow-piece is very large, and projects in a sharp point ; the oilier is formed by a small circular plate, with a spiked boss in the centre. One shoulder-piece, or pauldron, has a high turned-up ridge, the other not. The cuff of the gauntlet projects in a sharp top.

RICHARD III. from 1483 to 1486. — No higher degree of perfection was ever attained in armour than during this reign. The outline of the suit was most elegant, the workmanship elaborate, and the choice of ornaments full of taste. The monumental effigies in brass of this period fully prove the assertion. That of Sir Thomas Peyton, of this reign, which is preserved and engraved by J)r. Meyrick, is armed with all pieces, except his helmet, on which account a visored talade of tliis date is added. This does not protect the face, but when worn the lower part was supplied by the hausse-col, or gonret which was so formed on pur- pose. The breast of this armour is globular, and furnished with a demi-placard. The pauldrons are beautifully ribbed, and on the right one is placed the moton, which answers the purpose of a palette; but the ornaments at the elbows are superb beyond comparison. The gauntlets have overlapping plates, instead of fingers, and two fine tuilles hang pendent from the lowest trace. The sword belt is so disposed, that the ponderous sword may ku p in front, while a dagger is at- tached to the riuht hip.

lliMiv VII. from I486 to 1509. — The armour of the kin<4 is quite novel. It consists of an or namented cuirass in the form of a pair of stays, which terminates at the hip in a petticoat down to ihe knees ; all of which are thus described by Dr. Aleynck : ‘ The part which covers the body has a very cylindrical appearance, notwithstand- ing the convexity of the breast-plate, but is en- graved all over, together with the large puckered plates of >teel, which cover each thigh to the knee, and continue behind, except where hol- lowed out for the saddle. The><: plates are its curio-iiry, beinˆ in imitation of cloth, and called larubm-.. The toes of the sol'u rets are almost ai:d a little slit is made in the heel to

admit the spur, a mode which continued throughout the next reign.’ In this time occurs the beautiful fluted armour which had its origin in Germany ; and Jazarine jackets of velvet, &c. ornamented with brass studs, are of this era. — Cloaks were worn with armour, now and from the time of Edward II. to that of Charles I. The archers, in the illuminations of this period, are clad in a shirt of chain-mail, with great wide sleeves. The English army at this time con- sisted of men-at-arms, with their custrels also mounted, demi-lancers, and horse-archers ; and the infantry of bowmen, billmen, and halberdiers. This last kind of troops made their appearance during this reign. The cloathing of the army was white, with a red cross upon it. The cod-piece, or French baguette, came up in this reign. It originated in the flap, which became at first con- vex and then protuberant. Chain-mail occa- sionally occurs instead of tuilles ; and, as socks, annexed to the sollerets. The great change in armour during this reign was in the shape of the latter. It became square at the toe, being pre- viously perfectly round. The blade of the lance was very small. The battle-axe was at this time considered to be a royal weapon. We find horses with long feathers placed between their ears, and tassels appendent to the stirrups. Abroad, the caparison of a horse occurs in an illumination covered with music, the notes, of which are made of fleurs-de-lis, on five lines.

HENRY VIII. from 1509 to 1547. — During the latter part of the reign of Henry VII. and the early part of this, whether the armour was fluted or plain, the breast-plate had a globose form, and was terminated at top by a straight line, composed of a round piece of nearly an inch diameter in the centre, which was intended to prevent the thrust of a lance driving the point into the throat. Similar pieces were also on the gussets of plate, which turning on a nail moved at the upper end on the slit of an almaine rivet, to allow the wearer the more readily to close his arms, the straps of the back plate bringing them back to their place, when the arms withdrew. About the middle of this reign, the breast, al- though globose, took an edged form down the centre, which was called the tapull,an old fashion revived. The most striking features of the armour of this reign are its being embroidered or fluted, and a large arched aperture of the tassets, over the pudenda. The

globose breast-plate, but lightly edged in the centre, was succeeded by one, where the edge was more raised, and made to project in the centre of the breast, so as to turn a weapon. This projection on the breast was afterwards removed from the centre lower 'down. It has pass-guards, and a large cod-piece. A great deal of the armour of this period has a coat of arms of the place where they were made, stamped on its various pieces. Some- times the knights had their arms and crest en- graved on the upper part of their breast-plates, which, from the time of Edward IV. to the close of the reign of Elizabeth, were furnished with gussets of plate, just under the arms, so contrived as to give way to their motions. The cuisses from the latter part of Henry the Seventh's time to this period bad a similar contrivance on their

tops to give way with the motions of the legs. The allecret was a light armour for infantry, and consisted of armour for the breast, back, abdomen, thighs, arms, and chain-mail gorgets for the neck. Raised armour, now used, was the prototype of the embossed. The ground was nearly black, and all the foliage raised about the tenth of an inch, and made to shine. The paul- drons, elbow-pieces, and knee-pieces, have raised lions' heads on them. Stuffed arming doublets, or jackets reaching down to the middle of the thighs, and with sleeves of chain-mail, was a fashion of this era. White armour universally means polished steel.

Ponderous tilting helmets occur in this reign. Convex roundels are of this age ; in one speci- men, by unscrewing the spike, and taking off the raised foliage, an inscription is seen.

Henry VIII. repeatedly fought at barriers with two handed swords carried on the shoulders, and the battle-axe. Some of state at this period were very superb. The art of inlaying weapons with gold was now borrowed from the Asiatics, called damasquinee, and introduced by Benve- nuto Cellini. In this reign also the fencers became an incorporated body. A very curious weapon called a sword-breaker, was now used ; it had a hilt, pommel, and guard; the blade was made in the fashion of a scimitar, the edge being deeply serrated. It contained a spring, by means of which the antagonist's sword was held fast, as soon as it came within the teeth. By moving the hand a little, the blade of the antagonist's weapon was broken, and he was either cut or stabbed with the sword-breaker at option. L. Meyrick, esq. has one of them in his collection. The mell, maule, or mallet, used by the archers of this time, was made of lead, hooped round the ends with iron. In this reign was introduced a wea- pon called the pertuisan, or partisan. The etymology of

the word has been much contro- verted, but seems to lie (says Dr. Meyrick) between the Latin pertica and the German hart, an axe. Its blade was much longer than that of the pike, and much like that of the spontoon, but not so long nor quite so broad. It was found more serviceable than the pike in trenches, mounting breaches, and in taking or defending lodgments. It was used as late as the time of William III; but its blade had become broader, and is still carried by the yeomen of the guard. Spontoons, morning-stars, battle-axes, and pole-axes, some with four cross pieces, were also weapons of this reign.

Beautiful and fanciful chanfrons, formed into heads of griffins, and beat out of the solid steel in a wonderful manner, were now in vogue. The horse also had a manefaire, and round his neck a string of Varge bells, an Asiatic fashion. Just by the horse's shoulder the poitral was beat into a convex form. When a knight was armed for the jouste, called a haute barde, it meant the barde or armour for the horse, rising so high as to protect the rider up to the abdomen. The term barde was sometimes applied to the poitri- nal, or breast-plate of the horse, but, according to Richelet, it signified the whole armour for the horse. The tilt and sockettes were pieces of steel fixed to the saddle for protection of the

thighs. The stirrup had a bar on front to pre- vent the feet slipping forwards. The port was either fixed to the saddle or the stirrup, and was made to carry the lance, when held upright. The base was the drapery thrown over the horse, and sometimes drawn tight over the ar- mour which he wore.

EDWARD VI. from 1547 to 1553.— The chief distinction of the armour of this period con- sisted in the breast. The projection on the ta- pull was lowered to the bottom of it ; i.e. th<. waist was lengthened, and it was called long- waisted, or pease-cod-bellied, from its resem- blance to a pea-shell. Trunk hose made the upper part of cuisses, while the tassets hung over them. Brigandines (of which under the reign of Mary) now in use, were called, from their form, millers' coats. Dr. Meyrick thinks that the armet petit, or grand, was a helmet that might form either a close or open casque, ac- cording to the wish of the wearer. The beaver of the helmet of a man-at-arms, and demi-lan- cer, was made of three parts, which move over each other, and when covering the face, are held by little catches. This is probably the great and little armet, and was the kind of helmet which Shakspeare had before him, when in the play of Richard III. he says of this monarch, ' Had you seen him with his beaver up,' because he there alludes to his being prepared for war. On the top plate a horizontal bar, which meeting the umbril, when up, formed the visor. This beaver, however, was made to take off the helmet, which thus became an open one. The helmet is also furnished with two oreillets, attached by hinges, and will meet over the

chin-piece of the conjoined bars. The jambs, peculiar to this period, have joints above the ancles, which greatly assist the motion of the feet, and consist of several over- lapping plates. Breast-plates now became of great weight and thickness, to resist pistol balls ; and the cuisses are buckled on to them. The targets have a pistol instead of a spike, at the boss. At this time the mace was exchanged for the pistol. Holy-water sprinkles were staves with large cylindrical heads, with spikes, and a spear pointed at the end. They ar« generally ascribed to the Danes. Rancons were a kind of bills. The baton of the duke of Alva is covered with the result of military calculations. The mace is of the common chocolate-mill form.

MARY ; from 1553 to 1558. — No alteration, except that the breast-plates are not so long. Fire arms now became common, but there was no strong desire to introduce them, the long-bow being deemed equal. The men-at-arms con- sisted of the nobility and knights ; and about this time the term was changed from men-at- arms, hitherto given to the heavy cavalry, to spears or spearmen, and lances or lancers. The sallets were head-pieces which resembled, in some respects, the morion, and in others the pot or iron-hat. Steel feet-caps were used in- stead of sollerets. The black-bill, so called from the blades being blacked, instead of being kept bright ; and the military fork, a weapon exactly . like the common pitch-fork, were in use in this reign. Steel saddles were those whose burrs or bows and cantles were covered with steel.

ELIZABETH; from 1558 to 1603.— The body- armour seldom comes lower now than just be- neath the hips. Complete jousting suits do in- deed appear, but the combating knights are without any armour on the legs and thighs. The embossed armour is exceedingly rich. Heavy armour, owing to the thickness of the breast- plates, being bullet proof, was introduced to- wards the latter part of this reign. Hussars, with scimitars, &c. taken from the Hungarians and Poles, commenced in this reign. The buc- kler then had a spike in the centre, and was sold by haberdashers. A baton used to hang sus- pended from the right breasts of knights in tour- naments In tms century tne rapier and dagger were usually worn by the side of each other, and the fight with both together was deemed a gallant thing. Representations of negroes' heads, ari- sing from intercourse with America and the West Indies, were now introduced, as pommels and ornaments of swords. The sword and buckler ended with this reign. The rapier or tuck was introduced from France by Rowland York about 1587, and was worn in dances. The term proking spit seems to mean a long Spanish ra- pier, in opposition to the contemporary broad Scotch sword. The whin-yard was a

sword or hanger. Horse armour was disused in Germany during this reign. Perhaps the latest instance of chanfrons occurs in the time of Charles I.

The phrase of a ‘ hog in armour’ seems to have arisen (says Dr. Meyrick) from that animal, or parts of it, having been thus distinguished du- ing this century, when put on the table. Thus, in the list of dishes for the coronation dinner of Queen Elizabeth, are ‘ sheeldes of brawne in armour.’

JAMI.S I. from 1603 to 1625.— Thick breast- plates, bullet proof, characterise this reign. In the latter part of it the jambs or steel coverings for the legs were almost wholly laid aside. The heavy cavalry, then called pistolicrs, wore suits which ended at the knees ; and this fashion con- tinued during the following reign. About the year 1600 dragoons appeared. During this reign, and that of Elizabeth, the pauldrons were often attached to the armour by straps which came from beneath the gorget, while in the time of Charles I. they were placed above it. In the reign of Henry VIII. the pauldrons had in them little holes, which slipped on upright pins fixed on hinges placed on the gorget, and with spring catches in them to hold these shoulder-pieces fast. The splints within the elbows continued from the time of Henry VI 11. to this reign inclu- sive. A fine expanding garde de reine (a con- cave skirt of plates orer the posteriors) also dis- tinguishes this period.

CHARLES I. from 1625 to 1648. — No armour now reaches below the knees. The cuirassiers had gorgets, cuirasses, entases, culets, (mere names of the garde de reine) pouldrons, varn- braccs, a left hand gauntlet (probably of leather for the bridle-arm), taees, much shorter than those of the infantry, beino;, indeed, the upper part of the euisse loosened, misses and casques. The har£,‘obusiers or carbines had gorgets, cui- rasses, entases, pouldrons, vambraces, and a light head-piece, wide sighted, with beavers to let

down upon bars of iron. The dragoons (or foot- men on horseback) an open head-piece with cheeks, and a buff coat with deep skirts. The pikemen combe-caps, cuirasses, gorgets, taches down to the mid-thighs. The Rondell or Ron- dache (a target), which had been revived by Prince Maurice, was disused in the early part of this reign. The combed head-piece was a morion with a high ridge on its top ; the combe-caps had a ridge hanging over them from the front to the rear, seemingly the same. A curious head-piece occurs with neck flaps, and a bar passing through the umbril to guard the face from a cross cut. The garde de reine was relinquished soon after 1650, or rather became so short, as to be scarce distinguishable.

CROMWELL; from 1649 to 1660. — Helmets, and cuirasses, without garde-de-reines, were worn over a good buff coat by the cavalry, now deno- minated cuirassiers. The wearing of armour to the knees had

continued to this time, because the cavalry did not till then cease to use the lance. Elbow-pieces of plate, at least in some instances, seem to accompany the cuirass. Immense gam- bado boots guard the legs. Gorgets of a large size were often worn alone, a practice which seems to have been introduced by naval officers. Cromwell's troops had generally basket-hiked swords very close resembling the Scotch, whether the blade was curved or straight, and large cutting swords. The thumbring seems to have been first put upon sword hilts at the close of Elizabeth's reign, and to have originated in Germany. The basket hilt may have arisen in the time of James I. when the gauntlet began to be disused, and was derived from the ornamented shell-guards previously in fashion. I conceive, says Dr. Mey- rick, that the broader the Scotch blade the more ancient it is.

, CHARLES II. from 1660 to 1685. — At this time officers wore no other armour than a large por- get, which nearly served the purpose of a breast-plate, a circumstance commemorated in the dimi- nutive ornament in the present day. Silk armour, proof against bullet or steel, which rendered the figure very ridiculous, was in vogue. An attempt to connect the helmet arid hat in the same head-covering was made by a perforated steel-cap, put in the hat of the horse-soldier. Large gambado boots and spurs, to prevent the effects of pressure in a charge, were also worn.

Daggers of this reign in remembrance of the death of Sir Edmundbury Godfrey who was regard- ed a martyr for the Protestant cause,were inscribed ' Godfrey' and ' Memento Godfrey.' Another weapon was a pocket flail, the handle resembling a farrier's blood-stick ; the flail was joined to the end by a strong nervous ligature, and was made of lignum vitae. It was an accompaniment of the silk armour. Upright pieces, called burrs, were placed on the saddle, in front of the thighs.

Dr. Meyrick sums up with the following re- mark : ' The ancient weapons of the infantry had been principally the spear, the bill, the glaive, and the gisarme. The introduction of the bayonet oc- casioned these in their turn to fall into disuse, and rendered defensive armour unnecessary, as when musket proof it was too heavy for the con- venience of the wearer. The lance has, however,

been revived in the European armies. Should this become general, the cuirass, if not more, must again be brought into use, so dependent are defensive on offensive arms.'

The connexion of this subject with the wars of mankind down to a very late period ; the light it occasionally throws upon questions of mythology,

poetry, and general history, upon the religious rites of most nations ; the rise and progress of the arts; and even upon questions of jurisprudence and civil polity may excuse the length to which we have pursued its details. ‘ Our greatest poets,’ it is well observed in Dr. Meyrick’s preface, ‘ have felt the necessity of some extensive acquaintance with these topics, and have been aided beyond calculation in some of their grander scenes, by the splendid ma- chinery of ancient armour. How would the

high debates, the terrific array, the giant steps of Milton’s Pandemonium, stripped of their armour, be denuded of their impression !’ He instances the ‘ superior fiend :’

With AtlanUtan shoulders fit to bear The weight of mightiest monarchies.

The battle scene in heaven, &c. from Shaks- peare :

O majesty!

When thou dost pinch thy bearer, thou dost sit Like a rich armour worn in heat of day, That scalds with safety.

And the fine moral lesson :

What stronger breast-plate than a heart untainted ‘ Thrice is he armed that hath his quarrel just, And he but naked, though locked up in steel, Whose conscience with injustice is corrupted.

ARMOUR, COAT, is the escutcheon of any per- son, or family, with its several charges, and other furniture ; as mantling, crest, supporters, motto, &c. — Thus we say a gentleman of coat-armour ; meaning one who bears arms. See HERALDRY.

ARMOURER OF A SHIP, a person whose office it is to take care that the arms be in a condition fit for service.

ARMOURERS, in Roman antiquity, were dis- posed in certain places in the empire, it being forbidden to sell, or buy, or make arms elsewhere. They were exempted from all offices and taxes, and received a salary from the public. When once they had taken the employment, neither they nor their children were allowed to quit it. To prevent this they had a kind of mark im- pressed upon the arm, whereby they might be known. If any of them fled or secreted their ware, the rest were obliged to answer for him ; on account of which the effects of such as died without a legal heir went to the college. There were placed near the frontiers fifteen armamen- taries in the

eastern empire, and nineteen in the western.

ARMOURER'S COMPANY, one of the companies of the city of London, incorpo- rated by Henry VI. The arms are argent on a chevron gules, a gauntlet between four swords in saltier on a chief sable, a buckler argent, charged with a cross gules betwixt two helmets of the first. The crest is a man demi-armed at all points sur- mounting a torce and helmet. The motto, ' Make all sure.'

ARMS OF PARADE, or COURTESY, were those used in the ancient justs and tournaments; which were commonly unshod lances, swords without edge or point, wooden swords and even canes.

ARMS, PASS OF, was a kind of combat in use among the ancient cavaliers.

ARMS, in falconry, denote the legs of a hawk, from the thigh to the foot. See FALCONRY.

ARMS, in heraldry, are used for marks of dig- nity and honor, regularly composed of certain figures and colors, given or authorised by sove-

reigns, and borne in banners, shields, coats, &c. for the distinction of persons, families, and states, and passing by descent to posterity. They are called arms because they are borne principally on the buckler, cuirass, banners, and other appa- ratus of war. They are also called coats of arms, coat-armour, &c. because anciently embroidered on fur coats, &c. See HERALDRY. Some will have the name to have been first occasioned by the ancient knights, who, in their justs and tour- naments, bore certain marks, which were fre- quently their mistress's favors, in their armour, i. e. their helm or shield, to distinguish them from each other. Arms at present follow the nature of titles, which being made hereditary, these are also become so, being the several marks for distinguishing families and kindreds, as names are of persons and individuals. They are dis- tinguished by various epithets, such as,

ARMS, ASSUMPTIVE, are such as a man .has a right to assume of himself, in virtue of some gallant action. As if a man who is no gentle- man of blood, nor has coat armour, takes a gentleman, lord, or prince, prisoner, in any law- ful war; he becomes entitled to bear the shield of such prisoner, and enjoy it to him and his heirs. The foundation hereof is that principle in military law, that the dominion of things taken in lawful war passes to the conqueror.

ARMS, CANTING, are those wherein the figures bear an allusion to the name of the family. Such are those of the family of Prado in Spain, whose

field is a meadow. Most authors hold these the most noble and regular, as is shown by an infi- nity of instances produced by ,father Varenne and Menetrier. They are much debased, when they come to partake of the rebus.

ARMS, CHARGED, are such as retain their an- cient integrity and value, with the addition of some new honorable charge or bearing, in consi- deration of some noble action.

ARMS, FALSE, or IRREGULAR, are those where- in there is something contrary to the established rules of heraldry ; as when metal is put on metal, or color on color, &c. The laws of arms, with the cognizance of offences committed therein, belong, in Britain, to the earl-marshal and college of arms.

ARMS, FULL, or ENTIRE, are such as retain their primitive purity, integrity, or value; without any alterations, abatements, or the like. It is a rule, that the simpler and less diversified the arms, the more noble and ancient they are. For this reason Garcias Ximenes,first king of Navarre, and his successors for several ages, bore only gules, without any figure at all. The arms of all younger sons, and junior families, of princes of the blood, are not pure and full ; but distinguished and diminished by proper diffe- rences, &c.

ARMS OF ALLIANCE are those which families or private persons join to their own, to denote the alliances which they have contracted by marriage.

ARMS OF COMMUNITY are those of bishoprics, cities, universities, and other bodies corporate.

ARMS OF CONCESSION, or augmentation of honor, are either entire arms, or else one or more figures given by princes as a reward for some ex- traordinary service.

ARMS OF DOMINION are those which empe<- rors, kings, and sovereign states bear, being an- nexed to the territories which they possess. Thus the three lions are the arms of England; the fleurs-de-lis those of France, &c.

ARMS OF PATRONAGE, are those which go- vernors of provinces, lords of manors, &c. add to their family arms, in token of their peculiar superiority

and jurisdiction.

ARMS OF PRETENSION are those of such king- doms or territories to which a prince or lord has some claim, and which he adds to his own, though the kingdoms or territories be possessed by a foreign prince or other lord. Tims the kings of Knirland have quartered the arms of France with their own, ever since the claim of Edward III. to that kingdom in 1330.

ARMS or SUCCESSION are assumed by those who inherit estates, manors, &:c. by will, entail, or donation, and which they either impale or quarter with their own arms.

ARMS, in law, are extended to any thing which a man takes in his hand in his wrath, to cast at, or strike, another. By the common law it is an offence tor persons to go or ride armed with dangerous weapons ; but gentlemen may wear common armour, according to their quality, \c. The kiuu' may prohibit force of arms, and punish offenders according to law; and herein every subji ct is bound to be aiding. Stat. 7 F-'dw. 1. None shall come with force and arms before the kind's justices, nor ride armed iu an affray of the peace, on pain to forfeit their ar- mour, and to suffer imprisunnn nt, &c. 2 Ed. III. c. 3. The importation of anus and ammunition are prohibited by 1 Jar. II.e.H. and by 1 W. and M. stat. n. c. 2. I'rotts'ant subjects may have arms for th,",r defence. So likewise arms, &c. shipped afti r prohibition are forfeited by 29 G.I. c. It), sec. J. Arms of offence in use among us at present are the sword, pistol, musket, bayo net. pKe. \c.

Ai:M-,ii: natural history, denote the natural weapons or parts of defence, of beasts; as cla\s. teuh. tu-4s uf elephants, beaks of birds, &c.

ARMSTRONG C.TohrO, M.I), an eminent

physician, poet, and miscellaneous writer, was born in Castleton parish, Roxburghshire, where his father and brother were ministers, completed his education in the university of Edinburgh ; where he took his degree in physic, Feb. 4, 1732, and published his thesis, as the forms of that university require, De Tabe Purulenta. In 1735 he published a little humorous pamphlet in 8vo., entitled An Essay for abridging the Study of Physic ; to which is added a Dialogue betwixt Hygeia, Mercury, and Pluto, relating to the practice of physic, as it is managed by a certain illustrious society. As also an epistle, from Usbek the Persian to Joshua Ward, esq. This piece contains much drollery in the dialogue. He next published the Economy of Love ; a poem which has much merit, but too strongly tinctured with the licentiousness of Ovid. His maturer judgment expunged many of the luxuriances of youthful fancy, in an edition re- vised and corrected by the author in 1768. It appears that Mr. Millar paid fifty

guineas for the copy right of this poem, which was intended as a burlesque on some didactic writers. In 1760 he was appointed physician to the army in Ger- many, where, in 1761, he wrote a poem called Day, an epistle to John Wilkes, esq. of Ayles- bury. His principal work is The Art of Pre- serving Health, which appeared in 1744 ; be- sides which he wrote a Synopsis of the History and Cure of the Venereal Disease, 1 737 ; Benevolence, a poem, 1751 ; Taste, a poetic Epistle to a young Critic, 1753; Sketches, or Essays on various Subjects ; A short Ramble through some Parts of France and Italy. He died in September, 1779; and, to the surprise of his fiiends, left more than £3000 saved out of a very moderate income, arising principally from his half-pay.

ARMSTRONG (Sir Thomas), an English gentle- man, whose activity iu behalf of the king during the rebellion, caused Cromwell to imprison him and threaten his life. He was an open enemy to popery, and entered very warmly into the duke of Monmouth's service. An insurrection having been planned by the country party, soon after the new sheriffs were imposed on the city of London by the influence of the court, Sir Thomas Armstrong went with the duke of Mon- mouth to inspect the king's guards, for the pur- pose of judging whether they might hazard an attack upon them in the intended insurrection ; after which, finding himself obnoxious to the court, he hastily left the kingdom, and was out- lawed. He was seized abroad, sent to London, and condemned and executed without a trial in

1684.

ARMY, accurately defined, is a given num- ber of soldiers, consisting of horse and foot, completely armed, and provided with artillery, ammunition, provisions, &c. under the command of one general, having lieutenant-generals, major- generals, brigadiers, and other officers under him. An army is composed of squadrons and battalions; and is usually divided into three corps, and formed into three lines : the first line is called the van-guard, the second the main- body, and the third the rear-guard, or body of .reserve. The middle of each line is possessed by the fco ; the cavalry form the right and left

wing of each line ; and sometimes they place squadrons of horse in the intervals between the battalions.

Armies in general are distinguished by the following appellations: a covering army; a blockading army ; an army of observation ; an army of

reserve ; a flying army.

An army is said to cover a place when it lies encamped or in cantonments, for the protection of the different passes which lead to a principal object of defence.

An army is said to blockade a place, when being well provided with heavy ordnance and other warlike means, it is employed to invest a town for the direct and immediate purpose of reducing it by assault or famine.

An army of observation is so called, because by its advanced positions and desultory movements, it is constantly employed in watching the enemy. An army of reserve may not improperly be called a general depot of troops for effective ser- vice. In cases of emergency the whole or de- tached parts of an army of reserve are generally employed to recover a lost day, or to secure a victory. It is likewise sometimes made use of for the double purpose of secretly increasing the number of active forces, and rendering the aid necessary according to the exigency of the mo- ment, and of deceiving the enemy with respect to its real strength.

A flying army is a strong body of horse and foot, commanded, for the most part, by a lieu- tenant-general, which is always in motion both to cover its own garrisons, and to keep the enemy in continual alarm.

A naval or sea army is a number of ships of war equipped and manned with sailors, mari- ners, and marines, under the command of an admiral, with the requisite inferior officers under him.

ARMY, STANDING. In the ancient republics the proportion of soldiers to the rest of the peo- ple, which is now as about 1 to 100, might then be as one to eight. The reason is found in that equal partition of lands which the ancient founders of commonwealths made among their subjects ; so that every man had a considerable property to defend, and means to defend it with: whereas, among us, the lands and riches of a nation being shared among a few, the rest have no way of subsisting but by trades, arts, and the like ; and have neither any free property to de- fend, nor means to enable them to go to war ip. defence of it. While this equality of lands sub- sisted, Rome, though only a small state, being refused the succours which the Latins were obliged to furnish, after the taking of the city in the consulate of Camillus, presently raised ten legions within its own walls; which was more, Livy assures us, than they were able to do in his time when they were masters of the greatest part of the world : ‘ a full proof,’ adds the his- torian, ‘ that we are not grown stronger ; and that what swells our city is only luxury, and the means and effects of it. Our armies anciently were a sort of militia, composed chiefly of the vassals ar.d tenants of the lords.

When each company had served the number of days or

months enjoined by their tenure, or the customs of the fees they held, they returned home.'

One of the first standing armies of which we have any distinct account is that of Philip of Macedon. His frequent wars with the Thra- cians, Illyrians, Thessalians, and some of the Greek cities in the neighbourhood of Macedon, gradually formed his troops, which in the begin- ning were probably militia, to the exact disci- pline of a standing army. When he was at peace, which was very seldom, and never for any long time together, he was careful not to disband it. It vanquished and subdued after a long and violent struggle the gallant and well- exercised militias of the principal republics of ancient Greece ; and afterwards, with very little effort, the effeminate and ill-disciplined troops of the Persians. The fall of the Greek republics and of the Persian empire, was the effect of the irresistible superiority which a standing army has over every sort of militia. It is the first great revolution in the affairs of mankind of which history has preserved any distinct or cir- cumstantial account. The fall of Carthage, and the consequent elevation of Rome, is the second. All the varieties in the fortune of those two famous republics may very well be accounted for from the same cause.

From the end of the first to the beginning of the second Carthaginian war, the armies of Car- thage were continually in the field, and employed under three great generals, who succeeded one another in command ; Hamilcar, his son-in-law Asdrubal, and his son Hannibal ; first in chas- tising their own rebellious slaves, afterwards in subduing the revolted nations of Africa, and, lastly, in conquering the great kingdom of Spain. The army which Hannibal led from Spain into Italy must necessarily, in those different wars, have been gradually formed to the exact disci- pline of a standing army. Though the Romans, in the mean time, had not been altogether at peace, yet had they not during this period been engaged in any war of very great consequence ; and their military discipline, it is generally said, was a good deal relaxed. 'The Roman armies which Hannibal encountered at Trebia, Thrasy- menus, and Cannae, were militia opposed to a standing army. This circumstance, it is probable, contributed more than any other to determine the fate of those battles. The standing army which Hannibal left behind him in Spain, had the like superiority over the militia which the Romans sent to oppose it, and in a few years, under the command of the younger Asdrubal, expelled them almost entirely from that country. Hannibal was ill supplied from home. The Ro- man militia being continually in the field, became in the progress of the war a well disciplined and well exercised standing army; and the supe- riority of Hannibal grew every day less and less. Asdrubal judged it necessary to lead

the whole, or almost the whole, of the standing army which he commanded in Spain, to the assistance of his brother in Italy. In this march he is said to have been misled by his guides ; and in a coun- try which he did not know, was surprised and attacked by another standing army, in every re-

spect equal or superior to his own, and was en- tirely defeated. When Asdrubal had left Spain, the great Scipio found nothing to oppose him but a militia inferior to his own. He conquered and subdued that militia ; and in the course of the war, his own troops necessarily became well disciplined. They were afterwards carried into Africa, and found nothing but a militia to oppose them. In order to defend Carthage it became necessary to recal the standing army of Hannibal. The disheartened and frequently defeated African militia joined it, and at the battle of Zama com- posed the greater part of the troops. The event of that day determined the fate of the two rival republics.

From the end of the second Carthaginian war till the fall of the Roman republic, the forces of Rome were in every respect standing armies. That of Macedon, although far inferior, made some resistance to their arms. In the height of their grandeur it cost them two wars, and three great battles, to subdue that little kingdom ; of which the conquest would probably have been still more difficult, had it not been for the cow- ardice of its last king. Under the Roman em- perors the standing armies, those particularly which guarded the German and Pannonian fron- tiers, became dangerous to their masters, against whom they used frequently to set up their own generals. In order to render them less formi- dable Dioclesian withdrew them from the fron- tier, where they had always before been encamped in great bodies, generally of two or three legions each, and dispersed them in small bodies through the different provincial towns ; from whence thev were scarcely ever removed, but when it became necessary to repel an invasion. Small bodies of soldiers quartered in trading and manufacturing towns, and seldom removed from those quarters, became themselves tradesmen, artificers, and manufacturers. The civil came to predominate over the military character; and the standing armies of Rome gradually degenerated into a corrupt, neglected, and undisciplined militia, in- capable of resisting the attack of the German and Scythian militias, which soon afterwards invaded the western empire. It was now only by hiring the militia of some of those nations to oppose to that of others, that the emperors were for some time able to defend themselves. The fall of the western empire is the third great revolution in the affairs of mankind, of which ancient history lias preserved any distinct or circumstantial ac- count. It was brought about

by the irresistible superiority which the militia of a barbarous, has over that of a civilised, nation. When a civilised nation depends for its defence upon a militia, it is at all times exposed to be conquered by any barbarous nation which happens to be in its neighbourhood. The frequent conquests of all the civilised countries in Asia, by the Tartars, sufficiently demonstrates this : while a well regu- lated standing army, however occasionally dangerous to liberty, is .superior to every militia.

ARMY I.AM>S in geography, sundry districts in tin- I'liiti-d States of America, lying on the north of the Ohio, and to the westward of Pennsylvania, situated between 80° and 91° Ion. W., iiiiii ;•;?" n:i:l -H'J hit. "N.

ARMYNE (Mary), an illustrious English lady, the daughter of Henry Talbot, fourth son of George earl of Shrewsbury, and wife of Sir William Armyne. She was a woman of great talents, and exemplary piety. She had a good understanding of the French and Latin lan- guages, and was well versed in history and di- vinity. She made a practice of distributing books among the poor; and she gave conside- rable sums to the missionaries employed in con- verting the Indians in North America. Besides many other deeds of public beneficence, she en- dowed three hospitals. She died in 1675.

ARNABOS, in the materia medica, an aro- matic drug, described by Paulus ./Egineta and other Greek physicians, and supposed to be the same with the zarnab of Avicenna, and the car- pesia of the more ancient Greek writers. It was much used as an aromatic and cordial, and al- lowed in many cases to be a good substitute for cinnamon. It was composed of the young shoots of the cubeb-tree dried.

ARNALD (Richard), an English divine, born in London, and educated at Ben'et College, Cam- bridge. He became fellow of Emmanuel College ; and in 1728 he took the degree of B. D. when he was presented to the rectory of Thurcaston in Leicestershire. He is chiefly celebrated for his Commentary on the Apocrypha; he also published several sermons. He died in 1756.

ARNALDIA, or ARNOLDIA, in physic, a slow malignant kind of disease, formerly frequent in England ; the most distinguishing symptom whereof was a falling off of the hair. Authors are much at a loss for the nature of this disease, which appears to have been peculiar to our country. From the description given of it in an ancient chronicle, Mollerus concludes it to have been a species of the venereal disease, as that distemper appeared in those days in this country.

ARNˆEA, in entomology, a species of papilio, a native of Surinam, the lea

of Cramer and others.

ARNALL (William), a noted political writer in defence of Sir Robert Walpole, was originally an attorney's clerk ; but being recommended to Walpole, he employed him for a course of years in writing the Free Briton, and other papers, in defence of his administration. By the report of the secret committee he appears to have received in the space of four years no less a sum than £10,997. 6s. Qd. out of the treasury for his wri- tings ! but giving way to extravagance, and his supplies stopping on Sir Robert's resignation, he died broken-hearted and in debt, in the twenty- sixth year of his age. His invention was so quick, that his employer used to say, no man in England could write a pamphlet in so little time as A mail.

ARNAUD, D'ANDILLY (Anthony), the son of a celebrated advocate of the parliament of Paris, and a doctor of the Sorbonne, was born in 1612. He published in 1643, A Treatise on frequent Communion, which highly displeased the Jesuits; and in the disputes which broke out about this time in the university of Paris, and in which he took a zealous part with the Jansenists, helped to increase the animosity. He then wrote two letters on Absolution, which the faculty of divinity

condemned, and Arnaud was expelled the society. Upon this he retired, and during a retreat, which lasted nearly twenty-five years, he composed works on grammar, geometry, logic, metaphysics, and theology. In 1679 he withdrew from France, lived in obscurity in the Netherlands, and died in 1694. His heart, at his own request, was sent to be deposited in the Port Royal.

ARNATJD, D'ANDILLY (Robert), eldest brother of Anthony, was born in 1588 ; and, being intro- duced young in court, was employed in many considerable offices, all which he discharged with great integrity and reputation. In 1644 he quit- ted business, and retired into the convent of Port Royal des Champs, where he passed the remain- der of his days ; he enriched the French language with many excellent translations of different writers, as well as with religious compositions of his owa. He died in 1674; his works are print- ed in 8 vols. folio

ARNATD, DE MEYRVEILH, or MEREUIL, a poet of Provence, who lived at the beginning of the thirteenth century. He wrote a book enti- tled Les Recestenas de sa Comtesse, and a collec- tion of poems and sonnets. He

died in 1220. Petrarch mentions him in his Triumph of Love.

ARNAUD, DE VILLA NOVA, a famous physician, who lived about the end of the thirteenth, and beginning of the fourteenth, century. He studied at Paris and Montpelier, and travelled through Italy and Spain. He practised astrology, and upon this foundation he published a prediction, that the world would come to an end in the mid- dle of the fourteenth century. He practised phy- sic at Paris for some time ; but, having advanced some new doctrines, he drew upon himself the resentment of the university ; and his friends, fearing he might be arrested, persuaded him to retire from that city. Upon his leaving France he retired to Sicily, where he was received by Frederic king of Arragon with the greatest marks of kindness and esteem. Sometime after- wards this prince sent him to France, to attend Pope Clement in an illness ; and he was ship- wrecked on the coast of Genoa about the year 1313. The works of Arnaud, with his life pre- fixed, were printed in one volume folio, at Lyons in 1520, and at Basil in 1585, with the notes of Nicolas Tolerus

ARNAUTS, cavalry belonging to the Grand Seignior.

ARNAY-LE-DUC, a town of France, in the department of Cote d'Or, which carries on a pretty good trade. It is seated in a valley near the river Arroux, twenty-five miles N. W. of Baune. Population 2750. Lon. 4° 32′ E., lat. 47° 7′ N.

ARNDT (John), a famous Protestant divine of Germany, born at Ballenstadt, in the duchy of Anhalt, in 1555. At first he applied to the study of physic ; but falling into a dangerous sickness he made a vow to change his profession for that of divinity, if he should be restored to health ; which he accordingly did upon his reco- very. He was minister first at Quedlinburg and then at Brunswick. In 1611 George duke of Lunenburg, who had a high opinion of his inte- grity and sanctity, gave him the church uf Zeli,

and appointed him superintendant of all the churches in the duchy of Lunenburg; which office he discharged for eleven years, and died in 1621. He wrote, in high Dutch, A Treatise on true Christianity, which has been translated into several languages.

ARNE (Dr. Thomas Augustine), distinguished by his skill in music, was the son of Mr. Arne, an upholsterer in Covent Garden, the brother of Mrs. Cibher the actress. He was early devoted to music, and soon became eminent in his pro- fession. In July 6, 1759, he had the degree of doctor of

music conferred on him at Oxford. His compositions are universally applauded, and he was also particularly skilful in instruct- ing vocal performers. He died March 5, 1778, having written the following operas : Artaxerxes, in 1762; The Guardian Outwitted, 1764; and The Rose, in 1778.

ARNEBERG, a town of Brandenburg, seated on the Elbe, between Angermund and Werben, three miles distant from each. It was taken from the Swedes in 1631, and is now subject to Prussia. Population 1080.

ARNEE, a town and fortress of Hindostan, in the Carnatic, seventy-five miles south-west of Madras, and fourteen south of Arcot. In the war of the Carnatic between the English and French in 1751, lord Clive, then colonel- com- mandant of the British forces, laid the foundation of his military fame in a battle with the troops of Chunda Saheb, near this place, which was followed by the reduction of Timery ind Con- ganzam. Hyder Ali, in his invasion of the Carnatic in 1782, made the fortress his great magazine of stores. It stands in N. lat. 12° 39′ and E. long. 79° 24'.

ARNEMUYDEN, a small sea-port town on the island of Walcheren, in the Dutch province of Zealand. It was in former times a place of consequence, and is probably the Hanse town, Arnemunda, the position of which has puzzled so many geographers. It had a considerable trade in the salt prepared there ; and has still the remains of its ancient fortifications ; three miles east of Middleburg, and six N. N. E. of Flushing.

ARNGASK, a parish of Scotland, compre- hending a part of three different counties, which meet in it, viz. Fifeshire on the east, Perthshire on the west and north-west, and Kinross-shire on the south. It contained, in 1790, five hundred and fifty-four houses. The soil is various, and the climate salubrious.

ARNHEIM, or ARNHEM, a town of the United Provinces in Guelderland, capital o. Veluwe, seated on the Rhine, thirty miles east of Utrecht. It is adorned with several fine churches, particularly that of St. Walburg and of St. Eusebius, which last has a very high tower. The town has five gates, and several fine ramparts, part of which are washed by the Rhine, and the other parts have wide and deep ditches about them. There is a canal between this place and Nimeguen, made at the expense of both towns, on which boats pass backwards and forwards to carry on trade. The air is very healthful. Long. 5° 55′ E., lat. 52° 6′ N. ARNICA, LEOPARD'S BANE, in botany, a semis

of the polygamia superflua order, belonging to the syngenesia class of plants; natural order forty- ninth, compositae-discoideae. The receptacle is naked ; the pappus simple ; and the filaments five, without anthene. There are seven species, all natives of Ethiopia except the two follow- ing : 1. A. Montana, with oval leaves, grows na- turally on the Alps, and also on many of the high mountains in Germany, and other cold parts of Europe. The roots of this species, when planted in a proper soil and situation, spread very far under the surface, and put out many entire oval leaves, from between which the flower- stems arise, which grow about a foot and a half high. The top is terminated by a single yellow flower, composed of many florets, like those of the dandelion. These are succeeded by oblong seeds, which are covered with down. This plant delights in a moist shady situation, and may be propagated by parting the roots in autumn, when the stalks begin to decay; or by the seeds sown in autumn soon after they are ripe, for those sown in spring often fail. It has an acrid bitter taste, and, when bruised, emits a pungent odor, which excites sneezing. On this account the country people in some parts of Germany use it as snuff, and smoke it like tobacco. It was formerly represented as a re- medy of great efficacy against effusions of blood, from falls, bruises, or the like ; and in jaundice, gout, nephritis, &cc. ; but in these affections it is now very little, if at all, employed. Of late it has been principally recommended in paralytic affections, and in cases where a loss or diminu- tion of sense arises from an affection of the nerves, as in instances of amaurosis. In these it has chiefly been employed under the form of in- fusion. From a dram to half an ounce of the flowers has been directed to be infused in a pint of boiling water, and taken in different doses in the course of the day. It is also taken in the form of a pretty strong decoction taken in small doses frequently repeated, or in that of an elec- tuary with honey. Its real influence however still remains to be determined by future obser- vations; but it is one of those active substances from which something may be expected. 2. A. Scopioides, with sawed leaves growing alter- nately, is a native of Bohemia and Siberia. The roots of this sort are much jointed, and divided into many irregular fleshy off-sets, which are variously contorted ; from whence some super- stitious persons have imagined that they would expel the poison of scorpions, and cure the wounds made by the sting of that animal. This species is propagated like the other. Both are very hardy, and require only to be kept free from weeds.

ARNIC'.V., in entomology, a species of sta- phylinus found on the Arnica

Montana. It is black, except on the thorax and antennae, where it is ferruginous ; the leirs are testaceous. Also a species of musca, found on the same plant, tlie winus of which are gray and hooked.

AIlMKiK) (Bartholomew), the son of ablack- smith of Brescia in Lombardy, born 1523, died 1577. llavii;- a lurn for literature, at the age of (.-ighti-i n he abandoned the business of his father, ;m

he at length obtained a doctor's degree, which was conferred on him by the university of Padua. He was, however, less successful as a physician than as a poet, in which latter character he pro- duced Lettere, Rime, etOrazione, 4to.; Meteo- ria, 4to. ; Lettura letta publicamente sopra il sonettodel Petrarca,8vo.; LaMedicinad'Amore; Dieci Vegliedegli ammendati Costumi deU' umana \£ita, 4to. ; and Le Rime, 8vo.

ARNIS/EUS (Henningus), a philosopher and physician of great reputation, about the beginning of the seventeenth century. He was born at Halberstad in Germany, and was professor of physic in the university of Helmstad. The most remarkable of his works are ; 1 . De Authoritate Principum in Populum semper Inviolabili, in which he maintains that the authority of princes ought not to be violated ; 2. De Jure Majestatis libri tres, and Reflectiones Politico, all printed at Francfortin 1610, 1612, and 1615. He was invited to Denmark, and was made counsellor and physician to the king. He travelled into France and England, and died in November 1635. He wrote also several philosophical, me dicinal, and political treatises.

ARNO, a large and rapid river 01 Italy, ii. Tuscany ,which it divides, and in its course washe» Florence and Pisa ; rising in the Apennines, to the east of Florence, near a village called S. Maria della Gratie, on the bordess of Romagna, fifteen miles to the west of the sources of the Tiber; and then turning southward towards Arretium, it is there increased by the lakes of the Clanis ; after which it runs westward di- viding Florence into two parts, and, at length washing Pisa, falls four miles below it into the Tuscan Sea.

ARNO, a pleasant valley of Italy, through which the river Arno runs, and which abounds in all kinds of fruits. Part of it is thought to have been formerly a lake, before the Arno made its passage through the rock at Rignano. The bones of elephants are found in digging through its strata, which are very regular.

ARNOBIUS, professor of rhetoric at Sicca in Numidia, towards the end of the third century. Being bred up a Pagan, he at first opposed Christianity ; but afterwards became desirous of embracing it. For this purpose he applied to the bishops to be admitted into the church. But they had some distrust of him, and before they would admit him, insisted on some proofs of his

sincerity. In compliance with this demand, he wrote against the Gentiles ; wherein he refuted the absurdities of their religion, and ridiculed the gods. In this treatise he has employed the flowers of rhetoric, and displayed great learning ; but from an impatience to be admitted into the body of the faithful, he is thought to have been in too great a hurry in composing his work ; and not having exact knowledge of the Christian faith, he published some very dangerous errors. St. Jerome, in his epistle to Paulinus, is of opinion that his style is unequal and too diffuse, and that his book is written without method. Vossius styles him the Varro of the ecclesiastical writers. D upin observes, that his work is written in a manner worthy of a professor of rhetoric ; the turn of his sentiments is very oratorical ; but his

is a little African, his expressions being harsh and inelegant. We have several editions of his work against the Gentiles ; one published at Rome in 1542, others at Basil, Paris, and Antwerp : and one at Hamburg in 1610, with notes by Gerhard Elmenhorstius. He wrote also apiece entitled De Rhetorics Institutione ; which is not extant.

ARNODI, in antiquity ; from apvoc, a lamb, which was their usual reward, and o»£»j, song, or singing ; the rhapsodi, or public singers in Greece.

*ARNOLD, a native of Brescia in Italy, who studied under the celebrated Peter Abelard. Upon his return to Italy he put on the habit of a monk, and opened his invectives in the streets of Brescia. He told the people he was sent to reform abuses, to pull down the proud and to exalt the humble. He then pointed his decla- mation against the bishops, against the clergy, against the monks, and finally against the Roman pontiff himself; to the laity only he was indul- gent. ‘ Churchmen,’ said he, ‘who hold benefices, bishops who have domains, and monks that have possessions, will meet with eternal punishment.’ * These things,’ continued he, ‘ belong to the prince ; he may give them to whom he pleases, but he must give them to the laity. It is on their tithes, and the voluntary contributions of the people, that those sons of God must live : they must be frugal, continent, and mortified.’^ — The church of Brescia was soon thrown into the greatest confusion, and the people, already pre- judiced against their ministers, threatened to overturn their altars. Indeed, nothing could be more glaringly offensive than the ostentatious parade of the bishops and great abbots, and the soft and licentious lives of the monks and clergy. A grand council was held at Rome in 1139 ; Arnold was cited to appear before it. His ac- cusers were the bishop of Brescia, and many others, whom he had ridiculed and insulted. From such judges he could not look for much indulgence. He was*

found guilty, and sentenced to perpetual silence. Upon this he left Italy, crossed the Alps, and found a refuge in Zurich. Though Arnold had quitted Italy, yet had his opinions taken deep root, and Rome itself was infected by them. Irritated by the conduct of their master, Innocent II., the Roman people as- sembled in the capitol. It was proposed that the power of the pontiff, which they called ex- orbitant, should be restrained; this was carried: when suddenly, inspired as it were by the genius of the place, they moved that the senate, which for years had been abolished, should be restored. The proposition was received with the loudest ac- clamations. Innocent in vain opposed the bold design; it spread irresistibly, and for a moment seemed to rouse the fallen spirit of the nation. The pope viewed with horror the reverse of fortune which threatened the tiara ; he fell sick and died. Under his successors Celestine and Lucius, whose reigns were but of a few months, the Romans pursued their darling object. They waited on the latter, and, in an imperious tone, demanded the restitution of all the honors and civil rights which had been usurped from the people. The prince of the senate, said they,

whom we have chosen, will best administer the important trust : the tithes and offerings of the faithful will sufficiently answer all the exigencies of your holiness : it was thus that our ancient bishops lived. — Lucius survived this event but a few days. His successor was Eugenius III. the friend and disciple of the renowned Bernard. The night before his consecration the senators assembled, and it was agreed, that either he should solemnly confirm all their proceedings, or they would annul his election. This resolu- tion was notified to him. He called together his friends ; and it was their advice, that he should neither accede to their extravagant de- mand, nor expose himself, by a refusal, to the fury of the populace. He therefore silently withdrew from Rome, and retired to a neigh- bouring fortress. Arnold, who, in banishment, had contemplated the effect of his admonitions on the minds of the Romans, and the success which seemed to follow their exertions, was now informed that the pope had retired, and that the ffates of the capitol were open to receive him : it was likwise suggested to him, that his presence was more than ever necessary, to give energy to their resolves, form to their plans, and stability to their undertakings. Arnold took fire at the news ; an unusual swell of enthusiasm filled his breast ; and he fancied that, like Junius Brutus, he was called at once to give liberty to Rome. At his appearance a new stream of vigor ani- mated the citizens ; they called him their fi iend and deliverer. The Brescian walked amongst them ; his deportment was humble, his coun- tenance emaciated, his address affable, and he spoke to them of moderation, of submission, of obedience. With the- nobles and new senators also he was mild and diffident, speaking much of virtue and of respect for religion and the laws. But no sooner was he sensible of his own

real influence, and saw the lengths to which the revolters had carried their designs, than he ha- rangued the people ; he talked of their fore- fathers the ancient Romans, who, by the wisdom of the senate and the valor of their armies, had conquered nations and subdued the earth : he dwelt on the names and the achievements of the Bruti, the Gracchi, and the Scipios ; and of these men, said he, are you not the children? He advised that the capitol be instantly re- paired, that the equestrian order be restored, that the people have their tribunes, that dignity attend the senate, and that the laws, which had been silent and neglected, be revived in all their vigor. He spoke of the pope as of a deposed and banished tyrant : ‘ But should you again be disposed (continued he) to admit him within these walls, fix your own rights and determine his. He is but your bishop : let him therefore have his spiritual jurisdiction. The government of Rome, its civil establishments, and its terri- tories belong to you. These you will keep if you have the spirit of men, and the hearts of Romans.’ Fired by this harangue, the people, headed by the most disaffected nobles, attacked the few cardinals and churchmen who remained in the city, set fire to the palaces, and com- pelled the citizens to swear obedience to the new o-overnment. Moderate men were shocked &t

these excesses, but it was in vain to oppose the ‘.orrent : they submitted, looking forward, with some curiosity, to the termination of an event which had begun in extravagance, and could not out end in disappointment. Eugenius till now viewed, with concern, the wild derangement of the people : but when it seemed that their eyes were opened to their own excesses, he could be inactive no longer. He excommunicated the ringleaders of the faction ; and at the head of his troops marched against the enemy. His friends within the city, who were numerous, co-operated with his designs, and in a few days overtures for peace were made to the pontiff. He acceded to them, but on condition that they should annul the arrangements they had made, and if they would have senators, that they should acknow- ledge all their power was from him. The people were satisfied, and they threw open the gates, through which Eugenius entered, among the ac- clamations of a fawning and inconstant multi- tude. Before this event Arnold had retired; but he left behind him many friends strongly at- tached to his person and principles. Of himself we hear little more till the reign of Adrian our countryman; when, on account of fresh tumults, he and his adherents were excommunicated, and Rome was threatened with an interdict unless they expelled the whole party from their walls. This they did. The Arnoldists retired with their champion into Tuscany, where he was received as a prophet and honored as a saint. His ene- mies, however, prevailed; he

was made prisoner, and conducted under a strong escort to Rome. In vain was great interest made to save his life; lie was condemned to the stake, and executed, and his ashes thrown into the Tiber, lest the people should collect his remains and venerate them as the relics of a sainted martyr.

ARNOLD (Benedict), an American general, whose fortune and character were singular. He was born in New England and bred a surgeon, but gave up this profession for a sea life ; and was for a number of years master and super- cargo of a trading vessel. When hostilities be- tween (.real Britain and the colonies commenced he tuok part vith his native country, and was chosen captain of a company of volunteers at Newhaven. lie soon after rose to the rank of colonel, and commanded an expedition to Ca- nada. Designing to take Quebec by surprise, he conducted his troops through very great dif- ficulties, but the garrison having had timely no- tice was fully prepared. Montgomery joining him soon after, they attempted to storm the city, in which he received a wound in the leg; and on the death of General Montgomery he re- tired with his troops to Crown Point. He after- wards commanded a flotilla on Lake Cham- plain, in which he distinguished himself by his bravery. He continued actively employed on the American side till 1780, when he began a correspondence with Sir Henry Clinton for be- traying West Point to the British ; in which un- fortunate negociation major Andre became a viciim. Arnold himself narrowly escaped to an English ship of war. lie now showed etjual ar.ior en the British side; an,l at the end of the war retrx'l to !":';laiul, \l,cri. he had :i p'.-usiou.

Some time after he went to Nova Scotia, from whence he sailed for the West Indies, but was taken by the French, from whom he made his escape. He died in London in 1801.

ARNOLD (Samuel), an eminent composer of music, was educated at the Chapel Royal, St. James's, under Mr. Gates and Dr. Nares. About 1760 he became composer to Covent Garden theatre, and the pieces he there produced were much admired. His Cure of Saul brought crowded houses ; and still more did the Prodigal Son, an oratorio, for which the degree of doctor was conferred on him at Oxford in 1773. He was then proprietor of Mary-le-bone gardens, at that time famous for public amusement. When Dr. Nares died, in 1783, Arnold was appointed organist and composer to the Chapel Royal. In 1786 he began an elegant edition of Handel's works. He died in October, 1802, and was in- terred in Westminster abbey.

ARNOLD, a small river of Lower Canada, called after the American general of that name, and falling into the lake Mcganteck.

ARNOLDUS (Gothofredus), pastor and in- spector of the churches of Perleberg, and histo- riographer to the king of Prussia, was born at

Annaburg in the mountains of Misnia in 1666. He was a zealous defender of the Pietists, a sect among the German Protestants, and composed a great number of religious works ; particularly an Ecclesiastical History, giving an account of the doctrines and manners from the first ages, in which he frequently animadverts upon Cave's Primitive Christianity. He died in 1714.

ARNON, in ancient geography, a river that rises in the mountains of Gilead, and runs south- west between the borders of the Moabites and Ammonites on the other side Jordan. Jose- phus says it rises on the borders of Arabia, and falls into the Dead Sea. It is also called the river of Gad, as appears from 2 Sam. xxiv. 5ˆ compared with 2 Kings x. 33.

ARNOTTA, or ARNOT, in botany, a name given by the peasants of Burgundy, and many other places, to certain roots which they fre- quently turn up, from five to six inches depth, in ploughing the ground. They carefully collect these and eat them, after roasting in the ashes, or otherwise ; by which sort of cooking they acquire the taste of a chestnut, and are found to be a very wholesome and nourishing food. They are black- ish on the outside and white within, and are of the size of a small walnut. They are common in the north of Scotland.

ARNOULD (St.), a town of France, in the department of Eure and Loire, in the forest of Ivelin, on the road from Chartres to Paris.

ARNSTADE, or ARNSTADT, a town of Ger- many, in Thuringia, on the river Gera, ten miles south-west of Erfout. The Schwartzburg magistracy has its station here, and the town has a considerable trade in corn and wool. Popula- tion 4600. Lon. 11° 13′ E.; lat. 50° 48′ N.

ARNSTEIN, a handsome town on the river Lahn, containing a noble abbey founded by Count Louis of Arnstein. It was originally en- dowed with the imperial village of Winden ; but was secularised in 1802, and made over to the prince of Nassau-Weilburg. Population 2000.

ARNULPH, or ERXULPH, bishop of Ro- chester in the reign of Henry I. He was born in France, where he was some time a monk of St Lucian de Beauvais. Lanfranc, archbishop of Canterbury, invited him over to England, and placed him in the monastery of Canterbury, where he lived a private life till Lanfranc's death. When Anselm succeeded, Arnulph was

made prior of the monastery of Canterbury, and afterwards abbot of Peterboroush. In 1115 he was consecrated bishop of Rochester, which see he held nine years, and died in 1124, aged eighty-four. He wrote a piece in Latin entitled Textus Roffensis, concerning the foundation, en- dowment, charters, laws, &c. of the church of Rochester: it is preserved in the archives of that church ; an Epistle in answer to some Questions of Lambert, abbot of Munster; and an Epistle on incestuous Marriage.

ARNULPHIN, a coin of the value of a ducat and a half, current in some parts of France in the fifteenth century.

ARNWAY (John), a clergyman distinguished by his benevolence and loyalty to kintr Charles I. was descended from a good family in the county of Salop, from which he inherited a considerable estate. He was educated at Oxford ; and, having received holy orders, obtained the rectories of Hodnet and Ightfield, where he distinguished himself by his piety and exemplary charity. The civil war breaking out, he raised and clothed eight troopers for the service of king Charles I. upon which his house was plundered by the par- liament's army. He then went to Oxford to serve the king in person, which subjected him to a new train of misfortunes ; for his estate was soon after sequestered, and himself imprisoned till the king's death ; after which he went to the Hague, where he published the Tablet, or the Moderation of Charles I. the Martyr; and an Alarm to the Subjects of England. He at last went to Virginia, where he died in 1653.

AROBAS, or AROBE; by some spelt and pro- nounced arrobe; in Spanish, arrobas; in the language of Peru, arrou ; a weight used in Spain, Portugal, Goa, Brasil, and in all Spanish Ame- rica. All these arobas are scarcely like each other but in name, being very different in weight, and in proportion to the weights of other coun- tries. The aroba of Madrid, and almost all over Spain, weighs twenty-five Spanish pounds.

AROER, in ancient geography, 1. A city, partly on the north bank and partly in an island of the river Arnon. Sihon the Amorite took it from the Moabites ; Moses took it from him and gave it to the tribe of Gad, who rebuilt it, Num. xxxii. 34. \Vhen the Gadites were carried cap- tives to Assyria, the Syrians seem to have taken possession of it ; but were soon obliged to leave it to the Moabites, under whom the Assyrians seem to have rendered it a desert, Isa. xvii. 2. It had the same fate from the Chaldeans, under Nebuchadnezzar, Jer. xlviii. 20. 2. A city on the soutli of Jndah, to whose inhabitants David sent part of the spoil which he took from the Amalekites, 1 Sam. xxx. 28. 3. A city near Kabbah of the Ammonites, Josh. xiii. 25.

AROMA; Lat. spice, flavor, fragrance. Aroma is by some authors peculiarly

applied to myrrh.

AROMA GERM AN ic i M, a denomination given by Platerus to elecampane ; by others to juniper- berries, on account of the great esteem in which they are held by the Germans for their spiry warm qualities, being by many preferred ta ginger.

AROMATA, in ancient geography, a town o Lydia, famous for its generous wines, and hen.a the appellation. Also a trading town and pro montory of Ethiopia, at the termination of ths Sinus Avalites of the Red Sea.

AROMATIC,

AROMAI'ICAL,

AROMAT'ICKS,

AR'OMATIZE,

AROMATI'ZER.

From aroma, a substance

which supplies perfume,

'especially of the spicy kind.

j Spicy, scented with spice.

All things that are hot and dramatical do preserve liquors or powders. Bacon.

Drink the first cup at supper, hot ; and, half an hour before supper, something hot and aromatized.

Id.

Volatile oils refresh the animal spirits ; but like- wise are endued with all the bad qualities of such substances, producing all the effects of an oily and dramatical acrimony. Arbuthnot.

Or quick cfHuvia darting through the brain, Die of a rose in aromatick pain. Pope.

AROMATICA, in ornithology, the name given by Gmelin to the species of columba, or pigeon, called by Brisson columba viridis Am- boinensis, and by Latham aromatic pieeon. It is a native of the island of Amboyna, and is

about ten inches and a half in length ; the gene- ral color is olive-green ; the back chestnut ; on the wing a double bar of black edged with yellow.

AROMATITIS, in ancient physiology, a kind of bituminous stone, by some represented as a gem, both in smell and color resembling myrrh. It is said to be found in Arabia and Egypt, and to have been in great use as a perfume.

ARONA, a town of Italy, in the duchy of Mi- lan, with a strong castle, seated on the lake Maggiore. Upon an eminence, near the lake, there is a statue of St. Barromeus, the patron of Milan, in bronze, thirty-five ells high, upon a pe- destal of twenty-five ells, making in all sixty ells in height. The hill is hence called Monte di St Carlo. The position of the town on the lake is favorable for trade, and the adjoining country abounds in excellent wine. Population 4000. Seventeen miles N. N. W. of Novara. Long. 8° 32′ E., lat. 45° 46′ N.

AROO, a large island to «he south of Papua, in the 135th degree of east longitude, and the sixth of south latitude. In length it may be es- timated at 140 miles, by thirty-five miles the average breadth. The Chinese merchants carry on a traffic with this island, from whence they receive pearls, birds-nests, tortoise-shells, and slaves

ARO-ORCHIS, in botany. See GALANGAL.

AROPH, a contraction of aroma philosopho- rum ; a name given to saffron. Aroph is also used to denote mandragora.

AROPH PARACELSI, a kind of chemical flowers, probably of the same nature with the ens veneris, elegantly prepared by sublimation, from equal quantities of lapis tramatitis and sal ammoniac.

Aroph is also used by Paracelsus synonymously with lithontriptic.

ARORNOS, in botany, a name by which some authors have called the juniper.

AROSBAY, a town in the East Indies, on the coast of the island of Madura, near Java.

AROUND', prep. & adv. On round. Ital. ronda; Fr. ronde; from the Lat. rotundus, from rota, a wheel.

No war, or battle's sound Was heard the world around : The idle spear and shield were high up hung. Milton. On the Nativity, He shall extend his propagated sway, Where Atlas turns the rolling heav'ns around, And his broad shoulders with their lights are crown'd.

Dryden. And all above was sky, and ocean all around. Id.

From young lulus' head A lambent flame arose, which gently spread Ground his brows, and on his temples fed. Id,

So do the dark in soul expire, Or live like scorpion girt with fire ; So lives the mind remorse hath riven, Unfit for earth, uncloom'd for heav'n, .

Darkness above, despair beneath, Around it flame, beneath it death.

Lord Ki/ron. The Giaour.

AROTIvA, a Grecian measure of fifty feet. It was more frequently used for a square measure of lialf the plfthron. The Egyptian aroura was the square of 100 feet.

AltOrSK'. Supposed to derive its origin from the past participle of the verb Arise.

This is the wine Which, in former time, Each wise one of the magi Was wont to arouse, In a frolicsome bouse, Recubans sub tegmine fagi.

/•'. Keaumont. In praise of Sack. How loud howlint: wolves arouse the jades, That drag the tragic melancholy night.

Shakspeare,

Hut absent, what fantastick woes arous'd Rage in eacli thought, by restless musing fed ; rhill 'he warm cheek, and blast the bloom of life.

Thomson.

AROW. On row. In a regular line or

order.

For joye In1 lient hire in his arnies two; Hisherte bathed in a bath of bliss, A thousand time urmr lie jian hire kisse.

Clmwr. The Wife, of Bathes Tale, p. 275. My master ami bis man are both broke loose, Heat> n the. maids unnr, and bound the doctor.

Khuhspeare. Comedy of Errors. Three days nr/nr, to pass the open street.

Mirror for Magistrates, p. 321.

Then some irroen sˆowns arc by the lasses worn,

In chastrsr plays, till home they walk arow. Sidney.

Hut witli a pace more sober and more slow,

And twenty, rank in rank, they rode arow.

Dryden.

ARl'AI), in ancient geography, is thought to have hern a city of Syria. It was always placed with Ilamath. 2 Kings, xix. 13. Isa. x. 9. Jer. xlix. 215. Sennacherib boasts of having reduced Arpad and Harnath, or of having destroyed the gods of these places. Ilamath is the same with Arad or Arvad, as it is sometimes called in He- brew.

ARPAGIUS, or HARPAGIUS, among the an- cients, a child who died in the cradle, or in early youth. The word is formed from the Greek op- a£w, I snatch. The Romans made no funerals for their arpagii. They neither burnt

their bodies, nor made tombs, monuments, nor epitaphs for them. In after-times it became the custom to burn such as had lived to the age of forty days, and had cut any teeth; and these they called ApvoKToi, or Ap7ray/i £vo», q. d. rapti, lavished. The usage seems to have been borrowed from the Greeks ; among whom, Eustathius assures us, it was the custom never to bury their chil- dren either by night or full day, but at the first appearance of the morning ; and that they did not call their departure by the name of the death, but by a softer appellation, H/«pac apTraerij, im- porting that they were ravished by Aurora, or taken away to her embraces.

ARPAJON, a small town of France, in the department of the Seine, arrondissement of Cor- beiL It is situated on the river Orge, and contains 2100 inhabitants. The principal manu- factures are of cotton and fire-arms. This place formerly gave the title of marquis to the family of Noailles.

ARPEGGIO, (Ital.) in music, implies that the several sounds of an accord should be heard, not together, but one after another, beginning always with the lowest.

ARPENT signifies an acre or furlong of ground ; and, according to the old French ac- count in doomsday-book, 100 perches make an arpeut. The most ordinary acre, called 1'arpent de France, is 100 perches square ; some account it but half an acre.

ARPHAXAD, the son of Shem and father of Selah. Arphaxad was born a. year after the de- luge, and died at the age of 438. Genesis, xi. 12, &c.

ARPINAS, or ARPIKO, (Joseph Caesar), a fa- mous painter, born in 1560, at the castle of Arpinas. He lived in great intimacy with pope Clement VIII. who knighted him. In 1600 he went to Paris with cardinal Aldrobandin, legate to the French court on the marriage of Henry IV. who created him a knight of St. Michael. — His coloring is thought to be cold, but there is spirit in his designs. What he painted of the Roman history is the most esteemed of all his works. He died at Rome in 1640.

ARPINUM, in ancient geography, a town of the Volsci, a little to the east of the confluence of the rivers Liris and Fibrenus, in the Terra di Lavoroj now decayed. It was the native place of Cicero, and C. Marius

ARQUA, a town of Italy, in the Paduan, a territory of Venice, remarkable for the tomb of Petrarch. It is ten miles south of Padua.

ARQUATA, in ornithology, the name of a bird, called also by some numenius, and commonly known in England by the name of the curlew. The male of this species is somewhat smaller than the female, and is called

the jack curlew. It is of a very delicate taste.

ARQUATA Mi NOR, in ornithology, thewimbrel.

ARQUATUS MORBUS, a name given by some authors to the jaundice, from its resembling tne colors of the rainbow, arcus caelestis.

Ital. archibuso. An iron

ARQUEBUS A CROC is a sort of small fort buffaloes or men to the city of Arracan Here n, which carries a ball of about three half they are again embarked on deep narrow boats,

which, after quitting the river, keep along the It seems to coast till they enter the Megna of Bengal, and proceeding through the Sunderbunds, land them on the shore of the Salt-water lake, three miles to the east of Calcutta. The principal articles are honey, wax, ivory, drugs, sapphires, rubies, and gold; in exchange they take back tissues, silks, muslins, European commodities of all kinds, pearls, and diamonds. The inhabitants of Arracan are worshippers of Boodh, or God ama, to whom they have dedicated a number of handsome temples. In common with the other natives of the eastern peninsula, they keep their

gun

ounces ; now only used in Old Castile.

ARQUEBUSE, a hand-gun, have anciently meant much the same as our carabine, or fusee. AR'QUEBUSER,} ARQUEBUSADE', >, ARQUEBUSIER'. j ow°

And now farewell both spear and shield,

Caliver, pistol, arquebus, See, see, what sighs my heart doth yield, To think that I must leave you thus, And lay aside my rapier blade, And take in hand a ditching spade.

Nicholas Breton, in Ellis, vol. ... . .

A ttarquebuse, or ordnance, will be farther heard women "» great subjection, and make them per-

from the mouth of the piece, than backwards, or on ˆorm a'l the laborious offices of life. In features

the sides. Bacon, they resemble the Chinese, and speak a language

He compassed them in with fifteen thousand argue- very different from that of Bengal. This coun-

busieri, whom he had brought with him well appointed, try produces a number of very fine elephants.

Knolles. ARRACAN, a large city, and capital of the

ARQUEBUSADE, in medicine, a kind of water province of that name, stands on the banks of a originally of French invention, recommended noble river, two tides journey from the sea. as useful in cases of gun-shot wounds, from It was taken by the Burmans in the year 1 783, whence it derives its name. The composition of and is at present the residence of a viceroy, who it is not generally known, but it is said to be is very jealous of Europeans ; a Portuguese made from mint, sage, mugwort, 8cc. and lime- vessel hiving been driven into the river by stress water distilled in wine. It is also called aqua of weather, was confiscated. The harbour is said vulneraria, aqua sclopetaria, and aqua catapul- to have six fathoms water at the bar, and to be tarum. capable of containing a considerable fleet. The

ARQUES, a town of France, in the depart- great inconvenience to which it is exposed, pro- ment of the Lower Seine, seated on a river of ceeds from the violence of the tides, whiqh rise the same name, four miles south-east of Dieppe, from fifteen to twenty feet. Long. 93° 6′ E.T

and four north-east of Longueville.

ARRACAN, or RAKHANG, a large province of the Burman or Ava empire, extending along the eastern side of the Bay of Bengal, from the Nauf in Chittagong, as far south as Cape Ne-

lat. 20° 47′ N.

ARRACHEE, in heraldry, a term applied to the representations of plants torn up by the roots. ARRACK. See ARACK. ARRAGON, a province of Spain, which, be-

grais. The Anoupectoumiou mountains bound fore the union with Castile, in the person of it to the east; and towards the south approach Charles V. was governed by its own king and so near to the sea, that, though its length maybe laws. The kingdom of Arragon comprised the estimated at 500

miles, in many places the provinces of Valencia, Catalonia, and Mallorka. breadth in land does not exceed ten miles, and By Arragon is now understood the large province' nowhere more than 100. From the side of bounded by the Pyrenees on the north, Navarre Chittagong, Arracan can only be approached by and Castile on the west, Valencia on the south, a march along the sea beach, interrupted by se- and Catalonia on the east. The soil, though in

some places sandy, stony, and mountainous,

veral channels, which owe their waters to the tide. From the quarter of Basseen and Negrais, it can only be invaded by water.

The sea-coast of Arracan is studded with islands and clusters of rocks of different sizes, at a small distance from the shore. Behind these islands the sea-coast is agreeably diversified with hills covered with trees, and valleys planted with rice.

Arracan is a fertile country, but much op- pressed by the Burmans. Its ports are shut against all foreigners, and the natives much re- stricted in their privileges. It is subject to much rain, and the exhalations are unfavorable to Eu- ropean constitutions. Its inhabitants were for- merly called Muggo, and previous to Bengal being under the protection of the English, used to commit great depredations on that country. At present there is little intercourse by land be- tween the two countries, but a considerable trade is carried on by Burman merchants; who, em- barking their goods on the Irravaddy, land them at SembewRheei), whence they are carried by

principally in the tract bordering on Catalonia, is on the whole productive, especially in the rich valley of Catalayud and on the banks of the ri- vers. It is said that in the time ot the Romans the mines of Arragon were an object of great attention; and the remains of silver-mines may still be found. Copper, lead, and iron, however, are extremely plentiful ; and the Arragonese blades, of which Martial and Pliny speak, were celebrated to a late time. The cultivation of the country has been of late improved, and Ar- ragon abounds with olives and other fruits. Here are raised also maize, hemp, madder, and saffron ; and excellent wine is exported in consi- derable quantities. So early as the year 1179 silk worms were reared at Cespe, and the quan- tity of silk made and exported in 1784 was 300,000. The mineral products are alum, vitriol, jasper, marble, lead, and iron ; but the breeding of sheep forms the grand branch of industry. The wool is in high esteem with foreigners, par- ticularly with the English, who use it in their

finest cloths. The natural history of this province is only peculiar from the number of wild beasts which infest it, in greater numbers than are to be found in any other part of Europe. The black bear, the lynx, the wolf, are commonly met with in the mountains towards the Py- renees. It contains no more tha:.i 630,000 in- habitants, whereof 10,000 are priests, monks, and nuns, and above 9000 of the rank, or pre- tended rank of noblesse. The number of juris- dictions is thirteen, and Saragossa is the chief town.

ARRAH, a town of Hindostan, in the pro- vince of Bahar, district of Shahabad, the resi- dence of a British judge and collector. It is situated in N. lit. 25° 32', E. long. 84° 44'.

ARRAIGN', } Corrupted and contracted

AKRAIGN'MENT. S from ad rationem [ponere]. To call the prisoner to the bar of the court to answer the matter charged upon him in the in- dictment.

Summon a session, that we may arraign Our most disloyal lady; for, as she hath Been publickly accused, so shall she have A just and open trial. Shakspeare.

Then all thy saints assembled, thou shall judge Bad men and angels ; they arraigned shall sink Beneath thy sentence ; hell, her numbers full, Thenceforth shall be for ever shut.

Milton. Paradise Lost, book iii.

My own enemies I shall never answer; and, if your lordship has any, they will not arraign you for want of knowledge.

Dryden's Dedication to the JEneid.

Down, down, proud Satire ! tho' a realm be spoil'd, Arraignao mightier thief than wretched Wild.

Pope. Epilogue to the Satires. Reverse of nature ! shall such copies then

Arraign th' originals of Maro's pen? Roacommon.

He that thinks a man to the ground, will quickly endeavour to lay him there ; for, while he despises him, hi; arriiiuii.i and condemns him in his heart.

South.

One part, one little part, we dimly scan, Through the dark medium of life's feverish dream ; Yet dare arraign the whole stupendous plan, If but that little part incongruous seem.

lieattie' Minstrel.*

AI:I;AK,NMI NT, in law. The word in Latin, says Lord Hale, is no other than ad rationem poner.', and in French ad reson, or abbreviated a rcsn ; for as the ancient word disrain, orderayn, imports in Latin disrationare, to disprove or evince the contrary of any thing that is or may be af firmed, so arraiune is ad rationem ponere, to call to account or answer. And this perhaps may bo sufficient to show the meaning of the word, although not to declare its derivation ; for it secincth to have flowed unto the French tongue from its common origin with the Greek; of which we shall have little doubt, when we consider the verbs ayoptveiv, KarnyoptuHv, and also CKiyopfvtiv, as they are used in the classical remains of that language, and compare them with the terms arraigne, adraigne, disrayn, de- ray ne.

The prisoner on his arraignment, though under an indictment of the highest crime, must be brought to the liar without irons and all manner of shackles and bonds, unless there be a danger of escape, and then he may be brought with

irons. But at this day they usually come with their shackles upon their legs, for fear of an escape, but stand at the bar unbound, till they receive judgment. — 2 Hale, 219.

In Layer's case, 1722, a difference was taken between the time of arraignment and the time of trial, and accordingly the prisoner was obliged to stand in irons at the bar during his arraign- ment ; but when brought to trial, upon counsel desiring that his irons might be taken off, Lord J. C. Pratt said, the irons must be taken off; we will not stir till the irons are taken off. And in Rex v. Waite (for embezzlement) the prisoner, at the time of arraignment, desired that his irons might be taken off; but the court informed him, that they had no authority for that purpose until the jury were charged to try him. He accord- ingly pleaded Not guilty ; and being put upon his trial the court immediately ordered his fetters to be knocked off. Also there is no necessity that a prisoner, at the time of his arraignment, hold up his hand at the bar, or be commanded so to do ; for this is only a ceremony for making known the person of the offender to the court; and if he answer that he is the same person, it is all one.

A prisoner may stand mute two ways : 1 . When he speaks not at all ; in which case it is enquired, whether he stand mute of malice,3Jr by the act of God; if by the latter, then the judge, ex officio, ought to enquire whether

he be the same person; and of all other pleas, which he might have pleaded if he had not stood mute. 2. When he pleads not directly, or will not put himself upon the inquest to be tried. If he be found to be obstinately mute, then, if it be on an indictment of high treason, it is clearly settled that standing mute is equivalent to a conviction, and he shall receive the same judgment and exe cution. So likewise, in petty larceny, and in all misdemeanors, standing mute is equivalent to conviction. But in appeals or indictments for other felonies, or petit treason, it was the custom till of late not to consider him convicted, so as to pass judgment for the felony ; but for his ob- stinacy he was to receive the terrible sentence of penance, or peine forte et durc ; a method of torture by which he was pressed to death fasting, by large weights placed on his breast. Before this was pronounced, the prisoner was allowed not only trina admonitio, but also a convenient respite for a few hours, and the sentence was dis- tinctly read to him, that he might know his danger ; and, after all, if he continued obstinate, and his offence was clergyable, he was allowed the benefit of his clergy, even though he was too stubborn to pray it. But in this respect the law is now altered; for by 12 Geo. III. cap. 20. standing mute in felony or piracy is made a con- viction. To advise a prisoner to stand mute is an high misprision, a contempt of the king's court, and punishable by fine and imprison- ment.

ARRAN, a mountainous island of Scotland, in the Frith of Clyde, between Kintyre and Cun- ningham ; twenty-three miles in length and twelve in breadth, according to Walker, but seven according to Mr. George Stewart; if he means Scots miles, the estimates are nearly equal

Piobably the best description of this island is the following, given by Mr. Pennant in his Tour, vol. ii. : — ' Arran, or properly Arr-ian, ' the island of mountains/ seems not to have been noticed by the ancients. Camden indeed makes this island the Glota of Antonine, but no such name occurs in his Itinerary ; it therefore was bestowed on Arran by some of his commen- tators. By the immense cairns, the vast monu- mental stones, and many relics of Druidism, this island must have been considerable in very an- cient times. Here are still traditions of the hero Fingal, or Fin-maccoul, who is supposed here to have enjoyed the pleasures of the chace; and many places retain his name ; but there is no authentic history that relates to the island till the time of Magnus the Barefooted, the Norwe- gian victor, who probably included Arran in his conquest of Kintyre. Arran was the property of the crown. Robert Bruce retired thither du- ring his distresses, and met with protection from his faithful vassals. Numbers of them followed his

fortunes ; and after the battle of Bannock- bum he rewarded several, such as the M'Cooks, M'Kinnons, M'Brides, and M'Louis, or Fuller- tons, with different charters of lands in their na- tive country. All these are now absorbed by this great family, except the Fullertons, and a Stew- art I sˆended from a son of Robert III. who gave him a settlement here. In the time of the dean of the isles, his descendant possessed castle Douan ; and ' he and his bluid,' says the dean, ' are the best men in that countrey.' About the year 1334 this island appears to have formed part of the estate of Robert Stewart, great Stew- art of Scotland, afterwards Robert II. At that time they took arms to support the cause of their master ; who afterwards, in reward, not only granted at their request an immunity from their annual tribute of corn, but added several new privileges, and a donative to all the inhabitants that were present. In 1456, the whole island was ravaged by Donald earl of Ross and lord of the isles. At that period it was still the property of James II. but in the reign of his successor James III. when that monarch matched his sister to Thomas lord Boyd, he created him earl of Arran, and gave him the island as a por- tion. Soon after, on the disgrace of that family, he caused the countess to be divorced from her unfortunate husband ; and bestowed both the lady and island on Sir James Hamilton, in whose family it continues to this time, a very few farms excepted. — Arran is of great extent, being twenty-three miles from Sgreadan point north to Beinnean south ; and the number of inhabitants are about 7000, who chiefly inhabit the coasts; the far greater part of the country being unin- habited by reason of the vast and barren moun- tains. Here are only two parishes, Kilbride and Killmore ; with a sort of chapel of ease to each, founded in the last cenfury by Anne duchess of Hamilton. The principal mountains of Arran are, Goatfield, or Gaoilbheinn, or ' the moun- tain of the winds,' of a height equal to most of the Scottish Alps, composed of immense piles of moor-stone, in form of wool-packs, clothed only with lichens and mosses, inhabited by eagles and ptarmigans, Beinbharrain, or 'the sharp-

pointed ;' Ceum-na-caillich, ' the step of the carline or old hag;' and Grianan-Athol, that yields to none in ruggedness. The lakes are Loch-jorsa, where salmon come to spawn ; Loch- tana; Loch-nah-jura, on the top of a hijr'i hil ; Loch-mhachrai ; and Loch-knoc-acharbtll, full of large eels. The chief rivers are, Abhan- mhor, Moina-mhor, Slondrai-machrei, and Jo»- sa ; the two last remarkable for the abundance of salmon. The duke of Hamilton keeps a sur- geon in pay, who, at certain times, makes a tour of the island. On notice of his approach the inhabitants of each farm assemble in the open air, extend their arms, and are bled into a hole made in the ground', the common receptacle of the vital fluid. In burning fevers, a tea of wood sorrel is used with success, to allay the heat. An infusion of ramsons, or allium ursinum, in brandy, is esteemed here a good remedy for

the gravel. — The men are strong, tall, and well made ; all speak the Erse language, but the an- cient habit is entirely laid aside. Their diet is chiefly potatoes and meal; and during winter, some dried mutton or goat is added to their hard fare. A deep dejection appears in general through the countenances of all : no time can be spared for amusement of any kind ; the whole being given for procuring the means of paying their rent, of laying in their fuel, or getting a scanty pittance of meat and clothing. The leases of farms are nineteen years. The suc- ceeding tenants generally find the ground little better than a caput mortuum : and for this rea- son should they, at the expiration of the lease, leave the lands in a good state, some avaricious neighbours would have the preference in the next setting, by offering a price more than the person who had expended part of his substance in enriching the farm, could possibly do. This induces them to leave it in the original state. The metnod of setting a farm is very singular ; each is commonly possessed by a nujnber of small tenants ; thus a farm of £40 a year is oc cupied by eighteen different people, who, by their leases, are bound, conjunctly and severally, for the payment of the rent to the proprietor. These live on the farm in houses clustered together, so that each farm appears like a little village. The tenants annually divide the arable land by lot ; each has his ridge of land, to which he puts his mark, such as he would do to any writing : and this species of farm is called run-rig, i. e. ridge. They join in ploughing ; every one keeps a horse or more ; and the number of those ani- mals consume so much corn as often to occasion a scarcity ; the corn and peas raised being, much of it, designed for their subsistence, and that of the cattle, during the long winter. The pasture and moor land annexed to the farm is common to all, the possessors. All the farms are open. Enclosures of any form, except in two or three places, are quite unknown ; so that there must be a great loss of time in preserving their corn, &c. from trespass. The usual manure is sea plants, coral and shells. The run-rig farms are now discouraged ; but since the tenements are set by roup or auction, and advanced by an unnatural force to above double the old rent, without any allowance for enclosing, any example

set in agriculture, any security of tenure by lengthening the leases, affairs will turn retro- grade, and the farms relapse into their old state of rudeness ; migration will increase, for it has begun, and the rents be reduced even below their former value : the late rents were scarcely £1200 a year : the expected rents £3000.

‘ The live stock of the island is 3183 milch lows ; 2000 cattle, from one to three years old ; 1058 horses; 1500 sheep; and 500 goats : many of the two last are killed at Michaelmas, and dried for winter provision, or sold at Greenock. The cattle are sold from forty to fifty shillings per head, which brings into the island about £1200 per annum. I think that the sale of horses also brings in about £300. Hogs were introduced here only two years ago. The herring-fishery round the island brings in £300; the sale of herring-nets £100; and that of thread about £300, for a good deal of flax is sown here. These are the exports of the island ; but the money that goes out for the necessaries is a me- lancholy drawback. The produce of the island is oats ; of which about 5000 bolls, each equal to nine Winchester bushels, are sown ; 500 of beans, a few peas, and above 1000 bolls of po- tatoes, are annually set : notwithstanding this 500 bolls of oatmeal are annually imported, to subsist the natives. The women manufacture the wool for the clothing of their families ; they set the potatoes, and dress and spin flax. They make butter for exportation, and cheese for their own use. The inhabitants in general are sober, religious and industrious; great part of the sum- mer is employed in getting peat for fuel, the only kind in use here ; or in building or repair- ing their houses, for the badness of the materials requires annual repairs: before and after harvest they are busied in the herring-fishery; and du- ring winter the men make their herring-nets; while the women are employed in spinning their linen and woollen yarn. The light they often use is that of lamps. From the beginning of February to the end of May, if the weather permit, they are engaged in laboring their ground ; in autumn they burn a great quantity of fern, to make kelp. So that, excepting at new-year’s-day, at marriages, or at the two or three fairs in that island, they have no leisure for any amusements ; no wonder then at their de- pression of spirits. •• Arran forms part of the county of Bute, arid is subject to the same sort of government ; but, besides, justice is admi- nistered at the baron’s baily court, who has power to tine as high as twenty shillings, can decide in matters of property not exceeding forty shillings, can imprison for a month, and put delinquents into the stocks for three hours, but that only during day-time.’ In 1793 the number of inhabitants in the whole island amount- ed to 580-4.

AKKAN, NORTH, an island of Ireland, situated on tlve coast of Donegal in Ulster.

AUUAX, South isles of, three islands on the west coast of Ireland, in the mouth of Galway Bay.

ARRAN, a town of Switzerland, seated on the Aar, twenty-five miles south- west of Baden. The diets of t’ie Protestant cantons are held in it.

AK RAND. Ang.-Sax. ˆErendian ; to bear 01 carry tidings, to deliver a

message. Commonly written errand.

That with the noise of her he gan awake, And to cal, and dresse him vp to rise. Remembring him his arrand was to done From Troilus, and eke his great emprise.

Chaucer. Troilus, book ii. fol. 158. Such may be said to go out upon such an arrand. Howell. Instruct, /or For. Travels, p. 187.

ARRANGE', "^ Fr. ranger, arranger, to

ARRANG'ER, > order and dispose persons

ARRANGE'MENT. j or things. To put in order, to dispose in an orderly manner, to methodise.

I chanced this day

To see two knights in travel on my way, (A sorry sight !) arranged in battle new.

Faerie Qwene.

How effectually are its muscular fibres arranged, and with what judgment are its columns and furrows dis- posed ! Cheyne.

There is a proper arrangement of the parts in elastick bodies, which may be facilitated by use. Id.

In vain you attempt to regulate your expense, if into your amusements or your society disorder has crept. You have admitted a principle of confusion which will defeat all your plans, and perplex and en- tangle what you sought to arrange. Blair.

What organ it is that shall declare the corporate mind, is so much a matter of positive arrangement, that several states, for the validity of several of their acts, have required a proportion of voices much greater than that of a mere majority. Burke.

ARRANGEMENT, in rhetoric. See ORATORY.

AR'RANT,) Supposed to be derived from

AR'RANTLY. J errans, participle of erro, to wan- der. Fr. errant, a wanderer, a vagabond, an outcast, destitute of character, and therefore re- jected by society.

Country folks, who halloed and hooted after me, as the arrantest coward that ever showed his shoulders to the enemy. Sidney.

A vain fool grows forty times an arranter sot than before. L' Estrange.

Funeral tears are as arrantly hired out, as mourn- ing clokes. Id.

And let him every deity adore, If his new bride prove not an arrant whore.

Dryden.

ARRAS, a city of France, in the department of the Straits of Calais; formerly the capital of the ci-devant province of Artois. It is seated on a mountain ; and the parts about it are full of quarries, where good stones are got for building. It is divided into two parts by a strong wall, a large fosse, and the rivulet Chrinchron, which, 100 paces below, falls into the Scarpe. They are both well fortified, enclosed by high ramparts and deep fosses, which in several places are cut out of the rock. Arras has four gates, and a strong citadel with five bastions. The most remarkable places are, the great square where the principal market is kept, full of fine buildings, with piazzas all round it ; the lesser market, which contains the town-house, a very noble structure, with a high tower covered with a crown, on the top of which is a brazen lion which serves for a vane. In the midst of this market is the chapel of the Holy Candle, said to be brought by the Virgin Mary herself above 600 years ago, when the city was affected with divers diseases, and every one

that touched the candle was cured ! The candle is kept in a silver shrine. This chapel has a steeple adorned with silver statues. The cathedral church of Notre Dame stands in the city. It is a very large Gothic building, extremely well adorned ; the lower is very high, and has a fine clock em- bellished with little figures in bronze, which represent our Saviour's passion and pass before the bell to strike the hours The abbey church of St- Vedast is the greatest ornament of Arras, being adorned with a fine steeple and seats of admirable workmanship. The chimes are re- markable for the different tunes they play. There are ten parish churches. Arras is situated 12 miles S. W. of Douay. Long. 2° 50′ E., lat. 50° 20′ N.

ARRAS, or ARAXES, a river of Persia in Geor- gia, which arises in Georgia, and, running S. E. joins the Cyrus, and the united streams fall into

the Caspian sea between Shirvan and Aderbeit- zan.

ARRAY', v. & n. > From the Ang.Sax. ARRAIS'MENT. \ wrigan, to cover cr cloak, dress, or set in order. Array, in law, is the ex hibiting or setting forth the jury impanelled to try a cause. To challenge the array is to object to the jury altogether.

Hire riche array ne mighte not be told, As wel in vessell as in hire clothing ; She was all clad in pierri and gold,

Chaucer. The Monks' Tale. A rich throne, as bright as sonny day ; On which there sat most brave, embellished With royal robes and gorgeous array, A maiden queen. Faerie Queene.*

Deck thyself now with majesty and excellency, and array thyself with glory and beauty. Job id. 10.

Now went forth the morn, Such as in highest heav'n, array'd in gold Empyreal. Milton.

Wert thou sought to deeds, That might require th' array of war ; thy skill Of conduct would be such, that all the world Could not sustain thy prowess. Id.

In this remembrance, Emily ere day Arose, and dressed herself in rich array. Dryden. She seem'd a virgin of the Spartan blood, With such array Harpalyce bestrode Her Thratian courser. Id.

One vest array'd the corpse ; and one they spread O'er his closed eyes, and wrapp'd around his head.

Id.

The earl espying them scattered near the army, sent one to command them to their array. Hayicard.

A general sets his army in array In vain, unless he fight and win the day.

Denftam. At once arrayed

In all the colours of the flushing year, By nature's swift and secret-working hanc, The garden glows, and fills the liberal air With lavish fragrance ; while the promised fruit Lirs yet a little embryo unperceived, Within its crimson folds. Thornton.

To right and left the martial wings display Their shinine arms, and stand in close array, Though weak their spears, though dwarfish be their

height, Crropact they move, the bulwark of the ngnt.

Sir William Jones.

ARREAR', v. & n. ˆ Fr. arriere, behind.

ARREAR'AGE, VTo put in the rear or

ARRIERE'. j back, to be behind hand,

to omit (from any cause), to keep an account

paid up in due time.

To leave with speed Atlanta swift, arrear ; Through forests wild and unfrequented land, To chase the lion, boar, or rugged bear.

Faerie Queene.

When we have forgotten our sins, yet God remem- bers them, and, although not in anger, yet he calls for our arrearage. HaU't Contemplation*.*

Hell grant the tribute, send the arrearage.*

Shaktpeare.

Arrearage is the remainder of an account, or a sum

of money remaining in the hands of an accountant ;

or, more general!}', any money unpaid at the duo

time, as arrearage of rent. Cowell.

The horsemen might issue forth without disturbance

of the foot, and the avant-guard without shuffling with

the battail or arriere. Hay ward.

Paget set forth the king of England's title to his

debts and pension from the French king, with all

arrearage. Id.*

The old arrearage under which that crown had long*

groaned, being defrayed, he hath brought Lurana, to

uphold and maintain herself.

Howel't Vocal Forett.

ARRECT, v. & adj. Arrigo, arrectum, to set or lift up.

Arrectynge my sight toward the zodiake, The signes twelve for to beholde afarrc.

Skelton't Poem, p. 9. Eager fo» the event.

Around the beldame all arrect they hang, Each trembling heart with grateful terrors quell'd. Akcntide. Pleasure of Imagination. ARREPTION, J Arripio,atreptus, to snatch. ARREPTI'TIOUS. J Snatching away. This epi- thet is, according to Ducange, applied to that which is supposed to be under a Satanic or de- moniacal influence, and therefore crack-brained, frantic, mad. Words of little worth.*

The arreptian was sudden ; yet Elisha sees both the chariot, and the hones, and the ascent.

Hall's Contemplation.

They stick not to term their predictions of Christ to be mere mock oracles, and odd arreptitious frantic ex- travagancies. Howell't Letter. ARREST', t>.& n. Old Fr. arrester, to seize. To stop, attach, detain, impede, check, interrupt, from the Ang.-Sax. restan, to rest.*

This fals knight in his degree Arretted was, and put in holde.

Gower. Con. A. bk. ii.

The battle of Lepanto arretted the greatness of the Turk. Lord Bacon' Essay*.*

But, when as Morpheus had with leaden maze Arretted all that goodly company. Faerie Qutene. When Job's messengers told him the sad stories of fire from heaven, the burning his sheep, and that the Sabeans had driven his oxen away, and the Chal- deans had stolen his camels, these were sad arrests to his troubled spirit. Jeremy Taylor.

Age itself (which, of all things in the world, will not be baffled or defied) shall begin to arrest, seize, and remind us of our mortality. South.

This defect of the English justice was the main im- pediment, that did arrett

and stop the course of the conquest

Dar-iet.

As often as my dogs, with better speed, Arrest her flight, is she to death decreed Dryden.

748

ARREST.

Nor could her virtues, nor repeated vows Of thousand lovers, the relentless hand Of death arrest. Philips.

Then died Scamandrius, expert in the chace, in woods and wilds to wound the savage race ; Diana taught him all her sylvan arts, To bend the bow, and aim unerring darts ; But vainly here Diana's arts he tries, The fatal lance arretts him as he flies.

Pope's Iliad, v. 65. And it is hard

To feel the hand of death arrest one's steps, Throw a chill blight o'er all one's budding hopes, And hurl one's soul untimely to the shades, Lost in the gaping gulf of black oblivion.

Kirhe White's Poems. And dun and sombre 'mid the holy calm, Near Theseus' fane, yon solitary palm, All tinged with varied hues, arrest the eye — And dull were his that passed them heedless by.

Lord Byron's Corsair.

An ARREST, in a civil caus«^ is defined to be the apprehending or restraining one's person by process in execution of the command of some court. An arrest must be by corporeal seizing or touching the defendants body, after which the bai- lifF may justify breaking open the house in which he is, to take him; otherwise lie has no such po\ver, but must watch his opportunity to arrest him. For every man's house is looked upon by the law to be his castle of defence and asylum, wherein he should suffer no violence. Which principle is carried so far in the civil law, that for the most part, not so much as a common citation or summons, much less an arrest, can be executed upon a man within his own walls. Peers of the realm, members of parliament, and corporations, are privileged from arrests ; and of course from outlawries. And against them the process to en- force an appearance must be by summons and dis- tress infinite, instead of a capias. Also clerks, at- torneys, and ,ill other persons attending the courts of justice (for attorneys being officers of the court are always supposed to be there

attending), are not liable to be arrested by the ordinary process of the court, but must be sued by bill called usu- ally a bill of privilege, as being personally present in court. Clergymen performing divine service, and not merely staying in the church with a frau- dulent design, are for the time privileged from arrests, by statute 50 Edw. III. c. 5, and 1 Rich. II. c. 10 ; as likewise members of convocation ac- tually attending thereon, by statute 8 Henry VI. c. 1. Suitors, witnesses, and other persons ne- cessaiily attending any courts of record upon business, are not to be arrested during their actual attendance, which includes the necessary coming and returning. .Seamen in the king's service are privileued from arrests tor debt under .£'20, 1 Geo. II. c. 14, and 14 (leo. 11. c. UH ; and soldiers or m.irmes are not liable to arrest?, for a debt of less th, in I'lO. :!()(ieo. 11. c. 0. 11. And no arrest can !•(• made in the kind's presence, nor within the verge of his royal palace, nor in any place v. licre the king's justices are actually sitting, 'i iii- kiii'_r hath moreover a special prerogative, v. l.ic'.i indfi'd is very seldom exerted, that he may 1'v his \ rit of protection privileges defendant from ail personal and many real suits, for one year at a i;:::e, and no lunger; in rtˆpect of his being

engaged in his service out of the realm. And the king also by the common law might take his credit into his protection, so that no one might sue or arrest him till the king's debt was paid; hut, by the statute 23 Edw. III. c. 19, notwithstanding such protection, another creditor may proceed tc judgment against him, with a stay of execution till the king's debt be paid ; unless such creditor will undertake for the king's debt, and then he shall have execution for both. And lastly, by statute 29 Car. II. c. 7, no arrest can be made, nor process served, upon a Sunday, except for treason, felony, or breach of the peace. By 51st Geo. II I. c. 1 24, the power of arresting in civil cases is confined to those in which'£l5 at the least was the original amount of the debt, except in cases of promissory notes and bills of exchange.

An ARREST, in a criminal cause, is the appre- hending or restraining one's person, in order to be forthcoming to answer an alleged crime. To this arrest all persons whatsoever are, without distinction, liable ; and doors may be broken open to arrest the offender ; but no man is to be arrested, unless charged with such a crime as will at least justify holding him to bail when taken. There is this difference also between arrests in civil and criminal cases, that none shall be arrested for debt, trespass, or other cause of action, but by virtue of a precept or commandment out of some court ; but for trea- son, felony, or breach of the peace, any man may arrest with or without warrant or precept. But the king cannot command any one by word of mouth to be arrested ; for he must do it by writ, or order of his courts, according to law : nor may the king arrest any man for suspicion of treason, or felony, as his subjects may ; because, if he doth wrong, the

party cannot have an action against him. Arrests by private persons are in some cases commanded. Persons present at the committing of a felony must use their en- deavours to apprehend the offender, under penalty of fine and imprisonment ; and they are also with the utmost diligence to pursue and endeavour to take all those who shall be guilty thereof out of their view, upon a hue and cry levied against them. By the vagrant act, 17th Geo. II. c. 5, every person may apprehend beggars and vagrants ; and every private person is bound to assist an officer requiring him to apprehend a felon. In some cases likewise arrests by private persons are rewarded by law. By the 4th and 5th William and Mary, c. 8, persons apprehending highwaymen, and pro- secuting them to a conviction, are entitled to a reward of £40 and if they are killed in the attempt, their executors, &c. are entitled to the like reward. By the 6th and 7th William III. c. 17, persons apprehending counterfeiters and clippers of the coin, and prosecuting them to conviction, are entitled to £30. By 5th Anne, c. :-51, persons who shall take one guilty of burglary, or the felonious breaking and entering any house in the day time, and prosecute them to conviction, shall receive the sum of £40 within one, month after such conviction. Arrests by public officers, as watchmen, constables, &c. are either made by their own authority, which differs but very little from the power of a private*

person • or they are made by a warrant from a justice of Peace. See WARRANT.

On the continent of Europe the method of procuring a man's appearance before a court of justice is different from the above : the forms introduced in the Roman civil law, in the reigns of the latter emperors, being adopted. The usual practice is to have the person sued summoned to appear before the court by a public officer belonging to it, a week before the time. If no regard is paid to such summons twice repeated, the plaintiff, or his attorney, is allowed to make before the court a formal reading of his demand, which is then granted him, and he may proceed to execution.

ARREST of judgment, in law, the assigning just reason why judgment should not pass ; as want of notice of the trial ; a material defect in the pleading ; when the record differs from the deed impleaded ; when persons are misnamed ; where more is given by the verdict than is laid in the declaration, &c. This may be done either in criminal or civil causes.

ARREST, in horsemanship, a mangy humor be- tween the ham and pastern of the hinder legs of a horse.

ARRESTANDIS BONIS ne dissipentur, a writ which lies for him whose cattle or goods are taken by another, who during the controversy is likely to make away with them, and will hardly be able to give satisfaction for them afterwards. ARRESTANDO IPSUM qui pecuniam re- cepit ad pronciscendum iu obsequium regis, &c. is a writ which lies for the apprehension of him that hath taken bounty-money to serve in the king's wars, and hides himself when he should go.

ARRESTMENT, in Scots law, signifies the securing of a criminal till trial, or till he find caution to stand, in what are called bailable crimes. In civil cases it signifies either the de- taining of strangers or natives in meditatione fugsE, till they find caution judicio sisti, or the attaching the effects of a stranger in order to found jurisdiction. But in the roost general ac- ceptation of the word, it denotes that diligence by which a creditor detains the goods or effects of his debtor in the hands of third parties till the debt due to him be either paid or secured. See LAW, Index.

ARRESTO FACTO SUPER BOMS, &c. a writ brought by a denisen against the goods of aliens found within this kingdom, as a recompense for goods taken from him in a foreign country.

ARREflUM, or ARRHETIUM, one of the twelve ancient towns of Tuscany, near the Amis and Clanis, situated in a pleasant valley; now called Arezzo, forty-two miles east of Florence. See AREZZO.

ARETS, or ARRETES, in ichthyology, the tack-bones of fishes.

A.RRHABONARII ; from appo/3ov, earnest ; a sect of Christians who held that the eucharist is neither the real flesh nor blood of Christ, nor yet the sign of them ; but only the pledge or earnest thereof.

ARRHAPHON. a skull wi hout sutures, found to be the cause of incurable cephalaigije

ARRIIENOGOL»UN, in botany, a name

given by some to the parietaria, or pellitory of the wall.

ARRHEPHORIA, a feast among the ancient Athenians instituted in honor of Minerva, and Herse daughter of Cecrops. The word was composed of appijrov, mystery, and 0tpw, I carry ; on account of certain mysterious things which were carried in procession at this solem- nity. Boys, or, as some say, girls, between seven and twelve years of age were the ministers

that assisted at this feast, and were denominated appij- 0opoi. This feast was also called Hersiphoria, from Herse, already mentioned.

ARRIA,the virtuous and heroic wife of Foetus, who being condemned to death unjustly, along with her husband, by the tyrant Nero, first stab- bed herself, and then gave the dagger to her husband, saying ‘ Pcetus, it is not painful.’ Martial’s epigram on this subject is well known, but it is remarked that he has given an ingenious turn to the speech, which injures its noble sim- plicity :

c’ajta suo glad Sum cum traderet Arria Poeto, Quern de visceribus traxerat ipsa suis ;

Si qua fides, vulnus quod feci, non dolet, inquit, Sed quod tu fades, hoc mihi, Pate dolet.

When Arria drew the dagger from her side. Thus to her consort spoke th’ illustrious bride : ‘ The wound I gave myself I do not grieve ; I die by that which Foetus must receive.’

ARRIAGA (Roderic d’), a learned Spanish Jesuit, born in 1592. He became professor in theology and philosophy at Prague, where he died in 1667. He wrote a Course of Philoso- phy, and of Theology. The former was printed at Antwerp in 1532, and the latter in 1683; 8 vols. folio.

ARRIAGI, in the matena medica, a name given by some authors, particularly by Serapion and Avicenna, to a fine kind of camphor.

ARRIAN, a famous Grecian philosopher and historian of the second century. He was born at Nicomedia in Bithynia, and flourished under Adrian and the two Antonines. He united in himself the character of a warrior and a philoso- pher. His great learning and eloquence pro- cured him the title of the ‘second Xenophon;’ and raised him to the consulship and most con- siderable dignities at Rome. His History of Alexander die Great, in seven books, is admired by the best judges. He also wrote a book on the affairs of India, which pursues the history of Alexander, but is not deemed of equal au- thority with the former. An epistle from Arrian to Adrian is also extant, entitled Periplus Ponti Euxini. There are besides, a Treatise on Tac- tics; a Periplus of the Red Sea; his Enchiridion, a Treatise containing the Discourses of Epictetus. The best editions of Arrian are that of Gro- novius, Greek and Latin, 1704, folio; ofRa- phelius, Greek and Latin, Amsterdam, 1750, 8vo.; and of Schneider, Leipsic, 1798. An English translation of his History of Alexander was published by Rooke in 2 vols. 8vo. 1729.

ARRIDE’. Ad rideo, to smile at. To look pleasantly upon one, to manifest a

pleasing sa- tisfaction.

FAST. Tore heavens, his humor arridet me ex- ceedingly.

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CAR. Arrides you?

FAST. I, pleases me (a pox on't) I am so haunted at the court, and at my lodging, with your refined choise spirits, that it makes me cleane of another garbe, another sheafe, I know not howe I cannot frame me ! to your harsh vulgar phrase, 'tis against my genius. Ben Jim-son. Every Man out of his Humour.

ARRIEGE, a river of France, which rises among the Pyrenees, runs through the depart- ment, and passing by Foix and Pamiers, falls into the Garonne near Toulouse. Gold-dust has been found amongst its sands.

*ARRIEGE, or ARIEGE, adepartmen*of France, which takes its name from the river Arriege, is bounded on the east by the department of the Aude, on the south by a part of the Pyrenean mountains, and on the west and north by the department of the Upper Garonne. Its extent is 244 square leagues, and its population, ac- cording to the most recent returns, 222,936. It is divided into three arrondissements, viz. that of Foix, that of Pamiers, and that of St. Girons, This department forms, with that of the Haute Garonne, the diocese of the archbishop of Tou- louse. The general aspect of the country is mountainous, and there are several mines of lead, copper, and iron. The climate, which is very cold on the mountains, is warm in the valleys and plains. The many pastures render the herds of cattle numerous and thriving. The principal objects of culture and trade are cattle, resin, turpentine, pitch, cork, and particularly iron. Corn is not grown in sufficient quantity for home consumption.*

AURIKRE BAN ; Casseneuve derives this word from arriere and ban; ban denotes the convening of the nobless or vassals, who hold fees imme- diately of the crown; and arriere, those who only hold of the king immediately. A general proclamation, by which the king of France sum- mon:? to the war all that hold of him, both his own vassals or the noblesse, and the vassals of his vassals.

ARRIERE FEE, or Fief, is a fee dependent on a superior one. These fees commenced when (hikes and counts, rendering their governments

hereditary, distributed to their officers parts of tin; domains, and permitted those officers to gratify the soldiers under them in the same manner.

A KltlGIIKTTO, or ARRIGO, a Florentine poet of the twelfth century. He took holy orders, and obtained the benefice of Calvazo, which he lost from some irregularity. He made his mis- fortunes the subject of his poems, printed first in 1684, which are still popular for the elegance of their style, and the pensive melody of their versification.

A 11 It I VK', ˆ Fr. arrivcr, perhaps from

ARRIV'AL, Mhe Fr.mv, the shore. To ap-

AKRIV'ANCE. j proach the shore, to come to, to reach, to attain ; applied to persons, or what is personified.

Every minute is expectancy

Of more arrirance. Shahspeare,

Bid him [the intellect] soar up to heaven, and thence

down throwing

The rontrr search, and Dis' dark realm, he's gone, Returns, arrives, before thou saw'st him going ; And while his weary kingdom safely sleeps,

All restless he watch and warding keeps, Never his carefull head in resting pillow steeps.

Fletcher's Purple Island. Happy to whom this glorious death arrives ;

More to be valued than a thousand lives. Waller.

How are we changed, since first we saw the queen ! She, like the sun, does still the same appear j Bright as she was at her arrival here. Id.

It is the highest wisdom, by despising the world to arrive at heaven ; they are blessed who converse with God. Taylor.

The virtuous may know in speculation, what they could never arrive at by practice ; and avoid the snares of the crafty. Addison.

The citizen, above all other men, has opportunities of arriving at the highest fruit of wealth to the liberal without the least expense of a man's own fortune.

Steele.

Old men love novelties j the last arrived Still pleases best, the youngest steals their smiles.

Young.

The unravelling is the arrival of Ulysses upon his own island. Brooms' 's View of Epic Poetry.

ARROE, a small island of Denmark, in the Baltic Sea, a little south of the island of Funen, and north of that of Dulcen. It is eight miles in length and about two in breadth ; and produces corn, aniseed, black cattle, and horses. It has three parishes, the most considerable of which is Roping. It stands at the south side of the island, in the bottom of a bay, and has a port with some trade. Long. 10° 20 E., lat. 55° 10′ N.

AR'ROGATE,

AR'ROGANCE,

AR'ROGANCY,

AR'ROGANT,

AR'ROGANTLY,

ARROGA'TION,

ARROG'ATIVE.

Adrogo, adrogatum, to ask for or seek after. To claim too much consequence, to ask for more honor, merit, or consideration than is due. To think too highly of one's self, and to exact the same estimation from others, to make unjust preten sions.

The speech of Themistocles the Athenian, which was haughty and arrogant, in taking so much to him- self, had been a grave and wise observation and cen- sure applied at large to others. Desired at a feast to touch a lute, he said he could not fiddle, but yet he could make a small town a great city.

Lord Bacon's Essays.

Feagh's right unto that country, which he claims, or the seignory therein, must be vain and arrogant.

Spenter on Ireland. Who, not content With fair equality, fraternal state,

Will arrogate dominion undeserved Over his brethren. Milton.

An arrogant way of treating with other princes and states, is natural to popular governments.

Temple.

Rome never arrogated to herself any infallibility, but what she pretended to be founded upon Christ's promise. Tillotson.

What is so hateful to a poor man as the purse- proud arrogance of a rich man.

Cumberland.

I must confess I was very much surprised to see so great a body of editors, critics, commentators, and grammarians, meet with so very ill a reception. They had formed themselves into a body, and with a great deal of arrogance demanded the first station in the column of knowledge ; but the goddets, instead ot complying with their request, clapped them into liveries. Additon.

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After having thus ascribed due honor to birth and parentage, T must, however, take notice of those who arrogate to themselves mora honors than are due to them on this account. Id.

ARROJO DE ST. SERVAN, a town of Spain, in Estremadura, three miles south of Merida.

\RRONDEE, in heraldry, a cross, the arms of which are composed of sections of a circle, not opposite to each other, so as to make the arms bulge out thicker in one part than another ; but the sections of each arm lying the same way, so that the arm is everywhere of an equal thickness, and all of them terminating at the edge of the escutcheon like the plain cross.

ARROQUHAR, a parish of Scotland, in Dumbartonshire, fourteen miles long and about four broad. In the Gaelic it is pronounced Arrar and Ardthir, i. e. high country ; which is descriptive of the place, a? it is almost wholly mountainous ; notwithstanding which the climate is temperate

\RROTINO, in sculpture, a celebrated an- tique statue in the gallery of the great duke of Florence, representing an old man naked, rest- ing on one knee, and whetting a knife upon a stone, with his head in an attitude of listening. According to Millin, there is in its expression a ferocious smile, and he supposes it the image of a slave, who, while sharpening his knife, overhears some plan of a conspiracy ; perhaps that of Vindex, who discovered the conspiracy of the sons of Brutus ; or of Milichus, who informed Nero of the projects of his master Scevinus and the Pisos against him.

ARROUX, a river of France in the depart- ment of Cote d'Or, which passes through Au- tun, and falls into the Loire, between Bourbon Lancy and Digoin.

AR'ROW i Ang.-Sax. arwe, from arwian,

AR'ROWY. > to prepare. The pointed weapon of any material prepared to be shot from a bow. I swear to thee by Cupid's strongest bow, By his best arrow with the golden head.

Shakgpeare.

He saw them, in their forms of battle ranged ; How quick they wheel'd, and flying behind them shot Sharp sleet of arrowy show'r against the face Of their pursuers, and o'ercame by flight. Milton.

For this day will pour down, If I conjecture aught, no drizzling1 show'r, But rattling storm of arrows barb'd with fire.

Id.

Here were boys so desperately resolved, as to pull arrows out of their flesh, and deliver them, to be shot again, by the archers on their side. Hayward.

Mean time the virgin huntress was not slow

T" expel the shaft from her contracted bow ;

Beneath his tar the fastened arrow stood,

And from the wound appear'd the trickling blood. Dryden's Fables.

Say, irom what golden quivers of the sky,

Do all thy winged arrows fly ?

Swiftness and power by birth are thine,

J‘‘rom thy great sire they came, thy sire the word divine. Cowley.

ARROW, in fortification, is a work placed at the salient angles of the glacis and consists of two parapets, each forty toises long. This work has a communication vith the covert way, of

about twenty-four or thirty feet broad, calleo caponier; and a ditch before it, of five or six toises.

ARROW, iu surveying, is used for small straight sticks, about two feet long, shod with iron fer- rils. Their use is to stick into the ground at the end of the chain.

ARROW-HEAD, from arrow and head; a water plant, so called from the resemblance of its leaves to the head of an arrow.

ARROW-HEADS, or ARROW-STONES, in anti- quity, pieces of barbed flint, thin and sharp at the points, with which our ancestors armed their arrows. Specimens of them are often found in various places of Scotland, and preserved by antiquarians. The inhabitants of some of the South Sea islands head their arrows with stone, others with bones ; metal being unknown among them.

ARROW, MAGICAL, a sort of weapon very common among the barbarous inhabitants o. Lapland, and many of the northern climates; and supposed to possess very strange virtues.

ARROW-MAKERS are also called fletchers ; and were formerly, as well as bowyers, persons of great consequence in the kingdom. Arrow-heads and quarrels were to be well boched or brased and hardened at the points with steel ; the doing of which seems to have been the business of the arrow-smith.

ARROWSMITH (Aaron), hydrographer to his majesty, an individual of high celebrity, as a constructor of maps and charts. His many valuable works, frequently adverted to as stand- ards for comparison and reference, sufficiently attest the extent of his researches and the general accuracy of his observations. He published a New General Atlas, 4to. 181 7, to accompany the Edinburgh Gazetteer, and also a vast number of maps and charts of the world and of various regions, many of which are noticed with appro- bation in the catalogue at the end of Pinkerton’s Geography. He was also the author of a pam phlet, entitled, A Companion to a Map of the World, containing much useful information.

ARS, Latin, from apoc, utility, Greek. Art. The word is often conjoined with adjectives ex- pressing particular, real, or pretended arts; such as,

ARS NOTORI A, a pretended manner of acquiring sciences by infusion, without any application, except fasting, and performing certain ceremonies. This art was condemned by the Sorbonne, A. D. 1320.

ARS THESSALICA, the Thessalian art, is used by ancient writers for a species of magic, whereby it was pretended they could draw the moon and stars out of heaven ! It was denominated Thes- salian from its supposed inventors, the people of Thessaly.

ARSACES I., king of Parthia, was a man of obscure origin, who, upon seeing Seleucus de- feated by the Gauls, invaded Parthia, and conquered the governor of the province called Andragoras, and laid the foundations of an empire, 250 years B. C. He added the kingdom of the Hyrcani to his newly acquired possessions, and spent his time in establishing his power, and regulating the laws. He reigned thirty-eigh'

years, and was killed in battle against Ariarathes IV. king of Cappadocia,

ARSACES II., son of the preceding, succeeded his father on the throne of Parthia. He main- tained a powerful opposition to Antiochus the Great; and it seems probable this is the king of Parthia spoken of in the first book of Maccabees, xiv. 2, who considerably enlarged the kingdom of Parthia, by his good conduct and valor. See PARTHIA. He was succeeded by his son Arsaces Priapatius.

ARSACES TIRANUS, king of Armenia, was treacherously made captive by Sapor king of Persia, who ordered him to be bound with silver chains, after which he was confined in a prison at Ecbatana, in which he died A. A. C. 1632; and Armenia then became a province of Persia.

ARSAM AS, a town of Russia, in the territory of Morduates, seated on the river Mockcha-reca, on the road to Astracan, 500 miles south by east from Moscow, and 500 north by west from As- tracan. At this place Gen. Dolgoracki punished the rebellious Cossacks

ARSCH1N, a long measure used in China to measure stuffs ; of the same length with the Dutch ell, which is 2 feet 1 1 lines. Four arschins make three yards English.

AKSELLA, in botany, a name given by some of the Greek writers to the

argemone, a kind of wild poppy; and by others to the common agrimony

AR'S EN AL. Ital. arsenale, perhaps from arce navu/e. An armory, a depot of military or naval stores.

Walled towns, stored arsenals, and armories ; goodly races of horse, chariots of war, elephants, ordnance, artillery, und the like. All this is but a sheep in a lion's skin, except the breed and disposition of the people be stout and warlike.

Lord BOCOJI'S Ettayi.

I would have a room fur the old Roman instru- ments of war, where you might see all the ancient military furniture, as it might, have been in an arsenal of old Rome. Additon.

AKSENU.. The arsenal of Venice, the place v.'.i-iv galleys were built and laid up. The

-M.-nal of Paris, that where the cannon or great u'.ais were cast; having this inscription over the •Oate :

.-Ktiia h;i'c Henriro Vulcania te.la ministrat, Tela (iiiranUeos debellatura furores.

Arsenals are also appropriated to naval furni- ture and equipments. In an arsenal of conse- quence, all the proper departments connected with the artillery service are provided with suitable buildings and accommodations appli- cable to their particular branches ; such as the foundry, for casting of brass ordnance ; the car- riage department, which includes the wheelers, carpenters, and smiths ; the laboratory, for makingup and preparing all kinds of ammunition ; as well as all other departments requisite, ac- cording to the extent of the arsenal.

The ROYAL ARSENAL at Woolwich is where stores, &c. belonging to the royal artillery are deposited. It was formerly called the warren.

ARSAMATIAS, in ancient geography, a river of Armenia, over which the Parthians compelled the Romans to build for them a bridge. Lipsius has without sufficient reason, corrected the text of Tacitus, and called it Arsanias.

.ARSANE, a town of Palestine, in which Asa, king of Israel was buried, according to Josephus.

ARSANIAS, ARSEN, a river of Asia, which had its source in the mountains

east of the Eu- phrates, and passing through a small lake, tra- versed the south-west between the mountains, passed by Arsamosata, and discharged itself into the Euphrates to the south-west of that city. Pliny, Dion, Plutarch, and Tacitus, mention this river; and the latter says, that it ran between Tigranocerta and Artaxata.

ARSARATHA, a town of Asia, in Armenia Major.

ARSE VERSE, in antiquity, a term or formula inscribed on doors to prevent fire. It is said to be of Tuscan origin, where the word arse signi- fies avert, and verse, fire.

ARSEMINI, in geography, a town of the island of Sardinia, seven miles south-west of Cagliari.

ARSEN, in ancient geography, a river of the western part of Arcadia, which ran from the north-east to the south-west, and discharged it- self into the river Ladon.

ARSENA, a name given by Slrabo to the lake Arethusa, in Armenia Major.

ARS EN ARIA, in ancient geography, a Ro- man colony of Africa, in Mauritiana Casarien- sis. This town was an episcopal see. It cor- responds to the modern Arzew.

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Sic oportet ad librum, presertim mitcellanei generis, legendum accedere lectorem, ut solet ad convivium convivu nulls. Convivator anuititur omnibus satisfacore ; ft tamen si quid appouitur, quod hujus aut illius palato non respondent, et hie et ille urbane dissimulant, et alia fercula probant, ne quid contristent conirivatorem.

Eratruui.

A reader should sit down to a book, especially of the miscellaneous kind, as a well-behaved visitor does to a ban- quet. The master of the feast exerts himself to satisfy his guests ; but if, after all his care and pains, something should appear on the table that does not suit this or that person’s taste, they politely pass it over without notice, and commend other dishes, that they may nol distress a kind host. Translation.

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ARSENIC.

ARSENIC, apvtviKov, ARSENICUM, in min- eralogy and chemistry, called by Aristotle aavSpaxi), by Theophrastus appr.viKov, by the Romans orpimentum and arsenicum ; is a red- dish-colored ponderous mineral, caustic, cor- ‘osive, and highly poisonous; which was used by the ancients in medicine and painting. Aristot. de Hist. Anim. 1. 8, c. 24 ; Theophrast.; Dioscor. 1. 5, c. 121; Plin. 1. 34, c. 18; Cels. de Re Med. 1. 5, c. 5; Gal. de Comp. Med. sec. Loc. 1. 4. In the Linnaean system, it is a genus of metals having these generic characters : Bluish white, some becoming black, and falling to pow- der in the air; soft and extremely brittle ; specific gravity 8‘310 : subliming without melting in a moderate heat in a white powder, and emitting a strong garlic smell. Its sublimed oxid gives an acrid taste to water, and turns vegetable blues red. When dissolved in muriatic acid, and a watery solution of sulphurated hydrogen poured into it, it precipitates a fine yellow pow- der.

The principal species are, 1. A. nativum, na- tive asenic,of the three varieties : a. Uncombined, having a metallic lustre and separating into spherical incrustations. (3. With micaceous particles, y. Friable and porous. Found in the British Isles, Norway, Germany, Saxony, &c. in spar, baryte, or feldspar, massive, rarely disse- minated, often composed of hemispheric layers, corroded, branched, perforated, botryoidal, or stalactitic ; color lead- gray, but its surface soon tarnishing and becoming black by ex- posure to the air; streak bluish-gray, powder dull and blackish ; sometimes a little sonorous when struck against a hard body, and so soft as to be easily cut with a knife. Before the blow-pipe it emits a white smoke, diffusing its peculiar and highly poisonous vapors to a great distance ; burning with a blue flame and gradually vanishing, depositing a white oxid in the form of a powder: specific gravity 5-670 to 5‘729 ; always alloyed with some iron, and often contains some cobalt, bismuth, silver, and sometimes a

little gold.

2. A. calciforme ; white arsenic ; white oxid of arsenic ; white, soluble in eighty times its weight of water. It is found in a loose dust or mealy powder ; in a state of crys- tallisation ; or in an indurated state combined with earth; in various parts of Great Britain, Germany, Hungary, Saxony, Bohemia, &c. Color white or gray, with often a tinge of red, yellow, green, or black : before the blow- pipe it su; limes, but does not infbme, and tinges borax green : specific gravity 3,700.

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3. A. auripigmentum ; orpiment , yellow arsenic. Ponderous, yellow, curved, or un- dulately foliated, of a waxy internal lustre, evaporating almost entirely before the blow-pipe. Found in Great Britain, Hungary, Georgia, Turkey, &c. ; massive, disseminated, or in small imperfect crystals ; color, various shades of yellow, with a considerable waxy lustre, and some transparency ; streak orange-yellow, not metallic ; texture foliated, with the plates mostly curved or undulated, rarely striate, a little flexi- ble, but not elastic ; effervesces with hot nitric acid, burns with a bluish flame, and before the blow-pipe evaporates, leaving behind a small portion of earth : specific gravity 3‘048 to

3-521.

4. A. sandaraca ; red arsenic ; ruby arse- nic; realgar. Somewhat ponderous, red, with an orange-yellow streak, in straight foliations, melting easily before the blow-pipe ; burning with a blue flame and white arsenical vapors. Found in Sicily, Naples, Hungary, Bohemia, China,. Japan, 8cc.; massive, disseminated, su- perficial, or crystallised in small acute-angled, quadrangular, or acicular prisms ; color auro- ra-red, ruby, scarlet, crimson or blood-red, often variegated with yellow traces : texture lamellar, with the foliations a little flexible, and so soft as to be cut with a knife, and frequently exhibit- ing a brilliant lustre; streak yellowish-red ; pow- der scarlet ; in nitric acid it loses its color ; specific gravity 3-338.

5. A. sulphuratum ; marcasite ; white mundic ; white pyrite ; pyritical arsenical ore. Hard, bluish-gray with metallic lustre, before the blow- pipe emitting white arsenical vapors and blue sulphureous flames. Found in various parts of Great Britain, Germany, Sweden, Bohemia, Saxony, &c. in irregular masses, disseminated, investing or crystallised in cubes or four-sided prisms ; specific gravity

6-522.

6. A. albicans ; misspickel ; marcasite. Of a steel-whiti> color and lustre, hard, emitting white arsenical vapors before the blow-pipe, but no sulphureous flame or vapor. Found in Cornwall, near Dublin, in Bohemia, Silesia, Saxony, &c. generally dispersed among tin ores in granulations, or crystallised in four-sided double pyramids, or four-sided quadrangular prisms : color sometimes silvery, gray, or yel- lowish, or iridescently variegated when tar- nished : texture compact, sometimes a little splintery, with the surface marked with de- cussate grooves or black ramifications ; effer- vesces with nitric acid without heat, and yields

an arsenical smell when rubbed. It consists of arsenic alloyed with a considerable quantity of iron, but little or no sulphur ; specific gravity from 5-753 to 6‘522.

7. A. argentiferum ; argentiferous arsenic. Of a silvery lustre and very h’ne granular tex- ture, emitting arsenical vapors before the blow-pipe, and when fused with lead leaving a silver bead. Found in the mines of Saxony, Bohemia, Germany, and Spain ; massive, disseminated, or acicular ; color nearly that of the last, but brighter and more permanent ; burns with a white flame, and leaves a reddish residuum : by solution in nitro-muriatic acid the silver will be precipitated. It consists of arsenic, sulphur, iron, and from 1 to 10 or 12 per cent, of silver : specific gravity 4*087.

The following is the method of the celebrated Mr. Chevenix for the assay and analysis of arsenical ores. Reduce the ore to a very fine powder, and digest it in nitric acid sufficient to acidify and take up the whole of the arsenic ; pour off the clear liquor, and boil on the residue some distilled water : filter, and add the water to the nitrous solution : then neutralise the excess of acid by potash, taking care, however, not to have an excess of alkali, and add nitrate of lead as long as any precipitate takes place : wash the precipitate in cold water, dry, and weigh it. As tin; arsenical ores often contain sulphur, it is possible iluit the arseniat of lead thus procured may be mixed with a little salphat of lead: to decide this, digest the powder in some warm dilute muriatic aeid, and the arseniat of lead will be dissolved, leaving the sulphat behind.

The arsenic of commerce is prepared in Saxony by roasting the cobalt ores in the manu- facture of /afire. These ores consist principally of arsenic, cobalt, iron, and a little sulphur; the first and last ingredients are easily separated by roasting, which is performed not in the open air, but. in an oven, the tlue of which runs hori- zontally to a considerable distance before it bends upwards. The arsenic and sulphur, when liberated, ;ire deposited tor the most part in the hori/.ontal tlue. In this state it is called

Crude arsenic, or flowers of arsenic, and the form it assumes is that of a grayish meal streaked with yellow, -which is occasioned by the sulphur uniting with parts of the arsenic, and composing orpimmt. From the crude arsenie the

\hite arsenic of commerce is prepared by rnixmt: the crude with potash or lime, and re- subliminu'. The sulphur :ind other impurities are thus combined with the alkali, and the white oxide is driven over into a heated receiver, where it nulls into a heavv, colorless, transparent glass : by exposure to the air for a short time tins u-lass becomes opaque, and resembles in its fraiture (lie finest vhitf china; it is in this state that the white aiˆet'ic of commerce is sold in the shops, and kept in onr laboratories; and ###!###- ii is then an oxide of the metal approaching 'fry neaily to ;l state' of purity, it is not ditticiilt, by separating its oxygen, to reduce it

###nic. For this purpose the ###I will) T:.MV ol' the vegetable

or animal expressed oils, till it becomes of the consistence of very soft glazier's putty, and round or oblong pieces of the paste are dropped into a Florence flask, or earthen retort, so as not to adhere to the sides. It is then put into a sand- bath, or over a gentle charcoal fire, and heated very gradually until it ceases to emit thick va- pors, when the heat may be increased by degrees to obscure redness. Shortly after the vessel may be removed, and when cold, broken ; the neck and upper part will contain a crystal- lised oxide of arsenic ; below, a thick crust of metallic arsenic ; and at the bottom some impu- rities, which must be laid aside. The other products are to be pulverised with half their weight of charcoal, and sublimed again as be- fore ; by which means the arsenic is rendered pure, and will be found to line the vessel in the form of a shining crust and crystals.

The principal properties of pure arsenic, be- side those mentioned in the beginning of this article, are the following : ### That it is not per- ceptibly soluble in water, and is easily tarnished by exposure to the air ; the best method of pre- serving it unaltered is to immerse it in

water or alcohol. With carbon or hydrogen it does not combine ; but the latter substance, in the state of gas, dissolves it. Oxygen unites with it by combustion, forming arsenical acid. With sulphur it may be readily united, forming either realgar or orpiment, according to the proportions of the ingredients, or the methods of uniting them : these substances are really sulphurets of arsenic, and their properties, with their mode of prepa- ration, when not found native, maybe found under their names. Arsenic combines also readily with phosphorus, forming phosphuret of arsenic, which is black and brilliant ; but with azotic gas it has not been united. Muriatic acid attacks arsenic only if aided by heat ; but, by distilling equal parts of orpiment and corrosive muriate of mercury (corrosive sublimate) in a gentle heat, a blackish corrosive liquor is ob- tained, which is the sublimated muriat of arsenic, or butter of arsenic. Arsenic combines with most metals, forming with them alloys, and ren- dering them more fusible and brittle ; though such of them as were before very fusible become refractory : it possesses also the singular pro- perty of destroying the magnetic virtue of iron, and of all other metals susceptible of it.

The most useful alloys of arsenic are : ††† 1. With platinum, which is formed by fusing that metal and the white oxide of arsenic together. By this means platinum, itself so untractable, may be wrought into the utensils required. The mixture, after fusion, is hammered at a red heat into bars, and the arsenic is gradually driven off. 2. With copper, which is formed by fusing the two metals together in a close crucible, their sur- face being covered with common salt, to prevent the arsenic from being oxidised by the air. This alloy is white and brittle, and when mixed with a little tin or bismuth is used for a variety of purposes in the arts, when it is known by the names of white copper or white tombac. 3. With iron, which is likewise done by fusion. This alloy, however, is often found native, and is then called misspickel. The other metals with

which arsenic has been united, are gold, silver, tin, lead, nickle, zinc, antimony, and bismuth : it also forms an amalgam with mercury, by keep- ing them some hours over the fire, constantly agitating the mixture. Arsenic is capable of combining with two different proportions of 6xygen ; by the first is formed ˆthe white oxide already described, or arsenious acid, as it is denominated by Fourcroy, on account of the many acid properties which it exhibits ; by the second is produced arsenic or arsenical acid, which was discovered in 1775 by Scheele, who also made himself acquainted with its most re- markable properties.

In pharmacy, the white oxide of arsenic is directed by the London Pharmacopaeia to be sublimed ; after which it is to be boiled with an equal weight of carbonate of potash, in order to form the liquor arsenicalis, sometimes called Fowler's solution, or the tasteless ague drop. This contains one grain of arsenic in two drams, is given in doses of a few drops in intermittent fevers, and in several eruptive diseases. Caution is necessary in the exhibition of so dangerous a remedy. Arsenic has been used externally in cancer, lupus, &c. in form of an ointment. For an account of arsenic, as a poison, its symptoms, effects, and remedies, see POISON.

ARSENICAL MAGNET, MAGNES ARSENICALIS, is a preparation of antimony, with sulphur and white arsenic.

ARSENIUS, a deacon of the Roman church of great learning and piety, who was selected by the pope as tutor to Arcadius, son of the emperor Theo- dosius. Arsenius arrived at Constantinople A. D. 383. The emperor happening one day to go into the room where Arsenius was instructing his pu- pil, found Arcadius seated and his preceptor standing ; at this he was exceedingly displeased, took from his son the imperial ornaments, made Arsenius sit in his place, and ordered Arcadius for the future to receive his lessons standing un- covered. Arcadius, however, profited but little by his tutor's instructions, for some time after he formed a design of despatching him. Arsenius, however, hearing of the design, retired to the de- serts of Scete, where he passed many years in devotion, and died aged ninety-five.

ARSENIUS, bishop of Constantinople, in the thirteenth century, excommunicated Michael Pa- leologus, for taking the imperial crown from John Lascaris the son of Theodore. Though Michael solicited absolution, the bishop refused, unless he would restore the crown ; in conse- quence of which Arsenius was banished to a small island, where he died.

ARSENOTHELYS, among ancient natura- lists, the same with hermaphrodite. The Greeks use the word both in speaking of men and beasts, it is formed from apapv and SijXvc, male and female.

ARSENVAL, in geography, a town of France, in the department of the Aube, and chief place of a canton in the district 'of Bar-sur-Aube, twenty- three miles east of Troyes.

ARSES, or ARSAMES, king of Persia, succeed- ed Artaxerxes Ochus about A.M. 3612, and af- ter a short reign of less than four years was slain

by Bagoas, who had murdered his predecessor, and succeeded by Darius Codomanus.

ARSHIN, in commerce, the most common Russian measure of length ††† 16 vershok zz 315ˆ Paris lines. It is also a Chinese measure, but one Chinese arshin zz 302 Paris lines. Three arshins zz 1 fathom, and 500 fathoms zz 1 verst.

ARSIA, in ancient geography, a small river which had a northern course, and served as a boundary between Histria and Illyria, to the north of the Flanatic gulf. It there terminated Italy on the north-east of the Polatic promon- tory.

ARSINOE, in ancient geography, the name of various towns mentioned by Strabo, Ptolemy, Stephanus, &c. viz. of five towns in Cilicia, one of1 which had a station for ships ; of three in or near Cyprus ; viz. one inland, formerly called Marium, another north of it between Acamas and Soli, and the third in the south, with a port, between Ci- trum and Salamis. A sea-port in Cyrene, for- merly called Teuchira. A town in Egypt near the west extremity of the Arabian Gulf, and south of Hierapolis, called also Cleopatris. Another in the Nomos Arsinoites, mentioned on some coins of Adrian, and formerly called Crocodilo- rum Urbs, from its abounding with crocodiles ; Ptolemy calls this town an inland metropolis, with a port called Ptolemais. A sea-port of Ly- cia formerly named Patara, but called Arsinoe by Ptolemy Philadelphus after his queen. And three towns of Troglodytae, the chief of which was situated near the mouth of the Arabian gulf, which towards Ethiopia is terminated by a pro- montory called Dire. This Arsinoe is called Berenice, with the distinction Epidires ; because situated on a neck of land running out a great way into the sea. Also the name of several princesses of Egypt; particularly, 1. the daughter of Ptolemy Lagus, and wife of Lysimachus king of Thrace : 2. the wife of Ptolemy Philadelphus, who named several towns after her.

ARSINOE, in entomology, a species of papi- lio, found in the island of Amboyna, the wings of which are tailed, indented, fulvous, spotted with black ; and the posterior ones marked both above and beneath with two ocellated spots. It is figured by Seba and Cramer.

ARSINOITES, NOMOS, an ancient district of Egypt, west of the Heracleotes, on the western banks of the Nile.

ARSIS, and THESIS, in prosody, are names given to two proportional

parts into which every foot or rhythm is divided. By arsis and thesis are usually meant no more than a proportional division of the metrical feet, made by the hand or foot of him that beats the time. And in measuring the quantities of words the hand is elevated, as well as let fall ; that part of the time which is taken up in measuring the foot, by lifting the hand up, is termed arsis or ele- vatio ; and the part where the hand is let fall, thesis or positio. Vid. Augustin de Musica, lib. ii. cap. 10. In plaudendo enim quia elevatur et ponitur manus, partem pedis, sibi elevatio vendicat, partem positio.

Arsis and thesis are used as musical terms

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ART.

uhen the subject of a fugue or point is inverted or reversed ; i e. when one part rises and the other falls. These two words are Greek : arsis comes from atpw, tollo, I raise or elevate ; 6>►►

ARSON, in English law, is the malicious and wilful burning of the house or oui-house of ano- ther man, which is felony. This is an offence of great malignity, and more pernicious to the pub- lic than simple theft ; because, first, it is an offence against that right of habitation which is acquired by the law of nature as well as by the laws of society ; next, because of the terror and confusion that necessarily attends it; and, lastly, because in simple theft the thing stolen only changes its master, but still remains in esse for the benefit of the public ; whereas by burning, the very substance is absolutely destroyed. ►►► It is ulso frequently more destructive than murder it- self, of which too it is often the cause; since murder, atrocious as it is, seldom extends be- yond the felonious act designed; whereas fire too frequently involves in the common calamity persons unknown to the incendiary, and not in- tended to be hurt by him, and friends as well as enemies. If the house be a man’s own, the act is not felony and punishable with death, but only a great misdemeanor, and punishable by fine, imprisonment or pillory.

AJiSl il, ASOR, ARSAF, or ARSID, a hamlet on the coast of Syria, which has sometimes received the name of a city, because Solomon is supposed to have built the city Asor upon the site. It contains a fortress and mosque, in the last of which are a few Mahommedan monks.

ARSl’RA, in ancient customs, a term used for the melting of gold or

silver, either to refine them or to examine their value. The method of (loins: this is explained at large in the Black Book of the Exchequer, ascribed to Gervaise in the chapter De Otficio Militis Argentarii, being in those days of great use, on account of the vari- ous places and different manners in which the kind's money was paid. Arsura is also used for the loss or diminution of the metal in the trial. In this sense a pound was said, tot ardere dena- rios, to lose many penny-weights.

ARM UA, in medicine, is used by some writers Cor the erysipelas.

ARSURA, in metallurgy, is used for the dust and sweepings of silversmiths, and others who work in silver, melted down, arid which they call their sweep.

ART, "| Lat. ars, from aptrij,

AR'TFUL, manly energy, strength, or

AR'TFUI.LY, skill. The power of doing

AR'TFUI.NESS, any thing arising from a AR'TISAN, clear and perspicuous know-

AK'TIST, ˆ ledge of what the practice

AR'TLKSS, f of it requires. Artful sig-

AK'TI.F.SSLY, nines evil intention. One

AR'TII ICK, who exercises a mechanical

AK'I 11 ic F.ii, art is an artisan, he who ex-

A n'ni ICIAI., eels in the tine arts is an

AIM iVriAi.i.v. j artist. An skilful work-

.utiliee in Us present use

HEL. We, Hermia, like two artificial gods. Created with our needles both one flover, Both on one sampler, sitting on one cushion ; Both warbling of one song, both in one key ; As if our hand, our sides, voices, and minds. Had been incorporate. Shakspearc,

Why, I can smile, and murder while I smile ; And cry, content, to that which grieves my heart j And wt-t my cheeks, with artificial tears. Id.

Weaker than a woman’s tear,

Tamer than sleep, fonder than ignorance,

And artless as unpractis’d infancy.

Dry den. Troilus and Cressida.

Rich with the spoils of many a conquer’d land, All arts and artists Theseus could command. Who sold for hire, or wrought for better fame The master painters and the carvers came. Dryden. The rest in rank : Honoria, chief in place

Was artfully contriv’d to set her face,

To front the thicket, and behold the chace. Id.

Vice is the natural growth of our corruption. How irresistibly must it prevail, when the seeds of it are artfully sown, and industriously cultivated. Rogers.

What are the most judicious artisans, but the mimics of nature ? Wotton’t Architecture.

Best and happiest artisan, Best of painters, if you can, With your many-col or ‘d art, Draw the mistress of my heart.

Guardian. Thus artists melt the sullen ore of lead,

With heaping coals of fire upon its head ;

In the kind warmth, the metal learns to glow,

And loose from dross the silver runs below.

Parnell.

Sweet artless songster ! thou my mind dost raise .

To airs of spheres, yea, and ––o angels’s lays.

Drummond.

In oratory, the greatest art is to hide art. Swift.

If we compare two nations in an equal state of civi- lisation, we may remark that where the greater free- dom obtains, there the greater

variety of artificial wants will obtain also. Cumberland.

The merchant, tradesman, and artisan will have their profit upon all the multiplied wants, comforts, and indulgences of civilised life. Id.

In every quarter of this blessed isle. Himself [the mind] both present is and president, Nor once retires, a happy realm the while, That by no officers lewd ravishment, With greedie lust and wrong consum'd art, He all in all, and all in every part, Does share to each his due and equal dole compart.

Fletcher's Purple Island.

Among the several artifices which are put in prac- tice by the poets, to fill the minds of an audience with terror, the first place is due to thunder and lightning.

Addison.

Poets, like painters, thus unskill'd to trace The naked nature and the living grace, With gold and jewels cover ev'ry part, And hide with ornaments their want of art.

Poj > e's Essay on Criticitm. O still the same Ulysses, she rejoin'd j

In useful craft successfully refin'd ;

Artful in speech, in action, and in mind. Pope.

Embosom'd in the deep where Holland lies, Methinks her patient sons before me stand, Where the broad ocean leans against the land, And sedulous to stop the coming tide, Lift the tall rampire's artificial pride. Goldsmith.

A man will no more carry the artifice of the bar into the common intercourse of society, than a man who is paid for tumbling on his hands will continue to tumble when he should walk on his feet. Johnson.

ARTS.

He feels no ennobling principle in his own heart, who wishes to level all the artificial institutions which have been adopted for giving a body to opinion, and permanence to fugitive esteem. Burke.

ART has been more particularly defined to be a habit of the mind prescribing rules for the due production of certain effects ; or the

introducing the changes of bodies from some fore-knowledge and design in a person endued with the prin- ciple or faculty of acting. The word has been sometimes derived from otpoc, utility, profit ; and is found in that sense in JEschylus.

According to lord Bacon it is a proper dispo- sition of the things of nature by human thought and experience, so as to make them answer the designs and uses of mankind. Nature, accord- ing to that philosopher, is sometimes free, and at her own disposal ; and then she manifests herself in a regular order ; as we see in the heavens, plants, animals, &c. ••• Sometimes she is irregular and disorderly either through some uncommon ac- cident or depravation in matter, when the resistance of some impediment perverts her from her course ; as in the production of monsters. At other times she is subdued and fashioned by human industry, and made to serve the'several purposes of mankind. This last is what we call art. In which sense, art stands opposed to nature. Hence the knowledge of nature may be divided into the history of generation, of pretergeneration, and of arts. The first considers nature at liber- ty ; the second her errors ; and the third her restraints.

Art has been distinguished from science; by the latter being regarded as furnishing the prin- ciples of all art. Or science, scientia, all human knowledge, is said to be divisible into those purer sciences which relate to the ideas or laws of the mind, and the relation they bear to each other ; and the mixed or applied sciences ••• that relation which the same ideas bear to the external world. In this view the mixed and applied sciences are but other terms for all the fine and useful arts. Chambers has observed long ago, in the ex- cellent preface to his original Cyclopaedia: An Art and a Science, only seem to differ as less and more pure : a science is a system of deductions made by reason alone, undetermined by any thing foreign or extrinsic to itself: an art, on the contrary, requires a number of data, and postulata, to be furnished from without; and never goes any length, without at every turn needing new ones. It is, in one sense, the knowledge and perception of these data that con- stitutes the art ; the rest, that is, the doctrinal part, is of the nature of science; which attentive reason alone will descry. An art, in this light, appears to be a portion of science, or general knowledge, considered, not in itself as science, but with relation to its circumstances or appen- dages. In a science the mind looks directly backwards and forwards to the premises and conclusions : in an art we also look laterally to the concomitant circumstances. A science, in effect, is that to an art, which a stream running in a direct channel, without regard to any thing but its own progress, is to the same stream turned out of its proper course, and

disposed into cascades, jets, cisterns, ponds, &c. In

which case the progress of the stream is lot con- sidered with regard to itself, but only as it con- cerns the works ; every one of which modifies the course of the stream, and leads it out of its way. It is easy to trace the progress of the for- mer, from its issue, as it flows consequentially ; but a man ever so well acquainted with this will not be able to discover that of the latter, because it depends on the genius, humor, and caprice of the engineer who laid the design.'

The learned author of Hermes says, If it be asked, What art is ; we have to answer, ' It is an habitual power in man, of becoming the cause of some effect, according to a system of various and well-approved precepts.' If it be asked, On what subject art operates ; we can answer, ' On a contingent, which is within the reach of the human powers to influence.' If it be asked, For what reason, for the sake of what, art ope- rates ; we may reply, ' For the sake of some absent good, relative to human life, *nd attain- able by man, but superior to his i atural and uninstructed faculties.' Lastly, if it be asked, ' Where it is the operations of art end ?' We may say, ' Either in some energy, or in some work.' ××× Harris's Three Treatises, dialogue i.

Arts are properly divided into liberal and me- chanical : ×××

ARTS, LIBERAL, or POLITE, are those that are noble or ingenious, and worthy of being culti- vated for their own sake, without any immediate regard to any pecuniary emolument. Such as depend more on the imagination, or on the la- bor of the mind, than on that of the hand ; or that consist more in speculation than operation, and have a greater regard to amusement and curiosity than necessity. Such are poetry, music, painting, grammar, rhetoric, the military art, architecture, and navigation. They were formerly to be summed up in the following Latin verse :

Lingua, Tropus, Ratio, Numerus, Tonus, Angulus, Astra.

In the eighth century the whole circle of seieucea was composed of the seven liberal arts, as they were called; viz. grammar, rhetoric, logic, arithmetic, music, geometry, and astronomy ; the three former of which were distinguished by the title of trivium, and the four latter by that of quadrivium.

ARTS, MECHANICAL, are those wherein the hand and body are more concerned than the mind ; and which are chiefly cultivated for the sake of the profit attending them. Of which kind are most of those

which furnish us with the necessaries of life, and are popularly known by the name of trades and manufactures. Such are weaving, turnery, brewing, masonry, clock- making, carpentry, joinery, foundry, printing, &c. These arts, which indeed are innumerable, were formerly comprised in this verse . Rus, Nemus, Anna, Faber, Vulnera, Lana, Rates.

They take their denomination from /*►►;xav'/►► machine, as being all practised by means of some machine or instrument. With the liberal arts it is otherwise ; there being several of them which may be learnt and practised without any

instrument at all ; as logic, eloquence, medicine, properly so called, 8cc.

Lord Bacon has observed that the arts which relate to the sight and hearing are reputed liberal, beyond those which regard the other senses, and are chiefly employed in matters of luxury ; these are usually called the fine arts; such are poetry, painting, sculpture, music, gardening, and archi- tecture.

As all arts have this common property ac- cording to Mr. Harris, that they respect human life, it is evident that some contribute to its ne- cessities, as medicine and agriculture ; and others to its elegance, as music, painting, and poetry. The former seem to have been prior in time to the latter. Men must naturally have consulted how to live and to support themselves, before they began to deliberate how to render life agreeable. Indeed this is confirmed by fact ; as no nation has been known so barbarous and ig- norant as not in some degree to have cultivated the rudiments of these necessary arts ; and hence possibly they may appear to be more excellent and worthy, as having claim to a preference de- rived from their seniority. The arts, however, of elegance are not destitute of pretensions, if it he true that nature formed us for something >norc than mere existence. Nay farther, if well- being lie clearly preferable to mere being, and This, without the other, be contemptible, they may have reason perhaps to aspire even to a superiority. Harris, ubi supra, p. 54.

The history of the origin and progress of par- ticular arts is recited under their respective de- lominations in the course of this work. It may lie hero observed however, in general, that most -. f the arts that

are necessary to the subsistence, -.r conducive to the convenience and comfort of mankind, have had a very early origin.

Some useful arts must be nearly coeval with the human race; for food, clothing, and habita- tion, even in their original simplicity, require some art. Many others are of such antiquity as 10 place the inventors beyond the reach of tra- dition. Several have gradually crept into exist- ence without any recorded inventor or history. rl lie busy mind, however, accustomed to a be- ginning in all things, cannot rest till it finds or imagines a beginning to every art.

It lias been generally admitted that the arts Had their rise in the Kast, and that they were conveyed from thence to the Greeks, and from them to the Romans. The Romans, indeed, seem to have been chictly indebted to the Greeks, by \vho;:i they were excelled in point of inven- tion. The Roman: acknowledged this superi- ority, !oi :hcy sent, their youth to Greece in order to tini>h their education ; and from this circum- si.>ii':f' \je may infer, that they considered that country as the seat of the arts and sciences, and .i.s a <;hoo| \hnv gvnin< would be excited by the most finished inodei>, and the taste corrected and formed. l'lm\ and other writers have, neverthe less, iven hints which lead us to believe that the Rom, ms possessed a more extensive knowledge ol the arts than modern writers are sometimes willing to allow; and that several inventions re garde d as recent are only old ones revived and ;oiin applied to practice. The dark ages at onco

extinguished the knowledge of the past, and re- tarded the revival of art ; yet it cannot be denied, that several important discoveries altogether un- known to the ancients were made in those ages. Of this kind were the inventions of paper, paint- ing in oil, the mariner's compass, gunpowder, printing, and engraving on copper : see the several articles. After the invention of the com- pass and printing, two grand sources were opened for the improvement of science. As navigation was extended, new objects were discovered to awaken the curiosity and excite the attention of the learned ; and the ready means of diffusing knowledge afforded by the press, enabled the in- genious to make them publicly known. Igno- rance and superstition, the formidable enemies of philosophy in every age, began to lose some of that power which they had usurped, and different states, forgetting their former blind policy, adopted improvements which their prejudices had before condemned.

In countries, however, where civil and eccle- siastical tyranny prevailed, the progress of the useful and elegant arts was slow, and

struggled with many difficulties. Particular events, in- deed, have occurred in all ages and nations which have roused the exertions of genius, and furnished occasion for making important and useful dis- coveries. The history of Greece and Rome, and even of modern Europe, will afford many obvious facts that confirm and illustrate this observation. We can add but a few other miscellaneous ones.

In different countries the progress of the same arts has been extremely different. Though the compass was used in China for navigation long before it was known in Europe, yet to this day, instead of suspending it in order to make it act freely, it is placed upon a bed of sand, by which every motion of the ship disturbs its operation. Water-mills for grinding corn are described by Vitruvius, and wind-mills were known in Greece and in Arabia as early as the seventh century ; yet no mention is made of them in Italy till the fourteenth ; and that they were not known in England in the reign of Henry VIII. appears from a household book of the Northumberland family, stating an allowance for three mill-horses, ‘ two to draw in the mill, and one to carry stuff to the mill and fro.’ Water-mills for corn must in England have been of a late date. The an- cients had mirror-glasses, and employed glass to imitate crystal vases and goblets; yet they never thought of using it in windows. In the thirteenth century, the Venetians were the only people who had the art of making crystal glass for mirrors. A clock that strikes tlie hours was unknown in Europe till the end of the twelfth century. And hence the custom of employing men to proclaim the hours during night ; which to this day con- tinues in Germany, Flanders, and England. Galileo was the first who conceived an idea that a pendulum might be useful for measuring time ; and Huygens was the first who put the idea in execution, by making a pendulum clock. Hook, in 1660, invented a spiral spring for a watch, though a watch was far from being a new inven- tion. Paper was made no earlier than the four- teenth century ; and the invention of printing was a century Icter. Silk manufactures were

?ong established in Greece before silk-worms ⁂were introduced there. The manufacturers were provided with raw silk from Persia : but that commerce being frequently interrupted by war, two monks, in the reign of Justinian, brought eggs of the silk-worm from Hindostan, and taught their countrymen the method of managing them. ⁂ The art of reading made a very slow pro- gress. To encourage that art in England, the capital punishment for murder was remitted, if the criminal could but read, which in law lan- guage is termed benefit of clergy. One would imagine that the art must have

made a very rapid progress when so greatly favored : but there is a signal proof of the contrary; for so small an edition of the Bible as 600 copies, translated into English in the reign of Henry VIII. was not wholly sold off in three years. And the people of England must have been profoundly ignorant in Queen Elizabeth's time, when a forged clause added to the twentieth article of the established creed passed unnoticed till about a century ago.

The circumstances which arouse the national spirit upon any particular art, promote activity to prosecute other arts. When the Romans came to excel in the art of war, they rapidly im- proved in other arts. Nsevius composed in verse seven books of the Punic war; besides comedies, replete with bitter raillery against the nobility. Ennius wrote annals, and an epic poem ; and Lucius Andronicus became the father of dramatic poetry in Rome. And the Roman genius for the fine arts was much inflamed by Greek learn- ing when free intercourse between the two na- tions was opened.

The progress of art seldom fails to be rapid, when a people happen to be roused out of a tor- pid state by some fortunate change of circum- stances : public liberty now gives to the mind a spring which is vigorously exerted in every new pursuit. The Athenians made but a mean figure under the tyranny of Pisistratus ; but, upon re- gaining their freedom and independence, ,arts flourished with arms, and Athens became the chief theatre for science as well as for the fine arts. The reign of Augustus Ceesar, which put an end to the rancor of civil war, and restored peace to Rome with the comforts of society, proved an auspicious era for literature; and produced a cluster of Latin historians, poets, and philosophers, to whom the moderns are indebted for their taste. A similar revolution happened in Tuscany about 350 years ago. That country having been divided into a number of small re- publics, the peopie excited by mutual petty quarrels, became ferocious and bloody, flaming with revenge for the slightest offence. But being united under the Great Duke of Tuscany, these republics enjoyed the sweets of peace and a mild government; when the retrospect of recent ca- lamities roused the national spirit, and produced ardent application to arts and literature. The restoration in England in 1660, which put an end to an envenomed civil war, promoted im- provements of every kind, and arts and industry made a rapid progress. Had the nation, upon that favorable turn of fortune, been blessed with a succession of able and virtuous princes, arts and sciences might much earlier have nourished

in their modern perfection. Some important action even of doubtful event, a struggle for liberty, the resisting a potent invader, or the like,

have also had beneficial influences on the progress of art. Greece, divided into small states frequently at war with each other, advanced in literature and the fine arts to unrivalled per- fection. The Corsicans, while engaged in a pe- rilous war in defence of their liberties, exerted a vigorous national spirit ; they founded a univer- sity for arts and sciences, a public library, and a public bank. After a long stupor during the dark ages of ecclesiastical tyranny, arts and lite- rature revived among the turbulent states of Italy. The Royal Society in London, and the Academy of Sciences in Paris were both instituted after prolonged civil wars that had animated the people and roused their activity. On the other hand, as the progress of arts and sciences towards perfection is greatly promoted by emulation, no- thing is sometimes more fatal than to remove this spur ; as when some extraordinary genius appears to soar above rivalship. Thus mathematics long seemed to be declining in Britain : the great Newton, having surpassed all the ancients, left the moderns without any hope of equalling him ; for what man will enter the lists who de- spairs of victory 1

The useful have in all ages paved the way for the fine arts. Men upon whom the former had bestowed every convenience turned their thoughts to the latter. Beauty was studied in objects ol sight ; and men of taste attached themselves to the fine arts, which multiplied their enjoyments and improved their benevolence. Sculpture and painting made an early figure in Greece ; which afforded plenty of beautiful originals to be copied in these imitative arts. Statuary, a more simple imitation than painting, was sooner brought to perfection: the statue of Jupiter by Phidias, and of Juno by Polycletes, though the admiration of all the world, were executed long before the art of light and shade was known. Another cause concurred to advance statuary before painting in Greece, viz. a great demand for statues of their gods. Architecture, as a fine art, made a slower progress. Proportions upon which its elegance chiefly depends, cannot be accurately ascertained, but by an infinity of trials in great buildings ; a model cannot be relied on : for a large and small building, even of the same form, require differ- ent proportions. Literature as a branch of the fine arts deserves a separate consideration. See LITERATURE.

The cause of the decline of the fine arts may be illustrated by various instances. The perfec- tion of vocal music is to accompany passion, and to enforce sentiment. In ancient Greece, the province of music was well understood; and being confined within its proper sphere, it had an enchanting influence. Harmony at that time was very little cultivated, because it was of very little use; melody reaches the heart, and it is by it chiefly that a sentiment is enforced, or a pas- sion

soothed : harmony, on the contrary, reaches the ear only ; and it is a matter of undoubted experience, that the melodious airs admit but of very simple harmony. Artists, in later times, ignorant why harmony was so “little regarded by

the ancients, applied themselves seriously to its cultivation, and have been wonderfully success- ful. But successful at the expense of melody ; which, in modern composition.*, generally speak- ing, is lost amid the blaze of harmony. In the Italian opera, the mistress is degraded to be handmaid ; and harmony triumphs, with very little regard to sentiment. Among the Greeks also, as a conquered people, the fine arts de- cayed ; but not so rapidly as at Rome under her various despotic emperors; the Greeks farther removed from the seat of government, being less within the reach of the Roman ty- rants. During their depression they were guilty of the most puerile conceits ; witness verses com- posed in the form of an axe, an egg, wings, and such like. The style of Greek authors, in the reign of Adrian, is unequal, obscure, stiff, and affected. Lucian is the only exception. We need scarce any other cause but despotism, to account for the decline of statuary and painting in Greece. These arts had arrived at their ut- most perfection about the time of Alexander the Great; and from that time they declined gra- dually with the vigor of a free people; for Greece was now enslaved by the Macedonian power. It may in general be observed, that >vhen a nation becomes stationary in that degree of power which it acquires from its constitution and situation, the national spirit subsides, and men of talents become rare. It is still worse with a nation that is sunk below its former power and pre-eminence ; and worst of all, when it is reduced to slavery. Other causes concurred to accelerate the downfall of the arts mentioned. Greece, in the days of Alexander, was filled with statues of excellent workmanship ; and there being little demand for more, the later statuaries ⬛⬛⬛were reduced to make heads and busts. At last the Romans put a total end, both to statuary and painting in Greece, by plundering it of its finest pieces; and the Greeks, exposed to the avarice of the conquerors, bestowed no longer any money on the fine arts. The decline of the fine arts in Rome is, by I’etronius Arbiter, a writer of taste and elegance, ascribed to a cause different fiom any above mentioned, i. e. opu- lence, with its faithful attendants avarice and luxury. In England the fine arts are far from such perfection as to suffer by opulence. They are in a progress, indeed, towards maturity; but proceed at a very slow pace. Another cause that never fails to undermine a fine art in a country where it is brought to perfection, ab- stracting from every (.me of the causes above mentioned, lias been

already pointed out. No- thing is more fatal to an art or science, than per- formances so much superior to all of the kind as to extinguish emulation. This cause would have been fatal to the arts of statuary and paint- ing among the Greeks, even though they had continued a free people. The decay of painting in modern Italy is probably owing to this cause: Michael Angelo, Raphael, Titian, &c. are lofty oaks, that bear clown young plants in their neighbourhood, arid intercept them from the sunshine of emulation. Had the art of painting made a slower progress in Italy, it might have there continued in vigor to this day Archi-

lecture continued longer in vigor than painting, because the principles of comparison in the former art were less precise than in the latter. The artist who could not rival his predecessors in an established mode, sought out a new mode for himself, which, though perhaps less elegint or perfect, was for a time supported by novelty. Useful arts will never be neglected in a country where there is any police ; for every man finds his account in them. Fine arts are more pre- carious. They are not relished but by persons of taste, who are rare ; and such as can spare great sums for supporting them, who are still more rare. For that reason they will never flourish in any country, unless patronised by the sovereign, or by men of power and opulence. And richly do they merit such patronage, as one of the springs of government; multiplying amusements, and humanising manners.

ART, the second person singular of the verb TO BE, of which the English language affords no variation, except by adopting the plural, by say- ing You are, instead of Thou art. Thou beest in- deed was anciently used, but it is quite obsolete.

ART and PART in Scots law. See ACCESSARY.

ARTA, or LARTA, a gulf, river, and town of European Turkey, in Albania, or Epirus, be- longing to the government of Romania. The town is seated on the river of the same name, nine miles north of the spot where it falls into the gulf of Arta, above twenty miles north-east of Prevesa, and about 360 W. N. W. of Con- stantinople. The number of inhabitants, Christian* as well as Turks, amounts to six thousand, who trade in cattle, wine, tobacco, cotton, flax, pulse, fur, leather, and other commodities. They also- manufacture coarse woollen and other cloths. It is the seat of a Greek metropolitan and several European consuls. The gulf, otherwise called the gulf of Prevesa, extends a considerable way inland in an eastern direction, and from its rocks

and sand banks, is very dangerous. Long, 21►► 8'E., lat. 39►►30'N.

ARTABA, an ancient measure of capacity used by the Persians, Medes, and Egyptians. ►►► The Persian artaba is represented by Herodotus as bigger than the Attic medimnus by three Attic chcenixes; from which it appears that it was equal to 6| Roman modii ; consequently that it contained 166J pounds of wine or water, or 126f pounds of wheat. The Egyptian artaba contained five Roman modii, and fell short of the Attic medimnus by one modius ; consequ -ntly held 133►► pounds of water or wine, lOOlb. of wheat, or sixty of flour.

ARTABANUS, the name of several kings of Parthia. See PARTHIA.

ARTABANUS, the brother of Darius I. and the uncle and murderer of Xerxes. See ARTAX-

ERXES.

ARTABAZUS, the son of Pharnaces, com- manded the Parthians and Chorasmians in the famous expedition of Xerxes. After the battle of Salamis, he escorted the king his master to the Hellespont with 60,000 chosen men ; and after the battle of Platxa, in which Mardonius engaged contrary to his advice, he made a noble retreat, and returned to Asia with 40,000 men.

ARTAKI, a town of Asiatic Turkey, in Nv

ART

tolia, on the south coast of the sea of Marmora, forty-five miles east of Gallipoli and ninety south- west of Constantinople. Long. 27►► 39′ E., lat. 40►► 18′ N.

ARTAKUI, a town of European Turkey, in Romania, forty-eight miles north-west of Galli- poli.

ARTALIS (Joseph), a native of Mazara, A. D. 1628, who showed an early inclination both for poetry and arms. He finished his studies at fif- teen years of age, when he fought a duel and killed his adversary. He took shelter in a church and afterwards studied philosophy. Candia be- ing besieged by the Turks, he went to its relief, and displayed so much valor that he was created a knight of St. George. Being afterwards en- gaged in several rencounters and always victori- ous, he got the title of Chevalier de Sang, or the knight of blood. His literary talents obtained him the honor of being elected a member of se- veral academies in Italy, and his military abilites procured him the

favor of several princes, parti- cularly of the Emperor Leopold I. and Ernest duke of Brunswick.

ARTAXATA, an ancient city, the metropolis of Armenia Major, and the residence of the Ar- menian kings : it was built according to a plan of Hannibal, for king Artaxias ; and was situated on a branch of the river Araxes, which formed a kind of peninsula, and surrounded the town like a wall, except on the side of the isthmus, but this side was secured by a rampart and ditch. The town was deemed so strong that Lucullus, after having defeated Tigranes, durst not lay siege to it ; butPompey compelled him to deliver it without striking a blow. It was then levelled with the ground; but the Armenians have a tradition, that the ruins of it are still to be seen at a place called Ardachat. Sir John Chardin says, that it has the name of Ardachat, from Artaxias, whom in the east they call Ardechier. Here are the re- mains of a stately palace, which the Armenians take to be that of Tiridates, who reigned in the time of Constantine. One front of this building is half ruined, and there are many other fine an- tiquities.

ARTAXATA, or ATROPATIA, another city built also on the Araxes, in the northern part of Media.

ARTAXERXES I. king of Persia, surnamed Longimanus, from the uncommon length of his arms, was the youngest son of Xerxes, and was raised to the throne A. M. 3487, by Artabanus, the captain of the guards, who had privately murdered his father ; but persuaded the young prince that his elder brother Darius had done it ; whereupon, assisted by the guards, he killed Da- rius in his bed-chamber. But the murder and treason being afterwards discovered, Artabanus suffered the punishment he merited. Some reckon this king the Ahasuerus who married Esther; but, be that as it may, it is certain that he greatly favored the Jews, by not only autho- rising them To return to Judea, and rebuild Jeru- salem, but also to collect money for the use of their temple ; as well as by remitting their tri- bute, by encouraging their worship, and by making them a number of valuable presents, &c. See his letter to Ezra, chapter vii, 10 ××× 26. For

an account of the other transactions of his reign, see PERSIA. He reigned about forty years, and died A. A. C. 44*.

ARTAXERXES II. surnamed Mnemon, from his great memory, succeeded his father Darius II. A. M. 3546, but had to contend for his kingdom with his younger brother Cyrus, who was assisted by the

Greeks, but was at last overcome and slain. It was after this battle that Xenophon dis- played his generalship by his memorable retreat with his army. Artaxerxes reigned forty-three years, and died A. M. 3589. See PERSIA.

ARTAXERXES is also the name given in Scrip- ture to, and probably assumed by, the impostor Oropastes ; who, pretending to be Smerdis the son of Cyrus, reigned five months in Persia, after the death of Cambyses. During his short reign, the enemies of the Jews applied for, and ob- tained, an interdict of the rebuilding of the city and temple. See Ezra iv. 7.

ARTAXIAS, the founder of the kingdom of Armenia Major. See ARMENIA and ARTAXATA.

ARTEDI (Peter), a famous Swedish natura- list, born in 1705. He was educated at the uni- versity of Upsal, where he studied medicine ; but his time was chiefly dedicated to ichthyology, in which he made many valuable discoveries.❖❖❖ Such was the friendship between him and Lin- naeus, that the longest liver was to be heir of all their MSS. He was drowned at Leyden in 1735. His Bibliotheca Ichthyologica and Philosophia Ichthyologica, were published by Linnaeus in

1738.

ARTEDIA, in botany, a genus of the digynia order, and pentahdria class of plants ; ranking in the natural method, under the forty-fifth order, umbellatae. The involucra are pinnatifid ; the floscules of the disc are masculine ; and the fruit is hispid with scales. The principal species is, viz. A. squamata, with squamose seeds, a native of the east. Rauwolf found it growing on mount Libanus. It is an annual plant, whose stalks rise about two feet high, sending out a few side branches, garnished with narrow compound leaves resembling tnose of dill.

ARTEMIDORUS, a Grecian teacher in Rome, who being intimate with Brutus, and learning from him of the intended assassination of Caesar, delivered a note to him to inform him of it, as he went to the senate-house, and desired him to read it immediately, which Caesar neglect- ing, fell a sacrifice to the plot.

ARTEMIDORUS, an ancient author, under An- toninus Pius, famous for his Treatise on Dreams, which was first printed in Greek at Venice in 1518. Rigaltius published an edition at Paris in Greek and Latin in 1603, and added some notes. Artemidorus wrote also treatises upon Auguries and Chiromancy; which are not extant.

ARTEMISIA I. queen of Caria, and the daughter of Ligdamis, marched in person in the expedition of Xerxes against the Greeks, and performed wonders in the sea-fight near Salamis, A. A. C. 480. Being pursued by an Athenian vessel, she attacked one of the Persian ships, commanded by the king of Calyndus, and sunk it ; on which the Athenians, thinking that he1- ship was on the side of the Greeks, ceased their pursuit ; but Xerxes was the principal person

imposed upon in this affair ; for believing that she had sunk an Athenian vessel, he declared that ‘ the men had behaved like women, and the women like men.’ Xerxes entrusted her with the care of the young princes of Persia, his sons, when, agreeably to her advice, he aban- doned Greece in order to return to Persia. These great qualities did not secure her from the weak- ness of love : she was passionately fond of a man of Abydos, whose name was Dardanus, and was so enraged at his neglect of her, that she put out his eyes while he was asleep. Having consulted the Delphian Oracle how to extinguish this passion, and being advised to go to Leucas, which was the usage of desperate lovers, she took the leap from thence, and was drowned, and interred at that place. Many writers confound this prin- cess with the wife of Mausolus.

ARTEMISIA II., queen of Caria, the widow of king Mausolus, has immortalised herself by the honors which she paid to the memory of her husband. She built for him, in Halicarnassus, a very magnificent tomb, called the Mausoleum, which was one of the seven wonders of the world, arid from which the title of mausoleum was after- wards given to all tombs remarkable for their grandeur, but died of grief before the mausoleum was finished. She is said to have drank his ashes ; and to have offered a prize of great value to the person who should compose the best eu- logium on his memory. He died about the end of the lOtith Olympiad, A. A. C. 351.

AKTF.MISIA, mugwort, southernwood, and wormwood ; a genus of the polysramia superflua order, and syngenesia class of plants, ranking in the natural method under the forty-ninth order, compositae nucamentacese. The receptacle is either naked or a little downy ; it has no pappus ; the calyx is imbricated with roundish scales ; and the corolla has no radii. There are twenty-three species, of which the

following are the most remarkable : viz.

1. A. abrotanum, or southernwood, which is kept in gardens for the sake of its agreeable scent, a low shrub, seldom rising more than three or four feet high. 2. A. absinthium, or common wormwood, grows naturally in lanes and uncul- tivated places, and is too well known to require any description. 15. A. arborescens, or tree-worm- wood, urows naturally in Italy and the Levant, near the sea. It rises with a woody stalk, six or seven teet high, sending out many ligneous branches, garnished with leaves somewhat like those of the common wormwood, but more finely divided and much whiter. 4. A. dracun- culus, or Tarnuron, is frequently used in sallads, especially by the French, and is a very hardy plant, spreading greatly by its creeping roots. .r>. A. maritima, or sea-wormwood, grows natu- rally on the sea-coast in most parts of Britain, where there are several varieties to be found. (i. A. 1'ontica, or Pontic wormwood, commonly calh-d Roman wormwood, is a low herba- ceous | ilunt whose stalks die in autumn, and new ones rise up in the spriir_r. The flowers appear in August, but are rarely succeeded by seeds in Britain. 7. A. santonicum, produces the .seni<-n santonicum, which is much used for worms in children. It crrows naturally in

Persia, from whence the seeds are brought to Europe. 9. A. vulgaris, or common mugwort, grows naturally on banks and by the sides of foot- paths in many parts of Britain : in gardens it proves a troublesome weed. The seeds of the santonicum are small, light, chaffy, composed as it were of a number of thin membranous coats of a yellowish color, an unpleasant smell, and a very bitter taste They are celebrated for an- thelmintic virtues, which they have in common with other bitters, and are sometimes taken with this intention, either along with molasses or candied with sugar. They are not often met with genuine in the shops. The leaves of the sea, common, and Roman wormwoods are used as stomachics, but are all very disagreeable : the Roman is the least so and therefore is to be pre- ferred ; but the other two kinds are generally substituted in its place. The distilled oil of wormwood is sometimes made use of externally as a cure for worms. The leaves of the vulgaris or common mugwort were commonly celebrated as uterine and antihysteric : an infusion of them is sometimes taken, either alone or in conjunc- tion with other substances, in suppression of the menstrual evacuations. In some parts of this kingdom mugwort is of common use as a pot- herb. It is now, however, very little employed in medicine ; and it is probably with propriety that the London college have rejected it from the Pharmacopoeia.

The moxa, so famous in the eastern coun- tries for curing the gout, by

burning it on the part affected, is the lanugo or down growing on the under side of the leaves of a species of mug- wort, supposed to be the same with our com- mon sort. From some dried samples of this plant which were brought over to this country, Mr. Miller reckons them to be the same, differ- ing only in size. He supposes that the lanugo of our mugwort would be equally efficacious. The abbe Crosier says the ancient Chinese made great use of it in medicine.

ARTEMISIA, yearly festivals anciently observed in divers cities in Greece, particularly Delphi, in honor of Diana Artemis. In the artemisia a mullet was sacrificed to this goddess, as being thought to bear some resemblance to her, be- cause it is said to hunt and kill the sea-hare.

ARTEMISIUM, a promontory on the north- east of Eubcea, (called Leon and Cale Acte by Ptolemy,) memorable for the first sea en- gagements between the Greeks and Xerxes, of which the following account is given by Gillies : ‘ The Grecian fleet was stationed in the harbour, while that of the Persians, too numerous for any harbour to contain, had anchored between the city of Castanaea and the promontory of Sepias, on the coast of Thessaly. The first line of their fleet was sheltered by the coast of Thessaly ; but the other lines, to the number of seven, rode at anchor, at small intervals, with the prows of the vessels turned to the sea. When they adopted this arrangement the waters were smooth, the sky clear, the weather calm and serene ; but on the morning of the second day after their arrival on the coast, the sky began to lower, the appear- ance of the heavens grew threatening and terrible ; a dreadful storm succeeded ; raged for three days

with unabating fury, and destroyed 400 galleys, besides a vast number of store-ships and trans- ports. However, 800 ships of war, besides innu- merable vessels of burden, sailed into the Pega- sean bay and anchored in the road of Aphete, directly opposite to the harbour of Artemisium. The Grecians had posted sentinels on the heights of Eubcea, to observe the consequences of the storm, and to watch the motions of the enemy. When informed of the disaster which had befallen them they poured out a joyful libation, and sa crificed, with pious gratitude, to ‘ Neptune the Deliverer.’ The Persians, however, having reco- vered from the terrors of the storm, prepared for battle ;

and, as they entertained, not the smallest doubt of conquering, they detached 200 of their best sailing vessels round the isle of Euboea, to inter- cept the expected flight of the enemy through the narrow Euripus. About sunset the Grecian fleet approached in a line, and the Persians met them with the confidence of victory, as their ships were still sufficiently numerous to surround those of their opponents. At their first signal the Greeks formed into a circle, at the second they began the fight. Though crowded into a narrow com- pass, and having the enemy on every side, they soon took thirty of their ships, and sunk many more. Night came on, accompanied with an impetuous storm of rain and thunder ; the Greeks retired into the harbour of Artemisium ; the enemy were driven to the coast of Thessaly. By good fortune however, rather than by de- sign, the greatest part of the Persian fleet es- caped immediate destruction, and gained the Pegasean bay ; but the ships ordered to sail round Euboea met with a more dreadful disaster. They were overtaken by the storm, after they had ventured farther from the shore than was usual with the wary mariners of antiquity. Clouds soon intercepted the stars, by which alone they directed their course; and after continuing during the greatest part of the night the sport of the elements, they all perished miserably amidst the shoals and rocks of an unknown coast. The morning arose with different prospects and hopes to the Persians and Greeks. To the former it discovered the extent of their misfortunes ; to the latter it brought a reinforcement of fifty- three Athenian ships. Encouraged by this favor- able circumstance, they determined again to at- tack the enemy at the same hour as on the pre- ceding day, because their knowledge of the coast, and their skill in fighting their ships, ren- dered the dusk peculiarly propitious to their designs. At the appointed time they sailed to- wards the road of Aphete ; and having cut off the Cilician squadron from the rest, totally de- stroyed it, and returned at night to Artemisium. The Persian commanders being deeply affected with the,r repeated disasters, but still more alarmed at the much dreaded resentment of their k-‘ng, determined to make one vigorous ef- fort ff f restoring the glory of their arms. By art ar J stratagem, and under favor of the night, the Creeks had hitherto gained many important advantages. It now belonged to the Persians to choose the time for action. On the third day, at noon, they sailed forth in the form of a crescent, still sufficiently extensive to infold the Grecian

line. The Greeks, animated by former success were averse to decline any offer of battle ; yet it is probable that their admirals, and particularly Themistocles, would much rather have delayed it to a more favorable opportunity. Rage and resentment supplied the defect of the barbarians in skill and courage. The battle was longer, and

more doubtful, than on any former occasion; many Grecian vessels were destroyed, five were taken by the Egyptians, who particularly sig- nalised themselves on the side of the barbarians, as the Athenians did on that of the Greeks. The persevering valor of the latter at length pre- vailed, the enemy retiring, and acknowledging their superiority, by leaving them in possession of the dead and the wreck. But the victory cost them dear ; since their vessels, particularly those of the Athenians, were reduced to a very shattered condition ; and their great inferiority in the number and size of their ships made them feel more sensibly every diminution of strength.'

ARTEMISIUM, a town of CEnotria, now called St. Agatha, in Calabria, on the river Pisaurus, or la Foglia, eight miles distant from the Tuscan sea.

ARTEMISIUM, an ancient town of Spain, on the sea-coast of Valencia, called also Dianium, and now Denia, possessed by the Contestant.

ARTEMON, a Syrian who resembled Anti- ochus, king of Syria, so exactly, that by the con- trivance of his queen Laodice, he personated him after his death, and thus obtained the kingdom.

ARTEMON, the founder of the sect of Artemo- nites, a sect of Unitarians who flourished about the year 210.

ARTEMUS, a promontory of Valencia, called also Cabo St. Martin, and Punta del' Emperador.

ARTENNA, in ornithology, the name of a water-bird, of the size of a hen, of a brownish color on the back, and white on the belly ; hav- ing a crooked bill, and its three fore toes con- nected by a membrane, but the hinder one loose. It is found on the island Tremiti, in the Adriatic sea, and is supposed to be the avis Diomedis of the ancients.

ARTERIA ASPERA, ARTERIA BRONCHIA- LIS, &c. See ANATOMY, Index.

ARTERIA VENOSA, a name given by the ancients to the pulmonary vein, on the erroneous supposition of its being an air-vessel, and that it served for the conveyance of the vital aura from the lungs to the heart.

ARTERIACA, ARTERIACS. Medicines for disorders of the trachea, and the voice. Arte- riacs are reduced by Galen into three kinds : 1 . Such as are void of acrimony, serving to mollify the asperities of the part; such as gum traga- canth, aster samias, starch, milk, &c. 2. Those of an

acrimonious quality, whereby they stimu- late even the sound parts; such as honey, tur- pentine, bitter almonds, iris root, &c. 3. Those of an intermediate kind, soft and mild, yet deter- gent; such as butter, and preparations of al- monds, honey, &c. ###

ARTERIOSA VENA, or ARTERIAL VEIN, a denomination given to the pulmonary artery.

ARTERIOSUS CANAL/S, a tube in the heart of the foetus, which, with the foramen ovale. serves to maintain the circulation of the blood, and to divert it from the lungs.

ARTERY,) Aprjjpuz, spiritus semita, accord-

ARTE RIAL, $ ing to Pliny and Cicero. The moderns have a more accurate knowledge of the human body than this bare and inadequate defi- nition of the ancients affords. See ANATOMY for a complete view of the arteries.

Universal plodding prisons up

The nimble spirits in the arteries.

Shakspeare. Love's Labour Lost.

Had not the Maker wrought the springy frame ; The blood, defrauded of its nitrous food, Had cool'd and languished in the arterial road.

Blackmore.

As this mixture of blood and chyle passed! through the arterial tube, it is pressed by two contrary forces ; that of the heart driving it forward against the sides of the tube ; and the elastic force of the air, pressing it on the opposite sides of those air-bladders, along the surface of which this arterial tube creeps.

Arbuthnot.

ARTHEL, in law, something cast into a court, in Wales, or its marches, whereby the court is letted or discontinued for the time. The casting of arthel is prohibited, 26 Hen. VIII. cap. 6.

ARTHINGTON (Henry), a fanatical gentle- man of Yorkshire, who, towards the end of queen Elizabeth's reign, engaged in treasonable prac- tices against the government, with Edward Cop- pinger a servant

of the queen's, and one Hacket, whom, in their fanaticism they styled ' king of Europe !' Supposing themselves to be inspired, Coppinger styled himself the ' prophet of mercy,' and Arthintiton the ' prophet of judgment !' Arthington accordingly wrote and published his prophecies, wherein were intermingled some se- vere reflections against the lords of the privy council, the judges, &LC. They were at last all three apprehended in July, 1591 ; when Cop- pinger became quite deranged, and never re- covered his senses. Hacket was tried, con- demned, and executed ; and Arthington hearing of this, wrote a submissive letter to the lords of council, which, after some time, procured him the queen's pardon, lie died with the character of an honest but weak man.

ARTII1UT1CA, 111 botany, a name given by some to the primrose, and by others to the ground pine.

ARTHRIT'ICAL, } ApOninc, pain or disease

Aui HUII'K K. S which attacks the joints,

from apOnov, a joint.

Frequent changes produce all the arthritick diseases.

Arbuthnot.

Serpents, worms, and leaches, though some want bones, and all extended articulations, yet have they arthritirnl analogies ; and, by the motion of fibrous and musculous parts, arc able to make progression.

Brown's Vulgar Errors. I nliappy ! whom to beds of pain

Arthritic tyranny consigns; Whom smiling nature courts in vain,

1 hough rapture sings and beauty shines.

Jti/iHuin's Ode on Spring.

ARTHRITIS; from apOpov, a joint; any distemper that affects the joints, but the gout particularly.

Ainiir.ni-. I'I.AMTHA, ARTHRITIS VAGA, the wandering until, that <.;ives pain sometimes in one limb, and sometimes in another.

AKTI 1 K<)1)1 A, in anatomy, a species of ar- ticulation, \\htrcin the rial head of one bone is

received into a shallow socket in the other. The humerus and scapula are joined by this species of articulation. See ANATOMY, Index.

ARTHRODIA, in natural history, a genus o. imperfect crystals, found always in complex masses, and forming long single pyramids, with very short and slender columns.

ARTHRODIA, in zoology, a class of animalculz, containing those with visible limbs.

ARTHRON ; ap0pov, Greek ; a joint, or connection of bones proper for motion. ???

ARTHROSIS, in anatomy, a juncture of two- bones designed for motion ; called also articu lation. See ARTHRODIA.

ARTHUR, the celebrated hero of the Britons, is said to have been the son of Uter, named Pen- dragon, king of Britain, and to have been born in 501. His life is a continued scene of won- ders. He killed 470 Saxons with his own hand in one day; and after having subdued many mighty nations, and instituted the order of the knights of the Round Table, died A.D. 542, of wounds which he received in battle. The most par- ticular detail of his story and his exploits is that given by Geoffrey of Monmouth ; but his history is so blended with the marvellous and the extra- vagant, that not only the truth of the whole, but even the reality of Arthur's existence, has been called in question. The ingenious Mr. Whitaker however believes in his institution of the cele- brated order of the round table, as also tl*at it was the origin of others of the like kind on the continent.

ARTHUR'S SEAT, a high hill in the neigh- bourhood of Edinburgh, said to have been so denominated from a tradition that king Arthur surveyed the country from its summit, and had also defeated the Saxons in its neighbourhood. This hill rises by a steep and rugged ascent, till it terminates in a rocky point near 700 feet from the base, being more than double the height of the cross on the top of St. Paul's, London, which is 340 feet. On the south it is in many parts a perpen- dicular rock, composed of basaltic pillars, regu- larly pentagonal or hexagonal, about three feet in diameter, and from forty to fifty feet in height. Contiguous upon the west, and partly connected with it at the base, are Salisbury crags, of infe- rior height but exhibiting an appearance equally singular and grand. They present to the city an awful front of broken rocks and precipices, form- ing a sort of natural

amphitheatre of solid rock ; and backward from the craggy verge above, the hill forms an extensive irregular slope, the surface affording pasture to numerous flocks of sheep. The crags, beside ores, spars, rock-plants, and here and there it is said some precious stones, af- ford an inexhaustible supply of granite for paving the streets, &c. In quarrying a part of the crags has been worn down into a spacious shelf, having the appearance of a lofty terrace, and stretching a considerable length. From hence is a near and distinct prospect of the city with its environs and the adjacent country. But from the pinnacle called Arthur's Seat the view is more noble and extensive. The traveller may here sit and survey at his ease the centre of the kingdom, besides hav- ing a complete view of Edinburgh and its castle, on which he looks down as if seated among tht►►

riouds. In a word, the German ocean, the whole course of the Forth, the distant Grampians, and a large portion of the most populous and best cul- tivated part of Scotland, form a landscape sub- lime, various and beautiful. The denomination of this hill, derived as above, has been adduced as an argument against those who dispute the existence of the British Arthur. That derivation, however, though probable, is not without uncer- tainty. For Arthur's Seat is said to be derived, or rather corrupted, from A'rd Seir, ' a place or field of arrows,' where people shot at a mark : and this not improbably ; for among these cliffs is a dell or recluse valley, where the wind can scarcely reach, now called the Hunter's bog, the bottom of it being a morass. The adjacent craggs are supposed to have taken their name from the earl of Salisbury, who, in the reign of Edward III. accompanied that prince in an expedition against the Scots; though, according to others, the genuine derivation, like that of Arthur's seat, is from a Celtic word also corrupted. ARTICHOKE, in botany. See CINARA. AR'TICLE, v. & n. ˆ Lat. articulus, a di- ARTI'CULATE, v. & adj. (minutive of artus, a ARTI'CULATELY, (joint. To enter into,

 draw up or state par-

ticulars, to make terms. To articulate is to pro- nounce each portion of a sentence distinctly.

PROSPERO. Hast thou, spirit, Performed to point the tempest that I had thee. ARIEL. To every article. Shakspeare. Tempest. Henry's instructions were extreme curious and arti- culate, and in them more

articles touching inquisition, than negotiation ; requiring an answer in distinct articles to his questions. Bacon.

In speaking under water, when the voice is reduced to an extreme exility, yet the articulate sounds, the
॥ words, are not confounded. Id.

The first, at least, of these I thought deny'd To beasts ; whom God, on their creation day, Created mute to all articulate sound. Milton.

Antiquity expressed numbers by the fingers on either hand. On the left they accounted their digits and articulate numbers unto an hundred ; on the right Land, hundreds and thousands.

Browns Vulgar Errors.

If it be said, God chose the successor, that is mani- festly not so in the story of Jephtha, where he articled ॥ with the people, and they made him judge over them.

Locke.

By articulation I mean a peculiar motion and figure of some parts belonging to the mouth, between the throat and lips. Holder.

All the precepts, promises, and threatenings of the gospel, will rise up in judgment against us ; and the article* of OUT faith will be so many article* of accusa- tion ; and the great weight of our charge will be this, That we did not obey the gospel, which we professed to believe ; that we made confession of the Christian faith, but lived like Heathens. Tillotson.

You have small reason to repine upon that article of life. Swift.

The dogmatist knows not by what art he directs his tongue, in articulating sounds into voices. (Jrlanville.

In the mean time they have ordered the preliminary treaty to be published, -,vith observations on each article, in order to quiet the minds of his people.

Steele.

ARTICLE, in grammar, is a particle used in most languages for the declining of nouns, and Denoting t-.t-ir several cases and genders. The

use of them chiefly arises in languages that have no different

terminations to express the different circumstances of nouns. The Latins have no articles ; but the Greeks, and most of the modern languages, have had recourse to them for fixing and ascertaining the vague signification of com- mon and appellative names. Many have been the controversies among grammarians upon the use and meaning of these words. Mr. Harris, whose knowledge was derived from the Greek language and Greek grammarians, and whose principles are contradicted by the slightest ac- quaintance with the Teutonic and Arabic, leads us through many a maze; and we might have wan- dered till this moment, if Mr. Tooke, in his obser- vations on the word that, in his Epea Pteroenta, had not pointed out to us the open and straight road-upon this subject. In the English language we call the words a and the articles ; the Germans have ein and der ; the French un and le ; the Greeks 6 ; the Hebrews H : but the unfortunate Latins are said to be without these joints and pegs in speech. But if one language is without them, they are, it is evident, not essential to language ; and it will be found difficult to make such a defi- nition as shall exclude a variety of words, such as hie, this, that, &c. from making a part of this division. In the languages above-mentioned the precise meaning of the words the, der, le, 6, and 71, cannot at first sight be ascertained. The English word a points obscurely to its meaning, but the German ein and the French un clear the road for investigation. They are to be found continually applied to substantives, and mean one. If a thing is generally reported, we say in English, ‘ they say,’ meaning a great number say- so : and so in French it is on dit, or unus dicit, ‘ one person says so,’ meaning more than one person by an ellipsis very common in that lan- guage : in German it is man sagt, by man, mean- ing man in general. We have thus found, that in two languages one of the articles is merely a word of number. Probably it may be so in English; a may mean one, or it is an abbreviation of any. By trying the two senses it is evident that any cannot be applied in the room of a, but that one always can : and hence we might con- clude that a and an are only other words for one, and answer to the German ein.

The article the, as it rs called, may not dis- cover itself so easily. Yet let us try the same analogy, for the etymology of it is not ascer- tained. The answers to der of the Germans, and le of the French : but what is le ? the ille of the Latins ; and hence we may reasonably presume that our word the is no more an article than ille, and in fact that it comes from some adjective of the same signification. Let us try by etymology. In German we have der, die, das; which was anciently ther, thia (thio thiu) thax, and in the plural thie (thier). This looks very much like our the. In the Anglo-Saxon we find sat seo, that : in Islandic, sa, su, that : in Gothic, sa, so, thata : in Hebrew, n>T>

M►► HT : etymolo- logists perhaps will not be displeased at our making the words n: and the proceed from the same original ; and we shall not be afraid of ex- posing ourselves to the lauphter of critics, if we refer the Doric TJJVOC to the same stock. If we

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are right in our conjectures, the word the is as much►►a pronoun as the Hit of the Latins ; but, if persons choose to have a distinct class of words under the name of articles, we may say that the English has two, a and the, which ‘ serve to de- fine and ascertain any particular object, so as to distinguish it from the other object of the general class to which it belongs.’

Father Burner distinguishes a third kind of articles in French, which he calls intermediate or partitive, serving to denote part of the thing expressed by the substantives they are added to ; as, des s$avants ont cru, ‘ some learned men have supposed ;’ I want de la lumiere, ‘ some light.’ The use and distinction of the definite and inde- finite articles le or la, and de or du, make one of the greatest difficulties in the French language ; as being entirely arbitrary, and only to be ac- quired by practice.

The most philosophical and probable account is that which has been so ably illustrated by the learned bishop Middleton ; viz. that it is neither more nor less than the demonstrative or relative pronoun, for both were originally the same. The article, together with its adjunct, forms in fact a proposition, in which the participle of existence is either expressed or understood, and which in- volves a relation to something before said by the speaker, or which is suppposed to pass in the mind of the speaker. Thus, ytpcov signifies gene- rally ‘ old man ;’ but l> y’tpwv is equivalent to o, ytpuv uv, where the pronoun o, ‘ this,’ implies that the old man now spoken of has been men- tioned before, or that lie is in some way or other known to the hearer or the speaker.

ARTICI.K, Aimcins, in anatomy, a joint, or juncture, of two or more bones of the body.

ARTICI.K, in arithmetic, sometimes signifies the number 10, or any number justly divisible into ten parts, as ►►►_>(), 30, 40, Jcc.

Aunt IT, or 1’AiTii is by some defined a point 01 Christian doctrine, which we are obliged to believe as having been revealed by God him- self, and allowed and established as such by the church. The thirty-

nine articles were founded, for the most part, upon a body of articles com- piled and published in the reign of Edward VI. They were first passed in the convocation, and confirmed bv royal authority in 1562. They were afterwards ratified anew in the year 1571, and again by Charles I. The law requires a subscription to these articles of all persons or- daint'd to be deacons or priests, 13 El. cap. 12; of all (leruyiiien inducted to any ecclesiastical livinir, by the same >tatute ; and of licensed lec- turers and curates, 1 15 El. cap. 12 and 13, and 14 I'll. 11. cap. 4 ; of the heads of colleges, of chancellors, otHciaU and commissaries, and of schoolmasters. l>y 1 William III. cap. 10. dis- senting teachers are to subscribe to all except the thirty-fourth, thirty- fifth, and thirty-sixth, and part of the twentieth, and in the case of Ana- baptists, except aUo part of the twenty-seventh; othewise they are exempted from the benefits of the ait of toleration. See Cm KCH OF ENGLAND.

Auiirns 01 1111 ('i.r.Ruv, . \UTICUI.I CLERI, are certain statutes touching persons and causes ecclesiastical, made under l'.dw. II. and III.

Auncii.s 01 I.AMiu.m were nine articles on the subject of pn 'destination, and the limitation

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of saving gracfc, which were drawn up by arch- bishop Whitgift, and recommended to the atten- tion of the students of Cambridge, in consequence of some disputes which were raised in the uni- versity at that time on the above-mentioned points. They were, however, merely declaratory of the doctrines of the church of England, and were not imposed as of public authority.

ARTICULARIS NERVUS. See AN ATOMY, Index.

ARTJCULATE SOUNDS are such as express the letters, syllables, or words, of an alphabet or language : such are formed by the human voice, and by some few birds, as parrots, &c.

ARTICULATED LIBEL, libellus articulatus, in law, that wherein the parts of a fact are set forth to the judge in short, distinct articles.

ARTICULATION, in anatomy. See ANATOMY, Index.

ARTICULATION, in botany, is the connexion of parts that consist of joints or knees, such as the pods of French honey-suckles, which, when ripe, divide into so many parts as there are knees or joints ; also

those parts of plants which swell into nodes or joints, and which usually send forth branches.

ARTICULATION, in grammar, a distinct pro- nunciation of words and syllables.

ARTIFICERS, among the Romans, had their peculiar temples, where they assembled and chose their own patron, or advocate, to defend their causes ; they were exempted from all per- sonal services. Taruntenus Paternus reckons thirty-two species of artificers, and Constantine thirty-five, who enjoyed this privilege. Artificers were held a degree below merchants, and argentarii or money-changers, and their employment more sordid. Some deny, that in the. earliest ages of the Roman state, artificers were ranked in the number of citizens : others, who assert their cit- izenship, allow that they were held in contempt, as being unfit for war, and so poor that they could scarcely pay any taxes. For which reason they were not entered among the citizens in the censor's books ; the design of the census being only to see what number of persons were yearly fit to bear arms, and to pay taxes towards the support of the state. In almost all ages, till the present, and under most forms of govern- ment, artificers have been too little respected. By means of the arts, the minds of men are engaged in inventions beneficial to the whole community ; and thus prove the grand preser- vative against that barbarism and brutality, which ever attend indolence and induce stupidity. Ra- mazini has a treatise on the diseases of artificers.

ARTIFICIAL DAY, the time between the sun's rising and setting in any position of the hemisphere.

ARTIFICIAL LINES, on a sector or scale, are lines so contrived as to represent the logarithmick lines and tangents ; which, by the help of the line of numbers, solve, with tolerable exact- ness, questions in trigonometry, navigation, &c. Chambers

ARTIFICIAL Music, that which is according to the rules of art ; or executed by instruments invented by art. It is also used, in another sense, for some artful contrivance in music ; as when a piece is sung in two parts ; one of which is by B molle, or flat and the other by B sharp-

ARTIL'LERY. Fr. artitteric. Of doubtful

origin.

Have I not heard great ordnance in the field ? And heav'n's artillery thunder in the skies ?

Shaksfieare-

I'll to the tower with all the haste I can, To view th' artillery and ammunition. Id.

And Jonathan gave his artillery unto his lad, ana said unto him ; Go, carry them unto the city.

I Samuel.

As when two black clouds

With heaven's artillery fraught, come rattling on Over the Caspian, then stand front to front Hov'ring a space, till winds the signal blow To join their dark encounter in mid air.

Milton's Paradise Lost, b. ii.

twisted ropes inclined to recoil. Besides stones, were also used balls of earth, probably baked pelotes, corrupted into pellets and bullets. It will be sufficient therefore to enumerate shortly the machines, though it is to be recollected, that ancient authors are perpetually confounding the appellations. The arbalist is described in 1342 as a large cross-bow, furnished with a hundred gogions, or balls, and grapple to draw it up.

The balista is said to be a Phoenician invention for throwing huge stones, confounded sometimes with *he catapult, which threw darts, a Syrian contrivance, conveyed to the Syracusans, whence it was brought into Greece by Philip of Macedon. Accounts of the construction vary, but the cross-

Upon one wing the artillery was drawn, being six- bow principle of action seems the most proba- teen pieces ; every piece having pioneers, to plain ble. The Scorpio was a smaller kind of cata-

Hayward. pu]j

In the middle ages, besides the balista, catapult, onager, and scorpion, Grose mentions the mangona, and its diminutive mangonel, similar to the balista. The trebuchet or trip- getis, for throwing stones, which

seems to have

the ways

He that views a fort to take it, Plants his artillery against the weakest place.

Denham.

ARTILLERY, in its general sense, denotes,

1. The offensive apparatus of war, particularly |Jeen\h7 s►►mV Mlˆ of the missile kind. Among the trench tl j th h Dr Meyrick says the term trebuchet, term was anciently appropriated to archery. s to ►►► }y a raiiitary engine, which ejected

In its modern signification it denotes certain lire- itg ammunition from a trap-door, trebocchetto. arms mounted on carriages and ready for action, The petiary matafunda, bugles or bibles, cou- with their balls, bombs, grenades, rockets, &c. --- – — -►►► – –

ith their balls, bombs, grenades, re em, etc. ilkrtj and war.wolf (in one sense) aiso machines . In a more extensive meaning, it includes the for ejecti stones The bricolle, carreaux or leans which facilitate their motion and trans- rels> and the gspringal, calculated for throw-

2

means

port, the vehicles over which they traverse rivers

t – ing large darts, called muchettse ; and sometimes

every thing, in shortˆ necessary toˆ them,j)r toat viretonS) ; e< arrows wim the feathers put dia- gonally so as to occasion them to turn in the air, but it was not limited to darts ; for according to Dr. Meyrick, v. ii. p. 53, in 1342 the gates and towers of Norwich were furnished with thirty espringolds for casting great stones, and to every esprmgold a hundred gogions or balls fastened up in a box, with ropes and other accou- trements belonging to them ; which illustrates the construction before given. The robinet and mate-griffon (i. e. destroyer of the Greeks) threw both darts and stones.

The manu-balista, or cross -bow, supposed to

belongs to” a train of artillery. 3. In a sense still more extensive, the

word comprehends the men and officers destined for the service of the artillery. 4. By the term artillery is likewise understood the science which the officers of artillery ought to possess. SECT. I. ††† OF ANCIENT MISSILES AND MILI- TARY ENGINES.

The missiles of the ancients were of three kinds, viz. on the principle of the cross-bow, the sling, and the recoil of twisted ropes. The first sent forward, darts and sometimes combustible

arrows ; the second was the balista kind, here- be of Sicilian and Cretan origin, was perhaps the after described ; the third acted like the boy's most important machine of this kind, and intrq- bone bow, which by means of a wooden lever duced into Europe by the Crusades. It was

and a twisted string ejects a plum-stone. Dr. Meyrick has had the good fortune to meet in an ancient manuscript with actual delineations of the leading kinds of these engines used in the middle ages. The balista seems only to have been a large beam, rather crooked, resting at about two- thirds of its length on a forked support; if of three legs, then called trepied. Plate, ANCIENT

known in England, at least for use in the chase, as early as the time of the Conquest. Its appli- cation to warlike uses (not its introduction) by Richard I. is well supported; it was used in Italy in 1139. A legionary soldier appears on an ancient seal endeavouring to bend the arcu- balist with his foot. Five years earlier, mention is made of turni balisterii, or the arbaleste-a-tour,

ARTILLERY, fig. 1. At the long end was a great that drawn up by a turn; and in 1320, of the pear-shaped bag, tied to the beam by a stout balista grossa de molinellis, or one wound by a rope. At the short end was a large box full of moulinet or windlass, see fig. 6, and the balista stones. The long end being suddenly released, grossa de arganellis, i. e. one furnished with slung upon the enemy the contents of the bag, tubes for ejecting the Greek fire. The cross- through being jerked up by the great weight of bows used in the reign of Henry VII. were of the stone box. The onager, fig. 2, threw a like two kinds ; the latch, with its wide and thick bag of stones, but there was no stone-box, the bender, for quarrels, and the prodd for bullets, beam being impelled by its position between The stock of the former was short and straight.,

not much exceeding two feet, and (he bow was bent by the windlass or moulinet.

Of the important buttering ram Pliny and others have made Epeus the inventor, during the siege of Troy; but as it is not mentioned by Homer, nor any Greek writer, Vitruvius" and fertullian more probably assign the invention to Pephasmenon, a Tyrian, in the army of Carthage, during the siege of Cadiz. There were three kinds of rams ; one suspended, fig. 5 ; the second running upon rollers, fig. 3 ; the third carried by the men who worked it, fig. 5. At Haguenau, and Morviedro, the ancient Sa- guntum, are the remains of two : one is topped with a strong head of iron, square and of one piece ; the other consists of three pieces, has a ram's head, and is similar to one on the arch of Severus. The ram was used in the middle ages; and Sir Christopher Wren, in throwing down old walls, found no machine equal to it, parti- cularly in disjointing the stones. The momentum of one, twenty-eight inches diameter, 180 feet long, with a head of a ton and a half weighed 41,112 Ibs. and worked by a thousand men, was about equal to a point-blank shot from a thirty- six pounder.

Hardly, perhaps, to be called artillery, but materially assisting their operations were the ancient wusculus or tcstudo a covered machine, probably the subsequent sow, a very low shed, long and very sharp roofed ; used to advance to the wall, and overturn it by sap. The pluteus, a machine covered with ozier work and hides, running upon three wheels, one in the middle, and two at the extremities. The cat, also a covered shed, occasionally fixed on wheels, and used for protecting soldiers employed in filling uj) the ditch, preparing the way for the movable tower, mining the wall, See. Some of these cats had crenelles and chinks, from whence the archers could discharge their- arrows. These were called castellated cats ; and sometimes under cover of this machine, the beseigers work- ed a small kind of ram ; fig. 4. Ur. Meyrick, from an ancient illumination, has engraved one of these, called the chaschateil or cat castle. It resembles in form a modern four-post bedstead upon wheels. A miner is working under it with a pick-axe. And to the same purpose the vinea, another shed, was applied.

The Inlfraii'ntin or lulfnn, was a tower with stories, moved up to the walls. A cat, made of osier twigs and leather, and covered with planks, was used to protect those \lio filled up the ditches preparatory to wheeling upon them the belfries; from this use of the cat, was derived the French word eschaufaux, an elevated floor, and subsequently the

English word scaffold. Klsewhere Dr. Meyrick says, the catti Versailles, were chats faulx furnished with drawbridges. The chief belfries were called brestachiae or brestaches. William de Breton says, he caused to be made doubl- orestaches in seven different p!a< rs. Thest- tvere wooden castles, very highly t'ortifu (1, surroim'led with double quadrangular fov;rs, ;it a proportionate distance from each other, with drawbridges throw across them, and he 'had not only these filled with armed ►►j;ei:, but tiie niti nor sm'.'acr of each foss, and

thus he surrounded the besieged by his works' Such wooden castles were also called bastiles' An interesting print of a movable belfroi is given by Grose. It consists of a ground-floor occupied by a ram, and four upper stories by archers and cross-bowmen ; the highest story rose above the walls, and from that directly be- low, a drawbridge was let down, and rested upon the wall ; see our fig. 3. Some of these towers used by the early ancients were of amazing magnitude, being with pyramids twenty,' fifteen, or ten stages or floors.

The prickly cat, or fells echinata, was a beam, bristled with oaken teeth, which, being hung at an embrazure, could be let down upon an enemy. For the same purpose was used the fis- tuca bellica or war-hammer, fitted with curved nails and hooks, and suspended by a chain, to draw up the enemy from below.

Missive wheels were formed of mill-stones joined by an oaken axis, and let down upon besiegers ; missive chariots were rolled down an inclined plane, and retained by chains to discharge hot or cold stones. In the middle age the ma- chines were commonly made upon the spot. Hogsheads full of stones were used in the reign of Edward I. as a protecting rampart to defend the workmen in sieges.

SECT. II. ►►► OF MODERN ARTILLERY.

According to Du Cange the word artillery (ars telaria, meaning bows, arrows, and all im- plements of war,) first occurs in Rymer. Grose is confirmed by Dr. Meyrick in assigning the introduction of it to the fourteenth century.

Cannon called dolia ignivoma, or fire-flashing vessels, in Spain, were known in Italy as early as the year 1351, and were used by our Edward III. They were termed by the French, gunnae,. and appear at first to have been of two kinds ►►► a large one for discharging stones, called a bom- bard, and a smaller sort for discharging darts- or quarrels. In 1377, 1 Richard II. Thomas Nor- bury was directed to provide from Thomas Rest- wold of London, two great and two less

engines, called cannons, 600 stone shot for the same, and salt-petre, charcoal, and other ammunition, for stores, to be sent to the castle of Bristol. At the first invention of cannon, darts and bolts were shot from them ; but, before these, stones were used instead, for, in 1388, a stone bullet, which weighed 195 Ibs., was discharged from a bombard called the trevisan.

The bombard was so called from the Greek j3o/*j3oc, which expressed the noise it made in the firing. It was a Greek invention, and there is some reason to conceive that gunpowder owed its origin to the same people. At first used only in fire-works amusively, its discovery is in- volved in obscurity. From a tract on Pyrotechny by Marcus Gracus, Friar Bacon, in 1270, learned that its composition was two pounds of charcoal, one of sulphur, and six of salt-petre, well pul- verised and mixed. It was first made in Eng- land in the time of Elizabeth. At first it was not corned, but remained in its mealed state. It was then called serpentine powder, Meyrick, v. iii. p. 71. The first bombards were made of bars of iron, strengthened with welded hoops of the

same metal. They were short with large bores, and were made with chambers, in imitation of the tubes which ejected the Greek fire. These chambers consisted of the lower half of the cy- linder, the upper being open for the admission of the can, or canister, which held the charge, from whence probably arose the term cannon. One of these may be seen in the tower of Lon don, and there is another at Rhodes of the six- teenth century, on its original carriage, and a stone ball to fire from it. It is nineteen **eet in length, two feet eight inches in diameter, its calibre two feet, and its thickness four inches. About half the length is of a less diameter, and in this, as in a chamber, was placed the powder,
ववwhile the ball was in the larger part. The car- riage was made of timber, placed lengthways, and cramped together. These bombards were the only kind of cannon employed in the four- teenth century, and were of the howitzer kind, in use before mortars. After this invention of bombs, that of carcases of different kinds soon followed. The former, according to Strada, took place in 1588. Grenades are said to have been first used in 1594 in which year the howitzer was invented by the Germans. The bomb being intended to beat down buildings in**‘ its fall, or to break and destroy every thing around it, by the pieces of broken iron scattered in all

directions by its explosions, the end proposed by the car- case and grenade was to burn the town by means of fire-balls. The petard for forcing gates was invented in France, a short time before the year 1579, and soon after introduced into England. . The term bombard generally designates bat- tering guns and mortars ; but the word is also applied to lighter cannon. Accordingly Dr. Meyrick calls a cannon engraved by Strutt, a bombard on a carriage, light in proportion to the bulk of the piece. Its trail consists of a pro- longation of the cascabale, which rests on the ground, a block of wood serving as a quoin for the purpose of depression. Admitting that can- non were not used in the field till the fifteenth century, this gun, for it is very small, is the kind to which Froissart alludes, when he mentions two hundred carts loaded with cannon and artillery ; cannonades with bars of iron and quarrels headed with brass, and cannon mounted on walls and battlements. The balls were of stone adapted to the calibre. In 1434 it is said that the En- glish had many kinds of projectiles, ‘ cannons, culverines, and other vuglaires,’ more properly vulgaires, the ordinary kind. The scorpion was another sort. In an illuminated copy of the Roman de la Rose, done at the commencement of the reign of Edward IV. 1461, is the de- lineation of an iron cannon. The piece is placed in a kind of trough, or bed of wood, which is continued to the earth, not unlike a modern horse-artillery trail. Grose very properly says, that most of the earliest cannons were mere cylin- ders, fixed on sledges and being often composed of iron bars, iron plates rolled, or even jacked leather hooped, could be fired, because they were loaded by chambers fixed in at the breech. At this time they were generally purchased from abroad ; and though Henry VII. and VIII. had Flemish gunners to teach the art, yet they did not VOL. III.

understand it upon mathematical principles ; and in the sixteenth century the ordnance rarely made more than one discharge, the cavalry being able to charge them before they could load again. Aliens were employed in 1543 in cast- ing great brass ordnance, though one John Owen was said to have so done in 1521. In 1626, 2 Charles I. one Arnold Rotespen had a patent for making guns in a manner before unknown in this kingdom.

Culverines were an early denomination of a species of large cannon ; and when the distinc- tion between battering-pieces (all above twelve pounders) and field-pieces commenced, accord- ing to Dr. Meyrick, temp. Henry VIII. the ap- pellations were numerous. These names were derived from the tubes which had been used to eject the Greek fire, being fashioned so as to represent the mouths of monsters. The basilisk, the largest, shot stones of 200 pounds weight. It was so denominated from a basilisk sculptured upon it. The shot in this reign

consisted of iron, lead, and stone balls ; and ladles and sponges were used. Different proportions were given by various nations to pieces of the same denomination ; but the following table of Ord- nance in the reign of Elizabeth, applies in the main to the times immediately preceding :

Denomination.

Pounders.

i

o

n a

Cannon Royal ....

66

8*

Cannon

60

8

Cannon Serpentine . . .

53i.

7

Bastard Cannon . . .

41

7

Demi-cannon ....

33

6}

Cannon Petro' ....

24

6

174

54

15

5

Demi-culverin ....

9*

4

Bastard Culverin . . .

5

4

5i

3i

Minion

4

3i

Faulcon

2

2i

Falconet

ii

2

Serpentine

I

1J

Rabinet

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i

The change introduced in the military art by the modern artillery, Dr. Smith observes, has enhanced greatly both the expense of exercising and disciplining any particular number of sol- diers in time of peace, and that of employing them in time of war. Both their arms and ammunition are become more expensive. A musket is a more expensive machine than a javelin or a bow and arrows ; a cannon or a mortar than a balista or a catapulta. The powder which is spent in a modern review, is lost irrecoverably, and occasions a very considerable expense. The javelins and arrows which were thrown or shot in an ancient one, could easily be picked up again, and were besides of very little value. The can-

C

ARTILLERY.

non and the :nortar are not only much dearer, !>ut much heavier machines than the balista or catapulta, and require a greater expense not only to prepare them for the field but to carry them to it. As the superiority of the modern artillery too over that of the ancients is very great, it has become much more difficult, and consequently much more expensive, to fortify a town so as to resist, even for a few weeks, the attack of that superior artillery. In modern war, the great expense of fire-arms gives an evident advantage to the nation which can best afford that expense ; and consequently to an opulent and civilised, over a poqr and barbarous nation. In ancient times, the opulent and civilised found it difficult to defend themselves against the poor and bar- barous, nations. In modern times, the poor and barbarous find it difficult to defend themselves against the opulent and civilised. The invention of fire-arms, therefore, an invention, which at first sight appears to be so pernicious, is cer- tainly favorable, both to the permanency and to the extension of civilisation. And, on the whole, the invention of gun-powder and modern artillery may be said to have saved the effusion of human blood. Equestrian engagements (the principles on which cavalry act being nearly the same in every age,) are still similar in circum- stances to those which

appear so extraordinary in the battles of antiquity.

The present artillery of Great Britain is ad- mitted tii be the most perfect force of that description in Europe. If was until recently divided into the artillery of the park, the horse artillery, and the battalion guns, viz. all the light pieces of ordnance attached to regiments of the line. This latter description, however, has been discontinued of late, and brigades of foot and horse now comprehend the whole of our regular artillery. A brigade of foot artillery lias either five me- dium 12-poundersand a heavy 5 J-inch howitzer; five 9-pounders and ditto; live long 6-pO'inders and ditto; five light el-pounders and a light 5ˆ- inch howitzer; or six 3-pounders when acting in a mountainous district. In the late war the P-pounders wen.- more generally used, as best <>;>]>.jsed to the fi-poimders of the Trench army. riie L,nn— a;ul howitzers are accompanied by ;'..a '".'Jiri'idii <::trs upon a new principle. To every brigade is a i'nrco rart, a camp equipage waggon, and sparegun carriage, with spare wheels, and tools for a wheeler, collar-maker, and carriage-smith. The proportioning of field and battering ordnance, for foreign service, is a business of <_lreteil to accompany it. Hut two brigades of field artillery to a division of an army consisting of (luOO men, may be considered a ►►ood propor tion, independent of the reserve park.

A troop of British horse artillery has generally five 6-pounders and one light 5ˆ-inch howitzer. The French have generally 8-pounders and a 6-inch howitzer. Each troop consisting of one captain, one second captain, three subalterns, two staff Serjeants, twelve non-commissioned of- ficers, seventy-five gunners, forty-six drivers, six artificers, and one trumpeter, with eighty-six draught horses, and fifty-six riding horses, and six pieces of ordnance, with carriages for the conveyance of ammunition, camp equipage, and stores. Horse artillery was brought into the service of this country by the duke of Richmond in the year 1792. There is a colonel-command- ant, two colonels en second, four lieutenant- colonels, and one major, attached to it. The movements of horse artillery are made with great celerity, and it has been found, that they are perfectly adapted to act with cavalry in the field, in their most rapid movements, and are consi- dered as forming an essential addition to the artillery service.

The royal artillery drivers are a corps first formed about twelve years ago, by the duke of Richmond. Previous to the corps being esta- blished, the horses and drivers were provided by contract ; but, as no reliance could be placed on the service of either men or horses so procured, it was found absolutely necessary to abolish so unmilitary and destructive a plan ; and to em- ploy able men well trained to the

service. The artillery horses are now kept in the highest con- dition, the drivers being thoroughly drilled to the manoeuvres of artillery, an'd capable of se- curing, by rapid movements, advantageous posi- tions in the field. This change arises from the high state of excellence in which the brigades are equipped, and from the artillery men being, in particular cases, mounted upon the cars at- tending the brigades.

A park of artillery is a sort of movable super- numerary detachment, containing not only light guns, to replace such as may be lost or taken, but 12-pounders, or 18-pounders, with 8 inch howitzers, for the purpose of defending impor- tant positions, entrenched posts, &c. breaking down bridges, and conducting sieges. Attached to it also are the reserve officers and men of this service. In expedition service, where disem- barkations of artillery take place, the depot of reserve carriages, ammunition and stores, is usually formed near to the spot where the articles are landed from the ships, and a communication is kept up between the advanced park and the depot, from whence the articles are forwarded as demanded for the immediate exigencies of the park. See CANNON AND FORTIFICATION.

Regiments of artillery are always encamped, half on the right and half on the left of the park The company of bombardiers (when they are formed into companies, which is the case in al- most every nation except England) always takes the right of the whole, and the lieutenant colo- nel's company the left ; next to the bombardiers, the colonels, the majors, &c. so that the two youngest are next but one to the centre or park ; the two companies next to the park are the miners on the right, and the artificers on the left. In the rear of, and thirty-six feet from, the park, are encamped the civil list, all in one line.

The following Tables exhibit the latest official regulations for the proportion and disposition of the ammunition attached to the field- pieces of our army.

TABLE I. HEAVY 5ˆ INCH HOWITZER.

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Case Shot.

Cartridges.

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Where carried. u ˆ –

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L Total ....

58

8

8

4

78

78

58

8

LIGHT 5►► INCH HOWITZER.

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fu ►►►* r . $ Off Box .... Howitzer Umber ►► Near Box . \ \ .

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11 11

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21

21

12

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CD

12

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2

21

21

12

4

Total . .” ‘.T^-

62

10

8

4

84

84

8

- These are only 1-lb cartridges.

TABLE II. HEAVY SIX-POUNDER.

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Case Shot.

Cartridges.

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Where carried.

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25 25

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g&(Limber j / B^ ; J | .2 7 C Near Box . . .

ill Body- rHindB0oxx : : :

20 20 25 35

5 5

5 5

10 10

25 25 45 45

25 25 35

35

10 10

10 10

Total . ❓❓❓ >. ❓❓❓:** -.?’

140

15

15

20

190

170 ‘

20

20

Total for five guns

700

75

75

100

950

850

100

100

LIGHT SIX-POUNDER.

C ˆ f Box

3

8

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b

C Off Box . . . .

16

5

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21

25

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[►► (_ 1 Near Box ....

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J S-) Body. $5?re,?,ox ‘ <5 Q v ' i Hind Box ....

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25 35

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10 10

45 45

35 35

10

10

10 10

Total ....

132

14

14

20

180

160

20

20

Total for five guns .

660

70

70

100

900

800

100

100

- These are only l►►-lb. cartridges.

C 2

ARTILLERY.

TABLE III. NINE-POUNDER.

Description, of carriage.

Where carried

o

J3

►►►O

a

1

Case Shot.

o

A It

1

Cartridges.

ti i) W

1 3

Spherical.

M n

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12

Two-wheel ,T . .. , Carriage. New Patent hmber’

Gun Limber . . J JJfaf Box ! ‘. ⁂ ! !

J 2 S t R H ⁂ ˆore ˆOx * ‘ * ‘ ⁂ < O J y ' ⁂ Hind Box ....

Total

13 13 13 13 12 24

3 3 2

3

3 2

12

16 16 16 16 28 24

16 16 16 16 16 24

12

88

8

8

12

116

104

12

12

L. Total for five guns . . .

440

40

40

60

580

520

60

60

26 52

3 5

3

5

10

32 72

32 62

10

iO

/ Total .

78

8

8

10

104

94

10

10

Total for five guns ....

390

40

40

50

520

470

50

50

TABLE IV.

MEDIUM TWELVE-POUNDER.

Nature of Limber.

Where carried.

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Case shot.

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Cartridges.

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Spherical

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C Off Box

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6 6 16 16 20 20

6 6 16 16 12 20

8

8

Gun Limber . . . j ^^ BQX

- i > f ^ . (Off BOX .

i|CLimber. . j jJear Box . ! . . ...

<%U (Body . . JHindBox

Total

62

7

7

8

84

76

8

8

Total for five guns

310

35

35

40

420

380

40

40

I One box on ammuni- tion carriage.

s Off Box .

5 5

22 13 -13

1

2 2 2

1

2 2 2

6

6 6

32 17 17

6

6

26 17 17

6

6

Gun Limber . . . j Near BQX

⁂ to 1 Limber Box

g -c < r C Fore Box .

J S S J Body . . . { H. d B

‘

58

7

7

6

78

72

6

6

Total for five guns

290

35

35

30

390

360

30

ARTIMOMANTICO, a metallic compound invented by a gentleman at Leghorn. It is of the same weight as gold of eighteen carats, and can be made like that of twenty-four. Buttons are manufactured from it at Bologna, and sold for 50 cents the dozen. Artimomantico is soft and bends, and derives its superiority over other gold-coloured metals, from its not tarnishing.

ARTISCUS; from aproc, bread; in medi- cine, denotes a troche, more particularly that prepared with vipers' flesh mixed up with bread, to be used in the composition of Venice treacle.

ARTIST. See ART.

An ARTIST has more correctly been denned one who practises any of the liberal arts as a profession, in distinction from the artisan who mixes them with trade and commerce. The builder, it is said, should not be called an archi- tect, nor should the sign-painter, the figure-caster, or plasterer, the chair-sulptor, com- monly called cabinet-maker, the paper-hanger, or wall-decorator, be called artists, because their employments do not consist in the exercise o the higher faculties of the mind, but in prac- tising lower departments of art, or in executing the thoughts and designs of others.

ARTIZOOS; from ajm short, and ××w××j, life; is used by some ancient physicians for an infant short-lived by reason of a difficult birth.

ARTOBRIGA, an ancient town of Vindelicia, now called Altzburg, in Bavaria, on the Danube, below Ingolstadt, according to Aventinus ; but Cluverius supposes it to be Labenau on the Saltzbach, below Lauffen, in the archbishopric of Salisbury.

ARTOCARPUS; from oproc, bread, and Kap;roc, fruit; the bread-fruit tree; a genus of the monandria order and monoecia class ; natural order, urticae. It has a cylindric amentum, thickens gradually, and is covered with flowers : the male and female in a different amentum. In the male, CAL. none ; COR. bivalved. In the fe- male no calyx nor corolla ; stylus, one, and the drupa is many celled. The species are,

artocar- pus incisa, sitodium incisum, radermachia incisa, soccus lanosus, seu granosus, in French le rima, ou fruit a pain, bread-fruit tree, native of the Molucca Islands. Artocarpus integrifolia, sito- dium macrocarpon, seu cauliflorum, raderma- chia integra, soccus arboreus, seu tojacca-marum Indica, Indian jaca tree, a shrub, native of the East Indies. Artocarpus Philippensis, a shrub, native of the Phillippine Islands. Artocarpus pubescens, ansjeli, seu castania malabarica, a shrub, native of Malabar. Though this tree has been mentioned by many voyagers, particularly by Dampier, Rumphius, and Lord Anson, yet very little notice seems to have been taken of it till the return of Captain Wallis from the South Seas. Dampier states that in Guam, one of the Lad rone islands, ‘ there is a certain fruit called the bread-fruit, growing on a tree as big as our large apple-trees, with dark leaves. It is round, and grows on the boughs like apples, of the big- ness of a good penny loaf: when ripe it turns yellow, soft, and sweet, but the natives take it green, and bake it in an oven till the rind is black ; this they scrape off and eat the inside,

which is soft and white, like the inside of new- baked bread, having neither seed nor stone ; but if kept above twenty-four hours it is harsh. As this fruit is in season eight months in the year, the natives feed upon no other sort of bread during that time.’ Rumphius says, ‘ the fruit is shaped like a heart, and increases to the size of a child’s head. Its surface or rind is thick, green, and covered everywhere with warts of a qua- dragonal or hexagonal figure, like cut diamonds, but without points. The more flat and smooth these warts are the fewer seeds are contained in the fruit, and the greater is the quantity of pith, and that of a more glutinous nature. The inter- nal part of the rind, or peel, consists of a fleshy substance, full of twisted fibres, which have the appearance of fine wool ; these adhere to and in some measure form it. The fleshy part becomes softer towards the middle, where there is a small cavity formed without any nuts or seeds, except in one species which has but a small number, and this sort is not good unless it is baked or prepared some other way ; but if the outward rind be taken off, and the fibrous flesh dried and afterwards boiled with meat as we do cabbage, it has then the taste of artichoke bottoms. The in- habitants of Amboyna dress it in the liquor of cocoa-nuts, but they prefer it roasted on coals till the outward part or peel is burnt. They afterwards cut it into pieces and eat it with the milk of the cocoa-nut. Some people make frit- ters of it, or fry it in oil ; and others, as the Su- matrans, dry the internal soft part, and keep it to use, instead of bread, with other food. It affords a great deal of nourishment, and is very satisfy- ing, therefore proper for hard-working people ; and being of a gentle astringent quality is good for persons of a laxative habit of

body. It is more nourishing boiled in our manner with fat meat, than roasted on coals. The milky juice which distils from the trunk, boiled with the cocoa-nut oil, makes a very strong bird-lime. This tree is to be found on the eastern parts of Sumatra, and in the Malay language is called soccus and soccum capas., It grows likewise about the town of Bantam in Java, and in Balega and Madura.'

In 1791 a vessel was fitted out for the pur- pose of conveying a quantity of these inestima- ble trees to various parts of his majesty's co- lonies, under the command of Captain Bligh, who set sail on the 2d of August, and arrived at Otaheite April 8, 1792. The number of plants taken on board at Otaheite was 2634, in 1281 pots, tubs, and cases; and of these 1151 were bread-fruit trees. When they arrived at Coupang 200 plants were dead ; but the rest were in good order. They arrived at St. Helena with 830 fine bread-fruit trees, besides other plants. Here they left some of them, and from hence the East Indies may be supplied with them. On their arrival at St. Vincent's they had 678 bread- fruit trees. Nearly half this cargo was deposited here for the use of the Windward Islands ; and the remainder, intended for the Leeward Islands, was conveyed to Jamaica, and distributed as the governor and council of Jamaica pleased to direct. The exact number of bread-fruit trees brought to Jamaica was 352, out of which five only were

reserved for the botanic garden at Kew. There is a distinction between that which bears fruit with stones or seeds, and that in which the fruit has none. The parts of fructification of that tree which bears the fruit without stones are de- fective. The amentum, or catkin, which con- tains the male parts, never expands. The styli, or female parts of the fruit, are likewise defi- cient : from which it follows that there can be no stones or seeds, and therefore this tree can only be propagated by suckers or layers; although it is abundantly evident that it must originally have proceeded from the seed-bearing bread- fruit tree. Instances of this kind we sometimes find in European fruit, such as the barberry and the Corinthian grape from Zant, commonly called currants, which can therefore be increased only by layers and cuttings. Dr. Solander was assured by the oldest inhabitants of Otaheite, and the adjoining islands, that they well remem- bered there was formerly plenty of the seed-bear- ing bread-fruit; but they had been neglected on account of the preference given to the bread-fruit without seed, which they propagate by suckers.

ARTOIS, a ci-devant province of France, ex- tremely fertile, and

formerly one of the seven- teen provinces of the Netherlands. The name was derived from the Atrebates, the ancient in- habitants. Its greatest length from north to south was about twenty-four leagues, and its breadth about twelve, being bounded on the south and west by Picardy; on the east by Hainault; and on the north by Flanders. It is now included in the department of the Straits of Calais. Artois was always accounted a very productive province. It is rich in corn and hops, but is deficient in wood, and yields little wine or fruit. The chit- f articles of export are grain, flax, hops, wool, oil, cabbage, and rape- seed.

ARTOMKLI; from ××prof, bread, and pe\i, honey; in ancient pharmacy, a kind of cata- plasm, prepared of bread and honey.

ARTOTYRITES; from aproe and rvpog, cheese ; a branch of the ancient Montanists, who first appeared in the second century in Galatia. They used bread and cheese in the Eucharist, or perhaps bread baked with cheese. Their reason was, that the first men offered to God not only the fruits of the earth, but of their flocks too. The artotyrites admitted women to the priest- hood, and even to be bishops ; and Epiphanius informs us, that it was a common thing to see seven girls at once enter into their church robed in white, and holding torches in their hands; where they wept and bewailed the wretchedness of human nature, and the miseries of this life.

ART/ FA", a market-town and bailiwic of Calenberg, in the principality of Hanover, be- tween tlu,' 11 (mine and \eser. To the bailiwic belong twenty-two villages and the castle of Furstenberg, formerly the property of the count of Oberstein. This town is the seat of an eccle- siastical superintendant.

ARVAI), or Ar.ADi s, an ancient city of Phoe- nicia, built on a small island, south of Tyre, about three miles from the continent. It was formerly famous for commerce and riches, and shared the late of Tyre. It is now called Ru- wadde, and belongs to the Turks. It is quite ruinous, having only an old fort and a few can-

non to defend it; but the height of the island gives it a fine appearance from a distance.

ARVAL, a town of Hindostan, in the district and province of Bahar, forty miles south-west of Patna.

ARVALES FRATRES, in Roman antiquity, a college of twelve priests,

instituted by Romulus, and chosen out of the most noble families, him- self being one of the body : they assisted in the sacrifices of the ambervalia, annually offered to Ceres and Bacchus for the prosperity of the fruits of the earth, when they wore on their heads crowns made of ears of corn. The origin, of this institution was as follows : Acca Lauren- tia, Romulus' nurse, was accustomed once a year to make a solemn sacrifice for a blessing on the fields, her twelve sons always assisting her in the solemnity ; but at last losing one of them, Romulus offered himself to supply his place, and gave this small society the name of Arvales fratres. This order was in great repute at Rome,; they held the dignity for life, and never lost it on account of imprisonment or banishment.

ARUANUS, in conchology, a species of mu- rex, found on the coast of New Guinea. The tail is patulous; the spire crowned with spines. This is the buccinum aruanum of Rumphius.

ARVENSIS, in entomology, a species of cur- culio ; gray, with three lines on the thorax ; the wing-cases rufous, and tessalated. Also a spe- cies of cicada, a native of Denmark : yellow ; abdomen and sides black. A species of pha- laena; the phalaena noctua of Linnaeus. The wings are brown, with a transverse yellow spot in the middle ; margin brown. This is the noctua brunnea of Schmetterl. Also a species of Vespa, found in Europe, with four yellow bands on the abdomen.

ARVERNI, a brave and ancient people ; one of the most powerful nations of Gaul . They claimed affinity with the Romans, as descend- ants from Antenor; and after their subjugation by the latter, their ancient liberty was preserved to them on account of their bravery.

ARVICOLA, in entomology, a species of scarabaeus, found in Russia: the shield of the head reflected ; the body black.

ARVIRAGUS, the son of Cunobelin, a British king, in the time of Claudius and Domitian.

ARUM, or WAKE-ROBIN, in botany, a genus of plants of the class moncecia; order, poly- andria. There are several species, of which the following are the most remarkable. The generic characters are CAL. spathe,one-leaved : COR. none: STAM. filaments, none; anthers, sessile: PIST. germ, obovate ; style, none ; stigma, bearded : PER. berry, globular; seeds, several. A. arbor- escens, or dumb cane, is a native of the sugar islands and warm parts of America, where it grows chiefly on low grounds. A. arisarium as well as the A. proboscidium and A. tenuifolium have usually been separated from this genus, and

distinguished by the general name of arila- rum, or friar's cowl : the flower bears in April. A. colocasia, as well as the A. divaricatum, es- culentum, peregrinum, and sagittifolium, have all mild roots, which are eaten by the inhabi- tants of hot countries, where they grow naturally. A. dracunculus, or the common dragon's cane, grows naturally in most of the southern parts of Europe. A. Italicuni, a native of Italv, Spain,

and Portugal : they appear in the end of April or beginning of May. A. maculatum, or com- mon wake-robin, grows naturally in woods and on shady banks in most parts of Britain : the flowers appear in April, and their structure lias given rise to many disputes among .the botanists. The receptacle is long, in the shape of a club, with the seed-buds surrounding its base. The chives are fixed to the receptacle amongst the seed-buds fixed to the fruit-stalk, and placed between two rows of tendrils, the use of which is not known. A. trilobatum, or arum of Ceylon, is a native of that island and some other parts of India. All the species of this plant are hardy, except the trilobatum and the arborescens. The former must be kept constantly in a stove, and the latter in a moderate hot-bed. The arborescens is propagated by cutting off the stalks into lengths of three or four joints, which must be left to dry six weeks or two months ; for if the wounded part is not perfectly healed over before the cuttings are planted, they will rot and decay. They are then to be planted in small pots filled with light sandy earth, and plunged in a moderate hot-bed of tan, observing to let them have little water till they have taken good root. The roots of the maculatum and dracunculus are used in medicine, and differ in nothing but that the latter is somewhat stronger than the former. All the parts of the arum, particularly the root, have an extremely pungent acrimonious taste ; but if dried and kept some time, it loses much of its acrimony, and becomes at length an almost insipid, farinaceous substance. This root is a powerful stimulant and attenuant. It is reckoned a medicine of great efficacy in some cachectic and chlorotic cases, in weakness of the stomach occasioned by a load of viscid phlegm. Great benefit has been obtained from it in rheumatic pains, in which it may be given from ten grains to a scruple of the fresh root twice or thrice a-day, made into a bolus or emul- sion with unctuous and mucilaginous substances, which cover its pungency, and prevent its making any painful impression on the tongue. It gene- rally excites a slight tingling sensation through the whole habit, and when the patient is kept warm in bed, produces a

copious sweat. The arum was formerly an ingredient in an officinal preparation, the compound powder ; but in that form its virtues are very precarious. Some re- commend a tincture of it drawn with wine ; but neither wine, water nor spirits, extract its virtues.

ARUNCI, in entomology, a species of Ci- cada of a ferruginous color and brown eyes.

ARUNCO, in zoology, a species of rana, or toad, larger than the common frog, but of the same color. It is found in Chili. All the feet are palmated.

ARUNCUS, GREATER MEADOW-SWEET, in botany, a genus of plants, called by Tournefort and others barra capne, and by Linnaeus spiraea. This plant has been supposed to be of the same genus with the filipendula, but, by the examina- tion of the flowers, they appear to be extremely different.

ARU.NDA, a town of Hispania Bsetica, on the Annas, or Guadiana, now said to be Ronda in Granada, on the confines of Andalusia. Long. 5►►40'W., lat. 36►►26'N.

ARUNDEL, an ancient borough and market town of Sussex, seated on the north-west side of the Arun, over which there is a bridge. It had a harbour in which a ship of 100 tons bur- den might ride ; but the sea had ruined it so far, that in 1733 an act passed for repairing it, and for erecting new piers, locks, &c. The river is now navigable for vessels of 200 tons and up- wards, and the navigation is carried on to the Thames by means of a canal. It abounds in mullet of a very fine quality. A considerable trade in bark is carried on here. Arundel sent two members to parliament from the reign of Edward L, since the passing of the reform bill it sends one. It is mentioned in the will of Alfred, who left the castle to his brother's son. It was for- merly a place of great strength, and was besieged by Henry I., by whom it was taken after a gallant resistance from Bellesone de Montgomery earl of Arundel. The castle, which belonged to the family of Howard, was until lately in a mouldering condition ; but completely repaired by the late Duke of Norfolk, at a great expense. A weekly market is held here on Thursday. Po- pulation 2700. Arundel is the premier earldom in England, belonging to the illustrious family of Norfolk ; and is the only title in England that goes along with the lands. It is fifty-seven miles south-west by south of London, and ten east of Chichester.

ARUNDEL OIL, in the materia medica. At Bombay, Gambroon, and Surat in the East In- dies, there grows a tree which bears a nut en

closed in a rough husk, resembling the horse chestnut; and the kernel of the nut yields an oil by expression, which is of a purgative nature A tea-spoonful of it is reckoned a dose. The tree is called, the Arundel tree at Bombay and its oil the Arundel oil. Dr. Monro thinks it probable that this is the oil of the purging nuts mentioned in Dale's pharmacqlogia, and the palma Christi Indica of Tournefort.

ARUNDEL (Thomas), archbishop of Canter bury in the reigns of Richard II. Henry IV. and Henry V., the second son of Robert, and brother of Richard earl of Arundel, who was beheaded. In 1375, at twenty-two years of age, from being archdeacon of Taunton he was raised to the bishopric of Ely. He was a great benefactor to the church and palace of this see. In 1386 he was appointed lord chancellor of England, and in 1388 translated to the archiepiscopal see of York; and in 1396 to that of Canterbury, when he resigned the chancellorship. This was the first instance of the translation of an arch- bishop of York to the see of Canterbury. Scarcely was he fixed in this see, when he had a contest with the university of Oxford about the right of visitation. The affair was referred to king Richard, who determined it in favor of the archbishop. At his visitation in London he re- vived an old constitution, by which the inhabi- tants of the respective parishes were obliged to pay to their rector one half-penny in the pound out of the rent of their houses. In 1398 the house of commons impeached him, together with his brother the Earl of Arundel, and the Duke of Gloucester, of high treason. The archbishop was sentenced to be banished, and within forty days to depart the kingdom on pain of death. He

retired first to France ; and then to the court of Rome, where Pope Boniface IX. gave him a kind reception. About this time the duke of Lancaster, afterwards Henry IV. was in France, having also been banished by king Richard. The nobility and others, tired with the oppres- sions of Richard, solicited the duke to take the crown ; sending over their request in a letter to archbishop Arundel, desiring him to be their ad- vocate on this occasion with the duke. The archbishop accordingly accompanied the mes- sengers to the duke at Paris, and of course the inviting offer, after some objections easily ob- viated, the duke accepted. Arundel returned with him to England, and was restored to his see. In the first year of this prince's reign, the arch-

bishop summoned a synod which sat at St. Paul's. The next year we find him again in dispute with the commons, who moved that the revenues of the church might be applied to the service of the public: but Arundel opposed the motion with such vigor that it was negatived. In 1408 Arundel began to exert himself against the Lollards, or Wicliffites, particularly against the celebrated Sir John Oldcastle, Lord Cobham. He also procured a synodical constitution, which forbade the translation of the Scriptures into the vulgar tongue. He died at Canterbury in 1413, of an inflammation in his throat, with which he was first seized, it is said, whilst pronouncing sentence upon Lord Cobham. The Lollards asserted this to be a judgment from God ; and Bishop Goodwin speaks in the same manner. ' He who had withheld,' says he, ' from the peo- ple the word of God, the food of the soul, by the just judgment of God had his throat so closed, that he could not speak a single word, nor swallow meat or drink, and was so starved to death.' He was buried in the cathedral church of Canterbury, under a monument erected by himself. To this church he was a considerable benefactor : he built the lantern, tower, and a great part of the nave ; gave a ring of five bells, called from him Arundel 's ring, several rich vestments, a mitre enchased with jewels, a silver gilt crosier, and two gold chalices.

Anr NDEL (Lady Blanch), daughter of the earl of Worcester, and wife of Lord Arundel, cele- brated for her brave defence of Wardour castle against the parliamentary army, which consisted of 1300 mm ; and although the little garrison mustered only forty-five, yet she maintained the place lor six days, and then capitulated. She died in 1(549, aged sixty-six.

'/'//<❓❓❓ A RUN DELI AN MARBLES, are ancient stones or marbles, first named after Thomas earl of Arundel, who procured them from the east, or from Henry his grandson, who presented them to the university of Oxford. They arrived in I'.nuland in 1627, and then consisted of thirty- seven statues, 128 busts, and 250 inscriptions, together with a large number of altars, sarcophagi, fragments of sculpture, and an invaluable assem- blage of gems ; the inscriptions being principally sepulchral, and of a private nature. But one, called the Parian chronicle, from its being written at 1'aros, is said to have contained a chronolo- gical detail of the principal events of Greece, tj.jrmg a period of 1;>1R j ears, beginning with

Cecrops, before Christ 1582 years, and ending with the archonship of Diognetus, before Christ 264. It is this portion of these marbles which more particularly attracted the attention of the learned. The chronicle of the last ninety years is lost ; so that the part now remaining ends at

the archonship of Diotimus, 354 years before the birth of Christ ; and in this fragment the in- scription is at present much corroded and effaced.

The whole of these relics of antiquity, real or pretended, were purchased in Asia Minor, or in the islands of the Archipelago, by Mr. William Petty, who in the year 1624 was sent by the earl of Arundel for the purpose of making such col- lections for him in the east ; and when brought to England were placed in gardens belonging to Arundel house. Soon after their arrival they excited general curiosity, and were inspected by Sir Robert Cotton, and other eminent men, who prevailed upon the learned Selden to employ himself in explaining the inscriptions. The fol- lowing year Selden accordingly published a small volume in quarto, including about thirty- nine of them. But in the turbulent reign 'of Charles I. and the subsequent usurpation, Arundel-house was often deserted by the illus- trious owners ; and in their absence, many of these marbles were defaced and mutilated, and others either stolen or used for the ordinary pur- poses of architecture. The Parian chronicle in particular, was unfortunately broken. The upper part containing thirty-one epochas, is said to nave been worked up in repairing a chimney in Arun- del-house. Selden's work becoming very scarce, bishop Fell engaged Mr. Prideaux to publish a new edition of the inscriptions, which was printed at Oxford in 1676. In 1732, Mr. Maittaire obliged the public with a more comprehensive view of the marbles than either of his predeces- sors. Lastly, Dr. Chandler published a new and splendid description of them in 1763, in which he corrected many mistakes of the former editors ; and in some of the inscriptions, particularly that of the Parian chronicle, supplied the lucunae by many ingenious conjectures. We cannot here enter into the dispute respecting the authenticity of these curious stones. Sir Isaac Newton and other able chronologists and historians have paid little regard to their claims; and in 1788, a Mr. Robertson, in an essay, entitled the Parian Chronicle, boldly, and with much plausibility, asserts them to be a fabrication of comparatively modern date. This treatise was reviewed by the late professor Person, in the Monthly Review, June 1789 ; that distinguished Greek scholar fully and very ably vindicating the authenticity of the Parian marbles. See also his Tracts, edited by Mr. Kidd. p. 57. The reader will thus be sufficiently acquainted with both sides of this subject

ARUNDlNACEA, in conchology, a species of sabella fovmd in some rivers of Europe. It is subconic, and composed of fragments of the bark of reeds placed on each other.

ARUNDINACEUS, in ornithology, a species of turdus or thrush, that

inhabits the reedy marshes of Europe, and is the la rousserolle of Buffon and Brisson ; the junco of Ray and Wil- loughby ; and the reed thrush of Dr. Latham. Jt

is rather larger than the common hrk ; of a fer- ruginous brown color ; quill-feathers brown, reddish at the end. It is found in Russia and Poland.

ARUNDINETI, in entomology, a species of tipula; color whitish, with villose antennae, and black eyes. It is found in Europe, in reedy marshes.

ARUNDINIS, a species of phalaena, living on reeds ; wings cinereous with black dots, marked beneath with a central brown spot. Also a spe- cies of aphis that lives on the leaves of the wood- reed. The body is green ; thorax and head brown.

ARUNDO, in botany, the reed : a genus of the digynia order, triandria class of plants ; ranking in the natural method under the fourth order, gramina. The calyx consists of two valves, and the floscules are thick and downy. The fol- lowing are the principal species, viz. 1. A. ar- borea, has a tree-like stalk, with narrow leaves, and in all other respects resembles the bambos. 2. A. bambos, or the bamboo, is a native of the East Indies and some parts of America ; where it frequently attains the height of sixty feet. See BAMBOO. 3. A. debax, or manured reed, a na- tive of warm countries, but will bear the cold of our moderate winters in the open air. It dies to the surface in autumn, but appears again in the spring ten or twelve feet high in one summer. The stalks of this species are brough* from Spain and Portugal ; and used by weavers, as also for making fishing-rods. 4. A. orientalis is what the Turks use for writing pens : it grows in a valley near mount Athos, as also on the banks of the river Jordan. None of these plants are found in Britain. 5. A. phragmitis, or the common marsh- reed, grows by the sides of our rivers, and in standing waters. 6. A. versicolor, the Indian variegated reed, supposed to be a variety of the debax, differing from it only in having variegated leaves.

ARUNS TARQUINIUS, the son of Tarquin II. the last king of Rome, who meeting Brutus in the first battle, after the banishment of the royal family, they mutually killed each other.

ARURA, in the middle-age writers, a field ploughed and sowed. Some writers also use the word to signify the work of a day at plough.

ARUSINI CAMPI, or ARUSIAN FIELDS, plains in Lucania, famous for the last battle between the Romans and Pyrrhus. That prince being at Tarentum,and hearing that the two new consuls Curius Dentatus and Cornelius Lentulus had divided their forces, the one including Lucania and the other Samnium ; he divided a chosen de- tachment of his army into two bodies, marching with his Epirots against Dentatus, in hopes of surprising him in his camp near Beneventum. But the consul having notice of his approach, marched out of his entrenchments with a strong detachment of legionaries to meet him, repulsed his van guard, put many of the Epirots to the sword, and took some of their elephants. Curius, encouraged by this success, marched into the Arusian fields, and drew up his army in a plain, which was wide enough for his troops, but too narrow for the Epirot phalanx to act. But the king's eagerness to try his strength and skill with

so renowned a commander, stimulated him to engage at that great disadvantage. Upon the first signal the action began ; and one of the king's wings giving way, victory seemed inclined to the Romans. But that wing where the king fought in person repulsed the enemy, and drove them to their entrenchments. This advantage was in great part owing to the elephants ; a cir- cumstance which Curius perceiving, commanded a body of reserve, which he had posted near the camp, to advance and attack those animals with burning torches ; which frightened and annoyed them to such a degree, that they wheeled about, broke into the phalanx, and put that body into the utmost disorder. The Romans taking ad- vantage of this confusion, charged with such fury that the enemy were entirely broken and defeated. Pyrrhus retired to Tarentunv, attended only by a small body of horse, leaving the Romans in full possession of his camp ; which they so much ad- mired, that they ever after imitated it as a model.

ARUS'PEX,") Lat. aruspex, or haruspex,

ARUS'PICE, >from ara, an altar, and spicere,

ARUS'PICY. j to see, to regard.

Adorn'd with bridal pomp, she sits in state j The public notaries and arutpex wait.

Dryden's Juvenal's Satires, 10.

They [the Romans] had colleges for augurs and aruspices, who used to

make their predictions, some- times by fire, sometimes by flying of fowls, &c.

Howell't Letters, iii. p. 23. A flam more senseless than the roguery Of old anupicy and augury.

Butler's Hudibrat, ii. 3.

ARUSP1CES, or HARUSPICES, in Roman an- tiquity, an order of priests who pretended to foretel future events by inspecting the entrails of victims killed in sacrifice ; they were also con- sulted on occasion of portents and prodigies. The aruspices were always chosen from the best families ; and as their employment was of the same nature as that of the augurs, they were as much honored. Their college, as well as those of the other religious orders, had its parti- cular registers and records. Cato, who was an augur, used to say, he wondered how one arus- pex could look at another without laughing in his face. The aruspici libri, were a kind of sa- cred writings wherein the laws and discipline of the aruspices were described.

ARVUM, in ancient agriculture, properly de- noted ground ploughed but not sowed. The word is sometimes extended to all arable, or corn land, in contradistinction from pasture.

ARX, in the ancient military art, a town, fort, or castle, for defence of a place. The arx, in ancient Rome, was a distinct edifice from the capitoi, though some have confounded the two. The arx, properly speaking, being a place on the highest part of the Capitoline Mount, fortified with towers and pinnated walls, in which was also the temple of Jupiter Capitolinus. This was also the name of a consecrated place on the Palatine Mount, where the augurs publicly per- formed their office. Off this arx the feciales, or heralds, gathered the grass used in the ceremony of leagues and treaties.

ARYT7ENOIDES, in anatomy, two cartila- ges which, with others, constitute the head of the

larynx. It is also applied to some muscles ot the

larynx.

ARYTTENOIDEUS, in anatomy, one of the muscles serving to close the larynx.

ARYTHMUS, in medicine, the want of a just modulation in the pulse. It is opposed to eu- rythmus, a pulse modulated agreeably to nature.

ARZBERG, a market town in the circle of the Maine, district of Wunsiedel, Bavaria. The neighbouring hills yield iron, lime, and alum. The lime burned here is transported as manure to the Upper Palatinate and Bohemia. Seven miles east of Wunsiedel.

ARZILLA, an ancient maritime town of Africa, in the kingdom of Fez, S. S. W. of Tan- giers. It was formerly a Roman colony ; after- wards fell under the government of the Goths, and was next taken by the Mahommedans. Al- phonso of Portugal, surnamed the African, took it by assault in 1472, and brought away the pre- sumptive heir of the crown. After that prince came to the throne, he besieged it, in 1508, with 100,000 men. The Portuguese at length forsook it of their own accord. Long. 5►► 40′ W., lat. 35►► 40′ N.

AS. Usually called a conjunction, but accord- ing to some the Saxon article, the, this or that, which they say may always be substituted for it.

Besides that law which concerneth men as men ; and that which belongs unto men as they are men, linked with others in some society : there is a third, which touches all several bodies politick, so far forth, as one of their, hath publick concerns with another.

Hooker’s Eccles. Polity.

PRINCE HEN. Dar’st thou be as good as thy word now ?

FAI.ST. V. hy, Hal, thou knowest, as thou art but a man, I dare ; but its thou art a prince, I fear thee, as I fear the roaring of the lion’s whelp.

Sha/ispeare. Henry IV.

When thou dost hear I am as I have been ; .Approach me, anil thou shall be as thou wast. Id.

The cunningest mariners were so conquered by the stonn, ax they thought it best, with stricken sails, to yi’ Id to be governed by it. Sidney.

He had such a dexterous proclivity, as his teachers WIT’ tain to

restrain his forwardness. Wotton.

The relations are so uncertain, as they require a great deal of examination. Bacon.

(iod shall by grace prevent sin so soon, as to keep the soul in the vindnity of its first innocence. South. “Madam, were 1 as you, I’d take her counsel; I’d speak my own distress.

A . Ph Hip’s Distrest Mother.

The objections that are raised against it a* a tra- gedy, are as t’oliov.-.

(lull’s Preface to What d’ye Call it.

\ simple idea is one uniform idea ; as sweet, bitter.

Watts.

As. among the ancient Romans, a weight, consisting ot” twelve ounces; being the same with libra, or the. Koman pound. The word is de- rived from the (iivrk au;, which in the Doric d:a!eet is used for fie, one, q. d. an entire thing; though others will have it named as, quasi aes, In’. ;n;se made of braˆs.

As, was a! ►► the name of a Koman coin, of dif- ferent weight and diileivnt matter in different aucs o! (lie commonwealth. Under Numa Pom- jiilm.s, accord m;.: to Iv.i-vrbius, the Koman money

was either of wood, leather, or shells. In the time of Tullus Hostilius, it was of brass ; and called as, libra, libella, or pondo, because actu- ally weighing a pound or twelve ounces. About 420 years after, the first Punic war having ex- hausted the treasury, they reduced the as to two ounces. In the second Punic war, Hannibal pressing very hard upon them, they reduced the as to half its weight, viz. to one ounce. And lastly, by the Papirian law, they took away half an ounce more, and consequently reduced the as to the diminutive weight of half an ounce ; and it is generally thought that it conti- nued the same during the commonwealth, and even till the reign of Vespasian. The as, therefore, was of four different weights in the commonwealth. Its original stamp was that of a sheep, ox, or sow ; but from the time of the emperors, it had on one side a Janus with two faces, and on the reverse the rostrum or prow of a ship.

As, being used to denote any integer or whole, signified in old English law the whole inheri- tance ; whence hares ex asse, the heir to the

whole estate.

ASA ; NOR, Heb. i. e. a healer of sickness I king of Judah, succeeded his father Abijam* A. M. 2988. He abolished idolatry, restored the worship of the true God, and, with the assistance of Benhadad king of Syria, took seve- ral towns from the king of Israel. He died A. A. C. 917, and was succeeded by Jehosha- phat.

ASA, among naturalists, a word taken by modern authors from the lasar of the ancients, is applied to a gum very different from that an- ciently known by the name. The asa of the ancients was an odoriferous and fragrant gum ; that of after ages had so little title to this epithet, that they distinguished it by an additional one, expressing its being of an offensive smell, as ASAFCETIDA, which see. The Arabian writers describe two kinds of asa, the one of an offensive, the other of an aromatic smell.

ASA, or ASSA, in the materia medica, a name given to two very different substances, called asa dulcis and asa foetida.

ASAFCETIDA, in chemistry, the common name of the FERULA asafcetida of Linnaeus, which see.

ASAHEL; xriffx, Heb. i.e. God has wrought; one of the sons of Zeruiah, David's sister, and the younger brother of Joab. He was one of David's thirty heroes, and remarka- ble for his swiftness. At the battle ofsGibeon he pursued Abner with so much obstinacy, that he was obliged to kill him in self-defence, though it would appear with reluctance ; 2 Sam. ii. 19□□□23.

ASAPH; 3DK, Heb. i. e. gathering ; the son of Berachiah, a Gershomite, and a famous musician and psalmist under David, king of Israel. Twelve of the Psalms bear his name ; but it is doubted whether he was the author of them all, as some relate to later times.

ASAPII, ST. a city of Flintshire, in North Wales, situated in a pleasant valley at the con- fluence of the Elwy and (,'lwyd, twenty miles west of Chester, and 205 north-west of London.

As a bishopric, St. Asaph is of great antiquity, being founded about A.

D. 560, by Kentigern, bishop of Glasgow. He began the church on the banks of the river Elwy, whence it is called by the Welsh, Llan Elwy, and in Latin, Elwen- sis. Kentigern leturning into Scotland left St. Asaph his successor. The country was fre- quently in after times the seat of war between the English and the Welsh ; and Jhe records of the see are therefore very defective. This dio- cese does not contain any one whole county, but consists of part of Denbigh, Flint, Mont- gomery, and Merioneth shires, and a small part of Shropshire; wherein are 121 parishes, and 131 churches and chapels, most of which are in the immediate patronage of the bishop. It has but one archdeaconry, viz. that of St. Asaph, which is united to the bishopric, for the better mainte- nance thereof. The town, although situated in a rich valley, is a poor ill-built place; and the ca- thedral a plain building, 170 feet long, 108 broad, and 90 high. St. Asaph is contributory with Flint in sending one member to par- liament. Market on Saturday. The deanery of St. Asaph is valued at ––45. 11s. 5d., and is united to the vicarage of Henllan in the deanery of Rhos.

ASAPH, ST. a native of North ––Vales, was de- scended of an ancient family, and flourished un- der Carentius king of the Britons, about A. D. 590. Being a monk in the convent of Llan Elwy, and the successor of its founder Kenti- gern, that establishment received his name ever after. He wrote the Ordinances of his church, and the Life of St. Kentigern. Bayle says he was the first who received unction from the pope.

ASAPHEIS, aaaQtic; from a negative, and oatj>t)Q, clear ; persons who do not utter their words in a clear manner. The defect is occa- sioned, says Galen, ‘ either by some hurt which the organs of speech have contracted from a disorder of the nerves, or else by delirium.’

ASAPPES, or AZAPES, an order of soldiers in the Turkish army, whom they expose to the first shock of the enemy. The word is derived from the Turkish saph, which signifies rank, from whence they have formed asphaph, to range in battle. They travel on foot, and have no pay but the plunder they can get from the enemy.

ASAR, a gold coin current at Ormus in the Persian Gulf, worth 6s. Qd.

ASAROTA, atrapwra; from a and

ASARUM, ASARABACCA, in botany, a genus of the monogynia order, and dodecandria class of plants. The calyx is trifid or quadrifid, and rests on the germen ; there is no corolla ; the capsule is leathery and crowned. There are three species, viz. 1. A. Canadense, a native of

Canada. 2. A. Europaeum, growing naturally m some parts of England ; and 3. A. Virgini-

cum, a native of America. The dried roots of this plant have been generally brought from the Levant; those of our own growth being sup- posed weaker. Both the roots and leaves have a nauseous, bitter, acrimonious, hot taste ; their smell is strong, and not very disagreeable. The principal use of this plant among us is as a ster- nutatory ; and the root of asarum is perhaps the strongest of all the vegetable errhines, white hellebore itself not excepted. The leaves are the principal ingredient in the pulvis sternutatorius, or pulvis asari compositus, of the shops.

ASASI, in botany, a name given by the peo- ple of Guinea to a tree, the leaves of which being boiled in water, and held to the mouth, cure the tooth-ache. In its form and manner of growing it resembles the laurel ; the leaves are very hard and stiff, and grow alternately on the stalks; they have short pedicles, and the branches are blackish and rugged, but varie- gated with small reddish spangles, or scaly pro- tuberances.

ASBAMEA, in ancient geography, a fountain of Cappadocia, near Tyana, sacred to Jupiter and to an oath. Though this fountain bubbled up as in a state of boiling, yet its water was cold ; and never ran over, but fell back again.

ASBECK, a town of the bishopric of Mun- ster, Westphalia, annexed to the possessions of the house of Salm in 1803. Here is a con- vent for noblemen's daughters. It is four miles south-east of Ahaus.

ASBEN, a considerable kingdom in the in- terior of Africa, between Fezzan and Cashna. The sultan is said by Hornemann to rank next to that of Bornou among the sovereigns of in- terior Africa. Zanfara and Guberare tributaries to him ; he resides at Agades, and himself, with the greater part of his subjects, are Tuaricks of the tribe Kolluvi.

ASBESTOS, or ASBESTUS, in chemistry, from o privative, and fffievvvfu, I extinguish; a mine- ral consisting principally of silex and magnesia, with a small proportion of alumina, lime, and iron. It is a greenish brittle substance, unctu- ous to the touch, and somewhat elastic. Its fibres exposed to the violent heat of the blow- pipe, exhibit slight indications of fusion; though the parts, instead of running together, moulder away, and part fall down, while the rest seem to disappear before the current of the air. Igni- tion impairs the flexibility of asbestos in a slight degree. According to Herodotus, the Egyptians

made a cloth of this substance, which they used for the purpose of wrapping up the bodies of the dead. Pliny says, he had seen napkins made of it, which, being taken foul from the table after a feast, were thrown into the fire, and by that means were better scoured than if they had been washed in water, &c. But he men- tions its principal use being for the making of shrouds for royal funerals, so that the ashes might be preserved distinct from those of the wood, &c. whereof the funeral pile was com- posed. He calls the asbestos, inventu rarum, textu difficillimum. Bapt. Porta assures us, that in his time the spinning of asbestos was a thing known to every body at Venice ; and Sig. Castag- natta, a superintendant of mines in Italy, is said

lo have carried the manufacture to sucn per- fection, that his asbestos was soft and tractable, much resembling lamb-skin dressed white: he could thicken and thin it at pleasure, and thus either make it into a very white skin or into paper. His method of preparing it is thus described : the stone is laid to soak in warm water ; then opened and divided by the hands, that the earthy matter may be washed out. The ablution being several times repeated, the flax-like filaments are collected and dried ; being most conveniently spun with an addition of flax. Two or three filaments of the asbestos are easily twisted along with the flaxen thread, if the operator's fingers are kept oiled. The cloth also, when woven, is best preserved by oil from breaking or wasting. On exposure to the fire the flax and the oil burn out, and the cloth remains pure and white. The shorter filaments which separate in washing the stone, may be made into paper in the common manner. Five varieties are described : 1 . Com- mon asbestos, which occurs in masses of fibres of a dull greenish color, and of a pearly lustre. It is scarcely flexible, and greatly denser than amianthus. Specific gravity, 2'7. Fuses with difficulty into a grayish-black scoria. It is com- posed of 63'9 silica, 16 magnesia, 12'8 lime, 6 oxide of iron, and [image] alumina, and is more abundant than amianthus, being usually found in serpentine, at Portsoy, the Isle of Anglesea, the Lizard in Cornwall, &c. It was found in the limestone of Glentilt, by Dr. M'Culloch in a pasty state, but it soon hardened by exposure to the air. 2. Amianthus, which occurs in very long, fine, flexible, elastic fibres, is of a white, greenish, or reddish color. It has a silky or pearly lustre, and is slightly translucent ; sectile ; tough ; speci- fic gravity, from 1 to 2'3; it melts with difficulty before the blow-pipe into a white enamel, and consists

of 59 silex, 25 magnesia, 9‘5 lime, 3 alumina, and 2‘25 oxide of iron. It is usually found in serpentine, in Savoy ; in long and beau- tiful fibres, in Corsica ; near Bareges in the Pyrenees ; in Dauphiny and St. Gothard ; at St. Keverne, Cornwall ; and at Portsoy, Scotland ; in mica slate at Glenelg, Invernessshire, and near Durham. 3. Mountain leather, consisting not of parallel fibres, but interwoven and interlaced so as to become tough. When in very thin pieces it is called mountain paper. Its color is yellowish-white, and its touch meagre. It is found at Wanlockhead, in Lanarkshire. Its specific gravity uncertain. 4. Mountain cork, or elas- tic asbestos, is, like the preceding, of an inter- laced fibrous texture ; is opaque, has a meagre feel and appearance, not unlike common cork, and like it too, is somewhat elastic. It swims on v. ater. Its colors are white, gray, and yel- lowisli-brown. Receives an impression from the nail ; very tough ; cracks when handled, and nirlts with difficulty before the blow-pipe. Spe- citic uravity, from O68 to 0‘99. It is composed < >!’>ilici 62, carbonate of lime 12, carbonate of iTKimtesia ‘23, alumina ‘2-8, oxide of iron 3. ,”>. Mountain wood, or ligniform asbestos, is usually massive, of a brown color, and having the aspect of wood. Internal lustre, glimmer- ing. Soft, sectile, and tough ; opaque ; feeis meagre; fusible into a black slag. Specific

gravity 2‘0. It is found in the Tyrol; in Dauphiny ; and in Scotland : and has lately been employed hy Aldini as a protecting dress for firemen.

ASCALON, an ancient city, one of the five satrapies or principalities of the Philistines ; situ- ated on the Mediterranean, forty-three miles south-west of Jerusalem, between Azotus on the north, and Gaza on the south. It was the birth- place of Herod the Great, thence surnamed As- calonites, and was famous for its escallions, which take their name from this town. It is now called Scalona.

ASCANII, in entomology, a species of curcu- lio, of shape cylindrical, color black, and bluish on the sides.

ASCANIUS, the son of JEneas and Creusa, succeeded his father in the kingdom of the Latins, and defeated Mezentius king of the Tuscans, who had refused to conclude a peace with him. He founded Alba Longa ; and died about A. A. C. 1139, after reigning thirty-eight years.

ASCANIUS, in entomology, a species of papilio. Color black, above and beneath, with a white band ; posterior wings reddish ; it is a native of sil.

ASCARIS, amoptc ; from aaKtw, to move about ; in zoology, an intestinal worm so called from its troublesome motion. In the Linnaean system it is a genus of the class vermes, order intestina ; thus generically characterised. Body round, elastic, and tapering towards each extre- mity ; head with three vesicles ; tail obtuse or subulate ; intestines spiral, milk-white, and pel- lucid. Upwards of eighty species have been enumerated, generally deriving their name from the animal they chiefly infest : for the intestinal canal of most animals is affected by some spe- cies.

The species of Ascaris described by Gmelin are arranged in the following order :

Infesting man, and the mammalia. ××× Vermi- cularis, lumbricoides ; ××× vespertihonis, in the long- eared bat : ××× Phocae, bifida, canis, visceralis, lupi, vulpis, leonis, tigridis, felis, cati, martis, bron- chialis, renalis, mephitidis, gulonis, talpa-, muris, hirci, vituli, equi, suis, apri.

Infesting birds. ××× Aquilse, albicillae, buteonis, milvi, subbuteonis, hermaphrodita, cornicis, co- racis, cygni, anatis, fuliguhe, lari, ciconiae tar- dae, papillosa, gallopavonis, galli, gallinae, pha- siani, tetraonis, columbae, alaudae, sturni, turdi.

Infesting reptiles. ××× Testudinis, lacertae, bu- fonis, pulmonalis, rubetra?, trachealis, ranae, in- testinalis, dyspnoos, insons.

Infesting fishes. ××× Anguillse, marina, blennii,. rhombi, percse, globicola, lacustris, siluri, fkri- onis, truttae, maraente, acus, halecis, argentine,, gobionis, rajae, squali, lophii. Infesting worms. ××× Lumbrici. We can only describe the two principally in- festing man.

1. A. lumbricoides, is about the same length with the lumbricus terrestris, or common earth- worm ; but it wants the protuberant ring towards the middle of the body, the only mark by which they can be properly distinguished. The body is cylindrical, and subulated at each extremity ; but the tail is somewhat triangular. The lum- bricoides is the worm which is most commonly

found in the numan intestines. It is viviparous, and produces vast numbers. 2. A. vermicularis, witli faint annular rugae and the mouth trans- verse, is about a quarter of an inch long, and thicker at one end than the other. It is found in boggy places, in the roots of putrid plants, and very frequently in the rectum of children and horses. It

emaciates children greatly, and is sometimes vomited up. See MEDICINE and WORMS.

ASCAROIDES, a species of cucullanus found in the stomach of the silurus glanus : the head is orbicular; tail round, short, and pointed with two spicules.

ASCEN’D, Ascendo, from ad,

ASCEN’DANT, n. & adj.] and scendo, to climb. ASCEN’DANCY, \T►► mount upwards,

ASCEN’SION, ►►to mount, to rise, to

ASCEN’SIVE, \ acquire an elevation,

ASCEN’T. a superiority.

Eneas and vnsilly Dido baith tuay, To forest grathis in hunting forth he wend To marrow als fast as Titan dois ascend, And oner the warld gan his homes spred.

Douglas Eneados, bk. iv. p. 104. Northumberland, thou ladder wherewithal The mounting Bolingbroke ascends the throne.

Shdhspeare. Richard II. act v. sc. 2.

Over head up grew Insuperable height of loftiest shade. Cedar and pine and fir and branching palm, A sylvan scene ; and as the ranks ascend, Shade above shade, a woody theatre Of stateliest view.

Milton’ t Paradise Lost, book iv. line 131. Then, rising from his grave, Spoil’d principalities and pow’rs ; triumph’d In open shew ; and, with ascension bright. Captivity led captive through the air. Id.

Thus look’d Elisha, when to mount on high, His master took the chariot of the sky ; The fiery pomp, ascending, left the view j The prophet gazed, and wished to follow too.

Parnell. In his blest life

I see the path, and in his death the price, And in his great ascent, the proof supreme Of immortality. Young.

Themistocles now entered. At his look, Which carried strange ascendancy, a spell Controlling nature, was the youth abash’d.

Glover’s Athenaid, book xiv.

Thus, having passed the rocks in safety, we found the rest of the coast rise from the sea with a smooth and easy ascent ; and, floating at ease upon a gentle tide, we soon reached the sands with our feet.

Hawhesworth’t Telemachvs.

Their tribes adjusted, clean’d their vig’rous wings, And many a circle, many a short essay, Wheel’d round and round : in congregation full, The figur’d flight ascends. Thomson.

Fire fill’d his eyes ;

Turning, he bade the multitude without Ascend the rampart ; they his voice obey’d, Part climb’d the wall, part pour’d into the gate.

Cowper’s Iliad, book xii.

ASCENDANT, in astrology, denotes the horo- scope or the degree of the ecliptic which rises x>n the horizon at the time of the birth of any one. This is supposed to have an influence on

ASC

the person’s life and fortune, by giving him a bent and propensity to one thing more than another. In the jargon of Astrologers, it is also called the first house, the angle of the east, or oriental an- gle, and the significator of life. ××× Such a planet ruled in his ascendant ; Jupiter was in his as- cendant, &c. Hence the word is also used in a moral sense, for a certain superiority which one man has over another from some unknown cause.

ASCENDANTS, in law, are opposed to descend- ants in succession ; i. e. when a father succeeds his son, or an uncle his nephew, &c. heritage is said to ascend, or go to ascendants.

ASCENDING, in astronomy, is said of such stars as are rising above the horizon in any pa- rallel of the equator. And thus likewise,

ASCENDING LATITUDE, is the latitude of a planet, when going towards the north pole.

ASCENDING NODE, is that point of a planet’s orbit, wherein it passes the ecliptic, to proceed northward. This is otherwise called the northern node, and represented by this character Si.

ASCENDING SIGNS, among astrologers, are those which are upon their ascent, or rise, from the nadir, or lowest part of the heavens, to the zenith, or highest.

ASCENDING VESSELS, in anatomy, those which carry the blood upwards ; as the aorta ascendens. See ANATOMY.

ASCENSION, an island of the Atlantic, in S. lat. 8►► 8', and W. long. 14►► 28', lately taken posses- sion of by Great Britain, with a view to the better defence of St. Helena. Prior to this it was wholly uninhabited. The island, which has an excellent harbour, is ten miles in length from north-west to south-east, and from five to six in breadth. A flag officer resides here, on the single spot which presents a vegetable mould, in the south-east corner of the island : and homeward bound ves- sels from the Cape of Good Hope and the East Indies call here, under certain regulations. Plenty of fish and sea-fowl are found on the shores, and some fine turtle. ASCENSION is evi- dently a volcanic production ; at a distance it has the appearance of an immense sugar-loaf arising out of the sea, but on approaching it the top is broken into various barren peaks.

ASCENSION, in astronomy, is either right or oblique. Right ascension of the sun, or a star, is that degree of the equinoctial, counted from Aries, which rises with the sun or star in a right sphere. Oblique ascension is an arch of the equa- tor intercepted between the first point of Aries and that point of the equator which rises together with a star in an oblique sphere.

To find the right ascension of the sun, stars, &c. by trigonometry, say, as the radius is to the cosine of the sun's greatest declination, or obli- quity of the ecliptic ; so is the tangent of the sun's or star's longitude to the tangent of the right ascension. To find the ascensional differ- ence, you must have the latitude of the place, and the sun's declination given : then say, as the radius is to the tangent of the latitude; so is the tangent of the sun's declination to the sine of the ascensional difference sought This, converted into time, shows how much he rises before, or sets after, six o'clock; by subtracting which from the right ascension, when the sun is

in the northern signs, and adding it when he is in the southern ones,

you will find the oblique ascension.

ASCENSION DAY; the day on which the ascen- sion of our Saviour is commemorated, commonly called Holy Thursday; the Thursday but one before Whitsuntide.

ASCENSIONAL DIFFERENCE, is the difference between the right and oblique ascension of the same point to the surface of the sphere. The as- censional difference of the sun, converted into time, is just so much as he rises before or after six o'clock.

ASCENSIONIS, in ichtnyology, a species of perca, found about Ascension Island ; color reddish above, whitish beneath, the tail bifurcated.

ASCENT, in logic, denotes a kind of argu- ment, wherein we rise from particulars to univer- sals : as, when we say, this man is an animal, and that man is an animal, and the other man, &c. therefore every man is an animal.

ASCENT, in physics, implies the motion of a body upwards, or the continual recess of a body from the earth. The Peripatetics attributed the spontaneous ascent of bodies to a principle of levity inherent in them. The moderns deny spon- taneous levity ; and show, that whatever ascends, does it in virtue of some external impulse or ex- trusion. Thus smoke and other rare bodies ascend in the atmosphere; and oil, light woods, &c. in water ; not by any internal principle of levity, but by the superior gravity or tendency downwards of the parts of the medium where they are. The ascent of licrht bodies in heavy mediums is pro- duced after the same manner as the ascent of the lighter scale of a balance. It is not that such scale has an internal principle whereby it immediately tends upwards ; but it is impelled upwards by the preponderancy of the other scale ; the excess of the weight of the one having the same effect, by augmenting its impetus downwards, as so much real levity in the other; because the tendencies mutually oppose each other, and that action and re-actii.n aie always equal.

ASCKRTA1N',) < >ld Fr. acertener, from

A-i i :M AI.N'.MT.NT. S "

Thi> divine law both axcrrtaineth the truth, and sup- plieth unto us the want of other laws. Hooker.

Money difi'ers from uncoined silver in this, that the quantiiv of silver

in each piece is ascertained by the stump. Locke.

Ki’.rht judgment of myself may give me *he other certainty ; that is, ascertain me, that I am in the number of (iod’s children.

Hammond’s Practical Catechism.

This makes us act with a repose of mind, and won- derful trancmillity ; because it ascertains us of the ‘.Too(ini s> o:’

lie t. 11s us thai the positive ascertainment of its limits, and its security from invasion, were among the causes for which civil society itse►►f has been instituted.

ttnrkc en the Resolution in France.

The characters of great men, which are always mysterious while they live, are ascertained by the faithful historian, and sooner or later receive their wage; of fame or infamy, according to their true de- serts. Cowper’s Letten.

ASCESIS, from the verb aaxtiv, used by the ancients in speaking of the sports and combats of the athletae, properly denotes exercise of the body. It is also used by philosophers, to denote an exercise conducive to virtue, or to the acquir- ing a greater degree of virtue. This is particu- larly denominated the philosophical ascesis, because practised chiefly by philosophers, who make a more peculiar profession of improving themselves in virtue ; on the model of which the ancient Christians introduced a religious ascesis.

ASCETERIUM, in ecclesiastical writers, a monastery, or place set apart for the exercises of religion. The word is formed from ascesis, ex- ercise ; or ascetra, one who performs exercise. Originally it signified a place where the athletae or gladiators performed their exercise.

ASCET’ICK, n. & adj.) AffKEnicoc, aaiciu

ASCET’ICISM. $ to exercise. Applied

primarily to those who exercised themselves in religious contemplations and for this purpose separated themselves from the world.

None lived such long lives as monks and hermits ; sequestered from plenty, to a constant ascetick course of the severest abstinence and devotion. South.

I am far from commending those ascetickt, that out of a pretence of keeping themselves unspotted from the world, take up their quarters in deserts. Norrit.

He that preaches to man, should understand what is in man ; and that skill can scarce be attained by an ascetich in his solitudes. Atterbury.

The truth is we have seen, and yet do see, religious societies whose religious doctrines are so little ser- viceable to civil government that they can prosper only on the ruin and destruction of it. Such are those which teach the sanctity of celibacy and asceticism.

Warburton's Alliance, book ii.

ASCETICS, persons in the primitive times who devoted themselves to the exercises of piety, in a retired life, and particularly to prayer, absti- nence, and mortification. Afterwards this title was bestowed upon the monks, especially such of them as lived in solitude. This is also a title of several books of spiritual exercises, as the Asce- tics, or devout exercises of St. Basil, archbishop of Caesarea in Cappadocia, &c.

ASCHAFFENBURG, a town and district of Germany, on the Maine, formerly belonging to the elector of Mentz, who had a palace there, but now included in the kingdom of Bavariaˆ It is memorable for being the place where king George II. took up his quarters the night before the battle of Dettingen. It stands on an emi- nence, in a delightful country, and is of a quad- rangular form. The number of inhabitants in the town is about 6400 ; they received a consider- able augmentation by the emigrations from Mentz, on the occupancy of that city by the French in 1798. It has four churches, and a foundation called Insignis Collegiata, the capu- chin monastery ; the ancient Jesuits' college is now a lyceum or public school. Aschaffenburg was taken by the French in July 1796, and again in 1800. The rivulet of this name here dis- charges itself into the Maine. This town is eighteen miles south-east of Frankfort, and forty east of Mentz.

ASCHAM (Roger), was born at Kirby-Wiske, near North Allerton, in Yorkshire, in the year

1516. His father was steward to the noble fa- mily of Scroop. Roger was educated in the family of Sir Anthony Wingfield, who, about the year 1530, sent him to St. John's College, Cam- bridge, where he was soon distinguished for his application and abilities. He took his degree of A. B. at the age of eighteen ; was soon after elected fellow of his college ; and in 1536 pro- ceeded A.M. In 1544 he was chosen university orator; and, in 1548, was sent for to court to in- struct the lady Elizabeth (afterwards queen) in the learned languages. In 1550 he attended Sir Richard Morysine, as secretary, on his embassy to the emperor Charles V., at whose court he continued three years, and in the mean time was appointed Latin secretary to Edward VI. But upon the death of that prince, he lost his pre- ferment and all his hopes, being professedly of the reformed religion ; yet, contrary to his expec- tations, he was soon after, by the interest of his friend lord Paget, made Latin secretary to the king and queen. In June 1554 he married Mrs. Margaret How, with whom he had a con- siderable fortune. It is very remarkable, that, though Mr. Ascham was known to be a protes- tant, he continued in favor, not only with the ministry of those times, but with queen Mary herself. Upon the accession of Elizabeth, he was confirmed in his post of Latin secretary, and resumed his employment as preceptor to her majesty in the learned languages. He died in 1568, not rich, but much regretted, especially by the queen. He wrote, 1. Toxophi- lus. The schole or partitions of shooting, con- tayned in two bookes, written by Roger Ascham, 1544, and now newly perused. Pleasaunt for all gentlemen and yeomen of England, &c. Lond. 1571. This treatise was dedicated to Henry VIII. who settled a pension of ––lO per annum upon the author. It is said to have been written principally to promote the improvement of English prose. 2. A Report of the affairs and state of Germany, and the emperor Charles his court, &c. 4to. 3. The Schoolmaster : first printed in 1573, 4to. Mr. Upton published an edition with notes, in 1711. It has uncommon merit. 4. Latin epistles ; first published by Mr. Grant in 1576 : the best edition is that of Ox- ford in 1703. These are much admired on ac- count of the style, and esteemed almost the only classical work of the kind written by an English- man. 5. Apologia contra Missam, 1577, 8vo. His works were collected and published by Bennet, in one volume, 4to. 1769, with a life, by Dr. Johnson.

ASCHERSLEBEN, the chief town of a dis- trict in the principality of Halberstadt, Prussia, is seated between the Eine and Wipper, sixteen miles south-east of Halberstadt. It was formerly a Hanse town, and the capital of the principality of Ascania, but was annexed to Ilalberstadt in the year 1320. Here are manufactures of frieze and flannel ; and the suburbs, one of which is called the New Town, are well built. Inhabi-

tants about 8000 ; and here are a Lutheran and Calvinist school; four churches, one of which, called the Market church, is possessed by the two sects in common. The castle is in ruins.

ASCHILLIUS, king of the Uacians, one of

those monarchs, who is said to have assisted king Arthur in his wars.

ASCIA, in antiquity, an instrument supposed to be of the axe kind, used in the fabric of the Roman tombs, and frequently represented on them.

ASCIA, in surgery, is a kind of bandage, some- what oblique or crooked ; whose form and use are described by Sculteus, in his Armani. Chirug.

ASCIBURGIUM, in ancient geography, sup- posed to be one of the fifty citadels built on the Rhine, is mentioned by Tacitus, who adds, that some imagine it was built by Ulysses. Here was a Roman camp and a garrison. To its situation on the banks of the Rhine answers a small ham- let, now called Asburg.

ASCIDIA, a genus of animals belonging to the order of vermes mollusca. The body is cy- lindrical, and fixed to a shell, rock, &c. It has two apertures, one on the summit, the other lower, forming a sheath. These creatures have the power of contracting or dilating them- selves ; most of them are sessile. Gmelin enu- merates the following species : papillosa, gelatin- osa, intestinalis, quadridentata, rustica, echinata, mentula, venosa, prunum, conchilega, parallel- ogramma, virginea, canina, patula, aspersa, scabra, orbicularis, corrugata, lepadiformis, com planata, tuberculum, villosa, clavata, pedunculata, mammillaris, globularis, phusca, gelatina, cry- stallina, octodentata, patelliformis, pyura, auran- tium, globularis.

ASCINDOE, in botany, a name given by the people of Guinea to a shrub, which they use in medicine, boiling it in water, and giving the de- coction in gonorrhoeas, and the like complaints. Petiver has named it the prickly Guinea shrub. The thorns on the large branches are very strong.

ASCIT./E ; from O.GKOQ, a bag or bottle ; in antiquity, a sect of Montanists, who appeared in the second century ; so named, because they in- troduced a kind of Bacchanals into their assem- blies, who danced round a bag or skin blowed up; saying, they were those new bottles filled with new wine, whereof our Saviour makes men- tion, Matth. ix. 17. ††† They are sometimes also called Ascodrogitae.

ASCITES ; from aoxoc, a water bottle ; in medicine, dropsy of the belly; so called from the protuberance of the belly in that disease re- sembling a bottle. It is divided into two spe- cies, ascites abdominalis, in which there is a re- gular and equal intumescence of the abdomen ; and ascites saccatus, when the ovaries, &c. are the seat of the disease, and the swelling, at least in the beginning, is partial. The cure is diffi- cult, since the disease is often only the symptom of a decaying constitution ; evacuations are the chief palliatives, and paracentesis (irapaKti/rsw, to perforate), or tapping, relieves for a time, and, in some cases, permanently. See MEDICINE.

ASCLEPIA, a festival of ZEsculapius the god of physic, observed particularly at Epidaurus, where it was attended with a contest between the poets and musicians, whence it was likewise called Ispoc aytwv, the sacred contention.

ASCLEPIAD, in ancient poetry, a verse com- posed of four feet, the first of which is a spondee,

the second and third choriambuses, and the last a pyrrhichius : or of four feet and a caesura, the first a spondee, the second a dactyl, after which comes the caesura, then the two dactyls ; as

Mxcejnas atiivfs | edlte | reglhus.

O i't | presidium | dulce ilejcus miTum.

ASCLEPIADES, a celebrated physician among the ancients, was a native of Prusa, in Bi- thynia, and practised physic at Rome, about A. C. 96. He was the head of a new sect ; and, by prescribing wine and cold water in the cure of the sick, acquired a very great reputa- tion. He wrote several books, frequently men- tioned by Galen, Celsus, and Pliny; but they are now lost.

ASCLEPIADES, a famous physician under Adrian, of the same city with the former. He wrote on the composition of medicines, both in- ternal and external.

ASCLEPIAS, SWALLOW-WORT, in botany, a genus of the digynia order, and pentandria class of plants ; ranking in the natural method

under the thirtieth order, contortae. The generic cha- racter is taken from five oval, concave, hornlike nectaria, which are found in the flower. There are nineteen species, of which the following are the most remarkable, viz. 1. A. alba, or com- mon swallow-wort. 2. A. curassavica, or bas- tard ipecacuanha, a native of the warm parts of America. 3. A. Syriaca, or greater Syrian dogs- bane. The root of the first species is used in medicine. Though reckoned by botanists a spe- cies of dogsbane, it may be distinguished from all the poisonous sorts, by its yielding a limpid juice. The root lias a strong smell, especially when fresh, approaching to that of valerian, or nard ; the taste is at first sweetish and aromatic, but soon becomes bitterish, subacrid and nause- ous. It is esteemed sudorific, diuretic, and em- menagogue. it is also frequently employed by the French and German physicians as an alexi- pharmic, and sometimes as a succedaneum to contrayerva, whence it has received the name of contrayerva Germanorum.

AisCLKPlODORUS, a British prince who flourished in the third century. He killed Alec- tus the Roman general, who had slain the celebrated Carausius ; and was elected king of the Britons, A. 1). 232. He besieged and took London from the Romans, and threw Livius Gal- lus the Roman general into a brook, which thence received the name of (jallbrook, since changed into Wallbrook. lie was at last slain by Coilus II. king of the Britons, A.I). 260.

ASCOBOLUS, in botany; from aaicoQ, a skin, and f3o\of , a cast ; so called because the seeds are thrown out with elasticity; class, cryptoga- mia fungi. Its essential characters are, recepta- cle, tleshy, hemispherical ; seed-cases oblong, discharged elastically ; seeds moist, about eight. 1. A. furfuraceous, powdery ascobolus. Common on cow- dung late in autumn. 2. A. carneus, flesh-colored ascobolus ; found on dung in woods, rare. 3. A. vrlaber, smooth brown asco- bolus, on cow- dung in autumn. 4. A. immersus, sunk ascobolus; in the same situations, almost entirely sunk in the dung, so that the seed-cases only are prominent.

ASCODUT7E, in church history, a sect of Christians, in the second century, who rejected all use of symbols and sacraments, on this prin- ciple, that incorporeal things cannot be commu- nicated by things corporeal, nor divine mysteries by any thing visible.

ASCOGEPHYRUS, in writers of the middle age, a bridge supported on bags made of leather, or bullocks' hides. Such bridges appear to have been in use among the ancients, and to have given the denomination to a tribe of Arabs, hence called Ascitse.

ASCOLI, anciently called Asculum Picenum, a pretty large and populous town of Italy, in the marquisate of Ancona, and territory of the church. It is a bishop's see, and seated on a mountain between the rivers Tronto and Castellano, forty- eight miles south of Ancona.

ASCOLI DI SATRIANO, formerly called Ascu- lum Apulum, and Asculum Picenum, a city of Naples, in the Capitanata, with a bishop's see under the archbisnop of Benevento, seventy miles east of Naples, and thirty west of Manfre- donia.

ASCOLIA, in Grecian antiquity, a festival celebrated by the Athenian husbandmen in honor of Bacchus, to whom they sacrificed a he-goat, and made a foot-ball of his skin, because that animal destroys the vines. See Virgil, Georg. ii. 380.

ASCONIUS PEDIANUS, an ancient gramma- rian of Padua; and, according to Servius, an acquaintance of Virgil's. He wrote commenta- ries on Cicero's Orations, fragments of which are published in Cicero's works.

ASCOPHORA, in botany ; from a□□oc, bladder, and tpu, to bear ; class cryptogamia fungi. Its essential characters are, thread-shaped, terminating in a slightly inflated head. There is but one species, viz. A. perennis, perennial bladder- mould.

ASCORCA, a town and valley of Majorca, six leagues from Palma, principally known by its famous sanctuary, Nuestra Senora de Lluch. This is a large and beautiful edifice, containing an image of the virgin, said to have been mira- culously discovered on the spot in 1238. The number of persons connected with this establish- ment is 400. The canons are proprietors of the valley, which abounds in wine and olives.

ASCOUGH (William), L. L. D. appointed bishop of Salisbury in 1438, and soon after con- fessor to king Henry VI. He was seized by the famous rebel Jack Cade on the 28th June, 1450, who, after plundering his carriage, fell upon him the next day, while he was officiating at the altar, in Edington, Lincolnshire, and dragging him to a neighbouring hill dashed out his brains.

ASCRA, a village of ancient Greece near Mount Helicon, the birth place of the poet Ilesiod.

ASCRI'BE, -\ Lat. ad scribo, to write to.

ASCRI'BABLE, f Primarily to practice the art

ASCRIP’TION. ►►of writing on any substance

AscRiPTi’xious.ˆand with any instrument. Subsequently to charge, attribute, or place to the account of any one, whether in writing or other- wise.

Oh! ye traitours and maintainers of madness, Unto your foly I ascribe all my paine ; Ye haue me depriued of ioy and gladnesse, So dealing with my lord and soueraine.

Chaucer. Lamentation of Marie Magdalene, fol. 319. ch. iv.

True wisdom teaches to distinguish God’s actions, and to ascribe them to the right causes.

Hall’s Contemplations.

Ascribe thou nation, every favour’d tribe, Excelling greatness to the Lord ascribe ; The Lord, the rock on whom we safely trust, Whose work is perfect, and whose ways are just.

Parnell. The Gift of Poetry.

The cause of his banishment is unknown ; because he was unwilling to provoke the emperor, by ascribing it to any other reason than what was pretended.

Dry den.

To this we may justly ascribe those jealousies and encroachments which render mankind uneasy to one another. Rogers.

These perfections must be somewhere ; and there- fore may much better be ascribed to God, in whom we suppose all other perfections to meet, than to any thing else. Tillotson.

The greater part have been forward to reject it upon a mistaken persuasion ; that those phenomena are the effects of nature’s abnorrency of a vacuum, ►►►which seem to be more fitly ascribable to the weight and spring of the air. Boyle.

Sometimes we ascribe to ourselves the merit of good qualities, which if justly considered should cover us ###with shame. Craig.

Holiness is ascribed to the pope ###, majesty to kings : serenity or mildness to princes ; excellence or perfec- tion to ambassadors ; grace to archbishops ; honor to peers. Addison.

The innocent gambols of a few otters, have Seen known to occasion those yells which the vulgar of this country mistake for laughing or crying, and ascribe to a certain goblin, who is supposed to dwell in the waters, and to take delight in drowning the bewildered traveller. v Beattie.

ASCRIPTI, or ADSCRIPT:, in antiquity, those who entered their names in the colonies, and be- came coloni.

ASCRIPTITII, or ADSCRIPTITII, in ancient barbarous customs, a kind of villains, who, com- ing from abroad, settled in the lands of some new lord, and became so annexed to the lands that they might be transferred and sold with them. Ascriptitii is sometimes also used in speaking of aliens .or foreigners newly admitted to the freedom of a city or country.

ASCRIPTITII was used in the military laws for the recruits to supply the legions, called also ACCENSI, which see.

ASCRIVIUM, in ancient geography, a town of Dalmatia, on the Sinus Rhizicus, now called Cattaro, in Venetian Dalmatia.

ASCULUM APULUM, and PICENUM. See ASCOLI.

ASCIIS, in natural history, the pouch or bag of the opossum, for receiving its young. It is a skinny bag, separate from the rest of the body, but adhering by a membrane to the bottom of the belly.

ASCYRUM, PETER'S WORT, in botany, a ge- nus of the polyandria order, and the polyadelphia class of plants, ranking in the natural method under the twentieth order, rotaceae : CAL. four leaves : COR. four petals ; the filaments are nu-

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merous, and divided into four bundles. Ther## are three species: 1. A. crux andrese ; 2. .A hypericoides ; 3. A. villosum; all natives of tne West-Indies, or America.

ASDRUBAL, the name of several Carthaginian generals. See CARTHAGE.

ASEKAI, ASEKI, the name which the Turkish emperors give to their favorite sultanas, generally those who have brought forth sons. These are greatly distinguished above others in their apart ments, attendants, pensions, and honors. They have sometimes shared the government. The sultana who first presents the emperor with a male child is reckoned the chief favorite, and is called buyuk aseki.

ASELE-LAPPMARK, a division of Swedish Lapland, contains the large parish of Asele, sixty English miles in length. In the town of this name there is a church, erected in 1648. Here is also a school, established in 1730, where six children of Laplanders are educated at the ex- pense of the government. This place is moreover the seat of a court of justice, and has a yearly fair. The inhabitants trade in rein-deer skins, flesh, butter, cheese, fowls, fish, and furs. Eighty-five miles west of Umea. Long. 17□□ 4 E., lat. 64□□12'N.

ASELLA, in entomology, a species of pha- Icena, of the bombyx family, found in Germany, wings brownish without spots.

ASELLI, in astronomy, two fixed stars of the fourth magnitude, in the constellation Cancer.

ASELLI or ASELLIUS (Caspar), an Italian anatomist of the seventeenth century, who dis- tinguished himself by discovering the lacteal vessels. lie was born at Cremona, and studied medicine, and became professor of anatomy m the university of Pavia. Aselli first observed the lacteals in dissecting a living dog. His investigations were published after his death at Milan in 1627.

ASELLINA, in zoology, a species of Lernsea, having the body lunated, and the thorax heart- shaped. Found fixed on the gills of some fishes.

ASELLUS, in entomology, a species of the oniscus genus ; of an oval shape, with an obtuse tail, furnished with two styles. It delights in moist places, under stones, in damp and rotten wood, &c. The young are contained in. a four- valved receptacle, under the abdomen of the female. This is commonly known by the name of the wood louse.

ASELLUS, in conchology, a species of chiton, most frequently found adhering to the mytilus modielus. The shell consists of eight valves, very black, with a yellow spot on each valve, convex above ; also a species of cypraea, common about the Madeira islands. It is white, with three brown bands bordered with yellow or red.

ASENATH, the daughter of Potipherah, priest or prince of On, and wife of Joseph, prime mi- nister to Pharaoh king of Egypt. See Genesis xli. 45.

ASEPTA ; in medicine, from a negative, and ffqirw, to putrefy ; signifies any thing unputrefied, or unconcocted.

ASGILL (John), a humorous writer, bred to the law, which he practised in Ireland with great success. He was there elected a member of the

house of commons, but was expelled for writing

a Treatise on the Possibility of avoiding Death.

Being afterwards chosen member for Bramber in

Sussex, he was on the same account expelled the

parliament of England. After this, he continued

thirty years a prisoner in the Mint, Fleet, and

King's Bench ; during which time he published

a multitude of political pamphlets. He died in

the King's Bench in 1738, aged above eighty.

ASH', n .& v. \ Ang.-Sax. Asia, asce ; dust,

ASH'Y, Cashes. The remains of any

ASH'TUB, i substance which has been

ASH'YPALE. J burnt.

Ye Troyan athei, and last flames of mine, I cal in witnesse, that at your last fall, I fled no stroke of any Grekish sword. Surrey.

Poor key-cold figure of a holy king ! Pale ashes of the house of Lancaster ! Thou bloodless remnant of that royal blood !

Shakspeare.

So that lone bird in fruitful Arable, When now her strength and waning life decays, Upon some aerie rock or mountain high, In spiced bed, fired by near Phoebus rayes, Herself and all her crooked age consumes, Straight from the ashes, and those rich perfumes, A new-born phoenix flies, and widow'd place resumes. Fletcher's Purple Island. Porncius next him pac'd, a meagre wight,

Whose leaden eyes sunk deep in swimming head, And joyless look, like some pale ashy sprite,

Seem'd as he wore dying, or now dead. Id.

His ashy coat that bore a gloss so fair, So often kiss'd of the enamour'd air, Worn all to rags, and fretted so with rust, That with his feet he trod it into dust.

Dray ton's Poems. The Owl. Ah ! leave me not for Grecian dogs to tear ; The common ritos of sepulture bestow, To soothe a father's and a mother's woe ; Let their larˆe gifts procure an urn at least, And Hector's ashes in his country rest. Pope.

To great Laertes I bequeath A task of grief, his ornaments of death ; Lest, when the fates his royal ashes claim, The Grecian matrons taint my spotless name. Id. ASH, } Of doubtful etymology. Todd's ASH'KN. i Johnson gives scpe, a tree. There sawe I eke the fresh hauthorne, In white motley that so swote doth smell,

Asshe, firre, and oke with many a young acorn, And many a tree mo than I can tell.

Chaucer. The Complaint of the Black Knight,

f. 271. c. 1.

For whan we may not don, than wol we speken, Yet in our ashen cold is fire yreken.

Id. The Reve's Prologue, v. i. p. 153. As from some far seen mountain's airy crown, Subdu'd by steel a tall ash tumbles down, And soils its verdant tresses on the ground ; So falls the youth ; his arms the fall resound.

Pope. Iliad.

Then exercise thy sturdy steers to plough Betwixt thy vines, and teach the feeble row To mount on reeds, and wands, and upward led On ashy poles, to raise their forky head.

Dryden's Virgil, Georg. ii. ASH (John), L.L.D. a baptist minister, born in 1724; was at one period coadjutor with Dr. Caleb Evans in the management of the Bristol acaojemy, and subsequently pastor of a congrega- tion at Pershore, where he died in 1779. Besides several religious publications, he was the author of a Dictionary of the English language ; and an Introduction to Lowth's Grammar, which has passed through a great number of editions. ASHA'ME,) Found in all the Northern ASHA'MED. J languages. It has perhaps a literal affinity to ai, to blush, to redden ; although, according to our usage, it means the feeling that occasions the blush ; 10 feel shame. See SHAME.

And whanne he seide these thingis alle his aduer- saries weren ashamed : and al the puple joyede in alle thingis : that weren gloriously don of him.

Wiclif. Luk. c. 13.

Some men seem to be ashamed of those things which would be their glory, whilst others glory in their shame. Mason on Self-knowledge.

Ye only can engage the servile brood Of levity and lust, who all their days Ashamed of truth and liberty have woo'd, And hug'd the chain that glittering on their gaze, Seems to outshine the pomp of heaven's empyreal blaze. Seattle's Minstrel.

The modest speaker is asham'd and griev'd T'engross a moment's notice, and yet begs, Begs a propitious ear for his poor thoughts, However trivial all that he conceives.

Cowper's Task.

ASHANTEE.

ASHANTEE, a native kingdom of the Gold Coast of Africa, and an important power in the neighbourhood of our settlements on the western coast. It appears to be far superior in civilisa- tion, commerce, and general resources, to any known African state. The predominance of this power indeed lias, within the last ten years, entirely altered the political aspect of the coast. It is well known that our late excellent and in- trepid commander on this coast, and at Sierra I.eone (Sir diaries Macarthy), lost his life in a fruitless attempt to drive back a considerable force

with contempt the remonstrances of that king- dom, till at last the Ashantees over-ran the country, entirely reduced the Fantees, and be-, sieged the British settlement. A mission was now therefore sent to the king of Ashantee, to conciliate his good-will toward this country, to obtain, if possible, an extension of commerce, and to gain a knowledge of that kingdom, and the adjacent countries.

ASHANTEE, according to the elaborate account of Mr. Bowdich, employed on this mission, is situated at a distance from the coast, on the west of Dahomy, and nearly in the longitude of the central parts of England. Its- extent is supposed to be great, though sull imperfectly known to Europeans, and must, indeed, be so in a great measure to the inhabitants themselves. Where

no records are kept, and the communications are only received from those who levy the tribute, no great accuracy can be expected, either as it re- lates to extent of country or number of inhabi- tants. It spreads principally over a wide space westward and towards the interior. Ashantee Proper does not border on the coast which is occupied by the tributary countries. The surface of this country is variegated, but the cultivation is partial, and much of it is over-run with forests of brush-wood, and the luxuriance of a tropical vegetation. A river called the Volta is formed of two streams which intersect the Ashantee territory. South-east of Coomassie, the capital, a small lake is laid down in Mr. Bowdich's map. No means of ascertaining the population pre- sented itself to the members of the mission, but by that of the military force. Of this they give the following, as the most moderate estimate re- ceived :

Coomassie district, extending to the north- ern frontier 60,000

Dwabin ditto 35,000

Morpon ditto 15,000

Soota ditto 15,000

Kakoofoo ditto 15,000

Beequa ditto . 12,000

Adiabin ditto (between Coomassie and

the lake) 12,000

Aphwagwiasee ditto 10,000

Daniasee ditto (southward of Coomassie) 8,000 Kooritarasie ditto (on the lake) . . . 8ˆ)00

Gomasie ditto 8,000

Amafas ditto 8,000

206,000

The Ashantees being a nation of warriors, this statement may amount to nearly one-fifth of the -whole population, which will, therefore, be about one million. The area of Ashantee Proper is estimated by the same writer at 14,000 square miles, which is consequently about seventy-one persons to each; a population rather greater than that of Scotland. The climate of Ashantee is colder than that of Cape Coast. During May and June, the first two months that the mission was at Coomassie, it rained about one-third of the time ; in July and August, it rained nearly half, and violent tornadoes, ushered in by strong winds from the south-west, were frequent after sun-set. The heaviest rains fell from the latter end of September to the beginning of November, when they descended in more impetuous tor- rents than are usual on the coast. On the second of May Fahrenheit's thermometer rose to 91□□, and the following day, at twelve o'clock, it was 89□□. From the 7th to the 14th of June, it va- ried at Coomassie from 80□□ to 85□□. It appears that the general temperature of Coomassie, dur- ing the hottest part of the day, is between 70□□ and 84□□.

The agriculture and products are similar to those of other parts of south-west Africa. The soil is chiefly a light loam, and the only agricul- tural instrument is the hoe. Their plantations have much the appearance of hop-grounds, are well formed and regularly planted; a hut being

erected at each wicker-gate where a slave and his family generally reside. They grow twc crops of com a year; plant their yams about Christmas, and dig them up in September. They also cultivate rice, sugar-canes, a mucilaginous vegetable, called encruma, resembling asparagus, pepper, vegetable butter, oranges, papaws, pine- apples, and bananas. Fine cotton also grows spontaneously in Ashantee. The cattle seen by the embassy were as large as those in England. The horses are small, and the Ashantees bad horsemen. The Moors sometimes ride oxen with rings through their noses. The sheep are covered with hair. Among the wild animals are lions, panthers, elephants, hyaenas, goats, deer, and antelopes ; besides abundance of the monkey species : of these, the simia diana, is much admired for the beauty of its skin. The alligator, rhinoceros, and hippopotamus, are also met with; among the birds vultures are numerous, as well as pigeons, crows, and parrots. Various singing birds were likewise seen. Ashantee either is not a mineral country, or the inhabitants cannot avail themselves of its treasures, as the gold and other metals are imported. Iron-stone, however, is found in several places, and parti- cularly in the neighbourhood of Coomassie, the metropolis, which is

built upon the side of a large rocky hill, and is insulated by a marsh northward. This marsh contracts into a narrow stream on the southern and eastern sides, and supplies the town with water. Around the town is a beautiful forest. Coomassie is an oblong of nearly four miles in circuit, not including the suburbs of Assafoo, or Bantama (the bkck town), half a mile distant, and formerly connected with the streets. Four of the principal of these streets are half a mile long, and from fifty to a hundred yards wide. Mr. Bowdich observed them building one, and a line was stretched on each side to make it regular. The streets are all named, and a superior captain has charge of each. That where the mission resided was called Aperremsoo, great-gun, or cannon-street, be- cause the guns taken when Dankara was con- quered, were placed on a mound at the top of it. The Ashantees asserted that the entire po- pulation of Coomassie exceeded 100,000; ant. Mr. B. says, that on festivals, when the people were collected, he compared the crowds to those he had seen in the secondary cities of England. The higher classes support their numerous fol- lowers, and the lower their large families, in plantations within two or three miles of the capital. Mr. B. thinks the average resident po- pulation of Coomassie, exclusive of those of the surrounding crooms, does not exceed 15,000 There are two markets held daily, from aboit eight o'clock in the morning till sunset, where the articles exhibited for sale, are beef and mutton, hogs, deer, and monkey's flesh ; fowls, with the vegetable products of the country; salt and dried fish from the coast, large snails smoke- dried, and stuck in rows on small sticks in 'the form of herring-bone ; eggs for fetish, palm-wine, rum, pipes, beads, looking-glasses, sandals, silk and cotton cloth, gunpowder, small pillows, white and blue cotton thread, calabashes, &o. Provincial capitals, and other large towns of the

interior, were spoken of to the getulemen of the mission, hut were little known, it appeared, at the capital.

The king's love of justice is esteemed by his courtiers as his chief virtue. They have no ideas of extending their influence by civil policy. The cefoceers, or military captains, accordingly form the .'owest grade of the constitution, over whom are placed the heads of but four families, which form a sort of aristocracy, and, with the king, complete the three estates of this kingdom. In exercising his judicial

authority, or in laying the basis of a new law or measure, the king always retires in private to consult these four chief dig nitaries; but every law is announced publicly to them as well as to the assembly of captains, as the arbitrary pleasure of the king. On state emergencies only, are the latter assembled dis- tinctly, or to give publicity to some new law. The Ashantees are fully capable of vindicating this constitution by argument, according to the testimony of our officers who visited the court of Coomassie; indeed, no system of government would seem better suited to their habits and propensities. The captains are made respor*- sible, in a great degree, for the issue of their own advice with respect to war or peace; we only wish we could add, that in their mode of conducting hostilities, they were as humane as they are energetic and skilful.

In this respect, they are still barbarous in the highest degree. They rarely give quarter in a general action, and a distinct body of recruits follows the army to despatch with knives those who are wounded with a musket, and return with the personal spoil of the enemy. They even make a practice of cutting out the hearts of some of the slain, which they mix up with consecrated herbs, and after much ceremony and incantation, compel those who have never before killed an enemy, to eat part of the horrible por- tion. Of the heart of a celebrated enemy> the king and his dignitaries are said to partake ; and their most warlike generals are distinguished by names descriptive of their peculiar modes of despatching or torturing their enemies. Thus, Apokon, the king, is called Aboawessa, be- rause lie lias been in the habit of cutting off heir arms; Appia, Sheiiboo, because he beats their heads in pieces with ;; stone ; and Amanqua, Abiniowa, because he cuts off' their legs. Sir Charles M'Carthy, it is feared, was despatched by these barbarians in this cruel manner.

The last power subdued, or the revolters re- cently quelled, are always compelled by the Ashantees to form the van of their army ; the youngest captain marches first, and all the au- thorities in gradation of rank and seniority up to the king. The superior discipline and cou- rage of their soldiery were in a moment percep- tible, when they appeared in conflict with the people of the coast before Annamaboe ; but the following are said to lie the only maxims to which this is to be attributed : They never pursue an enemy at or near sunset ; the general is al\va\s in the rear, the secondary captains ead the soldiers on, while the chiefs of divisions, surrounded by a few select followers, urge them forward with heavy swords, and cut ucwn every

man who retreats, until the conflict is desperate. In close fight, the principal effort of the Ashantee is to fire, and then spring upon the

throat of his enemy. The most popular song of the ca- pital, has a sort of chorus to this effect : ‘ If I fight I die, if I run away I die, better I go on and die.’

At the Yam Custom, an annual festival, and at the death of their great men, hundreds of human victims are said to be regularly sacrificed, and the sculls and other bones of their enemies are exhibited in their armoury, and as the ornaments of their state apartments. At all their great fes- tivals and funerals, indeed, the slaughter of hu- man beings is horribly frequent. Some of the former occur once in three weeks, when 100 are sometimes immolated. It should be observed, however, that these are often convicts. The king celebrated the death of his mother by the sacri- fice of 3000 victims ; and the funeral rites of a great caboceef were repeated at intervals for three months, during which 2400 persons were butchered.

According to the religious belief of the Ash- antees, there are two distinct orders of gods ; one of which, the higher order, takes care of the whites, the other of the blacks ; they are believers in the immortality of the soul, and both their princes and nobility are supposed to enjoy the presence of the higher order of their deities after death. Here they regale themselves in epicurean indulgence, and have cooks and butlers after the fashion of their country. Persons of this descrip- tion are, therefore, buried with their great men, whose reception in another world is supposed to be greatly regulated by the number of at- tendants with which they appear. The Ashan- tees have also two sets of priests ; one class being devoted to the services of their temples and to preserving a communication with their deities, and the other class a sort of conjurors, and de- tectors of small theft. Every housekeeper also has his domestic gods and charms, bought of these cunning men. Polygamy is universally allowed, and the king claims the royal number of 3333 wives, which is regularly kept up ; the ladies living in round enclosures, ‘ like pheasants in a park.’

A peculiar feature in the law of succession obtains in this country, and is binding from the royal family downwards. The brothers’ chil- dren are always set aside in favor of sisters’ children, on the ground tbat if the sons’ wives are faithless, the blood of a family is lost in the offspring ; but should the daughters deceive their husbands the father’s blood is still preserved ; thus, the sisters of the king are allowed to in- trigue or marry with any personable man. The king is heir to all the gold of any subject, and contributes to the funeral rites to assert his claim ; the successor paying the debts of the deceased. Slaves, if ill treated, may transfer themselves from one master to another. They are a great article of traffic here, and the domestic

drudges, of course, of the country. No topic appeared so inexplicable to the king as that of the British motives for abolishing the slave-trade. The slaves of an ally or tributary are scrupulously restored; those of an indifferent or enemy's

country may become rree subjects of the state. An appeal lies for the subjects of any tributary power to the laws, and ultimately to the king of Ashantee.

Cowardice, treason, the murder of an equal, and some cases of adultery, are punishable with death, as are false accusations of treason. A great man killing his equal, is generally after- wards allowed to kill himself as a punishment; but the death of an inferior is compensated by a fine, paid to the family, of the value of seven slaves. Serious thefts are punished with a com- pensation inflicted on the family of the accused, who alone are suffered to punish him ; but this they may do even capitally, if he be incorrigible. Trifling thefts are visited on the offender by ex- posing him at various parts of the town, and proclaiming his crime before him. But all vexatious suits and accusations are discouraged and punished. Polygamy is allowed to all ranks, but the wife's property is distinct from that of her husband, and the king is the heir of it. None but a captain can put his wife to death for infidelity, and even then he is expected to accept a liberal offer of gold for her redemption. To intrigue with the king's wives is death. If the family of a woman, on her complaint of ill-treatment, choose to tender to a man his marriage-fee, he must accept it ; and the wife returns to her fa- ther's house, but can no more marry. ' The most entertaining delasseinent of our conversa- tion,' says Mr. Bowdich, ' with the chiefs, was to introduce the liberty of English females ; whom we represented, not only to possess the advan- tage of engaging the sole affection of a husband, but the more enviable privilege of choosing that husband for herself. The effect was truly comic ; the women sidled up to wipe the dust from our shoes with their clothes, at the end of every sen- tence brushed off an insect, or picked a burr from our, trowsers ; the husbands expressing their dislike by a laugh, would put their hands oefore our mouths, declaring that they did not want to hear that palaver any more, abruptly changed the subject to war, and ordered the women to the harem.'

The foreign trade of Ashantee is regulated by the government, so far as to interdict commerce with any unfriendly power. It is in every

other respect left free, though not much encouraged. The slaves of the capital are generally a part of the annual tribute of the neighbouring powers ; but many are kidnapped throughout the country. They fetch but a trifle ; but it is the most lucra- tive branch of their commerce with the coast ; and the continuance of it under other flags, par- ticularly the Spanish, while the British are pro- hibited from engaging in it, is represented by the intelligent writer, to whom we have been already so much indebted, as the most stubborn impe-

diment to the negociations which he had to conduct at Ashantee. ‘ It not only injures the British commerce here,’ says Mr. B. ‘ almost tn annihilation; but, slavery being the natural trade of the natives, because it is the most indo- lent and the most lucrative, the opposition, which is insinuated and believed to proceed from the English alone, conveys a disagreeable impression of us to the interior, as inauspicious to our intercourse and progress, as the even par- tial continuance of such a trade is to legitimate commerce and civilisation. One thousand slaves left Ashantee, for two Spanish schooners, or Americans under that flag, to our knowledge, during our residence there; doubtless the whole number was much greater. Since our return it must have been very considerable, for the slave trade was never more brisk than it is at this mo- ment, under the cloak of the Spanish flag; and great risk has been incurred, in consequence, of offending our new friend and formidable neigh- bour, the king of Ashantee, from the firm resist- ance of his strong entreaties to the governor-in- chief to allow the return of a powerful mulatto slave-trader to Cape Coast Town, whence he had been expelled under the present governor, as the most daring promoter of that commerce.’ How urgently does this press upon government, by all legitimate means, to urge the universal abolition of this accursed traffic ! It is but ‘ crippled,’ as this writer well remarks, at present, ‘ at the ex- pense of our own interests and views in the in- terior; and, which is worse, of the happiness and improvement of the natives.’

Gold was seen everywhere in great abundance by the British emissaries ; and the court of Coo- massie, in silks, stuffs, cloths, and cottons, of every hue, was most imposing. Some of the captains wore ornaments of solid gold on their wrists, so large as to tire the hand, which rested on the head of a young slave. The tops of im- mense umbrellas were decorated with golden heads of pelicans, panthers, baboons, &c. as large as life.

Guns and gunpowder are never allowed to be exported from Ashantee ; and the people in ge- neral have no idea of buying any thing but for the purpose of consumption,’ except a small number of articles of

which they can make a profitable barter for tobacco, cloth, and silk, in the Inta and Dagwumba markets. Their situa- tion bids fair, however, for their becoming the complete brokers between the interior and the European nations.

We subjoin a table of the most material arti- cles of commerce between our settlement at Cape Coast Castle and the Coomassie market, and the profit they will yield, according to Mr. Bow- dich, at the latter :

ASHANTEE.

CAPE COAST.

COOMASSIE.

Articles.

□□.

□□□.

Quantity.

□□.

*.

rf.

Quantity.

Profit perl cent.

1 Cushions . . □□□ . □□□ 2 Dagwumba white cotton

1 0 0 0 0 0 1 0 0 1 0 0 0 0 0 2 0 10 0

0 5 0 5 15 0 15 0 5 5 0 10 2 15 5 0 5 0 2

0 0

i

0 0

7k

0

7k

0 0

7k

0

6 0 0 0 0 0 6

each, square yard, each, per handkerchief.

100 100 600 75 50 400 75 75 100 20 400 100 400 50 175 100

0 1

0 4 1 0

5 10 10 0 0 10

0 0 0 0 0 0

100

per piece, do. J barrel, bar.

4 Glasgow Dane ••• . ••• 5 Guinea stuff .... 6 Gunpowder ....

per charge, bar. i inch, each, piece, dram, pair, per span.* piece, per span, per fathom.

roll. Ib.

8T pad

9 Locks (Marrowa) . . .

1 0

0 10

0 0

per piece, gallon.

11 Rum

13 Sarstracunda .... 14 Silesia . ....

0

1

4

10 10 0

5

0

0 0 0

0 0

piece, do. do.

15 Silk India ....

17 Spanish dollars 1 8 Tobacco, Portuguese . .

0 6

Roll.

75 150

The span is about nine inches long ; the fathom eight spans.

Gold dust is the currency of Ashantee, worth about ××4 Knglish an ounce. That of the neigh- bouring kingdoms of Inta, Dagwumba, Gaman, and Kong, is reckoned in cowries, of which five strings, or 200, make a tokoo ; eight tokoos an ackie ; and sixteen ackies an ounce.

Mr. Bowel ich recommends that a British set- tlement should be attempted up the Volta, which is navigable within four days' journey of Sallagha, the capital of Inta, east of which, and on the batiks of Laka river, connected with the Volta, is the kingdom of Dagwumba. These tributary nations to Ashantee are far more commercial in their policy than that state ; and, as far. as they have become known to us, more civilised. They give exorbitant prices to the Ashantees for rum, iron, &c. Silks, Manchester cloths, and cot- tons, would find a market in the same direction.

In their architecture the Ashantees have claims to surprising ncauiess, and even elegance. Al- though the walls are of mud, every house in Coomassie has its regular gable ends, from which three poles are projected, i.e. from end to end, forming the point and bottom of the roof on each side; in which a frame of bamboo work supports an interwoven thatch of palm leaves, tied with the runners of trees. Within, the bamboo work is painted black and polished, so as to form a sort of chequered and tasty ceiling. The pillars that, assist to support the roof, and form the open front of the superior houses, are squared pieces of timber, covered with plastering, and often or-

namented with fluting, quarter-foil, and the lozenge and gable ornaments of the Normans. The steps and raised floors of these houses are clay and stone, covered with a layer of red earth which has the appearance of ochre. Arcades and piazzas abound everywhere in the capital. The doors are generally an entire piece of the cotton wood ; the windows open wood work, carved in fantastic shapes, and painted red ; the frames being frequently cased in gold as thick as cartridge paper. Mr. Bowdich was agreeably surprised to find every house have its cloaca in some retired and arched corner, besides the com- mon ones about the town for the lower orders. The holes, he says, are dug to a surprising depth, and boiling water is poured down them every day. The rubbish and offal of the houses is burnt every morning in the back of the street. In their persons, and in all their domestic eco- nomy, the Ashantees are also patterns of cleanli- ness.

They manufacture cloths of exquisite fineness and brilliancy of color, sometimes unravelling the finest silks, to weave them into them. They paint on white cloths ; and dye with considera- ble skill, particularly leather ; in pottery, black- smith's work, tanning and dressing leather, they also excel. They will buy British cottons for the sake of a favorite stripe (generally the red), and cutting away the other parts, weave it up into their own cloths, which alone are worn as arti- cles of dress.

ASH HORN, or ASH no r KM , a town in Derby- It has a stone bridge over the Dove; an ancient

shire, on die borders of Staffordshire, between church with a fine spire; and a free school,

thr river; Dove and ('ompton, thirteen miles founded by citizens of London, natives of the

from Derby, and 131 > i\ . N. \V. from London place. Its trade in malt and cheese is consider-

able. A weekly market is held here, and several annual fairs. Population 2112.

ASHBURNHAM, a post town of the United States, in Worcester county, Massachusetts, on the west side of the river Sowhegan, forty-five miles north-west of Boston.

ASHBURTON, a town in Devonshire, seated on the river Dart, ten miles from Totness, nine- teen south-west of Exeter, and 192 west by south of London. It carries on a considerable trade, in wool, yarn, and serges ; has markets on Tues- day and Saturday, and fairs on the first Thursday of March and June, and on the 10th August and llth November. It sends one member to par- liament, and is one of the four stannary towns. It is seated among the hills, which abound in tin and copper ; and has a very handsome church, with a chapel, which is used as a school. Po- pulation above 4000.

ASHBY DE LA ZOUCH, a market town of Lei- cestershire, so called from the .Zouches, its an- cient lords, 13 miles south of Derby, 15 from Leicester, and 115 from London. It has seven annual fairs. It long had a castle, which was in the possession of the family de la Zouch. It afterwards fell into the hands of Edward IV. who granted it to Sir Edward Hastings, with the title of a baron, and license to make a castle of the manor-house, to which he adjoined a very high tower. James I. and his whole court were once entertained here by the Earl of Hunting- don. It was demolished in 1648. Malting, and the manufacture of hats and cotton, flourish here. Population upwards of 3000. In the neigh- bourhood is a mineral water called Griftydam.

ASHDOWN, a town of Essex, anciently called Assandun, or the hill of asses, famous for the defeat of Edmund Ironside, by Canute the Dane.

ASHER ; “UffK, Heb. i. e. blessedness ; one of Jacob’s sons by Zilpah, and the progenitor of the tribe so called.

ASHEREF, or ASHRAFF, a town of Persia, in the Mazanderan province, half a mile from a large bay, the best harbour on the south side of the Caspian. Shah Abbas built a superb palace here, surrounded by fine gardens, remarkable for the number of their orange trees. This palace is now falling to ruins. Distant fifteen miles from Fehrabad, and sixteen from Sari.

ASHES, among the ancient Persians, were used as an instrument of punishment for some great criminals. The criminal was thrown head-

long from a tower fifty cubits high, which was filled with ashes to a particular height, 2 Mac. xiii. 5, 6. The motion which the criminal used to disengage himself from this place, plunged him still deeper into it, and this agitation was farther increased by a wheel which stirred the ashes continually about him, till at last he was stifled. ASHES, in chemistry, are the earthy particles of combustible substances after they have been burnt. ††† If the ashes are produced from vegetable bodies, they contain a considerable quantity of fixed salt, blended with the terrene particles : and from these the fixed alkaline salts called pot- ash, pearl-ash, 8cc. are extracted. See POTASH, &c. The ashes of all vegetables are vitrifiable, and found to contain iron. They are also an

> ASH

excellent manure for cold and wet grounds. See HUSBANDRY.

ASHES were anciently used in several religious ceremonies. St. Jerome relates that the Jews in his time rolled themselves in ashes, as a sign 01 mourning. To repent in sackloth and ashes is a frequent expression in Scripture for mourning and being afflicted for our sins. There was a sort of lye and lustral water made with the ashes of an heifer sacrificed upon the great day of ex- piation ; the ashes whereof were distributed to the people, and this water was used in purifica- tions as often as any touched a dead body, or was present at funerals, Num. xix. 17.

ASH-FIRE, among chemists, a fire wherein the vessel to be heated is covered with ashes or sand. ASH1, a prince of Norway, said to have been slain by Fingal, the father of Ossian, at a place of Invernesshire, ever since named Drumashi, or Ashi's Hill.

ASHIMA, an idol of the Samaritans, 2 Kings xvii. 30, said to have been formed like a lion or a goat, and to have represented the sun.

ASHING-KEY, a low island on the Spanish main, on the Mosquito shore.

ASHIPOO, a river of North America, in South Carolina, which runs into the Atlantic. Long. 80†† 30′ W., lat. 32†† 25′ N . Also a town of the same name situated on the banks of this river. ASHLAR, in masonry, free-stones as they come out of the quarry, of different lengths, ge- nerally applied to slabs of stone, from six to nine inches in thickness, used for facing brick buildings, worked in imitation of regular courses of solid masonry.

ASHLER, or ASHLERING, quartering of tim- ber about three feet high, placed perpendicularly from the floor of the attic story, to the roof to obviate the useless angle formed by the junction of the roof and the floor.

ASHLEY, a river of South Carolina, rising in Cypress swamp, and emptying itself into the Cooper just below Charleston. Its breadth opposite Charleston is about 2100 yards, and its stream narrows but little for several miles. On the western bank of this river the first efficient settlement of the state was made at a place now called Old Town, or Old Charleston, in 1671. Also a river of West Florida, which runs into the Gulf of Mexico.

ASH MOLE (Elias), a celebrated antiquary and herald, founder of the Ashmolean Museum at Oxford, was born at Litchfield, in Stafford- shire, 1617. He first practised in the law: in the civil war he had a captain's commission, and was also comptroller of the ordnance under Charles I. In 1649 he settled at London; where his house was frequented by most of the learned men of the age, and a depository of many literary treasures. In 1650 he published a treatise written by Dr. Arthur Dee, relating to the philosopher's stone ; with another tract on the same subject by an unknown author. About the same time he was busied in preparing for the press a complete collection of the works of such English chemists, or alchemists rather, as had till then remained in manuscript. This under- taking cost him great labor and expense ; but at length the work appeared towards the close ot

i'ie year 1652, under the title of Thratricurn Chymicum Britannicum. He proposed at first)❓❓❓> have carried it on to several volumes; but ufterwards dropped this design, and applied himself to the study of antiquity and records. 1 le was at great pains to trace the Roman road, which in Antoninus's Itinerary is called Benne- vanua, from Weedori to Litchfield. In 1658 he began to collect materials for his celebrated his- tory of the Order of the Garter. In September following he made a journey to Oxford, where he commenced his full and particular description of the coins presented to the public library by arch- bishop Laud. Upon the restoration, Mr. Ash- mole was introduced to king Charles II. who bestowed on him the place of Windsor Herald. Soon after he appointed him to give a descrip- tion of

his medals, which were accordingly de- livered into his possession, and king Henry Vlllth's closet was assigned for his use. Mr. Ashmole was afterwards admitted a fellow of the Royal Society; and the king appointed him secretary of Surinam, in the West Indies. On the 19th July 1669, the University of Oxford, in consideration of the many favors they had re- ceived from Mr. Ashmole, created him M. D. by diploma. In May 1672 he presented his Insti- tution, Laws, and Ceremonies of the Order of the Garter, to the king, who, as a mark of his approbation granted him ––400 out of the custom on paper. On the 26th January, 1679, a fire broke out in the Middle Temple, in the next chamber to Mr. Ashmole's, by which he lost a noble library, with a collection of 9000 coins, ancient and modern, and a vast repository of seals, charters, and other antiquities and curio- sities ; but his manuscripts, and his most valua- ble gold medals, were luckily at his house at Lambeth. In 1G83, the University of Oxford having finished a magnificent repository near the theatre, Mr. Ashmole sent thither his collection of rarities ; which benefaction was augmented by the addition of his manuscripts and library at his death, which happened at Lambeth, May 18, 1692, in the 76th year of his age. Besides the works above mentioned, Mr. Ashmole left seve- ral which were published since his death, and some which sti.ll remain in manuscript.

ASH MOT, the principal part of the Isle Madame, dependent on the island of Cape Breton.

ASHO'RR. Onshore. Ang.-Sax. sciran, to shear, cut, divide, separate. See SHORE.

Sweare then how them escap'dst.

Swum atlinre man like a ducke '. Shakgpeare.

––– For now the flowing tide, Had brought the body nearer to the side ; The inure she looks, the more her fears increase, At nearer sight; and she's herself the less : Xow driv'n ashvrr, and at her feet it lies, She knows too much in knowing whom she sees. Her husband's corpse. Dryden's Fables*

[He] Then with his dire associates through the deep, For spoil and slaughter guides the. savage prow, Him c'.oˆs will rend

(iltirfr't Lcimidas, book xii. p. 77.

Tl.uB while their cordage strctch'd ashore may guide, Our brave companions thro' the swelling tide; Tl.ii lloatiiij: lumber shall sustain them o'er 'I l.e rocky shelves, in safety to the shore.

falconer’s Shivwf1’^

ASHTAROTH, ASHTORETH ; nnrwtt, Heb. i. e. flocks, or riches ; or ASTARTE, the chief god- dess of the Sidonians and Phoenicians, called also the Queen of Heaven, and reckoned the same with the Juno of the Greeks and Romans. Cicero, however, calls her the Venus of Syria, wherein he is certainly justified by her mode of worship ; which, like that of the Grecian Venus, abounded in all manner of debauchery. The Israelites, in all their relapses to idolatry, showed a great fondness for her worship. Solomon him- self in his dotage sacrificed to her. She was re- presented in various habits, encircled with rays, &c. We find a place named after her in the days of Abraham; Gen. xiv. 5.

ASHTON (Charles), an antiquarian and one of the most learned critics of his age, was elected master of Jesus College, Cambridge, July 5th, 1701, and installed prebend of Ely, on the 14th. His skill in ecclesiastical antiquitieo was equalled by few.

ASHTON (Dr. Thomas), a native of Eton, studied at Cambridge, in 1 733, was successively rector of Aldingham, Starminster, and St. Bo- tolph, Bishopsgate. In 1759 he took his degree of D. D. ; and in May 1762 was elected preacher at Lincoln’s Inn, which he resigned in 1764. He died in 1775, aged fifty-nine.

ASHTON-UNDER-LYNE, a town and parish in the hundred of Salford, county palatine of Lan- caster, England, 186 miles N. W. of London. The town stands on the northern bank of the river Tame, consists of several narrow streets, many large factories, a parish church, chapel of ease, and other buildings for the happiness and convenience of a population of about 15,000 souls. The cotton and woollen manufactures are carried on here extensively, and the collieries in the vicinity augment and employ the popula- tion. Traffic is also much promoted by the transit of the Rochdale canal by this place. The benefice is a rectory in the diocese of Chester, the patronage belonging to the earl of Stamford, who is also lord of the manor. This place is one of the new boroughs enfranchised by the reform bill, and returns one member to parliament. The mayor is the returning officer. At the vil- lage of Fairfield in this parish is a Moravian settlement, in which the males are employed in spinning and weaving.

ASHUR, Tern, Heb. i. e. blessed, the son of Shem, and progenitor of the Assyrians.

ASH-WEDNESDAY, the first day of Lent, so called from the ancient custom of sprinkling ashes on the head.

ASHWELL (George), rector of Hanwell, son of Robert Ashwell, of Harrow, was born at London in 1612, and admitted in Wadham College, Oxford, in 1627, where he took his de- grees of A. M. and B. D , and was elected a fellow and tutor. He died at Hanwell, in 1693. lie wrote, 1. A discourse, asserting the received authors and authority of the Apostle's Creed. Oxon. 1653. 2. A double Appendix, touching the Athanasian and Nicene Creeds. 3. On the Gesture at receiving the Sacrament, 1663. 4. A Treatise concerning Socinus, and the Sociniati Heresy. 5. A Dissertation on the Church of Rome. Ox. 1618.

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ASIA, in geography, one of the great divi- sions of the earth, lies to the east and south-east of Europe. North and south it stretches from about 2►► to 77►► of north latitude. East and west it extends from about 26►► east, to 170►► west longitude. Its northern capes penetrate the ice of the polar regions, while its southern promontories approach nearly to the centre of the torrid zone. Its greatest length in this di- rection is taken at something more than 5200 English miles from east to west. The extent of this continent from the western shores of Natolia, to East Cape, in Siberia, has been accurately calculated at 8000 miles.

BOUNDARIES. ►►► It is bounded on the north and south by the Arctic and Indian Oceans ; on the east by the Pacific Ocean and the Chinese Sea ; and on the west by the Arabian gulf, the Isthmus of Suez, the Mediterranean, the Archipe- lago, the straits of Gallipoli, the sea of Mar- mora, the Bosphorus, and the Black Sea, whence to the Arctic Ocean the boundary which sepa- rates Asia from the east of Europe is not dis- tinctly ascertained. It is, however, supposed to be constituted by the rivers Don and the Karposca, one of its tributary streams rising near Sarepta, the course of which is to be continued by an imaginary line between the 40►►th and 50►►th of east longitude.

ISLANDS. ►►► The islands belonging to Asia are the Prince's Islands near Constantinople, Mity- lene, Scio, Samos, Cos, Rhodes, Cyprus, &c. in the Archipelago. Bahrein on the Arabian side of the Persian gulf

noted for its pearl fishery. The Laccadive, Maldive islands, and Ceylon in the Indian Ocean, contiguous to the peninsula of Ilindostan East of the Bay of Bengal lies the Indian Archipelago, consisting of numerous different groups of islands including the Anda- man and Nicobar islands, the Sunda isles, Su- matra, Java, and Borneo ; the Moluccas or Spice islands, Papua or New Guinea, Solomon's isles, Queen Charlotte's isles, and the New Hebrides; which bending in a circular direction to the south-east lead us to the two islands of New Zealand. New Holland, to the south of New Guinea, is tha largest island in the world, and contains an area larger than all Europe. East of the New Hebrides lie the South Sea islands. North of New Guinea are the New Carolinas and the Marianne or Ladrone islands. West of them are the Manillas or Philippine islands, and the Mindanas or Magindanas north of the Mo- luccas. Immediately above Luzon is the Isle of Formosa. East of Formosa in the Chinese sea lie the Lieu-Kieu, or Lutchu islands. Still far- ther northward we have Nison and other islands which together form the kingdom of Japan ; irom which proceed the Kuriles, consisting of numerous groups of little islands, extending in a chain from the isles of Japan to Cape Lo- patka, the southern extremity of Kamtschatka. v\ est of these on the coast of Tartary lie Sagha- Fien and other islands. A little distant from x amtscliatka. are the Aleutian or Fox islands,

proceeding in a curved line to the opposite ex- tremity of America. Nova Zembla is also bv some geographers considered as an Asiatic island, and lies to the north-west of Siberia. The islands of Ramisseram and Manar afe curiously connected by a singular ridge of rocks called Adam's Bridge. It is nevertheless proper to ob- serve that the best of later geographers, con- curring in the opinion of the learned president des Brosses, have separated a vast number of the islands, formerly considered as Asiatic islands, from that continent, and arranged them with a number of other countries and islands to the south of Asia, and in the Pacific Ocean, under the two divisions of Australasia and Polynesia. The grounds of the new arrangement are ex- plained with sufficient clearness by Mr. Pinker- ton in his introductory observations on the Asiatic islands.

SEAS and WATERS. ••• Besides the great oceans which wash three sides of this celebrated quarter of the globe, there are numerous gulfs, bays, and inland seas which have greatly contributed to its fertility and civilisation. The Red sea or Arabian gulf, called the Weedy sea by the Hebrews, forms the grand natural division between Asia and Africa. Its length calculated from the straits of Babelmandel to the isthmus of Suez, is about 1470 English miles, and its medial breadth 140 miles. It terminates at the upper extremity, in two great branches,

of which the western, by several miles the longer, is celebrated for the passage of the Israelites in the month Nisan, B. C. 1497, sup- posed to have taken place in about 29►► 40′ north latitude. The eastern branch extends a little above the parallel of Mount Sinai. The Arabian sea is an appellation applied to the vast bay, in- cluded between Arabia and Hindostan, termina- ting in the Persian gulf, to which it is united by a strait twenty-four miles wide. This gulf stretches to the north-west between Arabia and Persia, containing several islands, and terminates under the same meridian as the Caspian. The deep and extensive Bay of Bengal, spreading from the eastern coast of Hindostan to the op- posite shores of the Bui-man Empire, is separated from the last mentioned sea by the great pro montory of the Deccan. This bay forms a mag- nificent inlet to the central part of southern Asia. At its entrance, which is in the eighth de- gree of latitude, it exceeds 1 300 miles in width, and is 1000 miles from that parallel to its nor- thern extremity, beyond the mouth of the Ganges. The gulf of Siam, on the opposite side of the peninsula of Malacca, separates the terri- torial projection from the broad rectangular peninsula included in the southern part of the Burman empire. The gulf of Tonquin lies on the south of China; the Yellow sea between China Proper and the gulf of Corea. The straits of Corea eastward lead to the sea of Japan ; which stretches through about fifteen de- grees of latitude, and divides the Japanese islands from the shores of the continent. This sea de- creasing to the north terminates in a channel

leading to the sea of Okotsk which forms a spa- cious inlet to the south-eastern shores of Siberia, dividing Chinese Tartary from the peninsula of Kamtschatka. From the top of this sea pro- jects a large forked gulf through nearly three de- grees of latitude between two chains of magnifi- cent mountains ; one on the peninsula and the other on the continent. This gulf, and a bay on the opposite shore, render the conformation of the north-eastern part of Asia, peninsular. The sea of Anadir a few degrees south of Behring's strait forms another inlet to the north-eastern extremity of this continent. A few deep inlets are found on the shores of the Arctic Ocean. Passing from the White sea through the strait of Waygat, between Nova Zembla and the con- tinent, we enter the gulf of Cara, which is di- vided from the deep gulf of Oby, by a long peninsula. This forms a large opening reaching nearly to the sixty-fifth parallel. The river Yenisei eastward forms itself into a wide estuary before it falls into the sea. The Bay of Tai- nourskaia, which from its situation is sometimes called the North Gulf, is placed about the seventy-fifth degree of latitude near the northern extremity of the Old World. Numerous other inlets are found along the

coast from this point to Behring's strait. The Levant and the Archipelago lie on the western side of Asia, north of the Isthmus of Suez. The Euxine, or Black sea, forms the northern boundary of Anatolia, and is considered for the most part as a detached sea, being united to the Mediterranean only by ;i small strait, the Bosphorus of the ancients, so narrow as to be called the Canal of Constanti- nople.

The sea of Marmora, or Propontis, is consider- ed by some an inland sea, and is connected with the .V.gean Sea, or Mediterranean Archipelago, by a similar strait called the Dardanelles, or an- cient Hellespont. This sea, as well as the Black Sea and Mediterranean, is supposed to have been anciently detached. 'Ihe Caspian, celebrated for its fisheries, forms the separating boundary, which divides Russia from Persia and indepen- dent Tartary. It is of elliptical figure ; the major axis extending nearly 700 miles from north to south, and occupying a breadth of nearly 200 geographical miles. It appears to have extended much farther 11* rth than it does at present; espe- cially as the deserts in that direction are saline, and sandy, presenting the same kind of shells and marine productions as are found in the waters of the Caspian. Pliny and Strabo sup- posed this sea to be a gulf of the northern ocean; but it must always have been restricted by the western branch of the Uralian mountains, which passes to the north of Orenburg, reaching to the Volga. Its former union with the Lake Aral is highly probable from the marine deposits found in the intervening steppes, and from the Salt Lake still remaining between them; the midway eminence having been occasioned perhaps by the alluvion from the great rivers which How into the latter. The ('aspian is remarkable for its having no visible outlet for the discharge of its waters, not- withstanding the large rivers that now into it, and also from the evidences of a former superior elevation beniLr visible in the flanks of the moun-

tains forming its western coasts. M. Pallas imagined he recognised its ancient shores on the steppe, considerably higher than its present level ; and has given some particulars on the subject: M M. Engelhardt and Parrot, natural- ists from Prussia, who visited this sea in 1815, place the former shores of the Caspian about 350 feet higher than its present surface ; where they found gulfs and bays clearly defined. Its islands are mostly uninhabited ; its bed is uneven, abounding with shoals, between some of which a line of 450 fathoms has been unsuccessfully employed to reach the bottom. Its waters are less salt than those of the ocean; but have a pe- culiar bitter taste. It has no tides ; but is subject to violent storms. The striking peculiarity of this sea is the difference between its level and that of the Baltic and the Black Sea. From baro- metical observations made at Astracan, and at St. Petersburgh, during

a period of nine years, the Caspian appeared to be 306 feet below that of the Baltic : and from other barometical obser- vations, made between the mouth of the Kuban and that of the Terek, the surface of the Black Sea was found to be 105 metres, or 344.5 feet above the Caspian.

Lake Aral is about 200 miles in length, and seventy in breadth, and about an hundred miles distant from the eastern shores of the Caspian ; which, in some respects, it may be said to resem- ble : it extends in the same direction, and receives the waters of several rivers, but discharges none. The principal rivers that run into it are the Gi- hon, or Jihon; the Oxus, of antiquity, which enters the southern extremity ; the ancient Jax- artes, which reaches it from the east ; as also the Aujany, or Kizil Daria. The southern extremity of this lake is sprinkled with numerous islands ; and its supplies of water flowing from the south and the east, while those of the Caspian flow from the north and west, evince that they occupy part of the same natural basin. Baikal, another of the great lakes, or inland seas, of Asia, is situ- ated near the southern borders of Siberia, on the northern side of the great chain of mountains which divides that country from Mongolia. This lake, like the former, stretches in the same direction as the Caspian : is 350 miles in length, and nearly forty in breadth. Its waters are fresh and pellucid, presenting however the general appearance of a slight green tinge, and are usu- ally frozen from the beginning of December to the end of April. The depth of this lake varies from twenty to ninety fathoms ; but so clear are the waters, that the bottom becomes distinctly visible to the depth of fifty feet. It is subject to violent storms, and is often agitated without any visible cause ; whence it has received from the Russians the superstitious name of Svetoie MarZ, Holy Sea. This lake, although it receives the waters of several copious rivers, has no visible outlet except the lower Angara, the discharge from which is considerably inferior to the ac- cessions which it receives. If is almost sur- rounded by mountains, in which the existence of subterraneous fire is evident, from frequent shocks of earthquakes ; and the surrounding shores are distinguished by some remarkable phenomena.

It has been imagined by aiany geographers that the northern regions of Asia communicate with the continent of America. This however is a topic on which we have not sufficient data to ground an opinion. Captain Cook certainly traced the separation of these continents, par-

tially : The best information yet obtained on this particular is, that Behring's Strait divides them to about forty miles in breadth, having East Cape on the Asiatic side, and Prince of Wales Cape on the American. The depth of water is about thirty fathoms. Pursuing this strait northward, the Asiatic shore tends rapidly to the west, while the American proceeds nearly due north ; till, at the distance of four or five degrees, the two con- tinents are joined by one solid and impenetrable mass of ice.

MOUNTAINS. ††† The mountains of Asia have always been thought remarkable ; and, arrayed in all the horrors of perpetual winter, seem to frown in awful silence over the profusion of the vale.

A celebrated writer (M. Walckenaer, in his Cosmologie, p. 105,) observes, ' that the chain of mountains in which the culminating points of the highest level are found, always follows the direction of the greatest dimensions of the conti- nent ; and the inferior chains or heights, where we find the culminating points of the second or third-rate levels, also follow the direction of the greatest dilatations of the land, terminating that continent.' In Asia we have an illustration of these observations. The greatest dimensions of the continent are from east to west : and the country from the seventieth to the 100th degree of east longitude, and from the thirtieth to the fiftieth of south latitude, presents nearly a level area, from the different sides of which all the largest rivers flow into the sea. The culminating points of this extensive level, there is reason to believe, are the most elevated spots on the surface of the earth. The included area has been termed the table-land of Asia; although, since the revival of science, it has been inaccessible to European travellers, and therefore little known. The west- ern part of it is, however, mountainous ; and the eastern is a vast desert ; the Shamo of the Chi- nese, and the Kobi of the Tartars, exhibiting an extent of several thousand miles not watered by a single stream.

The Altaian mountains are the northern boun- daries of this area ; the Himalaya, on the south, divide it from Hindostan. On the east is that lofty range in which originates the great rivers of China ; and the west is bordered by the moun- tains which contain the sources of the Indus and Jaxartes. The inferior chains, diverging as radii from this centre, are Muz-dagh or Muz-zart, 1 snowy mountains,' on the north. The Tibetian mountains on the east, the Vind'hya hills and G'hats on the south, and the Alburg or Alborg on the west. The different ranges that traverse the territories of Persia, and unite its north-west provinces to Caucasus on the north, to Taurus and Libanus on the west and south, are connected with the Alburgian chain. Libanus is also con- nected by

the hilly country on the west of Jordan with the mountains of Arabia. The greater number of these inferior chains run from east to vest, in the same direction as the central range.

The extensive Altai', or KhattaT chain, stretches across the continent, under different names, lor more than 5000 miles, terminating, to the east, in Tchutskoi Ness and cape Lopatka. Of the highest

Eoints of this celebrated chain south of Russia, we ave no accurate information; but the inferior ranges reach far above the point of perpetual con- gelation, and are supposed to be equal to the Alps. The Himalaya chain of mountains south of the great central level, rears its loftiest summits 26,000 feet above the level of the sea ; and, according to some of our best geographers, upwards of 6000 feet above the celebrated Chimborazo of America, which towers over the entire Cordillera of the Andes. This southern chain is supposed to be of superior elevation to the northern. Mount Kailas, the Olympus of the Hindus, is supposed to exceed even the D'hola-giri in Ni- pal, which has been proved by admeasuremen to reach 26,400 feet above the level of the sea. Mount Caucasus, the next in point of altitude, is a vast range extending between the Euxine and Caspian seas. Mount Ararat rises south- west of the Caucasus; Libanus, Amanus, and Taurus, are all connected with this great chain ; and the latter mount diverging with various branches, occupies almost the whole area from the Euphrates to the sea of Marmora. The Uralian mountains, running from south to north, nearly as far as Nova Zembla, and called by the Tartars the girdle of the earth, are much colder, in consequence of a higher latitude ; but are in- ferior to the abcve in point of elevation.

Many volcanoes are in a constant state of ac- tivity throughout Asia ; and many which were volcanic in former times, are now extinct, although smoke *t|l| issues, and hot streams are frequently discharged from crevices in their sides The insular regions of Asia are likewise moun- tainous, and Adam's Peak, in Ceylon, has been a remarkable subject of tradition and fable. Volcanoes are also found in most of the Asiatic islands ; Gunong-api is one of the most active now known ; of that near Brambanan, in Java, a violent eruption is recorded in 1586. Ter- nate, the chief of the Moluccas, is nothing more than a volcanic cone, occasionally emitting flames from its summit ; and on its sides are large pits of melting sulphur. The isles of France and Bourbon are entirely of volcanic origin ; and the crater of the latter, while in a state of eruption, was visited by M. Bory de St. Vincent, who de- scribes, with great interest, the phenomena ob- served on that occasion.

RIVERS. ❖❖❖ From the mountains of Asia nu- merous rivers

descend, which serve greatly to re- fresh the surrounding country. The river Lena rises east of Siberia, near the lake Baikel, and flowing first north-east, then north, enters the Frozen Ocean, opposite the Borkhaya isles, after a course of 1900 miles. The river Enisei, rising in the Altaian mountains, flows into the same sea after a course of at least 1400 miles. The Oby, per haps the widest river in the Russian empire, rises about 51►► north latitude, and 87►► east longitude from the Alturnor of the Kalmaks, and Ozero Teletzkoi of the Russians ; and after a course of not less than 2000 miles, falls into the Obskaya Juba, or sea of Oby, within the arctic circle. The

river Irtish takes its rise in 46►► north latitude, and 92►► east longitude, in the northern barrier of the central plateau ; and after rolling its rapid stream as far as the 62d degree of latitude, and gathering numerous tributary waters in its course, falls into the river Obe, north of Samarou. The Amour, or Saghalia, which rises in the Kalcas country, is formed by the junction of the two rivers, Kherton and Argun ; and after traversing Chinese Tartary, and receiving several large rivers in its course, disembogues itself in the sea of Ok- hotsk, near the northern extremity of the channel of Tartary, completing a course of 1800 miles. The rivers of China chiefly rise in the eastern de- clivity of the Table Land. The Mekang, or Kamboja, and the Irawadi, or Ava. River, after descending from the plateau into the lower coun- try by long and winding courses, flows in a di- rect line to the Indian Ocean. The three most celebrated rivers that spring from this region are the Indus, Ganges, and Burrampooter. The Ganges river is held sacred by the inhabitants, and is the only one of the three of whose source we have any satisfactory information ; although Moorcroft tells us he found that of the Indus in 31►► 3′ north latitude, and 80►► 35′ east longitude. The two others rise in Thibet ; the Burrampooter waters the eastern parts of Bengal ; and the course of the Indus, to the south, has been known ever since the time of Alexander. TheOxusand tlie Jaxartes are two large strearrs, well known to the ancients, which rise from the western de- clivity of the central range ; the former emanating from the glaciers of Pushti-khur, is supposed an- ciently to have taken a north-westerly course; at present it proceeds almost due north, and falls into the lake Aral. The latter rises in the Belurdagh or Icy mountains, west of Afghuunistaun, and en- ters the eastern side of the same lake. The Tigris mid Euphrates flow to the south, and the Araxes to the east, watering a considerable extent of coun- try. The Jordan and Orontes fertilize and

beau- tify the vales of Syria and Palestine. Anatolia, though it lias neither broad nor rapid rivers, is refreshed by the division of innumerable smaller streams, which throw an enchanting ap- pearance over the surface of the landscape. The Halys, or Kizil Irma, arising from mount Taurus, after a course of 350 miles, falls into tin: Black Sea. But the llowang-ho, or Yellow Kiver, which waters the northern provinces of China, is perhaps the deepest and most rapid river of Asia. 'I his liver rises on the eastern de- clivity of the plateau, and rolls its vast stream vsiih unabated rapidity, to nearly 2000 miles. The Yang-tse-kiang, or son of the sea, is another noble stream of China.

Ci.iMAii.. ••• The climate of Asia is exceedingly various, owing to the different degrees of eleva tion. In the south-east the heat is excessive, and in the northern parts the cold is almost insup- portable. In Anatolia the central parts are colder than tin1 provinces of France, although the latter are ten degrees farther north. The cause of this is explained by Mr. Brown, who calcu- lates that tin- city of Kiv.-rmn is 7000 feet above the level of the >ea. This extraordinary altitude ot level, together with the ;,Teat body of snow on the neigh homing mountains, accounts lor the

extremes of cold in Persia and Tartary ; Arabia is considerably tempered, though within the tropics. China being mountainous has an agree- able climate ; while in India and the Burman empire, are sensibly experienced the full effects of a torrid zone.

VEGETABLES. ••• The stupendous mountains, im- mense plains, immeasurable forests, noble rivers, and wide spreading marshes of this quarter of the earth, together with the variety of the soils, and an extreme difference of climate, from the intense cold of Siberia, where mercury freezes, to the almost insupportable heat of the sandy deserts : from the eternal frost that reigns around the pole, to the sterility of the arid waste, including di- versified intermediate regions, always adorned with the blossoms of spring, enriched with the fullness of summer, or laden with the produc- tions of autumn, produce an unparalleled variety of vegetation, from the almost imperceptible moss that creeps along the Arctic shores to the hundred-stemmed banian that spreads its beauti- ful luxuriance beneath a tropical clime. Some parts of Asia are very sterile, and the inhabitants look for support to the surrounding sea, in which fishes and mollusca abound. Vegetable productions however, generally speaking, are nu- merous, and differ according to the climate under equal circumstances of soil and irrigation. The central and western parts produce all sorts of grain which are common in Europe, and culi- nary vegetables in the highest

perfection. The tropical and southern regions afford gums, spices, medicinal roots, and extracts unknown in colder climates. Several genera of plants are peculiar to New Holland and the adjacent islands. The tea-tree is found chiefly in the central regions ; and the bread fruit and bamboo, which are natives of Asia, are useful in every part of domestic economy.

MINERALS. ††† This division of the globe con- tains the precious metals in great abundance : gold is washed down the rivers of Asia Minor. Arabia still supplies it in its utmost purity ; and in Assam, Celebes, and Borneo, the gold is said to be native. Mount Sipylus has been celebrated for the production of silver, and the mines of Tokat supply both silver and copper. Great quantities of tin are found in the island of Ban* ca; lead and iron in various parts of the continent ; precious stones are found in great variety throughout the whole of Asia; fine diamonds in Golconda; rubies in Ceylon, topazes in Siberia; and the most beautiful pearls in the straits of Manaar and the Bah- rein islands; the corundeum and other va- luable stones are peculiar to these countries. Singular remains of antiquity are also dug out of the earth ; huge tusks of a species of animal now unknown, and even the entire animal itself, is found in the islands of the Frozen Ocean.

ANIMALS. ††† Asia contains a great variety of land and marine animals, from the minute insect that flutters in the solar beam, to the stupend- ous elephant, the ferocious tiger and the majestic lion. The most valuable are indigenous to this quarter of the globe. The horse is found on the northern confines of Persia in his native slate,

hut exhibits none of the symmetry, powers, or pro- portions, to which he arrives through a course of domestic training. The camel is found here in his most perfect growth, and performs journeys which to the horse would be fatal. The ele- phant is trained to all sorts of service. The sea*- otter, so valuable for his fur, and the whale are common, and supply a considerable source of wealth to the inhabitants.

‘The population of Asia,’ it has been observed, rby no means equals those expectations which its history would naturally inspire,’ owing to the ravages of war, and the influence of despotic governments, which always impose an effectual check upon the increase of population. Never- theless, where the governments are mild and beneficial, as in British India, the reverse is the fact. China in particular, owing to a

long free- dom from foreign and domestic war, is said to exhibit the amazing population of five hun- dred millions ; and even this, according to some geographers, is below the real amount.

Asia, however, being the scene of human origination, is still peopled by numerous indige- nous tribes, and presents an ample field for the study of man, in all the stages of his progress from barbarism to civilisation. The variety ob- served in the appearance of the natives is proba- bly the effect of difference of climate, aliment, and religion. The Samoied tribes, New Hollanders, and inhabitants of Andaman, are of diminutive size. The people of Jesso and the Rurile islands, have uncommonly large beards, and an unnatural profusion of hair all over their bodies. The Tartars and Chinese are known by the pe- culiar figure of their faces ; the latter particu- larly by their oblique contracted eyes. There is, however, reason to believe they were anciently -.derived from one common origin, and bore a great resemblance to each other.

HISTORY. ††† Noah is said to have settled in Asia, immediately after the deluge, near the bor- ders of the Euphrates, and to have peopled the whole continent. The posterity of Shem occu- pying the central regions ; Japhet the northern ; and Ham the southern. Javan and his descen- dants, Ashkenaz, Dodanim, Tarshish, Elisha, Togermah, and Hipbath, are supposed to have been the ancient inhabitants of Asia Minor. The Canaanites and Amalekites were the people of Syria and Arabia Petraea. Modern writers have referred the present natives of Asia to those dif- ferent stocks the Hebrews, Indians, and Tartars, the propriety of which will appear from their make, features, and languages. There are, how- ever, some large tribes, as the Malays and abori- ginal negroes, which cannot be referred to either of these classes, as also the mountaineers of Cauca- sus, and the inhabitants of northern Siberia. Mr. Pinkerton observes, that the population of Asia is allowed by all authors to be wholly primitive and original ; with the exception of the Tshukt- shis, whom the Russian historians suppose to have passed from the opposite coast of America, the colonies that have migrated from Russia to the northern parts as far as the sea of Kamtschatka, the well-known European settlements, and a few others. Asia certain!ˆ presents an amazing origi- nal population. We add the following table of

the nations and languages in Asia, as calculated to give the reader a tolerably accurate idea of this interesting subject of enquiry.

Table of the Nations and Languages in Asia.

1. Assyrians. ⁂ Assyrians, Arabians, Egyp- tians.⁂ Chaldee, Hebrew, &c.

2. Scythians. ⁂ Persians, Scythians intra et extra Imaum, &c. Armenians. ⁂ (The Parsi and Zend are cognate with the Gothic, Greek, Latin, according to Sir William Jones. Indian Dissert, vol. i. p. 206. The Pehlavi is Assyrian or Chal- daic. Id. 187, 188. 206.)

3. Sarmats. ⁂ Medes and Parthians. ⁂ Geor- gians and Circassians.

4. Seres and Indi. ⁂ Hindoos, northern et southern, &c.

5. Sinae. ⁂ Chinese and Japanese. ⁂ These have a Tartaric form and face; they are probably highly-civilised Tartars, Mongoles, or Mand- shurs.

Bfiritwic Nations from north to south, and ac- cording to the degrees of barbarism.

6. Samoyedes, Ostiaks, Yurals, &c.

7. Yakutes. ⁂ Yukagirs. (Expelled Tartars, according to Tooke and Lesseps.)

8. Koriaks. ⁂ Tshuktshis. (From the opposite coast of America. Tooke's Russia. The Yuka- girs are a tribe of the Yakutes, around Yakutsk, and both are expelled Tartars. Tooke's View, ii. 80. Lesseps, ii. 312.)

9. Kamtskatdales. ⁂ Kurillans. ⁂ (These resem- ble the Japanese.)

10. Mandshures or Tunguses. ⁂ Lamutes. ⁂ (Ruling people in China.)

11. Mongoles. ⁂ Talmuks ⁂ Soongares, Tun- gutes, Buraets, &c.

12. Tartars or Huns. ⁂ Turks, Khasares, Uzes, and Siberians. ⁂ Nogays, Bashkirs, Kirghisikai- zaki or Kirghise Kaizaks, Teleutes.

After the destruction of Attila's swarms, and the effects of unfortunate inroads, the Huns be- came subject to the Mongoles, who under Zingis, or Chingis khan, Timur, &c. consituted the su- preme nation in

Asia.

The great share of population which Europe has received from Asia will appear from the fol- lowing brief statement.

Primitive Inhabitants.

1. Celts. ††† Irish, Welsh, Armorican. ††† Erse, Manks, Cornish.

2. Fins (chief god Yummala). ††† Finlanders, Esthonians, Laplanders, Hungarians, Permians or Biarmians, Livonians, Votiaks and Chere- misses, Vogules and Ostiaks.

Colonies from Asia.

3. Scythians or Goths (Odin). ††† Icelanders, Norwegians, Swedes, Danes, Germans, English. ††† Swiss, Frisic, Flemish, Dutch.

4. Sarmats or Slavons (Perune). ††† Poles, Rus- sians, Kaizaks. ††† Heruli, Vendi, Lettes.

The inhabitants of France, Italy, and Spain, are also of Asiatic origin ; and speak corrupted Roman, which, like the Greek, is a polished dialect of the Gothic, according to Sir William Jones, and other able antiquaries. The Heruli

Vendes, and Lettes, used mixed and imperfect dialects of the Sclavonic.

Besides these numerous original nations, the Malays and Asiatic islanders constitute another large and distinct class of mankind, with a pe- culiar speech, jn the south of the extensive con- tinent of Asia.

GOVERNMENTS. ††† The people of Asia in their civil state consist of families occupying the same territory, but acknowledging no chief or governor; of independent tribes associated under one com- mon potentate as the Arabs and Tartars, and therefore called equestrian nations ; or of king- doms ranged under established monarchies, of which the chief are Independent Tartary, China, Thibet, with its subsidiary provinces, the Japa- nese empire, &c. The Asiatic governments are mostly despotic, and those established by Euro- peans are nearly of the same description. In some of the political

institutions of Asia there is, however, the rude image of a popular administra- tion ; in others the influence of women is ad- mitted ; whilst in some few the prince is guided in all public measures by the advice of his nobles Were the principal governments in Asia to be arranged according to their natural and political importance, they would probably succeed each other in the following order : China in the first place, and after this successively Persia, Turkey, and Russia ; the precedency of the numerous other states can hardly be ascer- tained.

RELIGION. ††† The most common religion of Asia is idolatry. The doctrines of Mahomet prevail to a great extent ; but their influence is upon the decline, owing in a great measure to the popularity of the Wahabees. Christianity is now generally rejected in Asia, and in many countries even where it was formerly tolerated, as in China and Japan, The sacrifice of animals, and even of human victims, is very frequent; and a spirit of the most degrading superstition seems to reign throughout the vast regions of this division of the globe. Penance is carried beyond even the bounds of probability. Imposing upon himself perpetual silence, gazing on the sun till his eyes become fixed in their sockets, lacerating his body with sharp weapons, and other practices still more shocking to humanity are, through vast regions, considered among the most acceptable services which a man can ofl'er to the deity. Polygamy is generally practised, and sometimes even a plurality of husbands are allowed to a single woman: fe- males of rank also, betrothed at an early age, cohabit not with their husbands but with other men without reproach. Infanticide is common; and burning the living wife with the body of her dead husband, though now rendered a voluntary act on the part of the woman, has by no means sub- sided. Many of the tribes are complete canni- bals, and others are little better.

CiiAHACii.u or INHABITANTS. ††† The inhabi- tants of Asia, violent in their dispositions, are generally ferocious, vindictive, and cruel. The tender ties of nature are little felt. Children are openly sold by their parents without even the apology of necessity. Wives are sacrificed by their husbands even on the bare suspicion of in- fidelity ; and in the most civilised state after an

unfortunate contest for the crown, the unsuccess- ful prince, if not executed, invariably has his eyes put out, though the rival should be his own brother.

The ancient geography of Asia cannot be con- templated without feelings of excitement, which the deep gloom of her present degraded

and idolatrous condition are unable to suppress; feelings unknown in the contemplation of any other portion of the globe. Asia was the parent of nations, the cradle of civilisation and science ... - here occurred most of those remarkable transac- tions recorded in the scripture history ... here arose successively the Babylonian, Assyrian, and Per- sian empires ... and here the Christian religion was first planted for the salvation of man. Much of the celebrity of this quarter of the globe is un- doubtedly owing tp its climate, and the numer- ous gulfs, bays, and navigable rivers with which it abounds opening early facilities for commerce, &c.; but still more perhaps is to be attributed to the native genius and sanguine temperament of its inhabitants.

The origin of the name of Asia has given rise to some curious speculations and disquisitions. The Greeks deduced it from Asia, the fabulous daughter of Oceanus and Thetis. Others have derived it from Asius, king of Lydia. Bochart traces it to the Hebrew or Phoenician word Asi, signifying middle, which is, however, unsupported by historical evidence. According to Homer, Herodotus and Euripides, it early designated a country of Lydia, where ancient geography men- tions a tribe of Asiones and a city of Asia. The name, however, was gradually extended by the Greeks from a single province to the whole of Asia Minor, and afterwards to other regions as they were discovered successively ; in the same manner as Allemagne is applied by the French to the whole of Germany ; and as Italia, an ancient canton in Calabria, is now denominated the peninsula of Italy. Since, however, much perplexity has arisen among authors by the di- verse acceptations of the term Asia, so as to ren- der it extremely difficult for their readers to know what region was distinctly understood by that appellation ; and since it is not easy to reconcile the apparent inconsistency between sacred and profane history, as to the provinces which it comprised, we present the following observations for the satisfaction of the reader : ... The ancient geographers divided the vast continent that was known to the Greeks and Romans under the word Asia, first into Greater and Lesser Asia. The latter, also called Asia Minor, was thought to be a peninsula terminated by a line drawn from Sinope to the line of separation between highland and lowland Cilicia (Aspera and Cam- pestris). It comprehended a great number of provinces; but that which included Phrygia, Mysia, Caria, and Lydia, was denominated Asia Proper, or Asia properly so called. Cicero, enumerating the regions contained in Asia Pro- per, makes no mention of TEolis or lolia, though undoubtedly a district of it, as being compre- hended partly in Lydia and partly in Mysia. Lydia, beside the inland country commonly known by that name, contained also Ionia, lying

on the sea-side, between the rivers Hermus and

Moeander; and yEolis, extending from Hermus to the river Caicus, or to the promontory Lec- tum, the ancient boundary between Troas and Ihe sea-coast of the Greater Mysia. Accordingly, Asia Proper comprehended Phrygia, Mysia, Ly- dia, Caria, lEolia., and Ionia. This tract was bounded, according to Ptolemy, on the north by Bithynia and Pontus, extending from Galatia to Propontis; on the east by Galatia, Pamphylia, and Lycia ; on the south by part of Lycia and the Rhodian sea ; on the west by the Hellespont, by the JE.gea.n, Scarian, and Myrtoan seas, occu- pying the space between the thirty-fifth and forty-first degree of north latitude, and extending from 55►► to 62►► of longitude.

As Asia Proper is but a part of Asia Minor, so the Lydian Asia is only a part of Asia Proper. Asia, in this acceptation, comprehends Lydia, ./ Eolia, and Ionia ; and is that Asia whereof men- tion is made in the Acts and the Apocalypse. Aristotle tells us that Smyrna was at first pos- sessed by the Lydians ; and Scylax Coryandensis reckons it among the cities of Lydia, as also Ephesus, Sardis, Philadelphia, and Thyatira, are reckoned by Ptolemy among the cities of Lydia, as is Laodicea by Stephanus. Steph. de Urbid. That in ancient times Lydia was called Mseonia, and the Lydians, Mseonians, is manifest from Herodotus, Diodorus Siculus, Dionysius Afer, Strabo, Pliny, Stephanus, and others ; and that Maeonia was called Asia is no less plain from Callinicus, who flourished before Archilochus, from Demetrius Scepsius, contemporary with Crates, and Aristarchus the grammarian, from Euripides, Suidas the great etymologist, &c.; besides which it is expressly affirmed by the ancient scholiast of Apollonius Rhodius, that Lydia was formerly called Asia, and hence Lydia has been said to have a better claim to the name of Asia, than any other part of that continent. Ulterior (or Greater) Asia comprehended the remaining part of that continent. Its great di- visions were Iberia, Colchis, and Albania, be- tween the Euxine and Caspian seas ; Mingrelia, Georgia, and Daghistan Armenia, which retains its ancient name. Media and Persia included in modern Persia. Bactriana and Margiana ; the Merri, Balkh, and Bokhara of the Turks and Tartars ; Syria, Mesopotamia and Assyria, the Biladu'sh isham, Diyar bekr, and Abjonirah of the moderns. Hyrcania, Persia, and Susiana, the Irak and Fars of the present day. Judea, Babylonia, and Chaldea; the southern part of Syria and Pachalic of Bagdad. India the country between the Indus and Ganges, and Syria the remoter regions to the north-east.

ANCIENT GEOGRAPHY. ❖❖❖ The earliest accounts of this vast portion of the globe are those con- tained in the Scripture, which are, however, ex- tremely imperfect. Moses has enumerated the different parts of the earth with which the He- brews were familiar ; but, in consequence of the names by which he designates the places differ- ing from other authors, great obscurity hangs over the whole of his geography, except that which relates to the land of Canaan itself, and the states immediately contiguous. He appears to have been well acquainted with Asia Minor, Armenia, Media, Persia, and Arabia. The Gog

and Magog of Scripture seem to have been the inhabitants of Caucasus. Riphath seems to re- fer to the Riphaean mountains; and Rosh refers to the ancient Rossi, from whom were descended the Russians of the present day. The more northerly parts of Asia were evidently unknown to the Greeks. Herodotus considered the Pha- sis in Colchis as the line of separation between Europe and Asia, whilst others believed the Don, or Tanais, as the proper limit. The mountains north of India were the utmost boun- dary of their knowledge with respect to that part of Asia. The Ganges and the Indian Ocean they considered the eastern and southern limits ; and the Red Sea, with the isthmus between it and the Mediterranean, brought them back to the western or nearest side. Many geographers included Egypt in Asia, making the Catabathnus, or western side of the valley of the Nile, the separation between Asia and Africa ; whilst others considered the Nile itself as the line of separa- tion. Strabo and Pliny supposed the northern end of the Caspian sea communicated with the ocean.

PROGRESSIVE GEOGRAPHY. ❖❖❖ At the time when Asia was first mentioned in history it probably contained more powerful empires than it does at present, the Chinese excepted. Alexander the Great carried his arms beyond the Indus. The Sinae, or eastern Indians, were known to Ptolemy in the second century, and also Taprobane or Ceylon, with Jabadia, the Javia dwipa of the Indians, and the Java of our maps. Alfred, king of England, deputed a mis- sion to the shrine of St. Thomas on the coast of Babelmandel ; and the crusades of Syria and Palestine, in the eleventh and twelfth centuries, led to an intimate acquaintance with that part of Asia. Shortly after the passion for crusades had subsided, a spirit of commercial enterprise was excited, and merchants, from several parts of Europe, penetrated into the interior. The monks, animated with a desire to convert the heretics, departed in great numbers for Asia; a mission deputed from the pope to the court of the Moguls, and another from Louis of France to the same princes contributed on their return, by the pub- lication of their travels, to enlarge the ideas of Europeans with respect to that part of

the world. Marco Polo, a Venetian merchant, with his com- panions, spent twenty-six years in travelling either as merchants, or as agents of the Great Khan of the Tartars, during which period they for the first time disclosed the great desert of Gobi, and made great additions to our knowledge of oriental geography, particularly in the north of Asia. Such indeed was the ignorance of the age in which he lived, that his descriptions of the magnificence and wealth of the Asiatics were regarded by his contemporaries as the effusions of romance. Subsequent information has neverthe- less raised him to distinguished credit, and his work is now considered one of the most curious monuments we possess of the state of Europe and Asia in the middle ages. In the fifteenth century improvements in navigation, and the spirit of commercial enterprise, facilitated the progress of discovery. A passage was discovered to India round the Cape of Good Hope, and the

Knglish, Dutch, Spanish, and Portuguese settled several establisliments on the Asiatic coast, from which they undertook still more distant expeditions into the interior, and opened an intercourse with China, Japan, and Ilindostan. The British go- vernment sent out repeated expeditions under the conduct of Cook, Byron, and others, to make discoveries in the Southern Ocean ; and the em- press Catharine about the same time directed scientific travellers to explore some of the central parts of her Asiatic dominions. Geography by these means received many splendid additions, and our knowledge of different and distant parts of the globe illustrated many important and in- teresting points in the physical and natural his- tory of southern Asia. Van Diemen's Land and New Holland were explored by captain Flinders. The same voyager also observed that there is no river deeply penetrating into the latter island ; and that the gulf of Carpentaria is a basin of vast extent studded with islands. The expulsion of the Dutch from their insular settlements has also led to an intimate acquaint- ance with those territories, all knowledge of which they endeavoured to conceal. Travellers from British India have greatly increased our in- formation with respect to the neighbouring re- gions. A mission to the court of Persia has thrown a light on the geography and policy of that distinguished empire, and shown how de- fective our information was with regard to Ori- ental nations. A field of discovery, however, yet remains to complete the geography of this part of the world. The origin, course, and pro- gressive increase of some of its greatest rivers are unknown ; scarce any of its internal seas, except the Caspian, have been the subjects of actual survey ; and its mountains, perhaps the most stupendous masses on the globe, present a wholly unexplored

field of enquiry. Siberia is but little known ; and even of the coasts no perfect sur- vey lias ever been taken. The whole extent of country from the Caspian to the sea of Okhosts, including a superficial area of many thousands of miles, is occupied by nations and people whose names are scarcely known. Little more than the borders of Arabia is known to Kuropeans. The interior regions of Tartary and the northern part of China require much illustration. The same remark may be applied to India and the interior of Aniee the civilization of
 ऽ ऽnius of I'fter the (ireat; but natural history of that region rto dt-sciiln-d in a manner which On the whole we are

looking for superior lights. The morning which dawned so many centuries ago has hitherto ad- vanced but slowly ; and we hail the approach of a brighter period, which is not very remote, when the sun of discovery shall burst the clouds in which he has been enveloped, and irradiate the geography of this interesting section of the globe.

The propagation of Mahommedanism, and the exterminating wars by which it was attended, effected a complete revolution by the states of this continent. The Greek empire sunk in the arms of the victorious Moslems. The caliphs for a time prevailed to a considerable degree over their Constantinopolitan predecessors, and were in their turn humbled by the Tatarian Jengere and Temur. The latter were finally absorbed in the overwhelming power of the Turks who now, having no formidable enemy to oppose, overran the west of Asia, and in the middle of the fifteenth century extinguished the Eastern Empire, and laid the foundations of those great divisions of this continent which subsist at the present day.

With respect to the modern divisions of Asia, we observe that the Russian empire extends from the Uralian mountains to the sea of Kam- schatka, and from the Arctic Ocean to the pa- rallel of fifty degrees north latitude. It is inna- habited by Tartars, Mongols, Mantchirs, &c., under the general name of Siberia. The Asiatic part of the Ottoman Empire, consisting of Ana- tolia, Syria, and Diyar-Bekr, the ancient Meso- potamia, lies between the Black Sea and the Mediterranean ; the canal of Constantinople and the Tigris ; Arabia lies to the south of the latter country; and Persia lies east of the Tigris, as far as the Indus, between the Caspian Sea and the Persian Gulf. East of the Caspian, as far as east longitude 100 degrees, between Russia and Persia, are the independent Tartars. From the above meridian, to the Sea of Japan, lies eastern or Chinese Tartary, inhabited by the Mantchirs who subdued China in the middle of the seven- teenth century, and whose original country forms at present the northern part of that empire. Thibet is on the north side of the Himalaya mountains, the Alps of

Hindostan. South and east of China lies the peninsula of India, beyond the Ganges. West of the Burman empire is India on this side the Ganges, comprehending Kashmir, Hin- dostan, and the Deccan. The islands are under various governments, and have been made the seat of various commercial establishments by the different powers of Europe, of which an account will be given under their names separately.

ASIA MINOR is the western portion of Asia, having the Black Sea on the north, the Eu- phrates on the east, and the seas Mediterranean and Marmora, with the Hellespont and Bos- phorus, on the west. It is of an irregularly ob- long figure, 1000 miles from east to west, and 400 or 500 from north to south, variously in- dented by bays and inlets, and having a few peninsulas and promontories. Its streams and rivers are numerous but not large ; the interior abounding with saline lakes, crystal fountains, arid hot-springs, whose waters have been cele-

brated for their medicinal qualities. The cli- mate is tine, and its valleys warm, washed in some places by mountain torrents, shaded by the mountains, and temperedl>y cool and refreshing breezes from the sea. Long ranges of hills, from which branches diverge in all directions, isolated rocks and mountains crowned with trees and verdure, delightfully change the pros- pect ; while the luxuriance of the soil and abun- dance of grain, fruits, and every species of vegetation, render subsistence comfortable and happy. Earthquakes are, however, frequent, overwhelming entire cities and their inhabitants ; and the plague sweeps away its thousands. The whole country is subject to the Turkish government, and inhabited chiefly by Mahom- raedans and Christians. It is divided into se- veral large provinces, of which Natolia and Caramania are the most important. It contains

the cities of Angora, Bursa, Smyrna, and Tocat besides the ruins of many others which nave been highly celebrated in history. Thesoutnern shore of Caramania is overspread with remainˆ of Grecian antiquities; and Natolia abounds with ancient curiosities and columns, having been the theatre of important events from the earliest history. The several islands in the Archipelago, belonging to this country, are aiso highly classical and important.

This part of Asia is the most interesting te- gion of the earth, the parent of education, arts , and arms ††† the cradle of mythology, poetry, and eloquence ††† the favorite abode of the muses ††† the soil in which lay the ancient roots of genius, which have since struck round the world, beau- tified the moral wastes, and still luxuriantly ex- pand their blossoms in almost every clime of the civilised globe.

ASIAGO, one of the seven Venetian com- munes in Upper Italy, in the midst of mountains, in the north of the circle of Vicenza, and now be- longing toAustria. The inhabitants are descend- ants of the ancient Germans, and lead a purely pastoral life. They enjoyed great privileges under the Venetian government, and have more than once defended the passes of their country against the inroads of a foreign foe. The large town of Asiago is the seat of the court of jus- tice for all the communes; has a castle, and 11,000 inhabitants. It is twenty miles north of Vicenza.

ASI'DE. On side. See SIDE. And he took him asidis fro the people and puttede hise fingris into hise eeris and he spette and touchide his tonge. Wyclif. Mark ch. vii.

FRAN. Sir, he may live. I saw him beat the surges under him, And ride upon their backs ; he trod the water, Whose enmity he flung aside, and breasted The surge most swoln that met him ; his bold head 'Bove the contentious waves he kept, and oar'd Himself with his good arms in lusty strokes To the shore ; that o'er his wave-worn basis bowed. Shakspeare's Tempest. Thus (she pursu'd) I discipline a son, Whose uncheck'd fury to revenge would run ; He champs the bit, impatient of his loss, And starts aside, and flounders at the cross.

Dryden's Hind and Panther.

It is the custom of the Mahometans, if they see any printed or written paper upon the ground, to take it up and lay it aside carefully, as not knowing but it may contain some piece -of the Alcoran. Addison. ASILUS, in entomology, the hornet-fly, a genus of insects belonging to the order of in- secta diptera. It has two wings; and a homy, strait, two-valved, beak. There are seventeen species of this insect. Many of them wound in a very painful manner, and are particularly troublesome to cattle in low meadows ; others of them are quite harmless.

ASILUS, in ornithology, the name used by many for the luteola, or" regulus non cristatus, an extremely small bird, common among wil-

lows.

ASINARII, an appellation given, by wa>- of VOL. ITT.

reproach, to the ancient Christians, as well as Jews, from a mistaken opinion, among heathens, that they worshipped an ass.

ASINESIA, in medicine, an immovableness of the body, or in any part of it, as in apoplexy, palsy, &c.

ASINIUS LAPIS, a name given by some writers of the middle ages, to a stone, said to be found in those places frequented by the wild ass. See BEZOAR.

ASINUS Piscis, in ichthyology, a name given by some to the eglefinus, or common haddock, called also onos.

ASIO, in ornithology, a name given by Al- drovandus and others, to the otus, or lesser horn owl.

ASISIA, or ASSISIA, a town of Liburnia, now in ruins, but exhibiting many monuments of antiquity. It is the Asseria or Assesia of Pliny, and is now called Podgraje. See ASSE- RIA.

ASISIO, or ASITIO, a city of the Pope's ter- ritories in Italy, situated about sixteen miles east of Perugia, and eighty north of Rome. It is seated on a mountain, and is said to have been the birth-place of St. Francis.

ASK,) Ang.-Sax. secan, ascecan, to seek,

ASK'ER. $ to ask ; ascean, to seek, to ask. To seek, enquire, demand, require, petition, beg.

As it is a great point of art, when our matter re- quires it, to enlarge and veer out all sail ; so to take it in and contract it, is no less praise, when the argu- ment doth atk it. Ben Jonson.

A lump of ore, in the bottom of a mine, will be stirred by two men's strength ; which, if you bring it to the top of the earth, will ask six men to stir it.

Bacon.

When thcu dost ask me blessing, I'll kneel down, And ask of thee forgiveness. Shaktpeare.

We have nothing else to ask; but that, Which you deny already : yet will ask ; That, if we fail in our request, the blame May hang upon your hardness. Id.

In long journeys, ask your master leave to give al►► to the horses Swift.

Let him pursue the promis'd Latian shbre, A short delay is all I ask him now ; A pause of grief, an interval of woe. Dry den.

F.

ASK 50

Ash of the learn'd the way ; the learn 'd are blind ; This bids to serve, and that to' shun mankind ; Some place the bliss in action, some in ease, Those call it pleasure, and contentment these.

Pope. Eisay on Man.

Upon my asking her who it was, she told me it was a very grave elderly gentleman, but that she did not know his name. Addison.

ASKAH, a town of Hindostan, in the nor- thern circar, Cicacole, thirty-six miles north by west of Ganjam.. It stands in N. lat. 19►► 44', E. long. 84►► 55'.

ASKANCE', \ Supposed to be from as ASKAUNCE', f chined, participle of the Dutch ASKAUNT', /verb schuinen, to cut awry. ASQUINT'. 3 From whence probably are squint and asquint ; sideways, oblique.

And wrote alway the names, as he stood, Of alle folk that gave hem any good, Askaunce that he wolde for hem preye.

Chaucer. The Sempnour't Tale. Some say, he bid his angels turn askance The poles of earth, twice ten degrees and more. From the sun's axle : they with labour push'd Oblique the centric globe. Milton.

Zelmane, keeping a countenance askance, as she understood him not, told him, it became her evil.

Sidney.

His wannish eyes upon them bent atkance ; And whon he saw their labours well succeed, He wept for rage, and threaten'd dire mischance.

Fairfax.

While thus their worke went on with lucky speed, And reared rammes their horned fronts aduance, The ancient foe to man, and mortall seed, His wanuish eyes vpon them bent askance.

Fairfax's Tasso, book iv. At this Achilles roll'd his furious eyes, Fix'd on the king askaunt ; and thus replies, O, impudent ††† Dryden.

Since the space, that lies on either side The solar orb, is without limits wide ; Grant, that the sun had happened to prefer A seat askaunt, but one diameter : Lost to the light by that unhappy place, This globe had lain a frozen loansome mass.

Blackmore.

Through his bright disk the stormy weapon flew, Transpierc'd his twisted mail, and from his side Drove all the skin, but to his nobler parts Found entrance none by Pallas turn'd askance.

Coieper's Iliad, book xi. p. 195.

††† Panic-fixed he stood,

His seven-fold shield behind his shoulder cast, And hemm'd by numbers with his eyes askant, Watchful retreated. Id. book xi.

ASKERON, a place five miles from Don- caster, noted for a medicinal spring. It is a strong sulphureous water, slightly impregnated with a purging salt. It is recommended internally and externally in strumous and other ulcers, scabs, leprosy, and similar complaints. It is good in chronic obstructions, in cases of worms, &c.

ASKKW. Dan. skiavl, crooked; from skia- t'tr, to twist.

For, when ye mildly look with lovely hue, Then is my soul with life and love inspir'd : But, when ye lowre, or look on. Die askew, Then do I die. Spenier,

Then take it. Sir, as it was writ; Nor look askew, at what it snith : Thi- rc's no petition in it. Prior.

ASL

This said, her spear she push'd Against the ground. And, mounting from it with an active bound, Flew off to heaven : the hag with eyes askew Look'd up, and mutter'd curses as she flew,

Adduon. Ovid's Met. book ii.

ASKEW (Anne), an English lady, the daughter of Sir William Askew, of Kelsay, in Lincolnshire. She was born at her father's seat about 1520; and received a liberal educa- tion. Early in life she was married to a Mr. Kyme, contrary to her own inclination; and, being harshly treated by her husband, she went to the court of Henry VIII. to sue for a sepa- ration. Here she attracted the particular notice of such ladies as were attached to the reforma- tion : on this account she was arrested ; and, acknowledging her religious principles, was sent prisoner to Newgate. After having been put to the rack with savage cruelty in the Tower, she was burnt in Smithfield, along with her tutor, and two other persons of the same faith, in 1546. Her letters in Fox and Strype show her to have been an accomplished and pious woman.

ASKEYTON, a market town of Limerick, seated on the river Deel, 110 miles from Dub- lin; noted for its castle, built by the earl of Desmond, and for its beautiful abbey.

ASLA'KE. Ang.Sax. aslacian, to abate; to resolve, to unbend, to reduce to its compo nent parts, to slake, or slacken.

But this continual, cruel, civil war No skill can stint, nor reason can aslahe.

Spenser. Whilst, seeking to aslake thy raging fire,

Thou in me kindlest much more great desire. Id,

But suche as of ther golde ther only idoll make, Noe treasure may the rauyn of their hungry hands culake. Surrey.

ASLAN, or ASLANT, in commerce, a name given to the Dutch dollar in most parts of the Levant. The word is also written corruptly, asselani. It is originally Turkish, and signifies a lion, which is the figure stamped on it. The Arabs, taking the figure of a lion for a dog, called it abusketh. It is silver, but much al- loyed, and is current for 115 or 120 aspers. See

A.SPER

ASLANT. On slant. See SLANT. There is a willow grows aslant a brook, That shews his hoar leaves in the glassy stream.

Shakspeare. Hamlet. He fell ; the shaft

Drove thro' his neck, aslant : he spurns the ground , And the soul issues through the weapon's wound.

Dryden.

Lo! now apparent all

Aslant the dew-bright earth and coloured air. He looks in boundless majesty abroad, And sheds the shining day that burnished plays On rocks, and hills, and towers, and wandering

streams,

High gleaming from afar. Thomson.

ASLEE'P. On sleep. See SLEEP.

This false knight vpou delaie Hath taried till thei were asleepe, As he that woll time kepe His deadly workes to fulfille.

Gower. Con. Am. book ii. How many thousand of my poorest subjects Are at this hour asleep ! O gentle sleep, Nature's soft nurse, how have I frighted thee !

Shakspearo

ASO 51

The diligence of trade, and noiseful gain, And luxury, more late asleep were laid : All was the night's ; and, in her silent reign, No sound the rest of nature did invade. Dryden. For gorg'd with flesh, and drunk with human wine, While fast asleep the giant lay supine Snoring aloud, and belching from his maw His indigested foam and morsels raw : We pray, we cast the lots, and then surround The monstrous body, stretch'd along the ground.

Id. Virgil, jEneid iii.

There is no difference, between a person asleep, and in an apoplexy ; but that the one can be awaked, and the other cannot. Arbuthnot on Diet.

ASLOPE'. On slope, or slip. See SLOPE.

For many times I have it seen, That many have begyled been, For trust that they have set in hope, Which fell hem afterward aslope. Chaucer. Romaunt of the Rose, fol. 137. c. 1. Set them not upright, but aslope, a reasonable depth under the ground. . Bacon.

The curse aslope

Olanc'd on the ground ; with labour I must earn My bread! what harm? Idleness had been worse; My labour will sustain me. Milton*

The knight did stoop,

And sate on further side aslope. Hudibras. Where porters' hogsheads roll from carts aslope, Or brewers down steep cellars stretch the rope ; Where counted billets are by carmen tost, Slay thy rash step, and walk without the post.

Gay. Trivia, book ii.

ASMODAT, the name given by the Jews to the prince of daemons ; and according to R. Elias, the same with Sammael.

ASMONEUS, or ASSAMONEUS, the father of Simon, and chief of the Asmoneans, a family that reigned over the Jews 126 years.

ASNA, or ESNA, a town in Upper Egypt, seated upon the Nile, believed by some authors to be the ancient Syena, though others say the ruins of it are still to be seen near Assuan. It is so near the cataracts of the Nile, that they may be heard from thence, and it contains se- veral monuments of antiquity ; among the rest an ancient Egyptian temple, painted throughout. The columns are full of hieroglyphic figures. A little way from hence are the ruins of an ancient nunnery, said to be built by St. Helena, and surrounded with tombs. Asna is the principal town in these parts, and the inhabitants are rich in corn and cattle.

ASNAPPER, an Assyrian prince, mentioned in Ezra iv. 10, who settled the original Samari- tans in the country of the ten tribes. It is un- certain, whether he was Salmaneser or Esar- haddon, or one of their generals.

ASOLA, a town of Upper Italy, in the terri- tory of Brescia, on the Chiese, with a popula- tion of 4000. It is twenty miles S.S.E. of Brescia. ASOLO, a Venetian prefecture, in the March of Treviso, Italy ; belonging to Austria. It con- sists of the town of Asolo, and thirty-six vil- lages, with 25,000 inhabitants. They cultivate .grapes, corn, fruit, silk, oil, and garden ve- getables, trade in cattle, and manufacture silk and woollen stuffs. The town of Asolo is seated on some agreeable rising grounds, skirted on the north and west by the Musone. ASOPH, or AZOPH. See AZOPH. ASOPUS, a town of Laconia, on the Sinus

Laconius, with a port in a peninsula, between Boae to the east, and the mouth of the Eurotas to the west. The citadel only remains standing.

ASOPUS, in ancient geography, the name o several rivers, viz. 1. In Bceotia, which, running from mount Cithaeron, and watering the territory of Thebes, separates it from the territory of Pla- taea, and falls with an east course into the Euri- pus, at Tanagra. On this river, Adrastus, king of Sicyon, built a temple to Nemesis, and from it Thebes came to be surnamed Asopides. It is now called Asopo. 2. In Peloponnesus, which runs by Sicyon, and with a north-west course falls into the Sinus Corinthiacus, west of Corinth. 3. In Phrygia Major, which with the Lycus washes Laodicea. 4. On the borders of Thes- saly, rising in Mount (Eta, and falling into the Sinus Maliacus.

ASOR, or ASORUS, in ancient geography,!. A town in the south-west of Judah, near Asca- lon, called also Hazor, and Hasor-Hadata, trans- lated by the seventy A

ASOTUS, in ichthyology, a species of the silurus. ASP, ˆ Gr. affiraipw, to tremble, to quiver. AS'PEN. } Shaking, trembling; because the leaves of the aspen tree tremble with each breath of air.

This Sompnour in his stirops high he stood Upon this frere his herte was so wood That like an aspen leef he quoke for ire. Chaucer. The Sompnour's Prologue, vi. p. 292. He to him raught a dagger sharp and keene, And gave it him in hand : his hand did quake And tremble like a leafe of aspin greene.

Spenser's Faerie Queene, book i. c. ix. s. 51. The aspen or asp tree hath leaves much the same with the poplar, only much smaller, and not so white. Mortimer.

ASP, > Gr. aairtf, a serpent, said to be ASP'ICK. $ peculiar to Egypt and Lybia, whose bite is mortal and its effect immediate. Modem naturalists have not yet discovered this reptile.

High-minded Cleopatra, that with stroke Of cup's sting herself did kill. Faerie Queene.

Scorpion, and asp, and amphisbaena dire, And dipsas. Milton.

ASP, ASPICK, thus denominated from the Greek, avmc, shield; on account of its lying convolved in a circle, in the centre of which is the head, which it exerts, or raises, like the umbo or umbileus of a buckler. This species of ser- pent is very frequently mentioned by authors ; but so carelessly described, that it is not easy to determine

which, if any, of the species known at present, may probably be called by this name. It is said to be common in Africa, and about the banks of the Nile; and Bellonius mentions a small serpent which he had met with in Italy, and which had a sort of callous excrescence on the forehead, which he takes to have been the aspis of the ancients. It is with the asp that Cleopatra is said to have despatched herself, and

prevented the designs of Augustus, who intended to have, earned her captive to adorn his trium- phal entry into Rome. But the fact is contested. Brown places it among the vulgar errors. The indications of that queen's having used the ministry of the asp, were only two almost insen- sible pricks found in her arm ; and Plutarch says it is unknown of what she died. At the same time it must be observed, that the slightness of the pricks found in her arm furnishes no presump- tion against the fact ; for no more than the prick of a needle-point dipped in the poison was ne- cessary for the purpose of destroying life. Lord Bacon says, the asp is the least painful of all the instruments of death. He supposes it to hare an affinity to opium, but to be less disagreeable in its operation ; and his opinion seems to cor- respond with the accounts or most writers, as well as with the effects described to have been pro- duced upon Cleopatra. The ancients had a plaister called Si Aairtdwv, made of this terrible animal, of great efficacy as a discutient of strums and other indurations, and used likewise against pains of the gout. The flesh and skin, or exu- viss of the creature, had also their share in the ancient materia medica.

AS PA, a town of Parthia, now called Ispa- han.

ASPALATHUS, AFRICAN BROOM, a genus of the decandria order, diadelphia class of plants ; ranking in the natural method under the thirty- second order, papilionaceac. The calyx consists of five divisions ; the pod is ova!, and contains two seeds. Of this genus there are nineteen species ; all of which are natives of warm cli- mates, and must be preserved in stoves by those who would cultivate them here. The rosewood, whence the oleum Khodii is obtained, is one of the species, but of which we have no particular description.

ASPALATHUS, in pharmacy, is also called lig- num Rhodium, or rose wood ; and by some Cy- prus wood : the former on account of its sweet smell, or growth in the island of Rhodes; the latter from its being also found in the island of Cyprus. It was anciently in much

repute, as an astringent and strengthener, but is now little used internally. In virtue, taste, smell, and weight, it resembles the lignum aloes ; and in physic they are frequently substituted for each other. Aspa- athus is chiefly used in scenting pomatums, and liniments.

ASPARAGIN, the name given to white trans- parent crystals, of a peculiar vegetable principle, which form in asparagus juice after it has been evaporated to the consistence of syrup. They are in the form of rhomboidal prisms, with a slight nauseous taste. They do not change ve- getable blues ; nor are they affected by hydro-sul- phuret of potash, oxalate of ammonia, or acetate of lead ; but lime extracts from them ammonia. Along with the asparagin crystals, others in needles of little consistency appear, analogous to inannite, from which the first can be easily picked out.

ASPARAGUS, SPARAGUS, SPERAGE, or SPAR- now-CJRASS, u genus of the nionojjynia order, and lli►►- hcxandna class of plants; ranking in the na- tun;! method under the eleventh order, sarmen-

tacex : C\L. quinquepartite, and erect; the three inferior petals bent outwards ; the berry has three cells, and contains two seeds. There are ten species ; but the only one cultivated in the gardens is the common asparagus, with an upright herbaceous stalk, bristly leaves, and equal stipula. The other species are kept only in the gardens of the curious, for the sake of variety. The garden asparagus is cultivated with great care for the use of the table. The propagation of this useful plant is from seed ; and, as much of the success depends upon the goodness of the seed, it is much better to save it than to buy. The manner of saving it is this : Mark wit!) a stick some of the fairest buds ; and when they are run to berry, and the stalks begin to dry and wither, cut them up ; rub off the berries into a tub, and, pouring water upon them, rub them about with your hands ; the husks will break and let out the seed, and will swim away with the water in pouring it off; so that in repeating this two or three times, the seeds will be clean wash- ed, and found at the bottom of the tub. These must be spread on a mat to dry, and in the be- ginning of February, must be sown on a bed of rich earth. They must not be sown too thick, and must be trod into the ground, and the earth raked over them smooth : the bed is to be kept clear of weeds all the summer ; and in October, when the stalks are withered and dry, a little rot- ten dung must be spread half an inch thick over the whole surface of the bed. Next spring, the plants will be fit to plant out ; the ground must therefore be prepared for them by trenching it well, and burying a large quantity of rotten dung in the trenches, so that it may lie at least six in- ches below the surface of the ground : when this is done, level the whole plot exactly, taking out all

the loose stones. This is to be done just at the time when the asparagus is to be planted out ; which must be in the beginning of March, if the soil is dry, and the season forward ; but in a wet soil, it is better to wait till the beginning of April, which is about the season that the plants are beginning to shoot. The season being now come, the roots must be carefully taken up with a narrow-pronged dung-fork, shaking them out of the earth, separating them from each other, and observing to lay all their heads even, for the more conveniently planting them ; which must be done in this manner : ††† Lines must be drawn, at a foot distance each, straight across the bed ; these must be dug into small trenches of six inches deep, into which the roots must be laid, placing them against the sides of the trench, with their buds in a right position upwards, and so that, when the earth is raked over them, they may be two inches under the surface of the ground. Between every four rows, a space of two feet and a half should be left for walking in to cut the asparagus. When the asparagus is thus planted, a crop of onions may be sown on the ground, which will not at all hurt it. A month after this, the asparagus will come up, when the crop of onions must be thinned, and the weeds carefully cleared away. About August the onions will be fit to pull up. In October following, cut off the shoots of the asparagus, within two inches of the ground, clear well all

weeds avay and throw up the earth upon the beds, so as to leave them five inches above the level of tne alleys. A row of coleworts may be plantea in the middle of the alleys, but nothing must now r>e sown on the beds. In the spring the v\t*>ds must be hoed up, and all the sum- mer tne beds kept clear of weeds. In October they must be turned up and earthed again, as the preceding season. The second spring after planting, some of the young asparagus may be cut for the table. The larger shoots should only be taken, and these should be cut at two inches under ground, and the beds every year managed as in the second year. But as some people are very fond of early asparagus, the following direc- tions are given, by which it may be obtained any time in winter: ††† Plant some good roots at one year oid in a moist rich soil, about eight inches apart ; the second and third year after planting, they will be ready to take up for the hot-beds ; these should be made pretty strong, about three feet thick, with new stable dung that has ferment- ed a week or more ; the beds must be covered with earth six inches thick ; then, against a ridge made at one end, begin to lay in your plants, without trimming or cutting the fibres ; and be- tween every row lay a little ridge of fine earth, and proceed thus till the bed is planted ; then cover the bed two inches thick with

earth, and encompass it with a straw band ; and in a week, or as the bed is in the temper, put on the frames and glasses, and lay on three inches thick of fresh earth over the beds, and give them air and add fresh heat to them as it requires. These beds may be made from November till March, which will last till the natural grass comes on.

The roots have a bitterish mucilaginous taste, inclining to sweetness ; the fruit has much the same kind of taste ; the young shoots are more agreeable than either. Asparagus promotes ap- petite, but affords little nourishment. It gives a strong ill smell to the urine in a little time af- ter eating it, and for this reason chiefly is^sup- posed to be diuretic ; it is likewise esteemed aperient and deobstruent ; the root is one of the five called opening roots. Some suppose the shoots to be most efficacious ; others, the root ; and others, the bark of the root. Stahl is of opi- nion, that none of them have any great share of the virtues usually ascribed to them. Asparagus appears from experience to contribute very little either to the exciting of urine when suppressed, or increasing its discharge : and in cases where aperient medicines generally do service, this has little or no effect.

ASPASIA, among ancient physicians, a con- strictive medicine for the pudenda muliebra. It consisted of wool, moistened with an infusion of unripe galls.

ASPASIA, of Miletus, a courtezan, who settled at Athens under the administration of Pericles, and one of the most noted ladies of antiquity. She was of admirable beauty ; yet her wit and eloquence, still more than her beauty, gained her extraordinary reputation among all ranks in the republic. In eloquence she surpassed all her contemporaries ; and her conversation was so entertaining, and instructive, that notwithstand- ing the dishonorable commerce she carried on,

persons of the first distinction, male and female, resorted to her house as to an academy ; she even numbered Socrates among her hearers and admirers. She captivated Pericles in such a manner, that he dismissed his own wife, to es- pouse her ; and, by her universal knowledge, irresistible elocution, and intriguing genius, she in a great measure influenced the administration of Athens. She was accused of having excited, from motives of personal resentment, the war of Peloponnesus ; yet, calamitous as that long and obstinate conflict proved to Greece, and particu- larly to Athens, Aspasia occasioned still more incurable evils to both. Her example and in- structions, formed a

school at Athens, by which her dangerous profession was reduced into a sys- tem. The companions of Aspasia served as models for painting and statuary, and themes for poetry and panegyric. Nor were they merely the objects but the authors of many literary works, in which they established rules .for the behaviour of their lovers, particularly at table ; and explained the art of gaining the heart and captivating the affections. The dress, behaviour, and artifices of this class of women, became con- tinually more seductive and dangerous; and Athens thenceforth remained the chief school of vice and pleasure, as well as of literature and philosophy.

ASPASTICUM, or ASPATICUM, i. e. a greet- ing-house ; from aairaˆofiai, I salute ; in ecclesias- tical writers, an apartment adjoining to the an- cient churches, wherein the bishops and presby- ters sat to receive the salutations of those who came to visit them, desire their blessing, or con- sult them.

AS'PECT, v. & n.-\ Lat. aspicio, aspectum,

ASPEC'TABLE, 9 (from the obsolete word

ASPEC'TED, fspicere), to look towards.

ASPEC'TION. J The appearance any thing

presents when looked at ; the point of view; the

relation or influence which one thing has o:

bears with respect to another.

We see likewise the Scripture calleth Envy, an evil eye, and the astrologers call the evil influences of the stars, evil aspects ; so that there still seemeth to be acknowledged in the act of envy, an ejacula- tion or irradiation of the eye. Lord Bacon's Essays. The islands prince, of frame more than celestial, Is rightly called the all-seeing Intellect; All glorious bright such nothing is terrestrial ; Whose sun-like face, and most divine aspect, No human sight may ever hope descrie ; For when himself on's self reflects his eye, Dull and amazed he stands, at such bright majesty.

Fletclter's Purple Island. If nature's concord broke Among the constellations war were sprung, Two planets, rushing from aspect malign Of fiercest opposition, in mid sky Should combat, and their jarring spheres confound,

Milton’s Paradise Lott, book vi. Happy in their mistake, those people, whom The northern pole aspects ; whom fear of death (The greatest of all human fears) ne’er moves.

Temple.

To this use, of informing us what is in this aspect- able world, we shall find the eye well fitted.

Ray on the Creation.

Her motions were steady and composed,, and her aspect serious but cheerful ; her name was Patience.

Adduon.

ASP

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ASP

Why does not every single star shed a separate influence, and have aspects with other stars of their own constellation ? Bentley’a Sermons.

With aspect mild, and elevated eye, Behold him seated on a mount serene, Above the fog8 of sense and passion’s storm : Wrong he sustains with temper, looks on heaven, Nor stoops to think his injurer his foe ; Nought but what wounds his virtue wounds his peace.

Young.

ASPECT, in astronomy and astrology, denotes the situation of the planets and stars with re- spect to each other. There are five different aspects. 1. Sextile aspect is when the planets or stars are 60►► distant, and marked thus jfc . 2. The quartile, or quadrate, when they are 90►► distant, marked Q- 3. Trine, when 120►► dis- tant, marked A. 4. Opposition, when 180►► dis- tant, marked g. And, 5. Conjunction, both in the same degree, marked <5 . Kepler, who added eight new ones, defines aspect to be the angle formed by the rays of the two stars meeting on the earth, whereby their good or bad influence is measured ; for it is to be observed that these aspects, being first introduced by astrologers, were distinguished into benign, malignant, and indifferent ; the quartile and malignant being ac- counted malign ; the trine and sextile, benign or friendly ; and the

conjunction indifferent.

ASPECT, in gardening, signifies exposure.

ASPF.CT, DOUBLE, is used in painting, where a single figure is so contrived, as to represent two or more different objects, either by changing the eye, or by means of angular glasses. See OP- TICS.

ASPECT, in architecture. The aspect of the principal rooms of a house, demands the greatest attention from the architect, especially in an exposed situation. The south-east is the best for Britain ; and the south and due east the next. The south-west is the worst, because from that quarter it rains oftener than from any other. A north aspect is gloomy, because deprived of sun- shine ; but woods look best when viewed from rooms with a north aspect, because all plants and trees are mo>t luxuriant on the side next the sun. An aspect due east is nearly as bad as the north, because there the sun shines only early in the morning ; and the aspect due west is intole- rable, from the sun dazzling the eye through the greatest partof the day. 1 lencc we may conclude, a square house placed with its front, opposite to the four cardinal points, will have one good and three had aspects.

ASl'KN. or Asi>. See POPLAR, of which it is a species. The leaves of this tree always tremble. The aspen or asp tree has leaves much the same with the poplar.

AS1'F,K, in commerce, or aspre, a little Turkish silver coin, wherein most of the Grand Seignior's revenues are paid. The asper is worth something more than an English halfpenny. The only impression it bears, is that of the prince's name under whom it was struck. The pay of the Janissaries is from two to twelve aspers perdiem.

ASPF.R, in grammar, an accent peculiar to the Greek language, marked thus (') ; and importing, that the letter over which it is placed ought to be. strongly aspirated, or pronounced as if an ft were prefixed.

ASPER, in ichthyology, a small fish caught in the Rhone, so called from the roughness of ita scales. Its head is large, in proportion to its body, and of a pointed shape. It has no teeth, but its jaws are sharp to the touch. It is of a dark red color, with large black spots. It is good to eat, and is esteemed aperitive.

ASPERA ARTERIA, in anatomy, the windpipe or trachea. See ANATOMY.

ASPER JELLOUS, in botany, the name given by Michaeli to that genus of mosses, called by Dillenius and others, byssus.

ASPERGILE, or ASPERGILIUM, in antiquity, a long brush made of horse-hair, fixed to a han- dle, wherewith the lustral water was sprinkled on the people in lustrations and purifications. The ancients, instead of a brush, made use of branches of laurel and olive. It is also still ap- plied to the instrument in Romish churches with which holy water is sprinkled

ASPERIFOLIjE PLANT*, rough-leaved plants. The name of a class in Ilermannus, Boerhaave, and Ray's methods, consisting of plants which have naked seeds, and whose leaves are rough to the touch. In Tournefort's system, these plants constitute the third section or order of the second class ; and in Linnaeus's sexual method, they make a part of the pentandria mo- nogynia.

ASPERIFOLIATE, or ASPERIFOLIOUS, a- mong botanists, such plants as are rough-leaved, having their leaves placed alternately on their stalks, and a monopetalous flower divided into five parts. They constitute the forty-ninth or- der of plants in the Fragmenta Methodi Naturalis of Linnaeus, in which are these genera : tourne- ortia, cerinthe, symphytum, pulmonaria, an- chusa, lithospermum, myosotis, heliotropium, cynoglossum, asperugo, lycopsis, echium, bar- rago : magis minusve, oleraceae, mucilaginosse, et glutinosae sunt.

ASPERITY, the inequality of the surface of any body, which hinders the hand from passing over it freely. From the testimony of some blind persons, it has been supposed that every color hath its particular degree of asperity ; though this has been denied by others. See the article BLIND.

ASPERN, a market town, castle, and lordship of Lower Austria, in the circle of lower Mann- hartsberg, belonging to the count of Brenner, ten miles south east of Laba.

ASPERN, a market town of Austria, situated on a small arm of the Danube, on the north side of the river, at some distance below Vienna, the scene of a battle fought on the twenty-first and twenty-second of May, 1809, between Buo- naparte and the Austrians. It was completely destroyed at the time, but has since been rebuilt.

ASPER'SE,) Lat. ad, and spargo, to scat-

ASPER'SION. $ ter. To sprinkle or scatter ; metaphorically to censure, to calumniate.

In the business x > f Ireland, besides the opportunity to asperse the king, they were safe enough.

Clarendon.

Curb that impetuous tongue ; nor rashly vain, And singly mad, asperse the sov'reign reign. Pope

Unjustly poets we asperse ; Truth chines the brighter clad in verse. Swift.

He set his voice At highest pitch, and thus aspert'd the king.

Cotcper's Iliad, book vi.

Legions of impure spirits were believed to take

often possession of the bodies of men, from whence

nothing could drive them but aspertioru of holy water.

Bolingbroke's Essay on Human Knowledge.

ASPERUGO, small wild bugloss, in bo- tany, a genus of the pentandria monogynia class; ranking in the natural method under the asperi- foliae. The calyx of the fruit is compressed,
 ॐ with folds flatly parallel, and sinuous. There are two species, viz. 1. A. jEgyptiaca, a native of Egypt. 2. A. procumbens, or wild bugloss, a native of Britain ; which is eaten by horses, goats, sheep, and swine ; but cows are not fond of it.

ASPERULA, WOODROOF, in botany, a genus of the monogynia order, and the hexandria class of plants; ranking in the natural method under the forty-seventh order, stellatae. The corolla is infundibuliform ; and the capsule contains two globular seeds. There are two species ; which both grow wild in Britain, and therefore are sel- dom admitted into gardens, viz. 1. A. cynan- chica, found on chalky hills. The roots are used for dyeing red 'in Sweden. 2. A. odorata, a low umbelliferous plant, growing wild in woods and copses, and flowering in May. It has an ex- ceeding pleasant smell, which is improved by moderate exsiccation ; the taste is subsaline, and somewhat austere. It imparts its flavour to vinous liquors. Asperula is supposed medici- nally to

attenuate viscid humors, and strengthen the tone of the bowels ; modern practice has ne- vertheless rejected it.

ASPEYTIA, a town of Spain, in Biscay, seated on the Urola, in a line valley, near the districts of Loyola and Onis.

ASPHALITES, in anatomy, the fifth vertebra of the loins.

ASPHALTITES, a lake of Judea, so called from the great quantity of bitumen it produces : called also the Dead Sea ; and from its situation the East, the Salt Sea, the Sea of Sodom, the Sea of the Desart, and the Sea of the Plain, in the sacred writings. It is enclosed on the east and west with high mountains ; on the north it has the plain of Jericho ; or, if we take in both sides of die Jordan, it has the Great Plain, properly so called, on the south, which is open, and extends beyond the reach of the eye. Josephus makes this lake 580 furlongs in length, from the mouth of the Jordan to the opposite end, that is about twenty-two leagues ; and about 150 furlongs, or five leagues, in its greatest breadth ; but our modern accounts commonly give it twenty leagues in length, and six or seven in breadth. On the west side of it is a kind of promontory, where the remains of Lot's metamorphosed wife were for a long time said to be visible. Josephus says this pillar was standing in his time ; and Mr. Maundrell was shown a block or stump of it.

In what has been said and written of the Lake Asphaltites, fable is much blended with truth. We are told that it arose from the submersion of the vale of Sicldim, where once stood, as is com- monly reported, the three cities which perished in the miraculous conflagration, with Sodom and Gomorrah ; and this lake has been regarded as a lasting monument of the just judgment of God,

on the abominations for which they perished. It has been stated that its waters are so impreg- nated with salt, sulphur, and other bituminous matter, that nothing will sink or live in them ; and that it emits such a horrid smoke that the very birds die in attempting to cross over it. The description likewise of the apples that grew about it, fair without, and only ashes and bitter- ness within, were looked upon as a further de- monstration of God's anger. Travellers have also described the country round about as sul- phureous, bituminous, and suffocating ; and it has even been affirmed that the ruins of the five cities are still to be seen through the waters in clear weather.

It appears to be true, that the quantity of salt, alum, and sulphur, with which they are impreg- nated, render its waters so much specifically heavier (Dr. Pococke says one fifth) than fresh water, that bodies will not easily sink in them : yet that author and others assure us they have swam and dived in it. Dr. Pococke also, though he neither saw fish nor shells, tells us, on the authority of a monk, that fish had been caught in it; and M. Volney affirms that it is very com- mon to see swallows skimming its surface, and dipping for the water necessary to build their nests. The soil around it, he adds, impregnated with salt, produces no plants ; and the air itself, which becomes loaded with it from evaporation, and which receives also the sulphureous and bi- tuminous vapours, cannot be favorable to ve- getation : hence the deadly aspect which reigns around this lake. In other respects the ground about it, however, is not marshy, and its waters are limpid and incorruptible, as must be the case with a dissolution of salt. On the south-west shore are mines of fossil salt, of which I have brought away several specimens. They are situ- ated on the side of the mountains which extend along that border ; and from time immemorial have supplied the neighbouring Arabs, and even the city of Jerusalem. We find also on this shore fragments of sulphur and bitumen, which the Arabs convert into a trifling article of com- merce : as also hot fountains and deep crevices, which are discovered at a distance by little pyra- mids built on the brink of them. Likewise a sort of stone, which on rubbing emits a noxious smell, burns like bitumen, receives a polish like white alabaster, and is used for the paving of court-yards. At intervals we also meet with unshapen blocks, which

prejudiced eyes mistake for mutilated statues, and which pass with ignorant and superstitious pilgrims for monuments of the adventure of Lot's wife ; though it is no where said she was metamorphosed into stone like Niobe, but into salt, which must hare melted the ensuing winter.'

This lake is at present called by the Arabs Almotanah and Bahret Lout, and Ula Deguis by the Turks. It is remarkable that but one European has hitherto succeeded in making the circuit of it ; and Nau, who in his travels had recorded this expedition of Daniel, abbot of St. Saba, states on his authority, that ' the Dead Sea, at its extremity, is separated as it were into two parts, and that there is a way by which you may walk across it, being only mid-leg deep, at

leust in summer; that there the land rises, and bounds another small lake of a circular or rather oval figure, surrounded with plains and moun- tains of sand, and that the neighbouring country is peopled by innumerable Arabs. Seetzen in the year 1805-6 passed round the southern ex- tremity, but a short account only of his route, im a correspondence with M.de Zach, printed by the Palestine Association in 1810, has yet ap- peared. Mr. Burckhardt was \mable to reach its borders. He was informed in the neighbour- hood that there were spots in a ford about three hours north of Szaffye (the extreme southern point of the lake), in which the water is quite hot, and the bottom of red earth. This ford may be crossed in three hours and a half: the water here is generally not more than two feet deep, and it is probable there are hot springs in the bottom. It is so strongly impregnated with salt that the skin peels off the legs of those who wade across it.

M. de Chateaubriand, who visited this coun- try in 1807, has given the first decided testimony that the Lake Asphaltites abounds with fish. He reached it when it was dark, and passed the night among some Arab tents. ' About mid- night,' says he, ' I heard a noise upon the lake, and was told by the Bethlehemites, who accom- panied me, that it proceeded from legions of small fish, which come out and leap about the shore.' He speaks in the following terms of its saline properties ; ' The first thing I did on alighting was to walk into the lake up to my knees, and to taste the water. I found it im- possible to keep it in my mouth. It far exceeds that of the sea in saltness, and produces upon the lips the effect of a strong solution of alum. Before my boots were

completely dry they were covered with salt : our clothes, our hats, our hands, were in less than three hours impregnated with this mineral.'

A modern Scottish traveller, Mr. Gordon of Clunie, who bathed in it, brought home a phial nf its water, and Dr. Marcet found its specific gravity to be 1'211 ; a degree of density, says he, ' not to be met with in any other natural water.' The whole process with its results is detailed in the Philosophical Transactions for 1807. It was found that 100 grains of the water contain the following substances in the undermentioned proportions :

grains,

Muriat of lime . . 3,920 Muriat of magnesia 10,246 Muriat of soda . . 10,360 Sulphat of lime . 0,054

24,580

Another celebrated chemist, M. Klaproth, who procured a specimen brought from the East by the abb►►- Martin, found the specific gravity to be 1-245 instead of V211 ; agreeing in this respect more nearly with Maequer and Lavoisier, who stated it at 1-240. But the specific gravity of Dr. Marcet's specimen may have been less from its having been taken from the lake not far from the intli.x of the Jordan, where it might be somewhat diluted.

Dr. Clarke says that the inhabitants of the country still regard the Dead Sea with feelings of terror ; owing probably to the tradition that its waters cover the engulphed cities of Sodom and Gomorrah, or to the ideas entertained of the peculiar insalubrity of its exhalations. But it is greatly to be regretted that this traveller was prevented by the Arabs from exploring the lake, which he only saw at a distance.

Hasselquist asserts the apples of Sodom to be the production of the solanum melongena of Linnasus. This is found, he says, in great abundance round Jericho and in the neighbourhood of the Dead Sea The dust with which it is sometimes filled is the work of an insect (tenthredo) which pulverises the whole of the inside, leaving the rind entire and unchanged in color. M. Seetzen saw at Kerek a species of cotton which he was told was produced from a fruit resembling a pomegranate, growing on tne borders of the Dead Sea, and he thinks it is this pulpless fruit which is the ina- lum sodomeum. Viscount Chateaubriand saw a third fruit, which he conjectures to be the famous apples in question, growing on a thorny shrub ; and which, before it is ripe is filled with a corrosive and saline juice ; when dried

it yields a blackish seed, which may be compared to ashes, and which in taste resembles bitter pepper.

ASPHALTUM, BITUMEN JUDAICUM, or Jew's Pitch, is a light solid bitumen of a dusky color on the outside, and a deep shining black within ; of very little taste, and having scarcely any smell, unless heated, when it emits a strong pitchy one. It is found in a soft or liquid state on the surface of the Dead Sea, and by age grows dry and hard. The same kind of bitu- men is met with likewise in the earth in China, America, and in some places of Europe, as the Carpathian Hills, France, &c. The most abun- dant deposits of this substance, in modern times, are said to be in the islands of Barbadoes and Trinidad; in the former it is found as an highly bituminous earth, but, being in a state of great impurity, is only used as a coal for fuel. In the latter island is a complete lake of this substance. A specimen from Albania of the specific gravity of 1-205, examined by M. Klaproth, was found to be soluble only in oils and in aether. Five parts of rectified oil of petroleum dissolved one of the asphaltum without heat in twenty-four hours ; 100 grains of asphaltum afforded 32 of bituminous oil, 6 of water faintly ammoniacal, 30 of charcoal, 7►► of silex, 7i of alumina, f of lime, 1 i oxide of iron, ►► oxide of manganese, and 36 cubic inches of hydrogen gas. The true asphaltum was formerly used in embalming the bodies of the dead. At present the thick and solid asphalta are employed in Egypt, Arabia, and Persia, as pitch for ships ; the fluid ones for burning in lamps and for varnishes. Some writers relate that the walls of Babylon and the temple of Jerusalem were cemented with bitu- men instead of mortar. This much is certain, that a true natural bitumen, that for instance which is found in the district, of Neufchatel, proves an excellent cement for walls, pave- ments, and other purposes ; uncommonly firm, very durable in the air, and not penetrable bv water. The watch and clock-makers use a com-

position of asphaltum, fine lamp black, and oil of spike or turpentine, for drawing the black figures on dial-plates ; this composition is pre- pared chiefly at Augsburg and Nuremburg.

ASPHODEL, ASPHODELUS, or KING'S SPEAR, in botany, a genus of the monogynia order, and hexandria class of plants. The calyx is divided futo six parts ; and the nectarium consists of six valves covering the nectarium. There are five species, viz. 1. A. albus, the white asphodel, with keel-shaped leaves, has roots composed of small fibres and knobs at bottom ; the leaves are long, almost triangular, and hollow like the keel of a boat ; the stalks seldom rise above two

feet high, and divide into several spreading branches ; these are terminated by loose spikes of white flowers. 2. A. luteus, or common yellow aspho- del, has roots composed of many thick fleshy fibres, which are yellow, and joined to a head at the top ; from whence arise strong round single stalks nearly three feet high, garnished on the upper part with yellow star-shaped flowers, which appear in June, and the seeds ripen in autumn. 3. A. nonramosus, or the unbranched asphodel, roots like the ramosus (which see), but the leaves are longer and narrower ; the stalks are single; the flowers appear at the same time with the former, are of a purer white, and grow in longer spikes. “4> A. ramosus, or branching asphodel, has roots composed of fleshy fibres, to each of which is fastened an oblong bulb as large as a small potatoe ; the leaves are long and flexible, having sharp edges ; between these come out the flower-stalks, which arise more than three feet high, sending forth many lateral branches. They come out in the beginning of June, and the seeds ripen in autumn. 5. A. stu- losus, or annual branching spiderwort, hath roots composed of many yellow fleshy fibres; the leaves are spread out from the crown of the root, close to the ground, m a large cluster; these are convex on their underside, but plain above. The flower-stalks rise immediately from the root, and grow about two feet high, dividing into three or four branches upward, which are adorned with white starry flowers, with purple lines on the outside. These flower in July and August, and their seeds ripen in October.

The way to increase these plants is by parting their roots in August, before they shoot up their fresh green leaves. They may also be raised from seeds sown in August; and the August following the plants produced from these may be transplanted into beds, and will produce flowers the second year. They must not be planted in small borders among tender flowers, for they will draw away all the nourishment and starve every thing else. The Lancashire asphodel is thought to be very noxious to sheep, whenever through poverty of pasture they are necessitated to eat it ; although they are said to improve much in their flesh at first, they after- wards die with symptoms of a diseased liver. This is the plant of which such wonderful tales have been told by Pauli Bartholine, and others, of its softening the bones of such animals as swallow it; and which they thence called gramen ossifragum. Horned cattle eat it without any ill effect.

ASP

ASPHURELATA, in natural history, are semi-metallic fossils, fusible by fire, and not malleable in their purest state, being in their native state intimately mixed with sulphur and other adventitious matter, and

reduced to what are called ores. Of this series of fossils there are five bodies, each of which makes a dis- tinct genus ; viz, antimony, bismuth, cobalt, zinc, and quicksilver.

ASPHYXIA; from a privative, and 0-0i > 5►►c, a pulse ; in medicine, the state during life in whirli the pulsation of the heart and arteries cannot be perceived. Medical writers usually divide this suspended animation into lipothymia, apoplexia, syncope, submersio, suspensio, and congelatio. Mr. Sage has published a treatise recommend- ing the volatile alkali fluor as the most effectual remedy in asphyxies. Asphyxia is also used by some for a privation of pulse in a part of the body, e. g. in the arm, &c.

The following extraordinary case of asphyxia is related by Dr. Cheyne, in his English Malady, p. 307. ‘ Case of the Hon. Colonel Towns/iend. ►►► Col. Townshend, a gentleman of excellent natural parts, and of great honor and integrity, had for many years been afflicted with a nephritic com- plaint, attended with constant vomitings, which had made his life painful and miserable. During the whole time of his illness he had observed the strictest regimen, living on the softest vegetables, and lightest animal foods, drinking asses milk daily, even in the camp ; and for common drink, Bristol water, which the summer before his death he had drank on the spot. But his illness in- creasing, and his strength decaying, he came from Bristol to Bath in a litter, in autumn, and lay at the Bell-inn. Dr. Baynard (who is since dead) and I were called to him, and attended him twice a day for about the space of a week, but his vomitings continuing still incessant and ob- stinate against all remedies, we despaired of his recovery. While he was in this condition he sent for us early one morning : we waited on him with Mr. Skrine, his apothecary, (since dead also) ; we found his senses clear and his mind calm, his nurse and several servants were about him. He had made his will and settled his af- fairs. He told us he had sent for us to give him some account of an odd sensation he had. for some time observed and felt in himself; which was that, composing himself, he could die or expire when he pleased, and yet, by an effort or some how, he could come to life again ; which it seems he had sometimes tried before he had sent for us.

‘ We heard this with surprise ; but as it was not to be accounted for from any common prin- ciples, we could hardly believe the fact as he re- lated it, much less give any account of it, unless he should please to make the experiment before us, which we were unwilling he should do, lest in his weak condition he might carry it too far. He continued to talk very distinctly and sensibly above a quarter of an hour about this (to him) surprising sensation, and insisted so much on our seeing

the trial made, that we were at last forced to comply. We all three felt his pulse first ; it was distinct, though small and thready ; and his heart had its usual beating. He composed him-

self on his back, and lay in a still position some time ; while I held his right hand, Dr. Baynard laid his hand on his heart, and Mr. Skrine held a clear looking-glass to his mouth. I found his pulse sink gradually, till at last I could not feel any by the most exact and nice touch. Dr. Baynard could not feel the least motion in his heart, nor Mr. Skrine the least soil of breath on the bright mirror he held to his mouth ; then each of us by turns examined his arm, heart, and breast; but could not, by the nicest scrutiny, discover the least symptom of life in him. We reasoned a long time about this odd appearance as well as we could, and all of us judging it inexplicable and unaccountable, and finding he still continued in that condition, we began to conclude that he had indeed carried the experi- ment too far, and at last were satisfied he was actually dead, and were just ready to leave him. This continued about half an hour, by nine o'clock in the morning, in autumn. As we were going away we observed some motion about the body, and, upon examination, found his pulse and the motion of his heart gradually returning; he began to breathe gently, and speak softly ; we were all astonished to the last degree at this unexpected change, and after some further conversation with him, and among ourselves, went away tiilly satisfied as to all the particulars of this fact, but confounded and puzzled, and not able to form :my rational scheme that might account for it. lie afterwards called for his attorney, added a codicil to his will, settled legacies on his ser- vants, received the sacrament, and calmly and composedly expired about six o'clock that evening. Next day he was opened (as he had ordered) ; his body was the soundest and best made I had ever seen ; his lungs were fair, large, and sound, his heart big and strong, and his intestines sweet and clean ; his stomach was of a due proportion, the coats sound ;uid thick, and the villous mem- brane quite entire ; but when we came to examine the kidneys, though the left was perfectly sound and of a just size, the right was about four times as bi;_r, distended like a blown bladder, and yielding as if full of pap ; he having often passed a wheyish liquor, after his urine, during his ill- ness. Upon opening this kidney we found it quite full of a white chalky matter, like plaster of Paris, and all the fleshy substance dissolved and worn away by what 1 called a nephritic cancer. This had been the source of all his misery ; and the symptomatic vomitings, from the irritation ou the consentient nerves, had quite starved and worn him down. I have narrated the facts as 1 saw and observed

them, deliberately and distinctly, and shall leave the philosophic reader to make what inferences he thinks fit. The truth of the material circumstances I will warrant.’

Asi’u, in botany, a plant which grows in plenty in Languecloc, in Provence, and especially on the mountain of St. liauine in France. It is a kind of lavender, nearly like what grows in AS’PRE, our gardens, both with regard to the figure and AS’PREI.Y, color of its leaves and flowers. The botanists AS’PRENESS, ††† all it lavi ndula mas, or snica nardi, pseudo AS’PERATE, nardu-i, &:†††. ASPE’RITY,

ASl’lLATKS, or AMM i MU>, in the writings AS’PEROUS.

ASP

of the ancients, the name of a stone, famous for its virtues against the spleen, and many other disorders; it was to be applied externally, and fastened to the part with camel’s hair.

ASPINY, or ANGLIARY-THORN, a drug used in medicine, on which particular duties are im- posed by the tariff of the custom-house at Lyons.

Aspiro ; from ad, and spiro, to breathe ; to search after dili- †††gently, and in con- sequence of the ar- duous exertion to breathe frequently,

ASPIRE’, ASPIR’ANT,

ASPIR’ATE, v. n. ft, adj. ASPIRA’TION, ASPIRE’MENT, ASPIR’ER, ASPIR’ING.

and with apparent difficulty ; to pant after ; to pursue with eagerness an object deemed worthy of our ambition ; to desire with eagerness. To aspirate is to breathe strongly upon a letter in sounding it.

“Tis he ; I ken the manner of his gait : He rises on his toe ; that spirit of his In aspiration lifts him from the earth.

Shakspeare.

Horace did ne’er aspire to epic bays ; Nor lofty Maro stoop to lyrick lays.

Rotcommon.

Till then a helpless, hopeless, homely swain ; I sought not freedom,

nor aspired to gain. Dryden. Aspiring to be gods, if angels fell, Aspiring to be angel*, men rebel. Pope. H is only a guttural aspiration, i. e. a more forcible impulse of the breath from the lungs. Holder.

A soul inspired with the warmest aspirations after celestial beatitude, keeps its powers attentive. Watt*. Know thine own worth, and reverence the lyre. * Wilt thou debase the heart which God refined ? No ! let thy heaven-taught soul to heaven aspire, To fancy, freedom, harmony, resign'd ; Ambition's groveling crew for ever left behind.

Beanie's Minstrel.

Some more aspiring catch the neighbouring shrub, With clasping tendrils, and invest her branch.

Cowper.

Ye stars ! which are the poetry of heaven ! If in your bright leaves we would read the fate Of men and empires, ††† 'tis to be forgiv'n, That in our aspirations to be great, Our destinies o'erleap their mortal state,

And claim a kindred with you ;

Lord Byron's Childe Harold. ASPIUS, in ichthyology, a species of the cyprinus, belonging to the abdominal order. It is met with in the lakes of Sweden.

ASPORTATION. Lat. ad, and porto, to carry ; a carrying to.

A bare removal from the place in which he found the goods, though the thief does not quite make off with them, is a sufficient asportation or carrying ' away. Blackstone.

ASPOTAGOEN MOUNT, a sea-mark on the coast of Nova Scotia, from which ships bound from Europe to Halifax generally look out. It rises on the promontory, between Mahone and Margaret's bay, to about 500 feet above the level of the sea.

Lat. asper, rough in its na- ture : applied to that which is 'harsh, rugged, grating, bittei. morose.

ASS

Black and white are the most atperous and unequal of colours ; so like, that it is hard to distinguish them : black is the most rough.

Boyle.

I hope it is no very cynical asperity, not to confess obligations where no benefit has been received, or to be unwilling that the public should consider me as owing to a patron, that which Providence has en- abled me to do for myself. Dr. S. Johnson.

The patience of Job is proverbial. After some of the convulsive struggles of our irritable nature, he submitted himself, and repented in dust and ashes. But even so, I do not find him blamed for reprehend- ing, and with a considerable degree of asperity, those ill-natured neighbours of his who visited his dunghill to read moral, political, and (.economical lectures on his misery. Burke.

ASP'Y, v. & n. See ESPY.

In due season, as she alway aspied Euery thing to execute conueniently, The one louer first frendly she eied, The second she offred the cuppe curtesly.

Chaucer. The Rein ofLoue.

For Ion seide to Eroude, it is not leveful to thee to have the wyf of thi brother, and Erodias Icide aspies to him and wolde sle him and myghte not.

Wiclif. Mark, ch. vi.

ASRAEL, the angel, according to the Ma- hommedan system, who is appropriated to take care of the souls of those who die.

ASS, }

AS'ININE, > Lat. asinus, a well known animal.

ASS'LIKE. 3

You have among you many a purchas'd slave ; Which, like your asses and your dogs and mules, You use in abject and in slavish part, Because you bought them. Shahspeare.

You shall have more ado, to drive our dullest youth, our stocks and stubs, from such nurture ; than we have now, to hale our choicest and hopefullest wits, to that asinine feast of sow-thistles and brambles.

Milton.

Ass, in zoology. See EQUUS.

Ass, CORONATION OF THE, in antiquity, was a part of the ceremony of the feast of Vesta, wherein the bakers put crowns on the heads of these quadrupeds; Ecce coronatis panis dependet asellis ! Hence, in an ancient calendar, the ides of June are thus denoted : Festum est Vestae. Asinus coronatur ! This honor it seems was done the beast, because, according to the mythology, by its braying it had saved Vesta from being ravished by the Lampsacan god. Hence the formula, Vestae delicium est asinus.

ASSAC, or ASSAX, in the materia medica of the ancients, the name given by the Arabians to the gum ammoniac of the Greeks; but by many of the qualities attributed to this drug it does not appear to be the same that is now called so.

ASSACH, or ASSATH, a kind of purgation, anciently used in Wales, by the oaths of 300 men.

ASSAI, in music, signifies quick ; or, accord- ing to others, that the motion of the piece be kept in a middle degree of quickness or slowness : as, assai allegro, assai presto. See ALLEGRO and PRESTO.

ASSAIL’, -N Fr. assaWir, Lat.

ASSAII.’ABLE, / adsalire, to leap upon.

ASSAIL’ANT, t;. & adj. S > To assault; to make a

ASSAI L’EB, I sudden and vehement

ASSAII.’MENT, j attack by various means

of annoyance.

So, when he saw his flatt’ring arts to fail ,

With greedy force he ‘gan the fort t’ assail.

Faerie Queene I’ll put myself in poor and mean attire,

And with a kind of umbei smirch my face ;

The like do you : so shall we pass along,

And never stir assailants. Shakspeare.

My gracious lord, here in the parliament

Let us assail the family of York. Id.

She will not stay the siege of loving terms,

Nor bide th' encounter of assailing eyes. Id.

How have I fear'd your fate ! but fear'd it most, When love assail' d you on the Libyan coast.

Dryde.:. Prompt to assail and careless of defence,

Invulnerable in his impudence ;

He dares the world ; and eager of a name,

He thrusts about, and jostles into fame.

Id. Hind and Panther. All books he reads, and all he reads assails,

From Dryden's Fables down to D ××× y's Tales.

Pope.

Sensible of their own force, and allured by the prospect of so rich a prize, the northern barbarians, in the reign of Arcadius and Honorius, assailed at once all the frontiers of the Roman empire. Hume.

When winds the mountain oak assail, And lay its glories waste, ××

Content may slumber in the vale, Unconscious of the blast. Seattle.

ASSAM, or ASHAM, a country between Bengal and Thibet, 700 miles in length, by about 70 in breadth. It is intersected by the Brahmapootra and several rivers. On the north it is bounded by the mountains of Bootan and Thibet, on the south by the Garrow mountains, on the west by Bengal and Bisnee, and on the east by the tribu- taries of Ava and China. Assam is very fertile, and produces a considerable quantity of gold, found in the beds of the rivers ; it also yields ivory, lac, pepper, silk, and cotton, and exports a considerable quantity of borax and musk, said to be procured from Bootan and Thibet. Its im- ports from Bengal are principally salt, various European

commodities, and a few fine muslins. The inhabitants are genuine Hindoos, and are very shy of permitting foreigners to come among them. During the period that the Afghans and Moguls had possession of Bengal they frequently invaded this country, and even took possession of Ghergong the capital, but the unhcalthiness of the climate compelled them always to retire with great loss. In the year 1793 a detachment of the East India Company's troops, under the command of Colonel Welsh, entered Assam for the purpose of reinstating the rajah Surjee Deo ; and, in consequence of the services then rendered him, the rajah established a reciprocal liberty of commerce between himself and the British; and it was finally agreed that no European merchant or adventurer, of any description, should be al- lowed to fix his residence in Assam, without having previously obtained the permission of the British government, and of Maha Rajah Surjee Deo, of Assam.

ASSANCALA, or ASSANCALE, a strong town in Armenia, near the river Arras, in the road between Erzerum and Erivan, noted for its hot baths. It stands on a high hill, twenty-two miles east of Erzerum ; the walls are built in a spiral line all round the rock, and strengthened

with square towers. The ditches are about two fathoms over, cut out of bard rock.

ASSAPOOltY, in natural history, a name given by the people of the East Indies to a pe- culiar species of slate, which they use in medi- cine, reducing it to powder, and strewing it on burning coals that the sick person may receive the fumes of it. It is principally used for children ⁂when they are disordered by taking cold. The smell of it, while burning, is very offensive.

ASSARIUM, a small copper coin, being a part of the as. The word is used by Suidas in- differently with o/3o\oc, and vofiifffia, to denote a small piece of money ; in which he is followed by Cujacius, who defines aaaapiov, by minimus aeris nummus. We find mention of the assarion in Matthew, chap. x. ver. 29., translated a farthing.

ASSARON, an ancient Jewish measure of capacity, equal to the tenth part of an ephah. The assaron is the same with the omer. Jo- sephus calls it taaapov ; in the Hebrew it is written assarith. It was the measure of manna appointed for each person.

ASSAS’SIN, v. & n. ~\ The etymology of

ASSAS’SINACY, (this word has given

ASSAS’SINATE, v. & n. ►► rise to much learned

ASSASSINATION. 3 discussion, and the question is still undecided. Applied to one who attacks and kills those unprepared for defence, by treachery, or sudden violence.

It were done quickly ; if th’ assassination

Could trammel up the consequence. Shakspeare. Such usage as your honourable lords

Afford me, assassinated and betray’d ;

Who durst not, with your whole united pow’rs,

In fight withstand one single and unarm’d.

Milton,

The Syrian king; who, to surprise One man, assassin like, had levy’d war, War unproclaim’d. Id.

The duke finished his course by a wicked assas- sination. Clarendon.

In the very moment, as the knight withdrew from the duke, this assassinate gave him, with a back blow, a deep wound into his left side. Wottun.

The old king is just murdered ; and the person

that did it is unknown ►►► Let the soldiers seize him,

for one of the assassinates; and let me alone, to accuse

him afterwards. Drydcn.

Here hired assassins for their gain invade ;

And treach’rous pois’ners urge their fatal trade.

Creech.

When she hears of a murder, she enlarges more on the guilt of the suffering person, than of the as- ►►<"►►►►►'►►►►►►

Additon.

Orestes brandish'd the revenging sword;

Slew the dire pair ; and gave to fun'ral flame

The vile assassin, and adult'rous dame, Pope.

Useful, we grant; it serves what life requires; Rut, dreadful too, the dark atsassin hires. Id.

ASSASSINS, a tribe or clan in Syria, called also Isniuelians and Batanists, or Batenians. These people probably owed their origin to the Karmatians, a famous heretical sect among the Mahommedans, who settled in Persia about the year 1090; whence, in process of time, they sent a colony into Syria, where they became possessed of a considerable tract of land among the mountains of Lebanon, extending itself from the neighbourhood of Antioch to Damas-

cus. The first chief and legislator of this extra- ordinary tribe was Hassan Sabah, a subtle impostor ; who, by his artifices, made fanatical and implicit slaves of his subjects. Their reli- gion was compounded of that of the Magi, the Jews, the Christians, and the Mahommedans : but the capital article of their creed was to be- lieve that the Holy Spirit resided in their chief; that his orders proceeded from God himself, and were real declarations of the divine pleasure. To this monarch the orientals gave the name of Scheik : but he is better known in Europe by the name of the Old Man of the Mountain. This chief, from his residence on mount Lebanon, sent, like a vindictive deity, inevitable death to all quarters of the world ; and many sovereigns paid secretly a pension to the Scheik, for the safety of their persons. The Knights Templars alone dared to defy his secret machinations and open force. Indeed, they were a permanent dispersed body, not to be cut off by massacres or assassinations. In 1090, Malek Shah, third sultan of the Seljukians, of Iran, sent a mes- senger to Hassan, the Old Man of that period, calling on him for obedience, and accompanying the demand with threats in the case of his re- fusal. Hassan desired the ambassador might be admitted ; and having assembled around him his troops, commanded one of them to draw his dagger, and plunge it into his own breast; the man, without the slighest hesitation, stabbed himself to the heart, and fell dead at his sove- reign's feet. He then commanded a second to precipitate himself from the nearest tower ; and was instantaneously obeyed. ' Go,' said Hassan, ' to the sultan, your master, and inform him, that I have no other reply to make him, excepting that I have seventy

thousand troops equally obedient with those you have this day witnessed.' The sultan took the hint ; and having, as Ebn Amed states, other matters in his hands, thought it not advisable to prosecute a war against this prince.

In 1192, the assassins penetrated the palace of Conrade, marquis of Montserrat, who had displeased them, and put him to death. In 1213, they assassinated Lewis of Bavaria. Hu- lakn, a khan of the Mogul Tartars, in the year 655 of the Hegira, or 1254 of the Christian era, entered their country, and dispossessed them of several places. In 1257, the Tartars conquered them and killed their prince; but it was not till 1272, that they were totally extirpated; an achievement owing principally to the conduct and intrepidity of the Egyptian forces sent against them by the sultan Bibaris.

ASSAULT', v. & n.~\

ASSAULT'ING, n. f Assilio, assultum. See

ASSAULT'ABLE, ASSAULT'ER.

►► ASSAIL.

Themselves at discord fell, And cruel combat joined in middle space, With horrible asmult and fury fell.

Faerie Queene.

It hath been ever a dangerous policy of Satan to assault the best ; he knows that the multitude, as we say of bees, will follow their master.

Hall's Contemplation*. After some unhappy assaults upon the prerogative

"►►►'Hum '

Fifl.fi.

Fit). 7.

by the parliament, which produced its dissolution, there followed a composure. Clarendon.

Theories built upon narrow foundations, are very Iiard to be supported against the assaults of opposition.

Locke.

The king granted the Jews, to gather themselves together, and to stand for their life, to destroy all the power, that would assault them. Esther, viii. 11.

Before the gates, the cries of babes new-born, Whom fate had from their tender mothers torn, Assault his ears. Dryden.

Now cursed steel, and more accursed gold, Gave mischief birth, and made that mischief bold ; And double death did wretched man invade, By steel assaulted, and by gold betray'd. Id.

Neither liking their eloquence, nor fearing their might, we esteemed few swords, in a just defence, able to resist many unjust assaulters. Sidney.

This just rebuke inflamed the Lycian crew,

They join, they thicken, and th' assault renew;

Unmov'd th'embodied Greeks their fury dare,

And fix'd, support the weight of all the war.

Pope. Homer's Iliad, xii. 505.

ASSAULT, in law, is an attempt to beat another, and may be committed without touching him : as if one lifts up his cane or fist in a threatening manner at another ; or strikes at him, but misses him ; this is an assault, insultus, which Finch describes to be 'an unlawful setting upon one's person.' This also is an inchoate violence, amounting considerably higher than bare threats ; and, therefore, though no actual suffering is proved, yet the party injured may have redress by action of trespass vi et arm is, wherein he shall recover damages as a compensation for the injury.

ASSAULT, in the military art, a furious effort made to carry a fortified post, camp, or fortress, wherein the assailants do not screen themselves by any works : while the assault continues, the batteries cease, for fear of killing their own men. ASSAY', v. & n. Fr. essayer, Ital. assagiare, to try, examine, prove; to submit to experi- ment ; to test.

One, that to bounty never cast his mind ; No thought of honour never did assay His baser breast. Spenser.

She heard with patience all, unto the end j And strove, to master sorrowful assay.

Faerie Queene.

Gray and Bryan obtained leave of the general, a little to assay them ; and so, with some horsemen, charged them home. Hayward.

What unweighed behaviour hath this drunkard picked out of my conversation, that he dares in this manner assay me ? Shahspeare.

Be sure to find,

What I foretell thee ; many a hard assay Of dangers, and adversities, and pains, Ere thou of Israel's sceptre get fast hold. Milton.

The men he prest but late To hard assays unfit, unsure y need ; f et arm'd to point, in well attempted plate.

Fairfax.

She thrice assay'd to speak ; her accents hung, And falt'ring dy'd unfinish'd on her tongue, Or vanish'd into sighs : with long delay Her voice return'd ; and found the wonted way.

Dryden's Fables.

ASSAYING, or ESSAYING, in metallurgy, is a method of ascertaining the actual quantity of pure gold or silver m a given metallic mass.

The term might, with equal propriety, be ap- plied to ascertaining the presence and quantity of any metal, perfect or imperfect, in a mass of ore : but it has, from the universal value of the pure or precious metals, been gradually appro- priated to the best modes of separating them from all admixture, the baser metals being con- sidered by the assayer as of no value or consi- deration. We thus, therefore, apply the term in this paper; referring to the article METALLURGY, and the names of other metallic ores, in their al- phabetical places, for more general observations.

Assaying is a species of chemical analysis, owing its origin probably, like the rest of the modern terms of chemistry, to the alchemy of darker ages. In this country the Liber Niger Scacarii, cited by Du

Cange, attributes the first assay of money to the bishop of Salisbury, a royal treasurer, in the reign of Henry I. It states, that if the examined money was found to be deficient above sixpence in the pound, it was not deemed lawful money of the king, Du Cange, Gloss, i. p. 343. And thus is explained the first application of the terms arsas and arsuram, to money, in the Exchequer-book. But, it is clear, that some species of assay was prac- tised by our ancestors as early as the Norman conquest, Doomsday-book expressly stating, vol. i. f. 15, 16, that ►►65 of coined money was only worth ►►50 in pure silver, < according to the assay of the Mint.' This is the passage : ' Totum manerium T. R. E. et post valuit xl. libras. Modo similiter xl. lib. Tamen reddit 2 lib. ad arsuram et pensum quae valent Ixv. lib.' It also appears, by the same authority, that the king had this right of assay in several places beside the capital. It is remarkable, as Mr. Turner has observed, that we have no Anglo- Saxon gold coins, though numerous silver coins of that period have come down to us. That learned historian thinks, that both gold and silver uncoined, were, however, in circulation at this date. According to Dr. Henry's account of the conduct of Henry VIII. in respect to the coinage, it became indeed, most important that some system should be adopted for regulating the standard value of our coins.

‘ That monarch,’ he remarks, ‘ after he had squandered all his father’s treasures, the grants he had received from parliament, and the great sums he had derived from the dissolution of the religious houses, began to diminish his coins both in weight and fineness. This dimi- nution at first was small, in hopes, perhaps, that it would not be perceived ; but, after he had got into this fatal career, he proceeded by rapid steps to the most pernicious lengths. In the thirty-sixth year of his reign, silver money of all the different kinds was coined, which had only one-half silver and the other half alloy. He did not even stop here; in the last year of his reign, he coined money that had only four ounces of silver and eight ounces of alloy in the pound weight; and the nominal pound of this base money was worth only 9s. 3fd. of our present money. He began to debase his gold coins at the same time, and proceeded by the same degrees. But it would be tedious to follow him in every step. In this degraded and debased condition Henry

the Kignth left the money of his kingdom to his son and successor Edward the Sixth. This shameful debasement of the money of his king- dom, was one of the most imprudent, dishonor- able, and pernicious measures of his reign : it was productive of innumerable inconveniences and great perplexity in business of all kinds ; and the

restoration of it to its standard purity was found to be a work of great difficulty,' Henry's History of Great Britain, vol. xii. p. 336, 337. It is worthy of observation, that since that period, we have had no such capricious and nefarious attempts ; and the regulations of the royal British Mint may now be quoted as at once most scientific and effective.

The art, to which this paper is devoted, con- sists of two distinct branches or operations, the separation of alloy, or base metals, from the precious ores, accomplished by what is tech- nically called cupellation ; and the separation of the precious metals, gold, platina, arid silver from each other, called quartation and parting.

The separation of gold, silver, and platina, from baser metals, is conducted by exposing the whole metallic mass, in which they are sup- posed to be contained, mixed with a certain por- tion of lead, to a strong heat, in a shallow cru- cible, made of burned bones, called a cupel; which is placed in a muffle or small earthen oven, fixed in the midst of a furnace. The lead now vitrifies, or becomes converted into a glassy calx, which dissolves the imperfect metals : and this calx, with those metals which it absorbs, soaks into the cupel, and leaves the precious metals in a state of purity. ' In proportion to the violence of the heat,' says Dr. Aikin, ' is the density of the fume, the violence with which it is given off, the convexity of the surface of the globule of melted matter, and the rapidity with which the vitrified oxide circulates (as it is termed), or lulls down the sides of the metal. As the cupellation advances, the melted button becomes rounder, its surface becomes streaky with large bright points of the fused oxide, which moves with increased rapidity, till at last the globule, being now freed from all the lead and other alloy, suddenly lightens ; the last por- tions of litharge on the surface disappear with great rapidity ; showing the melted metal bright ###with irridescent colors, which directly after be- comes opaque, and suddenly appears brilliant, clean, and white, as if a curtain had been with- drawn from it. The operation being now finished, and the silver left pure, the cupel is al- lowed to cool gradually, till the globule of silver is fixed, after which it is taken out of the cupel while still hot, and when cold weighed with as much accuracy as at first. The difference between the globule and the silver at first put in, shows the quantity of alloy, the globule being now perfectly pure silver, if the operation has been well performed. The reason of cooling the globule or button gradually is, that pure

silver, when congealing, assumes a crystalline texture, and if the outer surface is too suddenly fixed, it forcibly contracts on the still fluid part in the centre, cax\sing it to spurt out in arbor- escent shoots, by which

some minute portions are often thrown out of the cupel, and the assay spoiled.'

The assay of gold and silver is alike, it will be observed, throughout the process of cupellation. As lead is the medium required for the absorp- tion of other metals, both the quality and quan- tity of that metal employed become important to ascertain. If it contains much silver, it will be easy to perceive a source of material error in the operations of the assayer. Lead revived from litharge contains only about half a grain in the pound weight, and is therefore preferred to lead immediately revived from the ore, which usually contains a larger quantity.

As to the proper quantity of lead, it is desir- able at first to ascertain the comparative state of purity of the ingot to be assayed. In this coun- try, such a judgment is generally formed from inspection of the color, hardness, tenacity, &,c. of the metal, but formerly touch-needles were employed for this purpose. These, which are not entirely in disuse, consist of small bars of differently proportioned alloys, of known com- position. If a streak is made with the ingot upon the surface of black flint, or basalt, a spe- cies of indurated slate, called by the ancients flaaavoc, and still known by the name of basa- nite, or even upon a fragment of black pottery, by comparing the streaks with those made on the same stone from needles of known compo- sition, the relative purity of the ingot may be in- ferred. ' Copper' says Dr. Aikin, ' the usual alloy of the fine metals, when taken singly, is found to require from ten to fourteen times its weight of lead for complete scorification on the cupel. Now, all admixtures of fine metal tend to pro- tect the copper from the action of the litharge and the more obstinately, the greater the propor- tion of fine metal. So that copper, with three times its weight of silver (or 9 oz. fine), requires forty times as much lead as copper ; with eleven parts of silver it requires seventy-two parts of lead, and the like in an increasing ratio. The fol- lowing is the table of the proportions of lead re- quired to different alloys of copper; of which a /ew points are founded on the above- mentioned experiments, and the rest filled up according to the estimated ratio of increase, being multiples of the asse:y integer 24 in arithmetical progres- sion. In the three first columns is shown the absolute increase of the quantity of lead in alloys of decreasing fineness ; in the three last columns will be seen the gradual diminution of the pro- tecting power of fine metal against scorification, in proportion to the increase of alloy, shown by the decreasing quantity of lead required for the same weight of copper, under different mixtures.'

ASSAYING.

TABLE.

Silver

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Lead

Ratio of increase

Cop- prr

Silver

Lead

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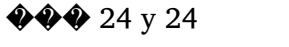
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It should be remarked, however, that many assayers of good authority use proportions of lead considerably different from the above table ; and the whole of the numbers here given may be considered as rather high, in regard to the quan- tity of lead. The assaying of gold, if that noble metal contained copper as an alloy, would be as simple and expeditious as that of silver ; but all gold contains a portion of silver, which cannot be destroyed by cupellation : it may also con- tain platina; but this is not commonly found.

After it has passed the cupel, quartation and parting become

necessary. The former consists in adding (generally) three parts of silver to the mass of supposed gold, and fusing them together. It is an object of importance to pre- vent the cornets from being broken, the result being less likely to be accurate when the gold is in fragments ; and to prevent this, the quantity of silver used is no more than is absolutely ne- cessary, it being found that the less the quantity of gold, compared to the silver, used in the assay, the more likely is the gold to be broken into pieces. ‘ Suppose, for example,’ says Mr. Mushet, ‘ that a gold assay is made from the in- teger, or pound, weighing twelve grains Troy, an addition of from twenty-four to thirty-six grains of pure silver is made in addition to the small portion already supposed to exist in the mass. This becomes thoroughly incorporated with the gold in the process of cupellation. The globule, or button, as soon as it is taken from the furnace, is passed between a pair of polished steel rollers, and drawn out into a thin lamina, or plate, of the thickness of a sixpence, and re- turned into the furnace to be annealed After being kept in a red heat for some time, it is taken out and suffered to cool. It is then wound up into a cornet. This is put into a glass matrass, of the shape of an inverted cone, and with about twice or thrice its weight of very pure nitric acid. M. Vauquelin recommends it to be 1‘25 specific gravity.’

The hot acid being very carefully poured from the matrass, warm water is. added to wash any remains of silver from the gold, and the addition repeated until the water comes off peifectly clear. The cornets of gold, which are of a dull brown color, are then put according to their numbers

into small clay crucibles, into which they are allowed gently to fall by inverting the matrass, with a portion of water in it, which breaks their fall, and also collects any grains of gold that may be in the matrass. The water is then poured off, and they are put into the furnace, and annealed under a bright cherry heat. When cooled, the pieces of gold exhibit their beautiful character- istic lustre, and possess all the softness and flexi- bility of that metal. The weight of the original metallic mass before cupellation and in the subse- quent stages, compared with the final weight now ascertained, indicates the degree of fineness of the ingot, or ore, of which it is a part. In esti- mating or expressing this fineness in regard to gold, the whole mass spoken of is supposed to weigh twenty-four carats of twelve grains each, either real, or merely proportional, like the assayer’s weights; and the pure gold is called fine. Thus, if gold be said to be twenty-three carats fine, it is to be understood, thai in a mass weighing twenty-four carats, the quantity of pure gold amounts to twenty-three carats.

The assay report of gold, says the official gen- tleman we have quoted above, is made accord- ing as it is better or worse than standard. The standard of our gold coin is twenty-two carats fine, and two carats alloy. If, by assay, an ingot of gold was found to contain twenty-one carats of fine gold, it would be reported worse one carat, the mass containing a carat of alloy more than the proportion of two carats to twenty-two carats fine. If the ingot weighed fifteen pounds Troy, there would be deducted from the gross weight one carat, or 240 grains Troy, reducing the standard of the mass to 14 Ibs. 1 1 ozs. 10 dwts. If, on the contrary, the mass was found to con- tain twenty-three carats fine gold, it would be reported one carat better than standard; and this carat would be added to the gross weight of the ingot, which we have supposed to weigh fifteen pounds Troy, and would be called 15 Ibis. Ooz. 10 dwts. of standard gold. When the gold assay pound or integer is only twelve grains, the quarter assay grain weighs only ˆ part of a Troy grain. This will show how delicate the scales must be by which the assayer works in order to obtain accuracy. In the royal mint the scales of the assayers will be sensibly affected even with

the rjfetli part of a Troy grain. When the em peror of Russia lately visited the mint, he was particularly struck with the extreme delicacy of the assay scales of Mr. Bingley, the king's assay- master. That gentleman requested the favor of his imperial majesty to put one of the hairs of his head into the scale, which he did, and, to the great satisfaction of his majesty, it very sensibly affected the equilibrium of the beam.'

It is necessary to be careful that the silver used in this last process should contain no gold, other- wise a source of material error would arise in the operation ; and, as silver generally contains a small portion of gold, the best assayers use that which is revived from a precipitation of the ni- trate of silver. This nitrate of silver is precipi- tated by immersing in it plates of copper : it may also be recovered by a solution of common salt, which converts the silver into luna cornea, of which, when washed and well dried, 100 parts contain seventy-five of silver. The accuracy of the assay may also be proved by this process. The luna cornea, however, is more difficult to reduce to the metallic state.

Many dealers in bullion (the bank of England we believe uniformly) refuse to purchase any foreign gold bullion, until it has been remelted by refiners or melters on whose integrity they can rely.

Platina, on account of its great value, is not likely to l>e used in debasing silver; but it maybe fraudulently added to gold. Like gold and sil- ver, it resists the action of lead upon the cupel ; but an expert assayer will recognise its presence by the very different appearance which it gives to the button of metal in fusion. This is less perfect ; a much greater heat is required ; and the color less bright; and, in a very small pro- portion, it gives to the gold a strong tendency to crystallisation. Nothing is required for its sepa- ration but to proceed exactly as in a gold assay ; and, by reducing the lamina of metal very thin, to form the cornet, the platina, though alone in- soluble in nitric acid, may, with the silver, be totally removed from the cold.

Some idea of the delicacy required through the whole of the foregoing operations maybe formed from an authentic statement, that in our national mint an assay of twenty grains is relied on for giving the value of a mass of gold of fifteen pounds, or of silver of sixty pounds in weight.

The Annales de Cliimie, vol. vi. p. 64, contain some very interesting details of recent attempts of the French government to establish an accurate assay of gold. The general result is as follows, nearly in the terms of the experimenters : ??? ???

Six principal circumstances appear to affect the operation of parting : namely, the quantity of acid used in partintr, or in the first boiling; the concentration of this acid ; t!>r' time employed in its application; the quality jf acid made use of in the reprise, or second operation; its con- centration ; and the- time during which it is applied. From the experiments it has been hown, that each of these unfavorable circum stances might easily occasion a loss of from the naif of a thirty-second part of a carat, to two thirty-second parts. The writers explain their technical language by observing, that, the whole

mass consisting of twenty-four carats, this thirty second part denotes 1 -768th part of the mass It may easily be conceived, therefore, that if the whole six circumstances were to exist, and be productive of errors falling the same way, the loss would be very considerable.

It is indispensably necessary, therefore, that one uniform process should be followed in the assays of gold ; and it is a matter of. astonish- ment, that such an accurate process should not have been prescribed by government for assayers in an operation of such great commercial im- portance, instead of every one being left to follow his own judgment. The process recommended in the report before us is as follows : ???

Twelve grains of the gold intended to be as- sayed must be mixed with thirty grains of fine silver, and cupelled with 108 grains of lead. The cupellation must be carefully attended to, and all the imperfect buttons rejected. When the cupellation is ended, the button must be re- duced by lamination into a plate of one inch and a half, or rather more, in length, and four or five limes in breadth. This must be rolled up upon a quill, and placed in a matrass capable of hold- ing about three ounces of liquid, when filled up to its narrow part. Two ounces and a half of very pure aqua-fortis, of the strength of twenty degrees of Baume's areometer, must then be poured upon it; and the matrass being placed upon hot ashes, or sand, the acid must be kept gently boiling for a quarter of'an hour ; the acid must then be cautiously decanted, and an ad- ditional quantity of one ounce and a half must be poured on the metal, and slightly boiled for twelve minutes. This being likewise carefully decanted, the small spiral piece of metal must be washed with filtered river water, or distilled water, by filling the matrass with this fluid. The vessel is then to be reversed, by applying the extremity of its neck against the bottom of a crucible of fine earth, the internal surface of which is very smooth. The annealing must then be made, after having separated the portion of water which had fallen into the crucible ; and, lastly, the annealed gold must be weighed. For the certainty of this operation, two assays must be made in the same manner, together with a third assay upon gold of twenty-four carats, or upon gold the fineness of which is perfectly and generally known.

No conclusion must be drawn from this assay, unless the latter gold should prove to be of the fineness of twenty-four carats exactly, or of its known degree of fineness ; for, if there be either loss or surplus, it may be inferred, that the other two assays, having undergone the same opera- tion, must be subject to the same error. The operation being made according to this process, by several assayers, in circumstances of import- ance, such as those which relate to large fabri. cations, the fineness of the gold must not be depended on, nor considered as accurately known, unless all the assayers have obtained a uniform result without communication with each other. The authors observe, however, that this identity must be considered as existing to the accuracy of half of the thiity-second part of a carat. For notwithstanding every possible precaution or

uniformity, it very seldom happens that an abso- lute agreement is obtained between the different assays of one and the same ingot ;

because the ingot itself may differ in its fineness in different parts of its mass.

The assaying of silver does not differ from that of gold, excepting that the parting operation is not necessary. A certain small portion of the silver is absorbed by the cupel and the more when a larger quantity of lead is used, unless the quantity of lead be excessive; in which case most of it will be scorified before it begins to act upon the silver. Messrs. Hellot, Tillet, and Macquer, from their experiments made by order of the French government, have ascertained, that four parts of lead are requisite for silver of eleven pennyweights twelve grains fine, or containing this weight of pure silver, and twelve grains of alloy, in twelve pennyweights ; six parts of lead for silver of eleven pennyweights ; eight parts lead for silver of ten pennyweights ; ten parts lead for silver of nine pennyweights : and so on in the same progression. The following is the assay table of M. D'Arcet :

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Silver at 1000

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400

14

35□□□1

500

500

from 16 to 17

32****1

400

600

16****17

26-66****1

300

700

16****17

22-857****1

200

800

16****17

20****1

100

900

16****17

17-77****1

Pure copper,

1000

16****17

16****1

This table supposes, that the title of the silver to be assayed is known; but when it is not, it may be determined approximately, bv exposing

m the cupel 0-1 part of this silver with 1 of lead French gold and silver coin contains l-10th of copper united to the precious metal. British silver com consists of 12* silver and 1 copper- our gold com contains ll-12ths of gold The remainder is either copper, or a mixture of silver and copper.

In our plate entitled ASSAYING we give the assay furnace and its instruments, as used at the ttoval Mint, and Goldsmith's Hall, London.

tig. 1- AAAAisafront elevation of the assay furnace ; a a one of two iron rollers on which the furnace rests; b the ash-pit; cc the ash-pit dampers, moving in a horizontal direction to- wards each other, for regulating the draught of

2 furnace; d the door, or opening by which

e cupels are introduced into the muffle; e a movable tunnel or chimney, by which the draught of the furnace is increased.

BBBB, Fig. 2, is a perpendicular section of ►►►► 1 ; a a ends of the rollers; b the ash-pit; c

6 ieh~pit damPers; d ** &**}* the

plate upon which the muffle rests, and which u covered with loam nearly one inch thick; fa. section of the mufflle representing the situation of the cupels; g the mouth-plate, and upon it are laid pieces of charcoal, which during the pro- cess are ignited, and heat the air that is to pass over the surface of the cupels ; h the interior of the furnace, exhibiting the fuel.

The total height of the furnace is two feet six inches and a half; from the bottom to the grate six inches; the grate, muffle, plate, and bed of loam with which it is covered three inches ; from the upper surface of the grate to the com- mencement of the funnel, e, is six inches. The square of the furnace which receives the muffle and fuel is eleven inches and three-quarters by fifteen inches. The external sides of the furnace are made of plates of wrought iron, and are lined with a two-inch fire brick.

Fig. 3 is the muffle, a sort of small oven, made of crucible clay, and open at one end. On the floor of the muffle the cupels are ranged in order, so that by a corresponding board as a re- gister, the position of each may be preserved with reference to their respective contents. ' At the sides of the muffle are three or four slits to allow of the circulation of the air, which is essen- tial to the process. It is usual to spread over

the floor of the muffle a thin layer of sand, or pow- dered chalk, to prevent the fused oxide of lead which may penetrate the cupel, from cementing it to the bottom of the muffle.

Fig. 4 is the muffle plate on which it rests in the furnace.

Fig. 5 is the door seen at d in fig. 1, with n its sliding mouth-plate.

Fig. 6 represents the mode of closing the mouth of the furnace with cylinders of charcoal, which being ignited, heat the air, before it arrives at the surface of the metal in the cupels.

Fig. 7 two cupels ; they are made of bones calcined and reduced to a moderately fine pow- der, which is mixed up with water so as to form a paste. The shape is produced by ram- ming this paste into truncated conical moulds, a cavity is then formed at the upper surface of each by means of a round ended pestle or rammer. The cupel is disengaged from the mould, and suffered to become thoroughly dry in the open air before it can be made use of for an assay. The core of ox horns is considered the best substance for producing the phosphate of lime for cupels. Those commonly employed in the mint are one inch in diameter by seven-eighths in depth.

Fig. 8 the teaser for cleaning the grate. Fig. 9 a larger teaser, which is introduced at the top of the furnace, for keeping a complete supply of charcoal around the muffle.

Fig. 10 the tongs used for charging the assays into the cupels.

Fig. 1 1 represents a board of wood used as a register, and is divided into forty-five equal com- partments, upon which the assays are placed previous to their being introduced into the fur- nace. When the operation is performed, the cupels are placed in the furnace in situations corresponding to these assays on the board ; by these means all confusion is avoided, and with-

out this regularity, it would be impossible to preserve the accuracy which the delicate opera- tion of the assayer requires.

ASSAY-MASTER, an officer, under certain cor- porations, entrusted with the care of making true touch, or assay, of gold and silver ; and giving a just report of the goodness or badness thereof. Such is the

assay-master of the mint in the Tower, called also assayer of the king.

The assay-master of the goldsmith's company is an assistant-warden, called also a touch-war- den, appointed to survey, assay, and mark all the silver-work, &c. committed to him. There are also assay-masters, appointed by statute, at York, Exeter, Bristol, Chester, Norwich, New-castle, and Birmingham, for assaying wrought plate. The assay-master is to retain eight grains of every pound Troy of silver brought to him ; four whereof are to be put in the pix, or box of deal, to be re-assayed the next year ; and the other four to be allowed him for his waste and spillings. 12 and 13 Will. III. c.4. 1 Ann. c. 9. Note. The number of pennyweights set down in the assay-master's report, is to be ac-counted as per pound, or so much in every pound of twelve ounces Troy. For every twenty pennyweights, or ounce Troy, the silver is found by the assay to be worse than standard, or ster- ling, sixpence is to be deducted ; because every ounce will cost so much to reduce it to standard goodness, or to change it for sterling. In gold, for every carat it is set. down to be worse than standard, you are to account that in the ounce Troy it is worse by so many times 3s. Qd. And for every grain it is set down worse, you must account it worse by so many times lid. in the ounce Troy. And for every half grain, 5ˆd. ; for so much it will cost to make it of standard goodness, ⬚⬚,c.

ASSAY-BALANCE, a balance used in the opera- tion of assaying. See BALANCE.

ASSAY or WEIGHTS A.NO MEASURES, often signifies the trial or examination of common weights and measures by the clerk of a market.

ASSLCL'RL, ~j Barbarous Lat. assecu-

ASS

ANCK, >rnre, Lat. sccurus, to give ASSECURA'TIOX. j assurance.

Can never mischief end as it begun ; Bui beinu- once out, must farther out of force? Think you that any means under the sun Can assecuru so indirect, a course?

l),i>ii,-l. Civil War. bk. iii. p. 473.

Hut how far then readies this assecitration? So far

as to exclude all fears, all doubting and hesitation ?

Neither of these. Bishop Hall's Sermons.

ASSFCUTION. Lat. asscquor, assecutus, from < <◆◆◆(/ and sftjiior, the act of following up, ob- taining.

Hy the canon law, a person after he has been in full possession of a second benefice, cannot return to lii > lirst, because it is immediately void by his assecu- tiim of a second. Ai/I!ffe's Pare.rgon.

ASSKLYN (John), a famous Dutch painter, the disciple of Isaiah Yandovelde. He distin- guished himself in historical pieces, battles, land- scapes, with ruins and animals, particularly linrses. lie travelled into France and Italy; and wa < much pleased with (lie manner of Bam- bo < <◆◆◆!; >. winch he always followed, except in the

painting landscapes, in which Claude Lorraine was his model. Twenty-four of his landscapes have been engraved by Perelle, and sold at high prices. lie died at Amsterdam in 1660.

ASSEMANI, I. S. and S. E. two learned librarians of the Vatican, in the seventeenth and eighteenth centuries. Joseph Simon was born at Rome 1687, and died 1768. He wrote Bib- liotheca Orientalis Clementino Vaticana, Romas, 1719-28, 4 vols. folio, affording ample proof of his learning in the numerous notices it contains of Sy- riac, Arabic, and Persian manuscripts, with lives of their authors. S. Ephraem, Syri, Opera omnia, quae extant, Grace, Syriace, et Latine, Romae, 1732-34, 6 vols. folio ; Italicae Historic Scriptores ex Bibl. Vat., Romae, 1751-53,4 vols. 4to; Ka- lendaria Ecclesias Universae, &c. Romre, 1755- 57, 6 vols. 4to. Assemani, S. E. nephew of the foregoing, wrote Bibliothecae Mediceo Lauren- tinae et Palatinae Codd. MSS. Orientalium Cata- logus, Florentiae, 1742,2 vols. folio; Acta Sanc- torum Martyrum Oriental et Occidental, Romae, 1748, 2 vols. folio.

ASSEM'BLANCE. Fr. sembler, a likeness. See SEMBLANCE.

FALST. Will you tell me, Master Shallow, how to chuse a man ? Care I for the limbe, the thewes, the stature, bulke, and bigge assemblance of a man ? Give me the spirit, Master Shallow,

Shakspeare. Henry IV. part ii.

ASSEMBLE, v. & n.~\ Fr. assembler, from

ASSEM'BLAGE, 1 the Latin ad, to, and

ASSEM'BLANGE, 1 simul, together. To

ASSEM'BLER, [bring together, or in

ASSEMBLING, one place; to collect;

ASSEM'BLY. J to convene.

A rout of people there assembled were, Of every sort and nation under sky, Which, with great uproar, pressed to draw near To the upper part, where was advanced high A stately seat of sovereign majesty. Spenser.

Mahomet made the people believe that he would call a hill to him ; and from the top of it offer up his prayers for the observers of his law. The people assembled ; Mahomet called the hill to come to him, again and again ; and, when the hill stood still, he was never a whit abashed, but said ; ' If the hill will not come to Mahomet, Mahomet will go to the hill.' Lord Bacon's Essays.

These men assembled, and found Daniel praying.

Daniel.

And he shall set up an ensign for the nations, and shall assemble the outcasts of Israel, and gather toge- ther the dispersed of Judah. Isaiah xi. 12. He wonders for what end you have assembled

Such troops of citizens to come to him.

Shakspeare. Assemble all in choirs, and with their notes

Salute and welcome up the rising sun. Otway.

O Hartford (fitted, or to shine in courts With unaffected grace, or walk the plains, With innocence and meditation join'd In soft assemblage) listen to my song ! Thomson.

The ASSEMBLY OF DIVINES at Westminster, was an association of ministers and others, sum- moned by ordinance of parliament, in the year 1643, to meet at Westminster, ' for settling the government and liturgy of the church of Eng- land, and for vindicating and clearing the said church from false aspersions and interpretations.'

ASS

It also met expressly according to the words of the covenant, ‘ for the extirpation of pre- lacie, that is church-government by arch-bi- shops, bishops, their chancellors, and com- missaries, deans and chapters, archdeacons and all other ecclesiastical officers.’ This assem- bly consisted of 121 divines and thirty laymen, ‘ celebrated ‘ in their party,’ says Mr. Hume, ‘ for piety and learning.’ The leading parties were the Presbyterians, Erastians, and Indepen- dents. The works of the assembly, besides some letters to foreign churches, and occasional admo- nitions were, 1. Their humble Advice to Parlia- ment, for Ordination of Ministers, and settling the Presbyterian Government. 2. A Directory for Public Worship. 3. A Confession of Faith. 4. A larger and a shorter Catechism. 5. A Review of some of the Thirty-nine Articles. Both the larger and shorter Assembly’s catechism, are largely in use at the present time among the English Calvinistic dissenters.

ASSEMBLIES of the clergy are otherwise called convocations, synods, councils. The annual meeting of the church of Scotland is called the General Assembly ; in which his Majesty is re-

E resented by his commissioner, generally a c’ottish nobleman, but who has no voice in the deliberations : his duty being confined to the calling and dissolution of the meeting, which he does in the name of his Majesty, whilst the Moderator does the same in the name of the Lord Jesus Christ. This assembly possesses the highest authority in the church of Scotland; a presbytery, composed of fewer than twelve pa- rishes, sends two ministers and one ruling elder to the assembly ; if it contains between twelve and eighteen ministers, it sends three of these, and one ruling elder ; if it contains between eighteen and twenty-four ministers, it sends four ministers and two ruling elders ; and of twenty- four ministers, it sends five with two ruling elders. Every royal borough deputes one ruling elder, and Edinburgh two ; their election must be attested by the kirk-session of their respective boroughs. Every university sends one commis- sioner from its own body. The commissioners are chosen annually six weeks before the meet- ing of the assemhly ; and the ruling elders are often men of the first eminence for rank and talents.

ASSEMBLIES of the Roman people were called comitia.

ASSEMBLIES OF THE STATES. Under the Go- thic governments, the supreme legislative power was lodged in an assembly of the states of the kingdom held annually for the like purposes as our parliaments. There were some feeble remains of them in France and Poland before

the late re- volutions and counter-revolutions.

ASSEMBLY, in the military art, the second beating of a drum before a march ; at which the soldiers strike their tents, roll them up. and stand to arms. See DRUM.

ASS ENS, a bailiwic and town of Denmark, on the west coast of the island of Funen, which carries on a considerable trade in corn. It is also called Asnes, which signifies the holy pro- montory. A battle was fought in it, in 1536, wherein Christian III. obtained a decisive victory

over Christian II. Here is a ferry across the little Belt to Holstein. Long. 9►► 54′ E., lat. 55►► 20′ N.

ASSENT, v. & n.~^ Lat. ctssentior, from ad, ASSENTATION, / and scntio, to think to, to VI

ASSENTA'TOR,

-be of the same opinion.

ASSENT'ER, i To agree to what is pro-

ASSENT'MENT. J posed, to bring one's mind to a thing, to comply. Assentation is sy- nonymous with flattery ; obsequiousness.

And the Jews also assented, saying that these things were so. Ads xxiv. 9.

Their arguments are but precarious, and subsist upon the charity of our assentments.

Brown's Vulgar Errors.

To urge any thing upon the church ; requiring thereunto that religious assent of Christian belief, wherewith the words of the holy prophets are receiv- ed, and not to show it in scripture ; this did the Fathers evermore think unlawful, impious, and exe- crable. Hooker.

The evidence of God's own testimony, added unto the natural assent of reason concerning the certainty of them, doth not a little comfort and confirm the same. Id.

Without the king's assent or knowledge, You wrought to be a legate. Shakspeare

Faith is the assent to any proposition, not thus madt out by the

deduction of reason, but upon the credit oi the proposer. Locke.

All the arguments on both sides must be laid in balance ; and, upon the whole, the understanding de- termine its assent. Id.

Man is the world's high-priest, he doth present The sacrifice for all, while they below, Unto the service mutter an assent, Such as springs use, that fall, and winds that blow.

Herbert.

One would think that hell should have little need of the fawning assentation of others, when men carry so dangerous parasites in their own bosoms ; but sure, both together must needs help to people that rrgion of darkness. Bishop Hall's Soliloquies.

He ceased ; th' assembled warriors all assent,

All but Atrides. Cumberland.

Precept gains only the cold approbation of reason, and compels an assent which judgment frequently yields with reluctance, even when delay is impossible.

Hawliesworth.

The ROYAL ASSENT is the approbation given by the king in parliament, to a bill which has passed both houses, after which it becomes a law.

The royal assent may be given in two ways. 1 In person ; when the king comes to the house of peers, in his crown and royal robes, and sending for the commons to the bar, the titles of all the bills that have passed both houses are read ; and the king's answer is declared by the clerk of the parliament in Norman-French. If the king con- sents to a public bill, the clerk usually declares, * le roy le veut ; the king wills it so to be ; ' if to a private bill, ' soit fait comme il est desire ; be it as it is desired.' If the king refuses his assent, it is in the gentle language of ' le roy s'avisera ; the king will advise upon it.' When a money-bill, or bill of supply, is passed, it is carried up and presented to the king by the speaker of the house of commons ; and the royal assent is thus expressed 'leroy remercie ses loyal sujets, accepte leur benevolence, et aussi le veut;

the king thanks his loyal subjects, accepts their benevolence, and wills it so to be.'

In case of an act of grace, which originally proceeds from the crown, and has the royal as- sent in the first stage of it, the clerk of the par- liament thus pronounces the gratitude of the subject ; ' les prelats, seigneurs, et commons, en ce present parlement assemblies, au nom de touts vous autres sujets, remercient tres humblement votre majeste, et prient a Dieu vous donner en sante bone vie et longue ; the prelates, lords, and commons, in this present parliament assem- bled, in the name of all your other subjects, most humbly thank your majesty, and pray to God to grant you health and wealth long to live.'

2. By the statute 33 Hen. VIII. c. 21., the king may give his assent, by letters patent, under his great seal, signed with his hand, and notified in his absence to both houses, assembled toge- ther in the high house. And when the bill has received the royal assent in either of these ways it is then, and not before, a statute or act of par- liament : a copy of which is usuallyprinted at the king's press, for the information of the whole land. See Blackst. Com. book i. chap. 2.

ASSER, or ASCE, a Jewish rabbi of the fifth century, who, with other learned rabbins, com- piled the collection of Hebrew traditions called the Babylonian Talmud. This was printed at Leyden, 1630, in 4to. ; but the most complete edition is one published in 1744, at Amsterdam, twelve volumes folio, with an ample commen- tary. Asser died in 427, aged seventy-four.

ASSEK (John), or Asserius Menevensis, (i. e. Asser of St. David's), bishop of Sherborne in the reign of Alfred the Great, lie was born in Pem- brokeshire, South Wales; and educated in the monastery of St. David's. By his assiduous ap- plication he soon acquired universal fame as a person of profound learning and great abilities. Alfred the munificent patron of genius, about the year 880, sent for him to his court, then held at Dean in Wiltshire. He was so charmed with Asser, that he made him his preceptor and com- panion : appointed him abbot of two or three different monasteries ; and at last promoted him to the see of Sherborne, where he died in 910. He is said to have been principally instrumental in persuading the king to restore the university of Oxford to its pristine dignity ; and wrote De Vita et Rebus Gestis Alfredi, &c. Lond. 1574, published by archbishop Parker, in the old Saxon character, at the end of Walsinghami Hist.
Francf. 1G02, fol. Oxf. 1722, 8vo. Many other works are ascribed to

this author by Gale, Bale, &c. but on very doubtful authority.

ASSERIA, AssF.siA,or ASISIA, an ancient town of l.iburnia, now in ruins. Pliny, having speci- fied the r.ilmrnian cities that were obliged to 4ttend the congress of Scardonia, adds to the ca- ialouue the free Asserians, immunesque Asse- riates ; a people who created theirown magistrates, and wure governed by their own municipal laws.

ASSERIDA, in botany, a name given by the p'-'>ple of Guinea to a kind of shrub, the leaves of which being chewed, are a cure for the

ASS

Assero, assertum, to kni to, to sew to. To abide by, to bear the consequence of an opinion, to hold, to main- tain, to affirm.

Miltun.

ASSERT',

ASSERTA'CIOK,

ASSER'TION,

ASSER'TIVE,

ASSER'TIVELY,

ASSER'TOR,

ASSER'TORY.

That tongue

Inspir'd with contradiction, durst oppose A third part of the gods, in synod met, Their deities to assert. Among th' auerteri of free reason's claim, Our nation's not the least, in worth or fame, The world to Bacon does not only owe It's present knowledge, and its future too.

Dryden's Epistles.

Faithful assertor of thy country's cause, Britain with tears shall bathe thy glorious wound.

Prior.

It is an usual piece of art to undermine the autho- rity of fundamental

truths, by pretending to shew how weak the proofs are which their assertort employ in defence of them. A tterbury.

He was not so fond of the principles he undertook to illustrate, as to boast their certainty; proposing them, not in a confident and assertive form, but as pro- babilities and hypotheses. Glanville. The Epicureans contented themselves with the de- nial of a Providence, asserting at the same time the existence of gods in general, because they would not shock the common belief of mankind. Addison. We, as it were, lean forward with surprise and trembling, to behold the human soul collecting its strength, and asserting a right to superior fates.

Usher.

When the great soul buoys up to this high point, Leaving gross nature's sediments below, Then, and then only, Adam's oifspring quits The sjˆe and hero of the fields and woods, Asserts his rank and rises into man. Young.

It is an erect countenance ; it is a firm adherence to principle ; it is a power of resisting false shame and frivolous fear, that assert our good faith and ho- nour, and assure us of the confidence of mankind.

Burke.

Sophocles also, in a fragment of one of his trage- dies, asserts the unity of the supreme being.

Cumberland.

But, lo ! from high Hymettus to the plain, The queen of night asserts her silent reign.

Lord Byron's Corsair.

ASSESS', v. & n.-} Ital. assessare, to set to,

ASSES'SIONARY, (impose a tax. Legally

ASSES'SMENT, f done by a sitting or coun-

ASSES'SOR. J cil, and agreement of those

authorised to impose it. Assessor is a legal ad-

viser to a magistrate, sitting by him on the

bench.

To his Son, Th’ assessor of his throne, he thus began. Milton.

Twice stronger than his sire, who sat above, Assessor to the throne of thund’ring Jove. Dryden.

Minos, the strict inquisitor, appears ; And lives and crimes, with his assessors, hears : Round, in his urn, the blended balls he rolls; Absolves the just, and dooms the guilty souls. Id. What greater immunity and happiness can there be to a people, than to be liable to no laws, but what they make themselves ? To be subject to no contri ••• bution, assessment, or any pecuniary levy whatsoever, but what they vote, and voluntarily yield unto them- selves. Howett.

One of the answers of the jury, upon their oaths, at the (ˆsessionary court, I have inserted.

Carew’s Survey of Cornwall. Pausanias sat the judge ; Callicrates and Aemnestus wise, His two assessors. Glover’s Athenaid.

ASSETS, in law, are either real or personal. Where a man hath lands in fee simple, and dies seized thereof, the lands which come to his heir are assets real ; and where he dies possessed of any personal estate, the goods which come to the executors are assets personal. Assets are also divided into assets per descent, and assets inter maines.

1 . ASSETS BY DESCENT are where a person is bound in an obligation, and dies seized of lands which descend to the heir, the land shall be assets, and the heir shall be charged as far as the land to him descended will extend.

2. ASSETS INTER MAINES are when a man in- debted makes executors, and leaves them suffi- cient to pay his debts and legacies ; or where some commodity or profit ariseth to them in right of the testator, which are called assets in their hands. This term is also applied com- mercially to any available property for the pay- ment of a man’s debts.

ASS EVER, 1 Lat. assevero ; ad, and se-

ASSEVER'ATION. $ vents. To say or affirm se- verely or solemnly; to assure; to maintain seriously.

GUISE. You must, you will, and smile upon my murder.

MARMUNTIER. Therefore, if you are conscious of

a breach,

Confess it to me : lead me to the king, He has promis'd me to conquer his revenge, And place you next him j therefore, if you're right, Make me not fear it by asseverations, But speak your heart, and 0 resolve me truly.

Dryden. Duke of Guise.

' I will come and some of you shall see me coming.' Can it be supposed that in such an asse- veration, the word to ' come' may bear two different senses. Horsley's Sermons.

ASSIDEANS, orCHASiDˆANs; from the Heb. Q'TDH, chasidim, merciful, pious ; those Jews who resorted to Mattathias to fight for the law of God and the liberties of their country. They were men of great valor and zeal, having volun- tarily deroted themselves to a more strict obser- vation of the law than other men. For after the return of the Jews from the Babylonish captivity, there were two sorts of men in their church; those who contented themselves with that obe- dience only which was prescribed by the law of Moses, and who were called Zadikim, i. e. the righteous ; and those who, over and above the law, superadded the constitutions and traditions of the elders, and other rigorous observances : these latter were called Chasidim, i. e. the pious. From the former sprung the Samaritans, Saddu- cees, and Caraites ; from the latter, the Pharisees and the Essenes.

ASSIDENT SIGNS, in medicine, are symptoms which usually attend a disease but not always ; hence differing from pathognomic signs, which are inseparable from the disease : e. g. in the pleurisy, a pungent pain in the side ; in an acute fever, difficulty of breathing, &c collectively

taken, are pathognomic signs; but that the pain extends to the hypochondrium or clavicle, or that the patient lies with more ease on one side than on the other, are assident signs.

ASSID'UATE,~\ Lat. assideo, to sit down ASSID'UITY, *at any thing constantly or ASSID'UOUS, (daily. Constant in appli- ASSID'UOUSLY.

) cation, unwearied, diligent, sedulous.

And if by pray’r

Incessant I could hope to change the will Of him who all things can, I would not cease To weary -him with my assiduous cries. Milton.

The most assiduous tale-bearers, and bitterest re- vilers, are often half-witted people.

Government of the Tongue.

In summer, you see the hen giving herself greater freedoms, and quitting her care for above two hours together ; but in winter, when the rigour of the sea- son would chill the principles of .life, and destroy the young one, she grows more assiduous in her at, tendance, and stays away but half the time.

Addism.

Each still renews her little labour, Nor justles her assiduous neighbour. Prior. We observe the address and assiduity they will use to corrupt us. Rogers.

The habitable earth may have been perpetually the drier, seeing it is assiduously drained and exhausted by the seas. Bentley.

A scholar is industrious, who doth assiduously bend his mind to study for getting knowledge.

Barrow’s Sermon*. Often as she mounts

Or quits the car, his arm her weight sustains With trembling pleasure. His assiduous hand From purest fountains wafts the living flood.

Glover. Leonidas, book viii. p. 57.

ASSIDUI, in Roman antiquity, volunteers who served in the army at their own expense.

ASSIDUUS, or ADSIDUUS, from as, money, among the Romans, denoted a rich or wealthy person. Hence we meet with assiduous sureties, assidui fide-jussores. When Servius Tullius di- vided the Roman people into five classes, accord- ing as they were assessed, the richer sort who contributed asses were denominated assidui ; and as these were the chief people of business who attended all the public concerns, those who were diligent in attendances came to be

denominated assidui.

ASSIEGE'. Fr. assieger, to sit down before. To sit down before a town, to besiege.

Swiche wondring was ther on this hors of brass, That sin the gret assege of Troye was, Ther as men wondred on an hors also, Ne was ther swiche a wondring, as was tho.

Chaucer. The Squier's Tale, vol. i. p. 431. On th' other side th' assieged castles ward

Their stedfast arms did mightily maintain.

Spenser. I leave what glory virtue did attain,

At th'ever memorable Agincourt.

I leave to tell, what wit, what pow'r did gain

The assieg'd Roan, Caen, Dreux ; or in what sort. Daniel. Civil War, book v.

ASSIENTO, Span, a contract. The first of this kind was made by the French Guinea Company ; and, by the treaty of Utrecht, transferred to the English, who were to furnish 4800 negroes to Spanish America annually.

1 Lat. aasiˆni) ; at/, and) signo, to mark or sign. [To mark off, to appoint, f to set apart, to appropriate

to a particular use, to J allot, to bring forward as

ASSIGN', r. & ASSIGN'ABLE,

ASSIGNA'TION, ASSIGNEE', ASSIGN'ER, ASSIGN'MENT. a cause or reason.

At last, as forced by false Ulysses crye, Of purpose he brake fourth, assigning me To the altar. Surrey.

He assigned Uriah unto a place where he knew that valiant men were. 2 Sam. xi. 16.

The two armies were astigned to the leading of two generals, both of them rather courtiers assured to the state, than martial men. Bacon.

The only thing which maketh any place publick, is the publick assignment thereof unto such duties.

Hooker.

Thus most invectively he (Jaques) pierceth through The body of the country, city, court, Yea, and of this our life, swearing that we Are mere usurpers, tyrants, and what's worse To fright the animals, and to kill them up In their assigned and native dwelling-place.

Shakspeare. As You Like It. The cause of love can never be assigned, 'Tis in no face, but in the lover's mind.

Dryden. Tyrannic Love. Both joining,

As join'd in injuries, one enmity Against a foe by doom express ussign'd us, That cruel serpent. Milton.

This institution, which assigns it to a person whom ⁂ve have no rule to know, is just as good as an assign- iiit'iit to ivihody at ail. Locke.

The lovers expected the return of this stated hour *ith ;:s much impatience as if it had been a real as- siijnutiun. Spectator.

True quality is neglected, virtue is oppressed, and vice triumphant. The last day will assign to every one a station suitable to the dignity of his character.

Addison.

Tii" ;.-:>s;>(.-l is at one;; t'.ic assigncr of our tasks, and .'ie ina-a/un.-< f our strength. Decay of Piety.

A-SIGN, on ASSIGNEE, in common law, a person to whom a thin:: is assigned or made over. The word assign is said to have been introduced in favor of natural children ; who, because they can- not pass by the name of heirs, are included under that of as

see 1'iAN KIU'l'TCY.

ASSIGNABLE MAGNITUDE, in geometry, any

finite magnitude.

ASSIGNABLE. RATIO, the ratio of finite quanti- ties.

ASSidNATS, a species of paper currency, issued by the government of France, for sums of di Ili-rent values to the amount of many thousand hii'iiot! < of huv', to support the credit of the re public during the course of the revolution.

ALIGNMENT, may be more accurately de- i'.ia.d ;hc: act of transferring the interest or pro- jM-rty a man has in any tlimj ; or of appointing or .M.-tiing over a rijil to another.

A—IGN.ME.VJ 01 A DOWRY, is the setting out o! a woman's portion by the heir.

ASSI M'l l.ATK, 'v F;it. assimilo, assimila

.V—I M'I i MINI —, / In;. i ,□□□ from ad, and shni/is,

. V-i 'in \ noN, ˆ to linn-.;' to the like, to

A---I u'l i \ 1 1 VE,

A" i M'I LABI E. own snl stance by digestion, and the process car- iird on in nmmal i > r vegetable bodies.

sto brinˆ to the like, to i make like, to liken, to J rest. mble, to convert to its

The spirits of many will find but naked habita- tions ; meeting no assimilable* wherein to re-act their natures. Brown's Vulgar Errours.

How little must the ordinary occupations of men seem to one who is engaged in so noble a pursuit as the assimilation of himself to the Deity. Berkeley. Fast falls a fleecy show'r : the downy flakes

Descending, and with never ceasing lapse

Softly alighting upon all below,

Assimilate all objects. Cowper't Poemt.

A ruin is a sacred thing. Rooted for ages in the

soil, assimilated to it, and become as it were a part of

it, we consider it a work of nature, rather than of art.

Gilpin's Tour to the Lakes.

ASSIMILATION, in physics, is that motion by which bodies convert other bodies related to them, or at least such as are prepared to be con- verted, into their own substance and nature. Thus flame multiplies itself upon oily bodies, and generates new flame ; air upon water, and produces new air; and all the parts, as weL similar as organical, in vegetables and animals, first attract with some election or choice, nearly the same, common or not very different juices for aliment, and afterwards assimilate or convert them to their own nature.

ASSINIBONS, a native tribe of North Ameri- cans, whose name has been given to the western branch of the Great Red River. This stream divides itself into two branches, about thirty miles from its estuary in lake Winnipeg, the eastern branch bearing the name of the Red River from its source, the western, which rises in N. lat. 51►► 15', and W. long. 103►► 20', that of Assinibons. Extensive plains, covered with a short rank grass, and crowded with buffaloes and elks, extend between these streams, but tim- ber even for firewood is scarce. The soil is gravelly, and beds of lime and stone form the rapids of these rivers ; which are both navigable by canoes up to their source.

ASSINT, a parish of Scotland in the county of Sutherland, about fifteen miles in breadth, and twenty-five in length.

ASSIRATUM, in antiquity, a bloody draught, wherewith treaties were ratified. It was made of wine and blood, called by the ancient Romans assir.

ASSIS, in physiology, opium, or a powder made of hemp-seed, which being formed into boluses about the bigness of chestnuts, is swal- lowed by' the Egyptians, who hereby become intoxicated and ecstatic. It is called by the Turks asserac.

ASSISA CADERE, in law ; from assideo, to be nonsuited; when the complainant, from defect of legal evidence can proceed no further. Assisa cadit in juratum, is where a thing in controversy is so doubtful that it must necessarily be tried by a jury. Assisa continuanda, a writ directed to justices of assize for the continuation of a cause when certain records alleged cannot be produced in time by the party that has occasion to use them. Assisa proroganda, a writ for the stay of

proceed- ings by reason of the parties being employed in the king's business. Assiza panis et cerevisiae, assize of bread and beer, a statute for regulat- ing their weight and quantity. Assisa No- cumenti, see NUISANCE. Assisa capi in mo- dum assisae, when the defendant pleads di- rectly to the assize. ••• Assisa judicum, a judg-

ment of the court given either against the plain- tiff or the defendant.

ASSIST, a small town in the papal dominions, in the duchy of Spoleto: the see of a bishop. Sf. Francis, the celebrated founder of the Fran- ciscan order, was born here ; and lies buried in the Sacro Convento. Near the foot of the hill on which the town stands is a rustic chapel, dedicated to the virgin and the angels, in which St. Francis was supposed to have received his first call to spacious church has been erected; and, on the second of August, multi- tudes of pilgrims flock to it from the adjoining provinces. When Mr. Eustace passed it in 1802, he informed him, that more than 10,000 persons had attended the last an- niversary, and that ten had been suffocated or trampled to death, in pressing forward to touch the altar. Here are the ruins of a temple of Minerva, built about

ASSISTANTS, in various trading or public companies, members who have the whole power of managing the company's affairs; and corn- monly called the court of assistants.

ASSISUS, in ancient law writers, a thing farmed out for a certain rent, in money or pro- visions.

ASSITHMENT ; from ad, to, Lat. and sithe, a weregild, or compensation is supposed to have received by a pecuniary mulct, quod vita supplicii ad devotion. Over this a ••• ••••••*••• i .1- . ••• ••• der the sanction or appointment of the law. one of the fathers informed him, that more than 10,000 persons had attended the last an- niversary, and that ten had been suffocated or trampled to death, in pressing forward to touch the altar. Here are the ruins of a temple of Minerva, built about

the time of Augustus. The portico consisted of six fluted Corinthian columns, each having a distinct pedestal. It is now used as the portico of the church of Santa Maria di Minerva. In the neighbourhood of Assisi are

other vestiges of Roman magnificence; ruins of baths, temples, and an aqueduct. The bishopric

There nas not a point truely That it nas in his right assise.

Chaucer. T/ie Romaunt of the Rose, ch. i. When in mid air the golden trump shall sound, To raise the nations under ground ; When in the valley of Jehosaphat The judging God shall close the book of fate ; And there the last assizes keep, For those who wake, and those who sleep. Dryden. Ode to the Memory of Mrs. A. Kittigrew.

ASSIZE, in old English law books, is defined to

was dissolved by the French in 1810. Twenty be an assembly of knights, and other substantial

###i -XT HT ttr t* n i , -r * ##.r## ##..^* -n *

miles N.N.W. of Spoleto. lat. 43′ 3## N.

ASSISII, in ecclesiastical writers, persons beneficed in a cathedral church, not in a rank below that of canons ; thus called, either because they were allowed an assisia or pension, or from assiduus, diligent.

Long. 12## 30′ E., men, together with a justice, in a certain place, and at a certain time; but the word, in its pre- sent acceptation, implies a court, place, or time, when and where the writs and processes, whether civil or criminal, are decided by judge and jury. All the counties of England were, very anciently, divided into six circuits, and two

ASSIST’, -\ Assisto ; from ad, and sisto, judges assigned by the king’s commission, to hold ASSISTANCE, f to stop or stay. To place their assizes twice a-year in every county, except ASSISTANT, i one’self by another so as to London and Middlesex. They were afterwards ASSIST’LESS. J give him our strength; to stand directed by magna charta, c. 12. to be sent into

_ A ?_ it . _ P i_ 1 1_ 1 i “_ * ##

by, not in the sense of to look on, but to give support ### to help.

The council of Trent commends recourse, not only

tistance : what doth this aid and assistance signify ?

Stillingfieet.

You have abundant assistances for this knowledge, in excellent books. . Wake's Prep, for Death.

One bull, with curl'd black head beyond the rest, And dew-laps hanging from his brawny chest, With nodding front awhile did daring stand, And with his jetty hoof spurn'd back the sand : Then, leaping forth, he bellow'd out aloud : Th' amazed assistants back each other crowd, While monarch-like he rang'd the listed field; Some toss'd, some gor'd, some trampling down, he kill'd. Dryden. Conquest of Granada, part i.

Let us entreat this necessary assistance, that by his grace he would lead us. Rogers.

every county once a-year to take or try certain actions then called recognitions or assizes; the most difficult of which they are directed to ad- journ into the court of common pleas to be there determined. But the present justices of assize and nisi prius are more immediately derived from the statute Westm. 2. 13 Edw. I.e. 30. explained by several other acts, particularly the statute 14 Edw. III. c. 16. and must be two of the king's justices of the one bench or the other, or the chief baron of the exchequer, or the king's ser- jeants sworn. They usually make their circuits in the respective vacations after Hilary and Tri- nity terms ; assizes being allowed to be taken in the holy time of Lent by consent of the bishops at the king's request, as expressed in statute Westm. 1. 3 Edw. I. c. 51. The judges upon

iut; uu wuuiu icou us. J.VJUCTB. . . . ., . . PA i

Loose at each joint; each nerve with horror shakes, the circuits now sit by virtue of five several

Stupid he stares, and all assistless stands.

Such is the force of more than mortal hands.

Pope. Homer's Iliad, book xvi.

God assists us in the virtuous conflict, and will crown the conqueror with eternal rewards. Blair.

While my thoughts were thus employed, I was sent by Metophis towards the mountains of the desert Oasis, that I might assist his slaves in looking after his flocks, which were almost without number.

Hawkesworth's Telemachus. Eternal God,

Guide thou my footsteps in the way of truth,

And oh ! assist me so to live on earth,

That I may die in peace, and claim a place

In thy high dwelling. Kirke White's Poemt.

authorities. 1. The commission of the peace in every county of the circuits; and all justices of the peace of the county are bound to be pre- sent at the assizes ; and sheriffs are also to give their attendance on the judges, or they shall be fined. 2. A commission of oyer and terminer, directed to them and many other gentlemen of the county, by which they are empowered to try treasons, felonies, &c and this is the largest commission they have. 3. A commission ot general gaol-delivery, directed to the judges and the clerk of assize associate, which gives them power to try every prisoner in the gaol commit- ted for any offence whatsoever, but none except

prisoners in the gaol : so that one way or other they rid the gaol of all the prisoners in it. 4. A commission of assize, directed to the judges and clerk of assize, to take assizes; that is to take the verdict of a peculiar species of jury called an assize, and summoned for the trial of landed dis- putes: the other authority is, 5. That of nisi prius, which is a consequence of the commission of assize, being annexed to the office of those justices by the statute of Westm. 2. 13 Edw. I. c. 30. And it empowers them to try all ques- tions of fact issuing out of the courts of West- minster, that are then ripe for trial by jury. Formerly, the judges could not act in counties where they resided or were born; but this cus- tom is abrogated by 49 Geo. 3. c. 91.

ASSIZE, or jury, in Scots law, consists of fif- teen sworn men, (juratores,) picked out by the court from a greater number, not exceeding forty-five, who have been summoned for that purpose by

the sheriff, and given in a list to the defender, at serving him with a copy of his libel.

ASSIZER, or ASSISER, from assize; an officer that has the care and oversight of weights and measures in various parts of England.

ASSO'CIATE, v. 7i. & adj. } Lat. adsocio,

ASSOCIA'TION, > from ad, and so-

ASSOCIA'TOR. j do, from sequor,

to follow. To meet together as equals, to keep in company, to be partners, confederates.

Their defender, and his associatei, have sithence proposed to the world a form, such as themselves like.

Hooker.

The church, being a society, hath the self-same original grounds which other politick societies have j the natural inclination which all men have unto sociable life, and consent to some certain bond of association ; which bond is the law that appointeth what kind of order they should be associated in. Id.

A fearful army, led by Caius Marcius, Associated with Aufidius, rages Upon our territories. Shakspeare.

Sole Kve, associate sole, to me (beyond Compareˆ above all living creatures dear.

Milton.

Associate in your town a wand'rinˆ train ; And strangers in your palace entertain. Dryden.

He was accompanied with a noble gentleman, no unsuitable associate. Wotton.

They persuade the king, now in old age, to make Plangus his associate in government with him.

Sidney.

Self-denial is a kind of holy association with God ; and, by making you his partner, interests you in all his happiness. Boyle.

A/tsnciatum of ideas is of great importance, and may be of excellent use. Watts.

But my associates now my stay deplore,

Impatient. Pope. Odyssey.

ASSOCIATE PRESBYTERY, the title first assumed liy those clergymen who associated together, after seceding from the church of Scotland, in

1733.

ASSOCIATE SYNOD, was the highest ecclesias- tical court among the Antiburgher Seceders of Scotland. Its decisions being final, like those of the General Assembly. See Antiburgher and Seceders.

ASSOCIATION, in law, is a patent by the king, cither of his own motion, or at the suit of a party plaintiff, to the justice* of assize ; to

have other persons associated with them, in order to take the assize.

ASSOCIATION OF IDEAS, is where two or more ideas constantly and immediately accompany or succeed one another in the mind, so that one shall almost infallibly produce the other, whether there be any natural relation between them or not. See METAPHYSICS. Wrong com- binations of ideas, Mr. Locke shows, are a great cause of the irreconcileable opposition between different sects of philosophy and religion : for we cannot imagine, that all who hold tenets dif- ferent from, and sometimes even contradictory to one another, should wilfully and knowingly impose upon themselves, or refuse truth offered by plain reason : but some loose and indepen- dent ideas are by education, custom, and the constant din of party, so coupled in their minds, that they always appear there together : these they can no more separate in their thoughts, than if they were but one idea; and they operate as if they were so. This gives the appearance of sense to jargon, of demonstration to absurdi- ties, and of consistency to nonsense. It is the foundation of the greatest, and almost of all the errors in the world. Association forms a prin- cipal part of Dr. Hartley's mechanical theory of the mind. He distinguishes it into synchronous and successive ; and ascribes our simple and complex ideas to the influence of this principle or habit. Particular sensations result from pre- vious vibrations conveyed through the nerves to the medullary substance of the brain ; and these are so intimately associated together, that any one of them, when impressed alone, shall be able to excite in the mind the ideas of all the rest. Thus we derive

the ideas of natural bodies from the association of the several sensible qualities with the names that express them, and with each other. The sight of part of a large building suggests the idea of the rest instantaneously, by a synchronous association of the parts ; and the sound of the words, which begin a similar sentence, brings to remembrance the remaining parts, in order, by successive association. Dr. Hartley maintains, that simple ideas run into complex ones by association; and apprehends, that, by pursuing and perfecting this doctrine, we may some time or other be enabled to analyse those complex ideas, that are commonly called the ideas of reflection, or intel- lectual ideas, into their several component parts, i. e. into the simple ideas of sensation of which they consist; and that this may be of con- siderable use in the art of logic, and in ex- plaining the various phenomena of the human mind.

ASSODES, in medicine, a continued fever, wherein the surface is moderately warm, but the internal heat great.

ASSOIL', i Supposed to be from the

ASSOIL'MENT. i Fr. absoudre ; Lat. absolvere, to loose or free from. To absolve from guilt; to liberate from punishment ; to pardon, to forgive.

This is my drede, and ye, my brethren tweie,

Asioileth me this question I preie.

Chaucer. The Marchantes Tale. But secretly tussoiliny of his sin,

No other med'cine will unto him lay.

Mirror for Man'ixtrafei

I also wyll aske of you a certayne question, whiche yf ye assoyle me, I in lykewyse wyll tell you by what auctori.e .da these thynges.

Bible, 1551. Matthew ch. xxi.

But with such guilefull appendices of oathes im- posed on him, that this assoilement was not so much the epilogue of his olde, as the prologue of his new tragicall vexations.

Speed’s History of Great Britaine.

To ASSOILE, in our ancient law books, sig- nifies to absolve from an excommunication.

ASSONANCE, in rhetoric and poetry, a term used where the words of a phrase or verse have the same sound or termination, and yet make no proper rhyme. These are usually accounted vicious in English ; though the Romans some- times used them with elegance : as, Militem comparavit, exercitum ordinavat, aciem lus- tra vit.

ASSORT, l Fr. assortir, from the Lat. ASSORTMENT, } sors, lot. To sort, to put things of the same kind or class together, to match, to suit.

Ye ne be but fools of good disport ! I wole you teachen a new play ; Sit down here by one assort,

And better mirth never ye seigh.

Sir Ferumbras, in Ellis, v. ii. p. 401.

A taylor sat musically at it in a shed over against

the convent, in assorting four dozen of bells for the

harness, whistling to each bell as he tied it on with a

thong. Sterne’s Tristram Shandy.

An adjective is by nature a general, and in some

measure an abstract word, and necessarily presupposes

the idea of a certain species or assortment of things,

to all of which it is equally applicable.

Smith’s Moral Sentiments.

ASSOS, a sea-port of Natolia, subject to the Turks, on a bay of the ./ Egean Sea, twelve miles south-east of Troas.

ASSRUMINA, in botany, the name given by the people of Guinea to the shrub whose leaves they use as a cure for long worms, which are found in their flesh : they bruise the leaves, and apply a large lump of the mass to the part. ASSUA’GE, } Old Fr. assouager. The ASSUAGE’MENT, > modern Fr. is soulager. To ASSUA’SIVE. J soften,

to alleviate pain or grief, to lessen, to allay, to render tranquil.

Tell me, when shall these weary woes have end ; Or shall their ruthless torment never cease, But all my days in pining languor spend, Without hope of assuagement or release ?

Spenser's Sonnets. Shall I, t' assuage Their brutal rage, The regal stem destroy ?

Dry den's Albion. The rest

Was broiled and roasted for the future feast, The chief invited guests were set around ; And, hunger first asswag'd, the bowls were crown'd, Which in deep draughts their cares and labours diown'd. Id. Fablet.

If in the breast tumultuous joys arise, Musick her soft assuasive voice supplies.

Pope's St. Ceecilia.

Refreshing winds the summer's heats assuage ; And kindly warmth disarms the winter's rage.

Addison.

Patroclus sat contentedly beside Eurypylus, with many a pleasant theme, Soothing the generous warrior, and his wound Sprinkling with drugs assuasive of his pains.

Cowper's Iliad, bk. xv. p. 274

ASSUEFACTION, > Assuefacio, assuefac- AS'SUETUDE. 3 turn, to accustom. The

state of being accustomed.

We see that assuetude of things hurtful, doth make them lose the force to hurt.

Bacon's Natural History.

Right and left, as parts inservient unto the motive faculty, are differenced by degrees from use and assiie- faction, or according whereto the one grows stronger.

Brown's Vulgar Errovrs.

ASSUME', ~\ Assujno, assumptum, ud

ASSU'MER, I and sumo, to take to [one's

ASSU'MING, Vself.] To appropriate, to

ASSUMPT', v. & n. I claim more than is due, to ASSUMPTION. J arrogate, to suppose some- thing granted without proof.

Preserve the right of thy place, but stir not ques- tions of jurisdiction ; and rather assume thy right in silence, and de facto, than voice it with claims and challenges. Lord Bacon's Essays.

His majesty might well assume the complaint and expression of king David. Clarendon.

With ravish'd ears The monarch hears ; Assumes the god, Affects to nod ;

And seems to shake the spheres. Dryden.

His haughty looks, and his assuming air, The son of Isis could no longer bear. Id,

This makes him over-forward in business, assuming in conversation, and peremptory in answers. Collier. For spirits freed from mortal laws, with ease Assume what sexes and what shapes they please.

Pope.

This, when the various god had urg'd in vain, He strait assum'd his native form again. Id.

The personal descent of God himself, and his as- sumption of our flesh to his divinity, more familiarly to insinuate his pleasure to us, was an enforcement beyond all methods of wisdom.

Hammond's Fundamentals.

In every hypothesis something is allowed to be assumed. Boyle.

Upon the feast of the assumption of the Blessed Virgin, the pope and cardinals keep the vespers.

StilUngfleet.

Adam, after a certain period of years, would have been rewarded with

an assumption to eternal felicity.

Wake.

It is scarce possible to conceive any scene so truly agreeable, as an assembly of people elaborately edu- cated, who assume a character superior to ordinary life, and support it with ease and familiarity. Usher. It very seldom happens that a man is slow enough in assuming the character of a husband, or a woman quick enough in condescending to that of a wife.

Steele.

Habits are soon assumed, but when we strive To strip them off, ‘tis being flayed alive. Cowper.

ASSU’MENT. Assuo, to stitch or tack on. A tacking on.

This assument or addition, Dr. Marshall says, he never could find any where but in this Anglo-Saxon- ick translation, and that very ancient Greek and Latin MS copy of Beza’s.

Lewis’s Editions of the Eng. Trans, of the Bible.

ASSUMPSIT, in the law of England, or

promise, is of the nature of a verbal covenant,

and wants nothing but the solemnity of writing

and sealing to nuke it absolutely the same. If therefore, it be to do any explicit act, it is an express contract, as much as any covenant : and the breach of it is an equal injury. The remedy indeed is not exactly the same : since, instead of an action of covenant, there only lies an action upon the case, for what is called an as- sumpsit or undertaking of the defendant; the failure of performing which, is the wrong or injury done to the plaintiff, the damages whereof a jury are to estimate and settle. As, if a builder promises or undertakes, that he will build and cover a house within a limited time, and fails to do it, an action on the case arises against the builder, and the party injured may recover a pecuniary satisfaction. But some agreements, though

ever so expressly made, are deemed of so important a nature, that they ought not to rest on a verbal promise only, which cannot be proved but by the memory of witnesses, and which oftentimes leads to perjury To pre- vent this, the statute of frauds and perjuries, 29 Car. II. c. 3. enacts, that in the five following cases, no verbal promise shall be sufficient to ground an action upon ; but at the least some note or memorandum of it shall be made in writing, and signed by the party to be charged therewith : 1 . Where an executor or adminis- trator promises to answer damages out of his own estate. 2. \ here a mun undertakes to answer for the debt, default, or miscarriage, of another. .1. Where any agreement is made upon consi- deration of marriage. 4. Where any contract or sale is made of lands, tenements, or heredita- ments, or any interest therein. 5. And lastly, where theiv is any agreement that is not to be performed within a year from the making thereof. In all these cases, a mere verbal as- sumpsit is void.

ASSUMPTION, a festival in the Romish church, in honor of the miraculous ascent of the Virgin Mary into heaven: the Greek church, who also observe this festival, celebrate it on the l.')th of Auuust with great, ceremony.

AˆM MI'IION, or ASM>M;ON<;, one of the La- drone islands, in the Pacific Ocean. Father (Jobien asserts that it is eighteen miles in circum- ference; hut Perouse diminishes its size to three. It i> of a conic, il figure, rising GOO feet in height, of dreary aspect, and almost covered witli lava from the. eruptions of a volcano in the centre. A few cocoa-nut trees an found on the island ; but there is no mchoiaue near the shore. Fifteen miles Mmth of St. Lawrence. Long. 140►► 55′ E., hit. 1HJ -4.V .V

AssrMi'TioN, the capital city of Paraguay, in America. It is situated

ASSl'.M PT1 VE AIIMS, in heraldry, are such a-> a person has a ri'jht to assume, with- the ap- proi'ation of hi> sovereign, and of the heralds: thus, if a person, who has no right by b'ood,

and has no coat of arms, shall captivate, in any lawful war, any gentleman, nobleman, or prince, he is, in that case, entitled to bear the shield of that prisoner, and enjoy it to him and his heirs for ever.

ASSURE', -v ~

A , t rr. assurer, to make sure.

ASSURED, JT secure, to assert, aver,

ASSUR’ANCE, \ , .-‘c

A i /warrant, voucii. certny, m-

ASSUR EDLY, i .’ , ⬛⬛⬛⬛⬛

A , 1 spire with confidence.

ASSUREDNESS. } *

What man is he that boasts of fleshly might, And vain assurance of mortality ; Which all so soon, as it doth come to fight Against spiritual foes, yields by and by.

Faerie Queetie.

I must confess, your offer is the best ; And, let your father make her the assurance, She is your own, else you must pardon me ; If you should die before him, where’s her dower?

Stiakspeare.

I hold the entry of common-places to be a matter of great use and essence in studying, as that which assureth copiousness of invention, and contracteth judgment to a strength. Bacon’s Essays.

An assurance, being passed through for a competent fine, hath come back again by reason of some over- sight. Id.

I revive

At this last sight ; assur’d, that man shall live With all the creatures, and their seed preserve.

Milton

Well is that part of us lost which may give assurance of the salvation of the whole.

Hall’s Contemplations.

Assuredly he will stop our liberty, till we restore him his worship. South.

It is the ennobling office of the understanding to correct the fallacious and mistaken reports of the senses, and to assure us that the staff in the water is straight though our eye would tell us it is crooked.

Id.

The obedient, and the man of practice, shall out- grow all their doubts and ignorances ; till persuasion pass into knowledge, and knowledge advance into assurance. Id..

Hath he found in an evil course that comfortable assurance of God's favour, and good hopes of his future condition, which a religious life would have given him ? Tillotson.

ALMANZ. No; there is a necessity in fate ; Why still the brave bold man is fortunate ; He keeps his object ever full in sight, And that assurance holds him firm and right.

Dry den. Conquest of Granada, part i. A man without assurance is liable to be made un- easy by the folly or ill-nature of every one he con- verses with.

Melmoth's Translation of Cicero's Laelius.

How happy it is to believe with a stedfast atsurance that our petitions are heard even while we are making them, and how delightful to meet with a proof of it in the effectual and actual grant of them.

'Covoper's Letters.

The soul reposing on assured relief, Feels hrrsc-lf happy amidst all her grief ; Forgets her labour, as she toils along, Weeps tears oi' joy, and bursts into a song.

Con-p r.

ASSURANCE.

ASSURANCE, or INSURANCE, in commercial affairs. Under the latter word, every thing con- nected with the subjects, both of life and of marine insurance, might with great propriety be arranged. But mercantile usage, and the titles of various respectable societies in this country, have appropriated the former word to contracts for paying sums of money upon the continuance of life, or in the event of death ; and the latter, to the insurance of property against the contin- gencies of the sea. We propose, under LIFE ANNUITIES, to enter further into the principles on which the contingency of life is calculated ; under MARINE INSURANCE, to treat of all that is usually comprised under

that head ; confining ourselves in this paper to the practical detail of the methods adopted by the most respectable Assurance com- panies in the conduct of their affairs, and the actual calculations on which they proceed.

Assurance on lives is the guaranteeing a cer- tain sum of money to be paid in the event of a person named being alive at a certain time, or dying within a certain time, or to be paid within a certain time after the death of a person named. The party agreeing to pay this sum, is termed the Assurer ; the sum he receives for his hazard, or in compensation for what he is to pay, is called the Premium of assurance; and the in- strument by which the parties are mutually bound to their contract, is called a Policy of assurance. These are granted sometimes by individuals; but in this case the policies, though often for larger sums than the companies insure, are usually for short periods, and at higher rates than the companies charge. It must be obvious, that as they are particular bargains between in- dividuals under circumstances known, par- ticularly, perhaps, or that ought to be known by those concerned, no uniform plan of proceeding can be expected.

But the respectable societies who conduct this business in the metropolis, and other parts of Great Britain, proceed upon settled and mathe- matical principles. Tables of the ordinary dura- tion of human life, formed from bills of mortality, are the basis of their calculations. The register of mortality at Northampton, originally pub- lished by Dr. Price, is that generally adopted ; it having been found by long experience that rather fewer deaths happen, according to the books of the Equitable Assurance Society, than are upon that scale to be expected. The most esteemed tables are those of Aikin, De Parcieux, Kerseboom, aud Gorsuch. M. de Moivre as- sumes, that if eighty-six persons were born at the same time, one would die in each year, until the whole number ceased to live. Although this hypothesis has not been found accurate enough for extensive business in this way, it furnishes an easy rate for estimating the expectation of life. Subtract the given aˆe of a person from 86; when, dividing the quotient by two, the remain- der gives the expectation nearly. Thus, let the

age be 40, then 8b∼40 is 23, which differs very

little from the Northampton table. At the ags of 50 again, the error is trifling, the Northampton table giving 17‘99, De Moivre’s, 18. But, in the higher ages, the error becomes considerable.

A scale of life having been adopted, the table of premiums to be paid

by the parties insuring is calculated in the following manner : ❖❖❖ The premium for a certain age being supposed to be known, then the premium for a person of one year younger, being compounded of the premium for one year and the present value of the above premium, is easily calculated from the table of lives, thus : ❖❖❖ Multiply the premium on the old- est life into the number of persons alive in the tables of that age, and divide by the number of persons of the younger age alive in the tables. This sum, discounted for a year, gives the pre- mium for assuring the desired sum at the end of the year. Then multiply the sum to be assured into the number of persons of the younger age, that die according to the tables in a year, and divide by the number of persons alive at that age, and this sum discounted for a year is the assurance of the sum for the first year, and con- sequently the two sums, added together, give the desired premium. Now, as the oldest person in the scale of life dies in the ensuing year, the premium on him is evidently the sum to be paid discounted for one year, and thence the premium for the age below is ascertained by the above rule ; and so of every age in succession. Errors cannot be committed on this plan without de- tection, as every step is checked by a similar table drawn out for the value of an annuity at each age. In the same manner are tables formed for the assurance of a sum payable at the death of one out of two persons, or at the death of the survivor of two persons, or at the death of one on the contingency of his surviving another, and so on. The tables generally adopted by the com- panies, on the contingency of one person sur- viving another, being calculated by an approxi- mation, founded on the expectation of their lives, do not partake of the mathematical accuracy of the other tables ; but the companies, in this case, grant assurances at times to their own disadvan- tage ; for if they take rather too much upon one life, they lose that sum upon the other ; the pre- mium payable on the death of one of two parties, being divided by the above-mentioned rule of approximation into two premiums, to be paid by the two parties on the contingency of one sur- viving the other. These rules apply to tables of rates for the payment of a gross premium : but as it is generally more convenient to pay an equiva- lent annual sum, a table of rates is made for this case, which is formed by dividing the gross premium by the value of an annuity upon each age added to unity. If the annual premium were paid at the end of the year, the addition of unity would be unnecessary ; but a policy is not granted till one premium is paid, and hence the necessity of the addition is obvious.

Premiums being thus settled from a fixed table of observations on life, it is evident that, unless

the deaths happen exactly in the order prescribed by the tables, there will be a sin-plus or defi- ciency of capital for the payment of the assured sums. The management of the surplus, or ap- prehended surplus, which the prudence of re- spectable companies generally insures, is dif- ferent in different companies. Either the com- pany appropriates the whole of the surplus to itself, or makes a compensation to the assured for it. In the former case, the company pays the sum specified in the policy, and no more ; con- sequently, a party may pay to the office a sum far greater than his executors or assigns receive in return. Thus, if an assurance is effected on a person between sixteen and seventeen for ––100, receivable at his death, the annual pre- mium is ––2. Os. 8d. ; and if he lives forty-nine years, he will have paid more than the whole sum to be received, without computing interest on these payments. The surplus of the accumu- lation of premiums above the claims may be great from two causes : first, the increased in- terest obtained by the company above that by which the table of rates was computed ; and, second, a longer duration of life in the earlier years than is assigned by the table ; and here great circumspection on the part of the company is requisite to preserve it from imposition, and to secure the best lives that circumstances admit. In the companies where only the sum specified in the policy is paid, the surplus does not go entirely to the company ; for it is common in these offices to allow a per centage on the pre- mium to the party who brings an assurance to them, generally a solicitor, who thus participat- ing in the gains of the company, has an interest in increasing its concerns, though to the evident disadvantage of his client.

Where the surplus is made advantageous to the assured, two methods are adopted ; the one is to add, at certain periods, a sum to each po- licy ; the other to diminish the premium. In both cases a valuation is made of all the annual premiums, with the past arid future expected ac- cumulations, and also of the claims upon every policy. If the former exceed the latter to a sufficient amount, then an addition is made to each policy, or the premium is diminished. It is necessary, however, that the utmost care should be taken to secure to each policy the sum named in it, with every addition made to it; and hence a third partof the surplus is constantly retained to guard against possible contingencies. This reservation has occasioned a singular ano- maly in one of the most distinguished companies for life assurance. In that company all are partners, being mutually guarantees to each other for the payment of their respective claims. The surplus arising from the

excess of pre- miums, with their accumulations above the claims, evidently belongs to the whole company, and consequently each partner is entitled to a portion of it. Hut of this surplus, a third being con- stantly reserved, and each person at his death ceasing to IK: a partner, every person leaves be- hind him a portion for his successors. Such has been the extreme caution of the Equitable So- ciety.

This led to the format ion of a plan, which is

adopted by the Rock Assurance Society, that vests this third in determinate hands. To do this, the company consists of a number of pro- prietors, each of whom is bound to keep up an assurance with it, and whose interest in these as- surances is greater than that derived from the profit of assurances granted to non-proprietors. The company takes upon itself the whole risk of policies made with it, being bound to pay to each party assured the sum specified in his po- licy ; and additions are made to each policy in the manner above-mentioned. But the third reserved is joined to, and makes part of the sub- scription capital stock ; and the interest upon it is annually divided among the proprietors. Thus the third reserved belongs to, and continues to add to, the security of the company ; and the non- proprietor, secured from all risk, participates in the two-thirds divisible at every period.

Other modes are sometimes adopted to dis- pose of accumulating property ; such as, by di- minishing, at certain periods, the premiums paid on assurance ; in this case the sum specified in the policy is paid, though the party assured may have paid a much less sum than in the com- panies above mentioned. The diminution of premium depends on the excess of capital in hand, with the present value of future premiums, above the claims that are or may be made upon it, and consequently the same care is necessary to reserve a part of the surplus for fear of future contingencies. The public have thus a choice either to receive a fixed or an increasing sum ; the fixed sum by means of a definite or a pro- bably decreasing premium, and an increasing sum by means of a definite premium.

Assurance policies are generally confined to the limits of Europe, but they are capable of be- ing extended to all parts of the world. In such cases an addition is made to the premium, ac- cording to the supposed addition to the risk from unhealthiness of climate, and danger of the seas. Additions are also made to the premium on account of the profession (as of the army) of the assured ; on account of disease, as of gout, by which he is occasionally afflicted ; or of diseases, as of small- pox and measles, to which he may be liable.

The oldest of the societies for assurances on lives in London, is the Amicable Society, insti- tuted by charter in the year 1706. The same contribution was originally required from every member, whatever his age might be, and the sums received at the death of members were variable, depending on the number of persons that died in the same year. Subsequent altera- tions were made in this company by successive charters. At present the several interests of the members are divided into shares, each share being now warranted to produce ––200 at the death of the insured, together with such additions as may arise from the circumstances of the year in which the death happens ; and any number of shares, and half shares, not exceeding sixty-five shares, may be granted on one and the same life, by which assurances may be effected from ––200 to ––5000, and participate in the benefits of the so ciety.

The Royal Exchange Assurance Company re-

ceived its charter in 1720, and is principally en- gaged in insuring ships and goods at sea, and of houses and goods from fire ; but it also grants annuities and assurances on life. In the latter, it confines itself to the payment of the sum as- sured.

The Equitable is the most considerable in point of numbers, and, on the whole, perhaps the most respectable of the societies for the as- surance of lives, to which it is chiefly confined. In this society all are partners, and mutually assurers of each other. It arose from small be- ginnings, and has made considerable alterations from the rate of its first premiums, till it settled in the table annexed to this article, which is that generally adopted by these associations. At cer- tain periods additions have been made to the policies ; and, in this manner, its affairs were conducted till December 7, 1809, when a change took place respecting the members then assured, namely, that instead of waiting till the end of the next interval, for assigning a sum out of the ac- cumulations to each policy, every member should have two per cent, annually assigned to his po- licy, during the years of this period. Conse- quently, all holders of policies, prior to the year 1810, will leave to their heirs the sum assured by the policy, together with its accumulations up to the year 1810, and also two per cent, per an- num for his life, within 1810 and 1820 ; but this benefit does not accrue to members entering at the close of the year 1809. Whether this plan can be continued or extended, time will show. The number

of the members in this society made it necessary to change some of their regulations respecting votes ; and it was wisely resolved, that persons becoming members, after the 19th December 1809, should not have a vote at the general meetings, unless they had been as- sured for five years, for the whole continuance of life, in the sum of ––2000 ; and to be a direc- tor, the qualification is an assurance of ––5000 for the same time, which must have been held for five years.

The history of this society is very important, and has been well treated by Dr. Price, in his Observations on Reversionary Payments, and by Mr. Morgan. In consequence of the connexion of Dr. Price with this institution, he drew up his remarks on the various societies which soon after sprung up, and whose names, but for his notice of them, would now be forgotten. They were formed chiefly about the years 1770 and 1771, offering very fallacious terms to the pub- lic, by which the aged were benefited at the ex- pense of their juniors ; and the evil is not yet cured.

For some time no other important society arose; but, in the year 1792, the Westminster Life Assurance was formed. The Pelican in 1797 ; the Globe in 1799 ; the Albion in 1805; the Rock and the Provident in 1806 ; the Eagle, Hope, London Life Association, and Atlas, in 1807. The Rock and Equitable we have no- ticed.

The Provident combines with life, policies on fire ; but it assigns also, at certain times, addi- tions to its policies. The Hope is also a fire and life office, and both are proprietary companies.

The rates in these societies are the same as those in the Equitable and Rock.

The Albion and the Globe are life and fire as- surance companies; their rates are also the same. They pay also the sum assured ; but a liberal commission is allowed to solicitors, and to others who effect assurances.

The London Life Association is confined en- tirely to life assurances ; but it differs from the others in this, that its aim is, that the benefits re- sulting from its transactions shall be enjoyed by the members during life ; in other words, the society assures to a person the sum named in the policy, and no more; but at certain times it con- siders whether the surplus of the accumulations above the claims is sufficient to admit of a dimi- nution of premium, and one is made accordingly. In this society all are members and assurers one of the other, and consequently the surviving members at any time are bound

to make up the deficiency, if any should arise by this mode of arrangement. This could be done by raising, in the first instance, the premiums that have been lowered ; and it is very improbable, that, with good management, any thing farther would be necessary. In imitation of these London Com- panies, several have been formed throughout the country.

The practical mode of effecting an assurance in these societies is as follows : The party de- sirous of effecting an assurance, receives from the office of the company a printed paper called a declaration, which he fills up with the name of the party to be assured, his age, the place and time of his birth, and place of his present re- sidence, with certain particulars as to his health. This declaration is then duly signed ; and it contains a clause, stating, that any falsehood in the declaration invalidates the policy. To cor- roborate the statement, references are given to two persons well acquainted with the party on whom the assurance is made, one of whom is to be a medical person, and sometimes more re- ferences are required. The reasons for these precautions are obvious.

When the declaration has been thus com- pleted, the person by whom the assurance is made makes his appearance before the directors of the company, who enquire into the general state of his health, and a minute is entered in their books accordingly. The letter of the re- ferees, with the declaration, are subsequently laid before the court, which from these docu- ments, and information frequently derived from other sources, forms its decision ; and this is entered on the minutes of the court, and com- municated to the applicant. A certain time is allowed for the payment of the premium ; and if it is not paid within that time, the assurance cannot be effected, but by a fresh application to the court, according to the forms above mentioned. On the payment of the premium a receipt is given, containing the number of the policy, which is then made out according to the decla- ration, inspected by the court, signed by a certain number of directors, and delivered to the other party interested in it.

If the person, on whose life the assurance is made cannot appear before the directors, or any

one appointed by them for that purpose, an ad- ditional sum is charged for non-appearance. There is also a duty to be paid to

government on each policy, and this, with a small entrance fee, makes an addition to the first year's pre- mium. But the premium itself is only named in the policy, as on the future payment of this sum its existence depends.

A policy is assignable ; and it often forms a se- curity for sums advanced, and not unfrequently becomes an object of sale. In these cases, the holder of the policy pays the future premiums, and the advantage of a purchaser consists in holding a policy at a less premium than he must have paid at the present age of the party, on whose life the assurance was made. Thus, supposing a policy to have been granted for the payment of a thousand pounds, at the death of a party aged between thirty-seven and thirty- eight, when the policy was made ; supposb it is sold when the party is between fifty and fifty-one ; tie purchaser will have to pay ––32. 5s. annually, during the existence of the policy : whereas, if he had taken out a policy at the present age of the party, his premium would be ––46. 15*. For the difference between these two sums, namely ––14. 10s., a price is fixed on ; but it is to be observed, that, in the sale of a policy in the market, this disadvantage attends it, ––– that the bidders, not being acquainted with the person on whose life the policy is made, and beini: liable to trouble and expense, to ascertain that lie is alive at each payment of the premium, must make a deduction on this account, from what they might otherwise presume to be a compensation for the difference between the two premiums.

On the death of the party on whom the claim depends, certain documents are required, such us the register of the burial of the deceased; and reference* to the medical persons or others who attended him in his last illness; and, if he effected the policy himself, the probate of his will, or, if it has been assigned to another, the ropy ot' the assignment. The grounds of these precautions are, with respect to the receiver of the sum assured, obvious ; and the nature of the death must be ascertained; as, in case of suicide, or dying by the hands of justice, or on a voyage on the high seas, without licence from the com- pany, (except, in general, in going from one part in the united kingdom to another,) the policy is vitiated. In the interval between the notice of the party's death, and the time assigned for the payment of the claim, due investigation is made ; ami, every tiling having been found satisfactory, the claimant brings with him the policy and a receipt for the sum claimed, which is imme- diately paid to him ; the seals are torn from the policy, and the contract is at an end. In the

case that a claim is payable, in the event of a person being alive at a

certain time, his ap- pearance before the court is requisite, or sufficient proof must be given that he was alive at the rime defined by the policy.

Policies depending on a person being alive at a certain time, are very rare, and chiefly confined to endowments for children, in which case the payment of a gross sum down, or of an- annual payment till the child attains the age of twenty- one, secures to that child, at that age, the sum named in the policy. This mode of assurance has led some offices to compose a table of rates, according to which, a person at the age of twenty is required to pay a premium, which would pro- duce at legal interest more than he would receive at the expiration of the year, from the company ; and thus a person, if any such could be found, to effect an assurance of this kind, would run the risk of losing the sum assured, and receive, if successful, not so much as he could have attained without any risk at all.

On the whole, the doctrine of assurance must always be considered a subject of the first im- portance, in a commercial state like that of Great Britain, and to involve an immense number of interests. When we consider the thousands of families in this country, who are living in a state of comparative affluence, without possessing any, or very little, disposable property ; whose income, in fact, depends almost entirely on the exertions of the head of the family, and with the extinction of whose life every source of income ceases ; when we contemplate the po- verty and distress in which many widows, wiOi their helpless children, would be plunged by such an event, we cannot estimate too highly the advantages which are held out by those so- cieties, who, on honorable principles, furnish the means whereby every provident father and husband may, in part, avert the consequences ot a premature death ; to which every one is liable, and against which event every man ought to be provided. Perhaps, no part of the civil economy of this country shows more decidedly the high moral state of the middling classes of the people, than the immense amount of life assurances ef- fected in the different offices of the metropolis, and in those of like local companies in several of the counties in England ; nor, perhaps, can we, have a stronger instance of the high degree of confidence that the people are disposed to place in the moral rectitude of the government ; by far the greater part of the capital of the companies to which we have alluded being in- vested under government securities.

The following is a table of the rates generally acted upon by the Life Assurance Offices in the capital.

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ASSURANCE OF SINGLE LIVES.

To secure a Sum to the No minee, or to the lawful Re- presentatives of the Assured.

SURVIVORSHIP OF A LIFE ASSURED. To secure a Sum to the Nominee or lawful Representatives of thf Assured, in case a Person namec shall survive another.

ASSURANCE ON TWO JOINT LIVES.

To secure a Sum, payable when either of Two Persons named shal happen to die.

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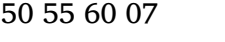 . s. d.

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ASSURGENT LEAVES, in botany, denote snch as are first bent down, and then rise erect towards the apex.

ASS US, or Assos, in ancient geography, a town of Troas, though by others supposed to be of Mysia, and the same with Apollonia, but different from the Apollonia on the Rhyndacus. Ptolemy places it on the sea coast, but Strabo more inland. It was the country of Cleanthes, the stoic philosopher, who succeeded Zeno. St. Luke and others of St. Paul's companions in his voyage, Acts xx. 13, 14, went by sea from Troas to Assos : but St. Paul went thither by land; and, meeting them at Assos, they all went to- gether to Mitilene.

ASSYRIA, an ancient kingdom of Asia, con- cerning the extent, commencement, and duration of which, historians differ greatly in their ac- counts. Several ancient writers, in particular Ctesias and Diodorus Siculus, have affirmed that the Assyrian monarchy, under Ninus and Semira- mis, comprehended the greater part of the known world. Had this been the case, it is not likely that Homer and Herodotus would have omitted a fact so remarkable. The sacred records intimate that none of the ancient states or kingdoms were of considerable extent; for neither Chedorlaomer nor any of the neighbouring princes were tribu- tary or subject to Assyria ; and we find nothing of the greatness or power of this kingdom in the history of the judges and succeeding kings of Israel, though the latter kingdom was oppressed and enslaved by many different powers in that period. It is highly probable, therefore, that Assyria was originally of small extent. Accord- ing to Ptolemy, it was bounded on the north by Armenia major; on the west by the Tigris; on the south by Susiana ; and on the east by Media.

The revolutions of the Assyrian monarchy were numerous. Its founder was Ashur, the second son of Shorn, who went out of Shinar, either by the appointment of ISimrod, or to elude the fury of that tyrant ; conducted a larˆe body of adven- turers into Assyria, and laid t!ie foundation of Ni- neveh, (ien. x. 11. These events happened not lonˆ alter Nmmui had established the Chaldean monarchy, and fixed his residence at Babylon. The 1'erMan historian-; suppose, that the kings of Persia of the first dynuMy \ere the same with the kinus of Assyria, of whom Xohath, or Nimrod, was the founder of Babel, llerbelot Orient. Bib. v. Bairdad. It does not, however, appear, that .Nimrod reiuiH'd in Assyria. The kingdoms of Haliylon and Assyria were originally distinct and separate, Micah v. fi ; and in this state they re- mained until Ninus conquered Babylon, and made it tributary to the

Assyrian eaipire. Ninus, the successor of Ashur, (Jen. x. 11, Diod. Sic. lib. 1, seized on C'haldea, after the death of Nimrod, and unitc-d the kingdoms of Assyi ia and Babylon. This prince is said to have subdued Asia, Persia, .Media, Kuvpt, &.c. If lie did so, the effects of his conquests were of short duration; for in the

princesses of the same name, who flourished at very different periods. One of them was the consort of Ninus ; and the other lived five generations before Nitocris, queen of Nebuchadnezzar, Euseb. Chron. p. 58. Herod, lib. 1, cap. 184. This fact has not been attended to by many writers. Whether there was an uninterrupted series of kings from Ninus to Sardanapalus, or not, is still a question. Some suspicion has arisen, that the list which Ctesias has given of the Assyrian kings is not genuine ; for many names in it are of Per- sian, Egyptian, and Grecian extraction. Nothing memorable has been recorded concerning the successors of Ninus and Semiramis. Of that effemi- nate race of princes it is barely said, that they ascended the throne, lived in indolence, and died in their palaces at Nineveh. Diodorus relates, that in the reign of Teutames, the Assyrians solicited by Priam their vassal, sent to the Trojans a supply of 20,000 foot and 200 chariots, under the command of Memnon, son of Tithonus, president of Persia. But this is not confirmed by any other author. Sardanapalus was the last, and by all accounts the most effeminate of the ancient Assyrian kings. Historians have unanimously reprobated his character ; and Lord Byron has made it the foundation of a beautiful poem. We have only to add, that Arbaces, governor of Media, taking advantage of Sardanapalus's indolence, withdrew his allegiance and rebelled against him. He was encouraged in this revolt by the ad- vice and assistance of Belesis, a Chaldean priest, who engaged the Babylonians to follow the ex- ample of the Medes. These powerful provinces, aided by the Persians and other allies, who de- spised the effeminacy, or dreaded the tyranny of their Assyrian lords, attacked the empire on all sides. Their most vigorous efforts were, in the beginning, unsuccessful. Firm and determined, however, in their opposition, they at length pre- vailed ; defeated the Assyrian army, besieged Sardanapalus in his capital, which they demo- lished, and became masters of the empire A. A. C. 821. The Assyrian empire was now divided into three kingdoms, viz. the Median, Assyrian,, and Babylonian. Arbaces retained thesuprerpe power and authority, and fixed his residence at Ecbatana in Media. He nominated governors in Assyria and Babylon, who were honored with the title of kings, while they remained subject and tributary to the Median monarchs. Belesis re- ceived the government of Babylon as the reward of his services ; and Phul was entrusted with that of Assyria. The Assyrian governor gradually en- larged the boundaries of his

kingdom, and was succeeded by Tiglath-pileser, Salmanasar, and Sennacherib, who asserted and maintained their independency. After the death of Esar-haddon, the brother and successor of Sennacherib, the kingdom of Assyria was split, and annexed to the kingdoms of Media and Babylon. Several tribu- tary princes afterwards reigned in Nineveh ; but no particular account of them is found in the annals of ancient nations. WTe hear no more of the kings of Assyria, but of those of Babylon, Cyaxares, king of Media, assisted Nebuchadnez- zar, king of Babylon, in the siege of Nineveh, which they took and destroyed, A. A.C. 606. The most remarkable provinces of Assyria

were, 1. Arapachitis, bordering on Armenia. 2. Corduene, a mountainous territory, the ancient residence of the Carduchi, mentioned by Xeno- phon in his Anabasis. 3. Adiabene, in Strabo's time, the most considerable province in Assyria. 4. Calachene, lying between the mountains of Armenia and Zabus Major. 5. Apolloniatis, watered by the river Gorgus. 6. Settacene, by some reckoned a portion of Babylonia. 7. Cha- lonitis, separated from Media by a branch of Mount Taurus.

ASSYRIAN LETTERS, a denomination given by several Rabbins and Talmudists, to the characters of the present Hebrew alphabet, as supposing them to have been borrowed from the Assyrians during the Jewish captivity in Babylon.

ASTA, an inland town of Liguria, a Roman colbny, on the river Tanarus, now called Asti.

ASTA, or ASTA REGIA, a town of Boetica, situated at the mouth of the Baetis, which was choked up with mud, north of Cadiz, and sixteen miles distant from its port. Its ruins show its former greatness. Its name is Phoenician, de- noting a frith or arm of the sea. It is said to be the same with the present Xeres.

ASTABAT, a town of Armenia, in Asia, three miles from the river Aras, and twelve south of Nakshivan. The land about it is excellent, and produces very good wine.

AST.'EUS, a species of the crab insect.

ASTAKILLOS, a denomination given by Pa- racelsus to a malignant gangrenous ulcer in the legs, occasioned by a mercurial salt in the blood. It is also called by him araneus, and ulcus ara- iaeum, the spider's ulcer.

ASTANDA, in antiquity, a royal courtier or messenger; the same with Angarus. Darius king of Persia, is said by Plutarch, in his book on the fortunes of Alexander, to have formerly been an astanda.

ASTARIL./E, ASTARITˆE, or ASTAROTHITES, a name given to those Jews who worshipped Ash- taroth.

ASTARTE. in ancient geography, a city on the other side Jordan; one of the names of Rab- bah Ammon, in Arabia Petraea.

ASTARTE, in pagan mythology. ROTH. On a medal of Caesa- rea Palestina, Astarte is repre- sented as in the annexed fi- gure, in a short habit, crown- ed with battlements, holding the head of Osiris in her right hand, and a staff in her left, inscription COLonia Prima fdix AUGusta Flavia Commodiana, &fc.

AST ATE'. See ESTATE.

The worlde stante ever upon debate, So maie be siker none astute, Now here, now there, now to, now fro, Now up, now down, the world goth so, And ever hath done, and ever shall.

Gower. Con. A. The Prologue. ASTATI, in the ninth century, the followers of one Sergius, who renewed the errors of the Mamchees. They prevailed much under the emperor Nicephorus ; but his successor, Michael Curopalntes, curbed them with very severe laws.

See ASHTA-

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ASTEEP'ING. in steeping. See STE*P.

Whore Perah's flowers Perfume proud Babel's bowers,

And paint her wall : There we lay'd asteeping Our eyes in endless weeping,

ForSion's fall.

P. Fletcher's Poems, p. 163.

ASTEISM, in rhetoric, a pleasant kind of irony, or handsome way of deriding another. Such, e. g. is that of Virgil: Qui Bavium non odit, amet tua carmina, Mavi, &c

ASTELL (Mary) was the daughter of an opu- lent merchant at

Newcastle-upon-Tyne, where she was born about 1668. She was educated in a manner suitable to her station ; and amongst other accomplishments was mistress of the French, and had some knowledge of the Latin tongue. Her uncle, a clergyman, observing in her marks of a promising genius, took her under his tuition, and taught her mathematics, logic, and philo- sophy. She left the place of her nativity when she was about twenty years of age, and spent the remaining part of her life in London and at Chelsea. Here she pursued her studies with great assiduity, made great proficiency in the above-mentioned sciences, and acquired a more complete knowledge of the classics. Among these Seneca, Epictetus, Ilierocles,Antoninus, Tully, Plato, and Xenophon were her favorites. She wrote, 1. A Serious Proposal to the Ladies. 2. An Essay in Defence of the Female Sex. 3. Letters concerning the Love of God. 4. Essays upon Marriage, Crosses in Love, and Friend- ship. 5. Moderation truly stated. 6. The Chris- tian Religion, as professed by a daughter of the Church of England. 7. Bart'lemey Fair, or an Enquiry after wit ; and other works. She died in 1731, aged sixty-three, and was buried at Chelsea.

ASTENA, a genus of worms of the mollusca order, in the Linnaean system.

ASTER, in ancient pharmacy, a kind of me- dicine, invented by Andromachus, against de- fluxions and divers pains.

ASTER, in botany, starwort, a genus of the polygamia superflua order, and syngenesia class of plants ; ranking in the natural method under the forty-ninth order, compositae discoides. The receptacle is naked ; the pappus simple ; the rays of the corolla ten ; and the calyx imbricated. There are above thirty species. All of them may be raised from seed sown either in autumn or spring : but the greater part being perennial plants, and increasing greatly at the roots, are generally propagated by parting their roots early in the spring. They will grow in almost any soil or situation ; and the larger sorts increase very fast. They grow best in the shade: the lower kinds do not run so much at the root, but should be taken up and transplanted every other year ; which will make them produce much fairer flowers. Some few sorts which are natives of warm climates, will require artificial heat to raise them, if not to preserve them.

ASTER, in mineralogy, a species of Samian earth.

ASTERABAD, a small province of Persia, bounded on the west by the Caspian **a, on the

south by the districts of Damgan and Bistan, and on the north and east by the river Ashor. This province is the ancient Hyrcania, and the paternal estate of the present king of Persia, as chief of the tribe Kajar, or Kujur, which has en- tire possession of it. The capital is situated on the south-east shore of the Caspian sea, at the mouth Df the river Aster, or Ester. It was de- stroyed by Tamerlane, and is now governed by a descendant of the reigning family of Persia. 300 miles N. N. E. of Ispahan. Long. 54►► E., lat. 350 44′ N.

ASTERAC, or ESTERAC, i ci-devant district of France, in Armagnac, now included in the department of Gers. It is fertile and populous.

ASTERIA, a gem, sometimes called the cat's eye, or oculus felis. It is a very singular and beautiful stone, and somewhat approaches to the nature of the opal, in having a bright included color, which seems to be lodged deep in the body of the stone, and shifts about, as it is moved, in various directions : but it differs from the opal in all other particulars, especially in its want of the great variety of colors seen in that gem, and in its superior hardness. It is usually found be- tween the size of a pea and the breadth of a six- pence ; is almost always of a semicircular form, broad and flat at the bottom, and rounded and convex at the top ; and is naturally smooth and polished. It lias only two colors, a pale brown anil u white : the brown seeming the ground, and the white playing about in it, as the fire color in the opal. It is considerably hard, and will take a fine polish, but is usually worn with its native shape and smoothness. It is found in the East and West Indies, and in Europe. The island of Borneo affords some very fine ones, but they are usually small ; they ure very common in the sands of rivers in New Spain; and in Bohemia they are often found immersed in the same masses of jasper with the opal.

AST r HI A, an extraneous fossil, called in Eng- lish the star-stone. These fossils are small, short, angular, or sulcated columns, between one and two inches lonu', and seldom above a third of an inch in diameter : composed of several regular joints; when separated, each resembles a radiated star. They are. not without reason, supposed to be a part of some sea-fish petrified, probably the asterias or sea-star. The asteria is also called astrites, astroites, and asteriscus. They may he reduced to two kinds : those whose whole bodies make the form of a star ; and those which in the whole are irregular, but are adorned as it were with constellations in the parts. The asterias spoken of by the

ancients appears to be of this latter kind. The finality of moving in vme_rar, as if animated, is scarcely perceivable in the astrites, hut is siu'nnl in the asteria. The f. Tiner must lie broken in small pieces before it will move; but the hitter will move, not only in a whole joint, but in two or three knit together. '! he curious tiviuiently meet with these stones in many p'trts of F.nuhuid.

AVII KIA, in /oology, a name by which some authors have called the falco pidumbarius, or ns-h;!\vk. See- FA I co.

AS !'!'.!! 1 AS, star-tish. or

lusca. It has a depressed body, covered with a coriaceous coat; is composed of five or more segments, running out from a central part, and furnished with numerous tentacula; and has the mouth in the centre. The tentacula resemble the horns of snails, but serve the animal to walk with. They are capable of being contracted or s'aortened : and it is only at the creatures moving that they are seen of their full length ; at other times, no part of them is seen but the extremity of each, which is formed like a sort of button, being somewhat larger than the rest of the horn. Aristotle and Pliny called this genus oASTERIA. There are many species of this genus : some of twelve, thirteen, and even four- teen rays. Most of them are found in our seas. We enumerate the principal : 1 . A. caput meducae, or arborescent sea-star, having five rays issuing from an angular body ; the rays divided into innumerable branches, growing slender as they recede from the base. These the animal, in swimming, spreads like a net ; and when he per- ceives any prey within them, draws them in again. It is called by some the Magellanic star- fish, and basket-fish. 2. A. clathatra, or cancel- lated sea-star, with five short thick rays, hirsute beneath, cancellated above, is found on our coasts, but is rare. 3. A. decacnemos having ten very slender rays, with numbers of long beards on the sides; the body small, and sur- rounded beneath with ten filiform rays. It in- habits the western coasts of Scotland. 4. A. gla- cialis, with five rays, depressed, round at the base, yellow, and having a round striated oper- culum on the back, is the most common; it feeds on oysters, and is very destructive to the beds, 5. A. hispida, with five rays, broad, angulated at top, and rough, with short bristles, is of a brown color, and found about Anglesea. 6. A. oculata, with five smooth rays, dotted or punctured, is of a fine purple color, also found about Anglesea. 7. A. placenta, with five very broad and mem- braneous rays, extremely thin and flat, found about Weymouth. 8. A. spherulata, with a pen- tagonal indented body; a small globular head

between the base of each ray ; the rays slender, jointed, taper, and hirsute on their sides; found off Anglesea.

ASTERIAS, in ornithology, the ancient name of the bittern. See ARDEA.

ASTERION, in astronomy, one of the canes venatici.

ASTERISCUS, in botany, asteriodes buph- thalmum, the ox eye.

ASTERISK, 3 Gr.AffrtpiffKoc, a diminutive

AS'TERISM. 3 of aoTTjp, a star. Asterisms denote a number of stars, a constellation. Asterisk is a character of reference used in print- ing, resembling a small star.

Dwell particularly on passages with an asterism, for the observations which follow such a note, will give you a clear light. Dryden's Dnfremoy.

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Poetry had filled the skies with asterisms, and his- tories belonging to them ; and then astrology devises the feigned virtues and influences of each.

Bentley's Sermons.

He also published the translation of the Septuagint by itself ; having first compared it with the Hebrew, and noted by asterisks what was defective, and by obelisks what was redundant. Grew.

ASTERIUS, or ASTURIUS, a Roman consul, who lived about A. D. 449. He wrote A Con- ference on the Old and New Testament, in Latin verse, which is extant, and in which each strophe contains, in the first verse, an historical fact in the Old Testament, and in the second an appli- cation of that fact to some point in the New.

AS'TERN. On the stern. See STERN.

Having left this strait astern, we seemed to be come out of a river of two leagues broad, unto a large and main sea.

The World encompassed by Sir F Drake, 1578.

The galley gives her side, and turns her prow,

While those astern descending down the steep,

Through gaping ways behold the boiling deep.

Dryden.

But at seven in the evening, finding we did not near the chase, and that the Wager was very far astern, we shortened sail, and made a signal for the cruizers to join the squadron. Anson't Voyage, p. 50.

ASTERN is used to signify any thing at some distance behind the ship ; being the opposite of a-head, which signifies the space before her. See AHEAD.

ASTEROP/EUS, a Trojan hero, who fought with Achilles, in single combat, and proved him not invulnerable, by wounding him in the right arm; notwithstanding which Achilles slew him.

ASTEROPHYTON, in natural history, a kind of fish composed of a great number of cylindric rays, each branching out into several others, so as to represent the branched stalks of a very intri- cate shrub.

ASTEROPODIUM, a kind of extraneous fossil, of the same substance with the asterise or star-stones, to which they serve as a base. See ASTERIA and STAR-STONE.

ASTESAN, the ancient county of Asti, a dis- trict of Upper Italy, bounded by Chieri and Carmugnola on the west, by the Vercellois on the north and east, and by the marquisate of Gorzegno on the south. It is a fruitful and po- pulous territory, about twenty-five miles long , and ten broad, and belongs to the house of Sa- voy. It produces excellent wines, and exports to various parts of Italy large quantities of olives.

ASTETE'S ISLAND, an island to the north- west of the gulf of Carpentaria, New Holland, containing some traces of iron ore, and well wooded.

ASTHMA, a frequent, difficult, and short re- spiration, joined with a hissing sound and a cough, especially in the night-time, and when the body is in a prone posture ; because then the contents of the lower belly bear so against the diaphragm, as to lessen the capacity of the breast, whereby the lungs have less room to move. See MEDICINE.

ASTI, a city of Montserrat in Italy, capital of the county. It has a bishop's see ; is well for- tified with strong walls and deep ditches :

and is divided into the city, borough, citadel, and castle.

AST

There are a great many churches, convents, and other handsome buildings in it. It is se'ated on the Tanaro, twenty-four miles east of Turin. Population 22,000. The inhabitants carry on a considerable trade in corn, wine, and silk, which is promoted by the situation of the town on the high-road from Alessandria to Turin.

ASTIGI, in ancient geography, a colony, and conventus juridicus, of Boetica, situated on the Singulus, which falls into the Baetis ; called also Colonia Astigitana, and Augusta Firma; now Ecya, midway between Seville and Corduba.

ASTIP'ULATE, 1 To make an agreement,

ASTIP'ULATION. J See STIPULATE.

I do by my royal authority, confirm to persons of monastical religion, and by the consent and astipula- tion of my princes and peers do establish and consign to them that monastery.

Bp. Hall's Polemical Works, p. 187.

Shortly, all, but a hateful Epicurus, have astipu- lated to this truth. Id. Devotional Works.

ASTIPULATOR, among the Roman Catho- lics, he by whose consent and leave a nun takes the religious habit.

ASTLE (Thomas), an English antiquary, was the son of a farmer in Staffordshire. After he had received a liberal education, Mr. Grenville took him under his patronage, and about 1763 gave him a place along with Sir Joseph Ayloffe and Dr. Ducarel, in the superintendance of the Westminster records. In 1 766 he was chosen to conduct the printing of the ancient records of parliament; and in 1775 was appointed principal clerk in the record office in the Tower ; from which, on the death of Sir John Shelly, he succeeded to the office of keeper of the records. He died in December 1803, and was the author of many curious papers in the volumes of the Archasologia ; also of a work entitled Origin and Progress of Writing, as well hieroglyphic as ele- mentary ; which was first printed in 1784, 4to, and again in 1803.

ASTLEY (John), a native of Wem in Shrop- shire, though he studied painting under the same master with Sir Joshua Reynolds, is more me-

morable as a favorite of fortune, than as a limner His best pictures are copies of the Bentivoglio's, Titian's Venus, &c. Lady Daniel, having sat to him for her picture, within a week after gave him the original, with the estate of Duckenfield, worth ►►5000 a year. He died in 1787.

ASTLEY (Philip), the founder of the royal am- phitheatre near Westminster Bridge, was born at Newcastle-under-line in 1742, and bred a cabinet- maker. In 1759 he enlisted in the Light Horse, and served seven years in Germany, where he acquired the reputation of a good soldier. On his return home, he began to exhibit equestrian performances; and in 1780 erected a building which he called the amphitheatre riding house, for which he subsequently procured a license. In 1794 Mr. Astley went to the continent as a volunteer in the army. This campaign led to the publication of his Descriptive and Historical Account of the places now the theatre of war in the Low Countries, with plans of fortifications ; London, 1794, 8vo ; and Remarks on the Pro- fession and Duty of a Soldier. Mr. Astley built amphitheatres at Dublin and at Paris, and the

Olympic Pavilion near the Strand. He closed an' active and diversified life at Paris, October 20th, 1814, at the age of seventy-two. Another work of his is entitled A System of Equestrian Education, exhibiting the Beauties and Defects of the Horse, 1800, 4to.

ASTOMI, in anthropology, a people feigned to be without mouths. Pliny speaks of a nation of Astomi in India, who lived only by the smell or effluvia of bodies taken in by the nose !

ASTON (Sir Arthur), a commander in the service of Charles I. was at the head of the dra- goons at the battle of Edgehill, and three times defeated the earl of Essex. He was successively governor of Reading and Oxford. He had the misfortune to break one of his legs in such a manner as to make amputation necessary ; and, serving in Ireland after the death of the king, when Cromwell took Drogheda, where Aston was governor, his brains were beaten out with his wooden leg.

ASTON (Sir Thomas), of an ancient family in Cheshire, was created baronet in 1628, and ap- pointed high sheriff of Cheshire in 1635. He raised a troop of horse for king Charles I., but was defeated and wounded in the vicinity of Nantwich in 1642. He was afterwards

made prisoner, and carried to Stafford ; and, while endeavouring to make his escape, a soldier struek him on the head, which, with other wounds he had received, brought on a fever, which ended 111 his death, in 1643. Sir Thomas was author of, 1. A Remonstrance against Pres- bytery, 1G41, 4to; 2. A Short Survey of the Presbyterian Discipline ; 3. Brief Review of the Institution, Succession, and Jurisdiction of Bishops.

Ang.Sax. stunian, to stun. Old Fr. estonne, to amaze, to excite wonder, sui prise; to stiike as with thunder, startle, stupify, confound, benumb ; to ston ny, or, as we say in modern phrase, to petrify. As- tound is from the same J root, and of a correspond-

ASTON'E,

ASTOX'Y,

ASTON'YIXG,

ASTON'IEDN r.ss,

ASTON'ISH,

ASTON'ISHEDLY,

AsTOx'lSHIXG.

ASTON'ISHINGLY, ASTOX'ISHMEXT, ASTOUN'D. ing signification.

But netheles how that it wende He drad hvm of his owne sonne That maketh hym well the more astone.

Gowcr. Con. A. book vi. And with this word she, fell to ground Aswoune, and there she lay astound.

Id. ib. 1. iv.

And anoon all the puple seynge Jhesus was

astunyed and thei dreddcn, and thei rennynge gretten

him. Wiclif. Mark, chap, ix.

Be astumjshed (O ye heaues), be afrayde, and

abashed at soch a thingc, sayethe the Lord. For my

people doue two euels. liible, 1539. Jeremy, c. ii.

Her looks did so a.itttnish me,

And set my heart a quaking; Like stag that gaz'd, I was amaz'd, And in a stranger taking.

Kelchicr, in Ellis, vol. iii.

These thoughts may startle well, but not astound, The virtuous mind ; that ever walks, attended By a strong siding champion, conscience. Milton.

AST

Now they lie

Groveling and prostrate on yon lake of fire, As we ere while, astounded and amaz'd, No wonder, fall'n such a pernicious height.

Milton. Paradise Lost, b. i. Princes, potentates,

Warriors, the flow'r of heaven, once yours, now lost, If such astonishment as this can seize Immortal spirits. Id.

But all sate mute,

Pondering the danger with deep thoughts ; and each In other's countenance read his own dismay Astonisht. Id. b. ii.

As when some peasant in a bushy brake, Has with unwary footing pressed a snake ; He starts aside, astonish'd, when he spies His rising crest, blue neck, and rolling eyes.

Drydtn's Virgil.

The palaces of Peru and Mexico were certainly mean and incommodious habitations, if compared to the houses of European monarchs ; yet who could forbear to view them with astonishment, who remem- bered that they were built without the use of iron.

Johnson.

Whence many wearied e'er they had o'erpast The middle stream (for they in vain have tried) Again return'd astounded and aghast, No one regardful look would ever backward cast.

. Gilbert West.

A genius, universal as his theme, Astonishing as chaos. Thomson.

At first, heard solemn thro' the verge of heaven The tempest growls ; but as it nearer comes, And rolls its awful burden on the wind, The lightning's flash a larger curve, and more The noise astounds. Thomson's Seasons.

Unmanly dread invades

The French astuny'd. J. Philips.

Astonishment is that state of the soul in which all its motions are suspended, with some degree of horror. Burke on the Sublime and Beautiful. A character so exalted, so strenuous, so various, so authoritative, astonished a corrupt age, and the trea- sury trembled at the name of Pitt, through all her classes of venality.

Grattan's Character of Lord Chatham.

ASTORCHA, in botany, a name given by some botanists to the stoechas.

ASTORGA, an ancient city of Spain, in the kingdom of Leon, with a bishop's see, seated on the river Tuerto, and well fortified. It stands in a most agreeable plain, about 160 miles north- west of Madrid. It is now the chief place in a small marquisate, the castle of which it contains. In its territory lies the lake of Sanabria, through which the Tuerto passes with such rapidity as to agitate the whole surface.

ASTHMA, in astronomy, a name of the sign Virgo, by others called Erigone, and sometimes Isis.

ASTRJEA, in mythology, the goddess of jus- tice, and daughter of Jupiter by Themis, or, as others say, by Nemesis, the goddess of ven- geance. The poets feign that Astraea quitted heaven to reside on earth, in the golden age ; but, growing weary of the iniquities of mankind, she left the earth, and returned to heaven, where she commenced a constellation of stars, and from her orb still looks down on the ways of men.

ASTRAGAL, in architecture, a little round moulding, which in the orders surrounds the top of the shaft or body of the column. Its etymo-

logy is derived from its resemblance to the bone of the heel, called astragalos. It is also called the talon and tondino ; it is used at the bottoms as well as the tops of columns, and on other oc- casions ; it properly represents a ring, on what- ever part of a column it is placed ; and the origi- nal idea of it was that of a circle of iron put round the trunk of a tree used to support an edifice, to prevent its splitting. The astragal is often cut into beads and berries, and is used in the ornamented entablatures to separate the se- veral faces of the architrave. See ARCHITEC- TURE.

ASTRAGAL, in gunnery, a round moulding encompassing a cannon, about half a foot from its mouth.

ASTRAGALOIDES, in botany, the phaca of Linnaeus.

ASTRAGALOMANCY; from a

ASTRAGALOTE, in natural history, a species of fossile alum, thus called from its resembling a talus, or ankle-bone ; whence it is also denomi- nated talare.

ASTRAGALUS, in anatomy, the bone of the heel. See ANATOMY.

ASTRAGALUS, in botany, milk-vetch, or liquor- ice vetch ; a genus of the decandria order, and diadelphia class of plants ; ranking in the na- tural method under the thirty-second order, papilionaceae, the pod is gibbous and bilocular. Of this genus there are thirty-nine species. 1. A. communis, the common species, grows wild upon dry uncultivated places, and is often re- commended by Mr. Anderson as proper food for cattle. 2. A. tragacantha, a thorny bush, growing in Crete, Asia, and Greece, which yields the gum tragacanth. This is of so strong a body, that a dram of it will give a pint of water the consistence of a syrup, which a whole ounce of gum Arabic is scarce sufficient to do. Hence its use for forming troches and the like purposes, in preference to the other gums.

ASTRAKHAN, a city and government of the Russian empire, on the shores of the Caspian, anciently an independent Tatarian sovereignty, but reduced to a Russian province by the Tzar Ivan Vasili'ovich in 1-554. It forms a distinct province, named after its principal city ; having been separated from that of Caucasus, in which it was formerly included. It is bounded by the governments of Caucasus, Saratov, Orenburg, the country of the Kirgiz Tartars, the Caspian Sea, and the ci-devant Persian provinces of Daghistan and Lergistan ; and contains

12,568 square geo- graphical miles. The number of its inhabitants is from 300,000 to 400,000. Its extent from east to west is about 600 geographical miles, and from north to south about 520. The climate is rather warm, the thermometer rising in the sum- mer to 158°° (Fahrenheit) ; but the nights are cold, and the dew very copious. The ice is usually strong, enough to bear at the end of November, and is not melted again till February.

This is followed by violent storms ; but spring soon advances, the ground is covered with flowers, and the whole face of nature changed. The summer is remarkably dry. This government is separated from that of Kazan and the Kozaks of the Ural, by a barren branch of the Uralian chain, which stretches from north to south, and is the only line of hills in this province. The rest of the government is one continued level. The principal rivers, besides the Volga and Ural, are the Akhtuba, running parallel with the Volga, the Manich, the great and little Uzen, the Kuban, the Kuma, lost in the summer months in the sands, the Terek, the Malka, and the Sula. The air in the Steppes is said to be very unhealthy. At a distance from the stream the soil becomes salt and barren, and is covered with drifting sand. There are several salt lakes, such as the Bogdo, Basinskoe, Graznoe, Kobilikha, &c.

On the banks of the Volga rhubarb and liquor- ice are plentiful, and the extract from the root of the latter is prepared in considerable quanti- ties in the city of Astrakhan. The sea-rose, found near the mouth of the Volga, is here con- sidered as sacred and nutritious. Its flowers have a fragrant smell, and give an essential water of the scent of amber. The shrubs of the Steppes are cherries, sloes, dwarf almonds, and capers. Near the river there are the willow, alder, birch, ash, poplar, elm, and oak ; the beech also on the Kuban ; but no large woods. The fruit trees are Tatarian mulberries, cherries, apples, pears, plums, apricots, peaches, quinces, and vines ; and on the latter there are also figs, almonds, wild olives, Spanish chestnuts, pomegranates, and Cornelian cherries (Cornus mas), which, when pickled, taste like olives. Silk, tobacco, and cotton are plentiful ; and the gardens produce all the common roots and herbs. The pasturage is excellent, and much cattle is reared. Sea and rock-salt, natron, epsom-salt, salt-petre-earth, bitumen, and mineral pitch, are also an abundant source of wealth to Astrakhan.

The population of the province is composed of a great number of different nations ; Russians, Kozaks, Tartars, Kalmuks, Indians, Persians, Armenians, &c. Generally the military, public officers, merchants, mechanics, and other citizens, are Russians. The garrisons

on the Ural consist of Kozaks, derived from those of the Don, who choose their own officers, except their commander, the hetman, or ataman, who is appointed by the Russian government. The Tartars are, excepting a small number, nomad tribes, continually en- camped, consisting of about 9000 families. The Kalmuks, about 12,000 families, are of the Derbet tribe, and encamp between the Volga, Don, and Kuma. There are also Armenians, Greeks, Georgians (Gruzinians), Bukharians, Khivinzians, and Hindoos, in considerable numbers, constantly inhabiting the city, to say nothing of the Euro- peans who are generally to be found there. Some colonies, established on the Terek and Kuma in 1781, cultivate grain, gardens, and vineyards, and produce a considerable quantity of silk. The number of their villages amounted to fifty-three in 1796.

ASTRAKHAN, the capital of the above govern- ment, (called originally Haie Terkhan, the

Gitercban, or Ginterchan, of the middle ages), is situated in E. long. 48►► 2′ 15”, N. lat. 46►► 21′ 12”, and is one of the most populous and important cities, ranking as the third town, perhaps, of the Russian empire. It contains nearly 70,000 in- habitants. It stands on a hill, in a long narrow island of the Volga, about thirty miles from its entrance into the Caspian, surrounded by swamps, which in spring are very unhealthy. The town itself, without including the suburbs, is from six to eight miles in circumference. The houses are built principally of brick and sand-stone. Here is an old Tatar castle, or kreml, and the Beloi- Gorod (white tower), built by the tzar, Michael Feodorovich, now in ruins; a cathedral, arch- bishop’s palace, public offices, main guard, arsenal, and powder magazine. Belgorod, which adjoins the kreml, on the same hill, is 2510 feet long, 1440 feet broad, and 7110 feet in circum- ference. The city has four gates, and some ruined walls. The streets are ill paved, and much exposed to inundations. Between the kreml and the canal, on the Volga, is the dock- yard, on the other side of which are the Tatarian and Armenian suburbs (slobods), and barracks for the troops. The exchange, where ships from the Caspian unlade and land their goods, is not far from St. Nicolas’s Gate, and opposite to it is the haven for vessels coming down the river. “Within the suburbs are about 100 vineyards, thirty of which belong to the crown ; a school for the- artillery, a bunk, and court of justice, in ►►►what was formerly the Troitzko’i convent ; and, in the Helograd, the Spasso-preobrashenski con- vent, two parish

churches, two hospitals, and a ba/ar for the use of the Armenians and Hin- doos.

The variety of nations and religions in Astra- khan is manifested by the number and difference of tin; places of worship. The total of them is fifty-seven : twenty-three Russian churches of the Greek communion ; twenty-seven Tatarian mosques, churches, and temples; four Arme- nian, two Human Catholic, one Lutheran, and one Hindoo temple. There is also a handsome hospital dedicated to St. Paul, and six monas- teries; several dyeing-houses, brick-fields, tallow- candle manufactories, one iron-foundry, and looms for weaving linen, veils, and sashes. The morocco leather manufactured here is most es- teemed, next to the Turkish ; especially the red. Then' is also an establishment here for rearing silk-worms, and ,i botanic .;arden. European I'.oods aie brought either by water from Feters- IMIP.MI, 01, on sledges, by laud from Moscow, and aie shipped across the Caspian, or conveyed to Mo/.dok, in Mount Caucasus. The merchants en;_;a.;ed in this trade employ 'J.r>0 vessels of dif- ferent tonnage. More than half of the whole I vade carried on is in tin- hands of the Armenians. M.;n\ of ihe Russian men-hauls employ their s in trading \o\auvs to Persia, Khiva, .!! iiukh.iia, ;>r carrying stmv.-i to Ki/.lixr, and >;□□□ the crown, in the towns on the Volga. I i.c 1 1 in loo mi rciianls '..vneraily quit their native , .it an early aue, selling out with a small c'>;>ital, uiuch thv-y soon increase by trade on I. >i ii way throu-Ji Ta-arv and Persia; and make n:i>im-)u< profit- by leti.hr.; the Tatars of Astra-

khan have their goods on credit; so that the latter are always deeply in their debt.

The imports from Persia and Bukhara consist of raw silk, about 120,000 Ibs. yearly, wool, dyed woollens, madder, galls, morocco leather, chintzes, dyed linens, silks, gauzes, small carpets, counter- panes, frankincense, bezoar, naphtha, rice, deer- skins, lamb-skins, Circassian cloth, tulups (pelisses), mountain-honey, tobacco, cotton gowns, Persian peas, dried fruits, almonds, figs, pomegranates, olives, oil, saffron, dried peaches, and spices. The exports consist almost entirely of foreign manufactures ; such as velvet, cochineal, satin, plush, linen, and other woven articles, sugar, Russia-leather, iron, dyeing substances, glass, coral, steel and iron wares, metal utensils, wrought gold and silver, wax, soap, trinkets, alum, quick-silver, vitriol, sal-ammoniac, &c. Caravans often arrive by land at Astrakhan from Bukhara and Khiva. The Indian trade alone is from 6 to 700,000 roubles (□□120 to 140,000) an- nually. The silk-manufactures are said to em- ploy from 3 to 400,000 (□□60 to 80,000). The supplies

sent to the Caucasian lines along the Terek, from 4 to 500,000 (►►100 to 120,000). The prices of all internal produce are low. Little is known concerning the origin of Astrakhan or of its condition before the thirteenth century, when William de Rubruguis found it a village without any fortifications ; but, at the close of that century, it was a considerable emporium for the trade with India and China ; and completely ruined by Timur. It was still a mere village when Josaphat Barbaro saw it in the fifteenth century ; but Ambrosio Contareni, the Venetian ambassador, in the latter end of that century, found a considerable trade" in rice and silk car- ried on there. The conquest of it, by the tzar Ivan Vasiliovich, in 1554, was therefore very advantageous to Russia, as it gave her the com- mand not only of the Volga, but also of the Cas- pian, an advantage which she has not neglected to impYove.

ASTRALISH, among miners, is the ore of gold in its first state.

ASTRANTIA, MASTERWORT, in botany, a genus of the digynia order, and the pentandria class of plants ; ranking in the natural method under the forly-fifth order, umbellatae. The in- volucrum is lanceolated, open, equal, and co- lored. The species are two : 1. A. major. 2. A. minor, both natives of the Alps, and possess- ing no remarkable properties.

ASTRAP7EA, in natural history, a name given by the ancients to a stone, since called, improperly, astrapia, and by some astrapias. It was of a blue, or blackish ore, with white varie- gations, running in the form of waves and clouds. Some specimens of the Persian lapis lazuli are of this- kind, but they are rare.

ASTRARII, in writers of the middle age, the same with mansionarii, those who live in the house or family, at the time when a person dies.

ASTRARIUS H*RES ; from astre, old French, a hearth ; is used in our old writers, where the ancestor, by conveyance, hath set his heirs ap- parent, and his family, in a house :n his life- time.

ASTRAY'. According to Tooke, the past part, of the Ang.-Sax. verb straegan, to stray, to scatter. First every day, beseech thy God on knee,

So to direct thy stagg'ring steppes alway ; That he which every secrete thought doth see, May holde thee in, when thou wouldst goe astray.

Gascoigne. You labour may To lead astray,

The heart that constant shall remain, And I the while Will sit and smile, To see you spend your time in vain.

George Wither, in Ellis, v. i. And darkness and doubt are now flying away,

No longer I roam in conjecture forlorn. So breaks on the traveller, faint, and astray, The bright and the balmy effulgence of morn.

Seattle's Hermit.

ASTRICr, v. & adj. ˆ Astringo, astric- ASTRIC'TION, turn, ustringere, to

ASTRIC'TIVE, I contract. To make

ASTRIN'GE, f strait or narrow, to

ASTRIN'GENTLY, heighten or draw

ASTRIN'GENT, n. & adj. j close, to bind; op- nosed to relax.

Tears are caused by a contraction of the spirits of the brain ; which contraction, by consequence, astrin- yeth the moisture of the brain, and thereby sendeth tears into the eyes. Bacon.

This virtue requireth an astriction ; but such an astriction, as is not grateful to the body : for a pleas- ing astriction doth rather bind in the nerves, than expel them ; and therefore such astriction is found in things of a harsh taste. Id.

The juice is very astringent, and therefore of slow motion. Id. Natural History.

What diminisheth sensible perspiration, encreaseth the insensible ; for that reason, a strengthening and astringent diet often conduceth to this purpose.

Arbuthnot on Aliments.

The solid parts were to be relaxed or astricted, as

they let the humours pass, either in too small or too

great quantities. Id.

Lenitive substances are proper for dry atrabilarian

constitutions ; who are subject to astriction of the belly,

and the piles. Id. on Diet.

Acid, acrid, austere and bitter substances, by their

astringency, create horrour; that is, stimulate the

fibres. Id.

Astringent medicines are binding, which act by the

asperity of their particles ; whereby they corrugate

the membranes, and make them draw up closer.

Quincy.

ASTRICTION, in law. See THIRLAGE. ASTRICTION, in medicines, the operation of astringent medicines.

ASTRICUS LAPIS, in natural history, a kind of figured stone, broken or cut from the enastros, after the same manner as the trochitae, from the entrochi.

ASTRID'E,) On stride, on straddle. See ASTRAD'DLE. $ STRIDE, and STRADDLE.

To lay their native arms aside, Their modesty; and ride astride. Hudibras. I saw a place, where the Rhone is so straitened between two rocks, that a man may stand astrideupon both at once. Boyle.

ASTRILD, in ornithology, a species of the loxia.

ASTRINGENTS, in the materia medica, sub- stances distinguished by a rough austere taste,

AST

and changing solutions of iron, especially those made in the vitriolic acid, into a dark purple or black color ; such as galls, tormentil root, bistort root, balaustines, terra japonica, acacia, &c.

ASTROBOLISM; from aˆp, a star, and |SttXXo>, to strike ; the same with sphacelus ; though properly applied to plants which are de- stroyed in the dog-days, as if blasted by that star.

ASTROCHITES, or ASTROITES. See As-

TER I A

ASTROGNOSIA; from a?w, star, and y{- vuxjKti), I know ; the art of knowing the fixed stars, their names, ranks, situations in the constellations, and the like. See ASTRONOMY.

ASTROLABE,

AS'TROLABRE, AS'TROLABY.

The firste partye of this treatise shall rehearse the figures, and the membres of thine astrolaby, because that thou shalt have the greater knowyng of thyne owne instrument. Chaucer. Astrolabie, i. 262. c. i.

For I have ben toward the parties of Braban, and beholden the astrolabre, that the sterre that is clept the transmontayne, is 53 degrees highe.

Sir John Maundeoille.

Liv'd Tycho now, struck with this ray which shone More bright i' the morn, than others beam at noon, He'd take his astrolabe, and seek out here What new star 'twas did gild our hemisphere.

Dryden. On the Death of Lord Hasting*.

ASTROLABE, among the ancients, was the same as our armillary sphere.

ASTROLABE, among the moderns, is used fora planisphere, or a stereographic projection of the sphere, either upon the plane of the equator, the eye being supposed to be in the pole of the world, or upon the plane of the meridian, at the time the eye is supposed in the point of the in- tersection oi the equinoctial and horizon.

ASTRO'LOGY, "i AASTRO'LOGER, a discourse ; from Xeyw, I

ASTRO'LOGIAN, I say. In Latin writers, ASTRO' LOGICK, j astrology was synonymous ASTRO'LOGICALL, I with, and more in use ASTROLO'GICALLY.J than, astronomy. This usage has been imitated by our elder writers.

On which was written, not in words, But hieroglyphic mute of birds ; Many rare pithy saws concerning, The worth of astrologic learning.

Butler's Hudibras, part i. can. 3. A worthy astrologer, by perspective glasses, hath found in the stars many things unknown to the ancients. Raleigh. Not unlike that, which astrologers call a conjunction of planets, of no very benign aspect the oae to the other. Wotton. Some seem a little astrological; as, when they warn us from places of malign influence. Id.

No astroloyick wizard honour gains, Who has not oft been banish'd, or in chains.

Dryden.

A happy genius is the gift of nature: it depends on the influence of the stars, ⬛⬛ay the astrologers; on the organs of the body, say the naturalists ; it is the par- ticular gift of heaven, say the divines, both Christians and heathens. Id.

Astrologers, that future fates foreshow. Pope

I never heard a finer satire against lawyers, than that of astrologers ; when they pretend, by rules of art, to tell when a suit will end, and whether to the advantage of the plaintiff or defendant. Swift.

I know, the learned think of the art of astrology, that the stars do not force the actions or wills of men.

Id.

Astrological prayers seem to me, to be built on as good reason, as the predictions. Stilling/fleet.

The poetical fables are more ancient than the astrological influences ; that were not known to the Greeks, till after Alexander the Great. Bentley.

The twelve houses of heaven, in the form which astrulogians use. Camden.

ASTROLOGY; from aTTjp, a star, and Xoyoc, dis- course; was long considered as a science, by which future events could be foretold, from the aspects and positions of the nun ⬛⬛⬛ enly bodies. In the literal sense of the term, astrology should signify no more than the

doctrine or science of the stars ; which was its original acceptation, and made the ancient astrology ; though, in course of time, an alteration has arisen : that which the ancients called astrology, being afterwards termed astro- nomy. Astrology may be divided into two branches, natural and judicial.

ASTROLOGY, JUDICIAL or JUDICIARY, is what we commonly call simple astrology, that which pretends to foretel moral events, i. e. such as have a dependence on the free will and agency of man ; as if they were directed by the stars. This art, which owed its origin to the practices of knavery on credulity, is now universally ex- ploded by the intelligent part of mankind. The professors of this kind of astrology maintain, ‘ That the heavens are one great volume or book, wherein God has written the history of the world ; and in which every man may read his own for- tune, and the transactions of his time. ◆◆◆ The art, they say, had its rise with the science of astro- nomy. While the ancient Assyrians, whose se- rene unclouded sky favored their celestial obser- vations, were intent on tracing the paths and pe- riods of the heavenly bodies, they discovered a constant settled relation of analogy between them and things below ; and hence were led to conclude these to be the parc;t, the destinies, so much talk- ed of, which preside at our births, and dispose of our future fate. The laws therefore of this relation being ascertained by a series of observa- tions, and the share each planet has therein ; by knowing the precise time of any person’s nativity, they vu’T’- enabled, from their knowledge in astronomy, to erect a scheme or horoscope of the situations of the planets, at that point of time; and henef, by considering their degrees of power and influence, and how each was either strength- ened or tempered by some other, to compute what must be the result.’ Such are the argu- ments of the astrologers in favor of their science. The chief province now remaining to the profes- sors of this art, is the making of calendars or Almanacks ; and the prodigious sale of Moore’s almanack, in this country, is no small proof of the popular belief in this subject.

Judicial astrology is commonly said to have been invented in Chaldea, and thence transmitted to the Egyptians, Greeks, and Romans; though some will have it of Egyptian origin, and as- rr;be the invention to llarn. Hut it is to the

Arabs we owe it. At Rome the people were ?o infatuated with it, that the astrologers, or, as they were then called, the mathematicians, main- tained their ground notwithstanding the edicts of the emperors to expel them out of the city. Domitian, in spite of his hostility to this art, trembled at its denouncements. They prophesied the year, the

hour, and the manner of his death ; and agreed with his father in foretelling, that he should perish, not by poison, but by the dagger. On the evening of his assassination he spoke of the entrance of the moon into Aquarius on the morrow. ‘ Aquarius,’ he said, ‘ shall no longer be a watery, but a bloody sign ; for a deed shall there be done, which shall be the talk of all mankind.* The dreaded hour of eleven approach- ed. His attendants told him it was passed, and he admitted the conspirators and fell. Suet, in Domit. 16.

The Brahmins, who introduced and practised this art among the Indians, have hereby made themselves the arbiters of good and evil hours, which gives them great authority ; they are con- sulted as oracles; and have taken care never to sell their answers but at good rates. The same superstition has prevailed in more modern ages and nations. The French historians remark, that in the time of Catherine de Medicis, astro- logy was so much in vogue, that the most incon- siderable thing was not to be done without consulting the stars. And in the reign of king Henry III. and IV. of France, the predictions of astrologers were the common theme of the court conversation. This predominant humor in that court was well rallied by Barclay, in his Argenis, on occasion of an astrologer, who had under- taken to instruct king Henry in the event of a war then threatened by the faction of the Guises. Little is known of the early history of astro- logy in England. Bede and Alcuin, among our Anglo-Saxon ancestors, were addicted to its study ; and Roger Bacon could not escape the imputation of the art. His imprisonment was owing, it is well known, to his being supposed skilful in it. But it was the period of the Stuarts which must be considered as the acme of astro- logy among us. Then Lilly drank the doctrine of the magical circle, and the invocation of spirits from the Ars Notoria of Cornelius Agrip- pa ; used the form of prayer prescribed therein to the angel Salmonoeus ; and entertained among his familiar acquaintance the guardian spirits of England, Sammael and Malchidael. Merlin Anglicus, 1647. The author of Waverley has made ample use of this promising character in his 4ales relative to this period.

The signs of astrology were primarily di- vided thus : the six first were called northern, and commanding ; the six last southern, and obeying. Next they wore distributed into four triplicities, (so called because three belonged to each), fiery, earthy, airy, and watery. Of these the fiery and airy were said to be masculine, the earthy and watery, feminine. The planets by their motion made several aspects. See ASPECTS. The remaining influential parts of the heaven were two, Dragon’s Head and Tail, that, is the nodes in which the ecliptic is intersected by the orbits of the planets ; and the Part of ifor.

tune, that is the distance of the moon’s plane irom the sun, added to the degrees of the ascen- dant.

The influences of the heavenly bodies being determined, it remained only, in each separate case, to observe their positions at some required moment; for upon this, and their aspect to each other, the resolution of any question depended. For this purpose the whole circle of the heavens was distributed into twelve parts or houses, by great circles drawn through the intersection of the horizon and meridian, and cutting the equa- tor in so many equal parts. The first house was placed directly east, and the remainder were counted round in order proceeding to the south according to the motion of the planets. *To each of these houses was assigned some peculiar go- vernment, according to the scheme below.

6

Servants

The remainder of the art consisted in accu- rately filling the scheme by an observation, and then framing from it an oracular response.

At the revolution astrology declined ; and not- withstanding the labors of the immortal Par- tridge then, and those of Ebenezer Sibley, which in our own days fill two 4to. volumes, the art may now be considered as exploded.

ASTROLOGY, NATURAL, is the predicting of natural effects from natural causes ; as, the changes of weather, winds, storms, hurricanes, thunder, floods, earthquakes, &c. This art properly belongs to physiology, or natural philo- sophy ; and is only to be deduced a posteriori, from phenomena and observations.

ASTROLOMA, in botany; from a

Gen. ch. CAL. perianth inferior, permanent, double ; inner of five elliptic-lanceolate, acute, equal, erect leaves ; outer of four or more, much shorter, concave, imbricated scales : COR. of one petal, tubular ; tube twice the length of the calyx,

inflated, furnished on the inside, near the base, with five tufts of soft hairs ; limb in five deep, spreading, lanceolate, acute, hairy segments, shorter than the tube. Nectary a cup-shaped undivided gland, surrounding the base of the ger- men: STAM. filaments five, linear, inserted into the tube, and enclosed within it; anthers oblong, in the mouth of the tube : PIST. Germen superior, roundish, of five cells ; style capillary, the length of the tube ; stigma ‘ globose, densely downy :’ PERIC. drupa globular, slightly juicy : SEED, nut of five cells, hard and solid, not bursting, with a pendulous oblong kernel in each cell.

Ess. ch. : outer calyx of several imbricated leaves : corolla tubular : tube swelling, twice as long as the calyx, with five internal tufts of hair at the base : tube shorter, spreading, bearded : filaments linear, within the tube : drupa almost dry, of five cells. This genus is closely related to stenanthera, as well as to melichrus. We might perhaps unite them all to styphelia.

Astroloma consists of shrubs, of humble stature, for the most part decumbent : leaves scattered, often ciliated : flowers axillary, erect. There are six species : 1 . A. humifusum, diffuse astroloma ; stem prostrate, much branched. Found in various parts of New Holland, on the south-west coast, as well as at Port Jackson and in Van Diemen’s island. The remaining five species have all been found in the southern part of New Hol- land, by Mr. Brown, and apparently by no other botanist. We give their names from his work: 2. A. prostratum, prostrate astroloma; 3. A. den- ticulatum, toothed astroloma; 4. A. pallidum, pale astroloma ; 5. A. compactum, compact astro- loma ; 6. A. tectum, upright astroloma.

ASTROLUS, in natural history, a name given by authors to a white and splendid stone, small in size, and of a roundish figure, resembling the eyes of fishes.

ASTROMETEOROLOGIA, the art of fore- telling the weather, and its changes, from the aspects and configurations of the moon and pla- nets. It is a species of astrology, sometimes called meteorological astrology.

ASTRONIUM, in botany, a genus of the pen- tandria order, and the dicecia class of plants. The male calyx consists of five leaves, and the corolla is quinquepetalous. Of the female the calyx and corolla are the same as in the male ; the styli are three, and the seed is single. There is but one species, viz. A. graveolens, a na- tive of Jamaica.

ASTRONOMICAL CALENDAR, an instru- ment engraved on copper plates, printed on paper, and pasted on a board, with a brass slider carrying a hair : it shows by inspection the sun's meridian altitude, right ascension, declination, rising, setting, amplitude, &c. to a greater de- gree of exactness than the common globes.

ASTRONOMICAL PLACE of a star, or planet, is its longitude, or place in the ecliptic, reckoned from the beginning of Aries in consequentia, or according to the natural order of the signs.

ASTRONOMICALS, a name used by some writers for sexagesimal fractions ; on account of their use in astronomical calculations.

ASTRO'NOMY,

ASTRO NOMICK, ASTRONOM'ICAL, [From atrrjjp, a star, ASTRONO MICALLY, [and vo/ioc, a law. ASTRON'OMER, ASTRON'OMIZE. J

Images astronomically framed under certain con- stellations to preserve from several inconveniences, as under the sign of the Lion the figure of a lion made in gold, against melancholic fancies, dropsie, plague, fevers. Bp. Hall's Cases of Conscience.

Our forefathers, marking certain mutations to happen in the sun's" progress through the zodiack, they registrate and set them down in their astrono- mical camons. Brown's Vulgar Errors. The old ascetick Christians found a paradise in a desert, and with little converse on earth, held a con- versation in heaven ; thus they astronomised in caves ; and though they beheld not the stars, had the glory of heaven before them. Brown. Chrit. Mor. ii. 9. Astronomers no longer doubt of the motion of the planets about the sun. . Locke.

The old and new astronomers in vain Attempt the heav'nly motions to explain.

Blackmore.

Can he not pass an astronomick line, Or dreads the sun th' imaginary sign ; That he should ne'er advance, to either pole? Id. To this must be added the understanding of the globes, and the principles of geometry and astronomy.

Sr.cr. T. KrYMor.or.Y AND DEFINITION OF

ASTRONOMY.

1. ASTRONOMY, a mixed mathematical science, teaching the knowledge of the celestial bodies; their magnitudes, distances, motions, revolu- tions, and eclipses : and it comprehends also a knowledge of the natural causes on which all celestial phenomena depend. Hence it is as much a branch of physics as of mathematics, and comprehends the theory of the universe.

Sr.cr. 11. HIS'.ORY or ASTRONOMY.

2. As Astrono.ny is the most sublime of all the science1-;, so it is also the most useful, the most ancient, and, \ve may add, the most perfect. HO\ ran it he otherwise than sublime, when its object is the study of that theatre which our merciful Creator has vouchsafed to establish as i!:i uncrrmi: testimony of his existence and his power. \Yhercver we turn we perceive immen- :,ty of operation, guided by the strictest regula rly. \ e find revolutions, intricate and complex, but n;>olviiig themselves, by laws irrevocably fixed, into paths the mo-n simple, and the most capable of s-.illerinu' an increase of numbers with- out confusion. I n another point of view it is sub- linie: the contemplation of its discoveries and its usefulness would convince the dreary-minded bi-_M>! , \ ho Mieers at human reason ;>nd its efforts, of tiie ama/ iiig extent to which that noblest gift of (MM to man can be extended. Astronomy is the proudest triumph of philosophy and of hu- man reason. Its Miperior usefulness when com-]>, ;:.□□□! with the oilier sciences can never be op posed: l'\ r the n:r i'_r:it"r is conducted through

unknown seas with safety; and the merchant transports the produce or the surplus of one nation to increase the comforts or relieve the wants of another ; in short, it affords the means of intercourse to all the inhabitants of the globe. If, from the folly of mankind, it has sometimes been compelled to effect the transportation of animosity and destruction, it has more frequently assisted the dissemination of arts, civilisation, and happiness. That it is the oldest science we shall more clearly ascertain when we trace, as we shall soon do, its history through the most ancient, and its improvements through the most modern, nations. If then astronomy is possessed of the highest antiquity, the greatest usefulness, and the utmost sublimity, it is an object of the most transcendant worth that can occupy the at- tention

of the human mind.

3. None of the sciences appear to be of higher antiquity than astronomy. From the ac- count given by Moses of the creation of the celestial luminaries, it appears extremely pro- bable that our first progenitor received some knowledge of their nature and uses from his Almighty Creator himself. The Jewish rabbins have adopted this opinion : and, indeed, it is natural to think that no visible objects would more readily excite the curiosity, or appear more worthy of the contemplation of Adam in a state of innocence, than the celestial bodies.

4. Consistently with this, Josephus ascribes to Seth and his posterity a considerable degree of astronomical knowledge. He speaks of two pil- lars, the one of stone and the other of brick, called the pillars of Seth, upon which were en- graved the principles of the science; and he says that the former was still entire in his time. But, be this as it may, it is evident that the great length of the antediluvian lives would afford such excellent opportunities for observing the heavenly bodies, that we cannot but suppose that the science of astronomy must have been considerably advanced before the flood. Jose- phus says, that longevity was bestowed upon them for the very purpose of cultivating the sciences of geometry and astronomy ; observing, that the latter could not be learned in less than 600 years ; * for that period (he adds) is the grand year.'

5. By this remarkable expression is probably meant the period in which the sun and moon come again into the same situation in which they were at the beginning of it, with regard to the nodes, apogee of the moon, &c. ' This pe- riod (says Cassini), of which we find no intima- tion in any monument of any other nation, is the finest period that ever was invented ; for it brings out the solar year more exactly than that of Hipparchus and Ptolemy ; and the lunar month within about one minute of what is deter- mined by modern astronomers.' If the antedi- luvians had such a period of 600 years they must have known the motions of the sun and moon more exactly than their descendants knew them for many ages after the flood. That re- markable expression in the book of Job, in which

the Deity is spoken of as the being who ' maketh Arcturus, Orion, and the chambers of the south,' is too striking to be overlooked.

6. Indeed, besides the motives of mere cu- riosity, which of themselves may be supposed to have excited people to a contemplation of the glorious celestial canopy, it is easy to see that some parts of the science answer such essential purposes to mankind that they could not long be dispensed with. And it has been remarked that traces of this science, in different degrees of im- provement, have been found among all nations.

7. Upon the building of the Tower of Babel, it is supposed that Noah retired with his chil- dren, born after the flood, to the north-eastern part of Asia, where his descendants peopled the vast empire of China. It is said also that the Jesuit missionaries have found traditional ac- counts among the Chinese of their having been taught this science by their first emperor Fo-hi, who is supposed to be the same with Noah ; and Kempfer asserts that Fo-hi discovered the mo- tions of the heavens, divided time into years and months, and invented the twelve signs, into which they divide the zodiac, and which they distinguish by the following names: 1. the mouse ; 2. the ox or cow ; 3. the tiger ; 4. the hare; 5. the dragon; 6. the serpent; 7. the horse; 8. the sheep; 9. the monkey; 10. the cock or hen; 11. the dog; and 12. the boar. They divide the heavens into twenty-eight con- stellations, or classes of stars, allotting four to each of the seven planets ; so that the year always begins with the same planet; and their constellations answer to the twenty-eight lunar mansions used by the Arabian astronomers.

8. They do not, however, mark these constel- lations with the figures of animals, like most other nations, but by connecting the stars by straight lines, and denoting the stars themselves by small circles : so, for instance, the great bear would be marked as represented in plate IV. fig, 9.

9. The Chinese themselves have many re- cords of the high antiquity of their astronomy ; though not without suspicion of great mistakes. They ascribe the discovery of tho, pole-star, the invention of the sphere, and mariners' compass, &c. to their emperor Hong-Ti, the grandson of Noah. But on more certain authority it is as- serted by Gaubil that, at least 120 years before Christ, the Chinese had determined by observa- tion the number and extent of their constella- tions as they now stand ; the situation of the fixed stars with respect to the equinoctial and solstitial points ; and the obliquity of the eclip- tic, with the theory of eclipses; and that they were, long before that, acquainted with the true length of the solar year, the method of observing meridian altitudes of the sun by the shadow of a gnomon, and of deducing from thence his de- clination and the height of the pole.

10. The same missionary also says that the Chinese have yet remaining some books of astro- nomy which were written about 200 years be- fore Christ; from which it appears that the Chinese knew the daily motion of the sun and moon, and the time of the revolutions of the planets, many years before that period. Du

Halde informs us that Tcheou-cong, the most skilful astronomer that ever China produced lived more than a thousand years before Christ , that he passed whole nights in observing the ce- lestial bodies and arranging them into constella- tions, &c. At present, however, the state of as- tronomy is but very low in that country, al- though it is cultivated at Pekin by public autho- rity, as in most of the capital cities of Europe. This is ascribed, by Dr, Long, to a barbarous decree of one of their emperors, to burn all the books in the empire excepting such as related to agriculture and medicine.

11. Astronomy, according to Porphyry, must have been of very ancient standing in the East. He informs us that when Babylon was taken by Alexander there were brought from thence ce- lestial observations for the space of 1 903 years ; which therefore must have commenced within 115 years after the flood, or within fifteen years after the building of Babel. Epigenes, according to Pliny, affirmed that the Babylonians had obser- vations of 720 years engraven on bricks.

12. Achilles Tatius ascribes the invention of astronomy to the Egyptians ; and adds that their knowledge of that science was engraven on pil- lars, and by that means transmitted to posterity. Bailly, in his elaborate History of Ancient and Mo- dern Astronomy, endeavours to trace the origin of this science among the Chaldeans, Egyptians, Persians, Indians, and Chinese, to a very early period ; and he maintains that it was cultivated in Egypt and Chaldea 2800 years before Christ ; in Persia, 3209 ; in India, 3101 ; and in China, 2952 years before that era. He also appre- hends that astronomy had been studied even long before this distant period, and that we are only to date its revival from thence.

13. M. Bailly, in investigating the antiquity and progress of astronomy among the Indians, examines and compares four sets of astronomical tables of the Indian philosophers, viz. that of the Siamese, explained by M. Cassini in 1689 ; that brought from India by M. le Gentil, of the Aca- demy of Sciences; and two other manuscript tables, found among the papers of M. de Lisle : all of which agree together, and refer to the me- ridian of Benares. It appears that the funda- mental epoch of the Indian astronomy is a con- junction of the sun and moon which took place at the distance of years 3102 A. A. C. And M. Bailly computes

that such a conjunction really then happened.

14. He farther observes that at present the Indians calculate eclipses from observations made 5000 years ago ; the accuracy of which, with regard to the solar motion, far exceeds that of the best Grecian astronomers. The lunar motions have been computed from the space through which that luminary passes in 1,600,984 days. They also use the cycle of nineteen years, the same as that ascribed by the Greeks to Meton. Their theory of the planets is better than that of Ptolemy, as they do not suppose the earth to be the centre of the celestial motions, and believe that Venus and Mercury move round the sun. Their astronomy also agrees with the most modern discoveries, with regard to the ob- liquity of the ecliptic and the acceleration of the

equinoctial points, 8cc. The inhabitants of Japan, of Siam, and of the Mogul's empire, have also been acquainted with astronomy from time im- memorial ; and the celebrated observatory at Benares is a monument both of the ingenuity of the Hindoos, and of their skill in that science.

15. In the Transactions of the Royal Society of Edinburgh, vol. ii, professor Playfair has given a learned and ingenious dissertation on the astronomy of the Brahmins, in which the great accuracy and high antiquity of the science among them is rendered extremely probable. It appears that their tables and rules of computa- tion have peculiar reference to an epoch, and to observations 3000 or 4000 years A. C. It ap- pears, too, that very considerable mathematical knowledge had been employed in their precepts and calculations. But amongst all these pre- cepts and those calculations, perhaps none will strike the mind of the reader with greater force than the following, from which we shall find, without plucking a leaf from the never-fading laurels of Sir Isaac Newton, that the principle which he developed to the western world, was discovered by the philosophers of the eastern, thousands of years before he existed : of the truth of this the following remarkable passage, translated by Sir William Jones, from the poem of Shirin and Ferhad : ' there is,' says the au- thor of that poem, ' a strong propensity which dances through every atom and attracts the minutest particle to some peculiar object ; from such propensity arises every motion perceived in heavenly or terrestrial bodies. It is a disposition to be attracted which taught hard steel to rush from its place and rivet itself on the magnet ; it is the same disposition which impels the light straw to attach itself firmly on amber.'

1(3. \e shall conclude this part of the his- tory of Asiatic discoveries in the words of pro- fessor Playfair: ‘ That observations made in India, when all Europe was barbarous or unin- inhabited, and investigations into the most subtle (fleets of gravitation made in Europe near five thousand years afterwards, should thus come in mutual support of one another, is perhaps the most striking example of the progress and vicis- situdes of science, which the history of mankind has yet exhibited.’

17. It appears too, that astronomy was not unknown to the Americans; though in their di- vision of time they made use only of the solar and not of the lunar motions. The Mexicans, in particular, had a strange predilection for the number thirteen : their shortest periods con- sisted of thirteen days ; their cycle of thirteen months, each containing twenty days ; and their epoch of (our periods of thirteen years each. This excessive veneration for the number thirteen arose, according to Siguenza, from its being the number of their greater gods. Clavigero also asserts it as a fact, that having discovered the excess of a few hours in the solar above the lunar year, they made use of intercalary days to bring them to an equality, as was done by Ju- lius Cirsar in the l{oman calendar   but with this difference, that instead of one day every four years, they interposed thirteen days every fiftv-two vt.ars.

18. Among the ancients we find the name of Chaldean used often for astronomer or astrologer. Indeed both these nations pretended to a very high antiquity, and claimed the honor of pro- ducing the first cultivators of this science. The Chaldeans boasted of their temple or tower of Belus, and of Zoroaster, whom they placed 5000 years before the destruction of Troy ; while the Egyptians boasted of their colleges of priests, where astronomy was taught, and of the monu- ment of Osymandias, in which, it is said, there was a golden circle of 365 cubits in circumfe- rence, and one cubit thick, divided into 365 equal parts, according to. the days of the year, &c. It is indeed evident that both Chaldea and Egypt were countries very proper for astrono- mical observations, on account of the extended flatness of the country, and the purity and sere- nity of the air. The tower of Belus, or of Babel itself, was probably an astronomical observatory ; and the pyramids of Egypt, whatever they were originally designed for, might perhaps answer the same purpose ; at least they show the skill of this people in practical astronomy, as they are all placed with their four fronts exactly facing the cardinal points of the compass.

19. The Chaldeans began to make observa- tions soon after the confusion of languages, as appears from the observations found by

Alexan- der on the taking of Babylon ; and it is probable they began much earlier. They determined, with tolerable exactness, the length both of a pe- riodical and synodical month. They discovered that the motion of the moon was not uniform ; and they even attempted to assign those parts of the orbit in which the motion is quicker or slower. We are assured by Ptolemy that they were not unacquainted with the motion of the moon's apo- gee and nodes, the latter of which they supposed made a complete revolution in 6585►► days, or a little more than eighteen years, and contained 223 complete lunations, which period is called the Chaldean Saros.

20. Ptolemy also gives us from Hipparchus several observations of lunar eclipses made at Babylon above 720 years A. A. C. ; and Aristotle informs us that they had many occultations of the planets and fixed stars by the moon ; a cir- cumstance which led them to conceive that eclip- ses of the sun were to be attributed to the same cause. They had also no inconsiderable share in arranging the stars into constellations, and the comets did not escape their observation. Dialling was also practised among them long before the Greeks were acquainted with that science.

21. The Egyptians were much of the same standing in astronomy with the Chaldeans. He- rodotus ascribes their knowledge in the science to Sesostris ; but probably not the same whom New- ton makes contemporary with Solomon, as they were acquainted with astronomy at least many hundred years before that era. We learn from the testimony of some ancient authors, that they believed the figure of the earth was spherical ; that the moon was eclipsed by passing through the earth's shadow, though it does not certainly ap- pear that they had any knowledge of the true system of the universe ; that they attempted to measure the magnitude of the earth and sun,

though their methods of ascertaining the latter were very erroneous ; and that they even pretend- ed to foretel the appearance of comets, as well as earthquakes and inundations. This science, how- ever, gradually decayed, and in the time of Au- gustus it was entirely extinct among them.

22. Astronomy passed from Chaldea and Egypt to the Phoenicians, and was applied by that com- mercial people to the purposes of navigation ; and they, in consequence, became masters of the sea, and

of almost all the commerce in the world . The Greeks, it is probable, derived their astrono- mical knowledge chiefly from the Egyptians and Phoenicians, by means of several of their country- men who visited these nations for the purpose of learning the different sciences. Newton sup- poses that the division into constellations was made about the time of the Argonautic expedi- tion ; but it is probable that most of them were of a much older date, and derived from other nations, though clothed in fables of their own in- vention.

23. The fable of Atlas supporting the heavens upon his shoulders, shows that some Mauritanian monarch of that name had made considerable ad- vances in astronomical knowledge ; and his dis- coveries had probably been communicated to the Greeks. Several of the constellations are men- tioned by Hesiod and Homer, who lived about A. A. C. 870. Their knowledge in this science however, was greatly improved by Thales the Milesian, and other Greeks, who travelled into Egypt, and brought from thence the chief prin- ciples of the science. Thales was born about A. A. C. 640, and he was the first among the Greeks who observed the stars, the solstices, and predicted the eclipses of the sun and moon.

24. The science was farther cultivated and ex- tended by his successors Anaximander, Anaxi- menes, and Anaxagoras ; but especially by Pytha- goras, who, about A. A. C. 577, brought from Egypt the learning of these people, taught it in Greece and Italy, and founded the sect of the Pythagoreans. He taught that the sun was in the centre of the universe ; that the earth was round; that there were antipodes ; that the moon reflect- ed the rays of the sun, and was inhabited like the earth; that comets were a kind of wandering stars, disappearing in the further parts of their orbits ; that the white color of the milky way was owing to the united brightness of a great multitude of small stars ; and he supposed that the distances of the moon and planets from the earth, were in certain harmonic proportions to one another.

25. Philolaus, a Pythagorean, who flourished about A. A. C. 450, and asserted the diurnal motion of the earth on its own axis, was taught by Hicetas, a Syracusan. About the same time Meton and Euctemon floxirished at Athens, where they observed the summer solstice, A. A. C. 432, with the risings and settings of the stars, and what seasons they answered to. Meton also in- vented the cycle of nineteen years, which still bears his name.

26. Eudoxus, of Cnidos, lived about A. A. C. 370, and was one of the most skilful astronomers and geometricians of antiquity, and the supposed inventor 01 many of the propositions in Euclid’s

Elements, He introduced geometry into the science of astronomy, and travelled into Asia, Africa, Sicily, and Italy, to improve it : and we are informed by Pliny, that he determined the annual year to contain 365 days 6 hours, and also the periodical time of the planets, and made other important discoveries and observations. Calippus flourished soon after Eudoxus, and his celestial sphere is mentioned by Aristotle ; but he is better known by a period of seventy-six years which he invented, containing four correct- ed Metonic periods, and which commenced at the summer solstice, A. A. C. 330. About this time the knowledge of the Pythagorean system was carried into Italy, Gaul, and Egypt, by cer- tain colonies of Greeks.

27. Vitruvius, however, represents the intro- duction of astronomy into Greece, in a manner somewhat different. He maintains that Berosus, a Babylonian, brought it immediately from Baby- lon itself, and opened an astronomical school in the isle of Cos. And Pliny says, that, in conside- ration of his wonderful predictions, the Athenians erected a statue to him in the gymnasium, with a gilded tongue. But if this Berosus be the same with the author of the Chaldaic histories, he must have lived before Alexander. About this time, or rather earlier, the Greeks having begun to plant colonies in Italy, Gaul, and Egypt, be- came acquainted with the Pythagorean system, and the notions of the ancient druids concerning astronomy. Julius Caesar informs us that the latter were skilled in this science ; and that the Gauls in general were able sailors, which they could not be without a competent knowledge of astronomy ; and it is related of Pytheas, who lived at Marseilles in the time of Alexander the Great, that he observed the altitude of the sun at the summer solstices by means of a gnomon. He is also said to have travelled as far as Thule to settle the climates.

28. After Alexander’s death the sciences flou- rished chiefly in Egypt, under the auspices of Ptolemy Philadelphus, and his successors. He founded a school there, which continued till the invasion of the Saracens, A. A. C. 650. From the founding of that school, the science of astrono- my advanced considerably. Aristarchus, about A. A. C. 270, strenuously asserted the Pythago- rean system, and gave a method of determining the sun’s distance by the dichotomy of the moon. ❓❓❓ Eratosthenes, who was born at Cyrene A. A. C. 271, measured the circumference of the earth by a gnomon ; and being invited to Alexan- dria, from Athens, by Ptolemy Euergetes, and made keeper of the royal library there, he set up for that prince those armillary spheres, which Hipparchus and Ptolemy the astronomer after- wards employed so successfully in observing the heavens. He also determined the distance be- tween the tropics to be JJ of the

whole meridian circle, which makes the obliquity of the ecliptic in his time to be 23►► 51′ $.

29. The celebrated Archimedes, too, cultivated astronomy, as well as geometry and mechanics, determined the distances of the planets from one another ; and constructed a kind of planetarium or orrery, to represent the phenomena and me ►►► tions of the heavenly bodies.

30. Not to mention many others of the ancients who cultivated astronomy, Ilipparchus, who nourished about A. A. C. 140, was the first who applied himself to the study of every branch of that science. Ptolemy says he made great im- provements in it ; he discovered that the orbits of the planets are eccentric, that the moon moved slower in her apogee than in her perigee, and that there was a motion of anticipation of the moon's nodes : he constructed tables of the mo- tions of the sun and moon, collected accounts of such eclipses, &c. as had been made by the Egyp- tians and Chaldeans, and calculated all that were to happen for 600 years : he discovered that the fixed stars changed their places, having a slow motion of their own from west to east ; he cor- rected the Calippic period, and pointed out some errors in Eratosthenes's method for measuring the circumference of the earth ; he computed the sun's distance more accurately than his predecessors : but his best work is a catalogue of the fixed stars, to the number of 1022, with their longitudes, la- titudes, and apparent magnitudes ; which, with most of his other observations, are preserved by Ptolemy in his Almagest.

31. From the time of Hipparchus, till that of Ptolemy, little progress was made in astronomy. He was born at Pelusium, in Egypt, in the first century, and made the greatest part of his obser- vations at the celebrated school of Alexandria in that country. Profiting by those of Ilipparchus, and other ancient astronomers, he formed a sys- tem (if his own, which, though erroneous, was implicitly followed for many ages by all nation*.

! k' compiled a great work, called the Almagest, which contained the observations and collections i if his predecessors in astronomy. This work ►►►-.'as preserved from tin; conflagration of the Alex- andrian library by the Saracens, and translated ,Mto Arabic, A.D. 827, and into Latin in 1230. 'Hiedivek original was not known in Europe 'ill the beginning of the fifteenth century, when ;; was brought from

Constantinople, then taken ! y the Turks, by a monk of Trapezond, named i k'orge, who translated it into Latin ; and various "tiler editions have been since made.

.'5-2. From A.I). 800, till the beginning of the

fourtc-i nth century, the western parts of Europe

were immersed in gross ignorance, while the

Aialiiaiis, profiting by the books they had pre-

□□□d from the wreck of the Alexandrian library,

',' ivatcd and improved all the sciences, and par-

□□□iLriy that of astronomy, in which they had v a.!>h' professors and authors. The caliph A! Mai Mir lir-t introduced a taste for the sciences into Ins emiure. His grandson, Al Mamun, who :;>cenii "1 ihe throne in [image] I, was a great encour- :> r and imj.rovr of tl. □□□ sciences, especially of astronomy. ! Saving coii-.!r:icted proper instru- ments, :, □□□ made many oi.^ □□□: v iimns ; determined UK: o'.'iiijiiily of the ecli, tie to be 2U' '.};') ; and under his auspices a degre^ of the eiicle of the i-artli was m. □□□ asiired a second time in the plain of Smgar, tni the border of tin: IV. 1 Sea.

□□□';:i. .V'out tins tune Alferuanus wrote ele- ments oi a-tronomv ; and Aibat.._;nius, who ilou ri>hc-d about the year H!U), greatly reionued it, by uunpari;: ; his o\\ observations with those of Ptolemy. ! l< nee h □□□ comput-i *!ie motion of the

sun's apogee from Ptolemy's time to his own, settled the precession of the equinoxes at one de- gree in seventy years ; and fixed the obliquity of the ecliptic at 23□□ 35'. The tables which he composed for the meridian of Aracta, were long esteemed by the Arabians.

34. After this, though the Saracens had many eminent astronomers, several centuries elapsed without producing any very valuable observations, excepting

35. Ulug Beg, grandson of the celebrated Ta- merlane, the Tartarian prince, a great proficient in practical astronomy, had very large instru- ments, particularly a quadrant of about 180 feet high, with which he made good observations. From these he determined the latitude of Samar- cand, his capital, to be 39□□ 27′ 23″ ; and compo- sed astronomical tables for the meridian of the same so exact, that they

differ very little from those constructed afterwards by Tycho Brahe. ••• His principal work was his catalogue of the fixed stars, made from his own observations in the year

1437.

36. At this period, almost all Europe was im- mersed in ignorance ; which began to be dispel- led by the settlement of the Moors in Spain. The emperor Frederic II. about 1230, also began to encourage learning ; restoring some decayed uni- versities, founding a new one in Vienna; and causing the works of Aristotle and Ptolemy's Almagest, to be translated into Latin. Two years after this, John de Sacro Bosco, that is of Halifax, compiled from Ptolemy, Albategnius, Alferga- nus, and other Arabic astronomers, his work, De Sphara, which was held in the greatest estima- tion for 300 years after, aud was honored with commentaries by Clavius and other learned men.

37. In 1240 Alphonso, king of Castile, not only cultivated astronomy himself but greatly encouraged others ; and by the assistance of se- veral learned men corrected the tables of Ptolemy, and composed those which were denominated from him the Alphonsine tables. About the same time Roger Bacon, an English monk, wrote several tracts relative to astronomy, par- ticularly of the lunar aspects, the solar rays, ana the places of the fixed stars; and about 1270 Vitello, a Polander, composed a treatise an op- tics, in which he showed the use of refractions in astronomy.

:;••. Till the time of Purbach, who was bom in 1423, little farther improvement was made in tii is science. He composed new tables of sines for every ten minutes, making the radius sixty with four cyphers annexed. He constructed :;;>heres and globes, and wrote several astronomi- ; d tracts, as a commentary on Ptolemy's Alma-

gest; some treatises on arithmetic and dialling, with tables for various climates; new tables of the fixed stars reduced to the middle of that century; and he corrected the tables c-f the planets, making new equations to them where the Alphonsine tables were erroneous. In his solar tables, he placed the sun's apogee in the the beginning of Cancer; but retained the ob- liquity of the ecliptic 23•• 33••', as determined by the latest observations. He also observed some eclipses, made new tables for computing them, and had just finished a theory

of the planets, when he died in 1462, being only thirty-nine years of age.

39. Purbach was succeeded in these labors by his pupil and friend, John Muller, commonly called Regiomontanus, who completed the epi- tome of Ptolemy's Almagest, which Purbach had begun ; and after the death of his friend was in- vited to Rome, where he made many astronomi- cal observations. Being returned to Nuremberg in 1471, by the encouragement of Bernard Wal- ther, a wealthy citizen, he made several instru- ments for astronomical observations, among which was an armillary astrolabe, like that used at Alexandria by Hipparchus and Ptolemy, with which, and a good clock, then but a late inven- tion, he made many observations. He made ephemerides for thirty years to come, showing the lunations, eclipses, &c. ; printed the works of many of the most celebrated ancient astrono- mers, and wrote the theory of the planets and comets, and a treatise on triangles, which con tains several good theorems ; computed a table of sines for every single minute, to the radius 1,000,000, and introduced the use of tangents into trigonometry.

40. After Muller's death, which happened at Rome in 1476, in his fortieth year, Bernard Walther collected his papers, and continued the astronomical observations till his own death. The observations of both were collected by order of the senate of Nuremberg, and published there in 1544 by John Schoner; they were also after- wards published in 1618 by Snellius, at the end of the observations made by the landgrave of Hesse; and lastly with those of Tycho Brahe in 1666.

4 1 . Walther was succeeded, as astronomer at Nuremberg, by John Werner, a clergyman, who observed the motion of the comet in 1500 ; and wrote several tracts on geometry, astronomy, and geography, in a masterly manner ; the most remarkable of which are those concerning the motion of the eighth sphere, or the fixed stars : in this tract, by comparing his own observations, made in 1514, with thoseof Ptolemy, Alphonsus, and others, he showed that the motion of the fixed stars, since called the precession of the equinoxes, is 1►► 10′ in 100 years. He made also the first star of Aries 26►► distant from the equi- noctial point, and the obliquity of the ecliptic only 23►► 28'; constructed a planetarium, repre- senting the celestial motions according to the Ptolemaic hypothesis ; and published a transla- tion of Ptolemy's geography, with a commentary, in which he first proposed the method of finding the longitude at sea by observing the moon's dis- tance from the fixed stars. Werner died in 1528, aged sixty

42. Nicolaus Copernicus rose next, and made so great a figure in

astronomy, that the true sys- tem discovered, or rather renewed by him, has been ever since styled the Copernican. He restored the old Pythagorean system of the world, which had been set aside from the time of Pto- lemy. About A. D. 1507 he conceived doubts of the Ptolemaic system, and entertained notions about the true one, which he gradually improved by a series of astronomical observations, and the study of former authors. By these he formed new tables, and completed his work in 1530, containing a renovation of the new system of the universe, in which all the planets are considered as revolving about the sun. This work was printed in 1543, under the care of Schoner and Osiander, by the title of Revolutiones Orbium Cffilestium; and the author received a copy of it a few hours before his death, on the 23d of May 1543, he being then seventy years of age.

43. After the death of this great luminary of Astronomy, the science and practice of it were greatly, improved by Schoner, Nonius, Gemma, Frisius, Rothman, Byrgius, the landgrave of Hesse. &c. Schoner reformed and explained the calendar; improved the methods of making celes- tial observations ; and published a treatise on cosmography. He died four years after Coper- nicus. Nonius wrote several works on mathema- tics, astronomy, and navigation, and invented some useful and more accurate instruments than formerly, one of these was the astronomical qua- drant, on which he divided the degrees into minutes, by a number of concentric circles ; the first was divided into ninety equal parts or de- grees, the second into eighty-nine, the third into eighty-eight, and so on to forty-six ; so that the index of the quadrant always falling upon or near one of the divisions, the minutes are known by an easy computation.

44. Appian's chief work, the Csesarean Astro- nomy, was published at Ingolstadt in 1540; in which he shows how to observe the places of the stars and planets by the astrolabe; to resolve astronomical problems by certain instruments ; to predict eclipses, and to describe the figures of them ; and the method of dividing and using an astronomical quadrant. To these are added ob- servations of five comets, one of which has been supposed the same with that observed by Heve- lius, and if so, it ought to have returned again in the year 1789; but astronomers were disappointed in their expectations.

45. Gemma Frisius wrote a commentary on Appian's cosmography, accompanied with many observations of eclipses : he also invented the astronomical ring, and several other instruments useful in taking observations at sea ; and was the first who recommended a time-keeper for deter- mining the longitude. Rheticus ❖❖❖ began a very extensive work, being a table of sines, tangents, and secants, to a very

large radius, and to every ten seconds, or one-sixth of a minute ; which was completed by his pupil Valentine Otho, and printed in 1594.

46. William IV., landgrave of Hesse Cassel, applied himself to the study of astronomy about A. D. 1561; and, with the best instruments which could then be procured, made a great

number of observations, published by Snellius in 1618, and preferred by Hevelius to those of Tycho Brahe. From these observations he formed a catalogue of 400 stars, with their latitudes and longitudes, adapted to the beginning of the year

1593.

47. Tycho Brahe, a Danish nobleman, began his studies about the same time vVith the Land- grave of Hesse, and observed the great conjunc- tion of Jupiter and Saturn ; but, finding the usual instruments very inaccurate, he constructed many others much larger and more exact. In 1571 he discovered a new star in the chair of Cassio- peia ; which induced him, like Hipparchus on a similar occasion, to make a new catalogue of the stars; which he composed to the number of 777, and adapted their places to the year 1600. In 1576, by the favor of the king of Denmark, he built his new obserratory, called Uraniburg, on the small island Huenna, opposite to Copen- hagen, which he very amply furnished with many large instruments, some of them so divided as to show single minutes, and in others the arch might be read off to ten seconds. One quadrant was divided according to the method invented by Nonius, that is by forty-seven concentric circles ; but most of them were divided by diagonals ; a method of division invented by Richard Chan- celer, an Englishman. Tycho employed his time at Uraniburg to the best advantage, till the death of the king, when, falling into discredit, he was obliged to remove to Holstein : he afterwards introduced himself to the emperor Rodolph, with whom he continued at Prague till his death in 1601. Tycho was the inventor of a system of astronomy, a kind of semi-Ptolemaic, which he vainly endeavored to establish instead of the Co- pernican. His numerous works, however, show that he was a man of great abilities ; and his discoveries, together with those of Purbach and Regiomontanus, were collected and published together in 1621, by Longomontanus, the favorite disciple of Tycho.

48. Tycho, while residing at Prague with the emperor, prevailed on Kepler to leave the uni- versity of Glatz, and to come to him ; and Tycho dying in K301, Kepler enjoyed all his life the title of matnematician to the emperor, svho onlcred him to finish the tables of Tycho Brahe, which lie published in 1627, under the title of Kodolphiue. lie died about A. D. 1630, at llatisbon, \here he was soliciting the arrears of his pension. From his own observations and those of Tyrho, Kepler discovered several of the tnii' laws of nature, by which the motions of the ××× ×××'×××h-stial bodies are regulated. lie discovered that all the planets revolve about the sun, not in circular, but in elliptical orbits, having the sun in one of the tbci < f the ellipse ; that their mo-

, but varying, quicker or ear to the sun, or farther from s described by the variable planet to the sun, are equal ;il ways proportional to the tinii s of describing them : and that the cubes of th*1 distances of the planets from the sun, were in the same proportion as the squares of their periodical times of revolution ily observations Jilso on comets, he eondudtd that thev are freely

carried about among the orbits of the planets, in paths that are nearly rectilinear, but which he could not then determine.

49. At this time there were many other good proficients in astronomy ; as Wright, Napier, Bayer, &c. Wright made several good meridio- nal observations of the sun, with a quadrant of six feet radius, in the years 1594, 1595, and 1596 ; from which he greatly improved the theory of the sun's motion, and computed more accu- rately his declination, than any person had done before. In 1599 he published also, an excellent work, entitled, ' Certain Errors in Navigation discovered and detected,' containing a method which has commonly, though erroneously, been ascribed to Mercator. To Napier we owe some excellent theorems and improvements in spherics, besides the ever- memorable invention of loga- rithms. Bayer, a German, published his Ura- nometria, or the figures of all the constellations visible in Europe, with the stars marked on them, and accompanied by names, or the letters of the Greek alphabet ; a contrivance by which they may easily be referred to with distinctness and precision.

50. About the same time, astronomy was cul- tivated abroad by Mercator, Maurolycus, Magi- nus, Homelius, Schultet, Stevin, Galileo, &c. and in England by Thomas and Leonard Digges, John Dee, Robert Flood, Harriot, &c. The beginning of the seventeenth century was parti- cularly distinguished by the invention of teles- copes, and the application of them to astrono- mical observations. The more

distinguished early observations with the telescope, were made by Galileo, Harriot, Huygens, Hook, Cassini, &c. It is said that, from report only, Galileo made for himself telescopes, by which he dis- covered inequalities in the moon's surface, Jupi- ter's satellites, and the ring of Saturn; also spots on the sun, by which he found out the revolu- tion of that luminary on its axis; and he dis- covered that the nebulae and milky way were full of small stars.

51. Mr. Harriot, who had previously been known only as an algebraist, made much the same discoveries as Galileo, and as early, if not more so, as appears by his papers in the possession of the earl of Egremont. And Mr. Horrox, a young astronomer of great talents, found out in 1633, that the planet Venus would pass over the sun's disc on the twenty-fourth of November 1639 an event which he announced only to his friend Crabtree; and these two were the only persons in the world that observed this transit. Horrox made also many other useful observations, and had even formed a new theory of the moon, taken notice of by Newton; but his early death, in the beginning of 1640, put a stop to his valuable labors.

52. Hevelius, Burgomaster of Dantzick, flou- rished about the same time, and observed the spots and phases of the moon; from which observations he compiled his Selenographia. An account of his apparatus is contained in his work entitled Machina Caelestis, a book now very scarce, as most of the copies were accidentally burnt, with the whole house and apparatus, in 1679. Heve- lius died in 1688, aged 76.

53. Doctor Hook, a contemporary of Hevelius invented instruments with telescopic sights, and censured the others. This occasioned a sharp dispute between them ; to settle which, Halley was sent over to Hevelius to examine his instru- ments. The two astronomers made several ob- servations together, very much to their satisfac- tion ; and amongst them was one of an occulta- tion of Jupiter by the moon, when they deter- mined the diameter of the latter to be 30′ 33".

54. Huygens and Fontana, before the middle of the seventeenth century, greatly improved the construction of telescopes. The former con- structed one of 123 feet, with which he observed the moon and planets, and discovered that Saturn was encompassed with a ring. With telescopes too, of 200 and 300 feet focus, Cas- sini saw five

satellites of Saturn, with his zones or belts, and the shadows of Jupiter's satellites passing over his body. In 1666 Azout applied a micrometer to telescopes, to measure the dia- meters of the planets, and other small distances in the heavens : but an instrument of this kind had been invented before, by Gascoigne, though it was but little known abroad. To obviate the difficulties arising from the great lengths of re- fracting telescopes, and the aberration of the rays, Mersennus, in a letter to Descartes, first started the idea of making telescopes of reflectors, instead of lenses; and in 1663 James Gregory of Aber- deen showed how such a telescope might be constructed.

55. Sir Isaac Newton, after spending some time on the construction of both sorts of telescopes, found out the great inconvenience which arises to refractors from the different refrangibility of the rays of light ; for which not finding a remedy, and pursuing the other kind, in 1672, he pre- sented to the Royal Society two reflectors, con- structed with spherical speculums. The incon- venience, however, arising from the different refrangibility of the rays of light, has since been fully obviated by Dollond.

56. Towards the end of the seventeenth, and beginning of the eighteenth century, practical astrcnomy rather languished; but the speculative part was carried to the highest perfection by New- ton in his Principia, by David Gregory, Keil, and others. Soon after this, great improvements in astronomical instruments began to take place, particularly in Britain. Graham not only improved clocks and watch work, but also car- ried the accuracy of astronomical instruments to a surprising degree. He constructed the old eight feet mural arch at the Royal Observatory, Greenwich, and a small equatorial sector for making observations out of the meridian ; but he is chiefly remarkable for contriving the zenith sector of twenty-four feet radius, and afterwards one of twelve feet and a half, with which Brad- ley discovered the aberration of the fixed stars. The reflecting telescope of Gregory and Newton was greatly improved by Hadley, who presented a very powerful instrument of that kind to the Royal Society in 1719. He invented also the reflecting quadrant or sector, now called by his name, presented to the society in 1731, and now universally used at sea. It appears, however, that an instrument similar to this in its princi-

pies, had been invented by Newton ; and, a description, with a drawing of it, was given by him to Halley, when he was preparing for his voyage in 1701. to discover the variation of the needle : it has also

been asserted, that Godfrey of Philadelphia, in America, made the same dis- covery, and the first instrument of this kind.

57. About the middle of this century, the con- structing and dividing of large astronomical instruments were carried to great perfection by Bird , and reflecting telescopes were not less im- proved by Short, who first executed the divided object glass micrometer, which had been pro- posed and described by Louville and others. Dollond also improved refracting telescopes, by means of his achromatic glasses: and the dis- coveries of Herschel are owing to the amazing powers of reflectors of his own construction. Thus, the astronomical improvements in the pre- sent century have been chiefly owing to the inventions of, and improvements in, the instru- ments, and to the establishment of regular obser- vatories in England, France, and other parts of Europe.

58. Roemer, a celebrated Danish astronomer, first made use of a meridional telescope ; and, by observing the eclipses of Jupiter's satellites, first discovered the progressive motion of light, con- cerning which he read a dissertation before the Academy of Sciences at Paris, in 1675. Flam- steed, appointed the first astronomer royal at Greenwich, in 1675, observed for forty- four years, and gave a catalogue of 3000 stars with their places, to the year 1689; also new solar tables, and a theory of the moon according to Horrox ; likewise, in Sir Jonas Moore's System of Mathematics, he gave a curious tract on the sphere, showing how to construct, geometrically, eclipses both of the sun and moon, as well as oc- cultations of the fixed stars by the moon. On his observations were founded both Hailey's tables, and Newton's theory of the moon. Cassini, thefirst French astronomer royal, made many observations on the sun, moon, planets, and comets, greatly im- proved the elements of their motions, erected the gnomon, and drew the celebrated meridian line in the church of Petronia at Bologna.

59. Flamsteed was succeeded, in 1719, as astronomer royal at Greenwich, by Dr. Halley, who had been sent at the early age of twenty- one, to the island of St. Helena, to observe the southern stars and make a catalogue of them, which was published in 1679. In 1705 he published his Synopsis Astronomiae Cometicac, in which he ventured to predict the return of a comet in 1758 or 1759. He first discovered the acceleration of the moon, and gave a very inge- nious method for finding her parallax, by three observed phases of a solar eclipse ; published in the Philosophical Transactions many learnerf papers, and amongst them, some concerning the use that might be made of the next transit of Venus, in determining the distance of the

sun from the earth; composed tables of the sun, moon, and all the planets, which are still in great repute; and recommended the method of determining the longitude, by the moon's dis- tances from the sun, and certain fixed stars; u method which was first proposed by Warner,

and which has since been carried into execu tion.

60. A dispute concerning the figure of the earth took place about this time. Newton had determined, from a consideration of the laws of gravity, and the diurnal motion of the earth, that the figure of it was an oblate spheroid; but Cas- sini, from the measures of Picart, supposed it to be an oblong spheroid. To settle this dispute it was resolved, under Louis XV. to measure two degrees of the meridian; one near the equa- tor, and the other as near the pole as possible. For this purpose, the Royal Academy of Sciences sent to Lapland, Maupertuis, Clairault, Camus, and Lemonnier : who were accompanied by Outhier, and Celsns, professor of anatomy at Upsal. On the southern expedition were sent Godin, Condamine, and Bouguer, to whom the king of Spain joined George Juan and Antonio de Ulloa. These set out in 1735, and returned at different times 1744, 1745, and 1746; but the former party who set out only in 1736, returned the year following; having both fulfilled their commissions. Picart's measure was revised by Cassini and De la Caille, which, after his errors were corrected, was found to agree very well with the other two ; and the result of the whole served to confirm i\e determination of the figure before laid down by Newton. On the southern expedition, the attraction of the great mountains of Peru was found to have a sensible effect on the pluir.b-line < >f one of their largest instruments, deflecting it seven or eight seconds from the true perpendicular.

61. In 1742 Dr. Bradley succeeded, on the death of Dr. Ilalley, as astronomer royal at Greenwich. The accuracy of his observations enabled him to detect the smaller inequalities in the motions of the planets and fixed stars. The consequence of his accuracy was, the discovery of the aberration of light, the nutation of the earth's axis, and a much greater decree of perfection in lunar tables. He observed the places, and com- puted the elements of the comets which appeared in the years 1723, 1736, 1713, and 1757; made new and more accurate tallies of the motions of .1 upiter's satellites, and, from amultitude of obser- vations of the luminaries, constructed a table of refractions; which has ever since been in very general estimation for

its accuracy, though it is now geneially admitted that it gives the refrac- tions too small. lie also, with a very large transit instrument, and a new mural quadrant of eight feet radius, constructed by Bird in 1750, made an immense number of observations for settling the places of all the stars in the British catalogue, together \ith nearly 1 .“‘00 places of the moon, the greater part of which he com- pared with Majcr’s tal.h-s. Bradley died in 1762.

62. Astronomers elsewhere wen? equally assi- duous in their <-i;dra\ onis to promote this s< ience. The theory of the moon was parti- (iilaily considered \-.\- (.'hiiranlt, D'Alembert, killer, Mayer, NnipMin, and \Yalmsley, and especially (lairanlt, Kuler, and Mayer, who computed complete sets of lunar tables: those of the la

of the Nautical !>phemeris, published by the Board of Longitude. The most accurate tables of the satellites of Jupiter were composed from observations by \V’argentin,an excellent Swedish astronomer. But these have again been super- seded by the more recent ones of Delambre. There is much room for improvement, however, in our knowledge of the elements of Jupiter’s satellites, even with respect to the first satellites, the predicted and actual times of immersion or emersion sometimes differ to the extent of two minutes.

63. Among the many French astronomers who contributed to the advancement of the science, it was particularly indebted to De la Caille for an excellent set of solar tables. He, in 1750, went to the Cape of Good Hope to make obser- vations in concert with the most celebrated astro- nomers in Europe, for determining the parallax of Mars and the moon, and thence that of the sun, which it was concluded did not much exceed ten seconds. Here he re-examined and adjusted, with great accuracy, the places of stars about the southern pole; and also measured a degree of the meridian. In Italy the science was assidu- ously cultivated by Bianchini, Boscovich, Frisi, Manfredi, Zanotti, and many others ; in Sweden, by Wargentin, already mentioned, Blingenstern, Mallet, and Planman; and in Germany by Euler, Mayer, Lambert, Grischow, and others.

64. In 1760 all the learned societies in Eu- rope made preparations for observing the transit of Venus over the sun, which had been predicted by Halley more than eighty years before, with the use that might be made of it in determining the sun’s parallax, and the distances of the pla- nets from the sun. The same exertions were re- peated, to observe the transit in 1769, by sending observers to different parts of the world ; and from the whole, Short computed that the sun’s parallax was nearly 8f seconds, and consequently the distance of the sun from

the earth about 24,114 of the earth's diameters, or ninety-six millions of miles. Bradley was succeeded, in 1762, in his office of astronomer royal, by Bliss, Savilian professor of'astronomy ; who, being in a declining state of health, did not long enjoy it.

65. In 1765 Bliss was succeeded by Nevil Maskelyne, who, in January 1761, was sent by the Royal Society, at a very early age, to the island of St. Helena, to observe the transit of Venus over the sun, and the parallax of the star Sirius. The first of these objects partly failed, by clouds preventing the sight of the se- cond internal contact ; and the second also, owing to Short having suspended the plumb-line by a loop from the neck of the central pin. However, he indemnified himself by many other valuable observations : thus, he observed art St. Helena, the tides ; the horary parallaxes of the moon ; and the going of a clock, to find by comparison with its previous going, which had been observed in England, the difference of gravity at the two places ; also in going out and returning, he prac- tised the method of finding the longitude by the lunar distances taken by Hartley's quadrant, making out rules for the use of seamen, and teaching the method to the officers on board the ship. This method was explained in the Philo-

sophical Transaetions, for 1762, and more fully afterwards in the British Mariner's Guide, pub- lished in 1763. In September 1763, he sailed for the island of Barbadoes, to settle the longi- tude of the place, to examine Harrison's watch, and to try Irwin's marine chair. While at Bar- badoes, he made many other observations, and amongst them, many relating to the moon's horary parallaxes, not yet published.

66. Maskelyne returning to England in the end of 1764, recommended to the board of Lon- gitude the lunar method of finding the longitude; and proposed to it the project of a nautical alma- nack, to be calculated and published to facilitate that method. This the board agreed to, and the first volume was published for 1767, and has con- tinued ever since to the great benefit of naviga- tion.

67. Tn consequence of a proposal, made by this astronomer to the Royal Society, the project was formed of measuring accurately the effect of some mountain on the plumb-line, in deflecting it from the perpendicular; and Schehallien, in Scotland, having been found the most convenient in this island for the purpose, he went into Scot- land

to conduct the business ; by this experi- ment he showed that the sum of the deflections on the two opposite sides was about 11□□□□ of a degree ; and proved to the satisfaction of the whole world, the universal attraction of matter. From the data resulting from these measures, Dr. Hutton computed the mean density of the whole matter in the earth, to be about 4□□ times that of common water.

68. The discoveries of Dr. HerscheJ form a new era in astronomy. In 1781, he began wnh observations on the periodical star in Collo Ceti, and a new method of measuring the lunar moun- tains, none of which he made more than half a mile in height ; and having constructed teles- copes far more powerful than any former ones, proceeded to other observations; such as, on the rotation of the planets round their axes ; on the parallax of the fixed stars ; catalogues of double, triple, &c. stars ; on the proper motion of the sun and solar system ; on the remarkable ap- pearances of the polar regions of the planet Mars; &c. Above all his discoveries of a new primary planet, on the 13th of March, 1781, called by him the Georgian Planet, but named the Hers- schel, and sometimes Uranus, by foreign astro- nomers, and of its six satellites, discovered since that time, has greatly enlarged the bounds of the solar system, this new planet being more than twice as far from the sun as the planet Saturn.

69. M. Piazzi, astronomer royal at Palermo, discovered on January 1st, 1801, another planet moving in an orbit between Mars and Jupiter. This planet has been named Ceres. Another was discovered on March 28th, 1802, by Dr. Olbeis of Bremen, and named Pallas; a third was discovered and named Juno by Mr. Harding of Lihenthal ; and a fourth by Dr. Oliers, and named Vesta, on March 29th, 1807. These planets are all very small, and all so nearly at the same distance from the sun, and moving in or- bits differing so little either in eccentricity or declination, that thev have by some been con-

jectured to be fragments of a larger planet, which from some explosion had been burst, and its parts scattered abroad in space.

It is probable that as astronomical instru- ments become more improved, further discoveries of the ‘same kind will be made, and that the boundaries of the solar system may be enlarged by the discerning of planets which circulate round the sun even beyond the orbit of the Georgian planet.

71 . Dr. Maskelyne was succeeded at the Green- wich observatory in 1811, by J. Pond, esq. the pre- sent astronomer royal, under whose managment the business of this important institution has been kept in

full activity. The number of instruments has been greatly increased. The use of the mu- ral quadrant has been abandoned for that of the circle, two of which, one by Troughton, and one by T. Jones, are in constant use, and give results which accord with each other in a manner alto- gether surprising. The most important discove- ries may be hoped for from the skill and activity with which the splendid instruments at Green- wich are managed. All indeed that appears wanting in that institution, is a telescope of the first class to follow up the discoveries in siderial astronomy, which conferred such splendor on the name of Herschel. But we are glad to perceive that this department of the science is likely to be carried to a degree of perfection which few would have hoped for, by Mr. Herschel, junior, the worthy and able son of the great astronomer, and his friend Mr. South, whose recent publication on the motion of double stars does them the highest credit.

72. On the continent of Europe, the greatest ardor is at present evinced in the cultivation of this science. The labors of Schumercher at Al- tona, are unintermitted and most valuable. He may be considered at present as a common bond among astronomical men. Greass at Gottingen, Littrow, at Venice ; Bressel, at Konigsberg ; Struve, at Dorpat ; Zach, atGenoa; and a host of other individuals distinguished for their la- bors and their zeal, have devoted themselves to astronomy .

73. In our own country, it would be injustice to pass over the names of Woodhouse and Brink- ley, whose eminence in this science is of the most distinguished kind.

74. Another striking feature of the present day is the formation of ‘ The Astronomical So- ciety of London,’ an institution whose only object is the cultivation of astronomical science. This society includes among its members almost every individual known to the world as distin- guished for astronomical knowledge. The me- moirs of the society, of which the third part is just ready for publication, are very valuable and interesting.

75. The university of Cambridge has recently evinced its sense of the importance of a practical knowledge of tins science, by the erection of an observatory on the most splendid scale ; and the English government has also shown by the recent order for the establishment of an observatory at the Cape of Good Hope, that the importance which it has always attached to the cultivation of this science, has suffered no abatement.

76. Historical accounts and lists of the prin- cipal authors and writings on this science, are contained in Weidler's and Bailly's History of Astronomy. Adam, \ ossius, Bayle, Chauffepie, Niceron, Perraut, the chronological table of Kic- cioli, and that of Sherburn, at the end of his edition of Manilius ; and the first volume of De

i Lande's astronomy, may also be consulted. Cbe more modern and popular books on as- tronomy are very numerous and well known ; as those of Ferguson, Long, Emerson, Vince, De la Lande, Leadbetter, Brent, Keil, Whiston, Wing, Street, Bonnycastle,Gregory, Brinkley, &c. but the recent treatise on astronomy by Wood- house, is by far the most complete that has ap- peared in the English language.

PART I.

OF THE APPEARANCES OF THE CE- LESTIAL BODIES.

SF.CT. I.- ××× OF THE CELESTIAL BODIES, AS SEEN

BY THE NAKED EYE.

77. The most obvious celestial phenomenon is the daily rising of the sun in the east, and his setting in the west ; next to which is that of the moon and stars appearing, and keeping the same westerly course. These cannot be long taken notice of before we must perceive that neither the sun nor moon always rise exactly in the same point of the heavens. If we observe the sun, from the beginning of March, we find that he seems tu rise almost every day sensibly more to the northward, than he did the day before, to continue longer above the horizon, and to be more elevated at mid-day, till towards the end of June, when he is observed to move backward in the same manner : this retrograde motion continues beyond the middle of December, when he begins again to move forwards, and so on.

78. When the new moon (as she is called, at her early period,) first becomes visible, she ap- pears in the western part of the heavens, at no great distance from the sun. Every night she increases in size, and removes to a greater dis- tance from the sun ; till at last she appears in the eastern part of the horizon, just at the time the sun disappears in the western. After this she gradually moves farther and farther east-

ward, rising every night later and later, till at last she seems to approach the sun as nearly in the east as she did in the west, and rises only a little before him in the morning, as in the first part of her course she set in the west not long after him. All these different appearances are completed in the space of a month ; after which they begin in the same order as before.

79. Several of tine stars neither rise in the east, nor set in the west, but seem to turn round an immovable point, near which is placed a single star called the pole, or pole star. This point is more or less elevated according to the different pans of the earth from which we take our view. The inhabitants of Lapland, for in- stance, see it nmra more elevated above the horizon than we do ; we see it more elevated than the inhabitants of France and Spain ; and they, again, sec it more elevated than the ###nhabitants of Harbary. I?) continually tra-

velling south, this star at last seems depressed in the horizon, and another point appears di- rectly opposite to it, round which the stars in the southern part of the horizon seem to turn. In this part of the heavens, however, there is no star so near the pole as there is in the northern part : nor is the number of stars in the southern part of the heavens so great as in the northern part.

80. Supposing us still to travel southward, the north pole entirely disappears, and the whole atmosphere appears to turn round a single point in the south, as the northern hemisphere appears to us to turn round the pole star. The general appearance of the heavens, therefore, is that of a vast concave sphere, turning round two points fixed in the north and south parts of it, once in twenty-four hours.

81. The majority of the stars keep their places with respect to one another ; that is, if we ob- serve two stars having a certain apparent dis- tance from each other one night, they seem to have the same every succeeding night. But all the stars in the heavens do not appear to be of this fixed kind: some of them change their places, with regard to the fixed stars, and to one another. Of these ten are at present known. They are distinguished by the appellation of planets, from irXavaoj, to wander, and are called by the names of Mercury, Venus, Mars, Ceres, Pallas, Juno, Vesta, Jupiter, Saturn, and Hers- chel, Uranus, or the Georgium Sidus. The fixed stars are likewise distinguished from the planets by continually exhibiting that appearance which is called the scintillation or twinkling of the stars.

82. Mercury is a small star which emits a very bright white light ; but, by always keeping near the sun, he is seldom to be seen ; and when he

does make his appearance, his motion toward the sun is so swift, that he can only be discerned for a short time, a little after sun-set, and again a little before sun-rise.

83. Venus the most beautiful star in the hea- vens, known by the names of the morning and evening star, keeps near the sun, though at almost double the distance of Mercury. She is never seen in the eastern quarter of the heavens when the sun is in the western ; but seems to attend him in the evening, or to give notice of his approach in the morning.

84. Mars is of a red fiery color, and gives a much duller light than Venus, though some- times he equals her in size. He is not subject to the same limitation in his motions as Mercury or Venus; but appears sometimes very near the sun, and sometimes at a great distance from him ; sometimes rising when the sun sets, or setting when he rises. Of this planet it is remarkable, that when he approaches any of the fixed stars, they change their color, grow dim, and often be- come totally invisible, though at some little distance from the body of the planet : but Herschel thinks this has been exaggerated by former astronomers.

85. Jupiter and Saturn often appear at great distances from the sun. The former shines with a bright white light, and the latter with a pale faint one ; and the motion of Saturn among the

fixed stars is so slow, that, unless carefully ob- served, he will not be thought to move at all. Herschel's motion is still slower, and he is sel- dom to be seen without a telescope.

86. The apparent magnitudes of these bodies are very different at different times. Every per- son must have observed that Venus is not always equally big; and this apparent difference of magnitude is so remarkable, that she appears no less than thirty-two times larger at some seasons than at others. This increase of magnitude is likewise very remarkable in Mars and Jupiter, but less so in Saturn, Mercury and Herschel. These planets by no means appear to us to move regularly in the heavens, but, on the contrary, sometimes go forward, sometimes backward, and sometimes seem to be stationary.

87. There are other moving bodies, besides the planets, which appear at uncertain intervals, and with a very different aspect. These are very numerous, and upwards of 500 are recorded as having visited our

system. They are called Comets, from ico/ijjrijc, hairy, having a long tail, somewhat resembling the appearance of hair. This, however, is not always the case ; for some comets have appeared as round as planets : but in general they have a luminous matter diffused around them, or projecting out from them, which to appearance very much resembles the Aurora Borealis. They appear to come in a direct line towards the sun, as if they were going to fall into his body ; and after having disappeared for some time, in consequence of their proximity to that luminary, fly off again on the other side as fast as they came, projecting a tail much greater and brighter in their recess ; but, getting daily at a farther distance from us in the heavens, they continually lose some of their splendor, and ut last totally disappear.

88. The apparent magnitude of comets is very different ; sometimes they appear only of the bigness of the fixed stars ; at other times they equal the diameter of Venus, and sometimes even of the sun or moon. In 1652 Hevelius ob- served a comet which seemed not inferior to the moon in size, though it was not so bright, but appeared with a pale and dim light. These bodies also sometimes lose their splendor sud- denly, while their apparent bulk remains un- altered. With respect to their apparent motions, they have all the inequalities of the planets; sometimes seeming to go forwards, sometimes backwards, and sometimes to be stationary.

89. The fixed stars are liable to changes : se- veral observed by the ancients are now no more to be seen; and. new ones have appeared which ###were unknown to the ancients. Some of them have also disappeared for some time, and again become visible. At times some have been ob- served to distinguish themselves by superlative lustre ; but afterwards decreasing, to vanish by degrees, and to be no more seen. One of these ###tars being first seen and observed by Hippar- chus, set him upon composing a catalogue of the fixed stars, that by it posterity might learn whether any of the stars perish, and others are produced afresh. After several ages Tycho Brahe observed another new star, which put him on the same design. Of these changes accounts have

been given by Halley, Montanere, and Pigot, in the Philosophical Transactions. As a specimen of these phenomena we shall here insert an ex- tract from the former.

90. ‘ The first new star in the chair of Cassio- peia was not seen by Cornelius Gemma on the 8th of November, 1572, who says, he that night considered that part of the heavens in a very se- rene sky, and saw it not : but that the next night November 9, it appeared with a

splendor sur- passing all the fixed stars, and scarcely less bright than Venus. This was not seen by Tycho Brahe before the llth of the same month: but from thence he assures us that it gradually de- creased and died away, so that in March 1574, after sixteen months, it was no longer visible ; and at this day no signs of it remain. The place, thereof, in the sphere of fixed stars, by the ac- curate observations of Tycho, was 0* 9►► 17′ a 1 m►► * “, with 53►► 45′ N. lat.

91. ‘ Such another star was seen and observed by the scholars of Kepler, to begin to appear Sept. 30. O. S. anno 1604, and which was not to be seen the day before. It broke out at once with a lustre surpassing that of Jupiter ; and like the former died away gradually, and in much about the same time disappeared to- tally, there remaining no footsteps thereof in Ja- nuary 160g. This was near the ecliptic, follow- ing the right leg of Serpentarius ; and by the ob- servations of Kepler and others, was in 7′ 20►► 00′ a lraa *

92. ‘ But between them, viz. in 1596, we have the first account of the wonderful star in Collo Ceti, seen by David Fabricius on the 3d of August, as bright as a star of the third magni- tude, which has been since found to appear and disappear periodically; its period being pre- cisely seven revolutions in six years, though it returns not always with the same lustre. Nor is it ever totally extinguished, but may at all times be seen with a six feet tube. This was singular in its kind till that in Collo Cygni was disco- covered. It precedes the first star of Aries 1►► 40’, with 15►► 57′ south lat.

93. ‘ Another new star was first discovered by William Jansonius in the year 1600, in pectore, or rather in eductione, Colli Cygni, which ex- ceeded not the third magnitude. This having continued some years became at length so small as to be thought by some to have disappeared entirely; but in the’years 1657, 1658, and 1659, it again arose to the third magnitude; though soon after it decayed by degrees to the fifth or sixth magnitude ; and at this day is to be seen as such in 9′ 18►► 38′ a”” * ,with 55►► 29′ north lat.

94. ‘ A fifth new star was first seen by Heve- lius in 1600, on July 15, O. S. as a star of the third magnitude, but by the beginning of Octo- ber was scarce to be perceived by the naked eye. In April following it was again as bright as be- fore, or rather greater than of the third magni- tude, yet wholly disappeared about the middle of August. The next year, in March 1672, it was seen again, but not exceeding the sixth magnitude : since when it has been no farther visible, though we have frequently sought for its

AST II O N O M Y.

e.urn ; its place is 9* 3″ 17′

(.)5. ‘ The sixth and last is that discovered by “Mr. G. Kirch in the year 1686, and its period determined to be of 404 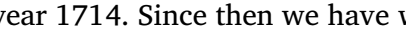 days; and though it rarely exceeds the fifth magnitude, yet it is very regular in its returns, as we found in the year 1714. Since then we have watched, as the absence of the moon and clearness of the weather would permit, to catch the first beginning of its appearance in a six feet tube, that, bearing a very great aperture, discovers most minute stars. And on June 15, last, it was first perceived like one of the very least telescopical stars ; but in the rest of that month and July it gradually in- creased so as to become in August visible to the Tiaked eye, and so continued all the month of September. After that it again died away by decrees, and on the 8th of December, at night, was scarcely discernible by the tube ; and, as near as could be guessed, equal to what it was at its first appearance on June 15th; so that this year it has been seen in all nearly six months, wnich is but little less than half its period; and the middle, and consequently the greatest bright- ness, falls about the 10th of September.’

96. The galaxy or milky way is a remarkable appearance in the heavens, being a broad ring of a whitish color surrounding the whole celestial concave, whose light is now known to proceed from vast clusters of stars, discoverable only by the telescope. Mr. Brydone, in his journey to the top of Mount /Etna, found this phenomenon to make a glorious appearance, ‘ like a pure flame (as he expresses it) that shot across the heavens.’

97. The only other appearances which are very observable by the unassisted eye, are those obscurations of the sun and moon commonly called eclipses. These are too well known, and attract the attention too much, to need any par- ticular description. Wo have, however, accounts MTV well authenticated, of obscurations of the 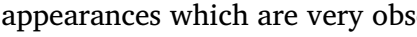 -un continuing’ for a much longer time than a common eclipse possibly can do, and likewise of the darkness being much greater than usual on sucli occasions.

SECT. !I. ()i inr Cri I>I!AI. BODIES AS SEEN i H KOI en Tr.i i ‘ 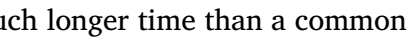 oi’r.s.

(>8. Although the sun, to the naked eye, is extremely l>r;;_rht and

splendid, he is frequently olxerved, even through a telescope of but very mall powers, to have dark spots on his surface, uhich are said to have been first discovered in K ! I ; and tie. honor of the discovery is disputed i twixt Galileo and Sclieiner, a German Jesuit at InuoNtudt. l! ut whatever merit Scheiner n;i_ht have in the priority of the discovery, it is (i. ‘tain that Galileo far exceeded him in accu- ‘.” y : though Schemer’s work has considerable merit, as containing observations selected from al eve :KH > 0 made hy himself.

‘.”.’. It appears from the papers of Harriot, the j-.nulisli ali_;vlira; > t, which were found in 17S4, at the scat of the earl of Kgremont in Sussex, that he made a great number of obser- vation- uron the solar snots much about the

.same time ; and Dr. Zach, astronomer to the duke of Saxe Gotha, in an account of Harriot’s papers, published in 1788, says that there is the greatest probability of Harriot being the first dis- coverer of these spots, even before either Galileo or Scheiner. Galileo’s first produced observations are only for June 2, 1612, and those of Scheiner of the month of October in the same year, whereas Harriot’s, as appears from his MSS, are of December 8, 1610.

100. There is great variety in the magnitudes of the solar spots ; the difference is chiefly in su- perficial extent of length and breadth ; their depth or thickness is very small : some have been so large as by computation to be capable of covering the whole surface of the earth, or even five times its surface. The diameter of a spot, when near the middle of the disk, is measured by comparing the time it takes in passing over a cross hair in a telescope, with the time wherein the whole disk of the sun passes over the same hair. It may also be measured by the micrometer; and thus we may judge how many times the diameter of the spot is con- tained in the diameter of the sun.

101. Spots are subject to increase and dimi- nution of magnitude, and seldom continue long in the same state. They are of various shapes ; most of them having a deep black nucleus, sur- rounded by a dusky cloud, whereof the inner parts near the black are a little brighter than the outskirts. They change their shapes, something in the manner that our clouds do, though not often so suddenly; thus what is of a certain figure to day, will to-morrow, or perhaps in a few hours, be of a different one ; what is now but one spot will in a little time be broken into two or three ; and sometimes two or three spots will coalesce, and be united into one. The number of spots on the sun is very uncertain ; some- times there are a great many, sometimes very few, and sometimes none at all.

102. Scheiner made observations on the sun from 1611 to 1629; and says he never found his disk quite free from spots, excepting a few days in December, 1624. At other times he fre- quently saw twenty, thirty, and in the year 1625, he was able to count fifty spots on the sun at a time. In an interval afterwards of twenty years, from 1650 to 1670, scarcely any spots were to be seen, and since that time some years have furnished a great number of spots, and others none at all ; but since the beginning of the last century, not a year has passed wherein some were not seen.

103. It is evident from these various appear- ances that the spots are not endowed with any permanency, nor at all regular in their shape, magnitude, number, or time of appearance or continuance. Hevelius observed one that arose and vanished in sixteen or seventeen hours ; and no one has been observed to continue longer than seventy days : those spots that are formed gradually are gradually dissolved, while those that arise suddenly are for the most part sud- denly dissolved. When a spot disappears, that part where it was, generally becomes brighter than the rest of the sun, and continues so for se- veral days : on the other hand, those bright parts

called faculae (as the others are called maculre) sometimes turn to spots.

104. The solar spots appear to have a motion across the sun's disk. Every spot, if it conti- nues long enough without being dissolved, ap- pears to enter the sun's disk on tho east side, to go from thence with the velocity continually in- creasing till it has gone half way, and then to move slower and slower till it goes off at the west side ; after which it disappears for about the saire space of time that it spent in crossing the disk, and then enters upon the east side again, nearly in the same place, and crosses it in the same track, and with the same unequal motion as before. The motion of the spots is in the order of the signs (the same way that all mo- tions in the solar system, those of the comets alone excepted, are performed); and therefore, as the earth revolves round the sun the same way with the solar spots, one of these will ap- pear to remain longer on the disk than it would otherwise do if the earth remained at rest.

105. The face of the sun, when clear of spots, seen by the naked eye through a smoked or co- lored glass, or through a thin cloud, or the va- pours near the horizon, appears all over equally luminous ; but when viewed through the teles- cope, the glasses being smoked or

colored, the middle of the disk appears brighter than the out- skirts, because the light is darted more directly towards us from the middle than from any other part, and the faculae appear more distinctly near the sides, as being on a darker ground than in the middle.

106. All the phenomena of the solar spots, as delivered by Scheiner and Hevelius, may be sum- med up in the following particulars : 1. Every spot which has a nucleus, or considerably dark part, has also an umbra, or fainter shade, sur- rounding it. 2. The boundary betwixt the nu- cleus and umbra is always distinct and well de- fined. 3. The increase of a spot is gradual, the breadth of the nucleus and umbra dilating at the same time. 4. In like manner, the decrease of a spot is gradual; the breadth of the nucleus and umbra contracting at the same time. 5. The exterior boundary of the umbra never con- sists of sharp angles ; but is always curvilinear, how irregular soever the outline of the nucleus may be. 6. The nucleus of a spot, whilst on the decrease, often changes its figure by the umbra encroaching irregularly upon it, insomuch that in a small space of time new encroach- ments are discernible, whereby the boundary betwixt the nucleus and umbra is perpetually varying. 7. It often happens, by these encroach- ments, that the nucleus of a spot is divided into two or more nuclei. 8. The nuclei of the spots vanish sooner than the umbrae. 9. Small umbrae are often seen without nuclei. 10. An umbra of any considerable size is seldom seen without a nucleus in the middle of it. 11. When a spot which consists of a nucleus and umbra is about to disappear, if it is not succeeded by a facula, or spot brighter than the rest of the disk, the place where it was is soon after not distinguish- able from the rest.

107. Dr. Wilson, in the Phil. Trans, vol. Ixiv.

mentions the following appearances: 1. When the spot is about to disappear on the western ed?e of the sun'j limb, the eastern part of the umbra first contracts, then vanishes, the nucleus and western part of the umbra remaining; then the nucleus gradually contracts and vanishes, while the west- ern part of the umbra remains. At last this disap- pears also; and if the spot remains long enough to become again visible, the eastern part of the um- bra first becomes visible, then the nucleus; and when the spot approaches the middle of the disk, the nucleus appears environed by the umbra on all sides, as already mentioned. 2. When two spots lie very near to one another, the umbra is deficient on that side which lies next the other spot ; and this will be the case, though a larger spot should be contiguous to one much smaller ; the umbra of the large spot will be totally want- ing on that side next the small one. If there are little spots on each side of the large one, the um- bra does not totally vanish ; but appears flattened

or pressed in towards the nucleus on each side. When the little spots disappear, the umbra of the large one extends itself as usual. This circum- stance, he observes, may sometimes prevent the disappearance of the umbra in the manner above mentioned ; so that the western umbra may disap- pear before the nucleus, if a small spot happens to break out on that side.

108. Mr. Wollaston observes, in the same volume, p. 337, that the appearances mentioned by Wilson are not constant ; and as much depends on the accuracy of observers and the situation of the spots on the sun's orb, it is probable that the observation will continue to differ in minute par- ticulars, till a consistent theory is formed, by which the cause of these phenomena may be ex- plained. The spots are not confined to one part of the sun's disk ; though they are generally observed about his polar regions. The paths' they describe in their course over the disk are exceedingly different ; sometimes being straight lines, sometimes curves, sometimes descending from the northern to the southern parts of the disk, sometimes ascending from the southern to the northern, &c. These appearances are in- creased by the inclination of the solar axis to the plane of the earth's orbit ; from whence it arises, that the part described by a spot which is on a circle parallel to the solar equator sometimes ap- pears oval, and at others a straight line, accord- ing to the position of the earth with respect to the sun. Besides these spots, there are others which sometimes appear very round and black, travelling over the disk of the sun in a few hours, totally unlike the others, and proceeding from an interposition of the planets Mercury and Ve- nus between the earth and the sun. Excepting the two kinds of spots above-mentioned, how- ever, no kind of object is discoverable on the surface of the sun, but he appears like an im- mense ocean of light.

109. The appearance of the Moon is very different. Many darkish spots appear in her to the naked eye ; and through a telescope their number is prodigiously increased ; she also ap- pears very plainly to be more protuberant in the middle than at the edges, or to have the figure of

a globe, and not a flat circle. When the moon is gibbous or horned, the one side appears very ragged and uneven, but the other pretty well denned and circular. The spots in the moon al- ways keep their places exactly ; never vanishing, or going from one side to the other, as those of the sun do. We sometimes see more or less of the uorthern or

southern, the eastern or west- ern part of the disk or face ; which is owing to what is called her libration. Plate IV. fig. 1, gives a representation of the full moon in her mean libration, with the principal spots accord- ing to Riccioli, Cassini, and Mayer.

110. Mercury, when looked at through tele- scopes magnifying about 200 or 300 times, ap- pears equally luminous ‘ throughout his whole surface, without the least dark spot. He appears to have the same phases with the moon, being sometimes horned, sometimes gibbous, and some- times shining almost with a round face, though not entirely full, because his enlightened side is never turned directly towards us.

111. Dr. Herschel has frequently examined Mercury with telescopes of highly magnifying powers ; but he always appeared equally bright on every part of his disk, without any dark spot or ragged edge. But Schroeter, who has so much distinguished himself in this department of astronomy, affirms that he has not only seen spots, but even mountains in Mercury ; and that he has succeeded in measuring the altitude of t\vo of them. lie makes the elevation of the higher of these about ten English miles arid three-quarters, or about thrice the height of the highest mountain on our earth : but where so small an error in the admeasure- ment of the angle on which the computation is founded would entail so great a mistake in the result, we can only consider this determination of the height of the mountains of Mercury, as a strong evidence that considerable elevations do exist on that planet. By examining the variation on the appearance of Mercury’s horns from day to day, Schroeter found the period of his diurnal rotation to be about twenty-four days, five hours, and twenty-eight minutes. Considerable differ- ence of opinion exists respecting the atmosphere of this planet : if it possesses any, it certainly at the centre subtends a very small angle.

112. Venus, when viewed through a telescope, is rarely seen to shine with a full face, but has phases and changes like those of the moon, in- creasing, decreasing-, being horned, gibbous, &c. Her illuminated part is constantly turned towards the sun ; being directed towards the east when she is a morning star, and towards the west when an evening star. Her different phases were first dis- covered by Galileo. Dr. Herschel has published, in the Phil. Trans, for 1793, a long series of observations on this planet, from which he con- < Uides, 1 that the planet revolves about its axis, out that the period, and the position of the axis, un> uncertain; 2. that the planet’s atmosphere is very considerable ; 3. that there are probably hills and inequalities upon its surface, though he has not beer, able to see much of them, owing, per- iiaps, to the density of” its atmosphere ; and, 4. that this planet is

somewhat larger than the earth,

instead of being less, as former astronomers have imagined. Schroeter, also, in the Phil. Trans for 1792, published the result of a series of observations on this planet, which were begun in 1780. He infers from his observations that Venus has an atmosphere of great density and height, and that many of her mountains are five or six times as high as those of the earth.

113. Much larger and more remarkable spots have been perceived on the disk of Mars than on that of any other primary planet. By very accu- rate observations, Herschel has determined the proportion between the polar and equatorial diameters, and the length of the day in this planet. He has also given some good conjectures on its seasons and its atmosphere : the latter it is now ascertained to have; but though consider- able, the atmosphere is not of so great an extent as the conjectures on former observations led astronomers to imagine. By very accurate obser- vations, Dr. Herschel has determined that the pro- portion of his polar and equinoctial axis is as 1272 to 1355, or nearly as 15 to 16 ; that its time of rotation on its axis is 24 h. 22 m. and that the inclination of the axis of Mars to the orbit of the earth is 59►►42'. From the great obliquity of this planet's axis of rotation, the polar regions of it are alternately presented towards the earth, and a much better opportunity is thereby offered for examining its surface than that of any other planet. This, however, is in some degree coun- terbalanced by the very dense atmosphere with which this planet is surrounded. It is not a little remarkable, that when either pole emerges into the light of the sun, it exhibits a very striking brilliancy, something like what would arise from its being covered with snow. The analogy between this phenomenon and what annually takes place on our own globe, is too obvious to escape notice.

114. The planet Ceres is of a red color, and appears about the size of a star of the eighth mag- nitude. It is surrounded by a very dense and extensive atmosphere, in which very great and sudden changes are observed to take place. The estimates that have been made of this planet's diameter are a striking instance of the difficulty of measuring the apparent diameters of such small objects. Herschel makes its diameter about 163 miles; and Schroeter about 1624, or nearly ten times as much. Its periodical revo- lution round the sun is accomplished in about four years, seven months, and ten days.

115. Pallas is nearly of the same size as Ceres, but not quite of so red an appearance. Its period of revolution has been computed to be about four years, ten months, and eleven days ; and its dia- meter has been

estimated at from eighty to up- w ards of 2000 miles . 1 1 has also an atmosphere, bu t of less extent than that of Ceres ; but it differs from that and all other planets in the great incli- nation of its orbit. The planets generally circu- late in planes that do not deviate much from the plane of the ecliptic ; but the orbit of Pallas is inclined about thirty-five degrees, nearly five times as much as that of any other planet.

116. Juno is of a reddish color, and is sur- rounded by an atmosphere of considerable den-

sity. Its diameter is allowed by all observers to be less than that of either Ceres or Pallas. It differs from all other planets in the eccentricity of its orbit ; being, when at its greatest distance from the sun, at double the least distance. The period of its revolution is about four years and 128 days.

117. Vesta appears like a star of the sixth magnitude, and may on a clear night be some- times seen with the naked eye. Its light is whiter and more intense than any of the other three small planets. Its apparent diameter has been estimated at about half that of the fourth satellite of Saturn ; and yet it is very remarkable that its light is so intense, that Schroeter saw it several times with his naked eye, while it requires a telescope of considerable power to see the fourth or indeed any satellite of Saturn. This planet revolves in about three years, sixty-six days, and four hours. The orbits of all these four little planets (which from their smallness have been called Asteroids) intersect each other in various places ; and the points of intersection are conti- nually varying from the changes in the places of their aphelia.

118. Jupiter has the same general appear- ance with Mars, only that the belts on his surface are much larger and more permanent. Their number is very variable, as sometimes only one, and at other times no fewer than eight, may be perceived. They are generally parallel to one another, but not always so ; and their breadth is likewise variable, one belt having been observed to grow narrow, while another in its neighbourhood has increased in breadth, as if the one had flowed into the other. The time of their continuance is very uncertain, sometimes remaining unchanged for three months ; at others, new belts have been formed in an hour or two. In some of these belts large black

spots have appeared, which moved swiftly over the disk from east to west, and re- turned in a short time to the same place ; from whence the rotation of this planet about its axis has been determined.

119. The figure of Jupiter is evidently an ob- late spheroid, the longest diameter of his disk being to the shortest as thirteen to twelve. His rotation is from west to east, like that of the sun, and the plane of his equator is very nearly coin- cident with that of his orbit ; so that there can scarcely be any difference of seasons in that planet. His rotation has been observed to be somewhat quicker in his aphelion than his perihelion.

120. The most remarkable circumstance at- tending this planet, is his having four moons or satellites, which constantly revolve round him at different distances. These are all supposed to move in ellipses ; though the eccentricities of all of them are too small to be measured, excepting that of the fourth ; and even this amounts to no more than 00‘07 of its mean distance from the primary.

121. The periodic times and distances of these satellites, in semidiameters of Jupiter, as well as in English miles, the angles under which their orbits appear, as seen from the earth, at its mean distance from Jupiter, taken from the latest and most exact observations, are as follow :

Distances in

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Periodic times.

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6 14

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7 3 42 36

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676,000

9 58

4

16 16 32 9

25?o

1,189,000

17 30

122. The nodes of these satellites are not in the same place. All of them, by reason of their immense distance, seem to keep near their prima- ry, and their apparent motion is a kind of oscil- lation like that of a pendulum, going alternately from their greatest distance on one side to the greatest distance on the other, sometimes in a straight line, and sometimes in an elliptic curve. When a satellite is in its superior semicircle, or that half of its orbit which is more distant from the earth than Jupiter is, its motion appears to us dire'ct, according to the order of the signs ; but in its inferior semicircle, when it is nearer to us than Jupiter, its motion appears retrograde ; and both these motions seem quicker the nearer the satellites are to the centre of the primary, slower the more distant they are, and, at the greatest distance of all, they appear for a short time to be stationary.

123. It is evident, from this account of the system of Jupiter and his

satellites, that occul- tations of them must frequently happen by their going behind their primary, or by coming in be- twixt us and it. The former takes place when they proceed towards the middle of their upper semicircle ; the latter when they pass through the same part of their inferior semicircle. Occulta- tions of the former kind happen to the first and second satellite ; at every revolution, the third very rarely escapes an occultation, but the fourth more frequently by reason of its greater distance. It is seldom that a satellite can be discovered upon the disk of Jupiter, even by the best tele- scopes, excepting at its first entrance, when, by reason of its being more directly illuminated by the rays of the sun than the planet itself, it ap- pears like a lucid spot upon it. Sometimes, however, a satellite, in passing over the disk, ap- pears like a dark spot, and is easily to be distin- guished. This is supposed to be owing to spots on the body of these secondary planets ; and it is remarkable, that the same satellite has been known to pass over the disk at one time as a dark spot, and at another so luminous that it could not be distinguished from Jupiter himself, ex- cept at its coming on and going off.

124. To account for this phenomenon, we must say that either the spots are subject to change, or, if they be permanent like those of our moon, that the satellites at different times turn different parts of their globes towards us. Possibly both these causes may contribute to produce the phe- nomena just mentioned. For these reasons also both the light and apparent magnitude of the sa- tellites are variable; for the fewer spots there are upon that side which is turned towards us, the brighter it will appear ; and, as the bright side

only can be seen, a satellite must appear larger the more of its bright side it turns towards the earth, and the less so the more it happens to be covered with spots. The fourth satellite, thoueh generally the smallest, sometimes appears bigger than any of the rest ; the third sometimes seems least, though usually the largest ; nay, a satellite may be so covered with spots as to appear less than its shadow passing over the disk of the pri- mary, though we are certain that the shadow must be smaller than the body which casts it. ××× To a spectator placed on the surface of Jupiter, each of these satellites would put on the various appearances of the moon; but they appear to us always round, having constantly their enlightened half turned towards the earth.

125. When these moons pass through their in- ferior semicircles, they cast a shadow upon Jupi- ter, and thus cause an eclipse of the sun to his inhabitants ; and in some situations this shadow may be observed going before or following the satellite. Herschel says, ‘ April 6th, 1780, I had a fine view of Jupiter, and saw, as soon as I looked into the telescope, without any previous notice of it, the shadow of the third satellite, and the satellite itself on the lower part of the disk. The shadow was so black and well defined, that I attempted to measure it, and found its diameter, by the micrometer, to be 1″ ,562.’ See plate XI. fig. 2. On tin; other hand, in passing through their superior semicircles, the satellites maybe eclipsed in :‘i;> same manner as our moon is to us, by pa-siii’.: t’l’ouu’li the shadow of Jupiter; and tins is aHuallv the case with the first, se cond, and third of these bodies ; but the fourth, by reason of the larjeiiess of its orbit, passes sometimes above or below the shadow, as is the case with our moon. The beginnings and end- ings of these eclipses are easily seen by a teles- cope when the earth is in a proper situation with regard to Jupiter and the sun ; but when this or any other planet is in conjunction with the s \m, the superior brightness of that luminary renders both it and the satellites invisible. From the tinii; of its first appearing after a conjunction until near the opposition, only the immersions of the satellites into his shadow, or the beginnings of the eclipse* are visible ; at the opposition, only the occupations of the satellites, by going behind or cominir before their primary, are ob- servable ; and from the opposition to the conjunc- tion, only the immersions, or end of the eclipses are to be- seen. Tor let S, plate VI. fig. 8, be the sun ; I Jupiter and its shadow ; A and P the earth, before and after the opposition of Jupiter ; Sp the path of the first satellite in the shadow ; A t a tangent to Jupiter. When the first satellite enters the shadow, the apparent distance of it from the body of Jupiter is t A. s ; but at its emersion, the line />A passes through Jupiter, and therefore the emersion is not visible ; but after opposition, the earth .hems; at P, the emer- sion, and not the immeision, will be seen. The same things take place with respect to the second satellite. If ///??<??? be the path of the third sa- telhie, ///A frequently lies without the body of .' .piter, and t'::t rt-fore both the immeision and Tsior. v ;'l br- u-ible ; tin.- satellite disappears

and re-appears again at a distance from the body of Jupiter, and on the same side.

126. This is exactly true in the first satellite, of which we can never see an immersion with its immediately subsequent emersion : and it is but rarely that they can be both seen in the second ; as in order to their being so, that satellite must be near one of its limits, at the same

time that the planet is near its perihelion and quadrature with the sun. With regard to the third, when Jupiter is more than 46►► from conjunction with, or op- position to, the sun, both its immersions and im- mediately subsequent emersions are visible ; as they likewise are in the fourth, when the distance of Jupiter from conjunction or opposition is 24►►. It had long been suspected that the sa- tellites of this planet revolved on their axis ; and Dr. Herschel has discovered that each of them revolves about its axis in the time of its revolu- tion round its primary ; thus furnishing another striking correspondence between the satellites of the other planets and the moon, the satellite of the earth. They must be very magnificent ob- jects to the inhabitants of Jupiter. The first of them appears to them four times larger than our moon does to us, and goes through all the changes of the moon in the short space of forty-two hours, within which period it is itself eclipsed, and causes an eclipse of the sun on the surface of Jupiter.

127. When Jupitei is in quadrature with the sun, the earth is farthest out of the line that pas- ses through the centres of the sun and Jupiter, and therefore the shadow of the planet is then most exposed to our view : but even then the body of the planet will hide from us one side of that part of the shadow which is nearest to it, through which the first satellite passes; which is the reason that, though we see the entrance of that satellite into the shadow, or its coming out from thence, as the earth is situate on the east or west side thereof, we cannot see them both ; whereas the other satellites, going through the shadow at a greater distance from Jupiter, their ingress and egress are both visible. The orbits of the satellites are inclined to the plane of Ju- piter's orbit, as is evident from the unequal dura- tion of the eclipses of the same satellite. The fourth satellite, like our own moon, is sometimes in opposition to the sun, without being eclipsed. The third and fourth satellites often disappear in the shadow, and re-appear again on the same side of Jupiter ; but only the beginnings or the endings of the eclipses of the first and second satellites are visible. The relative distances of these moons from their primary, are shown in plate VII. fig. 13.

127*. We cannot close this account of Jupiter without noticing two curious results obtained by La Place, with respect to the satellites of Ju- piter; results which agree with observation in a remarkable manner. The first is, that if m', m', m"', represent the mean motions of the first, se- cond, and third satellites respectively, the m' -f 2 m" ►►► 3m", is always equal to nothing, The second is, that if I', I", and I"' represent the mean longitudes of the satellites, as seen from the centre of Jupiter, then f ►►► 3 /" t 2 /"' r=

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ASTRONOMY.

107

180⬜⬜. It follows from this theorem, that the first three satellites of Jupiter can never all he eclipsed together. For if it was possible, then I', t", and I'" would be equal, and consequently /' ⬜⬜⬜ 3 /" + 2 /'" = 0. When the second and third are eclipsed together, then /" = /'", and con- sequently I' ⬜⬜⬜ /* = 180; hence, when the se- cond and third satellites of Jupiter are eclipsed at the same time, the first is always in conjunc- tion with Jupiter. Various other interesting con- sequences of this theorem might be easily de- duced ; but we leave the ingenious reader to make them out for himself. The relative dis- tances of the satellites from their primaries are shown in plate VII. fig.13.

128. Saturn, when viewed through a good telescope, makes a more remarkable appearance than any of the other planets. Galileo first dis- covered his uncommon shape, and from the dis- coveries made by him and other astronomers, it appears that this planet is surrounded by a broad thin ring, the edge of which reflects little, if any, of the sun's light to us, but the planes of the ring reflect the light in the same manner that the planet itself does. If we suppose the diameter of Saturn to be divided into three equal parts, the diameter of the ring is

about seven of these parts. The ring is detached from the body of Saturn in such a manner, that the distance be- tween the innermost part of the ring and the body is equal to its breadth. If we had a view of the planet and his ring with our eyes perpen- dicular to one of the planes of the latter, we should see them as in plate VII. fig. 12 ; but our eye is never so .much elevated above either plane as to have the visual ray at right angles to it, nor in- deed is it ever elevated more than about 30►► above it ; so that the ring being commonly viewed at an oblique angle, appears of an oval form, and through very good telescopes double, as represented, plate VII. fig. 13. and plate XI. rig. 3. When the ring appears most open, its longest diameter appears about twice the length of its shortest.

129. Both the outward and inward rim are pi'ojected into an ellipsis, more or less oblong, ;iccording to the different degrees of obliquity with viliich it is viewed. Sometimes our eye is in the plane of the ring, and then it becomes in- visible;, either because the outward edge is not titled to reflect the sun's light, or more probably because it is too thin to be seen at such a dis- tance. As the plane of this ring keeps always parallel to itself, that is, its situation in one part of the orbit is always parallel to that in any other part, it disappears twice in every evolution of the planet, that is about once in fifteen years ; and the planet sometimes appears quite round for months together. At other times the dis- tance betwixt the body of the planet and the ring is very perceptible ; and Mr. Whiston tells us, that Dr. Clarke's father saw a star through the opening.

130. When Saturn appears round, if our eye be in the plane of the ring, it will appeal as a dark line across the middle of the planet's disk ; and if our eye be elevated above the plane of the ring, a shadowy belt will be visible, caused by the

shadow of the ring as well as by the interposition of part of it betwixt the eye and the planet. The shadow of the ring is broadest when the sun is most elevated, but its obscure parts appear broadest when our eye is most elevated above the plane of it. When it appears double, the ring next the body of the planet appears bright- est ; when the ring appears of an elliptical form, the parts about the ends of the largest axis are called the ansas. These, a little before and after the disappearing of the ring, are of unequal magnitude : the largest ansse is longer visible before the planet's round phase, and appears again sooner than the other. In the diagram, plate VII. fig. 2, are delineated the phases of the ring from its full appearance in 1825, to its dis- appearance in 1832, and its full re-appearance in 1839.

131. Dr. Herschel has found that the ring is double, or that there are two concentric rings ; also that it has a motion of rotation in its own plane, its axis of motion being the same as that of Saturn himself, and its periodical time lOh. 32′ 15”, 4: But he thinks it probable that the concentric rings may not revolve in the same period. Their dimensions, and the space be- tween them, he states in the following proportion to each other : ###

miles.

Inner diameter of the same ring . . 146,345 Outside diameter of ditto .... 184,393 Inner diameter of the larger ring . . 190,248 Outside diameter of ditto 204,883

Breadth of the ring 20,000

Breadth of the outer ditto .... 7,204 Breadth of the vacant space 2,839

132. Dr. Herschel concludes, from his obser- vations on the ring, that its structure is such as to allow it to remain permanently in its present state ; nor does he think it at all probable that the ring is of that changeable nature which some persons have imagined.

133. The same excellent astronomer, from a series of observations on the belts of Saturn, has concluded, that he revolves upon his axis in lOh. 16′ 0”, 4, that he has a dense atmosphere, and that his polar diameter is to his equatorial one as 10 to 11.

134. Saturn has, besides his ring, seven little secondary planets or satellites revolving round him. One of them, which till lately was reckon- ed the fourth in order from Saturn, was discovered by Huygens in 1655, by means of a telescope 100 feet long; and the others, viz. the first, se- cond, third, and fifth, at different times by Cas- sini, between 1671 and 1684, by the help of glasses of 100 and 136 feet. The sixth and seventh have lately been discovered by Herschel, with his forty feet reflecting telescope, in 1787 and 1788. These he has called the sixth and seventh satellites, though they are nearer to Sa- turn than the other five ; that the names may not be mistaken with regard to former observations of them.

135. The periodical revolutions and distance* of these satellites expressed in semidiameters of that planet, and in English miles are as follow

ASTRONOMY.

Distances in

Angles

*?

r> ??? ??? J* rp*

of

fO

Semi-

Miles.

Orbs.

diara.

1

\d. 21 A. 18′ 27″

4|

170,000

1′ 27*

???2

2 17 41 22

5J

217,000

1 52

3

4 12 25 12

8

303,000

2 36

4

15 22 41 13

18

704,000

6 18

,r,

79 7 48 0

54

2,050,000

17 4

6

1 8 53 9

3*

135,000

1 14

7

0 22 40 46

2|

107,000

0 57

136. The first four describe ellipses like those of the ring, and are in the same plane : their in- clination to the orbit is from 30►► to 31►►. The fifth describes an orbit inclined from 17►► to 18►► to the orbit of Saturn, his plane lying between the ecliptic and those of

the other satellites. Dr. Herschel observes, that the fifth satellite turns round its axis once, exactly in the time in which it revolves round the planet Saturn. In this re- spect, like the satellites of Jupiter, it resembles our moon, which does the same thing. The pro- portional distances of the seven satellites for- merly known to astronomers, are shown in plate VII. fig. 13.

137. The apparent form of the ring of Saturn, and the form of the orbits of his first four satel- lites, may easily be found by means of the follow- ing table :

ARGUMENT.

Long, of Saturn + 13►► 43'.

b

Siijns.

Sians.

Signs.

e

en

fJQ

en

0. VI.

I. VII.

II. VIII.

I

. 1

1

4

30

0

o-ooo

0-260

0-451

0-027

0-284

0-464

27

6

0-054

0-306

0-476

24

0-081

0-328

0.486

21

12

0-108

0-348

0-495

18

15

0-1,”.’)

0-368

0-503

15

IB

0-161

0-387

0-509

12

21

0-187

0-405

0-514

9

‘,‘4

0-212

0-421

0-518

6

‘27

0-236

0-437

0-520

3

30

0-260

0-451

0-521

0

?

XI. V.

1

X. IV.

IX. III.

1

e

n

09

‘f

Signs.

Signs.

Signs.

GB

planet’s latitude, which correction is obtained by taking one-fourth of the latitude in minutes, and applying it to the number in the table, with the sign ††† when the latitude is north, but f when touth.

Example. What is the shape of Saturn’s ring on January 25, 1826?

By the Nautical Almanack, his longitude, on that day, is 2†† 15†† 23’, and latitude 1†† 26′ S. Now 2″ 15†† 23′ + 13†† 43’, is 2†† 29†† 6’, with which, in the table, we find ††† “521, which corrected by + 26, one-fourth of the latitude gives ††† ‘495 ; or the

shorter diameter is to the longer, as 495 to 1000. The sign + indicates that the most distant half of the ring is north, and ††† that the most distant half is south of the centre of the planet.

139. The Georgium Sidus, Herschel, or Uranus, was discovered by Herschel on March 13th 1781. From certain inequalities in the motion of Jupiter and Saturn, the existence of a planet of considerable size, without the orbit of either, had before been suspected. Its apparent magnitude, as seen from the earth, is about three seconds and a half; and as, from its distance from the sun, it shines but with a pale light, it cannot often be seen with the naked eye. Its d iameter is about four times and a half that of the earth, and it revolves round the sun in 83 years, 150 days, 18 hours. The want of light in this planet, on account of its great distance from the Bun, is supplied by no less than six moons, which revolve round it in different periods. But there is a remarkable peculiarity in the position of the orbits in which these moons revolve round their primary, and in the direction in which they re- volve in their orbits. The orbits are nearly per- pendicular to the plane of the ecliptic, and they revolve in them in a direction contrary to the order of the signs of the ecliptic. La Place, from theoretical considerations, concludes that this planet itself revolves on an axis very little in- clined to the plane of the ecliptic ; but there is little hope that this theoretical deduction will ever be either confirmed, or set aside, by obser- vations on a body so very remote.

140. The periods of the revolution of the sa- tellites, and the greatest angle of elongation of their orbits, as seen from the earth, are contained in the following table.

138. To find the shape of Saturn's ring by this table, add his longitude to 13†† 43', and with the sum as an argument enter the table, the number from which will represent the shorter diameter, the longer diameter being reckoned a thousand. This, however, requires a small correction for the

Satellite.

Period.

Elongation

D. H. M.

1

5 21 25

25-5'

2

8 17 1

33-9′

3

10 23 4

38-57

4

13 11 5

44-22

5

38 1 49

88-44

6

107 16 40

176-88

141. We are unacquainted with any second- ary cause that could have any influence in re- gulating the respective distances of the planets from the sun ; but there certainly does exist a relation which, from its singularity, it is difficult to believe quite accidental. This was first ob-

served by professor Bode of Berlin, who re- marked, that a planet was wanting at the dis- tance at which the new planets have been dis- covered, to complete the relation. According to him the distances of the planets may be ex- pressed nearly as follows, the earth's distances from the sun being ten.

Mercury ... 4 ~ 4 Venus ...4 + 3×1= 7

Earth . . . 4 + 3×2= 10

Mars . . . . 4 + 3 X 2 r= 16*

New Planets . 4 + 3 X 23 = 28

Jupiter . . . 4 + 3 X 24 = 52

Saturn . . . 4 + 3 X 2s = 100

Herschel . . 4 + 3 X 26 = 196

142. The comets, viewed through a telescope, have a very different appearance from any of the planets. The nucleus, or star, seems much dimmer. They are to appearance surrounded with atmospheres of a prodigious size, often rising ten times higher than the nucleus, and have often likewise different phases, like the moon.

143. The head of a comet, seen through a good telescope, appears to consist of a solid globe, and an atmosphere, that surrounds it. The solid part is frequently called the nucleus ; which, through a telescope, is easily distinguished from the atmosphere or hairy appearance.

144. A comet is generally attended with a blaze or tail, whereby it is distinguished from a star or planet ; as it is also by its motion. Some- times the tail only of a comet has been visible at a place where the head has been all the while under the horizon ; such an appearance is called a beam. Whether the tail of a comet is caused or not by the heat of the sun, it is always observed to grow larger as it approaches, and to diminish as it recedes from that luminary.

145. If the tail were to continue of the same length, it would appear longer or shorter, accord- ing to the different views of the spectator ; for if his eye be in a line, drawn through the middle of the tail lengthways, or nearly so, the tail will not be distinguished from the rest of the atmos- phere, but the whole will appear round ; if the eye be a little out of that line, the tail will ap-

ear short (see plate VII. fig. 8) ; and it is called bearded comet, when the tail hangs down to- wards the horizon, as in that figure. If the tail of a comet be viewed sideways, the whole length of it is seen. It is obvious, that the nearer the eye is to the tail, the greater will be its apparent length.

146. The tails of comets often appear bent (see plate V. fig. 12, 13). This is probably owing to the resistance of the aether; which, though extremely small, may have a sensible effect on so thin a vapour as the tail consists of. This bending is seen only when the earth is not in the plane of the orbit of the comet continued. When that plane passes through the eye of the spectator, the tail appears straight. See plate V. fig. 10, 11.

147. The fixed stars, when viewed through the best telescopes, appear not in the least magnified, but rather diminished, on account, as is thought by some, that the telescope takes off that twinkling appearance they make to the naked eye; but by

others more probably, that the telescope tube ex- cludes a quantity of the rays of light, which are not only emitted from the particular stars them- selves, but by many thousands more, which falling upon our eyelids and the aerial particles about us, are reflected into our eyes so strongly as to excite vibrations, not only on those points of the retina where the images of the stars are formed, but also in other points at the same dis- tance round about. This, without the telescope, makes us imagine the stars to be much bigger than when we see them only by a few rays coming directly from them, so as to enter our eye without being intermixed with others.

148. The number of stars appear prodigiously increased through the telescope ; seventy stars have been counted in the constellation called Pleiades, and no fewer than 2000 in that of Orion. The late improvements of Herschel, however, have shown the number of stars to be exceedingly beyond even what the discoveries of former astronomers would induce us to suppose. He has also shown that many, which to the eye, or through ordinary glasses, appear single, do in fact consist of two or more stars ; and that the galaxy, or milky way, owes its light entirely to multitudes of small stars placed so close, that the naked eye, or even ordinary telescopes, can- not distinguish them.

149. The nebulae, or small whitish specks, discoverable by telescopes in various parts of the heavens, are owing to the same cause. Former astronomers could only reckon 103 ; but Herschel has discovered upwards of 1250. He has also discovered a species of them, which he calls planetary nebulae, on account of their brightness, and shining with a well-defined disk

SECT. III. ❖❖❖ CONCLUSIONS DRAWN FROM THE

APPEARANCES OF THE SUN AND PLANETS.

150. There is an appearance m the heavens, termed semita luminosa, or the zodiacal light, which is now generally supposed to be owing to the sun's atmosphere. This was first dis- covered by Cassini in 1683. It is something like the milky way, a faint twilight, or the tail 01 a comet, thin enough to let stars be seen through it, and seems to surround the sun in the form oi a lens, the plane whereof is nearly co-incident with that of the sun's equator. It is seen stretched along the zodiac, and accompanies the sun in his annual motion through the twelve signs. Each end terminates in an angle of about

21►► : the extent of it in length from either of the angular points varies from 50 to 100►►; it reaches beyond the orbit of Venus, but not so far as that of the earth. The breadth of it near the horizon is also various ; from 12►► almost to 30►► : near the sun, where it may reasonably be supposed to be broadest, it cannot be seen.

151. This light is weakest in the morning, and strongest at night ; disappearing in full moon-light, or in strong twilight, and therefore is not at all visible about midsummer, in places so near either of the poles as to have their twi- light all the night, but may be seen in those places, in the middle of winter, both morning and evening, as it may in places under and near the equator, all the year round. In north latitude it is most conspicuous after the evening twilight,

about the hitter end of February, and before the morning twilight in the beginning of October ; for at those times it stands most erect above the horizon, and is therefore clearest from the thick vapours of the twilight. Besides the difference of real extension of this light in length and breadth at different times, it is diminished by the nearness of any other light in the sky ; not to mention, that the extent of it will be differently determined by different spectators, according to the goodness of their eyes.

152. Cassini supposed that, as by the rotation of the sun, some gross parts are thrown up on his surface, whereof spots and nebulosities are formed ; so the great rapidity wherewith the equatorial parts are moved, may throw out, to a consider- able distance, a number of particles of a much finer texture, of sufficient density to reflect light. That this light was caused by an emana- tion from the sun, similar to that of the spots, he thought probable from the following observation : That after the year 1688, when this light began to grow weaker, no spots appeared upon the sun ; whereas, in the preceding years, they were frequently seen there ; and that the great in- equality in the intervals between the times of the appearances of the solar spots, has some analogy to the irregular returns of weakness and strength in this light, in like circumstances of the consti- tution of the air, and of the darkness of the sky. But the atmosphere of no planet can extend beyond the point at which the centrifugal force arising fioni its evolution is equal to the force of Hiavity, and that distance is equal to the radius of a planet's orbit, which revolves in the same time that the sun revolves on his axis. Now the sun revolves in about '25 days, and Mercury in about eighty-eight, therefore the solar atmosphere can never extend to the orbit of Mercury, while the zodiacal li'Jit, whatever it is, certainly ex- tends much

farther. This consideration certainly militates strongly against the hypothesis of the zodiacal liuht beinu connected with the solar atmosphere.

l.”>3. He was also of opinion that this light in the zodiac, as it is subject to great increase at one time and diminution at another, may some- times become quite imperceptible; and thought this was the case in 1GG5, 1672, and 1G81, when he saw nothing of it, though he surveyed with great attention those parts of the heavens where, according t< > his theory, it must have appeared, it it had been as visible then as it was in others. !! ******* *cites al-o pa*

154. As to the solar spots. Dr. Long informs us, tl at ‘ they do not change their places upon I ho sun. but adhere, to his surface, or float in his atmosphere, vt-ry near his body; and if there be twenty >pnis upon him at a time, they all keep in the same situation with respect to one another; and, a- Ion-‘ as they last, are carried round in [‘!<; same manner: by the motion of the spots thereiore we learn, what we >hoii!

155. Notwithstanding this, he tells us after- wards, ‘The spots, generally speaking, maybe said to adhere to the sun, or to be so near him as to be carried round upon him uniformly ; nevertheless sometimes, though rarely, a spot has been seen to move with a velocity a little different from the rest ; spots that were different parallels, have appeared to be carried along, not keeping always the same distance, but approach- ing nearer to each other ; and when two spots moved in the same parallel, the hindmost has been observed to overtake and pass by the other. The revolution of spots near the equator of the sun, is shorter than of those that are more dis- tant from it.’ The apparent change of shape in the spots, as they approach the circumference of the disk, according to this author, is likewise a proof of the sun’s rotation round his axis, and that they either adhere to the surface of the lumi- nary, or are carried round his atmosphere veiy near his surface.

156. The time of the apparent revolution of a spot being known, tne true time of its going round upon the sun may be thus found : In plate VII. fig. 3. the arc A C, which, in the month of May, 3ie earth goes through in her orbit in 27 days 12 hours and 20 minutes, is 26►► 22′ ; the arc ac being equal to A C : the apparent revolu- tion of a spot is the whole circle abed, or 360►► with the addition of the arc a c of 26►►. 22’, which makes 386►► 22’: then say, as 386►► 22′ is to 27 d. 12 h. 20’; so is 360►► to 25 d. 15 h. 16’; the true time of the rotation of the sun as it would be seen from a fixed star.

157. The angle of intersection of the sun’s equator with the ecliptic is but small, being never more, according to Scheiner, than 8►►, nor less than

6□□ ; for which reason he settled it at 7□□ though Cassini makes it 7□□. This plane continued cuts the ecliptic in two opposite points, which are called the sun's nodes, being 10□□ of n, and 10□□ of +□□□ ; and two points in the ecliptic, 90□□ from the nodes, may be called the limits. These are 10□□ of ttji and 10□□ of X- When the earth is in either of these nodes, the equator of the sun, if visible, would appear as a straight line; and, by reason of the vast distance of the sun from us, all his parallels would likewise appear as straight lines ; but, in every other situation of the earth, the equator and parallels of the sun would, if visible, appear as ellipses growing wider the farther the earth is from the nodes, and widest of all when the earth is in one of her limits.*

158. There has been no small speculation respect- ing the nature and formation of the solar spots. Some have thought that the sun is an opaque body, mountainous and uneven as our earth is, covered all over with a fiery and luminous fluid ; that this fluid is subject to ebbing and flowing, after the manner of our tides, so as sometimes to leave uncovered the tops of rocks or hills, which appear like black spots ; and that the nebulosi- ties about them are caused by a kind of froth. Others have imagined that the fluid which sends us so much light and heat, contains a nucleus or solid globe, wherein are several volcanoes, which, like yEtria or Vesuvius, from time to time cast up quantities of bituminous matter to the sur face of the sun, and form those spots which are

seen thereon ; and that, as this matter is gradually consumed by the luminous fluid, the spots dis- appear for a time, but are seen to rise again in fie same places when these volcanoes cast up new matter. A third opinion is, that the sun consists of a fiery luminous fluid, wherein are immersed several opaque bodies of irregular shapes; and that these bodies, by the rapid motion of the sun, are sometimes buoyed or raised up to the surface, where they form the appearance of spots, which seem to change their shapes according as different sides of them are presented to the view. A fourth opinion is, that the sun consists of a fluid in continual agitation ; that, by the rapid motion of this fluid, some parts more gross than the rest are carried up to the surface of the lumi- nary, like the scum of melted metal rising up to the top in a furnace ; that these scums, as they are differently agitated by the motion of the fluid, form themselves into those spots we see on the solar disk; and, besides the optical changes already mentioned, grow larger, are diminished in their apparent magnitude, recede a little from, or approach nearer to, each other, and are at last entirely dissipated by the continual rapid motion of the fluid, or are otherwise

consumed or absorbed.

159. Dr. Wilson, in the sixty-fourth volume of the Philosophical Transactions, advances a new opinion, viz. that they are hollows in the surface of the luminary. On this supposition he offers some queries and conjectures concerning the nature of the sun himself. He asks, Whether it is not reasonable to think, that the vast body of the sun is made up of two kinds of matter very different in their qualities ; that by far the greatest part is solid and dark ; and that this dark globe is encompassed with a thin covering of that re- splendant substance, from which the sun would seem to derive the whole of his vivifying heat and energy ?

160. This, if granted, will afford a satisfactory solution of the appearance of spots ; because, if any part of this resplendant surface shall be by any means displaced, the dark globe must neces- sarily appear ; the bottom of the cavity corres- ponding to the nucleus, and the shelving sides to the umbrae. The shining substance, he thinks, may be displaced by the action of some elastic vapour generated within the substance of the dark globe. This vapour swelling into such a vo- lume as to reach up to the surface of the luminous matter, would thereby throw it aside in all direc- tions : and as we cannot expect any regularity in the production of such a vapour, the irregular appearance and disappearance of the spots is by that means accounted for ; as the reflux of the luminous matter must always occasion the dark nucleus gradually to decrease, till at lasf it be- comes indistinguishable from the rest of the surface.

loi. But an objection occurs, that, on this supposition, the nucleus of a spot, whilst on the decrease, should always appear nearly circular, by the gradual descent of the luminous matter from all sides to cover it. To this Dr. Wilson replies, that in all probability the surface of the dark globe is very uneven and mountainous,

which prevents the regular reflux of the shin- ing matter ; and this, he thinks, is rendered very probable by the enormous mountains and cavi- ties which are observed on the moon ; and why, says he, may there not be the same on the surface of the sun ? He thinks his hypothesis also con- firmed by the dividing of the nucleus into seve- ral parts, which might arise from the luminous matter flowing in different channels in the bottom of the hollow.

162. The appearance of the umbrae after the nucleus is gone, he thinks, may be owing to a cavity remaining in the luminous matter, though the dark globe is entirely covered. As to a mo- tion of the spots, distinct from what they are supposed to receive from the rotation of the sun round his axis, he says he never could observe any, except what might be attributed

to the en- largement or diminution of them when in the neighbourhood of one another. ‘ But,’ says he, ‘ what would farther contribute towards forming a judgment of this kind, is the apparent alteration of the relative place, which must arise from the motion across the disk on a spherical surface ; a circumstance which 1 am uncertain if it has been sufficiently attended to.’

163. Dr. Wilson’s hypothesis is further con- firmed by the disappearance of the umbra on the sides of spots contiguous to one another; as the action of the elastic vapour must necessarily drive the luminous matter away from each, and thus as it were accumulate it between them, so that no umbrae can be perceived. As to the luminous matter itself, he conjectures, that it cannot be any very ponderous fluid, but that it rather resembles a dense fog which broods on the surface of the sun’s dark body.

164. Dr. Wilson’s general conclusion is, that, ‘ According to the view of things given in the foregoing queries, there would seem to be some- thing very extraordinary in the dark and unig- nited state of the great internal spot of the sun. Does not this, (he asks), seem to indicate that the luminous matter that encompasses it derives not its splendor from any intensity of heat? For, if this were the case, would not the parts under- neath, which would be perpetually in contact with that glowing matter, be heated to such a degree as to become luminous and bright? At the same time it must be confessed, that although the internal globe was in reality much ignited, yet when any part of it forming the nucleus of a spot is exposed to our view, and is seen in competition with a substance of such amazing splendor, it is no wonder that an inferior degree of light, sh6uld in these cases, be unperceivable.

165. As to the moon, it is allowed on all hands, that there are prodigious inequalities on her sur- face. This is proved by looking at her through a telescope, at any other time than when she is full ; for then there is no regular line bounding light and darkness ; but the confines of these parts appear as it were toothed and cut with in- numerable notches and breaks; and even in the dark part, near the borders of the lucid surface, there are seen some small spaces enlightened by the sun’s beams. Upon the fourth day after new moon, there may be perceived some shining points like rocks or small islands within the dark

body of the moon ; and not far from the confines of light and darkness, there are observed other little spaces which join to the enlightened sur- face, but run out into the dark side, which by degrees change their figure, till at last they come wholly within the illuminated space, and have no dark

parts round them at all. Afterwards many more shining spaces are observed to arise by de- grees, and to appear within the dark side of the moon, which, before they drew near to the con- fines of light and darkness, were invisible, being without any light, and totally immersed in the shadow. The contrary is observed in the decreas- ing phases, where the lucid spaces which joined the illuminated surface by degrees recede from it ; and, after they are quite separated from the con- fines of light and darkness, remain for some time visible, till at last they also disappear. Now it is impossible that this should be the case, unless these shining points were higher than the rest of the surface, so that the light of the sun may reach them.

166. Astronomers have endeavoured to mea- sure the height of these lunar mountains, in the following manner. Let E C D, Plate VII. fig. 6, be the hemisphere of the moon illuminated by the sun ; E C D the diameter of the circle bound- ing light and darkness, and A the top of a hill within the dark part when it first begins to be illuminated. Observe with a telescope the proportion of the right line A E, or the distance of the point A from the lucid surface to the dia- meter of the moon ED ; and because in this case the ray of light E S touches the globe of the moon, A E C will be a right angle, and therefore in the triangle A E C having the two sides A E and F", C, we can find the third side A C ; from which deducting EC or EC, there will remain AB the height of the mountain. By this mode of mea- suring, which would be just if the line AE could be taken accurately, the height of St. Catherine would be nearly 8ˆ miles, if according to Riccioli its top was about a sixteentli part of the moon's diameter distant from the confines of the lucid surface. But by the more accurate observations ;md just calculations of llerschel, this dispropor- tionate height appears to be ill founded, and the ut -ncrality of the lunar mountains do not exceed half a mile in perpendicular elevation. He thus calculates their heights : Let S L M or s / m, fig. 1 , be a line drawn from the sun to the mountain, touching the moon at Lor /, and the mountain at .M or ui. Then, to an observer at E or e, the .ines LM,//□□, will not appear of the same length, .houˆh the mountain should be of an equal iieiuht; for LM will be projected into on, and lm into ON. But these are the quantities that .ire taken 1 y the micrometer when we observe a mountain t >pioject from the line of illumination. From the ibservrd quantity on, when the moon is not in 1 or quadrature, to find L M, we have the folloui r,' analogy. The triangles o O L, r M . are similar ; therefore Lo : LO : : L r: LM,

or-' □□□ J,ˆI : hut LO is the radius of

L

the moon, and L ;□□□ or on is the observed distance of the mountain's projection; and L o is the sine of the angle K O L□□□ o L S ; which we

may take k > be the distance of the sun from the moon with-

out any material error, and which therefore we may find at any given time from an ephemeris.

167. Some modern astronomers have disco- vered a still greater similarity between the lunar mountains and those of our earth; viz. that some of them are really volcanoes, and emit fire, as ours do. An appearance of this kind was dis- covered some years ago by Ulloa, in an eclipse of the sun. It was a small bright spot like a star near the margin of the moon, and which he at that time supposed to have been a hole with the sun's light shining through it. Succeeding ob- servations, however, have induced astronomers to attribute appearances of this kind to the eruption of volcanic fire : and Herschel has particularly observed several eruptions of the lunar volcanoes, and similar appearances have been more recently noticed by that acute and accurate observer, captain Henry Kater.

168. Many conjectures have been formed re- specting the nature of the moon's substance ; some have imagined, that, besides the light reflected from the sun, the moon has also some obscure light of her own, by which she would be visible without being illuminated by the sun-beams. In proof of this it is urged, that during the time of even total eclipses the moon is still visible, ap- pearing of a dull red color, as if obscured by a great deal of smoke. In reply to this, it has been advanced, that this is not always the case ; the moon sometimes disappearing totally in the time of an eclipse, so as not to be discernible by the best glasses, while little stars of the fifth and sixth magnitudes were distinctly seen as usual ; and when the moon is visible in a total eclipse, a suf- ficient reason may be assigned for this appear- rance from the refraction of the sun's rays through our atmosphere, which are reflected back to the earth by the otherwise dark surface of the moon.

169. Various speculations have also been in- dulged concerning the spots on the moon's sur- face. Some philosophers have been so taken with the beauty of the brightest places observed in her disk, that they have imagined them to be rocks of diamonds ; and others have compared them to pearls and precious stones. Keill, and the greater part of astronomers are now of opinion, that these are only the tops of mountains, which, by reason of their elevation, are more capable of reflecting the sun's light than others which are lower. The duskish spots, he says, cannot be seas, nor any thing of a liquid substance ; because, when ex- amined by the telescope, they appear to consist of an infinity of caverns and empty pits, whose shadows fall within them, which can never be the case with seas, or any liquid substance ; but ever within these spots, brighter places are also to be observed ; which, according to his hypothesis, ought to be the points of

rocks standing up within the cavities.

170. The existence of the lunar atmosphere, so long a subject of controversy, is now de- cidedly set at rest. Schroeter of Lilienthal has observed phenomena precisely analogous to the twilight, and which can in no way be accounted for independently of atmospheric refraction. He has also, as he says, observed several obscura- tions, and returning serenity, and other changes in the lunar atmosphere. In the occultation of

Jupiter by the moon on April 5th, 1824, Mr. Runage of Aberdeen, and Captain John Ross, It. N . at Stranr aer, with each one of Mr. Ram- age's splendid reflecting telescopes, observed the disk of Jupiter to be decidedly distorted at the time of its approach to the edge of the moon ; and precisely similar appearances were noticed by Mr. Cornfield of Northampton, and Mr. Wallis, lecturer on astronomy, on the occultation of Saturn by the moon, on October 30th, 1825.

This question, therefore, having been settled by the most satisfactory of all tests, we deem it unecessary to enter into the arguments which were wont to be advanced on either side of the question, before sufficient data were obtained for determining it in any way.

171. It has been a question whether the moon and other planets are inhabited. The answers given to it in the negative depend on the posi- tion, that human beings could not exist in any of the planets on account of their distance from the sun, and consequent inequality of heat to that which the inhabitants of the earth ex- perience ; and the want of an atmosphere in the moon, or the rarity of it, would as effectually preclude that body from being a fit habitation for man. But in reply it is argued, and with reason, that the same power which could make the earth a fit habitation for the animals upon it, could also adapt the organs of other animals to their various situations in the planets ; and as the earth teems with life of all kinds, it is pro- bable, that, as there is so great an analogy be- tween it and the planets in other respects, the same analogy prevails with respect to life and in- habitants.

SECT. IV. CONJECTURES AND CONCLUSIONS

RESPECTING COMETS.

172. None of the celestial bodies have given rise to more speculation and conjecture than comets. Their strange appearance has in all ages been a

matter of terror to the vulgar, who uniformly have looked upon them as bad omens, and forerunners of war, pestilence, 8cc. Others, less superstitious, supposed them to be meteors raised in the higher regions of the air.

Some part of the modern doctrine concerning them, however, was received in the ancient Italic and Pythagorean schools; for they held them to be so much of the nature of planets that they had their periodical times of appearing; that they were out of sight for a long time, while they were carried aloft at an immense dis- tance from the earth, but beqame visible when they descended into the lower regions of the air, and thus were nearer to us.

It would be as endless as useless to detail the various conjectures which in the dark ages were formed respecting the nature of comets ; and the various extravagant postulata by which each theorist sought to reconcile their appearances with his explanation. Aristotle conceived them to be meteoric bodies ; Kepler huge animals, that swam round the sun like fishes ; and Bodin imagined that they are spirits, which, having long dwelt on the earth, are about to be trans- lated to the skies.

A celebrated comet, however, which appeared VOL. HI

in 1577, enabled Tycho Brahe to determine that, at any rate, these bodies were at an im- mense distance ; as from many careful observa- tions he found that that comet had no sensible diurnal parallax ; and Kepler discovered, from his own observations and those of his master, Tycho, that the comets did not, as had been supposed, move in straight lines, but in paths concave towards the sun, and he conceived that their orbits were parabolas.

At length, from observations made on the great comet of 1680, Sir Isaac Newton found that these bodies, like the planets, move round the sun in elliptical orbits. This comet was seen for twenty- one days in its passage towards the sun, and for nearly three months as it receded from that lu- minary. The most careful observations were made to determine its place, and the conclusions deduced from these observations are confirmed by observations made on all that have been well- observed since.

173. It has been remarked that a greater num- ber of comets are seen towards the sun than in the opposite hemisphere; the reason of which will easily appear from fig. 9, plate VII. wherein S represents the sun, E the earth, A B C D the sphere of the fixed stars ; and because comets neither reflect light enough to be visible, nor emit tails conspicuous enough to attract our no- tice, till they come within the planetary regions, commonly

a good way within the sphere of Jupir ter ; let K L M N be a sphere concentric to the sun, at such a distance from him, that no comet can be seen by us till it come within that distance : through E draw the plane B D perpendicular to S E, which will divide the sphere K L M N into two hemispheres, one of which, BCD, is towards the sun, the other D A B, opposite. Now it is manifest, that the spherical portion L M N, which is in the hemisphere BCD towards the sun, is larger than the portion N K L in the hemisphere opposite to him ; and consequently a greater number of comets will appear in the hemisphere BCD than in that marked DAB.

174. Although the orbs of all comets are very eccentric ellipses, there are vast differences among them. Excepting Mercury and Pallas, there are no great differences among the planets either as to the^fcccentricity of their orbits, or the inclina- tion of their planes ; but the planes of some comets are almost perpendicular to others, and some of their ellipses are much wider than others. The narrowest ellipsis of any comet hitherto ob- served was that of 1680. There is also a much greater inequality in the motion of the comets than of the planets ; the velocity of the former being incomparably greater in their perihelion than in their aphelion ; but the planets are but very little accelerated.

175. There is now no question among astro- nomers, that comets are opaque bodies enlight- ened by the sun. Their perihelion distances from the sun are exceedingly various, ?ome being not more than one-fifth, and others up- wards of four-times the mean distance of the earth. Their diameters too differ very greatly. Their apparent diameters of course vary with their distance; and some have supposed that those apparently preternatural darknesses, of

\vliich several are recorded in history, may have bet-u caused by the interposition of a comet between the earth and the sun, at a time when, from its proximity to the earth, its apparent diameter was greater than the sun's, and when its ttpparent motion was in the same direction as the sun's The diameter of the comet of 1744, when at the distance of the sun from us, was about one minute, hence its real diameter was about three times that of the earth. The diame- ter of their atmosphere is however often ten or fifteen times as great as that of the nucleus.

176. The tails of comets have given rise to various conjectures ; but though it is apparent that they are in some way connected with the sun, we know as yet absolutely nothing of either their cause, or their uses. Perhaps the

most rational conjecture that -has been made respecting them is that of Euler, who imagines that on a comet's approaching the sun the impulse of the solar rays may drive the finer particles of the comet's atmosphere in a direction of course opposite to the sun, and that these particles become visible in the shape of a tail, which, from the resistance it may meet with moving obliquely through the ather, may put on that curved appearance which the tails are often observed to assume. If this hypothesis were true, we might conceive that the velocity of a comet may be so great, that a tail may be produced opposite to the sun before the previously funned one can overtake it. This agrees v. u!i what is recorded of the comet of 1744, which is said to have had several tails when near its perihelion.

177. Mr. \liiston has conjectured that the deluge, of which, in the sacred writings, we have the only authentic record, but of which the annals ot most nations have traditionary accounts, ﬁﬁﬁvas produced by the near approach of a comet, whose atmosphere had been attracted by the ﬁﬁﬁﬁﬁﬁﬁnth; and he further surmises, that the final catastrophe foretold in the. scriptures may be pro- duced liy thr approach of a comet prodigiously heated in its pi nhelion. \Ve pretend not, how- ever, on such subjects as these, to penetrate the -ccrets o! Almighty \iMlom, which can produce its r,\Mi ends, by means of which we have no conception.

17!!. (hi looking over the catalogue of ancient comets, Dr. Halley found that there was consider- able simihu it\ in the elements of the orbits, and in t:ie periodic times of three uliic.li appeared in l.~>:;i, 1(io7, ami Itlt-VJ; and lie strongly surmised it these three comets iiad only been several 11 turns of the same comet, which might be ex- p 'cted in return ;main about the end of 17,58 or .'ﬁﬁﬁgiiiniim of 17.V.). (hurault applied hiin -elt with jr-at diligence and success to the inves- tigation oi'tie elements of these comets, which e too conceived tn lie the >aine; and he pre- dicted that it \mild be in perihelion on April :>th, 17.V.I, :md it actually \s;i> in its perihelion "" tlie l.'iih o;' .March, difl'erinur about R month ﬁﬁﬁ""Hi the predict d time. This comet may be xperti ﬁﬁﬁ! auain in lM:;.r>.

17 ﬁﬁﬁ'. (hiKiel; found, by applying the princi-

ﬁﬁﬁﬁﬁﬁﬁs to ;h,j i i ,i nput, it ion ot this comet's

1 ""iii'ii. t 'i.r i;, 1'iM p-viod was lengthened about

r.'J <.';>ﬁﬁﬁ, – i>\ i ;i- a<:'>o:i ..>:' Sa'imi. and about .r>18

days by that of Jupiter. And, as we know not how the orbits of these eccentric bodies may be affected by their mutual attractions among them- selves, it is probable that many ages will elapse before any very accurate

knowledge of the peri- odic times of many of them will be obtained. Much attention however is at present paid to this branch of astronomy; and, the consequence has been, that a visit of a comet to our regions is found to be an event of very frequent occurrence. In the year 1825 not less than five different comets were observed.

180. The Astronomical Society of London, at their anniversary in February 1824, voted a gold medal to M. Rumker, for his re-discovery of a comet, which was first discovered by M.'Guke, and has been called by his name. This comet had been seen, in an intervening return in 1818, by M. Pons, and the astronomical society voted him a silver medal as a token of their approbation of the industry and talent with which he has ap- plied to this interesting branch of the science.

In connexion with this subject too, we cannot help noticing a most profound and ingenious paper by M. Masotti, on the resistance of aether, as deduced from the irregularities of the motion of Guke's comet.

SECT. V. ××× CONJECTURES AND CONCLUSIONS

RESPECTING THE FlXED STARS.

181. Astronomers have supposed the innu- merable multitude of fixed stars to be so many suns, each of which is attended by a certain number of planets or habitable worlds like our own, as well as visited by comets. The strong- est argument for tin's hypothesis is, that the stars cannot be magnified by a telescope on account of their immense distance ; whence it is concluded that they shine by their own light, and are there- fore so many suns ; each of which we may sup- pose to be equal, if not superior, in lustre and magnitude to our own. They are not supposed to be at equal distances from us, but to be more remote in proportion to their apparent smallness. This supposition is necessary to prevent any in- terference of their planets, and thus there may be as great a distance between a star of the first magnitude and one of the second .apparently close to it, as between the earth and the fixed stars first mentioned.

182. Others object, that the disappearance of some of the fixed stars is a demonstration that they cannot be suns, as it would be in the highest degree absurd to think that God would create a sun which might disappear of a sudden, and leave its planets and their inhabitants in endless night. But this argument will have no weight with those who believe in the doctrines of revela- tion; which assures us that our world will come to an end, and that our sun will be deprived of his light ; and consequently that all the -planets which circulate around him will be involved in darkness.

183. In short, there is nothing inconsistent with either scripture or reason in supposing, that while infinite space is universally filled with il- luminating suns and circulating planets, each world, or rather each solar system of worlds, has

its own periods of creation, duration, and final consummation ; as we are assured ours has had, and will have. And the discoveries of astrono- mers respecting old stars disappearing, and new ones being observed, are perfectly consistent with the doctrines of creation and dissolution, which all Christians profess to believe, with re- gard to our own solar system and the globe, we inhabit.

184. Some, however, have thought that the variable stars which disappear for a time, are planets, which are only visible during some part of their course. But this their apparent immo- bility, notwithstanding their decrease of lustre, will not allow us to think. Some have imagined that one side of them may be naturally much darker than the other, and when by the revolu- tion of the star upon its axis, the dark side is turned towards us, the star becomes invisible, and for the same reason, after some interval, re- sumes its former lustre.

185. M. Maupertius is of opinion that some stars, by tbeir prodigiously quick rotations on their axes, may not only assume the figures of oblate spheroids, but that by the great centrifu- gal force arising from such rotations, they may become of the figures of mill-stones, or be re- duced to flat circular planes, so thin as to be quite invisible when their edges are turned to- wards us; as Saturn's ring is in such positions. But when very eccentric planets or comets go round any flat star, in orbits much inclined to its equator, the attraction of the planets or comets in their perihelions must alter the incli- nation of the axis of that star; on which account it will appear more or less large and luminous, as its broad side is more or less turned towards us. And thus he imagines we may account for the apparent changes of magnitude and lustre in those stars, and likewise for their appearing and disappearing.

*106. In *the Philosophical Transactions for 1783, Mr. Mitchell, in proposing a method of determining the distance, magnitude, 8cc. of the fixed stars, by the diminution of the velocity of their light, should any such thing be discovered, supposes that by far the greater part, if not all of them, are systems of stars so near each other, as probably to be liable to be affected sensibly by their mutual gravitation ; and that it is therefore not*

unlikely that the periods of the revolutions of some of these about their principals (the smaller ones being upon this hypothesis to be considered as satellites to the others), may some time or other be discovered. And the recent observations of Mr. llerschel and Mr. South on double stars, when compared with those made by Sir William llerschel many years ago, show decidedly that many of these double stars do certainly revolve round each other.

187. Herschel, improving on Mitchell's idea of the fixed stars being collected into groups, arid assisted by his own observations with the ex- traordinary telescopic powers already mentioned, has suggested a theory concerning the construc- tion of the universe entirely new and singular. It had be.'ii the opinion of former astronomers, that our sun, besides occupying the centre of the system which properly belongs to him, occu-

pied also the centre of the universe : but llers- chel is of n different opinion.

188. The observations on which this theory is founded, were made with a Newtonian reflector of twenty feet focal length, and an aperture of eighteen inches. With this powerful telescope he first began to survey the Via Lactea, and found that it completely resolved the whitish appearance into stars, which the telescopes he formerly used had not light enough to do. The portion he first observed was that about the hand and club of Orion ; in which he found an asto- nishing multitude of stars, whose number he endeavoured to estimate by counting many fields (or apparent spaces of the heavens, which he could see at once through his telescope), and computing from a medium of these how many might be contained in a given portion of the milky way. In the most vacant place to be met with in that neighbourhood, he found 63 stars ; other six fields contained 110, 60, 70, 90, 70, and 74 stars ; a medium of all which gave 79 for the number of stars to each field. Thus he found that by allowing 15′ for the diameter of his field of view, a belt of 15►► long and 2►► broad, which he had often seen pass before his telescope in an hour's time, could not contain less than 50,000 stars, large enough to be distinctly numbered : besides which he suspected twice as many more, which could be seen only now and then by faint glimpses, for want of sufficient light.

189. The doctor's success within the milky way soon induced him to turn his telescope to the nebulous parts of the heavens, of which an accurate list had been published in the Connois- sance des Temps for 1783 and 1784. Most of these yielded to a Newtonian reflector of twenty feet focal distance, and twelve inches aperture ; which plainly discovered them to be composed of stars, or at least to contain stars, and to show every other indication that they consisted of them entirely.

190. ‘ The nebulce,’ says he, ‘ are arranged into strata, and run on to a great length ; and some of them I have been able to pursue, and to guess pretty well at their form and direction. It is probable enough that they may surround the whole starry sphere of the heavens not unlike the milky way, which undoubtedly is nothing but a stratum of fixed stars ; and as this latter im- mense starry bed is not of equal breadth or lustre in every part, nor runs on in one straight direction, but is curved, and even divided int two streams along a very considerable portion of it, we may likewise expect the greatest variety in the strata of the clusters of stars and nebulae.

191. ‘ One of these nebulous beds is so rich, that in passing through a section of it in the time of only thirty-six minutes, I have detected no less than thirty-one nebulae, all distinctly visi- ble upon a fine blue sky. Their situation and shape, as well as condition, seem to denote the greatest variety imaginable. In another stratum, or perhaps a different branch of the former, I have often seen double and treble nebulae va- riously arranged ; large ones with small seeming attendants ; narrow, but much extended lucid nebulae or bright dashes ; some of the shape of a fan, resembling an electric brush issuing from

a lucid point; others of the cometic shape, with a seeming nucleus in the centre, or like cloudy stars, surrounded with a nebulous atmosphere ; a different sort again contain a nebulosity of the milky kind, like that wonderful inexplicable phe- nomenon about 9 Orionis ; while others shine with a fainter mottled kind of light, which de- notes their being resolvable into stars.

192. ‘ It is very probable that the great stra- tum called the milky way, is that in which the sun is placed, though perhaps not in the very centre of its thickness. We gather this from the appearance of the galaxy, which seems to en- compass the whole heavens, as it certainly must do it the sun is within the same. For suppose a number of stars arranged between two parallel planes, indefinitely extended every way, but at a given considerable distance from one another, and calling this a sidereal stratum ; an eye placed somewhere within it will see all the stars in the direction of the planes of the stratum pro-

ected into a great circle, which will appear ucid on account of the accumulation of the stars, while the rest of the heavens at the sides will

only seem to be scattered over with con- jtellations, more or less crowded according to the distance of the planes, or number of stars contained in the thickness or sides of the tratum.

193. ‘ From appearances,’ Dr. Ilerschel con- Inues, ‘ we may infer that the sun is most likely

*placed in one of the great strata of the fixed stars, and very probably not far from the place where some smaller stratum branches out from it. This supposition will satisfactorily, and with great simplicity, account for all the phenomena of the milky way; which, according to this hypo- thesis, is no other than the appearance of the projection of the stars contained in this stratum and its secondary branch. As a farther induce- ment to look on the galaxy in this point of view, let it be considered that we can no longer doubt of its whitish appearance arising from the mixed lustre of the numberless stars that compose it. ?sow should we suppose it to be an irregular
व्ing of stars, in the centre nearly of which we must then suppose the sun to be placed, it will appear not a little extraordinary that the sun, being a fixed star like those which compose this imagined ring, should just be in the centre of such a multitude of celestial bodies, without any apparent reason for this singular distinction; whereas, on our supposition, every star in this stratum, not very near the termination of its Irimtli or height, will be so placed as also to !:avt; its own galaxy, with only such variations i;i thr form ami lustre of it as may arise from the] ववार्ticular situation of each star.’*

11>4. A continued scries of observations con- firmed Dr. Herschel in these opinions; and in a succeeding paper he has given a sketch of his ideas of the interior construction of the heavens: ‘ That the milky way,’ says lie, ‘ is a most ex- tensive stratum of stars of various sizes, admits no longer of the least doubt ; and that our sun is one of the heavenly bodies belonging to it is as evident. I rave, now viewed and gauged this shining zone in almost every direction, and find it composed of shining stars, whose number, by

the account of those gauges, constantly increases and decreases in proportion to its apparent brightness to the naked eye.

195. ‘ But, in order to develop the ideas of the universe that have been suggested by my late observations, it will be best to take the sub- ject from a point of view at a considerable dis- tance both of space and time. Let us then suppose numberless stars of various sizes scatter- ed over an indefinite portion of space, in such a a manner as to be almost equally distributed through the whole. The laws of attraction, which no doubt extend to the remotest regions of the fixed stars, will operate in such a manner as most probably to produce the following re- markable effects :

196. 1. It will frequently happen that a star, being considerably larger than its neighbouring ones, will attract them more than they will be attracted by others that are immediately around them ; by which means they will be in time as it were condensed about a centre ; or in other words, form themselves into a cluster of stars of almost a globular figure, more or less regu- larly so, according to the size and original dis- tance of the surrounding stars. The perturba- tions of the mutual attractions must undoubtedly be very intricate, as we may easily comprehend by considering what Sir Isaac Newton has said (Princip. lib. i. prob. 38, et seq.) : but in order to apply this great author's reasoning, of bodies moving in ellipses, to such as are here for a while supposed to have no other motion than what their mutual gravity has imparted to them, we must suppose the conjugate axes of these ellipses indefinitely diminished, whereby the ellipses will become straight lines.

197. 2. The next case, which will happen almost as frequently as the former, is where a few stars, though not superior in size to the rest, may chance to be rather nearer each other than the surrounding ones ; for here also will be formed a prevailing attraction in the combined centre of gravity of them all, which will occasion the neighbouring stars to draw together ; not, indeed, so as to form a regular globular figure, but, however, in such a manner as to be con- densed towards the common centre of gravity of the whole irregular cluster. And this construc- tion admits of the utmost variety of shapes, ac- cording to the number and situation of the stars which first gave rise to the condensation of the rest.

198. 3. From the composition and repeated conjunction of both the foregoing forms, a third may be derived, when many large stars, or com- bined small ones, are situated in long extended regular or crooked rows, hooks, or branches ; for they will also draw the surrounding ones so as to produce figures of condensed stars coarsely similar to the former, which ga re rise to these condensations.

199. 4. We may likewise admit of still more extensive combinations ; when, at the same time that a cluster of stars is forming in one part of space, there may be another collecting in a dif- ferent, but perhaps not far distant, quarter, which may occasion a mutual approach towards their common centre of gravity.

200. 5. In the last place, as a natural conse- quence of the former cases, there will be great cavities or vacancies formed hy the retreat of the stars

towards the various centres which attract them ; so that, upon the whole, there is evidently a field of the greatest variety for the mutual and combined attractions of the heavenly bodies to exert themselves in.

201. From this theoretical view of the heavens, which has been taken from a point not less dis- tant in time than in space, we will now retreat to our own retired station, in one of the planets at- tending a star in its great combination with num- berless others ; and in order to investigate what will be the appearances from this contracted situation, let us begin with the naked eye. The stars of the first magnitude, being in all proba- bility the nearest, will furnish us with a step to begin our scale. Setting off, therefore, with the distance of Sirius or Arcturus, for instance, as unity, we will at present suppose, that those of the second magnitude are at double, those of the third at treble, the distance, &c. Taking it for granted, then, that a star of the seventh magni- tude (the smallest supposed visible with the naked eye) is about seven times as far as one of the first, it follows, that an observer who is en- closed in a globular cluster of stars, and not far from the centre, will never be able with the naked eye to see to the end of it ; for since, according to the above estimations, he can only extend his view to above seven times the distance of Sirius, it cannot be expected that his eyes should reach the borders of a cluster which has perhaps not less than fifty stars in depth everywhere around him. The whole universe to him, therefore, will be comprised in a set of constellations richly or- namented with scattered stars of all sizes : or, if the united brightness of a neighbouring cluster of stars should, in a remarkably clear night, reach his sight, it will put on the appearance of a small, faint, whitish, nebulous cloud, not to be per- ceived without the greatest attention.

202. Let us suppose him placed in a much extended stratum, or branching cluster of millions of stars, such as may fall under the third form of nebulse already considered. Here also the heavens will not only be richly scattered over with brilliant. constellations, but a shining zone or milky way will be perceived to surround the whole sphere of the heavens, owing to the com- bined light of those stars which are too small, that is, too remote to be seen. Our observer's sight will be so confined, that he will imagine this single collection of stars, though he does not even perceive the 1000th part of them, to be the whole contents of the heavens.

203. Allowing him now the use of a common telescope, he begins to suspect, that all the milki- r.ess of the bright path which surrounds the sphere may be owing to stars. He perceives a few clusters of them in various parts of the heavens, and finds also that there are kinds of nebulous patches : but still his views are not extended to reach so far as to the end of the stratum in which he is situated ; so that he looks upon these patches as belonging to that system, which to him seems to comprehend

every ce- lestial object. He now increases his power of

vision ; and, applying himself to a close obser- vation, finds that the milky way is indeed no other than a collection of very small stars. He perceives, that those objects which had been called nebulae, are evidently nothing but clusters of stars. Their number increases upon him ; and when he resolves one nebula into stars, he discovers ten new ones which he cannot resolve. He then forms the idea of immense strata of fixed stars, of clusters of stars, and of nebulae ; till going on with such interesting observations, he now perceives, that all these appearances must naturally arise from the confined situation in which we are placed. Confined it may justly be called, though in no less a space than what appeared before to be the whole region of the fixed stars, but which now has assumed the shape of a crookedly branching nebula ; not indeed one of the least, but perhaps very far from being the most considerable, of those numberless clusters that enter into the construction of the heavens.

204. Dr. Herschel shows, that this theoretical view of the heavens is perfectly consistent with facts, and seems to be confirmed by a series of observations. ‘ Upon the whole,’ says he, ‘ I be- lieve it will be found, that the foregoing theo- retical view, with all its consequential appear- ances, as seen by an eye enclosed in one of the nebulae, is no other than a drawing from nature, wherein the features of the original have been closely copied : and I hope the resemblance will not be called a bad one, when it shall be con- sidered how very limited must be the pencil of an inhabitant of so small and retired a portion of an indefinite system, in attempting the picture of so unbounded an extent.’

205. The doctor having determined that the visible system of nature, by us called the uni- verse, consisting of all the celestial bodies, and many more than can be seen by the naked eye, is only a group of stars or suns with their planets, constituting one of those patches called a nebula, and perhaps not one 10,000th part of what is really the universe, he goes on to delineate the figure of this vast nebula, which he is of opinion may now be done ; and for this purpose, he gives a table, calculating the distance of the stars which form its extreme boundaries, or the length of the visual ray in different parts, by the number of stars contained in the field of his telescope at different times. He then proceeds to offer some thoughts on the origin of the nebulous strata of the heavens ; in doing which, he gives some hints concerning the antiquity of them ; con- jectures which, though abundantly ingenious, are of too fanciful a nature to justify us in de- tailing them.

206. An objection naturally occurred in the course of Herschel’s observations and enquiries concerning the structure of the heavens, that if the different systems were formed by the mutual attractions of the stars, the

whole would be in danger of destruction by their falling one upon another.

207. Several circumstances, however, he says, manifestly tend to a general preservation. The indefinite extent of the sidereal heavens, must produce a balance that will effectually secure all the great parts of the whole from approaohing

to each other. ‘ There remains then (says he) only to see how the particular stars belonging to separate clusters are prevented from rushing on to their centres of attraction.’ This he supposes may be done by projectile forces; ‘ the admis- sion of which will prove such a barrier against the seeming destructive power of attraction, as to secure from it all the stars belonging to a cluster, if not for ever, at least for millions of ages. Besides, we ought perhaps to look upon such clusters, and the destruction of a star now and then in some thousands of ages, as the very means by which the whole is preserved and renewed. These clusters may be the laboratories of the universe, wherein the most salutary remedies for the decay of the whole are pre- pared.’

208. The existence of such projectile forces is rendered probable, from the apparent changes of position of certain stars ; and from a comparison of the best modern observations with the most accurate of former times, there appears to have been a real change in the places of some of them. The Bull’s Eye, Sirius, and Arcturus, are now found to be half a degree more southerly than the ancients reckoned them ; and the bright star in the shoulder of Orion, has, in Ptolemy, almost a whole degree of latitude more southerly than at present. And, as we have already noticed, such remarkable changes have been observed both in the positions and distances of so many of the double stars, that \ve arc constrained to admit that nothing created is stable. Appearances, indeed, indicate that our own system is in motion towards a point of the heavens whose riu’iit ascension is about ‘2.”>0″ and declination about 50″ north. Whether this motion is one of rotati.ui about some distant centre, or of direct motion, must be left to time and accurate obser- vation to determine. The consequence of this motion, however, is, certain apparent motions of several of the fixed stars, entirely unconnected with the phenomena arising either from the earth’s figure, or its revolution round the sun. Dr. Maskelyne has _iven a table containing the proper motions, both in right ascension and declination of thirty six of the principal fixed stars. \Yesu!tjoiu this table, as one of great im- portance to the practical astronomer.

‘2U;t. T;il le of the annual proper motions of thirty❓❓❓ i\ fixed star-;, in right ascension and de- cimation :

Annual Proper Motion.

In riLfht In drclina-

tion.

- 0-15 N. + 0-07 S.

- 0-08 N. + 0-1-2 S. -f 0-44 S.

0-1 ij N.

\ o-lo S.

a Orion

+ o-oi

❓❓❓ 0.13 N.

Sirius

❓❓❓ 0-42

+ 1-04 S.

Castor . . .

❓❓❓ 0-15

+ 0-44 S.

Procyon . .

❓❓❓ 0-80

+ 0-95 S.

Pollux . . .

❓❓❓ 0-74

o-oo

a Hydrae

- 0-09

□□□ 0-14 N.

Regulus . . .

□□□ 0-22

□□□ 0.08 N.

/3 Leoni . . .

□□□ 0-57

+ 0-07 S.

/3 Virginis . . .

+ 0-74

+ 0-24 S.

Spicae Virgini .

□□□ 0-02

□□□ 0-19 N.

Arcturus . .

□□□ 0-26

+ 1-72 S.

1 1 a Librae . <

□□□ 0-11 □□□ o-ii

□□□ 0-18 N. □□□ 0-15 N.

a Cor. Borealis .

+ 0-26

+ 0-03 S.

a Serpentis . .

+ O’ll

0 19 N.

Antares . . .

o-oo

0-26 N. ,

a Herculis . . .

o-oo

0-23 N.

a Ophiuchi . .

+ 0-06

0-05 S.

a Lyrae . . .

+ 0-23

0-27 N.

y^ f

0-11

0-16 N.

a>Aquilae. . .<

f 0-48

0-54 N.

03 c.

0-03

f 0-35 S.

2 j a Capricorni <

o-oo

+ 0-05

••• 028 N. ••• 0-26 N.

a Cygni . . .

••• 0.08

••• 0-03 N.

a Aquani . . .

••• 0-08

••• 0-19 N.

Fomalhaut .

+ 0-35

••• 0-06 N.

a Pegasi . . .

••• 0-06

••• 0-18 N.

a Andromedae

+ 0-08

+ 0-06 S.

PART II,

OF THE VARIOUS SYSTEMS OF

ASTRONOMY. SECT. I. ••• OF THE MOST FAMOUS SYSTEMS, BY

WHICH THE CELESTIAL PHENOMENA HATE BEEN ATTEMPTED TO BE 'EXPLAINED.

210. To explain the motions and appearances of the heavenly bodies, various hypotheses have been formed; and every hypothesis that ever was framed, accounted for some one or other of them ; but men being, in the

early ages, ignorant of the laws of motion, could not be expected to discover the true system, or explain all the various phenomena of the celestial orbs.

211. In treating of the systems which have been invented in different ages, we do not mean to give an account of all the various absurdities that have been broached by individuals on this subject; but to confine ourselves to those sys- tems which have been of considerable note, and been generally followed for a number of years. We are as ignorant of the opinions of the first astronomers, respecting the system of the uni- verse, as we are of the astronomers themselves. Whatever opinions are handed down to us, must be of much later date than the introduction of astronomy among mankind.

212. If we may hazard a conjecture, however, we are inclined to think, that the first opinions on this subject were much more just, than those that were held afterwards for many years. Pythagoras maintained the motion of the earth, which is now universally believed, but at that time appears to have been the opinion of only a few detached individuals in Greece. As the Greeks borrowed many things from the Egyp- tians, and Pythagoras had travelled into Egypt

and Phoenicia, It is probable he might receive an account of this hypothesis from thence; but whether he did or not, we have now no means of knowing, neither is it of any importance. Certain it is, however, that this opinion did not prevail in his days, nor for many ages afterwards. 21\J. In the second century the Pythagorean hypothesis was superseded by a system erected by the famous geographer and astronomer, Clau- dius Ptolemaeus. This system, which commonly goes by the name of the Ptolemaic, he seems not to have originally invented, but adopted as the prevailing one of that age; and he, perhaps, made it somewhat more consistent than it was before. He supposed the earth at rest in the centre of the universe. Round the earth, and the nearest to it of all the heavenly bodies, the moon performed its monthly revolutions. Next to the moon was placed the planet Mercury; then Venus; and above that the Sun, Mars, Jupiter, and Saturn, in their proper orbits; then the sphere of the fixed stars ; above these, two spheres of what he called chrystalline heavens; above these was the primum mobile, which, by turning round once in twenty-four hours, by some unaccountable means or other, carried all the rest along with it. This primum mobile was encompassed by the empyrean heaven, which was of a cubic form, and the seat of angels and blessed spirits. Besides the motions of all the heavens round the earth once in twenty- four hours, each planet

was supposed to have a particular motion of its own; the moon, for instance, once in a month, performed an addi- tional revolution, the sun in a year, &c. See Plate VII. fig. 4.

214. It is evident, that on this supposition, the complicated motions of the planets already described could never be accounted for. Had they circulated uniformly round the earth, their apparent motion ought always to have been equal and uniform, without appearing either stationary or retrograde in any part of their courses. In consequence of this objection, Ptolemy was obliged to invent a great number of circles, interfering with each other, which he called epicycles and eccentrics. These proved a ready and effectual salvo for all the defects of his sys- tem; as whenever a planet was deviating from the course it ought on his plan to have followed, it was then only moving in an epicycle or an eccentric, and would in due time fall into its proper path. As to the natural causes, by which the planets were directed to move in these epi- cycles and eccentrics, it is no wonder that he found himself much at a loss, and was obliged to have recourse to divine power for an explana- tion, or, in other words, to own that his system was unintelligible. It, however, continued to be in vogue till the beginning of the sixteenth cen- tury, when it was superseded by the Copernican, of which afterwards.

215. The only other systems worth mention- ing, besides the true system, are the Tychonic, the semi-Tychonic, and the Cartesian; all of which have gained proselytes, though none of them were ever so universally received as the Ptole- maic and Copernican.

216. The Tychcnic system, plate VII. fig. 7,

*was invented by Tycho Brahe, who supposed that the earth was at rest, and that the moon and sun revolved about it; the moon in a month, and the sun in a year ; and at the same time, that the rest of the planets. Mercury, Venus, Mars, Jupi- ter, and Saturn, revolved round the sun; the three last also encompassing the earth. Besides these motions, he supposed them all to have a diurnal motion round the earth., as*vellas all the stars.*

217. The semi-Tychonic system supposed the planets to revolve round the sun, while the sun and moon revolve about the earth as their cen- tre of motion; and it supposed the earth to move about its axis from west to east in twenty- four hours. This system differs from the Tycho- nic only in this, that it supposes a diurnal motion in the earth, but, like the Tychonic, denies an annual one.

218. The Cartesian system, so named from its author, Des Cartes, supposes a variety of vor- tices or whirlpools, in which the motions of the heavenly

bodies are performed, being carried round the sun in a vortex of ethereal matter, in different times, proportioned to their distances ; and each planet having also a particular vortex of its own, in which the motions of its satellites are performed. From the laws of motion it will easily appear, that the irregular motions of the planets cannot be accounted for by these vortices; and besides, the supposition of an ethereal matter to perform the operations, is without any foundation, or analogy in nature.

SECT. II. ††† OF THE COPERNICAN, OR TRUE SYSTEM OF ASTRONOMY.

219. The Ptolemaic system had gained uni- versal credit, when Copernicus began to entertain doubts of its truth, and to try if a more satis- factory method of accounting for the apparent motion of the celestial bodies, might not be ob- tained . He had recourse to every author upon the subject, but obtained no satisfaction, till he found from Cicero, that Nicetas, the Syracusan, had maintained the motion of the earth; and from Plutarch, that Pythagoras and others of the ancients had been of the same opinion.

, 220. From these small hints, this great genius deduced a most complete system of astronomy, capable of solving every phenomenon in a satisfactory manner : ††† a system which has been more and more confirmed by the discoveries and improvements that have been made In astronomy and mathematics, since his time ; as well as by the use of telescopes, which have discovered nu- merous celestial phenomena formerly quite un- known. Like all important discoveries, however, when they run counter to general prejudices, the Copernican system was at first much opposed ; and by none more than the celebrated Tycho Brahe, who coulifnever assent to the motion of the earth, and whˆIjnvented the system described in the last section, with a view to supersede the necessity of it.

221. But while philosophers were divided be- tween the Ptolemaic, the Tychonic, the Carte- sian, and Copernican systems, Sir Isaac Newton laid down the laws of nature and motion, and,

comparing all the phenomena in the heavens, discovered the true system of the universe, con- firmed the Copernican system of astronomy, and demonstrated its truth by unanswerable argu- ments, drawn from the most obvious laws of na- ture. This system, which is founded on a basis not to be shaken, is as follows :

222. The sun, which to us is the fountain of light and nheat, is an immense

spherical body, which revolves on its own axis in about twenty- five days ; and is the centre round which eleven other bodies, called planets, are known to revolve at different distances and in different periods. The planes in which the planets revolve all pass through the centre of the sun, and they are in general inclined to each other in very small angles. They are called primary planets, and some of them are attended by smaller ones, called satellites, which revolve round them in the same manner as they revolve round the sun. See plate III.

223. The sun and the planets are called the solar system. The orbits of the planets are not strictly circular, but elliptical or oval, and the sun is situated in a focus of the ellipse ; so that the planets, at one period of their revolution, are nearer to the sun than at another.

224. Besides the periodical revolution round the sun, each of the planets has a uniform ro- tatory motion round an imaginary line, called the axis, passing through the centre ; and, during the whole of any planet's revolution, its axis of rotation preserves the same parallel position. In consequence of this rotation, the different parts of the surfaces of the planets are presented to the sun in succession ; but it has not been observed, that the axis round which any planet rotates, is perpendicular to the plane in which it revolves round the sun ; therefore, at one period of the revolution, one extremity of the axis and the ad- jacent parts of the surface will be inclined to- wards the sun. and the other at the opposite period.

****22,"). There is a class of bodies called comets, which also revolve round the sun, and appear to be governed in their motion by the same laws that regulate the motions of the planets. Their orbits are greatly elongated, and they come to- wards the sun from all quarters of the heavens, differing in this respect from the planets, which revolve pn-tty nearly in the sun's plane. They are further distinguished from the other stars, by a luminous stivam of liˆht which they emit when they come near the sun.*

'2'2<'>. The earth, on which we live, is one of the planets; it revolves round the sun in a year, and performs its rotation on its axis, from west to eaˆt, once in a day. The moon is a satellite attending the earth, round which it revolves from west 10 east in about twenty-seven days eight hours.

*227. The planets, in the order of their distance from the sun, an; : Mercury, Venus, the Earth, Mars. \ esta, Juno, Ceres, 1'allas, Jupiter, Saturn, and Ilerschel, 1'raiius, or the (ieorgium Sidus. Mercury, and \ enus, which arc nearer the sun *han the earth, are called inferior planets; and those which are more distant are called superior planets, as Jupiter, Saturn, and ilerschel. These latter, indeed, are also by far the largest. Venus, Juno, Ceres, and Pallas, which are all nearly at*

the same distance from the sun, and all lately dis►► covered, are so small that they are generally calleA asteroids. Jupiter has four satellites; Saturn seven; and Ilerschel six : Saturn is besides surrounded with a thin, broad, and beautiful ring, perfectly detached from his body. When an inferio planet is between the earth and the sun, its dark side being turned towards the earth, it cannot of course be seen by us, except as a spot apparently passing over the surface of the sun; but it can only be so seen when it passes the sun in one of those points in which its orbit enters into the plane of the earth's orbit. These points are called the nodes of the planet's orbit. For the characteristic marks of the suri and planets, see plate VIII. fig. 8.

228. The fixed stars are at an immense dis- tance ; for it has not yet been determined, by the nicest observations, that they have any annual sensible parallax; that is, they appear to the earth, when on different sides of its orbit, to be exactly in the same places, the earth's orbit seen from a fixed star, appearing only as a point. Con- sequently, the fixed stars all shine with their own native light : for it would be impossible for light, transmitted from the sun, ever to render them visible, as it would be infinitely weak at so immense a distance.

229. The distance of the sun is immensely great, in comparison with that of the moon, although it is almost nothing with respect to that of the fixed stars. For the sun's diurnal parallax, that is, the apparent semidiameter of the earth seen from the sun, is so small, that no instruments could be so exactly made as to find it. Hence, it is inferred, that the sun's magnitude is vastly greater than the earth's. For, supposing the sun's parallax to amount to as much as a minute, then, since the apparent diameter of the sun is half a degree, this would make the sun's dia- meter fifteen times as big as the earth's; but the sun's parallax has been found not to exceed 8′7″, which will make the sun's diameter 100 times as great as the earth's. That the sun is of a globular form, is plain from the apparent mo- tion of the spots upon its surface ; for while the sun moves uniformly about its axis, the spots in the middle of the disk move very quickly, and near the edges more slowly, agreeably to the motion of a globe about its axis. By observa- tions on these spots, the sun is found to revolve about its axis in twenty-five or twenty-six days.

230. None of the celestial bodies in our pla- netary system shine with their own native light, except the sun ; so that all the planets, both primary and secondary, are opaque bodies, that have no other light but what they receive from the sun, and reflect it back towards the earth and other planets. This is evident from the moon ; for only that side of her is observed to shine which is directly opposed to the sun ; but the other side, which is from the sun, is quite dark, except so far as it is illuminated by the reflection from the earth ; for the more of the illuminated side that is

turned towards the earth, the more we see her enlightened, the rest being dark; and the more of her dark side that is turned towards the earth, the more of her appears dark. Thus, at the full, she appears all enlightened, and at her rh=uige, all dark.

VOJ..3.PAGK 11JO.

<$ Manr Mercury ?►► Jufrit

Saturrv I

, 73.

J. ShtQy scnlp.

uaojf.y ip.

ASTRONOMY.

121

231. Mercury and Venus exhibit similar phe- nomena, and show all the phases of the moon according to their various situations. Mars likewise appears gibbous when near the quadra- tures with the sun. The satellites of Jupiter are eclipsed when they are behind his body, being then immersed in his shadow; they like- wise cast their shadows upon the body of Jupiter.

In Saturn, the shadow of the ring upon his body, proves its opacity. And the weakness of the! light of those that are far distant from the sun, shows that it is not innate but borrowed.

232. The following tables contain a synopsis of the periods, distances, &c. of the sun and planets, according to the latest and best obser- vations :

233. TABLE I.

j

Periodical revo-

Proportional

Mean distances

Mean distances

Eccentricities

lutions round

mean dis-

from the semi-

from the sun

in parts of

the sun.

tances from

diameters of

in English

the mean

the sun.

the earth.

miles.

distances.

D. n. M.

MERCURY . .

87 23 15

3871

9,210

37,000,000

A

VENUS . . .

224 16 49J

72333

17,210

68,000,000

rii

THE EARTH

365 6 9J

1;

23,799

95,000,000

-

MARS . . .

686 23 30|

1-52369

36,262

144,000,000

TI

VESTA . . .

1848

23-5513

56,049

222,000,000

-

JUNO . . .

200?i

26-6400

63,400

290,000,000

i

PALLAS . .

1682

27-6700

65,804

265,000,000

i

CERES . . .

1681

27-6500

65,851

260,000,000

A

JUPITER . .

4332 8 51

5-20098

123,778

490,000,000

&

SATURN

10,761 14 36f

9-53937

227,028

900,000,000

A

HERSCHEL . .

*30,445 18 ***

19-03421

453,000

1800,000,000

A

234. TABLE II.

Greatest appa- rent diameter as seen from the earth.

Diameter in English miles.

Diurnal rota- tions upon their axes.

Inclinations of their orbits to the ecliptic.

Place of the ascending node.

THE SUN . . . MERCURY . . . VENUS . . . . THE EARTH . . MARS .... VESTA .... JUNO .... PALLAS . . . CERES .... JUPITER . . . SATURN . . . HERSCHEL . .

32′ 36″ 11

58

883,217 3222 7687 7964 4189

Estimated from eighty to 4000 miles.

89,170 79,042 35,109

D. H. M. S.

25 15 16 0

unknown.

0 23 22 0 0 23 56 4 0 24 39 22

uncertain.

7[illegible] 0′ 3 23|

1 S 15[illegible] 46f

2 14 44

25

Very small, perhaps about

1″ 46 20 4

1 51 7 8 13 4 34 38 10 38

1 10i

- *30$ 0 48*

1 17 59 3 13 18 5 21 4 5 22 31 2 21 7 3 8 50

3 21 48i

3 13 1

0 9 56 0 0 10 16 0

unknown.

235. TABLE III.

Greatest elon-

gation of infe-

Proportion of

Bulk in re-

rior, and pa-

light and

spect to the

Proportion of

Place of the

rallax of supe-

heat.

earth.

density.

aphelion.

rior planets.

THE SUN . . .

1,380,000

i

MERCURY . . .

28►► 20′

6-68

&

2

8 S 14►► 13′

VENUS ....

47 48

1‘91

&

u

10 9 38

1

}

-J

*90 1 *ii*

MARS ....

47 24

43

*i**

*526**

VESTA

1 ft

2Q 4.9

JUNO

**1fi*

799 <1Q

PALLAS . . .

13

ceedingly

10 4 36

CERES

1 1

C-TVr11

1O 9fi Q

JUPITER . . .

11 51

◆◆◆037

1400

M

6 10 57J

SATURN . . .

6 29

◆◆◆Oil

1000

i

o 0 45◆◆

HERSCHEL . . .

3 4J

◆◆◆00276

96

m

11 23 23

122

A S T R O -X O M Y.

SECT. III. ON CKXTUAL FORCES.

236. As the doctrine of central forces is of the greatest importance in the science of astronomy, it will be proper to explain here some of the most material propositions relative to that subject.

237. In this doctrine it is supposed, that mat- ter is equally indifferent to motion and rest ; or that a body at rest never moves itself, and that a body in motion never changes either the velocity or direction of its motion, but would move uni- formly forward in a straight line for ever, unless some

external force or resistance should stop or change it.

238. Hence when a body at rest has a tendency to move, or when a body moving in a straight line, has its velocity continually increased or diminished, or when the direction of a motion is continually changed, and thereby a curve line described ; it is supposed that these circumstances

the triangles A CD, DCE are equal. By the same method of reasoning, if in the third particle of time the body describes any other right line E G, it may be proved that the triangle C D E is equal to C E G ; and in a fourth particle there will be described a triangle CGI equal to C E G, and so on : it is also obvious that the lines AD, D E, E G, G I, &c. lie in the same plane.

240. Thus it appears that in equal times the areas described by radii drawn to the centre of force will be equally increased, and therefore by composition, any sums of the areas are to one another, as the times in which they are described. Let the number of triangles be supposed to be now augmented, and their breadth diminished ad infinitum, the lines AD, DE, EG, GI, &c. will now become a curve line lying in the same plane, and the centripetal force which was supposed to act by starts, will now act continually, deflecting

proceed from the influence of some power that tne body from the tangent, and thus causing it to

acts incessantly, which power may be measured in the first case by the pressure of the quiescent body against the obstacle that hinders it from moving ; or by the change made on the velocity in the second case ; or by the flexure of the curve described in the third case ; due regard being had to the time in which these effects are pro- duced, and other circumstances, according to the principles of mechanics. Now the power or force of gravity produces effects of each of these kinds, which fall under our observation at the surface of the earth ; for the same power that renders bodies heavy while at rest, accelerates their motion when they descend perpendicularly, and bends the path of their motion into a curve line when they are projected in a direction oblique to that of their gravity. But we can judge of the forces or powers that act on the celestial bodies by eti'ects of the last kind only, and hence it is that the doctrine of central force is of so much use in the theory of the planetary motions.

~39. The following proposition is the founda- tion of this doctrine, and is given by Sir I. New- ton in IIH i'rincipia. The areas which revolving bodies describe by radii drawn to an immovable centre, of force, lie in the same planes and are proportional to the times in which they are de- scribed. Let tlie time supposed be divided into equal parts, and in the first part let a

body be sui>;i ⬜⬜⬜⬜⬜⬜⬜}, by its own inert force, to describe a rr.ht line, AD, Plate VIII. fig. 5. From what we ha\i; premised it will appear, that in the the body would describe the to A D. if nothing acted upon it. body is come to 1), suppose a ti nilinu' to the point (' acts upon ni] Mils", such, that it would have ly from D to n in the same time. ⬜⬜⬜_;⬜⬜⬜ now aeted upon by two powers, rirtkin D H, and another in the r_r through the centre of force, i,:Tam '/DIM-, be completed, the in the d;a_onal D F, and at the t-n.l (.t ill" tune will lie found at F, by the prin- ciples of mechanics. .loi.i AC,C F; the trian- !:]'⬜⬜⬜ A !) F. I) (' !i, havnr_f equal bases, will there- ion; be equal, and the triangles C 1) 15, C D F, arc (-qu.il, !'iT they 'land on the same base CD, and i:. bel\ux-n the parallels DC. M F; herefore

move in a curve.

241. We may hence infer, that the velocity of a body attracted towards an immovable centre, in spaces void of resistance, is reciprocally as a perpendicular let fall from that centre on the right line that touches the orbit. For draw C Y perpendicular to D E, and suppose the body to describe D E in a given time, hence the velocity of the body will be proportional to DE, and from what lias been said, the area of the triangle C E D will be given, for it is proportional to the time : but when the area of a triangle remains the same,the base varies inversely as the perpendicu- lar, therefore D E, or the velocity of the body, is inversely as C Y the perpendicular ; and the same will hold true, whether the body, by successive impulses, moves by a polygon in the way here described ; or, by the continual action of the cen- tral force, moves in a curve line.

242. The central force of a body moving in the circumference of a circle, is as the versed sine, A M (plate X. fig. 7), of the indefinitely small arc A E; or it is as the square of that arc divided by the diameter A B. For A M is the space through which the body is drawn from the tangent in the given time, whence 2AM is the measure of the intensity of the force. But A E being very small, and therefore nearly equal to

AEZ

its chord, we have AM ~ ⬜⬜⬜ ⬜⬜⬜ If therefore AB.

two bodies revolve uniformly in different circles, their central forces are directly as the squares of their velocities, and inversely as the diameters, or as the radii of the circles. For the velocities are as the space uniformly described in the same

V2 v2 time. Hence, F :/'.'. -rr : -r Hence, if the

diameters are inversely as the squares of the velocities, the forces will be as the fourth power of the velocities.

244. The central forces are to each other as the diameters divided by the squares of the peri- odic times. For if C be the circumference described in the time t, with the velocity v, then

C ??? t v, or v ~ ???

Hence, F D d

-T-TO '. '. TTT : -T; for the

' DT8 ' d t ??? ??? T2 t* varies as the circumference.*

*V?? v**

~D ' d

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245. If two bodies, revolving in different circles, be acted upon by the same central force, their periodic times are as the square roots of the diameters, or of the radii of those circles. For when F = /, the expression F : / '.'.

D d . D d , ??? . .

?fi : -3, gives ??j = -5, whence T : t . .

= KP = 2 PC; therefore a ??? p F =p M2. Now the time in P p is represented by the area of the

SP ??? pM triangle SP p or by ^ ??? ~- , whence T2 ~

m

' ' SP2 ??? pM2 4 T2

yr r ??? , and consequently p M2 ??? ??? ~

-

246. If the velocities be inversely as the dis- tances from the centre, the forces will be in- versely as the cubes of the same distances, or directly as the cubes of the velocities. For F :

V2 v” j ; ; ⬚ : ⬚ ; whence, if D vary as V, inversely,*

.L/ u>

F :’/:: V3 : v3;orF :/: : d3 : D3.

247. If the velocities be inversely as the square roots of the radii, the squares of the times will be as the cubes of Ihe radii. For, as has been

V2 t;2 shewn above, F : f : : ⬚ : ⬚ ; and F : f : :

iv T

R r V2 v2 R r

-r-jwhence-:,. ::-,

⬚ ⬚ – When T2 ‘ tz’

AndifV2 :

r R

|2 : : r : R, this proportion becomes ⬚ : ⬚ : :

r2 R2 r3 R3

KJS = TP’ or’ T2 = “F”’ or

T2 : t2 : : R3 : r3. Hence, also, if the forces be inversely as the squares of the radii, the squares of the periodic times will be as the

R r

cubes of the distances. For F : f : : ⬚ : ⬚v

hence, r1 : R2 : : ⬚ : ˆ, or T2 : f2 : : R3 : r2

248. We shall now apply the doctrine of cen- ral forces, to the circumstances of a planet re- volving in an ellipsis, by a force directed towards the focus.

249. Let A B H L (plate VI. fig. 2) represent the ellipses, S and A the foci, and let P be the place of the planet, and PT a tangent at P, and let Pp be an indefinitely small arc described by the planet. Join PS, p s, and drawpF parallel to SP, meeting PT in F. Then pF is the central force in the arc p P. Let a ††† the parameter of the transverse AH ; or let a AC ˆ 2 BC2. From p draw p I parallel to PT, meeting PK in I, and SP in i. Then the triangles PI i, PCE being similar, and P i equal and parallel to p F. P i or p F : PI : : PE, or (by conies) AC : PC. When a-p P : a ††† PI : : AC : PC. And simi- larly a ††† PI : : PI ††† IK : : a : KI; and by the property of the ellipse IP ††† IK : Ip2 : : PC2 : CN2. From p draw p M perpendicular to SP, then in the similar right angled triangles p i M PED, we have ip, or Ip (for they differ by quantities indefinitely small) p M : : PE : PD. But by conies PE : PD : : CN : CB, whence Ip : p M : : CN : CB, and consequently Ip : p M3 : : CN2 : CB2. Hence, by comparing these proportions, we have p F ††† a IP ††† IP ††† KI ††† I p2 : IP ††† a ††† IP ††† KI ††† Ip2 ††† p M2 : : CA ††† a .*

PC2 ††† CN2 : PC ††† KI ††† CN2 ††† CB2; or by reduc- tion a ††† PF : pM2 : a ††† AC ††† PC : KI ††† CB2; or, a- PF : p M2 : 2 CB ††† PC : CB2 ††† KI : : PC : KI. But P and I being indefinitely near, KI*

*SP**

4T2

whence p F (the force) ~ ††† ^^, or (as the in- d ‘ OF

crements of time are uniform), the force is in- versely as the square of the distance from the focus.

250. We may hence infer, that if several pla- nets revolve in different ellipses about a com- mon focus, that the areas of the sectors described in the same time are as the square roots of the parameter of the transverse axes. For by conies

a. p F ††† p M2 ; but p F varies as -ˆ-rjr hence

”

-

*a††† pM. SP2, or Ja= PM. SP. ButPM, S P is proportionate to the area of elementary sector S Pp, which therefore varies as t*J a.*

251. We may farther infer, that the velocities in the different ellipses, are

as the square root of the parameter of the transverse, divided by the perpendicular from the focus on the tangents, passing through the places of the planets. For the velocity, in an indefinitely small space of time, is as the arcpP; and from the similar triangles SPT, p MP, an hour SJT :SP :: PM:pP.

_… ††† SP.pM ,Ja

*Whence p P= ^ ††††-^*

252. It is farther apparent from what has been done, that the areas of the different ellipses are to each other as the product of the times by the square roots of the parameters of 'the transverse axes. For the area, Q, is as the product of the sector S Pp by the time, t, and the sector varies as ^/a ; therefore Q varies as t^JlT.

253. Again, the squares of the periodic times are proportional to the cubes of the transverse axes. For let b be the less, d the greater axis, and a the parameter; then by conies a d ~ 62, or a d3 ††† bz d2. But the whole areas are as the product of the axes ; and also, as has been just shown, as t^cT Hence b" d, or d3 a ††† t3 a, or d3 varies as t 2.*

SECT. IV. OF THE ORBITS AND MOTIONS

OF THE PRIMARY PLANETS.

254. For the theorems in the preceding section on the subject of central forces we are indebted to the sagacity of Newton. They had before his time, however, been found by Kepler to be true in the case of the known planets of the solar system. Kepler showed that these laws did ob- tain in the system; Newton shewed that they mmt obtain. ††† The three fundamental laws of planetary motion which Kepler discovered, and of which the demonstrations given above, are these.

255. l.The primary planets and comets de- scribe round the sun, and the secondary planets describe round their respective primary planets, areas proportioned to the times.

256. 2. The orbits described round the suiv and round the primary planets, are ellipses, having the sun of the primary planet in the focus.

257. 3. The squares of the periodic times of planets revolving round

common centres, are proportional to the cubes of their mean dis- tances.

258. These laws are universal; they are obeyed by all the planets of our system, which revolve nearly in the same plane, and they are found to obtain also in the comets which move round the sun in all directions.

259. In addition to what has been said, the following popular illustration may be given of the peculiarities of the motion of a planet in the different planets of its orbit. Let A B and E F be the axis of an ellipse, of which D is the centre, and C the focus. See plate VIIT.fig. 4. Suppose that P is the place of a planet moving in the curve A F B E, (supply P in the fig.) and that P G is drawn touching the curve at P. Join C P, C E, and draw C G perpendicular to P G. The place of the sun will be at C the focus, and the planet will move in the curve ; so that the line C P shall pass over equal areas in equal times. Since the velocity of the planet is in- versely as the perpendicular upon the tangent, and the lines C B, C A, are perpendicular to tangents at the points B and A, the velocity at A, as C A to C B, and the velocity at B is to the velocity at P as C G to C B. Thus at B, which is called the perihelion, the velocity will be the greatest, and at A, the aphelion, it will be the least ; and at any other point, P, it will be between these two extremes. The line C E is equal to H 1), \lueh is a mean between B C and C A ; and when the plaiu-t is at K, it is said to be ;it its mean distance. The force, that, acting upon the planet at I', bends it from the tangent, is to the force that aets upon it at E, any other point, as the square of C li to the square of C 1'.

2GO. We have hitherto supposed the sun to remain absolutely at rest, and that the planet was urged towards it, as to an immovable point; but the tendency of the planets towards the sun, arises from a law, that not only connects the planets with the sun, but with each individual particle of matter in the solar system ; a par- ticular cause of this law or fact, is the gravity of bodies at the surface of our earth, and the general law that includes all particular cases, has been termed gravitation. Hence it follows, that not only the planets gravitate towards the sun, but the sun gravitates towards the planets ; so that, in strict truth, both the sun and e-ach planet revolve round a point, winch is their com- mon centre of gravity, and which is as much nearer to the sun than to the planet, as the sun contains more matter than the planet.

'2ol. The truth of tins general law is only to be proved by a careful examination of particular cases ; and, supposing it to be true, the effects it oui;ht to produce in the planetary motions round the sun, are in perfect coincidence with the best observations.

'2

found to be the case ; and the effects produced are precisely what they ought to be, supposing" that the same law, which regulates the tendency of the planets towards the sun, also regulates their tendency to one another.

263. If the planets were acted on by a power directed to the centre of the sun only, varying according to the general law of gravity, and that centre were quiescent, their motions about it would be perfectly regular ; but since they are acted on by a power directed to every body in the system, in order to judge of the effects of these actions, Newton first supposes two bodies revolving about their common centre of gravity, and gravitating towards each other, and since the direction of this mutual gravitation passes always through that centre, and their distances from it vary always in the same proportion as their dis- tances from each other, they must describe similar figures about that point and about each other, and describe equal areas in equal times, about that centre, and about each other ; so that there will be no irregularities in the motion of two bodies about each other, because of their mutual attractions, whatever the law of their gravity is supposed to be ; only they will revolve in less time about their centre of gravity, than the one would have done about the other quies- cent, because the orbit described about the other centre of gravity is less than that which is described by any one of them about the other quiescent ; their distance in both cases being the same, and the orbits similar.

264. If three or more bodies mutually attract each other, the gravitation of any one of them, arising from the attractions of the rest, may be determined by the rule for composition of motion; and if the law of gravity be such as obtains in the solar system, its gravitations will not be always directed to the centre of gravity of the other bodies, or indeed to any fixed point, but sometimes to one side of that centre and some- times to the other, and therefore equal areas will not be described in equal times about any point in the system ; and some irregu- larities will then.fore arise in the motions of the bodies.

265. But if one of these bodies should be vastly greater than the others, so that the actions of the other bodies may be neglected, when compared with its action ; and the centre of gravity of the system be always found near it, the irregularities of such a system will be very small, the areas described in equal times about the centre of the great body will be nearly equal, and the orbits described will be nearly elliptic, having that centre in their focus.

266. We have seen that the determination of the circumstances relative to two bodies in motion, is a matter of great simplicity; but when the number of bodies is increased even by one, the general estimation of their effects on each othw's motions is a problem that has hitherto baffled the skill of the most eminent philosophers. It happens very fortunately that, in the only

case in which it is of much im- portance to us, it admits of an approximate solution, from the sun being so much greater than all the other planets ; for in the case of the

moon, the sun, and the earth, which we may take for the sake of illustration, the sun disturbs the motions of the moon as seen from the earth, only by the difference of its attractions on the moon and the earth, which difference, when compared with the former by which the moon is attracted towards the earth, is always very small.

267. The action of Jupiter on Saturn, when greatest (that is, when their distance is least), is found by calculation to be 5J, of the action of the sun upon Saturn. This produces an effect which is decidedly perceptible.

268. The whole action of Jupiter disturbs the motion of Saturn in their conjunction, because Jupiter then acts upon Saturn and upon the sun in opposite directions. But because Saturn then acts upon Jupiter and upon the sun in the same direction, if it acted also with the same force on both, it would have no effect on the motion of Jupiter about the sun ; and it is by the excess of its action on Jupiter, above its action on the sun, that it disturbs the motion of Jupiter. This excess is found to be one 1913th part of the action of the sun on Jupiter ; and therefore is much less than the force with which Jupiter disturbs the motion of Saturn.

269. The actions of the other planets on each other are incomparably less than these, and the irregularities proceeding from those actions are always less in any planet, as it is nearer the sun ; but the orbit of the earth is a little more irregular than that of its neighbouring planets, from the great comparative size of its moon, round the common centre of gravity of which, and the earth, both the earth and the moon make a monthly revolution.

SECT. V.' ••• OF THE ORBITS AND MOTIONS OF THE SECONDARY PLANETS.

270. The same general principle of gravita- tion which contains the primary planets in their orbits, extends also to the motions of the se- condary planets, both in regard to their motion round the sun along with their primaries, and to their motions round their primaries as a centre ; which furnishes us with an additional proof of this general law, that all matter gravi- tates to all other matter with a force reciprocally proportional to the square of the distance.

271. That each secondary planet is kept in its orbit by a power directed towards its primary, &c. is proved from the phenomena of the satel- lites of Jupiter and Saturn ; because they move in circles, as far as we can observe, about their respective primaries with an equal course, the primary being the centre of each orbit : and by comparing the times in which the different satellites of the same primary perform their periods, they are found to observe the same relation to the distances from their primary, as the primary planets observe in respect of their mean distances from the sun. The same thing holds good also with respect to the earth and moon ; for she is found to move round the earth in an ellipsis after the same manner as the primary planets do about the sun, excepting only some small irregularities in her motions, the cause of which will be particularly explained in what follows ; and it will appear that they

are no objections against the earth's acting on the moon in the same manner as the sun acts on the primary planets ; that is, as Jupiter and Saturn act upon their satellites.

272. The power of Jupiter and Saturn may be measured to a very considerable distance, by the number of satellites which move round them ; for the distance of the outermost satellite of each of them exceeds several times that of the inner- most. That the force which retains the moon in her orbit, bears precisely that relation which accords with its distance to the known force of gravity on the surface of the earth, may be shown by the following very simple process.

273. Let A in plate VII. fig. 5, represent the earth, B the moon, B C D the moon's orbit ; which differs little from a circle of which A is the centre. If the moon in B were left to itself to move with the velocity it has in the point B, it would leave the orbit and proceed straight forward in the line B E which touches the orbit in B. Suppose the moon would upon this con- dition move from B to E in the space of one minute of time : by the action of the earth upon the moon, whereby it is retained in its orbit, the moon will really be found at the end of this minute in the point F, from whence a straight line drawn to A will make the space B F A in the circle equal to the triangular space B E A ; so that the moon, in the time wherein it would have moved from B to E, if left to itself, has been impelled towards the earth from E to F. And when the time of the moon's passing from B to F is small, as here it is only one minute, the distance between E and F scarcely differs from the space through which the moon would descend in the same time, if it were to fall directly down from B towards A, without any other motion. A B, the distance of the moon from the earth, is about sixty of the semi- diameters of the latter ; and the moon completes her revolution round the earth in about twenty- seven days, seven hours and forty-three minutes : therefore the space E F will here be found by computation to be about 16f

feet. Consequently, if the power by which the moon is retained in its orbit, be greater, near the surface of the earth, than at the distance of the moon, in the duplicate proportion of that distance, the number of feet a body would descend near the surface of the earth, by the action of this power upon it, in one minute, would be equal to the number 16►► multiplied twice into the number sixty, that is, to 58,050.

274. Now bodies falling near the surface of the earth have been found, by exact experi- ments, to descend 16►► feet in one second; and the spaces described by falling bodies being as the squares of the times of their fall, the number of feet a body would describe in its fall near the surface of the earth in one minute of time, would be equal to 16$ multiplied by 60 ; the same as the power which acts upon the moon would cause.*

275. We may hence conclude, that the power which retains the moon in her orbit is the same as that which causes bodies near the surface of the earth to gravitate ; for, since the power by which the earth acts on the moon will cause

bodies near the surface of it to descend with pre- cisely the velocity they are found to do, it is certain that no other power can act upon them besides ; because, if it did, they must of neces- sity descend more swiftly. It is therefore eri- dent, that the power in the earth which we call gravity, extends up to the moon, and decreases as the square in the same proportion as the square of the distance from the centre of the earth in- creases. If to the motion of the satellite where- by it would be carried round its primary at rest, we superadd the same motion, both in regard to velocity and direction, as the primary itself has, it will describe about the primary the same orbit with as great regularity as if the primary had been indeed at rest. This proceeds from the law of motion, which makes a body near the surface of the earth descend perpendicularly, though the earth be in a swift motion, of which if the falling body did not partake, its descent would be oblique.

276. From this we learn, that, if the satellite moved about its primary with perfect regularity, besides its motion about the primary, it would have the same progressive velocity with which the primary is carried about the sun, in a direction parallel to that impulse of its primary ; and, on the contrary, the want of cither of these, in par- ticular of the impulse towards the sun, will occasion great inequalities in the motion of the secondary planet. The inequalities which would arise from the absence of this impulse towards the

sun are so great, that by the regularity which appears in the motion of the secondary planets, it is proved, that the sun communicates to them the same velocity by its action as it gives to their primary at the same distance.

277. “1 he sun therefore acts upon the secondary planets with tiie same force as upon the primaries at the same distance : but the action of the sun upon bodies is reciprocally in the duplicate pro- portion of the distance; therefore the secondary planets being sometimes nearer to the sun than to the primary, and sometimes more remote, they an- not always aeted upon in the same degree with their primary, but when nearer to the sun are attracted more, and \vhen farther off are at- tracted less. Hi nee arise various inequalities in the motion of the secondary planets. Some of these inequalities, however, would take place, though liie moon, if undisturbed by the sun, had move..! HI a nrclu concentrieal to the earth, and in tl.” plane of the earth’s motion ; others depend on u:e elliptical fi-jure and oblique situation of the moon s orbit. One of the former is, that the moon does not descnbe equal spaces in equal limes, but is continually accelerated as she passes troin the qnar,er to the new or full, and is retarded au’ain bv tiic like degrees in returning from the IH-W and lull to the next quarter ; but In re we consider not so much the absolute as the apparent motions of the moon with respect to us.*

~7K. These two may be distinguished in the following manner: ••• Let S, in pLte X. fig. 6. represent the 51111. A the earth moving in its (unit, 1! C, i)!•••’,!•••’ (i the moon’s orbit, and II tiie place of the moon in her orbit. Suppose the eailh to have moved from A to 1. Because

it has been shown that the moon partakes of all the progressive motions of the earth, and likewise that the sun attracts both the earth and moon equal- ly when they are at the same distance from it, or that the mean action of the sun upon the moon is equal to its action upon the earth ; we must there- fore consider the earth as carrying about with it the moon’s orbit ; so that, when the earth is re- moved from A to I, the moon’s orbit shall like- wise be removed from its former situation into that denoted by K L M N. But now the earth being in I, if the moon were found in O, so that O I should be parallel to HA, though the moon would really have moved from H to O, yet it would not have appeared to a spectator upon the earth to have moved at all, because the earth has moved as much ; so that the moon would still appear in the same place with respect to the fixed stars. But if the moon be observed in P, it will then appear to have moved, its apparent motion being measured by the angle O I P. And if the angle P I S be less than the angle H A S, the moon will have approached nearer its conjunc- tion with the sun. Now, to explain particularly the inequality of the moon’s motion already mentioned, let S, plate VIII. fig. 9, represent the sun, A the earth, B C D E the moon’s orbit, C the place of the moon when

in the latter quarter. Here it will be nearly at the same distance from the sun as the earth is. In this case, therefore, they will be both equally attracted, the earth in the direction A S, and the moon in that of C S. Whence, as the earth, in moving round the sun, is continually descending towards it, so the moon in this situation must in any equal portion of time descend as much; and, therefore, the position of the line A C in respect of A S, and the change which the moon's motion produces in the angle CAS, will nSt be altered by the sun : but as soon as the moon is advanced from the quarter toward the new or conjunction, suppose to G, the action of the sun upon it will have a different effect. Were the sun's action upon the moon here to be applied in the direction G H par- allel to A S, if its action on the moon were equal to its action on the earth, no change would be wrought by the sun on the apparent motion of the moon round the earth. But the moon receiv- ing a greater impulse in G than the earth receives in A, were the sun to act in the direction G H, yet it would accelerate the description of the space DAG, and cause the angle G A D to de- crease faster than it otherwise would. The sun's action will have this effect, upon account of the obliquity of its direction to that in which the earth attracts the moon. For the moon by this means is drawn by two forces oblique to one ano- ther : one drawing from G towards A, the other from G towards H ; therefore the moon must ne- cessarily be impelled towards D.

279. Again, because the sun does not act in the direction G H parallel to S A, but in the di- rection G S oblique to it, the sun's action on the moon will, by reason of this obliquity, farther contribute to the moon's acceleration. Suppose the earth, in any short space of time, would have moved from A to I, if not attracted by the sun, the point I being in the straight line C E, which touches the earth's oibit in A. Suppose the moon

in the same time would have moved in her orbit from G to K, and besides have partaken of the progressive motion of the earth. Then, if K L be drawn parallel to A I, (the line K L must be sup- plied in the figure) and taken equal to it, the moon, if not attracted to the sun, would be found in L. But the earth, by the sun's action, is re- moved from I. Suppose it were moved down to M in the line I M N parallel to S A, and if the moon were attracted but as much, and in the same direction as the earth is here supposed to be attracted, so as to have descended during the same time in the line L O parallel also to A S, down as far as P, till L P were equal to I M, let P M be joined, the angle P M N will be equal to LIN; that is, the moon will appear advanced as much farther forward as if neither it nor the earth had been subject to the sun's action. But this is on the supposition that the actions of

the sun upon the earth and moon are equal ; where- as the moon being acted upon more than the earth, did the sun's action draw the moon in the line LO parallel to AS, it would draw it down so far as to make LP greater than I M, whereby the angle P M N will be rendered less than LIN. But, as the sun draws the earth in a direction oblique to I N, the earth will be found in its or- bit, somewhat short of the point M. However, the moon is attracted by the sun, still more out of the line LO, than the earth is out of the line IN ; therefore, this obliquity of the sun's action will yet farther diminish the angle under PMN. Thus the moon, at the point G, receives an im- pulse from the sun, whereby her motion is ac- celerated ; and the sun producing this effect in every place, between the quarter and the con- junction, the moon will move from the quarter, with a motion continually more and more ac- celerated ; and therefore, by acquiring, from time to time, an additional degree of velocity in its or- bit, the spaces which are described in equal times by the line drawn from the earth to the moon, will not be everywhere equal, but those towards the conjunction will be greater than those towards the quarter. But, in the moon's passage, from the conjunction D to the next quarter, the sun's action will again retard the moon, till, at the next quarter at E, it be restored to the first velo- city which it had in C.

280. When the moon moves from E to the full, or opposition to the sun in B, it is again ac- celerated ; the deficiency of the sun's action on the moon from what it has upon the earth, produc- ing here the same effect as before the excess of its action. Let us now consider the moon in Q, as moving from E towards B. Here, if she were attracted by the sun in a direction parallel to AS, yet being acted on less than the earth, as the lat- ter descends towards the sun, the moon will, in some measure, be left behind. Therefore, RF being drawn parallel to S B, a spectator would see the moon move as if attracted from the point Q, in the direction 11 F, with a degree of force equal to that whereby the sun's action on the moon falls short of its action on the earth. But the obliquity of the sun's action has here also an effect. In the time the earth would have moved from A to I, without the influence of the sun, let the moon have moved in its orbit from Q to R. Drawing,

therefore, RT parallel to A I, the moon, by the motion of its orbit, if not attracted by the sun, must be found in T ; and therefore, if attracted in a direction parallel to S A, would be in the line TV parallel to AS; suppose in W. But the moon in Q being farther off the sun than the earth, it will be less attracted ; that is, T W will be less than I M ; and if the line N M be pro- longed towards X, the angle XMW will be less than XIT.

281. Thus, by the sun's action, the moon's passage from the quarter to the full would be ac- celerated, if the sun were to act on the earth and moon in a direction parallel to AS ; and the obli- quity of the sun's action will still

increase this ac- celeration : for the action of the sun on the moon is oblique to the line SA, the whole time of the moon's passage from Q to T, and will carry her out of the line TV towards the earth. Here we suppose the time of the moon's passage from Q to T so short, that it shall not pass beyond the line S A. The earth will also come a little short of the line I N, as was already mentioned ; and from these causes the angle XMW will be still farther lessened. The moon, in passing from the opposition B to the next quarter, will be retarded again in the same manner as it was accelerated before its appulse to the opposition ; and thus the moon, by the sun's action upon it, is twice acce- lerated, and twice restored to its first velocity every circuit it makes round' the earth ; and this inequality of the moon's motion about the earth is called by astronomers its variation.

283. The orbit of the moon is dilated when nearer the sun, and contracted when she is more remote : for it has been proved by Newton, that the action of the sun, by which it dimi- nishes the earth's power over the moon in the conjunction or opposition, is about twice as great as the addition to the earth's action by the sun in the quarters ; so that, upon the whole, the power of the earth on the moon is diminished by the sun ; and therefore is most diminished when that action is strongest. But as the earth, by its approach to the sun, has its influence lessened, the moon, being less attracted, will gradually re- cede from the earth ; and as the earth, in its recess from the sun, recovers by degrees its former power, the orbit of the moon must again contract.

284. Two consequences follow from hence, viz. that the moon will be more remote from the earth, when the latter is nearest the sun, and will take up a longer time in performing its revolution through the dilated orbit, than through the more contracted. These irregularities would be pro- duced, if the moon, without, being acted upon unequally by the sun, should describe a perfect circle about the earth, and in the plane of its mo- tion : but, though neither of these circumstances take place, yet the above-mentioned inequalities occur only with some little variation with regard to the degree of them ; but some others are ob- served to take place from the moon's motion be- ing performed in the manner already described. For, as the moon describes an ellipsis, having the earth in one of its foci, this curve will be sub- jected to various changes, neither preserving constantly the same figure nor position; and,

because the plane of this ellipsis is not the same with that of the earth's orbit, it follows, that the former will continually change ; so that neither the

inclination of the two planes towards each other, nor the line in which they intersect, will remain for any length of time unaltered.

285. The various forces by which the motion of the moon is disturbed, and the changes which take place in its orbit, may be investigated in the following manner. See plate IX. fig. 13. Let C A B D be the moon's orbit, T the earth, S the sun, P the moon ; make SK =z ST ; and let SK : SL : : S P2 : S K2. Then if SK or ST represent the sun's force at T, SL will represent his force at P. Draw L M parallel to PT ; divide the force LS into the two forces LM acting parallel to PT, and MS acting parallel to TS. But the force LM, and the part TM disturb the moon's motion. ••• . The force L M in its mean quantity is equal to PT, and by so much the force of the earth is in- creased. Also TM in its mean quantity is equal to 3 PK, acting in a direction PN parallel and equal to T S ; and the force M T draws the moon out of her orbit. Let P p be the periodical times of the earth and moon ; then the sun's centripe- tal force at T (ST) : the earth's centripetal force

ST PT at P : : ••• : ••• ; therefore the earth's centripetal

PTx PP

force at P ••• And this is to the ad-

Pf

PT x PP

ditional force PT : : : P T : : P P : pp.

PP

That is, the force by which the moon is retained in her orbit : is to the increase of centripetal force by tin; sun's action : : PP : />/; : : 178'725 : 1. ••• Therefore the increase of the moon's centripetal

force is – of that force.

1 fo'725

2f!t>. Also force PT : force 3PK or PL : : PT : 3 P K. Therefore, ex u-quo, the force by which the moon is retained in her orbit: disturbing force PL or TM : : PT X 178-725 : 3 PK. Therefore

3PK

the disturbing force T M ••• ••• – ••• – X earth's

centripetal force on the moon~3►► the sine of the moon's distance from the quadratures X earth's centripetal force, divided by 178-725 X radius.

Lot C, r,be the centripetal forces of the sun and earth, x ►►► sine of the moon's distance from the quadrature, radius zz r. Then the additional force

(PT)►►► ►►►

178 '725

And the disturbing force (TM)

178-725r

Produce TP, and make Pit = PL, or TM, and draw KQ perpendicular to TQ. Then QR is the force that accelerates the moon, and PQ is the diminution of its centripetal force.

For the force 1'K is divided into two forces, P Q, and Q K, of which 1′ Q, acting towards Q, diminishes the moon's centripetal force ; and QR being parallel to the tangent at P, accelerates the moon at P.

287. There are therefore four points in the rnoon's orbit, each :i.">" l(i' from the quadratures, where the moon\ disturliini; force makes no alteration in the earth's central force.

For the triangles P K T and P Q R are similar – whence PK : PT : : PQ(PT) : PR (3PK) ; there- fore 3 P K2 = P T2, or 3ss = rr, whence s =

V-| = s- 35►► 16'. And when PQ ►►► PT, the

diminution of the force is equal to the addition, which makes no alteration.

The mean force PT is ►►► of the force

643410

of gravity of the earth.

For the force of gravity is 3600 times greater than the force at P.

The whole increase of the centripetal force at P is

171-725

For rad (r) : s : :

a

178-725

Irs

PK =

And PR = 3PK = -ˆ ⬚⬚⬚ And 178-725r

And PT ⬚⬚⬚ PQ = whole additional

178‘725r

3css 178-725rr’

force =

If A = sine of twice the moon’s distance from the quadratures; then the force QR, accelerat- ing or retarding the moon’s motion in its orbit, is

3c _A 178-725 X2r’ ” Let z = S.QPR or KPT = cos. PTK; then

3c x sz = (by trigonometryˆ 3c

178-725rr 178.725

A

2r ”

288. Hence the moon is accelerated in the quadrants C A, D B ; and retarded in the qua- drants AD, BC ; and the force which accelerates or retards the moon’s motion, is greatest in the octants.

For it is greatest when A is greatest, that is, when 2 CP is ninety degrees, or C P r= 45⬚⬚.

The disturbing force TM, in the syziges A and B, is 2 P T. And therefore the earth’s force upon the moon in the syziges, is twice as much di- minished, as it is increased in the quadratures.

The moon’s orbit is more flat in the syziges, and more curve in the quadratures; and there- fore she goes farther from the earth in the quadratures.

For the orbit will be more curve where the central force is greater, that is in

the quadratures.

289. The motion of the moon's nodes, sup- posing her orbit to be nearly circular, may be thus found :

In fig. 7, plate XIII, let AgBQ be the moon's orbit, T the earth, P the moon, S A B the line of the apsides, Q, q the quadratures, wzNn the line of the nodes. P K, PH, AZ perpendiculars upon T Q and Nn. The force by which the moon is drawn out of her orbit has been found to be

PJˆATEIX.

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J.Stauy sculp.

ASTRONOMY.

129

c. Let PM be the arch

_3s __ r = 178-725r

which the moon describes in any small time ; and M L a small line, which the moon describes

*in the same time by the force – ††† ††† ††† . c, as this 59*575r*

force is directed to the sun, the line M L will be parallel to TA. As ML is the distance that the moon is drawn from the arch P M, by the said accelerative force ; 2 M L will be the uniform motion it has acquired in that time, by the said force. Let M P be continued back to m, in the moon's orbit, to cut the line of the nodes T N in m. Now since M L is parallel to the ecliptic ; a plane drawn through M L and M P m, will cut the ecliptic in a line m I, which will be parallel to ML; therefore draw LPl to cut ml inland the triangles PML and Pml are similar, and there-

*fore ml ††† =. †††- **††† 5 but since MP is given,*

and M L is as the force 3 P K, therefore m I is as mP X P K. Now when the moon was at P, the line of the nodes was at T m, where the plane of the moon's orbit T M P cuts the ecliptic. But, when the moon comes to L (instead of M), the plane of her orbit will then be in the plane TLP ; and the line of the nodes at T/, where the plane TLP/ cuts the ecliptic. Therefore the angular motion of the nodes generated in that time will be ††† angle mTl. But the angle /††T /

is as ~ x sine of 1ml or AT N ; that is, as im

“^x PK x AZ ; that is, because by similar

mf

. . /mP PH\ aa PH xPK . 7 tnangles Qp= ^) as ⬛⬛⬛p^ X AZ,

that is, (because PT is given) as PH x PK x AZ.

The line M L is to the versed sine of the arch PM, as the forces that produce them; that is, as

. c to c, or as s to 59‘575r. That is 59-575r

ML: — : : s : 59‘575r ; therefore ML=PM.!. 2MT 2MT

- ⬛⬛⬛ . When P falls upon A, or the moon is 59‘575r

in the syzigy ; then s ⬛⬛⬛=. r, and the angle PML is a right angle : therefore in the triangle PML,

*0”*P/=*

PM

And if N be at Q,

2MTX 59-575-

or the nodes in the quadratures, and P at A ; then PM and PL being parallel to the ecliptic, n and I will be at an infinite distance, and then theanjile mil will be equal to mPl, whose sine is

PM

⬛⬛⬛ ⬛⬛⬛ Tj, – _. And the angle mfl answering

to 2M L is the motion of the node, whose sine is

PM

rps – . Suppose P M to be described in

jjfi L X \) J dt 5*

an hoar, then P M or the mean horary motion is 32′ 56”⬛⬛, whose sine, as it differs insensibly from

32′ 56”□□□ the arch, we shall have the arch □□□ □□□ ?-

(putting PM □□□ 1) n 33′ 18”, where all the VOL. III.

angles PTK, PTN, and STN are right angles. And in other cases, the horary motion of the node will be to 33-18”, as the product of the sines of the three angles P T K, P T N, and S T N, to the radius cube ; and the nodes are regressive when all the sines are positive. But if any sine changes to be negative, the nodes will be pro- gressive.

290. Hence the nodes are progressive, when the moon is between either quadrature, and the node nearest that quadrature; otherwise they are regressive. And by the excess of the regress above the progress, they are in the whole moved forward.

For in the arches Q A n and q B N, P K and P II are both affirmative or both negative. And in the arches NQ, nq, only one is negative, the other being affirmative.

If it were not for the sun’s perturbating force, the moon would always describe the same ellip- sis, and the transverse axis and eccentricity of the orbit would remain unaltered. But since the perturbating force of the sun always acts upon her more or less, and causes all the irregularities of her motion ; it is evident that all these effects will be the greater as that force is the greater. But when the transverse axis, or line of the ap sides, is in the syziges, then the perturbate force TM or 3 PK, fig. 13, plate IX., is the greatest possible, by which the moon is removed farther from the earth, and consequently the transverse axis is lengthened, and the eccentricity becomes greater. And the contrary happens when the transverse is in the quadratures ; for by its being in the quadratures, the force LM is greater; and the whole centripetal force towards T being greater, the body will be drawn nearer the earth, and describe a less orbit, or one less eccentric than before. Therefore when the apsides are in the quadratures, the eccentricity is less ; and when they are in the syziges, it is greater. But how much it is greater or less depends upon the mean eccentricity; and that depends upon ob- servation.

292. Hence the eccentricity continually in- creases, as the apsides move from the quadratures to the syziges ; and decreases from the syziges to the quadratures. And the eccentricity of the orbit continually increases, as the moon passes from the quadratures to the syziges; and de- creases, in passing from the syziges to the quad- n. ratures. For the perturbating force increases from the quadratures to the syziges, and de- creases from the syziges to the quadratures.

293. It is certain that comets are not meteors in our air, because they rise and set in the same manner as the moon and stars. It is long since astronomers had gone so far in their enquiries concerning them, as to prove by their observa- tions that they moved in the celestial spaces beyond the moon ; but they had no notion of the path which they described. Now the power of the sun being reciprocally in the duplicate pro- portion of the distance, every body acted upon by him must either fall directly down or move about him in one of the conic sections. If a

body which descends towards the sun as low as the orbit of any planet, move with a swifter mo- tion than the planet, it will describe an orbit of a more oblong figure than that of the planet, and have at least a longer axis. Tho velocity of the body may be so great, that it shall move in a parabola, so that having once passed the sun, it shall ascend for ever without returning, though the sun will still continue in the focus of that parabola ; and with a velocity still greater, they will move in a hyperbola. The best observa- tions, however, show that the comets move in very eccentric ellipses ; and hence those bodies are sometimes found at a moderate distance from the sun, and appear within the planetary regions ; at other times they ascend to vast distances, far beyond the orbit of the most distant known planet, and become invisible.

294. The analogy between the periodic times of the planets, and their distances from the sun, discovered by Kepler, of course takes place, also in the comets, at least in those which revolve in elliptic orbits ; and consequently, if the periodic time of a comet were known, its mean distance might be easily computed. Now the comet of 17.59 is known to perform its revolution in se- venty-six years nearly, whence it appears that its mean distance is about eighteen times that of the earth, or a little less than the mean distance of 1 ramis : but, in consequence of the great eccen- tricity of its orbit, its aphelion point, or the greatest distance from the sun, is nearly double that of the above planet. The perihelion dis- tunce of this comet is about six of the mean dis- tance of the earth, which being taken from 36, the mean transverse axis of its orbit, leaves 35‘4 tor its aphelion distance, which is nearly double the greatest distance of Uranus, and about four times that of Saturn.

21.'."). The above is the only comet whose pe- riodic return has been ascertained, till the recent re-discovery of Knke's comet, and consequently the only one \hose mean distance can be known; but with regard to the perihelion distance of these bodies, this may be determined by observa- tions ; and accordingly \ve have an account of this element of the orbits of about 100 comets, which have been o!>s Tve.l wit'.i considerable accuracy. rJhe greater number of th-.sj have had their pe rihelion point t'ul! within the terrestrial orbit, and I'.iany of ;hi r.i at s tl.au half the mean distance of the e:>roaches the nearest to the sun, it- peril) 'lie,:! distance beiucr only '006 of the put i[image]TEW is known from observation and consequently its equal E T S, together with T E S, the angular distance of the comet from the sun, and ES to find ST, the limit of the comet's distance.

ON THF. ORBITS OF COMETS, AND THEIR PERIO- DICAL REVOLUTIONS.

297. It is extremely difficult to determine from computation, the elliptic orbit of a comet to any degree of accuracy ; for when this orbit is very eccentric, a very small error in the observa- tion will change the computed orbit into a para- bola, or hyperbola. Now from the thickness and inequality of the atmosphere with which the co- met is surrounded, it is impossible to determine with any precision, when either the limb or cen- tre of the comet pass the wire at the time of observation. And this uncertainty in the obser- vations will subject the computed orbit to a great error. Hence it happened, that M. Bouguer determined the orbit of the comet in 1729 to be an hyperbola. M. Euler first determined the same for the comet in 1744 ; but having received more accurate observation, he found it to be an ellipse. The period of the comet in 1680 ap- pears from observations to be 575 years, which M. Euler by his computation determined to be 166j years.

298. The only safe way to get the period of comets, is to compare the elements of all those which have been computed, and where you find they agree very well, you may conclude that they are elements of the same comet ; it being so extremely improbable that the orbits of two dif- ferent comets should have the same inclinations, the same perihelion distance, and the places of the perihelion and node of the same. Thus, knowing the periodic time, we get the major axis of the ellipse, and the perihelion distance being known, the minor axis will be known. When the elements of the orbits agree the comets may be the same, although the periodic times should vary a little ; as that may arise from the attrac- tion of the bodies in our system, and which may also alter all the other elements in a small degree. The following approximating method of deter- mining that part of a comet's orbit through which it moves, while it can be observed from the

earth, is due to Boscovich.

299. Having collected the greatest possible number of observationSj choose three of them which were taken' when the comet was not too near its perihelion, (because near the perihelion the orbit does not differ sensibly from a circle), and

make these the basis of the operations : let S, plate VI. fig. 6, be the sun, U W the orbit of the earth, supposed here to be a circle, E the place of the earth at the first, e at the third, draw E,C, e c, to represent the observed directions of the comets, and let L, I, w, be the longitudes of the first, second, and third observations, m and n the geocentric latitudes of the first and third ob- servation, and t, T, the intervals of time between the first and second, second and third observa- tions. Assume C for the place of the comet at the first observation, reduced to the ecliptic ; then, to determine the place of the third observa- tion, say T X sine w ††† / : t x sine / ††† L : : E C : e c, and c wril be nearly the place required : join C c, and it will represent the path of the comet on the ecliptic, according to this assump- tion. Draw C K, c k, perpendicular to the eclip- tic, taking C K : E C : : tang M : radius, and ck : ec : : tang n : radius ; join K k, and it will represent the orbit of the comet, if the first assumption be true. Bisect C c in x, and draw xy parallel to C K, and K k will be bisected in y ; join y s. Let S E††† 1 ; then if v be the mean velocity of the earth in its orbit, the velocity of

/2 y ?)

the comet at y~ . ??? (Art. 586), taking there- V sy

/2 y v fore f??? E e, compute ??? ~??? ??? and if this be equal

to K k, the assumed point C was the true point.

300. But if these quantities be not equal, a new point must be assumed for C, in choosing which we must be directed by the nature and quantity of the error arising from the first assump- tion; thus if the computed value of K/c, be greater than its value measured in the figure, and the lines C K, c k diverge from each other as they recede from the sun, the point c must be taken farther from E by how great a quantity we must conjecture from the magnitude of the error, and from the consideration that the comet's velocity diminishes as it recedes from the sun. Find C K, c k, as before, and compare the measured and computed value of K k ; and if a fresh as- sumption be necessary, make it in conformity to the considerations above suggested. Having thus ascertained the position of the points C, c, very nearly produce c C, k K to meet at N ; join N S, and it will be the line of the nodes ; and if C r, c z, be drawn perpendicular to N S, either of the angles K r C, kzc will measure the inclination of the orbit. Also from the two distances S C, S c, and the included angle C S c, the parabola may be easily constructed ; thus, having set off S C, S c (fig. 10, plate VI.) in their proper rela- tive position, with the centres C, c, and radii equal to SC, Sc, describe the arcs a R o, eri, and draw the line II r d to touch those arcs, this line will manifestly be the directrix of the para- bola : which, being known, together with the focus S and the determining ratio (that of equa- lity), the parabola may be constructed.

301. Or, letting fall SD perpendicularly upon R D, and bisecting it in A, the vertex and focus of the parabola A c C will be known ; whence it may be drawn by well-known methods. From either of these constructions, the ratio of the co- met's perihelion distance SA (fig. 1. plate IX.)

to the earth's mean distance S E (fig. 10. plate VIII.), will be known, and consequently the comet's velocity in perihelion: the velocity in either of the points C, or c, will be determined by the observations ; and since the angular dis- tances are reciprocally as the squares of the dis- tances from the centre of force, the S C, S r, are hence found in terms of S E : if these agree nearly with the construction, the assumptions have been properly made ; if not, some farther corrections are necessary. The angles A S C, A S c, may either be measured or calculated from the known distances ; then

having the perihelion distance and the true anomaly, the time from the perihelion may be determined, whence, as the observations will show, whether the comet be approaching to, or receding from, the perihelion, an epoch of the perihelion will readily be ascer- tained.

302. When a parabola is found to agree nearly with the given positions, it is needless to continue the approximation farther ; for if the observations are accurate, we cannot expect a parabola to agree perfectly with them ; if the body move in an ellipsis, as it is highly probable that all these bodies do. If the observations are only nearly accurate, a parabola found to agree with them, might probably not agree with other observations made upon the comet.

SECT. VII. ❖❖❖ OF THE BODIES OF THE SUN AND PLANETS, THE QUANTITY OF MATTER THEY CON- TAIN, AND THEIR DENSITIES.

303. The primary planets and comets being retained in their orbits by a power directed towards the sun, and the secondaries being also retained by a similar power directed to the cen- tre of the primaries, the same power is diffused through their whole substance, and inherent in every particle. This is proved by showing that each of the heavenly bodies attracts the rest, and other bodies, with such different degrees of force, as that the force of the same attracting body is exerted on others, exactly in proportion to the quantity of matter contained in the body at- tracted.

304. The first proof of this is from the experi- ments made on bodies on our earth. Pendulums vibrate by the same power which makes heavy bodies fall to the ground ; but if the ball of any pendulum of the same length with another were more or less attracted in proportion to the quan- tity of solid matter it contains, that pendulum would vibrate faster or slower than the other. Now the vibrations of pendulums continue for a long time, and the number of vibrations they make may be easily and correctly determined ; and Newton assures us that he examined several substances, as gold, silver, lead, glass, sand, common salt, wood, water, and wheat ; in all which he found not the least deviation from the theory, though he made the experiment in such a manner that, in bodies of the same weight, a difference in the quantity of their matter less than the thousandth part of the whole would have dis- covered itself.

*305. It appears, therefore, that all bodies are made to descend here by the power of gravity w:*h the same degree of swiftness. This descent*

has been determined at 16J feet in a second from the beginning of their fall. If any terrestrial body could be conveyed as high as the moon, it would descend with the very same velocity as the incremental deflection of the moon towards the earth ; and therefore the power of the earth upon the moon is in the same proportion to its force on other bodies at the same distance as the quantity of matter in the moon bears to the quantity in those bodies. Thus with respect to the earth, its power on every body it attracts is, at the same distance from the earth, proportional to the quantity of solid matter in the body acted upon.

306. As to the sun, the power of his action upon the same primary planet is reciprocally in the duplicate proportion of its distance; and that his power decreases throughout in the same pro- portion, is testified by the motion of the planets traversing the whole planetary regions. Hence if any planet were removed from the sun to any distance whatever, its tendency towards the sun would yet be reciprocally in the duplicate pro- portion of the distance. But the degree of ac- celeration given to the planets by the sun is observed to be reciprocally in the duplicate pro- portion of their respective distances ; from this we may safely infer, that the power of the sun upon any planet removed into the place of any other, would give it the same velocity of descent as it gives that other; and consequently, that the Dili's action upon differ.- ant planets at the same ii n;">e would be proportionable to the quantity of matter in each. The sun attracts the primary pla;n.ts and their respective secondaries, when at tiie same distance, in such a manner as to com li'.inicnte to both tlie same degree of velocity ;

d therefore the force wherewith the sun acts 'comlary planet, bears the same propor- tion to the force wherewith it attracts the primary,

□□□ tin- quantity of matter in the secondary planet i ears to tin.' quantity of matter in the primary.

:;t>7. Tiiis property therefore is found in the

>im with regard to both kinds of planets ; so that

lie possesses the same (nudity found in the earth,

□□□.iz. that ot acting on bodies with a degree of

v proportional to tiie quantity of matter they

contain. A!! the phenomena of the planetary

motions pmdueed by their mutual attractions

agree precisely v.i:h tins law of force; and we

an- tlieiu-e warranted in concluding, that this is

uii the gi eat Author of nature

is appointed to re idate the motions at least of tin – s',-;n ;o v.'ii'-i \ u inlong.

'. In a v. d-d, the attractive power both of

the ******'in and tin: planeN appears to be the same;

t acts in tue'i m the same proportion to the

distance, ai, 1 alike upon every particle of matter.

This power tin-More in the sun and planets,

e in its nature as the power of gravity

ie t ,irtii ; and hence tin- attracting power

i-i the sun and planets belongs likewise to

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M;H would attrai t it at the same distance, as the ***uantity of solid matter in the earth i; to that in

e SUIl.

309. The rule that action is equal to re-action holds good in attractive powers as well as in any other powers. The most remarkable force of this kind with which we are acquainted, next to that of gravity, is the attraction which the load- stone has for iron. Now if a loadstone and piece of iron are both made to swim on water, they move towards each other, and thus the attraction is shown to be mutual ; and when they meet, they mutually stop each other ; which shows that their velocities are reciprocally proportioned

to the quantities of solid matter in each ; and that by the stone's attracting the iron, it receives as much motion itself, in the strict philosophic sense of the word, as it communicates to the iron.

310. From this mutual action of the sun and planets upon each other, it follows, as has been already mentioned, that they both revolve about their common centre of gravity. Thus let A (in plate IX. fig. 7.) represent the sun, B a planet, and C their common centre of gravity. If these bodies were once at rest, they would directly ap- proach each other by their mutual attraction, arid that with such velocities, that their common centre of gravity would remain at rest, and they would meet in that point. Were the planet B to receive an impulse, as in the direction B E, this would prevent the two bodies from falling together; but their common centre of gravity would be put into motion in the direction of the line C F, parallel to B E. In this case, the sun and planet would describe round their common centre of gravity similar orbits, while that centre would proceed with an uniform velocity in the line C F, and so the system of the two bodies would move on with the centre of gravity without end. In order to keep the system in the same place, it is necessary, that when the planet re- ceived its impulse in the direction B E, the sun should receive such another the contrary way, so as to keep the centre of gravity, C, without any motion, in which case it would always remain fixed.

311. The action therefore between the sun and planets is mutual. The power which acts be- tween the sun and primary planets is of the same nature with that which acts between the secon- dary planets and their primaries, or between the earth and bodies near its surface. In different planets the force of the sun's action upon each at the same distance, would be proportional to the quantity of solid matter contained in the planet : therefore the re-action of the planet on the sun at the same distance, or the motion which he would receive from each planet, would also be pro- portional to the quantity of matter in the planet ; that is, these planets, at the same distance, would act on the same body, with the degrees of strength proportioned to the quantity of solid matter con- tained in each.

312. From these principles Newton has proved that the particles of which the sun, moon, and planets are formed, exert their power of gravita- tion by the same law, and in the same proportion to the distance, as the great bodies they compose.

313. The following propositions constitute the principal steps in the process of the investiga- tation. In fig. 4, plate VI., if A B is perpen- dicular to AC, and a corpuscle at C is atti acted

towards every particle of the line A B, by forces _ 2 p x 2 a a- ††† x* inversely as the squares of the distances, then the whole force which the particles in A B exert

AD

upon C, in the direction AC, is as

†††; wmch multiplied by

2 b-c + x c x + x x . pXlaxx ††† xx

††† ††††††††††† .

For put AC ††† a, and AD, any variable part of AB ††† x ; then the force of a particle at D being

as T-TTT; in the direction DC, its force in the *j\j

AC a

direction AC, will be as TTTTJ '†††> or

††† gives

-

for the

Hence

(a2 + **)- represents the fluxion of the

†††whole force, whose fluent is ††† or

AD CA x CD-

314. Again, let B C D E, plate VI. fig. 5, re- present a circular plane, and H a corpuscle per- pendicularly over its centre, then if the forces with which each particle in the plane acts upon H be inversely as the squares of the distances, the force with which II will be urged towards the

plane will be represented by (I SIT/2 P '

p bemg = 3-14159, &c. For let AH = a, and H I =. x ; then A 62=z x2 ††† a2; andp.. A 62 ††† p. x* ††† a2 ††† the area of the

circle, A c d b e ; and the fluxion of the area of this circle is 2p x x. But the force of a particle at b in the direction

H A is as ••• , or ••• , by the preceding pro- position ; therefore the fluxion of the whole force

willbe2^!*^^. The fluent of this

corrected, gives 2 p x 1 ^ 2 p x 1 •••

AH BH

for the whole force.

315. To apply this to the determination of the law of force, by which a particle without a sphere would be acted upon by that sphere, the law of force of each particle in the sphere being in- versely as the squares of its distance ; let A B E C, plate VI. fig. 3, represent a section of a sphere of which the centre is F ; let H be the particle, draw B C perpendicular to H E, join II B and B A. Put A F = a, F H = b, AH = F^~a = C, H D =r y and H B = c + x ; then A D ••• y ••• c, ED••• 2 a ••• y + C, and hence B D2 ••• A D ••• D E = HB2 ••• H D2, orj=~c X 2 a ••• y -f c ••• c + x2 ••• 7/2, an equation

from which we get y ••• 2ac + 2t-'2+2cJ + x2 2a + 2c

••• •••^ ••• ••• , as a + c ••• b. Hence,

the attractive force of the particles on the circle whose diameter is B C is, by the last proportion,

2 6 x c + *

fluxion of the required force, and the fluent of

this expresssion, P x ax ~~ % x is the force of

62

the segment ABC, and therefore when B coin- cides with E, or x ••• 2 a, this expression be-

4 D G?

comes ••• ^-r ••• the attraetive force of the whole

sphere.

316. If the particles, of which the globe is composed, acted upon those without in the re- ciprocal duplicate proportion of their distances, the whole globe would hence act upon them in the same manner as it does ; but, if the particles of the globe have not all of them that property, some must act in a greater, and some in a less proportion ; and if this be the condition of the globe, it is plain that when the body attracted is in such a situation in respect of the globe, that the greater number of the strongest particles are nearest to it, the body will be more forcibly at- tracted than when, by turning the globe about, the greater quantity of weak particles should be nearest, though the distance of the body should remain the same from the centre of the globe ; which is contrary to what was at first remarked, that the globe acts equally on all sides. If all the particles of the globe attract all the particles of another in the proportion already mentioned, the attracting globe will act upon the other in the same proportion to the distance between the cen- tre of the globe which attracts, and the centre of that which is attracted : and the proportion holds true, though either or both of the globes be com- posed of dissimilar parts, some rarer, and some more dense ; provided only that all the parts in the same globe, equally distant from the centre, be homogeneous, and likewise if both globes at- tract each other.

317. It is thus shown, that this power in the great bodies of the universe is derived from the same bsing lodged in every particle of the mat- ter which composes them ; and consequently that it is universal in matter, though the power is too minute to produce any visible effects on the small bodies with which we are conversant, by their action on one another. In the fixed stars indeed we have no particular proof that they have this power, as we find no appearance to demonstrate that they either act or are acted upon by it. But since this power is found to belong to all bodies whereon we can make ob- servation, and we find that it is not altered by any change in the shape of bodies, but ac- companies them in every form without diminu- tion, being ever proportional to the quantity of solid matter in each, it is highly probable thai such a power belongs universally to all matter.

318. From the times in which the satellites pertorm their revolutions, compared with their distances from their respective primaries, the proportion between the power with which one primary attracts his satellites, and the force with

which any other attracts his, may be found ; and the proportion of the power with whicli any planet attracts his secondary to the power with which it attracts a body at its surface, is found by comparing the distance

of the secondary planet from the centre of the primary with the distance of the primary planet's surface from the same ; 1 and from hence is deduced the proportion be- tween the power of gravity upon the surface of one planet to the gravity upon the surface of another.

319. In a like manner by comparing the periodical time of a primary planet about the sun, with the revolution of a satellite about its primary, may be found the proportion of gravity, or of the weight of any body, on the surface of the sun, to the gravity or to the weight of the same body upon the surface of the planet which carries about the satellite.

320. Amongst the ancient mathematicians, nothing could have appeared more completely out of the reach of human intellect, than by calcula- tion to determine the internal structure of remote and inaccessible bodies, that is, than to find the densities of the planets. Such, however, has been effected in modern times. The density of a planet can be found by comparing the velocity in its orbit round the sun with the velocity of its satellite, or by determining the distance which it deflected from its tangent in one second of time, comparing its angular velocity with the mean radius of its orbit, and by knowing the space which a heavy body falk through in one second by the force of gravity at its surface.

321. To understand the principle upon which this determination rests, we may observe that the effect of attraction at equal distances will be in

proportion to the quantity of matter in the at- tracting body ; and at different distances, as the quantity of matter and the inverse square of the distance conjointly. The quantity of matter is also in proportion to the magnitude of the body and its density conjointly. If therefore we know the effects of the attraction of different bodies, together with their magnitudes, we can find their densities, and thence their quantities of matter.

To find their densities, put

d = the density of the celestial object,

m = its diameter,

a = its quantity of matter,

P = the periodic time of the revolving body,

D = the mean distance of the revolving body from its central body,

s = the sine of the angle under which m ap- pears at the distance D, to radius unity.

D3

Then a varies as dm3, and P2 varies as ❓❓❓ ,or

a ‘

D3

dm3

hence, d varies as

P2

but s =s

m , 7 . i

-yL ; hence, d vanes as -j-pj .

From this we conclude that the logarithm of the

density varies as 3 x log. 2 log. P. But.

m

*in order to make the comparison between dif- ferent planets as simple as possible, we shall suppose the density of the sun to be 1, and find a logarithm, which, taken from the above formula, will make it so. Forthis purpose we shall take the diameter of the sun ❓❓❓ 883,217 miles, its distance from the earth 95,000,000 miles, and the earth’s periodic time 365*2564 days. Hence, we have ❓❓❓*

2-0316562 X 3 = 6‘0949686

Log. P= log. 36,V25G4 = 2-5625978 X 2 ❓❓❓ 5-1251956

0-9697730

th.’ logarithm of the sun’s density. Hut the lo- 325. To find the density of Saturn, if we take

jˆanthm of 1 is o ; hence the logarithm of the den- D

sity of a planet is to that of the sun, considered as tlie second satellite we shall have ❓❓❓ = 2‘75,

is l to 3 x log. -.❓❓❓ 2lo-P❓❓❓ -9G97730. and P = 2-7368,

therefore 3 x log. -5 ⬚⬚⬚2 log.

3-Jo. To tinu tlie density of the earth, we take r, nˆr,.⬚⬚⬚⬚⬚⬚ ⬚⬚⬚ it ⬚⬚ ˆL i

*the moon :,s tl,e revoh.nu, and the earth as the P/7c-7 ?? ” 7f SlJh ? 3J389′ \ *’*

central body, i) – 240000, ,⬚⬚⬚ = 7955, and P OJ”29‘7- Let us take the fifth ; then we have

- ⬚⬚⬚ 27, and P zr 79‘3196. Hence 3 x log. Jual to ⬚⬚⬚ .‘5959255, the log. of) _ 2 log. P ⬚⬚⬚ ‘9697730 is equal to ⬚⬚⬚

To find the density of Jupiter. If we take the 1-5255573 the log. of ‘3354. first satellite as the revolving body, wo shall have 326. To find the density of Uranus, if we take

-~-2-838,> and I’⬚⬚⬚ 1-7G91 ; hence 3 x log. the third satellite we shall have ⬚⬚⬚ ⬚⬚⬚ 9‘5, and

m

2 log. -9(597730 is then equal to 1-8916918 P⬚⬚⬚ 10‘9611,then 3 X log – ⬚⬚⬚ 2 log of P ⬚⬚⬚

m

9697730 is equal to ⬚⬚⬚ 1-8836886, the log. of ⬚⬚⬚“150. Again, let us take the sixth satellite, and we

*shall have ⬚⬚⬚ ⬚⬚⬚ 44, and P zz 107*6944; hence,*

3 X log. ⬚⬚⬚ ⬚⬚⬚ 2 log. P ⬚⬚⬚ -9697730 is equal to

m

sh, ill have — ⬚⬚⬚ 1-2Y>5 and 1′ ⬚⬚⬚ 1G’G8898,

A S T R t) N O M Y.

135

⬚⬚⬚ 1-8961985 the log. of 7874. A trifling dif- ference, either in the periodic time, or the dis- tance of the satellite, will make a considerable difference in the density of the primary ; and nence, if these be not very correct, the density cannot be depended on with any degree of ac- curacy.

327. The above are the only planets whose densities can be found by this method. Those which have no satellite, have obliged astrono- mers to have resource to a method much less accurate, depending on the effect, which by ob- servation the planet is found to produce in dis- turbing the motions of the other planets. Dr. Maskelyne makes the density of Venus 1-024, and M. de la Lande 1-038, that of the earth being 1 . Laplace concludes the density of Mars to be ###6563, and of Mercury 2-5833, the earth being 1. The density of the moon has been estimated at 1-456 times the density of the earth.

If the density of the earth be taken equal to 4J times that of water, we shall have the densi- ties, or specific gravities, of the planets in the following proportions : ###

Sun 1-1410 nearly = to the specific gra-

vity of opaque copal Mercury 11-6250 ... . lead Venus 4‘6395 . . . molybdsena Earth 4-5000 . . . ponderous spar Moon 6-5520 . . . cast antimony Mars 2-9533 . . . flint glass

Jupiter 0-8891 . . . mulberry tree Saturn 0‘3612 . . . poplar Uranus 0-8856 . . . beech tree.

PART ITT.

EXPLANATION OF THE CELESTIAL PHE- NOMENA, ACCORDING TO THE NEW- TONIAN DOCTRINE.

SECT. I. ### OF THE CIRCLES, NODES, ASPECTS, CONJUNCTIONS, &c. OF THE PLANETS.

328. To a spectator placed in the sun all the planets would appear to describe circles annually in the heavens; for, though their motions are really elliptical, the eccentricity is so small, that the difference between them and true circles is not easily perceived, even on earth ; and at the sun, whether great or small, it would entirely vanish. These circles, which in such a situation would ap- pear to be annually described among the fixed stars, are called the heliocentric circles of the planets. To a spectator in the sun, the comets, though moving in the most eccentric orbits, would also appear to describe circles in the heavens : for, though their orbits are in reality very long ellipses, the planes of them extended to the heavens would mark a great circle of which the eye would be the centre ; only, as the real motion is in an ellipsis, the body would appear to move much more slow- ly in some part of the circle than another, and to differ excessively in magnitude.

329. To an inhabitant of any planet, however, the sun appears to go round in its own heliocen- tric circle, or to describe in the heavens that same curve, which the planet would appear to do if seen from the sun. Thus, in plate XVI. fig. 8, when

the earth is at a, if we draw a line from a through the sun at S, the point G, in the sphere of the heavens where the line terminates, is the place where the sun then appears to an inhabitant of the earth. In a month's time the earth will go from a to b ; draw aline then through the sun, and its extremity at II will point out his apparent place at that time. In like manner, if we draw lines from the earth in twelve several situations, in which it is represented for the twelve months of the year, the sun's apparent place will be found as above ; and so it would be found by a spec►► tator placed in Venus, or any other planet.

330. The heliocentric circle of the earth is call- ed the ecliptic ; because eclipses of the sun or moon can only happen when the latter is in or near it. By some ancient writers it has been called the circle of the sun, or the oblique circle, because it cuts the equator at oblique angles. It is also called by Ptolemy the circle which passes through the midst of the animals ; because the twelve constellations through which it passes, were anciently all represented by animals, or parts of them, though now the balance is intro- duced in place of the claws of the scorpion. For this reason a belt, taken in the concave sphere of the heavens, about ten degrees on each side of the ecliptic, is called the zodiac, from ►►wov, an animal, and the constellations through which the ecliptic is drawn, are called the constellations of the zodiac.

331. Although the sun apparently goes round the earth annually in this circle, we cannot deter- mine his place by mere inspection, as we can do that of any other heavenly body ; for the fixed stars are the only marks by which we can deter- mine the place of any of the celestial bodies ; and the superior brightness of the sun renders them totally invisible, except in the time of a great eclipse, when his light is for a time totally ob- scured. But though we cannot know the place of the sun directly, it is easily found from a knowledge of those fixed stars which are opposite to him.

332. Thus, in plate IX. fig. 9, suppose it the time of the year in which the earth is at g, if we know that the point G is then diametrically opposite to the sun, we know that A, its opposite, is the sun's place, and consequently, by finding the places throughout the year diametrically op- posite to the sun, as G II I K L M A B C D E F, we may be assured that in these times the sun's place was in the points A B C D E F G H I K L M. The point in the heavens diametrically opposite to the sun may be known every night at twelve o'clock when the stars are visible ; for the star which has an

elevation above the horizon, at that time equal to the sun's depression below it, is directly op- posite to him.

333. When the position of the ecliptic is thus determined, the latitude of the moon, or any star, is measured by its distance from the eclip- tic, in the same manner as the latitudes of places on the earth are reckoned by their distance from the equator, and circles passing through the poky of the ecliptic at right angles to its plane, ere called circles of latitude. The declination of any celestial body is its deviation from the equator towards the pole nearest to it.

3IU. The latitude of any planet is either he- liocentric or geocentric. The heliocentric latitude is its distance from the ecliptic as seen from the sun, and its geocentric as seen from the earth. As the orbits of the planets are inclined in different angles to the ecliptic, the heliocentric latitude of any planet, is almost always different from its geo- centric latitude. Thus, let AB, plate VII. fig. 1 1, be the orbit of the earth, C D the orbit of Ve- nus, viewed with the eye in their common section, wherein they appear straight lines ; let E and F be two opposite points of the ecliptic ; and sup- pose Verms to be in the point C. If she were at that time viewed from the sun S, she would ap- pear in the point of the heavens marked H, and her heliocentric latitude is then FH; but if viewed from the earth in E, she will appear at g ; and her geocentric is only F g.

335. The planets Mercury and Venus, whose orbits are included in that of the earth, are called inferior ; and Mars, Jupiter, Saturn, and the Georgium Sidus, are called superior planets. The two points where the heliocentric circle of any planet cuts the ecliptic, are called its nodes; and that which the planet passes through as it goes into north latitude, is called the ascending node, and is marked thus ?5 ; and the opposite to this is called the descending node, and is marked p, . A line drawn from one node to the other is called the line of the nodes of the pla- iH't. whivh is tin; common section of the plane of '.lie eeliptir, a;> 1 that of the planet produced on each .side to tlu: fixed stars.

:>;>G. The y.odiae is either astral or local, 'llic astral is divided into twelve unequal parts, 1'ecause it eoaeains tv/ulve celestial constellations, some of which are larger than others. The local xodiac is divided i:;to twolve equal part;, called M;J:MS, each containing thirty decrees. These are counted from the point v.'hero the equator and ecliptic int-rsect each ether at the tune of the venial eijiiiaov ; and are denoted by particular

marks, according to the apparent annual motion of the sun. See plate V. ii.:'. G. A motion in the heavens in the order of these signs, as from Aries t,i T;u;ru>. :> sud to lie a motion in conse- quence; and such a;e the true motions of all the planets. thou-Ji their apparent motions arc; some- times contrary, and then they are said to move in antecedence. The lord zodiac is not always in- vanahlv the same a> 1" the places (;f the several s,;n-,, though the whole adua\s takes up the same j>!aie in the heavens, v;/. ten decrees on each side the iJiptic. Tiie point', where the celestial equator < uts the ei lijiiie, are found to have a mo- tion in antecedence of about fifty seconds a ye ir.

?,'.\~ . This change o\ place of the first point of

✿✿✿✿✿✿ the si ;ns are counted,

e in the r-iu'ns themselves;

v hit ;., ;i.'... '✿✿✿.' fir a fe\v years,*

lias IIMV. 1 ✿✿✿ <✿✿✿ ' ,.:' ' :. Thus, since

a>troin ,.: the (!rc-c-ks,

wlii, h I- – a. MI. 'lie li;>t point Of

the . . :.<✿✿✿;. war ! p.hovo a whole

M,.i : ,- . ., t, ✿✿✿ .✿✿✿ . h it v, a – : .e,; a')i,i;t the middle 'if ;1 Mii>teu.;tii)n Aries, i-. i:o—.,- ahoet t'ne mid- dle of !v ✿✿✿✿✿✿✿✿✿✿. i\oi.v;lhstand,i ; this alteration, iin-.M yi r, the >:;;:IH -.till n ta nt'a.i aiici: iit names

and marks. When the zodiac is mentioned by astronomers, the local zodiac is generally meant. '

333. The longitude of a phenomenon in the heavens is in the number of degrees counted from the first point of Aries on the ecliptic to the place where a circle of latitude drawn through the phenomenon would cut the ecliptic at right angles. Every phenomenon in the heavens, whether in the zodiac or not, is thus referred to the ecliptic by its circle of latitude, or great circle, passing through the phenomenon, and cutting the ecliptic at right angles ; and whatever sign the circle of latitude passes through, the pheno- menon is said to have its place in that sign, though ever so far distant from it.

339. Some astronomers make the local zodiac invariable ; for which

purpose they imagine a cir- cle of latitude drawn through the first star of the constellation Aries, marked in Bayer's catalogue by the Greek letter y ; and reckon their longitude from the point where that circle cuts the ecliptic. This star is called the first star of the Ram ; and, when this method is made use of, the longitude of any phenomenon is said to be so many signs, degrees, minutes, &c. from the first star of the Ram. Thus, in Street's Caroline Tables, the longitude of Jupiter's ascending node is l\ > signs eight degrees from the first star of Aries, which is thus marked : Long. T►► ►►►► a 1 2* 8►►. The common way of reckoning the longitude of a phenomenon, is to take rp for the first point of the ecliptic, and not to number the degrees quite round that circle as a continued series, but to make a new beginning at the first point of every sign, and to reckon from thence only the length of 30►►. When this method is made use of, the longitude of any phenomenon is expressed by saying it is in such a degree, and such a minute of a sign : and thus we may express the longi- tude of the ascending node of Mercury, ►► $ & 13►► 40', nnd so of any other. The place of a' phenomenon in the heavens is expressed by set- ting down its longitude and latitude.*

340. Every planet, like the moon, is sometimes ►►►in conjunction with the sun, and sometimes in opposition. Its conjunction is when the geo- centric place of the planet is the same with that of the sun ; though an exact or central conjunc- tion can only take place when the line of its nodes passes through the earth, and the planet itself is in one of its nodes at the time. It is however, in general, called a conjunction or op- position, when the same circle of latitude passes through the sun and planet at the same time. When the geocentric place of a planet is 90►►, or a quarter of a circle from the sun's place, the planet is said to be in quadrature or in a quar- tile aspect with the sun ; and these terms are used in a like sense when applied to any two of the heavenly bodies. Thus the sun and moon, or the moon and any planet, or any two planets, may be in conjunction, opposition, or quadrature.

341. Besides these, the ancients reckoned two other aspects, the trine and the sextile; the for- mer when the bodies were distant 120►►, and the latter when only half that distance. These as- pects are marked thus :

*Conjunct. Opposition Quadra. Trine Sextile 6 8 DA**

The aspects were formerly supposed to influence the affairs of mankind ; but astrology,, which treated of these influences, is now justly re- jected.

342. The inferior planets have two kinds of conjunction with the sun ; one in the inferior part of their semicircles, the other in the superior part. In the former the planet is between the earth and the sun ; and in the latter the sun is between the earth and planet. The inferior planets can never be in opposition to the sun, nor even ap- pear at a great distance from him. The length they go is called their elongation. Thus, in plate IX. fig. 11, let OPQRT be part of the ecliptic ; S the sun ; and the three circles round him the orbits cf Mercury, Venus, and the earth. Suppose ˆthe earth to be at A, the sun's geocen- tric place will be at Q. If Mercury be then at I, his geocentric place is likewise at Q ; so that he is in conjunction with the sun in his inferior semicircle : if at M, his geocentric place is like- wise at Q ; so that he is in conjunction in his superior semicircle.

343. In like manner, Venus at E is in con- junction in her inferior semicircle, at G in her superior : but if we suppose the earth to be at A, and Venus at H, her geocentric place is T, and her elongation QT, which in this figure is the greatest possible; for this always takes place when a straight line from the earth touches the orbit of the planet, as is evident from the figure ; that is, provided the planet be in its aphelion at the time. Thus the greatest possible elongation of Mercury is Q P when he is in his aphelion at L; and the quantity of this is found by astrono- mical observations to be about twenty-eight degrees, and that of Venus about forty-eight. The inferior planets in their elongations are sometimes eastward and sometimes westward of the sun ; in the former case they appear in the evening, and in the latter in the morning. The smailness of Mercury and his nearness to the sun prevent him from being often taken notice of; but the largeness and beauty of Venus have made her, in all ages, celebrated as the evening and morning star.

*344. The planets sometimes appear to go forward, sometimes backward, and sometimes to stand still. These different conditions are by astronomers called direct, retrograde, and station- ary. Were they to be viewed from the sun they would always appear direct; but when viewed from the earth, the inferior planets appear direct while moving in their upper semicircles, and retrogade when in their lower ones. Thus in plate IX. fig. 11, suppose the earth at rest at A, while Mercury is going on his orbit from N to I, and from I to L, his motion appears to an ob- server at A to be retrograde, or contrary to the order of the signs, namely from R to Q and from Q to P ; but when in that part of his orbit
 ॐ ॐ which lies between L and N, his motion appears direct, or from P to Q and from Q to 11.*

345. When the earth is in the line of nodes of an inferior planet, the apparent motion of the former is then in a straight line, because the plane of it passes through the eye ; if in a con- junction in his upper semicircle, he passes behind the sun; if in his lower semicircle, he passes

before it, and will then be seen by an observer on the earth to pass over the sun's disk like a round and very black spot. Were the plane of his orbit coincident with the ecliptic, this appearance would be seen every year; but by reason of the obliquity of the two planes to each other, it is much more rare.

346. Mercury, however, was seen in this man- ner November 12th, 1782, at 3h.44m. in the afternoon; May 4th, 1786, at 6h. 57m. in the morning ; and December 6th, 1789, at 3 h. 55 m. in the afternoon ; but was not seen again, in this island at least, until the year 1799, May 7th, at 2 h. 34 m. in the afternoon. In like manner, Venus sometimes appears as a black spot on the sun, but more seldom than Mercury. She was thus seen first in 1639; afterwards in the years 1761 and 1769; but will not again be visible in this manner till the year 1874.

347. When the earth is out of the line of the nodes of an inferior planet, its orbit appears an ellipsis, more or less eccentric, according to the situation of the eye of the spectator. In these cases the motion of Mercury is unequal ; faster near the inferior conjunction, but most unequal in the inferior semicircle, going through the un- equal spaces into which the ellipsis is divided. The motions of the inferior planets, both direct and retrograde, are very unequal ; and this ine- quality proceeds not from the eccentricity of their orbits, but from the projection of their orbits into long ellipses, and is therefore a mere optical deception.

348. These planets appear stationary while changing their motion from direct to retrograde, or from retrograde to direct. If the earth stood still, the times of their appearing stationary would be at their greatest elongation ; for though it be a property of the circle, that a straight line can only touch it in one point, yet when the circle is very large, the recess from the tangent is not per- ceptible for a considerable time. Thus in plate IX. fig. 11, suppose the earth to be at rest in A Venus would appear stationary, her geocentric place continuing at T all the while she is going in her orbit from a to b; because her deviatior from the visual line A T would scarcely be per- ceptible so near the point of contact H.

349. The inferior planets, therefore, to an in habitant of the earth, appear always near the sun ' alternately going from and returning to him, sometimes in straight lines, at others in elliptical curves, first on one side and then on the other ; sometimes so near as to be rendered invisible by his stronger light. Sometimes, when in or near their nodes, they pass behind the sun in their superior semicircles, or pass between him and us ; in which case they appear like black spots on his disk, as above-mentioned. For the better comprehending of these motions, however, we have hitherto supposed the earth to stand still in some part of its orbit, while they go round the sun

in theirs ; but as this is not the case, it now remains to consider the changes which take place in consequence of the earth's motion.

350. Were the earth to stand still in any part of its orbit, as at A, the places of conjunction, both in the superior and inferior semicircle, us also of the greatest elongation ; and. consequently ,

the places of direct and retrograde motion, and of the stations of an inferior planet, would always be in the same part of the heavens. Thus, in plate IX. fig. 11, upon this supposition, the places of Mercury's stations would always be the points P and R, the arc of his direct motion P R, and of his retrograde motion R P ; whereas, on account of the earth's motion, the places where these appearances happen are continually advanc- ing forward in the ecliptic, according to the order of the signs. In fig. 10, plate VIII., let A B C D be the orbit of the earth ; efg h that of Mercury, 0 the sun; GFKI an arc of the ecliptic ex- tended to the fixed stars. When the earth is at A, the sun's geocentric place is at F ; and Mer- cury, in order to a conjunction, must be in the line A F ; that is, in his orbit he must be at f or h. Suppose him to be at /, in his inferior semi- circle ; if the earth stood still at A, his next conjunction would be when he is in his superior semicircles at h ; the places of his greatest elonga- tion also would be at e and g, and in the ecliptic at E and G ; but supposing the earth to go on in its orbit from A to B, the sun's geocentric place is now at K; and Mercury, in order to be in conjunction, ought to be in the line B K at m. As by the motion of the earth, the places of Mer- cury's conjunctions with the sun, are thus con- tinually carried round in the ecliptic, in conse- quence, so the places of his utmost elongations must be carried in consequence also. Thus, when the earth is at A, the places of his greatest elongation from the sun are in the ecliptic E and G ; the motion of the earth from A to B ad- vances them forward from G to L, and from E to I.

351. The geocentric motion of Venus may be explained in a similar manner; only as the mo- tion of Venus is much slower than that of Mer- cury, his conjunctions, oppositions, elongations, and stations, nil return much more frequently than those of Venus.

3.V2. To explain the stationary appearances of the planets, it must be remembered that the diameter of the earth's orbit, and even of that of Saturn, are but mere points in comparison of the distance of the fixed stars; and, therefore, any two lines, absolutely parallel, though drawn at the distance of the diameter of Saturn's orbit from each other, would if

continued to the fixed stars, appear to us to terminate in the same point. Let the two circles, plate IX. tig-. 4, represent the orbits of \Vmis and of the earth; let the lines A K, 1! F, C G, 1) II, be parallel to S P ; we may nevertheless aitirm that, if continued to the dis- tance of the fixed stars, they would all terminate in the same point with the line S P. Suppose, tin n, Venus at !□□□'., while the earth is at A, the vi- sual ray, by which she is seen, is in the line AE. Suppose auain, that while Venus goes from E to]□□□', the i arth u'oes from A to B, the visual ray, by which \ enus is now s..-rn, is \ F, parallel to A V. ; and then-tot e, Venus will be all that time st'.itionary, appearing in that point of the hea- vens where SI' extended would terminate; this station is at her changing from direct to retro- grade. Airam, suppos", when the earth is at C, \ enus is at (i, arid the \ isual line C G ; if, while th'.- tarth yocs from (J to 1), Venus goes from G

to H, so that she is seen in the line G H, parallel to C G, she will be all that time stationary, ap- pearing in the point where a line drawn from S through P would terminate. This station is at her changing from retrograde to direct; and both are in her inferior semicircle.

353. An inferior planet, when in conjunction with the sun, in its inferior semicircle, is said to be in perigee, and when in the other, to be in apogee, on account of its different distances from the earth. Their real distances from the earth when in perigee are variable, partly owing to the eccentricities of their orbits, as well as that of the earth; and partly owing to the motions of the different bodies, by which it happens that they are in perigee, in different parts of their orbits. The least possible distance is when the perigee happens at the time that the earth is in its perihelion, and when the planet is □□n its aphelion.

354. The difference of distance between the earth and inferior planets, at different times, makes a considerable variation in their apparent diameters, which indeed is very observable in all the planets ; and thus, they sometimes look con- siderably larger than at others. This difference of magnitude in Mercury is nearly as 5□□ to 1 ; and in Venus, no less than 32 to 1. Any person, unassisted by instruments, may observe an in- ferior planet alternately approach nearer and nearer the sun, until at last it comes into con- junction with him, and then recedes farther and farther, till it is at its greatest elongation, which will be first on one side, and then on the other; but, if we observe the apparent change of place, of an inferior planet, in the sphere of the heavens, its direct motions, stations, and retrogradations, measuring its diameter frequently with the mi- crometer, we shall find, by its decrease at some times, and increase at others, that its distance from us is very considerably varied.

355. As the superior planets move in a larger orbit than the earth, they can only be in con- junction with the sun, when they are on that side opposite to the earth; as, on the other hand, they are in opposition to him, when the earth is between the sun and them. They are in qua- drature with him, when the geocentric places are 90□□ distant from that of the sun. In order to understand their apparent motions, we shall suppose them to stand still, in some part of their orbit, while the earth makes a complete revolution in hers ; in which case, any superior planet would then have the following appear- ances :

356. 1. While the earth is in her most distant semicircle, the motion of the planet will be direct. 2. While the earth is in her nearest semicircle, the planet will be retrograde. 3. While the earth is near those places of its orbit, where a line drawn from the planet would be a tangent, it would appear to be stationary. Thus, in plate VIII. fig. 6, let abed represent the orbit of the earth ; S the sun ; EFG an arc of the orbit of Jupiter; ABC an arc of the ecliptic, projected on the sphere of the fixed stars. Sup- pose Jupiter to continue at F, while the earth goes round in her orbit, according to the order of the letters abed. While the earth is in the

semicircle most distant from Jupiter, going from a to 6 and from o to c, his motion in the heavens would appear direct, or from A to B, and from B to C ; but, while the earth is in its nearest semicircle c de, the motion of Jupiter would ap- pear retrograde from C to B, and from B to A ; for □□, b, c, d, may be considered as so many dif- ferent stations, from whence an inhabitant of the earth would view Jupiter at different seasons of the year, and a straight line drawn from each of these stations, through F the place of Jupiter, and continued to the ecliptic, would show his apparent place there to be successively at A, B, C, B, A. While the earth is near the points of contact, a and c, Jupiter would appear stationary, because the visual ray drawn through both pla- nets, does not sensibly differ from the tangent Fa or Fc. When the earth is at b, a line drawn from b through S and F to the ecliptic, shows Jupiter to be in conjunction with the sun at B. Wrhen the earth is at d, a line drawn from d through S, continued to the ecliptic, would ter- minate in a point opposite to B ; which shows Jupiter then to be in opposition to the sun ; and thus, it appears, that his motion is direct in the conjunction, but retrograde when in opposition with the sun.

357. The direct motion of a superior planet is swifter the nearer it is to a conjunction, and slower as it approaches to a quadrature with the the sun. Thus, in fig. 9, plate XIII., let 0 be the sun ; the little circle round it the

orbit of the earth, whereof abed efg is the most distant semicircle ; O P Q, an arc of the orbit of Jupiter ; and ABC D EFG, an arc of the ecliptic in the sphere of the fixed stars. If we suppose Ju- piter to stand still at P, by the earth's motion from a to g, he would appear to move direct- from A to G, describing the unequal arcs AB, B C, C D, D E, E F, F G, in equal times. When the earth is at d, Jupiter is in conjunction with the sun at D, and there his direct motion is swiftest. When the earth is in that part of her orbit where a line drawn from Jupiter would touch it, as in the points e or g, Jupiter is nearly in quadrature with the sun ; and the nearer the earth is to any of these points, the slower is the geocentric motion of Jupiter; for the arcs CD and DE are greater than BC or E F, and the arcs B C and E F are greater than ABorFG.

353. The retrograde motion of a superior planet is swifter the nearer it is to an opposition, and slower as it approaches to a quadrature with the sun. Thus, let 0, fig. 10, plate XIII. be the sun, the little circle round it the orbit of the earth, whereof g h i k I m n is the nearest se- micircle ; O P Q, an arc of the orbit of Jupiter, NKG an arc of the ecliptic: if we suppose Ju- piter to stand stiil at P, by the earth's motion from g to n, he would appear to move retro- grade from G to N, describing the unequal arcs Gil, III, IK, KL, LM, M N, in equal times. When the earth is at k, Jupiter appears at K, in opposition to the sun, and there his retrograde motion is swiftest. When the earth is either at g or n, the points of contact of the tangents Pg and Pn, Jupiter is nearly in quadrature with the sun ; and the nearer he is to either of these

points, the slower is his retrogradation ; for the arcs I K and K L are greater than H I or L M ; and the arcs II I and K M are greater than G H or MN. Since the direct motion is swifter when the earfh is at d, and continues diminishing till it changes to retrograde, it must be insensible near the time of change; and, in like manner, the retrograde motion being swiftest when the earth is in A-, and diminishing gradually till it changes to direct, must also at the time of that change be insensible ; for any motion gradually decreasing till it changes into a contrary one gradually increasing, must at the time of the change be altogether insensible.

359. The same changes in the apparent mo- tions of this planet will also take place, if we suppose him to go on slowly in his orbit ; only they will happen every year when the earth is in different parts of her orbit, and consequently at different times of the year. Thus, fig. 6, plate VIII., let us suppose that while the earth goes round her orbit Jupiter goes from F to G, the points of the earth's orbit from which Jupiter will now appear to be stationary, will be a and y ; and consequently his stations must be at a time of the year different from the former. The conjunction of Jupiter with the sun will now be when the earth is at/, and his opposition when it is at e ;

for which reason these also will hap- pen at times of the year different from those of the preceding opposition and conjunction. The motion of Saturn is so slow, that it makes but little alteration either in the times or places of his conjunction or opposition ; and no doubt the same will take place in a more eminent degree in Herschel; but the motion of Mars is so much swifter than even that of Jupiter, that both the times and places of his conjunctions and op- positions are thereby very much altered.

360. A superior planet is in apogee when in conjunction with the sun, and in perigee when in opposition ; and every one of the superior planets is at its least possible distance from the earth where it is in perigee and perihelion at the same time. Their apparent diameters are va- riable, according to their distances, like those of the inferior planets; and this, as might natu- rally be expected, is most remarkable in the planet Mars, who is nearest us. In his nearest approach, this planet is twenty-five times larger than when farthest off, J upiter twice and a half, and Saturn once and a half. As the times of conjunction, utmost elongation, direct or re- trograde motions of the inferior planets, depend on the combinations of their motions in their orbits with the motion of the earth in its orbit, any of these appearances will be more frequent in Mercury than in Venus, because the former moves with a swifter motion in his orbit, and consequently must more frequently pass through those places where he is in conjunction, &c.

361. The time in which any of the inferior planets will return into a given situation, may be easily known. Compute the diurnal heliocentric motions of Venus and of the earth ; the differ- ence of these motions is the diurnal motion of Venus from the earth, or the quantity by which Venus would be seen to recede from the earth every day by a spectator placed in the sun : thus

the mean motion of Venus is every day about 59 m. and 8 s. ; the difference is 37 m. There- fore, as 37 m. is to 360□□, or to 21,600 m. so is one day to the time wherein Venus, having left the earth, recedes from her 360□□ ; that is, to the time wherein she returns to the earth again, or the time between two conjunctions of the same kind.

362. The calculations of the times are here made according to the mean or equable mo- tions of the planets ; and is therefore called a mean conjunction : but because Venus and the earth are really carried in elliptic orbits, in which their motions are sometimes swifter and sometimes slower, the true conjunctions may happen some days either sooner or later than

what these rules will give. The time of the true conjunction is to be computed from that of the mean conjunction in the following manner. Find by astronomical tables the places of Venus and the earth in the ecliptic, from which we shall have the distance of the two as seen from the sun ; compute also for the same time the an- gular motions of these two planets for any given time, suppose six hours ; the difference of these two motions will give the access of Venus to the earth, or her recess from it in six hours. As this difference is to the arc between the places of Venus and the earth at the time of a mean conjunction, so is six hours to the time between the mean conjunction and the true. This time added to, or subtracted from, the time of the mean conjunction, according as Venus is in an- tecedence or consequence from the earth, shows the time of their true conjunction.

3G3. As to the conjunctions, oppositions, di- rect and retrograde motions, &c. of th? superior planets, they depend on the combinations of their motions with that of the earth, and are more fre- quent in Saturn than in Jupiter, and in Jupiter than in Mar's, but most frequent of all in Hers- chel ; because the slower the motion of the pla- net is, the sooner the earth will overtake it, so as to have it again in any given situation.

30-1. Thus, suppose Saturn to be in conjunc- tion with the sun in , it' he were to stand still for one year, then he would again be in con- junction in y> ; but as he goes on slowly, ac- cording to the order of the signs, about 12►► an- nually, the earth must go through almost 13►► moivthan an entire revolution ; so that there will be almost a year and thirteen days between any conjunction between the sun and Saturn and the conjunction immediately following. As Jupiter moves in his orbit with greater velocity than Saturn, the earth must have a proportionably larger space added to tin- year; and, as Mars moves .swifter still, the time betwixt any two of his conjunctions must be still longer. The time when a superior planet will return into any given situation may be found by the methods .nready laid down for the inferior planets ; and the true conjunctions, ˆe. may be found in the superior planets as in the inferior.

So i. 11. Or Tin: Vr.nx nv, FIOURE, MOTIONS, &c. or TII r. KAIII n.

36">. The earth is ►►.V>, 173.000 miles from the sun, and goes round in 36.') days, live hours, f itv-

nine minutes, from any equinox or solstice to the same again ; but from any fixed star to the same again, as seen from the sun, in 365 days, six hours, nine minutes ; the former being the length of the tropical year, and the latter the length of the sideral. It travels at the rate of 68,000 miles every hour ; a motion which, though upwards of 140 times swifter than that of a cannon ball, is little more than half as swift as Mercury's mo- tion

in his orbit. The earth's diameter is 7970 miles; and by turning round its axis every twenty-four hours, from west to east, it causes an apparent diurnal motion of all the heavenly bodies from east to west. By this rapid motion of the earth on its axis, the inhabitants about the equator are carried 1042 miles every hour, whilst those on the parallel of London are carried only about 580, besides the 68,000 miles by the an- nual motion above-mentioned, which is com- mon to all places whatever.

366. A variety of circumstances afford the clearest evidence that the earth is of a globular figure. 1. When we are at sea on board a ship, we maybe out of sight of land, when the land is near enough to be visible, if it were not hid from our eye by the convexity of the water. Thus, let ABC D, fig. 11, plate VIII., represent a por- tion of the globe of the earth. Let M be the top of a mountain, this cannot be seen by a per- son on board the ship at B, because a line drawn from M to his eye at E, is intercepted by the convexity of the water ; but let the ship come to C, then the mountain will be visible, because a line may be drawn from M to his eye at E. 2. The higher the eye the farther the view will be extended. It is very common for sailors from the top of the mast of a ship, to discover land or ships at a much greater distance than they can do when they stand upon deck. 3. When we stand on shore, the highest part of a ship is visible at the greatest distance. If a ship is going from us out to sea, we shall continue to see the mast after the hull or body of the ship disap- pears, and the top of the mast will continue to be seen the longest. If a ship is coming to- wards us, the top of the mast comes first in view, and we see more and more till at last the .hull appears. If the surface of the sea were a flat plain, a line might be drawn from any object si tuated upon it, as the ship D, fig. 12, plate VIII. to the eye, whether placed high or low, at A or B. In this case, any object upon the earth 01 sea would be visible at any distance which wa? not so great as to make the appearance of it top faint, or the angle under which it appears too small, to be seen by us. An object would be visible at the same distance, whether the eye were high or low. Not the highest, but the largest, objects would be visible to the greatest distance, so that we should be able to see the hulk of a ship farther off than the mast.

367. 4. Several navigators, such as Fer- dinand Magellan, Sir Francis Drake, Lord Anson, Captain Cook, &c. have sailed round" the globe; not in an exact circle, the land pre- venting them, but by going in and out as the shores happened to lie. ,r>. All the appear- ances in the heavens are the same, whether at land or sea. 6. Eclipses of the moon arise

from the shadow of the earth, which is always circular. Although the earth presents, during several hours, different portions of its surface to the moon, yet still the shadow is round. The small inequalities upon the surface of the earth hear no kind of proportion to its magnitude, suf- ficient to alter the appearance of its shadow.

368. 7. The globular figure of the earth is also inferred from the operation of levelling, in which it is found necessary, to make an allow- ance for the difference between the apparent and true level.

369. The earth's axis makes an angle of 23J-►► with the axis of its orbit, and its position at any time is parallel to its position at any other time. Thus it points always to the same quarter of the heavens, throughout its annual course. That the earth moves round the sun may be proved, beyond a doubt, by the following arguments.

370. I. The sun is found by the most accurate observations, to be immensely larger than the earth; for his diameter, as seen by us, subtends an angle of more than 30', but it is certain that the earth, were it seen from 'the sun, would not subtend a greater angle than about 17". If, therefore, the sun be formed of materials not very much rarer than the earth, the quantity of matter in the sun, must far exceed the whole mass of matter in all the planets; and to sup- pose, that gravity retains all the other planets in their orbits, without affecting the earth, would be as absurd as to suppose, that six cannon bul- lets might be projected up to different heights in the air, and that five of them should fall to the ground, but that the sixth, though neither the highest nor the lowest, should remain suspended in the air without falling, and the earth move round it.

371. There is no such thing in nature as a heavy body moving round a light one as its cen- tre of motion. A pebble fastened to a mill-stone by a string, may, by an easy impulse, be made to circulate round the mill-stone : but no impulse can make a mill-stone circulate round a loose pebble; for the mill-stone would go off, and carry the pebble along with it. The sun is so very much bigger and heavier than the earth, that, if he were moved out of his place, not only the earth, but all the other planets, if they were united into one mass, would be carried along with him as the pebble would be with the mill-stone.

372. II. If the earth revolve round the sun, then the analogy between the squares of the periodic times and the cubes of the distances, will obtain in all the bodies which circulate round a common centre ; whereas, this will not be the case with respect to the sun and moon, if both turn round the earth.

373. III. Besides these, other proofs might be given ; but the most complete proof of all, and which indeed amounts to a demonstration is, the aberration of the fixed stars, arising from the progressive motion of light, combined with the earth's annual motion round the sun : a discovery made by Dr. Bradley, and one of the finest in modern astronomy.

374. By frequen-t observations of the eclipses t>f Jupiter's satellites, it is found, that light is aoout eight minutes in moving from the sun to the earth. And since the earth describes about

one degree, or 3600", in a day, or 1440', in eight minutes it will describe 20'25" in its orbit; therefore the velocity of light is to the velocity of the earth in its orbit, as radius to an arch of twenty seconds, or the third part of a

□□□0002909 minute, that is, as one to ~ or -00009697,

o

or as 10300 to one. That is, the velocity 01 light is 10300 times greater than the velocity of the earth in its orbit. Now if AN, plate VIII. fig. 15, be the way or path of a body in free space, as of a ray of light ; its apparent way on a movable plane will be different. For it will be that which is made by the composition of the two motions of the body and plane. Thus, if AN be described in any time by the body, and N F be described by (a point in) the plane, in the same time as the plane moves forward in the direction N F or AB, it leaves all the points of the fixed line AN behind it, all which will therefore seem to move backwards in the plane Therefore make NDnNF, being taken back- wards or contrary to the motion of the plane ; and the body, instead of going to N in the free space, will seem to go to D, in the same time, upon the movable plane; and therefore AD will be the apparent path of the body in that plane.

375. It will be the same thing, if we suppose the plane fixed, and the body to have the plane's . motion communicated to it, in a contrary direc- tion, so as the relative motion be the same as before. Thus, if the body moves from B to A, in the same time that it would also move from A to N, then by that compound motion it would move along the diagonal B N of the parallelogram whose sides are B A, AN, and in the same time. There- fore rays of light emitted from a star in the direc- tion A N, will fall upon the point D of the mov- ing plane ; that is, upon the eye of the observer, in the direction A D : and an observer at D will suppose the star situated in the line DA. If BN be parallel to AD, and the point D translated to N in the same time; an observer at N will sup- pose the star situated in the line BN ; making the angle BNF or ADF less than AN F, the angle it would appear

under if the plane were at rest. So that the angle of elevation BNF, above the line of direction NE, of the observer, is less than before, being taken on the side of F, towards which the observer moves. The observer, in- stead of seeing the star at A, its real place, will see it at B, its apparent place; but if the ob- server moves from F to N and D, and B be the real place of the star, its' apparent place would be at A to an observer at N.

376. The apparent place B is always in the plane of aberration, drawn through the way of the observer NF, and the line NA drawn from the observer to the real place of the star; for AB being parallel to NF, is in the plane AD NF. The angle B N A or N A D is the angle of aberra- tion; by the quantity of this angle the star is depressed, in going towards it; or raised in going from it. In the triangle AN D ; AN : N D ###.: S.ADN: S.NAD; and AN and ND being given; the S .NAD the aberration will be as the S.ADN. Because AN is 10,300 times greater than ND: the S.NAD does not differ .from its arch or angle; whence, the angle of aberration N A D or A N B is always as the sine of the angle

ADN, or ANF, which are nearly equal, and which may be called the angle of the earth's way. Hence the angle of aberration ANB is greatest, when AN is perpendicular to N U; and becomes nothing when AN 1″ is nothing. Since AN is to N D, as radius to 20"; when AN is per- pendicular to N D, the angle N A D or A N 13 will be 20"25", which is the greatest it can be. In other cases, as radius to S, angle of the earth's way ANF : : so 20′25″, to the aberration, answer- ing to that angle; which angle is always taken in the plane of aberration ADNF.

377. In Plate VIII. fig. 7, let BCD E be the earth's orbit, S the sun, A or Q a star, N any place of the earth in its orbit. Through the star A. draw the circle AH perpendicular to the plane)f the ecliptic, and draw K S B H, and ESC per- pendicular to it, or parallel to the tangent at B. Draw the tangent Nd, and draw N I towards the star, and make N I to N d as the velocity of light to that of the earth, or as 10,300 to one, and draw d I which leads to the apparent place of the star; and suppose DA, SA parallel to dl, NI; then DA will also lead to the apparent place of the star. Draw SFG perpendicular to SN, or par- allel to N d. Then will I Nd be the plane of aber- ration. This plane continually changes its situ- ation, revolving round the sun in a year along with the tangent Nd. Since AS, SF are par- allel to I N, N/; ASF is equal to IN/, and AS F is equal to the angle of the earth's way. Hence the plant.- AS F may be taken for the plane of aber- ration, which continually turns round the line AS, as t'.ie earth revolves about the

sun; the line S F being always in quadrature with the earth at N.

3?►►. Let the earth be at F, then the plane of aberration ASB will be perpendicular to the ecliptic ; and the angle of the earth's way A'S B is the least that it can be, and the angle of the aberration the least. Whilst the earth moves to I't, t!n> angle of the earth's way, and of aberra- tion inciva>es, and at B the plane of aberration i.s ACS, and the an_le of the earth's way AS C, a riaht an.de, which is the greatest it can be; therefore the angle of aberration is the greatest possible. While the earth moves to C, the an- g'.es of tli-.- earth's way and aberration decrease

382. TABLE I.

again, and at C are the least; and in mo ting to K they increase again to K, where they are great- est. From K to E they diminish again, where they are least.

379. It is evident then, that whilst the earth is at E moving towards N, the star's apparent place is at c lower than A ; at B moving towards F, it appears at 6 forward. When the earth is at C, the star appears at c above A. And when the earth is at K, the star is seen at k, having gone backward. Hence the apparent place of a star describes a small ellipsis in a year, about the true place of the star in its centre, whose trans- verse axis is parallel to the ecliptic; and lesser axis perpendicular to it. This ellipsis is b eke, answering to places of the earth at B, C, K, E. And the points k, c, k, et answer respectively to the points C, K, E, B, where the plane of aber- ration cuts the ecliptic, being ninety degrees before the earth, or ninety degrees behind the sun.

380. This phenomenon, the apparent change of place in celestial objects, arising from the com- bined motions of the earth and the light from those objects, is one of the most curious and im- portant discoveries of modern times. We are indebted for it to Bradley, who, as has been well observed, ' swept the ground of astronomical discovery, and left little to be gathered by those that followed him.'

381. The followingformulae represent the effect of aberration on any fixed stars, both in right as- cension and declination, p representing 20-25″ the quantity found above for the maximum effect of aberration, a and d the right ascension and decli- nation of the star, w the obliquity of the ecliptic, and 0 the sun's longitude.

Aberration in right ascension ~ ►►► p. { sin. 0 sin. a f cos. 0 cos a cos a sec. S. }

Aberration in declination rz ►►► p.

| sin. 0 cos. a . sin. S ??? cos. 0 (sin. a . cos. u .

sin. d ??? sin. u cos. S.) \

By the following tables, deduced from these formulae, the effect of the aberration on the right ascension and declination of any fixed star may readily be computed.

383. TABLE II.

UIGOIEVr.

ARGUMENT.

I'm- Alnr. in It. A.

*, K.A.??? G'long.

I c,j- A her. in IK-din. *< 11. A. f '.??JJ ??? (Ts long.

For Aber. in R. A. fc.ll.A. + ???? long. For Aber. in Declin. # ' R. A. + 30?? -f ????? long.

Sitrns.

Signs.

0. VI.

r. vn.

11. VIII.

O. VI.

I. VII.

II VIII.

I

??? -r

??? -r

??? -r

i

+ ◆◆◆

+ ◆◆◆

0◆◆

10-17″

lii-GO”

9-59″

30◆◆

0◆◆

0-83″

0-72″

0-41″

30◆◆

i ◆◆◆’>

19-10

1.V71

[MO

25

5

0-82

0-67

0-35

25

10

1R.H3

14-69

0-5(3

20

10

0-89

0-63

0-28

20

1 \:>

IK-.V2

i:;-:>u

4-96

15

15

0-80

0-58

o-w

15

20

1-02

12-32 3-3:5

10

20

0-78

0-53

0-14

10

[illegible]].-,

i?-:;;1,

11-00 l-tj7

5

2,5

0-75

0-47

0-07

5

3u

Ib-iiU

9..;9 0-00

0

30

0-72

0-41

o-oo

0

[illegible] -f

4-

[illegible] +

+ ◆◆◆

+ –

i

‘ :. v.

I. i. III.

1

XI. V.

X. IV.

ix. til.

ASTRONOMY.

143

384. TABLE III.

ARGUMENT.

For part 2d of Aber. in Declin.

0s long. + sfc1 Declin.

For part 3d of Aber. in Declin.

0t Long. ◆◆◆ ˆc ◆◆ Declin.

Signs.

0. VI.

I. VII.

II. VIII.

_i

- +

- +

0[illegible]

3-98″

3-45″

1-99″

30[illegible]

5

3-97

3-26

1-68

25

10

3-92

3-05

1-36

20

15

3-85

2-82

1-03

15

20

3-74

2-56

0-69

10

25

*3*61*

2-28

0-35

5

30

3-45

1-99

o-oo

0

~r

- -K

- +

XI. V.

X. IV.

IX. III. 1

385. To find from these tables the aberration of a star at right ascension. To the Logarithms of the sum or difference of the equations from tables I and II, answering to the proper argu- ments, add the longitude east of the star's de- clination, and the sum will be the logarithms of the aberration in right ascension.

386. To find the aberration of a star in decli- nation. Find the sum or difference of the equa- tions answering to the former arguments, in- creased by 90, to the logarithm of which add the logarithm sine of the star's declination, and the sum will be the logarithm of the first part of the aberration. Take parts second and third from table III, and these applied to the former, will give the aberration in declination. If the de- clination is south, change the sign of parts 2d and 3d.

387. The strongest objection that can be made against the earth's moving round the sun like the other planets, is, that, in opposite points of the earth's orbit, its axis, which always keeps a paral- lel direction, would point to different fixed stars; which is not found to be fact. But this objec- tion is easily removed, by considering the im- mense distance of the stars in respect of the dia- meter of the earth's orbit; the latter being no more than a point when compared to the former. If we lay a ruler on the side of a table, and along the edge of the ruler view the top of a spire at ten miles distance; then lay the ruler on the op- posite side of the table in a parallel situation to what it had before, and the spire will still appear along the edge of the ruler; because our eyes, even when assisted by the best instruments, are incapable of distinguishing so small a change at so great a distance. As the apparent places of the stars, therefore, correspond with this the- ory, the motion of the earth and the motion of light are both determined.

388. In fact, we find that the sun, and those planets on which there are visible spots, turn round their axes : for the spots in general move

regularly over their disks, allowing for the vari- ations already taken notice of. Hence we may reasonably conclude, that the other planets, on which we see no spots, and the earth, which is likewise a planet, have such rotations. But being incapable of leaving the earth to view it at a distance, and its rotation being smooth and uni- form, we can neither see it move on its axis, as we do the planets, nor feel ourselves affected by its motion. Yet there is one effect of such motion, which will enable us to judge with certainty whether the earth revolves on its axis or not.

389. All globes which do not turn round their axes, will be perfect spheres, on account of the equality of the weight of bodies on their sur- faces; especially of the fluid parts. But all globes, which turn on their axes will be oblate spheroides; that is, their surfaces will be higher or farther from the centre in the equatorial than in the polar regions : for, as the equatorial parts move quickest, they will recede farthest from the axis of motion, and enlarge the equatorial dia- meter. That our earth is really of this figure, is demonstrable from the unequal vibrations of a pendulum, and the unequal lengths of degrees in different latitudes. Since then, the earth is higher at the equator than at the poles, the sea, which naturally runs downward, or towards the places which are nearest the centre, would run towards the polar regions, and leave the equa- torial parts dry, if the centrifugal force of these parts, by which the waters were carried thither, did not keep them from returning. The earth's equatorial diameter is thirty six-miles longer than its axis.

390. One phenomenon, called the precession of the Equinoxes, depending on this peculiarity of- form in the figure of the earth, has been noticed from

the early ages of astronomy. The pole of the celestial equator appears to move with a slow and nearly uniform motion round the pole of the ecliptic ; while the intersections of the equator and ecliptic move backward on the ecliptic, with a motion nearly uniform. This motion is at the rate of about 1►► in seventy- two years, or more accurately 50‘2 in a year; consequently the sun returns again to the same equinoctial point before he has completed his revolution in the ecliptic, whence the origin of the term precession of the equinoxes. In con- sequence of this apparent motion all the fixed stars increase their longitude 50-2″ in a year, and also change their right ascensions and de- clinations, but their latitudes are not affected. The period of the revolution of the celestial equinoctial pole, round the pole of the ecliptic, is nearly 26,000 years.*

391. The north celestial pole therefore, about 13,000 years hence, will be nearly 49►► from the present polar star; and about 10000 years hence the bright star oc , Syrac, will be within 5►► of the north pole. This star therefore, which now in these latitudes passes the meridian within a few degrees of the zenith, will then remain nearly stationary with respect to the horizon. This motion of the celestial pole arises from the at- traction of the sun and moon on the excess of matter at the equatorial parts of the earth.,

392. The precession of the equinoxes is not entirely uniform, for a small inequality in the precession, and change in the obliquity of the ecliptic, depends on the position of the moon’s nodes. The intersections of its orbit with the ecliptic were discovered by Bradley, and have since been confirmed by Physical Astronomy. ‘1 he precession of the equinoxes was first discovered by Ilippurchus. As the quantity of it is so perceptible in a hundred years, a comparison of the positions of the circles of the sphere as re- corded in early times, and of their positions now, has been used to assist chronology.

393. Even the inclination of the equator and ecliptic have been shown by observation to be va- riable, and it is remarkable that from the date of the earliest observations that inclination has been diminishing. If it should continue to do so till the two circles coincided, a most important change would be effected in the phenomenon attending the earth’s annual and diurnal revolutions, as the days would everywhere be of the same length, and the seasons would not alter with the times of the year. But we learn from the prin- ciples of physical astronomy, that this change in the obliquity will never exceed a certain limit, which when it reaches, it will return again, os- cillating by a small quantity on each side of its mean

state. \Ve learn from physical as- tronomy too, that by this action the ecliptic is progressive on the equator, about 14″ in a century. The sun also according to his place in the ecliptic produces a small inequality in the precession, never amounting to more than

1-1”.

304. If d z= the declination of a star, and a ००० its riu’lit ascension, then the following formula will express nearly the annual variations of a and b, arising from precession : 20-084″ x cos. it r= the annual precession in declination, and ०००lu’Oiil’.) -f 20-084″ x sin.०० x tan. d = the an- nual precession in right ascension.

3 ‘.’.०००”>. From these expressions, the following table has been constructed for determining, by inspec- tion, the annual precession for any star.

Rt. AsciMi-ion df

•

Ann. Precession.

Rt. Ascension of

•

(J, j~, .7(),,

180०० 360००

10 UK) 3-47

170 350

20 ′.″JO i.;1)

KiO 340

30 210

lO’OO

].-> <) 330

40 220 12-8”)

140 320

,-> () 230 1.-V31

i:;o 310

(10 210 17-31

120 300

70 '.'."> 0 . 18-78

1 10 290

ivSO '.'i)0 I'.lfr.)

100 280

(.H) 27u , I'J-'j'.t

'JO 270

declination,

tlie natural tangent of and add the product to

46-0619 for the annual precession in right

ascension. Again add 90►► to the star's righ ascension, and with the sum as an argument enter the table, and the corresponding number will be the annual precession in declination If tne declination is south, the signs of the numbers in the table must be changed, both in finding the precession or right ascension and declination.

397. It is found that bodies near the poles are heavier than those towards the equator, because they are nearer the earth's centre, where the whole force of the earth's attraction is accumulated. They are also heavier, because their centrifugal force is less, on account of their diurnal motion being slower. For both these reasons, bodies car- ried from the poles towards the equator gradually lose their weight. Experiments prove that a pendulum, which vibrates seconds nearthe poles, vibrates slower near the equator, which shows that it is lighter or less attracted there. To make it oscillate in the same time, it is found necessary to diminish its length. By comparing the different lengths of peudulums swinging seconds at the equator and at London, it is found that a pendu- lum must be 2-^ lines (or 12th parts of an inch) shorter at the equator than at the poles.

398. A person on the earth can no more be sensible of its undisturbed motion on its axis, than one in the cabin of a ship on smooth water can be sensible of the ship's motion, when it turns gently and uniformly round. It is therefore no argu- ment against the earth's diurnal motion, that we do not feel it ; nor are the apparent revolutions of the celestial bodies every day, a proof of the reality of these motions; for whether we or they revolve, the appearance is the very same. A per- son looking through the cabin windows of a ship, as strongly fancies the objects on land to go round when the ship turns, as if they actually did so.

399. The other common objections against the earth's motion on its axis, are easily answered. Some imagine, that if the earth turns eastward, as it certainly does if it turns at all, a ball fired perpendicularly upward in the air should fall considerably westward of the place it was pro- jected from. This objection will be found to have no weight, if we consider that the gun and ball partake of the earth's motion ; and therefore the ball being carried forward with the air as quick as the earth and air turn, must fall down on the same place. A stone let fall from the top of a main-mast, if it meets with no obstacle, falls oa the deck as near the foot of the mast when the ship sails as when it does not.

400. As for those scriptural expressions which seem to contradict the earth's motion, this gene- ral answer may be made to them all, that the scriptures were never intended to instruct us in philosophy or astronomy ; and therefore, on these subjects, expressions are not always to be taken in the literal sense, but for the most part as ac- commodated to the common apprehensions of mankind. Men of sense in all ages, when not treating of the sciences purposely, have used common language ; and it would be absurd to adopt any other in addressing the majority of mankind.

401. We have said above, that the axis of the earth preserves always the same parallel position ;

but this must be understood with a slight limita- tion. Bradley found that the axis of the earth made a sort of conical revolution round the mean place of the pole, the earth's centre being the apex of the cone, and the diameter of the base about 18". With that admirable sagacity for which he was not less remarkable than for his accuracy and faithfulness as an observer, he clearly traced this most curious phenomena to its cause, which is the action of the sun and moon, when out of the equator, and the protuberant equatorial parts of the earth. This correction, which is called

the Nutation of the earth's axis, goes through all its variations with respect to the moon in about eighteen years, the period of the revolution of the moon's nodes, and with respect to the sun in a year ; but the maximum effect of the sun's action nearly amounts to half a se- cond.

402. In strictness, however, the curve of nu- tation is not a circle but an ellipse,, whose axes according to the best observations, are about 18″ and 13 "4". If $►► denote the longitude of the moon's node, r the right ascension of a star or planet, and d its declination ; then the effect of the sun's nutation on the right ascension and de- clination will be expressed by the following for- mulae ; viz. the nutation and declination :

rz:7'85″ X sin.r ►►► & + 1-15″ X sin r + & and the nutation in right ascension. ►►► (7-85″ X gin. r►►► 8 ►►► 90►► + 1-15″ sin. r + &►►► 90►►) + tan d►►► 15-43″ sin Q.

403. From these expressions, the following tables have been computed for finding the effect of the lunar nutation on the right ascension and declination of any celestial object :

404. TABLE I.

405. TABLE II.

ARGUMENT.

For Nutation in Right Ascension.

r►►► 8 For Nutation in Declination.

r + 90►► ►►► ►►

Signs.

0. VI.

- +

I. VII.

►►► +

II. VIII.

- +

0►►

5 10 15 20 25 30

8-33″ 8-30 8-20 8-05 7-83 7-55 7- ‘21

7-21″

6-82 6-38 5-89 5-35 4-78 4-16

4-16″ 3-52 2-85 2-15 1-45 0-73

o-oo

30⬜⬜

25 20 15 10 5 0

⬜⬜⬜ + XI. V.

⬜⬜⬜ + X. IV.

- +

IX. III.

VOL. ill.

ARGUMENT.

For Nutation in Right Ascension.

For Nutation in Declination.

r+ 90⬜⬜ + 8

Signs.

O. VI.

I. VII.

II. VIII;

- +

- +

1

0◆◆

1-22″

1-06″

061″

30◆◆

5

1-21

1-00

0-52

25

10

1-20

0-93

0‘42

20

15

1-18

0-86

0-32

15

20

1-15

0-78

0-21

10

25

1-11

0-70

O'll

5

30

1-06

0-61

o-oo

0

XI. V.

X. IV.

IX. III.

1

406. TABLE III.

Equation of Equinoxes in Right Ascension.

ARGUMENT.

Signs.

O. VI.

I. VII.

II. VIII.

0

.5

o-o”

1-4

8-2″ 9‘4

14-2″ 14-8

30□□

25

10

2-8

10-5

15-4

20

15

4-2

11-6

15-8

15

20

5‘6

12-5

16-1

10

25

6-9

13-4

16-3

5

30

8-2

14-2

16-2

0

+ 1

+ 1 .

+ 1

XI. V.

X. IV.

IX. III.

USE OF THE ABOVE TABLES.

407. To the logarithm of the sum or differ- ence of the equations from tables I. and II., an- swering to their proper arguments, add the loga- rithm tangent of the star's declination, and the sum will be the logarithm of part first of the nu- tation, or right ascension if the declination is north. If it is south, change the sign and apply the equation from table III., and the sum or dif- ference will be the nutation or right ascension. Increase the arguments in tables I. and II. each

bv 90, and the sum or difference of the corres- ponding difference of the equations taken from tiiose tables, will be the nutation or declination.

408. ‘i’he annual motion of the earth has been effectually confirmed by an argument drawn from the progressive motion of light; and from the same consideration the truth of the diurnal mo- tion may be completely established.

409. In consequence of the progressive motion of light, the apparent place of a fixed star is east of its true place, and the difference is proporti- onal to the cosine of the star’s declination ; this displacement of the fixed stars has changed, be- cause of the precession of the equinoctial points. Therefore, if the diurnal revolution of the heavens were a real motion, the whole heavens must have changed their appearance; and the respective positions of the stars must be very different now, from what they were in the time of Hipparchus. A star which is now near the vernal equinox, must have changed its apparent distance, at least 5►► from another ecliptical star which is 60►► east from ‘t. Nay, it is highly probable that no zodiacal star could be ever visible ; such would have been the direction that the rays of light must have taken, because of their own proper motion being compounded with that of the star, whose velocity must have been exceedingly great, by reason of its distance from the poles of the motion. But since no such remarkable displacement of the stars has be. MI observed, we may conclude, that the cause which would hr-v produced it, has no existence; and that the revolutions of the heavens js not a renl, but only an ;> ‘laivnt motion.

-!iO. ‘i he annual and Mal motions of the earth, together with the diil’.ivnl lengths of days and nights, and all the ‘.>cautil’ul variety of sea sons, depending on those motions, may be thus illustrat”d.

4 1 1. In plate X, fig. />. It t FC II I be the earth, O its “enin’; and let it. revolve about an axis perp.endi adar to ►►he plane of the figure, in the order I ! (►►► 1 1 : that is. from west to east. Let A be the sun, draw A F >) 1! (‘, and G O I per- pendieular to it : let a spectator be at I ; then since tli” t-iiv e::t ;:’ 1 (which represents the ho- n/nn) will ; ►►► ;►►►:.;►►► ;iie! lo A F 11, and A at an im men-H’ distau ►►► . they will nearly meet in A, and the SUM at A v. ill be rising iu the horizon at I. As th’: eaith moves round, the spectator is car- 1’itd t’iv. -IT’; 1’, and the sun at A seems to rise higher and higher ; an,i \iien the spectator is arrived at F, t’licn ti.e sun is at th.e highest. As the er-r’ii still turn-; round, and the spectator is ear: is d fro:;i i towards (I, the sun appears to de- ved towards I); and when the spectator i- a -’.\ ;;’ ‘I, then the sun appears in the tangent a1, (i ; tint is, m \]t(i horizon at G; ai”! ther, :►►► ►►► the sun is setting. Afterwards, all the time ;,’. ►►► :ectator i—. moved through Gill, thi sun a;>:!, irs under the horizon, till it comes at I, wl IT’ ::ie sun

— i'hn ; it is evident, tii.it while the specta- tor is carri
: through the illuminated half of the ' :u'th i i' < ', it is d iv li-lit ; at the middle point I1', it is noon dav ; at. ;'ie dark ht>misphere G II I, i| is IM at : an i a; !l, ii i< midnight. And thus id night appears, by the i'j; ttiun of l < i . n-t'i ;; ,'j| it; ;ixjs. What has

been said of the sun is equally true of the moon, or any star placed at A. And therefore all the celestial bodies seem to rise and set by turns, one after another, according to their various situations. For let A, B, C, D be four stars ; when the spec- tator is at I, the star A rises ; and when at G, it sets. When the spectator is at F, B rises ; and when he is at H, it sets. When he is at G, C rises ; and when at I, it sets. When the spec- tator is at II, D rises ; and when at F, it sets.

413. Hence it is the very same thing, as to the diurnal motions, whether the earth moves uniformly about its axis, while the heavens stand still ; or whether the heavens move uniformly round, while the earth stands still ; the pheno- mena being exactly the same either way. For whether the spectator move uniformly in the arch I F, from west to east, whilst A is fixed ; or A moves uniformly in the arch A D, from east to west, whilst I is fixed ; the same angle will be described, and therefore the altitude of A, above the horizon, will be the same either way.

SECT. III. OF THE SEASONS.

414. To explain the causes of the various sea- sons in plate VII. fig. 10, let 23 Y? be the earth's orbit, and S tiie sun. This orbit is so small with respect to the distance of the fixed stars, that the same aspect of the heavens will appear, whether a man be placed in the earth or in the sun. If the earth be at 5= n. Whilst the earth is moving to II, the sun will seem to pass through tr[f ; and a person in the earth observes the sun to go through the same space in the heavens, that a spectator at the sun would see the earth go through ; and as he is not sensible of the earth's motion, he ascribes that motion to the sun, which in reality is unmoved. Hence, because the relative motion is the same, whether of the two is moved, and all effects are the same as to their places ; astronomers generally suppose the sun to move along the ecliptic, describing its orbit round the earth at rest.

415. Let NEAQ be the earth, N A be its axis, N the north pole, A the south ; E Q the equinoctial, and P R a parallel of latitude pass- ing through any place. Draw a plane G ^ I perpendicular toy^S 03, which divides the illu- minated hemisphere from the dark one. The axis N A is inclined to the plane of the ecliptic or earth's orbit, in an angle of G6i : and during

the earth's motion in its orbit, the axis always remains in a parallel position, or pointing to the same star. The earth also moves uniformly round this axis ; and describes equal arches in equal times. Now let the earth be at s►► ; in this position, the circle dividing the light and dark hemispheres passes through the poles N and A, and divides all the parallels as P It into two equal parts ; therefore any point in that parallel, as the earth revolves round, will stay as long in the light hemisphere as in the dark ; that is, the days and nights are equal. As it moves to Tti, the pole N comes into the light hemisphere, by reason of the oblique position of the axis N A ; and as it proceeds to f and vtf, the light hemis-

phere reaches farther and farther beyond N, till coming to yf, it is at the farthest, reaching to G, and making the arch N G 23ˆ►► the complement of N y? S, or 66i►►. Then the opposite pole A i.'i as far involved in the dark hemisphere ; whence in north latitudes, or in the hemisphere E N Q, the days have been increasing from ˆt to yf, where they are at their longest; for the greater part of the parallel P R is in the illuminated hemisphere, and the smaller part in the dark.

416. In the opposite or southern hemisphere the days have been decreasing, and are at their shortest when the earth is at yp : for all parallels to E Q have their greater part in the dark hemis- phere. If through the point G a parallel be de- scribed, this parallel is called the arctic circle; and all the space contained therein is illuminated, and there is no night, when the earth is at yp. For the same reason, the space within a pa- rallel drawn through I, will be all dark, and all is night there. If a parallel be drawn through B, where S yf cuts the arch N E, that parallel is called the tropic of Cancer ; and then the sun will shine perpendicular upon the inhabitants in that parallel. This is the summer season for those that are in the hemisphere EN Q, and the ►►►winter for those that live in EAQ; and since E Q is equally divided by the circle of light and darkness G I, the days and nights are always equal under the equinoctial.

417. While the earth moves through ►►? and >►► to ryi, the circle of light and darkness comes nearer and nearer to the pole N, the angle N yf G, and consequently B yf E grows less and less, till they vanish in cyi > then the circle of light and darkness passes again through the poles N and A, bisecting all the parallels as P R ; and the days and nights are again equal all over the earth.

418. While the earth moves through , #, IT, to ►► , the sun seems to go

through =o=, nt,, $,

*

422. All these phenomena may be thus repre sen ted : Take a small globe that has the equinoc* tial and parallels drawn on it ; and^ placing a candle upon a table, move the globe round the candle in a circle parallel to the table, so that the axis of the equator may be oblique to that circle, and be kept always in a parallel position whilst it moves about The candle will illumi- nate the globe as it is carried round, just as the sun does the earth in its orbit ; and the poles and the parallels will be the same way affected with light and darkness as the globe.*

423. The orbit of the earth being elliptical, and the sun constantly keeping in its lower focus, which is 1,617,941 miles from the middle point of the longer axis, the earth approaches tyvice as near, or 3,235,882 miles nearer the sun at one time of the year than at another ; for the sun ap- pearing under a larger angle in our winter than summer, proves that the earth is nearer the sun in winter. But here this question naturally arises, Why have we not the hottest weather when the earth is nearest the sun ? In answer it must be ob- served, that the eccentricity of the earth's orbit, or 1,617,941 miles, bears no greater proportion to the earth's mean distance from the sun, than seventeen does to 1000; and therefore this small difference of distance cannot occasion any great difference of heat or cold.

424. But the principal cause of this difference is, that in winter the sun's rays fall so obliquely upon us, that any given number of them is spread over a much greater portion of the earth's sur- face where we live; and each point must then have fewer rays than in summer. There comes also a greater degree of cold in the long winter nights than there can return of heat in so short days ; and on both these accounts the cold must increase. In summer the rays fall more perpen- dicularly upon us ; come with greater force, and

in greater numbers, on the same place ; and by their long continuance, u much greater degree of heat is imparted by day than can fly off by night.

425. Besides, those parts which are once heat- ed, retain the heat for some time ; which, with the additional heat daily imparted, makes it con- tinue to increase though the sun declines towards the south. This is the reason why July is hotter than June; and often, in our cold climate, Au- gust hotter than both, although the sun has with- drawn from the summer tropic; as we find it is generally hotter at three in the afternoon, when the sun has gone towards the west, than at noon when he is in the meridian. Those places too which have been well cooled require time to be heated

again ; for the sun's rays do not heat even the surface of any body, till they have been some time upon it. lience we find January for the most part colder than December, although the sun has withdrawn from the winter tropic, and begins to dart his beams more perpendicularly upon us. An iron bar is not heated immediately upon being put into the fire, nor grows cold till some time after it has been taken out.

426. If we suppose the degree of heat to be as mih power of the sun's altitude, into the nth power of the time of his continuance above the horizon, that s and c are the sine and cosine of any given latitude ; s' and c' the sine and cosine of the sun's declination at the semidiurnal one ; T tin: time in the afternoon, when the heat is the greatest; and .v and // the sine and cosine of T* Then re' f .►►';/ will be the sine of the sun's alti tude ; and consequently (re' + 5 s y') m + A f T* must be a maximum ; - whence its fluxion mssy X A + T~+ n f + (ss' + A-S/) ►►► 0. But by

the: property of the circle ►►► = T, and conse-

an equation

from whence- the relation between x and y may be determined.

►►►'2~. The sun completes what is called a tro- pieal year, when he :irrivcs at the same equinoc- tial (.r soUtiti.il | , dint. This lie does in 365d. .►►►'MI. -in' ,")?". \ hen in: arrives at the same fixed star a^uri, as seen from the earth, he completes the siderial year, which contains 36od. 6h. 9'. 1-iy. Tin- Miierial year is therefore 20′ 17►►" loir_;.r than tin. solar or tropical year, and <)' 14$" longer than the Julian or the civil year, which stall- at :it).')d. iih. ; so that the civil year

almost a mean between the siderial and tro- pical.

decree in -Jo' l?i"of time; rive at tin same equinox or s ."HI" of a degree short of the ►►►ami: star, or fixed point in the heavens, from ►►►'. hich in: set out the: year before. So that, with ►►►expect to the li\i:tars, the snu and equinoctial ..uints fall back, as it were, :io ' in 21GO years, ►►►►►►►.h;eh will make the stars appear to have gone " fonv;.."l with respect to the signs of the eclip

tic in that time : for the same signs always keep in the same points of the ecliptic without regard to the constellations.

429. The sun returrs to the equinox again in 365d. oh. 48′ and 57″ ; and th's is the period in which the seasons complete their revolution. But as it is convenient in civil life to make the year consist of an exact number of

days, three years in succession are made to consist of 365 days, and a fourth of 366 days ; making the aver- age length of a civil year to be 365d. 6h. or 11 3″ too little.

430. These 11′ 3”, by which the civil or Julian year exceeds the solar, amount to 1 1 days in 1433 years ; and so much our seasons had fallen back, with respect to the days of the months, since the time of the Nicene council in A. D. 325. In order, therefore, to bring back all the fasts and festivals to the days then settled, it was requisite to suppress 11 nominal days; and, that the same seasons might be kept to the same times of the year in future, to leave out the bis- sextile day in February, at the end of every cen- tury of years not divisible by 4 ; to reckon them only common years; as the 17th, 18th, and 19th centuries, viz. the years 1700, 1800, 1900, &c. because a day intercalated every fourth year was too much ; and to retain the bissextile day at the end of those centuries of years which are divisible by 4, as the 16th, 20th, and 24th centuries, viz. the years 1600, 2000, 2400, &c.

431. Without these changes, the seasons in length of time would be quite reversed with re- gard to the months of the year ; though it would have required near 23,783 years, to have brought about such a total change. If the earth had made exactly 365ˆ diurnal rotations on its axis, while it revolved from any equinoctial or solstitial point to the same again, the civil and solar years would always have kept pace together and the style would never have needed any alteration.

SECT. IV. OF THE PHENOMENA OF THE MOON.

432. The moon is not a primary planet, but only a satellite, or attendant of the earth, circu- lating around it in 29d. 12h. and 44’, and round the sun along with it every year. The moon’s diameter is 2180 miles; and her distance from the earth’s centre about 240,000 miles. She goes round her orbit in 27d. 7h. 43’. moving about 2290 miles every hour; and turns round her axis exactly in the same time that she goes round the earth, which is the reason of her keeping al- ways the same side towards us, and that her day and night taken together is as long as our lunar month.

433. The moon is an opaque globe like the earth, and shines only by reflecting the light of the sun ; therefore, whilst that half of her which is towards the sun is enlightened, the other half must be dark and invisible. Hence she disap- pears when she comes between us and the sun ; because her dark side is then towards us. When she is gone a little way forward, we see a little of her enlightened side ; which increases to our view as she advances, until she comes to be op- posite to the sun ; when her whole enlightened side is towards the earth, and she appears . a round

illuminated orb, which we call the full

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moon ; her dark side being then turned away from the earth. From the full she seems to de- crease gradually as she goes through the other half of her course; showing us less and less of her enlightened side every day, till her next change or conjunction with the sun, when she disappears as before.

434. The moon has scarcely any difference of seasons; her axis being almost perpendicular to the ecliptic. What is very singular, one half of her has no darkness at all; the earth constantly affording it a strong light in the sun's absence ; while the other half has a fortnight's darkness and a fortnight's light by turns.

435. Our earth appears as a moon to the inhabitants of the moon; waxing and waning regularly, but appearing thirteen times as big, and affording them thirteen times as much light as she does to us. When she changes to us, the earth appears full to her ; and when she is in her first quarter to us, the earth is in its third quarter to her ; and vice versa. But from one half of the moon the earth is never seen at all: from the middle of the other half it is always seen over head ; turning round al- most thirty times as quick as the moon does. From the circle which limits our view of the moon, only one half of the earth's side next her is seen ; the other half being hid below the horizon of all places on that circle. To her in- habitants the earth appears the largest body in the universe ; for it appears thirteen times as large as she does to us.

436. While the earth turns round its axis, the several continents, seas and islands, appear to the moon's inhabitants like so many spots of different forms and brightness, moving over its surface; but much fainter at some times than others, ac- cording as our clouds cover them. By these spots the Lunarians can determine the time of the earth's diurnal motion, just as we do the motion of the sun : and they may measure their time by the motion of the earth's spots, for they can- not have a more true dial.

437. The axis of the moon is so nearly per- pendicular to the ecliptic, that the sun nev-er re- moves sensibly from her equator; and the obli- quity of her orbit, which is next to nothing as seen from the sun, cannot cause the sun to decline sensibly from her, equator. Yet her inhabitants are not destitute of means for ascertaining the length of their year, though their method must differ from ours. We know the length of our year by the return of our equinoxes ; but the Lu- narians, having always equal day and night, must have recourse to another method ; and, we may suppose, they measure their year by observing when either of the poles of our earth begins to be enlightened, and the other to disappear, which is always at our equinoxes; they being conveni- ently situated for observing great tracts of land about our earth's poles, which are entirely uji- known to us. Hence we may conclude, that the year is of the same absolute length to the inhabi- tants of the earth and moon, though very differ- ent as to the number of days ; we having 365 j natural days, and the Lunarians only 12-j|, every day and night in the moon being as long as 29►► on the earth.

438. The inhabitants of the moon, on the side next the earth, may find the longitude of their places as easily as we can find the latitude of ours. For the earth keeping constantly, or very nearly so, over one1 meridian of the moon, the east or west distances of places from that meri- dian are as easily found as we can find our dis- tance from the equator by the altitude of our celestial poles.

439. As the sun only enlightens that half of the earth which is towards him, and leaves the opposite half in darkness, he does the same to the moon ; but with this difference, that as the earth is surrounded by an atmosphere, we have twilight after the sun sets ; but if the moon has neither an atmosphere of her own, nor is in- cluded in that of the earth (as is supposed), the Lunarians must have an immediate transition from the brightest sunshine to the blackest dark- ness.

440. The moon being an opaque spherical body (for her hills take off no more from her roundness than the inequalities on the surface of an orange take of from its roundness,) we can only see that part of the enlightened half which is towards the earth. And therefore, when the moon is at A, see plate IV. fig. 3, in conjunction with the sun S, her dark half is towards the

earth, and she disappears, as at ◆◆, there being no light on that half to render it visible. When she comes to her first octant at B, or has gone an eighth part of her orbit from her conjunction- a quarter of her enlightened side is towards the earth, and she appears horned, as at b. When she has gone a quarter of her orbit from between the earth and sun to C, she shows us one-half 01 her enlightened side, as at c, and we say she is a quarter old. At D she is in her second octant ; and by showing us more of her enlightened side, she appears gibbous, as at d. At E her whole enlightened side is towards the earth; and there- fore she appears round, as at e, when we say it is full moon. In her third octant at F, part of her dark side being towards the earth, she again ap- pears gibbous, and is on the decrease, as at f. At G we see just one-half of her enlightened side ; and she appears half decreased, or in her third quarter, as at g. ◆◆◆ At H we only see a quarter of her enlightened side, being in her fourth octant, where she appears horned, as at h. And at A, having completed her course from the sun to the sun again, she disappears, and we say it is new moon. Thus, in going from A to E, the moon seems continually to increase ; and in going from E to A, to decrease in the same pro- portion; having like phases at equal distances from A to E, but as seen from the sun S, she is always full.

441. The moon does not appear perfectly round when she is full in the highest or lowest part of her orbit, because we have not a full view of her enlightened side at that time. When full, in the highest part of her orbit a small de- ficiency appears on her lower edge ; and the contrary when full in the lowest part of her orbit.

442. From the figure it is evident, that when the moon changes to the earth, the earth appears full to the moon ; and vice versa. For when ihe

moon is at A, new to the earth, the whole en- lightened side of the earth is toward:) the moon ; and when the moon is at K, full to the earth, its dark side is towards her. Hence a new moon answers to a full earth, and a full moon to a new earth. The quarters are also reversed to each other.

443. The position of the moon's cusps, or a right line touching the points of her horns, is very differently inclined to the horizon at different hours of the same days of her age. Sometimes she stands, as it were, upright on her lower horn, and then such a line is perpendicular to the ho- rizon : when this happens, she is in what the as- tronomers call the nonagesimal degree, which is the highest point of the ecliptic above the ho- rizon at that time, and is 00◆◆ from both sides of the horizon, where it is then cut by the

ecliptic. But this never happens when the moon is on the meridian, except when she is at the very begin- ning of Cancer or Capricorn.

444. It is easy to demonstrate that the moon turns round her axis in the time that she goes round her orbit ; for a spectator at rest, without the periphery of the moon's orbit, would see all her sides turned regularly towards him in that time. She turns round her axis from any star to the same star again, in ',}7d. 7h. ; from the sun to tin- sun a'_rain in '.".!►► d.; the former is the length of her sidenal day, and the latter the length of her solar day. A body moving round the sun would have a solar clay in '..'very revolu- tion, without turning on its a\i;; the- same as if it had been at ivst, and t!>e sun moved round it; hut without tumi'ig round its axis it could never have one siderial day, heeause it would always keep the same side towards anv paiticular star.

44.'). i i' the earth had no annual motion, the moon would u'o round it so as to complete a lu- nation, a r idi ;'iul, and a solar day, all in the same time. :>ut because t' ►►►: uariii go"s forward in its orbit, wiii:o the moon i;oi'.s round tie earth in her orbii, the mo'i'i must w as mucii more than round iii:;- orbil, tV.im eh:in'.;;; to change, in com- pleting a, soiar) annual mo tion, the moon's mntion round the . arth, and her track in open s^uce, woul 1 always be tie same. Hut, a^ the earth and moon move ioun ! die sun, the moon's real path in 'me iu.avetis ;s very dif- ferent from her visible path round the earth ; the latter being in a progressive circle, and tiie for- mer in a curve of different decrees of concavity ; which would aluays be the. same in the same parts of the he;uens, if the moon performed a complete number of lunations in a year without ;iiiv fraction.

4-ld. Newton ascribed the equality between tho periods M|' rotation and n: \olution of the moon to her i►►i in: of an oval form, and being denser on one side than the other; but La (iranue h,i> shown that though, from the diminu- tion or the c; nt. i:':i'j,'a! f.iree, the moon ought to be ele\ated at i V ►►► quator, yet the aberration is tour Urn s a> gr> at in the dir. etion ot' the cqua 'orial diameter, umc: is directed towards the -.artli : ►►►>.',\\ :>►►► ha- proved that, :n consequence . T 'li .r.i,ii:t,on nt the emi1! on uii.s eleva.ted

portion, the moon's motion is alternately acce- lerated and retarded ; and that this attraction tends to produce an equality between the rota- tion and revolution of the moon, and to occa- sion a coincidence both in the position and mo- tion of the nodes of the moon's orbit.

447. The motion of the moon in her orbit not being equable, if her rotation on her axis be uniform there must be parts on her eastern and western edges which are only occasionally seen. These changes, called her libration

in longitude, are found to agree with an equable motion of rotation. There are parts also about her poles only occasionally visible. This, called her libration in latitude, arises from her axis being constantly inclined to the plane of her orbit, in an angle of about 86►►. A diurnal libration also takes place ; at rising a part of the western edge is seen, which is invisible at setting, and the contrary takes place with respect to the eastern edge. This is occasioned by the change of place in the spectator, occasioned by the earth's rota- tation. Having found by any means., the moon's angular distance from the sun, the appearance of her disk for that time may be easily deli- neated in the following manner : Let the arch CO BP, Plate IV. figs. 6 and 8, represent, the disk of the moon which is turned towards the earth, and let O P be cut by the diameter B C at right angles, take LP to LF as radius to cosine of the moon's angular distance from the sun, and upon BC as the greater and LF the less axis describe the semi-ellipse B F C ; then B F C P will represent that portion of the moon's illumined face which is visible from the earth.

448. To illustrate this, let the nail in the end of the axle of a chariot-wheel represent the earth, and a pin in the nave the moon : if the body of the chariot be propped up so as to keep that wheel from touching the ground, and the wheel be then turned round by hand, the pin will describe a circle both round the nail and in the space it moves through. But if the props be taken away, the horses put to, and the chariot driven over a piece of ground which is circularly convex, the nail in the axle will describe a circular curve, and the pin in the nave will still describe a circle round the progressive nail in tiie axle, but not in the space through which it moves. In this case, the curve described by the nail v>ill resemble in miniature as much of the earth's annual part round the sun, as it describes whilst the moon goes as often round the earth as the pin does round the nail; and the curve described by the pin will have some resemblance to the moon's path during so many lunations.

449. The surface of the moo.n being uneven, some are surprised thai her edge does not ap- pear jagged, as well as the curve bounding the light and dark places. But if we, consider that what we call the edge of the moon's disk is not a single line set round with mountains, in which case it would appear irregularly indented, but large zone, having many mountains, lying behind one another from the observer's eye, we shall find that the mountains in some rows will be op- posite to the vales in others ; and thus fill up the inequalities so as to make her appear quite round ; just as when one looks at an orange,

although its roughness be very discernible on the side next the eye, especially if the sun or a candle shines obliquely upon that side, yet the line terminating the visible part still appears smooth and even.

SECT. V. OF THE TIDES.

450. The tides are found to follow periodi- cally the course of the sun and moon, and hence it has been suspected, in all ages, that the tides were somehow produced by the influence of these luminaries. Of this, Pliny, Ptolemy, Macrobius, and others, seem to have had some knowledge. The celebrated Kepler formed some conjectures long ago, as to the true cause of the tides. ‘ If,’ says he, ‘ the earth ceased to attract its waters towards itself, ail the water in the ocean would rise and flow into the moon. The sphere of the moon’s attraction extends to our earth and draws up the water.’ What Kepler only surmised, has been completely verified in the theory laid down by Newton, and by Halley from his principles. The principal phenomena of the tides are as follows :

451. I. The sea is observed to flow for about six hours from south to north, gradually swell- ing ; and after a flux of about six hours, it seems to rest for a quarter of an hour ; and then to ebb or retire back again from north to south for six hours more. Then, after a seeming pause of about ►► of an hour, the sea again begins to flow ; and so on alternately.

452. II. Hence the sea ebbs and flows twice a-day, but falling every day later and later by about forty-eight minutes, the period of a flux and reflux being on an average about 12 h. 24 m. and the double of each 24 h. 48 m. which is the period of a lunar day, or the time between the moon’s passing a meridian and coming to it again. So that the sea flows as often as the moon passes the meridian, both the arch above the horizon, and that below it; and ebbs as often as she passes the horizon, both on the eastern and western side. These are the most obvious appearances; the other phenomena are as follows :

453. III. The elevation towards the moon exceeds the opposite one a little, and the quan- tity of the ascent of the water is diminished from the equator to the poles.

454. IV. The sun raises and depresses the sea twice every day, in the same manner that the moon does ; but the solar tides are much less than the lunar ones, although subject to the same laws.

455. V. The tides which depend upon the actions of the sun and moon are not distin- guished but compound ; and thus they form to appearance one united tide which, increasing and decreasing, produce neap and spring

tides.

456. VI. In the syzygies tbe elevations from the actions of both luminaries concur, and the sea is more elevated ; but the sea ascends less in the quadratures ; for where the water is elevated by the action of the moon, it is depressed by that of the sun, and vice versa. Therefore, while the moon passes from the syzygy to the qua- drature, the daily elevations are continually di- minished ; on the contrary, they are increased

while the moon passes from the quadrature to the syzygy. At the new moon also cceteris pa- ribus the elevations are greater ; and those that follow one another the same day, are more dif- ferent than those at full moon.'

457. VII. The greatest elevations and depres- sions take place on the 2d or 3d day after the new or full moon; and they are the greater, the nearer the luminaries are to the plane of the equator ; being greatest in the syzygies, near the equinoxes.

458. VIII. The actions of the sun and moon are greater the nearer those bodies are to the earth ; and the greatest tides happen when the sun is a little to the south of the equator : but this does not happen regularly every year, be- cause some variation may arise from the situa- tion of the moon's orbit, and the distance of the syzygy from the equinox.

459. IX. The mean force of the moon to move the sea, is to that of the sun nearly as 4►► to 1 ; and therefore if the action of the sun alone produce a tide of two feet, which it is said to do, then that of the moon will be nine feet ; from which it follows, that the spring-tides will be eleven feet, and the neap-tides seven feet. But such elevations as far exceed these, happen from the motion of the water against some obstacles, and from the sea violently entering straits or gulfs, where the force is not broken till the water rises higher.

460. The preceding phenomena take place in the open sea, where the ocean is extended enough to be subject to their motions. But the parti- cular situations of places, as to shores, capes, bays, &c. disturb in a considerable degree these general rules. We are now to show how these phenomena may be explained, from the prin- ciple of universal gravitation.

461. If the earth were entirely fluid and qui- escent, its particles, by their mutual gravity towards each other, would form the whole mass into the figure of an exact sphere. If a power were to act on all the particles of this sphere, with an equal force, and in parallel directions, the whole mass would be moved together ; but no change would be produced on its spherical figure, and its centre would have the same motion as each

particle.

462. Upon this hypothesis, if the motion of the earth round the centre of gravity of the earth and moon, were destroyed, and the earth left to the influence of its gravitation towards the moon, as the power above mentioned, then the earth would/fall or move straight towards the moon, without changing its spherical figure.

463. But the fact is, that the effects of the moon's action, as well as the action itself on dif- ferent parts of the earth, are not equal ; those parts, by the general rules of gravity, being most attracted that are nearest to the moon, and those being least attracted that are farthest from her ; while the parts that are at a middle distance are attracted by a mean degree of force. Besides, all the parts are not acted upon in parallel lines, but in lines directed towards the centre of the moon, on both which accounts the spherical figure of the fluid earth must suffer some change from the action of the moon ; so that in falling, as we havt

supposed, the nearer parts being most attracted, would fall quickest, the farther parts being least attracted, would fall slowest, and the fluid mass would be lengthened out, and take a kind of spheroidical form.

464. Hence it appears (which must be care- fully observed), that it is not the action of the moon itself, but the inequalities in that action, that cause any variation from the spherical figure; and that if this action were the same in all the particles, as in the central parts, and operating in the same direction, no such change would ensue.

465. Let us now admit the parts of the earth to gravitate towards its centre, then as this gravi- tation far exceeds the action of the moon, and much more exceeds the differences of her actions on different parts of the earth, the effect which results from the inequalities of these actions of the moon, will be only a small diminution of the gravity of those parts of the earth, which it endeavoured in the former supposition to sepa- rate from its centre ; that is, those parts of the earth which are nearest to the moon, and those that are farthest from her, will have their gravity towards the earth somewhat abated, to say no- thing of the lateral parts ; so that supposing the eartli fluid, the columns from the centre to the nearest, and to the farthest parts must rise, till, by their greater height, they are able to balance the other columns, whose gravity is less altered by the inequalities of the moon's action, and thus the figure ot" the earth must be an oblong

spheroid.

46(3. Let us now consider the earth, instead of falling towards the moon by its gravity, as pro- jected in any direction, so as to move round the centre of gravity of the earth and moon, it is evi- dent, that in this case the .several parts of the fluid earth will still preserve that relative posi- tion, and the figure of the earth will remain the same as if it fell freely towards the moon; that is, the earth will >till assume a spheroidal form, ha\ing its longest axis directed toward the moon.

*167. 1 rum the preceding reasoning, it appears, that the parts of the earth directly under the moon, as at 11, plate X. lig. 4, and also the opposite parts at 1), will have the flood or high-water at the same time, whilst tue parts at 15 and F, at '.'(.> * diMance, or where the moon appears in the horizon, will then have the ebbs, or lowest waters.*

Hence as ihe earth turns round its axis from the moon to the moon again in 24h. 48m. this ov.d ot" water must shut with it, and thus theie will lie two tides of flood, and two of ebb in that time. It farther appears, that by the motion ot ti.u earth on her axis, the most ele- vated ; art of the water is carried beyond the moon, in the direction of the rotation ; so that tin; wattr ei'iitmues to rise after it has passed llmrtly under the moon, t'aouuh the immediate (nt ion ot tlif momi tin-re l)(-_ms to decrease; and voine< not tu Us greati-M, elevation, till it has got .i'nout Lai' a quadrant, farther. It continues to icM-t-iid after it nas parsed at W from the point .v the iiioun, to a like dir-tunce of half a quadrant.

4t',;',. The greatest (-luxation, then-fore, is not in the luu- di.iwn throu-_.i the cetiUv.i of the earth uid mo.. ii, not LIU lowest point, where the moon*

appears in the horizon, but all these are removed about half a quadrant eastward from these points in the direction of the motion of rotation. Thus, in open seas, where the water flows freely, the moon, M, is generally past the north and south meridian, as at p, when the high water is at Z, and at n; the reason of which is plain, because the moon acts with the same force after she has passed the meridian, and thus adds to the libra- tory or waving motion which the water acquired when she was in the meridian.

469. Besides, the tides answer not always to the distance of the moon from the meridian, at the same places, for the action of the sun brings them on sooner when the moon is in her first and third quarters, and keeps them back later when she is in her second and fourth : because, in the former case, the tide, raised by the sun alone, would be earlier than that raised by the moon, and in the latter case, later.

470. We have hitherto adverted only to the action of the moon in producing the tides ; but it is evident, that for the same reasons, the ine- quality of the sun's action on different parts of the earth, would produce a like effect, and a like deviation from an exact spherical figure ; so that in reality, there are two tides, every natural day, from the action of the sun, as there are in a lunar day, from the action of the moon, subject to the same laws ; and the lunar tide, as has been ob- served, is somewhat changed by the action of the sun, the change varying every day, on account of the inequality between the natural and lunar day.

471. Although the gravitation of the earth, towards the sun, is much greater than its gravi tation towards the moon, yet, by reason of the sun's immense distance, to which the earth's dia- meter bears a small proportion, his action upon the side of the earth next to him differs but little from that which is exerted on the side farthest from him, and it is only the inequalities in that action that produce the tide. However, the effect of the sun is still very sensible, but that of the moon is much more so; for, by its proximity to the earth, there is a considerable inequality, both in the direction of its action, and in the in- tensity of that action upon different parts of the earth.*

472. Hence it is easy to see, that the tides must be greatest at new and at full moon, because the actions of the sun and moon are then exerted in the same directions. These are called spring tides; whereas, when the sun and moon are 90►► distant, the action of the one luminary raises the tides, just where that of the other depresses them, and thus are produced what are called neap tides. Newton has calculated the effects of the sun and moon respectively upon the tides from their at- tractive powers, the former he finds to be to the force of gravity, as one to 12,868,200. To find the force of the latter upon the water, he com- pares the spring tides at the mouth of the river Avon, below Bristol, with the neap tides, and finds the proportion as nine to five ; whence, after several necessary corrections, he concludes, that the force of the moon, in moving the waters, is to that of the sun, -as 4-4815 to one.

473. Dr. Horsley, however, in his edition of

Newton's Prineipia, estimates the force of the moon to that of the sun, as 5-0469 to one, and other authors have given different proportions; but Newton computes, from his proportion, that the moon may raise the waters nine feet, 1►► inch, and the sun and moon together may produce an

elevation of about eleven feet, two inches ; and about 12 J feet, when the moon is at her nearest distance. Now this is found by observation, to be nearly the height to which the water rises, on the coasts of the open and deep ocean.

474. It must be observed, that the spring tides do not happen precisely at new and full moon, nor the neap tides precisely at the quarters, but a day or two after ; because, as in other cases, so in this, the effect is not greatest or least when the immediate influence of the cause is greatest or least ; for if the actions of the sun and moon were to cease, yet the tides would continue for some time ; as the waves of the sea continue their motion after a storm.

475. The different distances of the moon from the earth produce a sensible variation in the tides; and Newton has shown, that they increase as the cubes of the distances decrease ; so that the moon at half her distance, would produce a tide eight times greater. The moon describes an oval round the earth; and at her nearest distance, produces a tide sensibly greater than at her farthest distance. Hence two great spring tides never succeed each other, at the distance of four- teen days; for if the moon be at her least distance at the change, and therefore produce a great spring tide, she will be at her greatest distance at the full, and therefore the spring tide will be less.

476. The spring tides are highest, and the neap tides lowest, about the time of the equi- noxes; because, were the sun or moon in the pole of the world, there would be no tide; for their action would raise the water at the equator or any parallel, equally round the earth : there- fore, the nearer they are to the equator, the greater must be the effect. When the sun and moon traverse the equator, the tides, which are under them, will traverse the greatest circle, and the waters will be put into the greatest agitation. They will also be the greater at these times, be- cause the earth is nearer to the sun, about the beginning of March and end of September, than in the summer months.

477. As the greatest of the two tides, happen- ing in every diurnal revolution of the moon, is that in which the moon is nearest the zenith or nadir, therefore, while the sun is in the northern signs, the greater of the two diurnal tides, in our climate, will be that arising from the moon when above the horizon ; and when the sun is in the southern signs, the greatest is that arising from the moon below the horizon. Thus, the evening tides in summer exceed the morning tides, and the morning tides in winter exceed the evening tides. This difference is found at Bristol to be fifteen inches, and at Plymouth twelve inches.

478. Such would the tides regularly be, if the earth were all covered over with the sea, to a great depth, so that the waters might freely fol- low the influence of the sun and moon ; but, as the tides pass over shoals, and run through

straits into bays of the sea, their motion be- comes more various, and their height depends upon a great many circumstances. That the tides may have their full motion, the ocean, in which they are produced, ought to be at least 90°° extended from east to west; because that is the distance between the greatest elevation, and the greatest depression, produced in the waters by the moon.

479. Hence it appears, that it is only in the great oceans that such tides as we have described can be produced, and why in the larger Pacific Ocean they exceed those in the Atlantic Ocean. Hence it is obvious why the tides are not so great in the torrid zone, between Africa and America, where the ocean is narrower, as in the temperate zones on either side ; and hence, also, we see why the tides are so small in islands, at great distances from the shores. It likewise ap- pears, that the waters cannot rise on one shore of the Atlantic Ocean, but by descending on the other, so that at the intermediate islands it must remain at a mean height, between its elevations on those two shores.

480. The tides that enter the mouths of ri- vers from the ocean, are greatly retarded in their progress, by the currents of the rivers. Mr. Condamine, while in South America, observed, that in the river Amazons, there were five high waters, and four intermediate low waters at once ; and a similar circumstance takes place in the Thames. For the tide propagated by the moon in the German Ocean, when she is three hours past the meridian, takes twelve hours longer to come to London Bridge, so that when it is high water there, a new tide is already come to its height in the ocean; and in some intermediate place, it must be low water at the same time.

481. At several places, it is high water three hours before the moon comes to her meridian; but that tide, which the moon pushes as it were before her, is only the tide opposite to that which was raised by her, when she was nine hours past the opposite meridian.

482. There are no sensible tides in the Baltic, the Mediterranean, or the Black Seas ; for they communicate with the ocean by such narrow inlets, and are of so immense an extent, that they cannot speedily receive and empty water enough, to raise or depress their surfaces sen- sibly. In the Caspian Sea, and in lakes, &c. the moon's attraction is nearly the same upon all parts of their surface, so that no sensible swelling can take place in their waters.

483. We may also conclude, that by reason of the fluidity of the atmosphere, it must have tides similar to those of the ocean ; and hence, there will be a general current from east to west, both of the waters of the ocean, and of the air; but the changes produced in the state of the at- mosphere, from chemical causes, will so much affect the general current, as to prevent it from being perceived.

484. We shall conclude this subject with a table, by the aid of which the time of high water may be found with great ease and cor- rectness.

Table for finding the Time of High Water; being the Correction of the Moon's southing.

Moon's

Moon's Seinidiametcr.

Moon's

Moon's

Moon's Semidiameter.

Moon's

pass, over

pass, over

pass, over

pass, over

Merid.

14′ 30′

15′ 30″

16′ 30″

Merid.

Merid.

14′ 30″

15′ 30″

16′ 30″

Merid.

H. M.

H. M.

H. M.

H. M.

H. M.

H. M.

H. M.

H. M.

H. M.

H. M.

0 0

□□□ 04

□□□ 00

+ 05

12 0

6 0

0 55

□□□ 1 3

- 1 12

18 0

20

8

5

+ *

20

20

49

55

1 3

20

40

12

10

8

40

40

43

47

0 53

40

1 0

17

16

15

13 0

7 0

32

34

37

19 0

20

◆◆◆ 22

◆◆◆ 22

◆◆◆ 22

20

20

◆◆◆ 22

◆◆◆ 22.

22

20

40

◆◆◆ 27

◆◆◆ 28

◆◆◆ 29

40

40

◆◆◆ 11

_ g

◆◆◆ 0

40

2 0

◆◆◆ 31

◆◆◆ 33

14 0

8 0

1

+ 3

+ 9

20 0

20

36

39

43

20

20

+ 5

+ H

+ 19

20

40

40

44

50

40

40

+ H

+ 19

+ 29

40

3 0

44

49

55

15 0

9 0

+ H

+ 21

+ 32

21 0

20

48

54

12

20

20

+ 16

+ 24

+ 36

20

40

◆◆◆ 51

◆◆◆ 58

◆◆◆ 17

40

40

+ 16

+ 23

+ 35

40

4 0

◆◆◆ 55

◆◆◆ 1 2

◆◆◆ 1 12

16 0

10 0

+ 15

+ 23

+ 34

*22 *0*

20

◆◆◆ 57

◆◆◆ 15

◆◆◆ 1 15

20

20

+ 13

+ 20

+ 30

20

40

59

17

1 18

40

40

+ H

+ 18

-T 28

40

5 0

1 0

1 8

1 19

17 0

11 0

+ 7

+ 14

+ 23

23 0

20

20

20

+ 4

+ 18

20

40

40

40

+ 0

+ 11

40

6 0

- 1 12

18 0

12 0

□□□ – 4

+ o

+ 5

24 0

485. To find the time of high water by this table, seek in the Nautical Almanack, White's Epherneris, or any other similar astronomical work, for the time of the moon's passing the meridian of Greenwich ; with which enter the table, and take out the corresponding correction of the said time of the moon's meridian passage, and apply it by addition or subtraction as di- rected in the table, and add the result to the time of ii-h water at the proposed place on the full and change days, and the sum rejecting twenty-four hours if necessary, will be the hours and mi- nutes past noon, when it willbe high water.

SKT. VI. □□□ OF TIIK HARVEST MOON.

□□□loo. It is remarkable, that the moon, during the week in which she is full about the time of harvest, rises sooner after sun-set, than she does in any other full moon week throughout the year. Hy this moans, she affords an immediate supply of li-ht after sun-set, which is very beneficial for those employed in the harvest, and gathering in the fruits of the earth. Hence this full moon is distinguished from all others in the year, by calliim it the Harvest Moon.

187. To conceive the reason of this pheno menon, it may first he considered, that the moon is always opposite to the sun when she is full, and therefore, in the harvest months, she is full in Pisces and Aries, v,liich arc' opposite to Virgo and Libra, the suns occupied by the sun about the □□ame season. Nov.- the siˆns 1'isces aud Aries rise in a shorter space of time than others,

as is easily shown and illustrated by a celestial globe ; and the same thing may be conceived from this circumstance, that in northern lati- tudes, the smallest angle made by the ecliptic and horizon, is when Aries rises, at which time Libra sets ; and it is obvious, that the smaller the angle contained by the ecliptic and horizon, the greater portion of the ecliptic will rise by the earth's rotation in a given time. Conse- quently, when the moon is full in harvest, she rises with less difference of time, or more im- mediately after sunset, than at any other season of the year.

488. In our winter the rrfoon is in Pisces and Aries, about the time of her first quarter, when she rises about noon, and therefore, her rising is not then noticed.

489. In spring the moon is in Pisces and Aries about the time of her change, but as she then gives no light, and rises with the sun, her rising cannot be perceived.

490. In summer the moon is in Pisces and Aries at the time of the last quarter, and then, as she does not rise till midnight, her rising usually passes unobserved.

491. But, in autumn, the moon is in Pisces and Aries at the time of her full, and rises soon after sun-set, for several evenings successively ; which makes her regular risings very con- spicuous at that time of the year.

492. All this would happen, if the mo6n orbit lay in the ecliptic ; but her orbit make with the ecliptic an angle of 5►► 18', and crosst-f*

h in two points, called her nodes ; so that her rising, when in Pisces and Aries, will sometimes not differ above an hour and forty minutes, through a whole week; and at other times, in the same two signs she will differ in a week 3►► hours in the time of her rising, according to the different positions of the nodes with respect to the signs ; which positions are always changing, because the nodes go backward through the ecliptic in eighteen years, 225 days.

493. This revolution of the nodes causes the harvest moons to go through a whole course of the most advantageous and least beneficial states, with respect to the harvest, every nineteen years. They were least beneficial in 1796, and conti- nued so until 1797; aftf-r which, they became most beneficial from that period to 1806. In 1807 they again became least beneficial, and continued so till 1815. Their most advantageous period began agaih in 1816, and lasted till 1825, when the opposite period commenced, and will last until the year 1034; then again they will be most beneficial from 1835 to 1843 ; and so on.

SECT. VII. ►►► OF THE HORIZONTAL SUN AND MOON.

494. Philosophers have been much at a loss to account for the apparent magnitude of the sun and moon, being greater when they are in the horizon, than when elevated above it. For, ac- cording to the laws of vision,

they should appear least, when nearest the horizon, because they are then farthest from the eye ; and yet, it is found, that the contrary is true, in fact. Thus, although the diameter of the moon, when hi the horizon, .as measured by an instrument, is not found to be greater than when measured at her greatest elevation in the meridian, yet her ap- parent diameter, when in the horizon, seems to the eye two or three times greater than when ###she is considerably elevated above it.

495. According to Alhazen, one of the ear- liest writers on optics, the sight apprehends the surface of the heavens as flat, and judges of the stars, as it would of ordinary objects extended upon a wide plain. The eye sees them indeed under equal angles, but at the same time per- ceives a difference in their distances, and (on account of the semi-diameter of the earth, which is interposed in the one case, but not in the other) it is hence induced to judge those 'that appear more remote to be greater.

496. Des Cartes, and from him Dr. Wallis and most other authors, account for the ap- pearance of a different distance under the same angle, from the long series of objects interposed between the eye and the extremity of the horizon, which makes us imagine it is more remote than when in the meridian, where the eye sees nothing in the way between itself and the object. This idea of a great distance makes us imagine the luminary larger; for an object being seen undfc-r ##ny certain angle, and believed at the same time more remote, we naturally imagine it to be very large, to appear under such an angle at such a distance, and thus a pure judgment of the mind makus us sea the sun or the moon larger in the lorizon than ir> the meridian, notwithstanding /neir diameters, when measured, are really less in the former situation than, in the latter.

497. This opinion, however seems hardly te- nable, although it be sanctioned by the authority of very eminent men ; for it is daily seen, that the sun and moon, when near the horizon, very suddenly change their magnitude as they ascend and descend, though all the intervening objects remain the same as before ; and the luminaries appear largest of all, when fewest objects appear on the earth, as in a thick fog or mist.

498. Dr. Desaguliers has endeavoured to ex- plain the appearance of the horizontal moon, on the supposition that we imagine the visible heavens to be only a small portion of a spherical surface, and consequently suppose the moon to be farther from us in the horizon than near the zenith ; and he has shown how liable we are to such de- ceptions.

499. Upon this idea, Dr. Smith has determi- ned, in his optics, that the centre of the appa- rent spherical segment of sky, lying much below the eye, the apparent distance of its parts, near tlje horizon, is about three or four

times greater tnan the apparent distance of its parts over head ; for which reason it is, he infers, that the moon always appears larger as she is lower, and also that WR always think the height of a celestial object to be greater than it really is.

500. Of the apparent figure of the sky, we shall have occasion to treat more fully under optics ; and shall only observe here, that if it be allowed, that we judge of the apparent mag- nitude of the heavenly bodies, by the arc which they cover of the concave sky, it is evident, since the sky appears to us as a segment less than a hemisphere, that the horizon will appear farther distant than the zenith ; and therefore the sun and moon, while in the horizon, will cover a larger portion of the apparent sky, than when more elevated, acd thus their apparent diameter will be greater.

SECT, VIII. ??? OF THE REFRACTION OF LIGHT BY THE ATMOSPHERE.

501. If it were not for the atmosphere, the rays of light that come from the heavenly bodies, and by which they are seen, would enter the eye in the direction of a straight line joining the lu- minous body and the eye. But the earth being covered to a considerable height with an atmos- phere of unequal density, a ray of light falling obliquely upon its surface,, instead of continuing to move forward in the same rectilineal direction, is bent downwards into a curve, in its future progress ; and enters the eye in a direction differing more or less from its original one, ac- cording as it falls upon the atmosphere, with a greater or less degree of obliquity.

502. This effect may be thus illustrated: Suppose Z Y, plate IV. fig. 7, a quadrant of a vertical circle described from the centre of the earth T, under which is A B a quadrant of a circle on the surface of the earth, and G H a quadrant of the surface of the atmosphere. Then suppose S E a ray of light emitted from a star at S, and falling on the atmosphere at E ; because the ray passes out of a rare medium (and most probably a perfect vacuum) into a denser medium ; by the laws of optics, it will be refracted towards the perpendicular, or more inclined towards the earth ; and since tlw

farther that a ray descends in the atmosphere, the more dense is the medium through which it passes, it will move in the curve E A, and at last enter the eye in the direction of A F Q, a tangent to the curve. Therefore the star will appear at Q instead of S, and thus its apparent place Q will be nearer the zenith than its true place.

503. The nearer the star S is to the horizon, the greater will be the refraction as well as the distance between the apparent and true place of the star. Hence the heavenly bodies appear to be above the horizon, by reason of the refraction, when they are really below it. There is no re- fraction in the zenith, for a ray, coiling from Z, will fall perpendicularly on the surface of the at- mosphere at G, and continue its rectilinear course to the eye at A.

The following neat and elegant method of computing the atmospherical refraction has been given by Dr. Brinkley, the present learned and active professor of astronomy at Dublin :

504. Let LI, fig. 7, plate VI, be a ray of light falling on the atmosphere at I, and refracted in the curvineal course I S. The object appears to a spectator at S in the direction S T, a tangent to the curve, VST is the apparent zenith distance. The space in the figure between the concentric circles represents all the atmosphere which has any effect on the ray of light, so that the light may be considered as passing out of a vacuum into this space.

505. If the surface of the earth were a plane, the different strata of air might be considered as parallel thereto ; and by the principles of optics, the refraction would be the same as would take place were the ray of light to pass from a vacuum into air of the same density with that at the sur- face. It is therefore evident, that if we take into account the spherical form of the earth and at- mosphere, the error resulting from the supposition of an uniform atmosphere will necessarily be very small, compared with the change occasioned by considering the atmosphere spherical, pro- vided that change be small.

500. Let 7/1 : 1 : : sin. of incidence : sin. of re- fraction, when a ray of light passes from a vacuum into air of the density of that at the surface of the earth. Suppose all the air contracted into an uniform atmosphere, then SI is a right line. Let II I L = i, S 1 C = r, V S I = s, S C = a, the height of the uniform atmosphere = /, or C 1 = a + I.

V^ cos. ‘z + ••• sin. 2z =r a

cos. z (l + ••• tan. yz) nearly, we obtain

m ••• 1 ••• sin . Z ‘ I 1 ••• ••• i

••• sm. t. ••• sin. r a /

sin. l”xcos r

1. 1”. cos. 2/1 + i

_(m ⬚ 1) tan. z _ (m ⬚ 1) I. tan, “z

sin. 1″

a sin. 1″ cos.

= nearly.

3 ‘

507. Taking z = 80⬚, 2 = 5 and a ⬚ 4000 miles, the second term (arising from the spheri- cal figure of the atmosphere) = 10″ nearly. If a were indefinite, that isr if the surface of the earth were a plane, this second term would vanish. Hence we may safely conclude, that as far as 80 zenith distance, the error arising from supposing the atmosphere of uniform density must be much less than 10”, and that conse- quently the above expression gives the refraction as far as 80 from the zenith with sufficient ac- curacy. If we neglect the second term, the re- fraction will vary as the tangent of the zenith distance.

508. The exact experiments of M. M. Biot and Arago, have determined the value of m ⬚ 1 =, ⬚0002946, when the barometer is at 29,93 (in metre) and Fah. therm, at 32⬚. From their ex- periments, and the law of expansion of air, ;*

m ⬚ 1 may be inferred that

1,0375

sin. 1* ”

x T X 57* 82, nearly

1 +,002083 (f ⬚ 32)* 29,60

where b is height of the barometer, and t that of

Fahrenheit’s thermometer. When t ⬚ 50⬚ and

m ⬚ 1 b = 29,60 inches, this expression gives ⬚

sin 1

= = 57-82, a result independent of astronomical observations.

509. The French tables of refraction, by De- lambre, founded on astronomical observations,

give m 1 ⬚⬚⬚ 57-71"; and from upwards of 500 observations made by himself, Dr. Brinkley finds m~~l =57-56".

⬚⬚ f / : a

1 : 7/2

Hence

sin. z sin. r

sin. r sin. i.

?/(⬚⬚ sin. –

sin. i ~ ⬚⬚⬚ .⬚⬚⬚ ~ 77(sin

⬚⬚ + I

*(i sin. ⬚⬚ / / *

sm.r zr ⬚⬚⬚ .- ⬚⬚⬚ sin. ; { 1 –) nearly. ⬚⬚ + / V a/ 3

Let i ~ r + Iv, then 11 is the quantity of re- fraction. Sin. (7- + 11) ⬚⬚⬚ sm. i. Or, because H is small, sin. ,- + cos. r sin. R = sin. i, or sin r \ R sin. 1″ cos. 7- = sin. (', sub- stitutinu' in this equation tor sin. r and sin. i, as above. Also for cos. r.

v/

sin. 1″

510. Mr. H. Atkinson, in a memoir recently read before the Astronomical Society of London, and printed in the forth-coming part of the Society's I ˆ Memoirs, has treated the subject of refractions

,z(l⬚⬚⬚ ˆnearly, in a manner altogether new; and has evinced talents for scientific investigation which place him in a high rank among the philosophers of the present day. He treats the question alto gether as one depending on the optical proper- ties of air, by dividing the whole atmosphere into various concentric strata, and computes the deviation produced by refraction on each stratum. We should be glad, did our limits permit us, to quote very largely from this most elaborate and instructive essay, but we must content ourselves with extracting one of the results of his labo⬚⬚- in a table of mean refraction.

.511. Table of Mean Refraction, adapted to 50►► Fahrenlifit, and 29‘6 inches of Barometric pressure

Zenith dist.

Refraction.

Zenith dist.

Refraction.

Zenith dist.

Refraction.

Zenith dist

Refraction.

1►► 0′

0′ I’Ol”

58►► 30′

1′ 33-87″

76►► 20′

3′ 52-93″

84 40”►►

9′ 15-59″

2 0

0 2-01

59 0

1 35-72

76 30

3 55-80

84 45

9 22-86

3 0

0 3-02

59 30

1 37-64

76 40

3 58-74

84 50

9 30-32 /

4 0

0 4-03

60 0

1 39-60

76 50

4 1-75

84 55

9 37-95

5 0

0 5-05

60 20

1 40-93

77 0

4 4-83

85 0

9 45-77

6 0

0 6-06

60 40

1 42-30

77 10

4 8-00

85 5

9 53-79

7 0

0 7-08

61 0

1 43-70

77 20

4 11-23

85 10

10 2-01

80 0 8-11

61 20

1 45-13

77 30

4 14-55

85 15

10 10-44

9 0

0 9-14

61 40

1 46-59

77 40

4 17-95

85 20

10 19-09

10 0

0 10-17

62 0

1 48-08

77 50

4 21-43

1 85 25

10 27-96

11 0

0 11-21

62 20

1 49-60

78 0

4 25-00

85 30

10 37-00

12 0

0 12-26

62 40

1 51-16

78 10

4 28-66

85 35

10 46-4J

13 0

0 13-32

63 0

1 52-75

78 20

4 32-41

85 40

10 50-01

14 0

0 14-38

63 20

1 54-37

78 30

4 36-27

85 45

11 5-87

15 0

0 15-46

63 40

1 56-03

78 40

4 40-23

85 50

11 16-00

16 0

0 16-54

64 0

1 57-73

78 50

4 44-30

85 55

11 26-40

17 0

0 17-64

64 20

1 59-48

79 0

4 48-48

86 0

11 37-09

18 0

0 18-74

64 40

2 1-26

79 10

4 52-79

86 5

11 48-09

19 0

0 19-86

65 0

2 3-10

79 20

4 57-21

86 10

11 59-41

20 0

0 21-00

65 15

2 4-50

79 30

5 1-76

86 15

42 11-05

21 0

0 22-14

65 30

2 5-92

79 40

5 6-43

86 20

12 23-03

22 0

0 23-31

65 45

2 7-38

79 50

5 11-25

86 25

12 35-36

23 0

0 24:49

66 0

2 8-86

80 0

5 16-21

86 30

12 48-05

24 0

0 25-68

66 15

2 10-76

80 10

5 21-31

86 35

13 1-13

25 0

0 26-90

66 30

2 11-91

80 20

5 26-57

86 40

13 14-61

26 0

0 28-13

66 45

2 13-48

80 30

5 32-00

86 45

13 28-50

27 0

0 29-39

67 0

2 15-08

80 40

5 37-59

86 50

13 42-82

28 0

0 30-67

67 15

2 16-71

80 50

5 43-37

86 55

13 57-59

29 0

0 31-97

67 3-0

2 18-38

81 0

5 49-33

87 0

“14 12-83

30 0

0 33-30

67 45

2 20-08

81 10

5 55-50

87 5

14 28-55

31 0

0 34-66

68 0

2 21-82

81 20

6 1-87

87 10

14 44-78

32 0

0 36-04

68 15

2 23-60

81 30

6 8-46

87 15

15 1-54

33 0

0 37-45

68 30

2 25-41

81 40

6 15-27

87 20

15 18-86

34 0

0 38-90

68 45

2 27-27

81 50

6 22-32

87 25

15 36-75

35 0

0 40-38

69 0

2 29-17

82 0

6 29-63

87 30

15 55-24

36 0

0 41-89

69 15

2 31-12

82 5

6 33-37

87 35

16 14-36

37 0

0 43-45

69 30

2 33-11

82 10

6 37-19

87 40

16 34-14

38 0

0 45-05

69 45

2 35-14

82 15

6 41-7

87 45

16 54-60

39 6

0 46-69

70 0

2 37-21

82 20

6 45-03

87 50

17 15-78

40 0

0 48-38

70 15

2 39-32

82 25

6 49-07

87 55

17 37-69

41 0

0 50-12

70 30

2 41-49

82 30

6 53-18

88 0

18 0-41

42 0

0 51-91

70 45

2 43-72

82 35

6 57-37

88 5

18 24-06

43 0

0 53-76

71 0

2 46-00

82 40

7 1-65

88 10

18 48-57

44 0

0 55-66

71 15

2 48-36

82 45

7 6-01

88 15

19 13-95

45 0

0 57-63

71 30

2 50-77

82 50

7 10-45

88 20

19 40-24

46 0

0 59-67

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158

ASTRONOMY.

512. This refraction of the light by the atmos- phere produces the twilight ; for while the sun is less than 18J below the horizon, his rays, al- though prevented from reaching us directly, by reason of the interposed body of the earth, yet fall upon the superior regions of the atmosphere, and are so refracted and reflected by its particles as to produce a brightness over the horizon, which continues through the whole night during the summer months, in the regions of the earth towards the poles.

513. The subject of twilights has given rise to a problem which, from the talents of the mathe- maticians who have applied themselves to its investigation, has obtained considerable celebrity. The problem is, to find the day in any given latitude in which the twilight is the shortest. It .night be imagined that the twilights would in- crease from midsummer to midwinter ; but this both observation and theory show not to be the case; for though the twilights continue to increase in duration for some time after the sun’s decli- nation, allowed a denomination different from the latitude, yet they reach a maximum, after which they again increase.

514. In fig. 11, plate VI, let P be the pole, Z the zenith, IK) the horizon, AL the boundary of twilight, S s the places of the sun at the be- ginning and end of twilight. Draw the great circles’ PS, Ps, Z S, and ‘As, alsoPR = ZP,

making the airile '/A' \ = /_ Si's, and com- plete the triangle / !! s with great circles Z R, RS. Then as the /_ Z P R = / S P.s, we have the /_ UPs= L /PS; also, since Ps = PS, and PR = PZ, the triangles i(P.", / PS, are simi- lar and equal : therefore Its ••• ZS, and in the triancrle Z R.v we have eiven ZS and Rs, and as Z P, R P,are equal and given, and the /_ Z PR = /_ SPs a minimum, wo shall have Z R the least possible, which bv the writers on spherics it is shewn to be wh. -\ ••• Zx ••• R s, Us coincide: hence the; following

COXSTUVCTIOX. ••• 'Vith ZP, ?••• P, each = colat of the phicn, and Z r ••• Z 5 ••• 1{ s (Z S) = 18•• ; describe the isosedr.s triangle ZPr prolong Z r making r s = Z S ••• 90, draw Ps, which is the co-declination of tin: sun on the required day.

515. CAI.CI i A HON. ••• Draw P.; perpendicular and bisecting / r in ,••. then, by s])herical trig- onometry, we have cos. ;;•••; rail. 1 :: cos. Pr

: cos. P c, or cos. \> 2= J_•• L ; and in the

••• sine 0•• x sine lat.

cos. U . cos. 9••.

••• tang. 9′ x sine lat. A simple and general theorem, i'roin which it appears that the declina- tion and latitude are of eunirary names. From this theorem it appears, that the shortest twilight at Petersburg!! is about October 14th; at Lon- don, October 11 th, and at Homo, October 9th.

51(3. The rays of li-ht are equally refracted by the atmosphere, whether they come from the sun, the moon, or the stars; but the quantity of the refraction, ami therefore the duration of the twilight, are inHu .•••need by the changes which are

perpetually taking place with respect to the heat and cold, the moisture and dryness, &c. of the atmosphere.

PART IV. ASTRONOMICAL OPERATIONS AND

CALCULATIONS. SECT. I. ••• OF DRAWING A MERIDIAN LINE. –

517. Upon a plain board, set parallel to the horizon, describe a circle ABF, as in plate VIII. fig. 2. And upon the centre C, erect a stile or gnomon, exactly perpendicular to it, and so high, that the top of the shadow thereof may fall upon the circumference of the circle about the middle of the forenoon. Mark the point B exactly where the top of the shadow falls in the

forenoon, and the point F where the top of the shadow falls on the circumference, in the middle of the afternoon. Then, through the centre C, draw the line A C D, bisecting the arch BF. The AD is the meridian required.

518. It is proper to draw several concentric circles, and to make observations with them all, that they may confirm one another. If the sun happens to be clouded in one, it may be clear in another. It is best to make these observations about the solstices, when the sun does not alter his declination sensibly ; and the summer sol- stice is to be preferred.

519. The sun is evidently highest when in the meridian ; and at equal distances therefrom has equal altitudes. Therefore, when the distances D B, D F, are equal, the shadows C B, C F, will be equal, and therefore the altitudes equal. And vice versa.

520. 2. Hang up two threads and plummets AB, CD, plate VIII. fig. 13, at a good dis- tance, in vessels of water, to keep them steady ; of which C D is movable towards the left and right, upon a pin C. Wait till the polar star, E, and the star Alioth, F, (in the great bear's rump), come into the same plumb line, AB, to an eye placed at I. At that instant (or rather before) move the thread C D also into the same line ; so that the thread C D may hide the thread A B, and the polar star E from the eye at I. Then the plane A B C D is the plane of the meridian ; and where it intersects the horizontal plane, is the meridian line. And the same may be done with the star, called Cassiopeia's hip. To take away the star's rays, look through a small hole in a thin plate. This must be per- formed in a calm place.

521. If it is wished to have a meridian drawn in some other place, let the threads and plum- mets A B, CD, remain ; and hang up two others a b, cd, in the place proposed, as in fig. 14, let- ting ab be movable upon a pin at a. Then wait till any star, as G, comes into the plane abed to the eye, at h ; and at that instant, move the thread a b, till the same star G fall in the plane abed, to the eye at h ; then abed is the plane of the meridian. This is best done by the help of an assistant. This method will in time deviate a little from the truth, occasioned by the stars changing their places ; but that change is very inconsiderable for several years.

522. 3. Having a clock or watch, with mi- nutes and seconds, find the northing of the star, Alioth, F, fig. 13, by the astronomical tables ; and

wait till the polar star E is in a plumb line with F. At that instant, set the

clock to the said time of northing. And next day at twelve o'clock, draw a meridian line, by the shadow of a plumb line hung in the sun. Or find the time of south- ing of any other star, as G, and the clock remain- ing as before, when she shows the time of south- ing, place the threads a b, cd, fig. 14, so that the line G h may pass through them both. Then abed will be in the plane of the meridian.

523. These methods are only to be considered as affording a first and very rough approximation to the meridian, and may assist in placing a tran- sit instrument nearly in its position with respect to the meridian, previously to the application of the more exact methods by which the final ad- justment is made.

SECT. II. ××× OF FINDING TIME, AND THE EQUA- TION OF TIME.

524. Having drawn a meridian line, as directed in the last article, the time when the sun, or any other celestial body is exactly in the meridian, may be found by a common quadrant, placing the edge of it along the line, and observing when the sun or other luminary can be seen exactly through its two sights, and noting exactly the time ; which, supposing the luminary viewed to be the sun, will be precisely noon, or twelve o'clock : but, as the apparent diameter of the sun is pretty large, it ought to be known exactly when his centre is in the meridian, which will be some short space after his eastern limb has arrived at it, and before his western limb comes thither. It will be proper, therefore, to observe exactly the time of the two limbs being seen through the sights of the quadrant ; and the half of the dif- ference between these times, added to the one or subtracted from the other, will give the exact time when the sun's centre is in the meridian.

525. The same method is equally applicable to the moon ; but not to the stars, which have no sensible diameter. It is found, by observation, that the stars appear to go round the earth in twenty-three hours, fifty-six minutes, four seconds, and the sun in twenty-four hours ; so that the stars gain three minutes, fifty-six seconds upon the sun every day, which amounts to one diurnal revolution in a year ; and therefore, in 365 days, as measured by the returns of the sun to the me- ridian, there are 366 days as measured by the stars returning to it : the former are called solar days, and the latter siderial.

526. These may be considered as first steps in the determination of this important element. With the aid of a transit instrument, the time can always be determined with the greatest sim- plicity and exactness. But supposing the lati- tude of the place of observation to be known, the time may be deduced with great ease and pre- cision from the altitude of any celestial object observed with a quadrant or sextant, taken by reflection

from a basin of water or quicksilver. Equal altitudes of stau, perhaps, furnish the most ready and convenient method of deter- mining the time, as the use of trigonometrical formulae is not requ red; and there is besides no farther dependence on the goodness of the in- strument, than that it shall be in the same state at both observations.

527. As we shall have occasion, when treating of Nautical Astronomy (which we shall do under the article NAVIGATION), to explain the various ways by which time may be found, and conse- quently, how clocks may be regulated, we shall here merely give the practical method of finding the error of a clock by equal altitudes of fixed stars.

528. Take the altitude of a star when east- ward of the meridian, and mark the time by the clock when the observation is made ; wait till the star when west of the meridian conies to the same altitude, and mark the time by the clock. Half the sum of these times will be the time by the clock when the star is on the meridian. Now the siderial time at which a star is on the me- ridian is equal to the star's right ascension ; and the solar or apparent time is obtained by sub- tracting the sun's right ascension from the star's. Hence the error of the clock, either for mean or siderial time, is obtained at once. In practice, however, it is preferable to take several altitudes, and their corresponding times, both eastward and westward of the meridian, and to take half the sum of the mean of the times for the time by the chronometer at which the star passes the meridian.

529- For example, suppose that on February 20th, 1826, the time at which Regulus had the following altitudes, was as under: Times E. of Alts. Times W. of

the merid. the merid.

h. m. s. h. m. s.

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9 5 41-25 mean.

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25 47 39-75

12 53 4987 Time

by the chronometer when the star is on the me- ridian . Hence by comparing this with the star's right ascension on the same day (9 h. 59 m. 8-8 s.), it is found that the watch is 2h. 54m. 41-07 s. fast for siderial time.

530. If the earth had no annual motion, but only a diurnal, any given meridian would revolve from the sun to the sun again, in the same quantity of time as from any star to the same star again ; because the sun would never change his place with respect to the stars. But, as the earth advances almost a degree eastward in its orbit, in the time that it turns eastward round its axis, whatever star passes over the meridian on any day with the sun, will pass over the same meridian on the next day, when the sun is almost a degree short of it ; that is, three minutes, fifty- six seconds sooner. If the year contained only 360 days, as the ecliptic does 360 degrees, the sun's apparent place, so far as his motion is equable, would change a degree every day ; and then the siderial days would be just four minutes shorter than the solar.

531. As the motion of the earth round its axis is perfectly uniform and equal at all times of the year, the siderial days are always precisely of an

equal length ; and so would the solar or natural days be, if the earth's orbit were a perfect circle, and its axis perpendicular to its orbit. But the earth's diurnal motion on an inclined axis, and its annual motion in an elliptic orbit, cause the sun's apparent motion in the heavens to be unequal : for sometimes he revolves from the meridian to the meridian again in somewhat less than twenty- four hours, shewn by a well-regulated clock ; and at other times in somewhat more : so that the time shewn by a good clock and a true sun-dial is never exactly the same, excepting on the 15th 6f April, the 16th of June, the 31st of August, and ihe 24th of December. The clock, if it goes equably and true all the year round, will be before the sun from the 24th of December till the 15th of April; from that time till the 16th of June, the sun will be before the clock ; from the 16th of June till the 31st of August, the clock will be again before the sun ; and from thence to the 24th of December, the sun will be faster than the clock.

532. The equation of time, therefore, or dif- ference between the time shewn by a well-regu- lated clock and a true sun-dial, depending upon two causes, viz. the obliquity of the ecliptic, and the unequal motion of the

*earth in it, the united effects, resulting from their combination, may be explained in the following manner: ***

*5:53. Let Z Y1 c r^r, in plate V , fig. 1, be the earth ; / V R c, its axis ; a lie dc, &c. the equa tor; A 13 CD E, Sec. the northern half of the ecliptic from cy to s** on the side of the globe next the eye ; and AI N O 1', &c. the southern half on the opposite side from ^ to . Let us suppose a fictitious sun to set out from , at the same instant wit!) the real sun. Let the points at A 13 C D E F G, &c. quite round, from to*

53 4. As the real sun moves obliquely in the ecliptic, and the fictitious sun directly in the equator, witli nspect to the meridian ; a degree, or any number of degrees, between ry and F on the ecliptic, must be nearer the meridian Z ridian every day, whilst he is in the quadrant

*5:i,-“>. \ lule the real sun describes the second quadrant of the ecliptic V (.', II 1 K I,, from Cancer to -“:, lie comes later to the meridian every day, than the fictitious sun moving through the second quadrant of the equator, from /'to O= ; for the point at (ill 1 l\, and 1., being farther from the iiien-diaii, their corresponding points at gh h and /, must be later in coming to it: and as vioth suns come at the same moment to the point ******-, they come to the meridian at the moment of ^**on by the clock.*

536. In departing from Libra, through the third quadrant, the real sun going through M N O P Q towards yf at R, and the fictitious sun through mnopq towards r, the former comes to the meridian every day sooner than the latter until the real sun comes to yf> and the fictitious to r, and then they come both to the meridian at the same time. Lastly, as the real sun moves equably through S T U V W, from yf towards , the former comes later every day to the meridian than the latter, until they both arrive at the point , and then they make it noon at the same time with the clock.

537. We now proceed to explain the other cause of this difference, viz. the inequality of the sun's apparent motion, which is slowest in sum- mer, when the sun is farthest from the earth, and swiftest in winter when he is nearest to it.

538. As the real sun moves unequably in the ecliptic, let us suppose a fictitious sun to move equably in a circle coincident with the plane of the ecliptic. Let A B C D in plate V., fig. 2, be the ecliptic or orbit in which the real sun moves, and the dotted circles abed the imaginary orbit of the fictitious sun : each going round in a year according to the order of letters, or from west to east. Let H I K L be the earth turning round its axis the same way every twenty-four hours ; and suppose both suns to start from A and a, in a right line with the plane of the meridian E H, at the same

moment : the real sun at A, being then at his greatest distance from the earth, at which time his motion is slowest; and the fic- titious sun at a, whose motion is always equable, because his distance from the earth is supposed to be always the same. In the time that the meridian revolves from H to H again, according to the order of the letters H I K L, the real sun has moved from A to F ; and the fictitious with a quicker motion from a tofy through a large arc: therefore, the meridian E A will revolve sooner from H to h under the real sun at F, than from II to k under the fictitious suri at f; and conse- quently it will then be noon by the sun-dial sooner than by the clock.

539. As the real sun moves from A towards C, the swiftness of his motion increases all the way to C, where it is at the quickest. But not- withstanding this, the fictitious sun gains so much upon the real, soon after his departing from A, that the increasing velocity of the real sun does not bring him up with the equally moving fictitious sun, till the former comes to C, and the latter to c, when each has gone half round its respective orbit; and then being in conjunction, the meridian EH, revolving to EK, comes to both suns at the same time, and there- fore it is noon by them both at the same moment.

540. But the increased velocity of the real sun, now being at the quickest, carries him before the fictitious one ; and therefore, the same me- ridian will come to the fictitious sun sooner than to the real : for whilst the fictitious sun moves from c to g, the real sun moves thiough a greater arc from C to G : consequently, the point K has its noon by the clock when it comes to /c, but not its noon by the sun till it comes to /. And although the velocity of the real sun diminishes all the way from C to A, and the fictitious sun

*by an equable motion is still coming nearer to at the same moment. Upon these principles the real sun, yet they are not in conjunction till tables for the equation of time are calculated the one comes to A and the other to a, and then *u *”””*

the one giving the difference between the sun’s true and mean motion ; the other the difference between the sun’s longitude and light ascension ; from which the arc is calculated by addition or subtraction. But the calculation cannot, from the precession of the equinoxes, be depended upon for a considerable length of time.

542. By means of the following Table, however, of the Equation of Time for 1824, and the subjoined auxiliary Table, the Equation of Time may be found for any subsequent year in the present century, with sufficient exactness for regulating clocks and watches for the practical purposes of civil life.

543 Equation of Time, when the Sun is on the Meridian of Greenwich, for every day in the

year 1824.

it is noon by them both at the same moment.

541. Thus, it appears, that the solar noon is always later than noon by the clock, whilst the sun goes from C to A ; sooner, whilst he goes from A to C; and at these two points the sun and clock being equal, it is noon by them both

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544. Auxiliary Table, for finding the Equation of Time when the Sun is on the Meridian of Greenwich, on any day from the year 1824 till the year 1900.

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Add the Seconds from this Table, when the Equation on the corresponding day is increasing. Subtract , decrettsnui.

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ASTRONOMY.

USE OF THE PRECEDING TABLES.

545. Take from the first table the equation of time for the given day in the year 1824, and the daily difference of the equation, with this dif- ference, or the nearest second to it in the side column of the Auxiliary Table, and below the leap year preceding the given year, will be found a correction, which applied to the equation be- fore taken from the first Table, will give the equation on the given day of the leap year pre- ceding the given year.

546. Then take ††, ††, or J, of the daily diffe- rence of the equation of time, according as the given year is the 1st, 2d, or 3d after leap year, and add it to the previously found equation on the same day of the preceding leap year, when that equation is decreasing ; but Subtract it when

ncreasing ; and the sum or remainder will be the equation at noon, Greenwich time, of the given day.

547. If the day proposed is in leap year, the correction for that year in the Auxiliary Table, applied to the equation of time on the proposed day in 1824, will give the required equation.

Example . ††† Required the equation of tim% Sept. 12, 1867, at noon, Greenwich time?

548. Equation, see the first table, 3 min. 53 sec. subtractive ; daily difference 21 sec. nearly. In table 2, opposite 20 sec. and below 1864, stands 6 sec. ; which, added to 3 min. 53 sec., gives 3 min. 59 sec. the equation of time on Sept. 12, 1864, Now, 1867 is the third year after leap year; therefore, take f of 21 sec. or 15 sec. and as the declination is increasing, subtract it from 3 min. 59 sec. ; and the remainder 3 min. 44

sec. is the required equation at Greenwich noon of the given day, at noon.

549. By means of the following tables and rules, the sun's declination also, at noon, Green- wich time, may be found for any day in the pre- sent century, to within a few seconds.

TABLE I.

550. The Sun's Declination at Noon, Greenwich time, for every Day in the Year 1824.

DAYS.

JANUARY.

FEBRUARY.

MARCH.

APRIL.

MAY.

JUNE.

South. South.

South.

North.

North.

North.

1

23►► 4′ 43"' 17►► 18′ 20″

*7►► 28′ 50**

4►► 38′ 14″

15►► 8′ 49″

*22►► 5′ 42**

2

22 59 51 17 1 18

7 5 57

5 1 19

15 26 47

22 13 37

3

22 54 30 | 16 43 58

6 42 58

5 24 18

15 44 30

22 21 8

4

22 48 43

16 26 20

6 19 54

5 47 12

16 1 58

22 28 15

5

22. 42 28

16 8 26

5 56 45

6 9 59

16 19 9

‘ 22 34 59

G

22 35 46

15 50 16

5 33 31

6 32 40

16 36 5

22 41 19

7

22 28 37

15 31 49

5 10 12

6 55 14

16 52 43

22 47 16

8

22 21 2

15 13 6

4 46 50

7 17 41

17 9 5

22 52 48

9

22 13 1

14 54 8

4 23 24

7 40 0

17 25 10

22 57 57

10

22 4 33

1 4 34 55

3 59 55

8 2 12

17 40 57

23 2 41

11

21 55 40

14 15 28

3 36 23

8 24 15

17 56 26

23 7 1

12

21 46 21

13 55 47

3 12 49

8 46 10

18 11 38

23 10 56

13

21 36 36

13 35 52

2 49 13

9 7 57

18 26 31

23 14 27

14

21 26 27

13 12 43

2 25 35

9 29 34

18 41 5

23 17 34

15

21 15 53

12 55 22

2 1 56

9 51 1

18 55 21

23 20 16

16

2 1 4 54

12 34 49

1 38 15

10 12 20

19 9 18

23 22 33

17

20 53 32

12 14 3

1 14 34

10 33 28

19 22 55

23 24 26

18

20 41 45

11. 53 6

0 50 52

10 54 26

19 36 13

23 25 53

19

20 29 35

11 31 57

0 27 11 11 15 13

19 49 11

23 26 57

20 20 17 2 11 10 37

0 3 29S

11 35 49

20 1 49

23 27 35

21 20 4 5 10 49 7

0 20 12 N

11 56 14

20 14 6

23 27 48

22 19 .50 47 1 10 27 27

0 43 51

12 16 27

20 26 3

23 27 37

23

19 37 6

10 5 37

1 7 30

12 36 29

20 37 39

23 27 1

24 : 19 23 3

9 43 37

1 31 6

12 56 18

20 48 54

23 26 0

2.-) 19 18 39

9 21 29

1 54 41

13 15 54

20 59 47

23 24 34

26 ! 18 53 53

8 59 13

2 18 13

13 35 18

21 10 19

23 22 43

27 18 38 47

8 36 48

2 41 43

13 54 28

21 20 29

23 20 28

28 i 18 23 21

8 14 16

359

14 13 25

21 30 17

23 17 48

29 | 18 7 34

7 51 36

3 28 31

14 32 7

21 39 42

23 14 44

30 17 51 28

3 51 50

14 50 35

21 48 45

23 11 15

31 1 17 35 3

4 15 5

21 51 21

ASTRONOMY.

TABLE I. ??? (Continued).

163

DAYS.

JULY.

AUGUST.

SEPTEMBER.

OCTOBER.

NOVEMBER.

DECEMBER.

North.

North.

North.

South.

South.

South.

1

23 7′ 22″

18 0′ 0″

oo 13, 41//

3 16 6″

14 31′ 21″

21 52′ 6″

2

23 3 4

17 44 41

7 51 48

3 39 24

14 50 26

22 1 7

3

22 58 23

17 29 5

7 29 48

4 2 39

15 9 17

22 9 43

4

22 53 17

17 13 12

7 7 40

4 25 52

15 27 53

22 17 53

5

22 47 28

16 57 2

6 45 25

4 49 1

15 46 13

22 25 36

6

22 41 55

16 40 36

6 23 3

5 12 7

16 4 18

22 32 54

7

22 35 38

16 23 54

6 0 35

5 35 9

16 22 7

22 39 45

8

22 28 58

16 6 56

5 38 2

5 58 6

16 39 39

22 46 10

9

22 21 54

15 49 43

5 15 22

6 20 59

16 56 54

22 52 7

10

22 14 28

15 32 14

4 52 38

6 43 46

17 13 52

22 57 38

11

22 6 38

15 14 31

4 29 48

7 6 29

17 30 32

23 2 41 i

12

21 58 26

14 56 32

4 6 53

7 29 5

17 46 54

23 7 17

13

21 49 51

14 38 19

3 43 54

7 51 36

18 2 58

23 11 25

14

21 40 53

14 19 53

3 20 51

8 14 0

18 18 43

23 15 6

15

21 31 54

14 1 12

2 57 44

8 36 18

18 34 9

23 18 19

16

21 21 52

13 42 18

2 34 33

8 58 28

18 49 15

23 21 3

17

21 11 49

13 23 11

2 11 19

9 20 31

19 4 1

23 23 20

18

21 1 24

13 3 51

1 48 3

9 42 25

19 18 26

23 25 9

19

20 50 37

12 44 18

1 24 44

10 4 12

19 32 31

23 26 29

20

20 39 29

12 24 33

1 1 22

10 25 49

19 46 15

23 27 21

21

20 28 1

12 4 36

0 37 59

10 47 17

19 59 36

23 27 45

22

20 16 11

11 44 28

0 14 35 N

11 8 36

20 12 36

23 27 40

23

20 4 2

11 24 8

0 8 50S

11 29 45

20 25 14

23 27 7

24

19 51 32

11 3 37

0 32 16

11 50 43

20 37 28

23 26 6

25

19 38 42

10 42 56

0 55 43

12 11 30

20 49 20

23 24 36

26

19 25 32

10 22 5

1 19 0

12 32 6

21 0 48

23 22 38

27

19 12 4

10 1 3

1 42 35

12 52 31

21 11 53

23 20 12

28

18 58 16

9 39 53

260

13 12 43

21 22 33

23 17 17

29

18 44 9

9 18 33

2 29 24

13 32 42

21 32 49

23 13 55

30

18 29 44

8 57 4

2 52 46

13 52 29

21 42 40

23 10 5

31

18 15 1

8 35 27

14 12 2

23 5 47

551. TABLE II.

To reduce the Sun's Declination from Table I, to the Noon of any Day, Greenwich Time, till the

Year 1900.

Periods of 4 Yrs.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

Leap Yrs.

1824

28

32

36

40

44

48

52

56

60

64

68

72

76

80

84

88

92

96

1900

Daily Diff'.

of Sun's

Correction. Subtraction.

Declin.

\

1'

0'

2"

4"

6'

8'

*10**

12'

14'

16'

18′

20′

22′

24′

26′

26″

30″

32

34′

36″

38′

7

0

g

4

6

7

9

11

13

15

17

19

21

24

26

27

29

31

33

35

37

13

0

1

3

4

5

6

8

10

11

12

14

16

18

20

21

23

24

26

27

28

19

0

1

2

3

5

6

7

9

10

11

12

13

14

15

17

18

19

20

21

22

21

0

1

2

2

3

4

5

6

6

7

8

9

10

11

12

13

14

15

15

16

23

0

0

1

1

1

2

2

3

3

3

4

4

4

5

5

6

6

6

6

7

10-4

ASTRONOMY.

LTSE OF Tlir, IT.ECKDING T,IR!.F.S.

552. To find the sun's declination on any day. Take from table I. the declination for the noon of the corresponding day in the year 1824, and

the daily change of the declination. Opposite that daily change, in table II. and below the leap- year preceding the given one, will be found the first correction of the declination.

553. Multiply the seconds in the daily changes of declination, by the period of four years in table II. and parts of a period from 1824, to the given year, and the product multiplied by '0308 will give the seconds, in the second correction of the declination.

554. Lastly, take \, ►►, or f, of the daily change of declination, according as the year is the first, second, or third after leap-year, and the result will be the third correction of the decli- nation.

555. Subtract the first correction from the de- clination on the corresponding day of 1824, add the second correction, when the declination is increasing, and subt act it when decreasing ; and upply the third in a manner contrary to the se cond, and the result will be the declination at noon, Greenwich time, of the proposed day. ►►►

Note. ►►► If the given year be leap-year, the third correction is nothing.*

Example. ►►► Required the sun's declination at noon, Greenwich time, Oct. 18, 1875?

556. By table I. the sun's declination on Oct. 18, 1824, is 9►► 42′ 25′ S., and daily change 21′ 47", increasing. Now the leap-year pre- ceding the given one, is 1872, below which, in table II. and opposite 22′ (the nearest minute to the' daily change) stands 7', the first correction. As the given year is the third after leap-year, and there are (see table II.) 12 periods of 4 years from 1824 to 1872, there are 12| periods from 1824 to 1875. Hence, 12| X '0308 X 1307″ (21′ 47")=513"=: 8-33', the second correction, addition, because the declination is increasing. As the given year is the third after leap-year, we have f of 21′ 47″ = 16′ 19", the third correction, subtrac- tion, because the second is addition. Hence, the declination at the proposed time, is 9►► 42′ 25″ ►►►7″ + 8′ 33"►►► 16′ 19"=r9►► 34′ 34".

557. As immediately connected with this sub- ject, we add a table of the sun's right ascension for the year 1824, with a method of adapting it to any subsequent instant in the present century, with sufficient exactness for ordinary purposes.

of the. >'►►►►' s Riˆht Ascension, at Noon, Greenwich Time, for every Day in the Year 1824.

I’ARY. Fr.iiKfARY.

MARCH.

APRIL.

MAY.

JUNE.

“M. S. i H. M. S. ; H. M. S. H. M. S.

H. M. S.

H. M. S.

43 58 20 50 30 i 22 49 34 0 43 5

2 34 20

4 37 5

1.” ‘24 -M 0 35 ! 22 53 18

0 46 43

2 38 9

4 41 11

52 48 01 4 39 22 57 2 0 50 22

2 41 59

4 45 17

57 13-21 8 42 23 0 45 i 0 54 0

2 45 49

4 49 24

1 37 21 12 44 23 4 28 0 57 39

2 49 40

4 53 31

o 1 21 Iti 46 23 811 1 1 18

2 53 32

4 57 38

10 24 21 20 40 \ 23 11 52 1 4 57

2 57 24

5 1 45

14 4? 21 24 4G 23 15 34 18 37

3 1 16

5 5 53

19 9 21 28 45

23 19 15 | 1 12 16

359

5 10 1

23 30 , 21 32 43

23 22 56 ××× 1 15 56

393

5 14 9

27 ,-31 21 30 40

23 26 36 i' 1 19 36

3 12 57

5 18 17

32 12 ' 21 -10 37

23 30 16 1 23 16

3 16 52

5 22 26

30 31 21 44 32

23 33 56 j 1 26 57

3 20 48

5 26 35

40 50 21 48 27

23 37 36 i 1 30 38

3 24 43

5 30 44

45 9 , 21 52 21

23 41 15 ; 1 54 19

3 28 40

5 34 53

49 27 | 21 5 1) 15

23 44 54 1 38 1

3 32 37

5 39 2

53 44 ‘ 22 0 7

23 48 33 1 41 43

3 36 35

5 43 11

58 0 22 3 59

23 52 11 1 45 25

3 40 33

5 47 21

2 10 22 7 51

23 55 50 1 49 8

3 44 32

5 51 30

0 31 22 11 41

23 59 28 i 1 52 52

3 48 31

5 55 40

10 45 22 15 31

036

1 56 35

3 52 31

5 59 50

14 59 22 19 21

0 6 44

2 0 20

3 56 32

6 3 59

19 11 22 23 9

0 10 22

244

4 0 33

689

23 23 22 20 57

0 14 0

2 7 49

4 4 35

6 12 18

27 34 22 3u 45

0 17 38

2 11 35

4 8 37

6 16 28

31 -15 22 3-1 32

0 21 16

2 15 21

4 12 39

6 20 37

35 55 22 38 18

0 24 54

2 19 8

4 16 43

6 24 46

40 3 22 42 4

0 28 32

2 22 55

4 20 46

6 28 55

44 1 1 22 45 49

0 32 10

2 26 43

4 24 50

6 33 14

48 19

0 35 48

2 30 31

4 28 55

6 37 13

52 25 ;

0 39 27

4 33 0

ASTRONOMY.

Table of Sun's Right Ascension ??? (Continued).

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DAYS.

JULY.

AUGUST.

SEPTEMBER.

OCTOBER.

NOVEMBER.

DECEMBER.

H. M. S.

H. M. S.

H. M. S.

H. M. S.

H. M. S.

H. M. S.

1

6 41 21

8 46 8

10 42 10

12 30 14

14 26 34

16 30 29

2

6 45 29

8 50 1

10 45 47

12 33 52

14 30 30

16 34 49

3

6 49 37

8 53 53

10 49 25

12 37 30

14 34 26

16 39 9

4

6 53 45

8 57 44

10 53 2

12 41 8

14 38 24

16 43 30 !

5

6 57 52

9 1 33

10 56 38

12 44 47

14 42 28

16 47 52

6

7 1 58

9 5 25

11 0 15

12 48 26

14 46 21

16 52 14

7

765

9 9 15

11 .‘5 51

12 52 5

14 50 21

16 66 36

8

7 10 11

9 13 4

11 7 27

12 55 45

14 54 22

17 0 39

9

7 14 16

9 16 53

11 11 3

12 59 25

14 5-8 23

17 5 23

10

7 18 22

9 20 40

11 14 39

13 3 6

15 2 26

17 9 47

11

7 22 26

9 24 28

11 18 15

13 6 47

15 6 29

17 14 11

12

7 26 31

9 ?.8 14

11 21 50

13 10 29

15 10 33

17 18 36

13

7 30 34

9 32 1

11 25 26

13 14 11

15 14 38

17 23 1

14

7 34 38

9 35 46

11 29 1

13 17 54

15 18 44

17 27 26

15

7 38 41

9 39 32

11 32 37

13 21 37

15 22 51

17 31 58

16

7 42 43

9 43 16

11 36 12

13 25 21

15 26 58

17 36 18

17

7 46 45

9 47 0

11 39 48

13 29 5

15 31 7

17 40 44

18

7 50 47

9 50 44

11 43 23

13 32 50

15 35 16

17 45 11

19

7 54 47

9 54 27

11 46 59

13 36 36

15 39 27

17 49 37

20

7 58 48

9 58 10

11 50 34

13 40 23

15 43 38

17 54 4

21

8 2 48

10 1 52

11 54 10

13 44 10

15 47 50

17 58 31

22

8 6 47

10 5 34

11 57 46

13 47 57

15 52 2

18 2 58

23

8 10 46

10 9 15

12 1 21

13 51 46

15 56 16

18 7 24

24

8 14 44

10 12 56

12 4 57

13 55 35

16 0 30

18 11 51

25,

8 18 42

10 16 37

12 8 34

13 59 25

16 4 45

18 16 18

26

8 22 39

10 20 17

12 12 16

14 3 15

16 9 1

18 20 44

27

8 26 35

10 23 57

12 15 46

14 7 6

16 13 17

18 25 11

28

8 30 31

10 27 36

12 19 23

14 10 58

16 17 34

18 29 37

29

8 34 26

10 31 15

12 23 0

14 14 51

16 21 52

18 34 3

30

8 38 21

10 34 53

12 26 37

14 18 45

16 26 10

18 38 29

8 42 15

11 38 32

14 22 39

18 42 54

559. To find the sun's higher ascension at the noon of any day, Greenwich time, till the year 1900.

Take the right ascension for the corresponding day of the year 1824 from the above table, and multiply 7'3s. by the periods of four years, and parts of a period from 1824 till the given period, :md the product will be the period in the first correction, always to be added. Take J, ►►, or ►► of the daily change of right ascension, according as the given year is the first, second, or third after leap-year ; for the second correction always to be subtracted. Apply these corrections to the right ascension taken for the correspond- ing day of 1824, and the result will be the right ascension at the Greenwich noon of the proposed day.

iVo/e. ►►► If the given year is a leap-year, the second correction is nothing.

EXAMPLE.

Required the sun's right ascension. May 4, 1853. 560. The sun's right ascension, May 4, 1824, is 2h. 45m. 49s. and daily increase 3m. 51s. Now there are 1\ periods of four years from 1824 till 1853 ; when 7'3s. X 7i = 53s. the first correction; and |h. of 3m. 51s. in 58s., the second correction. Then 2h. 48m. 55d. x53s.

►►► 58s. ►►► 2h. 45m. 40s. the right ascension at the proposed time.

SECT. III. ►►► OF CALCULATING THE DISTANCES, MAGNITUDES, 8cc. OF THE CELESTIAL BODIES.

561-. One of the first objects of an observer is to ascertain the latitude of his place of observa- tion. There are many methods by which this may be effected. If the declination S of any celestial object be known, and its distance z from the zenith be observed, then the latitude / will be either = S + z, or S ►►► z, according as S and z are of the same or different denominations. But the latitude may be determined from altitudes o circumpolar stars, independently of any previous knowledge of the places

of those stars, for it is always equal to half the sum of their greatest and least altitudes. The pole star is most conve- niently situated for observations of this kind, and it is generally observed for that purpose.

*562. Considerable attention has been paid to the simplification of the method by which the latitude may be found from altitudes of this stat when it is out of the meridian. Mr. F. Bailey, the present learned president of the Astronomical Society of London, has given the following for-
नula, in which fy is the colatitude, p the star'a*

polar distance, and fits meridian distance, and z its

pa observed zenith distance, i// = z �ص wz2 1. cot.

p3 : + p cos. t + ص s in 2t cos. t. This formula

O

may be put under the form ˆ = z + (p + C) cos. t ص B cot. z ; whence, the coefficients p + C and B being computed and arranged in tables, iˆ may easily be determined.

563. The latitude being determined, it becomes next of importance to determine the inclination of the plane of the earth's orbit to the plane of the equator, or the obliquity of the ecliptic. This is the difference between the sun's greatest altitude and the colatitude of the plan of obser- vation. If the sun was in the solstice at the mo- ment at which he was on the meridian, the dif- ference between his meridian altitude and the colatitude, would be the obliquity. This, how- ever, is unlikely to happen, and, on the ground of utility, not at all to be desired ; as, from me- ridional observations made near the solstice, the obliquity may be determined with a degree of accuracy to which no single observation could justify us in pretending.

564. If ir be the obliquity, d the sun's decli- nation, and ˆ his longitude, d' the greatest de- clination, and 0′ the corresponding longitude; then,

sin. d ص sin. 0. sin. TV

And ex-

V /ˆ

panding and substituting for m – and cos. – their

approximate values it; terms of c, we obtain tan. ir. sin. s'. tr

from which, with the greatest ease, the correction of the declination d deduced from the altitude irny he untamed, and hence from a series of meridional altitudes, observed on each side of the >olstice, the obliquity of the ecliptic may be ob- tained to a very '_rreat degree of nicety.

i'> >. The obliquity of the ecliptic being ob- tained, the r.e\t >tep in this department of en- quiry i-, to a ieort un the place of the equinoctial p-.>i:it, or that point on the ecliptic in which it equator. Now the point in which ,: su:i 11 \iii.n his me: i'iion'.'l altitude is equal to the colatitude, will be (he equinoctial point.].et□□ □□□ his meridional altitude less than the = his meridional altitude greater than /, ;:. □□□ the days between the two obser-

vation□□. i i u as i); ar the equinox u may be consi-

- /, n

the true after the sun had the altitude a when he \as on the equator, whence his place at the time on the pn;r,u:i of the equinoctial point, with re- leieMje to ii.e meridian oi any kno'Aii fixed star Ji.ay lie lit lernuned.

,'")i'i',. | i.o (hxtanci s ot (lie heavenly bodies are obtained 1 y tinding the hon/ontal \ .aiallax of the

i Oil V.ho-e dl-taiice IS ih-iUii < < > tl \ novvn ;

of the earth would appear provided we could see it from that body. In general the parallax of a planet is the difference between the real and apparent place of a planet; that is, between its place seen from some part of the surface, and from the centre of the earth ; so that the parallax is the angle under which the semidiameter of the earth, terminated by the place of an observer, is seen at the planet; and to find this parallax many methods have been devised.

567. I. Let A D, plate V. fig. 3, be the earth, C its centre, P the planet ; and let the planet's distance C P from the centre of the earth be given. Then Z A P is the complement of the apparent altitude, Z C P the complement of the true altitude. As the planet's distance from the centre of the earth C P : to the earth's radius AC : : so is the cosine of the apparent altitude, S.Z A P : to the sine of the parallax. For draw A F parallel to C P. The angle F A P is equal to the angle A P C. But Z A F is equal to Z C P, the true zenith distance, and Z A P is the apparent zenith distance ; and their difference F A P, or its equal A P C, is the parallax. But in the triangle C A P, it isC P : S.C APor Z A P: : C A : S.C P A, or P A F, the parallax.

568. II. If the distances of two planets or stars, having the same apparent altitude, be known, and the parallax of one of them, let P and G be the planets in the line A P G ; then A P C is the parallax of P, and A G C the parallax of G. Therefore in the triangle C P C, we have C P, C G, and an angle opposite, suppose G, to find the other opposite angle. Therefore distance C P : distance CG::SCGP:SCPGorCPA;that is, the sines of the parallaxes are reciprocally as the distances from the earth's centre.

569. III. Let S be the star or planet whose parallax is sought. See plate V. fig. 7. Observe it when it is in the same vertical circle with any two fixed stars, A, B. Observe again when the same two stars come into a position parallel to the horizon at a and b ; and let the planet be come to s. Then with an instrument measure the altitude of a oc b, and likewise the altitude of s ; and the difference of these altitudes is the pa- rallax. For the real place of the star S, is some- where in the line A B, and therefore it is also somewhere in the line a b, and therefore its alti- tude is the same as that of a or b. Therefore the parallax is the difference of the altitudes of a and s, or of b and s.

570. IV. Let S be the star or planet; observe its distance from any fixed star B, which is in the same vertical circle Z S B ; and measure the dis- tance S B with an instrument. Then observe again when the same two stars have equal altitudes above the horizon at b and s, and then take the distance b s, This distance will be very near the true distance of the stars B and S ; therefore the first distance B S subtracted from the latter dis- tance b s, when B is below S, gives the parallax ; or the latter distance subtracted from the former, when B is above S, gives the parallax.

571. V. The parallax may be found by observ- ing the azimuth and altitude of the star or planet. Let II Z O, plate V. tig. 4, be the meridian, E Q the equinoctial, II O the horizon, Z the zenith, P the pole, S the sta.—, Z S B a vertical circle pass-

ing through it. Observe the altitude B S, and V. fig. 5, requires two observers in different the azimuth B O, and mark the moment of time places of the earth, and can be applied to none when these observations are made ; then observe of the planets but Mars in opposition to the sun,

the moment of time that the star comes to the meridian, and you then have the distance of time from the observations. Convert this into degrees, allowing only 23h. 56m. to 360□□, (which is the time of the earth's

rotation to the same star), and

or to Venus on the sun's disk. It is best per- formed when the sun is about the equinox. Let P E R Q be the earth, P R its axis, E Q the equi- noctial, S the planet Mars in opposition to the sun, and if near the perihelion, it is better. Let

you have the arch E D or angle EPA, suppos- two places F G, be taken, the one in north lati-

ing PAD an hour circle. Therefore in the spherical triangle Z P A, we have the angle Z P A, and angle P Z A equal to B O, and the side Z P the co-latitude, to find the side Z A the complement of the altitude ; this subtracted from Z S, known by observation, the remainder A S is the parallax.

tude, the other in south latitude, the further from the equinoctial the better; and nearly in the same meridian, or rather so placed, that the line FG, drawn from the one to the other, may be nearly perpendicular to the orbit of Mars. By this there is a greater base to work upon. Then let the two observers pitch upon some fixed star

572. VI. Another method is performed by a as A, which Mars comes very near at that time ;

telescope, with cross hairs in the focus. Direct the telescope to the planet, and turn it round till its motion is along one of the cross hairs, which

and the nearer the better. Having two good in- struments perfectly alike, furnished with micro- meters, and being situated at F and G ; let them

represents part of the planet's parallel circle ; and observe for several nights successively about mid- the other hair perpendicular to it, will represent night, the places of Mars at B and C, as he passes its hour circle. Observe the time when the plangt by the star A; and take the distances A B and

comes to this hour circle, there fix the telescope, and then take its altitude ; then observe the time when some fixed star, whose right ascension is

A C every night, during his transit by this star. These observations are to be continued till the distances begin to increase, and no longer ; for

known, comes to the same hour circle. The dif- then he is past the star,

ference of time between the planet and star com- 576. From these observations, the nearest dis-

ing to this hour circle, turned into degrees tance of Mars from the star A may be found, as

(allowing 360►► to 23h. 56m.), gives the difference observed from the places F and G ; at least they

of right ascensions of the planet and star ; and so may be found by interpolation. Let these nearest

the apparent right ascension of the planet is distances be A B and A C ; then we have the dif-

known. ference B C, or the angle B S C or F S G. And

573. When the planet comes to the meridian, from the situation of the places F and G, the

observe it with the telescope, and note the time ; length and position of F G will be known ; and

and when the star comes to the meridian, note by these F S may be found. And lastly, the an-

the time of that : then the difference of the times gle which the radius of the earth subtends at the

reduced to degrees as before, gives the true diffe- distance F S, or the horizontal parallax of Mars

rence of right ascensions, whence the true right will be known. If, instead of Mars in opposition,

ascension of the planet will be known. Therefore Venus be observed on the body of the sun ; then

let H O, plate V. fig. 8, be the horizon, H Z O her nearest distances from either limb of the sun

the meridian, Z the zenith, P the pole, A the must be taken, whose difference will give the

true place of the planet, S its apparent place, Z S B a vertical circle ; then in the triangle Z P S,

angle at Venus, subtended by F G ; the rest as before. Thus the parallax of Venus will be ob-

we have Z P, Z S, and angle Z P S to find the tained. The parallax of Mars, when nearest the

angle P Z S. In the triangle Z P A, we have Z P, earth, has been found 25”, 27”, and 30″ at differ-

angles Z P A, P Z A ; to find Z A, which taken ent times.

from Z S, gives A S the parallax. 577. Besides these methods of computing the

574. If the planet have a proper motion of its parallax, there is another depending on observa- own, its true place will be always changing ; and tions made out of the meridian, which may be therefore the change of place must be computed thus explained : let M, plate IV. fig. 5, be the for the time of the observations. This is done by true place, and m the apparent place of a planet, observing its place when in the meridian, twice ; Z the zenith, and P the pole, then MP m will re- ar.d thence the change of place is had for 24 present the apparent change in the right ascen- hours : and therefore the place at the times of sion of the planet arising from parallax. This observations will be had by proportioning the change may be thus estimated : make P n ⬜⬜⬜ =. P M, motion according to the times. Here the angle and join Mn, MPnzi M n cosect M P := M m Z P S should be about 90⬜⬜, to have A P S the sin. Z M P cosect P M ⬜⬜⬜ A sin. Z M. sin. Z M P greatest possible. cosect P M (A representing the horizontal par-

575. VII. The operation represented in plate allax) = A sin. Z P sin. Z P M cosect P M.

M P n M P n cos. declin.

Hence A ~~ ⬜⬜⬜ ⬜⬜⬜ ⬜⬜⬜ ⬜⬜⬜⬜⬜⬜ ⬜⬜⬜ ⬜⬜⬜ ⬜⬜⬜⬜⬜ ⬜⬜⬜ ^⬜⬜⬜ ^⬜⬜⬜ –

sin. ZP- sin. ZPM’ cosect PM cos. lat. sin. hour angle”

Or, calling M P m t, A n

cos. declin.

cos. lat. sin hour angle.

V\ e should have a similar expression for it, if the object were observed on the other side of the meridian, and therefore

t cos declin.

e cos. declin.

cos. lat. x (sin. A + bin. /►► ‘ A -f A ‘ A ►►► A ‘

2 cos. lat. sin. ►►► cos. ►►► –

This method serves tolerably well to find the parallax of the moon ; and it has been applied successfully to find the parallax of Mars; but it requires observations of much too great nicety to determine by it the parallaxes of the two planets. Those are chiefly deduced from the parallax of the sun, as determined by the transit of Venus.

578. In the above investigations, the earth has been considered as a spherical body ; but in computing the parallax of the moon, from observations, the peculiarity of the form of the earth becomes very apparent ; and it is a striking cir- cumstance that from the eclipses of the moon, we shew in a general way that the earth is round, and from her parallaxes that it is not spherical.

579. A star or planet appears lower than it really is, by the quantity of the parallax, which is greater the lower the star is ; and therefore the horizontal parallax is the greatest. The paral- laxes of two planets are as the cosines of the apparent altitudes directly, and their distances from the earth’s centre reciprocally. For when the distance is given, the parallax is as the sine of the zenith distance (by method 1), and if the apparent altitude be given, the parallax is reci- procally as the distance, (by method 2), and there- fore is in a compound ratio, when neither is given. Here the parallax being very small, one may take the parallax itself for the sine of the pa- rallax.

580. The parallax of a planet being known, its distance may be found. For this is only ►►►working backward, saying, as sine of the paral- lax, to the earth’s radius; so S zenith distance to the planet’s distance.

.”)►►!. Having the parallax of any of the pla- nets, the distances of all the planets from the sun may be known, in diameters of the earth, or any sort of measure. For the distances of the planets irom the sun and from one another, are known in some assumed measure; and by the parallax of a planet, the true distance of the earth .mm it is known ; and therefore all the other distances will be known by proportion.

W~2. The seventh of these methods has been practised in determining the

parallax of Venus, from observations made at different parts of the earth, upon what is called her transit over the sun's disk, a phenomenon that rarely happens : lint when it does happen, it affords the best, and indeed the only accurate method of determining that most important problem in astronomy, the sun's parallax, or the angle under which the earth's semi-diameter appears from the sun.

.V?:5. The first transit or passage of Venus over ihe sun's disk, that ever was observed, happened m liiH'. >, hut perhaps the only mortals who saw it were "\jr. llonox and Ins friend Mr. Crabtree.

wo Iran-its have happened since; the first in ITi'il. tuiil the last in 17(59. There will be no more before 1:'.7-1, and the next to that will happen in I(j9ti. llie t\o last transits were carefully observed. From the first of these Mr. Short has computed the sun's pai illax tobe8'G9"; and from the. last the best astn nomers have concluded it to he H-ii '. This is an ol servation of the greatest rouse']-. , Mee, because it s only by a knowledge of the Mill's distance fi ini the earth, in some known measure, that we can acquire a knowledge

of the true dimensions of the solar system. For an account of the principles of this method of finding the solar parallax, see VENUS, transit of.

584. As to the fixed stars, no method of as- certaining their distance has hitherto been found out. Those who have formed conjectures con- cerning them, have thought that they were at least 400,000 times farther from us than we are from the sun.

585. Dr. Herschel has proposed a method of ascertaining the parallax of the fixed stars, some- thing similar, but more complete, than that men- tioned by Galileo and others ; for it is by the parallax of the fixed stars that we should be best able to determine their distance. The me- thod pointed out by Galileo, and first attempted by Hooke, Flamsteed, Molineux, and Bradley, of taking the distances of stars from the zenith that pass very near it, has given us a much juster idea of the immense distance of the stars, and furnished us with an approximation to the know- ledge of their parallax, that is much nearer the truth than we ever had before.

586. But Herschel mentions the insufficiency of their instruments, which were similar to the present zenith sectors, the method of zenith dis- tances being liable to considerable errors on ac- count of refraction, the change of position of the earth's axis arising from nutation, precession of the equinoxes, and other causes, and the aberra- tion of light. The method of his own is by means of double stars; which is exempted from these errors, and of such a nature that the annual pa- rallax, even if it should not

exceed the tenth part of a second, may still become more visible, and be ascertained, at least to a much greater degree of approximation than it has ever been done.

587. This method is capable of every improve- ment which the telescope and mechanism of micrometers can furnish ; but as it goes on pre- sumptions which can hardly lead to any firm con- viction, we are not likely to gain any farther knowledge, than that the stars are at too great distance to be subjected as yet to our calculations. He supposes that the stars are, one with another, about the size of the sun ; and that the difference of their apparent magnitudes is owing to their apparent distances ; both of which suppositions being only hypothetical, it is evident that the conclusions founded on them cannot be depended on with absolute certainty.

588. Considerable discussion has recently taken place between Mr. Pond, the present as- tronomer royal, and Dr. Brinkley, respecting the annual parallax of a Lyrse, which parallax Dr. B. conceives his instrument shews clearly to be about 1′12″. Mr. Pond, asserts, that the Greenwich circle is a better instrument than the Dublin circle, and that observations made with it give no indications of parallax either in a Lyrae, or in any other fixed star. Dr. Brinkley, how- ever, has endeavoured to shew that, if the place of the pole-star can be relied on, the Greenwich observations do indicate a parallax in a Lyrae very nearly equal to that shewn by his instrument ; but Mr. Pond, in a recent communication to the astronomical society of London, states, that observations on the pole- star are on the whole more unsatisfactory than any other star. Wharf

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seems to go far towards settling this delicate Question is, that there are now two circles in , Constant use at Greenwich ; and that they agree together in a manner that must be gratifying to their distinguished makers, Mr. Trough ton and Mr. Thomas Jones ; they bear steady and united testimony against the parallax of the fixed stars, and shew even in some instances a ten- dency to exhibit a deviation of an opposite character.

SECT. IV. ❖❖❖ OF THE DIVISIONS OF THE STARRT HEAVENS.

589. The stars, from their apparently various magnitudes, have been distributed into several classes, or orders. Those which appear largest, are called stars of the first magnitude ; the next to them in lustre, stars of the second magnitude ; and so on to the sixth, which are the smallest that are visible to the bare eye. This distribution having been made long before the invention of telescopes, the stars which cannot be seen with- out the assistance of these instruments, are dis- tinguished by the name of telescopic stars.

590. The ancients divided the starry sphere into particular constellations, or clusters of stars, according as they lay near one another, so as to occupy those spaces which the figures of diffe- rent sorts of animals or things would take up, if they were there delineated. And those stars which could not be brought into any particular constellation, were called unformed stars.

591. By this division, the stars are so distin- guished from one another, that any particular star may be readily found in the heavens, by means of a celestial globe ; on which the con- stellations are so delineated, that the most re- markable stars are placed in such parts of the figures, as are most easily distinguished. See plates I, and II.

592. The number of the ancient constellations is forty-eight, and upon our present globes about seventy. On Senex's globes are inserted Bayer's letters ; the first in the Greek alphabet being put to the largest star in each constellation, the se- cond to the next, and so on; by which means every star is as easily found as if a name were given to it. Thus if the star y in the constel- lation of the ram be mentioned, every astronomer knows as well what star is meant, as if it were pointed out to him in the heavens.

593. The starry heavens are also divided into three parts, viz. 1 . The Zodiac, which extends quite round the heavens ; is about 16❖❖ broad, so that it takes in the orbits of all the planets, as well as that of the moon ; and along the middle of which is the ecliptic. 2. AH that region of the heavens which is on the north side of the zo- diac, containing twenty-one constellations; and, 3. That on the south side, containing fifteen.

594. The following tables exhibit the names of the ancient and modern constellations, and the number of stars observed in each of them by different astronomers :

595. TABLE I. THE ANCIENT CONSTELLATIONS.

NAMES.

ENGLISH NAMES.

NUMBER PTOLEMY.

of STARS in T. BRAKE.

EACH, accord HEVELICS.

iug to FLAMST.

Ursa Minor . .

The Little Bear

8

7

12

24

Ursa Major . : . 7*

The Great Bear . .

35

29

73

87

Draco ....

The Dragon .

31

32

40

80

Cepheus . . .

Cepheus ....

13

4

51

35

Bootes, or Arctophilax

23

18

52

54

Corona Borealis

The Northern Crown

8

8

8

21

Hercules, or Engonasin

Hercules Kneeling .

29

28

45

113

Lyra

The Harp

1 A

-i f

01

Cygnus, or Gallina

The Swan . . .

i .’

10

18

LI

47

i

81

Cassiopeia . . .

The Lady in her Chair

13

26

37

55

Perseus ....

Perseus ....

29

29

46

59

Auriga ....

The Waggoner . .

14

9

40

66

Serpentarius, or i Ophiuchus . i

Serpentarius . . .

29

15

40

74

Serpens ....

The Serpent . . .

18

13

22

64

Sagitta . . . '.

The Arrow . . .

5

5

5

18

Aquila, or Vultur .

The Eagle . . .

15

12

23

71

Antinous ....

Antinous ....

15

3

19

71

Delphinus . . .

The Dolphin . .

10

10

14

18

EquuhiSjOr Equi sectio

The Horse's Head .

4

4

6

10

Pegasus, or Equus .

The Flying Horse .

20

19

38

89

Andromeda

Andromeda . . .

23

23

47

66

Triangulum . . .

The Triangle . .

4

4

12

16

Aries

The Ram ....

18

21

27

66

Taurus ....

The Bull ....

44

43

51

141

Gemini ....

The Twins . . .

25

25

38

85 <

J

170

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TABLE I.□□□ (Continued).

NAMES.

ENGLISH NAMES.

NUMBER PTOLEMY.

of STARS in T. BRAKE.

BACH, accordi HEVELICS.

ag to FLAMST.

Cancer .... Leo

the Crab . . . The Lion .... Berenice's Hair . . The Virgin . . . The Scales . . . The Scorpion . . The Archer . . . The Goat .... Thte Water-Bearer . The

Fishes . . . The Whale . . . Orion

23 35 35 32 17 24 31 28 45 38 22 38 34 12 29 2 45 27 7 7 37 19 7 13 18

15 30 14 33 10 10 14 28 41 36 21 42 10 13 13 2 3 19 3 4

29 49 21 50 20 20 22 29 47 39 45 62 27 16 21 13 4 31 10

83 95 43 110 51 44 69 51 108 113 97 78 84 19 31 14 64 60 31 9 35 24 9 12 24

Comˆ Berenices

Libra, or Chelae Scorpius .... Sagittarius . . . Capncornus . . . Aquarius ....

Cetus

Orion ....

Efidanus, or Fluvius Lepus

Eridanus, or the River The Hare .... The Great Dog . . The Little Dog . . The Ship .... The Hydra . . . The Cup .... The Crow . . . The Centaur . . . The Wolf .... The Altar . . . The Southern Crown The Southern Fish .

Canis Major . . . Canis Minor . . . Argo Navis . . . Hydra

Crater .....

Corvus .... Centaurus Lupus .... Ara . ... Corona Australis Piscis Australis

596. TABLE II. THE NEW SOUTHERN CONSTELLATIONS.

Columba Noachi

Noah's Dove . .

10

Apis, or Musca . .

The Bee or Fly .

4

Robur Carolinum .

The Roval Oak

12

Chamseleon . . .

The Cameleon

10

Grus

The Crane . . .

13

Triangulum Australis

The South Triangle

5

Phoenix ....

The Phoenix . . .

13

Piscis volans, or Passer

The Flying Fish .

8

Indus ....

The Indian . . .

12

Dorado, or Xiphias .

The Sword Fish .

6

Pavo

The Peacock

M

Toucan .

The American Goose

q

Apus, or Avis Indica

The Bird of Paradise

11

Hydras ....

The Water Snake

10

597. TABLE III. HEVELIUS'S CONSTELLATIONS MADE OUT OF THE UNFORMED STARS.

HEVELIUS.

FLAMSTEAD.

Lynx

The Lynx

19

44

I, eo Minor ...

The Little Lion

53

Asterion and Chara . . . Cerberus

The Greyhounds .... Cerberus

23 4

25

Vulpecula and Anser . Scutum Sobieski .... Lacerta

The Fox and Goose . . . Sobieski's Shield .... The Lizard

27 7 10

35 16

Camelopardalus .... Monoceros ...

The Camelopard ....

32

19

58 32

Sextans

The Sextant

11

41

SECT. V. ??? Or CAT. err .ATING THE PKRIODICAL TIMES, PLACES, &c. OF THE CELESTIAL Bo- nus; CONSTRUCTING ASTRONOMICAL TABLES,

AND Dr.T.TNKATINC; THE PlIASES OF THE MoON.

,f > 98. This section, if treated fully, would com- prehend almost the whole of practical astronomy,

a subject so extensive, that the whole space which we can devote to the subject of astronomy would not suffice to do it justice. We shall, however, we hope, give an abstract of the leading points in this department of the science, which may at once gratify the wishes of the amateur,

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and stimulate the further enquiries of those who may be inclined to pursue the subject.

599. Indeed the elements of the chief bodies in our system have long been tabulated, and the mere practical astronomer may, without any knowledge of the causes of the planetary mo- tions, compute from the tables where any planet in the system will be found at any given instant. The tables in the third volume of Vince's Astro- nomy are a treasure to the astronomer, though those of the moon have been superseded by the improved ones of Burkhardt.

600. We have already shown how an observer who knows his own latitude may find the posi- tion of the ecliptic with respect to the equator, and that point of the heavens in which the celes- tial equator and the ecliptic intersect. We now proceed to the solution of Kepler's problem, or to the method of finding the place of a planet in an elliptical orbit.

601. Let AP B, fig. 12, plate VI., be an ellipse, E the sun in the focus, round which the earth, P, or any other planet revolves. Let the planet's motion, and the time of its motion, be dated from the extremity of the major onis, A, called the aphelion or apside. Now we are sup- posed to have given the time of the planet's quitting it, to find the position of the point P in the ellipse, either by finding the value of the an- gle A E P, or by cutting off from the whole ellipse and area A E P, which is to the area of the whole ellipse as the time from A to P bears to the whole time of revolution. The line E P is called a radius rector.

602. Let a circle A M B be described on A B as its diameter, and suppose a point to describe this circle uniformly, and the whole of it in the same time as the planet describes the ellipse, let t denote the time elapsed during P's motion from

2. t – AM B A to P; thenifAMperiodic time M will be

the place of the point that moves uniformly, whilst P is that of the planets ; the angle is called the mean .anomaly, and A E P the true ano- maly.

603. Hence, as the angle ACM can always be found when t is given, the solution of Kep- ler's problem is reduced to this, to find the true anomaly in terms of the mean.

604. The angle D C A, determined by pro- ducing the ordinate A2 P to the ellipse is called the eccentric anomaly, which has been devised for the purpose of expediting the computation of the true anomaly. It holds a mean between the two other anomalies, and is a step in the com- putation from the one to the other.

605. We shall first deduce two equations, by which the eccentric anomaly is expressed, in terms of the true and mean anomalies respec- tively.

Let t rz the time in describing A P, P ⬚ the periodic time in the ellipse a rz C A, ae ⬚EC, ⬚= L P E A, u ⬚ L D C A, (whence E T = E C. sin. u, E T being perpendicular to D T) r p zz P E, TT = 3-1415986 ; then, by the law of the equable description of areas,

area PEA ⬚ area D E A t = P X ⬚ ⬚ F-TP = P X

(by conies)=⬚ x CD EC+DCA)= ~ ⬚ tra"

Pa

(ET.DC , AP.DC ~ ⬚ ---

Sin "+

D C . u) = ⬚ x (e. sin. M 4- u) : hence if we

& 7T

put – ⬚ =- we have 2 TT n

n t = e. sin. u X u, an equation connecting the mean anomaly n t with the eccentric u.

606. To find the equation between the true and eccentric anomaly we must investigate and equate two values of p. Now the value of p in terms of the true anomaly is by conies ⬚

~

1 ⬚ e, cos. u.

and in terms of u the eccentric anomaly p = a 1 + e. cos. u. _

In P2 = E N2 x PN2=EN2J1DN21ˆH a e + a- cos. uz + a sin.2 u 1 ⬚ e2 = a"+ 2 e cos. u + cos. 2 u + a2 1 ⬚ e2 'm2 u = <** + "e cos. u ⬚ e* cos2 u when p = a 1+ e. cos- u.*

By equating these two values of P we have, 1 ⬚ e2= cos u 1 + e . cos u ; whence cos. v =

c + cos u ,.,

; ⬚ ⬚ – , an expression which may readily 1 + e cos. M

be transformed into 1 tan

u ⋀

❖❖❖ ⋁ –

area of ellipse

area 0

❖❖❖ e u . tan -❖❖❖

1 ^^ G **

The difference between the mean and true anomalies is called the Equation of the Centre ; which has its greatest value when P moves with its mean angular velocity, as may be thus made evident. If we conceive a body to move uni- formly in a circle round E, as a centre, with the mean angular velocity of P round E, revolving round the circle in the same time that P revolves round the ellipse. If they both depart from P together, then P at the first moving with its least angular velocity, will describe round E a less angle than the fictitious body does, which body will therefore advance before P, till the angular velocity of P becomes equal to that of the body, at which time their angular distance will be the greatest, and P will immediately afterwards begin to gain upon the body.

608. To determine the ellipse in which the equation of the centre is the greatest, conceive a circle to be described round E as a centre, setting the ellipse on some point P, and the line E A somewhere between E and A. Then, if the angular velocities be inversely as the squares of the distances from E, the angular velocity in the ellipse from A to P, will in every intermediate point be less than the angular velocity of the body in the circle, in all the points between E A and P. But if the areas described by the body in the ellipse, and the body in the circles, be res- pectively equal, the angular velocities are in- versely as the squares of the distances.

609. If then the incremental areas be equal, the whole areas are equal, since by condition, the lines of revolution are equal. Let therefore X be put for the value of E P, 2 a zz the major axis, and a e = the eccentricity of the ellipse, then by equating the expression for the elliptic area,

and that of the circle we obtain

x = a x 1 ❖❖❖ e44 = x

nearly.

609* From the above value of the radius vector when the equation of the centre is the greatest, the corresponding, true, and eccentric anomalies may be computed by the general equations for those purposes given above, a . 1 ††† e

Viz. p ††† ††† ‘††† 1 p ††† a. 1 + e. cos u ;

1 ††† ecos.u

and hence, too, the mean anomaly n t is deter- mined from n t ~ u j e. sine u, and finally there results the greatest equation of the centre ^z f r; ††† n t .

\Ve proceed now to the principles of the method by which the place and motion of the aphelia are determined.

610. It is evident that the sun being in perigee at the least distance and in apogee at his greatest, if we could measure his diameter with sufficient nicety, so as to determine when it is greatest or least, the corresponding places of the sun would be those of the perigee and the apogee respec- tively ; or if, by observing the sun's place from day to day, we could ascertain the times when his angular motion was the greatest or least, his places at the corresponding time would be those of the required points. And if, at a period con- siderably distant, like observations were repeated, a comparison of the results would shew whether the place of the apogee was stationary or not.

61 1 . Now by the observations of various astro- mers, it has been found that the apogee of the earth's orbit is progressive, ;is may be seen from the following statement :

Astronomer. Year. Longitude of Apogee.

Cochin King . 1279 3s. 0†† 8′ 0″ \Valtherus . . 1496 3 3 57 57 La lline . . 1684 3 7 28 0 Flamsteed . . 1690 3 7 35 0 The mean result of these observations gives

nbout 1′ 3‘4″ for the annual progressive motion

of the apogee of the earth's orbit.

612. The following, however, is a more accu- rate method of determining the progression of the apogee. Lot S Er (fig. 13. PlateVI.) bearight line, and draw T I'.t, making with A B, the major axis, an angle TEA ~ SEA; now the time through rBfS is less than the time through the remaining are SAT/1; for the equal and similar areas S E t, T E ;†††, are described in

equal times, but the area r E /, is less than S ET, and it will therefore be described in less time; whence r V. t -f S E f, which is equal to S Er t S, is described in less time than SET f TEr, which compose the area SErTS. This pro- perty belongs to every line drawn through E, <-\cept A H, the major axis, or the line which joins the aphelion and perihelion of the orbits. Hence, if on comparing two observations of the sun in opposite longitudes, as at S and r, it ap- pears that the time elapsed is not half a year, we may be sure that 'he sun has not been ob- served in apogee or perigee. In practice, how- ever, the interval will not differ much from half a year, and the true position of the apogee may be determined in the following manner:

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613. The time from r to S ••• the time from ˆ 3 \ r to B f the time from B to A ••• the time from

~ 4 32 6 } S t0 A ‘ ••r’ time from B to A ••• time fr••m r to*

S ••• time from S to A ••• time from r to B.

Now the first of these differences is known being the difference between half an anoma. listic year (the time from the sun’s leaving tht apogee till his return to it) and the observed in- terval ; and the second term of the second dif- ference may be expressed by means of the first. For let the first term = t, then the time from r to

n _ area r E B r B X E B ,

••• t. ;q-ˆ-r n t ••• . ••• . (r and S

_.

E B SA Angular velocity at A

area SEA ~ SAx EA being supposed near the apsides)

*r••A EB’-, EB’ X EA5 ~ X EA**

r B _ S A

angular velocity at B’ Dr E B ~A~E each representing the incremental angle r E B.

614. Now the angular velocities at A and B, or the increments of the sun’s longitude, being known from observation, and the time from r to B being expressed in terms of those velocities and of t, the quantity t may be readily deter- mined; whence the exact time when the sun is at A; and his

longitude, computed for that time, is the longitude of the apogee.

EXAMPLE.

1743.Dec.30. Oh. 3m. 7s. ►►'s long.Os 8►► 29′ 12'5″ 1744.Jun.30. Oh.3nr.0s 38 51 1-5

Difference .. 6 0 21 4-9

Therefore at the second observation, June 30th, the sun was past S. In order to find when I e was at S, that is, when the difference of the longitude was six signs (or supposing the peri- gee to have progressed through 31") when the difference of the longitudes was 6 s 0►► 0′ 31", we must find the time of describing 21′ 49″ ►►► 31", or 21′ 18". This is easily effected by this pro- portion, as the sun's daily motion on June 30th (5T 12") : 24 hours : : 21′ 18"; 8h. 56m. 13s., which taken from June 30th, Oh. 3m., leaves June 29th 15h. 6m. 47s. for the time when the difference of the sun's longitudes under the given circumstances was 180►► 0′ 31".

615. The interval between this last time and Dec. 30th, Oh. 3m. 7s. the time of the past ob- servation, is 182d. 15h. 3m. 40s., nearly the time from r to S : but this time is less than half an anomalistic year, which is 182d. 15h. 7m. 1 s., as has been found by repeated observations, and as we have seen above : t ►►► time from r to B ►►► 3m. 21s.; and time from r to B zi t.

57′ 12″

►►► ; ►►► ►►► ; whence, by substitution and reduction,

we have t ~ 47m. 54s. This added to June 29th, 15h. 6m. 47s., when the sun was at S, gives June 29th 15h. 6m. 47s. for the time when he was in apogee.

616. The sun's longitude at that time must be less than his longitude on June 30th, Oh. 3m. by the difference due on the difference of the times, which is 8h. 8m. 19s. This quantity is easily found by proportion to be 19'. 21", and

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hence the longitude of the apogee is 98►►. 31′ 40′5″, or 8″ 31′ 40'5″ past the summer solstice.

617. From the longitude at any given time and the annual progression, the position of the apogee and of the axis of the solar ellipse may be found by proportion for any other time. If it were required, for example, to find when the axis of the solar ellipse was perpendicular to the line of the equinoxes, or when the longitude of the perigee was 270□□. Now its longitude in 1750 was 9s 8□□ 37′ 28”, hence, taking the an_

pO o “7* O Q*

nual progression at 62*, □□□ -ˆp rz about 500

years, as the major axis was perpendicular to the line of the equinoxes in 1250. It is remark- able, that the period in which the major axis coincided with the time of the equinoxes, is at the time which astronomers consider to be that of the beginning of the earth.

618. Our next object is to explain those ob- servations made at the earth, and reduced to what they would have been if the observer had been at the sun ; as the methods of extricating from the geocentric observations of a planet’s place, the elements of the orbit which it de- scribes round the sun.

619. The observations made on the earth are, generally speaking, for right ascensions by the transit instruments, and polar distances by the quadrant or axle The latitudes and longitudes are not observed, but computed from the right ascensions and declinations. Let A, fig. 15. plate VI., represent the first point of Aries, A C a portion of the ecliptic, AB a portion of the equator, S a star, S B its declination, and S C its latitude; then AB will Be its right ascension and A C its longitude round *B A C, the obli- quity of the ecliptic. Now the method of find- ing BAG has already been shown; BS is de- termined by the circle or quadrant, and A B by the time shown by the siderial clock when the sun is on the meridian. Hence A C, C S, and the angle BAG, are given to find A B and B S. Now cos. A S □□□ cos A C . cos. C S ; cos. SAC = cos. CS . in AC, SAB = SACi= BAG; tan A B =: cos. SAB. tan. AS and sin. B S = sin. A S . in B A S. Hence the geocentric la- titudes and longitudes may be always determined.

620. If a □□□ the right ascension, d □□□ the de- clination, I □□□ the latitude, X □□□ the longitude, and o =. the obliquity of the ecliptic, then / and X may be determined from the following equations :

tan. Xrzsin. o . tan. d . sec. a + tan. a . cos. o sin. I□□□ sin d . cos. a □□□ sin. a . cos. d . sin. e.

621. By either of these methods the geocen- tric latitude and longitude may be determined. Among the resulting values of the latitude, some will be either nothing or very small. If the geocentric latitude is nothing, the

heliocentric latitude is also nothing, or the planet is in the plane of the earth's orbit, or in that point of its own orbit which is called its node ; the node being the intersection of the orbit of a planet with the plane of the ecliptic. It is not likely, however, that the planet will be observed exactly in the node ; but if by one observa- tion its latitude is found to be o south, and

*by another at an interval of time t, to be a' north**

the ––– – ––– 5- is the interval, which added to the a + ––

time when the planet had the latitude, a will give the instant at which it was in its node.

622. As we can thus find the time of a planet's entering its node, we can determine the time of its passage from the descending to the ascending node, and also the time between two successive returns to the same node ; and if the place of the nodes and the dimensions and line of the oroit remain unchanged, the latter interval must be the periodic time of the planet ; and if the former interval were half the latter, it would prove either that the orbit of the planet was cir- cular, or, if elliptical, that its major axis coin- cided with the positions of the nodes.

623. Now let N P, fig. 14, plate VI. be part of the orbit of a superior planet, N TT C a portion of the ecliptic, E the earth, S the sun ; and let P TT be an arc of a great circle from P perpen- dicular to the ecliptic. A spectator at E, sees P TT under the angle P E IT, which is therefore the geocentric latitude; and a spectator, as S, would see P TT under the angle P S TT, which is therefore the heliocentric latitude. If y be the first point of Aries, then as the diameter of the earth's orbit subtends no sensible angle at the fixed stars, a line drawn from E to y may be considered as parallel to a line drawn from S to y. Hence

the geocentric longitude of P (L) is /_ IT E y the heliocentric longitude of P (P) is /. v S y the longitude of the sun, (0) is /_ S E y, and consequently,

E representing the angle S E TT, called the angle of elongation.

624. The angle E S TT, is called the angle of commutation, (C) the angle S ir E, or rather the angle S P E, under which the earth's radius ap- pears from the planet, is called the annual pa- rallax.

625. To proceed, y S TT, (P) = L S E y f 180––– ––– E S TT = 0 + 180––– ––– C, whence P may be determined, if C be previously known. But S E is known from the solar theory, and S E TT, or E = L ––– –– is known, since L can be com puted as we have shown above from the obser- ved right ascension and declination, and 0 is known from

the solar theory ; therefore to find the angle E S TT, and all the other parts of the triangle, it is-only necessary to know S TT, which is called the curtate distance.

*626. Now S *□□□ = S P cos. /_ P S v = y . cos. H; whence to find STT we must know the values of y and Hˆ Let I □□□ P N TT, represent the inclination of the planet's orbit, to the plane of the ecliptic. Then by spherics, tan. H □□□ cos. N IT , tan. I, whence to find H we must previously know I and N IT, the distance of the re- duced place of the planet from the node of its orbit, which distance is evidently equal to the longitude of the planet, minus the longitude of the node.*

627. If. the eccentricity of the orbit be small, S P, or r, may be determined by Kepler's law, but it is the mean distance which is determined

by that law ; and therefore except P move in a circle, S P so determined will not be quite cor- rect. And in fact there is no direct and general method of determining S P. Astronomers there- fore select those positions of a planet in which its heliocentric longitude is exactly known. Now when the inferior planets are in conjunction, their longitudes are exactly known, as when they are in superior conjunction their longitudes are equal to 0, and in inferior equal to 180□□ + 0.

628. In such positions then the heliocentric longitude is obtained without any knowledge of S P, and without trigonometrical computation. The geocentric longitude may be computed from the right ascension and declination by the formu- las already given.

629. If we conceive N ir C to represent the earth's orbit, and e E that of an inferior planet, then E TT S is called the planet's angle of elong- ation, and ir E S its annual parallax, when it E is a tangent to E e.

To find the periodic time, mean motion, and dis- tance of a planet.

630. From the observed right ascensions and declinations compute its geocentric latitude ; and find when it is equal to nothing. The planet is then in its node. Find in the same way at some subsequent period when it returns to the same node, and thence the periodic time may be determined.

631. This method of finding the periodic time serves also to show whether the orbit is eccentric, and the degree of the eccentricity ; as will appear from the following detail given by Delambre, for finding the periodic time

of Mars : ††† July 23d, 1807. g in his descending node (ft} and his southern latitude increased till Dec. 16th. If the latter time be assumed as that when his lati- tude was greatest, and the interval (145 days) of his passage from the node to that position, be taken as one-fourth of his periodic time, the pe- riod will then be 560 days.

632. But on May 21st, 1808, $ in his ascend- ing node (gj) and the interval in his passage from ft to Q was 302 days. If that interval were half the period, the period would be 604 days.

633. Again on March 7th, 1809, the north latitude of Mars was 2 '††† 49' ; and in June 8th, it was (0), when Mars had returned to the node in which he was on July 23d, 1807, in 687 days, which must be very nearly the period of his revolution.

634 Now from this detail, and what we have done before, we may infer that the orbit of Mars is not circular, and that the major axis is neither perpendicular to, nor coincident with, the line of the node.

635. But we may draw farther inferences. The time from ft to Q being less than the other half of the -period by 83 days; if (plate VI. fig. 13) N n represent the line of the nodes, we have

NAw ††† NBn 83

r ††† – ††† since the areas are propor-

ISA/t 385

tional to the times. Now when Nn is perpen- dicular to A B, the difference between N A n and NBn is a maximum. In such a position

AEN††† NKB 41

- would be nearly —^ or the

A !†††:

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time from B to N would be nearly 152 days and from N to A 193 days.

636. But the period being nearly 687 days in which the planet describes 360†† the time of de- scribing 90†† would be nearly 171 days, supposing the planet to depart from B, and to move with its mean motion; but as we have seen, the planet was in N nineteen days previously, in which time its mean motion is equal to nearly 10††. When the real planet

therefore was at N, the fic- titious body moving with the planet's mean motion would be nearly 10►► behind. Now this difference is what has been denominated the equation of the centre, which at N is nearly at its greatest value. Hence the greatest equation of the centre in Mars cannot be less than 10►►. The same process for finding the periodic time, and like inferences respecting the eccentricity are applicable to Jupiter and Saturn. But the Georgian planet has not completed more than half a revolution since it was first discovered, and yet we have the elements of its orbit to a very con- siderable degree of exactness. The following method of determination byLaLande (one indeed of trial and conjecture, but which after a few times is sure of succeeding) will be easily under- stood.

637. Resuming the notation already employed ; the angle of elongation (EJ = L ►►► 0, L being the geocentric longitude, and E IT S, the angle of parallax (ir) is the difference of the heliocentric and geocentric longitudes, and therefore equal to P ►►► L. Now E = L ►►► 0 is known, and TT is

SE

known from the expression sin. TT = sin. E,-s ►►►

O IT

if we can find S v. If we assume a value (r) for S TT (S TT and S P being nearly equal) we shall from the above equation have a corresponding value of ir, and thence of P : let this value be represented by P'. Make another computation ►►►with TT and a second and third geocentric longi- tude, and let the resulting heliocentric longitudes be P" and P'". Then we have P" ►►► P', P" ►►► P", and P"' ►►► P', and from the three times of observation, t ; t" and t'" we have t" ►►► t", t'" ►►► t" and t'"►►► t .

Hence P'" ►►► P' : t'" ►►► t' : : 360►► : planet's period, Or P" ►►► P' : t" ►►► f : : 360►► : planet's period, As P"'►►► P" : f" ►►► t":: 360►► : planet's period.

638. By any of these three proportions may the period be computed ; but r is assumed as the mean distance, and if 1 n the earth's mean dis- tance, and p its periodic time ; the periodic time of the planet will be represented by p r \ ; and if this result agree with the former one, it will be a proof that r has been rightly assumed ; and the disagreement by its nature and magnitude will point out the manner and extent of correcting the first assumption for y.

639. LaLande computed from three geocentric observations of the planet

made on April 25th, July 31st, and Dec. 12th, 1781, and he found from the above formulae, the periodic time. The two values disagreeing he amended his first as- sumption, guided partly by conjecture and partly by his first trial, till a value of r was obtained which agreed with all the observations.

640. The u stance of an inferior planet ma) also be deter . aed from obse'v^ions on its dis-*

tance from the sun when stationary, or from what has been called its greatest elongation. Let E and E' be two of the greatest elongations, one when the planet is in aphelion and the other in perihelion, e the eccentricity of the orbit, R and R' the distances of the earth from the sun, and r the planet's mean distance; then e =:

Rsin=E ••• R'sinE'

- r – an equation which deter-

mines the relation between the eccentricity and mean distance.

641. We proceed now to the method of deter- mining the place of the node of a planet's orbit, and the inclination of its orbit to the plane of the ecliptic. In fig. 16, plate VI. let N n, represent the nodes. Now from the observed right ascen- sion and declination we can in an hour even com- pute the planet's geocentric latitude, and when this is equal to 0, the planet is in its node. Lat. E, E' be the two positions of the planet when, as viewed from the earth, it is respectively at n and N. Then S E n z: geocentric longitude of planet at n ••• 0 and S E' N r= ••' ••• geocen- tric longitude of planet at N. Now we already know how to compute S N or S n, and hence in the triangles S E n, S E N, we can compute the angles n S E, S n E, and N S E', S N E' ; and thence heliocentric Ion. of n =1 80 + 0 ••• /. n SE and heliocentric Ion. of N = ••' ••• 180 f /. N S E', •• and ••' representing the sun's lon- gitudes at the two times of observation ; and the angle ESE' is proportional to the earth's mo- tion during the planet's passage from n to N.

642. It is evident that the determination of the place of the node is the more difficult, the less is the inclination of the planet's orbit; and it is difficult on this account to determine the nodes of the orbits of Jupiter and the Georgian planets.

643. The longitude of the node being found, the inclination of the orbit may be thus deter- mined : Compute the day on which the sun's longitude will be the same, or nearly the same as the longitude of the node, the earth will then be nearly in the line of the nodes N n, at some point e, fig. 16, plate VI. On that day observe the planet's right ascension and declination, and thence deduce the geocentric latitude (G.) Then

sin.fSe sin.N*

t v = e t tan. G = S t – ˆ – tan.G = . p sm.Se/) sm.E

tan.G; but sin. N t=cot. t N/>. t p; or tan. I sin. N t = t p (I denoting the inclination) ; whence

tan.G tan.I. = p. Alike diagram and a similar

process will apply to a superior planet. The inclination may also be determined from observing the planet at conjunction when its latitude is con- siderable. If r = the planet's distance from the sun reduced to the ecliptic, I the inclination, and G, as above, the geocentric latitude. Then it may be easily shown, that :

tan. I.

r + tan. l

.

sm.(0

an equation from which I may be obtained, either by approximation, or the solution of a quadratic equation.

644. The next step in the investigation is the determination of the form of the planetary orbits. For the sake of simplifying the problem, in the first instance, we shall suppose that the planet's orbit lies in the plane of the ecliptic. Since the mean motion is known from the periodic time, and by observing in opposition or conjunction the planet's true longitude we can at any instant determine its mean longitude. Then if the elapsed time were the interval between two con- junctions, and the orbit were circular, the com- puted mean longitude would agree with the last observed longitude ; and a difference would be an indication of the orbit's eccentricity; which difference must depend both on the eccentricity and the place of the aphelion.

645. To apply these considerations to the sub- ject in hand, let N (fig. 14, plate VI.) be the node of the orbit. Then as its longitude may be considered (from what has preceded) as known, and the longitude of a planet when in conjunc- tion with the sun is known, being equal to 1 80►► + 0i if we deduct the longitude of the planet from the longitude of the node, there remains N IT. Now as the elliptical motion takes place in the orbit N P it is requisite to know N P, and other like distances of the planet from its node. ButN TT being known, and the angle P N ir\ the distance N P may be computed. For let P'N= cos. N. cos. N TT.

646. If we set off on the orbit of the planet an arc (A) = N r, the longitude of the node, we shall have A + N P which is called the lon- gitude of the planet on its orbit; and we can have as many such longitudes as there are obser- vations in conjunction or opposition.

647. Three observations are sufficient to deter- mine the two elements of the eccentricity, and the place Of the aphelion ; for if we have three longitudes (V, V, V*,) we have two indepen- dent differences of longitude, and as soon as the planet's period is known, we can compute two portions of its mean motion corresponding to the two corresponding noted intervals of time ; and the two real differences of longitude com- pared according to the elliptic theory, with the corresponding portions of mean motion, will give us two equations for determining the eccentricity and place of the aphelion.

648. Let e be the eccentricity (supposed to be very small) ►► the longitude of the perihelion, the place of which suppose to be at some point between N and P, and let M, M', M", be the mean anomalies reckoned from the perihelion, Then we have

V ►►► 0 = M + 2 e . sin. V ►►►

V►►► 0 = M' + 2 e . sin, V►►►

V"►►► 0 = M"+ 2 e . sin. V"►►►

Hence

' ►►► V ►►► M'►►► M (=a) = 2 e. \ sin. V ►►► <(, ►►► sin. V ►►► 0 j

And V- V►►► M'►►► M'(= b) = 2 e. { sin. V" ►►► ►►► sin. V

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Now as V, V',V" are known, and M' ►►► M

M"_ M' are known from the period of the planet and the elapsed time ; for if t be the interval be- tween the observations of V and V; we have

t. 360►► Planet's period : 360►► : : t : M' ►►► M = iod

Hence since a and b are known, we have two equations for determining e and (p. If the first

a ►►► sin. 1" "

e ►►► ►►► – -►►► ►►► .. ►►► –

2[sin.V ►►► 0 ►►► sin.V ►►► \ 4

649. Then e and

from this expression, r ►►► ►►► ►►► ►►► TT

1 + e ►►► cos. V ►►► 0 :

and since the place of the node, and the inclina- tion of the orbit are determined, we can compute

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of these equations be divided by the second we have from whence, by re-

sn.

V ►►► $ ►►► sin. V ►►► ˆ ~6=sin. V ►►► 0 ►►► sin. V ►►► ►► duction we obtain tan.

V" ►►► sin . V ►►► b ►►► sin. V ►►►

a ►►► cos. V" ►►► cos. V ►►► b ►►► cos. V ►►► cos. V Hence,

**

/.

V►►► V, /V'+V

'sm—T~cos<\~2-

In the case of the moon, m ►►► 13►►'1763, and M, the earth's daily

mean motion = 59′ 8- 3 ;*

whence s =

TO ◆◆◆ M 655. Since < =

29 d. 12h. nearly sP

P ◆◆◆ p

P =

there-

the curtale distance S TT, on the supposition that S fore from the known periodic time of the earth,

P, from which it is deduced, is the radius vector of and the observed synodic period of a planet, we

an elliptical orbit. If, therefore, in any of the can determine p, the periodic time of the planet

processes for determining the elements of the But to insure accuracy in the determination, the

planet's orbit, the curtale distance S TT has been return of the planet to a conjunction nearly in

supposed derived from S P, considered as a mean the same part of its orbit, at which a previous

distance, we may now, with a more correct value one was observed, ought to be noted, and the

of S TT, repeat the operations and correct the re- interim divided by the number of synodical

suits. revolutions will give the mean synodic period.

650. We shall now direct our attention to the jror under these circumstances there will be method of finding the synodical revolutions of nearly a mutual compensation of the inequalities the planets, and of computing their returns to arising from the elliptic form of the planet's the si.-me {joint of their orbits. orbit.

651. The time between conjunction and con- 656. Another reason for

attending to this junction, or between opposition and opposition, caution, is that on such conjunction depend the is called a synodical period. Let us suppose transits of Venus and Mercury, over the sun's that at a given instant the sun, Mercury, and the disk. For it is evident that Venus to be seen on earth, are in the same right line ; then, after any the sun's disk, must not only be in conjunction, elapsed time (a day for example), Mercury will but near the node of her orbit : at the next con- have described an angle in, and the earth an junction, after one synodical revolution, she angle M, round the sun. therefore at the end of cannot be near her node, and can only be again a. day the separation of Mercury from the earth, near when she returns to the same part of her as seen from the sun, will be m ••• M, and at the orbit, as at the first time of bbservatioH.

end of s. days s. in ••• M ; and when s. m ••• M =

300••, the sun, Mercury, and the earth, will be periods afford us the means of knowing these

again in the same right line, and in that case

300•• . .

s ••• – ••• , where s denotes a synodical period in ••• M

arid in, M the mean motions of Mercury and the earth for any equal intervals of time.

657. The preceding formulae for the synodic eriods afford us the me: particular conjunctions.•••

The time s of a synodic period is = p_ , – , the planet will still be in

at

P-p

053. Let P and p denote the siderial periods conjunction, n representing any whole number. of the earth and the planet ; then, since 1 d. : M•• It will therefore be for the first time in conjunc-

m•• : : p : 300••, we have tipn, and the earth and planet will also be in

P

360'- 300

“P~

and 1 d. and

300 P

,vhich substituted ˆ same part of

r equation, gives

for m and M in the precedin

P />

*=. . Or if 1 represents the earth’s mean P p

distance, and r that of the planet; we have P;

P P

]> : : I : r ; or = r whence s = -

1> r~ 3 &

from any of

orbits, when Hence the

ˆ e have here three expressions, winch .s may be computed.

054. For instance, in the case of Mercury, p = 87 d. 90<>, and P beinˆ 30.V2G9, we haves, thesynodi-

305-236 X 87-969

cal period ot Mercury ~~

P p

P, or when n ~ –

P

conjunction can only take place when S- , or

some of its multiples is a whole number, say

m . P p , m

when, = n, or when ◆◆◆ ◆◆◆

*7 ◆◆ * m*

115d. 2 Ih. nearly.

◆◆◆277-287

P ◆◆◆ p'

whence we have simply to find two integers, m

m p

and n, such that =z ◆◆◆ ◆◆◆

658. Now the tropical revolution of Mercury m 87-968

is 87-968 days, hence – ◆◆◆ ◆◆◆ ◆◆◆ . gˆ-0 .ft

J ' n 36o256 ◆◆◆ 87 9oo

ASTRONOMY.

177

◆◆◆ – ◆◆◆ – , consequently in 87,988 periods of

277"288

the earth, there will be 277288 synodical revolu- tions of Mercury, which will then be observed again in conjunction, and in the same part of its orbit. This result however, from the length of the period, is of no practical use ; we must, therefore by means of continued fractions (see ALGEBRA) endeavour to find fractions in smaller

87968

terms, having nearly the same value as ◆◆◆ ,

Zl i Zoo

659. Making the computation we find the fol- lowing series of fractions continually approxima- ling to this value.

\ 6 7 13 33 46

7' IF' 22' "IT "104 ' "145 which the denominators denote the number of*

synodical reˆol'itions, corresponding to the num- ber of years expressed by the numerator. Take as an example the fourth fraction, in thirteen years, one 474-8328 days, and forty-one synodi- cal periods, 475-0875 days, differing by only about six hours. If the sixth fraction be taken the difference will be little more than two hours.

660. In a similar way we may compute a series of fractions which will indicate the periods when transits of Venus may be expected. Thus,

.as Venus's period (p) ००० 224 d. 7008240, and the earth's (P) r= 365d. 256385, the synodical

P0

period of Venus (s) p ००० 583-92 d. nearly;

and consequently in one synodical period the earth describes 575००-51 nearly; as in n synodical periods, n. 575००-51 ; and when this first becomes a multiple of 360००, the ००arth and Venus will be first in conjunction, in the line from which they originally departed. If, therefore, Venus were so near the rtode in this original position that a transit took place, a transit will take place when

/ v f \ m 57551

(as before) ००० ~ -.,finnn Whence, by continued

,. 1 2 3 8 222 235

fractions, we obtain ००० , ००० , ००० , ००० , , ,

1 1 ' 2 ' 5 ' 142 ' 143'

&c. a series of approximating value to

57551

, from

36000'

which we are able to tell after what number of synodic periods Venus and the earth will be nearly in the same parts of their orbits.

661 . Thus, taking the fifth fraction, we infer that after 142 synodic periods, 227 circumfer- ences nearly, will be described ; or 142 synodic periods are nearly equal to 227 years ; and on trial we find 575००'51 X

142 = 360►► X 227 } 2►► 42', or 2►►-42 in excess. If we take the sixth fraction we shall find the result only 0►►-03 in de- fect. Hence, 235 years after a transit of Venus we may confidently expect another, and also after 235 + 8, or 243 years ; neglecting as we have done, and may safely do, the small altera- tion in the place of the node, that takes place in the interval of the transit.

662. A transit, however, may happen when the planet is in, or nearly in, the opposite node of her orbit. To find the time when it is proba- ble that transits in the opposite node may happen, we have merely to find approximative

f 57551 , . t .►►► , 3 16 227 values of

18000

which will be ►►► , ►►► y ►►► t

470

&c. Taking the third of these fractions,

14C

we have 71 X 575►►'51 = 180►► x 227 + l►►-2i: the fourth gives 147 X 575►►-51 = 180►► x 470►► ►►► 0►►-03. Whence, supposing the earth, Venus, and the sun, to be exactly in a line, Venus being in one of her nodes, then, in 71 synodic periods, Venus will be 1►►21 distant from the other node, and in 147 synodic periods, only about three hundreth parts of a degree distant from that node. 663. Did our limits permit, we should now enter upon the most difficult branch of the science, the Lunar Theory , but we must content ourselves with referring those who would acquaint themselves with this highly interesting subject, to the works of La Lande, La Place, and other foreigners, and to the astronomy of the late Pro- fessor Vince; more especially, however, to the elegant and masterly work of Professor Wood-* house.

664. Table of the Transits of Venus over the Sun's Disk, that will occur to the Year 3000.

Years.

True Time of Middle of Transit.

Semiduration for centre of Venus.

Shortest Dist. observed at the Earth's centre.

H. M. S.

H. M. S.

1874

Dec. 8 15 43 27

2 4 41

13′ 51″ N

1882

Dec. 16 4 49 41

3 1 43

10 29 S

2004

June 7 20 26 58

2 44 50

11 19 S

2112

June 5 13 37 25

3 20 45

8 20 N

2117

Dec. 10 14 34 0

2 22 50

13 ON

2125

Dec. 8 3 44 30

2 48 20

11 28 S

2247

June 11 23 51 13

2 7 52

13 17 S

2255

June 8 16 59 9

3 36 2

6 23 N

2360

Dec. 12 13 29 31

2 42 27

11 49 N

2368

Dec. 10 2 38 5

2 29 12

12 37 S

2490

June 12 3 13 58

1 2 14

15 14 S

2498

June 9 20 20 58

3 46 24

4 29 N

2603

Dec. 15 12 25 54

2 56 47

10 56 N

2611

Dec. 13 1 40 30

2 15 20

13 20 S

2733

June 15 6 33 52

17 Q N

2741

June 12 23 38 38

3 53 23

It y li

2 35 N

2846

Dec. 16 11 26 34

3 7 24

9 56 N

2864

Dec. 14 0 44 20

I 54 10

14 12 S

2984

June 14 2 31 51

3 56 9

0 45 N

178 A S T R 0 N O M Y.

o65. Table of the Transits of Mercury over the Suns Disk, that will occur before the Year 1900

Shortest Declin.

Years.

True Time of Middle of Transit.

Semiduration.

observed at the

Earth's centre.

H. M. S.

H. M. S.

1832 1835

May 4 0 18 0 Nov. 7 8 12 21

3 23 2 2 33 53

8′ 16"N 5 37 S

1815 1848

May 8 , 7 32 57

Nov. 9 7 49 42

3 22 33 2 41 33

8 58 S 2 36 N

1861

Nov. 11 19 20 13

2 0 23

10 52 N

1868

Nov. 4 19 18 20

1 45 2

12 20 S

1878 1881

May 6 6 55 13

Nov. 7 12 59 32

3 53 3 2 39 9

4 39 N 3 57 S

1891 1894

May 9 14 14 32 Nov. 10 6 36 28

2 34 20 2 37 36

12 21 N

4 20

SECT. VI. ❖❖❖ PRELIMINARY OBSERVATIONS

RESPECTING ECLIPSES.

666. Before we lay down rules for calculating eclipses, it is necessary to make a few general ob- servations respecting their nature and causes. All the planets and satellites being illuminated by the sun, cast their shadows towards that point of the heavens which is opposite to the sun. This shadow is nothing but a privation of light, in the space hid from the sun by the opaque body that intercepts his rays. When the sun's light is in- tercepted by the moon, so that he appears covered in whole, or in part, to any part of the earth, he is said to undergo an eclipse; though, properly speaking, it is only an eclipse of that part of the earth where the moon's shadow or penumbra falls. When the earth comes between the sun and moon, the moon falls into the earth's sha- dow; and having no liˆht of her own, she suffers a ival and Mai eelip.se from the interception of the sun's ravs. When the sun is eclipsed to us, the moon's inhabitants, on the side next the earth, see her shadow like a dark spot travelling over the carih, about twice as fast as its equato- rial parts move, and the same way as they move. \ hen the moon is in an eclipse, the sun ap- pears eclipsed to her inhabitants ; totally to all those parts on which the earth's shadow falls, and of as long

continuance as they are in the sluuiow.

Gu7. Although all opaque bodies, on which the sun shines, have their shadows, yet such are the distances of the planets, and the size of the sun, th.it tin.1 primary planets can never eclipse one another. A primary can eclipse only its secondary, or lie eclipsed by it; and never but when in opposition or conjunction with the sun. The primary planets are very seldom in these positions, but the sun and moon are so every month ; \vhen< e one may imagine that these two iis -ihould be eclipsed everv month. But clipses in respect of the number ..s ; the luasou of which we

)rbit were coincident with MC, in \vhuh the earth al- sun appears to move, the haiio'.v would fail t.i.'On the earth at ⬜⬜⬜⬜⬜⬜ the .jsm to some parts

of the earth. In like manner, the moon would go through the middle of the earth's shadow,' and be eclipsed at every full ; but with this difference, that she would be totally darkened for above an hour and an half; whereas the sun never was above four minutes totally eclipsed to us by the interposition of the moon. But one half of the moon's orbit is elevated 5| degrees above the ecliptic, and the other half as much depressed below it ; and when the sun and moon are more than 17⬜⬜ degrees from either of the nodes at the time of conjunction, the moon is then generally too high or too low in her orbit to cast any part of her shadow upon the earth : when the sun is more than 12⬜⬜ from either of the nodes at the time of full moon, the moon is generally too high or too low in her orbit to go through any part of the earth's shadow ; and in both these cases there will be no eclipse.

669. But when the moon is less than 17⬜⬜ from either node at the time of conjunction, her sha- dow or penumbra falls more or less upon the earth, as she is more or less within this limit. And when she is less than 12⬜⬜ from either node at the time of opposition, she goes through a greater or less portion of the earth's shadow, as she is more or less within this limit. Her orbit contains 360⬜⬜; of which 17⬜⬜, the limit of solar eclipses on either side of the nodes, and 12⬜⬜, the limit of lunar eclipses, are but small portions ; and, as the sun commonly passes by the nodes but twice in a year, it is no wonder that we have so many new and full moons without eclipses.

670. To illustrate this, let A BCD, plate V. fig. 9, be the ecliptic, RSTU a circle lying in the same plane with the ecliptic, and V X Y W the moon's orbit, all thrown into an oblique view, which gives them an elliptical shape to the eye. One half of the moon's orbit, as V W X, is always below the ecliptic, and the other half, X Y V, above it. The points V and X, where the moon's orbit intersects the circle RSTU, which lies even with the ecliptic,

are die moon's nodes; and a right line, X E V, drawn from one to the other through the earth's centre, is the line of the nodes, which is carried almost parallel to itself round the sun in a year. If the moon moved round the earth i.i the orbit RSTU, which is coincident with the plane of the ecliptic, her

shadow would fall upon the earth every time she is in conjunction with the sun, and at every op- position she would go through the earth's shadow ; and thus the sun would be eclipsed at every change, and the moon at every full.

671. But although the moon's shadow N must fall upon the earth at a when the earth is at E, and the moon in conjunction with the sun at z, because she is then very near one of her nodes ; and at her opposition, n, she must go through the earth's shadow I, because she is then near the other node, yet, in the time that she goes round the earth to her next change, according to the order of XYVW, the earth advances from E to e, according to the order of EFGH; and the line of the nodes VEX, being carried nearly parallel to itself, brings the poir.y of the moon's orbit in conjunction with the sun at that next change. The moon being then at f, is too high above the ecliptic to cast her shadow on the earth ; and, as the earth is still moving forward, the moon at her next opposition will be at gt too far below the ecliptic to go through any part of the earth's shadow ; for by that time the point g will be at a considerable distance from the earth as seen from the sun.

672. When the earth comes to F, the moon, Jn conjunction with the sun Z, is not at k in a plane coincident with the ecliptic, but above it at Y, in the highest part of her obit ; and then the point b of her shadow O goes far above the earth, as in fig. 2, plate IV, which gives an edge view of fig. 9. The moon, at her next opposition, is not at o, but at W, where the earth's shadow goes far above her, as in fig. 2, plate IV. In both these cases the line of the nodes is about 90►► from the sun, and both luminaries are as far as possible from the limits of the eclipses. When the earth has gone half round the ecliptic, from E to G, the line of the nodes V G X is nearly, if not exactly, directed towards the sun at Z ; and then the new moon /, casts her shadow P on the earth G ; and the full moon p goes through the earth's shadow L ; which brings on eclipses again, as 'when the earth was at E. When the earth comes to H, the new moon falls not at m, in a plane coincident with the ecliptic C D, but at W in her orbit below it ; and then her shadow Q, see fig. 2, plate IV, goes far below the earth. At the next full

she is not at q, fig. 9, plate V, but at Y in her orbit 5$ degrees above q, and at her greatest height above the ecliptic CD; being then as far as possible, at any opposition, from the earth's shadow M, as in fig. 2, plate IV.

673. Thus when the earth is at F and G, the moon is about her nodes at new and full, and in her greatest north and south declination (or lati- tude as it is generally called) from the ecliptic at her quarters ; but when the earth is at F or H, the moon is in her greatest north and south decli- nation from the ecliptic at new and full, and in the nodes about her quarters. The point X, where the moon's orbit crosses the ecliptic, is called the ascending node, because the moon as- cends from it above the ecliptic ; and the oppo- site point of intersection, V, is called the descending node, because the moon descends from it below the ecliptic.

674. When the moon is at Y, in the highest

point of her orbit, she is in her greatest north latitude ; and when she is at W, in the lowest point of her orbit, she is in her greatest south latitude. If the line of the nodes, like the earth's axis, was carried parallel to itself round the sun, there would be just half a year between the con- junctions of the sun and nodes. But the nodes shift backwards, or contrary to the earth's annual motion, 19J►► every year; and therefore the same node comes round the sun nineteen days sooner every year than on the year before. Conse- quently, from the time that the ascending node X (when the earth is at E) passes by the sun as seen from the earth, it is only 173 days (not half a year) till the descending node, V, passes by him.

675. Therefore, in whatever time of the year we have eclipses of the luminaries about either node, we may be sure that in 173 days afterward we shall have eclipses about the other node. And when at any time of the year the line of the nodes is in the situation VGX, at the same time next year it will be in the situation rGs ; the as- cending node having gone backward, that is, contrary to the order of signs, from X to s, and the descending node from V to r ; each 19|►►.

676. At this rate the nodes shift through all the signs and degrees of the ecliptic in 18 years and 225 days ; in which time there would always be a regular period of eclipses, if any complete number of lunations were finished without a frac- tion. But this never happens ; for if both the sun and moon should start from a line of con- junction with either of the nodes in any point of the ecliptic, the sun would perform 18 annual revolutions and 222►► over and above, and the moon 230 lunations and 85►► of the 231st by the "time the node came round to the same point of the ecliptic again ; so that the sun would then be, 138►► from the node, and the moon 85►► from the sun. But in 223 mean lunations, after the sun,

moon, and nodes,, have been once in a line of conjunction, they return so nearly to the same state again, as that the same node, which was in conjunction with thesun and moon at the beginning of the first of these lunations, will be within 28 12″ of a degree of a line of conjunction with the sun and moon again, when the last of these lu- nations is completed. And therefore in that time there will be a regular period of eclipses, or return of the same eclipse, for many ages.

677. In this period, which was first discovered by the Chaldeans, there are 18 Julian y. lid. 7h. 43m. 20s., when the last day of February in leap years is four times included ; but when it is five times included, (he period consists of only 18y. lOd. 7h. 43m. 20s. Consequently, if to the mean time of any eclipse, either of the sun or moon, you add 18 Julian y. lid. 7h. 43m. 20s., when the last day of February in leap-years comes in four times, or a day less when it comes in five times, you will have the mean time of the return of the same eclipse. But the falling back of the line of conjunctions, or oppositions of the sun and moon 28′ 12”, with respect to the line of the nodes in every period, will wear it out in process of time; and after that it will not return again in less than 12,492 years,

678. These eclipses of the sun, which happen about the ascending node, and begin to come in at the north pole of the earth, will go a little southerly at each return, till they go quite off the earth at the south pole ; and those which happen about the descending node, and begin to come in at the south pole of the earth, will go a little north at each return, till at last they quite leave the earth at the north pole.

SECT. VII. ??? OF CALCULATING ECLIPSES.

679. The chief things to be considered in the calculation of eclipses are, the magnitudes of the shadow and penumbra of the opaque body, and the ecliptical limits, or the distance from the node, when an eclipse of the sun or moon will happen. These must be calculated both for lunar and solar eclipses. The operations may be performed as follows : ???

I. ??? FOR LUNAR ECLIPSES.

680. In plate VIII. fig. 3, let AB be the sun, and CD the earth. Draw AC, BD, by the

edges of the sun and earth, which will meet in a point Y, because the sun is bigger than the earth. Through the centres of the sun and earth, S and T, draw S T Y. Also draw B C E, AD F, touching the contrary sides of the sun and earth, intersecting in P; also draw SC and CT. If the whole figure be turned round, about the axis S Y, the lines AY, BY. A F F, BPE, will generate the two cones C V 1), E F F ; the cone C YD, is the dark shadow of the earth, E F F continued, is the penumbral cone. And beyond V, the section of the cone F', F F, will be all in the pen- umbra.

(381. I knee, 1. Half the angle of the cone of the earth's shadow CYT, is equal to the sun's apparent s; midiameter, less his horizontal paral l.ix. lor in tlie trianJ.i' SCV, the external an-j-le S <. ' A ••• C Y S + C S T. And C S T is the sun's parallax. Therefore CYT n SCA •••

external an_ le CFT ~ PCS

i,.!f the ande of the earth's ral eon,' C FT, i-; f<;ual to half the angle iaik rone (. T f twice the sun's hori arallax C ST.

•••1. Thr app-irint semidiameter of the lark sl-ulow 1 !\, upon the moon's orbit, to liii- si in of tiit hori/ontal parallaxes less tht! sun's apparent anirle YC I ••• C IT ••• (IT ••• SCA + CST. fii'o. .“). The apparent semidiameter of the earth's penumbra, < > 1, upon the moon's orbit, is equal to tin sum of the liori/ontal parallaxes of the sun and moon -f the sun's apparent semidiameter. For in the ttiantde PCI, the external angle K C I ••• C IT + C P T ••• C 1 T + P C S + ! ' S T.

fioG. I). Hi-nee to find the length of the earth's ,1'idow. In the triangle CT\ there is given

the angle V ••• sun's apparent semidiameter ••• his parallax, and CT the earth's radius, to find TV.

II. ••• FOR THE SHADOW AND PENUMBRA, IN SOLAR ECLIPSES.

687. In plate IV, fig. 10, let AB be the sun, K|L the moon, C I) the earth. Draw the tan- gents AK, BL, by the edges of the sun and moon, on the same side, to meet in V; and BK G, ALII to touch the contrary sides. Draw S K, IK; and through S and I, the centres of the sun and moon, draw the axis SIV. Then if the whole figure A K V L B be turned about the axis S V, the sides AV, B V, and P H, PG, will ge- nerate two cones K V L, G P H . The cone KVL is the dark shadow of the moon, and the cone G P H is the moon's penurnbral cone. Hence,

688. 1. The angle of the cone of the moon's shadow KLV, the angle of the

penumbral cone KPL, the angles GKV, and HLV, are each equal to the sun's apparent diameter A KB, very nearly ; and half the angle of either cone P or V is equal to the sun's apparent semidiameter. For by reason of the great distance of the sun from T, in respect of T P, T V, T I ; the apparent diameter of the sun, seen from any of the places V, T, I, P, K, will be the same, that is, the angles A VB or KVL, APB or KPL, AKB or GKV, A L B or V L H are all equal ; differing only by the angle K S I, which in the moon is insensible.

689. 2. The height of the cone IP is equal to the cone VI. And KPL, KVL, are equal and similar. For the angles at P and V are equal ; and K L is common.

690. 3. The apparent semidiameter of the moon's dark shadow Q O, upon the earth at O, seen from the moon, is equal to the moon's ap- parent semidiameter ††† the sun's apparent semi- diameter. And if the sun's apparent semidia- meter be greater, the shadow does not reach the earth. For draw K O ; then in the triangle K O V, VKOrrKOS ††† KVSirKOI ††† AV S ~ K O I ††† †† the sun's apparent diameter.

691. 4. The apparent semidiameter of the moon's penumbra G O, upon the surface of the earth, as seen from the moon, is equal to the sum of the apparent semidiameters of the sun and moon. Draw GI and TGR. Then in the tri- angle G P I, the external angle G I O ††† G P I

(\ 1

††† A K S + K O I.

692. 5. Hence, to find the length I V of the moon's shadow. In the triangle KVI, there is given the angle K V I ††† half the sun's appa- rent diameter, and K I the earth's radius; whence V I will be had ; and to find the arch Q N of the earth, involved in the moon's dark shadow. In the triangle Q V T, we have given T V the dif- ference between the moon's distance from the earth, the height of the shadow; and the an- gle QVO ††† the sun's apparent diameter, and T Q the radius of the earth; to find the angle T Q V, to which add Q V T, and the sum is the angle Q T O or arch Q 0 ; and doubled gives the whole arch Q N.

*693. 6. To find the arch of the earth G H involved in the penumbra ; say, as the earth'? radius G T : to S. of the sun's apparent semidia**

meter : : so is PT the sum of the moon's dis- tance and cone's height: to S.TG P or RG K. From this take the sun's apparent semidiameter, tnd there remains G T O =r G O, which doubled gives G H. Tor in the triangle G P T, there is given the angle P r= the sun's apparent semidia- meter, and P T the moon's distance and height of the cone, and T G the earth's radius ; to find the angle RGKrzGPT + PTG. Therefore P TG or OTG:r: RGK ??? GPT= RGK??? the sun's apparent semidiameter.

III. TO FIND THE ECLIPTICAL LlMITS.

694. An eclipse of the moon can only hap- pen, when the distance of the centres of the moon, and of the earth's penumbra, is less than the sum of their semidiameters. For if the dis- tance is greater, the moon and penumbra cannot touch one another.

695. An eclipse of the sun cannot happen un- less the distance of the centres of the sun and moon, be less than the sum of their semidiame- ters, when seen from a certain place. That it shall appear in no place, the moon's parallax must be added to the sum of the semidiameters.

696. In lunar eclipses, therefore, the moon's latitude must be less than the sum of the semi- diameters of the moon and of the earth's penumbral shadow, taken at the moon's orbit. And in solar eclipses, the moon's latitude must be less than the sum of the sun's and moon's semidiameters added to the moon's horizontal parallax ; that the eclipse may be visible some way : or without the parallax, to be visible in a certain place.

697. Therefore in the right angled spherical triangle, plate IV, fig. 4, & SM, having the angle Q, and the distance S M, the distance of the sun from the node, Q, S will be known, or the ecliptic limits. The mode of finding which, may be seen from the following

EXAMPLE. " , ???

Mean apparent semidiameter of the sun 16 4 Parallax of the sun .... 12 Mean apparent semidiam. of the moon 15 38 Parallax of the moon . . . 59 5 Inclination of the moon's orbit . 5 8 30

Hence will be obtained, The semidiameter of the earth's pe- numbra . . . 1 13 21 The semidiameter of the moon and

earth's shadows . . 56 51

The semidiameter of the sun and moon 31 42

The same with the parallax . 1 28 47

In the triangle Q, S M for the eclipse of the moon.

Here S M =r 1►► 13′ 21″ + 15 38″ = 1►► 28′ 59”.

S. & ►►► 5 8ls . . . 8.952398

S.SMzr: 1 28 59 . . . 8.413067

Radius 10.

S. Q, S ►►► 16 47 . . . 9.460669

the limit for the lunar eclipse at a medium.

In the triangle & S M for the eclipse of the sun.

Here S M ►►► 1►► 28′ 47”.

S. &, =5 8J- . . 8.952398

S . S M = 1 28 47 . . 8.412009

Radius 10.

S. .S. =

15

9.459611

the limit for tue solar eclipse, in any place ; about the same as for the lunar. But for a par- ticular place, S M = 31 42 ; and S Q comes out only 5►► 54′ for the limit.

698. 1. Hence there will at least be four eclip- ses in a year, taking one year with another ; two of the moon, and two of the sun. For 16►► 47′ + 16►► 45 = 33►► 32′ or 32i►►. Therefore the sun stays above a month within the ecliptic limits twice in the year. During which time the moon makes two revolutions, and therefore must cause two eclipses, either time ; one of the moon, and another of the sun.

699. 2. Half of the eclipses will, in general, be invisible at any given place. And consequently one year with another there can only be two visible eclipses in a year, the one lunar and the other solar. For the sun and moon spend as much time below the horizon as above it.

700. 3. The ecliptical limits may be found for total eclipses, as well as for

partial ones, by the same method ; i. e. by taking S M ❓❓❓ the dif- ference of the semidiameters of the earth's dark shadow and of the rnoon, in lunar eclipses ; or = the difference of the semidiameters of the moon and sun, in solar eclipses.

701. 4. Eclipses do not always happen in the same places of the zodiac ; but in places more and more westward. For the eclipses being about the nodes, and the nodes regressive at the rate of nineteen degrees in a year; the places of the eclipses are nineteen degrees more west every succeeding year.

702. From these premises it will be necessary, in calculating a particular eclipse, to consider the angle that the moon's way makes with the sun at the time of an eclipse. See plate XI. fig. 4. Let $ S be the ecliptic, Q, M the moon's orbit, & the node. And let S be the sun, in the solar eclipse ; or the centre of the earth's shadow, in the lunar ; and M the moon at the time of the syzygy. Take &? A to Q, S as the sun's horary motion, to the moon's, at that time ; draw M A. then M A S is the angle required ; and A M the moon's apparent orbit.

703. For by construction, in the time that the moon has been moving from ❓❓❓❓ to M (that is, through ❓❓❓❓ S reckoned in the ecliptic,) the sun has moved through a space D S equal to Q, A. Therefore the sun was in D, when the moon was in the node at fo . Draw D B, M B parallel to S m, S D; and draw B Q,, which will be parallel to M A. Now since the moon makes the same latitude D B or S M, in the same time, whether the sun moves or stands still ; and since S M is her latitude, when the sun is at S, D B (equal to SM) will be her latitude, supposing the sun had stood at I), without any motion towards S ; and consequently Q, B will be her apparent way, to an eye at D, through which she seems to move in the same time. Or, which is the same thing, A M will be her apparent way to an eye fixed at S. ❓❓❓ For the triangles A M S are & B D are equal ; and M A S is the angle of her way with the ecliptic. By the theory of relative motions, in bodies moving the same way, all the apparent motions are the same, as if one body stood still and the other moved forward, with the difference of their motions. And here & D or AS is the dif- ference of their motions supposing S to be fixed

704. Hence, as the moon's horary motion : to the sun's horary motion : : S $ the distance from the node to A &. Then S A = S fi ❓❓❓ A &. As sine of S A : rad : : tangent moon's latitude S M : tangent angle A.

705. It is the apparent orbit A INI that must be made use of, in calculating all the particulars of ah eclipse. For an observer considers not S as moving; and therefore only the relative mo- tions are concerned. To calculate, therefore, an eclipse of the moon, the following rules will be found useful.

IV. RULES FOR CALCULATING LUNAR ECLIPSES.

706. 1. Find the true time of the opposition, when an eclipse is to happen ; and let that be reduced to apparent time. ,

707. 2. Find the true places of the sun and moon, when in opposition : 2. The sun's mean anomaly, and the place of his apogee : 3. The place of the moon's ascending nocle, and of her apogee, and her latitude.

708. 3. Let & S, fig. 1, plate VIII. be a part of the ecliptic; $3 M the moon's orbit; S the centre of the earth's shadow, and INI the moon, when in opposition. Take ►► > A, to & S which is known by calculation ; as the sun's horary mo- tion, to the moon's; which are known from the astronomical tabhs. Draw A M, for the way of die moon from the sun. Then in the right anuled spherical triangle A S M, there is given AS {►►► u S ►►► p A) ; and S3J the moon's latitude found by calculation : to iind the angle S MA.

?lh>. !. Let SI' fall perpendicular to AM; ;hen since the arches SM, M 1', S P, are very small, ihcv may be taken for right lines; and the tnan K; '.'►►► M t* for a plane triangle. Then hav ia- S M raid angle. S M I1 ; M P'and S P will be ioiiiid, where, 1′ is the place, of the moon in the middle or' the eclipse. Likewise the time of ihe moon's moving through .M i' will be known by her horary motion; and from thence the time when ►►he is at T, or the middle of the eclipse.

710. o. I'nmi the astronomical tables, find the sun and moon's apparent semuliameters, for the lime of opposition; and llieir horizontal parallaxes.

711. i). i'nmi anv convenient scale of equal pan—., with iho centre 1′ and radius P H, equal to tii,. minutes e..iitiiiied in th'' moon's radius, describe tin1 circle, lll'c tor the moon. And \iiii the radius S!) (. qnal to the sum of the sun and moon's horizontal parallaxes ; the sun's >i midiameter, all in minutes,) di scribe the cir- cle DKH, Irom the centre S, then this circle will r< p.p sent th" earth's dark shadow. Like- wise with the same centre S, and radius SF f the Min's semidhuneter, in minutes,) describe ti;e ciixle l'(,;u-. and this will be the earth's penumbra.

71'J. 7. These rules being observed, it will lie – a>y to liml all the requisites by scale and compass, s', i v measuimu' lin :.: : or rather by iidculation, m the seveiai i i^i.t-angled plain 1,'iangies, (ontainrd in the >

,'.me. Thus, to ami u h< n the moon lirst toucne., the penumbra at

-. in '.'.': vight ; ivjed tr -i;de S 1* K. there is

given S P, and SK (the sum of the radii SL and P B), to find P K. Which being known, the time of the moon's passing through it will be known, by the moon's horary motion from the sun.

713. To find when the moon first enters the dark shadow of the arth in D : in the right angled triangle S P I, there is given S P, and S I, (the sum of the radii S I), P B,) to find P I ; and consequently the time of half the duration in the shadow.

714. To find the digits, or 12th parts of the moon eclipsed. Here no the part eclipsed is ~

Sn-f-Po SP; and ,...- or 7 is the num- 2Po Po

ber of digits eclipsed. In total eclipses of the moon, the earth's shadow often reaches farther than the moon. And then more than twelve di- gits are said to be eclipsed, supposing the moon's disk to be produced so far.

715. To find the time when the moon wholly enters into the dark shadow BED, follow the same method as when it entered into the penum- bra G Q F. This will be evident, by supposing G Q L the dark shadow. In that case S I will be the difference of the semidiameters of the moon and dark shadow. The times of passing through P I, P K, &c. being known, and tne time of the middle of the eclipse at P, the beginning and end will be known.

716. 8. Hence, if the moon or circle CBo never touches the circle G Q F, there will be no eclipse, not even by the penumbra. And if the same circle never touches the circle B D E, there will be no part of the moon totally eclipsed. And if the whole circle CBo enter into the circle B E D, the whole moon will be totally eclipsed ; and that is when S P is less than the difference of the semidiameters S D a7\d P B. If the point S be in the node, then P falls upon S, and the eclipse is central* When only a part of the cir- cle C B o goes into the circle BED, the eclipse is a partial one, as in this figure.

717. 9. The time of the eclipse being known for any particular place, it is easy to know if it be visible at that place, by knowing if the moon be risen. Or the place will be known where the moon is vertical; and therefore it will be visible to all places within a quadrant's distance from it.

718. 10. If the spectator live in the place, (or in the same longitude) which the tables are calcu- lated for; he will see the eclipse at the time determined

by the calculation. If not, he will see it an hour sooner for every 15►► difference of longitude, that he lives west from it. And so much later, if he lives eastward; that is, in the way of reckoning time. But in regard to absolute time, it is seen from all places at the same instant.

EXAMPLE.

To find the time of the Lunar Eclipse, December \3th, 1769 ; its Duration and Digits eclipsed.

719. 1. The mean time of the syzygies, by the tables, is found to be December 12d. 19h. 27m. at which time the moon's horary motion from the sun is 35′ 33". At this time, computing the true places of the sun and moon, the moon will

appear to be 35 10″ before the sun. And there- fore the time is past the syzygy, 59m. l'2s. Therefore,

From Id. 19h. 27m. Os.

Take 0 0 59 12

True time 1 18 27 48

The places being computed again, the moon is only 7″ before the sun, which amounts to 12″ of time; therefore the time of opposition is 12d. 18h. 27m. 36s. which reduced to apparent time is December 12d. 18h. 32m 51s.

2. The sun's place is . . 8s. 21►► 37′ 35″ The moon's place .. 2 21 37 35 Place of the ascending node 8 14 46 13 Her latitude south . . 37 58 The sun's horary motion 2 33 The moon's horary motion 38 6

3. Hence the moon is 6►► 51′ 22″ past the de- scending node: that is & Sis 6►► 51′ 22". There- fore & A. = 17′ 32", and A S = 6►► 23′ 50". Therefore the angle S M A = 84►► 22′ 28".

4. Hence drawing the ecliptic R S, and S M perpendicular to it, and equal to 37′ 58″ from a scale of minutes, as in fig. 12, plate IX. and making the angle S M A = 84►► 22^'. We find the perpendicular S P rr 7′ 47", and M P ►►► 3′ 43". And therefore, the horary motion of the moon from the sun being 35′ 33", P M will be passed over in 6′ 17". And since this is

before the opposition at M, this time must be deducted from the time of opposition. And the time of the middle of the eclipse will be December 12d. 18h. 26m. 34s.

5. The sun's apparent semidiameter 16′ 20″ His horizontal parallax .... 12 The moon's apparent semidiameter 16 48 Her horizontal parallax 61 7

6. Hence the radius B P ××× 16′ 48".

radius S D ××× 44 59. radius S F = 77 39.

7. Hence also P K or P k =86 34.

and P I or P i = 48 53. and therefore the time of passing through P K is 2h. 26m. 6s., and through PI××× Ih. 22m. 30s. And the whole duration in the shadow from I to ××, is 2h. 45m. And the digits eclipsed 8×× on the upper side. Whence,

D. H. M. S. First entering the penumbra

December . .. 13 4 0 28 morn. Entering the dark shadow at 0 5 4 4

Middle 0 6 26 34

Opposition 0 6 22 51

Leaving the shadow . . . 0 7 49 4 Leaving the penumbra . .0 8 52 40

Duration 0 2 45 0

Digits eclipsed 8××

720. All these calculations may be made suf- ficiently near, by scale and compasses, in a large draught ; making use of a scale of minutes and sixtieth parts; or rather by making a scale of time answering thereto, by the help of the horary motion of the moon from the sun. For by this scale, the several hours and minutes may be marked along the line A A', by which it will ap-

pear at what time the centre of the moon is at any given point. For the time is known when the moon is at M, and from thence the points at each hour and minute are easily found. And this construction, with only right lines and cir- cles, will be exact enough in a large figure ; for the best lunar tables give the times of the phases of an eclipse no nearer than to four or five minutes of time ; and therefore such a construc- tion is sufficient to answer the purpose. Hence it may be observed, that no eclipse of the moon

can last above five hours and a half from the moon's first touching the earth's penumbra, to its last leaving it. For S K = 94′ 27″ = 94‘45, and the horary motion is 35′ 33″ = 35-55 and

94‘45

= 2-66 = 2h. 39m. = semiduration : and

35‘5o

no eclipse of the moon, by the earth's shadow, can last above 3-f hours. Nor when total, above If hours. For SI = 61′ 47″ = 61-78, and

_ ◆◆◆ ◆◆◆- ◆◆◆ 1-745 ◆◆◆ 1′ 45″ = the semiduration,

-

and SD ◆◆◆ SI ◆◆◆ 28′ 11″ n 28‘18, and

28-18 35-55

◆◆◆ -79 ~ 47m. the semiduration.

721. The refraction of the earth's atmosphere, in lunar .eclipses, makes the shadow less; by bringing the rays, which terminate the shadow, sooner to a point. And hence comes that red color of the moon even in total eclipses. But that light must be very dim, by reason of a great number of the rays being stopt and lost in the earth's atmosphere.

722. The circles terminating the shadow and the penumbra BED and G Q F, cannot be dis- tinguished. For the darkness from BED, di- minishes by insensible degrees, to G Q F, being darkest at E, and lightest at Q, where it vanishes insensibly. And therefore the moon does not appear to be eclipsed till she is a good way within the penumbra. For that reason, there may happen eclipses of the moon which cannot be discovered as such.*

723. All lunar tables show the moon's place in eclipses, more truly in the syzygies than in the quadratures, or any other place. For the times of the syzygies, and the moon's place, have been more accurately observed in eclipses, than at any other time ; and from thence the moon's theory has been deduced. Besides, many of the ine- qualities cease in the syzygies, but have sensible effects in other places ; becoming greater, as the moon is further from the syzygies ; being greatest in the quadratures. Whence the lunar tables do not determine the moon's place truly in the quadratures. And her place calculated from these tables is not so exact in the quadratures as in the syzygies.

724'. Several inequalities depend on the aspect of the nodes and the sun ; but these cease when the nodes are in the syzygies. When the moon and the nodes are in the syzygies, the moon's place, then wanting fewer equations, as being subject to fewer inequalities, will be more cor- rect than when she is in other places, where there are more and greater inequalities, and more equations. From hence more errors will happen out of the syzygies than in them.

V. To FIND THE WAY OF THE MoON FROM THE

SUN, IN A SOLAR ECLIPSE, SUPPOSING THE OBSERVER AT REST.

725. Let II ZO, in plate IX. fig. 6, be the meridian of the place, II O the horizon, E C the equinoctial, EL the ecliptic, Z the zenith, P the pole, S and M the places of the sun and moon in conjunction, PSD the sun's meridian. Having found the sun's distance from the node, ►►3 S, and the moon's latitude S M, &c. take $ A $ to S, as the sun's horary motion to the moon's horary motion; then S A is known. Draw M A; then in the spherical triangle ASM, right angled at S, there is given S A, S M ; to find the angle S M A ; AM being the moon's way from the sun.

726. But, as the eye of the observer is in mo- tion, by the rotation of the earth, which gives an apparent motion to the moon, contrary to that of the observer, we must find the quantity and direction of that motion. As the observer is carried eastward, towards the point C, the ap- parent motion of the moon caused thereby will be in the line C S. And to determine the position of C S, in respect of A M or S M, several spheri- cal triangles must be resolved, as follows :

727. Jn the right-angled triangle EDS there is 'jiven E S, and angle E to find D S, and angle E S I) or ASP; or these may be easier had from the astronomical tables. And in the tri- angle / P S, there is ˆiven P S (the complement of j)S), the angle Z 1' S (from the time of the day), and / 1" the complement of the latitude; to "find Z S, and an-l.b 1> Z S and Z S P. Then 7. S P and AS 1> heai known, /, S A will be known. And M S A being a right anˆle, Z S M ►►►will bu known. In the ntjht angled triangle V 1 S, there is given C 1', the measure of the anˆ'le FZC (the diHeivnee between the angle PZS and the rijit airj'le (.' Z P), and S F the complement of /, S ; to find (.' S, and the angle C S F or \ S Z. Then !', S Z and Z S M being known, I! S 31 will be known. And SMA being known, its supplement S M 13 is known, and consequently the arrjle S 1! M.

7~H. To find the quantity of the motion. That aloriL' A ,M is already known ; and to find the apparent motion along S H. The sine of .l.V (the horary motion of a point in the equinoc- tial , is "J.VJ to the radius 1. And if h be the moon's horizontal parallax, then the radius of the earth appear-; at the moon under the aiv_rle h, and therefore l.V of the equinoctial appears under the anu'le of ,!."> '. // ; this then is the horary mo- tion of a point in the equinoctial, viewed directly from the moon. And the moon's apparent motion seen from drat point in the equinoctial is the \ ery same. Hut this motion i> to be diminished upon t \o aeeiitmts. 1. Because it is less in a parallel circle, in proportion to the cosine of the latitude. And 'J. I pon account of the obliquity of tin- motion, when not perpendicular to the rays of the Min : and this \sillbe as the sine of C S, thi sun's distance from the east or west point of the hon/on. Therefore to find the quantity of this motion.

To tin; lo_arithm of _ >.'>."> //

Add tin cosine latitude.

And the sine of

Then the sum, abating twice radius, is the logar- ithm of this apparent horary motion. Then this motion is to be compounded with the motion along A M B as follows :

729. Let AS, plate IX. fig. 5, be a portion of the ecliptic, S B the way of the apparent mo- tion, MA the moon's way from the sun. Draw N M parallel to S B ; and let M N be the horary motion along SB or M N, and M I the horary motion of the moon from the sun. Then com- plete the parallelogram N M I Q ; draw the diagonal M QR, which is the direction of the mo- tion, compounded of the observer's and the moon's motions, and M Q is the total apparent horary motion, supposing the observer at rest. Then in the plain triangle Q M I, there is given M I, and 1 Q (or M N), and the angle M I Q = M B S ; to find the angle Q M I, and side M Q or the ab- solute horary motion. And the angles Q M I and IMS being known, Q M S is known.

730. If the sun be in the eastern hemisphere, in which case the concave side of the eastern he- misphere is here projected (in fig. 6), then the moon's motion from the sun is from M towards A, and the other apparent 'motion from S to- wards B, or from M towards N. But if the sun is in the western hemisphere, this projection re- presents the convex side" of the sphere; and then the moon moves from the sun, in direction A M, and the other apparent motion is from S towards C7 being contrary.

VI. ❖❖❖ To CALCULATE SOLAR ECLIPSES.

731. The eclipses of the sun are more diffi- cult to calculate than those of the moon ; the latter being clear of parallaxes, which the former are incumbered with, which gives a great deal trouble. But a great part of it may be avoided by using projections instead of calculations. The rules are,

732. 1. Find the true time of the conjunction, and the places of the sun and moon at that time.

733. 2. Having found the way of the moon from the sun by projection or calculation ; find, by the astronomical tables, the moon's horizon- tal parallax, her apparent diameter, and horary motion, also the sun's apparent diameter and ho- rary motion. But, to avoid a great deal of calcu- lation, if the sphere be projected by a large scale, it will give all the requisites with sufficient ex- actness, by measuring the several angles and sides, without any calculation, or very little. And here it is best to project the concave side* and then every thing appears as it is in nature.

734. 3. Find the moon's parallax of alti- tude, by making as rad. : cos. altitude : : so the moon's horizontal parallax : to her parallax of altitude V t or M m. fig. 8. Then find her pa- rallax of latitude M m, and longitude S s, or m n, and from thence her apparent latitude and longi- tude is known.

735. 4. Draw the line SL, fig. 10, for the ecliptic, and from a large scale of minutes, erect S M perp. to L S, and equal to the apparent la- titude ; make the angle S M R, as found in the last prob. and draw & M R for the moon's ap- parent path. From S let fall SP perpendicular to M R, and S P will be the least distance of the centres of the sun and moon, or tae middle o$

the eclipse. From the centre S, with the radius equal to the minutes contained in the sun's semi- diameter, describe the circle A B C for the sun. And from the centre P, with the radius equal to the moon's semidiameter, describe the circle A O C D for the moon. If these circles do not intersect, there will be no eclipse. But if they intersect, an eclipse must necessarily happen.

736. 5. Then P is the place of the moon in the middle of the eclipse. . Make S I and S K equal to the sum of the semidiameters of the sun and rrroon ; and the moon's centre will be at I when the moon first touches the sun, or at the moon's centre, at the end of it. In the triangle P S I, there is given SI, S P ; to find P I = P K, which reduced to time by help of the moon's ap-

parent horary motion, shews half the duration of the eclipse ; and consequently we shall have the beginning and end.

737. 6. And to find the quantity n o, or the digits eclipsed ; we have n o = S n + Po ††† S P,

and ††† – ††† = number of digits.

738. 7. The time found being mean time, it must be reduced to the common or apparent time, by the equation of time. And if the given place be not that for which the tables are made, add so much time, if the place lie eastward, to the time of conjunction, as answers to the dif- ference of meridians ; or subtract it if it lie westward.

EXAMPLE.

*To FIND THE T*ME OF THE SUN'S ECLIPSE, JUNE 4, 1769, ITS DURATION AND DIGITS ECLIPSED AT LONDON. 739. 1. By the tables the mean time of the con-*

lunction is found to be June 2d. 20h. 41m. And

hence, the true time of conjunction is June 3d.

20h. 27m. 43s. And their places are 2 13†† 51*

25. And the moon's lat. 55'32 north. The*

moon's motion from the sun 35′ 47'.

2. In fig. 5 and 6, Plate IX. the angle A M S

††† 84†† 47'. Z S M ††† 35†† 20'. C S F = 5†† 18′

S B M ††† 43†† 49'. S F rz 42†† 16', C F = 3†† 34'.

C S = 42†† 24'. The angle Q M I = 8†† 25'.

S M Q = 92†† 52'. MN orlQ = 6†† 38'. M Q

= 31†† 20'. Also

The moon's horizontal parallax . . 60′ 58″ Her apparent diameter . . ††† . 33 32

Her horary motion 38 10

The sun's diameter 31 41

His horary motion 2 23

3. In fig. 4, the moon's parallax in altitude M w►► is 45′ 09″ ; her parallax in latitude Mn, 38′ 05"; her remaining latitude Sn, 17′ 26"; her parallax in longitude Ss, 24′ 13"; which is increased so much.

4. Draw S L for the ecliptic, as in fig. 10, at any point S, erect the perp. M S equal to 17′ 26", the moon's apparent latitude ; through M draw the moon's way & M R, making the angle S M R = 92►► 52'. Draw S P perp. M R, which here falls very near M. From the centre S, with the radius S A = 15′ 50", describe the cir- cle A B C for the sun. And with the radius M D = 16′ 46", and centre P, describe the cir- cle A D C O for the moon.

5. Hence PI or P K ►►► 27′ 33". And the time of moving through I P or P K, at the rate

of 31′ 20″ an hour, is 52′ 45″ for the semidii. ration. By reason of the parallax (24′ 13"), she is past the apparent conjunction ; the difference being what the parallax causes, which comes to 47′ 23". Therefore the middle of the eclipse is so much sooner, being at 3d. 19h. 41m. 20s. This reduced to apparent time is 3d. 19h. 43m. 27s. for the middle.

6. The digits eclipsed are 5 -jˆ, nearly.

740. In this example, the concave side of the sphere is projected, which suits best to the ap- pearance of the heavens. And the figures are drawn upon that supposition. It appears from the process, that the moon is advancing to her descending node, and therefore has north lati- tude. And by the position of that part of the ecliptic, her parallax in longitude, advances her so much forward, viz. 24′ 13". And therefore she is so much past the apparent conjunction. Hence we gain these several particulars, as to the eclipse :

*D. H. ‘ **

741. 1. The begin. June, morn. 4 6 53 42 middle . . . . 4 7 43 27 end .. 4 8 46 12 total duration ... 1 45 30

digits eclipsed 5►►, on the upper side of the sun, towards the left ; as appears by the figure.

742. 2. Hence the position of the horns at C and A, are easily found in the middle of the eclipse. For they are in a position parallel to R I, the moon's way.

743. 3. The middle of the eclipse will not be at the same time in all places of the same longi- tude; for the parallax of longitude will be dif- ferent in different places.

744. No eclipse of the sun can last above two hours. For S I or S A + M D = 32′ 26″ = 32.6 and the horary motion = 34′ 47”= 35.78.

32 6

And :.r \>o = ‘91 = 544 minutes, for the semi- c!5.7o

duration.

745. If it were not for the parallax, eclipses of the sun would be as easily calculated as those of the moon. And in order to get the parallax, the angle Z S M and S P must be known, fig. 2, which occasions the resolving several spherical triangles before they can be had. Likewise it may be observed, that the apparent way of the moon is strictly curve line, concave towards S, which arises from the parallel of latitude being a curve, and the moon being out of its plane. Likewise the moon’s apparent velocity is some- thing greater at the beginning than at the end.

VI. ❖❖❖ RULES FOR CALCULATING A GENERAL ECLIPSE OF THE SUN.

746. The element* necessary for this are: 1- The sun and moon’s place, and the time at the true conjunction ; 2. The moon’s latitude, hori- zontal parallax, diameter, and horary motions ; 3. The sun’s declination, diameter, and horary motion ; and 4, the angle the moon’s way makes with a circle of latitude.

747. 2. From a large scale of minutes, take the moon’s horizontal parallax in the compasses, and at any point C, in the right line B D, (which represents the ecliptic in plate XI. fig. 6), de- scribe the circle ABE D, for the earth’s disk, or the earth’s flat face as it appears at a distance, in

aline drawn to the sun. Draw C M perpendi- cular to C D, and equal to the latitude of the moon upwards, if north. Make the angle C M G equal to that which the moon’s way makes with a circle of latitude ; acute to the right hand, if she tend to the node ; or obtuse, if she be past it; and drawing F M G, it will be the way of the centre of the moon’s shadow upon the earth. From C let fall C II perpendicular to FG. Then at II will be the

middle of the earth's eclipse.

748. 3. With the centre II, and radius H O, equal to the sum of the semidiameters of the sun and moon, describe the circle Q O R, which will be the moon's penumbra. Also describe a small circle round the centre H, whose radius is the difference of the sun and moon's semidiameters, that little circle will be the dark shadow of the moon. Then all the countries of the earth con- tained in the segment V A W will be successively eclipsed by the penumbra, as the shadow moves along the tract F G ; while the other segment V E W suffers no eclipse at al1. All places in the line st will be totally eclipsed, as the dark sha- dow, or the small circle at II passes successively over them. But this circle, or dark shadow, be- ing very small, a total eclipse at any place conti- nues but a small time. Sometimes the sun's se- midiarneter exceeds the moon's ; and then there will lie no dark circle, or total eclipse, but a lu- cid ring will appear about the moon in these pla- ces, and this is called an annular eclipse. The difference between the semidiameters of the sun and moon is so little, that no total eclipse lasts above four minutes.

74'.). 4. Draw C F, C G = sum of the semi- diameters of the sun and moon, and the moon's parallax ; then the moon's shadow will touch the earth at L and R, where the eclipse begins and ends. In the triangle CFII, there is given C F, CII ; to find F II = II G, which, converted into time, gives half the duration, or half the time that the moon's shadow is upon the earth. Also NO measured, shews how far the eclipse reaches; or C O measured, does the same. It may be sufficient to measure all these by the scale with- out calculation.

7.">0 5. To find the pole. Draw the arch A P, making the angle K A P equal to the sun's lomritiide, and A P the distance of the poles of the equator and ecliptic, 2j'"; then P is the pole. Fur A P is a part of the solstitial colure, and passes through Cancer and Capricorn. And CAP is what the sun wants of Cancer, there- fore PAR is what it is past Aries. Through I' draw C P T. And here we may suppose that the pole P is fixed during the time of an eclipse. Then in the right, angled spherical triangle APT, there is given A P anil the angle A, to find AT or angle A C P. In this triangle P T is the sun's declination, and APT or C PR his right ascen- sion from Cancer. Here note, that any place in the line C T is in the sun's meridian; and C is the place where the sun is vertical at the time of the eclipse.

7.M. G. To find the situation of any given place, at a given hour. Make the angle CPX (with the sun's meridian), equal tothetime from noon ; on the left hand, if it is IH tore noon. And Miake PZ the complement of the latitude; then

*Z is the place required. And if it falls in th***** penumbra, it is eclipsed ; or anywhere in the segment VAW; if its motion in the parallel circle does not carry it out, before the penumbra reaches it.*

*752. 7. To find the place which- is first or last touched by the penumbra, as K. Draw the arch PR. In the triangle GCA, there are given C G and C H. to find the angle GC H, from which subtract il C P which is known, gives the angle P C K or TK. Then in the right-angled spherical triangle PT K, there is given T K, and PT the sun's declination ; to find P K the com- plement of the latitude of K, and T P K or C PK the difference of longitude of K, and the sun. **** Therefore its longitude and latitude is obtained. In the same manner may be found that of L. And. by the same method the latitude and longitude of the places s and t may be found, where the dark shadow first enters the earth's disk, or quite leaves it. Thus also may be found the place which is in the line F H, at any point of time : or if the place be given, what the time will be ; and that by help of the horary motion, with other parti- culars of like nature.*

753. 8. The part of the sun's diameter eclipsed by the moon, is known by the situation of the place within the penumbra, or its distance from the centre of the penumbra. And the pha- sis of the eclipse, as seen from any place Z, upon the disk, will be found thus, for any time, t ind the centre of the shadow for that time, as suppose at H. Describe about H, a circle, whose radius is the moon's radius, and about Z, a circle with the sun's radius. Then the part cut off the sun's circle will be the part obscured.

*SECT. VIII. **** REMARKS ON ECLIPSES iw*

GENERAL.

754. In eclipses of the moon, even when she is near the centre of the earth's shadow, her body is still visible, and appears of a tarnished copper color. This seems to be occasioned by the rays of lieht which come from the sun, and which, passing near the earth, are inflected from their rectilinear course by our atmosphere ; so that they enter the earth's conical shadow, thus pro- ducing that faint illumination on the surface of the moon, which some have supposed to be her own native light ; but there seems to be no just ground for such a conjecture.

755. In most solar eclipses, the moon's disk is covered with a faint light, which is attributed to the reflection of the light from the illuminated part of the earth ; and in total eclipses, the moon's limb is seen surrounded by a pale circle of light: which some astronomers consider as an indication of a lunar atmosphere, but others as the atmos- phere of the sun ; because it is observed to move equally with the sun, but not with the moon.

756. Eclipses have in all ages greatly attracted the attention of mankind. The ignorant and su- perstitious have viewed them with terror, and in former ages they were often considered as the forerunners of national calamities. The Chinese, even at the present day. upon their appearance, perform the most absurd and superstitious cere- monies, although they are so far acquainted with their nature, as to be able to predict them. See. CHINA. But true philosophy has taught us, that

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made forking GEORGE I.

instead of these appearances being portentous of evil to mankind, they may, by proper observa- tions upon them, be made of great advantage to the sciences, and to some of the arts of life.

757. We have already shewn, that, by eclipses of the moon, the earth is demonstrated to be a globular figure. The longitudes of places on the earth are also determined by observations on solar and lunar eclipses ; as will appear by con- sulting the articles GEOGRAPHY, LONG ITUDE, NA- VIGATION, &c. Eclipses are also of great im- portance in CHRONOLOGY, (which see), as by them we are enabled to determine exactly the time when events recorded in history happened.

758. From the observations made upon the ancient eclipses, it appears that the period of the moon is now shorter, and consequently that her distance from the earth is now less, than in for- mer ages ; and this has been considered as an ar- gument against those who assert, that the world may have existed from eternity ; for it was hence inferred, that the moon moves in a resisting me- dium, and therefore that her motion must by de- grees be all destroyed, in which case she must at last come to the earth. But M. de La Place has shewn, that this acceleration of the moon's period is a necessary consequence of universal gravita- tion, and that it arises from the action of the planets upon the moon. He has also shewn that this acceleration will go on, till it arrive at a certain limit, when it will be changed into a re- tardation ; or in other words, that there are two limits, between which the lunar period fluctuates, but neither of which it can pass.

759. M. de La Grange has also discovered, that all the seeming irregularities in the motions of our system are periodical ; so that although

the obliquity of the ecliptic, the eccentricities of the planetary orbits, the precession of the equi- noxes, the length of the year, &c. may change, yet these changes will not pass certain limits, and after stated periods, they will return precisely to what they had formerly been. Some of these periods, however, may be very long. The acce- leration of the moon, for example, has been going on from the earliest ages of astronomy to the pre- sent day.

760. We cannot close this section, without observing, that eclipses happen very frequently to all the satellites of Jupiter ; and, as they are of great service in determining the longitude of places on the earth, astronomers have been at pains to calculate tables for the eclipses of these satellites by their primary ; for the satellites them- selves have never been observed to eclipse one another. But this falls more properly to be con- sidered under' the articles GEOGRAPHY, and LON- GITUDE, to which the reader is therefore referred.

761. The primary planets would also eclipse one another, were it not for their great distances ; but, as the comets are not subject to the same laws with the planets, it is possible they may sometimes approach so near to the primary pla- nets, as to cause an eclipse of the sun to those planets ; and as the body of a comet bears a much larger proportion to the bulk of a primary planet than any secondary, it is plain, that a cometary eclipse would both be of much longer continu- ance, and attended with greater darkness, than

that occasioned by a secondary planet. If we suppose the primary planet and comet to be moving both the same way, the duration of such an eclipse would be prodigiously lengthened ; and thus, instead of four minutes, the sun might be totally darkened to the inhabitants of certain places for as many hours : and, from this cause, some account for that prodigious darkness, which we sometimes read of in history, at times when no eclipse of the sun by the moon could possi- bly happen.

PART V.

ASTRONOMICAL MACHINERY AND IN- STRUMENTS.

SECT. I. ††† DESCRIPTION OF THE ASTRONOMICAL MACHINERY INVENTED FOR ILLUSTRATING THE SCIENCE.

762. The Grand Orrery, a very magnificent machine, first made in this kingdom, by Mr. Rowley, for king George I. is represented in plate XII. fig. 1 . The frame of it, which con- tains the wheel-work, &c. and regulates the whole machine, is made of ebony, and about four feet in diameter. Above the frame is abroad ring, supported with twelve pillars, which repre- sents

the plane of the ecliptic. Above the ecliptic, stand some of the principal circles of the sphere, viz. No. 10, are the two colures divided into de- grees, and half degrees; No. 11, is one half of the equinoctial circle, making an angle of 23ˆ►►. The tropic of Cancer, and the arctic circle, are each fixed parallel, at their proper distance from the equinoctial. On the northern half of the ecliptic, is a brass semicircle, movable upon two points, fixed in cy> and ˆ, representing the movable horizon to be put to any degree of la- titude upon the north part of the meridian, and the whole machine may be set to any latitude, without disturbing any of the internal motions, by two strong hinges, (No. 13.) fixed to the bot- tom-frame, upon which the instrument moves, and a strong brass arch, having holes at every degree, through which a strong pin is put at every elevation. This arch, and the two hinges, sup- port the whole machine, when it is lifted up, ac- cording to any latitude ; and the arch, at other times, lies conveniently under the bottom frame'.

763. The sun, (No. 1.) stands in the middle of the whole system, upon a wire, making an angle with the ecliptic, of about 82►►. Next the sun is a small ball, (2), representing Mercury. Next to Mercury is Venus, (3), represented by a larger ball. The earth is represented (No. 4), by an ivory ball, having some circles and a map sketched upon it. The wire which supports the earth, makes an angle with the ecliptic, of 66►►►►, the inclination of the earth's axis to the ecliptic. Near the bottom of the earth's axis is a dial plate, (No. 9.) having an index, pointing to the hours of the day, as the earth turns round its axis. Round the earth is a ring supported by two small pillars, representing the orbit of the moon; and the divisions upon it answer to the moon's latitude. The motion of this ring repre- sents the motion of the moon's qrbit, according to that of the nodes. Within this ring is the moon, (No. 5), having a. black cap or case, by

which its motion represents the phases of the moon, according to her age. Without the orbits of the earth and moon, is Mars, (No. 6.) The next in order to Mars is Jupiter, and his four moons, (No. 7.) Each of these moons is supported by a wire fixed in a socket, which turns about the pillar supporting Jupiter. These satellites may be turned by the hand to any position, and yet, when the machine is put into motion, they will all move in their proper times. The outermost of all is Saturn, his five moons, and his ring, (No. 8.) These moons are supported and con- trived, similar to those of Jupiter.

764. The machine is put in motion, by turning a small winch, (No. 14) ;

and the whole system is also moved by this winch, and by pull- ing out, and pushing in, a small cylindrical pin above the handle. When it is pushed, all the planets, both primary and secondary, will move according to their respective periods, by turning the handle. When it is drawn out, the motions of the satellites of Jupiter and Saturn will be stopped, while all the rest move without interrup- tion. There is also a brass lamp, having two convex glasses, to be put in room of the sun ; and also, a smaller earth and moon, made some- what in proportion to their distance from each other, which may be put on at pleasure. The lamp turns round at the same time with the earth, and the glasses of it cast a strong light upon her ; and when the smaller earth and moon are placed on, it will be easy to show when either of them will be eclipsed.

765. Mr. Ferguson's orrery, plate XII. fig. 2, slums the motions of the Sun, Mercury, Venus, Karth, and Moon; and occasionally the superior planets, Mars, Jupiter, and Saturn may be put on. Jupiter's four satellites are put round him in their proper times, by a small winch; and Sa- turn has his live satellites, and his ring, which keeps its parallelism round the sun ; and by a lamp put in the sun's place, the ring shows all its various phases already described. In the centre, IV o. 1, represents the sun ; No. 2, Mercury; No. 3, Venus; No. 4, the earth; No. 6, is a siderial dial-plate under the earth ; and No. 7, a solar dial-plate on the cover of the machine. The in- dex of the former shows siderial time, and of the Litter, solar time.

760. The earth always keeps opposite to a moving index, (No. 10), which shews the sun's daily change of place, and also the days of the months. The earth is half covered with a black cap, for dividing the apparently enlightened half next the sun, from the other half, which, when iiirned away from him, is in the dark. The edge of the cap represents the circle bounding light and darkness, and shows at what time the sun rises and sets to all places throughout the year. The earth's axis inclines 23J0 from the axis of the cc:liptic; by which means, the different lengths ot days and nights, and the cause of the various reasons, are demonstrated to sight.

7(i7. There is a broad horizon, to the upper side of which is fixed a meridian semicircle, in the north and south points. From the lower .side of this thin horizontal plate stand out four small wires, to which is fixed a twilight-circle, eighteen degrees from the graduated side of the

horizon, all round. This horizon may be put upon the earth (when the cap is taken away), and rectified to the latitude of any place ; and then by a small wire, called the solar ray, which may be put on, so as to proceed directly from the sun's centre towards the earth's, but to come no farther than almost to touch the horizon. The beginning of twilight, time of sun rising, with his amplitude, meridian altitude, time of setting, amplitude

then, and end of twilight, are shown for every day of the year, at that place to which the horizon is rectified.

768. The moon, (No. 5.) exhibits all the phases already described. When the horizon is rectified to the latitude of any given place, the times of the moon's rising and setting, together with her amplitude, are shown to that place, as well as the sun's ; and all the various phenomena of the harvest moon are made obvious to sight. The moon's orbit, (No. 9.) is inclined to the ecliptic, (No 11.) one half being above, and the other below it. The nodes, or points at 0 and 0, lie in the plane of the ecliptic, as before describ- ed, and shift backward, through all its sines and degrees, in 18f years.

769. The degrees of the moon's latitude, to the highest in NL, (north latitude,) and lowest at S L, (south latitude,) are engraven both ways from her nodes at 0 and 0 ; and, as the moon rises and falls in her orbit, according to its incli- nation, her latitude and distance from her nodes are shown for every day, having first rectified her orbit, so as to set the nodes to their proper places in the ecliptic ; and then, as they come about, at different, and almost opposite times of the year, and then point towards the sun, all the eclipses may be shown for hundreds of years (without any new rectification), by turning the machinery backward, for time past, or forward for time to come.

770. At 1 7►► distance from each node, on both sides, is engraved a small sun; and at 12►► dis- tance a small moon, which show the limits of solar and lunar eclipses; and when, at any change, the moon falls between either of these suns and the node, the sun will be eclipsed on the day pointed to by the annual index, (No.10). And when at any full, the moon falls between either of the little moons and node, she will be eclipsed, and the annual index shows the day of that eclipse. There .is a circle of 29ˆ equal parts (No. 8) on the cover of the machine, on which an in- dex shows the days of the moon's age. There is a jointed wire, of which, one end being put into a hole in the upright stem that holds the earth's cap, and the wire laid into a small forked piece which may be occasionally put upon Venus or Mercury, shows the direct and retrograde mo- tions of these two planets, with their stationary times and places, as seen from the earth. The whole machinery is turned by a winch, (No. 12) and is so easily moved, that a clock might turn it, without any danger of stopping.

771. Mr. Jones's Planetarium, plate XI. fig. 1, represents in a general manner, by various parts of its machinery, all the motions and phe- nomena of the planetary system. This machine consists of, the Sun in the centre, with the pla- nets, Mercury, Venus, the Earth and MOOD.

Mars, Jupiter and his four moons, Saturn and earth's in this machine, this being in just pro"

his five moons; and to it is occasionally applied an extra long arm for the planet Herschel and his two moons. To the earth and moon is applied a frame C D, containing only four wheels and two

portion to the moon's distance from the earth. A A is a bar of wood, to be moved by hand round the axis g, which is fixed in the wheel Y The circumference of this wheel is to the cir-

pinions, which serve to preserve the earth's axis cumference of the small wheel L, below the other

in its proper parallelism in its motion round the end of the bar, as 365ˆ days to 29J,or as a year

sun, and to give the moon her due revolution is to a lunation. The wheels are grooved round

about the earth at the same time. These wheels their edges, and in the grooves is the catgut

are connected with the wheel-work in the round string GG, crossing between the wheels at X.

box below, and the whole is set in motion by the On the axis of the wheel L, is the index F, in

winch H. The arm M, which carries round the which is fixed the moon's axis M, for carrying her

moon, points out on the plate, B, her age and round the earth E, fixed on the axis of the wheel

phases for any situation in her orbit, and which L in the time that the index goes round a circle

accordingly are engraved thereon. In the same of 29►► equal parts, which are the days of the

manner the arm points out her place in the moon's age. The wheel Y has the months and

ecliptic B, in signs and degrees, called her gee- days of the year all round its limb ; and in the

centric place. The moon's orbit is represented bar A A is fixed the index /, which points out the

by the flat rim A'; the two joints of which, and days of the months answering to the days of the

upon which it turns, denoting her nodes. This moon's age, shewn by the index F, in the circle

orbit is made to incline to any desired angle, of 29►► equal parts at the other end of the bar.

The earth of this instrument is usually made of On the axis of the wheel is put the piece D, below

a three inch or 1J globe, papered, &c. for the the cock C, in which this axis turns round; and

purpose ; and by means of the terminating wire in D are put the pencils e and m, directly under

that goes over it, points out the changes of the the earth C and moon M ; so that m is carried

seasons, and the different lengths of days and round e as M is round E.

nights more conspicuously. This machine is also 774. Lay the machine on an even floor, pres-

made to represent the Ptolemaic system, or such sing gently on the wheel Y, to cause its spiked

feet (of which two appear at P, the third beinˆ supposed to be hid from the sight by the wheel) to enter a little into the floor to secure the wheel from turning. Then lay a paper about four feet long under the pencils e and m, cross-ways to the

as is vulgarly received ; which places the earth in the centre, and the planets and sun revolving about it. This very excellent instrument may justly be considered as the best devised piece of apparatus that has ever been contrived for the purpose.

772. The true causes of the solar and lunar bar; which done, move the bar slowly round eclipses are here very clearly seen ; for by placing the axis g

of the wheel Y ; and as the earth E the lamp, fig. 5, plate XI., upon the centre, in- goes round the sun S, the mood M will go round stead of the brass ball denoting the sun, and tur- the earth with a duly proportioned velocity; and ning the winch until the moon comes into a the friction wheel W, running on the floor, will right line between the centres of the lamp (or keep the bar from bearing too heavily on the sun) and the earth, the shadow of the moon pencils e and m, which will delineate the paths ###will fall upon the earth On the other side, the of the earth and moon. As the index I points moon passes (in the aforesaid case) through the out the days of the months, the index F shows shadow of the earth, and is by that means the. moon's age on these days, in the circle of eclipsed. And the orbit A, fig. 1, is so movable 29ˆ equal parts. And, as this last index points on the two joints called nodes, that any person to the different days in its circle, the like nu- may easily represent the due position of the meral figures may be set to those parts of the nodes and intermediate spaces of the moon's curves of the earth's and moon's paths, where orbit ; and thence show when there will, or will the pencils e and m are at those times re- not be, an eclipse of either luminary, and spectively, to shew the places of the earth and what the quantity of each will be. While the moon. If the pencil e be pushed a very little moon is continuing to move round the earth, the off, as if from the pencil m, to about ˆj part of lamp on the centre will so illuminate her, that their distance, and the pencil m pushed as much all her phases, as new, dichotomised, gibbous, towards e to bring them to the same distances full, waning, &c. will be seen just as they ap- again, though not to the same points of space ; pear in the heavens. All the same phases of the then m goes round e, e will go as it were round earth, as they appear at the moon, will also be the centre of gravity between the earth e and exhibited. The satellites of Jupiter and Saturn moon m ; but this motion will not sensibly are movable only by the hand ; yet all their alter the figure of the earth's path or that of the phenomena may be easily represented, excepting moon's.

the true relative motions and distances. 775. If a pin, as p, be put through the pencil

773. The Trajectorium Lunare, fig. 8, plate m, with its head towards that of the pin g, in the XIII, is intended, by delineating the paths of pencil e, its head- will always keep thereto as m, the earth and moon, to show what sort of curves goes round e, or as the same side of the moon is they make in the ethereal regions. S is the sun, still obverted to the earth. But the pinp, which and E the earth, whose centres are ninety-five may be considered as an equatorial diameter of inches distant from each other ; every inch an- the moon, will turn quite round the point m, swering to 1,000,000 of miles. M is the moon, making all possible angles with the line of its wnose centre is ffo parts of an inch from the progress, or line of the moon's path. This is

am ocular proof of the moon's turning round her

axis.

SECT. II. OF THE PRINCIPAL INSTRUMENTS

USED FOR MAKING ASTRONOMICAL OBSER- VATIONS.

776. In practical astronomy it is necessary to have a place conveniently situated, and suitably furnished with proper astronomical instruments. It should have an uninterrupted view from the zenith down to, or even below, the horizon, at least towards its cardinal points. For this pur- pose that part of the roof in particular which lies in the direction of the meridian, should have moveable covers, which may easily be moved and put on again ; by which means an instrument may be directed to any point of the heavens be- tween the horizon and zenith, either northward or southward. This place, called an observatory, should contain some, if not all, of the following instruments :

777. 1. A pendulum clock for showing equal time. This should show time in hours, minutes, and seconds; and with which the observer, by hearing the beats of the pendulum, may count them by his ear, while his eye is employed on the motion of the celestial object he is observing. Just before the object arrives at the position described, the observer should look on the clock and mark the time, suppose it Cli. 15min. 25sec. ; then saying. 25, 26, 27, 28, Sec. responsive to the beat of the pendulum, till lie sees through the in- strument the object arrived at the position expec- ted ; which suppose to happen when he says 38, he then writes down

778. 2. An achromatic refracting telescope, or a reflecting one, of two feet at least in length, for observing particular phenomena. See the de- scription under OPTICS.

77l>. 3. A micrometer, for measuring small angular distances. See MICROMETER

7□□u. Astronomical quadrants, both mural and portable, lor observing meridian and other alti- tudes of the Itudit-s.

781. 4. The mural quadrant, so called from munis a wall: it is in the form of a quarter of a circle, contained under two radii alright angles to one another, and an arch equal to one fourth part of the circumference of the

circle. This is the most useful and valuable of all the astrono- nomical instruments ; and, as it is sometimes lixed to the side of a stone or brick wall, and the plane of it erected exactly in the plane of the meridian, it receives the name of mural quadrant. Tycho Brahe was the first person who applied tins arch to a wall ; and Hamsteed the first in Kngland who, with indefatigable pains, fixed one up in the royal observatory at Greenwich.

782. Mural quadrants have usually been made from five to eight feet radius. Iig. 1, plate XIII. represents the instrument fixed to the wall. The frame is formed of flat bars, and strengthened by edge liars, fixed underneath per- pendicular to them. The radii 11. B, A A, being divided each into f mr equal paits, serve to find the points I) and !□□□'., by which the quadrant is freely suspended on its iron supports, that are fastened

in the wall. One of the supports, E, is repre- sented separately in e on one side of the quadrant. It is moveable by means of a long slender rod E E or e /', which goes into a hollow screw in order to restore the instrument to its situation when it is discovered to be a little deranged. This may be known by the very fine perpendicular thread II A, which ought always to coincide with the same point A of the limb, and carefully examined to be so by a small magnifying telescope at every observation.

783. In order to prevent the unsteadiness of so great a machine, there should be placed behind the limb four copper ears with double cocks, I, K, If K. There are others along the radii II A and H B ; each of these cocks contains two screws, into which is fastened the ears that are fixed behind the quadrant. Over the wall or stone which supports the instrument, and at the same height as the, centre, is placed horizontally the axis P O, which is perpendicular to the plane of the instrument, and which would pass through the centre if it was continued. This axis turns on two pivots P. On this axis is fixed at right angles another branch, O N, loaded at its extre- mity with a weight, N, capable of equipoising with its weight that of the telescope L M ; whilst the axis, by its extremity nearest the quadrant, carries the wooden frame P R M, which is fasten- ed to the telescope in M. The counterpoise takes off from the observer the weight of the telescope when he raises it, and hinders him from either forcing or straining the instniment. The lower extremity, V, of the telescope, is furnished with two small wheels, which take the limb of the quadrant on its two sides. The telescope hardly bears any more upon the limb than the small friction of these two wheels ; which renders its motion so extremely ea?y and pleasant, that by giving it with the hand only a small motion, the telescope will run of itself over a great part of the limb, balanced by the counterpoise N.

784. When the telescope is to be stopped at n certain position, the copper hand T is to be made use of, which embraces the limb and springs at the bottom. It is fixed by a setting screw, which fastens it to the limb. Then, in turning the re- gulating screw, the telescope will be advanced; which is continued until the star, or other object whose altitude is observing, be on the horizontal fine thread in the telescope. Then on the plate X, supporting the telescope, and carrying a ver- nier or nonius, will be seen the number of degrees and minutes, and even quarter of minutes, that the angular height of the object observed is equal to. The remainder is easily estimated within two or three seconds nearly.

785. There are several methods of subdividing the divisions of a mural quadrant, which are usually from five or ten minutes each ; but that which is most commonly adopted is by the ver- nier or nonius, the invention of Peter Vernier, a Frenchman. This vernier consists of a piece of copper or brass, C D A B, fig. 6, which is a small portion ofX, fig. 1, represented separately. The length, C D, is divided into twenty equal parts, and placed contiguously on a portion of the division of the limb of the quadrant.

containing twenty-one divisions, and thereby di- viding their length into twenty equal parts. Thus the first division of the vernier piece marked 15, beginning at the point D, is a little backward, or to the left of the first division of the limb, equal to 15".

786. The second division of the vernier, is to the left of the second division of the limb double of the first difference, or 30″ ; and so on to the twentieth, and last division on the left of the ver- nier piece ; where the twenty differences being accumulated, each of the twentieth part of the di- vision of the limb, this last division will be found to agree exactly with the twenty-first division of the limb of the quadrant. The index must be pushed the twentieth part of a division, or 15″ to the right ; to make the second division on the ver- nier coincide with one of the divisions of the limb, in like manner in moving two 20ths, or 30", we must look at the second division of the index, and there will be a coincidence with a division of the limb. Thus the beginning, D, of the vernier, which is always the line of reckoning, has advan- ced two divisions, or 30″ to the right, when the

second division, marked 30 on the vernier, is seen to correspond exactly with one of the lines of the quadrant.

787. The plate of copper which carries the telescope, is placed on the side of the quadrant, and carries two verniers. The outer line CD di- vides five minutes into twenty parts, or 15″ each. The interior line A B answers to the parts of ano- ther division, not having 90□□, but 96 parts of the quadrant. It is usually adopted by English astro-r nomers, on account of the facility of its subdivi- sions. Each of the 96 portions of the quad- rant is equivalent to 56′ 15″ of the usual divisions. It is divided on the limb into sixteen parts, and the arch of the vernier A B contains twenty-five of these divisions ; and being divided itself into twenty-four, immediately give parts, the value of each of which is 8″ 47□□”.

788. 6. The portable astronomical quadrant is generally made from twelve to twenty-three inches. Fig. 2, plate XIII. represents one of brass, and strongly framed together by crossed perpendicular bars. The arch A C, and tele- scope E F, are divided and constructed in a simi- lar manner to the mural quadrant, but generally without the division of ninety-six parts. The counterpoise to the telescope T is represented at P, and also another counterpoise to the quadrant itself at P. The quadrant is fixed to a long axis, which goes into the pillar K R. Upon this axis is fixed an index, which points to, and subdi- vides by a vernier, the divisions of the azimuth circle, K. This azimuth circle is extremely use- ful for taking the azimuth of a celestial body, at the time its altitude is observed. The upper end of the axis is firmly connected with the ad- justing frame G H ; and the pillar is supported on the crossed feet at the bottom of the pillar K R, with the adjusting screws abed.

789. When the instrument is erected for ob- servation, it is necessary that two adjustments be very accurately made ; one, that the place or sur- face of the instrument be truly perpendicular to the horizon ; the other, that the line supposed to be drawn from the centre to the first line of the

limb, be truly on a level or parallel with the ho- rizon. The first of these particulars is done by means of the thread and plummet p ; the thread of which is usually of very fine silver wire, and is placed opposite to a mark made upon the end of the limb of the instrument. The four screws at the foot abed, are to be turned until a perfect coincidence is observed of the thread upon the mark, which is accurately observed by means of a small telescope T, that fits to the limb. The other adjustment is effected by means of the spirit-level L, which applies on the frame G H, and the small screws turned as before until the bubble of air in the level settles in the mid- dle of the tube. The dotted tube E B is a kind of prover to the instrument; for, observing at what mark the centre of it appears against, or, by putting up a

mark against it, it will at any time discover if the instrument has been displaced. The screw S, at the index, is the regu- lating or adjusting screw, to move the telescope and index, during the observation, with the ut- most nicety.

SECT. VII. ❖❖❖ THE MURAL CIRCLE.

790. Valuable as have been the services which the astronomical quadrant has rendered to astro- nomical science, its use, in modern times, has been altogether superseded by the muial circle, of which we shall row give the description and use: ❖❖❖

791. The circle, with its attached telescope, is made to revolve by means of a horizontal axis, which works in collars fixed in the stone wall. The plane of the circle, see plate X. fig. 3, is pa- rallel to the wall, but the graduations are made on the outer rim of the instrument, which rim is perpendicular to the wall.

792. These graduations are viewed and read off by six microscopes fixed to the wall, one of which microscopes is represented at A, and the places of the five others (precisely similar to the former) are marked by the letters B, C, D, E, F. The microscopes are distant from each other sixty degrees, or so placed as nearly as can be by the instrument maker.

793. The rim is divided into equal parts of five minutes each, and the readings oft' to a less number of minutes, and to single seconds, are effected by the micrometer microscopes, A, B, 8cc. the construction of which is as follows : The microscope A, or micrometer microscope A, is directed, as it is shown in the figure, to the rim on which the graduations are made. Con- sider the object to the microscope to be one graduation of the instrument, or the space oc- cupied by five minutes. The image of this space will be formed in the conjugate focus of the object glass, and will be seen distinctly through the eye-glass of the microscope, when the above-mentioned image is in its focus. In this latter focus (the focus of the eye-glass) are placed a thin indented slip of metal, and a wire capable of being moved in a parallel direction from one mark of division to another by means of a screw. The resolutions of the screw, and parts of its revolution, are noted by means of a- screw-head and graduated plate. Now, it is desirable, for the more convenient noting of the

results of observations, that by the five revolu- tions of the screw, the wire should be translated through the space occupied by five minutes ; in which

case one revolution would answer to one minute, and one-sixtieth to a second. The mode of effecting this may be thus explained : ◆◆◆

794. Suppose the object-glass of the micros- cope being at a certain distance from the gra- duated rim, and there being distinct vision, that the moveable wire appears to be translated through the five minutes by five revolutions and a half of the screw. In such case the image of the five minutes is too small. It will be increased by moving the object-glass towards the graduated rim ; the eye-glass, with its wire, &c. being ad- justed, by a separate movement, to distinct vi- sion. A second trial must now be made, to as- certain whether five revolutions of the screw are equal or not to the translation of the wire over the image of five minutes of the divided limb. If there is not an equality, the adjustments must be repeated till there be an exact correspondence, as considerable trouble is thereby saved in re- ducing the graduations of the screw-head to minutes and seconds. If the microscope of the micrometer were allowed to remain in its first state, then, since 5-5 revolutions = 5', one re- volution would equal 50.454″ &c.

*795. But, whatever be the value of a revolu- tion, the uses of the moveable wire and indented slip of brass are the same. A star is observed on the centre of the cross-wire of the telescope ; and on looking through the microscope, the in- dex, or slip of brass, occupies, probably, a place between two graduations. The wire moved from the index, either to the graduation above or be- low it, measures the distance of the index from that graduation by the revolutions of the screw- head. For convenience, each tooth of the in- dented brass answers to one minute, so that if the \virc is moved from the index post, two teeth, and the index of the screw- head points to 37, then *J' 37″ are to he added to, or subtracted from, the decrees and minutes which are read off by the '◆◆◆ye without the aid of the micrometer. In every observation all the six microscopes are used, to diminish the errors of division, and the effects of partial expansion.*

796. In reading off at the several microscopes, %vr need only to attend to the seconds. For, uppose a star to be in the pole, and the teles cope directed to it the whole circle must be in rued round in the direction from 13 towards C, I), \c. ; and the end of the telescope, instead of liciti'4 directed, as in the figure, to a point in the south, between B and (.', \vill be directed to a point between I) and A. If (the telescope being directed to the pole) the reading off at the mi- crometer A were 0◆◆ 0′ 0", the index error would be 0 If the other microscopes, F, K, B, Sec. were placed exactly at equal distances, the read- ing oil' at them would he GO0, 120◆◆, 180◆◆, 240◆◆, litio0. This, however, is notlikelyto take place, the index error of each will probably be of some magnitude. The reading oil' at A, for instance, instead of being 0◆◆ 0′ 0". may be -f 3", + 10",) 7″ ; and in the same way the reading off at the other microscopes, from their not being

placed at equal distances, or from inequality of

graduation, partial expansion, or from all these causes conjoined, may be 60□□ □□. 4″ 60□□ □□ 6”, 120□□ + 9”, 120□□+ l”,&c.

799. Suppose that, independently of the de- grees and minutes, the seconds at the six mi- croscopes were + 5”, + 7”, + 4″ 4 12″ 4- 8”, f 9″ ; then these are the several index errors ; and if the polar distance of an observed star were read off only at one microscope, the in- dex error belonging to that microscope must be applied to the polar distance so read off. Thus, if only the microscope B were used, whose in- dex error is + 12”, and the north polar distance of /3 Ursa Minores, were read off, 195□□ 4′ 46”, then deducting 180□□ for the position of the mi- croscope, and 12″ for the index error, we should have the north polar distance of the star □□□ 50□□

4′ 34”.

800. If all the six microscopes are used, the mean index error, or one-sixth of the several index errors, is applied to the result of the several readings.

801. The same illustration would serve if we suppose the telescope directed to a star whose polar distance is previously known. If, for ex- ample, we knew that the north polar distance of Polaris was 1□□ 41′ 41‘3″ ; then if the micrometer A, marked 1□□ 41′ 48-5”, we should know that its index error was 7′2″; and the equation to be ap- plied to its observed north polar distance at that microscope □□□ 7‘2. In like manner we should know from the same star the index errors of the other microscopes, and thence the mean index error.

802. That the results from this instrument do not depend on the accurate positions of the mi- croscopes, may be easily shown. Suppose the telescope directed to the pole, and that the se- conds indicated by the micrometer A be 7”, let B indicate b + 23”; C, c f 4; D, d + 5; E, e + 9, and F,/ +15; b, c, d, &c. denoting the degrees and minutes. Let X be the north polar distance of any star (Capella, for example, X being □□□ 44□□ 12′ 16”), and let the number of seconds in X be 16; so that, y being the /de- grees and minutes x □□□y f 16”; then the in- strument being directed to Capella (and con- sequently turned through an angle X), arid the errors of division, expansion, and uncertainties in reading off not being considered, the seconds at which it will stand will be 23 , B, 39 ; C, 20 ; D, 21 ; E, 25, and F, 31 ; one-sixth of the sum of which is 26-5”, whence the north polar dis- tance of Capella by the instrument, is Y + 26‘5″ □□□ 44□□ 12′ 26- 5″ ; and consequently the mean index error y f 26-5″ □□□ x □□□ y f 26‘5″ □□□ y J

16”= 10-5.

803. The index error may be found in the same way by any other star, since x may be any angle ; and if the catalogues were exact, and the instrument perfect, the same index error would result from all stars. If, for instance, the seconds in x, instead of 16″ were 36”, we should still have the same index error 10-5”. But in practice, the index error will be found different with different stars, both on account of the imperfection of the catalogues, the inaccuracy of graduation, and other defects in the instrument. The index error, therefore, is found from observations on a

great number of stars, and the mean of the whole of the errors so found, is considered as the ge- neral mean index error.

804. For the purpose of lessening the errors of division, the telescope can be shifted to dif- ferent parts of the circle, so that instead of the microscope A, nearly coinciding with O, when the telescope is pointed to the pole, it may point nearly to 10►►, 20►►, 30►►, or any other degree of the circle. In this case the index error in se- conds, found as above, added to the degrees and minutes read off by the eye, is the index error of the microscope.

805. The mural circle, like the transit instru- ment, requires three adjustments, 1 . Its axis must be made horizontal. 2. Its line of collimation must be made perpendicular to the horizontal axis. 3. The line of collimation must be made to move in the plane of the meridian.

806. The method of making the first adjust- ment is the same as that for making the like ad- justment in the transit instrument ; and as the two instruments are commonly used in conjunc- tion, we may use the transit instrument for bringing the plane of the circle and its telescope into the plane of the meridian. When a star is on the meridional wire of the transit instru- ment, move the mural circle, so that the star may be also on its middle wire. Observe, by the transit instrument, when a star in or near the zenith crosses the meridian, and if it is also at the same time on the middle vertical wire of the telescope of the mural circle, its line of collima- tion is rightly adjusted. If a difference exists, adj ust till an exact agreement takes place.

807. The great difficulties attending the veri- fication of the line of collimation in the mural circle, will always prevent its becoming a good transit instrument; though, in this respect, it acts better than the telescope

of the mural quad- rant, which slides along the limb of the quad- rant, whose plane cannot be made wholly on the plane of the meridian.

808. The mural circle is evidently sufficient to determine to the extent of 180□□, the differ- ences of the declinations of stars south and north of the zenith of the observer. There must be two quadrants to effect the same object; and besides this advantage (that of a single instrument), the circle is better balanced, and its six microscopes, which are firmly fixed in a stone wall, together with the power of changing the position of the telescope, must, when we take the mean results of a great number of observations, in a great measure do awaythe errors of division or partial expansion.

809. The direct and special office of the mural circle is to determine the meridional angular dis- tances of stars. But we may extend the prin- ciple of its uses, and view the image of the pole star, by reflection, from a basin of quicksilver, and we thence obtain the angular distance be- tween the star and its image, which is twice the elevation of the star above the horizon. Hence its zenith distance becomes known, and the ze- nith distances of other stars are consequently readily given by the instrument. The circle in this application combines in itself the properties of the mural quadrant and '□□nifu sector. It was

first applied by the present astronomer royal, and it is one of the many improvements on practical astronomy for which the world is indebted t"> that eminent, active, and unassuming astrono- mer.

810. The preceding is a concise description of the circle which Troughton fixed at the Royal Observatory. Some trifling differences between the results given by it and other instruments, lately induced government to have another made by Jones, which is now fixed to the west wall, five feet from the other circle. The agreement between them is almost perfect.

811. Dr. Brinkley of Dublin has a circle, and a very admirable one, which moves round a pil- lar, or azimuth; and consequently, in two days it determines double the zenith distance of any celestial object. He employs only three microscopes in reading off; but the principle of reading is the same as that which we have above described ; and a person who attentively con- siders what we have said on the subject of the Greenwich circle, will have no difficulty in com- prehending the method of using the Dublin one.

812. 8. The Astronomical or Equatorial Sector, is an instrument for finding the differ- ence, in right ascension and declination, between two objects ; the distance of which is too great to be observed by the micrometer, and

was in- vented by Graham. Let A B, plate XIII. fig. 4, represent an arch of a circle containing ten or twelve degrees well divided, having a strong plate C D for its radius, fixed to the middle of the arch at D : let this radius be applied to the side of an axis H F I, and be movable about a joint fixed to it at F, so that the plane of the sector may be always parallel to the axis H I ; which being parallel to the axis of the earth, the plane of the sector will always be parallel to the plane of some hour circle. Let a telescope C E be movable about the centre C, of the arch AB, from one end of it to the other, by turning a screw at G ; and let the line of sight be parallel to the plane of the sector. Now, by turning tLe whole instrument about the axis H I, till the plane of it be successively directed, first to one of the stars and then to another, it is easy to move the sector about the joint F, into such a position, that the arch A B, when fixed, shall take in both the stars in their passage, by the plane of it, provided the difference of their de- clinations does not exceed the arch A B. Then, having fixed the plane of the sector a little to the westward of both the stars, move the tele- scope C E by the screw G ; and observe by a clock the time of each transit over the cross hairs, and also the degree and minutes u?on the arch A B, cut by the index at each transit; then in the difference of the arches, the difference oe the declinations, and by the difference of t> times, we have the difference of the right asceu sions of the stars.

813. The dimensions of this instrument are these : The length of the telescope, or the radius of the sector, is 2►► feet ; the breadth of the radius, near the end C, is 1►► inch; and at the end D, two inches. The breadth of the limb, A B, is 1►► inch ; and its length six inches, con- taining ten deeree. divided into quarters, aud*

numbered from either end to the other. The telescope carries a nonius or subdividing plate, whose length, being equal to sixteen quarters of a degree, is divided into fifteen equal parts ; which, in effect, divides the limb into minutes, and by estimation, into smaller parts. The length of the square axis, H I F, is eighteen inches, and of the part II I twelve inches ; and its thickness is about a quarter of an inch : the diameters of the circles are each five inches : the thickness of the plates, and the other mea- sures, may be taken at the direction of a work- man.

814. This instrument may be rectified, for making observations, in this manner : By placing the intersection of the cross hairs at the same distance from the plane of the sector, as the centre of the object-glass, the plane described by the line of sight, during the circular motion of the telescope

upon the limb, will be suffici- ently true, or free from conical curvity ; which may be examined, by suspending a long plumb- line at a convenient distance from the instru- ment ; and, by fixing the plane of the sector in a vertical position, and then by observing, while the telescope is moved by the screw along the limb, whether the cross hairs appear to move along the plumb-line.

815. The axis, hfo, fig. 5, may be elevated, nearly parallel to the axis of the earth, by means of a small common quadrant; and its error may be corrected, by making the line of sight follow the circular motion of any of the circumpolar stars, while the whole instrument is moved about its axis, hfo, the telescope being fixed to the limb ; for this purpose, let the telescope k I be directed to the star a, when it passes over the highest point of its diurnal circle, and let the division cut by the nonius be then noted: then, after twelve hours, when the star comes to the lowest point of its circle, having turned the in- strument half round its axis, to bring the tele- scope into the position, in n; if the cross hairs cover the same star supposed at b, the elevation of the axis, hfo, is exactly right; but, if it be necessary to move the telescope into the position u v, in order to point to the star at c, the arch m ––/, which measures the angle in fit or b f c, will bu known ; and then the axis hfo must be depressed half the quantity of this given angle, if the star passed below 6, or must be raised so much higher, if above it ; and then the trial must be repeated, till the true elevation of the axis be obtained. By making the like observations upon the same star on each side the pole, in the six o'clock hour circle, the error of the axis, toward the east or west, may also be found and corrected, till the cross hairs follow the star quite round the pole : for. supposing a o p b c to be an arch of the meridian (or in the secondary practice of the six o'clock hour circle), make the angle afp eqtial to half an angle a f c, and the line fp will point to the pole ; and the anˆle o f p, which is the error of the axis, will be equal to half the angle bj c, or mfit, found by the observation; because the difference of the two angles a f b, af r, is double the difference of their halves afo and aj p. Unless the star be near the pole, allowance must be made for redactions.

816. 9. The transit instrument is used for observing objects as they pass over the meridian, and consists of a telescope fixed at right angles to an horizontal axis, so supported that what is called the line of collimation, or line of sight of the telescope, may move in the plane of the meridian.

817. Let AD, plate X. fig. 1, represent a telescope fixed, as it is represented in the figure, to an horizontal axis formed of two cones. The two small ends of these cones are ground into two perfectly equal cylinders ; which cylindrical ends are called pivots. These pivots rest on two angular bearings, in form like the upper part of a Y, and denominated Y's. The Y's

are placed in two dove-tailed brass grooves, fastened in two stone pillars, E and W, so erected as to be per- fectly steady. One of the grooves is horizontal, the other vertical ; so that, by means of screws, one end of the axis may be pushed a little for- wards or backwards, and the other end may be either slightly depressed or elevated, Which two small movements are necessary, as it will be soon explained, for two adjustments of the telescope.

818. Let E be called the eastern pillai, W the western. On the eastern end of the axis is fixed (so that it revolves with the axis) an index n, the upper part of which, when the telescope revolves, nearly slides along the graduated face of a circle ; attached, as it is shown in the figure, to the eastern pillar. The use of this part of the apparatus is to adjust the telescope to the zenith, or polar distance (for the one is as easily done as the other) of a star, the transit of which is to be observed. Thus, suppose the index of n to be at o (in the upper part of the circle) when the telescope is horizontal ; then, by ele- vating the telescope, the index of n is moved downwards. Suppose the position to be that represented in the figure, then the number of degrees between o, and what the index of n marks, is the altitude of the telescope ; or we may so graduate the circle, that the index shall mark the telescope's zenith distance ; or, if we make the o, the beginning of the graduation, to belong to that position of the telescope in which it is directed to the pole, the number of degrees, &c. between o and any other position of the index, will mark either the telescope's polar distance, or if we please, may be made to mark the telescope's declination ; the telescope in all these cases being supposed to move in the plane of the meridian.

819. There are several other parts and con- trivances belonging to the instrument not shown in the figure ; for instance, one of the cones is hollowed ; and, opposite the orifice, there is placed in the pillar a lamp, which, throwing its light on a plane speculum, placed in the axis of the telescope, and inclined at an angle of 45□□, illuminates the cross wires. It is usual, also, in large transits, to have counterpoises, by which the pressure of the pivots of the axis on the Y's is relieved. We will now explain the three principal adjustments of the transit.

820. 1. To make the axis on which the tele- scope moves, horizontal.

821. 2. To make the line of collimation move in a great vertical circle ; or, which is the same

thing, to make it perpendicular to the horizontal axis.

822. 3. To make it move in that vertical circle which is the meridian.

823. The first adjustment is effected by means of a level; the figure A is intended to represent the level L, as hanging by means of its upright arms (bent, however, in their upper extremities) on the two pivots of the axis. The principle, however, and mode of rendering any axis hori- zontal, by means of a level, may be best explained by the subjoined figure.

824. In plate X, fig. 2, the spirit-level (includ- ing in that term the brass tube that partly enve- lopes it, the horizontal bar to which it is affixed, and the two vertical arms by which it is hung on any cylinder or rod) as represented as hanging on a straight cylinder a b, the end towards a lying on a crotchet, which is capable of being raised or lowered by a screw B. The end A of the tube A D, which contains the level, is also capable of being lowered or raised by means of a screw at A, as is shown in the figure.

825. If ab were horizontal, and the tube of the spirit-level were parallel to a b, then the bubble would occupy the middle, or the two extremities of the bubble would be equidistant from the cen- tre, and would be, for instance, at/' and c. The same thing would happen if the level were re- versed, that is, if it were taken off the rod, turned round, and again hung on ; so that d in the second position, should occupy the place that A did in the first, or should be to the right hand. But if a b, should not be horizontal, the above circum- stances cannot take place. Suppose the end a to be lower than the end b, then if the level should not be parallel to a b, the bubble" might still stand in the middle, by the end at A being, by a certain quantity, higher than the end at B. But on reversing the level the bubble cannot occupy its middle ; since then, the lower part of the rod a 6, and the lower part of the level, would both be situated at the right hand. The bubble, however, may not stand in the middle from two causes, the want of horizontality in a b, and the want of parallelism to it in the tube contained between AD.

826. If the level were parallel to a b, and the extremity of the bubble, instead of being at e, should be at h, on reversing the level, the other extremity of the bubble (which, by the reversion, would be towards o) would be at h; fk being equal to e h. But suppose this is found not to be the case, and that the extremity of the bubble, on reversing the level, is at n, then the circum- stance of the bubble not standing at the two points e zndf, cannot arise solely from the end a being higher than b; but the level cannot be par- allel to a b ; and in the case we have put, the end at A must be lower than the end at D, when the level then is in the second or the reversed posi- tion ; so elevate the end at A, by means of the screw A, that the extremity of the bubble shall descend from n, and occupy a place

intermediate to n and k, and then the level is made parallel to a b: this is the first adjustment. Next, by means of the screw B, so depress the end, a that the extremities of the bubble shall be (as they oyghuo be, e f being the length of the bubble) at

e and f; then is a b adjusted or made horizon- tal; this second adjustment completes the ope- ration.

827. In the preceding reasonings, a b has been considered (the whole of it) as cylindrical. But this is not necessary : it is sufficient if its extre- mities at a and b (the pivots), on which the level is hung, be equal cylinders, the axis of which lie in the same straight line. The intermediate parts of the axis of the transit between the pivots, may be of any form : they may be formed, as they generally are, of two cones. The preceding process then will render the axis of the transit horizontal ; the level, whether in its primary or in its reversed position, being supposed to be hung on the equally cylindrical pivots.

828. The axis being now horizontal, the next operation is to make the line of collimation de- scribe a great vertical circle, or, which is now the same thing, to make the line of collimation perpendicular to the axis of the transit. The telescope A D is furnished, like the telescope of the quadrant, with a system of cross-wires placed in the principal focus of the object-glass. Sup- pose the wires so placed, that the line of colli- mation is perpendicular to the axis of the tran- sit. If then a small and well-defined object be bisected by the centre of the cross-wires, it will still be bisected when the transit is lifted off its angular bearings, reversed and directed to the object ; that is, if the end of the axis carrying the index n, which is placed on the eastern Y, should be placed on the western. Let now the wires be deranged, so that their intersection is moved, not, as in the former case, in the plane of the meridian, but in a direction perpendicular to that plane, and suppose it moved a little to- wards the east. In this case, the object before bisected is no longer so, but will be seen in the field of view a little to the west of the present centre of the cross-wires. Reverse the telescope, then the centre will be towards the west, and .the original object will be seen a little to the east of the centre : as much towards the east as it was before towards the west. If, therefore, there should be two objects or marks (on the horizon, for instance,) bisected by the centre of the wires in the two positions of the transit, the correction or adjustment of the line of collimation would consist in moving the centre of the cross-wires half-way towards that object which is not on the centre.

829. But the moving the centre of the cross- wires half-way towards an object, is a matter of guess, and not of certainty. In order to ascer- tain whether, in moving the centre, we have ad- justed it rightly, we may avail

*ourselves of that angular bearing, or Y, which, by means of an horizontal groove and screw, we can move, toge- ther with the pivot of the axis, in azimuth. So move these then, that the object to which we have already made the centre to approach half- way, may be exactly bisected by that centre. Reverse the transit, and the object and centre are either coincident, or very nearly so. If the latter be the case, again by their proper motion, move the centre of the wires half-way towards the object, and move it the o*her halt-way by the screw that acts on the axis. Reverse eiie .nstru*

nicnt, and again, if it be necessary, repeat the above operations.

830. By these means, after a few trials, we are sure of making the line of collimation, or axis of vision, perpendicular to the axis of the transit ; and when that is effected, the cross-wires are no longer to be meddled with, although we must continue to use the above horizontal movement of the axis, for the purpose of placing the line of collimation in the plane of the meridian. That line now moves in a vertical circle, and produced passes through the zenith : it is farther necessary to make it pass through the pole.

831. The transit instrument is supported be- tween two fixed pillars. It must be supposed to be nearly in the meridian, and to need only some slight adjustments to place it there exactly. It would be easy to effect this, were the pole-star exactly in the pole ; for, then, it would be only requisite to bisect that star by the middle vertical cross-wire. But the pole-star being, in fact, a circumpolar one, we must compute, by means of existing tables and observations, the time of its transit; and, at that computed time, bisect the star by the middle vertical wire. By these me- thods we may place the transit very nearly in the plane of the meridian.

832. We will now show how to place it there more exactly by means either of the polar, or of any other circumpolar star.

833. The axis being horizontal, the optical axis perpendicular to it passes through the ze- nith : let Z i' II m fig. 1, plate VI., be the true meridian, and Zsrn the vertical circle described by the optical axis or line of collimation ; then Hwz, which is the measure of the angle at Z, is the deviation of the transit from the meridian.

Let s s' s" a represent the circle described by a circumpolar star, which is seen through the transit telescope at a, its inferior passage, and at s, its

superior. Now, when the transit is not in the meridian, the time from a to s cannot equal the tune from s through s' und s" to a : for, P being the pole, the former time is proportional to the angle a P s, or,

180►► _ l_ sP.s' ►►► /_ a Ps". the kilter to

180►► + /_ slV + {_ ff ps".

834. Hence, if the interval between the infe- rior and superior passage should be less than the interval between the superior and inferior, the plane in which the transit moves from the zenith to the north of the hori/on (P being the north pole) is to the eastward of the true meridian.

83.). But in order to estimate the quantity of deviation from the observed difference of inter- vals between the passages, we must compute the angles s P x' or x P Z, and a P II, ►►► now

sin. s P Z ~ sin. s Z P x

sin. IV

sin.

sin. (i P Z = sin. s Z P-f-

sin. Z a

sin. P►►r Let / x /, 1' (measured by II in) ~ Z,

the latitude of the place ('►►► 1.1 P) ►►► L. 'I lien since Z, or the deviation from the meri- dian is, by the conditions, very small, we have, ns.vrlv sin. Z ►►► Z

Z = Z P ►►► Ps = 90►► ►►► (L + ►►),*

Z ff = Z P + P s ►►► 90►► ►►► (L►►► TT), consequently, s P Z (which is, nearly, = its sine)

= Z. cos.^A ~►►► Z. (COS.LCOS.TT ►►► sin.L),

sin. TT

and ►►► PH = Z. COS- (L" ~ ff) – Z (cos. L.

sin. fl- ees. 7T + sin. L).

Hence, the time from a to s = 180►► ►►► 2 Z cos. L. cot. TT,

and from s to a = 180 -f 2 Z cos. L. cot. IT; let the former time = 12 h. A, the latter = 12 h. f A ; then, since 180 is the angular measure, or ex ponent of twelve hours of siderial time,

12 h. A = 12h. 2Z. cos. L. cot. TT, 12 h. (A = 12 h. + 2 Z. cos. L. cot. TT,

whence Z = =

2 cos. L. cot. TT.

A

or = sec. L tan. IT.

***

836. The plane in which the line of collima- tion moves is brought into the plane of the me- ridian by means of a screw; and supposing the adjustment nearly effected, it may be completed in the following manner: Let the time of the transit of an equatorial star be noted on a parti- cular day. Alter the inclination of the plane in which the line of collimation moves, by turning the screws once round, and observe the time of the star's next transit. If the difference between the siderial times of transit be s seconds, then, s seconds of time corresponding to one revolution of the screw, it is easy to find the number of re- volutions, or parts of a revolution, that will give the correction 2, in the above equation ; whence the adjustment may be made to any degree of accuracy.

837. Computing from the above formulae for Z, we shall find that, in the case of Polaris, a deviation of ten seconds in the position of the transit instrument will, in the latitude of London, produce a difference of about seven minutes in the times between the upper and lower transits of the star ; and in the case of Capella, a dif- ference of only about twenty-five seconds. Hence, caeteris paribus, the pole-star is better adapted than Capella, to adjust, by the preceding method, a transit telescope to the plane of the meridian. The slow motion of the pole-star, however, in some measure detracts from this superiority. In small instruments it is hid for some seconds be- hind the wire. Even in the splendid ten feet transit, at Greenwich, it may be considered as hid for about a second.

838. Still, however, on the whole, this star is the most convenient one that can be made use of. The following is the method of making this ad- justment by means of the transits of the pole-star and of a star which passes near the zenith of the place of observation. In our latitudes, for in- stance, if the transit deviate only slightly from the plane of the meridian,

Capella would pass the meridian very nearly at the time of its pass- ing the vertical wire of the telescope. Assume it to pass exactly, and note the difference between the time shown by the clock and the star's known right ascension. Observe the time when the

pole-star is on the meridian, (which will differ more from the star's right ascension than the transit of Capella did from its right ascension), and compute, from the difference between its true right ascension and the observed time of its transit, the deviation of the instrument, and adjust it accordingly.

839. This operation will give a near approxi- mation to the required position ; and by a repe- tition or two of the process, the adjustment may be effected with great precision.

840. The line of collimation being now sup- posed, by means of the previous adjustments, to describe a great circle passing through the ce- lestial pole and the zenith of the observer, the transit instrument is in a fit state to note the pas- sages of stars across the meridian. A star passes the meridian when it coincides with the centre a, fig. 3. plate IX., of the cross- wires ; but if d e were truly vertical, a star on any point of de would be on the meridian ; hence it is desirable to make de vertical, since we might then observe the star's transit on any part of that line. This may be easily done thus : Direct the transit tele- scope to some well-defined distant object, so that it is bisected by some point of d e ; move the te- lescope upwards and downwards on its hori- zontal axis, and observe whether the same ob- ject is bisected by every part of de, or whether it runs along de If it does, the wire is vertical, or the middle wire is a meridional wire ; if it does not, the wire must be adjusted till the object coincides with it in every part.

841. In large instruments these various ad- justments are made with considerable trouble and difficulty ; and in order to prevent a repeti- tion of these troublesome verifications, when the instrument is once adjusted to the plane of the meridian, two marks are set up, one to the north and the other to the south, and their places de- termined by means of the meridional wire. They are first placed by means of the instrument, ad- justed by the astronomical means above ex- plained, and they are subsequently used to bring the instrument into the meridian, should it be- come deranged.

842. Besides the meridional wire, it is usual to place on each side of it, and at equal dis- tances from it, parallel side wires, to check the middle wire

and to supply its place, if from clouds or other accidents, an observation on it should not be obtained. The old transit, at Greenwich, had four side wires, or, in all, five wires. The present one has seven ; though only five are in general used. In fig. 2, plate IX. five wires are represented, and numbered 1, 2,

3, 4, 5.

843. If the wires are equidistant, then the fifth part of the sum of the times at which a star is ob- served on the several wires, will be the time of its passing the meridian, and it ought, if the ob- servation is well made, to agree with the time of passing the middle wire.

844. But the fact is, we are not able to note absolutely the times at the several wires ; for probably no beat of the pendulum will happen exactly when the star is on the wire. The ob- server is obliged to estimate to the best of his judgment, the fraction of a second sum, the last

beat of the pendulum, when the star is on the wire. A tenth or two of a second may be put down too much at one wire, and too little at another ; but the errors will probably in a great degree com- pensate each other, and the result will certainly be entitled to more confidence than a single ob- servation at the middle wire.

845. It will soon be perceived by the observer, that stars near the equator, pass more speedily from wire to wire than stars near the pole. It ij easy to prove that the time of a star's describing small spaces perpendicular to the meridian varies as the secant of its declination. For (fig. 1, plate IX.) let P represent the pole P e, Pf, two quad- rants ; let s t represent the interval of the wires, which, by reason of its smallness is nearly coinci- dent with s r t. Take e q ˆ s t ; then by the re- volution of the earth or star apparently moves from s to t in the same time that another moves from e to/. But the time through s t (=. the time

ef

through ef) ††† time through e q X ††† ††† time

e q

e f . , . rad.

*through e q -\ —~ ††† time through e q ††† + ††† ††† †††

SGCt S ⬛⬛⬛

~ time through e q + ⬛⬛⬛ ⬛⬛⬛. ⬛⬛⬛ Hence, if the

time through e g, that is the time of an equatorial star crossing the interval e q, be given, the time of crossing an equal interval, s t, varies as the secant of the star's declination.

846. There is, however, no star exactly in the equator; but the equatorial time of a star's running from wire to wire, may be readily obtained from the time which a star of known declination is observed to take. Let t be the observed time, and d the declination, then t, sect, d ~ the equatorial time.

847. By the preceding methods, the upright wires of the telescope may be adjusted vertically, and the true intervals between the wires found in parts of siderial time. To know whether the wires, which ought to be at right angles to the former, are truly horizontal, direct the telescope towards a star near the equator, and if the star en- tering at fi, plate IX. fig. 2, in an inverting teles- cope, run along hf; then hf is horizontal.

848. This test of horizontally is strictly true only with respect to a star in the equator. If the star be out of the equator, it cannot be bisected during the whole of its passage from h to /; for the star then describes the arc of a small circle. In fig 1, plate IX. let s m t be an arc of a great circle ; then a star describing s m t would seem to an eye situated in a plane passing through s m t and s t, to describe s t; but s r t, part of a small circle parallel to ef, is the star's apparent path, which coinciding at its extremities with the chord s t would appear, in the astronomical telescope, to describe a curve below the cross horizontal wire, the apparent curvature of the path increas- ing with the declination. There are, however, many stars near enough the equator to make this adjustment, without reference to the appa- rent curvature of their paths in the transit instrument, as they will differ from straight lines by a quantity too small to be estimated.

849. We have hitherto spoken only of the transits of stars, which are but as points without disks. The sun and the moon, however, have

disks, but no marked points for their centres ; and the transit of a heavenly body means the transit of its centre. With respect to the sun, the time at which his first or preceding limb touches each wire is noted, and the timeatwhich. his following limb comes to the same wire is also noted, and the sum of the times of observation divided by the number of observations,

gives the time at which his centre is on the meridian.

850. It is seldom, however, that the transit of both limbs of the moon can be observed ; but the mean of the times at which her enlightened limb is in contact with the several vertical wires, is the time at which that limb is on the meridian ; and adding to this, or subtracting from it, the time that the moon takes to move over a space equal to her own semidiameter, according as the east or west, the following or preceding limb is observed, we obtain the time at which her centre is on the me- ridian.

We have judged it right to devote so much space to the description of the circle and tran- sit instruments, as in the present state of as-

tronomical science, they, with the astronomical clock, are the capital instruments of our obser- vatory.

851. 10. The Equatorial or Portable Observa tory ; an instrument designed to answer a num- ber of u%eful purposes in practical astronomy, independent of any particular observatory, may be made use of in any steady place, and per- forms most of the useful operations in the science. The principal parts of this instrument, plate XIII. fig. 3, are, 1. The azimuth or horizontal circle A, which represents the horizon of the place, and moves on a long axis B, called the vertical axis. 2. The equatorial or hour circle C, representing the equator, placed at right angles to the polar axis D, or the axis of the earth upon which it moves. 3. The semicircle of declination E, on which the telescope is placed, and moving on the axis of declination, or the axis of motion of the line of collimation.

852. These circles are measured and divided as in the following table :

Measures of the several circles, and divisions of

Radius.

Limb divided

Nonius of 30 given

Divided on limb into

Divided by Nonius into

them.

seconds.

parts of inc.

parts of inc.

Azimuth or horizontal i

5 1

15′

30″

45th

1350th

circle. 5

Equatorial or hour cir- cle.

5 1

CIS’

I 1 in time.

30′ 1

2 J*

45th

1350th

Vertical semicircle for”)

declination or lati- >

5 5

15′

*30**

42nd

1260th

tude. 3

853. 4. The telescope in this equatorial may be brought parallel to the polar axis, as in the figure, so as to point to the pole star in any part of its diurnal revolution : and thus it has been observed near noon, when the sun has shone very bright. 5. Theapparatusfor correcting the error in altitude occasioned by refraction, which is ap- plied to the eye-end of the telescope, and consists of a slide G, moving in a groove or dovetail, and carrying the several eye-tubes of the telescope, on which slide there is an index corresponding to five small divisions engraved on the dovetail; a very small circle, called the refraction circle, II, move- able by a finger screw at the extremity of the eye '???ml of the telescope ; which circle is divided into half minutes, one entire revolution of it being equal to 15′ IB", and by its motion raises the cen- tre of the cross hairs on a circle of altitude; and a quadrant, I, of 1% inch radius, with divisions on each side, one expressing the degree of alti- t ide of the object viewed, and the other express-

ˆ the minutes and seconds of error occasioned retraction corresponding to that degree of al-

ude. To this quadrant is joined a small round

***vl, K, which is adjusted partly by the pinion that turns the uhole of this apparatus, and partly by the index of the quadrant; for which purpose the refraction circle is set to the same minute, &c. which the index points to, on the limb of the quadrant; and if the minute, &c. given by the quadrant exceed the .')' IB", contained in one en- tire revolution of the refraction circle, this must be set to th** *excess nl uve one or more of its en-*

tire revolutions ; then the centre of the cross hairs will appear to be raised on a circle of altitude to the additional height which the error of refraction will occasion at that altitude.

854. To adjust this instrument make the line of collimation to describe a portion of an hour- circle in the heavens; in order to which, the azi- muth circle must be truly level, the line of colli- mation, or some corresponding line represented by the small brass rod, M, parallel to it, must be perpendicular to the axis of its own proper mo- tion ; and this last axis must be perpendicular to the polar axis; on the brass roo. M, there is oc- casionally placed a hanging level, N, the use of which will appear in the following adjustments.

855. The azimuth circle may be made level, by turning the instrument till one of the levels is parallel to an imaginary line joining two of the feet screws ; then adjust the level with these two feet screws; turn the circle half round, i. e. 180??; and, if the bubble be not then right, correct half the

error by the screw belonging to the level, and the other half error by the two feet screws; repeat this till the bubble comes right; then turn the circle 90°° from the two former positions, and set the bubble right, if it be wrong, by the foot screw at the end of the level; when this is done, adjust the other level by its own screw, and the azimuth circle wil" be truly level. The hanging level must then be fixed to the brass rod by two hooks of equal length, and made truly parallel to it: for this purpose make the polar axis perpendicular or nearly perpendicular to the ho-

rizon; then adjust the level by the pinion of the declination semicircle; reverse. the level and, if it be wrong, correct half the error by a small steel screw that lies under one end of the level, and the other half error by the pinion of the declina- tion semicircle; repeat this till the bubble be right in both positions.

856. To make the brass rod on which the level is suspended at right angles to the axis of motion of the telescope or line of collimation, make the polar axis horizontal, or nearly so : set the decli- nation semicircle at 0°°, turn the hour circle till the bubble comes right; then turn the declination circle to 90°° ; adjust the bubble by raising or de- pressing the polar axis ; first by hand till it be nearly right; afterwards tighten, with an ivory key, the socket which runs on an arch with the polar axis ; and then apply the same ivory key to the adjusting screw at the end of the said arch, till the bubble comes quite right; then turn the declination circle to the opposite 90°°; if the level be not then right, correct half the error, by the aforesaid adjusting screw at the end of the arch, and the other half error by the two screws which raise or depress the end of the brass rod. The polar axis remaining nearly horizontal as before, and the declination semicircle at 0°°, adjust the bubble by the hour circle -, then turn the declination semicircle to 90°°, and adjust the bubble by raising or depressing the polar axis ; then turn the hour circle twelve hours ; and if the bubble be wrong, correct half the error by the polar axis, and the other half error by the two pair of capstan screws at the feet of the two supporters on one side of the axis of motion of the telescope ; and thus this axis will be at right angles to the polar axis.

857. The next adjustment is to make the cen- tre of cross hairs remain on the same object, while the eye-tube is turned quite round by the pinion of the refraction apparatus. For this ad- justment, set the index on the slide to the first division on the dovetail; and set the division marked 18″ on the refraction circle to its index ; then look through the telescope, and with the

pinion turn the eye-tube quite round ; and if the centre of the hairs does not remain on the same spot during that revolution, it must be corrected by the four small screws, two and two at a time, which will be found upon unscrewing the nearest end of the eye-tube that contains the first eye- glass ; repeat this correction till the centre of the hairs remains on the spot looked at, during an entire revolution.

858. To make the line of collimation parallel to the brass rod on which the level hangs, set the polar axis horizontal, and the declination circle to 90►► ; adjust the level by the polar axis ; look through the telescope on some distant horizontal object, covered by the centre of the cross hairs; then invert the telescope, which is done by turn- ing the hour circle half round, and, if the centre of the cross hairs does not cover the same object as before, correct half the error by the uppermost and lowermost of the four small screws at the eye-end of the large tube of the telescope. This correction will give a second object, now covered by the centre of the hairs, which must be adopted instead of the first object : then invert the teles-

cope as before ; and if the second object be not covered by the centre of the hairs, correct half the error by the same two screws which were used before. This correction will give a third object, now covered by the centre of the hairs, which must be adopted instead of the second ob- ject; repeat this operation till no error remains ; then set the hour circle exactly to 12 hours (the declination circle remaining at 90►► as before) ; and, if the centre of the cross hairs does not cover the last object fixed on, set it to that object by the two temaining small screws at the end of the large tube, and then the line of collimation will be parallel to the brass rod.

859. For rectifying the nonius of the declina- ˆion and equatorial circles, lower the telescope as many degrees, minutes, and seconds, below 0►►, or JE., on the declination semicircle as are equal to the complement of the latitude; then elevate the polar axis till the bubble be horizontal, and thus the equatorial circle will be elevated to the co-latitude of the place; set this circle to 6 hours ; adjust the level by the pinion of the decli- nation circle ; then turn the equatorial circle exactly 1 2 hours from the last position ; and if the level be not right, correct one half of the error by the equatorial circle, and the other half by the declination circle ; then turn the equato- rial circle back again exactly 12 hours from the last position ; and if the level be still wrong, repeat the correction as before till it be right, when turned to either position ; that being done, set the nonius of the equatorial circle exactly to 6 hours, and the nonius of the declination circle exactly to 0►►. The uses of this equatorial are :

860. 1. To find the meridian by one observa- tion only : for this purpose, elevate the equatorial circle to the co-latitude of the place, and set the

declination semicircle to the sun's declination for the day and hour required ; then move the azi- muth and hour circles both at the same time, either in the same or contrary direction, v till the centre of the cross hairs in the telescope exactly covers the centre of the sun. When that is done, the index of the hour circle will give the apparent or solar time at the instant of observation ; and thus the time is gained, though the sun be at a distance from the meridian. Then turn the hour circle till the index points precisely at 12 o'clock, and lower the telescope to the horizon, in order to observe some point there in the centre of the glass, and that point is the meridian mark found by one observation only ; the best time for this operation is three hours before or three hours af- ter twelve at noon.

861. 2. To point the telescope on a star, though not on the meridian, in full day light. Having elevated the equatorial circle to the co- latitude of the place, and set the declination semicircle to the star's declination, move the in- dex of the hour circle till it point to the precise time at which the star is then distant from the meridian, found in tables of tlie right ascension of the stars, and the star will then appear in the glass. Besides these uses, peculiar to this instru- ment, it is also applicable to all the purposjes to which the principal astronomical instruments, viz. a transit, a quadrant, and an equal altitude instrument, are applied.

862. This instrument, however, like all instru- ments that profess to do much, does nothing so well as instruments whose objects are more limited. The splendid equatorial of sir Geo. Shuckburgh, now at the royal observatory at Greenwich, is seldom used, except to observe comets when they cannot be seen at the time of their transit. And even for that purpose it is now likely to be superseded, by an equatorial lately put up in the north- west turret of the ob- servatory, by Mr. Dollond. The polar axis of this equatorial is fixed in the direction of the earth's axis, and carries round with it a vernier which points out right ascensions, on an equatorial cir- cle, fixed at its lower extremity ; and a circle at right angles to the equatorial is attached to the axis, which shows at once the distances of objects to which its telescope is pointed.

863. We shall conclude the subject of astro- nomy with the following catalogue of sixty of the principal fixed stars, recently published by astronomer royal, who remarks upon it that ' The catalogue will require a small correction, com- mon to every star, both in right ascension, and north polar distance. The correction in R. A.

will be subtractive, and may amount to nearly one-tenth of a second in time. The correction in N P D will, I imagine, be likewise subtractive, and will not exceed a quarter of a second.

‘ It is divided into four classes, according to the supposed degree of accuracy of each. The stars of the first class are those that have been determined both by direct vision, and reflection The second class consists chiefly of those too near the zenith to be observed by reflection. The third class is not quite so exact as the second, and the fourth still less exact than the third. The errors of the first and second classes, I should think, can rarely exceed a quarter of a second : in the third class the error may probably amount to double that quantity; and the fourth cla- cannot be relied on but to the nearest second Regulus ought, from the number of observations! te be in the first class ; but, from some accidenta. discordances, I have reserved it for future ex- amination. The errors are quite independent of the common error above-mentioned, the exact amount of which will be the future subject of investigation.’

864. Catalogue of the Right Ascensions and North Polar Distance of Sixty Stars, for the be- ginning of 1823, by J. POND, Esq. Astronomer lioyal.

No.

Names of Stars.

Right Ascension.

N. P. D. Bradley’s Refraction.

N. P. D. French Refraction.

Class.

H. M. S.

1

y Pegasi . .

0 4 8-1

75►► 48′ 2-2″

75►► 48′ 3-4″

1

2

a Cassiopese

0 30 31-3

34 26 6-0

34 26 6‘4

1

3

Polaris . .

0 57 46-2

1 38 7-7

1 38 7-7

1

4

a Arietes . .

1 57 13-1

67 22 44-4

67 22 45-1

1

5

a Ceti . . .

2 53 2-3

86 36 36-5

86 36 38-1

3

6

a Pcrsei . .

3 11 44-3

40 46 39-1

40 46 39-7

2

7

Aldebaran

4 25 46-6

73 51 17-7

73 51 18-6

1

8

Capella . .

5 3 37-8

44 11 36-9

44 11 37-5

1

9

Kigel . .

5 6 2-2

98 24 48-5

98 24 50-3

3

10

/3 Tauri

5 15 6-8

61 33 6-5

61 33 7-4

1

11

5 15 38-7

83 49 8-0

83 49 9-5

3

12

5 22 58-3

90 26 18-0

90 26 19-7

4

13

5 27 14-3

91 19 22-9

91 19 24-6

4

14

5 31 50-1

92 2 38-0

92 2 39-7

4

15

5 45 35-6

82 38 4-1

82 38 5-3

1

It}

5 46 32-9

45 4 55-9

45 4 56-7

3

17

6 37 20-9

106 28 48-5

106 28 50-5

3

18

7 23 17-6

57 43 59-1

57 44 59-9

1

ID

7 30 2-2

84 19 43-3

84 19 44-8

1

20

7 34 28-5

61 33 16-8

61 33 17-6

1 ,

◆◆◆21

9 18 53-5

97 53 44-4

97 53 46-2

3

22

9 58 56-3

77 10 15-6

77 10 17-0

-

23

10 52 43-5

27 17 43-7

27 17 44-1

1

24

11 40 1-7

74 26 18-1

74 26 19-3

3

2 .”)

11 44 28-6

35 19 14-9

35 19 15-6

2

26

12 6 37-2

31 59 0.3

31 59 0-9

3

◆◆◆27

13 15 52-9

100 14 0-4

100 14 2-2

3

23

13 16 46-8

34 8 51-2

34 8 51-9

2

20

13 40 33-5

39 47 59-6

39 48 0-4

2

30

13 59 35-9

24 46 31-4

24 46 31-9

3

31 Arcturus

1 4 7 35-6

69 53 29-2

69 53 30-1

1

32

14 37 15-6

62 10 27-8

62 10 28-9

3

33

14 40 54-6

105 15 14-5

105 15 16-5

4

14 41 6-4

105 17 56-0

105 17 58-0

4

14 51 19-5

15 7 15-6

15 7 15-9 1

ASTRONOMY.

Astronomer Royal's Catalogue continued.

201

No.

Names of Stars.

Right Ascension.

N. P. D. Bradley's Refraction.

N. P. D. French Refraction.

Class. I

H. M. S.

V

36

15 27 12-0

62 41 0-8

62 41 1-6

1

37

15 35 33-5

83 00 36-8

83 00 38-1

1

38

16 5 5-0

93 13 49-0

93 13 50-8

3

39

16 18 34-2

116 1 43-3

116 1 45-5

4

40

17 6 35-0

75 24 0-4

75 24 1-5

1

41

17 26 25-9

37 33 48-8

37 33 49-5

2

42

17 26 43-5

77 18 11-0

77 18 12-2

1

43

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ASTROPECTEN, in natural history, a species of star fish, composed of a central nucleus, fur- rowed like the shell of the common scallop, and parting- into five principal rays, from each of which issue several transverse processes, covered with a hairy down.

ASTROPODIA, the star-stone. See ASTERIA.

ASTROSCOPE, an astronomical instrument, composed of two cones, on whose surface the constellations, with their stars, are delineated, by means whereof the stars may easily be known.

ASTROSCOPIA, the art of examining the stars by telescopes. Iluygens improved this art considerably. See his Astroscopia Compendiaria.

AST ROTH KM AT A, in astrology, the posi- tions of the stars in a theme of the heavens.

ASTRUC (John), a celebrated French phy- sician, was bom in 1684, at the little town of Sauves in Languedoc. He studied at the univer- sity of Montpelier, and in 1717 was in great re- pute there as a teacher of medic;ne. His fame became so considerable that the king assigned him an annual salary, and appointed him to superintend the mineral waters in Languedoc. As Montpelier, however, did not afford sufficient scope for his genius, he removed to Paris, but soon after left it, having in 1729 accepted the ofKce of first physician to the king of Poland. L'pon the death of the celebrated Geoffrey, in 1731, he was appointed Regius Professor of medicine at Paris. Of his numerous writings the following are the principal : 1. De Morbis Vene- reis. 2. Memoirs relative to the Natural History of Languedoc. 3. A Treatise on Pathology. 4. On Therapeutics. 5. On the Inoculation for the Small-pox. 0. On Tumors and Ulcers. 7. Online fit; la Peste. 8. De motu Musculari. 9. L'Art de I'Accoucheur. 10. De motus Fer-

mrntativi. 11. Memoire sur la Digestion. 12. On the diseases of Women. The first and last have been translated into Kiulish. He died universally regretted, on the lath of May 1766, in the eighty-second year of his age.

ASTRUM, or ASTUON, a constellation, or as- semblage of stars ; as distinguished from aster, a single star.

ASTRUT'. On strut. See STRUT. What good can the great gloton do w►► his bely standing a strote like a taber, and his noil toty with drink. Sir Thos. More, fol. 98.*

Inflated and attrut with self conceit, He gulps the windy diet ; and ere long, Adopting their mistake, profoundly thinks The world was made in vain, if not for him.

Cowper. The Task, book v.

ASTURA, in ancient geography, a town of Italy, in the Campagna di Roma, which had a good harbour. Cicero lost his life in it, and prince Conradin, last heir of the house of Hohen- staufen, was taken prisoner here in 1268.

ASTURIA, an ancient kingdom of Spain, subdued by Augustus emperor of Rome.

ASTURIANS, the brave inhabitants of Asturia, who, along with those of Cantabria, asserted their liberty long after the rest of Spain had submitted to the Roman yoke. So great was their desire of liberty, that, after being closely shut up by the Roman army, they endured the most terrible calamities of famine, even to the devouring of one another, rather than submit to the enemy. At length, however, the Asturians proposed to surrender ; but the Cantabrians opposed the mea- sure, and maintained that they ought rather to die sword in hand. Upon this the two nations quarrelled, notwithstanding their desperate situa- tion ; and a battle ensuing, 10,000 of the Astu- rians were driven to the entrenchments of the Romans, whom they begged, in the most moving manner, to receive them on any terms. But Tiberius refusing to admit them into the camp, some of these unhappy people put an end to their lives by falling on their ,own swords ; others, lighting great fires, threw themselves into them, while some poisoned themselves by drinking the juice of a venemous herb. The campaign being closed by the winter, the next year the Asturians summoned all their strength against the Romans ; but, after frequent efforts, sometimes in conjunc- tion with the Cantabrians, they were reduced by the imperial armies, and submitted to the Roman power till the subversion of that empire by the (Joths.

ASfURIA, or ASTURIAS, anciently the king- dom of Asturia, is now a principality of modern Spain. It is bounded by Biscay on the east, Galicia on the west, Castile and Old Leon on the south, and the sea on the north. Its greatest length is about 120 miles, and its breadth 54. On the south it is separated from Castile and Old Leon by high mountains covered with woods. The province is tolerably fertile, but is thinly in- habited. It has mines of gold, lapis lazuli, and vermilion. The hereditary prince of Spain is styled Prince of the Asturias ; the infant Don Henriquez, son of John I. of Castile, being the first who took that title in 1388. This princi- pality is commonly divided into Asturia d'Oriedo, and Asturia de Santillana, so called from their principal towns ; the former occupying two-thirds of the principality to the west, and being about thirty Spanish leagues in length, and eighteen in breadth ; the latter the other third, sixteen leagues long and twelve broad. The climate of the whole principality is colder than the rest of Spain ; but the mountains and hills, though often covered with snow during the whole winter, abound with excellent pastures, and a great variety of fruit trees. Apples are particularly abundant, and a great deal of cyder is made and exported ; Spanish America alone has received 28,000 arobas of 25 Ib. each yearly. But the most important branch of their agriculture is the breeding of cat- tle; and their horses have been celebrated for strength from the days of Martial and Silius Italicus. The Asturias contain a bishopric, 668 parishes, 36 religious houses, including 23 mo- nasteries and nunneries, a university, 3 colleges, a royal court of justice, 4 cities, 50 towns, and 3 sea-ports, the principal of which is Gijon, together with several villages ; and a population of about 350,000. In more modern history, they are celebrated for having received Pelayo and the other Christians who escaped from the Moors after the battle of Xeres de la Frontera, and who, protected by this mountainous country, bade de- fiance to, and finally expelled the invaders, lay- ing in these provinces the foundation of the Spanish monarchy. Hence the Asturian nobility and gentry are possessed of some extraordinary privileges, and the inhabitants of the mountain Ancena are still distinguished by the title of ' the illustrious mountaineers.'

ASTURIAS, in zoology, a name by which some authors have called the goshawk.

ASTUTE. Lat. astutus; from Gr. o-ru, a city. Acute, penetrating, sharp. Applied to the inhabitants of a city who are supposed to be sharp-witted in

consequence of having much in- tercourse with the chicane and craft of mankind, and are therefore prepared to contend with it.

We term those most astute which are most versute. Sir M. Sandy's Ess. p. 168.

ASTYAGES, son of Cyaxares, the last king of the Medes. He dreamed, that from the womb of his daughter Mandane, married to Cambyses king of Persia, there sprung up a vine that spread itself over all Asia ; and she being with child, he resolved to kill the infant as soon as born. Its name was Cyrus ; but Harpagus being sent to destroy it, preserved it ; which Astyages hearing of long after, he caused Harpagus to eat

his own son. Harpagus, in revenge, called in Cyrus, who dethroned his grandfather, and thereby ended the monarchy of the Medes ; the tyrant thus losing his kingdom by the barbarous means he took to preserve it. See MEDIA and PERSIA.

ASTYANAX, the only son of Hector and Andromache. After the taking of Troy, he was thrown from the top of a tower by Ulysses' orders

ASTYNOMI, in Grecian antiquity, magis- trates in Athens, corresponding to the aediles of the Romans; they were ten in number. See ./EDILE.

ASUNDER. On sunder.

Two indirect lines ; the further that they are drawn Out, the further they go asunder. Spenser on Ireland.

So looks the pent up lion o'er the wretch That trembles under his devouring paws j And so he walks insulting o'er his prey, And so he comes to tear his limbs asunder.

Shalupeare's Third Part of Henry VI. act i. sc. 5.

The way of Fortune is like the milken way in the

skie, which is a meeting or knot of a number of small

stars ; not seen asunder, but giving light together : so

are there a number of little and scarce discerned ver-

tues, or rather faculties and customes, that make men

fortunate. Lord Bacon's Essays.

Sense thinks the planets spheres not much asunder ;

What tells us then, their distance is so far ?

Davies.

Greedy hope to find His wish and best advantage, us asunder.

Paradise Lost.

The fall'n archangel, envious of our state, Seeks hid advantage to betray us worse ; Which, when asunder, will not prove too hard , For both together are each other's guard.

Drydeit.

Borne far asunder by the tides of men, Like adamant and steel they meet again.

Dry den's Fables.

All this metallick matter ˆboth that which conti- nued asunder, and in single corpuscles, and that which was amassed and concreted into nodules,) sub- sided. Woodward's Natural Histury. The diversified but connected fabrick of universal justice is well cramped and bolted together in all parts ; and depend upon it, I never have employed, and I never shall employ, any engine of power which may come into my hands, to wrench it asunder.

Burke.

Upon the whole, there was in this roan something that could create, subvert, or reform j an understand- ing, a spirit, and an eloquence, to summon mankind to society, or to break the bands of slavery asunder, and to rule the wilderness of free minds with un- bounded authority ; something that could establish or overwhelm empire, and strike a blow in the world that should resound through the universe.

Grattan's Character of Lord Chatham. ASYLA, the plural of ASYLUM. The asyla of altars and temples were very ancient ; and like- wise those of tombs, statues, and other monu- ments of considerable personages. Thus, the temple of Diana at Ephesus was a refuge for debtors ; the tomb of Theseus for slaves. In order to people Rome, a celebrated asylum was opened by Romulus between the mounts Palatine and Capitoline, for all sorts of persons indiscriminately, fugitive slaves, debtors and criminals of every kind. It had a temple dedicated to the god Asylaeus. The Jews had

their asyla ; the most remarkable of which were, the six cities of refuge, the temple, and the altar of burnt offerings ; which protected those who had incurred the lash of the law, but not for any deliberate crime. But it was customary among the heathens to allow refuge and impunity, even to the vilest and most flagrant offenders ; some out of superstition, and others for the sake of peopling their cities. They had an idea, that a criminal who fled to the temple or altar, sub- mitted his crime to the punishment of the gods ; and that it would be impiety in man to take ven- geance out of their hands. It was by this means, and with such inhabitants, that Thebes, Athens, and Rome, were first stocked. We even read of asyla at Lyons and Vienne, among the ancient Gauls ; and there are some cities in Germany, which still preserve this ancient right. On the medals of several ancient cities, particularly in Syria, we meet with the inscription A2YAOI, to which is added IEPAI. The emperors Honorius and Theodosius, granting the like immunities to churches, the bishops and monks soon selected certain tracts or territories, without which they fixed the bounds of the secular jurisdiction ; and so well did they manage their privileges, that convents in a little time became a kind of for- tresses, where the most notorious offenders were in safety. These privileges at length were ex- tended, not only to the churches and church- yards, but also to the bishops' houses ; whence the criminal could not be removed without a legal assurance of life, and an entire remission of the crime. At last these asyla were stripped of most of their immunities. In Great Britain particu- larly, they have been entirely abolished as pro- tecting criminals, although there are still some privileged places of refuge for debtors, such as the precincts of the royal palaces, the Abbey of lloly-rood-house, Edinburgh, &c.

ASY'LUM. Gr. a, the privative, and eruXij, spoil; because it was not lawful, to spoil those who fled to a sanctuary.

So sacred \vas the church to some, that it had the right of an asylum or sanctuary. Aylijf'e's Purer.

Hut noble dames, In tliis tiM/luni sojourning awhile, Trust your own merits, and a guardian god.

Glwcr's Athenaid, book ii.

T he adventurer knows lie lias not far to go before he will meet with some fortress that has been raised liy sophistry for the iifylum of error.

Huwkesworth.

ASYU'S, the gad-fly. See ASILUS.

AS"i M'M I.TRY, \ A, the privative, and wp-

A-YM'MI.I KAI , J/ijrpov, proportion. Want

ASYM'MKTKOUS. j ot symmetry, dispropor- tion.

Quantities compared with respect to such a mea- suiv, are by geometricians wont to be called symme- triius or asi/mmctTHUii, i. e. commensurable or incom- mensurable. Barruu-'s Matliematical Lectures.

'I he asymmetries of the brain, as well as the defor- mities of the legs or face, may be rectified in time.

Grew.

AS^i M l'T( )TF. ; from a priv. avv, with, and rrroiu, to fall; which never meet; incoinci- (irtit. Asymptotes are ri^ht lines, which ap- proach nearer to some curve ; but which, though iluy ;md their curve wore infinitely continued, V.UIK i in ver meet; and uray be conceived as

tangents to their curves at an infinite distance. See CONIC SECTIONS.

ASYNDETON, from the privative a, and ffvvStu, I bind together ; a figure in rhetoric, im- plying an omission of words, or a defect of con- junctive particles. The want of such particles represents either the celerity of an action, or the haste and eagerness of the speaker. As, in the celebrated instance, ' veni, vidi, vici,' ' I came, I saw, I conquered.'

AT. From the Latin ad. In its abstract sense designating completion, termination, touch- ing the surface by approach.

For all the field was but of sand As small as men may see at eye In the desert of Libye.

Chaucer. The House of Fame, b. i. c. 3. I speke the thingis that I saigh at my fadir ; and ye doen the thingis that ye saighen at youre fadir.

Wiclif. Jon. chap. viii. p. 61.

Under pardon,

You are much more at task, for want of wisdom ; Than prais'd for harmless mildness. Shakspeare.

Others, with more helpful care, Cried out aloud, Beware, brave youth, beware ! At this he turn'd ; and, as the bull drew near, Shunn'd and receiv'd him on his pointed spear.

Dryden.

Their various news I heard, of love and strife, Of storms at sea, and travels on the shore. Pop.*

ATABALIPA, or ATAHUALPA, the last of the Incas. On the death of his father, in 1529, he succeeded to the throne of Quito, while his bro- ther Huascar obtained the kingdom of Peru. Not long after a disagreement took place, and hostilities commenced betwixt them, in which Huascar was defeated. The Spaniards taking advantage of these disturbances, with Pizarro as their leader, invaded Peru, where they were en- tertained with no little hospitality by the king and the people ; but, instead of making any return for his kindness, they, with their usual treachery held him in captivity. The inca, as a ransom, offered to give the Spaniards a room full of gold, and, when they had got the treasure in their pos- session, they, with the utmost baseness, burnt the unhappy monarch at the stake, in 1533.

ATABULUS, in physiology, a provincial wind in Apulia, of a dry pinching quality, and very noxious in its effects. The ancient naturalists speak of the Atabulus in terms of horror, on account of the ravages it made among the fruits.

ATABYRIS, a very high mountain in the island of Rhodes, on which, according to Strabo and Diodorus Siculus, stood a temple of Jupiter Atabyivis, whose worship a colony of Khodians carried into Sicily.

ATACAMA, a chain of mountains in South America, which separate Peru from Quito, and where the cold is very violent.

ATACAMA, a province of Peru, bounded on the north by the province of Arica; east by Lipes, Salta, and Tucuman ; south by a desert extending to the kingdom of Chili ; and west by the South Sea. Its population is under 3000. Its chief town, of the same name, lies in long. W. 69►► 30'. lat. S. 23►► 30'., on a barren spot, about 100 miles from the sea.

ATACAMITE, in mineralogy, a name given to a variety of muriate of copper, found in the

district of Atarama, in minute crystals and frag- ments.

ATAD, a Canaanite, rendered memorable by his threshing-floor, Gen. 1. 10. See ABEL-

M/ZRAIM.

ATALANTA, in ancien . geography, an island in the Euripus of Euboea, near the Locri Opuntii, said to have been originally a city of the Locri, but torn from the continent in the time of an earthquake, and during an eruption of mount ./Etna; in the fourth year of the ninety-third Olympiad, in the reign of Artaxerxes-Mnemon.

ATALANTA, in fabulous history, the daughter of Schceneus, king of Scyros. Being resolved against marriage, and at the same time very swift of foot, she, to get rid of her numerous suitors, declared that she would marry none but the man who was willing to risk his life for her, by striving to outrun her, and to forfeit it if he failed. This several attempted and suffered accordingly. But Ilippomenes, being furnished by Venus with three golden apples, dropt them at proper dis- tances during the race, and while she stooped to gather them, gained both the race and the prin- cess. The goddess Venus being enraged at the ingratitude of Ilippomenes, who never performed the vow he had made to erect a temple to her at Scyros, changed both him and Atalanta into lions.

Another ATALANTA received from Meleager., who was enamoured of her, the skin and head of the Caledonian boar, in testimony of her skill in having first wounded the animal. This roused the jealousy of Toxeus and Plexippus, his uncles, who endeavoured to strip Atalanta of her honor- able spoil. Meleager killed them in defence of her right ; and his mother Althrea, irritated by the death of her brothers, committed to the flames the charmed brand upon which the life of Mele- ager depended. This second Atalama was the daughter of Jasus and Clymene.

ATALANTA, in entomology, a species of Eu- ropean papilio, of which a variety is also found in America. The wings are black, indented, and spotted with white ; a red band across the an- terior pair ; border of the posterior pair of the same color. It is sometimes called the red admi- rable butterfly, and by the French Atalante.

ATALAYA DE ALAGOUTA, a town in Portu- guese Estremadura, district of Thomar, with the title of county, and between 1300 and 1400 in- habitants, eighteen miles north-west of Lisbon.

ATALAYA SORTELHA, a town of Portugal, in the province of Beira, thirteen miles north-east of Castel Branco.

ATALAYAS, SANTIAGO DE LAS, the capital of the province of San Juan de los Llanos, in the kingdom of Granada. It contains 400 house- holders, and is nine leagues from the city of Pore.

ATANARI, a considerable river of New Gra- nada, which enters the Mota.

ATANTA, in botany, a name given by the people of Guinea to a kind of sumach, called, by Petiver, rlius Guineense trifoliatum scabium, from its being trifoliate, and having rough and serrated leaves. They give it as a restorative boiled in water.

ATAPUERA, a town of Spain, in Old Cas- tile, near Burgos. In 1053, a battle was fought oere between Don Garcia, king of Navarre, and VOL. III.

his brother Don Ferdinand, in which the former was defeated and slain.

ATARAXIA, ATARAXV, arapaEia. Exemp- tion from vexation ; tranquillity. The sceptics, says Glanville, affected an indifferent equiponder- ous neutrality, as the only means to their ataraxia, and freedom from passionate disturbances.

ATARGATIS FANUM, the temple of the goddess Atergatis, in Bambyce, which was ex- tremely rich. Crassus, in his march against the Parthians, spent several days in weighing the treasure.

ATARNEA, or ATARNYA, an ancient town of Mysia, situated between Adramyttium and Pitane, memorable for the marriage of Aristotle with the sister of Hermias, the prince of it.

ATAULFUS, the first king of the Goths in Spain, established his government there, about A. D. 404, and died, A. D. 416. See SPAIN.

ATAXY, from a negative, and i-a□□tc, order, the want of order. With physicians, it signifies irregularity of crises and paroxysms of fevers.

Neither is there any ataxy to be feared in bringing in this distinction, betwixt pastors and the flock.

Bp. Hall's Polemical Works.

ATCHE, in commerce, the smallest silver coin current in Turkey, worth about one-third of a penny sterling.

ATCHIEVEMENT, or ACHIEVEMENT, vul- garly called HATCHMENT.

Armorial bearings in front of the houses of deceased persons.

ATCHIEVEMENT, in heraldry, denotes the arms of a person or family, together with all the exte- rior ornaments of the shield , as helmet, mantle, crest, scrolls, and motto, together with such quarterin'gs as may have been acquired by alli- ances, all marshalled in order.

ATE ; from arau, tp hurt ; the goddess of mischief, in the mythology. She was daughter of Jupiter, and cast down from heaven at the birth of Hercules. For Juno having deceived Jupiter, in causing Euristheus to be born before Hercules, Jupiter expressed his resentment against Ate, as the author of that mischief, and threw her head- ' long from heaven to earth, swearing she should never return thither again. Homeri II. xix. 125. Her being the daughter of Jupiter means, accord- ing to mythologists, that no evil happens to us but by the permission of Providence; and her banishment to earth the terrible effects of divinp justice among men.

ATEGAR ; from the Saxon aeton, to throw, and gar, a weapon ; a weapon among the Sax- ons, which seems to have been a hand-dart.

ATEGUA, or ATTEGUA, an ancient town of Spain, placed by some in the road from Anti- quara, now Antequera, to Hispalis, or Seville ; by others, near Alcala Real. It was situated near the river Flumen Salsum, or Salsusa. Pompey, having passed this river, encamped between Ucubis and Ategua, to oblige Caesar to raise the siege of the latter place ; but it was taken in his presence.

ATELIA, an exemption from taxes, or other burdens, is particularly used in some ancieni laws, for an exemption from offices granted to the Egyptian clergy by Constantins.

ATELIA, an ancient town of Campania in Italy, between Capua and Neapol's. The ruins

are still to be seen about eleven miles from the modern Aversa.

ATELLAN/E FABUL, ATELLANI LUDI, a species of farce, so named from Atella, called also Osci, from their inventor, in whose territory Atella lay. They were generally interlarded with much ribaldry and buffoonery , and some- times were exordia, or interludes, presented be- tween the acts of*

other plays. The actors in these farces were not reckoned among the common players, nor deemed infamous ; but retained the rights of their tribe, and might be enlisted for soldiers, the privilege only of free men.

ATEMPO GIUSTO, in music, signifies to sing or play in an equal, true, and just time.

ATENA, a town of Italy, in Naples, near the Negro, twelve miles north-west of Marsico, and twenty-two north of Policastro.

ATER, in conchology, a species of mytilus, described in Molin. Hist. Chili, p. 177, and said to be frequent on the shores of that country : also a species of strombus found in the boggy parts of the island of Amboyna.

ATER, in entomology, 1. a species of der- mestes found in the neighbourhood of Upsal. 2. A species of hydrophilis, a native of Europe. 3. A species of byrrhus that inhabits Germany. 4. A species of tenebrio found in Europe. 5. A species of carabus that inhabits Denmark. 6. A species of cerambyx (Callidium, Fabr.) found in the environs of Venice. 7. A species of gryllus (Acheta, Fab.) that inhabits Surinam. 8. A species ofcimex.

ATER, in natural history, a species of anguis; also a species of limax, slug or snail

ATER, in ornithology, a species of falco; also a species of psittacus.

ATF.KGATIS, in mythology, a goddess of the Syrians and Parthians, supposed to be the mother of Semiramis, and called Derceto by the Greeks. She was represented with the face and breasts of a woman, but the rest of her body resembled a tisli. \ ossius makes the name Phoenician, from addir-dag, the u'i'oat fish; and says it signifies, v, ithont fish ; whence ho conjectures that the vo- taries of tliis deity abstained from fish.

ATERNUM, in ancient geography, 1. a town of Lucania in Italy, now called Aterni. 2. A town in the territory of the Piceni, now called Pescara, a port town of Naples, on the Adriatic.

ATERRIMA, in conchology, a species of ne- rita, figured by Chemnitz.

ATERRIMA, in entomology, 1. a species of bhitta. 'J. A new British species of chrysomela, described liy Mr.Marsham, Ent. Brit.

ATERRIMUS, 1. a species of curculio, very common in Europe; black, with the wing-cases shining. Linn. Fn. Sv. Fabr., &c. 2. A species of carabus. 3. A species of elater, found in the north of Europe. 4. A species of cimex (rotun- datus, sec.) that inhabits Spain.

ATERRIMTS, in ornithology, the specific name of the szreat black cockatoo of New Holland.

ATESTE, a town in the territory of Venice in Italy, now called Este. ATH, or /Eth. See J]'.iu. ATH, ATIIA, or AIHE, among our Anglo-Saxon ancestors., signifies an u.tth, especially that taken

by way of purgation. In this sense, we meet with breaking of ath, privilege of ath, atha, or ordela.

ATHABOLI, or AGASTOBOLI, a town of Turkey in Europe, on the Black Sea, in the extensive province of Romania, sixty-eight miles north-east of Adrianople. Long. 27►► 39′ E., lat. 42►► 27′ N.

ATHALARIC, the grandson of Theodoric, and the second king of the Ostrogoths in Italy, succeeded A. D. 526, and reigned along with his mother Amalasuntha, about eight years. They both died A.D. 534.

ATHALIAH, rrbnir, Heb. i.e. the time of the Lord ; the daughter of Ahab king of Israel, by Jezebel, and wife of Jehoram king of Judah See 2 Chron. xxi. 10, and xxiii. 12.

ATHAMADULET, or ATHEMADAULET, the prime minister of the Persian empire. He is great chancellor of the kingdom, president of the council, superintendant of the finances ; and has the charge of all foreign affairs. He is in effect viceroy of the kingdom.

ATHAMANTA, Spignel, in botany, a genus of the digynia order, and pentandria class of plants, ranking in the natural method under the fourth order, umbellatoe. The fruit is oblong and striated ; and the petals are inflected and emar- ginated. Of this genus Linnaeus enumerates nine species : but none of them merit particular notice ; except the Cretensis, or Daucus Creticus, which grows wild in the Levant and the warmer parts of Europe. The leaves are irregularly disposed, and formed like those of fennel. The flower- stalk rises about two feet high, sending out many branches, terminated at the top by compound umbels, composed of nearly twenty small ones. The seeds have a warm biting taste, with an agreeable aromatic smell. They are kept in the shops as a carminative ; but are little used in practice.

ATHANASIA, Goldilocks, in botany, a genus of the polygamia aequalis order, and syn- genesia class of plants ; ranking in the natural method under the forty-ninth order, compositae discoides. The receptacle is chaffy ; the pappus chaffy and very short, and the calyx imbri- cated. There are twenty species, all tender plants except one; and none of them possessed of much beauty.

ATHANASIA, in ancient medicine, an epithet given to a kind of antidotes, supposed to have the power of prolonging life, even to immor- tality. In the Augustan dispensatory we still find a medicine under the appellation of athanasia magna, recommended against dysenteries and haemorrhages.

ATHANASIA, in botany, is used by some au- thors for tansy.

ATHANASIAN CREED; a formulary, or con- fession of faith, long supposed to have been drawn up by Athanasius bishop of Alexandria, in the fourth century, to justify himself against the calumnies of his Arian enemies ; but now gene- rally allowed among the learned not to have been his. Dr. Waterlaud ascribes it to Hilary bishop of Aries, for the following among other reasons : i . Because Honoratus of Marseilles, the write.

of his life, tells us, that he composed an Expo sition of the Creed ; a more proper title for the Athanasian, than that ⬚⬚f Creed simply, which it now bears. 2. Hilary was a great admirer and follower of St. Austin ; and the whole compo- sition of this creed is in a manner upon St. Aus- tin's plan, both with respect to the trinity and the incarnation. 3. It is agreeable to the style of Hilary, as far as we can judge from the little that is left of his works. About A. D. 570, it ⬚⬚⬚became so famous as to be commented upon ; but, for several years after, it had not acquired the name of Athanasian, but was simply styled the catholic faith. This creed obtained in France about A. D. 850, and was received in Spain and Germany about 100 years later. As to our own country, we have clear proofs of its being sung alternately in our churches in the tenth century. It was in common use in some parts of Italy, particularly in the diocese of Verona, about A.D. 960, and was received at Rome about 1014. As to the Greek and oriental churches, it has been questioned whether any of them ever received this creed at all : with regard to its matter, it is given as a summary of the true orthodox faith, and a condemnation of all heresies, ancient and modern. Unhappily, however, it has proved a fruitful source of unprofitable controversy and unchristian animosity even down to the present time.*

' The account given of Athanasius's creed,' says archbishop Tillotson, in a letter written from Lambeth, Oct. 23, 1694, to a right reverend prelate, ' seems to me no wise satisfactory : I wish we were well rid of it.' Bishop Taylor, in his Liberty of Prophesying, sect. ii. says, ' If it were considered, concerning Athanasius's creed, how many people understand it not, how

contrary to natural reason it seems, how little the scripture says of those curiosities of expli- cation, and how tradition was not clear on his side for the article itself, much less for those forms and minutes ; it had not been amiss if the final judgment had been left to Jesus Christ : and indeed to me it seems very hard to put un- charitableness into the creed, and so to make it become as an article of faith.' ' It certainly is to be lamented,' says Dr. Tomline, the present bishop of Worcester, in his Elements of Christian Theology, vol. ii. p. 220, ' that assertions of so peremptory a nature,' referring to the damnatory clauses, ' unexplained and unqualified, should have been used in any human composition.' ' I am ready to acknowledge,' p. 222, ' that, in my judgment, notwithstanding the authority of former times, our church would have acted more wisely, and more consistently with its general principles of mildness and toleration, if it had not adopted the damnatory clauses of the Atha- nasian creed. Though I firmly believe that the doctrines themselves of this creed are all founded on scripture, I cannot but conceive it to be both unnecessary and presumptuous to say, that ' ex- cept every one do keep them whole and unde- nted, without doubt he shall perish everlastingly'.' Dr. Horsley, late bishop of St. Asaph, avowed a similar opinion.

ATHANASIUS, St. bishop of Alexandria, and one of the most violent opponents of the Arians,

was born in Egypt. He followed St. Alexander to the council of Nice, in 325, where he disputed against Arius, and the following year was made bishop of Alexandria ; but, in 335, was deposed by the council of Tyre: when, having recourse to the emperor Constantine, the Arian deputies accused him of having hindered the exportation of corn from Alexandria to Constantinople; on which the emperor, without suffering him to make his defence, banished him to Treves. The emperor, two years after, ordered him to be re- stored to his bishopric : but, on his return to Alexandria, his enemies brought fresh accusations against him, and chose Gregory of Cappadocia to his see ; which obliged Athanasius to go to Rome, to reclaim it of pope Julius. He was there declared innocent, in a council held in 342, and in that of Sardica, in 347, and two years after was restored to his see by order ot the emperor Constans ; but, after the death of that prince, he was again banished by Constantius, on which he retired into the deserts. The Arians then elected one George in his room ; who being killed, in a popular sedition under Julian, in 360, Atha- nasius returned to Alexandria, but was banished under Julian, and restored to his see under Jovian. He addressed to that emperor a letter, in which he proposed, that the Nicene creed should be the standard of the orthodox faith, and condemned those who denied the divinity of the Holy Ghost. He was also banished by Valens, in 367, and afterwards recalled. He died on the 2d of May, 373. His works principally contain a defence of the mystery of the Trinity, and

of the incarnation and divinity of the Word and Holy Spirit. There are three editions of his works which are esteemed ; that of Commelin, printed in 1600 ; that of Peter Nannius, in 1627 ; and that of father Montfaucon.

ATIIANATI, i. e. immortals ; from a, privative, and Oavarof, death ; a body of cavalry , among the ancient Persians, consisting of 10,000 men, al- ways complete, because when any one of them died another was immediately put itto his place.

ATHANOR. Chemists have given this name to a furnace so constructed, that it can always maintain an equal heat, and lasts a long time, without addition of fresh fuel. The body of the athanor has nothing in it particular, and is con- structed like ordinary furnaces. But at one of its sides, or its middle, there is an upright hollow tower, which communicates with the fire-place, by one or more sloping openings. This tower ought to have a lid, which exactly closes its up- per opening. When the athanor is to be used, as much lighted coal is put in the fire-place as is judged necessary, and the tower is filled to the top with unlighted fuel. The tower is then to be exactly closed with its lid. As fast as the coal in the fire-place is consumed, that in the tower falls down and supplies its place. As the coal contained in the tower has no free communica- tion with the external air, it cannot burn, till it falls into the fire-place. The athanor being much celebrated and used by ancient chemists, has been particularly described by many au- thors, and was formerly found in all laboratories. At present, this furnace is much less employed, and even neglected. The reason is, that all the

undent chemists were in search of the art of making gold ; and being excited by this powerful ⁂motive, and confident of success, they spared no (rouble or expense to accomplish this design. ⁂ They undertook, without hesitation, operations which required great length of time, and unre- mitted heat. Whereas now, these alluring hopes having vanished, the cultivators of chemistry have no other view than to extend and perfect the theory of this essential part of natural philo- sophy. This motive, although undoubtedly much nobler than the former, seems, however, to be less powerful over most men. For now, all long and laborious operations, whence chemistry might receive great advantages, are neglected, as being tiresome and disgustful. There is, in fact, a considerable

difference betwixt the hope of ex- plaining a philosophical phenomenon, and that of obtaining an ingot of gold capable of produc- ing many others. Hence the instruments employed in long operations, and iparticularly the athanor, are now much neglected ; and also, because the fuel in the tower is apt to stick there, or fall down at once in too great quantity. The lamp furnace, which is a true athanor, may be success- fully employed in operations which do not re- quire much heat.

ATIIAPESCOW, a lake in the north-west of North America, and fifty-ninth degree of north latitude, so called from a tribe of Indians inha- biting its hunks. It is contiguous to the Lake of the Hills, and has now become so shallow, that, according to Mackenzie, it will in time be probably converted into a swamp.

ATIIAHKK, in astrology, a term used when the moon is in the same degree and minute with the sun.

ATHBOY, a town of Ireland, in the county of Meath, situated on a stream of the same name. It was a borough, which returned members to the Irish parliament before the union. Three fairs are held here annually. Distant twenty- nine miles north-west of Dublin.

ATI IKK, a town of France, in Anjou, with 260 houses, belonging to the arrondissement of Chateau-(lontier, in the department of Mayenne. It lies on the river Oudon, five leagues S. S. W. of Laval.

Ann r,, a town of France, in the department of the Indre and Loire, arrondissement of Tours, on the left bank of the (‘her, with 255 houses, three 1 (-agues south-west of Amboise.

YTHKISM, -\ A, privative, 0t oc, God;

A’-nir.is-i, n. & adj. without God. One of its Ari IH’.IM’ICAI., significations is illustrated

ATHi.isr’icAi.r.Y, [by the following citation A.THEIST’ICALNESS, from St. Paul’s Epistle ATHT.IST’ICK, to the Kphesians, A Otot

A’TIU I/K,] (v r^jcoa/ty, without God

A’liiKors.) in the world.

God never wrought miracles to convince atheitm, because his ordinary works convince’ it. Bacon.

Nor stood unmindful Abdiel, to annoy The atheist crew. Milton. Paradise

Lost.

Thy Father, who is holy, wise, and pure, Suffers the hypocrite, or atheuus priest, To tread his sacred courts. Paradise Regained.

Men are athciitical , because they are rirst vicious J nnd question the truth of Christianity, because they i.i t.> the practice. South.

Is it not enormous, that a divine, hearing a great sinner talk atheitticatty, and scoff profanely at religion, should, instead of vindicating the truth, tacitly approve the scoffer? /d>

Though he were really a speculative atheist ; yet, if he would hut proceed rationally, he could not how- ever, be a practical atheist, nor live without God in this world. Id.

I entreat such as are atheistically inclined, to con- sider these things. Tillotton.

It is the common interest of mankind, to punish all those who would seduce men to atheitm. Id.

Atheist, use thine eyes ; And, having view'd the order of the skies, Think (if thou canst) that matter, blindly hurl'd Without a guide, should frame this wondrous world.

Creech.

No atheist, as such, can be a true friend, an affec- tionate relation, or a loyal subject. Bentley.

Lord, purge out of all hearts profaneness and at heist icalness, Hammond's Fundamentals.

This argument demonstrated the existence of a Deity, and convinced all atheistick gainsaycrs.

Ray on the Creation.

Chester, civilized as well as Wales, has demon- strated, that freedom and not servitude is the cure of anarchy ; as religion, not atheism, is the true re- medy for superstition. Burke.

ATHEISM, absurd and unreasonable as it is, has had its votaries and martyrs. In the seven- teenth century, Spinosa, a foreigner, was its noted defender. Lucilio Vanini, an Italian, a native of Naples, publicly taught atheism in France, about the beginning of the seventeenth century ; and

being convicted of it at Toulouse, was condemned and executed.

An ATHEIST may be denned, a person who does not believe in any thing superior to the material world. Many people both ancient and modern, have pretended to be, or have been reckoned, atheists ; but it is justly questioned whether any man ever seriously adopted such a principle. These pretensions, are often, indeed, founded on pride and affectation. Such motives, together with an honest indignation against the imposi- tions and intolerance of superstition and priest- craft (which had so often deluged France with blood), seem to have co-operated to produce that extraordinary moral phenomenon, exhibited in the French Convention, of several of the lead- ing members openly avowing themselves atheists ; in consequence of which the whole nation was absurdly branded with atheism. Cicero, however, repiesents it as a probable opinion, that they, who apply themselves to philosophy, believe there are no gods. This must doubtless be meant of the academic philosophy, to which Cicero himself was attached, and which taugnt to doubt of every thing. On the contrary, the Newtonian philo- sophers, continually recur to a Deity, whom they always find at the head of their chain of natural causes. Among the modern philosophers, who have been the principal advocates for the exis- tence of a Deity, are Sir Isaac Newton, Boyle, Cheyne, Nieuwentyt, &c. To which may be added many others, who, though of the clergy, yet have distinguished themselves by their philosophical pieces in behalf of the existence of a God ; e. g Derham, Bentley, Winston, Kay, Samuel and John Clarke, Fenelon, &c. So true is that say- ing of Lord Bacon, that though a smattering of

philosophy may lead a man into atheism, a deep draught will certainly bring him back again to the belief of a God and Providence ; agreeably to what the poet observes of learning in general :

‘ A little learning is a dangerous thing : Drink deep, or taste not the Pierian spring.’

Archbishop Tillotson justly observes that spe- culative atheism is unreasonable on five accounts : 1. Because it gives no tolerable account of the existence of the world : 2. It does not give any reasonable account of the universal consent of mankind in this comprehension, that there is a God : 3. It requires more evidence for things than they are capable of giving : 4.

The atheist pretends to know what no man can know : 5. Atheism contradicts itself. Under the first of these he advances the following arguments : ‘ I appeal to any man of reason whether any thing can be more unreasonable than obstinately to impute an effect to chance, which carries in the very face of it all the arguments and characters of a wise design and contrivance. Was ever any considerable work, in which there was required a great variety of parts, and a regular and orderly disposition of those parts, done by chance ? Will chance fit means to ends, and that in ten thousand instances, and not fail in any one? How often might a man, after he had jumbled a set of letters in a bag, ling them out upon the ground before they would fall into an exact poem ; yea, or so much as make a good discourse in prose ? And may not a little book be as easily made as the great volume of the world ? How long might a man be in sprinkling colors upon canvass with a careless hand, before they would happen to make the exact picture of a man ? And is a man easier made by chance than his picture ? How long might twenty thousand blind men, who should be sent out from several remote parts of England, wander up and down before they would all meet upon Salisbury plain, and fall into rank and file in the exact order of an army ? Yet this is much more easy to be ima- gined than how the innumerable blind parts of matter should rendezvous themselves into a world. A man that sees Henry the Seventh’s chapel at Westminster, might with as good reason maintain (yea, with much better, considering the vast dif- ference betwixt that little structure and the huge fabric of the world) that it was never so con- trived or built by any means, but that the stones did by chance grow into those curious figures, into which they seem to have been cut and graven ; and that upon a time (as tales usually begin) the materials of that building, the stone, mortar, timber, iron, lead, and glass, happily met together ; and very fortunately ranged themselves into that delicate order in which we see them now, so close compacted, that it must be a very great chance that parts them again. What would the world think of a man that should advance such an opinion as this, and write a book for it ? If they would do him right, they ought to look upon him as mad, but yet with a little more reason than any man can have to say that the world was made by chance, or that the first men grew out of the earth as plants do now. For can any thing lie more ridiculous, and against all

reason, than to ascribe the production of men to the first fruitfulness of the earth, without so much as one instance and experiment, in any age of history, to countenance so monstrous a supposi- tion ? The thing is, at first sight, so gross and palpable, that no discourse about it can be more apparent. And yet, these shameful beggars of principles give this precarious account of the original of things ; assume to themselves to be the men of reason, the great wits of the world, the only cautious and wary persons that

hate to be imposed upon, that must have convincing evidence for every thing, and can admit of nothing without a clear demonstration for it.'

ATHELING, ADELING, EDLING, ETHLING. or ETHELING ; from aethel, noble, Saxon; a title among the Anglo-Saxons, properly belonging to the heir apparent to the crown. This appella- tion was first conferred by king Edward the Con- fessor on Edgar, to whom he was great uncle, when, being without any issue of his own, he in- tended to make him his heir. See EDOAR.

ATHELNEY, an island of England, in the county of Somerset, formed by the junction of the rivers Tone and Parret, a few miles below Taunton. Alfred took refuge here while the country was overrun by the Danes, and is said to have built an abbey on the spot. Many anti- quities were dug up in 1674

ATHELSTANE, a Saxon king of England, natural son of Edward the Elder, and grandson of the great Alfred. He succeeded in 925, and reigned sixteen years. There was a remarkable law passed by this prince, which shows his just sentiments of the advantages of commerce, as well as the early attention paid to it in this coun- try: viz. that any merchant who made three voyages on his own account beyond the British Channel, should be entitled to the privilege of a thane, or gentleman.

ATHELSTANE, king of Northumberland, or, ac- cording to Buchanan, a Danish chief, who ob- tained a grant of that country from king Alfred, flourished about the beginning of the ninth cen- tury ; and, carrying on a predatory war in Scot- land, was killed in battle byHungus, king of the Picts, at the village since named from him Athel- staneford, near the rivulet called Lugdown Burn, which is said to be a corruption of Rug Down, and to have taken its name from the circum- stance of Athelstane being rugged down, or pull- ed from his horse, in the battle.

ATHELSTANEFORD, a village and parish of Scotland, in the county of Haddington. It was the birth-place of Blair, the author of The Grave ; and here Mr. Home was settled as parish minister, but was obliged to relinquish the living in consequence of having written the tragedy of Douglas. Distant two miles from Haddington, seventeen from Edinburgh, east.

ATHENA, in the ancient physic, a plaster or liniment commended against wounds of the head and nerves, of which we find descriptions giver, by Oribasius, ./Elius, and .ZEgineta.

ATHENjEA, a feast of the ancient Greeks held in honor of Minerva, whom they called A0□□jv□□j. They were afterwards called Pana- thenaea.

wherein the professors of the liberal arts held their assemblies, the rhetoricians declaimed, and the poets rehearsed their performances. These places, of which there were a great number at Athens, were built in the manner of amphi- theatres, and encompassed with seats called cunei. The three most celebrated Athens were those at Athens, at Rome, and at Lyons ; the second of which was built by the emperor Adrian.

ATHENˆEUS, a Greek grammarian, born at Naucratis in Egypt, in the third century, one of the most learned men of his time. Of all his works we have none extant but his Deipnoso- phis, i.e. the sophists at table; there is a great fund of facts and quotations in this work, which render it very agreeable to admirers of antiquity, as they are nowhere else to be met with.

ATHENJEUS, a mathematician, who wrote a treatise on mechanics, which is inserted in the works of the ancient mathematicians, printed at Paris in 1693, in folio, in Greek and Latin.

ATHENJEUS, a physician, born in Cilicia, con- temporary with Pliny, and founder of the pneu- matic sect. He taught that the fire, air, water, and earth, are not the true elements, but that their qualities are, viz. heat, cold, moisture, and dryness ; and to these he added a fifth element which he called spirit, whence his sect had their name, Pneumatics.

ATIiENAGORAS, an Athenian philosopher, who nourished about the middle of the second century ; and was equally remarkable for his zeal for Christianity, and his great learning ; as ap- pears from ttie Apology which he addressed to the emperors Aurelius Antoninus and Lucius Conimodus ; as well as from another work still extant upon the Resurrection. They are both written in a style truly Attic.

ATHENATORIUM, among chemists, a thick glass cover placed on a cucurbit, having a slender umbo, or prominent part, which enters like a stopple, within the neck of the cucurbit.

ATHENE; A0r;v/, Greek; the name given by the Greeks to Minerva. See MINERVA.

ATHENIPPUM, in the ancient physic, a col- lyrium commended against divers diseases of the eyes ; thus denominated from its inventor Athe- nippus. It is described by Scribonius Largus and Gorraeus. Galen mentions

another athenip- pum, of a different composition, by which it appears that this was a denomination common to several collyriums.

ATHENODORUS, a famous stoic philoso- pher, bora at Tarsus, who went to the court of Augustus, and was made by him tutor to Tibe- rius. Augustus had a great esteem for him, and found him by experience a man of virtue and probity. He was accustomed to speak very freely to the emperor. Before he left the court to return home, he warned the emperor not to give himself up to anger, but, whenever he should be in a passion to rehearse the twenty-four letters of the alphabet before he resolved to say or do any thing. He did not live to see his bad success in the education of Tiberius.

ATHENOPOLIS,a town of the Massilienses, an ancient nation of Gaul, conjectured to be the same with Telo Martius, now Toulon.

ATHENRY, a village of Ireland, in the county of Galway, formerly a borough, and a walled town. In the year 1315 a battle was fought near this town between the English and Irish, in which the latter was defeated. In 1599 the Irish put all the inhabitants to the sword. Distant ten miles east of Galway, ninety-one from Dublin.

ATHENS.

ATHENS, in geography and ancient history, a celebrated kingdom of ancient Greece, the capital of Attica, situated 100 miles N. E. of Lacedxmon and :','20 S. by W. of Constantinople. It is at present the chief town of Livadia, a pro- vinee of the Turkish empire, and is seated in the Gulf of I'.nma, Lori. -23►► .►►►")?' E., lat. 38►► 5′ N.

OIMC.IN AN n A.NC ir.vr N.\Mr.. ►►► The kingdom of Attiea reeeivet! the name of Ogygia, from Ouym'S, commonly placed l.ltU])ears before Christ; but Athens is scarcely mentioned in history till some time after the days of Cecrops, an Egyptian by birth, supposed to be contem- porary with Moses, and affirmed by the Greeks to be the first builder of cities. This leader who appears to have either founded or new modelled the Acropolis, or ancient city, under the name of Cecropia, placed himself at the head of it, and introduced from Sais in Iv^ypt, the worship of Neith, adopted by the people under the name of 'A9r)rt]. In the early ages of Greece, that which was afterwards called the citadel, was the whole city, and called I'olis, or ' the city,' by way of eminence.

Ar.TF.RATioN or NAMF.. ►►► In the reign of Erich- thonius it lost the name of Cecropia, and ac- quired that of Athens, from Af'?;r►►j, the Greek

name of the goddess Minerva, the Neith of the Egyptians already mentioned, who was esteemed its protectress. This old city was seated on the top of a rock in the midst of a large and pleasant plain, which, as the number of inhabitants in- creased, became full of buildings ; which induced the distinction of Acropolis and Catopolis, i. e. of the upper and lower city. The extent of the citadel was sixty stadia ; it was surrounded by olive trees, and fortified with a strong palisade ; in succeeding times it was encompassed with a strong wall, in which there were one very large and eight small gates.

ORIGINAL SUCCESSION AND GOVERNMENT. ••• The successors of Cecrops are but imperfectly known, but, according to the most ancient tradi- tions, they were 1 . Amphictyon ; 2. Erectheus I. the same as Erichthonius, the place of whose in- terment is still called Erectheium. It was this prince who raised an image of Minerva made of olive wood in the Cecropia, and also in honor of the goddess instituted festivals called Athensea, to be celebrated by the twelve Attic cities. To him succeeded 3. Pandion I. 4. Erectheus II. 5. jEgeus. 6. Theseus. The last of whom es- tablished the Prytaneum, a court of judicature common to all Attica; also the Panathenaea,

sacred festivals to be observed by all the pro- vinces in the Erechtheium every five years. His wise government increased the power and popu- lation of Athens, and finally, about the year B.C. 1300, concentrated the other eleven cities of Attica under one general government.

INTRODUCTION OF PELASGI, AND RISE OF ATHENIAN GREATNESS. ••• The Pelasgi came to Athens from the North B. C. 1192, to whom those beautiful specimens of polygonal architec- ture are ascribed, which are found in the ancient fortresses of Greece and Italy, consisting of irre- gular blocks carefully adjusted to each other, without cement, whereas the Cyclopeian, with which it has been frequently confounded, is com- posed of masses laid together and the interstices filled up with smaller stones.

Next to the Pelasgi, Athens stands indebted for much of her early grandeur to Pisistratus, who, with his sons, founded a public library and two magnificent temples, one to Jupiter Olympus, the other to Apollo Pythias, besides which he collected and edited the works of Homer.

INVASION OF XERXES AND RE-BUILDING OF ATHENS. ••• Athens was now rising in population and importance,; possessed of considerable

mari- time ascendency, together with an extent of terri- tory and influence beyond any other state in Greece, Sparta excepted, and the invasion of Xerxes served to raise her to the pinnacle of military glory. It is true the Persians at first were successful in burning and destroying the ancient city founded by Cecrops ; but, after their shameful defeat at Thermopylae, the city of Athens rose from its ruins on an enlarged and improved scale, the queen of empire, enriched by the resources of the invasion, dignified by a naval superiority, by which she commanded the islands of the Archipelago, together with the colonies of Asia, Macedonia, and Thrace, em- bellished by the hand of Minerva, who seems to have employed herself the fifty years intervening between the victory of Salamis and the Pelopon- nesian war, to beautify the city of her residence ; her ancient Cecropian monuments yet remaining upon the Acropolis.

SURVIVES THE PELOPONNESIAN WAR. ••• The- mistocles restored the military works of the city, and fortified it as before. Cimon erected the Temple of Theseus, the Stoa?, the Pcecile, the Di- onysian Theatre, the Gymnasia, together with the ornaments of the Academy and the Agora. Pe- ricles conferred upon it the Odeum, the Parthe- non, and the Propylaea, and numerous other works, rendering it the wonder of nations. The superb glory of Athens was little injured by the war of Peloponnesus. The defeat of .ZEgospo- tami, it is true led to the destruction of the walls of Piraeus, but these were shortly restored, and so skilful was Minerva that defeats as well as vic- tories seemed to raise the political importance, and enrich the site of her favorite capital.

RAVAGES OF PHILIP OF MACEDON. ••• The rise of Macedon seemed however to eclipse the glory of Athens, and her alliance with Rome was the first political blow that tended to the real injury of this ancient city. Philip of Macedon invested her before her allies could come to her succour, and as the city was too well fortified to be taken

easily, he ravaged the suburbs, overthrew the temples, shrines, images, and tombs ; broke the marbles which were too precious to yield to the influence of fire ; the Cynosarges and the Ly- caeum, all the favorite retreats of pleasure and devotion were alike felled by the arm of the destroyer.

SIEGE BY SYLLA. ••• About 84 years B. C. during the Mithridatic war, the Roman Sylla resolved upon the conquest of Athens, and employed all Greece with her arms and trea- sures, to aid his design. He plundered Epi- daurus and Olympia, carried away the pre- cious deposits of Delphi, felled the groves ot the Academy and the Lycaeum. By means of an ill- fortified wall near Heptachalcos he passed the sacred gates at midnight, and the streets of the Cerameicus are said to have run with blood. The city however suffered little, but the destruc- tion of the Piraean fortifications

and the arsenal of Philo prevented the re-assumption of maritime power, and with that fell for ever the political importance of Athens. (Plutarch, in vita Syllae). As a school of science and art, Athens never- theless maintained her dignity among enlight- ened nations, and foreigners from all parts resorted there to attend the lectures of her philo- sophers.

SCIENCE AND ARCHITECTURE. ??? The Romans whose taste in some respects was formed upor. the Grecian models, added considerably to the embellishment of the city. Julius Caesar erected the Propylaea of the new Agora nearly at his own expense. Statues were erected to Brutus and Cassius by the friends of those distinguished Romans. Antony endowed the capital with nu- merous public gifts and a large accession of insular territory ; nor were Augustus and other illustrious personages in that powerful empire remiss in testifying their friendship for the city of Minerva, and some of them were even initia- ted into the Eleusinian mysteries (for the nature of which see ELEUSINIA.) Hadrian, on his ele- vation to the imperial dignity, was one of the greatest benefactors Athens enjoyed after the overthrow of her civil hierarchy. He finished the temple of Jupiter Olympius, which Pisis- tratus had begun ages before, and such was its beauty, costliness, and magnitude, that it was considered the glory of Athens ; superb beyond any other structure in Greece. The temple of the winds, more properly called the Honologium, in the Agora, was the benefaction of Andronicus Cyrrhestes. A new theatre was raised by Agrip- pa, and another was shortly afterwards erected at the foot of the Acropolis by H erodes Atticus, the ruins of which are yet remaining. The casing of the seats of the stadium with pentelic marble, is attributed to the generous profusion of the same illustrious individual.

SPLENDOR UNDER THE ANTONINES. ??? In the Antonine age Athens enjoyed its greatest splen- dor. It had been enriched by the accumulated magnificence of six centuries. The works of the age of Pericles, according to Plutarch, retained the freshness of modern buildings, and a bloom was diffused over them, which preserved their aspect untarnished. Athens, in a remarkable manner escaped the ravages and plunder which

followed the conquest of Greece, and the still more formidable dilapidations of time itself. She sat supreme amid the convulsions of states and changes of governments, rather contributing than otherwise to the imperial grandeur. Having pursued the history of Athens up to the zenith of her glory, we shall present the reader with a brief description of that eminent seat of learning and politeness, as she existed in her prosperous

ages.

APPEARANCE AND HARBOURS. ••• Seated upon a gulf, Athens, commanding three harbours sur- rounded by dock-yards and buildings, forming a continued town more extensive than Athens itself. The first of these was the Piraeus, the piosent Apdewv of the Greeks, the Asian Limani of the Turks, and the Porto Leone of the Italians. The Greek and Italian names being derived from an immense line of Pentelic marble which stood originally upon the beach, nearlythirty-five or forty stadia distant from the city, and was displaced at the Venetian siege. The harbour had three docks, Cantharos, Aphradisium, and Zea; the first de- rived its name from an ancient hero, the second irom the goddess Venus, the third from bread corn ; it was dignified with several public buildings. A stoa, including five distinct stoae or porticos un- der the general name of Macra Stoa; two tem- ples of Venus ; a sanctuary of Jupiter Soter; the Hippodameia, from Hippodamus the architect, which was used as an agora or commercial ex- change; two great fora or markets, one near the portico, the other near tlie city; the tribunal Phreathys; the hath Serangium; a deigma or maritime exchange, and a theatre, about 240 feet in diameter, some traces of which are yet re- maining. The second of these harbours was Mynychia, to the east of I'iraus, from which it is separated by a peninsula of the same name. It is of circular figure, and now called Stratis- tiki, and so strong is this promontory or penin- sula by nature, that Kpimenides said, if the Athe- nians saw what mischief it would one day pro- duce to them, they would eat it away with their teeth. This part of Athens is adorned with a Dionysaic theatre, a temple of Diana of the Doiic order, some remains of which are yet standing on the shore; also a Bendidemm, pro- lialily in honor of the same goddess whose Thracian name was Hendis. The third and' most ancient part was I'iialerum, to the east of Myny- chut, distant fro in the city, according to Thucy- dides, thirty-live stadia, and according to Pausa- mas twenty. It was formerly famous for the temple of Jupiter, Ceres, and Minerva Sciras, whii-h have been long whelmed in ruin, and lost in the lapse of tune.

\ AI.I>, I'OKTII ic ATIONS, &.c ••• 1 'cinceus from its natural division into three great basins, and ,ilso from its great capacity, became an object of capital importance- with the Athenians ; and ac- cordingly it uas fortified strongly in the second } ar of the 1 Vlopnnn.'sian wars. The works which Mil-rounded it consisted of a wall nearly seven

i!cs in length and sixty feet in height. The i••M_; walls ('I' (i [uiKfia 'I n'b or J "

I'-ii.lrd irom the astv or city, on the north to IVir.i'eus, ;i|lvi o!1 t|u. south to 1'lialerum; a dis tance ot live niilis, protecting the city on every M le

irom \;,ieh any 'linger uas apprehended.

These walls ran parallel to each other at the distance of 550 feet, from the centre of the Phaleric hill in the direction of the entrance of the Acropolis. The circumference of the whole walls, including those of the ports, the city, and the long walls, appears to have been about twenty miles. These walls were surrounded with cemeteries. The asty was embraced by the streams of Ilissus and Cephisus, uniting in the marshes of Phalerum The gates were, Melitides, Peiraicae, Acharnicae, Ithoniae, Hippades, Heriaeae, Diomeiae, Diocharis, and Dipylum; called also, Thriasia, Sacra, or Cerameicae.

ENTRANCE FROM THE GATE PEIRAICJE. ••• A cenotaph to Euripides adorned the outside of the gate Peiraicae; within it stood the Pompeion for the arrangement of processions; and the in- terior of the city, from this view, seemed crowded with temples, statutes, and porticoes. The Pnyx (Sui TO TTiirvKV&ffBcu), in which certain popular assemblies were held, stood on the right; the road continuing through the district of Cerami- cus, passed the Stoa Basileius, or portico of the king, where the Archon held his court ; at which point commenced the street of Hermae, so called from Mercury, with whose head it was said to have been adorned ; and after passing a consider- able distance, ended in a stoa called Poecile, from its numerous and highly finished pictures of the taking of Troy, the battle of Marathon, the bat- tle of Theseus and the Amazons, and the battles with the Lacedemonians at (Enoe and Argolis ; to keep alive the remembrance of which the cap- tured shields were also suspended.

Ar.oRA. ••• The Agora, fronting the Poecile, was planted with trees, and beautifully divided into markets, streets, porticoes, public halls, &c. One of these halls was for the assembling of the senate, another for the Prytanes to dine. Here stood a noble temple, also, to the mother of the gods, and altars to the twelve gods, to Pity, Modesty, Fame, and Impetuosity. The Areo- pagus sloped down from the north to a beautiful plane, where stood the temple of Theseus. It was called Mars Hill, because Mars was the first person tried here for murder, viz. for the murder of Ilallirhotius. The Theseium, from its beauti- ful remains, must have been a most magnificent spot. It is a peripteral hexastyle, having on the sides thirteen columns of the doric order, each three feet four inches diameter at the base. The whole building is of pentelic marble, thirty feet in height, from the base to the summit of the pediment. The cell is forty feet in length, and twenty in breadth ; the depth of the posticum is twenty-seven feet; that of the pronaos and por- tico thirty three. Contiguous to the Theseium were the Gymnasium of Ptolemy, the temple of the Dioscuri, and the Horologium of Androni- cus Cyrrhestes. To the south-east stood the Prytaneum or Senate house, from which, the street of the tripods led to the theatre of Bacchus. This street was adorned by the victors in the prize games, and

amongst its magnificent deco- rations stood the choragic monument of Lysicra- tes (the lantern of Demosthenes), the circular roof of which still preserves the triangular apex, intended to receive his native tripod. Adjoining to the theatre above mentioned stood the Odeum

of Pericles, from which, after passing through a gateway erected by Hadrian in the modern walls, arose the temple of Jupiter Olympius, which was completed and dedicated by the same em- peror. It was of decastyle construction consist- ing of one hundred and twenty-four columns, sixteen of which are yet standing. Within it was a colossal statue of the god, made of ivory and gold (chryselephantine). The whole length of the sacred precinct (Trtpi/SoXoe) was 689 feet, and its circuit about half a mile.

THE HILL MUSEUM. ••• The fountain of Enneacrunos or Callirrhoe, the omy natural spring by which Athens was supplied with pala- table water, was on the Ilissus; from which, proceeding to the south-west angle of the walls we come to the hill Musseum, the summit of which is embellished by a monument of the Syrian C. J. Antiochus Philopappus, grandson of Antiochus IV. the last king of Comagene. He erected it on his return to Athens, after having been greatly honored by Trajan at Rome, and even made Consul and Frater Arvˆlis. The lower part was embellished with the grand triumph of his illus- trious patron; above which were seated statues of himself, his grandfather Antiochus, and Seleu- cus Nicator, founder of the original dynasty. This monument has excited a degree of attention little inferior to that of Lysicrates above-men- tioned.

ACROPOLIS. ••• On the north-east side of the Musaem, rises the Acropolis or ancient citadel. The rock is lofty, abrupt, and inaccessible, ex- cept the front, which is toward the Piraeus ; but furnishes a very ample field to the virtuosi. It was filled with monuments of Athenian glory, and exhibited an amazing display of beauty, of opulence, and of art. Heliodorus, named Pe- negetes the guide, has employed on it fifteen books. The curiosities of various kinds, with the pictures, statues, and pieces of sculpture, were so many and so remarkable as to supply Polemo Periegetes with matter for four volumes; and Strabo affirms, that as many would be re- quired in treating of other portions of Athens and of Attica. In particular, the number of statues was prodigious. Tiberius Nero, who was fond of images, plundered the Acropolis as well as Delphi and Olympia ; yet Athens, and each of these places, had not fewer than 3000 remaining in the time of Pliny. Even Pausa- nias seems here to be distressed by the multi- plicity of his subject. But this banquet of the senses has long been

withdrawn ; and is now become like the tale of a vision. The spectator views with concern the marble ruins intermixed with mean flat-roofed cottages, and extant amid rubbish ; the sad memorials of a nobler people ; which, however, as visible from the sea, should have introduced modern Athens to more early notice. The Acropolis has only one entrance, which fronts the Pirreus. The ascent is by tra- verses and rude fortifications furnished with can- non, but without carriages, and neglected. By the second gate is the station of the guard. Over this gate-way is an inscription in large characters on a stone turned upside down, re- cording a present of a pair of gates. Going iarther up, you come to the ruins of the pro-

pylcpa, an edifice which graced the entrance into the citadel. No fewer than four temples were to be passed in this ascent, those of Aesculapius, Themis, Venus and Peitho, also of Tell us and Ceres. Two equestrian statues stood in front of the wings of the propylsea, supposed to represent Marcus Agnppa, and Caius Caesar Octavianus. The propylaea was one of the structures of Pe- ricles, who began it when Euthymenes was archon, 435 years before Christ, and completed it in five years, at the expense of 2012 talents. It was of marble of the Doric order, and had five doors, to afford an easy passage to the multitudes which resorted on business or devotion to the Acropolis Six fluted Doric columns raised on four steps, supported the central pediment, each five feet in diameter, twenty-nine in height, and seven in their intercolumniation, except between the two central columns, where was a space of thirteen feet, for the admission of carriages. Behind was a vestibule forty-three feet in depth, sustained by a double row of six Ionic columns, three and a half feet diameter, and thirty-four in height, three of which were placed on each side, whilst marble beams depending on the lateral walls and columns, supported a painted ceiling of exquisite workmanship. The doors contiguous to the frontage, opened into a portico of the depth of eighteen feet, upon a level of five steps ascent, from which a single step descended to the platform of the Acropolis. The middle door occupied the whole space be- tween the central columns. The next door on each side was of inferior dimensions, and the two extreme doors proportionally smaller. The portico itself consisted of a large square room roofed with slabs of marble which were laid on two great marble beams, and sustained by four beautiful columns. These were Ionic, the pro- portions of that order best suiting the purpose as taller than the Doric. The roof which so ex- quisitely embellished the building, after standing 'above 2000 years, was with all the pediments destroyed in 1687 by the Venetian siege. The right wing of the propylaea is said to have been a temple of Victory. The Athenians related that ./JLgeus stood there, viewing the sea, anxious for the return of his son Theseus from Crete, and precipitated himself at the sight of the black sails. The idol was named Victory without wings, because the news of the success of The- seus did not arrive but with

the conqueror. It had a pomegranate in the right hand, and an helmet in the left. As the statue was without pinions, it was hoped the goddess would remain for ever on the spot. On the left wing of the Propylaea, and fronting the temple of Victory, was a building decorated with paintings by Polygnotus, of which an account is given by Pausa- nias. This edifice, as well as the temple, was of the Doric order, the columns fluted, and without bases. Both contributed alike to the uniformity and grandeur of the design ; and the whole fabric, when finished, was deemed equally magnificent and ornamental. Its roof of white marble, was unsurpassed both in the size of the stones, and in the beauty of their arrangement On the northern side of the Acropolis within the propylaea, stood the celebrated statue of Mi

nerva Promachus, executed by Phidias after the battle of Marathon. Its height together with the pedestal exceeded seventy feet, rising con- siderably above the summit of the parthenon ; the crest of the helmet and point of the spear being seen out at sea, by persons sailing from Servium towards Athens ; and a brazen qua- driga stood near the statue in commemoration of the victory of the Athenians over the Boetians and the Chalcidenses. See HER. v. 79.

The propylaea, according to the Greek his- torians, took five years in building, and was formed after the designs of Mnesicles. It was completed 437 years B.C. and was estimated by Heliodorus, as cited by Harpocration, at 2012 talents, or ––452,700 sterling, and was the most expensive of all the works of Pericles. PARTHENON. ––– But the chief glory of the Acropolis is said to have been the Parthenon, or temple of Minerva, so elevated that the pave- ment of its peristyle was on a level with the capitals of the eastern portico of the propylaea. It was a peripteral octostyle of the Doric order, with seventeen columns on the sides, each six feet two inches in diameter at the base, and thirty- four feet in height, elevated on three steps. Within the peristyle, at each end stood six columns of 5ˆ feet diameter, forming a vestibule to the cell which rose two steps from the peris- tyle level. The cell itself contained two cham- bers of sixty-two feet six inches in width, and of lengths differing from forty-three feet ten inches, to ninety-eight feet seven inches, the roof of the former being supported by four columns of four feet diameter, and of the latter by sixteen of three feet diameter. The height of the temple from the base to the pediment being fifty-six feet, and the dimensions of the area 228 feet, by 102. The pediment contained two compositions of about eighty feet in length, each containing upwards of twenty colossal statues, in two groups, the first representing the birth of the goddess Minerva, and the second her contest

with Neptune, for the government of Attica. The figures of the western pediment enumerating them from the left were Cecrops. Aglaurus, Theseus, Ik-be, Kresichthon, Pandrosus, Victory without wings drawn in a Higa by two horses, Krechtheus, Minerva and Jupiter in the centre, and to the right, Neptune, Thalassa, Latona, Mercury, Maia, Vesta, Mars and Venus. The figures which occupied the eastern pediment have never been perfectly ascertained. Some of them, however, were Hyperion, Hercules, Venus, Iris, IVitho, Vesta, Proserpine, Victory with wings, ('ores, and the car of Night. The frieze advancing in two parallel columns from west to east, was sculptured on both sides, and contained a representation of the Panathenaic procession. Six seated figures of deities also represented the head of each column, while the central group represented the presentation of the peplus to the second archon. Of the ninety-two metopes which anciently adorned the frieze of the peristyle, these on the south side, some of which are now in the British Museum, contained each a cen- taur, ;ind hence those only of the eastern side have been assigned to the actions of Mi- i erva ; those of the western to some other point

of Athenian history, the subject of which has been lost ; those of the northern to the Amazo- nian war ; those of the southern to the war with the Centaurs. A chryselephantine statue of Minerva stood in the Opis, thodomos thirty-nine feet in height, the buskins sculptured with the battle of the Centaurs, and the ./Egis which lay at her feet containing a representation of the battle of the Amazons on the outside, and on the inside that of the Titans. Ictinus is said to have been the architect of this temple ; Phidias the artist ; and the entire cost one million and a half sterling. The remains of this beautiful specimen of ancient architecture have been described by Dr. Chandler, a few extracts from whose obser- vations we shall subjoin. ' The chief ornament,' he observes, ' of the Acr6polis was the Par- thenon or great temple of Minerva, a most superb and magnificent fabric. The Persians had burned the edifice, which before occupied the site, and was called hecatompedon, from its being 100 feet square. The zeal of Pericles and of all the Athenians was exerted in providing a far more ample and glorious residence for their favorite goddess. The architects were Calli- crates and Ictinus ; it was of white marble, of the Doric order, the columns fluted and without bases, the number in front eight ; and adorned with admirable sculpture. The story of the birth of Minerva was carved in the front pediment ; and in the back, the contest with Neptune for the country. The statue of Minerva, made for this temple by Phidias, was of ivory, twenty-six cubits or thirty-nine feet high. It was decked with pure gold to the amount of forty-four talents, so disposed by the advice of Pericles as to be taken off and weighed, if required. This image was placed in the temple in the first year of the eighty-seventh Olympiad, in which the Peloponnesian war began. The gold was stripped off by the tyrant Lachares, when

Demetrius Polior- cetes compelled him to fly. The same plunderer plucked down the golden shields in the Acropolis, and carried away the golden Victories, with the precious vessels and ornaments provided for the Panathenaean festival. The Parthenon remained entire for many ages after it was deprived of the goddess. The Christians converted it into a church, and the Mahommedans into a mosque. It is mentioned in the letters of Crusius, and miscalled the Pantheon, and the temple of the unknown God. The Venetians under Konings- mark, when they besieged the acropolis in 1687, threw a bomb, which demolished the roof, and setting fire to some powder, did much damage to the fabric. The floor, which is indented, still witnesses the place of its fall. This was the sad forerunner of farther destruction ; the Turks breaking the stones, and applying them to the building of a new mosque, which stands within the ruin, or to the repairing of their houses and the walls of the fortress. The vast pile of pon- derous materials, which lay ready, is greatly di- minished ; and the whole structure will gradually be consumed and disappear. The temple ot Minerva in 1676 was, as Wheeler and Spon assert, the finest mosque in the world, without comparison. The Greeks had adapted the fabric to their ceremonial by constructing at one end a

semicircular recess for the holy tables, with a window : for before it was enlightened only by the door, obscurity being preferred under the heathen ritual, except on festivals, when it yielded to splendid illuminations ; the reason, it has been surmised, why temples are commonly found simple and unadorned on the insides. In the wall beneath the window were inserted two pieces of the stone called phengites, a species of marble discovered in Cappadocia in the time of Nero ; and so transparent that he erected with it a temple to Fortune, which was luminous within, when the door was shut. These pieces were perforated, and the light which entered was tinged with a reddish or yellowish hue. The picture of the Panagia or Virgin Mary, in Mo- saic, on the ceiling of the recess, remained ; with two jasper columns belonging to the screen, which had separated that part from the nave; and within, a canopy supported by four pillars of porphyry, with Corinthian capitals of white marble, under which the table had been placed ; and behind it, beneath the window, a marble chair for the archbishop ; and also a pulpit, standing on four small pillars in the middle aisle. The Turks had white-washed the walls, to obli- terate the portraits of saints, and the other paint- ings with which the Greeks decorate their places of worship ; and had erected a pulpit on the right hand for the iman or reader. The roof was disposed in square compartments ; the stones massive ; and some had fallen in. It had been sustained in the Pronaos by six columns ; but the

place of one was then supplied by a large pile of rude masonry, the Turks not having been able to fill up the gap more worthily. The roof of the naos was supported by colonnades ranging with the door, and on each side ; consisting of twenty-two pillars below, and of twenty-three above. The odd one was over the entrance, which by that disposition was left wide and un- embarrassed. In the portico were suspended a few lamps, to be used in the mosque at the seasons when the Mussulmans assemble before day-break, or to be lighted up round the mi- naret, as is the custom during the Ramazan or Lent. It is not easy to conceive a more striking object than the Parthenon, though now a mere ruin. The columns within the naos have all been removed : but on the floor may be seen the circles which directed the workmen in placing them ; and at the farther end is a groove across it, as for one of the partitions of the cell. The recess erected by the Christians is demolished ; and from the rubbish of the ceiling, the Turkish boys collect bits of the Mosaic, of different colors, which composed the picture. We are told at Smyrna, that this substance had taken a polish, and been set in buckles. This cell is about half demolished ; and in the columns which surround it, is a large gap near the middle. On the walls are some traces of the paintings. Before the portico is a reservoir sunk in the rock, to supply the Turks with water for the purifications custo- mary on entering their mosques. In it, on the left hand, is the rubbish of the pile erected to supply the place of a column ; and on the right a staircase which leads out on the architrave, and has a marble or two with inscriptions, but worn

so as not to be legible. It belonged to the mi- naret, which has been destroyed. The travellers, to whom we are indebted for an account of the mosque, have likewise given a description of the sculpture then remaining in the front. In the middle of the pediment was seen a bearded Ju- piter, with a majestic countenance, standing, and naked ; the right arm broken. The thunderbolt, it has been supposed, was placed in that hand, and the eagle between his feet. On his right wag a figure, it is conjectured, of Victory, clothed to the mid-leg ; the head and arms gone. This was leading on the horses of a car, in which Minerva sat, young and unarmed ; her head-dress, instead of a helmet, resembling that of a Venus. The generous ardor and lively spirit visible in this pair of celestial steeds, was such as bespoke the hand of a master, bold and delicate, of a Phidias or Praxiteles. Behind Minerva was a female figure, without a head, sitting, with an infant in her lap ; and in this angle of the pediment was the emperor Hadrian with his arm round Sabina, both reclining, and seeming to regard Minerva with pleasure. On the left side of Jupiter were five or six other trunks to complete the assembly of deities into which he received her. These figures were all wonderfully carved, and appeared as big as life. Hadrian and his consort, it is likely, were complimented by the Athenians with places among the marble gods in the pediment, as benefactors. Both of them may be

considered as intruders on the original company ; and pos- sibly their heads were placed on trunks, which before had other owners. They still possess their corner, and are easy to be recognised, though not unimpaired. The rest of the statues are defaced, removed, or fallen. Morosini was ambitious to enrich Venice with the spoils of Athens; and by an attempt to take down the principal group, hastened their ruin. In the other pediment is a head or two of sea-horses finely executed, with some mutilated figures; and on the architrave beneath them are marks of the fixtures of votive offerings, perhaps of the golden shields, or of festoons suspended on solemn occasions, when the temple was dressed out to receive the votaries of the goddess.'

ERECHTHEIUM. ??? The erechtheium, about 160 feet north of the parthenon, containing the united temples of Minerva, Polias Pandrosus, or, ac- cording to some writers, Neptune, was of irre- gular figure, the eastern front of which pre- sented a hexastyle Ionic colonnade, the western being pseudo-pejipteral, and the entablature supported by half columns. Two deities are supposed to have inhabited two great divisions in the interior. The Pandrosseium (according to some) on the western side, opened into porticoes to the north and south ; the former being tetra- style, and the latter supported by six caryatides. This beautiful edifice was small, the entire area not exceeding sixty-three feet by thirty-six, nor the height twenty. Here was preserved the mark of Neptune's trident, which struck when the horse issued forth; also the olive-tree of Mi- nerva ; an image of the goddess which fell from heaven, before which was suspended a golden lamp, the wick of which, being Carpathian flax, never consumed, and required oil but once a

year ; together with a brazen palm-tree above it, which carried off' the smoke ; the wooden Hermes presented by Cecrops ; the chair by Daedalus ; the scimitar of Mardonius ; the breastplate of Masistrus, who commanded the Median cavalry at Plataea ; and numerous groups of statues.

As Dr. Chandler's description of this celebrated depository of arts, at the time of his visit, is highly interesting, we shall again refer the reader to that authority. ' Neptune and Minerva/ ob- serves the Dr. ' once rival deities, were joint and amicable tenants of the Erechtheium, in which was an altar of Oblivion. The building was double, a partition wall dividing it into two tem- ples, which fronted different ways. One was the temple of Neptune Erechtheus, the other of Mi- nerva Polias. The latter was entered by a square portico connected with the marble skreen, which fronts towards the

propylaea. The door of the cell was on the left hand ; and at the further end of the passage was a door, leading down into the Pandroseum, which was contiguous. Before the temple of Neptune Erectheus, was an altar of Jupiter the supreme, on which no living thing was sacrificed, but they offered cakes without wine. Within it was the altar of Neptune Erec- theus ; and two, belonging to Vulcan, and a hero named Butes, who had transmitted the priesthood to his posterity, which were called Butadse. On the walls were painting of this illustrious family, from which the priestess of Minerva Polias was also taken. It was asserted, that Neptune had ordained the well of salt water, and the figure of a trident in the rock, to be memorials of his con- tending for the country. The former, Pausanias remarks, was no great wonder, for other wells of a similar nature, were found inland; but this, when the south wind blew, afforded the sound of waves. The temple of Minerva Polias was de- dicated by all Attica, and possessed the most ancient statue of the goddess. This temple was burned when Callias was Archon, twenty-four years after the death of Pericles. Near it was the tomb of C'ecrops, and within it Erectheus was buried. The ruin of the Erectheum is of white marble ; the architectural ornaments of very exquisite workmanship, and uncommonly curious. The columns of the front of the temple '. >f Neptune arc standing with the architrave; mid also the skreen and portico of Minerva J'olias, with a portion of the cell, retaining traces Ci" '..'.ic partition wall. The order is ionic. An (difice revered by ancient Attica, as holy in the highest degree, was, in 1G7G, the dwelling of a Turkish family, and is now deserted and neg- lected ; but many ponderous stones and rubbish must be removed before the well and trident would appear. The former, at least, might pro- bably be discovered. The portico is used as a powder magazine ; hut we obtained permission to dig and to examine the outside. The door- way of the vestibule is walled up, and the soil risen nearly to the top of the door-way of the Pandroseum. l!y the portico is a battery com- manding the town, from which ascends an amusing hum. The Turks tire from it, to give notice of the commencement of Kama/an, or of their Lent, and of Hainan, or the holy days.'

Siiiuois (ivMNASiA. &c. ••• The schools and

places of public instruction of Athens during her prosperity were several : the most celebrated were two called Ceramicus; one within the city, containing a multitude of buildings of all sorts ; the other in the suburbs, in which was the academy and other edifices. There were many gymnasia in Athens ; the most remarkable were the Lyceum, Academia, and Cynosarges. The Lyceum stood on the banks of Ilissus ; some say it was built by Pisistratus, others by Pe- ricles, others by Lycurgus. Here Aristotle taught philosophy, instructing such as came to hear him as they walked, whence his disciples derived the name of Peripatetics. It was also the place where the Polemarch kept his court, and the chief gymnasium of the

Athenian youth. The ceramicus without the city was six stadia from its walls. The academy made part thereof. It was a marshy unwholesome place till Cimon got it drained, and then it becamei extremely pleasant and delightful, being adorned with shady walks, where Plato read his lectures, and from thence his scholars were styled Academics. The Cynosarges, sacred to Hercules, and com- monly considered as the position occupied by the Athenians after the battle of Marathon, when the Persians sailed to Phalerum, was a place in the suburbs not far from the Lyceum ; it was famous on many accounts, but particularly for a noble gymnasium erected there, appointed for the spe- cial use of such as were Athenians only by one side. Themistocles got much ill-will by car- rying many of the nobility to exercise with him here, because, being but of the half-blood he could exercise nowhere else but in this gymna- sium. Antisthenes instituted a sect of philoso- phers, who from the name of this district, as many think, were styled Cynics.

Of the walls of the acropolis the southern is called the Cimonian and the northern the Pe- lasgic ; both commonly attributed to Cimon and Themistocles. A few rude fragments of the an- cient Hecatompedum are still remaining in the latter, of Doric architecture, supposed to be the workmanship of the original Pelasgi, who first fortified the citadel anterior to the invasion of the Persians. On the northern side of the Propylaea is still to be seen an ancient grotto, consecrated to Apollo and Pan, in which the former received the favors of Creusa, daughter of Erectheus. It was descended by a flight of steps.

The other remarkable places and erections are the Stadium, south of the Lyceum, constructed by Lycurgus for the contest of the panathenaic festival, 350 B. C., and afterwards covered with marble by Herodes Atticus. It measured 675 feet by 130, and was capable of accommodating upwards of 25,000 persons. The temple of the Eumenides stood upon the hill Colonos, sacred to Neptune, and celebrated in the history of (Edipus. It was about a mile and a quarter north of the walls, and between it and the city lay the sepulchral plain. To the east rises a hill, supposed to be the mount Anchesmus of the an- cients, and at present one of the most remark- able features of modern Athens, occupied by the church of St. George.

REMAINS OF THE TEMPLE OF JUPITER OLYM- PIUS. ??? The ruins of the temple of Jupiter Olym-

pins and several other remarkable antiquities rje ihus described by the

celebrated gentleman to whom we have already referred. ‘ The ruin of t’ie temple of Jupiter Olympius,’ says he, ‘ con sists of prodigious columns, tall and beautiful, of the Corinthian order, fluted ; some single, some supporting their architraves ; with a few massive marbles beneath ; the remnant of a vast heap, which only many ages could have con- sumed and reduced into so scanty a compass. The columns are of very extraordinary dimen- sions, being about six feet in diameter, and nearly sixty in height. The number, without the cell, was 116 or 120. Seventeen were standing in 1 676 ; but, a few years before we arrived, one was overturned with much difficulty, and ap- plied to the building a new mosque in the bazai; or market-place. This violence was avenged by the bashaw of Negropont, who made it a pretext for extorting from the vaiwode, or governor, fifteen purses ; the pillar being, he alleged, the pro- perty of their master, the grand seignior. It was an angular column and of consequence in determining the dimensions of the fabric. We regretted that the fall of this mighty mass had not been postponed until we came, as it would have afforded an opportunity of inspecting and measuring some members which we found far too lofty to be attempted. On a piece of the architrave, supported by a couple of columns, are two parallel walls of modern masonry, arched about the middle, and again near the top. You are told it has been the habitation of a hermit, doubtless of a Stylites ; but of whatever building it has been part, and for whatever purpose de- signed, it must have been erected thus high in air while the immense ruin of this huge struc- ture was yet scarcely diminished, and the heap inclined so as to render it accessible. It was re- marked that two stones in a step in the front had coalesced at the extremity, so that no juncture could be perceived ; and the like was discovered also in a step of the Parthenon. In both in- stances it may be attributed to a concretory fluid, which pervades the marble in the quarry. Some portion remaining in the pieces when taken green, as it were, and placed in mutual contact, it exuded and united them by a process similar to that in a bone of an animal when broken and properly set. Besides the more stable antiqui- ties, many detatched pieces are found in the town, by the fountains, in the streets, the walls, the houses, and churches. Among these are fragments of sculpture, a marble chair or two, which probably belonged to the gymnasia or theatres ; a sun-dial at the catholicon, or cathe- dral, inscribed with the name of the maker ; and, at the archiepiscopal house close by, a very cu- rious vessel of marble, used as a cistern to re- ceive water, but once serving, it is likely, as a public standard or measure. Many columns occur with some maimed statues and pedestals, several with inscriptions, and almost buried in earth. A custom has prevailed, as at Chios, of fixing in the wall, over the gateways and doors of the houses, carved stones, most of which ex- hibit the funeral supper. In the courts of the houses lie many round stelae or pillars, once placed on the graves of the Athenians; and a

great number are still to bi seen applied to the same use in the Turkish burying-grounds before the acropolis. These generally have concise in- scriptions containing the name of the 'person, and of the town and tribe to which the deceased belonged. Another species, which resembles our modern head-stones, is sometimes adorned with sculpture, and has an epitaph in verse. We saw a few mutilated hermae. These were busts on long quadrangular bases, the heads frequently of brass invented by the Athenians. At first they were made to represent only Hermes or Mercury, and designed as guardians of the se- pulchres in which they were lodged, but after- wards the houses, streets, and porticoes of Athens, were adorned with them, and rendered vene- rable by a multitude of portraits of illustrious men and women, of heroes, and of gods ; and it is related that Hipparchus, son of Pisistratus, erected them in demi or borough towns, and by the road side, inscribed with moral apophthegms in elegiac verse ; thus making them vehicles of instruction.'

DECLINE OF ATHENS. ••• The decline of Athens, one of the most remarkable subjects of history, was occasioned by that great revolution which took place in the moral world upon the propa- gation of Christianity and the consequent anni- hilation of those idolatrous superstitions which had been handed down from the ages bordering on the deluge. The general conduct of the early Christians, wherever their influence extended, was to destroy all works of pagan architecture dedicated to the purposes of superstition, whilst, by propagating the gospel and thoroughly extin- guishing the principles that gave birth to them, no hope remained of their reproduction. At Athens, however, the early Byzantine emperors forbore to destroy these sacred edifices, and in lieu of it consecrated them to the Christian cause. Even Alaric used every effort for the preserva- tion of Athens, and the noble statue of Minerva Promachus still crowned the city and towered above the uninjured Parthenon at the close o••• the fourth century. During the ducal govern- ment of the Franks, however, the city dwindled to the rank of a provincial town, and in 1436 Omar took possession of it in the name of Ma- homet. This was shortly followed by the ruin of the city and the demolition of those stupend- ous works of art which had been the wonder of so many ages.

VENETIAN INVASION ••• In 1687 the Venetians, as already intimated, under count Koningsmark, a Swede, besieged the acropolis. The explosion of the beautiful temple of Victory without wings, (VIKTI avrtpoc) the frieze of which is now in the British Museum, followed the bombard- ment ; an explosion of the Parthenon followed ; the eastern wall and statues of that pediment were thrown to the ground; the middle of the temple was destroyed ; the western front consi- derably shaken, and little less except part of the opisthodomos and a few of the lateral columns of the peristyle adjoining the cell were left stand- ing. These two celebrated

temples, which had been used by the Turks as powder-magazines, constituted the chief glory of Athens, and after the destruction of these she surrendered. During

the short time the Venetians held possession of the city several ancient monuments were de- stroyed. A celebrated car of Victory, which stood on the western pediment of the Parthenon, with horses of a natural size, was taken down by the Doge Morosini, with a view of being re- moved to Venice, but in lowering it to the ground the engineers suffered it to fall, by which it was entirely destroyed.

KNOWLEDGE OF ATHENIAN ANTIQUITIES IN EUROPE. ❖❖❖ The antiquities and works of Athens were little noticed in Europe till the close of the 17th century. The accounts received by means of travellers had been mostly perplexed and mis- taken. Some called the Parthenon the pantheon, and^described it to be oval, others thought it the temple of the unknown God, mentioned in the narrative of the apostle Paul. Sir G. Wheeler, and Dr.Spon,who visited Athens before the Ve- netian siege, were the first who by their descrip- tion of the city impressed European nations with the great value of these celebrated remains. The Dillettanti society employed Dr. Chandler, already quoted, to visit this famous depository of the sciences, and examine its antiquities and topography. Mr. Stuart, an ingenious artist, also went over from England, and employed three years in studying and forming correct draw- ings of its principal remains.

LAI HAUL!, EFFORTS OF LORD ELGIN. ❖❖❖ Lord Elgin, on his appointment as ambassador to the Porte in 1790, established a society of distin- guished artists in Athens, who in three years presented him with a complete body of finished drawings of the plans and details of the most important monuments and remains, accompanied by just admeasurements of the elevation and extent, besides bas reliefs and characteristic fea- tures of Athenian architecture, moulded from the originals, in which they were the more diligent, as the Turks from motives of avarice were in the habit of breaking up marbles, in the hope of finding some hidden treasure under them, and of defacing the most perfect sculptures from motives of superstition. The British ambassador, who appears to have been a man of taste and genius, employed his interest at the Porte in obtaining permission to remove some of the most valuable marbles, and transfer them to England, the French having removed some valuable deposits to the gallery of the I.ouvre.

LOUD ELGIN'S COLLECTION OF ANTIQUITIES, &.c. ❖❖❖ Lord Elgin's collection consisted chiefly of the following articles : Several original Metopes from the interior frie/e of the Parthenon, descrip- tive of the combat between the Centaurs and the Lapithte ; part of the outer frie/e of the same temple, representing the procession at the Pana- thenaic festival, both of which occupied the pedi- ments of the (astern and western fronts, the former being in such high relief as to seem groups of statues. Several inscriptions after the Kionedon manner, in which singular care is taken to preserve an equal number of letters in each line, occasionally even to the division of monosyllables. A Doric capital, assizes of the columns, a triglyph, some of the modules of the cornice, and a few of the marble tiles (antefixa,) which roofed the original ambulatory. Models

of the metopes in the temple of Theseus, contain- ing the labors of Theseus and Hercules, taken from the interior frieze, representing the battle of the Centaurs and Lapithae ; together with seve- ral incidents of the battle of Marathon. The temple being in a considerable state of preser- vation, the originals could not be obtained. In addition to these he obtained from the vestibule of the temple of Neptune, and that of Minerva Polias, in the Erechtheium, a capital, a base, and some original blocks of the frieze and cor- nice, with plans of the architecture, &c. From the adjoining Pandroseium, one of the Caryatides. From the temple of the bearded Bacchus, a sta- tue of the god, and a sun-dial, said to have existed in the time of the tragedians. The con- vents and other buildings furnished bronzes, cameos, intaglios, and medals. Besides the above laudable undertakings, he traced the walls of the city, made extensive excavations, and, from the numerous tumuli which opened in the sub- urbs, formed a magnificent collection of the vases hitherto improperly denominated Etruscan. But perhaps one nf his most successful efforts was the removing of the celebrated Boustrophedon inscription, which anciently adorned the Sigean promontory. This celebrated monument had for some time formed a seat at the door of a Greek chapel, and was the resort of persons afflicted with the ague; the letters having been nearly obliterated by the numbers of patients who had reclined upon it. The most valuable part of his collection has been thought by some to be a complete series of Doric, Ionic, and Corinthian capitals, from the birth of Athenian architecture to its greatest height under Pericles. The same gentleman obtained some fragments of the tem- ple of Victory without wings, on the right of the propylaea, representing scenes from the battles of Marathon, Salamis, and Plataea, which had been built in the wall of a powder magazine ; the finest blocks of the whole being placed in an in- verted position. These and some other sculptures were afterwards embarked for England, but un- happily wrecked off the island of Cerigo. Many cases however by the assistance of the most ex- pert divers were obtained from the vessel, at the depth of twenty

fathoms of water, and the remain- der, although two successive winters of laborious exertion were employed about them, were left upon the wreck. On the acquisition of so nu- merous a collection of remains from the most valuable part of Athenian antiquity, the British ambassador conceived the idea of engaging the most distinguished of the modern artists, to at- tempt their restoration, but they declined the task. Canova, in particular, affirmed that the marbles of the ancient parthenon had never been retouched, and were so superior in their style of execution, that it would be sacrilege for any man to presume to violate them with a chisel. They were therefore transported to England as Athe- nian originals, and purchased by a ►►35,000 grant ►►f Parliament, to enrich the British Mu- seum, where they still remain to guide the im- provements of taste, and excite the emulation of modern genius.

PRESENT STATE OF ATHENS. ►►► The present state of Athens, like that of most other celebra-

ted cities of antiquity, exhibits a remarkable spectacle of fallen greatness. The Acropolis was converted into a Turkish fortress, and placed under the government of a waywode, or lieute- nant, who is chief black eunuch of the seraglio. The town is surrounded by an insignificant wall, about ten feet in height, far short of the dimen- sion of its ancient circumference. The streets are narrow. The population is diminished to one-tenth of its number in the time of De- mosthenes, said to have been 1 16,000. The Acro- polis is disfigured by a huge Venetian tower,

erected when under the dominion of that republic, the architecture of which looks the more barba- rous, from the highly finished models that sur- round it. The parthenon is degraded in the front by a mean house, in which resides the disdar, or governor of the fortress, and the south- east angle exhibits a wretched mosque. The town is chiefly inhabited, by Turks and Christians of the Greek church. It is the see of an arch- bishop, under whom five archons and a number of secretaries are appointed to the management of its ecclesiastical concerns.

ATHENS, a flourishing post town of New York, on the west bank of the Hudson, opposite Hud- son city. The situation of this place is pleasant, and very eligible for trade. It contains a Lu- theran church, three school-houses, and a mar- ket-house, an extensive rope-walk, a large dis- tillery, a pottery

of stoneware, and other smaller manufactories. Population 1000. Twenty-eight miles south of Albany.

ATHERINA, in ichthyology, a genus of fishes of the order of abdominales. The characters of this genus are these : ??? the upper jaw plain ; the rays of the branchiostege membrane are six ; and the side belt or line shines like silver. The spe- cies are two, viz.

1. A. hepsetus, the smelt, with about twelve rays in the fin next the anus. It is found in the Mediterranean, and is also very common in the sea near Southampton. The highest season is from March to the beginning of June ; in which month it spawns. It is also found on other coasts of our island.

2. A. menidea, has twenty-four rays in the fin next the anus. This is a very pellucid fish, with many black points interspersed; it has many teeth in the lips, but none in the tongue or jaws. It is found in the fresh waters^ of Carolina, and spawns in April.

ATHER1NOIDES, a species of clupea, dis- tinguished by a silvery lateral line. In the dor- sal fin are twelve rays; fourteen in the pectoral fins ; eight in the ventral fins ; thirty-two in the anal fin ; and eighteen in the tail. It is a native of Surinam.

ATHERIX, in entomology, a genus of the order diptera, and family rhagionidce. Its ge- neric characters are antennae moniliform ; the third joint not ringed, but terminated by a seta, the palpi erect. The only known species is ma- culatus, found in the woods of Great Britain.

ATHEROMA, a. kind of tumor, occurring chiefly in the neck and arm-holes, and contain- ing matter resembling aQypa, or pap, intermixed with hard and stony particles. These tumors are easily cured by incision.

ATHKSIS, in ancient geography, a river of Cisalpine Gaul, which, rising in the Rhaetian Alps, runs southward, and washes Tridentum and Verona, which last it divides ; and after- Vards bends its course eastward, and falls into the Adriatic, between Fossa Claudia and Phi- listma. It separated the country of the Euganei from that of the Veneti. It is now called the Adiee.

ATHIAS (Joseph), a learned Jewish printer in the seventeenth century. He resided at Am- sterdam, where, in 1667, he published a Hebrew bible, which is held in great estimation. He likewise printed the bible in Spanish, German, and English. The States presented him with a gold medal and chain, as a mark of the value they put upon his labors.

ATHIRST. On thirst. See THIRST. With scanty measure then supply their food ;

And, when athirst, restrain 'em from the flood.

Dryden.

Unnumbered suppliants crowd Preferment's gate, Athirst for wealth, and burning to be great ; Delusive Fortune hears the incessant call, They mount, they shine, evaporate, and fall.

Johnson.

ATHLETjE, A^\?jrjjc, Gr. from ►►0\oc, a com- bat ; in antiquity, persons of strength and agility, disciplined to perform in the public games. Un- der Athlete were comprehended wrestlers, boxers, runners, leapers, throwers of the disk, and those practised in other exercises, exhibited in the Olympic and Pythian games, &c. for the con- querors in which there were established prizes. To obtain a firm, bulky, weighty body, "by force of which they frequently overpowered their an- tagonist, they fed altogether on dry, solid, and viscous meats. In the earlier times their chief food was dry figs and cheese, which was called arida saginatio,j;fpa rpo0►►j. Oribasius first brought this in disuse, and substituted flesh instead of these. They had a peculiar bread, called icoXjjria : they exercised, eat, and drank, without ceas- ing ; were not allowed to leave off eating when satiated, but were obliged to cram on till they could hold no more ; by which means they at length acquired a degree of voracity, which to us seems incredible, and a strength proportional. Pausanias relates of Milo, the Crotonian, that he carried a bull on his back a considerable way, then knocked him down with a blow of his fist, and, lastly, devoured him at a meal !

ATH'LETE, 1 A0\ijri)c, a wrestler in the

ATH'LETICK.) agonistic exercises of the Greeks; from a9\of, labor. One whose phy- sical powers enable him to labor, struggle, contend.

And health itself, if it be athletic, may by its very excess become dangerous. Bp. J. Taylor.

Science distinguishes a man of honour, from one of those athletic brutes, whom undeservedly we call heroes. Dryden.

Was he [the wise man] in adversity ; he equally returned thanks to the director of this spectacle of

ATI!

human life, for having opposed to him a vigorous athlete, over whom, though the contest was likely to be more violent, the victory was more glorious and equally certain. Smith'* Moral Sentiments.

ATHLON, Gr. AOXov, in antiquity, the prize adjudged to the victor, in the athletic exercises, at the public games.

ATHLON E, a town of Ireland, pleasantly si- tuated on both sides of the Shannon ; the one half lying in the county of Westmeath, and the other in that of lloscommon. These divisions of the town are united by a well built bridge, in the middle of which stands a monument, on which there are some badly executed figures and in- scriptions, celebrating the success of Queen Elizabeth of England, and relating how the rebels in her reign were executed, quartered, and their skulls, &c. stuck upon poles, about the country, and at Dublin castle ; and every thing brought into a state of the greatest prosperity. Athlone, though so advantageously situated for trade, still remains a poor, ruinous, neglected, dirty place. The castle was founded by king John, on some land belonging to St. Peter's abbey, for which he granted a compensation. It is built on a high raised round hill, resembling one of the Danish forts. It had formerly two con- vents, and was strongly fortified. In 1691 part of the English army under General Ginckle, although the Irish were strongly entrenched on the opposite shore, forded the river, stormed and took possession of the town, not losing more than fifty men in the attack ; which is esteemed as bold an enterprise as any recorded in history. General Ginckle obtained the title of Karl of Athlone, as a reward for his services. There are generally two troops of horse, and tour compa- nies of foot, quartered at Athlone. Athlone is fifty-nine miles west from Dublin. This place returns one member to parliament.

ATH LOTH ETA, in antiquity, an officer ap- pointed to superintend the public games, and adjudge the prizes. The athlotheta was other- wise called rtsymneta, brabeuta, &c.

ATHNACll, tin; name of one of the principal of the Hebrew accents, which serves not only to reuulate the voice, but to distinguish the mem- bers of a sentence, whence its name athnach, i.e. respiration. On this account it is called king ami pause, and answers to our colon, and some- times to a note of interrogation. It is marked under a letter thus ; A.;.

AT11OL, or Ai HOI. i., the most northern dis- trict, of 1'ei'thshire in Scotland, extending in length foity-three miles, and in breadth thirty. The country is very rouuh and mountainous, and contains part of the ancient Caledonian forest: but these mountains are interspersed with fruit- ful

valleys. It has several villages, but no town of any consideration. The most noted place is Hlair castle, which belongs to the duke of Atholl, who derives his title from this district. In the neighbourhood is the pass of Killicranky, ren- dered memorable by the battle fought there, in the beginning ot kni'j; \ illiam's reign, between general M'Kay, and the Highlanders adhering to kip'j; James.

AT 11 OS, a mountain of (halcidia in Macedo- nia, celebrated in ancient anil modern times.

The ancients entertained extravagant notions concerning its height ; and it was a received opi- nion, that the summit of mount Athos was above the middle region of the air, and that it never rained upon it. Its modern name of Monte Santo (Holy Mount) it has got from the number of Greek monasteries that are built on it. They amount to nearly thirty, are protected by fortifi- cations from the incursions of the corsairs, and are inhabited by about 6000 monks, who lead a life of monotony and indolence. The air is re- markably pure, and many of the inhabitants reach a great age. About half-way up the hill lies a small town, called Kareis, which is also fortified, and is the seat of the Turkish aga. A market is held here every Saturday, from which females are excluded. They pay an annual tri- bute for protection to the Turkish government. The manuscripts in their libraries have been recently examined, and some account of them will be found in Dr. Clarke's Travels. Accord- ing to the accounts of modern travellers, this mountain advances into the Archipelago, on the south of the Gulf of Contessa, and is joined to the continent by an isthmus about half a league in breadth. It is about thirty miles in circum- ference, and two in perpendicular height. It abounds with many different kinds of plants and trees, particularly the pine and fir. In the val- leys grows a plant called elegia, whose branches serve to make pens for writing. Through this mountain, or rather through the isthmus behind it, Xerxes, king of Persia, is said to have cut a passage for his fleet when about to invade Greece. In this work he spent three whole years, and employed in it all the forces on board the fleet. He is also said, before the work was be- gun, to have written the following ridiculous letter to the mountain : ' Athos, thou proud and aspiring mountain, that liftest up thy head to the very skies, I advise thee not to be so audacious, as to put rocks and stones, that cannot be cut, in the way of my workmen ! If thou makest that opposition, I will cut thee entirely down, and throw thee headlong into the sea ! ' The direc- tors of this enterprise are said to have been Bubaris, the son of Megabyzus, and Artacheus, the son of Arbeus, both Persians ; but, as no traces of such a great work remain, the truth of the whole relation has been questioned. Dino- crates, a sculptor, who followed the march of Alexander, offered to convert mount Athos into a statue of that king, holding a town in his right hand, and in his left a basin large enough to contain all the waters that

flowed from it ; but the proposal was deemed too extravagant to be accepted. This venerable mountain constitutes one entire chain, extending seven miles in length, and three in breadth, and is situated about seventy miles east of Salonichi, the ancient Thes- salonica.

ATHULIA, in entomology, a very small spe- cies of papilio, found in the northern parts ot Russia. This is the papilio phcebe of Esper, and belongs to the family satyri in the Fabrician system.

ATHWART, prep. & adj. From to thwart. Across ; in a transverse direction ; figuratively, wrong, in a vexatious manner.

There let the classic page thy fancy lead Through rural scenes, such as the Mantuan swain Paints in the matchless harmony of song ; Or catch thyself the landscape gliding swift Athwart Imagination's vivid eye. Thomson.

Shook sudden from the bosom of the sky, A thousand shapes, or glide athwart the dusk, Or stalk majestic on. Id,

With thee, my bark, I'll swiftly go,

Athwart the foaming brine ; Nor care what land thou bear'st me to, So not again to mine.

Lord Byron'i Childe Harold. ATHWART, in navigation, is synonymous with across the line of the course. It is also used in other senses, such as,

ATHWART-HAUSE, expresses the situation of a ship, when she is driven by wind or tide, or any other accident across the fore part of another

ATHWART-SHIPS, reaching across ships from one side to the other.

ATHWART THE FORE FOOT, denotes the flight of a cannon ball from one ship across the course of another, to intercept the latter, and oblige her to shorten sail, that the former may come near enough to examine her.

ATHY, a town of Ireland, in the county of Kildare, near the borders of Queen's county. It is situated on the river Barrow, on which boats pass by Carlow to \aterford. It is ten miles south of Kildare, and thirty-two south-west of Dublin ; from which a branch of the grand canal extends, and boats pass between them daily, through the whole extent. It is governed by

a sovereign, two bailiffs, and a recorder; and is, alternately with Naas, the assizes town.

ATHYMIA, aQvpia, despondency ; dejection of the spirits.

ATIBAR, the name by which the inhabitants of Gago in Africa call gold-dust ; from which word Europeans, and especially the French, have composed the word tiber, which also signi- fies gold-dust among those who trade in that commodity.

ATILIA, in ancient records, signifies utensils, implements for country business.

ATILT. On tilt. Lifted up in the attitude of attack; also, any thing with one end lifted up, as a barrel.

In the city Tours

Thou ran'st atilt, in honour of my love ; And stol'st away the ladies' hearts from France.

Shaktpeare.

To run atilt at men, and wield Their naked tools in open field. Hudibras. Such a man is always atilt; his favours come hardly from him. Spectator.

ATINGA GUACU-MUCU. See CORNUTUS Cu- CULUS.

ATINGA, in ichthyology, a species of diodon, of an oblong form, beset with rounded spines. It is called by Marcgrave, guamajucu antinga; and in England is known by the name of porcu- pine fish.

This species lives in the American seas, and about the Cape of Good Hope. Its food consists of crabs and other shell-fish. The length rather exceeds twelve inches ; the body is compressed at the sides, and bluish. This creature has the VOL. III.

power of dilating its body, and erecting its spines at pleasure. It is usually taken in nets, but will also take bait, which is commonly the tail of a crab, fastened on the hook.

ATINIA LEX, a law passed by the tribune Atinius, which gave a tribune of the people the privileges of a senator, and the right of sitting in the senate.

ATIZOE, in the writings of ancient naturalists, a stone used in the consecration and anointing of kings. Pliny describes it to have been of a lenticular figure, and of the size of three fingers, of a bright silvery color,

and of a pleasant smell. He says it was found in India, and in some other places. Agricola is of opinion it was a kind of bitumen.

ATKINS (James), bishop of Galloway, the son of Henry Atkins, sheriff of Orkney, was born at Kirkwall, educated at the university of Edin- burgh, where he took the degree of A. M. and finished his studies at Oxford, under the cele- brated Dr. Prideaux, about A. D. 1638. Being appointed chaplain to the Marquis of Hamilton, he was soon after presented to the church of Birsay in Orkney, where he was much esteemed, In 1650, being moderator of the presbytery, he was appointed to draw up a declaration of loyalty, in their names, and present it to the Marquis of Montrose ; for which he and the whole presbytery were deposed by the general assembly, and the doctor was excommunicated for corresponding with the Marquis. The coun- cil soon after passed an act for bringing him to trial, but being privately warned by his friend, Sir Archibald Primrose, the clerk of council, he fled to Holland, where he remained till 1653, when he returned to Edinburgh, and resided in quiet obscurity till the restoration. He then accompanied Dr. Sydserf to London, and ob- tained the rectory of VVinfrith. In 1677 he was elected bishop of Moray, and in 1680 translated to the see of Galloway, which he governed seven years, and died much respected in 1687, aged seventy-four.

ATKINS (Sir Robert), lord chief baron of the exchequer, was born in 1621, and educated at the university of Oxford, from whence he removed to the inns of court, and became eminent in the law. He was made knight of the bath, at the coronation of king Charles II. In 1662 he was appointed one of the judges of Common Pleas ; in which station he continued till 1679, when foreseeing the troubles that soon after ensued, he resigned, and retired into the country. In 1689 he was made by king William lord chief baron of the exchequer; and about the same time filled the office of speaker to the house of lords. He dis- tinguished himself by an unshaken zeal for the laws and liberties of his country; and wrote several pieces which have been collected into one volume 8vo. under the title of Parliamentary and Political Tracts.

ATLANTEAN. Possessing the strength ol Atlas.

Where are the pillars, that support the skies ? What more than Atlantean shoulder props Th' incumbent load? What magic, what strange art, In fluid air these pond'rous orbs sustain ?

*Young's Night Thmˆghti, i**

Q

ATLANTKS. See AT: AS.

ATLANTIC. The Atlantic Ocean is that great basin of waters that separates Europe and Africa on the east, from America on the west, and stretches from the arctic ocean on the north to a line which joins Cape Horn and the Cape of Good Hope on the south. It is divided from the north sea, on the north-east, by the Straits of Dover, Great Britain, the isles of Faroe and Iceland. The Mediterranean with its gulfs, the Gulf of Mexico, and Hudson's and Baffin's Bay, are consequently branches of it. That part of the Atlantic, however, between Brasil and Africa, and from the nearest approximation of these countries to the southern limits, is sometimes called the Ethiopic Ocean. It has been conjec- tured that the vast bed of the Atlantic was formed at the time of the deluge, by the great southern ocean below the equator, rushing on the northern hemisphere. This the shape of the opposite shores has been supposed to justify, which have the exact appearance of having been formed by the action of water, the great protuberances of the one corresponding to the inden- tations of the other. One of the most remarkable f, atures of th.' Atlantic is its currents. It par- takes of the general current which flows from the poles touards the equator, and which arises from tin! inc:vased evaporation in the equatorial re- gions, ami tin; uu.mented temperature of the waters, rendering them specifically lighter than tho>(: of tlif.- ocean in higher latitudes, as well as from t:ic in, reused supplies produced by the UK hitiu' i'f the i ohir ice. The existence and effects of tins uTeat euiivnt are fully proved by the enor- mous masses of polar ice, which they convey into the more ti-mperatc regions of the ocean, and which sometimes iloat as low as 40►► of latitude.

The coast of America, and the numerous islands with which it is flanked, intercept the ge- neral cunvnt of the Atlantic, and create what navigators cull the mill' stream. This enters the dull' of .\iexico, sweeps round the shores of that < iulf, and issues with accelerated velocity towards the north, by the channel between the southern] oint of 1 loridu and the IJahama .Islands. It ih;.!i rolls alon ►►►? the shore of North America, cli- iiiiii.shinu" ui velocity, but increasing in breadth, till it real lies the u'reat bank of Newfoundland. There, it suddenly turns towards the east and

and the i oasts of Africa. Naviuators readily dis- tm^ui-h it >y the h' Ji t 'mperature of its waters, their grc.it s. s, their in li-jo color, and the

shoa'.sol se:i-weed that cover their surface. The celebrated l)r. [►►►

ranklin first caused it. to be laid uown mi a m:;p, and in li;s various voyages from America to Kurope, in a do numerous observations on its pr-i iHaritir.s. l!u:n oldt. in .May 1804, obv-rved its velocitv in the twenty-seventh de- t;'u ie. and found it a'-oul eighty miles iu twuity-f >':r h< urs, thoujh the north wind I I w very itruuulv a.f th" time of tin? observation. When u issu; < :rom the (Juif of llorida, its ve- locity resembles t.aT . >f a torrent, ami is some- times t'r. , miles a:i i:our, but at others not more ††† 'ti the nearest point of Florida iii ; '..:u bj.uk u.' n,i!ia:;;a. the brr-;dt'i is only fif-

teen leagues, but a few degrees further north it is seventeen ; in the parallel of Charlestown, it is from forty to fifty leagues in breadth ; and in latitude 40†† 25', this is increased to nearly eighty leagues. The waters of the torrid zone, being thus forcibly impelled towards the north-east, preserve their high temperature to suc'i a degree, that in latitude 40†† and 41†† it has been found to be 22-5†† of the centigrade thermometer, or 72†† of Fahrenheit ; while out of the current the tem- perature of the water was only 63'5††. In the parallel of New York, the temperature of the gulf stream is equal to that of the sea in latitude 80††. When the stream reaches the western Azore island, where the breadth is about 160 leagues, the waters still preserve a part of the impulsion they received in the Gulf of Florida, nearly 1000 leagues distant. Thence it proceeds to the Canaries and the coast of Africa, and in the latitude of Cape Blanco, where the waters flow towards the south-west, they mingle with the current of the tropics, and recommence their tour from east to west.

Thus it appears that the waters of the Atlantic, between the eleventh and forty-third degrees, are constantly drawn by currents into a kind of whirlpool ; and if a body floating on these waters be supposed to return precisely to the place from which it commenced its motion, M. Humboldt has calculated, from the known velocity of the current, that it would require two years and ten months to complete its circuit of 3800 leagues. ' A boat,' he observes, ' which maybe supposed to receive no impulsion from the winds, would require thirteen months from the Canary islands, to reach the coast of Caraccas, ten months to make the tour of the Gulf of Mexico and reach Tortoise shoals, opposite the port of Havannah, while forty or fifty days might be sufficient to carry it from the Straits of Florida to the banks of Newfoundland. Estimating the velocity of the water at seven or eight miles in twenty-four hours, in their progress from this bank to the coast of Africa, it would require ten or eleven months for this last distance. Such are the effects of this slow but regular motion, which agitates the wa- ters of the ocean.' A branch of this current evi- dently reaches the western shores of Europe, as the productions of the tropical regions of America are frequently thrown on the coasts of the He- brides, Scotland, and Norway.

M. Ilumboldt endeavoured to ascertain the comparative height of the waters of this ocean along its shores. In reference to the Gulf of Mexico, and the opposite side of the isthmus on the shores of the Pacific, he found the surface of the former to be six or seven metres higher than that of the latter. The depth of the Atlantic is also extremely various ; in many places being wholly beyond the power of man to fathom. Captain Scoresby, in the Greenland sea, in 1817, plumbed to the greatest known depth which a line has reached, i. e. 7200 feet. Many parts of the Atlantic, however, are thought to be three times this depth.

The saltness and specific gravity of the Atlan- tic differ in various parts ; and gradually diminish from the equator to the poles. In the neigh- bourhood of the British isles, the salt has been

s'ated at ford of the weight of the water ; and Dr. Thompson, in his Chemistry, observes, that as far as experience has gone, the proportion of saline contents does not appear to differ much, whatever may je the latitude in which the water is examined. Captain Phipps, in north latitude 30►►, and sixty fathoms under ice, found the sa line contents of sea-water to be 0-0354 ; in lati- tude 74►►, he found them to be 0-036 ; in latitude 60►►, 0P034. Pages found sea-water, taken up in north latitude 45►► and 39►►, to contain 0'04 of saline contents ; and Baume, obtained by analy- sis from water taken up by Pages, in north lati- tude 34►► and 14►►, exactly the same proportion of saline matter. In southern latitudes, Pages found the following proportions of saline con- tents, viz. :

Latitude Sal. Matter

49►► 50′ . 0-0416 .

46 0 . 0-045

40 30 . 0-040

Latitude Sal. Mat.

25►► 54′ . 0-04

20 00 . 0-039 1 16 0-035

The specific gravity of the water is greatest where the saline ingredients

contained are the most abundant; as it is the mixture of these with the pure water that increases its weight.

The water of the Atlantic ocean is warmest be- tween 5►► 45′ and 6►► 15′ of north latitude, where it has been found by actual observation to vary from about 82►► 5′ to 84►► 5′ of Fahrenheit's ther- mometer. There, too, the temperature of the sea is generally a few degrees higher than that of the air which reposes upon it. Nearer the poles the influence of the seasons on the surface of the ocean, becomes more sensible ; but, as the tem- perature of the water changes more slowly than that of the atmosphere, the means do not, in point of time, exactly correspond. Where not disturbed by local causes, the mean temperature of the surface water is not very different from lhat of the incumbent atmosphere. It is about fU►► at the equator, 70►► at 26►► of north latitude, and 60►► at 45►►. The temperature diminishes as the depth increases. M. Peron found that at the depth of 380 fathoms, the temperature was only 45►► 5', though at the surface it was 80►►. Currents greatly modify the temperature by transmitting the water of one region to another, as well as in some degree by the agitation they create. While the current which sets into the Gulf of Mexico is much warmer than the adjacent parts of the sea, it is not so warm as that which flows through Magellan's Straits into the Pacific.

Humboldt made various experiments on the surface of the Atlantic Ocean, between the 9th of June and the 15th of July, 1799, from which the following are selected :

North lat. West Ion.

39 10 34 30 32 16 30 36 29 18 26 51 20 8

16 18

16 55

17 4 16 54 16 40 19 13 28 51

Temperature of the Atlantic ocean, at

its surface.

o ►►►

59 00 Fahrenheit

61 34 63 86

65 48

66 74 68 00 70 16

17 57 14 57 13 51 10 46

33 14 44 40 49 43 60 54

72 32 74 66 76 46 78 44

He farther remarks that, ‘ from Corunna to the mouth of the Tagus, the water of the sea varied but little in its temperature ; but from the thirty-ninth degree of latitude to the tenth, the increment was very sensible and very constant, though not always uniform. From the parallel of Cape Montego to that of Salvage, the progress of the thermometer was almost as rapid as from 20►► 18′ to 10►► 46’; but it slackened extremely at the limits of the torrid zone, from 29►► 18′ to 2QO gˆ fpm’s inequaiity jSj no doubt, caused by the currents that mingle the waters of different latitudes, and which, as we approach the Canary Islands, or the coast of Guiana, set either to the south-east, or north-west. M. de Churuca, who crossed the equator in his voyage to the straits of Magellan, in the twenty-fifth degree of west longitude (in October), found the maximum of the temperature of the Atlantic ocean, at the surface in 6►► of north latitude.’ Humboldt’s Personal Narrative.

Masses of ice, and icebergs, having their origin in high latitudes, are carried towards the south and south-west by the general current, which flows from the poles towards the equator ; and they have a great influence in lowering the summer temper- ature both of the ocean and atmosphere. Frag- ments of these icebergs occasionally reach the fortieth degree of latitude. At 50►► the rivers, lakes, and bays, of the sea, sometimes freeze ; and at 60►►, the gulfs and interior seas sometimes freeze in their whole extent.

ATLANTIDES, in astronomy, the Pleiades, ‘ or seven stars, so called, as being supposed to have been the daughters of Atlas, who, the poets fabled, were translated into heaven.

ATLANTIS, ATALANTIS, or ATLANTICA; an island mentioned by Plato and some others of the ancients, concerning the real existence of which there have been many disputes. Homer, Horace, and the other poets, make two Atlanti- cas, calling them Hesperides and Elysian Fields, making them the habitations of the blessed. The most distinct account of this island we have in Plato’s Timseus, of which Mr. Chambers gives the following abridgement. ‘ The Atlantis was a large island in the western ocean, situated op- posite to the straits of Gades. Out of this island there was an easy passage into some others, which lay near a large continent, exceeding

in bigness all Europe and Asia. Neptune settled in this island, from whose son, Atlas, its name was derived, and divided it among his ten sons. To the youngest fell the extremity of the island, called (Jadir; which, in the language of the country, signifies fertile, or abundant in sheep. The descendants of Neptune reigned here from father to son for a great number of generations in the order of primogeniture, during the space of 9000 years. They also possessed several other islands ; and, passing into Europe and Africa, subdued all Lybia as far as Egypt, and all Europe to Asia Minor. At length the island sunk under water: and for a long time after-

wards the sea thereabouts was full of rocks and shelves.' Many of the moderns also are of opi- nion, that the existence of the Atlantis is not to be looked upon as entirely fabulous. Some take it to have been America ; and from thence, as well as from a passage in Seneca's Medea, and some other obscure hints, they imagine that the new world was not unknown to the ancients. But allowing this to be the case, the above- mentioned continent, which was said to lie beyond Atlantis, would seem rather to have been the continent of America than that of At- lantis itself. The learned Rudbeck, professpr in the University of Upsal, in a work entitled Atlantica sive Manheim, endeavours to prove that Sweden and Norway are the Atlantis of the ancients; but this its situation will not allow us to believe. By Kircher it is supposed to have been an island extending from the Canaries to the Azores; that it was swallowed up by the ocean, as Plato asserts; and that these small islands are the shattered remains of it.

ATLAS, one of the Titans, son of Japetus and Clymene, one of the Oceanides. He was brother to Kpimetheus, Prometheus, and Meneetius. lie married Pleione, daughter of Oceanus, or 1 lesperis, according to other?, by whom he had seven daughters, called Atlantides. He was king of .Maiuitaiiin, and master of a thousand flocks; as also or' beautiful gardens, abounding in fruit, tthir.h he entrusted to the care of a dragon. Per- seus, alter the conquest of the (Jorgons, passed by tin' palace of Atlas, and demanded hospitality. Tin- kiiiLi'. \vho had been informed by Themis that lie should be dethroned by one of the (endants oi' .lupiter, refused to receive him. Perseus showed him Medusa's head, and Atlas \as instantly chan'fcd into a large mountain. '.I his mountain whuh runs across the deserts of Africa, east and west, is so high that the ancients have imagined that the. heavens rested on its top, ::nd that Atlas supported the world on his shoul ders 1 iy_:i!ms says, that Atlas assisted the giants in their wars auamst the gods, for which Jupiter compelled him 10 bear the heavens on his shoulders.

An A-, in anatomy, the name of the first ver- tebra of tin- Meek, \hich supports the head. It has no

A i i\s in architecture, is a name given to tluxc (‘mures, or half liuuivs of men, sometimes n-i-d instead of columns t>r pilasters, to support any member of architecture, as a balcony, or the bki-. Thi i- Ailanti >an- also called Telamones.

A i i -, in commerce, a silk satin, manufac- Tuied in i In- l’;\<\ Indies. There are some plain, soi mi stuped. Mjme flowered, the (lowers of which are cither /Id, or silk. There are atlusses of all colors; hit most of them false, especially the red and i',e ciim.ilk stufl’s. In the Chinese manu factures of this sort, they gild paper on one side v-jth k’af-gold; then vut it in long slips, and

ATM

weave it into their silks; which makes them, with little cost, look very rich and fine. The same long slips are twisted about silk threads, so arti- ficially, as to look finer than gold thread, though it be of no great value.

ATLAS, in geography, a lofty chain of moun- tains which separate Barbary from the great desert of Zaara. They are said to have derived their name from Atlas, king of Mauritania. The mountains which form the eastern boundary of the empire of Morocco are by far the loftiest part of tliis chain; their height rises to upwards of 13,000 feet; and their summits are covered with perpetual snow. As the chain stretches through eastern Barbary, it diminishes consider- ably in height, spreading into various branches. These Dr. Shaw represents as generally consisting of anumberof little hills of the perpendicular height of 400 or 500 yards, covered with groves, and ranges of fruit and forest trees rising behind each other. From this chain numerous rivers de- scend and fertilise the plains of Morocco in their way to the ocean ; while others How southwards into the desert, till they are lost in its sands. The geology of the Atlas is very little known; but its basis is probably granite, while in its lower parts calcareous rocks appear to prevail. Consider- ing its extent and magnitude, the Atlas does not produce any very copious supply of minerals Lead and silver are obtained in considerable quantity, and farther to the south are mines ot gold and silver, which the sovereigns of Morocco have prevented from being worked, from jea- lousy of the natives. Antimony, for which there exists an extensive demand as a cosmetic, is drawn very copiously from these mountains. The most valuable kind is found near Tafilelt, and is called El Kahol Filelly. Opposite to Te- rodant, sulphur is found in immense quantities Iron is also produced though not very abun- dantly. The ancients, whose knowledge of geo- graphy was very confined, conceived

these moun- tains to be the pillars of the world, and that their summit upheld the heaven.

ATMOMETER, (from ar/ioc, vapor, and perpov, a measure). An instrument invented by professor Leslie for ascertaining the quantity of moisture exhaled from a humid surface in a given time. In consists of a thin ball of porous earthenware, from one to three inches in dia- meter, having a small neck firmly cemented to a long wide glass tube, to which a brass case is adapted, with a close fitting collar of leather. Being filled with distilled water, the waste and descent of this column indicates the quantity of evaporation from the surface of the ball. The tube is marked downwards with lines, from 200 to .500 in number, corresponding to the rings ot fluid that, if spread over the whole exhaling sur- face, would form a film 1000th of an inch in thickness. The cavity of the instrument is next to be filled with distilled water, and its cap se- cured tight, and then suspended in a situation exposed to wind, but not to rain. The water will transude through the porous matter of the ball as fast as it evaporates from the external surface ; and the waste is measured by the cor- regponding descent of the liquid in the stem.

ATMOSPiIERE.

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ATLITA, in entomology, a species of papilio, indented, brown, fulvous beneath, with undulated glaucous streaks, and five blind- eye shaped spots Native of the East Indies.

ATMOSPHERE,? From the Gr. arjuoc,

ATMOSI-HF.R'ICAT.. i vnpor, and aˆatpa, sphere. The body of air and vapor that sur- roun"s the earth.

ATMOSPHERE ; this word is used to signify the whole of the fluid mass consisting of air, aqueous and other vapors, electric fluids, &c. which surrounds the earth to a considerable height, and partakes of both its diurnal motion on its axis, and its annual motion round the sun.]ts composition was, until within these few years, very little known. That it is a very hete- logeneous mass, might readily be concluded, upon considering that it is the common recepta- cle of all the effluvia, exhalations, and particles, raised from innumerable bodies upon the earth : hence it has been compared to a vast chemi- cal vessel in which the matter of all kinds of bodies is continually floating, and thus exposed to the action of the sun; from whence proceed innumerable operations, sublimations, separa- tions, compositions, digestions, fermentations, putrefactions, &c. The discoveries of modern chemistry have, however, shown us its essential constituents and their proportions, a subject which we have treated at considerable length under the word AIR

It only remains therefore for us to add a few sup- plementary observations to that paper; and these will principally respect the figure of the atmos- phere and its supposed limits. If the earth had no diurnal rotation upon its axis, then according to the laws of gravity the atmosphere would be of an uniform height, enclosing the earth, which in this case would be perfectly spherical. But as the earth and the atmosphere revolve about an axis, the different parts of both have a centrifugal force, by which their gravity is diminished to- wards the equator, the figure of the atmosphere becomes an oblate spheroid; the parts that cor- respond to the equator being farther removed from the centre than the parts that correspond to the poles, and the ratio of the poles to the equa- torial diameter, being as two to three. Besides, the figure of the atmosphere must on another account represent a flattened spheroid ; namely, because the sun strikes more directly the air be- tween the tropics, than the air in the polar regions, and hence the mass of atmospheric air adjoining the poles being less heated, cannot expand so much, nor reach so high as the air in the neighbourhood of the equator. And yet higher columns about the equatorial regions may not be heavier than those at the poles ; seeing that the same force which contributes to elevate the air, diminishes its gravity and pressure on the surface of the earth.

Mr. Kirwan has given in the Transactions of the Royal Irish Academy an ingenious disserta- tion on the figure, height, weight, &c. of the atmosphere,

where he observes, that in the natu- ral state of the atmosphere, its weight must be equal over all the earth, and since the density of the air at the earth's surface increases from the equator to the poles, its height must diminish irom the poles to the equator, and from this it

follows that although the equatorial air be less dense to a certain height than the polar, yet at some greater heights it must be more dense. Hence it is inferred that in the higher regions of the atmosphere, the denser equatorial air not being supported by the collateral extra-tropical columns, gradually flows over and rolls down to the north and south.

La Place, in that part of his Systeme du Monde which treats of the atmosphere of the planets, ingeniously observes, that in all the changes to which the atmosphere is subject, the sum of the products of the particles of the revolving body and its atmosphere, multiplied respectively by the areas they describe round the common cen- tre of gravity (the radii being projected on the plane of the equator), remains the same in equal times. Supposing therefore by any cause what- ever, the atmosphere should be contracted, or that part thereof should become condensed on the surface of the body, the rotatory motion of the latter and its atmosphere would be accele- rated ; for the radii vectores of the areas des- cribed by the particles of the original atmosphere becoming smaller, the sum of the products of all the particles by their corresponding areas cannot remain the same unless their velocities be aug- mented.

The limits of the atmosphere have been a fre- quent subject of philosophical inquiry, especially since it was discovered by the Torricellian tube that air is endued with weight and pressure. Indeed, if the air possessed no elastic power, but were everywhere of the same density, from the surface of the earth to the extreme limit of the atmosphere, like water, which is equally dense at all depths, the whole height of the at- mosphere might be ascertained without difficulty. It has been well established, that the weight of a column of air reaching to the top of the atmos- phere, is equal to the weight of the mercury con- tained in the barometer, and counterbalancing it ; and the proportion of weight likewise being known between equal bulks of air and mercury, it will be easy to find the height of such a column, and consequently that of the atmosphere itself. For a column of air one inch high being to an equal column of mercury as 1 to 11364'6; it is evident that 11364'6 such columns of air, that is a column 947 feet high, would be equal in weight to one inch of mercury : and conse- quently the 30 inches of mercury sustained in the barometer, require a column of air 28,410 feet high ; whence the height of the atmosphere would only be 28,410 feet, or little more than five English miles and a quarter high. But the air by its elastic property expands and contracts; and it being found by repeated experiments that the spaces it takes up when compressed by diffe- rent

weights, are reciprocally proportional to those weights themselves ; or, that the air takes up the less space the more it is pressed ; it fol- lows that the air in the upper regions of the at- mosphere, where the weight is so much less, must be much rarer than near the surface of the earth ; and consequently that the height of the atmosphere must be much greater than is above assigned.

On this subject it has been further and well remarked, that if the earth weie perfectly mo-

.ionless, the elasticity of the atmosphere uni- formly as the compressing force, and matter infinitely divisible, we could have no other than an atmosphere indefinitely extended ; but the diurnal motion at a certain height brings the centrifugal force equal to that of gravity, and beyond this limit no atmosphere can exist. Its particles by the operation of this force would here become projected into space ; and the pro- cess would continue until the entire atmosphere was dissipated. Dr. Wollaston, in an ingenious paper in Part I. of the Philosophical Transac- tions for 1822, observes, that if we admit that air has been rarefied so as to sustain only f^g of an inch of barometrical pressure, and that this mea- sure has afforded a true estimate of its rarity, we should infer from the law of elasticity observed within certain limits, that the atmosphere extends at least to the height of forty miles with proper- ties yet unimpaired by extreme rarefaction. Be- yond this limit we are left to conjecture, founded on the supposed divisibility of matter ; and if this be infinite, so also must be the extent of the at- mosphere, except so far as regards the centrifugal force to which we have already referred; for if the density be throughout as the compressing force, then must a stratum of given thickness at every height be compressed by a superincum- bent atmosphere, bearing a constant ratio to its :.\vii weight, whatever be its distance from the earth. But if air consists of any ultimate par- t'.eles no longer divisible, then must expansion oi the medium composed of them cease at that distance where the force of gravity downwards upon a single particle is equal to the resistance arising from the repulsive force of the medium.

On the supposition of limited divisibility, the atmosphere which surrounds us must be con- ceived to be a medium of finite extent, and may lie peculiar to our planet, since its properties \ould afford no ground to presume that similar natter exists in any other planet. But if we adopt the supposition of unlimited expansion,

e must conceive the same kind of matter to ; e.vade all space, where it would not be in s-;uilibrio unless the sun, the moon, and all the planets possess. <1 their respective shares of it condensed around them, in degrees depending upon tlieir respective force of attraction, unless 1.1 iiios- nuances where the tendency to accu-

ulate in, iv be eount'-iactcd by the interference

; other kinds ot matter, or of other powers of have no e\pd to reason cor r. tiy.

sition, srice wo know the ††† in'in-inal bodies in our w also the density of their a! ti-eir respective surfaces; and i:at di-tanre fro;:! the surface of each, ihe density would ! > <††† the same as at the surface of the ,- anli ; ;:††† which height a sensible degree ot retraction that is more than a degree, ought to 'H- produce,! on a ray of light passing through it. r example, if til mass ofihi- sun be con-.ider- ††††††d ;is ;;:;u.oou times that of tin eatlh, ihe dis- tance at which his force is equal to that of' ter- ††††††'ryˆ gravity at our surface. v.;.i Ieˆ/lloO 000, ,.;:out o,V> Units the lartii's r.iiiusj and if his

radius be tll-5 times that of the earth then the

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distance will be ††† ††† ††† = 5-15 times the sun's ill "o

radius. Now the mean apparent semi-diameter of the sun being 15'49", we have 15' 49" x 5'15 = 1†† 21' 29", for the distance from the sun's centre, where the refractive power of his atmos- phere is equal to that at the earth's surface ; that is where it would produce a deviation of a degree to a ray passing through it at that distance. We are able, as Dr. Wollaston has shown, to observe Venus within this distance of the sun ; and since in this observation we find no effect pro- duced by refraction, the observed and computed places agreeing to a fraction of a minute, we have a right to infer that at the distance we have computed, the density of the sun's atmosphere is not such as it would be if each body in the system possessed an atmosphere proportional to its own attractive power ; but this must be the case if the elastic matter of the atmosphere were infinitely divisible, hence then again we may conclude that matter is not infinitely divisible, and consequently that the atmosphere of this earth is of a finite and limited height, and may be peculiar to it. But some doubt will hang over this deduction in respect to the sun, on account of the probable heat near his surface, which may produce a rarefaction far exceeding any thing that we can form an idea of; but this will not be the case if we select Jupiter as the

body for observation.

Since the mass of Jupiter is full 309 times that of the earth, the distance at which his attrac- tion is equal to gravity must be about ˆ309, or 1 7-6 times the earth's radius ; and since his diameter is nearly 11 times greater than that of

the earth, we shall have =1 '6 times his own

radius ; for the distance from his centre at which an atmosphere equal to our own should occasion a refraction exceeding one degree to the fourth satellite. This distance would subtend an angle of about 3►► 37', so that an increase of density to 3ˆ times our common atmosphere, would be more than sufficient to render the fourth satellite visible to us when behind the centre of the planet ; and consequently to make it appear on both or all sides at the same time. Hence, what- ever doubt may remain on the deduction made from observations on Venus seen through the solar atmosphere, in consequence of the possible effects of heat which cannot be appreciated, it is evident that no error from this source can be apprehended in regard to Jupiter. This planet therefore does not possess an atmosphere pro- portional to his mass, as he would do if the matter composing it were infinitely divisible, and therefore, as we have seen, common to the whole solar system. Hence then we have a right to conclude, that matter is not infinitely divisible, and that each planet possesses an atmosphere peculiar to itself of limited height, composed of ultimate atoms of definite magnitude, no longer divisible by the repulsion of their parts.

We may, in conclusion, observe that to the refractive and attractive power of the atmosphere we owe all the blessings and phenomena of twilight. By the former the rays of light are

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bent from the riˆTit-lined direction, by the latter objects are enlightened more uniformly on all sides. The want of this power would occasion a strange alteration in the appearance of things; shadows would be totally dark, and the en- lightened sides of objects overpoweringly bright; so that probably we could see no more of them than their bright halves ; and for a view of the other halves must turn them round, or, if immovable, wait until the sun could come round upon them. Such a pellucid unreflective atmosphere might, be very commodious for astronomical observa- tions on the course of the sun and planets among the fixed stars visible by day as well as by night; but such a sudden transition from darkness to light, and

from light to darkness immediately upon the rising and setting of the sun, without any twilight, and even upon turning to or from the sun at noon day, would be very incon- venient and offensive to our eyes. See Keil's Astron. Lect. 20, &c. See also LIGHT and RE- FRACTION in our alphabet.

ATOLLENS OCULI, in anatomy, a name given by Albums to one of his quatuor recti musculi oculi. This is the muscle called by Molinett, and others, the superbus, and Ly Cowper, the elevator oculi.

ATOM, "| From a, privative, and rty.- ATOM'ICAL, \ va>, to cut. Something so small A'TOMIST, (as not to be cut into smaller ATOM'LIKE, j particles ; so simple as not to ATOM'OLOGY, I be capable of reduction to AT'OMY. J simpler elements. It is as easy to count atoms, as to resolve the pro- positions of a lover. Shakspeare. As You Like it.

Drawn with a team of little atomies, Athwart men's noses, as they lie asleep.

Shakspeare.

Vitrified and pellucid bodies are clearer in their continuities, than in powders and atomical divisions.

Brown's Vulgar Errours.

These atomic theists utterly evacuate that grand .-irgument for a God, taken from the phenomenon of the artificial frame of things, which has been so much insisted upon in all ages.

Cudworth's Intellectual System.

*Innumerable minute bodies are called atoms; be- cause, by reason of their perfect solidity, they were
ॠeally indivisible. Roy-*

ATOMIC THEORY. A species of philoso- phy recently introduced into chemistry, and founded on the axiom, "that chemical union consists in the combination of the atoms of bodies with each other;" so that, when U\o bodies chemically unite and form a third body, the two substances united are dispersed every wherethrough the new compound. Thus saltpetre is a compound of nitric acid and potash ; and, if we examine so small a portion of this salt as the 100th part of a grain, it will be found to be compounded of these two substances, nitric acid and potash : and if any part had not these con- stituents, it would not be saltpetre. See AT- TRACTION.

ATONE', v. & ad. } To be at one. Imply- ATONE'MENT, Sing a state of former

ATONE'MAKER, 3 estrangement, and ex- pressing present reconciliation. To satisfy the

claims of justice and equity by making repara tion and expiation; to enjoy the renewed friend- ship and regard of the injured party.

Paul sayth, 1 Timothy ii. One God, on3 Mediator (that is to say, aduocate, int(rcessor, or an atone- maker), betweene God and man ; the man Christ Jesus which gaue him-.clfe a raunsom for all men.

The Whole Workcs of W. Tyndall, fol. 158. c. i. He seeks, to make atonement, Between the duke of Gio'ster and your brothers.

, Shakspeare.

He and Aufidius can no more atone, Than violentest contrariety. Id. Coriolanus.

From a mean stock, the pious Decii came ; Yet such their virtues, that their loss alone, For Rome and all our legions, did atone.

Dryden. Juvenal.

The good intention of a man of weight and worth, or a real friend, seldom atones for the uneasiness produced by his grave representations Locke.

Let thy sublime meridian course For Mary's setting rays atone :

Our lustre, with redoubled force, Must now proceed from thee alone. Prior. His virgin sword JEgysthus' veins imbrued ; The murd'rer fell, and blood aton'd for blood.

Pope.

Soon should yon boasters cease their haughty strife ; Or each atone his guilty love, with life. Id.

And the Levites were purified ; and Aaron made an atonement for them, to cleanse them. Numbers. Surely, it is not a sufficient atonement for the writers ; that they profess loyalty to thp government, and sprinkle some arguments iri favour of the dissenters ; and, under the shelter of popular politicks and reli- gion, undermine the foundations of all piety and virtue. Swift.

If any contention arose, he knew none fitter to be their judge, to atone, and make up their quarrels, but himself. Dmmmond.

ATONEMENT. The word "l►►J3,translated atone- ment in the sacred writings, some writers say, signifies covering ; and thus it would seem to imply that man can only be at-one with an in- finitely just God, when that for which his pro- genitor was banished God's presence, and that which he has himself acquired by following a similar course, is covered. See EXPIATION and SACRIFICE.

ATONICS, in grammar, words unaccented.

ATONY ; from a, and rovof, tone ; in medi- cine, a defect of tone or tension, or a laxity or debility of the solids of the body.

ATOOI, one of the Sandwich islands. ►►► Towards the north-west and north-east the face of the country is ragged and broken jNbut to the southward it is more even. The hills rise from the sea side with a gentle acclivity, and, at a little distance back, are covered with wood. Its produce is the same with that of the other islands of this cluster ; but its plantations are managed much better than those of all the neighbouring islands. In the low grounds, contiguous to the bay wherein our navigators anchored, they were regularly divided by deep ditches; the fences were formed with a neatness approaching to elegance, and the roads through them were finished in such a manner as would have re- flected credit even on an European engiueei. The anchoring place, which our vessel occupied, is on the south-west side of the island, about two

leagues from the west end, before a village named Wymoa. As far as was sounded, the hank was free from rocks, except to the eastward of the village, where there projects a shoal, on which are some rocks and breakers. This road is some- what exposed to the trade wind, notwithstanding which defect, it is far from being a bad station, and greatly superior to those which necessity con- tinually obliges ships to use, in countries where the winds are not only more variable, but more boisterous ; as at Madeira, Teneriffe, the Azores, &c. The landing too is not so difficult as at most of those places ; and, unless in very bad weather, is always practicable. The water in the neighbourhood is excellent, and may be con- veyed with ease to the boats. But no wood can be cut at any convenient distance, unless the islanders could be prevailed upon to part with the few etooa trees (cordia sebestitta) that grow about their villages, or a spe'cies called dooe dooe, which grows farther up the country. Atooi is about 300 miles in circumference. Long. 200►► 20′ E., lat. 21►► 57′ N.

*The natives of Atooi are of the middle size, and in general stoutly made. They are neither remarkable for a beautiful shape nor for striking features. Their visage, particularly that of the women, is sometimes round, but others have it long; nor can it justly be said tint they are dis- tinguished as a nation by any general cast of count;
नance. Their complexion is nearly of a nut brown; hut some individuals are of a darker hue. Tlu y are far from being ugly, and have, to all appearance, few natural deformities of any kind. Their skin i-* not very soft nor shining ; but their eyes any are a tr.e, viuoiou ;, and most expert s\immers, Laving th ००० ir e'liuu s upon the most frivtilous invasion, diving under them and swim ming to others, ih-००० rv.ible ainoiii; many of those of Tongataboo. '! hry seem to cultivate a sociable intercourse *'ith e.ich oiliei ; and except the propensity to t:ii', \iii_, \hich is as it uere innate in most of tin; people in titoM' seas, they appeared extremely liiendly. It \as pleasing to observe with what all. ००ctimi the \omcn managed their infants, and uith \liat alacrity the men contributed their as iˆtance in such a tender office; thus distinguish- jn_ themselves from those savages who consider a wite and child as things rather necessary than desirable, < >r v.orthy of their regard and esteem. From the niiml'er.s that were seen assembled at every village, in coasting along, it was conjec- tured that the inhabitants of this island are pretty numerous. Including the strauglinu' houses, it ua< computed then; niiuht perhaps be, in the vn ole i>laiKl, sixty such villages us that near*

which our ships anchored; and, allowing five persons to each house, there would be in every village 50o, or 30,000 in all upon the island. This is by no means exaggerated ; for there were sometimes 3000 people at least collected upon the beach, when it could not be supposed tha; above a tenth part of the natives were present.

The ground, from the wooded part to the sea, is covered with an excellent kind of grass, about two feet in height, which sometimes grows in tufts, and appeared capable of being converted into abundant crops of fine hay. But on this ex- tensive spot not even a shrub grows naturally. Besides taro, the sweet potatoe, and other simi- lar vegetables used by our crews as refreshments, among which were at least five or six varieties ol plantains, the island produces bread fruit ; which, however, seems to be scarce. There are also a few cocoa palms ; some yams ; the kappe of the Friendly Islands, or Virginian arum ; the etooa tree, and odoriferous gardenia or cape jasmine. Our people also met with several trees of the dooe dooe, that bear the oily nuts, which are stuck upon a kind of skewer, and made use of as candles. There is a species of sida, or Indian mallow ; also the morinda citrifolia, which is here called none ; a species of convolvulus ; the ava or intoxicating pepper, besides great quanti- ties of gourds. These last grow to a very large size, and are of a remarkable variety of shapes, which are

perhaps the effect of art. The scarlet birds, which were brought for sale, were never met with alive ; except one small one, about the size of a canary bird, of a deep crimson color. A large owl, two brown hawks or kites, and a wild duck, were also seen. Other birds were mentioned by the natives ; among which were the otoo, or bluish heron, and the torata, a sort of whimbrel. It is probable that this species of birds are numerous, if we may judge by the quantity of fine yellow, trreen, and small, velvet like, blackish feathers, used upon the cloaks and other ornaments worn by these people. Fish, and other productions of the sea, were to appear- ance not various. The only tame or domestic animals found here were hogs, dogs, and fowls, which were all of the same kind that had been met with at the islands of the South Pacific. There were also small lizards, and some rats.
ATOP. On top, at the top. See TOP.

Atop whereof, but far more rich, appear'd The work, as of a kingly palace-gate.

Paradise Lost,

What is extracted by water from coffee is the oil, which often swims atop of the decoction.

Arbuthnot on Aliment.

ATRA BILIS, black bile, or melancholy. According to the ancients it hath a two-fold ori- gin : first, from the grosser parts of the blood, and this they called the melancholy humor. Second, from yellow bile being highly concocted. Dr. Percival, in his Essays Medical and Experi- mental, suggests that it is the gall, rendered acrid by a stagnation in the gall-bladder, and rendered viscid by the absorption of all its fluid parts. Bile in this state discharged into the duodenum, occasions universal disturbance and disorder until it is evacuated ; it occasions vio- lent vomiting or purging, or both ; and, previous

tc this, the pulse is quick, the head aches, a de- 1 in urn comes on, a hiccough, intense thirst, inward heat, and a fetid breath. Some describe this kind of bile as being acid, harsh, corroding, and, when poured on the ground, bubbling up, and raising the earth, after the manner of a fer- ment. Dr. Percival says, that by the use of the infus. senae limoniat., warmed with the tinct. columb., he had checked the vomitings occa- sioned by this

matter.

ATRACTOCERUS, in entomology, a genus of the order coleoptera, and family malacodermi. Its generic characters are : antennae simple, and fusiform; short elytra, and sub-quadrate thorax. There is but one species, A. necydaloides, the necydalis brevicornis of Linnaeus.

ATRACTYLIS, distaff thistle, a genus of the

ATRAMENT'AL,) Lat. atramentum, ink.

ATRAMENT'OUS. 4 Having the blackening property of ink.

If we enquire, in what part of vitriol this atramen- tal and denigrating condition lodgeth ; it will seem, especially to lie in the more fixed tult thereof.

Brown's Vulgar Errours.

I am not satisfied, that those black and atramen- tous spots, which seem to represent them, are ocular.

Brown.

ATRAPHAXIS, in botany, a genus of the digynia order and class of plants ; natural order, twelfth, holoracese. CAL. two leaves ; the petals are two, and sinuated ; stigmas capitate ; and there is but one seed. There are two species, both natives of warm countries

ATRATUS (Hugh), was born at Evesham, in

polygamia aequalis order, and syngenesia class of Worcestershire. He made such proficiency in plants. Its generic characters are : CAL. many leaved: COR. compound radiate: STAM. five fila- ments; cylindric anther : PIST. germen very short; style filiform ; stigma bifid : PER. none : SEEDS turbinate. The species are : 1 . A. cancellata, or small cnicus, an annual plant, rising about eight or nine inches high, with a slender stem, gar- nished with hoary leaves, having spines on their edges. 2. A gummifera, or prickly gum-bearing

the knowledge of the sciences, particularly mathe- matics, medicine, and philosophy, that he was called the phoenix of the age. Pope Martin II. gave him a cardinal's hat in 1281. He died of the plague in 1287. He wrote Genealogiis Ilumanis Problemata; and also Canones Medici- nalis.

ATRAX, in fabulous history, a son of TEtolus, or, as others say, of the river

Peneus. He was

cnicus, known among physicians by the name of king of Thessaly, and built a town which he

carline thistle, is a perennial plant. It sends out many narrow leaves, which are armed with spines on their edges, and lie close on the ground ; be- tween them the flower is situated, without a stalk, and having many florets enclosed in a prickly empalement. Its roots were formerly used as a warm diaphoretic and alexipharmic ; but never came much into use in Britain, and the present practice has entirely rejected them. 3. A humilis, or purple prickly cnicus, a peren- nial plant, rising about a foot high, with in- dented leaves, having small spines on their edges. All these plants are natives of the warm parts of Europe, as Spain, Sicily, and the Archi- pelago islands.

ATRA DIES, in antiquity. The word literally imports a black day ; a denomination taken from the color, which is the emblem of death and mourning. Whence the Thracians had a custom of marking all their happy days with white stones or calculi, and their unhappy days with black ones ; which they cast, at the close of each day, into an urn. At the person's death the stones were taken out ; and, from a comparison of the numbers of each complexion, a judgment was made of the felicity or infelicity of his course of life. The dies atrae, or atri, were denominated nefasti, and posteri. Such, in particular, was the day when the tribunes were defeated by the Gauls at the river Allia, and lost the city ; also that whereon the battle of Cannae was fought; and several others marked in the Roman calen- dar as atrac or unfortunate.

ATRAGENE, in botany, a genus of plants, class polyandria, order polygnia. Its generic characters are : CAL. four-leaved perianth : COR. twelve petals: STAM. filaments very many; ob- long anthers : PIST. germs many ; villose style ; stigma simple; PER. none: SEEDS very many. The species are shrubs, as atragene japonica, atragene alpina, &c.

named Atrax or Atracia ; which became so fa- mous that the word Atracius was commonly given to an inhabitant of Thessaly. He was the father of that Hippodamia who married Pirithous, and who must not be confounded with the wife of Pelops, who was so named.

ATREBATES, the ancient inhabitants of Gallia Belgica, who possessed that part of Gaul now called Artois. A colony of them settled in Britain. They are mentioned by Caesar among the nations which composed the Belgic con- federacy against him ; and the quota of troops which they engaged to furnish on that occasion was 15,000.

ATREBATES, or ATREBATII, a people of Britain, seated next to the Bibroci, in part of Berk- shire, and Oxfordshire ; and one of those Belgic colonies which came out of Gaul into Bri- tain, and there retained their ancient name. Comius of Arras was a king or chieftain among the Atrebates in Gaul, in Caesar's time : and he seems to have possessed some authority over our Atrebatii in Britain ; for he was sent by Caesar to persuade them to submission. This circum- stance makes it probable that this colony of the Atrebatii had not been settled in Britain very long before that time. The Atrebatii were among those British tribes which submitted to Caesar; nor do we hear of any remarkable re- sistance they made against the Romans, at their next invasion, under Claudius.

ATRESIA ; from a, and rpaw, whence nrpaw, to perforate; in medicine, im perforation, or the state of those persons who want some natural aperture.

ATRETI, those persons of either sex in whom the anus, or genitals, are imperforate, whether naturally, or occasioned by some accident or disease ; as the growth of some fleshy excrescence, or membrane, which stops the orifice

ATREUS, in fabulous history, the supposed

king of Mycenx' and Argos, about A. A. (‘. 1228. He was the son of 1'elops by Hippodamia, and brother to I'ittheus, Troezen, Thyestes, and Chrysippus. The latter being an illegitimate son, and a favorite with his father, Hippodamia resolved to remove him; and for this purpose she endeavoured to persuade Thyestes and Atreus to murder him ; but her arguments prov- ing vain, she executed it herself. Pelops was grieved at his son's death ; and the brothers being suspected, they fled from his presence. Atreus retired to the court of his nephew, Eurystheus king of Argos, on whose death he succeeded to that throne. Some writers say he married .ftlrope, his predecessor's daughter, by whom he had Plisthenes, Menelaus, and Agamemnon ; but, according to others, ./Erope was the wife of Plisthenes, by whom she had Agamemnon and Menelaus, who are the reputed sons of Atreus, because he took care of their education, and brought them up as his own. Thyestes had followed his brother to Argos, where he lived with him, and debauched his wife, by whom he had some children. When Atreus discovered this incestuous commerce, he banished his brother from his court ; but, determined to have more ample revenge for

the violence offered to his bed, he soon after recalled him, and invited him to a sumptuous feast. Thyestes was served up with the flesh of the children he had by his sister-in- law the queen ; and, when the entertainment was over, to convince him of what he had feasted upon, the arms and the heads of the murdered children were shown him. This action appeared so horrid that the sun is said to have withdrawn his light. Thyestes fled dire> tly to tha court of Thesprotus, and thence to Sicyon, where he ravished his own daughter LYlopra, in a gr^ve sacred to Minerva, not knowing who she was; though some say he committc t this incest in- tentionally, to revenge himself on his brother Aliens, as the oracle had promised him satisfac- tion for the cruelties lie had suffered, only by the hand of a son by himself with his own daughter. Pelopea brought forth a son whom she named j-l'.gisthus, and soon after she married Atreus, who had lost iiis wife. Atreus adopted / Egis- tlnis, and sent him to murder 1 hvcstes, who had been made prisoner. Thyestes knew his son, and made himself known to him ; when, instead of murdering his father, he espoused his cause, and avenged his wrongs by returning to Atreus and assassinating him.

A'l'Kl, or. VIIMA, a town of Italy, inAbruzzo, in Naples. It lies ~2f> miles west of Aquila, arid was the birth place of the emperor Adrian. It is the see of a bishop, and is seated on a crag- uy mountain, live miles from the Adriatic sea. Long. l.">> -Jo' !□□□'.., hit. !'2J -10' N.

ATKICAI'i l.i.A, in ornithology, a little bird, commonly kno\n by the name of the black cap, and called, by some authors, ficedala, sycalis, or meliinchorvphus. and hy the Italians, cyponegro.

ATKU'KS, or Aim K i.s, in medicine, small tubercles about the anus, which sometimes dis- appear, and then return au'aui, at least in their early state. They aie ranked in the number of < ondy lomata, or lid. Some authors also give the denomination atnci to a kind of latent wounds

in the extremity of the rectum, which however do not perforate it.

ATRICILLA, in ichthyology, a species of 4.he lams.

ATRIDES, a patronymic of Agamemnon and Menelaus, the sons of Atreus.

ATRIENSES, in antiquity, a kind of servants in the great families at Rome, who had the caie of the atria, and the things lodged therein. See ATRIUM. They were also called atriarii, though some make a distinction Between atrienses and atriarii ; suggesting, that the latter were an infe- rior order of servants, employed in the more ser- vile offices of the atrium, as to attend at the door, sweep the area, &c. and to assist the former. The atrienses are represented as servants who had command over the rest, and acted is

agents for their master, in selling his goods, &c. To their care were committed the images of the mas- ter's ancestors, 8tc. which were placed round the atrium ; and which they carried in procession at funerals, &c. In the country houses, the atrien- ses had the care of the other furniture and uten- sils, particularly those of metal, which they were to keep from rust. Other things they were to hang in the sun, to keep them dry, &c. They were clothed in a short white linen habit, to distinguish them, and prevent their loitering from home.

ATRIP, in nautical language, is applied either to the anchor or sails. The anchor is atrip, when it is drawn out of the ground, in a perpendicular direction, either by the cable or buoy rope. The top sails are atrip, when they are hoisted up to the mast head, or to their utmost extent.

ATRIPLEX, ORACH, or ARRACH, a genus of the monoecia order and polygamia class ot plants ; natural order twelfth, holoracese. CAL. the hermaphrodite flower, rive-leaved ; COR. none; STAM. five; STY. bifid; SEED, one, de- pressed. There are fourteen species, of which the following are the most remarkable: 1. A. halimus, the broad leafed orach, formerly culti- vated in gardens as a shrub, by some formed into hedges, and constantly sheared to keep them thick. It may be propagated by cuttings, and planted in any of the summer months, in a shady border ; where they will soon take root, and be fit against the following Michaelmas to trans- plant. 2. A. hortensis, the garden orach, was for- merly cultivated in gardens, and used as a substitute for spinage. There are three or four varieties of this plant, whose only difference is their color : one is a deep green, another a dark purple, and a third has green leaves and purple borders. They are all annual, and must be pro- pagated by seeds. These are to be sown at Michaelmas, soon after they are ripe. This spe- cies is an article of the materia medica ; a decoc- tion of the leaves is recommended in costiveness where the patient is of a hot bilious disposition. 3. A. petulacoides, the shrubby sea orach, grows wild by the sea side, in many places of Britain. It is a low under shrub, seldom rising above two feet and a half, or at most three feet high ; but becomes very bushy.

ATRIUM, in antiquity, the large room or court at the first entrance into the house, in which the Romans used to sup, and in which they kept

the statues and images of their ancestors. In ecclesiastical antiquity it signified an open place or court before a church, making part of what was called the narthex, or antetemple. The atri- um in the ancient churches was

a large area or square plat of ground, surrounded with a portico or cloister, situtate between the porch or vestibule of the church and the body of the church. Some have mistakenly confounded the atrium with the porch or vestibule, from which it was distinct; others with the narthex, of which it was only a part. The atrium was the mansion of those who were not suffered to enter farther into the church. More particularly, it was the place where the first class of penitents stood to beg the prayers of the faithful, as they went into the church. Atrium, in the canon law, the ceme- tery or church yard. In this sense, we find a law, prohibiting buildings to be raised in atrio eccle- siae, except for the clergy ; which the glossary explains thus, id est in ccemeterio, which includes the space of forty paces around a large church, or thirty round a small church or chapel.

ATRO'CIOUS, \ Lat. atrox. Perhaps a, ATRO'CIOUSLY, ' intentive, and trux, fierce, ATRO'CIOUSNESS, t savage, rough in manners. ATRO'CITY. 3 Used in the sense of inflex-

ble, terrible, dreadful, enormously wicked.

An advocate is necessary ; and therefore audience ought not to be denied him in defending causes, un- less it be an atrocious offence. Ayliffe's Parergon.

I never reeal it to mind, without a deep astonish- ment of the very horror and atrocity of the fact in a Christian court. Wotton.

They desired justice might be done upon offenders, as the atrotity of their crimes deserved. Clarendon.

Bad as Herod was, the petition of Salome at first shocked him. ' The king was sorry.' He thought of John's character, the atrociousness of the murder, and the opinion which the world would entertain of the murderer.

Home on the Life and Death of St. John tJte Baptist.

ATROPA, DEADLY NIGHT-SHADE : A genus of the monogynia order, and pentandria class of plants ; natural order twenty-fifth, Luridse. The corolla is camppnulated ; the stamina are distant ; the berry is globular, and consisting of two cells. There are eight species; the most common are : 1. A. belladonna, growing wild in many parts of Britain. It hath a perennial root, which cends out strong herbaceous stalks of a purplish color. These rise to the height of four or five feet, garnished with entire oblong leaves, which, towards autumn, change to a purplish color. The flowers are large, and come out singly be- tween the leaves upon long foot stalks ; bell- shaped, and of a dusky color on the outside, but purplish within. After the flower is past, the germen turns to a red berry, a little flatted at the top, about the

*size of a cherry. It is first ***jreen ; but when ripe, turns to a shining black, sits close upon the empalement, and contains a purple juice of a nauseous sweet taste, and full of small kidney-shaped seeds. This species be- :ng remarkable for its poisonous qualities, is very seldom admitted into gardens, nor should it ever be cultivated or allowed to grow in those places to which children have access. The symptoms produced by this poison are vertigo, delirium,*

great thirst, painful deglutition, and retching, fol- lowed by furor, stridor dentium, and convul- sions ; the eye-lids are drawn down, the uvea dilated and immovable, the face becomes red and tumid, and spasms affect tlie mouth and jaw ; the sensibility and irritability of the body suffer such great diminution, that large and repeated do- ses of the strongest emetics produce no sensible effect; the pulse is small, hard, quick ; and sub- sultus tendinum, risus sardonius, and coma, close the fatal scene. Vinegar liberally drank has been found most efficacious in obviating t'.e effects of this poison. The leaves of the bella- donna were first used externally to discuss scirr- hous and cancerous tumors, and as an appli- cation to ill-conditioned ulcers ; and their good effects in this way at length induced physicians to employ them internally for the same disor- ders ; and we find a considerable number of well-authenticated facts, which prove them to have been of important service. 2. Afrutescens, is a native of Spain, and rises with a shrubby stem to the height of six or eight feet ; dividing into many branches, garnished with round leaves, in shape like those of the storax tree : these are placed alternately on the branches. The flowers come out between the leaves, on short foot stalks, shaped like those of the former, but much less ; of a dirty yellowish color, with a few brown stripes ; but these are never succeeded by berries in Britain. 3. A herbacea, is a native of Cam- peachy, and has an herbaceous stalk and a peren- nial root, which puts forth several channelled herbaceous stalks, rising about two feet. Towards the top they divide into two or three small branches, garnished With oval leaves, four inches long, and three broad, having several prominent transverse ribs on their under side. The flowers come out from between the leaves; on short foot stalks; they are white, and shaped like those of the common sort, but smaller. It flowers in July and August, but seldom ripens its fruit in Britain. 4. A mandragora, the mandrake, has been distinguished into the male and female. The male mandrake has a very large, long, and thick root : it is largest at the top or head, and from thence, gradually grows smaller. Some- times it is single and undivided to the bottom ; but more frequently it is divided into two or more parts. From this root arise a number of very long leaves, broadest in the middle, narrow towards the base, and obtusely pointed at the end : they are a footer more in length, and about five inches in breadth ; of a dusky and disagree- able green color, and of a very feted smell. The female mandrake perfectly

resembles the other in its growth; but the leaves are longer and narrower, and of a darker color, as are also the seeds and roots. It grows naturally in Spain, Portugal, Italy, and the Levant. These three last species are propagated by seeds, and placed in stoves. This plant has been recommended as a cure for barrenness. Its fresh root is a violent purge, the dose being from ten to twenty grains in substance, and from half a dram to a dram in infusion. It has been found to do service in hysteric complaints ; but must be used with great caution, otherwise it will bring on convul- sions, and other mischievous symptoms. It has also a narcotic quality. At present only the

fresh leaves arc sometimes used in anodyne and emollient cataplasms and fomentations. It used to be an ingredient in one of the old officinal unguents ; but both that and the plant itself are now rejected from our pharmacopeias. It still, however, retains a placfi in the foreign ones, and may perhaps be considered as deserving farther attention. No modern botanist will admit the human figure ordinarily ascribed to its roots, especially since the discovery of the artifice of charlatans in fashioning it, to surprise the credu- lity of the people. Moses informs us, (Gen. xxx. 14.) that Reuben, being in the field, hap- pened to find mandrakes, which he brought home to his mother Leah. Rachel wished for them, and obtained them from Leah, upon a certain condition. The term D'tnn dudaim, here made use of by Moses, is one of those words of which the Jews at this day do not understand the true signification. Some translate it violets, others lilies or jessamine. Junius calls it agreeable flowers ; Codurquus makes it truffle, or mush- room ; but Calmet will have it to be the citron.

ATROPHY. From a, privative, and rptˆw, 1 nourish. Want of nourishment; a disorder, in which what is taken at the mouth, cannot contribute to the support of the body.

Pining atrophy, Marasmus, and wide-wasting pestilence. Milton.

The mouths of the lacteals may be shut up by a viscid mucus ; in which case the chyle passeth by stool, and the person fallcth into an atrophy.

Arbufhnot on Aliments. The shaking head, and the contracted limb ;

And lingering atrophy, and hoary age. Jago.

ATROPHY. See MK.IIICINE, Index. ATKOPOS, in heathen mythology, the name of ihe third of the Parra, or Fates, ller business \v;is to cut the thread of life.

ATTACH', } Fr. nttacher, to fasten by A TT.U H'MK.NT. \ means of some tie. To bind both literally and metaphorically.

Kfi/oons the guards, which on his state did wait, A'tuc/i'il that traitor false, and bound him strait.

Spenser.

The Tower was chosen ; that if Clifford should jiccuso great ones, they might ˆwithout suspicion or i.>oi;r) \n- presently attached. Bacon's Henry V 'II.

Bohemia greets you : Desires you to attach his son, who has His dignity and duty botli cast off.

Shakspeare.

Attach tliee firmly to the virtuous deeds And otlices of life : to life itself, \Vilh all its vain and transient joys, sit loose.

Mallet.

It must he confessed a happy attachment, which

ami tli'! African to his scorching sun. Cumberland.

A sensible mind cannot do violence even to a local

attachment without much pain. Camper's Letters.

ATTACH I AM FATA BONORVM, in ancient

law hooks, denotes a distress taken upon the goods

or chattels of any person sued for a personal

estate, ordeht, by the leiral attachiators, as a se-

curity to answer the action.

A i i AI IIM I,N i, in the law of England, im- plies the taking or ai prehending a person by viiiue o-f a writ or precept. It is distinguished from

an arrest, by proceeding out of a higher court, by precept or writ; whcrca>, the latter

proceeds out of an inferior court, by precept only An arrest lies only on the body of a maiv ►► whereas, an attachment lies often on the goods only, and sometimes on the body and goods. ATTACHMENT BY WRIT differs from distress, in not extending to lands, as the latter does ; nor does a distress touch the body as ►►in attach- ment does.

ATTACHMENT, FOREIGN, is an attachment of money or goods found within a liberty or city, to satisfy some creditor within such liberty or city. By the custom of London, and several other places, a man can attach money or goods in the hands of a stranger, to satisfy himself. If a plaint be exhibited in the mayor's or the sheriff's court (the proceeding in the for- mer being the most advantageous) against A, and the process be returned nihil, and thereupon the plaintiff suggests that another person within London is indebted to A, the debtor shall be warned (whence he is called the garnishee), and if he does not deny himself to be indebted to A, the debt shall be attached in his hands. But nothing is attachable, but for a certain and due debt; though by the custom of London, money may be attached before due, as a debt, but not levied before due. Sid. 327. 1 Nels. Abr. 282,

283.

ATTACHMENT OF PRIVILEGE is, by virtue of a man's privilege, to call another to that court whereto he himself belongs, and in respect whereof he is privileged to answer some action.

ATTACHMENT OF THE FOREST, is one of the four courts held in the king's forests. The lowest court is called the court of attachment, or wood- mote court ; the second is the court of regard, or survey of dogs ; the third is that of swein-mote, the highest, the Justice in eyre's seat. This at- tachment is by three means : by goods and chat- tels, by body, pledges, and mainprize ; or by body only. This court is held every forty days through- out the year; whence it is also denominated forty days' court.

ATTACHMENT OUT OF THE CHANCERY, is obtained upon an affidavit made, that the de- fendant was served with a subpoena, and made no appearance ; or it issues upon not perform- ing some order or decree. Upon the return of this attachment by the sheriff, quod non est inventus in balliva sua, another attachment, with a proclamation, issues ; and if he still refu- ses to appear, a commission of rebellion.

ATTACK', v. & 7i. Fr. attaquer ; from aita- cher, to come into close

contact with hostile in- tentions ; to be the aggressor, to offend.

Satan who that day

Prodigious power had shown, and met in arms No equal ranging through the dire attack Of fighting Seraphim, confus'd at length Saw where the sword of Michael smote. Milton. An indiscreet man is more hurtful than an ill- natured one, for as the latter will only attack his ene- mies and those he wishes ill to ; the other injures indifferently both friends and foes. Addison.

Hector opposes ; and continues the attack ; in which Sarpedon makes the first breach in the wall.

Pope. Il'Md.

ATTACOTTI, an ancient people of Britain, mentioned by Ammianus Marcellmus, and St.

Jerome, as well as in the Notitia Imperii. They are represented as allies of the Scots and Picts, and were, therefore, probably their neighbours ; thoush their precise situation has not been deter- mined by antiquaries.

ATTAGEN, array af, or array tv ; in ornitho- logy, the same with our gor-cock, moor-cock, or red game.

ATTAIN', -\ Lat. attineo ; from ad,

ATTAINABLE, f and tcneo, to hold. To

ATTAIN'ABLENESS, t reach as the object of pur-

ATTAIN'MENT. J suit or effort, to realize one's desire, to procure.

Crowns and diadems, the most splendid terrene ittains, are akin to that ; which, to-day is in the field, and to-morrow is cut down. Glanville's Scepsii,

He wilfully neglects, the obtaining unspeakable good ; which, he is persuaded is certain and attainable.

Tillotson.

Persons become often enamoured of outward beauty, without any particular knowledge of its possessor, or its attainableness by them. Cheyne.

So pleas'd at first the tow'ring Alps we try, Mount o'er the vales, and seem to tread the sky ; The eternal snows appear already past, And the first clouds and mountains seem the last : But those attained, we tremble to survey The growing labour of the lengthened way, The increasing prospect tires our wond'ring eyes, Hills peep o'er hills, and Alps on Alps arise.

Pope's Essay on Criticism.

Among nations, as well as individuals, the powers of imagination attain some degree of vigour before the intellectual faculties are much exercised in spe- culative or abstract disquisition. Robertson.

ATTAINDER, in law, is the immediate con- sequence, when sentence of death, the highest judgment in our laws, is pronounced. For when it is now clear beyond all dispute, that the crimi- nal is no longer fit to live upon the earth, but is to be exterminated as a monster and a bane to human society, the law sets a note of infamy upon him, puts him out of its protection, and takes no farther care of .him than barely to see him executed. He is then called attaint, attinc- tus, stained, or blackened. He is no longer of any credit or reputation ; he cannot be a witness in any court ; neither is he capable of perform- ing the functions of another man : for, by an anticipation of his punishment, he is already dead in law. This is after judgment ; for there is a great difference between a man convicted and attainted ; though they are frequently confound- ed together. After conviction only, a man is liable to none of these disabilities ; for there is still in contemplation of law a possibility of his innocence. Something may be offered in arrest of judgment : the indictment may be erroneous, which will render his guilt uncertain, and there- upon the conviction may be quashed : he may obtain a pardon, or be allowed the benefit of clergy ; both which suppose some latent sparks of merit, which plead in extenuation of his fault. But, when judgment is pronounced, both law and fact conspire to prove him completely guilty ; and there is not the remotest possibility left of any thing to be said m his favor. Upon judg- ment, therefore, of death, the attainder of a cri- minal commences : or upon such circumstances as are equivalent to judgment of outlawry on

a capital crime, pronounced for absconding from justices which tacitly confesses the guilt : and therefore, upon judgment, either af outlawry, or of death, for treason or felony, a man is said to be attainted. A person attainted of high treason, forfeits all his lands, tenements, and heredita- ments ; his blood is corrupted, and he and his posterity rendered base. See

CORRUPTION, FOR- FEITURE, &c. Attainders may be reversed or falsified, (i. e. proved to be false) by writ of error, or by plea. If by writ of error, it must be by the king's leave, &c. and, when by plea, it may be by denying the treason, pleading a par- don by act of parliament, &c. Persons may be attainted by act of parliament. Acts of attainder of criminals have been passed in several reigns, on the discovery of plots and rebellions, from the reign of king Charles II. when an act was made for the attainder of several persons, guilty of the murder of king Charles I. Among acts of this nature, that for attainting Sir John Fenwick, for conspiring against king William, is the most re- markable ; it being made to attaint and convict him of high treason, on the oath of one witness, just after a law had been enacted, ' That no per- son should be tried or attainted of high treason, where corruption of blood is incurred, but by the oath of two lawful witnesses, unless the party confess, stand mute, &c.' Stat. 7 and 8 W. III. cap. 3. But he was indicted of treason, on the oaths of two witnesses, though but only one could be produced against him on his trial. By the VHth Ann. chap. 21, all corruption of blood, and the forfeiture for ever of a traitor's estate of inheritance, were to have ceased on the death of the then Pretender ; biit the legislative policy or panic of the reign of George II. caused a further extension of these vindictive principles of law, to the time of the death of the Pretender's sons. And, by an act of the 39th of the late king, the provisions of the statutes of Anne and of George II. for the future abrogation of these hard conse- quences of attainder, were repealed, and the law stood in its original severity. But by an act, in- troduced by Sir Samuel Romilly, in the 54th year of his late Majesty's reign, corruption of blood, and forfeiture beyond the term of the offender's own life were abolished, except in cases of treason, petty treason, and murder ; thus, in part, realising the hope expressed by Mr. Justice Blackstone (Comm. b. iv. c. 29), ' That as every other oppressive mark of feudal tenure is happily worn away, corruption of blood, with all its connected consequences, not only of present escheat, but of future incapacities of in- heritance, even to the twentieth generation, may in process of time be abolished by act of Par- liament.'

ATTAINT', v. n. & adj.-\ Old Fr. attaindre ; ATTAIN'DER, ˆfrom tcmgere, to

ATTAIN'TURE, i touch, says Min-

ATTAIN'MENT. J shen, because he

who is attainted is touched, caught, or taken : or, from tingere, to stain, which is more pro- bable. To stain, to impute charge, or accuse.

Were it not an endless trouble, that no traitor or

felon should be attainted, but a parliament must be

called ? Spcruer.

I must offend, before I be attainted. Shalisjieare.

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AIT

His warlike shield

Vas all of diamond, perfect, pure, and clean ; Kcr, so exceeding shone his glistering ray, That Phoebus' golden face it did attaint ; As, when a cloud his beams doth overlay.

Spenser's Faerie Queene. My tender youth was never yet attaint With any passion of inflaming love. Shakesp.

So smooth he daub'd his vice with shew of virtue ; He liv'd, from all attainder of suspect. Id.

Hume's knavery will be the duchess's wreck, And her attainture will be Humphrey's fall. Id.

The ends in calling a parliament were chiefly, to have the attainderi of all his party reversed ; and, on the other side, to attaint by parliament his enemies.

Bacon.

How would the sons of Troy in arms renown'd, ˆ►►nd Troy's proud dames whose garments sweep the

ground,

Attaint the lustre of their former name, Should Hector basely quit the field of fame ?

Pope. Homer.

ATTAINT, in the English law, is a writ that lies after judgment against a jury of twelve men, that have given false verdict in any court of record, in an action real and personal, where the debt or damages amount to above forty shillings, stat. .►►►") and 34 I'd. III. c. 7. It is called attaint,

because the party that obtains it endeavours thereby to stain or taint the credit of the jury \vilh perjury, by whose verdict lie is grieved. The jury who are to try this false verdict must he twenty-four, and are called the grand jury ; for the law wills not that the oath of one jury of twelve men should be attainted or set aside by an equal number, nor by less indeed than double the former. And he that brings the attaint can ci\e no other evidence to the grand jury, than v.luit was originally given to the petit. For, as their verdict is now try ins:, and the question is, whether or no they did right upon the evidence that appeared to them, the law adjudged it the hiuhe-t absurdity to produce any subsequent proof upon such trial, and to condemn the prior juns:!iction for not believing evidence which they TI. vi",- knew. Hut those against whom it is brought, are allowed, in the affirmance of the first verdict, to produce new matter: because the petit jury may have formed their verdict upon evidence of their own knowledge, which never appeared in court ; and, because very terrible was the judgment which the common law inflicted upon them, if the grand jury found their verdict a t'al-e one. The judgment was, 1 . That they should lose their liberam Icgem, and become for ever infamous. '2. That they should forfeit all their goods and chattels. 3. That their lands and tenements should be seized to the king. 4. That their wives and children should be thrown out of doors. 5. That their houses should be rased. 6. That their trees should be rooted up. 7, That their meadows should be ploughed. 8. That their bodies should be cast into jail. 'A That the party should be restored to all that he lost by reason of the unjust verdict. Hut, as the severity of this punishment had its usual effect, in preventing the law from hcinc executed, then-fore, by the sta- tute 1 I lien. VI f. c. '24, revived by 23 llen.VIII.

c. 3, and made perpetual by 13 Eliz. c. 25, it is allowed to be brought after the death of the party, and a more moderate punishment was inflicted upon attainted jurors ; viz. perpetual infamy, and if the cause of action were above forty pounds value, a forfeiture of twenty pounds a-piece by the jurors ; or, if under forty pounds, then five pounds a-piece ; to be divided between the king and the party injured. So that a man may now bring an attaint, either upon the statute or at common law, at his election ; and in both may reverse the former judgment. But, the practice of setting aside verdicts upon mo tion, and granting new trials, has so superseded the use of both sorts of attaints, that there is hardly any instance of an attaint later than the sixteenth century.

ATTAINT, or ATTEINT, in horsemanship, a hurt in a horse's leg, proceeding either from a blow with another horse's foot, or from an over-reach in frosty weather, when a horse, being rough-shod, or having shoes with long caulkers, strikes his hinder feet against his fore legs.

ATT ALIA, in ancient geography, a sea-port of Pamphylia, seated on a bay of the Mediter- ranean sea ; founded by one of the Attali, kings of Pergamus. In this city Paul and Barnabas preached, about A. D. 49 ; and it had bishops in the fifth and sixth centuries. It is now called SATTALIA.

ATTALIC^ VESTES, in antiquity, garments made of a kind of cloth of gold. They took the denomination from Attalus, surnamed Philo- meter, a wealthy king of Pergamus, who was the first,. according to Pliny, who caused gold to be woven into cloth.

ATTELABUS, in zoology, a genus of insects belonging to the order of coleoptera, or the beetle kind. It has four wings, of which the superior are crustaceous, and serve as a sheath or cover to the inferior, which are membranous. The head tapers behind, and is inclined ; the feelers turn thicker towards the apex. The species are thir- teen. 1 . A. apiarus is bluish, with red elytra, and three black belts. It is a native of Germany. 2. A. avellana is black, with the breast, feet, and elytra red. 3. A. betula has springy legs, and the whole body is of a dark red. It frequents the leaves of the birch. 4. A. buprestoides is of a dark color, with a globular breast, and nervous elytra. It is a native of Europe, o. A. ceramboides, is of a blackish red color, and the elytra is furrowed. It frequents the spongy boletus, a species of mush- room. 6. A. coryli is black, with red elytra, or crustaceous wings. 7. A. curculionoides is black, with red elytra and breast. These two last spe- cies, and the avellana, frequent the leaves of the hazel and filbert-nut trees. 8. A. formicarius is black, with red elytra, and a double white bell towards the base. It is a native of Europe. 9. A. melanurus is black, with testaceous elytra, black at the apex. It is a native of Sweden. 10. A. mollis is hairy and yellowish, with pale ely- tra, and three belts. It is a native of Europe. 11. A. Pennsylvanicus is black, with red elytra, a black belt round the middle, and another towards the apex of the elytra. It is a native of Philadelphia. 12. A. sipylus is green, with a hairy breast, and a double yellow belt upon the

elytra. 13. A. Surinamensis has a double inden- tation, or two teeth, in the top of the elytra.

ATTEM'PER, v. & adj.\ Lat. of the mid ATTEM'PERATE, /die ages, attempero.

ATTEM'PERANCE, ^Lat. temperare, to

ATTEM'PERLY. J abate, the predomi-

nant qualities of a thing. To moderate, to ac- commodate.

A man should love his wyf by discretien, patiently and attemprety, and than is she as though it were his sister. Chaucer. The Persones Tale, v. ii. p. 363.

The joyous birds shrouded in cheerful shade, Their notes unto the voice attempered sweet, The angel-call, soft trembling voices made, To the instruments' divine respondence meet.

Spenser.

A monarchy, where is no nobility at all, is ever a pure and absolute tyranny, as that of the Turks ; for nobility attemper sovereignty, and draws the eyes of the people somewhat aside from the line royal : but for democracies they need not. Bacon's Essays f*

Phemius ! let arts of gods and heroes old,

Attemper'd to the lyre, your voice employ. Pope.

Hope must be proportioned and attemperate to the promise, if it exceed that temper and proportion, it becomes a tumour and tympany of hope,

Hammond' t Pract. Catechism. Attemper'd suns arise,

Swect-beanvd, and shedding oft thro' lucid clouds A pleasing calm. Thomson.

In the midst a form divine ! Her eye proclaims her of the Briton line ; Her lion-port, her awe-commanding face, Attemper'd sweet to virgin-grace.

Gray's Bard.

ATTEMPT, v. & w.-\ Fr. attenter ; from ATTEMPT'ER, (tenter, which is from

ATTEMPT'ABLE, ►►the Latin tentare, to ATTENTATE. J try. To make experi-

ment ; to make an effort to accomplish an ob- ject ; 10 undertake.

The gentleman, vouching his to be more fair, vir- tuous, wise, and less attemptable, than the rarest of our ladies. Shakspeare.

Lucio. Our doubts are traitors, And make us lose the good we oft might win By fearing to attempt. Id. Measure for Measure. Alack! I am afraid, they have awak'd, And 'tis not done ; th' attempt, and not the deed, Confounds us. Id. Macbeth.

He flatt'ring his displeasure, Tript me behind ; got praises of the king, For him attempting, who was self-subdu'd. Id, He would have cry'd ; but, hoping that he dreamt, Amazement tied his tongue, and stopp'd th' attempt.

Dryden.

If we be always prepared to receive an enemy j we

shall long live in peace and quietness, without any

attempts upon us. Bacon.

I have nevertheless attempted to send unto you,

for the renewing of brotherhood and friendship.

1 Mac. xii, 17.

Who, in all things wise and just, Hinder'd not Satan to attempt the mind Of man, with strength entire and free-will arm'd.

Milton.

The Son of God, with godlike force endu'd, Against th' attempter of thy Father's throne. Id. You are no factors, for glory or treasure ; but dis-interested attempterSj for the universal good.

GlanviUe's Scepsis.

Fools only make attempts beyond their will, A wise man's pow'r's the limit of his will.

Congreoe.

He that would succeed in a project of gain, must never attempt to gain too much ; and uuon proper occasions, must know how to lose.

Hawkesworth's Telemachus.

A lion of Numidia, that hunger has made more furious, rushes among the flocks ; he kills and tears to pieces without resistance ; and the shepherds, in- stead of attempting to defend their sheep, fly with terror and trepidation

to preserve themselves. Id.

AIT END', ˆ Lat. attendo; from

ATTEND'ANCE,

ATTEND'ANT, n. & adj.

ATTEND'ER,

ATTENT',

ATTEN'TION, ATTEN'TIVE, ATTENTIVELY, ATTEN'TIVENESS.

ad and tendo, to stretch to or towards. To direct the mind to ; r to look to what one is about ; to have the faculties engaged or the affair in hand ; to wait.

The fifth had charge, sick persons to attend ; And comfort those, in point of death which lay.

Spenser.

He that goeth about to persuade a multitude, that they are not so well governed as they ought to be, shall never want attentive and favourable hearers.

Hooker's EC. Polity.

I will be returned forthwith : dismiss your attend- ant there j look it be done I Shakspeare. Othello.

England is so idly king'd, Her sceptre so fantastically borne ; That fear attends her not. Id.

I'm never merry, when I hear sweet musick : The reason is, your sririts are attentive.

Id. Merchant of Venice. My pray'rs and wishes always shall attend The friends of Rome. Addison's Gate.

A vehement, burning, fixed, pungent pain in the stomach, attended with a fever. Arbuthnot on Diet. I saw most of them attentive to three Sirens, distinguished by the names of Sloth, Ignorance, and Pleasure. Toiler.

The diligent pilot, in a dangerous tempest, doth not attend the unskilful words of a passenger. Sidney.

The gypsies were there, Like lords to appear ; With such their attenders, As you thought offenders. Ben Jonson. Now mine eyes shall be open ; and mine ears often unto the prayer, that is made in this place.*

2 Chron. vii. 15.

What can then be less in me, than desire To see thee, and approach thee, whom I know Declar'd the Son of God ; to hear attent Thy wisdom, and behold thy godlike deeds ?

Milton.

Other suns perhaps,

With their attendant moons, thou wilt descry, Communicating male and female light.

Id. Paradise Lout.

Unknown sins have their guilt and shame, and are justly attended with known punishments.

Hail's Contemplations.

We all are never weary of receivin , sooa weary or attending. Id.

At length her lord descends upon the plain

In pomp attended with a numerous train. Dryden.

Hush'd winds the topmast branches scarcely uend,

As if thy tuneful song they did attend. Id.

Plant anemonies after the first rains, if you will

have flowers very forward : but it is surer to attend

till October. Evelyn.

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AIT

With these four more of lesser fame,

And humble rank attendant came ;

Hypocrisy with smiling grace,

And Impudence with brazen face,

Contention bold with iron lungs,

And Slander with her hundred tongues. Moore. He [Termosiris priest of Apollo] related past events vith such force of expression that they seemed to be present ; and with such comprehensive brevity, that attention was not wearied ; and he foresaw the future by a sagacity that discovered the true characters and dispositions of mankind, and the events which they would produce. Hawkesworth't Telemachus.

ATTENTION has also been defined, a due appli- cation of the ear, or the eye, as well as of the mind, to any thing said or done, in order to acquire a knowledge thereof.

ent effects they produce. Thus, when tenacious and viscid juices not only stagnate in the cavities of the vessels, but obstruct the minute ducts of the viscera and emunctories, thest medicines, by their inciding and attenuating qualities, discharge the humors, and remove the obstructions; for which reason they are not improperly called ape- rients. Attenuants produce so great a variety of effects, that it is proper we should be well ac- quainted with their several kinds, as appropriated to the several disorders, and know which will prove most serviceable in each. According to Hoffman, the dissolving and attenuating of viscid crudities in the stomach and primae vise, is well answered by the roots of arum, acorus, pepper, ginger, and the like ; as also by sal ammoniac,

Attention of mind is not properly an act of vitriolated tartar, the fixed alkaline salts, and the

the understanding, but rather of the will, by which it calls the understanding from the con- sideration of other objects, and directs it to the thing in hand. Nevertheless, our attention

simple or dulcified spirit of salt. When crude and unconcocted humors are to be evacuated by stool, this intention is very well answered by the neutral salts, as the salts of the purging waters,

is not always voluntary ; an interesting object and the sal polycrestum, with a sufficient quan- seizes and fixes it beyond the power of control, tity of a watery vehicle. When viscid humors, Attention, in respect of hearing, is the stretching occasioning disorders of the breast, are to be at-

or straining of the membrana tympani, so as to make it more susceptible of sounds, and better prepared to catch even a feeble agitation of the air: or, it is the adjusting the tension of that membrane to the decree of loudness or lowness of the sound to which we are attentive. Accord- ing to the decree of attention, objects make a stronger or weaker impression. Bacon, in his Natural History, observes, that ' Sounds are me- liorated by the intension of the sense, where the common sense is collected most to the particular sense of hearing, and the sight suspended. There- fore sounds are sweeter, as well as greater, in the night than in the day; and 1 suppose they are sweeter to blind men than to others ; and it is manifest, that between sleeping and waking, when all the senses are suspended, music is far sweeter than when one is fully waking.' Attention is re- quisite even to the simple act of seeing : the eye can take in a considerable field at one look; but no object in the field is seen distinctly but that singly which fixes the attention : in a profound reverie that totally occupies the attention, we scarce see what is directly before us. In a train of perceptions, no particular object makes such a t'mure as it would do singly and apart : for, when the attention is divided among many ob- jects, no particular object is entitled to a large share. 1 lence, the stillness of night contributes to terror, there being nothing to divert the atten- tion, la matters of slight importance, attention is mostly directed bv the will; and, for that reason, it is our own fault if trifling objects make any deep impression. Had we power equally to withhold our attention from matters of import- ance, we miuht be proof against any deep im- pression. Hut our power fails us here; and, while our Attention is thus forcibly attached to one object, others will solicit it in vain.

ATT KM ANTS, or An i NUATING MEDI- CFM.S, are such as subtilise and break the hu- mors into finer parts; and thus dispose them for motion, ciiculation, excretion, &c. They are cf extensive, use in physic, and come under differ'. ;it denominations, accon!nr_r to the differ-

tenuated and expectorated, the intention is most effectually answered by elecampane and orrice roots ; and by gum ammoniacum, myrrh, or ben- jamin, and balsam of Peru ; or by regenerated tartar, oxymel of squills, a solution of crabs' eyes in distilled vinegar, and the syrup of to- bacco, and the like. When the mass of blood is tainted by thick and tenacious sordes, and the " emunctories are by that means obstructed, and the humors contaminated by a saline sulphureous and scorbutic dyscrasy, the most efficacious of the attenuants are the horse-radish, scurvy-grass, water and garden cresses, mustard, gum ammo- niac, benjamin, myrrh, the oil of fixed nitre, oil of tartar per deliquium, solutions of nitre, spirit of sal ammoniac, salt of wormwood with lemon juice, and the salts of the medicinal waters. When grumous or coagulated blood, occasioned by contusions or blows, is to be attenuated and again dissolved, the intention

is sure to be an- swered by the roots of Solomon's Seal, vinegar, and crabs' eyes, the regenerated tartar, and nitre prepared with antimony. And in cases where the lymph has acquired a preternatural thickness and viscidity, especially if from a venereal taint, the curative intention is most effectually an- swered by guaicum, the acrid tincture of anti- mony, calomel, .ZEthiop's mineral, and the like ; which, when skilfully used, are of singular effi- cacy in dissolving and attenuating the viscid juices impacted in the glands of the liver.

ATTEN'UATE, v. k n. \ Lat. attenuo, to

ATTENUA'TION J thin ; from ad and

tennis, to thin ; from tendo, to stretch. To draw out in length or superficial extent ; to lessen or thin ; to dilate.

Chiming with a hammer upon the outside of a bell, the sound will be according to the inward concave of the bell ; whereas the elision, or attenuation of the air, can be only between the hammer and the outside of the bell. Bacon.

Vivification ever consisteth in spirits attenuate, which the cold doth congeal and coagulate. Id.

The ingredients are digested and attenuated by heat ; they are stirred and constantly agitated by winds.

ATTERBURY.

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Of such concernment too is drink and food, T' encrassate or attenuate the blood.

Dryden's Translation of Lucretius.

ATTENUATION is defined more generally by Chauvin, the dividing or separating of the mi- nute parts of any body, which before, by their mutual nexus or implication, formed a more continuous mass. Accordingly, among alche- mists we sometimes find the word used for pul- verisation, or the act of reducing a body into an impalpable nowder, by grinding, pounding, or the like.

ATTENUATION, in medicine, the lessening the power or quantity of the morbific matter.

ATTERBURY (Bishop Francis), son of Dr. Lewis Atterbury, was born at Milton in Buck- inghamshire, in 1 662 ; educated at Westminster, and thence elected to Christ-Church, in Oxford, where he soon distinguished himself by his ge- nius. In 1687 he was made M. A., when he exerted himself in the controversy with the papists, vindicated Luther in the strongest manner, and displayed an uncommon fund of learning, enlivened with great vivacity. In 1690 he married Miss Osborn, a lady of great beauty, but moderate fortune. About 1690 he took orders, and in 1691 was elected lecturer of St. Bride's church in London, and preacher at Bridewell chapel. He was soon after appointed chaplain to king William and queen Mary. The share he took in the controversy against Bentley, (about the authenticity of Phalaris's Epistles) is now clearly ascertained. In 1700 a still larger field of activity opened, in which Atterbury was engaged four years with Dr. Wake (afterwards archbishop of Canterbury), and others, concern- ing ' the Rights, Powers, and Privileges of Con- vocations ;' in which he displayed so much learning and zeal for the interests of his order, that the lower house of Convocation returned him their thanks, and the university of Oxford complimented him with the degree of D.D. January 29, 1700, he was installed archdeacon ofTotness. The same year he was engaged, with some other learned divines, in revising an intended edition of the Greek Testament, with Greek Scholia, collected chiefly from the fathers, by Mr. Archdeacon Gregory. At this period he was popular, as preacher at the Rolls chapel ; an office which had been conferred on him by Sir John Trevor, in 1698, when he resigned Bridewell. Upon the accession of queen Anne, in 1702, Dr. Atterbury was appointed one of her chaplains ; and in October 1 704, was ad- vanced to the deanery of Carlisle. About two years after this, he was engaged in a dispute with Mr. Hoadly, concerning the advantages of virtue, with regard to the present life ; occa- sioned by his sermon, preached August 30, 1706, at the funeral of Mr. Thomas Bennet, a bookseller. In 1707 Sir Jonathan Trelawney, bishop of Exeter, appointed him one of the canons residentiaries of that church. In 1709 he was engaged in a fresh dispute with Mr. Hoadly, concerning ' Passive Obedience;' oc- casioned by his Latin sermon, entitled ' Concio ad Clerum Londinensem, habita in Ecclesia S. Elphegi.' In 1710 came on the famous trial of Dr. Sacheverell, whose remarkable speech on VOL. III.

that occasion was generally supposed to hare been drawn up by our author, in conjunction with Dr. Smalridge and Dr. Freind. The same year Dr. Atterbury was unanimously chosen prolocutor of the lower house of Convocation, and had the chief management of affairs in that house. May 11, 1711, he was appointed by the convocation one of the committee for comparing Mr. Whiston's doctrines with those of the church of England ; and in June following, he had the chief hand in drawing up ' A Representation of the present State of Religion.' In 1712 he was made dean

of Christ Church, notwithstand- ing the strong interest and warm applications of several great men in behalf of his competitor, Dr. Smalridge. In the beginning of June, 1713, the queen advanced him to the bishopric of Ro- chester, with the deanery of Westminster in commendam. He was confirmed July 4, and consecrated at Lambeth next day. The death of the queen, in 1714, put an end to all farther hopes of advancement ; for the new king treated him with great coolness, doubtless aware of either the report or the fact of his offer, on the death of Anne, to proclaim the Pretender in full canon- icals, if allowed a sufficient guard. This dislike operated like oil on the inflammable mind of Atterbury, who not only refused to sign the loyal declaration of the bishops in the rebellion of 1715, but suspended a clergyman for lend- ing his church for the performance of divine service to the Dutch troops brought over to serve against the rebels. Not content with a consti- tutional opposition, he entered into a correspondˆ ence with the Pretender's party, in favor of the dispossessed family ; for which offence he was apprehended in August 1722, and committed to the Tower ; and in the March following a bill was brought into the House of Commons, for the infliction of pains and penalties. This measure, which on constitutional grounds can never be defended, and which indeed was supported chiefly on the urgency of the particular time and case, met with considerable opposition in the Lords, and was resisted with great firmness and eloquence by the bishop, who maintained his innocence with his usual acuteness and dexte- rity. His guilt however has been tolerably well proved by documents since published ; and nothing more is necessary to warrant a con- firmed moral distaste to his character, than the contemplation of such a scene of smooth dissi- mulation and hypocrisy. By this bill the bishop was deprived and outlawed, and no British sub- ject was permitted to visit him abroad, without the king's sign manual ; which however was not refused to his relatives.

On the 27th, this prelate having that day taken leave of his friends, who, from the time of passing the bill against him to the day of his de- parture, had free access to him in the Tow er, em- barked on board the Aldborough man of war, and landed the Friday following at Calais. When he went on sho-e, having been informed that lord Bolingbroke, who, after the rising of the parliament, had received the king's pardon, was arrived at the same place on his return to Eng- land, he said, with an air of pleasantry, ' Then I am exchanged !' When bishop Atterbury first

entered upon his banishment, Brussels was the place destined for his residence ; but he was compelled to leave that place, and retire to Paris. He next changed his abode for Mont- pelier, in 1728 ; and, after residing there about two years, returned to Paris, where he died Feb- ruary 15, 1731. As a composer of sermons, Dr. Atterbury still retains the highest reputation ; his periods are easy and elegant, his style flowing and beautiful ; but as a critic or disputant, he is rather dexterous than accurate, and rather po- pular than profound.

ATTERBURY (Dr. Lewis), eldest son of the Dr. and brother to the bishop, was born at Cal- decot, in Bucks, in 1656 ; educated at Westmin- ster, and sent to Oxford in 1674. In 1679 he entered into orders, and commenced A. M. in 1680 ; in 1683 he was made chaplain to Sir W. Pritchard; in 1684 rector of Symel; in 1687, L.L.D. and in 1691 lecturer of St. Mary-at-Hill, London. In 1695 he was elected preacher at Highgate, and was appointed one of the six preaching chaplains to the princess Anne of Denmark, at Whitehall and St James's ; in which place he was continued after she became queen, and during part of the reign of George I. In 1707 the queen appointed him rector of Shepperton, and in March 1709, the bishop of London collated him to the rectory of Hornsey. lie died at Hath., of a paralytic disorder, in 1731. He published, during his life, 2 vols. of Ser- mons, and four occasional ones, besides other pieces. He was remarkably benevolent and charitable. While he resided at Highgate, ob- serving that the poor in that neighbourhood were much at a loss for medical advice, he studied physic, and practised it gratis among them : he also gave ►►10 annually to a teacher, to in- struct young girls at Newport Pagnel, and bur- dened his estate with this annual payment for ever. He left 200 volumes of pamphlets to the library of Christ Church, Oxford.

ATTKS, in fabulous history, a son of Calaus of Phrygiu, who was born impotent. The wor- ship of Cybele was introduced among the Ly- dians by him, after which he was highly honored by the goddess. His success awakened a jeal- ousy in Jupiter, and he sent a wild boar to lay waste the country, that Attes might be de- stroyed.

ATTEST', v. Sc n.ˆ Lat. attestor; ad and ATTF.ST'ER, >tcstor,to call to witness.

ATT F.STA'TION. j To corroborate or strength- en by witness, i. e. by one who has had the evi- dence of one or more of the senses.

With the voice divine

Nigh thunderstruck, th' exalted man, to whom Such high attest was giv'n, a while survey'd With wonder. Paradise Regained,

Many particular facts are recorded in holy writ, attested by particular panan authors. Addison.

We may derive a probability, from the attestation of wise and honest men, by word or writing; or the concurring witness of multitudes, who have seen and known, what they relate. Watts.

Prodigious actions may as well be done I!y weaver's issue, us by prince's son. This Jirdi-(i►►(,'sr►►r of the publick good, By that one deed ennobles all his blood.

Drydcns Absalom and Achitophel.

ATTIIIS, a daughter of Cranaus, the second king of Athens. According to Apollodorus she gave her name to Attica.

ATTIC, any thing relating to Attica, or Athens, or any thing peculiarly elegant or excellent.

ATTIC BASE, a peculiar kind of base used by the ancient architects in the Ionic order ; and by Palladio, and some others, in the Doric.

ATTIC ORDER, or ATTICS, in architecture, a kind of order, after the manner of a pedestal, raised upon another larger order, by way of crowning, or to finish the building. See ARCHI- TECTURE, Index.

ATTIC SALT, a delicate, poignant kind of wit, peculiar to the ancient Athenians. The term is applied to any similar piece of humor in mo- dern writings.

ATTIC STOIIY, in architecture, a story in the upper part of a house, where the windows are usually square.

ATTIC WITNESS, a witness incapable of cor- ruption.

ATTICA, an ancient state of Greece, situated along the north coast of the gulph of Saron, bounded on the west by Megara, mount Ci- thaeron, and part of Bojotia ; on the north by the gulf of Euripus (now called Strelto di Negro- ponte, or the Strait of Negropont), and the rest of Bceotia ; and on the east by the Euripus. It extended in length from north-west to south-east, about sixty miles ; its breadth from north to south was fifty-six, decreasing as it approached the sea. The soil of this country was naturally barren and craggy, though by the industry of its inha- bitants it produced

all the necessaries of life. On this account, Attica was less exposed to in- vasions than other more fertile countries ; and hence, it preserved its ancient inhabitants, beyond all the other kingdoms in its neighbour- hood ; so that they were reputed to be the spon- taneous productions of the soil ; and as a badge of this, Thucydides tells us, they wore golden grasshoppers in their hair.

The principal mountains of Attica were Lau- rium, celebrated for its silver mines, and situated near the Sunian promontory ; Pentelicus, famous for its quarries of white marble ; and Hymettus, near Athens, remarkable for the abundance and fineness of its honey. Other mountains men- tioned in history, are TEgialeus, Brilessus, Ica- rius, Lycabettus, and Parnethus. Its principal rivers were the Cephisus, Eridanus, and Ilissus. Although the mountainous character of the coun- try rendered it unpromising and sterile for grain generally, barley was produced in abundance ; and Aristotle observes that the fruits of Attica had a peculiar sweetness. The culture of the olive tree was protected by law, and a fine of 200 drachmae (upwards of ––8 sterling) was paid by any person who rooted up on his grounds more than two trees in a year, unless for the service of the gods. The olives called colym- bades, considered larger and of richer flavor than any other, retain their name to this day, and were, until the late civil wars, monopolised for the personal use of the grand signior.

*The chief cities of Attica were Athens, the ca- pital. See ATHENS. Next to it Eleusis, situ- ated on the same gulf, n&*r the coasts of Megara ;*

and next to that Rhamnus, famed for the temple of Amphiaraus, and the statue of the goddess Nemesis, sculptured by Phidias, from a block of Parian marble, which the Persians had brought thither to assist in erecting a trophy of their pro- posed victory. It was ten cubits high, and was inscribed with the name of his favorite pupil Agoracritus. Nor ought we to omit to mention the town of Marathon, ten miles ,north-east of Athens, immortalised by the victory gained there by Miltiades over the Persians. On the plain of the battle the Athenians erected small co- lumns, on which the names of those warriors who fell were inscribed. A monument after- wards raised to Miltiades himself, was set apart, a small distance from the rest : in the intervals between these columns were trophies, bearing the arms of the Persians.

Attica was divided1 into ten tribes, called $v\ai ; and these again were subdivided into 174 boroughs, or Srjfioi. The inhabitants were of three classes: 1. Citizens, TroXirtu; whose numbers underwent little change from the time of Cecrops, and averaged about 20,000. They had a right, from a

certain property, to vote in the general assembly ; about 60,000 others were freemen without this privilege. Those who sprung from parents both of whom were Athe- nian citizens, were considered freeborn, though occasionally the privilege was extended to such as had one parent only of this class. The honor was conferred on foreigners by a vote of the people, ratified at two solemn assemblies ; at the second of which it was requisite that 6,000 citi- zens should be present. But no one, except a free born Athenian, could hold an archonship. 2. Foreigners settled in Attica, and enrolled in the public registers, peroiicoi. They were pro- tected by the state ; but were not permitted to hold any public office. Each fifroiicos selected a citizen as his protector, irpocrrarjjc ; who stood to him much in the same relation aa the Roman patronus did to his cliens. They paid an an- nual tribute to the state of twelve drachma (about nine shillings), and in default of payment they were sold as slaves. Their number (males only) in the time of Demetrius of Phalerum, (307 B. C.) was 10,000. 3. Slaves, SovXot, who, when numbered at the same time, amounted to 400,000. The agricultural, mining, and menial labor was performed by them ; as well as the greater part of that of the public works, and of private manufactures. The entire population of ancient Attica may be taken at about half a mil- lion, or nearly 900 to a square mile ; about one- fourth of that of Middlesex. For the political history of this interesting country, including the details of its recent struggles for liberty, see our article GREECE.

ATTICISE,-)

AT'TICISM, (Gr. ATTIKˆ, to speak or

Af 'xic'K, (write after the Attic dialect.

AT'TICAI. j

There while they acted and overacted, among other voung scholars, I was a spectator ; they thought themselves gallant men, ⬛⬛nd 1 thought them fools; they made sport, and I laughed ; they mispronounced, and I misliked; and to makeup the atticwm, they were out, and I hist. Milton.

If any will still excuse the tyrant for attici.iinfi in those circumstances, it is hard to deny them the glory of being the faithfullest of his vassals.

Bentley. Dissertation on Phaluris.

ATTICUS (Titus Pomponius), one of the most remarkable characters of ancient Rome. He managed himself with such address, that he preserved the esteem and affection of all parties He sent money to the younger Marius, and yet was a favorite with Sylla. He pleased Csesar without offending Pompey. He sent supplies to Brutus, while he was doing kind

offices to An- tony. His strict friendship with Cicero did not hinder him from having great intimacy with Hortensius ; and in the contests between Antony and Augustus he preserved the regard of both. The contests at Rome between the parties of Sylla and Marius, however, induced him to re- tire to Athens, where he gained the affection of the Athenians so much, that the day he left them was a day of mourning. He was very fond of learning, and kept several librarians and readers. He might have obtained the most considerable posts in the republic ; but chose rather not to meddle, because in the corruption and faction which then prevailed, he could not discharge them according to the laws. He wrote annals, which Cicero praises, as having been of great use to him. He married his daughter to Agrippa, and died at the age of 77.

ATTICUS (Herodes), a celebrated orator of antiquity, was born at Marathon. His lectures on elocution were heard with such applause, that he was sent for by Titus Antoninus, to instruct Marcus Aurelius, and Lucius Verus. He was honored with the consulship, and other high offices. He generously erected an aqueduct at Troas, of which he had been made governor, and some other public buildings in different places of the empire, equally useful and mag- nificent. He was particularly liberal as a bene- factor to Athens. He died at Marathon, at the age of 76.

ATTICUS, patriarch of Constantinople, was by birth an Armenian, and flourished in the fifth century. In A.D. 406, he condemned John Chrysostom, by which he got possession of the patriarchate; but Pope Innocent I. being of- fended at his proceedings, excommunicated him. However, when Chrysostom died, he was al- lowed to retain his seat. He died in 427.

ATTILA, king of the Huns, lived in the fifth century. He was surnamed ‘ the Scourge of God,’ a title which all offensive conquerors have more or less merited, though none but At- tila is said to have assumed and gloried in it. He may justly be ranked among the greatest con- querors, for there was scarcely any province in Europe which did not feel the weight of his victorious arms. Attila deduced his descent from the ancient Huns, who had formerly con- tended with the monarchs of China. His fea- tures, according to the observation of a Gothic historian, bore the stamp of his national origin ; and the portrait of Attila exhibits the genuine deformity of a modern Calmuck ; a large head, a swarthy complexion, small, deep- seated eyes, a hooked nose, a few hairs in the place of a beard, broad shoulders, and a short square

body, of nervous strength, though of a dispro- portioned form. The haughty demeanor of this tyrant expressed the idea he entertained of his superiority above the rest of mankind ; and he had a custom of fiercely rolling his eyes, as if he wished to enjoy the terror which he inspired. Yet this savage hero was not inaccessible to pity ; his suppliant enemies might confide in his as- surance of peace or pardon ; and he was con- sidered by his subjects as a just and indulgent master. He delighted in war ; but, after he had ascended the throne in a mature age, his head, rather than his hand, achieved the conquest of the north ; and the fame of an adventurous sol- dier was usefully exchanged for that of a prudent and successful general. The effects of mere per- sonal valor are indeed so inconsiderable, that victory, even among barbarians, depends on the degree of skill, with which the passions of the multitude are guided for the service of a single man. The arts of Attila were skilfully adapted to his age and country. It was natural that the Scythians should adore the god of war ; but as they were incapable of forming either an ab- stract idea, or a corporeal representation of him, they worshipped him under the symbol of an iron scymitar. One of the shepherds of the Huns perceived that a heifer, who was grazing, had wounded herself in the foot; and curiously followed the tract of the blood, till he dis- covered among the long grass, the point of an ancient sword ; which he dug out of the ground, and presented to Attila. That artful prince ac- cepted with pious gratitude this celestial favor; and, as the rightful possessor of the sword of Mars, asserted his divine and indefeasible claim to the dominion of the earth. Thus this favorite of Mars acquired a sacred character, which ren- dered his conquests easy and permanent; and the barbarian princes confessed, in the language of devotion or (lattery, that they could riot pre- sume to gaze with a steady eye on the divine majesty of the king of the Huns. His brother Kleda, who reigned over a considerable part of the nation, was compelled to resign his sceptre and his life. Yet even tliis cruel act was attri- buted to a supernatural impulse ; and the vigor with which Attila wielded the sword of Mars convinced the world that it had been reserved alone for his invincible arm. But the extent of his empire affords the only remaining evidence of the number and importance of his victories ; and the Scythian monarch, however ignorant of the value of science and philosophy, might lament that his illiterate subjects were destitute of the art which could perpetuate the memory of his ex- ploits. Attila, indeed, may claim the title of su- preme and sole monarch of the barbarians. He alone, among the conquerors of ancient and mo- dern times, united the UTO mighty kingdoms of Germany and Scythia. Thuringia, which stretched beyond its actual limits as far as the Danube, was in the number of his provinces : he inter- posed, with the weight of a powerful neighbour, in the domestic affairs of the Franks; and one of liis

lieutenants chastised, and almost extermi- nated, the Burgundians of the Rhine. He sub- dued the inlands of the ocean, the kingdoms of Scandinavia, encompassed and divided by the

waters of the Baltic; and the Huns derived a tribute of furs from that northern region, whic.li has been protected from all other conquerors by the severity of the climate, and the courage of the natives. Towards the east, it is difficult to cir- cumscribe the dominion of Attila over the Scy- thian deserts; yet we may be assured that he reigned on the banks of the Volga ; that he was dreaded, not only as a warrior, but as a magi- cian ; that he vanquished the khan of the formi- dable Geougen ; and that he sent ambassadors to negociate an equal alliance with the empire of China. In the proud review of the nations who acknowledged the sovereignty of Attila, and who never entertained during his lifetime the thought of a revolt, the Gepidae and the Ostrogoths were distinguished by their numbers, their bravery, and the personal merit of their chiefs. Ardaric, king of the Gepidae, was the faithful and saga- cious counsellor of the monarch ; who esteemed his intrepid genius, whilst he loved the mild and discreet virtues of the noble Walamir, king of the Ostrogoths. The crowd of vulgar kings, who served under the standard of Attila, were ranged in the submissive order of guards and domestics round the person of their masters. They watched his nod ; they trembled at his frown ; and at the first signal of his will they executed without he- sitation his absolute commands. In time of peace the dependent princes with their national troops attended the royal camp in regular suc- cession ; but when Attila collected his military force he was able to bring into the field an army of five, or according to some, 700,000 barbarians. See HUNS. The circumstances attending Attila's death (about A. D. 453) were remarkable; from the festive throng, which celebrated his nuptials with a beautiful virgin named lldico, he retired late to bed, oppressed with wine, and during the night a blood-vessel burst and suffocated him. In the morning the bride was found by the bed-side, bewailing his death and her own danger. His body was exposed in the plain, while the Huns inarched round it in martial order, singing funeral songs to his praise; and was afterwards enclosed in coffins of gold, silver, and iron, and interred privately in the night. To prevent the violation of his remains, by the dis- covery of his grave, the slaves who were em- ployed on the occasion were put to death.

ATTILATUS EQUUS, in old law Latin, a horse dressed in his harness, for the plough or cart.

ATTILUS, in ichthyology, a river-fish, of the sturgeon kind, called by some adello, adano, and adeno. It grows to a very large size, and when full grown, casts its scales, and never has any fresh ones, but remains perfectly smooth; in which it differs from the common sturgeon. But it seems not to

differ in any essential point from the hussu germanorum. It is an eatable fish, but is greatly inferior in taste to the sturgeon.

ATTINGA, in ichthyology, a species of the diodon.

ATTIR/E, v. & n. ˆ Of uncertain derivation .

ATTIR'ING, >It may be observed, with-

ATTOU'R. J out deciding the question

of etymology, that the tiara was an head-dress

worn by Phrygian and Persian priests and kings

at sacrifices. Hence the word is found in Greek authors, and is probably derived from the Persic ??? Phrygia vestitur bucca tiara. Juvenal.

The high crowned covering for the head, still ???worn by the natives of Persia, in contradistinc- tion to the low turban of the Turks, is worthy of remark. The word is sometimes applied to the mitres of bishops. The French attirer, is to draw to ; attirail, is the apparatus necessary to an equipage or adorning.

Let it likewise your gentle breast inspire, With sweet infusion ; and put you in mind Of that proud maid, whom now those leaves attire, Proud Daphne. Spenser.

It is no more disgrace to Scripture, to have left things free, to be ordered by the church ; than for Nature, to have left it to the wit of man, to devise his own attire. Hooker.

My Nan shall be the queen of all the fairies ; Finely attired in a robe of white.

Shahspeare. Merry Wives of Windsor. With the linen mitre shall he be attired.

Lev. xvi. 4.

After that, the Roman attire grew to be in account, and the gown to be in

use among them.

Davies on Ireland. Now the sappy boughs

Attire themselves with blooms. Philips. Whose herds with milk, whose fields with bread,

Whose flocks supply him with attire, Whose trees in summer yield him shade,

In winter fire. Pope's Ode on Solitude.

ATTIRE, in hunting; the attire of a stag, if perfect, consists of bur, pearls, beam, gutters, antler, fur-antler, royal, fur-royal, and crotches ; 'and that of a buck, of the bur, beam, brow- antler, advancer, palm, and spellers.

ATTIRET (John Denis), a French Jesuit and painter, was born at Dole, in Franche Comte, in 1702, and died in 1768 at Pekin, whither he had accompanied the mission. He was employed by the emperor Kien Long to paint many battle- pieces, with which he was so much pleased, that he offered him the dignity of a mandarin, and when he declined the honor of the title, he granted him the revenues of the post.

ATTITUDE. Ital. attitudine. Supposed to be corrupted from low Latin aptitudo, from apto, I fit. A term used by the Italians in the art of design, to denote the gesture fitted for the display of grace, beauty, or other quality of form ; ex- pressive posture.

Bernini would have taken his opinion, upon the beauty and attitude of a figure. Prior's Ded.

They were famous originals, that gave rise to statues, with the same air, posture, and attitudes.

Addition.

ATTIUM, in ancient geography, a promon- tory on the north-west of Corsica, now called Punta di Acciuolo.

ATTLEBOROUGH, a town in Norfolk, once the capital of the county, on the road from Thet- ford to Norwich, about twelve miles from each, and ninety-three from London. It is also called Attlebury. Market, Thursday.

ATTOCK, a river of Asia, which rises in the Tartarian mountains, north of Hindostan, and passing by Cabul, falls into the Indus. By a treaty between Kouli Khan, Schah of Persia, and

the Great Mogul, it was made the boundary be- tween Persia and India.

ATTOCK, Atac, a limit, a town in the province of Lahore, on the east side of the Indus, which is here, in the month of July, from three-fourths to one mile across. Lat. 33►► 6′ N., long. 71►► 15′ E. The ancient name of Attock, to this day, is Va- ranas, or Benares ; but it is more generally known by the name of Attock. The fortress was built by Acber, A. D. 1581.

‘ It is remarkable,’ says Mr. Hamilton, ‘ that the three great invaders of Hindostan, Alexander, Tamerlane, and Nadir Shah, in three distant ages, and with views and talents extremely dif- ferent, advanced by the same route, with hardly any deviation. Alexander had the merit of dis- covering the way : after passing the mountains he encamped at Alexandria Paropamisana, on the same site with the modern city of Candahar ; and having subdued or conciliated the nations seated on the north west-bank of the Indus, he crossed the river at Taxila, now Attock, the only place where the stream is so tranquil that a bridge can be thrown over it.’

ATTOLLENS, in anatomy, an appellation given to several muscles otherwise called levatO’ res and elevatores.

ATTONITUS MORBTJS, ATTONITUS STLI>OR, an apoplexy ; also being planet-struck or blasted.

ATTOR’N, j Fr. attourner ; ation

ATTOR’NEY, v. & n. > nare, Du Fresne, to turn

ATTOR’NEYSHIP. j over to, or transfer; to perform service. Ang.-Sax. tyrnan, to turn.

As I was then,

Advertising and holy to your business, Nor changing heart with habit ; I am still Attornied to your service. Shakspeare.

But marriage is a matter of more worth,

Than to be dealt in attorneyship. Id.

I will attend my husband ! it is my office ;

And will have no attorney but myself ;

And therefore let me have him home. Id.

I am a subject,

And challenge law : attorneys are deny'd me ;

And therefore personally I lay my claim,

To mine inheritance. Id,

The king's attorney on the contrary,

Urg'd on examinations, proofs, confessions. Id. Despairing quacks with curses fled the place ;

And vile attorneys, now an useless race. Pope.

An attorney at law answers to the procurator, or proctor, of the civilians and canonists. And he is one who is put in the place, stead, or turn of another, to manage his matters of law.

Blackstone's Commentaries.

ATTORNARE PERSONAM, in common law, to depute a representative, or proxy, to appear and act for another.

ATTORNARE REM, to turn over money and goods, that is, to assign and appropriate them to certain persons or uses.

ATTORNATO FACIENDO, vel RECIPIENDO, in common law, a writ to command a sheriff, or steward, to receive and admit an attorney to ap- pear for the person that oweth suit of court, to a county or hundred. Every person that owes suit to the county court, court-baron, &c. may make an attorney to do his suit.

ATTORNEY AT LAW is one who is put in the place, stead, or turn of another, to manage his

matters at law. Formerly every suitor was obliged to appear in person, to prosecute or de- fend his suit (according to the old Gothic consti- tution,) unless by special licence under the king's letters patent. This is still the law in criminal cases ; and an idiot cannot to this day appear by attorney, but in person ; for he hath not discre- tion to enable him to appoint a proper substitute ; and, upon his being brought before the court in so defenceless a condition, the judges are bound to take care of his interests, and they shall admit the best plea in his behalf that any one present can suggest. But, as in the Roman law, when it was in use, one person could not act in the

name of another; yet, as this was attended with no small inconvenience, men were allowed to litigate by procurators ; so with us, on the same principle of convenience, it is now permitted in general, by divers ancient statutes, whereof the first is sta- tute West. 2, c. 10, that attorneys may be made to prosecute or defend any action in the absence of the parties to the suit. Attorneys are now, therefore, formed into a regular profession ; they are admitted to the execution of their office by the superior courts of Westminster hall ; are in all points officers of the respective courts in which they are admitted ; and as they have many privi- leges on account of their attendance there, so they are peculiarly subject to the censure and animad- version of the judses. No man can practise as an attorney in any of these courts, but such as is admitted and sworn an attorney of that particu- lar court. To pr.ic7.ise in the court of chancery, it is also necessary to be admitted a solicitor therein: and by the statute 22 Geo. II. c. 49, no person shall act as an attorney in the court of quarter sessions, but such as has been regularly admitted in some; superior court of record. So early as the statute 4 Hen. I '. c. 18, it was en- acted that nom; should he admitted attorneys but such as were virtuous, learned, and sworn to do their duty. And many subsequent statutes have la d them xmcler farther regulations.

By '2 Geo. II. c. 23, all attornies shall be sworn, administered, and enrolled, before they are allowed to sue writs in the courts of West- minster; and, after the 1st of December, 1730, none shall be permitted to practise but such as have served a clerkship of four years to an attorney, and they shall be examined, sworn, and admitted in open court. Any person duly admitted a so- licitor, may be admitted an attorney, and vice versa. An attorney's bill may be taxed, and if it he reduced a sixth part, he is to pay the costs of taxation.

]5y 34 Geo. III. e. 14, every person bound as clerk to an attorney of the courts at West- minster, pays ►►100 stamp duty. After admission in one court, no farther duties are required for the others. IS'or are farther duties required for new contracts with new masters. An attorney is privileged from being pressed as a soldier, but he may be drawn for the militia, lie need not serve any parochial or borough office against his will. They may sue and be sued only in their own co>;ru. Special bail is not required of them as defendants; as plaintiffs they may de- mand it. Payment to the attorney is payment 1o the principal. An attorney has a lien on the

money recovered for his client, and he may re- tain the amount of his bill. Attornies may be summarily punished by an attachment, or by being struck off the rolls of the court for ill- practice, fraud, or corruption ; and sometimes (in order to be called to the bar) they are struck off the roll on their own application.

ATTORNEY GENERAL, a great law-officer of the crown, whose business is to exhibit informations, and prosecute for the crown, in matters criminal ; also to file bills in the exchequer, for any thing concerning the king in inheritance or profits ; and others may bring bills against the king's attorney. His proper place in court, upon any special matters of a criminal nature, wherein his attendance is required, is under the judges on the left hand of the clerk of the crown ; but this is only upon solemn and extraordinary occasions , for usually he does not sit there, but within the bar in the face of the court. The queen consort is also privileged to have an attorney-general.

ATTORNEY OF THE DUCHY COURT OF LAN— CASTER is the second officer in that court ; placed as assessor to the chancellor of the court.

ATTORNMENT, attourner, old French, to turn over to; under the feudal system, the assent of a tenant to his lord's alienation of the seignory ; thus securing him against having his fealty and services transferred to another without his know- ledge. There was a reciprocal obligation on the tenant to obtain the lord's consent to any aliena- tion.

ATTRACT' v. & n. ~\ Lat attraho, attrac- ATTRACTABIL'ITY, turn, to draw to;

ATTRACTION, | from ad and traho,

ATTRACTIVE, n. & adj. V-from trans veho, to

carry over, Voscius. To draw to, bring over; to exercise a

ATTRAC'TIVELY, ATTRAC'TIVENESS, ATTRAC'TOR.

real but subtle agency in drawing an object to its subject; to conciliate, to win the heart, to gain the affections.

Setting the attraction of my good parts aside, I have no other charms. Shakspeare.

The drawing of amber and jet, and other electrick bodies ; and the attraction in gold, of the spirit of quicksilver at distance ; and the attraction of heat, at distance ; and that of fire, to naphtha ; and that of some herbs to water, though at distance ; and divers others, we shall handle. Bacon.

What, if the sun

Be centre to the world ; and other stars, By his attractive virtue and their

own Incited, dance about him various rounds ?

Milton. Adorn'd

She was indeed, and lovely, to attract Thy love ; not thy subjection. Id.

Loadstones and touched needles, laid long in quick- silver, have not amitted their attraction.

Brown's Vulgar Erroun.

If the straws be in oil, amber draweth them not ; oil makes the straws to adhere so, that they cannot rise unto the attractor. Id.

A man should scarce persuade the affections of the loadstone, or that jet and amber attracteth straws and light bodies. Id.

Shew ►►he care of approving all actions so, as may most effectually attract all to this profession.

fff-mmond.

ATTRACTION.

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Feels darts and charms attracts and flames, And woo and contract in their names. Hudibras. "Ihere were then the same incentives of desire on he one side, the same attractiveness in riches, the &arne relish in sovereignty. South. Sermon xiv. 293. Attraction may be performed by impulse, or some other means ; I use that word, to signify any force by which bodies tend towards one another.

Newton's Opticks.

Attract, attracted to, the next in place, Form'd and impell'd its neighbour to embrace.

Pope.

Deign to be lov'd, and ev'ry heart subdue ! V/hat nymph could e'er attract such crowds, as you ?

Id.

Homer hurries and transports us with a command- ing impetuosity, Virgil leads us with an attractive ma jesty. Id

As the attractive power in bodies is the most uni versal principle which produceth innumerable effects, so the corresponding social appetite in human soul►► is the great spring and source of moral actions.

Berkeley.

Ah ! why was ruin so attractive made, Or, why fond man so easily betray'd ? Why heed we not, while mad we haste along, The gentle voice of Peace, or Pleasure's song ?

Collins.

Forests in every age must have had attractive hor- rors : otherwise so many nations would not have resorted thither to celebrate the rites of superstition.

Beattie.

ATTRACTION. The word attraction is em- ployed to express the power by which bodies approach each other ; or rather that which gives them the tendency to this approximation. It is considered and designated differently as its ope- ration is upon greater or less distances, and as the masses or particles of matter are affected by it. In the first instance, viz. that of operation through distance, and upon mass, the power is termed gravitation, while contiguous attraction denotes the agency of the power as exerted upon minute particles, and as operating upon dis- tances that are not sensible.

*All bodies composing the material system of *he universe are considered as having a mutual disposition to approach each other, what- ever may be the distances at which they are placed. The nature or absolutely essential prin- ciple of this gravitating tendency is of course unknown ; but many of its laws have been in- vestigated and satisfactorily applied to the expla- nation of phenomena. The main and leading circumstances which characterise gravitation are these, that its action on bodies is directly as the mass or quantity of matter, and inversely as the square of die distance. These, then, are the laws of gravitation generally. (See GRAVITA- TION.) But there are other species of attractions which likewise seem to be in operation upon mass and at distance, but which are apparently peculiar in modification. Such are the magnetic and electric attractions, which some philosophers, however, are disposed to generalize into an iden- tity with the power just adverted to. See MAG- NETISM and ELECTRICITY.*

But masses of matter are necessarily composed of minute particles, and the power by which this combination of separate particles into a whole or mass is effected, is termed, as we have above

stated, contiguous attraction ; this being again subdivided into the attraction of cohesion or aggregation ; and into chemical attraction or affinity ; the former being exerted between par- ticles of different kinds of matter : the first unites bodies so as to form aggregates, the essential properties of which are the same as that of the particles which compose it ; the second forming substances which have qualities different from those of the bodies that have entered into com- bination.

These two varieties of contiguous attraction may perhaps be viewed as ultimately the same power, the difference of their effects being rather referribie to the difference of the material operated upon ; but it is necessary to consider them dis- tinctly, as the effects which they respectively pro- duce, are themselves so different.

The attraction of cohesion or aggregation is exerted with the greatest force and effect when the body is at its maximum of solidity. In this case the particles which compose the mass are united by a reciprocal attraction of such energy, that they oppose mechanical attempts at sepa- lation, as is instanced in the force required to break a solid compact stone ; but the attractive energy seems in different states of solidification to be exerted with different degrees of strength ; then, again, from loose solid, the gradation pro- ceeds to absolute liquid, and ultimately to gaseous and vaporous existence ; in the ratio indeed of departure from solidity does the attraction of cohesion become weaker and weaker. In the condition of fluidity ‘ it is only exerted under such a modification, that a slight impulse is suffi- cient to disunite the parts, and scarcely any re- sistance is now opposed to any force, the opera- tion of which is to bring these into new arrange- ments ;’ and, when vaporous existence obtains, this resistance is entirely overcome, ‘ the parti- cles instead of attracting, now repel each other ; they are made to approximate only by pressure, and they recede when this is withdrawn. Bodies, therefore, exist in the aeriform, the liquid, or the solid state, according as this attraction is exerted between their particles, and it is this power which unites their particles.’

It was supposed by the earlier philosophers, that as the attraction of gravitation influences bodies with a force inversely as the squares of the distance, so the laws of attraction between the particles themselves follow the same ratio ; but the adhesion of bodies is found to be much greater than could be inferred from this source, and it was therefore conceive’d that cohesive attraction is governed by a much higher ratio, and probably the cube of the distances. ‘ The moderns on the contrary, among whom are Bergman, Guyton Morveau, and others, have remarked that these deductions are too general, because for the most part drawn from the con- sideration of spherical bodies, which admit of no contact but such as is indefinitely small, and exert the same powers on each other, whichever side

may be obverted. They remark likewise, that the consequence depending upon the sum of the attractions in bodies not spherical, and at minute distances from each other, will not follow the inverted ratio of the square of the distance

taken from any point assumed as the centre of gravity, admitting the particles to be governed by that law; but that it will greatly differ accord- ing to the sides of the solids which are presented to each other, and their respective distances ; in- somuch that the attract'ons of certain particles indefinitely near each other will be indefinitely increased, though the ratio of the powers acting upon the remoter particles, may continue nearly the same.' ••• Ure.

Much however is requisite in application to the rationale of minute attraction, if it may be so expressed, before a generalisation of its laws can be admitted, in the same manner as is done with respect to the principle of gravitation generally. ' Speculation on these heads (says the same able author from whom we have above extracted,) may be regarded in ihe present state of science as standing much in the same situation as the theory of gravity, which is minutely described in Plutarch, did with regard to astronomy before the time of Newton. As the celestial phenomena were formerly arranged from observation merely, but are now computed from the physical cause, gravitation, so, at present, the science now re- ferred to, is the science of matter of fact duly arranged, without the assistance of any extensive theory, immediately deduced from the figures, volumes, densities, or mutual actions of the par- ticles of bodies.'

As matter of fact, however, it is necessary to observe that to the power of cohesive attraction is opposed those influences which alter the forms of bodies from solids to fluids, and from fluids to vapor; and that aggregation is thus weaken- ed or overcome by three opposing influences, viz. mechanical violence, heat, and chemical agency. The first is instanced in the operation of powdering or pulverising, and otiier processes by which separation to a greater than natural distance is cfl'ected of the constituent particles of matter. With respect to heat it is to be observed, that if a solid sub>t;mce he exposed to it under circumstances favorable to its action, the volume of the substance is enlarged, the particles com- posing it are therefore separated from each other, and the attraction by which they were kept in union is counteracted. The enlargement of volume continuing to proceed as the heat is in- creased, until the point, is reached, at which the attraction is so far modified that the body passes into a fluid form. If the

application of heat be continued, the particles are still further separated tiom eaeh other; and this still continues increas- ,','.: until the attraction between them is overcome, a iviuision is established, and the fluid passes into ti.e aerial lonn. (."aeniical action, as we have above remarked, is capable of effecting the same formative change. If a liquid be poured on a solid, it oiten happens that from the mutual ###iitra'timi exerted btt\vt en them, the aggregation ct'tiie soii'l is subverted, its particles are detach ed and diffused through the liquid so as to be no 'on.;.r perceptible, ;.nd not evi n to impair the t:"i:iN!>ai i ncy. This constitutes the chemical ########## named solution, \ ic'a is merely a case ;emical eoini'inali'>n, ddl'; ring from others in Lie circumstance t: .;' one oi the bodies exists i) ti: !,####### ;i 1 t'o'-ni, aii'i en-nmunicates that form

to the other. It is the result of the predomi- nance of the mutual affinity of the liquid and solid over the cohesion of the solid. The affinity exerted to a solid by a substance in the aerial form may in like manner overcome its cohesion and cause it to pass into the aeriform state. And even the mutual attraction exerted between two solids is sometimes such as to diminish the power of cohesion in each so as to admit of their union and their transition to a liquid state.

We have now to notice those changes in bo- dies, which, as opposed to their mere formative existence, may be regarded as the manifestation more directly and unequivocally of what would be called chemical agency ; viz. that, in which the power is exerted between the particles or atoms of different kinds ; the result of the union effected by this affinity not being a mere aggregate, having the same essential properties, though per- haps different in form, but being altogether a new material.

It is remarkable that Sir Isaac Newton was the first to indicate with precision, the nature and extent of this power, as well as that of gravita- tion. In his letter to Mr. Boyle, containing ob- servations on the nature of acids, and in other publications, he speaks of bodies combining in some cases, and refusing to unite in others, be- cause in the one instance an attraction exists, in the other it does not ; and he further talks of compounds being again decomposed by the agency of another body, owing to an attraction exerted by that body to one of the principles of the compound, superior in force to the first at- traction.

Since the time of Newton, the subject of chemi- cal attraction, or the attraction of affinity, has been investigated with abundant ardor, and with great success ; minute observation of its laws and the phe- nomena it produces, has developed a multitude of most interesting facts and principles which will fall to be noticed under the head of CHEMISTRY, and in other parts of this work. But there is one leading principle by which it is regulated

that demands to be noticed in the present article ; it is this, that there is a general reciprocity of saturating proportions in uniting bodies ; or, in other words, that combination is effected in definite proportions ; the. full development of this law was made by Mr. Dalton, who has thus overturned the doctrine of indefinite affinity taught by the celebrated Berthollet, and has been successful in showing ‘ that the different com- pounds of the same principles do not pass into each other by imperceptible gradations, but pro- ceed in successive proportions, each a multiple of the first.’

So far indeed as the fact of definite proportions goes, we ought to give the credit oi discovery and detection to Richter of Berlin. Mr. Higgins too, in his Comparative View of the Phlogistic and Antiphlogistic Theory, published in the be- ginning of the year 1789, had plainly indicated the doctrine of multiple proportion, with respect to the successive compounds of the same consti- tuents ; but to Mr. Dalton is due the merit of having, to use the language of Dr. Wollaston, shown, ‘ that in all cases the simple elements of bodies are disposed to unite atom to atom singly ;

or if either is in excess, it exceeds by a ratio to be expressed by some multiple of the number of its atoms.’

In the course of our researches, undertaken for the purpose of giving the reader a correct notion of this theory, we have found no statement more clear and explicit on the subject than that which vre have met with in the last edition of Dr. Henry’s Etements of Chemistry. We proceed, therefore, to extract largely from that section of this work which is devoted to the consideration of the atomic theory ; the several objections that have been proposed to this theory, we purpose canvassing in the article CHEMISTRY, under which head many opportunities will necessarily occur of repeatedly adverting, both in direct and inci- dental ways, to the doctrine under notice. We shall here, however, take occasion to say, with the author from whom we are about to extract, that the instances in which the theory agrees with the results of analysis are too numerous to be considered as accidental coincidences ; and no phenomena have hitherto been shown to be irre- concileable with the hypothesis. Its value and importance, if not contradicted by new facts, will be scarcely less felt as a guide to further inves- tigations into the constitution of bodies, than as a test of the accuracy of our present knowledge ; and the universality of its application to chemical phenomena, will be scarcely inferior to that of the law of gravitation, in explaining the facts of natural philosophy.

In the chemical combination of bodies with each other, says Dr. H. a few leading circum- stances deserve to be remarked.

1st. Some bodies unite in all proportions; for example, water and sulphuric acid, or water and alcohol.

2dly. Other bodies combine in all proportions, as far as a certain point, beyond which, combina- tion no longer takes place. Thus water will take up successive portions of common salt, until at length it becomes incapable of dissolving any more. In cases of this sort, as well as in those in- cluded under the first head, combination is weak and easily destroyed, and the qualities, which belonged to the components in their separate state, continue to be apparent in the compound.

3dly. There are many examples in which bo- dies unite in one proportion only ; and in all such cases the proportion of the elements of a compound must be uniform for the species. Thus hydrogen and chlorine unite in no other propor- tions than those constituting muriatic acid, which, by weight, are 1 of the former to 36 of the latter. In cases of this sort, combination is ge- nerally energetic ; and the characteristic qualities of the components are no longer observable in the compound.

4thly. Other bodies unite in several propor- tions ; but these proportions are definite, and, in the intermediate ones, no combination ensues. Thus six parts by weight of charcoal combine with 8 of oxygen, or with 16, but not with inter- mediate quantities; 64 parts copper combine with 8 of oxygen, or with 16, and with those propor- tions only.

It is further remarkable, that when one body enters into combination with another, in several

different proportions, the numbers indicating the greater proportions are exactly simple multiples of that denoting the smallest proportion. In other words, if the smallest proportion in which B combines with A, be denoted by 10, A may combine with twice 10 of B, or with three times 10, and so on : but with no intermediate quan- tities. There cannot be more striking instances of this law than those above mentioned, of the compounds of copper and charcoal with oxygen ; in which the oxygen of the last compound may, in both cases, be observed to be a multiple of that of the first by the number 2. Examples, indeed, of this kind have, of late, so much in- creased in number, that the law of simple multi- ples, first discovered by Mr. Dalton, bids fair to become universal with respect at least to chemi- cal compounds, the proportions of which are definite.

Facts of this kind are not only important in themselves, but also on account

of the generali- sations that have been deduced from them ; for on them Mr. Dalton has founded what may be termed the atomic theory of the chemical con- stitution of bodies. Till this theory was pro- posed, we had no adequate explanation of the uniformity of the proportions of chemical com- pounds; or of the nature of the cause which renders combination, in other proportions, im- possible. In this place I shall offer only a brief illustration of the theory; for in the course of the work I shall have occasion to apply it to the explanation of a variety of phenomena.

Though we appear, when we effect the chemi- cal union of bodies, to operate on masses, yet it is consistent with the most rational view of the constitution of bodies to believe, that it is only between their ultimate particles, or atoms, that combination takes place. By the term atoms, it has been already stated, we are to understand the smallest parts of which bodies are composed. The infinite divisibility of matter, indeed, against which powerful arguments before existed, has been rendered still less probable by Dr. Wollas- ton, in his essay on the ' Finite Extent of the Atmosphere' (Phil. Trans. 1822); all the phe- nomena according with the supposition that the earth's atmosphere ' is of finite extent, limited by the weight of ultimate atoms of definite mag- nitude, no longer divisible by repulsion of their parts.' An atom, therefore, must be mechani- cally indivisible, and of course a fraction of an atom cannot exist, and is a contradiction in terms.

The atoms of all bodies probably consist of a solid corpuscle, forming a nucleus, and of an at- mosphere of heat, by which that corpuscle is surrounded ; for absolute contact is never sup- posed to take place between the atoms of bodies. The figure of a simple atom may readily, there- fore, be conceived to be spherical. But in com- pound atoms, consisting of a single central atom, surrounded by other atoms of a different kind, it is obvious that the figure (contemplating the solid corpuscles only) cannot be spherical ; yet if we include the atmosphere of heat, the figure of a compound atom may be spherical, or some shape approaching to a sphere. To determine the relative diameters of the atoms of bodies is a

problem of considerable difficulty. With respect for it is not probable that our knowledge will to those of elastic fluids, it was some time ago ever extend beyond the ratios of these weights, effected by Mr. Dalton (New Syst. p. 226), and When only one combination of any two elemen- the same principle has been lately extended by tary bodies exists, he assumes, unless the con- Mr. Emmett to solid and liquid bodies. (Ann. trary can be

proved, that its elements are united

Phil. N. S . ix. 110).

atom to atom singly. Combinations of this sort

Taking for granted that combination takes he calls binary. But if several compounds can

place between the atoms of bodies only, Mr. be obtained from the same elements, they com-

Dalton has deduced, from the relative weights bine, he supposes, in proportions, expressed by

in which bodies unite, the relative weights of some simple multiple of the number of atoms,

their ultimate particles, or atoms, which is all The following table exhibits a view of some of

that we are likely to determine respecting them; these combinations :

1 atom of A + 1 atom of B = 1 atom of C, binary.

1 atom of A + 2 atoms of B = 1 atom of D, ternary.

2 atoms of A + 1 atom of B = 1 atom of E, ternary.

1 atom of A f 3 atoms of B = 1 atom of F, quaternary.

3 atoms of A + 1 atom of B = 1 atom of G, quaternary.

A different classification of atoms has been pro- with 2 of A, or with 3, 4, &c. When such a posed by Berzelius, viz. 1st, elementary atoms; series of compounds exists, the relative propor- 2dly, compound atoms. The compound atoms tion of their elements ought necessarily, on ana- he divides again into three different species, viz. lysis, to be proved to be 5 of A to 4 of B ; or 1st, atoms formed of only two elementary sub- 5 to (4 + 4) 8 ; or 5 to (4 + 4) 12, &c.; stances united, or compound atoms of the first or contrariwise, 4 of B to 5 of A; or 4 to (5 + order: 2dly, atoms composed of more than two 5) 10 ; or 4 to (5 f 5 + 5 :=) 15. Be elementary substances ; and these, as they are tween these there ought to be no intermediate only found in organic bodies, or bodies obtained compounds : and the existence of any such (as by the destruction of organic matter, he calls or- 5 of A to 6 of B, or 4 of B to 7\ of A) would, if game atoms : 'idly, atoms formed by the union clearly

established, militate against the hypo- of two or more compound atoms ; as for exam- thesis.

pie, the salts. These he calls compound atoms To verify these numbers, it may be proper to

of the second order. examine the combinations of A and B with some

If elementary atoms of different kinds were of third substance, for example, with C. Let us the same size, the greatest number of the atoms suppose that A and C form a binary compound, of A that could be combined with an atom of B in which analysis discovers 5 parts of A and 3 of would be 12 ; for this is the greatest number of C. Then, if C and B are also capable of form- spherical bodies that can be arranged in contact ing a binary compound, the relative proportion with a sphere of the same diameter. But this of its elements ought to be 4 of B to 3 of C ; for equality of size, though adopted by Berzelius, is these numbers denote the relative weights of not necessary to the hypothesis of Mr. Dalton, their atoms. Now this is precisely the method and is, indeed, supposed by him not to exist. by which Mr. Dalton has deduced the relative

As an illustration of the mode in which the weights of oxygen, hydrogen, and nitrogen ; the

weight of the atoms of bodies is determined, let two first from the known composition of water,

us suppose that any two elementary substances, and the two last from the proportion of the ele-

A and B, form a binary compound ; and that ments of ammonia. Extending the comparison

they have been proved experimentally to unite in to a variety of other bodies, he has obtained a

the proportion, by weight, of 5 of the former to scale of the relative weights of their atoms. 4 of the latter; then, since, according to the In several instances, additional evidence is ac-

hypothesis, they unite particle to particle, those quired of the accuracy of the weight, assigned to

r.umbers will express the relative weights of their an element, by our obtaining the same number

atoms. Hut besides combining atom to atom from the investigation of several of its com-

sindy, 1 atom of A may combine with 2 of B, pounds. For example: or with 3, 4, &,c. Or 1 atom of B may unite

1. In water, the hydrogen is to the oxygen as . 1 to 8.

2. In olefiant gas, the hydrogen is to the carbon as 1 to 6.

3. In carbonic oxide, the oxygen is to the carbon as 8 to 6.

In selecting the body, which should be as- sumed as unity, Mr. Dalton has been induced to fix on hydrogen, because it is that body which unites with others in th►► smallest proportion. Thus, in water, we have 1 of hydrogen by weight to 8 of oxygen ; in olefiant gas, 1 of hydrogen to 6 of carbon ; and in sulphureted hydrogen, 1 of hydrogen to 16 of sulphur. Taking for granted that all these bodies are binary com- pounds, we have the following scale of numbers,*

weight of the atom of hydrogen from the two expressive of the relative weights of the atoms of

their elements :

Whether, therefore, we determine the weight of the atom of carbon, from the proportion in which it combines with hydrogen, or with oxy- gen, we arrive at the same number G : an agree- ment which, as it occurs in various other instances, can scarcely br an accidental coinci- dence. In a similar manner, 8 is deducible, as representing the atom of oxygen, both from the combination of that base with hydrogen and with carbon; and 1 is inferred to be the relative

ATTRACTION.

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Hydrogen 1

Oxygen 8

Carbon 6

Sulphur 16

Drs. Wollaston and Thomson, and Professor Berzelius, on the other hand, have assumed oxygen as the decimal unit (the first making it 10, the

second 1, and the third 100), chiefly with a view to facilitate the estimation of its numer- ous compounds with other bodies. This, it appears to me, is to be regretted, even though the change may be in some respects for the bet- ter, because it is extremely desirable that chemi- cal writers should employ an universal standard of comparison for the weights of the atoms of bodies. It is easy, however, to reduce their numbers to Mr. Dalton's by the rule of propor- tion. Thus as 8 (Mr. Dalton's number for oxy- gen, corrected by the latest experiments), is to 1 (his number for hydrogen), so is 10 (Dr.Wollas- ton's number for oxygen), to 1-25, the number for hydrogen.

Sir H. Davy has assumed, with Mr. Dalton, the atom of hydrogen as unity : but that philo- sopher, and Berzelius also, have modified the theory, by taking for granted that water is a compound of one proportion (atom) of oxygen, and two proportions (atoms) of hydrogen. This is founded on the fact, that two measures of hy- drogen gas, and one of oxygen gas, are neces- sary to form water; and on the supposition, that equal measures of different gases contain equal numbers of atoms. And as, in water, the hydrogen is to the oxygen by weight as one to eight, two atoms or volumes of hydrogen must, on this hypothesis, weigh one, and one atom or volume of oxygen eight; or if we denote a single atom of hydrogen by one, we must express an atom of oxygen by sixteen. It is objectionable, however, to this modification of the atomic theory, that it contradicts a fundamental propo- sition of Mr. Dalton, the consistency of which with mechanical principles he has fully shown ; namely, that that compound of any two ele- ments, which is with most difficulty decomposed, must be presumed, unless the contrary can be proved, to be a binary one.

It is easy to determine, in the manner al- ready explained, the relative weights of the atoms of two elementary bodies, which unite only in one proportion. But when one body unites, in different proportions, with another, it is necessary, in order to ascertain the weight of its atom, that we should know the smallest pro- portion in which the former combines with the latter. Thus, if we have a body A, 100 parts of which, by weight, combine with not less than thirty-two of oxygen, the relative weight of its atom will be to that of oxygen as 100 to thirty- two; or, reducing these numbers to their lowest terms, as twenty-five to eight; and the number twenty-five will, therefore, express the relative weight of the atom of A. But if, in the progress of science, it should be found, that 100 parts of A are capable of uniting with sixteen parts of oxygen, then the relative weight of the atom of A must be doubled; for as 100 is to sixteen, so i< < fifty to eight. This example will serve to ex- piuiii the changes that have been sometimes

made in the weights of the atoms of certain bo- dies ; changes which, it

may be observed, always consist either in the multiplication or division of the original weight by some simple number.

There are, it must be acknowledged, a few cases in which one body combines with another in different proportions; and yet the greater proportions are not multiples of the less, by any entire number. For example, we have two oxides of iron, the first of which consists of 100 iron and about thirty oxygen; the second of 100 iron and about forty-five oxygen. But the numbers thirty and forty-five are to each other as one to one and one-half. It will, however, render these numbers (one and one-half) con- sistent with the law of simple multiples, if we multiply each of them by two, which will change them to two and three ; and if we suppose that there is an oxide of iron, though it has not yet been obtained experimentally, consisting of 100 iron and fifteen oxygen ; for the multiplication of this last number by two and three, will then give us the known oxides of iron.

In some cases, the peroxide of iron for in- stance, where we have the apparent anomaly of one atom of one substance, united with one and one-half of another, it has been proposed by Dr. Thomson, Annals of Philosophy, p. 87, to re- move the difficulty, by multiplying both num- bers by two; and by assuming that, in such compounds, we have two atoms of the one com- bined with three atoms of the other. Such com- binations, it is true, are exceptions to a law deduced by Berzelius; that in all inorganic compounds, one of the constituents is in the state of a single atom. But they are in no re- spect inconsistent with the views of Mr. Dalton ; and are, indeed, expressly admitted by him to be compatible with his hypothesis, as well as confirmed by experience.

The reader is referred to an able account of the atomic theory, published by Mr. Ewart, in the sixth volume of Thompson's Annals. Under the word Equivalents too, in Ure's Dic- tionary of Chemistry, the subject will be found handled in a masterly manner.

On elective affinity, or the unequal, and selecting attraction of bodies, and on the causes which modify this action, both in a simple and complex manner, let the reader consult the arti- cle CHEMISTRY, in the present work.

ATTRACTIVES, or ATTRACTIVE REMEDIES, me- dicines which are to be externally applied, and which by their activity and warmth penetrate the pores, mix with, and rarefy, any obstructed mat- ter, so as to render it fit for discharge, upon lay- ing open the part by a caustic or incision.

ATTRAHENTS, in medicine, are the same with maturants, digestives, &c.

ATT RAP. Fr. attraper, to catch, seize, ap- prehend, over-reach ; used as we now use entrap. See TRAP.

But Richard his brother being an expert and poli- tique man, so craftilye conueyed, and so wisely or- dered himselfe in his stormy tempest, that he was not attrapped eyther with net or snare. Grafton, v. 2. For, all his armour was like salvage weed

*With woody mosse bedight, and all his stec *

With oaken leaues attrapt, that seemed fit

For saluagc weight. Spenser's Faerie Queene.

ATTRIBUTE, -\ Lat. attribuo, from

ATTRIB'UTABLE, f ad and tribuo, to lay

ATTRIBU'TION, ►►a thing to. To ap-

ATTRIBU'TIVE, n. & adj. } portion, to give a proper share; to yield as due, to impute, to ascribe, assign, charge.

It (envy) is also the vilest affection, and the most depraved : for which cause it is the attribute of the Devil, who is called the envious man, that soweth tares amongst the wheat by night : as it always cometh to pass, that Envy worketh subtily, and in the dark, and to the prejudice of good things,, such as is the wheat. Lord Bacon's Essays.

It takes

From our achievements, tho' perform'd at height,

The pith and marrow of our attribute. Shakspeare. If speaking truth,

In this fine age, were not thought flattery ;

Such attribution should the Douglas have,

As not a soldier of this season's stamp,

Should go so general currenj; through the world.

Id.

We suffer him to persuade us we are as gods ; and never suspect, these glorious attributions may be no more than flattery. Decay of Piety.

We attribute nothing to God, that hath any repug- nancy or contradiction in it. Power and wisdom have no repugnancy in them. Tillutson.

Much of the origination of the Americans seems to be attributable to the migrations of the Seres.

Hale.

Your vain pools after did mistake, Who cv'ry attribute a god did make. Dryden.

All tho perfections of God are called his attributes; for he cannot be without them. Watts's Logick.

I have observed a campania determine, contrary to appearances, by the caution and conduct of a general, which were attributed to his infirmities. Temple.

The imperfection of telescopes is attributed to sphe- rical glasses ; and mathematicians have propounded, to figure them by the conical sections.

Newton's Opticks.

As to be perfectly just is an attribute of the Divine Nature ; to be so, to the utmost of our abilities, is the glory of a man. Addison.

Perhaps it may appear upon examination that the most polite ages are the least virtuous. This may be attributed to the folly of admitting wit and learning as merit in themselves, without considering the appli- cation of them. Steele.

Beneficence, would the followers of Epicurus say, is all founded on weakness ; and whatever be pre- tended the Vi'nduess between men and men, is by every man directed to himself. This, it must be con- fessed, is of a pieee with that hopeful philosophy which having patched man up out of the four ele- ments, attributes his being to chance. Grove.

ATTRIBUTE, in physics, ;i quality determining something to IK; after u certain manner. Thus understanding is an attribute of mind, and exten- sion an attribute of body. That attribute which the mind conceives as the

foundation of all the rest is called its essential attribute ; thus extension is by some, and solidity by others, esteemed the essential attributes of body or matter.

ATTRIBUTES, in louic, the predicates of any subject, or what may be attirmed or denied of any thing.

A 1 i i'.nu i F>, in painting and sculpture, sym- bols added to several figures to intimate their particular office and character. Thus the eagle

is an attribute of Jupiter ; a peacock, of Juno ; a caduceus, of Mercury ; a club, of Hercules; and a palm, of Victory.

ATTRIBUTIVES, in grammar, are words which are significant of attributes ; and thus include adjectives, verbs, and particles, which are at- tributes of substances ; and adverbs, which de- note the attributes only of attributes. Mr. Harris, who has introduced this distribution of words, denominates the former attributives of the first order, and the latter attributives of the second. ATTRITE,) Lat. attero, attritum, to rub . ATTRITION. \ against ; ad and tero, to beat small, to wear out by rubbing. The act of rub- bing used figuratively by theological wiiters.

Or, by collision of two bodies, grind Their air attrite to fire. Milton.

From these premises it follows, that if the priest can absolve him that is attrite, he may pardon him who hath affections to sin still remaining ; that is, one who fears hell, but does not love God.

Taylor's Polemical Discourses.

Attrition is a trouble for sin, merely for fear of the punishment of it. Tillotson.

This vapour, ascending incessantly out of the abyss, and pervading the strata of gravel and the rest, decays the bones and vegetables lodged in those strata ; this fluid, by its continual attrition, fretting the said bodies. Woodward.

The change of the aliment is effected, by attrition of the inward stomach, and dissolvent liquor, assisted with heat. Arbuthnot.

ATTROW, in botany, a name given by the people of Guinea to a plant which they use in cases of swellings, boiling the leaves in water, and using the decoction by way of a fomentation. It is a species of kali, and is called by Petiver, kali Guineense foliis polygoni, floribus verticilli in modum dispositis, from its leaves resembling the common knot-grass, and its

flowers growing in rundles round the stalks.

ATTRUMMAPHOC, in botany, a name given by the people of Guinea to a shrub which they boil in water, and give the decoction in the venereal disease. The juice, when fresh pressed out, is snuffed up the nostrils to promote sneezing, and cure disorders of the head and eyes. It is a species of colutea. Dr. Herman calls it astra- galus.

ATTUAL, a town of Arabia, in Tehama, in the province of Yemen. Long. 42►► 10′ E., lat. 15►►57'N.

ATTUDSJE, a town of Arabia, in Yemen, between Kusma and Sai-id. Long. 43►► 25′ E., lat. 14►► 40′ N.

ATTUIE, a fort of Arabia, in Tehama, seated on the coast of the Arabic Gulf. Long. 41►► 40′ E., lat. 17►► 37′ N.

ATTUNE. To tune, to set to a tune.

Airs, vernal airs,

Breathing the smell of field and grove, attune The trembling leaves. Milton.

Th' ethereal glow that stimulates thy frame, When all th' according powers harmonious move. And wake to energy each social aim, Attuned spontaneous to the will of Jove ; Be these, 0 man, the triumphs of thy soul.

Beat tie. Judgment of Paris.

ATTURNATUS, in old law Latin, an at- torney.

&TUHJE) a town of ancient Gaul, in the dis- trict of Novempopulana in Aquitania, on the Aturus; now called Aire. Long. 0►► 16′ E., lat. 43►► 42′ N.

ATURUS, a river of ancient Gaul in Aqui- tania, now called the Adour.

ATWAI'NE,-)

ATWEE'N, f In twain, in two. Gothic

AT'WIXT, ftwos, two.

*ATWO. **

And Jhesus gaf out a great cry and diede. And the veyl of the temple was to rent a two from the higheste to bynethe. Wiclif. Nark, c. xv.

And with that word he gan sigh as sore,

Like as his heart rive would atwaine,

And held his peace, and spake no more.

Chaucer. The Complaint of the Black Knight. Her loose long yellow locks (like golden wire,

Sprinkled with pearl, and perling flowers attveen)

Do, like a golden mantle, her attire. Spenser,

With them an hideous storm of wind arose

With dreadful thunder, and lightning atwixt,

And an earthquake, as if it straight would loose,

The world's foundations from its centre fixt.

Id. Faerie Queene, b. ii.

ATWOOD (George), a celebrated author in mathematical and mechanical investigations, was born in the early part of the year 1746. He was educated at Westminster school, where he was admitted in 1759. Six years afterwards he was elected to Trinity college, Cambridge, and took his degree of Bachelor of Arts in 1769, with the rank of third wrangler. This distinc- tion was amply sufficient to give him a claim to further advancement in his own college, on the list of which he stood foremost of his contempo- raries ; and, in due time, he obtained a fellow- ship, and was afterwards one of the tutors. He became Master of Arts in 1772 ; and, in 1776, was elected a Fellow of the Royal Society of London. The higher branches of the mathe- matics having previously made some important advances at Cambridge, under the auspices of Dr. Waring, Mr. Atwood delivered, for several successive years, a course of lectures in the ob- servatory of Trinity college, which were very generally attended. In 1784, or soon afterwards, Mr. Pitt, who had become acquainted with his merits by attending his lectures, bestowed on him a patent office, which required but little of his attendance, in order to have a claim on the employment of

his mathematical abilities in financial calculations. He died universally respected in 1807. The following, we believe, is a correct list of Mr. Atwood's publications : ??? 1. A Description of Experiments to illustrate a Course of Lectures, 8vo. 1775, or 1776. 2. This work was reprinted with additions, under the title of An Analysis of a Course of Lectures on the Principles of Natural Philosophy, 8vo. Cambridge, 1784. 3. A General Theory for the Mensuration of the Angle subtended by two objects, of which one is observed by Rays after two Reflections from plane Surfaces, and the other by Rays coming directly to the Spectator's Eye. Phil. Trans. 1781, p. 395. 4. A Treatise on the Rectilinear Motion and Rotation of

Bodies, with a Description of Original Experi- ments relative to the Subject, 8vo. Cambridge, 1784. 5. Investigations founded on the Theory of Motion, for determining the Times of Vibra- tion of Watch Balances. Phil. Trans. 1 794. p. 119. 6. The Construction and Analysis of Geometrical Propositions, determining the posi- tions assumed by homogeneal bodies, which float freely, and at rest, on a fluid surface ; also De- termining the Stability of Ships, and of other Floating Bodies. Phil. Trans. 1796, p. 46. 7. A Disquisition on the Stability of Ships. Phil. Trans. 1798, p. 201. 8. A Review of the Statutes and Ordinances of Assize, which have been established in England from the 4th year of King John, 1202, to the 37th of his present Majesty, 4to. London, 1801. 9. A Dissertation on the Construction and Properties of Arches 4to. London, 1801. 10. A Supplement to a Tract entitled a Treatise on the Construction and Properties of Arches, published in the year 1801; and containing Propositions for Deter- mining the weights of the several sections which constitute an arch, inferred from the angles. Also containing a Demonstration of the angles of the several sections, when they are inferred from the weights thereof. To which is added, a Description of original experiments to verify and illustrate the principles in this treatise. With occasional remarks on the construction of an iron bridge of one arch, proposed to be erected over the river Thames at London. Part II. By the author of the first part, 4to. London, 1804. Dated 24th Nov. 1803. 11. A Treatise on Optics is mentioned by Nichols, as having been partly printed by Bowyer, in 1776, but never completed. ,

ATYCIIIA, in entomology, a genus of in- sects of the order lepidoptera, and family zygae- nides. Its generic characters are: palpi ruing considerably beyond the clypeus, anteriorly very hirsute with long hairs, wings short; posterior tibiae with scales and elongated spurs.

ATYPOS ; from a negative, and TVTTOC, form; irregular, a word used by the old writers in medi- cine, for such diseases as did not observe any regularity in their periods. Others have used the word for deformities in the limbs ; and others for defects in the organs of speech.

ATYPUS, in entomology, a genus of the class arachnides, order acera, and family araneides. Its generic characters are : eyes on each side geminate ; labium inserted under the base of the maxillae, very small, quadrate ; palpi placed at the base of the external dilatation of the maxillae. The A. sulzeri has been found in this country by Dr. Leach, and inhabits turfy declivities, where it forms a deep cylindrical excavation, seven or eight inches long, in which it weaves a kind of funnel of white silk. The cocoon in which the eggs are deposited, is fixed at the bottom of this cavity by means of threads attached to each end.

ATYS, the son of Croesus, king of Lydia, is reported to have been born tongue-tacked, and of consequence to have been dumb for many years ; till observing one of Cyrus's soldiers going to kill his father, his passion suddenly broke the membrane that held his tongue, and he cried out ' Save the king !'

ATYS, in fabulous history, a celebrated shep- herd of Phrygia, with whom Cybele, commonly called the mother of the gods, fell passionately in love. She gave him the care of her temple, at the same time making him vow he would always live in celibacy. He afterwards violated his promise by an amour with the nymph Sangaris, on which account the goddess brought upon him such a species of insanity which made him castrate himself with a sharp stone. The same operation was purposely performed by his sacerdotal suc- cessors, in the service of Cybele, that their vows of perpetual chastity might not be broken. This is the most generally received account ; though, according to some writers, the cause of the fond- ness of the goddess for Atys, was his introducing her festivals into the greatest part of Asia Minor ; and that she herself mutilated him. From Pau- sanias we learn that Atys was the son of a nymph of the San gar, who became pregnant by placing the branch of an almond tree in her bosom. According to the passage (Achaic. c. 17), Jupiter having had an amorous dream, some of the impurity of the god dropt upon the earth, from which a monster of an human form was produced, with the parts of both sexW. This monster was named Agdistis, and was by the gods deprived of the characteristics of the male sex. The mutilated parts having been thrown on the ground, an almond tree sprung from them, a branch of which one of the daughters of the Sangar took and put in her bosom. As soon as Atys was born, lie was exposed in a wood, where a she-goat nourished and preserved him. \ liile in the wood, he was observed by Agdistis, who was captivated with his beauty; and when Atys was about to celebrate his nuptials with the king r" Pessinus's daughter, Agdistis, jealous of a rivai, infused into the kin.: and his intended <:>n-in-law such a spirit of madness as led them '►►►> Attack and mutilate one another in the

struggle. '□□□' e farther learn from Ovid, that as Atys was I'li.U' to lay violent hands upon himself, he v. as changed by Cybele into a pine-tree; and t':;itfrom that time the pine-tree was held sacred to the mother of the gods. Divine honors were paid to Atys after his death, and temples erected to his memory, among which that at Dymae was the most famous.*

A-IYS, a Trojan, who accompanied .-Eneas to Italy, and from whom it is supposed the family of the Atii at lioiue descended.

A\ A, or A.\(;WA, a cis of the Birman empire, iour miles west of 1 inn rirapura, the metropolis. It is in lat.vll ";')!' N., and long. 95□□ .58′ E. ; and was once the capital, but is now in ruins. Here are two large temples, one of which contains an 1'iia-j'c of Gaudma, (Uautamii or LJudd'ha, twenty- four feet iu held it, and ten fei ! across the breast, 'i hen: are also the n liqnes of many other temples in decay. 1'or AVA, as an empire, see BIRMAN i.Mi'iiti:, its more usual and modern designation.

A\ A-A\ A, a plant, so culled by the inhabi- tants of (Haheite, from the leaves of which they expirssan intoxicating juicv. I; i> drank very !y liy their cluYt's, who vie with each other in drinking the '.Mvatcst lumber of draughts, each drau.ht beiii'.; about a pmt ; i>ut they keep it i ire.v.i . from thrir WOT im.

AVA

AUACH, or AVACH, the ancient name of Avoch.

AUAD, a mountainous district of Arabia, in the province of Yemen, near the city of Udden Long. 44□□ 10′ E., lat. 14□□ 5′ N.

AVACHA, AWATSCHA, a considerable river of Kamschatka, falling, after a course of ninety miles from west to east, into a bay which bears the same name. Its mouth is rather narrow, but deep enough to admit ships of the greatest burden, and abounding in good anchorage ; the best of which is the harbour of St. Peter and St. Paul. On the north side of the bay is the Volcano of Avacha, which constantly smokes, though it has had no considerable eruption since 1734, and that only lasted twenty-four hours. A small town called the Avachinski Ostrog was begun in 1 740 ; it is in a tolerably flourishing state, and principally supported by the trade in beaver skins. The river Avacha has a course of about ninety miles.

AVADOUTAS, a sect of Indian Brahmins, who in austerity surpass all the rest. The other sects retain earthen vessels to hold their provi- sions, and a stick to lean on : but none of these are used by the Avadoutas ; they only cover their nakedness with a piece of cloth, and some of them even lay that aside, and go stark naked, besmearing their bodies with cow-dung ! When

hungry, some go into houses, and, without speak- ing, hold out their hand; eating on the spot whatever is given them. Others retire to the sides of holy rivers, and there expect the peasants to bring them provisions, which they generally do very liberally.

AVAIL', v. & n.) Fr. valoir, to be worth;

AVAIL'ABLE, ˆLat. valeo, to be strong, to

AVAIL'ABLENESS.) be in health. To possess advantageous properties ; to be of force or signi- fication. The a is intensive.

All things subject to action, the will does so far in- cline unto ; as reason judges them more available to our bliss. Hooker.

Laws human are available by consent. Id.

Drake put one of his men to death, having no au- thority nor- commission available. Raleigh.

For all that else did come, were sure to fail ; Yet would he further none, but for avail. Spenser.

I charge thee,

As heav'n shall work in me for thine ttrail, To tell me truly. ' Shakspearf

We differ, from that supposition of the efficacy, or availablenea, or suitableness, of these to the end.

Hale.

Those excellent means God has bestowed on us, well employed, cannot but much avail us : but if other- wise perverted, they mine and confound us.

Burton's Anatomy of Melancholy. Truth light upon this way, is of no more avail to us than errour. Loche.

Nor can my strength avail; unless, by thee Endu'd with force, I gain the victory. Dryden. When real merit is wanting ; it in-ails nothing, to have been encouraged by the great.

Pope's Preface to hi Works. Mean time he voyag'd, to explore the will Of Jove, on high Dodona's holy hill ; What means might best his safe return avail.*

P-JT-'P.

Ah ! ‘what avails the lore of Rome and Greece, All that art, fortune, enterprise can hring, If envy, scorn, remorse, or pride, the bosom wring.

Seattle.

AVAIL OF MARRIAGE, in ancient Scot’s law, that casuality in inward-holding, by which the superior was entitled to a certain sum from his vassal, upon his attaining the age of puberty, or fourteen years, as the avail and value of his tocher. AVAL, or BAHHREIN, the largest of the Bah-hrein islands in the gulf of Persia. It is about thirty miles in length, and twelve wide, where it is broadest. Besides the fortified town of Bah- hrein, it contains about sixty poor villages. Long. 48►► 4′ E., lat. 26►► 36′ N.

AVALANCHES, prodigious masses of snow and ice that roll down the mountains in Savoy, particularly mount Blanc, to the extreme danger of travellers.

‘ Oft rushing sudden from the loaded cliffs,

From steep to steep, loud thund’ring down they come,

A wintry waste in dire commotion all ;

And herds and flocks, and travellers and swains,

And sometimes whole brigades of marching troops,

Or hamlets sleeping in the dead of night,

Are deep beneath the smothering ruin hurl’d.’

Some of them are 150 or 200 feet diameter; being fragments of the ice-rocks which break by their own weight from the tops of the precipices. See BIANC, MOUNT.

AVALON, or AVALLON, the chief town of an arrondissement in the department of the Yonne in France, situated, with its strong castle, on the river Cousin. Population 4200 ; that of the arrondissement is 42,800. It is twenty leagues west of Dijon.

AVALON, or AVOLON, a peninsula of New- foundland.

AVALON, or AVALONIA, the ancient name of Glastonbury, where king Arthur was buried. See ARTHUR, and GLASTONBURY.

AVALOS (Ferdinand Francis d'), marquis of Pescara, was born in the kingdom of Naples. He entered into the service of Charles V. and accompanied the army to the battle of Ravenna, where he was made prisoner. During his cap- tivity he amused himself in writing a Dialogue on Love, and dedicated it to his wife. After his release he again entered into the emperor's ser- vice, and was present at the taking of Milan, where he died in 1525, aged thirty-six.

AVALOS (Alphonso d'), marquis del Vasto, was born in 1502. He was a near relation of the above ; and was likewise a zealous officer in the armies of Charles V. He died in 1546.

AVANIA, in the Turkish legislature, a fine for crimes, and on deaths, paid to the governor of the place. In the places wherein several nations live together under a Turkish governor, he takes this profitable method of punishing all crimes among the Christians or Jews, unless it be the murder of a Turk.

AVANT, the front of an army. See VAN.

AVANT is defined by Mr. Chalmers, a French preposition, signifying before, or any priority in respect of time or place; sometimes used in composition, in our language, but more usually con- tracted, and wrote vaunt, vant, or van.

AVANT FOSSE, &c.- See VAN FOSSE.

AVANT-GUARD, avantgarde, French. The van ❖❖❖ the first body of an army. ❖❖❖ The horsemen might issue forth without disturbance of the foot, and the avant-guard without shuffling with the battail or arriere. ❖❖❖ Howard.

AVANT MURE, an outward wall.

AVANT PEACH, a peach early ripe.

AVANT WARD, the van of an army.

A VANT E, among ancient medical authors, a name given to a disease, seeming, from their accounts of it to be the same with hypochon- driasis.

AVANTIO (John Mario), an Italian lawyer of great eminence, born in 1564. He displayed his abilities first at Ferrara, and afterwards at Padua;

at which last place he died in 1622. Besides several other pieces, he wrote an eccle- siastical history, from the commencement of the reformation.

AVANTIO (Charles), a celebrated physician, was a son of the above. He was author of a commentary on the work of Bapt. Fiera, printed at Padua, in 1649.

AVANTURINE, in mineralogy, a species o common quartz, containing a number of minute fissures, and sometimes crystals of mica. These lie in parallel, or nearly parallel planes : so that when the stone is cut into a double convex figure, the imaginary plane of junction of the two sphe- rical segments being parallel to the planes in which the fissures lie, a play of light is produced on the surface of the stone. The most beautiful varieties have been found in Spain.

AVARA, a river of Gallia Celtica, mentioned by Caesar, in the county of Brituriges, now called Aruon.

AVARES, one of the predatory tribes in the north of Asia Minor, who made, great ravages in the eastern empire. Having penetrated the Sclavonian and Greek territories, they first ap- peared on the banks of the Danube, A. D. 560, and established themselves at Sirmium, and in Upper Hungary. Their riches, and their alliance with Thassilo, chief of the Baii, alarmed Charle- magne, who, in A. D. 803, attacked them in per- son, and drove them into Corinthia. They have been conjectured to be the Aorsi, or Adorsi, of Strabo.

There is still on the banks of the Koiju, in Lezgislan, and on the eastern side of Mount Caucasus, a tribe called Aor or Avar, whose language is a peculiar one, but has an affinity with several others used in the neighbouring districts. There is also a city of this name consisting of about 600 houses, the residence of a hereditary prince or chief. He has considerable influence ; and, on a late occasion, a neighbouring potentate purchased his sister in marriage for ––25,000. In his palace, the only one with glass windows in eastern Caucasus, there is a large hall, well provided with provisions, constantly open to al strangers. In the city of Avar fine shawls ar manufactured from the wool of Caucasian sheep ; one of which, an ell and a half long, may be drawn through a ring. These people are war- like and courageous ; and their chief, the Avar Khan, is much courted by the Russians. ‘ He was raised to the rank of a lieutenant-general, with a pension of 10,000 silver rubles (––2000)

in 1807. He can bring 20,000 men into the field, and his dependant khan 10,000 more.

AVAKIA, in the Turkish and Persian domi- nions, a sum of money exacted from the Christians or Europeans, to be quit of some false accusation framed on purpose.

AVARICE, -\ Lat. avaritla, avurus ;

AVARIC'IOUS, / from avare, to covet, to

AVARIC'IOUSLY, > desire greedily. Applied

AVARICUM, an ancient town of the Biturige►► in (Jallia Celtica, situated on the Avara, in a very fertile soil ; now called Bourges. Long, 2►► 28′ E., lat. 47►► 5′ N.

AVAROMO TEMO, in botany, a siliquose tree, which grows in the Brasils. The bark is externally of a cineritious, and internally of a deep red color, and is the only part of the plant used for medicinal purposes, though some indeed

AvARic'iousNESsA to one whose ruling pas- use the leaves. But the bark, which is bitter, AV'AROUS. 3 sion is the acquisition of whether reduced to a powder, or boiled and used

wealth for its own sake.

Now good men ! God forgive you your trespass, And ware you fro the sinne of avarice, Min holy pardon may you all warice ; So that ye offre nobles or starlinges, Or elles silver broches, spones, ringes.

Chaucer. Pardeneres Tale.

But father I herde you say How the auorous hath yet some way Whereof he maie be glad. For hee Male, whan hym list, his tresure see, And grope, and fele it all aboute.

Gower. Con. A . book v.

This speech has been condemned as avaricious ; and Eustathius judges it to be spoken artfully.

Broome on the Odytsey. Luxurious, avaricious, false, deceitful.

Shak►►p. Macbeth. There grows

In my most ill-compos'd affection, such A stanchless ariirice ; that, were I king, I should cut off the nobles for their lands.

Shakspeare.

This tiruricc of praise in times to come, ; Those long inscriptions, crowded on the tomb.

Dryden.

Nor love his peace of mind destroys, Nor wicked avarice of wealth. Id.

Anirii-f is insatiable ; and so he went, still pushing on for more. L'Estrange.

Though the apprehensions of the aged may justify a cautious frugality, they can by no means excuse a sordid urnrin'. Blair.

AH insatiable thirst of riches renders Pygmalion everv day more \vv tehed and detestable. In his do- minions it is a crime to he wealthy : avarice makes him jealous, suspicious, and cruel : he persecutes the rich, and he dreads the poor.

Ha irln'xu-urth's Tclemachus.

AVARH T, of all the various passions by which mankind is governed, is the least to be accounted for, as it precludes its subject from all pleasure except that of hoarding. The ambitious man, the o-ainester, or even the prodigal, have all lead, by way of palliative for their ctions to their respective objects ni the subject of avarice gratifies e expense of every conveniency, even necessary of life. And though convinced that money is only the means of enjoyment, not the end, and that it is only valuable as far as it is useful for attaining that end, yet such is his infatuation, that the images of Ids l>a_;s and shininu metal, with all the an nexed ideas of property, enjoyment, security auau st want, independence, \c. prevent him i'roin ii-ii)'_v the means, and make him appear rtit'ont prupertv, in misery, in want, and de- pendent. No passion is more opposite to the

'lOpi

as a fomentation, cures inveterate ulcers, and, it is said, has been found to cure even cancers. It is also used as a corroborant, on account of its astringent quality, by way of bath.

AVAST, from basta, Ital. it is enough : enough ; cease. A word used among seamen. It always precedes some orders, or some conversation, and answers the same purpose as ××× harkye, list, attend, take heed, hold.

Like the Ital. avacci, I think it means ??? be attentive, be on the watch, i. e. awake. ??? Tooke, ii. 362.

AVATAR, in the Hindoo mythology, an incar- nation of the Deity. Ten of these are incarna- tions of Vishnu, the supreme God, in his cha- racter of preserver. Four are the subjects of Puranas, or sacred poems. Nine of them are believed to be past, and the tenth is yet to come. The first is the Matsya Avatar, or descent of the deity in the form of a fish. Of what species this fish was, the sages have not determined ; but Vishnus' object was the recovery of the holy Vedas from the ocean, in which they remained after one of the periodical dissolutions of the universe. The second is the Kachyapa, or Kurma Avatar, in which the same god appeared in the form of a tortoise, in order to sustain and give stability to the newly created earth.

The third is the Varaha Avatar, when he ap- peared in the shape of a boar, and plunging into the waters which had overwhelmed the earth, in one of its periodical destructions, fixed his tusks in it and drew it up.

The fourth is the Nara-sing'ha, or man-lion Avatar. Kasyapa, one of the descendants of Daksha, the fi-rst created man, had two wives, whose characters, to judge from their children, were very different, for one produced the gods, and the other the giants. Among the latter were two Hiranyaksha and Hiranyakas'ipu, who it seems stole a march on Brahma, and almost compelled him, by dint of their austerities, to grant what he had no mind to give them ??? im- mortality. Their strength was already' quite terrific, so that to give it an endless duration was more than the god thought prudent. How- ever, he could not resist the claim of austerities practised for some thousands of years, and, therefore, to release himself from this dilemma, he engaged that no ordinary being should destroy them; and that they should not die either by day or by night, in earth or in heaven, by fire, by water, or by the sword. Satisfied with this assurance, they immediately began to show how well they understood the value of their powers, they conquered the whole earth, and then dethroned Indra, king of heaven. He immedi- diately carried his complaint to Brahma, who very coolly answered that he could take no part

against those upon whom he had bestowed a blessing ; but that perhaps Vishnu would. This latter deity kindly undertook to settle the busi- ness, and restore Indra to his kingdom. To effect that purpose he assumed a mixed form, half man and half lion ; he concealed himself in a column in

Hiranya-kas'ipu's palace, and, when that gigantic monster struck the column in a fit of rage and profaneness, out started Nerasing'ha, seized the giant by his thigh, and ripped him up in an instant. This was certainly the action neither of nre, water, nor the sword ; it was certainly not done by any ordinary being; neither was it done by day or night, for it was in the evening, and it was also under the eaves, and consequently between earth and heaven. Thus was Brahma's promise fulfilled. How the other worthy Hiranyaksha, or Gold-eye, was killed we are not toki; but Vishnu consoled Pralhada, Hyranya-kas';pu's pious son, by assur- ing him that his father wci'ld ascend to heaven.

The fifth, or Vamana incarnation, was occa- sionecj by the same family. Pralhad'ha had a very 'audacious son, named Bali, who daringly made offering to himself, and performed the as'wa-med'ha, or sacrifice of a horse so often, that scarcely any thing could be refused to him, and he demanded the throne of heaven. Vishnu, having been applied to for relief against this troublesome giant, conveyed himself into the body of Aditi, the wife of Kas'ypa, the grand- father of the giants, and was born a dwarf ??? Va- mana. His diminutive size charmed the tyrant Bali, who, to gratify him, promised to give what- ever he should ask. He modestly demanded as much land as could be measured by three steps : and, placing one foot on earth and another on heaven, out started a third from his belly, for which he demanded a resting-place; the king's head was the only one that could be found, and to make up matters with the god, whose power was now indisputable, Bali consented to go down to Patala, or hell, on a promise of Vishnu's protection. Thus did a dwarf repress the turbu- lence of a giant.*

In the sixth, or Parasu-Rama Avatar, Vishnu came into the world, as the son of Jamadagni, a descendant of the sage B'hrigu, in order to chas- tise the military caste, or Kshatriyas, whose in- solence and disorder had become insufferable. One of them, a king, named Arjuna, took a fancy to a marvellous cow, named Kama-d'henu, the pro- perty of Jamadagni, and attacking her possessor with a large army, routed and slew him. Rama, the son of the luckess sage, determined to avenge his father's death, and going to Kailasa (Olympus), knocked down Siva's porters, who refused ad- mittance to him, presented himself to the god, and received from him a paras'u, or weapon with which he slew Arjuna. These incarnations all took place in the Satya Yuga, or Golden Age : the -emainder are more modern.

The seventh, or Rama-chandra Avatar, was Vishnu's descent for the purpose of subduing another giant Havana, who reigned in Lanka, or Ceylon, and carried off Sita, the wife of Rama, in his absence from home. Their contests and the final victory of Rama are the suoject of the celebrated epic poem called the Ramayana. VOL. III.

Pralamba, and other troublesome giants, who, it appears, were not confined to the golden age of the Hindoo mythology, made an eighth incarna- tion requisite, and Vishnu again descended in the formofBala-Rama. This took place in theDwa- par, or Brazen Age, and brings us nearer to the period of something like genuine history.

Budd' ha, the ninth, overcame the giants, his adversaries, by a very singular artifice ; he pro- duced, by his preaching, an universal scepticism, so that the gods, no longer compelled to grant prayers, had no difficulty in ridding the world of its scourges, these all-powerful giants.

The Kalkt, or tenth Avatar, is yet to come ! He will be the son of a Brahman, and be born in the city of Samb'hala at the close of the Kali Yuga, or Iron age. He will appear, say the Brahmans, mounted, like a crowned conqueror, on a white steed, with a scymitar blazing like a comet, to mow down all his foes. Plates of the incarnations of Vishnu from Indian drawings, were first given by Athanasius Kircher, in his China Illustrata, in 1667. They are to be found also in Baldsens (Churchill's collection), whence they were copied in Mr. Maurice's Indian An- tiquities : which see. ††† Ward's View of Hindoo Literature, ftc.

AVAUNCHERS, among hunters, the second branches of a deer's horns.

A VAUNT. Fr. avant, a word of abhorrence, by which any one is driven away.

O, he is bold, and blushes not at death;

Avavnt, thou hateful villain, get thee gone !

Shafapeare,

AVAUX, a town of Champagne, in France, with 1500 inhabitants, belonging to the depart- ment of the Ardennes, arrondissement of Rhetel It is seated on the Aisne, not far from Rheims, and formerly belonged to the family of de Memes, from whom sprung the celebrated diplomatist Claudius comte d'Avaux, ambassador of France at the treaty of Westphalia.

AUB, or Auw, a baliwick and town of Fran- conia, on the Gollach, between Uffenheim and Ochsenfurt. It had, in 1804, about 160 houses, and 1120 inhabitants, and belonged to the dis- trict of Rottingen, in the principality of Wurtz- burg, but was united to Bavaria in 1815. The hospital is well endowed. It is seventeen miles south of Wurtzburg. Long. 10†† 10′ E., lat 49†† 37′ N.

AUBAINE, in the ci-devant customs of France, was a right vested in the

king of being heir to all foreigners that died within his do- minions. By this right the French king claimed the whole inheritance of foreigners, notwithstand- ing any testament the deceased could make. But an ambassador was not subjected to it ; and the Swiss, Savoyards, Scots, and Portuguese, were also exempted.

AUBE, a department of France, so named from the river bounded on the north by that of Marne ; on the east by Upper Marne ; on the south by those of the Cote d'Or and Yonne ; and on the west by that of Seine and Marne. Its chief town is Troyes.

AUBE, a river of France, which rises in the de- partment of Upper Marne, and, running through

that of Aube, passes by Bar-sur-Aube and Arcis, aiul falls into the Seine, near Nogent.

AUBENAS, a town of France, in the Lower Vivarais, in Languedoc, now included in the department of the Ardeche, arrondissement of Privas. It was for some time the capital of an ar- rondissement, but is now only the head of a canton. The population is about 3315. Aubenas is a manu- facturing place of some consequence, containing silk-mills and extensive cloth-works. The twisted silk, called organsin, is wrought here by a mill, constructed by the ingenious Vaucanson; the average quantity manufactured in a year being 550 cwt. Here also are made handkerchiefs, neckcloths, chintzs, and stuffs, partly consumed in the country, and partly exported to the Levant. The raw material is brought chiefly from Spain. The cloths dyed here are also in great repute: In the neighbourhood is a famous medicinal spring, and mines of coal. It lies on the Ardeche, five leagues S. W. of Privas, and 135 S. S. E. of Paris.

AUBERT (Peter), an eminent French lawyer, born at Lyons in 1(542. He appeared very early in the world as an author, by the publication of a romance, called lit tour d'Isle d'Amour. He filled several important stations in the city of Lyons, and established an extensive public li- brary. In 1710 lie published two volumes of Cases, and, in 1723, a new edition of Richelet's Dictionary, three; volumes, folio.

AUBLilTIN (Edmund), a French Protestant divine, ❓❓❓ was born in 1595, and in 1631 was chosen minister of the leformed church at Paris. In

1633 he published a work on the Eucharist of the ancient church, which was attacked by Arnauld and other Catholic \riters. He died at Paris in 1652.

AUBERY (Anthony), a French lawyer, and Historical writer, born in 1617. He was very much given to study, taking no pleasure in the hustle of public business, but preferring a retired life. Tin1 following are the principal fruits of his labours: 1. The History of the Cardinals, five volumes, 4to. 16-1 '2. '2. Memoirs of the Cardinal de.Riclu-lieu, two \olumes, folio, 1660; in which the character of the cardinal is more respected than truth, which is sometimes sacrificed to his praise. 3. The History of Cardinal Mazarin, four volumes, 12mo. 1751. 4. On the Pre- eminence of the kings of France, 4to. 1649. 5. A Treatise on the Pretensions of the king of France to the Fnipire, -Ho. 1667. He died in 1695.

Ai;iii.iiY (John), a French physician of the se- venteenth century, lie was author of an Apology for Physic, in Latin, Hvo. printed at Paris in 1608, and an Antidote to Love, in French, T2mo. 1559.

AI.BKRY (Louis de Maurier,., a French writer. In 1682 he published Memoirs for a History of Holland, two volumes, 12mo. He died in 1687, leaving Memoirs of Hamburgh, Lubeck, llol- stein, Denmark, and Sweden, which were pub- lished at Amsterdam, in 1737.

AT BKSI'IM-: (Claude de F), baron of Cha- teau-Neuf. lie was a descendant of a noble family at Chartraiii, and tilled the ofh'ce of secretary of state under several of the kings of France. He

AUBESPINE (Charles de 1'), marquis of Clia- teau-Neuf. He was chancellor of France, but was imprisoned ten years. After his liberation he was taken into favor by Henry IV. He died in 1653.

AUBESPINE (Gabriel de F), was of the same family with the above. He became bishop of Orleans, in which station he showed himself a man of great learning. He died in 1630, aged fifty-two.

AUBESPINE (Magdalen de F), a celebrated French lady. She was the wife of de Neuville, seigneur de Villeroi, and author of several ex- cellent pieces in prose and verse. She died in 1596.

AUBIER, or AUBOUR, the French name for that soft whitish substance which lies round a tree between the bark and the solid wood. Mr. Barkley thinks it performs the office of veins. It may be considered as a third bark, whose fibres are less compact than those of the others, and is properly the fat of the tree. It hardens gradually, and becomes imperceptibly a part of the woody substance. There are few trees without some aubier, which is

more or less thick according to the situation in which the trees are planted, for the more they are exposed to the rays of the sun the less aubier will be found in them. In the oak it is seldom above an inch, or an inch and a half thick. When a tree is cut down, or dies in the ground, the aubier remains always of the same consistency without being turned into solid wood. It is liable to rot, and therefore merchants ought to take care that as little aubier is left on their wood as possible.

AUBIGNAN, a town of France, in the Ve- naissin, with the title of marquisate, and 1 320 in- habitants, now included in the department of Vaucluse, arrondissement of Orange. It is famed for its oil. Five leagues and a half N. E. from Avignon.

AUBIGNE (D' Theodore Agrippa), an illus- trious French author, was born in 1550. He made such an early progress in letters, that he is said to have translated Plato's Crito, from the Greek into French, when he was only eight years old. His father dying when he was thir- teen, he attached himself to the cause of Henry IV. under whom he fought, and who made him gentleman of his bedchamber. He soon became a favorite with Henry, who raised him to several other high offices ; but he at length lost his fa- vor, partly by refusing to comply with his pas- sions, and partly by a democratic kind of inflexi- bility. Quitting France, he took refuge in Ge- neva, where he was highly honored, and spent the remainder of his days in writing different works. His chief production is his Histoire Uni- verselle, from 1550 to 1601 ; with a short Ac- count of the Death of Henry IV. three volumes', folio. The first volume was scarcely published when the parliament of Paris condemned it to be burnt, as ' a work wherein kings are treated not only with little respect, but even outraged !' He died at Geneva, in 1630, aged eighty.

AUBIGNE, orAuBiGNY, a small town of Franci , in the department of Cher, seated on the Nerre, in a fine plain, twenty-four miles north ofBourtres

It is surrounded with strong walls, wide ditches, and high counterscarps. The castle is within the town, and is very handsome. Long. 2►► 28′ E., lat. 47►► 31′ N.

AUBIGNY, a ci-devant dukedom in France, belonging to the duke of Richmond in Eng- land, as descendant of the duchess of Portland, the

favorite mistress of Charles II., at whose so- licitation it was given her. It was confirmed to the duke of Richmond and registered in the Par- liament of Paris in 1777, but abolished with other French titles in 1790.

AUBIN, in horsemanship, a broken kind of Hobbes of Malmsbury. 4. Monumenta Britan- gait, between an amble and a gallop, ††† accounted nica, or a Discourse concerning Stonehenge, and

Roll-Rich Stones in Oxfordshire. 5. Architec-

*Anglicanum. He succeeded to several good es- tates, but law-suits and other misfortunes con- sumed them all, so that he was reduced to abso- lute want. In this extremity he found a va'uable benefactress in lady Long, of Dracot, who gave him an apartment in her house, and supported him till his death, which happened about A. D. 1700. 'He was a good Latin poet, and an excel- lent naturalist, but somewhat credulous, and tinctured with superstition. He wrote, 1. Mis- cellanies. 2. A Perambulation of the county*of Surry, in five volumes, 8vo. 3. The Life of Mr.*

a defect.

AUBIN (&t.), sometimes called Hodiere, a market town, situated on a bay of the same name, in the island of Jersey, three miles from St. Hil- lier's. The port is defended by a pier, which runs out into the sea, in the same manner as that at Guernsey. The town is well built, and much frequented by merchants. The parish church being at some distance, there is here a chapel of ease. Market on Mondays. Latitude 49†† 7', N. long. 2†† 15′ W.

AUBLETIA, in botany, a genus of the class and order polyandria monogynia. The essential characters are, calyx five-leaved, corolla, five pe- talled, capsule many celled, echinate, with many seeds in each cell. There are three species, all trees, and natives of South America.

AUBONNE, a district or bailiage of Switzer- land, in the canton of Bern, and territory of Vaud, which contains several villages, mostly at the foot of mount Jura.

AUBONNE, a rapid river of Switzerland, which runs through the above district, and falls into the lake of Geneva. In mount Jura there is a very deep cave, which is a natural and perpetual ice- house. At the bottom is heard a great noise, like that of a subterraneous river, which is sup- posed to be that of the Aubonne, because it first appears with several sources, about a hundred paces from the foot of that mountain.

AUBONNE, a town of Switzerland, in the above district, situated near the

river, seven miles north of the lake of Geneva, upon an eminence which has a gentle declivity, at the foot of which runs the river, with an impetuous torrent. It is built in the form of an amphitheatre ; on the upper part of which stands a castle with a court, and a portico supported by pillars of a single stone each. The castle stands high, arid there is a most de- lightful prospect, not only of the town and neigh- bouring fields, but of the whole lake of Geneva and the land that surrounds it. Aubonne is si- tuated eighteen miles W. of Lausanne. Long. 6►► 15′ E., lat. 46►► 30′ N.

AUBREY (John), F.R.S. a famous English antiquary, born at kston-Piers, in Wiltshire, in 1626, and educated at Trinity college, Oxford. In 1646 he was entered of the middle Temple, but quitted the study of the law on account of some embarrassments in his private affairs. He contracted an intimacy with several learned men,

tonica Sacra. 6. The Natural History of Wilt- shire. 7. Universal Education, and several other works still in MS.

AUBRIOT (Hugo), a Frencn reformer, from whom the appellation Hugonots. He was trea- surer of the finances, and mayor of Paris ; and under his magistracy the Bastile was built, in 1369. Soon after he was accused of heresy, and sentenced to confinement between two walls, from which the Maillotins, a' set of insurgents, released him, in 1381. He however left them, and retired into Burgundy, where he died the following year.

AUBUSSON (Peter d'), grand master of the knights of Rhodes, was born in La Marche, in 1423. Having entered into the order of St. John of Jerusalem, he was elected grand master, in 1476 ; and, in 1480, when the Turks made an attack upon the island, it was by his vigorous con- duct they were repulsed. He obtained a car- dinal's hat by very dishonorable means ►►► the de- livering up to the pope prince Zizim, brother of Bajazet, who had taken refuge in Rhodes, from the vengeance of the sultan. He died- in 1503.

AU'BURN. Sometimes written ABRON, which it is suggested may be the past participle of to bren, or brin, to burn ; quasi, browned. Others contend for alburn, from whiteness, regarding it as a -color inclining to white.

His faire auberne haire had nothing upon it but white ribbin. Pembroke's Arcadia.

Not wantcn white, but such a manly colour Next to aa abron, tough, and nimble set ; Which shows an active soul. Beaumont and Fletcher. The Tioo Noble Kinsmen.

These curious locks so aptly twin'd, Whose every hair a soul doth bind, Will change their auburn hue and grow White and cold as winter snow.

Carew. Persuasion! to Love ,

Close to her side, in radiant arms, a youth, Who like the brother of the Graces moves, His head uncas'd, discovers auburn locks Curl'd thick, not flowing.

Glover's Leonidas, book ii.

And not a year but pilfers as he goes Some youthful grace that age would gladly keep, A tooth, or auburn lock. Cowper's Poems.

AUBUSSON, a small town of France, in the

and was one of the first members of the Royal department of Creuse, thirty-seven miles north- Society. He made the history ;u;d antiquities of east of Limoges. Its situation is very irregular, England his peculiar study; and contributed on the river Creuse, in a bottom surrounded with considerable assistance to tht> famous Monasticon rocks and mountains.

S2 .

AUC '.id

AL'CAGUREL, the capital of the kingdom of Adel, in Africa, seated on a mountain. Long. 44►► 25′ E., lat. 9►► 10′ N.

At'CH, a town of France, in the department of the Gers. It has a beautiful cathedral, and is sixteen leagues west of Toulouse.

Alien, or ACH, in the Gaelic, signifies a field of some extent, generally arable and horizontal. In composition, Auchen, Auchin, or, as it ought rather to be spelt, Auch-an, signifies the field of, the panicle an, in Gaelic, being always the sign of the genitive, when placed between two sub- stantives ; although when prefixed to one sub- stantive, it implies only the definite article the.

AUCHABEll, or ACHABER, a hill in Aber- deenshire, in the parish of Forgue, on the south- east declivity, of which there are the remains of an elegant circular Roman redoubt.

AUCIIINLECK, in Gaelic, a field of rock; a parish of Scotland, in Ayrshire, eighteen miles in length, and two in breadth ; memorable for being the birth-place, as well as the property, of the late James Boswell, Esq. The soil, ex- cept upon the rocks and banks of the rivers, is poor ; but this is compensated by its abounding in excellent coals, free-stone, a black stone, which is fire-proof, used for building ovens, and other minerals. It has also a lead mine, which some think rather a silver mine, but it has never been wrought; and two mineral wells. It has the ruins of an ancient castle, of whose age there is no tradition ; and is ornamented with an elegant mansion-house, built by the late lord Anchinleck.

AUCH1NLILY LINN SPOUT, a cataract in the parish of Fintry, in Stirlingshire, over which the Carron rushes in its course from (,'arron bog to the carse of Falkirk.

Al'CHLOSSEN, LOCH or, a lake in the parish of Lumphanan, in

Aberdeenshire, nearly a mile in length, and above half a mile broad at the south end. Jt produces eels and pikes; some of the latter six feet long, and twenty-five pounds in weight. It often overflows its banks in summer. Al CHMI TV (Sir Samuel), lieutenant-ge- neral, (1. (‘. I), and colonel of the 78th regiment of foot, entered the army in 1776, as a volunteer in the 4/ Jth regiment ; and served with Sir W. Howe in North America, the three following campaigns. In 1783 he held a company in the T.‘itli foot in the East Indies, and was present at the first siege of Seringapatam, under lord Corn- waitis. In 1801 he was appointed adjutant- general to the expedition against Egypt. He was ordered out to South America in 1806, where h-e assumed the command of the troops, with the rank of brigadier-general ; and in February, 1807, carried .Monte Video l>y assault, after a nio.it determined resistance ; for which services !.t- icceived the thanks of parliament. In 1809 ue wa< appointed commander-in-chief of the (arnatic ; and in 1811 reduced the settlements :>f Java and Batavia under the dominion of Great iiritain, for which he auain obtained the thanks of both houses. On his return to Europe, Sir Samuel succeeded Sir I). Baird, as chief of the stall’ in Ireland. II ‘s death, occasioned by apoplexy, took place August 11, 1H-J2, in the srxt\ sixth year of his age. His remains, a’ter Jjnig in state at Ivilmaiuham hospital, were in

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terred in the royal vault in Christ Church Cathe dral, Dublin.*

AUCHTER, a Gaelic word, signifying high, or upper, which in composition makes part of many ancient names of places.

AUCI1TERMUCHTY, a town of Scotland, in Fifeshire, which was constituted a royal burgh by James IV7. confirmed by James VI. and still enjoys all the privileges, except that of electing a representative in parliament. It has three bailies, fourteen counsellors, a treasurer and clerk; and four fairs, viz. on 21st August, first Tuesday of November and April, and 13th July, which last is one of the most considerable in Fife, for horses, cattle, &c. The church was built in 1780, and an elegant manse in 1792. The chief manufacture is white and brown linens.

AUCKLAND, BISHOP, a market town in the county palatine of Durham, with a population of near 2000. Here is the palace of the Bishop of Durham, began in 1283, by bishop Beck, and is a noble, though irregular, structure. It is 257 miles north-west of London, and ten miles and a half south-west of Durham.

AUCKLAND (William Eden, lord), was the third son of Sir Robert Eden, bart. of West Auckland, in the county of Durham. Educated at Eton and

Oxford, he was called to the bar by the so- ciety of the Middle Temple in 1769, and accom- panied the earl of Carlisle, in 1778, to negociate terms with the revolted colonies of America. He was chief secretary during the same nobleman's viceroyalty in Ireland. In 1785 he was sent ambassador extraordinary to negociate a com- mercial treaty with France; and in 1788 per- formed a similar service with Spain. In 1789 he concluded, at the Hague, a treaty between Great Britain, the emperor, and the king of Prussia, in settlement of the affairs of the Nether- lands ; and the same year he was created baron Auckland, of the kingdom of Ireland. In 1793 he was advanced to the English peerage by the same title. Lord Auckland was considered an able diplomatist, and is the author of the fol- lowing works : The Principles of Penal Law, 8vo. 1771 ; Five Letters to the earl of Carlisle, 8vo. ; On the Population of England, in Answer to Dr. Price, 8vo.; View of the Treaty of Com- merce with France, 8vo. ; The History of New Holland, 8vo.; Remarks on the War, 8vo. 1795; and various speeches in the House of Lords. He died in 1814.

, AUCTION, -) Lat. augeo, auctum. Gr.

AUC'TIONARY, > Av►►w, increase; audio, an in-

AUC'TIONEER. j creasing. Auction is a selling

to those who will give the highest price for the

article offered. After successive biddings at a

price constantly advancing, the last bidder is the

buyer.

And much more honest, to be hirM, and stand With auctionary hammer in thy hand ; Provoking, to give more, and knocking thrice, For the old household stuff, or picture's price.

Dry den' i Juvenal,

Estates are landscapes, gaz'd upon awhile, Then advertis'd, and auctioneer' A away. Cowper't Poems. The Task, book iii.

AUCTION, in old medical writings, the nourish- ment of an animal body, whereby -J ►►►►► increased

in size.

AUD

AUCTION, in Roman antiquity, was originally a kind of sale, performed by the public crier sub basta, i. e. under a spear stuck up on the occa- sion, and by a magistrate, who delivered the goods. It was termed auctio, q. d. increase, be- cause the goods were sold to him, qui plurimum rem augeret, who bid most for them. The auc- tioneer was called Auctor ; and the term aucto- ritas denoted the right of property which the sale vested in the purchaser. A spear being set up in the forum as the sign of an auction, the phrase sub hast& venire ; (literally, to be sold under the spear) denoted a sale by auction.

The civil law, according to Huber, Praelec- tiones, xviii. 2. 7. held private biddings, by or on behalf of the seller, to be fraudulent: and this principle was adopted by the courts of law in this country, in the days of Lord Mansfield, whose inclination to adopt the maxims of the civil code is well known ; but latterly the legis- lature seems to recognise the practice, by ex- empting such private biddings from the duty im- posed on sales by auction. A sale, however, cannot be supported where the purchaser was the only real bidder, and public notice was not given of the owner's intention to bid ; but that public notice is not essential to the validity of a sale, if there be a contest between one or more real bidders. (See Sugden's Law of Vendors). In a Dutch auction, the auctioneer commences by naming a high price, and gradually reduces it, until some person closes with his offer.

AUCTORATI, in Roman antiquity, persons who entered the lists as gladiators, and received wages, or hired themselves to perform in the public games.

AUCTORATI MILITES, soldiers bound by oath, and the receipt of wages, to serve in war. They stood opposed to the exauctorati, who were dis- banded. The payment they received for their service was denominated auctoramentum.

AUDA'CIOUS, -\ Lat. audax, daring; from

AUDA'CIOUSLY, f audeo, I dare. These words

AUDA'CIOUSNESS, *" describe that bold enter-

AUDA'CITY. * prising incautious spirit,

which, without deliberation, undertakes to try to

vanquish.

Your reasons at dinner have been sharp and sen- tentious ; pleasant without scurrility, -witty without affectation, audacious without impudency.

Shakspeare. Love's Labour Lost.

Excusing, cavilling upon mandates and directions, is a kind of shaking off the yoke and assay of disobe- dience ; especially, if in those disputings they which are for the direction speak fearfully and tenderly, and those that are against it, audaciously.

Lord Bacon's Essays.

*Anniball took his losse and dammage nothing neere the heart, but rather made full reckning, that he had caught (as it were) with a bait, and fleshed the auda- ciousnesse of the foolehastie '***onsull, and of the soul-diours especially. Holland's Livy.*

As when the wolf has torn a bullock's hide,

At unawares, or ranch'd a shepherd's side ;

Conscious of his audacious deed he flies,

And claps his quiv ring tail between his thighs.

Dryden't Virgil. Mn. 11.

As Knowledge without justice ought to be called curning rather than wisdom, .so a mind prepared to

meet danger, if excited by its own eagerness, and not the public good, deserves the name of audacity rather than of fortitude. Steele.

AUDE, a department of France, bounded by that of Arriege on the west, Upper Garonne on the north-west, Tarn on the north, Herault on the north-east, the Mediterranean on the eas!, and the eastern Pyrenees on the south. It is named from the river.

AUDE, a river in France, which rises in the Cerdagne among the Pyrenees, and, running north by Alet, visits Carcassone, and, directing its course by Quillan and Limouse, falls into the Mediterranean, a little to the north-east of Narbonne. The Romans dug up gold from its banks and channel.

AUDEANISM, the same with anthropomor- phism. See

ANTHROPOMORPHITE.

AUDEBERT, Germain, a counsellor of Or- leans, on whom the senate of Venice conferred the order of knight of St. Mark, for a panegyric in verse, upon the republic, written by him while at that city. Henry II. honored him with a pa- tent of nobility. He died in 1598 ; and his poems were collected and published in 1602.

AUDEBERT, John Baptist, a French natural- ist, and a celebrated engraver of natural history, was born at Rochefort, in 1759. So much did he excel in the just and elegant representation of animals, that his productions are accounted among the most valuable in the line. His first piece was L'Hist. Nat. des Singes des Makis et des Galeopitheques ; a folio volume, published in 1800. This work drew the attention of the pro- fessors of the museum of natural history at Paris, who recommended it and the author in honor- able terms to the minister of the interior. He did not live to enjoy the fruits of his labors : but died in 1800, while engaged in other works of equal splendor.

AUDEUS, or AUDIUS, the chief of the Aude- ans, obtained the name of a heretic, and the punishment of banishment, for celebrating eastei in the manner of the Jews, and attributing a human form to the Deity. He died in the country of the Goths, about A. I). 370.

AUDIANISM, the system of Audius and his followers; particularly as to the belief of the human figure of the Deity. See ANTHROPOMOR- PHITES.

AU'DIBLE, n. & adj.-\ Lat. audio, I hear; AU'DIBLY, /that which may be

Au'niENCE, ►► heard. Loud enough

AU'DIENT. J to be heard; sounding.

But when this lady comen was To th' emperour, in his presence, She said aloud in audience.

Gower. Con. A . book ii.

Visibles are swiftlier carried to the sense than au- dibles ; as appeareth in thunder and lightning, flai.ie and report of a piece. Bacon's Works, fo. i.

Therefore the Omnipotent Eternal Father (for where is not he Present), thus to his Son audibly spake.

Milton. Paradise Lost, b. vii.

Don Quixote did prosecute his discourse, in such sort, and with so pleasing terms, as he had almost induced his audients to esteem him to be at that time at least exempt from his frenzie.

Sltelton't Tram, of Don Quixote.

AUD

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AUD

AUDIENCE COURT; a court belonging to the archbishop of Canterbury, of equal authority with the arches court, though interior both in dignity and antiquity. The original of this court was, because the archbishop of Canterbury heard several causes extrajudicially at home in his own palace ; which he usually committed to be dis- cussed by men learned in the civil and canon laws, whom he called his auditors ; and so in time it became the power of the man, who is called causarum" negotiorumque audientiae Can- tuarensis auditor, seu officialis. Cowel.

AUDIENCE COURTS are chiefly concerned in deciding differences arising upon elections, con- secrations, institutions, marriages, &c.

AUDIENCE is also the name of a court of justice established in the West Indies by the Spa- niards, answering in effect to the parliament under the old government of France. These courts take in several provinces, called also audi- ences, from the names of the tribunal to which they belong.

AUDIENCE OF AMBASSADORS : a ceremony ob- served in courts at the admission of ambassadors or public ministers to a hearing. In England, audience is given to ambassadors in the presence chamber : to envoys and residents, in a gallery, closet, or in any place where the king happens to be. Upon being admitted, as is the custom of all courts, they make three bows ; after which they cover and sit down ; but not before the king has covered and sat down, and has given them the sign to put on their hats. When the king docs not wish to have tnem covered, and sit, he himself stands uncovered ; which is taken as a slight. At Constantinople, ministers usually have audience of the prime vizier.

AUDIENDO I.T TI.UMTNANDO, a writ, or rather a commission to certain persons, when any insurrection or great riot is committed in any place, for the appeasing and punishment .hereof.

At 1)1 FATKS, or Ai DITORES, in church his- tory, an order of catechumens, consisting of those newly. instructed in the mysteries of the

Christian religion, and not yet admitted to baptism.

AT 1)1 r'!lKT(.lohn I Japtist),an eminent French geographer, born in l(>/ >7. 1 le was employed on embassies to the courts of Mantua, Parma, and Modena ; and was author of Ancient and Mo- dern (ieogruphy, :5 vols. - Uo, Paris, 1689. He died at Nancy, in 1 73:5.

A I I)! I il i I',!! (Vital d'), a French nobleman, born at Munor, m.-ar \ ille- franche de llouergue, about i. "> ! > . ">. liesides several otiier pieces, he \vroi,; a tivatis;' on I fuels, printed at Paris in 1(517 ; I'.n ! i'oeins on different subjects, 2 vols. f'.vo. Kil-l. 1 le uivd in 1(3:50.

Al 'DiT . . \ n. -\ Lat. audio, I hear.

Ar'nri'ii:, (To audit is to hear

Ar'unni; -i , n. \ nilj. I 'whatever may be said

*Ai.'m 1 1; i ss. * on the subject in hand*

with i view of passing a judgment; generally applied to tin: examination and passing of ac

II I o

counts b\ prrsons denominated auditors, but wliu are, pi rhaps, in these transactions, more properly, inspectors. Auditory applies to per- sons who hear, and sometimes to the place in ⬚⬚⬚vliich they aiv assemble.!.

In vain shall this be expected from our younger

years ; which the wise philosopher excludes from

being meet auditors, much less judges of true morality.

Bp. Hall's Balm of Gilead,

Yet went she not ; as, not with such discourse Delighted ; or not capable her ear, Of what was high : such pleasure she reserv'd, Adam relating, she sole auditress. Miltait.

Met in the church, I look upon you, as an auditory, ⬚⬚ fit to be waited on (as you are) by both universities.

South.

Several of this auditory were, perhaps, entire strangers to the person whose

death we now lament.

Atterbury.

Foh ! 'twas a bribe that left it ; he has touch'd Corruption ! whoso seeks an audit here Propitious, pays his tribute, game or fish, Wild fowl or ven'son ; and his errand speaks.

Cowper's Poemi.

Will make your very heart strings ake With loud and everlasting clack, And beat your auditory drum, Till you grow deaf, or they grow dumb.

Beattie. The Wolf and Shepherd.*

AUDITA QUERELA, a writ which lies against him who has taken a recognizance in the nature of a statute-staple, or the like, and has asked, or obtained, execution from the mayor and bailiffs, or judges, before whom it was entered, &c. It is granted by the lord chancellor, upon view of the exception suggested, to the judges of either bench, willing them to grant summons to the sheriff of the county where the creditor is, for his appearance at a certain day before them. But the indulgence now shown by the courts in granting a summary relief upon motion, in casts of evident oppression, has almost rendered this writ useless, and driven it quite out of practice. A late learned judge, Ch. J. Eyre, i. B. and p. 428, states that the court will grant relief upon motion in all cases where a party would have been entitled to relief by auditi querela. The legal student will find this subject clearly expounded in Mr. Serjeant Williams's notes to Saunders's Reports, in the case of Turner v. Da- vies, vol. ii. p. 137, d.

AUDITIONALIS SCHOLASTICUS, in writers of the middle age, an advocate who pleads causes for his clients in audiences.

AUDITORS OF THE REVENUE, or of the exche- quer, officers who take the accounts of those who collect the revenue and taxes raised by par- liament, the accounts of the sheriffs, escheators, collectors, tenants, customers, &c. The auditor of the exchequer, an office enjoyed for life, is one of considerable trust, lie is to file the tel- ler's bills, by which they charge themselves with all the monies received ; and by warrant from the lord treasurer, or the commissioners of the treasury, he draws all orders to be signed by him or them, for issuing forth all monies, by virtue of .privy seals, which are recorded in the clerk of the Pells' office, and entered and lodged in the auditor's office. He also, by warrant of the lord treasurer, or commissioners of the trea- sury, makes debentures to such as have fees, an- nuities or pensions, by letters patent from the king, out of the exchequer, and directs them for payment to the tellers. He daily receives the state of

the account of each teller, and weekly

certificates the whole to the lords of the treasury. At Michaelmas and lady-day the auditor of the exchequer makes a declaration ; that is, he de- livers an abstract of all accounts and payments made in the preceding half year, one for the lords of the treasury, and the other for the chan- cellor of the exchequer. The office is holden for life.

AUDITORES, in church history, a branch of the Manichean sect, who were divided into electi and auditores ; corresponding, according to some writers, to clergy and laity ; and according to others, to the faithful and catechumens among the catholics. By the Manichean rule, a differ- ent course of life was prescribed to the elect from that of the auditors. The latter might eat flesh, drink wine, bathe, marry, traffic, possess estates, bear magistracy, and the like ; all which things were forbidden to the elect. The auditors were obliged to maintain the elect, and kneeled down to ask their blessing. Beausobre observes, that the elect were ecclesiastics, and in general such as made profession of observing certain counsels, called evangelic ; such as the clergy and monks, and they were called the perfect by Theodoret. The auditors were the laity, and so denominated because they heard in the church, while others taught and instructed. See AUDIENTES.

AUDITORIUM, in the ancient churches, was that part where the audientes stood to hear and be instructed. The auditorium was the part now called navis ecclesiae. See NAVE. In the primi- tive times, the church was so strict in keeping people together in that place, that the person who went from thence in sermon-time was ordered by the council of Carthage to be excom- municated.

AUD1TORIUS MEATUS, the auditory passage or entrance of the ear, called also aurium alveare, on account of the wax collected in it.

AUDITORY, in ancient churches. See AUDI- TORIUM.

AUDITORY is also used for the bench whereon a magistrate, or judge, hears causes. At Rome, the magistrates had auditories, according to their dignity. Those of the superior officers were called tribunals ; those of the inferior, subsellia. The pedanei had their auditories in the portico of the imperial palace. Those of the Hebrews, at the gates of cities. The judges

appointed by the ancient lords distributed justice under an elm, which was usually planted before the manor- house,, and served them for an auditory.

AUDITORY NERVES, the seventh pair, arising from the medulla oblongata, and distributed, the one to the ear, the other to the tongue, eye, &c.

AUDLEY (Edmund), the son of Lord Aud- ley, bishop of Rochester and Hereford, under Henry VII., was a man of great learning and generosity. He gave ►►400 to Lincoln College, to purchase lands, and was also a benefactor to St. Mary's Church, Oxford. He died in

1524.

AUDLEY (James, Lord Audley), one of the English heroes who fought under Edward III. was born about 1314. In 1343 he was made governor of Berwick. In 1353 he reduced a great part of the country of Valois in France ; and was present at the famous battle of Poictiers

in 1 356 ; where, having obtained leave of Edward the Black Prince, to charge in front (in conse- quence of a vow he had made), he performed extraordinary feats of personal valor : but being at last dangerously wounded, was carried out of the field. In 1360 he again attended Edward III. to the wars in France ; and after the peace, in 1361, was made constable of Gloucester Castle, governor of Aquitain, and seneschal of Poictou. lie died April 1, 1386.

AUDLEY (Sir Thomas), descended of an ancient family in Essex, was born in 1488 ; and, having the advantage of an university education, was taken notice of by Henry VIII. and appointed speaker of the House of Commons in 1529. Having pleased the king in this station, he pro- moted him farther next year; and in 1532, ap- pointed him Lord keeper of the Great Seal, on the resignation of the famous Sir Thomas More. In 1533 he made him Lord Chancellor, with suitable emoluments. In 1535 Audley sat in judgment, and pronounced sentence of death upon Sir Thomas More, as guilty of high treason, in refusing to acknowledge the king's supremacy in the church ! Upon receiving sentence, Sir Thomas More said ' he had studied this subject for seven years, but could find no authority for a layman being head of the church ;' to which Audley gave this decisive answer ; ' Sir, will you be reckoned wiser, or of a better conscience, than all the bishops, the nobility, and the whole king- dom?' For these and the like services, Henry created Audley a baron and a knight of the gar- ter in 1538. He died in 1544.

AUDLEY CASTLE, a fort of Ireland, built on a promontory in the county of Down, which has a prospect of the whole lake of Strangford.

AUDLEY ROAD, a part of Strangford Bay, on the west side, on the coast of Down in Ulster, where ships may lie in safety.

AUDRAN (Benoit, or Benedict), the second son of Germain Audran, was born at Lyons in 1661, where he learned the first principles of design and engraving under his father. But soon after going to Paris, his uncle Gerard Audran took him under his tuition ; and he profited so greatly by his instructions, that though he never equalled the sublime style of his tutor, yet he deservedly acquired great reputation. Abbe Fontenai says, ‘ We admire in his works a share of those beauties which we find in the engravings of the illustrious Gerard.’ He was appointed the king’s engraver, received the royal pension, was made an academician, and admitted into the council, in 1715. He died unmarried at Lou- zouer, where he had an estate, in 1721. His manner was founded upon the bold clear style of his uncle. His outlines were firm and deter- mined ; his drawing correct ; the heads of his figures are in general very expressive ; and the other extremities well marked. His works, com- pared with those of his uncle, appear to want that mellowness and harmony so conspicuous in the latter; and the round dots with which he finishes his flesh upon the lights are often too predominant. In his most finished plates the mechanical part of the engraving is extremely neat, and managed with great taste. One of his neatest piints is that of Alexander sick, drinking

from the cup which his physician presents to him; a circular plate, from Le Sueur.

AUDRAN (Benoit), the second engraver of that name, the son of John Audran, and nephew to the former Benoit ; was also established at Paris. A little attention will easily distinguish his works, which are vastly inferior to those of his uncle. One of the best of his plates is the descent from the cross, from a picture of Poussin.

AUDRAN (Carl), an eminent French engraver, brother, or cousin to Claude, was born at Paris in 1594. In his infancy he discovered much taste for the arts ; and to perfect himself in en- graving he went to Rome, where he produced several prints that did him great honor. At his return, he adopted that species of engraving which is performed with the graver only. He settled at Paris, where he died in 1674, unmarried. The abbe Marolles, who speaks of him with great praise, attributes 130 prints to him: amongst which, the annunciation, a middling sized plate, upright, from Annibale Caracci ; and the assumption, in a circle, from Doininichino, are the most

esteemed. In the early part of his life he marked his prints with C, for Carl, till his brother Claude published some plates with the same initial, when, for distinction sake, he used the letter K, or wrote his name Karl.

Aruu.\ (Claude), a French engraver, the first of the celebrated artists of that name, was the son of Lewis Audran, an officer belonging to the wolf hunters in the reign of Henry IV. of France; and was born at Pans in 1592. Al- though he never made any great progress in the art, yet lie had the honor to be the father of three great artists, Germain, Claude, and Gerard. The last of whom has immortalised the name of the family. He died at Lyons, in 1677.

ArmiAN (Claude), the second son to Claude, was born at Lyons in 1639, and went to Rome to study painting ; where he succeeded so well, tint at his return he was employed by Le Brun to assist him in the battles of Alexander, which he was then painting for Louis XIV. He was received into the Royal Academy in 1675, and died unmarried at Paris in 1684. His virtues (says abbe Fontenai) were as praise-worthy as his talents.

*AUDHAN (Gerard), the most celebrated artist of his family, was the third son of Claude, and born at Lyons in 1640. lie learned from his father the first principles of design and engraving at Lyons; and went to Paris, where his genius soon beuan to manifest itself. Le Brun em- ployed him to enurave the battle of Constantine, and tho triumph of that emperor; and for these works lie obtained apartments at the Gobelins. At Rome he is said to have studied under Carlo Maratti, to perfect himself in drawing; and in that city he engraved several tine plates. M. Colbert w;is so struck with the beauty of Au- dran's works while he resided at Home, that he persuaded Louis XI V. to recal him. On his return, he was appointed engraver to the king. Jn 16!U he was named counsellor of the Royal Academy ; and died at Paris in 1703. He had been married, but left no male issue. The greatest, excellency of this artist, above that of *ny other engraver, was, that though he drew*

admirably himself, yet he contracted no manner of his own ; but transcribed on copper simply, with great truth and spirit, the style of the mas- ters whose pictures he copied. On viewing his prints, we lose sight of the engraver, and natu- rally say, it is Le Brun, Poussin, Mignard, or LeJSueur, &c. as we turn to the prints which he engraved from those masters. ' This sublime artist,' says the abbe Fontenai, 'far from con- ceiving that a servile arrangement of strokes, and the too frequently cold and affected clearness of the gravel, were the great essentials of historical engraving, gave worth to his works by a bold mixture of free hatchings and dots, placed toge- ther apparently without order, but with an inimi- table degree of taste ; and has left to posterity most admirable examples of the style in which grand compositions ought to be treated. His greatest works,

which have not a rery flattering appearance to the ignorant eye, are the admira- tion of true connoisseurs and persons of fine taste. He acquired the most profound know- ledge of the art, by the constant attention he bestowed upon the science of design, and the frequent use he made of painting from nature. He knew how to penetrate into the genius of the painter he copied from; often improved upon, and sometimes even surpassed him. Without exception, he was the most celebrated engraver that ever existed in the historical line. We have several subjects which he engraved from his own designs, that manifested as much taste as cha- racter and facility. But, in the battles of Alex- ander, he surpassed even the expectations of Le Brun himself.' These consist of three very large prints, length-ways, each consisting of four plates, which join together, from Le Brun, viz. The passage of the Granicus ; The battle of Ar- bela ; and Porus brought to Alexander, after his defeat. To this set are added two large prints, length-ways, on two plates each, also from Le Brun, viz. Alexander entering the tent of Darius, and the triumphal entry of Alexander into Ba- bylon. The former was engraved by Gerard Edelink, and the latter by Gerard Audran. Of all these plates, those impressions are most es- teemed which have the name of Goyton the printer marked upon them.

AUDRAN (Germain), the eldest son of Claude, was born in 1631 at Lyons, where his parents then resided. Not content with the instructions of his father, he went to Paris,' and perfected himself under his uncle Carl. Upon his return to Lyons, he published several prints which did him great honor. His merit was in such esti- mation, that he was made a member of the aca- demy, and chosen a professor. He died at Lyons in 1710, and left behind him four sons, all artists; namely, Claude, Benoit, John, and Lewis.

AUDRAN (John), the third son of Germain Audran, was born at Lyons in 1 667 ; and, after being instructed by his father, went to Paris to perfect himself in the art under his uncle Ge- rard. At the age of twenty he began to display his genius in a surprising manner ; and his suc- cess was such, that in 1707 he obtained the title of engraver to the king, and had a pension al- lowed him, with apartments in the Gobelins ;

and the following year he was made a member of the Royal Academy. He was eighty years of age before he quitted the graver ; and near ninety when he died, at the apartments assigned him by the king. He left three sons, one of whom was also an engraver. ' The most mis- terly and best prints of this

artist (in Mr. Strutt's opinion) are those which are not so pleasing to the eye at first sight. In these the etching con- stitutes a great part ; and he has finished them in a bold rough style. The scientific hand of the master appears in them on examination. The drawing of the human figure, where it is shown, is correct. The heads are expressive and finely finished ; the other extremities well marked. He has not, however, equalled his uncle. He wants that harmony in the effect ; his lights are too much and too equally covered; and there is not sufficient difference between the style in which he has engraved his back grounds and his draperies. This observation refers to a fine print by him of Athaliah, and such as he engraved in that style. At other times he seems almost to have quitted the point, and substituted the graver. But here I think he has not so well succeeded. The effect is cold and silvery : see for example, the Andromache from Sylvestre. One of his best finished prints, in this neat style, seems to be Cupid and Psyche from Ant. Coypel.'

AUDRAN (Lewis), the last son of Germain Audran, was born at Lyons in 1 670 ; from whence he went to Paris in 1712, before he had produced any great number of prints. The most esteemed are his seven acts of mercy, on seven middling- sized plates, from Sebastian Bourdon.

AUDREY, or ETHELREDA, an Anglo-Saxon princess, wife of Egfrid, king of Northumber- land. She turned abbess, and was canonized after her death.

AVE, ˆ A corruption of the Latin

AV'E MARY, S Ave Maria, Hail Mary ! A

reverential address used by Catholics to the

Virgin Mary.

All his mind is bent on holiness, To number Ave Marias on his beads. Shakspeare.

AVE MARY. In the Romish church, their chaplets and rosaries are divided into so many ave-marias and so many paternosters. It has been observed by Bingham and others, that among all the short prayers used by the ancients before their sermons, there is not the least men- tion of an ave-mary; and that its original can be carried no higher than the beginning of the fifteenth century, when Vincentius Ferrerius,who was a celebrated preacher, first used it before his discourses; from his example it obtained such authority, as not only to be prefixed to all the sermons of the Romish preachers, but to be joined with the Lord's Prayer in their breviary.

AVEIRO, a considerable town of Portugal, in Beira, seated near the head of a small gulf at the mouth of the Vouga ; which forms a haven with a bar, over which vessels may pass that do not draw above eight or nine feet water. The city stands in a long plain, well watered, and very fertile. This plain is nine miles broad, from Porto to Coimbra ; and is bounded on the east

by a chain of mountains called Sierra d'Al- coba, which reach from the one town to the other. Near this city salt is made in sufficient quantity to serve two or three provinces. It has a nunnery, where none are admitted but the daughters of the nobility. Many English are settled here, on account of the thriving trade in- oil, salt, and fish, especially sardels. It lies thirty miles S.ofOporto. Long.8►► 30'W.lat.40►►40'N. AVEIRON; a department of France, bounded by that of Cantal on the north, by those of Lo- zere and Card on the east, Herault and Tarn on the soxith, and Lot on the west. It is named from the river.

AVEIRON, a river of France, which rises near Severac, and flowing by Rhodes and Vil- lefranche, falls into the Garonne below Mont- auban.

AVEL, avello, Lat. to pull away. The beaver in chase makes some divulsion of par's, yet are not those parts avelled to be termed testicles.

Brown,

AVELLA, a town of Campagni di Roma. AVELLA. See AQUILA. AVELLANA, in botany, nux pontica, filbert, a sort of nut, anciently so called, from Avellanum, a town of Campania, where they abounded. See AVELLINO It is the corylus avellana of Lin- naeus. Plin.l. 25, c. 23.

AVELLANA PURGATRIX, in the materia ine- dica, the fruit of a species of ricinus.

AVELLANDA, in botany, a name given by the Spaniards to the roots of the Torsi, or sweet cyperus. These are esculent, and of a very de- licious taste : they seem to have had the name from their likeness to the avellana, or hazel nut. Garcias, and some others, have thought that the curcas of Malabar was the same with the avel- landa of Europe. But this does not seem to be the case ; for the curcas, though of the same size and shape with the avellanda, has a hard coat like the common filbert. , AVELLANE, in heraldry, a cross, the quarters of which somewhat resemble a filbert-nut. Syl- vanus Morgan says, that it is the cross which ensigns the sovereign's globe.

AVELLINO, a city of Italy, in the kingdom of Naples, with a bishop's see. It was almost ruined by an earthquake in 1694. It is, however, at present a

pretty considerable place, extending a mile in length down the declivity of a hill, with ugly streets, but tolerable houses. The churches have nothing to recommend them, be- ing crowded with monstrous ornaments in the barbarous style, which the Neapolitans seem to have borrowed from the Spaniards. The ca- thedral is a poor building, in a wretched situation, with little to attract the eye. The good catholics need not run to Naples to see the blood of St. Januarius ; for they have a statue of St. Law- rence, with a phial of his blood; which, for eight days in August, entertains them here with a similar miraculous liquefaction. The only edifice of note is a public granary, of the Com- posite order, adorned with antique statues, and a very elegant bronze one of Charles II. of Spain, while a boy, cast by Cavalier Cosimd. The number of inhabitants amounts to 8000, some say 10,000. The bishop's revenue is

AVE

about 6000 ducats (►►1125) a-year. The ma- gistracy consists of a syndic and four eletti, all annual ; which offices are engrossed by a certain number of families of distinction. Avellino has a considerable manufacture of cloth of various qualities and colors, but chiefly blue. Many wealthy merchants have ►► -20" E.,'lat. 41►► 11' N.

AV ELTON. See ALTON.

A'"KN, one of the Orkney Islands, better known by the name of Sanda.

Avi'N, the Scriptural name of several an- cient places; particularly, 1. of Bethel, byway of metaphor, IIos. . 8. '2. of Ileliopolis, a city of Ivjypt, Ezek. \x. 17. See HELIOPOLIS. .'). of a plain in S\na, between Lebanon and Antilikunis, Amos, i. 5; supposed to be the same with Baal-beck, or the valley of Lebanon. See BA u.-BreK.

AYKNA, OATS, in botany, a genus of the dvirinia onlei, and triandria class of plants; rank- ing in the natural method under the fourth order, uramina. The calyx has a double valve, and the awn on the back is contorted. There are thirteen species, of which the first six fol- lowing are natives of Britain : vi/. 1. A. elatior, the tall oat-r_rrass. ►►►->. A. futua, the bearded oat-gras-;. 3. A. tlavescens, the yellow oat-grass. 4. A. nuda, the naked oat. ."►. A. pratesis, the meadow oat-u'raˆs.

AVE

For the culture, see HUSBANDRY. Oats are an article of the materia medica. Gruels made from them have a kind of soft mucilaginous quality ; by which they obtund acrimonious hu- mors, and prove useful in inflammatory dis- eases, coughs, hoarseness, and exulcerations of the

fauces.

AVENACEOUS, something belonging to, or partaking of the nature of oats. AVENANT, agreeable; beautiful.□□□ Chauc. AVENCHE, an ancient city of Switzerland, in the canton of Bern, formerly the capital of all Switzerland, but now greatly decayed. It lies four miles S. W. of Murat, and fifteen W. ol Bern. Long. 6□□ 52′ E., lat. 46□□ 50′ N. AVEN'GE, v. & n.~\ Fr. venger, Lat. vm AVEN'GEANCE, I dicare (vim dicere, Vos AVEN'GEMENT, V sius), to repel force with AVEN'GER, I force. To deal out the

AVEN'GERESS. J measure allowed by the Jewish law □□□ (a tooth for a tooth,' &c. ; to de- nounce vengeance, to retaliate an injury, to exact punishment not sanctioned by good laws, or the benign spirit of Christianity.

That he might work th' avengement for his shame, On those, two caitives, which had bred him blame.

Spenter

All those great battles (which thou boasts to win Through strife and bloodshed, and avengement Now praised) hereafter thou shall repent.

Id. Faerie Queenr There that cruel queen avengeress Heap on her new waves of weary wretchedness.

Id

This neglected, fear Signal avengeance ; such as overtook A miser. Philipi.

I will menge me of mine enemies. Isaiah.

They stood against their enemies, and were avenged of their adversaries. Wisdom.

I will avenge the blood of Jezreel, upon the house of Jfhu. Hosea.

Till Jove, no longer patient, took his time, T' avenge with thunder your audacious crime.

Dryden.

The just iiˆenger of his injured ancestors, the vic- torious Louis, was darting his thunder. Id.

But just disease to luxury succeeds ; And ev'ry death its own avenger

breeds. Pope. Too daring bard ! whose unsuccessful pride Th' immortal Muses in their art defied ; Th' avenging Muses of the light of day Depriv'd his eyes, and snatch'd his voice away.

Id.

The day shall come, that great avenging day, When Troy's proud glories in the dust shall lay.

Id.

Send thy arrows forth, Strike, strike these tyrants and avenge my tears.

Cumberland.

Uttle did I dream that I should have lived to see such disasters fallen upon her [the queen of France] in a nation of gallant men ††† in a nation of men of honour and of cavaliers. I thought ten thousand swords must have leaped out of their scabbards to avenge even a look that threatened her with insult.††† But the age of chivalry is gone. Burk††.

AUENHEIM, a town of Germany, in the circle of Suabia, near () ffenbourg.

AVENIO an ancient town of Cavares, and one of the most opulent in Gallia Narbonensis ; now called Avignon.

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AVENPACE, a Spanish Moor of the twelfth century, who wrote a commentary upon Euclid; but having adopted the peripatetic philosophy, he attempted to explain the Koran, by the sys- tem of Aristotle, for which he was imprisoned at Corduba.

AVENS, in botany. See CARYOPHYLLUS.

AVENTINE (John), was born in 1466, in Abensperg, in Bavaria. He studied first at In- golstadt, and afterwards at Paris. In 1503 he taught eloquence and poetry at Vienna ; and in 1507 he taught Greek at Cracow, in Poland. In 1509 he read lectures on Cicero, at Ingold- stadt; arid in 1512 was appointed preceptor to the princes Lewis and Ernest, sons of Albert the Wise, duke of Bavaria; and travelled with the latter. After this he wrote the Annals of Bavaria, being encouraged by the dukes, who

settled a pension on him. This work, which gained great reputation, was first published in 1534, by Jerome Ziegler, professor of poetry in the university of Ingolstadt; and afterwards at Basil, in 1580, by Nicolas Cisner. In 1529 he was forcibly taken out of his sister's house at Abensperg, and hurried to a jail ; the true cause of which violence was never known; but it would probably have been carried to a much greater length, had not the duke of Bavaria in- terposed, and taken this learned man under his protection. Mr Bayle remarks, that the in- curable melancholy, which from this time pos- sessed Aventine, was so far from determining him to lead a life of celibacy, as he had done till he was sixty-four, that it induced him to think of marrying. He advised, however, with two of his friends, and consulted certain pas- sages of the Bible relative to marriage. The result was, that it was best for him to marry ; and having lost too much time, considering his age, he took the first woman he met with, who hap- pened to be his own maid, ill-tempered, ugly, and extremely poor. He died hi 1534, aged sixty-eight; leaving one daughter, who was then but two months old.

AVENTINE, or AVENTINUS, one of the seven hills on which Rome was built. It was also called Murcius, from Murcia, the goddess of sloth, who had a little chapel there; Collis Dianae, from the temple of Diana ; and Remo- nius, from Remus, who was buried there. It was taken within the compass of the city by Ancus Marcus. To the east it had the city walls ; to the south the Campus Figulinus ; to the west the Tiber ; and to the north Mons Pa- latinus ; in circuit two miles and a quarter.

AVENTUR7E, in our ancient writers, signify tournaments, or military exercises on horseback.

AVENUE. Fr. venir, avenir ; participles venu, avenu ; Lat. venire, to come. Approach, opening, passage.

Good guards were set up, at all the avenues of the city ; to keep all people, from going out.

Clarendon.

The regulations that, are established at Thebes for keeping the avenues free from incumbrances, main- taining the aqueducts and rendering the baths conve- nient, for the cultivation of arts, and for the security of the public, are the most excellent that can be ima- gined- Hawkesworth's Telemachtu.

Truth is a strong hold, and diligence is laying siege to it : so that it must observe all the avenues and passes to it. South.

AVENUE, in fortification, an opening or inlet into a fort, bastion, or the

like place, or the passes and ways to and from it.

AVENUE, in gardening, a walk planted on each side with trees, and leading to a house, garden- gate, wood, &c. and generally terminated by some distant object. All avenues that lead to a hoase ought to be at least as wide ►►s the whole front of the house ; if wider, they are better still ; and avenues to woods and prospects ought not to be less than sixty feet wide. The trees should not be planted nearer to one another than thirty-five feet, especially if they are of a spreading kind; and the same ought to be the distance, if they are for a regular grove. The trees most proper for avenues with us, are the English elm, the lime, the horse-chestnut,- the common chestnut, the beech, and the abele. The English elm will do in all grounds, except such as are very wet and shallow ; and this is pre- ferred to all other trees, because it will bear cut- ting, heading, or lopping, in any manner, better than many others. The rough or smooth Dutch elm is approved by some, because of its quick growth; this is a tree which will bear removing very well ; it is also green almost as soon as any plant whatever in spring, and continues so as long as any. It makes an incomparable hedge, and is preferable to all other trees for lofty espaliers. The lime is valued for its natural growth and fine shade. The horse-chestnut is proper for all places that are not much exposed to rough winds. The common chestnut will do very well in a good soil ; and rises to a considerable height when planted somewhat close; though, when it stands single, it is rather inclined to spread than to grow tall. The beech is .a beautiful tree, and naturally grows well with us in its wild state ; but it is less to be chosen for avenues, because it does not bear transplanting, and is very subject to miscarry. The abele is fit for any soil, and is the quickest grower of any forest- tree. It but seldom fails in transplanting ; and succeeds very well in wet soils, in which the others are apt to fail. The oak is little used for avenues, because of its slow growth. The old method of planting avenues was with regular rows of trees, and this has been the practice till of late : but we have now a much more magnifi- cent method, by setting the trees in clumps, making the opening much wider, and placing the clumps at about 300 feet distant from one another. In each of these clumps there should be planted either seven or nine trees ; but this is only proper where the avenue is to be of some considerable length; for in short walks single rows of trees look better. The avenues made by clumps are fittest of all for parks. The trees in each clump should be planted about thirty feet asunder; and a trench should be thrown up round the whole clump, to prevent the deer from coming to the trees to bark them.

AVENZOAR, or EBN-ZOAR, Abu Merwan Abdalmalec, an eminent Arabian physician, who flourished about the end of the eleventh and be- ginning of the twelfth century. He was of noble

descent, and born at Seville, where he exercised his profession with threat reputation. His grand- father and father were both physicians. The large estate he inherited, set him above prac- tising for gain : he therefore took no fees from the poor, or from artificers, though he refused not the presents of princes and great men. His liberality was extended even to his enemies; for which reason he used to say, that they hated him not for any fault of his, but rather out of envy. Dr. Friend writes, that he lived to the age of 135; that he began to practise at forty, others say twenty, and had the advantage of a longer experience than almost any one ever had, for he enjoyed perfect health to his last hour. Aven- zoar was contemporary with Averroes, who, ac- cording to Leo Africanus, heard the lectures of the former, and studied physic under him ; this seems the more probable, because Averroes more than once gives Avenzoar a very high and de- served encomium, calling him ‘ admirable, glo- rious, the treasure of all knowledge, and the most supitme in physic, from the time of Galen to his own.’ Avenzoar, notwithstanding, is by the generality of writers reckoned an empiric : but Dr. Friend observes, that this character suits him less than any of the Arabians. ‘ He was bred,’ says he, ‘ in a physical family, his father and grandfather being both practitioners. He had a regular education ; and not only learned what properly belongs to a physician, but every thing which relates to pharmacy or surgery.’ Dr. Friend adds, ‘ that he was averse to quackery, rejected the idle superstition of astrologers ; and throughout all his work professes himself so much of the dogmatical sect, that he has a great deal of reasoning about the causes and symptoms of distempers ; and as in his theory he chiefly follows Galon, so he quotes him upon all occa- sions. Notwithstanding he is so Galenical, there are several particulars in him which seldom or never occur in other authors ; and there are some cases which he relates from his own expe- rience, which are worth perusing.’ He wrote a book entitled Tayassir h’lmadawat w’altadbar, i. e. The method of preparing medicines and diet; which is much esteemed. This work was translated into Hebrew, A.I). 1280, and thence into Latin by Paravicius, whose version has had several editions. The author added a supple- ment to it, under the title of .lame, or a collec- tion. He also wrote a treatise Fi’ladwiyat wa’laughdiyat, i.e. Of Medicines and Food; wherein he treats of their qualities.

AVI.N/OA;;, or KUN-XOAII, the son of the f inner, followed his father’s profession; was in uvat favor with Al;nan/.ur, emperor of Mo- rocco, and wrote several treatises on physic. A\ KR’, } Fr. arcrer ; I. at. vereor, to AVER’MENT. $ fear with reverence. Com- pounded of vc pro i-dlidc, greatly, and rear, to think. To declare positively, solemnly.

The reason of the thins; is clear; Would Jove the nuked truth ircr.

Prior.

Then vainly the philosopher HI-ITS, That reason guides our deeds, and instinct theirs; How can we justly cliff 'rent causes frame, When the effects entirely arc the same? Id,

AVE

To avoid the oath, for averment of the continuance of some estate, which is eigne, the party will sue a pardon. Bacon.

We may aver, though the power of God be infinite, the capacities of matter are within limits. Benttey.

That which Bucer and his associates averred above a hundred years ago, we still say and maintain ; that which was the truth then, hath been so ever since, and shall he to all eternity. Bp. Hall's Peace-maker.

AVERA, in our ancient customs, a day's work of a ploughman, or other laborer, which the king's tenants in his demesne lands were obliged to pay the sheriff.

AVERAGE. Low Lat. averagium, to make or obtain a mean proportion by collecting the maxima and minima, or the highest and lowest prices.

AVERAGE, in commerce and navigation, is divided into three kinds. l.The simple average, which consists in the extraordinary expences in- curred for the ship alone, or for the merchan- dizes alone; such as the loss of anchors, masts, and rigging, occasioned by the common acci- dents at sea; the damages which happen to merchants by storm, prizes, shipwreck, wet, or rotting; all which must be paid and borne by the thing which suffered the damage. 2. The large and common average, being those expences incurred, and damages sustained, for the com- mon security of the merchandizes and vessels, consequently to be borne by the ship and cargo, and to be regulated upon the whole. Of this number, are the goods or money given for the ransom of the ship and cargo, things thrown overboard for the safety of the ship, the ex- pences of unloading, for entering into a river or harbour, and the provisions and hire of the sailors, when the ship is put under an embargo. 3. The small averages, which are the expences for towing and piloting the ship out of or into harbors, creeks, or rivers, one-third of which must be charged to the ship, and two-thirds to the cargo.

AVERAGE, in agriculture, a term used by the farmers in many parts of England, for the breaking of corn-fields.

AVERANI (Benedict), a native of Flowrce, who became Greek professor at

Pisa, and wrote several critical tracts on classical authors. He died in 1707. After his death, his works were collected and printed at Florence, in 3 vols. 8vo

1717.

AVERANI (Joseph), brother to Benedict, was born in 1662. He became professor of law at Pisa, but was particularly devoted to the study of mathematics and natural philosophy. He died in 1738. Two volumes of his orations in the academy at Florence, and some other tracts, were printed after his death.

AUERBACH, a town of Upper Saxony, in Voigtland, fourteen miles south of Zwickau, and sixty W. S. W. of Dresden. On a high rock, about four miles from this place, is found a species of topaz, called kings-crown, which is said to excel the Spanish and Bohemian in hard- ness, and to equal the oriental in brilliancy.

AVER-CORN, in ancient writings, such corn as by custom is brought by the tenant's car- riages to the lord's granary.

AVERNUS.

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AVERDUPOIS. See AVOIRDUPOIS.

AVERDY (Clement Charles de 1'), an emi- nent French statesman, was born at Paris in 1720. He was counsellor of parliament, mi- nistei and comptroller general of the finances under Louis XV. His reputation was so great, that his appointment gave general satisfaction to the people, but falling into some mismanage- ment, he requested his dismission in 1764. He afterwards retired to his estate, and occupied himself in agricultural pursuits. Though he took no part in the revolution, but kept perfectly neu- tral, yet he was arrested and brought to the guillotine in 1793. He wrote, 1. Suite des Ex- periences de Gambais sur le bleds noirs ou ca- ries, 8vo. 2. Memoire sur le Proces criminal de Robert d'Artois, Comte de Beaumont pair de France.

AVERIA, in our old law books, properly signify oxen or horses used for the plough ; but in a general sense any cattle. When mention is made of one beast, they say ' quidam equus, vel quidam bos ;' when of two or more they do not say equi or boves, but averia.

AVERIA, in commerce, a branch of the Spanish revenue, signifying a tax paid for convoys to guard the ships trading to America. It was first imposed

when Sir Francis Drake made his voyage to the South Sea.

AVERIIS CAPTIS IN WITHERNAM, a wiit for taking cattle when unlawfully distrained and driven out of the country, so that they cannot be replevied by the sheriff.

AVER-LAND, in our old writers, such lands as the tenants ploughed with their cattle, and manured cum averiis suis, for the use of a mo- nastery, or the lords of the soil.

AVERNAT, a sort of grape. See VINE.

AVERNI ; from the privative a, and opvic, a bird, as intimating that birds could not fly over them, but dropped down dead ; among the an- cient naturalists certain lakes and other places which infect the air with poisonous steams or vapors ; called also mephites. Averni are said to be common in Hungary, on account of its abundance of mines. The Grotto del Cani, in Italy, is a famous one. See AVERNUS.

AVERNO, the ancient Avernus, a lake of Lavoro in Naples, lying in a narrow valley, two miles long and one broad. It is 180 feet deep in some places, and the old walls standing upon its banks are supposed to be the ruins of a temple of Apollo. Vibus Sequester, and other an- cient authors represented it as bottomless. Mr. Chambers says the modern Italians call it Lago di Tripergola. See the next article.

A VERNUS, a lake of Campania in Italy, near Baiae, famous among the ancients for its poison- ous qualities. It is described by Strabo as lying within the Lucrine bay, deep and darksome, sur- rounded with steep banks that hang threatening over it, and only accessible by one narrow pas- sage. Black, aged groves stretched their boughs over the watery abyss, and with impenetrable foliage excluded almost every ray of wholesome light ; mephitic vapors ascending from the hot bowels of the earth, being denied free passage to the upper atmosphere, floated along the surface in poisonous mist; and killed even the birds that

attempted to fly over it. These circumstances produced horrors fit for the gloomy votaries of the infernal deities. A colony of Cimmerians, as well suited to the rites as the place itself, cut dwellings in the bosom of the surrounding hills, and officiated as priests of Tartarus. Supersti- tion, always delighted in dark ideas, early and eagerly seized upon this spot, and represented a cavern near it called the Sybil's cave, as the mouth of the infernal regions. Hither she led her trembling votaries to celebrate her dismal orgies; here she evoked the manes of departed heroes ??? here she offered sacrifices to the gods of hell, and attempted to dive into the

secrets of futurity. Poets enlarged upon the popular theme, and painted its awful scenery with the strongest colors of their art. Homer brings Ulysses to Avernus, as to the mouth of the in- fernal abodes , and, in imitation of the Grecian bard, Virgil conducts his hero to the same ground. Whoever sailed thither, first did sacri- fice, and endeavoured to propitiate the infernal powers, with the asistance of some priest, who attended upon the place, and directed the mystic performance. Within, a fountain of pure water broke out just over the sea, but which nobody tasted, as it was fancied to be a vein of the river Styx ; near this fountain was the oracle ; and the hot waters, frequent in these parts, were supposed to be branches of the burning Phlegethon. The holiness of these shades remained unimpeached for many years. Hannibal marched his army to offer incense at this altar; though it may be sus- pected he was led to this act of devotion rather by the hopes of surprising the garrison of Puteoli, than by his piety. After a long reign of un- disturbed gloom and celebrity, a sudden glare of light was let in upon Avernus ; the horrors were dispelled, and with them vanished the sanctity of the lake : the axe of Agrippa brought its forest to the ground, disturbed its sleepy waters with ships, and gave vent for all its malignant effluvia to escape. The virulence of these exhalations, as described by ancient authors, has appeared so very extraordinary, that modern writers, who know the place in a cleared state only, charge these accounts with exaggeration ; but Swinburn thinks them entitled to more credit ; for even now, he observes, the air is feverish and danger- ous, as the jaundiced faces of the vine-dressers, who have succeeded the Sybils and theCimmerians in the possession of the temple, most ruefully testify. Boccaccio relates, that during his resi- dence at the Neapolitan court, the surface of this lake was suddenly covered with dead fish, black, and singed, as if killed by some subaqueous eruption of fire. The changes of fortune in these lakes, is singular : in the splendid days of imperial Rome, the Lucrine was the chosen spot for the brilliant parties of pleasure of a volup tuous court : now, a slimy bed of rushes covers the scattered pools of this once beautiful sheet of water ; while the once dusky Avernus is clear and serene, offering a most alluring surface and charming scene for similar amusements Oppo- site to the temple is a cave usually styled the Sybil's grotto; but apparently mote likely to have been the mouth of communication between Cuma and Avernus, than the abode of a pro-

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phetess ; especially ;is the Sybil is positively said liy historians to have dwelt in a cavern under the Cumosan citadel. Mr. Kustace (Classical Tour) describes the Avernus as a circular sheet of water, about a mile and a half in circum- ference, and in many places nearly 190 feet deep ; surrounded

by ground low on the one side, on the other high, but not steep, in rich cultivation, and slightly wooded. On the southern bank stands a large and lofty octagonal building, vaulted, and of brick, with halls ad-

order, by touching properly the leaf intended to be put in motion. Hut if the impression even on a single leaf be strong, all the leaves on that pinna, and sometimes on the neighbouring ones, will be affected by it. Notwuustanding this apparent sensibility of the leaf, however, large incisions may be made in it with a pair of sharp scissars, without occasioning the smallest mo- tion ; nay, it may even be cut almost entirely off, and the remaining part still continue unmoved, when by touching the wounded leaf with the

joining. This probably was the temple of Pro- finger or point of the scissars, motion will take

serpine, or of Avernus itself. It is surrounded place as if no injury had been offered. The

by vineyards. On the northern bank, under a reason is, that although the leaf be the ostensible

steep, overhung with shrubs and brambles, is a part which moves, the petiolus is the seat both of

subterraneous gallery, still called the Grotto della sense and action : for although the leaf may be

Sibilla. The first gallery runs under the Monte cut in pieces, or squeezed with great force, pro-

Grillo, in the direction of Baiae. It opens into vided its direction be not changed without any

a second on the right, tending towards Cumae; after some distance, a piece of water crosses it, called the Sybil's bath. The ground then rises rapidly, and all farther progress is stopped by the fallen walls. The situation and appearance of the cavern agree very closely with the descrip- tion of Virgil. It branched out into

other galleries; and probably furnished him with much of the scenery in the sixth book. The Lago di Tripergola, as it is called at present, has .ost all claim to its former appellation, since in winter it abounds in water-fowl. There can be no doubt that the lake is the crater of an ex- hausted volcano.

AVKK-PK.NNY, q. d. AVERAGE PENNY, money contributed towards the king's averages ; or money given to be freed thereof. See AVE- RAGE.

AYI'.IUIOA, in botany, a genus of the decan-

dria order, belonging to the pentagynia class of plants ; ranking in the natural method under the fourth order, gruinales. The calyx has five leaves, the petals are five, opening at top ; and the apple or fruit is peutugonous, and divided into live cells. There are three species, viz. 1. A. acida ; "2. A. hlimbi ; and :}. A. carambola, (.□□□ailed in l>en<_ral the camrue or camrunga. This plant is remarkable for possessing a power some- what similar to those species of mimosa which are termed sensitive plants; its leaves on being touched moving vevv perceptibly. In the mi- mosa the moving faculty extends to the brandies; but from the hardness of the wood this cannot be expected in the carambola. The leaves are alternately pinnated \\ith an odd one ; and their most common position m the day- time is hori- zontal, or on the sain;' plane with the branch from \\mch they com.- out. On being touched they move themselves downwards, frequently in so nreat a dej.ive that the two opposite almost touch on..- another by t!..-ir under sides, and the yoiin^ ones sometimes either come into contact, or evi-n pass nich other ; the whole of the leaves of one pinna mov.' by striking the branch with the nail of the linger, or other hard substance; or each li at" can l>e moved sin'jlv, by making an impulsion that shall not leal. in this \av the leavt

motion being occasioned ; yet if the impression on the leaf be made in such a way as to affect the peliolus, the motion will take place. When, therefore, it is wanted to confine the motion of a single leaf, either touch it so as only to affect its own petiolus, or without meddling with the leaf, several touch the petiolus with any small pointed body, as a pin or knife. By compiessing the universal petiolus near the place where a partial one comes out, the leaf moves in a few seconds in the same manner as if the partial petiolus had been touched. Whether the impression be made by puncture, percussion, or compression, the motion does not instantly follow ; generally several seconds intervene, and then it is not with a jerk, but regular and gradual. Afterwards when the leaves return to their former situation, which i"□□ commonly in a quarter of an hour or less, it is in so slow a manner as to be almost imperceptible. On sticking a pin into the universal petiolus, as its origin, the leaf next it, which is always on the opposite side, next the second leaf on the outer, and so on. But this regular progression seldom continues throughout ; for the leaves on trie outer side of the pinna seem to be affected both more quickly, and with more energy, than those of the inner ; so that the fourth leaf on the outer side frequently moves as soon as the third on the inner, and sometimes a leaf, especially on the inner side, does not move at all, whilst those above and below it are affected in their proper time. Sometimes the leaves at the extremity of the petiolus move sooner than several others, , which were nearer the place where the pin was put in. On making a compression with a pair of pincers on the universal

petiolus, between any two pair of leaves, those above the com- pressed part, or nearer the extremity of the peti- olus, move sooner than those under it, or nearer the origin ; and frequently the motion will ex- tend upwards to the extreme leaf, whilst below it perhaps does not go farther than the nearest pair. If the leaves happen to be blown by the wind against one another, or against the branches, they are frequently put in motion ; but when a branch is moved gently, either by the hand or eyond that the wind, without striking against any thing, no one side of the motion of the leaves take place. When left to

pinna may be made to move one after another, themselves in the day-time, shaded from the sun, whilst the opposite ones continue as they were ; wind, rain, or any disturbing cause, the appear- or they may b, made to move alternately in any ance of the leaves is different from that of other

AVE 2

pinnated plants. In the latter a great uniformity subsists in the respective position of the leaves on the pinna ; but in the carambola, some will be seen on the horizontal plane, some raised above it, and others fallen under it ; and in an hour or so, without any order or regularity which can be observed, all of them will have changed their respective positions. Cutting the bark of the branch down to the wood, and even sepa- rating it about the space of half an inch all around, so as to stop all communication by the vessels of the bark, does not for the first day affect the leaves, either in their position or their aptitude for motion. In a branch, which was cut through in such a manner as to leave it sus- pended only by a little of the bark no thicker than a thread, the leaves next day did not rise so high as the others ; but they were green, and fresh, and, on being touched, moved, but in a much less degree than formerly. After sun-set the leaves go to sleep, first moving down so as to touch one another by their under sides ; they therefore perform more extensive motion at night of themselves than they can be made to do in the day-time by external impressions. With a convex lens the rays of the sun may be collected on a leaf, so as to burn a hole in it, without oc- casioning any motion. But upon trying the ex- periment on the petiolus, the motion is as quick as if from strong percussion, although the rays be not so much concentrated as to cause pain when applied in the same degree on the back of the hand. The leaves move very fast from the electrical shock, even although very gentle.

AVERRHOISTS. See AVERROISTS.

AVERROES, one of the most subtle of the Arabian philosophers, flourished about the end of the eleventh and beginning of the twelfth centuries. He was the son of the high-priest and chief judge of Cordova in Spain ; and

edu- cated in the university of Morocco, in which he was afterwards a professor ; and studied natural philosophy, medicine, mathematics, law, and di- vinity. After the death of his father he enjoyed his posts ; and was farther promoted by Alman- zor, emperor of Morocco, to be judge of Mo- rocco and Mauritania, with leave to appoint de- legates, and remain at Cordova. But notwith- standing his great emoluments, his liberality to men of letters in necessity, whether they were his friends or his enemies, made him always in debt. He was afterwards stripped of all his post* and thrown into prison for heresy ; but the judge who succeeded him, being convicted of oppression, he was restored to his former em- ployments. He died at Morocco in 1206. Aver- roes was excessively corpulent, though he eat but once a-day. lie spent his nights in the study of philosophy ; and when fatigued, amused himself with poetry or history. But was never seen to play at any game, or to partake in any diversion. He was extremely fond of Aristotle's works, and wrote commentaries on them, whence he was styled the commentator, by way of eminence. He likewise wrote Colliget, i. e. Universal ; or, The Whole Art of Physic ; and many amorous veises; but these he burnt when he grew old. His other poems are lost. As to religion, his opinions, were, that Christianity is absurd ; Ju-

daism, the religion of children ; and Mahommed- anism, the religion of swine.

AVERROISTS, a sect of peripatetic philoso- phers, who appeared in Italy some time before the restoration of learning, and attacked the im- mortality of the soul. They took their denomi- nation from Averroes, the celebrated interpreter of Aristotle, above mentioned. Although they held the soul to be mortal, according to reason or philosophy, yet they submitted to the Christ- ian theology, which declares it immortal. But their distinction was held suspicious ; and this divorce of faith from reason was condemned by the last council of Lateran, under Leo X.

AVERRUN'CATE,) Lat. averrunco, I turn AVERRUNCA'TION.] or take away whatever hurts. To weed, to avert an evil, to cut off what is superfluous.

I wish myself a pseudo-prophet, But sure some mischief will come of it, Unless by providential wit, Or force, we averruncate it. Butler's Hudibras. AVERRUNCI DEI; from averrunco, to avert; gods, whose business it was, according to the Pagan theology, to avert misfortunes. Apollo and Hercules were of the number, among the Greeks ; Castor and Pollux among the Romans, and Isis among the Egyptians.

AVERSA, a town of Naples, in the Terra di Lavoro, anciently called Atella. It is situated in a fine plain, covered with vineyards and orange trees, and is the seat of a bishop (who holds immediately of the pope), of a royal go- vernor and a judge. There are here sixteen cloisters of different orders, exclusive of nine parish churches. Population 13,800. Eight miles north of Naples. Long. 14►► 1′ E., lat. 41►► N.

AVERSION,, according to lord Kames, is op- posed to affection, and not to desire, as it com- monly is. We have an affection to one person ; we have an aversion to another ; the former dis- poses us to do good to its object, the latter to do ill.

AVERSIONS LOCARE, AVERSIONE VENIRE, in the civil law, the selling, or letting things in the lump, without fixing particular prices for each piece. AVERT', -)

AVER'TER, A, and verto, version,- to

AVER'SE, | turn away or from. Averse AVERSE'LY, 1 expresses the state of having AVERSE'NESS, ˆthe mind turned from a thing.

AVERSA'TION,

AVER'SION,

AVER'SIVE.

It signifies also loath, reluctant.

unwilling,

It is most true, that a natural and secret hatred, and avertation towards society in any man, hath some- what of the savage beast ; but it is most untrue, that it should have any character at all of the Divine Na- ture, except it proceed not out of a pleasure in soli- tude, but out of a love and desire to sequester a man's self for a higher conversation.

Lord Bacon's Essays.

When people began to espy the falsehood of oracles, whereupon all gentility was built j their hearts were utterly averted from it. Hooker.

Even cut themselves off from the opportunities of proselyting others, by averting them from their com- pany. Government of the Tomjite.

AVI;

Thero is such a general aversation (in human na- ture) to contempt, that there is scarce any thing more exasperating: I will not deny, but the excess of the alienation may be levelled against pride. Id.

I beseech you,

T" avert your liking a more worthy way, Than on a wretch. Sliakspeare. King Lear.

At this, for the last time, she lifts her hand ; Averts her eyes, and half unwilling drops the brand.

Dry den.

Averters and purgers must go together, as tending all to the same purpose, to divert this rebellious hu- mour and turn it another way.

Burton's A natomy of Melancholy. Has thy uncertain bosom ever strove, With the first tumults of a real love ? Hast thou now dreaded, and now bless'd his sway, By turns averse and joyful to obey ? Prior.

Averse alike, to flatter or offend ; Not free from faults, nor yet too vain to mend.

Pope.

The corruption of man is in nothing more mani- fest, than in his aveneness to entertain any friendship or familiarity with God. Atterbury.

Hatred is the passion of defiance ; and there is a kind of aversation and hostility included in its essence.

South.

The jealous man's disease is of so malignant a na- ture that it converts all it takes into its own nourish- ment. A cool behaviour is interpreted as an instance of aversion : a fond one raises his suspicions.

Addison.

AVERTI, in horsemanship, is applied to a

regular step or motion unjoined in the lessons. In this sense they say pas

avertc.

A VERY, a place where oats, or provender, are kept for the kind's horses.

AVES, hirds, the name of Linnaeus's second class of animals. See ORNITHOLOGY and ZOO- LOGY.

AVES, or the IST.F or I? inns, 1. One of the Carrib' oiands, lot miles south of Porto Rico, with a good harbour for careening ships. It is so called from the urreat niunher of birds that fre quent it; '2. another lyiirj; northward of this. I. at. 1 .V 0′ X. ; and a third near the eastern coast of Newfoundland, l.at. 5uJ ,V .

A\ ESIU'RY (Robert;, an English historian, of whom little more is known, than that he was keeper of the registry of the court of Canterbury, in the reiˆn of Edward III. and consequently that he lived in the fourteenth century. He wrote Memorabilia gesta magnifici regis Ari<_clice doruini, i .dwardi tratii post eonquestum, procerumque ; tactis primitus qmlmsdam '.restis de tempore pa- tris sui domini Edwardi secundi, qua? in regnis Antjliae, Scotia', et Francia', ac in Aquitannia et Britannia, non humana sed Dei potentia, con- tigerunt, per Kobertum Avesbury. This history ends with the battle of I'oietiers, about A. D. 1356. It continued in MS. till 1720, when it was printed by the industrious Thomas Hearne at Oxford, from a MS. lielonuinˆ to Sir Thomas Seabri<_rht. It is now very scarce.

A\ KSK, or Av-r, a river of the United States of America, in the north-western territory, which runs min t!,e Mississippi, in a south-west direction, about sixty miles above the Ohio. It js navigable in boats for upwards of sixty miles.

A\ ESNES, or Avisxrs, an irregular, but well fortilie'i town on the IK" TC<;, in llainault,

on the frontier of France, towards the Nether- lands, and three leagues distant from Maubeuge. It is the head of an arrondissement, in the de- partment of the north ; population about 3000. In the neighbourhood there are excellent quar- ries, and several iron foundries and smelting- houses. This was one of the frontier towns re- tained for a definite period by the allies, in fulfil- ment of the treaty of Paris in 1815. Long. 4►► E. lat. 50►► 7′ N.

AVEYRON, or AVEIRON, a department of France, having its name from the river, which running from east to west, separates it into two parts. Its boundaries are to the north, the de- partment of the Cantal ; north-east, the Lozere ; east, the Gard ; south-east, Herault; south-west, Tarn, and west, Lot. It corresponds to the an- cient province of Rouergue, and is divided

into five arrondissements ; viz. those of Rodez (which is the capital of the department), Ville Franche, Milhau, St. Afrique, and Espalion. It contains 474 square leagues, equal to about 3740 square miles, and had at the last enumeration 318,047 inhabitants. They paid in direct taxes in 1803, ––140,000 sterling. It constitutes, with the de- partment of Lot, the spiritual jurisdiction of the bishop of Cahors. This depaitment is wa- tered by the Aveyron, the Lot, the Tarn, and the Viaur, and is covered with high and craggy mountains. Hence it abounds in game, fish, and wood, and is more adapted for grazing than for the cultivation of grain. Corn and wine, how- ever, are raised in tolerable quantity. The mi- neral productions are copper, iron, lead, sul- phur, alum, coal, and vitriol. There is also a considerable trade in cattle, wool, woollen stuffs, and in excellent cheese. The climate is reckoned fine, though occasionally severe in winter.

AVEZZANO, a town of Naples in Abruzzo. It is built on an almost imperceptible declivity, one mile from the lake of Celano, to which an avenue of poplars leads from the baronnial castle. This edifice stands at a little distance from the town, is square, and flanked with towers ; it was erected by Virginio Orsini, to which family this and many other great lordships be- longed, before they were wrested from them in times of civil war, and transferred to the Colon- nas. Avezzano was founded in 860, and contains 2800 inhab:tants, and two religious communities within its walls, which are indeed in a ruinous condition. The houses are in general mean; but there are some large buildings and opulent fa- milies of the class of gentlemen, not possessed of fees held in capite.

AUF'. Sometimes written oaf and elf. For definition, see ELF.

These when a child haps to be got, Which after proves an idiot, When folk perceive it thriveth not ;

The fault therein to smother. Some silly dealing brainless calf, That understands things by the half, Says, that the fairy left this aulf,

And took away the other. Drayton.

AUGA, ACGE, or AGEA, in fabulous history, the daughter of Aleus, king of Tegea, by Neaera, she was ravished by Hercules, and brought forth a son, whom she left in the woods to conceal he-

omors from her father; but the child was pre- served, and was named Telephus. When Aleus was informed of his daughter's shame, he de- livered her to Nauplius to be put to death ; but instead of executing the father's cruel purpose, Nauplius gaveAuga toTeuthras, king of Mysia, who, having no children of his own, adopted her as his daughter. The dominions of Teuthras be- ing soon after invaded by an enemy, he promised his crown and daughter to the man who could de- liver him from the threatening danger ; and Tele- phus having been directed by the oracle to go to the court of Teuthras, if he desired to find his parents, made an offer of his services, which was accepted. Having obtained a victory, he was about to unite himself to Auga, when she rushed from him with secret horror, and the gods sent a serpent to separate them. Auga implored the assistance of Hercules, by whom her son was made known to her, and she returned with him toTegea. According to Pausanias, Auga was shut up in a coffer with her infant son, and thrown into the sea, where they were preserved and protected by Minerva, till found by king Teuthras.

AUGEAN CODEX, Codex Augiensis, a Greek and Latin MS. of St. Paul's Epistles ; supposed by Michaelis to have been written in the ninth century, and so called from Augia major, the name of a monastery at Rheinau, to which it be- longed. It came, in 1718, into the hands of the celebrated Dr. Bentley, who purchased it for 250 Dutch florins ; it is now in the library of Trinity College, Cambridge. This MS. (noted F. in the second part of Wetstein's New Testament), is written in uncial letters, and without accents, not continua serie, as is common with the more ancient copies, but with intervals between the words, and a dot at the end of each. The Greek text is in capitals, and the Latin in Anglo-Saxon letters ; whence it is tolerably clear that it must have been written in the west of Europe, where that formation of the Latin letter was in general use between the seventh and twelfth centuries. The MS. is defective from the beginning to Ro- mai s, iii. 8 ; and the epistle to the Hebrews is onlj found in the Latin version.

A UGEAS, in fabulous history, king of Elis, famed for his stable, which contained 3000 oxen, and had not been cleaned for thirty years. Her- cules was desired to clear away the filth in one day ; and Augeas promised, if he performed it, to give him a tenth part of the cattle. This task Hercules is said to have executed, by turning the course of the river Alpheus, or, as some say, the Peneus, through the stable, which immedi- ately carried away the dung and filth. Augeas not only refused to stand by his engagement, pre- tending that Hercules had used artifice, and ex- perienced no labor or trouble, but banished his own son Phyleus from his kingdom, for support- ing the claims of the hero. Upon this a war commenced, and Hercules conquered Elis, put Augeas to death, and gave his kingdom to Phy- leus. Augeas has been called the son of Sol, be- cause Elis signifies the sun. After his death, the honors usually paid to heroes, were paid to

Augeas.

AUGER. Tentonick Anesher ; Ang.-Sax.

VOI. II!.

Aeg. From the same root we Lave edge, a tool used in the mechanic arts.

AUGER (Athanasius), a learned classic, and professor of rhetoric at Rouen, and vicar-general of Lescar, published a splendid edition of the works of Isocrates, from the press of Didot, Paris, 3 vols. 4to. 1 782 ; and the works of Lysias in 1783, in 2 vols. 4to. afterwards reprinted together in 5 vols. 8\o. He died at Paris in 1792.

AUGEliEAU, (Pierre Francois Charles), duke of Castiglione, marshal of France ; son of a fruit merchant; born at Paris, 1757; served as a carabinitr in the French army ; went from thence into the Neapolitan service, established himself at Naples, in 1787, as a fencing-master, and was banished thence, in 1792, with the rest of his countrymen. He served, afterwards, as a volunteer in the army of Italy, in which his talents and courage soon gained him promotion. He distinguished himself, in 1794, as general of brigade in the army of the Pyrenees, and, in

1796, as general of division in the army of Italy. He took the pass of Millesimo ; made himself master, April 16, of the intrenched camp of the Piedmontese at Ceva, afterwards of that at Casale; threw himself on the bridge of Lodi, and carried it with the enemy's intrenchments. June 16, he passed the Po, and made prisoners the papal troops, together with the cardinal legate and the general's staff. Aug. 1, he came to the assist- ance of Massena; maintained, during a whole day, a most obstinate struggle against a superior number of troops, and took the village of Cas- tiglione, from which he derived his ducal title. Aug. 25, he passed over the Adige, and drove back the enemy as far as Roveredo. In the battle of Arcole, when the French columns wa- vered, Augereau seized a standard, rushed upon the enemy, and gained the victory. The di rectory bestowed this standard on him Jan. 27,

1797. Aug. 9, he was named commander of the 17th military division (division of Paris), in place of general Hatry. He was the instrument of the violent proceedings of the 18th of Fruc- tidor, and was saluted, by the decimated legis- lative body, as the saviour of his country. In 1799, he was chosen member of the council of five hundred, and, therefore, resigned his com- mand. He then obtained from the consul, Buon- aparte, the command of the army in Holland. He led the French and Batavian army on the Lower Rhine to the support of Moreau, passed the river at Frankfort, and

fought with the im- perial general, with various success, until the battle of Hohenlinden ended the campaign. In October of 1801, being superseded by general Victor, he remained without employment till 1803, when he was appointed to lead the army, collected at Bayonne, against Portugal. When this enterprise failed, he went back to Paris, and, May 19, 1804, was named marshal of the em- pire, and grand officer of the legion of honor. In July of this year, the king of Spain sent him the order of Charles III. At the end of 1805, he was at the head of a corps of the great army in Germany, formed of troops collected under his command at Brest. He contributed to the suc- cesses which gave birth to the peace of Presburg, and, in March, 1806, had possession of Wetzlar

and the country around, until, in the autumn of this year, a new war called him to Prussia. The wounds which he received in the battle of Eylau corr'pelled him to retu-rn to France. Early in 1811, Napoleon gave him the command of a corp.s in the army of Spain. Afterwards he re- turned from thence, and remained without any employment until July, 1813, when he led the army in Bavaria against Saxony, where he took part in the battle of Leipsic. At the entrance of the allies into France, his duty was to cover Lyons. Louis XVIII named him a peer. After the fall of Napoleon, Augereau used reproachful language respecting him in a proclamation to his army. Napoleon, therefore, on his landing in

1815, declared him a traitor. Augereau, however, expressed himself in his favour, but took no active part in the new order of things. After the return of the king, he took his place again in the chamber of peers, sat among Ney's judges, was for a while unoccupied, and died, June 11,

1816, at his estate La Houssaye, of the dropsy. AUGES, in astronomy, two points in a pla- net's orbit, otherwise called apsides, the one denominated the apogee, the other perigee. See APSIS.

AUGETTE, in fortification, the wooden pipe which contains the powder by which a mine is fired.

AUGHT. Ang.-Sax. hwit, a whit or owhit. See WAIT.

AUGILA, a district and town of Africa, be- tween Siwah and Fezzan. it is included under the dominion of Tripoli, though the subjection is but nominal. This city is of trreat antiquity, being known in the time of

Herodotus. It is about a mile in circumference, but dirty and ill-built; the apartments are dark, there being no aperture for light, except the door. The buildings are also very mean. Dates of excellent quality are pro- duced abundantly. The inhabitants are em- ployed partly in agriculture, but still more in following the caravans which pass through this territory. Long. 22►► 2.5′ E., lat. 29►► 35′ N.

AUGITES, among ancient naturalists, a kind of gem, of a pale grern color, inferior in value to the topaz. This mineral is crystallised in small six or eight-sided prisms, with dihedral summits. Its colors are green, brown, and black. Inter- nal lustre shining Uneven fracture. Translu- cent. Easily broken. It scratches glass. Specific gravity 3-3. Melts into a black enamel. Its composition, according to Klaproth, is forty- eight silica, twenty-four lime, twelve oxide of iron, 8‘7,”) magnesia, five alumina, and one Sian- gan es-e.

A L (i M EN T, v. & n .^\ Lat. uugmentum, from

Ai.‘i.Mi.N TA’TION, tuugcre, to increase. To

An.Mr.N’i ATIVE, i put a smaller quantity

Ai CMT.N’I i ii. J to a greater, toenlarge,

to make greater, and so to strengthen.

AUGMENTJ..D, a musical term, used in contra- distinction to perfect, major, minor, and dimi- nished : thus, an augmented note forms an in- terval of three chromatic degrees ; as C, d-sharp; E, flat, f-sharp ; F, g-sharp. See INTERVALS. Augmented intervals become, by inversion, di- minished.

AUGMENTATION OF LIVINGS. The shamefully

poor livings of many of the inferior clergy of the church of England, attracted the attention of the legislature so long ago as the reign of queen Anne. The governors of the bounty of queen Anne, for the augmentation of the maintenance of the poor clergy, by virtue of several acts of parliament made for that purpose, are empower- ed to augment all livings not exceeding ►►50 per annum; and the number of livings following were certified to be capable of augmentation :

May be No. of aug-

augmentcd. mentations.

6 times 6426

4 5868

No. of Rate per

livings. annum.

1071 Under ––10 1467 From ––10 to 20

1126 20 to 30

1049 30 to 40

884 40 to 50

3

twice

once

3378

2098

884

5597 Total of augmentations to be~

made by the bounty beforef 1Rfi_. these 5597 livings will ex- 1 ‘ ceed ––50 a-year. s

Mr. Chalmers observes, that computing the clear amount of the bounty to make fifty-five aug- mentations yearly, it will be 339 years, from 1714 (which was the first year in which any liv- ings were augmented), before all the small liv- ings above certified can exceed ––50 per annum; and even if one-half of such augmentations should be made, in conjunction with other bene- factors (which is not probable) it will still re- quire 226 years before all the above livings will exceed ––50 per annum 1 This is the more dis- graceful, considering the immense incomes en- joyed by the superior clergy.

AUGMENTATION, in heraldry, i particular mark of honor, borne either on an escutcheon, or a canton, as argent, a hand, gules, borne by every baronet not being of higher dignity, as in the an- nexed example.

AUGSBURG, the second place in the king- dom of Bavaria, both in population and cele- brity, was formerly one of the free and imperial cities of Germany. It is situated at the con- fluence of the Wertach and the Lech. Though less nourishing than in former times, it contains a population of about 30,000 individuals, and is well fortified, in the ancient style, having four principal gates and six smaller ones. Augsburg partakes largely in the manufactures and com- merce of the country, and has long been dis- tinguished for its engravings', and its consider- able bookselling trade, especially in Catholic literature. By means of its agents and bankers, Augsburg is the general medium of exchange with other countries, as well as a central depot for the Neckar, Tyrolese, Greek and Italian wines. This city is venerable from its antiquity, and interesting from its connexion, both with the civil and ecclesiastical history of Germany. In the diet of the empire, Augsburg was originally called ˆVindelicia, as being the capital of the Vindelicia. When it subsequently fell under the dominion of the Romans, and a colony was set- tled there by Drusus, it was called Aagusta-Vindelicorum and Rhastorum. It is mentioned

by Tacitus (Germ, xli.) as a very splendid city three members with respect to the t'iree Luceres, of the province of Rhaetia. From the Romans Rhamnenses, and Tatienses ; afterwards the it passed to the Alemanni, and subsequently to number was increased to nine, of whom four were the Goths and the Franks. Under these its im patricians and five plebeians. They bore an au- portance declined. It was subsequently in a gural staff, as the ensign of their authority; and precarious condition, but revived after Rodolph their dignity was so much respected, that they \as elected ernperor; several of its former pri- were never deposed, nor any substituted in their vileges being confirmed by him, and new ones place, though they should have been convicted granted. Augsburg is forty miles north-west of of the most enormous crimes. Munich. Long. 10►► 53′ E., lat. 48►► 17′ N. from AUGURALE, a place in a camp where the Greenwich. general took auspicia. This answered to the

AUGSBURG, a secularised bishopric of Ger- Auguratorium in the city. Augurale is also used many, now forming part of the kingdom of Ba- in Seneca for the ensign or badge of an augur, varia. It took its name from the imperial city as the lituus.

of Augsburg, and was founded so early as the AUGURATORIUM, or

AUGURACULUM, a sixth century. The territory of which it was building on the Palatine mount, where public composed contained 1012 square miles, and lay auguries were taken.

partly along the banks of the Lech, in the direc- AUGURELLO (John Aurelio), an Italian tion of the Tyrol, in the margraviate of Beocgau, poet, born at Rimini, in 1441. He was profes- and partly beyond the Danube, in the principal- sor of the belles letters at Treviso, at which place ity of Neuburg. The population was computed he died in 1524. He wrote several pieces, but at 86,000, and the total revenue at 500,000 dol- his chief work was a Latin poem, entitled Chry- lars. The only towns of note are Dillingen and sopceia, or the art of making gold. He dedicated Fussen, with eleven market towns and a number his poem to Leo X. upon which the pontiff pre- of villages, mostly situated in the northern part sented him with a large empty purse, and said, of the bishopric, which is by far the most fruit- ‘ that as he could make gold he best knew how ful and populous. The chapter was composed to fill it.’ ‘

of forty prebendaries’, each of whom had a salary AUGURY, is more fully defined the art of fore- of from 1000 to 1700 florins. The bishopric telling future events, by observations taken from came into the possession of Bavaria in 1802. the chattering, singing, feeding, and flight, of

AUGSBURG, or AUGUSTAN CONFESSION, a birds. It is also used in a more general signifi- celebrated confession of faith drawn up by Lu- cation, as comprising all the different kinds of ther and Melancthon, on behalf of themselves divination. To make his observations, the augur and other ancient reformers, and presented, in commonly seated himself on a high tower, with 1550, to the emperor Charles V. at the diet of his face towards the east, the north on his left Augusta or Augsburg, in the name of the evan- hand, and the south on his right. He divided gelic body. This confession contains twenty- the face of the heavens into four parts, with a eight chapters ; of which the greatest part is crooked staff, after which he sacrificed to the employed in representing, with perspicuity and gods, while he covered his head with his vest- truth, the religious opinions of the Protestants, ment. The augurs drew omens from five different and the rest in pointing out the errors and abuses things: 1. The phenomena of the heavens, as that occasioned their separation from the church thunder, lightning, comets, &c. 2. The chirping of Rome. A civil war followed, that lasted up- of birds, as already mentioned : 3. The eager- wards of twenty years, but which only spread the ness or indifference of the sacred chickens in

new opinions, as they were then called, instead of extirpating them.
AU’GUR, v. &

AU'GURATE,

AUGURA'TION,

A'UGURER,

AUGU'RIAL,

AU'GUROUS,

AU'GURY.

eating the bread which was thrown to them, they interpreted lucky or unlucky : 4. Quadrupeds

Augurium quasi avige- crossing or appearing in some unfrequented rium, to see ; quo mode place : 5. From different casualties, which were aves se gererent in volan- called dia, such as spilling salt on a table, or birds wine upon clothes, hearing strange noises, stum- bling or sneezing, meeting a wolf, hare, fox, or pregnant bitch. The sight of birds on the left hand was always considered as a lucky object, and the words sinister laevus, though commonly

) > do, what direction take in flying, Vossius. Auguries were also taken

J from their singing and

feeding. Hence it signifies to notice the move-

ments of bird—, and thereby to predict, to foretel imagined to be terms of ill luck, were uniformly future events. We now apply the words gene- used by the augurs in an auspicious sense.

rally to predictions of the future by means of any signs or tokens.

Thy face and thy behaviour. Which, if my augwry deceive me not, Witness good breeding. Shakspearf.

Calchas, the sacred seer, who had in view Tilings present and the past, and things to come, foreknew :

Augury was a very ancient superstition. We know from Hesiod, that husbandry was in part regulated by the coming or going of birds ; and most probably it had been in use long before Ins time, as astronomy was then in its infancy. In process of time, these animals seemed to have gained a greater and very wonderful authority, till at last no affair of consequence, either of pri- vate or public concern, was undertaken without

Supreme of augurs. Drydens Fablet.

AUGUR, in Roman antiquity, an officer ap- consulting them. They were looked upon as the

pointed to foretel future events, by the chattering, interpreters of the gods ; and those who were

flight, and feeding of birds. There was a college qualified to understand their oracles were held

or community of them, consisting originally of among the chief men in the Greek and Roman

States, and became the assessors of kings, and even of Jupiter himself. However absurd such an institution as a college of augurs may appear in our eyes, yet, like all other extravagant insti- tutions, it had in part its origin from nature. When men considered the wonderful migration of birds, how they disappeared at once, and ap- peared again at stated times, and could give no guess where they went, it was not unnatural to suppose, that they retired somewhere out of the sphere of this earth, and perhaps approached the ethereal regions, where they might converse with the gods, and thence be enabled to predict events ; at least it was not unnatural for a superstitious people to believe this as soon as some impostor was impudent enough to assert it. Add to this, that the disposition in some birds to imitate the human voice, must contiibute much to the con- firmation of such a doctrine. This institution of augury seems to have been much more ancient than that of aruspicy ; for we find many instances of the former in Homer, but not a single one of the latter, though frequent mention is made of sacrifices in that author. Thus it is probable that natural augury gave rise to religious augury, and this to aruspicy, as the mind of man makes a a very easy transition from a little truth to a great deal of error. A passage in Aristophanes gave the hint for these observations. In the comedy nf the birds, he makes one of them say, ‘ The greatest blessings which can happen to you, mortals, are derived from us; first, we show you the seasons, viz. spring, winter, autumn. The crane points out the time for sowing, when she flies with her warning notes into Kgypt ; she bids the sailor hang up his rudder and take his rest, and every prudent man provide himself with winter garments. Next the kite appearing, pro- claims another season, vi/. when it is time to shear his sheep. After that the swallow informs yon v\hen it is time to put on your summer elothe—,. \Ve are to you (adds the

chorus) Am- nicii, Dodona, Apollo : for, after consulting us, you undertake every tiling; merchandise, pur- chases. man-rage-;, Jvc.' Now, it seems not im- probable, that the same transition was made in t[image] speculations of men, which appears in the poct'> words ; and that they were easily induced to think, that the surprising foresight of birds, as to the time of migration, indicated something of a divine nature in them.

Al'XiUST. L;it Jumistus. Said to be so called from the thing signified being consecrated by auutiry, and on that account was sacred and venerable.

Ai(,t si, Augustus, Lat. The name of the eighth month from January, inclusive. August was dedicated to the honor of Augustus Caesar, because in the same month he was created con- sul ; thrice triumphed in Koine; subdued Egypt to the Roman empire ; and made an end of civil wars ; lieintr before called Sextilis, or the sixth from March. August was, by our Saxon ances- tors (who, like the modern French, eavp their months significant name-0, called weod-menath, i. e. weed-month, on account of the great plenty of weeds at that s ason. It answers to part of the t\so la.st months in the year in the new French calendar ; coim)U'l;-:>m!ing the seventeen last days

of Thermidor, and the fourteen first days of Fructidor.

AUGUSTA, a considerable and flourishing town of Georgia, and the present seat of govern- ment. It is pleasantly situated in Richmond county, on the south-west side of Savannah river, upon a beautiful plain, five miles in length, and one and a half in breadth. It is regularly laid out, the streets intersecting one another at right angles, and contains about 250 dwellings. The public buildings are, a church ; an academy ; a government-house, where the governor, secre- tary of state, and other public officers transact their business ; a market-house ; a new stone jail ; a spacious building, where the courts of justice are administered, and the legislature hold their sessions ; and three ware-houses, large enough to contain 10,000 hogsheads of tobacco. The academy is governed by a board of trustees, who are a body corporate in law. The funds of this institution amount to several thousand pounds sterling. Opposite the centre of the town, a large wooden bridge has been erected across the Savannah, which opens a commodious and easy communication with South Carolina; it is 19 feet wide, and between 700 and 800 in length. It is about 236 miles from the mouth of Sa- vannah river, including its meanders, 120 N. N. W. of Savannah, and 746 S. W. S. of Philadelphia. Population upwards of 4000. Lat. 33►► 19′ N., long. 80►► 46′ W.

AUGUSTA, a post town of Maine, on the river Kennebec, 56 miles N. N. E. of Portland, 168 N. E. of Boston. Population, in 1810, 1805; in 1820, 2457. It is a pleasant and flourishing town, and has, by an act of the state legislature, been constituted the seat of the state government after January 1, 1832. Here is an elegant bridge across the Kennebec, consisting of two arches, each 180 feet long. The river is navi- gable to Augusta for vessels of 100 tons.

AUGUSTA, a county of Virginia, lying partly east and partly west of the North Mount, a ridge of the Alleghany. It is fertile, and contains up- wards of 12,000 inhabitants, including slaves. It has a remarkable cascade, called Falling Spring.

AUGUSTA, in antiquity, a title given to the Roman empresses, and frequently to the mothers and daughters of the emperors, who had been empresses.

AUGUSTA, in ancient geography, the name of various ancient cities, mostly named after Au- gustus or his successors : such as,

1. AUGUSTA, a city and island in the Adriatic sea, called also Austa, on the coast of Dalmatia, near Ragusa, subject to Venice. Long. 17►► 50′ E., lat. 42►► 35′ N.

2. AUGUSTA ACILIA, a town in Bavaria, now called Azelburg.

3. AUGUSTA AUSCIORUM, a town of Aquita- nia, originally called Climberum, which name it afterwards resumed. In the middle age, how- ever, it took the name of the people, Ausci ; and is now called Auch.

4. AUGUSTA BRACCARUM, a city of Portugal, now called Braga.

5. AUGUSTA Dursi, a town in Suabia, now called Memmingen.

►►► 6. AUGUSTA EMERITA, u town of Lusitania,

on the Anas, capital of the province ; a colony of the Emeriti, now called Merida, in Spanish Estremadura.

7 and 8. AUGUSTA PRETORIA ; 1. a town and colony of Gallia Cisalpina, the capital of the Sa- lassi ; seated at the foot of the Alps Graiae, on the Duria ; now called Austa. 2. another in Tran- sylvania ; now called Cronstadt.

9. AUGUSTA RAURACORCM, a town of Gallia Belgica, six miles east from Basil ; now called Angst. From the ruins, which are still to be seen, it appears to have been a considerable colony.

10. AUGUSTA ROMANDUORUM, the ancient name of Luxemburg.

11. AUGUSTA SUESSONUM, a town of Gallia Belgica, on the Axona ;

with great probability supposed to be the Noviodunum Suessonum of Caesar ; now called Soissons.

12. AUGUSTA TAURINORUM, a town of the Taurini, at the foot of the Alps, where the Duria Minor falls into the Po ; now called Turin.

13. AUGUSTA TIBERII, a city of Bavaria; now called Ratisbon.

14. AUGUSTA TREBA, a town of the .ZEqui, near the springs of the river Anio in Italy ; now called Trevi, in Umbria.

i 15. AUGUSTA TREVIRORUM, a town of the Treviri ; now called Trieres or Treves.

16. AUGUSTA TRICASSIUM, the ancient name of Troceres.

17. AUGUSTA TRINOBANTUM, the name given by the Romans to London.

18. ABGUSTA VEROMANDUORUM, a town of ancient Gaul ; now St. Quintin.

AUGUSTA VINDELICORUM, a town of the Li- cates on the Licus ; styled by Tacitus a noble colony of Rhsetia ; now called Augsburg, in Suabia. See AUGSBURG.

AUGUSTA HISTORIA, in literature, the history of the Roman emperors, from Adrian to Carinus ; that is, from A. D. 157 to 285, composed by six Latin writers, viz. ./Elius Spartianus, Julius Ca- pitolinus, ./Elius Lampridius, Vulcatius Gallica- nus, Trebellius Pollio, and Flavius Vopiscus.

AUGUSTALIS PRˆFECTUS, a title peculiar to a Roman magistrate who governed Egypt, with a power much like that of a proconsul in other provinces.

AUGUSTAN, relating to Augustus, or Au- gusta.

AUGUSTAN CONFESSION. See AUGSBURG.

AUGUSTICUM, in writers of the middle age, a largess of an emperor to the people or soldiery.

AUGUSTEUM MARMOR, in the natural his- tory of the ancients, a name given to the common green and white marble, so frequent in use with us for tables, &c. and called by our artificers Egyptian marble.

AUGUSTIA, an ancient town in Wallachia, now called Kusty.

AUGUSTIN (St.), the capital town of the province of East Florida, North America, is si- tuated on the Atlantic, on a peninsula, consisting of a narrow strip of land. It is of an oblong figure, intersected by four streets, which cut each other at right angles. It is reckoned a healthy place, and is well supplied with fresh water. It

has a good port, although the breakers, at its entrance, have formed two channels, whose bars have only eight feet of water each. It has a strong castle for its defence ; a good parish church, and two hospitals, one for the garrison of troops, and another for the community. It was burned by Sir Francis Drake, in 1586, and by captain Davis, with the Buccaniers, in 1685; but was immediately after rebuilt. In 1702 it was be- sieged by the English, who, not being able to take the castle, burned and destroyed the town. In 1714 it was again unsuccessfully attacked by the English under general Oglethorpe. Long. 81►► 40′ W., lat. 29►► 58′ N.

AUGUSTINE, a cape of South America, in Brasil, on the Atlantic, 300 miles north-east of All-Saints' Bay. Long. 35►► 4′ W., lat. 8►► 30′ S.

AUGUSTINE, or AUSTIN (St.), the first archbi- shop of Canterbury, was originally a monk in the convent of St. Andrew at Rome, and educated under St. Gregory, afterwards Pope Gregory I. by whom he was despatched into Britain, with forty other monks, about A. D. 596, to convert the English to Christianity. He landed in the isle of Thanet, and having sent some French in- terpreters to king Ethelbert, with an account of the errand on which he came, the king gave him leave to convert as many of his subjects as he could, and assigned his place of residence at Do- roverum, since called Canterbury ; here the king himself was converted ; whose example had a powerful influence in promoting that of his sub- jects. Austin now despatched a priest and a monk to Rome, to acquaint the pope with the success of his mission, and to desire his resolu- tion of certain questions. These men brought back with them a pall 'and several books, vest- ments, utensils, and ornaments for the churches ; with directions to Augustine concerning the set- tling of episcopal sees in Britain ; ordering him not to pull down the idol temples, but to convert them into Christian churches ; only destroying the idols, and sprinkling the place with holy water, that the natives, by frequenting the tem- ples they had been always accustomed to, might be the less shocked at their entrance into Chris- tianity. Augustine resided principally at Can- terbury, which thus became the metropolitan church of England ; and having established bishops in several of the cities, he died A. D. 607. The popish writers ascribe several miracles to him. The observation of his festival was first enjoined in a synod held under Cuthbert, arch- bishop of Canterbury, and afterwards by the pope's bull in the reign of Edward III.

AUGUSTINE (St.), a famous father of the church, was horn at Thagaste, in Numidia, A. D. 354. His father, a burgess of that city, was called Patricius ; and his mother, Monica, who being a woman of great virtue, instructed him in the principles of Christianity. In his early youth he was in the rank of the catechumens ; and falling dangerously ill, earnestly desired to be baptized, but the violence of the distemper ceasing, his baptism was delayed. His father, who was not yet baptised, made him study at Thagaste, Ma- daura, and afterwards at Carthage. Augustine having read Cicero's books of philosophy, applied himself to the study of the scriptures ; but suf-

fered himself to be seduced by the Manicheans. At the age of nineteen he returned to Thagaste, taught grammar, and frequented the bar: he afterwards taught rhetoric at Carthage with ap- plause. The insolence of the scholars at Car- thage made him take a resolution to go to Rome, though against his mother's will. Here also he had many scholars ; yet he quitted Rome, settled at Milan, and was chosen professor of rhetoric in that city. Here he had opportunities of hearing the sermons of St. Ambrose, which, to- gether with the study of St. Paul's epistles, and the conversion of two of his friends, determined him to retract his errors, and quit the sect of the Manicheans : this was in the thirty-second year of his age. In the year 386 he retired to the house of a friend of his, named Verecundus, where he seriously applied himself to the study of the Christian religion, to prepare himself for baptism, which he received at Easter, in 387. He went to Africa about the end of 388 ; and having obtained a garden-plot without the walls of the city of Hippo, he associated himself with eleven other persons of eminent sanctity, who distinguished themselves by wearing leathern girdles, and lived there in a monastic way for three years, exercising themselves in fasting, prayer, study, and meditation, day and night ; from hence sprung up the Augustine friars, or eremites, of St. Augustine, the first order of men- dicants. About this time, or before it, Valerius, bishop of Hippo, against his will, ordained him priest : nevertheless, he continued to reside in his little monastery, with his brethren, who, renoun- cing all property, possessed their goods in com- mon. Valerius, who had appointed St. Augus- tine to preach in his palace, allowed him to do it in his presence, contrary to the custom of the churches in Afiica. lie explained the creed, in a general council of Africa, held in 393. Two years after, Valerius, fearing he might be prefer- red to be bishop of another church, appointed him his colleague, and caused him to be ordained bishop of Hippo, by Megalus, bishop of Calame, then primate of Numidia. St. Augustine died the twenty-eighth day of August, 430, aged seventy-six, having had the misfortune to see his

country invaded by the Vandals, and the city where he was bishop besieged for seven months. His works make ten volumes; the best edition of them is that of Maurin, printed at Antwerp, in 1700.

AUGUSTINE (Anthony), an eminent prelate, born at Sarau'ossa, in Spain. He was employed by the pope on an embassy to England, in 1554; and afterwards assisted at the council of Trent. In 1574 he was preferred to the archbishopric of Tarragona. So great was his charity, that at his death, in 1586, he did not leave what was suffi- cient to defray his funeral expences. He wrote several treatises on law, and on medals, in the Spanish language, which were printed in 1587.

AUGUSTINE (Leonard), or AGOSTINI, anltalian antiquary, was a native of Sienna, and flourished in the seventeenth century. He compiled an elaborate work on ancient gems, which was first published in 1657, in two volumes, 4to. and again in 1707, four volumes, 4to. A Latin translation of this work, byGronovius, was pub-

lished at Amsterdam in 1685, and at Franeker in

1694.

AUGUSTINE, MOUNT, ST. a remarkable island within the entrance of Cook's islet, about six miles from its western shore. It was seen by Capt. Cook, who was doubtful whether it did not belong to the continent. It was since visited, in 1794, by Mr. Puget, who, in the Chatham, sailed round the world, in company with Van- couver. He states it to be about nine leagues in circuit.

AUGUSTINE, ST. a port on the coast of La- brador, opposite St. John's Bay, Newfoundland. About two miles south-west runs a chain of small islands, called St. Augustine's Chain, about long. 58►► 50′ west, and lat. 51►► 11′ north.

AUGUSTINE'S SQUARE, ST. a number of small islands in the Gulf of St. Lawrence, Labrador, reaching from Shecatica bay on the north-east, to Outer Island on the south-west.

AUGUSTINIANS, divines who maintain, on the authority of St. Augustine, that grace is effec- tual from its nature, absolutely and morally, and not relatively and gradually. They are divided into rigid and related.

AUGUSTINIANS, or AUGUSTINS, an order of religious ; so called from St. Augustine, whose rule they observe. The Augustins, or Austin friars, were originally hermits, whom pope Alex- ander IV. first congregated into one body, under their general Lanfranc, in 1256. Soon after, this order was

brought into England, where they had about thirty-two houses at the time of their sup- pression. The Augustins are clothed in black, and make one of the four orders' of mendicants. From these arose others, under the denomination of bare-foot Augustins, Minorites, or Friars rqi- nor. There are also canons regular of St. Au- gustine, who are clothed in white, excepting their cope, which is black. At Paris they are known under the denomination of religious of Genevieve ; that abbey being the chief of the order. There are also nuns and canonesses, who observe the rules of St. Augustine.

AUGUSTINUS, a work of Jansenius, bishop of Ypres, in three volumes, folio, printed at Lou- vain in 1540; the first whereof contains a dis- course against Pelagianism ; and the secondr treatises on reason ; the use of authority in theo- logical matters ; the state of innocence ; fall of nature by sin ; grace, &c. From these treatises the five famous propositions of the Jansenists were collected.

AUGUSTOBONA, a city of the Tricasses, in ancient Gaul, from whom it was afterwards called Tricasses, and Trecassae ; and still farther cor- rupted to Thracae, or Treci ; whence its modern name Troyes.

AUGUSTOBRIGA, an ancient town of Spain, now called Medina Celi.

AUGUSTODUNUM, the capital of the JEdui, where there was a famous academy for the edu- cation of youth ; now called Autun.

AUGUSTOMAGUS, an ancient town of Gal- lia Belgica, now called Senlis, in the Isle of France. Long. 2►► 40′ E, lat. 49►► 12′ N.

AUGUSTONIMETUM, a town of ancient Gaul, now Nevers.

AUGUSTORITUM, according to some au-

thors the capital of the Pictones, afterwards called Pictavi; now Poictiers. But by Antonine's Itinerary from Burdigala to Argantomagus (or Argenton, as it is interpreted by many), it can be r.o other but the capital of the Lemovices, now Limoˆest, situated between Vesunna or Petro- corii, or Perigueux, and Argantomagus. Long. 1►► 22′ E. lat. 45►► 52′ N.

AUGUSTALIA, in Roman antiquity, a festi- val on which games (Augustales ludi)were cele- brated, in Rome, annually, on the day of the return of Augustus Caesar, at the conclusion of his wars. It was instituted

ann. U. C. 735, and kept on the IVth ides (12th) of October. After his decease, the tribunes of the people asked permission to celebrate the festival at their own private expense.

AUGUSTALES SOD ALES, priests institu- ted by Tiberius after the apotheosis of Augustus Caesar, to perform the service of the new god. One and twenty of the noblest Romans were chosen by lot to this office ; and among the first members were Tiberius himself, Drusus, Clau- dius, and Germanicus.

AUGUSTOWO, or AUGUSTOW, a town in the department of Lomza, Poland. It contains 2000 inhabitants, and has a staple for salt, fifty-six miles north-west of Rielsk.

AUGUSTULUS, otherwise called Flavius Ro- mulus Augustus, was the son of Orestes, and the last Roman emperor. Being subdued by Odo- acer, the king of the Heruli, he abdicated the throne, in 475, and thus put an end to the western empire, after it had subsisted 522 years from the battle ofPhar- salia. This prince is repre- sented on some medals, as in the annexed figure; inscrip- tion, D. N. ROMULUS AU- GUSTULUS. P. F. AUG.

AUGUSTUS, an appellation conferred upon Caesar Octavianus. See OCTAVIANUS, and ROME. The obscure name of Octavianus, Mr. Gibbon observes, he derived from a mean family in Ari- cia. It was stained with the blood of the pro- scription ; and he was desirous, had it been possible, to erase all memory of his former life. The illustrious surname of Caesar he had assumed as the adopted son of the dictator ; but he had too much sense either to hope to be confounded, or to be compared with that extraordinary man. It was proposed in the senate, to dignify their minister with a new appellation; and after a very serious discussion, that of Augustus Avas chosen among several others, as being the most expressive of the character of peace and sanctity which he uniformly affected. Augustus was therefore a personal, Caesar a family, distinction. The former should naturally have expired with the prince on whom it was bestowed ; and how- ever the latter was diffused by adoption and female alliance, Nero was the last who could allege any hereditary claim to the honors of the Julian line. But at his dealh, the practice of a century had inseparably connected those appellations with the imperial dignity, and they have been preserved by a long succession of emperors, Romans, Greeks, Franks, and Ger-

mans, from the fall of the republic to the present time. A distinction was, however, soon intro- duced. The sacred title of Augustus was always reserved for the monarch ; the name of Caesar was more freely communicated to his relations ; and from the reign of Adrian, at least, was

appro- priated to the second person in the state, who was considered as the presumptive heir of the empire.

AUGUSTUS FORT, a small fortress of Scotland, in Invernesshire, at the head of Lochness, be- tween the rivers Taarf and Oich. The name of this fort in Erse is Killchuimin, or the burial place of the Cummins. It lies on the road to the Isle of Sky.

AU-G UY-L'AN-NEUF, or AUGUILLANNEUF. See MISLETO.

AVIA. See AQUILA.

AVIARY. Lat. avis, a bird. A place where birds are kept.

In aviaries of wire, to keep birds of all sorts, the Italians bestow vast expence ; including great scope of ground, variety of bushes, trees of good height, running waters, and sometimes a stove annexed, to contemper the air in the winter. Walton's Architecture.

Look now to your aviary ; for now the birds grow sick of their feathers. Evelyn's Kalendar.

AVIARY is now used for any place in which birds are kept, but more particularly where the beauty of their plumage or the sweetness of their song has been the cause of their confinement. Laenius Strabo, an opulent and luxurious Roman, was the first who introduced aviaries upon an extensive scale, and erected a splendid one at his villa near Brundusium. Varro, however, out- shone all in his ornithological buildings, and elegant and spacious aviary, at his country house near Casinum. With evident satisfaction, be relates, that in his days there were two sorts of aviaries, one for containing birds intended for the table, and the other the birds which were kept for their song or plumage. The former sort were built entirely for use, but the latter- were often beautiful pavilions, with an apartment or saloon in the centre, for the company to sit in and enjoy the melody of the feathered songsters. Aviaries have never, in modern times, equalled the splendor and extent of those of the Romans; yet the aviary at Woburn Abbey, the seat of the Duke of Bedford, is of great extent and value ; and Malmaison, one of the palaces of the late Em- peror Napoleon, contains an aviary at once large, elegant, and -well stocked with birds from all quarters of the globe.

AVICENA, AVICENES, or AVICENNA, the prince of Arabian philosophers and physicians, was born at Assena, a village near Bokhara. His father was a Persian, and had married at Bokhara. The first years of Avicenna were de- voted to the study of the Koran and the Belles Lettres. His progress was so rapid, that when he was but ten years old, he was perfectly ac- quainted

with the most hidden senses of the Koran. Abu-Abdoullah at that time professed philosophy at Bokhara with great reputation. Avicenna studied logic under him ; but, disgusted with the slow manner of the schools, he set about studying alone, and read all the authors that had written on philosophy, without any other

help than that of the commentators. After read- ing the first six propositions of Euclid, he pro- ceeded alone to the last, having made himself perfect master of them, and treasured up all of them equally in his memory. Endued with an extreme avidity for all the sciences, he did not neglect the study of medicine. Persuaded that this divine art consists as much in practice as in theory, he sought all opportunities of seeing the sick ; and afterwards confessed that he had learned more from experience than from all the books he had read. He was now in his six- teenth year, and was already celebrated as the light of his age. He resolved at this age to re- sume his philosophical studies, which medicine had made him neglect ; and he spent a year and a half without ever sleeping a whole night together. If he felt himself oppressed by sleep, or exhausted by study, a glass of wine refreshed his wasted spirits, and gave him new vigor. At the age of twenty- one he conceived the bold de- sign of incorporating, in one work, all the ob- jects of human knowledge ; and carried it into execution in an Encyclopaedia of twenty volumes, to which he gave the title of the Utility of Utili- ties ; an immense labor for one man at such a period. Several great princes had been taken dangerously ill, and Avicena was the only one that knew their ailments and cured them. His reputation increased daily, and all the kings of Asia desired to retain him as their physician. Mahmud, the first sultan of the dynasty of the Samanides, was then the most powerful prince of the east. Imagining that an implicit obedience should be paid by all manner of persons to the injunctions of his will, he wrote a haughty letter to Mauiun sultan of Khara/m, ordering him to send Avicena to him, who was at his court, �with several other learned men. Philosophy, the friend of liberty and independence, looks down with scorn on the shackles of tyranny. Avicena, accustomed to the most nattering distinctions amonрр the great, could not endure the imperious manner of Mahmud's inviting him to his court, and refused to go. But the sultan of Kharazm, who dre:ided his resentment, obliged the philoso- pher to depart, with others, whom that prince had demanded to he ,enl to him. Avicena pretended to obey; but, instead of repairing to Gazna, he took the rout of Georgian. Mahmud, who had gloried in the thoughts of keeping him at his palace, was greatly irritated at his flight. He despatched portraits, done in crayons, of this philosopher to all the princes of Asia, with rriers to have

lnin conducted to Gazna, if he ppeared in their courts. But Avicena had ⬛⬛⬛minutely escaped the most diligent search after mi. lie arrived in the capital of Georgian, here, under a disguised name, he performed iariy admirable cures, (,'abous then reigned in that country. A nephew whom he was extremely (end of, having fallen sick, the most able phy >'.et;ms were called, and none of them were able t'> '.now his ailment, or vrivc him any ease. Avi- < eua was at last consulted. So soon as he had I It tV young prince's pulse, he was confident >': it Ins illness proceeded from a passion which he dii:.i not avow. Avirena commanded the \ 'T'.or nlio h,id the carr of thf different apart

*ments of the palace to name them all in their respective order. A more lively motion in the prince's pulse, at hearing one of these apart- ments mentioned, betrayed a part of his secret. Avicena then ordered the keeper to name all the female slaves that inhabited that apartment. At the name of one of these beauties the young Cabous could not contain himself; an extraor- dinary vehemence of his pulse is said to have completed the discovery of what he in vain de- sired to conceal. Avicena, now fully assured that this slave was the cause of the prince's ill- ness, declared that she alone had the power to cure him. The sultan's consent was necessary, and he of course was curious to converse with his nephew's physician ; but had scarce seen him, when he knew in his features those of the por- trait sent him by Mahmud : still Cabous, far from forcing Avicena to repair to Gazna, re- tained him for some time, and heaped honors and presents on him. The philosopher passed afterwards into the court of Nedjmeddevle, sultan of the race of the Bouides. Being appointed first physician to that prince, he found means to gain his confidence to so great a degree that he raised him to the post of grand vizier. This dignity, however, he did not long enjoy. Too great an attachment to pleasure made him lose at once his post and his master's favor. From that time Avicena felt all the rigors of adversity, which he had thus brought upon himself. He wandered about as a fugitive, and was often obliged to shift the place of his habitation to secure his life from danger. He died at Hamadan, aged fif*y- eight, A.D. 1036, and in the year of the Hegira 428. No one composed with greater facility than Avicena. He is said to have written fifty pages a-day without fatigue. Until the twelfth century he was preferred for philosophy and medicine to all his predecessors. His works were the only writings in vogue, even in Europe. The following are their titles: 1. Of the Utility and Advantage of Science, 20 books. 2. Of Innocence and Criminality, 2 books. 3. Of Health and Remedies, 18 books. 4. On the means of preserving Health, 3 books. 5. Canons of Physic, 14 books. 6. On Astro- nomical Observations, 1 book. 7. On Mathe- matical Sciences. 8. Of Theorems, or Mathe- matical and Theological Demonstrations, 1 book. 9. On the Arabic Language, and its Proprieties, 10 books. 10. On the Last Judgment. 11. On*

the Origin of the Soul, and the Resurrection of Bodies. 12. Of the end we should propose to ourselves in Harangues and Philosophical Argu- mentations. 13. Demonstration of collateral Lines in the Sphere. 14. Abridgment of Euclid. 15. On Finity and Infinity. 16. On Physics and Metaphysics. 17. On Animals and Vege- tables, &c. 18. Encyclopaedia, 20 volumes.

AVICENNIA, or AVICENIA, eastern ana- cardium, a genus of the angiospermia order, and didynamia class of plants; ranking in the natura1 method under the fortieth order, personatae. The calyx is qninquepartite ; the corolla is bilabiatcd, the upper lip squared ; the capsule is leathery, romb-like, and monospermous. There are tv\o species, viz. 1. A. nitida, the shining, eastern anacardium ; and, 2. A. tomentosa the downy

anacardium. The seeds are said to be the Ma- lacca beans formerly kept in the shops, the ker- nels of which were eaten as almonds. Others say that the plant producing the Malacca bean is rather the bontia germinans.

AVICH, LOCH, anciently called Loch-luina, a lake of Scotland, in the parish of Dalavich, in Argyllshire. Mr. Campbell, in his Statistical Report, says it is 'a beautiful sheet of water, of a regular triangular form, about eight miles in circumference, full of trouts ; having a castle and several islands, the resort of gulls, cranes, water eagles, and wild ducks. Near this lake lay tlic scene of an ancient Celtic poem, called Cathluina, or the conflict of Luina; and in the lake is an island, the scene of another poem, called Laoi Fraoich, or the death of Fraoch. Many places,' he adds, ' in this neighbourhood are still denomi- nated from Ossian's heroes.'

AVICH, a river rising from the above-men- tioned lake, and running through a wood, and part of the parish of Dalavich, to which it gives names, and at last falls into Lochow.

AVID'ITY,) Lat. avidus; from avco, 1

AVID'IOL'SLY. $ desire earnestly. Covetous- ness, greediness, insatiable appetite.

For nothing is more auydyously to be desired, than is the sweet peace of God.

Bale's Image of both Churches, part i. No writings would have been received with such avidity and respect as these.

Paley's Evidences.

AVIENUS, Rufus Festus, a Latin poet of the fourth century. He translated the Phenomena of Aratus, the description of the earth by Diony- sius, ./ Esop's Fables, &c. An edition of his works was printed at Paris in 1590, and again in 1731.

AVIGATO PEAR. See LAURUS.

AVIGLIANO, a small town of Piedmont in Italy, seven miles west of Turin.

AVIGNON, a city of France, in the depart- ment of Vaucluse, on the banks of the Rhone, 168 leagues from Paris. Before the revolution 4t was subject to the Pope ; and the residence of several of them in it had rendered it considerable. This occasioned many of the natives to be ene- mies to the new government ; especially after the Convention had abolished the establishment of the Roman Catholic religion in France ; and was the cause of much bloodshed. It is now, however, completely annexed to France. Near the Rhone there is a large rock, within the circumference of the walls, upon which is a platform, whence may be had a prospect of the whole city and its en- virons. Its circumference is somewhat more than three miles. Its manufactories are silks, saltpetre, oil of vitriol, and aqua-fortis. Its pro- ducts, wine, brandy, almonds, olives, oil, saffron, truffles, corn, and wool ; and it contains a well- regulated lunatic asylum, and an hospital of in- valid soldiers which lodges 1500 in-pensioners. Before the French revolution its population exceeded 30,000 ; but in the latest census they are 23,311. It is the seat of a bishop, whose diocese contains the departments of Vaucluse and the Card; and, in 1803, an university, or Lyceum, was established here.

Avignon was ceded by Philip III. of France to the see of Rome in 1273. On the decease of Benedict XI. the papal court was transferred here ; and the six successive pontiffs, Clement V. John XXII. Benedict XII. Clement VI. Innocent VI. and Urban V. made it their only abode. The entreaties of Petrarch were often addressed to the four last. He was well ac- quainted with Avignon, which had been the residence of his father ; and the celebrated foun- tain of Vaucluse, but a short distance from its walls, has been immortalised by the complaints of his unreturned love. The tomb of Laura is still shown in the church of the Cordeliers ; and her husband, Hugh de Sade, sleeps there by her side. He speaks of it as the sink of vice and corrnption, as an object of universal hatred and contempt, as barbarous, and as the mystic Baby- lon. Yet for seventy years, from 1309,

it con- tinued to be the seat of the holy see ; and after the death of Gregory XI. who returned once more to the Vatican, on the commencement of the great schism of the west, during forty years more, the two rival pontiffs of the day thundered their respective excommunications against each other from the banks of the Rhone and of the Tiber. The election of Martin V. terminated the distraction, and Rome once again became the single metropolis of the papacy. During its subjection to the papal see, Avignon was several times seized by France: once in 1662, when the French ambassador at Rome had been insulted by the Corsican guards; again in 1688; and again in 1733, on account of the loss occasioned to the French revenue by smuggling. Another instance of seizure happened in 1 768, when pope Clement XIII. threatened to excommunicate the duke of Parma, and took the Jesuits under his protection ; it was not given back till 1774, by which time the papal chair had changed its oc- cupant. The Count de Grignan, the husband of Madame de Sevigne's daughter, held it as vice- roy for two years, and many of Madame de Sevigne's letters are addressed to Avignon.

AVIGNON BERRY, the fruit of a species of ly- ceum, which grows plentifully near Avignon and in other parts of France. The berry is some- what less than a pea; its color is green, ap- proaching towards a yellow; and it is of an astringent and bitter taste. It is much used by the dyers, who stain a yellow color with it; and by the painters, who also make a fine golden yellow of it.

AVILA, a city of Spam in Old Castile, seated on an eminence on the banks of the river Adaja, and in sight of the mountains of Pico. It is fortified both by nature and art, having had a wall 9075 feet in circumference, adorned with lofty towers and handsome gates. The houses are generally good and stately. It has an uni- versity, and a considerable bishopric ; besides a cathedral, which has eight dignitaries and forty canons and minor canons. It stands in the mid- dle of a large plain, surrounded with mountains and covered with fruit-trees and vineyards There is likewise a manufacture of cloth.

AVILA, or AVILES, a town of Spain, in As- turias, on the Bay of Biscay, eight miles south of Cape de Pinas, and twenty-five north of Oviedo

AVILA (Giles Gonzales,) a Spanish historian. He went to Rome for his

education, and when he returned to his own country obtained a rich benefice, and was appointed historiographer to the king. He wrote a Treatise on the Antiquities of Salamanca, also the Theatre of the Churches of 'India, and other works. He died in 1658.

AVILA (Louis d'), a Spanish gentleman sent by Charles the Fifth, as ambassador to the popes Paul IV. and Pius V. and was afterwards a commander at the siege of Metz. He wrote histori- cal memoirs of the wars of Charles V. against the Protestants of Germany, entitled ' Los Commentaries de la Guerra del Emparador Carlos V. contra los Protestantes de Alemania ;' first print- ed in 1546, and afterwards translated into French and Latin. He also wrote Memoira of the War in Africa.

AUJILAH, an oasis, in the great Sahra, or Lybian desert, in lat. 29►► 30′ N..and long. 22►► 30′ E. through which Mr. Hornemann passed in 1798. He says, there are three towns in the territory of Aujilah, the capital of that name, Mojabrah, and Meledilah; the latter are near each other, and both about four hours distant from Aujilah. That city is about a mile in circumference; ill built, though of stone, dirty, and wretched. Mojabrah, is smaller but more popu- lous; its inhabitants are principally engaged in commerce, as those of Meledilah are in agricul- ture. The women are skilful weavers, and ex- port their cloths to Fezzan. The soil round the town is sandy, but fertile when well watered. It is subject to Tripoli, and the Bey of Ben- ghazi was resident there during his visit.

AVILER (Augustine Charles d'), a French architect, born in 16.53. He was taken by the Algerines in his passage to Rome, and carried to Tunis, where he designed a grand mosque, which is much admired. He was liberated after two years, and settled at Montpelier, where lie died, in 1700. lie wrote a Course of Archi- tecture, in 4 vols. 4to.

AVIO, a town of Germany in the bishopric of Trent, a little west of the Adige.

AVIS, a river of Portugal, in Alentejo.

Avis, rr Aviz, a small town of Portugal, in Alentejo, seated on an eminence with a castle near the river.

Avis, KNIGHTS or, an order of knighthood in Portugal, established about A. D. 1162. When Fvora. was taken from the Moors, in the reign of Alphonso I. king of Portugal, it was garrisoned by several persons who assumed the title of knights of St. Mary of Evora, which was soon after changed for that of knights of Avis, which town the king gave them, and whither they removed from Avora. The badge of the order is a green cross

flory, and they observe the rule of St. Benedict.

Avis LONGA, a name given by Nieremberg to the hoitlattotl of the Americans, a bird remark- able for the swiftness of its running.

Avis NIVEA, a name under which Nieremberg has described an American bird, of the size of a thrush, brown and black on the back, and yel- /ow under the belly ; it imitates the human voice, and is called by the natives, ceoan.

Avis Pr.NNii'ri.ciiA, the name of an Ameri-

can bird, described by Nieremberg, and called by the Indians quetzaltototl. It is of the size of a pigeon, and is of more beautiful colon than the peacock. There are, besides this spt- cies, three or four others. Mr. Ray has, how- ever, ranged all these under the number of birds, the account of which he is either dubious about, or suspicious of the truth of.

AVIS TROPICORUM, the Tropic bird, a bird of the size of the common duck, found only about the tropics.

Avis VENTI, the bird of the wind. See HEATOTOTL.

AVISANDUM, in Scots law, literally advis- ing, or under consideration. A process is said to be under avisandum, when the whole proofs, with the arguments on both sides, are under the consideration of the judge, before he has given an interlocutor or decision upon the cause.

AVIS'ION. Used for VISION. The kinge of this auision, Hath great imaginacion, What thinge it signifie maie.

Cower, Con. A. bookviii. p. 264.

AVISO, adviso, Italian; a term chiefly used in matters of commerce to denote an advertise- ment, an advice, or piece of intelligence.

AVISON (Charles), an English musician of Newcastle, where he practised the whole of his life. In 1752 he published an Essay on Musi- cal Expression, which was favorably received, and reached a second edition in 1763, when it produced published remarks from Dr. Hayes, professor of music at Oxford. Avison quickly retorted, and his reply is appended to the third edition of the original essay. He died at New- castle in 1770, and left five concertos for the violin, and other compositions, which are esteemed light and elegant.

AVITES, a tribe of Samaritans, who came from Avah, in Chaldea, and

were settled by Sennacherib in Samaria. They worshipped the idols Nibhaz and Tartak. 2 Kings xvii. 24 31.

AVITUS, one of the emperors of Rome, in the last stage of its declension. He succeeded Maximus, A. D. 455, and reigned only one year, being cut off and succeeded by Majorians, A. D. 456.

AVI'ZE. See ADVISE.

No power he had to stir, nor will to rise ; That when the careful knight 'gan well avise, He lightly left the foe. Faerie Queen*.

As they 'gan his library to view, And antique registers for to avixe. Spenter. With that, the husbandman 'gan him auige, That it for him was fittest exercise. Id.

But him ariginy, he that dreadful deed Forbore, and rather chose, with scornful shame, Him to avenge. Id,

AUK, in ornithology, See ALCA. AUKLAND, BISHOPS. See AUCKLAND. AULA, is used for a court baron, by Spel- man ; by some old ecclesiastical writers, for the nave of a church, and sometimes for a court- yard.

AULA REGIA, or AUM REGIS, a court establish- ed by William the Conqueror in his own hall, com- posed of the king's great officers of state, who resided in his palace, and were usually attendant

on his person. This court was regulated by the article which forms the eleventh chapter of Magna Charta, and established in Westminster- hall, where it hath ever since continued in op- eration.

AULD WIFE'S LIFT, an ancient structure, in the parish of Baldernock, Dumbartonshire, about a mile from the church; supposed to be a relict of ancient druidism, and from its name to have been the work of Druidesses. The uppermost stone is eighteen feet long, eleven broad, and six deep.

AULEN, an ancient imperial city of Ger- many, in the circle of Suabia, thirty miles north of Ulm.

AULETES, avXjjrEc, in antiquity, a flute- player. One of the Ptolemies of Egypt, bore the surname of Auletes.

AULIC, an act, in the Sorbonne and foreign universities, which a young divine maintains upon being admitted a doctor in divinity. It begins by an harangue of the chancellor, addres- sed to the young doctor ; after which he receives the cap, and presides at the aulic or disputations.

AULIC, an epithet given to ce.cain officers of the empire, who compose a court which decides, without appeal, in all processes entered in it. The Aulic council is a jurisdiction of the Ger- man empire, established by Maximilian I. in 1502, to counterbalance the authority of the Im- perial Chamber. It is called Aulic, because it follows the emperor's court aula. The emperor names all the members, consisting of a president, vice-president, and an unlimited number of counsellors; six of whom at least must be Pro- testants. All points relating to feudal rights and the reserved territories of the emperor in Italy are arranged by this council. In order to pre- vent any collision with the emperor's will, it sometimes contents itself with making a report to him in the form ' fiat votum ad Cacsarem.' Following the emperor's court, it is sometimes called justitiam imperatoris, the emperor's jus- tice. The aulic court ceases at the death of the emperor.

AULIS, in ancient geography, a sea-port town cf Bceotia, over against Chalcis of Eubcea, on the Euripus, where that strait is narrowest; and which were some time joined by a mole or cause- way ; on a craggy situation, and a village of the Tanagraci, distant from Chalcis three miles. The harbour is famous for the rendezvous of 1000 ships under Agamemnon, previous to the Trojan expedition. It is now entirely destroyed.

AULIUS ATTICUS, a captain of a Roman cohort under Julius Agricola, who was killed in a battle with Galgacus, at the foot of the Gram- pians. Two urns were dug up in the parish of Redgorton, containing human ashes; one of which Mr. Moncrieff supposes to have contained those of this officer, and the other those of Agri- cola's son.

AULON, anciently a town and station for ships, in Illyricum, on the Adriatic; now called Volano, a port town on one of the mouths of the Po, on the gulf of Venice.

AULON, or AULONA, anciently a town of Elis, in Peloponnesus, on the confines of Messenia. Here stood a temple of /Esculapius.

AULONIAS, an epithet of ˆsculapius. See last article.

AULOS, a Grecian long measure, the same with stadium.

AULTGRANDE, a river of Scotland, in the parish of Kiltearn, in Rosshire, which takes its rise from Loch Glass, and after running six miles falls into

the sea. Its course for two of these miles is through a deep chasm of an extensive and rugged precipice, called Craig-grande, or the ugly rock ; of which the Rev. Mr. Robertson, in his statistical account of the parish, gives the following description. ‘ This is a deep chasm or abyss, formed by two opposite precipices that rise perpendicularly to a great height, through which the Aultgrande runs for the space of two miles. It begins at the distance of four miles from the sea, by a bold projection into the chan- nel of the river, whicli it diminishes in breadth by at least one half. The river continues to run with rapidity for about three quarters of a mile, when it is confined by a sudden jutting out of the rock. Here, the side view from the summit is very striking. The course of the stream being thus impeded, it whirls and foams, and beats with violence against the opposing rock, till, collecting strength, it shoots up perpendicularly with great fury, and forcing its way, darts with the swiftness of an arrow through the winding passage on the other side. After passing this obstruction, it becomes in many places invisible, owing partly to the increasing depth and narrow- ness of the chasm, and partly to the view being intercepted by the numerous branches of trees which grow on each side of the precipice. About a quarter of a mile further down, the country people have thrown a slight bridge, composed of trunks of trees covered with turf, over the rock, where the chasm is about sixteen feet wide. Here the observer, if he has intrepi- dity enough to venture himself on such a totter- ing support, and can look down the gulph below without any uneasy sensations, will be gratified with a view equally awful and astonishing. The wildness of the steep and rugged rocks; the gloomy horror of the cliffs and caverns, inac- cessible by mortal tread, and where the genial rays of the sun never yet penetrated; the water- falls which are heard pouring down in different parts of the precipice, with sounds various in proportion to their distance; the hoarse and hol- low murmuring of the river, which runs at the depth of nearly 130 feet below the surface of the earth ; fine groves of pines, which majestically climb the sides of a beautiful eminence, that rises immediately from the brink of the chasm ; all these objects cannot be contemplated without exciting emotions of wonder and admiration in the mind of every beholder. The appearatice of this singular and picturesque scene, will naturally bring to the recollection of the classical spec- tator those beautiful lines of Virgil, in which he describes the gulph, through which his Alecto shoots herself into the infernal regions :

‘densis hunc frondibus atrum

Urget utrinque latus nemoris, medioq-ue iragosus Dat sonitum saxis et torto vortice torrens Hie specus horreudum, et saevi spiracula Ditis Monstrantur ; ruptoque ingens Acheronte vorago Pestiferas apcrit fauces.

AUN

Critics may labor to convey the force and mean- ing of the author's words ; and travellers may, by their ingenious descriptions, give us a still more lively idea of their beauty and propriety; but he who would see a living commentary on this noble passage, must visit the rock of Aultgrande.'

AULUS GELLIUS. See GELLIUS.

AUMALE. See ALBEMARLE.

AUME, a Dutch measure for Rhenish wine, containing forty English gallons. The term is now obsolete.

AUMONE, in old law style, alms. ??? Bailey.

AUMONE, tenure in, lands given to a church or manastery.

AUMONIER. See ALMONER.

AUNA, the ancient name of Emly, in Ireland.

AUNCEL weight, an ancient kind of balance, prohibited by several statutes, on account of the many deceits practised by it. It consisted of scales hanging on hooks, fastened at each end of a beam, which a man lifted up on his hand. In many parts of England, auncel weight signifies meat sold by the hand, without scales.

AUNG ESTER, ancestor.??? Chaucer.

AUNE, a river of Devonshire, which runs into the sea, east of Plymouth.

AUXE, a long measure used in France to mea- sure cloths, stuff?, ribbons, &c. At Rouen, it is equal to one English ell ; at Calais, to 1'52 ; at Lyons, to 1-061 ; and at Paris, to 0-95.

AUXEAU, or Ai Nk.vrx, a town of France, in the department of the Eure and Loire, arrondis- sement of Chartres, with 250 houses. It has a castle, and some hosiery manufactures. Here the duke of Guise defeated, in 1587, the Germans who had come to the assistance of the Protes- tants. Five leagues east of Chartres.

AUNEDONACUM, the ancient name of Fontenay, in France.

AU N G ER VI L I , V. (Richard,) commonly known by the name of

Richard de Bury, was born in 1281 at St. Edmund's Bury in Suffolk, and edu- cated at the university of Oxford: after which he entered into the order of Benedictine monks, and became tutor to Edward Prince of Wales, afterwards kin_r Edward 111. Upon the acces- sion of his royal pupil to the throne, he was first appointed cofferer, then treasurer of the ward- robe; archdeacon of Northampton, prebendary of Lincoln, Sarum, and Litchfield, keeper of the privy seal, dean of Wells, and last of all bishop of Durham, lie likewise enjoyed the offices of lord hiu'h chancellor and treasurer of England: and discharged two important embassies at the court of France. Learned himself, and a patron of letters, he maintained a correspondence with some of the greatest geniuses of the age, particu- larly with the celebrated Italian poet Petrarch. !lc was also of a most humane and benevolent temper, and performed many signal acts of cha- rity. Kvery week he made eight quarters of wheat into bread, and gave it to the poor. When- ever he travelled between Durham and Newcas- tle, lie distributed t'H sterling in alms; between Durham and Stockton 1'.5, between Durham and Aukland five marks, and between Durham and Muidleham .□□,">. He founded a public library at Oxford, for the use of the students, which he fur- nished with the best collection of books then in

England ; and appointed five keepers, to whom he granted yearly salaries. At the dissolution of religious houses in the reign of Henry VIII. Durham college, where he fixed the library, being also dissolved, some of the books were removed to the public library, some to Baliol college, and some into the hands of Dr. George Owen, who bought the college of king Edward VI. Bishop Aungerville died at his manor of Aukland, April 24, 1345, and was buried in the south part of the cross isle of the cathedral church of Durham, to which he had been a benefactor. He wrote, 1. Philobiblos, contain- ing directions for the management of his library at Oxford, and a great deal in praise of learning in Latin. 2. Epistolae Familiarum; some of which are written to the famous Petrarch. 3. Orationes ad Principes; mentioned by Bale and P>□□ts.

AUrVIS, or Aunix, the smallest of the ci- devant provinces in France. It was bounded on the north by Poictou, on the west by the ocean, and on the east and south by Saintogne. It is now comprehended in the department of Lower Charente. It is watered by the Seure and the Charente. The coast has the advantage of several ports, the most remarkable of which are Rochefort, Rochelle, Brouge, St. Martin de Re, Tremblade, Tonnai, and Charente. The soil is dry, yet produces good corn and plenty of wine. The marshes feed a great number of cattle, and the salt marshes yield the best salt in Europe.

AUNT. Some ingenuity is necessary to de- rive this word from the Fr. tante □□□ ' Lat. amita from avita, and this from avia ! In Todd's John- son it

is deduced from the Old Fr. ante, from a Celtic root, a father or mother's sister.

Who meets us here 1 my niece Plantagenet, Led in the hand of her kind aunt of Glo'ster.

Shakspeare.

She went to plain work, and to purling brooks, Old fashion'd halls, dull aunts, and croaking rooks.

Pope.

AVOCATORIA, a mandate of the emperor of Germany, addressed to some prince in order to stop proceedings in any cause appealed to him.

AVOCH, or AUACH, Gael, a ford, a parish in

Scotland, Rosshire, on the coast of the Moray

Frith, and extending about four miles from south

to north, and two and a half from east to west.

AVOID', A Fr. wider, or eviter. Lat.

AVOIDABLE, I evito. The word viduus, in whole

AVOID'ANCE, V or in part, is supposed to "be the

AVOID'ER, I etymon. To make void or free

AVOIDLESS. 5 from, to leave empty, to go out

of, to move away from, to leave, to escape. The

word shun is usually applied to persons, and

avoid to things. ' Avoid the room,' no longer

means, as in Lord Bacon's time, go out of the

room, but ' go not into the room.'

What have you to do here, fellow? pray you. avoid the house. Shaktpeare.

tf any rebel should be required of the prince coo- federate, the prince confederate should command him to avoid the country. Bacon.

That avoidleu ruin in which the whole empire would oe involved. Dennis's Letters.

Want of exactness in such nice experiments is scarce avoidable. Boyle.

To take several things for granted, is hardly avoid- able to any one, whose task it is to shew the falsehood or improbability of any truth. Locke.

Now what things can there be of greater moment or importance for men to know or God to reveal, than the nature of God and ourselves, the state and con- dition of our souls, the only way to avoid eternal misery, and enjoy everlasting bliss. Stillingfleet ,

It is appointed to give us vigour in the pursuit of what is good, or in the avoidance of what is hurtful.

Watts.

AVOIRDUPOIS, avoir du pois, French. A kind of weight, of which a pound contains six- teen ounces, and is in proportion to a pound Troy, as seventeen to fourteen. All the larger and coarser commodities are weighed by avoir- dupois weight. Avoirdupois ounce is less than the Troy ounce in the proportion of 700 to 768 : but the avoirdupois pound is greater than the Troy pound in the proportion of 700 to 576.

AVOIRDUPOIS WEIGHT. For the table of its divisions, see ARITHMETIC.

AVO'KE, ~\ Lat. avoca, avocatum, I call ; AVO'CATE, >from a, and voco. Evoke is now AVOCA'TION. j used instead of the verb. Avo- cations are those engagements which call off our time and attention from other things.

We have written to your grace in our common letter, for a confirmation of many inconveniences and dangers which we persuaded to his Holiness, to follow both to himself and to the see apostolick, in case his Holiness should avoke the cause.

Bumet'i Reform Records, vol. i.

For what is a scholar, but one who retireth hia person, and avocateth his mind, from other occupations and worldly entertainments. Barrow's

Sermons.

Sorrow ought not to be suffered to increase by in- dulgence, but must give way after a stated time to social duties aud the common avocations of life.

Johnson.

Whom could I select with such perfect propriety as yourself, who, like the younger Scipio, can so usefully mingle the avocations of business with elegant litera- ture 1 Dr. Stuart's Dedication of S/illust.

AVOLATION. Lat. avolatio (a volo}, a fly- ing away from.

These airy vegetables are made by the relicks of plantal emissives, whose avolation was prevented by the condensed enclosure. Glanville's Scepsis.

Strangers, or the fungous parcels about candles, only signify a pluvious air, hindering the avolation of the favillous particles. Brown's Vulgar Errours.

AVON, the name of four rivers in England ; viz. 1 . rising in Leicestershire, runs south-west by Warwick and Evesham, and falls into the Severn at Tewksbury ; 2. in Monmouthshire ; 3. rising in Wiltshire, coasts the edge of the New Forest, and enters the English channel at Christ Church Bay in Hampshire ; and 4. the Lower Avon, which rises near Tetbury in Glocestersh. and running west to Bath, becomes navigable; continues its course to Bristol, and falls into the Severn north-west of that city.

AVONA PORTICOSA, the ancient name of the isle of Sanda.

Fr. avouer. Lat. Voveo, I vow or promise. To make j a solemn declaration, to ac- knowledge, to confess.

AVOSETTA, in ornithology. See RECURVT- ROSTRA.

AVOU'CH, v. & n. } Fr. avouer, to affirm-

AVOU'CHER, >To maintain, declare ab-

AVOUCH'MENT. j solutely, to vindicate, to

justify, to corroborate, to answer for the truth of,

to support a statment with documents.

They boldly avouched that themselves only had the truth, which they would at all times defend.

Hooker.

Wretched though I seem, I can produce a champion that will prove What is avouched here. Shaktpeare. King Lear. Such authours and avouchen of thinges.

Udall. Luke, cap. i.

But I maruail much that maister Moore beyng a great learned man, would not for the avouchement of his credite, and the truth of so great a matter, allege so much as the testimonie and auctoritie- of some one aucthor, for the prouyng of his assertion.

Grafton, vol. i. AVOW, ►►.&►►.- AVOW'ABLE, AVOV'AL, AVOW'ED, AVOW'EDLY, AVOW'ER, AVOW'RY.

His cruel stepdame, seeing what was done, Her wicked days with wretched knife did end ; In death avowing th' innocence of her son.

Faerie Queene.

Wilinot could not avowedly have excepted against

the other. Clarendon.

He that delivers them mentions his doing it upon

his own particular knowledge, or the relation of some

credible person, avowing it upon his own experience.

Boyle.

Left to myself, I must avow, I strove From publick shame to screen my secret love.

Dry den.

Virgil makes yF

Id.

Such assertions proceed from principles which can- not be avowed by those who are for preserving church and state. Swift.

This management, when no avowable reason could be given for it, gave suspicious and refining persons occasion to throw out a great deal of

slander.

Bolingbroke.

Then blaz'd his smother'd flame, avow'd and bold.

Thomson.

AU-PIS-ALLER, a French phrase, sometimes used among English writers, signifying at the worst.

AURA, among physiologists, an airy exhala- tion or vapor. The word is Latin, derived from the Greek, owpa, gentle wind.

AURA, in chemistry, a name given to that certain fine and pure spirit, found in every ani- mal or vegetable body ; but so subtle, as only to be perceptible by its smell and taste, or other effects, not found in any other body. This aura, says Boerhaave, exhibits the proper .character of the body, and is lodged in the oil of the body, to prevent its being dissipated and thrown oif.

AURA, in ornithology, a species of vulture.

AURACH, a town of Germany, with a good castle, in the south part of Suabia, in the duchy of Wirtemberg. It is the usual residence of the youngest sons of the house of Wirtembeig; is

seated at the foot of a mountain on the rivulet Krmst, fifteen miles east of Tubingen.

AUR/F,, in mythology, a name given by the Romans to the nymphs of the air. They are mostly to be found in the ancient paintings of ceilings ; where they are represented as light and airy, generally with long robes and flying veils of some lively color or other, and fluttering about in the rare and pleasing element assigned to them. They were characterised as sportive and happy in themselves, and wellwishers to mankind.

AVRANCHES, a town of Lower Normandy, formerly the capital of the district called Avran- chin, and now of an arrondissement in the de- partment of La Manche. It stands on a hill near the Seez, and commands an extensive pros- pect of the surrounding country. It was formerly the see

of a bishop, whose palace still remains, and who was suffragan to the archbishop of Rouen. The cathedral was founded in 1 1 20. It is only half a league distant from the sea, and the tide brings up small vessels close to the town. The inhabitants carry on a traffic in grain, flax, hemp, cattle, butter, wheat, salt, and cyder, which is here made of an excellent quality. Provisions and fuel are both cheap. Population about 0000. Avranchcs was much resorted to by the English after the peace of 1814. It lies 222 miles due west of Paris. Long. 1►► 17′ W., lat. 48►► 41′ N.

Al'RANTIA, in botany, a natural order, comprehending the entire orange tribe. Jussieu is the author of this order, the seventieth in his arrangement; nor arc there any traces of it among the fragmenta of Linnrtus. CAL. one leaf, often deeply divided. PET. definite, broad at the base, inserted round a disk on which the germen is plaeed. STAM. placed on the same disk. oKi'.M. one; style one; stigma simple, or rarely divided. Fruit mostly pulpy, sometimes capsu- lar, of one or many cells, with one or two seeds in each. This order is divided into three sec- tions, according to the seed contained in the fruit. 1. Fruit with only one seed. The leaves an.- not marked with resinous dots, and hence the plants of this section are termed spurious au- rantia. '2. Fruit many-seeded, pulpy. These are genuine aurantia, having the leaves full of pellucid resinous dots. 3. Fruit many-seeded, capsular. Leaves riot dotted. Genera akin to aurantia and to melia-.

AUIANTIAM, in botany. See CITRUS.

AL'RANTH S Pocis, in ichthyology, a name given by IS'ieremberg to the dorado, or dolphin, a species of the coryphsena, distinguished from the others by its forked tail.

A I RARlA FUNCTIO, pensio, or prastatio, a tax to be paid in gold.

ATI! ATA, in ichthyology, the fish called gilt head.

A I." RAY, a town in the province of Bretagne,)n France, a department of Morbihans, arrondis- sement of 1,'Orient, and the head of a canton. It stands on the gulf of Morbihan, and has a har- bour, with considerable trade in corn, honey, skins, and salted 11>h. The only manufactures are a feu woollen stuffs. It trades principally with Spain, and receives in exchange for the

above-mentioned articles, Biscay-iron and wine. Population 3200. F'our leagues W. of Vannes. Long. 2►► 53′ W., lat. 47►► 40′ N.

AUREA ALEXANDRINA, in pharmacy, a kind of opiate, or antidote against the cholic and apo- plexy, composed of a great number of ingre- dients, which was in great fame among the an- cient writers. It is called

aurea, from the gold (aurum) which is an ingredient in its composi- tion ; and Alexandria, as having been invented by a physician named Alexander.

AUREA CHERSONESUS, a name given by an- cient authors to Japan.

AUREAPOLIS, an ancient town of Bavaria, now called Ingolstadt.

AU'REAT, i Lat. aurum, gold ; partaking

AURIFE'ROUS. \ of the nature and qualities of gold. Poetical epithets.

And sum departe in freklis rede qubyte, Sum bricht as gold with aureate leuis lyte.

Douglas. Eneados, Prol. to book xii. p. 401.

Rocks ricb in gems, and mountains big with mines, Whence many a bursting stream auriferous plays.

Thomson.

AURELIA, in natural history, the same with what is usually called chrysalis, and sometimes nymph. See CHRYSALIS.

AURELIA, the ancient name of Orleans.

AURELIANUS, Ccelius, or, as some have called him, Lucius Ccelius Arianus, an ancient physician, and the only one of the sect of the Me- thodists of whom we have any remains, was of Sicca, a town of Numidia in Africa. This we learn from the elder Pliny, and his style much resembles that of the African writers. It is half Greek, half Latin, harsh, and difficult ; yet strong, masculine, full of good sense, and valuable for the matter it contains. It is frequently very acute and smart, especially where he exposes the errors of other physicians, and always nervous. What age Crelius Aurelianus flourished in, cannot be determined ; but it is probable that he lived before Galen, as he does not make the least men- tion of him. He was not only a careful imitator of Soranus, but also a strenuous advocate for him. He had read over very diligently the an- cient physicians of all the sects ; and to him we are indebted for the knowledge of many dogmas which are not to be found but in his books, ' De Celeribus et Tardis Passionibus.' The best edi- tion of these books is that published at Amster- dam, 1722, in quarto. He wrote, as he himseh tells us, several other works ; but they have all perished.

AURELIANUS (Lucius Domitius), emperor of Rome, was one of the greatest generals of anti- quity, and commanded the armies of the emperor

Claudius II. with such glory, that, after the death of that emperor, the legions agreed to place him on the throne, A. D. 270. He was a native of Dacia, born of obscure parentage, and was elected emperor in the fifty-fifth year of his age. He was a man of amazing strength and courage, and had risen through all the gradations of mili- tary duty. In one engagement he is said to nave killed forty of the enemy with his own hand ; and, in the various battles in which he was engaged, above 900 in all. He earned the war from the east to the west with as much faci-

iity, says a modern writer, as a body of troops marches from Alsace into Flanders. He de- feated the Goths, Sarmatians, Marcomanni, the Persians, Egyptians, and Vandals; conquered Zenobia, queen of the Palmyrenians, and Tetri- cus, general of the Gauls, both of whom graced his triumph in 274. In a word, for valor and expedition, he might be compared to Julius Caesar, had he possessed equal clemency and mo- deration. He showed great clemency indeed to queen Zenobia, although he destroyed her city, for he gave her lands and an income sufficient to maintain her in all the splendor of her former royalty without the trouble of it. But his gene- rosity to that princess was sullied by his order- ing her secretary, Longinus, the celebrated critic, to be put to death, whose work on the sublime ought to have procured him respect from any person one degree removed from barbarism. His severities were at last the cause of his destruc- tion. Mnestheus, his secretary, conspired against him, and he was slain by one of his generals in passing with a small guard from Heraclea in Thrace towards Byzantium, A. D. 275, after a very active reign of five years. See ROME.

AURELLI, or ARELLI, a Latin poet of the sixteenth century, who obtained the government of a district from Leo X. but whose tyrannical behaviour made the inhabitants throw him into a well, in 1520. His poems are much in the manner of Catullus.

AURENGABAD, or AURUNGABAD. See Au-

RUNGABAD.

AURENG-ZEBE, the Great Mogul, was the third son of Schah lehan. He was born in 1618, and in his youth feigned an air of religious sanc- tity, but in 1658 he and his brother Morad seized Agra, and took their father prisoner. Not long after, he put Morad and Dara, another bro- ther, to death. He, however, showed some ten- derness towards his father, who died in 1666. Aureng-zebe increased his dominions so much, and became so

powerful, that ambassadors were sent to him from all the eastern princes ; and for the sake of commercial advantages, many Euro- pean princes did the same. He died atAhmed- naghur in 1707, aged eighty-nine. His posses- sions were, by his will, divided among his sons. He was of a low stature, with a large nose, a white beard, and olive complexion. He was slender, and supported himself on a staff; yet he endorsed petitions without spectacles, and seemed pleased with doing business at a public audience. He subdued Visapour, Golconda, and the Carnatic ; overran the kingdom of Asen ; reduced Bengal ; and cleared the mouth of the Ganges from the Portuguese pirates. He had formed a design to destroy all the native princes, and to force a conversion of the Hindoos ; but harrassed in his turn by the rebellion of his sons, he was obliged to put off the execution of this momentous endeavour. By his indulgence to- wards his omrahs and governors his meaner sub- jects were oppressed with impunity. ►► God,' he observed, in his usual sanctimonious manner, ►►► would punish them if they did evil.' The real state of the case was, that he shared in the fruits of their oppression.

AUREOLA, in ecclesiastical antiquity, ori-

ginally signified a jewel, proposed as a reward of victory in some public dispute. Hence the Ro- man schoolmen applied it to denote the reward bestowed on martyrs, virgins, and doctors, on account of their works of supererogation ; and painters use it to signify the crown of glory with which they adorn the heads of saints, con- fessors, 8cc.

AUREOLUS, a Dacian shepherd, who as- pired to the empire, but was defeated and slain by Claudius, a general of the emperor Gallienus. This usurper is known by some medals bearing on one side his head, crowned with rays, as in the annexed figure, inscription I M P. M. AC IL. AUREOLUS P. F. AUG. on the reverse a goddess, resting on a pillar, with a sceptre in her right hand, a cornucopia in her left, and a globe at her feet, inscriptiorrPROVIDENTIA AUG.

AUREUS, a Roman gold coin, equal in value to twenty-five denarii, or 100 sesterces. Accord- ing to Ainsworth, the aureus of the higher em- pire weighed nearly rive pennyweights ; and in the lower empire little more than half that weight. Suetonius says, that it was customary to give aurei to the victors in the chariot races.

AUREUS MONS, in ancient geography, 1. A mountain in the north-west of Corsica, whose ridge runs out to the north-east and south-east, forming an elbow. 2. Another of Mcesia Supe- rior, or Servia, south' of the Danube, which the emperor Probus planted with vines ; and 3. A town at the foot of it, on the same river.

AURIA (Vincent), a Sicilian writer, born at Palermo, 1625. He was author of several works in Latin and Italian; but the principal are a History of the most eminent Men of Sicily, 1 704 ; and a History of the Viceroys of Sicily, 1697, folio. He died in 1710.

AURICHALCUM, opaxaXxov, mountain- brass; from opoc, a mountain, and xaXicoc, brass ; the metal now called brass being a mix- ture of copper and lapis calaminaris. It is called aurichalcum by Plautus, and orichalcum by Virgil and Horace. Plaut. Mil. act iii. scene 1. v. 64.

Cedo mihi tres homines aurichalco contra cum istis moribus.

AURICULA, in botany. See PRIMULA.

AURICULA, in ichthyology, the earwig.

AURICULA JUD.&, or JEW'S EAR, a kind 01 fungus, or mushroom, somewhat resembling in figure a human ear. It grows on elder-trees, the tree on which, as some pretend, Judas hanged himself; and hence, they think, the name is de- rived. This fungus steeped in water and applied to the eyes, is said to free them of inflammation ; but its chief use is in the form of a gargle in decoctions against inflammations of the throat, or swellings of the tonsils.

AURORA B O R E A L 1 S.

AURIC'ULAR, ˆ Lai. auricula, flap of the AURIC'ULARLY. S ear ; sometimes the ear it- self. Addressed to the ear ❖❖❖ as much as to say, to go no further. Private, secret, confidential.

You shall hear us confer, and by an auricular as- surance have your satisfaction.

Shakspeare. King Lear.

The alchymists call in many varieties out of astro- logy, auricular traditions, and feigned testimonies.

Bacon.

These will soon confess, and that not auricularly, but in a loud and audible voice. Decay of Piety.

AURICULATED LEAF, in botany, is a leaf which has a lobe on each side towards the base.

AURIFLAMMA, in the French history, a standard belonging to the abbey of

St. Dennis, suspended over the tomb of that saint, which the religious, on occasion of any war in defence of their land or rights, took down, with great cere- mony, and gave to their protector or advocate, to be borne at the head of their forces. Hence the word is sometimes used to denote the chief nag or standard of an army.

AURIGA, the waggoner, in astronomy, a constellation of the northern hemisphere, consist- ing of twenty-three stars, according to Tycho; forty, according to llevelius; and sixty-eight, in the Britannic catalogue. It is figured as an old man with a goat, her kids in his left hand, and a bridle in his right. Capella, the goat, is a star of the first magnitude. Its rising was deemed by the ancients a prognostic of rain.

AU K 1(rNAC, a town of Gascony, the head of a canton, in the department of the Upper Garonne, arrondissement of St. Gaudens. The inhabitants, who amount to about 1230, trade in cattle, and manufacture woollen goods. It is seated on the river I.ouge, fourteen leagues S. E. of Toulouse.

AURIGNY, a small island in the English channel, belonging now to England, twenty miles north ftom Jersey, and seven west of Cape La Hogue. Long. 2'►► 9′ E., hit. 49►► 43′ N.

AURIGRAPIIUS; from aimim, gold, and yoaˆw, I write ; in the middle age, writers, a copyist, or calligrapher, who wrote in gold letters.

ATJRILLAC, a town of France, on the Jor- dane, in Upper Auvorgne. At present it is the chief town in the department of the Cantal. Here are manufactures of woollen stuffs, carpets, stamine. shalloon, and lace; in which, as well as in cattle and cheese, EJI active trade is carried on. Population 10,332 in 1815. Fifteen leagues south- east of Tulle, and 111 south of Paris. Long. 2′ 31′ E., hit. 44'J "./i' N.

AUK1OI., a town of !►►►' ranee, in the depart- ment of the Bouches du Rhone, arrondissement of Marseilles. Here are some woollen manu- factures. Population 3700, live leagues north- east of Marseilles.

AURIPIGMENTUM. See ORIMMF.NT.

AI.'RIS, the ear. See ANATOMY, Index.

Anus AMM, ass-ears, a name given by na- turalists to a species of sea-shell, supposed to resemble the ear of an ass.

AIRFS F,\TI.KV\, the auricle.

Ari;r-> MAIMNA, ear-shc-il.

Arms I'OIK i, hog's ear, in natural history, a ►►.ea-shell, a species of the murex.

AU ' M SU A 1 .! M ' M , an instrument to clean the

ears, and serving also for other operations in dis- orders of that part.

AURISPA (John), a Sicilian writer, lie was appointed secretary to Nicholas V. from whom he obtained two abbeys. He died at Ferrara, at the end of the fifteenth century. He translated the works of Archimedes, and lliero- rle's Commentary on the golden verses of Py- thagoras.

AUROGALLUS (Matthew), professor of lan- guages at Wittemberg, was a native of Bohemia ; he assisted Luther in his translation of the Bible into German, and wrote a Hebrew and Chaldee Grammar, printed at Basle in 1539. He died in 1543.

AURIUM ABSCISSIO, cutting off the ears, was a punishment inflicted, by the Saxon laws, on those who robbed churches ; afterwards on every thief; and, at length, on divers other cri- minals.

AURON, a river of France, in the department of Cher, anciently called Avara.

AURORA, in the mythology, the goddess of the morning, was the daughter of Hyperion and Theia, according to Hesiod; but of Titan and Terra, according to others. It was under this name that the ancients deified the light which foreruns the rising of the sun above our hemi- sphere. The poets represent her as rising out of the ocean in a chariot, with rosy fingers dropping gentle dew. Virgil describes her ascending in a flame colored chariot with four horses. She had various lovers, Cephalus, Pandion, Tithonus, &c. Aurora is also used for the morning twi- light, or that faint light which appears in the morning when the sun is within 1 8►► of the horizon . AURORA, one of the New Hebrides islands in the South Sea, in which Mr. Forster supposes the Peak d'Etoil, mentioned by Mr. Bouganville to be situated. The island is inhabited; but none of its inhabitants came off to visit Captain Cook. The country is woody, and the vege- tation seemed to be excessively luxuriant. It is about twelve leagues long, but not above five miles broad in any part ; lying nearly north and south. The middle lies in long. 168►► 24′ E lat. 15►► 6′ S.

AURORA AUSTRALIS, SOUTHERN LIGHT, OR STREAMERS, similar to the aurora borealis, or northern light, only more clear and white. See AURORA BOREALIS.

AURORA BOREALIS, NORTHERN TWILIGHT, or Streamers ; a kind of meteor appearing in the northern parts of the heavens, mostly in the winter-time, and in frosty weather. It is now so generally known, that no description is requisite of the appearance which it usually makes in this country. But it is in the arctic regions that it appears most remarkable, particularly during the solstice. In the Shetland islands, the merry dancers, as they are there called, are the constant attendants of clear evenings. They commonly appear at twilight near the horizon, of a hue approaching to yellow ; sometimes continuing for several hours without any sensible motion ; after which they break out into streams of stronger light, spreading into columns, and altering slowly into ten thousand different shapes, varying their colors from all the tints of yellow to the obscurest russet. They often cover the whole hemisphere,

◆◆nd then make the most brilliant appearance. Their motions at these times are most amazingly quick ; and they astonish the spectator with the rapid change of their form. They break out in places where none were seen before ; darting along the heavens, are suddenly extinguished, and leave behind an uniform dusky tract. This again is brilliantly illuminated in the same man- ner, and as suddenly left a dull blank. Some- times they assume the appearance of vast co- lumns, on one side of the deepest yellow, on the other declining away till it becomes undistin- guishable from the sky. They have generally a tremulous motion from end to end, which con- tinues till the whole vanishes. In a word, we, who only see the extremities of these northern phenomena, have but a faint idea of their splendor and their motions. According to the state of the atmosphere, they differ in colors. They often put on the color of blood, and make a dreadful appearance. The rustic sages become prophetic, and terrify the gazing spectators with the dread of war, pestilence, and famine. This super- stition was not peculiar to the northern islands ; nor are these appearances of a recent date. The ancients called them Chasmata, and Trabes, and Bolides, according to their forms or colors. The Aurora Borealis in this country, appears usually of a reddish color, inclining to yellow, and sends out frequent coruscations of pale light, which seem to rise from the horizon in a pyramidal un- dulating form, and shooting with great velocity up to the zenith. They appear often in the form of an arch, which is partly bright, and partly dark, but generally transparent : and the matter of them is not found to have any effect on the rays of light, which pass freely through them. Dr. Hamilton observes, that he could plainly discern the smallest speck in the Pleiades through the density of those clouds which formed part of the aurora borealis in 1763, without the least diminution of its splendor,

or increase of twinkling. Sometimes it produces an iris ; and hence, M. Godin judges, that most of the extraordinary meteors and phenomena in the skies, related as prodigies by historians, as battles, and the like, may probably enough be reduced to the class of aurora borealis. This kind of meteor never appears near the equator ; but it seems, is frequent enough towards the south pole, like as towards the north, having been observed there by voyagers. See Philo- sophical Transactions, No. 461, and vol. liv. ; also Forster's account of his voyage round the world with Captain Cook, where he describes their appearance, as observed for several nights together, in sharp frosty weather, which was much the same as those observed in the north, excepting that they were of a lighter color. Meteors of this kind have appeared more fre- quently at some periods than others ; whence it would seem, that the air, or earth, or both, is qot at all times disposed to produce this pheno- menon. The extent of these appearances is also amazingly great. That which occurred in March, 1716, was visible from the west of Ireland 10 the confines of Russia, and the east of Poland; extending at least near thirty degrees of longitude, and from about the fiftieth degree in latitude, over VOL. III.

almost all the north of Europe ; and in all places, at the same time, it exhibited the like wondrous appearances. Father Boscovich has determined the height of an aurora borealis, which was ob- served by the marquis of Polini the 16th of December, 1737, and found it was 825 miles high ; and Mr. Bergman, from a mean of thirty computations, makes the average height of the aurora borealis amount to seventy Swedish, or 469 English miles. But Euler supposes the height to be several thousands of miles; and Mairan also assigns to them a very elevated region. Many attempts have been made to de- termine the cause of this phenomenon. Dr. Halley imagines that the vapors, or effluvia, exceedingly rarefied by subterraneous fire, and tinged with sulphureous steams, which many naturalists have supposed to be the cause of earthquakes, may also be the cause of this ap- pearance ; or that it is produced by a kind of subtile matter, freely pervading the pores of the earth, and which, entering into it nearer the southern pole, passes out again with some force into the sether, at the same distance from the nor- thern. This subtile matter, by becoming more dense, or having its velocity increased, may perhaps be capable of producing a small degree of light, after the manner of effluvia from elec- tric bodies, which, by a strong and quick friction, emit light in the dark ; to which sort of light this seems to have an affinity. On this subject see Philosophical Transactions No. 347 ; and also Mr. Cotes's description of this phenomenon, and his method of explaining it, by streams emitted from the heterogeneous and fermenting vapors of the atmosphere, in Smith's Optics, p. 69. The celebrated M. de Mairan, in an ex- press treatise on the aurora borealis, published in 1731, supposes its cause to be the zodiacal light,

which according to him, is no other than the sun's atmosphere ; this light happening, on some occasions, to meet the upper part of our atmosphere about the limits where universal gravity begins to act more forcibly towards the sun, falls into our air to a greater or less depth, as its specific gravity is greater or less compared with the air through which it passes. However, M. Euler thinks the cause of the aurora borealis not owing to the zodiacal light, as M. de Mairan supposes: but to particles of our atmosphere, driven beyond its limits by the impulse of the solar light. And on this supposition he endea- vours to account for the phenomena observed concerning this light. He supposes the zodiacal light, and the tails of comets, to be owing to a similar cause. But ever since the identity of lightning and the electric matter has been de- termined, philosophers have been naturally led to seek for the explication of aerial meteors in the principles of electricity; and there is now no doubt but most of them, and especially the aurora borealis, are electrical phenomena. Be- sides the more obvious and known appearances which constitute a resemblance between this meteor and the electric matter by which lightning is produced, it has been observed that the aurora occasions a very sensible fluctuation in the mag- netic needle; and that when it has extended lower than usual in the atmosphere, the flashes

have been attended with various sounds of rumbling utid hissing, especially in Russia and the other more northern parts of Europe ; as noticed by Sig. Reccaria and M. Messier. Mr. Canton, soon after he had obtained electricity from the clouds, offered a conjecture, that the aurora is occasioned by the dashing of electric fire positive towards negative clouds at a great distance, through the upper part of the atmos- phere, where the resistance is least ; and he sup- poses that the aurora which happens at the time when the magnetic needle is disturbed by the heat of the earth, is the electricity of the heated air above it : and this appears chiefly in the northern regions, as the alteration in the heat of the air of those parts is the greatest. Nor is this hypothesis improbable, when it is considered, that electricity is the cause of thunder and light- ning ; that it has been extracted from the air at the time of the aurora borealis; that the inha- bitants of the northern countries observe it re- markably strong, when a sudden thaw succeeds very cold severe weather ; and that the tourmalin is known to emit and absorb the electric fluid only by the increase or diminution of its heat. Positive and negative electricity in the air, with a proper quantity of moisture to serve as a con- ductor, will account for this and other meteors, sometimes seen in a serene sky. Mr. Canton has since contrived to exhibit

this meteor by means of the Torricellian vacuum, in a glass tube about three feet long, and sealed her- metically. \Yhen one end of the tube is held in the hand, and the other applied to the con- duclor, the whole tube will be illuminated from end to end, and will continue luminous without interruption for a considerable time after it has been removed from the conductor. If, after this, it be drawn through the hand either way, the light will be remarkably intense through the whole length of the tube. And though a great part of the electricity be discharged by this opera- tion, it will still ilash at intervals, when held only at one extremity, and kept quite still; but if, at the same time, it be grasped by the other hand in a different place, strong flashes of light will dart from one end to the other ; and these will continue twenty-four hours or more, without a fresh excitation. Siu'. Ilaccuria conjectures that there is a constant and regular circulation of the electric fluid from north to south ; and he thinks that the aurora borealis may be this electric mat- ter performing its circulation in such a state of tne atmosphere as renders it visible, or approach- ing nearer than usual to the earth ; though pro- balilv this is not the mode of its operation, as the meteor is observed m the southern hemisphere, with the same appearances as in the northern. Dr. Franklin supposes, that the electric, fire dis- charged into the polar reuions, from many leagues of vaporised air raised from the ocean between the tropics, accounts tor tin- aurora borealis ; and that it appears lir>t \ln-re it is lir.it in motion; namely, in the1 most northern parts; and the ap- pearances pro- red southward, though the fire really moves northward. Mr. Kiruati, in the Transactions of the i'oyal I rish Academy, anno 1708. his also some mˆvni'ius lumarks on the air/on bori.ilij ;r:d a-:..lr:!u. ile

reasons for supposing the rarefaction of the at- mosphere in the polar regions to proceed from them, and these from a combustion of inflamma- ble air caused by electricity. He observes, that after an aurora borealis the barometer commonly falls, and high winds from the south generally follow. The only distinct history of this pheno- menon is what we have from Dr. Halley, Philoso- phical Transactions, No. 347. Mr. Forster, who, in his voyage round the world with Captain Cook, assures us, that he observed them in the high southern latitudes, though with phenomena some- what different from those which are seen here. On February 17th, 1773, as they were in the fifty-eighth degree of south latitude, ' A beautiful phenomenon,' says he, ' was observed during the preceding night, which appeared again this and several following nights. It consisted of long columns of a clear white light, shooting up from the horizon to the eastward, almost to the zenith, and gradually spreading on the whole southern part of the sky. These columns were sometimes bent 3ideways" at their upper extremities; and though in most respects similar to the northern lights (aurorae boreales) of our hemisphere, yet differed from them in being always of a

whitish color, whereas ours assume various tints, espe- cially those of a fiery and purple hue. The sky was generally clear when they appeared, and the air sharp and cold, the thermometer standing at the freezing point.' These are what Mr. Kirwan denominates aurora australis.

M. Libes, in his Nouv. Diet, de Physique, has suggested a new theory, which is adopted by most of the northern philosophers. In his opi- nion electrical light is not the cause of the aurorae boreales; nor has electricity itself any farther influence upon their existence than as it fixes the aeriform substances whose combinations occasion the meteor. This philosopher's theory is founded upon the following principles : ††† 1 . If we excite the electric spark in a mixture of azotic and oxy- gen gas, there will result nitric acid, nitrous acid, or nitrous gas, according to the relation that sub- sists between the gases which compose the mix- ture. 2. Nitric acid, when exposed to the sun, assumes more color and volatility. Scheele first observed this phenomenon. Libes placed a re- ceiver over a salver containing nitric acid, and exposed to the action of the solar rays. Some minutes after, the acid appeared colored, and the receiver filled with red and volatile vapors, which were sustained in it a long while, and diffused a light similar to that of the aurora borealis. 3. In flasks, which contain nitrous acid, a ruddy and volatile vapor is always perceived above the vapor. 4. Nitrous gas, in contact with atmos- pheric air, exhales ruddy vapors, which fly off into the atmosphere. 5. The hydrogen, which is disengaged from the surface of the globe, rises till it occupies, in the higher regions of the at- mosphere, a place determined by its specific gravity. 6. The solar heat has very little activity in the polar regions.

These principles rest upon observations and experiments made with the greatest exactness, and most of them too well known to need being described here. Now it is manifest from a sim- ple combination of these facts: ††† 1. That thfe

|, reduction of hydrogen must be almost nothing in the polar regions. 2. That the higher regions of the polar atmosphere contain very little if any hydiogen. 3. That whenever there is a re-estab- lishment of equilibrium of the electric fluid in the polar atmosphere, this fluid can only find in its passage a mixture of azot and oxygen. 4. That the electric spark ought to fix and com- bine these gaseous substances. 5. That from this combination must result a production of nitrous acid, of nitric acid, or of nitrous gas, according to the relation subsisting between the oxygen and azot that constitute the mixture. 6. That the productions of either of these acids, or

of the gas, will give birth to red and volatile vapors, whose elevation in the atmosphere will form the meteor known under the name of the aurora borealis.

After removing some general objections to these preliminary notions, M. Libes applies them to the phenomena below :

1st Phenomenon. ❓❓❓ The aurorae boreales are sometimes accompanied by slight detonations.

In the polar regions, the production of hy- drogen is next to nothing, by reason of the little activity of the solar heat. It is nevertheless true, that in summer the long duration of the sun above the horizon causes even there a heat suf- ficiently considerable to produce the disengage- ment of some small portion of hydrogen, which will rise up to the higher regions of the atmos- phere : whence it results, that if the re-establish- ment of equilibrium of the electric fluid takes place in the polar atmosphere, when its superior strata contain this gaseous substance, the electric spark must exert upon it a part of its activity, and produce slight detonations.

2d Phenomenon. ❓❓❓ The major part of aurorae boreales appear to move from the north towards the south ; though some are seen whose motion is directed towards the east and west.

The nitric acid, nitrous acid, and nitrous gas, which K've birth to aurorae boreales, have their origin towards the poles. These substances exhale ruddy vapors, which, as they rise in the atmosphere, must direct their motion towards the place where they meet with least resistance ; which is, of course, towards the south, where the air, always less dense than about the north, offers them a more free and easy passage. It may also happen that at the same time these ruddy vapors are formed, a northerly wind may blow in the upper region of the atmosphere, and thus give them a strong impulsion, which, combined with the preceding general tendency southward, may cause a resulting motion to be sometimes southward, at others eastward, or westward.

3d Phenomenon. ❓❓❓ The aurorae boreales some- tunes exhibit themselves under the form of luminous columns having different figures and dif- ferent directions. Some are cylindrical, others pyramidal, others are curved in the shape of an arc. When they are impelled with much activity, they proceed to the zenith of the spectator. Those whose motion is still more > rapid, go on beyond the zenith, sometimes even till they reach the southern horizon. They do not always rise directly from the centre of the cloudy part to-

wards the zenith ; but sometimes take a lateral direction, especially when the cloud from whence they spring is found suspended between the north and the east or west.

When the re-establishment of equilibrium of the electric fluid fixes and combines a great quantity of azote and oxygen, the ruddy vapors resulting from this combination must occupy a large space in the atmosphere. These vapors being of such considerable extent, and impelled from north to south, must sometimes separate from one another, the different portions receiving various directions ; thus they will be carried sometimes perpendicularly, at others parallel to the horizon ; at others parallel to the earth's axis ; whence it follows that the aurora borealis must sometimes appear to the observer in the form of columns, whose number, figure, and direction, are determined by circumstances. It may also sometimes happen that these luminous columns remain for a time immovable with respect to the horizon. ' This ousrht to be the case when- ever a wind impels the luminous cloud towards any part whatever from the south, with the same force as the exhalations are impelled towards it by a contrary wind.

4th Phenomenon ❓❓❓ The aurorse boreales do not all shine with an equally vivid lustre ; some have a mild and tranquil light, others shine with a very resplendent brilliancy.

The vapors which are disengaged from nitric acid exposed to the solar rays, diffuse a mild light of a clear red, verging towards yellow; those which are perceived above them from nitrous acid, are of a deep red ; those exhaled from the nitrous gas, in contact with the atmos- pheric air, are at first of a pretty deep red, which afterwards become more and more clear and light, as these vapors extend themselves more in the atmosphere. The luminous columns, therefore, presented by the aurora borealis, have different colors, according as the ruddy vapors take their rise from the forrdation of the nitric acid, of the nitrous acid, or of the nitrous gas. Retrospect of Philosophic, &c. Discoveries, No. 8. Our countryman, Mr. Dalton, is of opinion that the aurora borealis is a magnetic phenome- non, the beams being governed by the earth's magnetism. See his Meteorological Essays, and Gregory's Astronomical and Philosophical Lessons. See our article ELECTRICITY.

AURORA SURGENS, in alchemy, a phrase used to express the multiplicative virtue of the philo- sophers' stone.

AURUM, Latin, gold. See GOLD, CHEMIS- TRY, and METALLURGY. This metal was in- troduced into medicine by the Arabians, who esteemed it one of the greatest cordials and com- forters of'the nerves. From them Europe received it without any diminution of its character ; in foreign

pharmacopoeias it is still retained, and even mixed with the ingredients from which simple waters are to be distilled. But no one, it is presumed, at this time expects any singular virtues from it, since it certainly is not alterable in the human body. Former chemists endeavour- ed, by many elaborate processes, to extract what they call a sulphur ttnima, or spirit of gold ; but no method is as yet known of separating the com-

ponent. parts of this metal : all the tinctures of it, and aurum potabile, which have hitherto ap- peared, are real solutions of it in aqua regia, diluted with spirit of wine or other liquors, and prove injurious to the body rather than benefi- cial. A place, however, is now given in some of the foreign pharmacopoeias to the aurum fulmi- nans ; and it has been recommended as a remedy in convulsive diseases, particularly in the chorea sancti viti.

AURUM FULMINANS is a dangerous preparation, and should be used with great caution. A scru- ple of this powder acts more forcibly than half a pound of gunpowder : a single grain laid on the point of a knife, and lighted at a candle, goes off with a greater noise than a musket. Dr. Black attributes the increase of weight, and the explo- sive property of this powder, to adhering fixable air. See CHEMISTRY, Index.

AURUM MOSAICUM, AURUM MUSIVUM, a preparation so called from its golden color, made of mercury, tin, sal ammoniac, and flowers of sulphur. It is recommended in most chronical and nervous cases; and particularly convulsions of children. Its dose is from four grains to a scruple. It is also used as a pigment, and for mixing with glass, to imitate the spangles of the lapis lazuli. Mosaic gold is composed of 100 tin + ,“i(r2.) sulphur, by Dr. John Davy; and of 100 tin -f 52-3 sulphur, by Professor Berzelius ; the mean of which, or 100 + />4-2 is probably cor- rect. Jt will then consist of 1 prime of tin ~ 7-37/i + 2 sulphur ❖❖❖ 4‘0.

AURUM POTAHII.V., or tincture of gold; a me- dicine formerly in great request, but at present rarely used. It is prepared by mixing essential oil of rosemary with a solution of gold in aqua regia; and after shaking the vessel, the gold is retained in the oil, swimming on the top. The very name imposes on many people, and gives an opportunity to empirics to cheat them ; for they draw tinctures from ingredients whose colors come near to that of sold, and sell them at an exorbitant rate under this title. This sort of deceit generally succeeds best ; for patients are prepossessed in favor of

such medicines as cost much, carry great names, and have a specious appearance. It often happens that these tinctures produce some good effects, because they can make them with such spirituous menstrua, as comfort the patient, and expel humors by per- spiration ; then the effect is extolled for a miracle, and attributed to the imaginary gold.

AURUM REGIME. See QUEEN-GOLD.

AfRUM SOPHISTICUM, mimic gold, a chemical preparation made as follows : take fine distilled verdigris, eight ounces ; crude Alexandrian tutty, four ounces ; borax, twelve ounces ; salt-petre, one ounce and a half; pulverise and mix them all together, tempering them with oil to the con- sistence of a plaster ; then put a (lerman crucible into a wind furnace, heat it red hot, and putting your mass into it, let it be covered, and the fur- nace filled with coals over the crucible. When the mass is melted, let it cool of itself, then break the crucible, and you will find at the bot- tom a fine regains, like gold, weighing about four oiinivs, w!i,i li being malleable may be wrought into any i'oi .11.

AUS

AURUM YF.GETABILE, Saffron.

AURUNCI, in ancient geography, a people of Latium, towards Campania ; the same with the Ausones, at least so intermixed as not to be distinguishable, though Pliny makes a distinction.

AURUNGABAD, (so called from the Mogul Emperor Aureng-zebe), a province of the Deccan, Hindostan, principally divided between the Mahrattas and the Nizan ; the former possessing about three-fourths of its area, and strictly in- cluding the islands of Salsette and Bombay, be- longing to the British. It is bounded on the north by Gujerat, Candesh, and Berar ; on the east by Berar and Hyderabad ; south by Beja- poor and Boeder ; and west by the ocean ; its length being about 300 miles, and its average breadth 160 miles. Although this province is hilly throughout, it gives rise to no fivers of consequence. The Beemah and Godavery, which have their sources in the same neighbour- hood (about thirty miles east of Poonah), are the principal streams. On the banks of .the former are reared the strongest Mahratta horses, callea the Beemarheddy breed, and the whole province is fertile, particularly in rice. Its natural fast- nesses have been in numerous places fortified by art ; and under the warlike dominion of the Mahrattas have been rendered at once the se- curity and curse of the country. These fortresses are principally occupied by independent chief- tains, who pay a sort of feudal homage to the Paishwa, but are in reality the lords of the soil. The population is about six millions, consisting mainly

of Brahminical Hindoos. Ahmednuggar, Aurungabad, Basseen, Damaura, Dowletabad, and Jalnapoor,are the chief towns. In the article AHMEDNUGGAR it will be seen that an independent sovereignty of that name, which included the greater part of this province, was established here at the close of the sixteenth century. A few years afterwards (1601 to 1630), we find the province called by the name of another principal town, Dowletabad, the seat of the Nizam Shahee dy- nasty, which being taken in 1634 by the Moguls, the government was transferred to Gurka, the former name of the city of Aurungabad. The East India Company's forces at Bombay com- mand the whole of the coast, which swarms with native pirates. See AHMEDNUGGAR.

AURUNGABAD, the capital of the above dis- trict, was, under its original name of Gurka, the chief town of the viceroyalty of the Deccan, and the residence of the emperor Aureng-zebe, while viceroy : a circumstance to which it owes, with the province, its present name. It continued to be the capital of a Mogul soubah until the Nizams withdrew their allegiance from the court of Delhi ; it was then for some years the capital of the Nizam's dominions. At present, the capi- tal having been transferred to Hyderhabad, Au- rungabad is on the decline ; but there is a noble bazaar here for shawls and silks, and a fine ruin, once the palace of Aureng-zebe. The Fakeer's tomb is also admired. It is distant from Poonah 186 miles, and 284 from Bombay. Lat. 19°° 46′ N., long. 76°° 3′ E.

AUSA, a town of Tarraconensis, in the middle age called Ausona, now Vich de Ossona, a town of Cataknia in Spain.

AUSCII. See AUCH.

AUSCI, a people of Gaul, the ancient inhabi- tants of AUCH. See AUGUSTA.

AUSCULTATOR, in ancient customs, a, per- son appointed in monasteries to hear the monks read and sing, and to instruct them how to per- form, before they were admitted to read or chant publicly in the church.

AUSHOFEN, a town in the circle of Suabia, belonging to the house of Austria. Long. 27°° 16′ E., lat. 43°° 15′ N.

AUSI, or AUSENSES, an ancient and very savage people of Libya.

Herodotus tells us that they were unacquainted with marriage, and had all their women in common. The children were brought up by their mothers till they were able to walk ; after which they were introduced to an assembly of the men, who met every three months ; and the man to whom any child first spoke, acknowledged himself its father. They celebrated annually a feast in honor of Minerva, in which the girls divided into two companies, and fought with sticks and stones ; those who died of their wounds were concluded not to have been virgins.

AUSIMUM, or AUXIMUM, an ancient Roman colony in the Picenum ; now Osimo or Osmo, in Ancona.

AUSITJE, AISITJE, or HLsniE, a tribe of an- cient Arabs, supposed by Bochart to have in- habited the land of Uz mentioned in Job. See ARABIA.

AUSKERRY, 1. a district in the island of Stronsay, consisting of four holms ; 2. a small pasture isle belonging to the parish, and three miles from the island of Stronsay ; and on which there are the ruins of an old chapel, and of a house called the Monker, or Monk's house.

AUSONA, in ancient geography, a town of the Ansones.

AUSON, a son of Ulysses and Calypso, from whom the Ausones are descended.

AUSONES, or AUSON n, a people who an- ciently occupied all the Lower Italy, from the Promontorium Circaum, down to the straits of Sicily, but were afterwards reduced to a much narrower compass ; viz. between the Monies Circaei and Massici : nor did they occupy the whole of this, but other people were intermixed.

AUSONIA, the ancient name of Italy, from its earliest inhabitants the Ausones.

AUSONIUM MARE, in ancient geography, a part of the Ionian sea, extending southwards from the promontory Japygium, to Sicily, which it washes on the east, as it does the Brutii and Magna Grgecia on the south and east. It is separated from the Tuscan sea by the straits of Messina.

AUSONIUS (Decius, or Decimus Magnus), one of the best poets of the fourth century, was the son of an eminent physician, and born at Bourdeaux. Great care was taken of his edu- cation, either because his genius was very pro- mising, or that the scheme of his nativity, which had been cast by his grandfather, made them imagine that he would rise to great honor. He made an uncommon progress in classical learn- ing; at the age of thirty he was chosen to teach grammar at Bourdeaux ; and

afterwards pro-

moted to be professor of rhetoric ; '.i which office he acquired so great a reputation that he was sent for to be preceptor to Gratian, the emperor Valentinian's son. He was afterwards appointed consul, by his pupil Gratian, then emperor, A.D. 379 ; and besides the dignity of questor, to which he had been nominated by Valentinian, he was made prefect of the Praetorium in Italy and Gaul, after that prince's death. His speech, returning thanks to Gratian on his promotion to the consulship, is highly commended. He lived to a great age. The emperor Theodosius had a great esteem for him, and pressed him to publish his poems. There is a great inequality in his works, and in his style there is a harshness which was perhaps rather the defect of the times he lived in, than of his genius. According to Lem- priere, he did not take proper time to correct his poems, but hurried them to publication, which may be the cause of many faults. One valuable performance, the Consular Fasti, is now lost He is generally supposed to have been a Chris- tian. The best edition of his poems is that of Amsterdam, in 1671. They were printed at Paris, with a French translation, in 1769.

AUSPEX, a name originally given to those who were afterwards denominated augurs. It is formed from avis, a bird, and inspicere, to in- spect ; auspices, q. d. avispices. Some will hav,, > auspices only to denote those who foretold future events from the flight of birds.

AUS'PICATE, v. & adj.ˆi Lat. aruspex, from AUS'PICE, / avis, a bird, the ob-

AUS'PICY, ssolete spicere, to

AUS'PICIOUS, i look ; to take fa-

AUS'PICIOUSLY. J vorable omens from

birds ; but in a less formal and official manner than by augury. To foretel good fortune, pros- perity, &c. Auspicious is synonymous with fa- vorable, prosperous.

Know thus far forth ;

By accident most strange, bountiful fortune (Now my dear lady) hath mine enemies Brought to this shore , and by my prescience I find my zenith doth depend upon A most auspicious star ; whose influence If now I court not, but omit, my fortunes Will ever after droop. S/iakspeare. Tempest.

None of their kindred met ; the knot they ty Silent ; content with Brutus

auspicy.

May's Lucan, book ii. Thus were their loves autpiciously begun, And thus with secret care were carried on.

Dryden's Fables.

Skilled in the wing'd inhabitants of air, What auspices their notes and flight declare O ! say ??? for all religious rites portend A happy voyage and a prosp'rous end. Dryden,

But so may he live long, that town to sway, Which by his auspice they will nobler make, As he will hatch their ashes by his stay. Id.

AUSPICIUM, AUSPICY, the same with AUGURY. Servius, indeed, distinguishes between auspicy and augury; making auspicy comprehend the consideration of all things ; augury only of cer- tain things.

AUSPITZ, a town of Moravia, in the circle of Brunn, belonging to the prince of Lichten- stein. Here are held large cattle markets which

are attended by a number of graziers from Hun- gary. Population 2215. Forty-two miles S.S.W. of Olmutz.

AUSTER, one of the four cardinal winds, as Servius calls tbem, blowing from the south. AUSTE'RE, \ Lat. austerus; from avu>, AUSTE'RELY, f I dry; because harsh tastey AUSTERE'NESS, (dry the palate. Harsh, dis AUSTER'ITY. J agreeable to the moral taste, rigorous, severe.

My unsoil'd name, th' cauterenets of my life, May vouch against you ; and my place i' th' state Will so your acrusatiou overweigh. Shakspeare.

Now, Marcus Cato, our new consul's spy, What is your sour austerity sent t' explore ?

Ben Jonson.

What was that snaky-headed Gorgon shield That wise Minerva wore, unconquer"d virgin, Wherewith she frecz'd her foes to congeal'd stone, But rigid looks of chaste austerity, And noble grace, tliat dash'd brute violence With sudden adoration and blank awe 1 Milton.

Th' austere and pond'rous juices they sublime Make them ascend the porous soil, and climb The orange tree, the citron, and the lime.

Blackmorc. Compos'd in gait,

Austerely grave and thoughtful, on his shield The democratic majesty he bore Of Athens. Glover's Leonidas, book vii.

ArsTERi: implies also rough or astringent. Thus an austere taste is surh a one as constringes the mouth or tonkin.' ; as that of unripe fruits, harsh wines, vitriol, alum, iS.c. Austere sub- stances, says Mr. Chalmers, differ

from acerb ones, in that tl;i-y constringe the mouth and tongue less, ami are void of acidity.

AUSTERLITZ, or SI.A.WKOW, a small town of Moravia, in the circle of Brunn, twelve miles east of Brunn, belonging to the prince of Kaunitz Rielberg. Population about 1(320. This town will be loner memorable in history for the great battle fought near it on the 3d of December, 1R05, the anniversary of Buonaparte's coronation, between the French under him, and the united forces of Austria and Russia, under their respec- tive emperors. The armies it appears were nearly equal, being about 70,000 men each. Buonaparte, by feigning a retreat, drew the allies 1o a spot which he had selected for giving battle; ;.iid he bivouacked on the iield, after having spent most of the night in jjivinu' orders. The b;;tt'.e commenced with the cknvning light. After a cannonade of several hours the allied right and WITO routed; and their left, which had M ::...! *successful m the outset, was compel- led toghc way. The deR-nt was signal; but the aiyroaeh 01 'iiKrht prevented pursuit ; the state of ihu roaiU compelled the allies to abandon n.est oT their artillery, ;.ml forty standards; all ti:'1 i ::,e and i-muiuiition of the allies, and '2o pii es 01 cannon, remained in the hands of 'h'.' i itmh. The 1 reneh are supposed to have io-t i:i,0uu hien in killed and wounded; and t:ie Austro-Uiissians three tinu-s the number. It i> certain that so many wounded were left on the field by the alliis, that tlu-y could not all be dressed until two days after the battle. Near this place an interview'immediately took place be- Iween the emperor of Austria and Buonaparte, in*

a mill, and the preliminaries of an humiliating peace were agreed to. But the emptror Alex- ander refused to become a parly to it, and suc- ceeded, though under every difficulty, in effecting his retreat homeward.

AUSTIN (William), an English author, was a barrister of Lincoln's Inn. He wrote a book en- titled Haec Homo, or the Excellency of Women, 12mo. ; in which he seems to have borrowed very freely from Agrippa's De Nobilitate at Pra- cellentia Fceminei Sexus. He wrote also Medi- tations on the principal Fasts and Feasts of the Church, which were published in folio, 1637, after his death.

AUSTIN (Sr.) See AUGUSTINE, ST.

AUSTRALASIA, or AUSTRALIA, is a new and fifth great division of the globe, originally suggested by a learned foreigner, M. le President de Brasses of Paris ; but whose principal parts have been explored- by Englishmen, and which has been colonised solely from this country. It comprehends a tract of ocean, bounded on the north by the equator, east by a line drawn on the 186th degree of east longitude, to the 55th degree

of south latitude, south by the 55th parallel, and west by a line drawn from the north-west Cape of Hapau, on the east of the islands of Mysol, Timorlaut and Ceram, to the 65th degree of east longitude on the 55th parallel ; making an irregular four-sided figure, extending upwards of 5000 miles in average breadth from east to west, and about 3200 miles from north to south.

Australasia is, therefore, a maritime division of the globe, in distinction from the older terrene divisions of Europe, Asia, Africa, and America; it is, altogether, a classification of islands, having no one continent of this name, including, as the other divisions of the world, various kingdoms circumscribed by one shore ; so far it is an anomaly in geographical classification. ‘ But in this immense extent of regions, which are to form the object of researches about to be de- tailed,’ says M. de Brasses (Histoire des Navi- gations aux Terres Australes), ‘ how numerous are the different countries, climates, manners, and races of mankind ! The sight would be dazzled and confounded if care were not taken to re- lieve it, and fix its attention, by divisions rrarked from distance to distance.’ On these grounds he proposed, together with a classification of the islands of the Pacific, under the name of Poly- nesia, to include New Holland, New Guinea, New Zealand, and the islands in their neigh- bourhood, under the collective name of Aus- tralasia, an arrangement that has been latterly adopted by most respectable writers. Some have preferred the term Australia, as more con- sonant to the primitive appellation, Terra Aus- tralis, or Southern Land.

The progress of the discovery of this immense region may be correctly united, with the commcn features of its various parts, under this collective article. The history of particular settlements will be found under BOTANY BAY, NEW HOL- LAND, NORFOLK ISLAND, VAN DIEMEN’S LAND, &c. in their alphabetical positions in our work. We present the reader with a Chronological Table of the disco very of the islands of Australasia.

AUSTRALASIA.

A Chronological Tttlile of the discovery of the Islands of Australasia.

**

NAME.

WHEN DISCOVERED.

BY WHOM.

INHABITANTS.

1. Papua or New >

1526.

The Portuguese, under D. Jorge de Meneses.

Black Negroes ; much resem- bling those of Guinea.

Guinea. y

i

r

Supposed to

be uncertain ???

D.'tto ; a remarkably barba-l

Marked in a

The Dutch, in the Duy- rous race; ??? ' all of them ofj

Map in the Bri-

xen yacht. About the

the most unpleasant look,!

2. New Holland, ??? <

tish Museum in 1542 ; first au-

same time the Spani- ards visited it under

and the worst features of any people I ever saw,

thentic account

Torres, and F. deQui-

though I have seen a great

of its being

ros.

variety of savages,' says

visited, dated

Dampier.

' ' L

1606.

3. Solomon's Islands.

-

•

Of which the prin-

cipal are ???

Buonavista, Florida, Galera, Guadalcanal-,

Santa Ysabel,

> 1567.

The Spaniards, under Alonso de Mandana. Not again visited until by Carteret, in 1767.

Inhabitants, cannibals. ' ??? Many of the islands very fertile. Extend from S. lat. 5?? to 11??, E. long. 155?? to 162?? 30'.

San Christoval,

San Catarina,

Santa Ana,

4. New Hebrides,

^

According to Cook,

Tierra des Espiritu

Santo,

St. Bartholemew,

Mallicola,

Isle of Lepers,

Inhabitants, more civilised, at

Aurora,

Tanna the negro character

Whitsuntide,

The Spaniards, under F.

disappears. The country

Amtrym,

de Quiros, and L. V.

very fruitful and agreeable ;

Apee,

IfiOfi

de Torres. ??? Explored

and, in some of them laid

Paoom,

> l.V\/U.

by Captain Cook in

out in well fenced planta-

Three Hills,

1774, who gave them

tions. The Terra del Es-

Sandwich,

their present name.

piritu Santo, the principal ol

Montagu,

the group, lies in S. lat, 14⬚⬚

Hichinbrook,

30', E. long. 167⬚⬚ 30'.

Shepherd's Isles,

Erromango,

Tanna,

Inmer,

Annatom,

Erronan,

'

Inhabitants of New Britain

and Ireland black negroes.

5. New Britain, New

⬚⬚⬚

Inhabitants of the Admiralty

Ireland, &c. ; a

Isles of a lighter color, and

group not fully ascertained. To the

I 1616.

The Spaniards, under Le Maire and Schouten.

approaching the Malay cha- racter. All the islands fer-

N. W. are the Ad-

tile and well watered : lying

miralty Isles.

in a crescent, whose centre

lies in S. lat. 50□□, E. long.

150□□.

6. Van Diemen's Land.

f 1642□□□ / as an island)in 1798.

The Dutch, under Abel Jansen Tasman. □□□ The British, Capt. Flinders and Mr. Bass.

A similar race. Called after the Dutch governor of the East Indies, Anthony Van Diemen.

r

Inhabitants remarkably strong,

7. New Zealand, hav- ing to the east Chat- ham Island.

:

\ 1642. < Chatham I island in V.1791.

The Dutch, under Abel J. Tasman. □□□ By Mr. Broughton when with Vancouver.

active, and barbarous. Have at the same time singular traces of civilisation amongst them.

A Chronological Table of the Discovert/ of the Islands of Australasia □□□ continued.

NAME.

WHEN DISCOVERED.

BY WHOM.

INHABITANTS.

8. St. Paul and Am- sterdam

The Dutch, under Vla- ming.

Uninhabited. Amsterdam a volcanic production, if not the crater of an immense volcano, scarcely cool, and

9. Kerguelen's Land, or Island of Desola- tion . . .

J 1772.

The French under M. de Kerguelen.

abounding with hot water springs. Seals are caught on the shore in large quantities.

Uninhabited and barren.

10. New Caledonia.

C

< 1774.

The British, under Capt. Cook.

Inhabitants, affable, honest, and of light complexion. The country comparatively barren, occasionally laid out in plan- tations.

We have thus exhibited the leading features of this extensive division of the globe, in the order in which they became known to Europe ; but must not omit to notice the coral reefs and islets with which the Australasian seas abound. These are seen in every league of sea, and ac- cording to Dalrymple, in ' all stages' of their formation. Capt. Flinders, who was wrecked on one of them, conjectures, ' that when the ani- malculre, which form the coral at the bottom of the ocean, cease to live, their structures adhere to each other, by virtue either of the glutinous remains within, or of some property in salt water ; and the interstices being gradually filled up with sand and broken pieces of coral washed by the sea, which also adhere, a mass of rock is at length formed. Future races of these ani- malculae erect their habitations upon the rising bank, and die in their turn, to increase, but principally to elevate, this monument of their wonderful labors.' It is pretty well authenti- cated that these submarine laborers uniformly build the outer part of their erection perpen- dicularly from the

very bottom of the deepest seas. As it rises to the surface, and out of the water, salt plants, vegetable matter of various descriptions, floating wreck and other accumula- tions attach themselves to it ; ‘ we had wheat- sheafs, mushrooms, stag’s horns, cabbage-leaves, and a variety of other forms, glowing under water,’ says Capt. Flinders, ‘ with vivid tints of every shade betwixt jrreen, purple, brown, and white.’ The dung of birds and the various seeds and other food they occasionally scatter, are fruitful sources of the growth of these extraordi- nary productions of the deep; some are seen considerably below the water, others just ap- pearing above its surface ; some as barren rocks with no indications of soil ; others with a thin layer of earth, or a few weeds on the highest part ; and others, auain, well clotned with soil and even with timber. The recent navigator of these seas, whom we have quoted, describes himself as having to seek fourteen days, and sail upwards of 500 miles amongst that range of these reefs and islets which environs the eastern coast of New Holland, before he could find a passage through then) to the open sea.

In no part of the globe can greater extremes of barrenness and fertility occur than in the various islands comprehended in Australasia. On the shores of New Holland, its most pro- minent feature, we find fruitful plains covered with verdure eastward, and on the south and south-western coast nothing but naked hillocks of sand ; ‘ so uniform,’ says M. D’Entiecasseaux, ‘ that the most fruitful imagination could find nothing to say of it.’ This island, indeed, if such it is to be called, almost equal in size to the whole of continental Europe, presents of itself an unequalled and almost unexplored field for geological enquiry ; the outline of the western coast is not filled up ; and some recent journeys into the interior, from our colony on the eastern shore, have disclosed an extensive series of as promising lands, watered by some noble rivers, within 140 miles of Sidney, as are found in any part of the world. See NEW HOLLAND.

The natives of Australasia are for the major part, of a decisively African or negro character ; and nowhere is human nature found in a more degraded state. An enormous head, flat coun- tenance, and long, slender extremities, mark their physical conformation, together with an acuteness of sight and hearing ; but, often half- starved, their strength is generally less than that of the inhabitants of other climes. In no part of these seas is the population great. Not more than 20,000 inhabitants have been seen on all the coasts of these islands taken together. Of natural affections, little, of course, appears, and of religion, absolutely nothing. Mothers have scarcely the regard of the brute creation for their offspring. They will commonly procure abortion by violent means ; and sometimes adopt the horrible expedient of burying their children alive, to be freed of the trouble of them. An inhabitant of New Holland knocks down the woman of his choice with a club, in the pre- sence of her friends, and takes her into the woods, while in

a state of insensibility. Here the alliance is preserved as long as he finds it convenient ; he then deserts her for a new wife, who is similarly obtained.

No quadrupeds larger than the kangaroo are found here, and none whatever in many of the

I .1-. li-li Miles. o so to >io 80 lou

AUSTRIA.

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islands. This animal was first described by Captain Cook, who found it while with a shooting party on the coast of New South Wales in 1770. It is peculiar to this part of the world, but has been found to breed well in England. There is also a small animal peculiar to Australasia, called the wombat, of the bear tribe, but re- markably tame. The most extraordinary animal, however, of this, or perhaps of any other region, is the ornithoryneus paradoxus, or duck-bill ; a quadruped with the beak of a duck. Dr. Shaw was so astonished at this apparent mixture of bird and quadruped in its formation, that when the first specimen was exhibited to him at the Bri- tish Museum, he suspected it to be an attempt at imposition. ‘ Nor is it without a minute ex- amination,’ says this distinguished naturalist, ‘ that we can persuade ourselves of its being the genuine snout of a quadruped. The body is de- pressed, and has some resemblance to that of an otter in miniature; it is covered with a very thick sort of beaver, like fur, and is of a mo- derately dark brown color above, and of a sub- ferruginous white beneath, with some variety as to intensity of color in different animals. The head is flattish, and rather small than large ; the tail flat, furry, like the body, rather short and ob- tuse, with an almost bifid termination ; it is broad at the base, and gradually lessens to the tip. The general length of the animal, from the tip of the beak to the end of the tail, seems to be from thirteen or fourteen, to eighteen inches. The legs are very short, terminating in a broad web, and claws which on the fore feet are five in number, straight, strong, and pointed ; but on the hind feet in the male, are six claws, the sixth or in- terior one being seated much higher up than the rest, and resembling a long sharp spur.’ Dr. Shaw first described this animal in his Naturalist’s Miscellany, under the title of Platypus animus.

Numerous tribes of beautiful birds are seen here. The bird of Paradise, so long spoken of in Ilurope as wanting feet ; paraquets, cocka- toos, a singular species of cassowary, and a black swan. Immense whales, seals, and dol- phins, crowd upon the shores, where a large cuttle fish is sometimes seen, having the ap- pearance of a cask upon the water, and stretching out its tentecula to the length of seven or eight feet. The tribe of

molluscas is also singularly rich. One species of marine fucus has been found to reach from the bottom of the sea to the surface, on a stem from 250 to 300 feet in length.

The botany of this region is as curious and novel as any other of its features. Mr. Brown,

who accompanied Captain Flinders, and who had the magnificent botanical collections of Sir Joseph Banks under his charge, has arranged a Flora Terrse Australis, containing 4,200 species referable to 120 natural orders, eleven of those orders containing about half the species. In Van Dieman's Land, the gum-tree (of which 100 different species are found) not unfrequently at- tains the height of 150 feet, with a girth near the base of from twenty-five to forty feet. The gum of this tree is medicinal, and that of one spe- cies makes very good pitch. It also furnishes, together with the sasuarina, excellent timber for ship-building, agricultural implements, or do- mestic furniture.

There can be no question that the supposed existence of an immense continent in the Sou- thern Ocean first invited the navigators of the sixteenth and seventeenth centuries to explore these important islands ; nor was the idea of its existence wholly abandoned until the discoveries of Captain Cook. The name of Terra Aus- tralis Incognita was given to this feature of science ; and upon no point were geographers mo re agreed than respectingits existence, although its limits were variously defined. Even in the year 1770, ' the great southern continent' was declared by Mr. Dalrymple, in his Historical Collections, to be no longer a matter ' for dis- covery ;' that ' it extended from 30►► south, to the pole ; and that the number of its inhabitants was probably more than 50,000,000 ;' while ' the countries intermediate' between the east and west points, ' equal in extent all the civilised part of Asia, from Turkey to China inclusive.' Thus the supposed extension of the East Indies round to the west, allured Columbus to the ar- duous enterprize that resulted in the discovery of the western world ; and thus some harmless errors, pursued with humility, are kindly allowed by providence to lead us to truth.

AUSTRALIS CORONA. See CORONA AUSTRALIS.

AUSTRALIS PISCES, the Southern Fish, is a constellation of the southern hemisphere, uot visible in our latitude : whose stars, in Ptolemy's catalogue, are eighteen, and in the Britannic catalogue, twenty-four.

AUSTRALIZE. From ouster, the south. To point towards the south.

Steel and good iron discover a verticity, or polar faculty ; whereby they do

septentriate at one extreme, and australize at another. Brown' Vulgar Errour*.*

AUSTRASIA, the ancient name of, 1. Lor- raine, in France; and, 2. of Westriek, in Ger- many.

AUSTRIA.

AUSTRIA, in geography, a country of Ger- many, the Upper Pannonia of the ancients, de- riving its modern name from the French and Italian pronunciation of (Esterich ; in High Ger- man, (Esterreich; a name which signifies the eastern kingdom, alluding to the geographical position of the province with respect to the more western parts of Germany, and which was originally applied to the circle of Austria, the patrimonial possession of the first grand dukes.

The CIRCLE OF AUSTRIA is the largest of the ten circles or divisions of the German empire, bounded on the east by Hungary, south by Italy and Croatia, west by Switzerland, and north by Suabia, Bohemia, and Moravia. It comprehends Austria Proper, Styria, Carinthia, and Carniola dutchies, the country of Tyrol, the principalities of Brixen and Trent, part of Friuli and the Littoi ale, Voralberg, certain districts in Suabia, and several domains belonging to the

Teutonic order ; together with Saltzhurg and part of Passau, which have been added since 1802. Of this extensive circle, the four general divi- sions of Upper Lower, Anterior, and Interior Austria have been formed, corresponding with their administration by the chancery at Vienna; the whole including an area of 29,940 square miles, and a population of nearly 5,000,000. The ARCHDUCHY OF AUSTRIA, otherwise called Austria Proper, or the Hereditary States of the house of Austria, forms the upper and lower di- visions of this circle, into which it is divided by the flowing of the river Ens. It is bounded on the north by Bohemia and Moravia, on the east by Hungary, on the south by Styria, and on the west by Saltzburg and Bavaria, compre- hending an area of 15,392 square miles, and a population of nearly two millions of inhabitants. Of the two divisions of this archduchy, Lower Austria is the most important, containing, on a surface of 7788 square miles, thirty-eight cities, 241 towns, 4327 villages ; and by the last census, 1,100,000 inhabitants. It is made to consist of four subordinate divisions, lying upon the two opposite banks of the Danube. On the south bank the quarter ' above the forest of

Vienna,' and ' the quarter below the forest of Vienna.' On the north bank the quarter 'above the Mannhartsberg,' and ' the quarter below Mann- hartsberg.'. Upper Austria, containing an area of 5104 square miles, and including fourteen cities, ninety-two towns, (3411 villages; and, according to the late census, 629,945 population; is also di- vided into four subordinate territories, those of

the Traun, Hansruck, and Inn, on Jie south bank of the Danube, and that of Mulil on the north. The archdukes of Austria were originally ex- empt from the jurisdiction of the high courts of the empire, took precedency of princes of the blood, and had the power of creating counts, barons, and other nobility. According to the Pragmatic sanction of 1713, the succession to this archduchy is hereditary, females not ex- cluded. The revenue is about 24,000,000 florins, 20,000,000 of which are contributed by the country below the Ens. The states, how- ever, assemble but seldom, and have but a very contracted influence in the management of na- tional concerns.

The EMPIRE OF AUSTRIA, besides the pro- vinces of the same name, including the arch- duchy and other territories described above, comprehends many ancient kingdoms and states which were originally independent. It is situated in the middle of eastern Europe, and is bounded by Piedmont, Switzerland, and Bavaria, on the west ; Bavaria, Silesia, and Poland on the riorth ; Russia, Moldavia, and Wallachia, on the east; Turkey, the Adriatic, and Middle Italy on the south. The northern part of the empire stretches into Bohemia, and the southern into the ter- ritory of Cattaro, in the region of Dalmatia. It has received several augmentations of territory at different periods, and includes a number of na- tions, all differing in their lineage, customs, languages, and habits, but forming one solid and compact political body, and subsisting at present under one general name.

The following table presents a view of its great component parts, as settled by the last peace, or in 1816 : ◆◆◆

Computed Re-

COUNTRIES.

Square Miles.

Inhabitants.

venue in Ster-

ling Money.

Circle of Austria ....'....

45,760

4,222,700

⬜⬜4,000,000

Saltzburg, Berchtolsgade, and Passau . . .

4,378

255,000

140,000

Bohemia

20,900

3,112,000

2,000 000

Moravia

10,296

1,364,000

700 000

Austrian Silesia

1,826

286 000

150 000

Galicia, with the Bukowine

53,400

4,934,000

1,600,000

Hungary, including Transylvania, Sclavonia, > and Austrian Croatia 5

130,920

9,400,000

1,800,000

Venetian territories, including Istria . . . Dalmatia, with Oitlaro, Ragusa, and the islands

15,136

8,052

? 2,894,000

1,500,000

Lombard), viz. the territories of Milan and? .Mantua 3

4,400

1,350,000

400,000

Lordships of Valteline, Bormio,and Chiavenne.

1,320

108,700

20,000

Iota! in round numbers

300,000

28,000,000

12,000,000

In Ioi8, .Mr. Lichtenstern states the extent of the empire, exclusively of the dependent states, at 250,001') square !'.i;_lis!i miles; and the population at28,207,8H2.

The natural features of Austria are very rnngnifietnt : the southern parts

*highly romantic : the si . :.' s and landscape's of Carinthia, Carniola, and ! 1al:;*atia, ha\e long hern celebrated as M>;;:I oi i!,!1 most ni.Tli ct in the Alpine regions;*

whilst detached hills and chains of mountains bulge in irregular figures all over the northern dis- tricts, uniting themselves with the great Carpathian chain, the natural boundary of -Hungary and Transylvania. But the Tyrol stands pre-emi- nent for its rich variety of picturesque scenery. Bold mountains and denies, lakes and glaciers, cataracts and cascades, rivers, woods, and val- leys, shaded with great beauty, bestowed in the

different grounds of the picture, irregularly grouped and brought, unite in the same sweep of prospect, and overwhelm the mind of the spec- tator with unutterable emotions.

The highest mountains belong to the central part of the empire ; namely, to Styria, Carin- thia, and Carniola, where they frequently reach the height of 4000 feet. The snowy mountain, in the hereditary states, is of vast altitude, and may be seen from the ramparts of Vienna every clear day. The elevated ramifications of the Alps and Carpathian mountains, with the cir- cular barrier of Bohemia and other ranges, spread themselves over very extensive regions of the Austrian empire, and under various names and forms stretch from the borders of Switzer- land to the confines of Russia.

The interior of Austria is intersected by noble rivers. The Danube is altogether, per- haps, the most rapid and majestic. This river, winding its course from the north-west to the south-east, divides the whole empire into two distinct parts. It receives into its bosom up- wards of forty tributary streams before it enters the Austrian dominions, and afterwards an acces- sion of one hundred more before it enters the Eux ine Sea. The rivers that empty themselves into this grand emporium ef waters are many of them of considerable magnitude, and chiefly take their rise in the mountains already enumerated. The Thesis originates in the eastern part of the Car- pathian range, and is at first a fine, clear, and rapid stream. It flows four degrees east longi- tude, and then turning south, crosses Hungary, receiving the Maros, Koros, and othei tributary accessions, and enters the Danube near the city of Belgrade. The river Save is formed by nu- merous mountain torrents descending from the summits of Tyrol. It flows along the southern border of the Austrian dominions, and enters the Danube a little below the Thesis. The Drave originates in the streams and cataracts of the mountains of Carinthia, and receives the Muhr at Legrad, which conveys the waters from the northern summits of Styria. Crossing these two beautiful provinces, and forming the sepa- rating boundary between Croatia and

Hungary, it falls into the Danube below Esseck. The Inn, rising in the elevated regions of the Swiss Alps, and descending to the north-east through the kingdom of Bavaria, forms the western boundary of the empire, and enters the Danube at Passau. The Raab and Leytha rise in the western parts of Hungary, and fall into the Save ; the former near Komora, and the latter at Presburg. The Morava, or March, from which Moravia derives its name, de- scends fiom the northern extremity of that pro- vince, and proceeding south, falls into the Da- nube west of Presburg. The Mulda rises in the southern regions of Bohemia, and taking a northerly direction, flows into the Elbe. The southern parts of Austria are watered by nu- merous important streams and rivers, which originate in the chain of mountains that encir- cles the ccrth of Italy, are cherished by the overflowings of those lakes that lie upon its bosom, and are poured over the summits of that lofty range in falling torrents and beautiful cascades.

The Adige and the Po will be described in our view of Italy. The Piave rises in the over- flowings of the sub-alpine lakes, and descends through the territory of Brixen and the province of Treviso, into the Gulf of Venice. The Tesino rises in St. Gothard mountain, and forms the south-western boundary of the Austrian ter- ritory, flowing through the country of Gris- sons, the lake of Maggiore, and the Milanese territory ; it washes the walls of Pavia, and falls into the Po. The Adda rises in Mount Braulis in the country of the Grissons, and after flowing through the valley of Valteline, falls into the lake of Como, and re-issuing from the south- east arm of that basin, enters the Po near Cre- mona. The Oglio rises in the Val Camo- nica, and bending to the south, flows through Venice and lake Isero to the duchy of Milan, and then winding south-east, crosses the duchy of Mantua, and falls into the Po a few miles east of the Adda. The greater part of the Aus- trian rivers are too rapid, and too much impeded by rocks and waterfalls, to admit of any exten- sive navigation ; much, however, has been ef- fected by canals, and plans of the most gigantic kind have been formed for connecting the great rivers with each other, and thus opening a com- munication between the interior of Austria and all the maritime kingdoms of Europe.

The lakes of Austria are numerous, but are inferior to those of Russia and Switzerland. They chiefly lie upon the tops of mountains, or pent up within the valleys and intersections formed by the bold ridges which characterise the scenery. Those on the south side of the great Alpine range are considered among the grandest specimens of picturesque beauty found in Europe. They form the distinguishing features of the land- scape, and furnish that delightful charm which so bewilders and astonishes the traveller. The chief are Maggiore, or Lucarno, Lugano, Como, Lecca, Iseo, and Gar da. Maggiore is, from its situation and figure, regarded as the most beautiful. It lies embosomed in hills, adorned with orchards, nurseries,

and vineyards, and has its summit shaded with dark thick forests of chestnut-trees. The banks are spotted with co- vered avenues in trellis-work, and are laid with numerous small sheets of water, while the lake itself presents a clear greenish surface, broken by beautiful islands of different figures and di- mensions, embellished with numerous temples and gardens. Lake Como is almost equally delightful. It lies among mountain scenery perfectly romantic, and is celebrated for an in- termitting spring near Tarno and the ancient Caves of Verena. The lake Lago di Garda is diversified with small islands, capes, promon- tories, and peninsulas, and lies sunk in hills richly adorned with vines, lemon, orange, olive, and other fruit-trees. On a peninsula of that Jake lies the ancient ruins of Sirmis, so highly celebrated by Catullus. The small, but beautiful Iseo, is less than the other lakes, but lies amid the same alpine summits, and partici- pates of the same delightful scenery.

The climate of Austria is various, and in ge- neral salubrious, except in the neighbourhood of the plains and marshes where the miasma often

proves fatal. In the southern regions it is warm, and produces the wines and fruits commonly found in the upper regions of Italy ; but in the northern parts, comprising Gallicia, part of Hungary, Bohemia, and Moravia, with the whole of Austrian Silesia, the cold is often severe.

The soil of Austria is also various, including almost every species from the most barren to the most fertile. Sandy plains are frequently found, in which nothing can grow ; whilst the banks of the Po and Danube are, in point of luxuriance, scarcely to be equalled. Of the land of Austria not less than 24,000,000 joch, each about an English acre and a half, is occupied by forests. These are in general of the finest timber and of the greatest importance to the empire. That of Belevar in Hungary, situated on the Drave, consists for the most part of different species of oak trees, thousands of which, at a considerable distance above the root, are seven feet in diameter, and continue nearly the same size to the height of thirty, forty, and even fifty feet, without throwing out a single branch. But though Austria is wholly, from its situation, an agricultural empire, that science is imperfectly understood; and the late improvements are scarcely known. Even endeavours for the more extensive promotion of agriculture have been un- successful, owing to the want of a better mode of tenure and a better understanding between the cultivators and the proprietors. The pro- ductions of some parts of the empire are never- theless numerous and excellent, embracing all that can administer to the necessaries and even

luxuries of life. Austria Proper yields corn, wine, and fruits. Bohemia pulse, grain, hops, &c. Hungary produce millet, maize, and rice. The valleys of Carniola produce oil and excellent wine, with fruits, millet, and flax; while the sub-alpine regions yield all the productions of southern climes, abounding in oranges, lemons, vines, peaches, rigs, and tobacco. From a recent calculation by M. Blumenbach, it appears that the present quantity of arable land in Austria is about 43,582,000 acres; of which, allowing one-third for fallow, there remains 2fJ,054,700 productive acres; and of grain alone the annual produce has been calculated at 300,000,000 Winchester bushels, or about 12‘4 for every acre. The land in Austria devoted to the cultivation of wine is about 2,324,660 acres, and the produce about 493,109,565 gal lons, being about 212 gallons per acre; besides which, the vineyards of Sniyrmiam alone yield 70,000 timers of spirit, distilled from the grapes, after the wine has been drawn from them, each nimer equal to fifteen English gallons; and the same spirit is produced in the other provinces in equal proportion. The whole value of the vege- table production of his imperial majesty’s domi- nions has been estimated at the annual sum of ►►*

The domestic animals are chiefly horses, cattle, buffaloes, sheep, swine, &c. Efforts have been made to improve the breed of horses, by the imioiluction of the Arabian and other species un.on-st them, which have been commonly suc-

cessful. The emperor established a breeding- stud at Mezbhegyes in Hungary, about the year 1783. It occupies four commons, containing 63,000 English acres, employs 500 men, and furnishes the army alone with 1000 horses an- nually. Attention has likewise been paid to the improvement of sheep, and of the wool imported to England, as Saxon, a great part is the produce of the Hungarian flocks. The cattle are mostly of a bluish slate-color ; they feed chiefly in the forests, where they are protected from the heat of the sun, and are a considerable source of wealth to the inhabitants. The chief wild ani- mals of Austria are those common on the Euro- pean continent, consisting chiefly of wolves, boars, lynxes, &c. The chamois and the marmot are common.

Of the feathered tribes may be enumerated bustards and pelicans, and some species of the falcon. A few birds are also found upon the mountains of Carniola, which are peculiar.

The mineral riches of Austria are considerable, and are more varied and important than those of most other states in Europe. Near Kremnitz, in Hungary, are mines of gold and silver. Silver mines are also found in Chemnitz, about twenty miles south of the latter. Schmelnitz and Her- rengund contain valuable mines of copper. An- timony, coal, salt, and

alum are also found in different parts of the empire. The opal is a mi- neral peculiar to Hungary, and as a gem is held in high estimation throughout the east. It is found in the mines of Kzerweriza, east of Kremnitz, in all states and qualities, from the semi-opal to the finest and most valuable. Gold ore is obtained of several kinds. The gray gold ore is found in the Najiag, north-east of Deva, and is peculiarly rich. The white gold ore is found a few leagues north of Karlsburg. To the west of the same town are mines of the same metal, in the vicinity of Zalantha. To the north of the province are those of Kapnich, and in the southern parts fresh gold mines are also said to have been re- cently discovered. Bohemia contains ancient mines of gold, silver, copper, and lead, in which are found perhaps the finest garnets in the world. Styria produces the finest steel ; and mercury is said to be found in many parts of the empire. The Austrian mines altogether employ more than 35,000 persons, and the annual produce has been calculated at 2100 marks of gold, 93,000 of silver, 62,000 centvers of copper, 44,000 of iron, and 23,000 of lead. Excellent marble, and also mineral springs, are common in many parts of Austria.

Vienna, the capital, and centre of its commerce, lies near the site of the ancient Vindobona, to- wards the eastern confines of Germany, on a plain where the Vien falls into the Danube. The whole city approaches to the figure of a cone, of which the apex is formed by St. Stephen's church, and the circumference by the basis of the exter- nal lines of the fortification. The church of St. Stephen is the chief ornament of the city : it has a beautiful spire covered with fretwork, and a roof distinguished by the finest Mosaic tiling. This edifice is closely connected with the history of Austria ; and their chief princes, heroes, and sages, sleep within its walls. The church of the

Auˆustines, and the imperial palaces, attract con- siderable attention.

Pra

The chief manufactures of Austria are cotton, thread, linen, lace, silks, stuffs, stockings, spiritu- ous liquors, brass, iron, and steel; agricultural and kitchen utensils, glass, porcelain, and earthen- ware. The manufacture of some of these is confined to ˆparticular districts ; cotton is manu- factured chiefly in Austria Proper, where the British machinery and improvements have been introduced, and no fewer than 360,000 persons are constantly employed. Linen is manufactured chiefly in Bohemia and Moravia, although some of the finest qualities are obtained from Austrian Silesia,

where upwards of 80,000 pieces are pro- duced annually. The iron forges of Austria are about 1000, and are chiefly in Bohemia, in the country near the Enns, and in Styria. The last of these contains 200 of them, and produces 17,000 tons of wrought iron and steel annually. The steel ware of Carlsbadt is in high repute in many parts of Europe. Glass and porcelain manufactures are carried to a considerable ex- tent in several parts of the empire ; of the former there are no fewer than 170 works; nearly one half of which are in Bohemia, where magnificent services and beautiful highly finished lustres are made. Plate glass is carried to great perfection at Neuhaus. Leather, gunpowder, tobacco, sugar, and cinnamon, receive considerable atten- tion in several districts; and the jewellers of Vienna are much renowned for polishing pre- cious stones.

From a jealousy of foreign manufactures there is no great fair held in the Austrian states, except at

Botzen, on the Italian frontier; but several mar- kets have been instituted for the interchange of domestic commodities. The rivers of Austria in some parts, greatly facilitate and improve the inland trade, whilst the great commercial roads afford the means of supplying even the secluded inhabitants of the Alps with all the comforts and conveniences of life. The chief imports of Austria consist of the raw materials, as wool, cotton, raw silk, drugs, oil, rice, and spices, received chiefly from the Levant. They export their own manufactures. Austrian consuls have been placed about the Levant and other parts of the Mediterranean, under the protection of Tri- este and Constantinople, for the advantage of commerce; and the Greek merchants, who trade with them, are obliged, as a security to the state, to have a certain proportion of visible property in the empire.

The established religion of Austria is the catholic, but since the time of Joseph II. full toleration has been granted to all religious pro- fessions ; and in Hungary, Transylvania, and Sclavonia, members of the Protestant and Greek churches are numerous, and are settled in the enjoyment of considerable privileges. The ec- clesiastical establishment has nine archbishops, viz. those of Vienna, Gran, Kolocza, Prague, Lemberg, or Leopold, Olmutz, Layback, Udina, and Milan. Under these there are above thirty Catholic bishops, and six of the united Greek church. The archbishop of the pure Greek church has his seat at Carlowitz, in the eastern part of Sclavonia, and has nine suffragans under him. The archbishop of Gran is the metro- politan of Hungary, and by virtue of his office is lord lieutenant, primate, and chancellor of the kingdom. He has power to create nobility within his own archi-episcopal dominions, and pos- sesses an annual revenue of ►►36,000 sterling. The emperor is considered as the head of the church, and in Hungary is considered as pope. He appoints bishops, regulates their incomes, esta- blishes or suppresses monasteries at his

pleasure, and frequently applies their revenues to other purposes.

In point of literature Austria is, at present, greatly behind the other provinces of Germany, owing to the unpolished state of the languages; their want of connexion with the more refined and classical tongues of Europe, together with the restrictions of government. The influence of bigotry, too, has often blasted the bud of genius, and neutralized every effort to promote its deve- lopment and perfection. There are, however, a few names of eminence in various departments of knowledge ; and the arts and sciences are now said to be upon the advance in Austria, but in the fine arts, it would be difficult to find an eminent sculptor or a good painter. Architecture is so little cultivated, that their best public buildings are generally planned by foreigners. In the mechanical arts they have evinced considerable native genius ; but like that of the Germans, gene- rally, its efforts have seldom been directed to any useful purpose. One mechanic has constructed a machine that performs all the functions of an expert chess player ; another has made a head capable of imitating all the varied sounds of the

human voice; and a third has invented an instru- ment that emits, simultaneously, all t!ie sounds of music. In the latter science they have been thought to excel, and the names of lladyn and Mozart, whose powers and taste were formed at Vienna, have sufficiently established their na- tional fame. In mathematics, astronomy, and botany, they have also succeeded to a certain extent; and amongst the numerous professors of these sciences, Burke, and the Abbe Treisnecker, have eminently distinguished themselves. But education, and consequently general knowledge, in Austria has been much neglected. The em- press Maria Theresa, who patronised learning, established schools in every part of the empire ; which, with others that have since been added, have in a measure relieved the intellectual gloom which for so long a period shrouded the south of Germany. Universities, lyceums, district acade- mies, gymnasiums, Latin schools, schools for teaching their native tongue, schools for diffus- ing the elements of religion, are now universal; and are supported at the expense of government. The young men are compelled to attend the line of study marked out for them, under pain of forfeiting all civil offices and employments.

In Vienna, alone, are sixty schools for instruct- ing the poor in reading, writing, and arithmetic; one normal school, preparatory to the gymnasium; throe irymna-ia. in w:iidi the studies prescribed by government are, mathematics, geography, his- turv, natural history, arithmetic, composition,

classic-, and religion; tho Theresian academy, for the sons of tin: Catholic nobility and foreigners of distinction, under the care of a director, t\ enly-oiie professors, ten masters of modern lanu'!ia::'.->, and Several additional tutors ; and an imiviji'sitv, prnvided with forty-five professors, extra teach, ►►►>.'<, \c. The school of surgery at Vienna, is considerable; there are also imperial medical academics, imperial military academies, imperial polytechnic .schools, for teaching the scientific principles of all trades and manufac- tures, and an imperial academy of oriental lan- unaˆts. Their universities, he-sides Vienna, 8re i'ra_!Ue, i'esli, Krlan, l.emberg, .Milan, Mantua, I'adua, and I'avia. To many of these public inititr.tions are attac1 ed extensive libraries. Tiiat (I'luiected with t'::- university of Vienna contains ˆ0,000 volumes, and the Imperial library upwards of 2uO,000. The doors of the lath r are regularly < >;>en several hours in the day for t' e nˆo of t ,►►► i m/i.-ns, \vlio an; permitted to read any of tli volumes in apartments provided for that purpose.

*The laii'_rnaˆ' – of Austria are several, of which theliethie or', iennan is most prevalent. The Sclavonic is common in purl of Hungary, Ga- licia, iloh inia. and Moravia. The proper Hun- garian is ;i dialect ot the Scythian. Latin is also spoken in 1 1 unwary ; and on the borders of Tur- key the * alaeluan language, which is a corrup- tion of til'' Latin, is prevalent. The Italian is the common lanuuaˆe of the southern provinces, and 1 renen is spokui hy the higher classes.*

The Auˆtri ms are, generally speaking, hand- some and aH.letie, of (icrman onuin, mixed in- sensibly -.viih the native inhabitants of Italy, Hungary, and Duhemiu. The -rand German

outline is still visible, accompanied with the darker complexion, bolder features, blacker eyes, and more animated expression, which distinguish the countenance of the Austrian from those of his northern neighbours. They are a sensual people, but sensuality never enervates them. They pos- sess an instinctive indifference to what would excite all the passions of an Englishman, and would rush from the ball to the battle, from the' comic theatre to the field of blood, with apparent indifference ; owing not to phlegmatic coldness, but to a peculiar felicity of temperament, which nature has conferred upon the constitution of the Austrian, by which he possesses an astonishing power of forbearance and self-command. The persons, manners, and accomplishments of the Austrian' females have considerably attracted the attention of modern travellers, and have called forth some very lively and pertinent remarks from the pen of Mr. Lemaistre. ' The Austrian ladies,' says he, 'are the handsomest women I have seen on the continent ; their countenances are expressive, and their complexions uncom monly fair. In beauty they are exceeded by no females

in Europe ; excepting only our own country-women, whose unrivalled superiority I believe is universally acknowledged. In man- ner they are elegant, and in conversation lively and well informed. Much greater attention seems to have been paid to their education, than is usual in other parts of the continent : all of them speak French with as much fluency as German, and some- are proficients in English. The best works in these languages are familiar to them. They are completely free from pedantry ; and I have had frequent reason to admire the taste and knowledge displayed in their remarks.' But as Austria is composed of separate kingdoms and states, whose manners and habits are many of them peculiar, we defer further particular ob- servations on this till we come to treat of those states separately.

If we except Bohemia, Moravia, the northern parts of Austria, and a part of Hungary, this kingdom formed an integral part of the Roman empire, and abounds in antiquities and curiosities both natural and artificial. Castles, churches, and monasteries are common everywhere, whilst the southern parts, being near the centra of Roman power, are proportionably rich in ancient remains. The amphitheatre of Pola, about forty miles south of Trieste, stands near the extremity of a small peninsula, on the eastern shore of the Adriatic. This ancient edifice is elliptical in its figure, having three floors and rustic arcades, like the outer wall of the amphitheatre at Verona. Its length is 416 feet, and height ninety-seven feet. This is the only one of the ancient Roman elliptical precincts that now remains entire, those of Rome and Verona being much broken and dilapidated. Some imagine it to have been a theatre, and not an amphitheatre, because the seats only occupy one side, and are formed on the declivity of a hill. The amphitheatre at Ve- rona is another building of the same description, though not so large, as the Coliseum at Rome ; only a small part of the wall is standing, and the rest of the building scarcely rises above the sum- mits of the surrounding houses. The seats

within, constructed of stone, were renewed in the sixteenth century, and now form the surface of a large hollow inverted cone, capable of accommo- dating upwards of 22,000 persons. A part of these seats are enclosed in a small wooden theatre, in which plays are performed during the summer. The structure exhibits a fine specimen of Roman architecture, composed of squared masses of marble from Sant. Ambrosio, about nine miles distant. The soffit stones of the arcades are nine feet long. Some parts of the building are composed of large flat bricks, which have with- stood the action of the sun and weather for 1700 years, and yet remain uninjured by

time. The precinct of this ancient amphitheatre is 522 feet long, embellished by three tiers of rusticated ar- cades, ninety-six feet high, and before the falling of the fourth story of rectangular windows, pre- sented a grand and pleasing appearance. The disposition of the seats, and of the stairs leading to them, is better seen in this amphitheatre than in any other Roman antiquities of the same kind ; and the remains generally are in a better state of preservation. See AMPHITHEATRE.

The natural curiosities of Austria are nume- rous and interesting. The various Alpine scenery, glaciers, chasms, caves, curious depo- sitions of stones, &c. have in all ages commanded the admiration of the traveller, and the attention of the antiquarian. Austria Proper contains a singular assemblage of rocks, near Trautenau in Bohemia, in the shape of flowers, reaching from fifty to 100 feet in perpendicular altitude, and of great extent; supposed to be the remains of a mountain, the intermediate parts of which have been removed. Near Szadello, about thirty miles north-west of Kaschau in Hungary, is a celebrated cavern, which runs under the moun- tains to the distance of several miles, and has never been completely explored. It includes a multiplicity of distinct caves and winding pas- sages, separated by numerous impending stalac- tites ; the whole forming so intricate a labyrinth, that Dr. Townson, who visited this country a few years ago, says, ‘ a man once lost in it, though he had lights and food to last him a month, would not be able to find his way out.’ A party of curious travellers, it is said, once remained in it for three days without being able to explore its dimensions, or reach the opening. Near Szalitze, in the Carpathian range, is another remarkable cavern, within which is a small glacier; and at Demanovo is a curious cave, which contains the bones of numerous wild animals. Various other subterranean domes and caverns have also been found in all parts of the calcareous mountains, beneath the towering summits of the Alpine regions. The lake of Czirknitz, in the Illyrian provinces eastward of Trieste, is one of the most singular natural curiosities of the Austrian ter- ritories. It is about four English miles in length, and nearly that measure in breadth, surrounded with mountains on all sides, and of the depth of five or six feet. Although there is no visible place for the discharge of them, in June or July t the waters subside, aad at length are seen to retire into a number of caverns at the bottom of the lake ; the herbage of the bed then begins to grow rapidly, and produces considerable crops.

which are cut and preserved ; after which the ground is grazed by cattle. In November, when the rains fall upon the adjacent hills, the waters issue again from their caverns, swell by reason of still gathering accessions, and spread into a perfect lake as before. The lake of Jessero, in the isle of Cherso, is classed among the natural curiosities of Austria, and said to discharge its waters but once in four or five years. In the same island are

several curious caverns, in which have been found numerous fossil bones of oxen, horses, sheep, and other animals ; amongst which none hare been recognised as human. The salt- mines of Wieliczka, on the confines of Poland, exceed description ; and those near Salzburg, on the western border of Austria, present an ap- pearance so magnificent and sublime, as to be rated among the most stupendous and astonish- ing phenomena of Europe.

The islands belonging to Austria are few and unimportant, lying along the north-east shore of the Adriatic, from the Gulf of Juarnero to the southern point of Dalmatia. The principal are, Veglia, Osero, Grossa, Cherso, Lesina, Melida, and Brazza.

Of the provinces which make up the grand imperial dominions of Austria, many of them have constitutions different from each other. Hungary, as an hereditary and limited monarchy, has been in the house of Austria ever since the year 1437, when the archduke, having married the only daughter of king Sigismund, succeeded to the crown. The nation, however, shares the legisla- tive and executive power with the emperor, who exercises his authority only through the medium of the States, a kind of parliament assembling at fixed periods for the transaction of public busi- ness. The Hungarian nobility also possess great power ; and they alone, in state language, are in- cluded under the appellation of the Hungarian people, the rest being regarded as an inferior race of beings. Bohemia, Moravia, and the Tyrolese, also have an influence in the general government, and possess, to a certain degree, the privileges of Hungary. But in most of the pro- vincial diets, the authority of the crown is so great, that the representatives can determine little else than the mode of raising taxes, so that the emperor is in a considerable degree unlimited in his sovereignty. In the ancient diet of the em- pire, Austria, independent of her electoral vote for Bohemia, had seven votes in the college of princes for the seven states of Austria Proper, Carinthia, Styria, Brixen, Trent, Tyrol, and Carniola. In the new diet, or ‘ confederation of the sovereigns and free towns of Germany,’ formed in 1815, Austria, without having any su- periority over the other states in point of rank, was declared by tbe Congress of Vienna (act fifty-seventh), to have the presidency with a vote. In the general assembly Austria has now four votes. The executive government consists of four great departments, established at Vienna, organized originally by the counsels of Maria Theresa. One of these regulates the internal concerns of the empire, another its foreign affairs, a third its military conduct, and the fourth the government 9f Hungary. These different parts of the administration are identified in numerous

boards, chanceries, councils, ministries, &c. The laws and jurisprudence of his imperial and royal apostolic Majesty's dominions, are in the general very vague and complicated. Bohemia and Mo- ravia are divided into circles, each under a sepa- rate court of judicature from which lies a right of appeal to the supreme tribunal in the provincial capital. Every county in Hungary has its ruling assembly and court of justice, subject to an ap- peal to the district judicature, thence to the royal tribunal at Buda, and thence to the king in per- son. A new code of mild and salutary laws has however been recently drawn up at the instance of the government, and promulgated; the criminal part, in 1804, and the civil in 1812 ; which are made the universal code of jurisprudence for the the Austrian empire.

The entire revenue of Austria has been calcu- lated at twenty-two millions, arising chiefly from taxes on the land, and articles of internal con- sumption. Joseph II. proposed a new land and poll tax, which has since been lucrative. The imperial domains, monopoly of tobacco, duties on stamps, hair-powder, glass, china, starch, wine, beer, brandy, carriages, legacy duties, fees on titles of nobility, toleration tax on the Jews; together with the duties arising from the crown lands, mines, coining, salt, tolls, fines, penalties, passing the frontiers, incomes upon vacant bi- shoprics, salaries, pensions, &c. of Hungary, constitute a considerable part of the above sum. Paper money has been frequently employed by Austria in her distress ; and bank notes to the amount of ►►100,000,000 were in circulation as recently as 1810. The national debt, before the French revolution, amounted to ►►20,000,000, in 1805, it had increased to ►►30,000,000, and is ;it present ►►150,000,000. Of this two-thirds was created by the issue of paper money, which, however, is not deemed re-payable at its nominal amount.

The military establishment of Austria under Joseph 11. rose into considerable importance; and in 1784, though a season of peace, the Aus- trians were able to muster more than 200,000 men ; and after the French revolution, at the peace of 1797, they kept in pay an army of nearly 300,000. There were lately in the Aus- trian army no fewer than nine field-marshals, twenty-one generals of artillery, thirteen generals of cavalry ISfilieut.-generals, 258 major-generals. Since 1805, however, the troops of Austria were greatly reduced, till she reached her ebb in 1809, having lost about one-eighth part of her popula- tion, and one-tenth of her resources. Afterwards her army amounted to 470,000 men; and in the campaign of 1813 and 1814, when she took the field afresh against the common enemy, her troops were more numerous than at any former period. Austria at present, as one of the united kingdoms, supplies 94,8-22 men to the military establishments of the German Confederacy, winch is one in every hundred of her population in (MTinany. and, allowing the same proportion for all the ottier parts of the empire, the standing army of

Austria will amount to 280,000 men. The Bohemian army is, however, stated at 50,000 men, which is about one in every sixty-four of the population. The Hun :aria;i army is calcu-

lated at twelve regiments of infantry, and ten of hussars, the former consisting each of 3837 men, and the latter of 1698, forming an aggregate of 63,000 ; which, compared with seven millions and a half, the present population of Hungary, yields about the proportion of one to every hundred and twenty. The Hungarian army con- sists of three separate classes of individuals ??? the nobles, who are called together at the pleasure of the sovereign ; the standing army, kept up by recruiting and conscription ; and those of the mi- litary frontiers, where every man holds his possessions on condition of being ready to take up arms when called upon. Austria has nothing that deserves the name of a maritime force, but provides a few frigates and armed vessels for the protection of trade. The vessels called tschaiken, manned with about 1000 seamen and soldiers, are placed on the Danube towards the Turkish frontiers at the expense of goTernment. There are in the Austrian states the following orders, hav- ing the emperor or empress at their head : the Golden Fleece, Maria Theresa, St. Stephen, Elizabeth, and the Star and Cross.

Of the political and historical memoirs of Aus- tria, the reader will be able to form but a very imperfect idea. To write the history of a king- dom composed of kingdoms, with separate histo- ries of their own ; kingdoms too, which have been connected with other kingdoms, and those kingdoms, which have made a figure upon the earth, have balanced for ages the crisis of European power and politics, have given rise to governments, laws, manners, and language, and to surrounding nations, whose histories have also been embarked upon the stream of tii.:e, and intermingled with the politics of other states, is a work of no small difficulty. The Austrian history, if not obscure, is at least perplexed. The revolutions, alike incident to all human governments, the fluctuations of empire, the ebb and flow of territory, have been so frequent and considerable, that the high and low water mark of boundary at different periods of history, during the spring and neap tides of national influence and power, are only to be sought successfully in larger geographical treatises, and would require a distinct detail of relation beyond what the limits of an encyclo- pedia can possibly allow.

The original population of Austria was prin- cipally Gothic and Sclavonic, and the descen- dants of the former still constitute the principal part of the inhabitants. Moravia and Bohemia were stocked by the latter, whilst the southern territories were inhabited by the descendants of the cisalpine Gauls, and the Roman colonies, which had been planted there. Only a small part of the present imperial dominions belonged originally to the

house of Austria. Th,e vicissi- tudes to which it has been subject from the period of its origination, are what have chiefly contri- buted to raise the empire to its present rank among European sovereignties, and to trace those vicissitudes down the variable narrative of their political story, affords an interesting topic in geographical speculation.

*The princes of these houses are descended from the ancient dukes of Alsace, and bore the title of counts of Hapsburg, from the castle o***

that name in the Aar on Switzerland, their pa- trimonial residence, before their accession to the imperial throne of Germany. In 1273 count Rodolph was elected king of the Romans, and bestowed the duchy on his son Albert, with whom, therefore, the house of Austria com- mences. This duchy was formed of the ancient margraviate, with that part of Bavaria situated vbove the river Enns ; and passed to the house of Hapsburg as a fief of the empire, on the extinc- tion of the old ducal family. The counts of Hapsburg at that time possessed a great part of Oberland in Switzerland, and a considerable portion of Suabia, to which, in 1284, were added Styria, Carinthia, and Carniola. But Albert, ###.vho was elected king of the Romans in 1298, during the revolutionary troubles of Switzerland, which happened about nine years after his ac- cession, lost all his hereditary possessions in that country. The acquisition of Tyrol in 1364 made some addition, and Albert II. the next duke of Austria, was invested, in 1438, with the imperial purple, which has, ever since that period, been retained by his descendants in almost uninterrupted succession. The emperor Max- imilian, grandfather to Charles V. acquired the territory of the low countries by marriage, and in like manner his son Philip, espousing the heiress of the Spanish crown, obtained the pos- session of that kingdom, with the dominion of the American colonies. At his decease the united kingdoms of Austria, Spain, and Spanish America, descended to his successor Charles V. who, about the year 1527, added those of Hun- gary, Bohemia, Moravia, Silesia, and Lusatia, when Austria appeared in the zenith of her glory. In 1556 Charles V. made over the Spanish dominions, and the Netherlands, to his son Philip II. under whom they suffered con- siderable diminution ; the seven united pro- vinces of the Netherlands entirely throwing off their allegiance. In 1648, at the conclusion of the thirty years war, Austria was obliged to relinquish the two provinces of Lusatia and Al- sace, ceding the former to the elector of Saxony, and the latter to the king of France ; but shortly after the emperor Leopold, son of Ferdinand III. added the whole of Transylvania, and con- siderably enlarged the boundaries of Hungary, after which few fluctuations occurred

in the empire till the reign of Charles VI. when the peace of Utrecht in 1713, and the Barrier Treaty, two years afterwards, added Belgium, the duchy of Milan, the kingdom of Naples, and the island of Sardinia, which last was six years afterwards exchanged with the duke of Savoy, for the isle of Sicily. By the peace of Passarowitz, in 1718, Charles VI. acquired the Bannat of Temeswar, Belgrade, part of Servia, Bosnia, and Walachia; all of which, however, except the Bannat, were restored to the Porte in 1739. In 1735, after an unsuccessful opposition to France, the king- dom of Naples, and the island of Sicily, were made over by the Emperor to the infant Don Carlos of Spain, in exchange for the duchies of Parma and Placentia. At last, after various changes, as well in the outline as in the inward policy of the empire, Charles VI. died, in 1740, VOL. III.

and with him ended the male succession of the Hapsburg house of Austria.

Maria Theresa, eldest daughter and heiress of the deceased emperor, was married, in 1736, to Francis duke of Lorraine, afterwards grand duke of Tuscany ; and immediately on her advance to the sovereignty had to carry on a long and ex- tensive war against Prussia, Saxony, Bavaria, and Spain ; all of whom made pretensions to some part or parts of her dominions. After a powerful but unsuccessful struggle for empire, Prussia, in the year 1742, obtained the greater part of Silesia, and the country of Glatz ; and Spain, about six years afterwards, took possession of the duchies of Parma, Placentia, and Guas- talla. The war of 1756 producing no remarkable change of territories, the Austrian boundaries continued the same, with little variation, till the partial dismemberment of Poland, in 1773, when she acquired Galicia and Ladomaria; and was still further augmented, in 1777, by the addition of the Bukowine; and in 1778, by the accession of the Innviertel on the side of Bavaria.

The first emperor of the Lorraine branch was Joseph II. who, after sharing the government with his mother Maria Theresa for several years anterior to her decease, was fully vested with the sovereignty in 1780. His reforms in the executive branches of government, abolition of sinecures, suppression of convents, modification of the dependence of the clergy upon Rome, and the perfect toleration of all dissenters, though they have been censured as the extreme of im-f prudence, were decidedly promoted for the con- solidation of his immense territories, the manu- mission of his subjects from the civil disabilities under which many of them labored, and the establishment of a more worthy system of re- gular administration. To whatever extent such measures might have been neutralized by an ob- vious precipitancy, and rashness in the mode of execution, they show a great monarch, in- fluenced by the best of principles, laboring in the common cause of humanity, justice, and pa- triotism ; directing all his efforts towards the happiness of his people_, and the welfare of his dominions. It is said that a visit which he

re- ceived from pope Pius VI. two years after his accession, effected no alteration in his designs. After an active but variable reign, rendered remarkable towards the close, by a new war with the Turks, he died on the 20th of February, in the year 1790, and was succeeded by his brother Leopold II. who died at the commence- ment of the revolutionary war, on the 1st of March, 1792. The crown of Austria then de- scended to his eldest son, Francis II. the present emperor, and the sovereignty of the grand duchy of Tuscany to his second sou Ferdinand. From this time the empire of Austria began to de- cline.

At this period the population of the empire was estimated at 25,000,000, and was increased, in 1 796, by the accession of a great part of Poland, which was then finally dismembered and divided between Austria, Russia, and Prussia : but it was reduced to little more than its former amount the following year by ceding to France, Lombardy, thg

Netherlands, and all the Austrian districts on the left bank of the Rhine. The war of 1799 gave early hopes of success, but the withdrawment of Russia from the coalition, and the fatal days of Marengo and Hohenlinden, obliged Austria to conclude a treaty with France in 1801; in which, although she obtained Saltzburg and Berchtologaden, she was deprived of nearly all her Venetian states. The third war, in 1805, proved still shorter and more disastrous; and after the overthrow at Ulm and Austerlitz, the remainder of the Vene- tian states, Tyrol and Suabian principalities, containing a population of 3,000,000, were given as the price of peace; a period was likewise put to the Germanic constitution, and the title ot Emperor of Austria substituted for Emperor of Ger- many and King of the Romans. In 1809 the resistance of Spain to Buonaparte prompted Aus- tria to enter upon a new war with France. Her army was numerous and well disciplined, and a large portion of the French was employed in the peninsula; but the decided neutrality of Prussia, and the circumstance of Russia and Bavaria, with the states composing the confederation of the Rhine, taking part against Austria, enabledBona- parte to acquire a decided victory, and once more to enter Vienna. This led to further losses, but

left the emperor no alternative but a treaty; the terms were the union of the emperor's daughter with Napoleon in marriage, and the sacrifice of considerable territory and population; namely, the provinces of Carniola,

Trieste, Villach, the greater part of Croatia, and Agram, West Galicia, the circle of Zamosc, a circle in East Galicia, the greater half of Hansruckviertel, the Innviertel, Berchtolsgaden, and Saltzburg, the whole including 45,000 square miles and nearly three millions and a half of inhabitants. Austria remained overawed by France until the de- struction of the French armies in Russia, when she again asserted her independence ; and the subsequent success of the allies reinstated her in more than her former splendor. The ninety-third act of the Congress of Vienna restored nearly all that had been lost, while the succeeding one annexed several others on the side of Italy, which more than compensated for the remaining deficiency. The dominions of the Austrian empire, as fixed by this congress, have, according to Blumenbach, been divided into twenty-one provinces, or governments, besides the four dependent states. To these he assigns the following extent and population.

i:

3.

1.

5.

6.

7.

8.

9. 10. 11. 12.

13. 14. 15.

1(5. 17.

19.

‘20. 21.

1.

2. 3. 4.

I.□□□ AUSTRIAN EMPIRE.

Ger. sq. miles.

Inhabitants.

The kingdom of Bohemia .

956-80 417-64 3 86-85 5 363-65

344-32

398-98 190-90

250-95

176-18 520-44 867-50 274-94 1526-12 4097-06

1118-70

186-00 139-40 67-40 166-40 54-20

3,203,222 1,680,935 1,048,324

756,897

799,056 278,500

467,836

422,861 717,542 4,111,535 295,089 3,755,454 8,200,000

1,510,000

171,675 230,079 107,217 188.906 95,442

The mar

The dukedom of Silesia

Austria below the Enns

Ger. sq. miles. Inhabitants. r Austria above the Enns . ??? . 151-86 417,625-) < Circle of the inn and Hansruck 59'92 197,537 V (Saltzburgh 132-54 141 699 J

The duchy of Styria

The duchy of Carinthia ....

*^ Illyria . . . 190‘61 358831**

t Part of Croatia 60‘34 108 205 5

The coast district ... . .

Tyrol and Voralberg ‘

The Lombardo- Venetian kingdom

The government of Dalmatia

Civil Hungary, Croatia and Sclavonia . . . .

Civil Transylvania i

*Transylvanian military frontiers . *

Bannat frontiers .....

Sclavonian frontiers

*N\ arasdiner military “*********overnment ....*

Carlstadter military government

Bannat regiments

*i 1.******** *Dr.iT.MiF.M STATES. Grand dukedom of Tuscany ... ...*

12,204-43

28,040,570

431-00 92-31 23-00 101-62

1,170,000 375,000 60,000 383,000

Dukedom cf Modena

!)ukedom of Massa and Carrara, with Garfagnana . . Dukedom of Parma

‘

647-93

1,988,000 ,

AUSTRIA, SAN Fn.irpr, m *******-*., a eity of South 10*** *31′ N. Thereis another small place of the*

n-rica, in the province and government of same name, four leagues south-west of Cumana.

ir.uanri, forty-eight miles from Cumana, and A USTRIACUS, in ornithology, a species of falco,

containing .Long. o:iy 11′ \ ., lat. named by Latham the Austrian kite. Gmelin.

AUSTRO AFRICUS, the S. S. W. wind.

AUSTROMANC Y, AUSTROMANTIA, properly denotes soothsaying, or a vain method of pre- dicting futurity, from observations of the winds.

AUSTURCUS, or OSTURCUS, in ornithology, a goshawk ; from whence we usually call a fal- coner, who keeps that kind of hawks, an os- tringer. In ancient deeds, there lias been re- served, as a rent to the lord, unum austurcum.

AUSURIANI, in Roman antiquity, a military order, similar to that of hussars among the mo- derns.

AUTENIGUA, the name given by the natives to a region of southern Africa, on the east of the Cape of Good Hope ; and signifying, in their language, the land of honey. It now forms part of the district of Zwellendam, and is represented by Vaillant as a delightful region, having a great variety of surface and scenery, great fertility, and abundance of honey. It was partially inha- bited by Dutch colonists, whilst in possession of that nation; but it has been much improved since it came under the authority of the English. It abounds with all the wild animals common to southern Africa. See ZWELLENDAM.

AUTENOW, a town of Russia, in the govern- ment of Kiov, eighteen miles W. S. W. of Bialacerkier.

AUTER DROIT, in law, is where persons sue, or are sued, in another's right; as executors, ad- ministrators, 8cc.

AUTER VIE; in law, a person who holds an estate by the life of another is usually called tenant per auter vie.

AUTHENTICATE,ˆ Gr.

c, Lat.

cum auctoritate, with authority. Certo auc- tore, the author being well known; to make known the author, to give up the author, or authority ; to refer to ;

AUTHEN'TICAL,

AUTHENTICALLY,

AUTHEN'TICALNESS,

AUTHENTICITY,

AUTHENTICK,

AUTHEN'TICKLY,

AUTHENTICK'NESS

to rely on information ; to vouch for the truth of a statement. Authentic seems to have been the proper epithet for a physician regularly bred or licensed. The diploma of a licentiate runs, ' Au- ihentice licentiatus.'

Thirdly, it appeareth by regesters and recordes iudicially and autentiquely made, yet presented for confirmation of the same. Hall. Henry VIII.

This point is dubious, and not yet authentically decided. Brown's Vulgar Errours.

Of statutes made before time of memory, we have no authentical records, but only transcripts. Hale.

Thou art wont his great authentich will Interpreter through highest heaven to bring.

Milton.

She joy'd th' authentick news to hear, Of what she guess'd before with jealous fear.

Coteley.

Conscience never commands or forbids any thing authentically, but there is some law of God which commands or forbids it first. South.

But censure's to be understood The authentic/I mark of the elect, 1'he public stamp heav'n sets on all that's great and good. ' Swift.

Nothing can be more pleasant than to see virtuosos about a cabinet of medals, descanting upon the value, rarity, and mithenticulncss of the several pieces.

Additon.

The nations that, according to the best authenticated

history, appear to have been first civilized, were those

that dwelt around the coast of the Mediterranean sea.

Smith's Wealth of Nations.

AUTHENTICS, AUTHENTIC, in the civil law, is a name given to the Novels of Justinian. The reason of the denomination is not well known. Alciat will have it to have been first given them by Accursius. These novels were originally com- posed in Greek, and afterwards translated into Latin by the patrician Julian, who reduced them into less compass. And in the time of Bulgaris, there was a second version made, more exact and literal, though not quite so elegant as the former. This translation being preferred by Accursius, he called it authentica, by way of preference to that of Julian, as being more conformable to the ori- ginal. They are hereby distinguished from some other publications of later imperial constitutions, which are not regarded as of much authority.*

AUTHIE, a river of France, which rises in the department of the Straits of Calais, and falls into the sea between the Somme and the Canche.

AUTHON (John d'), a French historian of the sixteenth century, abbot of Angle in Poitou. He wrote the history of France from 1490 to 1508, which has never been all printed. He died in

1523.

Some contend for the Latin auctor, from au- geo, auctum, to increase, i. e. to carry on an un- dertaking. It seems to relate more to the ground than to the form of the work. Others refer its origin to avGevruchis, or

AUTHOR, v. & n. "|

AU'THORESS, AUTHOR'ITATIVE, \UTHOR'ITATIVELY, AUTHOR'ITY, AUTHORIZA'TION, AU'THORIZE, AU'THORLESS, AU'THORSHIP.

the root which it represents. Whether this ety- mology be admitted or not, the verb and its cor- relatives convey the ideas of beginning, creation, foundation, invention, countenance, support, and power.

They consider the main consent of all the churches in the whole world, witnessing the sacred authority of Scripture, ever sithence the first publication thereof, even till this present day and hour Hooker,

ISAB. O but man, proud man, Brest in a little brief authority, Most ignorant of what he's most assured, His glassy essence like an angry ape, Plays such fantastick tricks before high heav'n, As makes the angels weep.

Shakspeare. .Measure for Measure.

Idle old man,

That. still would manage those authorities That he hath giv'n away ! Id. King Lear.

That which is the strength of their amity, shall prove the immediate author of their variance.

Shakspeare. I know, my lord,

If law, authority, and pow'r deny not, . -It will go hard with poor Antonio. Id.

But I suffer not a woman to teach, nor to usurp authority over the man, but to be in silence.

Pout.

War mends but few, but spoils multitudes ; it legi> timatcs rapine, and authorises murther.

Jeremy Taylor, X 2

AUT

308

AUT

Although their intention be sincere, yot doth it no- toriously strengthen vulgar errour, and authorize opi- nions injurious unto truth. Brown's Vulgar Errours.

Now while the tortur'd savage turns around, And flings about his foam, impatient of the wound ; The wound's great author close at hand provokes His rage. Dryden's Fables.

Yourself first made that title which I claim,

First bid me love, and authoriz'd my flame.

Dry den.

The obligation of laws arises not from their matter, but from their admission and reception, and authori- zation in this kingdom. Hale.

Power arising from strength, is always in those that are governed, who are many : but authority aris- ing from opiuion, is in those that govern, who are few. Temple.

The woods are fitter to give rules than cities, where those that call themselves civil and rational, go out of their way, by the authority of example.

Locke.

The faith or persuasion of a Irvine revelation is a

Divine faith, not only with respect to the object of

it, but likewise in respect to the author of it, which is

the Divine spirit. Tillotson.

From his loins

New authors of dissension spring ; from him

Two branches, that in hosting long contend

For sov'reign sway. Philips.

A more decisive proof cannot be given of the full eonviolicm of the iiritish nation, that the principles in' the Revolution did not authorise them to elect Kinirs at plca-un-, than their continuing to adopt a plan of hereditary protestaut succession in the old line.

Burke.

Al.'TOCABDALI, in untitpiiiy, an order of musicians, who wore an ivy

crown or garland. Scalio-cr s.' -mi to rank, thorn in the number of ininii.

Al T< K ' i'/i'ilALl/S ; from curof, ipse, and KKjcks, to certain archbishops who were ex fmpti-d i'rum the jurisdiction of patriarchs. There v, ere several other bishops in the east, who were auto

Al "l'( )('ll'l'l iU\ KS, ati appellation assumed bv some nations, importing th.U they sprung, or were produced, from the same soil which they stiil inhabited. In this sense autoethones amounts to the >ame with aborigines. The Athenians va- lued tliemselves on their bein^ autochthones, t'-bnrn, or -ti)yn'u<;, earth-born ; see ATTICA, :t bem_r tie- prevailing opinion among the ancients ill,:', m t!:e be^mmn.;, the earth, by ►►►o'ue prolific power, produced men, as it still (toes plant -.

Ai.TOVRAT, A

Arinr'K-v, (/corrrer, power; the pos-

A i i o' i; \ I'M A i , (sensor of uncontrollable

Ariuei; A [or/K \i..Jpo\LT. The emperor of i ! !i. 1 -d the ' autoerat (.if all the Russias.'

'lie' I . . .1 >vill is ah-olute ; it is its own reason:

is ho'li ►►►;►►► – . rodueer and the' '.round of :ill its acts.

the external impulse or inclination

uf oV"vl:, out deteruiiues itself !>y an absolute auto-

i ri ►►►►►►►'/. Squill's Sermons,*.

Tin: Father, Son, and Holy (rhost, in respect of !::>►►► —a. iie divinity, have the same autucratorical jio-.ver, dominion, and authority.

I'furtoH ►►/i the Creed.

AUTOCRATOR; from avrof, himself, and Kparoc, power ; a person vested with an absolute independent power, by which he is rendered un- accountable to any other for his actions. The power of the Athenian generals, or commanders, was usually limited : so that at the expiration of their office, they were liable to render an account of their administration. But, on extraordinary oc- casions, they were exempted from this restraint, and sent with uncontrollable authority: in which case they were styled Avroeporopfc. The same people also applied the name to some of their ambassadors, who were vested with a full power of determining matters

according to their own discretion. These were denominated Upeˆ/Stif Awrorparop►►c, and resembled our plenipoten- tiaries.

AUTO DA FE, or act of faith. See ACT.

AUTODIDACTUS ; from UVTOC and StSatrieo, to learn ; a person self-taught, or who has had no master or assistant of his studies.

AUTOGENIAL; from awroc and)ryvo/tai, to beget, self-begotten.

AUTOGLYPHUS LAPIS, a stone mentioned by Plutarch, as having naturally impressed on it the figure of Cybele. It is said to have been found in Sagaris a river of Persia. Doubtless if any such stone ever existed, the priests had it made to deceive the people.

AUT'OGRAPH, avroc, myself, and ypaˆw, I write. An original manuscript.

He did accurately describe ana turn into Latin from the original autographe in Cambridge public li- brary. Wood't Athcerue Oxoniensis.

AUTOLITHOTOMUS, one who cuts him- self for the stone. Of this we have a very extra- ordinary instance given by Reiselius, in the Ephemerides of the Academy Natura Curiosorum, dec. 1, an. 3, obs. 192.

AUTOLOGIST ; from awroc, self, and Xoyoc, speech ; one who speaks much of himself.

AUTO LOGY, speaking of or to one's self.

AUTOLOL.E, an ancient people of Maurita nia, descended from the Gaetuli. They excelled all their neighbours in running.

AUTOLYCUS, in fabulous history, a son of Mercury by Chione, a daughter of Daedalion. He was one of the Argonauts, famous for his cun- ning as a thief. After stealing the flocks of his neighbours, he altered their marks, and mingled them with his own. But Sisyphus, son of ˆEolus, discovered his craft ; and when Autolycus stole his flocks, he picked out his own by a mark which lie had made under their feet. The arti- fice of Sisj phus pleased Autolycus so much, that he directly formed an intimacy with him, and even allowed him freely to enjoy the company of his daughter Anticlea, who became pregnant of Ulysses, and was soon after espoused to Laertes.

AUTOLYCUS, a Greek mathematician and as- tronomer of Pitane, in ˆEolia, who flourished about 320 years before Christ. He was precep- tor in mathematics to Arcesilaus, who was also a disciple of Theophrastus, the

successor of Aris- totle. His works extant are, a Treatise on the Movable Sphere, published by Dasypodius in Greek and Latin, 8vo. at Strasburg, in 1758; and in a Latin translation in the Synopsis Ma-

thematica of Mersennus, published in 4to. at Paris, in 1644 ; and also a Treatise on the Rising and Setting of the Stars, edited, with the former work, by Dasypodius. Diog. Laert. Vit. Arcesil. Fabr. Bid. Graec. torn. ii. p. 89. Montucla, Hist. Mathem. t. i. p. 192.

AUTOMATE, called also HIERA, one of the Cyclades, an island on the north of Crete, said to have emerged out of the sea, between the islands Thera andTherana, in the fifth year of the emperor Claudius ; in extent thirty stadia.

AUTOM'ATON,} Gr. Avro/zaroc. Ex. pa AUTOM'ATOUS, > TJJV, frustra, vel /tao/[illegible]*i, ex- AUTOMA'TIC. j citor. Something self- moved ; deriving its motion from internal ma- chinery .*

Clocks, or automatons organs, whereby we distin- guish of time, have no mention in ancient writers.

Brown's Vulgar Errours.

For it is greater to understand the art whereby the Almighty governs the motions of the great automaton, than to have learned the intrigues of policy. t ,

Glanville's Scepsis.

The particular circumstances for which the automata of this kind are most eminent, may be reduced to four.

Wilkins.

AUTOMATON may be farther defined, a ma- chine, so constructed by means of weights, levers, springs, wheels, &c. as to move for a considerable time, as if endued with animal life. According to this definition, clocks, watches, and all machines of that kind may be ranked as a species of automata. But the word is most commonly applied to such machines as are made in the form of men and other animals, at the same time that their internal machinery is so contrived, that they seem voluntarily to act like the animals they represent. It has fallen in the way of the writer of this paper

to have been making a few collections on this subject for some years past ; and, observing that the whole direc- tion of mechanical genius to these inventions lias at present terminated in amusing, rather than any particularly useful machines, he has often entertained himself with considering the powers of man as a mere animal machine, in con- trast with their inventions; the highest and best of which imitate his motions.

Political economists have frequently amused themselves and the public with the nicely-ba- lanced powers of man as a propagating and eating animal, and philosophers and divines often assure us that he is, in other and higher respects, but a machine of a superior descrip- tion; in especial deference to the latter grave authorities, we, therefore, take it for granted in this paper, that man is a machine, and shall not presume to arrogate for him any higher preten- sions. We know nothing of his impulses as an animal, nor of the duties or influences to which he is subject as a rational, being, if such he be ; we only propose to introduce to our readers a variety of claimants for the honor of having made a part of him ••• of imitating portions of his organs, in their actual exercise ••• and isolated ac- tions of his very mind. What wonder, if, in the progress of these efforts, our artists should

occasionally have struck off a complete and clever duck, a learned fly, or a royal eagle !

Automata have been favorite objects of me- chanical contrivance from a very early period. If the term, indeed, may be allowed to include what some writers have considered under it, their history would quickly swell into a volume. The celebrated Glanville, for instance, speaks of ‘ the art whereby the Almighty governs the mo- tions of the great automaton’ of the universe ! Bishop \ ilkins ranks the sphere of Archimedes amongst the avTOfiara arara, ‘ or such as move only according to the contrivance of their several parts, and not according to their whole frame.’ It was, in fact, an early orrery, accord- ing to Claudian :

Jupiter in parvo cum cerneret aethera vitro, Risit, et ad superos talia dicta detiit ;

Huccine mortalis progressa potentia curie ? Jam meus in fragili luditur orbe labor, &c.

This learned prelate has even extended the application of the term to machines moved, in consequence of their peculiar construction, by external forces or elements, as mills, ships, &c. Its modern acceptation, however, and that to which we shall restrict ourselves, will not in- clude all machines that are self, or internally moved. It is confined to the mechanical imita- tions of the functions and actions of living ani- mals, and particularly those

of man.

The celebrated story of the statue of Memnon, one of the wonders of Ancient Egypt, has some pretensions to lead the way in this historical sketch. We have positive testimony (Strabo, lib. xvii.) to the circumstance of the most beau- tiful sounds being emitted from this statue, at the rising and setting of the sun ; and from the pedestal, after the statue was overthrown. What was the contrivance in this case, it may be vain to conjecture; but automata are, by professi►►n, a puzzling race. If a certain disposition of strings, exposed to the rarefaction of the air, or to the morning and evening breezes, after the manner of our ˆEolian harps, produced these sounds; or if any method of arranging the in- ternal apertures so as to receive them from a short distance, were the artifice, a considerable acquaintance with the science of music, and with accoustics generally, will be argued. Wil- kins quotes a musical invention of Cornelius Drebel, of similar pretensions, which ‘ being set in the sunshine, would, of itself, render a soft and pleasant harmony, but being removed into the shade would presently become silent.’

The statues and the flight of Daedalus are equally famous, and, perhaps, fabulous. Aris- totle, however, speaks of the former in his treatise De Anima, lib. i. c. 3. as successful imitations of the human figure and human func- tions in walking, running, &c. and attempts to account for their motions by the concealment o quicksilver.

Archy tas- flying dove, originally mentioned in Favorinus, is another of the ancient automata. The inventor is said to have flourished about B. C. 400, and was a Pythagorean philosopher at Tarentum. It was made of wood, and the principal circumstance of its history, which F?

*vorinus mentions, that is like some other birds of too much wing, when it alighted on the ground, it could not raise itself up again. Aulus Gel- lius, in his Nodes Attica; , attempts to account for its flight, by observing, * Ila erat scilicet li- bramentis suspensum, et aura spiritus inclusa atque occulta consitum,’ &c. that it was ‘ sus- pended by balancing, and moved by a secretly enclosed aura or spirit.’*

Friar Bacon, we all know, made a brazen head that could speak, and that seems to have assisted, in no small degree, in proclaiming him a magician. Albertus Magnus is also said to have devoted thirty years of his life to the construction of an automaton, which the celebrated Thomas Aquinas broke

purposely to pieces. Men, treated as these were by the age in which they lived, had no encouragement to hope that any details of their labors would reach posterity.

Amongst the curiosities of his day, Walchius mentions an iron spider of great ingenuity. In size it did not exceed the ordinary inhabitants of our houses, and could creep or climb with any of them, wanting none of their powers, except, of which nothing is said, the formation of its web. Various writers of credit, particularly Kircher, Porta, and bishop Wilkins, relate that the cele- brated Regiomontanus '(John Muller) of Nu- remberg, ventured a loftier flight of art. He is said to have constructed a self-moved wooden eagle, which descended toward the emperor Maximilian, as he approached the gates of Nu- remberg, ⬜⬜⬜⬜⬜⬜⬜'vtH him, and hovered over his person as he :⬜⬜⬜'. ed the town. This philosopher, according to tin; s;::ne authorities, also produced an iron tly, which would start from his hand at table, and after tlyinu' round to each of the guests, returned, us if weaned, to the protection of his niMsU'r.

An hydraulic clock, presented to the emperor Charlemagne, by the caliph llaroun al Raschid, merits record in the history of these inventions. It excited the admiration of all Europe at the period of its arrival. Twelve small doors di- vide;! the dud into the twelve hours, and opened successively as each hour arrived, when a ball fell from the apoiture on a brazen bell and struck the time, the door remaining open. At the conclusion of every twelve hours, twelve mounted knights, handsomely caparisoned, came out simultaneously from the dial, rode round the plate, and ek⬜⬜e.d the doors. Dr. Clarke, in his last volume of Travels '(part)ii. Scandinavia, sec. 1. 4to. 1R19), mentions a similar contri- vance1 in a clock at I.ubeck, of the high antiquity ⬜⬜⬜)f I40.ri. ( )vr-r the face is an image of Jesus Christ, on either side of which are folding- doors, \viuch tly open every day as the clock strikes twelve. A srt of figures, representing '.he twelve apostles, then march forth on the left hand, and, bowing to our Saviour's image as they pass in sueces-ion, enter the door on the rijrht. ()u the termination of the procession the doors closo. This clock is also remarkably com- plete, for the age, in its astronomical apparatus; representing the place of the sun and moon in the ecliptic, the moon's age, &c. Similar ap- pendages to clocks and time-pieces became too common, at the beginning of the last century, to

deserve particular notice. We should not, how- ever, omit some of the productions of the Le Droz family, of Neufchatel. About the middle of last century, the elder Le Droz presented a clock to the king of Spain, with a sheep and dog attached to it. The bleating of the former was admirably correct, as an imitation ; and the dog was placed in custody of a basket of loose fruit. If any one removed the fruit, he would growl, snarl, gnash his

teeth, and endeavour to bite, until it was restored.

The son of this artist was the original inventor of the musical boxes, which have of late been imported into this country. Mr. Collinson, a correspondent of Dr. Hutton's, thus clearly de- scribes this fascinating toy in a letter to the doctor, inserted in his Mathematical and Philo- sophical Dictionary : ‘When at Geneva, I called upon Droz, son of the original Droz, of La Chaux de Fond, where I also went. He showed me an oval gold snuff-box, about, if I recollect right, four inches and a-half long, by three inches broad, and about an inch and a-half thick. It was double, having an horizontal partition ; so that it may be considered as one box placed on another, with a lid, of course, to each box. One con- tained snuff; in the other, as soon as the lid was opened, there rose up a very small bird, of green enamelled gold, sitting upon a gold stand. Immediately this minute curiosity wagged its tail, shook its wings, opened its bill of white enamelled gold, and poured forth, minute as it was (being only three-quarters of an inch from the beak to the extremity of the tail) such a clear and melodious song as would have filled a room of twenty or thirty feet square with its harmony.'

In Ozanam's Mathematical Recreations, we have an account, by the inventor, M. Camus, of an elegant amusement of Louis XIV. when a boy. It represented a lady proceeding to court, in a small chariot drawn by two horses, and attended by her coachman, footman, and page. When the ma- chine was placed at the end of a table of proper size, the coachman smacked his whip, the horses started off with all the natural motions, and the whole equipage drove on to the farther extremity of the table ; it would now turn at right angles in a regular way, and proceed to that part of the table opposite to whrch the prince sat, when the carriage stopped, the page alighted to open the door, and the lady came out with a petition, which she presented with a courtesy to the bow- ing young monarch. The return was equally in order. After appearing to await the pleasure of the prince for a short time, the lady courtesied again, and re-entered the chariot, the page mounted behind, the coachman flourished his whip, and the footman, after running a few steps, resumed his place.

About the same period, M. Vaucanson, a member of the Academy Royal of France, led the way to the unquestionable superiority of modern times, in these contrivances, by the con- struction of his automaton duck, a production, it is said, so exactly resembling the living animal, that not a bone of the body, and hardly a feather of the wings, seems to have escaped his imitation and direction. The radius, the cubitus, and the humerus had each their exact offices. The auto-

maton ate, drank, and quacked in perfect har- mony with nature. It gobbled food brought before it, with avidity, drank, and even muddled the water after the manner of the living bird, and appeared to evacuate its food ultimately in a digested state. Ingenious contemporaries of the inventor, who solved all the rest of his con- trivances, could never wholly comprehend the mechanism of this duck. A chemical solution of the food was contrived to imitate the effect of digestion.

This gentleman is also celebrated for having exhibited at Paris, in 1738, an androides (from avjjp, a man, and tiSog, a form; a term under which some scientific works have classed all the automata that have been made to imitate the human person), a flute-player, whose powers exceeded all his ancestry ; and for the liberality and good sense with which he communicated to the academy, in the same year, an exact account of its construction. The figure was nearly six feet in height, and usually placed on a square pedestal four feet and a-half high, and about three feet and a-half broad. The air entered the body by three separate pipes, into which it was conveyed by nine pairs of bellows, which were expanded and contracted at pleasure, by means of an axis formed of metallic substances, and which was turned by the aid of clock-work. There was not even the slightest noise heard during the operations of the bellows : which might otherwise have discovered the process by which the air was conveyed ad libitum into the body of the machine. The three tubes, into which the air was sent by means of the bellows, passed again into three small reservoirs concealed in the body of the automaton. After having united in this place, and ascended towards the throat, they formed the cavity of the mouth, which terminated in two small lips, adapted to the performance of their respective functions. A small movable tongue was enclosed within this cavity, which admitted or intercepted the passage of the air into the flute, according to the tune that was executed, or the quantity of wind that was requisite for the performance. A par- ticular species of steel cylinder, which was turned by means of clock-work, afforded the proper movements to the fingers, lips, and tongue. This cylinder was divided into fifteen equal parts, which caused the ascension of the other extremities, by the aid of pegs, which pressed upon the ends of fifteen different levers. The fingers of the automaton were directed in their movements by s.;ven of these lerers, which had wires and chains attached to their ascending ex- tremities ; these being fixed to the fingers, caused their ascension in due proportion to the declen- sion of the other extremity, by the motion of the cylinder; and thus, on the contrary, the ascent, or descent, of one end of the lever, produced a si- milar ascent, or descent, in the fingers that cor- responded to the others ; by which one of the holes was opened or stopped agreeably to the direction of the music. The entrance of the wind was managed by three of the other

levers, which were so organized as to >e capable of opening or shutting, by means of tiie three reservoirs. By a similar mechanical process, the lips were under

the direction of four levers ; one of which opened them in order to give the air a freer passage; the other contracted them ; the third drew them back ; and the fourth pushed them in a forward direction. The lips were placed on that part of the flute which receives the air; and, by the different motions which have been already enu- merated, regulated the tune in the requisite manner for execution. The direction of the tongue furnished /employment for the remaining lever, which it moved in order that it might be enabled to shut or open the mouth of the flute. The extremity of the axis of the cylinder was terminated on the right side by an endless screw, consisting of twelve threads, each of which was placed at the distance of a line and a half from the other. A piece of copper was fixed above this screw; and within it was a steel pivot, which was inserted between the threads of the screw, and obliged the cylinder above-mentioned, to pursue the threads. Thus, instead of moving in a direct turn, it was perpetually pushed to one side; the successive elevation of the levers displaying all the different movements of a pro fessed musician.

M. Vaucanson constructed another celebrated androides, which played on the Provencal shep- herd's pipe, and beat, at the same time, on an instrument called the tambour de basque. This was also a machine .of the first order for inge- nious and difficult contrivance. The shepherd bore the flageolet in his left hand, and in the right a stick, with which he beat the tabor, or tambourine, in accompaniment. He was ca- pable of playing about twenty different airs, consisting of minuets, rigadoons, and country-dances. The pipe, or flageolet, which he was made to play, is a wind-instrument of great va- riety, rapidity, and power of execution, when the notes are well filled and properly articulated by the tongue; but it consists only of three holes; and the execution, therefore, mainly de pends upon the manner in which they are co- vered, and the due variation of the force of the wind that reaches them. To give the androides power to sound the highest note, M. Vaucanson found it necessary to load the bellows, which supplied the air to this tone, with fifty-six pounds weight, while that of one ounce supplied the lowest tone. Nor was the same note always to be executed by exactly the same force of air; it was necessary to pay the most accurate atten- tion to its place on the scale, and to so many difficult circumstances of combination and ex- pression, that the inventor declares himself to have been frequently on the point of relin- quishing his attempt in its progress. In the tambourine accompaniment, too, there were nu- merous obstacles to overcome ; the variation of the strokes, and particularly the continued roll of this instrument, was found to require no small ingenuity of construction.*

All other exhibitions of mechanical skill, in imitation of the powers of human nature, were destined, however, to give way, in 1769, to the pretensions of the chess-player of M. Wolffgang de Kempelin, a Hungarian gentleman, and aulic counsellor of the royal chamber of the domains of the emperor in Hungary. Called in that year

to Vienna, by the duties of his station, this gen- tleman was present at some experiments in magnetism, made before the empress Maria Theresa, when he ventured to hint that lie could construct for her majesty a piece of mechanism far superior to any of those which had been exhibited. His manner of remarking this, ex- cited the attention of the empress, who encouraged him to make the effort, the automaton chess- player, which has since been exhibited in all the capitals of Europe, was, within six months after this period, presented at the imperial court. It is a presumption in favor of the pretensions of this contrivance to be a master-piece of mere mechanism, that the original artist, after having gratified his exalted patroness and her court with the exhibition of it, appeared for many years in- different to its fame. He engaged himself in other mechanical pursuits with equal ardor, and is said to have so far neglected this, as to nave taken it partly to pieces, for the purpose of making other experiments. But the visit of the Russian grand duke Paul to the court of Joseph II. again called our automaton to life. It was repaired and put in order in a few weeks ; and, from this period (1785), has been exhibited at intervals, through Germany, at Paris, and in London, first by M. de Kempelin, and latterly by a purchaser of the property from his son; De Keinpelin having died in 1803.

Our chess-play mi;' readers will be able to ap- preciate the hold pretensions of this automaton. The entire number of combinations which it is possible to form \itli the pieces of a chess-board lias never, we believe', been ascertained. To push forward a. plan of our own steadily, and at the same time to anticipate the designs of an antagonist, requires a constant '.ind acute discri- mination, which long experience, and some con- siderable strength of memory, have been required to make availing in all other cases. But this running inlidel (for he assumes the figure of a Turk) drives kinˆs, and castles, and knights before him with more than mortal sagacity, and with his inferior ham! : he never, we believe, has been beaten; and except in a very few instances of drawn games, has beat the most skilful chess- players in Kurope. Dr. Hutton, on the suppo- sition of its being altogether a mechanical con- trivance, calls it 'the greatest master-piece of mechanics that ever appeared in the world.' \ e shall recount his pretensions in the

words of an Oxford graduate, who published Observations on them, during his last visit in London, and subjoin a statement of the best attempts that have been made to account for his apparent skill.

‘ ‘1 he room where the automaton chess-player is at present exhibited, has an inner apartment, within whirl) appears the i’m’ure of a Turk as large as life, dressed after the Turkish fashion, sitting behind a ehesl of three feet and a half in length, two fri t in hr> a-lt’i, and two feet and a half in bright, to which it is attached by the wooden scat on winch it sits. The chest is placed upon lour rastois, and, toother with the rhure, nny be easily moved to any part of the room. On the plain “-iirface formed by the top <>t the (iir>t, HI ihe centre, is a raised immovable (□□□ iicss-boitrd ol handsome dimeuv ii\>, upon which

the figure has its eyes fixed ; its right arm and hand being extended on the chest, and its left arm somewhat raised, as if in the attitude of hold- ing a Turkish pipe, which originally was placed in its hand. The exhibiter begins by wheeling the chest to the entrance of the apartment within which it stands, and in face cvf the spectators. He then opens certain doors contrived in the chest, two in front and two at the back ; at the same time pulling out a long shallow drawer at the bottom of the chest, made to contain the chess-men, a cushion for the arm of the figure to rest upon, and some counters. Two lesser doors, and a green cloth screen, contrived in the body of the figure and its lower parts, are likewise opened, and the Turkish robe which covers them is raised ; so that the construction, both of the figure and chest, internally, is displayed. In this state the automaton is moved round for the exa- mination of the spectators : and, to banish all suspicion from the most sceptical mind, that any living subject is concealed within any part of it, the exhibitor introduces a lighted candle into the . body of the chest and figure, by which the inte- rior of the chest is, in a great measure, rendered transparent, and the most secret corner is shown. Here it may be observed, that the same precau- tion to remove suspicion is used, if requested, at the close, as at the commencement, of a game ot chess with the automaton. The chest is divided, by a partition, into two unequal chambers. That to the right of the figure is the .narrowest, and occupies scarcely one-third of the body of the chest. It is filled with little wheels, levers, cy- linders, and other machinery used in clock-work. That to the left contains a few wheels, some small barrels with springs, and two quarters of a circle placed horizontally. The body and lower parts of the figure contain certain tubes, which seem to be conductors to the machinery. After a sufficient time, during which each spectator may satisfy his scruples and his curiosity, the exhibiter recloses the doors of the chest and figure, and the drawer at the bottom ; makes some arrangements in the body of the figure, winds up the works with a key inserted into a small opening on the side of the chest, places aˆ cushion under the left arm of the figure,

which now rests upon it, and invites any individual present to play a game of chess. At the com- mencement of a game, the automaton moves its head as if taking a view of the board ; the same motion occurs at the close of a game. In mak- ing a move, it slowly raises its left arm from the cushion placed under it, and directs it towards the square of the piece to be moved. Its hands and fingers open on touching the piece, which it takes up, and conveys to any proposed square The arm then returns with a natural motion to the cushion upon which it usually rests. In tak- ing a piece, the automaton makes the same mo- tions of the arm and hand to lay hold of the piece, which it conveys from the board, and then return- ing to its own piece, it takes it up, and places it on the vacant square. Observations, fyc. by an Oxford Graduate, 8vo, 1819. His motions have an air of great dignity and composure. On giving check to the king, he moves his head as a signal. When u false move is made, as if to puzzle him, lie taps with his right hand on the chest, replaces the

piece wrongly moved, and proceeds to take the due advantage of moving a piece of his own. At other times he will tap on the chest for his ad- versary to more ; and at the close of the game he bows gracefully round to the company. It is a remarkable, and somewhat suspicious circum- stance, that neither the present proprietor of this automaton (in a pamphlet circulated by him on this subject), nor the Oxford graduate, from whose observations we have abridged the above account of his performances, takes any notice of the at- tempted solution of them by Mr. Collinson, a correspondent of Dr. Hutton, to whom we have before alluded. In the same letter in which this gentleman describes the automaton inventions of the Droz family, he speaks of a pamphlet pre- sented to him at Dresden, which affirms the whole phenomena to be produced by human agency ; a conjecture which is confirmed by a writer in the Edinburgh Encyclopaedia. A well- taught boy is said to be partly concealed in the ample drapery of our automaton's lower limbs, and partly in the commode on which the chess- board is placed. He cannot be seen when the doors are opened, we are told, ' because his legs and thighs are then concealed in two hollow cy- linders, which appear designed to support the wheels and levers, the rest of the body being at that moment out of the commode, and hid in the drapery of the automaton. When the doors of the commode are shut, the clacks which are heard by the turning of a rounce, permit the dwarf to change his place, and re-enter the com- mode without being heard; and while the ma- chine is rolled about to different parts of the room, to prove that it is perfectly detached, the dwarf has an opportunity of shutting the trap through which he has passed. The drapery of the automaton is then lifted up, and the

interior part of the body is shown, to convince the spec- tators that all is fair, and the whole terminates to their great astonishment, and in the illusion that an effect is produced by simple machinery, which can only arise from a well-ordered head.' This writer proceeds to conjecture, that the chess- board is semi-transparent, so as at once to con- ceal the party within, and afford him sufficient light to perceive the moves of his antagonist, which are met by an interior lever, governing the arm of the automaton, on the principles of the pantograph.

\V ith these accounts of the chess-player very distinctly in his mind, and an extract of the sup- posed method of concealing the dwarf or boy, in his pocket, the writer of this paper went with some friends a short time ago, to visit, and, if possi- ble, to play at chess with the automaton. His engagements, however, were far too numerous for the writer to obtain that honor on this occasion. Some slight changes had taken place in the man- ner of exhibiting the automaton (compared with the account of the Oxford graduate) ; having, therefore, avowed to the proprietor, that his object was to obtain a scientific knowledge of his pro- ceedings, as far as it could be done with pro- priety, the writer took memoranda of what passed.

From a door in a canvass screen the automa- ton and commode were wheeled out at the

time appointed, and the figure was made to face the company. Then the inferior chamber of the commode (occupying about one-third of its di- mensions), was opened before and behind, when a taper was held by the proprietor in such a si- tuation, as to throw a full light through the ma- chinery that occupied this part of it. He now closed and locked the doors of this chamber, opened the drawer, and took out the men and cushionˆ as described by the Oxford graduate ; after which he opened the larger chamber of the commode in front, and put the taper through the front door within it. Perhaps one-sixth, or one- eighth of this chamber was occupied by machi- nery ; the rest was a perfect cavity, lined with green baize. He now shut and locked these doors ; then wheeled the commode round, opened and took up the drapery of the figure, and exhibited the body, partly occupied by ma- chinery, and partly left with imperfect imita- tions of the prominent parts, to the shoulders. The drapery was then carefully pulled down, and the figure wheeled round, so as again to front the spectators, before whom it played a masterly and successful game. The conviction of the writer and his friends (with the figure before them) was, that the concealment of a small thin boy or dwarf was barely possible. The larger chamber would contain him, and that chamber never was opened from behind, nor at the same time that the back of the figure was exposed ; while it is observable that the inferior chamber had the light of a taper thrown through it. So that it appeared a practi- cable contrivance that a

boy should be concealed in the drapery while the commode was opened, and in the commode while the figure was ex- posed.

Under these impressions, the writer addressed a letter to the proprietor, in which he stated, that having with his friends, been highly gratified by the wonderful powers of the automaton chess- player, and intending to communicate the result of his investigation to the public, which must, if satisfactory, prove extremely creditable to the invention, ??? he requested leave to visit the exhi- bition (accompanied by two or three scientific friends, and probably in the presence of a mem- ber of the Royal family), in order to see a game played by the figure, with the doors of the com- mode open ; his object being merely to ascertain the impossibility of any human intervention, and not in any degree to inspect the machinery ; but to this application a polite negative was returned, declining any other than the ordinary public ex- posure of the machine.

Since writing the above, we have sesn 'An At- tempt to analyse the Automaton Chess-player of M. De Kempelin,' Lon. 1821. The anonymous author is sanguine enough to add, ' With an easy method of imitating the movements of that cele- brated Figure.' The solution of these movements here offered to the public, is so far similar to our own, as that the writer confidently ascribes them to the concealed presence of a living agent. Five lithographic plates illustrates his supposed mode 01 operation. But this tract suggests, 'that the ope- rator is introduced into the body of the automa- ton; that he sees the chessboard, while playing ' through the waistcoat, as easily as through a

veil ; ' and that his left hand actually fills the sleeve of the figure, moving the fingers ' with a string.' (Surely, to make this sort of agency com- plete, the chess-player might have been furnished with gloves !)

The. author ingeniously finds a space at the back of the drawer, not heretofore noticed, which would receive the legs of a concealed person. He also makes some pertinent remarks on the illu- sion which is probably practised on the spectator in the winding up of the machinery, the ticking of clock-work that is heard, 8cc. We still ima- gine, however, that the dimensions of the chest would afford no room for the concealment of a fi- gure that could thus direct the arm, and are certain no such figure could rise out of it into that part of the body supposed, as we saw it displayed in London. A youth coiled up in the commode would much more ' easily ' play the game. The whole chest is but two feet and a half high, three feet

long, and two feet in breadth. On the whole, we must leave the question of human agency still undecided, and pass on to the mention of another of M. de Kempelin's ingenious inventions.

' On what do you think M. de Kempelin is at present employed ?' says M. de Wendisch, in a letter to a friend on the pursuits of that gentle- man, in 1783 ••• ' on a machine that talks ! ' Ac- knowledge that he must be gifted with a creative genius bold and invincible, to undertake a pro- ject of this kind ; and will it be believed that he has every reason to hope for complete success? Ik1 has already succeeded so far as to prove the possibility of such a machine, and to deserve on the part of the learned, that they should dedicate their attention to this new and hitherto unknown invention. His machine answers, clearly and distinctly enough, several questions. The voice is sweet and agreeable ; there is but the letter R which it pronounces lispingly, and with a certain harshness. When its answer is not understood, it repeats it slower ; and if required to speak a third time, it repeats it again, but in a tone of im- patience and vexation. I have heard it pronounce ui different languages, very well and very dis- tinctly, the following words and phrases : ••• 'Papa,' 'Mama,' '.My wife,' 'My husband,' ' A-propos,' ' Marianne,' ' Rome,' ' Madam,' ' The queen,' ' The king,' ' At Paris,' ' Come,' ' Mama, loves me,' 'My wife is my friend." This writer th >n speaks of the machine being at that time notaing more than a square box, to \shieh was affixed a pair of organ-bellows; and that, at each answer of this non-dcscript speaker, the inventor put his hand under a curtain that covered it, to touch, apparently, the springs that produced the articulation. It appears to have been M. Kempelin's design to give to this auto- maton the form of a child of five or six years of aˆe, as the voice which he produced was that of this period of lite. He, however, exhibited it in an unfinished state ; and we have not been able t•• Irani to v\hat figure it was finally adapted. Ti.e narrative of his proceedings in accomplish- ing what he did effect, and which we abridge from a curious treatise of his, ' On the Mecha- niMii of Speech,' appears to us to be amongst the most interesting and useful of all the automa-

tical details. Our modern removers of impedi- ments in speech may work wonders, perhaps, by looking into his artificial jaws !

The first object of M. Kempelin, though upjn what ground he reasoned we cannot imagine, was the production of the vowel sounds, rather than those of any of the consonant, which he hardly expected to be able to combine with them. He investigated the affinity between the sound of various instruments and the human voice ; and between the use of the artificial reed-stop, or voce humana (which has sometimes been applied to the natural organs), and the general functions of the glottis. To the honor of our northern countrymen, after exhausting his patience on qualifying and

combining bassoon, with clarionet reeds, those of hautboys, &c. he found the reed of the Highland bagpipe to furnish the best prac- tical basis of his attempts, and sounds approxi- mating the nearest to the harmony divine of human speech ! He now conceived that the fun- damental powers of the voice were in A, the sound of which vowel he easily produced by combining the reed with a tube and a pair of organ-bellows ; but beyond this he could not proceed, until it occurred to him that the organ of developing the sounds desired, demanded his principal attention. He divided, therefore, a deep elliptical box into two parts, which shut upon each other with a hinge, in the manner of the human jaws, connecting his tube with the back of it, and carefully varying their opening and manner of action, until he could command the sounds of O OU, and E. Year after year was devoted to this instrument, we are told ; but I, or the German U, refused to obey his call. K, L, M, and P, however, rewarded his efforts ; when he attempted to form the letters he had ob- tained, into syllabic combinations and words. Here an almost insuperable difficulty occurred; the sounds of the letters would not flow into each other without a clatter or pause. If too slowly enunciated, they would seem like a child repeat- ing his alphabet, and have no resemblance to the word intended ; and if the tube was too rapidly supplied, it would produce a catching gust of air in the mouth, which interrupted every letter with the sound of K. An aspirating sound fol- lowing that of the consonants, was also very troublesome to overcome. In the beginning of the third year of his labor, he could execute, pretty accurately the words Papa, Mama, Aura, Lama, Mulo. The sounds of most of the other consonants were ultimately obtained. P, K, and T, required the greatest quantity of air, we are told ; and the whole machine about six times the quantity of the human lungs. But the two lat- ter consonants, with D and G, were always im- perfectly articulated. Some of his best sentences were, Romanorum Imperator semper Augustus. Leopoldus Secundus. Vous fetes mon ami. Je vous aime de tout mon ccour. M. de KempeHn finally perfected, 1. Nostrils, which he found of great importance in articulation, and which con- sisted of two tin tubes, communicating at bottom with the mouth. 2. The mouth, made of elastic gum, and of a bell form, so contrived that the sounds of the reed issued immediately from it,

and connected with the air-chest by a tin tube, which kept it always full of air. 3. The air- chest, which was of an oblong shape, and received at one end the voice-pipe containing the reed, and at the other the bellows-pipe, both closed round with leather. In this chest were contained two inferior ones, each having a valve at the top closed by a spring, and a round aper- ture adapted to receive through the side of the larger chest a tin funnel, and

a round wooden tube, which produced the hissing sounds of C H, J, S, and Z. The voice-pipe entered the larger chest between the two smaller ones. 4. The bel- lows, answering the purpose of lungs, and which acted in the ordinary manner of those belonging to an organ. 5. The reed, which was in imi- tation of a bagpipe drone, the hollow portion being square, and the tongue of it formed of thin ivoryx vibrating horizontally, to produce the various sounds. The square end was inserted, as we have noticed, in the air-chest. Along the upper side of the tongue was a movable spring, which slightly bent it inward ; and the part on which it fell was covered with leather, to modu- Jdte the vibrations. The sounds were more acute as the spring acted toward the outer extremity of the tongue, which was then more rapid in its motions ; as it was withdrawn from this part, the vibrations were slower, and the sounds more grave.

The name of M. Maillardet, a Swiss artist, of modern celebrity, is the only one that merits as- sociation with that of De Kempelin. He has executed two or three celebrated figures. One of these is a lady at her piano-forte. She exe- cutes eighteen tunes by the actual pressure of her fingers on the keys ; and while all the natu- ral notes are thus performed, her feet play the Hats and sharps by means of pedals. The in- strument, in fact, may be correctly called an organ, as it is mainly moved by bellows ; to bring which into proper action is the one important object of the machinery. The whole is impelled by six strong springs, acting on twenty-five com- municating levers, and regulated and equalised by a brass fly. The interior of the instrument is, of course, very complicated and minute in its mechanism, which requires to be wound up once an hour. Before commencing a tune, the lady bows her head to the auditors ; she is apparent- ly agitated with an anxiety and diffidence, not always felt in real life ; her eyes then seem intent on the notes, her bosom heaves, and at a dis- tance it is impossible to discover any semblance of a work of art.

A magician, that has sometimes accompanied this musical lady, is also a considerable triumph of mechanical skill. He sits at the bottom of a wall, with a long wand in his right hand, and a book in his left. Questions inscribed on thin oval counters, twenty in number, are put into the spectator's hand, who is desired to enclose one or more of them in a drawer, which shuts with a spring. A medallion, for instance, has the question, What is the most universal pas- sion ? which being put into the drawer, the figure rises with a solemn gait, bows his head, draws a circle or two with his wand, consults his book, and lifts it towards his face, is if in meditation. He then strikes with his wand on the wall above

his hand, when two folding-doors open, and dis-. cover the inscription Love, as the reply. The counters are remarkably thin, and similar in all other respects but their inscriptions, which some of them bear on both sides

: certainly the mechan- ism that can discriminate the one from the other, must be exquisite; and mechanism alone, we have the highest authority for believing it is.

M. Maillardet's Writing-boy is hardly less meritorious. He is exhibited kneeling on one knee, and an attendant having dipped hy pencil and laid the paper before him, he executes draw- ings, and French and English sentences, in wri- ting, of a very superior description. Every natural motion of the fingers, elbow, eyes, &c. is correctly imitated. The first of these figures the artist stated to have cost him the sum of ►►1500 in its construction.

The last machine of this kind which we shall no- tice is the engine invented by Mr. Babbage, capa- ble of computing any table by the method ot differences, whether they are positive or nega- tive, or of both kinds. The greater the number of differences, the more will this engine outstrip the most rapid calculator ; and by the application of certain parts of no great complexity, the roots of equations, and consequently the roots of num- bers may be extracted.

One machine of this kind this gentleman has executed. Drawings and plans of a second have been made by him to multiply any number of figures by any other number ; of a third, to make tables of prime numbers from 0 to ten millions ; and of a fourth, to construct tables which have no order of differences constant. This last engine will calculate tables governed by laws which have not been hitherto shown to be explicitly determinable ; and will solve equations, for which analytical methods of solution have not yet been contrived. Thus one of the greatest difficulties with which calculators are beset, ari- sing from the errors of copyists, and of the press, is obviated. In Mr. Babbage's engine, the ma- chine itself takes from several boxes, containing types, the numbers which it calculates : thus becoming at the same time computer and com- positor ; and preventing all error both in copy- ing and in printing. It is worked by the hand, and it would be very easy, if any advantage were to be gained by such a method, to apply to it a self-moving power.

We have now placed before the reader as com- plete an account of the most celebrated automata as the limits of our publication will admit. We believe no remarkable contrivance of this kind has escaped our notice ; and is it too much to ask him for one serious reflection, at the close, upon the wisdom of that Almighty Architect, by whom we are so fearfully, so wonderfully, so inimitably made ? Without any speculation on the possible powers of man, or the tendency of his habits and impulses on a large and hypothetical scale, let the entire muscular action of a single youthful arm, in striking a shuttlecock, be perfectly imi- tated by him, and we could

consent to resign to the artist the government of our share of the world !

AUTOMENES, one of the Heraclidse, kiug ot Corinth At his death, A. A. C. 779 annual ma-

gistrates were ohosen at Corinth, who were cal- led Prytanes ; and by them the Corinthians were governed for ninety years, till Cypselus and his son Periander assumed absolute power.

AUTOMEDON, in entomology, a species of papilio.

AUTOMOLI, a nation of Ethiopia, mentioned by Herodotus.

AUTOMOLITE, in mineralogy, a substance which, from its crystalline form, was considered to be a variety of spinelle, containing a portion of oxide of zinc. But a later and more accurate analysis has shown it to be an aluminate of zinc. It has hitherto been found only in Sweden, in small octahedral crystals, imbedded in talc.

AUTONINE (Bernard), a French lawyer, was advocate to the parliament of Bourdeaux. He was author of, 1 . A Comparison of the French and Roman Law; 2. A Commentary on the Provincial Law of Bourdeaux; 3. Censura Gal- lica in Jus Civile Romanum.

AUTONOE, in fabulous history, a daughter of Cadmus, who married Aristeus, by whom she had Actason, frequently called Autonei'is Heros. Actaeon became a famous huntsman, but happen- ing to look at Diana and her attendants bathing near Gargaphia, he was changed into a stag, and devoured by dogs ; which was so afflicting to Autonoe, that she retired from Boeotia to Me- gara, and soon after died.

AUTONOMIA; from at/roc, and j/o/ˆoc, law; a power of being governed by our own laws and magistrates. The liberty of the cities which lived under the faitli and protection of the Romans, consisted in their autonomia, i. e. they were al- lowed to make their own laws, and elect their own magistrates ; by whom justice was to be administered, and not by Roman presidents or judges, as was done in other places, which were not indulged with the autonomia.

AUTOPIIOROS ; from avrog and 0epw, to bear, i. e. self-bearing; an

epithet applied to a thief taken in the act with the stolen goods upon linn.

ACTOIMIOSPHORL'S is, by some, used to denote phosphorus, on account of its kindling of itself.

AUTOPRACTI; from cwroc, and Trpctrrw, I exact ; in the civil law, persons indulged with this privilege, that they should not be compelled to pay taxes, but should be left to their own free will. <)f this number were men of distinguished

A I TOl'SY. From av-nc; and

In those that have forked tails, autopsy convinccth us, that it hath this use. R,,,/ on the Creation.

\ '1 Ol'\ RITI'.S, At TO]-1, r,o> ; from avroc, and 7n►►poc, wheat ; in the ancient diet a species ►►► >f bread, wherein the whole substance of the wheat was retained, \sithout retrenching any part ot the bran. (lalen describes it otherwise, viz. as bread where only the coarser bran was taken out. And thus it was a medium between the finest bread, called similagineus, and the coarsest railed uuTuraceiis. This was also called the svneoinistus.

AUTOTHEISM, the doctrine of God's self- existence.

AUTOUR, in natural history, a sort of bark which resembles cinnamon, but is paler and thicker ; it is the color of a broken nutmeg, and full of spangles. It comes from the Levant, and is an ingredient in the carmine dye. Also, in ornithology, the name under which Buffon de- scribes the goshawk, or falco palumbarius of Linnaeus.

AUTREAU (James d'), a French poet and painter, who died in great poverty, in the hospi- tal of incurables in Paris, in 1 745. His drama- tic works were published in 4 vols. 12mo. 1749, He had little merit as a painter.

AUTRICUM, in ancient geography, 1. the capital of the Carnutre, in Gallia Celtica ; after- wards called Carnotena, Carnotenas, and Civitas Carnotenum ; now Chartres ; and, 2. the an- cient name of Auxerre.

AUTUMN, "} Perhaps from augeo, auc-

AUTUM'NAL, > turn, from the augmented fruiU

AuTUM'NiiY.3 of nature.

For I will board her though she chide as loud

As thunder, when the clouds in autumn crack.

Shakspeare.

Thy grandsire's -words savour'd of thriftie leekes, Or manly garlicke : but thy furnace reekes Hote steams of wine ; and can aloofe descric, The drunken draughts of sweete autumnitie.

Bp. Hall's Satires, book iii. Thou shalt not long

Rule in the clouds ; like an autumnal star, Or lightning, thou shall fall. Milton.

No spring or summer's beauty hath such grace, As I have seen in one autumnal face. Donne.

Bind now up your autumnal flowers, to prevent sudden gusts, which will prostrate all. Evelyn.

Not the fair fruit that on yon branches glows With that ripe red th' tutumnal sun bestows. Pope.

When men once reach their autumn, fickle joys Fall off apace, as yellow leaves from trees ; Till Jeft quite naked of their happiness, In the chill blasts of winter they expire. Young.

Autumn, nodding o'er the yellow plain, Comes jovial on. Thomson.

I would not be over-confident, till he hath passed a spring or autumn. Wiseman's Surgery.

The starving brood, Void of sufficient sustenance, will yield A slender autumn. , Philips.

The evening is an emblem of autumn, and autumn of declining life. Idler.

AUTUMN bfgltd when the sun enters Libra. When it eTwia, winter begins. Several nations % have computed their years by autumns ; the An- glo-Saxons bv winters. Tacitus tells us the Ger- many v/ara >⬛⬛

' Autumuus Libitina quaustus acerb '*

AUT

Autumn is commonly represented by painters under the figure of a female crowned with vine branches, and bunches of grapes ; naked in that part which respects summer, and clothed in that which corresponds to winter. Its garment is covered with flowers, like that of Bacchus.

AUTUMN, in alchemy, the season when the operation of the philosopher's stone is brought to perfection.

AUTUMNAL EQUINOX, the time when the sun enters the autumnal point.

AUTUMNAL POINT is that part of the equinox from which the sun begins to descend towards the south pole.

AUTUMNAL SIGNS, in astronomy, are the signs Libra, Scorpio, and Sagittarius, through which the sun passes during the autumn.

AUTUMN A LI A, the fruits of the earth that ripen in autumn.

AUTUMNALIS, in ornithology, a species of psittacus, called also psittacus Americanus, and crick a t►►te bleue, by Buffbn. It is the lesser green parrot of Edwards, and autumnal parrot of Latham. It is distinguished by being of a green color, with the front and spot on the quill-fea- thers scarlet ; crown and primary quill -feathers, blue. Of this kind there are two varieties. Also a species of anas, or duck, that inhabits South America. And a species of fringilla, called by Latham the autumnal finch.

AUTUMNUS, in entomology, the name given by Ammiral to the moth, or phalaena, called by Gmelin P. FAGANA : which see.

AUTUN, an ancient city of France, in the de- partment of the Saone and Loire, formerly the capital of the Autunois district, and now of an arrondissement, with nine cantons, and 67,000 inhabitants. Before the revolution the intend- ant of Burgundy resided heie, and it was the see of a bishop, suffragan of Lyons. The Arroux washes its walls, whose ruins are so firm, and the stones so closely united, that they seem almost to be cut out of the solid rock. Among the anti- quities of this city are the ruins of three ancient temples, one of which was dedicated to Janus, and another to Diana; two antique gates of con- siderable beauty, with a theatre and a pyramid ; which last is probably a tomb. In the church of St. Martins is the tomb of the sanguinary Brune- hault, who is said to have poisoned her son Chil- debert, and to have procured the death of ten kings ; and wh6 met her death by being tied to the tail of a wild mare, by order of her grandson, Clovis II. The present bishop ranks under the metropolitan of Besancon, and exercises jurisdic- tion over the departments of the Saone and Loire,

and the Nievre. Autun consists of the upper town, the castle, and the lower town. It is to- lerably well built, contained before the revolu- tion nine parish churches, five abbeys, with five other religious houses, and about 8000 inhabi- tants. The natives manufacture delft wares, carpets, coverlets, blankets, and tapestry. The city lies at the foot of three great mountains, sixteen leagues south-west of Dijon, and forty- five south-east of Paris.

AUTUNOIS, a ci-devant district of France, in Burgundy, now comprehended in the depart- ment of Saone and Loire. See AUTUN.

AUTURA, or AUDURA, a river of Gallia Cel- tica, now called Eure. It falls into the Seine, on the south side.

AUVAIL, a town of Germany, in the circle of Westphalia.

AUVERGNE, a ci-devant province of France, about 100 miles in length, and seventy-five in breadth ; the capital of which was Clermont. It was bounded on the north by the Bourbon- nois ; on the east by Forez and Velay ; on the west by Limosin, Quercy and La Marche ; and on the south by Rovergue and the Cevennes : and was divided into upper and lower ; the latter, otherwise called Limagne, being one of the finest countries in the world. The moun- tains of Upper Auvergne though not fruitful, afford good pasture, which feeds great numbers of cattle, the chief riches of that country. It now forms the two departments of Cantal and Puy-de-Dome, except some small districts an- nexed to those of Creuse Allier, and the Upper Loire. Auvergne is conspicuous in the various revolutions experienced by France, and anciently maintained a pre-eminence among the indepen- dent states of Gaul. Its inhabitants boasted a singular trophy in the sword of Caesar, which he lost before the walls of Gergovia. But they maintained a faithful alliance with the Romans after they became subject to them.

AUVERGNIE, a town of Switzerland, in the canton of Neufchatel, three miles south oi that place.

AUVERS, a town of France, on the righ bank of the Oise, in the department of the Seine and Oise, arrondissement of Pontoise. Also a town in the west of France, in the arrondissement of Le Mans, and department of the Sarthe.

AUVILLARS, or AUVILLARD, a town of France, in Lower Armagnac, Gascony, in the department of the Tarn and Garonne. It is the head of a canton, and contains manufactures of woollen stockings, and upwards of 2000 inha- bitants. It stands on the Garonne, which here forms a small harbour. Five leagues south of Agen.

AUVERNAS, a very deep-colored heady wine, made of black raisins, so

called at Orleans; but it is not fit to drink before it is above a year old ; but if kept two or three years, it becomes excellent.

AUVIGNY (N. Castressd'), a French historian of the eighteenth century. He was both a writer and a soldier, and lost his life at the battle of Dettingen, in 1743, at the age of thirty-one. His writings are, 1. Memoirs of Madam Bar- neveldt, 2 vols. 12mo. 2. Histories of Rome and France abridged for young persons. 3. His- tory of Paris, 4 vols. 12mo. 4. Lives of illus- trious Frenchmen, 8 vols. 12mo.

AVULS'ED, I Avello, avulsum, I tear or

AVULS'ION. $ pull away. Torn or pulled away.

Spare not the little offsprings, if they grow

Redundant ; but the thronging clusters thin

By kind avultion. Philipt.

The pressure of any ambient fluid can be no intel- ligible cause of the cohesion of matter ; though such a pressure may hinder the avulsion of two polished superficies one from another, in a line perpendicular to them. Locke.

AUX

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AW

Ye towering minds '. ye sublimated souls '. Who scatter wealth, as though the radiant crop Glitter'd on every bough ; and every bough, Like that the Trojan gather'd, once avuls'd Were by a splendid successor applied Instant, spontaneous ! listen to my lays.

Shenstone's Economy.

AUX, in astronomy, see AUGES. Some use aux to denote the arch of the ecliptic, intercep- ted between the first point of Aries, and the point wherein the sun, or a planet, is at its greatest distance from the earth.

AUXENTIUS, bishop of Milan, in the fourth century. He was a native of Cappadocia, and of Arian principles. Constantius gave him the bishopric of Milan; and though excommunicated by a council held at Rome, in 368, he held his see to his death, in 374.

AUXENTIUS, another of the Arian party, who challenged St. Ambrose to a public disputation, which was wisely declined by that great prelate.

AUX ERR E, an ancient town of France, the capital of the department of Yonne, formerly the capital of the Auxerrois, in Burgundy. The palace of the ci-devant bishop is one of the finest in France, and the churches are very beautiful. It is advantageously situated for trade with Paris, on a hill on the banks of the river Yonne, eleven leagues S. S. E. of Sens, and thirty-seven south-east of Paris. Its principal trade is in wood, and the excellent wares of the neighbour- hood. Here is also a manufacture of woollen stiitis. Population about 12,000.

AUXERKOIS, a ci-devant territory of France, in Burgundy, of which Auxerre was the capital. It now forms the greater part of the arrondisse-ment of Auxerre, in the department of the Yonne.

AUXKSIS, in mythology, a goddess worship- ped by the inhabitants of i'-gina, and mentioned by Herodotus and Pausanias.

AUXn.I'Al!, \ Lat. auxilium,

Ai XILI'AP.Y, n. k adj. ˆstrength ; one who

AUXILI'ATORY. _) gives or lends usaddi-

dotial strength. An aider, assister, or supporter. The giant brood,

That, fought at Thebes and Ilium on each side,

Alix'd with (iiisiliur gods. Milton's Puratlite Lost.

'I heir tractates arc little auxiliary unto ours, nor .iH'ord us any light to detenebrate this truth.

Brown's Vulgar Krrours.

There is not the smallest capillary vein' but it is present with, and auxiliary to it, according to its use. Male's Origifi, of Mankind. Nor from his patrimonial heaven alone,

Is Jove content to pour his vengeance down,

j\id from his brother of the seas he craves To help him with auxiliary waves. Dryden. Ovid.

They had both kept good company, rattled in cha- riots, glittered in play-houses, and danced at court, and were both expert in the games that were

in their times called in as aitx'diarif against the intrusion of thought. Rambler.*

AUXILIARY Vi KB. A verb that helps to con- jugate oilier verbs. In almost all languages, some of the commonest nouns and verbs have many irregularities ; such are the common aux- ###'.iary verbs, to be, and to have, to do, and to be done. &c.

AUXILIARY VERBS, in grammar, are prefixed to other verbs, to form their moods and tenses, In the English language, the auxiliary verb am supplies the want of passive verbs. All the modern languages make use of auxiliary verbs, because their verbs do not change their termina- tions as those of the Latin and Greek, to denote the different tenses or times of being, doing, or suffering ; nor the different moods or man- ners of their signifying : so that, to supply this defect, recourse is had to different auxiliary verbs. See GRAMMAR.

AUXILIUM, in law. See AID.

AUXILIUM, AD FILIUM MILITEM FACIENDUM, vel filiam maritandam, was a writ directed to the sheriff of every county, where the king or other lord had any tenants, to levy them reasonable aid, towards the knighting of his eldest son, or the marriage of his eldest daughter.

AUXILIUM CURLJE, signifies an order of court, for the summoning of one party at the suit of another.

AUXO, in mythology, the name of one of the two graces worshipped by the Athenians. See HEGEMONK.

AUXOIS, a small ci-devant territory of France, in Burgundy, of which Semur was the capital. It is now in the department of Cote d'Or.

AUXON, a town of France, in Champagne, department of the Aube, with 2340 inhabitants. 5J leagues S. S. W. of Troyes. Also a town in Upper Auvergne, department of the Upper Loire, near the Allier, with 1500 inhabitants ; and the title of barony. It carries on a traffic in corn, wine, and cloth. 12## leagues north- west of Le Puy.

AUXONNE, the capital of a county of the same name in France, in the province of Bur- gundy, on the left bank of the Saone. It is re- gularly fortified, and contains manufactures of serge and other cloths.

AUXY, the French name of a species of wool, spun in the neighbourhood of Abbeville, by workmen, called houpiers. It is very fine and beautiful, and used to make the finest stock- ings.

AW, a river of Scotland, in Argyllshire. Also a town of Germany in the electorate of Bavaria

Aw, or LOCH-AW, a beautiful and extensive lake in Argyllshire, in the parish of Glenorchy. The whimsical tradition respecting the origin of this lake is recorded by Ossian. The substance of it is, that ‘ to Bera the aged, was committed the charge of that awful spring, which was ap- pointed by fate to/ destroy the inheritance and race of her fathers. This event, she was to pre- vent, or at least to protract, by covering the spring before sun-set, with a stone, on which the sacred and mysterious characters were en- graved. One night this was forgot. The confined waters of the mountain burst forth, and sweeping all before them, covered that large expanse, now known by the name of the Lake of Aw.’ Mr. Stewart, minister of Stachur, explains the fable by the etymology of Bera; Beir, in the Gaelic signifying a thunderbolt. This lake is about thirty miles long, but not above three quarters broad upon an average, though in some places,

it measures two miles. It abounds with salmon, trout, eel’s, &c. The name is often spelt and generally pronounced Loch-ow.

AWA, a town of Persia, in the province of Irak, eighty miles south of Casbin.

AWA, a town of Japan, and capital of a pro- vince on the south coast of the island of Xicoco. Also a town of Japan, and capital of a province on the south coast of the island of Niphon, eighty-five miles south of Jeddo. Long. 140►► 4′ E., lat. 34►► 24′ N. ►►► A town of Japan, in the island of Ximo, sixty-two miles north of Nan- gasaki.

AWAHAZARI, a town of Asiatic Turkey, in Caramania, fifteen miles N. N. W. of Ala- nieh.

AWAIT, v. &n. } Dutch, rvaeken; Ang.-

AWAIT’ER, n. > Sax. Waeccean, to wake or

AWAIT’ING. j watch. To be watchful,

vigilant ; to keep upon the look out ; to be in

attendance, in expectation.

Even as the wretch condemn'd to lose his life, Awaits the falling of the murdering knife. Fairfax

And least mishap the most bliss alter may : For thousand perils lie in close await, About us daily, to work our decay. Spenser.

Advanc'd in view, they stand, a horrid front Of dreadful length, and dazzling arms, in guise Of warriors old with order'd spear and shield, Awaiting what command their mighty chief Had to impose. Milton. Paradise Lost, book i.

Nor less resolv'd, Antenor's valiant heir, Confronts Achilles, and awaits the war. Pope.

Man's feeble race what ills await! Labor and penury, the racks of pain, Disease, and sorrow's weeping train, And death, sad refuge from the storm of fate.

Collins.

The boast of heraldry, the poirp of power, And all that beauty, all that wealth e'er gave, Await alike the inevitable hour, The paths of glory, lead but to the grave. Gray.

AWA'KE, v. 8c adj.~\ See AWAIT. To rouse AWA'KEN, (from inaction of any

AWA'KENER, fkind; from sleep; to

AWA'KENING. J make alive.

K. RICH. I had forgot myself: am I not king? Awake, thou coward majesty, thou sleepest; Is not the king's name forty thousand names ?

Shakspeare. King Richard II. The cheerful lark, mounting from early bed, With sweet salutes awakes the drowsy light, The earth she left, and up to heaven is fled, There chaunts her Maker's praises out of sight.

Fletcher.

Covetous men need neither clock nor bell to awaken them : their desires make them restless.

Hall's Contemplations.

Tis night! the season when the happy take Repose, and only wretches are awake ; Now discontented ghosts begin their rounds, Haunt ruin'd buildings and unwholesome grounds.

Otway.

And see !

Tis come ! the glorious morn ! the second birth Of heaven and earth ! awakening nature hears The new creating world, and starts to life, In every heightened form, from pain and death For ever free. Thornton,

See Truth, Love, and Mercy, in triumph descending, A nd nature all glowing in Eden's first bloom ! On the cold cheek of Death smiles and roses are

blending, And Beauty immortal awakes from the tomb.

Seattle's Hermit.

AWAR'D, v. & n. > According to Tooke

AWAR'DER. $ from the French a garde."

to keep ; with a verb preceding, understood as to determine who is [to keep;] to adjudge.

A pound of that same merchant's flesh is thine ; The court awards it, and the law doth give it.

Shakspeare.

It advances that grand business, and according to which their eternity hereafter will be awarded.

Decay of Piety.

A church which allows salvation to none without it, and awards damnation to almost any within it.

South.

Satisfaction for every affront cannot be awarded by stated laws. Collier on Duelling.

Now hear th' award, and happy may it prove

To her, and him who best deserves her love.

Dry den.

Affection bribes the judgment, and we cannot ex- pect an equitable award, where the j-udge is made a party. Glanville.

To urge the foe,

Prompted by blind revenge and wild despair,

Were to refuse th' awards of Providence.

Addison's Cato. Th' unwise award to lodge it in the tow'rs,

An off 'ring sacred. Pope. Odyssey.

AWARD, in law, is the arbitrator's final ad- judication, of matters referred to him. Re- ferences are sometime made spontaneously by the parties themselves, to avoid the ex- pense and delay of legal proceedings; and sometimes by order of the court before which a cause is pending. In the former case, the par- ties enter into bonds to abide by the decision ; in the latter an order or rule of the court is made, that the matter in issue shall be deter- mined by the award. Law as well as facts are within the province of the arbitration. But if in the award (which is in writing and under seal) the arbitrator states the legal 'grounds on which he has decided, and those grounds appear to the court to be wrong, the award may be set aside. If he merely makes his order without assigning his reasons, the award must be abided by, though he may have been mistaken in point of law. And the courts will set aside an award, if the arbi trator can be shown to have made it from corrupt motives.

AWA'RE, v. & n.) Sax. waerd. Germ.

AWAR'N. J gewdrht, from wakren, to

see. To be on the look out, to be cautious, to take care, to be provident.

So warn'd he them aware themselves; and

Instant, without disturb, they took alarm.

Paradise Lott.

*Ere I was aware, I had left myself nothing but the name of a king. * Sidney.*

Ere sorrow was aware, they made his thoughts bear away something else besides his own sorrow.

Id. Arcadia.

Temptations of prosperity insinuate themselves ; so that we are but little aware of them, and less able to withstand them. Atterbitri/.

The first steps in the breach of a man's integrity are more important than men are aware of. Steele.

A\VE

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AWH

AW AST, or AWADSI, an island of Japan, near the south coast of Niphon, about sixty miles in circumference. Long. 133►► 44′ E., lat. 34►► 30′ N. Also, a town of Japan, and capital of an island of the same name. Long. 133►► 43′ E., lat. 34►► 30′ N.

AWASIMA, a small island of Japan, seven miles east of Sado.

A WATCH A, in ornithology, a species of mo- tacilla that inhabits Kamtschatka. It is of a brown color ; the chin and breast white, spotted with black ; middle of the belly and lores white ; primary quill-feathers bordered with white ; tail- feathers orange at the base. Art. Zool. ►►► Gmelin.

AWATSKA BAY, a harbour of Kamtschatka ; which is said to be the safest and most extensive yet discovered in that part of the world ; and the only one that can admit vessels of large burden. The entrance to it is in long. 158►► 48′ E., and lat. 52►► 51′ N.

AWAY',) Ang.-Sax. wagean, to wag

AWAY'WARD. $ or move; Ang.-Sax. weg, or waeg; Eng. way. Away is the imperative mood, or past participle.

A man's life is not to be trifled tway : it is to be offered up and sacrificed to honourable services, public merits, good causes, and noble adventures.

Bacon's Essays. I had my feather shot sheer away.

Jieaum. ty Flctcfi. Kniyltt of the burning Pestle.

They could make Love to your dress, although your face were away.

Ben Johnson's Catiline.

It is impossible to know properties that are so an- nexed to it, that any of them being away, that essence is not there. Locke.

So if by chance the eagle's noble offspring, Ta'en in the nest, become's some peasant's prize, Compell'd awhile to bear hi. cage; and chains .And like a pris'ner with the clown remains But when his plumes shoot forth and pinions swell He quits the rustic and his homely cell ; Breaks from his bonds, and in the face of day Full in the sun's bright beams he soars away : Delights thro' heav'n's wide pathless ways to go, .Viay < with Jove's shafts and grasps his dreadful bow. Jinifi-'s Jinyal Convert, act iv.*

But all ! thou knows't not in what youthful play Our nights beuuil'd with pleasure swam airay ??? viay songs and cheerful tales deceived the time, And circlinj; goblets made a tuneful chime; Sweet was the draught , and sweet the blooming maid, Who louch'd her lyre beneath the fragrant shade.

Sir W. Jones. There seems a floating whisper on the hill,

But that is fancy, for the starlight dews,

All silently thei'r tears of love instil,

Weeping themselves ainii/, till they infuse

Deep into Nature's breast the spirit of her hues.

l.??nl Byron's Childe Harolds.

Aw i,', r. & n. ~

Au i 'i i i.,

Au I'M i.i.y,

AuT/l I I.NKSS, Aui'l K-S,

Awr'i n -i. vri),

Au I .-(OMMAN DI Ml,

Au I -M Rl< K.

His coward lips did from their colour fly, And that same eye, whose bend does awe the world, Did lose its lustre. Shakspeare.

h. airy an, to fear,

.i(i. 'i'o cause

terror, or reve-

Know, then, that some of us are gentlemen. Such as the fury of ungovern'd youth Thrust from the company of awful men. Id.

So awful, that with honour thou may'st love Thy mate ; who sees, when thou art seen least wise.

Milton. Par. Lost. I approach thee thus, and gaze Insatiate -, I thus single ; nor have fear'd Thy awful brow, more awful thus retir'd, Fairest resemblance of thy Maker fair. Id.

A parish priest was of the pilgrim train, An awful, reverend, and religious man, His eyes diffused a venerable grace, And charity itself was in his face. Dryden.

Hail ! rev'rend priest ' To Phoebus' awful doms A suppliant I, from great Atrides come, Unransom'd here receive the spotless fair, Accept the hecatomb the Greeks prepare. Pope.

In those deep solitudes, and awful cells, Where heav'nly-pensive contemplation dwells, And ever-musing melancholy reigns.

Id. Eloisa to Abelard.

In winter, awful thou ! with clouds and storms Around thee thrown, tempest o'er tempest roll'd Majestic darkness! on the whirlwind's wing, Riding sublime, thou bidst the world adore And humblest nature with thy northern blast.

Thomson. Serene, though awful, on her brow the light

Of heavenly wisdom shone ; nor roved her eyes. Save to the shadowy cliff's majestic height, Or the blue concave of th' involving skies.

Beattie.

It were endless to enumerate all the passages, both in the sacred and profane writers, which establish the general sentiment of mankind concerning the insepa- rable union of a sacred and reverential awe with

our ideas of the divinity. Burke

A- WEIGH, the state of an anchor when it is drawn out of the ground in a perpendicular direction.

AWERI, or OVERO, a kingdom of Africa, de- pendent on Benin, with a town of the same name on the river Formosa.

AWE'ARY. On weary. See WEARY. SAP. Go thy waies, I begin to be awearie of thee j and I tell thee so before ; because I would not fall out with thee.

Shakspeare. All's Well that Ends Well.

AWHATED. From Ang.-Sax. wafian, to

be amazed, or astonished, terrified, confounded.

Ah ! my dear gossip, answer'd then the ape, Deeply do your sad words my wits awhape, Both for because your grief doth great appear, And fike because myself am touched near.

Hubberd's Tale

AWHEELS. ON WHEELS. And will they not cry then the world runs awheelt.

Ben Jonson's Masques, f. 18 AWHILE'. A time; Ang.-Sax. hwile (foi hwiol, a turn), walk a while, take a turn. See WHILE.

Stay, stay, I saj :

And if you love me, as you say you do, Let me persuade you to forbear awhile.

Shakspeare

Into this wild abyss the wary fiend Stood on the brink of hel\, and look'd awhile, Pond'ring his voyage. Milton's Paradise Lott Here, lonely wandering, o'er the sylvan bower, I come to pass the meditative hour ; To bid awhile the strife of passion cease, And woo the calms of solitude and peace.

Kirke White' Poems.*

AWN

But thou, with spirit frail and light, Wilt shine awhile and pass away,

As glow-worms sparkle through the night, But dare not stand the test of day.

Lord Byron.

AWHIT. A whit, or o whit, Ang.-Sax, hwit. See WHIT.

These farre exceede the haggarde hauke

That stoppeth to no stale : Nor forceth on the lure awhit, But mounts with eu'ry gale ?

Turberville. Epitaphes, &c.

AWK', \ Perhaps awk is a cor

AWK'LY, / ruption of averricht. The

AWK'WARD, \ termination, ward, is from

AWK'WARDLY, I keered, past participle of

AWK'WARDNESS. J keeren, Ang.-Sax. cyrran,

to turn. Deviating from the right path or line,

indirect, clumsy, inelegant.

Proud Italy,

Whose manners still our tardy apish nation Limps after in base awkward imitation.

Shakspcare.

Their own language is worthy- their care ; and they

are judged of hy their handsome or awkward way of

expressing themselves in it. Locke.

An awkward shame, or fear of ill usage, has a share

in this conduct. Swift.

Slow to resolve, but in performance quick ; So true, that he was awkward at a trick. Dryden. It is an awkward thing for a man to print in de- fence of his own work against a chimasra : you know not who or what you fight against. Pope.

What's a fine person, or a beauteous face, Unless deportment gives them decent grace ? Bless'd with all other requisites to please, Some want the striking elegance of ease ; The curious eye their awkward movement tires j They seem like puppets led about by wires.

Churchill.

AWK, in ornithology. See ALCA. AWL'. Ger. ahl. A sharp pointed tool. In the chroniclers used for a weapon of war.

His aide and lingell in a thong, His tar-boxe on his broad belt hong, His breech of coyntrie blew.

Drayton.

Thou art a cobler, art thou? Truly, sir, all that I live by is the awle.

Shaktpeare. Julius Caesar, fol. 109.

AWLS, among shoemakers, are usually a little flat and bended in the blade, and the point ground to an acute angle.

AVVLAN, a small imperial town of Germany, in the circle of Suabia, seated on the river Ko- cher, fifteen miles west of Oeting and twelve north of Heidenheim.

AWME, or AUME, a Dutch measure of ca- pacity for liquids, containing eight steckans, or twenty verges or verteels; answering to what in England is called a tierce, or one-sixth of a ton of France, or one-seventh of an English

ton. Arbuthnot.

AWN, in botany. See ARISTA.

AWN of wine, 360 pounds.

AWNING. A cover spread over a boat or vessel, to keep off the weather. ••• Awningi are made of canvas. The length of the main-deck awning, says Mr. Clerke, is from the centre of the fore-mast to the centre of the main-mast ; the VOL. Ill

width corresponds to the breadths of the ship, taken at the main-mast, fore-mast, and at the mid-way between. The length of the quarter- deck awning is from the centre of the main-mast s to the centre of the mizen-mast; and the width answers to the breadths of the ship, at the main- mast, mizen-mast, and at the mid-way between. The length of the poop, or after-awning, is from the centre of the mizen-mast to the ensign-staff, about seven feet above the deck ; and the width is formed agreeably to the breadths of the ship, taken at the mizen-mast, the taffarel, and at the mid-way between. The canvas is cut to the given breadths of the awning, allowing about nine inches to hang down on each side, which is sometimes scolloped and bound with green baize, and is sewed together with an inch-seam, and tabled all round with a two or three inch tabling. Half the diameter of the masts is cut out in the middle at each end, and lacing-holes are made across the ends to connect one awning to another. On the upper part, along the middle and sides, is sewed a one-inch and half or two-inch rope, to which the trucks are sewed at about three-quarters of a yard asunder. A thimble is spliced in each end of the rope. Sometimes curtains are made to hang to the sides of the awnings, of the same length as the awnings. Their depth is taken from the sides of the awning to the gun-wale, supposing the awning to be in its place. The seams and tab- lings are the same as those of the awnings, and lacing-holes are made along the upper tabling of the curtain, and the side tabling of the awning. Clerke's Elem. and Practice of Rigging, vol. i. p. 140. 230. In the long-boat they make an awning, by bringing the sail over the yard and stay, and booming it out with the boat-hook.

AWOR'K,

AWORK'ING.

Long they thus trauail'd, yet neuer met Adventure, which might them aworking set.

Spenser. Mother Hubberd't Tale, He first suborns a villain, that embrac'd The nobler name of March-born Mortimer, Which, in the title of the house of York, Might set the monstrous multitude awork.

Drayton. Miseries of Queen Margaret.

Who shoulde bee the makers of anye maner cloth,

if there lacked men of substaunce to set sudry sortes

a woorhe. Sir Thomas More's Workes.

AWRE'KE. Ang.-Sax. awrecan, to wreak. See WREAK.

Than dame Prudence, whan that she saw how that hire husbande shope him for to awreke him on his foos, and to beginne werre, she in ful humble wise, whan she saw hire time, sayde him these wordes.

Chaucer. The Tale of Melibeus.

AWRISH, a river in the county of Durham, which runs into the Tees at Eggleton.

AWRY'. Past participle awrythed, of the verb wrythan, to writhe. Writhed, crooked, bended, distorted, askance. When I look back, and iu myself behold

The wand'ring ways, that youth could not descry : And see the fearful course that youth did hold,

And mete in mind each step I strayed aivry.

Paradise of Dainty Devices^ 1600.

A XT,

322

AXI

Preventing fate directs tii;> l;mcc awry, Which glancing only inark'd Achates' thigh.

Dry den.

AX',) Ask. Asking. See ASK. These AX'YNG. \ words, which are now considered vulgarisms, are the original Saxo-n forms.

But Rohin may not wete of this, thy knave, Ne eke thy maiden Gille I may not save ; Axe not why ; for though thou axe me, I wol not tellen goddos privetee.

Chaueer. The Milleret Tale, v. i. p. 140. Ax, a town of France, the head of a canton, in the department of the Arriege, arrondissement of Foix. Here are warm baths which are much frequented. It lies on the river Arriege. Five leagues north-west of Tarascon. Population

1500.

Ax, or AXE, a river of England, which rises in the county of Dorset, and entering Devonshire, passes by Ax minster, and afterwards falls into the sea a little below Axmouth.

Ax, a river of England, which rises in Wokey- Hole, near Wells, in the county of Somerset, and after passing Axbridge, falls into the Bristol channel, about eight miles lower down AX, BATTLE. See AXE.

AXAM, a district and town of Tyrol, in the lower valley of the Inn, to the south-west of In- spruck. Here a great deal of flax is cultivated.

AXA.MKNTA, in antiquity, the verses or songs of the sulii, which they sung in honor of all men. The word is formed, according to some, from axare, to nominate. Others will have the carinina saliaria to have been denominated axamenta, on account of their having been written in axibus, or on wooden tables. The axamenta, were not composed by the salii. The author of them was IVunia Pompilius; and, as the style might not be altered, they grew in time so obscure, that the salii themselves did not understand them. Varro says they 700 years old.

AxAMr.viA, or AssA.Mr.XTA, in ancient music, hymns performed wholly with human voices.

AXARA, a (own of Asiatic Turkey, in Na- tolia, sittiati-d in a fc.itilo district -of die same name, lit'ty or sixty miles from (Inzel-IIissar.

AXA'll, a town of ancient Htvtica, in the Bottis ; now called Lora, a small eity of Anda- lusia, m Spain, seated OH the Huadalquiver.

AXA YA('ATI , a species of fly, common about the lakes of .Mexico; t'io eu'>_ deposited in immense qnantiti and corn-li,i_rs, form !ar_e masses, which are taken up 1 y iisliermn:, and carried to market. This caviare, called a'luauhtli, which has much – caviare of iish, used to be and is now a common dish The Mexicans eat not ies themselves, made up prepared with saltpetre. rket town of Somerset- _',';, liv prescription, senti- ent during the; reigns of ufu.T winch it was, at its i'i>e corporation consists ❓❓❓' -r:, ten aldermen, a ; < ❓❓❓!' whom a sheriff, ;! :s are chosen.

Knit hose is the only manufactory. The kings of England formerly had a

hunting chase here Market on Saturday. It is twenty-three miles north-west of Somerton, and 131 west of London. AXE'. Gr. Ayw, a□□u>. An adze or addice. See ADDICE.

My mangled body shows,

My blood, my want of strength, my sick heart shows That I must yield my body to the earth, And by my fall the conquest to my foe ; Thus yields the cedar to the axe's edge, Whose arms give shelter to the princely eagle.

Shakspeare. Third Part of Henry VI. act v. sc. 3. Loud sounds the axe, redoubling strokes on strokes, On all sides round the forest hurls her oaks Headlong. Deep echoing groan the thickets brown, Then rustling, crackling, crashing, thunder down.

Pope's Homer's Iliad, xxiii. 144. Like crowded forest trees we stand,

And some are inark'd to fall ; The axe will smite at God's command,

And soon will level all. Cowper.

AXE, a river in Somersetshire, which falls into the Severn below Uphill.

AXE, or Ax, differs from the hatchet, in that it is made larger and heavier, to hew large stuff; and its edge tapering into the middle of its blade. It is furnished with a long handle, being to be used with both hands.

AXEL, or AXIL, a small fortified town of Dutch Flanders, in the kingdom of the Nether- lands. It is seated among marshes, fourteen miles north of Ghent.

AXELODUNUM, tbe ancient name of Hex- ham, in NorthxirtiherlaTid.

AXENUS, the ancient name of the Euxine Sea, the signification of which is, inhospitable ; and is perfectly answerable to the disposition and manners of the ancient inhabitants of the east.

AXE-STONE, in mineralogy, a sub-species of were jade, but not of so light a green, and somewhat of a slaty texture. The natives of New Zealand work it into hatchets. It is found in Corsica, Switzerland, Saxony, and on the banks of the river Amazons, whence it has been called Ama- zonian stone. Its constituents are silica 50'5, magnesia 31, alumina 10, oxide of iron 5'5, water 2-75, oxide of chromium 0-05.

AXEY, the principal town in the isknd of Axholm. It is thinly inhabited.

AXHOLM, a river island in the north-west of which, being part of

Lincolnshire. It is formed by the rivers upon the rushes Trent, Idel, and Dun ; and is about ten miles long, five broad, and twenty in compass. It has three villages, Crowle, Epworth, and Hyrst ; besides Axey, the chief town. The lower part is marshy, but produces an odoriferous shrub, called gall ; the middle is rich and fruitful, yielding flax in great abundance. It also produces an alabaster, which is used for making lime. In the eighteenth century the body of a woman, quite entire, and in a bent position, the head and feet almost in contact, was found in a morass, which, from the fashion of her sandals, was conjectured to have lain there from the time of Edward I. when there were two monasteries here.

AXIACE, -an ancient town of Sarmatia Eu□□ ropea; now Oczacow.

AXIL. See AXEL.

AXILLA, in anatomy, or ALA, the cavity under the upper-part of the arm ; commonly called the arm-pit. It is a diminutive of axis, q. d. little axis. Abscesses in the axillae are usually dangerous on account of the many blood- vessels, lymphatics, nerves, &c. thereabout, which form several large plexuses. By the ancient laws, criminals were to be hanged by the axillae if they were under the age of puberty.

AXILLA, in botany, is the space comprehended between the stems of plants and their leaves. Hence we say, those flowers grow in the axillae of the leaves ; i. e. at the base of the leaves, or just within the angles of their pedicles.

AXILLARY ARTERY is that part of the sub- clavian branch of the ascending trunk of the aorta, which passes under the arm-pits.

AXILLARY GLANDS are situated under the arm-pits, enveloped in fat, and lie close by the axillary vessels.

AXILLARY NERVE, called also the auricular nerve, arises from the last two cervical pairs ; runs into the hollow of the axilla, behind the head of the os humeri, between the musculus teres major and minor, &c.

AXILLARY VEIN, is one of the subclavian veins; which, passing under the arm-pits, divides itself into several branches; superior, inferior, external, internal, &c. which are spread over the arm.

AXILLARY VERTEBRA, the second vertebra of the back, so called because it is nearest to the arm-pits.

AXIM, a district of Africa, part of the fertile territory of Ahanta, on the Gold Coast. It is directly east of Apollonia, from which it is sepa- rated by the river Ancobra. The Dutch have a fort in Axim called Fort Anthony, situated on the most western promontory of Cape Three Points. It is compact, well situated for landing, and in a commanding position. Ten leagues east of Apollonia.

The climate is so excessively moist, that it is proverbially said to rain eleven months and twenty-nine days of the year. This excessive moisture renders it very unhealthy ; but it pro- duces great quantities of rice, water-melons., lemons, oranges, &cc. Here are also produced vast numbers of black cattle, goats, sheep, pigeons, &c. The whole country is filled with beautiful and populous villages, and the inter- mediate lands are well cultivated. The natives all go naked, but are very healthy ; and there is a constant traffic carried on with them by the Europeans for their gold. This canton is a kind of republic, the government being divided between the Caboceroes or chief men, and Ma- naceroes or young men. But in their courts, whoever makes the most valuable present to the judges is sure to gain his cause. The Portu- guese founded the first settlement here, but were driven from it by the Dutch in 1642.

AXIM, a river in the above canton, which runs through the town of Axim.

AXIM, or Auchombone, the capital of Axim, stands under the cannon of the Dutch fort St. Antonio. It is secured behind by a thick wood dial covers the whole declivity of a neighbouring

hill. Between the town and the sea runs an even and spacious shore of beautiful white sand. All the houses are separated by groves of cocoa, and other fruit-trees, planted in parallel lines, each of an equal width, and forming an elegant vista. The coast is defended by a number of small pointed rocks, which project from the shore, and render all access to it dangerous.

AXINAE'E, AxiNjEa:, in natural history, a genus of the Mollusca tribe (Testacea,) establish- ed by Poli, in his history of the shells of the two Sicilies. The character is taken from the form of the animal; the shell belongs to the Area genus of the Linnsean arrangement.

AXINITE, in mineralogy, a crystallised sub ??? stance, found principally in Dauphiny, in France, and latterly in the neighbourhood of St. Just. Cornwall. The colors are a light violet brown The crystals resemble an

axe in the form and sharpness of their edges ; being flat rhomboidal parallelepipeds, with two of the opposite edges wanting, and a small face instead of each. They become electric by heat. Lustre splendent. Hard, but yields to the file, and easily broken. Specific gravity 3-25. It froths like zeolite before the blow-pipe, melting into a black enamel, or a dark green glass. According to Vauquelin's analysis, it contains forty-four silica, eighteen alumina, nineteen lime, fourteen oxide of iron, and four oxide of manganese.

AXINOMANCY, AXINOMANTIA ; from alivri, an axe, and pavrtia, divination ; an ancient spe- cies of divination, or a method of foretelling future events by means of an axe or hatchet. This art was in considerable repute among the ancients ; and was performed, according to some, by laying an agate stone on a red hot hatchet, and also by fixing a hatchet on a round stake so as to be exactly poised ; then the names of those that were suspected were repeated, and he at whose name the natchet moved was pronounced guilty.

AX'IOM, 1 Gr. A$tufj.a, from o□□tow,

AXIOMAT'ICAL. $ to think worthy. A self- evident proposition.

The universal axiom in which all complaisance is included, is, that no man should give any preference to himself. Johnson.

That a conjectural critick should often be mistaken, cannot be wonderful, either to others or himself, if it be considered that in his art there is no system, no principal and axiomatical truth that regulates subor- dinate positions.

Johnson's Preface to Shakspeare.

AXIOM, in rhetoric, is used by Hermogenes to denote grandeur, dignity, and sublimity of style.

AXIOMS, in logic. That the whole is greater than a part; that a thing cannot be, and not be at the same time; and that from nothing, nothing can arise; are axioms indisputable. Established principles in arts and sciences are also stilea axioms. Thus it is an axiom in physics, that nature does nothing in vain ; that effects are proportional to their causes, &c. It is an axiom in geometry, that things equal to the same thing, are also equal to one another; that if to equal things you add equals, the sums will be equal, &c. It is an axiom in optics, that the angle of

incidence is equal to the angle of reflection, &c.

AXION, the brother of Alphesibrea, who mur- aered Alcmteon, his sister's husband, because he washed to take back a golden necklace he had given her.

AXIOPOLI, a town in Bulgaria. Long. 34►►

AXIOPOLIS; a town of the Triballi, in Maesia Interior.

AXIOS, a form of acclamation, anciently used by the people in the election of bishops. \V hen they were all unanimous, they cried out a►►toff/ he is worthy ! or ava►►ioff ! unworthy !

AXIOS1S, a?►►o

AXIOTKA, or AXIOTHEA, a female philoso- pher of Greece, who lived in the time of Plato, and attended his lecture?, dressed in the habit of a man.

AVIS, -\ Lat. a r/x, (jr. a$wv, from ayuv,

AXI. K, 'to go round. Axis is a line

Ax i.r.n, (drawn through the centre of

Ax LE-TREE. 3 any body round which it re- volves.

The line, that \vr douise from thonc to thothcr so, As axcll is j upon v.hich the heaven's about do go.

Wyatt.

But mark mo also, these, mourners of these seuen, Be not aliouc the axeltrcc of tlie first mouing heauen.

Id.

Inferior ministers, for !Uar? repair His broken axle-trees, and blunted war.

J>ri/

T. \Vitrtun. The (I rare of King Arthur.

Axis, iii anatomy, the second vertebra of the neck, thus called l>ecau

Axis, in astronomy, is an imaginary right line supposrd id pa>s t:in>u_;ii the centre of the heavenly Imdies, a: out which they perform their diurnal revolutions.

Axis, in liot.my, a taper column placed in the centre of some flowers or catkins, about which the other parts are disposed.

AM-, in eonie sections, aright line dividing the section into two equal parts, and cutting all its ordmati s at riˆht angle.";.

Axis i:1 '.cometry, tlie ˆtrai'Jit line in a plain figure, aliout which it revolves, to produce or generate a solid. Tlius if a semicircle he moved round its diameter at re

Axis. ID mechanics. The axis of a balance is that line which it moves, or rather turns about.

Axis, in optics, is that particular ray of light coming from any object which falls perpendicu- larly on the eye.

.Axis, common or mean, in optics, a right line drawn from the point of concourse from the two optic nerves, through the middle of the right line which joins their extremity.

Axis, in peritrochio, one of the six mechanical powers, consisting of a peritrochium or wheel concentric with the base of a cylinder, and move- able together with it about its axis.

Axis, in zoology, a very remarkable animal, of the deer kind in all respects, except that neither the male nor female have horns; the tail is considerably long, and the whole shape and make are extremely like those of the fallow deer. The female is smaller than the male, and both are of a reddish tawny color, variegated with spots of white; the belly is white. The voice is much more loud and shrill than that of the deer. It is plain that this creature is neither of the red nor fallow deer kind, whence Bellonius, who saw it at Cairo in Egypt, was induced to call it the Axis.

Axis, determinate, in a hyperbola, a right line which divides it into two equal parts, and at right angles, an infinite number of lines drawn parallel to each other within the hyperbola.

Axis, MAGNETICAL, or Axis OF A MAGNET, a line passing through the middle of a magnet, lengthways, in such manner, as that however the magnet be divided, provided the division be made according to a plane

wherein such line is found, the load-stone will be made into two load-stones. The extremities of such lines are called the poles of the stone.

Axis or A PLANET, is a line drawn through the centre, about which the planet revolves. The sun, moon, and all the planets, except Mercury and Saturn, are known, by observation, to move about their several axes ; and the like motion is easily inferred from those two.

Axis OF A SPHERE, or CIRCLE, is the same as diameter.

Axis OF A VESSEL, is an imaginary right line passing through the middle of it perpendicularly to its base, and equally distant from its sides.

Axis OF INCIDENCE in dioptrics, a right line drawn through the point of incidence perpendi- cular to the refracting surface.

Axis OF OSCILLATION, is a right line parallel to the horizon, passing through the centre about which a pendulum vibrates.

Axis OF REFRACTION, is that which is made by the ray of incidence directly prolonged on the inside of the second medium by the ray of refraction.

Axis OF THE CYLINDER, is properly that qui- escent right line, about which the parallelogram turns, by whose revolution the cylinder is formed. Though, both in right and oblique cylinders, the right line joining the centres of the opposite bases, is also called the axis of the cylinder.

Axis OF THE EARTH, is a right line upon which the earth performs its diurnal rotation from west to east.

Axis OF THE IONIC CAPITAL, is a line passing perpendicularly through the middle of the eye ot the volute.

Axis OF THE ZODIAC, a line supposed to pass through the earth and terminate in the poles.

Axis, SPIRAL, is the axis of a twisted column drawn spirally, in order to trace the circumvolu- tions without.

AXMINSTER, a town of Devonshire, situated on the river Ax, in the great

road between Lon- don and Exeter, being twenty-five miles east of the latter place. It was a place of some note in 'the time of the Saxons, and now contains about 2500 inhabitants. It has a manufactory of broad and narrow cloths, and an extensive one of carpets, manufactured after the Turkish manner : its carpets are often preferred to those from Turkey. The petty sessions are holden here. King yEthelstan founded a minster here, for seven priests, to pray for the souls of those who were slain in a battle which he fought with the Danes at Bremaldown. It has four fairs : on the 24th of February, 25th of April, 24th of June, and Wednesday after Michaelmas, with a market on Saturday, It is 147 miles west of London. Long. 3►► 8′ W., lat. 50►► 45′ N.

AXOLOTI, in icthyology, a singular fish found in the lakes of Mexico. It has four feet like the lizard, no scales, a matrix like a woman, and the menstrual flux. It has the taste of an ee).

AXONES; aZwvfe; public laws of the an- cient Greeks, particularly of the Athenians, so named from their mode of publication.

*AXTEL (Daniel), a regicide, and colonel in the service of the long parliament, was of a good family, and had a tolerable education. As he was of a serious disposition, and had been very early tinctured with puritanical principles, he became a fervent follower of such ministers as distinguished themselves by their zealous preach- ing. His great attachment to these people, and the natural warmth of his temper, were the cause of his going into the army, in which he behaved with so much zeal, courage, and conduct, that he rose by degrees to the several commands of cap- tain, major, and lieutenant-colonel, in a regi- ment of toot. It was in this last capacity that he acted with great vehemence against all endea- vours for a reconciliation with the king. When the king was brought before the high court of justice, colonel Stubberd and Axtel had the com- mand of the soldiers below stairs. The king de- manded of sergeant Bradshaw, the president, by what authority they brought him there ? and the president appealing to the charge, which was in the name of the Commons of England, lady Fairfax and Mrs. Nelson are said to have cried out, * It is false ; not a half, not a quarter of the people.' Upon this colonel Axtel cried out,*

' Down with the w ; snoot them !' After

the sentence, the king was carried through King- street, in a sedan, by two porters, who, out of re- verence, went bare-headed, till the soldiers under Axtel's command beat them, and forced them to put on their hats. After the king's death, when Cromwell was sent into Ireland, the regiment in which Axtel served was drawn out by lot for that expedition, which occasioned

his going over into that kingdom, where he made a considerable figure, was much esteemed, and raised by Crom- well to tiie command of a regiment, and the go-

vernment of Kilkenny After the Protector's death Axtel endeavoured to conceal himself, sus- pecting that he might be called to an account for the share he had taken in the trial of the king; but before the close of the month he was discovered and committed to prison. On the 10th of October the grand jury for Middlesex found bills against twenty-eight persons, for their concern in the king's death, of whom Axtel was the last. His trial, by the elaborate defence he made, lasted upwards of three hours : but the jury, without going from the bar, found him guilty; and he was executed, on the 19th, at Tyburn.

AXUM, AXOMA, AXOMIS, or AKSUM, in Abys- sinia, the capital of a powerful state in the time of the Ptolemies, and perhaps of all Abyssinia ; still retaining monuments ofits former splendor. An ancient throne of granite, and two rows of obelisks, struck Mr. Salt as amongst the most beautiful ancient relics he had ever seen. But per- haps the most curious of all is a long Greek in- scription, which records the victories of one of the Ptolemies and the extent of their empire. Fru- mentius, the apostle of Ethiopia, was the first bishop of Axum, and many churches had been excavated from the surrounding mountains be- fore the close of the fifth century. It carried on a considerable trade with India and Arabia, through the port of Adulis. It is the place where the kings of Abyssinia are crowned. Mr. Salt found it to be in lat. 14□□ 6′ 36″ N. Its present population is about 3000. The inhabit- ants are rude and inhospitable. They wear coarse woollen clothes. The monks prepare the best parchment in all Abyssinia. The church of Axum appears to have been built in 1657, and is considered by Mr. Salt, excepting that of Chelicut, as the finest in the province of Tigre. The town stands agreeably sheltered by hills, at the corner of an extensive valley. It is de- scribed by Bruce as containing 600 houses.

AXUNGIA, in a general sense, denotes old lard, or the driest and hardest of any fat in the bodies of animals ; but more properly it signifies only hog's lard.

AXUNXYIA LUN.E, an affected name given by the German chemists to the terra goltbergensis, from their imagining that it contains some par- ticles of silver, and owes to them its virtues in medicine.

AXUNGIA SOLIS is used for the terra siiesiaca, and said to be good against the plague, pestilen- tial fevers, &c.

AXUNGIA VITRI, SANDIVER, or salt of glass, a kind of salt which

separates from the glass while it is in fusion. It is of an acrimonious and biting taste. The farriers use it for cleansing the eyes of horses. It is also made use of for cleansing the teeth ; and it is sometimes applied to running ulcers, the herpes, or the itch, by way of desiccative.

AXYLUS, an ancient hero of Arisba, ceKJ brated by Homer for his hospitality, whic!i gained him the appellation of the Friend of Man- kind.

AXYRIS, a genus of the triandria order, and moncecia class of plants, ranking in the natural method under the twelfth order holoraceae. The

calyx of the male is tripartite; it has no corolla. The calyx of the female consists of two leaves; it has two styli and one seed.

AY. Sax. Ever. For ever.

AY, a town of France, in the department of Marne, near the river Marne, remarkable for its excellent wines. It lies twelve miles south of Kheims, and one mile and a half north-east of Epernay. Inhabitants 2600.

AYACUCHO, BATTLE OF. This engagement is one of the most celebrated in the history of South America, having been decisive of the in- dependence of Upper and Lower Peru. For several months before this event, the Colombian auxiliary army, under general Sucre, and the royalist army, under the viceroy La Serna, had been moving in face of each other with various success, but, on the whole, to the disadvantage of the Colombians. Sucre and his men were anxious for battle; and at length La Serna deter- mined to engage them on the plain of Ayacucho, Dec. 9, 1825. The royalist force consisted of 9,310 men, that of the patriots of 5,780 men. Generals Sucre (the commander in chief), La Mar, Cordora, and Miller distinguished them- selves on this occasion, and the battle terminated in the total defeat of La Serna, who was taken prisoner, with the loss of 1800 men in killed and wounded, and in the capitulation of Can- terac, the second in command. Of the patriots, only 370 were killed. Tins splendid victory effectually accomplished the delivery of Peru from the Spaniards.

AYAH, or KAYAC-IIT, one of the Andren- nofskie islands, in the eastern or Pacific: Ocean, about 1;”>0 versts in circumference, anil consisting of several high and rocky mountains, the intervals of which ate ban; heath and moor ground ; but in the whole island there is not one forest-tree.

AYAMOXTE, a sea-port town of Andalusia in Spain, with a strong castle built ori a rock; seated on the mouth of the Guadiana, eighty- fu '(.' miles north-west of Cadiz. It has a com- modious harbour, a productive sardel fishery, fruitful vineyards, and excellent wine. Popula- tion about ,">000.

AYAS, a town and castle of C'aramania, in the u'oveninieiit of Adana, on the bay of Ay as, near the .Ivpoo, and on the west side of the (iulf of Scanderoon, or Iskeiuleroon, the ancient Sinus Is.-icus. It is fortified all round; and here are the remains of a fort and artificial pier. A little to tin1 westward is a round tower with an Arabic inscription. Myriads of fish, numerous fine turtle, and aquatic birds, abound on the shore. This place is supposed to be die ancient .LVoj. l.onir. ::/, 48'. I',, lat. 3u□□ 4(5' N.

AˆiASIl, a village on the same coast, sur- rounded by tlie rums of a town that has occupied a considerable space of ground, and containing tue remains ol a theatre and many other edifices. The most conspicuous of the whole is a temple, situated on a projecting eminence. Its columns arc of the c'ompo-ite order, tinted, and about four leet in diameter. This is conjectured to l.a' e been the ancient Seba>ta.

.\ A\ I KI, a town of Lima, in Peru, remark- able ior many stately tombs of the Peruvian no-

AYBAR, a town of Spain, in Navarre, on the Arragon, famous for a battle fought here in the year 1451, betwen John king of Castile, and his son Don Carlos, in which the latter was defeated and taken prisoner. Three miles south of San- guesa.

AYDON BRIDGE, or HEYDON BRIDGE, a town in Northumberland, five miles west of Ilex- ham, so named from its bridge over the Tyne. It has a market on Tuesday, and a fair on July 21st, 22d, 23d, and 24th.

AYE. Ayez. The imperative of the French verb avoir, to have ; signifying have it, possess it, enjoy it. The expression is similar in Swedish, German, and Dutch.

Return you thither? Ay, madam, with the swiftest wing of speed.

Shakspeare.

What say'st thou ? wilt thou be of our consort ? Say ay, and be the captain of us all. Id.

Sometimes in mutual sly disguise, Let ayes seem not, and nos seem ayes; Ayes be in courts denials meant, And no in bishops give consent. Thus aye proposed, and, for reply, No for the first time answer'd aye. They parted*

with a thousand kisses, And fight e'er since for pay like Swisses.

Gay's Fables. Aye and No.

AYEK JEMANI, a species of cornelian, much valued by the Arabians.

AY EL, Fr. in law, a writ which lies where the grandfather was seized in his demesne on the clay he died, a stranger enters the same day and dispossesses the heir.

AYENIA, in botany, a genus of the pentan- dria order and gynandria class of plants, ranking in the natural method under the thirty-seventh order, columnifera;. The calyx has two leaves ; the petals are in the form of a star, with, long ungues ; and the capsule has five cells. There are three species all natives of the West Indies.

AYERBE, or AYERVE, the capital of a ba- rony, in the district of Iluesca, Arragon, situ- ated at the foot of the Pyrenees, thirty-two miles north of Saragossa.

AYERSTOWN, a town of the United States, in New Jersey, thirteen miles south-east from Burlington.

AYESHA, the wife of Mahomet, and daugh- ter of Abubeker. The impostor had a greater regard for her than for any of his wives, though she had no children ; and his followers highly respected her. She opposed Ali's suc- cession and raised an army against him; but after a severe contest was made prisoner. The conqueror, however, dismissed her with civility. This turbulent woman died in 677, aged sixty- seven.

AYGULA, in zoology, a species of simia or ape.

AYGULUS, in entomology, a species of sca- rabaeus that inhabits India.

AYLESBURY (Sir Thomas), merits a place in a work of this kind, not only as a learned man himself, but as the patron of men of letters. He was born in London in 1576, was educated

at Westminster, and studied at Oxford, where he took his degree of A.M. in 1605. He became secretary to Charles earl of Nottingham, lord mgh admiral, and gave so many proofs of his skill in mathematics, that he

retained his secre- taryship under the duke of Buckingham upon his succeeding the earl. By the duke's influence he was appointed master of requests, and master of the mint, and created a baronet. The profits of these lucrative offices he applied to the most benevolent purposes. He not only made all men of science welcome to his table and afforded them his best countenance, but also gave regular pensions to such of them as were in narrow cir- cumstances. It is to be regretted that a man of so benevolent a character should himself have afterwards experienced adversity. In conse- quence of his steady adherence to the king, he was, in 1642, stripped of his places and estate, but he bore up cheerfully under his misfortunes, and in 1649 retired with his family to Brussels. He died at Breda in 1657, aged eighty-one.

AYLESBURY (William), the son of the baronet, took his degree of A.M. at Christ Church, in the sixteenth year of his age, and like his father, was a sufferer by his adherence to the cause of royalty. King Charles I. early appointed him travelling preceptor to George Villiers duke of Buckingham, and his brother, Lord Francis. During their travels in Italy he was nearly killed by an assassin. He returned to Engtand during the civil war, but after the king's death retired to Antwerp. In 1650 he again returned to Eng- land, where he experienced great difficulties, being often in want of daily necessaries. At last, in 1657, the protector having fitted out a fleet for the WTest Indies, he was engaged as secretary to the governor of Jamaica, the climate of which soon cut him off.

AYLESBURY. See AILESBURY.

AYLESFORD. See AILESFORD.

AYLLTS, or SEA SWALLOWS. In heraldry, they are often called Cornish choughs, and are painted sable, beaked, and legged gules.

AYLETT (Robert), an English author of the seventeenth century. He was educated at Trinity Hall, Cambridge, where he took the degree of LL.D. in 1614 and afterwards became master in Chancery. He wrote Susanna, or the Arraign- ment of the Two Elders, a poem, 1622, 8vo. besides several other poetical pieces. He is thought by some to have been the author of the Britannica Antiqua Illustrata, which is generally attributed to his nephew, Aylett Sammes.

AYLIN (John), an Italian writer of the four- teenth century. His chief work is a History of Friuli, printed in Muratori's Antiquitates Italics! medii /Evi, Milan, 1740.

AYLMER (John), bishop of London in the reign of Elizabeth, was born in

1521, at Aylmer- hall, in Tilney, Norfolk. While a boy he was distinguished for his quick parts, by the marquis of Dorset, afterwards duke of Suffolk; who sent him to Cambridge, made him his chaplain, and tutor to his children. One of these was the un- fortunate Lady Jane Gray, who soon became perfectly acquainted with the Latin and Greek. His first preferment was to the archdeaconry of Stow, which gave him a seat in the convocation

held in the first year of queen Mary, wheie he resolutely opposed the return to popery, to which the generality of the clergy were inclined. He was soon after obliged to take shelter among the Protestants in Switzerland. On the acces- sion of Elizabeth he returned to England. In 1562 he obtained the archdeaconry of Lincoln ; and was a member of the famous synod of that year, which reformed and settled the doctrine and discipline of the church of England. In 1576 he was consecrated bishop of London. He died in 1594, aged seventy-three; and was buried in St. Paul's. He published An Harbrowe for faithful and trewe Subjects against the late blowne Blaste concerning the Government of Women, &c. In answer to Knox, who published a book at Geneva under this title, The first Blast against the monstrous Regimen and Empire ˆof Women. Strype gives the following instance of his courtly , courage : ••• Queen Elizabeth being once tormented with the tooth-ache, and yet afraid of having the tooth drawn, bishop Aylmer being by, to encour- age her majesty, sat down in a chair, and calling to the operator, ' Come,' said he, ' though I am an old man, and have but few teeth to spare, draw me this;' which was done; and the queen seeing him make so slight a matter of it, sat down and had hers drawn also.

AYLOFFE (Sir Joseph), of Framfield in Sus- sex, was descended from a Saxon family anciently seated at Bocton Aylof, in Kent, in the reign of Henry the Third. He was born about 1708; received the early part of his education at Westminster school ; admitted of Lincoln's Inn 1724 ; and in the same year was entered a gen- tleman commoner at Oxford, which he quitted about 1728 ; was elected F.A.S. Feb. 10, 1731 ; one of the first council, under their charter, in 1751 ; vice-president and F.R.S. June 3, 1731. He prevailed on Mr. Kirby, painter of Ipswich, to make drawings of a great number of monu- ments and buildings in Suffolk, of which twelve were engraved, with a description, 1748 ; and others remain unpublished. On the building of Westminster-bridge he was appointed secretary to the commissioners, 1736-7; and on the estab- lishment of the Paper-Office on the respectable footing it is at present, by the removal of the State Papers from the old gate at Whitehall to new apartments at the treasury, he was norm nated the first in the commission for the care and preservation of them. In 1757 he circulated proposals for printing by subscription, Encyclo- paedia ; or, a rational Dictionary of Arts, Sciences, and Trade. In 1772 he*

published in 4to. Ca- lendars of the Ancient Charters, &c. and of the Welsh and Scottish Rolls now remaining in the Tower of London, &c. and in the introduction gives a judicious and exact account of our Pub- lie Records. He drew up the account of the chapel of London-bridge, of which an engraving was published by Vertue in 1748, and again by the Society of Antiquaries, 1777. His historica description of the interview between Henry VIII and Francis I. on the Champ de Drap d'O from an original painting at Windsor, and hi; account of the paintings of the same age at Cow> dray, were inserted in the third volume of the Archaeologia, and printed separately to accom.*

pany engravings of two of these pictures by the Society of Antiquaries, 1775. His account of the body of Edward I. as it appeared on opening his tomb, 1774, was printed in the same volume p. 376. His intimate acquaintance with every part of Westminster Abbey displayed itself in his accurate description of five monuments in the choir, engraved in 1779 by the same society. He superintended the new edition of Leland's Collectanea, in nine vols. 8vo. ; and also of the Liber Niger Scaccarii, in two vols. 8vo. ; to each of which he added a valuable appendix. He also revised an edition of llearne's Curious Dis- courses, 1771, two vols. 8vo. ; and the Regis- trum RorTense, published by Mr. Thorpe, in 1769, folio. At the beginning of the seventh volume of Somers's Tracts is advertised A Col- lection of Debates in Parliament before the Restoration, from MSS. by Sir Joseph Ayloffe, bart. which is supposed never to have appeared. Sir Joseph died at his house at Kennington-lane, Lambeth, April 19, 1781, aged seventy-two.

AYMAR (James), a celebrated impostor, born at Veran, in Dauphine. He became famous, and acquired considerable wealth about the end of the seventeenth century, by giving out that he was in possession of a divining rod for bringing to light hidden treasure. The cheat was detect- ed, and he was suffered to fall back into his former obscurity ; but the noise he had raised gave occasion to l)e Vallemont's learned book on the powers of the dirinhig rod, which see.

AYMARES, a district of Peru, forty leagues south-west of that city, abounding in sugar, cat- tle, corn, and mines of gold and silver.

AYMON (John), a Roman Catholic priest of Piedmont, who took part with the Protestant cause, and afterwards returned to the Catholic faith.

Cardinal de Naoilles gave him a pension, and he wrote several books in opposition to the Reformers. He likewise published the letters of Cyril Lucar, Ees Synodes nationaux des Eglises reformees de France, 1710, 2 vols. 4to.; and Tableau de la Cour de Rome, 1710, 12mo.

AY()(H ANTOTOTE, or Avis AYOWANTO- TOTI, in ornithology, the name under which the oiiolus xanthornus of Gmelin is described by some old writers.

AYOKA, a town of Spain, in Valencia. Long. 16►► 40′ I-‘,., hit. 39►► 6′ .

AYR, or Am, in Scotland. See AIR.

AYK, or A in, a river of France, in the duchy of liar, which abounds in lish, and falls into the Aisne, near (iraudprc’, in the department of the Ardennes.

English penman of the seven- 1 ie was employed in the service Ashhurst, in 1094, to whom he uise, entitled Arithmetic made he published his Tutor to Pen- ‘rnt. lie lodged il’s Church-yard,

AYUES, an

tee-nth century.

of Sir \ illiiun

dedicated a tr

Easy. In lu’J.

manship, engraved by John

at the 1 Land-and-Pen, St. 1

where lie probably kept a school.

AYHMIN, or AYI.KMIN (William), a bishop of Norwich in the reigns of Edward II. and III. was descended of an ancient family at Osgodby in Lincolnshire, lie was a canon in the cathe- dral of York, and afterwards in th:>t of Wells; and was for some time keeper of the seal, and

vice-chancellor to king Edward II. under John, bishop of Norwich. About A. D. 1319, a war having broke out between England and Scotland, Ayrmin was taken prisoner in a battle between the Scotch and Yorkists. Recovering his liberty he was made chancellor under Edward III. and

afterwards treasurer. Being sent ambassador to the court of Rome, he neglected the business of his embassy, and employed his time and in- terest in obtaining the bishopric of Norwich, which was then vacant; in which application meeting with success, he returned to take pos- session of that see : which the king hearing, and being disgusted at his proceedings, sent soldiers to Norwich to apprehend him ; but Ayrmin lay hid in the cathedral church, till by the interpo- sition of friends the king was reconciled to him, and consented to his consecration. He died in

1337.

AYR-MOSS, a place in the parish of Auchin- leck in Ayrshire, memorable for a defeat of a party of those friends of religion and liberty, called Covenanters, during the turbulent and op- pressive reign of Charles II.

AYRON, a river of Wales, in Cardiganshire.

AYR-SHIRE. See AIR. .

AYRTON (Edmund), was born at Ripon, Yorkshire, in the year 1734, and died in 1808. At the age of thirty he became one of the gentlemen of the Chapel Royal, St. James's, and subsequently a vicar choral of St. Paul's and Westminster Abbey. In 1784 he took his degree of doctor of music in the univer- sity of Cambridge, on which occasion he com- posed a grand anthem for a full orchestra, after- wards performed at St. Paul's Cathedral, on the day appointed for the general thanksgiving for peace in 1784. Dr. Ayrton took a leading part in the commemoration of Handel in Westminster Abbey.

AYRY, or EYERY. Ey, Teutonic, an egg; eyr, eggs ; the eyery, or eggery, where the eggs are deposited. Used of hawks, or other birds.

Yon sun-bred ayry, whose immortal birth Bears you aloft beyond the sight of earth. The hearen-touch'd feathers of whose sprightly wings Skirts (from above) the palaces of kings.

Drayton. The Owl. The eagle and the stork On cliffs and cedar tops their eyries build.

Milton. Paradise Lost, book vii.

I should discourse on the hrancher, the haggard, aud then, treat of their several ayries.

Walton's Angler.

AYSCOUGH (George Edward), only son of Dr. Ayscough, dean of Bristol, was a lieutenant in the guards. He wrote Semiramis, a tragedy ; and Letters from an officer in the guards to his friend in England ; containing some accounts of France and Italy, 8vo. 1778. He died October,

1779.

AYSCUE (Sir George), a gallant English ad- miral, descended from a good family in Lincoln- shire. He was knighted by Charles I., which however did not withhold him from adhering to the parliament in the civil war : he was by them constituted admiral of the Irish seas, where he did great service to the protestant interest, and contributed much to the reduction of the island.

In 1651 he reduced Barbadoes and Virginia, then held for the king, to the obedience of the parliament ; and soon after the Restoration be- haved with great honor in the war with the Dutch. In the famous engagement in the be- ginning of June 1666, when Sir George was ad- miral of the white squadron, his ship, the Royal Prince, ran upon Galloper sand ; where, being surrounded with enemies, his men obliged him to strike. He went no more to sea after this, but spent the rest of his days in retirement.

AYSEAUX, a castle and marquisate of the Netherlands, in Hainault, on the Bender. AYSERIUS, or ASSERIUS. See ASSER. AYTONIA, in botany, a genus of the mona- delphia order, and the pentandria dass of plants; the characters of which are : the calyx is qurn- quepartite ; the corolla consists of four petals ; the berry is dry, quadrangular, unilocular, and many seeded. There is but one species, viz. A. Capensis, a native of the Cape.

AYUTLA, a river of South America, in the province of Guatimala, which flows into the Pacific Ocean. Lat. 14►► 55′ N.

AZAB, a place on the coast of Abyssinia, in lat. 13►► N., where Bruce says 'he found the re- mains of a very ancient aqueduct.' lie supposes it to be the Sabae of Strabo ; and the country of the Sabaei so famous for their myrrh and frankin- cense. ' Those gums,' he adds, ' are still pro- duced in the neighbourhood.' Behind are pits of rock salt, whence the pieces used as coin by the Abyssinians are extracted. See Bruce, vol.i. Strabo. xvi. Diod. iii.

AZAB, in the Turkish armies, a distinct body of soldiery who are great rivals of the Janissaries. In the oriental languages the word signifies an unmarried person ; the original rule being ►►► that this corps should be composed of single men.

AZABE KABERI, from kaber, sepulchre, and azab, torment, denotes a temporary punishment, which, as the Mahommedans say, the wicked must suffer after death. Their crimes are hereby expiated, and Mahomet opens the gate of Paradise to all who believe in him.

AZALDUS, in old law Latin, a sorry horse. AZALEA, AMERICAN UPRIGHT HONEY- SUCKLE, a genus of 'the monogynia order, and pentandria class of plants ; ranking, in the natural method, under the eighteenth order, bicornes. The corolla is bell-shaped ; the stamina are inserted into the receptacle ; and the capsule has five cells. There are six species, of which the most remarkable are the following: 1. A. nudi- flora, or rod American upright honeysuckle, grows taller than the viscosa, and in its native country will sometimes arrive at the height of twelve feet, but in Britain never rises to above half that height. It has several stems with oblong smooth leaves. 2. A. rubriflora, a species with bright red flowers, was found by Mr. Light- foot upon the tops of many mountains in the Highlands of Scotland. 3. A. viscosa, with a white flower, is a low shrub, arising with several stems to the height of two or three feet. The leaves come out in clusters without any order at the end of the shoots, and their edges are set witli very short teeth which are rough. The flowers come out in clusters between the leaves,

have much the appearance of honeysucfte, and are as well scented.

AZAMOR, a small sea-port town of the king- dom of Morocco in Africa. It is situated on the river Morbeya, in the province of Duquella, at some considerable distance from its mouth. This townr though formerly very considerable, is obstructed in its maritime commerce by the dangerous entrance of the river. It was unsuccessfully be- sieged by the Portuguese in 1 508 ; it was taken however, in 1513, by the duke of Braganza, but abandoned about the end of the sixteenth cen- tury. Mr. Jackson calculates its population at 1000. It is eighty miles north of Morocco.

AZARADEO, a sea-port town of Brasil, in the bay of Spiritu Santo. Long. 60►► 10′ W. lat. 20►► 18′ S.

AZARAKITES, a sect of Mahommedan Arabs . AZARECAH, a sect of heretical Mussulmans who acknowledge no punishment, temporal or spiritual.

AZARIAH ; from "'\y, and n% i. e. the help of the Lord ; king of Judah. See UZZIAH. Also the name of various high priests and princes ot the Jews.

AZARIAS, a Jewish rabbi and historian of the sixteenth century. In 1574 he published at Mantua, in Hebrew, a book entitled The Light of the Eyes.

Many historical and miscellaneous subjects are treated of in this work ; and it con- tains a Hebrew version of the letter of Aristeas on the Septuagint.

AZAR1ST, a city of Khieva, on the river Amo which was visited by the English factors in 1741 AZAROLA, the service tree. AZARUM, a small, dry, blackish, stringy, medicinal root, much used in France as a specific for the farcy in horses. The azarum, called also nardus sylvestris, grows in the Levant, Canada, and about Lyons in France. The first is reputed the best. It is given in powder, from the quantity of one ounce to two.

AZAY, or ASSAIE-LE-RIDEAU, a town of France, in the department of the Indre and Loire, situated on the Indre, the head of a can- ton, with a castle, and 1700 inhabitants. It was in former times a place of strength, and the seat of a royal governor. Five leagues south-west of Tours.

AZAY-SUR-CHER, a town in France, situated on the river Cher, and belonging to the arron- dissement of Tours, in the department of the Indre and Loire. Number of houses above 230. Two leagues and a half E. S. E. of Tours. Many other villages and hamlets in France bear this name.

AZAZEL, a word relating to the institution of the scape-goat, in the Jewish religion, respect- ing which there are various opinions. St. Jerome and Theodoret call the goat itself by this name. Dr. Spencer says the scape-goat was to be sent to Azazel, by which is meant the devil.. M. le Clerc translates it praecipitium, making it to be that steep and inaccessible place to which the goat was sent, and where it was supposed to perish.

AZED, in the materia medica, a name giren by the Arabian writers to a kind of camphor, which they make the third in value, placing it

after the alcansuri and abriagi. The first of these was the finest of all the kinds of camphor, and was collected tolerably pure from the tree, as it grew in Cansur, the place whence it was named. The second was the same camphor, rendered yet moiw pure by sublimation ; this was a discovery of one of the kings of that country, and the cam- phor was named from him. The third kind, or azed, was the same with what we now receive from the Indies, under the name of crude or rough camphor. The word azed signifies only large, and was used to express the camphor formed into large cakes. Avicenna says this camphor was gross, of a dusky color, and much less

bright and pellucid than the other kinds.

AZEDARACH, or AZERADACH, in botany, the bead-tree.

AZEEMABAD, the Mahommedan name of PATNA, which see.

AZEITAO, a town in Portuguese Estrema- dura, south of the Tagus, with a manufacture of chintz, and various dye-houses. Population 2350. Five miles N.N.W. of Setuval.

AZEKAH, in ancient geography, a city of the Amorites, in the lot of Judah ; situated between Eleutheropolis and Aelia ; where the five kings of the Amorites and their army were destroyed by hail.

AZELBURG, a town of Bavaria, formerly called Augusta ACII.IA.

A/ELFOGE, in astronomy, a fixed star of the second magnitude, in the swan's tail.

AZ KM, ASF.M, ASSAM, or Am AM, a country of Asia, north of Ava. See ASSAM.

A/KMAKOR, in alchemy, red lead.

A/ EM ECU, the Arabian name for the star, called the virgin's spike.

AZENAY, a town of France, in Poitou, de- partment of the Vendee, arrondissement of Sables d'Olonue. Population 3000. Five leagues north of Sables d'Olonne.

AZKRUUAX, or ADERBEITZAN, a province of Persia, part of the ancient Media, bounded l.\ (ihilan and the Caspian sea on the east, and >n the west by Kurdistan and Armenia. It is separated from the latter by the Araxes, and from t';o province of Irak on the south, by Kizilozein, or the Golden stream. The climate, which is < >' Unarily temperate, is cold in winter, and se- M-r.ly felt by the poorer inhabitants, from the scaivity of fuel. The province is watered by the two rivers already named, and by the Jungatty, which is larger than either, and abounds in fish; the Yezdian, Agi, and other lesser streams. On the frontier also is the lake Urumea, which is salter than the sea. Its minerals are lead, cop per, saltpetre, and sulphur ; here is also a kind of beautiful transparent marble, or jasper, which takes the highest polish, and is used in the build- ings of Tabriz, Shiruz, and Ispahan, under the name of Tabriz marble. The cultivation of the land, which consists of fine undulating eminences and rich valleys, is here carried on chiefly by ir- rigation ; the oven are used for the plough, and the best soil yields from fifty to sixty fold. Most of the villages are

surrounded with orchards and gardens, \hich produce fruit of almost every description. A considerable quantity of wine is made ; and provisions are cheap and abundant.

The name of this province is said to signify the country of fire, and is supposed to have been derived from the number of fire temples of the Guebres. It is divided into twelve districts, in which are several cities and towns of im- portance, as Tabriz, or Tauris, the capital, con- taining 30,000 inhabitants, Urumea, Shebuster, and Maragah.

AZERGUE, BAHR-EL, or the BLUE RIVER, the principal stream of Abyssinia, which, rising in the kingdom of Gojam, passes through the lake of Dembea, and, after a winding course through Abyssinia and Sennaar, falls into the Nile above Gerri. Travellers described it as the principal branch of the Nile, till D'Anville showed that this distinction belonged to the Bahr-el-Abiad.

AZEVEDO (Ignatius), a Portuguese Jesuit, born in 1527. He was heir to a handsome for- tune, but turned his back upon it for a religious life, and went as a missionary to India. In 1570 he was going out a second time, when the ship was taken by pirates, who killed all the missionaries, about forty in number.

AZIMEN, in astrology, certain degrees in the zodiac, which, when they are ascendant, persons born under them are said to be afflicted with lameness, or some other imperfection.

AZIMUTH, in astronomy, an arch of the horizon, intercepted between the meridian of the place and the azimuth, or vertical circle passing through the centre of the object, which is equal to the angle of the zenith, formed by the meridian and vertical circle. It is found by this propor- tion : As the radius to the tangent of the latitude of the place, so is the tangent of the sun's or star's altitude, for instance, to the cosine of the azimuth from the south, at the time of the equinox.

AZIMUTH CIRCLES are represented by the rhumbs on common sea charts, and on the globe they are represented by the quadrant of altitude, when screwed in the zenith. On these azimuths is reckoned the height of the stars and of the sun when not in the meridian.

AZIMUTH COMPASS, an instrument for finding either the magnetical azimuth or amplitude of an heavenly object. The learned Dr. Knight invented some time ago a very accurate and useful sea-compass, wtoich is at present used in the navy, and will be found described under the article COMPASS. This instrument, with the following contrivance added by the

ingenious Mr. Smeaton, answers the purposes of an azimuth and amplitude compass. The cover of the wooden box being taken off, the compass is in a condition to be made use of in the binnacle, when the wea- ther is moderate ; but if the sea runs high, as the inner box is hung very free upon its centre, the better to answer its other purposes, it will be ne- cessary to slacken the milled nut, placed upon one of the axes that support the ring, and to lighten the nut on the outside that corresponds to it. By this means, the inner box and ring will be lifted up from the edges upon which they rest when free, and the friction will be increased, and that to any degree necessary to prevent the too great vibrations which otherwise would be occasioned

by the motion of the ship. To make the com- pass useful in taking the magnetic azimuth or am- plitude of the sun and stars, as also the bearings .►►f headlands, ships, and other objects at a dis- tance, the brass edge, designed at first to support the card, and throw the weight thereof as near the circumference as possible, is itself divided into degrees and halves, which maybe easily estimated into smaller parts if necessary. The divisions are determined by means of a catgut line, stretched perpendicularly with the box, as near the brass u.lge as maybe, that the parallax, arising from a different position of the observer, may be as little is possible. Underneath the card are two small weights, sliding on two wires, placed at right an- gles to each other; which being moved nearer to, or farther from, the centre, counterbalance the dipping of the card in different latitudes, or re- store the equilibrium of it where it happens by any other means to be too much out of level There is also added an index at the top of the in- ner box, which may be put on and taken off at pleasure ; and serve for all altitudes of the object. It consists of a bar, equal in length to the diame- ter of the inner box, each end being furnished with a perpendicular stile, with a slit parallel to the sides thereof: one of the slits is narrow, to which the eye is applied ; and the other is wider, with a small catgut stretched up the middle of it, and from thence to the top of the other. There is also a line drawn along the upper surface of the bar. These four, viz. the narrow slit, the horizon- tal catgut thread, the perpendicular one, and the line on the bar, are in the same plane which dis- poses itself perpendicular to the horizon, when the inner box is at rest and hangs free. This in- dex does not move round, but is always placed on so as to answer the same side of the box. When the sun's azimuth is desired, and his rays are strong enough to cast a shadow, turn about the wooden box till the shadow of the horizontal

thread, or, if the sun be too low, till that of the perpendicular thread, in one stile, or the light through the slit on the other, falls upon the line in the index bar, or vibrates to an equal distance on each side of it, gently touching the box if it vibrates too far : observe, at the same time, the degree marked upon the brass edge by the catgut line. In counting the degree for the azimuth, or any other angle that is reckoned from the meri- dian, make use of the outward circle of figures upon the brass edge; and the situation of the index bar, with regard to the card and needle, will al- ways direct upon what quarter of the compass the object is placed. But if the sun does not shine out sufficiently strong, place the eye behind the narrow slit in one of the stiles, and turn the wooden box about, till some part of the horizontal or per- pendicular thread appears to intersect the centre , of the sun, or vibrate to an equal distance on each side of it, using smoked glass next the eye if the sun's light is too strong. In this method another observer will be generally necessary, to note the degree cut by the nonius, at the same time that the first gives notice that the thread appears to split the object. The other observations will be easily performed : only, in case of the sun's am- plitude, take care to number the degree by the help of the inner circle of figures on the card,

which are the complement of the outer to 90"^ and, consequently, show the distance from east to west. The azimuth of the stars m;iy also be observed by night; a proper light serving equally for one observer to see the thread, and the other the degree upon the card. It may not be amiss to remark farther, that in case the inner DOX should lose its equilibrium, and consequently the index be out of the plane of a vertical circle, an accurate observation may still be made, provided the sun's shadow is distinct ; for, by observing first with one end of the index towards the sun, and then the other, a mean of the two obser- vations will be the truth.

AZIMUTH DIAL, a dial whose gnomon is per- pendicular to the plane of the horizon.

AZIMUTH, MAGNETICAL, an arch of the ho- rizon intercepted between the azimuth, or ver- tical circle, passing through the centre of any heavenly body, and the magnetical meridian. This is found by observing the object with an azi- muth compass.

AZINCOURT,orAciNcouRT. SeeAGiNcouRT.

AZLEEL, the name of an angel mentioned in the book ascribed to Enoch.

AZMUT, or ASMUS, an ancient and large town of Natolia, eighty-four miles south-east of Scutari. It is inhabited by Greek Christians.

AZO, a town of Asia in the East Indies, seated on the frontiers of Azem, on the river Laquia.

Azo I. and II. earls of Este in Italy, in the tenth century. They claimed their descent from the Accii, a patrician family of ancient Rome Their posterity settling afterwards in Germany, gave rise to the illustrious house of Brunswick ; from which that of Hanover and the present royal family of Great Britain are lineally descended.

AZOF, or Azov, a town and fortress of Rus- sia, in the government of Yekatorinoslaw, at the mouth of the Don ; lat. 46►► 53′ N., long. 39►► 14 E. When Dr. Clarke saw it in 1800, it did not contain more than fifty houses ; the garrison con- sisted of a few worn-out invalids, and the works were abandoned to decay. It is surrounded by a swamp ; and the interior of the country is a barren desert. It was anciently a considerable port; but the waters of the bay have been diminishing for many years. Tanai's is mentioned by Strabo, as a settlement of the Bosporani, but Dr. Clarke could find no trace of the ancient town near the site of Azov, and supposes it must have been at the embouchere of the Danaetz or northern arm of the Don. Its ancient history is very obscure ; but it passed from the Polovtzes to the Geno- ese, who called it la Tana ; was wrested from them by Tamerlane in 1392; and possessed, after his decease, by the khans of the Krim till 1471, when it fell into the hands of the Turks. Peter the Great took it by assault, and laid out large sums upon improving its fortifications, but was obliged to give it up at the peace of 1711. The fortifications were demolished, in compliance with the terms made at the peace of Belgrade in 1739; but it was finally ceded to Russia ir

1774.

The sea of Azof, named from the above town, was the Palus Maeotis of the ancients, and the Mar de Zabacchi of the middle ages. It is 210 miles long, and about fifty broad ; though pro-

T>erly only a hay of the Black sea, with which it is united by the straits of Caffa (Keffeh). Its principal port is Taganrok. Its fish are small, hut plentiful ; so that 60,000 are often taken at one draught. This sea seems to be gradually filling up with the alluvial earth brought down by the Don ; and, during violent east winds, the waters are driven so far back, where it is from thirteen to fourteen miles broad, as to allow a passage over the sand from Jagan Rock to the opposite coast. But when the wind changes

the water flows back with such rapidity, that many of those who have attempted to cross this tempo- rary route are overwhelmed by the returning tide. The deepest soundings are from thirty- five to forty feet. The whole surface, except a portion towards the centre, freezes during about a month in winter. A new island, at some dis- tance from the shore, was thrown up on the 5th of September, 1799, with phenomena evidently volcanic.

AZOGA SHIPS, are those Spanish ships com- monly called the quicksilver ships, from their carrying quicksilver to the Spanish West Indies, to extract the silver out of the mines of Mexico and Peru. These ships are prohibited to carry any goods except for the king of Spain.

AZOGUES, a town of Quito, South America, ten miles north-east of Cuenza. AZOLO. See ACEI.UM. AZONI ; from a privative, and ►►01/17, country; in mythology, a term anciently applied to such of the gods as were not the private divinities of any particular country, but were acknowledged in every country, and worshipped by every nation. They were superior to the gods called zonaei, who were supposed to inhabit particular parts of the world, and never to stir out of the district or zone that was assigned them. Such in Egypt were Serapis, Osiris, and Bacchus; and in Greece, the Sun, Mars, the Moon and Pluto. They were called by the Romans dii communes.

AZOOPIIAGUS; from a, ►►wov, animal, and QayM, to eat; in natural history, a term used by authors to express such insects or animals as feed on herbs, never eating the flesh of any living creature.

A/OHF.S, or WF.STEUX ISLANDS, a group of islands in the Atlantic Ocean, situated between the thirty-seventh and fortieth degrees of latitude, and about 800 miles from the western shore of Portugal. The name is said to have been given to them on their first discovery by the Portu- guese, from Acor, a falcon, on account of the numerous goshawks which they found there. They have also sometimes been called Terceras, from the principal island. The A/ores still be- long to the crown of Portugal, and are considered as forming three separate clusters. St. Mary and .St. Michael lie at the eastern extremity; the five islands of Tercera, Graciosa, St. George, Pico, and Fayal, form a central group; while Corvo and 1 lores are more detached, and lie farther north-west. The geographers of Arabia, in the middle aues, appear to have had some knowledge of these islands ; but they were not known to I'.uropeans till towards the middle of the fifteenth centurv, when \andcr I>erg, a Flemish merchant, being driven by contrary winds on

these shores, and intelligence of the event reach- ing the court of Lisbon, an expedition was fitted out to take possession of them. The Flemings took

possession of I'ayal, where traces of them are still visible. When Portugal became subject to the Spanish yoke in 1580, these islands fell under Spanish control till the duke of Braganza was raised to the throne in 1640. They were now for a long period much neglected by the home government ; but their situation being most salubrious, and highly favorable to commerce, they encreased and prospered spontaneously. Towns and cities were founded, and the popula- tion rose to between 200,000 and 300,000.

The first Portuguese minister whose wisdom was directed to the fostering of these islands was Pombal ; ' he taught the Azoreans that they might become a people, and Portugal that she might cease to be a despot. During his mission, the islands were improved by his authority, adorned by his munificence, and extolled by his praise.' But the liberal administration of Pombal was succeeded by a sullen and bigoted ministry, com- posed of the most furious churchmen. A cabinet so formed, soon destroyed the foundations of the rising prosperity winch had been laid during the former administration. The islands were inun- dated with bigoted ecclesiastics ; a circumstance which was attended by the destruction of com- merce, the extinction of arts and sciences, and the consequent introduction of indigence and barbarity. 'All the islands,' says a late his- torian, who had resided in the country, ' are under the religious dominion of a sordid and luxurious priesthood, and subject to the civil control of a licentious military power; to a government which condemns the country to a perpetual state of ignorance and sloth, and which confines the whole of its intercourse with the civilised world to the banks of the Tagus, or the port of Lisbon. For the last hundred and fifty years, the peaceable islanders have had to with- draw their eyes from the rest of the world, from every general public care, and fix them steadily and perpetually on the court of Portugal.' Such is, and such has long been the gloomy and miserable state of political degradation in which the Azores are sunk. The spirit of the people has been palsied by the arbitrary measures of the government ; yet they are described by those who have been resident among them, as an honest race, who prefer peace to conquest, and who seek distinction in industry rather than in arms ; as ' an innocent people, who are as emi- nent in the humble vale of domestic life, as the hero in the stormy regions of blood and warfare. Their whole happiness, however, consists in their domestic and personal comforts, for country they have none. They have no common principle of union ; no common bond of action ; they form a community not insensible to the ties of kindred, but uncemented by national feeling ; a political blank in themselves, and comparatively useless to the parent state.' See History of the Azores, London, 1313.

in 1591 these islands were, for twelve succes- sive days, shaken by violent concussions, and the Villa Franca entirely destroyed. A similar occurrence took place in 1757. There can

indeed be little doubt of their volcanic origin, and deep subterranean connexion with very active volcanoes. New islands have frequently been raised from the bottom of the sea, by the power of volcanic action. In 1720 one of these phenomena took place, on approaching which, the next day, an English captain observes, ‘ we made an island of fire and smoke ; the ashes fell on our deck like hail and snow, the fire and smoke roared like thunder Or great guns.’ Another instance of this kind happened in 1811, near the western extremity of St. Michael, when flames were seen issuing from the sea, accompanied by volumes of smoke and showers of scoria and ashes. The rocks remained just below the surface, with the waves dashing vio- lently over them, and soundings of 80 fathoms, were found almost close to the new island. The presence of subterraneous fire is also indicated by its effect on numerous springs throughout the islands. Some of these are so hot, that they burn the hand. These have of late been con- siderably resorted to as warm baths, which they answer the more conveniently, as a cold spring is always at hand. In other places, boiling fountains rise to a considerable height, and dis- solve in vapor.

The Azores are discovered from a great dis- tance, by a high mountain called the Pico, or peak, bearing a strong resemblance to the peak of Teneriffe, and rising about 7000 feet above the level of the ocean. Their whole appearance is mountainous, but many delightful and fertile valleys separate the rounded and conical hills, of of which the greater part of their surface is com- posed. The islands are subject to violent winds, and the fury of the waves is sometimes injurious to the low grounds near the sea. Wheat, bar- ley, Indian corn, and valuable woods are pro- duced ; but their chief produce is wine and fruits, both of which are exported in large quantities. The wine has some resemblance to Madeira, but is inferior in quality. The oranges are much esteemed.

The best vines are raised on the lofty sides of the Pico, from which wine is made, and exported through Fayal, by which name it is known. It is decidedly inferior to Madeira, but being 50 per cent, cheaper, obtains a considerable sale.

Pico exports a fine species of wood, little in- ferior to mahogany. The trade was formerly cramped, by being carried on through the medium of Portugal ; but, since the emigration of the court, the inhabitants have begun to traffic di- rectly with England and America ; a circumstance that has much

invigorated this? commerce.

Angra, the chief town of Terceras, is the seat of government : but Penta del Gada, or the city of St. Michael, is the largest town of the islands, and the seat of the bishop and principal eccle- siastical authorities.

AZORES is also the name of a small group of islands of the Atlantic, north of St. Domingo.

AZORIUM, in old law Latin, azure.

AZOTE ; from a, privative, and ►►au>, I live ; a name given by the French chemists to a species of air which is destructive of animal life ; not fitted for respiration, it is also incapable of sup- porting combustion. It is said to form about

four-fifths of our atmosphere ; but being there mixed with the remaining fifth of another air, having properties the reverse of its own, it be- comes suited to our existence. See GAS NI- TROGEN.

AZOTH, in ancient chemistry, the first matter of medals, or the mercury of a metal ; more par- ticularly that which alchemists call the mercury of philosophers which they pretended to draw from all sorts of metallic bodies.

AZOTH is also a name given to the philosopher's stone. When the Arabs began to study che- mistry, their metaphorical and hieroglyphical manner of writing seems to have given rise to a practice of calling the means made use of for bringing metals to perfection, by the name of medicines, and imperfect metals by the name of sick men, and gold by that of a sound and lively person. Hence it was supposed, that these were to be understood literally, especially upon find- ing the impurities of the baser metals called by the name of leprosies; and hence rose the opinion, that the imperfect metals might be turned into gold, and the bodies of such men into sound ones, by the same preparation !

AZOTH, AZOTUS, or ASHDOD, one of the five cities of the Philistines, and a celebrated sea-port on the Mediterranean, situated about fourteen or fifteen miles south of Ekron, between that and Ascalon. It was in this city that the idol Dagon fell down before the ark ; and so strong a place was it, if we may believe Herodotus, that it sus- tained a siege of twenty-nine years by Psammiti- cus king of Egypt. It was, however, taken by the Maccabees in a much shorter time ; who burnt both city and temple, and with them about 8000 men. The town is now called by the Arabs Hasaneyun. It is but thinly inhabited, though the situation is very pleasant. With regard to the houses, those that were built in the time of Chris- tianity, and which are now inhabited by Mahom- medans, still preserve some claim to admiration

; but the modern buildings, though generally of stone, have nothing in them which can attract the notice of a traveller. The streets are pretty broad, the inhabitants mostly Mahommedans, with a few Christians of the Greek communion, who have a church under the jurisdiction of the archbishop of Gaza. The town is about a mile and a half in circumference ; and has in it a mosque, a public bath, a market-place, and two inns. The num- ber of the inhabitants is between 2000 and 3000. The most remarkable things in this place are an old structure with fine marble pillars, which the inhabitants say was the house that Sampson pulled down ; and to the south-east, just out of the town, the water in which the Ethiopian eu- nuch was baptized by the evangelist Philip. There are several ancient buildings with capitals and pillars standing.

AZPEYTIA, a town of Spain, in the pro- vince of Biscay, canton of Guipuscoa, on the river Urola. To this place belongs the village of Loyola, once the property of the celebrated father Ignatius Loyola, founder of the order of Jesuits.

AZPILCUETA (Martin), surnamed NaTarre, was born at Verasoa, near Pampeluna, in Spain, in 1494. He was professor of law in several uni-

versUiss, and died at Rome in 1586. His works were printed at Lyons, in 6 vols. folio, 1597.

AZRAH-BEN-AREN, a town of tlie Arabian Irak, situated on the river Tigris, fifteen miles N.N.W. of Korna.

AZUA, a small town on the south side of the island of St. Domingo, seated on a deep bay.

AZUBAH, the daughter of Shilhi and mother of kins: Jehoshaphat.

AZUELA, a large river of South America, in the kingdom of Quito, which enters the-Ama- zons.

AZUL, a river of Mexico, in the country of the Appaches, which enters the Gila.

Azui,, Rio, or the BLUE RIVER, a river of North America, in California.

AZUM, a port of Abyssinia on the Red Sea. AZ'URE, ~i Fr. uzur ; Ital. azurro ; from the AZ'URED, > Arabic hazul, the name of a stone AZ'URN. J brilliantly blue, but notxtranspa- rent; sky-colored blue.

And on his shield cnucloped seuenfold, He bore a crowned little ermilin, That deckt the azure field with her faire pouldred skin. Spenser's Faerie Queene, book iii. c. 2.

By whose aid

(Wfak masters though yc be) I have bedimm'd The noon-tide sun, call'd forth the mutinous winds, And 'twb.t the green sea and the axured vault So! roaring war. Shakspeare. Tempest.

His spear

He '.valkt with, to support uneasie steps Over the burning marie, not like those steps On heaven's azure. Milton. Paradise Lost.

15 v tin- rushy fringed bank, Where UTIHVS the willow, and the osier dank,

M ' sluinii; chariot slays, 'I luck set wiili aiiate, and the azurn sheen Ol' tui- kis blue, and emerald green,

That in the channel strays. Id. Comus.

As when the moon, refulgent lamp of night, O'er heuven's clear azure spreads her sacred light; When not a breath disturbs the deep serene, .Ami Mot a cloud o'ereasts the solemn scene: A i-ii1. ml h'T throne the vivid planets roll, Am! stars unnumbered gild the glowinn pole.

Pu]n\ Homer's Iliad. How many bright

And splendid lamps shine in heaven's temple high, !>ay bath his golden sun, le r moon the night, her fix'cl and wand'ring star> the iiznrc sky.

Fairfax's Trans. Tasno's Jerus. Deliv.

A/i IM: SioM'.. Axure, among painters, which at]irrst;nt sanities a tine blue, color resembling that MI llit; sky, w;is tormerly appropriated to lapis lax.tili ; which is thus defined : Lustre glistening: tine "Trained, uneven fracture. It scratches glass, but scaiccly strikes life with steel. Opaque, or translucent on the very edges, Easily broken. Specific gravity 2'8"> . In a very strong heat it intume.M-es, and melts into a yellowish black nia^s. Alter calculation it forms a jelly with acids. Hy a late and most interesting

research v)f MM. Clement and Desonnes, it appears to be composed of tlmU-ibur silica, thirty-three alu- mina, three sulphur, and twenty-two soda. (Ann. de (hiinie, torn. .'}'.) in tins analysis, however, a IONS ot eijit percent. \as experienced. These chemists consider the aiiove ingredients essential, and the j 1 uf lime, and '~> of iron, which they have occasionally met with, a accidental. The*

best specimens are from China, Persia, and Great Bucharia. They are made red-hot in the fire, and thrown into water to render them pul- verisable. They are then reduced to a fine pow- der, and intimately combined with a varnish, formed of resin, wax, and boiled linseed oil. This pasty mixture is put into a linen cloth, and repeatedly kneaded with hot water : the first wa- ter, which is usually dirty, is thrown away ; the second gives a blue of the first quality ; and the third yields one of less value. The process ic founded on the property which the coloring matter of azure-stone has of adhering less firmly to the resinous cement, than the foreign matter with which it is associated. When azure-stone has its color altered by a moderate heat, it is reckoned bad. MM. Clement and Desormes consider the extraction of ultramarine as a spe- cies of saponification.

AZURE, in heraldry, the blue color in the arms of any person below the rank of a baron. In the escutcheon of a nobleman, it is called sap- phire ; and in that of a sovereign prince, Jupi- ter. In engraving, this color is expressed by lines or strokes drawn horizontally. M. Upton and his followers rank this color before gules. This color may signify justice, perseverance, and vigilance ; but according to G. Leigh, when it is compounded with

Or ^ ^Cheerfulness. Arg. ~ Vigilance. Gul. I J—J Readiness. Ver. f 3.] Enterprise. Pur. I? Goodness. Sab. j " tMournfulness.

AZUREA, in entomology, a species of phry- ganea, with black wings, violet behind. Linn. The lower wings are obliquely violet. It inha- bits the north of Europe. Also, in zoology, a species of lacerta that inhabits Africa.

AZUREUS, in entomology, a species of cara- bus, of an azure color, with red legs and anten- nse. It inhabits Leipsic. Fabricius. 2. A spe- cies of cimex, of a middle size ; dull green color ; and yellowish mouth and legs. Inhabiting Guinea. The abdomen is yellowish, with black dots in the middle.

AZURIN, in ornithology, a name assigned by Buffon, Hist. Ois. to the species of turdus, since called specifically cyanurus by Gmelin.

AZURITE, in mineralogy, a blue substance, which occurs principally in

Styria. Its crystal- line form, as well as some other of its other cha- racters, distinguish it from lazulite, or, as it is more commonly termed, lapis lazuli, of which at its first discovery, if was regarded as a variety.

AZYGOS, in anatomy, a vein rising within the thorax, on the right side, having no fellow on the left ; whence it is called a►►vyoc, or vena sine pari. See ANATOMY.

AZYMA, or AZYMES; from a negative, and ˆvfuri, ferment; the feast of unleavened bread among the Jews.

AZ YME. Gr. aˆvfiof, without ferment ; a, the privative, and %vp.ri, ferment.

They had (they said, i. e. the translators of King James's Bible), on the one side, avoided the scrupu- losity of the puritanes, who left the old ecclesiastics.

B

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BAA

words and betook them to other, as when they put washing for baptism, and congregation for church ; and on the other hand, had shunned the obscuritie of the papists in their azmes, tunike, rational, holo- causts, prepuce, pasche, and a number of such like, whereof their late translation was full, and that of purpose to darken the sense, that since they must needs translate the Bible, yet by the language thereof it might be kept from being understood.

, Preface to King James's Bible. AZYME, or AZYMUS, a term much used in the controversies between the Greek and Roman church ; the latter of whom contend, that the bread in the mass ought to be azymus, unleaven- ed, in imitation of the paschal bread of the Jews, and of our Saviour, who instituted the sacra- ment on the day of the passover. In the council of Florence it was decreed, that the point lay at the discretion of the church ; and that either leavened or unleavened bread might be used. The Lutheran church uses unleavened bread to this day ; and a respectable modern commenta- tor says : ►►► ' If any respect should be paid to the primitive institution, in the celebration of this divine ordinance, then unleavened, unyeasted, bread should be used. In every sign or type, the thing signifying or pointing out that which is beyond itself, should either have certain pro- perties, or be accompanied with certain circum- stances, as expressive as possible, of the thing signified. Bread, simply considered in itself, may be an

emblem apt enough of the body of our Lord Jesus, which was given for us ; but the design of God was evidently that it should not only point out this, but also the disposition re- quired in those who should celebrate both the antetype and the type ; and this the apostle ex- plains to be sincerity and truth (1 Cor. v. 6 ††† 8), the reverse of malice and wickedness. The very

taste of the bread was instructive ; it pointed out to every communicant, that he who came to the table of God with malice or ill-will against any soul of man, or with wickedness, a profligate or sinful life, might expect to eat and drink judg- ment to himself, as not discerning that the Lord s body was sacrificed for this very purpose, that all sin might be destroyed, and that sincerity, fi\††cpiv††a, such purity as the clearest light can discern no stain in, might be diffused through the whole soul ; and that truth, the law of righteousness and true holiness, might regulate arid guide all the actions of life'. ††† Dr. Adam Clarke on the New Testament.

AZYMITES, in church history, Christians who administer the eucharist with unleavened bread. This appellation is given to the Latin church by the Greek, because the members of the former use fermented bread in the celebra- tion of the eucharist. They also call the Armi- nians and Maronites by the same name, and for the same reason.

AZYMOUS, something unfermented, or made without leaven, as unleavened bread. Sea bis- cuit is of this kind ; and therefore, according to Galen, less wholesome than bread that has been fermented.

*AZZALUM, in the ancient physiology, a spe- cies of iron, reputed the most excellent of all, supposed to have been brought from India, whence it was called Indicum ; but, in reality, according to some, brought from China**

AZZO (Portius), an Italian lawyer, was a na- tive of Bologna, where he was chosen professor of jurisprudence in 1190 He wrote a work held in great estimation, entitled, A Summary of the Code and the Institutes. He died about

1220.

B.

B, the second letter of the English and most other alphabets. It is the first consonant, and first mute, and its pronunciation is supposed to resemble the bleating of a sheep.

B is also one of those letters which the eastern grammarians call labial, because the principal organs employed in its pronunciation are the lips. It is

pronounced by pressing the whole length of them together, and forcing them open with a strong breath. It has a near affinity with the other labials P and V, and is often used for P, both by the Armenians and other Orientals, as in Betrus for Petrus, apsens for absens, &c. ; and by the Romans for V, as amabit for amavit, berna for verna

As a numeral, B was used by the Greeks and Hebrews to denote 2 ; but among the Romans for 300, and with a dash over it (thus B) for

3000.

B, is also an abbreviation, though rarely used as such.

In music B stands for the tone above A ; as Bb, or bB, does for B flat, or the semitone major above. A B also stands for bass ; and B C for basso continuo, or thorough bass.

BA, a small sea-port town of Africa ou the Slave coast, where the Dutch have a factory.

BA, a river of Scotland, in Argyleslnre.

BAA-BA, v. n. { Lat. balo, to cry like a

BAA. ►►. J sheep. The bleating of a

sheep.

Therefore thou art a sheep ;

Such another proof would make me cry baa.

Shakspeare.

BAADSTED, or BATSTED, a sea-port town in the province of Schonen, Sweden, situated in a bay of the Cattegat, ten miles north of Engelholm, sixteen south of Helmstadt. Long. 12►► 45′ E., lat. 56►► 28′ N.

BAAGOE, two small islands in the Baltic be- longing to the crown of Denmark, the one lyin between the islands of Zealand, Moen. and Fal-*

star. Long. 12 3′ E., tot. 54►► 56′ N. And the other in the Little Belt, Ion. 9►► 49′ E., lat. 55►► 10’. N.*

BAAL, [“?J?3, Lord, Syr.] BEL, or BELUS ; an idol of the Chaldeans, and Phoenicians, or Canaanites. The former worshipped Mars un- der this name, according to Josephus : who, speaking of Thurus, the successor of Ninus, says, ‘To this Mars, the Assyrians erected the first statue, and worshipped him as a god, calling him Baal.’ It is probable from what is recorded, 2 Kings xxiii, 5, 11, that the Phffiiiicians wor- shipped the sun under the name of Baal. The temples consecrated to this god are called in scripture Chamanim, which signifies places en- closed with walls, in which was kept a perpetual fire. Maundrel, in his journey from Aleppo to Jerusalem, observed some traces of these enclo- sures in Syria. As the word baal, in the Punic language, signifies lord or master, it doubtless meant the supreme Deity, the Lord and Master of the universe. It is often joined with the name of some false god, as Baal-berith, Baal-peor, Baal-zephon, &,c. This deity passed from the Phoenicians to the Carthaginians, who were a colony of Phoenicians ; as appears from the Car- thaginian names, Hannibal, Asdrubal, &c. accord- ing to the custom of the east, where kings and great men added to their own names those of their u’cvls. This deity is also frequently men- tioned in Scripture in the plural number, Baa- lim : which may signify, either that the name Baal was Driven to several different gods ; or that there weie many statues bearing different appel- ki’ions, roust-crated to this idol. Arnobiui tells u<, that 1'aal was of an uncertain sex; and that his votaries, when they called upon him, invoked hi n thus ; ' Hear us, whether thou art a god or a i…ddess.' Some learned men think that the Baal ►►f the Phoenicians is the Saturn of the Greeks; v\! uch is probable from the conformity there is between the human sacrifices offered to Saturn, and those which the scripture tells us were offer- ed to Haul. Others are of opinion, that Baal \\as the Phoenician, or Tynan Hercules; a god of great antiquity in Phoenicia.

HAAI.. See BAAI.ATII-KEER.

BAALA11. 1. A city transferred from the tribe of .Indah to the Simeonites. 2. The original name o-f Kirjath-jearim, in .hidah.

HAALAT1I, a city in the tribe of Dan.

HAALATH-BEER, or HAAI, a city of the ˆmieonites, or. the south-west border.

BAAL-HECK, or the VAI.I.KY 01 BA A I., a fer- tile country of Asia, between Lebanon and Antilibanus., about thirty miles from Damascus; where then: was formerly a magnificent temple ‘it’ the sun, the ruins of

which are still visible. Some geographers make it a part, and others the win ile of (Vlo Syria ; hut all a_n>e that it was one of the must pleasant spots on the earth. The ruins of the temple are still admired. See HAI.ISKC.

HAAL-BEKlTli, the god of the Shechemites. Hoi hart conjectures that Herith is the same as liiToe, the daughter ot \ enus and Adonis, who was ˆiven in marriage to Bacchus ; and that she gave her name to the city of Herith, in Phoenicia, and became afterwards tin; goddess of it. Baal- benth signifies Lord of the covenant, and may be

taken for the god who presides over alliances and oaths, in like manner as the Greeks had theii ZtvaopKiog, and the Romans their Deus Fidius, or Jupiter Pistius. The idolatrous Israelites made Baal-berith their god. Judges viii. 33.

BAAL-GAD, BAGAD, or BEGAD, in ancient mythology, an idol of the Syrians, whose name was composed of baal, lord, and gad, chance or fortune ; the god of chance or fortune. After the god of thunder, the god of chance was one of the first worshipped by mankind.

BAAL-H AMON, a place where Solomon had a vineyard, and where probably he sacrificed to Baal, in his dotage, to please his idolatrous wives.

BAAL-HANAN, the son of Achbor, and the seventh king of the Edomites. From his name it appears probable that the worship of Baal had at that early period taken place among the de- scendants of Esau .

BAAL-HAZOR, a city near Ephraim, about eight miles north-east of Jerusalem, between Bethel and Jericho. In this city Absalom held his treacherous festival for murdering his brother Amnon.

BAAL-HERMON, a part of Mount Hermon.

BAALIM, in antiquity, inferior deities among the Pho3nicians. See BAAL.

BAALIS, a king of the Ammonites, who sent Ishmael, the son of Nethaniah, to murder the brave Gedaliah, the viceroy appointed by Nebu- chadnezzar over the remnant of the Jews, whom he had left in Jerusalem. (Jer. xit 17.) For this he was justly punished by Nebuchadnezzar, who soon after invaded his country, and reduced it to a desert.

BAAL-MEON, BEON, or BETIIBAAI>MEON, a city of Canaan, which was taken from the Amor- ites and given to the Ileubenites. (Num. xxxii. 38.) It was afterwards taken by the Moabites, and at last destroyed by the Chaldeans. It had been rebuilt, however, for it was inhabited in the time of the Maccabees.

BAAL-PEOR, BAAL-PHEGOR, or BEL-PHE- GOR, an idol of the Moabites and Midianites. We are told, that Israel joined himself to Baal- peor, and that Solomon erected an altar to this idol upon the Mount of Olives. Baal-peor has been supposed a Priapus, and that the worship of him consisted in the most obscene practices. Others have thought that as Baal is a general name signifying Lord, Peor may be the name of some great prince deified after his death. Mede supposes, that Peor being the name of a moun- tain in the country of Moab, on which the tem- ple of Baal was built, Baal-peor

may be only another name of that deity, taken from the situ- ation of his temple; as Jupiter is styled Olym- pus, from his temple built on Mount Olympus. Selden, who is of this opinion, conjectures like- wise, that Baal-peor is the same with Pluto; which he grounds upon these words of the Psalmist, Psal. cvi. ‘ They joined themselves unto Baal-peor, and eat the offerings of the dead ;’ though by the offerings of the dead, in this pas- sage, may be only meant sacrifices made to idols, who are very properly called the dead, in contra- distinction to the true, who is justly and em- phatically styled the living, God.

BAAL-PERAZIM, a place in the valley of

H.ephaim, about three miles south-west of Jeru- s ilem, where David routed the Philistines.

BAAL’S-BAY, and BAAL’S RIVER, a bay and river in West Greenland, situated between Bear’s Sound and Delft’s Point, opposite Hudson’s Strait.

BAAL-SHALISHA, a place belonging to Sa- maria, probably near Gilgal, the birth place of a prophet, whose name is not recorded, who, in a time of famine, miraculously fed 100 men with twenty barley loaves. See 2 Kings iv. 42, 44.

BAAL-TAMAR, a place near Gibeah, where the tribe of Benjamin was almost extirpated by the other eleven tribes. See Judg. xx. 33.

BAALTIS, a goddess among the Phrcnicians. Some suppose that she was the same with the Diana of the Greeks.

BAAL-ZEBUB, BEEL-ZEBUB, or BELZEBUB, [DISjblD, i. e. the lord of flies,] the idol, or god of the Ekronites In Scripture he is called the Prince of Devils. His name, the God-fly, some think was a mock appellation bestowed on him by the Jews. But this seems not very probable, as his worshipper, Ahaziah, called him by this name. Perhaps Beelzebub was characterised like the god Achor, who was worshipped at Cyrene, as the preserver from flies. He had a famous temple and oracle at Ekron. Ahaziah, king of Israel, being dangerously hurt, sent to this deity to enquire if he should be cured. The Jews accuse our Saviour of driving out devils in the name of Beelzebub, their prince. Scaliger derives the name of this deity from Baalim-zebahim, which signifies the lord of sacrifices.

BAAL-ZEPHON is mentioned in Exodus xiv. 2, as opposite to Pihahiroth, during the peregrinations of the Israelites in the wilderness ; out whether it was a fortified place, built to guard the frontier of Egypt, at the north point of the Red Sea, or an idol erected in that station, commentators are not agreed. Perhaps both parties may be right. An idol of Baal might be set up in the fort, which would naturally take its name from the deity.

BAAN (John d'), a Dutch portrait painter, born in 1633, and died in 1702. He resided some time in England, under the patronage of Charles II. His son James, who died in 1700, at the age of twenty-seven, was little inferior to his father in portrait painting, and superior to him in some other branches.

BAANITES, the followers of one Baanes, who adopted and disseminated the Manichean notions in the early part of the ninth century.

BAAR, mountains in the duchy of Wirtem- burgh, which are a part of that long range called Abenow, or Abnoba.

BAARAS, BAHARAS, or BACHARAS, an ex- traordinary kind of root, said to grow in the valley of Baaras, near Mount Lebanon, whence the name. By the account which Josephus gives, it seems to be a sort of vegetable phosphorus; for he represents it as of a flame color, emitting rays of light in the night, and disappearing by day.

BAARD, in old records, a transport ship.

BAART (Peter), a Dutch poet of the eighteenth century, author of 'Georgics,' descri- bing the rural pleasures and occuptaions of his ~ VOL. III.

countrymen, and of a poem entitled the '

of Friesland.'

BAASHA JKPJ73, Heb. i.e. pressing together, the son of Ahijah, and the third king of Israel, after its separation from Judah ; one of the many monarchs who have waded through blood to a throng. I Kings xv. and xvi. He died A. M. 3013, in the twenty-fourth year of his reign.

BAAT, in the language of the Siamese, answer- ing to tical in that of the Chinese, denotes a weight and coin current in those kingdoms, and weighs about half an ounce.

BABA, a town, district, and river of South America, in the province of Guayaquil, and kingdom of Quito. The district is twenty-two leagues in

extent; it abounds in cacoa; and its population amounts to 4000 souls.

BABA, an impostor, who appeared among the Turks in 1240. He maintained that there is but one God, and that he was his messenger. He drew considerable attention, and wilh a number of followers overran Natolia. His success, how- ever, was short-lived, for he was defeated, and his sect sunk into obscurity.

BABA-DAGI, or BABA-TAGH, see BABATAGH.

BABAHOYO, a town, district, and river of South America, in _the province of Guayaquil, and kingdom of Quito, in lat. 1►► 47′ S. There is a custom-house and royal arsenal in the town, .which is a great mart for trade. The district is extremely level and fertile, and abounds in cat- tle. Cotton, rice, soap, tobacco, cocoa, and fruits are the principal exports.

BABANON, or BALBANON, a town of the kingdom of Cambodia, on the river Cambodia. Long. 105►► 10′ E. lat., 12►► 17′ N.

BABA-TAGH, a large town in the district of Silistria, in European Turkey, situated between two mountains. It has a college, five mosques, and 10,000 inhabitants. Here have generally been the head quarters of the Grand Vizier's arrny in the wars between Turkey and Russia. BayazM I. peopled it with a Tartarian colony, and its name (Saint's Hill) is derived from 'the tomb of Sari Saltic Bey, a celebrated Tartarian saint, buried on one of the neighbouring moun- tains. This mountain-pass was the Dere (tho neck) of the Greeks. Ptolemy places it in lat. 11►►.

BAB-BAHA, one of the richest districts of Abyssinia, according to Mr. Bruce, about twelve miles from the river Baha, and near the lake Tzana. This on the south, and Woggora on the north, are the two granaries that supply the rest of the kingdom. It contains a number of small villages ; in which the queen and many ~of her relations have their houses and possessions. These are all surrounded with kolquall trees, as large in the trunk as those of the province of Tigre, but less beautiful.

BAB'BLE, v. & n. s.~\ Germ, babbelen ; Fr. II

BAB'LER, n.s.

babiller. Probably re-

BAB'BLING, a. & n. ►►ceives its origin from BAB'BLEMENT. n. s. / the tower of Babel, when the confusion of tongues took place, and marks a superfluous and improper use of speech To talk without reflection and without meaning noisy repetition ; to betray secrets ; to talk mucr

with unintelligible rapidity. Babbling, among hunters, is when the hounds are too busy after they have found a good scent. It is used figura- tively to indicate mere senseless sounds.

He told me meryly, y* logicke he reckoned but bab- linge musicke to seme for singers.

Sir Thomas Move's Works.

John had conned over a catalogue of hard words ; these he used to babble indifferently in all companies.

Arbuthnot.

The apostle had no sooner proposed it to the mas- ters at Athens, but he himself was ridiculed as a babbler. Rogers.

This is mere moral babble. Milton.

Deluded all this while -with ragged notions and babblements, while the expected worthy and delightful knowledge. Id.

With volleys of eternal babble And clamour more unanswerable. Hudibras. To stand up and babble to a crowd in an alehouse till silence is commanded by the stroke of a hammer, is as low an ambition as can taint the human mind.

Hawkesworth.

Utterers of secrets be from thence debarred Babblers of folly. Faerie Queene.

We hold our time too precious, to be spent With such a babbler. Shakspeare.

The babbling echo mocks the hounds. Id.

The babbling echo had descried his face.

Addisan.

There at the foot of yonder nodding beech, That wreathes its old fantastic root so high, His listless length at noontide would he stretch, And por ••• upon the brook that bubbles by. Gray.

BA'Iij'., n. i. ~\ \K\s\bulian; Dutch bab-

*BA'IIY, ••.s. * bacnl ; Ital. bambino; an in-*

BA'IUMI, ••

BA'KV.IIY. n. s. . its earliest stage of being.*

Childish, belonging to infancy, applied to dolls

and images and playthings, the playthings of

children, and the finery (hat pleases them.

Who all that piteous storie which befell About the \vori'ull couple which were slaine, And tin-ire youn:: bloodie Imbc to him gan tell With whom whiles In; did in the wood remaine His horse purloyned was by subtitle traine.

Faerie Queene.

Those that do tearh your babes Do it with gentle means, and easy tasks.

S/iakspeare. (,'oine, poor babe, : 1 have heard, (hut not b.lieved,) the spirits of the

dead.

May walk again : if such thin-.: be, thy mother Appear'd to me last ni.Jit -, for ne'er was dream So like awakiii'.:. Id.

Command my best obedience to the queen, If she dares trust me with her liule babe, I'll show't lb.- king. Id..

'J'lie linhi/ beats the nurse, and (luitc athwart (iocs all decorum. Id.

Sweet babal who like the little playful fawns, Were wniit to trip along these verdant lawns.

Lyttleton.

‘I’he archduke- saw that 1’erkin would prove a run- ua^ate; and it was the part of children to fall out

Bacon.

It he !>:□□□ bashful and will soon blush; Ti: ‘. i’ii’,1 hi;. i a Iml’n-h and ill brought up thing.

Ascham.

S,, have I seen trim books ‘□□□V’.tli golden leaves and painted babcry, i)t silly boys, please unacquainted sight, Sidney,

BABEL, a city and tower undertaken to be built by the whole human race soon after the flood, and remarkable for the miraculous frus- tration of the attempt by the confusion of languages. See BABYLON.

BABEL, a town of Egypt, in the Delta, sup- posed by D’Anville to be the ancient Byblos. It is forty miles north of Cairo.

BABEL (St.), a small town of France, in Au- rergne, department of the Puy de Dome, eight miles north-east of Issoire, thirteen east of Brioude.

BAB-EL-MANDEB, or BABELMANDEL, li- terally the gate of affliction, a promontory and strait at the southern extremity of the Red Sea, about seven leagues broad; the strait forming the communication between that sea and the Indian Ocean. There is a mountain or island in the middle of the strait, sometimes called El Mandel, as well as Perim or Mehun, which divides the strait into two parts, of which the eastern, though narrowest, is most frequented, as it lias deep water, and is free from shoals. ‘ It is at most three geographical miles in width,’ says Bruce, ‘ and has twenty or thirty fathoms water.’ lord Valentia and Niebuhr make the breadth of the strait between Perim and the Asiatic shore the same as Bruce; between it and the coast there are from fifteen to twenty English miles. His lordship observes, that ‘ Perim should be kept close on the larboard side, in order to avoid a deep bay to the eastward of the cape, which has been sometimes mistaken for the strait.’ The wider or western channel is much ob- structed by rocks and small islands. The Ara- bian cape is in lat. 12□□ 40′ N., long. 43□□ 33′ E. Niebuhr’s lleisebeschreibung, i. 448. Bruce’s Travels, i. 361. Lord Valentia’s Travels, ii. 13. Vincent’s Periplus, i. 111. The island is said to be about five miles in circumference, barren and scarcely inhabited.

BAB EN, an island in the Indian Sea, about eighteen miles long, by six in breadth, sur- rounded by some smaller ones. Long. 130□□ 131′ E., lat. 7□□ 41′ S.

BABENHAUSEN, a market town in the circle of the Iller, Bavaria, with two castles, a Latin school, and 1600 inhabitants. It is six- teen miles S. E. of Ulm, twenty-six W. S. W. of Augsburg.

BABGAUM, a town of Hindostan, in Dow- latabad, twenty-two miles north of Poonah.

BABI, a small island near the west coast of Ceram, in the Eastern Seas. Long. 128►► 3′ E., lat. 3►► 5′ S.

BABIC, or BARABEG, a town of Persia, si- tuated in a fertile, uncultivated plain, towards the north-west of the province of Kerman. It has formerly been a fine city, but is now falling into decay. Fere are, however, four gates, from each of which long streets lead to the market- place in the centre, and the dome over the market-place, which is esteemed the largest in Persia, is in complete preservation. Babic be- ing at an equal distance from the cities of Ker- man, Shiraz, and Yezd, was in former times a great mart of commerce, the greater part of the merchandise which was sent to the port of Gom- broon, on the Persian gulf, passing through it.

A lieutenant-governor resides here, under the control of the prince governing Kerman. The avenues to the town are planted with fruit-trees, and the gardens are said still to surpass those of both Shiraz and ►►► Ispahan in beauty and taste. Fruit of every kind is in such profusion as to have given occasion to the saying, that ‘ if all Persia, except this district, were a desert, Shuhre Babic would supply it with fruit.’

BABILIUS, an astrologer in the time of Nero, who advised the emperor to put all the leading men of Rome to death, that he might avert the danger which seemed to hang over his head, from the appearance of a hairy comet. Nero strictly followed this advice.

BABILLO, a river of South America, in the kingdom of Granada, which falls into the Ma- dalena.

BABINGLEY, a village in the county of Norfolk, two miles north-east from Castle Rising, is only remarkable as being the place in which the first Christian church in East Anglia was erected. Some hills in the vicinity are said to be called Christian hills from this event.

BABINGTON (Gervase), bishop of Wor- cester, was born in Nottinghamshire ; and sent to Trinity College, Cambridge, of which he was made fellow; and in 1578 was incorporated A.M. at Oxford. .He, however, made Cam- bridge the place of his residence, where he be- came an eminent preacher; and being now D. D. was made domestic chaplain to Henry, earl of Pembroke. In 1588 he was installed prebend of Hereford, and in 1591 bishop of Landaff. In 1594 lie was translated to the see of Exeter, and thence to Worcester in 1597. About this time he was made queen's counsel for the marches of Wales. He was a considerable benefactor to the library of the cathedral of Worcester, where he was buried in May 1610. Historians agree that he was a learned and pious man, but his wri- tings, like those of most of his contemporaries, abound with puns ind quaint expressions. His works were printed both in folio and quarto in 1615 and 1637.

BABINGTON (Anthony), one of the sufferers in the cause of the unfortunate Mary, queen of Scotland. He was born of a good family in Derbyshire, and inherited a plentiful fortune. Having distinguished himself by his learning and talents, he was recommended by the arch- bishop of Glasgow to the queen ; and being na- turally of an ardent temper, he resolved to devote himself to her service. Accordingly, he not only entered into the scheme of an enthu- siastic priest named Ballard, for dethroning Elizabeth, but when one Savage undertook to assassinate the English queen, he agreed in the design, and engaged five other gentlemen as ac- complices. But, after their design was ripe for execution, Polly, one of the associates, disco- vered the whole to Walsingham, secretary of state ; and they were arrested, condemned, and executed, in 1586.

BABG5UF (Francis Noel), an active man in the French revolution. From a footman he had risen to a lawyer's clerk, and afterwards became attorney. When the revolution commenced, he

assumed the name of Gracchus, ind engaged in conducting an incendiary journal, entitled Tr□□□□ Tribune of the People; but his concern in a conspiracy being discovered, he was condemned to be guillotined, and the execution was only prevented by his killing himself in prison, in

1797.

BABOLISA, called also BABOLITZNA CA- RETHNA, a town of Hungary, or rather of Scla- vonia, seated near the river Drave.

BABOLSCA, or,BABOLZA, a market town of Hungary, in the county of Shumeg and circle of Canischa. It was formerly fortified, and from the middle of the sixteenth to the end of the se- venteenth century, alternately

in the possession of the Turks and Imperialists. It is now inha- bited by Croats, and is twenty-two miles S. S.E. of Canischa.

BABOON, in zoology, the name of that tribe of apes (simia, Linnaeus) which have short tails, comprehending the species apedia, sphinx, mor- mon, maimon, and porcaria. They have very muscular bodies. In the English language baboon has the same application as babouin in the French, of which many accounts have been given by Buffon, Sonnini, and others. Virey observes, that they are a ferocious and very las- civious kind of ape, found in many parts of the old world, and especially in Africa. Their muzzle, he remarks, is a little lengthened in the same manner as that of a dog, and on that account they have sometimes been called synges cyanoce- phales, and also maggots. They live on fruits, seeds, roots, leaves, insects, &c. In a state of captivity they are altogether untameable, are fond of wine and spirituous liquors; and the fe- males, it is asserted, have an antipathy to the fair sex, as the males have against men. See SIMIA.

BABOUIN A MUSF.AU DE CHIEN, of Sonnini (edit. Buffon), in zoology, the simia hymadryas, Linnaus ; and dog-faced ape, Pennant.

BABOUR (Sultan), the founder of the Mogul dynasty in Hindostan, was descended from the great Timor, or Tamerlane, and was sovereign of Cabul. While engaged in an expedition against Samarcand, he was deprived of his hereditary dominions, and reduced to the utmost extremity by the Usbecks. But on recovering his fortunes, he invaded Hindostan, and in 1525 overthrew and killed sultan Ibrahim, the last Hindoo em- peror of the Patan or Afghan race, and firmly established himself on the throne. He died in 1530. Ferishta, a Persian historian of Hin- dostan, informs us, that this prince wrote an elegant history of his own life, and is noted as the first Indian sovereign who had the roads he travelled measured after him,

*BABRAHAM, formerly BADBURUAM, a small place in the county of Cambridge, four miles north-west of Linton. The manor of this place was formerly in the possession of Sir Horatio Pallavicini, collector of the Pope's dues in the reign of queen Mary ; and who, on Elizabeth's accession, detained the money he had gathered. Lord Orford, in his Anecdotes of Painting, cites the following epitaph on him, from Sir John Crew : ***

I'crc lies H-or.itio I'iilavii/ene,

Who robbed the Pope to lend the quecue.

He was a thiefe ††† a thiofe ; thou lycst :

For what? he robbed hut Antichrist.

Hym Death with besom swept from BAB'RAM

Into the bosom of old Abraham j

But thrn came Hercules with his club

And struck him Howii to Uelzebuh,

Sir Horatio was one of the commanders against the Spanish Armada, and his portrait is pre- served in the tapestry of the House of Lords. The register of this parish records the marriage of his widow with Sir Oliver Cromwell, the Protector's uncle.

BABREA, a mountainous district in the province of Gujrat, situated on the peninsula between the Gulfs of Cambay and Cutch. It contains many strong holds and various small rivers, which flow into the Gulf of Cambay. Here is the famous fortress of Chitpour and the temple of Diu. It is subject to the Mahrattas.

BABU, a small island in the Gulf of Siam, near Cambodia. Long. 103†† 48′ E., lat. 9†† 42′ N.

BABUAX, a small island, said to be about twenty-five miles in circumference, which is the most northerly of thePhilippines. Long. 1 22″ E., lat. 19†† 43′ N.

BABUYANES ISLES, a number of islands off the north coast of Luzon, the principal Philip- pine, between the nineteenth and twentieth de- grees of north latitude. The largest are named Babuan, Calayay, Dalupiri, Camiguen, and Fuga, and are from twenty to thirty miles each in circumference. Besides these, there are many small rocky islets. Although so far north, the Babuyanes isles are much infested by the piratical cruisers of Magindarao. Their pro- ductions are wax, ebony, bananas, cocoas, and plantains.

BABU'L-ALWAB. See DERBEND.

BA'BU'L-BAWA'DI (Gates of the Deserts), or Mahrah, a province on the south coast of Arabia, so named from its being the southern entrance to the great central deserts with which it communicates

BABYLON, Heb. BABEL, in ancient geogra- phy, the capital of Babylonia or Chaldea, sup- posed to have been situated in N. lat. 33►►, E. long. 42►► 40′ ;]()” ; or, according to the observations of M. Beauchamp (Mem. Ac. Sc. Paris, 1787), N. lat. 32►► 34’, and E. long. 44►► 12′ 30″ upon the river Euphrates, and considered for many ages the wonder of the world. The few vestiges that yet remain of its ancient ruins are placed by mast geographical writers, at a town called Hilla or Elugo, about fifteen leagues south-west of Bagdad. It was on or near the site of this city, that the descendants of Noah, according to the Hebrew text, 101 years after the flood; or 531, according to the Septuagint, began to build a city and tower, the top of which should reach to heaven ; an impious attempt, which ended in the confusion of their language, and their dispersion over the face of the whole earth. See Genesis, xi. 1 ►►► 0. That before this period all mankind spoke one language cannot be thought incredible, or even improbable; for since the family of Noah, the only one in the \orld, are known to have dwelt together, we cannot suppose that any material change could have been effected in their language during a single century, or even the period assigned by the Septuagint calculation. Besides which, numerous histories and traditions still current in Asia, though dashed with super- stition and fable, allude to the same events: all tending to confirm, in the most unequivocal manner, the main strokes and outlines of the Mosaic narrative, .losephus ascribes the build- ing of the tower to Nimrod (See Bochart’s Pha- l<'ii\ i. 10.), whose name is also affixed to some of the remains of Babylon. Abydenus (as quoted by l-'.usebius, I'ncpar. Evangel, ix. 14.), observes, that the firˆt men, contemning the power and authority of the gods, and relying on their own extraordinary strength, built a lofty tower, which nearlv reached the sky, in the place where Babel then stood. But the winds coming to the assist-

ance of the gods, overturned the whole mass upon the heads of its builders, and from its ruins Babylon was afterwards built. The gods also at the same time caused mankind, who had before all spoken the same language, to speak hencefor- ward in different tongues. Plato also, (Polit. p. 272. ed Steph.), relates a similar tradition, wherein he says, that in the golden age, one common language was spoken both by men and beasts, but that Jupiter confounded their tongues as a punishment for their insolence in claiming eternal youth and immutability. After the confu- sion of languages, the people ‘ left off to build the city’, says Moses ; but they must afterwards hare resumed it, for in the next verse he adds, that the name of it was called Babel, which signifies confusion, alluding to the confusion in the lan- guages of its builders. It is afterwards mentioned as the chief city of the kingdom of Nimrod, the son of Cush, from which period no further ac- count is given of it in the sacred writings, till the captivity of Israel under

Nebuchadnezzar, 730 years before the commencement of the Christian era, when it was so heightened and improved as to be called ‘ great Babylon,’ ‘ the glory of king- doms,’ ‘ the beauty of the Chaldees’ excellency,’ ‘ the golden city,’ ‘ the lady of kingdoms.’ See the prophets Isaiah, Jeremiah, and Daniel. The Greeks have nevertheless, supplied this 1515 years interval of silence, and have given a com- plete history of the Assyrian and Babylonian em- pires, together with a magnificent sketch of their renowned metropolis in the zenith of its glory under Semiramis, Nebuchadnezzar, and others. The learned Bochart connects the sacred and profane histories together, by supposing the city of Babylon, and the tower of Belus, mentioned by the Greek historians, to be the same as those related by Moses.

Babylon, according to the concurrent testimony of the ancients, was seated on a plain (the plain of Shinar in Scripture), and surrounded by

water. The places about Babylon, as Abydenus informs us, from Megasthenes, (Euseb Prsep. Evang. 1. ix.c. 41. p. 41. p. 457.), are said from the beginning to have been overwhelmed with waters, and therefore called the sea ; according to the language of Isaiah, xxi. 1. ‘the burden of Ihe desert of the sea.’ Jeremiah calls the city itself a mountain, li. 25, on account of the great height of its walls, towers, palaces, and temples, which, according to Berosus, as quoted by Jose- phus (ubi infra), resembled mountains. The founding of this metropolis is attributed by some historians to Semiramis, by others to Belus, who is thought by many to have been the same with Nimrod already alluded to, but was indebted for its chief improvements to Nebuchadnezzar, his son Evilmerodach, and his widow Nitocris. Nebuchadnezzar repaired, enlarged, and embel- lished it to such a degree, that he may be said to have built it, according to his own vain-glorious boast, Dan. iv. 30. Nor is this asserted only in Scripture, but likewise by heathen authors, Megasthenes, Berosus, and Abydenus. (See Josephus, Antiq. 1. x. c. 11. sect. i. t. i. p. 536. ed. Haverc.) Eusebius, (Praep. Evangel. 1. ix. c. 41. p. 457. ed. Vgeri.) The chief works of Ba- oylon, mentioned by historians, were the prodi- gious walls of the city, the temple of Belus, Ne- buchadnezzar’s palace, the hanging gardens, the bank of the river, the artificial lake, and the canals. This city was surrounded with walls, in thick- ness eighty-seven feet, in height 350, and in compass 480 furlongs, or sixty of our miles ; according to Herodotus, who was himself at Ba- bylon ; and most writers give us the same dimen- sions. Diodorous Siculus, however, diminishes the circumference of these walls very considera- bly, and takes somewhat from the height of them ; though

he seems to add to their breadth, by say- ing, that six chariots might drive abreast thereon ; while Herodotus writes, that one chariot only might turn upon them ; but then he places build- ings on each side of the top of these walls, which, according to him, were but one story high ; which may pretty well reconcile them together. Those, who give the height of these walls but at fifty cubits, speak of them only as they were after the time of Darius Hystaspis, who had caused them to be beaten down to that level. The ground plan of these walls formed an exact square, each side of which was 120 furlongs, or fifteen miles, in length ; and they were all built of large bricks cemented together with bitumen, which in a short time grows harder than the brick and stone which it cements. Without the walls, the city was encompassed with a vast ditch, filled with water, and lined witn bricks on both sides ; and, as the earth that was dug out of it served to make the bricks, we may judge of the depth and largeness of the ditch from the height and thick- ness of the walls. In the whole compass of the wall there were 100 gates, that is, twenty-five on each of the four sides, all of solid brass. Between every two of these gates, at proper distances, were three towers ; four more at the four corners of this great square, and three between each of these corners and the next gate on either side ; and each of these towers was ten feet higher than the walls, in those parts where towers were needful

for defence. For some parts of the walls, beimr upon a morass, and inaccessible by an enerm , they stood in no need of towers. Thus the whole number of these towers amounted to more than 250. From the twenty-five gates in each side of this square, there was a straight street, extending to the corresponding gate in the opposite wall ; whence the whole number of the streets must have been but fifty ; but they were each about fifteen miles long, twenty-five of them crossing the other twenty-five exactly at right angles. Besides these whole streets, we must reckon four half streets, which were but rows of houses facing the four inner sides of the walls. These four half streets were properly the four sides of the city within the walls/ and were each of them 200 feet broad, the whole streets being about 150 of the same. By this intersection of the fifty streets, the city was divided into 676 squares, each of four furlongs and an half on each side, or two miles and a quarter in compass. Round these squares on every side towards the streets stood the houses, all three or four stories in height, beautified with all manner of orna- ments : and the space within each of these squares was void, or taken up by gardens, &c. A branch of the Euphrates divided the city into two, running through the midst of it, from north to south, over which, in the middle of the city, was a bridge, a furlong in length, or, as some say, no less than five furlongs, though but thirty feet broad. At each end of this bridge were two palaces ; the old palace on the east side, the new one on the west side of the river; the former of which took up four of*

the squares, and the latter nine. The temple of Belus, which stood next to the old palace, took up another ol the squares. That part or half of the city on the east side of the river was the old town, and the other on the west was added by Nebuchad- nezzar ; both being included within the vast square bounded by the walls. It is supposed, that Nebuchadnezzar, who had destroyed the old seat of the Assyrian empire, Nineveh, proposed that this new one should rather exceed it ; and that it was in order to fill it with inhabitants that he transported such numbers of the captives from other countries hither. But notwithstanding his great conquests it was never wholly inha- bited ; for, Cyrus removing the seat of the empire soon after to Shushan, Babylon fell by degrees to decay. So far was it from being finished according to its original design, that, when Alexander came to Babylon, Q. Curtius tells us, ' no more than ninety furlongs of it were then built ;' which can only be understood of so much in length ; and, if we allow the breadth to be as much, no more than 8100 square furlongs were then built upon ; but the whole space within the walls contained 14,400 square furlongs ; and therefore there must have been 6300 square furlongs remaining unbuilt, which, Curtius tells us, were ploughed and sown. Be- sides this, the houses were not contiguous, but built with a void space on each side.

The next great work of Nebuchadnezzar was the temple of Belus. The wonderful tower, however, that stood in the middle of it, was not his work, but was built many ages before, bein'_r

the famous tower of Babel, as is commonly sup- posed. This is said to have been composed of eight pyramidal ones raised above one another, and is stated by Herodotus to have been a fur- long in height ; but as there is an ambiguity in his expression, it has been disputed whether each of the towers, was a furlong in length, or the whole of them taken together. Even on the latter supposition, it must have exceeded the highest of the Egyptian pyramids by 179 feet, though it fell short of its breadth at the basis by thirty-three. The way to go up was by stairs on the outside round it ; whence it seems most likely that the whole ascent was, by the benching in, drawn by a sloping line from the bottom to the top eight times round it ; and that this made the ap- pearance of eight towers, one above the other. In these different compartments or stories were magnificent rooms, with arched roofs, supported by pillars, forming parts of the temple when the tower was consecrated, those of the uppermost story being thought most sacred. Over the entire top was an observatory. Diod. Sic. 1. ii. ; and Calisthenes, the philosopher who accom- panied Alexander in the conquest

of Babylon, found astronomical observations which carried up the account as high as the 115th year after the flood, or B.C. ?334, and fifteen years from the building of the tower of Babel. Till the times of Nebuchadnezzar, it, is thought that this tower constituted the whole of the temple of Belus; but he. made great additions, by vast edifices round it, in a square of t\vo furlongs on every side, and a mile in circumference; thus exceeding the square of the temple of Jerusalem by 1800 feet. On the outside of these buildings was a wall, which enclosed the whole ; and, from the regularity with which the city was marked out, it is supposed, that tins wall was equal to the squan: wheivin it stood, and so is concluded to have !,e n two i:;iles and an half in circum- ference In this \all were several gates leading into the temple, ull of solid brass. In the temple were several images of massy gold, one of them forty feet in height. The whole weight of its statues and decorations, according to Diodorus Si- culus, amounted to above />000 talents in gold, above twenty-one millions of our money : an equal sum in treasure, utensils, and ornaments, not mentioned, is allowed for.

Next to this temple, on the east side of the river, stood the old palace of the kings of Baby- lon, which was four n:ih s in circumference, and exactly opposite to it, on the other side of the river, was the new one built by Nebuchadnezzar, erj,ht. miles in circumference. The tower or temple stood till the time of Xerxes. But that prince, on i is return Iroin the Grecian expe- dition, having tir.-t plundered it of its immense wealth, de; .o'.ished the whole, and laid it in rnms. Alexander, on his return to Babylon ii<; n his Indian expedition, proposed to rebuild it, iiinl make it the seat of his empire, and even employed 10, 000 men to clear away the rubbish, lint his death happening soon after, a stop \\as put to all further proceedings in that design.

Nothing was more wonderful at Babylon than the hanging gardens, which Nebuchadnezzar

made in compliment to his wife Amyitis ; who being a Mede, and retaining a strong inclination for the mountains and forests of her own country, was desirous of having something like them at Babylon. They are said to have contained a square of four plethra, or 400 feet, on each side ; and to have consisted of terraces one above another, carried up to the height of the wall of the city, the ascent from terrace to terrace being by steps ten feet wide. The whole pile con- sisted of substantial arches upon arches, and was strengthened by a wall surrounding it on every side, twenty-two feet thick. The floors on each of them were laid in this order : first, on the tops of the arches was a pavement of stones sixteen feet long, and four feet broad ; over this a layer of reeds, mixed with a great quantity of bitumen; over this were two courses of brick, closely cemented together with plaster ; and over all these thick sheets of lead, and on these the earth or mould of the

garden. Upon the uppermost of these terraces was a reservoir, supplied with water from the river. The other works attributed to Nebuchadnezzar by Bcrosus and Abydenus, were the banks of the river, the artificial canals, and the great artificial lake said to have been sunk by Semiramis. The canals were cut-out on the east side of the Euphrates, to convey its waters, when it overflowed its banks, into the Tigris, before they reached Babylon. The lake was on the west side of Babylon ; and, according to the lowest computation, forty miles square, 160 in compass, and in depth thirty- five feet, as Herodotus, or seventy-five, as Megas- thenes will have it; the former, perhaps, mea- sured from the surface of the sides, and the latter from the tops of the banks that were cast up upon. them. This lake was dug to receive the waters of the river, while the banks were building on each side of it. But both the lake, and the canal which led to it, were preserved after that work was completed, being found of great use, not only to prevent all overflowings, but to keep water all the year, as a common reservoir, to be let out, on proper occasions, by sluices, for the improvement of the land. The banks were built of brick and bitumen, on both sides of the river, to keep it within its channel ; and extended on each side throughout the whole length of the city, and even farther, according to some writers. Within the city they were built from the bottom of the river, and of the same thickness with the walls of the city itself. Opposite to each street, on either side of the river, was a brazen gate in the wall, with stairs leading down from it to the river : these gates were open by day, and shut by night. Berosus, Megasthenes, and Abydecus, attribute all these works to Nebuchadnezzar; but Herodotus tells us, the bridge, the banks, and the lake, were the work of the queen Nito- cris already alluded to, who may have finished what Nebuchadnezzar left imperfect. Such is the description ancient historians give of this city ; which, if the accounts are not exaggerated, must have exceeded every specimen of human grandeur that has yet appeared. Many of the moderns, however, are of opinion that these des- criptions are exaggerated ; although it is certain that few other arguments can be brought against

the reality of them, than that we do not now see similar designs executed.

The taking of Babylon by Cyrus, as prophe- cied in the scriptures, forms one of the most striking and important events in the variable page of ancient history. War had commenced between the Medes and Persians, and Babylo- nians, in the reign of Neriglissar, and had been carried on with very bad success on the side of the last named people. Cyrus, who commanded the Median and Persian army, having subdued the several

nations inhabiting the great continent from the A'gean sea to the Euphrates, .bent his march towards Babylon. Nabonadius, hearing of it, immediately advanced against him. In the engagement which ensued, the Babylonians were defeated ; and the king, retreating to his metro- polis, was blocked up and closely besieged by Cyrus. But the reduction of the city was no common enterprise. Its walls and towers were well manned, and the place stored with all provisions for twenty years. Cyrus, despairing of being able to take it by storm, caused a line of circum- vallation to be drawn quite round it, with a large and deep ditch; reckoning, that if all communication with the country were cut off, the besieged would be obliged to surrender through famine. That his troops might not be too much fatigued, he divided his army into twelve bodies, appoint- ing each body its month to guard the trenches; but the besieged, looking upon themselves to be out of danger, insulted him from the ramparts, and despised all his efforts. Cyrus having spent two whole years before Babylon, without making any progress in the siege, at last thought of the following stratagem, which put him in possession of it. He was informed that a great annual solemnity was to be held at Babylon; and that the inhabitants on that occasion were accustomed to spend the whole night in revelry. On this night he accordingly sent a strong detachment to the head of the canal leading to the great lake, with orders at a certain time, to break down the bank which was between the lake and the canal, and to turn the whole current into the lake. At the same time he appointed one body of troops at the place where the river entered the city, and another where it came out; ordering them to march in by the bed of the river as soon as they should find it fordable. Towards the even- ing lie opened the head of the trenches on both sides of the river above the city, that the water might discharge itself into them ; by which means, and the breaking down of the great dam, the river was soon drained. Then the two bodies of troops entered the channel; the one commanded by Gobryas and the other by Gadates: and finding the gates left open, they penetrated into the heart of the city without opposition. Those who were in the palace opening the gates to know the cause of this confusion, the Persians rushed in, took the palace, and killed the king as became out to meet them. Cyrus took possession of Babylon, in the name of his uncle Cyaxares II. called in scripture Darius the Mede : A. M. 3468.

The manner in which this city was taken is remarkable, from its coincidence with the pro- phecy of that event in Isa. xlv. 1, 2. ' The two-leaved gates' were literally opened before

him, and the gates were ' not to be shut,' Sec. On these prophecies, see bishop Newton, bishop Lo wtlˆon Isaiah, &c.

With Babylon fell the empire of Babyloni.i. according to the striking language written on the wall of the palace the same night in which the city

was taken, and interpreted by the prophet Daniel ; ‘ Mene, God hath numbered thy king- dom and finished it.’ See Dan. ch. v.

The history of the ruins of this great city is all which we have now to present to the reader. An insurrection, under Darius Hystaspes, B.C. 500, provoked that prince to overthrow the walls and gates which had been left by Cyrus. We also learn from a fragment of Diodorus Siculus, produced by Valesius, and from him quoted by Vitringa, Comment, in Jesaiam, ch. xiii. vol. 1, p. 421, that one of the kings of Parthia sent many of the Babylonians, under the most trivial pretences, into slavery ; burnt the forum, together with some of the temples ; and demolished the best paits of the city, B. C. 130 years. Diodo- rus Siculus, 1. i asserts, that in his time, B.C. 44, only a small part of it was inhabited, and that the greater part of the space within the ancient walls was tilled. Strabo, who wrote fourteen years after him, in his 1. xvi. p. 1073, applies to Babylon what a comic poet, said of Megalpolis in Arcadia: ‘ The great city is now become a great desert,’ Pliny, H. N. 1. 6. ch. xxx., published A.D. 66, affirms that it was reduced to solitude by the neighbourhood of Seleucia. Pausanias, A.D. 153, says, Arcad. ch. xxxiii. p. 668. ed. Kuhuii, ‘that of Babylon, the greatest city the sun ever saw, nothing re- mained but the walls.’ Maximus Tyrius, Diss. 6., and Lucian, ETTIOV, sive Contemplantes, mention it as a neglected place; the latter inti- mating that in a little time it would be sought for and not be found, like Nineveh. Eusebius has preserved an oration of Constantine the great, in which that emperor states, that he himself was upon the spot, and beheld the desolate and miserable condition of the city. St. Jerome in- forms us, that about the close of the fourth cen- tury, it was converted in’o a chase to keep wild beasts in, for the diversion of the Persian kings , that all was in the utmost state of desolation, except the brick walls, which were occasionally repaired to prevent the animals from escaping ; a circumstance which literally fulfilled the pro- phecy of Isaiah xiii. 21. Hieron, Comment, on Isa. ch. xiii. ch. xiv. vol. 3. p. 111. 115. ed. Benedict. Benjamin of Teudela, who lived in the twelfth century, affirms, Itin. p. 66, that some ruins were still to be seen of Nebuchadnezzar’s palace, into which travellers were afraid to enter on account of the serpents and scorpions that inhabited the interior. Texeira, a Portuguese, is cited by Bochart, and Prideaux, as giving a simi lar account of this place ; various other travellers have further confirmed them. Ta vernier says, that at the division of the Tigris, a short dis- tance from Bagdad, is the foundation of a city which, from its appearance, may have been a league in compass; of which some of the walls yet standing occupy sufficient breadth to allow six coaches to pass upon them abreast, and are com- posed of burtit bricks ten feet square and three*

feet thick. This place is represented by the chronicles of the country as the seat of ancient Babylon. Hanway says, Trav. vol. 4. pt. 3. ch. xx. p. 78, that the ruins of Babylon lie fifteen leagues south of Bagdad, and are now so much effaced by time, that scarcely any vestiges of them remain to point out the original situation of the city. Niebuhr, who lived in the eighteenth oentury, gave a description which has thrown a light upon the question respecting the original site of Babylon. But the most complete and satisfactory account is given by Mr. Rich, who resided for some time at the court of the Pasha of Bagdad, on the part of the East India Com pany, and possessed greater advantages for such an inquiry than any of his predecessors. He expected, he says, to have found on the site of Babylon both more and less than he actually met ###with; more, because he supposed he should have been able to have identified some of the ancient buildings, which was quite impossible ; ‘ less because he could form no conception of the pro- digious extent of the whole mass of ruins, their size, solidity, and the perfect state of some of their parts.’

The traces of the city begin to show themselves near Mohaeril, a khan or inn, nine mi’es from Hillah, and nearly thirteen leagues south of Bag- dad ; the whole country round exhibiting here and there, detached masses of bricks and bitu- men. Three mounds attract particular attention by reason of their extraordinary magnitude. llillah, in lat. 32## 28′ N., stands cast of the Euphrates, and on tliat side also, with the excep- tion of two small elevations, and one very con- siderable ruin, are all the remains of any anti- quity. Two miles above llillali commences a mound or enclosure of circular appearance, thought to have been the ancient boundary wall. It includes an area of two miles and a half one way, and one mile and one third the other. On the east side two stiaight dykes or walls of earth run from north to south, parallel with the Euphrates, and forming, together \ith the river and the ends of the enclosure above-mentioned, an oblong an a, containing; three principal mounds of rubbish, which rise more than 1UO feet above the level of the river. The largest mass of these ruins, called by the Arabs Makallebah, pro- nounced by the natives Majellibeh, in English ###:ul>vtrtcd, is what Kennell and 1’etro della V alle thought to be the tower of Belus. The figure

is oblong, and the sides which face the cardinal points measure as follows : the northern side 200 yards, the southern 219, the western 136, and the eastern 192; the highest elevation is 141 feet. On the south-east angle appeared something like a turret, and in the rubbish were found whole bricks, having on them inscriptions in CUNEATIC

CHARACTERS, for which S66.

The next important ruin is called by the Arabs El Kair, the castle, a mile to the south of the for- mer ; consisting of walls and piers, eight feet in thickness, facing, like the former, the cardinal points. It is adorned with buttresses, pilasters, and niches of fine burnt brick, laid in lime mor- tar of extraordinary tenacity. Beneath this building are subterranean caverns and passages, which are still unexplored. In the neighbour- hood is an atheleh, tamarix articulata, considered by the natives to have been coeval with the city. Mr. Rich also found another curious ruin, west of the river, and about six miles south-west of Hillah, which he coincides with Niebuhr Reisse, ii. 289, in considering as the celebrated tower of Belus ; especially as the Arabs call it Birs Nem- rud, the tower of Nimrod. (The word birs, which embarrassed Mr. Rich, being nothing else than the Persian word borz, as Ges^nius has justly expressed it.) This celebrated remain, which the Jews denominate the prison of Nebu- chadnezzar, forms a mound of fine burnt bricks, with inscriptions on them ; it is of oblong figure, 762 yards in circumference, and on the east side about sixty feet in height ; but rises on the west in a conical form to the height of 198 feet, the base occupying a breadth of 28.

No works of art yet discovered in these ruins have been thought beautiful ; but bricks and gems, with inscriptions and sculptures similar to those brought from Persepolis, evince the early connexion between the Babylonian and Persian empires. The inscriptions on the lower side of the bricks were buried in a substratum of mortar, and not designed to be seen or read ; whence it has been inferred, that they are charms or ma- gical formulae to protect the building from the attack of demons and evil spirits. For a further illustration of this subject we refer the reader to Gesenius, in Ersch's Encyclo.; Rich's Memoir on the Ruins of Babylon, 1818; Maurice's Ob- servations on ditto, 1816; and the numerous other works already quoted.

B ABYLONIA.

BABYLONIA, or (IIAI.IH . a renowned kingdom of Asia, said to have been the most ar.tient in the world, lymu between thirty and thirty-five degrees of north latitude, and bounded, according to I'toletny, on the north by Mesopo- tamia, on the east by the Tigris, on t!.e west by Arabia Deserta, and on the south by the Persian Gulf and part of Arabia Felix. Babylonia was founded by Nimrod, the grandson of llam, who is also said to have built Nineveh, the ancient capital of Assyria. \ anous ha\e been the con- jectures of the learned respecting these two king-

doms ; some supposing them to have been the same, others imagining that Babylonia was an early province of Assyria, although it is plain from the best authorities, that they remained perfectly distinct till the time of Ninus;

who having conquered the former, reduced it to a tributary dependance upon the latter ; in which state it continued till the effeminate reign of Sardanapalus ; as did also Media, Persia, Egypt, and other kingdoms At length Arbaces, gover- nor of Media, taking advantage of that monarch's indolence, threw off his allegiance bv the advice

of Belesis, a Chaldean priest ; the Babylonians followed the example, and with the assistance of the Persians, and other allies to whom the tyranny of their Assyrian lords was equally odious, attacked the empire on all sides, and after a determined and obstinate perseverance, overthrew the Assyrian army, besieged Sardana- T)alus in his capital, and made themselves mas- ters of the empire, A. A. C. 821.

The whole territory was then divided into three kingdoms, viz. the Assyrian, Median, and Babylonian. Arbaces retaining the supreme authority, fixed his imperial residence at Ecba- tana, in Media; nominated Belesis to the go- vernment of Babylon, and Phul to that of As- syria; at the same time conferring upon them the title of kings. Phul, who reigned during the time of Menahem, king of Judah, re-established and greatly enlarged the Assyrian empire ; and at his death bequeathed the kingdoms of Assyria and Babylonia to his two sons, the former to Tiglath-Pileser, the latter to Nabonasser, in the year B. C. 747.

From this period to the year 625, B. C. when Nabopolasser began his reign, nothing remark- able occurs in the history of Babylon, except that Assaradinus, or Esarhaddon, brother and successor of Senacherib, king of Assyria, took possession of that kingdom, B. C. 680; and ►►.hat upon his death, B. C. 668, the kingdoms were again separated. The Scripture mentions only five Assyrian kings, viz. Pul, Tiglath-Pile- ser, Shalmaneser, Sennacherib, and Esarhaddon. In the twentieth year of Nabopolasser, B. C. 606, in the reign of Chynalidan, the Sardanapa- lus of the Greeks, Nineveh was taken and de- stroyed, by the united armies of the Medes and Babylonians, under Cyaxares and Nabopolasser, when the seat of the empire was transferred to Babylon. This Nabopolasser, called also Nebu- chadnezzar, was the father of the celebrated Nebuchadnezzar, whose history is so famous in the sacred writings, and who commenced his reign 604 years B. C. two years after the con- quest of Nineveh. This prince raised the em- pire of Babylon to its highest pitch of glory, and spread his dominions over a wide extent of ter- ritory, stretching from Media on the north-east, beyond Egypt on the south-west, and compre- hending the several kingdoms of Assyria, Persia, Syria, Phoenicia, Canaan, North

Arabia, Idumea, and Egypt. After Nebuchadnezzar, little is known of Babylon, except the names of his suc- cessors, Evil-Merodach and his queen Nitocris, his son-in-law Neriglissar, Laborosoarchod, the son of the latter, and Nabonadius, the son of Evil-Merodach by Nitocris, Labynitus of Hero- dotus, and Belshazzar of Scripture, in whose reign the city of Babylon was broken up, and the empire extinguished by Cyrus the Persian, 538 years B. C. See Anc. Un. Hist. vol. iii. p. 367???437. Rollin's Anc. Hist. vol. ii. p. 1???

153.

In the early ages of the world, Babylonia was known by the names of Shivar, or Shivaar, which appellation it seems to have retained in the time of Daniel. In the days of Abraham, a king of Shivar is mentioned called Amraphel, who under f'hedarlaomer, king of Elam, or Persia, made

*war upon the Canaanites. The name of Baby- lon is supposed to have been derived from the tower *f Babel, and that of Chaldaea from Chal- daeans or Chasdim. Joseph Ant. 1. i. c. 7. These names were not synonymous ; Babylonia, properly intending the country more immediately in the neighbourhood of Babylon, and Chaldaea, the territory lying south of the former, and reach- ing downward as far as the Persian gulf. Both nevertheless are commonly employed as general names of the whole empire, and in that sense are taken indifferently for each other, Chaldaea being the name used in Scripture, and Babylonia the most common in profane authors. Diodor. Sic. 1. ii. c. 11, 12. Strabo, 1. xvi. sub.ivit.*

The chief cities of Babylonia were BaLylon, Vologsia or Vologesocerta, built by Vologesis, king of the Parthians, on the Euphrates, about the time of Vespasian ; Barsita, thought to be the Borsippa of Strabo, sacred to Diana and Apollo, and called Borisippeni, from its being the habi- tation of a certain sect of the Chaldaeans ; Idic- cara, on the Euphrates and the borders of Arabia Deserta; Coche, in the island of Mesene, formed by the Tigris, Saura, and Pombeditha, of which the situation is very uncertain.

The air of this country was for the most part salubrious and temperate, though occasionally subject to hot pestilential winds. The rains according to Herodotus, were seldom, the defi- ciency of which the inhabitants supplied, by inventing wheels and engines for watering the land, and also by cutting numerous canals by which the waters of the Euphrates and Tigris were carried in different directions, and diffused over the whole surface of the empire. The southern parts of Babylonia between the rivers, have been compared to the Delta of Egypt, in consequence of their natural and artificial islands, and from their lying under the same parallel of latitude. The region of Chaldata between the mountains of Babylon and the

Euphrates, is also well watered by lakes, rivers, and canals, which greatly refresh every part of the surface, and its produce, according to Herodotus, 1. i. c. 193, is by this means rendered equal to a third part of Asia.

In short, it was one of the finest countries for corn in the world ; and so luxuriant, that it commonly yielded a hundred times more than what was sown ; and, in good years, it yielded three hundred times more than it received. The leaves of its wheat and barley were four inches broad. ‘ Though I know,’ says Herodotus, ‘ that the millet and the sesame of that country grow to the size of trees, I will not describe them par- ticularly, lestthose who have not been at Baby- lonia should think my account fabulous.’ They had no oil but what they made from Indian corn. For producing fig-trees, vines, and olives, it was not famous, but the country abounded with palm- trees, which grew spontaneously ; and most of them bore fruit, of which the inhabitants made bread, wine, and honey. Some of them, as of other trees, the Greeks called male ones. They tied the fruit of the male to the trees which bore dates ; that the mosquito, leaving the male, might cause the date to ripen, by penetrating it ; for without that assistance it came not to maturity. Musquitoes breed ia the male palms as in the .\ it 1

fig-trees. The great fertility of the soil was owing, in a great measure, to the inundations of the Euphrates and Tigris, in the months of June, July, and August, caused by the melting of the snow upon the mountains of Armenia. From the circumstance of its being low, flat, and well watered, this country abounded with willows, and was hence called the ‘Valley of Willows,’ as Prideaux (Con. pt. i. b. i. p. 105,) after Bochart corrects the text, Is. x. 5, 7. Israel, Ps. cxxxvii. 1, 2, sat down in their captivity by the rivers of Babylon, and hung their harps upon the wil- lows.

To facilitate the purposes of commerce the Babylonians navigated the Euphrates, by means of small boats, nearly round, constructed like wicker baskets, which were covered with hides, and guided by two oars, or paddles. These boats had neither head nor stern ; but, being of different sizes, were very useful for carrying their goods to Babylon; whence they returned by land, the strength of the .current not allowing them to return by water

The inhabitants of this country were divided, not only into two great tribes, Babylonians and Chaldeans, properly so called, but into nume- rous inferior sects and divisions, three of which are said to have fed upon

nothing but fish, dried .n tln> sun, formed into paste, and afterwards baked in rolls as a substitute for bread.

Physicians are said to have been unknown in Babylonia, to supply the want of which they car- ried tlu.ir sick into the public forum, to consult ihnse who passed by on the nature and cure of their diseases. Kvery one who saw a sick per- son was obliged to go to him to inquire into his distemper, and tell him if he ever had the same himself, or if he knew any one that had, and how lie \.is cured; together with such other inquiries as the sick person might be induced to propose. Tin y embalmed their dead with honey; and in their niraniiii1.;- imitated the Kgyptians.

The laws of marriage among the Babylonians were peculiar, and were celebrated by the an- cient writers for their wisdom and utility. On what ground the reader will determine. When the girls were marriageable, they were ordered to meet in a certain place, where the young men likewise assembled. They were then sold by the public, crier; but he first, sold the most beautiful one; and then pat up others to sale, according to their decrees of beauty. The rich Babylonians were emulous i< > carrv oil' the finest women, who weie sold to the highest bidders. But as the voiiij-' men who weru poor could not aspire to have line v.omen, they v.ere content to take the more homely, with the mom y which was given \Iih them, from the produce of the sale of the tiii<-t women! A father could not give his daughter in marriage as he pleased; nor was he \\lio liuiu'iit her allowed to take her home, with- out uivinu' ^einrity that he would marry her lli.t, ai'ti r the sale, if the pani's '.vere not agree- able to each other, the law enjoined that the money should be nstoied. The inliabitauts of au\ of their towns were permitted to marry wives at ilic.se auctions. Sin h were the early customs of the Babylonians. Hut tin y afterwards made a lav,, which piol.ibited the inhabitants of different

towns to intermarry, and by which husbands wei" punished for treating their wives ill.

The Babylonians were not without consider- able taste for the arts. Of their music and poetry we have certain records. They also excelled in architecture and sculpture; also in the arts of designing and casting metals. Their manufac- tories of rich embroideries, sumptuous vestments, magnificent carpets, and fine linen, were famous ; and their purple constituted a considerable article of eastern commerce. They were naturally a commercial nation, for which their metropolis afforded peculiar advantages ; seated, as it was, in the midst of the world, and having, by means of its two chief rivers, an easy access to the northern and western parts ; and, by means of the Persian Gulf, to the western.

At first, it is said, the Babylonians worshipped only the sun and moon ; but they soon multi- plied their divinities. They deified Baal, Bel, or Belus, one of their kings, and Merodach-Bala- dan. They also worshipped Venus under the name of Myletta She and Belus were the prin- cipal deities of the Babylonians. The practice of sacrificing human victims is said to have been first introduced into the world by the Babyloni- ans in the worship of these deities. They counted their day from sun-rise to sun-rise. They solemnised five days in the year with great mag- nificence, and almost the same ceremonies with which the Romans celebrated their Saturnalia; and the Babylonians, generally speaking, were very much addicted to judicial astrology. Their priests, who openly professed that art, were obliged to commit to writing all the events of the lives of their illustrious men ; and on a fancied connexion between those events and the motions of the heavenly bodies, the principles of their art were founded. They pretended that some of their books, in which their historical transactions and revolutions were accurately com- pared with the courses of the stars, were thousands of years old. ??? And although we may- dispute this assertion of their astrologers, it is nevertheless, true that they had made a long system of observations; and that some of these were extant in the days of Aristotle, which were older than the Babylonish empire. See ASTRO- NOMY, Index.

The government of Babylon was despotic, and the succession hereditary. Their potentates as- sumed divine titles, and received divine honors, which shows the spirit and force of the Scripture comparison between Babylon and papal Rome. The officers by whom the affairs of government were administered, were both civil and military, and were divided into three classes. The first had the charge of virgins, and of their disposal in marriage. They were also to judge in cases of adultery, and all matters connected with the rights and institutes of matrimony. The second took cognizance of thefts ; and the third of all other crimes. The chief officers of the king's household were the captains of the guard, who executed the commands of the sovereign. The prince of the eunuchs, who had the care of the youth of the palace ; the prime minister, resem- bling the Turkish vizier, who sat in the king's gate to hear complaints and pass judgment;

and a master of the magicians, whose province it was to satisfy the king on all subjects that re- lated to futurity.

Of the criminal laws of Babylon little is known, except that their punishments were cruel and capricious ??? as beheading, cutting to pieces, turning the house of the criminal into a dung- hill, burning, &c. Such is the account com-

monly given by historians of this renowned and ancient monarchy, one of the four great empires of the earth, so frequently employed in the hand of Prt>vidence as a scourge to execute the divine threatening upon surrounding nations. This, however, is but a general view, and for a more detailed description, we refer the reader to the authorities already quoted.

BABYLON is a term employed in the Scriptures, particularly in the first epistle of St. Peter, and the book of Revelation, to designate a great ene- my to the Christian faith ; and is generally ap- plied, by Protestants, to the Roman Catholic church; which, from her pride, oppressive and persecuting spirit, but chiefly from her idolatry, bears great resemblance to Babylon. Whoever reads the sixth chapter of Baruch, and com- pares it with the history of the papal apostacy, will see the justice and force of the application. See also Whitby's Paraphrase, vol. ii. p. 661, and 753.

BABYLONIA CURA, in astrology, the art of casting nativities.

BABYLONIAN, BABYLOMUS, is used, in ancient writers, for an astrologer, or any thing relating to astrology.

BABYLONICA. See BABYLONICS.

BABYLON ic A TEXTA, a rich sort of weavings, or hangings, denominated from the city of Baby- lon, where their practice of interweaving divers colors in the hangings first obtained. Hence also Babylonic garments, Babylonic skins, Baby- Ionic carpets, housings, &c.

BABYLONICS, BABYLONICA, in literary history, a fragment of the ancient history of the world, ending at 267 years before Christ; and attributed to Berosus, a priest of Babylon, about the time of Alexander. The Babylonics are sometimes cited in ancient writers by the title of Chaldaicr. They are generally consonant with Scripture, whence the author is usually supposed to have consulted the Jewish writers. Berosus speaks of an universal deluge, an ark, &c. He reckons ten generations between the first man and the deluge ; and marks the duration of the several generations by saroi, or periods of 223 lunar months ; which, reduced to years, differ not much from the chronology of Moses. Only a few imperfect extracts are now remaining of the work ; preserved chiefly by Josephus and Syncellus. Annius of Viterbo, to supply the loss, forged a complete Berosns !

BABYLONII NUMERI, Babylonican num- bers, or the computation of astrologers.

BABYROUSSA, in zoology, a synonyme of a species of sus. It is the horned

hog of Grew; porcus indicus babyroussa dictus of Ray; and baby-roussa of Buft'on. In the arrangement of the French naturalists, it belongs to the genus cochons and order pachydermes. See Sus.

BAG, or BACK, in brewing or distilling, a large flat tub, or vessel, wherein the wort is put to stand and cool. There is a branch of trade called back-making, for furnishing these vessels.

BAC, in navigation, is used for a praam, or ferry-boat. See BACK.

BACA, an ancient vallev in Palestine. Some

commentators suppose it to be the same with the valley of Rephaim, where the Jews, in journey- ing to their solemn festivals, stopped for refresh-ment, as it abounded with springs, and was well shaded with mulberry trees, which the name Baca signifies. See Psalm Ixxxiv. 6,

BACA, or BAZA, a town of Spain, in Granada, situated in a valley called Hoya de Baza. It is encompassed with old walls, has a ruined castle, and a church, dedicated to the Virgin Mary. The land about it is well cultivated, and is fer- tile in wheat, wine, honey, hernp, and flax, being watered by the Guadalentin. it is thirty-five miles north-west of Almeira.

BACACUM, a town of the Nervii in Gallia Belgica ; now Bavay, in Hainault.

BACAIM, or BAZAIM, a sea-port town of the Deccan of Hindostan, on the Malabar coast.

BACALAL, a lake of Mexico, in the pro- vince of Yucatan, forty miles long, and sixteen broad. It is thirty-six miles south-west of Val- ladolid.

BACANO, a lake of Italy, in the pope's terri- tories, from which issues the river Varca.

BACANORA, a town of North America, in New Mexico, seated on the Hiagra.

BACANT1BI, in ecclesiastical history, wan- dering clerks, who strolled from church to church. The word seems formed by corruption from va-cantivi.

BACASERAY, a considerable town in the peninsula of Crim Tartary. It was taken from the Turks by the Russians, in 1736. It is seventy miles south of Precop.

BACBAKIRI, in ornithology, the name by which le Merle a plastron noir de Ceylan of Buffbn, is known at the Cape of Good Hope, because its note very clearly expresses the syl- lables bac-ba-ki-ri. It is the green-pye from Ceylon of Edwards ; Ceylon thrush of Latham ; and turdus Zeylon us of Linnaeus.

BACCA, BERRY, in botany, is used to signify such fruits as consist of pericarpium full of juice and seeds, without any valves.

BACCˆE BERMUDIENSES, in the materia me- dica, the berries of the sapindus, or soap-berry tree.

BACCALARIA, in middle age writers, a kind of country farms, consisting of several manses. /

BACCALARIA DOMINICARIA, BACCALARIA IN- DOMINICATA, were more particularly used for a farm belonging to the lord, and kept in his own hands.

BACCALAUREATE, BACCALAUREATUS, a bachelor's degree ; tlie first degree in arts and sciences in an university. See next article.

BACCALAUREUS; Latin, from bacca law-

rea, a bay berry ; a bachelor in an university, so called because anciently their heads, at gradua- tion, were adorned with a garland of bay berries.

BACCARACH, a town of Germany, in the lower Palatinate ; formerly imperial and free, but now subject to Prussia. It is famous for excel- lent wine ; and is situated on the east shore of the Rhine, thirty-eight miles south of Coblentz, and forty-eight north of Deux Ponts. This place is mentioned by historians in the twelfth cen- tury, and the customs formerly collected on the Rhine here were so productive, that it received the name of the golden toll. A spring, of an oily consistence, rising in the middle of the river near it, affects both the smell and color of the water to a considerable distance. The island of Heil- esen, just below it, contains a monument, to be seen at low water, adorned with sculptures and inscriptions. It appears to have been an ancient altar of Bacchus ; is still termed Bacchi ara, and is said to give the town its name. There are large slate quarries in the neighbourhood, and the town contains manufactures of powder and starch.

Population about 1200. The town suf- fered much in the thirty years war. The count palatine formerly resided in the castle of Sta- lecke, near this town.

BACCARUM, in entomology, a species of acarus, found on gooseberries, currants, and other fruit-trees. Also a species of cimex, of a fulvous color. Inhabits Europe.

BACCASKRY. See BACASERAY.

BA'CCATKD, adj. l.at. baccatus, beset with pearls; having many berries.

Johnson from Diet.

BACCATUS, in botany, berried, or soft, like a berry ; ►►n epithet for a capsule, a drupe, a si- lique, and an aril, as Baccata capsula, a capsule with a fleshy coat. Baccata drupa, a drupe with a succulent coat, ivc.

BACC1I.1',, in antiquity, 1. the priestesses of Bacchus, who celebrated the mysteries of that [rod; 2. the ivy crowns or garlands worn by the priests of Bacchus, in offering sacrifices to him.

BAC'C 1 1 AN AL, n. s.) From Lat. bac-

BAC'CHANALIAN. ad. & n. s. } chunulia. The "easts and revels of Bacchus, the god of wine ; a worshipper of Bacchus, or, in modern usage, a drunkard or riotous person.

Ha, my hrave emperor! shall we dance now the Egyptian bacchanals, and celehrate our drink ?

Shakspeare. i the heathen bac- x quailed?

Decay of Piety.

Both extremes were hanish'd f om their walls ; Carthusian fasts, and fulsome IIM hanalf. Pope.

And now Cliilde Harold.- was ore sick at heart, And from his fellow bnerhnn/ils w uld flee. Byron.

BACCHANALIA, BACCHANALS, religious

feasts in honor of Bacchus, were celebrated with much solemnity ainouu the ancients, particu- larly the Athenians, \lio even computed their \ears by them, till the commencement of the Olympiads. They are sometimes also called "ruin, from the Greek ooy/y, fury; on account of the madness and

enthusiasm wherewith the people appeared to be possessed at the time of their celebration. They \ere held in autumn, snd took their rise from Ku'vpt ; whence, accord-

*ing to Diodorus, they were brought into Greece by Melampus. The form of the solemnity de- pended at Athens, on the archon, and was, at first, exceedingly simple ; but, by degrees, it became encumbered with a number of ridiculous ceremonies, and attended with much dissolute- ness and debauchery ; insomuch, that the Romans grew ashamed of them, and suppressed them by a decree of the senate throughout all Italy The women had a great share in these solemnities, which were said to have been instituted on their account ; for a great number of them, according to the tradition, attended Bacchus to the con- quest of the Indies, carrying in their hands the thyrsus (i. e. a little lance, covered with ivy and vine leaves), and singing his victories and tri- umphs. The ceremony was kept up after Bac- chus's deification, under the title of Bacchanalia, and the women were installed priestesses thereof, under that of Bacchae, or Bacchantes. These priestesses, at the time of the feast, ran through the streets, and over the mountains, covered with tiger's skins, their hair dishevelled, their thyrsus in one hand, and torches in the other, howling and shrieking, Evot Ba*x*** ***' Of the men, some repre- sented Pan, others Silenus, others satyrs. Men and women met promiscuously at the feast, quite naked, except only that the vine leaves, and clus- ters of grapes, bound their heads and loins ; here they danced and jumped tumultuously, and, with strange gesticulations, sung hymns to Bacchus, till, being weary and giddy, they fell. Livy has left us a particular account (xxxix. 8, &c.) of the enormities practised at these festivals, and which led to their suppression. There were two principal Bacchanalia held annually, viz.*

BACCHANALIA DIONYSIA, or MAJORA, the greater Bacchanalia, so called from one of Bac- chus's names (see BACCHUS), celebrated in the city about spring time ; and

BACCHANALIA LENˆEA, or MINORA, the lesser festival, celebrated in the open fields about autumn.

BACCHANALIA signify also pictures, or basso relievos, whereon the feast is represented, con- sisting chiefly of dancing, nudities, and the like. There are antique Bacchanals, still seen on seve- ral ancient friezes. Those painted by Poussin are excellent.

BACCHANTES, priestesses to Baccnus.

BACCHARACH WINE, an excellent kind of wine, by many mistaken for Rhenish ; but from which Portzius observes it differs in color, taste, flavor

and strength. See BACCARACH.

*BACCHARIS, in botany, Ploughman's Spike- nard: a genus of *he polygamia superflua order, and syngenesia class of plants; ranking in the natural method under the forty-ninth order, com- positaa discoides. The characters are : a naked receptacle, and hairy pappus ; with a cylindrical imbricated calyx, and feminine florets mixed with the hermaphrodites. There are seven species, all natives of warm climates; of which the two following chiefly merit notice. 1. B. Halimifolia, or Virginia groundsel tree, a native of Virginia and other parts of North America. It grows about seven or eight feet high, with a crooked shrubbery stem ; and flowers in October 2. B-*

Ivsefolia, or African tree groundsel, a native of the Cape of Good Hope, as well as of Peru and other warm parts of America.

BACCHARIS, in pharmacy, a sweet ointment used among the ancients, so called perhaps from the above plant being a principal ingredient in it.

BACCHI, in fabulous history, a kind of ma- chines in the form of goats, said to have been used by Jupiter, in his wars against the giants. Rudbeck describes two kinds of Bacchi, one made like the battering ram, wherewith Jupiter demolished the enemy's fortifications ; the other contrived to cast fire, from whence the Greeks are conjectured to have framed their idea of the chimera.

BACCHIC, something relating to the ceremo- nies of Bacchus. The celebrated intaglio, called Michael Angelo's ring, is a representation of a Bacchic feast.

BACCHIC SONG is sometimes used for a chanson a boire, or composition to inspire jollity. But in a more proper sense, it is restrained to a dithy- rambic ode or hymn.

BACCHICA, in botany, Hedera, or ivy.

BACCHINI (Benedict), a learned monk of the seventeenth century, was a native of Parma, and entered at the age of sixteen into the Bene- dictine monastery of Mount Cassino. He after- wards travelled as secretary to the abbot of Fer- rara. At length he settled at Parma, and esta- blished a periodical journal, which he conducted for some years with learning and success : but his criticisms created enemies, who procured his banishment.

He retreated to Modena, and re- sumed his journal under the patronage of the duke of Modena. He was also historiographer and librarian to the duke. He subsequently be- came abbot of a Benedictine monastery, and was also chosen professor of ecclesiastical history at Bolognc, where he died in 1721, aged seventy. Bacchini was one of the most learned men of his time. 7iis literary journal extends to nine vols. 4to. ; besides which, he published De Sistrorum Figuris ac Differentia, Bononiae, 1691, 4to. ; De Ecclesiastics Hierarchic Originibus, Mo- denae, 1703, &c. &c.

BACCHIS, or BALUS, king of Corinth, suc- ceeded his father Pruinnides, and reigned with such moderation and equity, that to commemo- rate him his successors were called Bacchidae. The Bacchidos afterwards becoming numerous, they chose one as president, with regal authority. This institution was, however, overturned by Cypselus making himself absolute.

BACCHIUS, a follower of Aristoxenus, sup- posed by Fabricius to have been tutor to the emperor Marcus Antoninus, and consequently to have lived about A. D. 140. He wrote in Greek a short introduction to music in dialogue, which Meibomiushas published with a Latin translation.

BACCHIUS, in ancient poetry, a foot composed of a short syllable and two long ones ; as egestas. It takes its name from the god Bacchus, because it frequently entered into the hymns composed in his honor. The Romans called it likewise aeno- trius, tripodius, and saltans ; and the Greeks Ilopia/ i/Bof.

BACCHIUS and BITHUS, two renowned gladia- fors of equal age and strength ; whence the pro-

verb, expressive of equality, Bithus contra Bac- chium.

BACCHUS, in heathen mythology, the god of wine. He is seldom named in modern times, but as a sensual encourager of feast and jollity : he was regarded in a more respectable light by the ancients, who worshipped him in different countries under the appellations, in Egypt, of Osiris; in Mysia, Fanaces; in India, Dionysius; Liber, throughout the Roman dominions ; Ado- neus, in Arabia; and Pentheus, in Lucania. Mythologists furnish reasons for all these diffe- rent names. The Greeks and the Romans ascribed to the Bacchus whom they worshipped, the several actions and attributes of the many divi- nities known by that name, and by other equiva- lent denominations in different countries. How- ever, antiquity chiefly distinguished two gods under the title of Bacchus ; the one of Egypt, the other of Thebes in Bceotia.

The BACCHUS of Egypt was the son of Ammon, and considered as the

same with Osiris. He was brought up at Nysa, a city of Arabia Felix, whence he acquired the name of Dionysius, or the god of Nysa ; and was the conqueror of India. This Bacchus was one of the elder gods of Egypt, although, according to Sir Isaac Newton, he flourished but one generation before the Argo- nautic expedition. Bacchus, says Hennippus, was potent at sea, conquered eastward as far as India, returned in triumph, brought his army over the Hellespont, conquered Thrace, and left music, poetry, and dancing there.

BACCHUS of Thebes was the son of Jupiter by Semele, the daughter of Cadmus, and ranked as the youngest of the Grecian deities. Diodorus Siculus tells us, that Oruheus first deified the son of Semele by the name of Bacchus, and ap- pointed his ceremonies in Greece, to render the family of Cadmus, the grandfather of the Grecian Bacchus, illustrious. According to this author, it was the son of Semele who invented farces and theatres, and who first established a musical school, excepting from all military functions such musicians as discovered great abilities in their art : on which account, says the same author, musicians formed into companies have since fre- quently enjoyed great privileges. Pausanias, in his Attics, speaks of a place at Athens conse- crated to Bacchus the singer : whence it should seem that Bacchus was regarded by the Athenians not only as the god of wine, but of song ; and it must be owned, that his followers, in their cups, have not been uninclined to pay him service iu this way. Indeed it is clear, that in none of the origies, processions, and festivals, instituted by the ancients to the honor of this prince of bons- vivans, music was forgotten. We find not only that musicians, male and female, regaled him with the lyre, the flute and the song ; but that he was accompanied by fawns and satyrs, play- ing upon timbrels,cymbals, bag-pipes, and horns; these Suidas calls his minstrels, and Strabo gives them the appellation of Bacchi, Sileni, Satyri, Bacchae, Lense, Thyae, &c. These representa- tions have furnished subjects for the finest remains of ancient sculpture ; and the most voluptuous passages of ancient poetry are de- scriptions of the orgies and festivals of Bacchuv

Bacchus, is represented on medals in the form where he stands under the shadow of a vine- of a bo-r or youth, an old man, or a female, as in branch, near an altar, at which the emperor tigs. 1, 2, 3 ; he is mostly naked, as in fig. 4, Commodus is offering him divine honors.

Fig. 1.

Fig. 2.

Fig. 3.

BACCHUS, m entomology, a large species of scarahitus, that inhabits the Cape of Good Hope. 2. A species of curculio. 3. A species of monoculus.

BACCHUS, in ichthyology, a name given by some to the myxon, a fish of the mullet kind, remarkable for the red color of its lips, and the extremity of the covering of the gills. See

MUGIL.

BAC'CHUS-BOLE. See BOTANY.

BACCHYLIDES, a famous Greek poet, the nephew of Simonides, and the contemporary and rival of Pindar. Both sung the victories of Iliero at the public games. Besides Odes to athletic victors, he was the author of love verses, prosodies, dithyrambics, hymns, paeans, par- thenia, or sonu's to bo sung by a chorus of virgins at festivals, &c. The chronology of Kusehius places the birth of Bacchylides in the eighty-second Olympiad, about A. A. C. 450.

MACClTKROrS. See BOTANY.

i>A(CIXA, or BACCINVM, a basin to hold water to wash the hands, The holding the basin, or waiting at the basin, on the day of the king's coronation, was an ancient tenure in ser- jeantry.

BAC'('K) I'raucisco Bartolomeo, or Barte- ieini di S. Marc. i , a celebrated history and por- trait painter, was born at Saviunano near Florence, in 1- Ki ►►►>, and was a disciple of Koselli ; but his principal knowledge in the art was derived from !)a '. inci. lie understood the. true principles of di ►►►>[image] i ': . M;T than most masters of his time, and 1 > a eonsid1 rahle painter of perspective. I'ap'i .(1, alter lie had quitted the school of Pe n^iiio, studieil tlu; art of unitinu' colors under

:.'. as \cll as the rules of perspective. Some years after the departure of Raphael, Baccio viMted Koine ; and by the observations he made ►►i I he antifjuitie> and the works of Raphael, >y tiiat time, weic universally admired, ►►► ie improved much, and manifested his abilities by a picture of St. Sebastian, which he finished at his return to I lorenee. This was so well de- signed, >o naturally colored, and had so strong in expression of a'jony, that it was removed from the convent where it was

exhibited, as it had made ton >tron.: an impression on the imagina- tions ot many women. lie is accounted the first inventor oi the machine called a layman by the artist-., and which is still in general use. I pon that he placed his draper Cs, to observe, with uri a: exactness their natural and their most eleuant folds A capital picture of the ascen- sion by ilaeeio, is in the Florentine collection. He died in 1.M7.

BACCIO, or BACCIUS (Andrew), a celebrated physician of the sixteenth century, born at St. Elpideo. He practised physic at Rome with great reputation, and was first physician to pope Sixtus V. The most scarce and most valuable of his works are, 1. De Thermis. 2. De Natu- rali Vinorum Historia. 3. De Venenis et An- tidotis. 4. De Gemmis ac Lapidibus pretiosis.

BACCI'VOROUS, adj. From bacca, a berry, and voro, to devour, Lat. Devouring berries.

BACCOFOB, in botany, a fruit like the banana, very common in Guinea, but whiter, thicker and shorter. The taste and smell are agreeable ; and some pretend that on cutting it through transversely, there is the figure of a cru- cifix on each side of it. Phil. Trans. No. 108.

BACCULI. See BACILLI:

BACH, a town of Lower Hungary, in the county of Tolu, seated on the Danube.

BACH (John Sebastian), a celebrated musician, born at Eisnach in Germany in 1685. He was patronised by the duke of Saxe Weimer, who appointed him his musician in 1708; and at Dresden he gained a victory over a famous French organist, whose vanity led him to chal- lenge all the German musicians. As an organist, he was thought equal to Handel, and the excel- lence of his compositions testify him to have been among the foremost in the science. He died in

1754.

BACH (Charles and John), sons of the above, were both very eminent as performers and composers of music. Charles lived at Ham- burgh in 1773, and John was in England in 1763.

BACHA, a river of Asiatic Russia, which joins the Jenesei on the right.

BACHA, in ornithology, a species of falco, figured in the fifteenth plate of Le Vaillant's work on the birds of Africa. It is about the size of the common buzzard, and naturally belongs to that tribe of rapacious birds.

BACIIAUMONT (Francois le Coigneux de), a French poet. He was counsellor to the par- liament, but his love of ease and pleasure made him give up his post and renounce his profes- sion. Contracting an intimacy with Chapelle, he was joined with him in writing A Journey to Montpelier, in which there is much vivacity dis- played ; besides which he -wrote several other works, in a humorous style. lie died at Paris in 1702, aged seventy-eight.

BACHAUMONT (Louis-Petit), a French writer, born at Paris, was author of Secret Memoirs towards a History of the Republic of Letters in France, thirty-six volumes, 12mo. and otber works. He died in 1771.

BACHELORS.

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P.ACHELIER (Nicholas), an eminent French svdptor and architect. He was a pupil of Mi- c'iael Angelo, and ornamented the churches of Toulouse, his native city. He died about 1554.

BACH'ELOR, n. s.) This is a word of

BACH'ELOKSHIP, n. s. \ very uncertain etymo- logy ; it not being well known what was its ori- ginal sense. Junius derives it from /3aK?j\oc, a man of full stature but of effeminate and imma- ture mind ; Menage, from bas chevalier, a knight of the lowest rank ; Spelman, from baculm, a staff; Cajas, from buccella, an allowance of pro- vision. The most probable derivation seems to be, from bucca laurus, the berry of a laurel or bay ; bachelors, being young, are of good hopes, like laurels in the berry. Dr. Lawrence ob- serves, that Menage's etymology is much con- firmed by the practice in our universities of call- ing a bachelor, Sir. In Latin, bcuralaureus. The former of these words describes the person ; the latter his condition. The more common ac- ceptation is a man unmarried. Its secondary meaning is one who takes his first degree at the university in any profession ; and its last and now obsolete sense, is a knight of the lowest order.

Shall I never see a bachelor of threescore again?

Shakspeare.

When I said I would die a bachelor, I did not think I should live till I were married. Id.

Her mother, living yet, can testify, She was the first fruit of my bachelorship. Id.

But he told the latter, that is to say, Mr. Spectator, he told the bachelors that their lives and actions had been so peculiar that he knew not by what name to call them. Spectator.

Being a boy, new bachelor of arts, I chanced to speak against the pope. Ascham.

I appear before your honour, in behalf of Martinus Scriblerus, bachelor of physic. Mart. Scriblerus.

BACHELOR, in ancient times, was a denomina- tion given to those who had attained to knight- hood, but had not a number of vassals sufficient to have their banner carried before them in the field of battle ; or if they were of the order of bannerets were not of age to display their own banner, but obliged to march to battle under another's banner. It was also a title given to young cavaliers who, having made their first campaign, received the military girdle accord- ingly. And it served to denominate him that had overcome another in a tournament the first time he ever engaged.

BACHELOR, in the six companies of merchants at Paris, was a name given before the Revolu- tion to the elders, and such as, having served the offices, had a right to be called by the mas- ters and wardens to be present with them, and assist them in their functions.

BACHELORS, in the livery companies of Lon- don, are those who are not yet admitted to the livery. These companies generally consist of a master, two wardens, the livery, and the bache- lors, who are yet but in expectation of dignity in the company, and have their functions only in attendance on the master and wardens. They are also called yeomen.

BACHELORS, in the university sense, are per- sons who have attained to the baccalaureats, or

first Degree in arts, divinity, law, or physic. This degree in some universities has no exist- ence. It was first introduced in the thirteenth century by pope Gregory IX. The foKowing regulations are observed respecting it in Oxford and Cambridge : In the university of Cam- bridge, a bachelor of arts must reside the greater part of twelve several terms, the first and last excepted. The statutable exercises before ad- mission, ad respondendum qurestioni (a form in which the father of the college asks each student a question before his graduation), are two acts and two opponencies. A bachelor of divinity must be a master of arts of seven years standing : his exercises are, one act, after the fourth year, two opponencies, a concio ad clerum, and an Eng- lish sermon. The ten-year men, who are candi- dates for this degree, are tolerated by a statute 12 Eliz. They are persons who, being twenty- four

years of age and upwards, are admitted at any college to take the degree of bachelor of di- vinity after ten years. During the last two years they must reside the greater part of three several terms. Their exercises are the same as in the regular course. A bachelor of laws must be of six years standing complete, and must keep the greater part of nine several terms. The exercise is one act. A bachelor of physic must keep the greater part of nine several terms, and may be admitted any time in his sixth year : the exercise is one act and one opponency. A bachelor of music must enter his name at some college, and perform a solemn piece of music as an exercise prior to his degree.

In the university of Oxford, a bachelor of arts must keep sixteen terms, and appear once as a respondent in the schools A bachelor of divi- nity must be master of arts of seven years stand- ing : his exercises are one act, two opponenoies, and a concio ad clerum after the fifth year. A bachelor of laws must be a master of arts of three years standing : his exercises are one act and two opponencies. A bachelor of medicine must be a master of arts of one year standing his exercises are one act and one opponency. A bachelor of music must produce a competent testimonial $hat he has applied himself to that science during seven years, and must perform a piece of music of five parts publicly in the music school.

BACHELORS, KNIGHTS, the most ancient, but the lowest order of knights in England; known by the name of knights only. They are styled knights bachelors, either (according to some) as denoting their degree, quasi bas chevaliers ; or, according to others, because this title, like the fortune of an unmarried man, does not descend to their posterity. The custom of the ancient Germans was to give their young men a shield and a lance in the great council ; this was equi- valent to the toga virilis of the Romans. Before this they were not permitted to bear arms, but were accounted as part of the father's household , after it, as part, of the public. Hence some de- rive the usage of knighting, which has prevailed all over the western world since its reduction oy colonies, from those northern heroes. Knights are called in the Latin equites aurati; aurati, from the gilt spurs they wore, and equites, be-

*muse thev always served cm horseback ; for it is '*********'bservable that almost all nations call their knights by some appellation clerked from a horse. They are also called in our law milites, because they formed a part,*

or indeed the whole of the royal army, in virtue of their feudal tenures : one condition of which was, that every one who held a knight's fee (which in Henry II.'s time amounted to twenty pounds per annum) was obliged to be knighted, and attend the king in his wars, or pay a fine for his non-compliance. The exertion of this prerogative, as an expedient to raise money in the reign of Charles I. gave great offence, though warranted by law and the ecent example of queen Elizabeth. At the res toration it was, together with all other military branches of the feudal law, abolished, and it now only exists in an honorary title, conferred by the king's lightly touching the person, who is then kneeling, on the right shoulder with a drawn sword, and saying, ' rise, sir.' See KNIGHT and NOBILITY.

On bachelors, or unmarried men, the Roman censors frequently imposed fines. Dion Hali- carnasseus mentions an old law by which all persons of full age were obliged to marry. But the most celebrated law of the kind was that made under Augustus, called the lex Julia de maritandis ordinibus ; by which bachelors were made incapable of legacies or inheritances by will, unless from their near relations. This brought many to marry, according to Plutarch's observation, not so much for the sake of raising heirs to their own estates, as to make themselves capable of inheriting those of others. The rab- bins maintain, that, by the laws of Moses, every body, except a few particular persons, is obliged in conscience to marry at twenty years of age ; and that this makes one of their 613 precepts. Hence those maxims, so frequent among their casuists, that he who does not take the necessary mea- sures to eave heirs behind him, is not a man, but ouu'ht lu be reputed a homicide. I.ycurgus was nut more favorable to this state of life. By his laws, bachelors are branded with infamy, ex- cluded tVniii all offices civil and military, and even from the shows and public sports. At certain fr.ists they were, (breed to appear, to be exposed ro the public derision, and led round the market-place. On one occasion, the women I'.'ii them in tins condition to the altars, where they were obliged to m, ike amende honorable to nature, accompanied with a number of blows and lashes with a md. To complete the affront, they forced them to sing certain songs com- posed in their own derision. The Chris- tian religion has been supposed to be more indulgent to the bachelor state; because the apos'le Paul has recommended it as prefer- :S it cert unly was) during the early ages ut (hristianity, \hen a man was in danger ofsuf- terinu, not only in his own person or property, but in those of his nearest and dearest con- nexions, tor the sake of religion ; which rendered Mich persecutions more dreadful and severe upon the married than the unmarried. The ancient church, overlooking this principle, upon which the ,i: ostlo's advice is evidently founded, recom- 'nc-ndud the bachelor state, as well as that of

perpetual virginity in the other sex, as not only more perfect than the married state, but even as highly meritorious : and thus gave birth to the

absurd system of monasteries, nunneries, and the celibacy of the clergy ; which for so many ages has burdened Europe, with thousands of idle drones of both sexes. In the canon law, we find in- junctions on bachelors, when arrived at puberty, either to marry or to turn monks and profess chastity in earnest. In England there was a tax on bachelors, after twenty-five years of age, ––12. 10s. for a duke; and a common person Is. by 7 Wil. III. 1695. They were also taxed by Mr. Pitt in an extra-duty on their servants.

BACHELORS OF THE CHURCH, baccalarii eccle- siae, an inferior class of ecclesiastics, mentioned in some old records, which speak of the bishop with his canons and baccalarii.

BACHELOR'S PEAR, in botany, a name some- times given to the solanum mammosum.

BACKER, a lofty ridge of mountains – in Styria, circle of Cilly, near the Drave, about sixty-five miles in circuit.

BACHIAN, or BATCHIAN, one of the Mo- lucca islands in the eastern ocean, separated by a narrow channel only, from the island of Gilolo. It is about fifty miles long, and twenty in average breadth, but much narrower in the middle than towards each end. The native prince of this island early formed an alliance with the Spaniards and Portuguese, who were expelled by the Dutch in 1610. It is fertile in sago, and other fruits of the climate ; and was formerly considered as producing better cloves than any other island of these seas. On this island the Dutch fixed their principal settlement, before Amboyna attained its present pre-eminence. Bachian, covered with forests, contains a burning mountain ; beds of coral adorn its shores, and gold has been classed among its products. It is under the government of a sultan, the sovereign of Oby, Ceram, Goram, and another contiguous islet. The inhabitants are Malay Mahommedans, who are considered as the most eastern disciples of the Arabian pro- phet. The chief town is Sabongo. Latitude about 0–– 48′ S.; and long. 128–– 0′ E.

BACHILERIA, in old law Latin, the com- monality, as distinguished from the nobility.

BACHILLI. See BACILLI.

BACHMUTH, or BAKHMOUD, the chief town of a circle in the government of Ekaterinoslav, in European Russia, situated on a river of that name, which falls into the Donetz. It is well fortified, and has a citadel for the protection of its salt-works. It has belonged successively to the governments of Voronetz and New Russia, and was erected into its present

government in 1775. The circle of Bachmuth borders on the govern- ment of Voronetz, and the country of the Don Cossacs, and is one of the most fertile parts of Little Russia. When a scarcity of water prevails in the summer, the supplies are brought from the Donetz. 104 miles N. N. W. of Azoph, and 112 east of Ekaterinoslav.

BACHNEU, or BONGHU, a market town of Transylvania, in the county of Kokelburg, on the river Little Kokel.

BACHU. See BAKU.

BACILLARIA, in entomology, a genus of

BACK.

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the class vermes, and order infusiora : its body consisting of cylindrical, straw-like filaments. The only species is the B. paradoxa, seu vibrio paxilifer.

BACILLI, or BACULI, in medicine (from baculus, Lat. a staff,) such compositions as are made up in a cylindrical figure, like a stick.

BACILLUM, in medicine, dim. of baculum, a troche in the form of a stick.

BACILLUM, in chemistry, iron instruments in the shape of a baculum, or staff.

BACK, n. s. v. a. & adv. ►► Sax. bac, baec;

BACKED, adj. J Germ. back. The

noun signifies the hinder part of the body ; the outer part of the hand opposed to the palm ; the thick part of any tool opposed to the edge. The adverb denotes the situation of being, and he tJirection of going. The adjective points out the back as the adjunct of being; the simple cir- cumstance of having a back ; and the verb is used in various senses, intimately connected and easily traced to one common source, the original etymon, namely, to mount on the back of a horse ; to break a horse ; to place upon the back ; to maintain, to strengthen, to support, to defend, to justify, and to second.

His back, or rather burthen, show'd As if it stooped with its own load. Hudibras.

Did they not swear, in express words, To prop and back the house of lords

? And after turn'd out the whole houseful. Id. Part following enter ; part remain without, And mount on others backs, in hopes to share.

Dryden.

The epistles being written from ladies forsaken by their lovers, many thoughts came back upon us in divers letters. Id.

Factious, and fav'ring this or t'other side, Their wagers back their wishes. Id.

Methought love pitying me, when he saw this, Gave me your hands, the backs and palms to kiss.

Donne.

Those who, by their ancestors, have been set free from a constant drudgery to their backs and their bellies, should bestow some time on their heads.

Locke.

He might conclude, that Walter would be upon the king's back, as his majesty was upon his.

Clarendon.

As the voice goeth round, as well towards the bach as towards the front of him that speaketh, so does the echo : for you have many back echoes to the place where you stand. Bacon.

And all within it full of wyndingsis And hiddea ways that scarce an hound by smell Can follow out those false footsteps of his Ne none can backe returne that once are gone amis. Spenser. Faerie Queene.

At the hour of death, all friendships of the world bid him adieu, and the whole creation turns its back upon him. South.

A great malice, backed with a great interest, can have no advantage with a man, but from his expec- tations of something without himself. Id.

Back you shall not to the house, unless You undertake that with me. Shakspeare.

That roan shall be my throne, Well, I will back him strait. O Esperancc ! Bid Butler lead him forth into the park. Id. VOL. JII.

He hath a garden circummur'd with brick, Whose western side is with a

vineyard backed. Id.

As I slept, methought Great Jupiter, upon his eagle back'd, Appear' d to me. Id.

Belike he means

Back'd by the pow'r of Warwick, that false peer,

T' aspire unto the crown. Id.

You are strait enough in the shoulders, you carp

not who sees your back ; call you that backing of your

friends ? a plague upon such baching ! give ine them

that will face me. Id.

He sent many to seek the ship Argo, threatening

that if they brought not back Medea, they should

suffer in her stead. Raleigh' t History of the Worlil

Where they are, and wny they came not bach, Is now the labour of my thoughts. Milton

Back to thy native island might'st thou sail And leave half-heard the melancholy tale. Pope

So rag'd Tydides boundless in his ire, Drove armies bach and made all Troy retire. lit'

This Caesar found, and that ungrateful age, With losing him went back to blood and rage.

Waller

I've been surpris'd in an unguarded hour, But must not now go back ; the love, that lay Half smother'd in my breast, has broke through all Its weak restraints. Addison

How shall we treat this bold aspiring man? Success still follows him, and backs his crimes.

u

To thee, Almighty God to thee, Our childhood we resign ; Twill please us to look bach and see, That all our lives were thine. Watti.

First Fear his hand its skill to try, Amid the chords bewildered laid, And back recoil'd he knew not why, E'en at the sounds himself had made .

Direct us how to back the winged horse ; Favour his flight and moderate his course.

Roscommon.

These were seconded by certain demilaunces, and both backed with men at arms. Sir J. Hayward.

The patrons of the ternary number of principles, and those that would have five elements, endeavour to hack their experiments with a specious reason.

Boyle.

We have I know not how many adages to back the reason of this moral. L' Estrange,

BACK, in the menage, and among farriers A horse's back should be straight, not hollow, which is called saddle-backed : horses of this kind are generally light, and carry their heads high, but want in strength and service. A horse with a weak back is apt to stumble. In the French riding-schools, to mount a horse a dos, is to mount him bare-backed, without a saddle.

To BACK an anchor, in maritime affairs, empen- neller une ancre, Fr. to carry out a small anchor, as the stream or kedge, ahead of the large one, by which the ship usually rides, in order to sup- port it, and prevent it from loosening, or coming home in bad ground. In this situation the lattei is confined by the former, in the same manner that the ship is restrained by the latter.

To BACK astern in rowing, scier ti culer, Fr. is to manage the oars in a direction contrary to the usual method, so as that the boat or vessel impressed by their force, shall retreat or move with her stern foremost.

BACK the starboard oars ! scie. tribord ! avec les avirons, Fr. the command to confine the above management to the oars on the right hand side of the boat only, in order to turn her round more speedily to that direction.

To BACK and fill, coifferetfaire servir les voiles, Fr. is an operation generally performed in nar- row rivers, when a ship has the tide in her favor, and the wind is against her. ××× Exam. ‘ We were obliged to back and fill occasionally to get up the Thames.’

To BACK the sails, mettre & scier, Fr. is to ar- range them in a situation that will occasion the ship to retreat or move astern, in consequence of the tide or current in her favor, and the wind contrary, but light. This operation is particu- larly necessary in narrow channels, when a ship is carried along sideways by the strength of that tide or current, and it becomes requisite to avoid any object that may intercept her course, as shoals, or vessels under sail, or at anchor : it is also necessary, in a naval engagement, to bring a ship back, so as to lie oppposite to her adversary, when she is too far advanced in the line; and also in fleets under convoy, where ships are too much crowded, by the above operation they may be preserved from falling aboard each other. See the article ABACK.

BACK the main-topsail! brasse le grand hunier fia- le mat .’ Fr. the command to brace that sail in such a manner that the wind may exert its force against the fore-part of the sail, and ‘by thus laying it aback materially retard the ship’s course.

BACK, or Dutchman’s Cap, an islet of the Hebrides. Long. 6×× 27′ W., lat. 56×× 29′ N.

BACKAIl, or BEIIKUR, a district and town of Hindostun. in the province of Moultan. The town is situated cm an island formed by the In- dus, near its junction with the Dommoody ; for- merly it \as called Munsoorah, and had a strong fort. Long. 70×× ××× > ’ K., lat. 28×× 31′ N.

BACK BAR, the bar in a chimney, for sus- pending vessels over the fire.

BACIv-BlvA.il, B \< K-I'.I IUND, BACKBEROND, in old law, a criminal caught carrying off some- thin? on his back. See BACKCARRY.

BA(K'BITK, r. ˆ From back and bite.

BACK'I-.I n n, n. s. >A familiar term for the

BACK'IUTIXGLV, arfy. 3 calumny and calum- niators which shun the presence of their victims. To censure the absent ; the coward who defames in the dark.

I so bis men well Davy, for they arc arrant knaves and will backbite. Sluilispeare.

Nobody is bound to look upon bis backbiter, or his undenniner, bis betrayer, or bis oppressor, as his friend. South.

BACK-BOARD, in maritime affairs, is of a semi-circular figure, placed transversely in the after-part of a boat, like the back of a chair, to recline against while sitting in the stern sheets.

BACK- BON I), in Scots law, a bond granted by him who receives a deed to declare the pur- pose of it, and to bind the granter to perform accordingly.

"BACK/BONE, n. s. from back and bone. The bone of the back.

The backbone should be divided into many vertebre for commodious bending, and not to be one entire rigid bone. Roy.

BACK/CARRY. Having on the back.

Manhood in his forest laws, noteth it for one of the four circumstances or cases, wherein a forester may arrest an offender against vert or venison in the forest, viz. stable-stand, dog-draw, backcarry, and bloody hand. C- ncell.

BACK'DOOR, n. s. From back and door. The door behind the house ; privy passage.

The procession durst not return by the way it came ; but, after the devotion of the monks, passed out at a backdoor of the convent. Addiion.

Popery, which is so far shut out as not to re-enter openly, is stealing in by the backdoor of atheism.

After bury.

BACKER, or BARKER (Jacob), a painter of portraits and history, was born

at Harlingen in 1609, but spent the greatest part of his life at Amsterdam. He was remarkable for an uncom- mon readiness of hand and freedom of pencil. His incredible expedition appeared in a portrait of a lady fromHaerlem, whom he painted at half length, and began and finished in one day ; though he adorned the figure with rich drapery and several ornamental jewels. He also painted historical subjects with success ; and has left a fine picture of Cimon and Iphigenia. In de- signing academy figures, his expression was so just, and his outline so correct, that he obtained the prize from all his competitors ; and his works are bought up at very high prices in the Low Countries. The Carmelites church at Antwerp has a capital picture of his of the Last Judgment. He died in 1651.

BACKER, or BARKER (Jacques, or James), also a painter of history, was born at Antwerp in 1 530, and learned the principles of painting from his father, who was very knowing in his profes- sion, though his works were in no great estima- tion. After his death he lived with one Palermo, a dealer in pictures, who avariciously took care to keep him incessantly employed, and sent his paintings to Paris to be disposed of, where they were exceedingly admired. The judicious were eager to purchase them ; and though the trans- actor sold them at a great price, yet the artist was not proportionably rewarded, but continued still in the same depressed condition. His merit, indeed was universally allowed, but his name, and the narrowness of his circumstances, were as universally unknown. He had a clean light manner of penciling, and a tint of color that was extremely agreeable. He died in 1560.

BACKEREEL, or BACQUERELLI (William), a painter of history, born at Antwerp, and a dis- ciple of Rubens, at the same time with Vandyck. When each of them quitted that master, and commenced painters, Backereel was little infe- rior to Vandyck, which may be seen in the works of the former, in the church of the Augustin monks at Antwerp. He had likewise a taste for poetry ; but exercising that talent too freely in writing satires against the Jesuits, they compelled him to fly from Antwerp. Sandrart observes, that in his time there were seven or eight eminent painters of this name in Italy and the Low Coun- tries.

BACKERGUNGE, a district in the south-

east part of Bengal, a considerable portion of which, called Bokla, situated near the sea-side, was, in 1584, overwhelmed by the sea, and scarcely has recovered from the inundation: the other parts are, however, very

productive, but being subject to inundations, are very unhealthy. But there are settled here a number of the descendants of the Portuguese, who, in the year 1666, were invited by the nuwab, Shaista Khan, to desert the raja of Arracan, and enter into his service. Also a town in the province of Bengal, capital of a district 120 miles east of Calcutta ; it is the residence of the English magistrate, and carries on a very considerable trade in rice, salt, and cotton cloths. Long. 89 20′ E., lat. 22 42′ N.

BACK-FRAME WHEEL, for laying cordage, from a six-thread ratline, to a two-inch rope, is about four or five feet in diameter, and is hung between two uprights, fixed by tenons, on a truck, and supported by a knee of wood. Over its top is a semi-circular frame, called the head, to contain three whirls (that run on the brasses), with iron spindles, secured by a hasp and pin. They are worked by means of a leather band en- circling the whirls and wheel. Three of the whirls are turned when hardening the strands, and only one when closing the rope, the strands being hung together on it. The truck, on which the back-frame wheel is fixed, runs on four wheels, and is made of three-inch oak plank, about nine feet long, and thirteen inches broad at one end, and eleven inches broad at the other.

BACKTRIEND, n. s. From back and friend. A friend backwards ; that is, an enemy in secret.

Set the restless importunities of talebearers and backfriends against fair words and professions

L'Estrange.

Far is our church from encroaching upon the civil power ; as some who are backfriends to both would maliciously insinuate. South.

BACKGAM'MON, n. s. From bach gammon, Welsh, a little battle; a play or game at tables, with box and dice.

Till finding your old foe the hangman, Was like to lurch you at backgammon. Hudibras.

In what esteem are you with the vicar of the pa- rish? can you play with him at backgammon? Swift.

BACKGAMMON, a game played with dice and tables, to be learned only by observation and practice. It is said to have been invented in Wales, in the period preceding the Conquest. Gloss, ad Leges Wallicas,a voc. Tawlbwrdd, cited by Henry, vol. iv. p. 404. 8vo.

This game is played with dice, upon a table, by two persons. The table is

divided into two parts, upon which there are twenty-four black and white spaces, called points. Each adversary has fifteen men, black and white, to distinguish them ; and they are disposed of in the following manner : Supposing the game to be played into the right hand table, two are placed upon the ace point in the adversary's table, five upon the six point in the opposite table, three upon the cinque point in the hithermost table, and five on the six point in the right-hand table. The grand object in this game is for each player

to bring the men round into his right hand table, by throwing with a pair of dice those throws that contribute towards it, and at the same time prevent the adversary doing the like. The first best throw upon the dice is esteemed aces, be- cause it stops the six point in the outer table, and secures the cinque in the thrower's table ; whereby the adversary's two men upon the thrower's ace point cannot get out with either quatre, cinque, or six. This throw is an advantage often given to the antagonist by the superior player. When he carries his men home in order to lose no point, he is to carry the most distant man to his adversary's bar point, that being the first stage he is to place it on ; the next stage is six points farther, viz. in the place where the adversary's five men are first placed out of his tables. He must go on in this method till all his men are brought home, except two, when by losing a point, he may often save the gammon, by throwing two fours or two fives. When a hit is only played for, he should endeavour to gain either his own or adversary's cinque point : and if that fails by his being hit by the adversary, and he finds him forwarder than himself, in that case he must throw more men into the adversary's tables; which is done in this manner : he must put a man upon his cinque or bar point; and if the adversary fails to hit it, he may then gain a for- ward game instead of a back game ; but if the adversary hits him, he should play for a back game : and then the greater number of men which are taken up makes his game the better, because by these means he will preserve his game at home : and then he should endeavour to gain both his adversary's ace and trois points, or his ace and deuce points, and take care to keep three men upon the adversary's ace point, that in case he hits him from thence, that point may remain still secure to himself A back game should not be played for at the beginning of a set, because it would be a great disadvantage, the player running the risk of a gammon to win a single hit.

A variety of instructions with regard to this curious game, are given by Mr. Hoyle, who calculates the odds of the game with great accuracy. The following particulars, however, may be of use to the generality of players. If a player has taken up two of the adversary's men, and happens to have two, three, or more points made in his own tables, he should spread his men, that he may either take a new point in his tables, or be ready to hit the man which the adversary may happen to enter. If he finds, upon the

adversary's entering, that the game is upon a par, or that the advantage is on his own side, he should take the adversary's man up whenever he can, it being twenty-five to eleven that he is not hit : except when he is playing for a single hit only ; then if playing the throw otherwise gives him a better chance for it, he ought to do it. As it is five to one against his being hit with double dice, he should never be deterred from taking up any one man of the adversary's. If he has taken up one of the adversary's men, and should happen to have five points in his own tables, and forced to leave a blot out of his tables,

he should endeavour to leave it upon doublets preferable to any other chance ; because the odds are thirty-five to one, that he is not hit; whereas it is only seventeen to one but he is hit upon any other chance. When the adversary is very forward, a player should never move a man from his own quatre, trois, or deuce points, thinking to bear that man from the point where he put it, as nothing but high doublets can give him any chance for the hit. Instead of playing an ace or a deuce from any of those points, he should play them from his own size or highest points, so that throwing two fives, or two fours, his size and cinque points being eased, would be a considerable advantage to him ; whereas, had they been loaded, he must have been obliged to play otherwise. It is the interest of the adversary to take up the player as soon as he enters. The blot should be left upon the adversary's lowest point ; that is to say, upon his deuce point rather than upon his trois point ; or upon his trois point rather than upon his quatre point ; or upon his quatre point preferable to his cinque point, for a reason before mentioned : all the men the adversary plays upon his trois, or his deuce points, are deemed lost, being greatly out of play ; so that those men not having it in their power to make his cinque point, and his game being crowded in one place and open in another, the adversary must be greatly annoyed by the player. If the player has two of the adversary's men in his tables, he has a better chance for a hit than if he had more, provided his game is for- warder than that of his antagonist; for if he had three or more of the adversary's men in his tables, he would stand a worse chance to be hit. When a player is running to save the gammon, if he should have two men upon his ace point, and several men abroad, although he should lose one point or two in putting his men into his tables, it is his interest to leave a man upon the adversary's ace point, because it will prevent his adversary from bearing his men to the greatest advantage, and at the same time the player will have a chance of the adversary's making a blot, which he may

chance to hit. However, if a player finds, upon a throw, that he has a proba- bility of saving his gammon, he should never wait for a blot, as the odds are greatly against his hitting it, but should embrace that oppor- tunity.

*The following are directions for calculating the odds of saving or winning the gammon. Sup- pose the adversary lias so many men abroad as squires three throws to put them into his tables, *nd at the same time that the player's tables are made up, and that he has taken up one of the adversary's men ; in this case it is about an equal wager that the adversary is gammoned. For, in all probability, the player has borne two men before he opens his tables, and when he bears the third man, he will be obliged to open his size or cinque point. It is then probable that the adversary is obliged to throw twice before lie enters his IP.CII in the player's tables, twice more before, he p\,ts that man into his own tables, and three throws more to put the men w-hkh an. abroad into his own tables, in all s:-u:ii tl.rous. > ow the playir having twelve*

men to bear, he may be forced to make an aoe or a deuce twice before he can bear all his men, and consequently will require seven throws in bearing them ; so that, upon the whole, it is about equal whether the adversary is gammoned or not. Suppose a player has three men upon his adversary's ace point, and five points in his own tables, and that the adversary has all his men in his tables, three upon each of his five highest points. Has the player a probability of gammoning his adveis

Points. i or bearing three men from his 6th point is 18

I rom his 5th point 1">

From his 4th point 12

From his 3rd point 9

From his 2nd point 6

In all 60

Bringing his three men from the adver- sary's ace point to his size point in his own tables, being eighteen points each, and making together 54

There must remain 6

It is plain from this calculation, that the player has much the best of the probability of the gam- mon, exclusive of one or more blots which the adversary is liable to make in bearing his men, supposing at the same time

tne throws to be upon an equality. Suppose two blots are left, either of which cannot be hit but by double dice; one must be hit by throwing eight and the other by throwing nine ; so that the adversary has only one die to hit either of them. What are the odds of hitting either of them ? The chances of two dice being in all 36

The chance to hit 6, are 6 and 2 twice 2

5 and 3 twice 2

2 Deuces 1

2 Fours 1

The chances to hit 9 are 6 and 3 twice . 2

5 and 4 twice 2

2 Trois 1

For hitting in all 11

Chances for not hitting, remain ... 25 So that the odds are twenty-five to eleven

against hitting either of these blots. This method may be taken to find out the odds of hitting three, four, or five blots upon double dice ; or blots made upon double and single dice at the same time. After knowing how many chances there are to hit any of those blots, they must be added altogether,, and then subtracted from the number thirty-six, which are the chances of the two dices, and the question is solved.

*The laws of Backgammon are, 1. If a man is taken from any point, it must be played ; if two. men are taken from it, they also must be played. 2. A man is not supposed to be played, till it is placed upon a point and quitted. 3. It a player has only fourteen men in play, there is no penalty inflicted, because by his playing with a less number than he is entitled to, he plays to * disadvantage, for want of the deficient man to make up his tables. 4. If he bean any*

number of men before he has entered a man taken up, and which of course

he was obliged to enter, such men so borne must be entered again in the adversary's tables as well as the man taken up. 5. If he has mistaken his throw and played it, and his adversary has thrown, it is not in the choice of either of the players to alter it, unless they both agree so to do.

The probable method of prolonging a hit at backgammon, affords a case of instruction, as well as curiosity ; for there is a probability of making the hit last by one of the players for many hours, although they shall both play as fast as usual. Suppose B to have borne thirteen men, and that A has his fifteen men in B's tables, viz. three men upon his size point, a many upon his cinque, quatre, and trois point., two upon his deuce point, and one upon his ace point. A in this situation can prolong it by bringing his fifteen men home, always se- curing six close points till B has entered his two men, and brought them upon any certain point ; as soon as B has gained that point, A will open an ace, deuce, or trois point, or all of them ; which done, B hits one of them, and A, taking care to have two or three men in B's tables, is ready to hit that rnan ; and also he being certain of taking up the other man, has it in his power to prolong the hit almost to any length, provided he takes care not to open such points as two fours, two fives, or two sixes, but always to open the ace, deuce, or trois points, for B to hit him.*

We add the following two critical cases for a back game : 1 . Suppose the fore game to be played by A, and that all his men are placed as usual ; B has fourteen of his men placed upon his adversary's ace point, and one man upon his adversary's deuce point, and B is to throw; who has the best of the hit? Answer: A has the best of it, gold to silver : because, if B does not throw an ace to take his adversary's deuce point, which is twenty-five to eleven against him, A will take up B's men in his tables, either singly or to make points ; and then if B secures either A's deuce or trois point, A will put as many men down as possible, in order to hit, and thereby get a back game. It is evident that the back game is very powerful ; consequently, who- ever practises it must become a greater proficient at the game than he fcould by any other means. 2. Suppose A to have five men placed upon his size point, as many upon his quatre point, and the same number upon his deuce point, all in his own tables. At the same time let us suppose B to have three men placed upon A's ace point, as many upon A's ttois point, and the same number upon A's cinque point, in his own tables, and three men placed as usual out of his tables ; Who has the best of the hit? Answer : The game is equal till B has gained his cinque and quatre points in his own tables ; which, if he can effect, and by playing two men from A's cinque point, in order to force his adversary to blot by throw- ing a cane, which, should B hit, he will have the best of the hit

BACK-HEAVER, a machine long used in several parts _ > t England,

particularly in Hamp- shire, Wiltshire, and Sussex, for winnowing corn.

An improved construction of this machine waspro- posed by Dr. Hales in 1747, which not only ren- dered it fit for winnowing corn sooner and better than by any other means previously used, but also for clearing it of the very small corn, seeds, smut- balls, &c. It has however been since improved. BACK'HOUSE, n. s. From back and house. The buildings behind the chief part of the house. Their backhouses, of more necessary than cleanly service, as kitchens, stables, are climbed up unto by steps. Careie.

BACKHUYSEN (Ludolph), an eminent painter, born at Embden, in 1631, who received his earliest instruction from Albert Van Ever- dingen ; but acquired his principal knowledge by frequenting the painting rooms of different masters. One of these was Henry Dubbels, whose skill in his art was great ; and he was equally communicative of his knowledge to others. From him Backhuysen obtained more benefit than from all the painters of his time. His subjects were sea-pieces, ships, and sea-ports. He had not practised long when he became the object of general admiration ; so that his draw- ings were sought after, and several of them were bought up at 100 florins. He studied nature at- tentively in all her forms ; in gales, calms, storms, clouds, rocks, skies, lights, and shadows ; and expressed every subject with so sweet a pencil, and such transparence and lustre, as placed him above all the artists of his time, except the younger Vandervelde. It was a frequent custom with Backhuysen, whenever he could procure resolute mariners, to go to sea in a storm, to store his mind with images directly copied from nature ; and the moment he landed, impatiently to run to his palletteto delineate those incidents of which the traces might, by delay, be obliterated. He perfectly understood the management of the Chiaro-scuro, and, by his skill in that part of his art, gave uncommon force and beauty to his ob- jects. His works may easily be distinguished by the freedom and neatness of his touch, the clear- ness and natural agitation or quiescence of the water, a peculiar tint in his clouds and skies, and the exact proportions of his ships. He painted, for the Burgomasters of Amsterdam, a large view of the city, for which they gave him 1300 guilders, and afterwards presented it to the king of France. No painter was ever more honored by the visits of kings and princes than Backhuysen ; the king of Prussia was one of the number ; and Peter the Great often endeavoured to draw after vessels which he had designed. He died in 1709.

BACKING. See HORSEMANSHIP. BACKING WARRANTS, in law, denotes the signing of such as have been issued by a justice of the peace in one county, by a justice of the peace in another, which is necessary before they can be executed there. This practice is authorised by statutes 23 Geo. II. c. 26. and 24 Geo. II. c. 55.

BACKNANG, a town in the kingdom of Wir- temberg, circle of Heilbronn, and district of the Lower Neckar. It lies on the Murr, and con- tains 3020 inhabitants, many of whom are woollen-weavers and tanners. Eight miles east of Marbah, and twelve north-east of Stutgard.

*BACK-PAINTING, the method of pointing n ezzotinto prints, pasted on glass, with oil-colors. ‘ ee MEZ/.OTINTO. It consists chiefly in laying t’le print upon a piece of crown-glassˆ of such a si/o as fits it. To do this, the print should be lii I in clean water for two days and nights, if tin: print be on very strong, close, and hard pun mod]) iper ; but if upon an open, soft, spunky paper, two hours, or more, will some- times suffice. The paper or picture having been sufficiently soaked, take it out and lay it upon two sheets of paper, and cover it with two more; and let it lie there a little to draw out the mois- ture. In the mean time, take the glass the pic- ture is to be put upon, and set it near the fire to ***warm ; take Strasburg turpentine, warm it over the fire till it is grown fluid, then, with a hog’s- hair brush, spread the turpentine very smoothly and evenly oa the glass. Then take the mezzo- tinto print from between the papers, and lay it upon the glass ; beginning first at one end, rub- bing it down gently till it lie close, and there be no wind bladders between. After this rub or roll off the paper from the back of the print, till it looks black, i. e. till nothing appears but the print, like a thin film left upon the glass, and set it aside to dry. Then varnish it over with some white transparent varnish, that the print may be seen through it; and it is then tit for painting. The utmost cure is necessary in rubbing or rolling the paper oil’ the print so as not to tear it, es- pecially in the liu’ht parts. Or the prints, instead of bein ‘..; soaked, may lie rolled up and boiled for about two hours, more or less, according to the quality < >f the paper ; and that will render it as fit tor rubbing, rolling or peeling, as the other method. This being done, and the oil-colors prepared, ;: round very fine, and tempered up very still’, lay on the hack of the transparent prints such colors as each part requires; letting the master-lines of the print still guide the pen- cil ; and thus each particular color will lie fair to the eye on the other side of the glass, and almost as well as a painted piece, if it be done neatly. The shadows of the print are generally sufficient for the —hadow of every color; but if it is wished to <_rive a shadow bv the pencil, let the shadows be laid on lust, and the other colors afterwards. In this kind of back-painting it is not necessary to lay on the colors very smooth. As the chief aim is to have the colors appear well on the fore- side of the print, all that is necessary is to lay the colors on thick*

enough, that its body may strike the color of it plainly through the glass.

I!. \(K'i'l !□□□',(' I-'., 11. x. From back and piece. The piece ot armour which covers the back.

The morning that he \v;is to join battle, his ar- niomvr put on his / lackpiccc before, and his breast-]il;iti> behind Camden.

, the same with BACK-

STAI 1 . Sri; Qr A I)I!.\ NT.

I5A('!\ RIVFK, a river of Maryland, which runs into the Chesapeake.

I□□A(I'K(X).M, /(. s. From back and room. A room behind; not in the trout.

If via have a fair prospect backwards of gardens, it in,MOJT. Mech. Ererciiei.

BACKS, among dealers in leather, denote the thickest and best tanned hides, used chiefly for soles of shoes.

BACK'SIDE, n. s. From back and side. The hinder part of any thing ; the hind part of an animal ; the yard or ground behind a house.

If the quicksilver were rubbed from the backside of the speculum, the glass would cause the same rings of colours, but more faint; the phenomena depend not upon the quicksilver, unless so far as it increases the reflection of the backside of the glass. Newton.

A. poor ant carries a grain of corn, climbing up a wall with her head downwards and her backside up- wards. Addison.

The wash of pastures, fields, commons, roads, streets, or backsides, are of great advantage to all sorts of land. Mortimer.

BACK-SINEWS OF A HORSE, the extensor tendons of the foot, placed behind the fore-leg, and very frequently injured by over-exertion. The inflammation hereby produced is best re- moved in the first instance by emollient and astringent cataplasms.

BACK'SLIDE, v.n. ˆ From back and slide.

BACK'SLIDER, n. s. > To retrograde in reli-

BACK'SLIDING. 3gion. Exclusively a

scriptural and theological term. Its precise signification, as employed by divines, is not apos- tacy as stated by Dr. Johnson, but a tendency to it. It supposes a religious profession ad- vanced to a state of spirituality and consistency, and a receding from that state in a greater or less degree in principle or practice : but it does not amount to a total abandonment of either.

The backslider in his heart shall be filled with his own ways. Solomon.

Thy backsliding shall reprove thee. Jeremiah.

Remember thy . backslidings from me ; lament over them : confess them before me ; and look to God to enable thee to take thy steps with more firmness, and to offer up thy prayers with more spirituality. Cecil.

BACK'STAFF, 7i. s. From back and staff; because in taking an observation, the observer's back is turned toward the sun. An instrument useful in taking the sun's altitude at sea. It was sometimes called Davis's quadrant, from its inventor, captain John Davis, a Welchman, and a celebrated navigator, who produced it about the year 1590.

This instrument consists of two concentric arches of box-wood, and three vanes : the arch of the longer radius is of 30□□, and the other 60□□, making between them 90□□, or a quadrant : also the vane at the centre is called the horizon-vane, that on the arch of 60□□ the shade-vane, and that on the other arch the sight-vane. It is unneces- sary to give a more minute description, since more complete and accurate instruments have entirely superseded the use of this.

BACK'STAIRS, n. s. From back and stairs. The private stairs in the house.

I condemn the practice which hath lately crept into the court at the backstairs, that some pricked for sheriffs get out of the bill. Bacon.

BACK'STAYS, n. s. From back and stay. Ropes or stays which keep the masts of a ship from pitching forward or overboard.

The BACKSTAYS, Fr. galhaubans, are long ropes extending from the top-mast-heads to the starboard and larboard sides of the ship, where they are farther extended to the channels ;

they are used to second the efforts of the shrouds, in supporting the masts, when strained by a weight of sail in a fresh wind.

They are usually distinguished into breast- backstays and after-backstays ; the intent of the first being to sustain the mast when the ship sails upon a wind ; or, in other terms, when the wind acts upon the ship sideways; the second is to enable her to carry sail when the wind is further aft ; and the third kind take their name from being shifted or changed from one side to the other, as occasion requires. There are also backstays for the top-gallant-masts, in large ships, which are fixed in the same manner with those of the top-masts.

A pair of backstays is usually formed of one rope, which is doubled in the middle, and fas- tened there so as to form an eye, which passes over the mast-head, from whence the two ends ‘ hang down, arid are stretched to the channels, by dead-eyes and lanyards. See the article DEAD-EYES, &c.

BACKSTAY STOOL, a short piece of plank, fitted for the security of the dead-eyes, and chains for the backstays, though sometimes the channels are left long enough at the after end, for the backstays to be fitted thereto.

BA’CKSWORD, re. s. From back and sword. A sword with one sharp edge.

Bull dreaded not old Lewis at backsword.

Arbuthnot.

BACK TACK, in Scots law, a lease granted by a mortgager or heritable creditor, who, instead of possessing the mortgage lands, grants a rent thereof to the reverser or heritable debtor, for payment of a certain sum in name of tack duty.

BACK’WARD, n.$. adv. & adj.-\ From back, BACK’WARDS, ˆand pearib,

BACK’WARDLY, adv. (Sax. that is,

BACKWARDNESS, n. s. Jtowardsthe

back ; contrary to forward. Backward, as an adverb, denotes simply the manner of going; and is distinguished from back, thus : a person stands back who does not wish to be in the way ; he goes backward when he does not wish to turn his back on an object. As an adjective, its mean- ing is unwilling, or averse. And hence it is often used in the sense of hesitating, dilatory. Slow in apprehension, and in growth. The sub- stantives take their literal and figurative meaning from the adverb and the adjective.

They went backward, and their faces were back- ward. Generis.

All things are ready, if our minds be so : Perish the man whose mind is backward now.

Shuktpeare.

It should seem then, that Dobbin's tail grows back— word. Id.

What seest thou else In the dark backward or abysm of time ? Id.

The monstrous sight

Struck them with horror backward ; but far worse Urg'd them behind. Milton.

Then darting fire from her malignant eyes, She►►cast him backward as Le strove to rise.

Dry den.

We are strangely backward to lay hold of this safe, this only method of cure. Atterbury.

The thing by which we are apt to excuse our back- wardness to good works, is the ill-success that hath been observed to attend well-designing charities. Id. Cities laid waste, they storm'd the dens and caves For wiser brutes are backward to be slaves. Pope.

Our mutability makes the friends of our nation backward to engage with us in alliances. Addison.

It often falls out that the backward learner makes amends another way. South.

To prove the possibility of a thing, there is no ar- gument to that which looks backwards ; for what has been done or suffered may certainly~be done or suffer- ed again. Id. Like Numid lions by the hunters chas'd,

Though they do fly, yet backwardly do go

With proud aspect, disdaining greater haste.

Sidney,

The mind is backward to undergo the fatigue of weighing every argument. Watts.

BACK-WORM. See FILANDERS.

BACO, a town of Mindoro, one of the Philip- pines, the capital of the island, and residence of a Spanish judge. The environs are well watered by springs from the mountains, which are covered by sarsaparilla. Long. 121►► 5′ E., lat. 13►► 18′ N.

BACO, in old Latin, a fat hog.

BACOBA, in botany, a name by wnich some authors call the banana tree, or musa fructu breviori.

BACON (Anthony), the son of Sir Nicolas, and elder brother to the celebrated lord chancellor, was born in 1558, and educated at Cambridge. He spent much of his time in travelling, and thus became personally acquainted with most of the literati of his age. In 1579, at the age of twenty- one, he went to Paris, where he resided for some time ; and thence to Bourges and Geneva, where he lodged at the house of the celebrated Theodore Beza. From Geneva he successively removed to Montpelier, Marseilles, Bourdeaux, and Mont- auban, sometimes communicating intelligence of importance to England. In 1585 he visited Henry, king of Navarre, afterwards the great Henry IV. of France, who was then at Beam ; and became acquainted with the learned Lam- bert Danaeus, who, as a mark of esteem, dedicated several of his works to him. His health failing, he returned to England in February, 1591-2 ; and in 1595 took up his residence at Essex house, where he carried on a most extensive corres- pondence with the foreign literati, and among others with king Henry IV. The time and place of his death is uncertain.

BACON (Francis), lord high chancellor of England, under king James I. was son of Sit Nicholas Bacon, by Anne, daughter of Sir An- thony Cook, eminent for her skill in Latin and Greek. He was born in 1650; and showed such marks of genius that he was taken notice of by Queen Elizabeth when very young. He was educated at Trinity college, Cambridge; and made such progress in his studies, that, before he was sixteen, he had not only traversed the whole circle of the liberal arts as then taught, but began to perceive those imperfections in the reigning philosophy which he afterwards so ef- fectually exposed. On his leaving the univer- sity his father sent him to F ranee ; where, before he ►►vas nineteen years of age, he wrote a general view of the state of Europe : but Sir Nicholas

dying, he was obliged suddenly to return to England, when he applied

himself to the study of the common law, at Gray's-Inn. At this period the famous Earl of Essex, who could dis- tinguish merit, entered into intimate friendship with him ; zealously attempted, though without success, to procure him the office of queen's solicitor ; and, in order to comfort his friend under the disappointment, conferred on him a present of land to the value of ►►1800. Bacon, notwith- standing the Earl's friendship, and even the early prepossession of her majesty in his favor, met with many obstacles to his preferment during her reign. His enemies represented him as a specu- lative man, whose head was filled with philo- sophical notions, and therefore more likely to perplex than forward public business. It was with great difficulty that lord treasurer Burleigh obtained for him the reversion of register to the star chamber, worth about ►►1600 a-year, which only fell to him about twenty years after. He did not obtain any other preferments from queen Elizabeth; though, if obedience to a sovereign in the most disagreeable of all offices, viz. the casting reflections on a deceased friend, entitled him, he might have claimed it. The people were so clamorous, even against the queen herself, on the death of Essex, that it was thought necessary to vindicate the conduct of the adminis- tration; and to Bacon was assigned this disgrace- ful task. Upon the accession of James he was soon raised to considerable honors ; and wrote in favor of the union of the two kingdoins of Scot- land and England. In 1616 he was sworn of the privy council. He then applied himself to the reducing and recomposing the laws of England. When attorney-general, he distinguished himself by his endeavours to restrain duelling, then very frequent. In 161 7 he was appointed lord keeper of the great seal ; and, in 1618, lord chancellor of England, and created Lord Verulam. In the midst of these honors, and the multiplicity of business, he forgot 7iot his philosophy, hut in 1620 published his great work Novum Organum. In 1621 he was advanced to the dignity of Viscount St. Albans, and appeared with great splendor at the opening of the session of parlia- ment ; but soon after met with a severe reverse of fortune For about the. twelfth of March, a com- mittee of the house of commons being appointed to inspect the abuses of courts of justice, the chancellor was openly accused of corruption, and the king is said to have positively enjoined him to submit 1 1 his peers, promising to reward him afterwards ! The chancellor, though he fore- saw his approaching ruin if lie did not plead for himself, resolved to obey ; and the house of peers, on the 3d of May, 1621, gave judgment against him, ' that he should he fined ►►40,000, and re- main prisoner ir. the tower during the king's plonsure ; should tor ever be incapable of any office, place, or employment in the state, and that lie should never sit in parliament, or come within the verge of the court.' The fault which, next to his ingratitude to Essex, thus tarnished the glory of this illustrious man, is said to have principally proceeded from his indulgence to his servants, who made a corrupt use of it. One day, ►►►luring his trial, passing through a room

where

several of his domestics were sitting, upon their rising up to salute him, he said, ‘ Sit down, my masters ; your rise hath been my fall.’ And we are told by Kushworth, in his historical collec- tions, ‘ that he treasured up nothing for himself Of family, but was over-indulgent to his servants, and connived at their takings : they were profuse and expensive, and had at their command what- ever he was master of. The gifts taken were for the most part for interlocutory orders. His de- crees being generally made with so much equity, that though gifts rendered him suspected of in- justice, yet never any decree made by him was reversed as unjust.’ It was peculiar to this great man (say the authors of the Biog. Brit.) to have nothing narrow and selfish in his composition : he gave away without concern whatever he pos- sessed ; and believing other men of the same mould, he received with as little consideration. He retired, after a short imprisonment, from the engagements of an active life, to the shade of a contemplative one, which he had always loved. The king remitted his fine, and he was sum- moned to parliament in the first year of King Charles I. In his recess he composed the greatest part of his English and Latin works, and it ap- pears from them that his thoughts were still free, vigorous, and noble. The last three years of his life he devoted wholly to his studies. He died in 1626; and was buried in St. Michael’s church at St. Albans, where a monument of white mar- ble was erected to him by Sir Thomas Meautys’, formerly his secretary. A complete edition of his works was published at London in 1740. Addison has said of him, that he had the sound, distinct, comprehensive, knowledge of Aristotle, with all the beautiful light graces and embellish- ments of Cicero. Mr. Walpole calls him the prophet of arts, which Newton was afterwards to reveal ; and adds, that his genius and his works will be universally admired as long as science exists. We must add, from another writer, with regret, ‘ as long as ingratitude and adulation are despicable, so Jong shall we lament the depravity of this great man’s heart. Alas! that he, who could command immortal fame, should have stooped to the little ambition of power.’

If parts allure theo, think how Bacon shin’d ; The wisest, brightest, meanest of mankind. Pope.

BACON (Robert), a divine of the thirteenth ce.atury, was born about 1168. He studied at Oxford, where he distinguished himself by (he quickness of his parts. Thence, according to the custom of that age, he removed to Paris, where he perfected himself in all the branches of learn- ing. After his return he settled at Oxford, and read divinity lectures. In 1233 he was made treasurer of the cathedral church of Salisbury ; and distinguished himself by a sermon before king Henry III. at Oxford. In 1240 he lost his great patron and intimate friend, Edmund, arch- bishop of

Canterbury, and possibly this circum- stance, joined to his love of a retired life, might induce Bacon, though very old, to enter into the order of Friars Preachers. In gratitude to the archbishop, Bacon wrote his life, which was

highly esteemed. He wrote also many other learned pieces, and died in 1248.

BACON (Roger), a Franciscan friar of surprising genius and learning; born near Ilchester in Somer- setshire, in 1214. He studied first at Oxford, and afterwards at Paris, which, in those times, was esteemed the centre of literature. Here he made so rapid a progress in the sciences, that he was esteemed the glory of that university, and much caressed by several of his countrymen, particu- larly Robert Grouthead, afterwards bishop of Lincoln, his friend and patron. About 1240 he returned to Oxford, and, assuming the Fran- ciscan habit, prosecuted experimental philoso- phy, with unremitting ardor. In this pursuit, in experiments, instruments, and in scarce books, he tells us, he spent, in the space of twenty years, no less than ––2000, which was given him by some of the heads of the university. But such extraordinary talents, and his astonishing progress in sciences, which, in that ignorant age, were totally unknown to the rest of mankind, whilst they raised the admiration of the more intelligent few, could not fail to excite the envy and malice of his illiterate fraternity ; who found no difficulty in propagating the notion of Bacon's dealing with the devil. Under this pretence, he was restrained from reading lectures ; his writings were confined to his convent ; and, in 1278, he himself was imprisoned in his cell. At this time he was sixty-foui years of age. Nevertheless, being permitted the use of his books, he went on in the rational pursuit of knowledge, corrected his former labors, and wrote several curious pieces. When he had been ten years in con- finement, Jerome de Ascoli being elected pope, Bacon solicited his holiness to be released ; and towards the end of that pope's reign, obtained his liberty. He spent the remainder of his life in the college of his order, where he died in 1294, in the eightieth year of his age, and was buried in the Franciscan church. Such are the few particulars, which the most diligent re- searches have been able to discover concerning this very great man ; who, like a single bright star in a dark hemisphere, shone forth in an age of ignorance and superstition, the light and glory of his country. His works are : 1. Epistola fra- tris Rogeri Baconis, de Secretis Operibus Artis et Naturae, et deNullitate Magiae. Paris, 1542, 4to. Basil, 1593, 8vo. 2. Opus Majus. Lond.1733, fol. published by Dr. Jebb. 3. Thesaurus Che- tricus. Francf. 1603, 1620. This was probably the editor's title ; but it contains several of

our author's treatises on this subject. There are said to remain in different libraries several ma- nuscripts of his not yet published.

BACON (Sir Nathaniel), K. B. and an excellent painter, was a younger son of Sir Nicholas, and naif brother to the great Francis Bacon. He studied painting in Italy ; but his manner and coloring approaches nearer to the style of the Flemish school. Mr. Walpole observes, that at Culford, where he lived, are preserved some of his works; and at Gorhambury, his father's seat, is a large picture by him in oil, of a cook-maid with a dead fowl, admirably painted. In the same house is a whole length of him, by himself, drawn on paper, his sword

and pallet hung up, and a half length of his mother by him.

BACON (Sir Nicholas), lord keeper of the great seal in the reign of Queen Elizabeth, was born at Chislehurst in Kent, 1510, and educated at Cambridge; after which he travelled into France, and visited Paris. On his return, he settled in Gray's Inn, and quickly distinguished himself so much, that on the dissolution of the monastery of St. Edmund's Bury, in Suffolk, he had a grant from king Henry VIII. of several manors. Two years after he was made attorney in the court of Wards, a place both of honor and profit. Inˆ this office he was continued by Edward VI. and in 1552 he was elected treasurer of Gray's Inn. His great moderation and consummate prudence preserved him through the dangerous reign of queen Mary. In the very dawn of that of Eliza- beth he was knighted ; and in 1558, the great seal of England being taken from archbishop Heath, was delivered to him with the title of lord keeper, and he was made one of the queen's privy council. He had a considerable share in the settling of religion : as a statesman he was remarkable for a clear head and deep counsels : but his great parts and high preferment were far from raising him in his own opinion, as appears from the modest answer he gave queen Elizabeth, when she told him his house at Red-grave was too little for him : ' Not so, madam,' returned he, ' your majesty has made me too great for ray house.' After having held the great seal more than twenty years, this able statesman and faith ful counsellor met with his death by falling asleep in his room with a window open, and the current of fresh air blowing in upon him. He awoke very ill, and was immediately removed into his bed-chamber, where he died in a few days, i. e. on the 26th of February, 1578-9. He was buried in St. Paul's, where a monument was erected to him, which was destroyed by the fire in 1666. Sir Nicholas was the first lord keeper that ranked as lord chancellor. He was twice married ; by his first wife he had three sons and three daughters ; and by his second, two sons, Anthony and Francis. Sir Nicholas left several manuscripts, which have never been printed.

BACON (John), an ingenious sculptor, born in South wark in 1740. He

very early manifested an inclination for drawing, which was encou- raged by binding him as an apprentice to a manufacturer of china, at Lambeth, when about fifteen years of age. Here a considerable part of his employment was to paint on porcelain, in which he improved himself so much, in forming small ornamental pieces, that within two years all the models of the manufactory were committed to him. This situation al?o afforded him au opportunity of seeing various models executed by other artists, which were sent to a neighbour- ing pottery to be burnt. In 1758 he obtained a premium from the society for the encouragement of the arts, for a small figure of Peace, after th# manner of the antique ; and eight different pre- miums afterwards for other figures. Before his apprenticeship was out, he formed a design of making statues in artificial stone, which he afterwards perfected, and which is still carried on in a manufactory in the New Road, with sue-

cess. He first began to work in marble about 1763, and soon invented an instrument for transferring the form of the model to the marble (getting out the points as artists call it), which other sculptors have since adopted. In 1769 he received the first gold medal bestowed by the Royal Society, and next year was chosen an associate. The exhibition of his statue of Mars greatly increased his reputation ; and Dr. Mark- ham, since archbishop of York, employed him to make a bust of the king, to be placed in the hall of Christ Church College, Oxford. While he was modelling this bust, his majesty asked him ‘ if he had ever been out of the kingdom;’ and receiving an answer in the negative, said, ‘ I am glad of it, you will be the greater honor to it.’ By the execution of this work he obtained the royal patronage, and was employed to form another for the University of Gottingen. In 1777 he was engaged in preparing a model of a monu- ment, to be erected in Guy’s hospital to the me- mory of the founder, which he executed in such a manner, as recommended him to that of Lord Chatham, at Guildhall. In 1778 he became a royal academician, and finished a handsome mo- nument to the memory of Mrs. Draper, which is in Bristol cathedral. From this period, his works are so numerous, that we can only mention a few of the principal : ••• Two groups for the top of Somerset-house ; a statue of Judge Blackstone, for All Soul’s College, Oxford ; another of Henry VI. for Eton College; Lord Chatham’s monu- ment in \ estminster Abbey ; and Dr. Johnson’s and Mr. Howard’s in St. Paul’s cathedral. He died of an inflammation in his bowels, in 1799, and left a widow and eight children. He was a man of most excellent character, and of his religious principles, let the inscription which he ordered to be placed over his grave testify : ‘ What I was as an artist, seemed to me of some importance while I lived;

but what I really was, as a be- liever in Christ Jesus is the only thing of import- ance to me now.' Mr. Bacon also possessed respectable literary talents.

HA CON, n. s. probably from baken, that is, dried flesh. The flesh of a hog salted and dried.

No wine no drank slip, neyther Aˆliite ne red, Hire hord was served most with white and black Milk, and brown bred, in which she fond no lack, Seinde bacon, and sometime an ey or twey ; For she was as it were a manner dey ! Chaucer.

When it had stabbed or broke a head, It would scrape trenchers or chip bread ; Toast cheese or bacon, tho' it were To bait a mouse-trap it would not care.

Hudibrai.

High o'er the hearth a chine of bacon hung, Good old Philemon seized it with a prong, Then cut a slice. Dryden.

UACOX, the flesh of swine, salted, dried, and generally, in this country, smoked. It is a considerable article of commerce : we shall de- scribe the most approved methods of preserving it ; viz. that adopted in Somersetshire. The last three months of the year are selected as best adapted for curing bacon here. When a hog is killed for bacon, the sides are laid in large wooden troughs, and sprinkled all over with bay

*s-ilt ; t' *

twenty-four hours, to

drain away the blood and the superfluous juices. After this first preparation, they should be taken out, wiped very dry, and the drainings thrown away. Next some fresh bay-salt, well heated ir. a large iron frying-pan, is to be rubbed over the meat, until it has absorbed a sufficient quantity, and this friction repeated four successive days, while the meat is turned only every other day. If large hogs are killed, the flitches should be kept in brine for three weeks, and, during that period, turned ten times, then taken out, and thoroughly dried in the usual manner; for, unless they be thus managed, it is impossible to pre- serve them in a sweet state, nor will their flavor be equal to those properly cured.

As the preservation of the salt used in this process, when carried on to a great extent, may be an object of economy, the following method may be adopted for recovering the saline matter contained in these drainings, or in

any other brine; it was communicated by a person who had seen it practised on the continent, where culinary salt is sold at a considerable price. He first added such a quantity of boiling-water, to the brine or drainings, as was sufficient to dis- solve all the particles of the salt. This solution he then placed in either an iron or earthen ves- sel, over a fire, which, by boiling, forced all the feculent animal particles to the top, so that they were carefully removed by a perforated ladle. After the liquid had become clear, it was set aside for twenty-four hours, in a cool place, that the coloring matter might subside. But, as the combination it had formed with the boiled liquor was very tenacious, he contrived two different ways of separating it : 1. A solution of alum in water, one pirvt to an ounce of that substance was gradually dropt into the cold liquor, in the proportion of a table-spoonful of the former to every gallon of the latter; and the whole allowed to stand for several hours ; or, 2. If time and circumstances would permit, he filtered the liquor by means of long flannel slips, cut longitudinally by the web, but previously soaked in another strong and perfectly clear solution of salt ; these slips were so immersed into the colored fluid that the projecting external end reached another vessel, which had been placed much lower than that containing the brine, or drainings. When these particulars were properly attended to, the absorbed liquor became almost colorless, and pellucid. Having thus procured a clear liquid solution, nothing more was required than to evaporate it to dryness, in order to reproduce the salt in its original granulated form. This process may be imitated without any difficulty, and at very little expense. Dr. Willich, from whose Domestic Encyclopaedia we now quote, says, the second method of discharging the color is preferable ; as by this no alum will be re- quired, which only contaminates the salt.

BACON, THE SERVICE OF THE, a custom, men- tioned by our old historians and law-writers ; as well as in the Spectator, as held in the manor of Whichenacre in Staffordshire, and in the priory of Dunnow in Essex. In the former of these places, by an ancient grant of the lord, a flitch of bacon, with half a quarter of wheat, was to be given to every married couple who could swear that having been married a year and a day, f.hcy

would never within that time have once ex- changed their mate for any other person on earth, however richer, fairer, or the like. But they were to bring two of their neighbours with them to attest that they swore the truth. On this the lord of another neighbouring manor of Rud- low, was to find a

horse, saddled, and a sack to carry the bounty in, with drums and trumpets, as far as a day's journey out of the manor; all the servants being summoned to attend, and pay service to the bacon. The bacon of Dunmow, first erected under Henry III. was on much the same footing ; but the tenor of the oath was only that the parties had never once repented their connexion, or wished themselves unmarried again.

BACON, a town of Persia, in the province of Seistan, eighty miles N. N. E. of Zareng.

BACON, a town on the east coast of the island of Lufon.

BACON'S ISLAND, a small island in the Chi- nese Sea. Long. 113►► 5′ E., lat. 11►► 13′ N.

BACON-FOSSIL, in modern chemistry, a singular bod v discovered in the parish of Cruwys- Morchard, Devon, a few years since, in the fol- lowing manner : ►►► Some workmen, in sinking a pond, had arrived at a depth of ten feet from the surface, when they struck upon a spongy sub- stance, which appeared to be a very thick cuticle of a brown color : they soon found pieces of bone and solid fat of the same hue. At length the entire body of a hog was extricated, reduced to the color and substance of an Egyptian mummy : the flesh was six inches thick, and the hair upon it very long and elastic. On proceed- ing in the work, a considerable number of hogs, of various sizes, were found in different posi- tions ; in some places two or three together, in others singly ; the bodies, when exposed to the air, still retained their consistency, and the stratum continued for twelve feet ; after which the pond, being sufficiently deep, was filled with water. The ground was never known to have been broken up before; but here had formerly been a monastery of Augustine friars. The fa- mily which preceded the present possessor has a journal of all remarkable events which have occurred in the parish during three centuries; but there was no entry which could lead to a so- lution of the phenomenon. The Rev. Mr. Pol- whele, who obtained a specimen, mentions, in his History of Devon, that the bed in which the fossils lay was of stiff clay. He describes the piece in his possession to be very light, some- what spongy, mottled like mottled soap, and evidently of a sebaceous nature. On a slight chemical analysis, it was mostly soluble in spirit of wine, while hot ; but separated into white flakes on cpoling, in which it resembles spermaceti ; but it was easily convertible into soap on being boiled in a fixed alkaline lixivium. By a reference to the above particulars it will be obvious that what is here termed a 'fossil' really consisted of adipocere or animal fat, which has frequently been found in receptacles for the dead.

BACONGEN, a town on the west coast of the island of Sumatra. Long.

6►► 58′ E., lat. 2►► 52′ N.

BACONO, a river of the Caraccas, South America. It runs in the mountains near Trux- illo, and serves as a line of demarcation to the provinces of Varinas and Venezuela. Thence passing through the plains, it enters the Gua- nare, which discharges its waters into the Por- tugueza. There is a settlement of the same name near its source.

BACONTHORPE, or BACONDORP (John\ styled the resolute doctor, a learned monk, boiu in the thirteenth century at Baconsthorp, in Norfolk. He spent the early part of his life in the convent of Blackney, near Walsingham; whence he removed to Oxford, and thence to Paris ; where he obtained degrees in divinity and law, and was esteemed the principal of the Aver- roists. In 1329 he returned to England, and was chosen twelfth provincial of the English Carmelites. In 1333 he was sent for to Rome ; where, we are told, he first maintained the pope's sovereign authority in cases of divorce, but that he afterwards retracted his opinion. He died in London in 1346, with the character of a monk of genius and learning. He wrote, 1. Commenta- ria seu Queestiones super Quatuor Libros Senten- tiarum; and 2. Compendium Legis Christi, et quodlibeta: both which underwent several edi- tions at Paris, Milan, and Cremona. Leland, Bale, and Pits, mention a number of his works never published.

BACOPA, in botany, a genus of plants of the class pentandria, and order monogynia. Its ge- neric characters are CAL. perianth, one-leaved : COR. one-petalled : STAM. filaments, five; an- therae, sagittate : FIST, germ, ovate; style short; stigma, headed : PER. capsule, one-celled ; seeds, very many. The only species is the B. aquatica, native of Cayenne. Linn. Spec. Plant.

BACOUE (Leo), a French divine of the se- venteenth century. He was first of the Protest- ant persuasion, but afterwards changed to the Roman Catholic faith, turned Franciscan, and was made bishop of Pamiers. He was author of a Latin poem on the education of a prince. He died in 1694, in his ninety-fourth year.

BACRAG, the same with Baccharach wine.

BACRAS, a town of Sennaar, in Africa, twenty-five miles east of Sennaar.

BACRE, a small town in the territory of Sierra Leone. Long. 12►► 11′ W., lat. 8►► 40′ N.

BACTISHUA (George Ebn), a Christian phys;cian at the court of the caliph Almaasor who sent him as a present 3000 dinars, with three beautiful girls to supply the place of his wife, who was old : Bactishua sent them back,

observing that his religion forbad him to have more than one woman for his wife.

BACTRIA, or BACTRIANA, now Chorassan, or Khorasan , an ancient kingdom of Asia, bounded on the west by Margiana, on the north by the Oxus, on the south by Mount Paropismus, and on the east by the Asiatic Scythia and the country of the Massagetse. It was a large, fruitful, and well-peopled country ; containing, according to Ammianus Marcellinus, 1000 cities, though of these only a few are particularly mentioned ; of which, that formerly called Maracanda, now Sa- marcand, is the most considerable. Of the his- tory of this country we know but little. Authors

agree that it was subdued first by the Assyrians, afterwards by Cyrus, and then by Alexander the Great. Afterwards it remained subject to Se- leucus Nicator and his successors, till the time of Antiochus Theos; when Theodotus, from go- vernor of that province, became king, and otrengthened himself so effectually in his king- dom, while Antiochus was engaged in a war with Ptolemy Philadelphus, king of Egypt, that he could never afterwards dispossess him of his ac- quisitions. His posterity enjoyed the kingdom for some time, till they were driven out by the Scythians, who possessed Bactria during the reigns of Adrian, Antoninus Pius, &c. The Scythians were in their turn driven out by the Huns and Turks, and these often conquered by the Saracens and Tartars ; although they were in possession of this country, in the time of Ladis laus IV. king of Hungary.

BACTRIANS, the inhabitants of Bactria. In ancient times they differed little in their manners from the Nomades; and being near neighbours of the Scythians, who were a very warlike people, the Bactrian soldiers were reckoned the best m the world. Their appearance was very savage; they being of an enormous stature, having rough beards, and long hair hanging down their shoulders. Some authors assert that they kept dogs on purpose to devour such as arrived at ex- treme old age, or who were exhausted by long sickness. They add, that for all their fierceness, the Bactrian husbands were such dupes to their wives, that they durst not complain of them even for conjugal infidelity, to which it seems the latter were very much addicted.

BACTRIAN US, in zoology, a species of the camel.

BACTRTS, in botany, a genus of plants of the class moncecia, order

hexandria. Its ge- neric characters are CAL. spathe universal, one- leaved : COR. one-petalled : STAM. filaments, six; anthera?, oblong: PIST. germ, ovate; style, very short; stigma, headed: I-ER. drupe, coriaceous, seed-nut, roundish. The species are, 1. B. minor fructibus, &c. seu cocos (quincensis) acu- eata, Sec. a shrub, native of South America. 2. 15. major fructu, &c. seu fructus exoticus, a shrub, native of South America.

BACTRIS, in entomology, a. species of bruchus.

BACTROPERAT.E, from /3aicrpov, a staff, and 7Tj;n►►, a bag ; an ancient appellation given to philosophers by way of contempt, denoting a man with a staff and a budget. It seems to be of this sect that 1'aschasius Radbertus speaks, under the corrupt names of Baccoperitae, or Bac- cliionitai, whom he describes as philosophers who, by way of contempt for earthly things, kept nothing but a dish to drink out of; and that one of this order seeing a peasant scooping up the water in his hand, threw away his cup as a su- perfluity.

BACULARES, a sect of Anabaptists, so called, as holding it unlawful to bear a sword, or any other arms, besides a staff.

BACULARIUS, in writers of the middle age, an ecclesiatical apparitor or verger : who carries a staff, baculus, in his hand, as an ensign of his office.

BACL'LK, in fortification, a kind of portcullis,

or gate, made like a pit-fall with a counterpoise, and supported by two great stakes. It is usually made before the corps du guard, near the gate of a pluce.

BACULI. See BACILLI.

BACULI STI. PAULI, batoons of St. Paul, a kind of figured stones, of the same substance with those resembling the bristles of some Ame- rican echini, called by Dr. Plott, lapides Juda- ica.

BACULO'METRY, n. s. From baculus, Lat. and pirpov. The art of measuring distances by one or more staves.

BACULOMETRY. See GEOMETRY.

B AC U LOS US ECCI.ESIASTICUS, in some an- cient laws, is used for a bishop, or abbot, digni- fied with the pastoral staff, or crozier.

BACULUS DIVINATORIUS, or VIRGULA Di- VINA. See BAGUETTE DIVINATOIRE.

BACriUUS, or BATURIUS, king of the Ibe- rians, a people on the side of the Caspian sea. One day being hunting, he lost sight of his com- pany, through a great storm and sudden darkness ; upon which he vowed to the God of his Christian slave, that if he were delivered, he would wor- ship him alone: the day breaking up imme- diately, he is said to have made good his promise, and became the apostle of his country.

BAD', adj. ˆ Quoad, Dut. ; Sax. baed ;

BAD'LY, adv. > Ger. bos ; probably connected

BAD'NESS, n.s.) with the Lat.pejus, worse, and the Heb. bosch. Comparative worse ; superlative worst. Bad respects moral and physical quali- ties indiscriminately ; whatever offends the taste and sentiments of a rational being, is bad ; food is bad when it disagrees with the constitution ; the air is bad which has any tiling in it disagree- able to the senses or hurtful to the body; books are bad which only inflame the imagination and the passions. In one word, bad is equally descriptive of mental, moral, and corporeal dis- ease, and implies misfortune or delinquency, only from its application. Badly means in the manner of bad. It is always annexed to the action ; but never to the quality of things.

Tis good ; though music oft hath such a charm, To make bad good, and good provoke to harm.

Shaktpeare.

How goes the day with us ? O tell me, Hubert. Badly, I fear. How fares your majesty ? Id.

It was not your brother's evil disposition made him seek his death ; but a provoking merit, set a work by a reproveable baanets in himself. Id.

Thou may'st repent,

And one bad act, with many deeds well done, May'st cover. Milton.

Thus will the latter, as the former, world Still tend from bad to worse. Id.

Our unhappy fates

Mix thee amongst the bad, or make thee run Too near the paths which virtue bids thee shun.

Prior.

Daughter of Jove, relentless power, Thou tamer of the human breast,

Whose iron scourge, and tort'ring hour, The bad affright ??? afflict the best. Gray.

The sun his annual course obliquely made, Good days contracted, and enlarg'd the bad.

Dryden

BAD

365

BAD

Reading was bad for his eyes, writing made his head ache. Additon.

I did not see how the badnets of the weather could be the king's fault. Id.

There is one convenience in the city, which makes some amends for the badnett of the pavement.

Id. on Italy.

BADE' } The Preterite of bid>

Our council was not longe for to seche,

Us thought it was not worth to make it wist,

And granted withouten more avise,

And bad him say his verdict as him leste. Chaucer.

And for an earnest of greater honour, He bade me, from him, call thee Thane of Cawder.

Shakspeare. She thank'd me,

And bade me, if I had a friend that lov'd her, I should but teach him how to tell my story, And that would woo her. Id.

Thus God and nature link'd the general frame,

And bade self-love and social be the same. Pope.

But thou, O hope, with eyes so fair, What was thy delighted measure ? Still it whisper'd promis'd pleasure, And bade the lovely scenes at distance hail ! Collins.

BADAGIS, a town of Persia, in the province of Khorassan, forty miles north of Fusheng.

BADAJOZ, or BADAJOX, a large and strong town, the capital of Estremadura, in Spain. It is seated on an eminence on the south side of the Guadiana, over which there is a bridge of twenty- eight arches, and nearly 1900 feet in length, said to have been founded by the Romans. On this bridge the Portuguese were defeated in 1661, by Don John of Austria. Here are also five ancient gates, but the public buildings, with the exception of the cathedral, merit no notice : the only ma- nufacture is hats. Population 14,300. The Roman Pax Augusta, of which Badajoz is sup- posed to be a corruption, stood on much higher ground. Badajoz has always been regarded as an important barrier against Portugal; from the frontiers of which it is little more than four miles. The Goths captured it in the fifth cen- tury; the Moors in the eighth, and Alphonso of Castile reconquered it in 1230. Lord Welling- ton invested Badajoz on the 18th of March, 1812; and breaches having been made on the 6th of April, it was assaulted on the same night. General Picton established himself in the castle ; but after repeated attempts upon the town itself, the British troops were obliged to retire: the possession of the castle, however, so far com- manded the works, that the French comman- dant thought it advisable to surrender: 1200 men out of a garrison of 5000, were killed or wounded during the siege, and of the besiegers, British and Portuguese, upwards of 4000. But the possession of Badajoz, in conjunction with Ciudad Rodrigo, secured the defence of Por- tugal, and was thought well worth the price paid for it. The bishop of Badajoz, suffragan to the archbishop of St. Jago, has under his inspection a cathedral chapter, an archdeaconry, and fifty parishes. The chapter is composed of seven dignitaries, twelve canons, four prebendaries, and six subprebendaries. There are besides in the town five parish churches, seven monas-

teries, five nunneries, and five hospitals. It is the residence of the captain-general and intend- ant of Spanish Estremadura, a civil and military governor, a royal lieutenant, an alcade major, and a contador. It has fourteen companies of militia, a garrison, two forts (Cristobal and las Pardaleras), and an arsenal. It is eighty-two miles N. N. W. of Seville, forty-nine S. of Al- cantara. . Long. 6►► 47′ W., lat. 38►► 49′ N.

BADALONA, or BADELONA, a sea-port town of Spain, in Catalonia, with a citadel. Earl Peterborough landed here with the arch-duke Charles in 1704. Four miles north-east of Bar- celona. Long. 2►► T E., lat. 41►► 25′ N.

BADANACOUPY, a town of the Mysore, Hindostan, twenty-eight miles south of Serin- gapatam.

BADAR, a town of Hindostan, in the pro- vince of Bejapour, on the south side of the Krishna, thirty miles south of Mirjee. Long. 75►► 32′ E., lat. 16►► 40′ N.

BADASKY, a town of Siberia, in the go- vernment of Irkutzk, on the river Angara, eighty miles N.N.W. of Irkutzk.

BADCOCK (Samuel), the son of a reputable butcher, was born at Si> Molton, Devonshire, in 1747, and bred a dissenting clergyman. He was first pastor at Beer-Regis in Dorsetshire, and afterwards at Barnstaple, for about ten years. Here meeting with some of Dr. Priestley's publi- cations, he paid the Dr. a visit, and established a correspondence with him. Upon investigation of the subject, however, he found it impossible to embrace Unitarianism. In 1777 he removed to his birth-place, and in 1780, engaged as a writer in the Monthly Review. The controversy then agitated by Dr. Priestly, Price, and others, respecting the materiality of the soul, led him to publish his thoughts upon the subject, in a pamphlet entitled, A Slight Sketch of the Con- troversy between Dr. Priestly and his Oppo- nents; which was repeatedly quoted with great approbation. In 1781 he wrote a poem, entitled the Hermitage, and reviewed Madan's Thelyp- thora, greatly to the satisfaction of the public. In the controversy concerning the authenticity of Rowley's Poems, he took the negative side, and displayed his usual ingenuity. In the. Monthly Review for 1785, he attacked Dr. Priestly's History of the Early Opinions rela- tive to Jesus Christ, with such strength of rea- soning, that the doctor, without knowing his antagonist, complimented him in his Reply, as a formidable and respectable antagonist.' Being a- .plied to by Dr. White, to assist him in completing his Bampton lectures, he wrote the greater part of the first, third, fourth, fifth, seventh and eighth; with part of the notes subjoined to them. In 1787, having expressed an intention of conforming to the established church, he was ordained in Exeter cathedral by his friend bishop Ross ; who gave him the order of deacon and priest, on two succeeding Sundays. He died May 19th, 1788, at the house of his friend Sir John Chiches- ter, bart. in May- fair. His disposition was gen- tle, humane, and lively ; his judgment acute and comprehensive; and his literary attainments great and various. He was equally eminent as a preacher and a writer.

BADDAMMY, a town ofllindostan, in the province of Bejapour, in the territories of the Mahrattas. It is a place of some strength. Thirty miles south-east of Merritch. Long. 74►► 54 E.,lat. 16►► 6′ N.

BADDERLOCKS, in natural history, a Scot- tish name given to the fucus esculentus, or eatable sea-weed. It is about four feet long, and seven or eight inches wide, but varies in length from three yards to a foot, and in breadth, from a foot to two inches ; the substance is thin, membranaceous, and pellucid ; the color, green or olive. This fucus is eaten in the north of Scotland both by men and cajtle, and is in its greatest perfection in September; that which is eaten by the common peopje about Edinburgh is the F. PALMATUS, DULSE, or DILS, which see.

BADEAUT, LOCH, or, as it is erroneously spelt in some maps, BADWELL, a good harbour of Scotland, on the coast of Sutherland, in the parish of Edderachylis; where shipping of all sizes can enter, and moor close to the land, in perfect safety.

BADEN, in geography, formerly a margra- vate of Germany, in the circle of Suabia, stretch- ing along the east bank of the Rhine, and forming, at present, the most important part of a grand duchy of the same name. It consisted of two divisions, viz. Baden-Baden, and Baden-Dur- lach ; of which the former, and part of the latter, formed a compact territory, surrounded by Spire, \Virtemberg, the bishopric of Strasburg, and the Khine. The country is for the 'most part level, but intersected or the east by branches of the hilly Schwartzwald, or Black Forest. The most considerable part of Baden-Durlach lay disjointed and insulated towards the south ; and that part in the upper margraviate lying in the direction of Bale, was covered with mountains, except in the immediate vicinity of the Rhine. These divisions, taken together with the county of Eberstein, include a space of 1186 square miles, and a population of more than 180,000 inhabitants, independent of the military. Within the limits of this margravate were seventeen towns, fourteen boroughs, and upwards of five hundred villages and hamlets ; the whole yield- ing an annual revenue of nearly ►►150,000 ster ling. The eouTitry abounds with wood, wine, iron, cobalt, arid silver. The Rhine which flows over tin; whole surface, from north to south, sup- plies abundance of excellent salmon. Whilst the flax, hemp, linen, and fiuits, which are found in considerable quantities, not only supply the aggregate home consumption of the inhabitants, but form important articles of exportation. Silk has also been cultivated hen- ; but not with any great advantage. The principal manufactures ►►►ire of cloth, stuffs, stockings, jewellery, See. There is also one of steel, at Pfortzheim, and one of beautiful earthenware at Durlach.

The house of Baden is descended from Her- man, second son of Berthole! I. duke of Zahrin- gen, who died A.I). 107-1. About the middle of the sixteenth century it split, into the two lines of Baden-Baden, and Baden-Durlach, in which state it continued for sometime; but, on the ex- tinction of t!;e former, in 1771, the latter suc- cutdcd to the whole inheritance. At

the diet of the em"!'-" ►► ' "u-frave of Baden had three

votes in the council of princes, and one In the bench of counts, in virtue of his title as count of Eberstein. Before the memorable revolution in France, this prince possessed the following terri- tories : his patrimonial lands, different territories in Suabia and Bohemia, portions of the county of Sponheim-Graftenstein, together with the bailiwic of Roth on the French side of the Rhine, the lordships of Rodemachern and Hespringen, in Luxemberg, and several estates in Alsace; but when the possessions on the left bank of the Rhine were ceded to France by the peace of Luneville, concluded on the 9th of February, 1801, the German princes were indemnified for their losses by the secularisation of ecclesiastical possessions ; the reduction of the imperial cities, and other alterations on the right hank of the Rhine, and the margrave of Baden on that occa- sion acquired the bishopric of Constance, part of Bale-Strasburg, and Spire, several bailiwics of the Lower Palatinate, and in Hesse, the lord- ship of Lahr, a number of secularised abbeys, and several imperial towns, together with the title of elector, and three additional votes at the diet His augmented possessions at this time contained a territory of 2770 English square miles, and a population of 410,000 'inhabitants, yielding in annual revenue ►►372,000 sterling; and, in the year 1803 were separated into three divisions, viz. the margraviate, the palatinate, and the upper principality.

When the coalition was formed against France in 1805, Bavaria, Wirtemberg, and Baden, were the allies of Buonaparte ; and after the defeat of the confederated powers at Austerlitz had led to the peace of Presburg. and the subsequent form- ation of the Rhenish confederation in 1806, these states participated in the ceded possessions. Baden was erected into a grand duchy, and in exchange for the towns and territory of Biberach, which had been reduced from its imperial dig- nity, and assigned to Baden, in 1802, and now ceded by that government to Wirtemberg, she received the following accessions, the towns and territories of Billiugen and Baeunlingen, the greater part of the Brisgau, the principality of lleitersheim, the county of Bondorf, the district of Ortenau, the commandery of Bengen, and the possessions of the provincial nobility ; also the sovereignty over a great part of Furstenberg, Salm-Krautheim, and Loevenstein-Werheim, as well as over the whole of the Clettgau and Thengen. The county of Nellenburg was shortly aftewards added, together with several adjacent territories, and by means of new acquisitions and interchanges, the detached districts on the lake of Constance were rendered contiguous to the other dominions. These acquisitions raised the importance of Baden, and were all guaranteed to the grand duke, in 1815, by the Congress at Vienna.

Baden, in its present state, therefore, remains to be considered as a grand

*duchy of Germany, including the territories already described. Its division into a landgraviate, a margraviate, and a palatinate, or the provinces of the Upper, Middle, and Lower Rhine, was superseded in 1809, two years after its commencement, by the following distribution into nine circles, thus peopled, according *~ Mr. Hassel's statistics :*

BADEN.

367

Vo.

Circles.

Population.

Xo.

Chief Towns.

Population.

1 0

The Lake (Seekreis) . .

89,604 72,735

1 2

Constance . ... Villingen

4,503 3 316

3

116,954

3

Lorrach

1,906

4

125,867

4

Freyburg

10 108

5

117,640

5

Offenburg

2,888

o

The Murg

85,112

6

Rastadt ....

4 204

7

The Pfinz and Enz

131,518

7

Durlach

3 916

166,818

a

Manheim ....

18,213

M

The Alaine and Tauber

95,382

9

Wertheim

3 227

1,001,630

52,281

For the general superintendance of the circles are established two divisions of the civil govern- ment, at Manheim and Freyburgh, besides which each of the circles individually has a director and two counsellors of its own. For the adminis- tration of justice there are inferior courts, and above them three courts of appeal at Freyburg, Rastadt, and Manheim, together with an upper court at the town last mentioned, analagous to what is called in France the ‘ Court of Cassation.’ The French code, also commonly called the code 3f Napoleon, was introduced during the usur- pation of Buonaparte, and is still in force, with a few modifications. The seat of the government is held at Carlsruhe, where the Grand Duke re- sides, under the designation of Royal Highness. There are four ministers connected with the exe- cutive part of government, viz. those of the interior, finance, justice, and war. The legis- lative part is conducted by the Baden cabinet, called the ministerial conference, of which the Grand Duke, hereditary duke, or, failing both, the oldest minister is president. The government has of late manifested considerable solicitude for the welfare of the people, by the formation of roads, the abolition of feudal vassalage, the establishment of an excellent system of forest laws, and above all, by the erection and endow- ment of schools, academies, and public libraries. The principal of these are at Heidelberg, Man. heim, Baden, and Carlsruhe, Heberlingen, Offenburg, Rastadt, Bruchsal, &c. Religious toleration is also universally granted, although the religion of the Grand Duke and national establishment is Lutheranism.

M. Hassel thus enumerates the different re- ligions : ⬛⬛⬛

Roman Catholics 620,000

Lutherans 305,600

Calvinists 61,000

Jews 15,080

Mennonites 1,290

The surface of Baden is beautifully diversified by every variety of landscape, hill and dale, plain, and mountain, breaking on the sight in regular succession. The climate is agreeable, and the soil, generally speaking, fertile; the only part incapable of cultivation being a portion of the Black Forest, in Brisgau. The country is intersected by the Maine and the Neckar, and bounded on the west by the Rhine ; tributary to these are numerous smaller rivers and streams,

from several of which the circles derive their names. The country bordering upon Switzer- land is mountainous, and a chain runs from the confines of that division through the southern part of Baden into the kingdom of Wirtemberg. It afterwards forms a part of the separating boun- dary between them, and is joined by another chain stretching from east to west, over the whole breadth of the southern region.

Perhaps one of the most beautiful portions of this grand duchy is the country lying round Heidelberg and its suburbs. The town itself ex- hibits a romantic site, mild air, delightful pros- pects, curious and extensive subterranean walks, which have been lately closed, an ancient elec- torial palace ; but the environs, if possible, are still more beautiful. Manheim is also well situ- ated, and forms a delightful appearance at the confluence of the Neckar and the Rhine. At the commencement of the seventeenth century, it was only a pleasant village, but being shortly after fixed upon as the residence of the elector, and seat of the court, it became a flourishing place, although when the court was removed, in 1777, the town considerably declined. The palace of the Grand Duke, the tower of the ob- servatory, the custom house, churches, and other public buildings, together with the gallery of paintings, cabinet of antiquities, he. are objects worthy of notice ; as are also the bridge of boats over' the Neckar, and the flying bridge over the Rhine. The horses of Baden are an excellent breed. In other respects the domestic and wild animals resemble those of the other states of Germany.

BADEN, a town of Germany, in the grand duchy of the same name, formerly the capital of the upper margraviate, but included, since the the year 1810, in the circle of the Murg. The town is seated among hills, on rocky and uneven ground, which renders the streets inconvenient and crooked. It derives its name from its baths, the word bad, in German, signifying bath. These baths were known to the Romans before the

Christian era, and are supplied by upwards of 300 mineral springs, the waters of which are strongly impregnated with sulphur, salt, and alum. Some of these springs are hot, and are accounted good in nervous cases. Baden con- tains a population of 2000 inhabitants, and is now the head of an upper bailiwic. It has a lyceum, with several flourishing manufactures of earthenware, potash, candles, soap, and leather. The ancient castle, now in ruins, stand-

ing on a neighbouring eminence, overlooks the river Oelbach, commanding the pleasing and extensive prospects of a beautiful wine country. The town is twenty-two miles N. E. of Strasburg, and forty S. S.W. of Ileidelburg. Long. 8►► 18′ E., lat. 48►► 46′ N.

BADEN, a small town of Lower Austria, seated on the rivulet of Schwocha, in a plain not far from a ridge of hills which runs out from the mountain Cetius. It is much frequented by the people of Vienna, and the neighbouring region, on account of its warm baths, which are said to be twelve in number, and beneficial in disorders of the head, as also for the gout, dropsy, and most chronic distempers. It contains three churches, 250 houses, and 1500 population, is surrounded by walls, and is twelve miles S.S. W. of Vienna. Long. 16►► 14′ E., lat. 48►► 2′ N.

BADEN, a district of Switzerland, in the can- ton of Aargau, bounded by Suabia on the north, Zurich on the east, Lucerne on the South, and Aargau proper on the west. It is thirty miles in length, and from eight to twelve in breadth, in- cluding a territory of 176 square miles ; and, according to an enumeration made in 1803, con- tained nearly 47,000 inhabitants, which have since increased considerably. This country is one of the finest in Switzerland, and is watered by three navigable rivers, the Limmet, the Russ, and the Aar. It is divided into three parts and eight bailiwics, producing great abundance of corn, fruit, and wine. Before the peace of 1712, this district formed a separate canton, but when the articles of treaty were concluded between Zurich and Berne, it was divided among these cantons and that of Claris. The two first seizing upon seven-eighths, and the last the one-eighth then remaining. In the constitution of 1798 it was restored to its original independence, but in the re-organization of the cantons by the emperor Napoleon, in 1808, it was united to that of Aar-►►►gau, in connexion with which it has ever since remained.

BADEN, the capital of the above district, is a small town containing about 1700 inhabitants, and carrying on a considerable trade. It is seat- ed on

the side of the Linnnet, in a plain flanked by tuo lulls, between which the river runs. This city owes its rise to its baths, which were famous before tin; Christian era, and known to the Ro- mans by the name of Thermae Helvetica. Seve- ral monuments of antiquity have been found here, particularly in 14‘20; when the inhabi- tants, on opening the large spring of the baths, found statues of several heathen gods, made of alabaster, Roman coins, of Augustus, Vespasian, Decius, &c. made of bron/e, and several medals of the Roman emperors, of iiold, silver, copper, and bronze. There are two churches in Baden; one of which is collegiate, and makes a good ap- pp.inmce, and the other a monastery of the Capuchins, near the touu- house. The inhabi- tants are rigid Roman Catholics, and formerly behaved in a most insolent manner to the Pro- te.>tunts, but they are now obliged by their mas- ters to be more submissive. In this town were held formerly the general assemblies of the can- ton, who met in a handsome room, fitted up for their reception within the Capuchin’s monastery;

here, too, the negociations for peace between France and the empire, which had been opened at Rastadt, were brought to a close, on the seventh of September, 1714. The town at present chooses its own magistrates, and enjoys other privileges. The governor resides in a fine castle on the other side the Limmet, erected after the destruction of the old edifice in 1712; a hand- some wooden bridge hangs over the river, form- ing a beautiful entrance to the castle, and in front of this magnificent residence is a stone pillar erected in honor of Trajan, who paved a road in this country, eighty-five Italian miles in length. The baths, which are on each side the river, are a quarter of a league from the city. Joining to the small baths there is a village, and to the village a town, which may pass for a second Baden. It is seated on a hill, of which the ascent is steep. There the baths are brought into inns and private houses, by means of pipes, which are about sixty in all. There are also public baths in the middle of the town, from a spring which rises in the street, where the poor bathe gratis, but they are exposed quite naked to all that pass by. AH the baths are hot, and one to so great a degree as to scald the hand. The springs, which originate in a place called Ort-Zum-Baden, are eight in number, and are impregnated with a great deal of sulphur, accom- panied with a little alum and nitre. The waters are used for drinking, as well as bathing, and are said to cure all diseases from a cold cause, head-aches, vertigos, &c. They strengthen the senses, cure diseases of the breast and bowels, asthmas, and obstructions, and are peculiarly excellent for diseases of women. Baden is about fourteen miles N. W. of Zurich, twenty-seven S. E. of Basle. Long. 8►► 12′ E., lat. 47►►-24′ N.

BADEN, a parochial village of Switzerland, in the Valais, jurisdiction of Leuck. Here is the celebrated bath commonly called the bath of Leuck, or Valais, which is of heat sufficient to boil an egg, and the water of which is

used by the inhabitants both for the purposes of bathing and drinking.

BADENOCH, a large district of Inverness- shire, of which it is the most easterly part, bounded by Inverness on the north, Moray on the east, Athol on the south, and Lochaber on the west. It extends about thirty-three miles in length from east to west, and twenty-seven from north-east to south-west, where it is broadest. It has no considerable town, and is very barren and hilly, but abounds with deer and other kinds of game.

BADENS (Francis), a historical and portrait painter, was born at Antwerp in 1751, and first initiated in the art by his father. Having visited Rome, he formed an excellent taste for design, and a manner exceedingly pleasing. On his re- turn, he was usually distinguished by the name of the Italian painter. His touch was light and spirited, and his coloring warm ; and he was the first who introduced a good taste in coloring among his countrymen. While his acknowledged merit was rewarded with every public testimony of esteem, he received an account of the death of his brother, who had been assassinated on a journey ; and the intelligence affected him so

violently, that it occasioned his own death sud- denly, in 1603.

BADERALLY, a town of Hindostan, 'in the province of Bejapour, seventeen miles south-west of Raioaug.

BADEW (Richard de), the original founder of Clare-hall, Cambridge. He was born at Badow, in Essex ; and in- 1 326 was chancellor of Cam- bridge, when he laid the foundation of a building to which he gave the name of University-hall. This being afterwards burnt down, was rebuilt by a daughter "of Sir Gilbert de Clare, earl of Gloucester, and named Clare-hall.

BADEY, a town of Persia, in the province of Khorassan, 140 miles north-west of Herat.

BADGE, v. a. & n. s. A word of uncertain etymology; derived by Junius from bode or bade, a messenger, and supposed to be cor- rupted from badage, the credential of a mes- senger; but taken by Skinner and Minshew from bagghe, Dirt, a jewel, or bague, Fr. a ring. It seems to come from bajulo, Lat. to carry, The substantive denotes a mark ; or ornament worn to show the relation of the wearer to any person or cause. It also signifies a token of rank or character. An outward and visible dis- tinction, either

honorable or disgraceful.

But on his breast a bloody cross he bore, The dear resemblance of his dying lord ; For whose sweet sake that glorious badge he wore.

Spenser. A savage tigress on her helmet lies ;

The famous badge Clarinda us'd to bear. Fairfax.

Mark the badge of these men, then say if they be true. Shahspeare.

Might I but know thee by thy household badge. Id.

Sweet mercy is nobility's true badge. Id.

Your royal father's murdered

Oh, by whom?

Those of his chamber, as it seem'd had done 't ;

Their hands and faces were all badg'd with blood,

So were their daggers. Id.

Let him not bear the badges of a wreck,

Nor beg with a blue table on his back. Dryden.

The outward splendour of his office is the badge and the token of that sacred character which he inwardly bears. Atterbury.

BADGE, in naval architecture, a sort of orna- ment placed on the outside of small ships, very near the stern, containing either a window for the convenience of the cabin, or a representation of it. It is commonly decorated with marine figures, martial instruments, or such like emblems.

BADGE'LESS, adj. From badge and less. Having no badge.

Whiles his light heels their fearful flight can take,

To get some badgeless blue upon his back,

Bishop Hall's Satires.

BA'DGER, n. s. Perhaps from the Lat. bajulus, a carrier ; but by Junius derived from the badger, a creature who stows up his provision. One that buys corn and victuals in one place, and carries it unto another.' ◆◆◆

Cowel.

BA'PGER, n. s. From bedour, Fr. melis, Lat. An animal that earths in the ground, and used to be hunted.

That a brock, or badger, hath legs of one side

shorter than the other, is received not only by theorists

and unexperienced believers, but most who behold

them daily. Brown.

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BADGER, in zoology, the English name of a species of ursus. See URSUS.

BADGER-BAITING, or BADGER-HUNTING. The badger has suffered more perhaps from vulgar prejudices than any other animal. He has been accused of destroying lambs and rabbits: the first unquestionably without foundation, and it is uncertain whether the last charge be better supported; for many naturalists maintain that his sole food consists of roots, fruits, grass, in- sects, and frogs. From this general and double accusation, however, the harmless badger has been selected to make sport, as it is called, for the vulgar, in both hunting and baiting.

Hunting the badger is in general only perform- ed by moonlight : the badger, from his natural habits, being never to be found above-ground by day. In this sport the hunters are obliged to oppose art to cunning, and obtain by stratagem what they cannot effect by strength. At a late hour in the evening, when the badger is natu- rally concluded to have left his kennel or his castle in search of food, some of the party, as previously adjusted, proceed to place a sack at length within the burrow, so constructed that the mouth of the sack directly corresponds with the mouth of the earth, and is secured in that posi- tion by means of a willow hoop, which, from its pliability, readily submits to the form required. This part of the business being completed, the parties withdrawn, and the signal whistle given, their distant companions lay on the dogs, either hounds, terriers, lurchers, or spaniels, encourag- ing them through the neighbouring woods, cop- pices, and hedge-rows ; which the badgers abroad no sooner find, than being 'alarmed, and well knowing their inability to continue a state of warfare so much out of their own element, in- stantly make to the earth for shelter; where, for want of an alternative, and oppressed with fear, they rush into certain destruction, by entering the sack : being entangled in which, they are soon secured by those who are fixed near the spot for that purpose. If the badger escape by the ill-construction or accidental falling of

the sack, and safely enter the earth, digging him out is not only a very laborious but very precarious attempt ; for the badger, from instinctive inge- nuity, will be generally found to have formed his retreat before he can be reached : to render which the more easy, he usually constructs his kennel among the roots of some old pollard, in the banks of moors, or underneath some hol- low tree ; from the spreading root branches of which the burrows run in such various and per- plexing directions, that his assailants are often compelled, after tiring themselves by digging fifteen or twenty feet, to relinquish the pursuit ; corroborating the opinion of the common people, that in a loose and sandy soil badgers can make a way as fast as their hunters can pursue them : whence drawn-battles in such situations are verv common results.

Badger-baiting is a different sport, and if pos- sible of a lower description. It consists in attacking the animal at a distance from his burrow, with dogs of almost any kind ; but must successfully with the terrier. The badger is so rapid in his motions, that the dogs are often desperately

wounded, and compelled to give up the contest. The looseness and thickness of the badger's skin are admirably contrived for his advantage; in consequence of the latter, and especially in con- junction with the coarseness and toughness of his hair, it is difficult for the dogs to lay hold of nim ; and in consequence of thp former, IIP finds great facility of escaping from their grasp when ⬜⬜⬜⬜⬜⬜hey have succeeded. These sports have given rise to a very expressive proverb of ' badgering a /nan with a request' for payment of debt.;, &c.'

BA'DGER-LEGGED. From badger and legged. Having legs of an unequal length, as the badger is supposed to have.

His body crooked all over, big-bellied, badger-legged, and his complexion swarthy. L' Estrange.

BADGUM, a town of Hindostan in Dowlatabad, six miles S. S. W. of Oudighir.

BADHUNTOUL; Gael, a den of refuge; a place in the parish of Fordice, in Banffshire, in former times used as a place of refuge from the Danish invasions.

BADIA, in conchology, 1. A species of cyprea having an oblong gibbous shell. ••• Gmelin. 2. A species of helix, called by Born, helix ungulina; and, 3. A species of patella.

BADIA (D.), a Spaniard, who devoted himself, in 1803, and four or five following years, to the profession of Mahommedanism, as a means of exploring Mahommedan countries. He assumed the name of All Bey el Abassi, and submitted, it is said, to the most distinguishing rite of Islamism, the better to pursue his plans. Mr. Burckhardt. writes thus, respecting him, from Aleppo: 'lie called himself AH Bey, and pro- fessed to be born of Tunisian parents in Spain, and to have received his education in that country. Spanish appears to be his native lan- guage, besides which he spoke French, a little Italian, and the Moggrabeyan dialect of Arabic, luil badly. He came to Aleppo by the way of Cairo, Yaffil, and Damascus, with the strongest letters of recommendation from the Spanish go- vernment to all its a-_ruits, and an open credit upon them, lit1 seemed to be a particular friend of the I'rince of I'eace, for whom he was col- lecting antiques : and from the manner in which it \as known that he was afterwards received by the Spanish ambassador, at his arrival at Con- stantinople, he must, have been a man of dis- tinction. The description of his figure, and what is related of his travels, called to my re- collection the Spaniard Badia, and his miniature in your library. He was a man of middling si/e, lonu'ihin head, black eyes, large nose, long bl.ick heard, and feet that indicated the former wearing of tiuht shoes, lie professed to have (rave'iUil in Ijarl.ary, to have crossed the Lybian ilt> >ert, hctueei! Harbary and Kirypt, and from Cairo to ha\e '.;one to .Mecca and back. He travelled \ith eastern magnificence, but here he '.\a< lather Miy of showing himself out of doors : he ne\i'i \\alktd out Imt on Fridays, to the pra\ei> of noon in the great, mosque. One of the before-mentioned dervises told me that there had in en a great deal of talking about this All Bey, at Damascus and llamar: they suspected him of beiiii; a Christian, but his great liberality .si.'d the pruning letters which he brought to all

people of consequence, stopped all further in- quiry. He was busily employed in arranging and putting in order his journal during the two months of his stay at Aleppo.' His travels were published at London and in Paris, in 1814, in 2 vols. 8vo. under his assumed name. He is now known to have been an agent of Godoy, the Prince of the Peace, employed at the insti- gation of Napoleon. He died in Spain shortly after his return to Europe.

BADIA, LA, a town of Italy, on the Adigetto, at the place where it branches from the Adige. It is small and open, but well-built, populous and wealthy ; and was formerly called Castello Piazzone, having two castles. The Adige is here crossed by a handsome bridge five miles from Legnano, and fifteen W.

S. W. of Rorigo.

BADIAGA, in the materia medica, the name of a sort of spongy plant, common in the shops of Moscow and some other northern kingdoms. It is used to take away the livid marks, occasioned by blows and bruises, which the powder is said to do in a night's time. We owe the know- ledge of this medicine, and its history, to Bux- baum. He observes, that the plant is always found under water, and is of a very peculiar nature. It somewhat resembles the alcyonium, and some- what the sponge, but differs from both, it being full of small round granules, resembling seeds. It is of a loose, light, and spongy structure ; is made up of a number of fibres of an herbaceous matter, and is dry, rigid, and friable between the fingers. Such is the generic character of the badiaga, of which this accurate observer has found three different species. Linnaeus makes it a species of sponge.

BADIANA, BAUIANE, or BANDIAN, the seed of a tree which grows in China, and smells like anise seed. The Chinese, and the Dutch in imitation of them, sometimes use the badiana to give their tea an aromatic taste.

BADIGEON, in joiner work, saw-dust mixed with strong glue, wherewith they fill up the chaps and other defects in the wood after it is wrought.

BADIGEON, in statuary, a mixture of plaster and free-stone well ground together, and sifted ; used by statuaries to fill up the little holes, and repair the defects in stones, whereof they make their statues and other work.

BADILE (Antonio), history and portrait painter, born at Vienna in 1480, was an eminent artist : but derived greater honor from having two such disciples as Paolo Veronese and Baptista Zelotti. He died in 1560. His coloring, especially of his carnations, was beautiful ; and his portraits preserved ,the perfect resemblance of real life.

BADINAGE, foolery, buffoonery.

BADIS, a fortress of Livonia, subject to Russia, twenty miles east of Revel.

BADITES, in botany, the Nymphnea, or clava Herculis : the root of which, according to Mar- cellus Empiricus, bruised and eaten with vine- gar for ten days by a boy, makes him an eunuch without excision.

BADKIS, or PASIN, a town of Persia in the province of Khorassan, thirty-six miles north of Herat. Long. 60►► 27′ E. lat. 3.5►► 30. N.

BADONG, a district of the island of Balli, where the Dutch had a small settlement, after- wards taken by the British.

BADOO, two towns in the kingdom ot Woolli, in Africa. They both united their strength in enforcing the payment of custom from Mr. Park.

BADOUCE, in natural history, the East Indian name of a fruit, very common in that part of the world. It is round, and of the size of one of our common apples ; yellow on the outside, and white within. It resembles the mangoustan; but its pulp is more transparent; its taste is very agreeable, and has some resem- blance to that of our gooseberries.

BADRACHILLUM, or the SACRED MOUN- TAIN, a town of Hindostan, in Golconda, on the north-east side of the river Godavery, consisting of 100 huts. Here is a pagoda of great celebrity. Distant seventy-two miles N.W. of Rajamun- dry, 150 east of Hydrabad, and 134 from Vizagapatam.

BADROWLY, a town of Hindostan, in Guze- rat, sixteen miles east of Surat.

BADRYCAZRAM, an extensive mountainous district on the northern borders of Hindostan, between the thirty-first and thirty-third degrees of northern latitude; very unproductive and thinly inhabited.

BADSHIFT BAY; a bay on the coast of Pa- tagonia, in the straits of Magellan. Long. 74°° 24”’ W. lat. 53°° 35 S.

BADUEL (Claude), a French protestant di- vine, born at Nismes. He went to Switzerland in 1557, where he taught philosophy and mathe- matics, and exercised his ministry till his death in 1561.

BADULATO, a town and territory of Naples, in Calabria Ultra, extremely productive in wine, oil, honey, turpentine, cotton and silk. Fourteen miles S. S. E. of Squillace.

BADULE, a town of Ceylon, fifty-four miles S. E. of Candy.,

BADY, a large town of Africa, in the kingdom of Woolli, governed by an independent chief, under the appellation of Faranba.

BAEA, in botany, a genus of plants, of the class diandria, and order monogynia. Its ge- neric character is COR. ringent, the tube very short, upper lip flat, tridentate; lower lip flat, bilobate : caps bilocular, quadrivalvular, contorted : CAL. quinquepartite, equal.

BAECKEA, in botany, a genus of the octan- dna order, and monogynia class of plants, named after Abraham Baecka, a friend of Lin- naeus. The calyx is a permanent perianthium, consisting of a single funnel-shaped leaf, cut into five fragments at the brim; the corolla con- sists of five roundish petals inserted into the calyx; the pericarpium is a globose capsule, made up of four valves, and containing four cells, in which are a few roundish

angular seeds. The species are shrubs.

BAEDOO, an extensive kingdom of central Africa, south of Tombuctoo, and east of Bam- barra, to which latter country it is tributary. It is traversed by a river called the Ba Nimma, des- cending from the mountains of Cong. The inte- rior is little known.

BAELAMA, in zoology, the Arabian name, according to Forskal, of a species of clupea.

BAENA, or VAENA, a town of Spain, in the Andalusian province of Cordova, surrounded with walls, and containing four parish churches, five religious houses, and 4800 inhabitants. Here are some excellent salt works. It is eighteen miles E. S. E. of Cordova.

BAEOBOTRYS, in botany, a genus of plants, of the class pentandria, and order monogynia. Its generic character are COR. tubulose, quinque- fid : CAL. double, superior; exterior of two leaves ; inferior campanulate quinquedentate. Berry unilocular, many-seeded. VVilldenow describes two species ; one, a native of Arabia, is figured by Mart. Vahl. Symbola Botanica, tab. 6.

BAERSUIS, or VEKENSTIL (Henry), a printer and mathematician of the sixteenth century. He settled in Louvain, where lie published Tables of the Longitudes and Latitudes of the Planets, in 1528.

BAERWALDE, or BARWALDE, a town of New Mark of Brandenburg, in the Prussian states, circle of Konigsburgh, population 1500. Here Gustavus Adolphus entered into a secret treaty with France in 1631. It is thirteen miles N.N.W. of Custrin, and forty-two E.N.E. of Berlin.

BZETERRjE, an ancient town of the Terto- sages in Gallia Narbonensis, on the east bank of the Obris. It is now called Besiers.

BrETICA, a province of ancient Spain, so called from the river Baetis. It was bounded on the west by Lusitania ; on the south by the Medi- terranean, and Sinus Gaditanus ; on the north by the Cantabric sea, now the Bay of Biscay. On the east and north east its limits cannot be so well ascertained, as they are known to have been in a continual state of fluctuation, each petty monarch having had an opportunity of encroach- ing upon his neighbour. The province was divided into two by the river Bcetis, on the side of which, towards the Anas, were situated the Turdetani, from whence the kingdom was some- times called Turdetania, though more generally Baeturia. On the other side, along the Mediter- ranean, were situated the Bastuli, Bastetani, and Contestant. The whole province of Baetica, according to the most probable account, is con- tained in what is

now called Andalusia, part of the kingdom of Grenada.

B.&TIS, a famous river of ancient Spain, after- wards called Tartessus, and now Guadalquiver, or the Great River.

B/ETOLO, a town of ancient Spain, in th►► Terraconensis ; now Badelona, in Catalonia.

BALTURIA. See BJETICA.

BJETUS, in ichthyology, a name' given by Aristotle, and others of the ancient Greeks, to the fish called by the Latin writers cottus ; par- ticularly to that species calle'4 by us the bull- head, or miller's thumb.

BˆLTYLIA, anointed stones, worshipped by the Phoenicians, by the Greeks before the time of Cecrops, and by other barbarous nations. They were commonly of a black color, and con- secrated to some god, as Saturn, Jupiter, the Sun, &c. ►►► Some are of opinion that the origin of this practice is to be derived from the pillar of

stone which Jacob erected, and near which he worshipped, at Bethel. These baetylia were much the object of the veneration of the ancient hea- thens. Many of their idols were no other. In reality, no sort of idol was more common in the eastern countries, than that of oblong stones erected, and hence termed by the Greeks, Kiovig, pillars. In some parts of Egypt they were planted on both sides of the highways. In the temple of Heliogabalus in Syria, there was one pretended to have fallen from heaven. There was also a famous black stone in Phrygia, said to have fallen from heaven. The Romans sent for it, and the priests belonging to it, with much ceremony, Scipio Nasica being at the head of the embassy. The priests of Cybele carried a bcetylion on their breasts representing the mother of the gods.

B/ETYLOS, the same with B.ETYLION ; plural, BˆTYI.I.V. See last article.

BAEZA, or BAECA, a town of Spain, in the province of Jaen, Andalusia. Its streets and squares are handsome, and it was in former times a place of considerable importance, the residence of a Moorish king. It was subsequently a bishop's see, and the seat of a university. At present it is

fallen into decay, but has still two chapter.—, several parish churches and cloisters, a conviridor, a society under the title of economi- .rood tanneries, and a population of l/i.OOO. It is sovenU miles N. N. E. of Cordova. Lou. :;'-' 3.V \V., hit. o83 4′ N.

MM/A, a city ot' the province and government of (juixos a-.; i ,M;ie;r;, in the kingdom of Quito. It \a> formerly rich and populous, but has been wasted h\ the Indians. Eat. 2G3 S.

iiAM-A, or !!;>!(), a sea-port on the Grain Coif-t of A'u'ica, v, Inch carries on a considerable trade in pepper. Eon-. ►►J ,V2′ \V., hit. 5►► 10′ N.

I)\i iv. , a .-"a-poi't town on the west coast of tin i !►►►.![image] of (. '\ j.rus, the ancient 1'aphos, situated on a rod v eminence, close to the sea. Its har -. ;l nil \itli sand, and is generally avoided i;y mariners. l)ecause of its dangerous approach, and from its having no shelter from the violence of the winds. The Turks have built ni t!ie point, of a rock to the south-west, .fended by artillery; and it is the resi dence of ;i Turkish a_a. Of several Christian churches onU one remains, in which the Greeks i still have a bishop here, suffragan ot the arch' i>hop of Nicos.a. Pieces of fine rock crystal are .ld hen under the name of Baffa diamonds: amianthus al>o, of superior quality, is found in the nei.h'.our'iooil. It is called cotton ston" i'V tiie natives, \anous ruins and some antiquities are >calteivd o\er tiie vicinity of Jit,, i, in .on whii-'u are many highly polished hla.kish nmrl 1-column-;, traditionally supposed by the 'ii I'litants to 1m e been t'.e materials of the palace Aphroditis. I'unher cast, others of 'i note the situ of a temple. There ->, cur out of the luck a subterraneous church, dedicated to the .even sleepers, and a lame exca vation, conjectured to have been a cistern. I .one. .VJ" I!1/ 1-;., 1 it. :j-T 48′ N.

>M i .'.. ('AIM . a cane on tiie south-west coast i oi i:\prus. Long. :)2►► 18′ E., lat.

;.' t ~'7′ ,.

li.vnAS. a cloth made of

coarse white cotton thread, which comes from the East Indies. That of Surat is the best.

BAFFIN'S BAY; a large gulf or bay of North America, lies between seventy and eighty degrees of north latitude. It opens into the Atlantic ocean through Baffin's and Davis's straits, between Cape Chidley, on the Labrador coast, and Cape Farewell on that of West Green- land; both of which are in about the sixtieth degree of north latitude; and abounds with

whales and walrusses. On the south-west side of Davis's straits it has a communication with Hudson's bay, through a cluster of islands, in lat. 74□□ 20′ ; it communicates with Sir James Lancaster's sound, through which Captain Parry passed triumphantly, and discovered Barrow's straits, Prince Regent's Inlet, &c.

BAF'FLE, v. a. & n. s. } In Fr. befler, from

BAF'FLER, n. s. ybuffle, an ox, and

BAF'FLED, adv. j signifies to lead by

the nose as an ox ; that is, to amuse or disap- point ; to perplex by a feint. Its general accep- tation is eluding the schemes of others by dex- trous management. It is sometimes explained by the words to defeat, to disconcert, and con- found. Dr. Johnson employs these terms in his definition of it. But Crabbe has well distin- guished them, and given them different shades of meaning in their application. Baffle expresses less than defeat ; defeat less than confound ; and disconcert less than all. Obstinacy, persever- ance, skill, or art, baffles ; force or violence de- feats; awkward circumstances disconcert; the visitation of God confounds.

Where thou wilt, lad, I'll make one ; an I do not, call me villain, and baffle me. Sl-aktpeare.

Go, baffled coward, lest I run upon thee. Milton.

They made a shift to think themselves guiltless, in spite of all their sins ; to break the precept, and at the same time to baffle the curse. South.

He hath deserved to have the grace withdrawn, which he hath so long baffled and defied. Atterbury.

Experience, that great baffler of speculation, assures us the thing is too possible, and brings, in all ages, matter of fact to confute our suppositions.

Government of the Tongue. Etruria lost,

He brings to Turnus' aid his baffled host. Dryden

When the mind has brought itself to close thinking, it may go on roundly. Every abstruse problem, every intricate question, will not baffle, discourage, or break it. Locke.

Now shepherds . to your helpless charge be kind, Raffle the raging year, and fill their pens With food at will. Thomson.

BAG', v. a. & n. A sack, pouch, or purse Either artificially constructed, or the work of nature.

Cousin, away for England ; haste before, And, ere our coming, see thou shake the bagt Of hoarding abbots ; their imprison'd angels

Set diou at liberty. Shakspenre.

Sing on, sing on, for I can no'er be cloy'd ;

So may thy cows their burden'd bags distend.

Dryden

Two kids that in the valley stray'd I found by chance, and to my fold convey 'd : They drain two bagging udders every day. Id.

Like a bee, bagg'd with his honey'd venom,

He brings it to your hive. Id. Don Sebastian,

BAGDAD.

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Once, we confess, beneath the patriot's cloak, From the crack'd bag the dropping guinea spoke.

Pope.

We saw a young fellow riding towards us full gal- lop, with a bob wig and black silken bag tied to it.

Addison,

BAG, in commerce, a term signifying a certain quantity of some particular commodity ; a hag of almonds, for instance, is about 300 weight ; of anise seeds, from 300 to 400 ; of pepper, from 1►► to 300; of cotton yarn, from 1\ to 4j, &c. Bags are used in most countries to put several sorts of coin in, either of gold, silver, brass, or copper. Bankers, and others, who deal much in current cash, label their bags of money, by tying a ticket or note at the mouth of the bag, signify- ing the coin contained, the sum total, its weight, and of whom it was received. Tare is allowed for the bag.

BAG, in farriery, is when, in order to retrieve a horse's lost appetite, they put in an ounce of assafcetida, and as much powder of savin, into a bag, to be tied to the bit, keeping him bridled for two hours several times a-day ; as

soon as the bag is taken off, he will fall to eating. The same bag will serve a long time.

BAG, in medicine and pharmacy, a kind of fomentation, prepared of proper ingredients, en- closed in a bag, to be applied externally to a part diseased, for present relief. Dispensatory writers describe cordial bags, used in deliquiums ; bags for the side, for the stomach, in weaknesses of the stomach ; anodyne bags to ease pain in any part. Wines and ale are frequently medicated by put- ting into them bags full of proper ingredients. Sweet bags, are composed of perfumes, scented powders, and the like, enclosed in bags, to give a fragrancy to clothes, &c.

BAGA. See RUTA BAGA.

BAGADAT, or BAGALIN, a name by which some call the carrier pigeon, the columba tabel- laria of Moore. The name is probably a cor- ruption of the word Bagdat, the city from whence they are sometimes brought to Europe; being originally brought thither from Bazora.

BAGALAEN, or BUGELEN, a district in the south of Java, nearly about the centre of the island, from east to west. The dialects of Scindo and of this district, are said to be very distinct from the Javanese Proper. From the Bugelen dialect the Sooloo language is supposed to be derived.

BAGAMADER, or BAGAMEDRI, a province of Abyssinia in Africa : so named from the great number of sheep bred in it; meder signifying land or earth, and bag a sheep. Its length is estimated about sixty leagues, and its breadth twenty, but formerly it was much more exten- sive; several of its provinces having been dis- membered from it, and joined to that of Tigre. A great part of it, especially towards the east, is inhabited by wandering Gallas and Caffres.

BA'GATELLE, n. s. Bagatelle, Fr. A trifle ; a thing of no importance.

Heaps of hair rings and cypher'd seals ;

Rich trifles, serious bagatelles. Prior.

BAGAUDAE, or BACAUD.S:, a faction of pea- sants, or malcontents, who ravaged Gaul about

A. D. 290, and assumed' the name Bagaudae, which, according to some authors, signified, in the Gaelic language, forced rebels ; according to others, 'robbers. After seven months' siege they stormed the city of Autun. Villages and open towns were everywhere abandoned to their ra- vages; and they shook off the yoke of slavery only to show their incompetency for

freedom, by a perpetration of the most cruel barbarities. Two of their most daring leaders, ./Elianus and Amandus, had the boldness to assume the title and decorations of the Caesars ; and the cabinets of the curious still contain medals which they coined. Maximian, when associated with Dio- clesian in the imperial government, devoted him- self to the reduction of the Bagaudae. It has been said that they were Christians; but even Mr. Gibbon (ii. 123) rejects this fact.

BAGAUZE, the name given, in the Antilles, to the sugar-canes, after they have passed through the mill ; they are dried, and used for boiling the sugar.

BAGDAD, or BAGDAT, a celebrated city and pachalic of Asia, in Arabian Irak, seated on the eastern banks of the Tigris, which is here up- wards of 600 feet wide. It is 300 miles N.N.W. ††† of Bassora, 210 south of Mosul, and 1350 east of Constantinople. This city is of an oblong figure, about 1500 paces in length, by 800 in breadth, environed with a high but ruined wall, and a deep ditch. It has six gates surmounted with cannon, a castle, and an armoury ; but the whole of its defences are in a very feeble and contemptible state. Here are some handsome houses ; the markets are well supplied, and the bazaars are magnificent, containing from 1200 to 1500 shops, loaded with every description of east- ern merchandise. Bagdad, in fact, is the great link of communication between Asia Minor, Syria, and even Europe and the East. The chief imports from India are, gold brocade, cloths, sugar, pepper, tin, sandal-wood, iron, china-ware, spice, cutlery, arms, and broad-cloth ; in return for which they send bullion, copper, gall-nuts, tamarisk, leather, and otto of roses. From Aleppo are imported European silk-stuffs, broad-cloth, steel, cochineal, gold thread, and several other European articles, which are brought in Greek vessels to Scanderoon. The imports from Persia are, shawls, carpets, silk, cotton, white cloth, leather, and saffron : and those from Constantinople are, bullion, furs, gold and silver thread, jewels, brocade, velvets, and otto of roses. Its principal manufactures are red and yellow leather (which is much es- teemed), silk, cotton, and woollen stuffs ; and latterly a foundry of cannon has been erected.

Bagdad exhibits the ruins of a number of antique buildings. On the west side of the river is a suburb connected with the city by a bridge of boats, upon which the Bab jisri, (Bridge gate) opens: The great extent of this city anciently on the west, as well as on the east side of the river, appears from the ruins all round this suburb. Here are the tombs of many Mahommedan saints ; among others, those of the .Imams Abu Hanifak and Hanbel, founders cf two of the orthodox sects ; and of Masa Kazim, one of the twelve Imams, the successors of Alij,

so much venerated by the Persians. To the literary traveller it offers many other objects of interest ; such as the tombs of Haroun Al Raschid, and his consort Zobeidah, so often mentioned in the Arabian Nights; and the remains of some fine mosques and colleges, monuments of the most brilliant period of Arabian history. But even the wrecks of many palaces and public buildings, celebrated by eastern writers, have not entirely disappeared.

Bagdad was founded by the caliph Abu Jafur Almansor in 766, and completed in four years. In the following century the celebrated Haroun Al Raschid reigned here, and under the auspices of Zobeida, his queen, and the vizier Jaffer Bar- makeed, it rose into great splendor and impor- tance : but was alnlost totally destroyed by the Turks, 100 years later; and in the thirteenth century was stormed by the Tartar prince Ho- laku, the grandson of Jenghis Khan, who put the sovereign to death, and abolished the cali- phate. Tamerlane seized upon Bagdad in the year 1416, and Kara Yusef in 1436. Shah Is- mael, the first of the royal Persian house of Sen, rendered himself master of it in the following century, since which time, it has been an object of constant contention between the Turks and Persians.

Bagdad sustained a memorable siege by the Tuikish emperor Amu rath IV. who, with an army of “00, 000 men, reduced it to threat extre- mities: it surrendered in 1(>’!8, on the promise of indemnity ; hut the savage victor, having gained possession of the place, put a great pro- portion oi ‘ t: o inhabitants to the sword. During the following century, Nadir Shah endeavoured in vain to wivst it from the Turks, and was obliged to retire with disgrace; and in the course of later years it” safety has been frequently me- naeed by the V. aha bees. In 1?/>0 the inhabi- tants prevailed upon the Porte, to appoint the pasha whom they chose to name; and they have ever since maintained this species of virtual in- dependence.

The commerce of i’a.rdad was once very ex- lensive and liourislnng ; but, from the improvi- dent oppression of its rulers, it has now greatly declined. It is however, a place of great resort; the residence of a pasha; and a constant resort ot pilgrims. Tavernier rati-d the population in his tune at 1,”>0.ou>, hut they probably do not amount t<> .“n i,uou at present. This population consists of Arabs Persians, Turks, Jews, Ar- menians, and other eastern Christians, who are represented as generally courteous to strangers, and of an independent spirit. The truth is, that the pa-‘. as are’ sensible of the advantage of their distance from Constantinople, and obey or dis- oiiey t’.e ordi is ot the sultan, according to their

own <:on\ ehleiice.

*(ireat extivmt s of heat -and cold are felt here : in summer, especially when the samm-yeli, or poisonous wind, blows, the inhabitants are obli.ed to lake refuse in the well ventilated cellais \ith winch must of the houses are pro- vided : and in winter the cold is sufficient to produce ice half an inch thick. This is con- sidered as intolerable; and many of the natives ***‘in- said to perish b it. The natives are like-***

wise subject to a cutaneous disorder, for which no cure has yet been discovered : it appears in the form of a pimple, then degenerates into au ulcer,, and at the end of eight or ten months dries up of itself, leaving a prominent mark. The inhabitants of Aleppo, and other towns in Syria, are also subject to this disease.

The pachalic, or vice-royalty, of which Bagdad is the capital, is one of the largest in the Turkish dominions. It contains eighteen sanjaks, or military divisions, and two districts of Kurdistan. According to the present distribution of the em- pire, it comprehends all its south-eastern angle ; having Diyar-boer .and Mount Sinjah on the north ; Persia on the east ; the Persian gulf on the south ; and the Euphrates on the west. It therefore very nearly corresponds with the Me- sopotamia of the ancients. Its area is about 178,100 square miles. The pacha is commander- in-chief of the troops stationed in his pachalic ; next to him are the aghas of the janissaries and sipahis. Their whole number amounts to 30,000 ; infantry and cavalry in nearly equal proportions. A corps of 500 men, trained in the European manner, which was raised a few years ago, is still kept up.

This province has some very fertile spots : but is too much exposed to the depredations of ban- ditti to be cultivated in any proportion to its ca- pabilities. It includes many celebrated cities and towns, such as Bagdad, Bassora, Mosul, and Merdin.

*The revenue derived from the customs, a ca- pitation-tax, occasional contributions of the towns and cities, and the tribute levied on the Arab tribes, does not exceed 7,500,000 piastres, or ****375,000.***

BAGDAGSHAN, a very ancient city and dis- trict of Bokharia, in the province of Balkh, situated at the foot of the mountains which se- parate Hindostun from Great Tartary. The city is not large, but exceedingly strong by its situa- tion ; and belongs to the khan of Proper Buk- haria, who uses it as a kind of state prison. It is well built and very populous. It stands on the north side of the river Amu, about 100 miles from its source ; and is a great thoroughfare for the caravans designed for little Bukharia. The inhabitants are enriched by mines of gold, silver, and rubies, which are in

the neighbourhood ; and those who live at the foot of the mountains gather gold and silver dust, brought down in the spring by torrents occasioned by the melting of the snow on the top. It is 1 50 miles east of Balkh.

BAGE (Robert), a novel-writer of the last century, was the son of a paper-maker at Derby, and born in 1728. He was brought up to the same occupation as his father, but having a taste for literature, he gained a knowledge of ma- thematics, and of the French and Italian lan- guages. He wrote Mount Kenneth, 2 vols. 1781 ; Barham Downs ; The Fair Syrian; James Wai- dace ; Man as he is ; and Hermsprong, or Man as he is not. The last two, which appeared, when the author was nearly seventy years of age, were decidedly superior to the preceding. He died at Tamworth in 1801. Three of the earlier novels of this writer have been republished ia

the ninth volume of Ballantyne's Novelist's Li- brary, edited, with biographical prefaces, by Sir Walter Scott.

BAGFORD (John), an antiquary, and great collector of old English books, prints, &c. was born in London. He had been, in his younger days, a shoemaker ; afterwards, a bookseller ; and lastly, for the many curiosities wherewith he en- liched the famous library of Dr. John Moore, bishop of Ely, his lordship got him admitted into the Charter-house. He was several times in Holland, and on the Continent, where he pro- cured many valuable old books, prints, &c. some of which he disposed of to the late earl of Oxford, who purchased his collections, papers, Sec. for his library. In 1707 were published, in the Philo- sophical Transactions, his Proposals for a General History of Printing. He died at Islington, May 15, 1716, aged 65 ; and was buried in the ceme- tery of the Charter-house.

BAG'GAGE, n. s. From bag ; baggage ; Fr. and from baguglia, Ital. The furniture and utensils of an army ; or any goods that are move- able. It is likewise employed to designate a dissolute woman of the baser sort, because such usually follow camps.

No barricado for the belly ; it will let in and out the enemy bag and baggage. Shakspeare.

They were probably always in readiness, and carried among the baggage of the army. Addison on Italy.

Dolahella designed, when his affairs grew desperate in Egypt, to pack up bag and baggage, and sail for Italy. Arbuthnot.

A spark of indignation did rise iu her, not to suffer such a baggage to win away any thing of hers. Sidney.

When this baggage meets with a man who nas vanity to credit relations, she turns him to account.

BAGGAGE, in antiquity, was distinguished by the Romans into two sorts ; a greater and less. The lesser was carried by the soldier on his back, and called sarcina ; consisting of the things most necessary to life, and which he could not do without. Hence colligere sarcinas, packing up the baggage, is used for decamping, castra mo- vere. The greater and heavier was carried on horses and in vehicles, and called onera. Hence onera vehiculorum, sarcinae hominum. The baggage horses were denominated sagmentarii equi. The Roman soldiers in their marches were heavily laden, in so much that they were called, by way of jest, muli mariani, and aerumnse. They had four sorts of luggage, which they never went without, viz, buccellatum, or corn, utensils, valli, and arms. Cicero observes, that they used to carry with them above half a month's provisions ; and we have instances in Livy, where they carried provisions for a whole month. Their utensils comprehended those proper for gathering fuel, dressing their meat, and even for fortification or entrenchment; and what is more, a chain for binding captives. For arms, the foot carried a spear, shield, saw, basket, rutrum, hatchet, lorum, falx, &c. Also stakes or pales, valli, for the sudden fortifying a camp ; sometimes seven, or even twelve of these pales were carried by each man, though generally, as Pollybius tells us, only three or four. On the Trajan column we see

soldiers represented with this fardle of 'corn, utensils, pales. &c. gathered into a bundle and laid on their shoulders. Thus inured to labour, they grew strong, and able to undergo any fatigue in battle ; the greatest heat of which never tired them, nor put them out of breath. In after times, when discipline grew slack, this luggage was thrown on carriages and porters' shoulders. The Macedonians were not less inured to hardship than the Romans ; when Philip first formed an army, he forbad all use of carriages ; yet, with all their load, they would march, in a summer's day, twenty miles, in military rank.

BAGGAGE, in modern military affairs, denotes the clothes, tents, utensils of divers sorts, provi- sions, and other necessaries belonging to the army. Before a march, the waggons with the baggage, are marshalled according to the rank which the several regiments bear in the army; being sometimes ordered to follow the respective columns of the army, sometimes to follow

the ar- tillery, and sometimes form a column by them- selves. The general's baggage marches first; and each waggon has a flag, showing the regiment to which it belongs.

BAGLAFECHTE, in ornithology, the name of Gmelin's loxia philippina, var, /?, in Buffon's history of birds.

BAGLANA, or BHAGELANA, a large district in the Mahratta territories, in the province of Aurungabad, situated principally betwixt the 20th and 21st degrees of north latitude. It is exceedingly mountainous, but contains many fertile plains ; and its natural strength is aug- mented by a number of strong fortresses, erected on the summits of the mountains. The rivers are small, and the only towns of any note are Chandere, Tarabad, and Ingauw.

BAGLIVI (George, M. D.) an illustrious physician of Italy, born in Apulia, about 1668. He graduated at Padua, and afterwards went to Rome, where he was chosen professor of anatomy. His works were printed first in 1710, in 4to. The Praxis Medica, and De Fibra Matricis are his principal pieces. He wrote a Dissertation upon the Anatomy, Bite, and Effects of the Tarantula,, and gave a particular account of the earthquake at Rome and the adjacent cities in 1703. Hi works are all in Latin.*

BAGNA i)i AQUA, a town of Italy, in Tus- cany. It is divided into the upper and lower towns, the former of which is called Petraja, and the latter Perlascir. It has long been celebrated for its warm baths, and is fifteen miles east of Leghorn.

BAGNAGAR, a town of Asia, in the domi- nions of the Great Mogul, once the capital of Gol- conda. Its suburbs were three miles long, and chiefly remarkable for a magnificent reservoir of water, 220 miles north-west of Fort St. George, and as many east of Goa.

BAGNAJA, a small town of the ecclesiastic states, one mile south of Viterbo, where is held yearly a great cattle market. The Dominicans have here a large monastery, with an elegant church.*

BAGNALS, PUNT A DE, a point on the north coast of the island of Barbadoes, between Indian river and the bay of Carlisle.

BAGNARA, a town of Naples, in Calabria Ultra, with the title of duchy, and 5000 inhabi- tants. It was destroyed by an earthquake in 1783, but

has recovered from the calamity, and carries on a trade in wood, pitch, and excellent JMusca- del wine. It is fourteen miles west of Oppido.

BAGNAREA, a town of Italy, in the states of the Church ; the see of a bishop, and stands on a little hill. Five miles south of Orvieto, and twelve north of Viterbo. Long 12►► 10′ E., lat. 42►► 38′ N.

BAGNERES DE CAMPIN, or EN Bi- GOIUIE, a town of France, in Gascony ; the ca- pital of an arrondissement, in the department of the Upper Pyrenees. It contains about 6000 inhabitants, who are employed in tillage and pasturage. It is famed for its hot springs, of which there are no less than thirty-two ; they were known in the time of the Romans. The accommodations for visitors arerespectable. It is eleven miles south of Tarbes, and 450 S. S. W. of Paris.

BAG'NIO, n. s. Bagno, Ital. balneum, Lat. bath. A house for bathing, and other less inno- cent purposes.

I have known two instances of malignant fevers produced by the hot air of a buyniu.

Arbuthnot on Air.

When I see a young profligate squandering his for- tune in Imyniw, or at a gaming-table, I cannot help looking on him as hastening his own death, and in a manner digging his own grave. Connoiseur.

BAG MO. The word is metaphorically ap- plied to houses of bad fame. In Turkey it is become a general name for the prison where the slaves aie enclosed, it being usual in those pri- sons to have baths.*

BAdNOl.S, a town of France, in I.anguedoc, the head of a canton in the department of the Gard, arron-dissement ofl'sez. It stands on a rock, lias a manufactory of various kinds of silk, and contains WOO inhabitants. An expensive mad has been cut through a hill, tour miles in length, leading from this place to the Pont du Jard and Nismes. The sands of the neighbour in -.;►►► river Ceze \iekl '.rdd occasionally. It is twenty-one mile> cast of > ismes.

I)A{;NO1.F.\SF.S, or I)A(,Mii.[A.\s, in church , a sect of heretics, who in reality were M;mielices. tiiouu'h they tiis':tiU"d their errors. -hey rejected the Old Testament and part of the New ; held tiic world to be denial ; atlinned that (.od did not create the soul, v. hen he infused it into the body; and demed his prescience.

\S, a. Persian name Cor the king's

eunuch, employed in hiMory to denote Bagoas,

‘in i.u> pi, an, who Miverncd Cor along time under

(1ms. lie poiM-iied his master, and

hen JHIL to death Arses, \h;,m he had set up as

Ui.s successor, bin was ai length killed by Darius,

e he conjured. Tins eunuch

; f’> ;!□□□:□□□ ISa.oas mentioned in Judith. □□□

iw□□7>/□□. .lulu/. I. 11. e. 7. 2. A

is in ureat favor wi:!i Alexander

th.- (.icat. \e.

:’- -“I, a::, on: the ancu nt IVr.si;. r.s, were the

□□□-.‘I □□□- o!’ eunuchs.

BAGOLINO, a town of Venice, on the river Caferro, which runs into the lake of Idro. It has many iron-works, and contains 3600 inhabitants. Twenty-four miles north of Brescia.

BAGONFS, a river of Brasil, in the province of Rio Janeiro. It runs S. S. E., and enters the sea near (ipe Frio, in lat. 22□□ 5′ S.

BAG O; \GUENOU, two of the Laccadive islands, in the Indian ocean, and in the vicinity of each other. Long. 71□□ 56′ E., lat. 11□□ N.

BAGOPHANES, a governor of Babylon, who, when Alexander approached the city, strewed all the streets and burned incense on the altars, &c. 2 Curt. 5. 1.

BAGOT (Lewis), an English prelate, son of Sir Walter Bagot, bart. and brother to the first Lord Bagot, was born in 1740. He was edu- cated at Westminster, and chosen thence student of Christ Church, Oxford, took his degrees of A. M. and L.L.D. in 1764 and 1772; was made canon of Christ Church in 1771, installed dean in 1777 ; promoted to the see of Bristol in 1782 ; translated to Norwich the year following, and thence to St. Asaph ‘in 1790, where he died in 1802. In this latter diocese he rebuilt the epis- copal palace. He wrote, 1. A Defence of Sub- scription to the Thirty-nine Articles, as it is required in the University of Oxford, 1772, which was an

anonymous answer to an anony- mous pamphlet, entitled Reflections on the Impropriety and Inexpediency of Lay Subscrip- tion in the University of Oxford. 2. Twelve Discourses on the Prophecies, preached at the Warburtonian lecture in Lincoln's-inn Chapel.

BAG'PIPE, n. s. > From bag and pipe. A

BAG'PIPER, n. s. J musical instrument, con- sisting of a leathern bag, which blows up like a foot-ball, by means of a port-vent or little tube fixed to it, and stopped by a valve and three pipes or flutes ; the first called the great pipe or drone, and the second the little one, which pass the wind out only at the bottom ; the third has a reed, and is played on by compressing the bag under the arm, when full ; and opening or stop- ping the holes, which are eight, with the fingers. The bagpipe takes in the compass of three

octaves. ❖❖❖ Chambers.

Wei coude he stolen come and tollen thries, And yet he had a thomb of gold parde, A white cote and a blew hode wered he A bagyepipe wel coude he blow and soune, And therewithall be brought us out of toune.

Ctiaucgr.

No banners but shirts, with some bad bagpipes, in- stead of drum and fife. Sidney. Yea, or the drone of a Lincolnshire bagpipe.

Shakspeafe.

Some that will evermore peep thro' their eyes, And laugh like parrots, at a bagpiper. Id,

This light inspires and plays upon, The nose of saint-like bagpipe drone, And speaks through hollow empty soul, As through a trunk or whispering hole.

Hudibras.

BAGPIPE. The peculiarity of the bagpipe, and from which it takes its name, is, that the air which blows it, is collected into a leathern bag, from whence it is pressed out by the arm into the pipes. These pipes consist of a bass and

tenor, or rather treble ; and are different accord- ing to the species of the pipe. The bass part is called the drone, and the tenor or treble part the chanter. Bagpipes are chiefly used in Scotland and Ireland. In all the species, the bass never varies from its uniform note, and therefore very deservedly gets the name of drone ; and the com- pass of the chanter is likewise very limited. There is a considerable difference between the Highland and Lowland bagpipe of Scotland; the former being blown with the mouth, and the latter with a small pair of bellows : though this differnce is not essential, every species of bagpipe being capable, by a proper construction of the reeds, of producing music either with the mouth or bellows.

The Highland BAGPIPE consists of a chanter and two short drones, which sound in unison with the lowest note of the chanter, except one. This is exceedingly loud, and almost deafening, if played in a room; and is therefore mostly used in the fields, for marches, &c. It requires a "prodigious blast to sound it ; so that those unaccustomed to it cannot imagine how High- land pipers can continue to play for hours together, as they- are often known to do. For the same reason, those who use the instrument are obliged either to stand on their feet, or walk when they play. The instrument has but nine notes ; its scale, however, has not yet been re- duced to a regular standard, by comparing it with that of other instruments. Those who are best acquainted with it, affirm that it plays only the natural notes, without being capable of varia- tion by flats or sharps.

The Irish BAGPIPE is the softest, and in some respects the most melodious of any, so that music books have been published with directions how to play on it. The chanter, like that of all the rest, has eight holes like the English flute, and is played on by opening and shutting the holes as occasion requires ; the bass consists of two short drones, and a long one. The lowest note of the chanter is D on the German flute, being the open note on the counter string of a violin ; the small drone (one of them commonly being stopped up) is tuned in unison with the note above this, and the large one to an octave below ; so that great length is required in order to produce such a low note, on which account the drone has sometimes two or three turns. The instrument is tuned by lengthening or short- ening the drone till it sounds the note desired.

The Scots Lowland BAGPIPE is also a very loud instrument, though less so than the former. It is blown with bellows, and has a bass like the Irish pipe. This species is different from all the rest, as it cannot play the natural notes, but has F and C sharp. The lowest note of a good bag- pipe of this kind is in unison with C sharp on the tenor of a violin, tuned concert pitch ; and as it has but nine notes, the highest is D in alt. From this peculiar

construction, the Highland and Lowland bagpipes play two species of music essentially different from one another, as each of them also is from every other species of mu- sic in the world. This kind of bagpipe was formerly very much used in Scotland at wed- dings and other festivals ; being extremely well

calculated forplaying that peculiar species of Scots music called reels. But it has been often a mat- ter of surprise how this was possible, as the instrument has only a compass of nine or ten notes at the utmost, which cannot be varied as in other instruments. In this respect, however, it has a very great compass, and will play an inconceivable variety of tunes. Its notes are natu- rally so high, there is scarce any one tune but what is transposed by it, so that what would be a flat note on the key proper for the violin, may be a sharp one on the bagpipe ; and though the latter cannot play any flute note, it may in this manner play tunes which on other instruments would be flat.

The small BAGPIPE has the chanter not ex- ceeding eight inches in length ; for which reason the holes are so near each other, that it is with difficulty they can be closed. It has only eight notes, the lower end of the chanter being com- monjy stopped. The reason of this is to prevent the slurring of all the notes, which is unavoid- able in the other species ; this, by having the lower hole closed, and also by the peculiar way in which the notes are expressed, plays all its tunes in the way called by the Italians staccato, and cannot slur at all. It has no species of music peculiar to itself; and can play nothing which cannot be much better done upon other instruments ; though it is surprising what volu- bility some performers on this instrument will display, and how much they will overcome the natural disadvantages of it. Some of this species, instead of having drones like the others, have their bass parts, consisting of a winding cavity in a kind of short case, and are tuned by opening them to a certain degree, by means of sliding covers ; from which contrivance they are called shuttle-pipes.

The bagpipe appears to have been an instru- ment of great antiquity in Ireland, though it is uncertain whence they derived it. Mr. Pennant, by means of an autique found at Richborough, in Kent, has determined that the bagpipe was introduced at a very early period into Britain ; whence it is probable that both the Irish and Danes might borrow the instrument from the Caledonians. But that writer observes, ‘ We must still go further, and deprive even that ancient race of the credit; and derive its origin from the mild climate of Italy, perhaps from Greece. There is now in Rome a most beautiful bas re- lievo, a Grecian sculpture of the highest antiquity, of a bagpiper playing on his instrument, exactly like a modem Highlander. The Greeks had their Ao-KavX^c, or instrument, composed of a pipe and blown-up skin; the Romans in all probability borrowed it from them, and intro-

duced it among their swains, who still use it under the names of piva and cornu-musa. That master of music, Nero, used one ; and had not the empire been so suddenly deprived of that great artist, he would (as he graciously declared his intention) have treated the people with a concert, and, among other curious instruments, would have introduced the utricularius, or bag- pipe. Nero perished ; but the figure of the instrument is preserved on one of his coins, highly improved by that great master : it has the*

Aristides Quintilianus informs us, that it pre- vailed in the Highlands in very early ages ; and indeed the genius of the people seems to render the opinion highly probable. The attachment of that people to their music called pibrachs is almost incredible, and on some occasions is said to have produced effects little less marvellous than those ascribed to the ancient music. At the battle of Quebec, 1760, while the British troops were retreating in great disorder, the gen- eral complained to a field-officer in Frazer's regiment, of the bad behaviour of his corps. ' Sir (said he, with some warmth), you did very wrong in forbidding the pipers to play this morning : nothing encourages the Highlanders so much in the day of action. Nay, even now, they would be of use.' ❖❖❖ ' Let them blow like the devil, then (replies the general), if it will bring back the men.' The pipers were now ordered to play a favorite martial air ; and the Highland- ers, the moment they heard the music, returned and formed with alacrity in the rear. In the late war in India, Sir Eyre Coote, sensible of the attachment of the Highlanders to their favorite instrument, '.rave them i.V>0 to buy a pair of bagpipes.

There was once a kind of college in the island of Sky, where the Highland bagpipe was taught; the teachers making use of pins stuck into the ground instead of musical notes. This, however, was for some time entirely dissolved, and the use of the Highland pipe became much less general than before, At last a society of gentlemen, thinking it perhaps impolitic to allow the ancient martial music of the country to decline, resolved to revive it by giving an annual prize to the best performers on the instrument. These compe- titions were held at Falkirk. The Lowland bag- pipe was reformed, and the music improved by (ii '>r_r Mackie, who is said to have attended the colic.:; of Sky seven years. He had before been thr best performer on that instrument in that part of the country where he lived; but, while attending the college at Sky, adapted the graces of the Highland music to*

the Lowland pM>e. I pon his return, he was heard with astonishment and admiration ; but unluckily, was not able to commit his improvements to untiirˆ, and indeed the nature of the instrument scarcely admits of it.

1!.\(i It I-‘,, in ichthyology, a small bearded fish, of the an_ruillitbnn kind, of which there are seve- ral species. It has no scales, but is covered over the whole body with a soft mucous skin of a sil- veiv whiteness, and the beard, the head, and the tins ;m ad of the same color; the eyes are

large, the mouth small, and without teeth. It is caught in the American seas, and is eaten ; but if any body is wounded by its thorns, it gives great pain, and is difficult to cure. In the Lin- nrean system it is classed as a species of silurus.

BAGRE DE Rio, a name by which some call the fish more frequently known by the name of nhamdia.

BAG-REEF, in maritime affairs, a fourth or lower reef, sometimes used in the royal navy.

BAGSHAW, a romantic little town, in the High Peak of Derbyshire.

BAGSHOT, or BADSHOT, a small town in Surry, two miles and a half south-west from Staines, and twenty-six from London. This place is famous for its excellent mrtton, brought hither from the Hampshire downs. It was form- erly called Holy Hall, and our kings had an- ciently a house and park here. The church was rebuilt in 1676, having been destroyed by light- ning. Bagshot-heath, which surrounds the town, is mostly uncultivated, but upon its borders are some handsome seats, and one is the residence of his royal highness the duke of Gloucester.

BA’GUETTE, n. s. FT. a term of architec- ture. A little round moulding, less than an astragal ; sometimes carved and enriched.

BAGUETTE DEVINATOIRE, the divining-rod, generally regarded as a piece of philosophical quackery. It is nothing else than a forked piece of hazle, the two branches of which are often from fifteen to eighteen inches in length, and form an angle of thirty or forty degrees. They are held in the hands in a certain manner, so that the trunk or middle is turned towards the heavens. Some persons, it is said, are endowed with such a property, that if they hold this rod as above de- scribed, it tends by a violent effort to turn its trunk downwards, when in the proximity of a spring, or of precious metals concealed in the bowels of the earth, or stolen money, &c. Nay, some have even asserted that it has pointed out, in this manner, the traces of criminals, robbers, or assassins. (See Hutton’s Translation of Mon- tucla’s Ozanam, vol. iv. p. 260). A lady of rank, on reading his account of

the divining-rod, wrote several letters to Dr. Hutton on the subject, de- scribing the way in which she discovered that she possessed the faculty of finding water by such an instrument; and relating that she ac- tually found water, by means of the hazle, in the duke of Manchester's park, at Kimbolton, Hunt- ingdonshire, about thirty years ago. The same lady also exhibited successfully her method of discovering water, at Woolwich Common, to Dr. Hutton and his friends. See DIVINING ROD.

BAG YON, or BOOENDORF, a market town of Transylvania, in the county of Kolosch, not far from the Marosch, with churches of the Catholic, Reformed, and Unitarian creeds

BAHALATOHS, a small island in the eastern seas, near the east coast of Borneo. Long. 118►► 21′ E., lat. 5►► 45′ N.

BAHAMA, or LUCAYAS ISLANDS, the east ernmost of the Antilles are situated in the Atlantic Ocean, to the south of Carolina, be- tween 21►► and 28►► N. lat. and 71►► and 81►► W.

long. They extend along the coast of Florida down to the isle of Cuba ; are said to be 300, or, according to others, 500 in number, some of them only mere rocks ; but twelve or fourteen of them are large and fertile, and differing but little from the soil of Carolina. Proceeding from the southern to the northern extremity of the chain, the group may be thus enumerated : ►►►

1. Turk's islands,

2. The Caucus, or Caicos,

3. The Heneagas,

4. Mayaguana,

5. Crooked island Group,

6. Long island,

7. Watlings,

8. The Exumas,

9. San Salvador,

10. Eleuthera, or Habour Island,

11. Providence,

12. Andros,

13. Lucayo, or Abaco,

14. Bahama.

In addition to the islands included in this group, two extensive sand-banks, called the great and little Bahama banks, occupy a wide space of sea, the boundaries of which are indi- cated by a vast number of keys and islets. The population of the whole cluster is stated at 16,600. These islands were the first fruits of Columbus's discoveries, and the feelings with which they inspired that great commander are expressed in the name of San Salvador, which he gave to the island on which he landed. It was called Gua- nahani by the natives, and was first seen on the llth of October, 1492, being the earliest authen- ticated discovery of the western hemisphere. These islands are said to have been at this time inhabited by a peaceable race of Indians, whom the Spaniards transported to work in the mines of St. Domingo. They were not known to the English till 1667, when captain Seyle, being driven among them in his passage to Carolina, first gave his own name to one of them; but being a second time driven upon it, he gave it' the name of Providence. The English govern- ment observing the advantageous situation of these islands, as a check on the French and Spa- niards, attempted to settle in them in the reign of Charles II. ; but they were little more than har- bours for the buccaneers, until, in 1718, captain Woodes Rogers was sent out with a fleet to dis- lodge the pirates and make a settlement. A fort was now erected and an independent company stationed on the island. Ever since these islands have been slowly improving. In 1781 they were surrendered to the Spaniards, but restored to the British by treaty at the end of the war. At this period, also, many of the British loyalists and planters repaired to the Bahamas, chiefly from the southern states of North America ; from which period the principal islands have been re- gularly settled. In 1773 the number of whites was 2052, and the blacks about 2241 . Previously to May 1803 lands were granted by the crown, in the whole of the Bahamas, to the amount of 265,381 acres, for the purpose of cultivation. At that time the population amounted to about 14,318, including 11,395 blacks and people of color, and it appears, by a return to the House

of Commons in 1805, that the number of slaves imported for two years previously to the year 1803 amounted to 2523, of whom 2230 were exported, leaving only 293 for the use of the colony. The physical

characteristics of the whole of this group are very similar : the surface of the whole is flat, the soil fertile, and the climate serene, but they are all thinly inhabited, and by persons who subsist chiefly by supplying neces- saries to the crews of vessels driven on the coast. The thermometer generally varies from 80►► to 90►► during summer, and from 60►► to 65►► in winter ; but the southern isles experience the influence of the trade-winds through the greater part of the year. The soil in a few places is rich : the chief cultivated product is cotton, besides which they yield mahogany and some kinds of dye woods, salt, turtle, and several species of fish. Cattle and sheep also thrive well, and great numbers of birds are met with, generally of the same kinds as those of the West India islands.

New Proridence, being the seat of govern- ment, absorbs nearly the whole trade of the group, which is chiefly with England, the West Indies, and North America. Nassau is the prin- cipal town, and the seat of government for all the islands. This is founded upon that of the mother country, and resembles those of her other colonies in preserving the legislative, executive, and judicial powers distinct : the governor is the representative of the crown ; and in him the executive power is vested. He is commander-in-chief of the military, convenes and prorogues the national assembly, and has power to annul their proceedings, subject to a reference to the king in council. By his judicial character he presides in all the courts. The council consists of twelve persons, appointed by the king, who form the upper house of the legislature, and participate with the governor in his judicial authority. The house of assembly consists of twenty-six mem- bers, who are elected by the respective districts. 869 Edwards's History of the West Indies ; and M'Kinnen's Account of the Bahama islands.

BAHAMA, GREAT, ISLAND OF, one of the Ba- hama's, sixty-three miles long and about nine broad, situated on the south side of the Little Bahama bank, and extening from the Florida stream almost to the island of Abaco. The soil is fertile, the air serene, and the island well watered. It formetly produced guaiacum, sar- saparilla, and red wood ; all which the Spaniards are said to have destroyed. This island is fifty-seven 'miles from the coast of east Florida. Long. 78►► 10′ to 80►► 24′ W., lat. 26►► 40′ to 273 5'N.

BAHAMA CHANNEL, the narrow sea between the coast of America and the Bahama islands, about forty-five leagues in length, and sixteen in breadth. It is sometimes called the Gulf of Florida. Here the current flows with that rapi- dity which renders the passage extremely dan- gerous, except under favorable circumstances.

*BAHAMA BANK, GREAT, a sand-bank, ex- tending nearly from the island of Cuba to the shores of *he Bahama group. It com- mences about 22►►*

20', and stretches to 26►► 15′ of north latitude. A smaller bank of the same kind and name occupies a considerable space on the north of the island of Bahama.

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B A H A R.

BAIIAR, from the Sanscrit Vihar, a Buddish monastery, a large and populous province of Hindostan, formerly called Magadha, and once an independent kingdom. It lies between the twenty-second and twenty-seventh degrees of north latitude, is separated from the Nepaul do- minions by an extensive range of hills, rising upon the northern frontier. On the east it has the province of Bengal, on the south the ancient Hindoo province of Gundwana, and on the west a part of the latter, Allahabad and Oude. It was anciently separated from the Benares territories by the river Caramnassa. This pro- vince at present is one of the most fertile and highly cultivated territories of Hindostan. Its included 'area of arable ground is computed at 26,000 square miles, and separated north and south into two equal divisions by the river Gan- ges, wich flows from west to east in a course of 200 miles.

The northern division stretches a distance of seventy miles from the forests of Nepaul and Morun

The cential division extends from the Ganges soi.th, as far a the Vind'n a- chil ranee of hills, a distance ol 'sixty miles, it is separated from Hi'iual on the ca-t by a bran ': of the above ►►►outhern lulls, < Mending to the '1 liiiaghury pass, on the routines ot Uajemal; from C hunar, in Al lahabad on the. west, by the river Charamnassa. Tiic district Hahar, which lies in the centre of ilns division, occupies one half of the inclusive Icvvl area; the plains of Monu'hyr one sixth more, and the rc-.t is mountainous. The district of ivotas lies to the south-west, chiefly between the rivers Soaiie and Caramnassa, and that of Sha- habad stretches aloirj; the southern side of the Ganges. This central division is usually con- sider, d tiie most important and fertile of the uhole piovmee, abounding in opium, and \icldttm' nearly two thirds of the whole pro- iluce.

Independent of the above divisions there is a

Mnu;.;lm<.y hilly country of HUUO square miles,

which is almost barren, and still further to the

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The extent of this province may easily be perceived from the following table in square miles : □□□

Assessed lands of eictht districts . . Hilly territories in Rhotas, Monghyr,

&c

Content of lands belonging to Pala-

mour, Ramgheir and Nagpoor.

Total content of the province. . 51,973

The following extract from the celebrated in- stitutes of Acber, compiled by Abul Fazel, A. D. 1582, may not be unacceptable to the geogra- phical reader.

‘ The length of Bahar from Gurher to Rotas is 120 coss, and the breadth from Terhoot to the northern mountains includes 110 coss. It is bounded on the east by Bengal, has Alla- habad, and Oude to the west ; and on the north and south are large mountains. The principal rivers of this Soubah are the Ganges and the Soane. The river Gunduck comes from the north, and empties itself into the Ganges near Hadjypoor. The summer months are here very hot, but the winter is temperate. The rains continue for six months. In the district of Mon- ghyr is raised a stone wall extending from the Ganges to the mountains, and this wall is con- sidered to be the

boundary between Bengal and Bahar. The Soubah contains seven districts, viz. Bahar, Monghyr, Chumparum, Hajypoor, Sarum, Tirhoot, and Rotas. These are sub- divided into 199 pergunnahs. The gross amount of the revenue is 55,47,9ˆ5 sicca rupees. It furnishes 11,415 cavalry, 449,350 infantry, and 100 boats.'

The natural features of Bahar are by no means u ninteresting. It possesses all the advantages of a rich soil, a temperate climate, and a centrical geographical situation, shaded by mountains and watered by rivers and small streams. Of these the Ganges, the Soane, the Gunduck, the Dum-moodah, Caramnassa, and the Dewah are the most remarkable.

*In Bahar and the contiguous districts a parching wind from the westward prevails during a portion of the hot season, and blows with great strength during the day, but at night it is succeeded by a cool breeze in the opposite direction. Both oc- casionally cease for days, and even weeks together, giving way to easterly gales ; and during the cold season a blighting frost fre- quently occurs in both the provinces of Bahar and Benares. ***

Agriculture, manufactures, and commerce have always flourished in this province, owing perhaps in a great measure to its natural advantages. The chief productions are opium, saltpetre, grain, su- gar, betel-leaf, indigo, oils, essences, &c. together with fine timber for boat-building. Cotton cloths, for exportation, are manufactured all over the districts, and the hills are supposed to contain coal, sulphur, iron and other metals. The nu- merous productions of Bahar, together with its

*internal, means of communication serving as a thoroughfare for the commerce of Bengal and foreign maritime countries with the province of Hindostan, raised this territory into a state of prosperity, soon after the Patan conquest, and this continued under the Mogul dynasty. Opium may be considered as the staple commodity of the province, although saltpetre is a great article of exportation. The latter is produced in consider- able quantities, in the districts of Hajypoor and Sarun, where it is manufactured for exportation. The production of this article is always greatest during the prevalence of the hot winds, which are perhaps essential to its formation. These winds did not formerly extend their influence beyond the eastern confines of Bahar; but by the change of seasons which have been remarked ***within the last thirty years, they have reached to Bengal Proper, where it is now said saltpetre might be manufactured with nearly the same success as in Bahar. The opium that is pro- duced in this and the*

neighbouring provinces is monopolized by government, and sold in Cal- cutta by public sale. The common produce is eight pound of opium for every beegah, which measures about one-third, of an acre, besides which the cultivator reaps about fourteen pounds of seed. The preparation of the raw opium is under the immediate superintendance of the com- pany's agent, and is as follows : The watery par- ticles are first evaporated by the sun, and re- placed by oil of poppy-seed to prevent the drying of the resin ; after which the opium is formed into cakes, covered with the petals of the poppy, and when sufficiently dried is packed up in chests with the fragments of the capsules, from which the poppy-seeds have been thrashed out. The opium is frequently adulterated by intermixing an extract obtained from the stalk and leaves of the poppy, and sometimes the gum of the mimosa ; but the adulteration is difficult of discovery.

Bahar was, in common with the greater part of Hindostan, anciently supplied with salt from the lake of Sambher, in the province of Ajmeer ; but its supplies of that article are now brought from Bengal and Coromandel, and imported under the protection of government.

Although an intimate connexion has always ex- isted between this province and Bengal, and their histories have been blended, there are, in the na- ture of landed property, several important distinc- tions; of which the following are worthy of notice. In Bengal the zemindaries are very extensive, but in Bahar they are comparatively small; hence the Bengalese zemindars assume a degree of power and influence which those of Bahar are not able to maintain. Those of the latter also from their comparative distance having been placed under a provincial administration, have been precluded from that information which the zemindars of Bengal have derived from their access to the offices of government. Though the lands of Bahar have been let to farm, from time immemorial, yet no general settlement had been concluded between government and the pro- prietors of the soil from the acquisition of the Dewanny until the final and perpetual assessment in 1792 ; from which circumstance the cultivator

was placed under great disadvantages. There are, at present, few instances of jaghires in Ben- gal ; but in Bahar they are common. The custom of dividing the produce of the land in certain proportions between the cultivator and the government was almost universal in Bahar, but in Bengal it was very partial and limited; so that compared with those of the latter province, the land-proprietors of Bahar, generally speak- ing, were in a degraded condition. There are now in this province three principal zemindars, viz. the rajahs of Tirhoot, Shahabad, and Sun- note Tekaroy ; and it has been observed, that the permanent fixing of the revenue system, which was supposed to be fraught with so much mis- chief, has not been found so injurious in practice as it appeared in theory : the actual

cultivators of the earth being now in a much better con- dition than they were before the adoption of that measure.

It appears from the geographical chapters of the Puranas, the only documents of their ancient geography which the Hindoos possess, that Bahar was originally the seat of two indepen- dent sovereignties, viz. that of Magadha or south Bahar, and that of Mithila (Tirhoot) or north Bahar. Different dialects were anciently used, and even now prevail, in those countries ; namely, that of Mithila, or Tirhoot, which both in the terms and form of its character has considerable affinity to the Bengale; and that of Magadha, in which the resemblance f.o that language is still more characteristic and striking.

Of the general population of the province, at least one-fourth are Mahommedans; Bahar having been conquered by that people at an early period, and afterwards retained in subjection; so that the Brahmins have acquired an unusual degree of in- fluence. Gaya, the birth-place of the great pro- phet and legislator Buddha, is a place of pil- grimage, and the central resort of sectaries of that persuasion ; but among the resident inhabi- tants few Buddhists are to be found, owing to the intolerance and cruelty of the Brahmins, together with the Mahommedans' mode of propa- gating and confirming their faith.

The chief towns are Patna, Monghyr, Buxa, Rotas, Gayah, Dinapoor, and Boglipoor. The revenue is considerable, amounting in 1815 to 6,701,538 rupees, or nearly ►►837,944 sterling. The inhabitants visibly improve, and appear to be of a different race from the Bengalese, whom they excel both in strength and stature.

The province of Bahar is at present divided into the following districts; which, with their natural features and local peculiarities, we shall subjoin for the satisfaction of the reader.

1. BOGLIPOOR, south-east of Bahar, and com- prehending a part of the Mogul province of Ben- gal, is bounded on the north by Tirhoot and Purinijah, on the east by the latter and Mur- shid-abad ; on the south by Birb'hum and Ram- gaiih, and on the west by that district and Bahar. It extends 133 miles one way, and eighty the other, forming a total area of about 8225 square miles,and, according to Ayeen Akberry,ii.25. 197 was known anciently by the name of the sercar of Monger. The hills are imperfectly cultivated. The winds shift twice a year, blowing almost

invariably from east to west, between the months of June and February; after which they change from west to east. The heats are frequently oppressive, and the cold season comparatively mild. The soil is in many places rich, and fit for agriculture ; but in others, rocky and barren. Hot springs are frequently found in this district; in some of which, particularly at 'B'hinebaud, the thermometer rises to 144►► Fahrenheit. The general character of the population is respectable, but the mountaineers are wild and uncivilised : some of them have been lately brought, under the guidance of the Brahmins, who teach them, to worship Durga be/ore a bil-tree.

The most remarkable places in the district are as follow : B'hagal-pur, the capital, situated in lat. 25►► 13′ N., long. 86►► 58′ E. ; 1 10 miles north- west of Murshid-abad. It is a mean-looking town, in the midst of a beautiful country ; and contains a population of more than 30,000 inha-bitants, chiefly Mahommedans. Champanager, in lat. 25►► 14′ N., long. 65►► 55′ E., three miles west of B'hagal-pur, contains, together with Lacshmi-gani, a population of 9000. A Mahom- medan saint, nine cubits high, is said to have been buried here, whose tomb is still a place of pilgrimage. G'hicld'hor, or Ghiddhore, lat. 24►► 52"N., long. 80►► 10′ S. S. \V. of Monger, is remarkable for the ruins of a castle, said to have been built by the Affghan Shir Shah, A. 1). 1544; the massive walls of which are still remaining.

Monger, Monghyr, (Mudga or Mucti-giri), in lat. 25►► 23′ N. long. 80►► 26′ W., on the south bank of the Ganges. Its fort, surrounded by a deep ditch, lias been a place of note from remote antiquity. The town is formed by the assem- blage of sixteen distinct hamlets, provided with only two regular streets, which lie near the eastern and southern gates of the fort. The po- pulation is about 30,000. Its most remarkable curiosity, the shrine of Per Shah Kosem Lohauni, is most venerated, both by Mussulmans and Hin- dus. About, live miles distant from the above town is the celebrated hot spring called Sita- (i.iul, or tiie pool of Situ ; in oriental mythology, the wife of Kama the Indian Bacchus. The v. aters are received into a brick cistern, about eighteen feet square, from which air-bubbles are (onstanily emitted, although the nature of the ►►►;:K has not hern ascertained. The heat of this Miring is different at different times, varying from !>2 ►►►' to 132►► of I1 ahrenheit's thermometer.

Muii j'harna, or Mootyjerna (the pearl drop- it ij; stream) lies about eiu'lit miles inland from the < langes ; is a remarkable cascade, formed by

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leaked hill, ten common ens south-east of Bog-

lij.oor. 'i'eliv'au'ar'hi, or Tellia'Jiurry, is a small miles north-west of Raja-N., Ion-. 87►► 37′ 1'..]t is

remarkable for an old castle, built by the Suhan Shujsia, in the seventeenth century. The Vind'- hya hills here, come down close to the river, and form the line of boundary between the provinces of Bahar and Bengal, in the Mogul division.

2. BAHAR is a large district lying in the centre, the boundaries of which are ill denned, but generally traced to the Ganges, on the north, to Ramgur and Monghyr on the south, to the lat- ter, with the river Soane on the east, and the district of Rotas on the west ; including a terri- tory of 6680 square miles. The level land is highly cultivated, but interspersed with naked and barren hills, which are entirely isolated. Some of these rise in clusters, exhibiting a rugged irregular appearance, of which the most remarkable are, the Beraber pahar, west of the Phalgu; the Raja-grlha, or Raj-mahal, hills on its eastern side ; and a long narrow range con- tiguous to Shaikh purah. The southern hills form a part of the Vind'hyan chain, continued with little or no interruption for a great extent, and, in the opinion of some, even to Cape Comorin. These hills no where approach the river, and the country, though generally lofty, exhibits the immense stretch of one continued plain. The winds commonly blow east and west, shifting twice in the year. The soil is highly fertile, and the climate warm ; producing not only the comforts, but even luxuries of life. The rivers and streams which water the country are numerous. The Ganges rolls along its mag- nificent stream to the width of an English mile. The Sonar, almost equal in the width of its channel, is navigable in the rainy season, and is celebrated for its handsome pebbles and fine fish. The Phalgu, held in religious veneration by the Hindus, is tremendously deep and rapid, and is formed by the union of two immense torrents above the city Gaya, where it spreads to the breadth of 500 yards. The' Punpun, Muraha, Dard'ha, Sacri, and Panchane, are all rivers of considerable importance. The popula- tion of this district is overflowing. In 1811 it amounted to 2,755,150 souls, and the increase has been almost incredible. The revenue in 1814 was equal to 1,748,006 rupees, or ►►218,500 sterling. In point of religion, Mahommedanism is widely extended, although idolatry is the most prevalent. There are six great Hindoo shrines, visited by pilgrims, and two belonging to the Jain in the division of Nawada.

The principal towns of this district are, Patna, (in Sanscrit, Padmarati, the lotus-bearing) the capital of the province of Bahar, in lat. 25►► 37′ N. long. 85►► 15′ E., on the south side of the Ganges, which is here five miles wide in the rainy season. Including the suburbs, it covers an area of twenty square miles, and contains 312,000 po- pulation. The public buildings are paltry , the fortifications are in ruins ; and even the hand-somest mosque is now let as a warehouse. Patna is a place of considerable trade. It has a court of appeal and circuit; a judge and magistrate; collector, commercial-resident, and opium agent ; is garrisoned by a provincial battalion, but has few European houses or inhabitants. Patna lies 400 miles from Calcutta, by Murshed-abad.

Dana-pur, in lat. 25►► 37′ N. long. 85►► 5′ E.,te►►

miles west of Patna, is one of the principal sta- tions of the European troops, and, accordingly, has magnificent barracks, good roads, elegant villas, and is, in short, compared with Patna, a perfect paradise. Its population is between 20,000 and 30,000.

Gaya, in lat. 24►► 49′ N., long. 85►► E., is the capital of the district of Bahar, and consists of 1. Gaya Proper, the residence of the Brahmins; and 2. Sabibganj, the residence of the re- maining inhabitants, both containing a popula- tion of nearly 40,000. This place is celebrated by the Budd'hists as the birth-place of their great legislator, and by the Hindoos as the scene of one of Vishnu's victories over an unmanageable asur or giant. Pilgrims without number crowd from all parts, and their amount is rapidly increasing ; since from 31,000 who visited it in 1811, 200,000 at present are said to arrive annually. These pious visitants are taxed by the British government according to the number of holy places they visit. The utmost sum is 14►► rupees, or ►►l 12s. sterling. We have only to add, that the crimes arising from so great an influx of strangers, too evidently shows the de- plorable tendency of the Hindoo superstition. The ruins of Budd'ha-gaya, and the number of images scattered round them for fifteen or twenty miles, are astonishing, and render it probable that this was once the centre of Budd'hism, and the residence of some powerful monarch profess- ing that faith.

3. The third districtof the province, viz. TIR- HOOT, or Tirhut, is on the north-west of the pro- rince, bounded on the south by the Ganges, on the west by Saren, orSarun district, on the north by the Saptari woods of N►►pal, and on the east by Purneyah in Bengal. The district is high,

healthy, Lnd well-watered, producing, besides the com- modities above-mentioned, turmeric, ginger, and several other valuable articles. Its chief rivers are the Gaud'achi, B'hagmati, and Gagari. The whole area in 1784, before the alteration, was upwards of 5000 square miles ; the revenue, as late as 1814, amounted to 1,274,717 rupees, or ►►159,339 sterling; and the population in 1801 was 2,000,000. It was anciently a part of the province, or rather kingdom, of Mit'hila, which comprehended the greater part of the three dis- tricts, Tirhut, Puriniga, Saren, together with part of the Nepalese territory; and was bounded by the Gandac, Cosa, and Ganges, together with the mountains of Nepal on the north. It was subdued by the Moguls in the fourteenth cen- tury, and became part of the British empire in 1 765. This district has been recently selected by govern- ment for improving the breed of horses, the soil and climate appearing favorable to that purpose ; accordingly many of the first quality are reared in the Zilat, or division of Haji-pur.

The most remarkable mountain feature is the towering peak of D'hola-giri in the Himalaya chain, near which the Gaud'achi, or Salagrami river, suposed to be the Condochates of Arrian, takes its rise in lat. 29►► 30′ N., and long. 83►► 45′ E., or nearly. The summit of this mountain was calculated by Mr. Colebroke to reach nearly 27,000 feet above the level of the sea. As. Res. xii 276. In its bed are found schistose stones,

or salgrams, containing remains of the cornu ammonis, which are thence dispersed, are objects of adoration all over India. From which circum- stance the mountain is called Salgrami in Nepal. The spiral lines are supposed to be traces of Vishnu, and some of these stones sell for 2000 rupees, or ►►225. sterling.

Within the limits of Tirhut, or Tirhoot, is the town Hajypoor, or Haji-pur, with a district of the same name, including an area of 2782 square miles, whence the company obtain most of their saltpetre. The town lies nearly opposite Patna, at the confluence of the Ganges and Gaud'achi rivers, in lat. 25►► 41′ N., and long. 85►► 21′ E. It is celebrated for its horse-fair, held every November, to which, in 1807, no fewer than 6000 horses were brought, two of which sold for 4000 rupees, or ►►450 each. DurbTiauga, in lat. 26►► 9′ N., long. 86►► 20′ E., was a considerable place in the time of Acbar ; and near Sing'hia, east of the Gaud'achi, lat. 25►► 52′ N., long. 85►► 15', are some very curious ruins.

4. The fourth district is SAREN (the Asylum), comprehending Bettia or Champaran, formerly a separate district, and is bounded on the north by Macwan-pur and G6nac'h-pur, on the south by the Ganges, on the west by the Dewa or G'hara river, and on the east by Tirhoot, including, in 1784, an area of 5106 square miles. The whole of Saren suffered extremely from

the famine in 1770, by which nearly half the inhabitants perished ; but is in general a well cultivated and highly fertile country, and greatly improved sinc< the decennial settlement by Lord Cornwallis. There are only two Mahommedan zemindars in the whole district, and the revenue, in 1814, was 1,233,385 rupees, or ►►138,756. The popu- lation is considerable, amounting, in 1801, to 1,200,000, of whom one tenth were Mahom- medans.

Teryani, or Turyaul (the country of boats) lies at the foot of the northern hills and the lower lands, where the rivers become navigable. The base of the mountains is covered with wood, and the intervening lands between it and the culti- vated districts are covered with grass, intersected by streams and rivers, which in the rainy season are navigable. The confined air, stagnant water, and putrified vegetable matter, in this district render the climate unwholesome in the wet months, especially in the low-lands. The forests are inhabited by elephants, bears, tigers, rhi- noceroses, wild boars, jackals, foxes, hares, and hog-deer. The palas (erythrina monosperma) and simul (bombax heptaphyilum) are found on the Nepalese confines. Of this district Cha- prah is the capital, lying in lat. 25►► 46′ N., long. 84►► 46′ E., and extending nearly a mile along the northern bank of the Ganges. The popula- tion of this town, in 1817, amounted to 43,700, and is now greatly increased. The Patna bearers of Calcutta, or the original C'harwa tribe, are settled near the borders of this town, although they emigrated originally from Chota Nag-pur, lying in the southern part of the province.

5. SHAH-ABAD (the royal residence), is an ex- tremely fertile and populous district, bounded on the north by the Ganges, on the east and south by the Son, and on the west by Chun&r,

in the province of Allah-abad ; and including, in 1784, an area of 1869 square miles, since which it has been materially augmented. The popula- tion is about 2,000,000, and the revenue, in 1814, amounted to 1,177,462 rupees, or ►►132,465 sterling.

Arrah, the capital of this district, lat. 25►► 35′ S., and long. 84►► 40', is extensive and populous. Bagsar, or Bacsar, south of the Ganges, in lat. 25►► 35′ N., long. 83►► 57′ E., is the place of the celebrated engagement in 1764, when sir Hector Munro, with 6215 Sipakis and 856 Kuropeans, defeated the combined armies of Shujau'd dau lah and Kasim All Khan, amounting to 40,000 men. Here also is a police station, at which all travellers are obliged to exhibit their passports. Sasram, Sesrnung,*

Sahasram, or Sahasraung, ly- ing in lat. 24►► 58′ N., long. 83►► 58′ E., is cele- brated for the splendid mausoleum of Shir Khan the Afghan, built in the midst of a great reservoir or tank, upwards of a mile in circumfer- ence. Rohtas is the chief town of the westerly par- gauah of this district, bounded by the Caramnasa, which joins the Ganges at Bacsar, and contained, in 1784, as many as 3680 square miles. The fortress Rohtas gar'h, on the level summit of a mountain, in lat. 24►► 38′ N. and long. 83►► 50′ E. , was thought impregnable till taken from Rajah Chintainun in 1542, by Shir Shah, the cele- brated Af_lian. After this it was again sur- prise', and in 17G4, when Kasim AH evacuated the province, camo into possession of the English.

G. KAM-I/IIAK (the house of Rama), the sixth division of the province, is a hilly and moun- tainous district in the south, bounded on the north by Bahar proper, on the cast by Barda- iuvan and B'hal-pur, on the west by Bilaunja, ►►►Seraiija and Jeshpur, and by that district, Gang- ►►►i- uid Sing'h-b'hum on the south. A great part of this district belonged to the ancient province of Gund wana; but now, in addition to its own peculiar territory, it comprehends Palamo, Pa-

chet, and Chuta Nag-pur. The population has been estimated at half a million, who, though improving, are at present uncivilised. The woods, wild beasts, and savage inhabitants, ren- der this district a perilous residence; whilst superstition, rapine, and murder, are to be seen in all directions. The extent of the Ram-g'har territories in 1784 was 21,732 square miles, of which two-thirds was waste land. Iron is found in many of the hills. The Mahwap tree, or Bassia longifolia, grows abundantly among the rocks, and furnishes a farinaceous pulp which is a substitute for bread, and a nutricious infusion which is used as tea. The chief rivers are Bara- car and Damodar ; and the largest towns are Macaud-gauj, Chitra, and Ramgar'h. Ramgar'h, on the Damodar, is now a second-rate town, in lat. 23►► 39′ N., long. 95►► 43′ E. Palamo, or Palamau, the residence of a powerful rajah, is a hilly and woody territory on the Mahratta fron- tier. Berwa, in "lat. 53►► 20′ N., long. 84►► 46′ E., lies contiguous to Nazarl Bagh, the head quar- ters of the corps stationed in Ramgar'h. Pachet, a zemindar! of uncivilised population, contains 2779 square miles. The town is in lat. 23►► 36′ N., and long. 86►► 50′ E. Ch'hota Nag-pur is a high, woody, and unhealthy zemindan, at the southern extremity of this province, bordered on three sides by Gondwana, and never completely subdued by the Mahommedans. The Chatauri, Cieri, and D'hangar tribes, have never embraced the religion of the Brahmins ; but have a reli- gion and language of their own. The productions are similar to those found in the other parts of the district. Iron is commonly met with, but is not manufactured, because that metal can be pro- cured at a smaller expense from the European markets.

For a further illustration of the general features and economy of this piovince we refer the reader to Hamilton's Hindostan ; Asiatic Researches ; Bernoulli's Hindostan, i. and ii.; Rennell's Me- moir , Ayeen Akberry, &c.

BUIAU, a town in the province of Bahar, district of Bahar, 35 miles S. E. from Patna. hat. 15►► 13′ N., Ions. 85►► 37′ E.

B MI A u, or B,\r.r.i., in commerce, weights used in several places in the F.ast Indies. They have been distinguished as the great bahar, with which they \veu.',li pepper, cloves, nutmegs, gin- uer, &c. and the little bahar, with which they \veiuh quicksilver, vennillion, ivory, silk, &c. But thi> wi'iuht vanes much in different parts of the Kast. The bahar of Achecn, in Sumatra, consists of 100 cattees, and is equal to 490lbs. avoirdupoi—. The bahar of Betlefackee, in Ara- bia, consisting of forty farcels, is = 815-ˆlbs. avoirdupois. The bahar of Bencoolen = 560 Ihs. avoirdupois. The bahar of Junkseylon of eiuht capins — -l.'ollis. "> oy. ,-VJ-dr. The bahar of Molac.ca, of three, peculs = !().Vi!)s. avoirdu- pois. The bahar of Mocha, of iii'toen franks = 44."ill)s. avoirdupois.

BA11AK1.X, or BUIIIKIIN, a cluster of islands in the Persian Gulf, chiefly remarkable for the pearl fishery of tin- neighbourhood. They

*have often changed masters. With Ormus they came under the dominion of the Portuguese, were again restored to Pei sia by Thomas Khouli Khan ; and after his death, the confusion into *vhich his empire was thrown, gave an opportu- nity to an enterprising and ambitious Arab of taking possession of them. But he was soon compelled to relinquish them once more to the Persians; who have lately been, in their turn, driven from them by the rising sect of the Wa- habees. Baharen, or Awal the principal island, was famous for its pearl fishery even when pearls were found at Ormus, Kareke, Kashy, and other places in the Persian Gulf: but became of much greater consequence when the other banks were exhausted. It lies about fifteen miles from the coast, and ninety W. N. W. of Bushire; and is covered with villages and date gardens. The capital, Medina, containing 800 or 900 houses, and a strong fort, which was some time ago gar- risoned by 300 Persians, The town is destitute of water ; but here is a harbour which will admit vessels of 200 tons burden, and a strong castle.*

It lies about three miles from the coast. The Persians are said to resort hither habitually for the study of Arabic, under the Shuats, the dis- ciples

of Ali. Another of these islands is Arad, divided by an isthmus into two parts, the princi- pal of which is called Samoki, and has a small town, Mahared. A third island, sometimes no- ticed in the Eastern maps, is Gutter Sahari, called by the English, Meritan Rock. The earliest time of fishing is in April, and the latest in October. The pearls taken at Baharen, though not so white as those of Ceylon or Japan, are much larger than those of the former place, and more regularly shaped than those of the latter. They have a yellowish color ; but have also this good quality, that they preserve their golden hue, whereas the whiter kind lose much of their lustre by keeping, especially in hot countries. Those of deeper color are generally bought by the Mahrattas, and the paler are transported through Bassora and Bagdad all over Asia. It is said to be on the whole the richest and most productive pearl fishery in the world ; and to average a profit to the individuals who farm it of ►►100,000 per annum. The oyster banks, lying fifteen or twenty feet below the surface, stretch from about 25►► to 26►► 40′ N. lat., and the shells from two to ten inches in dia- meter, are considered valuable, as well as the pearls. It is a practice with those who are em- ployed in opening the shells, to put the finer pearls into their mouths, believing that this adds to their brilliancy ; and the fishermen always an- ticipate success after copious rains. Latterly the produce of t'.ie fishery has in some measure declined, in consequence of the English markets for the Ceylon fishery being transferred to the straits of Manaar; and the pearls are chiefly sent to Surat.

BAHARY, a town of Sennaar, fifteen miles south-east of that place.

BAIIAS, a town of Arabia, in the kingdom of Yemen, near the Red Sea, sixteen miles N.N.W. of Loheia. Lat. 15►► 59′ N.

BAH-ATRICALLY, a town of Cochin, with a pagoda, twenty-three miles S. S. E. of Cochin.

BAHBEIT, BALBEIT, or BHABEIT, a ruined place in the Delta of Egypt, where there are the remains of a magnificent marble temple. Po- cocke supposes it to have been a temple of Isis ; but this is disputed by D'Anville and Savary. The figures on the basso relievo are beautiful, but ill drawn. Pococke supposes Bahbeit to be the ancient Busiris. Seven miles S. S. W. of Mansora.

BAHBELGONGE, a town of Hindostan, in the country of Baglana, situated on the river Godavery, sixty miles east of Nassuck, sixty- five west of Aurungabad. Long. 74►► 52′ E., lat. 19►► 43′ N.

BAHHREIN, or AR'DU'L BAHREIN (the Land of the two Seas), is the name of a pro- vince of Arabia, between Oman and Basrah. It is called

also Hajar and Lahsa, or El-Ahsa. This district is bounded by the Arabian desert f.n the north ; by Nejed on the west ; by the sea on the east ; and by Oman on the south. It ap- pears to be in a flourishing condition ; and is governed by the Arabs of the tribe of Beni Kha- YOL. Ill

lid. The principal towns are on the coast, viz. 1. Lahsa, or Hajar, the residence of the sheik, or head of the tribe. 2. Katif, a sea-port, about twenty miles from the islands of Al BahreTn, It is inhabited "by people employed in the pearl- fishery. 3. Cowei't, or Korei'n (Grasn), sixty or seventy miles from Zobei'rch, Old Basrah. It is populous, and maintained, like other places on this coast, by the pearl-fishery.

BAHIA DE TODOS LOS SANTOS, a province and captainship of Brasil, extending to a consi- derable distance along the coast ; being bounded on the north by the St. Francisco, which runs into the sea in lat. 11►► S., and on the south by the province of Minas Geraes, including the dis- trict of Ilheos, forming a separate province. The climate "s always warm, but is refreshed by the sea-breeze. The soil is peculiar, and those parts between the mountains and the sea are esteemed the best in Brasil for the growth of the sugar- cane. It is also well adapted for tobacco and cotton. Coffee is grown in great quantities, but the quality is inferior.

BAHIA, or ST. SALVADOR, the capital of the above province, is populous and opulent ; and the second city in Brasil. It is strong by nature and well fortified ; and was, for two centuries, the residence of the governor-general of Brasil. It is still an archiepiscopal city ; and, including its suburbs, is about four miles long. The upper town is situated upon an eminence, and the lower, which consists principally of a single street, parallel to the beach, at its western base. Here is the chief seat of its commerce, a dock- yard, and a marine arsenal. The streets of the upper town are so steep that carriages can rarely be used. The churches, chapels, and convents, of Bahia are splendid structures ; and with the archbishop's palace, the mint, and the governor's residence, are the first and most conspicuous objects that meet the eye of a stranger. The grand church, formerly belonging to the Jesuits, ►►► is by far the most supurb structure in this city It is entirely composed of European marble, im- ported at an immense expense. The wood-work of the altar is inlaid with tortoise-shell, and co- vered with paintings, gilding, and a profusion of ornaments. The chief commerce of Bahia is in linen, and other kinds of cloth, hats, silk and thread, stockings, grain, rice, flour, biscuit, wine, oil, slaves, butter, cheese, bacon, and household furniture ; for which gold, sugar, tobacco, skins, hides, Brasil wood, balsam, and several kinds of drugs, are exported. The population, including the suburbs, has been lately estimated at 100,000, about 30,000 of whom are whites, and the rest mulattoes and negroes. It stands in 12►► 59′ S. lat., and longitude 37►► 23′ W.

BAHIA, a province of the island of Luzon, one of the Philippine islands, so called from a lake in the neighbourhood, which is said to be ninety miles in circumference.

BAHIA DE CHETUMEL, or Hanover Bay, a bay on the east coast of the peninsula of Yutucan, in the bay of Honduras.

BAHIA, HONDA, a large, well sheltered har- bour of the island of Cuba, on the north side, which has fifteen and ten fathoms of water in the bay, eight at the entrance into the harbour, and

anchorage in foui <\nd five fathoms. Long. 83►► 6′ W., lat. 22►► 58′ N.

BAHIE, o-r BAHEI, an island on the coast of Arabia, in the Red Sea. Also a small town op- posite to it on the shore.

BAHIOUDA, an extensive desert district to the north of Sennaar, between that country and Dongola.

BAHIR, a Hebrew term, signifying famous or illustrious, but particularly applied to a book of the Jews, the most ancient of the Rabbinical works, and which treats of the profound mysteries of the Cabbala.

BAH IRA, BAIIRI, or RIF, or the maritime province, a name given by the Arabian geogra- phers to the Delta of Egypt, and the districts immediately adjoining it east and west. It con- tains Alexandria, Rosetta, Damietta, Menuf, and Mansoura.

BAHIRA, among the ancient Arabs, a name given to one of the four kinds of camels or sheep, which, according to their religion, were turned out at liberty with an ear mark, no longer to be used for service like other cattle. The bahira, with the sabahi, wasita, and hami, were abolished L.y Mahomet.

BAlll.lMJFN, a large and well built village in tin: urand duchy of Baden, circle of the Treisam, upper bailiwic of Huchberg. It con- tains iti-jo inhabitants, ssho cultivate the vine to ;i ere at extent.

ii \i!N, a to'.sn of'the Prussian states, in Further Poms rauia, and circle of (Imfenhagen. It con- tains annul i:jou inhanitant<, who derive their sul'si- tenee chiefly tVoni tillage-, the neighbouring country hem.;' very ieitde; straw hats are also Miaimiaetured here. Tuenly link's S.S.N\ . of Staixnd, tliirty-Uvo north of Oustrin.

HuinosN, a small i-land in the Sooloo archi- pelauo. l.onu. l-J(.-►► .">►►' 1'.., lat. (3►► 9' N.

I>.\1 1'(H AC'll 1'.. l)i AN, the title of the sove K-i.n ot'AnosM. See Axos

liAi 1 !! AliAD, a tuun of Persia, in the pro- vine- ot Khorassan, ten miles north of Sebsvar.

Pi A 1 1 II l!i I.\M i , or riser svitliout water, a deep '.alley in the west of F.u'ypt, supposed to have : neieiitly formed :>. can.d of communication be tsst.n Lake Moris (I'aioiinij, and the Lake .'►►►.i rentis. Sic I) \ ui; A i.

I i >T ((liaries Frederick), a (German :►►►.'►►►, 1'iin ;,t i/;c!:ot's \si ida, in 1741. He Mudied at I.eipMe, ss here his father was profes l:v,niH, took the (leave of A.M., and – a1 j oiiited his lather's deputy. In conse- . n amour he wa> obliged to leave ►►►;c ; and >►►► tiled at F.rfuit, as professor of liililie.il ant.(jiiities. 1 le;v in 1 7ii;> lie published An i-<-:iy toss; nls a systi m of the Doctrines con- tdn .1 in li.e HiMe, in svhich several heterodox wore broached. He soon after left F.rUirt, an. I \ \ent to (jiessen in Hesse, where he published a niiJiihcr ot theological tracts, abound- ing ssit!i extravagancies, confidently maintained. ITOIU (lessen he removed to Durkheim, in 1774, arul here i oiint \ on !.einin_en Dachsburg ap- :io:nted him las preacher, and gave him a i:on-e tor a seminary of education, designated t;it> Phiiaiithropiu:!!, ul-.j, h \vus opened in 1777. '! o out am pii]iils, lji)!ialt traselled to Holland

and England ; but on his return, finding a prosw- cution had been commenced against him at Vienna, he fled to Prussia. Some time after h^ settled at Halle, where he became an avowed deist, and commenced tavern- keeper, and farmer. At Hatte lie instituted a new society of free- masons, on account of which he lay twelve months in prison, but afterwards continued his business as a* landlord. He died in 1792.

BAHR EL ABIAD, or the White River, a name given to the real Nile, near its first ►►rigin ; the sources of which in the African Alps of Kumri remain to be explored.

BAHR EL AZREK, JBlue River, or Abyssinian Nile, has its chief spring in a small hillock, situated in a marsh, and joins the Bahr el Abiad, or true

Nile, about lat. 16►► N.

BAHR EL ACCABA, an arm of the upper ex- tremity of the Red Sea, penetrating into Arabia.

BAHR EL SOWDA, a name said to be given to the lake of Antioch.

BAHRY, a town of Hindostan, in the do- minions of the rajah Of Dhoulpore, 10 miles north of the river Chumbul.

BAHURIM, a city of the Benjamites, about a mile or two north-east of Jerusalem. Ahimaz and Jonathan hid themselves in a well in this town, when pursued by Absalom's messengers.

BAJA, or BA.IJE, an ancient village of Cam- pania, in Italy, between the promontory of Mi- senum and Puteoli, on the Sinus Baianus ; fa- mous for its natural hot-baths, which served the wealthier Romans for the purposes of medicine and pleasure. The variety of these baths, the softness of its climate, and the beauty of its landscape, captivated the minds of opulent no- bles, whose passion for bathing was unbounded. The wearing of linen, and the disuse of ointments, render the practice less necessary in modern life; but the ancients performed no exercise, and en- gaged in no study, without previous ablutions, which at Rome required an enormous expense in aqueducts, stoves, and attendants : a place, therefore, where waters naturally heated to every degree of warmth bubbled spontaneously out of the ground, in the pleasantest of all situations, was such a treasure, as could not be overlooked. Baise possessed these in the highest perfection ; its easy communication with Rome was also a point of great weight. Hither at first retired for a temporary relaxation the mighty rulers of the world, to string anew their nerves and revive their spirits, fatigued with bloody campaigns and civil contests. Their habitations were small and modest ; but soon increasing luxury added palace to palace, till ground was wanting for the vast de- mand; enterprising architects, supported by im- mense wealth, now, therefore, carried their foun- dations into the sea, and drove that element back from its ancient limits. It has since taken ample revenge, and recovered much more than it ever lost. From being a place of resort for a season, Baiae grew up to a permanent city : whoever found himself disqualified by age, or infirmity, for sustaining any longer an active part on the political theatre, or from an indolent disposition, sought a place where the pleasures of a town were combined with the sweets of a rural life ; whoever wished to withdraw from the dangerous

neighbourhood of a court, or the baneful eye of informers, flocked thither, to enjoy life untainted with fear and trouble. The affluence of wealthy inhabitants rendered Baiae, therefore, as much a miracle of art as it was before of nature : its splendor may be inferred from its innumerable ruins, heaps of marbles, mosaics, stucco, and other precious fragments of taste. It flourished in full glory down to the days of Theodoric, the Goth ; but the destruction of its enchanted pa- laces followed quickly upon the irruption of the northern conquerors, who sacked and burnt all before them, and destroyed or dispersed the whole race of Roman nobility. Moles and but- tresses were now torn asunder and washed away; promontories, with the proud towers that once crowned their brows, undermined and tumbled headlong into the deep, where, many feet below the surface, pavements of streets, foundations of houses, and masses of walls are still to be de- scried. Internal commotions of the earth contri- buted also largely to this general devastation : and mephitic vapors and stagnated waters have converted this favorite seat of health into the abode of pestilence, at least during the estival heats. Yet Baiae in its ruined state, and stripped of all its ornaments, presents many beautiful and striking subjects for the pencil. It lies in the Terra di Lavoro, twelve miles west of Naples, and two from Puzzuolo. Don Pedro, the vice- roy of Charles V. erected a castle on a neigh- bouring eminence to defend the harbour ; and about a century ago, another was built on an island adjacent, which communicates to the shore by a bridge.

BAJA, BAIA, BAYJAH, or BEGIA, a town of the kingdom of Tunis in Africa, supposed to be the ancient Vacca of Sallust, and Oppidum Vag- genese of Pliny. The Tunisians say that if there was in the kingdom such another town as this for plenty of corn, it would become as cheap as sand. It has a great annual fair, to which the most dis- tant Arabian tribes resort with their families and flocks. Notwithstanding this, the inhabitants are very poor, and great part of the land about the town remains uncultivated. The town stands on the declivity of a hill, on the road to Constan- tina, about ten leagues from the northern coast, and thirty-six south-west of Tunis. On the highest part is a citadel that commands the place, but is of no great strength. The walls were raised out of the ruins of the ancient Vacca, and have some ancient inscriptions.

BAJA, or BAYA, a populous market town of Hungary, on the Danube, thirty-five miles north- west of Esseck. It has a Catholic and Greek parish church.

BAJA, in entomology, a species of phalaena, (noctua), of the middle size, that inhabits Europe, It feeds on the deadly night shade.

BAIA DE RAMA, a town of European Turkey, in Walachia, district of Mehedinza, situated on the river of the same name.

BAIABAD, a town of Asiatic Turkey, in Na- tolia, twenty-eight miles south-east of Kastamoni.

BAIAC, a town of Asiatic Turkey, in Na- tolia, thirty miles south-east of Kutayeh.

BAJ AD, in zoology, a species of silurus.

BAJADOR, CAPE, a cape on the west coast

of the island of Luzon, being its extremity Long. 120►► 40′ E., lat. 18►► 40′ N.

BAJADOUR, in old records, a carrier or porter.

BAJ AN A, in conchology, a species of vena? found on the shores of Brasil.

BAIANUS LACUS, a lake, or bay, mentioned by Tacitus, which some suppose to be the lake Lucrinus, and others the bay of BAI►►.

BAIANUS SINUS, or BAIARUM PORTUS, a bay of Naples, so called from Baiae, which was en- larged by Augustus, by giving entrance to the sea into the Lacus Lucrinus and Averni. He ordered it to be called Portus Julius apud Baias. The modern name is Golfo di Pozzuolo. See POZZUOLO.

BAJAPOUR, a town of Baglana, Hindostan, on the river Godavery, twenty miles east of Bahbelgong.

BAIAS, or BAL.E, a town of Syria, at the north-east extremity of the bay of Alexandretta, supposed to be the ancient Issus. On the hills fronting it, are the ruins of a triumphal arch, or of some other structure of gray marble. It is sixteen miles from Alexandretta, and the fine gardens round the town supply Aleppo with oranges and lemons. In a small bay, to the north of the town, are seen the ruins of an ancient port, which is now much exposed to the south-west winds, which are very dangerous here. On the south side there is a mountain torrent, the bed of which is conjectured to have been the boundary between Syria and Cilicia.

BAJAZET I. emperor of the Turks, succeeded Amurath I., A. D. 1373. He was a renowned warrior, but a tyrant. In the beginning of his reign he was very successful. In 1393 he had conquered all Thrace, Macedonia, Thessaly, and the greater part of Mysia and Bulgaria ; and in 1396 he brought an army of 300,000 men against Emanuel II. emperor of

Constantinople, whom he defeated, and slew 20,000 of the Christians, but not without considerable loss on his own side. But in 1397 Tamerlane, or Timour Beg, the celebrated prince of the Tartars, brought an army against him_of 400,000 horse and 600,000 foot; and having overcome him in a pitched battle, wherein 200,000 Turks were slain, took Bajazet himself prisoner, and exposed him, it has been said, in an iron cage, the fate he had des- tined for his adversary, if he had been the victor. This story, however, has been rejected as a fable by many modern writers. Mr. Gibbon has given the following narrative of this memorable transaction : ‘ No sooner was Timour informed that the captive Ottoman was at the door of his tent, than, he graciously stepped forward to re- ceive him, seated him by his side, and mingled with just reproaches a soothing pity for his rank and misfortunes. (Alas F said the emperor, ‘ the decree of fate is now accomplished by your own fault : it is the web which you have woven ; the thorns of the tree which yourself have planted. I wished to spare, and even to assist, the cham- pion of Moslems : you braved our threats, you despised our friendship ; you forced us to enter your kingdom with our invincible armies. Behold the event. Had you vanquished, I am not igno- rant of the fate which you reserved for myself

and my troops. But I disdain to retaliate : your life and honor are secured; and f shall express my gratitude to God by my clemency to man.’ The royal captive showed some signs of repent- ance, accepted the humiliation of a robe of honor, and embraced with tears his son Mousa, who, at his request, was sought and found among the captives of the field. The Ottoman princes were lodged in a splendid pavilion ; and the respect of the guards could be surpassed only by their vigilance. On the arrival of the haram from Boursa, Timour restored the queen Despina arid daughter to their father and husband; but he piously required that the Servian princes who had hitherto been indulged in the profession of Christianity, should embrace without delay the. religion of the prophet. In the feast of victory, to which Bajazet was invited, the Mogul em- peror placed a crown on his head and a sceptre in his hand, with a solemn assurance of re- storing him with an increase of glory to the throne of his ancestors. But the effect of this promise was disappointed by the sultan’s un- timely death : he died of apoplexy at Akshehr, the Antioch of Pisidia, about nine months after his defeat. The victor dropped a tear over his grave. His body, with royal pomp, was

conveyed to the mausoleum which he had erected at. Boursa; and his son Mousa, after receiving a rich present of gold and jewels, of horses and anus, was invested, by a patent in red ink, with, the kingdom of Anatolia. Such (continues the historian) is the portrait of a generous conqueror, which lias been extracted from his own memo- rials, and dedicated to his son and grandson nineteen years after his decease; and at a time when the truth was remembered by thousands : a manifest falsehood would have implied a sa- tire on bis real conduct. On the other hand, of tl.e harsh and ignominious treatment of Bajazet there is also a variety of evidence. The Turkish annals, in particular, which have been con- sulted or transcribed by I.eunelavius, Pococke, and ('antemir, unanimously deplore the capti- vity of the iron cage; and some credit may be allowed to national historians who cannot stig- inatisi' the Tartar without uncovering the shame of their king and c ountrv.'

li.i\/r.T II. emperor of the Turks, the \Minui-st son of Mahomet II. who took Constan-

iii pie, succeeded his father, A.I). 1480. Like

i .1111 too he \as a u'real conqueror. In 1484, he

'I waste \allachia : in H:'> < >, he subdued the

i hi- : ni I I'M, he took Kpidamnum in Scla- ' i:ia: in 14'.':$, he defeated the Christians in

❖❖❖"alia, in an obstinate ;md bloody battle,

therein he lost 10,000 of his own troops : in

1 I'.'K, he over-ran l!us

70. OIK) men; and, in 1.'>UO, he took iModon, in

Morea, Irom the Venetians, lie died in

BAICHA, two nveis of Siberia, flowing into 'he Ttinic'ian, thirty-two and fifty-six miles .mrth-vu'Sl of' Turucliansk.

li.M !)1'.AI1, a valK-y in the great, road from 'no to Sue/., at the northci n extremity of which Si'i'/ stands.

iJAIDHA, a town of Arabia, in the province

llesijas, thirty miles north-west of Vadilkova.

BAIDYNATU, a small town of Ilindostan, in the Kemaon hills, celebrated for an ancient temple, dedicated to the Hindoo god of medi- cine, and much frequented by pilgrims.

BA1EU, in zoology, the name of the cervus Mexicanus, or Mexican stag, in Bancroft's Guiana, &c.

BA'IGNE, v. a. Bagner, FT. To drench; to soak : a word out of use.

The women forslow not to baigne them, unless they plead their heels, with a worse perfume than Jugurth found in the dungeon. Carew's Survey of Cornwall.

BAJITH, a city of Moab, mentioned in Isaiah xv. 2. whither the king went to bewail the state of his nation, and supplicate aid from his idols.

BAIKAL, a large lake of Siberia, lying be- tween 52►► and 55►► lat. N. It is reckoned to be 550 versts, or 3 18 'German miles in length; but only about thirty versts broad, and in some places not above fifteen. It is environed on all sides by high mountains. In one part of it, which lies near the mouth of the 'river Bar- guzin, it throws up an inflammable sulphureous liquid called naptha, which the people of the ad- jacent country burn in their lamps. There are likewise several sulphureous springs near this lake. Its water at a distance appears of a sea- green color : it is fresh ; and so clear that objects may be seen in it several fathoms deep. It does not begin to freeze till near the end of December, and thaws again about the beginning of May ; from which time till September, a ship is seldom known to be wrecked on it ; but by the high winds which then blow, many shipwrecks happen. The fishery on the shores begin in May ; and the southern shore is divided into districts, and farmed out by the government. This lake is called by the Russians Swaetoie More, or the Holy Lake ; and Dalai Nor by the Tartars. When it is frozen over, people travel upon it in the road to China; camels have for this purpose a particular kind of shoes, sharp at the bottom, and the oxen have sharp irons driven through their hoofs, without which it would be impossible for them to pass. The shores and islands, consisting of granite rocks, called the Yablonian and Tunkinski chain, running from east to south-west, are well wooded, and form, by their frequent projections into the lake, bays and promontories, but with little good ancho- rage. The high road from Irkutsk to Kiaekhta, passes along its southern shores. On the western shore copper has been found. Its depth, where greatest, is from eighty to 490 fathoms, but in some places it is unfathomable, and so variable that it has been conjectured with great probabi- lity to have arisen from a deep rent in the moun- tains, occasioned by an earthquake. Under the waters of this lake, grows a peculiar species of sponge, called by the Russians morskaya suba, or sea-

sponge, the spongia baicalensis of Pallas. It is used for giving the first polish to metals. The common seal (phoca vitulina) seldom found in fresh water, or at a distance from the ocean, is taken here in April, basking on the ice, and the sale of their skins is a source of considerable profit. It yields a sort of blubber, so rank that even ravens will not toucli its carcase ; yet its oil is highly esteemed and purchased by the Chi-

nese. The baikalensis, a species of callionymus that inhabits the deep parts of the lake, is about nine inches long, soft, slender, and rather com- pressed ; and has ventral fins ; of carp, tench, sturgeon, devil's lampreys, (salmo oxyrrynchus), lenki (salmo salvelinus), there is abundance; the most important fish is the omul, or migratory salmon, somewhat resembling the herring. They are taken in October, and being dried by the frost, can be conveyed fresh almost to any distance. The climate around this lake is extremely severe ; in the midst of summer frosty nights being common ; and snow, as early as August, falling on the neighbouring moun- tains. The vegetable productions are principally ihe pinus cembra, empetrqm nigrum, and pyrola umflora, the silky knotgrass (polygonum seri- ceum), a beautiful plant, and the triticum lito- rale, which the peasants call dikaya koch, wild barley. Rivers flowing into the lake Baikal are, on the north side, in lat. 55►► 51′ the Upper An- gara, on the east the Barguzin, in latitude 54►►. At its mouth is the Cape, called the Holy Pro- montory ; and on the west, the Tunga, Selenga, and Buguldeika, the last of which discharges itself by three mouths. The only outlet is the Lower, or Greater, Angara, which rushes from the lake, in lat. 50►► 54′ N. and long. 105►► E. with great impetuosity, and joins the Yenisei near Ust Tungurskoye in north lat. 58►►. The channel through which it quits the lake is more than a mile broad.

BAIKALITE, in mineralogy, a variety of py- roxene, found near the lake Baikal in Siberia. See PYROXENE.

BAIKALENSIS. See BAIKAL.

BAIL', n. s. & v. a. 1 Of this word the ety-

BAIL'ABLE, adj. { mologists give many de- rivations ; it seems to come from the French bailler, to put into the hand ; to deliver up, as a man delivers himself up in surety. ' Bail is the freeing or setting at liberty one arrested or im- prisoned upon action either civil or criminal, under security taken for his appearance. There is both common and special bail ; common

bail is in actions of small prejudice, or slight proof, called common, because any sureties in that case are taken; whereas, upon causes of greater weight, or apparent speciality, special bail or surety must be taken. There is a difference be- tween bail and mainprise ; for he that is main- prised is at large, until the day of his appear- ance : but where a man is bailed, he is always accounted by the law to be in their ward and custody for the time; and they may, if they will, keep him in ward, or in prison at that time, or otherwise at their will.' ××× Cowell. A. bail is therefore a surety or bondsman ; one who gives surety for another. Bailable relates to the less atrocious offences, where security for the appear- ance of the offender may be legally offered and accepted. To give or to admit to bail, is to ren- der or to accept the security which the law pre- scribes in a bailable case. In Spenser the word is figuratively used to signify power or jurisdic- tion.

So did Diana, and her maydens all, Use silly Faunus now within their baile.

Let me be their bail.-

They shall be ready at your highness' will,

To answer these suspicions.

Thou shalt not bail them. Shahspeare.

They are not bailable, Thev stand committed without bail or mainprize.

B. J;mton.

Worry'd with debts, and past all hopes of bail, The unpity'd wretch lies rotting in a jail.

Roscommon.

And bribe with presents, or, when presents fail, They send their prostituted wives for bail.

Dry den.

BAIL, is originally derived from the Greek, fiaXXuv, to deliver, and so called because by means of it, the party restrained is delivered into the hands of those that bind themselves for his forthcoming, in order to a safe keeping or pro- tection from prison ; and the end of the bail is to satisfy the condemnation and costs, or render the defendant to prison. The commitment of a per- son being only for sˆfe custody, wherever bail will

answer the same intention, it 'ought to be taken ; as in most of the inferior crimes : but in felonies, and other offences of a capital nature, no bail can be a security equivalent to the actual custody of the person. For what is there that a man may not be induced to forfeit, to save his own life ? or what satisfaction or indemnity is it to the public, to seize the effects of him who has bailed amurderer, if the murderer himself be suffered to escape with impunity ? Upon a si- milar principle, the Athenian magistrates, when they took a solemn oath never to keep a citizen in bonds that could give three sureties of the same quality with himself, did it with an exception to such as had embezzled the public money, or had been guilty of treasonable practices.

Bail may be taken either in court, or, in some particular cases, by the sheriff or other magis- trate ; but most usually by the justices of the peace. To refuse or delay to bail any person bailable, is an offence against the liberty of the subject, in any magistrate, by the common law ; as well as by the statute Westm. 1. 3 Edward I, c. 15, and the habeas corpus act, 31. Car. II. c. 2. And, lest the intention of the law should be frustrated by the justices requiring bail to a greater amount than the nature of the case de- mands, it is expressly declared by statute 1 . W. and M. st. 2. c. 1. that excessive bail ought not to be required ; though what bail shall be called excessive, must be left to the courts, on consider- ing the circumstances of the case, to determine. And on the other hand, if the magistrate takes in- sufficient bail, he is liable to be fined, if the cri- minal does not appear.

In civil cases, every defendant is bailable But it is otherwise in criminal matters. Regu- larly, all offences either against the common law or act of parliament, that are below felony, the offender ought to be admitted to bail, unless it be prohibited by some special act of parliament. By the ancient common law, before and since the Conquest, all felonies were bailable, till murder was excepted by statute : so that persons might be then admitted to bail almost in every case. But the statute W. 1. 3 Ed. I. c. 15. takes away the power of bailing in treason, and in divers in- stances of felony. The statutes 23 Hen. VI. c. 9

and 1 & 2 Ph. &Mar. c. 13. gave farther regula- tions in this matter: and upon the whole we may collect, that no justices of the peace can bail, 1. Upon an accusation of treason : nor, 2. Of mur- der : nor, 3. In case of manslaughter, if the pri- soner be clearly the slayer, and not barely sus- pected to be so ; or if any indictment be found against him : nor, 4. Such as, being committed for felony, have broken prison ; because it not only carries a presumption of guilt, but is also superadding one felony to another : 5. Persons outlawed; 6. Such as have abjured the realm: 7. Persons taken with the mainour, or in the act of felony : 8. Persons charged with arson : 9. Excommunicated persons, taken by writ de ex- communicato capiendo : all which are clearly not admissible to bail by the justices. Others are of a dubious nature, as, 10. Thieves openly de- famed and known : 11. Persons charged with other felonies, or manifest and enormous offences, not being of good fame : and, 12. Accessaries to felony, that labor under the same want of repu- tation. These seem to be in the discretion of the justices, whether bailable or not. The last class are such as must be bailed upon offering suffi- cient surety; as, 13. Persons of good fame, charged with a bare suspicion of manslaughter, or other infamous homicide; 14. Such persons Ivni'j; charged with petit lurceny or any felony, not before specified : or, 1.5. \ith being acces- sary to any felony. Lastly, it is agreed, that the court of kind's bench or any judge thereof in time of vacation) may bail for any crime whatso- ever, lie it treason, murder, or any other offence, according to the circumstances of the case. And herein the wisdom of the law is very manifest. To allow bail to be taken commonly for such enormous crimes, v, ould greatly tend to elude the public justice ; an ! yet there are cases, though thev rarely happen, in which it would be hard an-! unjust to confine a man in prison, though ;\ci u—ed even of the '.rreatest Oiieiice. The law ;s then-ton1 provided one court, and only one,

;eh has a discretionary power of bailing in any <",<❓❓❓❓❓❓: excepting only even to this hii;h jurisdic- t on, and of course to all inferior ones, such per- sons as are connuittrd by either house of parlia- im nt, so loiiu1 as the si-ssion lusts; or such as are uimmitted for contempts by any of the king's superior courts of justice.

In civil processes, in which an actual arrest and

i-.sonment is not now allowed, such as suits for

t :e recovery of sums of less amount than ❓❓l5, or of

1. tiiiaje-., the. precise amount of which cannot be

>ho\vn before the jury shall have estimated them

“as m actions of trespass, or for any injuries,

eit’ier pei’Mina! or pecuniary, but to an unascer-

atnount;, no arrest can be made, and,

uently. no bail need be demanded. But

inasmuch as the writ, \lneh now forms the com-

iii n ⬜⬜⬜⬜⬜⬜:⬜⬜⬜!!, cut of all civil actions, was formerly a

s issued au”ain-t a defendant, who had neg-

te 1 to i omply \ itli certain anterior summonses, i\ !;o was the- re1 y liable to imprisonment, in or-

]⬜⬜⬜ ⬜⬜⬜(> si-run1 Ins appearance in court on the day

n on t: e shi-ntf v, as to make his return of the

h ivin_ !i\ his previc.iis contempt of le-

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[.:;_> : it \a.s a cons. -:, IK e that he could not

avoid imprisonment, but by giving bail. And, as by the tenor of the writ, and by fiction o law, a defendant in all cases is now held to bf in the same circumstances, it is necessary that he should put in common bail : which is a mere formal entering of the names of two fictitious persons, John Doe and Richard Roe, as his sureties.

In actions for a sum certain, if the plaintiff make affidavit that that sum is fifteen pounds, or upwards, the defendant must give what, tech- nically, in distinction from the fictitious bail of which we have just spoken, is called special bail : that is, in order to avoid imprisonment, he must find two real and responsible persons to be sureties for him. As soon as an arrest has been effected, these sureties give a bond to the sheriff, for the defendant’s appearance on the day of the return of the writ, and this is called bail to the sheriff, or bail below. On that day, or within four, or in some cases, six or eight days after, they enter into recognizances, that if judgment be given against the defendant, he shall pay the da- mages and costs, or surrender

his person. This is called giving bail above, or bail to the action. If the plaintiff requires it, they must justify, as it is termed, or perfect the bail ; that is, they must swear (if in London or Middlesex, before a judge; or, in the country, before commissioners appointed for that purpose), that they have the requisite qualifications : which are, the being housekeepers, and worth, each of them, the full sum for which they become bail, after payment of all their debts. Thus securing the plaintiff the person or property of his defendant, if the latter is insufficient to discharge the claim, the bail are entitleˆ to apprehend him by warrant, or in any other way, to surrender his person.

When a defendant has failed to put in bail above, and the sheriff is unable to produce his body, that officer is answerable to the plaintiff for the sum for which the bail below was given : and he has his own remedy against the bail, by action upon their bond. But, as a simpler plan, the sheriff usually assigns the bond to the plain- tiff, and he proceeds upon it. It is, however, optional with the plaintiff to accept or refuse the assignment.

BAIL-BOND, an obligation entered into by one or more sureties, upon giving bail, insuring the defendant's appearance at the time appointed by the court.

BAILEMENT. See BAILMENT.

BAILEY (Nathan), an English lexicographer, who kept a school at Stepney, where he died June 27, 1742. He published Dictionarum Domesticym, or a Household Dictionary, 8vo ; The Antiquities of London and Westminster, 12mo; and several school books: but his princi- pal work was an Etymological English Dictionary, which first appeared in octavo, and being enlarged into a folio, volume became the basis of Dr. Johnson's dictionary.

BAILIE, in Scots law, a judge anciently ap- pointed by the king over such lands, not erected into a regality, as happened to fall to the crown by forfeiture or otherwise : now abolished. It is still the title of one or more magistrates in royal boroughs, and of the judge appointed by a baron

over lands erected into a barony. There are four bailies in the town council of Edinburgh, three in those of Glasgow, Aberdeen, Perth, &c.

BAI'LIFF, n. s. ~\ Borrowed from the Fr.

BAIL'IWICK, n. s. >baillie. In our old voca-

BAILY, n. s. j bularies written baily, and

so a steward is still called in many places. Bailiff is the person who sustains the office ; bailiwick is the place of his jurisdiction; and baily is the office or jurisdiction itself.

Every beggarly corporation affords the state a mayor or two bailiffs yearly. B. Jonson.

BAILIFF, BALLIVUS, from the French word bailli or bailiff, that is, praefectus provinciae : and as the name, so the office itself was answerable to that of France, before the revolution ; where there were eight parliaments, which were high courts, from whence there lay no appeal ; and within the precincts of the several parts of that kingdom, which belonged to each parliament, there were several provinces to which justice was administered by certain officers called bailiffs. ??? In England there are several counties in which justice has been administered to the inhabitants, by the officer now called sheriff or viscount (one of which names descended from the Saxons, the other from the Normans) ; and though the sheriff is not called bailiff, yet it is probable that was one of his titles, because die county is often called balliva. And in Magna Charta, cap. 28. and 14 Ed. 3. c. 9. the word bailiff seems to comprise both sheriffs and bailiffs of hundreds. As the realm is divided into counties, so every county is divided into hundreds ; within which, in an- cient times, the people had justice administered to them by the officers of every hundred. But now the hundred courts, except certain franchises, are swallowed in the county courts ; and the bai- liff's name and office is grown into contempt, they being generally officers to serve writs, &c. within their liberties. In other respects, however, the title is still in esteem : for the chief magis- trates in divers towns are called bailiffs, or bai- lies ; and sometimes the persons, to whom the king's castles are committed, are termed bailiffs, as the bailiff of Dover Castle, &c. Of the ordi- nary bailiffs there are several sorts.

BAILIFFS ERRANT, or BAILIFFS ITINERANT, are those whom the sheriff appoints to go up and down the country to serve writs and warrants, to summon county courts, sessions, assizes, &c. The sheriff being answerable for the misdemeanor of these bailiffs, they arc usually bound in an obligation for the due execution of their office, and thence called bound bailiffs, which is vul- garly corrupted into a much more homely appel- lation.

BAILIFFS OF BOROUCIIS, were magistrates an- ciently in cities and towns,

answering, in some measure, to what, in later times were called portgrave, mayor, &c. Canterbury was a bailiff town 500 years before it was made a mayor town. \ estminster, Southwark, Scarborough, &c. are still governed by bailiffs.

BAILIFFS OF FORESTS and MANORS, direct husbandry, fell trees, gather rents, pay quit- rents, &c.

BAILIFFS OF FRANCE, under the monarchy, were appointed over the provinces originally be- longing to the crown.

BAILIFFS OF FRANCHISES, or BAILIFFS OF LIBERTIES, in England, are those bailiffs who are appointed by every lord within his liberty, to execute process and do such offices therein as the bailiff errant doth at large in the county.

BAILIFFS OF THE EMPIRE, were anciently vicars or regents of the empire ; as appears from a letter of Henry of Flanders to pope Innocent III. wherein he says, the princes, barons, and knights have elected me ballivum imperii.

BAILIFFS, PROVINCIAL, among the French, under the old despotism, were officers appointed in certain provinces or counties, with an autho- rity somewhat like that of justices of assize, in- stituted by the dukes and counts in their several territories, after they had procured the inherit- ance of them. These acted in the name, and by the authority, not of the king as justiciaries, but of the dukes or counts who appointed them, and whose deputies they were.

BAILIFFS, ROYAL, in France, were appointed by the king over provinces annexed to the crown.

BAILIFFS, SHERIFF'S, in England, or sheriff's officers, are either, 1. bailiffs of hundreds, or 2. special bailiffs, and appointed over their res- pective districts, to collect fines; summon juries; attend the judges and justices at the assizes and quarter sessions ; and to execute writs and pro- cesses in the several hundreds.

BAILIFFS, WATER, officers appointed in all port-towns, for the searching of ships, gathering the toll for anchorage, &c. and arresting persons for debt, 8cc. on the water.

BAILII (David), painter of perspective views and portraits, the son of Peter Bailii, aa artist of some note, was born at Leyden in 1584. Having acquired the rudiments of the art under his father, he improved under Verburg, and still more under Vandervoort, with whom he spent above six years. While with him, he copied a perspective view of the inside of a

church, by Stenwyck, with such accuracy, that even Sten- wyck himself could scarcely determine which was the original. He travelled through several parts of Italy to see the works of masters, and for a few years resided at Rome. The correctness of his drawing, and the delicate finishing of his pic- tures, have been much admired. He died in 1638.

BAILIWIC, BAILYWICK, or BAYLiwicfs, balliva, in law, the jurisdiction of a bailiff over that liberty which is exempted from the sheriff of the county. Stat. 27th Eliz., ch. 12. Wood's Just. 206.

BAILLET (Adrian), a very learned French writer and critic, born in 1649, at Neuville near Beauvais. His parents being poor, he obtained his education by favor of the bishop of Beauvais who afterwards presented him with a small vica- rage. In 1680 he was appointed librarian to M. de Lamoignon, advocate general to the parlia- ment of Paris, of whose library he made a copi- ous index, in thirty-five volumes folio. He died in 1706. His principal works are, A History of Holland, from 1609, to the peace of Nimiguen in 1679, 4 vols. 12mo. Lives of the Saints, 3 vols. folio, which he professed to have purged from fables. Jugemens des Savans, 9 vols. 12mo. and the Life of Des Cartes, 2 vols. 4to. which he also abridged to 1 vol. 12mo.

BA1LLEUL, a town of France, in the depart- ment of the North, formerly very strong. It has been several times burnt by accident. It lies nine miles S.W. of Ypres.

BAILLIAGE, the office of a bauiff, or the place where he keeps his seat, and the territory subject to his jurisdiction ; which last is also de- nominated Bailiwic.

BAILLIAGE, Water, an ancient duty received by the city of London, upon all goods and mer- chandises brought in or carried out of port.

BA1LLIE (Robert), M. A. a presbyterian divine of Scotland, was born at Glasgow in 1599, and studied at that city ; having received orders from Abp. Law, in 1622 he was chosen regent of philosophy at Glasgow, and some time after was presented to the church of Kilwinning, by the earl of Eglinton. In 1633, he declined the offer of a church at Edinburgh, but in 1638 was chosen a member of the famous assembly at Glasgow, which was a prelude to the civil war, and was a member of all the succeeding assem- blies, excepting those which sat while he was at \ estminster. In 1640 he was sent to London by the Covenanting Lords, to draw up an accu- sation

against Apb. Laud. In ‘1642 he was appointed joint professor of Divinity in the Uni- versity of Glasgow, with Mr. Dickson; which he preferred to similar offers from the other three universities. In 1 6 K; lie was one of the com- misMoners to tin; celebrated assembly of Divines at Westminster, and returned in 1640. When alter the execution of’ Clnrles I. his son was pro- claimed in Seothuu!. he was appointed by the assembly to wait on Charles II. at the Hague, ;;nd aft.T the restoration was made principal of the university of Glasgow. He died in 1662, aged sixty-three.

ISui.ur. (Matthew), M. I), a celebrated ana- tomist, lie was tiie son of the Rev. James Kiiiiie, professor of divinity at Glasgow, by the sister of Dr. \illiaui Hunter. He studied at (ilas-ow and lialiol College, Oxford, and after- wards became the pupil ut’ his uncle. Being made physician to St. George’s hospital, he suc- ceeded Dr. li miter as le; tnrer on anatomy, in conjunction witli Air. Cniickshauk. He conti- nued a public lecturer tiil 1799. Dr. Baillie was one of the pliysieians in ordinary to Geo. III. and Geo. i V . and lonˆ stood in the first rank aiiionj his med u al contemporaries. He published Tli;’ Morbid Anatomy of tile most important parts of tue Human iiody. f’>vo. 1793, subsequently (ida’.ued and implored : a Series of Engiavings ft ndiri’j; to il’m-lrate .’.nM’bid Anatomy; also a

Description of (‘nivid i terns; and contributed v important papers to the Philosophical

i r iii-aetion> and medical collections of iiis day.

! >r. ii.ullie tor ,ied a vaiu.iMe museum of anato- mical .pecimens which lit; presented to the Col < >f i’h\sicians. lie dii d m 1823, in the

v.t-ihird yeir <-!' his age; leaving by Iiis wife,

ˆhter ot Dr. ! ‘ :i;nan, a son and a daughter.

BAIl.UKr.UKO’ C.1I, a town of Ireland, in

;- eountv of (. avan. !’ irty-thive miles from

Dublin.

‘,. .., heraidiv, a charge in coats t .inns, representing a lion rampant, holding

. ??? ‘ itT in his mouth.

BAILLY (John Sylvian), a celebrated philoso- pher and astronomer, born

at Paris in 1763 His family had been respectable as painters for several generations, and he had commenced his studies in the same profession ; but he was too much bent on the pursuit of literature, to apply himself successfully. His early acquaintance with La Caille the celebrated geometrican, determined the science which was in future to engross his atten- tion. The calculation of the comet which ap- peared in 1759, was his first labor. In 1763 he became a member of the Academy of Sciences ; and in the course of the same year, published a reduction of La Caille's observations on the zodiacal stars in 1760 and 1761. He was next employed in considering the theory of Jupiter's satellites ; and in 1766 published the results of his investigation, with the history of that part of astronomy. In 1771 he gave the world a very valuable memoir on the light of the satellites, marking their eclipses in a very precise and accu- rate manner.. The genius of Bailly was not confined to abstract science, or profound physical speculations ; it was equally brilliant in those departments of literature where the nicest dis- crimination of character and the most powerful eloquence is requisite. His eulogies upon Charles V. Corneille, Leibnitz, Moliere, Cook, La Caille, and Gresset, raised universal admiration. In 1775, he published at Paris the first volume of the History of Ancient Astronomy ; and in 1778 the second. TheHistory of Ancient Astro- nomy, from the foundation of the Alexandrian school to the present age, followed in 1779. He next published Letters on. the origin of the Sciences, and of the people of Asia ; to which he added a series of Letters on the Atlantis of Plato and the ancient History of Asia ; which he addressed to Voltaire. He was also very inti- mate with Buffon, till he opposed the election of the Abbe Maury into the French academy; to which Bailly had been chosen secretary in 1784. This year he was named one of the commission to investigate the nature of the animal magnetism of Mesmer, practised by Deslon. His report, which was presented to the Academy of Sciences, and has been since translated into English, con- tains the most satisfactory and decisive evidence upon the subject, It is highly valuable in developing the physical effects produced by moral causes. In 1785 he was admitted into the Academy of Inscriptions and Belles Lettres ; and thus was at the same time a member of all the three academies of Paris, which none had been since Fontenelle. We must now leave the peaceable haunts of philosophy, and follow Bailly to the revolutionary stage, on which he acted a principal part. Here, though we behold him struggling with opposite interests in the midst of a lawless mob ; zealous for freedom, and contending in its cause with enthusiasm, we hear not a charge of selfish motives, or want of integrity, brought against him by any party; yet he fell a sacrifice to that violence which nothing could control. In 1789 he was appointed de- puty to the Tiers Etat, and was soon after elected president ; a station which he held when the national assembly was constituted, and when tl;e king issued his proclamation for dispersing

them. In the contest between the popular assemblies and the court, Bailly was zealous to maintain the rights of the people; and the fa- mous oatli to the members of the Tiers Etat, to resist tyrants and tyranny, and never to se- parate till they should obtain a free constitu- tion, was dictated by him. Next day, the 14th of July, memorable for the taking of the Bastile, he 'was chosen mayor of Paris ; and though in this high office he greatly promoted the different measures by which the popular party became victorious over the court, yet he is allowed to have discharged the arduous duties of it, at this trying juncture, with integrity, moderation, and firmness. The public mind was now, however, become like the ocean in a tempest : a people ever fond of novelty, free from the fetters of des- potism, with enthusiastic and erroneous ideas of liberty, were every day more eager for a change, and could surfer no restraint. The disposition of the people to anarchy was evident, and Bailly, still anxious that the laws should be respected, imagined that, by the vigorous execution of them, tranquillity might be maintained. Depu- ties from the military insurgents at Nancy were arrested by his orders, and he firmly opposed Marat and Hubert in their proceedings. He entered into a society more select than that of the Jacobins' club ; and used every argument that the king and the royal family might be al- lowed to go to St. Cloud. Thus he lost the confidence of the people ; and being called by the national assembly to dismiss the tumultuous meeting, demanding the abolition of monarchy, on the 17th July, 1791, he ordered the soldiers to fire, which rendered him completely obnoxious to thsm. In the end of the same year, when the constituent assembly was dissolved, he therefore resigned his office, and retired to his philosophical studies. Yet a bloody proscription reached him ; us an enemy to the republic he was seized, impri- soned,arraigned before a savage tribunal, summa- rily condemned, and executed in the fifty-seventh year of his age. He bore his sufferings with great magnanimity, though they were purposely lengthened out. To mark him as a conspirator, he was dressed in a red shirt, placed in a cart, with his hands tied behind his back ; and though the rain poured incessantly on his head, the mob threw mud at him while he passed to the place of execution, and insulted him in the cruellest manner. As he ascended the platform, a person near him cried out in a sneering manner, ' Bailly you tremble.' ' Yes (answered he) but not with fear.' His person was tall, his countenance se- date, but striking. Scarcely any philosopher has appeared more eminent in the different branches of science and literature. While he filled the magisterial office, he gave away no inconsiderable part of his fortune to relieve the necessities of the poor.

He left a wife whom he had married in 1787.

BAIL'MENT, n.s. The delivery of goods; or their consignment from one person to another, for the benefit of a third party. Sometimes also to be delivered back to the bailor, that is to him that so delivered them:, sometimes to the use of the bailee, that is of him to whom they are delivered.

BAILMENT, in law, is a delivery of goods in trust, upon a contract, expressed or implied, that the trust shall be faithfully executed on the part of the bailee. Thus if cloth be delivered, or (in our legal dialect), bailed to a taylor to make a suit of clothes, he has it upon an implied contract to render it again, when made, and that in a workmanly manner. If money or goods be delivered to a carrier, to convey from Oxford to London, or from Glasgow to Edinburgh, &c. he is under a contract in law to pay, or carry them to the person appointed. If a horse or other goods be delivered to an inn-keeper or his ser- vants, he is bound to keep them safely, and restore them when his guest leaves the house. If a man takes in a horse, or other cattle, to graze and pasture in his grounds, which the law calls agistment, he takes them upon an implied contract to return them on demand to the owner. If a pawnbroker receives plate or jewels, as a pledge or security for the repayment of money lent thereon, at a certain day, he has them upon an express condition to restore them, if the pledger performs his part, by redeeming them in due time; for the due execution of which contract, many useful regulations are made by statute 30 Geo. II. ch. 24. If a landlord distrains goods for rent, or a parish officer for taxes, these for a time are only a pledge in the hands of the distrainers ; and they are bound by an implied contract in law to restore them on payment of the debt, duty, and expenses, before the time of sale, or when sold, to render back the overplus, &c. Sir Wil- liam Jones, in his learned work on the law of bailments, distinguishes five species of this con- tract. 1. Depositum, or deposit, which is a bail- ment of goods to be kept for the bailor withou reward. 2. Mandatum, or commission; a bail- ment of goods to be carried from place to place, or to have some act performed about them, with- out reward. 3 Commodatum, or loan for use ; a bailment of a thing for a certain time, to be used by the borrower without paying for it. 4. Pignori acceptum, or pawn; a bailment of goods by a debtor to a creditor, in pledge as a security for the debt. 5. Locatum, or letting to hire; of which there are three subdivisions distinct enough to demand enumeration. (1.) Locatio rei, or bail- ment of a thing, to be used by the hirer for a reward. (2.) Locatio operis faciendi, or letting out of work and labor to be done, or care and attention to be bestowed, by the bailee, on the goods bailed for a reward. (3.) Locatio operis mercium vehendarum, or letting of care and pains in carrying the things bailed from place to place for a reward.

If a bailee refuse to return the things bailed upon a lawful demand, he becomes answerable for even the slightest neglect. If a guest be robbed by the servants or inmates of an inn, the inkeeper is responsible. And, if goods bailed to a common carrier be lost by any means, except by the act of God, or of the kings enemies, the car- rier is bound to idemnify the owner.

BAILO, or BALIO, a title formerly given al Constantinople, to the ambassador of Venice residing at the Porte. The Venetian consuls al Aleppo, Alexandria, Smyrna, and other parts of the Levant, are also denominated bailo.

BAILOQUE, in commerce, or BALLOQI i., a French name for the ostrich feathers that are used as ornaments without dyeing.

BAIL-PIECE, the parchment containing the recognisance entered into by those who give bail for the appearance of another.

BAFLS, in sea-language, the hoops that bear up the tilt of the boat.

BAILS, CLERK OF THE, is an officer belonging to the court of King's Bench : he files the bail- pieces taken in that court, and attends for that purpose.

BAILYBOROUGH, a market town of Cavan, Ireland, twenty-five miles from Dublin. Between this place and King's Court, is a pool on the sum- mit of a mountain, much frequented for its anti- scorbutic virtues. Many bathe in the lake, and even rub the affected parts with the mud, which is of a greasy substance like tar. It has not been known to be frozen even in the severest winter.

BAIMALPOUR, a town of Bejapour, Hin- dostan, fourteen miles east of Satarah.

BAIN, a town of Brittany, in France, with 3450 inhabitants, and woollen manufactures; the head of a canton in the department of the Ille Vilaine, arronrftssement of Redon, sixteen miles south of Rennes, and twenty-four south-west of V'itre.

BAIN A, a market town of Hungary, in the county of (Jran. It was formerly a considerable place.

BAIN BRIDGE, a township of England, in the North Riding of Yorkshire, distant two miles from Askriu'-i, near the Ure, conjectured to have been a Roman station.

BAIMUUDGE, Pour, an inlet on the west coast of North America, extending about twenty miles northward. Loii'j;. of us west point, 212►► 9^' E. hit. .").i 55′ N.

BAIM>,I, nx, i: (Dr. John}, an eminent physician am! astronomer, born at Ashby-de-la-Zouch, in l.Wj. lie taught, a grammar school for some years, and practised physic, employing his leisure liours in astronomv. At length lie removed to London, \as admitted a fellow of the college of physicians, and raised his character by his description of the comet in 1618. The next year Sir lit/my Sa\il!e appointed him professor of astronomy at Oxford; and the masters and fellows of MtTton college made him first junior, and then superior reader of Linacre's lecture. Hi.1 died in Iti-i.'J, leaving valuable MSS. pre- served ni the library of Trinity College, Dublin.

BAKU 'CO, a copper coin current at Rome, equivalent to a tenth part ot the juho, or a hun- dredth part of tlie ducat. It is worth about nine ►►►leniei's. Trench money.

BAI RAM, or Bm:\M, a Turkish word which siu'iiiiies a solemn least. The Mahommedans have t\ o Bairams, the UT< at and the little.

BAIKAM, iiir. (MM.AT, is properly that held by the pilunms at .Mecca, commencing on the t►► nth of him Ihajie, when the victims are slain, and lasting three days. Tins is called by the Aiabs, Id al adha, that is, the feast of sacrifice, as l)em_r celebrated in memory of the sacrifice of Abraham, ss hose son, (lod redeemed with a great victim. By Kuropean writers it is called the Lesser Bairam, as beum- less taken notice of by

the generality of the people, who are not struck with it, because the ceremonies with which it is observed are performed at Mecca, the only scene of the solemnity. On this feast, after throwing little stones, one after another, into the valley of Mina, they usually kill one or more sheep, some a goat, bullock, or even a camel ; and after giving a part thereof to the poor, eat the rest with their friends. After this, they shave themselves. The second day is a day of rest. On the third, they set out on their return home.

BAIRAM, THE LITTLE, is properly that held at the close of the fast Ramazan, beginning with the first full moon in the following month Sha- wal. This is called, in Arabic, Idal Fetz, or the Feast of breaking the Fast; by European writers, the Turkish Easter, because it succeeds Ramazan,

which is their Lent, more usually the Great Bairam, because observed with great ceremony and rejoicing at Constantinople, and through Turkey, for the common people, to make amends for the mortification of the preceding month. The feast commencing with the new moon, the Mahommedans are very scrupulous in observing the time when the new moon commences; to which purpose, observers are sent to the tops of the highest mountains, who, the moment they spy the appearance of a new moon, run to the city, and proclaim Muzhdaluk ! welcome news! as it is the signal for beginning the festivity.

BAIRDSTOWN, a post town of the United States, the capital of Nelson county, in the state of Kentucky. It is seated on the east side of Beech-Fork ; thirty-five miles from Frankfort.

BAIR-MAN, or BARE MAN, an old law term for an insolvent debtor, who was obliged to swear that he was not worth more than 5s. 5d.

BAIRNS PART OF GEAR, in the Scots law, i.e. the children's share of effects, is that portion which by the law falls to the children of a mar- riage, on the death of either of their parents; viz. two thirds when the father, and one third when the mother, dies first.

BAIROUT, or BAGREUTH, formerly Berytus, a sea-port town of Syria situated on a plain in the pachalic of Saide, or Acre. There was for- merly a harbour here, which is now choked up, nothing being seen of it but a pier, apparently of ancient construction, which will shelter a few boats. The town is surrounded by a wall, built by the famous Djezzar Pacha, after the place was bombarded by the Russians. With the same view he pulled down and rebuilt a high tower to the north-east. The streets of Bairout are nar- row and irregular, and the suburbs nearly as large as the town. The environs are extremely agreeable, and they are laid out in gardens and plantations full of fine trees, especially mulber- ries. A stream descending from Mount Lebanon winds to the sea through the country. The po- pulation amounts to 7000 or 8000. It is the re- sidence of a Greek, and a Maronite bishop ; and there is a monastery of Capuchins. The staple commodity of commerce is raw silk, which is carried to Cairo, Aleppo, Damascus, and Europe. Earthen jars and jugs of a particular kind are also manufactured here ; and are much esteemed from the nature of the clay. The cotton cloth is manufactured by the inhabitants

of the adjacent mountains, and exported in con- siderable quantity. The trade to Europe is chiefly managed by French and Italian mer- chants ; but the place is the emporium to which the Druses and Maronites send their products, and in return receive rice, tobacco, coffee, and specie. It is, indeed, considered the chief town of the Druses. Agrippa,the grandson of Herod the Great, constructed a theatre and amphitheatre here, as well as baths, and no expense was spared in embellishing them. Four magnificent granite columns, of which three are within the precincts of the town, with other ancient buildings, attest its former grandeur. Bairout long remained in the sole possession of the Druses, and has only of late been united to the pachalic of Acre. BAIT', v. a. & n. & n. a. batan, Sax. baitzen, Germ, battre, Fr. perhaps from buita, Goth. According to these different derivations, the meaning of this word varies. As derived from the Saxon and German it means to put meat upon a hook to tempt fish or other animals ; or to supply food to one's self or horses. Johnson intimates that in this latter sense it is a corrup- tion of bate, to abate speed on a journey. As derived from the French and Gothic it assumes a very different signification, namely to invite, to stir up, to attack with violence, to harass by the help of others, as we bait a boar with mastiffs, but a bull with bull-dogs. In hawking, the hawk is said to bait when she flutters or claps her wings, as if preparing to fly.

The kinges lawe \vol no man deme

Anger liche withouten answere,

But if any man these misqu'eme

He shall be baighted as a here,

And yet wel worse they wol him tere,

And in prison wollen him pende,

In gines and in other gere,

When that God woll, it may amende. Chaucer.

On mony a sorymele now may she baite,

After hei'e dethe ful often may she waite,

Or that the wild waves wol hire drive,

Unto the place ther as she shalarive. Id.

Like a wilde bull that being at a bay,

Is bayted of a mastifTe and a hound,

And a curre dog that doe him sharpe assay,

On every side and beat about him round.

Faerie Queene. Wba so strong,*

But, wanting rest, will also want of might ; The sun, that measures heaven all day long, At night doth bait his steeds the oˆean waves among.

The pleasant'st angling is to see the fish Cut with her golden oars the silver stream, And greedily devour the treach'rous bait.

Shdkspeare.

She steals love's sweet bait from fearful hooks. Id. Are these thy bears ? We'll bait thy bears to death.

Id.

All plum'd like estridgos, that wing the wind ; Baited like eagles having; lately bath'd ; Glittering in golden coats like images. Id.

A grove hard by, sprung up with this their change, His will who reigns above, to aggravate Their penance, faden with fair fruit like that Which grew in Paradise the bait of Eve, Us'd by the tempter. Milton.

Many sorts of fishes feed upon insects, as is well known to anglers, who bait their hooks with them.

fay-

BAIT. See ANGLII.G.

BAIT, WHITE, in ichthyology, a small fish, which is caught in great plenty, from August !. to October 1. by stat. 30. Geo. II. ch. 21, in the river Thames, near Blackwall, and is esteemed very delicious. They are the fry of some fish, and have been attributed to the shad, the sprat, the smelt, and the bleak-fish. Pennant observes, that it belongs to the genus of cyprinus, because it has only three branchiostegous rays, and one dorsal fin ; its body is compressed like that of the beak; its usual length is two inches; the under jaw is the longest ; the irides are silvery, and the pupil black; the dorsal fin consists of about fourteen rays; the side line is straight; the tail forked, and the tips black.

To BAIT, in falconry, the action of a hawk when she claps her wings, or stoops to catch her prey.

BAITHOSUS, a Jew who, with Sadoc his fellow disciple, founded the sect of the Saddu- cees, denying a future state and resurrection. From Baithosus, they were for some time called Baithosan as well as Sadducees, but are now only known by the latter denomination.

BAITING, the act of smaller or weaker beasts attacking and harassing greater and stronger; as the baiting of bulls or bears by mastiffs, 01 bull-dogs with short noses, that they may take the better hold. Utility has been pleaded in justification of bull-baiting; the chaffing and exercise of the animals making the flesh tenderer and more digestible. But a spirit of barbarism has the greatest share in supporting the sport: bulls are kept on purpose, and exhibited as standing spectacles for the public entertainment. It is a very popular amusement in Spain. In this sport, the chief aim of the dog is to catch the bull by the nose, and hold him down ; to which end he will creep on his belly: the bull's aim, on the contrary, is, with equal industry, to defend his nose; in order to which he thrusts it close to the ground, where his horns are also in readi- ness to toss the dog. Bull-baiting was first introduced into England as an amusement in the reign of king John, about 1 209.

BAJULUS, an ancient officer in the court of the Greek emperors. There were several degrees of bajuli; as, the grand bajulus, who was precep- tor to the emperor; and the simple bajuli, who were sub-preceptors. The word is derived from the Latin verb bajulare, to carry or bear a thing on the arms or on the shoulders ; and the origin of the office is thus traced by antiquaries. Chil- dren, and especially those of condition, had anciently, besides their nurse, a woman called gerula, as appears from several passages of Ter- tullian ; when weaned, or ready to be weaned, they had men to carry them about and take care of them, who were called geruli and bajuli, a gerendo et bajulando. Hence it is, that gover- nors of princes and great lords, were still deno- minated bajuli, and their charge or government bajulatio, even after their pupils were grown too big to be carried about. The word passed in the same sense into Greece.

BAJULUS is also used by Latin writers in the several senses wherein we use bailiff.

BAJULUS was likewise the title of a conventual

officer in the ancient monasteries, to whom belonged the charge of gathering and distributing the money and legacies left for masses and obits ; whence he was also denominated bajulus obituum novorum.

BAJULUS, in entomology, a species of cerambyx (callidium) that is found in the trunks of trees in the northern parts of Europe. The thorax is villous, with two tubercles ; body brown. Fabri- cius. This is the cerambyx caudatus of Degeer ; and leptura bajula of Scopoli. ††† Gmelin. Obs. a variety of this species (j3) is described by Lin- naeus; the color of which is testaceous: thorax cinereous, and villous, with two little glabrous lines ; in the Fabrician mantissa. Another variety (y) is noticed, a native of Saxony, and only half the size of the former.

BAIZE', n. s. ' A kind of coarse open cloth stuff, having a long nap ; sometimes frizzed on one side, and sometimes not frizzed. This stuff is without wale, being wrought on a loom with two treddles, like flannel.' ††† Chambers.

BAKE', v. a. & n.~\ Baecan, Sax. becken, BA'KF.N, part. I Ger. supposed by Wach- BA'KKD, tuljcc. \ter to come from bee, BA'KF.K, ††..s. i which, in the Phrygian

*1? AKI.'IKH sr, n. s. J language, signified bread. Bread, and the process of preparing it, are very naturally identified, as the one always suggests the oilier. It signifies to heat or to harden by iire, and is of a more general application than to the stafl'of life : though the substantives have no other reference, un!es> they have an affix, sugar- Sake!, \e. To bake, is then to heat or to har r in the tire, in a furnace, an oven, or in the sun ; or to do the work of baking. !'K, /;//!! denotes the progress towards the com- pletion of this work. Maker is the ageni by \hom it is accomplished, linked describes the quality of these substances which have gone nirouuh the entire process, as baked meats, con- tra-distinu'uished from viands of a different de- scription ; and imkclniinn' is a place appropriated *o the business of baking.*

He will take thereof, and warm himself; yea, he

kindleth it. and Inihth bread. Isaiah.

There was a eake hai-fn on the coals, and a cruse

of water, at, his head. 2 Kings.

He could roste and sethe, and broilc and frie, Maken mnrtrewes and wel lake a pie, But m-et harm was it as it thouiihte me, 1 hat on his shinne a inornial hadde ho. Chaucer.

His brede, his ale, \va< alway after on, A better envy'd man was no where non ; Withouten fmki'n mete never was his house, Of lish and Iloli, and that so plenteous It snewed in his hous of mete and drinke, Of all the deimies that in< n coud of thinke. Id.

!. i ‘ i:. ipl i!,’- kinu’ Dan i’harao,

,,]iis l;l)t,. ler also,❓❓❓ ne t.‘hi n non elVi et ill dreines. Id

There be some houses wherein sweetmeats will re- lent, and baked meats will mould, more than others,

Id

With vehement suns

When dusty summer bakes the crumbling clods, How pleasant is ‘t, beneath the twisted arch, To ply the sweet carouse ! Philips.

In life and health, every man must proceed upon trust, there being no knowing the intention of the cook or baker. South.

BAKING, as a term of art, though applicable to the drying of any moist substance by heat, has been used more particularly to describe the art of preparing bread, or of reducing meal of any kind, whether simple or compound, into bread. We read, indeed, as in Chaucer, (Pro- logue v. 436) of ‘ bake mete, of fish, and flesh ;’ and some of our modern inventions in the way of cooking apparatus seem destined to extend the triumphs of this art, and to bake a whole Lord Mayor’s dinner in less time than even his wor- shipful guests consume in eating it. P❓❓ut the ‘ baker/ historically and legally, has been the baker of bread. In an Anglo-Saxon colloquy, preserved in the Cotton Library (MS. Tib. A. 3.) and presenting a lively picture of the manners of our ancestors, a sort of dialogue occurs with the baker (baecere) : ❓❓❓ ‘ Of what use is your art ? We can live long without you.’ He replies, ‘ You may live through some space without my art, but not long, nor well. Without my craft every table would seem empty; and without bread (hlafe) all meat would seem nauseous.’

We have therefore only here to remark, gene- rally, that the art of baking, of the highest anti- quity, is, in regard to its origin, involved in en- tire obscurity : traces of it being found in the history of all ancient nations. Abraham and Lot, in the patriarchal ages, evinced their hospi- tality by providing baked cakes or unleavened bread for their guests ; and shortly after (Exod. xii. 15.) the prohibition of leavened bread to the Israelites proves that the art of making it was well known and ordinarily practised. In Egypt it is highly probable the Jews became acquainted with this art :

though the Chaldeans are said to have practised it as early as any people. The Greeks ascribe the invention of it to Pan, who Diodorus informs us, was originally an Egyptian deity, and that Thebes was built to his honor, (lib. i.) The Romans were long reproached as a pulse-eating people. Until 580 years after the founding of their metropolis it contained no pro- fessed bakers. They first settled in it, we are told by Pliny (Hist. Nat. xviii. 11), during the war with Perseus, king of Macedon : we find, how- ever, before this time families baking their own bread.

Bakers, as we have seen, were esteemed im- portant members of society by our ancestors The incorporation of a London company with this title took place in the early part of the fourteenth century (1307), and by a statute 22 Hen. VIII. cap. 13., their trade was ex empted from being reckoned as handicraft. Until a late act of parliament abolished their control of the price, called the assize of bread, this con- stituted an important portion of the duties 01 the London magistracy.

Under the word BREAD, we propose to treat of the entire manufacture of that important article : and the reader will find much useful informa- tion connected with the economy of fuel in baking under COMBUSTION, HEAT, CHEMISTRY, and FURNACE.

BAKER (David Erskine), son of Henry Baker, was a young man of genius and learning. Having been adopted by an uncle, who was a silk throwster in Spitalfields, he succeeded him in the bivsiness ; but wanted the prudence and attention necessary to secure prosperity in trade. Like his father, he was both a philosopher and a poet; and wrote several occasional poems, some of which were much admired at the time. His principal publication was, The Companion to the Play-house, in two volumes, 1764, 12mo; a work, which though imperfect, has considerable merit.

BAKER (Henry), an ingenious and diligent naturalist, was born in Fleet-street, London, about the end of the seventeenth, or beginning of the eighteenth century. He was brought up under an eminent bookseller, who preceded the elder Dodsley, but being of a philosophical turn, and having studied the methods practicable in the cure of deaf and dumb persons, he made this the employment of his life. In the prosecution of so valuable and difficult an undertaking he was very successful. He married Sophia, youngest daugh- ter of the famous Daniel Defoe, who brought him two sons, both of whom he survived. In January, 1740, he was elected a fellow of the Society of Antiquaries ; and, on the twelfth of March following, the

same honor was conferred upon him by the Royal Society. In 1744 Sir Godfrey Copley's gold medal was bestowed upon him, for discoveries in the chrystallisation and configurations of saline particles. Having led a very useful and honorable life, he died in the Strand in 1774, aged above seventy. Mr. Baker was a very constant and useful attendant at the meetings of the Royal and Antiquarian Societies, and in both was frequently chosen of the council. Several of his communications are printed in the Philosophical Transactions; and he was the means, by his extensive correspondence, of con- veying to the Society the intelligence and obser- vations of many other inquisitive and philosophi- cal men, at home and abroad. The society for the encouragement of arts, manufactures, and commerce, is under singular obligations to him. Being one of its earliest members, he contributed greatly to its rise and establishment, and at its first institution officiated for some time gratis as secretary. He drew up a short account of its origin, which was read before the society of anti- quaries. Mr. Baker was a poetical writer in the early part of his life. His Invocation of Health was printed without his knowledge; but re- printed by liimseif in his Original Poems, serious and humorous, part I. 8vo. 1725. Part II. came Out in 1726. Among these poems are some tales as witty, and as loose as Prior's. He was the author likewise of the Universe, a poem, which has been several times reprinted. His account of the water polype, originally published in the Philosophical Transactions, was afterwards enlarged into a separate treatise, and has gone

through several editions. But his principal pub- lications are, The Microscope made Easy, and Employment for the Microscope.

BAKER (Sir Richard), author of the Chronicle of the Kings of England, was born at Sissing- herst, in Kent, about the year 1568. After completing his studies at Oxford, he travelled, and upon hie return was created A. M. In 1603 he was knighted by king James I. and in 1620, high sheriff of Oxfordshire ; but engaging to pay some of the debts of his wife's family, he was reduced to poverty, and obliged to retire for shelter to the Fleet prison. His works are, 1. Meditations and Disquisitions on the Lord's Prayer. 2. Meditations, &c. on several Psalms. 3. Meditations and Prayers upon the Seven Days of the Week. 4. Cato Variegatus, or Cato's Moral Distiches varied, 8cc. ••• Mr. Granger ob- serves. ' That his Chronicle of the Kings of Eng- land was more esteemed by readers of the lower class, than by such as had a critical knowledge of history. The language of it was called polite : and it long maintained its reputation, especially among country gentlemen. The author seems to have been sometimes more studious to please than to inform, and with that view to have sacri- ficed even chronology itself to method.' In 1658 Edward Philips, nephew to Milton, pub- lished a third edition of this work, with 'the addition of the reign of Charles I. It has been several times reprinted, and is now carried as

low as the reign of George I. Sir Richard also translated several works from the French and Italian. He died in the Fleet, very poor, in 1645.

BAKER (Thomas), an eminent mathematician, was born at Ilton, in Somersetshire, about 1625, and entered at Wadham College, Oxon, 1640; after which he was vicar of Bishop's Nymmet, in Devonshire, where he wrote The Geometrical Key, or the Gate of Equations unlocked, by which he gained a considerable reputation. A little before his death, the members of the Royal Society sent him some mathematical queries, to which he returned such satisfactory answers, that they presented him a medal. He died at Bishop's Nymmet, in 1690.

BAKER (Thomas), a very ingenious and learned antiquary, descended from an ancient family, was born at Crook, in 1656 ; educated at the free school at Durham, and thence removed to Cam- bridge in 1674. He proceeded B. A. in 1677; M. A. 1681 ; was elected fellow, March, 1679-80 : ordained deacon by Bishop Compton, Dec. 20th,

1685, and priest by Bishop Barlow, Dec. 19th,

1686. Being chaplain to Lord Crew, bishop o; Durham, his Lordship collated him to the rec- tory of Long-Newton, June, 1687 ; and intended to have given him that of Sedgefield, worth about ––700 a year, with a golden prebend, had he not incurred his displeasure for refusing to read King James II.'s declaration for liberty of conscience. Mr. Baker resigned Long-Newton, August 1st. 1690, refusing to take the oaths; and retired to his fellowship at St. John's, in which he was protected till Jan. 20th, 1716-17, when he was dispossessed of it, in consequence of scrupling to take the oaths required on the accession of George I. but he retained his chambers at St. John's college, where he was highly esteemed, and Mi .

BAK

Piior, the celebrated poet, gave the profits of his own fellowship to Baker, in order to supply the loss of income which he had suffered. He is said to have retained a lively resentment of his depri- vations ; and designated himself in his books, as well as in those which he gave to the college library, socius ejectus, and in some, ejectus rec- tor. He continued to reside in the college as commoner master till his death, July 2d, 1740. Mr. Baker's correspondence with men of learn- ing was extensive ; and he was liberal in his literary communications to those who solicited information ; particularly to bishop Burnet, who was indebted to him for several remarks and corrections relating to his History of the Refor- mation. Of his extensive collections, he left twenty-three volumes in folio, written by his own hand, to Lord Oxford, and they now compose part of the Harleian

collection in the British museum. He also bequeathed fifteen volumes folio, of a like kind, to the public library at Cam- bridge, together with other MSS. and printed books. Biog. Brit. ‘ Mr. Baker,’ says the Earl of Orford, was ‘ perhaps the sole instance of a man who bequeathed his vsorldly goods to a society that ejected him, and to the ministers of a church in which he had lost, preferment.’ The only works he printed were, 1. Reflections on Learn- ing, showing the insufficiency thereof in its ⬚⬚⬚several particulars, in order to evince the useful- ness and necessity of Itevelation, Lond. 1709-10; and ‘2. The Preface to bishop I’isher’s funeral ⬚⬚⬚HTniun lor Margaret, Countess of Richmond and Derby, 17o:’>; both without his name. Dr. Kniuht stvles him ⬚⬚⬚ the greatest master of the an- tiquities of this our university;’ and llearne pays him a similar compliment ; expressing his wish that his collections were published. Mr. Baker intended something like an Athense Can- tabriuionscs, on the plan of the Athenae Oxoni- onses

BAKI.II (Sir George), M. D. was the son of a Devonshire clergyman, born in 1722, and edu- cated at F.ton ami Cambridge, lie commenced practice at Stamford, whence he soon removed to London, and soon attained considerable repu- tation, be hi’.,r appointed physician in ordinary to the kim:. and physician to the queen : he was

BAK

*proper, holding a pair ol scales, or, *between*

three garbs of the first.’

also chosen fellow of the Koval and Antiquarian Societies. In 1770 he was created ,1 baronet, and

m IT1.1? was placed at the head of his profession, in.; elected president of the College of Physi- cian-s. lie died. hme !,”>ih, UiO’A Sir George Biker h.ad the reputation oi’ being an elegant cl i-sˆieal .-cholar and critic, t lis published works R-e, Aii l’.ssa\s m the .Medical and Philosophical .lo’irnaK ot his time.

BAKI’, US’ COM TAN v; there are two com- panies of this name, the White and the Brown Bakeis. The White Bakers are of great anti- (|‘i,t\, ha\ invr been a company ;is early as Edward 11. ‘iheir arms an.1 (tig. 1.) ‘ ⬚⬚ules, thn e garbs, cr on a e!n>.f : an arm issuing out of a cloud,

Fig. 1.

Fig. 2.

The Brown Bakers were incorporated the 19th of James I. Their arms (fig. 2) are 'gules, a hand issuing out of the clouds, proper, holding a pair of scales ; an anchor in a chief, barry wavy, or and azure, on a chevron, gules between three garbes.

BAKEWELL (Robert), a famous grazier, born in 1726, on his father's estate of Dishley, in Leicestershire. For some years before his father's death, he had the management of the farm, and his attention was much taken up in im- proving the breed of his cattle. In pursuit of this object, he travelled over England into Ire- land and Holland ; and such was his success, that in a short time the Dishley sheep were prized so much above others, that he could let one of his rams for no less than 400 guineas ! and for one in particular, he drew the enormous sum of 800 guineas, besides the ewes from his own stock, which, by the same calculation, makes a total of 1200 guineas ! Dishley sheep are dis- tinguished by the fineness of their bone and Mesh, the lightness of the offal, and quiet dispo- sition, which makes them fatten with less food than other sheep equally heavy. Mr. Bakewell also greatly improved his black cattle ; and could let his bulls at fifty guineas a season each. He died in 1795. On the other hand, it has been stated that he failed in business more than once ; and, with regard to the effect of his im- provements, it has been sarcastically remarked, that they enabled him to make meat too fat for any body to eat, and too dear for any body to purchase.

BAKEWELL, a market town an 1 parish in the hundred of High-Peak, Derby, eleven miles west from Chesterfield, and 152 north from London. It is seated on the river Wye, and contains 1700 inhabitants. It is supposed to have been a Ro- man town. The place is much resorted to by anglers ; the Wye producing plenty of trout, grayling, &c. There are several good quarries of stone, and lead and zinc mines, in the neigh- bourhood ; here is also a large cotton manufac- tory. Three miles distant is Chatsworth, a mag- nificent seat of the duke of Devonshire. This celebrated mansion was erected by William the first duke of Devonshire, in the year 1702. The unfortunate Mary, queen of Scots, was doomed to thirteen years' captivity in the old mansion at this place. On the east side, not far distant from the town, is a high mountain, on the top of which millstones are dug. The living of Bakewell is in the gift of the dean and chapter of Litch- field ; and the parish is exempt from episcopal jurisdiction. Market on Monday. Its fairs are on Easter Monday, Wr it Monday, the Monday

after October 10th, and the Monday after No- vember 22d. At a short distance from Bakewell is Ashford, where are some marble works that were the first of the kind established in Eng- land. Great quantities of black and gray marble are sawed and polished by means of machinery kept in motion by water. About two miles south of Bakewell is Haddon Hall, a truly venerable mansion, belonging to his grace the duke of Rutland. The high turrets and em battlements of this house, when beheld at some distance, give it the appearance of an ancient fortified castle. It presents, perhaps, a more complete specimen of the ancient English ba- ronial mansion than is to be found in any other house in the kingdom. For a particular de- scription of it see the Beauties of England and Wales vol. iii. p. 494.

*BAKHISHiSARAI, orsifnply BACCA-SERAI, * the summer-house,' a large town of European Russia, in the Crimea, government of Taurida, formerly the residence of the khans, situated be- tween two hills, and containing from 10,000 to 12,000 inhabitants. Here are manufactures of Turkey leather, saddles, silk stuffs, and- cutlery. Fifty miles north of Caffa. Long. 33►► 52′ E., lat. 45►► 10′ N.*

BAKOONGAR, one of the Sooloo islands. It is high and rocky, and has some inhabitants.

*BAKOS, a river of Great Bukharia, from which and others the Harrat is *brmed.*

BAKOU, or BAKU, a town of Persia, in the province of Shirvan, situated at the extremity of the Gulf of Ghilan, occupying the peninsula of Abasharon, on the west coast of the Caspian. It is esteemed the most commodious haven in that sea, as vessels may ride securely at anchor in seven fathoms of water, within eighty yards of the shore ; but the number of shoals, islands, and sand banks, render the entrance, in some places, difficult and dangerous. The town is of an obtuse triangular form ; it occupies a strong and fine situation, and is defended by a strong wall and deep ditch. Good cotton is yielded in the neighbourhood, together with opium, rice, silk, wine, salt, and naptha. In the latter article is the principal trade of Bakou, 1000 or 1500 pounds of it being yielded by the wells in this district daily. The country around is highly volcanic, abounding with inflammable gases, which, being collected in leather flasks, will ignite at a distance. Hence, the town and its environs abound in monuments of the supersti- tion of the Guebres, Parsees, and other fire wor- shippers, some of whom yet frequent a spot called Ateschjah. Various temples built of stone ap- pear; in one of which a blue lambent flame isssued from a large hollow cane near the altar. The jurisdiction of Baku extends over thirty-two villages. It was ceded to Russia in the year 1723, and restored to Persia in 1735; but re- taken by the Russians in 1801, who have ever since kept possession of it.

BAKTEGAN, or BAKTEGHIAN, a salt lake in the province of Fars, Persia, about seventy-five miles in circuit. It is nearly dry in summer, when a quantity of fine salt, left by evaporation, is collected from the bottom. Distant ten miles south-east of Shiraz.

BAKTSCHISARI, an open town on the west side of the Crimea, near the sea. seated between two mountains. It is one of the places of resi- dence of the cham of Tartary. BAKU. See BAKOU.

BAL, a Gaelic word, used in the composition of the names of many places, particularly in Scot- land and Ireland, and signifying a town, village, or place of residence.

BALA, a market town of Merionethshire, in North Wales, and a borough by prescription, but sending no member to parliament. It is 202 miles north-west of London, and 26 from Welshpool. Population 1163. The assizes forthe county are held here alternately with Dolgelly. There are vestiges of three Roman camps in the neighbour- hood, and adjacent to the town is a large artificial mount, called Tommen y Bala, supposed to be of Roman origin. Its manufactures are woollen gloves, stockings, and the caps called Welsh wigs. Pemble Mere, Llyn Tegid, or Bala lake, lies a few miles to the south of the town, and is the largest sheet of water in Wales, being four miles in length, and about three quarters of a mile in breadth. Its depth of water is about forty feet ; but it sometimes rises above its usual level, over- flowing the beautiful vale of Eidernion. It abounds in fish, and the tradition of the country states that the rive Dee, like the Rhone at Ge- neva, passes through without mixing its waters with those of the lake.

BALAAM; from "hi, without, and DJ?, people ; the son of Beor, a prophet and diviner of Pethor, upon the Euphrates, whose practices with Balak, king of the Moabites, are recorded in Numbers xxii. ??? xxiv. as well as his involuntary prophecies of the prosperity of Israel. Jewish writers are generally of opinion that he was a pretending astrologer, who observing when men were under a bad aspect of the stars, pronounced a curse upon them ; which sometimes coming to pass, gained him reputation. Several ancient fathers suppose him to have been a common soothsayer, who undertook to tell future events, and discover secrets, by no very justifiable arts. Origen will have it, that he was one of the devil's sorcerers, and that of him he went to en- quire ; but that God prevented him, and put what answers he pleased into his mouth. It cannot be denied, however, that the Scriptures expressly call him a prophet, 2 Pet. ii. 16, and therefore some later writers have imagined that he had once been a good man, till loving the wages of iniquity, and prostituting the honour of his office to covetousness, he apostatised from. God, and devoted himself to idolatrous prac- tices. Philo, in his Life of Moses, passes over the miracle of his ass

speaking to the prophet in silence ; and Maimonide

bishop Newton, was not unnecessary. ‘ It evi- denced, that the same divine power, which caused the ass to speak, compelled Balaam to utter blessings contrary to his inclination. And accordingly he was overruled to bless the people, though he came prepared and disposed to curse them; which, according to Bochart, was the greater miracle of the two, for the ass was merely passive, but Balaam resisted the good motions of God.’

BALAAMITES, a sect in the first ages of Christianity, of the same import in the Hebrew language with Nicolaitans in the Greek.

BALABAC, an island of the eastern seas, off the south extremity of Palawan. Long. 117►► 10′ E., lat. 8►► N.

BALABEA, an island of the South Pacific Ocean, off New Caledonia. Long. 164►► 22′ E., lat. 20►► 7′ S.

BALABOLA,‘one of the Society Islands in the South Sea, visited by Captain Cook. It is only eight leagues in circumference, but has a very capacious harbour on the west side.

BALACHNA, or BA LAKH AN, a town of Eu- ropean Russia, in the government of Nishnei- Novgorod, on the right bank of the Wolga. The salt springs here were closed in 1755. The in- habitants, engaged partly in agriculture and partly in trade, amount to ,r>000. It is eighteen miles W. N. W. of Nishnei-Novgorod, and 120 I’,. S.]►►►:. of Petersburg.

IJAI.ADA.rV, the scripture name for a king of Babylon, Isvi. xxxix. 1. 2 Kings xx. 12, called by profane authors IJelesusor Belesis, Nabonassar or INanvbnis. lie at first was no more than governor of Babylon; but entering into a confe- deracy with Arbaces, governor of Media, and re- beHing against Sardanapalus, king of Assyria,these two u’enerals marched against him with an army of 100 000 men, and were boat in three different battles. But the Hadrians deserting the king, and corning over to Baladan and Arbaces, the re bels attacked the enemy in the night, and made themselves masters of his camp. After this mis- fortune, Siirdanapalus retreated to Xineveh, and left the command of his army to his brother-in- law Salamenes. The conspirators attacked Sala- itienes, and defeated him in two great battles; after \hich they laid siege to Nineveh. Sardana- palus sustained the siege for three years; but the Tigris, in the third year, overflowing its banks, beat down twenty furlongs of the walls: where- upon

the conspirators entered the city and took ssion of it, after Sardanapalus had burnt himself and all his most valuable effects upon a funeral pile, erected tor that purpose in his palace. Haladan was thereupon acknowledged king of l!a!,ylon. as Arbaces was of .Media. Sir Isaac Xewton supposes llaladan to have been the son of I'ul, kitiLr of Assyria, and to have had Babylon f'tr his portion.

1 >AI,.KV\, the \halc, in zoology, from fia\w, to east up, because it throws up water. a. u< in:s of the mammalia class, belonging to the order of u -to. The characters of this genus are, the bahi i.a, in place of teeth, has a horny plate on the iijiji'T jaw, and a double fistula or pipe tor th row iir. >; out water. There are live principal ⬜⬜⬜⬜⬜⬜pixies ; v.;/ 1.]!. bo-ops, the pike-headed

whale, has a double pipe in its snout, three fins and a hard horny ridge on its back. The belly is full of longitudinal folds or rugee. It fre- quents the northern ocean. The length of that taken on the coast of Scotland, as remarked by Sir Robert Sibbald, was forty-six feet, and its greatest circumference twenty. This species takes its name from the shape of its nose, which is narrower and sharper pointed than that of other whales. 2. B. Musculus, has a double pipe in its front, and three fins ; the under jaw is mnch wider than the upper one. It frequents the Scotch coast, and feeds upon herrings. 3. B. mysticetus, the common whale, which has many turnings and windings in its nostrils, and no fin on the back. This is the largest of all animals ; it is commonly found of from fifty to sixty feet; but some have been taken in modern times, in the northern seas ninety feet in length. But as Mr. Scoresby observes, ' there is every probability of an error having been committed two or three cen- turies back (from which period some of our di- mensions have been derived), when we know that whales were usually viewed with super- stitious dread, and their magnitude and powers in consequence highly exaggerated. Of 322 individuals, in the capture of which I have been personally concerned, no one, I believe, exceeded sixty feet in length, and the largest I ever mea- sured was fifty-eight feet from one extremity to the other, being one of the longest to appearance I ever saw. From fifty to sixty feet therefore may be considered the average length of the Greenland whale.' The head is very much disproportioned to the size of the body, being one third of the size of the fish, and the under lip is much broader than the upper. The tongue is composed of a very soft spongy fat, ca- pable of yielding five or six barrels of oil. The gullet is very small, not exceeding four inches in width. In the middle of the head are two orifices through which it spouts water to a vast height, and with a great noise, especially when disturbed or wounded. The eyes are not larger than those of an ox, and when the chrystalline humor is dried, it does not appear larger than a pea. They are placed towards the back of the head, being the most convenient situation for enabling them to

see both before and behind ; as also to see over them, where their food is prin- cipally found. They are guarded by eye-lids and eye-lashes, as in quadrupeds ; and they seem to be very sharp sighted. Nor is their sense of hearing in less perfection ; for they are warned at a great distance of any danger pre- paring against them. It would seem as if nature had designedly given them these advantages, as they multiply little, in order to continue their kind. It is true, indeed, that the external organ of hearing is scarcely perceptible, for this might only embarrass them in their natural element ; but as soon as the thin scarf-skin after mentioned is removed, a black spot is discovered behind the eye, and under that is the auditory canal, that leads to a regular apparatus for hearing. In short, the animal hears the smallest sounds at very great distances, arid at all times, except when it is spouting water ; which is the time that the fishers approach to strike it.

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*What is known by the name of whalebone, adheres to the upper jaw of the whale ; and is lormed of thin parallel laminae, some of the longest four yards in length ; of these there are commonly 350 on each side, but in very old fish more ; about 500 of them are of a length fit for use, the others being too short. They are sur- rounded with long strong hair, not only that they may not hurt the tongue, but as strainers to pre- vent the return of their food when they dis- tharge the water out of their mouths. The real ‘*********ones of the whale are hard, porous, and full of marrow. Two great strong bones sustain the jipper lip, lying against each other in the shape ff an half moon. The tail is broad and semi- mnar; and when the fish lies on one side, its blow is tremendous. The tail alone it makes use of, to advance itself forward in the water ; and it is surprising to see with what force and celerity its enormous bulk cuts through the ocean. The tail occupies a surface of eighty or 100 square feet, it is only five or six feet long, but from eighteen to twenty-four or twenty-six feet in breadth, and is placed horizontally : its motions are rapid and universal. The fins are only made use of for turning in the water, and giving a direction to the velocity impressed by the tail : they are from seven to nine feet long, and four to five broad, being capable of motion in any direction ; but they are prevented from oeing raised above the horizontal position by the tension of the skin and flesh below ; the ac- count therefore of whales supporting their young on their back by means of their fins, must be fabulous. The whale varies in color ; the back of some being red, the belly generally white. Others are black, some mottled, others quite white. Their colors in the water are extremely beautiful, and their skin is very smooth and slippery. The outward or scarf skin of the* ****whale is no thicker than parchment ; but this removed, the real skin appears, of about an inch thick, and*

covering the fat or blubber that lies beneath : this is from eight to twelve inches in thickness ; and is, when the fish is in health, of a beautiful yellow. The muscles lie beneath ; and these, like the flesh of quadrupeds, are very red and tough. The teats in the female are in the lower part of the belly. The fidelity of the male and female to each other exceeds whatever we are told even of the constancy of birds. Some fishers, Anderson informs us, having struck one of two whales, a male and a female, that were in company together, the wounded fish made a long and terrible resistance : it struck clown a boat with three men in it, with a single blow of its tail, by which all went to the bottom. The other still attended its companion, and lent it every assistance ; till, at last, the fish that was struck, sunk under the number of its wounds ; while its faithful associate, disdaining to survive the loss, with great bellowing, stretched itself upon the dead fish, and shared his fate. The whale goes with young nine or ten months, and generally produces one young one, and never above two. When she suckles her youn;;, she throws herself on one side on the surface of the sea, and the young one attaches itself to the teat. Nothing can exceed the tenderness of th-j female VOL. III.□□□ PART II.

for her offspring ; she carries it with her where ever she goes, and when hardest pursued, even when wounded, she still clasps her young one ; and when she plunges to avoid danger, takes it to the bottom ; but rises sooner than usual, to give it breath again. In June 1811, says Mr. Scoresby, one of my harpooners struck a sucker, with the hope that it would lead to the capture of the mother. Presently she arose close by the ‘ fast boat,’ and seizing the young one, dragged about a hundred fathoms of line out of the boat with remarkable force and velocity. Again she arose to the surface ; darted furiously to and fro ; frequently stopped short, or suddenly changed her direction, and gave every possible intimation of extreme agony. For a length of time she continued thus to act, though closely pursued by the boats ; and, inspired with courage and resolu- tion by her concern for her offspring, seemed re- gardless of the danger which surrounded her. At length, one of the boats approached so near, that a harpoon was hove at her. It hit, but did not attach itself. A second harpoon was struck; this also failed to penetrate ; but a third was more effectual, and held. Still she did not at tempt to escape, but allowed ‘/ther boats to ap- proach; so that in a few □□unutes three more harpoons were fastened ; a id in the course of an hour afterwards she was killed. The young ones continue at the breast for a year ; during which time, they are called by the sailors, short- heads. They are then extremely fat, and yield above fifty barrels of blubber. The mother at the same time is equally lean and emaciated. At the age of two years they are called stunts, as they do not thrive much immediately upon quit- ting the breast : they then yield scarcely above twenty or twenty-four barrels of blubber : after this they are called skull-fish, and their age is

wholly unknown. 4. B. physalus, or fin-fish, is distinguished from the common whale by a fin on the back, placed very low and near the tail. The length is greater than that of the. common kind, being often 100 feet; but much more slender. It is furnished with whalebone in the upper jaw, mixed with hairs, but short and knotty, and of little value. The blubber also on the body of this kind is very inconsiderable. These circumstances, added to its extreme fierce- ness and agility, which render the capture very dangerous, cause the fishers to neglect it. The natives of Greenland, however, hold it in great esteem, as it affords a great quantity of flesh, which to their palate is very agreeable. The lips are brown, and like a twisted rope: the spout hole is as it were split in the top of its head, through which it blows water with much more violence, and to a greater height, than the common whale. The fishers are not very fond of seeing it, for on its appearance the others retire out of those seas. Some writers conjecture this species to have been the (bvaaXoq, and phy- seter, or blowing whale of Oppian, iElian, and Pliny : but, since those writers have not left the ‘ least description of it, it is impossible to judge which kind they meant ; for in respect to the faculty of spouting out water, or blowing, it is not peculiar to any one species, but common iv all the whale kind. The physalus inhabits the

European and American Oceans : it feeds upon herrings and other fish. 5. R. rostrata, beaked whale : rostrata mysticete. The nose of this species is elongated to a beak, and the dorsal fin fat, It inhabits the Norway seas, is rarely seen near England, is very black, much resembling the boops, swims rapidly, and is about twenty- five feet long.

Each species of whale propagates only its own kind, and does not at all mingle with the rest : however, they are generally seen in shoals, of different kinds together, and make their mi- grations in large companies. They are grega- rious animals ; which implies their want of mutual defence against the invasions of smaller but more powerful fishes. It seems astonishing, therefore, how a shoal of these enormous ani- mals find subsistence together. To increase our wonder, we not only see them herding together, but usually find them fatter than any other ani- mals of whatsoever element. We likewise know that they cannot swallow large fishes, as their throats are so narrow that an animal larger than a herring could not enter. How then do they subsist, and grow so fat ? A certain sort of small snail, or, as Linnams tells us, the medusa, or sea- blubber, is sufficient for this supply. (See ME- DUSA.) They float in vast abundance in

the north- ern seas. Content with this simple food, it pur- sues no other animal, leads an inoffensive life in its element, and is harmless in proportion to its strength to do mischief. But Martens says he has found a barrel or more of herrings at a time in the belly of the whale. Inoffensive in itself, how- evur, it has many enemies ready to take advan- tage of its disposition, and of its unfitness for com- bat. There is a small animal of the shell-fish kind, called the whale-louse, that sticks to its body as we see shells sticking to the foul bottom of a ship. Tins insinuates itself chiefly under the fins; and \hatever efforts the great animal makes, it still keeps its hold, and lives upon the fat, which it is provided with instruments to arrive at. The sword-iish, however, is the whale's most terrible enemy. See XIPIIIAS. ' At the sight of this little animal,' says Anderson, ' the whale seems agi- tated in an extraordinary manner; leaping from lilt; water as if with affright: wherever it appears, the whale perceives it at a distance, and flees from it in the opposite direction. I have been myself,' continues he, ' ;i spectator of their terrible en- <.:omiter. The whale has no instrument of defence except the tail ; with that it endeavours to strike the enemy ; and a single blow taking place would effectually destroy its adversary; but the sword- fish is as active as the other is strong, and easily avoids the stroke : then hounding into the air, it (alls upon its great subjacent enemy, and en- deavours, not to pierce it with its pointed beak, but to cut it with its toothed etkres. The sea all about is seen dyed with blood, proceeding from the \sounds of the whale; \shile the enormous animal \ainlv endeavours to reach its invader, and st nkes with its tail against the surface of the water, making a report at t-ach blow louder than the IIOISL ot a cannon.' In calm weather, the fisher- iiien lie upon their oars as spectators of this scene, until they perceive the \hale at an extremity: thei they \i\ towurds him ; and his enemy re-

tiring at their approach, they enjoy the fruits of the victory. Seamen report, that a fish called the thresher, a species of squalus, is in league with the sword-fish ; and that the former keeps on the back of the whale, while the latter wounds it underneath in the belly. The grampus, and other large fishes of the cetaceous order, are at- tacked and destroyed by the same enemies in a similar manner. The whale has other desperate enemies in sharks of different sizes, from one to three fathoms ; and it generally avoids the seas where sharks abound. But among all the ene- mies of this harmless animal, man may be ranked as the greatest.

Viewing the whale in a commercial light, we must observe, that the English were late before they engaged in this fishery. It appears by a set of queries, proposed by a merchant, in 1575, in order to get information in the business, that we were at that time totally ignorant of it, being obliged to send to ' JBiskaie for men skilful in the catching of the whale and ordering of the oil, and one cooper skilful to set up the staved cask.' This seems

*strange : for by the account Octher gives of his travels, to king Alfred, near 700 years before that period, it is evident that he made that monarch acquainted with the Norwegians practising the whale fishery ; it seems therefore that all memory of that gainful employment, as well as of the able voyager Octher and his im- portant discoveries, was lost for nearly seven cen- turies. The earliest notice we find of this article in our commerce is by Hackluyt, who says it was brought from the Bay of St. Laurence by an English ship that * went there for the barbes and fynnes of whales and train oil, A. D. 1 594, and found there 700 or 800 whale fynnes, part of the cargo of two great Biskaine ships, that had been wrecked three years before.' About 1598, the town of Hull had the honor of first seriously at- tempting this profitable branch of trade ; which has largely contributed to its aggrandizement.*

We will resume the history and description of it, however, under FISHERIES, which see. Li mucus makes the physeter and delphinus, which are ranked among the whales by some writers, two distinct genera. See PHYSETER and DELPHINUS. BALAGHAR, a district of Persia, in the principality of Baku, including some villages, near which are twenty-five wells of black naphtha. There is also one of a very inflammable white naphtha : this remains lighted on the surface of water; whence it is a common amusement among the inhabitants to throw pieces of it, du- ring calms, into the sea. It is subject to Russia.

BALAGIIAUT, or BALAGATE, the upper passes of a chain of mountains which divides the coast of Malabar from that of Coromandel, running almost the whole length of the peninsula on this side the Ganges. Some parts of them are covered with fine red earth, which is blown by the strong west winds as far as Ceylon ; and when the rays of the sun are reflected from these mountains, they seem to be on fire. They make surprising alterations in the seasons ; for on the north side of the cape Comorin, it is winter in May, June, July, August, and September, in which months it is summer on the south side : on one side there are continual tempests, thunder

and lightning, while the other enjoys a constant serenity. When black clouds are gathered about the mountains, they are followed by sudden rain, which causes the overflowing of the rivers, and chokes them up with sand, insomuch that they are unnavigable for some time afterwards. The buildings and clothes of' the inhabitants of this region are scarcely sufficient to defend them from the weather. They live upon rice, milk, roots,

and herbs, with very little meat ; they have likewise a sort of small arrac, but they are not given to drunkenness. These mountains are also called the Ghauts.

BALAGUER, a town of Spain, in Catalonia, situated on the Segre, at the foot of a steep hill, in a tract of uncommon fertility. It contains four convents, a castle, and 3700 inhabitants. The neighbourhood is very fertile. In 1709 Ba- laguer was taken by Stahremberg, for Charles III. and in 1710 by the duke de Vendome, for Philip V. It is the capital of a district, and lies sixty-three miles north-west of Barcelona, and 219 north-east of Madrid. Long. 0►► 40′ E., lat. 41►►55'N.

BALAK; p"O, Heb. i. e. a destroyer; the son of Zippor, a king of the Moabites, who, alarmed at the success of the Israelites, and jealous of their prosperity, sent for Balaam, and bribed him to curse them. Num. xxiii. and xxiv. The divinations of Balaam, however, and the still more powerful enchantments of the fair Moabitesses, appear to have been the only weapons employed by Balak against the pros- perity of Israel ; for we find Jephthah urges it as an argument, in his manifesto against the king of the Ammonites (Judges xi. 25.), that Balak never actually fought against them.

BALAKLMA, or BALACHRA, a town of Rus- sia, in the province of Nizney Novgorod, on the Volga, twenty miles north of the city of Nizney Novgorod. Long. 44►► 0′ E., lat. 56►► 30′ N.

BALALUAN, a volcano in the island of Su- matra, situated in the northern part of the island, near Acheen.

BALAMATTA, a town on the east coast of the island of Bouro. Long. 126►► 17′ E., lat. 3►► 12′ S.

BALAMBANGAN, a fertile island in the Eastern seas, between Borneo and Magindanao. It is about fourteen miles in length from south- east to north-west, and three to six in breadth, and has two harbours. Being ceded by the king of Sooloo to the English East India Company, a settlement was established upon it in 1773 ; but the Sooloo surprised it in 1775, and seized the effects of the company, to the value of above ►►200,000 sterling. A new establishment was formed in 1803, which proving expensive, was withdrawn. Previous to 1774 it was nearly un- inhabited. Distant fifteen miles from the north- ern extremity of Borneo. Long 117►► 5′ E., lat. 7►► 15′ N.

BALAMBUAN, or BALLANBOUANG, or PA- LAMBUAN, a district and town in the south-east of the island of Java, along the shore of the straits of Bally ; formerly governed by an inde- pendent sovereign. A range of

mountains, in- tersecting the island longitudinally, commences here. Considerable trade in pepper was once

carried on here; but the European resident having removed to Bagnouangay, it has been transferred thither. The town stands on a river of the same name, and is protected by a fort.

BALAMBUAN, or PALAMBUAN, a strong trading town of Asia, in the East Indies, on the east end of the island of Java, and capital of a territory of the same name.

BALAMIO (Ferdinand), of Sicily, was phy, sician to pope Leo X. who greatly regarded him. He was no less skilled in the belles lettres than in medicine; and he cultivated poetry and the Greek learning with much suc- cess. He translated from the Greek into Latin several pieces of Galen, which were first printed separately, and afterwards inserted in the works of that ancient physician, published at Venice, 1586, in folio. He flourished at Rome about the year 1555.

BALAM-PULLI, in botany, a name used by some authors for the tree whose fruit is the tama- rind of the shops.

BAL'ANCE, n. s. v. a. & n. ~\ Fr. balance;

BAL'ANCING, > Lat. bis lanx. One

BAL'ANCEK. 3 of the six simple

powers in mechanics, used principally for de- termining the difference of weight in heavy bo- dies ; and consequently their masses or quantities of matter. For further definition and description, see CLOCK-MAKING and MECHANICS. The me- taphorical applications of the different parts of this word are various. To balance in the mind is to compare one thing with another. The act of comparing two things together is called a ba- lance ; it also is used to signify fluctuation be- tween equal motives : as applied to accounts, it means that which is wanting to make two parts even, and the payment of what is deficient, to produce equality in the debtor and creditor state- ments. In general to keep in a state of just pro- portion, in equilibrio. Balance of trade is the equal importing of foreign commodities with the exporting of the native. Balance of power is the exact equipoise of strength and resources between rival nations, formed by alliances and treaties with neighbouring states, in order to keep each other in check, to preserve peace, and to promote the advantage of all. In astronomy, the balances are one of the twelve signs of the zodiac, commonly called Libra.

Ten thousend mark and mo, that now er in balance, And I betraised of

allo, bi God, that all may auauco, I salle bring him to stalie, but he make acquitance. R. Brunne, p, 156.

If the balance of our lives had not one scale of reason to poise another of sensuality, the blood and baseness of our nature would conduct us to most pre- posterous conclusions. Shatupeare.

I have in equal balance justly weigh'd What wrong our arms may do, what wrongs we suffer : Griefs heavier than our offences. Id, Henry VI .

Comfort arises not from others being miserable, but from this inference upon the balance, that we suffer only the lot of nature. L' Estrange.

Upon a fair balance of the advantages on either side, it will appear, that the rules of the gospel are more powerful means of conviction than such message.

A tier bury. 2D2

BALANCE.

Sinrc them is nothing that can offend, I see not nhy you should balance

Id. to Pope.

Little that is truly noble can be expected from one who is ever poring on his cash book, or balancing his accounts. Spectator.

Though I am very well satisfied, that it is not in my power to balance accounts with my Makrr, 1 am resolved, however, to turn all my endeavours that way. Addixon. Id.

They pass the planets sev'n, and pass the fix'd And that crystalline sphere whose balance weighs The trepidation talk'd, and that first mov'd. Milton.

Were the satisfaction of lust, and the joys of hea- ven, offered to any one's present possession, he would not balance, or err, in the determination of his choice.

Locke.

Judging is balancing ar. account, and determining on which side the odds lie. Id.

Care being taken, that the exportation exceed in value the importation ; and then the balance of trade must of necessity be returned in coin or bullion.

Bacon's Advice to Villien.

Heav'n that hath plac'd this island to give law, To balance Europe, and her states to awe. Waller

A balance of power, either without or within a state, is best conceived by considering what the nature of a balance is. It supposes three things ; first, the part which is hold, together with the hand that holds it ; and then the two scales, with whatever is weighed therein. Kwtft.

Give him leave To balance the account of Blenheim's d;iy. Prior.

BALANCE, THE ANCIENT or ROMAN, called also the Statera Romana, or steel-yard, consists, as is well known, of a lever or beam, move- able on a centre, and suspended near one of its extremities : the bodies to be weighed are applied on one side of the centre; and their weight is shown by the division marked on the beam, where the weight, which is moveable along the lever, keeps the steel-yard in equilibrio. This balance is still often used in weighing heavy bodies.

HA i. A NCI:, 1)ix i;nrt i ., or that which cheats by the inequality of its brachia, is founded on the sum- principle as tin: steel-yard. Let there be, for example, a balance so constructed, that both the brachia with their scales shall equiponderate, but that the length of theone arm shall be to that of the other as ten to nine. In this case a weight of nine pounds put into the scale of the longest arm, will counterpoise one of ten pounds put into that of the shorter one : but the cheat is immedi- ately discovered by shifting the weight from one scale to the other : in which case, the balance will no longer remain in equilibrio. The true weight is a geometrical mean proportion between the two false weights.

HA i AM r, A-SAV, is a very nice balance used in decimastical operations, to determine exactly the weight of minute bodies; see plate HA LANCE, fie. 1. This si. mild l)i.> made of the best steel, and (.1 the harde-,1 kind; beLau>o that metal is not so (asily spoiled v\it!i rii-.t as iron; and it is more apt than am other tn take a perfect polish, which at the saint time prevents tin; rust. The structure of the leaver's stale is little different t'rom that ot comn.uii scales, excepting in ::;eety ami small- ness. The lonuer the !.e;:m of it is, the mure

exactly may the weight of a body be found ; how- ever, ten or twelve inches are a sufficient length. Let the thickness of it be so little, that two drams may hardly be hung at either of its extremities without its bending; for the largest weight put upon it seldom exceeds one dram. The whole surface of this beam must be altogether without ornaments, which only increase the

weight and gather dust, &c. We give in the plate, one made by Fontin of Paris, so delicate, that when charged with a weight of a thousand grammes in each scale, it will turn with the addition of one gramme. LL' is the beam of the balance, made of the finest steel, and of sufficient dimensions to prevent any sensible deflection in it, with the greatest weights it is proposed to charge it with; the arms are of course of equal length and figure, and the whole is balanced on a knife-edge suspension at C, the plate G being also of polished steel, and rendered as hard as possible, to prevent the action of the knife-edge upon it. In order to relieve the suspension of the balance when the instrument is not in use, the two crotches F F are brought up by the screws shown in the figure, so as just to take off the pressure from the point of support. When the equilibrium is nicely supported, the needle, or index, CS, corresponds very accurately with zero on the graduated arc attached to the top or bottom of the principal stem, and which former, being fixed to the beam, will be displaced by, and indicate any want of due equipoise. The whole apparatus is, when used for nice experi- ments, enclosed in a case or frame, with glass faces, and which are only opened sufficiently to introduce the weights and body to be weighed. An instrument in its case, with the index pointing downwards, to save room, is shown in the figure.

The method of weighing a body is this : ❓❓❓ Place the body, which we may denote B, in one of the scales of the balance ; as, for example, in the scale A, to be put in equilibrio, by placing in the other scale A', bodies of any weight, such as grains of lead, small pieces of copper, or the like; and lastly, small pieces of leaf copper, cr paper, till the needle, or index, points exactly to zero on the graduated arc; the beam is then in equilibrio, and the weight in the two scales equal, or very nearly so. Take out now the body B, and replace it by different know a weights, till the equilibrium is again obtained ; and these weights together, will express the pre- cise weight of the body. This method, it is obvious, is independent of the length of the arms, and even of the quantity of friction on the axis, because the body B, and its equal weights, ar❓❓ placed precisely in like circumstances, which is not the case in the common method of weighing. One thing, however, is here very essential, an- 1 must be attended to ; viz. not to shake or disturb the apparatus in removing the body from thu scale, as this may change a little the point of" support,, and alter the degree of friction. To prevent this, the crotches F, F', are brought u\< to the beam, without removing it from its sup- port; then before the body Bis removed, another body, of about half its weight, is added. The former body B is now taken out, and weights, as

J.ShwrySc.

BALANCE.

nearly as can be judged equal to it, are put in the scale ; the other body is then removed, the crotches let down, and the balance left on its point of support as at first ; and successive small weights added, till the equipoise is perfect.

BALANCE, THE BENT LEVER, is represented in fig. 7. Here ABC is a bent lever supported on its axis B in the pillar IH. At A is sus- pended the scale E, and at C is affixed a weight or a heavy knob. Draw the horizontal line K B G through B, the centre of motion, on which from A and C let fall the perpendiculars AK, CD; then if BK and BD are reciprocally in proportion to the weights at A and C, they will be in equilibrio ; but if not, the weight C will move one way or other along the arc F G, till that ratio be obtained. If the lever be so bent that when A coincides with the line GK, C coincides with the vertical line B H, then as C moves along from F to G, its momentum will increase; whilst that of a weight in the scale E will decrease; hence, the weights in E corres- ponding to different positions of the balance, may be expressed on the graduated arc of the plate F G, the whole being used in the manner of the steel-yard.

BALANCE, THE CHINESE, is a steel-yard some- what different in its form and application : it is much used by the eastern merchants in weighing gems and precious metals. The beam is a small rod of wood or ivory, about a foot in length : upon this are three lines of measure made of fine silver studded work, beginning from the end of the beam, whence the first is extended eight inches, the second six and a half, and the third eight and a half. The first is European weight, the other two Chinese. At the other end of the beam hangs a round scale ; and at three several distances from this end are fastened so many fine strings at different points of suspen- sion. The first distance makes 1 jj or | of an inch ; the second 3►► or double the former; and the third, 43, or triple the same. When the instru- ment is used, it is held up by some one of the strings, and a sealed weight, of about an ounce and a quarter, troy, is hung upon some one of the divisions of the rule, so as to produce an equi- librium, the weight of the body being indicated by the graduated scale above referred to.

BALANCE, THE DANISH, is a kind of balance or steel-yard, in common use upon various parts of the continent of Europe. It consists of a bat- ten of hard wood, having a heavy lump or knob at one end, and a swivel hook at the other. The goods to be weighed are suspended on the hook, and the whole is carried in a loop of whip-cord, in which it is slidden to and fro (when placed horizontally), till the goods suspended from the hook at one end are balanced by the knob at the other. The weight of the goods is estimated by the contact of the loop with a scale of divisions in harmonic progression.

BALANCE, BRADY'S, or WEIGHING APPARATUS. One of the best mo'dern inventions of the kind is represented in fig. 6. It unites the properties of the bent lever balance and the steel-yard. ABC is a frame of cast iron, having a great part of its weight towards A, when: it is thicker than in its other parts : F is a fixed fulcrum, and E a move-

able suspender, having a scale and hook at its lower extremity; K, E, G, are three distinct places to which the suspender EH may be applied; and to which belong respectively, the three graduated scales of division, or weights, fC, cd, ab. When the scale and suspender are applied at G, the apparatus is in equilibrio, with the edge A B horizontal, and the suspender cuts the zero on the scale ab ; now a weight being applied, the whole apparatus turns about F, and the part towards B descends, till the equi-librium is again established ; when the weight of the body is read off from the scale ab, which registers to ounces, and extends to two pounds. If the weight of the body exceeds two pounds, and be less than eleven pounds, the suspender is placed at E, and when the upper edge of the balance is horizontal, the weight or number 2, is found a little to the right of the index of the sus- pender; if now weights exceeding two pounds be placed in the scale, the whole again turns about F, and the weight of the body is shown on the graduated arc cdt which extends to eleven pounds, and registers to every two ounces.

If the weight of the body exceeds eleven pounds the suspender is hung on at K, and the weights are ascertained in the same manner on the scale fC to thirty pounds, the subdivisions being on this scale quarters of pounds. The same princi ??? pies would obviously apply to weights greater or less than the above. To prevent mistake, the three points of support, G, E, K, are numbered 1 , 2, 3 ; and the corresponding arcs are respec- tively numbered in the same manner. When the hook is used instead of the scale, the latter is turned upwards, there being a joint at in for that purpose. BALANCE, HYDROSTATIC, an instrument con- trived to determine accurately the specific gravity of both solid and fluid bodies. It is constructed in various forms. We shall describe that which appears to be the most accurate. ??? V C G, fig. 2, is the stand or pillar of this hydrostatic balance, which is to be fixed in a table. From the top A, hangs, by two silk strings, the horizontal bar B.B, from which is suspended by a ring i, the fine beam of a balance b ; which is prevented from descending too low on either side by the gently springing piece tjcy z, fixed on the sup-port M. The harness is annulated at o, to show distinctly the perpendicular position of the exa- men, by the small pointed index fixed above it. The strings by which the balance is suspended, passing over two pullies, one on each side the piece at A, go down to the bottom on the other side, and are hung over the hook at v ; which hook, by means of a screw P, is moveable about one inch and a quarter backward and forward, and therefore the

balance may be raised or de- pressed so much. But if a greater elevation or depression be required, the sliding piece S, which carries the screw P, is readily moved to any part of the square brass rod V K, and fixed by means of a screw. The motion of the balance being thus adjusted, the rest of the apparatus, is as fol- lows : ††† H H is a small board, fixed upon the piece D, under the scales d and e, and is move- able up and down in a low slit in the pillar above C, and fastened at any part by a screw behind. From the point in the middle of the

bottom of each scale hangs, by a fine hook, a brass wire a d and a e. These pass through two holes m m in the table. To the wire a d is sus- pended a curious cylindric wire, r s, perforated at each end for that purpose : this wire r s is covered with paper, graduated by equal divisions, and is above five inches long. In the corner of the board at E, is fixed a brass tube, on which a round wire h I is so adapted as to move neither too tight nor too free, by its flat head I. Upon the lower part of this moves another tube Q, which has sufficient friction to make it remain in any position required : to this is fixed an index T, moving horizontally when the wire h I is turned about, and therefore may be easily set to the graduated wire r s. To the lower end of the wire r s hangs a weight L ; and to that a wire p n, with a small brass ball g, about one-fourth of an inch in diair eter. On the other side, to the wire a c, hangs a large glass bubble R, by a horse-hair. Let us first suppose the weight L taken away, and the wire p n suspended from S : and, on the other side, let the bubble R be taken away, and the wire F suspended at c, in its room. This weight F we suppose to be suf- ficient to keep the several parts hanging to the other scale in equilibrium ; at the same time that the middle point of the wire p n is at the surface of the water in the vessel O. The wire p n is to be of such a size, that the length of one inch shall weigh four grains. Now it is evident, since brass is eight times heavier than water, that for every inch the wire sinks in the water, it will become half a grain lighter, and half a grain heavier for every inch it rises out of the water: consequently, by sinking two inches below the middle point, or rising two inches above it, the wive will become one grain lighter or heavier. Therefore, it', when the middle point is at the surface of the water in equilibrium, the index T be set to the middle point a of the graduated wire r s, and the distance on each side a rand a s contains 1UO equal parts ; then, if in weighing bodies the weight is required to the 100th part of a grain, it may be easily had by proceeding in the following manner : Let the body to be weighed lie placed in the scale d. Put a weight in the scale r, and let this be so determined that one grain more shall be too much, and one grain less too little. Then the balance being moved gently up

or down, by the screw P, the equili- brium will be nicely shown at ►► ; if the index T be at the middle point a of the wire r s, it shows that the weights put into the scale c are just equal to tin- Wright of the body. By this method we find the absolute weight of the body : the rela- tive weight, is found by weighing it hydrostati- (.illy in water, as follows : Instead of putting the body into the scale c, as before, let it hang with I in1 weight I'", at the hook c, by a horse hair, as .it !!, supposing the ves.el () of water were away. The equilibrium being then made, the index. T standing between 'r\ih division, siiows the weight of the body put MI !o be HI.),">;;U grains. As it thus hangs, let it be immersed in the water of tho vessel O, and it will become much lighter; the scale r will de scend till the beam of the balance rests on the litippoit ;►►► Then -upj,o.,e 100 grains put into

the scale d restore the equilibrium precisely, so that the index T stands at the thirty-sixth division above a ; it is evident that the weight of an equal bulk of water would, in this case, be exactly 100 grains. In a similar manner this balance may be applied to find the specific gravity of liquids, as is easy to conceive.

LURIN'S HYDROSTATIC BALANCE, an Ame- rican invention, has the recommendation of simplicity, and is said in the Report of the Committee of the Academy of Sciences at Phi- ladelphia, to be a very accurate instrument. It acts on the principle of the steel-yard ; the arms being at equipoise, when unloaded; see fig. III. C is the body whose specific gravity is to be weighed, and it is suspended to the short arm of the instrument. On the longer arm A, the movable weight D indicates its weight in air or water. When greater accuracy is required, a second weight may be added on the long arm, which ought to be some determinate portion of D. Then, the division marked by the larger weight, will be units, and that of the smaller tenths, or lOOths as it maybe contrived.

COATES'S HYDROSTATIC BALANCE is also an instrument of American invention, upon the same principles, but differing in the mode of gradu- ation : this being adapted to the purposes of find- ing the specific gravity of minerals ; and therefore, instead of pointing out the actual and relative weights, it shows at once their specific gravity. The instrument is accurately balanced when un- loaded, by making the shorter arm much larger than the longer one ; and the latter is graduated and marked with numbers, which everywhere show the quotient of the entire length of the longer arm, divided by the distance of the mark from the end : thus, at half the length, is marked the number 2 ; at one-third the number 3, and so on; which numbers extend on the scale to rather more than twenty, in order to extend the use of the instrument to heavy minerals.

In using it, a weight is suspended by a hook at A, and the body under examination is to be hung by a horse-hair on the shorter arm, and slid along, as on the steel-yard, till an equipoise is ob- tained, say at D. Then, without altering its situation on the beam, the body is to be immersed in water, and balanced a second time, by sliding the weight C along the graduated arm, till the instrument is found again in equilibrio. The hook of this latter will then at once indicate, by its situation on the scale, the actual specific gra- vity of the body, water being considered as unity. The instrument being supposed in equilibrio, and B D and the weight of the counterpoise being constant, the weight of the body varies as the distance of the counterpoise from B, by the common principle of the lever.

The BALANCE OF TORSION, fig. V. was in- vented by M. Coulomb, to estimate minute attracting and repelling forces in electricity, mag- netism, &c. It consists of a vertical metallic thread, the upper end of which is attached to a point A, its lower end carrying a small weight to, and a little above it a light horizontal needle, n, n. To ascertain very small forces they are made to act on the extremity ot this needle, and their intensity is appreciated by the angle of de-

viation which they cause in it, so that the forces are balanced by the torsion of the wire, and hence the denomination. The needle is enclosed in a glass cylinder, to protect it from the action of the air, and the thread is enclosed in a smaller cylin- der fixed into the brass cover thereof. On the upper part of the small cylinder is placed a di- vided dial-plate, which, with very little friction, turns about the cylinder. The lever which carries the thread that suspends the horizontal needle, traverses this dial, and serves as an indicator, when it is requisite to have the torsion equal to a certain number of degrees. A circular division applied horizontally about the glass cylinder, opposite to the needle, measures the deviations of the latter when under excitation. Mr. Caven- dish determined the mean density of the earth by estimating with this instrument the action of two leaden balls of known dimensions and spe- cific gravity ; and comparing the effect with that of terrestrial gravity. See Phil. Trans, anno. 179-8. The BALANCE, COMMON, or MODERN, gene- rally used, consists of a lever or beam suspended exactly in the middle, having scales or basins hung to each extremity. The lever is called the jugum or beam ; and the two moieties thereof, on each side the axis, the brachia or arms. The line on which the beam turns, or which divides its brachia, is called the axis ; and, when consi- dered with regard to the length of the brachia, is esteemed a point only, and called the centre of the balance: the handle whereby it is held, or

by which the whole apparatus is suspended, is called trutina; and the slender part per- pendicular to the beam, whereby either the equili- brium or prepon- derancy of bodies is indicated, is called the tongue of the balance. ††† aˆt ‘ “†††“IB Thus, in the dia- gram annexed, a b is the beam, divided into two equal brachia, or arms, by the white spot in the centre, which is the axis or centre of the balance, and c is the tongue. The tru- tina, on which the axis is suspended, is not re- presented in this figure, in order to render the other parts more conspicuous. It follows from what has been observed, that in the Roman ba- lance, or steel-yard, the weight used for a coun- terpoise is the same, but the point of application varies ; in the common balance the counterpoise is various, and the point of application the same. The principle on which each is founded, may be very easily understood from the general proper- ties of the lever. See LEVER. The beam is a lever of the first kind; but instead of resting on a fulcrum, is suspended by something fastened to its centre of motion : consequently the me- chanism of the balance depends on the same theo- rems as the lever. Hence as the quantity of matter in known weight is to its distance from the centre of motion, so is the distance of the un- known weight to its quantity of matter. The common balance is properly a lever, whose axis of motion is formed with an edge like that of a

knife, and the other two dishes, or scales, at its extremities, are hung upon edges of the same kind, which are first made sharp, and then rounded with a fine bone, or a piece of buff leather. Ui the regular formation of this part, the excellence of the instrument essentially depends. When tho lever, or beam of the balance, is considered as a mere line, the two outer edges are called points of suspension, and the inner the fulcrum. The points of suspension are supposed to be at equal distances from the fulcrum, and to be pressed with equal weights when loaded.

And now, observe, 1 . If the fulcrum be placed in the centre of gravity of the beam, and the three edges be all in the same right line, the beam of the balance will have no tendency to one po- sition more than another, but will rest in any position in which it may be placed, whether the scales be on or off, empty or loaded. 2. If the centre of gravity of the beam, when level, be immediately above the fulcrum, it will overset by the smallest action ; that is, the end which is lowest will descend ; and it will do this with the greater velocity, in proportion as the centre of gravity is higher, and the points of suspension are less loaded. 3. But if the centre of gravity of the beam be immediately below the fulcrum, the beam will not rest in any position but when level ; and, if disturbed from that position, and then left at liberty, it will vibrate, and at last come to rest in an horizontal position. Its vi- brations will be quicker, and its horizontal ten- dency stronger, the lower the centre of gravity, and the less the weight upon the points of sus- pension. 4. If the fulcrum be below the line joining the points of suspension,

and these be loaded, the beam will overset, unless prevented by the weight of the beam tending to produce an horizontal position, as in the third case. In this case small weights will equilibrate, as in the former ; a certain exact weight will rest in any position of the beam, as in the first case ; and all greater weights will cause the beam to over set, as in the second. Money scales are often made this way, and will overset with any con- siderable load. 5. If the fulcrum be above the line joining the points of suspension, the beam will come to the horizontal position, unless pre- vented by its own weight, as in the second case. If the centre of gravity be nearly in the fulcrum, all the vibrations of the loaded beam will be made in times nearly equal, unless the weights be very small, when they will be slower. The vibrations of balances are quicker, and the horizontal tendency stronger, the higher the ful- crum. Finally, in the proper construction of the common balance, observe, that the points of sus- pension must be exactly in the same line as the centre of the balance ; that they must be pre- cisely equidistant from that centre on either side ; and that the brachia must be as long as conve- niently they may, in relation to their thickness, and the weight which they are intended to sup- port ; that there must be as little friction as pos- sible in the motion of the beam and scales ; and, lastly, that the centre of gravity of the beam must be placed a little below the centre of motion.

The equality of the arms of a balance is of use, in scientific pursuits, says Dr. Ure, chiefly in

*making weights by bisection. A balance with unequal arms will weigh as accurately as another of the same workmanship with equal arms, pro- vided the standard weight itself be first counter- poised, then taken out of the scale, and the thing >o be weighed be put into the scale and adjusted ***i^ainst the counterpoise ; or when proportional quantities only are considered, as in chemical and in other philosophical experiments, the bo- dies and products under examination may be weighed against the weights, taking care always to put the weights into the same scale. For then, though the bodies may not be really equal to the weights, yet their proportions among each other may be the same as if they had been accurately so. But though the equality of the arms may be well dispensed with, yet it is indispensably ne- cessary that their relative lengths, whatever they may be, should continue invariable. For this purpose, it is necessary, either that the three edges be all truly parallel, or that the points of suspension and support should be always in the same part of the edge. This last requisite is the most easily obtained. The balances made in London are usually*

constructed in such a man- ner, that the bearing parts form notches in the other parts of the edges ; so that the scales being set to vibrate, all the parts naturally fall into the same bearing. The balances made in the coun- try have the fulcrum end straight, and confined to one constant bearing by two side plates. But the points of suspension are referred to notches in the edges, like the London balances.

\ ery delicate balances (continues this able writer) are not only useful in nice experiments, but are likewise much more expeditious than others in common weighing. If a pair of scales with a certain load be barely sensible to one-tenth of a grain, it will require a considerable time to ascertain the weight to that degree of accuracy, because the turn must be observed several times over, and is very small. But if no greater accu- racy were required, and scales were used which \ ould turn with the hundredth of a grain, a tenth ol a grain, more or less, would make so great a difference in the turn, that it would be seen im- mediately.

It a balance be found to turn with a certain addition, and is not moved by any smaller weight, a greater sensibility may be given to that balance, by producing a tremulous motion in its parts. 'I hus, if the edge of a blunt saw, a file, or other similar instrument, be drawn along any part of tiie case or support of a balance, it will produce a jarring, which will diminish the friction on the mo\ inu parts so much, that the turn will be eri- d-nt \ith OIK- third or one-fourth of the addition t;iat would else have been required. In this way, a. heam which would barely turn by the addition tit one-tenth ot a grain, will turn w ith one-thirtieth or fortieth of a uTain.

Muschenbroek, in his Cours de Physique, (freneh translation, Paris, ITov1) torn. ii. p. 247, says lit; used an ocular balance of great accuracy, > >;'ich turned trebuehoit) with l-40th of a grain. I h- substances he weighed were between 200 ::nd 3UO grains. His balance, therefore, weighed

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ascertain such weights truly to four places of figures.

In the Philosophical Transactions, vol. Ixvi. p. 509, mention is made of two accurate balances of Mr. Bolton ; and it is said that one would weigh a pound, and turn with one-tenth of a grain. This, if the pound be avoirdupois, is

of the weight : and shows that the ba-

70000

lance could be well depended on to four places of figures, and probably to five. The other

weighed half an ounce, and turned with -rrr of

100

a grain. This is

of the weight.

24000

In the same volume, p. 511, a balance of Mr. Read's is mentioned, which readily turned with less than one pennyweight when loaded with fifty-five pounds, before the Royal Society ; but very distinctly turned with four grains, when

tried more patiently. This is about

part of the weight; and therefore this balance may be depended on to five places of figures.

Also, page 576, a balance of Mr. Whitehurst's weighs one pennyweight, and is sensibly affected

Withofagrain' ^" part of

oo

the weight.

A balance belonging to Mr. Alchorne of the Mint in London, is mentioned, vol. Ixxvii. p. 205 of the Philosophical Transactions. It is true to three grains with 15lb. an end. If these were avoirdupois pounds, the weight is known to

□□□ – □□□ part, or to four places of figures, or

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barely five.

A balance (made by Ramsden, and turning on points instead of edges,) in the possession of Dr. George Fordyce, is mentioned in the seventy- fifth volume of the Philosophical Transactions. With a load of four or five ounces, a difference

of one division in the index was made by

of a grain. This is

part of the weight,

and consequently this beam will ascertain such weights to five places of figures, beside an esti- mate figure.

The Royal Society's balance, which was lately made by Ramsden, turns on steel edges, upon planes of polished crystal. ' I was assured,' says Dr. Ure, 'that it ascertained a weight to the seven-millionth part. I was not present at this trial, which must have required great care and patience, as the point of suspension could not have moved over much more than the 2-1 00th of an inch in the first half minute ; but, from some trials which I saw, I think it probable that it may be used in general practice to determine weights to five places and better.

BALANCE, in ichthyology, or the balance fish. See SQUALUS.

BALANCE, in the woollen manufacture, is a machine invented by the Rev. W. Ludlum. The thread is made into skeins of the same length ; and the fiaeness of it is denominated from the

number of skeins which go to a pound; the coarsest being about twelve to the pound, and the finest nearly sixty. This machine is designed for weighing skeins, in order to determine their respective fineness. It resembles the beam of a common pair of scales ; at one end of it is fixed a weight, called the counterpoise, and at the other end a hook ; in sorting, the skein to be examined is put upon the hook, and sinks down more or less, according to its weight, till the counterpoise, by rising, balances it : and then the index or cock of the beam, points out on a gradual arch, the number of skeins of that sort which go to the pound.

The BALANCE OF A CLOCK or WATCH, is that part which regulates the beats. The circular part of the balance is called the rim, and its spindle the verge ; there belong to it also two pallets or nuts, that play in the fangs of the crown-wheel : in pocket watches, that strong stud in which the lower pivot of the verge plays, and in the middle of which one pivot of the crown-wheel runs, is called the potence : the wrought piece which covers the balance, and in which the upper pivot of the balance plays, is the cock; and the small spring in the new pocket watches is called the regulator. The

*motion of a balance, as well as that of a pendulum, being alternate, while the pressure of the wheels is constantly in one di- rection, it is obvious that some art must be used to accommodate the one to the other. When the tooth of the wheel has given the balance a motion in one direction, it must quit it, that it may get an impulsion in the opposite direction. The ba- lance or pendulum thus escaping from the tooth of the wheel, or the tooth escaping from the ba- * lance, has given to the general construction the name of scapement.*

Before the invention of the pendulum, clocks were regulated by an horizontal balance, having a vertical axis, that passed through two holes, with liberty to play up and down ; and that sus- pended by means of a string passed through a hole in the axis and fastened at both ends, so as to form equal angles with the axis itself. Con- sequently, when the balance revolved in one di- rection, the string was wound upon the verge, and being thus shortened, raised it up until the weight of the balance had overcome the force of rotation : after which it revolved the contrary way, and descended to perform a similar ascent by winding the string the opposite way.

A supposed BALANCE OF POWER, in the poli- tical system, originates from, and is maintained by, the alliances of different nations, as their cir- cumstances and interest may require. The pre- servation of the balance of power has generally implied the maintaining of such a degree of equa- lity among the powers of Europe, in general, as may prevent any enormous accumulation of power, or any attempt at universal monarchy, on the part of any one of them. To preserve this balance, much blood has been shed, and money spent, since the revolution of 1688; but the re- volution of France, and the wars arising out of it, have hopelessly deranged all former theorems and calculations upon this subject. Robertson and other historians have said, that the principle of the balance of power was a discovery of the

fifteenth century, made by the Italian politicians on the invasion of Charles VIII. Against such statements we might adduce the arguments 01 Hume and others, who have traced in ancient times vastly more refined notions of policy than any that dictated the Italian defensive league. It was not, in truth, to any such single event that the balancing system owed either its origin, or its refinement ; but to the progress of society, which placed the whole states of Europe in the same relative situation in which the states of Italy were at that period ; and taught them not to wait for an actual invasion, but to see a Charles at all times in every prince or common- wealth that should manifest the least desire of change. See Edinburgh Review, vol. I. p. 354.

BALANCE OF TRADE. That which is com- monly meant by the balance of

trade, is the re- lative quantity of foreign commodities compared with the exportation of home productions or manufactures. And it has been reckoned that the nation which exports most of its own com- modities, has the advantage of the balance of trade. The reason is, that, if its own commodi- ties be of a greater value than are imported, the balance of that account must be made up in bul- lion or money ; and the nation grows so much richer, as the balance of that account amounts to. But this reasoning admits of many qualifications. See COMMERCE and ECONOMY, POLITICAL.

BALANCERS, orPoiZERS, in entomology, (iu French, balanciers, and the halteres of Linnaeus), denoting those little filamentous bodies which terminate in a round, truncated, or oval capitu- lum, or knob; and of which one is placed on, each side of all the dipterous or two-winged in- sects, under a small scale below the wing. In different genera these vary a little in respect of situation, and are also of larger or smaller size, in proportion to the other parts of the insect, in different kinds.

BALANCIER, a machine used in the striking of coins, medals, counters, and the like. See COINAGE.

BALANCING, among seamen, the contract- ing a sail into a narrower compass, in a storm, by retrenching or folding up a part of it at one cor- ner : this method is used in contradistinction to reefing, which is common to all the principal sails ; whereas balancing is peculiar to few, such as the mizen of a ship, and the main-sail of those vessels wherein it is extended by a boom. See BOOM and REEF. The balance of the mizen is thus performed: the raizen yard is lowered a little, then a small portion of sail is rolled up at the peek or upper corner, and fastened to the yard about one-fifth inward from the outer end or yard-arm, toward the mast. See MIZEN. A boom main-sail is balanced, after all its reefs are taken in, by rolling up a similar portion of the hind- most or aftmost lower corner, called the clue, and fastening it strongly to the boom, having previ- ously wrapped a piece of old canvass round the part (which is done in both cases) to prevent the sail from being fretted by the cord which fastens it.

BALANITES, in natural history, a name given by the ancients to a stone, seeming to have been of the semipellucid gems. They describe two species of it; the one yellow, and the other

jfreen, but eacn naving veins of a flume color. Their descriptions are too

short for us to ascertain what stone, among those known at this time, they meant. Some suppose it to have been the lapis judaicus, on account of its acorn-like figure and size.

BALANOIDES, in conchology, a species of lepas, with a conic truncated smooth shell, and obtuse operculum. Linn. Fn. Suec. Donov. &c. This is balanus parvus vulgaris of Petiver ; and a variety of it with a long tubular stalk is described by Da Costa, Pennant, and Donov. Brit. Shells, Dr. Leach includes the whole of this species, with additional ones, in his class corrhi- pedes.

BALANUS, (3a\avoc, in anatomy, is used for the glans penis, and sometimes for the clitoris.

BALANUS MYREPSICA, in the materla medica, the oily acorn. The whole nut is of a purging quality ; and the dry pressing or powder, after the oil is taken out is of a cleansing and drying nature.

BALAO, a river of the province of Guayaquil, in the kingdom of Quito, which runs into the sea, in the gulf of that name.

BALASFALVA, or BLASENBURG, a town of Transylvania, in the county of Kockelburg, at the conflux of the Great and Little Kockel, hay- ing a castle, and being the residence of a bishop of the united Greek church of Wallachians.

BALASORE, a sea-port of Asia, on the north- \vrst ot" the bay of Bengal, four miles from the sea by land, but twenty by the windings of its river, the Booree Bellaun, which produces plenty of tish. It is navigable for vessels of 100 tons. Here the pilut of Calcutta waits the arrival of vessels : and the English, Dutch, and Portuguese all had factories here in the seventeenth century ; it was ceded to the Mahrattas in 1751, but in :►►03 given up by the Nagpore Rajah to the English. Balasore is in the province of Orissa, 1 10 miles south-west from Calcutta.

UALATITI, in natural history, a name given ny the people of the Philippine islands to a spe- cies of birds, by the flight ot which they divine tin- event of things.

HALATOX, a lake of Hungary, between the counties of S/alad, \Vesprim, and Schumeg, five inilrs south of Stuhl-Weissenburg. It is nearly ►►►Hi miles IOOLT, and from one to four broad, formed orrginally by the river Szala, and augmented by ;i number of other streams. The water, it is said, may be preserved for nearly two years without putrefaction. It contains some tish as well as birds of rare occurrence, which are bought up tor exportation. The Austrian government have lately projected an union

between this lake and thr Danube, by a canal, but the works proceed

HAI.ATOV, or BAI.ASCHEV, the capital of

‘ : in the government of Saratov, in Eu- I’ussia. To tin- north are extensive fo- nd to the south almost interminable heaths, pes. It is situated on the Khoper, which lo the Don. Ninety miles west of Saratov, ii►►l i):!l south-east nt” St. I’ctersburgh.

1 > A!.A1 STIA, orl > \i u MINIS; from jSoXww tti-r, in pharmacy, the flowers of the wild pome- :a:ia!e which are \eiv rou.ih to the tongue and

- *-J O*

rest

palate, and very astringent ; on that account they are frequently used in diarrhoeas, hernias, &c.

BALAUSTINES in botany. SeePuuiCA.

BALAYAN, a province of Manilla, next to the city of Manilla, and extending along the coast on the east side of the island, a little beyond the bay of Batangas. There were formerly gold mines in it, but they have been long since aban- doned.

BALBASTRO, a town of Arragon, in Spain, near the junction of the Vero and Cinca, having a population of 5000, and a dependent jurisdic- tion of 1 70 parishes. Tanning is the chief pur- suit here. Thirty miles E. N.E. of Saragossa, and 47 north-west of Barcelona.

BALBEC, or BAALBECK, a city of Asia, in Syria, anciently Heliopolis, and called by the Arabians, The Wonder of Syria. It is situated at the foot of Anti-Libanus, on the ground where the mountain terminates in the plain, thirty-seven miles north of Damascus. In tra- velling to it from the south, it is seen only at the distance of a league and a half, behind a hedge of walnut-trees, over the verdant tops of which appears a white edging of domes and minarets. It has a ruined wall, flanked with square towers, which ascends the declivity to the right. This low wall permits a view of those void spaces and heaps of ruins which are the invariable ap- pendages of every Turkish city ; but what prin- cipally attracts attention is a large edifice on the left, whose lofty walls and rich columns designate it as having been amongst the most splendid of ancient temples. The apparent length of this edifice was about 900 feet, and its width 450. The entrance to the pronaos, or portico, was by a row of twelve columns, flanked by wings or- namented with pilasters. It was approached by a magnificent

flight of steps, of which there are but few remains. The interior of the portico is choked up with heaps of ruins, but these, when surmounted, lead to an hexagonal court of 180 feet diameter, strewed with broken shafts of co- lumns, mutilated capitals, wrecks of pilasters, bases, and other architectural and sculptural fragments. The buildings in this and the ad- joining court appear to have been appropriated for academies and lodgings for the priests. Through an opening at the end of this court is a vast perspective of ruins, which are best viewed from the top of a slope that was formerly a stair- case, which communicates with a rectangular court, 350 feet long and 346 wide. At the end of the court are six enormous columns; and to the left is another row of columns which formea the peristyle to the body of the temple. The buildings to the right and left form a sort of gal- lery, which is divided into seven parts, to each of the great wings or lateral buildings. At the extremity of this court is the cell or body of the temple itself, where are the before-mentioned six colossal columns. Their shafts measure twenty- two feet in circumference, and fifty-eight in height; and the whole height of the order (the Corinthian) nearly seventy-two feet. On ex- amining the circumjacent site, a row of bases was discovered, arranged in a parallelogram- matic form of 270 feet in length, and 150 in width. This belt of columns encompassed the

cell or body of the temple, which was decastyle (ten columned) in front, with nineteen columns in flank, and of the fourth or peripteral order of temples ; but its intercolumniations do not ac- cord with any of the five species described in the system of Vitruvius. These buildings are all of the Corinthian order, with the exception of some pilastral elevations, which are of the Com- posite. A second temple is situated near the southmost part of the city, upon an irregular site. It is pseudodipteral, and does not appear to have been surrounded by a peristyle and court like the former. It is, however, in a better state of preservation, having very lately eight columns in front, and thirteen in flank, of the Corinthian order. Their shafts are about sixteen feet in. cir- cumference, and forty-fcmr in height.

Balbec also possesses, in the southern part of the city, a circular temple, differing in every re- spect from the precepts of Vitruvius : its lower story is used for a Greek church. Its plan is extremely whimsical, and all its details present a mass of architectural anomalies.

Few architectural remains of the ancient world are more rich in decoration than those of Balbec. The soffites and ceilings of the pe- ristyle are panelled in lozenge forms, with repre- sentations of Jupiter and his eagle, Leda and

the swan, Diana with her bow and crescent, and various busts in the costume of emperors and empresses. All the members of the interior en- tablatures are loaded with a profusion of orna- ments. The archivolts, the heads of the niches, the frieze of the principal order, are covered with the most sumptuous embellishments of sculpture. The interior columns are all fluted, and those of the exterior plain. Dr. Pococke conceives that nothing can be finer than the en- trance to the great temple. Almost all the mem- bers are enriched with sculptural representations of flowers and fruit, and the frieze with ears of corn, of admirable execution. According to Volney, the walls of the smaller temple suffered much from the earthquake of 1759; which is confirmed by our countryman, who, in 1784, found but six columns of the great temple stand- ing out of the nine, which were erect in 1751; and twenty only out of twenty-nine belonging to the smaller temple. The rapacity of the Turks has also contributed to their destruction, from their desire of possessing the iron pins and cramps with which the huge blocks of masonry are joined.

The massiveness, indeed, of the stones and blocks of marble is not the least remarkable fea- ture of these ruins. No modern mechanical contrivance, it is said, could convey such masses from any distance into their present positions. Stones, from twenty-eight to thirty-five feet long, and nine in depth, form the second layer of the great temple. One is even fifty-nine feet long and twelve deep.

The period of the erection of these edifices seems to be a question lost in entire obscurity. The age of Aurelian, from the similarity of their style with that of the Palmyra edifices', would seem to be the most probable. Here is the same compound of Grecian forms with Asiatic adorn- muit and luxuriant display, the same fantas-

tical ornaments, united with occasional grandeur of design and boldness of execution.

The town now inhabited is small and mean, but about four miles in circuit. The population has been for a long period gradually decreasing . the town was computed, in 1751, to contain 5000, and in 1784, to contain only 1200 poor and in- dolent inhabitants, cultivating a little cotton, maize, and water-melons, for their subsistence. History has preserved but few traces of this place. About 140 years before the time of An- toninus Pius, it was garrisoned by Roman troops. Some writers state that he erected the principal part of the present edifice on the site of one more ancient. Under Constantino it was neglected, and the great tern pie soon after converted into a church: thus it was appropriated until the irruption of the Arabs, when it fell rapidly into decay. After a vigorous defence, the town was taken by tha. nation, under Abu Obeidah, a commander of the caliph*

Omar. In 1401 it was taken by Tamer lane. An earthquake, in 1759, nearly com pleted its destruction. Distant forty miles N.N.W. of Damascus, and 110 S. of Aleppo.

BALBINUS, Decimus Ccelius, emperor of Rome, was elected by the senate, A. D. 237, but massacred, along with his colleague, Maximus, soldiers.

BALBO (Vasco Nuiies de), a Castilian; a celebrated navigator, and one of the first disco- verers of South America. He was beheaded by the Spanish govenor of St Mary, through jealou of his growing reputation, in 1517, aged forty two.*

BALBU'CINATE, v.n. From Lat. balbutio, to stammer in speaking. Diet.

BALBUL, in ornithology, a species of Anas, or duck having a black beak, and spot on the vring, above obliquely green, beneath obliquely black Forsk. Fn. Arab.

BALBUS (Lucius Cornelius Theophanes), was born at Cadiz, and distinguished himself by his valor in the war carried on by the Romans in Spain against Sertorius and the Lusitanians, on which account Pompey gave him the privileges of a Roman citizen. He was consul in the 714th year of Rome, and was the first foreigner on whom that dignity was conferred. He was the friend of Porapey, Caesar, Crassus, and Cicero.

BALBUSARDUS, in ornithology, the name used by authors, for the bird called in English the bald buzzard. It is of the long-winged hawk kind, and has been described by Aldrovan- dus and some other authors, under the name of the Haliaetus and Morphnus, two species of the eagle. It frequents the shores of ponds and rivers, and sometimes of the sea, where it preys on fish. It builds on the ground among reeds, and lays three or four large white eggs, nearly as big as hens' eggs.

BALBUTIATE, v. n. The same with balbu- cinate.

BALCAIRN, a place in Perthshire, in the parish of Clunie, which some antiquarians sup- pose to have been the scene of the decisive battle between Agricola and Galgacus.

BALCANQUAL (Walter), an eminent Scot- tish divine, who attended James I. to England, and at Oxford took the degree of D.D. H#

became his majesty's chaplain, master of the Sa- voy, and representative of the church of Scotland, at the synod of Dort. He was appointed dean of Rochester in 1625, and of Durham in 1639. During the rebellion he underwent many hard- ships, being obliged to fly from place to place. He died on Christmas day, 1645, at Chirk castle in Denbighshire; he wrote, Epistles concerning the Synod of Dort, and the Declaration of King Charles I. concerningthe late tumults in Scotland, folio, 1630.

BALCARRA, a town of Ireland, in the county of Mayo, 115 miles from Dublin.

BALCARRY, a free port on the west coast of Scotland, in the Stewartry of Galloway, and parish of Rerwick. It is naturally a safe and commodious harbour.

BALCHRISTIE; Gael. i. e. the town of Christian ; a village of Fifeshire, in the parish of Newburn, anciently given to the Culdees, by king Malcolm III. and his queen St. Margaret. Tra- dition reports that the first Christian church in Scotland was built in this village.

BALCK, a town of Usbeck Tartary, on the frontiers of Persia, 200 miles south of Bokhara.

BALCLUITIIA, a settlement in the south part of Kentucky, on the west side of Big Sandy river.

BALCO'NY, n. s. Fr. balcon ; Ital. balcone, a frame of iron, wood, or stone, before the win- dow of a room.

Then pleasure came, who, liking not the fashion, Beean to make balconies, terraces, Till she had weaken'd all by alteration. Herbert.

When dirty waters from balconies drop,

And dext'rous damsels twirl the sprinkling mop.

Gay.

BALCONY in a ship, denotes a gallery either covered or open, made abaft, either for orna- ment or convenience of the captain's cabin.

BALD', adj. ~\ Welch bal, wanting hair.

BALD'LY, adv. >A bare surface which is

BALD'XKSS, n. s.) usually covered or fledged I>y nature. In the human species this is usually the effect of time, vexation, fever, or cutaneous disease of the parts, or, as some say, the dryrtess of the brain. It is figuratively employed to de- note whatever is inelegant and meagre of thought, in literary composition or verbal discourse ; what- ever is mean, undignified and valueless, in cha- racter and disposition.

Come hither goodman bald pate. Do you know me?

Shakspeare.

Why \ou Imld paled lying rascal, you must be hooded must you! Id.

I iiih-r an oak, whose bouirlis were moss'd with age, And Liiih top h-ilil with dry antiquity. Id.

Tin-; '"ii.i unjointi d chat of his, my lord,

I answered indirectly. Id.

What should tin- people do with these bald tribunes? On wh.nn depi ◆◆◆miini'., their obedience fails To th' jrrc ater bench. Id.

He should imitate C.tsar, who, because his head

was b'il'1, roveivd thai defect with laurels. Addison

:>es, in the preface to hi; own bald translation,

l.e-ins tiie praise of Homer where he should have

And that, though labourM, line, must bald appear, fuat brings ungrateful muaick to the ear. Creech.

BALDNESS occurs chiefly on the sinciput It differs from alopecia, acea, ophiasis, and tinea, as these all arise from some vices in the nutritious humor ; baldness, from the defect of it. When the eye-lids shed their hair, it is called a ptilosis. Among the causes of baldness, immoderate venery is reputed one of the chief: old age usually brings it on of course ; and it frequently results from violent fevers. Eunuchs and women are almost always free from it, and Aristotle says that it never can precede the age of puberty. Herodotus, iii. 12, says the Egyptians seldom went bald, because they shaved their heads from childhood, and thus hardened them in the sun ! Calvus (bald), among the Romans, was a term of re- proach. Thus Juvenal calls Domitian, calvus Nero. The later Romans, however, seem to

have been reconciled to baldness ; for we find among them a kind of officers, or servants, called glabratores or glabrari, whose business was to take off the hair from all parts, even from the head. In an ancient inscription there is mention made of one Diophantus, TI. C&SARIS OR- NATOR GLABR. that is, Oraator Glabrarius. We have seen it somewhere observed that the ma- jority of Englishmen, above forty, are more or less bald. Buffon observes that the crown of the head, and the space immediately above the tem- ples, are the parts which first become bald ; but that the hair below the temples, and on the in- ferior part of the back of the head, seldom falls off. He also adds, that baldness is peculiar to men. In its early stages nutritives, particularly a tea made of abrotoniim, southernwood, have been advised to be applied to the roots of the hair.

BALDACANIFER, or BALCANIFER, a stand- ard-bearer ; chiefly in the ancient order of knights Templars.

BAL'DACHIN, n. s. Ital. baldachino, a piece of architecture, in form of a canopy, supported with columns, and serving as a covering to an altar. It properly signifies a rich silk, Du Cange, and was a canopy carried over the host.

BALDACHIN, BALDAKIN, BALDEKIN, or BAULDEKIN, in middle-age writers, a rich kind of cloth made of gold warp and silk woof, vari- ously figured. It took the denomination from its being formerly brought into these countries from Baldacio, or Babylon.

BALD-BUZZARD, in ornithology, the name given by Willoughby and others to the Falco Haliaetos, or Osprey. It is the balbuzzard of Buffon. See BALBUSARDUS.

BALD EAGLE, or Sinking-Spring Valley, lies upon the frontiers of Bedford county, in Penn- sylvania, about 200 miles west of Philadelphia. It is bounded on the east by a chain of high rugged mountains, called the Canoe ridge ; and on the west by the Bald Eagle, or Warrior mountains, and is a pleasant vale, having a lime- stone bottom, about five miles wide ; its vicinity abounds with lead-ore, and shows signs of pit coal. The curiosity of this place is the swallows, which absorb several of the largest streams of the valley, and after conveying them several miles under ground, return them again to the surface. Hence its name of Sinking-Spring Valley. The most remarkable of these is called the Arch

Springs, which run close upon the road from the town to the fort ; being a deep hollow formed in the lime-stone rock, about thirty feet wide, covered with a stony arch, and giving passage to a fine stream of water, which enters the mouth of a spacious cave, whose exterior aperture is sufficient to admit a shallop with her sails full spread. In the midst of this cave, from eighteen to twenty feet wide, are timber, bodies and branches of trees, &c. which, being lodged up to the roof of the passage, show that the water rises to the top during freshes. The cave, extending about forty yards, widens into a large kind of room, at the bottom of which is a vortex, where the water forms a whirlpool, and absorbs pieces of float- ing timber, which are instantly conveyed out of sight. From the top of the Bald-eagle mountains is a fine prospect of those of the Alleghany.

BALD EAGLE, a river of the United States which runs forty-four miles north-west, and falls into the Susquehanna.

BALD EAGLE CREEK, a head water of the Huron.

BAL'DERDASH, n.s. kv.a. Probably of Sax. bal&, bold, and dash, to mingle; any thing jumbled together without judgment; rude mix- ture ; a confused discourse. The verb is derived from the noun, and signifies to mix or adulterate any liquor. Balderdash, in its primary sense, probably signified the froth or foam made by barbers in dashing their balls backwards and forwards in hot water.

They would no more live under the yoke of the sea, or have their heads washed with his hubbly spume or barbers balderdash. Naihe, Lenten stuffe.

It is against my freehold, my inheritance, To drink such balderdash, or bonny clabber !

Ben Jonson. Mine is such a drench of balderdash.

Beaumont and Fletcher.

BALD HEAD, an island at the mouth of Cape Fear river, North Carolina. A light-house was erected here in December 1794 ; four miles N. N. W. of Cape Fear.

BALD HEAD, the south-west part of West Bay, in the district of Maine.

BALD HEAD, a point on the north-western shore of America, in Norton sound. Long. 198 18″ E., lat. 64 43′ N.

BALD HEAD, a promontory of New Holland, about 400 feet high, on the south-west coast, at the mouth of King George's sound. Branches of coral

appearing through the surface of the top, have given rise to a conjecture that this promon- tory emerged from the sea. Long. 118►► E., lat. 35►► 6′ S.

BALD! (Bernard), an Italian mathematician and poet, born at Urbino in 1553. He studied at Padua and afterwards became mathematician to the duke of Guastalla. He wrote several excellent poems in the Italian language, and translated the works of various ancient mathe- maticians into that language. He died in 1617. His Lives of Mathematicians were printed in

1707-

BALDINI (John Anthony), an Italian noble- man, born at Placentia, in 1654 He was a man

of great learning, and employed as ambassador at different courts of Europe. He was also at the congress of Utrecht. He made a large collec- tion of curiosities and books ; a catalogue of which was printed in the Italian Literary Journal. He died in 1725.

BALDINUCCI (Philip), of Florence ; a con- noisseur in the polite arts, and the continuator of Vasari's lives of the painters. He died in 1696, aged seventy-two.

BALD ISLAND, an island off Mount Gardner, on the south-west coast of New Holland, about two miles long. Long. 18►► 29′ E., lat. 34►► 55′ S.

BALDIVIA, or VALDIVIA, a sea-port town of Chili in South America. It is situated be- tween the rivers Callaculles and Portero, where they fall into the South Sea, and was built in 1551 by the Spanish general Valdivia, from whom it takes its name. In 1643 it was taken by the Dutch, who would probably have maintained their conquest against all the power of the Spanish viceroy, had they not been obliged to relinquish it through sickness and famine.

BALD'MONY, n. s. Gentian ; a plant.

BALDO MONTE, a mountain of Italy, the highest in the Veronese. It is situated at the head of lake Garda, and is famous for its rare plants. Sea shells are found upon the top of it.

BALDOCK, a market-town and parish of Herts, eight miles south from Biggleswade, and thirty-seven north from London ; containing 1 600 inhabitants. It is a neat, pleasant place, originally built by the knights-

templars, in the reign of Stephen, and stands on the old Roman road, Ikening street, and the present great north road. The church is large and handsome, with three chancels. There is a well-endowed alms-hpuse, and several excellent charities in this parish. Market on Thursday. The chief articles of trade are corn and malt.

BALDOCK (Ralph de), bishop of London under Edward I. and II., was educated at Mertons college in Oxford; became dean of St. Paul's; was afterwards promoted to the see of London ; and at last was made lord high chancellor of England. He had a very amiable character both for morals and learning ; and wrote Historia Anglica, or an history of the British affairs, down to his own time, and a Collection of the Statutes and Constitutions of the church of St. Paul. He died at Stepney, July 24, 1313.

BALD-PATE, in zoology, a name given by Ray to the columba leucocephala.

BALDRED ; Sax. from bald, bold, and rede, counsel ; the last king of Kent.

BALD'RICK, n. s. It was formerly written baudrick, and signified a belt of leather, from the old French baudrier, derived from the verb bau- droyer, to dress skins. It is now used to signify a girdle, a bracelet, and has been applied to the zodiac.

Athwart his breast a baldrick btaue he ware, That shin'd like twinkling stars, with stones most precious rare. Spenser.

That like the twins of Jove, they seem'd in sight, Which deck the baldrick of the heavens bright. Id.

That a woman conceived me, I thank her ; that she brought me up, I likewise give her most humble

thanVs : hut that I will have a recheat winded in my forehead, or hang my hu^le in an invisible baldrick, all women shall pardon me. Shakspeare.

A radiant baldrick o'er his shoulders ty'd,

Sustain'd the sword that glitter'd at his side. Pope.

BALDRICK was a belt worn by the Saxons, hanging from the shoulder

across the breast, on which the sword was hung.

BALDWIN, archbishop of Canterbury, was born of obscure parents at Exeter, where, in the early part of his life, he taught a grammar school; after which he took orders and was made arch- deacon of Exeter ; but resigned and became a Cistertian monk in the monastery of Ford in Devonshire, of which in a few years he was made abbot. In 1180 he was consecrated bishop of Worcester. In 1184 he was promoted to the see of Canterbury by pope Lucius III., and by his successor Urban III. was appointed legate. lu 1 189 he crowned king Richard I. at Westminster; and soon after followed that prince to the holy land, where he died at the siege of Ptolernais. He wrote various tracts on religious subjects, which were collected and published by Bertrand Tissier in 1662.

BALDWIN I. earl of Flanders, was proclaimed emperor of Constantinople, A.D. 1204, in op- position to Theodore Lascaris, but enjoyed his new dignity little more than a year. He was succeeded by his brother Henry, who took Con- stantinople in 1206.

BALDWIN II., emperor of Constantinople, suc- ceeded Robert the fourth Latin emperor A.D. 1229, and reigned thirty-three years; but was expelled by Michael VIII., who recovered Con- stantinople, and thus put an end to the empire of the Latins in the east, A.D. 1261.

BALDWIN (Francis), a learned civilian, born at Arras, in 1.V20. He is said to have changed his religion four different times, from the Protestant to the Catholic faith, and vice versa. He how- ever obtained successively the patronage of the emperor Charles V. Anthony king of Navarre, ami Henry III. king of Poland; the latter of whom having invited him to his court, he was making preparations for his journey, when he was sri/ed with a fever, of which he died in l.”>72. lie wrote Leges de Rustica; Novella Con- stitutio prima; de llx>redibus et Lege Flacidia; und other works.

BALDWIN 1. king of Jerusalem, was the son of Lustace, count of Boulogne. Having ac- companied his brother Godfrey into Palestine, lie there obtained the country of Edessa. He ascended the throne of Jerusalem as his brother’s successor in 1100, and next year took Antipatris, (,‘esarea, and A/.otus ; and Acre, after a long siege, in 1104. He died in 11 IB, and was interred on Mount Calvary. He was an active and enter- prising prince.

BALDWIN II. son of Hugh, count of Rethel, succeeded to the throne in 1118, after Eustace, the brother of Baldwin 1. had given up all claim to it. In 1120 he gained a great victory over the Saracens, but was made prisoner by them in ! 12-1; and gave up the city of Tyre to obtain his iilarty. lie died in 1 lol.

] > AI DWIN ill. J\ , and V. were also kings of Jemsiikm :;i the latter part of the twelfth cen-

tury ; the last of this name being poisoned, it was thought, by his mother, in 1186.

*BA'LE, n. *. v. n. & v. a. Fr. emballar; Ital. imballare, a bundle or parcel packed up for carriage ; a pair of dice. To make up into a parcel. As used by sailors, it is distinguished from pumping, and signifies to lave out water from hand to hand ; from the French bailler.*

One hired an ass in the dog-days, to carry certain bull's of goods to such a town. L' Estrange.

It is part of the bales in which bohea tea was brought over from China. Woodward.

It is a false dice of the same bale, but not the same cut. Overbury. Charac. sign. Q. 2.

For exercise of arms a bale of dice.

Ben Joruon, New Inn.

BALE', n. s. ") Sax. bael; Dan. bale; BALE'FUL, adj. > Icelandic bal, bol ; Cimb. BALE'FULLY, adv. j haul; Sax. bealopull. Mi- sery, calamity, mischief, poison, its genuine meaning.

And I salle telle that tale, or I ferrer go, Now falsnes brewes bale with him, and many mo.

JR. Brunne, p. 55.

She look'd about, and seeing one in mail Armed to point, sought back to turn again ; For light she hated as the deadly bale.

Faerie Queene.

But when he saw his threat'ning was but vain, He turn'd about, and searched his baleful books again.

Id. Thenceforth they playne, and make full piteous

mone Unto the author of their balefull bane. Spenser.

Such stormie stoures do breed my balefull smart, As if my yeare were wast and woxen old. Id.

Boiling choler chokes, By sight of these, our baleful enemies.

Shahipeare.

Round he throws his baleful eyes, That witness'd huge affliction and dismay, Mix'd with obdurate pride and stedfut hate.

Milton

Unseen, unfelt, the fiery serpent skims Betwixt her linen and her naked limbs, His baleful breath inspiring as he glides.

Dry den.

Happy lerne, whose most wholesome air Poisons envenom'd spiders, and forbids The baleful toad and vipers from her shore.

Philips.

BALE, in commerce, is particularly applied to a quantity of packed up merchandise, well se- cured for carriage or voyages. To sell goods in the bale is to sell them in the lump, on showing a specimen, without unpacking or taking off the cordage. Thus the East India Company and others sell their goods. In the East India trade, the bulky goods are salt-petre, pepper, red earth, tea, &c. Bale goods stand opposed to piece goods.

A BALE of camlet, at Smyrna, is called a table, on account of its flat square.

A BALE of cotton yarn is from 300 to 400 weight.

A BALE of dice denotes a little packet, or paper, containing some dozens of dice.

A BALE of dowlas, or of lockram, consists of either three, three and a half, or four pieces.

A BALE of paper denotes a certain, or rather uncertain number of reams packed together in

a bundle. Those sent from Marseilles to Con- stantinople usually contain

twelve reams. A bale or ballon of crown paper, manufactured in the departments of the Var, the Lower Alps, and the mouths of the Rhone, consists of fourteen reams.

A BALE of raw silk contains from 100 to 400 weight.

BALE (John), bishop of Ossory in Ireland, was born at Cove, in Suffolk, in 1495. At twelve years of age he was entered in the mo- nastery of the Carmelites, Norwich. He was educated a Roman Catholic; but, being converted to the Protestant religion by Thomas Lord Went- worth, on the death of Lord Cromwell, who pro- tected him from the Romish clergy, he was obliged to retire into the Low Countries, where he continued eight years. Soon after the acces- sion of Edward VI. he was recalled; and being first presented to the living of Bishop's Stoke in Hampshire, in 1552, was nominated to the see of Ossory. During his residence in Ireland he was remarkably assiduous in propagating the protestant doctrines; but frequently at the hazard of his life. Once five of his domestics were murdered, as he would probably have been, had not the sovereign of Kilkenny come to his as- sistance with 100 horse and 300 foot. On the accession of queen Mary, the tide of opposition became so powerful, that he embarked for Hol- land, but was very unfortunate in his escape. First he was taken by a Dutch man of war, and robbed of all his effects. Then, being forced by stress of weather into St. Ive's in Cornwall, he was confined on suspicion of treason. Being re- leased after a few days confinement, the ship anchored in Dover road, where he was again seized on a false accusation. After his arrival in Holland he was kept prisoner for three weeks, and at length obtained his liberty on paying ––30. From Holland he travelled to Basil in Switzer- land, where he continued till queen Elizabeth ascended the throne. After his return to England he was, in 1560, made prebendary of Canterbury, not choosing to return to his former flock of wolves. He died in November 1563, at Canterbury, aged sixty-eight. He was so severe a writer against the church of Rome, that his books are particularly prohibited in the expurga- tory index, published at Madrid in 1667. Most of his writings are attacks upon the religion he had abandoned. His Brief Chronicle concerning Sir John Oldcastle was republished in 1729; and he is also the author of many strange pro- ductions in English metre, among which are several plays on sacred subjects, a specimen of which may be seen in the Harleian Miscellany. To modern readers they would appear strange burlesques ; but, as the author himself informs us, they were gravely and piously represented in his own days by young men at the market-cross of Kilkenny. The principal work of bishop Bale is his Scriptorum Illustrium Majoris Bri- tmniae Catalogus ; or, An Account of the Lives of eminent Writers of Britain ; which, according to the title, commences with Japhet the son of Noah, and reaches to the year J557! It formed the foundation of all the large subsequent com- pilations of this

kind.

BALE, BASLE or BASIL. See BASLE.

BALEARES INSULJE, or BALEARIC ISLANDS, islands in the Mediterranean, so called from Ba- \tiv, because the inhabitants were excellent slingers. But Bochart makes the name of Punic or Phoenician original, as were the people : Baal-jare, signifying a master, or skilful at throw- ing ; the Phoenicians and Hebrews being dexte- rous at the use of the sling. The Greeks called these islands Gymnasia, because, in summer, the inhabitants went naked, or rather because they were only armed with a sling in war. There are two principal ones called Major and Minor; and hence the modern names Majorca and Minorca. The Major is distant from the Minor thirty miles to the west ; in length 40 miles, and in circuit 150. They were subdued by Quintus Metel- lus, A. A. C. 120. The Baleares, together with the adjacent islands, were a part of the Pro- vincia Citerior or Tarraconensis, and of the resort of the Coventus Carthaginiensis, or New Car- thage. These islands are called Cheorades, by Apollonius, and Choeradades, by Strabo, i. e. rocky. See MAJORCA and MINORCA.

BALEARICUS, a surname obtained by Me- tellus upon his conquest of the Baleares.

BALECHOU (John Joseph), a celebrated French engraver, born at Aries, in 1719. He died at Avignon, in 1765. This extraordinary artist wrought entirely with the graver, of which he was fully master. The clearness of his strokes, and the depth of color which he produced, are far beyond any production prior to his own. His two large plates from Vernet, the one represent- ing a storm, the other a calm, must ever be con- sidered as astonishing exertions. They are too well known, and too much admired, to need any further eulogium : and were never equalled, until they were perhaps surpassed by our coun- tryman Woollet.

BALEN (Hendrick Van), history and por- trait painter, was born at Antwerp, in 1560; was a disciple of Adam Van Oort, and resided at Rome a considerable time. He copied the antiques ; and at his return to his own country, the visible improvement of his taste procured him the esteem of the ablest judges. He gave to his figures so much truth, roundness, and correctness of outline, that few of his contempo- raries could enter into competition with him. Several fine portraits of his remain. He died in

1632.

BALEN (John Van), painter of history, land- scapes, and boys, was born at Antwerp, in 1611 ; and derived his knowledge of the art, and his fine taste

of drawing and design, from his father Hendrick ; but, as soon as he had made a com- petent progress, he travelled to Rome, and lived for several years in that and other ctties of Italy. There he acquired a good gusto of design, though he was sometimes incorrect. His particular merit was in his figures of naked boys, cupids, and nymphs bathing or hunting, of which sub- jects he painted a considerable number ; and he procured both praise and riches by his land- scapes and histories. The carnations of his figures were clear and fresh ; his coloring in general transparent ; the airs of his heads were in the manner of Albano.

BALKNGARIA, BALENGER, in writers of the

middle age, a kind of vessel of war, but of what particular construction seems not well known. Blount says, that by thestat. 28 Hen. VI. cap. 5, balenger seems to have been a kind of barge.

BALKS (Peter), a famous master in the art of penmanship, or fair writing ; and one of the first inventors of short hand. He was born in 1547, and is styled, by Anthony Wood, ‘ a most dexterous person in his profession.’ Wood adds, that ‘ he spent several years in sciences among the Oxonians, particularly in Gloucester-hall ; but that study, which he used for a diversion only, proved at length an employment of profit.’ He is mentioned in Hollinshed’s Chronicle, A. D. 1 525 ; and Mr. Evelyn has celebrated his deli- cate execution of a piece of writing, containing the Lord’s Prayer, the Creed, Decalogue, with two short prayers in Latin, his own name, motto, day of the month, year of the Lord, and reign of the Queen (Elizabeth), to whom he presented it at Hampton Court, all ‘ written within the circle of a single penny, inchased in a ring and borders of gold ; and covered with a crystal, so accurately wrought as to be very plainly legible, to the great admiration of her Majesty, the whole Privy Council, and several ambassadors then at Court?’ He was also dexterous in imitating hand- writing, and, about 1586, was employed by Secretary Walsingham in certain political manoeuvres. In 1590, we find him at the head of a school, near the Old Bailey, London ; in which year he published his Writing Schoolmaster, in three parts : the first teaching swift writing, the second true writing, the third fair writing. In 1595, he had a great trial of skill in Blackfriars with one Daniel Johnson, for a golden pen of ––20 value, and won it. He had also the arms of Calligraphy given him, which are Azure, a Pen, Or, as a prize, at a trial of skill in this art among the best penmen in London. In 1597, he repub- lished his Writing Schoolmaster, which was in such high reputation, that no less than eighteen copies of

commendatory verses, composed by learned men of that time, were printed before it. Wood says, that he was engaged in Essex's trea- sons in KJOO; but he was only engaged, and very innocently so, in serving the treacherous purposes of one of that Earl's mercenary de- pendents.

BALKSSAX, the eastern name for that spe- cies of the Amyris which produces the celebrated balsam of Mecca, the ancient balm of Gilead. This plant grows to tin; height of fourteen feet, flourishing in a hot climate, and in a stony bar- ren soil. In general it is lower, and Mr. Bruce describes a specimen live feet and a half in height, and five inches across the stem where thickest. The wood is white, light, and of open texture, covered with a smooth bark, reddish or of bluish white, resembling that of a healthy standard cherry-tree, green within, and emitting a very fragrant odor. That of the branches, which are very flexible and resinous, is equally agreeable. The loaves, which are evergreen and scanty, bear some resemblance to those of rue; and the flowers, which are leguminous and of a purplish color, resemble those of the acacia. The fruit consists of small pointed ovoidal berries,

containing a yellowish fluid similar to honey, at a bitterish taste, and exhaling a pleasing perfume, approaching the odor of balm.

It has been in modern times maintained that the plants producing the balsam of Mecca are restricted to a plantation of a little more than thirty acres, at Beder Ilunein, a station for pil- grims in Arabia, between Mecca and Medina. Yet it cannot be positively affirmed if this be one species, that Abyssinia, the country ascribed to the other, is deprived of it ; or that the balm of Gilead grows in Abyssinia exclusively. These are facts which require elucidation from future botanical research. The plantation belongs to a noble family of Arabs, of the tribe Beni K'oreish, from which Mahomet originated, unless the Wa- habees, who interrupted the wo? red pilgrimages, have dispossessed them of their inheritance. The balsam is a resinous matter, exuding, like ordi- nary resin from incisions in the bark, in July, August, and September. It is received in an earthen bottle, and the most productive trees do not yield more than sixty drops a day, we are told. At this time it emits a very strong and pungent odor, and is of a rough, acrid taste, a pale yellow turbid color, and it dissolves in oils readily. Afterwards it acquires a deeper color, as well as greater consistency and clear- ness, and is not unlike honey in its appearance. It sinks in clear water to the bottom, and, if dropped on hot iron, collects itself into a glo- bule. It is said to be frequently adulterated with honey, wax, and oil. The best kind is called opobalsamum; there are two other kinds, the carpobalsamum, and xylobalsamum ; they are obtained from an expression of the fruit of the amyris, the other from a decoction of the twigs.

Prosper Alpinus ascribes many properties to the balsam of Mecca, esteemed the most precious of all that bear the appellation of balsam, and which, in ordinary description, we must consider synonymous with the balm of Gilead ; and the modern Arabs, Turks, and Egyptians, entertain great confidence in its efficacy. It is a powerful vulnerary : Mahomet affirmed, that a grove of the trees sprung up from the blood of his own tribe killed in battle, the juice of which cured the wounds of the faithful, however deadly, nay, that it recovered some of them from death itself. It is also taken for complaints in the breast, in fe- vers, and rheumatism. Hasselquist says, it is useful as a stomachic in doses of three grains. Its repute as an antiseptic is very great ; and it is esteemed so effectual an antidote against the plague, that when this distemper makes its appear- ance, the Egyptians take a certain quantity daily Its principal use, however, is as a cosmetic by the eastern females of rank : after being kept in a very warm bath, the face and breast are anointed with it, and the same process is continued every third day for a month. Oil of almonds and other cosmetics are then rubbed over the parts, where- by the skin and complexion are beautifully reno- vated. Lady Mary Wortley Montague relates, that she was induced to try the experiment, by which her face became swelled and red for three days, during which she suffered much pain , but her complexion was greatly improved. She adds

that the ladies of Constantinople, by whom it is used, have the finest bloom As yielding the virtues of the balm of Gilead. this plant has been celebrated from very remote antiquity. When Joseph was confined by his brethren in a pit, it is said, ‘ they sat down to eat bread ; and they lifted up their eyes and looked, and behold a company of Ishmaelites came from Gilead, with their camels bearing spicery, and balm, and myrrh, going to carry it down to Egypt.’ Jere- miah particularly alludes to its virtues ; and Josephus states, the queer- of Sheba, or Saba, ‘who was inquisitive ii.lc philosophy, and on that and otner accounts was also to be admired,’ brought the balm of Gilead as a present to Solo- mon, on her visit to Jerusalem.

‘ They say also,’ he adds, ‘ that we possess the root of this balsam, which our country still bears, from that woman’s gift.’ It appears from the writings of the ancients, nearly contemporary with Josephus, that Judea was generally be- lieved to be possessed of it exclusively. Pliny says, ‘ To all other odors whatsoever is to be preferred that balsam, which is produced in no other part of the world than the land of Judea, and there in two gardens

only, both belonging to the king, one not exceeding twenty acres in size, and the second still smaller.' Strabo partly confirms the above accounts, ascribing it to that country, over or near to which the queen of She- ba reigned. ' Near to this,' he says, 'is the most favored land of the Sabeans, a very great people. Frankincense, myrrh, and cinnamon, grow among them, and in the coast that is about Saba, the balsam also.' Whence Bruce observes, that 4 among the myrrh-trees behind Asab, all along the coast to the Straits of Babelmandel, is its native country. It grows to a tree about four- teen feet high spontaneously, and without culture, like the myrrh, the coffee, and frankincense-tree; they are all equally the wood of the country, and occasionally cut down for fuel.' Diodorus Si- culus affirms that this balsam grew in a valley of Arabia Felix. AH Bey says, that there is no balsam made now at Mecca : that, on the con- trary, it is very scarce, and is obtained princi- pally in the territory of Medina ; as also that it was called belsan, for whose history see our arti- cle BADIA.*

Galen travelled into Syria and Palestine, pur- posely to obtain a knowledge of this substance : in 1516 we find the emperor Selim levying a tax of three pounds weight of it annually on Arabia and Egypt ; which is said to be levied to this day.

Part of the governor of Cairo's appointments include a right to receive a pound of balsam ; the like quantity is due to an officer who conducts the caravan of pilgrims to Mecca; and half a pound to the pacha of Damascus.

BALESTRA (Antonio), an excellent historical painter, born at Verona in 1666. At the age of twenty-one he went to Venice, where he con- tinued for three years, under the direction of Ant. Bellucci. He next visited Bologna and Rome, and at the latter became the disciple of Maratti. Under him he exerted himself in de- signing after Raphael, Corregio, Annibal Caracci, &c. by which he so effectually confirmed his VOL. III.

taste, that he obtained the prize of merit in th►► academy of St. Luke, in 1694, when he was only twenty-eight. From that time his reputation was established, and he was engaged to work for most of the churches and the nobility, and his paintings were universally admired. His style is like that of Maratti; and his works have a certain mixture of the manners of Raphael, Cor- regio, and Caracci. He died in 1740. In the church of Santa Maria Mater Domini, at Venice, there is one of his most capital performances, representing the nativity of our Saviour. In a chapel belonging to the church of S. Geminiano, in the same city, there is another capital picture of his, representing our Saviour dead, in the arms of the virgin.

BALESTRA, in ichthyology, a name by which Sylvian and others have called the fish more usually known by the name of Capriscus.

BALETCHENCK, a town of Turkey in Asia, on the Kurasir, twenty-one miles from Hazahan, and twenty-seven miles from Kati- bounou. It consists of 260 houses, and carries on a considerable traffic in horses, cattle, and goats' hair, made into bags.

BALEY (Walter), the son of Henry Baley of Warnwell in Dorsetshire, was born at Portsham, and educated at Winchester. From thence he was sent to Oxford ; and, after two years proba- tion, was admitted perpetual fellow of New Col- lege, in 1550. Having taken his degree of M. A. he practised physic, and in 1558 was proctor of the university. About this time he obtained the prebend of Wells, which he resigned in 1559. In 1561 he was appointed queen's professor of physic, in 1563 proceeded M. D and afterwards became one of her majesty's phy- sicians in ordinary. He was thought skilful in his profession, and had considerable practice. He died in 1592, aged sixty-three; and was buried in the inner chapel of New College. His works are, 1 . A Discourse of three kinds of Pep- per in common use, 1588, 8vo. 2. Brief Treatise of the Preservation of the Eye-sight ; first printed at Oxford in 1616 and 1645, 8vo. 3. Directions for Health, natural and artificial ; with medicines for all diseases of the eyes, 1626, 4to. 4. Expli- catio Galeni de potu Convalescentium et Senum, &c. MS. formerly in Lord Aylesbury's library.

BALFROSH, a town of Persia, in the pro- vince of Mazendaran, consisting of one principal street, occupied almost wholly by a bazaar, and divided into seventeen wards. Here are eight caravansaries, three of which are devoted to the use of the Russians and Armenians. It is the second town of the province, distant twenty miles west of Fehrabad.

BALGA, a bailiwic, castle, and town of Bran- denberg, in East Prussia, opposite Pillau, and twenty-four miles south-west of Konigsberg. The celebrated fortress of Storeda is in this vicinity.

BALGAVIES, a lake of Scotland, in the parish of Aberlemno, in Angusshire, through which the Lunan runs. It furnishes much marl for manuring the adjacent grounds.

BALGILLO, a hill of Scotland, in the parish of Monyfeith in Angusshire, about half a mile

north of Broughty Castle ; on which there are itill to be seen remains of

those fortifications that were erected by the English, under Henry VIII. when they ravaged Dundee and most of the county during the regency of the earl of Arran, in 1548.

BALGONIE, a district in Fifeshire, the property of the Earl of Leven, and from which his eldest son takes his title. It produces ex- eellent coals, and is said to have been wrought for that mineral upwards of 300, some say 500, years ago.

BALGONIE CASTLE, one of the earl of Leven's seats, in the parish of Markinch, in Fife- shire, a fabric of great antiquity, supposed to have been built in the twelfth century.

BALGUY (John), an eminent divine of the church of England, was born in 1686, at Shef- field, and studied at Cambridge, where he took the degrees of A. B. and M. A. In 1708 he was appointed tutor to Joseph Banks, esq. grand- father to the celebrated Sir Joseph. In 1710 he was ordained a deacon, and in 1711 a priest, when Sir II. Liddel bestowed on him the dona- tive of Lamesly and Tanfield. In this small cure he composed a new sermon every week, 250 of which he afterwards burnt, that his son, Dr. Thomas Balguy, archdeacon of \Vinchester, luiu'ht exorcise his own genius, instead of trust- ing to his father's labors. In 1727 he was col- lated by bishop lloadly to a prebend in Salisbury, with the right of presenting to four livings ; of which lie unvc one to his son, and another to his brother-in-law, Air. Hobinson. lie published 1. Silvius's Examination of certain Doctrines tauuht by the Keverend Mr. Stebbing, in 1718; '2. Silvius's Letter to the Rev. Dr. Sherlock, in 171'.' ; both anouvmously, in vindication of Bp. Ilou'llv. Mr. Ste!>;;ing having replied to these works. Mr. Bulimy published, 3. Silvius's De- feu e of a dialogue Ivtween a Papist and a Pro- te-,ta:it. in answer to the Rev. Mr. Stebbing; with remarks on that author's manner of writing; 4. A Letter to a !)ei>t concerning the Beauty and Excellence of Moi:;l Virtue, and the support which it receives from t'.ie Christian Revelation, in 17'Jt]. lu this treatise he attacked Lord Shattesbury 's principles, with equal politeness and strength of reasoning. />. The Foundation of Moral Goodness, or an Enquiry into the Ori- ginal of our Ideas of Virtue; in two parts, in 17x!o. o. Divine Rectitude, or a brief Enquiry concerning the Moral Perfections of the Deity, &.C. 7. A second Letter to a Deist. 8. The Law of Truth. 9. Essay on Redemption : and, 10. A Volume of Sermons. He died iu 1748, aged

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Simda or Sumatran islands,

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of its inhabitants. The country is mountainous, rising into the interior ; the ravines and beds of rivers are deep, and the rivers rapid.

Bali is well cultivated and thickly planted with cocoa-nut and other fruit-trees : the uncul- tivated parts are crowned with deep forests.

Its productions consist chiefly of rice, maize, yams, and sweet potatoes ; rice yields from thirty to forty fold, and the maize often more than a hundred. The Balinese also grow co’ton on the dry land, of a superior kind ; some opium, nut- megs, dyeing drugs and tobacco, are also objects of culture. On the whole, the Balinese may be considered, we are told, as the most civilised islanders in this archipelago, not excepting even the Javanese. The women manufacture a con- siderable quantity of cotton cloth for exportation ; and are not so much in the field as those of Java : the men manufacture their own fire-arms. On the eastern coast at a place called Pejan a gold mine has been opened. They import chintz and other piece goods, iron, and china ware. Iron, in particular, is in great request. The religion is that of Budh, but not divided into castes ; and the priesthood, at least in general, is hereditary. The priests live secluded in separate societies, among the mountains, having lands assigned for the support of themselves and their temples. Justice is administered by distinct civil magis- trates, who very intelligently expound the law from written authorities, which is a decided proof that civilisation has had a powerful in- fluence even upon the body of the people.

Bali is governed by seven native and inde- pendent princes, each absolute in his own do- minion ; though their despotism appears to be of a much milder character than among the native governments of Java. A right of

private pro- perty in the soil is said to be established, and the claims of the government to be confined to a regular tax in kind on the rice. The language presents the singular distinction of one class of words to be used by the privileged orders, and another for the people in general. A sort of feudal service in war is maintained ; slavery, we regret to add, though unknown among them, is encouraged by the sale of their prisoners of war to other nations. They are also said to use poi- soned arrows in war.

Historically it seems only to be known that this island was visited by Sir Francis Drake in 1597, and that the conversion of the natives to Budhism took place about 1750 years since. The east peak of the island is in lat. 8►► 24′ long. 115►► 24′ E.

Their language is written in the same character as that of Java, and the Javan is said to be spoken at the courts of their princes, but it is considered as a foreign tongue. The Kawi, the learned language of all these islands, is well understood at Bali. The Balinese are represented as mild and inoffensive in their manners ; they readily associate with strangers, and are altogether di- vested of those bigoted prejudices of caste, nation and religion, with which the people of continen- tal Asia are generally imbued. On the other hand they are said to be the only people of this archipelago who possess either courage or tracta- bility for receiving the regular discipline of European troops. Their food consists princi-

pally of the flesh of hogs and buffaloes, with which ships touching here are readily and rea- sonably supplied. Nor is the use of spirituous liquors or opium unknown, both of which have been introduced by Europeans. Their houses, like those of Java, are built upon the ground, and not raised upon posts as amongst the Malays. They are generally clothed in cotton of their own manufacture, and of a good fabric. Until they are married, indeed, the females go nearly naked, then the bridegroom wraps a selendang or .cloth round the bosom of his chosen fair. There is said to be great general prudence and fidelity in their marriages. BALIO. See BAILO.

BALIOL, BALLIOL, or BAILLIOL (John), king of Scotland. On the death of queen Margaret, in her passage from Norway, being at the head of the English interest in Scotland, he claimed the vacant throne, by virtue of his descent from David earl of Huntingdon, brother to William the Lion, king of Scotland. Robert Bruce op- posed Baliol, but having submitted to the

arbi- tration of Edward I it was decided in favor of Baliol, who did homage to him for the kingdom on the 12th of November, 1292. Baliol, how- ever, did not long enjoy the crown, for having remonstrated against the power which Edward assumed over Scotland, he summoned him to his tribunal as a vassal. Irritated at this, Baliol concluded a treaty with France, on which a war with England immediately commenced ; and after the battle of Dunbar he surrendered his crown into the hands of the English monarch, who sent him and his son to London to be imprisoned in the Tower. The pope interceded for them, and they were liberated, and committed to his legate in 1297. Baliol retired to his estate in France, where he died in 1314.

BALIOL (Edward), the son of John Baliol, king of Scotland. Notwithstanding the manner in which his father was degraded, and obliged to give up his crown, he laid claim to the kingdom of Scotland, and, assisted by France, invaded and recovered it ; but it was soon again wrested from him ; and dying afterwards without issue the family became extinct.

BALIOL, or BALLIOL (Sir John de), founder of Baliol college, in Oxford, was son of Hugh Baliol, of Bernard's castle in the diocese of Durham, and eminent for his power and riches. He was appointed governor of Carlisle in 1248 ; and when Margaret, daughter of Henry III., was married to Alexander III., king of Scotland, the guardianship of the royal pair, and also of the kingdom, was committed to him and another lord ; but in about three years they were charged with abusing their trust, and the English mo- narch marched towards Scotland, on purpose to punish them. Baliol, however, pacified him by advancing a sum of money. During the wars between Henry III. and the barons he adhered to the king, on which account the barons seized hw lands. In 1263 he began the foundation and endowment of Baliol college, which was after- wards completed by his widow. He died in

1269.

BALISTES, in icthyology, a genus of fishes belonging to the order of amphibia nantes. The

character: are, the head is flat; eight teeth in each side, the two anterior ones are longest ; in the place of gills an aperture immediately above the pectoral fins ; the body flat ; the scales joined together by the skin, and the belly keeled. There are eight species of this genus : ??? viz. B. acu- leatus, with a triradiated back fin, and the spines of the tail lean upon each other. It is a native of India. 2. B. hispidus with the head-fin uni- radiated, and a round black spot in the tail-fin ; the body rough, and bristly towards

the tail; the spine or horn situated between the eyes ; the snout subulated, and instead of a belly-fin a jagged sharp spine. This is a native of Carolina. 3. B. monoceros, whose head-fin consists of but one ray, and the tail-rays carinated. It is called the unicorn-fish by Catesby. This fish has been accounted poisonous. They mostly frequent those seas, amongst the Bahama islands, wheie the corals are in great plenty. 4. B. papillosus, with a biradiated back-fin, and a papillous body. 5. B. ringens, with a triradiated back-fin; three folds in each side of the head, and the tail-fin forked. It is found at Ascension island. 6. B. tomentosus, whose head-fin is biradiated, and the body of it, towards the hind part, hairy. It is a. native of America. 7. B. verrucosus, has a tri- radiated back-fin, and the tail full of little warts. In the place of a belly-fin this species has a large, thick, warty ray, and twenty-five small reversed sharp spines at the side of the tail, disposed in four rows. It is a native of India. 8. B. ve- tula, or old wife, with a triradiated back-fin ; the belly-fin longitudinal and somewhat carinated; and the tail-fin forked. It is found at Ascension island.

The fishes of this genus are remarkable for their splendid colors. The species mentioned by Linnaeus and Gmelin are the following : ††† mono- ceros, scriptus /3, hispidus, tomentosus, papillo- sus, verrucosus, biaculeatus, aculeatus, vetula, maculatus, ringens, sinensis, assassi, capriscus, forcipatus, punctatus, Kleinii, curassavicus, and Americanus. Lacepede has described twenty- four species of balistes, in his work on fishes, and which he divides into four sections : ††† Le baliste mamelonne, le baliste pralin, le baliste verdatre, le baliste Mungo-Parck (Park) ; le ba- liste me'tallique, &c. are new or interesting spe- cies described by Lacepede.

BAL'ISTER, n. s. Lat. balista; Fr. balesto, a cross bow.

A spindle full of raw thread to make a false string for the king's balister or cross bow.

Blount't Tenures, p. 92.

BALIZE, a river in the peninsula of Yucatan, South America, which falls into the bay of Hon- duras, in lat. 14†† 59′ N. On its banks, and to the extent of 200 miles up the stream, the Eng- lish cut mahogany, and by the treaty of 1783 a right was guaranteed to British subjects of cut- ting and carrying away logwood, in the district between this river and the Rio Hondo. Beyond the scene of their operation the Balize is very imperfectly known.

BALIZE, a sea-port town of Yucatan, South America, is an establishment chiefly composed of English settlers, at the mouth of the above river The

houses are mostly built of the wood

of the neighbourhood, amongst which the grace- ful mahogany frequently furnishes pillars of eight or .en feet high, on which they stand, sur- rounded by piazzas. The cocoa tree and tamarind, largely interspersed among the buildings, which are also frequently thatched with leaves of the palmetto, give the whole place a very picturesque appearance. But the better sort of houses have of late been shingled. The neighbourhood is low and swampy.

BALK, n. s. v. a. 8c v. n. Dutch and Germ. balk ; Sax. and Wech bale, derived by Skinner from Ital. valicare, to pass over. A great beam such as is used in building ; a rafter over an out- house or barn ; a ridge of land left unploughed, between the furrows, or at the end of the field ; land over which the plough slips without turning it up ; figuratively any thing overpassed, untouch- ed. A disappointment; to frustrate, to elude, to omit, or refuse any thing ; to heap together ; to turn aside, to deal in cross purposes ; to speak differently from the intention. The two last meanings are arbitrary, and rest on the authority of Spenser only.

His owns hond than made he ladders three To climbcn by the ringes and the stalkes Unto the tubbes hanging in the balkrs. Chawr.

BALKAN (anciently called Hsemus), a lofty and ru;_ged chain of mountains, extending from Cape: Kmineh Burum, on the Black Sea, in European Turkey, to Cape San Stefano, in the Adriatic Sea, from 23►► to 27►► E. Ion. Near Sulu Derbent (I'orta Trajani), this mountain, culled, by the Turks, Kmmeh Slag, separates from Rhodope, and divides the valley of the Danube, which constitutes Bulgaria (inhabited mostly by wandering tribes), from Romania, or Ifumelia. A branch extends from north to south (Mount Athos) ; another runs through ancient Greece, and comprehends the mountains Olym- pus, (F.t.i, I'indus, Parnassus, Helicon. The highest peak, Orbelus, rises 90(30 feet above the surface of the sea. After the overthrow of the em- pire in Constantinople, only the Greeks of the plains and the sea-coast submitted to the Mussul- mans. The warriors, and those who had no landed property, tied into the mountains, into the arnr-Uo- lics, and have, in general, maintained a continual contest with the pachas of the- plain : some have paid a small tribute to the Turkish pacha,and some have become Mohammedans. The districts where the Catholic is the prevailing church, contain the wildest in habitants, and have

never been subjected to the emperors of Constantinople for any length of time. In 1828 a Itussian army crossed the Malkan, advanced nearly to the gates of Constan- tinople, and dictated a peace to the sultan.

BALK'EKS. In fishery. Men who stand on a rlitl', or high plncv on the shore, and give a sign to tin- men in the fishing boats, which way the pa►►age or shoal ol herrings is. ►►► Cowcll.

Tin- pilchard- ;i ro pursued by a bigger fish, called a plusher, v.ho lr;i;icih alxi\<; v.atcr, anil bewrayeth them to the hal'.i'r. Careiv's Sur, of Corn.

liAI.KH, a province of Turkistan, bounded

on tiie noiiii by t!it' Amu, on the east by Badak-

';'.,;') n, nn the south by the 1 1 indii-cush, and on

. < st by the u';_-S"its of Khuarezm, the ancient

i.:u:trui. Its present extent is about 250 miles

from east to west, and about 110 from north to south. The southern and eastern districts are comparatively cool for the climate, and the val- leys towards the Amu are well watered and fer- tile. The rivers from the Hindu-cush, we learn from Mr. Elphinstone, flow in a direction almost due north, into the Amu : the Koksha, or Ba- dakhshan, is the easternmost; next comes the Ak-sera'i ; and the last and most westerly, the Rehas, loses itself in the sands before it reaches Balkh. Balkh is divided into the districts of Maimench, Andekhud, Shilburkan, or Shibberg- han, Balkh Proper, Kulum, Hazeret Imam, Kundus Khost, Inderab, and Talikan. The three first border on the deserts, and are occupied by wandering hordes of Uzbegs and Turcomans.

BALKH, a city of Turkistan, the capital of the above province, stands in lat. 36►► 45′ N., long. 65►► 20′ E. ; it is now in ruins ; but is surrounded by 360 fertile villages. The districts Kulum and Hazeret Imam are barren, but those on the north side of the Hindu-cush, are productive and well peopled. The population of the whole province amounts probably to a million. Balkh was originally built by Kayumaras, and was the favorite residence of the Persian kings of the Caianian dynasty. It was once esteemed the chief Mussulman city in the north, and called Kubbatu'l islam, (the holy shrine of Islamism). Jengiz Khan took it in 1221, and the last of his family was driven out of it by Tamerlane. In the beginning of the sixteenth century the house of Ta'imur was expelled by the Uzbegs, who have ever since maintained a precarious dominion over these provinces. Kilij Alt Bey was the reigning prince when Mr. Elphinstone visited

Afghanistan, nominally acknowledging the autho- rity of the king of Cabul ; but in all the internal government entirely independent.

BALKY, a large decayed old town of Hm- dostan, in the province of Beeder, surrounded by a wall. It is distant fifteen miles W. N. W. of Beeder, and forty-five north-east of Kalbergah. Long. 77►► 29′ E., lat. 17►► 49′ N.

BALL, a small place in the county of Mayo. 107 miles from Dublin. Here is a celebrated holy well and a round tower ; also at Moat in the neighbourhood the ruins of an ancient abbey. This place is sometimes called Ballagh. The living is a prebend in the archdiocese of Tuam.

BALL (John), a puritan divine, born in Ox- fordshire in 1585. He had a curacy of ►►20 per annum in Staffordshire, and kept a school. He wrote strongly against such as separated from the church, as disapproving of the ceremonies and government, though he was far from being satis- fied with these in some respects himself. He died in 1640.

BALL'. Germ, and Dutch bollen-bol, to roll, turn, round ; any thing round, or roundly, as a cricket ball, a billiard ball, the eye ball, the globe, any thing globular.

' Bal, diminutively Belin, the sun, or Apollo, of the Celtse, was called by the ancient Gauls Abelllo. Whatever was round, and in particular the head, was called by the ancients either Bal, or jBe/,andlikewiseBt>/and Bui. Amongthe modern Persians, the head is called Pole : and the Flem-

ings do still c%ll the head Boile. IIoXoc is the head or poll ; and iroXtiv is to turn. BoXoc like- wise signifies a round ball, whence bowl, and bell, and ball, which the Welsh term bel. By the Scotch also the head is named bhel ; whence the English bill is derived, signifying the beak of a bird. Figuratively, the Phrygians and Thurians by j3a\X►►jv understood a king. Hence also, in the Syriac dialects, /3

Baxter.

For where as God hath shewed unto us certain tokes of his Godhed, in the heavenly baUes and cir- Jes above, and on the yearthe beneth, in the sea, and in all lyuing creatures on the yearthe, yet hath he wrought in none of thym more wonderfully than in manne. Udall. Acts, ch. xvii.

The palme play, where despoiled for the game, With dased eyes oft we by gleams of love Have missed the ball, and got sight of our dame, To bait her eyes which kept the leads above.

Earl of Surrey.

Be subject to no sight but mine j invisible To every eye-ball else. Shakspeare.

Balk to the stars, and thralls to fortune reign, Turn'd from themselves, infected with their cage, Where death is fear'd, and life is held with pain.

Sidney.

Those I have seen play at ball, grow extremely ear- nest who should have the ball. Id.

What, though in solemn silence, all Move round the dark terrestrial ball ! What fho' nor real voice nor sound Amid their radiant orbs be found ! In reason's ear they all rejoice, And utter forth a glorious voice j For ever singing, as they shine, ' The hand that made us is divine.'

Andrew Marvell.

% This, with the other sublime and beautiful hymns in the Spectator, were meanly with- held from their genuine author, and falsely ascribed to Addison and Tickell. Nor arms they wear, nor swords and bucklers wield, But whirl from leathern strings huge balls of lead.

Dryden, Thus nothing to her genius was deny'd ;

But, like a ball of fire, the further thrown, Still with a greater blaze she shone ;

And her bright soul broke out on ev'ry side. Id.

Like a ball of snow tumbling down a hill, he

gathered strength as he passed. Howell.

Ye gods, what justice rules the ball?

Freedom and arts together fall. Pope.

Tis but a ball bandied to and fro, and every man

carries a racket about him to strike it from himself

among the rest of the company. Swift.

BALL', n. s. Fr. bal, from balare, low Lat. from /3aXXi□□□□j/. To throw or cast about the legs and feet, from /3aXXw, to throw. An entertain- ment of dancing ; a fashionable amusement, either public or private ; in the former case it is

conducted and controlled by a master of the ceremonies ; and in the latter it is given by in- dividuals, and is select, because none are ad- mitted but persons specially invited. At public balls, or dancing assemblies, the expenses are defrayed by the company; at private entertain- ments of this description, the guests are gratui- tous participants.

He would make no extraordinary figure at a ball ; but I can assure the ladies, for their consolation, that he has written better verses on the sex than any man.

Swift.

Have you not been in pain even at a ball, because another has been taken out to dance before you.

Tatler, No. 253.

There's nothing in the world like etiquette j In kingly chambers, or imperial halls, As also at the race and county balls. Byron.

BALL, among Cornish miners, a tin mine.

BALL, in antiquity, a species of game frequent among the ancients. The Romans had four kinds of pilse, or bal\s ; the first called trigon or trigonalis, because the three gamesters were placed in a triangle : these caught and tossed the ball, taking great care not to let it fall to the ground. The second and third, called follis, made of leather, blown up like our foot- balls : the largest sort of these were struck with the arm, the smaller with the fist : the former seem to have been distinguished by the appellation, paganica, as being much used in country villages : the fourth was the harpast, a kind of small ball, so called be- cause the gamesters endeavoured to snatch it from each other. Galen has an entire treatise on the exercise of the lesser ball.

BALL, HERO'S, pila Heronis, a kind of artificial fountain, wherein the water is made to spout out of a hollow ball or globe ; so named from the inventor, Hero of Alexandria, who has left the description of it in his Spiritalia.

The BALL OF A DOG'S FOOT is the prominent part of the middle of the foot, called by Latin writers of the middle age, pelota.

BALL OF A PENDULUM, the weight at the bot- tom. In shorter pendulums, it is called the bob.

BALL PUFF, in botany, the English name of the lycoperdon. See LYCOPERDON.

BALL VEIN, in mineralogy, a name sometimes given by miners to a sort of iron ore, common in Suffolk, and wrought to a considerable advan- tage. It yields not any great quantity of metal, but what it has runs freely in the fire, and is usually found in loose masses, covered with one or more crusts. It contains some sparkling par- ticles ; and is usually of a circular form in the perfect masses, thickest in the middle, and gradu- ally thinner as it approaches the sides.

BALL, French, balle, in the military art, com- prehends all sorts of bullets for fire-arms, from the cannon to the pistol ; also a composition of divers ingredients, generally of the combustible kinds, serving to burn, give light, smoke, stench, or the like ; as fire-balls, light-balls, smoke-balls, stink-balls, land-balls, &c. Cannon-balls are made of iron, musket-balls, pistol-balls, &c. are of lead. The experiment has been tried of iron balls for pistols and fusees, but they are justly rejected, not only on account of their lightness,

which prevents them from flying straight, but because they are apt to furrow the barrel of the pistol, &.c.

Cannon-balls are distinguished by their respec- t:.ve calibres : thus

For a

pound ball the diameter is

6-68' 6-10 5-54 5-04 4-40 4-00 3-49 2-77 2-42 1.1-92

A new description of inflammable balls, ap- plicable for besieging a town, and peculiar for its small weight, by which means it may be thrown to a great distance, and takes fire on a very curious plan, has been invented by Captain Thomas Dundas, of the royal navy. It spreads a flame in three distinct openings, which is so strong that the fire extends a full yard in length from the ball itself, and is so powerful that any thinSHOT.

i>\tis, ANCHOR, are made in the same way as the liu'ht-balls, hereafter described, and filled with the same composition, only with this addition, that these are made with an iron bar two-thirds of the ball's diameter in length, and three or four inches square. One-half is fixed within the ball, and the other half remains without; the exterior end is made with a grapple hook. Au- dio-balls are very useful to set tire to wooden bridges, or any tiling made of wood, or even the riuuiii'.r of ships, &c. for the pile end being (he heaviest, flies foremost, and wherever it and sets all on fire about it. x. are two balls linked together ..'it or t.n inches lon'_c, and some e with a chain of three or four are used to destroy the palisa ridures, and clievaux-de-frizes of They are also very destructive to ' a ship.

HAMS l-'iiii-. AND J.IOIIT; the Greeks had arious kinds of tire-bills, or IIi;oo/3oXoi \iOoi ', ne Lied ."ailed, more particularly, anvraXia, or Krrn \n~nˆ made of wood, sometimes a foot, or ven a cubit hi,:.:; their head armed with spikes t iron, benea'ii whieh were hemp, pitch, and ing set on fire, they Also composed of

d powder two, saltpetre one and a half, :ur one, re-.ni one, turpentine two and a i parts. Sometimes they are made of an iron ell. sometimes a stone, tilled and covered with nous coat< of the above composition, till it nulumerates to a proper si/.e, the last coat in- in' Drained powder. Hut the best method inakm ;[illegible] them is to take thick brown paper, ve a >hell the si/e of the mortar, and fill it tii a C(,mpo

dp

&,c. the composition must be mealed powder, ten, saltpetre two, sulphur four, and resin one ; or rather mealed powder forty-eight, saltpetre thirty-two, sulphur sixteen, resin four, steel or iron filings two, fir tree saw-dust boiled in saltpetre ley two, birch-wood charcoal one, well rammed into a shell for that purpose, having various holes filled with small barrels, loaded with musket- balls ; and lastly, the whole immerged in melted pitch, resin, and turpentine oil.

BALLS, POISONED; the Indian and African nations have always been ingenious at poisoning several sorts of warlike stores and instruments Their composition is generally mealed powder four, pitch six, resin three, sulphur five, assa- fcetida eight, extract of animal poison twelve, other poisonous substances twelve, made into balls as above directed. At the commencement of the French revolution, poisoned balls were exhibited to the people, pretended to have been fired by the Austrians, particularly at the siege of Lisle. Major James says he has seen some of this sort. They contained glass, small pieces of iron, &c. and were said to be concocted together by means of a greasy composition, which was impregnated with poisonous

matter. In 1792 they were deposited in the archives of Paris.

BALLS, RED-HOT, are heated red-hot upon a large coal fire in a square hole made in the ground, six feet every way, and four or five feet deep. Some make the fire under an iron grate, on which the shell or ball is laid ; but the best method is to put the .ball into the middle of a clear burning fire, and when red-hot, all the fiery particles must be swept off. Whatever machine you use to throw the red-hot ball out of, it must be elevated according to the distance you intend it shall range, and the charge of powder must be put into a flannel cartridge, and a good wad upon that ; then a piece of wood of the exact diameter of the piece, and about three inches and a half thick, to prevent the ball from setting fire to the powder ; then place the ball on the edge of the mortar, &c. with an instrument for that purpose, and let it roll of itself against the wood, and instantly fire it off. Should there be a ditch or parallel before such a battery, with soldiers, the wood must not be used, as the blast of powder will break it to pieces, and its own elasticity prevent it from flying far ; it would in that case either kill or wound your own people. On this account the wad must be double, the second being damp. If the gun lies at a de- pression, there must be a wad over the shot, which may be rammed home.

BALLS, SMOKE, are prepared similarly to other fire-balls, and they contain five to one of pitch, resin, and saw-dust. This composition is put into shells made for that purpose, having four holes to let out the smoke. Smoke-balls are thrown out of mortars, and continue to smoke from twenty-five to thirty minutes.

BALLS, STANG, are generally termed bar-shot, and by some called balls of two-heads ; they are sometimes made of two half-balls, joined together by a bar of iron from eight to fourteen inches long ; they are likewise made of two en- tire balls ; they answer the same purpose as the before-mentioned.

BALLS, STINK, are prepared by a composition of mealed powder, resin, saltpetre, pitch, sul- phur, rasped horses and asses hoofs, burnt in the fire, assa-foetida, seraphim gum or ferula, and bug or stinking herbs, made up into balls, as mentioned in light-balls, agreeable to the size of the mortar out of which they are to be thrown.

BALLS, in electricity, are two pieces of cork, or pith of elder, nicely turned in a lathe to the size of a small pea, and suspended by fine linen threads ; intended as electrometers, and of excel- lent use to discover small degrees

of electricity, to observe the changes of it from positive to negative, and vice versa; and to estimate the force of a shock before the discharge, so that the operator should always be able to tell very nearly before the discharge, by knowing how high he has charged his jars, what the explosion will be.

BALLS, in heraldry. See BALLETS.

BALLS, CRYSTALLINE. There are two sorts of fossil bodies mentioned in authors by this name, and distinguished into the echinated, and con- cave. The first are roundish nodules of stony matter, covered over with points of crystal ; and the other flints, and other stones, having cavities in their middles, which are lined, or crusted over with these crystals.

BALLS, HORSE, among farriers. Horses have a very nice taste ; :t is therefore proper to give the most disagreeable drugs, in the form of balls, and to make drenches of the more palatable. Balls should be of an oval shape, not exceeding the size of a pullet's egg ; and should be dipped in sweet oil to make them slip down the easier. Some horses have a strait gullet, which makes them very averse to a ball being thrust down their throats; such horses had better have drenches given them, or their medicines may be mixed with bran, or in their mashes. See FARRIERY, Index,

BALLS, MERCURIAL, in pharmacy, are an amalgam of mercury and tin, sufficiently solid to be moulded, and to preserve a given form. The method of making them is by adding mer- cury to melted tin, and pouring the fluid mass into a round hollow mould'. These balls are sometimes employed to purify water, in which they are boiled.

BALLS OF FIRE, in meteorology, a kind of luminous bodies, commonly appearing at a great height above the earth, with a splendor surpass- ing that of the moon; and even occasionally equalling her apparent size. They generally proceed with great velocity in this hemisphere, from north to south, frequently breaking into several smaller ones, sometimes vanishing with a report, and sometimes not. These luminous appearances no doubt constitute one branch of the ancient prodigies, or blazing stars. They sometimes resemble comets, in being attended with a train, but frequently they appear with a round and well defined disk. The first of which we have any accurate account, was observed by Dr. Ilalley and others at different places, in 1719. From the slight observations they could take of its course among the stars, its perpendicular height was computed at about seventy miles from the surface of the earth. The height of others has also been computed, and found to be various;

though in general it is supposed to be beyond the limits assigned to our

atmosphere, or where it loses its refractive power. The most remarkable on record appeared on the 1 8th of August 1 783, about nine o'clock in the evening. It was seen to the northward of Shetland, and took a south- erly direction for an immense space, being obser- ved as far as the southern provinces of France and Rome. During its course it appears fre- quently to have changed its shape, sometimes appearing in the form of one ball, sometimes two or more; sometimes with a train, sometimes without one. It passed over Edinburgh nearly in the zenith, and had then the appearance of a well defined, round body, extremely luminous, and of a greenish color ; the light which it diffused on the ground giving likewise a greenish cast to objects. After passing the zenith, it was attended by a train of considerable length, which continually augmenting, at last obliterated the head entirely, so that it looked like a wedge, flying with the obtuse end foremost. The motion was not apparently swift, by reason of its great height ; though in reality it must have moved with great rapidity, on account of the vast space it travelled over in a short time. In other places its appear- ance was very different. At Greenwich, we are told, that two bright balls parallel to each other led the way, the diameter of which appeared to be about two feet ; and were followed by an ex- pulsion of eight others, not elliptical, seeming gradually to mutilate, for the last was small. Between each two balls a luminous serrated body extended, and at the last a blaze issued which terminated in a point. Minute particles dilated from the whole. The balls were tinted first by a pure bright light, then followed by a delicate yellow, mixed with azure, red, green, &c. which, with a coalition of bolder tints, and a reflection from the other balls, gave the most beautiful rotundity and variation of colors that the human eye could be charmed with. The sudden illumi- nation of the atmosphere, and the form and singular transition of this bright luminary, tend- ed much to make it awful : nevertheless the amazing vivid appearance of the different balls, and other rich connective parts not very easy to delineate, gave an effect equal to the rainbow in the zenith of its glory. Dr. Blagden, in a paper on this subject in the seventy-fourth volume of the Philosophical Transactions, has not only given a particular account of this and other meteors of the kind, but added several conjectures relating to the probable causes of them. The opinion which he finally adopts, as the most probable, is, that these fire-balls are great bodies of electric matter moving from one part of the heavens, where to our conception it is superabundant, to another where it is deficient.

Other fireballs have appeared much smaller and nearer the surface of the earth, and some- times rolling or falling upon it, and exploding with violence; as is the case with those which appear in the time of thunder, and frequently produce mischievous effects. One of these is mentioned by some authors as falling in a serene evening in the island of Jamaica ; exploding as soon as it touched the surface of the ground, and making a considerable

hole in it. Another is

mentioned by Dr. Priestley, as rolling along the surface of the sea, then rising and striking the top-mast of a man of war, exploding and damaging the ship. In like manner we hear of an electrified cloud at Java, whence, without any thunder storm, there issued a vast number of fireballs which did incredible mischief. All these point out the true origin of balls of this kind, viz. an extensive accumulation of electricity bursting from one part of the atmosphere to another.

This is confirmed by an experiment related at the end of Dr. Priestley's fifth volume on air. lie states that a gentleman having charged with a very powerful machine, a jar, which had- the wire supporting the nob of a considerable length, and passed through a glass tube, a globe of fire was seen to issue out of it. This globe gradually ascended up the glass tube till it came to the top of the knob, where it settled, turning swiftly on its axis and appearing like a red-hot iron ball of three quarters of an inch diameter. On con- tinuing to turn the machine, it gradually descended into the jar, which it had no sooner done, than there ensued a most violent explosion and flash, the jar being discharged and broken at the same time. We may yet gather from these experi- ments, that a fireball will be the consequence of a very violent electrification of any substance, provided at the same time that the air be in a very non-conducting state, so that the electricity may not evaporate into it as fast as it is collected ; for tliis would produce only lucid streams and flashes, as in the common experiments with the Ley den phial, and it is probably an inattention to this circumstance which has hitherto prevented the repetition of the experiment above mentioned. The case is the same in thunder-storms, where an excessive accumulation of electric matter always produces fireballs, the most mischievous kind of lightning. A philosopher of the last century, it is well known, met his death from a ball of this description in attempting to draw the electric fluid from the clouds.

BALLS OF HAIR and other substances, in natural history, covered over with a smooth, shining coat, or shell, are mentioned by zoolo- gists, as sometimes found in the stomachs of several animals ; they occur most frequently in those quadrupeds which lick the surface of their bodies, in which case they are composed of the hair that has been removed by the tongue ; the hair, partly by the operation of licking, and still more by the motion of the stomach, becomes imx.'d and interwoven in a such a manner, that it resemble.-; the texture of a hat, and when moulded into a round figure, receives a smooth, shining coat, or ralculous incrustation.

These are the sort of balls usually met with in the cow, sheep, and coat kind, especially the chamois. Every indiueMible substance that is swallowed is liable, however, to give origin to these balls, or to form a nucleus for calculous concretion ; hence we meet with them composed of the reedy fibres of M-jvtibles, husks of seeds, feathers, and different animal ;.iiil vegetable exuviae. \ hen such sub- .t.inee, as stones of fruit, nut□□, or inorganic substance-;, as pebbles, coin1;, &c. are long de- lani' '□□□). air I have been rovi :□□□ < □□□"! v.ith a deep in-

crustation, they constitute the bezoardic stones See BEZOAR and / EGAGROPILA.

According to some writers the human subject is liable to the formation of balls in the intes- tines, in consequence of indigestible matters not being regularly expelled. Cases have been re- lated of death ensuing from accumulations of gooseberry seeds, which had been rolled into a solid ball in the stomach ; and Sir Hans Sloane gives the history of a ball found in the intestines of a man, much afflicted with the colic, six inches in circumference, of a spongy substance, and which, when viewed with a microscope, appeared made up of small transparent hairs or fibres, wrought together like the tophus bovinus ; in the middle was a common plumb stoneˆ which made, as it were, the core or nucleus upon which the fibrous matter had collected, stratum super stra- tum. Phil. Trans. No. 309, p. 2387. Sloane, in Phil. Trans. No. 282, p. 1282.

BALLS OF SILK WORMS, or BALLS OF SPIDERS, are little cases or cones of silk, wherein those insects deposit their eggs. Spiders are extremely tender in their balls, which they carry about with them, adhering to the papillae about their anus Grew mentions balls or bags of a species of silk-worms in Virginia, as big as hen's eggs, and containing each four aurelias.

BALLS, VEGETABLE, in botany a particular plant of a deep green color, of an irregular sphe- rical shape, hollow within, and of different sizes, from an inch and a half to three inches in di- ameter. It probably belongs to the conservs genus, in the class of mosses ; though Dr. Raj has ranged a similar plant under the genus of alcyonium.

BAL'LAD, v.kn.ˆt Fr. belade, Ital. ballata. BAL'LADER, j A song. It once signi-

BAL'LADRY, I fied a solemn and sacred

BAL'LATED, [song : the Song of Solo-

BAL'LATRY, I mon was called the bal-

BAL'LETT. J let of ballets. It is now

generally employed to designate those popular compositions which are sung in simple melodies by all classes of the community; and which, while true to nature, illustrate the manners, cus- toms, and opinions, of the age and country to which they belong. In composition, this word is used as iaZ/orf-monger, ballad-singer, &c.

At certame timis gan repaire Smale birdis doune from the aire, And on the shipis bounds aboutc, Ysate and song -with voyce full out, Ballades and layes right Joyously. Chauacr

And also I have ofte assaide Roundel, baladet, and vereloie For her, on whom myn hert laic, To make. Gowet,

Alas ! I make but repetition, Of what is ordinary and ryalto talk, And balleted, and would be plaid o' the stage, But that vice many times finds such loved friends, That preachers are chann'd silent. Wcbttar

And otherwhyles with amourous delights. And pleasing toys he would her entertaine ; Now singing sweetly to surprize her sprights ; Now making lays of love, and lover's paine, Uransles, ballads, virelayes, and verses vaine ; Oft purposes, oft riddles he devys'd, And thousands like which flowed m his braine.

BALLADS.

425

With whiche he led her fancy, and entys'd

To take to his new love, and leave her old despys'd.

Speruer'i Faerie Queene.

Is there not a ballad, boy, of the king and the beggar?

Shakspeare.

The world was very guilty of such ballads some three ages since. Id.

I had rather be a kitten, and cry mew, Than one of these same metre ballad-mongers. Id. The ballatry and the gamut of every municipal fiddle.

Milton.

More solid things do not shew the complexion of the times so well as

ballads and libels. Selden.

*No sooner *gan he raise his tuneful song, But lads and lasses round about him throng. Not 6aHad-singer, plac'd above the crowd, Sings with ►► note so shrilling, sweet, and loud. Gay.*

Thither no more the peasant shall repair, To sweet oblivion of his daily care ; No more the farmer's news, the barber's tale. No more the woodman's ballad shall prevail.

Goldsmith.

BALLADS are ordinarily amongst the first efforts of a semi-barbarous people in poetry; and a collection of the best and most popular compositions of this kind will throw great light on the manners of a people in any stage of their civilisation. We can only attempt a slight sketch of the history of this kind of poetry in our own country. ' That our ancestors,' says Mr. Turner, (Anglo-Saxons, p. 287, c. ii.) ' had popular songs on the actions of their great or favorite characters, or on such other subjects as interested the vul- gar mind, is proved by many instances, which may be traced in the ancient writers. Alfred says, in his manual, that no one had ever ap- peared before Aldhelm, so competent in English poetry ; none had been able to compose so much, or to sing and recite it so appositely. The king mentions a popular ballad" of Aldhelm's, which was in his time, (that is, nearly two centuries afterwards) sung in the streets. Malmsbury adds, that Aldhelm, anxious to instruct his countrymen, then semi-barbarous, and inattentive to their religious duties, took his station on the public bridge, as if a singer by profession, and, by mix- ing sacred with lighter topics, won their atten- tion, and ameliorated their minds. Bede mentions that in a festive company the harp was sent round, that those might sing who could. It was a book of Saxon poems, s%ys the above historian, which first allured Alfred to learn to read ; and the fact that he had his children taught to read the Saxon poems, and that he himself, visited the Danish camp as a harper, which, in the reign of his grandson, Anlaf imitated, prove the existence of popular songs which instructed both the child and the rude warrior.

The connexion of these compositions with the foundations of our history is clear. When Malmsbury, after narrating the reign of Athel- stan, proceeds to describe his origin from Ed- ward's amour with a shepherd's daughter, he says, The following facts I have taken rather from the songs (cantilenio) worn out by the course of time, than from books composed for the instruction of posterity.

A curious fragment of a ballad, composed by Canute the Great, says Mr.

Turner, has survived

*to us. As this prince was sailing by the abbey, in the isle of Ely, he heard the monks chanting their psalms and anthems, and was so struck with the interesting melody, that he composed a little Saxon ballad on the occasion, which began thus : ***

00 ens punˆen $e munechej- binnen 61y, Tha LrnuT chinj nevfceri by Ropefc Unitey, noep. $e lanb Ani> herie pe fcep munechej-

*Merry sang the mji'ss ***!**. Ely When Canute the king was sailing by j Row, ye knights, near the land, And let us hear those monks' song.*

In Domesday-book, the Joculator Regis, who was evidently a minstrel, is mentioned as having lands assigned for his maintenance in Gloucester-shire, Du Cange, iii. 1543 ; and in the battle of Hastings, Tarblessen or Taillefer, an esquire in the conqueror's army, obtained permission, as a sort of forlorn hope, to lead the van, and threw him- self upon the English spears, singing the popular ballad, Chanson de Roland, Id. iv. 769. Sub-sequent to the conquest we meet with many genuine English songs : Horn Child : the Squire of lowe Degree : and a Lytele geste of Robin Hoode, have been pointed out as tales without foreign admixture. Richard Ceeur de Lion was at once the hero of chivalry and the patron of song : his well known deliverance from captivity in Germany is connected by history with our subject ; and the celebrated Scotch novelist has well availed himself of all the romantic truths of the story. Edward IV. incorporated the Minstrels by charter, and they were protected by a corporation under the government of a marshal and two wardens. This charter was renewed by Henry VIII. But by statute 39 Eliz. the profession was visited with the last dis- grace, and minstrels were included and made punishable among ' rogues, vagabonds, and sturdy

Our older ballads are all in the northern dia- lect : but singularly enough, on the accession of the Stuarts, we find the whole spirit of these com-positions evaporate ; arid English minstrelsy be- came extinct. See Percy's Reliques of English Poetry : also Dr. Burney's History of Music : Sir Walter Scott's Minstrelsy of the Scottish Border; and Warton's History.

BALLADUK, a town in the desert of Syria 140 miles E.N. E. from Damascus.

*BALLAGHAN POINT, at the south-west en- trance of Carlingford Bay, a cape on the east coast of Ireland. Eleven miles S. E. of Newry. Long. 6** 4′ W., lat. 53** 58′ N.*

BALLAGHAN, or BALLAGHY, a town of Ireland, in the county of Sligo,

and province of Connaught. Twenty miles south of Sligo, and 1 05 from Dublin. Long. 9►► 50′ W., lat. 53►► 48 N.*

BALLAGHNEED, a village of Ireland, in Tyrone, with a good inn, seventy-eight miles from Dublin.

BALLAGHY, three towns in Ireland, viz. 1 in Londonderry, ninety-two miles from Dublin. 2. in the county of Mayo, ninety-seven miles from Dublin. And 3. in Sligo. See BAL- LAGHAN.

BALLAMONO, a village in the Isle of Man, near Castletown.

BALLAN, a town of France, in the depart- ment of the Sarte, seated on the Orne. Long. 20'E.,lat. 48►► 10′ N.

BAL1ANDEN. See BALLENDEN.

BALLANI, a species of shell-fish, about a finger's length, which abound in the harbour of Ancona, and lodge among the stones. They are much valued at Rome, whither great quantities are sent.

BALLANTRAE, a small post-town and pa- rish of Scotland, in the county of Ayr. The village stands at the mouth of the Stinchar. It carries on a salmon-fishing and some cotton manufactures. Distant twenty-eight miles S. S. W. of Ayr.

BALLAPATTY, a town of the Carnatic, in Hindostan, twelve miles west of Vencatigherry.

BALLAPILLY, a town of Hindostan, in the ceded Balaghaut district of Commim. Long. 78►► 38′ E., lat. 15►► N.

BAL'LARAG, v. a. A ludicrous and low word, purporting to overpower by word or act ; to bully ; to threaten. It is still used in the north, and pronounced bullyrag.

Warton.

BALLARD (George), one of those occa- sional geniuses in lower life which shoot up without culture, was born at Campden, in Glou- cestershire. Being of a weakly constitution, his parents put him to a habit-maker; and in this situation he mastered the Saxon language. The time he employed in learning it was stolen from sleep, after the labor of the day was over. Lord

Chedworth, and the gentlemen of his hunt, who used to spend about a month of the season at Campden, heard of his fame, and generously of- fered him an annuity of ►►100, but he modestly told them that ►►'GO was fully sufficient to satisfy both his wants and his wishes. Upon this he retired to Oxford, for the benefit of the Bodleian library; and Dr. Jenner, president, made him one of the eiuht clerks of Magdalen College. He was afterwards one of the University bea- dles, but died in June, 1755, rather young; which is supposed to have been owing to too in- tense application. He left lartre collections be- hind him, but published only Memoirs of Bri- tish Ladies, who have been celebrated for their N\ ntings or Skill in the learned Languages, Arts, and Sciences, 1752. 4to. He drew up an account of Ca.mpden church, which was read at the Society of Antiquaries, November 21, 1771.

BAIJ.AUH, /'AIT., a cape of Newfoundland. Long. 523 '2o' \ ., lat. 4GJ 55' N'.

BAI.I.ARD'S-POINT, a cape on the west coast of Ireland, in the county of Clare. Longitude {I- li'2' W., lat. 52 42' .

IJALLARK, in middle-age authors, to dance.

HA1.LA1U N A, in ornithology, a name under which Olina describes the white-wagtail, mota- cilla alba.

HAJ.I.AS, a tradiii~ place on the left bank of the >ilc, I ppcr lv_:ypt, where a great quantity

of earthen pots of a peculiar kind are manufac- tured. Ten miles south of Dendera.

BALLASSA-GYARMATH, a considerable market-town and castle of Hungary, in the county of Neograd. It suffered dreadfully by a conflagration in 1800; when no less than 568 houses were destroyed, and only fifty, with the town-house, left standing.

BALLASEDERE, a town of Ireland, in the county of Sligo, 100 miles from Dublin, near a water-fall.

BAL'LAST, v. & n. \ Ang.-Sax. hlaestan, BAL'LASTURY. 5 be-hlaestan, to lade,

load, or fraught a ship. Past participle hlaested, be-hlaested, loaded or laden. Dut. and Ger ballast. It is applied to that lading or loading which is used to steady a vessel in the water, or to steady any thing in its motion or action. See NAVIGATION, for the nautical illustration of the term.

‘Mongst friends ?

If brothers :□□□ -Would it had been so, that they Had been my father’s sons ! then had my prize Been less ; and so more equal ballasting To thee, Posthumus. Shalupeare.

There must be middle ‘counsellors to keep things steady ; for, without that ballast, the ship will roll too much. Bacon.

While thus to ballast love I thought, And so more steadily t’ have gone, I saw I had love’s pinnace overfranght. Donne. Now you have given me virtue for my guide. And with true honour ballasted my pride.

Dry den

Why should he sink where nothing seem’d to preis ?

His lading ,!ttle, and his ballast less. Swift

Those men have not ballast enough of humility and

fear. Hammond’s Sermons.

BALLAST, in navigation. The principal ob- ject is to make a vessel sink to a proper depth in the water, that she may steadily carry a suffi- cient quantity of sail. There is often great dif- ference in the proportion of ballast required to prepare ships of equal burthen for a voyage ; the quantity being more or less according to the sharpness or flatness of the ship’s bottom, which seamen call the floor.

The properly ballasting of a ship is amongst the most important duties of the skilful mariner ; for, although it is known that ships in general will not carry a sufficient quantity of sail, till they are laden so deep that the surface of the water will nearly glance on the extreme breadth amidships, yet there is more than this general knowledge required; since, if she has a great weight of heavy ballast, as lead, iron, &c. in the bottom, it will place the centre of gravity too low in the hold ; and, although this will enable her to carry a great sail, she will nevertheless sail heavily, and run, in rolling, the risk of being dismasted.

The ballast, therefore, should be so disposed that she may be duly poised, and maintain a proper equilibrium on the water, so as neither to be too stiff nor too crank : in the first, al- though the ship may be fitted to carry a great sail, her velocity will not be proportionably in- creased ; whilst her masts are endanged by hei sudden jerks and laboring : and, in the last, she

will be incapable of carrying sail without the risk of upsetting. The former is occasioned by disposing too great a quantity of heavy ballast in the bottom, which brings the centre of gravity near the keel; and, that being the centre about which the vibrations are made, the lower it is placed, the more violent will be the motion of rolling. Crankness, on the other hand, is occasioned by disposing the ship's lading so as to raise the centre of gravity too high, which endan- gers the mast in carrying sail when it blows hard : for when the masts lose their perpendi- cular, they strain in the nature of a lever on the shrouds, which increases as the sine of their obliquity.

As a general principle, it may, therefore, be observed, that ballast should be placed round and near the centre of gravity of the ship, because it will prevent the pitching being so violent as it

would be if it were carried much fore or aft of that point. When a vessel is passing over a wave, she will be at one time supported below the centre of gravity; and immediately after, her head will incline downwards, or, as it is termed, she will pitch ; when it is evident, that the nearer the weight is to the point over which the vessel is supported, the less violent will the motion be. But this rule stands in need of fre- quent modifications : for which reason, a large quantity of shifting ballast is allowed in the Royal navy. Indeed, throughout the whole practice, as we are finding a remedy for one fault, we are in danger of running into another; and much of the final distribution of ballast depends upon knowing well the peculiarities of the vessel, and observing experimentally, how different winds and calms affect her.

The following was, until lately, the Ballast allowed to our Men of T/Var :

1

i Guns.

Tonnage.

Iron Tons.

Shingle Tons.

Guns.

Tonnage.

Iron Tons.

Shingle Tons.

110

2290

180

370

36

870

65

160

100

2090

180

370

32

700

65

140

98

2110

160

350

28

600

60

100

90

1870

160

350

24

500

50

80

80

1620

140

300

22

450

50

70

74

1700

80

270

20

400

50

60

64 50 44

1370 1100 900

70 65 65

260 170 160

Sloop. Brig.

Cutter.

300 160

50 30 20

40 15

Seldom

38

930

70

170

Sloop,

15

any.

The general practice then was, first, to stow the iron ballast fore and aft, from bulkhead to bulkhead, in the main hold, next to fir cants, nailed on the limber strakes, on each side of the kelson, five or more inches clear of the limber boards ; and winged up three or four piga above the floor-heads in the midships, or bearing part of the ship, with two tiers of pigs in the wake of the main hatchway, &c. The shingle ballast was spread and levelled over the iron ballast, on which was stowed the lower tier of water-casks, with the bungs up, and the bilge clear of the sides. The midship tiers were first laid, and the casks sunk about one quarter of their dia- meter into the shingle ; the sides being filled in with small casks, as half-hogsheads, &c.

*Since the introduction of iron tanks, shingle ballast has been altogether laid aside, and iron ballast only employed, the present proportion of which, according to the practice of the navy, is as follows : ***

Table of the proportion of Iron Ballast at present allowed in t/te navy, in proportion to their ton- nage.

*To all three-deckers, **th of computed ton- nage.*

To two-deckers and oak frigates -ˆth ditto. To fir frigates ˆths of ditto. To 22-gun ships and sloops, Jth ditto. To brigs, sloops, &c. i,th ditto.

Smaller vessels are not submitted to these rules ; but are ballasted as circumstances may require, according to the judgment of their offi- cers. In ships of the line, sixteen ton of the above, called shingle ballast, is moveable as circumstances require, and half that quantity to frigates.

Additional ballast, to the amount of one-third, and even one-half, of the original quantity is sometimes, however, demanded : and the table only exhibits the official and ordinary allowance.

In the merchant-service, the stowage consists, besides the other ballast, of casks, cases, bales, boxes, &c. all carefully wedged off from the bottom, sides, pump-well, &c. and great atten- tion is paid that the most weighty

materials are stowed nearest to the centre of gravity, or bear- ing of the ship ; and higher or lower in the hold agreeably to the form of the vessel. A full low- built vessel requires them to be stowed high up, that the centre of gravity may be raised, to keep her from rolling away her masts, and from being too stiff and laborsome ; as, on the contrary, a narrow high-built vessel requires the most weighty materials to be stowed low down, near- est the kelson, that the centre of gravity may be kept low, to enable her to carry more sail. To yachts and other small vessels, both in the navy and merchant-service, the ballast is sometimes lead, worked between the timbers.

By the 19 Geo. II. it is enacted, that if any

master or owner, or any person acting as master of any ship or other vessel whatsoever, shall cast, throw out, or unlade, or if there shall be thrown out, &c. of any vessel, being within any haven, port, road, channel, or navigable river within England, any ballast, rubbish, gravel, earth, stone, wreck, or filth, but only upon the land, where the tide and water never flows or runs ; any one or more justices for the county or place where, or near which the offence shall be com- mitted, upon the information thereof, shall sum- mon or issue his warrant for bringing the master or owner of the vessel, or other person acting as such, before him; and, upon appearance or de- fault, shall proceed to examine the matter, and upon proof made thereof, either by confession of the party, or on view of the justice, or upon the oath of one or more creditable witnesses, he shall convict the said master, &c. and fine him at his discretion for every such offence, any sum not exceeding ––5, nor under 50s. &c.; and for want of sufficient distress, the justice is to commit the master, or person acting as such, and convicted as aforesaid, to the common jail or house of cor- rection, for the space of two months, or until payment of the penalties.

Besides the above general act, there are the 6 C.eo. II. c. 29, and the 32 Geo. II. which re- gulate the ballasting of merchant-vessels in the river Thames, placing it under the direction of the corporation of the Trinity-house.

To trench the ballast, denotes, to divide the ballast into two several parts or more, in the ship's hold, commonly done to find a leak in the bottom of a ship, or to undock her.

Shooting of the ballast is when it runs over from the one side to the other. Hence, it is that corn, and all kinds of grain, is dangerous lading, for that is apt to shoot. To prevent which, they make policies ; that is, bulkheads of boards, to secure it from moving about.

BALLATAIl CRAG, a roeky hill in Aber- deenshire, whose tremendous impending rocks seem to threaten the astonished traveller with in- stant destruction.

BALLATIONES, in middle age writers, dan- cings.

BALLATOOXS, large heavy luggage-boats, used for carrying wood by the river from Astra- khan and the Caspian Sea from Moscow. They will carry from 100 to '200 tons, and have from 100 to 120 men employed to row and tow them along.

BALLANTYNR (John), was a native of Kelso, in Roxburgshiie; and at an early age en- tered into business as a printer. lie, with his brother, distinguished himself by the great im- provement of the art, evinced in the extensive publications which have of late years issued from their press. He was at one time a proprietor of the Kelso Mail; and subsequently ushered into llie world the publications known as the Wa- verly novels. He was possessed of sufficient literary talents to be thought at one time to be iheir author. He died in 1821.

HAIJ,F.HI11)A\, the original name of the parish of Ardchattan, Argyleshire.

UALLKNA, I'TNTA DE i \, a point of land on I he eaˆi coast of the island of Manraritla:

another in Chili, on the coast of the province of Quillota : another in the kingdom of Quito, and on the shore of the South Sea.

BALLENA, a river of Florida, which fells into the Atlantic.

BALLENDEN (Sir John), a Scottish poet, in the reign of James V., descended from an an- cient family in that kingdom. His father, Mr. Thomas Ballenden, of Auchinoul, was director to the chancery in 1540, and clerk register in 1541. From one of his poems we learn, that in his youth he had some employment at the court to king James V. and that he was in great favor with that prince. Having taken orders, and been created D.D. at the Sorbonne, he was made canon of Ross, archdeacon of Moray, and clerk register; but was afterwards deprived of that employment by the factions of the times. How- ever, in the reign of Mary, he recovered that office, and was one of the lords of session. Be- ing a zealous papist, he, in

conjunction with Dr. Laing, was extremely assiduous in retarding the progress of the reformation ; till at last, finding the opposition too powerful, he quitted Scot land, and went to Rome, where he died in 1550: He is generally esteemed one of the best Scot- tish poets of that age. His works are, 1. The History and Chronicles of Scotland of Hector Boies (Boethius), translated by Mr. John Bal- lenden, Edinb. 1536. 2. Cosmography to the History of Scotland, with a Poetical Proem. 3. A Description of Albany. 4. Translation of Boethius 's Description of Scotland. 5. Epistles to king James V. ??? Bale says he had seen these letters. 6. Several poems in Carmichael's Col- lection. 7. Virtue and Vyce, a poem addressed to king James V.

BALLENGARY, a town of Ireland, in the county of Kerry, on the mouth of the Shannon, near Ardfert.

BALLENSTEDT, an ancient county and castle in the principality of Anhalt-Bernburg, Germany, on the confines of Quedlingburg. It is the ordinary residence of the prince of Anhalt, and contains a riding-house, a theatre, and beautiful gardens. At the foot of a hill on the rivulet of Getel. Population 2500. Eighteen miles south-west of Bernburg, twenty-seven north-east of Nordhausen. Long. 11?? 25′ E., lat. 51?? 45′ N.

BALLERINI (Peter and Jerome), two bro- thers, Italian priests, natives of Verona. Peter was born in 1698, and Jerome in 1702. They wrote in conjunction, several learned and in- genious poems, and published various editions of ecclesiastical authors.

BALLEROY, a town and castle of France, in Normandy, with 1180 inhabitants, and several iron mines, and forges. I Islands on the Dromme, and is the head of a canton, in the department of Calvados, arrondissement of Bayeux. Seven miles S.S.W. of Bayeux, eighteen south of Caen.

BALLERUS, in ichthyology, a species o fresh water fish of the leather mouthed kind, which appears to be the same with the carcassius, or carcassi tertium genus.

BALLERUS is also a name given by Ans totle to that species of cyprinus called blicca, and pleysta, and pallerus, by modern writers.

BALLET, a dramatic fable represented by action, music and dancing. The

origin of the ballet is to be traced to the meretricious taste of the Italian courts, and succeeded the more dangerous but more manly amusement of the tournament. The interview between our Henry VIII. and Francis I. of France, in the field of the cloth of gold, presents us with an early specimen of these entertainments. In the next cen- tury they reached the summit of their glory in the splendid pomps of the courts of Tuscany and Lorraine. The genius of Ben Jonson, and even that of Shakspeare, was matured amidst the scenery connected with the Italian ballet : but it found its most zealous patron in Louis XIV. ; and probably the most magnificent ballet ever performed, was that which this prince comman- ded and bore a part in, in the year 1664. In honor of this memorable fete , the name of the Carousel has been given to the spot of its cele- bration ; and the theatres of England, France, and Italy, have been always striving since in amicable warfare, to sustain the public par- tiality for these spectacles.

BALLETS, or BALLS, in heraldry, make a fre- quent bearing in coats of arms, though never so called ; for, according to their several colors they have different names ; as besants, when the color is or; plates when argent; hurts when azure; torteaux when gules; pomies when vert; pellets or agresses when sable ; golpes when purple ; orenges when tanne ; and guzes when sanguine.

BAL'LETTE, n. s. Fr. ballelte. A dance in which some history is represented.

BALLEXARD (JSf.), a citizen of Geneva, born in 1726. He wrote a treatise on the physical education of children, which gained the prize from a society in Holland ; and a dissertation on the question, what are the principal causes of the deaths of children? He died at Geneva in

1774.

BALLI (Joseph), a scholastic divine, born at Palermo in Sicily. He was a canon of Bari, in the kingdom of Naples ; and author of De Fae- cunditate Dei, and De Morte Corporum Natura- lium. He died at Padua in 1640.

BALLIACE, in ancient geography, a town of Illyria, in the vicinity of Apollonia.

BAL'LIAGE, a duty payable to the city of London, for the goods and merchandise of aliens, according to the charter 16 Car. II.

BALLI AN I (John Baptist), a native of Ge- noa, born in 1586. He rose to be a member of the senate, and wrote a treatise on the Natural Motion of Heavy Bodies. 1646. He died in

1666.

BAL'LIARDS, n. s. From ball and yard, or stick to push it with. A play at which a ball is driven by the end of a stick; now corruptly called billiards, Dr. Johnson says ; but billiards is not a corruption, being the Fr. billard, from bilk, the term for the ball used in playing.

With dice, with cards, with balliards far unfit, With shuttle-cocks nusseeming manly wit.

Spenser.

CLEO. Let it alone ; let v.s to billiards; Come, Charmian.

Shakspeare. Antony and Cleopatra.

BALL1BAY, a market, fair, and post town in tne county of Monaghan, Ireland, seventy-six miles N.N.W.of Dublin. The living is a rectory and vicarage, in the Clogher diocese.

BALLIMORE, a town of Ireland, in the county of Westmeath. It was taken in 1691 by General Gingle ; and burnt by the military, in the rebellion of 1798. Distant from Athlone ten miles north, and 72 from Dublin.

BALLIN (Claude), a celebrated French artist, born in 1615. His father was a goldsmith, and under him he learned that business. When about nineteen years of age, he displayed un- common genius, by making four silver basins, on which were represented the four ages of the world. These were purchased by Cardinal Ri- chelieu, and he was employed to make four vases, after the antique, to match them. He afterwards executed handsome pieces for Louis XIV. and after the death of Varin, he succeeded as director of the mint, for casts and medals. He died in

1678.

BALLINA, or BELLEEK, a town of Ireland, in the county of Mayo ; fourteen miles north of Castlebar, and 183 from Dublin. It has a con- siderable salmon fishery; and in 1798 was taken by the French troops who landed in Ireland under General Humbert.

BALLINACARGY, a town of Ireland, in West Meath, about forty-six miles from Dublin.

BALLINACHORA, a town of Ireland, near Middletown, in Cork.

BALLINACOURTY, POINT, a cape on the south coast of Ireland, in the county of Water- ford, on the north side of Dungarvan Bay. Dis- tant four miles east of Dungarvan.

BALLINAGAR, a town of Ireland, in King's county, Leinster, forty-one miles from Dublin.

BALLINAKIL, a market town of Ireland, in Queen's county ; a borough previously to the Union. Here are woollen manufactures, and the ruins of a castle, fourteen miles west of Carlow, fifty-eight from Dublin.

BALLINAKILL HARBOUR is on the west coast of Ireland. Forty miles north-west of Gal- way. Long. 9►► 58 W., lat. 53►►^4'N.*

BALLINALACK, a town in West Meath, Ireland, about forty-eight miles from Dublin.

BALLINAMORE, a town of Ireland, in the county of Galway, eighty-four miles from Dublin. '

BALLINANAGHT, a town of Ireland, in the county of Cavan, fifty-four miles from Dublin.

BALLINASLOE, a town of Ireland, in the county of Roscommon, ninety miles from Dub- lin. It is noted for its great fairs of cattle, wool, &c. The town is neat and improving ; it has two breweries, barracks for cavalry and infantry, and possesses a communication, by still water, with the river Shannon. The fairs are the largest held in Ireland, 100,000 sheep and 10,000 black cattle being annually sold here.

BALLING ARRY, a town of Ireland, in the county of Limerick, 145 miles from Dublin.

BALLINROBE, a town of Ireland, in Mayo, where the assize? were formerly held. It is 147 miles from Dublin. .Long. 9►► 10′ W., lat. 53►►40'N. .

BALLINTOGHER, a town of Sligo, Ireland.

BALLINTOY, a town of Ireland, on the coast of Antrim. It produces coals. It has a tolerable good harbour, which has been im proved by a parliamentary grant. A short dis- tance to the eastward is the small island of Carrick-a-rede, separated from the land by a chasm of sixty feet, of a frightful depth, which is passed by means of two cables stretched across.

BALLINTRA, a village and parish of Ireland, on the coast of Antrim. Several ancient fortifi- cations are within its precincts, and there is a cromlech near the village. Other antiquities are

parish of Muthil, about half a mile in circum- ference.

BAL'LON,) Fr. balm, a little ball or pack ;

BAL'LOON. $ also a foot-ball. Uut. balloen, Germ, balluyn, Span, balon, Ital. ballone. A name given to a certain game played with a ball filled with wind.

Many other sports and recreations there be much in use, as foot-ball, ballowne, quintan, &c. and many such, which are the common recreations of the country folks. Burton' t Anatomy of Melancholy.

SIR PET. Faith, I was so entertained in the pro-

also found here. It is 'twenty miles north of f e" with ►►?e c►►►►►►t Epernoun, a Welsh knight : we

had a match at baloon, too, with my lord Wachum,

for five crowns. O, sweet lady, 'tis a strong game

with the arm. Eattward Hoe.

BALLON, or BALLONE, an ancient castle,

Ballymena, and 150 from Dublin.

BALLISTA, Lat. from /3aXX►►v, to shoot, a machine used by the ancients for shooting darts ; it resembled in some measure our cross bow. Ve-

darts with such rapidity and violence, that nothing could resist their force : and Athenseus adds, that Agistratus made one of little more than two feet in length, which shot darts 500 paces. See AR- TILLERY.

getius informs us, that the ballista discharged seated on the sea-coast, in the parish of Tarbat,

in Ross-shire ; which exhibits a monument of the taste and grandeur of former ages.

BALLON, a town in the province of Maine, France, on the Orne, with 3560 inhabitants. It is the chief place of a canton in the department

BALLISTA, in practical geometry, the geomet- of the Sarthe, arrondissement of Le Mans; and

has manufactures of stamine and other linen cloths. Ten miles north-east of Le Mans, six- teen south of Alenfon. Also a town of France, in the department of the Lower Charente, arron- dissement of Rochefort; nine miles south-east of La Rochelle.

BAL'LOON, n. s. In chemistry, a large globu- lar glass flask, with a short neck, generally used as a receiver in distillations.

In architecture, a ball or globe placed on the top of a pillar.

In fire -works, a ball of pasteboard stuffed with

rical cross, called also Jacob's staff. See CROSS STAFF.

BAI.LISTA, or Os BALLISTJE, is a name given by some anatomists to the first bone of the tar- sus, otherwise called talus and astragalus.

BALLISTARII, or BALHSTRARII, in anti- quity, slingers or soldiers who fought with the ballista-. There are two kinds of ballistarii ; the one, called aiso manuballistarii, or manuballistae, cast stories and other missive weapons, with the hand. The others, called also carroballistarii, or carroballista1, made use of a machine. The

ballistarii were scarcely heard of before the age of combustible matter, winch, when fired, mounts

Constantine.

BALLISTARIUS is also used, in writers of

the middle arre, for a cross bowman, or arbaletier. BAL'LISTER. See BALLUSTER. BALLISTEUM, or BALLISTRJEA ; from/3aXXw,

to toss, to throw, or to shoot ; in antiquity, a mi- litary song or dance used on occasions of victory. Vopisciis has preserved the ballisteum sung in honor of Aurelian, who, in the Sannatian war, \as said to have killed forty-eight of the enemy in one day with his own hand. The ballistea were a kind of popular ballads, composed by poets of the lower class, without much regard to the laws of metre.

BALLISTICA, or BALLISTICS the art of designed.

to a considerable height in the air, and then bursts into bright sparks resembling stars.

*In aerology, a hollow vessel of silk, which is filled with inflammable air, and ascends with considerable weight annexed to it, into the atmos- phere. Though of modern introduction, by the following citation it looks as if the existence of such a machine had been known 150 years since : * Like balloones full of wind, the more they are pressed down, the higher they rise.' ••• Hewyt's Sermons (1658) p. 115. See AERONAUTICS.*

BALLOON, in a general sense, signifies any spherical hollow body, of whatever matter it be composed, or for whatever purposes it be

throwing heavy bodies.]•••'. Mersennus has published a treatise on the projection of bodies, under this title.

BAI.LU'.M, old law Latin, bail.

BAU.ITM, in archaeologia, the court of a forti- fied castle. The outer ballium was immediately within the pates, separated by a wall from the inner ballium, which contained the apartments fur the garrison and the keeper. St. Peter, in the Bailey at Oxford, stands in the outer ballium of the castle. The Old Hailey and New Bailey in J.ondon were in similar positions in regard to the walls ol that city; and hence are their names.

BAI.LIVUS. See BAJLIIT.

BALLOC1!, a lake of Perthshire, in the

BALLOON, in the French paper trade, is a term for a quantity of paper, containing twenty four reams.

BALLOON likewise denotes a kind 'of game something resembling tennis. The ballon is played in the open field, with a great round ball of double leather blown up with wind, and thus driven to and fro with the strength of a man's arm, fortified with a brace of wood.

BALLOON, or BALLOEN, is particularly used among voyagers for the state barges of Siam. These balloons are a kind of brigan tines, managed with oars, of very odd figures, as serpents, sea- horses, &c. j but, by their sharpness and number of oars, of incredible swiftness. They are said

to be made of a single piece of timber, of uncom- mon length; they are

raised high, and much decorated with carving at head and stern: some are' gilt over, and carry 120 or 150 rowers on each side. The oars are either plated over with silver, gilt, or radiated with gold; and the dome or canopy in the middle, where the company is placed, is ornamented with some rich stuff, and furnished with a ballustrade of ivory, or other costly matter, enriched with gilding. The edges of the balloon just touch the water, but the extremities rise with a sweep to a great height. Some are adorned with a variety of figures, made of pieces of mother of pearl inlaid: the richer sort, instead of a dome, carry a kind of steeple in the middle : so that, considering the slenderness of the vessel, which is usually 100 or 120 feet long, and scarcely six broad, the height of two ends, and of the steeple, with the load of decorations, it is a kind of miracle that they are not overset. BALLOON, or BALLOT, in the French glass trade, signifies a certain quantity of glass plates, smaller or greater according to their quality. The balloon of white glass contains twenty-five bundles, of six plates per bundle; but the balloon of colored glass is only twelve bundles and a half, and of three plates to a bundle.

BALLOON, AIR. See AERONAUTICS, &c. BAL'LOT, v. & n.~\ Fr. baUotter, Ital. bal- BALLOTA'NT, tlotare, from Gr. j3aX\w,

BALLOT'ATION, I from ball, Skinner. A BALLOT'IN. j particular mode of elec-

tion. This is managed by putting little balls or tickets of different colors, black and white, pri- vately into a box, which has two compartments ; by counting the balls it is known what is the re- sult of the poll, without any discovery of the respective voters.

The greatest of the parliament men hated this de- sign of rotation and balloting, as being against their Power. Wood's Attenice Oxoniensis.

Whereupon eight balloting, or pages, take eight of the boxes, and go four on the one side, and four on the other side of the house ; and every magistrate and senator holds up a little pellet of linen as the box passesˆ between his finger and his thumb, that they may soe he has but one, and then puts it into the same. Harrington's Oceana.

No competition arriving to a sufficient number of balls, they fell to ballot some others. Wotton.

The election of the duke of Venice is intricate and curious, consisting of ten several ballotations. Id.

Giving their votes by ˆallotting, they lie under no awe- Swift.

BALLOTA, WHITE HOREHOUND: in botany; a genus of the gymnospermia order, and didy- namia class of plants; ranking, in the natural method, under the forty-second order, verticillatae. The calyx has five teeth, with ten striae; and the upper lip of the corolla is crenated. It is a com- mon weed growing on the sides of banks in most parts of England, as also in walks near towns and villages in Scotland; so is seldom admitted into gardens. The flowers are in whorls, upon branched peduncles, and lean on one side of the stalk; they are commonly of a dull red color, but sometimes white. It was formerly used in hys-

teric cases, but is now fallen into disuse. The Swedes reckon it an almost universal remedy in the diseases of their cattle. Horses, cows, sheep, and goats, refuse to eat it.

BALLOTADE. See BALOTADE.

BALLRIENAN, a pleasant peninsula of Ire- land, in the county of Louth; in which there are relics of a Druid's Grove; supposed to have been the chief seat of the Arch-Druid.

BALL's BAY, a bay on the east coast of Nor- folk island, in the South Pacific.

BALLS, a river of West Greenland, which runs into the sea, in long. 50►► 10′ W., lat. 64►► 30′ N.

BALL'S PYRAMID, a small island in the South Pacific, discovered by lieutenant Ball in 1788. Long. 159►► E., lat. 31►► 35′ S.

BALLSTOWN, a thriving town of the state of New York, situated in Saratoga county, thirty miles north of Albany.

Also a town of North America, in Lincoln county, district of Maine, 195 miles north-east of Boston.

BALLUNTEE, a town of Hindostan, inOrissa, thirteen miles south-east of Cuttack.

BALLUSTER. See BALUSTER.

BALLUSTRADE. See BALUSTRADE, and ARCHITECTURE, Index.

BALLY, a small island in the Eastern seas, separated from the west coast of Bachian by a channel about five miles wide. Lat. 0►► 30′ S.

BALLY, a large town on the east coast of the island of Lombhook, about

fifteen miles from the entrance of the strait of Alass. The inhabitants trade principally for rice with the Dutch settle- ments. Long. 116►► 28′ E., lat 8►► 31′ S.

BALLY, a Gaelic word, analagous to Bal, which makes part of the names of above 100 places, mostly small towns, or villages, in Ire- land ; of which we can only notice a few of the principal. The word seems to be a corruption of the term Ballibetagh, anciently used to express a town land able to maintain hospitality.

BALLYCASTLE, a sea-port of Antrim, about thirty miles north of Carrickfergus, and 180 from Dublin: noted for its chalybeate spring and collieries.

BALLYCONNEL, a town of Cavan, in Ulster, sixty-seven miles from Dublin, and eleven north- east of Cavan.

BALLYCOTTON BAY, a bay on the north-west coast of Ballycotton island.

BALLYCOTTON ISLAND, an island of St. George's channel, on the south-west coast of Ire- land, four miles off Cloyne. Long. 7►► 59′ W., lat. 51►► 50′ N. It is a great resort of sea-fowl, and porpoises frequently come ashore here.

BALLYDOVILIN BAY, a bay on the south-west coast of Ireland. Long. 9►► 32′ W., lat. 51►►

2r N.

BALLYELA BAY, a bay on the west coast of Ireland, 128 miles east of the south Arran islands.

BALLYGAMBOON, in Kerry, Munster; noted for producing great quantities of cyder.

BALLYGILLY HEAD, a cape on the east coast of Ireland.

BALLYHAYS, a market town of Ireland, county of Cavan, fifty-seven miles from Dublin, and onte a considerable place.

BAI.LYHOI.M BAY, on the coast of Down, between Carrickfergus and

Copland islands.

BALLYHOOLY, in Cork, seated on the Black- water, in a woody country, 111 miles from Dublin.

BALLYLESS BAY, a harbour on the north- west coast of Ireland, due west from Sligo Bay, and east from Broad-haven. Dunsinehead is its eastern limit.

BALLYMAHON, a town in Longford, sixty-eight miles from Dublin. Long. 7►► 56′ W., lat. 52►► 31′ N.

BALLYMENA, a market town of Antrim, on the river Maine, Ireland. It has a town-house, in which the quarter-sessions are held ; and a linen manufacture is carried on here. Twenty miles north-west of Belfast, and 132 north of Dublin.

BALLYNAUIKCH, a market town of Down, in Ireland, ninety-four miles from Dublin. In its neighbourhood is a chalybeate spring. Here, in 1798, the rebels were defeated after a bloody en- gagement on Lord Moira's estate, and the greater part of the town was at that time destroyed.

BALLYQUIKTON POINT, a cape of Ireland, seven miles east of Down-patrick.

BALLYRAG HAN BAY, a bay on the west coast of Ireland, in the north part of the county ot Clare. Long. 9►► 6′ W., lat. 53►► 7′ N.

BAI,LTSIIAV>O.N, a town of Ireland,in the county of Donegal, situated on a bay at the mouth of a river flowing from Lough Erne, which is here crossed by a bridge of fourteen arches. Here are two fisheries of eels and salmon. Fish and grain are the chief exports. The imports, timber, rock salt, iron, earthenware, and other commodities in small quantities. Distant forty miles south-west of Londonderry, and 127 from Dublin.

BALLYTORE, a beautiful village, on the river Gris, in Kildare, thirty-five miles from Dublin.

BAM.YVOGY HEAD, a cape in Cork, opposite to Mizen Head, between which there is a large bay.

BAL'M, v. & n, ˆ Gr. (3a\ffa[j.ot>, Lat. bal-

BALM'Y, S samum, Fr. batsarme, baulrne,

Ital. btikat/io, Goth, balsan, Ang.-Sax. baldsame, balzame, Germ, and

Swod. balsam, Dut. balsem. Applied to a fragrant shrub, as balm-mint; the sap of a shrub, as balm of Gilead; to fragrant ointment; to any thing fragrant, sweet-smelling, soothing, lenifying, hilling, mitigating, either literally or metaphorically. To balm, is to wash with balm, or any thin1.; softening, fragrant, and antiseptick. See EMBALM. Of balm-mint, the species are 1. garden balm; 2. garden balm, with yellow variegated flowers ; 3. stinking Roman balm, with soft hairy leaves.'- ††† Miller. ' Balm of Gilead is the juice drawn from the balsam- tree, by making incisions in its bark. Its color is first white, soon after green ; but when it comes to be old it is of the color of honey. The smell of it is agreeable, and very penetrating; the taste of it bitter, sharp, and astringent. As little issues from the plant by incision, the balm sold by the merchants is made of the wood and green branches of the tree, distilled by fire, which is generally adulterated with turpentine.' ††† Calmet. ' It seems to me that the 7.ori of Gilead, which we ivnder in our Bible bv the word balm, was not the same with the balsam of Mecca, but only

a better sort of turpentine, then in use for the cure of wounds and other diseases.' ††† Prideaux't Connex.

In May that mother is of monethes glade, That the freshe flouris all, blew, white, and rede, Ben quicke ayen, that winter ded had made. And full of baume, is fleting euery mede.

Chaucer.

But forbeare to speake Of baths, or balming, or of beauty DOW.

Chapman. Homer' Odyisey.*

We saw thee in thy balmy-nest,

Bright dawn of our eternal day ; We saw thine eyes break, from the cast, And chase the trembling shades away.

Craihaw.

Upon an hill a bright flame I did see, Waving aloft with triple point to sky, Which like incense of precious cedar tree, With balmy odours fill'd th' ayre farre and nie.

Spenier.

Where many groomes and squyres ready were, To take him from his steed full tenderly, And eke the fayrest Alma mett him there, With balm and wine, and costly spicery, To comfort him in his infirmity. Id.

This is most strange ;

That she, that even but now was your best object, The argument of your praise, balm of your age, Most best, most dearest, should, in this trice of time. Commit a thing so monstrous, to dismantle So many folds of favour. Shaktpeare. Leaf.

As bees

In spring time, when the sun with Taurus ridet. Pour forth their populous youth about the hive In clusters ; they among fresh dews and flowers Fly to and fro, or on the smoothed plank, The suburb of their straw-built citadel, New rubb'd with balm, expatiate and confer Their state-affairs. Milton.

Now gentle gales

*Fanning their odoriferous wings dispense Native perfumes, and whisper whence they stole Those balmy spoils. /*********'.*

Publicola, with healing hands shall pour Balm in their wounds, and shall their life restore ; Greek arts, and Roman arms, in her conjoin'd, Shall England raise, relieve oppress'd mankind.

Marcell.

So weak are human kind by nature made, Or to such weaknes by their vice betrayed Almighty vanity ! to thee they owe Their zest of pleasure and their balm of woe.

Young

O smile, ye heavens, serene ; ye mildews wan. Ye blighting whirlwinds spare his balmy prime, Nor lessen of his life the little span. Deattie.

BALM, in botany. See MELISSA.

BALM, or BALSAM. See BALSAM.

BALM MINT. See BALM.

BALM OF GILEAD, the English name of the dracocephalum canariense, or canary dragon's head.

BALM OF SULPHUR. See SULPHUR.

BALMUIUEUM, the name given by Leslie to the ancient abbey of Balmerino, which was founded A. D. 1229, by king Alexander II. and his

mother Emergarda, widow of William the Lion. That princess lies interred in the abbey church. See BALMERINO.

BALMURENACH, the original name of BAL-

BALOOCHISTAN

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BALNAGOWN, a small river of Scotland, in Ross-shire, which bounds the parish of Kilmuir Easter, on the east.

BALNAHUAICH, one of the western isles of Scotland, on the coast of Argyllshire, and ih the parish of Jura, on the north end of that island. Mr. Stewart, minister of Jura and Colonsay, in his statistical report of these parishes to Sir J. Sinclair, states the population of this island in 1793 at "28 families, and 132 souls. It abounds with excellent slates.

BALNAVES (Henry), a Scottish protestant divine, born in Fife, in the reign of James V., and educated at St. Andrew's. He went to France to finish his studies ; and returning to Scotland, was admitted into the family of the earl of Arran, then regent; but in 1542 the earl dismissed him for having embraced the protes- tant religion. In 1554 he joined, says Mackenzie, the murderers of cardinal Beaton; for which he was declared a traitor, and excommunicated. While that party were besieged in the castle of St. Andrew's, they sent Balnaves to England, who returned with a considerable supply of pro- visions and money ; but being at last obliged to surrender to the French, he was sent with the rest, of the garrison to France. He returned to Scotland about 1559 ; and having joined the con- gregation, he was appointed one of the commis- sioners to treat with the duke of Norfolk on the part of queen Elizabeth. In 15C3 he was made one of the lords of session, and appointed by the general assembly, with other learned men, to re- vise the Book of Discipline. Knox, his fellow- laborer, gives him the character of a very learned and pious divine. lie died at Edinburgh m 1579. He wrote, 1. A Treatise concerning Justification, Edinburgh, 1530, 8vo. 2. A Cate- chism, or Confession of Faith, 1584; 8vo.

BALNEAL', ad. -\ These, with bain and BAL'NEARY, n. s. f bagnio, are derived from BALN'EATION, ►►the Lat. balneum, which BALNE'ATORY, ad. J signifies a bath. To wet, to wash, to bathe.

Others attribute this balneal heat to the sun, whose all-scorching beames penetrating the pores of the earth, do heat the waters. Howell't Letters.

The balneariei and bathing-places he exposeth unto the summer setting. Brown's Vulgar Errowt.

*As the head may be disturbed by the skin, it may
॥tfie same way be relieved, as is observable in balnea- tiont, and fomentations of that part. Id.*

BALNEARI1 SERVI, in antiquity, servants or attendants belonging to the baths. Some were appointed to heat them, called fornicatores ; others were denominated capsarii, who kept the clothes of those that went inta them ; others aliptae, whose care it was to pull off the hair; others unctuarii, \lio anointed and perfumed the body.

BALNEARIUS FUR, or BALNEARIUM,FUR, in antiquity, a kind of thief who practised steal- ing the clothes of persons in the baths. This crime was reckoned a kind of sacrilege ; for the hot baths were sacred ; hence they were more severely punished than common thieves, who stole out of private houses. The latter were ac- quitted with paying double the value of the thing VOL. III.

stolen; whereas the former were punished with death.

BALNEGLERA, a town of Ireland, in the county of Armagh.

BALNE'UM, n. a vessel used in chemistry.

BALNEUM, a term used by chemists to sig- nify a vessel filled with some matter, as sand, water, or the like, in which another is placed that requires a more gentle heat than the naked fire. See CHEMISTRY, Index.

BALNEUM ARENOSUM, a sand bath.

BALNEUM FOENI, a hay bath, is when a body is laid to digest in moist hay, whose heat is like- wise directed by the application of water.

BALNEUM MARINE is by some so called, as being supposed to have been first invented by the blessed Virgin ; but by others, with more propriety, it is called

BALNEUM MARTS, or sea bath, in regard the vessel here floats as it were in a sea. Here the cucurbit is placed in hot water, which warms the matter contained, and disperses it for exhalation.

BALNEUM MINERALS, or mineral bath, is used by some chemists for aqua regia.

BALNEUM RORLS, or RORITUM, is a furnace where the cucurbit, or distilling vessel, is only suspended over the vapor of water, and not in contact with the water itself.

BALNEUM SICCUM, or ARENOSUM, a dry or sand heat.

BALNEUM VAPORARIUM, or the vapor bath ; the same with Balneum roris.

BALOLY, a town of Hindostan, in the dis- trict of Dowlatabad, thirty-five miles E.N.E. of Oudighir.

BALOJVGO, three islands in the bay of Ben- gal, near the coast of Arracan. Long. 93►► to 93►► 20′ E., lat. 19►► 50′ to 20►► 5′ N.

BALONICH, in the ancient materia medica, a name given by Avicena, Averrhoes, and others, to a kind of camphor, which they describe as coarse, brown, and of less value than the other sorts. This is probably the same with our rough camphor, as brought over to us from the East Indies.

BALOOCHISTAN, BALOCHASTHAN, or, ac- cording to some, Belujistan, a large province west of the Indus, bounded on the north by Seistan in Persia and Candahar, on the south by the sea, on the east by the province of Sinde and Shekarpoor, and on the west by Mekran in Persia. It comprehends all that space of terri- tory lying between the 25►► and 30►► of north la- titude, and the 62►► and 69►► of east longitude. The political limits are, however, difficult to de- fine with accuracy, from the perpetual fluctua- tions to which they are subject. The province is extremely mountainous, peopled by warlike semi- oarbarous tribes, and was scarcely known to Europeans till the years 1809 and 1810, when it was visited by Mr. Pottinger and a few other officers in the East India Company's service. At that time the whole country of Baloochistan was divided into the following provinces : ►►► 1 Those of J'halawan and Saraw&n, and districts of Kelat. 2. Macran and Les. 3. Kohistan, ths mountainous region west of the desert. 4. The desert. 5. Cach Gandavah and the district of Herrend Dajel. 6. The province of Sind'h.

The principal provinces at present are Jala- wan, Sarawan, Zukree, Mekran, Lus and Mutch, although this includes territories not properly subject to Mahmood Khan, the present Ameer of Kelat, the capital.

To the south Baloochistan Proper commences at Kohinee, twenty-five miles N. E. from Bayla, in lat. 26►► 35′ N., and extends to Nooshky, seventy-nine miles N. W. from Kelat, in lat. 30►► N. The country is described

generally as a con- fused heap of mountains, through which the roads lead for the most part in water-courses, and the beds of small rivers.

The principal mountainous range, called by Mr. Pottinger Brahu'ic, from the Brahuis who in- habit it, rises abruptly out of the sea to a considerable height at cape Mowari, the Monze of the Maps, in lat. 25►► N., and long. 66►► 58′ E. whence it runs in a north-east direction, after- wards to the north, and at last resuming its ori- ginal course sinks into moderate hills and unites with the lowest ridges of the chain that traverses Afghanistan. Anciently this chain formed the separating boundary between Persia and India. Near the Indian Ocean it is not more than thirty miles in breadth ; but about the same distance from the shore it breaks into a variety of branches, and stretches over the whole country, west and north, in which direction it unites itself with thi►► Persian ranges, ending abruptly in the sea, or sinking in the sandy region which divides the cultivable territory from the ocean. The general inclination of the boldest ridges is from the north-east to the south-west, whence it becomes highly probable that the HrahuTc range is a pro- longation of the Hindu Cush, the Emodus of the ancients, in which the llezarah range or Paropa- misus, extending as tar as the Caspian, has its origin. With this latter chain the western ex- tremity of the Brahui'c mountains, extending north beyond the main body of highlands, is thought to be united ; a branch which lying be- tween Seistan and Kirman forms the eastern boundary of the Persian empire. Another di- vision of this range extends from their south- western angle, and, running nearly parallel with the main heights in that direction, forms at last a junction with the mountains of Laristan, in Persia, and sends out many collateral ramifica- tions terminating in headlands on the coast of Macron. In the western parts of that province the mountains recoil on the principal body, and form a complete mass of mountains, irregularly crowded, which the natives denominate Kohistan, or the highlands. The lenuth of this range is stated at 3,~>0 miles, and the breadth of the loftiest ridge at nearly 200. The town of Kelat stands upon the highest level ; the extraordinary elevation of which is supposed to exceed by one- eighth the highest peaks of the Pyrenees; a fact which is confirmed by the severity of its winters, and by the great height of the bold defiles bend- ing down to the northern desert.

In this mountainous country, filled probably with primitive rocks, the soil is generally barren ; but in the upper provinces rich grain crops are gathered in from fields which to the sight exhibit scarcely any thing but pebbles. The lowlands of Cach (iandavah, formed by the alluvions ot

the Indus, are extremely fertile, producing grain, cotton, indigo, and oil. The valleys of Wudd, Khozdar, and Sohrab, are capable of cultivation. The precious metals, together with lead, iron, copper, tin, and antimony,

abound in many parts of the country ; as also rock-salt, nitre, and several medicinal minerals of great value.

The whole of this region, though mountainous, is remarkably destitute of water. It has not a single river that is navigable ; but on the northern side the hills are a few brooks and mountain tor- rents ; but these, with the exception of the Budar, are frequently dried up by the intense avidity of the lowland climate. The stream, known by different names in different parts of its course, as Budar, Mulidani, B'hagwar, Desti, &c., is supposed to have been formerly much larger and more important than at present ; its source is in the district of Garmsail, near the banks of the Helmind, or Hindmind ; but has never been traced by Europeans beyond the parallel of 29►► from the ocean. At the distance of a hundred yards from the beach it is not more than twenty inches deep ; more remote from the shore, how- ever, its magnitude increases ; and in the district of Penj-gur it has a copious and perpetual stream.

The climate, and consequently the seasons, ?re very different in different parts of the coun- try. In the loftiest regions they resemble those of the southern and middle parts of Eunope, whilst, in the maritime provinces and deserts, they approximate to that of the tropics, and are subject only to three changes, introducing the hot, the cold, and the rainy periods. In J'halawan and Sarawan the spring commences towards the end of February; the summer at the beginning of May; the autumn succeeds and continues through August and September, after which a severe winter concludes the year. The rains in the level sands of Macran continue through February and March, and afterwards return in June and July, the latter being occasioned by a south-west monsoon. The hot season lasts from March till October, including the second rains, after which the cold succeeds and continues from November till February. The aridity and drought in Macran are so extreme in the summer as to render the country scarcely habitable. Kohistan has a climate of medium temperature ; and Cach Gandavah, where the heat is so intolerable in the summer, has scarcely any winter at all.

So great a variety of climate is capable of pro- ducing a great variety of vegetation ; and after Nadir Shah, in 1739, granted the whole of this territory to Nasir Khan, that prince endeavoured to inspire his subjects with the love of agricul- ture, and gardening. With this view, he not only introduced various fruits from Cabul, but almost all the productions of temperate and tropical climes, numerous kinds of which are still to be found in some part or other of these dominions. All the different kinds of European grain, madder, cotton, indigo, esculent vege- tables, &c. are produced in great abundance; wheat is sown in August and reaped the follow- ing June ; barley is sown in September, and reaped in May.

Madder, after lying in the ground three years, is brought to great perfec- tion. Ushpusht, or camel-grass, a large species

of clover (perhaps lucern), produces two crops in a month, and lasts for six or seven years. The provinces of Macran and Les, or Las, yield a crop of grass in each of the rairy seasons. The palms throughout the whole leigon give a large quantity of dates, and, the impregnation of the female blossoms being carefully attended to, the varieties are almost innumerable. Rice is also plentiful, and forms a great part of the food of the inhabitants ; besides which, they have bajri (holcus spicatus) ; jowari, (holcus rosghum) ; mung, (phaseolus mungo); mayz, dal, urad, and malar, (leguminous vegetables) ; channa, (cicer arietinum) ; and til, (sesamum). Among the timber trees of Baloochistan may be enume- rated, the Bubal, (mimosa famesiana) ; la'i, (ta- marix) ; mulberry, nim, (melia azad lirachta) ; pipal, (ficus religiosa) ; sisii, (dalbergia sissoo) ; chinar, (oriental plane); mango, walnut, and sycamore. The common European forest trees are wanting. The apurs, a species of the zizy- phus, resembles the jujube, and tamarind. The wood of the former has much the appearance ot teak, and both are remarkably hard and durable

The birds and animals are of numerous species, from the great diversity of climate. Most of our domestic fowls are common, with the exception of ducks, geese, and turkies. The magpye, a bird unknown in India, is not uncommon about Kelat. Flamingoes and floricans (otis houbara) are found in the lower districts. Poisonous rep- tiles are less frequent than in India. Fresh- water fish are exceedingly scarce. The horses of Baloochistan are strong, but very vicious ; their sheep are broad tailed, of the description of the Persian dunbah. Camels and dromeda- ries are the most common beasts of burthen, the latter of which, with only one hump on its back, is remarkable for its strength, swiftness, and power of abstinence. \ ild and very fierce dogs are found in the woods : and the breed of those that are tame, especially the shepherd's dog and the greyhound, is an object of particular atten- tion.

The inhabitants have been divided into four classes: ××× 1. The Baloochees ; 2. the Brahooees; 3. the Dehwars ; 4. the Hindoos. The two first of these, speaking different languages, are evi- dently distinct races, forming together the ma- jority of the inhabitants. Mr. Pottinger thinks the upper and inhospitable regions of J'halawan and Sarawan were first peopled by the Hindoos, who, in the early part of the eighth century, fled from the victorious armies of Mahmud Sabuctagin and his son Masuud.

The two principal tribes above- named are divided into many different kheils, or tomuns, but their actual number has never been ascertained .

2. The Balooches, called Nharroe, or Ruk- shani, inhabit that part of the country lying west of the desert, and are a tribe containing 1000 fighting men ; by whom the judgalls or culti- vators have been nearly exterminated out of Northern Mekran. Mr. Pottinger thinks they are descendants of the Turcuman soldiers, who served in the armies of the Seljuk dynasties, and were dispersed when those dynasties were over- turned ; on which supposition, the first establish- ment of the Balooches in the mountainous regions

east of Persia, must tie reterred to tae fifth century of the Hegirali, answering to the eleventh of the Christian era, when they begin to be named by the Asiatic historians. But the Lord's prayer in their language, published by the baptist missionaries at Serampor, affords us evidence of its having been derived from a Tartarian dialect ; also, we may observe, that the Beluchiki, or Beluch, commonly spoken, is evidently a cor- rupt dialect of the Persian, approaching to that of the Curds, on the western side of Persia, as the Brahuiki, or Brahu, does to the Hinduwe spoken in the Penj- ab.

Whatever be their origin they are found in the greatest numbers in the northern and eastern provinces, and are divided into three leading tribes, ××× the Nhariiis, Rinds, and Maghsis, of which the first and last are most important ; the former on the western side of Baloochistan ; the latter on the low lands of Cuch Gundava, at the eastern foot of the mountains. These tribes are again subdivided, and those of Rind and Mu- gree, who formerly emigrated from Mekran, and live in villages, retain the appellation of Too- rauns,

The Balooches are generally tall and hand- some, but not athletic ; patient, and full of courage. They delight in predatory excursions called chapaos, greatly resembling the forays of our northern borders in the sixteenth century. On these occasions they are mounted on drome- daries, provided with d'ates, bread, sour cheese, and water, and march without halting to the place they mean to attack ; here they conceal themselves in a wood till night, and when the inhabitants are asleep, hasten forwards, burning, destroying, and carrying off whatever comes in their way. These diversions occasion frequent warfare ; but hospitality is nevertheless general, and pilfering despised. Their domestic habits are pastoral, and their subjection to the chiefs voluntary. They reside in tents, or ghedans of black felt, or coarse blanket, stretched over a frame of wicker-work, formed of twigs of the gaz, or tamarisk ; an assemblage of which light habi- tations forms a tuman or village, and its inhabi- tants a khe'il or family. The men are

indolent, and great lovers of opium, though not accustomed to any other species of intoxication. They are less jealous of theii1 wives than Mussulmans ge- nerally ; of which, though their religion allows a plurality, they commonly have only one. Their regard to the sanctity of marriage is exemplary, and many of their customs appear to origi- nate in the law of Moses. A widow must be married by her husband's next brother : adultery is punishable by the death of both parties ; in- continence before marriage authorises divorce afterwards, the sang or promise of marriage is inviolable ; and a betrothed virgin is considered as having nearly the same rights as a married woman.

Their clothing consists of a long shirt, and trowsers of blue and white calico, together with a quilted cap, round which, when they are in full dress, a shawl is twisted ; in winter thick warm surtouts are worn by all classes. The women when young tress their hair, and twist it round their heads, fc rmiug the ends into a kho >

on the crown, so as to give it the appearance of a cap. Their dress in other respects resembles that of the men, but exposes the bosom as much as the tunic worn by the females of Persia. When out of doors they are completely veiled.

The soldiers, although awkwardly accoutred, are excellent marksmen ; to kill a lark or spar- row with a single ball at the distance of fifty or sixty yards is not considered by them as any proof of dexterity ; and the nezah-bazi, or spear play, their favorite diversion, evinces not only considerable skill, but superior muscular strength. It consists in the rider piercing a wooden stake, driven into the ground, wich the point of his spear while his horse is at full speed ; and re- quires the most critical management of both horse and spear at the same instant of time. On the whole, the similarity between the manners of this people and those of the Curds and wan- dering Turcumans, the Yaruk of the Turks, found in every part of Anatolia, render the above con- jecture as to their origin highly probable.

2. The Brahooees, or Brahuis, are a strong hardy race of men, with uncommonly short and thick bones. Their cast of countenance is dif- ferent from the Balooches and Asiatics, generally exhibiting a roundness of face, and bluntness of features, somewhat resembling Europeans. They are divided into separate tribes, the principal of which are the following :

Men. The Kumburanee, or the tribe of the chief

Mahmood Khan, estimated at ... 1,000 The tribe of Mengul 12,000

Zukree 6,000

Pandurani 6,000

Nahari 6,000

Imaum Hosseing 4,000

Begungje 1,000

They are hard-working people, of voracious appetites, devouring their animal food almost raw. \ hen they cure their meat, it is effected by drying it in the sun, and smoking it over a lire ; after which it will keep for several months, and in flavor very much resembles rein-deer's tongue. The people generally are less ferocious than their neighbours, for which reason the government of their chiefs asssumes a more des- potic character. They are disinterested, placa- ble, and humane ; the very reverse of the Baloochees, and the uncouthness of their manners is to he attributed solely to their want of civi- lisation. All the Baloochees are excellent work- men, but none are equal to the Brahooees in strength and courage. Broad sword exercise, and shooting at a mark, are their common diver- sions ; in both of which they are said to excel. Their breed of shepherds' clogs is excellent; greyhounds arc also trained amongst them with gn-at care, and a single one is frequently ex- changed for t\o camels, or sold for 400 rupees. Their breed of horses is large and hardy, equally accustomed to the heat of (iundava and the cold of Keh'it, but they are often vicious.

The Brahooees, in religion, are strict observers of the Sunnah,or the traditional law of the Mussul- mans, in which respect they approach nearer to the Turks than the Persians. They are riot jealous

of the women, who sometimes assist in out-door work, and are seldom secluded from the society of the men. The common dress used in this part of the province is an under coat, which fits close to the body and is worn over the pyrahun or shirt : their trowsers are gathered np at the ankle, and a small round flat-Topped cap of felt silk is the only covering of the head. The shep- herds wear a white felt garment above the shirt in winter, with cloth trowsers and a felt cap. The females wear a kind of stays which lace be- hind, and give them an appearance similar to that of the peasants in Switzerland. It has also been observed that with the exception of the shepherds, the Brahooees never increase their clothing in the severest weather. The common language is the Koorgalee.

3. The Dehwars, or Dehkans, i. e. villagers, are exclusively employed in agriculture, and hold their lands by a sort of feudal tenure, being bound to provide the khan's guests with water, fuel, provender, &c. ; to attend him in his hunting- excursions, and to supply him with couriers when required, in consideration of which they are exempted from all military duties ; they are tacit, harmless, and submissive to the other tribes. They differ considerably from all the other inhabitants of the province, being uncomely in appearance, low in stature, coarse in features, with high cheek bones, but possessing a more artless, gaod humored and honest expression of countenance. They never migrate, and their lan- guage is pure Persian. Mr. Pottinger from this latter circumstance concluded that they sprang from the Gebrs, or followers of Zoroaster, who fled before the victorious arms of the Mussul- mans, but, against this opinion, their dispersion through other parts of Asia, their correspondence with the tajies of Afghanistan, together with their zealous observance of the Sunnah, power- fully militate.

4. The Hindoos are few in number and carry on the miserable traffic of the country, acting as money-changers and agents to the native chiefs. Many of them are not so indigenous as they have been generally represented, but are merchants from Multan. The Hindoos are supposed to have been the first settlers in these mountains, and were long tolerated by their Mussulman con- querors, who, according to current traditions, were first admitted into their impregnable retreats as traders, where being indulged with too much lenience, they finally subverted the government. Numerous Hindoo occupiers, however, still re- mained in the country, till within the last two centuries, when the barbarity of the Mahomme- dan tribes increased to such a degree that no medium could be observed, and the native Hin- doos, with the exception of a few merchants, un- derwent compulsory conversion, or fled the country. The remaining few have however con- siderably degenerated from the laws of the Shas- ter ; they eat animal food, use leathern bags, and in many other respects violate their religious tenets, and perhaps it is this partial conformity which constitutes the true principle of their tole- ration.

Of the divisions of Baloochistan generally, Jhalawan and Sarawan, with the intermediate

district, extending to the north and north-east, and bounded by that part of the Brahuic moun- tains which is beyond the twenty-sixth degree of north latitude, come first under our considera- tion. Jhalawan is the most southerly, contain- ing six t'hacs or districts, each governed by a different

chief. Zehri, the largest town, is sur- rounded by a mud wall, and contains 2000 houses. There are no streams in the whole pro- vince more than ten inches deep in the dry sea- son, and water can be obtained only by digging in the beds of torrents. Kelat properly belongs to Sarawan, but the usurpations of the khan have rendered it nearly a distinct province. To the north of it, bounded by the Afghan hills and the desert east of Kandahar, lies Sarawan, divided into inferior districts, and occupied by migra- tory tribes of the Brahuics. The province is mountainous, not possessing a single level of more than a few miles in circumference, except a naked plain of about thirty miles in extent, called the Ueshti-be-daulat, or Pennyless Desert, forming a remarkable gap in the northern front of the great chain. The southern province is fertile, having frequent rains, but the least popu- lous ; Kelat is considered the capital of Baloo- chistan generally.

Nooshky is a small tract of about thirty-six square miles, lying at the base of the Kelat mountains. It is an arid tract, the sand hills of which shift with the winds. A few patches of cultivable land are nevertheless met with occa- sionally ; and a small stream, called the Xysur, issuing from the hills, irrigates the portion of country immediately contiguous. The inhabi- tants dwell under black felts stretched over a frame of wickerwork made of the guz plant, by which they are sheltered from the heat of the sun. The soil being sandy, the heat is excessive in the summer ; the stream fails in the valley, and the inhabitants migrate to the mountains for cool air and water.

The fine valley of Sohrab extends north and south about fifty miles in length by twelve in breadth. The water from the hills runs through its centre, and around it are scattered a few vil- lages.

The two provinces of Les and Macran are in- cluded between the higher ridges of the Brahuic chain and the Indian Ocean, and are varied by intersections of such branches of these hills as diverge towards the sea. On the north lie the regions of J'halawan, Sarawan, and Kelat, toge- ther with Kehistan and the desert; and on the west the Persian Laristan. Lus or Les, signifying in the Jedgali language a valley or plain, pre- sents a perfectly level surface for about ninety miles by fifty, enclosed on three sides by lofty mountains passable by only five lekhs, or defiles, two in the eastern and western, and one in the northern branch of this great chain. This is a fertile province, watered by two small rivers, Habb and Purali (the Arabis of the ancients), and together with Macran formed a part of the Persian empire. The sovereignty is at present held on a feudal tenure under the khan of Kelat.

Bela, the capital, stands on a rocky eminence en the northern bank of the Purali. Many of the inhabitants are merchants from Multan and

Shicarpur, west of tne Indus, and their immuni- ties are considerable.

The population of Lus is about 26,000, who are of the same tribe, though distinguished by the different names of Jedgal, Jok'hya, Jet'h, and Numri. They are an indolent and curious people ; the men athletic and middle-sized, the women plain, and dirty. Their manners, appear- ance, and language, prove that they must have been derived originally from Hindostan ; and the latter called Jedgali or Jet'hgali has a close affinity with that of Sind'h. They are fond of intoxicating drugs, and nearly one third part of them are migratory.

Of Makran there are fourteen districts, several of which are uninhabited. Water is extremely scarce throughout the whole territory, a great part of which consists of barren mountains with here and there a fertile valley, or an island of palms emerging from the waste, similar to those found in the vast deserts of Africa. Many of the streams of this region, now trifling brooks, were formerly navigable. In one of these, namely, Ag'hon Nadl, is a celebrated well called Anilci Cund, or Fathomless Abyss, the depth of which is not known. The Hindoos attribute the dig- ging of it to Call, whose shrine at Hinglatz or Hing-laj, just above it, is the resort of numerous pilgrims. The river Best waters the district of Kedge, or Kej, which receives its name from the capital of the province. This ancient town car- ried on formerly a considerable trade with Kan- dahar and the north of India, but has gone to decay since its governors threw off their alle- giance to the khan of Kelat. It has many ad- vantages of site, and covers three sides of the base of a hill, on the summit of which is a castle deemed impregnable.

Kohistan is surrounded on the east, north, and west, by sandy deserts, with the exception of a narrow range of hills which connect it on the north-west with the Paropamisus of the ancients, and on the south it is bounded by the Brahui'c chain, of which it forms one of the extremities. It is divided into two districts, the Maidani or plain, and the Chopaki or hilly country. Water is extremely scarce and the population scanty, consisting chiefly of Beluches. It abounds with salt and chalybeate springs, with numerous mi- neral productions, and its hills occasionally be- tray a volcanic origin.

The desert, 300 miles long and 200 broad, is traversed by the Helmind or Hermend, the natural boundary of Baloochistan, and separated on the west by a narrow range of hills from the deserts of Kirman. Its utmost extent including the latter is about 600 miles diagonally from east to west, and 500 miles from north to south, and is bounded on the north and east by the moun- tains of Afghanistan.

This vast ocean of sand is composed of par- ticles so light that when taken up into the hand they are little more than palpable, and when agitated by

*the winds are thrown into an irre- gular mass of waves running east and west. Most of these banks rise perpendicularly from ten to twenty feet on the leeward side ; and, from the redness of their appearance, might be taken for brick walls,
ॷ whilst the windward side slopes*

off with a gradual declivity to the base of the next bank or wave. The camels are with diffi- culty driven up the perpendicular or leeward sides of these sandy hills ; but on the shelving sides they ascend with laborious perseverance, and, having reached the summit of a wave, drop most expertly on their knees and slide down with the sand to the bottom of the next hollow. These mountains of sand are observed to be succeeded by hard black gravel, without the least appearance of vegetation, and bare stony hills lying at the base of the mountains, are the first ascent towards higher and less barren regions. Throughout the whole desert the sands are ex- tremely hot, and the fine particles, raised by the wind, getting into the eyes, nostrils, and mouth of the traveller, cause an extreme degree of painful irritation and thirst.

The Regency of Sind'h and also Cach Gan- davah, east of the Brahuic chain of mountains, between India and Persia, though commonly in- cluded in the kingdom of Baloochistan, belong more properly to Ilindostan.

\Vith respect to the history of Baloochistan antiquity is almost silent. The mountainous tract, which forms the central and most important part of this territory, appears to have been unknown to the ancients, and was perhaps uninhabited up to the1 period of the Mahommedan conquests in the seventh and eighth centuries of the Christian era. Alexander inarched from Pattala, (T'hatt 'hah or Tatiah) on the Indus, through the ter- ritory of t'ic Arabiuv, still indicated by the cape called Aral u by the natives, the Arabah of the maps, thence he advanced into the country of the Orei'ta' ia his way to Gedrosia or Macran, when; the- ॷ greater part of his troops are said to have perched t'rom thirst, famine and fatigue. Cratcrus who commanded, with another part of Lis army, passe;! by a circuitous route through Araehosia and Dr.miriana, the Kandahar and Septan of modern geography ; countries placed in a higher latitude, south of the extreme deserts v.lii, h separate the Heluehcs from Persia and Afghanistan. The Mahommedan invaders fol- lowed (he track of Alexander, whilst the Sultans of (dia/uah, who made themselves masters of the 1 \el country to the mouth of the Indus, and the coast as far as the confines of Persia, never descended the hills. The Persian historians say the idolatrous Hindoos wen: driven into these retrea's ; but, since the present occupiers betray no aflimty

with the natives of India in customs, fratup's, or language, the origin already as- signed is more probable. They themselves atlinn that they are the original natives of the hills, and that their name Brahue is derived from Haruhi mountains, whilst the inhabitants of the plain are called Yhanhsor Narohis, Lowlanders. The most ancient traditions do not carry the orL'in of the .Mussulman government further back than seven gvneiMtions.

About two centuries ago the city of Kelat vith the surrounding country was possessed by Sewah Kajah a Hindoo, and the Balooches tended llocks of sheep in the mountains. To protect the inhabitants from the depredations of a people residing in the low country between K'-.lat, Sinde, and Shekarpoor, the rajah sent

lor Kumber a Baloochy chief, and took him into his service, allowing him five bundles of grass and wood per day for each man. This auxiliary shortly after seized the government, and raised the tribute to a hundred bundles, besides a con- tribution of horses, camels, and footrunners. This tribute is still occasionally exacted by the Khan of Kelat, and paid by the detmars or pea- sants in the immediate vicinity.

Kumber the first usurper was succeeded by his son Sumbar, the father of the next prince, Ma- hommed Khan, who in his turn was succeeded by his son Abdulla Khan. This prince conquered a considerable part of Cach Gandavah, till then subject to the Nuwwabs of Sind'h. About that time the celebrated Nadir Shah carried his vic- torious arms into India ; and while at Kandahar sent an army into the mountains of the Beluches. Abdu'llah sent his two sons as hostages to the conqueror's camp ; sifter which he was allowed to continue in his government as a feudatory of Persia. Upon the death of Abdu'llah, Nasir Khan his younger son, by the advice of Nadir Shah, put to death his elder brother, who had succeeded to the sovereignty, and took possession of the Gad'hi or throne; and having performed some important services to his patron, was re- warded by the donation of several provinces, and, being a man of considerable abilities, greatly enlarged his dominions, so that at his death, in 1795, the territories descended to his son and successor Mahmood Khan in a very flourishing and prosperous state. This prince is now about twenty-nine years of age ; but his talents being very inferior to those of his father, the dominions of Kelat have been greatly curtailed by the Ameers of Sinde and other neighbouring pro- vinces. His brother Mustapha Khan, who is about one year younger than the sovereign, is, however, of an active martial disposition, and bids fair on his accession to restore the empire and improve the hereditary dominions. The territory at present subject to Mahmood Khan, comprises the high hilly country of Sewistan, and the low lands of Cutch Gundava and Amund, Dajil to the eastward ; bounded on the north by Khorassan ; on the south by Lus and Sinde; on the west by Mekran ; and on the east by Sinde. His

clear revenue is about three lacks of rupees, and is collected from Amund Dajil, Cutch Gundava, and the bazaar tolls of Kelat. The Khans of Baloochistan acknowledge the paramount authority of the Cabul sovereigus, to whom they are feudatories ; but their obedi- ence is in proportion to the talents of the reigning prince, and the political circumstances of the Cabul government. The present territories of Mahmood Khan are supposed capable of raising an army, infantry and cavalry, of 26,000 men, although formerly the sovereign could raise 60,000. See Christie, Kinneir, ––$r.

It was probably without intention that Nasir Khan laid the foundation of the present govern- ment, which is rather a military republic than an absolute monarchy. The Serdars or chiefs hold their lands on feudal tenure, each tribe chooses its own Serdar,in whose family the office becomes hereditary. The general administration is, how- ever, still vested in the Khan of Kelat. Each

Serdar in time of war attends with his quota of troops, and is bound to obey the orders of the sovereign ; but if to his own detriment, receives compensation.

A new code of laws was established by Nasir, of which the Koran is the standard, accompanied however by the following improvements. In cases of murder where the deceased is a fo- reigner, every one concerned in the crime is im- mediately executed without commutation. Bur- glaries and night robberies are punished with death. Adultery may be avenged by the hus- band; but the clearest testimonials of guilt are required ; and if he fails of producing these he is liable to severe punishment. Minor offences are cognizable by the Serdar of the Kheil, or family, with an appeal lying to the Serdar of the whole tribe, and ultimately to the Khan himself, who commonly consults the heads of his family before he decides on any intricate cause. No execution can take place without an order from the sovereign, except in case of the murder of a traveller on his road, when, as a speedy execution is necessaiy, the nearest chief is empowered to enforce the penalty of the law.

BALOR, a town on the east coast of the island of Luzon. Long. 122–– 5′ E., lat. 15–– 18′ N.

BAL'OTADE, n. s. The leap of an horse, so that when his fore-feet are in

the air, he shows nothing but the shoes of his hinder feet, without yerking out. A balotade differs from a capriole ; for when a horse works at caprioles, he yerks out his hinder legs with all his force. ††† Farrier's Dictionary.

BALOTE, a town on the east coast of the island of Mindoro. Long. 121†† 15′ E., lat. 13†† 3′ N.

BALOU, a town of Armenia, twenty-five miles north-west of Khars.

BALREMIT BAY, a bay on the east coast of the island of Colonsay, one of the Hebrides. Long. 6†† 7′ W., lat. 56†† 6′ N.

BALRIE CASTLE, a very ancient fort, now in ruins, situated on an eminence at the west end of the moss of that name, Angusshire, Scotland. It was destroyed by the marquis of Argyll in 1640. The walls are eight feet thick. This castle and the adjacent lands were the property of the last viscount Fenton.

BALROTIIERY, or BALRUDDERY, a town of Ireland, in the county of Dublin, fourteen miles from the city and one from the sea.

BALSA, an ancient town of Lusitania in the Ager-Cunseus ; now called Tavira, in Algarva.

BALSAM, or NATIVE BALSAM, an oily, resinous, liquid substance, flowing either spontaneously, or by means of incision, from certain plants. There are a great variety of balsams, particularly distinguished by the names of the substances from which they are obtained ; and which will be found explained under their names as they occur.

BAL'SAM, BALSAM'ATION, BALSAMˆCAL, BALSAM'ICK, n. & adj.\ BALSAM'OUS.

Of the same deri- vation as balm, but

††† more limited in its application. It is al-

1 most exclusively used

in designate an unctuous or oily mixture, gene- rally attended with fragrance.

Should I sigh out my days in grief, And, as my beads, count miseries ; My mind would meet with no relief, For all the balsam of my eyes. Stevenstm.

Brave spirits are a balsam to themselves, There is a nobleness of mind that

heals Wounds beyond salres. Cartwriyht.

Is this the balsam that the usuring senate Pours into captains' wounds ? Ha ! banishment ? It comes not ill ; I hate not to be banish'd ; It is a cause worthy my spleen and fury, That I may strike at Athens. Shakspeare,

Christ's blood our balsam ; if that cure us here, Him, when our judge, we shall not find severe.

Denham.

That this herb [ros-solis] is the cause thereof, shep- herds affirm and deny ; whether it hath a cordial vir- tue by sudden refection, sensible experiment doth hardly confirm ; but that it may have a baUamical and resumptive virtue, whereby it becomes a good medi- cine in catarxhes and consumptive dispositions, prac- tice and reason conclude. Brown's Vulgar Erroart.

The Britons squeeze the works Of sedulous bees, and mixing odorous herbs, Prepare balsamic cups, to wheezing lungs Medicinal, and short-breath'd ancient sires.

J. Philipt.

Now the radical moisture is not the tallow or fat of animals, but an oily and balsamotu substance ; for the fat or tallow, as also the phlegm or watery parts, are cold ; whereas the oily and balsamovs parts are of a lively heat and spirit. Sterne.

BALSAM APPLE. Lat. momordica. An annual Indian plant.

BALSAM TREE. This is a shrub which scarce grows taller than the pomegranate-tree ; the blos- soms are like small stars, very fragrant ; whence spring out little pointed pods, enclosing a fruit like an almond, called carpobalsamum, as the wood is called xylobalsamum, and the juice opo- balsamum.

BALSAMATION is used by some writers for the art or act of embalming dead bodies. Dr. Hook speaks of an universal balsamation, or method of preserving all kinds of bodies from corruption, invented by Dr. Elshot.

BALSAMELˆON, in the materia medica, a name given by some to the balm of Gilead.

BALSAMELJEUM, in ecclesiastical writers, the sacred chrysm.

BALSAMINA SCANDENS, a name given to the large fruited white briony

of Ceylon.

BALSAMINE, FEMALE, in botany, the name given by Tournefort to a genus of plants, called by Linnseus, impatiens, and belonging to the class of syngenesia monogamia.

BALSAMITA, a species of tansy.

BALSAMICA. See BALSAMICS.

BALSAMICS, BALSAMICA, Latin, i. e. mitt- gating; this term includes medicines of very different qualities, as emollients, detergents, re- storatives, 8cc. ; but in all these kinds there are these requisites, that they be soft, yielding, and adhesive; and by their smallness they have a ready disposition to motion. Medicines of this tribe are generally required for complaints whose seat is in the viscera ; and as they cannot be con- veyed there but by the common road of the cir- culation, it follows that no great effects can be ex- pected from them but by their long continuation

Hoffman calls by the name of balsamics those medicines which are hot and acrid, also the natural balsams, gums, &c. by which the vital heat is increased.

BALSAMITA, in botany, a genus of plants, of the class syngenesia, and order polygamia cequalis. Its generic character, is receptacle naked, pappus none, calyx imbricate. It con- tains four species, of which the only one re- quiring notice is the B. vulgaris (tanacetum balsa- mita of Linnaeus) common costmary, or alecost. Its stem is herbaceous, leaves oval, dentate ; in- ferior petiolate; superior sessile, auriculate at the base, flowers corymbose. It is a perennial plant, native of the south of France and Italy ; and was formerly prescribed in the pharmacopoeias as a carminative.

BALSAS, a town of Peru, in the province of Chachapuyas, on the east shore of the Amazons, forty miles north of Caxamarca. Lat. 6►► 16′ S.

BALSEY CLIFT, a high land on the east coast of England, between Orford and Harwich.

BALSO, a river of Quito, which, after wind- ing through forests, enters the Bobonasa.

BALSTAL, a well-built market town of Swit- zerland, in the canton of

Solothurn. The inha- bitants carry on a great trade between Bale and Solothurn. Ten miles north-east of Solothum.

BALSAMOX (Theodore), patriarch of Anti- och in the twelfth century. He wrote a number of works on the canon law, which were printed at Paris, in folio, in 1020.

BALSHAM, or HI.I.ESAI.E (Hugh de), the tenth bishop of F.ly, in the thirteenth century, was first a monk, and afterwards subprior of the Be- nedictine monastery at Ely. In 1247 he was chosen bishop by the convent. But king Henry III. who had recommended his chancellor Henry de Wengham, refused to confirm his election; whereupon Balsham went to Rome to be con- firmed by the pope ; winch, however, was not done for ten years, when at last his holiness con- firmed his election in 12/>7. Bishop Balsham then executed what he had long intended; by laying thu foundation of St. Peter's College, Cam- bridge, the first in that I Diversity, which has immortalised his name as the patron of literature. He was also very charitable to the poor. He di<-d in 12!'>f>, and was buried in the cathedral of Ely.

BALTA, or 15.u TO, a town of European Rus- sia, the capital of a circle in the government of Podolia, Mtiuiti-d on the Kadyma, a tributary stream of the B;v_;. Before the annexation of tin-; part of Poland to Russia, one half of Balta belonged to the palatinate of Braclaw, and the other to Tari.iry. In 1 7 ti~, in the war which broke out between the Russians and Turks, the town of Baha was laid in ashes by the former. Sixty- five miles N..X. E. of Bender.

1'iu.TA, out- of the .-mailer Shetland islands, near the east coast of I'nst. Long. 4►► 2' W., iat. 01►► 7' .

BA!.TA(iI, amonu; the Turks, porters, and hewers of wood, in tin; court of the grand seig- nior ; who also mount on horseback when the emprror rides out. Part of them, who, for that purpose, must be castrated, keep watch at the gates of the first and second courts of the ser-

aglio. These last are called capigi, and their commander capigi pacha.

BALTCHUTZKO, a town of Asiatic Russia, in the government of Kolhyvan.

BALTEATUS, in entomology, a species of cimex, inhabiting South America. 2. A species of elater, of a black color ; anterior half of the wing cases rufous. Linn. Fn. Suec. A native of Europe.

BALTEUS, in entomology, a species of cer- ambyx, that inhabits Lusitania. The thorax spinous ; body ferruginous ; abdomen ovate ; wing cases with a

blackish band. Linnaeus.

BALTHASAR (Christopher) a learned French author of the seventeenth century. He followed the profession of an advocate ; but having em- braced the protestant religion, from pleading at the bar, he became a champion for the reformed churches; and in 1659 a pension was settled upon him by the national synod at Loudun, in consideration of his services. He displayed great abilities in combating Baronius.

BALTHAZARINI, an Italian musician of the sixteenth century, who was a great favorite at the French court in the reign of Henry III. He composed a ballet, which he called Ceres and her Nymphs, in 1531, designed for the marriage of the duke de Joyeuse with Mademoiselle de Vaudemont, the queen's sister ; and this is thought to have been the origin of the ballet he- roique, in France.

BALTHEUS ORIONIS, the belt of Orion, in astronomy, a part of the constellation of Orion, consisting of three bright stars of the second magnitude, placed nearly in a right line in Orion's girdle.

BALTHICA, in conchology, a species of tel- lina that inhabits the Baltic Sea ; the shell roundish, smooth outside, carnation color. Linn. Fn. Suec. About the size of a horse-bean, and very rarely larger ; .extremely thin, pellucid, brittle, and white within. Chemnitz, &c.

BALTHICA, a species of helix, found on the shores of the Baltic ; the shell imperforated, ovate, and pointed ; with elevated wrinkles ; aper- ture ovate, and very ample. Linn. Fn. Suec. This animal is black, with two tentacula; shell pellucid, and with four whorls.

BALTHICUS, a species of nautilus, of the smaller kind, that is found adhering to the roots of fuci. This shell is sometimes opaque, some- times glossy, frequently pellucid ; and the wreaths either smooth, striated, ribbed, or tuberculated. It is specifically distinguished by being white, convex, aperture linear, and the first wreath much larger than the others. Schroeb.

BALTIA, an island in the Baltic Sea which gives name to it.

BALTIC SEA. A large gulf of the German Ocean, penetrating trie upper part of Europe, and surrounded by the coasts of Denmark, Sweden, Russia, Germany, and Prussia. It is 600 miles in length ; from eighty to 150 miles in breadth, commencing at the Danish islands of Eunen and Zealand ; it stretches beyond the sixty-fifth degree of latitude, including an area of surface equal to 10,000 square leagues. The two extreme divisions of this sea are the Gulfs of Bothnia and Finland ; the former running

east to the vicinity of Petersburg, the latter ex- tending north till it penetrates the arctic regions.

Its access is through a narrow winding chan- nel, or strait, on the west of the European con- tinent, the northern part of which, communi- cating with the ocean on the south-west, is called the Scaggerack ; the middle consists of the Great and Little Belts, and the southern part of the Cattegat. Tin's entrance to the Baltic is sometimes called the sound. It is also connected near Pillau and Memel by narrow passages with two large lakes called the Frische Haff and Curische Haff.

The proximity of the coasts and islands, the shallowness of the waters, the flatness of the Prussian shore, the mguedness of that of Sweden, the frequent and sudden changes of the winds, and the violent storms with which they are at- tended, render this sea very dangerous for navi- gators, although the breakers are much less for- midable than those in the German Ocean. The general depth of the Baltic is from fifteen to twenty fathoms, although in some places it is much less, and in others much more. Like other inland seas the Baltic has no tides, or, if it has, they are scarcely perceptible ; but a strong cur- rent generally sets towards the ocean, which, when checked by a west wind forcing the waters in a contrary direction through the straits, causes the Baltic to rise much above its ordinary level. The waters of this sea are colder and less salt than those of the Northern Ocean ; from which circumstance, together with the deficiency of tides, it is usually for about three months of the year so completely frozen as to admit in many places of a passage over the ice. The ice in the southern part begins to break up in April, al- though the two gulfs are not generally cleared before the middle of May.

Numerous rivers, of different degrees of im- portance, empty themselves into this sea, which greatly contribute to the freshness of its waters, and, together with the diminished evaporation of the northern regions, occasion the current to which we have already referred. The chief of them are the Warnow, the Oder, the Peene, the Persante, the Wipper, the Vistula, the Pregel, the Memel or the Niemen, the Dwina, the Aura-Jccki, the Cano, the Torneo, the Skel- leftea, the Pitea, the Lulea, the Umea, the An- germany, the Motala, the Luisna, and the Dal. The earthy particles conveyed into the bed of the Baltic by means of streams, rivers, &c. are said to cause the depth of this sea to diminish at the rate of four feet in a century ; and Mr. Von Buck, in his Travels in Sweden and Lapland, observes with respect to the Bothnian Gulf, that the sea-bays have become marshes by the conti-

nual decrease of the gulf waters ; and that we may soon expect to see the site of that aquatic region covered with fields and cottages.

The islands of the Baltic are numerous, one chain of which, reaching from Finland to Swe- den, divides the southern part of the sea from the northern, commonly called the Gulf of Both- nia. The chief of the Danish islands forming the immediate seat of the governmnent are Zea- land and Funen. Near the shores of Livonia are the islands Dago and Oesel. Gothland and

Oeland belong to Sweden ; Rugen to Pomerania ; and Moen, Bornholm, Falster, Alsen, Laaland, together with several others, are subject to the Danes.

Considerable fisheries are formed on some of the coasts of the Baltic, and Mr. Fischer, a naturalist of Livonia, enumerates nearly fifty dif- ferent species of fish in the waters of that pro- vince ; the principal of which known as articles of commerce are salmon, pike, streamlings, and lam- preys.

The general commerce of the Baltic is very considerable, since it washes the shores of Den- mark, Sweden, Russia, Prussia, and part of Germany; it has a communication with the Cas- pian Sea, by means of the canals of Ladoga, Vyschnei-Volotschok, and Maria, thus opening facilities for conveying the commodities of nor- thern Europe into the interior of Asia.

All vessels that pass in or out of the Baltic pay a certain duty to the Danish government, for th^e maintaining of light-houses, &c. This toll is received at Elsinore, where the vessels are regularly entered in the national register, a view of which for the years 1816 and 1817, will enable the reader to form some idea of the com- parative importance of the Baltic commerce. A second entrance into the Baltic, by the canal of Gotha, was opened in 1832.

*Jn 1816 were registered the following vessels : ***

From the

From the

North Sea.

Baltic.

America

85

Bremen . .

55

56

Danish . .

408

379

Dutch . .

473

403

English . .

942

906

French . .

8

8

Hamburgh .

18

18

Hanover . .

113

111

Lubeck . .

23

22

Mecklenburg

126

127

Norwegian .

396

398

Oldenburg .

16

13

Pappenburg

22

17

Portuguese .

25

23

Prussian . .

525

489

Rostock . .

65

68

Russian . .

208

191

Spanish . .

5

4

Swedish . .

1097

945

/

4608

4263

4fi08

Total number th Sound in

it passed the \ 1816 . ||1

TUV/U

8871

Number to and from in 1831 12,938 4778 British

Ditto .... 183212,2023831 do.

442 B A L T I C S E A.

In 1817 were registered the following vesselt : ###

America

Bremen . ###

Danish . .

Dutch . .

English . .

French . .

Hamburgh .

Hanover . . Mecklenburgh

Norwegian .

Prussian . .

Russian . . Swedish Other nations

Total number of vessels from)

the North Sea . . J

From the Baltic the same year

Total number of ships that) passed the Sound in 1817 S

6758 6390

13,148

*total in 1831, 12,938 Do. in 18I1-2, 1-2. '?()***

47/8 British

*The winds are extremely variable in the Baltic; but they blow most commonly from the east in the spring, and from the west in autumn; calms are seldom experienced except in the middle of the summer. The irregular variations of the level of the Baltic somewhat resemble tides, and occur generally in autumn, when the weather threatens rain. These sensible swells frequently last for weeks together, and their maximum rise being three feet and a-lialf, all the low hauls are inun- dated. On these occasions, the fresh-water lakes which communicate with the sea are rendered brackish. In the Gulf of Bothnia, the fall of the ***water is usually succeeded by north winds, whereas, at Stockholm, these winds follow the elevation. M. Kraft, who was professor of ex- perimental philosophy in the imperial academy at I'etersburuh, published a treatise on the inun- dations of the Neva at the autumnal equinox, in which he observes, that three or four days before or after the full or new moon, a violent north-west wind drives the waters of the Northern Ocean, dur- ing the inllux of the tide, into the Baltic, and is im- mediately succeeded by a south wind in that sea and the (!ulf of Finland, to the concurrent effect of uhich he attributes the phenomena in ques- tion; but Schultens, a learned Swede, who had closely studied the physical geography of the Baltic, attributed all the irregular elevations of*

*this sea to the unequal pressure of the atmos- phere on different portions of the water, de- rangiir.:, in his opinion, their common level, lie was led to this conclusion by having observed repeatedly, that when the waters were about to rise, the barometer fell, and that when the waters ***vere about to fall the barometer rose.*

The waters of the Baltic are of different de- grees of saltuess in different places, and in the same places at different seasons, and during dif- ferent winds. The waves are short and broken,

in consequence of sudden changes of wind, ir- regular depths, and strong currents, many of which, especially towards the north, rise thrice in the course of a year. The superior and infe- rior currents of the Sound are remarkable. These were discovered first by some of our own countrymen, who, being in a boat in the middle of the channel, found that they drifted towards the Cattegat; but upon letting down a loaded bucket to the depth of four or five fathoms found that their boat became stationary, and upon sinking the bucket still deeper, the boat drifted in a direction diametrically opposite to the superficial current.

By the transfer of Swedish Pomerania to Prussia, of Swedish Finland to Russia, and of Norway to Sweden, the commerce and resources of the Baltic nations have undergone a consider- able change.

The following is a sketch of the staple articles of their commerce at the beginning of the pre- sent century.

Danish vessels visit the ports of Mecklenburgh and Pomerania, with horses, bullocks, butter, cheese, fish, fish-oil, colonial produce, &.C.; and receive in return, thread, linen, brandy, wool, hardware, paper, &c. To Petersburgh, Riga, and Memel, the Danes send herrings and dried fish, woollen manufactures, salt of France, Spain, and Portugal, India and China goods, oysters, and dog-skin gloves ; for which they receive potash, planks, fire-wood, flax and hemp, cor- dage, iron, copper, linens, and corn. To Hol- land, Denmark exports rape-seed, salted and dried fish, and timber ; and receives spices, drugs, corn, pipes, and paper. To England, hides, bar-iron, kelp, furs, tar, timber, &c. The returns are, hardware goods, woollens, cot- tons, hats, and colonial produce. From the official account of the real value of the imports into Denmark from Great Britain, from the 5th January 1798, to the 5th January 1808, laid before Parliament, in consequence of the attack on Copenhagen, it appears, that from 1798 to 1803, they are rated about half a million; and that from 1803 to 1808, they varied from two to six millions. France receives from Denmark, horses, butter, cheese, fish, &c. ; and returns salt, wines, brandy, fruits, silks, &c. The exports to Spain and Portugal are nearly the same as to France ; the imports also are

the same, with the addition of wool and American produce. To the Mediterranean, Denmark sends fish, salted provisions, butter, iron, &c. ; and receives wines, brandy, oils, fruit, and salt. The Danes derive great profit from hiring their vessels to the ports of Italy, as their flag is generally respected by the Barbary States. The exports to the Faroe Islands are wheat, flour, brandy, tea, coffee, sugar, linens, &c.; the imports are dried and salted fish, fish-oil, feathers, hides, tallow, and worsted stockings. The exports to, and imports from, Iceland, are nearly the same ; the imports from Greenland are whale-oil and bone, seal-oil and skins, eider down ; the exports nearly the same as to the Farot and Iceland Islands. Den- mark has also a trifling trade to the East and West Indies.

lu 1807 the Danish fleet consisted of twenty-

six sail of the line ; sixteen frigates ; nine sloops, and thirty gun-vessels.

The foreign commerce of Sweden is confined to what are called staple towns, which alone have custom-houses ; they are Stockholm, Got- tenburgh, Warberg, Halmstad, Nordkceping, Landscrona, Carlscrona, Christianstad, Carl- shamm, Calmar, Westervic, Uddervalla, Mar- strand, Gefle ; and Abo and Wasa in Finland, now given up to Russia. The foreign commerce is supposed to be divided among these cities, as follows :

Stockholm ˆths of exports, and ˆ of imports.

Gotenburgh -&ths ⬚⬚

The other ports ˆths ˆ

To the foreign parts of the Baltic, Sweden ex- ports iron, steel, copper, lime, alum, and her- rings, and receives corn, hemp, tallow, and hides. To Holland, iron ; and receives spices, tobacco, prepared colors and papers. To Eng- land, she exports iron, timber, pitch, tar, potash, and herrings ; her imports are lead, tin, leather, bear, butter and cheese ; and every kind of ma- nufacture and colonial produce. In France, Spain, and Portugal, the exports are iron, steel, copper and brass, and wines, brandy, fruits ; oil and silks are the returns. To Italy and the Levant she exports all her territorial produc- tions; and receives salts, spices, fruits, and cot- ton. There are from four to six ships of 600 to 1000 tons burden in the East India trade. In 1800 she had above 2000 merchant vessels of twenty tons and upwards ;

but the rupture with England and cession of Finland reduced them, in 1810, to 1500. In 1809 her navy was re- duced, in consequence of her wars with Russia, to thirteen sail of the line, nine or ten frigates, and about 150 vessels of the flotilla.

The Prussian ports, including Dantzic, export almost the whole of the commercial productions of Poland, consisting of corn, fir planks and rafters, masts, hemp, tar, pitch, potash, hides and tallow, leather, honey and wax; besides Pomeranian oak, brandy, woollens, linens, ca- viar, and amber. The imports are wines, coffee, sugar, tobacco, spices, salt, iron, copper, Spanish wool, herrings, and flax seed from Livonia and Courland. Towards the close of the last cen- tury, the merchant marine of the Prussian ports on the Baltic, consisted of between 900 and 1000 ships. Salted and smoked meat, hides, wool, butter, cheese, corn, and fruits, are the exports of that part of Pomerania which belonged to Sweden and Mecklenburgh ; the corn of the latter is principally taken off by England ; that of Pomerania, as well as the fruits, used to go to Sweden.

The exports and imports of Russia, in the Baltic, in the beginning of this century, were

Exports. Imports.

Rubles. Rubles.

In 1802 – 47,000,000 33,000,000

1804 – 45,000,000 27,000,000

1805 – 52,000,000 29,000,000

The number of her merchant-vessels that na- vigate the Baltic and the Ocean, do not exceed fifty ; perhaps 100 smaller vessels carry on the coastu-.g-trade here; and about 100 craft of

twenty or thirty tons are employed in loading and discharging these vessels at Cronstadt, that cannot enter the Neva. At the close of 1807, the Russian Baltic fleet consisted of twenty sail of the line, fourteen frigates, six brigs and cutters, and nineteen small craft ; and the Baltic flotilla, of twenty galleys, twenty-five floating batteries, eighty-one gun-boats, and sixteen yauls.

BALTIC PORT (formerly Rogerwick, from the island of Roog, on which it is built), a sea-port of European Russia, in Esthonia, now the govern- ment of Revel, at the influx of the rivulet of Pa- dis into the Baltic. The fortifications were begun by Peter I. but discontinued by Catherine II. Were

they completed, few harbours would equal it in size, depth, or security. Thirty-eight miles west of Revel, 150 north of Riga, and 220 west by south of St. Petersburgh.

BALTIMORA, in botany, a genus of the po- lygamia necessaria order, and syngenesia class of plants. The receptaculum is chaffy ; there is no pappus ; the calyx is cylindrical and polyphyl- lous; and the ray of the corolla is quinqueflo- rous. There is but one species, viz. B. recta, a native of Maryland. It is allied to Milleria.

BALTIMORE, a large, populous, and well cultivated county of the western shore of Mary- land, is bounded on the east by Harford county and the Chesapeak, north by York county, Penn- sylvania, south by Anne-Arundel county, south- west by a small point of Montgomery, and west by Frederick. It is thirty-six miles from north to south, and forty-five from east to west, and contained in 1820, 24,580 white, and 33,463 total population, exclusive of the city of Balti- more. In this county are found vast quantities of iron ore of the best quality, and it is watered by numerous rivers.

BALTIMORE, the largest city in Maryland, the third in population, and the fourth in commer- cial importance in the United States, is built upon a bay, which opens from the north side of Patapsco river, and affords a spacious and conve- nient harbour. The strait which connects this bay with the river is scarcely a pistol-shot across, and is well defended by fort M'Henry. A small river, called Jones's Falls, empties into the north side of the harbour, and divides the city into two parts, called the Town and Fell's Point, con- nected by bridges. At Fell's Point the water is deep enough for vessels of 500 or 600 tons, but none larger than 200 tons can go up to the city. Baltimore is well situated for commerce. It supplies Maryland, and large portions of Penn- sylvania and the western states with foreign goods, and is supposed to contain nearly 70,000 inha- bitants. Its rapid growth maybe thus exhibited: In 17ˆ5 the population was 300

1790 13,503

1810 46,555

1820 62,627

1830 80,625

< In 1790 the tons of shipping trading here were 13,564. In 1830 106,303, in 633 foreign and 501 coasting vessels. Baltimore cannot be considered on the whole a very healthy place, al- though the atmosphere is said to have become less humid of late : in autumn, the most unfa-

vourable season, the opulent portion of the in-

habitants generally retire to their country seats in the neighbourhood. It is in general well built, most of the houses being of brick, and many lately erected displaying considerable taste. Its general plan is similar to that of Philadelphia, the streets crossing each other at right angles. Some of these are spacious, one in particular is about a mile long, and eighty feet wide, running east and west, nearly parallel to the water. The ground on the north and east of the city rises to a considerable elevation, and with the number of ships in the harbour forms a scene very interest- ing. The principal public buildings are a court- house, penitentiary, jail, almshouse, hospital, theatre, exchange, museum, a gallery of paint- ings, and a public library, possessing about 10,000 volumes. Besides these there are ten banks, and thirty-one places for public worship, belonging to nearly all the denominations of reli- gious professors to be found in the United States. The exchange is a vast pile of build ing,, very lately erected, 255 feet in length by 140 in breadth, comprising four wings. The Roman Catholic cathedral, the Unitarian church, St. Paul's church, the Court-house, and the Union bunk, are all spacious and elegant structures. The Washington monument is another ornament to this city. It stands in an elevated situation, at a short distance above the compact part of the town. The base is fifty feet square, and twenty- three hisih, on which is placed another square of about half the same size and elevation. Upon this stands a column of twenty feet diameter at the bottom, and fourteen at the top, on which the statue of Washington is placed, 163 feet from the ground, its literary and scientific institutions are very respectable. St. Mary's college was incorporated as a university in 1806, and is well endowed. It has a <_rood library with a philoso- phical and chemical apparatus; and is under the direction of a president, a professor of divinity, one of moral, and one of natural, philosophy, one of the belles lettres, four of languages and ma- thematics, besides eiu;ht assistant tutors. The number of students is generally about 140; but they are admitted at a much earlier age than in the universities of Kngland. The medical college was founded in 1807. It received a new charter in 1BT.2, when it was denominated the university of Maryland, nnd was authorised to annex the oilier faculties of lanuuaures, arts and sciences, law and divinity, to that of physic; but the medical department was the only one lately in operation. The building is spacious and elegant, and the instruction is under the direction of a provost and six professors of anatomy, &c. There is ano- ther literarv institution,

called the Baltimore folleuv. Four daily newspapers are published here. Above sixty flour-mills, besides forges, <\c. are placed on the stream, within a few miles of the town, and add greatly to its trade. In 1814 an attack was made on this city by the British troops under (Jeneral H"ss, but they were re- pulsed and their commander slain : a structure, called the Battle monument, commemorates this circumstance. A rail-road extends from Balti- more to I'iusburi;-, a distance of 300 miles. HA) IIMOIU , a town of Ireland, in the county

of Cork, on a head land, running into the sea, five miles north-east of Cape Clear.

BALTIMORE BIRD. See ORIOLUS.

BALTINGLASS, a town of Ireland in the county of Wicklow, where are manufactures of woollen, linen, and diaper. It is situated on the Slaney, forty-nine miles south of Dublin.

BALTUS (John Francis), a French Jesuit, born at Meritz in 1627, was librarian at Rheims, and wrote an Answer to Fontenelle's History of Oracles, printed at Strasburg, 8vo.

BALTZAR (Thomas), an eminent musical composer, and the finest performer on the violin of his time, born in Lubec. He came into Eng- land in 1658, and lived about two years with Sir Anthony Cope, of Hanwel, in Oxfordshire. He was the great competitor of Davis Mell, who, though a clockmaker, was, till Baltzar came hither, allowed to be the finest performer on the violin in England ; and after his arrival he divided with him the public applause, it being agreed that Mell excelled in the fineness of his tone and the sweetness of his manner, but Baltzar in the power of execution and command of the instru- ment. It is said of the latter that he first taught the English the practice of shifting, and the use of the upper part of the finger-board. Baltzar shortened his days by excessive drinking, and was buried in Westminster abbey, in 1663.

BALVAG, a river of Perthshire, which runs through and connects the lakes, Lochdoine, Loch- voil and Loch-Lubnaig, in the parish of Bal- quhidder. It abounds in trout of different species, char, &c. and has occasionally a few salmon.

BALVAIRD, a district of Perthshire, in the parish of Abernethy, memorable for one of those monuments of ancient ingenuity and superstition, called rocking stones. It is mentioned by Bu- chanan, but has long ago lost its motion ; being choked up with earth and gravel. There is another, still movable in the parish of Dron.

BALVAIRD CASTLE, an ancient edifice in Perthshire, among the hills, in the south-west corner of the parish of Abernethy ; which be- longed originally to the Murrays of Balvaird, and is now, along with the estate, the property of the earl of Mansfield.

BALUE (John), a native of France, born about 1420. His parents were in low circum- stances, but by art and servility he obtained se- veral rich preferments, and at last was made bishop of Angers, when his old patron of that see was deposed. He afterwards got a cardinal's hat from Paul II. But a correspondence which he had engaged in with the dukes of Burgundy and Bern, to the disadvantage of Louis, being discovered, he was seized and confined in an iron cage eleven years. After his liberation he went to Rome, from whence he was sent as legate by Sixtus V. to France. He died in 1491.

BALVENIE, or BALVENY, a mountainous district of Scotland, in the county of Bamff, on the western side, watered by the Spey, where there is a noted rock, which produces hones ana whet-stones sufficient to supply the whole island Here are also veins of alum-stone, and springs of alum water.

BALVENY CASTLE, an ancient fort ; and

BALVENY CRAG, a remarkable hill or rock, in the parish of Mortlach in Banffshire, exhibiting, with the adjacent grounds, a great deal of pictu- resque rural scenery, and a pleasing mixture of the sweet and the wild.

BALUSTER, n. t. ˆ Fr. ballustre, Span.

BALUSTRADE, n. s. ybalauster, Ital. ba-

BALUs'TERED,/ > ar□□. & adj. j laustrio,Gr.fiaXav- TIOV, the flower in blossom of the pomegranate. Dr. Johnson, however, derives it from the Italian balestriera, a spike-hole, or loop-hole, to shoot out at. Baluster is sometimes corruptly written banister. A small column or pilaster from an inch and three quarters to four inches square, or diameter : their dimensions and forms are various. They are frequently adorned with mouldings ; they are placed with rails on stairs, and in the fronts of galleries in churches. Balusters, when continued form a balustrade.

This should first have been planched over, and

railed about with balusters. Carew.

The terraces and balustrades built along the rivor, are

now overgrown with roses. Swinburne' Travels.*

Here is a vista, there the doors unfold,

Balconies here are baluttred with gold.

Dry den's Art of Poetry.

BALUSTRADE, n. s. ; from baluster ; an as- semblage of one or more rows of little tuined pillars, called ballusters, fixed upon a terrace, or the top of a building, for separating one part from another.

BALUZE, (Stephen) a French writer, born in 1641, and educated at Toulouse, where he was patronised by the archbishop, after whose death he was appointed librarian to M. Colbert. In 1693 the king made him professor of canon law, and gave him a pension, with the post of direc- tor of the royal college, for writing the lives of the popes of Avignon ; both of which advantages he soon lost in the fluctuation of court parties; having inserted some offensive notes in his Ge- nealogical History of the house of Auvergne. He is much more famed for collecting ancient MSS. and illustrating them with notes, than for his own compositions. He died in 1718.

BALYUR, or BALIUR, a sea-port of Africa, in the kingdom of Dancali, about fourteen hours journey west from Babel-Mandel. It is remark- able only for being the landing place of the Abys- sinian patriarch, Alphonsus Mendez, with his Jesuits and Portuguese, April 3d, 1724.

BALZAC (John Lewis Guez de), born at An- gouleme in 1595. Voltaire allows him the merit of having given numbers and harmony to the French prose, but censures his style as bombastic. Cardinal Richelieu gave him a pension of 2000 livres, with the titles of counsellor of state and historiographer of France. He died in 1 654 ; and was buried in the hospital of Notre Dame des Anges, at Angouleme to which he bequeathed 12,000 livres. Besides his Letters, he wrote a work called (Euvres Diverses, i. e. on various subjects ; The Prince ; The Christian Socrates, &c. ; and many other pieces, which have been published in two volumes folio.

BAM, BEAM, being initials in the name of any place, usually imply it to have been woody ; from the Sax. beam, which we use in the same sense to this day. ††† Gibson.

BAMAH, a high place in Jerusalem, where there was an idol temple.

BAMBA, the largest province of the kingdom of Congo, in Africa. It is situated between the rivers Ambriz anoˆCsanza; the last of which parts it from Pemba on the east, as the Ambriz does from the province of Sogno on the north. Along the sea coasts it extends on the north to the river Lelunda ; and on the south to the Danda, wh,ich parts it from the kingdom of Angola. The governors of this province bear the title of dukes, and are al- most independent of the king. The soil is very fertile, and would produce all the necessaries of life in great plenty, were the inhabitants indus- trious in its cultivation. The sea coasts produce a vast quantity of salt, which could be purified with little trouble. The fishery of the zimb's, or little sea-snail, is here carried on, whose shell is the current coin, not only in this and the neigh- bouring kingdom, but also in the most distant parts of Africa. Here are also said to be mines of gold, silver, quicksilver, copper, tin, and iron, but the iron mines alone are allowed to be worked. Bamba, the capital, is thirty leagues inland. The other chief towns are, Panza or Penga, in a plain between the rivers Ambriz and Loze, and Mosulla or Marsoula.

BAMBARAH, an ancient city of Sinde, in Hindostan, supposed to have been the ancient Braminabad, a city which, in the tenth century, was the residence of a dynasty of Hindoo princes, when it had regular bastions (and corresponding defences), to the number of 1400, seventy yards distance.

BAMBARRA, one of the largest and most powerful kingdoms of central Africa, bounded on the west by Kaarta and Manding, on the south by Ludamar and Beeroo, on the east by Tombuctoo and Baedoo, and on the south by Kong and Mamana. It is generally placed be- tween 12►► & 18►► N. lat. and about 20"►► W. long. The country, though in some parts desert, is in general very fertile, and often reminded Mr. Park, he tells us, of the finest parts of Eng and. Besides the usual productions of this part of Africa, it yields the shea tree, the kernel of which forms a species of vegetable butter. The Niger traverses it from west to east, and is navigable by canoes through the whole extent of Barabarra. The inhabitants tan sheep and gaat skins, smelt iron, are pretty good smiths, and make a tolera- ble sort of beer of durrah, (sorghum vulgare), and the lotus-berries, (zyzyplms lotus). The land about Kabba was so well cultivated, as to remind Mr. Park of England. Their language is a dialect of the Mandingo. Their canoes are large, formed of two trunks of trees joined to- gether, but have neither sails nor masts Mr. Park, in travelling, passed through many popu- lous towns. Sego, the capital, he supposed to have 30,000, Sansanding, 10,000 or 11,000, and Jenne probably more inhabitants. Baedoo is tributary to the king of Bambarra, and some accounts represent Tombuctoo also to have fallen under his dominion. The inhabitants consist*

of a mixture of Moors and Negroes ; and though the sovereign is a Negro, the administration of many of the towns is in the hands of the Moors. That people are the most intelligent, active, and

commercial of the two ; hut their character is narsh, severe, and intolerant; whereas the Ne- groes are gentle and kind, the influence of which Mr. Park frequently experienced. The slaves brought from Bambarra are the most valued of any, both on the coast, and in Barbary. The trade with the coast is carried on by s'.ateas, or tra- velling merchants ; that with Barbary by the Moors from across the desert, either directly into Bambarra, or through the channel of Tombuc- too ; and although Bambarra itself does not pro- duce gold, it is the medium through which that of Manding, Kong, and Bambouk, is trans- mitted to many other parts of the continent. Mr. Park could form no satisfactory conjecture of the number of the inhabitants altogether. The name of this country w and the coast. Mr. O'Beirne was sent, in March 1820, by the governor of Sierra Leone on a mission to the Aliuami (Imam) of Timbo, and found there an envoy from Dhaa, king of Sego, sent to apologize to the governor for the deten- tion of .Mr. Docherd. Lieutenant Lung of the second West India regiment, offered to accom- pany this envoy back to S<'".;o ; and the envoy quitted Sierra Leone for Futah Jallon, in July 1821. Jenne is now under an independent Fel- 1 at all chief.

BAMBKIIG, a lar_re handsome town and bi- shopric lit' Francoiiia in (Germany, now forms part of the circle of the Maine and of lieizat, in Havana. It was formerly imperial, and the as nip \vas director of the circle of Franconia. lie enjoyed the privileges of an archbishop, im- mediately under the pope, and was the fourth amonˆ the spiritual princes of the empire. In 1007 the emperor Henry II. created his chan- cellor the first bishop of-Bamberg, and the succes- sion was regular until it was secularised and as- signed to Havana in 1803. The diocese included 14.'iO square miles, and more than 200,000 inha- bitants. The number of towns was nineteen. The bailiwics exceeded fifty, and the villages and hamlets \vre estimated at 1200. The whole of Humbert, including the secularised convents, is supposed to yield about .t'150,000 a year to the crown of Bavaria. 'I he country produces plenty of corn, fruits, and liquorice, and the manufac- tures of chinl/ and iron are flourishing. The town lias an university, founded in 1147; and is situated at the continence of the rivers Maine and Keidnitx. It is in part surrounded by walls and ditcliei The cathedral, with its four towers and

ricli treasury, the abbey of St. Michaelsberg, the ten monasteries and

nunneries (now mostly sup- pressed), the sixteen churches, the fifteen chapels, the new episcopal residence of Petersburgh, built by bishop Lotharius in 1702, the tombs of the emperor Henry II. and his wife, of Conrade III, and pope Clement II., are all worthy of regard, A Carmelite monastery, which is now secularised, contained a library of 14,000 volumes, besides many curious manuscripts ; and valuable collec- tions of books exist in the cathedral church and in the abbey of St. Michaelsberg. This last esta- blishment stands on a hill, and commands a de- lightful prospect. The university was converted into a lyceum in 1802. This place is noted for its abundant vegetable markets ; not less than 400 market-gardeners being resident here. It has been laid under several contributions by the Rus- sians and the French. It is supposed to contain 20,000 inhabitants.

BAMBERG, a town of Bohemia, situated at the foot of a mountain, in long. 16►► 50′ E., lat. 49►► 53′ N.

BAMBELE, in zoology. See RUTILUS. BAMBO, in commerce, an East Indian mea- sure, containing five English pints.

BAMBOCCIO, a celebrated painter of con- versations, landscapes, cattle, &c. was born at Laeren, near Naarden, in 1613. His name was Peter Van Laer ; but in Italy they gave him the name of Bamboccio, on account of the uncommon shape of his body, the lower part being one-third part longer than the upper, and his neck so short that it was buried between his shoulders. He had, however, an ample amends for the unseem- liness of his limbs, in the superior beauties of his mind ; he was endowed with an extensive genius ; and, indeed, he had an universal taste for every part of painting. See VAN LAER.

BAMBOO, an Indian plant of the reed kind, It has several shoots much larger than our ordi- nary reeds, which are knotty, and separated from space to space by joints. The importance of this plant to vast regions of the East, may well excuse our dwelling on some modes of its culture, and its peculiarities.

Botanists have generally ranked it with other reeds. Linnaeus, in the Systema Nature, describes two species, under the genus bambusa, which is characterised by scales three, covering the spike- lets, which are about five flowered ; calyx none ; corolla, a two valved glume ; style bifid ; seed one. But Loureiro, who saw it in its own cli- mate, characterises it as having flowers with six stamina ; panicle diffused, with imbricate spike- lets ; branches of the culm spiny ; calyx one / flowered. We shall not discuss its minute bota- nical characters, as it is the practical cultivation and great utility of the plant to which we would engage the reader's attention.

A native of the warmer climates only, though often growing luxuriously beyond the tropics, the bamboo rises to the height of forty, sixty, or even eighty feet, with a slender, hollow, shining, stem. Many, however, are only twelve or fifteen feet high; and those which attain the greatest height here mentioned are rather to be viewed as over- grown. The stem is extremely slender, some- times not exceeding the thickness of five inches

in them which are fifty feet high, and In others, being fifteen or, eighteen in diameter; the whole divided into joints separated by knots or inter- nodes, between which are distances varying from a few inches to several feet. Alternate branches spring from the base to the top ; which, with the pointed leaves of the knots, give the whole tree a most elegant appearance.

It will sometimes vegetate three or four inches in a single day, and it has been seen to rise twenty feet, and as thick as a man's wrist, in five or six weeks. Its full dimensions are frequently, therefore, attained in a year ; and the only change afterwards, is greater thickness and induration of the wood. Towards the root it is solid and com- pact ; and the cells of the stem become wider in proportion as they ascend. In Malabar it is said to bear fruit when fifteen years old, and that it then dies.

There seem to be several species which have not yet been recognised by systematic botanists. An observer of the bamboos of China, in general, considers that there are nine species or varieties, and an observer of those in Cochin-China, admits of eight. The former judges the difference to consist, first, in the size and height, for there is here the greatest disparity in those that are full grown ; and it has been supposed that some, if not all species, originally spring of their ultimate diameter, which receives no accession. Secondly, the distance of the knots, or length of joint, which, in certain species of full-grown bamboo, is only four inches, while, in others long and slen- der, they are nine or ten feet asunder. Thirdly, in the color of the wood, which is whitish, yel- low, brown, pale blue, or speckled. Fourthly, in the size and form of the knots, some swelling out from the stem above and below ; some en- circling it like a cord ; and those of the most sin- gular kind, which do not penetrate within to interrupt the tubular part of the bamboo. Fifthly, by the surface and figure of the internodes being channelled or covered with tubercles ; and a kind is said to exist, called the square bamboo. The varnished surface is also of different quality. Sixthly, the substance and thickness of the wood, which, varying without any relation to the dimen- sions of the plant, afford sufficient characteristics for constituting a species. The wood is either soft and tender, or very hard and

of great strength ; and the stem is either very thin and hollow, or almost totally filled up and solid, like other trees. But elsewhere, in Bangalore for example, this solidity is not ascribed to the difference of spe- cies, but to the tardiness of its growth in stony- places. Seventhly, it is said that there are bam- boos entirely devoid of branches, however old they may be; while others protrude as they spring from the earth. Eighthly, there is a great difference both in the hue and figure of the leaves, as also in their size ; they are bluish, ash- color, reddish, or mottled. Some are so large as to make good fans. Ninthly, the roots, though knotty, are found in one species to penetrate into the earth like a tuft of filaments.

This plant is to be found growing wild in most parts of the east, and is resorted to as occasion requires. It is regularly cultivated in plantations in the more genial climates, and preserved in

others in green-houses, &Q. It succeeds best in low sheltered spongy grounds, but the immediate contact of the root with water is said to be fatal to it. They propagate it by shoots, deposited in pits at the close of autumn or commencement of winter, eighteen inches or two feet deep ; and if it be designed to obtain bamboos of considerable size, the scyons are cut over as they spring up. It flourishes but in large plantations, as the plants yield considerable shelter to each other in their progress. As they run from the ground they are propped up and trained with rods of a proper height ; and if complete plants, are cut over, in order to obtain suitable shoots, which are chiefly sought after. This, also, makes the root strike out and take a secure hold of the ground. The planta- tion, in rainy seasons, is generally drained by a ditch, as it decays very fast in too damp grounds. To obtain good Bamboos, it is not uncommon to take a vigorous root with firm wood, and transplant it, leaving only four or five inches above the joint next the ground. The cavity is then filled with a mixture of horse-litter and sulphur. Sometimes the shoots are destroyed at an early stage during three successive years; and those springing in the fourth are then said to resemble the parent tree.

The earliest shoots of this plant are edible, and are served up at table in autumn like aspa- ragus; in a similar manner with that vegeta- ble, also, they are earthed over to keep them: they are also salted and eaten with rice. A fluid of grateful taste and odour is yielded from the hollow joints as the plant grows up, afford- ing an agreeable beverage. In its further progress this becomes a concrete substance called tabaxir or tabascheer, highly valued for its medicinal properties, and apparently a species of siliceous earth. It resists the impres- sion of acids, is indestructible by fire, and with alkalies forms a transparent glass. A decoction of the leaves of the bamboo is recommended in the east for coughs and sore-throat ; the bark for fever and vomiting; the buds as a diuretic ; and a com- pound of

the root with tobacco-leaves, betel-nut, and oil, forms an efficacious ointment. Many of the poorer classes in the most populous countries subsist entirely upon it in times of scarcity. The Hindoos eat its seeds roasted, mixed with honey as a delicacy, equal quantities of each being put into a hollow joint, coated externally with clay.

From the copious draught which a joint of the bamboo naturally yields, mankind are taught its use as a vessel for carrying water, and in some places no other bucket is employed. Many eastern nations build their houses solely of the bamboo-wood; entire, it forms their posts or columns ; split up, it serves for floors or rafters ; or, interwoven in lattice-work, it is employed for the sides of rooms, admitting light and air The roof is sometimes, also, of bamboo, for which two of its species are described to be specially adapted; and when split, which is accomplished with the greatest ease, it can be formed into lath or planks. Vessels of all kinds are framed out of it likewise, and fitted for sea. The hull is taken from the stem ; and some of the strongest plants are selected for masts of boats. In Bengal, a boat of four or five tons may be

furnished with both mast and yard from the same bamboo, at the cost of threepence; and the masts of larger vessels are sometimes formed by the union of several bamboos built up and joined. Those of considerable dimensions are used in the higher yards of larger ships, for which, by their great strength and lightness, they are well adapted.

This important plant is also employed in the construction of agricultural and domestic imple- ments; and in all materials and implements required in fishery, with the exception of hooks and nets. In Thibet bows are made of it, by the union of two pieces with many bands ; and in the same country also, it is employed for pipes, in transmitting water, for several miles, to reservoirs or gardens. A single joint is sufficiently capacious to serve as a bucket; and in some places, no other is used. In the south-west of Asia, a species of slender growth supplies writing-pens or reeds. Baskets, cages, hats, and various ornamental articles, are to be added to the catalogue of its extensive uses. By a particular process in bruising and steeping the wood or bark, also, a paste is procured that is made into paper. In short, as it has justly been observed, from its very origin until its decay, it never ceases to pro- duce something beneficial ??? all that composes a bamboo is profitable, of whatever species it may be. The artists of China have each made their choice, and in the works they produce, show the advantage they have derived from it. Its uses are so numerous, so various, and so

beneficial, that it is impossible to conceive how China could now dispense with this precious reed. It is no exaggeration to ath'rm, that the mines of this vast empire are of less importance to it than the possession of the bamboo.

BAM HOO, in botany, the trivial name of a spe- cies of arundo. See Ai:r. \i>o.

BAMBOO HABIT, a Chinese contrivance by which a person who does not know how to swim may easily keep himself above water. The fol- lowing account of it is taken from a letter to the author of the Seaman's Preservative. ' In the year 1730 I was passenger in a ship from Bata- via to China, burden about 400 tons, called the Pridae, Francisco Xavior, commander, freighted bv the Kn'jlish, Chinese, ;md Portuguese. Near tiie coast of China, v.0, met with one of those storms called atuffoon (tau son□□-), or a great wind, which carried away all our masts, bowsprit and rudder ; and in our hold we had six feet of water, expecting every moment the ship would founder. \ e consequently were consulting our preserva- tion ; the Mnu'lish and Portuguese stood in their shirts only, ready to be thrown of}'; but the Chi- nese merchants came upon deck, not in a jacket, but I will call it a bamboo habit, which had lain ready in their chests against such dangers ; and it was thus constructed; four bamboos two before and two behind thorr bodies, wen: placed hori- zontally, and projected about twenty-eight inches. Tin se ui re crossed on each side by two others, and tin: whole properly secured, leaving a sp-iiv tor their body ; so that they had only to put it over tin-ir heads, and tie the same securely winch was done in two minutes, and we were sa tistied they could not possibly sink.'

BAMBO'OZLE, v. ^A cant word not used, BAMBO'OXLER, n. >says Johnson, in pure, BAMBO'OZLING. j or grave writings. To

delude, to mislead, to cheat, to cozen, to deceive,

to beguile. Synonymous with another cant term,

to humbug, or to take in.

After Nic had bamboozled John awhile, John called

for counters. Swift.

There are a set of fellows they call bauterers and

bamlonglen, that play such tricks. Arbuthnot.

But, says I, sir, I perceive this is to you all 6am-

booxliny ; why you look as if you were Don Dirgo to

the tune of a thousand pounds. Taller, No. 31.

BAMBRIDGE, or BAINBRIDGE (Christo- pher), L.L.D. archbishop of York, and cardinal, was born at Hilton in Westmoreland, and edu- cated at Oxford. He rose gradually from being rector of Aller, prebendary of Salisbury, dean of York and Windsor, &c. to one of the highest dig- nities of the church. In 1495 he was eleckd provost of Queen's college. In 1507 he was appointed bishop of Windsor, and next year archbishop of York. He was employed in dif- ferent embassies to foreign princes ; particularly to the emperor Maximilian I., Charles VIII. king of France, &c. But he chiefly distinguished himself in the embassy from Henry VIII. to pope Julius II. who created him a cardinal, with the title of St. Praxede, m 1511, and appointed him legate of the ecclesiastical army, then besieging Bastia. In return, our new cardinal prevailed upon Henry VIII. to take part with the pope against the king of France. There are extant in Rymer's Fcedera, two letters ; the one from car- dinal Barnbridge to king Henry VIII. respecting the pope's bull, giving him the title of Defender ??? of the Faith ; and the other from cardinal Sini- galli, to that monarch, acquainting him he had delivered the instrument to cardinal Barnbridge. He died at Rome in 1514, being poisoned by a domestic, in revenge for his having struck him.

BAMBORUUGII, or BAMBROUGH, a parish and castle of Northumberland, on the sea coast, five miles east from Belford, and 329 north from London. It was once a royal borough, and sent two members to parliament. The castle stands upon a rock, almost perpendicularly to the sea. and 1 50 feet above its level. It is acces- sible only on the south-east side. On this spot, according to historians, stood a palace of the Northumbrian kings, built by Ina in 559. In the reign of queen Elizabeth, Sir John Forster, warden of the marches, was made governor of it after the battle of Musselburgh ; and subsequently, to his great credit, his relative, Crew, bishop of Durham, purchased and bequeathed it to cha- ritable uses. In 1 757 the trustees of this charity re- paired the great tower, and formed the upper build- ings into granaries, for the sale of corn to the poor, at a cheap rate. A constant watch on the top of the tower is said to be kept, whence signals are made when any vessel is discovered in dis- tress, and boats are able to, put off from Holy Island when none from the land can pass the breakers. During a storm horsemen patrol the coast, to the extent of eight miles, from sun-set to sun-rise, to giye notice in case of shipwrecks to the castle, and wnere the unfortunate mariner finds an hospitable asyium. Upwards of thirty

boats are always in readiness for this good work. At the expense of this fund, the last offices are also performed over the bodies of such persons as may be cast on shore. Within the castle walls are to be found a school, a valuable library, an infirmary, which receives more than 1000 patients yearly, and a dispensary.

BAMBOUCH, or BAMBYCH, called also Ma- gog and Hierapolis, an ancient city of Syria, not far from the Sejour, and fifty miles distant from Aleppo. It is situated in a valley, watered by a stream conveyed by aqueducts to the town from a hill twelve miles south, and in some parts by a channel twenty feet under the earth. The an- cient town was surrounded by walls above thirty feet high, and nine feet thick, strengthened by towers at the distance of fifty paces from each other ; it was entered by four gates fifteen feet wide, defended by a tower on each side, cased, as they still appear, both externally and inter- nally, by hewn stone ; the top was gained by a flight of steps built on arches. Various remains of the structures and sculptures of different nations and dates appear here.

BAMBOUK, or BAMBUC, a country of Africa, which the Abbe Raynal states to be situated in the interior, under the twelfth or thirteenth de- gree of north latitude. It is not subject to a parti- cular king ; but governed by village lords, called farims. These hereditary and independent chiefs are obliged to unite for the defence of the state, when it is either attacked as a community or only in one of its branches. The territory of this aristocratical state is dry and barren. It produces neither maize, rice, nor pulse. The insupportable heat it is subject to, proceeds in part from its being surrounded by high moun- tains, which prevent the wind from refreshing the air. The climate is as unwholesome as it is dis- agreeable ; vapors, which continually issue from the bowels of a soil replete with minerals, render- ing it unfit to live in, especially to strangers. Its gold has made it an object worthy of notice ; gold, which in the eyes of the covetous man seems to compensate for all the evils of nature, though in reality it increases them Sensible and judicious merchants, adds this author, have chosen to limit themselves to a commerce much .nore important, which is that of slaves.

Almost all that is known of this state is de- rived from a Frenchman named Compagnon, who passed a year and a half there in the begin- ning of the last century. Labat, Afrique Occi- dentale, iv. 5. He describes it as divided into three provinces, Bambouk Proper, Kincodon, and Satadore, each of which abounds with gold, but the first most particularly. The principal repositories are at Rakkon, Semayla, Hambia, and Hombadyria, at each of

which appears a conical hill of moderate elevation, every part of which contains gold, combined with earth, sand- stone, lapis lazuli, &c. They obtain the metal by Digging deep pits, and delivering the earth to the women, who cary it to the streams, and sepa- rate the gold by the simple process of agitation in water, after the manner described in Mr. Park's second journey. When the other sub- stances are hard, the whole is previously pounded. Inosf- pit being only six feet square often fall VOL. 111.*

in, and bury the workmen. Bambouk appears f> be the main source of that large quantity of gold which is on one side conveyed down the Gambia and Senegal, and traverses the desert on the other into Barbary. The population is almost entirely of the Mandingo race. It is remarkable, how- ever, that although they profess Mahommedanism, no marabout or priest is suffered to reside amongst them : it is said they were all expelled some years since, being detected in a conspiracy to seize the government. It is also said that they are very jealous of European visitors ; and that the Por- tuguese and French have each in vain endeavoured to establish themselves here.

BAMBYCE, an ancient city of Parthia, called also Hierapolis : famous for the rich and mag- nificent temple of Atergatis, which was plundered by Crassus.

BAMEENY, VAMANI, an island lying off the coast of Chittagong, in the province of Bengal, formed by the sediment deposited by the great River Megna. It is twelve miles long by about five broad. The East India company have here an extensive establishment for the manufacture ol salt, of which they retain the monopoly.

BAMFF, or BANFF, a county of Scotland, com- prehending Strathdovern, Boyn, Enzie, Strath- aven, Balvenie, and part of Buchan, extends fifty miles from east to west, and thirty in breadth from north to south. On the south it is separated from part of Buchan by the river Ugie ; on the east it is bounded by the Deveron and the Ger- man Ocean ; on the west by the Spey and the county of Moray ; on the south-west by Badenoch and the Braes of Mar ; and on the north by the Moray Frith. The face of the country is agree- ably diversified with hills and dales, woods and rivers ; and exhibits many seats and plantations. The air is pure, the climate healthy, and the soil fertile, producing plentiful crops of corn. The pasture grounds feed sheep, cattle, and horses ; the arable lands produce plenty of corn ; while the rivers and sea supply great quantities of fish. The manufactures of this county never were considerable ; and those of yarn and cloth, as well as the cotton manufacture, have declined of late. Coarse woollen stuffs are made for the use of private families and tan-works ; breweries, rope works,

&c. have been established on a small scale. The principal exports of Bam-ff a-re grain, fish, butter, cheese, yarn, and linen ; while the imports are flax, hemp, leather, iron, coals, wood, and wine. Various minerals have been found in different parts of the shire ; and a piece of amber, as large as a horse, was once cast ashore on the beach. Gordon castle, and several other seats of the duke of Gordon are situated in this county. It sends a member to parliament. Here are nu- merous remains of antiquity, consisting of cairns and tumuli, exhibiting the triumphs of our an- cestors over the Danes, whose sculls they have built into the solid walls of churches. Also th►► ruins of several forts, castles, and monasteries. The valued rent of the county is ►►79,200 Scots ; and in 1811, according to the assessment of the property tax, the real gross rent of the lands was ►►79,396 3s. 4d., and of the houses ►►5514. 2►► sterling.

BAMFF, the capital of the county, is pleasantly

situated on the south side oi' a hill, at the mouth of tiif Deveron. A fine bridee ol seven arches crosses the river. It has several good streets ; of which that with th" town-house in it, adorned with a new spire, is very handsome. This place was erected into a ;,;.iough by a charter from Robert II. dated Oc'oher 7th, 1372, endowing it with the same privileges, and putting it on the same footing with the burgh of Aberdeen ; but tradition says it was founded in thp reign of Malcolm III. The harbour is bad, as the en- trance at the mouth of the Deveroti is very un- certain, being often stopped by the sands, which are continually shifting in great storms ; the pier is therefore placed on the outside, and defended by a half-moon battery of eight guns. Manu- ' factories of thread^ cotton, and stockings, are carried on to a considers.! >le extent, and great quantities of salmon era annually exported. About Troop-head some kelp ii made ; and the adven- turers pay the lord of tho manor ►►50 yearly for the liberty of collecting tne materials. Near the town is a magnificent, seat of the earl of Fife, it lies in a beautiful plain washed by the Deveron, the lofty banks of which, clothed with wood on the opposite side, afford a delightful contrast to the soft vale beneath.

Bamff has two fairs, on the first Tuesday in February, and the third Tuesday in December, both old style. Long. 2►► 15′ W., lat. 57►► 35′

N. The parisli is about six miles in length, and two iii breadth. The sea coast is hold and rocky. A great part of the parish, though it might be easily converted into arable land, is occupied in pas- turage. Population about 3000.

BAMIAN, an ancient city and province of Asia, to the north-west of Cabul, ten days journey from Balkh. It is remarkable alike for having been once the metropolis of Buddhism, and for its dreadful catastrophe, when taken by Jenghiz Khan in 1221. At that time it belonged to Sul- tan Jalallo;im, the last of the famous Mahmud of (iazni's race. Jenghiz was about to attack (Ja/na, that prince's capital, but was stopped by the garrison of this place, which lie had hoped would uive him no trouble. In this, however, he \as disappointed. The people had for a long time expected an attack, and had therefore ruined the country for five or six leagues round, while ihe peasants had earned away the stones, and every thing that conid he of use to the besiegers. Accordingly Jenu'luz Khan having erected wooden tov.vrs, and phniKii his engines upon them, was obliged to su>pcnd his operations, till millstones and other materials could 'ne brought from a great distance. 'I he \alls of the city were very strong, su that the engines of the Movuls made little im nre.ision . ami the garrison, making frequent and lunous sallies, (tit oil' \hole squadrons of his troops, and fr□□;ui ntly overthrew his towers and engines. 'J his so exceedingly chagrined Jenghiz that he swore to bo revenged. To exasperate him \et thrth(r a \ m,^ .ruice, his grandson, v, as arddt niaily lain in tne si(□□j;e. At last, there lore, by the inr; in rks-; multitude of the Moguls, v. hu con'iiiue'! ii, ,;□□□ attack without intermission, the cit\ v. us MI- en, ii> vails had been mined in ni:.mv phuvs, ;>:,□□□! t'.e !.r,i\e>t :'>KleTS and officers (if the '.rani.. >u s:am in its defence. T."e r>nt}irr (,i ii;.. vounir 'ir"iet, who had been kil!e,l,

entered with the troops, and caused the throats of every one of the inhabitants to be cut, we are told, without exception, and even gave orders to destroy the women with child, that not an infant might be left alive ! Further, to gratify the rage of this inhuman monster, the buildings were all levelled with the ground ; the cattle, and every living creature, destroyed ; insomuch that the hardened Moguls themselves gave this place the name of Maubalig, or the unfortunate city. A castle has since been built out of its ruins.

The place now appears surrounded with grot- toes, or caverns (several of which are inhabited), excavated from an insolated mountain. Many of these abound with carved work and sculptures, and the remains of ancient paintings. Mr. Wil- ford (As. Res. vi. 462), says ' it was formerly called Budd'h Vamiyan, ' the most beautiful and excellent,' (a name still frequently given it by the followers of Buddha), and maliciously cor- rupted

by the Mussulmans into But-Bamiyan, ‘ idolatrous Bamiyan.’ It has been called by historians the Thebes of the east ; and here are two colossal statues, seventy-rive feet high, hewn out of the rock, standing in alto relievo against the wall of the niches in which they are enshrined. A third, of less colossal dimensions, being only fifteen cubits high, stands at a small distance. The orthodox say they represent B’hima and his family ; the BuddTiisti maintain that they are Shahama and his disciples Salsala; while the Mussulmans affirm that they are no other than Adam and Eve, in the shape of Cayumans, and his consort. Between these opinions it would be presumptuous for us to decide. A door, be- tween the legs of the largest, opens into a temple still served by a few Brahmins. The province contains several villages, and decent towns.

BAMIER, a plant common in Egypt. It pro- duces a pyramidal husk, with several comp’art- ments, of the color of alemon, and filled with musky seeds The husk dressed with meat is a wholesome food, and of a very agreeable flavor. The Egpytians make great use of it in their ragouts.

BAMMAKOO, a considerable town of Bam- barra, in Africa, situated on the Niger, at the point where the navigation higher upwards is interrupted by cataracts. It carries on a great trade in salt. It is 180 miles south-west of Sego. Long. 5►► 48′ W., lat. 12►► 50′ N.

BAMOO, a province on the north-east frontier of the kingdom of Ava. Also a town situated on the river Irrawaddy, 170 miles N. N. E. of Ummerapora, where a considerable trade is car- ried on with the Chinese.

BAMORI, a village in Northern Hindostan, where an annual fair is held, to exchange the productions of the mountaineers and the inha- bitants of the low countries.

BAMOTH-BAAL, one of the towns of the tribe of Reuben, which seems to have had a tem- ple of Baal on an eminence; lying eastward, near the river Arnon, and the territory of Moab . Jerome calls it Bamoth, a city of the Amontes, beyond Jordan, in the possession of the sons of Reuben. Whether it was the same with that mentioned in Numbers xxi. is doubtful, but k appears to have been the place of encampment of the Israelites, and of Balaam’s first station

wherr lie had the first view of the rear of the

BAMPEYLDE (Sir Charles Warwick), a baronet of one of the oldest and

most distin- guished families in Devonshire. He sat in seven parliaments for the city of Exeter, was well known upon the turf, and moved in the first circles of fashion. He received his death from an assassin named Morland, whose wife had lived in his service. The shocking act was perpe- trated almost at his own door in Montague Square, where the murderer waited his approach, and after a short conversation, first discharged a pistol at his victim, and with a second blew out his own brains. April 19th, 1822.

BAMPLASOY, a town of Lower Siam, on the Gulf of Siam. Long. 101►► 36′ E., lat. 3►► 35′ N.

BAMPTON, or BAMPTON IN THE BUSH, a market town and parish of the county of Oxford, situated on the river Isis. It has a spacious church, a charity school for twenty children, and the remains of an ancient castle. Trade and manufacture are carried on here in leather articles to a considerable extent. Population 1232. Distant ten miles from Oxford, and sixty-nine and a half W.N.W. from London.

BAMPTON, a market town and parish of Eng- land, in Devonshire, situated on a branch of the Exe called Batham, or Batherm, where the Romans are supposed to have had artificial hot- baths, and there is still a chalybeate spring in the vicinity. It carries on a small manufacture of serge and pottery. John de Bampton, a Carme- lite monk, who first read Aristotle at Cambridge, and died in 1361, was a native of this town. A battle was fought here in 614 or 620, between the West Saxons and the Britons, wherein the latter suffered great loss. Population 1452. Distant from Tiverton five miles north, and 164 west of London.

BAN, v.& n.) Germ, bannen, bann. A word

BAN'NING. } exceedingly various in its appli- cations. Its primary meaning seems to be that of a public proclamation ; whether the matter in- volved were agreeable or otherwise. It generally signifies, however, proclamation with authority ; to command, or to forbid ; to excommunicate, and to curse.

I bnr it in the interest of my wife; Tis she is subcontracted to this lord, And I her husband contradict your bans.

Shakspeare.

Ah, Glo'ster, hide thee from their hateful looks ; And in thy closet pent up, rue my shame, And ban thine enemies, both mine and thine. Id.

Bold deed to eye

The sacred fruit, sacred to abstinence, Much more to taste it, under ban to touch.

Milton.

To draw her neck into the bans. Hudibrat.

Shall we think that it baneth the work which they eave behind them, or taketh away the use thereof?

Hooker.

Before these Moors wont a Numidian priest bellow- ing out charms, and casting scrowls of paper on each side, wherein he cursed uud banned the Christians.

Knollei.

He proceeded so far by treaty, that he was proffer- ed to have the imperial ban taken off Altapinus, upau submission. Umc-.'il.

BAN OF THE EMPIRE, a public censure, by which the privileges of any German prince are suspended.

BAN, in commerce, a sort of smooth firs mus- lin, which the English import from the Ivi►►t Indies. The piece is almost a yard broad, and runs about twenty yards and a half.

BANNS OF MARRIAGE. The instrument which publishes the bands or obligations of matrimony into which the parties enter, to ►►► the end that if any man can say against the intention of the parties, either in respect of kindred or otherwise, they may take their exception in tine. And, in the canon law, 'banna sunt proclamations sponsi et sponsae in ecclesiis fieri solitae.' Among the variety of applications, says a writer in the Ency- clopaedia Metropolituna, all deducible from its primary meaning, ban signified a solemn assem- bly of the nobility, to attend the king in arms, summoned by proclamation. To be put under the ban of the empire, in the ancient German constitution, was to be interdicted from all inter- course with society. The imperial ban was di- rected against cities, as well as persons, and de prived those who incurred it of all their dignities and privileges.

BANAGHER, a town of Ireland, in King's County, seated on the Shannon, over which there is a bridge of nineteen arches. It is about nine- teen miles south of Athlone, and eighty-one from Dublin. This is a permanent military station, has an endowed classical school, and is ihe ter- mination of the

Grind (‘ati-.il.

BANARES, or BENARES (Varanasi), a large district or zemindary in the province of Allaha- bad, situated principally between the twenty- fourth and twenty-sixth degrees of north latitude. When ceded by Asoph ud Dowlah, the Nabob of Oude, in 1775, it was divided into six and a half pergunnahs, containing an aggregate of 12,000 square miles, of which 10,000 are a fer- tile and richly cultivated flat, on both sides or the Ganges. The chief districts are Benares, Gazypoor, Jionpoor, and Chunar. In the Insti- tutes of Acber, A. D. 1582, Abul Fazel describes it as follows : ‘ Sircar Benares, containing eight mahals, measurement 136,663 beegahs, revenue 8,169,318 dams.□□□ Seyurghal 338,184 dams. This Sircar furnishes 830 cavalry, and 8100 infantry.’ The gross revenue in 1813 amounted to 4,562,707 rupees ; □□570,338. 7s. 6d. of our money. At Chunar-gur’h, Mirza-pur, and Ghazi- pur, are large stone quarries ; at which, on pay- ing a moderate duty, any one may work ; and the receipt for such licenses in 1816 amounted to 37,086 rupees, or □□4635. 15s.

The atmosphere of this province is severe, and in winter renders fires indispensable; but for three months after March, becomes so heated by the setting in of the hot winds, as to destroy all verdure, and would probably prove destructive to all European artificial grasses, were the culti- vation of them introduced. Garden-stuff of dif- ferent kinds for Europeans, flax for oil, grains, and sugar, are nevertheless produced by the ra- tives during the cold season. The use of flax as

an article of clothing is not licre understood, livery field of barley contains a mixture of grain or peas ; and at the distance of six or ten feet is planted a beautiful yellow flowering shrub, used in dyeing.

The principal manufactures are plain and flowered muslins, chiefly made in the northern, baftas in the western, and sanaes in the eastern parts of the province. Tissues, brocades, and ornamented gauzes, are articles of general manu- facture, from the Ganges arid Goomty to the Ca- ramnassa and Soane. The apparatus for the sugar manufactory is extremely simple ; a stone mortar and wooden pistern, turned by two bullocks, constitute the most expensive part of the opera- tion ; the boiling pols are of common earthen- ware ; the whole, in value, not exceeding twelve rupees. Salt is manufactured at Banares. In- digo and opium are annually raised and

exported from many parts of the province.

The country is well supplied with water, and washed by several noble rivers and streams ; of which the Ganges, the Goomty, the Caramnassa, and the Soane, are the most important ; the two latter forming the natural boundaries of the pro- vince. The space from Patna to Buxar, Gazy- poor, Banares, and Mirzapoor, presents a beau- tiful and highly fertile country, adorned with numerous clumps of mango-trees, which give the whole reu'ion the appearance of a forest, affording a shady retreat for cattle. The territory on both sides of the river, above Mir/.apoor, formerly belonged to the Nabob of (hide, and exhibited a stroii: contrast to the nourishing state of the Banares districts, which in point of prosperity, perhaps excel all others in India, with the ex- ception of Burdwan in Bengal.*

Tiie population of the province, according to the census taken in 1801, under the direction of the Marquis \ellrsley, at that time governor- genera!, amounted to three millions, in the pro- portion of one Mahoininedan to live Hindoos. The code of regulations for Bengal has, with verv little alteration, been extended to Banares. The Brahmins, however, from the great venera- tion in which they are held by the people, are indulged with some peculiar privileges. The punishment of death in capital offences is com- muted for transportation, and the process against them in criminal charges is somewhat different from that of Hindoos of a lower caste. Several evil practices of the Brahmins were, nevertheless, at the same time suppressed ; as, the holding out the threat of obtaining spiritual vengeance on their adversaries by suicide; the exposure of the life, or actual sacnlice, of their own children, or ne,.r relations; occurrences which are now sub- ject to th" usual course of criminal law. One 'tribe of llm(l< > < >, . residing in the province, called Ra)eoomai-, were accustomed to destroy their female infants, from the difficulty experienced in gettiii'j, them suit-iHv married. Mr. Duncan, the resident, pr< vaiied on thvm to desist from this practice ; and the o!,ser\;mce of it subjects the offender to theordinaty pun --' m> lit of murder. The most remarkable' < vents i.n the history of this piwinec. are the following :- -Musuram, the n-randfathcr of Cheit Sin-h, possessed originally hut half the villa, e "f : i.n. a poor ; by additions

to which, he laid the foundation of the zemindary, or lordship, of Banares. At his death, in 174C, his son and successor Bulwant Singh ascended the throne ; and after a reign of thirty-years, in- creased the provincial territories to their present dimensions. Cheit Singh Raja received the zemindary in 1780; but from his refractory conduct, was expelled the province by Mr. Hastings, within one year after his accession. He lived at Gwaliyar till 1810, and his lands are still held by a collateral branch of the same family, with an annual profit exceeding ten per cent, on the revenue, derived from them by the government. Tennant, J. Grant, Colebrooke, fifth

Report, Hamilton, SfC.

The chief towns in the Banares zemindary, are Banares, in Sanscrit, Vara Nasrri, from the two streams, Vara and Nashi. It lies in lat. 25►► 30′ N. and long. 83►► E.,on the northern bank of the Ganges, which here forms a fine sweep of about four miles in length. Its elevation above the water is evident from the G'hats, or landing places, composed of large stones, to the height of thirty feet, and are supposed to have been erected by pious Hindoos, as acts of public charity. The town rises like an amphitheatre from this basis on the external curve of the river, and may be seen at once from the opposite shore, which forms an extensive level.

The great narrowness of the streets gives it the usual appearance of an Asiatic town, and the houses, which are six stories high, close to each other have terraces on their summits, and ex- tremely small windows, to keep them cool and prevent inspection. The opposite sides of the streets in some places approach to each other so closely as to be united by galleries. The number of houses built of stone and brick, are stated at 12,000, those of mud at 16,000. The inhabitants are more than 600,000, of whom one tenth are Mahommedans; and during the great Hindoo festivals, the concourse is immense. Casi, or Cashi, the splendid, as the Indians commonly call it, is one of the most sacred places in the whole of India ; the country for ten miles round is thought holy land, and the famous lingam, sup- posed to be Siva, or M ah a Ueo himself, in a state of petrifaction, attracts the veneration and alms of myriads. The representatives of this invaluable relic in different parts of the city are said to be at least a million, and one pilgrim is reported to have travelled sixteen times from Banares, an- ciently Casi, to Rameswara or Ramisseran, op- posite Ceylon. Devout Hindoos come to end their days at Banares, the same as pious Jews go to die at Jerusalem : and so great is the holy sanctity of the place, that to die there is suffi- cient to preserve even beef-eating Englishmen from the black realms of the Indian Pluto, the Hindoo Patala. One Englishman the Brah- mins say did get to heaven by departing this life at Banares, and his meritorious decease is said to have been still further sanctified by the bequest of a large sum of money for the erection of a temple under the direction of his spiritual solicitor. So holy is this celebrated city tha►►. many foreign Hindoo Rajahs have vakeels or delegates residing here, who perform for them the requisite sacrifices and ablutions.

Casi, the ancient name of this city, is still re- tained in preference to its modern name Banares, although there are no notices concerning it in the works of ancient geographers. It is remarkable that they should omit this celebrated city, and at the same time specify Mathura or Methora and Clisobara, which are near the Jumna.

Banares is regarded as the ancient seat of Brahminical learning ; and within the last cen- tury the moon beams of science have in some measure relieved the intellectual gloom which lowered upon the dark hemisphere of the inha- bitants. Jaya-Sing'ha, Raja of Amb'her, at the close of the seventeenth century erected an ob- servatory in this city. (Philosophical Transac- tions, vol. Ixvii ; and Asiatic Researches.) A college has also been erected by the British government, for the instruction of Hindoos in their own literature ; but the influence and prejudices of the Brahmins have prevented any considerable diffusion of learning among the natives. Reading and writing are however taught here, upon a plan strongly resembling that of some modern institutions in our own country. The boys are collected on a smooth flat of sand, on which, with the finger or a small reed, they trace the letters in the sand, and learn to pro- nounce them at the same time.

The number of pious foundations in Banares is very great. Hindoo temples are scattered all over the city and the surrounding plain. The principal one is called Visweswar or Bisesar, and is dedicated to Siva, whose sacred relics it contains. Aurengzebe, to mortify the Hindoos, built a splendid mosque on the highest ground of the city, and what was worse than all, on the sacred ruins of a Hindoo temple, which was destroyed to make room for it. The minarets of this edifice command an extensive view of the city, and open some of the finest prospects of the surrounding country.

The handsome houses of the English exhibit an unusual nakedness from the want of trees ; but this in India is absolutely necessary, from the swarms of mosquitoes to which they afford a favorite resort. The Rajah resides at Ramna- gur on the opposite side of the river, five miles from Banares. In this city are upwards of 8000 houses occupied by mendicant Brahmins, who have nevertheless considerable property of their own. Europeans in this place are few, con- sisting chiefly of a judge, collector, and registrar, a few other civil servants connected with the company's establishment, together with a few private merchants and planters.

Banares is the chief mart for gems and diamonds, which are brought principally from the Bundelcund country. Merchants and bankers are numerous and wealthy, arising from the great traffic of which this city is the site. The land is extremely high priced, and law suits respecting it are unceasing. The division of the court of circuit comprehends the following

districts. 1. Mirzapoor. 2. Allahabad. 3. Bundelcund. 4. Juanpoor. 5. Gooracpoor. 6. City of Ba- nares.

Casi does not appear to have been known to the Greeks, and was probably subject to the Hindoo sovereignty of Canoj. In the year 1017 Sultan Mahmood of Ghizni toak possession of it, to-

gether with the town of Casum or Casuma, now Patna, and went as far as the country of Ouga- nam or Unja, west of the Cossimbazar river. The following year he overran these countries a second time, and penetrated as far as Kisraji, Cach'ha Raja, or Cooch Bahar, from which period the Hindoos in this part of India remained unmolested by the Mahommedans till the close of the twelfth century, when it was finally in- cluded within the Mogul empire. In 1775 Banares was ceded by the Nabob of Aud'h or Oude, since which for the most part it has en- joyed uninterrupted tranquillity ; and the inha- bitants are fully sensible of- the advantages they derive from living under the British government, with respect to the security of their persons and property.

On the 14th of January, Mr. Cherry the resi- dent, and three other English gentlemen, were treacherously murdered by Vizier Ali, the de- posed Nabob of Oude, and spurious son of the late Asoph ud Dowlah. Mr. Davis would also have fallen a sacrifice had he not, from the top of a narrow winding stair-case, on the flat roof of the house, defended himself and family with a short spear till assistance could be procured.

The travelling distance from Banares to Cal- cutta by Birbhoom is 460 miles, by Moorsheda- bad 565, from Buxar seventy, Allahabad eighty-three, Calpy 239, Kanoge 259, Bareily 345 miles. See Lord Valentia, third Register, Wil- j'ord, and Rennet.

BANBURY, a borough and market town in the hundred of that name, Oxon, seventy-one miles from London; containing 5400 inhabitants. It stands on the river Charwell, on the road from Buckingham to Bridgenorth, and was first made a borough by queen Mary. Its privileges were afterwards confirmed and enlarged by James I. and George I. It is now governed by a mayor, high steward, recorder, six burgesses, and thirty assistants; has a town-clerk, and two serjeants- at-mace, and returns one member to parliament. The land in this neighbourhood is particularly fine pasture, and the town was noted, in Cam- den's time, for the excellence of its cheese, as it is now for cakes and ale. When Holland was employed in translating the Britannia, Camden visited the printing-office, and found that to his own observation, that Banbury was famous for cheese, the translator had added cakes and ale. Thinking this remark too trifling, he changed the last word into zeal ; and this gave much un- intentional

offence. In his MS. supplement to the Britannia, in the Bodleian library, is the fol- lowing note : ‘ Put out the word zeale in Ban- bury, where some think it a disgrace, when as zeale with knowledge is the greatest grace among good Christians.’ In the adjacent fields Roman coins have often been discovered, and the pyrites aureus, or golden fire-stone. A castle was built here in 1125, which was entirely destroyed in the civil wars of Charles I. Plush is manufac- tured here, and the trade of the town is greatly enhanced by the proximity of the Thames and Severn canal. Here are held, annually, seven fairs : those for hiring servants are called mop fairs. The church, having been of late re- built, is large though not handsome. Tin? market on Thursday is reckoned the best in the

BAN 4;

county for corn, cattle, and all kinds of pro- visions.

BAN’C, or Rr.NCA, in law, a tribunal, or judg- ment-seat : Hence,

BANG, COMMON, means the Court of Common Pleas ; and

BANC, KING’S, the Court of King’s Bench. BANCA, an island of the Indian Ocean, be- tween Sumatra and Borneo ; from the first of which it is separated only by a narrow channel. It is celebrated for its tin mines, the annual profit of which to the Dutch is estimated at ►►150,000. It is mountainous and woody. There are seven mines, which give Employment to 25,000 men, originally a Chinese colony, and nominally un- der the direction of the sultan of Palembang, but in reality working for the profit of the Dutch East India company. The metallic sand is said to yield 70 per cent. Very little is sent to Eu- rope ; the Chinese are very skilful in adulterating it. This island, which had been captured by our forces during the late war, with the rest of the Dutch possessions in the East Indies, was gi“en up at the peace of 1814. It had been formally ceded to us by Najmu’ddin, sultan of Palembang, in 1812, on condition of his being placed under our protection, but this stipulation was disregarded by the Dutch authorities in Java in 1818; and they have since that period been at war with the sultan. The straits of Banca afford a sale passage with a favorable monsoon ; but as shoal water sometime.’ occurs, and there are occasionally coral reefs, they require great care and attention in navL’atinir them. The Banca islands in 2►► 22′ S. hit., and 105►► 41′ E. loti’i., afford shelter from S. V\ . byS. toN.W. with a ‘^ood supply of \atcr and fuel.*

1! VNC \, a small island of a chister still smaller, lying off the north-east e:y of the island of Celebes, which are much frequented by the Ma l.iy pirate^. Fish, turtle, ami fruits, are plentiful. Lou-. 1-j.v F.., hit. 1″ 50′ N.

I'.AN'CAL, an F.ast In.lian wei.;bt, containing lo-f1, ilruns Avoirdupois.

HANCA 1,1 A, old law, Lat.cnshionsforbench.es. P>. -\CAI.1S, a sea-port town on the east coast of Sumatra, where t'ie Dutch have a settlement.]? !:□□□□□□□= i:'0 miles west of Malacca.

!;.'>' ('!!! (.Vr.iphin), arcMushop of Angou

e was :.t iir>t a priest of the Dominican

order ;.t Florence; but in l.V.KJ one Peter Bar-

i:ere, a hot-headed fanatic, having communicated

t > ! i, his purpose of inurdrrmu' the kin

it'y revealed the matter to a nobleman,

; '.v!ii. !; i!ie horrid dtsiun was prevented from

□□□ d. He was rewarded with the

' 'i1'g src=""." alt="" /> .'□□□ of Aii'j;ouleme. He afterwards re

:;icd Irs iv r.:e, and retired to St. James's mo-

i; □□□' TV ;.t Par;-;, vvh< re he continued till his death.

□□□.M'liU, or i;.\vn no, thane of Lochaber,

'..;□□□ 'irh'ather of Wa'ter, the tirst lord high

□□□eotlairl, and 'he progenitor of the

hou.M' of Stewart. He gained several great

□□□'ir,, -s o\i r thr Highlanders and Danes, in the

□□□: o! 1). n.'l'i \ II. 1 ut his glory was tarnished

.'ih:inir Ma'-brth in ihe conspiracy against

4 e.",:ir'1i; and he was murdered by the ty-

'□□□□□□□□□□ th about A.D. HMo.

I ' S the privilege <□□□ □□□' n ivin.; a bench

woo anciently ullowe 1 to the king's jiidV01; qt►►' summam administrant justitiam. interior courts, as courts baron, hundred courts, &c. were not allowed that prerogative ; and even at this day the hundred court at Freebridge, in Norfolk, is held under an oak at Gey-wood ; and that of Woolfry, in Herefordshire, under an oak near Ashton, in that county, called Hundred oak.

BANCK (Peter Vander), an engraver of con- siderable repute, born at Paris, and bred under the celebrated Francis de Poilly. He came over into England with Gascar, the painter, about

1674 ; and married the sister of Forester,

Esq. He was a laborious artist : but the pay he received for his plates being by no means ade- quate to the time he bestowed upon them, he was reduced to want ; and, retiring from busi- ness, sought an asylum in the house of his brother- in-law. He died at Bradfield, and was buried in the church in 1674; leaving his widow in possession of the chief part of his plates, which she disposed of to Brown, a print-seller, to great advantage, and left an easy fortune. His chief employment was engraving portraits; and accord- ing to Virtue's account of him, published by Walpole, he was the first in England who en- graved them on so large a scale. Like many of Poilly's disciples, his great merit consists in the neat management of the mechanical part of the art.

BANCO, an Italian word, which signifies bank, and commonly used to signify the bank of Venice.

BANCOOK, a town in the kingdom of Siam, in Asia, with a fort, which was once in the pos- session of the French, but they were driven from it in 1688. The houses are made of canes, cover- ed with palm leaves, and the inhabitants go almost naked. It is forty miles south of the city of Siam.

BANCROFT (Richard), archbishop of Can- terbury, was born at Farnworth, in Lancashire, in 1544, and studied at Cambridge,where he took his degrees of B. A. M.A. and D. D. Aftei passing successively through several gradations in the church, he was, in 1.597, appointed bishop of London. In 1600 he was sent by queen Eliza- beth to settle some difference between the Eng- lish and the Danes. He also interposed in the disputes between the secular priests and the Jesuits, and furnished arguments to the former. In 1603 he was at the conference at Hampton Court, between the bishops and the Presbyterian ministers, and was appointed a commissioner for regulating church affans. In 1604 he was ap- ►►►►►►► pointed

president of the convocation, and soon after elected archbishop of Canterbury, which was continued by king James I. His last pro- motion was in 1610, to be chancellor of the uni- versity of Oxford, which he did not long enjoy, for he died in 1612, of the stone, at Lambeth.

BANCROFT (John), bishop of Oxford, a nephew of the above, born in Oxfordshire. In 1592 he was admitted of Christ Church, in Oxford. In 1609 he was chosen master of University College, where he continued above twenty years ; during which time he was at a great deal of labor .as well as expense to recover the ancient lands be- longing to that foundation. He was made bishop

qf Oxford in 1C22, and he built the palace of Cuddesden for that see. He died in 1640, and was interred in tbe church of Cuddesden.

BAND', v. c'c n.~\ Dut. bende, Sax. band, BAND'AGE, /Goth, bandi, Celt. iaw. A

BAND'OR, ►►tie. The noun upon which

BAND'ER. J the verb to band is formed,

is the past participle of the verb to bind. To tie, fasten, unite, join, yoke together; mutual engage- ment ; promise ; to be in bonds or bondage ; to confederate for one common purpose. Band, in our old writers, is frequently written bende.

With a bend of gold tassiled, And knoppes fine of gold amiled. Chaucer.

The botiler is not ray friend, Whiche hathe the key by the bende.

Gower.

Then wrong it were, that any other twaine Should in love's gentle band combyned bee, But those whom heaven did at first ordaine, And made out of one mould the more t' agree.

Spenser.

And when it was day, certain of the Jews banded together, and bound themselves under a curse, that they would neither eat nor drink till they

had killed Paul. Bible. Acts ch. xxiii. ver. 12.

Yorke and his banders proudly pressed in.

Mirror for Magistrates,

Men's hearts are growne so false, that most are loath

To trust each other's words, or bands, or oath ; For though we had in every part an eye, We could not search out all hypocrisy.

George Wither. Like Maia's son lie stood,

And shook his plumes, that heav'nly fragrance fill'd The circuit wide, strait knew him all the bands Of angels under watch ; and to his state, And to his message, high in honour rise. Milton.

What multitudes Were banded to oppose his high decree. Id.

Now strike the golden lyre again, A louder yet, and yet a louder strain, Break his bands of sleep asunder, And rouse him like a rattling peal of thunder.

Dryden.

The queen, in white array, before her band,

Saluting took her rival by the hand. Id.

On a sudden, mcthought, this select land sprang

forward, with a resolution to climb the ascent, and

follow the call of that heavenly musick. Tatler.

Strait the three bands prepare in arms to join, Each band the number of the sacred Nine. Pope

He took his lodging at the mansion-house of a taylor's widow, who washes, and can clear-starch his bands. Addison,

Zeal, too, had a place among the reiA, with a ban- dage over her eyes ; though one would not have ex- pected to have seen her represented in snow. Id.

Cords were fastened by hooks to my bandages, which the workmen had girt round my neck. Swift.

Pride in their port, defiance in. their eye, I S'-e the lords of human kind pass by ; Intent on high designs, a thoughtful band, By forms unfashioned, fresh from nature's hand. Fierce in their native hardiness of soul, True to imagin'd right, above control ; While e'en the peasant boasts these rights to scan, .Am! learns to venerate himself as man.

Goldtmith's Traveller.

While her snowy har.ˆs

From her fair brow, her golden hair unbind, And of her zone unloose the silken bands, More passing bright unvcil'd her beauty stands.

Mrs. Tujhe

Pirate, thou know'st me not ××× but I am one Grateful for deeds thou hast too rarely done ; Look on me ××× and remember her thy hand Snatch 'd from the flames, and thy more fearful bawl

BAND', in architecture, a low flat moulding, otherwise called a face, horn fascia.

BAND is also the denomination of a military or- der in Spain, instituted by Alphonsus XI. king of Castile, for the younger sons of the nobility, who, before their admission, must serve ten years at least, either in the army or at court; an 1 are bound to take up arms for the catholic faith against the infidels.

BAND OF PENSIONERS, a company of 120 gentlemen, who receive a yearly allowance of ××100 for attending on his majesty on solemn occasions.

BANDS OF A SADDLE are two pieces of iron nailed upon the bows of the saddle, to hold the bows in the right situation.

BANDA ISLANDS, a group of islands in the Eastern ocean, about 130 miles E. S. E. from Amboyna. They strictly include ten sepa- rate isles, Banda Neira, Banda Lantoir, Pulo Ay, Pulo Rondo, Pulo Pisang, Rosingen, Craka, Capella, Souangy, and Gonong Apee, the last being a volcanic islet, rising 2000 feet above the level of the sea. They are all small ; Banda Proper, or Lantoir, one of the largest, is only about eight miles long, and not more than three broad ; Neira, another of the most considerable, does not contain much more than two or three square miles. Their rich black soil makes them generally fertile in tropical fruits ; but their chief and well known produce is nutmegs, for the cul- tivation of which Neira, Lantoir, Pulo Ay, and Pulo Rondo, are laid out in parks or plantations. The plant

attains the size of a pear-tree, with a leaf resembling that of the laurel, and the fruit, enveloped in a membranaceous covering of mace, is contained in a husk. It is of the shape of a pear when ripe, and approaches the size of an apricot : it is then pulled and put into a drying- house or kiln, where it is exposed during three months to a slow fire : the husk or shell is now broke, and the nutmeg instantly placed among lime, to prevent the attack of insects. It is after- wards made up into packages of 200 pounds each, for exportation. Each tree produces about ten pounds yearly, and an oil is extracted from the unripe and damaged fruit. Nutmeg-trees require incessant care ; a great proportion of them are barren, a defect which cannot be dis- covered before the twelfth or fourteenth year. From this period they continue bearing until the age of twenty, four years after which they perish. The total quantity produced in the four islands the Dutch would never suffer to be ascertained. When they were captured in 1796, a half year's crop was found to amount to 81,618 pounds of nutmeg, and 23,885 pounds of mace. Formerly the average sales were estimated at 350,000 pounds of nutmeg annually, and 100,000 pounds

of mace. For many of the necessaries of life these islands depend upon Java. The Dutch having subjected the original inhabitants, were the first European occupiers of the Banda islands. And their most extraordinary policy was to cul- tivate a portion, and carefully extirpate the trees in all the other islands. This was obviously a check upon the population. By a census taken in 1796, they were found to be 5763 ; in 1814 they were estimated at little more than 4000 ; about three-fourths of whom were slaves. The accounts therefore which formerly stated them at 15,000 whites, were most likely exaggerated.

The seat of government is Neira, where there is a good harbour, and two fortresses, public ma- gazines and storehouses, for the produce of the nutmeg plantations. Garrisons have always been maintained in these fortresses ; but they were taken possession of by Admiral Rainier in 1796, with little opposition. Being restored to the Dutch by the peace of Amiens, they were again taken by the English in 1810; and reverted to their former masters at the general peace of 1814. The latitude of these islands is between 4►► and ,r)►► S. and the longitude about 130►► E.

UAXDALEER, or BANDF.I.F.ER, in military a'i'iirs, a large leathern belt, thrown over the ri_';t shoulder, and hanging under the left arm ; worn by

the ancient nuisqucteers, both for the su

r.AND.VI.rSAN, a small island in the East- ern Indian sea, near the south coast of Mindanao, hong. 1‘2‘2►► 58′ E. hit. 7►► 12′ N.

!U\n.\!!RA (Coir/ales), a Portuguese fana- tie of the sixteenth century, who, pretending to be a prophet, raised some disturbance, and in 1 5 1 1 , made a narrow escape from being burnt for heresy, bv the inquisition. lie died in 155G.

HAMVBOX, n. a. From band and box. A s’iuht bo\ used for bands, and other things of small weight.

HA X ! VE1.ET, n. a. !>. bandelet. In archi- 1 enr; ►►►, :my little hand, Hat moulding, or fillet.

I >A N i) I’. 1 ,!.()(Matthew), bishop of Agen, was born at Castelnnvo, in the Milanese, about the (iid of the fifteenth century. He was first a Dominican monk, and distinguished himself by writing novels in the manner of Boccacis. When his country was invaded by the Spaniards he went to France, and there, inl.~K>0, obtained the bishopric of Ajen, but resigned it in 1555. lie died MI i .►►►>(‘, i. The best edition of his novels is thai printed at London, m lour volumes, 4to.

17-10.

HA .\ ! M-.l,, a l,,nd of Niphun. Long. 131►► 1 >’ i ‘ , ‘.i’. ‘]►►►[‘ iti’ T.

HAN PEL D’ AGOA, a sea-port on the erst coast of Africa, supposed by Dr. Vincent to be the Zergifa of Ptolemy. Long. 49►► E., lat. 8 20′ N.

BAN DEL CAUS, a sea-port on the east coast of Africa, supposed by Vincent to be the Opone of Ptolemy. Lat. 8►► 15′ N.

BANDEL VELHO, or OLD PORT, on the coast of Ajan, supposed by Vincent to be situated on what the Periplus calls the Little Coast. Gosselin imagines it to be the Rhapta of Ptolemy and the Periplus. Fifty miles N. N. E. of Mag- dasho.

BANDEN, a hill of Scotland, in Fifeshire, which commands an extensive view of the Strath of Eden, from Kinross to St. Andrew’s Bay. The remains of an ancient rampart and circum- vallation, 200 yards in diameter, and of a circu- lar form, are to be seen upon it.

BANDER-ABASSI. See GOMBRON.

BANDERAS, a large bay in the Pacific Ocean, on the west coast of Mexico, between Cape Corientes and Tintoque Point. Lat. 20►► 30′ N.

BANDER-CONGO, a small sea-port town in Asia, seated on the east side of the Persian Gulf; eighty miles west of Gombron ; and 190 of Bander-Abassi.

BANDERET, a general, or one of the com- manders in chief of the forces. This appellation is given to the principal commanders of the troops of the canton of Berne, in Switzerland, where there are four banderets, who command all the forces of that canton.

BANDEROLL, a little flag, in form of a gui- don, extended more in length than in breadth, used to be hung out on the masts of vessels, &c.

BAND FISH, in zoology, the English name of the cepola rubescens.

BANDI. See ANGOLA.

BANDINELLI (Baccio), a celebrated sculp- tor and painter of Florence, born in 1487. Though he distinguished himself by his skill in both lines, he chiefly excelled in sculpture; and his group of the Lacoon is much admired. He died in 1559.

BANDIT, n. } Ital. ban and ditto. It

BAND'ITTO, n. > is the past participle of

BAND'ITTI (plural), j dicere, united to ban, ex- communicated or banished ; and thus signifies one declared to be banished. An exile or out- law. Banditti are not only outlaws, but robbers, who commit their depredations in concert. Men who place themselves without the pale of society, that they may commit aggressions upon its peace and property.

A Roman sworder, and banditto slave, Murder'd sweet Tully. Shaktpeare.

No savage fierce, bandit, or mountaineer, Will dare to soil her virgin purity. Milton.

Just as much fidelity might be expected from them in a common cause, as there is among a troop of honest, murdering, and ravishing bandits. Dryden,

No bandit fierce, no tyrant mad with pride, No cavern'd hermit, rests self-satisfy'd. Pope.

Who are they who can be said to be govern'd by laws of their own making?

I know of no such per- sons ; I never heard or read of any such, except, per- haps, among pirates, and other banditti, 'who, trampling

on all laws, divine and human, refuse to be governed in any 6ther way than hy their own licentious regu- iations. Seattle.

BANDITTI. Brydone, in his Tour through Sicily, informs us, that in the eastern part, called Val Uemoni, from the devils that are supposed to inhabit Mount Etna, it was in his time found altogether impracticable to extirpate the banditti; there being numberless caverns and subterrane- ous passages round that mountain, where no troops could possibly pursue them : besides they were known to be perfectly determined and reso- lute, never failing to take a dreadful revenge on all who offended them. Hence, the prince of Villa Franca embraced it, as the safest, wisest, and most political scheme, to become their declared patron and protector. Such of them as thought proper to leave their mountains and forests, though perhaps only for a time, met with en- couragement, and a certain protection in his service, where they enjoyed his confidence, which in no instance were they found to abuse. They were clothed in the prince's livery, and wore a badge of their order, which entitled them to uni- versal fear and respect from the people. The persons of those whom they accompanied were ever held sacred. For this reason travellers chose to hire a coupje of them from town to town ; and many thus travelled over the whole island v.ith them in safety.

BANDITTI ISLAND, an island on the east- ern Indian sea, at the south entrance of the straits of Lombhook, about twenty miles in cir- cuit. Long. 115►► 35′ E., lat. 8►► 50′ N.

BAN DOG. In zoology, a name of the canis molossus, or mastiff. But Dr. Johnson observes, that the original of this word is very doubtful. Caius, De Canibus Britannicis, derives it from l>and, that is, a dog chained up. Skinner inclines to deduce it from bana, a murderen May it not come from ban, a curse, as we say a curst cur ; or rather from bound, swelled or large, a Danish word ; from whence, in some counties, they call a great nut a tan- nut. A kind of large dog.

Or privy, or pert, if any bin, We have great bandogs will tear their skin.

Spemer.

The time of night when Troy was set on fire, The time when screech-owls cry, and bandogs howl.

Shakspeare. Henry VI. Then, Somerset says, set the bandog on the bull.

Drayton.

BANDON, or BANDON-BRIDGE, a considerable borough town of Cork, in Ireland, situated on a river of the same name. It is called by the Irish, Drohed (the bridge), and was founded by the first earl of Cork in 1610. The walls were de- molished by the Irish, in 1689, and, in conse- quence of this violence, papists were long pro- hibited from residing in the town. Bandon principally belongs to the duke of Devonshire and the earl of Bandon. It returns one mem- ber to the imperial parliament. The cotton manufactory used to nourish here, and great numbers of workmen are still employed on linens, camlets, and woollens. The population is 10,179; distance from Cork thirteen miles ; from Dub- lin, 186.

UANDORA, a town of the island of Sal-

sette, on the west coast of the peninsula on tins side the Ganges.

BANDORE, a musical instrument with strings, resembling a lute, said to have been invented in the fourth year of queen Elizabeth, by John Rose, a citizen of London.

BANDROL, banderol, Fr. A little fkg, or streamer ; the little fringed silk flag that hangs on a trumpet.

BANDUM, or BAND, is used, in middle age – writers, for a flag or banner.

BANDURI (Anselm), a learned Benedictine, born at Ragusa, in Dalmatia. He studied in France, and applied himself principally to anti- quities. He published, The Antiquities of Con- stantinople, two volumes, folio ; and Numismata Imperatorum Romanorum, a Trajano Decio ad Paleologos Augustos, 1718. He died at Paris in

1743.

BAN'DY, v., n.s., & adj. Fr. bander, to make crooked. A club turned round at bottom for striking a ball at play ; hence to bandy is to beat to and fro from one to another, to agitate, to toss about, to give and take reciprocally, to contend as at some game, in which each strives to drive the ball his own way.

The shooting stars,

Which, in an eye-bright evening, seem'd to fall,

Are nothing but the balls they lose at bandy.

Brewer's Lingua, ii. 6.

They do cunningly, from one hand to another, bandy the service like a tennis-ball. Spenser.

Do you bandy looks with me, you rascal ?

Shakspeare.

No simple man that sees This factious bandying of their favourites, But that he doth presage some ill event. Id 'Had she affections and warm youthful blood, She would be as swift in motion as a ball, My words would bandy her to my sweet love. And his to me. Id

Could set up grandee against grandee, To squander time away and bandy ; Made lords and commoners lay sieges, To one another's privileges. . Hudibrax.

They now begun To spur their living engines on ; For as whipp'd tops, and bandy'd balls. The learn'd hold, are animals ; So horses they affirm to be, Mere engines made by geometry. Id

And like a ball, bandy'd 'twixt pride and wit, Rather than yield, both sides the prize will quit.

Denham.

This hath been so bandied amongst us, that one can hardly miss books of this kind. Locke.

Ever since men have been united into governments, the endeavours after universal monarchy have been bandied among them. Swift.

He that is employed, has no leisure to move in the little disputes and quarrels which trouble the peace of the inind, and which are chiefly kept up and ban- died to and fro by those who have nothing else to do.

Atterbury.

What vigorous arm, what repercussive blow, Bandies the mighty globe still to and fro.

Blackmorc .

She calls it witty to be rude, And placing raillery in railing, Will tell aloud your greatest failing; Nor make a scruple to expose Your bandy-leg, or crooked nose. Swift,

BAN

The Ethiopians had a one-eye d bandy-lcqqed prince ; fjch a person would have made but an odd figure.

Collier.

BANDY LEGS, are legs distorted, turning either inward or outward on either side ; arising from some defect in the birth, or imprudence in the nurse, endeavouring to make a child stand or walk before his legs were strong enough to sus- tain the weight of his body. See VALGUS. BANE', v. & n. ˆ Sax. bana, a murderer, BANE'FUL, > according to Dr. Johnson;

BANE'FULNESS. 3 but it may be referred to the Goth, banjos, ulcers, sores, wounds, or to bane, destruction, death. To poison, to render poi- sonous, to destroy ; to cause destruction or ruin. For in his hunting hathe he swiche delite, That it is alle his joye and appetite, To ben himself the grate hart's bane. Chaucer. Help me, ye banefull byrds ! whose shrieking sound Is signe of dreary death, my deadly cries Most ruthfully to tune. Spenser.

Another righteous doom I saw of greedy gain, With busy cares such treasures oft preserved, Are to their bane. Earl of Surrey.

The country people use kitchen physick, and common experience tells us,

that they live freest from all manner of infirmities that make least use of apothe- caries' physick. Many are. overthrown by preposte- rous use of it, and thereby get their bane, that might otherwise have escaped.

Burton's Anatomy of Melancholy. Lest Rome herself be bane unto herself, And she whom mighty kingdoms court'sy to, Like a forlorn and desperate cast away, Do shameful execution on herself. Shakspeare.

Begone, or else let me. 'Tis bane to draw the same air with thee. Ken Jonson.

All good to me becomes Bane ; but in heav'n much worse would be my state.

Milton.

They with speed

Their course throivh thickest constellations held, Spreading their bum-. Id.

Iniolency must, be repressed, or it will be the bane of the Christian religion. Hooker.

Win, can omit the Gracchi, who declare The Scipios' worth, those thunderbolts of war, The double b.me of Carthage ? Dryden.

False ivliuioa is, in its nature, the greatest bane and destruction to government in the world. South.

For voyaging to learn the direful art, To taint with deadly drugs the barbed dart J Observant of the gods, and sternly just, Ilus ivfus'd t' impart the bane fid trust. Pope.

Thus am I doubly arm'd ; my death and life, ?.!✿✿✿✿✿✿, Ihiiie and antidote, are both before me, This in a moment brings me to my end; '.', < }'. that informs me 1 shall never die. Addifon.

Thy sins are of so hum fid a nature, that they poison – v < n the blood of Christ unto thee.

Hupliins's Sermons. Then would 'st thou steer, where fortune spreads

the sails?

Go flatter vice, for seldom flattery fails. Soft through the ear the pleasing bane distils ; Delicious poison! in perfumes it kills! Broome.

O bant' of good, seducing cheat, Can man, weak man, thv power defeat? Gay.

Ueneath the gloomy covert of a yew, That taints the grass with sickly sweats of dew; No verdant beauty entertains the sight, i!ut b-incful hemlock , and cold aconite. Garth.

BAN

When it is now clear beyond all dispute, that the criminal is no longer fit to live upon the earth, but is to be exterminated as a monster, and a bane to human society, the law sets a note of infamy upon him, and puts him out of its protection. Blacks tone. So gentle life's descent,

We shut our eyes, and think it is a plain ;

We take fair days in winter for the spring j

And turn our blessings into bane. Young,

But quiet to quick bosoms is a hell, And there hath been thy bane. Byron.

BANE BERRIES, a name given to the actaea spicata, or herb Christopher.

BANEWORT, n. s. From bane and wort. A plant, the same with deadly nightshade.

BANG', v. & n. Dut. bengeler, to beat with sticks, clubs, Sac. Swed. bana, to strike. A northern provincialism, to beat. To beat, or strike, to hit hard; to give repeated heavy blows. Figuratively applied to speech ; thus to tongue- bang, is to scold, and overpower others by viru- lent noisy abuse.

The desperate tempest hath so bang'd the Turks,

That their designment halts. Shakspeare.

You should accost her with jests fire-new from the mint; you should have banged the youth into dumbness. . Id.

I am a bachelor. ••• That's to say, they are fools that marry ; you'll bear me a bang for that. la.

*With many a stiff twack, many a bang, Hard crab-tree and old iron rang. Hudibrat^*

I heard several bangs or buffets, as I thought, given to the eagle that held the ring of my box in his beak.

Swift' t Gulliver.

He having got some iron out of the earth, put it into his servant's hands to fence with, and bang one another. Locke.

Formerly I was to be banged because I was too strong, and now, because I am too weak, to resist ; I am to be brought down when too rich, and oppressed when too poor. Arbuthnot.

But, dear Mr. Bickerstaff, convince 'em that as harsh and irregular sound is not harmony ; so neither is banging a cushion, oratory. Tatler.

BANGALOOR, or BANGALORE, a fortress in the peninsula of Hindostan, seventy-four miles from Seringapatam, the capital of the Mysore. Hyder Ali constructed the fort there, which Tippoo Saib destroyed, as useless against Europeans. Here, however, he built a palace, and laid out extensive gardens. It is a good place for trade, especially in the betel-nut, black-pepper, and sandal wood. Woollen cloths, 8cc., and a kind of strong silken stuff, are manufactured here. Bangaloor was annexed to the Mysore in 1787, was taken by assault, under lord Cornwallis, and plundered by the army.

BANGASSI, a large fortified town of Foola- doo, in Africa. Long. 6►► 45′ W., lat. 13►► 10′ N.

BANGERMOW, a considerable town of Hin- dostan, in the province of Oude. Long. 80►► 25′ E., lat. 26►► 48′ N.

BANGEY, a cluster of small islands in the Molucca passage. Long. 124►► 15′ E., lat. 1►► 45'.

BANGIUS (Peter), a Swedish divine, born at Helsingborg in 1633. He became professor of theology at Abo, where he continued thirty-two years; and in 1682, obtained the bishopric of

Wyborg. He died in 1696, leaving, besides other works, an Ecclesiastical History of Swe- den ; and a Treatise on Sacred Chronology.

BANGIUS (Thomas), a Danish divine, born in 1660, he was professor of divinity, philosophy, and Hebrew, at Copenhagen ; and distinguished

himself as an elegant Latin writer, on the origin of languages, and other subjects. He also pub- lished a Hebrew lexicon. He died in 1661.

BAN'GLE, v. a. To waste by little and little ; to squander carelessly; a word now used only in conversation.

If we bangle away the legacy of peace left us by Christ, it is a sign of our want of regard for him.

Duty of Man.

BANG LOR, a town in the Mysore territory, twenty miles south-east of Bangaloor.

BANGOR, or BANGOR FAWR, i. e. the great, an ancient city and parish, in the hundred of Uwch-Gorffai, county Caernarvon, North Wales, situated near the Menai strait, at the foot of a precipitous rock, and near the embouchure of the Ogwen river, called generally " Aber Cegin." It is 236-J miles from London, nine from Caernarvon,and fifteen from Conway. It is a place of good trade, and has grown up with a rapidity almost unprecedented. It consists of one street, a mile in length, from which several branches issue towards the Menai. The public buildings are the cathedral, bishop's palace, town-hall and market house, spacious chapels erected by the dissenters of various denominations, a free-school, dispensary, and inns, which are on a scale of such magnitude as places them beyond the rank of private edifices. The trade here is considerable ; slates, raised and worked at the quarries of Dolawen, form the principal export. They are conveyed a distance of seven miles on a rail-road, and shipped at the quay of Port Penrhyn. A manufacture of writing slates, chimney-pieces, cisterns and other useful articles, all made from the Bangor slate, is carried on at the port, to which may Toe added an iron foundry, ship-building, and the various trades connected with both, as the most prominent amongst the employments in which the inhabitants are en- gaged. Since the erection of the Menai bridge, two miles from the city, and the transit of the great road through, it is calculated that up- wards of 50,000 strangers have annually visited Bangor. The valuable quarries just mentioned, the port of Penrhyn, the spacious inn, and the noble Saxon castle about a mile from the city, are the property of G. H. Dawkins Pennant, esq., representative and heir of the ancient family of Penrhyn. The see of Bangor was founded by St. Deiniol, A. D. 525. It includes Anglesea, Caernarvonshire, except four parishes, fourteen parishes in Denbighshire, and seven in Montgomery. It is divided into three arch- deaconries, Anglesea, Bangor, Merioneth, the two first being held in commendam with the bishopric. The first cathedral was destroyed by the Saxons, A. D. 1071. King John rebuilt it, A. D. 1212, which was mutilated in the wars of 1 247, and burned down in 1 402.

Bishop Deane erected the present nave, and Dr. Skeffington added the tower in 1532. It was plundered by

bishop Bulkeley about the year 1 5 47,who actually sold the bells for his private advantage. It is now in good repair, the choir handsome, and the fine nave converted into a parish church for the accommodation of the dense population of this prosperous place. Here is an effigiated tomb of Owen Gwynedd, prince of Wales, who was interred here in 1169. The city is governed by 'the bishop, who is lord of the manor. The free school was founded by Dr. Jefferey Glynn, A. D. 1557, and enjoys an endowment of ►►400 per annum. The ancient castle of Bangor was erected by Hugh, earl of Chester, in the reign of William II. : no traces of it now remain. Bangor is one of the boroughs contributing with Caernarvon in returning a member to parliament. Population about 4000. Markets are held on Fridays, and there are four fairs holden here in each year. See MENAI BRIDGE.

BANGOR FERRY, see MENAI BRIDGE.

BANGOif, county Down, Ireland ; this place gives title of viscount to the family of Ward.

BANGORIAN CONTROVERSY, so called from Dr. Hoadly, bishop of Bangor. It arose from a sermon preached by him before his majesty king George I. at the royal chapel, St. James's, on Sunday, March 31, 1717. Mr. Belsham, in his Memoirs, vol. i. p. 174, gives the following ac- count of this controversy : ►►► ' As the foundation of this famous discourse, the bishop chose the declaration of Christ to Pilate : My kingdom is not of this world : and the direct and undis- guised object of it was to prove that the king- dom of Christ, and the sanctions by which it is supported, were of a nature wholly intellectual and spiritual ; that the church, taking the term in its most unlimited signification, did not, and could not, possess the slightest degree of authority under any commission, or pretended commission, derived from man; that the church of England, and all other national churches, were merely civil or human institutions, established for the pur- pose of diffusing and perpetuating the knowledge and belief of Christianity, which contained a system of truths, not in their nature differing from other truths, except by their superior weight and importance, and which were to be inculcated in a manner analogous to other truths ; demand- ing only from their more interesting import, proportionably higher degrees of care, attention, and assiduity in the promulgation of them. It is scarcely to be imagined, in these times, with what degree of false and malignant rancor, these plain, simple, and rational principles were at- tacked by the zealots and champions of the church. See HOADLY. On the meeting of the convocation, a committee was appointed to examine this famous

publication, and a repre- sentation was quickly drawn up, in which a mosl heavy charge was passed upon it, as tending to subvert all government and discipline in the church of Christ ; to reduce this kingdom to a state of anarchy and confusion ; to impugn and impeach the royal supremacy in matters eccle- siastical, and the authority of the legislature to enforce obedience in matters of religion, by se- vere sanction. A sudden stop, however, was put to these disgraceful proceedings, by royal prorogation ; and from that period the convoca-

fjon has never been convened, but as a matter of mere form, and for the purpose of being again prorogued. The controversy which then com- menced was carried on for several years, with great ability and animation on the part of the bishop, aided by various excellent pens, though opposed by men whose learning and talents irtve an artificial lustre to bigotry and absurdity. No controversy, however, upon the whole, ever more fully and completely answered the purpose intended by it. The obscurity in which this subject had been long involved, was dissipated; the public mind was enlightened and convinced ; church authority, the chimera vomiting flames, was destroyed ; and the name of Hoadly will be transmitted from generation to generation, with increase of honor, of esteem, and grateful vene- ration.'

BANGUE, a species of opiate, much used throughout the east, for drowning cares and in- spiring joy. By the Persians it is called beng; by the Arabs esscar, corruptly asseral, and as- sarth; by the Turks, bengitie, and vulgarly mas- tack ; by European naturalists, bangue or bange. It is the leaf of a kind of wild hemp, growing in the countries of the Levant, and differs little, either as to the leaf or seed, from our hemp, ex- cept in si/.e. Some have mistaken it for a spe- cies of Alth-.ea. There are various manners of preparing it; Olearius describes the method used in Persia. Mr. Sale tells us, that, among the Arabs, the leaf is made into pills or con- serves. But the most distinct account is given by Alexander Maurocordato, counsellor and phy- sician of the Oitotnan Porte, in a letter to We- delius. According to this author, bangue is made of the leaves of wild hemp, dried in the shade, then ground to powder; put into a pot wherein butter has been kept ; set in an oven till it begins to torrify ; then taken out and pulverised again ; tlius to be used occasionally, as much at a time as will lie on the point of a knife. Such is the Tinkish bangue. Bangue in reality, is a succe-

MAM.!” KY. an island in the eastern seas, Ivin.: ii!i the north coast of Borneo, and separated by a channel, three riiile< wide, from the island i.t Ualambairj.an. It is about twenty-three miles in h huth, byele\eii in breadth, and its shores an- frequented by abundance of turtle. Long

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BANIAK, an i>land in the eastern seas, off the we>t coast ol Sum-air. i, oppo.Mte to the mouth of the Sinke.ll. li is one of a cluster, and is about

st-vt nteen miles in length, by bn adt’n. it is known bv a ps?aki a su_;ir!oaf. N a slu^, or bi- taine’l here. ‘1 lie unr.ihitants ; ;ak a la!“_’iia^‘e | ‘.‘ti I’ ‘ I’... hit. ‘,!

B A N J A

Here.

co, but sp ives. I .on,’ BAMAl.l’CH,

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e llO’;seS, \ lllell

ill;, ami the reess. Long BANIAN 1),

MI in average ill, resembling le-mar is ob- jf the Maruwi liar to them- 10′ .

t KA, a city of he capital of Bosnia, upon Uia, on tin- river \ erbas. mount to :H)i)0, are meanly uburbs are chiefly inhabited by I a3 -Jo’ !’.., l.,t. - u’~ W . v^, in ;:..iiine language, a term

among sailors, for those days in which they have no flesh meat. It seems to be derived from the practice of the people mentioned in the next article.

BANIANS is sometimes taken as a name for a religious sect in the empire of the Mogul, and sometimes extended to all the idolaters of India, as contradistinguished from the Mahommedans : in which sense, Banians include the Brahmins and other castes. At other times it is restrained to a peculiar caste or tribe of Indians, whose office or profession is trade and merchandise ; in which sense Banians, signifying bankers, stand contradistinguished from Brahmins, Cut- lery, and Wyse, the three other castes into which the Indians are divided. The four castes are ab- solutely separate as to occupation, relation, mar- riage, &c. though all of the same religion ; which is more properly denominated the religion of the Brahmins, who make the ecclesiastical tribe, than of the Banians, who make the

mercantile. The proper Banians are called, in the Shaster, or book of their law, by the name of Shuddery; under which are comprehended all who live after the manner of merchants, or that deal and transact for others, as brokers ; exclusive of the mechanics or artificers, who make another caste. These Banians have no peculiar sect or religion, unless it be, that two of the eight general pie- cepts given by their legislator, Bremaw, to the Indian nation, are, on account of the profession of the Banians, supposed more immediately to relate to them, viz. those which enjoin veracity in their words and dealings, and avoiding all prac- tices of circumvention in buying and selling. Some of the Banians, quitting their profession, and retiring from the world, commence religious, assume a peculiar habit, and devote themselves more immediately to God, under the denomina- tion of Vertea. These, though they do not hereby change their caste, are commonly reckoned as Brahmins of a more devout kind ; as monks in the Romish church, though frequently not in orders, are reputed as a more sacred order than the regular clergy. Gemelli Carreri divides the Banians into twenty-two tribes, all distinct, and not allowed to marry with each other. Lord assures us they are divided into eighty-two castes or tribes, correspondent to the castes or divisions of the Brahmins or priests, under whose discipline they are, as to religious matters, though the generality of the Banians choose to be under the direction of the two Brahmin tribes, the Visalna-granaugers and Vulnagranaugers. The Banians are represented as great factors, by whom most of the trade of India is managed ; in this respect equal to the Jews and Armenians, and not be- hind either, in point of skill and experience, in whatever relates to commerce. Nothing is bought bnt by their mediation. They seem to claim a kind of jusdivinum to the administration of the traffic of the nation, grounded on their sacred books, as the Brahmins do to that of reli- gion. They are dispersed, for this purpose, tiirough all parts of Asia, and abound in Persia, particularly at Ispahan and Gombroon, where many of them are extremely rich, yet never above acting as brokers. But it has been justly said by a late writer, that the name Banian was

originally given by Europeans to almost all Hindoos; and that generally what we read of their peculiar tenets, their abhorrence for meat, &c. is, in fact, the practise of all conscientious Hindoos.

BANIAN TREE. See Ficus.

BANICA, a town in the island of Hispaniola, forty miles south-east of Cape Francois. Also the name of a small river in the same island.

BANJAR MASSIN, or BAGSAR MESSIX, a town and district of Borneo, on a river of the same name, which falls into the sea near the southern extremity of the island. The district produces diamonds, gold dust, iron, canes, and pepper, the last of which is its staple commo- dity. Gold is obtained here in bars, and the country is celebrated for the quality of its steel. The imports are slaves, birds' nests, nutmegs, and tortoise shells, which are all re-exported from Borneo. The rajah, or sovereign, formerly re- sided at a place called Cagu-Tangie, or Cota- Tengah, but he directed a city to be built at Martapura, whither he transferred his abode in 1771, changing the name of Martapura to Bunire Kintjana. His power is considerable. A Dutch commercial establishment on the banks of the river, at the end of the village of Banjar Massin, called Tatas, consists of an octagonal fort, sur- rounded by palisades, witk bastions towards the river side ; it was built in 1709. They had, by a previous treaty in 1648, compelled the king to relinquish for their benefit the whole pepper trade. The king has, in return, been protected by the Dutch from the unsettled predatory tribes in his neighbourhood. In the beginning of the seventeenth century, an establishment was at- tempted here by the English East India Com- pany, but the settlers were resolved to abandon the place. During the late war, however, the Dutch fort was occupied by the British. The town of Banjar Massin formerly stood eighteen miles up the river, but has been transferred six miles lower down. It consists of about 300 houses. Long. 114►► 55′ E., lat. 3►► S.

BANIASS, or PANAAS, anciently Caesarea Pliilippi, a village of Syria, near the source of a river, which has been commonly supposed to be t'ie Jordan. This stream rises near a remarkable grotto in a rock, on the declivity of which are seen some ancient Greek inscriptions to Pan and the nymphs of the fountain. The vestiges of a flourishing city are still to be seen ; but there are no remains of the temple which Herod the Great erected in honor of Augustus. The fort of Baniass. built in the time of the caliphs, stands on the summit of a lofty mountain. Around is an agreeable country, but panthers, bears, wolves, and hyaenas, are numerous. There is also great abundance of game. Distant two leagues west of the lake Phiala, or Birkel-el-Ram.

BANIER (Anthony), licentiate in laws, mem- ber of the academy of inscriptions and belles lettres, and ecclesiastic of the diocese of Cler- mont, in Auvergne ; died in November 1741, aged 69. He is principally celebrated for his translation of the Metamorphoses of Ovid, with remarks and explanations, which was published in 1 732, at Amsterdam, in folio, ornamented with coppei -plates, by Picart; and reprinted at Paris,

1738, in 2 vols. 4to; and for his Mythology explained by History, a work full of the most important information, and printed at London in 1741, in 4 vols. 8vo.

BANILLIA, in the materia medica, a name used by some for the vanillia, or vanilloes, used in making the scented chocolate.

BANISERLIE, the capital of Dentila, in western Africa. It is a Mahommedan town. BANISH, N See BAN. Sax. forbatned BANISH'ER, fa banished nan. In Fr. ban BANISH'MENT, inir, Germ, bannen, to put out BAS'NITIOX. J of a community by a ban or civil interdict, which was formerly either eccle- siastical or civil. Banishment, exile, and expul- sion, all include the idea of exclusion or coercive removal, but in other respects they differ. Ba- nishment follows from a decree of justice ; exile, either by the necessity of circumstances or an order of authority ; banishment is a disgraceful punishment inflicted by tribunals upon delin- quents ; exile is a disgrace incurred without dis- honor ; exile removes us from our country ; banishment drives us from it ignominiously. Banishment and expulsion, both mark a disgrace- ful and coercive exclusion. But banishment is authoritative, the public act of government; expulsion is the act of a private individual, or a small community. Banishment always supposes a removal to a distant spot, to another land ; ex- pulsion never reaches beyond a particular house or society. Banishment and expulsion are like- wise used in a figurative sense, although exile is not : in this sense banishment marks a distant and entire removal ; expulsion a violent removal ; we banish that which it is not prudent to retain ; we expel that which is noxious. Hopes are banished from the mind when every prospect of success has disappeared ; fears are banished when they are altogether groundless ; envy, hatred, and every evil passion should be expelled from the mind as disturbers of its peace ; harmony and good-humor are best promoted by banishing from conversation all subjects of difference in religion and politics ; good morals require that every un seemly word should be expelled.

This is thy mortal for-, this is Arcite, That fr5 thy lond is baniihed on his hed, For which he hath deserved to be ded.

Chaucer.

Plato made it a great signe of an intemperate and corrupt commonwealth, where lawyers and physicians did abound ; and the Romans distasted them so much that they were banished out of their city, as Pliny and Celsus relate, and for 600 years not admitted.

Burton's Anatomy of Melancholy.

Oh, fare thee well !

Those evils thou repeat'st upon thyself Have banish'd me from Scotland. Shakspeafe. Marius then fetching a deep sigh from his heart, gave him this answer, ' Thou shall tell Sextilius, that thou hast seen Cains Marius, banished out of his coun- try, sitting amongst the ruins of the city of Carthage.'

North. Plutarch.

They refused to do it (take the oaths), and WV.TC upon that condemned to perpetual banishment, a: men that denied allegiance to the king, and by this an cugine was found out to banish as many as they pleased. Bishop Burnet's Own Times,

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BANK.

As I have your express orders not to restore any person who Las been sentenced to banishment, either bv myself or others ???, so I have no directions with respect to those, who having been banished by some of my predecessors in this government, have by them also been restored. Melinuth's Pliny

Every professor do continuo in his office during life, unless in case of such misbehaviour as shall amount to bannition by the university statutes.

Blackstone'i Commentaries. Thus I alone, where all my freedom grew, In prison pine, with bondage and restraint ; And, with remembrance of the greater grief, To banish the less, I find my chief relief.

Earl of Surrey.

Then came the autumne, all in yellow clad, As though he joyed in his plentious store, Laden with fruits that made him laugh, full glad That he had banisht hunger, which to fore Had by the belly oft him pinched sore ; Upon his head a wreath that was enrol'd With ears of corne of every sort he bore, And in his hand a sickle he did holde, To reap the ripen'd fruit the which the earth had yold. Spenser's Faerie Queene. If sweet content is banish'd from my soul, Life grows a burthen and a weight of woe.

Gentleman.

Joy to that happy pair, Whose hopes united banish our despair.

Maniell.

lianish business, banish sorrow, To the gods belongs to-morrow. Cowley.

It is for wicked men only to dread God, and to en- deavour to banish the thoughts of him cat of their minds. TittoUon.

Successless all her soft caresses prove, To banish from his breast his country's love.

Pope

BANISTER (John), a physician and surgeon in the reign of queen Elizabeth, was educated at Oxford, where, says Anthony Wood, he studied logic for a time ; but afterwards applied himself solely to physic and surgery. In 1573 he took the degree of M. B. and, obtaining a licence from the university to practise, settled at Nottingham, where he lived many years in great repute, and wrote several medical treatises. His works were collected and published in 1633, 4to.

BANISTER, the same with BALUSTER.

BANISTERIA, in botany, a genus of the trigynia order, and decandria class of plants, ranking in the natural method under the twenty- third order, trihilatae. The calyx is quinque- partite, with nectarious pores on the outside of the base ; the petals are roundish and ungulaled ; the seeds are three, with membranaceous wings. There ars seven species, all natives of warm countries, but possessing no remarkable pro- perties. An American and West Indian genus, containing twenty-four species, has been figured and described in Cavanilles, ' Monadelphiae classis dissertation es decem.'

BANK.

BANK', v. & n. Junius derives this word from the Dutch bancke, which signifies to beat, to strike, as the waves perpetually strike against the shores of the sea, and the current of the river presses against its sides. Skinner is content, as is Johnson, with the Ang.Sax. bane, tumulus. Waehter has dime, a hill, mound, heap, and any eminence, or rising place. It is transferred, he add>, to all eminent or rising places for sitting or lying, as hanks of oars were not on the same level in ancient ships, but seats raised above one another. It may thus be applied to any thing raised to confine a current of water; to any mound or elevation designed as a barrier to pro tect or defend from the incursions of warriors ; or to facilitate the subjugation of forts and cities; and to the raised table or counter of merchants, traders, or money-changers. To bank is to con- tine or surround \ith battle; to throw up em- bankments. On the authority of Steevens, the

commentator on Shakspeare, it has been suggest- ed, that to dank may mean to sail along the bunks.

Bethmaachah, and ity ; and it stood in Samuel.

not the laiide, but they sjiyi'd 'A cert;1.1 ne lumen with a lianhe, into which they \v>'iv miiu!"d uf it v.vre pos.-uble > to thrust in the iliip. Bible, 1551.

Have I no; heard these islanders shout out

' Vivt: le roy,' as 1 have bunk'-l their towns ?

S/uiktpeare,

*Have you not made an universal shout, That Tyber trembled underneath his bank? Id**

Richmond, in Devonshire, sent out a boat Unto the shore, to ask those on the banks, If they were his assistants. Id.

How sweet the moon-light sleeps upon this bank ! Here will we sit, and let the sounds of inusick Creep in our ears ; soft stillness, and the night, Become the touches of sweet harmony. Id.

That strain again, it had a dying fall ; O, it came o'er my ear like the sweet south That breathes upon a bank of violets ; Stealing and giving odour. Id.

Plac'd on their banks the lusty Trojans sweep Neptune's smooth face, and cleave the yielding deep.

Waller.

Mean time the king with gifts a vessel stores.

Supplies the banks with twenty chosen oars.

Dryde.*

That bunks of oars were not in the same plane, but raised above one another, is evident from descriptions of ancient ships. Arbuthnot.

A brook whose stream so great, so good, Was lov'd, was honour'd as a flood j Whose banks the Muses dwelt upon. Crashaw ,

'Tis happy when our streams of knowledge flow

To fill their banks, but not to overthrow. Denham.

O early lost ! what tears the river shed, When the sad pomp along his banks was led !

Pope.

Amid the cliffs And burning sands, that bank the shrubby vales.

Thomson,

BANK.

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My bankj they are furnished with bees, Whose murmur invites one to sleep, My grottos are shaded with trees,

And my hills are white over with sheep. I seldom have met with a loss,

Such health do my fountains bestow, My fountains all bordered with moss, Where the hare-bells and violets grow.

Shenstone.

An intercourse of commerce and language was gra- dually established between the opposite banks of the Danube, and after Dacia became an independent state, it often proved the firmest barrier of the empire against the invasions of the savages of the north.

Gibbon.

On every bank, and under every shade, A thousand youths, a thousand damsels play'd ; Some wantonly were tripping in a ring, On the soft border of a gushing spring. . Sir William Jones.

Is it owing to Christianity, or to the want of it, that the banks of the Nile, whose constantly renewed fer- tility is not to be impaired by neglect, or destroyed by the ravages of war, serve only for the scene of a ferocious anarchy, or for the supply of unceasing hos-

tilities ?

BANK', v. & n. BANK'ER,

Paley. A commercial application of the

BANK'RUPT, v., n. s., & adj. \ former word. In BANK'RUPTCY, . i this sense, bank

BANK'EROUT, v. & n. J is a receptacle for

money, and to bank is to deposit money in such receptacle. Bankrupt is of more general appli- cation, extending to persons who are dealers in any commodity, or who carry on any trade or business. It is derived from the Fr. banqueroute, or the Ital. bancorotto. It signifies one whose bench or table has been broken ; that is, whose debts exceed his means of payment. The Bank- rupt laws accurately define this species of offence or misfortune.

But natheless I toke unto our dame, Your wif at home, the same gold again Upon your benche, she wote it wel certain, By certain tokenes that I can hire tell. Chaucer. He hadde openly preached in the temple, he had overthrown the banker's tables, and drieven oute of the temple too. Sir Thomas Store's Works.

Perkin gathered together a power, neither in num- ber nor in hardiness contemptible ; hut in their for- tunes, to be feared, being bankrupts, and many of them felons. Bacon.

Wherefore do you look Upon that poor and broken bunk'rupt there ?

Shakspeare. As you Like it. Ross. The earl of Wiltshire hath the realm in

farm.

WlLLOUGHBY. The king's grown bankrupt, like a broken man. Id. Richard II.

Dainty bits

Make rich the ribs, but bankerout the wits. Id. Unless we had rather think both moral and judi- cial, full of malice and deadly purpose, conspired to let the debtor Israelite, the seed of Abraham, run on upon a banhrout score, flattered with insufficient and ensnaring discharges.

Milton. Doctrine, Sfc. of Divorce. This done, he pens a proclamation stout, In rescue of the banker's hankerotit. Sfarvell.

The money of widows and orphans employ'd, And the bankers quite broke. Id-

GONZ. There's the quintessence, The soul aud grand elixir of my wit, For he (according to his noble nature) Will not be known to want, though he

do want, And will bs bankrupted so much the sooner, And make the subject of our scorn and laughter.

Beaumont and Fletcher. By powerful charms of gold and silver led, The Lombard bankers, and the 'change to waste.

Dryden.

Whole droves of lenders crowd the banker' doors, To call in money. Id.*

In vain at court the bankrupt pleads his cause, His thankless country leaves him to her laws.

Pope.

i Or at some banker's desk, line many more, Content to tell that two and two make four, His name had stood in city annals fair, And prudent dullness mark'd him for a may'r.

Churchill.

Here is again discovered the inhabitant of Cheap- side, whose head cannot keep his poetry unmingled with trade. To hinder that intellectual bankruptcy, which he affects to fear, he will erect a bank for wit.

Johnson's Life of Blackmore.

By an act of insolvency all persons who are in too low a way of dealing to be bankrupts, or not in a mer- cantile state of life, are discharged from all suits and imprisonments, by delivering up all their estate and effects. Blackstone.

That bankruptcy, the very apprehension of which is one of the causes assigned for the fall of the mo- narchy, was the capital on which the French republic opened her traffic with the world. Burke.

Had every particular banking company always un- derstood, and attended to its own particular interest, the circulation never could have been overstocked with paper money. Smith's Wealth of Nations.

1. BANK, BANKERS, BANKING. The term bank has two distinct significations ; one in refer- ence to commerce, implying a place of deposit or store-house; the other relating to geography and rural economy , implying an elevation of the earth, either natural or artificial; and either below or above the surface of the water, in rivers as well as in the ocean. It is further a technical term in law; the judges of the supreme court of law,

when sitting in judgment collectively, are said to sit in bank, banque, or banco. See JURISPRU- DENCE. It is also a military term, denoting an elevation of earth within the parapet of a for- tification, generally between two and three feet high, or more, according to the height of the parapet; being about four feet and a half lower than the top of the parapet, three feet broad, ascended at intervals by steps, by which the gar- rison get up to fire on, or to observe the proceed- ings of, the besiegers.

2. We will now proceed in the endeavour to illustrate the term bank, in conjunction with bankers and banking, as referable to commerce, by showing, 1st, the probable origin or derivation of the term; 2nd, the origin or rise, and nature of banking institutions ; 3rd, their progress, practice, and present state, throughout the commercial world; and 4th, their influence and effect on the social and moral relations, and condition of mankind.

3. Bank, in its present application as a com- 'nercial term, appears to have had its origin in

*Italy, where, in the infancy of European com- merce, the Jews were wont to assemble in the market-places of the principal cities and towns, seated on benches, ready to lend money ; first on the reputation and written bond or acknowledg- ment, singly or jointly, of borrowers; but (as will be more fully shown hereafter), as there is in the lending and borrowing of money an immuta- ble tendency to demoralise and derange society, confidence and reputation soon became mere bye- words; and, instead of bonds and written obliga- tions, money was only lent upon the security of commodity or produce, by which localised places of deposit or storing became necessary; and hence, banking, in its origin, bore an ana- logy to our present system of pawnbroking; while the term bank is supposed to have been derived from the benches and tables in the mar- ket-places, at which the money-lenders used to transact their business; the Italian word banco, signifying a bench, derived probably from the Greek word *rpairtZat signifying both a bench and a table, as does also the Spanish word banco ; in reference to which the money-lenders obtained the name of benchers or bankers; the .lews of Lombardy being among the first people in Western Europe who carried into practice the principle of lending money on the security of commodity : their repositories partially obtained the name or Lombard-houses.*

1. The Lombards were a Scandinavian tribe, who first figure in history

about the year 378 ; but it was not till ."/tit' that they established themselves in Italy; at which period they made Pavia the capital of their kinu'dom. It must have been, therefore. uhscquent to this period that bank ing institutions assumed any thing like a perma- nent character. J. ending and borrowing, how- ever, appear to have prevailed in all ages, or long before the intervention of money, to facilitate the interchange of commodities; and in all ages, as in the present dav, appears to have been productive ot extortion and social derangement : see the Mosaic code, Kxo- his, cli. xxii. v. 14 and 22, and Deuteronomy, ch. xxiv, v. (i and 10, and by tl;e nairative of St. Matihew, ch. xxi, v. 12, it will he seen that tables in t ,e market or public places were in use in his day, tor the accommoda- tion of money-lenders.

,"). Tiii' restlos disposition of the Lombards tended to excite a spirit of activity and enterprise throughout all the Italian states; by which the people of the seventh century, after the M.thiimnirdiiiis had obtained possession of Euypt, that the chief depot of the products of the east, was Iran-It i Ted from Alexandria to Con- stantinople, and afterwards to Venice, that com- merce he-;.!! to resolve itst;lf into a more regu- lar svMe.m ta.ui I. a 1 e\ er beiore been practised, and a methodical an 1 vise i and adopted. See IJoOK XM MM,. Thi-, 111 ih'- proj;res> of time, elicited new id-, as on th ec.onoiny of payment; and ⁂j'mut the middle of the twelfth century the bank of Venice, so loiiir celebiated throughout the commercial world, and which may be regard-*

ed as the foundation of the present system of banking, was established ; and had the operations of the bank of Venice been confined to the legi- timate object of facilitating commercial inter- change, its socialising capabilities would have rendered it worthy of the celebrity it so long enjoyed; but, whilst the principles of its eco- nomy are entitled to the highest admiration, it seems to have been established in tyranny, with a view to political aggrandisement, and throughout the whole course of its career to have been perverted to the worst of purposes.

6. It was the desolating system of the cru- sades, and not the socialising principle of facili- tating commercial interchange, which gave rise to the bank of Venice. The first crusade embarked from the shores of the Adriatic, under the auspi- ces of Pope Urban the Second, in 1095; and from the ascendancy and influence which the Venetians, by their extensive commercial inter- course, had then acquired over every part of Western Asia and Europe, they became the principal agents of the crusaders, as well for the wealthy individuals who embarked in those chi- valrous exploits as for the several governments to which they respectively belonged. The fruits of extortion, so likely to result from such a sys- tem, excited the cupidity and avarice of the Venetian senate, which led, in 1176, some say in 1157,

to the establishment of the bank, under the authority and pretended guarantee of the state, the crusading agency previously having rested exclusively with individuals.

7. The original subscription fund of the bank of Venice was 2,000,000 Venetian ducats, equal to ––433,333 ; but, by a solemn edict of the senate, the whole trading community of the republic were compelled to deposit their money in the bank, with which a credit was opened equal to the deposit made, which could only be made avail- able for transfer, so that not only the subscribed capital but also the aggregate amount of the depo- sits resolved themselves into a national debt. The whole amount of the intrinsic money, subscribed and deposited, having been applied by the se- nate towards aiding the views of the crusaders, and other external purposes, an ideal capital, or mere denomination of amount was thus created to adjust the operations of commercial interchange.

8. \Vhether the transfers at the bank in the early period of its establishment required per- sonal attendance, as is the case in transferring the national debt-stock at the bank of England in the present day ; or whether effected, on written orders corresponding to the checks in the present English practice of banking ; does not appear : but, be that as it might, derangements in the social economy of the state soon ensued ; the agio or difference between the current money, and transferable amounts at the bank, attained the rate of thirty per cent. Yet such was the insidious and illusive nature of the bank system, that the bank increased in popularity in propor- tion to the extent of the derangement which ensued ; the inconvenience frequently occasioned in the minor transactions of commerce, as well as on occasions of citizens or strangers requiring money to defray the expenses of foreign ioumevs,

led in the course of time to the bank paying out money. Yet such was the influx of money, which the crusading armaments brought from all parts of western Europe, that after the system of making payments in money was practised, the deposits always exceeded the demands.

9. At a later period, when the Venetians them- selves turned crusaders against the Turks, the subscription-fund of the bank was increased to 5,000,000 of ducats; the whole of which was made use of by the senate, to aid them in their operations of warfare ; and, as previously stated, throughout the whole period of its career, it was made an instrument of aggression in aid of poli- lical aggrandisement : yet such was the fortuity of circumstances, and, for several centuries having no rivalry, its integrity does not appear ever to have been questioned ; the derangements occa-

sioned by the fluctuation of the agio led ulti- mately to an edict of the senate, fixing it at twenty per cent., at which rate it continued up to the period of the extinction of the republic in 1797, see VENICE.

10. In the fourteenth century the Genoese began to rival the Venetians in their commerce, and in 1345 a bank was established at Genoa; but the more favorable local position of Venice retained for it an undiminished political impor- tance, and although the Genoese were very successful in their commercial career, their bank, relatively to that of Venice, was an insignificant establishment ; it nevertheless was enabled, in the fifteenth century, to advance considerable sums to Spain, and other governments; but in 1751 it was deemed insolvent to a very considerable amount, and in 1798 the establishment was finally dissolved and broken up by Buonaparte.

11. No further progress appears to have been made in the formation of banking institutions, until after the discovery by the Portuguese, in 1 497, of the passage to Asia by the Cape of Good Hope ; and even then, more than a century elapsed before another bank was established. It was at the commencement of the seventeenth century, when Amsterdam had become the chief mart of European commerce, that a bank was established in that city in 1609; and, as the cir- cumstances which led to, and the conduct which dictated, the formation of this bank, appear to have been purely commercial and social, void of all speculative and political influence, and its economy essentially different from either those of Venice or London, it merits the most ample elucidation of the details of its system on our part, and the utmost attention on the part of the enquiring reader.

12. Banking, in its economy, resolves itself into three distinct orders of practice, viz. 1. of deposit, transfer, and agency; 2. of discount, simply; and, 3. of discount and circulation: a banking establishment may, therefore, be formed for carrying on either any one of these orders of practice separately, or two, or all collectively ; and either, and all of them are liable to be made instruments of oppression by partial application, or by perversion to impolitic and bad purposes : a more ample elucidation of the details of each order of practice will appear hereafter (see section 1 4.), the analysis being exhibited in this

place, that the distinctive character of the bank of Amsterdam may be the better understood.

13. The circumstances which gave rise to the establishing of the bank of Amsterdam, were the great variety of clipped and debased coins which its

extensive commerce, at the close of the six- teenth and commencement of the seventeenth century, brought into that city. The constant variations of value of these coins occasioned con- tinual disputes and inconveniences in the adjust- ment of payments, more especially so in the payment of foreign bills of exchange ; to obviate these disputes and inconveniences, it was, that the bank was established in 1607, on the legiti- mate and social principle of deposit, transfer, and agency ; the security of the deposits being gua- ranteed by the corporation of the city, by whom its managers were appointed, and who thereby constituted themselves the agents of the establish- ment; the expenses of which, and its manage- ment, being defrayed by fees on opening of accounts, transfers, &c. This system or practice of banking, it will be seen, requires no sub- scribed or fixed capital.

14. The bank of Amsterdam received coins of all descriptions at a fixed value, according to their weight and fineness, deducting an amount equal to the expense of coinage into the standard coin of Holland ; not that the various coins so paid in should be converted into standard coins, but that a credit should be placed on the bank books to such an amount, after the seignorage and fees had been deducted ; the amount so credited then constituted bank-money. It was in the next place enacted, that all payments of 600 guilders, = to ––52. 10s., in amount, and upwards, whether on internal or foreign account, should be made in bank money ; and as these regulations immediately occasioned an agio or difference of value between bank-money and current money, it as immediately became com- pulsory on the part of every man of business either to open an account at the bank, or to sub- ject himself to the caprice of a fluctuating agio, to enable him to make his payment through the medium of those who had an account.

.15. The distinction between the practice of the bank of Amsterdam and the bank of Venice, is this, viz. That the bank of Venice appropriated its subscribed capital, as well as part of its de- posits, to external purposes, and created an ideal sum by means of transfers to a corresponding amount, whereby to adjust the internal payments of the public ; whilst the bank of Amsterdam retains its deposits within the walls of its own establishment ; and when we come to treat of the practice of the bank of England, that will be found to present additional features of practice deserving the utmost possible attention, as well in reference to a comparison with the practice of the banks of Venice and of Amsterdam, as for the influence and effects of its own operations upon the general interests of the country at large.

1 6. In addition to the transactions of the bank of Amsterdam, as detailed in sect. 14, the bank also gives credit on its books upon deposits of gold and silver bullion, at the rate of five per cent, below the mint price of the bullion. In making these deposits, which are made more for

safe keeping, and the view of reserving them for articles of merchandise, than for conversion into coin, the bank grants a recipice, receipt, or warrant, entitling the holder to take out the bul- lion again at any time within six months, upon transferring to the bank an amount of bank mo- ney equal to that for which credit had been given in its books when the deposit was made, and upon paying one-fourth per cent, for the keeping, if the deposit was in silver, and one- half per cent, if it was in gold ; the recipice ex- pressing, that in default of such payment, upon the expiration of the term of six months, the be- nefit of the recipice becomes forfeited to the bank, while the amount credited again* the de- posit resolves into bank-money ; leaving a profit to the bank proportionate to the difference be- tween five per cent, below the mint price, and the value of the bullion in the market.

17. This species of deposits are, in the first instance, more generally made when the mercan- tile price of bullion is so far below the mint price as to become an article of speculation, and the profits to the bank upon this branch of its business are considerable, by the forfeiture of some of the recipices ; but more particularly so from the frequent renewals. The creditors of the bank, in bank-money, and the holders of reci- pices, are regarded by the bank as two distinct classes of creditors : hence the creditor in bank- money, having no recipice, cannot draw out bul- lion without first going to market to buy a recipice, nor can the holder of a recipice draw out his bullion, in the event of his having sold the bank- money assigned to him on making the deposit, -without first goinir into the market to repurchase bank money, and reassigning the same to the bank.

18. in a city of extensive and complicated commercial interchange, like Amsterdam, these “egulations of the hank necessarily occasion con- tinued demands for both bank-money and bullion, and u’ave rise to a system of jobbing and trick, precisely simi’ar to the jobbing and tricking in time bargains upon the stock exchange in London ; and at one period the agio was wont to fluctuate from eight to ten per cent. To keep it within certain bounds, however, the bank of Amsterdam resolved at all times to grant 100 of bank for 105 of current money ; or rather to sell bank-money at ;;n agio of /> per cent. In conse- quence of this resolution, the aˆio was prevented ever exceeding thai rate-; and the fluctuation now seldom exceed* ~2\ per cent, between 1►► and 4.

I’.i. In addition to tin: seignoragc deducted on “irst opening an account with the bank in money, sec sect. 14, a fee of ten guilders, ►►► to 17s.

6d., is also charged ; and for every renewed account, 3 uuilders .'! >ti \ers; f< >r every transfer, 5′ sti- vers, zz *d. ,', of a penny, and in order to dis courage a multiplicity of small transactions, if the transfer is for lr

maintain an equilibrium in the agio, and the for- feiture of bullion recipices, produce a considera- ble revenue to the city, over and above what suffices to defray the expenses of the establish- ment. Public utility, ho %vever, and not revenue, was the original, and up to this time, has continued the ruling object of the establishment, and the re- venue derived from it is the natural result of its invariable rule of practice, < *hich, whether the best that can be devised or i ot, its certainty and impartiality has obtained for it the sanction and confidence of all who have been concerned in it.

20. How far the system or practice of the bank of Amsterdam approximates to perfection or utility will more fully appear as we proceed to illustrate the various practices of banking in England, and in other parts of the world. The direction of the bank of Amsterdam is vested in four reigning burgo-masters (aldermen), who are changed every year. Each new set of burgo- masters, on induction to their charge, are con- ducted to the bank, inspect the deposits, corn- pane them with the books, and acknowledge the same upon oath, delivering it over at the end of the year with the same formal solemnity to the set which succeeds ; and highly to the credit of the corporate body of the city of Amsterdam, both in its collective, and in its individual capa- city, in reference to the direction of the bank, not only has no malversation been proved, but no imputation ever brought against them ; nor have the political convulsions, by which Holland has at times been surrounded, and in which it has been involved, ever induced the bank to swerve from the strict rule of its established regu- lations ; and such has ever been the confidence in the integrity of its director, that it has at times been the depositary of the money treasure of the opulent individuals of surrounding states.

21. Of the extent of the deposits of the bank of Amsterdam at different periods, the informa- tion is very imperfect ; it may, at times, probably, have amounted to a sum equal to five, six, or seven millions sterling, and probably more, but on an average they probably have not, at past periods, nor do not at the present time, exceed three to four millions, or from forty to fifty millions of guilders.

22. As commerce extended itself over the north of Europe, banking institutions were es- tablished in different parts of Germany, but there were none that obtained any great celebrity, except those of Hamburgh and Nuremburg. That of Hamburgh was established in 1619, on principles, and for objects, not very dissimilar to those of Amsterdam, viz. those of deposit,

transfer-agency and public utility. Instead of coin the deposits are made in silver bullion of a given fineness, against which credits are opened, either for transfer, or for withdrawing the bullion at pleasure, subject only to a trifling charge for deposit, or safe-keeping. The general practice of the bank of Hamburg is less formal, and more simple, than that of Amsterdam ; and has been productive of great advantage to the city, and has maintained an unsullied integrity. The ex- penses of its management have been, and still continue to be, defrayed by fees, or transfers, &c similar to those of Amsterdam. It was plundered of a considerable portion of its deposits by the

French general, Davoust, in 1813, a part of which were restored by the Bourbon government at the peace of 1815.

23. In 1635 the bank of Rotterdam was established, under regulations somewhat different in detail from those of either Amsterdam or Ham- burg, but upon the principle of deposits, transfer, and agency.

24. About the sixth or seventh decenary of the seventeenth century, an individual of the name of Palmshut, in Stockholm, established a bank for the purposes of exchange, discount, and circula- tion ; that is, he bought and sold bills of exchange, lent money at interest, and issued notes, which became a circulating medium, or token of inter- change, for the amount they represented; na- turally enough, although Palmshut originally possessed, relatively, great resources, derange- ment and embarrassment soon overtook him, but inflated with his notions of ideal wealth, he ap- plied to the king, Charles XL, whom he induced to become his patron in the formation of a royal bank, which, under Palmshut's directions, soon obtained a general confidence; and, in 1688, the direction was transferred to the assembly of the states of the kingdom, the king declaring himself, and his successors, protectors of the bank, but renouncing all interference in the dis- posal of the money. The states being thus declared guarantees, proprietors, and directors, under the regulations which they established, the bank became a bank of deposit, discount, and circulation. Depositors were allowed interest at the rate of 6 per cent. ; and the deposits, together with notes of circulation, appropriated to dis- counts, on collateral securities, at the rate of 8 per cent. ' The king's revenues were also depo- sited at the bank free of interest. The institution immediacely became popular, and all who had surplus money, in every part of the kingdom, poured it into the bank, so that, by the close of the century, the interest on deposits had been progressively reduced from 6 to 2 per cent., and on discounts from 8 to 3

per cent.

25. Like all institutions founded on specula- tive principles, the bank of Stockholm was soon destined to experience a reverse of fortune, and to become an instrument of political perversion. The chivalrous exploits of Charles XII. led to such a drain of the intrinsic resources of the bank, during the four years, 1714 ––– 1717, the period of the king's residence in Turkey, after the battle of Pultowa, and when the corrupt and profligate Goertz was minister of finance, that the revenues usually deposited with the bank, were unequal to discharge even the in- terest, much less contribute towards any repay- ments. This dilapidation of the resources, and credit of the bank, led to the mortgaging of other revenues of the crown, and a declaration on the part of the king, that no further drain should be made upon the bank until its resources and credit were fully restored : these measures produced a partial reaction in favor of the credit of the bank ; but it proved only temporary, until an expedient of the minister Goertz unexpectedly diverted all the disposable wealth of the kingdom into the bank.

26 Whilst the declaration and resolve of the

king to restore the resources and credit of th––– bank were adhered to, it deprived Goertz of the adequate funds to carry on his political in- trigues, and to supply the king with sufficient means to maintain his regal importance ; under these circumstances, he resorted first to fines and penalties, and ultimately to a species of confis- cation, by demanding all the plate, jewels, and coin in the kingdom to be placed at his disposal, for which he gave copper tokens, representing ninety-six times the intrinsic value of the metal, (paper money in effect.) This measure led all those who possessed such disposable means to confide in the royal pledge, rather than yield to the exaction of Goertz. And they consequently in secret conveyed all their treasure to the bank. Goertz, chagrined at being thus disappointed, ap- plied to the king and advised him to seize all the treasure deposited in the bank ; but the king refused to comply, and prohibited Goertz from even making any proposal on the subject, con- trary to the pledge which he had solemnly made.

27. This decision of the king reinstated con- fidence in, and fully re-established, the resources and credit of the bank, so that on the declaration of war against Russia, in 1 741 , the bank presented the king with a donation of 100,000 Swedish silver dollars, equal to about 7600, and sup. plied another 500,000 dollars, as a loan without interest, and subsequently to that period it fre- quently advanced considerable sums to the crown, and to the board of manufactures under the guarantee of the states.

28ˆ The resources and credit of the bank being thus re-established, it was divided into two departments, lane and wexel, or loan, and exchange banks; the former corresponding in its practice with the practice originally estab- lished in Lombardy, (see sect. 3.) and precisely similar in principle to the practice of pawn- broking in England at the present day. Whilst the practice of the wexel or exchange bank, is that of deposit, discount, and circulation. The loan bank lends money on gold and silver bul- lion, copper, and its own stock, to their full value, at the rate of three per cent, and on three- fourths of the value of iron, at the same rate of interest ; and on lands and houses at the rate of six per cent, four for interest, and two as a sinking fund, until the whole sum advanced is repaid. Jewels were at one time advanced upon, but the bank having once been defrauded f a considerable extent by them, resolved nevei again to make advances on those articles.

29. The wexel or exchange bank receives money on deposit, for which it allows two per cent, and issues notes, with which, together with its deposits, it discounts bills of exchange ; this practice, which is the one originally pursued by Palmshut, (see sect. 24.) involves risk, and leads to certain loss ; the issuing of notes, having no intrinsic value, sustains the loss as long as the notes retain confidence ; but when that fails, de rangement necessarily ensues, all this befell the wexel or exchange bank of Stockholm, within the short space of twenty-five years ; and in 1766 the bank was on the verge of bankruptcy and final dissolution, when, by the interference of the

states, a loan of three millions of rix dollars, equal to about ►►700,000, was raised to liquidate the excess of notes in circulation ; since the period of 1766 successive regulations have been resorted to, to preserve the credit of the bank, and a committee, composed of a certain number of persons from each of the three states of the kingdom, viz. the nobles, clergy and burgheis, has been appointed, to inspect triennially the general state of the bank and its accounts.

30. Under the guardianship of the States, the wexel bank of Stockholm retains its place among the other institutions of the kingdom, but it has no importance externally, nor does the extent of its operations equal the operations of several pri- vate banking establishments in some of the pro- vincial towns in England ; it is the various kinds of practice of banking, however, and not the extent of the operations, which most demand

attention ; and on that ground it is, that the bank of Stockholm has here been enlarged upon, much beyond what the extent of its operations would otherwise have rendered necessary.

31. BANK OF ENGLAND. ••• We now come, in order of time, to treat of the bank of England ; ;m establishment, whether considered with respect to thu magnitude of its operations, or its influence upon the social relations of mankind, without a parallel in history ; and from the period of its foundation, but more especially since the period of 1793, it has become so interwoven with the government, arid the collective interests of the nation, as to render it ditlicult to treat of one, without entering largely into the details of the other. \ e will endeavour, however, to confine our elucidation of the bank, as far as it is con- nected with the government and the nation, as much as possible within the limits of those cir- cumstances of the nation, in which the character and interests of the bunk have been more imme- diately involved.

'.}~2. Although by its peculiar constitution, and terms of its charter, as well as in all the details of its practice, the hank of Kngland appears to be an independent trailing company, and although its operations combine all the various kinds of practice in banking (except the original one, of lending money on pledges,) viz. exchange, de- posit, transfer, discount, agency, and circulation, and each and all of these, on a more extended scale than e \erwas, or perhaps ever will be, practised !n any otner establishment, it is, and. ever has been, from its foundation, materially connected with all the financial operations ot liu; government, and partakes therefore far more of a political than of a commercial character. This i.'.deed has been considered by some writers ;.nd financiers on alarming excrescence on both ••• HIT commercial and political systems. But we procved to illustrate the progress of its career.

33. It Appears to the writer of this paper that instead of desirableness and necessity dictatinj; it origin, and instead of being founded like the hauls of Amsterdam (see sect. 11) on tin1 broad and sou il basis of public convenience and public utility, the origin of the bank of England was a mere project, which fortuitous circumstances alone have hitherto protected in an unexpected manner The original

projector of this memorable institution was n Mr.W. Paterson, who, after numerous application on the subject to the privy council, at length succeeded in the the year 1693, in obtaining its consent to the project, and an act, 5th and 6th William and Mary, c. 20, tor granting to their Majesties severa. rates and duties upon tonnage of ships and vessels, and upon beer, vale, and other liquors, for securing certain recotn- pences and advantages in the said act, mentioned to such persons as shall voluntarily*

advance the sum of ►►1,500,000 towards carrying on the war against France ! Section 19th of the said act, enacts that ‘ Their Majesties may make commis- sioners take subscriptions for ►►l ,200,000. Tie sum of ►►100,000 to be annually appropriated to the subscribers ;’ and by section 20th it was fur- ther enacted that, ‘Their Majesties may appoint rules for transferring, and make the subscribers a corporation by the name of ‘ The governor aud company of the bank of England.”

34. Under the authority of the aforesaid act, subscriptions were immediately entered into, and before the 1st of Jan. 1694, the whole sum was subscribed, and on the 27th of July, in that year, the charter of incorporation was executed, its duration being limited to eleven years, viz. from the 1st of August, 1694, to the 1st of August, 1705, after which date the corporation was deter- minable upon twelve months notice, and repay- ment of the ►►1,200,000 advanced. At this time (1694), the rate of interest was 6 per cent, per annum ; but by the terms of the contract for the above ►►1,200,000, the corporation were to receive 8 per cent, per annum, and ►►4000 per annum for management, or trouble of transferring and ap- portioning the interest among the numerous subscribers.

35. Such were the circumstances, and sucli the origin of the bank of England, neither of which it will be seen bear any analogy to the circumstances and origin of the banks of Venice, Amsterdam, Hamburgh, or Stockholm ; but before we proceed further in exhibiting the progress of the bank of England, it may be well to show what the stale and practice of banking in Eng- land was, prior to the formation of that establish- ment ; and when the circulating medium of the country was exclusively metallic. At an early period of England carrying on an external com- merce, when she received from Holland and Germany almost every species of manufacture in exchange for grain and wool, and other produc- tions of the soil and mines, England then had her loan banks, or Lombard houses, for lending money on pledges (see sect. 3), hence the etymo- logy of Lombard-street, in the vicinity of the Royal Exchange, in London. At a more recent neriod the goldsmiths became the bankers, first, merely as places of deposit or safe keeping, aud afterwards for discount ; and for more than a century prior to the establishment of the bank oi England, and circulation of paper money, the goldsmiths held the same rank and importance in commerce, and exercised similar functions, as the private bankers do at the present day. But the establishment of the bank of England did not merely divert the transactions of private deposit and discount into new channels, but it will be

seen, as we proceed, that it had the effect of changing the whole social economy of the state

36. The Bank of England being established, the charter directed that its management should be vested in a governor, deputy governor, and twenty-four directors, to be elected by the holders of the stock, a clear possession of ––500 of which for six months constitutes a qualification to vote, tlie qualification of a director being the possession of ––2000 of the stock, of a deputy governor, ––3000 of do. and of a governor ––4000 of do. So far as we have here described the transactions of the Bank of England, it seems confined to the mere raising of a loan of ––1,200,000, for the use of government, at 8 per cent, per annum, and which was in fact, the foundation of the FUNDING SYSTEM, or NATIONAL DEBT; to prevent enlarging upon which here, see each of those subjects under their respective heads, and in conjunction with them see also CIRCULATING MEDIUM, EXCHANGE, BILLS OF, EXCHEQUER BILLS, MONEY, PAPER MONEY, and TALLIES. Of the nature and ex- tent of the practice of the Bank of England, in deposit, transfer, discount, and circulation, during the early period of its establishment, but little seems to be known ; and, indeed, for some time, its transactions seem to have been very much confined to trading in the government securities, and notes of its own circulation. At the Exchequer, then, as is still the case, accounts were kept by tallies, similar to accounts of bakers in those parts of the country where the weight of the loaf varies, and the money price remains fixed ; notches are cut in a piece of stick, to de- note so many loaves of bread, the stick is split, the buyer holding one part and the seller the other, so with the accounts of money at the Exchequer of enlightened England, at the period of establishing the Bank of England, and so the practice continued in 1826.

37. The first and second years after the establishment of the Bank, these Tallies were a trading and speculating commodity, as stock and exchequer bills are at the present day, and such was the state of the credit of the nation at that time that the tallies were at a discount of 20 to 40 per cent, against the sealed notes of the Bank, and the notes of the bank at a discount of 20 per cent, against the standard coin of the realm. With the view of equalising these disparities of value between the bank and national securities, and the standard coin of the realm, an act was passed in 1697, 8 and 9 Will. 3 cap. 20, empower- ing the Bank to receive subscriptions for the enlargement of their stock, four-fifths in tallies, and the remaining fifth in Bank notes. The amount of tallies ingrafted under this act was ––1,001,171. 10s. subject, like the original subscrip- tion to an interest of 8 per cent, per annum, and the charter was extended to the 1st of Aug. 1710. In 1 708, another act was passed, 7 Ann. cap. 7, under which the

bank further lent the govern- ment the sum of ––400,000 without interest ; thereby reducing the interest on ––1,600,000 to 6 per cent. The Bank at this time held Exche- quer bills to the amount of ––1,500,000, which, with an arrearof interest of ––275,027. 17s. lOJd., were cancelled (funded) at the rate of 6 per

cent, per annum. For these acts of condescension, the charter of the Bank was extended to Aug. 1, 1732, and the company authorised to take in subscriptions, to double their capital. In 1709 a call of 15, and in 1710 a further call of 10 per cent, was made, and in 1713 another act was passed, 12 Ann. cap. 11, extending the char- ter to Aug. 1, 1742, then, as before, determinable after twelve months notice, and repayment by the government, of all sums borrowed.

38. In 1717 another act was passed, 3 Geo. I. ch. 8, authorising the funding of a further amount of exchequer bills of ––2,000,000, at five per cent, per annum; to which rate the interest on ––1,775,027 was also reduced after midsummer 1718. In 1722, by another act, 8 Geo. I, cap. 21, the bank was authorised to purchase stock of the South Sea Company to the amount of ––4,000,000, which stock bore an interest of five per cent, per an. but was reduced to four per cent, after mid- summer 1729. To effect this purchase the capi- tal was increased ––3,400,000; and in 1727, pur- suant to the act of 1 Geo. II, cap. 8, ––1,000,000 of the ––1,775,027. 17s. lOˆd, funded in 1708, at six per cent, was paid off, and the interest on the ––2,000,000, funded in 1717, reduced from five to four per cent, and under the autho- rity of the same act; in 1728, ––1,750,000 was further advanced to government at an interest of 4 per cent. ; and, in the following year, pursuant to the act of 2 Geo. II, cap. 3, the remainder of the ––1,775,027. 17s. 10––d. funded in 1708, together with ––500,000 of the amount funded in 1717, was paid off by the government; who borrowed, under the authority of the said act, the sum of ––1,250,000, at an interest of 4 per cent, per annum from midsummer 1729.

39. In 1738 another act was passed, 11 Geo. II, cap. 27, authorising the paying off a further portion of the bills funded in 1717, to the amount of ––1,000,000; and in 1742, by the act of 15 Geo. II, cap. 13, ––1,600,000 was advanced to government without interest, on condition of the bank being authorised to increase their capital stock, and the charter being extended to Aug. 1 1764. The capital stock was accordingly in- creased ––840,004. 5s. 4d. The pretension set up in reference to this ––1,600,000, was the re.duc- tion of the rate of interest on the original ––1,200,000, and the ––400,000 advanced in 1708; by the receipt of which latter sum the interest on the ––1,600,000 was reduced to 6 per cent. ; and, by the receipt of a corresponding sum without interest, it made

the interest on the ►►3,200,000 equivalent to 3 per cent. But this seeming reduction in the rate of interest is a delu- sion; for, however anomalous it may at first seem, as the rate of interest progressirely became reduced from 8 to 3 per cent, the pressure of the exaction on the people, as will clearly appear hereafter, progressively and virtually increased. So far, therefore, from the ►►1,600,000 being entitled to be regarded as a boon to the public, it appears to us as neither more nor less than a bribe to reconcile an unsuspecting people to an extension of the charter.

40. In 1746 another act was passed, 19 Geo. II, cap. 6, authorising the funding of exchequer bills, issued in anticipation of the tax on licences

for retailing spirituous liquors, to the amount of ►►986,800, at the rate of 4 per cent, per annum, and for authorising the bank to increase their capital stock 10 per cent, which was done in pursuance thereof. The total sum advanced by the bank to the government, now amounted to ►►11,686,800, and the capital on which the stock- holders divided was ►►10,780,000. Of the amount advanced to government ►►3,200,000, (see preced- ing section) was at an interest of 3 per cent. ; part of the bills funded in 1717 remained at 5 per cent, and the remainder at 4 per cent. ; in reference to ►►►which, in 1749 an act was passed, 28 Geo. II, cap. 1, determining that from Christmas 1750 the interest on the whole ►►8,486,800 should be re- duced to 3►► per cent., and from Christmas 1757 it should further be reduced to the same rate as the ►►3,200,000, viz. 3 per cent. . Fifteen years now elapsed without any change in the terms of the charter, or accounts with the government, when in 1764, pursuant to the act of 4 Geo. Ill, oap. 25, the bank advanced ►►1.000,000 for two years without interest, and gave bonus to the

exchequer of ►►l 10,000, for the extension of thtir charter to the 1st of August 1786.

41 . In 1781, pursuant to an act passed that year, the charter was further extended to the 1st of August 1812, and ►►862,400 more added to the capital stock, in return for the loan of ►►2,000,OOC> for three years at 3 per cent.; and in 1800, pur- suant to an act of 48 Geo. Ill, the charter was fur- ther extended to the 1st of August, 1833, on con- dition of advancing ►►3,000,000, for the service of the year 1800, on exchequer bills, to be discharged without interest in 1806. Such was the state of the bank of England in 1800 in reference to its permanent advances to the government and ex- tent of its permanent capital, which we will here

briefly recapitulate. In the session of parliament, 1822, an account of the total amount of debt due to the bank of England, distinguishing funded from unfunded, the periods when contracted for, &c. &c. was laid before the house (paper No. 190), which, up to the period of 1746, will be seen to correspond with the amounts previously enumerated, viz :

Anno.

Acts.

Amount.

►►15,962,999

4,276,199

1694 1607 1708

5W.&M.C.20

►►Sc9 Win. c. ID 7 Aune, c. 7

Original Subscription .... Ingrafted Tallies

►►1,200,000

1,001,171 1,775,028 400,000 2,000,000 4,000,000 1,750,000 1,250,000 1,600,000 996,800

Exchequer-Bills cancelled . . . Advanced without interest . . . Exchequer-Bills cancelled . . . Transfer from South-Sea Company Advanced

1717 17-2-2 1728 17-2'.) 174-2 1740

3 Geo. I. c. a

" c ►►1

1 Geo. 1 f. c. H

o (. ►►►}

Ditto Ditto

i."> c 13

Exchequer-Bills cancelled . . . Total Sum advanced . . .

××1,001,171

1,000,000 775,028 500,000 1,000,000

Paid otT in

1707 17-2-‘, 172.)

1733

iivjirafu-cl Tallies 1’art of .t‘1 ,77.1 0

OP

Ueiiiaindrr of (11 Aud part of ××o.(

1 uillK-r part of .

.“Sett ;i;;:uiint 0 it stood up ‘

tto .

)00 000 of 1717

r×× 000,000 of 1717

- *permanent Debt in 1746, and as > o 1816 *

××11,686,800

×××××××-××× i:i l’;l” .1 furhrr advance was made of ××3,000,01)0: ;md in 1823 a contract was entered into t’oi tl: ××××××× lv-;nk to advance the government the sum of .××l:;,0!’,’:>,4lO7 m thirteen irregular instal- ment-;, between the 4th of April, 1823, and the (1th ot July. 1828, in consideration of an annuity of ‘>””>. 7 K, ;; . i I years, from the 10th of Oct. 1823. r transaction; resolves itself into .ni; equivalent to from ××7,000,000 the iiuter beinir to a certain ex- nt transaction, may prove disad- ××××.u’olie to the extent of from .’: millions, and under any can possibly occur is equiva-)oiiu×× to the Kink of at le;>st

××2,000,000. The first transaction is simple and conclusive, and will be seen to involve moral as well as pecuniary features, demanding the rery serious consideration of the public. The other is one of the most complex and equivocal transactions which the whole history of British financiering, with all its profligacy and tortuosity, exhibits since the commencement of war in 1793. A more circumstantial account of the nature of both

transactions will be found in their order of time further on.

In the mean time, the following is a reca- pitulation of the augmentations of capital, on which dividends were made to the proprietors of stock, viz.

BANK.

471

Anno.

Augmentation.

Aggregate.

1694 1697 1708 1709 1710 1722 1742 1746 1781

►►1,200,000

1,001,171 2,201,172 656,204 501,449 3,400,000 840,004 980,000 862,400

►►1,200,000

2,201,171 4,402,343 5,058,547 5,559,996 8,959,996 9,800,000 10,780,000 11,642,400

Ingrafted Tallies .

Ditto Ditto

Call of 10 per Cent.

43. And the following shows the rate and amount of dividends, per annum, at different periods,

up to 1807, viz.

Anno.

Rate per cent.

Amount annually divided.

1694►►►1696 1697►►►1707 1708►►►1729 1730►►►1741 1742►►►1746 1747►►►1752

1753

1754□□□1763 1764□□□1766 1767□□□1780 1781□□□1787 1788□□□1806 1807□□□1815 1816□□□1823 1824□□□1826

3 years 8

11 9

22 □□□-□□□ – 9 to 51

(actual)

(estimated) (actual)

□□96,000

198,105 450,000 520,200 563,000. 539,000 512,050 485,100 539,000 592,900 698,544 814,968 1,164,240 1,455,300 1,164,240

12 6 & 5i 5 6 & 5]

6 , 5

1 4J & 5 1O 4i

3 5

14 5J

7 6 19 7 9 10

Q R

44. Thus, as stated in sect. 39, it is seen, that whilst the bank affects to lend the public its money at 3 per cent, per annum, the public, since 1807, have virtually been taxed at the rate of 10 per cent, to the extent of □□1,164,240 per annum ; nor is this all, for, by a return made to parliament in the session of 1819 (Paper, No.

347), in addition to the above exorbitant exac- tion, resulting from the illusive and peculiarly involved nature of the transactions of the govern- ment with the bank, it appears that the following sums were divided among the stock-holders as bonuses, viz.

Anno.

Amount.

June, 1799 May, 1801 Nov. 1802 Oct. 1804

10 per cent, on the ––11,642,400 . . .

––1,164,240

582,120 291,060 582,120 582,120 582,120

1806

Total as Bonus . . .

––3,783,780

And profuse as all this may seem in favor of the holders of bank-stock, and oppressive as it must be to the public, it sinks into comparative insig- nificance when compared with the transactions of 1816 and 1823, the nature of which shall be elucidated by and by ; it seeming first desirable to take a retrospective view of the transactions of the bank, independent of its permanent ad- vances and augmentation of its permanent ca- pital.

45. By the stat. of 6 Anne, cap. 22, it was

enacted, ‘ for securing the credit of the Bank of England, that no other banking company in England should consist of more than six per- sons, empowered to issue bills or notes payable on demand, or for any time less than six months.’ And the act of 15 Geo. II. cap. 13, which ex- tended the privileges of the charter to 1764, also enacted, that the acts of 7 and 12 Anne, and all all other acts for determining the corporation, should be void; and that the governor and com- pany of the bank should remain a body corpo-

rate and politic for ever, subject to such restric- tions and regulations as were contained in the acts and charters then in force, and by the same statute it was also further enacted, ‘ that persons forging counterfeiting, or altering, any bank- note, bill of exchange, dividend, warrant, or any oond or obligation, under the company’s seal, or any indorsement upon it, or knowingly utter- ing the same, shall suffer death, without benefit of clergy ;’ and further, ‘ that the company’s servants breaking their trust to the company, shall also suffer death, as a felon, without benefit of clergy.’ The same statute also further enacts, ‘ that when at a court of directors of the bank, neither the governor nor deputy shall attend in two hours after the

time appointed for business, .hen any thirteen or more of the directors may choose a chairman for the time for the despatch of business, and that such court shall be as valid as if either the governor or deputy-governor had duly attended.'

46. As stated in sect. 36, the information is imperfect as to the extent of the transactions of

the Bark of England in deposit, transfer, dis- count, and circulation, during the earlier period of its establishment; nor does it appear that the- notes of the bank were ever at a discount against the standard coin of the realm after 1697, until 1798. In addition to the monies permanently advanced to the government, it was the practice of the bank to advance money in anticipation of the land and malt taxes; and to make other temporary advances on exchequer-bills and other floating securities ; we have not been able to ob- tain any circumstantial account of the extent of these advances at an earlier date than 1777; from which period an account of advances by the bank to government on land, malt, exche- quer-bills, and other securities, on the 25th of February on each of the twenty years preceding the 25th of February, 1797, was laid before par- liament, vide Appendix, second Report of the Select Committee on the Expediency of the Bank resuming Cash Payments, 1819. Commons re- print, fol. 315, of which the following is a copy viz.

On the

□□□2,3th Feb.

Land and Malt.

Exchequer-Bills.

Treasury-Bills.

Total.

1777

□□4,912,000

□□'2,500,000

□□7 412 000

1778

5,251,000

2,500,000

2760

7,‘753,‘760

1779

5,682,000

2,769,000

15,664

8,466,664

1780

5,613,000

3,104,400

33,582

8,750,982

1781

5,517,000

262,230

49,541

8,188,841

1782

5,659,000

4,289,050

43,628

9,991,678

1783

4,962,000

4,662,200

4871

9,629,071

1784

3,901,000

3,641,000

23,853

7,565,853

1785

3,102,000

3,900,000

28,200

7,030,200

1786

2,307,000

4,303,200

24,672

6,634,872

1787

2,809,000

4,334,200

1696

7,144,896

1788

2,636,000

4,707,400

4299

7,347,699

1789

2,928,000

5,000,200

20,235

7,948,435

1790

2,882,000

5,006,500

20,468

7,908,968

1 79 1

3,334,000

6,247,100

22,878

9,603,978

1792

2,802,000

6,636,600

26,999

*9,839,338

1793

2,698,000

5,939,600

52,359

9,066,698

1794

2,915,000

4,777,600

717,175

8,786,514

1795

4,291,000

4,329,000

2,117,491

11,114,230

1796

5,536,000

5,265,000

540,991

11,718,730

in each of the live last years include ◆◆376,739 lent out of the unclaimed dividends, without

interest.

47. The earliest account of the amount of bank-notes in circulation which

we have been alilc to obtain is the following, which was cleli- vi- red to thu House of Commons on the 18th of l\l;>.rch, 1797, and exhibits the amount of notes in circulation on the 25th of February, in each of the ten years, 1787 ••• 1796, viz.

Ml

“.‘2

••8,688,570

9,370,350

9,905,2 10

10.217,360

1 1.699, 140

11.349,810

I 1,193,125

1794 10,699,520

1795 13,539,160

1796 11,030,110

As we are now approaching a most important period in the history of the transactions of the Bank of England, it will be well for the earnest enquirer after truth to bear in mind, that the notes in circulation up to the period of 1797, were convertible into gold on demand, at the rate of 77s. W%d. per oz. ; and when the abov

discounted, it will be seen that the issue of notes appears to have teen regulated more in reference to the amount of the temporary advances to the government, than to the means of paying them in gold on demand, as will be seen by the follow- ing statement of the amount of cash and bullion

on hand, notes in circulation, bills discounted and advances to government, on an average in the months of March, June, September, and December, in each of the five years, 1793••• ••• 1796, viz.

Cash and Bullion on hand.

Bills Discounted.

Average of Notes in Circulation.

Average of Advancs to Government.

1793

March . .

►►3,508,000

►►4,817,000

►►11,963,820

►►8,735,200

June . . .

4,412,000

5,128,000

12,100,650

9,434,000

September . .

6,836,000

2,065,000

10,938,620

9,455,700

December

7,720,000

1,976,000

10,967,310

8,887,500

1794

March . . .

8,608,000

2,908,000

11,159,720

8,494,100

June . ⬛⬛⬛ .

8,208,000

3,263,000

10,366,450

7,735,800

Septembe>-

8,096,000

2,000,000

10,343,940

6,779,800

December

7,768,000

1,887,000

10,927,970

7,545,100

1795

March . . .

7,940,000

2,287,000

12,432,240

9,773,700

June . . .

7,356,000

3,485,000

10,912,280

10,879,700

September

5,792,000

1,887,000

11,034,790

10,197,600

December .

4,000,000

3,109,000

1 1,608.,670

10,683,100

1796

March . . .

2,972,000

2,820,000

10,824,150

11,351,000

June . . .

2,582,000

3,730,000

10,770,200

11,269,700

September

2,532,000

3,352,000

9,720,440

9,901,100

December

2,508,000

3,796,000

9,645,710

9,51 1,400

1797

February 26 .

1,272,000

2,905,000

8,640,250

10,672,490

48. By the above statement, it is seen, that with ––8,640,250 of notes in circulation on the 25th of February, 1797, ––1,272,000 value of gold only remained in the bank, whilst the de- mand for gold continued daily to increase ; under which circumstances, on the 22d of Fe- oruary, a

committee was appointed by the privy council to investigate the affairs of the bank, which committee, on the 26th of the same month, 'reported, that the total assets of the bank, exclusive of the ––11,686,800 permanent debt of the government (see sect.40, 41), was ––l 7,597,298, whilst the whole of the demands upon the bank amounted to only ––13,770,390, leaving a clear balance in its favor of ––3,826,903, exclusive of the permanent debt due from the government. Upon this report, the privy council instantly is- sued an order prohibiting the directors of the bank from issuing any more cash (specie) in payment, until the sense of parliament on the subject was obtained. From the statement of ––13,770,390 being the amount of demands upon the bank, and ––8,640,250 being the amount of notes in circulation, as per statement in the pre- ceding section, it appears that the demands of depositors and other creditors must have amounted to ––5,130,140; and in like manner, ––17,597,298 being the whole of the assets, and ––10,672,490 thereof consisting of claims on the government, ––2,905,000 in bills discounted, and ––1,272,000 in specie, it leaves ––2,727,808 to be assigned to some specified items; including, no doubt the bank premises and probably some

other property in fief, in houses or lands, &c. &c. The transactions and state of the Bank of Eng- land, as detailed in this section, bring its his- tory down to that eventful and important period when the peculiar nature of its connexion with the government first openly developes itself. To obtain a more comprehensive and distinct view of the subject, the reader will do well to refer to the journals and proceedings of parliament for the year 1797, and to examine the subject attentively, in relation to the nature and amount of the loans, and extent of the revenue and expenditure of the goveniment at that period, as exhibited in Mr. Marshall's Statistical Illustrations of the Finances, Revenues, &c. &c. of the British Em- pire. See also the articles FUNDING, LOANS, SINKING FUND, and REVENUE, in the subsequent parts of this work.

49. It was on a Sunday evening that the order of the privy council, adverted to in the preced- ing section, was transmitted to the bank, and on Monday morning the following notice was published by the directors of that establishment, viz.

–– Bank of England, February 27, 1797.

' In consequence of an order of his majesty's privy council, notified to the bank last night, a copy of which is hereunto annexed,

' The governor, deputy-governor, and directors of the Bank of England, think it their duty to inform the proprietors of the bank-stock, as well as the

public at large, that the general concerns of the bank, are in the most affluent and flourish

ing situation, and sucli as to preclude every doubt as to the security of its notes.

'The directors mean to continue their usual discount for the accommodation of the commer- cial interest, paying the amount in bank notes ; and the dividend warrants will be paid in the same manner.

(Signed) 'FRANCIS MARTIN, Sec.'

50. The consternation of the public at this notifi- cation was extreme, but as a proof of the secret workings and illusive nature of the system, a meeting was held the same day at the mansion house, at which the lord mayor (Watson), presi- ded, when the following resolution was unani- mously agreed to, viz. 'That we the undersigned, being highly sensible how necessary the preser- vation of public credit is at this time, do most readily hereby declare, that we will not refuse to receive bank notes in payment of any sum of money to be paid to us; and we will use' our utmost endeavours to make all our payments in the same manner.' This singular specimen of sub- serviency to speculative expediency was signed by the lord mayor and all present, and ultimately obtained upwards of 3000 signatures. We will not here enquire what portion of their names have since been exhibited on the bankrupt or other lists of insolvency ; but we must regard the consciences to have been the degradation of an alarming portion of the total population of the kingdom to the rank of paupers, with all the consecutive concomitants of demoralisation and crime.

.□□□M. On the same day (27th Feb.), a message was delivered from the kiii'j; to both houses of parliament, to the following effect, viz- 'That an unusual demand of specie having been made from diiii rent pails of the country, on the metro- polis, it had been found ?ieeessary to make an order of council to the directors of the bank, pro- hibiting the issuhi'j; of any cash in payment, till llic sense of paiiiameiit could he taken on the subject.' In the upper house. Lord Grenville, \lio v.as then secretary of state for the foreign department, moved, 'That the communication from his Ma'ev'ty should be taken into consider- ation the following day,' when in pursuance of the motion, after much circumlocution, Lord (Jrenville stated that he had two motions to sub- mil to the consideration of their Lordships, first, 'That ;i humble address he presented to his Majesty, to return thanks for

his gracious com- munication, and to assure his .Majesty that he might rely \ith the inmost confidence on the wisdom ot parliament, to call forth, in case of necessity, the extensive resources of the king- dom.' This was agreed to, nemine contradicente. The other mot ion was for ' The appointment of a select committee of nine lords, to examine and report on the outstanding debts against the bank, the st;ite of the funds for discharging the same; the cause that, rendered the order of council necessary, and which might justify the members of that house for taking the proper steps for the confirmation and continuance of that measure.' 1 his motion nave rise to considerable discussion, in which tiie lˆnke of liedtbrd moved as an amendment, 'To leave ov.►►. all that part which

related to the committee reporting their opinion on the continuance of the measure.' In support of which amendment, the Marquis of Lansdowne said, ' That noble Lords would do him the jus- tice to recollect, that not one session had passed over, since the fatal commencement of the war in 1793, in which he had not, to use a vulgar but strong expression, bored their Lordships with his prophetic admonitions, and proceeded to illus- trate the nature of public credit, by saying, that it was to the people of Great Britain, what the soul of man was to his body. It was pure soul : it was immaterial in itself, and yet it was that which gave to substance its functions. It was not property, for no branch of the body could call it its own. It was not the king's credit, nor was it the credit of parliament ; it was public credit, which did not look to security alone as its basis, but which always connected security with punctuality.'

52. The shock which had been given to public credit, the noble marquis stated, proceeded from deep, progressive, and accumulated causes; causes which all thinking, all honest men, had long deplored, and which had grown to a head under the unhappy and ill-required confidence which had so fatally been placed in the king's ministers. In endeavouring to ascertain the causes that had brought on the dilemma, one cause was manifest; the inordinate increase of expenses, of places, and establishments, in every corner of the empire, which had grown to a height beyond every thing that the mind could previously have conceived ; it was, said the noble marquis, incredible and scandalous ; the increase of fees, of salaries, of places and pensions, of new boards of commission, and new appoint- ments of all kinds, had not only served to open all the gates of waste and profusion, but to beat down and destroy all the checks of control, and all the means of correction. Waste and extrava- gance had been systematised ; one scene of abuse countenanced and protected another, and all the corners of the earth were witnesses to the ruinous waste of the treasures of the British people. In this strain, with unabated ardor, did the noble marquis continue to depict the fatal consequences which must inevitably ensue from the continu- ance of such a system, and concluded a most pa- triotic appeal to the British

parliament, by call- ing upon his compeers to mark his prophecy, and not to disdain his counsel, while yet in time, for said his Lordship, if you attempt to make bank notes a legal tender, then credit will perish. They may go on for a time, but their end is certain ruin. The earnestness and force of this appeal drew the Lord Chancellor from his seat, to state, 'That he had deprecated the idea of forcing bank paper into circulation, by making it a legal ten- der, and he would take upon himself to say, that it then had never been conceived, that it would be wise or prudent to make bank notes a legal tender. After which, their lordships divided on the amendment of the duke of Bedford ; twelve for, and seventy-eight against it. After which the original motion for a committee of enquiry was carried without a division,

53. Similar proceedings took place in the commons on the same day, where, in reply to

some observations by Mr. Fox, Mr. Pitt stated that perceiving some suspicions were entertained that the measure adopted for succouring public credit, was designed to be permanent, he assured the house, ' That nothing could be farther from his intention.' An amendment similar to that of the duke of Bedford, in the lords, was moved in the commons by Mr. Sheridan, which was rejected by 244 against eighty-six, when the original mo- tion for a committee was carried without a division. On the 6th of March the lords' com- mittee reported to the house that it was necessary to ' continue and confirm the measures already taken, for such time, and under such limitations and restrictions, and with such power of discon- tinuing the same, as to the wisdom of parliament might seem expedient.' And thus a system of paper money, without reference to any standard, either of value or quantity, was established, the duration and progress of which will appear, as the elucidation of the transactions of the bank is here further proceeded in.

54. On the re-assembling of parliament in November of the same year (1797), the commit- tee of secresy, appointed to enquire into the expediency of continuing the restriction on the bank, reported, that the total assets of the bank, exclusive of the ††11,686,800 of permanent debt due from the government on the 1 1 th of Novem- ber, was ††21,418,640 (see sect. 48 for the amount on the 25th February preceding), and that the total amount of outstanding demands was ††17,578,910, leaving a balance on that date in

favor of the bank of ►►3,839,730. The report further stated that the advances of government had been reduced to ►►4,258,140, and that the cash and bullion in the bank had increased to nearly ►►6,500,000 or upwards, or five times its amount on the February preceding ; all this being true, it will be seen that the discounts of commercial bills must have been increased in the proportion of about ►►8,000,000 against ►►2,905,000, the amount in February, but it will seem, on reflection, and on comparison with the advances to the government, as exhibited in the appendix at the conclusion of this article, that the whole report was a singular misrepresenta- tion of the facts of the case, to answer the purposes of the moment; at all events, it will be seen that both the temporary advances to the government, and issue of notes, progressively increased from the close of the year 1797 up to the peace of Amiens in 1802-3, and the following statement exhibits the progress and duration of that restriction, which the Lord Chancellor in the Lords, and the finance minister in the Commons, so solemnly declared was to be only temporary.

55. The first act passed, relating to the subject was dated the 3d March, 1797, 37 Geo. Ill, cap. 28, authorising the issuing of notes for ►►l and ►►2 each ; the amount of such notes in circulation on the 26th August of that year was ►►934,015; for the progressive increase of their circulation see appendix.

ACTS RELATING TO RESTRICTION.

Year of Reign.

Date of Act.

Purport and Duration.

37 Geo. III. cap.

45.

3d May, 1 797. |

Indemnity for order in council, and to continue during the following month of June.

►►► ►►► ►►►

91.

*22d June, *

Extended to one month after the meeting of the next session of parliament.

◆◆◆

Further extended to one month after the ratifi-

38 ◆◆◆ ◆◆◆

1.

30th Nov. >

cation of a definitive treaty of peace, which

3

took place on the 25th March, 1802.

42

40.

30th April, 1802.

Further extended to 1st March, 1803.

43 .

18.

28th Feb. 1803. 1

Still further, to six weeks after the meeting of the next session of parliament.

44 ◆◆◆ ◆◆◆

1.

15th Dec. 1

Again, to six months after the ratification of a definitive treaty of peace. j

This brings the history of the restriction down to a most interesting and important period of its operation ; so far, it is important to understand, that notwithstanding the introduction of paper as a circulating medium, gold at the rate of 77s. 10ˆ-d. per ounce continued to be the legal standard of value, and such was the incongruity of British legislation at this

period, that whilst landlords and other creditors were authorised by law to enforce payment in gold, the acts previ- ously enumerated precluded the gold from being had, wherewith either to pay rents, or make any other payments ; such however was the insidious working of the system, that up to the period of 1809 no derangement in the social economy of the state, resulting from such incongruity of le- gislation was perceptible.

56. In 1800 foreign gold coin commanded about 5s. to 7s. per ounce more than its equiva- lent value to British coin ; but the short peace of 1801-2 occasioned a cessation of demand, and the price again became merely nominal. From March, 1804, to October, 1805, standard gold sold at ––4 per ounce ; and from October, 1 805, to February, 1 809, no price was quoted ; in the meantime, however, all the gold coin of the realm had gradually disappeared (for the quan- tity coined in each year since the restoration of Charles II. in 1663, see Statistical Illustrations, folio 47, and the article MINT in a subsequent part of this work), partly for internal purposes of manufacture and ornament, and partly in aid of the external purposes of the war; not directly and openly for that purpose but the excess of

bills drawn by the commissariat and other agents of the government, on account of the expenses of the war in different parts of the world, occasioned the bills to be drawn at a discount of 10 to 15 or 20 per cent, and at such depreciation, in- stead of being left to operate as mere extraneous equivalents of commercial exchange, they became an object of speculation against bullion, in refer- ence to the standard price of gold in England.

57. To render the circumstances of this very interesting and important period of the bank restriction act somewhat more intelligible to such readers as are not practically familiar with the complicated involutions of exchanges, it may not be irrelevant to state (taking the mint of France as the means of illustration), that according to the mint regulations of England and France, twenty- five francs, twenty centimes in France are equal to ––l in England ; but, in consequence of the excess of bills above adverted to, in May, 1809, the ––l English in France would not obtain more than twenty francs; consequently, as long as gold could be obtained in England at the mint price of 77s. lOˆd. per ounce, it yielded a profit in France of upwards of 20 per cent, against that rate of exchange, but such a disparity of value, as might naturally be expected, excited a spirit of Speculation and competition, which raised the price of gold to a premium

equal to the discount on the bills. So that in May, 1809, gold com- manded .t‘4. 11s. per ounce; this disparity be- tween the mint and trading price of gold excited an universal hubbub in every part of the country, ;md in February, 1810, a committee of parlia- ment was appointed to enquire into the cause of the high priee of bullion, and to take into con- sideration the state of the circulating medium, and of the exchanges between Great Britain and foreign parts. This committee sat from the 22d of February to the 2.”>th of May, during which time it took the opinions of thirty different per- sons, whose trading transactions and influence were thought to be such as qualified them to throw much light on the subject; but whether ignorant of the combination of causes that did in reality produce the disparity of value, or whether seltish motives led them to conceal their better judgment, certain it is, that although much in- teresting matter-of-fact information is here and there interspersed through different parts of the evidence, as a whole, it is completely destitute of every thing like a solution to the question proposed. In proof of this conclusion see article I’.XCHANGK, in a subsequent part of this work ; and in proof of the futility of the labors of the committee, ami of the frivolousness of the evi- dence in a g< neral sense, bullion continued gradually to advance, ami the exchanges pro- gressively to depreciate, until on the 18th Sep- tember, 1812, gold commanded .►►5. 11s. per ounce.

.”>!<. Such an extreme disparity of value had previously excited every species of contrivance id was beginning to lead to Cements in the internal econo- i selfish and avaricious indivi- selvesof thepointoflaw, which demand and enforce payment where by ►►h-; nature of the obli-

gation, payment in current money only \v;-►►j implied, that on the 24th July, 1811, an act was passed, 51 Geo. HI. cap. 127, to make the bank of England notes a legal tender in all payments, which by the act of the 38 Geo. III. cap. 1. (30th Nov. 1797), were only so in private transactions, after having been accepted as such, but which were ordered to be received as cash by all the collectors of taxes and duties. The title of the act for making the bank of England notes a legal tender, in conjunction with a consideration of the circumstances which led to it, is curious, and deserves attention. It is as follows, viz. ‘ For making a more effectual provision for preventing the current gold coin of the realm from being paid or accepted for a greater value than the current value of such coin ; and for preventing any note or bill of the governor and company of the bank of England from being received for any smaller sum than the sum therein specified; and for staying proceedings upon any distress by tender of such notes.’ To continue in force till the 25th of March, 1812, and no longer.

59. By another act in the following session, 52 Geo. III. cap. 50. dated 5th May, 1812, the preceding act was extended to three months after the

commencement of the next session of parlia- ment, and no longer; and by 53 Geo. III. cap. 5, 22d Dec. 1812, further extended to 25th March, 1814 ; and by 54 Geo. III. cap. 52, 4th May, 1814, to as long as restriction continues; 54 Geo. III. cap. 19, 18th July, 1814, restric- tion extended to 25th March, 1815; 55 Geo. III. cap. 28, 23d March, 1815, further extended to 5th of July, 1816; 56 Geo. III. cap. 40, 21st May, 1816, still further to 5th of July, 1818;

58 Geo. III. cap. 37, 28th May, 1818, again to 5th of July, 1819; 59 Geo. III. cap. 23, 6th April, 1819, restriction extended indefinitely;

59 Geo. III. cap. 49, 2d July, 1819, restriction limited to 1st of May, 1823 ; and in the interim the bank empowered to exchange bullion in quantities of not less than sixty ounces for their notes, between the 1st of February and 1st of October, 1820, at any rate between 81s. and 79s. 6d. per ounce ; and from the 1st of October, 1820, to the 1st of May, 1821, at any rate be- tween 79s. 6d. and 77s. 10□□d. per ounce; and from the 1st of May, 1821, to 1st of May, 1823, at 77s. 10□□d. per ounce; when gold coin again became a general circulating medium, and, as will be seen by the statement at the conclusion of this article, the □□l and □□2 notes of the bank of England were withdrawn from circu- lation, and to meet this change in the circulating medium in the years 1821 and 1822, gold to the amount of □□14,877,547 was coined at the mint. Such is the history of the bank restriction act, which in February, 1797, was in both houses of parliament so 'solemnly declared to be only a temporary measure, but which continued through a period of twenty-six years.

60. Preparatory to returning again to a gold circulating medium, a committee was appointed in each house of parliament, in 1819, to enquire into the state and affairs of the bank, with refer- ence to the expediency of the resumption of cash payments, when, after taking the opinion of about thirty persons, the act of 2d July, 1819, 59 Geo.

III. cap. 49. was resolved upon, and in the course of the enquiry on the 31st of March, 1819, the bank exhibited the following account of the state of their affairs, viz. 'That the whole of the claims upon them on that date amounted to □□33,948,560, of which □□24,710,770 was notes in circulation, and □□9,237,790 in deposits and other debts, against which their assets in cash and bullion, bills discounted, and government securities, amounted to □□39,179,750, leaving a balance in favor of the bank to the amount of □□5,231,190, exclusive of the □□11,686,800, per-

manent debt of the government, as exhibited in sect. 41, and ►►3,000,000 added in 1816.' Flat- tering as all this may seem on a superficial view of the subject, and confident as opinion generally was, of the country having escaped the peril, so earnestly warned of by Lord Lansdowne, in sect. 51, a short period only elapsed before the effects of the system, spectre-like, returned in a more ter- rific form than ever. Preparatory to the return to cash payments in 1823, through the years 1821 and 1822, the bank had progressively diminished the issue of its notes from an average of ►►22,550,000 in December, 1820, to an aver- age of ►►16,393,000 in December, 1822; a depres- sion in the money value of all the products of industry, without any parallel since the com- mencement of the war in 1793, followed this diminution of circulating medmm. But the ordeal of the experiment of paying gold on de- mand having been got over, the cupidity of avarice again began to operate, and notwith- standing the accession to the circulating medium of the ►►14,877,547 of gold coined in the years 1821 .and 1822, the bank aeain showed a dispo- sition to force its notes into circulation, so far, that instead of gold supplying the place of paper for six weeks preceding the 5th of January, 1825, th►►e bank of England notes in circulation again exceeded an average of ►►20,000,000 ; and those of country bankers had increased from ►►4,293,1 64 in 1822, to ►►6,724,069 in 1824, and ►►8,755,307 in 1825.

61. The facility of raising money among indi- viduals, which this redundancy of circulating medium afforded, gave rise to an extent of spe- culation, far, very far, exceeding the notable South Sea and other adventures at the commence- ment of the preceding century. (See the article COMPANY, in a subsequent part of this work, for an elucidation of the extent and consequences of the folly at both periods.) Towards the month of September, however, the speculations generally liefzan to be considered equivocal in their results; the first perceptible shock to what is technically termed credit, was experienced on the 24th of October, in the suspension of payment of one of the most eminent commercial establishments in London, or the commercial world (Mr. S. Wil- liams, an American). After this, a month passed away in gloomy suspense, till on the 25th of]\ovember an extensive banking establishment at Plymouth (Sir W. Elford, Bart, and Co.) was the next evidence of the unsoundness and im- policy of the paper money system. This failure strengthened the doubts of die stability of others, and suspicion falling on all the banking establish-

ments in the west of England, it produced in London such a demand for gold, as excited ap- prehensions for the consequences to which it might lead ; in the meantime the bank of Eng- land had been progressively narrowing its issues, till the amount at the end of November was reduced again to ►►17,500,000. On the 9th of December the suspension of payment was

announced of an extensive banking establishment at York (Messrs. Wentworth, Chaloner and Co.), having branches at three or four other towns in the county, and their own house of agency in London ; consternation now became general, and the directors of the bank of England, who had, as we contend, contributed to bring on the de- rangement, by the facility which they afforded to get their notes into circulation, in discounting three and four months bills at 4 per cent, per annum, now as suddenly took steps which acce- lerated the derangement. On the 13th of Decem- ber the following notice was issued, viz.: ••• Bank of England.

' Resolved ••• That from and after the 13th instant, no bills or notes will be discounted under 5 per cent, per annum.'

62. This notification added considerably to the consternation : an extensive private banking establishment, deemed one of the most reputable in London, had previously suspended its pay- ments, and on the following morning two others were reduced to the same alternative ; it would be difficult, and at all events it would exceed due limits here, to describe the dismay and confusion that now prevailed ; and- with the view of endea- vouring to allay the ferment, a public meeting at the Mansion House, as on the memorable 27th of February, 1797, took place on the 13th of December, 1825, when about 700 signatures were obtained to the following resolutions : viz.

' 1. That the unprecedented embarrassments and difficulties under which the circulation of the country at present labors are mainly to be attributed to a general panic, for which there are no reasonable grounds; that this meeting has the fullest confidence in the means and sub- stance of the banking establishments of the capital and the country, and they believe that the acting generally upon that confidence would relieve all those symptoms of distress which now show themselves in a shape so alarming to the timid, and so fatal to those who are forced to sacrifice their property to meet sudden demands upon them, which it is no imputation upon their judgment and prudence not to have expected.

' 2. That it having been stated to this meeting, that the directors of the bank of England are occupied with the remedy for a state of things so extraordinary, this meeting will refrain from any interference with the measures of the directors of the bank, who, they are satisfied, will do their duty towards the public.

' 3. That having the firmest confidence in the stability of the public credit of the country, we declare our determination to support it to tho utmost of our power.

‘ 4. That it is the opinion of the meeting that declarations of a similar description with the

present, in the country towns, where the banking establishments may appear to deserve them, may be productive of much benefit in restoring gene- ral confidence.’

63. Although it was generally believed that the bank of England had been drained of nearly the whole of its stock of gold, during the memo- rable week between the 10th and 18th of Decem- ber; yet on an average of the five weeks between the latter date and the 22d of January, 1826, the issue of bank of England notes had been in- creased to ►►25,310,000.; and that this lavish ex- perimental issue did not lead to the necessity of again resorting to a restriction Act, was owing entirely to circumstances not at all contemplated in the deliberations which led to the increased issue of notes’, and which, in fact, seem to have been issued with very little calculation on the consequences to which they might lead.

64. Notwithstanding the declaration at the Mansion House, on the 13th of December, that the embarrassments and difficulties under which the circulation of the country then labored, were mainly to be attributed to a general panic, for which there were no reasonable grounds; accord- ing to a return laid before the House of Com- mons on the 27th of February, 1826; in the interval of the end of October, 1825, and that date, fifty-nine banking establishments, com- prisiiig 141 partners, had been declared bank- nipt, about twenty others insolvent, and every succeeding wei k continued to add from seventy to U o merchants, manufacturers, and traders, to ihe bankrupt. l>t, and thousands to the lists of insolvency; whilst half a million of families in

manuf.icturing districts were driven of starvation, in consequence of the of confidence, and suspension of commercial operations, which the uncertain issue ;an! uncertain value of the circulating medium HI urea! pait occasioned.

o.”.. !Ia\i:ir: no’.v brought the history of the l>ar:k of Kn’.:!;;n.l from the time of its foundation ‘!o\n to the jn.‘iiod of this sheet going to press, in May, ln-ji], in icfereticu to its circulation, we will now proceed to brmu; down its history from sec!. 44. in reference to its a jrency and connexion vnrh the uov< nimcnt. Sect. 34 shows that it originated in the raisi:i'j; of a loan of ►►1,200,000 for th" use of the '_o\ vrnmi nt, at an interest of o

p; r cent, per annum, and ►►-1000 per annum for a--' ncy ; ;ul,) that that t i"i nsact ion was, in i'aet, the foundation of the funding system, winch has h d to an extent and pressure of taxation without anv parallel in the history of society, and which the bank of Knuland has been the main instrument in occasioning. Sect. 42 shows ►►►i of the advances made by the bank niiiient up to 1781 ; which advances, inti rest, were all subject to a _. . :c\ ; as was also all other sums lottery, or borrowed by the govern- ii:i!.\ idu.il> during the war, from I'.',, the total sum then amounting to ;:;. The terms of auvncy up to 1726 according to ciicnmstanccs, at which fixed at .L'oiju per million, afterwards ►►►2. lu.s. per million; after the ; t-:vje of Versa.!!! s in i 7:'-, v/h, a the total sum

n t

amounted to ►►249,000,000, the terms were re- duced to ►►450 per million, at which rate it con- tinued up to 1807, when it was reduced to ►►340 per million, on ►►600,000,000., and ►►300 for every million above that sum; during the exac- tion of the property tax, the bank received at the rate of ►►1250 per million, on such portions of the tax as were paid in to the bank direct, and ►►805. 15s. \0d. per million on about ►►600,000,000 paid in on account of loans between the 1st of February, 1793, and the 5th of January, 1823; these several charges (including ►►4000 to ►►6000 per annum for management of lotteries), and most of which charges are likely to continue, at all events up to the period of the continuance of the charter in 1833, since the commencement of the present century, have averaged about ►►275,000 per annum.

66. Independently of the above species of agency, subject to specific charges, the whole re- ceipt of taxes of Great Britain passes through the Bank of England, which, since 1803, have averaged upwards of ►►50,000,000 per annum ; upon this branch of its agency the bank makes no direct charge, but as each separate depart- ment, paymaster, or accountant of the govern- ment, upwards of fifty in number, has its se- parate account at the bank, and each holding a provision for the progress of its payments, it leaves a permanent balance in the hands of the bank of from four to seven millions per annum, and during several of the last years of the war, from ten to fifteen millions per annum. The following is a statement of the amount in each of the eight years 1818 ►►► 1825 according to returns made annually to parliament, viz.

Years.

Maximum.

Minimum.

Average of the Year.

1818

8,852,078

5,709,487

7,019,071

1820

5,861,631

2,246,598

3,713,442

1

7,096,874

2,302,591

3,920,157

2

7,690,046

2,867,851

4,107,853

3

8,305,174

3,698,764

5,526,635

4

10,359,773

5,000,127"

7,222,187

5

9,239,024

3,197,190

5,347,314

67. By means of these balances, deposits ot individuals, and the circulation of its notes (and the circulation of its notes, be it remembered, creates the means of the balances and depo- sits), the bank discounts the bills of individuals, makes the temporary advances to go- vernment on interest, and buys exchequer bills and other government securities, bearing interest ; all these it is, in addition to the specific charge of ––275,000 per annum specified in sect. 65, and 3 per cent, on the ––14,686,800 specified in sect. 41, that enables the directors of the bank tc divide the enormous amount of ––1,455,300 per annum among the holders of the ––14,553,000 of stock, as specified in sect.43. This profuse di- vidend occasions the nominal ––100 of stock on the bank books, to be saleable for transfer pro- portionate to the current rate of interest, be it 3, 4, or 5 per cent, per annum. Ilenoe, on the

10th of May, 1816, ––100 of stock commanded ––262, and this leads us to an elucidation of the transaction adverted to in sect. 42. In 1816 the directors of the bank offered to lend the govern- ment a further sum of ––3,000,000 during the continuance of their charter, at the moderate rate of interest of 3 per cent, per annum, the current' rate then being about ––4. 5s. per cent. ; and such was the blindness, as the writer of this paper regards it, of the government at that time, that the Chancellor of the Exchequer actually held it up in parliament as one of the most disinterested acts of kindness and genero- sity of a public body that he had ever known : but the reader should mark the sequel.

68. There was another proposition connected with the transaction on the part of the directors of the bank, to the following purport, viz. That they should be empowered to add 25 per cent, to their then permanent capital of ––11,453,330. This being complied with, what did the trans- action amount to ? Certainly to empower the then holders of bank stock to levy a contribu- tion of from ––7,000,000 to ––8,000,000 c" the public for their own exclusive benefit, because no new subscription was called for, nor

was the ––3,000,000 purported to be lent, the property of the bank, but simply a reduction of the ba- lances of the public money, which the bank held as the agent of the public ; which by this act they were empowered to convert either into a marketable commodity at from ––262 to ––220 for every ––100, or to retain it as a permanent ac- cession of capital equivalent thereto.

69. Another transaction between the bank and the government, equally disadvantageous to the public, took place in 1823, act of 4 Geo. IV. cap. 22. This act, which, under the title of Mili- tary and Naval Pension Bill, was virtually an act to raise money for the purpose of sustaining a sinking fund, granted an annuity to the bank

of ––585,740 for forty-four years, from the 5th of April, 1823, in consideration of the bank paying to the government the sum of ––13,089,419 in thirteen irregular instalments between the 5th of April, 1823, and the 5th of July, 1828. As the actual result of this transaction depends upon the rate or terms at which the ––13,089,419 or a corresponding sum, may be expended in die purchase of 3 per cent, stock, prior to the pay- ment of the last instalment, we are of course (in May, 1826) precluded from stating with accuracy the precise extent of its disadvantage to the public. But, according to one (the eighteenth) of a series of resolutions on the state of the nation, submitted to the consideration of par- liament, by Mr. Hume, on the 4th of May, 1826, it appears that ––6,917,569 of the amount re- ceived up to the 6th of January, 1826, had been expended at a rate equivalent to ––7,858,188 of 3 per cent, stock, whilst the equivalent of 3 per cent, stock given for that portion of the amount was ––9,476,110, consequently a bonus to the bank equal to ––1,617,922 of 3 per cent, stock; but, by mathematically correct working of the transaction in 1824, when the 3 per cent, stock was at 95, and assuming that rate for the ex- penditure of the remainder of the instalments then to be paid, the result would have been on the 10th of October, 1828, a cancelling of per- petual annuity to the amount of ––365,880, leaving an excess of ––219,852 per annum, payable for 38–– years, equivalent to an annuity in perpetuity of ––146,962; and supposing from the date of the last instalment in 1828, 3 per cent, stock should recede to 60, or the rate of interest become permanent at 5 per cent, per annum, the excess of the annuity of ––219,852 for 38–– years, would, at the expiration of that period, be equal to ––29,381,900 of 3 per cent, stock, or an annuity in perpetuity of ––881,457, consequently a dis- advantage to the public to that extent for ever.

70. The following is a Statement of the Income of the Bank at the period of this article going

to press.

Interest on the ––14,686,800 permanent Debt of the Government, at 3 per cent.

Annuity for 44 years, from 5th of April, 1823 . –––

Charge for transfer of the Puolic Funds, and Payment of the Annuities, about Interest on Notes in circulation, say ––20,000,000, at an average of 4 per cent.

Total

From which the following charges and liabilities must be deducted, viz.

––250,000

50,000 20,000 50,000 50,000

Salaries of about 1000 Clerks

Stationary, Coals, Candles, and Hopse Expenses

Repair of Buildings, Taxes, &c

Composition for Stamps

Loss on Bills Discounted

Law Expenses, Gratuities, &c.

20,000

Net ID come

––440,604

585,740 275,000 800,000

––2,101,344

440,000

––1,661,344

Being upwards of 11 per cent, on the amount of stock constituting the permanent capital annually divided upon, against which, however,►►5,000,000 of the loan of 1823, for which the annuity of ►►585,740 was obtained, remains to be paid up ; but, if the resources of the bank have hitherto been such as to enable it to advance the ►►8,000,000 without entrenching more than 2 per cent, upon its profuse income, but little doubt remains that it will be able to fulfil the contract without any further entrenchment, and if so, the whole annuity then remains clear income for the remainder of the period, viz. 38►► years. The amounts deducted from the gross income are entirely assumed, there being no authentic data before the public on the subject ; they probably exceed the actual expenses.

71. In the preceding view of the total income of the bank, no notice is taken of interest on the temporary advances to the government, nor of profits by discounting, nor of interest that may be derived from the balances held by the bank, due as well to depositors as to the government ; because the first, that is, the temporary advances to the government wholly, and the others par- tially, merge in the aggregate amount of interest derived from the circulation of its notes.

72. Since 1826, when the preceding part of this article was written, great and important changes in the practice and principles of Bank- ing in England have taken place, the particulars ;nnl consequences of which, we will now pro-

< >;' ih:> Bank of England in the present Year, j Ifi.'J:)] occasioned, in 1832, a committee of par— Lament to he appointed "to inquire into the t .I'jit'ln no/ of renewing the Charter, and into the syviem on which Banks of issue in England I'.d Wahs are conducted, 8tc. &c." The com initiet', \hieh was composed of thirty-two mem- bers of the. House of Commons (five a quorum), railed lief in: them twenty-two individuals, con- sidered to be practically well infornfcd men, to whom, collectively, .V.iTB questions were put, whose answers till 480 printed pages of large foolscap, upon which evidence the committee reported, "That on all the points into which th'y were appointed to inquire, more or less information will be found in the minutes of evidence, but on no one of them is it so com ph-tc a-< to justify the committee in giving a 'U'ci'b c! opinion." Many of the questions apply t ' I ie I-1!'.-, t which the Foreign Exchanges have e price of (iold, and their consequent OM the internal circulating medium; an i lurid it on "f these subjects belongs to the aMieies (u\-t

rlii'/Kinˆ!;, r.,tlu-r than to Hankinu; they are, i:nwever, -►►►' intimately connected with it as to r.'H'l T a ivt'.renrc to them necessary to a com j.'<-'i' t-liK i-iation thereof: we shall, therefore, hereafter a_am refer to

them in continuation of ili" present article. Inapplicable as many of t':;.: questions put bv the committee were, and i.'i-iillicient and unsatisfactory as it-; labors have

leiMi, as tar a< the question of a developement of the j'iM principles of Cnnvney and Hanking !< coneerned, there are several accounts an- nex;.1 ! to the i-\ iilence that contain information

of the most important kind, and from which many just conclusions may be drawn ; all of the most interesting and material of these accounts will be found exhibited in four state- ments at the conclusion of this article, and they will be adverted to in detail as we proceed in the further elucidation of the subject.

73. Independent of the Bank of England, which constitutes so prominent and important an adjunct to the great trading transactions of the Metropolis, there are also at this time [1833] about sixty other Banking establishments of de- posit, discount, and agency in the Metropolis, and about 650 others in different parts of Great Britain, which are also banks of issue, as well as of deposit and agency. Previous to 1797, while all notes payable on demand were con- vertible into gold at the standard price of ►►3. 17*. lOJd. per. oz , or into silver at 5s. 2d. the oz., the practice of most of the provincial or country bankers was, to issue notes of ►►5 and ►►10 each, and partially of ►►20, ►►30, and ►►50 payable on demand, at some one of the most accredited of the sixty-five to seventy banking establishments in the metropolis. These notes it was the practice to advance, on interest, to the trading and agricultural producers of their respective districts; but as these notes, being payable on demand, were, within a week of their being issued, even from the most distant part of the country, liable to be presented for payment, the issuer was, in all cases, required to deposit with his agent in the metropolis an adequate sum or security for their amount, as well as being pro- vided to pay them on demand at the place from whence issued ; whereby it appears that two protecting capitals are required to keep one in circulation; and hence the difficulty, on a partial view of the subject, of discovering how the ad- vantage to the issuer of the notes arises. This will be explained by supposing the total amount of promissory notes issued by any one country banker to be ►►20,000 ; a protecting capital of ►►5000 in the Metropolis, and ►►1000 or ►►2000 at the place of issue, will suffice ; the interest upon the difference will be profit, less the ex- pence of stamps, paper, and management; three- fourths of the amount issued, on an average, keeping permanently in circulation or dormant in the dra%vers of the traders and farmers ; but, independent of the profit derived from cir- culation, some country bankers charge a com- mission of one-fourth per cent, upon all accounts which are allowed to be occasionally overdrawn ; and to such of

his connexions who become his creditors he generally allows interest only at the rate of two or three per cent, per annum., while he charges all his debtors four or five per cent., or some such difference. The great epoch, however, of advantage to the provincial banker commenced with the suspension of cash payments in 1797, when notes under ►►5 were allowed by law to be issued ; the small notes, chiefly of ►►1, sometimes of ►►2, were generally payable only at the place where issued, and consequently required no protecting capital in the metropolis, or elsewhere, to sustain them ; their circulation was maintained entirely by the credit and character of the party issuing them. Columns number

3 and 4, of the Statement, number IV., will show the estimated annual amount of country bank notes in circulation, about three- fifths of the amount being in notes of ►►l and ►►2, as well as the number of establishments licensed to issue the same.

74. Payment in cash being suspended (see sec- tion 55) until six months after the ratification of a definitive treaty of peace, the small note circulation received its first check after the peace of Paris in 1814 ; but reattained its wonted vigour again in 1817-18, see columns 3 and 4 of statement IV. From the close of the latter year, when the return to gold payments at the standard of 1797 was determined upon, the small note circulation experienced a second check, from which an effort was made to recover it in 1822-3, but in the year 1825, in consequence of circumstances detailed in sections 60 and 64, their circulation was entirely prohibited, the Bank of England having voluntarily with- drawn their small notes in 1821. “Up to the period of 1826, the practice of provincial Banking in England and Wales had been carried on principally by individuals, or by partnerships of two or three ; and here and there, but very partially, of four or five members ; but the discredit which fell upon individual country bankers in 1 825-6, as detailed in sec- tion sixty-four, and the disinclination of many to afford any accommodation on credit, has led since that date to the formation of Joint Stock Banking Establishments, at each of the under- mentioned places, viz. ►►►

Liverpool. York.

Manchester, 2. Darlington.

Manchester and Lancaster, 3.

Liverpool, 9. Whitehaven.

Birmingham,!, Carlisle 7.

Wolverhampton. Leicester.

Sheffield. Norwich, 9.

Barnesley. Stamford & Spalding.

Bradford. Gloucester.

Halifax. Langport, 14.

Huddersfield. Plymouth and

Knaresborough. Devonport.

The figures following certain of the places denote the number of branches respectively established by those banks. The Bank of England has also established branches at each of the eleven fol- lowing places, viz. ††† Liverpool, Manchester, Leeds, Birmingham, Bristol, Gloucester, Swan- sea, Exeter, Norwich, Hull, and Newcastle.

75. In Scotland there are about thirty-five banking establishments, all, except three, issuing notes of ††l and ††2, as well as for larger amounts. The commercial banking company of Scotland, at Edinburgh, has thirty-one branches ; the bank of the British linen company, twenty-seven branches ; and the bank of Scotland, sixteen ; and eighteen other establishments have together fifty-nine branches, so that altogether there is in Scotland between 160 and 170 offices of discount, deposit, and agency. Of these about fifteen may be regarded as private establishments, and the remainder joint stock partnerships ; their total1 issues of promissory notes amount to about ††3,500,000, in the proportion of three-fifths of ††l and ††2. In Ireland, subsequent to its union

with Great Britain in 1801, banking establish- ments became numerous, increasing during the war to sixty or seventy ; but, on the return to payment in gold in 1823, about ten only re- mained solvent and in practice. In 1783, the Bank of Ireland was established with a capital of ††600,000, afterwards increased to ††3,000,000, with exclusive privileges, corresponding with those of the Bank of England ; the circulation of the Bank of Ireland, on an average of five years preceding 1826, amounted to about ††5,000,000, in the proportion of about one-third of small notes under ††5 ; and the circulation of all the other banks at the same time amounted to about ††1,200,000. In 1825, a company was

formed in London with a subscribed capital of ►►2,000,000, under the title of the " Provincial Banking Company of Ireland," which has established branches at eighteen of the principal towns in that country, at a greater distance than fifty miles from Dublin, within which limits it was precluded by the privileges of the Bank of Ireland from issuing of notes. The provincial Bank of Ireland, as well as all the banks of Scotland, Jike the country banks of England and Wales, charge a commission on all the amounts which pass through their hands, and allow and charge interest in like manner.

76. In the three preceding sections we hare exhibited, in brief outline, the nature and extent of the provincial banks of issue in the three several parts of the United Kingdom, preparatory to showing the way in which they are connected with the transactions of the metropolis. To the American reader of our work to whom the prac- tice of banking (in a way to which we shall hereafter advert) is so familiar, it may be inte- resting to know that, not only does the whole receipt of revenue of the United Kingdom pass through the metropolis for redistribution, but that the payments of all the great trans- actions of the kingdom are also there equalized or balanced; this general concentration of the whole money transactions of the kingdom, gives to the private banking establishments of the metropolis, a character peculiar to themselves ; they neither issue notes, nor, on the transactions of the metropolis, do they charge any commission, yet several of them employ from forty to sixty clerks, while their contingent expences are on a proportionate scale. Since 1824, eleven of these establishments have suspended their payments, and the greater number of them proved great defaulters; at the present time (1833) there are fifty-nine in operation, of which, thirty-five are located within two or three minutes' distance of the Bank of England and Royal Exchange, ten in the more western part of the city, and the remainder in Westminster. The transactions of ten of those located contiguous to the Bank of England are on a very extended scale, and among whom the agency of the country banks is principally divided ; the transactions of ten or twelve others may be regarded as inconsiderable, and each of the remainder as giving employment to from fifteen to twenty-five clerics.

77. The private banking establishments of the metropolis are formed of two, three, or more partners, in very few instances exceeding five;

the requisite qualifications, either for commencing a new banking establishment or for being admitted a partner in an existing one, are, 1st. a money property of from ►►30,000 to ►►50,000, 2nd. prudential habits, and 3rd. a general good moral character. The practice of the metropolis being for every merchant, trader, and professional practitioner to deposit his daily or weekly receipts of money with some one of the banking estab- lishments, the total number of depositors probably amount to about 30,000 ; this gives an average of about 500 accounts to each bank, supposing them equally divided ; upon these deposits no interest is given, nor, on the other hand, is any commission charged on their being withdrawn ; but, as many deposits thus made form collec- tively a large sum, the banker obtains his advan- tage by using it in the discounting of bills, it being understood between the depositor and the banker that, as a compensation for managing his account, the depositor will keep a permanent balance with his banker of ►►200, ►►500, or ►►5,000, as the case may be, according to the nature and extent of his transactions : thus, supposing a banker to have only 500 accounts, and the standing deposit of each to average only ►►jOO, this would afford a discounting capital to the banker of ►►250,000; this will serve as an example, but the deposits in each of about twenty of the principal establishments will probably average five or ten times that sum.

7u. It is not what may be considered the per- manent balance of the deposits, which alone constitutes the means of advantage to the econo- mical banker. The respectable merchant and trader does not confine his balance to a specific sum; but he provides by anticipation for his payments some days previous to their being due, and at other times his receipts come in with- out any immediate demands being made xi-pon him : all these contingencies tend to augirent the banker's balances, and means of discount ; and thus a thousand sums, which remaining in the hands of individuals would hi.- useless, by being concentrated in banks of deposit become available for being made constantly active and profitable. It was with these deposits so concentrated that the Ex- chequer bills exhibited in col. 13 of statement III. i\> re kt pt in circulation ; during the war from !"►►►.>:; to K',16 those bills carried an interest of 3d. to 'iˆl. per ►►100 per day, and, by being daily convertible, they enabled die metropolitan banker at all times to convert his depositors' balances to ;i profit ; but, since the termination of the war, the interest on those bills has been progressively reduced to]}2.">, with the exception (.(' the. envi- niMieiii account and that of the F.ast India Company, the transactions of the Bank of 1 'i.;iand, a- a bank of deposit, were compara- tively inconsiderabli ; but. in consequence of the devastation> a: the clo>e of that year, as de- tailed in sect. o-i. \heii

ing houses of the metropolis were involved in the general wreck ; the

distrust thereby occa- sioned led to the transfer of a number of accounts from the private bankers to the Bank of England, as may be seen by the increase of deposits, as exhibited in col. 7 of statement IV.

79. It having been shown that the interest de- rived from the deposits is the only source of emolument of the private bankers of the metro- polis upon the metropolitan part of their trans- actions, if the extent of the deposits was ascertained, their aggregate emolument might be pretty accurately determined ; but, in the ab- sence of all authentic data, the best that can be done here is to assume some basis whereby an approximation to the amount may be arrived at ; the expenses of about fifteen of the principal establishments, ten in the city and five in West- minster, will approximate to ––8000 per annum each, in clerks salaries, rent, taxes, and contin- gencies; of thirty others about ––5000 each, and the remaining fifteen about ––2000 each, ––– making a total of ––300,000 per annum ; if to this we add ––2000 per annum each, as the personal ex- penses of 240 principals, being an average of four partners to each establishment, ––480,000 per annum more is required to meet those ex- penses, making together a total of ––780,000. To meet this amount, at the present prevailing rate of interest, deposits to the amount of about ––25,000,000 are required, and to be constantly employed, leaving nothing for defalcations and such like contingencies ; ––25,000,000, divided among sixty establishments, gives an average of ––416,600 ; when a second-rate establishment has been suspended in its operations the claims upon it have run from ––300,000 to ––400,000; but with from ten to fifteen of the principal houses the deposits will doubtless amount to ––1,000,000 or ––1,500,000, and the aggregate probably ap- proximates to ––30,000,000, in the following pro- portions, viz. with the

15 principal establishments ––1,200,000 each, 30 second class do. 300,000

15 minor do. 150,000

These give a total of ––29,250,000, and require 30,000 depositors, in the following proportions, viz.

1 000 averaging ––5000 each ––5,000,000 1000 do. 3000 3,000,000

4000 do. 2000 8,000,000

4000 do. 1000 4,000,000

10,000 do. 750 7,500,000

5000 do. 200 1,000,000

5000 do. 150 750,000

30,000 ––975 ––29,250,000

80. As all what are termed first-rate bills, that is, bills of unquestionable validity, have for the last four or five years been discountable at the rate of 3, to 3J, or, as an extreme case, 3J per cent, per annum, ––30,000,000, allowing ––5,000,000 as a necessary rest or reserve, to meet daily contingencies (to which we shall again advert), will barely provide for the current ex- penses, in addition to which the personal ex- penses of several of the individual principals engaged in banking are stated to amount to ––20,000 per annum, and a number of them to

––10,000 and 5000 each; and, at the present time, the personal expenses of the collective partners of one of the principal establishments are stated to amount to ––80,000 per annum, whose fortunes at the commencement of the war in 1793 were inconsiderable, not exceeding ––60,000 ; the profits of another establishment, it is pretty well understood, for two or three years previous to the termination of the war, ex- ceeded ––100,000 per annum, while the personal expenses of the principal partner did not exceed ––2000 per annum ; but from 1798 down to 1819, in addition to the emoluments derived from the metropolitan deposits, the emoluments derived from the agency of the country banks, as exhi- bited in col. 4 of statement IV., was very consi- derable, and equal probably to that derived from the metropolitan deposits. The emoluments of the London bankers by the agencies of the banks of Liverpool, Manchester, and Leeds, are sup- posed, at one time, to have amounted to a very considerable sum, and that one of the Manchester establishments alone is stated to have been equal to ––l 0,000. It will not be out of place here to state that the practice of the banks in Liverpool and Manchester was and still is an exception to the practice of all the other provincial banks ; those of Liverpool and Manchester never having been banks of issue, but exclusively of agency, charging J per cent, upon all

transactions : the nature of their prac- tice is, to take the bills drawn and received in payment for the produce and manufactures sold in the respective places, and supply the mer- chants and manufacturers with Bank of England notes and cash for their current demands ; in ad- dition to which the bills so drawn in themselves constitute an important feature in the circulation of that district of the kingdom ; and, as the practice is peculiar to the district, and is as in- teresting and important as it is peculiar, it me- rits more than an ordinary share of attention from the legislative as well as general inquirer, not merely in comparison with the practice in other parts of Great Britain, but as having no compa- rison with the circulation and practice of banking in any other part of the world ; we shall therefore endeavour to show its extent and practice.

81. The imports into Liverpool, including those from Ireland, have averaged, during the last fifteen years, about ££20,000,000 per annum ; and the annual value of the manufactures of the district of which Manchester is the centre have averaged about ££50,000,000 per annum ; for, al- though the quantity has doubled during the period, the reduction in value has been in a ratio corresponding as near as possible with the in- crease of quantity. Upon these transactions but few bills, comparatively speaking, are created in Liverpool ; while about ££35,000,000 on London are created in Manchester, in the proportion of about ££17,000,000 for the proportion of cottons and yarn exported, and ££18,000,000 for the con- sumption and re-distribution of the metropolis ; the remaining ££15,000,000 are paid for by other bills carried in or remitted by the country shop- keeper. (Draper.) Hence bills, as here described, to the amount of about ££50,000,000, annually pass through the hands of the Manchester bank-

ers, at present (1833) eight in number. In Liverpool the prevailing condition of all contracts is 'payment in approved bills, not exceeding three or four months' date ;' then, as the bulk of the imports into Liverpool are worked up or consumed in the district ; the cotton dealer, or spinner, the grocer, provision dealer, &c. obtain from their bankers in Manchester such portion of the bills previously mentioned as their transactions require; hence it will be seen that these bills constitute the chief circulating medium or means of exchange between the place of import and distribution. The remainder of the bills created and received in Manchester are in due course remitted to the metropolis, in exchange for such foreign produce and productions thereof as are supplied from thence into Lancashire; and then, as all the produce imported into Liverpool is drawn for at the places of export in bills payable in London, all the bills carried into Liverpool from the Manchester district are ultimately re- mitted to the metropolis, to meet the payment of the bills so drawn, on account of the imports ; and, as the bills made payable in London are generally addressed to some accredited

banking house, the remittances from Liverpool are com- monly made tSrough the banking houses of that place.

82. By the preceding section it will be seen that the practice of the Liverpool and Manchester bankers consists more of endorsing and rendering valid, or approved, the bills created and received for the manufactures of the district than in re- ceiving and disbursing of cash deposits, and that it is consequently a practice requiring the utmost discretion and judgment, and differing essentially from the practice of the metropolis. The risks and liabilities of the Liverpool and Manchester bankers are exceedingly involved, inasmuch as their transactions are not confined to the bare passing through their hands the ––50,000,000 per annum which the manufactures of the district give rise to, but they exchange bills of large amount for smaller, and vice versa, as the wants and conveniences of their connexions require ; and, although these transactions do not add to the aggregate liability, they add to their complication. The practice of the bankers of Leeds, of Sheffield, of Birmingham, and of all the other manufacturing districts, as well as of the provincial banks in general, is similar to that of the bankers of Liverpool and Man- chester, in regard to their endorsing and exchanging of bills, but differed from them in their practice, during the small note circulation, of issuing their own promissory notes to supply the current cash demands of their respective districts, which their ––5 and ––10 notes at pre- sent in part supply ; but, as in the case of Li- verpool and Manchester, the bills created in all the other manufacturing districts are all drawn upon or made payable in the metropolis, they consequently give rise to daily exchanges between about thirty-five of the metropolitan bankers to an extent incredible to persons un- acquainted in some degree with the practice of banking transactions.

83. The aggregate transactions of the metro, noli tan bankers, exclusive of the Bank of

2 H 2*

*462**

13 A N K.

England, are stated to amount to from ––3,000,000 to ––4,000,000 daily, and occasionally to exceed the latter sum. The economical means devised for the daily liquidatioa and settlement of the claims of the bankers upon each other is the nearest approximation to perfection in social ar- rangement ever arrived at: some of the principal Westminster establishments have accounts with those in the city in a way not dissimilar

to the provincial bankers; then, about thirty of the principal houses each send a clerk to a common rendezvous, where they exchange the claims of their respective houses upon each other. The place where this exchange takes place is in Lom- bard Street, in the immediate vicinity of all the principal banking houses, and is termed the Clearing House ; the first meeting takes place at one, and the last at four o'clock in the day ; and by this arrangement claims of millions are settled in an hour, with a very inconsiderable sum. To the uninitiated it may be proper still further to explain that when the merchant or

trader of the metropolis accepts a bill he usuaiiy accepts it payable at his bankers; and in like manner, in making cash payments, they g:ve a cheque, or order, on their banker, and at the same time write across it the name of the banker to whom it will be paid, which practice serves at once as a receipt on one side and se- curity on the other, because, when so written upon or crossed, in the event of being lost, no injury can accrue to either party, inasmuch as the crossing implies that it must pass the Clearing House, and therefore prevents its being paid to any undue person. It must be under- stood, however, that the payment in cheques is not usually made for amounts less than ►►5 ; at one time the Bank of England would not pay or recognize cheques of less than ►►10, and some houses of business make it a rule not to draw for a less sum ; but this depends entirely on cir- cumstances, and occasionally, as an exception to the general rule, a cheque may be given for as small an amount as 30$. or even 25s.

84. The following statement will suffice to show the way in which the daily transactions of those bankers who associate at the Clearing House are equalized :

A

r,

C

D

E

F

G

H

Totals.

-C

A claims of

9,872

3,841

2,850

17,640

11,652

16,827

19,764

82,446

B do.

12,082

7,641

4,627

23,219

9,760

26,541

18,322

102,792

C do.

4,040

7,157

1,520 8,617

4,215

8,427

7,380

41,956

1) do. 3,157

5,117

942

5,183

2,970

4,185

3,768

25,322

K do. , 16,970 -27, 080

9,180

3,922

7,680

32,817

15,870

114,128

F do.

12,827 13,801

3,814

1,815

9,723

11,614

7,682

61,366

G do.

17,954 23,814

9,716

13,817

◆◆◆29,740

17,952

13,876

126,869

11 do.

21,0'A) 14,872

9,427

4,640

14,834

9,167

13,740

88,370

To receive

80,020 102,412

44,501

33,191

108,956

63,396

114,151

86,662

643/249

Claimed of A

12.682

4,640

3,157

16,970

12,827

17,954

21,690

89,920

do. 1!

9,872

7,157

5,117

27,689

13,891

23,814

14,872

102,412

do. C

3,811

7,041

942 9,180

3,814

9,716

9,427

44,561

do. 1)

2,850

4 027

1,520

3,922

1,815

13,817

4,640

33,191

do.][illegible]*’.*

17,610 2:;. 2 10 8,617

5,183

9,723

29,740

14,834

108,956

do. F

1 1,052

0,7(30

4,215

2,970

7,680

17,952

9,167

63,396

do. 0

10,8-27 20, 541 8,427

4,185 ; 32,817

11,614

13,740

114,151

do. 11

10,704 18,322 7,380

3,768

15,870

7,682

13,876

86,662

To pay

82.14.; !02,70C

41,956

25,322 114,128

61,366ˆ 26,869

88,370

643,249

Balances .

i

To pay

7,474

2,605

7,869

2,030

19,978

To receive

380

5,172

12,718

1,708

19,978

85. Suppose the letters A to II here to repre- sent

money twice over. It iis true an exchange might take place at the counters of the respective houses, and the balances only paid or received ; but this would be attended with great loss of time and considerable payments, while, by the arrangement adopted, no money payment is necessary if the bankers have confidence in each other ; because, with the exception of an occasional very large amount, the balance notes given one day would probably equalize themselves the next, so that if each banker was to deposit Exchequer bills for mutual security, according to the extent

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of their respective transactions and probable oc- casional balances at the clearing house, their exchanges might continue, ad infinitum, without a shilling of money ever being required, and the banking of the metropolis resolve itself, by this practice, into a joint stock security, with the su- perior advantage resulting from individual con- fidence ; while a daily account, made up in the form as exhibited above, would show the work- ing of the money transactions of the metropolis, in a wav'to enable just and important conclu- sions to be drawn from them.

86. According to the previous statement the aggregate balance arising out of an exchange of ––643,249 is ––19,978, or about 3 per cent.; this, however, does not show the extent of money re- quisite to equalize each day's transaction, as will be seen by the account of B, which in the ag- gregate, balances within the trifling sum of ––380, but which, when exhibited iu detail, shows a ba- lance of ––9,471, viz.

Claimed

B has to

B has to

1

B claims.

of B.

receive.

pay.

◆◆

◆◆

f

◆◆

A

12,682

9,872

2810

C

7,641

7,157

484

D

4,627

. 5,117

490

E

23,219

27,689

4470

F

9,760

13,891

4131

G

26,541

23,814

2727

•

II

18,322

14,872

3450

102,792

102,412

9471

9091

Balance to receive 380

It will be seen by these statements that, how- ever irregular the claims of the respective bank- ers may be on each other, in the aggregate the balances to be received or paid exactly cor- respond with each other, and thereby it may be seen how advantageously the use of money may be economised by mutual arrangement ; and it is by such arrangements that the half-yearly payment of the dividends in January and July, to the amount of ––8,000,000, are effected with about ––2,000,000 of money, as may be seen by the statement No. 1 of the weekly circulation of bank notes, at p. 474. To make this more in- telligible to the uninitiated it may be proper to state, that at the National Debt department of the Bank of England an order, termed a war- rant, is given for the amount of the dividend, which warrant is convertible into money on de- mand, at another department of the Bank ; but when the warrant is received by such persons as keep banking- accounts, it is not converted into money, but carried to their banker, and it then enters into the general exchange with the Bank of England at the Clearing House, or in account with the respective private bankers, and thus the inconsiderable sum with which the payment of ––8,000,000 in amount is half-yearly effected.*

87. Having thus far traced the progress of banking in Europe, from the earliest period of its practice, and shown its nature and extent in the United Kingdom at the present time, before

we proceed to show its nature and extent in France and America, we will offer a few obser- vations on the prevailing excitement in England in regard to its expected future practice. That it rs destined to an important change is certain, from more than one cause : the expiration of the charter, and the present ascendancy of the Bank of England, with its claim of about ––33,000,000 on the government, coupled with the imaginary difficulties and certainly prevail- ing extensive distress of the nation, strong prepossession in favor of joint stock banks, and vulgar prejudice against private banks, are all circumstances which imply that an important change must take place. It is not, however, the question of banking, so much as of currency, that claims consideration ; whether the energies of the people shall be bound in chains, and fet- tered with logs of gold, or whether some means as elastic as their energies shall be applied, that those energies may produce their proper force and effect, is still more immediately the question which ought soon to be decided ; and without stopping to show the relative advantage or dis- advantage of national, compared with joint stock or private, banks, we will first proceed to show the basis upon which the currency, or cir- culating medium of the country, now ought to be founded : this, however, unavoidably leads us to refer to the account commonly called the National Debt, but which term is a solecism, in- asmuch as it is quite as much a credit, as it is a debt.

88. It will be seen, on reference to col. 2, of statement II. p. 476, that on an average of seven years preceding the war declared against France in February 1793, the expenditure of the goˆ vernment did not amount to ––18,000,000, in- cluding the charges of collection of the revenue, from which amount it progressively increased to upwards of ––130,000,000, in 1815, more than seven-fold ; the revenue, however, was increased only from ––18,000,000 to ––71,000,000, or about four-fold, the difference being effected, first, by the creation of bills, as shown in col. 13, of statement III., then funding them, and by the raising of loans, as shown in col. 3, of statement II. The most remarkable feature displayed in statement II. is, that during the first five years of the war, while the expenditure was increased from ––18,000,000 to ––50,000,000, no increase of taxation, comparatively speaking, took place ; but when the operations of the war had ab- sorbed the ––18,000,000 value of gold, which had been coined during the eight previous years (see col. 14), and placed the country in a situation the most peculiar, a paper circulation was resorted to (see cols. 4, 5, of statement II., col. 3 of No. IV., and sect. 73) ; then it was, for the first time, shown what society, when unfettered, is capable of; it enabled England to advance her revenue with increasing*

facility from less than ►►20,000,000 to more than ►►70,000,000 per annum, in the course of eighteen years, and not only to con- tend single-handed for the supremacy of the world, but to advance at the same time all the means of social enjoyment in a corresponding degree; and, in 1815, to attain the object for which she had for twentv-tWo ˆqrs contended,

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,:ot exhausted of, or diminished in, her re- sources, but, on the contrary, surrounded by an extent of scientific and mechanical power, a facility of interchange, and a moral force, with- out a parallel in the history of human action.

89. But what is the situation of the country now? (1833) An accursed delusion in respect to gold, like an ignis fatuus, has dazzled the understandings of men, and, with one or two al- ternations, led to eighteen years of prostration as deplorable as the previous eighteen years of advancement is even now delightful to look back upon. This declaration will doubtless in- duce the sciolist to exclaim, Oh ! here's a paper money advocate for you ! Simpletons, who do not seem to know the distinction between use and abuse, or, at all events, if they do know it, seem never to have entertained it. We will therefore show the distinction; but we must previously show the slate of the annuity account, called the National Debt, in 1793, compared with its amount at the present time, and the state of the account between the Bank of England and the Government at the same two periods; and we shall then, in our development of an entirely new principle of currency, clearly show the distinction between the use and abuse of a paper circulating medium. The amount of government annuities, at the commencement of the war in 1793, was .►►'9,200,000, reduced by the extinction of certain life and other terminable annuities, and by redemption of land tax, &c. to about ►►7,200,000 ; the total amount now payable being ►► 28,340,000, leaves ►►21,140,000 created since 1792. Now, on reference to the statement of loans raised, and bills issued and funded, cols. 3 and 13 of statements II. and III. it will be seen that every pound of these annuities was created, not for gold received, but for paper ; and for paper, if convertible at all into gold, a gnat part of it was at the rate of ►►5. 7s. to ►►5. 1 Is. per ounce. Mark, then, the injustice, as well as the folly, of endeavouring to enforce the payment of these annuities, as well as all other proportionally increased amounts, in gold at the fixed rate of 77s. Kty/. per ounce. Next, u:th regard to the Bank of England, sect. 42 shows the progressive increase of the subscribed capital of tin; Hank, from its foundation in 1694 down to 1781, at which sum it remained fixed down to the close of the war in 1815; the two following sections show the

rate of dividends and amount of bonusses derived therefrom, during the same period, and down to the present tune (I!!:!;)); sect. 67 shows that an augmenta- tion of 1':;, 000,000 to the capital took place in KUti; and col. 8, of statement 111., shows the amount of a further sum of between .L'H>,000,000 and i'19.UOO.OOO, \hich the Hunk now claims of the (iu \ eminent, making together a total claim, as laird in sect. !',7, ►►..f about ►►'33,000,000. The amount advanced, as explained in sect. G9, is inelnd. d in tin amniiul exhibited in col. 8.

< >U. Thi' ti'tal m>mm;d value of the annuities, or, HI other uonls, the capit d of the National llrbt, a- it stoMi! ;it the commencement of the present \ear (li<33), \\as 1'7 .V>,U()0,000, for Jt'2 l,K''(:,(►► >(> of the aunui'.ies, the remainder hi'iii.' bi'.' and (,tlii r terminable annuities, except

about ►►650,000 for interest on the Exchequer Bills, as exhibited in col. 13, of statement III. The ►►755,000,000 of capital above stated stands under twenty or more denominations of 3, 3J, and 4 per cents., distinctions as unnecessary as they are elusive ; therefore, preparatory to the adoption of the measure we are about to pro- pose, it is necessary that all the various descrip- tions of stock should be consolidated into one denomination, a measure as desirable for its own sake, as it is in reference to the proposition we are about to advance ; in reference to which it is desirable that they should be converted wholly into a 3 per cent, stock ; that being done, the amount of the account will somewhat exceed ►►800,000,000, which account is now, instead of gold, to be made the basis of the circulating me- dium of the country. Suggestions have been fre- quently and repeatedly offered for liquidating the National Debt, by converting it into currency; but the suggestions have invariably been vague and irrational, bespeaking an entire destitution of all knowledge of the exact relation either of the debt or of currency with the aggregately com- bined interests of the nation. In the first place the extinction, or even diminution, of the debt is neither necessary nor desirable ; but, were it otherwise, there is no means of either extin- guishing or reducing it without producing a diminution of power in the body politic, like the loss of a leg or an arm to the body physical : from the manner in which it has grown up it has become an essential and indispensable part of the aggregate combination ; and, if it can at all be considered a grievance, it is more than compen- sated for by the scientific and mechanical power, now in operation, which the funding system has mainly been the means of creating.

91. The ►►800,000,000 nominal value of the annuities being made the basis of the currency, to make the currency invariable, the nominal value of the annuities must be made invariable ; and this is to be effected by

means at once simple, and as important to the aggregate in- terests of the nation as they will prove ef- fectual for the purpose of affording an inva- riable currency. The government henceforward must be the only manufacturers of the cur- rency in ►►l and ►►2 notes, as well as of larger amounts; ►►100 of such notes to be always ex- changeable for ►►100 of the consolidated stock, and, vice versa, the stock in like manner always exchangable for ►►100 of notes. The established rate of interest being 5 per cent., the difference between 3 and 5 per cent, will be the means of profit to the bankers and agents of distribution. By the adoption of such a measure, gold, like any other metal or commodity, will find its level of value as an article of merchandize, and the energies of the country will be at once relieved from the golden fetters with which (heavier than iron or lead) they have for eighteen years been bound. This measure being resolved upon, the first step to be taken, after the consolidation of the stock, will be to provide notes for all appli- cants, and then settle the claim of ►►33,000,000 . with the Bank of England. The directors of that establishment, doubtless, imagine that they arc entitled to claim ►►33,000,000 in gold, at

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77s. iO^d. per ounce; but ►►11,642,400 is all they are entitled to receive in gold, all beyond that amount has been created in paper, and in paper only ought it to be paid ; let, then, the claim of the Bank be settled by paying the sub- scribed capital back in gold, at the rate at which it was received, and the remainder in the na- tional paper proposed as the only future circu- lating medium of the country, which gold and paper would form the future capital of the Bank of England.

92. Under the arrangement proposed in the preceding section all obligation between the Go- vernment and the Bank is dissolved ; the Bank stands on its own bottom, with means and in a condition to pursue the occupation of bankers, like any other establishment, with the difference in their favor of a larger capital ; if they should prefer funding their notes, or any part of them, let them do so : another establishment upon an equal scale of efficiency would doubtless be formed ; the government business is open to the existing establishment, or to any other which may be formed; in either case it will be the duty of the government to take care that it is transacted on the most economical terms for the public ; by economical we do not mean the lowest rate of terms, but those which afford the greatest security and facility. As the proposed currency is totally unconnected with gold, the ►►11,642,400, which the Bank will be entitled to receive at 77s. \0\d. per ounce, in its settlement with the government, will be at the disposal of

the Bank as merchandize, like any other metal; should a demand ensue either to facilitate the transfer of capital from British to foreign secu- rity, or for procuring corn or any other article of production, the price of gold will rise in pro- portion to the demand for it, and a due equili- brium be thereby maintained. If it should be imagined that our silver currency may be ex- posed to derangement, by circulating in con- junction with paper, we do not apprehend an inconvenience as likely to arise ; but, as it is a possible case, it may not here be irrelevant to state that the present attainment in the arts affords a substitute even for silver, more beauti- ful and equally convenient, whether in sixpences, shillings, half crowns, or crowns, and at the same time as non-intrinsic or valueless as the notes, except for their legitimate purpose of currency.

93. We have stated in a previous section that the present prevailing rate of interest does not exceed 3 to 3| per cent. ; it may therefore be sup- posed that, if the government rate of interest is fixed permanently at 3 per cent., there will be no inducement for bankers to risk the circu- lation of national notes ; but the very circum- stance of the government being always open to receive the surplus money capital at that rate, in itself would tend to enhance the rate for trading purposes ; while the increased energies which a rational and compatible system of cur- rency would tend to excite, and the progres- sively increasing consumption which would necessarily ensue, would enable 5 per cent, in- terest per annum to be readily paid on all money borrowed for manufacturing and trading

purposes. A currency cased as we have here proposed, on the capital of the national annui- ties, would not merely suffice for all purposes of internal interchange far more conveniently and preferably than gold, but it is susceptible of such an order of management as to serve at all times as an indicator of the activities and con- dition of the country.

94. The present circulation of the United Kingdom may be stated as follows : viz.

Bank of England notes about 18,000,000

Country Banks :

England and Wales . . 7,500,000

Scotland 3,500,000

Ireland 5,000,000

Gold 26,000,000

Total . . . ––60,000,000 Exclusive of about ––7,000,000 of silver, the cir- culation of which would not at present be al- tered by the adoption of the measure we have here proposed. The total of gold coined since the termination of the war in 1815, up to this time (1833), amounts to about ––50,000,000; but the large transfers of capital from British to foreign securities, which took place more par- ticularly in 1817-18, and more or less since that date, have led to the export of about ––20, 000,000 of gold, and three to five millions more has pro- bably been absorbed for manufacturing pur- poses; the proportion left for the purposes of- circulation may therefore be estimated as stated above, and ––60,000,000 as the aggregate amount of circulating medium ; but it does not circulate, and hence the embarrassment which so exten- sively pervades the productive interests of the empire. It will be seen by col. 10, of statement III., that from ––7,000,000 to ––10,000,000 of geld is constantly dormant in the coffers of the Bank of England; ––3,000,000 to ––5,000,000 more will in like manner be dormant in the drawers of the ether bankers of the kingdom ; while an equal amount of the Bank of England notes will be dormant in the hands of the private bankers of the metropolis, to meet sudden and unex- pected demands ; so that in reality the proportion of active circulating medium is less than ––40,000,000.

95. We have shown in sect. 81 that, indepen- dent of the circulating medium exhibited above, bills of exchange in the manufacturing districts constitute the chief circulating medium ; there is also another description of bills which are in- timately connected with the question of circula- tion, viz. the Exchequer bills, as exhibited in col. 13, of statement III. : the function of these bills is, they are held principally by the metro- politan bankers, as an immediately convertible means of meeting any sudden or unusual de- mand upon them ; being a legal tender for duties of customs, excise, &c., they are always convert-

> ible into current money within twenty-four hours ; the Bank of England hold a considerable amount of these bills, for which they receive in- terest, giving in exchange their own notes, bear- ing no interest. We shall offer no observation here on the improvidence of such a system, but proceed to show the amount of national notes likely to be required for facilitating the most ex

tensive interchange of productions, the way in ––––which they would at once be put into circulation, and the consequences which would necessarily follow the adoption of such a measure. To with- draw suddenly such an

amount as ––26,000,000 of gold from its function as currency, and throw it at once on the market as metal, or an article of merchandize, might lead to embarrassment; the government might therefore take all that offered, at some fixed rate to be agreed upon, in exchange for national notes ; this we will suppose to call for ––15,000,000, or perhaps ––20,000,000, of notes : the Exchequer bills outstanding will be seen by col. 1 3, of statement III. to amount to ––27,000,000 ; the whole of these would at once be converted into currency or national notes; and the claim of the Bank, beyond their sub- scribed capital, being about ––23,000,000, in which, however, about ––8,000,000 of Exchequer bills is included, leaving about ––l 5,000,000 to be liquidated in currency or national notes ; and, in addition to these, it is probable that from ––5,000,000 to ––10,000,000 more of notes would be almost immediately demanded for legitimate banking purposes in different parts of the United Kingdom. Thus the entire issue of national notes in the first instance may be estimated as follows, viz.

Against gold 15,000,000

I)o. Exchequer bills held by

private bankers, See. . . 19,000,000 Do. do. by the Hank of England 8,000,000 In final settlement with do. . 15,000,000 Demanded by provincial banks 7,500,000

Total

––64,500,000

96. It is probable, however, that a portion of the amount issued against gold, as well as to the P>ank, would seek to be funded, say to the amount of about ––14,500,000, leaving ––50,000,000 for active circulation. Proceeding upon these pre- mises, let us, in the next place, see how the government and the public will then stand in relation to each other. The government will gain on behalf of the public, on one side, the interest on the Exchequer bills to the amount of about ––700,000 per annum, and irvur, on the Other side, an obligation on the new stock to be created ot ––435,000 per annum, and be liable to the expense of manufacture ami issue of the notes, equal probably to ––200,000 per annum more ; but then the government will he in possession of from .t'i;>,0uo,ooot.o L 20,000,000 value iu gold, which may oilier be disposed ––t' gradually, as occasion may^erve, HI puvehaseof beneficial arrangements i 'I intercourse with the several nations of the world, tj. held in whole, or in part, as a reserve for war, tailurc of harvests, or other contingencies: ,u ail eveins an important object will be gained toi all parses, by withdrawing it

from fettering the circulation, and cramping the productive en ergies ol the country.

'.'7. The t\o objections to a [taper circulating ini-ilinin are its liability to excess of issue, and imitaiion. The first of these objections is valid i iiuuˆh, \hcn issued as it \as by country bank- ('., upon their individual rredit, or p.s it iniˆht i1. ii i.je.ed. iudetiuiteiv bv a '.'overniiK'nt ; but

the objection does not apply to the proposition here advanced, based, as here proposed, on the ►►800,000,000 of national obligation ; inasmuch as no more will be converted into currency than will be necessary for its legitimate purpose of facilitating the exchange of commodities, aiding the means of production, and advancing those improvements which the spirit of the age in- vites, and which such an order of currency is in itself calculated to promote and encourage : when it ceases to be required, and to find active and profitable employment for such purposes, it will revert back for conversion into stock, and thereby serve at all times as an indicator of the state of the activities of the nation ; and if, from any temporary current of feeling which caprice or any other cause may engender, the notes should press in, for fixed investment, to an extent indicative of an undue contraction, the quarterly payments of the government will lead to a re-issue, whereby a uniform and just equilibrium may always be maintained. The objection in re- gard to imitation is one which cannot be entirely overcome ; but the objection lies equally strong against a metallic currency, and it is question- able if recent improvements in the arts will not afford greater protection against the imitation of paper than can be obtained against the ad- mixture, or debasement, and abrasion of metal ; against which, for the purposes of currency, we might proceed to point out various other ob- jections, while none other of a valid nature can be brought against paper.

98. To fix permanently the rate of interest for the ►►800,000,000 capital stock of England at 3 per cent., while the rate of interest on the public securities or stock of all other countries rates from 5 to 6 per cent., may seem to be a measure calculated to induce a transfer of the capital of England to other countries ; we will therefore now show how the attempt at a transfer of property would operate. A stockholder in England is desirous to transfer a given sum, say ►►5,000, of stock from England to France, or any other country ; the stock in England being con- vertible on demand into currency notes at pound for pound, if the transfer is attempted to be made in gold, gold will be sought after as an article of merchandize, and a price demanded for it accordingly. A demand for such a sum as ►►5,000 would not probably produce any effect on the price ; but, in proportion as the amount is attempted to be increased, a price will be demanded for gold calculated to check the operation ; so that, whatever may be the nominal

rate of interest in the different countries of the world, a due equilibrium will be maintained through the medium of a fair market price for that metal. To a certain extent, transfers of capital may continue to be made, as they have hitherto been, through the medium of the export of the products of British labour; and the demand for gold will not show itself until a difficulty ensues in the disposal of British productions to an addi- tional extent, corresponding with the amount de- sired orattemptedtobe transferred. In like manner, on occasions of a sudden demand for supplies of foreign grain, derangements in the circulating medium will be prevented, and the exchange for*

grain be more confined than heretofore to pro- ductions of British labor, inasmuch as gold will experience the effect of a rise in price more im- mediately than any other article.

99. A circulating medium founded on the basis we have here proposed, while it would free the energies ot the country from the chains in which they have for eighteen years past been enthralled, would at the same time render the practice of banking more simple and intelligible, and thereby render it likely to be more exten- sively carried on, and more generally uselul, than it has hitherto been. The government, on behalf of the public, being the only issuers of circulating medium, the only security required from bankers will then be for the deposits made with them; this must at all times, and under all circum- stances, be an affair more or less of risk, whe- ther banking be conducted by individuals, by partnerships of two, three, or more members, or by an extended joint-stock proprietary, inasmuch as all are equally exposed to chances, which no reasonable amount of capital, nor pru- dence, can absolutely prove a protection against. Joint-stock companies, with a capital avowedly subscribed and actually paid up for the purpose of aiding the productive industry of the districts in which they may be formed, afford, generally speaking, a more ample security than individuals ; while, on the other hand, the indi- vidual or more private establishments afford the greatest facility : joint-stock, or public compa- nies, are too apt to be governed by fixed rules of practice, while with the individual banker a strong mutual confidence generally prevails be- tween him and the parties with whom he is con- nected in business transactions ; and he more readily yields to the exigencies of particular cir- cumstances, which the forms or fixed rules of public companies prevent.

100. The scheme we have here proposed will be seen not in the slightest degree to alter the practice of banking in regard to deposit, dis- count, and

agency, but effectually separates from them the practice of issue ; and, as it was the issue of notes, and not the advantages derived from deposit, discount, and agency, which more particularly constituted the exciting principle of provincial bankers in the United Kingdom from 1798 down to 1819, and which still constitutes t!ie leading feature of banking in Scotland, and with the provincial bankers of Ireland, as well as of several of those of England and Wales, as far as their reissuable notes of ►►5 and ►►10, &c., are concerned, and as we propose the extinction of all provincial reissuable notes on demand of larger amounts, as well as of ►►l and ►►2, we have to show how the provincial banker is likely to be affected by trie suppression of his ►►5 and ►►10 notes. We have shown in ►► 73, that while these notes are issued at the rate of five per cent, per annum, the issuer is obliged to provide two protecting capitals to a certain extent to meet them, which, with the stamp, probably amounts to little less than three per. cent, on his whole circulation ; so that the circulation of the national notes at the rate of five per cent, per annum, which will cost him only three per cent., will afford him an equal if not greater advantage

than that derived from the issue of his own notes. There is, however, another species of circulating medium, and a practice in provincial banking which we have not yet described ; in the development of which we shall suggest an alteration that will more than compensate the provincial banker for the suppression of his re- issuable notes.

101. A prominent feature in the practice of the provincial banker is taking in deposits from the traders of his town and district; if it is a manufacturing district, the cash or money depo- sits which the banker receives from the shop- keeper and trader, suffice to supply the manu- facturer with the necessary funds or means for paying his wages, &c., while the deposits of the shopkeeper or trader are liquidated by the banker drawing in their favour on his house of agency in the metropolis, in bills at forty-five days'- or two months' date, in such amounts as the de- mands of the shopkeepers require for their pur- chases in the metropolis or elsewhere.- These bills, being drawn upon, and accepted by, the metropolitan banker, require, like the provincial bankers' promissory notes on demand, a protect- ing capital in the hands of the metropolitan agent. Now, if in future these bills are drawn payable at, instead of upon, and to be accepted by, the metropolitan agent, no protecting capital will be requisite until within a day or two of their becoming due. By such a change of prac- tice as this, the provincial banker will be enabled to extend his accommodation in his district as effectually, and more advantageously to himself, than by the circulation of his own notes, which are always liable to revert back upon him with- out any previous notice, while the drafts, as here proposed, will give him a definite time for pro- viding for them.

102. We have so far described al: the various modes of banking, as practised in the United Kingdom, as well as the nature and amount of the circulating medium, and shown the extent to which banking transactions have been carried1 on, as far as the internal transactions of the kingdom are concerned; its external transac- tions, however, independent of its exports and imports, tend greatly to augment the aggregate of banking operations, and, in some degree, to augment the amount and vary the character of the circulating medium. During the war from 1793 to 1815, bills, to the amount of from ––5,000,000 to ––25,000,000 annually, were drawn, in different parts of the world on account of the British government, for subsidies and supplies to the fleets and troops of England every where distributed; these bills were generally drawn payable at thirty or sixty days' after sight, and were remitted in payment of British products exported ; and, when accepted by the depart- ment of government to which they were ad- dressed, entered more or less into the circulating medium of thd country.

103. Since the termination of the war, the transfer of capital from British to Foreign secu- rity has given rise to a drawing- of bills on Eng- land to the amount of ––5,000,000 to 7,000,000 annually ; British and Irish absentees, and tra- vellers in different parts of Europe, give rise

to nearly a corresponding amount of bills ; and, in addition to these and such bills as are legiti- mately drawn on account of foreign products imported, mercantile houses of established repu- tation give rise to other bills to the amount of several millions annually, based merely on the credit of the respective drawers. In addition to the sixty banking establishments of the metro- polis, as described in –– 79, there are about twenty other establishments, through whom most of the bills here described pass, and whose transactions partake as much of banking as they do of a mercantile character. They draw bills for any amount on any part of the world, and give money for those drawn by others ; and ac- commodate, in that way, the commercial transac- tions of the world at large, as the bankers of Manchester and Liverpool (see –– 81) do the transactions of their respective districts; these fo- reign transactions are designated exchange ope- rations.

104. Having now explained all the modes of banking and exchange of the United Kingdom, in regard to its external transactions as well as its internal, we will now proceed to show the nature and extent of banking in France. By the law of 24 Germinal, year xi. (14th April, 1803), the bank

of France was established with a capital of 45,000,000 francs, afterwards dou- bled, with an exclusive privilege of issuing of notes for 40 years. The operations of this es- tablishment consist, 1st, of discounting bills of exchange, not exceeding three months' date, and with the signatures of three parties, unde- niably (notoirc/nent) solvent, or with two unde- niably solvent signatures, if guaranteed by a deposit of any public stoek or other readily convertible security.

'2nd. To advance money on bullion and fo- reign coins, not less than 10,000 francs in amount, at the prevailing rate of interest for 45 days.

old. To afford security of deposit for bullion, coin, diamonds, and deeds, for a charge of ode-eighth per cent, for six months.

4th. To open accounts, current or drawing accounts, fW public establishments and private persons, demanded under proper regulations.

."nil. To furnish all persons with recepisses for all amounts payable at sight. These cor- re'-por.d with the post bills of the bank of I'-ngiand.

This establishment from its commencement IMS maintained a high and deserved reputation. Its capital is divided into 90,000 shares (actions) of 1000 francs each, 67,900 of which are in cir- culation, the emolument of the establishment arises chief'./ from the discount of commercial bills, which amounts to about 3,000,000 francs per annum ; the amount discounted averaging about .r>CO,000,000 francs per annum. The interest on treasury bonds does not exceed 250,000 francs per annum, and the emolu- ments derived from interest on bullion and coins, and commission on deposits, does not ××× xceed 150,000 francs per annum ; the remaining portion of the income consists of about 2,300,000 francs of rcnti-a. The charges <>f the establish- ment for clerks' salaries, vS.c., amount to about "Ur-,000 iia.no per aniium.

105. Although this is the only bank of paper circulation in all France, the amount does not exceed 200 to 250 millions of francs (××8 to 10,000,000) in notes of 1000 francs and 500 francs, against which the bank holds a reserve of specie of from 180 to 200 millions of francs ; hence it would appear that the notes are circu- lated more for the convenience of the public than with a view to profit. This establishment is under the direction of a governor and two deputy governors appointed by the king ××× the first must possess 150, and the latter 50 shares each ; a general council of fifteen members; three censeurs ; a council of accounts, consisting of twelve members ; nine chiefs of department, and six cashiers ; under whom are employed about 200 clerks, porters, &c.- A clear and circumstan- tial account and report of the proceedings anu state of the

establishment is published half- yearly.

106. The Almanack du Commerce de Paris enumerates, under the head of banqviers, about 160 establishments in that city; and, to a certain extent, these establishments take in deposits and discount bills in a way not dissimilar to the bankers of London, while their general business is essentially different. In the first place, with the exception of the 200 to 25C million francs of notes of the bank of France, the circulating medium of France is composed entirely of silver: since 1816, she has raised upwards of 3,500,000,000 of francs on annuities, (rentes,) and coined upwards of 200,000,000 francs of circulating medium. These operations have given rise to an active correspondence and exchange with the capitalists of all Europe, and have been participated in, more or less, by all of the 160 establishments adverted to above ; but, on the whole, the transactions of the greater part of them partake more of the character of mercantile agency than of bankers. The cities of Bourdeaux, Lyons, Lisle, &c. have each several similar establishments de- nominated bankers, who facilitate payments in Paris and other distant parts of France, and different parts of Europe ; but France has no establishment for economising and rendering active and profitable the deposits of the public ; this is a principle which she has yet to learn and reduce to practice.

107. All the capitals and several other of the principal cities of Europe have now their bank- ing establishments. Next to the bank of France, the Imperial Commercial Bank of' Russia holds the highest place. At the close of the war in 1817, Russia had a paper circulation amounting to upwards of 830 millions of roubles, about ––40,000,000. Since 1817 a considerable por- tion of the paper roubles have been converted into annuity stock, and loans have been raised in foreign countries to enable a further part to be exchanged for specie; and, in 1821, the paper roubles were reduced to 639 millions. The paper rouble, however, in notes some as low as one rouble, forms the bulk of the cir- culating medium of Russia; and with such a circulation the Imperial Commercial bank was es- tablished in 1818, with a capital of 17,295,345 roubles ; and the following report of the finance

minister, Count Gourieff, in May, 1821, will best show its progress up to that time ; since when it has been gradually advancing in acti- Tity and usefulness, merely as a bank of deposit, discount, and agency; the government being the only issuer of the circulating medium.

108. " The increasing transactions of the Im- perial commercial bank, which afford such great facilities to merchants, are not of less advantage to the other classes of society. The considerable sums which it throws into circulation cannot fail in moderating the general rate of interest. In order to be of still greater service to com- merce and industry, in conformity with the in- tentions of the law of the 7th May, 1817, the bank, besides the one it had opened at Moscow, has established new ones at Archangel, Odessa, and at Nigninovgorod, during the time that the annual fair is held in that city ; it has also now a branch bank at Riga, and will establish one in future in all the principal cities of the empire. Pursuing all the same objects, and strictly conforming to the same principles, they have, in a very short space of time, given great ex- tension to the circulations of trade, and afforded them considerable facilities. The account rendered of the operations of the bank in 1820 will convince you, gentlemen, that, if on the one hand the resources of this establishment have been augmented with large additional capitals, deposited in its coffers by private per- sons, merchants on the other hand, sensible of the advantages it offered them, have entrusted it with a large proportion of their business, and have in a manner turned over to the bank and its branch establishments the whole of their financial circulations. With what re- mained over of the preceding year, the bank and its various provincial branches have, in the course of the year 1820, received and transferred more than 68 millions ; 33 millions of which has been transmitted from one city to the other by means of drafts upon each other. The deposits upon interest confided to the bank here, and its office at Odessa, have amounted to 86 millions of paper roubles, and three millions metallic ditto. Deducting what has been drawn out, there remained on the 1st of January, 1821, 58,156,935 roubles, 69 copecks in bank notes, and 555,822 ××× 55 ××× specie.

" At the commencement of the year 1820, these deposits only amounted to 33,304,000 roubles in notes, and 1,933 roubles in specie. This augmentation proves that the capital and credit of the bank are increasing ; by which it will acquire additional means of extending its dis- counts, by employing to that effect a part of the sums confided to it at interest. With the above amounts added to what remained over of 1819, the bank discounted in 1820 effects to the amount of 182 millions ; and what proves the circumspection of the bank in the choice of these effects, is, that only 69,459 roubles 83 copecks have been protested ; for the payment of which, actions at law have been instituted. The hank only advanced 5,200,000 roubles upon merchandize, and, deducting what it has received back, there did not remain due more

than 2,317,687 roubles ; the re-payments have all been made with punctuality. The dis- counts have greatly exceeded the advances upon merchandize, which evinces the progress indi- vidual credit has

experienced. The fund, or capital of the bank, amounted, at the beginning of 1820, to 20,910,173 roubles, 14 copecks : it accumulated in the course of the year to 24,889,950 roubles, 1 1 copecks. The nett profits of the bank, over and above the interest paid and remaining due upon the deposits confided to it, after deducting the charges of its establish- ment, amount to 1,946,825 roubles, 45 copecks, being about 7 per cent, on its capital. Alto- gether the bank and its offices have transacted business during the last year, 1820, for

955,561,231 paper roubles, and 12,052,842 metallic ditto."

109. The Bank of Issue was established in St. Petersburgh, in 1768, when 40,000,000 of roubles in paper were first put in circulation, afterwards increased to 100,000,000 ; it was during the war from 1802-3 to 1810 that the issue became so extended. In February of the latter year, when the amount in circulation ex- ceeded, as before stated, 830,000,000 of roubles, an Ukase was issued, declaring all the property of the state a guarantee for the validity of all the notes then in circulation, and that no further in- crease should take place. After the termination of the war, in 1815, the Bank of Issue esta- blished in 1768 was converted into an Assign- ment Bank for the exchange of new notes for old, and between the 1st of Jan. 1817, and the 1st oc Jan. 1821, in addition to 191,109,420 roubles withdrawn from circulation, 632,603,1 15 roubles in new notes had been issued for the same amount of old issued previous to 1817; in this amount 6,857,155 roubles of forged notes were included as a loss to the state, against which 12,287,465 roubles of legitimate notes are as- sumed as gained by the state, old notes to thai amount never having been presented for ex- change. In addition to the assignment and com- mercial banks, the capital of Russia has another establishment denominated a Loan bank, which takes in deposits from one class of individuals, and lends out on security to public bodies or individuals engaged in works of public utility. This establishment bears some analogy to the exchequer bill loan office of the British1 government, the difference being, that in Russia the loans are made out of deposits, and in England the government issues bills which are converted into money on the Stock Exchange.

110. Calcutta, and the other principal cities of the Peninsula of India, Rio-Janeiro, Boe- nos Ayres, New South Wales, the Cape of Good Hope, and Canada, have now all their banks, founded chiefly on the principles of the provincial banks of England, and therefore requiring no especial elucidation. It is in the United States of North America where, next to Great Britain, banking has made the most rapid progress, and produced the most extraordinary results. The capital of all the banks in the Union, in 1790, did not exceed 2,000,000 dollars. In 1791 a national bank was chartered for twenty years, with a capital of 10,000,000 of

dollars; and, previous to the expiration of its charter in 1810, eighty-eight other banks had been established in different parts of the Union, with a capital of 42,610,000 dollars, in addition to the capital of the national bank. The disso- lution of the Bank of the United States in 1810 gave rise to no less than 120 new establishments during the four years 181 1-1 4. In August and Sep- tember, 1814, all those below Connecticut in the statement in ►► 1 13, suspended payment in specie, consequent on the effects of the war declared in June, 1812; and the following depreciation en- sued on the notes of the several banks of New York, Philadelphia, and Baltimore : ►►►

New

Philadel-

Balti-

York.

phia.

more.

1814 September . .

10

►►►

20

October .

10

►►►

15

November .

11

◆◆◆

10

December .

11

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14

1815 Janunry . . .

15

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20

February

2

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March . ...

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April . . .

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May . . .

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14

June

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16

July ....

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11

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August .

12J

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19

September .

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20

October . . .

16

*****

211

November .

12J

16

15

December .

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14

18

1 81 0 January .

* *

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15

I’ebruary

9

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13

March “...

12J

12j

18

Arril . . .

10

144

23

May ....

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14

20

June

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17

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July ....

6

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August . . .

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12

September .

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October . . .

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November .

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7

9

December .

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I'll? .In unary .

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3

February

”

4”

24

The derangement in social affairs inse- : from such a variation in the circulating posal of” the secretary of

181:., for

a new

, as the report avowed, ◆◆◆storing specie payments The charter was ned by Congress in April, 1810, and sed for bu-iiiess in Jan. 1817, with a I of 3,'>,U>0,000 of dollarsˆ and by Jan. the number of other bunking cstablish- liad increased to 307,

The following statement shows the appropria- tion of the shares of the Bank of the United States in Jan. 1832; the amount of notes in cir- culation at each of its branches in Sept. 1829; and amount of specie on hand at each branch in Jan. 1832.

Notes in

Number of

Circula-

Specie on

tion, in

iand,.lan.

Branches.

States.

Share-

Share,, of

Sep.18.SO.

1, 1839.

holder!

liiii >!□□. □□a.

Dollars.

Dollars.

Chief Office I'ittsburg

Philadelphia Pennsylvania

^872

51,028 j

1,3< >7,180

554,102

2,811,641 31,810

Portland

Maine

14

4Q8

79,280

70,438

Portsmouth

N.Hampshire

24

511

*101*85*

50,111

Boston

Massachusetts

3U

11,175

271.180

328.378

Providence

Rhode Island

36

1,218

113,920

102,028

Hartford

Connecticut

60

1.5.SB

171,532

28.C9J

New York

City

3731

834,733

664,fi!17

Utica .

New York

**60f*

30,881

t>7 .;.>!

Buffaloe

do.

J^j

258,130

105,?34

Hnrlington

Vermont

2

27

96,596

7?,4CS

Baltimore

Maryland

624

34,235

528,(>38

228,000

Washington

Dist. of Col.

01

2,725

647,6(□□2

54,611

Richmond N orfolk

□□ Virginia

368

*11,617 *

469,440 532,400

197,218 112,169

Fayetville

N. Carol:na

36

2,391

713.700

18,944

Charleston

S. Carolina

730

40,242

885,840

271,4',8

Savannah

Georgia

48

1,981

522,605

37

Mobile

Alabama

940,825

153,67s

N. Orleans

Louisiana

17

119

2,623,320

510,340

Natchez

Mississippi

57,82fi

St. Louis

Missouri

228,700

136,897

Nashville

Tennessee

A

258

1,285,275

167,866

Louisville Lexington

v Kentucky

22

.

66C.375

908,625

217,431 91,513

Cincinnati

Ohio

14

556

647,240

111,028

N ew Jersey

75

2,787 ,

No branches es-

Delaware

42

1,531 /

tablished in these

Indiana

2

SO >

States , those ai

Illinois

S

IBM

Utica and Natchez

(Arkansas

1

42 J

appear to have been

Held by Foreigners, chiefly

established since

English

470

84,0r.5

1829

By the U. S. Government

70,000

lu Transfer

115

8,373

N

Totals

4072

350,000

15347657

7,038,823

1 12. The statement A, at page 474, shows the situation of this bank in each of the twelve years 1819-30, according to which it appears that, at the close of the latter year, its assets exceeded its liabilities by 2,766,129 dollars; at the same time, its specie amounted to only 7,175,274, while the amount due to foreign shareholders was 8,405,500 dollars ; and while, in the event of the dissolution of the bank, 28,000,000 dol- lars in specie would be due to shareholders, in- dependent of 7,000,000 to the United States Government, the specie in all the banks of the Union (the bank of the United States included), was only 22,114,967 dollars; yet, under such circumstances, the president of the United States in 1832 refused to ratify an act of Congress for the extension or renewal of its charter.*

113. The following statement shows the number of banks in operation in each state of the union in June 1830, and the aggregate amount of capital in each state, and also of the number of banks which failed between the 1st of Jan. 1811, and the 1st of July 1830, with the amount for which failed in each state.

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Banks in Operation in the United

Banks which

States of North America, on the

failed between

1st. of January, 1830.

the 1st Jan. 18] 1 and July 1, 1830.

No.

Amount trf

STATES.

of

Capital,

BXs.

in Dollars.

Bks.

Capitals.

1 Massachusetts

66

20,420,000

6

850,000

2 Maine

18

2,050,000

8

1,150,000

3 New Hainps.

18

1,791,670

2

129,600

4 Vermont .

10

432,625

5 Rhode Island

47

6,118,397

1

200,000

6 Connecticut

13

4,485,177

2

600,000

7 New York .

37

20,083353

10

3,378,676

8 New Jersey 9 Pennsylvania

18 33

2,017,009 14,609,963

7 16

1,142,400 1,811,558

10 Delaware .

4

830,000

1

45,000

11 Do. . .

2

no return.

.

12 Maryland

13

6,250,495

9

1,821,162

13 Dist. of Col.

9

3,875,794

4

1,657,460

14 Virginia .

4

5,571,100

10

421,415

15 N.Carolina

3

3,195,000

2

16 S. Carolina

5

4,631,000

I

20.000

17 Georgia .

9

4,203,029

1

480,000

18 Louisiana .

4

5,665,980

2

924,000

19 Alabama .

2

643,503

3

337,112

‘20 Mississippi

1

950,600

.

21 Tennessee

1

737,817

4

2.229,782

22 Ohio. . .

11

1,454,386

18

1,911,179

23 Michigan .

1

10,000

1

10,000

24 Florida .

1

75,000

-

25 Kentucky .

18

4,307,431

26 Indiana .

2

257,624

27 Illinois .

2

162,910

28 Missouri .

2

400,000

330

110,101,898

129

24,212,339

Uanscertained, principally) ###/-

*in Kentucky. > *

114. Statement B, at page 474, shows the progress of banking institutions in the United States of North America since rtttl, and the situation of all the banks of the Union in 1830, in regard to their capital, notes in circulation, specie, and deposits. The states are there ex- hibited in five*

districts, for the purpose of show- ing the inequality of specie in different parts of the Union. In the western states 2,686,396 dollars in specie are held to sustain a circulation of 4,684,860 dollars in notes ; while in the state of New York, and the adjoining states of Con- necticut on the north, and New Jersey on the south, the centre of all the activities of the Union, the circulation of 12,737,539 dollars in notes is sustained by only 2,841,746 dollars in specie. This statement is further interesting in showing the very limited amount of specie in the aggregate, with which all the exchanges between a population of 13,000,000 to 14,000,000 of people, maintaining an active and extensive intercourse with all the nations of the world, are facilitated and effected ; 22,000,000 dollars in specie, less than ––5,000,000, sustains the opera- tions of 350 banks of circulation, including the branches of the national bank, diffusing life and energy over 100,000,000 square miles of terri- tory ; we say sustains the operations of the banks, inasmuch as it forms no part of the cir- culation, but is held as a protection to the 61, 000,000 of notes which, with about 10,000,000 of dollars in small coins, forms the exclusive

circulating medium of that extensive and rapidly improving territory.

115. While in the act of writing the preceding sections [on the 31st May, 1833] the chancellor of the exchequer of Great Britain and Ireland was developing to parliament, in committee of the whole house, propositions for the extension of the charter of the Bank of England for a period of twenty-one years, subject " to the con- tingency, that, if at the end of ten years the then government should think proper to alter the system, it should have the power to give a year's notice to the Bank ; and, in that case, if the government so desired, that the charter would expire at the end of the eleventh year :" subject to this condition the chancellor of the exchequer proposed " to continue the monopoly to the Bank of England as far as regarded the metro- polis––– that was, that no bank with more than six partners should be allowed to issue notes in London, or within sixty-five miles of it." It was next proposed that the Bank should make a weekly return to the treasury of the amount of bills and notes in circulation, and also of de- posits, and that the average of such issues and deposits should be published quarterly. The chancellor of the exchequer then said, " that the convertibility of bank notes to bullion was es- sential to a sound system of banking .' ! ! but having a bank secured by a ready check, such as that which he had stated, he did not think there would be any danger in securing banks against sudden internal drains of gold. He proposed, therefore, to make Bank of England paper a legal tender in every place except at the Bank of England itself, or at its branch banks."

116. It was next proposed to diminish the capital of the Bank from its present amount of ––14,60ˆ,000 to about ––11,000,000, and that the

Bank should give the fixed sum of ►►120,000 per annum nut of the amount now allowed by law for the management of the public banking account and transfers of the national annuity account. So far in regard to the Bank of England ; when it was next proposed that every banking company of more than six partners should be a joint stock company, such company to be established by charter; and if using the paper of the Bank of England, may be esta- blished within the limits of the Bank of England's monopoly, viz. sixty-five miles of the metropolis : the conditions on which charters are granted to be, that when issuing their own notes half the subscribed capital shall be paid up and deposited either in the government funds, or some equally good securities, and the partners to be liable to an unlimited responsibility ; but if using the paper of the Bank of England, then only one quarter of the subscribed capital to be paid up, and the partners only liable to the amount of their shares. The government to have the power of deciding on the propriety of granting the charters ; and with the view of enabling the government to know at all times the exact amount of country bankers' notes in circu- lation, a duty of 7s. to be charged on every ►►100 of notes which they issue. A statement of the accounts of each individual bank should be

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sent to the government, as a strictly confidential paper, not to be published separately, but to enable a general result of the banking operations of the kingdom to be given to the public pe- riodically,

117. The following is a recapitulation of the propositions in the official form, verbatim, in which they were submitted to the committee.

1. That it is expedient to continue, for a limited period, to the Bank of England, certain of the privileges now vested by law in that corporation, subject to such con- ditions as may be provided by any act to be passed for the purpose.

2. That, provided the Bank of England shall be bound by law to discharge, in the legal coin of the realm, all such of its debts and liabilities as shall be demanded at the Bank of England, or at any of the branch banks thereof, it is expedient that the promissory notes of the said corporation be made a legal tender for all sums of ►►5 and upwards.

3. That provision be made by law during the present session of parliament, for the re- payment to the Bank of England of one- fourth part of the amount of the debt now due by the public to that corporation.

4. That the rate of allowance and remunera- tion now secured by law to the Bank of England for the management of the public _ debt, and services rendered to the public, be continued to that corporation for the limited period to be fixed as aforesaid, sub- ject to an annual reduction of ►►120,000.

5. That the laws restricting the interest of money to ►►5 per cent, shall be repealed, so far as they relate to bills of exchange not having more than three months to run be- fore they become due.

6. That it is expedient to give facilities, by the grant of royal charters, for the esta- blishment of joint stock banks, at a certain distance from London ; but that every such royal charter shall contain certain stipu- lations to be enforced with respect to all such chartered banks.

7. That all banks issuing promissory notes payable on demand, shall enter into a com- position in lieu of .stamp duty, at the rate of 7s. for every ►►'100 on the notes which such banks shall have in circulation.

8. That it is expedient to make provision with regard to joint stoek banking companies.

11". It will be seen by the three preceding sections, 11.5-117, that the object aimed at by the propositions submitted by the chancellor of (.►►►XL-IK ipier to parliament, is, to establish an nniloni: order ot paper currency, based on gold at .{.'.'!. 17s. lO.'.d. per ounce; and to vest the con- trol "f the circulation and the profit thereof in the hands of the Hank for a limited term of years, thereby continuing a monopoly 'as we shall show hereafter) of ilie most objectionable kind, in op- poet adverted is contained in

the fifth paragraph of the official propositions above ; holding this in view, we will now pro- ceed to show the objections to the scheme in general as well as in detail on one side, and the advantages which it promises on the other. Making the notes o legal tender convertible into gold only at the Bank of England itself, or its branches, is a part of the scheme which tends to an enlargement of the circulation, and, as such, promises to facilitate the operations of industry ; and the scheme is so devised as to enable the Bank to withdraw all its branches for the pur- pose of concentrating the convertibility into gold in the metropolis alone ; it doubtless being the intention of the Bank of England to withdraw its branches wherever joint stock banks are es- tablished to circulate its paper. As far as making the notes a legal tender, the scheme is good : nor is there any objection to be offered to the general principle on which joint stock bank? are proposed to be established ; and the return of their circulation, liabilities, and assets, is

pro- per and commendable.

119. But the scheme is exceedingly objection- able on the three following grounds, viz.

1st. As being based on gold at a low fixed price, instead of on the ––800,000,000 capital of public annuities, as proposed in section 96.

2nd. For the fluctuation and variation in the rate of interest which it so strongly tends to give rise to.

3rd. For the arbitrariness, and tendency to caprice, which it establishes, and threatens to cherish.

It is shown to demonstration in Mr. Marshall's digest of the accounts and papers presented to parliament since 1799, that the cause of the depre- ciated value in all our manufactured productions, and consequent diminution of profits and wages, 3ias arisen from the large transfer of capital from British to foreign securities which has taken place since 1816. It is shown that, while since that date the British government have been in- strumental in causing about ––70,000,000 to be applied to the purchase of 3 per cent, stock, at rates varying from 78 to 94, equal to upwards of twenty ounces of gold, for which they received less than eleven ounces in 1813-15, a cor- responding amount of capital has been vested in the public stocks of the different nations of Europe, at an average rate of interest of about 6 per cent. Thus, while about ––2,800,000 of annual interest has been cancelled in England, and the country at large relieved from an annual taxation to a corresponding amount, about ––4,500,000 of annual interest has been created abroad ; and it is in consequence of the way in which these transfers of capital and payment of interest become involved with the commercial transactions of Europe, that the whole of the in- terest on the capital so transferred, be it more, or be it less, falls wholly and exclusively on the manufacturing and productive classes of Eng- land, inasmuch as the interest is paid out of those means which otherwise would remain to augment the means of payment for the products of British industry exported.

120. It is the facility which the low price of gold affords for the transfer of capital, as de

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*473**

scribed in the preceding section, that renders it so objectionable as the basis of the circulating medium. Had the circulating medium at the termination

of the war been based on the ––600,000,000 of stock which the war had created, or indeed on any other internal means, and gold like any other commodity been left to find its own level in price, a converse effect would have been produced to that which has, so fatally for the productive interest of England, been produced : the transfer of capital might have taken place, but it would have confined the demand more to productions of industry at re- munerating prices, inasmuch as the predilection for bullion would have enhanced its price pro- portionate to the demand for it, and thereby have operated beneficially to the importer of bullion on one side, as well as to the exporter of the products of British industry to Europe on the other. In the first instance bullion is ob- tained in exchange for the products of British industry, being the only commodity which a great portion of the western world yet has to give in exchange : and on this commodity the British government fixes a maximum. How palpably ridiculous, and how palpably unjust to the commercial operator to that part of the world ! He brings his bullion to a focus of operations which would probably afford him 30 to 50 per cent, more than a perverse law allows him to obtain ; and this, not to benefit the party imposing or retaining the force of that law, but to facilitate another course of operations, which portend the ruin of all the productive interests of the empire.

121. It is not, however, the commercial dis- advantage which a low fixed price of gold in- flicts on the activities of the community, that constitutes exclusively its objection as the basis of the circulating medium. The objections are numerous ; to allow the article to be demanded for one, when one and a half, or any other price would be readily given, is an absurdity too pal- pable to need further observation. The greatest objection, however, lies against the constant fluctuation to which it subjects the circulation at large, and constant uncertainty to which it exposes all the rewards of industry. A consider- able time, it is true, may pass away without any very sensible derangement being manifest ; but so long as the disproportionate rate of interest in England and the other nations of the world con- tinues, so long will the tendency to the transfer of capital continue, and consequently so long will continue sudden and unexpected demands for bullion ; and, should there be another such a harvest season as that of 1816, (and we are, from year to year, liable to a succession of such har- vests, while an enlarged circulating medium would be required to sustain the enhancement of price sconsequent thereon), the increased demand for gold which would inevitably ensue would lead to precisely the opposite effect. We might

pursue the subject to a much greater length, but we trust enough has been said to prove the folly of such a basis as gold, for the circulating me- dium of a community so constituted as that of England.

122. The space assigned for this article pre- cludes us from entering into any fuither elucida- tion of this interesting and important subject ; except a few observations on the subject of SAVINGS BANKS, institutions for the deposits of small sums. ††† Schemes for this purpose were first suggested at the close of the last century ; but it was subsequent to the termination of the war in 1815 when they were made a government mea- sure, by a fixed rate of interest being guaranteed to the depositors. Between January 1815, and November 1830, 402 banks had been esta- blished in England and Wales ; at the latter date the number of depositors amounted to 378,316, exclusive of 4278 Friendly Societies, and 1826 charitable institutions, and the total sum deposited ††13,420,976; at the same date there were 73 banks in Ireland, the total number of depositors 34,638, and the sum deposited ††945,991. The deposits in these institutions have been considered by some as evincing grow- ing prudential habits, and consequently in- creasing comfort and independence of the working classes ; but this is fallacious : during the earlier years of these institutions, the rate of interest guaranteed to the depositors consider- ably exceeded the interest yielded by the public Annuity Stocks ; the more crafty, therefore, of the monied fraternity, sold 3 per cent, stock and vested it in the Savings Banks ; and to obviate the ob- stacle which the limitation of deposits in Savings Banks prescribed, being not more than ††20 at any one time nor exceed ing ††200 per ann., the sums transferred from the 3 per cents., were deposited in the savings banks in the names of the wife, chil- dren, and relations of the parties so transferring, and by this artifice, instead of ††200, from ††1000 to ††2000 has been annually transferred. The rate of interest on the deposits in savings banks having been lowered, the inducement to transfer from the 3 per cents, is diminished, and the transactions of the savings banks are now more confined than heretofore to the class of per- sons for whom they were intended. The prin- ciple on which the Saving Banks are founded, and their economy of management, are unex- ceptionable enough, but they have, nevertheless, up to this time, had a most baneful effect. The deposits are vested in the 3 and 3ˆ per cents, by the commissioners of the sinking fund, as the trustees of the depositors; the total sum de- posited has therefore aided the transfer of a cor- responding amount of capital from British to foreign security. For a more complete elu- cidation of the working and effect of these transactions, see the article SAVINGS, in the further part of this work.

*474**

BANK.

Statement A, showing the situation or condition of the Bank of the United States, in each of (lie twelve years 1819-30. The amount of the total liabilities in column No. 7 is made up of the 35,000,000 dollars, due

equally in each year to the shareholders, in addition to the amounts due to depositors, and holders of notes, as exhibited in cols. 8 and 9.

ASSETS.

LIABILITIES.

Bills dis-

Domestic

Funded

Real

Total

Total

Proportion

Notes in

counted.

Bills.

Debt.

Estate.

*Specie**

Dollars.

Dollars.

of Deposits.

circulation.

1819

32,211,674

336,760

7,236,153

2,743,834

45,791,51142,528,421

5,734,682

5,056,829

182028,808,267

1,526,600

8,258,701

5,214,773

45,991,960

43,808,341

6,581,628

4,410,332

1821

27,099,050

1,598,473

11,859,296

245,846

6,469,224

47,599,29347,271,689

6,990,073

5,609,220

1822

28,574,893

2,394,688

13,116,004

579,152

3,711,145

46,927,90548,376,082

6,365,570

5,562,335

1823

30,584,919

2,588,245

10,911,700

736,370

4,899,686

50,073.057

49,720,920

10,401,786

4,671,271

1824

29,478,255

2,563,672

13,373,095

1,393,193

5,909,351

53,853,604

52,717,566

12,918,108

5,935,496

1825

29,327,219

3,270,699

19,807,665

1,566,728

4,686,557

58,722,376

58,658,868

12,885,829

8,836,646

1826

29,592,103

3,592,145

17,885,210

1,745,566

5,174,643

57,814,051

57,989,667

12,578,523

10,235,528

1827

27,948.592

4,563,297

17,724,192

2,118,560

6,327,758

59,535,518

58,690,399

13,727,274

10,808,244

1828

30,820.944

6,018,784

17,127,077

2,298,352

6,205,107

,61,868,559

62,470,264

14,454,169 12,414,390

1829

32,703,280

8,417,021

13,925,701

2,474,750

6,411,998

65,183,516

63,942,759

15,172,164

15,011,352

1830

32,541,124

7,476,321

11,717,071

3,876,404

7,175,274

66,322,274

63,556,145

14,788,809

13,048,984

1

o

3

4

5

6 1 7

8

9

% The total liability in the last year includes 1,161,001 dollars under the head of foreign account, and 2,375,079 due from banks, and notes of ditto.*

Statement B, showing the progress of Banking Institutions in the United States of North America, from 1811 to 1831, and the situation of all the

Banks of the Union in 1830 in regard to their

capital, notes in circulation, specie, and deposits.

Capital.

Notes.

Deposits.

Specie.

88 banks, January 1, 1811 . . United States Bank

42,610,601 10,000,000

22,700,000 5,400,000

!

‘ 9,600,000 5,800 000

Total ###208 bunk in 1815*

52,610,601 82,259,590

28,100,000 45,100,000

15,400,000 17,000,000

###?-!(} do. 1816

89,822,422

68,000,000

10,000,000

307 do 1820 . . .

102,110,611

40,641,574

31 244,959

16,672 263

United States do

35,000,000

4,221,770

4,705,511

3,147,977

Total in 1820 . . . Do., as below, in 1830

The following shows the state of the banks in each of ri\e divisions of the United States territory in 1829. The numbers refer to the list in section 113: New England States Nos. 1 ††† 5 Connec. New York and Jersey 6††††8 Pennsylvania, Delaware, Mary- land and Columbia . 9 ††† 13 4 Southern States . . 14 ††† 17 7 Western Ditto . . . 18††††24

137,110,611 145,192,268

30,812,692 26,585,539

25,566,622 17,600.129 9,629,286

44,863,344 61,323,898

7,394,566 12,737,539

11,274,086 12,183,863 4,684,860

35,950,470 55,559,928

4,203,895 14,594,145

10,850,739 6,952,094 4,180,146

19,820,240 22,114,917

2,194,768 2,841,746

4,170,592 3,046,141 2,686,396

Total of 330 banks, 1830 United States bank '

1 10,184,268 35 000,000

48,274,194 13,048,984

40,781,119 14,778,809

14,939,643 7,175,274

Total Proportion 7 chief cities . . .*

145,1:92,268 53,211,605

61,323,898 17,144,422

. 55,559,928 ‘ 23,137,129

22,114,917 7,258,025

- *Salem, Boston, New York, Philadelphia, Baltimore, Charlestown, and New Orleans.*

I.

BAN

475″

STATEMENT showing the Weekly Circulation of Bank of England notes, in each of the seven years which follow, viz. 1792, being the year preceding the declaration of war in February, 1793 , 1797, being the year preceding their nonconvertibility into gold, at a fixed standard ; 1817, as the year of maximum of circulation, the increase from 1797 to 1817 having been progressive; 1822, as the minimum, on the return to convertibility into gold, at the previous standard of 1797; 1825-6, as years of great commercial activity; and 1832, as the year previous to this sheet going to press. The blank lines are drawn to show the periods when the National Debt, Dividends, or Annuities are payable. On the fifth of January and July they amount to about ––8,000,000 at each period, while an increased issue of about ––2,000,000 of notes is seen to suffice. The April and October payments are about ––5,500,000 each.

1792.

1797.

1817.

1822.

––

1825.

◆◆

1826.

1832.

◆◆

◆◆◆

Jan. 7

10,358,730

9,185,520

23,950,510

16,950,147

21,790.472

24,120,416

16,495,053

14

10,818,710

9,893,340

28,372,199

20,764,268

22,337,332

26,104,904

18,796,825

21

11,017,540

10,550,830

28,175,531

20,211,461

22,328,627

25,013,791

19,470,453

28

11,065,770

10,024,740

28,055,261

19,673,545

21,960,334

24,255,925

19,398,387

Feb. 4

11,335,940

9,667,460

27,703,811

19,211,845

21,931,937

23,673,737

19,157,008

11

11,428,920

9,431,550

27,386,121

19,034,229

21,307,879

23,450,151

18,796,570

18

11,539,060

9,137,950

27,518,561

18,679,243

21,234,674

24,466,510

18,451,810

25

11,148,500

8,640,250

27,326,221

18,348,009

21,060,145

24,955,050

18,143,070

Mar. 3

11,871,760

10,416,510

27,182,621

18,387,046

20,342,417

25,115,173

17,898,310

10

11,707,400

10,388,640

26,876,061

17,803,676

1 9,875,858

24,375,453

17,587,410

17

11,442,850

9,999,210

26,593,571

17,709,606

19,560,433

24,164,274

17,414,590

24

11,596,290

10,506,320

26,744,801

17,467,141

19,611,349

24,060,901

17,388,450

31

11,546,080

10,946,020

26,912,667

17,388,481

20,328,980

24,161, 1?!

17,605,720

April 7

11,649,150

11,559,910

26,400,271

17,149,301

20,687,517

24,947,796

17,655,170

14

11,932,330

12,618,510

29,071,621

19,025,399

21,060,103

25,562,055

18,905,450

21

12,387,930

12,127,770

28,936,241

18,583,121

20,717,044

25,569,374

18,965,130

28

12,415,530

13,055,800

28,666,041

18,105,998

20,536,633

24,482,967

18,875,430

May 5

12,415,580

13,599,060

28,373,961

17,798,295

20,500,259

23,654,000

18,988,430

12

12,068,510

12,217,700

28,040,701

17,461,161

20,046,091

22,976,215

18,634,610

19

11,896,180

11,969,250

27,927,361

16,984,938

19,723,489

22,293,814

17,863,660

26

11,585,560

10,892,870

27,964,981

1~,036,996

19,653,012

21,909,490

17,777,700

June 2

11,406,840

11,240,910

27,169,441

16,505,296

19,298,202

21,355,405

17,375,300

9

11,327,590

11,236,770

26,449,790

16,785,480

18,639,892

20,878,408

17,063,360

16

11,161,940

10,982,640

26,414,580

16,304,807

18,327,736

20,852,693

16,959,760

23

11,126,330

10,290,800

26,060,050

16,404,930

1 8,372,369

21,045,575

16,582,660

30

11,494,890

10,778,100

26,560,660

17,005,527

19,038,339

20,787,013

16,754,870

July 7

11,539,880

10,781,960

25,800,260

16,834,794

21,714,838

22,630,821

16,731,560

14

11,903,330

11,381,670

30,686,720

20,896,904

21,763,418

23,564,518

18,652,580

21

11,926,670

11,262,490

30,759,300 20,579,130

21,198,818

22,871,630

18,876,930

28

11,822,530

11,240,100

30,646,840

19.748,395

20,794,730

22,852,220

18,846,270

Aug. 4

11,737,120

11,111,330

30,920,360

19,287,790

20,157,200

22,653,454

18,753,820

11

11,566,180

11,466,560

30,374,260

18,833,458

19,738,770

21,983,284

18

11,350,130

10,955,220

30,112,650

18,503,576

19,589,056

21,660,961

25

11,005,660

10,568,210

-29,971,699

18,498,856

19,290,570

21,388,029

Sept. 1

11,306,240

11,439,180

29,543,710

17,464,796

1 9,028,070

21,421,297

8

10,975,810

11,031,770

28.938,560

17,149,134

18,517,202

21,132,437

15

10,787,650

10,716,230

28,712,160

17,540,955

18,252,171

20,653,131

20

10,999,840

10,655,850

28,527,061

16,796,585

18,009,781

20,264,364

28

10,852,080

10,654,330

28,559,511

16,798,699

18,506,562

20,408,194

Oct. 6

10,966,340

10,509,840

28,925,91 1

17,231,846

18,173,445

19,584,501

13

10,999,690

11,780,610

29,293,891

16,693,871

19,686,586

20,654,313

20

11,489,330

12,116,960

30,502,360

18,387,096

19,027,460

21,050,060

27

11,491,630

12,451,420

29,981,610

17,991,058

18,692,228

20,875,943

Nov. 3

11,474,030

11,983,330

29,658,950

17,753,077

18,497,423

20,834,838

10

11,416,970

11,677,550

29,544,611

17,456,991

18,031,872

20,527,490

17

11,117,130

11,313,880

29,446,071

17,382,866

17,594,301

20,416,250

24

10,894,620

11,215,330

29,050,230

17,218,660

17,464,890

19,906,857

Dec. 1

10,981,970

10,688,660

28,698,540

17,457,244

17,477,294

19,301,328

8

11,200,850

11,127,510

28,465,490

16,370,602

18,037,966

19,031,617

15

1 1 ,083,740

10,759.930

27,967,590

16,088,529

23,942,827

19,049,078

22

11,230,810

11,260,250

27,770,990

16,642,042

25,611,806

19,084,909

29

11,289,250

11,139,080

27,601,180

19,483,697

25,709,526

19,049,738

*470**

B A N K.

II.

STATEMENT showing the liabilities and assets of the Bank of England, at the annual settling day, on the 28th of February, in each of the fifty-five years, 1778 ††† 1832, as laid by the Directors of the Bank before the Parliamentary Committee on the Bank of England Charter, in the session of 1832; to which is here added a statement of the Income and Expenditure of the Government in,

Years.

On Ihe 5th of January, 1817, the Exchequer of Ireland was united with

that of Great Britain ; and,

Circulation.

Deposits. ⬛⬛

Total Liabilities.

⬛⬛

penditure of Ircl'and has' heen kept ; the Revenue, SIIH-C 1817, has averaged about 4,000,8001. per an- num, included, since 1816, in col. No. 1. Previous

1778

to 1817 colt. 1 and 2 exhibit the income and ex-

6 7,440,330

4,662,150

12,102,480

9

penditure of Great Britain only. In 1815 the Revenue of Ireland was 7,334,7861. ; and, since-thai

O 9,012,610 ⬛⬛⬛:

4,358,160

13,370,770

1780

Cir. taxes have heen repealed and reduced in the uited Kingdom equal to 34,000,0001. per annum.

t- 8,41 0,790 ~

4,723,890

13,134,680

1

►►: 7,092,450 f*

5,796,830

12,889,280

2

0 S 8,028,880 o

6,130,300

14,159,180

3 4

Income.

Expenditure.

Loans raised & Bills (out of col. No.lS}Fuode,i.

Sˆ 7,675,090ˆ ►► ˆ 6,202,760 g

4,465,000 3,903,920

12,140,090 10,106,680

5

►►

►►

f

“g “o 5,923,090 n

6,669,160

12,592,250

‘►►►’*

6

14,656,663

15,810,481

= ^ 7,581,960 bo

6,151,660

13,733,620

7

15,894,178

14,7)4,038

“S * 8,329,840 ^

5,902,080

14,231,920

8

16,201,547

15,665,569

5~v 9,561,120^

5,177,050

14,738,170

9

16,099,435

15,466,207

◆◆◆^| 9,807,210 g

5,537,370

15,344,580

1790

16,451,450

16,142,317

2^-10,040,540""-

6,223,270

16,263,810

1

17,806,097

17,173,062

ƒ 11, 439,200 “2

6,364,550

17,803,750

2

17,864,464

16,770,352

5,523,370

16,830,750

Loans.

c w a.

3

17,707.983

22,754,366

4,000,000

2-* 11,886,910^

5,346,450

17,235,360

4

17,899,294

29,305,477

12,007,451

^^ 10,744,020 =

7,891,810

18,635,830

f,

18,456,098

30,751,091

42,096,646

g 14,017,510 o

5,973,020

19,990,530

i;

18,548,628

40,701,533

42,756,196

- 10,729,52,0^

5,702,360

16,431,880

7

19,852,640

50,739,857

16,120,000

^ 9,674,780

4,891,530

14,566,310

j;

30,492,993

51,241,798

20,000,000

1,448,220

11,647,610

6,148,900

19,244,730

()

35,3 1 1,018

59, ‘29(3, 081

15,500,000

1,465,650

11,494,150

8,131,820

21,091,620

1 800

34,069,457

01,017,988

20,500,000

1,471,540

15,372,930

7,062,680

23,907,150

1

3.5,516,351

7:5,072,408

36,910,450

2,634,760

13,578,520

10,745,840

26,959,120

2

37,1 1 1,0-20

02,373,480

25,000,000

2,612,020

12,574,860

6,858,210

22,045,090

3r,,203’,937

54,‘J 12,890

1 2,000,000

2,968,960

12,350,970

8,050,240

23,370,170

1

15,515,152

07, (3 19, 475

1 5,005,290

4,531,270

12,546,560

8,676,830

25,754,660

5

50,555,190

70,056,796

24,521.409

4,860,160

13,011,010

12,083,620

29,954,790

(i

54.071,908

75,154,548

20,000,000

4,458,600

13,271,520

9,980,790

27,710,910

7

59,490,731

78,369,689

15,700,003

4,109,890

12,840,790

11,829,320

28,780,000

,'i

1)2,147,001

84,797,080

14,500,000

4,095,170

14,093,690

11, 96 1,960

30,150,820

()

03,879,882

88,792,551

22,532,100

4,301,500

14,241,360

9,982,950

28,525,810

IK 10

i>7,825,597

9 1,3(30,728

13,400,000

5,860,420

15,159,180

12,457,310

33,476,910

1 1

05,309,100

99.000,421

24,000,000

7,114,090

16,246,130

11,445,650

34,805,870

12

04,752,125 107,044,085

34,721,3251

7,457,030

15,951,290

11,595,200

35,003,520

ID

08,302,800

22,235,660

64,703,100 7,713,610

15,497,320

11,268,180

34,479,110

1 !

70,240,313

129,742,396

24,000,000

8,345,540

16,455,540

12,455,460

37,256,540

1.5

71,203,142

133,305,958

54,135,589

9,035,250

18,226,400

1 1,702,250

38,963,900

in

62,640,711

86,507,902

3,000,000

9,001,400

18,012,220

12,388,890

39,402,510 ,

17

57,505,097

58,887,527

8,136,270

19,261,630

10,825,610

38,22:\510

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‘>9,028,173

58,233,037

39,261,920

7,400,680

20,370,290

7,997,550

35,768,520

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58,r,77,!55

57,858,282

12,000,000

7,354,230

17,772,470

6,413,370

31,540,070

1K20

59,772,230

58,001.890

12,000,000

6,689,130

16,794,980

4,093,550

27,577,660

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00,679,000

58,194,263

6,437,560

17,447,360

5,622,890

29,507,810

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55,1319,041

1,374,850

17,290,500

4,689,940

23,355,290

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58.740,005

54,397,234

13,089,419

681,500

17,710,740

7,181.100

25,573,340

-1)0,l 15,8(1-1 55,;) 18,734

486,130

19,250,860

10,097,850

29,834,840

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54,980,128

416,730

20,337.030

10,168,780

30,922,540

ii

55,902,334

57.0 19,195

8,023,228

1,375,250

24,092,660

6,935,940

32,403,850

7 55.75ti, 401 50. “59,224

661,390

21,229,220

8,801,660

30,692,270

57,297,235 53,573,714

416,260

21,564,450

9,198,140

31,178,850

9

55.934,906

53,037,075

3,000,000

356,830

19,514,020

9,553,960

29,424,810

1830

54, <)32,287 51,432,877

320,490

19,730,240

10,763,150

30,813,880

i

51,012,009

51,125,723

306,870

19,293,270

11,213,530

30,813,670

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299,100

17,752,610

8,937,170

26,988,880

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III.

BAN K.

*477**

each year since 1784; and of Money raised by Loans and funding of Exchequer Bills, in each year since the commencement of the war in February, 1793; and also of the amount of Ex- chequer Bills outstanding at the end of each of the forty-seven years, 1785 ××× 1831 ; and of the value of gold coined within each of the seventy-eight years before mentioned.

Amount oi

SECURITIES.

Coin and

Total Assets.

Balance in favor of

Exchequer

*Amount o /***** i jf, ***** i*

ears

Public.

Private.

~~ 1,'Union.

the Bank.

Bills out- standing.

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1778

JL

7,898,292

3,322,228

2,010,690

13,231,210

1,128,730

350,438

9

8,862,242

2,073,668

3,711,150

14,647,060

1,276,290

1,696,117

1780

9,145,659

1,755,371

3,581,060

14,482,090

1,347,410

none.

1

8,640,073

2,546,007

3,279,940

14,466,080

1,576,800

876,795

2

10,346,055

3,448,015

2,157,860

15,951,930

1,792,750

698,074

3

10,016,349

2/779,431

1,321,190

14,116,970

1,976,880

227,083

4

7,789,291

3,829,929

655,840

12,275,060

2,168,380

822,126

5

7,198,564

4,973,926

2,740,820

14,913,310

2.321,060

9,481,423

2,488,106

6

6,836,459

3,516,781

5,979,090

16,332,330

2,598,710

9,358,387

1,107,382

7

7,642,587

3,716,463

5,626,690

16,985,740

2,753,820

9,524,177

2,849,057

8

7,833,857

4,030,653

5,743,440

17,607,950

2,869,780

10.953,474

3,664,174

9

8,249,582

2,711,108

7,228,730

18,189,420

2,844,840

12,101,504

1,530,711

1790

8,347,387

1,984,733

8,633,000

18,965,120

2,701,310

14,334,480

2,660,521

1

10,380,358

2,222,282

7,869,410

20,472,050

2,668,300

12,867,156

2,456,567

2

9,938,799

3,129,761

6,468,060

19,536,620

2,705,870

14,449,889

1,171,863

3

9,549,209

6,456,041

4,010,680

20,015,930

2,780,570

17,954,065

2,747,430

4

9,950,756

4,573,794

6,987,110

21,511,660

2,875,830

19,758,109

2,558,895

5

13,164,172

3,647,168

6,127,720

22,939,060

2,948,530

24,972,616

493,416

6

12,951,812

4,188,028

2,539,630

19,679,470

3,247,590

15,795,266

464,680

7

11,714,431

5,123,319

1,086,170

17,923,920

3,357,610

16,525,573

2,000,297

8

11,241,333

5,558,167

5,828,940

22,628,440

3,383,710

17,669,465

2,967,565

9

11,510,677

5,528,353

7,563,900

24,602,930

3,511,310

24,252,582

449,962

1800

13,975,663

7,448,387

6,144,250

27,568,300

3,661,150

31,898,878

189,937

1

15,958,011

10,466,719

4,640,120

31,064,850

4,105,730

25,185,241

450,242

2

14,199,094

7,760,726

4,152,950

26,112,770

4,067,680

18,436,295

437,019

3

9,417,887

14,497,013

3,776,750

27,691,650

4,321,480

23,107,615

596,445

4

14,684,686

12,314,284

3,372,140

30,371,110

4,616,450

29,516,406

718,397

5

16,889,501

11,771,889

5,883,800

34,545,190

4,590,400

31,005,210

54,668

6

14,813,599

11,777,471

5,987,190

32,578,260

4,867,350

31,175,942

405,106

7

3,452,871

13,955,589

6,142,840

33,551,300

4,771,360

36,005,348

none.

8

14,149,501

13,234,579

7,855,470

35,239,550

5,088,730

43,736,718

371,744

9

4,743,425

14,374,775

4,488,700

33,606,900

5,081,090

43,571,575

298,946

1810

4,322,634

21,055,946

3,501,410

38,879,990

5,403,080

42,363,510

310,936

11

7,201,800

19,920,550

3,350,940

40,473,290

5,667,420

47,221,658

312,263

12

22,127,253

15,899,037

2,983,190

41,009,480

6,005,960

51,947,084

none.

13

25,036,626

12,894,324

2,884,500

40,815,450

6,336,340

54,302,987

519,722

14

23,630,317

18,359,593″

2,204,430

44,194,340

6,937,800

64,776,381

none.

15

27,512,804

17,045,696

2,036,910

46,595,410

7,631,510

46,719,432

none.

16

9,425,780

23,975,530

4,640,880

48,042,190

8,639,680

51,006,687

none.

17

25,538,808

8,739,822

9,680,970

43,959,600

5,736,090

62,025,124

4,275,337

18

26,913,360

3,991,970

10,055,460

0,960,790

5,192,270

48,871,205

2,862,374

19

22,355,115

9,099,885

4,184,620

5,639,620

,099,550

41,929,879

3,574

1820

21,735,168

4,472,322

4,911,050

1,098,549

,520,880

3,700,988

949,516

1

6,010,990

4,785,280

11,869,900

2,666,170

,158,360

2,726,123

9,520,760

2

2,478,133

3,491,947

11,057,150

7,030,230

,674,940

6,645,240

5,356,787

3

3,658,829

4,660,901

10,384,230

8,703,960

,130,620

4,989,508

759,748

4

4,341,127

4,530,873

13,810,060

2,682,060

,847,220

8,084,514

4,065,075

5

9,447,588

5,503,742

8,779,100

3,730,430

,807,890

2,194,233

4,580,919

6

0,573,258

12,345,322

2,459,510

.5,378,090

,974,240

5,163,850

5,896,461

7

8.685,015

4,844,515

10,159,020

3,688,550

,996,280

8,153,050

2,512,637

8

9,818,777

3,762,493

10,347,290

3,928,560

,749,710

7,862,750

,277,784

9

9,736,665

5,648,085

6,835,020

2,219,770

,794,960

5,607,600

2,271,158

1830

0,038,890

4,165,500

9,171,000

3,375,390

,561,510

7,271,650

1

9,927,572

5,281,408

8,217,050

3,426,030

,612,035

7,133,350

2

8,497,448

5,836,042

5,293,150

9,626,640

,637,760

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478*

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BANKS.

479*

BANKS, SAVINGS’. These admirable insti- tutions form a striking feature in the moral his- tory of modern Britain. In former times every charitable institution w-as exclusively a subscrip- tion of the rich for the benefit of the poor : these, most happily, like their kindred Friendly Socie- ties, are composed of contributions from among the poor, co-operating for their own benefit, and conscious that they are promoting primarily their own interest. The success of these plans has been surprising, considering the peculiar crisis at which they have originated ►►► that of unques- tionable distress and pressure on all ranks (espe- cially the middle and lower ranks) of society ; to say nothing of the spirit of undue dependence engendered in this country by the poor laws.

The eccentric but philanthropic Jeremy Butham was the first, we believe, who invited the public attention to a distinct banking system for the poor. He proposed to establish what he calls a Frugality Bank, so far back as the year 1797, in Young’s Annals of Agriculture. The scheme involves more than the mere deposit of money, and has never, as we understand, been acted upon ; but, like most of his projects, it contains many useful hints, and may do good by rebound. The wants to which it was by him designed to operate as a remedy were : ►►►

1. Want of physical means of safe custody, such as lock-up places ; thence, danger of depre- dation, and accidental loss.

2. Difficulty of opposing and never-yielding resistance to the temptations afforded by the in- struments of sensual enjoyment, where the means of purchasing them are constantly at hand.

3. Want of the means of obtaining a profit by the savings of the poor, or the use of them in portions adapted to their peculiar exigencies.

4. Want of a set of instructions and mementos constantly at hand, presenting to view the seve- ral exigencies, or sources of demand for money in store, and the use of providing it.

He next proceeded to sketch the properties which appeared to him to be desirable in a sys- tem of frugality banks, commensurate to the whole population of the self-maintaining poor. These were,

1. Fund, solid and secure.

2. Plan of provision all- comprehensive.

3. Scale of dealing commensurate to the pecu- niary faculties of each customer.

4. Terms of dealing sufficiently advantageous to the customer.

5. Places of transacting business suitable ; viz. in point of vicinity, and other conveniences.

6. Mode of transacting business accommo- dating.

7. Mode of operation prompt.

8. Mode of book-keeping clear and satisfactory. In 1803 the well-known authoress Mrs. Pucilla

Wakefield projected the first bank that was ever actually instituted for the benefit of the poor at Tottenham. In the Reports of the Society for Bettering the Condition of the Poor, vol. iv., it is said, ‘ for the purpose of providing a safe and convenient place of deposit for the savings of laborers, servants, and other poor persons, a cha- ‘ liable establishment has been lately formed at Tottenham in the county of Middlesex. It is

guaranteed by six trustees, who are gentlemen of fortune and responsibility, most of them pos- sessing considerable landed property. This ren- ders it as safe and certain as institutions of this kind can be, and insures it from that fluctuation of value to which the public funds are liable. The books are kept by a lady, and never opened but on the first Monday in every month, either for receipts or payments. Any sum is received above Is., and five per cent, is given for every 20s. that lies twelve kalender months ; every person so depositing money being at liberty to recal it any day the books are opened ; but no business is transacted at any other time. The money so collected is divided equally between the six trustees. For every additional ––100 a new trustee is to be chosen ; so that a trustee can only risk his proportion of ––100. None but the laboring classes are admitted to this benefit ; and there is no restriction as to place of resi- dence.

‘ Observations. ––– These few simple rules are all that have hitherto been found necessary for the establishment of this charity. It is not sufficient to stimulate the poor to industry unless they can be persuaded to adopt habits of frugality. The season of plenty should provide for the season of want, and the gains of summer be laid by for the rigors of winter. But it must be obvious how difficult it is for even the sober laborer to save up his money, when it is at hand to supply the wants that occur in his family. For those of intemperate habits, ready money is a very strong temptation to the indulgence of those pernicious propensities. Many would try to make a little hoard for sickness or old age, but they know not where to place it without danger or inconve- nience. They do not understand how to put money in, or to take it out of the bank ; nor will it answer for small

sums, either in point of trou- ble or of loss of time. The same causes fre- quently occasion thoughtless servants to spend all their wages in youth, and in consequence to pass their old age in a workhouse.'

In 1807 the Rev. Henry Duncan, minister of West Colder, in Scotland, established in his parish a similar institution, which he described in a pamphlet that exhibits his accurate ac- quaintance with the difficulties and encourage- ments of these schemes.

' Those who are at all acquainted with the history of friendly societies,' he well observes, ' must be aware that they owe much of their popularity to the interest excited among the lower orders, by the share to which each of the mem- bers is admitted in the management of the insti- tution. The love of power is inherent in the human mind, and the constitution of friendly societies is calculated to gratify this natural feeling. The members find, in the exercise of their functions, a certain increase of personal consequence, which interests their self-love in the prosperity of the establishment. Besides, by thus having constantly before their eyes the ope- ration of the scheme, in all its details, they are more forcibly reminded of its advantages ; and not only induced to make greater efforts them- selves for obtaining these advantages, but also to persuade others to follow their example. Hence

it happens tnat a great number of active and zealous supporters of the institution are always to be found amongst the members of a friendly society, who do more for the success of the estab- lishment than can possibly be effected by the benevolent exertions of individuals in a higher station.' Mr. Duncan therefore found it expe- dient to give the contributors themselves a share in the management of the institution ; and that share was well chosen. The contributors in a body were not fit to be the acting parties ; but they were fit to choose those who should act.

' A general meeting is held once a year, con- sisting of all the members who have made pay- ments for six months, and whose deposits amount to ??l. By this meeting are chosen the court of directors, the committee, the treasurer, and the trustee, the functionaries to whom the executive operations are confined : and by the annual meeting also are reviewed and controlled the transactions of the past year, with power to reverse the decisions of the committee and court of directors ; and to make new laws and regula- tions, or alter those already made. The society consists of two sorts of members, the ordinary, and the extraordinary and honorary. The general meetings alone have the power of elect- ing honorary members ; but

the bank trustee, the lord-lieutenant and vice-lieutenant of the county, the sheriff-depute and his substitute, the members of parliament for the county and burgh, the ministers of the parish, with certain magis- trates of the town, are honorary members ex offi- cio ; and there are certain regulated subscrip- tions or donations, of no great amount, which constitute the person paying them, ipso facto, an extraordinary or honorary member. From this list of honorary and extraordinary members the thoice of functionaries by the general meeting is annually to be made, provided a sufficient number of them should be disposed to accept of the otlices designed ; if not, from such of the ordinary members as make deposits to the amount of not less than ►►'2 l"2s. in the year. De- posits are received in sums of Is., bear interest .it the amount of.t'l ; and are always payable at compound interest on a weeks' notice.

In liU-1 the first Edinburgh bank for savings \as founded on a modification of the above plan. The bunk for savings at Liverpool was estab- lished in the year 1 813, by the Society for Better- ing the Condition and Increasing the Comforts of the Poor, in the Town and Neighbourhood of Liverpool. 'Tins establishment was suggested,' :;ay> one of the managers, ' by the numerous in- stances which had come to the knowledge of the Miciety, in v. Inch the industrious had lost thoir savings from the failure of the Arsons in whose naiids they \ere placed. The committee were anxious to hold out every possible inducement to tiie lower orders, for depositing their surplus earnings, consistent with a proper prudence and caution. Many ueiitleir.en were of opinion that, in such a town as Liverpool, five per oent. might at all tunes lie obtained on good security; and as tlu1 society had an office and clerk of their oun, where and by whom the deposits might be received, without any additional expense, it was determined that iive r.er cent, should be the rate

of interest given, ilowever no sum was to be entitled to thai interest till it had been in the fund for one year at least; if taken out before that period four per cent, only was to be allowed. The bank continued under these regulations till the beginning of 1815, at which period above ►►900 were deposited in it. We had placed ►►300 upon mortgage, and the remainder was vested in the navy five per cents, at such prices as to yield more than five per cent. When, however, we found that the fund was likely to increase to a very considerable extent, and that, as we were personally responsible for the money, we should always be liable to the sudden fluctuation of stock, and might, upon any sudden disaster, have a run upon us, which would compel us to sell out, perhaps at a considerable loss, it was de- termined in future to limit the receipts into the Mechanics Fund to ►►5 for one individual, and to establish a higher bank, under the name of the Provident Institution, into which the depositors might remove their money when it reached that sum (►►5) ; and where it might be allowed to ac-

cumulate to any amount The principle of the bank is, that every person becomes a proprietor of stock to the amount of his deposit, and shall receive the interest annually, after deducting one- twentieth for the necessary expenses of manage- ment. This one-twentieth, together with the farthings, which are not paid, is reserved for the above purpose; and, should any surplus remain at the end of five years, it is to be divided amongst the then existing proprietors. One or more even pounds will be at any time received ; but the fractions of pounds must always accumulate in the lower fund. By this means we have reduced the Mechanics' Fund to about ►►450 ; the re- mainder has been transferred to the Provident Institution, and about ►►1200 have been depo- sited in addition to it since July last.'

We need not add to these abstracts any ac- count of the almost numberless Saving Banks now existing in the country. Their principle is familiar to all classes, and information on the subject is so easy of access that we do not think it right to occupy our space with any observa- tions of our own. The government have acted the part which became them as to these institu- tions, and have afforded them the sanction and security which were essential to their permanence and prosperity ; and the public mind has caught the impulse to such an extent as is likely to give them a lasting and universal establishment.

We make but two concluding remarks: ►►► 1. One of the great advantages of the saving bank over the friendly society is that it has the benefit of survivorship. If the contributor to a saving bank dies, the whole of his contribution remains to his family. If, on the contrary, the member of a benefit society dies, the whole of his pro- perty, except the sums ordinarily allowed to the widow, and sometimes to his children, is lost to his family.

2. Another great advantage of saving banks over benefit societies, constituted as these last ordi- parily have been, is, that the benefit societies have been the prolific source of contention and immorality ; whereas the scheme of saving banks appears liable to no such abuse-

BANKAFALET, a game of cards played tmis : after cutting the cards into as many parts as there are players,every man lays what money he chooses on his card ; and according to the value of his card, above or below those of the other game- sters, the dealer wins or loses. The ace of dia- monds is the best card ; the ace of hearts next ; the ace of clubs after it; then the ace

of spades ; and so of the rest of these suits in order, accord- ing to their rank. The cheat depends on secu- ring an ace, or such other sure winning card ; which are known to the sharper by some secret mark.

BANKERS, in antiquity, were called argentarii, and nummularii ; by the Greeks rpcnrtZiTai, KO- Xv/5►►

BANKERS, in bricklaying, pieces of timber whereon bricks are cut. The banker is six feet long or more, according to the number of men to work at it, and nine or ten inches square; it is to be laid on two piers of timber, three feet nigh from the floor.

BANKERS, in the court of Rome, are persons authorised, exclusively, to solicit and procure by their correspondents at Rome, all bulls, dispen- sations, and other acts despatched at the papal datary, or in the legateship of Avignon. They were common in all the cities of France that had a parliament, or a presidial before the revolution ; and were erected into a regular and hereditary office, by an edict in 1673. They owed their origin to the Guelphs, who took shelter at Avig- non, and in other cities within the jurisdiction of the pope, in the time of the civil wars of Italy. But the heavy extortions they practised towards their clients, soon rendered them odious, and oc- casioned several denominations of reproach, as coarcini, caturcini, caursini, corcini, &c. from the city Cahors, the native place of pope John XXII. in whose pontificate they were in their highest power.

BANKERS, in seamens' language, vessels em- ployed in the cod-fishery on the banks of New- foundland.

BANKING, in architecture, the making of banks to oppose the force of the sea, rivers, or the like, and secure the land from being overflowed thereby. With respect to the water which is to be kept out, this is called banking ; with respect to the land, which is thereby to be defended, em- banking.

BANK ALA, an island in the eastern seas, off the coast of Celebes, about twenty miles in cir- cumference. Long. 122►► 51′ E., lat. 2►► 30′ S.

BANKAPOUR, or BANCAPOUR, a fortress of Hindostan, in the Mysore, now dismantled. VOL HI.

Distant 108 miles N. W. of Seringapatam, and sixty S. W. of Bednore.

BANKINSKO1, a town of Siberia, in the envi- rons of Lake Baikal. Long. 117►► 14′ E., lat. 51►► 11′ N.

BANKMORE, a sand bank in the Irish Sea, one mile south of Pontaferry harbour, in the county of Down .

BANKODANG, a small island in the Eastern Indian sea. Long. 118►► 2′ E., lat. 5►► 12′ S.

BANKOSSEI, a town of Lower Siam, on the west side of the gulf. Distant seventy miles south of Juthia. Long. 100►► 38′ E., lat. 13►► 12′ N.

BANKRUPTS, LAWS RESPECTING. The title of the first English statute on this subject, 34 Henry VIII. cap. 4, which is said to be ‘ against such persons as do make bankrupt,’ is a literal translation of the French idiom, qui font banque route. The 3d of Elizabeth followed, all of the provisions of which were incorporated in 1 Jac. I.

A bankrupt, according to these statutes,.was con- sidered as a criminal or offender, 1. Jac. I. c. 15. sect. 17 ;but at present the laws of bankruptcy are regarded as calculated for the general benefit of trade, and being founded on broader views of humanity and justide, confer some privileges not only on the creditors, but also on the bankrupt himself : on the creditors, by compelling the bank- rupt to give up all his effects to their use, without any concealment; ►►► and on the debtor, by ex- empting him from the rigor of other parts of the law, whereby his person might be confined at the discretion of his creditor, though in reality he has nothing to satisfy the debt; and, together with the liberty of his person, affording him, on cer- tain conditions, some pecuniary provision for his future maintenance. In this respect our legisla- tures seems to have attended to the example of the Roman law. We mean not the terrible law of the XII tables ; whereby creditors might cut the debtor’s body into pieces, and each of them take his proportionable share : if indeed that law, de debitore in partes secando, is to be un- derstood in so barbarous a light; nor do we mean those less inhuman laws (if they may be called so, as their meaning is indisputably certain), of imprisoning the deb tor’s person in chains, subject- ing him to stripes and hard labor at the mercy of his creditor ; and sometimes selling him, his wife, and children, to perpetual foreign slavery trans Tiberim ; an oppressionwhich produced so many popular insurrections, and secessions to the mons sacer. Laws equally barbarous are quoted by Blackstone, as existing in Pegu, and the adjacent countries of the East, where the creditor is entitled to dispose of the debtor himself, and likewise of, or appropriate, his wife and children : though in- deed by doing so, the debt is understood to be discharged. But we mean the law of cession in- troduced by the Christian emperors; whereby if a debtor ceded or yielded up all his fortune to his creditors, he was secured from imprisonment, ‘ omni quoque corporali cruciatu semoto.’ For, as the emperor justly observes, ‘ inhumanum erat spoliatum fortunis suis in solidum damnari.’ Thus far was just and reasonable ; but, as the de- parting from one extreme is apt to produce its opposite, we find it afterwards enacted, that if the

debtor, by any unforeseen accident, was reduced to low circumstances, and would swear that he had not sufficient left to pay his debts, he should not he compelled to cede or give up even that which he had in his possession; a law which, under a false notion of humanity, seems to be fertile of perjury, absurdity, and injustice. The laws of England, more wisely, have steered be- tween these extremes : providing at once against the inhumanity of the creditor, who is not suf- fered to confine an honest bankrupt after his effects are delivered up ; and at the same time taking care that all his just debts shall be paid, so far as the effects will extend. But still they are cautious of encouraging prodigality and ex- travagance by this indulgence to debtors : and therefore they allow the benefit of the laws of bankruptcy to none but actual traders ; since that set of men are, generally speaking, the only per- sons liable to accidental losses', and to an inabi- lity of paying their debts, without any fault of their own. If persons in other situations of life run in debt without the power of payment, they must take the consequences of their own indis- cretion, even though they meet with sudden ac- cidents that may reduce their fortunes ; for the law holds it to be an unjustifiable practice, for any person but. a trader to encumber himself with debts of any considerable value. If a gentleman, or one in a liberal profession, at the time of con- tractile.; his debts, has a sufficient fund to pay them, the delay of payment is a species of dis- honesty, and a temporary injustice to his creditor ; and if, at such a time, IK- has not sufficient fund, the dishonesty and injustice is the greater. He cannot, thorul'oiv, murmur, if lie suffer the pu- nishment which he ha; voluntarily drawn upon himself. Uut in mercantile transactions, the case is far otherwise. Tra.de cannot be carried on without niuiual credit on both sidus ; thecon- tractiirj; of debts is therefore here 7iot only justi- fiable but necessary. And if by accidental cal. unities, as by the loss of a ship in a tempest, the failure of brother traders, or by the non-pay- ment of persons out of tiade, a merchant or trader becomes incapable of discharging his own debts, it is Ins misii>r;nne and not his fault. Such is the spirit of our law : which has been rendered mote simple in the mode of its execution of late W the comprehensive statute (i(ieo. IV. cap. 16. ⬛⬛⬛vhich, repealin/ the greater part of the former statute.; on this subject, dictates aline of practice \hicii ni;iy be umveniuntly considered xinder, 1. \ ho m i\ become bankrupts. 2. What is an net oi bankruptcy. 3. Proceedings thereon up to, .m;! mi hiM\e of the meetings of creditors. 4. l-'.tf. et~; to the '.^iknipt and his creditors.

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UMII , the t:\ile or pr.jfession of a scrivener, re- cvi\!iij- oth'-r men's monies or estates into their tiu>t or custody, and persons insuring ships or th'-ir tr.i.h:, or mile: maters, against perils of t!ie -en, Nsarch Neiiie!!, \ h ►►► dinners, packers, 'nil '.►►►►►►!, c i;pe;i!e;-s, shipwrights, victuallers,

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dyeis, pi. nter~, blc.ieh-rs, fullers, ealenderers, cattle 01 sh'-ep s; ' ' , and all persons using

the trade of merchandise by way of bargaining,

exchange, bartering, commission, consignment or otherwise, in gross or by retail ; and all pet % sons who, either for themselves or as agents o; factors for others, seek their living by buying and selling, or by buying and letting for hire, or by the workmanship of goods or commodities, shall be deemed traders liable to become bank- rupt : Provided that no farmer, grazier, common laborer, or workman for hire, receiver-general of the taxes, or member of or subscriber to any incorpo- rated commercial or trading companies, establish- ed by charter or act of parliament, shall be deemed, as such a trader, liable to become bankrupt.

II. An act of bankruptcy is committed. 1. ' If any trader shall depart this realm, or being out of this realm shall remain abroad, or de- part from his dwelling-house, or otherwise ab- sent himself, or begin to keep his house, or suffer himself to be arrested for any debt not due, or yield himself to prison, or suffer himself to be outlawed, or procure himself to be arrested, or his goods, money, or chattels, to be attached, se- questered, or taken in execution, or make or cause to be made, either within this realm or elsewhere, any fraudulent grant or conveyance of any of his lands, tenements, goods, or chattels, or make or cause to be made any fraudulent surrender of any of his copyhold lands or tene- ments, or make or cause to be made any fraudu- lent gift, delivery, or transfer of any of his goods, or chattels; every such trader doing, suffering, procuring, executing, permitting, making, or causing to be made any of the acts, deeds, or matters aforesaid, with intent to defeat or delay his creditors, shall be deemed to have thereby committed an act of bankruptcy.

2. But where any trader shall execute any conveyance or assignment, by deed, to a trustee or trustee.s, of all his estate and effects for the benefit of all the creditors of such trader, the execution of such deed shall not be

deemed an act of bankruptcy, unless a commission issue against such trader within six calender months from the execution thereof, provided that such deed shall be executed by every such trustee within fifteen days after the execution thereof by the said trader; and that the execution by such trader and by every such trustee be attested by an attorney or solicitor; and that notice be given within two months after the execution thereof by such trader in the London Gazette, and two London daily newspapers ; or in case the trader does not reside within forty miles of London, in the London Gazette and in one Lon- don daily newspaper and one provincial news- paper, published near to such trader's residence ; such notice containing the date and execution of such deed, and the name and place of abode respectively of every such trustee, and of such attorney or solicitor.

3. Other acts of bankruptcy are lying in prison for debt twenty-one clays; escaping out of prison or custody ; or, which is the most novel and im- portant feature of this act, ••• If any trader shall file in the office of the Lord Chancellor's secretary of bankrupts, a declaration in writing, attested by an attorney or solicitor, that he is insolvent, or unable to meet his engagements, the secretary of bankrupts or his deputy is then to sign a memo-

randum that such declaration hath been filed, which is authority for the printer of the London Gazette to insert an advertisement of such decla- ration therein ; and every such declaration shall, after the advertisement inserted, become an act of bankruptcy committed by such trader at the time when such declaration was filed : but no commission can issue thereupon, unless it be sued out within two calender months next after its insertion, nor unless such advertisement shall have been inserted in the London Gazette within eight days after such declaration was filed ; and no docket can be struck upon such act of bankruptcy before the expiration of four days next after insertion of such advertisement, in case such commission is to be executed in Lon- don, or before the expiration of eight days next after such insertion, in case such commission is to be executed in the country.

A further provision upon this point, and which seems designed to encourage a settlement of in- solvents' affairs in this way is, That no commis- sion under which the adjudication shall be grounded on the act of bankruptcy being the filing of such declaration, shall be deemed in- valid by reason of such declaration having been concerted or agreed upon between the bankrupt and any creditor or other person.

If any trader having privilege of parliament shall commit any act of bankruptcy, a commis- sion of bankrupt may issue against him, and the commissioners and all other persons acting under such commission, may proceed thereon in like manner as against other bankrupts, only such person shall not be subject to be arrested or im- prisoned during his privilege, except in cases made felony by this act.

III. Proceedings hereupon. 1. The Lord Chancellor has power upon petition stating to him in writing that any trader has committed any act of bankruptcy, by any creditor or creditors of such trader ; if one being a credi- tor for ►►100, if two for ►►l50, and if three being creditors for ►►200 ; by commission under the great seal, to appoint such persons as to him shall seem fit, to have full power and authority to take such order and direction, with the body of the bankrupt, as herein after men- tioned, as also with all his lands, tenements, and hereditaments, both within the realm and abroad, which he shall have in his own right before he became bankrupt, as also with all such interest in any such lands, tenements, and hereditaments as such bankrupt may lawfully depart with all, and with all his money, fees, offices, annuities, goods, chattels, wares, merchandise, and debts, wheresoever they may be found or known, and to make sale thereof, See. for satisfaction and payment of the creditors.

The petitioning creditor must prosecute a commission at his own costs, until the choice of assignees ; or the commissioners may appoint temporary assignees. Any creditor or creditors whose debt or debts is or are sufficient to entitle him or them to petition for a commission against all the partners of any firm, may petition tor a commission against one or more partners of such firm, and every commission issued upon such petition shall be valid although it does not in-

clude all the partners of the firm, and in e\erv commission against two or more persons it shall be lawful for the Lord Chancellor to supersede such commission as to one or more of such per sons, and the validity of such commission shall not be thereby affected as to any person as to whom such commission is not ordered to be su- perseded, nor shall any such person's certificate be thereby affected. Auxiliary commissions for the proof of debts or examination of witnesses may also be issued by the chancellor. But the examinations are to be annexed to the original commission.

2. The commissioners take oath impartially and honestly to execute their office; and they take a fee of twenty shillings for every meeting and for the signature of every deed and conveyance, and the bankrupt's certificate. The first duty is, upon proof made before them of the petitioning creditor's debt or debts, and of the trading and act or acts of bankruptcy of the person or per- sons against whom such commission is issued, to adjudge such person,

or persons bankrupt. Then the commissioners ‘ shall forthwith cause notice of such adjudication to be given in the London Gazette, and shall there’by appoint three public meetings for the bankrupt to sur- render and conform, the last of which meetings shall be on the forty-second day hereby limited for such surrender.’ No commission shall abate by reason of a demise of the crown, and (if by reason of the death of commissioners, or for any other cause, it becomes necessary) any commis- sion may be renewed, but only half the fees usually paid upon obtaining commissions shall be paid for the same ; and if any bankrupt shall die after adjudication, the commissioners may proceed in the commission as they might have done if he were living.

3. The messenger of the commissioners may break open the bankrupt’s doors, &c. and seize upon his body or property; and if the bankrupt be in prison or in custody, it shall be lawful for the person so appointed as aforesaid to seize any property (his necessary wearing apparel only ex- cepted) in the custody or possession of such bankrupt, or of any other person, in any prison or place where such bankrupt is in custody. But, in ordinary cases, the messenger proceeds quietly to enter on the bankrupt’s premises, and take possession of his goods. The commissioners are empowered to summon persons suspected of having bankrupt’s property in their hands, &c. ; and compel them to produce books, &c. under pain of being committed to prison without bail. They may even summon the bankrupt’s wife. And the concealment of his effects subjects other parties to a fine of ⬛⬛lOO.

4. At the three several meetings appointed by the commissioners, and at every other meeting by them appointed for proof of debts (whereof, and of the purport whereof, ten days notice shall have been given in the London Gazette), every creditor of the bankrupt may prove his debt by his own oath ; and all bodies politic and public companies incorporated or authorised to sue or bring actions, either by charter or act of par- liament, may prove by an agent, provided such ageut shall in his deposition swear that he is sucn

agent, and that he is authorised to make such proof; and if any creditor shall live remote from the place of the meeting of the commissioners, l>e may prove by affidavit, sworn before a master in chancery, ordinary or extraordinary ; or if such creditor shall live out of England, by affidavit

sworn before a magistrate where such creditor shall be residing, and attested by a notary public, British minister, or consul : and no creditor shall pay any contribution on account of any such debt ; provided, that it shall be lawful for the said commissioners to examine upon oath, either by word of mouth or by interrogatories in writing, every person claiming to prove a debt under the said commission, or to require such further proof, and to examine such other persons in relation thereto, as they shall think fit. Bonn fide credi- tors are admitted to prove a debt notwithstanding any secret act of bankruptcy, before it was con- tracted, and, as special debts, the commissioners may order six months wages of servants or clerks to be paid in full ; but of more than six months' wages, the residue must be proved as an ordinary debt ; and debts not payable at the time of the bankruptcy may be proved, deducting rebate of interest ; and the actual interest due on bills of exchange, &c. at the date of the commission. Sureties and persons liable fur the debts of bank- rupts can only prove, after having paid such debts. The value of annuities, however, may ln> calculated and proved ; but other debts con- tingent at the tune of the bankruptcy, are pro- v.iblo after the happening of the contingency. Th" commissioners may convey the personal estate, dents due to the bankrupt, and all his propci ty to the assignees.

,">. At the second meeting appointed by the commissioners, or any adjournment thereof, the assigi.eesuf the bankrupt's estate and effects are chosen; and all creditors who have proved debts under tlie commission to the amount of ten pounds and upwards entitled to vote in such choice ; and also any person authorised by letter of attorney from any creditor or creditors, upon proof of the execution thereof, either by affidavit sworn before a master in chancery, ordinary or extraordinary, or by oath before the commission- ers viva voce ; and that the commissioners having power to reject, any person so chosen who shall appear to them unlit to be such assignee, and upon such rejection a new choice of another as- signee or assignees shall be made. And a joint creditor is entitled to prove under a separate commission, for the purpose of voting in the choice of assignees.

(i. If any person against whom aiˆy commis- sion has been issued, or shall hereafter be issued, whereupon Mich perxm hath been or shall be declared bankrupt, shall not, before three of the clock upon the forty-second day after notice thereof in wntinj; to be left at the visual place of a"odc fif such perxm, or personal notice in case such person be then in prison, and notice given in the London (ia/ette of the issuing of the com- mis>KiM, and of the meetings ot the commis- sioners, surrender himself to them, and sign or subscribe such sunvirlrr, and submit to be exa- mine,i before them, from time to time, upon oath, or, being a (Quaker, upon solemn' affirma-

tion ; or if any such bankrupt upon sucn exami- nation shall not discover

all his real or personal estate, and how and to whom, upon what consi deration, and when he disposed of, assigned, 01 transferred any of such estate, and all books, papers, and writings relating thereunto (except such part as shall have been really and bonft fide before sold or disposed of in the way of his trade, or laid out in the ordinary expense of his family) ; or if any such bankrupt shall not upon such ex- amination deliver up to the commissioners all such part of such estate, and all books, papers, and writings relating thereunto, as be in his pos session, custody, or power, (except the necessary wearing apparel of himself, his wife and chil- dren); or if any such bankrupt shall remove, conceal, or embezzle any part of such estate, to the value of ►►10 or upwards, or any books of account, papers, or writings relating thereto, with intent to defraud his creditors, every such bankrupt shall be deemed guilty of felony, and be liable to be transported for life, or for such term, not less than seven years, as the court be- fore which he shall be convicted shall adjudge, or shall be liable to be imprisoned only, or im- prisoned and kept to hard labor in any common gaol, penitentiary house, or house of correction, for any term not exceeding seven years. But the lord chancellor, or the commissioners have power, as often as they shall think fit, from time to time, to enlarge the time for the bankrupt sur- rendering himself, so as every such order be made six days" at least before the day on which such bankrupt was to surrender himself; and an allowance is to be made to the bankrupt for his maintenance, out of his estate, until he shall have passed his examination. The bankrupt shall also be free from arrest or imprisonment by any cre- ditor in coming to surrender; and after such surrender during the said forty-two days, and such further time as shall be allowed him for finishing his examination, provided he was not in custody at the time of such surrender; and if such bankrupt shall be arrested for debt, or on any escape warrant in coming to surrender, or shall after his surrender be so arrested within the time aforesaid, he shall, on producing the sum- mons under the hands of the commissioners to the officer who shall arrest him, and giving such officer a copy thereof, be immediately discharged ; and if any officer shall detain any such bankrupt after he shall have shown his summons to him, so signed as aforesaid, such officer shall forfeit to such bankrupt, for his own use the sum of ►►5. for every day he shall detain such bankrupt, to be recovered by action of debt in any court of record at Westminster, in the name of such bank- rupt, with full costs of suit.

IV. The effects of these provisions with regard to the bankrupt and his creditors are, 1 . All pre- vious conveyances of property, made while he was insolvent, become void (except upon mar- riage of his children or for some valuable consi- deration).

2. He is no longer entitled to leases, or agree- ments for leases, nor liable for rents or cove- nants ; but his assignees may elect to abide by or

abandon a lease or agreement, and execute all powers previously vested in bankrupts. But

all conveyances by, and all contracts and other dealings and transactions by and with any bank- rupt, bona fide made and entered into more than two calendar months before the date and issuing of the commission against him, and all execu- tions and attachments against the lands and tene- ments or goods and chattels of such bankrupt, bona fide executed or levied more than two ca- lendar months before the issuing of such commis- sion, shall be valid, notwithstanding any prior act of bankruptcy by him committed ; provided the person or persons so dealing with such bank- rupt, or at whose suit or on whose account such execution or attachment shall have issued, had not at the time of such conveyance, contract, dealing, or transaction, or at the time of execut- ing or levying such execution or attachment, no- tice of any prior act of bankruptcy by him com- mitted : payments made by and to the bankrupt without notice, are valid, notwithstanding an act of bankruptcy. And no person or body corpo- rate, or public company, having in his or their possession or custody any money, goods, wares, merchandises, or effects belonging to any bank- rupt shall be endangered by reason of the pay- ment or delivery thereof to the bankrupt or his order ; provided such person or company had not at the time of such delivery or payment, no- tice that such bankrupt had committed an act of bankruptcy.

3. Every bankrupt who shall have duly sur- rendered and conformed himself to the laws in force concerning bankrupts at the time of issuing the commission against him, shall be discharged from all debts due by him when he became bank- rupt, and from all claims and demands provable under the commission, in case he shall obtain a certificate of such conformity, so signed and al- lowed, and subject to such provisions as herein- after directed ; but no such certificate shall release or discharge any person who was partner with such bankrupt at the time of his bankruptcy, or who was then jointly bound, or had made any joint contract with such bankrupt. Such certifi- cate shall be signed by four-fifths in number and value of the creditors of the bankrupt, who shall have proved debts under the commission to the amount of twenty pounds or upwards, or after six calendar months from the last examination of the bankrupt, then either by three-fifths in num- ber and value of such creditors, or by nine- tenths in number of such creditors, who shall thereby testify their consent to the said bank- rupt's discharge as aforesaid ; and no such cer- tificate shall be such discharge, unless the commissioners shall in writing, under their hands and

seals, certify to the Lord Chancellor that such bankrupt has made a full discovery of his estate and effects, and in all things conformed as aforesaid, and that there does not appear any reason to doubt the truth or fulness of such dis- covery, and also that the creditors have signed in manner hereby directed, and unless the bankrupt make oath in writing that such certificate and consent were obtained without fraud, and unless such certificate shall, after such oath, be allowed by the Lord Chancellor, against which allowance any of the creditors of the bankrupt may be heard before the Lord Chancellor. But the commis-

sioners shall not sign any certificate unless they shall have proof, by affidavit in writing, of the signature of the creditors thereto, or of any per- son thereto authorised by any creditor, and of the authority by which such person shall have so signed the same ; and if any creditor reside abroad, the authority of such creditor shall be attested by a notary public, British minister, or consul ; and every such affidavit, authority, and attestation, shall be laid before the Lord Chan- cellor, with the certificate, previous to the allow- ance thereof.

Any contract or security made or given by any bankrupt or other person unto or in trust for any creditor, or for securing the payment of any money due by such bankrupt at his bankruptcy, as a consideration or with intent to persuade such creditor to consent to, or sign such certificate, shall be void, and the money thereby secured or agreed to be paid shall not be recoverable, and the party sued on such contract or security may plead the general issue, and give this act and the special matter in evidence. And, finally, any bankrupt who shall, after this certificate shall have been allowed, be arrested, or have any ac- tion brought against him for any debt, claim, or demand, hereby made provable under the com- mission against such bankrupt, shall be dis- charged upon common bail, and may plead in general that the cause of action accrued before he became bankrupt, and may give this act and the special matter in evidence, and such bank- rupt's certificate, and the allowance thereof, shall be sufficient evidence of the trading, bankruptcy, commission, and other proceedings precedent to the obtaining such certificate ; and if any such bankrupt shall be taken in execution, or detained in prison for such debt, claim, or demand, where judgment has been obtained before the allowance of his certificate, it shall be lawful for any judge of the court wherein judgment has been so ob- tained, on such bankrupt's producing his certifi- cate, to order any officer who shall have such bankrupt in custody by virtue of such execution, to discharge such bankrupt without exacting any fee, and such officer shall be hereby indemnified for so doing.

It is nevertheless provided that if any person who shall have been so discharged by such certifi- cate as aforesaid, or who shall have

compounded with his creditors, or who shall have been dis- charged by any insolvent act, shall be or become bankrupt, and have obtained or shall hereafter obtain such certificate as aforesaid, unless his estate shall produce (after all charges) sufficient to pay every creditor under the commission fif- teen shillings in the pound, such certificate shall only protect his person from arrest and imprison- ment, but his future estate and effects (except his tools of trade and necessary household furniture, and the wearing apparel of himself, his wife and children), shall vest in the assignees under the commission.

A scale of allowance on the other hand is made for every bankrupt who shall have ob- tained his certificate, if the net produce of his estate shall pay the creditors who have proved under the commission ten shillings in the pound; in which case he shall be allowed five per cent.

'nit of such produce, to he paid him by the as- signees, provided such allowance shall not exceed fcur hundred pounds; and every bankrupt, if such produce shall pay such creditors twelve shillings and sixpence in the pound, shall be al- lowed and paid as aforesaid seven pounds ten shillings per cent., provided such allowance shall not exceed five hundred pounds ; and every bank- rupt, if such produce shall pay such creditors fifteen shillings in the pound or upwards, shall be allowed and paid as aforesaid ten pounds- per cent., provided such allowance shall not exceed six hundred pounds; but if such produce shall not pay such creditors ten shillings in the pound, such bankrupt shall only be allowed and paid so much as the assignees and commissioners shall think fit, not exceeding three pounds per cent, and three hundred pounds.

As to the important point of making dividends, the' commissioners shall, not sooner than four nor later than twelve calendar months from the issuing the commission, appoint a public meeting (whereof, an'd of the purport whereof, they shall prive twenty-one days notice in the London (Ja/ette), to make a dividend of the bankrupt's estate, at which meeting all creditors who have not proved their debts shall be entitled to prove the same; and the said commissioners at such luertin.: sha'l order such part of the net produce of the bankrupt's estate in the hands of the as- signees, as they shall think lit, to l>e forthwith divided jrnoiurst such creditors as have proved debts un !rr the commission, in proportion to their respective debts, and shall make an order lor a dividend in writing under their hands, and shall caiiic one part of such order to be filed ainon >t th.' proceedings under the commission,

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creditor, though for a valuable consideration, who shall sue out execution upon any judgment obtained by default, confession, or nil dicit, shall avail

himself of such execution to the prejudice of other fair creditors, but shall be paid rateable with such creditors.

If the bankrupt's estate shall not have been wholly divided upon the first dividend, the com- missioners shall, within eighteen calendar months after the issuing of the commission, appoint a public meeting (whereof, and of the purport whereof, they shall give twenty-one days notice in the London Gazette), to make a second divi- dend of the bankrupt's estate, when all creditors who have not proved their debts may prove the same ; and the commissioners at such meeting, after taking such audit as herein-before directed, shall order the balance in the hands of the as- signees to be forthwith divided amongst such of the creditors as shall have proved their debts ; and such second dividend shall be final, unless any action at law or suit in equity be depending, or any part of the estate be standing out, not sold or disposed of, or unless some other estate or effects of the bankrupt shall afterwards come to the assignees, in which case they shall, as soon as may be, convert such estate and effects into money, and within two calendar months after the same shall be so converted, divide the same in manner aforesaid.

Lastly, if any assignee, under any commission of bankrupt, shall have, either in his own hands or at any banker's, or otherwise subject to his order or disposition, or to his knowledge in the hands of, or in the order and disposition of him- self and any co-assignee or co-assignees, or of any or either of them, any unclaimed dividend or dividends, amounting in the whole to the sum of fifty pounds, and shall not within six months after this act shall have taken effect, or two calendar months after the expiration of one year after the declaration and order of payment of such dividend or dividends made by the com- missioners, either pay to the creditor or creditors entitled thereto, or cause a certificate thereof to be filed in the office of the Lord Chancellor's secretary of bankrupts, containing a full and true account of the name or names of the creditor or creditors to whom such unclaimed dividend or dividends is or are respectively due, and of the amount of such dividend or dividends respec- tively (such account being signed by the assignee or assignees rendering the same, and attested by the solicitor to the commission, or the solicitor to the assignee or assignees signing the same), such assignee or assignees shall be charged, rn account with the estate of the bankrupt, interest upon such unclaimed dividend or dividends, to be computed from the time that such certificate is hereby directed to be filed, at the rate of five pounds per centum per annum, for such time as he shall thenceforth retain the same, and also such further sum as the commissioners shall think fit, not exceeding in the whole twenty pounds per centum per annum ; and the Lord Chancellor, or the said commissioners, may order the investment of any unclaimed dividends in the public funds, or in any government security, for or on account of the

creditors entitled, and

subject to such order as the Lord Chancellor may think fit to make respecting the same, who, if he shall think fit, may, after the same shall have remained unclaimed for the space of three years from the declaration of such dividends by the commissioners, order the same to be divided amongst and paid to the other creditors, and the proof of the creditors to whom such dividends were allotted shall from thenceforth be considered as void as to the same, but renewable as to any future dividends, to place them pari passu with the other creditors, but not to disturb any divi dends which shall have been previously made.

We have thus fully stated the general pro- visions of the late act, as useful to all persons connected with trade ; more minute provisions will of course engage the attention and require the aid of professional men.

BANKS, CAPE, the north-east point of Bo- tany Bay, on the east coast of New Holland.

BASKS' ISLAND, an island of New Zealand, off the north-east coast of Tavai Poenammoo. It is about sixty miles in circumference, and suf- ficiently high to be visible at the distance of twelve or fifteen leagues. It is barren but inha- bited. Distant fifteen miles from Tavai Poe- nammoo. The south point lies in long. 186►► 30′ W., latitude 43►► 32′ S. Also, an island in the North Pacific, near the west coast of North America, about sixty miles long, and five broad. Long. 129►► 45′ to 130►► 10 W., lat. 50►► 30′ N.

BANKS' PORT, a harbour on the north-west coast of America, south-east from Cape Edge- cumbe, and north-west from Sea Otter Sound.

BANKS (Sir John), Lord Chief Justice of the Common Pleas, in the reign of Charles I., was born at Keswick, in Cumberland, in 1589. He studied at Oxford, but took no degree : applying to the law, his extraordinary reputation in that profession soon recommended him to the king, who made him attorney to the prince in 1629 ; knighted him, and appointed him attorney- general in 1634 ; lord chief justice in 1640; and a member of the privy council in 1642. In these perilous times, he discharged the duties of his important and arduous offices with very ge- neral approbation. But at last lost his popu- larity, by declaring from the bench, in the sum- mer circuit, that the actions of Essex, Man- chester, and Waller, were treasonable ; and the Commons voted him a traitor. Meantime his lady,

being with her family at his seat at Corfe Castle, in the isle of Purbeck, was summoned to surrender by the friends of the parliament; but refused, though she had then only five men in the castle, and sustained a siege, by William Karl, with not more than forty men. At last lady Banks was relieved by the arrival of lord Caernar- von with a body of horse. Sir John continued with the king at Oxford till 1644, when he died.

BANKS (John), an English author, born at Sunning, in Berkshire in 1709. He was bred a weaver at Reading, but gave up that business and went to London, where he became a book- seller. Not succeeding ia this, he published various tracts, particularly a Critical Review of the Life of Oliver Cromwell, which met with ◆◆◆◆◆◆ tiivorabk' reception. He died in 1751.

HANKS (Thomas), an eminent English sculptor,

was born in 1735, and was son of Mr. William Banks, steward of the duke of Beaufort. He was educated with Kent, the well-known archi- tect of that period ; but afterwards, showing a preference for sculpture, studied it at the Royal Academy with great success, and was elected to be sent as one of its students to Italy. Here he executed several good pieces, particularly a basso-relievo of Caractacus, in the possession of the duke of Buckingham ; and a Cupid catching a butterfly, which was afterwards purchased by the empress Catharine. He went from Italy to Russia, where he staid two years, and returned to his own country to acquire both fame and for- tune. Among his works are a colossal statue exhibiting Achilles mourning the loss of Briseis, in the hall of the British Institution; and the monument of Sir Eyre Coote, in Westminster Abbey. Mr. Banks was elected a member of the Royal Academy not long after his return from Russia, and finished his useful life in February 1805.

BANKS (Sir Joseph), the late celebrated natu- ralist, was the son of William Banks, Esq. of Revesby Abbey, Lincolnshire, where he was born in 1743. He received his education at Eton and Oxford, where he continued till the death of his father. In 1765 he made a voyage to Newfoundland and Labrador, for the purpose of making researches relative to natural history ; and in 1763 embarked with his friend, Dr. So- lander, in the first voyage round the world made by the great captain Cook. In the course of this expedition Mr. Banks, in traversing the rocks of Terra del Fuego, narrowly escaped pe- rishing from intense cold. In consequence of a misunderstanding with captain Cook, he did not join, as he intended, in the expedition of 1772; but the same year undertook a voyage to the Western Isles of Scotland and to IceJand, in the course of which he made important additions to our knowledge of those regions. About this time he received the compliment of a diploma of LL. D. from his alma mater. In 1778 he was

made a baronet and elected president of the Royal So- – ciety. Some unpleasant dissentions, which arose in the society not long after, were almost the only circumstances which occurred to inter- rupt his tranquillity. These, however, subsided, and the remainder of his life was passed amongst saientinc associates, and ihe prosecution of re- searches connected with natural history. His house was always open to the learned world. He died June 19, 1820, at his seat at Spring Grove, Middlesex. The published writings of Sir Joseph Banks are neither numerous nor im- portant. They consist of papers in the Philoso- phical Transactions, the Archseologia, the Trans- actions of the Horticultural Society, and other periodical works ; and a small tract, entitled A Short Account of the Causes of the Diseases in Corn, called by Farmers the Blight, the Mildew and the Rust, with plates. London, 1803, 4to. This impression was only for private distribution; but an edition in 8vo. was published in 1805. Sir Joseph possessed a noble library of works on natural history, of which an admirable catalogue, in five vols. 8vo. was compiled by his librarian Mr. Dryander.

BANKS-BRAE, a hill of Scotland, in Renfrew- shire, on the south-west border of the parish of Kilbarchan, beautifully adorned with plantations.

BANKS1A, in entomology, a species of pa- l>ilio, (nymph), with angulated wings; brown above, with a yellowish disk. Fabricius. It is a native of New Holland, and the papilio isinene of Cramer.

BANKSIA, in botany, a genus of the monogy- nia order, and tetandria class of plants. The amentum is scaly, the corolla consists of four petals. The antherse are in the cavity of the folds and sessile ; the capsule is bivalvular ; and the seed is solitary, and bipartite. There are four principal species, viz. 1. B. dentata; 2. B. ericsefolia ; 3. B. integrifolia ; 4. B. serrata ; all natives of New Holland. See Mr. Brown's Transactions of the Linnaean Society, vol. x. p. 202; and Commentaries to the Hortus Kew- ensis, vol. i. p. 213.

BANKSIA ABYSSIMCA, a beautiful Abyssinian tree, so named by Bruce

BANKS1I, a species of scarabaeus melontha; described by Fabricius, from a specimen in the museum of Sir Joseph Banks. The head and thorax are black ; wing-cases villose, and legs testaceous ; abdomen short and retuse.

BANKSII, a species of cimex (rcduvius), that inhabits India. It is rufous

above, with black wings; abdomen deep black; border rufous.

BANKSII, a species of chrysomela that inha- bits Calabria. It is brassy above, beneath tes- taceous.

BANKSII, a species of cerambyx (lamia), that is found at the Cape of (Jood Hope. It is of a grayish color ; thorax slightly spinecl ; wing-cases speckled with ferruginous, and marked with two cinereous bands.

BAMLKL'UA, BAMI.V.I-, or BANMI.EUGA, in writers of the middle age, the territory within which the jurisdiction of municipal magistrates, or ordinary judges of a city, town, or the like, is confined: so called, because within this tract they make their proclamations, prohibitions, and other acts of justice and policy, comprised under the name ot ban or bannum.

HAVvlORK, KII.AN N'.vx, Gael. i.e. the island of great women; the ancient name of the inland of l;.l-g.

B.\~\, from the Brit, ban, i.e. clamor, a proclamation, public notice, command, or prohi- bition.

BANN, in ancient jurisprudence, denoted proscription or banishment for a crime proved; because anciently published by sound of trumpet; or, us \ ossms thinks, because those who did not appear at the above-mentioned summons, were punished by proscription. Hence, to put a prince under the bann of the empire, is to de- clare him divest- 'd of all his dignities. The s>;itt nee denotes an interdict of all intercourse and oitices ot humanity with ti.e offender; the l"::n of v, .nch si.eins taken from that of the Ito mans, v. kmi-hed persons by forbidding them ti'.e IK,- n| lire iirfl w:;ter. Sometimes also ci- ties were j,:ii under the imperial bann; that is, sirli.ii' i of their ri-hts an I privileges. The .'.ciuli s a pecuniar; mulct, or penalty,

laid on a delinquent for offending against a bann.

BANN, in military affairs, a proclamation made in the army by beat of drum, sound of trumpet, &c. requiring the strict observance of discipline, either for the declaring a new officer, or punishing an offender.

BANN, a river of Ireland, descending from the north of the mountains of Mourne, and flow- ing north-west into the Lough Neagh : again is- suing from the north side of that lake, it passes Coleraine, and enters the sea a few miles east of Lough Foyle. Its course, including the lough, is about seventy miles; and, with the canal of Newry, which joins it to the Irish sea, it makes the north-east portion of Ireland a peninsula.

BANN, or BANNUS, a title anciently given to the governor or viceroy of

Croatia, Dalmatia, and Sclavonia.

BANN, EPISCOPAL, bannus episcopalis, a mulct paid to the bishop by those guilty of sa- crilege and other crimes.

BANN OF HARVEST, or VINTAGE, &c. in the ci-devant French customs, imported a prohibition to reap, or gather the grapes, without the leave of the lord.

BANNS OF MARRIAGE are solemn notices of matrimonial contracts, made in the parish-church before marriage; that if there be any objections to either party as to prior engagements, &c. there may be an opportunity of making them.

The publication of banns, popularly called asking in the church, was intended to prevent clandestine marriages : but a licence may be ob- tained for the marriage, and then this ceremony is omitted : but ministers are not to celebrate matrimony between any persons without a li- cence, except the banns have been first pub- lished three several times upon pain of suspen- sion, &c. The use of matrimonial banns is said to have been first introduced in the Gallican church, though something like it obtained even in the primitive times : and it is this that Ter- tullian is supposed to mean by trinundina pro- mulgatio. The council of Lateran first extended and made the usage general. By the ordinance of Blois, no person could validly contract mar- riage, without a preceding proclamation of three banns; nor could any person whatever be ex- empt except for the two last.

BANNS, PAPAL, solemn anathemas, or excom- munications, attended with curses, &c.

BANNAGHEll, or BANAGHER, a town of Ire- land, in King's county, Leinster, on the Shan- non, fifteen miles south of Athlone.

BANNALEC, a town of Brittany, France, department of Finisterre, arrondissement of Quimperle, the head of a canton ; has 4700 in- habitants. It is four miles from Rosrporden and six from Quimperle'.

BANNALIS MOLA, or BANNAL MFLL, a kind of feudal service, whereby the tenants of a dis- trict are obliged to carry their corn to be ground at a certain mill, or to be baked at a certain oven, for the benefit of the lord. This in Scot- land is called thirlage.

BANNEC, an island in the English channel, near the coast of France. Long. 4►► 55. W., lat. 48'J 25′ N.

Fr. banmere, Ital. banda, ban-

From bandvo, signum ; bandvjan, significare. Bannerol, or more properly banderol, is derived from banderolle, Fr. Spenser writes it bannerall ; and the old Fr. is banneralle. The banner, bandroll, or bansegn, is probably the sign of union, which fastened to a pole, may be furled and unfurled at pleasure, like a roll of canvass or silk ; and which armies and other bodies of men elevate as a standard, which distinguishes the party and cause which they have espoused, or the common purpose to which they have bound themselves. ‘ We find (say the writers in the Encyclopaedia Britannica), a multiplicity of opinions concerning the etymology of the word banner ; some deriving it from the Latin bandum, a band or flag ; others from the word bann, to summon the vassals to appear in arms ; others again from the German ban, a field or tenement, because landed men alone were allowed a ban- ner ; and finally, there are some who think it is a corruption of panniere, from pannus, cloth ; be- cause banners were originally made of cloth.

Lift ye up a banner upon the high mountains.

Isaiah

Then To tryumphe ! O great beautie’s queen, Advance the banner of thy conquest hie.

Spenter.

From France there comes a power who already Have secret spies in some of our best ports, And are at point to shew their open banner.

Shakspeare.

All in a moment through the gloom were seen

Ten thousand banners rise into the air,

With orient colours waving. Milton,

A gentleman told Henry, that Sir Richard Croftes,

made banneret at Stoke, was a wise man ; the king

answered, he doubted not that, but marvelled how a

fool could know. Camden.

King Oswald had a bannerol of gold and purple set

over his tomb. Id.

Philip Augustus, and Richard the First, are the

only kings of France and England who have fought

under the same banners. Gibbon.

BANNER, in heraldry, such a flag is borne as a charge, in coats of arms, and when open and flying is called ‘ the banner disveioped,’ as ‘ the field is Ju- piter, three banners disveloped, in bend Sol,’ which are said to have been the arms of the king- dom of Baldachia.

BANNER OF DENMARK, or the DANISH BANNER, was a famous magical standard, taken from the Danes by Alfred the Great, in spite of its miraculous powers and properties, which are thus described by Sir John Spelman. ‘ It was a banner with the image of a raven magically wrought by the three sisters of Hungar and Ilubba, on purpose for their expedition, in re- venge of their father Lodebroch’s murder, made, they say, almost in an instant, being by them at once begun and finished in a noontide; and be- lieved by the Danes to have carried great fa- tality with it, for which it was highly esteemed by them. It is pretended, that being carried in

battle, towards good success it would always seem to clap its wings, and make as if it would fly ; but towards the approach of mishap, it would hang down and not move !’

The BANNER OF FRANCE was the largest and richest of all the flags borne by the ancient kings in their military expeditions. St. Mar- tin’s cap was in use 600 years as the banner of France ; it was made of tafety, painted with the image of that saint, and laid one or two days on his tomb to prepare it for use. This was suc- ceeded by the famous auriflamma, or oriflamme. About the year 1100 was introduced a more pompous apparatus; the mode of which was borrowed from Italy. The banner-royal was fastened to the top of a mast, or some small tree planted on a scaffold, borne on a chariot drawn by oxen, covered with velvet housings, decorated with devices, or cyphers of ‘.he reigning prince. At the foot of the tree was a priest, who said mass early every morning, len knights mounted guard on the scaffold nigh; and day, and as many trumpets at the foot of the tree neyer ceased flourishing to animate the troops. This cumbrous machine continued in use about 130 years. Its post was in the centre of the army. And here the chief feats were performed to carry off and defend the royal banner : for there

was no victory without it ; nor was an army reputed vanquished till they had lost this banner.

BANNERET, from banner. A knight made in the field, with the ceremony of cutting off the point of his standard, and making it a banner. They are next to barons in dignity ; and were anciently called by summons to parliament. It is also the name of an officer or magistrate of Rome towards the close of the fourteenth cen- tury. The people of that city, and throughout the territory of the church, during the disputes of the antipopes, had formed a kind of republican government, where the whole power was lodged in the hands of a magistrate, called senator, and twelve heads of quarters called bannerets,by rea- son of the banners which each raised in his district. BANNERETS, an ancient order of knights, or feudal lords ; who, possessing several large fees, led their vassals to battle under their own flag or banner, when summoned thereto by the king. They are also called in ancient writers milites, vexilliferi, and vexillarii, bannerarii, bannarii, banderisii, &c. There are two kinds of knights, great and little ; the first whereof were called bannerets, the second bachelors ; the first com posed the upper, the second the middle nobility. The banneret was a dignitary allowed to march under his own flag, whereas the bachelarius eques followed that of another. To be qualified for a banneret, one must be a gentleman of family, and must have a power to raise a certain number of armed men, with estate enough to subsist at least twenty-eight to thirty men. This must hare been very considerable in those days ; because each man, besides his servant, had two horsemeu to wait on him armed, the one with a crossbow, the other with a bow and hatchet. As he was not allowed to be a baron who had not abore thirteenknights'fees,sohe was not admitted to be a banneret if he had less than ten. The order of ban- neret, according to Spelman, was a middle one, between a baron and a simple knight; called

sometimes also vexillariug minor, to distinguish him from the greater, that is from the baron, to whom alone properly belonged the jus vexilli, or privilege of the square flag. Hence the banneret was also called banneretus, quasi baro minor ; a vord frequently used by English writers in the same sense as banneret was by the French, though neither of them occur before the time of Edward II. Some will have bannerets to have originally been persons who had some portion of a barony assigned them ; and enjoyed it under the title of baro proxnaus, and that with the same preroga- tives as the baron himself. Some again find the origin of bannerets ir. France, others in Brittany, others in England. These last attribute the insti- tution of

bannerets to Conan, lieutenant of Max- imus, who commanded the Roman legions in England under the empire of Gratian in 383. This general, say they, revolting, divided England into forty cantons, and in these cantons distri- buted forty knights, to whom he gave a power of assembling, on occasion, under their several banners, as many of the effective men as were found in their respective districts : whence they arc called bannerets. However this be, it appears from Kroissard, Sec. that anciently such of the military men as were ricli enough to raise and subsist a company of armed men, and had a right tn do so, were called bannerets. Not, however, that these (ju;ili!ic;itions rendered them knights, but only bannerets; tli.e appellation of knight being only added thereto, because they were sim- ple knights before, Bannerets were second to none but knights of the garter. They were repu- ted the next degree below the nobility, taking precedence next to the knights of the bath, and were allowed to bear arms with supporters, which HOMO else may under the degree of a baron. In l'nm

i_ht dragoons, because the ceremony did not take jilaee where the i nu'aucnu'nt happened. i ,.|ita,n Troilojic of the li oval Navy was another kn jjil-bamieret, created by (leu. ill., after lord Duncan's victory at ('ampenlown, but as this ur.olved Mime heraldic difficulties on points of precodencv, and then; was some apprehension oi jealousy on tin1 j.art ot baronets, the practice ˆcontinued. In Switzerland the banneret ua— a civil oiiieer like, the (lonfalonier in some 1 1 the Italian iv|> iblies ; and at Lausanne the tit.e was eon!', rred on thost; magistrates who had

◆◆◆◆◆◆◆.ivu .;e d!' larrying the banner of that city at die eonfe leiation of the cantons.

i'o: m of civatiii _: bannerets was on a day of battle; the candidate presented his Hag to the king ji guiind, wiio cutting otF the train or skirt

thereof, and making it a square, returned itagam, the proper banner of bannerets, who are nence sometimes called knights of the square flag. There seems to have been bannerets created either in a different manner, or by others than the sovereign ; since King James, in the patent of baronets, gives them precedence to all knights bannerets, except such as are created by the king himself in the field ; which implies, either that there are some of this Order created out of the field, or by inferior persons.

BANNEROL, more properly BANDEROL, from banderole, Fr. a little flag or streamer.

BAN'NIAN, n. s. 1. A man's undress, or morning gown, such as is worn by the Bannians in the East Indies. 2. A native of India ; now usually applied to a Gentoo servant employed in managing the commercial affairs for

Englishmen.

BANNIAN-DAY, in common parlance, a day of self-denial ; of shifts and expedients ; derived probably from sacred or fast-day.

BANNIAN-TREE. A sacred fig-tree, growing in India, called by our old herbalists ‘ the arched Indian fig-tree;’ from the various branches of which grow little sprigs downwards, till they reach the ground, take root, as Milton has observed,

And daughters grow About the mother tree, a pillar’d shade, High o’er-arch’d, and echoing walks between. Paradise Lost

BANNIANS. See BANIANS.

BANNIER (John), a Swedish general, born in 1601. He served under Gustavus Adolphus, and on his death became commander-in-chief. After gaining many victories, and taking several important places, fortune favored the Imperial- ists, and they at last drove him out of Bohemia. He died in 1641, on his retreat from the German dominions.

BANNIMUS, q. d. we banish, from the obso- lete verb bannio, the form of expulsion of any member from the University of Oxford, by affix- ing the sentence up in some public place, as a promulgation of it.

BANNITUS, an exile or outlaw.

BAN’NOCK, n. s. A kind of oaten or peas- meal cake, mixed with water, and baked upon an iron plate over the fire ; used in the northern counties, and in Scotland.

BANNOCKS differ from cakes, in being thicker and softer; and their taste is thought to be improved by being baked in the embers, or on a stone placed before the fire, or a slate above it.

BANNOCK-BURN, a village of Scotland, in Stir- lingshire, seated on the Bannock, from whence it is named, famous for the decisive battle fought near it between king Robert Bruce of Scotland, and Edward II. of England. A.D. 1314.

It is to be regretted that to poetical narratives only (that of the Scottish poet Barbour particu- larly) we must look for the existing detail of the events of this memorable day. They, how- ever, were so important, and have since been so frequently alluded to by poets and historians, that we cannot omit to furnish the reader with the best account we can digest. On Saturday the 22d of June, Bruce having received intelli- gence that the English had

reached Edinburgh,

drew his army out of his encampment to take up a position in the neighbourhood of Stirling. Here he occupied a wood, extending on the right towards the church of St. Ninian, and on the left nearly, it is supposed, in the direction of the road from Edinburgh to Stirling; directing a number of small pits to be dug knee-deep, and covered with turf, which concealed at the bottom a kind of spikes called calthrops, designed for the destruction of the enemy's cavalry. The po- sition was besides protected by a neighbouring morass. On Sunday, the 23d, an alarm being given of the approach of the enemy, Bruce pre- pared to receive them. His army heard mass: and in answer to a proclamation that whoever would, might retire, all unanimously declared their resolution to conquer with him or die. His right wing was commanded by his brother Ed- ward, the left by lord Uouslas and the younger Stewart, and the centre by his nephew, Randolph, earl of Murray, while he himself commanded a reserve posted on a rising ground. The English army meanwhile had sent a squadron of 800 horse for the purpose of gaining Stirling castle by a circuitous route, which the king perceiving, reproached the earl of Murray with leaving the place exposed, and the latter hastened with 500 spearmen to turn the enemy, an object which he with difficulty accomplished. The van of the English army soon after appeared in sight. Henry de Bohun, a knight of the Hereford fa- mily, advancing a bow-shot before his comrades, now distinguished ' the Bruce' from a crown sur- mounting his helmet, and the manner in which he disposed his troops, he himself being in ad- vance of his front. The Englishman advanced upon him, but his spear missing the king, the latter, rising in his stirrups, cleft his opponent's helmet with a single blow of his battle-axe, and Bohun fell : this was the only memorable event the first day. At the succeeding dawn Bruce reminded his troops of the past conduct of the enemy be- fore them, their usurpation of the government of the country, and their barbarous treatment of those that had fallen into their hands, that they therefore were now to fight for all they held dear, their own liberty, and the comfort and existence of their families. He showed them his excellent position, urged the necessity for order, and to preserve their line unbroken, while he promised the amplest rewards to all who exerted them- selves, and to their heirs if they fell. At day- break Maurice, Abbot of Inchaffray, celebrated mass in front of the army, and exhorted the sol- diers, bearing a crucifix in his hand. The troops now breakfasted on the ground, and Bruce cre- ated some of the most distinguished of his fol- lowers knights. Edward also in person com- manded the English army, attended by a body- guard of 500 cavalry : among his troops were 52,000

archers. He likewise was confident of victory, but the same unanimity did not subsist as among his foes ; and the Scottish host having knelt to utter a prayer and receive benediction, he exclaimed to those around him, ‘ Behold, they kneel for mercy!’ But they quickly unde- ceived him; ??? the armies approached, and a contest ensued, unexampled in the annals of British history. The English van, composed of

cavalry, charged the right wing of the Scots in full gallop. Here Edward Bruce commanded, and received them with intrepidity. While this wing was engaged, Randolph advanced to meet the main body of the enemy ; and the left wing also hastened into the conflict. Repeated charges of cavalry in vain attempted to break the Scottish line ??? it was impenetrable ; everywhere they were resisted and driven back. At this time the battle became general. The Scots were annoyed by the English archers ; but they fought despe- rately with their spears, swords, and knives, and also with iron clubs or maces, and found the ad- vantage of acting in a compact bo ly, while the English forces were too unwieldy to be concen- trated. The Scots were also protected by their light armour, which at the same time did not restrain their movements. Edward, the king’s brother, was hard pressed by the English cavalry, and Murray, making a movement to his support, was almost overwhelmed by the multitude of the enemy, who presented a vast and extensive front. The Scottish king now directed Sir Ro- bert Keith to take the archers in flank with 500 horse, and their impetuosity proved irresistible. The enemy were overthrown, and fled with pre- cipitation. The earl of Gloucester, endeavour- ing to rally the fugitives, was unhorsed and slain. The numbers of the English finally proved their destruction : for those who recoiled threw the rest into disorder, and those who fell were trampled to death. The battle, notwithstanding, continued to rage, and victory was long and fu- riously contested. But, at length, the retainers of the Scottish camp, who had previously been sent to a valley in the rear, suddenly appeared on a neighbouring height, and the enemy, be- lieving it a strong reinforcement, took at once to flight. Edward, with 500 horse, sought shelter in Stirling castle, but the governor found means to dissuade him from remaining there. The rout of his army became complete. Some sought re- fuge among the rocks of the castle, others hur- ried to the river Forth, and they were drowned ; but the most terrific carnage was in the valley of the Bannock, for the ascent towards the east being difficult, and probably impeded by wood, the fugitives were exposed to inevitable destruc- tion. Scarcely any who took that direction es- caped ; and the course of the river is said to have been completely dammed up by the English who were slain. Edward, hotly pursued, con- tinued his flight, followed by sixty horse, to Winchburgh, twenty miles from the field of battle, where, again mounting, the pursuit was continued to Dunbar castle, whence he was ultimately conveyed by a vessel to England. The loss on both sides in this memorable

battle was immense. Barbour asserts that the English had 30,000 men and 200 knights killed : but the truth of this calculation is questionable, as it is said elsewhere that only forty-two knights were slain, and sixty made prisoners. Barbour also affirms that only two Scotsmen of note fell on the occasion, Sir William Vipont and Sir Walter Ross. The earl of Gloucester's fate, who was the near relative to Edward, was much la- mented ; and historians state that had the Scots known him he would not have fallen. His body

was carried to St. Ninian's church, and sent with that of lord Clifford to England. ' O day of vengeance and fatality,' one of our historians exclaims, ' hateful accursed day, to be blotted from the circle of the year; a day which tar- nished the glory of England, despoiled our na- tion, and enriched its enemies to the amount of ††200,000. How many valiant youths and il- lustrious nobles, how many excellent horses and beautiful arms, how many precious vestments and golden vessels, were lost in that single unfor- tunate day.' The privy seal of Edward was among the spoils, and afterwards restored by Robert. He is said, indeed to have acted upon this victory with that clemency and moderation which has rarely been equalled.

The consequences of this great battle were the surrender of the fortresses of Scotland to Bruce, the liberation of the inhabitants from a foreign yoke, and the firm establishment of that prince upon the throne. Memorials of it are said still to remain near the spot, where armour and weapons are frequently dug up ; and at an inter- val of 500 years the inhabitants of the vicinity met on the 24th of June 1814, to celebrate the triumph of ttieir ancestors. Sir Walter Scott h;is commemorated it with enthusiasm in his Lord of the Isles.

BANNOW, a town of Ireland, ten miles south-west of "Wextbrd.

BANNUM, in law, the utmost bounds of a manor or town ; bannum capitis was a mulct paid in cattle.

BANXUS Pi. i, the bann of God, an expres- sion used by writers of the middle age, for excommunication.

BANMS KI.GIS, a proclamation of silence anciently made by the court, before the encounter of the, champions in a combat.

BANOLAS, a town of Spain, in Catalonia, district of Gerona, with 3000 inhabitants, and a considerable trade in linen.

BANOS, a town of Leon, Spain, thirty miles from 1'lasencia, in Kstremadura. The number of families is about 300, who are employed prin- cipally in the manufacture of linen. It takes its name from the hot sulphureous baths to the north-east of the town. Here are to be seen the remains of a Roman mound or dyke. The territory is covered with olives, chestnuts, and vines ; the last produces annually 15,000 arobas of wine.

BAN'OV, the name given by the people of the Philippine Inlands, to a species of hawk, some- what larger than our sparrow-hawk, of a yellowish color on the back and wings, and white under the belly. It is the most common species of hawk in that part of the world, and is very voracious.

HA.YCjrET, r. &n.v Fr. banquet, Ital. BA.N'I.HT.T.VNT, tlianchetto, Span, ban

i <]uctc.,V(inqueto; Germ. J and Out.

B \N'(,TKT[N(;. J and Out. bancket.

Derivrd from I'unl;, a bench or table, around which messmates or companions sit to eat or feast together. It now signifies a luxurious and sumptuous entertainment. \Yhether the feast, or the. dessert which succeeds it, or both,

Shall the companions tiKikr1 a banquet of him? ❖❖❖ SLaii thcj part him amou.. thf merchants ? Job.

In which how many wonders doe they reeds, To their conceipt that others never see ! Now of her smiles with which their scales they feede. Like gods with uectar in their banketi free. Spenser.

The mind shall banquet, tho' the body pine : Fat paunches make lean pates, and dainty bits Make rich the ribs, but bankerout the wits.

Shahtpeare. Welcome his friends, Visit his countrymen, and banquet them. />/.

In his commendations I am fed , It is a banquet to me. Id.

You cannot have a perfect palace, except yi-u have two sides ; a side for the banquet, and a side for the household ; the one for feasts and triumphs, and the other for dwelling. Bacon.

They were banqueted by the way, and the nearer they approached, the more increased the nobility.

Sir J. Hayward.

In a banqueting-hou.se, among certain pleasant trees, the table was set near to an excellent water-work.

Sidney.

Home then, my lambs; the falling drops eschew To-morrow shall ye feast in pastures new. And with the rising sun, banquet on pearled dew.

Fletcher's Purple Island.

When Venus was born all the gods were invited to a banquet. Burton's Anatomy of Melancholy.

If a fasting-day come, he hath on that day a ban- quet to make. Hooker.

At that tasted fruit,

The sun, as from Thyestan banquet, turn'd His course intended. Milton.

So long as his innocence is his repast, he feasts and banquets upon bread and water. South.

That dares prefer the toils of Hercules, To dalliance, banquets, aud ignoble ease.

Dryden.

At the walk's end behold, how rais'd on high, A banquet-house salutes the southern sky. Id.

*I purpos'd to unbend the evening hours, And banquet private in the women's bow*ra.*

Prior

With royal banquets feasts my longing soul, And seals his truth with sacramental wine.

Mrs. Route.

BANQUETING-HOUSE, BANQUETING ROOM. The ancient Romans supped in the atrium, or vestibule of their houses ; but, in after-times,

magnificent saloons, or banqueting rooms, were built for the more commodious and splendid entertainment of their guests. Lucullus had several of these, each distinguished by the name of some god ; and there was a particular rate of expense appropriated to each. Plutarch relates with what magnificence he entertained Cicero and Pompey, who went with design to surprise him, by telling only a slave who waited, that the cloth should be laid in the Apollo. The emperor Claudius, among others, had a splendid banquet- ing room named Mercury. But every thing of this kind was outdone by the lustre of that cele- brated banqueting house of Nero, called domus aurea; which, by the circular motion of its partitions and ceilings, imitated the revolution of the heavens, and represented the different sea- sons of the year, which changed at every service, and showered down flowers, essences and per- fumes, on the guests. See SALOON.

BAN QUETTE, n. s. Fr. in fortification, a small bank at the foot of the parapet, for the soldiers to mount upon when they fire.

BANSTICKLE, in ichthyology. See GAS-

TEROSTEUS.

BAN'STICKLE, n. s. A small fish, called stickleback.

BANTAM, a large town of the island of Java, in the East Indies, once the capital of an indepen- dent state. But its harbour has been gradually choked up with soil from the surrounding hills : and the air is so unhealthy that its inhabitants have been compelled to desert the place almost entirely. In 1595 the king of Bantam called in the assistance of the Dutch of Java, against the Portuguese, and as a return for their aid allowed them to build a factory here, where also the English, under Captain Lancaster, established one in 1603. At this time the sovereign had a commercial navy of his own, and until the latter end of the seventeenth century, when he sent an embassy to England, to request assistance against the Dutch. In the following year the latter took his capital, and in 1683, they entirely dispossessed him of the government; the English factory withdrawing to Surat.

The Dutch East India Company now keep a garrison here, nominally to defend the king, but in fact to have him always in their own power. The

chief authority on the part of the Dutch East India Company was vested in a senior merchant, with the title of Commandant, who had the management of the trade, which consisted chiefly in pepper and some cotton yarn. To the com- mandery at Bantam belonged the residencies of Lampong, Toulang, Baunang, and Lampong Samanca, situated on the southern part of Suma- tra. The sovereigns possess the power of life and death over their subjects, but pay an annual tribute of six million pounds of pepper to the Dutch.

The climate of Bantam, says Mr. Hamilton, is still more pestilential than that of Batavia, of which a remarkable instance is mentioned. On the night of the 18th March 1804, the king of Bantam was murdered by one of his grand nephews, who had concealed himself under his bed, and who was afterwards discovered and put to death. An embassy was sent from Batavia, to elect and instal the new king in the name of the Dutch Company, part of which ceremony consists in having him weighed in a pair of scales at the palace gate, after having feasted for fifteen days. This deputation was composed of a counsellor of India, four senior merchants, a major, lieutenant, serjeant, two corporals, eighteen French and eighteen Dutch grenadiers. The external forms- occupied fifteen days ; at the end of which time, or soon after their return, the whole of the Euro- pean grenadiers and subalterns died, except two or three of the French who escaped. The coun- sellor, his wife who had accompanied him, the major and four merchants, all returned with putrid fevers, which brought them to the brink of the grave, and the secretary died . In 1 81 1 , after the conquest of Batavia, the town and district of Bantam surrendered to the British arms -without resistance. Bantam twas restored to the Dutch by the peace of 1814. Long. 106►► 31′ E., la.t. 6►► 14′ S.

BANTAM, or dwarf cock, in zoology, a well known variety of the species phasianus gallus. See PHASJANUS.

BANTAM WORKˆ a kind of painted or carved work, resembling that of Japankonly more gaudy Some are flat, lying even with the black, andl others highly embossed, as we find in many large screens. The Japan artists work chiefly in gola and other metals ; and those of Bantam generally in colors, with a small sprinkling of gold here and there : for the flat Bantam work is done in colors mixed with gum-water, proper for the thing designed to be imitated

BANTER, v.&n. -} The derivation unknown.

BAN'TERER, > Perhaps from badiner, Fr.

BAN'TERING. j It signifies to mock with ridicule. A lighter kind of raillery.

Playing upon the fretftilness of the testy, the simplicity of the ignorant, the self-importance of the proud, and the conceitedness of the vain. It is sometimes employed against the infirmities of the good and the virtuous. A species of humor that is more allied to malignity than kindness, and which sometimes meets with its reward.

"Pis thus, malicious deity, That thou hast banter'd wretched me ; Thus made me vainly lose my time, Thus fool away my youthful prime.

Walsh. On loving one I never saw.

The magistrate took it that he bantered him, and

bade an officer take him into custody. L' 'Estrange.

It is no new thing for innocent simplicity to be the

subject of bantering drolls. Id.

This humour, let it look never so silly, as it passes

many times for frolic and banter, is one of the most

pernicious snares in human life. Id.

What opinion have these religious banterert of the

divine power ? Or what have they to say for their

mockery and contempt? Id.

And the grave affairs of state have been treated

with an air of irony and banter. Shafteibury.

Could Alcinous' guests withhold From scorn or rage ? Shall we, cries one, permit His lewd romances, and his bant'ring wit? Tote.

Metaphy sicks are so necessary to a distinct concep- tion, solid judgment, and just reasoning on many sub- jects, that those who ridicule it, will be supposed to make their wit and banter a refuge and excuse for their own laziness. Watt.*

BANTIUS (L), a spirited youth of Nola, whom Hannibal found almost dead among those who had fallen in the battle of Cannae. Having been kindly treated, and sent home with great generosity, he took it into his head to betray his country to such a humane enemy; but Marcellus, the Roman

general, being informed of it, repri- manded Bantius, and he afterwards continued steady in the Roman interest.

BANTLING, n. s. If it has any etymology, it is perhaps corrupted from the old word bairn, bairnling, a little child. A low word ; so says Johnson. But it is usually applied to a child born, or at least begotten, before marriage. If the object of their love

Chance by Lucina's aid to prove,

They seldom let the bantling roar

In basket at a neighbour's door. Prior.

BANTRY BAY, called also BEERHAVEN, a capacious bay of Ireland, on the coast of Cork, capable of containing all the shipping of Europe. It is twenty-six miles long, three broad, and forty fathoms deep in the middle, here are two small islands, Bear and Whiddy. Coral is

dredged from the bottom of the hay, and used as manure in the neighbourhood. Fish were for- merly very plentiful here ; but of late the business has declined. In May, 1689, a French fleet, which had brought succours of arms, ammuni- tion, and money, to the adherents of king James, was attacked in this bay by Admiral Herbert; and in December, 1796, another French fleet, consisting of seven sail of the line, two frigates armed en flute, and seventeen transports, an- chored here for a few days, and landed an officer and eight men in a boat, who were taken prisoners.

BANTRY, a large barren barony of Ireland, in the county of Cork.

BANTRY, a sea-port town of Ireland, in the county of Cork, and province of Munster, seated on the bay, about thirty miles west of Cork, and 164 south-west of Dublin.

BANYAN TREE, in botany, a name sometimes given to the ficus Indica.

BANYOUWANGY, a Dutch settlement of Java, containing the residence of a native chief. The Dutch garrison the fort to protect themselves and commerce from the numerous pirates of the straits of Bali.*

BAN/A, a town of Congo Proper, on the river Zaire.

BA()I>AB, the name given by Prosper Albi- nus to (lie African calabash. See ADANSONIA. This is the largest vegetable production known: although the trunk is not above twelve or fifteen feet high, it is from sixty to eighty-five feet round, and the lower branches extend almost horizon- tally about sixty feet. Their own weight bending thi'se extremities to the ground, they form an hemispherical mass of verdure about 120, and sometimes 150, fed in diameter. The flowers of this plant are in proportion to the size of the tree, and are followed by a fruit pointed at both ends, about ten inches long and five or six broad, covered with a kind of grevn down, under which is a hard, black, radiated, rind. The fruit hangs to the tree by a pediele two feet long. It con- tains a whitish, spongy, juicy, substance of an acid taste, and seeds of a brown color, of the shape of a kidney bean, which are called goui \ hen dry. the pulp by which the seeds are sur- rounded, is powdered, and brought into Europe under the name of terra sigillata lemnia. The kernel contains a large proportion of alkali, when burnt, and the negroes mix it with palm oil to make soap. The bark is called lalo; the negroes dry and powder it; after which it is pre- served in little cotton bags, and two or three pinches arc put into their food: it is mucilagi- nous and supposed to check perspiration. This

tree is a native of the west coast cf Africa, from the Niger to the kingdom of Benin.

BAOL, a small kingdom of wtstern Africa, between the Senegal and Gambia. It lies south of Cayor, by which it has recently been con- quered. It has a capital of the same name.

BAPAUME, a strong town of France, in the ci-devant French Netherlands, now included in the department of the Straits of Calais. Fine thread and lawn are made here. De Ville and Vauban fortified it in 1641, and France obtained the cession of it in 1659. Situate eighteen miles south-east of Arras.

BAPHE, in the writings of the ancients, a word used to express that fine red color with which they illuminated the capital letters in ma- nuscripts, at the beginning of chapters. It is also called by some encaustum sacra, and by others coccus and cinnabaris. It was a very ele- gant color, and said to have been prepared of the purple taken from the murex, and some other ingredients. It was called encaustum, from its resembling the fine bright red used in enamels.

BAPT./E, in antiquity, an effeminate volup- tuous kind of priests of the goddess Cotytto, at Athens ; so called from their stated dippings and washings, by way of purification ; their rites were performed in the night, and consisted chiefly of lascivious dances. Eupolis having composed a

comedy to expose them, entitled fSairrot, they threw him into the sea, to be revenged ; and the same fate is also said to have befallen Cratinus, another Athenian poet, who had written a comedy against the Baptae, under the same title. Others deduce the denomination Baptae from the prac- tice of dyeing and painting their bodies, especi- ally their eyebrows, and officiating at the service of their deity, with the parade and demureness of women. Juvenal describes them in this light. Stat. ii. ver. 91.

BAPTES, in natural history, a name given by the ancients to a fossile substance used in medicine ; they have left us but very short de- scriptions of it. Pliny only tells us, that it was soft and of an agreeable smell. Hence Agricola judges, that it was probably one of the bitumens

BAPTISECULA, in botany, a name given by some authors to the blue corn-flower, called the cyanus or blue-bottle.

BAPTISIA, in botany, a genus of plants, class, decandria; order, monogynia. The gen- eric character is : CAL. semi four-fivefid, bilabi- ate : COR. papilionaceous, petals nearly equal in length: VEXILLUM reflected laterally : STAM. de- ciduous ; legume ventricose, pedicellate, many-seeded. ??? Hort. Kew. It is a genus closely allied to podalyria, and containing four species.

BAPTISM. BAP'TIZE, v.

BAPT'IST, BAP'TISTERY, BAPTIST'ICAL, BAPTI'/ATION.

~) Derived from the Gr./3a7rrw I and fiairrtZu. The primary BAPTI'ZER, n. \ meaning is to dip, to plunge, BAP'TISMAL, 'v to immerge. Protestant Chris- tians use it strictly in its pri- mary sense, or with greater latitude of meaning, accord- ing to their respective tenets, on the subject of the rite of baptism, as an ordi- nance of Christianity. It is sometimes employed figuratively, to express overwhelming sorrows ; the covering of the earth by the dews of heaven ; and the sacred influences of the spirit of God in cleansing the heart.

I have a baptism to be baptised with, and how am I straitened till it be accomplished. Luke.

Certes, if he' be baptised without penitence of his old gilt, he receiveth the maik of baptisms, but not the grace, ne the remission of his sinnes, til he have veray repentance. Chaucer. The Persones Tale.

Speak, my Lord ;

And we will hear, note, and believe in heart, That what you speak is in your conscience wash'd As pure as sin with baptism. Shakspeare,

His baptisms gives virtue to ours. His last action (or rather passion) was his baptizing with blood ; his first was 'his baptization with water : both of them wash the world from their sins.

Hall's Contemplations.

Baptism is given by water, and that prescript form of words which the church of Christ doth use.

Hooker.

He to them shall leave in charge, To teach all nations what of him they learn'd, And his salvation ; them who shall believe, Baptizing in the profluent stream, the sign Of washing them from guilt of sin to life, Pure, and in mind prepar'd, if so befal, For death, like that which the Redeemer died.

Milton.

Let us reflect that we are Christians : that we are called by the name of the Son of God, and baptized into an irreconcileable enmity with sin, the world, and the devil. Rogers.

The sacrament of baptism was supposed to contain a full and absolute expiation of sin ; and the soul was instantly restored to its original purity, and entitled to the promise of eternal salvation. Gibbon.

Philosophy, baptix'd In the pure fountain of eternal love, Has eyes, indeed ; and, viewing all she sees As meant to indicate a God to man, Gives him his praise, and forfeits not her own.

Cowper's Task. Pass not unblest the genius of the place !

If through the air, a zephyr more serene, Winnow the brow, 'tis his ; and if ye trace Along his margin a more eloquent green, If on the heart the freshness of the scene

Sprinkle its coolness, and from the dry dust Of weary life a moment lave it clean

With nature's baptism, ??? 'tis to him ye must Pay orisons for this suspension of disgust.

Byrun. Childe Harold.

BAPTISM has been defined, a New Testament ००० ordinance, appointed by our Lord Jesus Christ, dS the first or initiatory sacrament of the Gospel dispensation, whereby its subjects are admitted as visible members of that spiritual society of

believers, which is scripturally denominated the ‘ Church of Christ,’ and entitled to all the privi- leges of church communion. The derivation of the word is from the Greek /3a7rri००w, which lite- rally signifies dipping or immersion, but is often used in a lower sense to express the legal ablu- tions and washings of the ceremonial law. See Heb. ix. 10. and Mark vii.8. Baptism is denominated or described by various ecclesiastical writers, in other ways ; it is sometimes called palingenesia, the laver of regeneration, salus, salvation ; afypa- y(००, signaculum Domini, or signaculum fidei, the seal of faith ; mysterium, mystery ; sacramentum fidei, the sacrament of faith, &c. Sometimes it was called viaticum, from its being administered to departing persons ; sometimes sacerdotium laici, the lay priesthood, because allowed in cases of necessity to be conferred by laymen ; some- times the great ‘circumcision, because it suc- ceeded in the room of circumcision, and was to be a seal of the Christian covenant, as that was the seal of the covenant made with Abraham. As it had Christ for its author, it was anciently styled Awpov and ˆapicr/ia Kvpiou, the gift of the Lord ; sometimes simply 5wpov, by way of eminence. And as it made men members of the church, it had the title of T००\००W < TIC, and Tt\tir], the conse- cration, and consummation ; because it gave men the perfection of Christians, and a right to partake of the To TsXeioi/, which was the Lord’s Supper. It was also entitled fivrfats and /twrayoyta, the initiation, as it admitted men to all the sacred rites of the Christian religion.

Purification by water seems so natural an em- blem to express mental purification, that the use of it has prevailed amongst nations who were never enlightened by revelation ; water was used in the religious ceremonies both of the Egyptians and Greeks; and Grotius is of opinion that it originated at the time of the deluge. According to Clemens, Alexandrinus, and Tertullian, puri- fication, by water, was the first ceremony per- formed at initiation into the Eleusinian myste- ries, which were derived from Egypt ; and Hesy- chius renders the word vdpavoc, or the waterer, by o ayvt

The Jews are said by many writers, to have used Baptism together with circumcision and sa- crifice in the admission of male proselytes : all these ceremonies, according to the same authors, having been observed in their own admission into covenant with the Deity at Sinai, when they washed their clothes, and sanctified themselves. See Exod. xix. 10. ००० 14. The female proselyte was admitted by baptism and sacrifice, and in cases where

the proselyte had children, they both circumcised and baptised, or baptised them only, according to their sex. The baptism of a proselyte was what they called metonymically his regeneration, or ‘ new birth.’

The connexion, or rather the similitude be- tween Jewish and Christian baptism has been thus exhibited by Dr. Wall’s celebrated treatise upon the latter institution .

4D(>

BAPTISM.

1. Tlie Jews required of proselytes a renun- ciation of idolatry, and to believe in Jehovah.

2. The Jews interrogated the proselyte while standing in the water.

3. The Jews baptised ihe infant children of proselytes.

4. The Jews required foi an infant proselyte that either his father, or the church of the place, or three grave persons should answer for the child.

5. A Jewish proselyte was said to be born again, when baptised.

C. The Jews told the proselyte that he was now clean and holy.

7. The Jews declared the baptised to be under the wings of the Divine Majesty, or Shechinah.

8. At the paschal season, the Jews baptised proselytes, that they might eat the passover.

9. The Jews had their proselytes of the gate.

The above statements are ingeniously drawn from the writings of Maimonides and the Baby- lonian Talmud, which was completed at the close of the fifth century, and of course affords an his- torical testimony of facts existing and believed in at that time. Spencer, who is fond of deriving the rites of the Jewish religion from the ceremonies of the Pagans, lays it down as a probable sup- position, that the Jews received the baptism of proselytes from the neighbouring nations, who were wont to prepare candidates for the more sacred functions of their religion by a solemn ablution ; that, by this affinity of sacred rites, they ‘might draw the Gentiles to embrace their religion, and that the proselytes (in gaining of whom they were extremely diligent) might the inure easily comply with the transition from Gentilism to Judaism. In confirmation of this opinion he observes,

*first, that there is no divine precept for the baptism of proselytes, God having enjoined only the rite of circumcision d'l- the admission of strangers into the Jewish re- ligion. Secondly, that, anioivj: foreign nations, the!! K'jyptiaus, Persians, Greeks, Romans, and others, it was customary that those who were to be initiated into their mysteries, or sacred rites, should he first purified by (lipping their whole !'o(]y in water. That learned writer adds, as a farther confirmation of his opinion, that the cup of blessing likewise, added to the paschal supper,
 ॐ ॐ ॐ ॐ ॐ ॐ ॐ ॐ eeins plainly to have been derived from a pagan original : for the (! reeks, at their feasts, had one*

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the ;:ood demon or god, which they drank at the conclusion of their entertainment, when the. table wa-; removed. Since, then, a rite of (i en- tile origin was added to one of the Jewish sacra- ments, viz. the passover, there can be no absurdity iu supposing, that baptism, which was added to the other sacrament, namely, circumcision, might be di rived from the same source. In the last place, he ol>st rves, that Christ, in the institution

1. The Christians required to renounce the devil, and all his works, and to believe in the Trinity.

2. The Christians put interrogatories as the catechumen was about to enter the water, when he had before answered in the congregation.

3. The Christians baptised infants.

4. The Christians observed a similar custom.

5. Our Saviour and the Apostles <;all baptism regeneration, or being born again.

6. The same term is used in the New Testa- ment : the baptised Christians are called the saints, the holy, the sanctified ॐ ॐ ॐ sanctified with the washing of water.

7. Among Christians this was shown by the gifts of the Holy Ghost: to this end the lay- ing on of hands was used, a custom, probably taken from the Jewish church.

8. The Christians at Easter administered bap . tism in a solemn manner.

9. The Christians had their catechumens, or competentes.

of his sacraments, paid a peculiar regard to those rites which were

borrowed from the Gentiles ; for, rejecting circumcision and the paschal supper, he adopted into his religion baptism and the sacred cup ; thus preparing the way for the conversion and reception of the Gentiles into his church.

Some able critics, however, who oppose the general conclusions of the Baptists upon this subject, agree with them in discarding these alleged proofs of the connexion between the Christian institute and Jewish proselyte baptism. The learned Owen says : ‘The opi- nion of some learned’ men, about the transferring of a Jewish baptismal rite (which, in reality, did not then exist), by the Lord Jesus for the use of his disciples, is destitute of all probability.’ And in his exercitations on the epistle to the He- brews, Exercitat. xiv. ‘ From this latter tem- porary institution (the washing of their clothes commanded upon the Israelites at Sinai) such as they had many granted to them in the wilder- ness, before the giving of the law, the Rabbins have formed a baptism for those that enter into their synagogue ; a fancy too greedily embraced by some Christian writers, who would have the holy ordinance of the Church’s baptism to be derived from thence. But this washing of their clothes, not of their bodies, was temporary, never repeated ; neither is there any thing of any such baptism or washing required in any prose- lyte, either man or woman, where the laws of their admission are strictly laid down. Nor are there the least footsteps of any such usage among the Jews until after the days of John the Baptist, of whom it was first taken up by some ante- mishnical Rabbins.’ Jennings, in his Jewish Antiquities, (vol. I. p. 134, 8.) a work recom- mended by the bishop of Lincoln, and placed in the first class of those which every clergyman ought to possess; says it is more likely the Jews took the hint of proselyte-baptism from tha

Christians after our Saviour’s time, than that he borrowed his baptism from their’s; which, when- ever it came into practice, was one of those addi- tions to the law of God, which he severely cen- sures. There wants more evidence of its being as ancient as our Saviour’s time, than I appre- hend can be produced, to ground any argument upon it in relation to Christian baptism. We therefore dismiss this form of the admission of proselytes, as uncertain.’ And Dr. Lardner, works, vol. V. p. 501, 2. : ‘ I pay no regard to what the later Jewish Rabbins say of the method of initiating proselytes, by circumcision, bap- tism, and sacrifice ; who have made void not only the moral (with which our Lord often charged them, as Matth. xv. 1 ––– 9, Mark vii. 1 ––– 13, and other places), but also the ritual part of the law of God. Indeed, they had corrupted the Mosaic ritual by numberless

additions, before the coming of our Saviour. As appears from the text of St. Mark just referred to. Nor have they ceased to do the like since.

‘ I think, as before said, that women were first baptised under the evangelical dispensation. I am also of opinion, that our blessed Lord’s fore-runner first made use of baptism as an initiating ordinance; and therefore he was called the Baptist, O BctTrriffrijc. Matth. iii. 1, and in many other places. Nor am I singular in this opinion.’

From this alleged Jewish ordinance, as Jen- nings has observed, some sects infer, that under the Christian dispensation baptism is only to be administered to converts from Judaism, Mahom- medanism, paganism, or some other religion, and to their descendants born before their conversion and baptism, but to none born after. Mr.jEmlyn, in particular, (Previous Question to several Questions, or Valid and Invalid Baptism), in- sists upon this argument against the constant and universal obligation of infant baptism. And the Society of Friends ground on this their prin- cipal argument for rejecting baptism with water as a ‘ carnal washing.’ See Mr. Gurney’s late defence of the ‘ Peculiarities of Friends,’ p. 67, &c.

The baptism of John naturally presses upon our consideration at the commencement of every enquiry upon this subject. Its divine original is expressly taught, John 1 and 33, and its object was to prepare the way for the Messiah by call- ing a general attention to him and preaching the necessity of repentance. The Jews seem to have expected a general baptism at the coming of the Messiah, and accordingly express little surprise at the fact of the baptism itself, but rather ques- tion the authority of John to administer it. ‘ Why baptisest thou then if thou be not Christ, neither Elias, nor the prophet?’ John uniformly bore testimony to the more glorious person and office of the Messiah; ‘ I indeed,’ said he, ‘ bap- tise you with water; but there standcth one among you whom ye know not, he shall bap- tise you with the Holy Ghost and with fire:’ and, agreeably to the nature of his mission, he taught them that his baptism was of no more force after the entrance of the latter upon his public ministry; ‘ He must increase, but I must decrease;’ ‘ I know him not but that he should be made manifest to Israel; therefore am I come VOL. III.

baptising with water’;’ and the whole of his ministry received a perfect accomplishment, when, amidst the admiring multitudes, assembled on occasion of his baptising his great successor, there came a voice from heaven, saying, ‘ this is my beloved son, in whom I am well pleased, hear ye him.’ The cause of Christian baptism has frequently been advocated, and, as some have thought, illustrated, from the baptism of John ; but John, according to the scriptures, is to be considered as a member of the Old Testa- ment church, agreeably to our Lord’s language ‘ the least in the

kingdom of heaven is greater than he.' The nature and obligation of baptism as a Christian ordinance, is to be piaced on dif ferent and on better grounds.

1 . The first thing to be considered is the origi- nal institution of this sacrament by our Lord himself, as a means of admission into his church. He gave the universal commission to the dis- ciples after his resurrection from the dead, ' Go ye and teach all nations, baptising them in the name of the Father, and of the Son, and of the Holy Ghost. He that believeth and is baptised shall be saved, he that believeth not shall be damned,' Mark, xvi, 15, 16. As a sacrament of initiation, baptism, according to the majority of ???writers on this subject, corresponds with circum- cision in the Jewish establishment, being the badge of distinction between the church and the world. The analogy between these two ordi- nances appeared so forcible to the church in the time of St. Cyprian, that his opinion was request- ed upon the point, whether baptism ought not to be delayed till the eighth day after the birth of a child, in order that the resemblance between the Jewish and Christian sacraments might be more perfectly exhibited. Gregory Nazianzen was an advocate for the eighth day. Cir- cumcision has been considered, from a very remote period, as a type of baptism, and those arguments in behalf of infant baptism have been deemed valid, which are drawn from the prac- tice of circumcision under the ceremonial law. St. Paul himself appears to teach the analogy of the two ordinances in the following language, found in Col. ii. 11. 'In whom ye are circum- cised with the circumcision made without hands, in putting off the body of the sins of the flesh by the circumcision of Christ (or Christian baptism), buried with him in baptism.'

That baptism must be received by all believers, is evident from the very language of the original institute, ' he that believeth and is baptised shall be saved,' and so strongly did the early fathers feel the necessity of it, that they frequently ex- pressed their doubts as to the safety of infants who died in an unbaptised state. Whether it be possible for a man to be saved in an unbaptised condition the church of England nowhere decides ; but the scriptures have been thought to lean to the side of absolute necessity, in our Lord's words to Nicodemus, John, iii, 5, ' Verily, verily, I say unto tliee, except a man be born again of water and of the spirit, he can- not enter into the kingdom of God.' The fathers generally supposed this intended to express the absolute necessity of baptism : the former part of the verse evidently alluding to the outward form

of administration by water; the latter, to the sub- sistence of an inward grace by the spirit of God ; constituting, in reality, that regeneration of the mind of which the outward regenerative rite is an imperfect representation. Hooker's language upon the necessity of the exterior ordinance is, ' If Christ himself, which giveth salvation, do require baptism it is not for us, that look for sal- vation, to sound and examine him whether unbaptised men may be saved, but seriously to do what is required, and religiously to fear the danger which may grow by the want thereof.'

2. The second thing worthy of consideration is the proper subjects to whom baptism may be administered.

The church of England admits, equally, to the sacrament persons of both sexes, adults or chil- dren. Considerable opposition of opinion, never- theless, prevails at present, with respect to the validity of infant baptism and its benefits ; for an historical sketch of the ceremony, see P.EDO-BAPTIST. It may be sufficient to our present enquiry to observe, that there is no church in the world, the Baptist excepted, that does not admit of infant baptism, and that the question was never agitated upon any considerable scale un- til the period of the reformation. The service found in the Common I'rayer for the baptism of such as are of riper years, was added at the review on the restoration of Charles II. in consequence of the growth of Anahapti-ts, who had become so numerous in the preceding century, that it was necessary to have a form fitted for their service.

CLINICAL HM'TISM, which was used in the first centuries of the Christian era, was baptism administered to a person on his death-bed; of which custom, mention is made by Cyprian and [□□□'.usebius, by Kpiphanius in Ileres. Cermth, and by other writers of the fourth and fifth centuries. In a case where a heathen in his last sickness, was converted to the Christian religion, such a baptism became necessary. But, in consequence of the superstitious notion that baptism alone washed away all the sins of the past life, many persons delayed the consideration of Christianity till their last moments, intending just at that cri- sis to make use of baptism, and thus die in the hope, of heaven. Gregory Xyssen, Chrysostom, Na/ianzen, and other fathers of the church, inveighed against this delusion in the most powerful language. The- two most remarkable instance; of the superstition alluded to, are found in the emperor Constantine and his son CoiM-Miiius, who were both baptised on their \U. lint, since in all cases the sincerity □□□d religion is, to say the least, doubtful, it \v:is decreed iiy the council of Neocesarea, . 1). :!.□□□")(), and of Laodicea, 3(33, that no clinic should i;v.:r be admitted to the order of presbyter. '! in: third i nqmiy on this subject respects Tarrament. Tim right of bap ^ been committed to the :\

ot all eo-::'iiumons. It belongs to bishops ; premiers as a pnrt of their office, although, sample ot 1'hilip, it appears that dea- con- nave a divine authority for performing it, p.-v:;aps tqi:al to either of the two former. In our c>ta!>Ubhed church deacons arc empowered

to baptise only in the absence of the priest, a limitation which is intended out of respect to th►► > higher orders of the clergy. Different opinions appeal to have been held by the fathers upon the subject of lay-baptism. Tertullian admits laymen to administer it in cases of urgent necessity : the same sentiment was expressed by St. Jerome, and by the council of Eliberis, A. D. 305. Cal- vin also confesses the antiquity of the opinion. ►►► Inst. 1. iv. c. xv. sec. 20. Basil however held the contrary notion, and the apostolic, Const, c. x. 1. iv., forbids laymen to baptise. It is how- ever one tiling to dispute the right of a layman to baptise, and another thing to deny the spiritual validity of a sacrament so administered, especially since several of the ancient fathers allowed the validity of the ordinance even when administered by women. Baptism by laymen is at present unknown in our national church, it may never- theless be interesting to our readers to notice some of the ancient canons upon the subject, made in England by the Pope's delegates, during the thirteenth century. In the constitution of Edmund, archbishop of Canterbury, A. D. 1236, 26 Hen. III., there is this direction : ►►► ' Item in- terroget sacerdos laicum diligentur, cum in neces- sitate baptizaveret puerum ; quid dixerit, etiam, quid fecerit. Et si diligenti praecedente inqui- sitione facta sibi fide plena, invenirit laicum dis- tincte et in forma ecclesiae baptizasse, sive in Latino, sive in Gallico, sive in Anglico, approbet factum. Si verb baptizatus fuerit puer a laico, precedentia et subsequentia mersionem explean- tur vel suppleantur a sacerdote.' 'When a lay- man has, upon urgent necessity, baptised a child, the priest shall enquire diligently with what words and acts it was performed, and if upon diligent enquiry he find, and is well persuaded, that the layman did distinctly, and according to the forms of the church, whether in Latin, French, or English, baptise the child, he shall confirm the proceeding : but in this case the rites preced- ing and following the immersion shall be supplied by a priest.' By another constitution of the same archbishop, order was given, that in cases of child-birth the attendants should have water ready at hand to baptise the child if necessity required. The legantine constitutions of Otho the year following gave order that laymen should be instructed how to baptize ; which was again enforced by the constitution of Otobon, another legate, in 1260. It would perhaps, under all circumstances, be difficult to decide the point, whether this earnest solicitude to prevent any child dying unbaptised was the effect of a de- plorable superstition, or a profound policy on the part of the clergy, but evidently the compli- ance arose from ignorance on the part of the people. It is also certain, that in consequence of these institutions

baptism became very pre- valent, for we find a constitution of archbishop Peccham, in a provincial synod held at Reading in 1279, enjoining that baptism by laymen should not be repeated ; and, in cases where it appeared doubtful, whether the child had been baptised or not that the form should be used, which is still preserved in our liturgy. ‘ If thou art not already baptised, I baptise thee &c.’ In the liturgy of Edward VI. there is internal evidence that the

form of private baptism was intended for the use of the laity, as well as the clergy, at least in cases of extreme danger. In the articles drawn up by the convocation, A.D. 1575, the twelfth takes notice of a doubt which had frequently arisen ; namely, whether the form of private baptism might be administered by laymen or no. The convocation decided in the negative ; but this article, though existing in the MS., was never printed, and the question still remained till the conference at Hampton Court, which took place in the first year of the reign of James I., when the form itself was so altered as to ex- clude lay baptism altogether. Upon the whole, then, it appears ‘ that lay baptism is now ex- cluded from the church of England, there exist- ing no necessity for it, but that the church does not say that lay baptism is no baptism.’

4. The fourth enquiry is, what facts go to con- stitute baptism. These, with reference to the outward administration of it, are two ; namely, the application of water, and the using of the original words of institution ‘ I baptise thee in the name of the Father, and of the Son, and of the Holy Ghost.’

The Baptists consider that it is an essential part of baptism that the subject should be ap- plied to the water and immersed in it, for which reason many of them abstain from Christian com- munion with members of other churches, consider- ing them as unbaptised persons. It is certain that the literal meaning of the word baptism is im- mersion, which is further confirmed by the prac- tice of the ancient church ; but whether immersion be essential to the constitution of the ordinance, is in our opinion a separate enquiry. The practice of sprinkling in some cases was adopted, and even justified by all the parties, as in the baptism of sick persons and weak children. It follows that baptism is valid where immersion is not used, and therefore that immersion is no essential part of it; besides which, there is a strong probability that in the baptism of the jailor, Acts xvi. 33, immersion was not resorted to. With respect to the practice of our estab- lished church, dipping appears to have been the regular and established

mode, and was general at the Reformation ; but, in 1644, when the Presbyterians had the ascendancy, the original practice of the church began to decline, and, after several centuries had elapsed, the present mode became universal. It contributed not a little to the cause of sprinkling, that during the bloody reign of queen Mary, many of our Protestant divines, flying into Germany and Switzerland, and re- turning when queen Elizabeth came to the crown, brought back with them a great zeal for the pro- testant churches beyond sea, where they had been sheltered and received; and having ob- served, that at Geneva and some other places, baptism was administered by sprinkling, they introduced the same practice into the churches of England.

The next point essential to a valid baptism, is that it be administered ' in the name of the Fa- tner, and of the Son, and of the Holy Ghost.' A baptism not thus administered, or administered without water, the church of England considers no baptism, and would insist on a proper sub-

mission to the sacrament. But sundry passages occur in the new testament which relate to the administering of baptism in the name of Christ alone, as Acts ii. 38; viii. 16; xx. 48; xix. 5; Rom. vi. 3; Gal. iii. 27; accordingly in St. Basil's time, the question was agitated, and some contended that baptism ought to be thus adminis- tered. But being baptised in the name of Christ implies being baptised 'in the name of the Father, Sec.' because these were points in which all cate- chumens were instructed, and in which every bap- tised Christian was supposed to be established.

The following illustration of this subject, taken from Dr. Lightfoot's Harmony of the New Tes- tament, Acts ii., is worthy the attention of the reader. ' Three thousand converted are baptised in the name of the Lord Jesus,' verse 38, which no whit disagreeth from the command, ' Baptise in the name of the Father, and of the Son, &c. Matt, xxviii. 19. For the form of baptism in these first days of the gospel, of which the New Testament giveth the story, may be considered under a threefold condition. 1. John the Bap- tist baptised in the name of Messias, or Christ that was then ready to come, but that Jesus of Nazareth was he, he himself knew not till he had run a good part of his course, John, i. 31, 32. The disciples baptising the Jews, baptised them in the name of Jesus, upon this reason, because the great point of controversy then in the nation about Messias was, whether Jesus of Nazareth were he or no. All the nations acknowledged a Messias, but the most of them abominated that Jesus of Nazareth should be thought 10 be he, therefore those that by the preaching of the gos- pel came to acknowledge him to be Messias, were now baptised in his name as the critical badge of their embracing the true Messias. But 3d, where the question was not on foot, they baptised in the name of the Father, and of the Son, and of the Holy Ghost. And so that bap- tising in the name of

Jesus was for a season for the settling of the evidence of his being Messias, and when that was thoroughly established, then it was used no more ; but baptism was in the name of the Father, and of the Son, &c. Of. the same cognizance were those extraordinary gifts of the spirit evidences of Jesus his being the Messias, and means of conveying the gospel through the world, and when both these were well established, then those gifts ceased for ever.' See also his sermon on Matt, xxviii. 19, where it is proved that John baptized in the name of Mes- sias now coming.

According to the general sentiment among Christians this sacrament canbe received but once, thus expressed in the Nicene creed, ' I believe in one baptism for the remission of sins.' The cases mentioned in ecclesiastical history to the con- trary, are derived from the re-baptising of per- sons who had been baptised by heretics, the validity of which the orthodox, or party baptising, denied and said that it was no baptism. The subject was therefore in those cases considered as an unbaptised person.

5. Our next object will be to illustrate the time, place, and manner of baptism. In the earliest ages of the church, there was no stated time or place for the reception of baptism. After-

wares Easter,Whitsuntide,and Epiphany, became solemn seasons, out of which baptism was not administered, except in cases of necessity. The catechumens, who were to receive it at these times, were called competcntes ; and to these it is that St. Cyril addresses his catechises. In the apostolical age, and some time after, before churches and baptisteries were generally erected, they baptised in any place where they had con- venience; as John baptised in Jordan, and Philip baptised the eunuch in the wilderness, and Paul the jailor, in his own house. But in after ages, baptisteries were built adjoining to the church ; and then rules were made, that baptism should ordinarily be administered nowhere but in those buildings. Justinian refers to ancient laws, ap- pointing that none of the sacred mysteries of the church should be celebrated in private houses. Men might have private oratories for prayer in their own houses ; but they were not to adminis- ter baptism or the eucharist in them, unless by a particular license from the bishop of the place. Such baptisms were frequently condemned in the ancient councils, under the name TrapaficnrTio- fiara, baptisms in private conventicles. As to tlit! attendant ceremonies and manner of baptism in the anciont church : The person to be bap- tised, if an adult, was first

*examined by the bishop or otliciaiing piiest, who put some ques- tions to him ; as, first, Whether he abjured the devil and all his works .' secondly, Whether he pave a firm absent to all the articles of the Chris- tian fai'.h ? to both which he answered in the aOirtpjtivc. ll'tlie person to be baptised was an infant, h(: iinswrn'd by his sponsors or god- f.ithers. Ai'ier the t,iMSi:eais and answers fol- lowed the exorcism: Tin: minister hid his hands (in the person's 'lend, and breathed in his face, to expel the devil from him, and prepare him for baptism, by which the holy spirit was to be con- ferred upon h;r.i. Alter exorcism, the minister, 1'v prayer, consecrated the v.ater. The person was then baptisid ' in the name of the Father, and of the Son, and of the Holy Ghost.' In peiionninu the ceremony, the usual custom (ex- i CM!, in clinical eases, or wh; re there was scarcity or' w.it(r'), was In immerse and dip the whole body. T;ni, St. Hamahas, I'escri' >in;;' a baptised pcisoii, siy<, 'We jro down into the water full of sin and tilth, but we ascend bearing fruit in our In ails.' And this practice was so general that we iind MI * xeepiions ,na !e in respect either to the tenderness nf inf.ints or the bashfulriess of the other sex, unless in (;;-.; of sickness or other Hut to pri vent any indecency, men and \opxn were ba;-;isen ; ',-art; and either the ii:to two apartments,*

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present baptists never baptise naked, though they always immerse. After immersion, followed the unction ; by which (says St. Cyril) was sig- nified,

that they were now cut off from the wild olive, and were ingrafted into Christ, the true vine ; or else to show that they were now to be champions for the gospel, and were anointed thereto, as the old athletae were against their solemn games. With the anointing was joined the sign of the cross, made upon the forehead of the person baptised ; which being done, he had a white garment given him, to denote his being washed from the defilements of sin. From this custom the feast of Pentecost, which was one of the annual seasons of baptism, came to be called Whit-sunday, i. e. White Sunday. This garment was afterwards laid up in the church, that it might be an evidence against such persons as violated or denied that faith which they had owned in baptism. The person baptised was then, according to Justin Martyr, 'received into the number of the faithful, who sent up their pub- lic prayers to God, for all men, for themselves, and for those who had been baptised.'

The FORM OF BAPTISM in the church of Rome is as follows : ❖❖❖ When a child is to be baptised, the persons who bring it, wait for the priest at the door of the church, who comes thither in his sur- plice and purple stole, attended by his clerks. He begins with questioning the godfather, whether they promise, in the child's name, to live and die in the true catholic and apostolic faith, and what name they would give the child. Then follows an exhortation to the sponsors : after which the priest calling the child by its name, asks it, What dost thou demand of the church? The godfather unswers, eternal life. The priest goos on : If you are desirous of obtaining eternal life, keep God's commandments, thou shall love the lord thy God, &c. After which he breathes three times in the child's face, saying, Come out of this child, thou evil spirit, and make room for the Holy Ghost ! This said, he makes the sign of the cross on the child's forehead and breast, saying, Receive the sign of the cross on thy forehead, and in thy heart. Then taking off his cap, he repeats a short prayer; and laying his hand softly on the child's head, repeats a second prayer: which ended, he blesses some salt, and putting a little of it into the child's mouth, pronounces these words, Receive the salt of wisdom. All this is performed at the church door. The priest, with the godfathers and godmothers, coming into the church, and advancing towards the font, repeat the apostle's creed and the Lord's prayer. Being come to the font, the priest exorcises the evil spirit again ; and taking a little of his own spittle, with the thumb of his right hand, rubs it on the child's ears and nostrils, repeating, as he touches the right ear, the same word (Ephatha be thou opened), which our Saviour made use of to the man born deaf and dumb. Lastly, they pull off its swaddling-clothes, or strip it below the shoulders, during which the priest prepares the oils, &,c. The sponsors then hold the child directly over the font, observing to turn it due east and west : whereupon the priest asks the rhild, Whether he renounces the devil and all his w orks ? and the godfather having answered

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the affirmative, the priest anoints the child be- tween the shoulders in the form of a cross. Then taking some of the consecrated water, he pours part of it thrice on the child's head, at each per- fusion calling on one of the persons of the Holy Trinity. The priest concludes the ceremony of baptism with an exhortation. The Romish church allows midwives, in cases of danger, to baptise a child before it is come entirely out of its mother's womb : where, it is to be observed, that some part of the body of the child must appear before it can be baptised, and that it is baptised on that part which first appears : if it be the head, it is not necessary to re-baptise the child ; but if only a foot or hand appears, it is necessary to repeat baptism. A still-born child, thus baptised, may be buried in consecrated ground! The Greek church differs from the Romish, as to the rite of baptism, chiefly, in performing it by complete immersion.

FORMS OF BAPTISM in the Church of England. The forms of administering baptism among us being too well known to require a particular de- scription, we shall only mention one or two of the 'more material differences between the form, as it stood in the liturgy of king Edward, and that in the English Common Prayer Book at present. The form of consecrating the water did not make a part of the office in king Edward's liturgy, as it does in the present, because the water in the font was changed, and consecrated but once a month. The form likewise itself was something different from that now used ; and was introduced with a short prayer ; that Jesus Christ, upon whom (when he was baptised), the Holy Ghost came down in the likeness of a dove, would send down the same Holy Spirit, to sanctify the foun- tain of baptism ; which prayer was afterwards left out at the second review. ??? By king Edward's first book, the minister is to dip the child in tie water thrice ; 1st, dipping the right side ; 2dly, the left ; the 3d time, dipping the face toward the font. This trine immersion was a very ancient practice in the Christian church, and used in honor of the Holy Trinity ; though some later writers say, it was done to represent the death, burial, and resurrection of Christ, together with his three days continuance in the grave. After- wards, the Arians, persuading the people that it was used to denote that the three persons in the Trinity were three different substances, the or- thodox left it off, and used only one single immer- sion. By the first common prayer of king Edward, after the child was baptised, the god- fathers arid godmothers were to lay their hands upon it, and the minister was to put on him the white vestment commonly called the chrysome, and to say, ' Take this white vesture, as a token of the innocency, which by God's grace, in the holy sacrament of baptism, is given unto thee; and for a sign, whereby thou art admonished, so long as thou livest, to give thyself to innocence of living, that after this transitory life thou may- est be partaker of the life everlasting. Amen.' As soon as he had pronounced these words, he was to

anoint the infant on the head, saying, ‘ Almighty God, the father of our Lord Jesus Christ, who hath regenerated thee by water and ‘he Holy Ghost, and hath given unto thee remis-

sion of all thy sins ; may he vouchsafe to anoint thee with the unction of his Holy Spirit, and bring thee to the inheritance of everlasting life. Amen.’ This was manifestly done in imitation of the practice of the primitive church.

The only human institutions connected with baptism in our established church, at present, are two, namely, sponsors and signing with the cross. Sponsors, or godfathers, called in ancient ecclesiastical writings, patrini, and avudoxoi, or susceptores, are mentioned as early as Tertullian. Cyril of Alexandria, A. D. 412, mentions the susceptor as saying Amen for the child baptised. It is also evident that in the second century there were attendants upon the children to be baptised, whose distinct office was to receive them from the priest, and who, it is highly probable, an- swered for them at the font ; but that the prac- tice was not used in the days of the apostles is evident, since it is not mentioned by Justin Martyr- The sign of the cross is a ceremony against which much censure has been levelled. It was used as early as the third century, and, although many efforts were made at the reforma- tion to abolish it, has been carefully preserved.

Other customs, however, have by different churches, and in different ages, been introduced into the celebration of this sacrament, which are now totally disused, or retained only in the church of Rome. They may be enumerated in the following order : 1 . Trine immersion, already alluded to, the practice of which commenced about the opening of the fourth century. Al_ though prescribed in the English church by the prayer-book, 2 of Edward VI., this form was afterwards omitted. 2. Chrism, or unction, as mentioned by Tertullian, Cyprian, Cyril, and Chrysostom. It was performed with plain oil before baptism, and with unguent afterwards. 3. Tertullian mentions the practice of giving milk and honey to persons after baptism. This ceremony, which after a few centuries was dis- continued, has been derived by some learned men from the Jewish customs at proselyte bap- tism. 4. Exorcism, or putting the baptised per- son upon his oath, and declaring to him his obligation to renounce sin, was used in the fourth century. This ceremony abounds with corruption in the church of Rome. 5. Candles lighted after baptism, and placed in the hands of the person baptised, as an emblem of the illumi- nation of the spirit, was a ceremony used as early as the fourth century. 6. The chrisom, so called iu the English church, was a white gar- ment or surplice, put on immediately after bap- tism. 7. Easter and Pentecost were considered solemn times for the administration of baptism, as early as the second and third centuries. 8. Salt was not given to the baptised till the eighth century; nor, 9. The ears

touched with spittle till the ninth.

6. Our sixth object will be to exhibit some of the most popular heresies which have prevailed at different periods respecting baptism These arose chiefly in the second and three following centuries. 1. In the second century Marcion permitted women to baptise ; affirmed that none but virgins, widows, or celibates, were fit sub- jects for baptism ; and allowed baptism to be

repeated timce. The Montanists baptised the dead. The Yalentinians, instead of baptising in the name of the Father, &c. used a mystical form in the name of the Tnknown Father of all things, in the Truth the Mother of all things, in him that came down on Jesus, in the union and re- demption and communion of powers Instead of using water they poured a mixture of oil and water on the head, after which they anointed the persons so baptised. 2. In the third century arose the heresy of the Manichees, who affirmed that baptism by water was not necessary to sal- vation, and accordingly neglected it. 3. The fourth century was remarkable for the heresy of Arius, who baptised in the name of the Son only. 4. Pelagius, in the fifth century, affirmed that infants were baptised for other reasons, and not because of original sin.

7. Several laws have passed in different ages for enforcing and restricting baptism. In the ancient church, baptism was frequently con- ferred on Jews by violence ; but the church never seems to have allowed of force on this occasion. By a canon of the fourth council of Toledo, it is expressly forbidden to baptise any acrainst their wills. That which looks most like foiec in this ease, allowed by law, were two order., of Justinian ; one of which appoints the he, itnens, and the other Samaritans, to be bap- tised, viit'i their wives and children and servants, under pain of confiscation. By the ancient laws, baptism uas not to be conferred on image-makers, i.tai.e- j'kn ITS, gladiators, aurijie or public drivers, inauiciaiis, or even strolling beggars, till they quitted such professions. Slaves were not al – lo\ed the privilege of baptism without the tes- timony and consent of their masters ; excepting the slaves of Jews, heathens, and heretics, who were iidt on'v admitted to baptism, but, in con- sequencc thereof, had their freedom. Yossius h.;s ;: learned and elaborate work, 1)e Baptismo, v.herem he aceura'clv discusses all the questions court ,-iiing i aptisin aeeorditi'/ to the doctrine of th' an, i nts.

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same opinion, as Baronms, Jos. Scaligev, Jus- tellus, and Grotius. But Bellarmin, Salmeron, Menochius, and several other Roman catholics, understand it of the baptism of tears, and pe- nance, and prayers, which the living undergo for the dead ; and thus allege it as a proof of the belief of purgatory in St. Paul's days. Some protestant divines read the passage, baptised into death ; and illustrate it by the context ; par- ticularly the words ' being buried with Christ by baptism into death.' Paul, they say, is proving the resurrection by that of our Saviour, and the strength of his argument is, (1 Cor. xv. 16, 17, 29.) ' If Christ be not raised, and if the dead rise not, what shall they do who are baptised into his death ?' This appears the most probable interpretation of the text.

BAPTISM OF THE DEAD was a custom which anciently prevailed among some people in Africa. The third council of Carthage speaks of it as a thing that ignorant Christians were fond of. Gregory Nazianzen also takes notice of the same superstitious opinion prevailing among some who delayed to be baptised. In his address to this kind of men, he asks whether they staid to be baptised after death ? Philastrins also notes it as the general error of the Montanists or Cata- phrygians, that they baptised men after death. The practice seems to be grounded on a vain opinion, that, when men had neglected to receive baptism in their life- time, some compensation might be made for this omission by receiving it after death.

BAPTISM OF BELLS, a superstitious custom practised in the church of Rome, whereby the bell was supposed to be rendered capable of driving away tempests and devils. It is first taken notice of in the capitulars of Charles the Great. Baronius carries its antiquity no higher than the year 968, when the greatest bell of the church of Lateran was christened by pope John III. In 1581 it was complained of in th?? cen- tum gravamina

of the German nation, drawn up in the public diet at Nuremberg. In this cere- mony the bell was provided with godfathers, who made responses, and gave it a name ; after which they clothed it with a new garment, as Christians used to be clothed on coming out of the water.

BAPTISM, FIRE, spoken of by St. John the the Baptist, has occasioned much conjecture. Some of the fathers held that believers, before they enter paradise, are to pass through a cer- tain fire, which is to purify them from all re- maining pollutions. Others, with St. Basil, understood it of the fire of hell ; othws of that of tribulation and temptation. Others, with St. Chrysostom, will have it to denote an abundance of graces. Others suppose it to mean the descent of the Holy Ghost on the apostles, in the form of fiery tongues. Lastly, others maintain that the words ‘ with fire’ are an interpolation. Some MS. copies of St. Matthew, indeed, want these words ; but still they are to be found in St. Mark and St. Luke. The ancient Seleucians and Her- minians, understanding it literally, maintained that material fire was necessary in the adminis- tration of baptism. But we do not find how, or to what part of the body, they applied it, or whether they were satisfied with cbliging the

person baptised to pass through the fire. Valen- tinus, according to Tertullian, rebaptized all who had received water baptism, and conferred on them the “baptism of fire. Heracleon, cited by Clemens Alexandrinus, says that some applied a red hot iron to the ears of the person baptised, as if to impress some mark upon him ! If many of the plainest texts of Scripture had not been misconstrued by ignorance, and darkened by knavery, one would be surprised that ever this text should have occasioned the smallest contro- versy. The context suggests one good interpre- tation. The Baptist spoke to a mixed multitude, many of whom were or would be believers, and many of whom never did believe the gospel. He therefore tells them that One, mightier than he, should baptise them (the one class) with the Holy Ghost, and (the other) ‘ with fire ;’ that he will thoroughly purge his floor and gather his wheat into his garner ; but he will burn up the chaff, &c. Other passages of the New Testament speak of a ‘ fiery trial,’ which is to try all faithful believers, as no ‘strange thing/ 1 Pet. iv. 12 ; and Jesus Christ, alluding to his own sufferings, as- sured his immediate followers ‘ that they should be baptised with the baptism wherewith he was baptised.’ Probably therefore we unite the best interpretations of the passage by considering it to refer to the baptism of the day of Pentecost literally, and symbolically to the Christian’s share of afflictions in this suffering and vain world.

BAPTISTS, a general name by which those Christians are distinguished who deny the validity of infant baptism, and restrict the administration of that sacrament to persons capable of believing and understanding the religion into which they are thus initiated. They also maintain generally that immersion is necessary to constitute a scrip- tural baptism. Like all other denominations of Christians, they call in the evidence of antiquity ; and their pretensions, if founded on fact, as will be seen hereafter, are considerable. They affirm that infant baptism was unknown before the third century, was established in the fourth and fifth, and prevailed generally till the Reformation ; that even in the dark ages some traces of pure bap- tism are discernible ; that the ancient British church, before the arrival of St. Austin, did not baptise infants ; that Bruno and Berengarius in the eleventh century, the Waldenses, the Lol- lards, and the Wickliffites, opposed infant bap- tism, together with William Sawtre, the first Lollard martyr in England, who was burnt A. D. 1401, m the reign of Henry IV. This is certain, with respect to their antiquity, that at an early period of the Reformation disputations were held at Zurich, Bale, and Berne, upon infant baptism.

To the class of Baptists belong the ancient No- vatians, Cataphrygians, the Donatists, the Ana- baptists and Mennonites of Germany, and others, who, though they differed widely in their opinions upon other subjects, held the same general views with respect to the initiatory sacrament.

Although the term Anabaptist has been pro- miscuously used as a general name by which to distinguish Baptists or re-baptisers, still we must distinguish between the Baptists in general and ilie Anabaptists of Germany, for which see article

ANABAPTIST. It would be equally uncandid and unjust to confound, with the latter enthu- siasts, so respectable and consistent a body of Christians as the Baptists are, merely from a coin- cidence of opinion on the subject of baptism, especially since the wild doctrines of the latteˆ on the subject of civil government have always been disclaimed by the former, although it must be confessed a difficulty to distinguish them for some years after the Reformation.

The Baptists in England separate from the es- tablishment for the same reasons as their brethren of the other denominations do ; and from the ad- ditional motives derived from their particular tenets respecting baptism. The constitution of their churches, and their modes of worship, are congregational or independent ; in the exercise of which they are protected in common with other dissenters, by the act of toleration. Before this act they were liable to pains and penalties as nonconformists, and often for their peculiar sen- timents as Baptists. A proclamation was issued out

against them, and some of them were burnt in Smithfield in 1538. Many of them were per- secuted as Anabaptists in the reign of Elizabeth, charged with holding opinions which tended to anarchy. Indeed, during the latter part of Eliza- beth's reign, the powers of the Star Chamber, and the High Commission, rad almost destroyed dis- sent ; the Baptists fled the country, and settled principally in Holland. Mr. Smyth, a beneficed clergyman who had seceded from the establish- ment, founded a Baptist church of English refu- gees at Amsterdam. He appears to have been an Arminian in point of sentiment ; but in his settlement over this people we have the earliest evideuce of the existence of regular Baptist churches. Mr. Smyth died in 1610, and was succeeded in his ministry by Thomas Helwisse, who shortly after returned with his congregation to England, and settled in London. The severi- ties exercised by king James I. at this time against the Puritans and Baptists, called forth some able writings in explanation and defence of their principles. A petition was presented to parliament in 1620, after which the Baptists were legally acknowledged as a body distinct from the Anabaptists, although considerable prejudice existed against them, even to the time when bishop Taylor wrote his Liberty of Prophecying. It was particularly unhappy for their cause that the fifth monarchy men, of Cromwell's time, were chiefly Baptists. The year 1633 affords us the earliest records remaining of a particular baptist church in London, formed under a Mr. Spilsbury. The persons who formed this con- gregation had separated from one of the inde- pendent persuasion ; and, conceiving the right of administering baptism to descend in uninter- rupted succession, sent one of their members over to Holland to receive that ordinance, and bring it over to them.

They might, it is true, have received baptism from some member of Mr. Spilsbury 's congrega- tion; but that body being Particular or Cal- vinistic Baptists would not have any connexion with the Arminian or General Baptists. Be- tween these two denominations there never way much intercourse, nor is there at the present

, professed their belief in the distinguishing .octriues of Calvinism, which are still the general sentiments of all their churches. As a body they

❖❖❖ highly respectable, and rising in importance. They have several academies for the education of stud', nts for t!ie ministry in their congregations, ',". <; oldest of whieh is at Bristol; and also two inhibitions for students to be educated at one of tiir universities in Scotland, given them by Dr. Ward of Gresham college.

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churches v.‘no exercised a species of episcopal

authority ; but their only church officers, at the

present time, are ministers or pastors, and dea-

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Christians in Scotland, who profess to deduce their original from the apostolic age. Their views of the initiatory sacrament, and arguments against the validity of infant baptism, are the same as those held by Baptists generally, but their collateral opinions, especially on the sub- ject of church government, are peculiar. They stand in no particular connexion with any other class of Baptists, either abroad or in England, although they have churches and brethren in their own communion in London and other places. It was not known till lately that a so- ciety of Baptists had existed in Scotland before 1765, but now the fact is ascertained that such a society did really exist, and usually met both in Leith and Edinburgh as far back as the middle of the last century. At the period already al- luded to, the Baptist profession publicly revived, first in Edinburgh and afterwards in other places, so that now there are disciples and brethren in all parts of the kingdom.

They are generally remarked for their unity and love to each other, to which is superadded a firmness in maintaining their religious opinions.

I. They hold, from the New Testament, that each church planted by the apostles was a single congregation, and met together in one place. Acts ii. 1. 46; iv. 31; and v. 12; 1 Cor. xi. 18. 20; so that it was composed of visible be- lievers ; 1 Cor. i. 2 ; Philip i. 1 ; Col. i. 2 ; that it had a plurality of elders, or bishops, to rule and labor in the word and doctrine ; (Acts xiv. 23; xx. 17; Philip i. 1 ; Titus i. 5; 1 Tim. T. 17; also a plurality of deacons to minister in the proper application of the church's bounty ; Acts vi. 1 ... 17; Philip i. 1; and that both were chosen not by their academical abilities, but by their characters laid down in 1 Tim. iii. 1 ... 16 ; Tit. i. 5 ... 10 ; and set apart by the laying on of hands; Acts vi. 6; 1 Tim. iv. 14; v. 22.

II. They aim at the faithful and impartial exer- cise of discipline, according to the several rules, laid down in the New Testament; Matt.xvii. 15 ... 17; 1 Cor. v.; 2 Thess. iii. 6 ... 15; 2 Tim. iii. 5. Tit. iii. 10, 18. Gal. vi. 1 Jude 22, 23. Such discipline, they say, is essential to the very being of a Christian church ; but altogether impracti- cable in any other society. III. They receive none into church-fellowship but such as make a scriptural profession of their faith in Christ, and show their readiness to observe whatsoever he enjoins; and they retain none in their com- munion who visibly depart, in any instance, from the faith and obedience of the gospel, and are proof against all the instituted means of recovery. IV. They hold that the rule of forbearance is divine revelation, making all due allowance fof differences in natural tempers, capacities, growth in grace, &c. and exercising all long-suffering, lowliness, and meekness, in their endeavours to reclaim an erring brother. V. They consider it their duty to be all of one mind, in every thing that regards their faith and practice as a body, Acts iv.

32. 1 Cor. i. 10. 2 Cor. xiii. 11. Philip, i. 27. ii. 2. 1 Pet. iii. 8. Nothing is ctecided among them by human influence or policy, or by majority of votes, but by the unanimous con- sent and explicit agreement of every member. VI. They meet every first day of the week for

reasons and ends given in Matt, xxvii. 1 ••• 7. Luke xxiv. John xx. 19, 26. Acts ii. 1. xx. 7. 1 Cor. xi. 18. 20. xvi. 2. Rev. i. 10. When they observe the following institutions of divine ‘ worship : 1. The public reading of the scrip- tures of the Old and New Testaments, from what is written, Acts xv. 20, 21. Col. iv. 16. 1 Thess. v. 27. 1 Tim. iv. 13. 2. The mutual exhorta- tion of the brethren, which is attended to on the morn ing of Lord’s day, immediately after the read- ing of the scriptures. Col. Hi. 16. 1 Thess. iv. 18. Heb. iii. 13.; x. 24, 25. 3. Preaching and ex- pounding the word, which is done by the elders and pastors. 1 Pet. v. 2. 1 Tim. v. 17. Acts v. 42. xx. 20. 2 Tim. iv. 2. 4. The public prayers, not only of the elders, but also of the brethren, as was exemplified in the first churches. Rom. xii. 12. 1 Cor. xi. 4. xiv. 14. Eph. vi. 18.

1 Tim. ii. 1, 2. Jas. v. 16. Jude 20. To these prayers and thanksgivings, the whole church say Amen. 1 Cor. xiv. 16. 5. The singing of praise. Matt. xxvi. 30. 1 Cor. xiv. 15. In doing which they use the Psalms of David, and other spiritual songs. Eph. v. 19. Col. iii. 16.

6. The fellowship, contribution, communication, distribution, or well doing, as in Rom. xvi. 26.

2 Cor. ix. 13. Philip, iv. 14, 15. 1 Tim. vi. 18. Heb. xiii. 16. i. e. the collection for the support of the poor saints, and other necessary uses. See Acts ii. 41. and 1 Cor. xvi. 1, 2.

7. The breaking of bread, or the Lord’s supper : this they observe every Lord’s day without any regard to preparation and thanksgiving days, as the church at Troas came together chiefly for that end on the first day of the week. Acts xx. 7.

8. In the interval of public worship, they have the feast of charity, in an appropriate place, and generally contiguous to the ordinary place of meeting for worship, where every member may attend. Its nature is to promote love, pleasure, har- mony, and mutual edification among the brethren, also for disengaging the minds of the members, from the time and care spent in preparing a diet at their own houses on that day ; for refreshing those who come from a distance, and for affording a moderate

repast to the poorer members. These love feasts they deduce from the apostolic churches. Acts ii. 46. xx. 11. 1 Cor. xi. 20, 21, 22. Jude 12. 2 Pet. ii. 13. VII. They consider it their duty to join fasting with prayer, on particular occasions. Matt. ix. 25. Acts xiii. 2. compare Isaiah Iviii. 5. with James iv. 8 ††† 10. VIII. They use the kiss of charity on various occasions ; such as, the reception of a new mem- ber, the forgiveness of offences, the reconciliation of differences, the setting apart of office-bearers, the departure or return of brethren, &c. Rom. xvi. 16. 1 Cor. xvi. 20. 2 Cor. xiii. 12. 1 Thess. v. 26. 1 Pet. v. 14. IX. They wash the saints' feet, even literally, and that not as a ceremony, but whenever it can be of real service to a bro- ther ; the men perform that service to those of their own sex, and the women to their's only. John xiii. 14, 1.5. X. They abstain from eating of blood and strangled, or ' flesh with the blood thereof;' because these were not only forbidden to Noah and his posterity. Gen. ix. 3, 4 ; but also under the gospel. See Acts xv. 28, 29. xvi. 4. and xxi. 25. Rex. ii. 20. 24. and ver. 52.

XI. They do not find themselves at liberty to eat a common meal with persons excommuni- cated from their fellowship ; but they do not set aside any natural or relative duty. Matt, xviii. 17. Luke xv. 2. Acts x. 28. 1 Cor. v. 9, 10, 11. And XII. They consider themselves subject to the powers that be in all lawful civil matters, Rom. xiii. i ††† 6. 1 Pet. ii. 13 ††† 16. to honor them, ver. 17. pray for them, 1 Tim. ii. 2. pay them tribute, Rom. xiii. 6, 7. and rather to suffer patiently for a good conscience, than in any case to resist them by force. Acts v. 29. 1 Pet. ii. 19 ††† 24. Therefore they can have no fellowship with any who are known to be disaffected to government; Prov. xxiv. 21.

BAPTISTERY, in ecclesiastical writers, was one of the exedrae, or buildings distinct from the church itself ; and consisted of a porch or anti- room, where the persons to be baptised made their confession of faith, and an inner room, where the ceremony of baptism was performed. Thus it continued till the sixth century, when the baptisteries began to be taken into the church porch, and afterwards into the church itself. The ancient baptisteries were commonly called o- Tifijpia, photisteria, q.d. places of illumination; either because that name was sometimes given to baptism, or because they were the places of an illumination, or instruction, preceding bap- tism ; where the catechumens were taught the first rudiments of the Christian faith.

Baptisteries in general are either octagonal or circular, surmounted with a dome, and as the font is usually placed at the entrance of the church to represent the initiation of the new Christian, so the baptistery is situated at the approach to the western or principal gate. These edifices are of very high antiquity, since one was prepared for the ceremonial of the baptism of

Clovis; and, as the times of baptising returned but seldom, they have been usually very ca- pacious. In Italy, although the churches were numerous, in some of the most considerable cities there was only one general baptistery, to which they all resorted. This was dedicated to John the Baptist, and the church to which it was at- tached, assumed the pre-eminence connected with the church of Santa Sophia. At Constanti- nople was a spacious baptistery, in which we read of ancient councils assembling. Of the baptis- teries of Rome, the Lateran is the most ancient, in which some antiquaries are said to have disco- vered the remains of the Thermse, anciently within the precincts of the imperial palace. The bap- tistery of Pisa, both externally and internally, presents a fine display of the most exquisite workmanship, and accordingly has greatly excited the admiration of modern travellers, among whom we may distinguish the celebrated Joseph Ad- dison. The baptistery of Florence is remarkable for the beauty of its gates. Here also are to be seen the bas reliefs, of which Michael Angelo was so enamoured, that he exclaimed they de- served to be portals of paradise. The Italian baptistery in appearance is not very dissimilar to the octagon in Ely cathedral at the intersection of the transepts and nave ; but it does not ap- pear from history that any building especially devoted to the purpose of baptism, was ever

erected in England. Many of the fonts in our churches are nevertheless highly interesting to the antiquarian, that of Bridekirk in Cumberland is of Danish origin, and that winch was removed from the church of St. Peter in the east, Oxford, exhibited proofs of an antiquity almost as early. See FONT.

Upon fonts and baptisteries in general, the following curious inscription is frequently found, especially upon those which are ancient : ‘ NIˆON ANOMHMATA MH MONAN O►►IN.’ The pious monks often exercised their gifts in forming acrostics and chronograms ; but this line exhibits the happiest instance of the amphisbsena; the words being exactly the same whether we read the line backwards or forwards.

BAPTIST MISSION. ►►► While the Missionary Societies of various denominations have an ul- terior object in view, too high and sacred for much discussion in books of human science, there are collateral benefits to mankind, which gradually accompany their march, that fall strictly within our sphere to record. The bearing of these societies, on our acquaintance with the physical and political geography of the globe, and on the study of its languages, ancient and modern, is obvious : while the very object al-

luded to, and a missionary ardor for its accom- plishment, has armed, and will arm, the traveller and the scholar (when a missionary), with a patient and persevering zeal, to be imbibed, per- haps, in no other school. It will be principally So the literary and scientific aspect of these in- stitutions that we shall, in this work, direct the attention of the reader ; but we purpose, in so doing, to insert a slight sketch of the rise and progress of all the reputable societies of this kind.

Ainoivj Protestants, it may be said, that in 17152 the I nitas 1'ralrum, or Moravian brethren, led the way in these benevolent enterprises. '1 hey Lecame deeply impressed with the fact that so many millions of the human race were sitting 111 darkiu ss. and held in bondage by idolatry and vice; and they formed themselves into a small society for endeavouring to convey the benefits of Christianity to heathen nations. At first their beginnings \ere veiy small, but they now possess beiuecn ibity and fifty settlements, employing from 1 u'O to 180 missionaries. For sixty years this soeiety purMied its way, in the most unos- tenritious and silent manner, before any others of a like natni1'- \ere formed.

*Oet. -j5 IT.'J, a i't:\v !'>;;>tist ministers meeting at Kett, rinj-, Northamptonshire, entered into a series ot resolutions for the formation of a so- ciety, to be called 'i he i'aiticnlar (or Calvinis- tic; llapti-t SurL-ty lor propagating the Cospel aitioiiu the Heathen. * But so far,' say they, ' were v.e from having in view the exclusive pro- motion of our own peculiar principles as Bap- tists, that we were th termined from the beginning, if no Hppoitunily appeared for sending out Mis- sionane- <>f our own, that we would assist other societies already in binnˆ amongst the Presby- terian— and the Moravians.' The names of the iirst committee were. I ol in Hyland, Reynold Hogg, William Carey, John Suteliti, and Andrew Ful- ler. Keynolil 1 log- was chosen Treasurer, and Andrew Fuitei, Secretary.*

Nov. 13. ??? The committee meeting again at Northampton, learned that a Mr. John Thomas, a surgeon, who had been several years in Ben- gal, and during that period had occasionally preached the gospel to the natives, was then in London. He was said to be endeavouring to establish a fund for a mission to that country, and to be desirous of engaging a companion to return with him. Enquiry was made concerning Mr. Thomas, as to his character, principles, &c. ; and the accounts which were received proving satisfactory, the committee resolved to invite him to go out as one of their missionaries, and to en- deavour to furnish him with a colleague. Mr. Carey, on being asked if he were willing to accompany Mr. Thomas, answered readily in the affirmative. And thus was furnished to the so- ciety one of the most useful laborers in the missionary field, and ultimately one of the most profound of oriental scholars, from the humble station of an uneducated provincial dissenting minister.

The next step was to calculate the expense of sending them out, and to obtain the means 01 defraying it. The expense was estimated at ►►500, which sum required to be raised in about three or four months. To accomplish this the committee frankly stated to the religious public their plan, requesting that so far as it appeared to be deserving of encouragement, they would encourage it. Letters also were addressed to the most active ministers of the denomination through- out the kingdom, requesting their concurrence and assistance. The result was, that more than twice the sum which had been asked for was collected ; yet, when the work was finished, the actual expense had so far exceeded the estimate, that there were only a few pounds to spare. A principal cause of this was, that the whole of the new missionary's family were induced to ac- company him.

The first laborers in this mission sailed on June 13, 1793, on board the Princessa Maria, a Danish Indiaman ; but no tidings of their pro- ceedings arrived in this country until July or the following year. For the first three or four months, it seems, Mr. Carey found himself in consider- able pecuniary difficulties. The investment which was taken out for their immediate sup- port, was sunk ; and he, with his wife and family in a foreign land, were utterly destitute of the means of subsistence. He now, therefore, en- quired for secular occupation ; and early in March,! 795, received an invitation from Malda,to take the superintendance of an indigo factory. His colleague also, Mr. Thomas, who had stopped at Calcutta, under an idea of supporting himself by his profession, received, a little before, a similar invitation.

Mr. Carey accepted the superintendence of an indigo factory at Mudnabatty, and Mr. Thomas of another at Moypauldiggy, both in the neigh- bourhood of Malda. Here they considered them- selves capable of watching the best opportunity for proceeding with their noble undertaking in coming out ; and letters were sent to England, expressing their great pleasure in being able to decline, at present, any further assistance from the Society's funds.

At home, about this time, two young men, Mr. Jacob Grigg, and Mr. James Rodway, had offered themselves as missionaries, and being considered suitable persons, the committee re- solved on another mission, i. e. to Africa, in the neighbourhood of Sierra Leone. In the autumn of 1795, the missionaries left England; but through the indiscretion of one of them, and the ill health of the other, the undertaking failed. In the spring of 1796, a

Mr. J. Fountain offer- ing himself as a missionary, was accepted, and sent out to join his brethren in India.

During the first year of his residence, Mr. Carey had repeated attacks of an intermittent fever with a dysentery. Mrs. Carey also, and their eldest son, were much afflicted ; and their third son, Peter, died at five years of age. As soon as they were able to apply themselves to the work, they set up schools at their respective factories ; preached every Sunday, and frequently on week days ; and Mr. Thomas being particu- larly attentive to the poor, in administering me- dicines, &c. to them ; many people, besides the workmen, attended their preaching. Two Englishmen, a Mr. Long and a Mr. Powell, who had settled in Bengal, joining in the views of this little band, on Nov. 1, 1795, they, with the mis- sionaries, formed a church, and commemorated the sacrament of the Lord's Supper. Mr. Long was afterwards excluded for improper conduct ; but Mr. Powell continued an useful character till his death, which was at Dinagepore, on Sept. 25, 1802. An European or two were joined to this body, from 1796 to 1800 ; a spirit of enquiry was awoke among the natives, and a school erected at Dinagepore ; but no native converts manifested, as yet, sufficient boldness to shake off caste for the benefit of the new faith.

The missionaries, however, were not easily dis- couraged. They requested nev helpers from home, and particularly some one who should understand the printing business. Accordingly, in the spring of 1799, Mr. and Mrs. Marshman, Mr. and Mrs. Grant, Mr. and Mrs. Brunsdon, Mr. William Ward, and Miss Tidd, embarked ' for India. Mr. Ward being a printer, and Mr. and Mrs. Marshman having kept a school. Their instructions were, to ' beware, both from a principle of conscience, and from a regard to their own interest, and that of the mission, of intermeddling with any political concerns ••• to be obedient to the laws in all civil affairs ••• to re- spect magistrates, both supreme and subordinate, and teach the same tilings to others ••• in fine, to apply themselves wholly to the all-important concerns of that evangelical service to which they had so solemnly dedicated themselves.' Moreover, that ' however gross might be the idolatries, and heathenish superstitions that might fall under their notice, they should se- dulously avoid all rudeness, insult, or interrup- tion, during the observance of such superstitions, observing no methods but those of Christ and his apostles, namely, the persevering use of scripture, reason, prayer, meekness, and love.'

Mr. Carey was anxious that the new mission- aries and their wives might be permitted to pro- ceed and settle in the neighbourhood of Malda. He had taken a small place at Kidderpore, about

twelve miles distant, where he intended to carry on a little business, and to

erect some dwellings for them. The relinquishing of this undertak- ing would be a loss of ––500. But the British authorities were inflexible in their opposition to his plan of increasing his establishment. Mr. Carey, therefore, determined to remove to the Danish settlement of Serampore, where his bre- thren had arrived.

This important step was accomplished January 10, 1800, and the next day he was introduced to the governor, who received him in a very friend- ly manner. The- first object of attention was to settle a plan of internal government. All the missionaries determined to consider themselves as one family ; they were to preach and pray in turn ; one to superintend the affairs of the family for a month, and then another. Mr. Carey was appointed treasurer and keeper of the medicine chest ; Mr. Fountain librarian. Saturday even- ing was devoted to adjusting any differences which might arise during the week, and' pledg- ing themselves to love one another ; finally, it was resolved that no one should engage in any private trade ; but that whatever was done by any member of the family, should be done for the benefit of the mission.

The first sheet of the Bengalee New Testament was printed May 16. They worked off 2000 copies, besides 500 of the gospel by Matthew, for immediate distribution. Early in June they opened a Bengalee school, in which the children of those natives who chose to send them, were taught gratis ; and by the 20th of July they had forty pupils. A native, named Gokool, also ap- peared exceedingly attentive to their ministry. On the 22d of December, Gokool, and a man named Kristno, came and ate in public with the missionaries, by which act they threw off their caste. All who witnessed it were surprised ; it was so universally said, No one would lose caste for the Gospel.

' Thus the door of faith is opened to these Gen- tiles––– who shall shut it?' said Mr. (now Dr.) Marshman. ' The chain of the caste is broken, who shall mend it ?' The same evening Gokool, without his family, and Kristno with his, came and offered themselves willingly to the church, each making a solemn profession of faith in Christ, and of obedience to his commands. It was soon noised abroad that these people had lost caste ; and now a time of trial drew near. The next day a great company of people assem- bled, two thousand or thereabouts, pouring out their execrations upon them. Taking them by force, they first dragged them before the Danish magistrate ; but he, instead of censuring, com- mended them for what they had done. Being dismissed, they came a second time with Kristno with a new charge, accusing him of refusing to deliver up his daughter to a man who had con- tracted for her in marriage. The magistrate, however, defended Kristno, and assured the girl that she should not be compelled to marry the man against her consent. The governor also promised the missionaries that they

should not be interrupted in baptising. The hubbub that had thus been raised, did not shake the resolution of Kristno ; but his family, and Gokool, were in-

timidated by it. On the 27th they sent to the mission-house, saying, ‘ they wished to put off their baptism for a few weeks.’ The next day (the 28th) was the time appointed for baptising. Kristno came forward, and with Felix Carey, was baptised in the Hoogiy. A considerable num- ber of Europeans and natives attended; many of whom appeared to be struck with the so- lemnity of the ordinance. Shortly after, a Mr. Fernandez, and Joymooni (Kristnoo’s wife’s sister), were baptised, and joined the church. At a meeting on the 22d, she said, ‘ She had found a treasure in Christ greater than every thing else in this world.’ Kristnoo said his chief ‘ thoughts now were about the salvation of others.’

The effect of these baptisings was, that all the children of the Bengalee school were taken away by their parents, lest they should be made Christians ; and the only children left for instruc- tion were those of Kristno, to whom the mis- sionaries now paid the greater attention, and amongst whom there were some hopeful ap- pearances. The baptised Hindoos appeared to improve much in knowledge and affection. Their manner of speaking was singular and impressive. ‘ Christ Csaid one) is my joy, my hope, my all. If worldly things draw my mind from him, I say, mind, why dost thou leave Christ.’ There is no other Saviour. If thou leave him, thou tallest into hell.’ ‘ I was for- merly,’ said another, ‘in prison; the light of the (iospel came to the prison door, and I got’ out !’

About this time Mr. Carey was appointed by Marquis \eliesley to a professorship in the A’ew College of Fort William. When an appli- ratiun was made to him on the subject, he had some hesitation as to complying with it, lest it should interfere with his proper work as a mis- sionary. Nor did he accede to the appointment till !,e had consulted with his brethren, who thought that it might promote rather than ob- struet the great objects of the mission. Every t.i-mporal advantage that might arise from it would, on the ground of their established rules, lie only so much added to the missionary stock. And here let us add, that steadily, and when these advantages have risen to several thousands per annum, has this good man added them to that stock.

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ic:i strain as I'u-,: ⬛⬛⬛ ⬛⬛⬛ IP. a!! your worship there i—; no fruit. None of the debtas died for sinners; but Jesus Christ (aine into tin; world for this. 'i his i> (he greatest love I e\er heard of. At llie !.cm.-e of the m,ss,on,.neˆ i have seen such

love as I never saw before. When a man believes in Christ he gets a new mind. This is the fruit of becoming a Christian, &c. &c. The missionaries from such specimens hoped that he would soon be able to preach Christ to his countrymen.

During this month, Mr. Ward and Kristno visited certain parts of the country from whence persons had come for religious instruction, preaching and distributing papers as they proceeded ; and some of the women went to visit their female relations up the country, where they also conversed about the gospel. Mr. Ward in his ex- cursion was detained by a police officer, on the ground ' that the company had given no orders for the natives to lose caste.' Mr. W. assured him that the papers were entirely religious; and on his offering to sign them with his own name, the officer released him. The papers thus signed were sent to Calcutta, and examined. Some alleged, that it was improper to attack the reli- gion of the natives; but others answered that there was nothing more in the papers than had been always tolerated in the Roman Catholics in the company's territories. Nothing therefore came of it; and during the administration of Marquis Wellesley, no more was heard of the subject.

In the course of this year, colonel Bie trans- mitted to his government an account of the set- tlement of the missionaries at Serampore, in consequence of which his Danish majesty directed the Royal College of Commerce at Copenhagen to signify his pleasure to the governor of Serampore, that the society of missionaries be con- sidered as under his majesty's

protection and patronage, which they accordingly signified by a letter, bearing date Sept. 5, 1801. The gover- nor-general also of British India was pleased tc assure one of the missionaries, that he ‘ was per- fectly acquainted with all the concerns and opera- tions at Serampore, and felt great satisfaction at their affairs being attended with a degree of success’.

In the beginning of 1802 the mission had bap- tised seven natives.

On the 4th of April, a native who had previ- ously lost caste, of the name of Syam Dass, was baptised. He proved to be a simple-hearted good man, and was instrumental to the conver- sion of one of his neighbours, Bharut; but died, or was murdered on a journey in the autumn ot the same year, about five months after his bap tism. About this time a brahmin came to Seram- pore, who lived with Dulol, a famous leader of a Hindoo sect. They are a kind of Deists, setting light by the superstitions of the country, and by the caste; but making light also of sin, and a future state. He said that Dulol sent him to get baptised first, and that he himself would fol- low, and bring with him an hundred thousand disciples! The missionaries had no faith in this tale; but thought it right to pay him a visit Mr. Carey, Mr. Marshman, and Kristno (who had formerly been one of his disciples) therefore, set off for Ghospura, the place of his residence. They perceived him to be what they expected, a designing man, living in state only upon thw credulity of his followers.

On May 10th, Mr. Ward and Mrs. Fountain were married. Heretofore the marriages had been performed by an English clergyman; but the missionaries having been advised to marry their own people, they, with the concurrence of the civil authorities, drew up a simple form for the purpose ; and the business was conducted to the satisfaction of all present. In June or July five more natives were baptised at Serampore. Towards the end of this last month, a Mussul- man, whose name was Moorad, came from Ponche- taluckphool, or as they usually call it by way of contraction, Luckphool, with an invitation from a considerable number of people in that part of the country to go and preach the gospel to them. Mr.‘Marshman, accordingly, set out on the 10th of August, taking Petumber Mittre and Bharut with him. At Luckphool, they halted under a large tree, which was the appointed “place for hearing; the people came together and received them sitting down on the grass, and after having heard with much earnestness for about half an hour, entreated the preacher to rest, and take refreshment. He did so, and then renewed his subject. They spent the evening, sitting round him, and asking questions on Christ, the resur- rection, a future state &c.

These people, amounting to some hundreds, had, for the last fourteen years, begun to dislike the idolatry of the country; and attaching them- selves to a grave elderly man, as their goroo or teacher, had from that time been enquiring after the right way. Neelo, for that was the old man's name, had taught them that there was one God, whom he called father, who alone was to be worshipped ; that sin was to be forsaken ; and that a farther revelation was to be expected. It was in consequence of his having heard of the missionaries that Moorad was sent to Seram- pore, to request them to come and visit them. After the worship, as above related, the old man took Mr. Marshman aside for private conversa- tion, and appeared to be very averse to Brahmin- .sm, and friendly to the gospel as opposed to it; recommending it also to his people, as being the revelation which he had given them to expect. In returning home, Mr. M. called on another goroo, who had nearly 20,000 followers. His name was Seeb Ham Dass, and his residence at Juggerdandakatty. There was much less pomp and artifice in him than in Dulol; and less con- viction and affection than in Neelo" and his people at Luckphool. The general impression was, that these people were loosened from the Hindoo and Mahomrnedan systems, which marked the hand of providence, and might be introduc- tory to the gospel.

During this year Mr. and Mrs. Chamberlain were sent out by the committee to assist in the labors of the India mission. About the same time, the missionaries purchased the house and premises adjoining their own. The garden and out-buildings contained more than four acres of land. By this addition they had room not only lor the schools, and for the printing and binding business, but also for any new missionaries that migiit arrive. They made themselves trustees for the society, as they had done in the first pur- chase. Towards the end of January, 1803, be-

sides the New Testament, the first volume of the Old, the Psalms, and a part of Isaiah, were finished, and began to be a good deal read in different places. A new fount of Naggree types was nearly completed ; and a house was taken in Calcutta for preaching to both Europeans and natives.

In February they speak of ' the affairs of the mission growing more and more weighty.' Se- veral new enquirers arrived ; amongst whom was Sheetaram, a sooder, from Bishoohurry; in Jes- sore, and who on the 27th was baptised. The zeal, the simplicity, and the good conduct of this man proved, as will be seen, a great blessing to several of his relations and neighbours.

In April two of the native converts intermar- ried. The ceremorjy was conducted much in the same way as Mr. Ward's had been. Mr. Carey, after explaining the nature and ends of marriage, and noticing the impropriety of the Hindoo cus- toms, read certain portions of scripture, and

after them the marriage agreement. The parties then joined hands, promised love, faithfulness, obedience, &c. ; then signed the agreement, to which others added their names as witnesses. A prayer for a divine blessing followed, and the whole was concluded with a temperate and cheerful repast of raisins, plantains, 8cc. The day following they had a supper at the house of Kristuo, the bride's father, where all sat down together without dis- tinction of color or country. This to the spec- tators was quite a new thing. During this month several of the native brethren, as Kristno, Pre- saud, Ram Roteen, &c. went into the villages to talk with the people about Christ. They were treated with abuse, but bore it with Christian meekness, telling their abusers, that they ' only did what every sect did, who, whether Hindoos or Mussulmans, were allowed to perform their poorjahs in the streets ; and that insults, stripes, and even death were good for them, so that God by them did but turn their hearts.'

Frequent additions were now made to the Baptist flock here ; nor did the diligence of the missionaries slacken in their noble work of trans- lating the scriptures.

In August, a new and improved edition of the Bengalee New Testament was begun, as only 600 copies remained of the first impression. In September, the convert, Gokool, seemed to be drawing near his end. But his mind was steadily fixed in the faith of Christ, and on the 7th of October he died. ' About two hours be- fore his death,' says Mr. Marshman, ' he called the native brethren round him to sing and pray. He was perfectly sensible, resigned, and tranquil. Some of the neighbours had been trying to per- suade him to employ a native doctor ; but as all their medicines are accompanied with hea- then incantations, he refused them, saying, he would have no physician but Jesus Christ. ' How is it,' 'said they, 'that you, who have turned to Christ, should be thus afflicted ?" My affliction, replied he, is on account of my sins : my Lord does all things well. Observing Komal to weep (who was a most affectionate wife) he said, \hy do you weep forme? His tranquil and happy end made a deep impression on all around. They said one to another, May my

mind be as Gokool's was.' His funeral, in the European manner, made also a considerable im- pression on the native's. On the 23d, a brahmin from Assam was baptised.

During this year, the society presented a copy of the Bengalee New Testament, and of thepenta- teuch, to his majesty, Geo. III. by the hands of

Robert Bowyer, Esq. His majesty was pleased graciously to accept of them, and to direct that his thanks should be given to the society. During this year also a plan was laid for translating the scriptures into various other eastern languages.

In February, 1804, these worthy laborers had the happiness of devolving a portion of their work upon two native teachers, and ordained Kristno and Petumber Shingo to the work of the ministry, with prayer and the imposition of hands. In the course of the year, fourteen more natives were baptised.

About fouryears previously, Mr. Wardbeing, on a visit at Calcutta, went with Kristno to a village called Ramkreeshnopore, on the other side of the river, opposite Calcutta. Here they left a num- ber of small tracts, and a New Testament. Till now the effects were unknown. Kristno, on re- visiting the village, meets with a byraggee, who tells him that the books have been read, and that several persons are convinced by them.

In November and December twenty-one per- sons were baptised, seven of whom came from Kristnopore, and were the fruits of the New Testament and tracts which were left at that vil- lage. One of them, named Kristnoo Dass, re- ferrini: to Mr. Ward's having declared that 'it was for the use of the whole village, and that he who could read the best should keep it, and read it to all who wished to hear it,' said, ' he had got it, and that the reading of it had changed his ideas, and made him leave off idolatry, and put his trust, in Christ.' The Testament was produced, and was nearly worn out by reading. Ten out of the twenty-one were baptised on No- vember 3d. 'A solemn seriousness,' says Mr. Biss, 'pervaded the company. Some who seemed to know nothing of the power of religion, nevertheless shod tears.' At the Lord's supper there was great joy through the whole church, siirjiii'i, and making melody in our hearts to the Lord.'

In the autumn of this year, captain Wickes being in London, the committee sent by him K'OO guineas, which had heen collected in Eng- land, Scotland, and Ireland, towards the transla- tion of the Scriptures into the eastern languages. On the captain's arrival in America, he expressed a \ish in the public papers, that the friends of reliuii.n in his oountn would add something to 11. 'I he n>iilt was, that by the generous exer- tions of the different denominations, the original sum \v,is considerably more than doubled, and sent in dollars to Serampore.

\Ve have been following this band of brethren to the period of their cruise taking that deep and well grounded root in India, from which it will not

arrived, a demur was made as to their being per mittcd to proceed to

Serampore. Next day, Mr. Carey was told by the magistrates that they had a message for him, ‘ that as government did not interfere with the prejudices of the natives, it was the governor-general’s request that Mr. Carey and his colleagues would not.’ As ex- plained by the magistrates, this request was said to be a kind of order. ‘They were not to preach to the natives, nor suffer the native converts to preach; they were not to distribute religious tracts, nor suffer the people to distribute them ; they were not to send forth converted natives nor take any steps, by conversation or otherwise, for persuading the natives to embrace Chris- tianity. Mr. Carey enquired whether they had any written communication with the governor-general ; and being answered in the negative, took leave. This, however, it was afterwards said was not meant ‘ to prohibit Mr. Carey or his brethren from preaching at Serampore, or in their own house at Calcutta ; only they must not preach at the loll bazaar. Nor was it intended to prevent their circulating the scriptures, but merely the tracts abusing the Hindoo religion : or to forbid the native Christians conversing with their countrymen on Christianity, only they must not go out under the sanction of the mission- aries.’

In a conversation that took place between the magistrates and a friend of the missionaries, they acknowledged themselves ‘well satisfied with their character and deportment.’ Messrs. Chater and Robinson, however, were commanded to return to Europe.

A tract, about this time, was translated and sent to England, in which the missionaries were represented as calling the natives ‘ barbarians,’ and their shasters ‘ barbarian shasters,’ when in the original they had only intreated them not to reject the bible as being the shaster of the bar- barians, or ‘ M’leeches,’ a name by which they designate all who are not of the caste. After this a pamphlet appeared by Mr. Twining, and was followed by several more, written by major Scott Waring, and others: some openly espousing the cause of idolatry, and most of them filled with unfounded statements, and inef- fectual endeavours to trace the Vellore mutiny to the attempts at christianising the natives. The charges produced in these pamphlets were answered by the friends of the mission. Not long after, a tract which had been printed in Bengalee, and which in that language contained nothing offensive, was put into the hands of a native to be translated into Persic. The transla- tion being finished, it was, through the pressure of business, inadvertently printed off without be- ing first inspected by the missionaries ; and the translator having introduced various strong epi- thets, calling Mahomet a tyrant, &c. which it was alleged would irritate his followers, the Bri- tish authorities took it up in a serious manner. Mr. Carey being sent for, readily acknowledged the impropriety of the epithets, and promised to enquire into the affair. Had the object of the party been merely to prevent the disturbance of the public tranquillity,

things would have is- sued here. But proceedings were commenced

****which threatened ruin to the mission. In con- sequence, however, of an explanation, and a respectful memorial presented to the governor-general, the most serious part of the proceedings was revoked ; and when two of the missionaries waited on his lordship to thank him for his candour in regard to their memorial, he replied, that nothing more was necessary than a mere examination of the subject, on which every thing appeared in a clear and favorable light. The missionaries however, were required, in future, not to print any tracts without first submitting them to the inspection of government.*

In 1807 new rules were formed suited to the present state of the mission, every station being independent of the other, but all united as a ge- neral body. A considerable advance was made in ten of the translations : two new founts of type completed, viz. the Orissa and the Mahratta, and two others begun, viz. the Burmah and Chi- nese; a new and improved fount of Nagree also begun. With respect to printing, an impression of 1500 copies of the fourth volume of the Ben- galee Old Testament, containing all the prophets, was completed; the third volume, comprising the historical books, being in the press ; an edi- tion of 10,000 copies of Luke, the Acts, and the epistle to the Romans was completed ; the New Testament in the Sungscrit and Orissa considerably advanced; and the Hindostanee, Mahratta, and Guzuratee, put to press.

January 28, 1808, Serampore was taken by the English, but without making any difference in the situation of the missionaries. Mr. F. Carey, having studied medicine at Calcutta, in- troduced the vaccine inoculation at Rangoon. After having inoculated about fifty in the city with success, he was sent for by the governor to perform the operation on his children. This circumstance proved favorable to their settling as missionaries.

During this year the Danish clergyman at Serampore being dead, a question was moved among the inhabitants who should succeed him ? The majority expressed their wish, that the mis- sionaries might be permitted to do so. A peti- tion was accordingly presented to the governor- general for the purpose, which being granted, the parish church has from that time, about Sep- tember, been occupied by some of the Baptist brethren. They accept of no pecuniary reward for their services.

Towards the latter end of September there was a second examination of the

lads engaged in the study of the Chinese language, held at Seram- pore; at which were present the vice-president of the Asiatic Society, with several other Euro- pean gentlemen, who expressed their satisfaction in very strong terms. The missionaries now oc- cupy the ten following stations, viz.

Bootan, Missionary, Robinson.

Dinagepore, Fernandez.

Saddamahl, Wm. Carey.

Goamalty, Mardon.

Miniary, ... Moore.

Cutwa, Chamberlain.

Jessore, Carapeit Chater.

Serampore, Carey, &c.

Calcutta, Carey, &c.

Rangoon Chater and F. Carev.

In the month of March, 1809, they finished the Orissa New Testament. Towards the close of this year an improved paper manufacture was established in Serampore. The Benevolent In- stitution had increased to nearly ninety children, and a humane medical gentleman prescribed and furnished medicines for it and the family gratis. Access was allowed, and the gospel freely preached amongst the soldiers and their wives in the fort. In all the stations 106 were baptized during the year.

From the commencement of the following year, the missionaries speak of themselves no longer as a single mission, but as divided into five mis- siens, according to the different languages of the country, and which they designate, the United Missions in India. These are the Bengal, the Burman, the Orissa, the Bootan, and the Hin- doost'han. The Bengal contains five stations, the Hindoost'han two, and the rest one each.

In March the New Testament in the Hindee and Mahratta languages, the Pentateuch in Sung- scrit, and the Prophetic books in Orissa, were finished at press; and considerable numbers of them were sent and distributed in the respective countries, from whence they afterwards received intelligence of their being read and understood .

In April the plan suggested by Dr. Bell and improved by Mr. Lancaster was

introduced by Mr. Marshman into the school at Calcutta, by which the number of children could be greatly increased, and the expense contracted. Ground was purchased, and a new school-house erected, near the chapel, ninety feet by seventy, which would contain 800 children. Among the children in this school was a Malay boy, bought by Captain W. out of the hands of persons who were fattening him for sale to the Batta can- nibals !

On the llth of March, 1812, occurred a me- morable calamity for the mission, the spacious printing-office at Serampore was consumed by fire, with all the types, many valuable MSS. and a large quantity of paper; the whole- amounting to a loss of nearly ►►10,000. The missionaries, though much affected, were not greatly disheartened, nor in any degree induced to relax their efforts. New founts of type, in all the eastern languages, were cast, as soon as pos- sible, from the melted metal recovered from the ruins ; and the printing of the Scriptures was resumed, as fast as they could be prepared.

On the 19th of February the following year, the Tamul New Testament was finished at the press, and on the 20th was laid before the Cal- cutta Auxiliary Bible Society, at their anniver- versary. This edition, consisting of 5000 copies, was begun in April 1812, and completed in ra- ther more than ten months.

The progress of the translations, during this year, cannot be better described than in an ex- tract from a letter of Dr. Carey, dated Decem- ber 14. ►►► ‘ We are, at this time, engaged in translating the Bible into twenty-one languages, including the Bengalee, which is finished. This week, we obtained a person to assist in the trans- lation of the Scriptures into the Kassai language. About a fortnight ago we obtained help for die Sindh and Wuch. I believe we have now all the languages in that part, except that of Kutch,

which, I hope, will soon bo brought within our roach. We have not yet boon able to secure the languages of Nepala, Bootan, Munipoora, and Siam, and about five or six tribes of moun- taineers : besides these, I am not acquainted with any language on the continent of India, into which the word of God is not under trans- lation.’

At the public disputation of the students of the college of Fort William, held before Lord Minto as visitor of the college, on September 20th, his lordship, after enumerating their recent labors, concludes thus: ‘ I profess a very sincere pleasure in bringing the literary merits of Mr. Marshman and the other Reverend Members of the Serampore Mission to the notice of the pub-

lic, and in bearing my testimony to the great and extraordinary labors which constancy and energy MI their numerous and various occupations have enabled this modest and respectable community to accomplish. I am not less gratified by the opportunity which their literary achievements afford, of expressing my regard for the exemplary worth of their lives, and the beneficent principle which distinguishes and presides in the various useful establishments which they have formed, and which are conducted by themselves.' The stations occupied by the mission in 1814 had increased to twenty-four.

*In 181.r> the society had to sustain one of its greatest losses at home in the death of their ***civtary, the Rev. Andrew Fuller, who expired ;it Kettenng, after a short illness, on May 7th. lie had sustain. 'il this arduous and important oilice uvcr since the commencement of the society in 1 7 V2 ; 'unl at length fell a sacrifice to its ac eimial ;ted cares am! labors. At the next meeting of the committee, j)r. i'vland, of Bristol, was re- t ;,' to undertake the oiiice, pro tern pore ; and, at the a;mua! meeting, held at Northampton, in 'M< >V-T, this appointment was confirmed, and Mr. Minton, of Oxford, associated with the Doc- tor, as joint-secretary. November 27th the mis- sion premises were visited by the Right Hon. Karl Moira, the bishop of Calcutta, and Other distinguished personages, who expressed their high gratification witli what they saw. On December loth the settlement was restored to the Danish government.*

January, 1818, say the missionaries, 'In the Bengalee we have commenced a new edition, of .r>(KK) copies, of the whole Scriptures, in a new and much-reduced type, reduced by brother I.awiH;> in one large octavo volume ot 8.">0 page/,; which has hitherto occupied five volumes, of 800 pa-j-es each. The brethren in- tend to print .JOtK) additional Testaments, form- ing a thin volume, of about 180 pages. In the Suijˆcnt, the Latin of the east, and intelligible to almost all tin- learned men throughout Hin- doostan. the Historical Books have been com- plete 1, and the printing advanced to the middle < >t Jeremiah. \ e therefor" expect to complete this volnni" \,thin the next three months, and shall tiu-n l.ave printed the who!.' of the Scriptures in that language. The Hinder- Bible is still further advanced; and we fully expect that

within a month the last part will be ready for distribution. We shall then have printed the first edition of the whole Scriptures, with a second edition of the New Testament. In the Mahratta the historical books have been printed off, since the last Memoir, and the Hagiographa advanced to the middle of Proverbs. In the Sikh, the Pentateuch is just completed, and the historical books begun. In the Chinese we have just com- pleted the Pentateuch, and are now proceeding with a second edition of the New Testament. In the Telinga the New Testament is printed as far as the

Thessalonians ; and we hope to have finished the volume ere this reaches you. In the Pushtoo Testament the printing is advanced as far as the first of Peter; and in the Assam and Wuch, to the Romans : while, in the Bruj Bhassa, although a delay has arisen in consequence of the distance of brother Chamberlain's station, who was superintending the version, we are pre- paring to proceed with the version as before. In the Kurnata we have finished Mark, and are pro- ceeding with Luke : while in the Kunkuna, the Mooltanee, the Sindhee, the Kashmere, the Bikaneer, the Nepal, the Ooduypore, the Mar- war, the Juypore, and the Khassee, not much progress in printing has been made since the last Report. As soon, however, as the Hindee and Sungscrit versions are completed, it is in- tended to proceed with them. These translations were never advancing more rapidly than at present. The office now furnishes our venerable editor, Dr. Carey (independently of the Chinese proofs it forwards to Dr. Marshman) with twelve proofs per week, on an average. To which may be added, that opportunities of distributing the Scriptures, when printed, are becoming more extensive.'

Copies of the New Testament, in various lan- guages, as printed and published at Serampore, were presented by Mr. Ward at the Annual Meeting of the British and Foreign Bible Society, in 1 820 ; and two years after, the Chinese Bible complete, the result of sixteen years labor on the part of Dr. Marshman, was presented on a simi- lar occasion, by his eldest son, then in England. At that time, 1822, the New Testament had been printed and published in twenty-one different languages, and the work was proceeding in ten others. Four versions, after having been carried to a certain point, had been resigned to other individuals, whose local residence afforded greater facilities for completing them; and ten besides were suspended, principally because the requisite pecuniary means were wanting.

In 1819 a new station was formed in the island of Ceylon, at a place called Hangwell, about fourteen miles from Colombo. Mr. Siers re- moved hither, and a small church was subse- quently formed under his direction. The trans- lation of the whole Bible into Cingalese, by the united efforts of Messrs. Chater, Armour, and Clough, was completed about the end of 1822.

No part of the missionary undertakings of this society has succeeded more satisfactorily than the Jamaica mission. In 1819 two gentlemen left England for Kingston and Spanish town ; a spacious chapel has been built at the former place.

BAPTIST MISSION

in the year 1822 the number of members in Ihe church exceeded 2,000 :

Mr. Knibb arrived this year to take charge of a free school, estab- lished and maintained by the congregation ; and Mr. Tinson to commence a new station in a dis- tant part of the island. A station has been also formed in the north-west part of thg island, on an estate in the parish of St. James's ; the owners of which had long been favorable to the instruc- tion of their negroes.

In consequence of facilities afforded by some pious gentlemen, in the habit of trading to that quarter, the committee were induced, in 1822, to turn their attention further westward still, and to send out Mr. James Bourne as a missionary to the bay of Honduras, South America.

At home, the business of the society having become far more extensive than formerly, some alterations were made in the manner of con- ducting it. At the General Meeting held at Cambridge, October, 1819, it was resolved that a central committee should be formed out of the general committee, who should meet monthly, in London, for the transaction of business ; and from that time the Annual Meeting of the society has been held also in the Metropolis, in the month of June. Mr. Hinton, of Oxford, in con- sequence of his other numerous and important engagements, had resigned the office of joint secretary, in October, 1817, on which Mr. Dyer, then of Reading, now of Battersea, was chosen assistant secretary to Dr. Ryland, and, in the following year, requested to devote himself ex- clusively to the service of the mission, as joint secretary. In 1820 premises were engaged for the society in London, and at length a suitable house purchased, at No. 6, Fen Court, Fenchurch Street, where its still increasing business is now carried on.

Exclusive of the Chinese, the New Testament is published and sent into circulation in twenty of the languages of India. They are :

1. The Bengalee, 6th }

edition in the press S The Hindee, 2d edi- 3

tion in the press $ The Sungscrit, 2d)

edition in the press $ The Orissa, 2d edi- }

tion in the press S 5. The Mahratta, 2d }

edition in the press { TheTelinga . . . The Sikh .... The Gujuratee . The Kunkuiia tO. The Kurnata . . . The Pushtoo or Aff- (

ghan ??? S

The Assamee . . . The \Vutch or Mul- }

tanee $

The Bikaneer . t j. The Kashmeer . . The Bhugulkhund The Maruwar .
VOL. III.

Finished Commenced, at press.

1794 1801

1802 1803 1803

1804

1805 1807 1807 1808 1808

1811 1811 1812

1813 1810 1814 1814

1811 1810 1811

1811

1818 1815 1820 1819 1822

1819 1819 1819

1820 1820 1821 1821

513

1821 1822 1822

1817

The Nepalee 1812

The Harotee .’”’.’ 1815

20. The Kanoja ... 1815 The Chinese, 2d edi- ˆ

tion of the gospels > 1806

printed j

From this view of the translations, and of the time whem they were

respectively begun and finished at press, it will be evident that none ot them have been brought hastily through the press. Seven years have formed the shortest period which has been occupied, even by those in which the terminations were the nearest akin to those in the neighbouring dialects : we have before us the most honorable and competent eastern tes- timony to the corrrectness of these versions.

The following list exhibits ten other versions now or recently in the Serampore press, with the period of their commencement, and the state of their progress.

The Jwmboo . . The Mwnipoor . . . The Mwgwdh .... The Khasee .... The Oojjuyunee. . . . The Bruj . . . . .

Begun. Printed to. 1814 Phil. iii. 9 1814 2 Cor. xiii. 4 1814 Rom. xiii. 4 1814 Acts xix. 2i 1815 Phil. i. 10 1815 2 Cor. ii. 9

The Kwmaoun . . . The Bhutneer .... The Sree-nugar, or Gur- wal . . .

1815 Luke x. 23 1816 Rom. xiv. 13

1816 Luke xi. 21

The Palna

1817 Matt, xxvii.8

To these we may add the Kythee edition, which is the Hindee in the current Naguree character, chiefly used by the mercantile and trading classes, and in which at the earnest request of the late Mr. Chamberlain, they prepared a fount of types for the sake of printing the New Testament. We are able further to submit to the reader a brief view of what have been done by this society re- lative to the Old Testament, as well as the New.

State of the Versions of the Old Testament.

The Bengalee, second edition advanced to 1 Sam-

xx. The Sungscrit, second edition advanced to Exod.

xxxi. The Orissa, first edition finished at press in

1819.

The Mahratta, first edition printed off in 1820. The Chinese, finished at press April 1822. The Sikh, Pentateuch, and Historical Books,

printed ; Prophetic printed to Jer. xiii. The Assamee, Pentateuch finished, Historical

Books begun. The Pushtoo or Affghan, Pentateuch advanced

to Deut. xxx. The Kashmeer, Pentateuch advanced to Gen.

xxxvi.

The Telinga, Pentateuch printed ; and the ver- sion resigned to the Madras Bible Society.

The Old Testament now printed off in Chi- nese, forms the sixth version completed here of the whole Scriptures in the different Indian lan- guages. This was finished at press in April this year; after sixteen years of unremitting labor.

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We tlcse with a fac-simile of a printed passage, in thirteen of those eastern languages, in wrncl. the Scriptures have been published in the whole, or in part, by this Society.

TEXT. ‘ The people which sat in darkness saw great light,’ &c. MATT. iv. 16.

No. 1. The Bengalee.

2. The Orissa.

3. The Hindoostanee.

4. The Sungskrit.

5. The Telinga.

6. The Kurnata.

7. TheAffghan.

8. The Burman.

9. The Tamul.

10. The Singalese.

11. The Malay.

12. The Chinese.

13. The Multanee.

CS CTt$

BAPTISTK (John Monoyer), an artist, born in Lisle in 1635, who received his education at Antwerp, and in his first years was intended for a painter of history ; but his genius more strongly inclining him to the representation of flowers he applied his talents to those subjects, and became in that style one of the greatest masters. The disposition of his objects is elegant and beautiful; and his compositions are easily known in that respect. The duke of Montague employed him in conjunction with La h'osse and Rousseau, to embellish his house, now the British Museum; where are some of the finest performances of Baptist. A celebrated work of his is a looking- idass.in the royal palace at Kensington, which lie decorated with a garland of flowers for Queen Mary 11. who sat by him during the greatest part of the time lie was painting it. Baptist died in lo'.".t, leaving a son, Anthony, who painted flowers in his father's style.

BATTISTI: (John (laspurs), born at Antwerp, was the di.sciplo of Hosehaert. During the civil war he eanic to F.nuland, and entered into the service of < u-ncral l.ainhert; but after the resto- ration was enquired by Sir IVter Lely to paint the postun-s and draperies of his portraits; and lie has been called Lrly's Baptist. Kneller also, and l\ilev, employed him for the same purpose. lu the hall of St. Bartholemew's hospital is a poitrait of King Charles II. painted by this ar- tist, who died in 1(391 .

BAPTISTIN (John Baptiste Stuk), an Italian musician, was a native of Florence. He was a good composer, but is chiefly famed as having first brought the violincello into fashion in France. He died about 1 740.

BAR', v. & n., I From the Ang.Sax. bairgan, BAR'FUL. ibeorgan, birgan, byrgan, lite

rally to prevent, to keep out, or obstruct, to guard, to secure, to fortify, to prohibit. Chaucei once uses it in a metaphorical sense, ' covered with precious cloth and rich, barred (that is striped and crossed in the form of bars) and plated of gold and silver.' ??? The Persones Tale. But we meet with it in other parts of his writings, em- ployed according to the

common acceptation.

He rode but homely in a medlee cote, Girt with a seint of silke, with barret small.

Chaveer.

He was short shuldered, brode, a thikke gnarre, Ther 'nas no dore that he 'nolde heve of barre, Or breke it at a renning with his hede. Id,

He breake the barres, and through the timber pearst So large a hole, wherby they might discerne The house, the court, the secret chambers eke Of Priamus, and auncient kings of Troy. Surrey

Deep in the bottom of an huge great rocke The dungeon was, in which her bound he lefte, That neither yron barret, nor brasen locke, Did need to guard from force ov secret theft

BAR.

515

Hath he set bounds between their love and me ? I am tneir mother, who shall bar them from me ?

Shakspeare. My duty cannot suffer

T" obey in all your daughter's hard commands j Though their injunction be to bar my doors, And let this tyrannous night take hold upon you.

Id.

When law can QO no right,

Let it be lawful, that law bar no wrong. Id.

VIOLA. I'll do my best To woo your lady ; yet, a larrefull strife, Whoe'er I woo, myself would be his wife.

Id. Twelfth Night.

Ye sit like pris'ners, barr'd with doors and chaines, And yet no care perpetual care restraines.

Beaumont. Of True Liberty. Hard, thou know'st it, to exclude Spiritual substance with corporeal bar. Milton.

These bars enclose that wider den, Of those wild creatures called men. Marvell. Our hope of Italy, not only lost, But shut from ev'ry shore, and barr'd from ev'ry coast.

Dry den.

When you bar the window shutters of your lady's bed-chamber at nights, leave open the sashes, to let in air. Swift.

What is a greater pedant than a mere man of the town ? Bar him the playhouses, and you strike him dumb. Addison.

With emulation fir'd,

They strain to lead the field, top the barr'd gate, O'er thr deeo ditch exulting bound, and brush The tliorny-twining hedge. Somerville. The Chace.

Fig. 1.

Fig. 2.

BAR, in African traffic, is used for a denomi- nation of price : payment being formerly made by the negroes almost wholly in iron bars.

BAR, in courts of justice, is an enclosure made with a strong partition of timber, where the council are placed to plead causes. It is also applied to the benches where the lawyers or advocates are seated, because anciently, there was a bar to separate the pleaders from the at- torneys and others. Hence our lawyers, who are called to the bar, or licensed to plead, are termed barristers, an appellation equivalent to licentiate in other countries.

BAR of gold or silver, is a lump or wedge from mines, melted down into a sort of mould, and never wrought.

BARS of a horse, are the upper part of the gums between the tusks and grinders, which bear no teeth, and to which the bit is applied, and by its friction the horse is governed.

BARS, in music, are strokes drawn perpendi- cularly across the lines of a piece of music ; used to regulate the beating or measure of musical time. The use of bars in music is a modern in- vention. They cannot be traced higher than the year 1574, and seem not to be in general use till about the middle of the seventeenth century. It is not easy to imagine how music in many parts could be composed without bars, or how the

*The folded i*ates would bar my progress now, But that the lord of this enclos'd demesne, Communicative of the good he o-*ns, Admits me to a share ; the guiltless eye Commits no wrong, nor wastes what it enjoys.*

Cowper't Tatk.

BAR, in law, is a peremptory exception against a demand or plea brought by the defendant in an action, that destroys the action of the plaintiff for ever. It is divided into a bar to common intent, and a bar special ; a bar to common intent is an ordinary or general bar, that disables the de- claration or plea of the plaintiff; a bar special, is that which is more than ordinary, and falls out in the case in hand, upon some special circum- stance of the fact.

BAR, in heraldry, one of the honorable ordi- naries, consisting of two horizontal lines drawn across the escutcheon, as in fig. 1. The bar dif- fers from the fesse in three particulars, namely, that it occupies a fifth part of the field instead of a third ; it is not limited to any part of the escutcheon, and is never borne single. It has two diminutives, namely, the closet (fig. 2), which is half the bar, and the barrule (fig. 3), which is half the closet. Of the closet there may be five in one field ; but the barrulet can be borne only in couples. Bars-gemelles are so called when they stand in couples, as in fig. 4. ' The field is argent, a fesse between two bars, gemelles gules, by the name of Badlemere.'

Fig. 3.

Fig. 4.

maxima, or large, equal to eight semibreves could be divided into bars of one or two semi- breves in each. See BATTITTA, and TIME-TABLE. A double bar implies the end of a strain. When double bars are dotted on both sides, thus, the dots imply a repetition of each strain ; but if dotted only on one side, that strain only which precedes or follows the dots, is to be repeated.*

BAR, in geography, (Gael, a hill or brae), the name of several places in different parts of Eu- rope : such as,

BAR, a ci-devant duchy of France, bounded on the east by Lorraine, on the north by Luxem- bourg, on the west by Champagne, on the south by part of the same country and by Franche Comte ; it is crossed by the Meuse from south to north, and watered by several other rivers, which render it very fertile. It was divided into four bailiages, viz. Bassigni, Bar, St. Michael, and Clermont. The chief towns are Bar-le-Duc, Clermont, St. Michael, Longwy, Pont-a-Mous- son, and Stenay. In 1736 it was given to Sta-

nislaus, then king of Poland.

BAR, a city of Poland, in Podolia, seated on the river Kiov, and strongly fortified ; forty-eight miles north-west of Braclaw, and sixty-five north-east of Kaminieck.

B.\n, a town in tlio province of Bahar, in the dislriet of the same name, thirty-five miles E.S. E. of Patna. Long. 86►► 46′ E., lat. 25►► 28′ N.

BAR, a hill of Scotland, in Renfrewshire, in the parish of Kilbarchan, on the top of which are the remains of an old encampment, consist- ing of a semicircular parapet of loose stones to- wards the south, and defended on the north by perpendicular basaltic rocks. Tradition says it was an encampment of the celebrated Sir William Wallace ; and the people show a pinnacle of rock where they say he sat, while he enticed the Eng- lish forces into a bog at the bottom of it, where they perished. But Mr. Maxwell, the minister of the parish, concludes it to be Danish from its form, and from the silence of historians respect- ing this anecdote of the Scots patriot. Mr. Maxwell also mentions it as a singular fact in natural history, by no means consonant to the prevailing theories, that these perpendicular ba- saltes are incumbent upon coal, formerly wrought to a great extent.

BAR, or BARU, a small but thriving town of France, in the department of the Lower Rhine, sixteen miles south-west from Strasburg. It has u population of 4100 souls.

BAR-LK-MONT, a town of France, in the ci- devant French Netherlands, now in the depart- ment of the North ; fifteen miles south of Mons, situated on the Sambre.

r>\u si 11 At: UK, an ancient town of France, in l!:e department of Aube, and ci-devant province of Champagne, twenty-six miles east of Troyes, (Unions tor its excellent wines. The manufac- tures are soap, linen, serˆe, and leather. Here are also some j;ood iron-works. It is the capital of an arrondissement, containing 44,000 inhabi- tants.

BAH si i: OF.NAIN, or I! A ii-i.E-T)uc, a town of !►►►' ranee, in die department of Mouse, and the ci- devant capital of the duchy of Bar. It is seated o;i the doclivity of a hill, and divided into the higher and lower town ; the lower town is watered by tin; rivulet Ornain, which abounds with excellent, trout. The population nearly 10,000. llere are manufactures of calicoes, woollen stud's, stockings, hats, and leather; also a uood trade in

grain, wood, brandy, win?, and hemp. Forty-two miles west of Nancy, and 133 east of 1 'avis' Long. :V2►► 15′ F,., lat. 48►► 47′ N.

BAK-STR-SKINE, a town of France, in Bur- L;undy, on the Seine; formerly the capital of a county of the same nan.e, now of an arrondisse- ment in the department of the Aube. In it are <1",o houses, and 2'27o inhabitants, with manufac- tures of knives, leather, and woollen caps, and a trade in wine, n-rain, and paper. Eighteen miles south-east of Troyes, and I 10 south-east of Paris. Long. -1 ' 27′ F,., lat. 48″ T N.

BAits-dKMKi,, or bars-gemclles, arc diminu- tives of the bar, and are placed in pairs, or two nnd t\o on a sin,. Id. They derive their name from tin- i aim gemeili, twins.

MARA, a festival celebrated with much mag rihicence at .Messina, and representing the as- sumption ofihe Virgin. The bara, though used as th" ►►► neral denomination of this festival, sig- H'lifs irore particularly a vast r:;u'hine iifty feet hi. h, i:t U►►> top t>i v.liir.h a Y'.IUIV.; virl of four-*

BAR

teen, representing theVirgin, stands upon the hand of an image of Jesus Christ. Round him turn vertically, in a circle, twelve little children, which represent the seraphim ; below them, in another circle, which turns horizontally, are twelve more representing the cherubim; faeiow these a sun turns vertically, with a child at the extremity of each of the four principal radii 01 his circle, who ascend and descend with his ro- tation, yet still stand upright. Below the sun is the lowest circle, about seven feet from the ground, in which twelve boys turn horizontally without interruption : these are intended for the twelve apostles, who are supposed to surround the tomb of the Virgin at the moment when she ascends into heaven. This description of such a complication of superstitious whirligigs may nearly turn the stomachs of our delicate readers ; but think of the poor little cherubim, seraphim, and apostles, who are twirled about in this pro- cession! 'For,' says M. Houel, in his Travels through Sicily, ' some of them fall asleep, many of them vomit, and several do still worse :' but these unseemly effusions are no drawback upon the edification of the people; and nothing is more common than to see fathers and mothers soliciting with ardor for their boys and girrs the pious distinction of puking at the bara. This machine is not drawn by asses or mules, but by a multitude of robust monks !

BARA, in ancient geography, 1. a small island in the Adriatic, opposite to Brundusium; the Pharos of Mela : 2. A Frith, or arm of the sea of

Britannia, supposed to be the Murray frith.

BARA, or BARRAY, one of the Western Islands of Scotland, eight computed miles in length, and from two to four in breadth.

BARABAIAN DESERT. See BARABINZIANS.

BARABBAS, from J3, a son, and K3K, a fa- ther, a notorious robber and murderer, whom Pilate, wishing to save Jesus, offered for execu- tion to the Jews ; but they, instigated by their rulers, saved the murderer, and murdered the Saviour of mankind.

BARABINZIANS, a tribe of Tartars, who live on both sides the river Irtisch. They seem to derive their name from the Barabaian desert, whose lakes supply them abundantly with fish, on which, and their cattle, they chiefly subsist.

BARABRAS, a people of Lower Nubia, con- tiguous to Egypt. They are a distinct race from their neighbours, and of unknown origin.

BARACHAN, a creek on the western coast of Scotland, on the Ross side of the Sound of Eye, where vessels of considerable burden may an- chor in safety.

BARACOA, a sea-port on the north-east coast of the island of Cuba, fifty miles north-east of St. Jago.

BARADˆEUS , JACOB, or JACOB ZANZALUS, a monk of the sixth century. He was a Syrian by birth, and a disciple of Eutyches and Dioscorus. He maintained that there is but one nature in Christ; and his doctrines spread so much ir, Asia and Africa that the Eutychians were swal- lowed up by that of the Jacobites, which also comprehended all the Monophysites of the east. His party made him bishop of Edessa. He di.d in 588.*

1 BARAK, p~D, i.e. lightning; the son of Abinoam, of Kedesh Napthali, one of the deli- verers of Israel from the oppression of the Ca- naanites. See Judges iv.

BARAKAN, or PARKAN, a town of Hungary, formerly fortified, in the

farther circle of the Danube, -where the Turks were defeated, and the town recovered by the Imperialists, who took it by storm in 1684. It is opposite to Gran, of which it is reckoned a part.

BARALIPTON, among logicians, a term de- noting the first indirect mode of the first figure of syllogism. A syllogism in baralipton, is when the two first propositions are general, and the third particular, the middle term being the subject in the first proposition, and the predi- cate in the second. The following is of this kind :

BA. Every evil ought to be feared ; R A. Every violent passion is an evil ; LIP. Therefore something that ought to be feared is a violent passion.

BARALLOTS, in church history, a sect of heretics at Bologna, in Italy, who had all things in common, even their wives and children ! Their facility in complying with all manner of debauchery made them get the name of obe- dientes, or compliers.

BARAN, a river rising in the Hin'doo Kho mountains, and flowing through the north-east of Cabul.

BARANCA DE MALAMBO, a town of Terra Firma in America, with a bishop's see and a good haven. It is a place of great trade, seated on the river Magdalena, seventy-five miles north of Carthagena.

BARANGI, officers among the Greeks of the lower empire, who kept the keys of the city gates where the emperor resided. Codiuus says, they stood guard at the door of the em- peror's bed-chamber and dining-room. ××× Codinus and Curopalata observe, that the name is English, formed from bar, to shut ; and that the barangi were Englishmen by country; Anglo-Danes, who, being driven out of England, were received into the service of the emperor of Constantinople, and made guards or protectors of his person. Whence they are called in Latin (Cujaccius), protectores ; by others, securigeri, as being armed with securis, a battle-axe. Codinus adds, that they still spoke the English tongue. Anna Comnena says, the barangi came from the island Tlmle ; by which is doubtless meant our island. Yet Nicetas make? them Germans ; a mistake easy to be made at that distance, considering the relation the Anglo-Saxons bore to Germany. There were barangi as early as the emperor Mi- chael Paphlagonius, in 1035, as appears from Cedrenus ; but they were then only common soldiers, not a life-guard. Their commander was called atco\o9o××, importing a person who always followed the emperor. BARANTA, a West Indian balsam. BARANYAT, a county of Lower Hungary, oounded by the Danube, Sclavonia, and the 'Bounties of Tolna and Schumeg. It abounds in i^i-ain, fruit, wine, cattle, and gama. Its capital is Funfkirchen, and it has a

population of 140,000 persons.

BARANZANO (Redemptus), a Barnabite monk, born in Piedmont in 1590. He became ??? professor of philosophy and mathematics at Anneci, and was highly esteemed by lord Bacon, who corresponded with him. He died at Mon- tarifis in 1622. He wrote, 1, Uranoscopia, seu Un. 'ersa Doctrina de Ccelo, fol. 1617 ; 2. Cam- pus Philosophicus, 8vo. 1620; 3. De Novis Opinionibus Physicis, 8vo. 1617.

BARA-PicKLET, bread made of fine flour kneaded with barm, which makes it very light and spongy : bara being the Welch for bread.

BARATHIER (Barthelemy), an Italian lawyer of the fifteenth century. He was bom at Pla- centia, and became professor at Pavia and Fer- rara. He published a New Digest of the Feudal Law, at Paris, in 1611.

BARATHRA, a name of the Serbonian bog.

BARATHRO, a glutton. See BARATHRUM.

BARATHRON, solemn games held at Thes- protia.

BARATHRUM, fiapaQpov, in antiquity, . a deep dark pit at Athens, into which condemned persons were cast headlong. It had sharp spikes at the top that no man might escape out ; and others at the bottom, to pierce and torment such as were cast in. Its depth and capaciousness made it to be applied proverbially to a covetous per- son, a glutton, called barathro by the Romans, and a common prostitute.

BARATHRUM, in physiology, a baleful cavern, inaccessible on account of its foetid, or poisonous fumes ; styled by others fossa charonia.

BARATIER (Philip), a most extraordinary instance of early and rapid exertion of mental faculties. This surprising genius was the son of Francis Baratier, minister of the French church at Schwabach, near Nuremberg, where he was born January 10, 1721. The French was his mother-tongue, and High Dutch the language of the place; but his father talking Latin to him, that language became as familiar to him as the rest: so that without knowing the rules of grammar, he, at four years of age, talked French to his mother, Latin to his father, and High Dutch to the maid, or neighbouring children ; and all this without mixing or confounding the respective languages. About the middle of his fifth year he acquired Greek in like manner ; so that in fifteen months he perfectly understood all the Greek books in the Old and New Testament, which he readily translated into Latin. When he was five years and eight months old, he en- tered upon Hebrew ; and in three years was so expert in the Hebrew text, that from a

*bible without points, he could give the sense of the original in Latin or French ; or translate extem- pore the Latin or French versions into Hebrew, almost word for word ; and had all the Hebrew psalms by heart. He composed, at this time, a dic- tionary of rare and difficult Hebrew words, with critical remarks and philosophical observations, in about 400 pages in 4to; and, about his tent'i year, amused himself for twelve months with tat rabbinical writers. With these he intermixed a knowledge of the Chaldaic, Syriac, and Arabic ; and acquired a taste for divinity and ecclesiastical antiquity, by studying the Greek fathers and councils of the first four ages of the church. In *he midst of these occupations, a r>'"r of rrlobes*

coming into his possession, he could, in ten days time, resolve all the problems on them ; and in about three months (in January, 1735), devised his project for the discovery of the longitude, which he communicated to the Royal Society at London and the Royal Academy of Sciences at Berlin. In June, 1731, he was matriculated in the university of Altorf; and at the close of 1732, he was presented by his father at the meet- ing of the reformed churches of the circle of Franconia; who, astonished at his wonderful Calents, admitted him to assist in the deliberations of the synod ; and to preserve the memory of so singular an event, it was ordered to be registered in their acts. In 1734 the margrave of Bran- denburgh Anspach granted this young scholar the use of whatever books he wanted from the Anspach library, together with a pension of fifty florins, which he enjoyed three years; and his father receiving a call to the French church at Stettin, in Pomerania, young Baratier was, on the journey, admitted M.A. with universal ap- plause at the university of Halle ; at Berlin he was honored with several conversations with the king of Prussia, and was received into the royal academy. Towards the close of his life he ac- quired a taste for medals, inscriptions, and anti- quities; metaphysical enquiries, and experimental philosophy, intervening occasionally between these studies. He wrote several essays and dis- sertations ; made astronomical remarks and labo- rious calculations; and took great pains towards a history of the heresies of the anti-trinitarians, and of the thirty years' war in Germany. His last publication, which appeared in 1740, was on the succession of the bishops of Rome. The final work lie was engaged in, and for which he had collected many materials, was Enquiries concern- ing the Egyptian Antiquities. But the sub- stance of this blazing meteor was now nearly exhausted ; he was always weak and sickly, and died October 5, 1740, aged nineteen years, eight months, and sixteen days. He published eleven

different pieces, and left twenty-six MSS. on various subjects, the contents of which may be seen in his life, written by M. Formey, professor of philosophy at Berlin.

BARATOR, or BARRETOK, in law. Lambert derives the word from the Latin balatro, a vile knave; but the proper derivation is from the French barrateur, i. e. a deceiver ; and this agrees with t!ie description of a common barretor in lord Coke's report, viz. that he is a common mover and maintainer of suits in disturbance of the peace, and in taking and detaining the pos- session of houses and lands, or goods, by false inventions, &<-. And, therefore, it was adjudged tiiat the indictment against him ought to be in these words, viz. that he is communis malefactor, calumniator et seminator litium et diseordiarum inter vieinos suos, et pacis reˆis perturbator, &c. It is said that a common barretor is the most dangerous oppressor in the law, for he oppresseth the,- innocent by color of law, which was made ti) protect them from oppression.

BAKATRY, or BARRATRY, in a shipmaster, iˆ his cheating the owners. If goods delivered on ship-board arc embezzled, all the mariners ou.;ht by the maritime law, to contribute to the sa-

tisfaction of the party that lost his goods, and the cause is to be tried in the admiralty. In a case where a ship was insured against the baratry of the master, &c. and the jury found that the ship was lost by the fraud and negligence of the master, the court agreed, that the fraud was baratry, though not named in the covenant ; but that negligence was not.

BARATRY, or BARRETRY, from baraterie, Fr. fraud ; in law, is the offence of frequently stirring up suits and quarrels between his majesty's sub- jects, either at law or otherwise. The punish- ment for this offence, in a common person, is by fine and imprisonment : but if the offender, as is too frequently the case, belongs to the profes- sion of the" law, the barator who is thus able as well as willing to do mischief, ought always to be disabled for practising for the future. And, indeed, it is enacted by statute 12 Geo. I. c. 29, that if any one having been convicted of forgery, perjury, subornation of perjury, or common bar- retry, shall practice as an attorney, solicitor, or agent in any suit, the court, upon complaint, shall examine it in a summary way; and if proved, shall direct the offender to be transported for seven years. Hereunto also may be referred another offence of equal malignity and audacious- ness, that of suing another in the name of a fic- titious plaintiff, either one not in being at all, or one who is ignorant of the suit. This offence, if committed in any of the king's superior courts, is left, as a high contempt, to be punished at their discretion : but in courts of a lower degree, where the crime is equally pernicious, but the authority of the judges not equally extensive, it is directed by statute 8 Eliz.

c. 2, to be punished by six months imprisonment, and treble damages to the party injured.

BARATRY is also used for bribery or corrup- tion in a judge, giving a false sentence for money. BARATRY is also used, in middle age writers, for fraud or deceit in making of contracts, sales, or the like.

BARATZ, Turkish, letters-patent granted by the Turkish emperors to the Greek patriarchs, bishops, &c. for the exercise of their ecclesias- tical functions. This baratz gives the bishops full power and authority to establish and depose the inferior clergy, and all other religious per- sons ; to grant licenses for marriages, and issue out divorces ; to collect the revenues belonging to the churches; to receive the pious legacies bequeathed to them ; in short, to enjoy all the privileges and advantages belonging to their high station : and all this (as it is expressed in the baratz itself), ‘ according to the vain and idle ceremonies of the Christians.’

BARB’, v. & n. -\ Fr. barbier,T)ui barbeeren, BARB’ATED, / Lat. barba. The etymology

BARB’EK, p > doubtful. It signifies a

BA’RB’ER, v. & n. I beard ; hence it has grown BARB’ET. J to mean a covering and

protection ; as armour and trappings for horses, a hood or muffler for the head and lower part of the face and shoulders. It has also been ex- tended in its application to the jags or reversed points of an arrow or hook. To barb, is to cut, to shave, or to dress out the beard. Barb, con- tracted from Barbary, signifies a Barbary horse

For of a suertio the duke straka the kyng on the brow, right under the defence of the hedpece, on the very coyffe scull or bassenet pece, whereunto the bar- bet for power and defence is charneld.

Hall. King Henry VIII. fol. 133. But let be this, and tell me how you fare, Do way your barbe, and shew your face bare, Do way your boke, rise up and let us dance, And let vs done to May some observaunce.

Chaucer. Troilus and Creieide.

Two manner of arrows heades sayth Pollux, was used in olde time. The one

he calleth iyx

Thanked they were from the senate, and presents were sent unto them, to wit, a chaine of gold weigh- ing two pounds ; certain golden cups of foure pounde weight ; a brave courser barbed and trapp'd, and an horseman's armour. Holland. Living.

Shave the head, and tie the beard, and say it was the desire of the penitent to be so barbed before his death. Shakspeare.

Grim-visag'd war hath smooth'd his wrinkled front ; And now ??? instead of mounting barbed steeds, To fright the soul of fearful adversaries, He capers nimbly in a lady's chamber, To the lascivious pleasing of a lute. Id.

Their horses were naked, without any barbs ; for albeit many brought barhi, few regarded to put them on. Hayward.

The stooping scythe-man, that doth barb the field, Thou mak'st wink-sure ; in night all creatures sleep.

Martton. Malcontent, No drizzling show'r, But rattling storm of arrows, barb'd with fire.

Milton.

Thy boisterous looks No worthy match for valour to assail, But by the barber's razor best subdued. Id.

A warriour train

That like a deluge pour'd upon the plain ; On barbed steeds they rode, in proud array. Thick as the college of the bees in May.

Dryden's Fablei.

Nor less the Spartan fear'd before he found The shining barb appear above the wound. Pope.

Watermen brawl, coblers sing; hut why must a barber be for ever a politician, a musician, an anato- mist, a poet, and a physician ? Talter, No. 34. I cannot lay so much stress on a plate and descrip- tion, given by Plot, of a dart uncommonly barbated.

Warton.

To make a fine gentlemen several trades are re- quired, but chiefly a

barber. You have undoubtedly heard of the Jewish champion, whose strength lay in his hair ; one would think the English were for placing all wisdom there ; to appear wise nothing is more requisite here than for a man to borrow hair from the heads of all his neighbours, and clap it like ◆◆◆i bush on his own.

Goldsmith. Citisen of the World. Straight as above the surface of the flood, They wanton rise, or urg'd by hunger leap, Then fix, with gentle twitch, the barbed hook.

Thornton.

Horses brought from Barbary are commonly of a light slender size, and very dear, usually chosen from stallions. Barbs, it is said, may die, but never grow old ; the vigour and mettle of barbt never cease but with their life. . Farrier't Dictionary.

They are ill-built,

Pin-buttock 'd like your dainty barbariei, And weak i' the pasterns.

Beaumont and Fletffyir.

But why should you who still succeed, Whether with graceful act you lead The fiery barbt or with as graceful motion treaH In shining balls, where all agree To give the highest praise to thee.

Verses to Lanidowne.

BARB is also used for the Barbary pigeon, called by Moore the columba numidica. This bird is but a small pigeon, and has a very short buak like a bullfinch, with a small water, and a naked circle of tuberose red flesh round the eyes ; the iris of the eye is of a pearl color, and the broader and redder this circle round them is, the more the pigeon is valued ; but this is always narrow while they are young, and does not arrive at its full breadth till they are four years old. Soma of this species have a tuft of feathers behind their head, and others not. The red circle round their eyes grows pale and whitish if they become sick, but always recovers its redness as they grow well. Their proper color is black or dun. There are likewise pied ones ; but they are of a mixed breed and not so valuable.

BARBA, in botany, a species of pubes, or down, with which the surface of some plants is covered. The term was invented by Linnaeus, and by its application in the Species Plantarum, seems to signify a tuft or bunch of strong hairs terminating the leaves. The mesembryanthemum barbatum, a species of marygold, furnishes an ex- ample. The word is also often used in

composi- tion to form the trivial names of several plants.

BARBA ARON, in botany, a name given by some authors to the common great house-leek.

BARBA CAPR, in botany. See SPIRAEA. Of this genus Mr. Tournefort allows only one spe- cies, the common barba caprae, or, as it is called by some, drymopogon.*

BARBA Jovis, in botany, a species of anthyllis

BARBA (Alvarez Alonzo), curate of St. Ber- nard de Potosi, in the seventeenth century. He was author of a curious book on metallurgy, published at Madrid in 1620, quarto, and again in 1730, abridged in French, 12mo.

BAR'BACAN, n. s. Fr. barbacane, Span, bar- bacana. A fortification placed before the walls of a town. A fortress at the end of a bridge. An opening in the wall through which the guns are levelled.

Within the barbacan a porter sate,

Day and night duly keeping watch and ward :

Nor wight nor word mote pass out of the gate, But in good order, and with due regard.

Faerie Queene.

BARBACAN, or BARBICAN. See CASTLE.

BARBADENSIS, in conchology, a species of voluta, inhabiting the American seas. The shell is an inch and a half long, tapering; color red- dish, with very fine transverse striae.

BARBADENSIS, in ornithology, a species of psittacus, the ash-fronted parrot of Latham. This bird is green; about the size of a pigeon, and inhabits Barbadoes.

BARBADILLO (Alphonsus Jerom de Salas), a Spanish dramatic writer, born at Madrid. He

was author of several comedies, and of the Ad- ventures of Don Diego de

Noche, 1624, 8vo.

BARBADINO, a learned Portuguese. He wrote and published at Paris, in 1746, a book in his native language, On the present state of Literature in Portugal. This work was attacked with great severity by a Portuguese Jesuit, and defended by Don Joseph de Maymo.

BARBADO, a district in the island of Arbe, which produces excellent wines. See ARBE.

BARBADOES, the most easterly of all. the Carribee Islands, subject to Great Britain, and, according to the best geographers, lying between 59►► 50′ and 62►► 2′ W. long., and between 12►► a6′ and 13►► 16′ N. lat. It is seventy miles from St. Vincent's. Its extent is not certainly known ; but, according to Edwards, the length of the island is twenty-one miles, and its breadth four- teen. From the returns to parliament in 1811, it. appears that the population of its different pa- rishes was at that time as follows : ►►► viz.

Parishes.

Whites. ‘(Free color.

Slaves.

St. Michael .

5405

1551

12,198

Christ Church

1570

66

9234

St. Philip .

1.510

212

9682

St. John . .

1148

887

58

St. Joseph .

106G

77

3104

St. Andrew .

571

165

3249

St. Lucy . .

1043

34

5282

St. Peter . .

1356

223

5725

St. James

703

33

4295

St. Thomas .

773

31

4003

St. George .

1130

113

5428

1C, 289

3392

62,258

Hv latest returns the u h\i>^\ Five Co

or | Sliives.

population was, ‘21,000 (79,000

The population of the island, therefore, was U)U,<'UU ; and from this statement it appears that the nninher of slaves had increased at a comparatively slow rate during a period of twenty years, i.e. from 1811 to 1831. It was affirmed by Mr. Wilberforce, in the House of Commons, in the course of the debates on the slave trade, that in the former of these years there were 63,248 >!a\<.s on the island: in 17u6 the number was f">2,l !.”>; and in 1811 they were, as we see, S. ISarbadoes is supposed to have attained ihe summit of prosperity more than a century ai;o; and between the yreat planters and the people o! color here there is a numerous and remarkable class of inhabitants, descended from the original settler—, \lio have no precise know- ledge when their ancestors arrived at the island. ! hese. consequently, consider it as their coun- ts, ami do not look buck, therefore, like the planters or the negroes, to early associations or other sci IKS as then home. At a distance, Bar- badoes present- a hrosvn and nearly uniform surface, and the U est Indians generally think a very Hat country; but on a nearer approach the prospect improve-;, and the scenery becomes uround rises in singular ulues from the shore. about U”J ieet each are terrace.-, marls half a

mile broad, and these, highly cultivated, form a strong contrast with the black rocky precipices and bold promontories, projecting over deep ravines covered with dark foliage, by which they are surrounded.

When Barbadoes was first settled by the English, in 1605, few or no quadrupeds were found upon it except hogs, which had been left there by the Portuguese. For convenience of carriage to the sea-side, some of the planters at first procured camels, which undoubtedly would, in all respects, have been preferable to horses for their sugar and other works ; but the nature of the climate disagreeing with that ani- mal, it was found impossible to preserve the breed. Some gentlemen of small fortune in England resolved at this time to become adven- turers thither. The trees were large, and of a wood so hard and stubborn that it was with great difficulty they could clear as much ground as was necessary for their subsistence ; but by unremitting perseverance they brought it to yield them a tolerable support. They found that cotton and indigo agreed well with the

*soil ; and that tobacco, which was beginning to come into repute in England, answered tolerably well. These prospects, together with the storm be- tween the king and parliament, which was be- ginning to break out in England, induced many to transport themselves into this island : and so great was the increase of people in Barbadoes, within twenty-five years after its first settlement, that in 1650 it contained more than 50,000 whites, and a much greater number of negro and Indian slaves. They now applied for horses to Old and New ,England : from the former they had those that were fit for show and draught j from the latter those that were proper for mount- ing their militia, and for the saddle. They had likewise some of an inferior breed from Curassao, and other settlements. They are reported to have had their first breed of black cattle from Bonavista and the Isle of May ; they now breed upon the island, and often do the work of horses. The sugar, which soon after this was cultivated, rendered them extremely wealthy. The number of slaves, therefore, was still augmented ; and in 1 676 it is supposed that they amounted to 100,000, which, together with 50,000 whites, made 150,000 on this small spot : a degree of population un- known in Holland, in China, or any other part of the world most renowned for numbers. At this time Barbadoes employed 400 sail of ships, one with another 150 tons, in their trade. Their an- nual exports in sugar, indigo, ginger, cotton, and citron-water, were above ►►350,000 ; and their circulating cash at home was ►►200,000. Such was the increase of population, trade, and wealth, in the course of fifty years. The asses herex are very serviceable in carrying burdens to and from the plantations. The hogs of Barbadoes are finer eating than those of Britain, but the few sheep they have are not near so good. They likewise have goats, which when young are ex- cellent food. Racoons and monkeys are also found here in great abundance. A variety of birds are produced on Barbadoes, of whicii the humming-bird is the most remarkable. \ild fowl do not often frequent this island ; but sometime**

teal are found near their ponds. A bird which they call the man of war, is said to meet ships at twenty leagues from land, and their return is to the inhabitants a sure sign of the arrival of these ships. When the wind blows from the south and south-west they have flocks of cur- lews, plovers, snipes, wild pigeons, and wild ducks. The wild pigeons are very fat and plen- tiful at such seasons, and rather larger than those of England. The tame pigeons, pullets, ducks, and poultry of all kinds, that are bred at Barba- does have also a fine flavor, and are accounted more delicious than those of Europe. Their rabbits are scarce ; they have no hares ; and the few deer they have are kept as curiosities. The insects of Barbadoes are not

venomous, nor do either their snakes or scorpions ever sting. The mosquitoes are troublesome, and bite ; but are more tolerable in Barbadoes than on the conti- nent. Various other insects are found on the island, some of which are troublesome, but in no greater degree than those that are produced by every warm summer in England. Oranges and lemons grow in Barbadoes in great plenty, and in their utmost perfection. The lemon juice here has a peculiar fragrancy. The citrons of Barbadoes afford the best drams and sweetmeats of any in the world, the Barbadoes ladies excel- ling in the art of preserving the rind of the fruit. The pine-apple is also a native of Barbadoes, and grows there to much greater perfection than it can be made to do in Europe. A vast num- ber of different trees, peculiar to the climate, are also found to nourish in Barbadoes in great per- fection, such as the aloe, mangrove, calabash, cedar, cotton, ginger, plantains, guavas, mastic, &c. Here likewise are produced some sensitive plants, with a good deal of garden stuff. Bar- badoes is well supplied with fish ; and some caught in the sea surrounding it are almost pe- culiar to itself, such as the parrot-fish, snappers, gray civallos, terbums, and coney-fish. The mullets, lobsters, and crabs, caught here are ex- cellent ; and the green turtle is perhaps the greatest delicacy that ancient or modern luxury can boast of. At Barbadoes this delicious shell- fish seldom sells for less than a shilling a pound, and often for more. There is found in this island a kind of land-crab which eats herbs whereever it can find them, and shelters itself in houses and hollows of trees. According to re- port they are a shell-fish of passage ; for in March they travel to the sea in great numbers. See CANCER. Barbadoes is considered by some writers as having its fertility diminished by long cultiva tion ; and its produce is, therefore, thought to be little in proportion to the quantity of land. The soil chiefly rests upon a basis of calcareous rock, formed of madripores and other marine concretions. In some places it is composed of a deep black mould ; red earth, of the same kind as in Jamaica, is also found, and sometimes the surface consists of a species of light white earth, .vhich is chiefly indurated .argil, bleached by ex posurc. Barbadoes on the whole must be con- sidered as an important possession : its situation renders it the key to the Weit Indies; and its tir,ˆ bay affords an excellent rendezvous for snip- , niir while the salubritv of its climate exceeds

that of most of the other West India islands. But it has been thought to decline considerably since the year 1787, a circumstance ascribed to the dreadful succession of hurricanes with which it has been visited. The capital of the island was scarcely risen from the ashes to which it had been reduced by fire, when it was torn from its foundations, and the whole country made a scene of desolation by the storm of the 10th of October, 1780. Above 4000 of the inhabitants miserably perished, and the damage of property was com- puted at above one million sterling. Indepen- dent of

those sudden calamities, arising from the fury of the elements, its inhabitants are also sub- ject to a distressing malady, in the form of an elephantiasis, so peculiar to this island that it has obtained the appellation of the Barbadoes disease. Dr. Pinckard, however, describes the heat as less inconvenient than he expected. IB the harbour, and placed in the shade, the thermo- meter seldom rose higher than 84►►, and never exceeded 86►►. The inhabitants may be consi- dered in three classes, viz. the masters, white servants, and blacks. The former are either English, Scots, or Irish; but the great encou- ragement given by government to the peopling this and other West India islands, induced some Dutch, French, Portuguese, and Jews, to settle among them with their estates ; by which, after a certain time, they acquire the rights of natura- lization in Great Britain. The white servants, whether by covenant or purchase, are said to live more easy lives than the day-laborers in England ; and when they come to be overseers, their wages and other allowances are consider- able. The earliest planters of Barbadoes were reproached with cruelly forcing into slavery the Indians of the neighbouring continent ; and the history of Inkle and Yarico, which Mr. Addison, in his Spectator, has recorded for the detestation of mankind, took Us nse in this island.

We retain from a preceding work of this kind an illustration of this sublet ; not the most glar- ing, perhaps, which has happened in the same quarter of the world ; 'is it displays at once the savage cruelty of a man bred among Christians, and the noble disinterested friendship and true greatness of soul, in those too often considered barbarians. A planter in Virginia, who was owner of a considerable number of slaves, instead of regarding them as human creatures, and .of the same species with himself, used them with the utmost cruelty, whipping and torturing them for the slightest faults. One of these, thinking any change preferable to slavery under such a barbarian, attempted to make his escape among the mountain Indians; but unfortunately was taken and brought back to his master. Poor Arthur (this was his name) was immediately ordered to receive 300 lashes. These were t& be given him by his fellow slaves, among whom there happened to be a negro whom the planter nad purchased on the preceding day. This slave, ihe moment he saw the unhappy wretch destined to the lashes, rushed forward, clasped him in his arms, and embraced him with the greatest tenderness : the other returned his transports, and nothing could be more moving than their mutual bemoaning each other's misfortunes.

Their master was soon given to understand that they were countrymen and intimate friends ; and that Arthur had formerly, in a battle with a neighbouring nation, saved the life of his friend at the expense of his own. The newly purchased negro threw himself at the planter s feet, with tears, beseeching him, in the most moving man- ner, to spare his friend, or at least to permit him to undergo the punishment in his stead, protesting he would rather die ten thousand deaths than lift his hand against him. But the haughty planter, looking on this as an affront to the absolute power he pretended over him, ordered Arthur to be immediately tied to a tree, and his friend to give him the lashes ; tell- ing him that for every lash not well laid on, he should himself receive a score. The negro, amazed at a barbarity so unbecoming a human creature, with a generous disdain refused to obey him, at the same time upbraiding him with his cruelty ; upon which, the planter turning all his rage on him, ordered him to be immediately stripped, and commanded Arthur, to whom he promised forgiveness, to give his countryman the lashes which he himself had been destined to receive. This proposal was heard with scorn, each protesting lie would rather suffer the most dreadful torture than injure his friend. This generous conflict, which must have raised the strongest feelings in a breast susceptible of pity, did but the more inflame the monster, who now determined they should both be made examples of, and, to satiate his revenge, was preparing to begin with Arthur, when the negro drew a knife from his pocket, stabbed the planter to the heart, and, at the same time struck it to his own, re- joicing with his last breath, that he had avenged his friend, and rid the world of such a monster. ••• Kncyclo. Perthensis.

In 1831 this island was again visited by a hurricane, by which 3000 souls perished. St. Vincent may be seen from Barbadoes in a clear day. It is twenty-five miles only from St. Lucia ; twenty-eight south-east from Martinico; sixty north-east from Trinidad ; and 100 south-east from St. Christopher.

BARBADOES, FLOWER-FENCE. See POINCIANA.

BAHBADOES TAR, a bituminous substance, differing little from the petroleum floating on several springs in England and Scotland. It is a mineral fluid of the nature of the thicker fluid bitumens, of a nauseous bitterish taste, very strong and disagreeable smell, found in many parts cif America, trickling down the sides of the mountains, and sometimes floating on the surface of the waters. It has been greatly recommended in coughs, and other disorders of the breast and lungs.

BAR BAN A, a district and village of the late maritime Austria, in the province of Istria, seated on the Ar/a, with two forts.

BARBARA, in logic, the first mode of the first figure nt the syllogisms. A syllogism in barbara is that whereof all the propositions are universal and aHirmative; the middle term being the subject in the first proposition, and attribute or predicate in the second. Kxample :

BA1! Whoever sutlers a man to starve, whom lie is able to sustain, is a murderer:

BA Whoever is rich, and refuseth to give alms, suffers those to starve, whom he is able to sustain :

RA Therefore, whoever is rich, and refuses to give alms, is a murderer.

BARBARA, sister and successor of Zingha, queen of Angola.

BARBARA, St., an island on the coast of Brasil.

BARBARA, St., the capital of New Biscay.

BARBARANO, a district of maritime Austria, in the Vicentino,on the banks of the Bacchiglione, among the Berean hills, containing one town, of the same name, &c., and fifteen populous villages.

BARBARIANI. See BARBELICOTJE.

BARBARICARII, in antiquity, 1. artists, who, with threads of divers colors, expressed the figures of men, animals, &c., or whose business was to gild and decorate shields and helmets with gold and silver. They were so called, because they learned these arts from the Phry- gians, who were particularly denominated bar- barians, in regard of their opposition to the Greeks. The name is sometimes also written branbaricarri. 2. Soldiers, or officers, who wore masks and vizards thus adorned with gold and silver.

BARBARICUM, in ancient writers, 1. A mi- litary shout raised by the soldiers on point of en- gagement ; so called from the barbarians, in whose armies this method much prevailed : 2. A war or expedition undertaken against the barbarians ; Quousque ad ipsum tempus quo barbaricurn ex- ortem est inter nos et vos : 3. An armory or magazine, wherein the Greek emperors kept the spoils taken from the barbarians.

BARBARICUM, in botany, an appellation given by the modern Greeks to rhubarb ; so called from the sinus barbaricus, by the way of which this root was first brought to them.

BARBARICUS, in entomology, a species of cimex (reduvius) of a black color ; thorax and wing-cases obscure ferruginous, and a little white line on

the middle of the scutellum. A native of Barbary. Gmelin.

BARBARICUS, in ornithology, a species of ral- lus that inhabits Barbary ; the Barbary rail of Latham ; and, 2. A species of turdus, of a green color, with the breast spotted with white ; rump and tip of the tail yellow. It is the grive bas- sette de Barbarie of Buffon, and the Barbary thrush of Linmvus.

BARBARIES, that rudeness of mind wherein the understanding is neither furnished with useful principles, nor the will with good inclina- tions.

BAR'BARIZE, “) Gr. /3apj3opoc, Lat.

BAR'BARISM, BARBA'RITY,

barbarws,of uncertain etymology, applied

BARBA'RIAN, n. & adj. ००० to any nation,person, BARBA'RICK, n. & adj. \ or thing, which indi-

BAR'BAROUS,

BAR'BAROUSLY,

BAR'BAROUSNESS.

cates a want of cul- ture. It is opposed J in all respects to civi-

lisation. It seems to have signified at first only foreign, or a foreigner. The Greeks applied it to all nations but themselves, and conveyed by it an idea of disparagement and contempt. It is now applied to every species of wildness, fierce- ness, and cruelty ; to untaught savages; to mon-

sters without pity ; to ignorance of arts and want of learning ; to inaccuracies, vulgarisms, impurities of speech and language ; and to inci- vility of manners. Bruce has shown, that bar- barick, barbarine, and barberin, are names derived from Berber or Barbar, the native name of the coast of the troglodytae, ichthyophagi, and shep- herds. It goes down the whole western coast of the Red Sea. The Egyptians hated and feared them. It was therefore in Egypt a term both of dread and contumely ; in which sense it passed to the Greeks, and from them to the Romans. To barbarize, is to reduce to a state of barbarism ; to make, or cause to be made, fierce,

cruel, and uncivilised.

*Nor were the Corinthians proude only by reason of their welthe, but also because they were learned in the Grecians' philosophy, and therefore despised they suche as were not learned therein as rude and bar- barous. Udall. What need I say more to you? Wh*t ear is so barbarous, but hath heard of Amphialus ? Sidney.*

The doubtful damsel dare not yet commit Her single person to their barbarous truth.

Spenser. Fuerie Queene. I have for barbarism spoke more Than for that angel knowledge you c□□n say.

Shahspeare.

Thou art a Roman ; be not barbarout. Id,

No joyful tongue gave him his welcome home ; But dust was thrown upon his sacred head ; Which with such gentle sorrow he shook off, His face still combating with tears and smiles, The badges of his grief and patience, That had not God for some strong purpose steel'd The hearts of men, they must perforce have melted, And barbarism itself have pitied him. Id.

I would they were barbarians, as they are, Though in Rome littered. Id. Coriulanus.

Moderation ought to be had in tempering and ma- naging the Irish, to bring them from their delight of licentious barbarism unto the love of goodness and ci- vility. Spenser's Ireland. Divers great monarchies have risen from barbarism to civility, and fallen again into ruin.

Daries on Ireland.

A barbarous country must be broken by war, before it be capable of government ; and when subdued, if it oe not well planted, it will eftsoons return to bar- barism. Id. He left governor, Philip, for his country a Phry- gian, and for manners more barbarous than he that set him there. Mace.

Our groaning couutry bled at every vein, When murders, rapes, and massacres prevail'd, When churches, palaces, and cities blaz'd, When insolence and barbarism triumph'd, And swept away distinction. Rowe.

By their barbarous usage, he died within a few days, to the grief of all that knew him. Clarendon. And they did treat him with all the rudeness, re- proach, and barbarity, imaginable: Id. The barbarousness of the trial, and

the persuasives of the clergy, prevailed to antiquate it.

Hole's Common Law. The gorgeous East, with richest hand, Show'rs on her kings barbarick pearl and gold.

Paradise Lost.

Next Petrarch folio w'd, and in him we see What rhyme, improv'd in all its height, can be ; At best a pleasing sound, and sweet barbarity.

Uryden.

They who restored painting in Germany, not hav ing those reliques of antiquity, retained that barbarous manner. Id.

Latin expresses that in one word, which either ilie barbarity or narrowness of modern tongues cannot supply in more. Id.

The genius of Raphael having succeeded to the times of barbarism and ignorance, the knowledge of painting is now arrived at perfection.

Id. Dufretnoy, Preface.

The language is as near approaching to it, as our modern barbarism will allow ; which is all that can be expected from any now extant.

Id. Juvenal, Dedication. The eastern front was glorious to behold, With diamond flaming, and barbarick gold..

Pope.

Some felt the silent stroke of mould'ring age, Barbarian blindness. Id.

We barbarously call them blest, While swelling coffers break their owner's rest.

Stepney.

Excellencies of music and poetry are grown to be little more, but the one fiddling, and the other rhiymng ; and are indeed very worthy of the ignorance of the friar, and the barbarousness of the Goths.

Temple.

Proud Greece all nations else barbarians held, Boasting her learning all the world excell'd.

Denham.

There were not different gods among the Greeks and barbarians. Sf it lint/ fleet.

But with descending show'rs of brimstone fir'd, The wild barbarian in the storm expir'd. Addison, She wishes it may prosper ; but her mother used one of her nieces very barbarously. Spectator.

Thou fell barbarian, What had he done? What could provoke thy

madness, To assassinate so great, so brave a man ?

A. Phillips. This moon, which rose last night, round as my

shield,

Had not yet fill'd her horns, when by her light, A band of fierce barbarians, from the hills, Rush'd like a torrent down upon the vale, Sweeping our flocks and herds. Home.

*The barbarians of Germany, still faithful to the maxims of their ancestors, abhorred the confinement of walls, to which they applied the odious names of prisons and sepulchres ; and Jixing their independent habitations on the banks ot rivers, the Rhine, the Moselle, and the Meuse, they secured themselves against the danger of a surprise, by a rude and hasty fortification of large trees, which were felled and thrown across the roads. Gibbon**

We shall be barbarized on both sides of the water, if we do not see one another now and then, we shall sink into surly brutish Johns, and you will degenerate into wild Irish.

Burke. Letter to Sir C. Bingham. That sadd ening hour when bad men hotlier press,

But these did shelter him beneath their roof, When less barbarians would have cheer'd him less,

And fellow-countrymen have stood aloof ••• In aught ihil tries the heart, how few withstand the proof! Byron. Childe Harold.

BARBARISM, a name applied by St. Epi- phanius, to the most ancient of the four primitive religions; that which worshipped hills, trees, and fountains.

BARBAROLOGIA, barbarology, a word used

oy Isidore, to express that species of writing, wherein foreign words are adopted, or as he rtyles it, intruded into the Latin language.

BA11BAROSSA (Aruch), and his brother Hayradin, were famous corsairs, the sons of a potter in the isle of Lesbos ; who being of a rest- less and enterprising spirit, left their father's em- ployment, and joined a crew of pirates. They soon distinguished themselves by their zeal and ac- tivity, and, becoming masters of a small brigan- tine, they carried on their depredations with such success and conduct, that they were soon pos- sessed of twelve galleys, besides smaller vessel?. Of this fleet Aruch, the elder brother, was ad- miral, and Hayradin the second in command ; they called themselves the friends of the sea, and the enemies of all who sailed upon it ; and their names became terrible, from the straits of the Dardanelles to those of Gibraltar. With such a power they wanted an establishment; and the opportunity of settling themselves offered in 1416, by the inconsiderate application of Eutemi, king of Algiers, to them for assistance against the Spaniards. The active corsair gladly accepted the invitation, and, leaving liis brother Hayradin with the fleet, marched at the head of 5000 men to Algiers, where he was received as their de- liverer. Such a force gave him the command of the town ; and observing that the Moors neither suspected him of any bad intentions, nor were capable, with their light-armed troops, of oppos- ing his disciplined veterans, he secretly murdered the monarch lie came to assist, and caused him- self to IK; proclaimed king in his stead. The authority thus boldly usurped, he endeavoured to establish by arts suited to the genius of the people lie had to govern; by liberality without bounds to those who favored his promotion; and by cruelty no less unbounded, towards all whom lie had any reason to distrust. Sec ALGIERS. The Arabians, alarmed at his success, implored the assistance of Hamidcl Abdos, king of Tunis, u> drive the Turks out of Algiers. That prince readily undertook to do what was in his power for this purpose, and, upon their agreeing to settle the kingdom on himself and his descen- dants, set out at the head of 10,000 Moors. t'pon his rnterin<,r the Algerine dominions, he was joined by all the Arabians in the country. B ar! .-iro.-s;: engaged him, with only 1000 Turkish iiuis([ueteers and ,">()0 Granada Moors ; totally defeated his numerous army ; pursued him to the very ˆutos of his capital, which he easily made himself master of; ami, having given it up to be plundered by his Turks, obliged the inhabitants to acknowledge him sovereign. This victory, .'winch was elnetly owiii'j; to his tire-arms), was followed by an embassy from the inhabitants of I'remi i_vn, inviting him to come to their assistance against their prince, with whom they were dissa- ti-lied on account of his having dethroned his

*nephew, and offering him >'\ > n the sovereignty, in .*********asc he accepted of their proposal. The king of Tremeeen, not suspectm- the treachery of his* *********subjects, met the tyrant with an army of 6000 lioi-M' and .'iOOO foot; but Harbarossa's artillery f-ave him such an advantage, that the king was :*********.! lentil; forced lo retire into die capital; which he had no sooner entered, than his iiead was cut*

off, and sent to Barbarossa, with a fresh invitation to take possession of the kingdom. On his ap- proach lie was met by the inhabitants, whom he received with great complaisance, and many fair promises; but Beginning to tyrannise as usual, his new subjects soon convinced him that they were not so passive as the inhabitants of Algiers. He therefore entered into an alliance with the king of Fez ; after which he secured the rest of the cities in his new kingdom, by garrisoning them with his own troops. Some of these, how- ever, revolted soon after ; upon which he sent one of his corsairs, named Escander, a man no less cruel than himself, to reduce them. The Trcme- cenians now began to repent of their having in- vited such a tyrant to their assistance ; and con- sulted how to bring back their lawful prince Abu- chen-Men : but their cabals being discovered, a great number of the conspirators were massa- cred in the most cruel manner. The prince escaped to Oran, and was taken under the pro- tection of the marquis of Gomarez, who sent immediate advice of it to Charles V. then lately arrived in Spain, with a powerful fleet and army That monarch immediately ordered the young king a succour of 10,000 men, under the com- mand of the governor of Oran ; who, under the guidance of Abuchen-Men, began his march to- wards Tremeeen ; and in their way were joined by prince Selim, with a great number of Arabs and Moors. The first thing they resolved upon was to attack the important fortress of Calau, situated between Tremeeen and Algiers,and commanded by Escander at the head of about 300 Turks. They in vested it closely, in hopes that Barbarossa would ********ome out of Tremecen to its relief, which would give the Tremecen ians an opportunity of keeping him out. That tyrant, however, kept close in his capital, being embarassed by his fears of a revolt, and the delays of the king of Fez, who had not sent the auxiliaries he promised. The gar- rison of Calau, in the mean time, made a brave defence ; and, in a sally, cut off near 300 Spa- niards. This encouraged them to venture a se- cond time ; but they were now repulsed with a great loss, and Escander himself wounded : soon after which, they surrendered, but were all mas- sacred by the Arabians, except sixteen, who clung close to the stirrups of the king, and of the Spanish general. Barbarossa being now in- formed that Abuchen-Men, with his Arabs, ac- companied by the Spaniards, were in full march to lay siege to Tremecen, came out at the head of 1500 Turks, and 5000 Moorish horse, in order to break his way through the enemy ; but he had not proceeded far, before his council advised him to return and*

fortify himself. This advice was now too late ; the inhabitants being resolved to keep him out, and open their gates to their own lawful prince as soon as he appeared. In this distress Barbarossa saw no way left but to retire to the citadel, and there defend himself till he could find an opportunity of stealing out with his men and all his treasure ; bet, his provisions failing, he took advantage of a subterraneous back way, and, taking his immense treasure with him, stole away as secretly as he could. His flight, however, was soon discovered; and he was so closely pursued, that to amuse, as he

hoped, the enemy, he caused a great deal of his money, plate, jewels, &c. to be scattered all the way, thinking tfcey would not fail to stop their pursuit to gather it up. This stratagem, how- ever, failed, through the vigilance of the Spanish commander, who being at the head of the pur- suers, obliged them to march on, till he was come up close to him on the banks of the Huexda, about eight leagues from Tremecen. Barbarossa had just crossed the river with his vanguard, when the Spaniards came up with his rear on the other side, and cut them all off; and then crossing the water, overtook him at a small dis- tance from it. Here a bloody engagement en- sued, in which the Turks fought like lions ; but being at length overpowered by numbers, they were all cut to pieces, and Barbarossa among the rest, in the forty-fourth year of his age, and four years after he had raised himself to the royal title of Jigel of the adjacent country ; two years after he had accomplished the reduction of Treme- cen. His head was carried to Tremecen, on the point of a spear; and Abuchen-Men pro- claimed king, to the joy of all the inhabitants. A few days after, the king of Fez appeared at the head of 20,000 horse, near the field of battle ; but hearing of Barbarossa's defeat and death, marched off with all possible speed.

BARBAROSSA (Hayradin), upon his brother's death, assumed the sceptre at Algiers.with equal abilities, but with better fortune; for the Spa- niards, sufficiently employed in Europe, giving him no disturbance, he regulated the interior po- lice of his kingdom with great prudence, carried on his naval operations with vigor, and extended his conquests on the continent of Africa. But perceiving that the Moors and Arabs submitted to his government with the utmost impatience, and being afraid that his continual depredations would one day draw upon him the arms of the Christians, he put his dominions under the pro- tection of the Grand Seignior, and received from him a body of Turkish soldiers, sufficient for his security

against his domestic, as well as his fo- reign enemies. At last the fame of his exploits daily increasing, Solyman, the Turkish emperor, offered him the command of his fleet, as the only person whose valor and skill entitled him to command against the famous Andrew Doria. Proud of this distinction, Barbarossa repaired to Constantinople ; and with a wonderful versatility of mind, mingling the arts of a courtier with the boldness of a corsair, gained the entire confi- dence both of the sultan and his vizier. To them he communicated a scheme he had formed of making himself master of Tunis, the most flourish- ing kingdom at that time on the coast of Africa ; which being approved of, they gave him what- ever he demanded for carrying it into execution. He obtained it in a manner similar to that by which his brother gained Algiers ; but was driven from it by Charles V. in 1536. After this he lavaged several parts of Italy, and reduced Ye- tien, in Arabia Felix, to the Turkish government. He died in 1547, aged 80. See ALGIERS.

BARBAROSSA was also a title or surname of Frederick I. emperor of Germany, one of the first sovereigns in Europe who ventured to speak freely of the papal hierarchy, and the pride of

the popes. Of the cardinals he said, Cardina- lis nnn esso praedicatores sed praedatores ; ??? the cardinals were not preachers, but plunderers. This was so early as A.D. 1155. See GER- MANY.

BARBAROSSA, in entomology, a species of scarabaeus, a native of New Holland. The an- terior part of the thorax is scabrous ; horns of the head recurved and short.

BARBAROUX (Charles), a French republi- can, and a sufferer by the guillotine. He was a native of Marseilles, and became a member of the national assembly. He was a great adver- sary to Robespierre and Tallien, against whom he brought many charges. He likewise proposed the trial of the king and the royal family. On the overthrow of the Girondist party, he was arrested, but found means to escape. Some time after, however, he was seized, and brought to the guillotine at Bourdeaux, on the 25th of June, 1794.

BARBARUS (Daniel), a noble Venetian, pa- triarch of Aquileia, and famous for his learning, was ambassador from Venice to England ; and one of the fathers of the council of Trent, where he acted with great zeal for the interest of the pope. He wrote, 1. A Commentary upon Vi- truvius. 2. Catena Grsecorum Patrum in quin- quaginta Psalmos Latine versa. 3. La Pratica delta Perspectiva. He died in 1569, aged 41.

BARBARUS (Francis), a noble Venetian, of the same family with Daniel. He was born in 1398, and gained great fame in the fifteenth century, not

only for his learning, but for a skilful address in the management of public affairs. He wrote a book De Re Uxoria, on the Choice of a Wife and the Duties of Women ; and translated some of Plutarch's Lives. He died in 1454. His book, De Re Uxoria was printed at Paris in 1515, and his Letters in 1743.

BARBARUS, (Hermolaus), grandson of Fran- cis, one of the most learned men of the fif- teenth century. The pu.blic employments he was entrusted with early, did not prevent him from cultivating letters. He understood the most difficult authors ; wrote a celebrated para- phrase upon Aristotle ; and corrected and trans- lated Dioscorides, and added a commentary. But of all his works none gained him so much reputation as his commentary upon Pliny ; wherein he corrected above 5000 passages, and occasionally restored 300 in Pomponius Mela. Pope Innocent VIII. to whom he was ambas- sador, conferred upon him the patriarchate of Aquileia. He imprudently accepted it without waiting for the consent of his superiors ; though the republic of Venice had made laws forbidding the ministers they sent to the court of Rome to accept any benefice. The haughty aristocrats were inflexible ; and not being able to gain any thing upon them either by flattery or his father's interest, the father died of grief, and the son soon followed him.

BARBARUS (Hermolaus), was a nephew of Francis, and distinguished himself by his know- ledge of the Greek language. At the age of twelve years he translated some of JEsop's Fables into Latin. He was successively bishop of Tre- visa and of Verona, and died at the latter in 1470.

BARBARUS, in entomology, 1. A species of papilio ; the wings without tails, and blueish. 2. A species of tenebrio, of a black color, and very glossy. 3. A species of cryptocephalus that inhabits Barbary.

BARBARUS, in ichthyology, a species of syng- nathus, found in European seas.

BARBARUS, in ornithology, a species of brown vulture that inhabits Barbary, and some other parts of Africa. The vultur barbatus, Briss. Orn. and bearded vulture of Edwards and Latham. Also a species of Falco, called by the English writers Barbary falcon.

BARBARY, a part of Africa, including the states of Fez, Algiers, Morocco, Tripoli, and Tunis. This country contains almost the whole of what the Romans possessed of the conti- nent of Africa, excepting Egypt. It stretches

in length, from east to west, from Egypt to the straits of Gibraltar, full 35►► of longitude; and from thence to Santa Cruz, the utmost western edge of it, about six more, in all 41►►. On the south, indeed, it is confined within much narrower bounds, extending no further than from 27►► to 35►►►► N. lat. In this view of it Barbary begins on the west of the famed mount Atlas, called by the Arabs Al Duacal, enclosing the ancient king- doms of Suez and Dela, now provinces of Mo- rocco ; thence stretching along the Atlantic to the pillars of Hercules at cape Finisterre, then along the coast of the Mediterranean, it is at last bounded by the city of Alexandria in Egypt. In the ancient world this comparative desert was rendered interesting by being the seat of the Carthaginian empire ; and portions of it were then so fruitful, that Northern Africa was some- times denominated the granary of Italy.

Concerning the origin of the name there are many conjectures. According to some, the Ro- mans, after they had conquered this large tract of country, gave it the name of Barbary, out of dis- like to the manners of the natives, according to their custom of calling all other people but them- selves and the Greeks, Barbarians. Marmol, on the contrary, derives the word Barbary from Ber- ber, a name which the Arabs gave to its ancient inhabitants, on account of the barrenness of the country, and which they retain to this day in many parts of it, especially along the great ridge of the mountains of Atlas. According to Leo Africanus, the name of Barbary was given by the Arabs on account of the strange language of the natives, which appeared to them more like the grumbling of brutes than articulate sounds. Others derive it from the Arabic word bar, signi- fying a desert, which was given by one Africus, a king of Arabia, from whom the whole continent of Africa is said to have taken its name; and who being driven out of his own dominions, and closely pursued by his enemies, some of his retinue called out to him Bar-bar; that is, To the desert, to the desert ; from which the country was after- wards called Barbary.

Gibbon (Decline and Fall Rom. Emp. v. ix.) says that the history of the word Bar-bar is divi- sible into four periods. 1. In the time of Homer, when the Greeks and Asiatics might probably use a common idiom, the imitative sound of Bar- bar, was applied to the ruder tribes, whose pro-

nunciation was most harsh, whose grammar was most defective. Kaptc BapjSapoˆwvoi (Iliad, ii. 867. with the Oxford Scholiast, Clarke's Annota- tions and Henry Stephens's Greek Thesaurus, torn, i. p. 720.) 2. From the time, at least, of Herodo- tus, it was extended to all nations who. were strangers to the language and manners of the Greeks. 3. In the age of Plautus, the Romans submitted to the insult (Pompeius Festus, 1. ii. p. 48. ed. Dacier), and freely gave themselves the name of Barbarians. They insensibly claimed an exemption for Italy, and her subject provinces, and at

length removed the disgraceful appellation to the savage or hostile nations beyond the pale of the empire. 4. In every sense it was due to the Moors ; the familiar word was borrowed from the Latin provincials by the Arabian conquerors, and has justly settled as a local denomination, (Barbary) along the northern coast of Africa.

By the Romans, this country was divided into the provinces of Mauritania, Africa Propria, &c. and they continued absolute masters of it from the time of Julius Csesar till A. D. 428. At that time Bonifacius, the Roman governor of these pro- vinces, having through the treachery of Mtius been forced to revolt, called to his assistance Genseric king of the Vandals, who had been some time settled in Spain. The terms offered, accor- ding to Procopius were, that Genseric should have two thirds, and Bonifacius one third, of Africa, provided they could maintain themselves against the Roman power ; and to accomplish this they were to assist each other to the utmost. This proposal was instantly complied with ; and Gen- seric set out from Spain in May 428, with an army of 80,000 men, according to some, or only 24,000 according to others, together with their wives, children, and all their effects. In the mean time the Empress Placidia, having discovered the true cause of Bonifacius's revolt, wrote a most oblig- ing letter to him, in which she assured him of her favor and protection for the future, exhorting him to return to his duty, and exert his usual zeal for the welfare of the empire ; by driving out the Barbarians, whom the malice of his enemies had obliged him to call in for his own safety and preservation. Bonifacius readily complied, and offered the Vandals considerable sums if they would return to Spain. But Genseric, already master of the greatest part of the country, return- ing a scornful answer, and falling unexpectedly on him, cut most of his men in pieces, and obliged Bonifacius himself to fly to Hippo, which he invested in May 430. The siege lasted till July 431, when the Vandals were forced, by a fa- mine that began to rage in their camp, to drop the enterprise, and to retire. Soon after, Boni- facius having received two reinforcements, one from Rome, and the other, under the celebrated Aspar, from Constantinople, a resolution was taken by the Roman generals to offer the enemy battle. A bloody engagement ensued, in which the Romans were utterly defeated, a prodigious number of them taken, and the rest obliged to shelter themselves among the rocks and mountains. Aspar, who commanded the eastern troops, escaped with difficulty to Constantinople, and Bonifacius was recalled to Italy. Upon their de- parture, the Vandals over ran all Africa, committing

everywhere the most terrible ravages, which struck the inhabitants of Hippo

with such terror, that they abandoned the city, which was first plundered, and then set on fire by the victorious enemy ; so that Cirtha and Carthage were now the only strong places possessed by the Romans. In 435, Genseric, afraid of an attack by the united forces of the eastern and western empires, con- cluded a peace with the Romans, who yielded to him part of Numidia, the province of Procon- sularis, and Byzacene, for which, according to Prosper, he was to pay a yearly tribute to the emperor of the east. Genseric delivered up his son Hunneric by way of hostage ; but so great was the confidence which the Romans placed in that barbarian, that some time after they sent him back his son. Of this they soon had reason to repent ; for in 439, the Romans being engaged in a war with the Goths in Gaul, Genseric laid hold of that opportunity to seize upon the city of Car- thage ; by which he considerably enlarged his African dominions. Valentinian, however, re- tained as long as he lived, the two Mauritanias with Tripolitana, Tingitana, and that part of Numidia where Cirtha stood. On taking Car- thage, Genseric made it the seat of his empire ; and in 440 ravaged the island of Sicily, and laid siege to Palermo. Not being able, however, to reduce that place, he soon returned to Africa with an immense booty, and a vast number of captives, Being now become formidable to both empires, Theodosius, emperor of the east, resolved to assist Valentinian against so powerful an enemy. Ac- cordingly, he fitted out a fleet consisting of 1100 large ships ; and putting on board of it the flower of his army, under the conduct of Arcovindas, Ansilus, and Germanus, he ordered them to land in Africa, and joining the western forces there, to drive Genseric out of the countries he had seized. But the latter, pretending a desire to be reconciled with both empires, amused the Roman general with proposals of peace, till the season for action was over; and, next year, Theodosius being obliged to recal his forces to oppose the Huns, Valentinian found it necessary to conclude a peace with the Vandals ; and this he could ob- tain on no other terms than yielding to them the quiet possession of the countries they had over-run. So powerful was Genseric now become, or rather so low was the Roman empire by this time re- duced, that in 455 he took and plundered the city of Rome itself (See ROME), and, after his return to Africa, made himself master of the remaining countries held by the Romans in that part of the world. Hereupon Avitus, who had succeeded Valentinian in the empire, despatched ambassa- dors to Genseric, putting him in mind of the treaty he had concluded with the empire in 442 ; and threatening if he did not observe the articles at that time agreed upon, to make war upon him, not only with his own forces, but with those of his allies the Visigoths, who were ready to pass over in- to Africa. To this Genseric was so far from paying any regard that he immediately put tq sea with a fleet of sixty ships ; but being attacked by the Roman fleet under Ricimer, he was utterly de- feated, and forced to fly back into Africa. He returned, however, soon after, with a

more power- ful armament, committing great ravages on the

coast of Italy : but in a second expedition he was not attended with so good success ; the Romans falling unexpectedly upon his men,while busied in plundering the country, put great numbers of them to the sword, and among the rest the brother- in-law of Genseric himself. Encouraged by this advantage, Majorian, then emperor, resolved to pass over into Africa, and attempt the recovery of that country. For this purpose he made great preparations ; but his fleet being surprised and defeated by the Vandals, through the treachery oi some of his commanders, the enterprise miscarried. Notwithstanding this misfortune, Majorian per- sisted in his resolution, and would in all likelihood have accomplished his purpose, had not he him- self been murdered soon after by Ricimer. After his death Genseric committed what ravages he pleased in the poor remains of the western em- pire, and even made descents on Peloponnesus and the islands belonging to the emperor of Con- stantinople. In revenge, Leo made vast prepa- rations for the invasion of Africa, insomuch that, according to Procopius, he laid out 130,000 pounds weight of gold in the equipment of his army and navy. The forces employed on this occasion were sufficient for expelling the Vandals, had they been much more powerful than they were ; but the command being given to Basiliscus, a covetous and ambitious man, the fleet was ut- terly defeated through his treachery, and all the vast preparations came to nothing. By this last defeat the power of the Vandals in Africa was fully established, and Genseric made himself master of Sicily, as well as all the other islands between Italy and Africa, without opposition from the western emperors, whose power was entirely annihilated, A. D. 476. Thus was the Vandalic monarchy in Barbary founded by Genseric, be- tween the years 428 and 468. That prince's government, in his new dominions, presents no very agreeable prospect. Being himself a barba- rian in the worst sense of the word, and an utter stranger to every useful art, he displayed his prowess by the destruction of all the monuments of Roman greatness, which were so numerous in the country he had conquered. Instead of improving the country he laid it waste, by de- molishing all the stately structures both public and private with which those proud conquerors had adorned this part of their dominions. Mo- numents which the Romans had been at an immense expense to erect, the barbarous Van- dals reduced to heaps of ruins. Besides this kind of devastation, Genseric made his dominions a scene of blood, by persecuting the orthodox Christians; being himself,as well most of his coun- trymen, zealously devoted to the Arian party. He died in 477, after a reign of sixty years ; and was succeeded by his son Hunneric, who also proved a still greater tyrant than his father, per- secuting the orthodox with the utmost fury ; and, during his short reign of seven years and a half, destroying more of them than Genseric had done in all his life. He died miserably ; his flesh

rotting upon his bones, and crawling with worms, so that he looked more like a dead carcase than a living man. Concerning his successors Gundamund, Thrasimund, and Hilderic, we find nothing remarkable, except that they sometimes

persecuted, and sometimes were favorable to, the orthodox. Ililderic hy favoring them was ruined ; for, having published, in the beginning of his reign, a manifesto, wherein he repealed all the acts of his predecessors against them, a rebellion was the immediate consequence. He was deposed in the seventh year of his reign by Gilimer, a prince of the blood-royal, who caused the king with all his family to be closely confined, and himself to be crowned at Carthage. Gilimer proved a greater tyrant than any that had gone before him. He not only continued the perse- cutions of the orthodox, but horribly oppressed the rest of his subjects, so that he was held in universal detestation, when the Greek emperor Justinian projected an invasion of Africa. This expedition is fabled to have been occasioned by an apparition of Laetus, an African bishop, who had been murdered some time before, and now com- manded the emperor to attempt the recovery of Africa, assuring him of success. Justinian, not- withstanding his being at that time engaged in a war with Persia, now, therefore, sent a powerful fleet and army to Africa, under the command of the celebrated Belisarius. At this time Gilimer was so much taken up with his pleasure that he knew little or nothing of the formidable prepa- rations against him. On the arrival of Belisarius, however, he put himself in a posture of defence. The management of his army lie committed to his two brothers, Gundimer and Gelamund, who accordingly attacked the Romans at the ,head of a numerous force. The engagement was long and bloody ; but at last the Vandals were de- feated, and the two princes slain. Gilimer, in desperation, sallied out at the head of his corps of reserve, to renew the attack with the utmost vigor; but by his own indiscretion lost a fair opportunity of defeating the Romans. For as soon as they perceived Gilimer hastening after them at the head of a fresh army, they fled and the greatest part were dispersed in such a manner, that, had the king followed them close, they must have been totally cut off. Instead of this, how- ever, stumbling on the body of one of his slain brothers, the sight of it made him lose all thoughts of the enemy ; and instead of pursuing them, he spent his time in idle lamentations, and in bury- ing the corpse with suitable pomp. Belisarius had thus an opportunity of rallying, which he did so effectually, that, coming unexpectedly upon Gilimer, lie easily gained a new and com- plete victory over him. This defeat was followed by the loss of Carthage, which the barbarians had been at no pains to put into a posture of defence. Gilimer, having in vain solicited assistance from the Moors and Goths, recalled his brother Zano from Sardinia, resolving to make one desperate

attempt to regain the kingdom, or at least recover the captives. The consequence was another en- gagement, in which Zano was killed with 800 of his choiccM men, while the Romans lost only lift} ; after which Belisarius, moving suddenly tor ward at the head of his army, fell upon the inp ol the \ andals. Tins Gilimer was no HUT apprised of titan he tied towards Numidia the utmost consternation. As soon as the :!it was known amoiu: his troops, they aban- ii'"1 tlieir camp to the Romans, who plundered

it, and massacred all the men that were left, car- rying the women captives. Thus a total end was put to the power of the Vandals, and the Romans once more became the masters of Bar- bary. The Vandal inhabitants were permitted to remain, on condition of exchanging the heresy of Arius for the orthodox faith. Gilimer fled to Medamus, a town situated on the top of the Papuan mountains, and almost inaccessible by its height and ruggedness. The siege of this place was committed to Pharas, an officer of great experience, who having shut up all avenues to the town, the fugitive was reduced to the great- est straits for want of provisions. Pharas being apprised of the distress he was in, wrote him a friendly and pathetic letter, exhorting him to put an end to the distress of himself and his friends by a surrender. This Gilimer declined ; but at the same time concluded his answer with a most sub- missive request, that Pharas would so far pity his great distress as to send him a loaf of bread, a sponge, and a lute. This strange request surprised Pharas, but was explained by the messenger, who told him that the king had not tasted any baked bread since his arrival on that mountain, and ear- nestly longed to eat a morsel of it before he died ; the sponge he wanted to allay a humor that had arisen in one of his eyes; and the lute, on which he had learned to play, was to assist him in setting some elegiac verses, he had composed on the sub- ject of his misfortunes, to a suitable tune. At this mournful report, Pharas could not refrait from tears, and immediately despatched the mes- senger with the things he wanted. Gilimer had spent nearly three winter months on the summit of this inhospitable mountain, his misery hardening him against the thoughts of surrendering, when a melancholy scene in his own family at once re- conciled him to it. This was a bloody struggle between two boys, one of them his sister's son, about a flat bit of dough, laid on the coals ; which the one seized upon, burning hot as it was, and clapped into his mouth, but the other by dint of blows forced it out, and eat it from him. The quarrel, which might have ended fatally, had not Gilimer interposed, made so deep an impression upon him, that he immediately despatched a mes- senger to Pharas, acquainting him that he was willing to surrender himself and all his effects upon the conditions he had offered, as soon as he was assured that they were embraced by Belisarius. Pharas lost no time in getting them ratified and sent back to him. Gilimer was afterwards brought in golden

chains before Justinian, whom he be- sought in the most submissive manner to save his life. That emperor treated him with a degree of humanity he little merited ; allowing him a hand- some yearly pension to live upon as a private gentleman. But his mind was too much unsettled to enjoy the sweets of a private life ; so that, op- pressed with grief, he died in the first year of his captivity, five years after he had been raised to the throne, A. D. 554. Barbary being thus again reduced under the power of the Romans, its his- tory falls to be noticed under that of Rome. In the khalifat of Omar this country was reduced by the Saracens, a$ the reader will find under the article KHALIFS. It continued subject to the khalifs of Arabia and Bagdad till the reign of

Ilaroun Al Raschid, who having appointed Ibra- him Ebn Aglab, governor of the western parts of his empire, that prefect took the opportunity, first of assuming greater powers than had been granted by the khalif, and then erecting an inde- pendent principality. The race of Aglab con- tinued to enjoy their new principality peaceably till the year of the Hegira 297 or 298, during which time they made several descents on the island of Sicily, and conquered part of it. About this time, however, one Obeidallah re- belled against the house of Aglab, and assumed the title of khalif of Kairwan, the ancient Cyrene, and residence of the Aglabite princes. To give the greater weight to his pretensions he also took the surname of Al Mohdi, or Al Mohedi, the director. He pretended to be descended in a right line from AH Ebn Abu Taleb, and Fatema the daughter of Mahomet ; for which reason the Arabs called him and his descendents Fate- mites. He likewise encouraged himself and his followers by a traditional prophecy of Mahomet, that at the end of 300 years the sun should rise out of the west. Having at length driven the Aglabites into Egypt, where they became known by the name of Magrebians, he extended his do- minions in Africa and Sicily, making Kairwan the place of his residence. In the 300th year of the Hegira, Habbasah, one of Al Mohdi's gene- rals, overthrew the khalif Al Mokhtader's forces in the neighbourhood of Barca, and made him- self master of that city. After which he reduced Alexandria ; and was making great progress in the conquest of the whole country, while Al Mokhtader sent against him his generals Takin and Al Kasem, with an army of 100,000 men. Habbasah, being informed that the khalif 's troops were in motion, advanced at the head of his army to give them battle, and at last came up with them in an island called by the Arabs Ard Al Khamsin. Here he attacked them with incredible bravery, notwithstanding their force was much superior to his ; but the approach of night obliged both generals to sound a retreat. The action therefore was by no means decisive, though

extremely bloody, the khalif 's generals having lost 20,000 men and Habbasah 10,000. The latter, however, durst not renew the fight next morning ; but stole off in the night, and returned home, so that Al Mokhtader in effect gained a victory. In the 302d year of the Hegira, however, Habbasah returned, possessed himself of Alexandria a se- cond time, defeated a body of the khalif 's forces, and killed 7000 upon the spot. In the 307th year, Abul Kasem, son to Al Mohdi, entered Egypt with an army of 100,000 men. At first lie met with extraordinary success, and overran a considerable part of that fine country. He made himself master of Alexandria, Al Tayum, Al Baknasa, and the isle of Ashmaryin, penetra- ting even to Al Jizah, where the khalif 's army Uiider the command of Munes was posted to op- pose him. In this country he maintained himself till the 308th year of the Ilegira, when he was entirely defeated by Munes, who made himself master of all Ins baggage, as well as of the plunder he had acquired. This obliged Abul Kasem to fly to Kairwan with the shattered remains of his urmy, where he remained without making any VOL. Ill

further attempt on Egypt. Al Mohdi reigned twenty-four years, and was succeeded by Abul Kasem, who then took the name of Al Kayem Mohdi. During his reign we read of nothing very remarkable, except the revolt of Yezid Ebn Condat, a man of mean extraction, but who, having been raised to the dignity of chancellor, found means to create such a strong party, that the khalif was obliged to shut himself up in the castle of Mohedia. Yezid, being then at the head of a powerful army, soon reduced the capital of Kairwan, the cities of Al Rakkada and Tunis, and several other fortresses. He was no less successful in defeating a considerable number of troops which Al Kayem had sent against him ; after which he closely besieged the khalif himself in the castle seven months, when the khalif died, in the twelfth year of his reign, and 334th of the Hegira. Al Kayem was succeeded by his son Ishmael, who immediately took the title of Al Mansur, but concealed the death of his father till he had made preparations for reducing the rebels. In this he was so successful, that he obliged Yezid to raise the seige of Mohetdi, and in the following year obliged him to shut himself up in the fortress of Kothama, where he besieged him in his turn. Yezid defended the place a long time with desperate bravery, but, finding the gar- rison at last obliged to capitulate, he made shift to escape privately. Al Mansur despatched a body of forces in pursuit of him, who overtook, and brought him back in fetters, after a vigorous defence, in which Yezid got several dangerous wounds, of which he died in prison. After his death Al Mansur caused his body to be flayed, and his skin stuffed and exposed to public view. For Al Mansur's exploits in SICILY, see that article. Nothing farther remarkable happened in his African dominions. He died after reigning seven years and sixteen days, in the

341st of the Hegira, and was succeeded by his son Abu Zam- min Moab, who assumed the surname of Al Moez Ledinilloh ; and maintained a bloody contest with Abdalsahman, khalif of Andalusia : for a particu- lar account of which, see SPAIN. In the 347th year of the Hegira, beginning March 25th A. D. 958, Al Moez sent a powerful army to the western extremity of Africa, under the command of Abul Hasan Jawhar, one of his slaves, whom he had advanced to the dignity of vizier. Jawhar first advanced to a city called Tahart, which he be- sieged for some time ineffectually. From thence he marched to Fez, which he took at last by storm in the following year. But the greatest achieve- ment performed by this khalif was his conquest of Egypt, and the removal of the khalifat to that country. This conquest, though long projected, he did not attempt till the year of the Hegira 358. Having then made all necessary preparations for it, he committed the care of that expedition to an experienced general called Giafar, but in the mean time, this enterprize did not divert Al Moez from the care of his other conquests, particularly those of Sicily and Sardinia ; to the last of which he sailed in the year of the Hegira 361, continu- ing a whole year in it, and leaving the care of his African dominions to an experienced officer named Yusef Ben Zeiri. He sailed thence the following year for Tripoli in Barbary, where he

had not staid long, before lie received the agree- able news that his general had made himself master of Alexandria, lie lost no time, but im- mediately embarked for it, leaving the government of his old African dominions in the hands of his trusty servant Yusef, and arriving safely at that port was received with all the demonstrations of joy. Here he began to lay the foundations of his new Egyptian dynasty, which put a final end to the old one of Kairwan, after it had continued about sixty-five years. Al Mqez, however, preserved all his old dominions of Barbary and Africa Pro- per. Hut the avarice of the governors, whom he appointed, occasioned them to run quickly to decay ; particularly the new and opulent metro- polis of Mohedia, on which immense sums had been lavished, so as to render it not only one of the richest and stateliest, but one of the strongest cities in the world. But the wealth and splendor of this once famed, short-lived state, took their lea ˆe of it with the departure of the khalif Al Moez. The whole maritime tract from the Eyp- lian confines to the Straits of Gibraltar has since become the nest of the most odious piratical crew that ever existed. Under the article AL- (iii.us we have given a short account of the erection of a new kingdom in Barbary by Texe- rini ; \huh, however, is there no

farther conti- nued than is necessary for connecting the history of that country. A general history might here be given of the whole country of Barbary; but as that would occasion repetitions under the ar- ticles .Moiiiuio, TUIPOLI, Tr,\is, &c. we must refer to tin so articles for the rest of its history, as well as for other particulars not here mentioned. The great natural feature of this region, and that which appears to exempt it from the sterility by which it is surrounded, is the mountain chain of Atlas. This celebrated range, which ancient fable imaged as the prop of heaven, has its loftiest pinnacles in the west, immediately behind Mo- rocco ; but it extends in various branches, which hau; been little explored, and at different heights, ilonu the whole southern frontier of Algiers and Tunis, leaving a tortile tract of from 50 to 200 miles on the shores of the Mediterranean. Lime- siouo is the predominant rock of this range, which in the western and loftier ranges appears in the iorm of marble, and afterwards in the looser limns of secondary limestone. The marbles of \nmidia are well known in history. The me- tallic products arc not well ascertained, from the unskilful manner in which they have been worked. Silver, copper, and lead, are found to a considerable extent in Algiers and Tunis. Iron, lead, copper, silver, antimony, and a mix- tun of antimony, lead and uold, are found in the mountainous districts; but none of them are woiked to any <;roat extent. Salt, in many places, especially in the southern countries bor- dering upon the (I real Desert, completely im- pregnates the earth ; and the water of the springs and pools, \\hen evaporated, leaves a thick crust (it saline matter: in others it appears in large solid masses. Springs some of them hot, con- taining other mineral substances, particularly sulphur, are frequent; indicating the presence of great internal heat. At llamman Mescouteen, near ('on-tantia, the waters of a spring absolutely calcine th'1 rock o\er \\hieh th' \ pass.

Much of the general character and produc- tions of this entire region appears in our article ALGIERS, now a French province: the whole is ill-cultivated. Of the improvements in agriculture they have no notion ; and their industry is con- stantly checked by the pressure of a short-sighted and iniquitous government. Burned stubble and the litter of the cattle turned out upon the fallows, is the only manure they use. Their ploughing is done by a wooden plough, drawn by a single yoke of oxen, going over not moit. than one acre in a whole day. Two bushels and a half per acre is their ordinary allowance of seed-corn, and 1200 per cent, the return ex- pected. Dr. Shaw found the Asiatic customs introduced by the Arabs everywhere prevailing; the ox is driven round the circular threshing- floor, to tread out the corn, which is afterwards winnowed by being thrown up against the wind, just as it was in Judea three thousand years ago. (Deut. xxv. 4. Is. xxx. 24.) The grain is depo- sited in large subterraneous magazines called matmors, each containing at least 500 bushels. Wheat, maize, and different species of

millet (sorghum), pulse, vetches, lentils, and caravances (garbanzos), chich-peas, (cicer arietinum), are their agricultural objects. Neither oats nor hay are used ; but, as in western Asia, barley and chopped straw are substituted for them. Hemp, flax, cotton, and tobacco, make up the remainder of their field produce. Their gardens abound with figs, melons, oranges, lemons, and limes; vineyards and olive-yards are seen on the plains and declivities, and our common forest-trees, corks and evergreen oaks, in the woods. There are also some inferior kinds of fruit, such as the jujube, lote-tree (zizyphus lotus), eljeagnus, argan (elaodendrum arg.), diospyros lotus, celtis australis, and cornelian cherry (cornus mascula), not common among us : some gum resins, such as galbanum, opopanax, ammonia- cum, and sandarac, the produce of the Arar, or Juniperus communis, and medicinal herbs, such as wormwood, orrisroot (iris Germanica, Floren- tina), colocinth, or coloquintida, &c.

The climate is upon the whole temperate and salubrious, with considerable variations in the different regions. The formidable scorpion, the boa constrictor, and above all the dreaded locust, appear here; the latter in those prodigious swarms that convert a ' garden of Eden into the wilderness.' Here also range the lordly lion, (who is nowhere seen more strong or ferocious), the panther, and the hyena. The last is said, however, not to manifest in its wild state that fierceness which it displays in our menageries, and which is generated by confinement. It sel- dom attacks man, unless molested by him ; and boys are sometimes seen leading it about with ropes. It remains all day in its cave, staring with its eyes fixed, and comes out in the night, chiefly after dead bodies. The same is observa- ble of the jackal, here called the deeb, about half the size of the hyena. The animal most valued is the antelope or gazel, whose beauty is the object of universal admiration here ; the term gazel being employed as the highest praise to a beautiful woman. The mutton is very fat here, but it is eaten as a great delicacy. The sheep of eastern Barbary, according to Shaw,

have fleeces coarse and hairy, like those of the goat; but Morocco contains some breeds with very fine wool. That territory produces likewise the breed of goats whose skins yield the leather so much esteemed in Europe. The finest species is produced in Tafilet, on the southern side of the Atlas. They are tanned with the leaves of a shrub called tizre, which are thought by some to give them their peculiar softness and pliability. The tanners, however, conceal as much as pos- sible the processes employed.

The government of each of the three states, Morocco, Tunis, and Tripoli, is

deemed essen- tially despotic. For any varieties in their parti- cular forms, we must refer the reader to the sepa- rate articles. The general population of Barbary consists of, 1 . Moors, who are the ruling race ; 2. Jews; 3. Arabs; and 4. Brebers, or ancient natives. The Moors are the chief inhabitants of the towns and cities. The term may be consi- dered as including that portion of the Mahom- medan conquerors of northern Africa who have t habituated themselves to a settled mode of life, along with all the inhabitants who have been incorporated with them, and trained to the same religious habits, which here regulate all the social relations, and extend their influence to the mi- nutest practices of life. The daily ceremonies of worship are very numerous. Prayer is repeated five times a day, once before, once after sun-set, and three times in the course of the day; the crier each time from the top of a minaret loudly announcing the hour. Necessity allows the Moor to worship in any spot where he may be placed, at these hours ; but such devotions are not con- sidered equally beneficial with the public ones. At the door of the mosque is a bath for ablution ; and no worshipper must enter unless barefooted. Mr. Addison relates the contempt with which a Moor once spoke to him, of the indecencies of our admitting into Christian places of worship ' women, clogs, and dirty shoes,' all of which are here excluded.

The Jews, who are numerous, are the objects of constant insult and oppression. They are envied for their wealth, despised for their avarice, and abhorred as enemies to the faith ; and, as in most of the states there exists no law for their protection, the hardships of their situation are no- where greater. As they form, however, the only class capable of managing trade or money con- cerns, they make immense profits, the opportu- nity of reaping which no oppression can induce them to relinquish. The Arabs occupy, with their flocks and herds, all the interior and pastoral districts. They live in movable villages or douars composed of tents, which are generally arranged in concentric circles, around the habitation of the sheik. They are made of camels' hair and the fibres of the palm tree. In removing, they place on the backs of camels the women, children, and young animals, the latter enclosed in baskets. The interior government of these villages is en- tirely conducted by their own chief or sheik, who, when the supreme government is weak, often sets it at defiance. The Brebers inhabiting the mountain districts have a language of their own, which seems to be indigenous. They live in small fixed villages, and cultivate the ground.

They also elect their own sheik, and have some forms of popular government; are very strong, athletic, and formidable. Their chief amuse- ment consists in the use of the musket.

With respect to the habits and manners of Barbary, nowhere is grovelling ignorance sub- ject to a worse tyranny on the part of knavish priests, called

here marabits, or as the word is commonly written in Europe, marabouts. These men, affecting a scrupulous observance of the Koran, and continually repeating favorite texts, gain the reputation of extraordinary sanctity, and soon persuade the people to believe them the favorites of heaven. Some pretend to miraculous powers ; others practise the arts of divination, and all deal in charms, from the sale of which they make great profits. The greater part wan- der about through the country, professing to live on charity, (they call themselve dervises or fakirs, i. e. poor men,) and doing far more mischief than the mendicants in Popish countries. Amongst all classes in Barbary their influence is uncon- trolled. At the great festivals they give an en- tire loose to religious phrenzy, heightened pro- bably by large doses of opium, and the excesses in which they then indulge are truly horrible. Mr. Lyon (Travels, ii.) saw a man thrust his hand into the side of a living ass, tear out his bowels, and devour them ! Idiots and madmen are, on the same stupid principle, considered as half-inspired, and are therefore looked upon with veneration, and allowed to do all the mischief which their bewildered imagination suggests. The most simple arts are little known here. Though the hardest stone and better materials abound, timber, we are told by travellers, is almost the only thing used for building. They have, however, in some parts, a sort of artificial stone, called tabiah, a mixture of lime, sand, and pebbles, put into a wooden frame of the pro- per size and shape, and beaten down with square rammers; and a hard and durable cement, a com- pound of sand, wood ashes, and lime beaten toge- ther for three days and nights without intermission, and frequently sprinkled with oil and water. Another cement used by them is made of tow, lime, and oil. The houses are built round (sometimes paved) square courts, into which the windows open ; the lower part is used as stable? or out- houses, the upper part for the apartments of the family. In each story is an open corridor, with which stair-cases from below and all the chambers communicate. Sometimes a fountain appears in the centre of the court, and an awn- ing is stretched across from side to side. The ordinary houses seldom have more than one story, about sixteen feet high, with an apartment on each side of the court ; and the windows being small, the want of light and air are insufferable to Europeans. No fire-places appear : a charcoal fire, in an earthern chafing dish, placed in one corrier of the court, serves to cook the dinner ; and mattresses on the floors, with large cushions against the walls, are the seats by day and beds by night : at one end of the room, a raised platform sometimes receives the beds. Their household utensils consist of a few pewter plates, spoons and basins, wooden bowls, earthen pots, and iron ladles, some China plates for show, anil

perliaps a tea equipage. The roofs of their houses are flat, and in the cool of the day are much used by the females. The rich have often a small additional building-, called oliyyah, for the accommodation of strangers. It is like ano- ther house on a small scale, and is placed over the gateway at the entrance, exactly answering to the upper chamber of the Jews. Boarded ceilings, diversified by painted lattice work, walls covered half-way down with gilt and painted wainscoting, hangings of different colored cloths, or tyger-skins, filling the interval between the wainscot and the floor, looking-glasses, clocks, or arms arranged in fanciful patterns, are the de- corations of their rooms ; and the courts of better houses, paved with marble and elegantly covered above, form an agreeable saloon for their com- pany.

Eastern Barbary is distinguished by several noble monuments of antiquity. The traces of Punic architecture indeed have in a great mea- sure disappeared ; and the labors of that cele- brated people are only attested by subterraneous ruins,particularly those of the celebrated aqueduct, by which water was conveyed to it from the dis- tance of upwards of sixty miles. The whole course of it may still be traced ; and several arches are entire, seventy feet high, and sup- ported by columns sixteen feet wide. The architectural ruins being of Roman erection, are rhiefly of the composite order, the favorite one of that people. The temple at Spaitla appeared to Bruce to present a specimen superior to what is to be found on any other spot. In conse- quence of recent excavations, some very valua- ble remains of statuary have been dug up; and it is probable that, by the continuance of similar researches, further valuable discoveries might be made.

The dress of the inhabitants of Barbary is cum- bersome, and unlike those of eastern climates ge- nerally. The men wear a red woollen skull-cap, called Fez, (where it is manufactured,) and a white shawl twisted round the head; linen and woollen trowsers, a cotton or silk shirt, a tunic called kaftan, with or without sleeves, having rows of buttons down the front, kept close to the body by a sash folded round the waist ; and a pair of yellow slippers. The better sort have a strip of velvet passed over the right shoulder, by which they suspend the sabre ; and the dagger is stuck into the folds of the sash.

The arrangements in Barbary regarding the lemale part of society are tiie same as in all Ma- hommedan countries. The harem is supplied chierly trom Constantinople, by Georgian or Circassian slaves, trained for this purpose by persons who carry on this employment as a trade. The interior arrangements appear to differ con- siderably in the different states, and, so far as known, will be described respectively under each. 1 he women are fattened to make them plump, the grand criterion of beauty; and their

under dress resembles that of the men. Two broad straps pass over the shoulders from their girdle, and are cro>sod upon the breast. Their hair, as in tho east, is tressed and braided, and a handker- chief is tied close round the head. They wear earrings from the u|>per and lower parts of the

ears, and upon their ancles gold and silver rings. Their slippers are always red, and usually em- broidered. Veils and hayics, and sometimes straw hats, form a part of their dress out doors. A black stripe down the forehead, along the nose, chin, and throat, is considered as a great improvement of their beauty. This is very con- spicuous in a plate of the Tripolitine costume, given by Captain Lyon, p. 7. They use a profusion of hinna, for giving a red tint to their hair and fingers, and stibium (al-cohl), to blacken the inside of their eye-lids. Some days before a marriage the bride is visited by her female friends, and the bridegroom parades the streets on horseback, attended by his associates, a band of music, musketry, shouting, racing, &c. an- nounce his expected joys. On the wedding day the bride is carried through the town in a sort of sedan-chair, fixed on the back of a mule or camel, (see plate at p. 299, Captain Lyon's Travels,) covered with silk or linen. In this at- tire, surrounded by torches, drums, and musketry, large bodies of her relations attend her home. Nor are the attendants of the bridegroom less daz- zling and noisy. Arrived, the company retire, and he is left alone with his wife, whose veil he then removes for the first time.

The amusements in Barbary are the indo- lent Asiatic ones of smoking, tea, and pompous talk, or the most violent exercises, such as play- ing with the jerid, (see JERID,) leap-frog, foot- ball, and a few more such games, probably borrowed from Spain ; but one is quite peculiar to themselves: it consists of a sort of mock-fight; parties of horsemen riding full speed at each other, discharge their pieces, then wheel round and retreat. This is much like the game with the jerid ; but to improve it they ride full gallop towards a wall, approach it as near as possible, then stop short and fire. Sometimes, instead of chasing a wall for this purpose, they chase a friend, when they think they cannot do him A greater honor, that by galloping up and dis- charging their muskets full in his face. Their lively musical airs are said to be simple and beautiful ; but their serious ones dull and te- dious. In riding they have a thong attached to the rein, which serves as a whip. Their spur is a long spike loosely attached to the foot, and carefully kept from the horse's side, except in case of need.

The principal and best manufacture here is morocco leather. Good carpeting is also made : mats of the palmetto ; and cotton, silk and wool- len cloths. Their swords and gun-barrels are also of home make. An inland traffic is main- tained by periodical fairs; but the caravans, protected by

their numbers, are the only safe medium of general commerce.

BARBASTELLUS, VESPEBTI'LIO, in zoology, the tailed bat, with elevated hairy cheeks, and large ears, angulated on the lower part, the1 bar- bastelle of Buffbn and Pennant.

BARBATA, in entomology, a species of brown cantharis that inhabits Germany. 2. A. species of cicada (deflexa), of a brown color, with greenish abdomen. 3. A species of phalsena that inhabits Barbary. 4. A species of pimelia, (Ilelops Fabr.) inhabiting Saxony. Fabricius.

BARBATA, in natural history, a species of co- ral'ina, about three inches in length, that grows on the shores of Jamaica. Ellis, in his work on coralline, calls it the rosary or bead-coralline of Jamaica ; it is the bead-band string of Plunket, and corallina major, nervo cassiori fuciformi in- termedia breviora nectente of Sloane. (Hist. Jam.) Also, a species of Nais.

BARBATA, in ornithology, is a species of frin- gilla of Chili ; and a species of muscicapa, inha- biting Cayenne : called by Linnceus, the whis- kered fly-catcher.

BARBATED LEAF, in botany, a leaf termi- nated by a bunch of strong hairs.

BARBATELLI (Bernardino), otherwise called Pochetti, an eminent painter of history, fruit, animals, and flowers, was born at Florence in 1542. He was the disciple of Ridolfo Ghirlan- daio at Florence, from whose school he went to Rome, and studied there with such uncommon assiduity, that he was frequently so absolutely engrossed by the objects of his contemplations, as to forget the necessary refreshments of sleep and food. His touch was free, light, and delicate, and the coloring of his objects inexpressibly true. The historical pieces which he designed were much admired. He died in 1612.

BARBATINA, a seed which is thought effica- cious in extirpating worms from the human body, to which children are chiefly liable. It comes from Persia, and the borders of Russia. It ought to be chosen plump, of an agreeable scent, and very green : special care must be taken that the color be not dyed, and that the seed of sou- thernwood be not sold instead of it.

BARBATULA, in ichthyology, a species of cobitis, with six cirri ; head unarmed and com- pressed ; the bearded loche of English writers ; enchelyopus, &c. Klein ; cobitis fluviatilis, Ray ; fundulus, Marsden. It is a native of Europe and Asia ; and is most frequent in fresh-water streams, and lakes in mountainous countries. From its habit of lurking at the bottom of the water, on the gravel, it has been called the groundling ; but the latter name is now more generally given to the spiny loche, a fish distin- guished from the present , by having a forked spine under each eye, and is that species of cobi- tis, which Gmelin calls taenia. This is a fertile creature. We are told by Mr. Pennant, that it is frequent in a stream near Amesbury in Wilt- shire, where the sportsmen, through frolic, swal- low it down alive in a glass of wine. It is also found in great abundance in France.

BARBATUS, in entomology, a species of ce- rambyx (prionus), of a large size that inhabits South America. Also a species of scarabaeus, unarmed, smooth, and black ; vent bearded. (Fabricius.) A native of India.

BARBATUS, in ichthyology, a species of gobius. 2. A species of lophius, of a depressed form, with the lower jaw bearded. (Montin. act. suec, 1779.) Inhabiting the seas in the northern parts of Europe.

BARBATUS, in ornithology, a species of falco, of a whitish red color, with brown back : the vul- tus barbatus, Linn., and vulturine eagle of Albinus.

BARBATUS PISCIS, in ichthyology, a name given by Salvian and others, to the Silurus, or sheat-fish ; the Claims of Pliny, and the ancients.

This Artedi describes under the name of silurus with four cirri at the mouth. By this it is dis- tinguished from the fish called the alkussa, or lake, which, though a genuine species of the silurus, has one beard.

BARBAULD (AnnaLetitia), was the daughtei of the Rev. John Aikin, of Kibworth, in Leices- tershire, and born June 20, 1743. She received from her father, who in the early part of her life presided over a dissenting academy at Warring- ton, an excellent classisal education, to which she was indebted for the full development of her great natural talents. Her first production was a small volume of miscellaneous poetry, printed in 1772, which in the year following was suc- ceeded by a collection of pieces in prose, pub- lished in conjunction with her brother, Dr. John Aikin, of Stoke Newington. She accepted, in 1774, the hand of the Rev. R. Barbauld, with whom she took up her residence at Palgrave in Suffolk, and there composed the work on which her re- putation is chiefly founded, viz. Early Lessons and Hymns for Children, pieces of standard merit, in conveying the first rudiments of instruc- tion. In 1785 she accompanied her husband on a tour to the continent, and on their return they resided for several years at

Hampstead ; in 1802 they again removed to Stoke Newington, in order the more constantly to enjoy her brother's society. In 1812 appeared the last of her publications, entitled Eighteen Hundred and Eleven, a poem ; previous to which she had amused herself by select- ing and editing a collection of English novels,with critical and biographical notices. A similar selec- tion followed, from the best British Essayists, since the reign of Anne, and another from Richardson's manuscript correspondence, with a memoir and critical essay on his life and writings. Mrs. Bar- bauld died at Stoke Newington, March 9, 1825, in her eighty-second year.

BARBAZAN, (Stephen) a French author, born at Saint Fargeau, in the diocese of Auxerre, in 1696, and died in 1770. He wrote Instruc- tions from a Father to a Son, 8vo. 1760; but he is chiefly famed as the editor of old French books, particularly Tales and Fables of the twelfth and thirteenth Centuries, 3 vols. 12mo. Few persons were so well acquainted as he was with the an- tique French language, and he had almost an equal knowledge of the provincial dialects.

BARBE, or BARBETTE, in the military art. To fire in barbe means to fire the cannon over the parapet, instead of firing through the embrasures ; in which case the parapet must not be above three feet and a half high.

BARBE, or BARB. See BARB.

BARBE, or BARDE, is an old word, denoting the armour of the horses of the ancient knights and soldiers, who were accoutred at all points. It is said to have been an armour of iron and leather, wherewith the neck, breast, and shoulders of the horse were covered.

BARBE, ST. a town of Biscay in Mexico, near which are rich silver mines, 500 miles north-west of the city of Mexico. Long. 110►► 5′ \V ., lat. 26►► 10′ N.

The BARBE, or BARB, of zoology and com- merce, brought from Barbary, is a horse much esteemed for its beauty, vigor, and swiftness. It has a long fine neck, not overcharged with

hair, well divided from the withers : the head small and beautiful; the ears handsome; the shoulders light and flat; the withers thin and well raised; the back straight and short; the flunk and sides round, and the belly not too

large. The haunch bones are properly concealed ; the crupper is somewhat long, and the tail placed hiirh; the thigh is well formed, and rarely flat;

Lenglet's Chronological Tables ; also, La Croix's Modern Geography, and the two last volumes of Bibliotheque de France. Besides which, he translated into French, Strahlenberg's Description of Russia, &c. He died in 1781.

BARBEAU, a river of Canada, which runs into the Utawas. Long. 76►► 55′ W., lat. 45►► 5′ N.

BARBED, in heraldry, the five petals or leaves

the" limbs are'fine, handsome, and not hairy ; the which appear on the outside of a full blown rose and the foot well made ; but are called barbs ; and are thus emblazoned : a rose gules barbed and seeded proper, the rose is red, the barbs green, and the seeds yellow or gray. A barbed arrow, signifies an arrow whose head is pointed of an angular form, and jagged.

tendon prominent, a

the pastern is often long. They are of all colors,

but generally gray. In their movements they are

apt to be careless, and require to be checked.

They are swift, nervous, light, and make very

fine hunters. These horses are much sought after

for improving a breed. They are seldom, how- that is, a war-horse completely armed, furnished,

ever, above four feet eight inches, and never ex- and accoutred.

A barbed horse is a horse barbed at all points,

ceed four feet nine inches, or 14-J- hands ; but they produce foals which grow larger. Those of the kingdom of Morocco are said to be the best, and next to these the barbs from the mountains. The horses from Mauritania are of an inferior quality, as well as those of Turkey, Persia, and Armenia. (Button's Nat. Hist. vol. iii. p. 357.) It is a maxim, that barbs grow ripe, but never grow old, because they retain their vigor to the last, which makes them prized for stallions. In Numidia, the nice of horses is much degenerated. The Tiiv.'itanians and Egyptians have had the repu- tation of preserving the best breed. Some of these are sixteen hands high, and all of

them shaped, according to their phrase, like the ante- lope. The good qualities of a Barbary horse, besides the supposed one of never lying down, and of standing still when the rider drops his bridle, are to have a long walk, and to stop short, it' required, in full eareer. The barb is very Lr/.y ami neu'iiu'ent in his general motions; he will stumble in walking upon the smoothest ground ; his trot is like that of a eow, and his gallop very low, very easy to himself. This sort ###jf horse, however, is for the most part sinewy, nervous and excellently winded ; it is therefore uood for a course, if not overweighted. The mountain barbs, \hieh are the largest and strong- si, are much esteemed: common barbs have been usually bought in Provence and Lan- ###_uednc in I' ranee, nt a moderate price ; and many of our persons of fashion in Kngland have them n thence. llarl'S, amonust us, fall short of the to them in their native coun- inte-1 i'nr, partly from the s of their ride;-;, and partly >ade ! v. itii IK avy saddles o. ###,'./, nor even \vith shoes. , a cloth v.irt round with a and ;> sort of pummel to

cending from Bullions, :in'l 1)-, tier shaped, le, than their

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BARBED CROSS, in heraldry, a cross, the extremities whereof are like the barbed irons used for striking fish.

BAR'BEL. A fish so called by reason of the barb, or wattels, at his mouth, which are under his nose or chaps, so says old Izaak Walton. It is the vulgar name of the cyprinus barbus, which cost the fisherman so dear, when he presented it to the gloomy and savage Tiberius, at Capraea. The lavish slave

Six thousand pieces for a barbel gave ;

A sesterce for each pound it weigh'd, as they

Gave out, that hear great things, but greater say.

Duke,

BARBEL, in heraldry, is understood of a cock, when his comb and wattles are of a different co- lor from the rest of the body ; in which case he is said to be barbed and crested.

BARBEL, in ichthyology. See CYPRINUS. BARBELA, or VERBELA, the branch of the Zaire or Congo which comes from the south, and is considered by the Portuguese geographers as the principal one. It is said to take its rise in the kingdom of Matamba.

*BARBEIICOTJE, an ancient sect of Gnos- tics, spoken of by Theodoret. Their doctrine was, that one of the ./Eons, possessed of immortality, had commerce with a virgin spirit named Barbe- loth, who demanded of him, first prescience, then incorruptibility, and lastly eternal life ; all which were granted to her : that being one day in a gayer humor than ordinary, she conceived and afterwards brought forth light, which being per- fected by the unction of the spirit, was called Christ : the child Christ desired to have under- standing, v*v, and obtained it; after which, un- derstanding, reason, incorruptibility, and Christ united together ; and from their union arose au- togenes avrotytvi/c- To these fables, they add divers others. They were also denominated Bar- barian i.*

BAKBELOTH. See the last article. BARBER-CiiiRCRGEONS anciently had a lyte, viol, or some other musical instrument, as part of the furniture of their shops, which were fre- quented by persons above the ordinary level, who resorted to the barber either for the cure of wounds, or to undergo some chirurgicai opera- tions, or, as it was then called, to be tiimmed

a word that signified either shaving or cutting and curling the hair ; these, together with "etting blood, were the ancient occupations of the bar- ber-surgeons. As to the other important branch of surgery, the setting of fractured limbs, that was practised by another class, called bone-setters, of whom there are hardly any now remaining. The musical instruments in their shops were for the entertainment of waiting customers ; and an- swered the end of a newspaper, with which those who now wait for their turn at the barber's amuse themselves.

BARBER, CHIRURGEONS, in heraldry, were in- corporated by king Edward IV., but the barbers were separated from the surgeons by 18 Geo. 2, c. 15. Their arms are, ' A St. George's cross gules ; thereon a lion passant gardant, or quarterly ; the first and fourth a chevron between three

fleams ; the second and third per pale argent and vert, a rose, gules, crowned, and seeded or.

BARBERS OF EDINBURGH were formerly united in one incorporation with the surgeons; but about the year 1720, some disputes arising about precedency, a process commenced before the Court of Session, which ended in a total separa- tion of these two bodies ; and the surgeons were found entitled to retain the charter and privileges of the incorporation. The barbers have ever since met as a regular,but unincorporated society ; and though they retain some of their former privileges, such as their preses being one of the governors of the Trades Maiden Hospital, &c. they have no representative in the town council, nor even the shadow of a vote in the election of a member of parliament. Mr. Creech, in his Statistical Account of Edinburgh, records a revolution of a different nature in that society, which affords an instance of the rapid progress of refinement, or, as a philosopher would express it, the rapid in- crease of luxury, in the metropolis of Scotland. ‘ In 1763,’ he says, ‘ there was no such profession known asaperfumer; barbers andwigmakers were numerous, and were in the order of descent bur- gesses : hairdressers were few, and hardly per- mitted to dress hair on Sundays ; and many of them voluntarily declined it. In 1783 perfumers had splendid shops in every principal street : Some of them advertised the keeping of bears, to kill occasionally, for greasing ladies’ and gentle- mens’ hair, as superior to any other animal fat. Hairdressers were more than tripled in number ; and their busiest day was on Sunday. There was a professor who advertised a hair-dressing academy, and gave lectures on that noble and useful art.’

BARBER’S POLE. See APPELLATION.

BARBERINO (Francis), one of the most ex- cellent poets of his age, was born at Barberino, in Tuscany, A. D. 1264. As his mother was of Florence, he settled in that city ; where his pro- fession of the law, but especially the beauty of his poetry, raised him a very considerable character. The greatest part of his works are lost ; but his ‘ Precepts of Love, a moral poem, calculated to in- struct all who have a regard for glory, virtue and eternity,’ has had a belter fate. It wa^ published

at Rome, adorned with beautiful figures, in 1640, by Frederick Ubaldini ; who prefixed the au- thor’s life ; and, as there are in the poem many words which are grown obsolete, he added a glossary to explain them, which illustrates the sense by the authority of contemporary poets.

BARBERINO, a town of Italy, in Tuscany, situated at the foot of the Appenine mountains, twelve miles south of Florence.

BARBERRY, in botany. See BERBERIS.

BARBERSTOWN, a town of Ireland, in the county of Kildare, Leinster, twenty-three miles from Dublin.

BARBESULA, in ancient geography, 1. a town, and 2. a river, of Boetica ; 3. a colony in the resort of the Conventus Gaditanus in Spain : now Marbella, in Grenada.

BARBET, in natural history, a name given by M. Reaumur, and other of the French writers, to a peculiar species of the worms which feed on the pucerons or aphides. See APHIS.

BARBET, in zoology. Buffon calls the water- dog of Pennant, canis aquaticus of Gmelin, &c. le grand barbet ; and canis minor Gmel. le petit barbet. Hist. Nat.

BARBET, in ornithology, the English name of a genus of birds in Latham's Synopsis, correspond- ing with that of bucco, Linn. See Bucco.

BARBETS, the name of the inhabitants of seve- ral valleys in Piedmont, particularly those of Lucern, Angrona, Perusa, and St. Martin.

BARBEYRAC (Charles), an eminent physi- cian, born at Cereste, in Provence, in 1629. He studied at Montpelier, and afterwards settled there. The celebrated Locke, with whom he was in friendship, compared him to Sydenham. He died in 1699. He was author of Traites nou- veau de Medicine, &c. 12mo. 1654 ; and Ques- tiones Medicae Duodecim, 4to. 1658.

BARBEYRAC (John), was born at Besiers, in Lower Languedoc, in 1674. He was madepro- fessor of law and history at Lausanne in 1710, which he enjoyed for seven years. In 1717 he was professor of public and private law atGron- ingen. He translated into French, Puffendorf '﹐﹐ Law of Nature and Nations, and his Duties of a Man and a Citizen ; to both which he wrote ex- cellent notes, and to the former an introductory preface. He translated also Grotius's treatise De Jure Belli ac Pacis, with large and excellent notes ; and several of Tillotson's sermons. He wrote a work entitled Traite de Jeu, 2 vols. 8vo.

BARBEZIEUX, a town of France, in the province of Saintohge, with 2452 inhabitants, and the title of marquisate. It is the capital of an arrondissement of six cantons, in the depart- ment of the Charente. Here are thriving linen manufactures ; and in the neighbourhood there is a mineral spring. Twenty-eight miles south-east of Saintes, and forty-four north-east of Bourdeaux. Long. 0﹐﹐ 4′ W., lat. 45﹐﹐ 28′ N.

BARBI, in natural history, aspecies of echino- rhynchus, of an ovate shape, yellow color, fas- ciated ; neck long, white, cylindrical ; and cyathiform (glass or pot-shaped) at the end, found in the intestine of the barbel.

BARBICAN. SeeBARBACAN.

BARBICAN, in ornithology, the name of tV Gmelinian bucco dubius, or doubtful barbet, in

Buffon's Hist. Birds Barbu is also a name given by that writer to all the birds of the bucco genus, which he describes.

BARBICANAGE, or BARBICANAGIUM, in our old writers, money given for the maintenance of a barbican, or watch tower; or a tribute towards repairing or building a bulwark.

BARBICON (BARBICON DE CAYENNE), in or- nithology, the name of the Muscicapa barbata of Gmelin, in Buffon's History of Birds.

BARBICORNIS, in entomology, a species of brentus that inhabits New Zealand, the curculio barbicornis of Fabricius. 2. A species of ceram- byx. 3. A species of cimex (reduvius), of Sierra Leone. 4. A species of tipula.

*BAR BIER (M.), an English singer, who ap- peared on the revival of the opera of Almahide, in 1711. Her timidity on this occasion gave birth to an admirable Spectator (No. 131), in which Addison apologises for and commends her diffidence and modesty. This lady was a native of England, who continued to sing at the opera several years, and afterwards was a favor- ite concert and playhouse singer till the year 1729. In 1717 it seems she had somewhat van- quished her bashfulness in private. Her elope- ment from her father's house gave occasion to the following elegant lines by Hughes : ***

All, who in town or country dwell, Say, can you talc or tidings tell Of Tortorclla's hasty flight? Why in new groves she takes delight j And if in concert, or alone, The cooing murmurer makes her moan?

Now learn the marks, by which you may Trace out and stop the lovely stray.

Some wit, more folly, and no care, Thoughtless her conduct, free her air; Gay, scornful, sober, indiscreet, In whom all contradictions meet, Civil, affronting, peevish, easy, Form'd both to charm you and displease you ; Much want of judgment, none of pride, Modish her dress, her hoop full wide ; Brown skin, her eyes of sable hue, Angel when pleased, when vexed a shrew. Genteel her motion when she walks, Sweetly she sings, and loudly talks ; Know-s all the world, and its affairs. Who goes to court, to plays, to prayers, Who keeps, who marries, fails or thrives, Lead honest or dishonest lives ; What money match'd each youth or maid. And who was at eacli masquerade ; Of all fine things in this fine town, She's only to herself unknown.

JHy this description, if you meet her, With lowly bows, and homage greet her! And if you bring the vagrant beauty Hack to her mother and her duty, Ask for reward a lover's bliss, And, if she'll let you, take a kiss ; Or more, if more you wish, and may, Try if at church the words she'll say,' Then make her, if you can ††† obey.

BARBIKRI (Giovanni Francesco), otherwise called Gnereino da Cento, an eminent histori- cal painter, uas horn at Cento, near Bologna, in l.V.'O. He was the disciple of Benedetto Gen- nan, but afterwards studied in the school of the

Caracci, though he did not adopt the manner of that famous academy. He preferred the style of Caravaggio to that of Guido or Albano, imagin- ing it impossible to imitate nature truly, without the assistance of strong lights and strong shadows. In effect, by this opposition, he gave such force to his pictures, that few, except those of Cara- vaggio, can stand near them, and not seem feeble in their effect ; however, his manner is censured as not being like nature, because it makes objects appear as if they were seen by a candle-light, or a sun-beam, which alone can justify the deepness of his shadowing. His princpal attention seems to have been fixed on perfection in coloring ; he saw the astonishing effects produced by the color- ing of the celebrated Venetian masters ; and ob- served that notwithstanding any imperfection in regard to correctness or elegance, their works were the objects of universal admiration. On this account he devoted his whole study to excel in coloring ; being convinced that few are qualified to discern the elevation of thought which consti- tutes the excellence of a composition ; that few are touched with the grandeur or beauty of the design, or have a capacity to examine the correct- ness of a painting ; but that every imperfect judge may be sensibly affected by the beauty of the coloring. His taste of design was natural, easy, and often grand, but without any extraordinary share of correctness or elegance. The airs of his heads are often deficient in dignity, and his local colors want truth. However, there is great har- mony in his colors, although his carnations are not very fresh ;

and in all his works there is an expres- sive imitation of life, which will always render them estimable. Towards the decline of his life, he observed that the clearer and brighter style of Guido and Albano had attracted the admiration of all Europe ; and therefore he altered his man- ner, even against his own judgment. But he apologised for that conduct, by declaring that in his former time he painted for fame, and to please the judicious ; and he now painted to please the ignorant, and enrich himself. He died in 1666. The most capital performance of Barbieri is the history of St. Petronilla which is considered as one of the ornaments of St. Peter's, at Rome.

BARBIERI (Paolo Antonio, da Cento), painter of still life and animals, was the brother of Gio- vanni, and born at Cento in 1596. He chose for his subjects, fruit, flowers, insects, and animals ; which he painted after nature, with a lively tint of color, great tenderness of pencil, and a strong character of truth and life. He died in 1640.

BARBIGEROUS, bearded.

BARBILLONS, in entomology, are certain bodies, usually two in number, placed under the head of an insect, and movable at pleasure, some- what resembling hands or fingers placed on a short or broken arm. The word is a diminutive of the French barbe, the beard.

BARBING, is sometimes used in ancient statutes for shearing. Cloth is not to be export- ed till it be barbed, rowed, and shorn. 3 Hen. VII. c. 11.

BARBISTON, an ancient castle in the parish of Dalrymple, in Ayrshire, near which a battle was fought. The dates of 1340 and 1345, are ou some stones in the old vaults.

BARBITOS, or BARBITON, an ancient instru- ment of music, mounted with three strings ; others say seven, much used by Sappho and Alcaeus ; whence it is also denominated lesboum. It is laid to have differed from the lyre and cithara. Strabo makes it the same with the sambuca. It is represented as yielding a grave,deep, sound, and on that account peculiarly fitted for Doric composi- tions. Anacreon is said to have been the inventor.

BARBLE, or BARBEL, in ichthyology. See 'CYPRINUS.

BARBLES, BARBES, or BARBS, in farriery, the knots or superfluous flesh that grow up in the channels of a horse's mouth ; that is, in the inter- vals that separate the bars, and lie under the tongue. These obtain in black cattle as well as horses, and obstruct their eating. For the cure, they cast the beast, draw out his tongue, and clip off the barbies with a pair of scissars, or cut them with a sharp knife; others burn them off with a hot iron.

BARBO, a river of Mexico, which rises in the province of Honduras, and runs into the Spanish Main, forty miles south-east of Cape Camaron.

BARBONI, in ichthyology, a name given to the mullus barbatus, a fish greatly esteemed at table, and caught in the Mediterranean and some other seas.

BARBONNE, a town of France, in the depart- ment of the Marne, five miles from Sezanne.

BARBORA, a maritime town of Africa, in the kingdom of Adel.

BARBOUR (John), archdeacon of Aberdeen, was esteemed an elegant poet in the reign of David I. He wrote the history of Robert the Bruce, in an heroic poem, which is still extant, and contains many facts and anecdotes omitted by other historians. An edition of this book was printed at Glasgow, 8vo, in 1762: en- titled The Acts and Life of the most victorious conqueror Robert Bruce, king of Scotland, where- in also are contained the martial deeds of the valiant princes Edward Bruce, Sir James Doug- lass, Earl Thomas Randall, Walter Steward, and sundry others. In one passage he calls it a ro- mance ; but that word was then of good repu- tation. The Romaunt of romaunts has been applied to true history ; as well as the Ballad of ballads to a sacred song. Mr. Pinkerton pub- lished an edition in 1790, from an ancient MS.

BARBUD, a Persian musician in the service of Kosru Parviz, whose name was afterwards adopted to signify the master of music. Barbud is also the name of a sort of lyre in use among the Persians.

*BARBUDA, or BERBUDA, one of the British Carribee islands, about twenty miles long, and twelve broad. It is low land, but fruitful and pretty populous, abounding in cattle and fruits, especially in cocoa trees, which are here ex- tremely fine. It also yields cotton, pepper, tobacco, indigo, ginger, and sugar-cane, besides fine woods, herbs, and roots, with which it is plentifully stocked. Several species of snakes are found in this island, some of which are harm-
ळळless, while others are exceedingly venemous. Amongst the latter is one having a flat head, whose bite*

occasions instant death. The island has no harbour, but a well sheltered road on the

west side. The inhabitants are about 1500, and. follow husbandry, finding always a ready mar- ket for their corn and cattle in the sugar islands. Barbuda is the property of the Codrington fami- ly, who have great numbers of negroes here, as well as in Barbadoes. That family have one merit which few slave-holders can lay claim to : they have given large benefactions to instruct their slaves in Christianity. Barbuda lies about twenty miles north-east of St. Christopher's, and forty-five north of Antigua. Long. 61►► 50′ W., lat. 18►► 30′ N.

BARBUE, a river of North America, m the north-western territory, which runs west by north, and falls into the Lake of Michigan. It is about 150 yards broad at the mouth.

BARBUL/E in botany, a name given by Pliny to the semi-flosculi.

BARBURY CASTLE, and BARBURY Hilt, places in Wiltshire, west of Ogborn St. George, and near Marlborough Downs. There formerly stood here a castle of considerable magnitude, surrounded by a double moat ; and on the ad- jacent plain are many barrows, which seem to indicate that a great battle was fought on this spot, at some remote period.

BARBY, a county in the Prussian states on the Elbe, between Magdeburg and Anhalt, consist- ing of the bailiwics of Barby, Rosenburg, Wal- ther-Nienburg, and Muhlingen. On the death of the last of the counts in 1659, Barby Proper came to the elector of Saxony, and after forming part of Jerome Buonaparte's kingdom of West- phalia, was annexed to Prussia in 1815.

BARBY, the chief town is situated on the Elbe, near where it receives the Saale, and has 2900 inhabitants. It is well built, has an old castle, and is the seat of the superintendant of eight churches in the county. The Moravian brethren obtained permission in 1749 to remove hither their academy and theological seminary, and they founded an academical college in 1 754. They had here also a school and chapel, an observatory, and a cabinet of natural history ; but the greater number of these establishments have been trans- ferred to Niesky, inUpperLusatia. Fourteen miles north-west of Dessau, and fourteen S. S. E. of Magdeburg. Long. 11►► 58′ 47″ E., lat. 51►► 59′ N.

BARBYLA, in botany, a name by which The- ocritus and other of the early writers, have called the common damask prune.

BARCA, a large country of Africa, lying on the coast of the Mediterranean

sea, between the kingdoms of Egypt and Tripoli, extending in length from east to west from 39►► to 46►► E. long., and in breadth from north to south about thirty leagues, as is generally supposed. It is for the most part, especially in the middle, a dry sandy desert ; on which account the Arabs call it Sahart, or Ceyart Barka, that is, the desert or road of whirlwinds or hurricanes. It labors almost everywhere un- der a great scarcity of water ; and except in the neighbourhood of towns and villages, where the ground produces some small quantities of grain, such as millet, and some maize, the rest is in a manner quite barren and uncultivated, or rather uncultivable : and even of that small quantity which those few spots produce, the poor inhabi- tants are obliged to exchange some part with their

. indigent neighbours, for dates, sheep, and camels, which they stand in greater need of than they, by reason of" their great scarcity of grass and otjier proper food ; for want of which, those that are brought to them, seldom thrive or live long. In this territory stood the famed temple of Jupiter Ammon : and notwithstanding the pleasantness of the spot where it stood, this part of the country is said to have been the most dangerous of any, being surrounded with such quick and burning sands as are very detrimental to travellers ; not only as their feet sink into them", but being light and heated by the rays pf the sun, they are easily raised by every breath of wind ; which, if it chance to be in their faces, almost burns their eyes out, and stifles them for want of breath ; or, if vehement, often overwhelms whole caravans. Against this temple Cambyses, king of Persia, despatched an army of 50,000 men. They set out from Thebes, in Upper Egypt, and under the conduct of pro- per guides, reached the city of Oasis, seven days journey from that place : but what was their fate afterwards is uncertain ; for they never returned either to Egypt or to their own country. The Annnonians informed Herodotus, that, after the army had entered the sandy desert which lies be- yond Oasis, a violent wind began to blow from the soutli at the time of their dinner, and raised the sand to such a degree, that the whole army was overwhelmed and buried alive. Concerning the government or commerce of this country we know nothing certain. The maritime towns are under tin: nominal protection of the Porte, and the whole country is subject to Tripoli, the bashaw of which appoints a sangiack, who resides at Derne, the capital of IJarca.

BARCA, a sea-port town in the territory of the same name. Long. 20" 25′ L\, lat. 32►► 26′ N.

I { ARC A I. AO, a Spanish word, 'which the 1'rench pronounce baccala, or baccaliau. By this last name the Basques most commonly call the fish which we style cod; and those people call also the island which we call Newfoundland, the isle of Baccalian, cod island, because of the great plenty of cod caught there.

BAIICALON, an appellation given to the prime minister of the king of Siam, who super- intends every thing relating to commerce, both foreign and domestic, as well as the king's magazines.

1 AltCA-LOXCA, a large Spanish fishing- iioa . navigated \viih lug-sails, and having two or

masts, very common in the Mediterranean.

A1JCA !,< >K,K, a town of Cochin, twenty-two

s east ol ('raiT^anore.

AIM'ANS, tlic natives of UAHCA, which see. 1 AUCAitlA, old law Lat, a barkery or tan-

i

AUCAKY, bergerie, l"r. a sheep-cote. MICAS, a town of New Mexico, in the in- Irntlaney of Guadalaxara, which has a numerous opulation of Spaniards, Mestizoes, and Mu- l.ittoes.

I >A I { CATTY, a town of Cochin, on the con- I'mes of Mindigul, sixty miles east of Cochin.

liAUCK, the chief city in the province of l'>arca, about nine miles from the. sea. It was

ed by the b

f Arcesilaus, king of

Cyrene, ,">1.> years before the Christian era.

BARCELONA, a handsome, rich, and strong city of Spain, in the province of Catalonia, of which it is the capital. It is situated by the sea side, of a form between a square and an oval ; surrounded with a good brick wall, round which is another, with fourteen bastions, horn-works, ramparts, and ditches; the ramparts are high, broad and spacious. This city, which is reckoned the second in Spain in population, is divided into two parts, the Old and the New, separated from each other by a wall and a large ditch ;

the streets are handsome, well paved with large stones, wide, and very clean. It is a bishop's see, the seat of a captain-general, a governor, and a royal audiencia; and here the archives of the kingdom of Arragon are preserved.

The Barcelonians have also a fine university, and various institutions for the promotion of lite ??? rature, arts and sciences; the academies for juris prudence, natural philosophy, medicine, history, and the fine arts, are celebrated throughout Spain. The most remarkable buildings are the cathedral, which is adorned with two high towers; the church of the Virgin Mary, the palace of tire bishop, that of the inquisition, and several religi- ous houses ; add to these the palace of the viceroy, the arsenal, which contains arms for 1000 men, and a cannon-foundry, the exchange, where the merchants meet, the tersana, where they build the galleys, and the palace where the nobi- lity of the country meet, called La Casa de la Deputation. This last is built with fine large free stone, and adorned with columns of marble : there is in it a large hall, with a handsome por- tico. There are several fine squares, particularly that of St. Michael, into which all the great streets run.

This city w.as originally founded by Hamilcar Barcas, and from him called Barcino. It was reduced by the Romans, and continued subject to them till Spain was over-run by the Goths and Vandals. In the beginning of the ninth century Barcelona was in the hands of the Sara- cens, under the government of one Zade. The government having more than once abused the clemency of Charlemagne, at last irritated Louis king of Aquitain, his son, to such a degree, that he gave orders to his generals to invest the city, and not to rise from before it till they had put Zade into his hands. Zade made a most obsti- nate resistance, so that the siege lasted many months; at last, finding it impossible to preserve the city much longer,, and being destitute of all hopes of relief, he determined, or rather was compelled by the inhabitants, to go to the Chris- tian camp and implore the emperor's mercy; and being sent prisoner to Charlemagne, he was con- demned to perpetual banishment. The people gaining nothing by this expedient, continued to hold out for six weeks longer, when Louis him- self took the command of the siege. To him they made a proposal, that if he would allow them to go where they pleased, they would sur- render. Louis, having agreed to this, made his public entry into Barcelona, where he formed a design of extending his father's dominions as far as the Ebro ; but being recalled before he could put his design in execution, he appointed one Bera, cous. of Barcelona. The city continued*

subject to him and his successors, who enjoyed .he title of counts of Barcelona, from A. D. 802 to 1131; during which time nothing remarkable occurred, except that the city was once taken by the Moors, but soon after retaken by the assist- ance of Louis IV. king of France. In 1131 it was united to the crown of Arragon by the mar- riage of Raymond V. count of Barcelona with the daughter of Ramiro the monk, king of Arra- gon. In 1465 the Catalonians revolted against John II. king of Arragon, out of hatred to the queen Donna Joanna ; the consequence of which was, that Barcelona was besieged by that monarch in 1471. Various efforts were made by Louis XI. of France and the duke of Lorraine to raise the siege, but without effect. Things at length were brought to the utmost extremity, when the king offered to pardon them all, without the smallest punishment either in person or property, provided they would submit; but these terms they rejected, chiefly through the influence of the count de Pailhars, who had been pardoned the year before. The army on the other hand, was very earnest in being led on to the assault, in hopes of plunder. The king, however, wrote a letter to the citizens, dated the 6th of October, in terms as affectionate as if he had been writing to his children, bewailing the miseries they had brought on themselves, and concluding with a protestation that they, and not he, must be answerable for the consequences. Upon this, they sent deputies to the king, and made a capi- tulation on the 17th of that month. In this the king acknowledged they had taken up arms on just motives; and forgave everybody except Pail- hars, who waSj however, suffered to escape. On the 22nd of October the king made his entry into the city, and confirmed all their ancient privi- leges. In 1697 Barcelona was taken by the French, after a bloody siege of fifty-two days ; and the loss of this city had a considerable effect in disposing the Spaniards to agree to the treaty of Ryswick. In queen Anne's time it was taken by the allies, under the earl of Peterborough, Oct. 4, 1705; but, being afterwards shamefully denied assistance by the English ministry, was obliged to submit to Philip V. by whom the whole province was deprived of its ancient pri- vileges, in 1714; for a particular account of which, see SPAIN.

Th port of Barcelona is wide, spacious, deep, and safe ; defended on the one side by a great mole, and on the other sheltered from the west wind by two mountains that advance into the sea, and form a kind of promontory ; the mole is 750 paces long, with a quay, at the end of which is a light house and a small fort. One of the moun- tains, called Montjoui or Mount Joy, is very high, and rises in the middle ,of the plain near the city : it is covered with gardens, vineyards, groves of trees, and has a strong fort for the defence of the city; this mountain being a rock, yields an inexhaustible quarry of fine hard free- stone. Barcelona is a place of great trade. The number of ships which arrived here in 1803, before its commerce was impeded by the penin- sulur war, has been stated at 1333, 927 of which*

were Spanish, and the remainder belonged to other nations. The manufacturing establish- ments are calico presses, looms for silk, wool,

and cotton, hats, laces, ribbons, stockings, and soap. Here, also, are fabricated excellent mus- kets, pistols, swords, and other small arms, not only for the army at home, but for Naples and America. There are, besides, several steel and brass works. It has, also, a good trade in linen, copper, and brass, from Germany. An- other extensive article of its trade is salt fish, from Newfoundland, the chief trade for which is with England.

When the trade with Mexico was first opened, in 1778, the Barcelonese merchants soon distin- guished themselves by successful enterprises in it. Twenty-three ships, whose cargoes of Spa- nish produce was valued at ––85,000 English, and the foreign freight at ––25,000, cleared out here the first year. In ten years after, the goods thus exported amounted to ––400,000, and the return cargoes to ––450,000. The present export and import trade are taken together at ––1,750,000, and the population at about 112,000.

At Barcelona Charles III., of the house of Bourbon, landed from Naples in 1759, to take possession of the throne of Spain. On the 16th February, 1808, it was surprised by a body of French troops under general Duhesme. They arrived in the neighbouhood on the 13th of February to the number of 10,000; and, hav ing requested permission to halt and refresh themselves on their way to Valencia, the gates were opened to receive them, and they were hailed as friends and allies. On the 16th, having assembled on the parade, as if for the purpose of continuing their march, they filed off in two divisions, one to the citadel, the other to Mon- jui, a fort upon a hill which commands the town, and having summoned those posts, they were immediately surrendered. Barcelona continued in possession of the French until the year

1814.

BARCELONA, one of the principal provinces of the government of Cumana, South America : bounded on the west by Cumana, east by the Caraccas, and south by the river Orinoco, which also divides it from Guiana. Here commence those immense plains, covered with excellent pasturage, which, uniting with those of the Ca- raccas, extend as far south as the Orinoco. They were formerly well stocked with cattle, 8000 or 9000 head being killed annually, in salting of which the inhabitants exhibited great skill. In the province are four remarkable salt—pits ; but of late the supply is much diminished. This pro- vince declared its independence in 1811, and is now a part of the republic of Columbia.

BARCELONA NEW, the capital of the foregoing province, is situate in a plain on the left bank of the river Neveri, half a league distant from the sea, in 10□□ 10′ N. lat. and 64□□ 47′ W. long. It is twelve leagues from Cumana in a direct line ; but the windings which it is neces- sary to make to avoid bad roads, make it a journey of twenty hours. It is reckoned ten marine leagues by sea from the port of Barcelona to that of Cumana.

On ascending on the east side of the river, about four miles from its mouth, we observe, on an eminence which bears the name of the city, a fort erected for the protection of vessels which anchor not far from it, in a bay so shallow as not

to be capable of admitting veesels of considerable size. This port, if it may be so called, affords no shelter but against the breeze : but at the dis- tance of one league to the north, the island of Borracha, inhabited by fishermen, presents, on its south side, a safe harbour for ships of the largest size. From the hill of Barcelona, the coast runs to the north-east, as far as Cumana, which is at the distance of two leagues. That space is filled with a chain of islands, not far removed from the coast. Some of these are pro- vided with bays and ports; but they are of no great consequence.

Barcelona has a population of fourteen thou- sand souls, a single parish church, and an hospi- tal for the Franciscans who support the missions of this part. It is neither handsomely nor agree- ably constructed. Its unpaved streets are ex- tremely muddy in rainy weather; and in dry seasons they are covered with a dust so light that the least breath raises it in the air. The immense quantity of hogs fed there, induce in the city a number of stinking and infectious sties, which corrupt the air and frequently create dis- eases. In 1803, however, the commandant of the place took measures for removing from the town an infection which could not but poison its residence. This town had, in 1807, a population of 1 .5,000 persons ; half whites and half mulattoes and negroes.

Hides, tallow, oxen, mules, jirked and salted beef, are the great articles of trade here; in 1800 eight thousand mules left this port for the West India islands. The annual value of the trade is computed at 400,000 dollars.

BAIU; El. ON ETTA, a small and new town of Spain, in Catalonia, a suburb of Barcelona. It stands on the south-east of that city, between the harbour and the light-house, and was built by the marquis de la Mina, then captain-general of Catalonia, about the middle of the last century. In

consists of a square, laid out in twenty-four streets, composed of brick houses, all built upon the same plan, which gives it a neat appearance. The number of houses is stated at 600, and that of the inhabitants at 10,000, the major part of whom are soldiers, sailors, and persons other- wise connected with the navy. The church is a handsome structure, in the form of a Greek cross.

BARCEI.ONNE, a town of France, in the department of the (lers, arrondissement of Miran- ile, on the river Adour. Population 840. Nine miles south-west of Nogaro, twenty-seven W. N. W. of Miraude.

HAUCI -.I.ONXK, a small town of France, in the department of the Drome, arrondissement of \ alencr, five miles east of Valence.

K\K(i IONM.TH , a town of France, in the de- partment of the Lower Alps, and capital of the province and valley of this name.

The arrondissement contains above 18,000 inhabitants, in four cantons. Population of the town 1900. The only objects of trade are corn anil cattle, particularly sheep. Near this place is a passage across the Alps to Coni; and the district, was the scene of various military opera- tions in the campaign of 1799. Twenty-eight miles north-cast of Dignc, twelve miles south-

east of Embrun, and fifty-six north-west of Nice- Long. 6►► 44′ E., lat. 44►► 23′ N.

BARCELORE, a town of Hindostan, in Canara, on the banks of a broad river, about four miles from the sea. It once belonged to the Portuguese, from whom it was captured by the Dutch, who immediately began to establish a settlement here. It was formerly the capital of an independent state, which in 1575 was ruled by a female sovereign, and the daughters of the family have since succeeded. Barcelore carries on considerable trade with the Arabs of Maskat, exporting rice, the chief product of the country, and pepper, and receiving horses and dates ‘n return. This port is supposed to have been the Barace of the ancients. Long. 74►► 46′ E., lat. 13►► 45′ N.

BARCELOS, a town of Portugal, in Entre Duero-e-Minho, ten miles west of Braga, and twenty north of Porto, seated on the river Sou- rilla.

BARCELOS, a town of Portugal, with the title of a duchy, seated on the river Cavado, over which there is a handsome bridge.

BARGES, or BEECHES, were formerly a kind of ship guns, not unlike sakers, only shorter, thicker in metal, and wider bored.

BARCINO, in ancient geography, a town of the Tarraconensis in Spain, and capital of the Laletani ; now called Barcelona.

BARCLAY (Alexander), a learned monk in the reign of Henry VIII. Where he was born, has been subject of contention among his biogra- phers. Bale, his contemporary, says he was born in Somersetshire. There is indeed a village of his name, and a numerous family, in that county. Pits thinks he was born in Devonshire. Mackenzie is positive he was a Scotchman; but without proof, unless we admit as such his name Alexander. He was, however, educated at Oriel College, Oxford. Afterwards he went abroad, and continued some time in France, Italy, and Germany, where he acquired a com- petent knowledge of the languages of those countries. On his return to England he was made chaplain to his patron the bishop of Tyne, who appointed him a priest of St. Mary, at Ottery College in Devonshire. After the bishop's death he became a Benedictine monk of Ely. On the dissolution of that monastery he obtained a vicarage in Somersetshire; and, in 1549, being D.D., was presented to that of Great Baddow in Essex. In 1552 he was appointed rector of Allhallows, which he enjoyed but a short time ; for he died at Croydon in June following. He improved the English language, and was one of of the politest writers of his time. He composed several original works; but was chiefly remark- able for his translations from the Latin, Italian, French, and German languages. His version of Sallust's Jugurthine war is accurate, and even elegant. His lives of several saints, in heroic verse, are still in MS. His Stultifera Navis, or The ship of fools, is the most singular of his per- formances. It was printed by Richard Pynson at London, 1509, in folio; and contains a variety of wooden plates, which are worthy the inspec- tion of the curious.

BARCLAY (John), son of William, was bora

in France, at Pont-a-Mousson, and was so great favorite of the Jesuits, that they used all their efforts to engage him in their society. But his father prevented this, and carried him with him to England. Previously to this young John had already commenced author, for he had published A Commentary upon the Thebais of Statius, a Latin poem on the coronation of King James, and the first part of Euphormio, in 1603. He returned to France with his father in 1 604 ; and after his death went to Paris, but returned soon after to London, where he was in 1606. He published The History of the Gunpowder Plot, a pamphlet of six leaves, printed at Amsterdam. He published at London in 1610, An Apology for the Euphormio, and his father's treatise De Potestate Papae. And at Paris, in

1612, he pub- lished a book entitled Pietas, in answer to Car- dinal Bellarmin, who had written against his father's book, on the power of the Pope. Two years after he published Icon Animorum. He was invited to Rome by Pope Paul V. and re- ceived a great deal of civility from Cardinal Bellarmin, though he had written against him. He died at Rome in 1621, while his Argenis was printing at Paris. This celebrated work has since gone through a great number of editions, and has been translated into most languages. M. de Peiresc, who had the care of the first edition, caused the effigies of the author to be placed before the book ; and the following dis- tich, written by Grotius, was put under it :

Gente Caledonius, Callus natalibus, Jiic est, Komam Romano qui docet ore loqui.

BARCLAY (Robert), one of the most eminent among the Quakers, the son of Colonel David Barclay, descended of an ancient family, was born at Edinburgh in 1648 He was educated under an uncle, who was principal of the Scots' college at Paris, where the Papists used all their efforts to draw him over to their religion. He joined the Quakers in 1669, and distin- guished himself by his zeal and abilities in de- fence of their doctrines. His first treatise in their defence was published at Aberdeen in 1670. His father the colonel had joined them in 1666. In 1676 he published in Latin at Amsterdam his Apology for the Quakers ; which is the most ce- lebrated of his works, and esteemed the standard ⬚⬚⬚of the doctrine of the Quakers. His Theses Theologies;, which were the foundation of this work, and addressed to the clergy of what sort soever, were published before the writing of the Apology, and printed in Latin, French, High Dutch, Low Dutch, and English. He trans- lated his apology into English, and published it in 1678, with a dedication to king Charles II. which is remarkable for the uncommon frankness and simplicity with which it is written. Amongst many other extraordinary passages, we meet with the following : ' There is no king in the world, who can so experimentally testify of God's pro- vidence and goodness ; neither is there any who rules so many free people, so many true chris- tians ; which thing renders thy government more honorable, thyself more considerable, than the accession of many nations filled with slavish and ii.persutious. souls. Thou hast tasted of pros-

perity and adversity ; thtou knowest what it is to be banished thy native country, to be overruled as well as to rule and sit upon the throne ; and being oppressed, thou hast reason to know how hateful the oppressor is both to God and man t if, after all those warnings and advertisements, thou dost not turn unto the Lord with all thy heart, but forget him who remembered thee in thy distress, and give up thyself to follow lust and vanity, surely great will be thy condemna- tion.' He travelled with the famous William Penn through the greatest part of England, Hol- land, and

Germany, and was everywhere re- ceived with the highest respect ; for though both his conversation and behaviour were suitable to his principles, yet there was such liveliness and spirit in his discourse, and such serenity and cheerfulness in his deportment, as rendered him extremely agreeable to all sorts of people. He returned to his native country, spent the re- mainder of his life in a quiet and retired man- ner; and died at his house at Urie, on the 3rd of October 1690, aged forty-two. He wrote other works; particularly, 1. A Treatise on Univer- sal Love. 2. The Anarchy of the Ranters; a turbulent sect with whom the enemies of the Quakers endeavoured to confound them. 3. A Letter to the Ministers of Nimeguen. 4. The Possibility and Necessity of the Inward Revela- tion of the Spirit of God, 'See. &c.

BARCLAY (William), a learned civilian, was born in Aberdeenshire, in 1541. He spent the early part of his life, and much of his fortune, at the court of Mary Queen of Scots, from whose favor he had reason to expect preferment. In 1573 he went to France, and at Bourges com- menced student of civil law under the famous Cujacius. He continued some years in that se- minary, where he took a doctor's degree ; and was soon after appointed professor of civil law in the university of Pont-a-Mousson, then founded by the duke of Lorraine. That prince afterwards made him counsellor of state and master of requests. Barclay, in 1481, married Ann de Malleville, a French lady, by whom he had his celebrated son, John. This youth the Jesuits would gladly have received into their society. His father refused his consent, for which reason they contrived to ruin him with the duke. Barclay embarked for Britain, where James I. offered him preferment, if he would join the church of England : but not choosing to comply, he returned to France in 1604; and, soon after, was appointed professor of civil law in the university of Angers, where he died in 1605, and was buried in the Franciscan church. He wrote elaborately in defence of the Divine Rights of Kings, in answer to Buchanan and others. His works are. 1. De Regno et Regali Potestate, &c. 2. Commentarias in tit. Pandec- tarurh de Rebus Creditis, et de Jure-jurando. 3. De Potestate Papae, &c. 5. Praemetia in vi- tam Agricolae.

BARCLAY, CASTLE Hi LI. OF, and BARCLAY MOAT, OR MERKLAND OF, two relics of Danish forts, on the banks of the Urr, in the parish of Colvend, in Kircudbrightshire.

BARCLOSH, an ancient edifice in the parish of Kirkgunzeon, which seems to have been built

as a place of refuge, being remote, inaccessible, and more defended by nature than art. It belongs to the family of Herries.

*BARCOCHAB, or BARCOCHEBAS, a Jewish impostor, whose real name was Akiba ; but he took that of Barcochab, which signifies the Son of a Star ; in allusion to the prophecy of Balaam, * There shall a star arise out of Jacob.' He pro- claimed himself the Messiah ; and talking of nothing but wars, victories, and triumphs, made his countrymen rise against the Romans, by which means he was the author of innumerable disorders ; he ravaged many places, took a great number of fortresses, and massacred an infinite multitude of people, particularly the Christians. The emperor sent troops to Rufus, governor of Judea, to suppress the sedition. Rufus, in obedience, exercised a thousand cruelties, but could not finish his attempt. The emperor was therefore obliged to send Julius Severn s; the greatest general of that time ; who attained his end without a direct battle : he fell on them se- parately ; cut off their provisions; and at last the whole contest was reduced to the siege of Hitter, in the eighteenth year of Adrian. The impostor perished there. This war cost the Romans a great deal of blood.*

BARCO-LONGA. See BARCA-LONGA.

BARCONE, a short broad vessel, of a middle si/.c, used in the Mediterranean sea for the car- riage of corn, wood, salt and other provisions, from one place to another.

BAIM)', 3 Fr. harder, Dut. burdcrcn, pha-

BA Ki/Ki). 3 Icrurc, phaleris ornare. This word, of so frequent occurrence in the ancient chro- nicles, is probably no more than a corruption of barb. They are apparently of similar origin, and it is certain that they are used synony- mously. See B.YRJI.

1 s;uv the muster of the new band-men of arms, &c. sonic with feathers, staves, and pencils of their colours ; some with sleeves anil half coats ; some with bards and staves, &r.

litirnct's History of the Reformation.

BAUD', \ The hard, was the poet, the BAK'DICK, f musician, and the historian, of BAII'DISII, i ancient times. The kind of song H \KD'I .1 M;. j \lueh the bards sung, is called burditus, by Tacitus; and barditus is derived by Wachter from the Germ, bartcn, ptignare. The bards were, therefore, originally the com posers of the war-song, the song of battle, and their task was to inspire the love of martial fame, by impassioned tales of heroic deeds. The title is now given to poets without discrimina- tion.

Then: is among the Irish a kind of people called bards, which are to them instead of poets j whose pro- fession is to set forth tin: praises or dispraises of men in their poems or rhiine ; the which are had in high regard and estimation among them.

Spenser on Ireland.

And many bards that to the trembling chord,

(.'an tune their timely voices cunningly.

Faerie Queene.

Then you that valiant soulcs and slainc in warre, Do ceh lirate with praise that ncucr dyes, You littrd.i securely sing your eU'sryes. May. Lucan.

And indeed my jealousy liath oft vexed me with particular inquisition of whatsoever recurs, bearing not a mark of most apparent trutb, ever since I found so intolerable antichronisms, incredible reports, and bardish impostures ; as well from ignorance as assumed liberty of invention in some of our ancients. Selden.

The bard who first adorn'd our native tongue Tun'd to his British lyre this ancient song, Which Homer might without a. blush rehearse.

Dryden.

Rapt into future times, tbe bard begun ; A virgin shall conceive, a virgin bear a son ; From Jesse's root, behold a branch arise, Whose sacred flow'r with fragrance fills the skies ; TV etherial spirit o'er its leaves shall move, And on its top descends the mystic dove.

Pope's Messiah.

By Pella's bard, a magic name,

By all the griefs his thoughts could frame,

Receive my humblest rite : Long, Pity, let the nations view Thy sky- worn robes of tenderest blue,

And eyes of dewy light !

Collin's Ode to Pity.

Faith let him 'scape, let love and fame survive, With your kind sanction keep his scenes alive ; Try to approve (applaud we will exempt) Nor crush the bardling in this hard attempt.

Cunningham. A Prologue to Love and Fame.

The Welsh, kept in awe as they were by the Ro- mans, harassed by the Saxons, and eternally jealous of the attacks, the encroachments, and the neighbour- hood of aliens, were on this account attached to their Celtic manners ; this situation, and these circum- stances, inspired them with a pride and an obstinacy for maintaining a national distinction, and for pre- serving their ancient usages, among which the bardic profession is so eminent.

Warton's History of English Poetry.

Their ashes flew ;

No marble tells us whither. With their names No bard embalms and sanctifies his song ; And history, so warm on meaner themes, Is cold on this. Cowper's Task.

BARD, in antiquity, denotes one who was a poet by genius and profession ; and ' who sung of the battles of heroes, or the heaving breasts of love.' Ossian's poems, i. 37. Lord Kaimes justly observes, Sketches i. sec. 2. that the cu- riosity of man is great with respect to the trans- actions of his own species; and when such transactions are described in verse, accompanied with music, the performance is enchanting. An ear, a voice, skill in instrumental music, and above all the poetical genius, are requisite to excel in that complicated art. As such talents are rare, the few that possessed them were highly esteemed ; and hence the profession of a bard, which, besides natural talents, required more culture and exercise than any other known art.

BARDS anciently were capital persons at every festival and at every solemnity. Their songs, which, by recording the achievements of kings and heroes, animated every hearer, must have been the entertainment of every warlike nation. Demodocus is mentioned by Homer as a ce- lebrated bard ; and Phemius, another bard, is introduced by him deprecating the wrath of Ulysses, Odyss vii. and urging him to

spare the poet's ever gentle kind.

A deed like this thy future fame would wrong, For dear to gods and men is sacred song. Save then the poet, and thyself reward Tis thine to merit, mine is to record."

Cicero reports, that at Roman festivals, an- ciently, the virtues and exploits

of their great men were sung. The same custom prevailed in Peru and Mexico, as we learn from Garci- lasso and other authors. We have for our au- thority Father Gobien, that even the inhabitants of the Marian islands have bards, who are greatly admired, because in their songs are cele- brated the feats of their ancestors.

BARDS, CELTIC, BRITISH, &c. In no part of the world did the profession of bard appear with such lustre as in Gaul, in Britain, and in Ireland. Wherever the Celtaa or Gauls are mentioned by ancient writers, we seldom fail to hear of their druids and their bards ; the institiition of which two orders, was the capital distinction of man- ners and policy. The druids were philosophers and priests ; the bards their poets, and recorders of heroic actions : and both these orders seem to have subsisted among them, as members of the state from time immemorial. The Celtae possessed, from many remote ages, a system of discipline and manners, which appear to have had a deep and lasting influence. Ammianus Marcellinus, lib. xv. c. 9. gives them this tes- timony, that they cultivated the study of the most laudable arts; introduced by the bards, who sung in heroic verse the gallant actions of illustrious men ; and by the druids, who lived together in colleges or societies, after the Pytha- gorean manner, and philosophising upon the highest subjects, asserted the immortality of the soul. Though Caesar, in his account of Gaul, does not expressly mention the bards, yet it is plain, that under the title of Druids, he com- prehends that whole college or order ; of which the bards, who probably were the disciples of the druids, undoubtedly made a part. According to his account, the druidical institution first took rise in Britain, and passed from thence into Gaul ; so that they who aspired to be thorough masters of that learning were wont to resort to Britain. He adds too, that such as were to be initiated among the Druids, were obliged to commit to their memory a great number of verses, insomuch that some employed twenty years in this course of education ; and that they did not think it lawful to record these poems in writing, but sacredly handed them down by tra- dition from race to race. So strong was the at- tachment of the Celtic nations to their poetry and their bards, that amidst all the changes of their government and manners, even long after the order of the Druids was extinct, and the national religion altered, the bards continued to nourish ; not as a set of strolling songsters, like the Greek 'AoiSot or rhapsodists, in Homer's time, but as an order of men highly respected in the state, and supported by a public establish- ment. We find them, according to Strabo, and Diodorus, before the age of Augustus; and we rind them remaining under the same name, and exercising the same functions as of old, in Ireland, and in the north of Scotland, almost

down to our own times. It is well known, that? in both these countries, every regul jsor chief, had his own bard,- who was considered as an officer of rank in his court.

Of the honor in which the bards were held, many instances occur inOssian. They were the ambassadors between contending chiefs ; and their persons were held sacred. ‘ Cairbor feared to stretch his sword to the bards, though his soul was dark. Loose the bards (said his brother Cathmor), they are sons of other times. Their voice shall be heard in other ages, when the kings of Temora have failed.’ Ossian ii. 22. They and the Druids were exempted from taxes and military services, even in times of the greatest danger : and when they attended their patrons in the field, to record and celebrate their great ac- tions, they had a guard assigned them. At all public assemblies they were seated near the per- son of the king or chieftain, and sometimes even above the greatest of the nobility and chief officers of the court. Nor was their profession less lucrative than it was honorable. Besides the valuable presents which they occasionally received from patrons, they had estates in land allotted for their support. So great was the veneration which the princes of those times entertained for their poets, and so highly were they delighted with their strains that they sometimes pardoned even their capital crimes for a song. We may reasonably suppose that a profession so honorable and advantageous would not be deserted. It was indeed much cultivated, and the accounts which we have of the number of bards in some countries, particularly in Ireland, are hardly credible. We often read, in the poems of Ossian, of 100 bards belonging to one prince, singing and playing in concert for his entertainment. Every chief bard, who was called allah redan, or doctor in poetry, was allowed to have thirty bards of inferior note constantly about his person ; and every bard of the second rank was allowed a retinue of fifteen poetical disciples.

Though the ancient South Britons had originally the same taste and genius for poetry with those of the north, yet none of their poetical composi- tions have been preserved. Nor can we be surprised at this. After the provincial Britons had submitted to the Roman government, yielded up their arms, and lost their martial spirit, they could take little pleasure in hearing or repeating the songs of their bards, in honor of the glorious achievements of their brave ancestors. The Ro- mans also, though they did not exercise the same barbarous policy, which was long after practisedby Edward I. of putting the bards to death, would at least discourage them, and discountenance the repetition of their poems. These sons of the song being thus persecuted by their conquerors, and neglected by their countrymen, either aban- doned their country or their profession ; and their songs, being no longer heard, were soon forgotten. It is probable that the ancient Britons, as well as many other nations of antiquity, had no idea of poems that were made only to be repeated, and not to be sung to the sound of musical in- struments. In the first stages of society in all countries, the two sister arts of poetry and mu- sic seem to have been always united ; every poet

was a musician, and sung his own verses to the sound of some musical instrument. This, we are directly told by two writers of undoubted credit, was the case in Gaul, and consequently in Bri- tain, at this period. ‘ The bards, ‘ says Diodorus Siculus, lib. v. sect, 31, ‘sung their poems to the sound of ar instrument not unlike a lyre. ‘ 4 The bards, ‘ according to Ammianus Marcelli- nus, lib. xv. c. 9, ‘celebrated the brave actions of illustrious men in heroic poems, which they sung to the sweet sound of the lyre.’ This ac- count is confirmed hy the general strain, and by many particular passages, of the poems of Ossian. ‘ Beneath his own tree, at intervals, each bard sat with his harp. They raised the song and touched the string, each to the chief he loved. Vol. ii. p. 112. The invention of writing made a consider- able change in the profession of the bards. It is now agreed, that no poetry is fit to be accom- panied with music, but what is simple : a com- plicated thought, or description, requires the utmost attention, and leaves none for the music; or, if it divides the attention, it makes but a faint impression. The simple operas of Quinault bear away the palm from every thing of the kind composed by Boileau or Racine, who were poets of a higher order. But when a language is enriched with variety of phrases, fit to express the most elevated thoughts, men of genius aspired to the higher strains of poetry, leaving music and song to the bards; which distinguished the profession of a poet from that of a bard. Homer, in one sense, may he termed a bard; for in that character lie strolled from feast to feast. But he was not a bard in the original sense; he, indeed, recited his poems to crowded audiences ; but his poems are too complex for music, and he probably did not sing them, nor accompany them with the lyre. The troubadours of Provence were bards in the original sense, and made a capital figure in the days of ignorance, when few could read, and fewer write. In later times the songs of the bards were taken down in writing, which gave every one access to them without a bard; and the pro- fession sunk by degrees into oblivion. Among the Highlanders of Scotland reading and writing, in their own tongue, is not common even at pre- sent ; and that circumstance supported long the bard profession among them, after it was dropt among the neighbouring nations.

Among the ancient British bards the most ce- lebrated is the great Merlyn, whose true name, aceoiding to l.huyd, is Merdhym. The genea- logical sonnets of the Irish bards are still the chief foundations of die ancient history of Ireland. In the Highlands of Scotland there are consider- able remains of many of the compositions of their old hards still preserved. Hut

the most genuine entire and valuable remains of the works of the ancient bards, and perhaps the noblest specimen of uncultivated genius, are the poems of Ossian the son of l'mural, a kinur of the Highlands of Scotland, who flourished in the second or third centnrv ; cnllreted !

BARD.-K, in antiquity, housings for horses.

BAR DAN A, or BLRI'JOCK. See AUCTICM.

BARDARIOT/E, in antiquity, a kind of an cient guards attending the Greek emperor, armed with rods, with which they kept off the people from crowding too near the prince when on horse- back. Their captain or commander, was deno- minated primivergius. The word was probably formed from the BARDIE, which see.

BARD AS, the brother of the empress Theo dora, and uncle of the famous Photius, is said to have had no other good quality besides that of loving the sciences, which he established in the Eastern empire; for he was treacherous, cruel and ambitious. In A. D. 856 he assassinated Theoctistes, general of the emperor Michael's forces, and obtained his post. He caused the disgrace of the Empress Theodora ; and St. Ig- natius, patriarch of Constantinople, reproaching him for his vices, he had him deposed in 848, to make room for Photius. He was assassinated in 866 by Basilius, afterwards emperor.

BARDED, in heraldry, is used in speaking of a horse that is caparisoned. He bears sable cavalier d'or, the horse barded, argent.

BARDELLE, in the menage, a saddle made in form of a great saddle, but of cloth stuffed with straw, and tied tight down with packthread, without either leather, wood, or iron. In Italy they trot their colts with such saddles; and those who ride them are called Cavalcadours, or Scozone.

BARDESANES, a Syrian of Edessa in Me- sopotamia, born in the middle of the second century, who became eminent, after his conver- sion to Christianity, for his zeal against heretics; against whom, ve are informed by St. Jerome and Eusebius, he wrote a multitude of books ; yet he himself fell into" the errors of Valentinus, to which he added some others of his own. He taught that the actions of men depend altogether on fate, and that God hirnself is subject to necessity.

BARDESANISTS, a sect of ancient heretics, thus denominated from their leader Bardesanes. They went further than their teacher, and denied the resurrection of the body, and the incarnation and death of our Saviour ; holding that these were only apparent or fantastical. They maintained that the supreme God, being free from all imper- fection, created the world and

its inhabitants pure and incorrupt : that the prince of darkness, who is the fountain of all evil and miseiy, enticed men to sin ; in consequence of which, God permitted them to be divested of those ethereal bodies, with which he had endued them, and to fall into slug- gish and gross bodies formed by the evil princi- ple: and that Jesus descended from heaven, clothed not with a real but aerial body, to recover mankind from that body of corruption which they now carry about there ; and that he will raise the obedient to mansions of felicity, clothed with aerial vehicles, or celestial bodies.

BARDEWICK, a town of Germany, in the circle of Lower Saxony, and duchy of Lunen- burg; formerly a very large place, but being ruined in 1 1 89, by the Duke of Saxony, has never yet recovered itself. It is seated on the Ilmenau, seven miles north-east of Lunenburg,and seventeen south-east of Hamburg, It belongs to the king- dom of Hanover.

BARD, a small fort and town in the valley of Aosta, in Piedmont. The fort commanded the pass from the Valais into Piedmont. It was taken by Buonaparte in 1800, after his passage of the Great St. Bernard, and is now dismantled.

BARDI, a town of Italy, in the duchy of Placentia, on the Genoese frontier. It is near the river Cevo, has a magnificent castle, and is thirty miles south-west of Parma.

BARDOWIE, LOCH, a lake of Stirlingshire, in the parish of Baldernock, extending about seventy acres, and containing plenty of pike and perch. The mansion-house of Bardowie lies within a few paces of it.

BARDSEY, an island in the Irish sea, on the coast of Wales, about two miles long, and one broad, with a small harbour on the south-east side. There is good anchorage within the bay, but the entrance is difficult for large ships. It forms the north point of Cardigan bay, and formerly contained a well-endowed monastery. Long. 5►► 4′ W., lat. 52►► 48′ N.

BARDT, a river of Germany, in Pomerania.

BARDT, a strong and rich town of Germany, in the duchy of Pomerania, with a castle and spacious harbour. It was subject to the Swedes till 1815,

but now belongs to Prussia; and is situated near the Baltic sea, twelve miles west by north of Stralsund.

BARDUS, a druid, the son of Dryis, and the fifth king of the Celtae.

BARE', v. & adj. ~} Heb. parah, to lay bare,

BARE'BONES,

BARE'FACED,

BAREFA'CEDLY,

BAREFACED'NESS,

BARE'FOOT,

BARE'GNAWN,

BARE'HEAD,

BARE'LEGGED,

BARE'LY,

BARE'NECKED,

BARE'NESS,

BARE'WORN.

and bar, pure, Goth. bairhtjan, Germ, baren, Dut. baeren, old Sax. abarian. It signifies the absence of ornament, of ˆconcealment. It is the j condition of nudity, of | destitution, of leanness

and poverty, of rigid com- pleteness, without any the least appendage. The verb represents the act of stripping off, of uncovering, of bringing to light and exposing what was hidden, of rendering de- fenceless. Barefaced denotes the absence of all disguise, or all shame ; when applied to express impudence, it characterises the individual as more than ordinarily lost to all sense of de- corum.

Him thought he rode al of the newe get ; Dischevele ; sauf his cappc, he rode all bare ; Swiche glaren eyen hadde he as an hare. Chaucer.

Thereto he hath a groom of evil guise, Whose scalp is bare, that bondage doth bewray, Which pols and pils the poor in piteous wize, But he himself

upon the riche doth tyrannize.

Spenser.

For other meed may hope for none of mee, To whom nought else but bare life doth remame, And that so wretched one as ye do see, Is liker to lingering death than loathed life to bee.

Id.

How many flies in hottest summer's day, Do seize upon some beast, whose flesh is bare, That all the place with swarmes do overlay, Aud with their little stings do felly faro

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So many theeves about him swarming are. All which do him assayle on every side, And sore oppress, ne any him do spare. Id.

You have an exchequer of words, and no ether treasure for your followers ; for it appears by theii bare liveries, that they live by your bare words.

S/iakspeare. So you serve us

Till we serve you ; but when you have our roses, You barely leave our thorns to prick ourselves. And mock us with our barenesi. Id.

To feed were best at home, From thence, the sauce to meat is ceremony, Meeting were bare without it. Id.

For their poverty, I know not where they had that ; and for their barenesi, they never learned that of me.

Id.

She must have a husband ;

I must dance barefoot on her wedding-day. Id. Ambitious love hath so in me offended^ That barefoot plod I the cold ground upon With sainted vow. Id.

The duke of Lancaster is dead ;

And living too, for now his son is duke

Barely in title, not in revenue.

Id. Richard II.

He bareheaded, lower than his proud steed's neck, Bespoke them thus. Id.

Here comes lean Jack, here comes barebone ; how long is it ago, Jack, since thou sawest thy own knee ?

fd. Henry IV.

Your French crowns have no hair at all, and then you will play barefaced.

Id. Midsummer Night's Dreum Going to find a barefoot brother out, One of our order. Id. Romeo and Juliet.

Know, my name is lost, By treason's tooth baregnawn and cankerbit.

Id. King Lear.

The external administration of his word, is as well

by reading barely the Scripture, as by explaining the

same. Hooker.

A desire to draw all things to the determination of

bare and naked Scripture, hath caused much pains to

be taken in abating the credit of man. Id.

That which offendeth us, is the great disgrace which

they offer unto our custom of bare reading the word of

God. Id.

Were it for the glory of God, that the clergy should

be left as bare as the apostles, when they had neither

staff nor scrip ; God would, I hope, endue them with

the self-same affection. Id. Preface.

He barely nam'd the street, promis'd the wine, But his kind wife gave me the very sign. Dunne.

He himself, with a rope about his neck, barefooted, came to offer himself to

the discretion of Leonatus.

Sidney.

Next, before the chariot, went two men bareheaded.

Bacon.

There is a fabulous narration, that an herb groweth in the likeness of a lamb, and feedeth upon the grass, in such sort as it will bare the grass round about.

Id. Natural History.

Though the lords used to be covered whilst the com- mons were bare, yet the commons would not be bare before the Scottish commissioners ; and so none were covered. Clarendon.

The animosities increased, and the parties appear- ed barefaced against each other. Id. According to their growth and years, they did change the exercises of their bodies j they did shave their hea4s,. they went bare-legged, they were constrain- ed to play naked together the most part of their time.

North. 2N

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*Being summer he would go out bare-necked to the waste to work in his ground among his servants and other workmen. '*****

He scarce had said, when the bare earth, till then Desert and bare, unsightly, unadom'd. Brought forth the tender grass, whose verdure clad Her universal face with pleasant green. Id.

Nor are men prevailed upon by bare words only, through a defect of knowledge ; but carried, with these puffs of wind contrary to knowledge. South. Were it stripped of its privileges, and made as like the primitive church for its bareness as its purity, it eould legally want all such privileges. Id.

He held a stirrup, while the knight, From leathern barebones did alight. Hudibras. He bur'd an ancient oak of all her boughs ; Then on a rising ground the trunk he plac'd.

Dry den.

Then stretcli'd her arms t' embrace the body bare;

Her clasping hands inclose but empty air. Id.

It is most certain, that barefaced bawdry is the

poorest pretence to wit imaginable. Id.

In the old Roman statues, these two parts were

always bare, and exposed to view as much as our

hands and face. Addison.

Envoys describe this holy man, with Ins Alcaydes

about him, standing barefoot, bowing to the earth. Id.

For virtue, when I point the pen, Hare the mean heart that points beneath a star ; Can there he wantinu; to defend her cause, Lights of the church, or guardians of the laws? Pope. Making a law to reduce interest, will not raise the price of land ; it will only leave the country barer of money. Locke.

Though only some profligate wretches own it too b.trcfacctlly, yet, perhaps, we should hear more, did not fear lie people's tongues. Id.

If to some common's fenceless limits stray'd, He drives his Cocks to pick the scanty blade, Those fenceless fields the sons of wealth divide, And evi u the bare-worn common is deny'd.

Goldsmith. The Deserted Village. Nor stoop'd at barren bare necessity

* 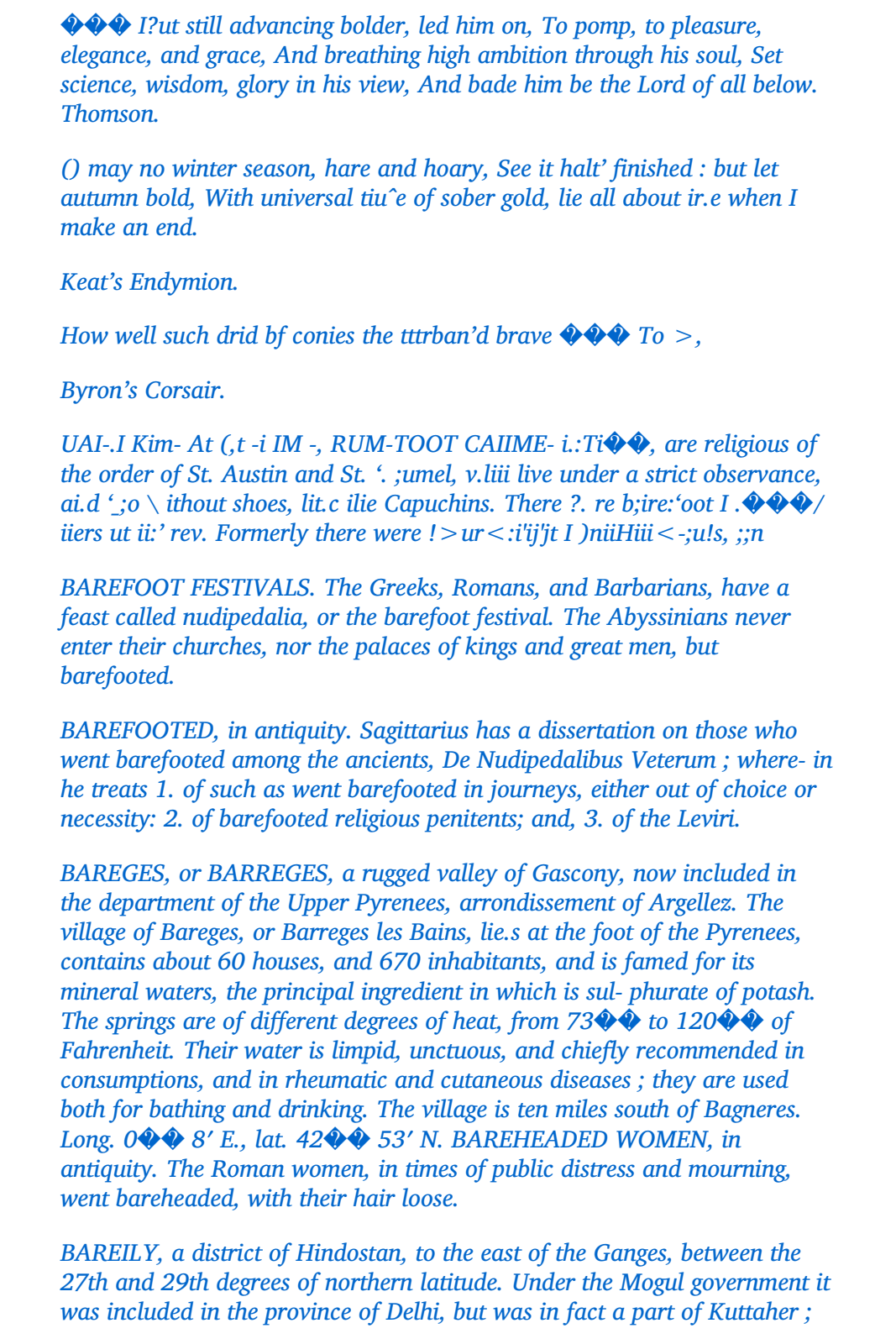
I?ut still advancing bolder, led him on, To pomp, to pleasure, elegance, and grace, And breathing high ambition through his soul, Set science, wisdom, glory in his view, And bade him be the Lord of all below. Thomson.*

() may no winter season, hare and hoary, See it halt' finished : but let autumn bold, With universal tiuˆe of sober gold, lie all about ir.e when I make an end.

Keat's Endymion.

How well such drid bf conies the tttrban'd brave ••• To >,

Byron's Corsair.

UAI-.I Kim- At (,t -i IM -, RUM-TOOT CAIIME- i.:Ti••, are religious of the order of St. Austin and St. '. ;umel, v.liii live under a strict observance, ai.d '_;o \ ithout shoes, lit.c ilie Capuchins. There ?. re b;ire:'oot I .•••/ iiers ut ii:' rev. Formerly there were !>ur<:i'ij'jt I)niiHiii<-;u!s, ;;n

BAREFOOT FESTIVALS. The Greeks, Romans, and Barbarians, have a feast called nudipedalia, or the barefoot festival. The Abyssinians never enter their churches, nor the palaces of kings and great men, but barefooted.

BAREFOOTED, in antiquity. Sagittarius has a dissertation on those who went barefooted among the ancients, De Nudipedalibus Veterum ; where- in he treats 1. of such as went barefooted in journeys, either out of choice or necessity: 2. of barefooted religious penitents; and, 3. of the Leviri.

BAREGES, or BARREGES, a rugged valley of Gascony, now included in the department of the Upper Pyrenees, arrondissement of Argellez. The village of Bareges, or Barreges les Bains, lie.s at the foot of the Pyrenees, contains about 60 houses, and 670 inhabitants, and is famed for its mineral waters, the principal ingredient in which is sul- phurate of potash. The springs are of different degrees of heat, from 73•• to 120•• of Fahrenheit. Their water is limpid, unctuous, and chiefly recommended in consumptions, and in rheumatic and cutaneous diseases ; they are used both for bathing and drinking. The village is ten miles south of Bagneres. Long. 0•• 8′ E., lat. 42•• 53′ N. BAREHEADED WOMEN, in antiquity. The Roman women, in times of public distress and mourning, went bareheaded, with their hair loose.

BAREILY, a district of Hindostan, to the east of the Ganges, between the 27th and 29th degrees of northern latitude. Under the Mogul government it was included in the province of Delhi, but was in fact a part of Kuttaher ;

in modern times known by the appellation of Rohil- cund. It is very fertile, and well watered. The principal towns are Bareily, Anopsheher, Buda- yoon, Pillybeet, Moradabad, Rampoor, Sumbul, and Amroah. Towards the end of the seventeenth century this country was taken possession of by the Afghan chiefs of the tribe of Roh, and re- mained in their possession till 1774, when it was conquered by Shuja Addowleh, under whose, and his successor's jurisdiction, it was cruelly harassed and depopulated ; but, having been ceded to the British in 1802, it is daily recover- ing.

BAREILY, a city of Hindostan, and capital of the above district, is situated on the banks of the Sunkra river, about forty miles east of the Ganges. It was the capital of Hafiz Rahmut, the Rohilla chief, slain at the battle of Cutterah in 1774 ; it is a large and populous town, and the seat of the British judicial establishment of the province. Long. 79□□ 21′ E., lat. 28□□.

BAREITH, a ci-devant "margravate of Ger- many, in the east division of Franconia, subject to the Brandenburg family, and thence styled Brandenburg-Bareith.

BAREITH, a town of Germany in Franconia, in the margravate, with a famous college belong- ing to the margrave of Brandenburgh-Bareith. It is fifteen miles south by east of Culmbach.

BARENTS (Dieterich), an excellent painter, born at Amsterdam, and the son of an industrious but middling artist. He studied in Italy, and became the favorite disciple of Titian, with whom he lived along time; but at length returned to Amsterdam,

where he performed many extraordinary pieces. He died in 1582, aged forty-eight.

BARENTON, a town of France, in the de- partment of the Channel, twenty miles E. S.E. of Avranches.

BARETTI (Joseph), an ingenious writer of the eighteenth century, was the son of an archi- tect at Turin. We have no account of the early part of his life ; but his writings show that he had travelled through various countries. He came to England in 1750 ; and, in a short time, he ac- quired such a knowledge of the English language as to write it with facility and

correctness. Be- coming acquainted with Dr. Johnson about 1753, he was by him introduced, as a teacher of the Italian language, to the family of Mr. Thrale. In 1760 he went back to Italy, and commenced a periodical work, entitled Frusta Litteraria, which was published at Venice ; but the freedom of sentiment which appeared in it, giving offence, obliged him to leave that country, and he re- turned again to England. He was tried at the Old Bailey, in 1769, for killing a man who had assaulted him in the Haymarket, and was ac- quitted. In 1770 he published his Travels through France, Spain, Portugal, and Italy, in four vols. 8vo. When the Royal Academy was established, he was chosen secretary ; and during Lord North's administration he obtained a pension. He died in 1789, aged about seventy-three. His temper was pleasant, and his disposition liberal. His works are : 1 . A Dissertation on the Italian Poetry ; 2. An Introduction to the Italian Lan- guage; 3. The Italian Library, 8vo.; 4. A Dic- tionary, English and Italian, 2 vols. 4to. ; 5. A Grammar of the Italian Language, 8vo. ; 6. An Account of the Manners and Customs of Italy, 2 vols. 8vo. ; 7. An Introduction to the most use- ful European Languages, 8vo.; 8. A Dictionary English and Spanish, 4to. ; 9. Tolondron, Speeches to John Bowie, about his edition of Don Quixote, 8vo. ; and other tracts.

BAR-FEE, a fee of twenty pence, which every person acquitted of felony pays the gaoler.

BARFLEUR, a Cape of France, in the de- partment of the Channel, twelve miles east of Cherbourg. Near this cape part of the French navy was destroyed in 1692, the day after the victory of La Hogue, obtained by the confederate fleet under Admiral Russel.

BARFLEUR, a town of France in the depart- ment of the Channel, arrondissement of Valognes. It contains about 140 houses, and 900 inhabi- tants. Its harbour, which is now choked up with sand, was in former times the best on the coast. Here William the Conqueror equipped the ex- pedition which effected the conquest of England. In the year 1346 it was taken and destroyed by the English army, in the same campaign in which they fought the battle of Cressy. Since that time the port has been neglected, and is now fre- quented only by small vessels. The trade is confined to fish, fresh and salted. Twelve miles east of Cherbourg. Long. 1►► 10′ W., lat. 49►► 40′ N.

BARGA, a town of Italy, in the grand duchy of Tuscany, on the Serchio. It is the capital of k vicariat, bordering on the principality of Lucca, and contains 9000 inhabitants. In the neigh-

*bouring Appenines is found beautiful jaspe*1 Six miles from Lucca.*

BAR'GAIN, v. & K.J See to BAR. Goth.&air

BAR'GAINING, f gan, Ang.-Sax. beorgan

BAR'GAINED, fbirgan byrgan, Welsh

BAR'GAINER. J bargen, Fr. bargaignc.

To make a confirmed agreement. A contract

either with or without purchase, usually heir'

binding.

I do thee no wrong. Did I not bargayne with thee, so that thou shouldeste haue a denarye for thy dayes laboure ? Thou haste done thy laboure, thou haste thy couenaunte : I have nothing more to doe with thee. Udall. Matthew, chap. xx. Henry is able to enricn his queen, And not to seek a queen to make him rich. So worthless peasants bargain for their wives. As market-men for oxen, sheep or horse.

Shakspeare.

No longer than we well could wash our hands,

To clap this royal bargain up of peace

Heaven knows they were besmeared and overstained With slaughter's pencil. Id.

No bargains break that are not this day made. Id.

Hold, sir, for God's sake : now your jest is earnest : Upon what bargain do you give it me. Id.

What is marriage but a very bargain? wherein is sought alliance, or portion, or reputation, with some desire of issue ; not the faithful nuptial union of man and wife. Bacon.

For those that are like to be in plenty, they may be bargained for upon the ground. Id.

There was a difference between courtesies received from their master and the duke ; for that the duke's might have ends of utility and bargain, whereas their master's could not. Id.

No more can be due to me, Than at the bargain made was meant. Donne.

Where sold he bargains, whipstitch ? Dryden.

As to bargains, few of them seem to be excellent, because they all terminate in one single point. Swift.

No maid at court is less ashamed, Howe'er for selling bargains famed. Id,

Give me but my price for the other two, and you

shall even have that into the bargain. L'Estrange.

He who is at the charge of a tutor at home, may

give his son a more genteel carriage, with greater

learning into the bargain, than any at school can do.

Locke.

It is possible the great duke may bargain for the re- public of Lucca, by the help of his great treasures.

A ddison on Italy. All offer incense at my shrine, And I alone the bargain sign. Gay.

What is all righteousness that men devise, What ! but a sordid bargain for the skies ; But God as soon would abdicate his own, As stoop from heav'n to sell the proud a throne.

Cowper.

It is adjusted, however, not by any accurate mea- sure, but by the higgling and bargaining of the market, according to that sort of rough equality which though not exact, is sufficient for carrying on the business.

Smith. Wealth of Nations.

BARGAIN, in the old Scottish writers, is ap- plied to an armed fight or battle. A battle where both parties have settled the preliminaries of weapons and manner of fighting, and are so far on equal terms of security and defence. In this sense it is used by Chaucer in the Romaunt of the Rose.

This is the strife, and eke the affraio, And the batcll that lastcth aie, This bargaine end may neuer take But if that she thy peace wil make.

BARGAIN AND SALE, in the English law, re- quires to be farther explained. It is a contract whereby the bargainer, for some pecuniary con- sideration, bargains and sells, that is, contracts to convey the land of the bargainee ; and becomes by such bargain a trustee for, or seized to the use of, the bargainee ; and then the statute of uses completes the purchase : or, as it hath been ex- pressed, the bargain first vests the use, and then the statute vests the possession. But as it was foreseen that conveyances thus made would want all those benefits of notoriety which the old com- mon law assurances were calculated to give; to prevent clandestine conveyances of freeholds, it was enacted by statute 27 Hen. VIII. c. 16. that such bargains and sales should not enure (be avail- able) to pass a freehold, unless made by indenture, and enrolled within six months in one of the courts of Westminster-hall, or with the custos rotulorum of the county. Clandestine bargains and sales of chattel interests, or leases for years, were thought not worth regarding, as such in- terests were very precarious till about six years before ; which also occasioned them to be over- looked in framing the statute of uses : and there- fore such bargains and sales are not directed to be enrolled. This omission has given rise to the snecies of conveyance by lease and release.

BARGAINS, in commerce, are distinguished, at Amsterdam, into three kinds, viz.

BARGAINS, CONDITIONAL, for goods which the seller has not yet in his possession ; but which he knows have been bought for him by his correspondents abroad, and which he obliges himself to deliver to the buyer, on their arrival, at the price and conditions agreed on.

BARGAINS FIRM, those wherein the seller obliges himself to deliver to the buyer a certain quantity of goods, at the price and in the time agreed on.

HA la,, \i.\s, OPTIONAL, those wherein a dealer obliuvs himself, in consideration of a premium receive ! in hand, either to deliver or take a cer- tain quantity of '.roods at a fixed price, and within a time Hunted : but wit!) a liberty of not deli- vering or not receiving them, if bethinks proper, upon i'ort'eiture of their premium.

HAP.I, \i.\ Fijur.iiAMi, are those wherein ⬚⬚⬚roods are bought or sold, to be delivered at a certain time afterwards, some part of the price 1 :eiii'_r advanced.

HAH'i.K,) See to HAP.. Dut.&argie, low

HAH i, in, >Lat. l>arnii, (>oth. tiairgan, to

H.\ U'GP.M A N. ˆ strengthen. A barge, says

Tooke, is a stron- bo a, and this is still its widest

inclining, us in co.d bar_;e, Jkc. \e.; but it has

al

sea \orthy, but one of pleasure ; light, airy, and

elegant, mire rem irku 1 ; ior i:e;uity than strength.

So inyki 11 v.os {.MI " " ' '. i: misfit not lightly saile, An:i so hi uy ►►►>;' rl.urj, . ;mci pu vvnili: ˆan faile.

R. Bmnnt.

And euery creke in Bretagne and in Spaine ; His barge yclcped was the Magdelaine.

Chaucer. Prologue.

Many wafarers make themselves glee, by putting the inhabitants in mind of this privilege ; who again, like the Campcllians in the north, and the London bargert, forslow not to baigne them.

Carew's Survey of Cornwall. ENO. I will tell you,

The barge she sat in, like a burnish'd throne, Burnt on the water ; the poop was beaten gold, Purple the sails ; and so perfumed, that The winds were lovesick with them ; the oars were

silver ;

Which to the tune of flutes kept stroke, and made The water, which they beat, to follow faster, As amorous of their strokes.

Shakspeare. Antony and Cleopatra.

Plac'd in the gilded barge, Proud with the burden of so sweet a charge ; With painted oars the youths begin to sweep Neptune's smooth face. Waller.

BARGES are vessels of state, furnished with elegant apartments, canopies, and cushions ; equipped with a band of rowers, and decorated with flags

and streamers : they are generally used for processions on the water by noblemen, offi- cers of state, or magistrates of great cities. Those annually exhibited on the Thames, at the election of the lord mayor of London, are uncommonly elegant.

BARGES for the use of admirals and captains of ships of war, are smaller and of a liphter frame, and may be easily hoisted into or out of the ships to which they belong.

BARGES OF BURDEN, are for lading and dis- charging ships, and removing their cargoes from place to place in a harbour.

BARGE, in ornithology, a name used by some authors for the god wit or stone-plover; the aego- cephalus.

BARGE, or BARGES, a town of Piedmont in the district of the Four Valleys ; seven miles south of Pinarolo, or Pignerol.

BARGE-COUPLES, in architecture, abeam mor- tised into another, to strengthen the building.

BARGE-COURSE, with bricklayers, a term used for that part of the tiling which projects over, without the principal rafters, in all sorts of buildings where there is either a gable or a kirkin head,

BARGH-M ASTER, BARMER, or BAR-MAS- TER, from beirg-meister, Ger. i. e. master of mines ; in the royal mines, the steward or judge of the barmote. The bar-master keeps two great courts of barmote yearly ; and every week a small one, as occasion requires.

BARGHMOTE, or BARMOTE, a court which takes cognizance of causes and disputes between miners. By the custom of the mines, no person is to sue any miner for ore debt, or for ore, or for any ground of variance, but only in the court of barmote, on penalty of forfeiting the debt, and paying the charges at law.

BAllGUAVE (Isaac), an English divine, born in 1586, and educated at Clarehall, Cambridge. He was appointed chaplain to James I. ; and in 1625 was made dean of Canterbury. When the civil war commenced he was imprisoned in the Fleet, by colonel Sandys, a man whom he had saved from the gallows ! He died in 1642.

BARl, a province in the kingdom of Naples, ◆◆◆which lias the Gulf of VTenice to the north, the Terra d' Otranto to the east, Basilicata to the south, and Capitanata to the west. It contains 1 760 square miles, and 290,000 inhabitants, and is rich in grain, wine, oil, cotton, fruit, and saffron. The chief town, called Bari, lies on the Gulf of Venice, and is well fortified ; it is a t nading place of some consequence, with 1 8,000 inhabitants. The principal objects of its trade are wine, oil, and fruit ; and a great deal of linen is woven here for inland consumption. It has he title of a duchy, and is an archbishop's see. Eighteen miles east of Trani, 120 E. N.E. of Naples. Long. 16◆◆ 52′ E., lat. 41◆◆ 15′ N.

BARI, a town of Hindostan, in the province of Bejapoor, thirty miles south-west of Raibaug.

BARJAPOOR, BEJAPOOR, or BIJA-PUR, (a corruption of Vijaya-puri, the impregnable, the ancient name of the capital ;) is a large province in the Deccan, extending from the fifteenth to the nineteenth degrees of north latitude. It is bound- ed on the north by the province of Aurungabad, south by the Toombuddra River and North Canara district, east by Aurungabad and Beeder, and on the west by the Indian Ocean ; including a superficial area of 350 miles in length, by 200 the average breadth. The chain of the western Ghauts traverses the province at a moderate dis- tance from the coast, with which it is in perfect parallel ; the surrounding region is mountainous, but the eastern part is more level, watered by several fine rivers, particularly the Krishna, the Beemah, the Toombuddra, and the Gutpurba; the latter of which, before the year 1790, formed the separating boundary between the dominions of Tippoo and the Mahrattas. The productions of this province are the same as of the Deccan gnerally , the internal traffic is considerable, and the banks of the Beemah, celebrated all over the continent for their superior breed of horses, sup- ply the best cavalry in the Mahratta armies.

The most remarkable natural features of the province are rivers, of which the Krishna, de- riving its name from the dark color of its waters, or from its mythological connexion with the – Indian Apollo, the Crishna of the Hindoos, is the most important. Emerging from the western Ghauts, forty-two miles from the coast, this river takes a south-west direction, falls in with the "VVarnah about Merich, and then rolling its vast stream to the east receives the principal rivers which diversify this part of India in its course, and at last empties itself by three channels into the Bay of Bengal. Although from its lofty banks, which do not admit of extensive irriga- tion, this river contributes less to the fertilisation of the country than others of inferior importance, it is perhaps more abundant in gems than any other river of India; gold, chalcedonies, cats- eyes, onyxes, and even diamonds, being found in its bed.

Of the province generally, four-fifths have long appertained to the Mahrattas, and the remainder to the government of Nizam. The Peshwa, though nominal lord of the whole, has little effective jurisdiction. The population is esti- mated at seven millions, of whom one-twentieth part are Mahommedans, and the rest Hindoos of

the Brahminical order. Two languages gene- rally prevail ; the Canara on the north, the Mah- ratta on the south of the river Krishna; which also forms an interesting line of separation be- tween the two different styles of building, the houses to the south being covered with clay or mud, and flat roofed, those to the north having the roofs pitched and thatched.

At the conclusion of the war between the British and Sindia in 1804, the Mahratta terri- tories of this province exhibited a scene of the greatest anarchy. The authority of the Peshwa was resisted by the chief of every petty village. The chiefs of the various banditti were almost innumerable; amongst whom Goklah, Appah Saheb, and Bala Saheb (the sons of Purseram Bhow, and heads of the Putwurden family), Ap- pah Dessaye, Furkiah, Bapoojee Sindiah, Mada- row Rastiah, the Rajah of Colapoor, Futteh Sing Bhoonslah, Chintamuny Row (the nephew of Purseram Bhow), Tantia, Punt Pritty Niddy, and others, presented formidable obstacles to the return of peace and tranquillity. The country had likewise been otherwise ravaged and depopu- lated, from the laxity of its internal government, and the rapid succession of governors appointed by the Peshwa, the preceding one uniformly op- posing his successor. The chiefs above-named although commonly distinguished by the name of ' Southern Jaghiredars,' were properly the Serinjamy Sirdars of the Poonah state; the pos- session of whose lands being granted for the pay- ment of troops employed in state service, might be changed annually; although in this instance the lands themselves, with several other species of property, had been retained for many years.

*Amidst the confusions consequent on so em- barrassed a state of government, the British em- pire interposed her arbitration, ascertained on the part of the Peshwa to what extent of service he was entitled from the Jaghiredars, and, on the part of the latter, engaged to guarantee their pos- sessions, and protect them from the oppressions of the Peshwa's government. General Welles- ley (now duke of Wellington) expressed his disapprobation of the projects of vengeance which the above sovereign had formed against the Putwurden family, and others of the Mahratta state in immediate subjection to Poonah ; and in his march southwards in 1804, entered into * negociations with the chiefs, adjusted the dissen- sions of the sovereign, and by the able co-opera- tion of Col. Close and Mr. Strachey succeeded in what the home government contemplated, the final settlement of these complicated claims. That it was effected without bloodshed, is to*

the honor of British prudence and benevolence. MSS. Ferishta, Moor, Wilks, Scott, &c.

The territorial divisions of the province are as follows :❖❖❖ 1 . The Concan ; 2. Cola-pur ; 3. Mur- teza-abad ; 4. Ased-nagar; 5. District of Bija pur; 6. Sacar; 7. Rai-chur; 8. Mudgal; 9. Ga- jindra-gar'h; 10. Anagundi; 11. Bauca-pur ; 12. Gandac; 13. Nurgul; 14. Azim-nagar; 15. Rai'-bagh.

1. The first of these divisions, Concan, Cancana, or Cocan, includes a portion of territory 220 miles in length, and thirty-five in breadth, occu- pying the whole sea coast of the province. It is

bounded on the north by the river Sawatrl, which separates it from Calyani, on the west by the Indian Ocean, on the south by Canara, and on the east by the G'hats or Ghauts. Formed by the gradual declivity of the mountains towards the sea, it presents a very unequal surface, inter- sected by numerous streams and torrents, together with a coast diversified with bays and inlets, although without deep and spacious harbours. The soil below the Ghauts is fertile, producing grain, hemp, cocoa-nuts, Sec. The trees planted near the coast are, however, more vigorous and fertile than those cultivated higher up the coun- try, which is commonly attributed to the sea air.

The language of the province is peculiar, pos- sessing a great resemblance to the Sanscrit, from which some imagine it is derived. It is chiefly cultivated by the Brahmans, a peculiar race, not acknowledged by their brethren in the rest of India.

The principal divisions of the province are Concan, B'honsala, and Goa. The former in- cludes Fort Victoria, a fortress at the entrance of the Baneut river. This division, comprehend- ing nine villages, was taken by the British forces in 1756. So great is the advantage of living under the British government, that in 1812 the population had nearly doubled within the last ten years. B'honsala, the second division of the C'uncan, is a beautiful district formed by a gentle slope of hills descending from the western Ghauts to the sea, and watered by numerous rivers and mountain torrents. Like the former, it has seve- r.il strong posts or rocky heights, difficult of access.

Though thinly peopled, the soil is extremely fVrtile, producing cocoa, betel nuts, ginger, siuar, cardamoms, pepper, and other tropical ve- getables in

great abundance. Iron is also found in tlu; mountains, though wrought in a very clumsy manner by the natives. Goa, now in possession of the Portuguese, forms the southern division of the Concan. Its capital, bearing the same name, although dignified by many noble churches and public buildings, is nearly deserted from the unhealtliiness of its climate and the t> iTors of the Inquisition. So great is the fecun- dity of thi! Roman church in this settlement, that in the year 1808 were found no fewer than 2000 ecclesiastics, although the whole extent of the territory does not exceed 400 square miles. The trade has very much declined, and the wretched- ness ot the country presents a very striking con- trast with the English settlements in its vicinity. \vhere every luxury is to be found. It had for- merly a considerable manufacture of arack, a spirituous liquor made from toddy, or tsiri, ex- tracted from the trunks of palm trees; but this is now superseded by a similar spirit at Batavia, of which rice and suuar are the principal ingre- di"iiN. 'I he dialect that is used here is a bar- baron.- mixture of the Portuguese, Canara, and Mahntta languages. This place has been rcn- dervd mien ------tiiu to the Knglish reader by the vi

2 Cola-par, or Cola-poor, according to the former division of the province, was in the Ser-

car of Raibagh, and subsequently formed a small independent state, composed of several districts above and below the mountains, but so inter- mingled with the neighbouring states as not to be easily discriminated.

3. Mortezabad, a contraction of Morteza-abad, is a small hilly division of the province, at a much greater elevation above the sea than the Concan, and is traversed by the Krishna, which rises at Mahibaliser, within the same division of Bij4- pur. Among the most remarkable places of this province is the hill-fort of Satarah, a strong-hold of no small celebrity in the Mahratta annals, standing in lat. 17-- 42′ N., and long. 74-- 12 E., on the pinnacle of a lofty hill, and accessible only by a narrow winding path, which admits no more than one person at a time. Its name, which signifies 'seventeen,' answers to the re- puted number of its towers. A wall of solid rock encloses it on all sides to the height of thirty or forty feet. Similar sites are found in the sur- rounding country, and are occupied by fortresses, which, to a native army, must be nearly im- pregnable. Kelingah is considered as almost capable of baffling European skill if resolutely defended.

4. Ased-nagar (the city of Lions) is another division of this province. Its chief town is Pun- dar-pur, a large well-built handsome town, and, what is more extraordinary in an Indian city, has several broad well-paved streets. The mar- kets are supplied with native productions and English manufactures. The banks of the river are lined with stone walls, and

handsome flights of steps lead down to the water. The soil around is fertile, but little cultivated ; the Brahmins considering it too sacred to be used for the un- holy purposes of producing fruit for mortals.

5. Bejapoor, or Vijayapura, the Impregnable, The chief city, of the same name as, and formerly the capital of, the province, has, by European travellers of the last three centuries been deno- minated Viziapoor. The wall of the city was twenty feet thick, surrounded by a ditch of vast dimensions, excavated out of the solid rock, from the berme of which the curtain rises nearly forty feet, composed of huge stones strongly cemented, and frequently adorned with sculptural repre- sentations of lions, tigers, &c. The towers which flank the wall are numerous and of vast size, occurring at intervals of 100 yards. The fort is one of the largest in the world, and, measured by the counterscarp of the surrounding ditch, is no less than eight miles in circumference, and adorned with a spacious courtway from 150 to 200 yards broad. Within the citadel were the king's palace, the houses of the nobility, together with several large magazines ; and without the walls were large suburbs, adorned with noble palaces.

The rock on which the city stood furnished abundance of stone for public and private build- ings, and the style of their architecture unites elegance with solidity. The city is well watered and the soil rich : large sums of money, with other valuable articles, are also found among its ruins. It is said, in its most flourishing state, to have contained 984,000 inhabited houses and 1 600 mosques.

Several enormous pieces of cannon, to the number of twelve, are to be seen here, corres- ponding with the magnitude of the fort, of which the three largest are of the following dimen-

1. A Malabar gun.

Feet. Inches.

Diameter at the breech 4 5

Length from breech to muzzle . . 21 5

Circumference of the trunnions . 4 7

Diameter at the muzzle 4 3

Ditto of the bore 1 9

2. A brass gun cast by Aurengzebe to comme- morate the conquest of Bejapoor.

Feet. Inches.

Diameter at the breech 4 10

Ditto at the muzzle 4 8

Ditto of the bore 2 4

Length 14 1

Circumference in the middle ... 13 7

3. The gun called frigh-flyer.

Feet. Inches.

Length 30 3

Circumference at the breach ... 9 2 Circumference over the smallest

part of the moulding 6 0

Diameter of the bore 1 1

The brass gun is fixed on its centre on an im- mense iron, fastened in the ground, and grasping its trunnions in the manner of a swivel, its breech resting on a block of wood supported by a thick wall, so that it cannot recoil. For the calibre of this gun an iron ball weighing 2646 pounds would be required. The two other guns are constructed of bars of iron hooped round, not upon carriages, but lying on blocks of wood. The other provinces above enumerated, as be- longing to the territory of Barjapoor are of minor importance, and capable of affording but little interest.

BAR-JESUS, or ELYMAS, a Jew, who pre- tended to be a magician ; and endeavouring to obstruct Paul and Barnabas, was miraculously struck blind, Acts xiii. 8. 12.

BARILHA, or BARILLA, in botany, a plant cultivated in Spain for its ashes, from which the purest kinds of mineral alkali are obtained. There are four plants, which in the early part of their growth, bear so strong a

resemblance to each other, that they would deceive any but the farmer or critical botanist. These four are, ba- rilla gazul, or as some call it, algazul, soza, and salicornia, or salicor. They are all burnt to ashes, but applied to different uses, being pos- sessed of different qualities. Some of the far- mers mix more or less of the three last with the first; and it requires a complete knowledge of the color, taste, and smell of the ashes to be able to detect their knavery. Barilla is sown afresh every year. Its greatest height above ground is four inches : each root pushes out a vast number of little stalks, which again are subdivided into smaller sprigs resembling samphire; and altoge- ther form a large spreading bush. The color is bright green ; as the plant advances towards ma- turity, this color gradually changes to a dull green tinged with brown. Gazul bears the greatest affinity to barilla, both in quality and appearance . the principal difference consists in

its growing on a still drier salter earth, conse- quently it is impregnated with a stronger salt. It does not rise above two inches out of the ground, spreading out into little tufts. Its sprigs are much flatter and more pulpy than those of barilla, and are still more like samphire. It is sown but once in three, four, or five years, according to the nature of the soil. Soza, when of the same size, has the same appearance as gazul, but in time grows much larger, as its na- tural soil is a strong salt marsh, where it is to be found in large tufts of sprigs, treble the size of barilla, and of a bright green color, which it re tains to the last. Salicor has a stalk of a deep green color, inclining to red, which last becomes by degrees the color of the whole plant. From the beginning it grows upright, and much resem- bles a bush of young rosemary. Its natural soil is on the declivities of hills near the salt marshes, or on the edges of the small drains or channels cut by the husbandmen for the purpose of watering the fields ; before it has acquired its full growth, it is very like the barilla of those seasons in which the ground has been dunged before sowing. In those years of manuring, ba rilla, contrary to its usual nature, comes up with a tinge of red, and when burnt falls far short of its wonted goodness, being bitter, more impreg- nated with salt than it should be, and raising at blister if applied for a few minutes to the tongue. Barilla contains less salt than the others; when burnt, it runs into a mass resembling a spongy stone, with a faint cast of blue. Gazul, after burning, comes as near barilla in its outward appearance as it does while growing in its ve- getable form ; but, if broken, the inside is of a deeper and more glossy blue. Soza and salicor are darker, and almost black within, of a heavier consistence, with very little or no sign of spon- giness. All these ashes contain a strong alkali ; but barilla the best and purest, though not in the greatest quantity. Upon this principle, it is fittest for making glass and bleaching linen ; the others are used in making soap. Each of them would whiten linen ; but all except barilla would burn it. A good crop of barilla impoverishes the land to such a degree, that it cannot bear good barilla a

second time, being quite ex- hausted. For this reason the richer farmers lay manure on the ground, and let it lie fallow for a season, at the end of which it is sown afresh without any danger, as the weeds that have sprung up in the year of rest have carried off all the pernicious effects of the dung. A proper succession of crops is thus secured by manuring and fallowing the different parts of the farm, each in their turn. The poorer cultivators cannot pursue the same method for want of capital ; and are therefore under the necessity of sowing their lands immediately after manuring, which yields them a profit just sufficient to afford a present scanty subsistence, though the quality and price of their barilla be but trifling.

BARILLA, BARILLIA, or BARIGLIA, in the glass trade, is a sort of pot ashes imported from Spain, inferior in goodness to those of the Levant, called polverine when loose, small, and in pow- der, and rochetta when in hard rocky lumps The frit made of these becomes fine and clear crystal glass, especially that from the rochetar, or.

the polvcnne in lumps ; but the barilla of Spain, though it be usually fatter, yet makes not a glass so white, but usually inclining to a bluish color. The method used in making barilla is the same as that followed in Britain in burning kelp. The plant as soon as ripe is plucked up and laid in heaps, and then set on fire. The salt juices run out below into a hole made in the ground, where they run into a vitrified lump, which is left about a fortnight to cool. An acre may give about a tori.

BARILLARIUS, an ancient officer in monas- teries and great households, who had the care of the casks and vessels of wine, &c.

BARJOLS, a small populous town of France, in the department of the Var, (a part of the ci- devant province of Provence,) nineteen miles from lliez.

BAR-JONAS, a Syriac designation of St. Peter, importing that he was the son of Jonas.

BARITONO, in music, denotes a voice of low pitch, between a tenor and a base.

BARIUM, in ancient geography, a town of Apuli.i, on the Adriatic; so called from the founders, \vlio, being expelled from the island H :ra, built this town.

\ 111 I'M,

u called by its discoverer, Sir II. Davy.

-.:: pure barytes, make it into a paste with

%.aii_r, and put tins on a plate of platinum. Make

a cavity in th,: mi Idle of the barytes, into which

-⬛⬛⬛⬛⬛⬛nil' < >f nierc.uvv is to be placed. Touch

!e with the negative wire, and the pla-

nh the positive wire of a voltaic battery

i! 10U pairs of plates in good action. In a

e an amalgam will be formed, consisting

<⬛⬛⬛⬛⬛⬛ mercury and banmm This amalgam must be

<;-.!uctd into a little bent tube, made of glass

t'n ⬛⬛⬛⬛⬛⬛,-' iVo:,i 1-a.l, seal.".' at one end, which being

v. it'.i the vapor of naphtha, is then to be

;d at tie other end. Heat must

applied to thi: recurve;! end of the tube, where

!_ram li-'S. The mercury will distil over,

v. hi!,' t :e ! ai'ima viii remain.

. tal,' says i)r. I re, ' is of a dark gray s a lustre inferior to that of cast-iron. .isiiile at a red heat. Its density is supe- .hat of sii'Mliuric acid; for, though sur- i with '.liohuli-s of'_ras, it sinks immediately \ 'In 'n e?: posed to air it instantly covered wi'h a crust of barytes; and ;ently !i. al 'd in air, burns with a deep red 1 1 riiVrvcsees violently in water, convert in.; this liquid int.; a solution of barytes.' Sir II. s it probable that barium may be chi mica! as well as electrical decom- tion. \ hen chloride of barium, or even i irth, united to \hiteness, is exposed to ;⬛⬛⬛ or' pot;,.- .111:11, a 'lark gray substance is Utilised thr>i:;.:h t'ne baryks or the chloride, ich e'li- rvesces copiously in water, es a metallic appearance, which dis- in the air. Th" potassium, by being thus i.Mintti'u, i< (oi led into potash. From in- p' rmients ;- !r 11. Davy was inclined to a-; composed of 89'7 barium f : ICO. This v. onld make the ' ot' bainini !'⬛⬛⬛',", and that of ba- . ::p ! to : ii o|' , vy^ell I'D ; a

determination nearly exact. Dr. Clarke of Cam- bridge, by exposing dry nitrate of barytes on char- coal, to the intense heat of the condensed hydroxy- gen flame,observed'metallic-looking globules in the midst of the boiling fluid, and the charcoal was found to be studded over with innumerable globules of the most brilliant lustre and whiteness. On let- ting these globules fall from the charcoal into water, hydrogen was evolved in a continued stream. When the globules are plunged in naphtha, they retain their brilliancy but a few days. Barium combines with oxygen in two proportions, forming, 1st. barytes, and 2d. the deutoxide of barium. See BARYTES.

BAR'K, v. & n. \ These have the same ori BAR'KBARED, ˆgin with the words barge, BAR'KY, (&c. The root from

BAU'KER. J which they are derived

conveys the idea of security and defence. See BAR. The defence of a tree is its bark. It is that which protects it from the weather. Hence the application of the term to the rind or out- side covering of the trees. To bark, is used in opposite senses. It signifies either to strip off, or to cover, as with bark.

And as in winter leaves ben biraft, Ech after other til trees be bare, So that there nis but bur/te and braunch ylaft.

Chaucer. Troilus and Creteide, In a walnote, without ys a byter barke, And often Jjat biter barke, be J?e shall aweye, Ys a curnal of comfort. Piert Ploughman,

Thy palate then did deign The roughest berry on the rudest hedge ; Yea, like the stag, when snow the pasture sheets, The barks of trees, thou brow'sd.

Shakspeare. Antony and Cleopatra. So doth the woodbine the sweet honeysuckle, Gently entwist ; the female ivy so Enrings the barky fingers of the elm.

Id. Midsummer'* Night Dream, What craftsman art thou, said the king,

I pray thee tell me trowo, I am a barker, sir, by my trade ;

Now tell me what art thou ? Edward IV. and Tanner of Tamworth, in Percy. The cause is, for that trees last according to the strength of their sap and juice ; being well munitt d by their bark against the injuries of the air.

Bacon's Natural History. Perhaps some cold bank is her bolster now, Or 'gainst the bark of some broad elm, Leans her unpillow'd head fraught with sad fears.

Milton.

The slant lightning, whose thwart flame driv'n down. Kindles the gummy bark of fir or pine, And sends a comfortable heatˆfrom far, Which might supply the sun. Id,

I'll carve thy name on barht of trees, With true love knots and nourishes, That shall infuse eternal spring And everlasting flourishing. Hudibrat.

For oft engendered by the hazy north, Myriads on myriads, insect armies warp Keen in the poison'd breeze, and wasteful cat Through buds and barh into the blackened core, Their eager way. Thornton,

Wand'ring in the dark, Physicians for the tiee have found the bark.

Dry den.

The severest penalties ought to be put upon barking any tree that is not felled. ' Temple.

BAN

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BAN

These trees, after they are barked and cut into shape, are tumbled down from the mountains into the stream. Addison.

Excorticated and bark-bared trees may be preserved by nourishing up a shoot from the foot, or below the stripped place, cutting the body of the tree sloping off a little above the shoot, and it will heal, and be covered with bark. Mortimer.

In the kingdom of Monomotapa, they have a me- thod of deciding lawsuits equally whimsical and uncer- tain. The witness for the plaintiff chews the bark of a tree, endued with an emetic quality ; which, being sufficiently masticated, is then infused in water, which is given the defendant to drink.

Blackstone's Commentaries.

BAR'K, v. & n. \ Derived from the same BAR'KER, } word as the preceding. Its

primary sense is to guard and defend. Thus the bark of a dog is his own defence and ours. It apprises of danger, expresses anger, and ex- cites fear. To bark, therefore, is to make a noise, either to annoy others, or to protect our- selves.

Vile is the vengeance on the ashes cold, And euvy base, to bark at sleeping fame.

Spenser's Faerie Queene. You dare patronage

The envious barking of your saucy tongue Against my lord. Shakipeire.

Sent before my time

Into this breathing- world, scarce half made up, And that so lamely and unfashionably, That dogs bark at me. Id. Richard III.

Why do your dogs bark so ? be there bears i' th' town ? Id. Merry Wives of Windsor.

What hath he done more than a base cur ? barked and made a noise ? had a fool or two to spit in his mou'h ? But they are rather enemies of my fame than me, these barkers. Ben Jonson.

Her clacking mill, driv'n by her flowing gall, Could never stand, but chide, rail, bark, and bawl, Her shield no word could find, her tongue engross'd them all. Fletcher's Purple Island.

And when more age and strength more fierceness

lent,

She taught him in a dark and desart wood, With force and guile poor passengers to slay, And on their flesh his barking stomach stay, And with their wretched blood his fiery thirst allay.

Id.

I have oft heard

My mother, Circe, with the graces three, Amidst the flow'ry kirtled Naiades, Culling their potent herbs and baleful drugs, Who as they sung would take the prison'd soul, And lap it in Elysium ; Scylla wept, And chid her barking waves into attention, And fell Charybdis murmur'd soft applause.

Milton.

BAR'K, > The barks are all of a family; BAR'KMEN, $ for their great progenitor, see to BAR. A bark, says Tooke, is a stout vessel, in the same sense that barge is a strong boat, im- plying safety and defence. The word, however, does not always convey this its primary meaning. It is frequently applied indiscriminately to small ships employed either for commerce or plea- sure. Like as a ship with dreadful storme long tost,

Having spent all her mastes and her ground-hold, Now far from harbour, likely to be lost,

At last some fisher barke doth neare behold, That giveth comfort to her courage cold. Spenser.

And I, in such a desperate bay of death, Like a poor bark, of sails and tackling reft, Rush all to pieces on thy rocky bosom.

Shukspeare.

The duke of Parma must have flown, if he would have come into England : for he could neither get bark nor mariner to put to sea.

Bacon, on the War with Spain. O my soul's joy :

If after every tempest come such calms, May the winds blow till they have waken'd death ! And let the labouring bark climb hills of seas, Olympus-high ; and duck again as low As hell's from heaven! If it were now to die, 'Twere now to be most happy ; for, I fear, My soul hath her content so absolute, That not another comfort like to this Succeeds in unknown fate. Id,

Whilst I, in vale of tears, at anchor ride Where winds of earthly thoughts my sails misguide, Harbour my fleshly bark safe in thy wounded side.

Fletcher's Purple Islind. Some have the boots of their own life to guide,

Some of whole families doe row the barge, Some govern pttty townships too, beside

(To those compar'd which of small barhes have

charge) Some others rul-j great provinces, and fliey

Resemble captains of huge Argosies ; But when of kingdomes any gayne the sway,

To generals of fleets we liken these. GeorgeWither. When they come near the shore the barkemen leap out of the barke into the sea to keep the burke

right, that she cast not thwart the shore.

Hackluyt. Voyages, 2fc.

It was that fatal and perfidious bark Built in th' eclipse, and rigg'd with curses dark, That sunk so low that sacred head of thine. Milton. Who to a woman trusts his peace of mind, Trusts a frail bark with a tempestuous wind.

Granville.

Like a flag floating when the bark's ingulph'd, It floats a moment, and is seen no more ; One Caesar lives, a thousand are forgot. Young. Ill fares the bark with trembling wretches charg'd That toss'd amid the floating fragments, moors Beneath the shelter of an icy isle While night o'erwhelms the sea, and horror looks More horrible. Thomson.

*My sole resourses in the path I trod ***. j: Were these *** my bark *** my sword *** rny love *** my*

God1

*The last I left in youth *** he leaves me now *** And man but works his will to lay me low.*

Byron's Corsmir.

BARK, in the anatomy of plants, is that exte- rior coat of trees, corresponding to the skin of an animal. For its organisation, &c. see BOTANY. As animcis are furnished with a panniculus adi- posus, usually replete with fat, vhich invests and covers all the fleshy parts, and screens them from external cold ; plants are encompassed with a bark replete with fatty juices, by means whereof the cold is kept out, and in winter the spiculae of ice prevented from fixing and freezing the juices in the vessels : whence it is that some sort of trees remain ever-green all the year round, their barks containing more oil than can be spent and exhaled by the sun, &c. The bark has its pecu- liar diseases, and is infested with insects pecu- liar to it. It appears from the experiments of Buffon, that trees stripped of their bark the whole

length of their stems die in about three or four years. But it is very remarkable, that trees thus stripped in the time of the sap, and suffered to die, afford timber heavier, more uniformly dense, stronger, and fitter for service, than if the trees had been cut down in their healthy state. Something of this nature was observed by Vitruvius and Evelyn. The ancients wrote their books on bark, especially of the ash and lime tree, not on the exterior, but on the inner and finer bark called philyra ; and this custom is yet frequent in the east. Many kinds of bark are used in the arts. Some in agriculture and in tanning lea- ther, as the oak bark ; some in physic, as the Jesuit's &c. others in dyeing, as the bark of alder and walnut trees ; others in spicery, as cin- namon, mace, cassia lignea, &c. ; and others for divers uses, as the bark of the cork tree, &c. In the East Indies they prepare the bark of a cer- tain tree so as to spin like hemp. After it has been beaten and steeped in water, they extract long threads from it, which are something be- tween silk and common thread ; being neither so soft nor so glossy as silk, nor so rough and hard as hemp. They mix silk with it in some stuffs, and these are called millaes, and cherque- molles. The Japanese make paper of the bark of a specie.s of mulberry tree. See MORUS. In the island of Otaheite, the natives make their cloth, which is of three kinds, of the bark of different trees ; the paper-mulberry above mentioned, the bread-fruit tree, and the cocoa-tree. That made of the mulberry is the finest and whitest, and worn chiefly by the principal peo- ple. Of the hark, too, of a tree which they call poeron, the hibiscus tiliaceus of Linnaeus, they manufacture excellent matting; a coarse sort which serves them to sleep upon, and a finer to wear in wet weather. Of the same bark they also make ropes and lines, from the thickness of an inch to the si/e of a small packthread.

BARK, JESUIT'S, or BARK by way of eminence, quinquina, or cinchona. See CINCHONA.

HARK, INDIAN", Thuris cortex, a medicinal bark, brought from the East, rolled up like cin- namon ; of a rusty color, a warm aromatic bitter taste, and pleasant smell ; sometimes used in fu- migation against fits of the mother.

HARK, in navigation, is a general name given to small ships; it is however sometimes peculiar- ly appropriated to those which carry three mari- ners, who are trained up in the coal trade. Some apply this distinction to a broad sterned ship, winch carries no ornamental figure on the stern or prow.

HARK, LONG, is a small vessel without deck, and lon.'vr and lower than the common barks, bemu; sharp before, and commonly going both with sails and oars. It is built after the manner ot a sloop, and in many places is

called a double sloop.

BARK, WATF.II, a little vessel used in Holland for the carriage of fresh water to places where it is wantmu, as well as for the fetching sea-water to make salt of. N\ ater barks have a deck, and an tilled with water up to the deck.

HARK Hr.n, in ganleninir, is that sort of hot- bed which is either wholly or principally con- stituted of tanner's bark. This bed, from its pre-

serving the most uniform and regular degrees of heat, is found by much the most useful in the propagation and culture of all kinds of tender exotic plants that are brought from warm cli- mates, and which stand in need of the continued assistance of artificial heat in this part of the world. Beds of this nature, with a little trouble in the management of them, are found sometimes to support a pretty uniform and regular tempe rature for a considerable length of time. They are generally employed in hot-houses, being formed in pits or cavities constructed for the purpose, frequently the whole length of the house, six or seven feet in width, and three in depth, being enclosed by means of brick-work. See BARK PIT.

In these beds the pots of tender exotics are plunged and supported ; while they at the same time afford the houses or stoves degrees of heat that may be proper for the growth and support of other plants that do not require to be plunged into the beds. Bark hot-beds are likewise occa- sionally formed in pits, constructed for them in the open ground, separately and detached from the hot-house. These are walled round with bricks, chiefly above the surface of the ground, having a frame or coping of wood upon the top, on which glass lights are fixed so as to slide with facility. See BARK PIT.

Beds formed of bark are also employed with success in various sorts of early productions, as early strawberries, melons, peas, French beans, &c., and, by the regular and moderate heat they afford, they mostly bring them forward in the greatest perfection. They are likewise made use of in forcing different sorts of curious flowers, of the bulbous, tuberous, and fibrous-rooted kinds, into early bloom ??? as hyacinths, dwarf-tulips, narcissus, jonquils, anemonies, ranunculuses, pinks, &c. also many flowering plants of the small shrubby kind, as roses, hypericums, &,c. Bark beds are also employed with great advan- tage in forcing frames for the purpose of pro- ducing early fruit of the apricot, peach, and grape kinds. See FORCING FRAMES and HOT- WALLS.

Hot- beds constituted of bark, from the slow and regular manner in which the heat is in common evolved, are not so liable, as those of dung, to injure the plants by their steam ; they are therefore to be preferred for all the

more im- portant purposes of forcing, where the material can be obtained. The heat of them may be per- petuated for a great length of time, by having re- course occasionally to the practice of forking or turning them over, adding in such operations about a third part of new tan or bark. The beds are, however, to be wholly, or in great part, re- newed every autumn and spring.

BARK MILL, a mill constructed for the pur- pose of grinding and preparing bark till it is fit for the use of tbe tanner. Bark mills, like most other mills, are worked sometimes by means of horses, at others by water, at others by wind, or by steam. Several of these mills are described in different volumes of the Repertory of Arts and Manufactures, and an ingenious one in Gregory's Mechanics, vol. ii. Mr. Chapman's simple ma- chinery for this purpose (for which he took out a

patent in July 1805) is thus described, as below, in No. 3, of the Retrospect of Arts and Manu- factures. It may be worked by horses, or in any of the usual ways. A large horizontal face-wheel gives motion to a horizontal tumbling shaft, which unites with the gudgeon of a large rag- ban el : two other cylinders are posited horizon- tally with respect to this rag-barrel, one on each side ; one of these is a smaller rag-barrel, the other is a spike-roller. A moderate-sized wheel at one end of the larger rag-barrel has its teeth to play into the leaves of a pinion on the end of the spike-roller, thus communicating motion to that roller and to a large fly-wheel turning on the same axis : two or three other smaller wheels and pinions communicate motion from the larger to the smaller barrel, and in such manner that the latter has a considerably less velocity than the former, and turns the contrary way. A hori- zontal hollow frame contains the barrels and spike-roller, and the bottom plate of this is movable by means of screws, so as to be capable of adjustment, and placed at a suitable distance from the rag-barrel, to act as a grinding-plate. Two screws, whose heads are at one end of this frame, serve to place the smaller rag-barrel at a convenient distance from the larger. This large barrel has about twenty rows of plates with their indentations turning downwards, while the indentations of the smaller barrel project up- wards ; so that this latter barrel gathers the bark and holds it fast, while the larger one tears it to pieces ; and the spike-roller on the other side of this larger barrel keeps it clean. A sloping spout conveys the torn bark from the grinding- plate to an inclining cylinder, posited like the cylinders in dressing machines for flour-mills : the wires of this cylinder

are of two different kinds with respect to fineness, the coarsest being lowermost ; and beneath it two bins are placed, the one to receive the finer dust, the other the coarser or hand-dust from the cylinder; and next to these stands a basket to receive the torn bark as it passes through the cylinder.

BARK PIT, a pit or cavity of a long, square, or other form, a yard or more in depth, appertain- ing to a hot-house or stove, &c. and being formed internally, or detached externally, in which to make tan or bark hot-beds, commonly called bark beds. The dimensions are four, five, or six feet in width, or more, having length in pro- portion to that of the hot-house, 8cc., and when in detached pits, such as may be required. In both methods they are formed by a low surround- ing brick-wall, about a yard in height in the in- ternal pits, arid in the external ones three or four feet in front, by four or five in the back wall. These different sorts of pits are indispensably ne- cessary, where bark beds are intended, to make the beds in, as the short loose nature of the tan will not admit of being formed into compact re- gular beds without the aid of such kinds of en- closed pits to confine it close together within the limits that are requisite in the formation of the beds.

BaiK pits are necessary for various purposes, in all hot-houses or stoves, and occasionally in forcing-houses, &c. And detached bark pits, distinct from the hot-house, are likewise very

useful in all extensive gardens on many occa- sions, being of great service in the culture of many sorts of tender exotics, and in raising va- rious kinds under different methods of propaga- tion, as well as for raising and nursing those of similar kinds in their young and tender growth ; also occasionally for forcing and raising early productions of several sorts of hardy plants in the greatest perfection.

Hot-houses, or stoves of the common width, have in general only one pit, extending length- ways of them, as described above ; but, if they are of considerable extent in length, the pit is some- times divrded in the middle by an intervening passage, to render it more convenient in per- forming the necessary culture of the plants. Some hot-houses, however, of very great width, have two internal bark r its ranging parallel lengthways, with an alley or passage extending between them, which renders them more commo- dious in giving the requisite culture to the plants that are plunged in the beds, than if the whole was in one extremely wide pit, in which it would often be very inconvenient to come at the plants placed towards the middle of them ; so that two parallel pits, four or five feet wide each, become more eligible than one of eight or ten feet, and, by having an intervening passage, give a larger scope, and afford a better current of air, for the growth of the plants in the beds, as well as ad- mit of viewing them

to greater advantage and effect.

Detached bark pits should always be erected in warm dry situations, in a southerly aspect, and be constantly ranged lengthways in the di- rection of east and west, or nearly so, in order to have the whole front incline fully to the south sun, in a sloping manner, on which to place the glasses in the same position, being generally sta- tioned either contiguous to the hot-house or stove, but at a proper distance in front of it, as the situation and convenience of the place may admit ; or they may be erected at one or at both ends, extending in a line with it but separated by a passage between them. But detached bark pits are sometimes formed with ridged tops, like the roofs of houses, the glasses sloping to both sides, being ranged lengthways north and south, in order to hare the benefit of the sun equally on both sides, and used for the same purposes as the others ; though the common south-fronting pits, extending east and west, are more generally adopted, being less expensive in glass-work, &c. and, in general, more convenient for different purposes of the forcing kind. They should be constructed with walls of brick-work, forming the iipright sides and ends nine inches thick ; and where fire-flues are intended, the back wall should be of a proper thickness from the bottom to admit of having flues in the upper parts, a fire-place being contrived externally at the bottom at one end; or, in considerably ex- tended pits a double fire-place may be formed in the middle, behind, or one at each end, either endways or in the back part, as may be thought the most convenient. Some detached pits are formed of wood-work only, by means of post and planking, serving for particular occasions, where no fire heat is required, as flues for that

purpose cannot be admitted in such kinds of pits ; where additional heat is occasionally ne- cessary in such pits, it is effected by applying a strong lining of hot dung to the outsides; by which a good constant heat may be supported. In these bark pits sometimes the younger pine- apple plants are deposited and nursed for the first year; they are likewise occasionally used for the purposes of propagating, raising, and nursing tender plants in spring and summer, &c. also for forcing early esculent crops, flowers, &c.

The principal detached bark pits should, how- ever, be formed with brick-work walls ; as being the most effectual for general use, and of the greatest duration.

BARKARY, a tan-house, or place to keep bark in, for tanners.

BARK-BINDING, a distemper incident to trees ; cured by slitting the bark, or cutting along the grain.

BARK-GALLING, is when the trees are galled with thorns, &c. It is cured by binding clay on the galled places.

BARK HAM (Dr. John), a learned divine and antiquary, born at Exeter about 1572, and edu- cated at Oxford. lie possessed successively se- veral preferments, and died at Bocking in Essex, of which lie was rector and dean, 1642. He was an accomplished scholar, and an exact his- torian. He hud an excellent collection of coins and medals, which lie gave to archbishop Laud, and which Laud afterwards left to the university of Oxford. Speed acknowledges the assistance he had from Barkham, whom he styles ‘ a gen- ileinan, composed of learning, virtue, and cour- tesy.’ The ‘ Annals’ of .lohn and Henry II. are reckoned to he chiefly of his writing. He had also the principal hand in ‘Guillim’s Display of Heraldry,’ 1610, fol.

UAIIKAM-STF.U. See BEUKHAMSTEAD.

HARKING 01 Tin ES, the peeling off the rind or bark. This must be done, in our climate, in the month of May, because at that time the sap separates the bark from the wood. It would 1) ††† very ditlicult to perform it at any other time of the year, unless the season was extremely wet and rainy ; for heat and dryness are a very great hindrance to it.

H \UKIM;, a town of Essex, on the river Rodin-j-, near the Thames, chiefly inhabited by fishermen. It once had a largo monastery. The i)aii’s destroyed the town in H70, but it was re- built soon after the coronation of \illiam the < 'onrjiieror. The soil of the vicinity is remark- a'ily rich, but the air is unhealthy. Goods are brought up from the Thames in vessels to its quay. If is seven miles from London, has a fair October 'J'2d, and a market on Saturday.

MAI! KSI)ALK ((‘lenient j, a learned writer, born at \Vinchcombo, in Gloucestershire, in 1 < > (j’. >. He received the first part of his educa- tion at Abinu’don-school, and afterwards went to Oxford, lie became master of the grammar- school at Hereford; I ut when the rebels took that citv, he lemovii] to Ilawlinu, in Glouces- tershire, and opened a school there. At the Re- stoiution ho was presented to the living of Naun- ton, and died theie in I ††187. His writings are, 1. Monumerita Lilerariu : sive obitus Elogia

Ductorum virorum, ex Historiis J. Aˆ. Thnani, 4to. 2. Nympha Libethtis, or the Cotswold Muse, 8vo. 1651. 3. Life of Hugo Grotius, 12mo. 1652. 4.

Memorials of Worthy Persons, 12mo. 1661 ; and other tracts. He also published several sermons.

BARKWAY, a town of Hertfordshire, on the great road from London to York; three miles from Royston, eighteen from Cambridge, and thirty-five from London. It has a fair July 20, and a market on Friday.

BARLAAM, a learned monk of the fourteenth century, was a native of Calabria. Having gone to Constantinople to study the Greek language, he gained the favor of the emperor Andronicus, of whom he received the abbey of St. Saviour, and was employed to negociate a reunion between the two churches. The emperor also employed him to solicit the assistance of the Christian princes against the infidels ; and on his return he occupied his pen in writing against the La- tins. He, however, quickly changed his principles on being made bishop of Gerace, in Italy, and commenced an opponent of the Greeks. He died in 1348. His letters were printed in Ingolstadt in 1604. He was a great opponent of Greg. Palama and the Hesychastae.

BARLAAMITES, in church history, the followers of Barlaam.

BARL7EUS (Gaspar), professor of philosophy at Amsterdam, and one of the best Latin poets of the seventeenth century. He defended Ar- minius ; and showed his abilities as an historian by his relation of what passed in Brasil, during the government of prince Maurice, of Nassau, published in 1647. He died in 1648.

BARL;EUS (Lambert), professoi of Greek at Leyden. In conjunction with Rivius, he trans- lated the confession of the reformed churches into Greek, and published the Timon of Lucian, with notes ; also, Annotations on Hesiod's Theogony. He died in 1655.

BARLAND (Adrian), a learned Dutch critic, was professor of eloquence at Louvain. He published Notes on Terence, Virgil, Pliny the younger, and Menander; An Abridgement of Universal History ; The Chronicles of the Dukes of Brabant ; De Literatis urbis Romae Principi- bus, &c. He died at Louvain in 1542.

BARLERIA, SNAP-DRAGON, in botany, a genus of the angiospermia order, and didy- namia class of plants, ranking in the natural method under the fortieth order personatae: CA.L. quadripartite, two of the stamina much less than the rest ; the capsule quadrangular, bilo- cular, bivalved, elastic, and without claws ; and the seeds are two. There are ten species ; all natives of the warm parts of America, and therefore required to be kept in a stove, and treated like other tender exotics. They possess no great beauty nor any remarkable property.

BARLETTA, a sea-port town of Italy, in Na- ples, in the Terra di Bari, with a bishop's sec. It is situated on the Gulf of Venice, thirty miles south-east of Manfredonia.

*BARLETTA (Gabriel), a Dominican of singular fame in the fifteenth century. He was born at Barletta, in the kingdom of Naples, about 1400. ' His sermons,' says Dr. Watkins, * exhibit such*

a mixture of religious and comic expressions, sublime and vulgar ideas, the serious and the ri- diculous, and, what is more remarkable, the whole written in such a barbarous language, compounded of Greek, Latin, and Italian, as to nave rendered them one of the most extraordi- nary productions of literature. Such, however, was his fame among his contemporaries, as to have occasioned this proverb : ' nescit predicare qui nes-.it Barlettare.' From this singuhr and rare merit, his sermons were eagerly sought after and read, arid they quickly passed through more than twenty editions. The best is that of Ve- nice, in 1577, two vols. 8vo.

BA'RLEY, n. s. derived by Junius from "O hordeum ; grain of which malt is made. It hath a thick spike ; the calyx, husk, awn, and flower, are like those of wheat or rye, but the awns are rough ; the seed is swelling in the middle, and, for the most part, ends in a sharp point, to which the husks are closely united. The species are, 1. Common long-eared barley. 2. Winter or square barley, by some called big. 3. Sprat bar- ley, orbattledoor barley. All these sorts of bar- ley are sown in the spring of the year, in a dry time. In some very dry light land, the barley is sown early in March ; but in strong clayey soils it is not sown till April. The square barley, or big, is chiefly cultivated in the north of Eng- land and in Scotland; and is hardier than the other sorts. ••• Miller. Barley is emollient, moist- ening, and expectorating ; barley was chosen by Hippocrates as a proper food in inflammatory distempers. ••• Arbuthnot on Aliments.

BA'RLEYBRAKE, n. s. a kind of rural play.

By neighbours prais'd she went abroad thereby,

At barleybrake her sweet swift feet to try. Sidney.

BA'RLEY-BROTH, n. s. from barley and broth; a low word sometimes used for strong beer.

Can sodden water

A drench for surreyn'd jades, their barley broth, Decoct their cold blood to such valiant heat ?

Shakspeare.

BARLEY-CORN, n. t. from barley and corn ; a grain of barley ; the beginning of our measure of length ; the third part of an inch. A long, long journey, choak'd with brakes and thorns, 111 measur'd by ten thousand barley corns. Tickell

BARLEY-MOW, n. s. from barley and mow ; the place where reaped barley is stowed up. Whenever by yon barley mow I pass,

Before my eyes will trip the tidy lass. Gay.

BARLEY BIRD, in zoology, a name given in Sussex to the frir.gilla spinus, or siskin, on ac- count of its visiting them in barley time.

BARLEY, in liotany. See HORDEUM and AGRICULTURE. The principal use of barley in England is for making beer; in order to which it is first malted. See BREWING. The Spaniards, among whom malt liquors are little known, feed their horses wi'th barley as we do with oats. In this country barley is a frequent ingredient in broths.

BARLEY, FRENCH, and BAKLEY, PEARL, barley freed of the husk by a mill ; the distinc- tion between the two being-, that the pearl barley is reduced to the size of small shot, all

but the very heart of the grain being ground away.

BARLEY-WATER is a decoction of either of these, reputed soft and lubricating, of frequent use in physic. This well known decoction is a very useful drink in many disorders ; and is re- commended, with nitre, by some authors of re- putation, in slow fevers.

BARLEY-BROTH. See BARLEY.

BARLEY-CORN, is used to denote a long mea- sure, containing in length one-third of an inch, and in breadth one-eighth. The French carpen- ters also use barley-corn, grain d'orge, as equi- valent to a line, or one-twelfth of an inch.

BARLEY-CORN, grain d'orge Fr. ; is also used in building for a little cavity between the moulding of joiners' work, serving to separate or keep them

asunder; thus called, because made with a kind of plane of the same name.

BARLOW (Francis), an English painter, born in Lincolnshire. On his coming to London, he was placed with a limner ; but his genius led him chiefly to drawing of birds, fish, and other animals. There are six books of animals from his drawings, and his etchings are numerous ; his illustrations of TEsop is his greatest work. He died in 1702. There is something pleasing in his composition and manner, though neither ‘ is excellent. His birds, in general, are better than his beasts.

BARLOW (Thomas), born in 1607, was ap- pointed fellow of Queen’s college, Oxford, in 1633, and two years after was chosen reader of metaphysics to the university. He was keeper of the Bodleian, and in 1657 was chosen provost of Queen’s college. After the Restoration, he was nominated one of the commissioners for re- storing the members expelled in 1648. He wrote at this time The Case of Toleration in Matters of Religion. In 1675 he was made bishop of Lincoln. After the popish plot, he published several tracts against the Roman Ca- tholics; in which he shows an uncommon ex- tent of learning and polemical skill. When the duke of York, however, was proclaimed king, he took every opportunity of expressing his affec- tion towards him ; but after the Revolution, as readily voted that the king had abdicated his kingdom; and was very zealous in excluding those clergymen who refused the oaths. His moderation, to call it by the softest name, was very great ; so great, indeed, as often to bring the firmness of his character into question. But casuistry, which was his most distinguished ta- lent, reconciles seeming contradictions. He died at Buckden, in Huntingdonshire, in 1691, aged eighty-five.

BARLOW (Joel), an American poet, the author of the Columbiad, was born at Reading, in the state of Connecticut, in the year 1757. He received his education at Dartmouth College ; and in the latter part of the struggle which his country maintained for independence, served in he army. When his services were no longer re- tuired in the capacity of a soldier, he commenced the task of benefiting his country, and promoting his own fortune as a public writer ; and, having engaged in partnership with a bookseller and printer at Hartford, conducted a newspaper there

for two years. His education had been directed to the profession of law, although the troubles of the American union had, for a time, diverted his mind from legal pursuits ; and on the restoration of tranquillity, and the establishment of inde- pendence, he resumed his original determination. He

was accordingly called to the bar in 1785, and practised for some time with success. Two years afterwards he published his Vision of Co- lumbus, a poem in nine books, which em- braced almost all the events of the epic, which he subsequently gave the world under the title of the Columbiad. In the same year, or nearly about the same time, he accepted of the situation of agent to the Ohio Land Company. In this capacity he came to England to sell their lands, and to engage settlers to occupy them. The same employment led him to France, where he remained during the era of the French revolu- tion ; and as he witnessed in his own country a struggle for liberty and independence, ending in the most brilliant success, so he sympathised, without reserve, in the feelings of the French popular party, and anticipated from their efforts the most glorious results. Neither the precipi- tate violence with which the demagogues pro- secuted their objects of reform, nor the atrocities of a licentious mob, who received the watch-word of havoc and bloodshed from the fierce spirits now called into action, nor the acts of tyrannical injustice committed under the sacred name of liberty, could deter this intrepid repub- lican from admiring and applauding the work of revolution. Nor was he satisfied with bestowing en it his own individual tribute of encourage- ment and approbation. lie offered himself as one of the deputies from the London Constitu- tional Society, who should carry to the hall of the French convention the congratulations of England upon the glorious prospect of a regener- ated people, and to unite their wishes with that assembly for the general diffusion over the world, of the freedom that assembly had conferred on their country. About the same time he pub- lished three political pamphlets, containing his opinions on passing events, and preaching the doctrine of reform. One of these is entitledt Advice to the privileged Orders, and was a, the tune read with ureat avidity. His political lucubrations, and the part he took in conveying to the national convention of France the address of F,iirlish subjects, were regarded with a jealous eye by the administration of this country, and rendered it (inadvisable in him to return to Britain. He continued therefore at Paris, and was much connected with the leaders of the Gi- ronde party. Washington, being then president of the l.'nited States, appointed him, in 1795, envoy to the Barbary powers, and with them, in tlie following year, he negociated treaties of peace. From the year 17% till 1804, he prin- cipally resided at Tans, kept an elegant house, entertained occasionally the Americans, or the lew English who could visit that city, and gained the esteem of the natives by the politeness and urlianity of his manners. He thus had the mis- fortune to see the tree of liberty, whose roots had hi rn watered with the host blood of France, cut down by the axe of a military despot, lie had

the misfortune to see those ferocious citizens? who, at first, pretended a desire to recline under its shadow, only maddened with its fruits, and, in

the paroxysms of the fury which they inspired, rushing forth to conquer and oppress the nations. In 1804 Mr. Barlow resolved to return to America, and in his way thither visited England. In the metropolis he was well received by many who had experienced his hospitality at Paris, and remained for a few months to enjoy their society. He was cured of his admiration for French liberty, and deplored the establishment of the imperial power ; but his preference for a re- public seemed to have remained unchanged. After returning to America, he occupied him- self with revising, amending, and enlarging his poem on American history, which, upon republi- cation, he entitled the Columbiad. It appeared in 1808, in a splendid volume, printed at Phila- delphia, adorned with engravings, and was the most magnificent work that had issued from the American press. But its reception in the lite- rary world was not conformable with the splen- dor of its appearance. It was read and criticised in this country when it first appeared, but it never had much circulation, ' and we believe is now almost forgotten. Mr. Barlow's principles and conduct could not fail to render him a favorite with the ruling party in the American states, and as he was, from long residence in Paris, well acquainted with the French charac- ter, and the principles of the French government, he was employed by president Maddison, in 1812, in a mission to France. The relations of America with the French empire were then in a very intricate undecided state, but requiring a speedy understanding and prompt adjustment ; and as the emperor, in his Russian expedition, had carried the powers of the government along with him, Mr. Barlow set out from Paris to en- counter the severities of a Polish winter in ob- taining an interview with the Great Napoleon. He was not favored with a sight of the empe- ror ; and though he lived till he returned from Moscow, the swords of the Cossacks had ren- dered his lustre less dazzling, and a treaty of alliance with him of less importance. He died near Cracow, in Poland, about the beginning of December, 1812.

BARLOWE (William), bishop of Chichester, de- scended of an ancient family in Wales, was born in the county of Essex. In his youth he favored the Reformation ; and went to Germany to be instructed by Luther and other preachers of the new doctrine. How long he continued a Protestant is uncertain: but he was a regular canon in the Augustine monastery of St. Osyth, in Essex, and studied at Oxford with the brothers of that order, where he took the degree of D. D. He was then made prior of the convent at Bisham, in Berkshire ; and afterwards succeeded to the several priories of Blackmore, Typtree, Lega, Bromhole, and Ilaverford West. On the dissolution of abbeys, he resigned not only with a good grace, but persuaded several abbots to follow his example. Henry VII. was so pleased with his ready obedience on this occasion, that he sent him, in 1535, on an embassy to Scot- land; in the same year made him bishop of St.

Asaph; 111 two months after translateˆ him to the see of St. David's, and in 1547 to that of Bath and Wells. During this time our good bishop, as appears from his epistle to the king, was, or pretended to be, a staunch papist. It was written in 1533, and in it he regrets that he had ' made certayn bokes, and soffred them to be imprinted, as the tretise of buryall of the masse, &c. In these tretises I perceive and acknow- ledge myself grievously to have erred against the blessed sacrament of the altare ; disallowing the masse and denying purgatory, with slanderous infamy of the pope and my lord cardinal,' &c. However, when Edward VI. came to the crown, he was again a protestant; and for that reason, on queen Mary's accession, was deprived of his bishopric, and sent prisoner to the Fleet, where he continued some time. At length he found means to escape, and join the other English Pro- testants in Germany. Upon queen Elizabeth's accession, he was raised to the see of Chichester, and soon after made a prebendary of Westmin- ster. He died in 1568, and was buried at Chi- chester. He had five daughters, each of whom married a bishop. He wrote, l.The Buryall of the Masse. 2. The Climbing of Fryers and Religious Persons, portred with Figures. 3. Christian Homelies. 4. A Book upon Cosmo- graphy. 5. The Godly and Pious Institution of a Christian Man, commonly called the Bishop's Book ; and several other works. He is said to have been the translator of the Apocrypha, as far as the Book of Wisdom. His letters to M. Parker, are in MS. in Corpus Christi College, Cambridge, Misc. i. 445.

BARLOWE (William), a mathematician and di- vine, the son of the bishop, was born in Pem- brokeshire, whilst his father was bishop of St. David's. In 1560 he was entered of Baliol college, Oxford; and in 1564 took a degree in arts, which having completed by determina- tion, he left the university and went to sea; but in what capacity is uncertain : however, he acquired considerable knowledge in the art of navigation. About 1573 he became prebendary of Winchester, and rector of Easton near that city. In 1588 he was made prebendary of Litch- field, which he exchanged for the place of trea- surer. Some years after, he was made chaplain to prince Henry, the son of king James I. ; and in 1614 archdeacon of Salisbury. He was the first writer on the magnet He died in 1625, and was buried at Easton. His works are, 1. The Navigator's Supply, containing many things of principal importance belonging to Naviga- tion, and the use of divers instruments framed chiefly for that purpose. Lond. 1597, 4to. De- dicated to Robert, earl of Essex. 2. Magnetical Advertisements, or divers pertinent observations and approved experiments concerning the nature and properties of .the Loadstone. Lond. 1616, 4to. 3. A Brief Discovery of the

idle animadver- sions of Mark Ridley, M. D. upon a treatise en- titled Magnetical Advertisements. Lon. 1618, 4to.

BARM. Goth, barm, Ang. Sax. barm, bearm. To cherish ; to foster as in the bosom.

And in hire barme this litel child she leid, With full sad face, and gan the child to blesse, AnJ lulled it, anjl after gan it kisse.

Chaucer. The Cierkei T>ile.

A scint she \vered, barred all of silk,

A burinecloth eke as white as rnorwe milk.

Id. The Millires Tale,

BARM', 1 Welsh, burm, Sax. beonm. Yeast : BARM'Y.] the ferment put into drink, to make it work ; and into bread to lighten and swell it

Are you not he

That sometime makes the drink to bear no barm ; Mislead night wand'rers, laughing at their harm ?

Try the force of imagination upon staying the work. ing of beer, when the barm is put into it. Bacun,

Their jovial nights in frolics and in play They pass, to drive the tedious hours away ; And their cold stomachs with crown'd goblets cheer, Of windy cider, and of barmy beer. Dryden.

BARM is said to have been first used by the Celta} in the composition of bread. About the time of Agricola's entrance into Lancashire, a new sort of loaf had been introduced at Rome ; which was formed only of water and flour, and much esteemed for its lightness ; and it was called the water-cake from its simple composition, and the Parthian roll from its original inventors. But even this was not comparable to the French or Spanish bread for its lightness. The use of curmi, see ALE, and the knowledge of brewing, had acquainted the Celtae with an ingredient for their bread, which was much better calculated to render it light and pleasant, than the leaven, the eggs, the milk, or the wine and honey of other nations. This was the spume which arose on the surface of their curw in fermentation, and which the Welch denominate burm, and we barm. The Celtae of Gaul, of Spain, and most probably, therefore, of South Britain, had long used it ; and their bread was, in consequence of this, superior in lightness to that of any other

nation in the world. See BAKING, BREAD, and Yeast.

BAR-MASTER. See B ARCH-MASTER.

BARMEKIN, a hill of Scotland, in the pa- rish of Echt, in Aberdeenshire, of a conical shape. On the top of it are the remains of an ancient fortification, respecting which tradition is silent. Two dry stone walls and three ditches, all circular, are visible. The inner wall ap- pears to have been twelve feet thick, and 330 yards in circumference:' the outer about six feet thick and the outer ditch 560 yards in cir- cumference.

BARMOUTH, a small market and sea-port town, in Merionethshire, North Wales. It is very pleasantly situated, and is much frequented as a bathing-place : 222 miles from London, and ten from Dalgelly,

BARMINE denotes such mine or ore as is adjudged at a court of Barghmote.

BARMOTfi. See BARGHMHTE.

BARN, v. & n. See to bar, bairgain, Goth, to defend; to protect. A covered enclosure in which grain, &c. is protected and defended.

But of herr songe it was as loud and yerne

As any swallow sitting on a berne;

Therto she coud skip and make a game

As any kid or calf following his dame. Chaucer.

BAR 560

Wb'lc the cock with lively

And as an owl that on a barn Sees a mouse creeping in the corn Sits still, and shuts his round blue eyes As if he slept, until he spies The little beast within his reach, Then starts and seizes on the wretch. Hndibras. In vain the barns expect their promis'd load ; Nor barns at home, nor reeks are heap'd abroad.

Dryden.

I took notice of the make of barns here : having laid a frame of wood, they place, at the four comers, four blocks, in such a shape, as neither mice nor vermin can creep up. Addison.

An owl of grave deport and mien, Who (like the Turk) was seldom seen, Within a barn had chose his station As fit for prey and contemplation.
*&< *#*

As near a barn, by hunger led, A peacock with the poultry fed ; All view'd him with an envious eye And mock'd his gaudy pagaentry. Id.

BAIIN. Sec BEAUX. The past participle of Ijcuran, to bear a child ; bearen or born ; still in use.

Goodlucke (and't be thy will), what have we here? mrivy oil's, a burue, a very pretty barne.

Shaktpeare. Winter Night's late.

BARNABAS (St.), was bom at Cyprus, and descended of the tribe of Levi, whose Jewish ancestors a re thought to have retired thither to secure themselves from violence during the troublesome times in Judea. His proper name wits Joses, to which, after his conversion to Christianity, the apostles added that of Barna- bas, siunit'vinˆ the son of consolation. The time of his conversion is uncertain; but he is ireneraliy esteemed one of the seventy disciples cho.>e.n i-y our Saviour himself. At Antioch, Paul and Uarnibas had a contest, which ended in their sepaiatiou : what followed with respect to St. Barnabas is not related in the Acts of the Apostles. Some writers say, he went into Italy, and founded a church at .Milan. He suffered martyrdom at Salamis, where some Jews, being come out of Syria, assailed him as he was dis- puting in the synairo'j.-ue, and stoned him to death, lie \as buried by his kinsman Mark, whom he had taken with him, in a cave near that city. The remains of his body are said to nave hi en discovered in the reiun of the emperor Xeiio, \ith a copy of St. Matthew's Gospel, \riiien \ith bis own hand, lying on his breast.

BAI:N U',AS'> DAY (St.), a Christian festival, celebrated on t'.ie llth of June.

BAUNAHAS'S KIMVI 1,1: (X.), an apocryphal work ascribe 1 to St. Barnabas, and frequently cited by St. Clement of Alexandria and Origen. It was tirst published in (ireek, from a copy of father Hugh Menanl, a Benedictine monk. An ancient version of it was found in a MS. of the abbey of Corbey, near 1000 years old. Vos- sms published it in 16.36, with the epistles of St. Ignatius.

JJAI-.N .MIAN'S (JosFKL (St.), another apocryphal work, asc'ibcd to St. Barnabas, the Apostle, vvhercm tiie historv of Jesus Christ is related in n r.ia.Micr veiy (iiti'erent from the account given

MS by the four Evangelists. The Mahommedans have this gospel in Arabic, and it corresponds very well with those traditions which Mahomet followed in his Koran. It was, probably, a forgery of some nominal Christians ; and after- wards altered and interpolated by the Mahom- medans, the better to serve their purpose.

BARJVABITES, a religious order, founded in the sixteenth century by three Italian gentlemen, who had been advised by a famous preacher of those days to read carefully the epistles of St. Paul. They are regular priests of the congrega- tion of St. Paul ; hence they were called Clerks of St. Paul; and Barnabites, because they per- formed their first exercise in a church of St. Barnabas, at Milan. Their habit i-s black ; and their office is to instruct, catechise, and serve in mission.

BA'RNACLE, n. s., probably of bearm, Sax. a child, and aac, Sax. an oak. A kind of shell- fish that grows upon timber that lies in the sea. A bird, like a goose, fabulously supposed to grow on trees.

It is beyond even an atheist's credulity and impu- dence to affirm, that the first men might grow upon trees, as the ►►tory goes about barnacles; or might be the lice of some vast prodigious animals, whose spe- cies is now extinct. Jicntlcy.

And from the most refin'd of saints As naturally grow miscreants, As barnacles turn Soland geese In th' islands of the Orcades. Hudibrat.

BARNACLE, an instrument made commonly ot iron for the use of farriers, to hold a horse by the nose, to hinder him from struggling when an in- cision is made. It is also called horse-twitcher, or brake. The barnacle differs from pinchers, as the latter have handles whereby to hold them ; whereas the former is fastened to the nose with a lace or cord.

BARNACLE, in ichthyology, a kind of shell- fish, which cleaves to the bottoms and sides of ships in certain seas; the same with what is called by sailors clam ; by naturalists, concha anatifera. There are divers species of shell fishes included under the denomination barnacles: some reduce them to two, viz. the balanus and pinna marina. See an account of several rare species of barnacles, by John Ellis Esq. Philoso- phical Transactions, vol. i. part ii. No. 113.

BARNACLE or BERNACLE, a species of Anas, common in the western isles of Scotland. ►►► See ANAS. Concerning the origin and species of this bird many fables have been advanced. Seve- ral authors have represented it as the produce of a shell-fish ; but later naturalists, on ►►► better

grounds, refer it to the natural manner of gene- ration; making it a real goose, produced like others from an egg. Some reckon the barnacle the same with the anser Scoticus, or Soland goose ; others will have it to be the same with the French macreuse. Dr. Robinson makes the barnacle to be of the goose, and the macreuse of the duck kind. The same author shows, that the mac- reuse is the scoter, or anas niger minor, described by Ray and Willughby, contrary to the opinion of Mr. Cattier, who took it for the greater coot of Bellonius.

BARNADESIA, in botany, a genus of the polygamia aequalis order, belonging to the syn-

genesia class of plants ; the characters of which are : the COR. is radiated ; the CAL. is naked, imbricated, and pungent; the pappus of the rays feathery, of the disk bristly and retrofracted. There is but one species, viz. B. spinosa, a native of America.

BARNARD, or BERNARD (John), the son of John Barnard, gent, was born at Castor in Lin- colnshire, and educated at Cambridge. After several preferments, he was made a prebendary of the church of Lincoln. He wrote Censura Clerica, against scandalous ministers not being fit to be restored to church livings ; the Life of Dr. Heylin ; and several other works. He died at Newark, Aug. 17th, 1783.

BARNARD (Sir John), M.P. for London, a spirited member of the opposition party, in the reigns of Geo. I. and II. He was born at Read- ing in Berkshire in 1685. His father was a wine merchant, to whose business he succeeded. He particularly distinguished himself, on being appointed by the body of wine merchants to state before the house of lords their objections to a bill then pending in that house ; and, from the abilitities he displayed on that occasion, was no- minated, in 1721, candidate for the city of Lon- don, and elected the following year. In 1725 he received the thanks of the common council, for opposing a bill introducing a change in the city elections. In 1727 he presented a bill for the better regulation of seamen. In 1730 he made a violent opposition to the bill prohibiting British subjects from lending money to foreign princes. In 1732 he received the honor of knighthood from Geo. II. whom he attended with an address; and, in 1733, he acquired much popularity in opposing Sir R. Walpole's excise bill, which was at last obliged to be relin- quished, In 1735 he introduced a

bill to limit the number of play-houses, which passed two years after, and is still in force. In 1737 he formed a scheme for reducing the interest on the national debt, which was afterwards adopted. In 1736 he and his brother-in-law, Sir R. Gods- chall, were elected sheriffs, and in 1738 he was chosen lord mayor of London. He died at Clapham in 1766, aged eighty, after repeatedly receiving the thanks of his fellow citizens for his public conduct.

BARNARD, a township of Vermont, in Wind- sor county ; sixty-five miles north-east of Ben- nington.

BARNARD'S CASTLE, a town and barony on the Tees, in the county of Durham, belonging to the earl of Darlington. It is fifteen miles from Richmond, thirty south-west of Durham, and 244 north-west of London ; has a market on Wednesday, and fairs on Whit-wednesday, St. James's day, and 25th July.

BARNAUL, a town of Siberia, on the river of the same name, which falls into the Obi. It consists of 1000 houses, built chiefly of wood, with several public edifices of stone. This town is the seat of the supreme chancery of the mines contained in the great Altaian mountain chain, and has under its jurisdiction 40,000 peasants. Many of the foundries, however, are abandoned from the want of fuel, which has been exhausted. There is still one mine in the vicinitv of Barnaul, VOL. III.

very productive both in gold and silver. A foundry of bells, and manufactories of tiles and glass, are carried on in the town. Distant 100 miles south-east of Kolhyvane.

BARNAVE (Anthony), a victim of French republicanism, was born in 1762. Having be- come a member of the national assembly, he was there distinguished by the warmth and zeal which he displayed. On the stopping of the king at Varennes, he was appointed to conduct his ma- jesty and family to Paris, in doing which he showed the most respectful attention to the royal captives. He was afterwards accused of being a royalist, and guillotined at Paris in 1794.

BARNAY, an ancient fort of Dunse, in Ber- wickshire. Dr. Anderson of Chirnside says, these Barnays, or Barnekins, were a kind of forts commonly placed, during the feudal system, at some distance from the baron's castle, to defend the bridge or passage to it.

BARNES (Joshua), a learned divine, born in London in 1654. He was educated at Christ's hospital, from whence he removed to Emanuel college, Cambridge, where he was chosen queen's professor of Greek in 1695 ; a language he wrote and spoke with the utmost facility. His first publication

was a whimsical tract, entitled Gera- nia, or a New Discovery of the little sort of peoprle called Pygmies. After that appeared his Life of Edward III. In 1700, when he had published many of his works, Mrs. Mason, of Hemmingford, in Huntingdonshire, a widow lady of between forty and fifty, with a jointure of ►►200 per annum, came to Cambridge, and desired leave to settle ►►100 a-year upon him after her death ; which he politely refused, unless she would also con- descend to make him happy with her person ; and they were accordingly married. He wrote several other books, viz. Sacred Poems; the Life of Oliver Cromwell, the Tyrant; several dramatic pieces ; a Poetical Paraphrase on the History of Esther, in Greek verse, with a Latin translation, &c. ; and he published editions of Euripides, Anacreon, and Homer's Iliad and Odyssey, with notes and a Latin translation. This excellent man died in 1712, in the fifty-eighth year of his age.

BARNES (Robert), a martyr for the doctrines of Luther, was brought up to the church, obtained the degree of D. D., and became chaplain to Henry VIII., by whom he was sent to Germany, to consult with the divines of that county re- specting the lawfulness of his divorce. While in that country he adopted the doctrines of the Reformation, and on his return to England pro- pagated his new opinions with such zeal that he was taken into custody, brought to the stake, and burnt at Smithfield in 1540. He was author of a treatise on Justification, and several other tracts.

BARNET, CHIPPING BARNET, or HIGH BAR- NET, a town on the top of a hill, partly in Mid- dlesex, and partly in Hertfordshire, eleven miles north by west of London. It is a great thorough- fare ; had a market on Wednesday, and two fairs, on April 8th, 9th, 10th, and September 4th, 6th, 6th. Near it two great battles were fought between the houses of York and Lancaster, in 1468, and 1471 ; in the last of which the earl of

Wnrwick and 10,000 men were slain, [n 1740 Sir Jeremy Sambrooke, Bart, erected a stone column with an inscription on the spot.

BARN EVELDT, the celebrated statesman, and one of the founders of the civil liberty of Holland, was born about 1550. He had a noble bold air, an expressive eye, and was an able speaker. He possessed a genius equally suited to commerce, finance, and nego- ciation ; the art of pushing any

favorite point without seeming importunate, and of withdraw- ing without appearing indolent ; the singular talent of penetrating the secrets of others, whilst he concealed his own. His merit raised him to the first dignities in the government, where he showed himself an enemy to injustice, bribery, parties, and novelties, even though they might appear useful. lie undertook to restore the credit of his country, and had the good fortune to succeed. lie was the chief author of the truce in 1599, which was concluded for twelve years, between the Arch Duke and the states. He had, by his assiduity prevented the latter from taking part in the troubles of Bohemia, of which Maurice, prince of Orange, was willing to avail himself, to advance his fortune. Barneveldt, who perceived the designs of this ambitious prince, judged it was his duty to oppose him, and Maurice never pardoned his zeal for the li- berty of the republic ; but having got his partisans to accuse him of a design to deliver his country into the hands of the Spanish monarch, on this absurd chaise, lie was tried by twenty-six com- missaries deputed from the seven provinces, con- demned to lose his life and his fortune confiscated, lie heard the si ntence with great composure. ‘ I have serwd the states,’ said he, ‘thirty years as pensionary of Holland, and the city of Rotter- dam as pensionary ten years before. My labors and iidelity deserved another reward. If you will have my blood, it should seem that you niujit snare rnv lor’aine, and not ruin, on my ac’coir.r, , n:y wife and children.’ He was be- heaih-M in 1C! 9.

B \UM.VF.LI IT CUenatus and William), sons of the iibo’ve, with a view of revenging their father’s death, formed a conspiracy against the stadtholder, which was discovered. \N illiamllcd; but Renatus was iakeu and condemned to die, which fatal circumstance haˆ innr-.>rt;di.> 1 hi; surprise, that she do that i’or her sou which she had not dor.’ :oi her hu

I!AI;M vi. i.;>;, an iˆhtiui, south of Terra del Fue.o. Lou-. (‘,[,- ,”;►►’;’ V, ., lat. o.VJ 40′ S.

I►►A!l\l iA!!I), in on./Mii.logy, the name of a bin! Dually s, en at Ma, ana esteemed as a fore- tell :\ weather. It is about the size of a sparrow, its iicck and lack arc black, and its breast and belly ra”; its t’cct are red, and its bill black and somewhat broad. It skims very rnr.My alouu tin .surface of the water.

UNSTABLE, a county ana peninsula of

Massachusetts, bounded on the east and south by the Atlantic Ocean, north by Cape Cod Bay, west by Buzzard’s Bay, and north-west by Ply- mouth county, where it is but four miles broad This county lies nearly in the form of a man’s arm when bent, with his hand turned inwards. The whole extent on the outer shore, from Wood- end to Buzzard’s Bay, is about 120 miles;

and the inner shore on Cape Cod is nearly seventy ; its greatest breadth is not more than two miles. It is in general a barren sandy soil, perhaps more so than any other part of the eastern states. The trees which grow here are mostly pitch-pine. It abounds with ponds of fresh water, generally well stored with fish. The principal produce is Indian corn and rye. It is divided into ten townships, viz. Barnstaple, Falmouth, Sandwich, Yarmouth, Harwich, Eastham, Wellfleet, Chat- ham, Truro, and Province-town. The chief towns are Barnstable and Falmouth.

BAHNSTABLE, a port of entry and post town of Massachusetts ; situated in the above county, at the head of a bay of its own "ame. It is seventy-two miles south-east by south of Boston, and 119 of Philadelphia. Long. 4►► 5′ E. lat., 41►► 43′ N.

BARNSTABLE, or BARNSTAPLE, a sea-port town of Devonshire, seated on the river Taw, over which there is a good bridge. It is a cor- poration town, and sends two members to par- liament. It lies thirty-six miles north of Exeter, and 191 from London, has a market on Friday, and fairs, Friday before April 21, September 19, and second Friday in December, which last four days, toll free.

BARNSTEAD, a township of New Hamp- shire, in Stafford county, thirty-two miles north- west of Portsmouth.

BARNWELL, i. e. Bairn's Well, a village about half a mile north-east of Cambridge. In 1092, a priory being founded in Cambridge in honor of St. Giles, by Hugolina, a Norman lady, Paganus Peverell, a favorite of Henry I., re- ceived a grant of the property ; and finding the site upon which it had been commenced too small, he transferred it to the spot now called Barnwell, where many of the ancient walls still remain. A pottery fair is held yearly here, on a common called Midsummer-green, which com- mences on St. John's day, and lasts a fortnight. It assumed a legal form as early as the reign of Henry III., and is proclaimed by the heads of the university. Another fair, called Sturbridge fair, annually held in a meadow in this parish, has been traced by Dr. Stukely to the times of Carausius. Assured documents trace it up to king John, who granted it for the use and main- tenance of a hospital of lepers, which here pos- sessed a chapel dedicated to St. Mary Magdelen, which is still in existence. By a charter of Henry VIII. this fair was transferred to the mayor and corporation of Cambridge on the payment of 1000 marks. On the fourth of Sep- tember the ground is marked out. On the eighteenth, the university officers first, and then the officers of the corporation, proclaim the fair, which lasts fourteen days. One of these days (September 25) is appropriated to the sale of

horses. It was formerly the largest fair in Eng- land; and was attended in tthe year 1605 by Hackney coaches from London.

BARO, or BARON (Peter), was born at Estam- pes in France, and educated in the university of Bourges, where he was admitted a licentiate in the law : but, being of the Protestant religion, he was obliged to leave his native country to avoid persecution ; and withdrawing into Eng- land, was kindly entertained by Lord Burleigh. He afterwards settled at Cambridge; and by Lord Burleigh's recommendation, was, in 1674, chosen professor of divinity there. For some years he quietly enjoyed his professorship ; but at last a restless faction was raised against him, by his opposing the doctrine of absolute predes- tination, which rendered his place so uneasy that he left the university, and settled in London. He wrote, 1 . In Jonam Prophetam Praelectiones xxxix; 2. De Praestantia et Dignitate Divings Legis ; and other pieces. He died in London, ⬛⬛⬛about 1600.

BAROCCI, or BAKOZZI (Francis), a noble Venetian, who distinguished himself in the latter half of the sixteenth century by his erudition, and his extensive knowledge of mathematics. He had, however, the weakness to believe in magic, and his attempts to practise it brought him into the hands of the Inquisition, from which he es- caped with difficulty, by the payment of a heavy fine. His published works are, Translations from Proclus and Hiero ; four books of a Treatise on Cosmography ; a Treatise on Geometry ; and a curious volume, intituled, II Nobilissimo ed Antichissimo giuco Pitagorico chiamata Ritmo- machia,- cioe battaglia di consonanze di numeri, with figures, imitated from the Latin of Buxerius. Among his MSS. is a description of Crete.

BAROCCIO (Frederic), a celebrated painter, born at Urbino. In his youth he travelled to Rome, where he painted several things in fresco. Ke then returned to Urbino : and giving himself up to intense study, acquired a great name in painting. His genius particularly led him to religious subjects. At his leisure hours he etched a few prints from his own designs ; which are highly finished, and executed with great soft- ness and delicacy. The Salutation is his capital performance in that way : of which we seldom meet with any impressions, but those taken from the retouched plate, which are very harsh. He died at Urbino in 1612, at the age of eighty-four.

BAROCHAN, a barony in the parish of Houstoun, in Renfrewshire, belonging to an an- cient family of the name of Fleming, whose an- cestors came from Flanders in the reign of David I., and one of whom was killed at

the battle of Floddon. It had a very ancient cross on the side of the public road, which was removed by the proprietor, Malcolm Fleming, Esq. to a hill where the old mansion-house stood. In the front of this cross, there are two rows of images, four in each row, with long garments and clubs over their shoulders. Tradition is silent respect- ing it. The barony abounds in free-stone, coals, and lime-stone, and the mansion-house is orna- mented with plantations of ash, plane, oak, larch, and fir.

BAROCHE, or BROACH, capital of a district

of the same name, in the province of Gujrat, on the north bank of the Nerbuddah. It is walled round, and was formerly a place of great trade, It is now inhabited by weavers and manufacturers of cotton cloth. Here they have the best cotton in the world, and of consequence the best baftas are manufactured in this place. The waters of the Nerbuddah are also said to have the peculiar property of bleaching cloths to a pure white. Baroche was ceded to Madhajee Sindia in 1 782, but was retaken from his successor, Dowlet Row. in 1803, by Sir Arthur Wellesley, and has ever since remained in possession of the British. Long. 72►► 5′ E., lat. 22►► 15′ N.

BAROCO, in logic, a term given to the fourth mode of the second figure of syllogisms. A syllo- gism in baroco has the first proposition universal and affirmative, but the second and the third par- ticular and negative, and the middle term is the predicate in the two first propositions. Example :

BA Every man is a two-legged animal :

RO But every animal is not two-legged ;

co Therefore every animal is not a man.

BAROM'ETER, 1 From jSapoc, weight, and BAROMETR'ICAL. $ ptrpov, measure. A ma- chine for measuring the weight and variations of the atmosphere, in order to determine the changes of the weather, the elevation of particular parts of the earth's surface, &c.

The measuring the heights of mountains, and finding the elevation of places above the level of the sea, hath been much promoted by barometrical expe- riments, founded upon that essential property of the air, its gravity or pressure. As the column of mercury in the barometer is counterpoised by a column of air of equal weight, so whatever causes make the air heavier or lighter, the pressure of it will be thereby increased or lessened, and of consequence the mercury will rise or fall. Harris.

He is very accurate in making barometrical and thermometrical

instruments. Derh, Phytico-Theol.

BAROMETER. The name baroscope, signifying an indication of weight, was originally given to the mercurial tube by Sinclair, professor of philosophy in the university of Glasgow, in Charles II. reign : but the more definite one of baro- meter, obtained universally a short time after- wards. The barometer is founded upon the Torricellian experiment, so called from Torricelli the inventor of it, at Florence, in 1623; it is a glass tube, filled with mercury, horizontally sealed at one end ; the other open and immerged in a basin of stagnant mercury ; so that, as the weight of the atmosphere diminishes, the mercury in the tube will descend, and, as it increases, the mer- cury will ascend ; the column of mercury sus- pended in the tube being always equal to the weight of the incumbent atmosphere. It was long the common opinion among philoso- phers, that the ascent of water in pumps was owing to what they called nature's abhorrence of a vacuum ; and that thus fluids might be raised by suction to any height whatever. But an acci- dent having, early in the seventeenth century, discovered that water could not be raised in a pump, unless the sucker reached to within thirty- three feet of the water in the well, it was con- jectured by Galileo, who flourished about that

time, that there might be some ofner cause of the ascent of water in pumps, or at least that this abhorrence was limited to the finite height of thirty-three feet. Being unable to satisfy himself on this head, he recommended the consideration if the difficulty to Torricelli, who had been his disciple. After some time Torricelli suspected that the pressure of the atmosphere was the cause of the ascent of water in pumps; that a column of water thirty-three feet high was just a counter- poise to a column of air of the same base, and which extended up to the top of the atmosphere ; and that this was the true reason why the water did not follow the sucker any further. And this suspicion was soon after confirmed by various experiments. Torricelli considered, that if a column of water thirty-three feet high were a counterpoise to a whole column of the atmos- phere, then a column of mercury of about two feet and a half high would also be a counterpoise to it, since quicksilver is nearly fourteen times heavier than water, and so the fourteenth part of the height, or nearly two feet and a half, would be as heavy as the column of water. This reasoning he soon verified ; for having filled a glass tube with quicksilver, and inverted it into a basin of the same, the mercury presently descended till its height, above

tliat in the basin, was about two fed and a half, just as he expected. And this is what has, from him, been called the Torricellian experiment. The new opinion, with this confir- mation of it, was readily acquiesced in by most philosophers, who repeated the experiment in various ways. Some, however, still adhered to the old doctrine of Linus, and raised several objections aginst the new one ; such as that there was a film or imperceptible rope of mercury, extended through the upper part of the tube, winch suspended the column of mercury, and kept, it from falling into that in the basin. But this and otiicr objections were soon overcome by additional confirmations of the true doctrine; particularly by varying the elevation of the place. it was hinted by Descartes and Pascal, that if the mercury be sustained in the tube by the pres- sure ot the atmosphere, by carrying it to a higher situation it would descend lower in the tube, having a .shorter column of the atmosphere to sustain it, and vice versa. And Pascal engaged his brother-in-law, M. Perier, to try that experi- nent for him, being more conveniently situated or that purpose than he was at Paris. This he accordingly executed, by observing the height of ihr quicksilver, in t'ae tube, first at the bottom of a mountain in Auvergne, and then at several diligent altitudes ; wherein it was found that the mercury fell lower and lower all the way to the top ot' ihe mountain ; and so confirming the truth of the doctrine relating to the universal pressure ot the atmosphere, and tin- consequent suspen- sion of the mercury in the tube of the barometer. 1 hus, by tin; united endeavours of Torricelli, Descartes, 1'ascal, Mersetine, liuygens, and others, the cause of the suspension of the quick- silver in the tube of the barometer became pretty generally established. It was some time, how- < vi r, alter this ueneral i onsont before it was kiiO'.sn t ; it the pu.M>re of tin; air was various at ;ji!iurei;t times at ihe same place:. This could

not, however, remain long unknown. The fre- quent measuring of the column of mercury soon showed its variations in altitude; and experience and observation taught that those variations in the mercurial column were always succeeded by certain changes in the weather, as to rain, wind, frosts, &c. Hence this instrument soon came into use, as the means of foretelling the changes of the Weather ; and on this account it obtained the name of the weather-glass, as it did that of barometer from its measuring the weight or pres- sure of the air.

It should not be forgotten that Pascal and his brother-in-law seem clearly to have seen the pos- sibility of those numerous experiments of modern times, for ascertaining the altitude of mountains by the barometer. Early in the mornin^of the 1 9th of Sept. 1648, the latter assembled with a few friends in the garden of a monastery, situate near the lowest part of the city of Clermont, where he had Drought a quantity of mercury, and two glass tubes hermetically sealed at the top. Having filled and inverted them as

usual, he found the mer- cury tc stand in both at the same height, namely, 26 inches and 3| lines, or 28 English inches ; when leaving one behind, in the custody of the subprior, he proceeded with the other to the summit of the mountain, and repeated the expe- riment. Here the party were surprised and de- lighted to see the mercury sink more than three inches under the former mark, and remain sus- pended at the height of 23 inches and 2 lines, or 24- 7 English inches. In his descent from the mountain, he observed, at two several stations, that the mercury successively rose ; and, on his return to the monastery, found it stood exactly at the same point as at first. Encouraged by the success of this memorable experiment, Perier re- peated it on the highest tower of Clermont, and noted a difference of two lines at an elevation of twenty toises. Pascal, as soon as the intelligence reached him at Paris, made similar obsei vations on the top of a high house, and in the belfry of the church of St. Jacques des Boucheries, near the border of the Seine ; and so much was he satisfied with the results, that he immediately proposed the application of the barometer for measuring the relative height of distant places on the earth's surface. The substance, therefore, of all that has since been more accurately ascer- tained, was thus at once discovered. Pascal, it is well known, was attacked and persecuted as a heretic by the Jesuits, for these and similar pur- suits ; and when no other weapon would avail, they contested the originality of his experiments. Their base conduct on this occasion, however, only stimulated his ardor, and gave a keener edge to that wit, which he afterwards directed with such overwhelming energy against this insidious order of the priesthood. In 1653, he composed, though they were not published till after his death, two short but perspicuous treatises, On the Equili- brium of Liquors, and On the Weight of the Mass of Air. The laws of the equilibrium of fluids are here beautifully deduced from a single principle. In those tracts, he likewise gives a description of the hydraulic press. It has, how- ever, been truly remarked, that the intention of *hese philosophers, was merely to ascertain wbe-

ther the height of the meroury was affected by being carried to different altitudes, and it was ' some time afterwards that theorems and formulae were invented for the purpose of barometrical measurement ; the balance between the mercury and the atmosphere was indeed known, but the value of the weights remained to be determined. The first thing necessary to be ascertained was the law of the condension of air under different pressures. Mariotte in France, and Boyle and fownley in England, found from experiment that the density of this fluid was proportional to the compressing weight ; but this law is only true when the temperature of the air remains constant ; and attention was not at first paid to this important

restriction, which in fact could not be indicated by experiments where the com- pressed volumes of air differed but little from each other in respect to temperature.

The law of compression being otherwise known, Halleymade use of it for calculating the decrease of density in the beds of the atmosphere at va- rious altitudes ; and thus led to the mathematical formulae, by means of which the difference of altitude of two places may be calculated from the heights of the mercury in the barometer observed at each of them. Newton, in his Principia, per- fected Halley's theory, by showing that regard was to be paid to the diminution of gravity, ac cording as the distance from the surface of the earth increased ; but, what is very remarkable, he, as well as Halley, omitted to consider the effect of the variations of heat, and of the pro- gressive decrease of the temperature and density of the different strata of the atmosphere. The barometrical formulae thus obtained, without the correction which renders them applicable to all temperatures, could only furnish a very imper- fect approximation, and therefore philosophers and mathematicians, who endeavoured to apply them, found that they succeeded only in a few in- stances, and that generally the results seemed to be subject to various errors, which appeared to follow no law. Hypotheses were therefore formed for explaining these irregularities ; but some maintained that no dependence whatever was to be placed upon such theorems ; and others, that they ought to be wholly excluded from works of science. No person seems to have conjectured the true cause ; and the omission is the more re- markable, when we reflect that Bouguer and Lambert, men of such peculiar and opposite ta- lents ; the one a most accurate observer and philosopher, and the other a very inventive and acute mathematician, were both much occupied with this instrument, and its application.

Deluc at last discovered the true source of these errors and anomalies, by searching in the observations themselves for the correspondence between the temperature of the air and the cor- rection which the general formula required. Nu- merous experiments on the comparative expan- sions of air and mercury enabled him to perceive the law that those corrections ought to follow, and the quantity in all cases which should be assigned to them.

This remarkable discovery, by giving to the baiometrical formula an unexpected accuracy, animated the zeal of philosophers, and observa-

tions were multiplied to a great extent. Dr. Mas- kelyne undertook to reduce the new formula into English measures, while Playfair added a correc- tion for the variation of gravity in different latitudes. Sir George Shuckburgh, by very exact measures, verified the results of M. Deluc, and gave them a greater degree of precision : General Roy also made an

application of it at a great number of places in the progress of his survey : the Alps were levelled by MM. Saussure and Pictet ; the Pyrenees by M. Ramond, and the Andes by Humboldt ; and the barometer ren- dered portable, became an indispensable instru- ment to all well-informed travellers.

Still the theory of barometrical levelling was far from being brought to its most simple terms. M. Deluc had adapted the constant co-efficient of his formula to a certain degree of the thermo- meter, which he called the normal temperature, and which he had fixed from the condition, that, for this temperature, the difference of level be- came a decimal multiple of the difference of the tabular logarithms of the observed barometrical heights. All the corrections relative to tempe- rature which the formula required, commenced, therefore, according to M. Deluc, at the normal temperature ; in consequence of which this point of commencement changed whenever the formula was applied to any other measures than French toises. These variations were very inconvenient : and it appeared much more natural to make all the corrections commence at some fixed term, as, for example, the freezing point, which is given by experiment, and common to observers of all countries. This is what Laplace has done, in a chapter of his Me"canique Celeste, in which he has established the requisite formula upon the most simple and accurate data. He determines- the correction for temperature relative to the ex- pansion of air, according to the experiments of M. Gay Lussac ; but he has modified his results in such a manner as to take into the account the humidity of the atmosphere ; and, what is very fortunate, the sum of this correction and the co- efficient of the expansion of air is just equal to TBJ55. With respect to the, expansion of mercury, Laplace employed the values obtained, in con- junction with Lavoisier, in experiments on the expansion of bodies, of which there unhappily remains only a small number of results. Finally, he determined the general co-efficient of the for- mula from barometrical observations themselves, by combining for this purpose, a great number of experiments made in the Pyrenees by M. Ra- mond, with a degree of care and an accuracy before unknown in this science. The valuo of this co-efficient has since been confirmed in a di- rect manner by the experiments made by M. Arago and M. Biot, on the comparative weight of air and mercury ; so that all die elements of the barometrical formula, the research of which, has cost travellers so much labor, has been ob- tained directly, and with great accuracy, without quitting the chemical laboratory. Laplace's for- mula, founded upon data so exact and so ably combined, coincides with observations better than any other in which these advantages are not united, and the rigorous proofs to which MM. Ramond and Daubusson have submitted it ex-

perimentally, hare demonstrated its utility. It still remained, however, to render the observa- tions comparable with each other, though made with different barometers ; which has also been done by Laplace, who has shown that the diffe- rent indications of these instruments, in circum- stances otherwise equal, are the effect of capillary attraction, and has given tables for correcting this effect.

The barometrical formula being thus improved, observations with that instrument have been con- siderably multiplied, and carried to a degree of precision almost incredible ; a precision which has already led to the idea of distinguishing every place on the globe (in addition to its latitude and longitude) by its height above the level of the sea, or rather by its distance from the centre of the earth ; which corresponds in principle with the determination of the position of a point in absolute space, by means of three rectangular co-ordinates ; with this view various tables have been computed, and principles of approximation and compensation invented, highly creditable to their respective authors.

It remains only for us to describe the progres- sive improvement of this instrument. 1. The common, or Torricellian barometer, is repre- sented in our plate liAUOMr.TKUs, fig. 1. AB is a glass tube, of -.';, or ►►, or J incli wide (the wider the better), and about thirty-four inches long, beinu' close at the; top A, and the open end B im- mersed in a basin of quicksilver CD, which is the better the wider it is. To iill this, or any other barometer, take a clean new glass tube, of the dimensions as above, and pour into it well purified quicksilver, with a small funnel either of glass or paper, in a fine continued stream, till it wants about hall' an inch or an inch of being full; then stopping it close with the linger, invert it slowly, and the air in the empty part will ascend gradually to the other end, collecting into itself such other small air bubbles as unavoidably get into the tube among the mercury, in filling it with the funnel : and thus continue to invert it sevi ral times, turning the two ends alternately upwards, till all the air bubbles are collected and brought up to the open end of the tube, and till the part, tilled shall appear without speck, like a fine polished steel rod. This done, pour in a little more quicksilver to fill the empty part quite full, and so exclude all air from the tube; then stopping the orifice auaui with the finger, invert the tube, and immerse the linger and end, thus stopped, into a ba>m of purified quicksilver. In this portion withdraw the linger, so shall the mercury descend in the tube to some place, as G, between twenty-eight and thirty-one inches above that in the basin at F, as these are the Imits between which it always stands in this country, on the common surface of the earth. Then measure, from the surface of the quicksilver in the ba-.ii at I', tv, enty-ei'_dit inches to K, and thirty-one mcln : to I, dividing the space

be tw. en them into inches and tenths, which are marked on a scale placed against the side of the tube ; and the tenths are subdivided into hundredth parts of an inch by a sliding index carrying a vernier or nonius. The-; ❖❖❖ three inches, between Uventy-ci;.:ht arid thirty -one, ❖❖❖❖❖❖❖ <.) divided, will

answer for all the ordinary purposes of a sta- tionary or chamber barometer ; but for experi- ments on altitudes and depths, it is proper to have the divisions carried on a little higher up, and a great deal lower. In the proper filling and otherwise fitting up of the barometer, several circumstances are to be carefully noted ; as, that the bore of the tube be pretty wide, to allow the freer motion of the quicksilver, without being impeded by an adhesion to the sides ; that the basin below it be also pretty large, in order that the surface of the mercury at F may not sensibly rise or fall with that in the tube ; that the bottom of the tube be cut off rather obliquely, that when it rests on the bottom of the basin there may be a free passage for the quicksilver ; and that, to have the quicksilver very pure, it is best to boil it in the tube, which will expel all the air from it. This barometer is commonly fitted up iu a neat mahogany case, together with a ther- mometer and hygrometer, as represented iu fig. 2. As the scale of variation is small, being included within three inches in the common barometer, several contrivances have been de- vised to enlarge the scale, or to render the mo- tion of the quicksilver more sensible.

Descartes suggested a method of increasing the sensibility of this instrument, which was executed by Huygens. This was effected by making the barometrical tube end in a pretty large cylindri- cal vessel at top, into which was inserted also the lower or open end of a much finer tube than the former, which was partly filled with water, to give little obstruction by its weight to the mo- tion of the mercury, while it moved through a pretty long space of the very fine tube by a small variation of the mercury below it, and so rendered the small changes in the state of the air very sen- sible. But the inconvenience was, that the air contained in the water gradually disengaged it- self, and escaped into the vacuum in the top of the small tube, till it was collected in a body there, and by its elasticity preventing the free rise of the fluids in the tubes, spoiled the instru- ment as a barometer. And this is the reason why a water barometer cannot succeed. This in- strument, however, is represented in fig. 3. C D is the vessel, in which is united the upper or small water tube A C, with the lower or mer- curial one C B. To remedy this inconvenience, Huygens thought of placing the mercury at top, and the water at bottom, which he thus contrived. A D G, fig. 5, is a bent tube hermetically sealed at A, but open at G, of about one line in diameter, and passing through the two equal cylindrical vessels, B C, E F, which are about twenty inches apart, and of fifteen lines diameter, their length being ten. The mercury being put into the tube, will stand

between the middle of the vessels E F and BC, the remaining space to A being void both of air and mercury. Lastly, common water, tinged with a sixth part of aqua regia, to prevent its freezing, is poured into the tube FG, till it rises a foot above the mercuiy in D F. To pre- vent the water from evaporatitig, a drop of oil of sweet almonds floats on the top of it. But the column of water will be sensibly affected by heat and cold, which spoils the accuracy of the instru- ment. Although the invention of tins barometer

was claimed by Huygens, and also by De la Hire, it appears first to have been contrived by Dr. llooke in 1668, and described in Phil. Trans., No. 185. It is most delicately movable; and, when properly managed, by far the fittert for a chamber, or for amusement, by observations on the changes of the atmospheric pressure. The slightest breeze causes it to rise and fall, and it is continually in motion. But, for philosophical purposes, this, and all other instruments of the kind, are inferior to the common barometer, both on account of their being less manageable, and also in point of accuracy. For their scale must be determined in all its parts by the com- mon barometer, and therefore, notwithstanding their great range, they are susceptible of no greater accuracy than that with which the scale of a common barometer can be observed and measured.

The horizontal or rectangular barometer of Bernoulli and Cassini is shown in fig. 4. AD is a pretty wide cylindrical part at the top of the tube, which latter is bent at right angles at B ; the lower part, B C, being turned into the hori- zontal direction and closed above at A, but open at the lower end, where however the mercury cannot run out, being opposed by the pressure of the atmosphere. This, and the foregoing con- trivance of Huygens, are obviously founded on the known principles of hydrostatics, ‘ that fluids of the same base press according to their per- pendicular altitude, and not according to the quantity of their matter ;’ so that the same pres- sure of the atmosphere sustains the quicksilver that fills the tube BDA and the cistern D, as would support the mercury in the tube alone. Hence having fixed upon the size of the scale, as, for example, the extent of twelve inches instead of three, that is four times as long ; the area of a section of the cylinder D must be four times that of the tube, and consequently its diameter double ; so that for every natural variation of an inch of air in the cylinder AD, there will be a variation of four inches in the tube C B. But on account of the friction against the sides of the glass, the quicksilver is liable co break ; and the rise and fall is then no longer equable ; besides the mercury is in danger of being thrown out of the orifice at C, by any sudden motion of the machine.

The diagonal barometer, invented by Sir Samuel Moreland, fig. 6, is another method of enlarging the natural scale of three inches per- pendicular, C D, by extending it to any length, BC, in an oblique direction. This is liable in some degree to the inconvenience of friction and breaking ; and hence it is found that the diagonal part, B C, cannot properly be bent from the per- pendicular more than in an angle of 45►►, which only increases the scale nearly in the proportion of seven to five.

But the most perfect of all these instruments, on an enlarged scale, unquestionably is Dr. Hook's wheel barometer, fig. 7. This was in- vented about 1668, and is meant to render the alterations in the air more sensible. Here the barometer tube has a large ball, AB, at top, and is bent up at the lower or open end, where an iron ball, G, floats on the top of the mercury in

the tube, to which is connected another ball, H, by a cord, hanging freely over a pulley, turning an index, KL, about its centre. When the mer- cury rises in the part F G, it raises the ball, and the other ball descends and turns the pulley with the index, round a graduated circle from N towards M and P ; and the contrary way when the quicksilver and the ball sink in the bent par of the tube. Hence the scale is easily enlarged ten or twelve fold, being increased in proportion of the axis of the pulley to the length of the index KL. But then the friction of the pulley and axis is some obstruction to the free motion of the quicksilver. Contrivances to lessen the friction, &c., may also be seen in the Phil. Trans, vol. 52, art. 29., and vol. 60, art. 10.*

In the Philosophical Transactions, vol. 53, No. 29, Fitzgerald's improvement of the wheel barometer is described as furnished with two pulleys, which move on friction wheels ; each of which turns an index on the centre of a graduated circle. The smallest circle is four inches in diameter, and divided into three equal parts, each again being subdivided decimally ; and the changes, corresponding to the rise or fall of the mercury from twenty-eight to thirty-one inches, are marked on the margin of it, as they are on the scales of the common barometers. The large circle, which is proposed by the inventor to be thirty inches in diameter, is divided into three hundred equal parts, and the index belonging to it will therefore mark distinctly to the six- hundredth part of an inch in the rise and fall of the mercury. On the centre of this circle two registers are fixed, which are placed along the index when the instrument is adjusted ; one of them is carried round as the index advances, and left round on its return ; so that their distance will determine the limits of the variation from one observation to another.

Mr. Caswell's barometer, described in the Philosophical Transactions, vol.

24, seems to be as sensible and exact as any. Suppose A B C D, fig. 8, is a bucket of water, in which is the baros- cope xreyzosm, which consists of a body x r s m, and a tube e y z o, which are both con- cave cylinders, made of tin, er rather glass, and communicating with each other. The bottom of the tube, z y, has a leaden weight to sink, it, so that the top of the body may just swim even with the surface of the water by the addition of some grain weights on the top. When the instrument is forced with its mouth downwards, the water ascends into the tube to the height z u. To the top is added a small concave cylinder, or pipe, to keep the instrument from sinking down to the bottom : m d is a wire ; and m s, d e, are two threads oblique to the surface of the water, which perform the office of diagonals : for while the in- strument sinks more or less by an alteration in the gravity of the air, where the surface of the water cuts the thread is formed a small bubble, which ascends up the thread while the mercury of the common baroscope ascends, and vice versa. It appears from a calculation which the author makes, that this instrument shows the alterations in the air 1200 times more accurately than the common barometer. lie observes, that the bub- ble is seldom known to stand still even for a

minute; that a small blast of wind, which cannot be heard in a chamber, will sensibly make it sink ; and that a cloud passing over it always makes it descend, &c.

ROWN ING'S COMPOUND BAROMETER has se- veralcontrivances for enlarging the scale, and that in any proportion whatever. One of these is described in the Philosophical Transactions, No. 427, and also in his Natural Philosophy, part 2 ; and another in the same part, which is repre- sented in tig. 9. ABC is a compound tube, hermetically sealed at A, and open at C ; empty from A to D, filled with mercury from thence to B, and from hence to E with water. Hence, by varying the proportions of the two tubes AF and F C, the scale of variation may be changed in any degree.

A STEEL-YARD or LEVER BAROMETER, is repre- sented by fig. 13, which enlarges the scale in pro- portion of the shorter to the longer arm of a steel- yard. A B is the barometer tube, close at A and open at B, immersed in a cylindrical glass cistern C D, which is but very little wider than the tube A B is. The barometer tube is suspended to the shorter arm of an index like a steel-yard, moving on the fulcrum E, and the extremity of its longer arm pointing to the divisions of a graduated arch, with which index the tube is nearly in equilibrio. \V hen the pressure of the atmosphere is lessened, the men airy descends out of the tube into the cistern, which raises the tube

and the shorter arm of the index, and consequently the extremity of the longer moves downwards, and passes over a part of the graduated arch. And on the contrary this moves upwards when the pressure of the atmosphere increases.

Artists, however, have of lute directed their efforts rather to adapt barometers for particular purposes, and to improve their accuracy of action, than to enlarge the scale.

An instrument called the CHAMBER BAROME- TKI;, constructed by Messrs. Jones, opticians is shown in fiir. 11. It consists of a barometer d, thermometer a a, and hygrometer c, all in one mahogany frame. Tin.- thermometer or hygro- meter of this apparatus may lie separated from the frame, and occasionally used apart if neces- sary. The thermometer is separated by means of t\vo screws u a: and the hygrometer by un- screwing a br.vs pin at the back of the frame. The index of the hygrometer is set at any time, merely l>y ino\inu' with the finger the brass wheel seen at c ,- and the two sliding indexes of thi- barometer and thermometer are moved by rack work, set in action by the key g, placed in the holrs // and i. The divisions of the barome- ter, plate d, are in tenths of an inch, from twenty- eiˆht to thirty-one inches, and these are subdivided into hundredths 1>\ the nonius or vernier scale, on a sliding slip of l.rass. The vernier scale is divided into ten equal parts, which are equal to eleven on the scale ot inches, or to eleven-tenths of an inch. By this means the height of the mer- cury at I1", is evident merely by inspection to the one-hundredth part of an inch, according to the principle of the vernier scale.*

A more common sort of barometer is frequently made, which differs from the one above princi- pally iu this, that in . i iKTul it is not supposed to

register to the same degree of accuracy, having no vernier, and being meant for the common pur- poses of a weather-glass, its face is marked with different words indicating the probable shades of weather peculiar to different altitudes of the mer- cury. As the lowest state of the mercury in this country is not less than twenty-eight inches, nor the highest above thirty-one inches, this lowest point on the scale, on the face of the instrument, is marked stormy, and the latter very dry for summer, and on the other side very hard frost for winter. To the next half-inch below this highest point are written set. fair on the one side, and set. frost on the other. At thirty inches, the word fair is placed on the one side, and frost on the other ; and at twenty-nine inches and a half there is marked changeable, both for summer and win- ter. At twenty-nine inches we have rain on the one side, and snow on the other ; and at twenty- eight inches and a half, much rain on the sum- mer side, and much snow on the winter ; these terms, for want of room, are omitted in the figure.

In the better sort of these chamber barometers the reservoir of mercury is a leathern bag, which is more or less compressed by the atmosphere, according to its greater or less pressure, and the scale is supposed to commence from the bottom of the tube ; there is also a screw at the bottom, fig. 29, by which the mercury may be forced to the top of the tube, and thus prevented from oscil- lating when the instrument is removed. This construction, however, is not sufficiently accurate for those instruments designed for the mensura- tion of altitudes ; portable barometers, therefore, have several adjustments peculiar to this purpose.

PORTABLE BAROMETER. ❖❖❖ One of the best in- struments of this kind, by Troughton, is exhibited in figs. 12, 13, 14, and 15, (BAROMETERS, plate II.) Its distinguishing characteristic consists in the excellent manner in which the mercury in the cistern is set to the zero in the scale of inches. For this purpose a glass cylinder, of about two inches and a half diameter, and as much in length, contains the mercury. An external cover- ing of hollow brass, terminating in an interior screw a little above and below the glass, admits external screw pieces, whose ends, well leathered, being pressed hard against the ends of the glass, prevent the escape of the fluid. Near the upper end of the brass cover are two slits, made hori- zontally, one before, and the other behind, ex- actly similar, and opposite to each other. At bottom is a screw, seen better in the section, fig. 13, which, acting upon the usual leathern bag, forces the quicksilver upwards at pleasure, and, by filling every part, renders the instrument por- table. But the primary design of the screw is, to furnish the means of adjusting the surface of the mercury in the glass cistern, so as just to shut out the light from passing between it and the upper edges of the slits in the brass cover. This is the mode of adjusting to zero ; and it follows, that the upper edges of the slits must represent the beginning of the scale of inches. The frame is entirely made of brass tube, and above the cis- tern is of about 1-1 inch in diameter. The first ten inches of the lower end are occupied by a thermometer, whose bulb, bent inwards, is con- cealed within the frame. At about three inches

U < > V[KT .]❖❖❖',

Ff

❖❖❖

culp ❖❖❖

BAROMETER.

higher, it is attached to the stand by a ring, in which the frames turn round with a smooth and steady motion, for the purpose of placing the in- strument in the best light for reading off, &c. The actually divided scale commences at about fifteen inches above the zero, and is continued as high as thirty-three inches; and, by the usual help of a vernier, is subdivided down to -001 of an inch. A longitudinal slit, from end to end of the divided part, exposes to view the glass tube and mercury within it. The whole of this part consists of two tubes of brass : in the inside of the interior one, slides a cylindrical piece, and on this is divided the vernier scale, the index to which is the lower end of the piece. In taking the height of the mercury, this piece is brought down so as just to exclude the light from passing between itself and the spherical surface of the mercury. The screw at top, although but a short one, performs this office in whatever part of the scale the vernier piece may be ; for it acts upon the interior long tube, in the inside of which the piece is sustained by friction, and in which it is, on every occasion, to be set by hand nearly. The tripod is altogether similar to what Mr. Ramsden used for the same purpose, as far back as the year 1775. It affords when closed, fig. 15, a safe and convenient packing-case for the instrument : the structure of the staff head is cu- rious : the principal part is a circle fig. 16, about 75 of an inch broad, joined in three pieces; these, although they seem in principle to be in capable of motion, yet, in practice, produce what is fully adequate to the purpose. The three ˆ)oint-pins extend inwards, so as to pass through a circular rim, which they hold fast ; within this rim is hung a similar one, by two pivots ; and, inside the latter, at right angles to the pivots, are fastened two y's, or angles, in which the barome- ter hangs by its gudgeons. Thus are brought about, in a small compass, the means of ex- tending the legs, of turning the instrument about in the tripod, and an universal joint, whereon it readily places itself perpendicular to the horizon.

The importance of these instruments at sea, where every real indication of the approaching weather must be important, early suggested a MA- KINE BAROMETER, first invented by Dr. Hooke. It is contrived so as not to be affected or injured by the motion of a ship. His contrivance consisted of a double thermometer, or a couple of tubes half filled with spirit of wine ; the one sealed at both ends, with a quantity of air included ; the other sealed at one end only. The former of these is affected only by the warmth of the air ; but the other is affected both by the external warmth and by the variable pressure of the at- mosphere. Hence, considering the spirit ther- mometer as a standard, the excess of the rise or fall of the other above it will show the increase or decrease of the pressure of the atmosphere. This instrument is described by Dr. Halley, in the Phil. Trans. No. 269, where he says, ' I had one of these barometers with me in my late southern voyage, and it never failed to prognos- ticate and give early notice of all the

bad weather we had, so that I depended thereon, and made provision accordingly ; and from my own expe- rience I conclude, that a more useful contrivance

hath not for this long time been offered for the benefit of navigation.' Mr. Nairne, an artist of London, invented another kind of Marine Baro- meter, having the lower part of the tube, for about two feet long, made very small, to check the vi- brations of the mercury, which would otherwise arise from the motions of the ship. This was also assisted by being hung in gimbals, by a part which subjects it to be the least affected by such motions. It was constructed for the use of Cap- tain Phipps in his celebrated v6yage to the North Pole. A marine barometer has also been in- vented by M. Passemente, an ingenious artist of Paris. This contrivance consists only in twist- ing the middle of the tube into a spiral of two revolutions ; by which contrivance the impulses which the mercury receives from the motions of the ship are destroyed, by being transmitted in contrary directions.

TROUGH-TON'S MARINE BAROMETER may be considered the best, perhaps, at present known. The upper part of the tube here is four-tenths of an inch diameter, and the smaller part only one- fiftieth ; and, to counteract more effectually the effects of the ship's motion, the instrument, like the above, is suspended in gimbals, as shown in figs. 17 and 18. The whole is attached to the side of the cabin by two brass tubes, which slide one within the other, and render the instrument capable of being suspended at different distances from the place of support ; that the bottom of it may not strike the side of the cabin during any heavy rolling of the vessel, the inner tube carries the gimbal. The external frame of the barometer is a cylindrical tube of wood, on which the brass sockets slide ; and in this is inserted the inner- most pair of pivots, or universal joint, which furnishes the instrument with a movable point of suspension. The top is terminated with a brass ball, of a weight nearly equal to that of the mer- cury, &c. at the lower end. With respect to the position of the point of suspension, no general rule can be given applicable to every case, though it is a circumstance on which the oscilla- tions of the mercury greatly depends ; it is indeed obvious, that, though this point were accurately determined for one particular height of the mer- cury, it would not correspond with every other. By this ingenious contrivance of the counterpoise to the weight of the mercury, the centre of gra- vity of the whole will be about the middle ; and if the instrument were of the same specific gra- vity throughout, the point of suspension that would produce the smallest oscillation, would be about one-third of the length of the instrument from the top, considering the lower part as a fixed point ; but as this is not strictly the case, the point of suspension is best ascertained by ex- periment. The graduation is on two scales of ivory, about four inches long, for the reception of which two opposite quarters of the cylindrical frame are sunk through that length,

their planes pointing towards the centre of the tube, and the index is very light, and slides on the glass tube, without touching any other part. At the bottom is the usual screw, which, pressing up the leather bag, prevents the mercury from oscillating when the instrument is removed. For an instrument of this kind, lately invented by Mr. Adie, see SYMI IESOMETEB.

Among barometers, or baroscopes, might be ranked a weather instrument to ascertain the variation of the atmosphere, by the sound of a wire, mentioned by M. Lazowski in his Tour through Switzerland, and discovered by accident. A clergyman, who was near-sighted, often amused himself with firing at a mark, and contrived to stretch a wire so as to draw the mark to him to see how he had aimed. He observed that the wire sometimes sounded as if it vibrated like a musical chord ; and that after such soundings a change always ensued in the state of the atmos- phere ; from whence he came to predict rain or fine weather. On making farther experiments, it was found that the sounds were most distinct when extended in the plane of the meridian. According to the weather which was to follow, the sounds were more or less soft, or more or less continued. Fine weather was announced by the tones of counter-tenor, and rain by those of bass. It has been said that M. Volta mounted fifteen chords in this way at Pavia, to bring this method to some precision, but no accounts have appeared of his success.

Marine barometers are now generally used on board all ships of war and Indiamen. To fa- cilitate the keeping of a register of barometrical observations, Mr. Ilorsburgh, hydrographer to the East India Company, has lately published a set of engraved ruled sheets, adapted for the convenience of navigators. In these plates the height of the mercury, from twenty-seven to thirty-one inches, is represented in inches and tenth parts, by horizontal lines ; while each suc- cessive day has a space apportioned to it by ver- tical bars. The state of the barometer at every observation is marked with a dot; and these dots being afterwards connected together, exhibit an irregular waved line, stretching across the sheet, and indicating the series of the changes of the weather. At the lowest points, from which the curve again returns, ;i gale generally follows. From the observations made off the Cape of Good Hope, during the month of May 1815, by Captain Basil Hall, of his Majesty's sloop Vic- tor, it appears that whenever the mercury fell to 29′ GO inches, a storm always ensued; the column always rose when the gale abated, and when it reached near thirty inches, the weather became fair. Those gales often came on suddenly, without any visible

change in the aspect of the sky, but the marine barometer never failed to give warning of their approach.

Tin' following observations, upon the move- ments and state of the mercury in the marine barometer, were made by Captain Flinders, of his maji.sty's ship Investigator, during his ex- amination of the coasts of New Holland and New South \ ales, the Terra Australia of the earlier charts, in the years of 1801, 1802, and l!io:;. 1'hil. Trans. 180(5, Tart. 2. The ba- rometer, with which these observations were made, was constructed by Nairne and Blunt, and had been used in Captain Cook's voyages. The height of the mercury was taken regularly at day-lireak, at noon, and at eight o'clock in the evening Tin; temperature of the thermometer \sas also registered at the, same periods. The < ireumstaiiees that led Captain Flinders to think his observations worth attention were, the coin-

cidence that took place between the rising and falling of the mercury, and the setting in of wind that blew from the sea and from off the land, to which there seemed to be at least as much reference as to the strength of the wind, or the state of the atmosphere. Among the ex- amples selected from the captain's journals, are nine that relate to the south coast ; from these it appears, generally, that a change of wind from the northern, to any point in the southern half of the compass, caused the mercury to rise, and a contrary change, to fall ; and that the mercury stood considerably higher when the wind was from the south side of east and west, than it did in similar weather when the wind came from the north side. The cause of this appears to be, that the first proportion of air brought in from the sea, is impelled upwards by the land which it encounters, and along the inclined surface of the land, in a sloping direction : the next portion is, in the same manner, stopped and forced up- wards ; but it has a shorter space to pass through, because the former portion goes along two of the sides, and the latter along the third side of an obtuse-angled triangle : thus, the succeeding portions of air meet the summit of land before the first portions, and cause the latter to eddy and stagnate ; while the stream blowing above this portion, compresses it, and augments its density, whence the increased height of the barometer.

' The barometer/ says Captain Flinders, ' was of great service to me in the investigation of this dangerous part of the east coast, where the ship was commonly surrounded with rocks, shoals, islands, or coral reefs. Near the main land, if the sea-breeze was dying off at night, and the mercury descending, I made no scruple of an- choring near the shore, knowing that it would either be a calm, or a wind would come off from the land ; but if the mercury kept up, I stretched off, in the expectation that it would freshen up again in a few hours. Amongst the barrier-reefs, when the wind was dying away, the barometer told me, almost certainly, from what

quarter it would next spring up. If the mercury stood at 30►► 15′ or near it, and was rising, I expected the proper trade wind ; and if higher, that it would be well from the southward, or would blow fresh ; and, if it was up to 30►► 30′ both. The falling of the mercury to 30►► 10′ was an indica- tion of a breeze from the north-eastward ; and its descent below thirty inches, that it would spring up, or shift round to the westward.' Hence, it appears, that this skilful commander navigated his vessel throughout those dangerous parts of the eastern coast that are between the latitudes of 23►► and 17►►, pursuant to a confident deduc tion from his own theory.

DR. HALLEY'S RULES FOR JUDGING OP

THE WEATHER BY BAROMETERS. 1. In Calm

weather, when the air is inclined to rain, the mercury is commonly low. II. In serene, good, and settled weather, the mercury is generally high. III. Upon very great winds, though they be not accompanied with great rain, the mercury sinks lowest of all, according to the point of the compass the wind blows from. IV. The greatest heights of the mercury are found upon easterly or north-easterly winds, other circumstances alike. V. In calm frosty weather, the mercury commonly

stands high. VI. After very great storms of wind, when the mercury has been very low, it generally rises again very fast. VII. The more northerly places have greater alterations of the barometer thau the more southerly, near the equator. VIII. Within the tropics, and near them, there is little or no variation of the barometer, in all weathers. For instance, at St. Helena it is little or nothing, at Jamaica three-tenths of an inch, nnd at Naples the variation hardly ever ex- ceeds an inch ; whereas in England it amounts to two inches and a half, and at Petersburgh to 3 1 nearly.

Mr. Rowning justly remarks, that it is not so much the absolute height of the mercury in the tube that indicates the weather, as its motion up and down, and therefore, to pass a right judg- ment of what weather is to be expected, we ought to know whether the mercury is actually rising or falling; to which end the following rules are of use. I. If the surface of the mer- cury is convex, standing higher in the middle of the tube than at the sides, it is a sign that the mercury is then rising. II. But if the surface is concave, or hollow in the middle, it is then sinking. And, III. If it be plain, or rather a very little convex, the mercury is stationary ; for mercury being

put into a glass tube, especially a small one, naturally has its surface a little convex, because the particles of mercury attract one another more forcibly than they are attracted by glass. IV. If the glass be small, shake the tube ; then if the air be grown heavier, the mer- cury will rise about half a tenth of an inch higher than it stood before ; but if it be grown lighter, it will sink as much. And, it may be added, in the wheel or circular barometer, tap the instrument gently with the finger, and the index will visibly start forwards or backwards according to the tendency to rise or fall at that time. This proceeds from the mercury's sticking to the sides of the tube, which prevents the free motion of it till it be disengaged by the shock ; and therefore, when an observation is to be made with such a tube, it ought to be first shaken ; for sometimes the mercury will not vary of its own accord, till the weather is present which it ought to have indicated.

VARIATIONS OF THE BAROMETER. SeVCKll

members of a German meteorogical society have registered observations upon the barometer. The most noted of those observers are, Steilehner, Planer, Chiminello, and Hemmer.

The first of these gentlemen says, that he found, by several comparative observations, that the greatest fall of the barometer does not happen in very remote places at the same time ; but that it is earlier towards the west, and later towards the east ; and that the difference of the time is nearly equal to the difference of the meridians of the places ; an assertion which deserves to be accurately examined.

M. Planer observed the barometer fora whole year, six times every day, viz. at two, six, and ten o'clock in the morning, and at the same hours in the afternoon ; and found, in general, that the barometer, between ten in the morning and two iw the afternoon, and between ten at night and two in the morning, was less in its rising, and iT in its full ; and that the contrary was the

case between the hours of six and ten in the evening and morning.

Chiminello observed the barometer twenty-two times a day, for three years, but he left a chasm in the night, which he supplied by calculation. The principal positions which he then deduced are, that the barometer falls towards noon, as well as towards midnight.

Hemmer deduced the three following general rules from a great number of accurate observa- tions : 1. When the sun passes the meridian, the barometer, if in the act of falling, continues to fall, and the falling is accelerated. 2. When the sun passes the meridian, the barometer, if in the

act of rising, falls, or becomes stationary, or rises more slowly. 3. When the sun passes the meridian, the barometer, which is stationary, falls, if it has not risen before or after being sta- tionary ; in which case it usually becomes sta- tionary during the sun's passage.

From a register kept by a Mr. Dunbar, near the banks of the Mississippi, in N. lat. 31►► 28', we find that, for the space of about four days before, and six days after, the summer solstice, the barometer regularly rises from nine P. M. to about six A. M. then falls till the return of the former hour in the evening, then rises again as before, &c. in alternate periods. In the first four days the direction is ascending, and the elevation of a line drawn through the mean is about ySj of an inch. In the latter six days the mean line is perfectly horizontal, the elevation each night amounting to ►►►$ $, and the depression each day to the same, but occupying double time.

The celebrated Humboldt made some inter- esting observations at Caraccas, in South America, near the equator. There are, he says, four at- mospherical tides every twenty-four hours, which depend only on the attraction of the sun. The mercury falls from nine in the morning to four in the evening: it rises from four to eleven o'clock : it falls from eleven o'clock till past four in the morning : and it re-ascends from that time till nine o'clock. Neither winds, storms, nor earthquakes, have any influence on this motion. Horsburgh, in his last voyage to Bombay, employed two marine barometers, one made by Troughton, and the other by Ramsden ; with which he made very minute observations ; which were published in the second part of the Phil. Trans, for 1805; and in the Hist. Roy. Soc. Edin. of the same year, we have a comparison of the diurnal variations of the barometer, made in Peyrouse's voyage round the world, with those made at Calcutta, by Dr. Balfour.

The agreement between these observations seems very remarkable. Dr. Balfour found that, during the whole lunation, in which he observed the barometer from half hour to half hour, the mercury constantly fell from ten at night to six in the morning ; from six to ten in the morning it rose ; from ten in the morning to six at night it fell again ; and, lastly, rose from six to ten at night. The maximum height is, therefore, at ten at night and ten in the morning ; and the mini- mum at six at night and six in the morning. The only difference is, that in M. Lamanon's observations, the minimum is stated to have hap- pened at about four instead of six. This, how-

ever, will not seem a very material difference, when it is remembered, that

the instant when any quantity attains either its greatest or its least state is not easily ascertained with precision. From the observations, as detailed by M. Lama- non, the time of the minimum seems to answer fully as well to five as to four ; so that the dif- ference of the results is in every view incon- siderable, and their coincidence on the whole not a little singular. The variation in Dr. Bal- four's barometer between the nearest maximum and minimum is sometimes about -fa of an inch, though, in ireneral, considerably less.

Many hypotheses have been advanced to ex- plain the cause of the variations of the barometer. The various and often imaginary effects of vapors of heat and winds have been employed in framing an explication of the changes of the atmosphere. The fact that the mercurial column generally falls before rain, seemed at complete variance with the intimation of the senses; it being a notion universally prevalent, that the air is heavier when the sky appears lowering and over- cast ; another proof, if it were wanted, how fallacious are all current opinions in matters of science.

Leibnitz endeavoured, by a sort of metaphysi- cal argument, to demonstrate that, though a body adds its own weight to the pressure of a fluid in which it is suspended, yet it will cease to be ponderous in the act of falling. This alleged principle will not, in the actual state of science, be thought to require any serious refutation. Dr. Halley thought the winds and exhalations sufficient to account tor these variations; and on this prin- ciple gives a theory, the substance of which may be comprised in what follows : 1st That the winds must alter the weight of the air in any particular country; and this, either by bringing together a greater quantity of air, and so loading the atmos- phere of any place, which will be the case as often as two winds blow from opposite 'parts, at the same time, towards the same point; or by sweeping away some part of the air, and giving room lor the atmosphere to expand itself, which will happen when two winds blow opposite ways from the same point at the same time : or lastly, by cuttmu' off the perpendicular pressure of the air, which is the case when a single wind blows briskly any way ; it being found by experience, that a strong hla' i uirn-; ;n. noised by salts and metals dissolved m them, -lihly, That the air heinu' rendered heavier !>y these and the like causes, is thi nee bctt'T aMr to support the vapors ; which beinj;]ike\ ise ! nt imately mixed with it,make theweat'i'er >'-ru". ••• and fair. .Vrani the air being made li'Jitv,' from the contrary causes, it becomes unable to sum iort the valors with which it is

replete ; these therefore precipitating, are collect- ed into clouds, the particles of which in their progress unite into drops of rain. Hence he infers, that the same causes which increase the weight of the air, and render it more able to support the mercury in the barometer, likewise produce a

serene sky, and a dry season ; and that the same causes which render the air lighter, and less able to support the mercury, likewise generate clouds and rain.

Dr. James Hutton, in his Theory of Rain, printed in the Transactions of the Royal Society of Edinburgh, vol. 1, gives ingenious and plau- sible reasons for thinking that the lessening the weight of the atmosphere by the fall of rain, is not the cause of the fall of the barometer, but that the principal, if not the only cause, arises from the commotions in the atmosphere, which are chiefly produced by sudden changes of heat and cold in the air. The barometer, says he, is an instrument necessarily connected with motions in the atmosphere ; but it is not equally affected with every motion in that fluid body. The barometer is chiefly affected by those motions by which they are produced, accumulations and abstractions of this fluid, in places or regions of sufficient extent to affect the pressure of the atmosphere upon the surface of the earth. But as every commotion in the atmosphere may, under proper conditions, be a cause for rain, and as the want of commotion in the atmosphere is naturally a cause of fair weather, this instrument may be made of great importance for the purpose of meteorological observations, although not in the certain and more simple manner in which it has been with the increase of science, so suc- cessfully applied to the measuring of heights. See RAIN.

Hauksbee's celebrated experiment has been quoted as confirming the theory of Dr. Halley. That ingenious experimentalist, about the year 1 704,placed two barometers, about three feet asun- der, with their naked cisterns in two close square wooden boxes, connected by a horizontal brass pipe ; one of these boxes had, inserted at right angles, an open pipe on the one side, and a second pipe, terminating in a screw, on the other side ; to this end he adapted a strong globular receiver of about a foot in diameter, which Tiad been charged, by injection from a syringe, with three or four atmospheres ; then suddenly opening the stop-cook, and giving vent for the escape of the air through the box and over the surface of the included cistern the mercury sunk equally in. both barometers more than two inches. This experiment might be deemed entirely conclusive, if a minute circumstance, on which its success depends, had not unfortunately been overlooked. It will be perceived frem the inspection of the figure which Hairksbee has given, that the exit pipe of the box was considerably wider than the pipe which con- veyed into it the stream of air. This fluid, escaping from compression, would', therefore, be carried by its elasticity as much beyond the state of equilibrium ; while the width of the orifice, by facilitating its emission, would allow the por- tion occupying the box and the connected reser voir to preserve its acquired expansion. If the pipe of discharge from the box had beer. mucH

narrower than the other, an opposite effect must have taken place; for the air accumulated over the cistern, not finding a ready vent, would remain in a state of condensation. This fact is a remark- able indication of the great delicacy required in performing such experiments.

The same result, however, can be exhibited by a very simple apparatus. Let a small box, or rather a glass ball, have a short narrow tube inserted in the one side, and another wide tube opposite to this, with a cross slider of brass, for contracting the orifice at pleasure ; and, to the under part of the ball, join a long perpendicular tube, bent back like a syphon to more than half its height and containing a double column of water. Now, blow through the narrow tube into the cavity of the ball, while the orifice of emission is quite opened, and the liquor will rise several inches in a long stem ; but, still continuing the blast, let the orifice be gradually contracted, and the column will first descend to its ordinary level, and then sink considerably below it.

It is clear that the fall and rise of the mercury in the barometer must evidently be occasioned by some corresponding reduction or accumulation of the atmosphere at the place of observation. Whatever augments the elasticity of the air will cause part of the incumbent flnid to evade and leave for the time a diminished vertical pressure. The efflux of wind might also produce a tempo- rary reduction of the atmospheric column. But the real difficulty consists in explaining why the variations of the barometer should be greater in the high latitudes than between the tropics, and why they so much exceed in all cases the quantities which calculation might assign. On the whole, the present state of physical science presents nothing but a series of conjectures on this subject. The augmented elasticity communicated to the air by the action of heat or the presence of hu- midity, and the reduction of the incumbent mass by the efflux of winds, have doubtless each their distinct influence, in disturbing the equilibrium of the atmospheric ocean. But the effects, par- ticularly in the high latitudes, much surpass the regular operation of those causes. The only mode, perhaps, of removing the difficulty, is to take into consideration the comparative slowness with which any force is propagated through the vast body of atmosphere. An inequality may continue to accumulate in one spot, before the counterbalancing influence of the distant portions of the aerial fluid can arrive to modify the result. In the higher latitudes, the narrow circle of air

may be considered as, in some measure, insulated from the expanded

ocean of atmosphere, and hence, perhaps, the variations of the barometet are concentrated there, and swelled beyond th►► due proportion.

The use and application of barometers in measuring altitudes, has of late attracted more of the attention of philosophers than their fa- culty of indicating the weather. As before ob- served, this use of the instrument was first proposed by Pascal and Descartes. Succeeding philosophers have been at great pains to ascer- tain the proportion between the fall of the ba- rometer and the height to which it is carried ; as Halley, Mariotte, Maraldi, Scheuchzer, J. Cassini, D. Bernoulli, Horrebow, Bouguer, Shuckburgh, Roy, and more especially De Luc, who has given a critical and historical detail of most of the attempts, that have at different time been made, for applying the motion of the mer- cury in the barometer to the measurement of accessible heights. We have noticed the re- searches of Dr. Halley and De Luc, who intro- duced the corrections of the columns of mercury and air, on account of heat. The following rules for computing heights (the principles of which the reader will find explained under PNEUMATICS,) are given by Dr. Maskelyne, in his Introduction to Taylor's Tables of Loga- rithms. The altitudes of the barometer at two stations, with the heights of Fahrenheit's ther- mometer attached to the barometer, and the heights of two thermometers of the same kind, exposed to the air but sheltered from the sun, at the' two stations being given, to find the perpen- dicular altitude of the one station above the other? ►►► Put B for the observed height of the barometer at the lower station, and b for that at the upper station, D for the difference of heights of Fahrenheit's thermometer attached to the barometer at the two stations, and F for the mean of the two heights of Fahrenheit's thermo- meter, exposed freely for a few minutes to the open air, in the shade at the two stations. The altitudes of the upper station above the lowej, in English fathoms, will be expressed as follows, according to the respective observations of M. de Luc, the late General Roy, and Sir George Shuckburgh, in which the upper sign ►►► is to be used when the thermometer attached to the baro- meter is highest at the lower station, (which is most usual,) and the lower sign + when it is lowest at the lower station.*

M. De Luc Log. B ►►► Log. 6+ 0-452 D X 1 + F ►►► 40►► X 0-00223.

General Roy .... Log. B ►►► Log. b +00-468 D X 1 + F ►►► 32►► X 0-00245.

SirG. Shuckburgh . . Log. B ►►► Log. 6zpO'440D X 1 + F►►► 32►► X 0-00243.

Mean of the two last . Log. B ►►► Log. 6+0-454 D X 1 f F ►►►

32►► X 0-00244.

The observations of General Roy and Sir George vided by Mr. Ramsden, and with the detached Shuckburgh having been made with barometers thermometers never exposed to the sun, appear and thermometers constructed and accurately di- charly to deserve the preference above those of

*M. de Ltic. The last of the above rules, which is a mean between those of General Uoy and Sir George Shuckburgh, may be expressed in words at length, as follows : take the difference of the tabular logarithms of the observed heights of the barometer at the two stations, considering the four first figures, exclusive of the index, as whole numbers, and the remaining figures to the right as decimals, and subtract or add ffifa of the dif ference of altitude of Fahrenheit's thermometer, attached to the barometer at the two stations, ac- cording as it was highest at the lower or upper station; thus the height of the upper station above the lower in English fathoms, will be found nearly ; to be corrected as follows : ►►► Multiply the height found nearly by the difference between the mean of the two altitudes ►►► of Fahrenheit's thermometer exposed to the air of the two sta- tions and 3*2►►, and by the decimal fraction 0-00244 ; the product will be the correction of the approximate height, which added to, or sub- tracted from the same, according as the mean of the two altitudes of Fahrenheit's thermometer exposed to the air was higher or lower than 32►►, will give the true height of the upper station above the lower in English fathoms; which mul- tiplied by 6, will give the true height in English feet.*

KxAMi'i.E. Let the state of the barometers .ind thermometers be as follows, to find the al- titude.

THERMOMETERS.

BAROMETERS.

Detached.

Attached.

57

57

29-68 lower.

42

43]

25-28 upper

Mean 49J

DifF. 14

11 IK. UTS. LOO.

29-68 4724-639 25-28 4027-771

Subtract

from 696-868 X M ••• 6‘356

Ilcijit nearly zz 690-512 Multiply by 49′ •••32 ••• 17••

Heiuht nearly ZZ 690-512

Product zz 21083-960

Multiply by ‘00244

Correction zz 29‘485 Height nearly zz 690-512

Corn- t height in fathoms zz 719‘997

Professor Playiair, in a learned paper, printed in _tli(‘ lii->t volume of the Transactions of the Royal Society of Fdudnirgh, lias examined all the circuiuMances \liieh can affect -barometrical measurements, \ith his usual correctness and perspicuity, l.a Place n-Miinei! the subject in his Mecanique (.YkMe, anil Inonuht all the condi- tion> together in a \cry complicated formula, to which \e have hetoiv alluded. Such an appear- ance of extreme ac(nracy, however, is perhaps to he regarded rather a> a theoretical illusion, than a view of results founded on the real stateof practice, liiol al>o, in attempting- to arrive at a similar conclusion, confines himself to the same

remark. He sets out & priori from some careful experiments on the relative density of air and mercury, performed by him in conjunction with Arago. He thence infers, that in the latitude of Paris, and at the point of congelation, air, under a mercurial pressure of 76 metres, or 29-922

English inches, is 10,463 times lighter than mer- cury at the temperature of water at its lowest contraction. This would give 26-090 feet for the height of a column of homogeneous fluid, whose pressure is equivalent to the elasticity of the atmosphere. The coefficient adapted to com- mon logarithms, and adjusted to the force of at- traction at the level of the sea, would therefore be 60,148 feet, or 18,334 metres; scarcely dif- fering sensibly from the quantity which Ramond had deduced from a very numerous set of expe- riments made by him on the Pyrenees. But Biot prefers, as the coefficient, the number 18,993, answering for an elevation of 1200 me- tres, or about 4000 feet above the sea, which is not far from the general level of such observa- tions. The formula is hence, in English feet,

60,346 (1 + -002837 cos. 2) 1 +*

TT

log. ❓❓❓ ; where $ denotes the latitude of the

place, T and t the temperatures of the air at the two stations, as indicated by the centesimal ther- mometer, and H and h the heights of mercurial columns corrected for the effects of heat.

This writer has likewise given tables for ex- pediting the calculation of barometrical measure- ments; in which he was anticipated, howerer, by Oltmans of Berlin, who published, in 1809, large Hypsometrical Tables, as they are called, accommodated to the complex formula of La Place. Such tables might, no doubt, prove use- ful where very frequent computations are wanted, as in the case of the reduction of the numerous observations brought home by Baron Humboldt, for which, indeed, they were first designed. But still they contain a needless profusion of figures, and hold forth a show of extreme accuracy which the nature of the observations themselves can never justify. By barometrical admeasurements, prin- cipally scientific, travellers have of late years been able to form vertical sections of different countries, which contribute further to our know- ledge of their geological character than any pre- vious mode of delineation. Thus Humboldt, in his Geography of Plants, gives a section across the American continent, one of the best and most interesting that has yet appeared. It consists, in fact, of four combined sections, traversing through an extent of 425 miles. The line begins at Acapulco on the shore of the Pacific Ocean, and runs 195 miles, about a point of the compass towards the east of north, to the city of Mexico ; then eighty miles, a point to the south of east, to La Puebla de los Angeles ; again it holds a north- east direction of seventy miles, to the Cruz Blanca ; and finally bends eighty miles east by south, to Vera Cruz, on the coast of the Atlantic. A scale of altitudes is

annexed , which shows the vast elevation of the table-land at Mexico.

This mode of distant levelling has originated also a very interesting discovery, recently made by Engelhardt and Parrot, two Prussian travel-

lers, in another quarter of our globe ; they pro- ceeded, on the 13th of July, 1814, from the mouth of the Kuban, at the island of Taman, on the Black Sea ; and, examining carefully every day the state of the barometer, they advanced with fifty-one observations, the distance of 990 versts, or 711 English miles, to the mouth of the Terek, on the margin of the Caspian Sea. Si- milar observations were repeated and multiplied on their return. From a diligent comparison of the whole, it follows that the Caspian is 334 English feet below the level of the Black Sea. That the Caspian really occupies a lower level than the ocean, had been suspected before, from a comparison of some registers of barometers kept at St. Petersburgh, and on the borders of that inland sea ; but the last observation places the question beyond all doubt. It farther appears, that within 250 versts, or 189 miles, of the Cas- pian, the country is already depressed to the level of the ocean, leaving, therefore, an immense basin, from which the waters are supposed to have retired by a subterranean percolation.

We subjoin a table of the altitude of some of the most remarkable mountains, &c. on the earth above the surface of the ocean : ###

Eng. feet.

Mount Puy de Dome in Auvergne, the first mountain measured by the baro- meter 5088

Mount Blanc -\ 15662

Monte Rosa f ., 15048

Aiguille d'Argentiere ?A1P## ### 13402

Monastery of St. Bernard J 7944

Mount Cenis 9212

Pic de los Reyes-v . . . . 7620 Pic du Midi f ### 9300

*Picd'Ossano >Pyrenees ### * "11700 Canegou j 8544*

Lake of Geneva 1232

Mount /Etna 10954

Mount Vesuvius ..... 3938 Mount Hecla in Iceland . . . 4887 Snowdon 3555

Ben Moir 3723

Ben Lawers 3858

Ben Gloe 3472

Schihallion 3461

Ben Lomond 3180

Tinto 2342

Table Hill, Cape of Good Hope . . 3454 Gondar, city in Abyssinia . . . 8440 Source of the Nile 8082

Pic of Teneriffe 14026

Chimboraco 19595

Cayambouro 19391

Antisana 19290

Pichincha 15670

City of Quito 9977

The mean height of the barometer in London, upon an average of two observations in every day of the year, kept at the house of the Royal Society, for many years past, is 29‘88 ; the me- dium temperature, or height of the thermometer, according to the same, being 58□□. But the me- dium height at the surface of the sea, according to Sir George Shuckburgh, (Phil. Trans. 1777. p. 586.) is 30-04 inches, the heat of the thermome- ter being 55□□, and of the air 62□□.

BAROMETRICAL PHOSPHORUS. See PHOS- PHORUS.

BA’RON, “| Fr. baron ; Ital. barone ; Sp. BA’RONAGE, I baron. See to BAR. Bairgan, BA’RON ESS, [to arm ; to defend ; to strengthen. BA’RONET, [“The etymology of this word is BA’RONIAL, very uncertain.

Baro, among BARONY. J the Romans, signified a brave warrior, or a brutal man ; and, from the first of these significations, Menage derives baron, as a term of military dignity. ??? Others suppose it originally to signify only a man, in which sense baron or varon, is still used by the Spaniards ; and, to confirm this conjecture, our law yet uses baron and femme, husband and wife. Others deduce it from ber, an old Gaulish word, signi- fying commander ; others from the Hebrew "QJ, of the same import. Some think it a contraction of par homme, or peer, which seems least pro- bable. Allowing the derivation to be from bairgan, which is the suggestion of Tooke, then the simple idea of baron is a man of power, armed and surrounded with abundant means of defence. This generally implies rank ; and baron is a title of nobility, it is likewise a name of office.

When loue has told heir his extent The baronage to counsaile went, In many sentences they fill, And diuersly they saied her will.

Chaucer. Romaunt of the Hotel My lord, I'll tell you what, ??? If my young lord, your son, have not the day, Upon mine honour for a silken point I'll give my barony. Shakspeare.

Where throngs of knights and barons bold In weeds of peace high triumph hold, With store of ladies, whose bright eyes Rain influence, and judge the prize Of wit or arms, while both contend To win her grace whom all commend. Milton. Sir Edward Walker, garter and secretary of war to King Charles the First, observes, ' That in all Queen Elizabeth's forty-four years reign, she created but six earls and eight or nine barons.'

Oldys' Life of Sir Walter Raleigh. The second was the baronage, the nobility and gentry who held their baronies of the king, and the third was the boroughs, who held of the king by ba- rony, though in a community ; so that the parliament was truly the baronage of the kingdom. The lesser barons grew weary of this attendance.

Burnet. History of hit own Timet. Coffee (which makes the politician wise, And see thro' all things with his half shut eyes) Sent up in vapours to the baron's brain New stratagems the radiant lock to gain. Pope.

Here might you see

Barons and peasants on the embattled field, Slain or half dead, in one huge ghastly heap Promiscuously amassed. Philips'i Cider, b. h.

The title of baronet, invented by Salisbury, was sold ; and two hundred patents of that species of knighthood were disposed of for so many thousand pounds. Hume. History of England. King Jamei 1st. A baron is the most general and universal title of nobility ; for originally every one of

the peers of supe- rior rank had also a barony annexed to his other titles. But it hath sometimes happened, that when an ancient baron hath been raised to a new degree of peerage, in the course of a few generations the twenties have descended differently. BLachstone'i Commentaries.

BAROX (Robert), a dramatic author, who lived during the reign of Charles I. and the protectorship of Oliver Cromwell. He was edu- cated at Cambridge, after which he became a member of the society of Gray's Inn. During his residence at the university he wrote a novel, called the Cyprian Academy, in which he in- troduced the first two of the dramatic pieces mentioned below. The third of them is a much more regular and perfect play, and was probably written when the author had attained a riper age. Their names are, 1. Deorum Dona, a masque. 2. Gripus and Hegio, a pastoral. 3. Mirza, a tragedy. Mr. Baron was intimate with the celebrated Mr. James Howell, the traveller, in whose collection of letters there is one to this gentleman, vol. iii. let. 41 8, who was then at Paris. To Mr. Howell, and the ladies and gentlewomen of England, he dedicated his romance.

BARON. This title in ancient records was ap- plied to all the nobility of England, because regularly all noblemen were barons, though they had also a higher dignity. But it has sometimes happened, that when an ancient baron has been raised to a new degree of peerage, in the course of a few generations the two titles have descended differently ; one perhaps to the male descendants, the other to the heirs general ; whereby the earldom or other superior title has subsisted without a barony : and there are also modern instances, where earls and viscounts have been created without annexing a barony to their other honors : so that now the rule does not hold universally that all peers are barons. The origin and antiquity of barons has occasioned great enquiries among antiquaries. The most pro- I >;i! ile opinion is, that they were the same witli our present lords of manors. It is said the original name of this dignity in England was vavassour, which by the Saxons was changed into thane, and by the Normans into baron. It maybe collected from king John's magna charta, that originally all lords of manors, or barons, had seats iu the great council of parliament; but such is the deficiency of public records, that lite first precept to be found is of no higher date than the -10 Henry 111. which, although it was issued out in the king's name, was neither by his authority nor by hi? direction: for the king Imnˆeif, his son prirce Edward, and most

r> "l'iire the 19 Henry III. the ancient par liaments consisted ot the archbishops, bishops, bljots, earls, and banms. Of these barons t,u:iv weru

two sorts ; the greater barons, or t'.i'j Kitiu's chief tenants, who held of him in cav:;U; by barony ; and the lesser barons, who

held of the first by military service in capite. The former had summons to parliament by several writs ; and the latter (i. e. all those who were possessed of thirteen knight's fees and a quarter) had a general summons from the sheriff in each county. Thus things continued till the 49 Henry III. when, instead of keeping to the old form, the prevailing powers thought fit to summon, not all, but only those of the greater barons who were of their party ; and, instead of the lesser barons who came with large retinues, to send their precepts to the sheriff of each county to cause two knights in every shire to be chosen, and one or two burgesses for each borough, to represent the body of the people residing in those counties and boroughs ; which gave rise to the separation into two houses of parliament. By degrees the title came to be confined to the greater barons, or lords of par- liament only ; and there were no other barons among the peerage but such as were summoned by writ, in respect of the tenure of their lands or baronies, till Richard II. first made it a mere title of honor, by conferring it on divers persons by his letters patent.

BARONS BY ANCIENT TENURE, were those who held certain territories of the king, who still re- served the tenure in chief to himself. We also read of barons by temporal tenure ; who are such as hold honors, castles, manors, as heads of their barony, that is, by grand serjeantry ; by which tenure they were anciently summoned to parliament. But at present a baron by tenure is no lord of parliament, till he be called thither by writ. The barons by tenure, after the con- quest, were divided into majores and minores, and were summoned accordingly to parliament ; the majores, or greater barons, by immediate writ from the king ; the minores, or lesser barons, by general writ from the high sheriff, at the king's command. Anciently they distinguished the greater barons from the less, by attributing high, and even sovereign jurisdiction, to the former, and only inferior jurisdiction over smaller matters to the latter.

When a baron is called up to the house of peers by writ of summons, the writ is in the king's name, and he is directed to come to the parliament appointed to be held at a certain time and place, and there to treat and advise with his majesty, the prelates, and nobility, about the weighty affairs of the nation. The ceremony of his admission into the house of peers is this : He is brought into the house between two barons, who conduct him to the Lord Chancellor, his patent or writ of summons being carried by a king-at-arms, who presents it kneeling to the Chancellor, who reads it, and then congratulates him on his becoming a member of the house of peers, and invests him with his parliamentary robe. The patent is then delivered to the clerk of the parliament, and the oaths are administered to the new peer,

who is conducted to his seat on the barons' bench. Some barons hold their seats by tenure. The coronation robes of a ba- ron are the same as an earl's, except that he has only two rows of spots on each shoulder. In like manner his parliamentary robes have but two guards of white fur, with rows of gold lace.

In other respects they are the same with those of other peers.

A BARON'S coronet, in herald- ry, is a gold circle, on \vhich are six pearls, which were assigned to barons by king Charles II. after the Restoration. Previously to this time the barons wore scarlet caps, turned up with ermine, and on the top a tassel of gold. Though called pearls, the globes round the coronet are always made of silver. His cap is the same as a viscount's. His style is Right Honourable ; and he is addressed by the king en- queen, Right Trusty and Well Beloved. See BARONY.

BARON AND FEMME, in English law, husband and wife. They are deemed but one person ; so that a wife cannot be witness for or against her husband, nor he for or against his wife, except in cases of high treason.

BAKON AND FEMME, in heraldry, is when the coats of arms of a man and his wife are borne par pale in the same escutcheon, the man's being always on the dexter side, and the woman's on the sinister; but here the woman is supposed not an heiress, for then her coat must be borne by the husband on an escutcheon of pretence.

BARON, LORD CHIEF, the president of the court of Exchequer.

BARONS OF THE CINQUE-PORTS, are members of the house of commons, elected by the five ports, two for each port. Those who have been mayors of Corfe-castle, in Devonshire, are like- wise styled barons ; and formerly the principal citizens of London were honored with the title of baron. See CINQUE-PORTS.

BARONS OF THE EXCHEQUER, four judges in England, and five in Scotland, to whom the ad- ministration of justice is committed, in causes between the king and his subjects, relating to matters concerning the revenue. They were formerly barons of the realm, but of late are ge- nerally persons learned in the laws. Their office is also to look into the accounts of the king, for which reason they have auditors under them. See EXCHEQUER.

BARONAGIUM. See BARONY.

BARONETS OF ENGLAND. The dignity of baronet is given by patent. The order was founded by King James I. at the suggestion of Sir Robert Cotton, in 1611, when 200 baronets were created at once ; to which number it was intended they should always be restrained : but it is now enlarged at the king's pleasure, without limitation. They had several considerable pri- vileges given them, with an habendam to them and their heirs male. They were allowed to charge their coat with the arms of Ulster, which are, in a field argent, a sinister hand, gules ; and that upon condition of their defending the pro- vince of Ulster in Ireland against the rebels, "who then harassed it extremely : to which end they were each to raise and keep up thirty soldiers, at their own expense, for three years together, or to pay into the exchequer a sum sufficient to do it ; which, at eight-pence per day per head, was ––109.5. So that, including fees, the expense of this dignity may be about ––1200 VOL. III.

sterling. To be qualified for it, one must be a gentleman born, and have a clear estate of ––1000 per annum. Baronets take place according to the dates of their patents ; by the terms of which no honor is to be erected between barons and baronets. The title, Sir, is granted them by a peculiar clause in their patents, though they be not dubbed knights : but both a baronet and his eldest son, being of full age, may claim knight- hood. The first English baronet was Sir Nicholas Bacon, of Redgrave, in Suffolk, whose successor is therefore styled primus baronetorum Anglias. If a baronet be named at an installation as proxy for a knight of the Bath, it appears es- sential that he should be knighted for the occasion ; thus Sir George Osborne, Bart, was knighted by king George III. A baronet takes precedence of all knights, except bannerets. Baronets' mark ; the arms of the province of Ulster, viz. argent, a hand, gules, in a canton, or in escutcheon, are borne by every baronet, as in the annexed example. ' He beareth, or, between two chevronels, three trefoils, slip- ped, sable,' as in the arms of the Abdy family.

BARONETS OF IRELAND. In Ireland, an he- reditary dignity somewhat similar to knighthood, appears to have been occasionally conferred in the earliest times ; and the knights of Kerry and of Glyn are yet permitted to bear distinctions bestowed on their ancestors by the ancient so- vereigns of the country. The order of baronets, however, was likewise instituted here by James I. in the eighteenth year of his reign, for the same purpose, and with the same privileges within the kingdom of Ireland as he had con- ferred on the like order in England ; for which the Irish baronets paid the same fees into the treasury of Ireland. The first of that kingdom who was advanced to this hereditary dignity was Sir Francis Blundell, then secretary for the affairs of Ireland. Several more have been added, no number being limited

; but since the union in 1801, none have been created otherwise than as baronets of the united kingdom.

BARONETS OF NOVA SCOTIA, AND BARONETS OF SCOTLAND. The order of knights baronets was also designed to be established in Scotland in 1621, by James I. for the plantation and cul<- tivation of the province of Nova Scotia, in America ; but it was not actually instituted till the year 1625, by his son Charles I. when the first person dignified with this title was Sir Ro- bert Gordon, of Gordonstone, a younger son of the Earl of Sutherland. The king granted a certain portion of land in Acadia or New Scotland, to each of them, which they were to hold of Sir William Alexander, afterwards Earl of Stirling, for their encouragement who should hazard their lives for the good and increase of that plantation, with precedency to them, and their heirs male for ever, before all knights called equites aurati, and all lesser barons called lairds, and all other gentlemen, except Sir William Alexander, his majesty's lieutenant in Nova Scotia, his heirs, their wives and children ; that tiie title of Sir should be prefixed to thtii

Christian name, and Baronet added to their sur- uanie ; and their own and their eldest sons' wives should enjoy the title of Lady, Madam, or Dame. His majesty was so desirous of adding every mark of dignity to this, his favorite order, that four years after its institution, he issued a royal warrant, granting them the privilege of wearing an orange ribbon and a medal : which last was presented to each of them by the king himself, according to the words of the warrant. All the privileges of the order, particularly this of wearing the medal, were confirmed at the king's request by the convention of estates in the year 1630; and, in order to establish them on the most solid foundation, they were again con- firmed by an act of the parliament of Scotland in 1633. The premier baronet of Scotland, at present, is Sir Richard Strachan ; and the num- ber of the order, exclusive of such titles as are merged in peerages, is 135. Since the union the power of the king to create new baronets within Scotland is held to have ceased.

BARONI (Adriana), baroness of Piancaretta, in Mantua, an eminent singer, surnamed the fair, on account of her uncommon beauty. See next article.

DA RON i (Leonora), and her mother, Adriana, were both distinguished for their extraordinary nmsk';il talents. Leonora was born at Naples, but spent the greatest part of her life at Rome. She had less beauty than her

mother; but ex- celled her in profound skill in music, the fineness of her voice, and the delicacy of her manner. Mr. Hayle styles her one of the finest singers in the world ; she was equally eminent as a com- poser, and was accordingly, as well as her mother, celebrated by the wits. In 1639 there was published, at Braeciano, a collection of Latin, Greek, Italian, Spanish, and French poems, in her praise, with this title, Applausi Poetici alle Glorie della Signora Leonora Ba- roni. Among the Latin poems of Milton there are three addressed, Ad Leonoram Romae ca- nentem, wherein this lady is celebrated for her singing, with an allusion to her mother's ex- quisite performance on the lute. A fine eulogium on her is contained in a discourse on the music of the Italians, printed with the life of Malherbe, >md some other treatises at Paris, in 1672, in l'2mo. It was composed by M. Maugars, prior of St. Peter de Mat, the king's English inter- preter, who says, ' her singing threw me into Mich raptures, that I forgot my mortality, and thought myself among the angels, enjoying the felicity of the blessed !'

I'.AROM.K CAITT. See CAPUT.

BARON IS, a mountain of Chaus, in Barbary, three miles north of Fez. Itproduces red grapes, of which they make good wine, and is surrounded '. y villages.

BARONIUS (Ca-sar), was born at Sora, in l.">:;t:, and studied at Rome, under Philip de]\ori. In].(`:; he was made general of the con- ur of the Oratory, on the resignation of I -iiilipde Neri, the founder. Pope Clement VIII. 11. i 1-e him ins confessor, and created him a car- il'ii.ii in M:><'>. lle\:is Afterwards librarian to t!ie Vatican; and di-.'d in 160.">, at sixty-eight years cf age. lie wrot. ,ovi ral works, the pnn

BAR

cipal of which is his Annales Eoclesiastici, from A. D. 1 to 1198, in twelve vols. folio; which has been abridged by several persons, particularly by Henry Spond^us, Bzovius, and Ludovico Aurelio.

BARONSTOWN, a town of Ireland, in the county of Louth, six miles W. N. W. of Dundalk.

BARONY, BARONIA, or BARONAGIUM, may be considered as a lordship, held by some service in chief of the king, coinciding with what is otherwise called grand serjeanty. Baronies, in their first creation, moved from the king himself, the chief lord of the whole realm, and could be holden of no other lord. For example, the king enfeoffed a man of a great seigneurie in land, to hold to the person enfeoffed and his heirs, of the king and his

heirs, by baronial service; to wit, by the service of twenty, forty, sixty, knights, or of such other number of knights, as the king by his feoffment limited or appointed. In the ages next after the conquest, when a great lord was enfeoffed by the king of a large seigneurie, such seigneurie was called barony, but more commonly an honor; as, the honor of Glouces- ter, the honor of Wallingford, and the like. There were in England certain honors, which were called sometimes by English and sometimes by foreign names. This happened when the same person was lord of an honor in Normandy, or some other foreign country, and also of an honor in England. For example, William de Forz, de Force, or de Fortibus, was lord of the honor of Albemarle in Normandy : he was also lord of two honors in England; to wit, the honor of Holderness, and the honor of Skipton in Cra- vene. These honors in England were sometimes called by the Norman name, the honor of Albe- marle, or the honor of the earl of Albemarle. In like manner the earl of Britannie was lord of the honor of Britannie in France, and also of the honor of Richmond in England; the honor of Richmond was sometimes called by the foreign name, the honor of Britannie, or the honor of the Earl of Britannie. This serves to explain the terms honor Albemarliae, or comitis Albe- marliae in Anglia ; honor Britannia, or comitis Britanniae in Anglia; not that Albemarle or Bri- tannie were in England, but that the same per- son respectively was lord of each of the said honors abroad, and of each of the said honors in England. The baronies belonging to bishops are by some called regalia, as being held solely on the king's liberality. These do not consist in one barony alone, but in many; for tot erant baroniae quot majora praedia. A barony, accord- ing to Bracton, is a right indivisible. Where- fore, if an inheritance be to be divided among co-partners, though some capital messuage may be divided, yet if the capital messuage be the head of a county or barony, it may not be par- celled : and the reason is, lest by this division many of the rights of counties and baronies by degrees come to nothing, to the prejudice of the realm, which is said to be composed of counties and baronies.

BARONY of Glasgow. See GLASGOW.

BAROPTIS, or BAROPTINUS LAPIS, among ancient naturalists, a species of stone, supposed

to have wonderful virtues against venemous bites, externally applied. Pliny has left us but a very short description of it; he says, it was black in color, but variegated with large spots of red and white.

BAROS, or BARIOS, a sea-port of the island of Celebes, having a Dutch factory and settle- ment. There is a good trade here in opium. Long. 119►► 15′ E., lat. 1►► 24′ S.

BA'ROSCOPE, n. s. Bapoc and aicoirtu, an instrument to show the weight of the atmosphere. See BAROMETER.

If there was always a calm, the equilibrium could only be changed by the contents ; where the winds are not variable, the alterations of the baroscope are very small. Arbuthnot.

BAROTH, a market-town of Transylvania, on the Aluta.

BARQUETTE, or BARCHETTA, denotes a lesser sort of barks, used in the Mediterranean, for the service of galleys, as boats and shallops are for other ships.

BARQUISIMETO, a city of South America, in the province of Venezuela, founded by the Spaniards in 1552. It is placed on an elevated plain, and enjoys great comparative coolness. The most constant and equal wind which prevails is the north-east, and, whenever the rays of the sun are not tempered by it, the thermometer of Fahrenheit rises to 82►► and 84►►. In the surround- ing plains and hills excellent pasture encou- rages the rearing of all sorts of cattle. Many of the citizens prefer this speculation, and find it to their advantage, although at the same time they cultivate the sugar-cane and wheat. From a freshness preserved by irrigation the vales pro- duce cacao abundantly, and of a good quality ; and the sides of the hills have lately been em- ployed in the culture of coffee. There are in this place from 11,000 to 12,000 inhabitants, and the aspect of the city announces ease and affluence. The houses are well built; the streets straight, wide, and airy. The parish church is handsome, and served by two priests. The judi- cial and police duties are discharged by a com- mon council and lieutenant. Barquisimeto is 120 miles W.S.W. of Caraccas, 450 N.N.E. of Santa Fe, and forty-five N.N.E. of Tocuyo.

BAR DICE, a species of false dice, so formed as that they will not easily lie on certain sides, or turn up certain points. Bar dice stand oppo- sed to flat dice, which come up on certain points oftener than they should do.

BARR, or BARRA, a small kingdom of Africa. See BARRA.

BARR, ST. the tutelar saint of the island of Barray, which was named after him. His holi- liday is the 25th of September. On this day the priest says mass, and all those of the Romish religion used punctually to attend. See BARRY.

BARRA, a hill of Scotland in Aberdeenshire, in the parish of Bourtie, on the top of which are still distinctly visible the remains of an anciec.': camp, of a circular form, surrounded with ditches, and extending to near three acres.

BARRA, in commerce, a long measure used in Portugal and some parts of Spain, to measure woollen cloths, linen cloths, and serges. There are three kinds ; the barra of Valencia, thirteen

of which make twelve yards and six seventh. English measure ; the barra of Castile, seven of which make six yards and four sevenths; and the barra of Arragon, three of which make two yards and four sevenths English.

BAURA, in law. See BAR.

BARRA, a kingdom of the western coast of Africa, at the mouth of the Gambia, fourteen leagues in breadth, and eighteen long, according to Golberry. It contains a population of 200,000 souls, chiefly of the Mandingo race, zealous Mahommedans, and acute in commercial transactions. The capital is

BARRA INDING, where a considerable trade is carried on to Barraconda in maize, elephants' teeth, gold dust and cotton cloth. Every vessel entering the Gambia here pays a tax of about ––20 sterling to the king of Barra.

BARRABA, or BARRADA, a tract of land in Siberia, lying between the rivers Irtisch and Oby, in the province of Tobolsk. It is uninhabited, but not through any deficiency of the soil; for that is excellent for tillage, and part of it might also be laid out in meadows and pastures. It is interspersed with a great number of lakes, which abound with carp, and the country produces great numbers of elks, deer, foxes, ermine, and squirrels. Between the Irtisch and Oby are some copper-mines.

BA'RRACAN, n. s. Fr. bouracan, or barracan, a strong thick kind of camelot.

BARRACAN, or BARRAGAN, is something like camlet but of a coarser grain. It is used to make cloaks, surtouts, &c. to keep off rain. Barracans are chiefly made in France, as at Valenciennes, Lisle, Abbeville, Amiens, and Rouen. Those of Valenciennes are the most valued.

BARRACIDA, in ichthyology, a species of pike. See Esox.

BA'RRACK, n. s. Span, barracca. Little cabins made by the Spanish fishermen on the sea shore; or little lodges for soldiers in a camp. It is generally taken among us for buildings to lodge soldiers. It is not found in our early lexi- cographers. Perhaps from barricado, barrique. See BARRICADO.

Like ours it should wholly be composed of natural subjects ; it ought only to be enlisted for a short and limited time ; the soldiers also should live inter- mixed with the people ; no separate camp, no bar- racks, no inland fortresses, should be allowed.

Blackstone. Commentaries.

Modern military men have always thought barracks very convenient, when there is sufficient room to make a large square, surrounded with buildings; because the soldiers are easily con- fined to their quarters, and the rooms being con- tiguous, orders are executed with privacy and expedition; and the troops have not the least connexion with the inhabitants of the place. This prevents quarrels and riots. Those for the horse were formerly called barracks, and those for the foot, huts; but now barrack is used indiffer- ently for both.

Much opposition was made in parliament dur- ing the late war to the

erection of barracks, as inimical to the liberties of Britain, by tending to estrange the soldiers from the citizens; thus ren- dering the former fit tools to enslave the latter,

should any future king or ministry wish to change the constitution, or compel the people to submit to unpopular and arbitrary measures. Plausible as these arguments may appear, there are others that have also considerable weight, on the side of these establishments : in regard to the morals of the people, we are persuaded the most virtuous country town or village will be proportionally corrupt as soldiers are quartered among them ; and the fact is, that the soldiers and the citizens may be too much as well as too little inter- mixed:

Until the year 1793, barracks were neither numerous in Great Britain, nor were they under the control and management of a separate and peculiar board. In January 1793, a superinten- dant-general of the barracks was appointed ; and, on the 1st of May that year, the king's warrant was issued for their regulation. Greater powers were given to him in the year 1794; but as these seemed to interfere with the duties and powers of the Board of Ordnance, a new warrant was issued in the year 1795, denning and limiting the respective duties and powers of the Board of Ordnance, and the superintendant-general, or barrack-master-general, as he was now called. The salaries and extra pay of the barrack-master- general and his officers amounted in 1796 to ►►9o'24. 17s. 2d. The establishment was after- wards considerably increased, in proportion as the number of" barracks throughout the kingdom increased, and by the creation of some new offi- cers, among whom was a law clerk. In 1806, thrir salaries amounted to ►►19,329. 4s. lOd.

During this year the commissioners of military enquiry recommended that the offices of barrack- master-general, and deputy barrack-master-gene- ral, should be totally abolished, and that the superintendence of the barrack establishment should be vested in commissioners. This sug- gestion, and some others relative to the mode of transacting the business of the department, and preventing useless and extravagant expenditure, have been followed ; and the barrack establish- ment is now under the direction of four commis- sioners, one of whom is generally a military man.

As it frequently happened that it was abso- lutely necessary to build

barracks on an emer- gency, government was often obliged to pay an extravagant price for the land which they needed for their erection; in order to remedy this evil, it was provided by the act, usually called the defence act, 43d (Jeo. 111. ch. 55, that justices of the peace rni<_,rht put any general officer into the possession of such ground as he might deem fit for the erection of barracks; the value of it to bo settled afterwards by a jury; provided, how- ever, the necessity for such ground was certified by the lord lieutenant, or two deputy lieutenants of the county. The following are the barrack districts in Great Britain:

1. Northern. containing Northumberland, Cumberland, Westmoreland, and Durham.

‘2. York, containing Yorkshire.

.‘5. F.astern, containing Norfolk, Suffolk, Cam- bridge, Huntiii’-rdonshire, and all Mssex, except ‘] ilbury-tbrt.

4. St uthern, containing Kent, Tilbury-fort, ⬚⬚⬚Lid Si:s:.ex

5. South-western, containing Hampshire and Dorsetshire.

6. Isle of Wight.

7. Western, containing Devonshire, Cornwall, and Somerset.

8. Severn, containing Gloucestershire, Wor- cestershire, Herefordshire, Monmouthshire, and South Wales.

9. North-western, containing Cheshire, Shrop- shire, 1 ,ancashire, North Wales, and the isle of Man.

10. London.

11. Home, containing Middlesex, Surry, Hertfordshire, and part of Kent.

12. North-inland, containing Derbyshire, Not- tinghamshire, Staffordshire, Warwickshire, Lei- cestershire, and Rutlandshire.

13. South-inland, containing Bedfordshire, Northamptonshire, Oxfordshire, and Bucking- hamshire.

14. Jersey, Guernsey, and Alderney.

SCOTLAND.

Northern, containing Caithness, Sutherland, Ross-shire, Inverness-shire,

Nairnshire, Moray- shire, and Bamffshire.

Western, containing Aberdeenshire, Argyle- shire, Ayrshire, Bute, Kincardineshire, Lanark- shire, Renfrewshire, and Wigtonshire.

Centre, containing Angusshire, Clackmannan- shire, Dunbartonshire, Fifeshire, Kinross-shire, Perthshire, and Stirlingshire.

Southern, containing the Lothians, Berwick- shire, Peeblesshire, Selkirkshire, Roxburghshire, and Dumfriesshire.

On the 14th of July, 1805, there were in Great Britain and Jersey, &c. Established barracks of brick and stone . . 84

wood 12

Temporary barracks 75

rented 41

212

The following statement exhibits the several particulars of the total expense incurred by the nation for barracks, and the barrack-office, in Great Britain, between the 25th of December 1792, and the 10th of November 1804:

►► s. d.

Buildings and purchases of land 3,930,223 5 8

Forage 846,246 7 10

Beer 643,030 9 6

Coals, candles, furniture, rents, repairs, supplied by barrack-masters, and

salaries 1,685,487 8 0

Office-establishment . . . 256,129 10 4

Fees at War-office 80,346 3 6

Insurance 1,519 2 2

Additional rents 36,860 13 5

Lodging money to officers . . 139,582 16 0

Engines 11,866 0 5

Bedding, furniture, &c. issued by the

barrack-office, and in store 1,357,215 7 3

Miscellaneous 35,498 4 8

Total, ––9,024,005 8

The annual expense, during the last war, varied from ––350,000 to ––500 000; in the year

1814, it was ––309,826. The peace estimate for 1R16 is ––173,500. In Ireland, where barracks are more numerous, the expense, in 1814, was ––360,515, and the peace estimate for 1816 was ––213,000.

See first, second, third, and fourth Reports of the Commissioners of Military Enquiry, 1806; Finance Reports and Estimates laid before Parliament for 1814 and 1816, &c.

BARRACK ALLOWANCE, a specific allowance of bread, beer, coals, &c. to the regiments sta- tioned in barracks.

BARRACK GUARD, the principal guard of a regiment in barracks; the officer of which is responsible for the regularity of the men, and for all prisoners duly committed to his charge while on that duty.

BARRACK-MASTER-GENERAL, a staff-officer at the head of the barrack-department, who has a number of barrack-masters and deputies under him, that are stationed at the different barracks. He has an office and clerks for the despatch of business; and to this office all reports, 8cc. respecting the barrack department are made.

BARRACOL, in ichthyology, a name given by Artedi, from the Venetians, to the species of ray fish called by Bellonius and Gesner mirale- tus, and by others raia oculata Ircvis. The spe- cific name of Artedi carries in it a much better character of the fish ; he calls it the ray, with a smooth back and belly ; and with the eyes sur- rounded with a series of spines, and three other rows of them on the tail.

BARRACONDA, a considerable town in cen- tral Africa, about 400 miles up the Gambia, where very formidable cataracts obstruct the navigation of the river, and prevent any but the smallest canoes from passing. The tide flows up to this place. Long. 13►► W., lat. 13►► 36′ N.

BARRACUDA, a species of esox.

BARRADA, or BARRADYS, a river of Syria, rising at Barraud, twenty-four miles west of Da- mascus. Receiving the Fichee, it divides into seven branches, six miles from that city ; the fourth alone, which washes the northern walls, preserving the original name. All the different brandies afterwards rejoin the main stream, which is discharged into a lake twenty-one miles north-east.

BARRAGAN, a river of the province and government of Buenos Ayres, which runs north, and enters the Plata.

BARRAGAN, BAY OF, in the La Plata, about twelve miles below Buenos Ayres, to the south- east. Ships discharge, in lighters, their car- goes in the roadstead of Buenos Ayres, and then go to the bay of Barragan to wait for their cargoes out. The land about it is low, and the bay therefore much exposed, nor can ships of any burden come within two or three miles of the shore. Some banks under water, how- ever, meet the force of breakers, but there is little security, when a storm comes on, against a ship's parting from her ground-tackle, and being driven on them. The river running into the bay can receive vessels drawing twelve feet water, but none larger.

BARHAI SCIAIIIAT, the Arabian name given to the desert of Natron in Egypt, situated to the

west of the Delta, and the south of lake Mareo tis. It contains the two lakes Nedebe and Lebe, from which the Natron is drawn, and is pervaded by a vast and deep ravine, called the Bahr Be- lame, or river without water. This desert is celebrated' for the great number of monasteries which were founded in it at a former period.*

BARRAMAHAL, adistrict in Southern India, situated between twelve and fourteen degrees of north latitude, consisting of twelve places, which the name is said to signify. These are Krish- nagiry, Jacadeo, Varinaghada, Maharay-ghada, Bujungaghada, Tripatura, Vanambady, Ghan-ganaghada, Sudarshana-ghada, and Tatucallu. This district was ceded to the British by Tippoo, in 1792. The inhabitants are Hindoos.

BARRATI, BARRED, in ecclesiastical history, an appellation given to the Carmelites, after they were obliged to lay aside the white cap, and wear cowls striped black and white.

B All RATOR, s. { From barat , old French ;

BA'RRATRY, s. $ from which is still retained burateur, a cheat; from the Dano-Norman baret, our lawyers have baretter, barettry, a wrangler and encourager of law-suits; one who harasses the bar or courts with importunate litigations. Lord Coke defines barrator to be a common mover and maintainer of suits, in disturbance of the peace. This exciting and fomenting of liti- gious quarrels is an offence by common law, and punishable by fine and imprisonment; and if the barrator be an attorney, a statute of the 12th of George the First provides that he shall be inca- pacitated from practising for the future, under pain of seven years' transportation.

Will it not reflect as much on thy character, Nic, to turn barrator in thy old days, a stirrer-up of quar- rels amongst thy neighbours ?

Arbuthnot't History of John Bull. 'Tis arrant barratry, that bears Point blank an action 'gainst our laws.

Hudibrag.

BARRATRY, iu commerce. See BARATRT and INSURANCE.

BARRATRY, in the law of England, has been noticed. See BARATRY. The term, however, is of foreign origin; and in Italy, and other coun- tries, seems ordinarily to have been applied to the traffic of ecclesiastical benefices ; but was afterwards used in a more general sense, as ap- plicable to all corrupt buying and selling of jus- tice. In Scotland it signified the corrupt pur- chasing of benefices or offices of collection, from the see of Rome, by persons who left the realm for that purpose ; a practice which had become frequent, and was in various respects injurious to the realm ; as a means of carrying money out of it, without any return of value, as prejudicial to the right of patronage in the king or others, and to the free elections of the monks in the mo- nasteries, both which the pope by prevention pretended to exclude ; and as contributing to raise the rate of taxation upon benefices, by the false accounts which those suitors for the office of collector carried to the pope.

BARRAUX, or FORT BARREAUX, a fortress of France, in Dauphiny, on the borders of Savoy, now included in the department of the Isere, ar- rondissement of Grenoble. It stands on the right bank of the river Isere, near the entrance

of the valley of Gresivaudan, on the road from Grenoble to Chambeny, eighteen miles north- east of the former town. The fort was erected at a great expense by Charles Emanuel, duke of Savoy, in 1,597, and is strong both by nature and art. The French, however, got possession of it in a single night, and is retained it at the peace of Vervins, on the plea that it was built on French ground. Population 1320.

BARRE (Louis Francis Joseph de la), an in- genious writer, born at Tournay, in 1688. He received his education at the college of St. Barbe, at Paris, where he assisted Anselm Banduri in his extensive work, Imper. Orientale, Recueils de Medailles des empereurs, after which he had a pension given him by the grand duke of Tus- cany. He also published Memoirs for the His- tory of France and Burgundy, and various other works. He died in 1738.

BARRE' or BARRY (Madame Du), the favorite mistress of Louis XV. She is said to have been one of the richest women in France. She was condemned by the revolutionary tribunal of Paris, as a conspirator against the republic. Her beha- viour was marked by unusual cowardice. Theex- ecutoiner was obliged to support her all the way to the scaffold, ami lie required two assistants to lift her upon it; after which she exerted all her strength to prevent being fastened to the j.l-.ink. She was guillotined on the 9th December i793.

15 A n u r.', a township of \ orcester county, Mas- sachus.'tts, twenty-four miles north-west of Wor- cester, and sixty-six west of Boston. Also a township of ⁂Pennsylvania, in Huntingdon county.

HA'RRKL, v. 1- n. Fr. burril, Ital. barrile, Span, burril. Junius says, perhaps from barre, rrpu⁂ulum fsee To BAR); because liquids are held or contained in a cask, quasi in quondam repagulo : as if under bar, or in a stout strong vessel stopped close. It is applied to anything hollow, as to the ear, the barrel of a gun, a cy- linder about which any thing is wound. It also denominates a particular measure.

1 would have their beef beforehand barrelled, which may be used as is needed. Spenser on Ireland.

linrrcl up earth and sow some seed in it, and put it in the bottom of a pond. Bacon.

It hath been observed by one of the ancients, that an emptv burrt-l, knocked upon with the finger, giveth .1 diapason to the sound of the like barrel full. Id.

Trembling to approach The little barrel which he fears to broach.

Dryden.

Several colleges, instead of limiting their rents to a certain sum, prevailed with their tenants to pay the price of so many barrels of corn, as the market went.

Swift.

Take the barrel df a lonˆ guu perfectly bored, set it upright, with the breech upon the ground, and take a bullet exactly .'it for it ; then, if you suck at the mouth (if the bnrrrl ever so gently, the bullet will com" up so forcibly, that it will hazard the striking in. (your teeth. Digby.

\ our striiii: and b"w inn' be accommodated to your drill; if too \eak, it will not carry about the >'(irr,'l. Moxon.*

BAKKF.I, 1:1 mechanics, a term given by watch makers to the cylinder about which the spring is \ra|>j!e I : and by gun-smiths to the

cylindrical tube of a gun, pistol, &c. through which the ball is discharged.

BARREL OF A PUMP, is the wooden tube which makes the body of the engine, and where- in the piston moves.

BARREL OF EELS and BARREL of SALMON, ought to contain forty-two gallons each. BARREL of SOAP must weigh 256lb. BARREL, or BARILLE of Florence, is a- liquid measure, containing twenty flasks, or one-third of a star or staio.

BARREL, or BARIQUE of Paris, contains 210 pints, or twenty-six septiers and a half; four bariques make three muids, or one tun.

BARRELS, in artillery, are used for holding powder, small-shot, flints, sulphur, salt-petre, resin, pitch, quick-match, &c. Barrels filled with earth serve to make a parapet to cover the men, like gabions and canvas bags.

BARRELS, FIRE, are casks of divers capacities, filled with bombs, grenadoes, fire pots, &c. and mixed with great quantities of tow soaked in petroleum, turpentine, pitch, &c. used by the be- sieged to defend breaches. Some are mounted on wheels, filled with composition, and inter- mixed with loaded grenades, and the outside full of sharp spikes; some are placed under ground, which have the effect of small mines : others are used to roll down a breach, to prevent the ene- my's entrance. Composition, corned powder, thirty pounds, Swedish pitch twelve, saltpetre six, and tallow three.

Not used now. See FIRE SHIP

BARRELS OF GUNPOWDER are about sixteen inches diameter, and thirty or thirty-two inches long, holding 100 pounds of powder; but the quantity put into a whole barrel is only ninety pounds, into a half barrel forty-five pounds, and a quarter barrel, used for rifle powder, only twenty-two pounds and a half; this propor- tion leaves a space for the powder to separate when rolled, or otherwise it would always be in lumps, and liable thereby to damage.

BARRELS, BUDGE, hold from forty to sixty pounds of powder ; at one end is fixed a leathern bag with brass nails : they are used in actual service on the batteries, for loading the guns and mortars, to keep the powder from firing by ac- cident.

BARRELS'S SOUND, on the north-west coast of America, is situated about six leagues north-west of Washington, or Charlotte Islands. Long. 131►► W., lat. 52►► N.

BARRELLING OF HERRINGS. See HERRING FISHERY.

BA'RREN, adj. ~\ Barren, i. e. barr-ed, BA'RRENLY, adv. > stopped, shut, strongly BA'RRENNESS, s. j closed up, which cannot be opened, from which can be no spirit or issue. ►►► Tooke. See To BAR. Thus it is ap- plied to sterile ground, unfruitful trees, unpro- lific animals; to unimaginative and mninstructed minds ; to professedly intellectual works, desti- tute of thought, and originality ; to whatever is useless and unproductive.

But I that am exiled ; and barreine Of alle grace, and in so gret despaire, That there n'ls erthe, water, fire, ne aire,

Ne creature that of him maked is

That may me hele, or don comfort in this.

Chaucer. Glad was the markis, and his folk therefore,

For though a maiden child come all before

She may unto a knave child atteine ;

By likelyhed, sin she n'is not barreine. Id.

It is a darksome delve, farre under ground,

With thornes and barren brakes environed round,

That none the same may easily out-win j

Yet many waies to enter may be found,

But none to issue forth when one is in :

For discord harder is to end than to begin.

Spenser.

Thou barraine ground, whom winter's wrath hath

wasted,

Art made a mirror to behold my plight. Whilome thy fresh spring flowr'd, and after hasted Thy summer proude with daffodillees dight ; And now is come thy winter's stormie state, Thy mantle mard wherein thou maskedst late. Id.

Yet, 0 most blessed Spirit ! pure Lampe of Light, Eternal Spring of Grace and Wisedom trew, Vouchsafe to shed into my barren spright Some little drop of thy celestial dew, That may my rimes with sweet infuse embrew, And give me words equal unto my thought, To tell the marveiles by Thy mercie wrought. Id.

It is one especial praise of many, which are due to this poet, that he hath laboured to restore as to their rightfull heritage such good and natural! English wordes as have beene long time out of use and almost dean disherited, which is the. only cause that our mother tongue, which truly of itself is both full enough for prose, and stately enough for verse, hath long time been counted most barren and bare of both.

Critique on Spenser, prefixed to his Works.

There shall not be male or female barren among you, or among your cattle. Deuteronomy.

Give me no help in lamentations ; 1 am not barren to bring forth laments. Shahspeare.

There be of them that will make themselves laugh, to set on some quantity

of barren spectators to laugh too. Id.

Forget not in your speed, Antonius, To touch Calphurnia ; for our elders say The barren, touched in this holy chase, Shake off their steril curse. Id.

The situation of this city is pleasant, but the water is naught, and the ground barren. 2 King.*

Within the self same-hamlet, lands have divers degrees of value, through the diversity of their fer- tility or barrenness. Bacon,

The importunity of our adversaries hath constrain- ed us longer to dwell than the barrenness of so poor a cause could have seemed either to require or to admit.

Hooker.

Straight mine eye hath caught new pleasures Whilst the landscape round it measures ; Russet lawns and fallows gray, Where the nibbling flocks do stray ; Mountains, on whose barren breast The lab'ring clouds do often rest j Meadows trim, with daisies pied, Shallow brooks, and rivers wide. Milton.

They led the vine

To wed her elm ; she spous'd about him twines Her marriageable arms, and with her brings Her dow'r, th' adopted clusters, to adorn His barren leaves. Id.

I pray'd for children, and thought barrenness In wedlock a reproach. Id.

No more be mention'd then of violence Against ourselves ; and wilful barrenness

That cuts off us from hope. Id.

The adventures of Ulysses are imitated in the ˆEneis ; though the accidents are not the same, which would have argued him of a total barrenness of invention.

Dry den.

Telemachus is far from exalting the nature of 1m country ; he confesses it to be barren. Pope.

Some schemes will appear barren of hints and mat- ter, but prove to be fruitful. Swift.

Without the evening dew and show'rs, The earth would be a barren place,

Of trees, and plants, of herbs and flow'rs, To crown her now enamell'd face.

Charles Cotton.

This heart, by age and grief congeal'd, Is no more sensible to love's endearments, Than are our barren rocks to morn's sweet dew, That calmly trickles down their rugged cheeks.

Miller's Mahomet.

There is a power upon me which withholds And makes it my fatality to live : If it be life to wear within myself, This barrenness of spirit, and to be My own soul's sepulchre, for I have ceas'd To justify my deeds unto myself, The last infirmity of evil. Byron.

BARREN ISLAND, an island in the bay of Bengal, about eighteen miles in circumfer- ence ; the vegetation consists principally of withered shrubs and trees. It contains a vol- cano 1800 feet above the level of the sea. Im- mense columns of smoke and showers of red-hot stones, some of them three or four tons weight, are discharged from it. Distant forty-five miles east of the Lower Andaman Island. Lat. 12►► 15′ N. Also a small island in Chesapeake bay, north-east from the mouth of Patuxent river. Long. 76►► 22′ W., lat. 38►► 34′ N.

BARREN ISLAND, CAPE, an island of the South Pacific Ocean, in Bass Straits, between Great Island on the north, and Clarke's Island on the south. It is about twenty miles in length, and ten in breadth, chiefly covered with low vegeta- tion. Here are found the peculiar quadrupeds of the Australasian regions, the kangaroo, wombat, and duck-billed ant eater.

BARRENNESS. See STERILITY.

BARREN-WORT. See EPIMEDIUM. BARRERIA, in botany, a genus of plants, class pentandria, order monogynia. Its generic character is CAL. quinquedentate ; COR. rotate, divisions scrobiculate ; filaments dilated ; ANTH. tetragonal, marginate, margins cohering. The only species of this genus is the B. theobromae- folia, a tree of about fifty feet in height, a native of Cayenne.

BARRETRY. See BARRATRY. BARRETT (George), an eminent landscape painter, was born in Dublin about 1732. By natural genius and application, he acquired, with- out a teacher, such skill in the art of painting, as to obtain the premium of ►►50 offered by the Dublin society

for the best landscape in oil. He afterwards went to London, and there, in 1763, the premium of ►►50 for the best land- scape, was adjudged to him by the society for the encouragement of arts, &c. He was one of the original planners of the Royal Academy, of which he became a member. He died in 1784. BARRETT (William,) an eminent surgeon, born in Somersetshire. He settled at Bristol, and gained great reputation in his business. In 1788

he published a history of the city of Bristol, in one vol. 4to. the materials of which lie had em- ployed upwards of twenty years in collecting. He died in 1789. Mr. Barrett was the early patron of the celebrated Chatterton.

I3AunrcA'i)K,v.&.n.ˆ From barr, to stop,

BAURICA'DO, v.&c n. (ˆ bur, or obstruct. A

*BA'RIUCO, {fortification; any thin**

BARRIER. ' fixed to hinder entrance;

barrier likewise signifies boundary or limit; a

bar to mark the limits of any place.

Why it hath bay windows, transparent as barrica- does ; and the clear stones to the north are as lustrous as ebony ; and yet compjainest thou of obstructions.

Shahspcare.

The access was by a neck of land, between the sea on one part, and the harbour water, or inner sea on the other ; fortified clean over with a strong rampier and barricade. Bacon.

For justs, and tourneys, and barriers, the glories of them are chiefly in the chariots, wherein the chal- lengers make their entries. Id.

Fast we found, fast shut

The dismal gates, and barricado'd strong! Milton. He had not time to barricadu the doors ; so that the enemy entered. Clarendon.

Tho truth of causes we find so obliterated, that it pr; ins almost barricadoed from any intellectual ap- proach. Harvey. This lie courageously invaded, And having enter'd, barricaded) Iiiscoi>:'d himself as formidable A; eould be underneath a table. Hudibras.

Pris'ners to the pillar bound, At either barrier plac.'d ; nor, captives made, He treed, or arm'd anew. Dryden.

The queen is ˆu.iranteo of the Dutch, having pos- session of the barrier, and the revenues thereof, be- fore a peiice. Swift.

jJut wave whal'er to Cadmus may belong, And lix, () muse, the barrier of thy song At Oedipus. Pope's Statins.

How instinct varies in the grovelling swine, Compar'd half reas'nin;: elephant ! with thine : 'Twixt that and reason what, a nice barrier ! For ever sep'rate, yet. for ever near. Pope.

Saft: in the love of Ifeav'n, an ocean flows Around our realm, a harrier from the foes. Id.

Now all the pavement sounds with trampling feet, And th'1 nux'd hurry Litrriratli's the street j lintaiii'l'd here, the waggon's lengthened teanti. Gay. It you value yourself as a niiin of learning, you are 1 ::iliiin_; a mo.;l impassable barrier against improve-

Watts. The lurrii-r wall, the river tleep and wide,

liorrii! i rags, tin1 u.oimtains dark and tall, Hi ' lik" ih. rocks iliat part Hispania's land from

Byron.

HUM! MIT, in military affairs, is usually tnnuril win n tiini: permits, of pales or stakes crossed witli butoons, ami shod with iron at the feet, and set up 111 passages or breaches.

ll\i:i;i< \i i, in naval architecture, a strong wooden rail, supported by stanchions, extending across the !<>reiiio>t part of the quarter deck. In i vtsM'l oi \ar, ilic vacant, spaces between the strmchions are eun.monly filled with rope-mats, <►►rk, or pieces of old cable ; and the upper i ail, which contains a double rope-netting above i ;t; .ail, is stuffed with full hammocks to inter- 1 ►►► pt tiie motion, and prev: nt ilie execution. of ►►►►►►► .t'! :►►►'. ot iii time of battle.

BARRIER, in fortification, a kind of fence made at a passage,

retrenchment, &c. to stop up the entry. It is composed of great stakes, about four or five feet nigh, placed at the dis- tance of eight or ten feet from one another, with transums, or overthwart rafters, to stop either horse or foot, that would enter or rush in with violence : in the middle is a moveable bar of wood, that opens or shuts at pleasure. A bar- rier is commonly set up in a void space, between the citadel and the town, in half-moons, &c.

BARRIER ISLANDS, a range of islands nearthe east coast of New Zealand, thirty miles in length, at the mouth of the river Thames. Long. 184►► 27'W., lat. 36►►11'S.

BARRIERS, styled the jeu de barres, French, was a martial exercise of men armed and fighting together with swords, within certain bars or rails which separated them from the spectators. It is now disused.

BARRIGA NEGRA, a river in the vice-royalty of Buenos Ayres, South America, which has its rise about 160 miles north-west of Monte Video, and after being augmented by the accession of several streams, falls into lake Meri. The coun- try around is well watered, mountainous, and woody. Here are numbers of great breeding estates for cattle.

BARRING A VEIN. See To BAR.

BARRINGTON (John Shute, Viscount), a distinguished theologian, was the youngest son of Benjamin Shute, Esq. a merchant and a pro- testant dissenter. He was born in 1678, and re- ceived part of his education abroad. On his re- turn to London, he studied in the Inner Temple, and in 1701 distinguished himself as a writer in favor of the civil rights of the dissenters. Being employed by Lord Somers to engage the Presby- terians of Scotland to favor the union between the two kingdoms, he was in 1708 rewarded by. the place of commissioner of the customs, from which the tory ministry of Anne removed him. About this time an ample fortune was left him by Francis Barrington of Tofts, Esq. whose name he assumed. On the accession of George I. he was chosen member of parliament for Berwick- upon-Tweed, and in 1720 was raised to tire peerage by the title of viscount Barrington of Ardglass. Unfortunately he became connected with one of the bubbles of that time, called the Harburgh Lottery ; and was in consequence ex- pelled the House of Commons; a censure which lie scarcely merited, as the misconduct seems to have rested principally with the ministry of Ha- nover. But his strong opposition to Sir Robert Walpole is thought to have produced this seve- rity. In 1725 Lord Barrington published his ' Miscellanea Sacra,' 2 vols. 8vo., since reprinted by his son, the la'te Bishop of Durham, 3 vols. 8vo. 1770. In the same year he published 'An Kssay on the several Dispensations of God to Mankind,' 8vo. and was also the author of va- rious other tracts relative to toleration in

matteis of religion. He died in 1734, leaving several children, of whom five sons rose to high stations respectively in the state, the church, the law, the army, and the navy ; the youngest of them was the late venerable Bishop of Durham. Lord Barrington was the friend and disciple of Locke ;

and although bred a Dissenter, and a leader of that body, was also a frequenter and communi- cant of the Church of England.

HARRINGTON (Dairies), fourth son of viscount Barrington, was distinguished as a lawyer, anti- quary, and naturalist. He was born in 1727, and, after preparatory studies at Oxford and the Inner Temple, was called to the bar. He held several offices previous to his being appointed a Welch judge in 1757, and was subsequently se- cond justice of Chester till 1785, when he re- signed that post, and thenceforward lived in retirement, in the Temple, where he died, March 1800. His works, which are numerous, consist principally of papers in the Transactions of the Royal and Antiquarian Societies, of both which learned bodies he was a fellow ; Observations on the Statutes, chiefly on the more Ancient, &c. 1766, 4to. ; an edition of Orosius, with the Anglo-Saxon version of king Alfred, and an English translation and notes, 1773 ; Tracts on the Probability of reaching the North Pole, 1775, 4to. occasioned by the arctic expedition of Capt. Phipps, afterwards Lord Mulgrave.

BARRINGTON, a township of Nova Scotia, in Queen's county, on the east side of the bay of Fundy. 2. A township of New Hampshire, in Stafford county, about thirty miles north-west of Portsmouth. Alum is found here. 3. A town- ship of'Rhode Island, in Bristol county, on the north-west branch of the Warren, seven miles south-east of Fox-Point, in Providence.

BARRINGTON, GREAT, a township in Berkshire, county of Massachusetts. It lies 140 miles west of Boston.

BARRINGTONIA, in botany, a genus of the polyandria order, belonging to the monadelphia class of plants, the characters of which are : one female, the calyx dephillous above ; with a drupa, which it crowns ; and the seed is a quadrilocular nut. There is but one species known, viz. B. speciosa, a native of China and Otaheite.

BA'RRISTER ; from burr, and ester, to re- main or continue : thus the combination of the two form, barrester, one who takes his sta- tion at a*

bar ; who continues there ••• that is who carries on his profession at the bar ; a pleader of causes.

Jollier of this state,

Than are new-benefic'd ministers ; he throws,

Like nets or lime-twigs, wheresoe'er he goes,

His title of barrister on every wench,

And wooes in language of the Pleas and Bench.

Donne.

This being reveal 'd, they now begun With law and conscience to fall on, And laid about as hot and brainsick, As th' utter barrister of Swanswick.

Butler's Hudi'rai.

BARRISTERS are sometimes termed juriscon- sulti ; and in other countries called licentiati in jure. Anciently barristers at law were called apprentices of the law, in Latin, apprenticii juris nobiliores. The time before they ought to be called to the bar, by the ancient orders, was eight years, now reduced to five ; and the exercises done by them, (if they were not called ex gratia) were twelve grand moots performed in the inns of Chancery in the time of the grand readings, and twenty-four petty moots in the term times, before

the readers of the respective inns : and a barris- ter newly called is to attend the six (or four) next long vacations the exercises of the house, viz. Lent and Summer, and is thereupon for those three (or two) years styled a vacation bar- rist^\> The duties of a barrister are to be consi- dered honorary, and he can maintain no action for his fees, which are reckoned a gratuity, not a hire ; and which cannot be even demanded by a barrister without doing wrong to his reputation.

BARRITUS is a word of German original, adopted by the Romans to signify the general shout usually given by the soldiers of their armies on their first encounter after the classicum or alarm. This custom, however, of setting up a general shout was not pectiliar to the Romans, but prevailed amongst the Trojans according to Homer, amongst the Germans, the Gauls, Mace- donians, and Persians. See CLASSICUM.

BARROS (John de), a celebrated Portuguese historian, born at Visere, in 1 496. He was edu- cated at the court of king Emanuel, among the princes of the blood, and made a great progress in Greek and Latin. The infant John,

to whom he attached himself, and became preceptor, having succeeded the king his father, in 1521, Barros obtained a place in this prince's household ; and in 1522 was made governor of St. George del Mina, on the coast of Guinea. The king, having recalled him to court three years after, made him treasurer of the Indies, and this post inspired him with the thought of writing this history; for which purpose he retired to Pombal, where he died in 1570. His history of Asia and the Indies is divided into decades; the first of which he published in 1552, the second in 1553, and the third in 1563 ; but the fourth decade was not published till 1615, when it ap- peared by order of Philip III. who purchased the MS. Several authors have continued it, so that we have at present twelve decades. He left many other works.

BARROW, n. s. beriej>e, Sax. supposed by Skinner to come from bear; any kind of carriage moved by the hand ; as a hand-barrow, a frame of boards, with handles at each end, carried be- tween two men ; a wheel-barrow, that which one man pushes forward by raising on one wheel.

Have I lived to be carried in a basket, like a barrow of butcher's offal, and thrown into the Thames.

Shakspeare. No barrow's wheel Shall mark thy stocking with a miry trace. Gay

BA'RROW, n. s. bejij. Sax. a hog; whence barrow grease, or hog's lard.

His life was like a barrow hogge,

That liveth many a day,

Yet never once doth any good,

Until men will him slay.

The Jew of Venice, in Percy,

And therefore take my words thus, that 1 mean no

other swine but such as feed and root in the field :

among which the female, especially a guelt that never

farrowed, is more effectual than a (tame) bore, barrow

hog, or a breeding sow. Holland's Plinie.

BARROW, whether in the beginning or end of

names of places, signifies a grove ; from bean.be,

which the Saxons used in the sarr,e sense. Gibson.

BARROW is likewise used in Cornwall for a

hillock, under which, in old times, bodies have been buried. See BARROWS.

BARROW, a river of Ireland, which rises in Queen's county, and passing by Port-Arlington, Monastereven, Athy, Carlow, &c. is joined by the Nore before it arrives at Ross, after which, continuing south, it joins the Suir in Waterford Haven.

BARROW, a river of Westmoreland, which runs into the Burbeck, near Howse-house.

*BARROW (Isaac), an eminent mathematician and divine, of the last century, was the son of Mr. Thomas Barrow, a linen-draper in London, where he was born in 1630. He was at first placed at
ِ the charter-house school for two or three years; where his behaviour afforded but little hopes of success in the profession of a scholar, but being removed thence his disposition took a happier turn ; and having soon made a suffi- cient progress in learning, he was admitted a pensioner of Peter House, Cambridge. He now applied himself with great diligence to the study of all branches of literature, especially that of natural philosophy. He afterwards turned his attention to physic, and made a considerable progress in anatomy, botany, and chemistry ; after which he studied chronology, astronomy, and geometry. He then travelled into France :nnl Italy, and in a voyage from Leghorn to Smyrna, the ship being attacked by an Algerine pirate, he staid upon deck, and with the greatest intrepidity, worked the guns, till the pirate, per- ceiving the stout resistance the ship made, sheered on" and left her. At Smyrna he met ص with a most kind reception from Mr. Bretton, the F.nglish consul, upon whose death he after- wards wrote a Latin elegy. From thence he proceeded to Constantinople, where he received similar civilities from Sir Thomas Bendish the English ambassador, and Sir Jonathan Dawes, with whom he afterwards preserved an intimate friendship. At Constantinople he read the works of St. Chrysostom, once bishop of that see, whom he preferred to all the other fathers, and about a year after he returned to Venice. From thence he came home in 1659,*

through Germany and Holland; and was ordained by bishop Brownrig. !ii KifJOhe was chosen to the Greek professorship at Cambridge, and gave lectures upon Aristotle's rhetoric.. In 1i>62 lie was appointed professor of geometry in (Jresham college, and in 1603 elected a fellow of the Royal Society, in the first choice made by the council after their charter. The same year he was chosen professor of mathe- matics at Cambridge, and resigned his professor- ship of Grcsham college. In 1669 he resigned his mathematical chair to his learned friend l.saac Newton, being determined to give up the study of mathematics for that of divinity. Upon quiuiu'j; his professorship, he was only a fellow of Trinity college, till his uncle gave him a small sinecure in Wales, and Dr. Seth Ward, bishop < >f Salisbury conferred upon him a prebend in his church. In l(i?0 he was created D. D. by mandate; and, upon the promotion of Dr. Pear- son, master of Trinity college, to the see of Chester, he was appointed to succeed him by the kind's patent, dated the 13th of February, 1672. \lien tlie king advanced him to this dignity, he

said, ' he had given it to the best scholar in Eng- land.' In 1675 he was raised to be vice-chancel- lor of the university. He died on the 4th of May, 1677, in the forty seventh year of his age, and was interred in Westminster abbey, where a monument adorned with his bust was soon after erected. Among other instances of his wit and vivacity, is related the following rencontre be tween him and the celebrated Lord Rochester. These two meeting one day at the court, while the doctor was king's chaplain in ordinary, Roches- ter, thinking to banter him, with a flippant air, and a low formal bow, accosted him with, ' Doc- tor, I am yours to my shoe-tie ;' Barrow, per- ceiving his drift, and determined upon defending himself, returned the salute, with, ' My lord, I am yours to the ground.' Rochester, on this, improving his blow, returned it with, ' Doctor, I am yours to the centre ;' which was as smartly followed up by Barrow, with, ' My lord, I am yours to the antipodes.' Upon which, Roches- ter, disdaining to be foiled by a musty old piece of divinity, as he used to call him, exclaimed, ' Doctor, I am yours to the lowest pit of hell ;' upon which, Barrow turning upon his heel, with a sarcastic smile, archly replied, ' There, ray lord, I leave you.'

Of Dr. Barrow's numerous works, the princi- pal are, 1. Euclidis Elementa, 8vo. Cantab. 1655. 2. Euclidis Data, 8vo. Cantab. 1657.

3. Lectiones Opticae XVIII. 4to. Lond. 1669.

4. Lectiones Geometries XIII. 4to. Lond. 1670.

5. Archimedis Opera, Apollonii Conicorum, Libri IV; Theodosii Sphericorum, Lib. III. &c. 4to. Lond. 1675. 6. Lectio, in qua Theoremata

Archiraedis de Sphaera et Cylindro exhiben- tur, 12mo. Lond. 1678. 7. Mathematics Lectiones, &c. Lond. 1683. 8. Theological Works in 3 vols. fol. Lond. 1683, published by Tillotsoii. 9. Isaaci Barrow Opuscula, &c. fol. Lond. 1687.

BARROWS, in ancient topography, artificial hillocks or mounts, met with in many parts of the world, intended as repositories for the dead, and formed , either of stones heaped up, or of earth. For the former, more generally known by the name of cairns see CAIRNS. Of the lat- ter Dr. Plott takes notice of two kinds in Oxford- shire : one placed on the military ways ; the other in the fields, meadows, or woods ; the first sort doubtless of Roman erection, the other more probably erected by the Britons or Danes. We have an examination of the barrows in Cornwall by Dr. Williams, in the Phil. Trans. No. 458, from which we find that they are generally com- posed of foreign or adventitious earth ; that is, such as does not rise on the place, but is fetched from some distance. Monuments of this kind are also very frequent in Scotland. On digging into the barrows, ums have been found in some of them, made of calcined earth, and containing burnt bones and ashes ; in others, stone chests containing bones entire ; in others, bones neither lodged in chests nor deposited in xirns.' These tumuli are round, not greatly elevated, and ge- nerally at their basis surrounded with a foss. They are of different si7es; in proportion, it is sup- posed, to the greatness, rank, and power, of the deceased person. The links of Skail, in Sand-

****wick, one of the Orkneys, abound in round barrows. Some are formed of earth alone, others of stone covpred with earth. In the former was found a coffin, made of six flat stones. They ;ire too short to receive a body at full length : the skeletons found in them lie with the knees pressed to the breast, and the le.u,s doubled along the thighs. A bag, made of rushes, has been found at the feet of some of these skeletons, containing the bones, most probably, of another of the family. In one were to be seen mul- titudes of small beetles ; and as similar insects have been discovered in the bag which enclosed the sacred ibis, we may suppose that the Egyp- tians, and the nation to whom these tumuli be- longed, might have had the same superstition respecting them. On some of the corpses in- terred in this island marks of burning were ob- served. The ashes deposited in an urn, which was covered on the top with a flat stone, have been found in the cell of one of the barrows. This coffin or cell was placed on the ground, then covered with a heap of stones, and that again cased with earth and sods. Both barrow and contents evince them to be of a different age from the former.*

These tumuli were in the nature of family vaults : in them have been found two tiers of coffins. It is probable, that on the death of any one of the family, the tu- mulus was opened, and the body interred near its kindred bones. Ancient Greece and Latiuni concurred in the same practice with the natives of this island. Patroclus among the Greeks, and Hector among the Trojans, received but the same funeral honors with our Caledonian heroes ; and the ashes of Dercennus the Laurentine monarch had the same simple protection. The urn and pall of the Trojan warrior might per- haps be more superb than those of a British leader : the rising monument of each had the common materials from our mother earth. See Homer's Iliad, xxiv. 1003. The Grecian bar- rows, however, do not seem to have been all equally simple, ˆhe barrow of Alyattes, father of Croasus king of Lydia, is described by Hero- dotus as a most superb monument, inferior only to the works of the Egyptians and Babylonians. It was a vast mound of earth heaped on a base- ment of large stones by three .classes of the people : one of which was composed of girls, �who were prostitutes. Alyattes died, after a long icign, A. A. C. 562. Above a century inter- vened, but the historian relates, that to his time five stones (�pot termini or stela) on which let- ters were engraved, had remained on the top, recording what each class had performed ; and from the measurement it appeared, that the greater portion was done by the girls. Strabo likewise has mentioned it as a huge mound, raised on a lofty basement by the multitude of the city. The circumference was six stadia or three quarters of a mile ; the height two ple- thra or 200 feet ; and the width thirteen plethra. It was customary among the Greeks to place on barrows, either the image of some animal or stelae, jommonly round pillars with inscriptions. The famous banow of the Athenians in the plain of Marathon, described by Pausanias, is an in- stance of the lattor usage. An ancient monu-

ment in Italy, by the Appian way, called the sepulchre of the Curiatii, has the same number of termini as remained on the barrow of Alyattes, the basement which is square, supporting five round pyramids. Of the barrow of Alyattes, the apparent magnitude is described by travellers as now much diminished, and the bottom ren- dered wider and less distinct than before, by the gradual increase of the soil below. It stands in the midst of others by the lake Gygseus ; where the burying place of the Lydian princes was situated. The barrows are of various sizes, the smaller made perhaps for children of the younger branches of the royal family. Four or five are distinguished by their superior magni- tude, and are visible as hills at a great distance. That of Alyattes is greatly supereminent. AH of them are covered with green turf, and retain their conical form without any sinking in of the top.

BARROWS, AMERICAN. Barrows are also found in great numbers in America. These are of different sizes, according to Mr. Jefferson ; some of

them constructed of earth, and some of loose stories. That they were repositories of the dead is obvious ; but on what particular occasion constructed, is matter of doubt. Some have thought they covered the bones of those who have fallen in battles, fought on the spot of interment. Some ascribed them to the custom said to pre- vail among the Indians, of collecting, at certain periods, the bones of all their dead, wheresoevet deposited at the time of death. Others again supposed them the general sepulchres for towns, conjectured to have been on or near these grounds ; and this opinion was supported by the quality of the lands in which they are found (those constructed of earth being generally in the softest and most fertile meadow grounds on river sides \ and by a tradition said to be handed down from the aboriginal Indians, that when they settled in a town, the first person who died was placed erect, and earth put about him, so as to cover and support him ; that when another died, a narrow passage was dug to the first, the second reclined against him, and the cover of earth replaced, and so on. 'There being one of these barrows in my neighbourhood (says Mr. Jefferson), I wished to satisfy myself whether any, and which, of these opinions were just. For this purpose I determined to open and ex- amine it thoroughly. It was situated on the low grounds of the Rivanna, about two miles above its principal fork, and opposite to some hills, on which had been an Indian town. It was of a spheroidical form, of about forty feet diameter at the base, and had been of about twelve feet altitude, though now reduced by the plough to 7►►, having been under cultivation about a dozen years. Before this it was covered with trees of twelve inches diameter, and round the base was an excavation of five feet depth and width, whence the earth had been taken of which the hillock was formed. I first dug superficially in several parts of it, and came to collections of human bones, a,t different depths, from six inches to three feet below the surface. These were lying in the utmost confusion, some vertical, some ob- lique, soint horizontal, and directed to every

point of the compass, entangled, and held to- gether in clusters, by the earth. Hones of the most distant parts were found together ; as, for instance, the small hones of the foot in the hol- low of a skull, many skulls would sometimes be in contact, lying on the face, on the side, on the back, top or bottom, so as on the whole to give the idea of bones emptied promiscuously from a bag or basket, and covered over with earth, without any attention to their order. The bones of which the greatest numbers remained, were skulls, jaw-bones, teeth, the bones of the arms, thighs, legs, feet, and hands. A few ribs re- mained, some vertebra of the neck and spine, without their processes, and one instance only of the bone which

serves as a base to the vertebral column. The skulls were so tender, that they generally fell to pieces on being touched. The other bones were stronger. There were some teeth which were judged to be smaller than those of an adult ; a skull which, on a slight view, ap- peared to be that of an infant, but it fell to pieces on being taken out, so as to prevent satis- factory examination ; a rib, and a fragment of the under jaw of a person about half grown ; another rib of an infant; and part of the jaw of a child, which had not yet cut its teeth. This List furnishing the most decisive proof of the burial of children here, 1 was particular in my attention to il. It was part, of the right half of tlie um'.er jaw. Tin: processes by which it was articulated to the temporal bones were entire ; and t!ic bone itself linn to where it had been broken oil', which, as nearly as I could judge, was about the place of the eye-tooth. Its upper edge, wherein would have been the sockets of the teeth, was perfectly smooth. Measuring it with that of an adult, by placing their hinder processes together, iis broken end extended to the penultimate grinder of the adult. This bone was white, all the others (if a sand color. The boms of infants being soft, they probably decay M 'oner, which mi'j;ht be the cause so few were found here, I proceeded then to make a perpen dicular cut through the body of the barrow, that I uuuht examine its external structure. This passed about three feet from its centre, was opened to the former surface of the earth, and was wide enough fora man to walk through and examine its sides. At the bottom, that is, on the level of the circumjacent plain, I found bones; above these a lew stones, brought from a cliff a quarter of a mile oft, and from the river one eighth of a mile oil'; then a large interval of earth, then a .stratum of bones, ami so on. At one end of the section were four strata of bones plainly distinguishable : at the other, three; the strata in on,- part not ranging with those in another. The bones nearest the surface were least decayed. No holes were discovered in any of them, as it' made with bullets, arrows, or other weapons. 1 conjectured that in this barrow might have been 1000 skeletons. I-'. very one will readily seize the circumstances above related, which militate against the opinion that it covered the bones only of persons fallen in battle; and against the tradition also winch would make it tile common sepulchre of a town, in which the bodies were placed upright, and touching each

other. Appearances certainly indicate that it derived both origin and growth from the ac- custoir ary collection of bones, and deposition of them together ; that the first collection had been deposited on the common surface of the earth, a few stones put over it, and then a co- vering of earth ; that the second had been laid on this, had covered more or less of it in pro- portion to the number of bones, and was then also covered with earth, and so on. The fol- lowing are the particular circumstances which give it this aspect. 1. The number of bones. 2. Their confused position. 3. Their

being in different strata. 4. The strata in one part having no correspondence with those in another. 5. The different states of decay in these strata, which seem to indicate a difference in the time of in- humation. 6. The existence of infant bones among them. But on whatever occasion they may have been made, they are of considerable notoriety among the Indians : for a party passing, about thirty years ago, through the part of the country where this barrow is, went through the woods directly to it, without any instructions or enquiry; and having staid about it somatime, with expressions which were construed to be those of sorrow, they returned to the high road, which they had left about half a dozen miles to pay this visit, and pursued their journey. There is another barrow, much resembling this in the low grounds of the south branch of the Shenandoah, where it is crossed by the road leading from the Rockfish gap to Staunton. Both of these have, within these dozen years, been cleared of their trees and put under cultivation, are much re- duced in their height, and spread in width, by the plough, and will probably disappear in time. There is another on a hill in the Blue ridge of mountains, a few miles north of Wood's gap, which is made up of small stones thrown to- gether. This has been opened and found to contain human bones as the others do. There are also many others in other parts of the country.' In South Africa, to the north of the Hottentots, innumerable barrows are described to have been seen by Dr. Sparrow, (Travels ii. 264.) In New Caledonia, also, Mr. Foster met with a barrow four feet high, surrounded by an en- closure of stakes. But the most recent disco- veries of the kind, in countries removed from all intercourse with Europe, have been made by Mr, Oxley during his expedition into the in- terior of New South Wales, in 1817-18. On his return, he passed two native burial places. The first presented a raised mound of earth, under which were some ashes ; but there was no decisive proof whether they were from wood or bones. A semicircular trench was dug round one side of the barrow, as if designed to afford seats for persons in attendance. The second appeared not to have been constructed more than a year or two ; and, from the care displayed in it, evidently belonged to some personage of dis- tinction. The form of the whole was semicir- cular. Three rows of seats occupied one half; the grave and an outer row of seats the other. The seats formed segments of circles of from forty to fifty feet, and were raised by the soil being trenched up between them. The grave

was shaped into an oblong cone, five feet high and nine long. On opening this barrow, a layer of wood presented itself, about two feet beneath the

surface, forming a sort of arch, which supported the upper cone. Beneath this were placed several sheets of dry bark ; then dry grass and leaves, to which no damp had ever pene- trated. The body, which was fresh enough to be extremely offensive, was deposited, at the depth of four feet, in an oval grave, as many feet long, and about two feet broad. The legs were bent quite up to the head, and the arms were placed between the thighs. The face was downwards. The direction of the corpse was east and west, the head being to the east. The body was carefully wrapped in a great number of opossum skins. The head was bound round by the common net and girdle of the natives. Over the whole was a larger net. Two cypress trees were to the west and north of this barrow, distant about fifty feet. The sides of them to- wards the sepulchre were barked, and curious characters were deeply engraven in them.

BARROW, LITTLE, a river of Ireland, which falls into the Barrow, about four miles east of Portarlington.

B ARROW, POINT, a cape on the south coast of Ireland, in the county of Cork, five miles east of Kinsale. Long. 8►► 21′ W., lat. 51►► 43′ N.

BARROW'S STRAIT, a considerable strait of the Northern Ocean, so named by Captain Parry, in one of his voyages, in honor of Mr. Barrow of the admiralty.

BARROW UPON SOAK, a village in Leicester- shire ; the birth place of bishop Beveridge. It is celebrated for producing a hard blue stone, which, when calcined, makes a lime fit for a strong cement, and adapted to all works under water. The Barrow blue stone was conveyed to Ramsgate for the building of the piei and was found to succeed, after the Dutch tarras mortar had failed.

BARROWS, in the salt works, are wicker cases, almost in the shape of a sugar loaf, wherein the salt is put to drain.

BARRSTOBRICK, a rocky moorish hill, in the county of Kirkcudbright and parish of Tong- land, where the unfortunate Mary, Queen of Scots, rested and refreshed herself with a few faithful friends, in 1568, after the fatal battle of Langside; on her way to the Abbey of Dun- drennan. From this circumstance the farm on that part of Barrstobrick has ever since been called Queen's Hill.

BARRUEL, a French ecclesiastic, and a literary man of some eminence during the French revolution, commenced his career in 1774, with an ode on the accession of Louis XVI. Soon after he united with Freron in the compo- sition of the Annee Litteraire. In 1788 he became editor of Le

Journal Ecclesiastique, which he carried on till July 1792. In 1794 he had escaped, from the opposition his sentiments encountered in Paris, to England, and published his History of the French Clergy during the Revolution. In 1796 nppeared the first two volumes of the work by which he is best known, Memoirs for a History of Jacobinism, Impiety, and Anarchy, the remaining part of which followed some

years after. Though an exaggerated production, it supplies many facts not otherwise to be found recorded. He returned to France in 1802, and did Oct. 5, 1820, at the age of seventy-nine.

BARRULET, in heraldry, the fourth part of the bar, or the one half of the closset, an usual bearing in coat-armour.

BARRULY, in heraldry, is when the field is divided bar-ways, that is, across from side to side, into several parts.

BARRY (James), a celebrated painter, was born at Cork on the llth of October, 1741. His father's occupation was that of a coasting-trader, and, anxious to engage his son in the same busi- ness, he carried him along with him in several voyages. The mind of Barry, however, averse to such an employment of his talents, was engaged at all leisure moments in sketching and drawing ; and his father, perceiving the impossibility of fix- ing his choice in a seafaring profession, allowed him at last to pursue the natural bias of his dis- position. His eager thirst of knowledge, and his persevering industry in acquiring it, now excited the admiration of all his acquaintance, and carried him forward to improvement and information far beyond his years. He read all the books that his slender finances could com- mand, or the kindness of his friends supplied ; and his unwearied diligence allowed him no time for frivolous amusement, and little for repose. But he devoted a part of every day to the exercise of his pencil, and at a very early age furnished designs for a volume of fables, printed by an Irish bookseller. He was seventeen years old when he attempted oil painting ; but his progress in this first art must have been extremely rapid, and his execution of individual pieces uncom- monly quick, since we find him in less than five years not only finishing several large paintings, but producing that work which drew him from the obscurity of a provincial town, and gave him a high place among the artists of his country. The subject that he chose for this picture was an old traditionary story concerning the arrival of Saint Patrick in Ireland ; and as soon as he had finished it he set out with it for Dublin. With- out acquaintance or recommendation of any kind, he obtained leave to expose his piece in an exhibition of paintings, which was just opening upon his arrival, and had the happiness to see it marked out by public approbation and ap- plause. He shortly after was introduced to the acquaintance, and soon obtained the friendship, of Burke. With that

great man he repaired to London, as a better field for the display of his talents, and, under his patronage, was introduced to several artists of eminence. The talents of Mr. Barry were here universally acknowledged to be great ; but in proportion as nature had been libe- ral, his friends and himself felt the importance of seconding her views, by embracing every at- tainable opportunity of improving her gifts. The most important part of a painter's education having for a long time been considered to be a short residence in Rome, Barry, was enabled to visit, by the assistance of the Burkes, that seat of the arts. There he remained nearly five years, engaged in the deepest researches on the princi- ples of his art, and in the most laborious exami- nation of its noblest specimens. For three years,

ne mentions in a letter to Sir Joshua Reynolds, lie was so completely occupied in studying the inimitable models of perfection bestowed upon the world by the genius of Michael Angelo, Ra- phael, Titian, Guido, and other celebrated masters, that he could not spare two hours for any other employment. Nor was any of this portion of his time spent in copying them, ••• it was entirely devoted to a minute and critical examination of their peculiar manner and characteristic excel- lencies. In 1771 he returned to his native country, and soon displayed the extent of his powers, and the improvement of his taste, in se- veral masterly appeals to public admiration. His first was a Venus, in which he embodied an amazing assemblage of beauty and grace. The subject he chose for the following year was like-

the 22d of February, 1 80'3, aged sixty-five. ' Mr. Barry, as an artist,' Mr. fiazlett has well said, 'as a writer, and a man, was distinguished by great inequality of powers and extreme contra- dictions in character. He was gross and refined at the same time ; violent and urbane ; sociable and sullen ; inflammable and inert ; ardent and phlegmatic ; relapsing from enthusiasm into in- dolence ; irritable, headstrong, impatient of re- straint ; captious in his intercourse with his friends, wavering and desultory in his profession. In his personal habits he was careless of ap- pearances or decency, penurious, slovenly, and squalid. He regarded nothing but his im- pulses, confirmed into incorrigible habits. His pencil was under no control. His eye and his hand seemed to receive a first rude impulse, to

wise mythological, being a representation of Ju- which he gave himself up, and paid no regard piter and Juno on Mount Ida. But Mr. Barry's to any thing else. The strength of the original chief object of ambition was to be employed in

some national work, which should raise the cha- racter of his country, while it should confer per- manent reputation on his own name. He had beheld at Rome the works of Raphael and Michael An-jeloon the walls of the Vatican, and he saw what splendor magnificent edifices, and noble designs in painting, mutually diffused over each other. He therefore concurred with ala- crity in a proposal made to decorate the cathe- dral of St. Paul's \ith paintings, and offered his services as one of the artists. But this design was reliquished, owingto the opposition of the primate and the bishop of London. A proposal that was made soon afterwards to Barry and his brother artists, to decorate the <_rreat hall of the Society ,tf Arts with historical and allegorical paintings, failed, to his ureat mortification, like the former. Bent on his v,reat object, he offered to execute this work by himself, and the only condition that he stipulated for was, that he might be allowed to proVeed to the end of his designs without in- terference or control. The condition was agreed In, and the work will remain a lasting monument of ins fume. We have not space in this short sketch to describe his beautiful and ingenious designs ; we must therefore refer our readers to his own writings for their details, and to the pic- tures themselves, for a knowledge of the feeling ot that excellence; to which Ins own description can do justice no more than that, of others can convey. Dr. Johnson observed, upon seeingthem, that they displayed a '_rra►►p of mind which was nowhere else to he found. This great work was unproductive of emolument to the author. But the society voted him their gold medal, 250 '.niiurus at different periods, and allowed him the profits of exhibitions, which amounted to .L'.V.'O. it is ni t very pleasing to follow the artist through the remaining part of his life, in 1777 lie \\as made a Uoval Academician, and Ju ITflO professor of paintiuu- in ihu academy, ►►►vvhic'i situation he lo -t. in IT1.'1., in consequence ot :,i< extreme anxiety to induce the academy to appropriate the icceipts of the uxmbitions to the .asters for the use ::".►►►'. of Buchan set*

impetus only drove him farther from his object. His genius constantly flew off in tangents, and came in contact with nature only at salient points. His enthusiasm and vigor were exhausted in the conception ; the execution was crude and abortive. His writings are a greater acquisi- tion to the art than his paintings. The powers of conversation were what he most excelled in ; and the influence which he exercised in this way over all companies where he came, in spite of the coarseness of his dress, and the frequent rude- ness of his manner, was great. Take him for all in all, he was a man of whose memory it is impossible to think without admiration as well as regret.' Towards the close of life he was doubtless occasionally deranged. His works are collected in two quarto volumes, 1809, of which his Lectures are deemed the best part.

BARRY (Girald), commonly called Giraldus Cambrensis, Girald of Wales,

an historian and ecclesiastic in the reigns of Henry II. and Richard I., was born at the castle of Manorbier, near Pembroke, A. D. 1146. By his mother he was decended from the princes of South Wales, and his father, William Barry, was one of the chief men of that principality. Being a younger brother, and intended for the church, he was sent to St. David's, and educated in the family of his uncle, who was bishop of that see. He acknow- ledges, in his history of his own life and actions, that in his youth he was too playful ; but being reproached for it by his preceptors, he became a very hard student, and excelled all his schoo. ••• fellows. When he was about twenty years of age he was sent, A. D. 1166, for improvement, to the university of Paris ; where he continued five years. On his return to Britain he entered into holy orders, and obtained several benefices in England and Wales. Observing that his countrymen were backward in paying the tithes of wool and cheese, which he' was afraid would in- volve them in eternal ruin, he applied to Richard, archbishop of Canterbury, and was appointed his legate in Wales for rectifying that disorder. He executed his commission with great spirit; excommunicating all who refused to save their souls by surrendering the tithes of cheese and wool. Not satisfied with enriching, he also at- tempted to reform, the clergy ; and reported the archdeacon of Brecon, for the unpardonable

crime of matrimony. The poor old man refusing to put away his wife, was deprived of his arch- deaconry; which was bestowed upon our zealous legate. His great vigor involved him in many quarrels. His uncle, the bishop of St. David's, dying A. D. 1176, he was elected his successor by the chapter : but this election having been made contrary to the inclination of Henry II. he did not insist upon it, but went again to Paris to prosecute his studies, in the civil and canon law, and theology. Having spent about four years at Paris, he returned to St. David's, where he found every thing in confusion ; and the bishop being expelled by the people, he was ap- pointed administrator by the archbishop of Can- terbury, and governed the diocese in that capacity till A. D. 1184, when he was restored. About the same time he was called to court by Henry the Second, appointed one of his chaplains, and sent into Ireland A. D. 1185, with prince John. By this prince he was offered the united bishop- rics of Femes and Leighlin, but declined them, and employed his time in collecting materials for his Topography of Ireland, and his history of the conquest of that island. Having finished the former work, which consisted of three books, he published it at Oxford, A. D. 1287, in the follow- ing curious manner, in three days. On the first day he read the first book to a great concourse of people, and afterwards entertained all the poor of the town ; on the second

day he read the se- cond, and entertained the doctors and chief scholars ; and on the third day he read the third book, and entertained the young scholars, sol- diers, and burgesses. 'A most glorious specta- cle!' says he, 'which revived the ancient times cf the poets, and of which no example had been seen in England.' He attended Baldwin, arch- bishop of Canterbury, in his progress through Wales, A. D. 1186, in preaching a croisade for the recovery of the Holy Land; in which he tells us he was far more successful than the primate ; and that the people were prodigiously affected with his Latin sermons, which they did not un- derstand, melting even to tears, and coming in crowds to take the cross. Although Henry II. entertained the highest opinion of his abilities, he never advanced him to any higher dignity in the church on account of his relation to the princes of Wales. But on the accession of Richard I. A. D. 1189, his prospects of prefer- ment became better, for he was sent for by that prince into Wales to preserve the peace of that country, and joined in commission with William Longchamp, bishop of Ely, as one of the regents of the kingdom. He did not however, improve this favorable opportunity, refusing the bishopric of Bangor in A. D. 1190, and that of Landaff the year after, having fixed his heart on the see of St. David's, the bishop of which was very old and infirm. In A. D. 1192 the state of public affairs and the course of interest at court became so un favorable to our author's views, that he deter- mined to retire. At first he resolved to return to Paris to prosecute his studies ; but meeting with difficulties in this, he went to Lincoln, where William de Monte read lectures in theo- logy with great applause. Here he spent about six years studying divinity, and composing vari-

ous works. The see of St. David's, wnich had long been the object of his ambition, now be- came vacant, (A. D. 1198) and brought him again upon the stage. He was unanimously elected by the chapter; but met with so powerful an adver- sary in Hubert, archbishop of Canterbury, that it involved him in a litigation which lasted three years, cost him three journeys to Rome, at a great expense, and in which he was at last de- feated, A. D. 1203. Soon after, he retired from the world, and spent the last seventeen years of his life in a studious privacy, composing many books, of which we have a catalogue in the Bio- graphia Britannica. ThatGirald of Wales was a man of uncommon activity, genius, and learning, is undeniable; but these and his other good qualities were much tarnished by his insuffera- ble vanity, which must have been as offensive to his contemporaries, as it is disgusting to his readers.

BARRY (James, baron Santry), was also a descendant of the ancient princes of Wales. Be ing bred to the law, he was appointed king's ser- jeant for Ireland in 1629. In this station he was noticed by Lord Wentworth, afterwards earl of Strafford, who promoted him to be second baron of Exchequer in 1634. Barry was not un- grateful. In 1 640, when the Irish

parliament pro- posed sending over a committee to impeach Lord Strafford, he did his utmost to oppose the mea- sure, though his efforts proved fruitless. During the commotion and revolution that followed, we hear nothing of Mr. Barry; but in 1660 he was appointed chairman of the Convention, which voted for the restoration of monarchy ; and in the end of that year, king Charles II. showed his opinion of his services, by appointing him Lord Chief Justice of the King's Bench, and a privy counsellor, and creating him a peer of Ireland. He did not live to see a third revolution, for he died in 1672.

BARRY, a hill of Scotland, in Angusshire, three miles north of Belmont, and 688 feet in height. Tradition says, that queen Guinever or Vanora, the wife of Arthur king of the Britons, was confined upon it, after having been taken prisoner in a battle between that prince and the Scots and Picts. Dr. Playfair has given the fol- lowing particular account of this hill. 'Barry-bill, the supposed place of Vanora's confinement, merits some description. It is one of the Grampians, one mile and a half north-east of Alyth. It commands an extensive view of Strathmore, and of several remarkable hills in the Sidlaw range, viz. Dunsinnan, Kinpurnie, Sidlaw, Finhaven, &c. all of which might have been anciently used as watch towers, or places of defence. History in- forms us that the Picts kept possession of Dun- barry, and the adjacent country, from a remote period to the ninth century, or later ; but the precise dates of their settlement in these parts, and of their expulsion, cannot be ascertained. The hill itself is of an oval form. Its summit was levelled into an area 180 feet long, and se- venty-two or seventy-four broad. Around the area a mound of earth was raised, from six to eight feet high, and ten to twelve broad at top. On this mound a wall of free stone was built without any cement whatever. The

foundation of the wall was composed of rough granite, and still remains. It is of the same breadth with the summit of the mound ; but the height of the wall cannot be known ; Gor- don's estimate of it is extremely erroneous. Among the ruins there are several pieces of vitri- fied stone; but these vitrifications must have been accidental, as they are few and inconsider- able. Along the west and north borders of the area, barracks, or huts, were built of dry stone, and sufficiently sheltered by the mound and wall ; but no structures of this sort can be traced in the south part of the area. As tfie north and west sides of the hill are steep, and of difficult access, there was no need of an outer ditch in those quarters : but, towards the south and east, where the hill gently slopes, there is a ditch ten feet broad, and from twelve to sixteen feet below the foundation of the wall. At the south-east

extremity of the fort, a narrow bridge was raised over the ditch, eighteen feet long, and two broad, except towards each end, where the breadth was increased. It was composed of stones laid to- gether with much art and vitrified above, below, and on both sides ; so that the whole mass was firmly cemented. That an opening was left below after the process was finished is doubtful. ( )n the upper part of the bridge a stratum of gra- vel was laid, to render the passage smooth and easy. This is ilui sole part of the fort intentionally vitri- fied. A few yanls distant from the ditch there is nn outer wall, the foundation of which is about t.uee feet lower than the summit of the mound. The approach to the fort is from the north-east, alonˆ' the verge of a precipice; and the entrance was secure;! by a bulwark of stone, the ruins of which are extant. Thc-re is no vestige of a well within the fort; hut westward, between the basis uf the mound ar.d the precipice, there was a deep pond or lake, recently filled up by the tenants in that neighbourhood. About a quarter of a mile eastward, on the declivity of the hill, there are some re-mains of another oval fort, of less extent than the precedin ;, consisting of a strong wall and ditch. Tradition says, that there was a sub- terranean communication between these forts, which is not improbable. From the account iit'W given, it v. ouM apt-oar, 1. That both were constructed before' the Uonians introduced the ail ot building with lime and other cement. 2. That the 1'icts and ancient Scots had stone edifi- ces, which AH'herson is not inclined to admit. '. 1 hat they sonic-times viuitied particular parts ()! their fort.;, to render them the more durable.

BA1{11\, HAIIUA, or IJAUA, one of the wes- tern ieai:iiii e, from tin; great

of equal extent in Scotland. In the middle anrl south end there are very high hills, which are a mixture of green, rock and heath, and seem fir for sheep-walks, if the island were near a good market. The west coast is low and flat ; t soil, fine shell sand, in many parts very fertile ; but the ground rises to the east coast, where it ,s barren, and breaks off abrupt, irregular, and steep. In some parts, where the soil is rocky and uneven, it admits not of being plowed ; it is cultivated, therefore, by a kind of crooked spade, called cashroom. The inhabitants are about 1500. Long. 7'J 30′ W., lat. 56►► 55′ N.

BARRY, a town of Ireland, in the county of Longford, fifty-four miles from Dublin.

BARRY, a small island in the Bristol channel, near the south coast of Wales ; distant three mites west of Flat Holm. Its name is said to be derived from a hermit, St. Baruch, who died there in 700. Giraldus Cambrensis states, that in a rock near the entrance of the island there is a small cavity, to which, if the ear be applied, a noise is heard like that of smiths at work,

the blowing of bellows, strokes of hammers, grind- ing of tools, and roaring of furnaces,' and Sir Richard Hoare adds, that towards the southern part of the island, on a spot, called Nell's point, is a fine well, to which great numbers of women resort on Holy Thursday : having washed their eyes at the spring, each drops a pin into it. The landlord of the boarding-house (for the island is frequented by bathers) informed Sir Richard Hoare, that in the- last cleaning of the well he took out a pint of these votive offerings.

BARRY, in heraldry, is when an escutcheon is divided bar-ways, that is, across from side to side, into an even number of partitions, consisting of two or more tinctures, interchangeably disposed. It is to be expressed in the blazon by the word barry, and the number of pieces must be specified ; but if the divisions be odd, the field must be fint named, and the number of bars expressed.

BARRY-BENDY is when an escutcheon is divided evenly, bar and bendways, by lines drawn transverse and diagonal, inter- changeably varying the tinctures of which it consists, thus :

BARRY-PILY, is when a coat is divided by several lines drawn obliquely from side to side, where they form acute angles,

thus :

BARSA, in ancient geography, an island on the coast of France, in the English channel ; now called Basepool, according to some ; according to others, Bardsey.

BARSABAS ; from n3, a son, and NOjf, rest ; a name of Joseph, surnamed Justus, who was competitor with Matthias for the apostleship, and is said to have been one of the seventy disciples.

BARSABAS (Judas), a member of the synod at

Jerusalem, who was sent with Paul, Barnabas, and Silas, to publish their decree against the Judaising teachers among the Gentile churches at Antioch. He is also styled a prophet : Acts xv. 32.

BARS AC, a town of France, in Guienne, in the Bourdelois, on die left bank of the Garonne ; contains 480 houses, and belongs to the depart- ment of

the Gironde, arrondissement of Bour- deaux, eighteen miles south-east of Bourdeaux. It is noted for its excellent wine.

BAKSALLACH, POINT, a cape of Scotland, on the coastof the county of Wigton, in the bay of Luce, eight miles north-west of Burrowhead. Long. 4►► 35′ 17″ W., lat. 54►► 48′ N.

BARSALLI, or BARSALLO, a kingdom of Africa, bordering on the Gambia, inhabited by a trioe of negroes called Jaloffs. Their govern- ment is a despotic monarchy ; all people being obliged to prostrate themselves on the earth when any of the royal family makes his appearance. It is divided in to a number of provinces, over which governors are appointed, called bumeys. The Mahommedan is the professed religion, but little regard is paid to that part of the impostor's laws which forbids the use of wine ; for. the king cannot live without brandy ; nor is he ever more devout than when he is intoxicated. When he wants a fresh supply of this liquor, or of any other commodity, he seizes a certain number of his subjects, and sells them as slaves.

BARSANIANI, in church history, a sect who held the errors of the Severians and Theodosians.

BARSANTI (Francisco), an eminent musi- cal performer and composer, was born at Lucca about 1690. He studied the civil law in the university of Padua ; but after a short stay therev preferred music, and put himself under the tui- tion of some of the ablest masters 'in Italy. Having attained to a considerable degree of proficiency in practical composition, he resolved to settle in England, and came hither with Ge- miniani, in 1714. He was a good performer on the hautboy and flute. He was many years a performer at the opera-house ; and at last went to Scotland, where he improved the music of that country, by making basses to a great num- ber of the most popular Scots tunes. About 1750 he returned to England; but, being ad- vanced in years, he went into the opera band as a performer on the tenor violin ; and in the summer season into that of Vauxhall. At this time he published twelve concertos for violins; and shortly after, Sei Antifone, in which he en- deavoured to imitate the style of Palestrina, and the old composers of motets ; but so little profit resulted, that, towards the end of his life, the industry and economy of an excellent wife, whom he had married in Scotland, and the labors of a daughter whom he had qualified for a singer, but who afterwards became an actress at Covent Garden., were his chief supports. Miss Barsanti went on the stage in consequence of her entirely losing her singing voice by catching cold. Col- man engaged her as a comic actress for the Haymarket theatre, and she gained great ap- plause. She afterwards went to Ireland, became a favorite there, and married Mr. Daly, the manager of the Dublin theatre. VOL. Ill

BAIISE, in ichthyology, an English name for the pearch, still used for the same fish in the Saxon language, and one of the many Saxon words we have retained.

BARSICK, a head land on the coast of the island of South Ronaldshay, one of the Orkneys, which is 250 feet perpendicular above the level of the sea.

BAR-SUR-AUBE. See BAR.

BAP-SUR-SEINE. See BAR.

BA'RTER, v. & n.J Fr. barater; Ital. bar

BAR'TERER, gratare ; Span, barrator,

BAR'TERY. ,) from barat , craft, fraud. It

is now, however, no longer used in this ill sense. It signifies a particular mode of exchange. Ex- change is the general term signifying to take one for another. To barter is to exchange one ar- ticle of trade for another. The words that bear a near affinity to this are truck and commute ; but their precise difference is this : truck is a familiar term to express a familiar action for exchanging one article of private property for another; and commute is applied to the ex- changing one mode of punishment for another. We may exchange one book for another ; traders barter trinkets for gold-dust ; coachmen truck a whip for a handkerchief; government commutes the punishment of death for that of banishment.

For him was I exchang'd and ransom'd ; But with a baser man of arms, by far Once, in contempt, they would have barter'd me.

Shakspearc.

From England they may be furnished with such things aa they may want, and in exchange or barter send other things with which they may abound.

Bacon.

As if they scorn 'd to trade and barter, By giving or by taking quarter. Hudibras.

A man has not every thing growing upon his soil, and therefore is willing to barter with his neighbour.

Collier.

I see nothing left us, but to truck and barter our goods, like the wild

Indians, with each other. Swift.

He who corrupteth English with foreign words, is as wise as ladies that exchange plate for china ; for which the laudable traffick of old clothes is much the fairest barter. Felton.

It is a received opinion, that, in most ancient ages, there was only bartery or exchange of commodities amongst most nations. Gamden't Rent.

Then as tliou wilt dispose the rest, To those who, at the market rate, Can barter honour for estate. Prior,

If they will barter away their time, methinks they should at least have, some ease in exchange.

Decay of Piety.

He also bartered away plums, that would have rotted in a week, for nuts that would last good for his eating a whole year. Locke.

At tiie same time those very men tear their lungs in vending a drug, and show no act of bounty, except it be that they lower a demand of a ciown to six, nay to one penny. We have a contempt for such paltry barterers. Toiler. No. 4.

The most ancient and most obvious sort of commer- cial contract is bartert or the exchange of goods for goods. But, where there is no other sort of com- merce, contracts of barter must be liable to great in- equalities. Beattie. Moral Science

Some men are willing to barter their blood fat lucre. Burke.

BARTER. See ARITHMETIC, Index.

BARTH,OF BART (John), a Freiicli admiral, born at Dunkirk in 1651. He left his father, who was a poor fisherman, an

BARTHELEMY (John James), a celebrated French writer, born at Cassis, in Provence, in 1716. He was sent to school at Marseilles, and admitted

into the college of the Oratory, where his promising genius was discovered, and encou- raged, so that he made a rapid progress in learn- ing. But his design being for the church, it v, as necessary for him to leave the Oratory, a;:d .;o for i hi'.u o;ihy and theology to vthe Jesuits. Here he ;u quired, more by his own labor and per verar.ce than Ly t1.!,' instructions of the pro- lls-'TS, a ',n'i\v!eM;.;e of the (ireek, Hebrew, (.'linidean, Syriac, air! Av::l>ic kuuua'j'cs. Before liarthfclcmy Us, and when about

IVM nty-one y. ;: ; of aˆe, tL: merchants of that city havitiu' me! :- a Jew boasting of his learn- ing, and %v> i_- t.'i il to b ••• made, by introducing l:i"i to s-v. ••••••••' learnt ! man, \vith some, difficulty uot him to en •••;: ~e win the ,re\v; and Barthe-

iy came oil' -wi:.'.; t'. e diaractor of a prodigy of

firi'-ntal leaniin ;. After liniˆiin ; his education

t t!:e seminary, : e retired to Aubagne, and

!:P';iit <,•••!:'!' tii'i'"1 witji !.js iamily, by whom he

is hi-hlv e .!••••••••;••• me 1. Biit he often v'isited Maiv- scillis, for ;lu- company of learned men; and he

s ,'art!e-i!arly taken ID with one M. Gary, wiio h;'d :••• tine cibinet of ni< dais and an exten- ••• library. He also associated himself with lather S : ;'.oux, in making astronomical obser- vations. .\t last, hov.evcr, he resolved to devote liimscli tj literature, and accordingly went to Paris i-i 17 It. lie v.as n •••commended to M. de Bc./.e. keeper of the inedaN. and secretary of in- srriptioiii and br',i. ••••••••, h ttres, who received him kindly, and pant him every possible attention; and, 1:1 ;> >!iort time, on account of the age and l!o:/,e, Iiarthelemy was chosen cue < >; the cabinet of medals; ;ich ia hored incessantly. Some- "1111' '.!"•••: – li'vninatel s cretary to the

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Here, among

of them, from their injunctions, could not gratify him. On this he begged a sight of a page for a few minutes. It contained twenty-eight lines, which he read over attentively, and, retiring to a corner, transcribed the whole, and sent the fac simile to the academy of belles lettres. About the end of 1758, the duke de Choiseul, having been appointed minister for foreign affairs, gave him a pension of ––250, and in 1765 conferred on him the treasurership of St. Martin de Tours ; to which in 1758, he added the place of secretary- general to the Swiss guards In 1768 appeared his great work, the fruit of thirty years labor, entitled, The Voyage of the younger Anacharsis in Greece ; in which the traveller gives an account of the customs, government, and antiquities of the country he visited ; remarks on the music of the Greeks, on the library of the Athenians, and on the customs of all the surrounding states. In 1 789 Barthelemy became a candidate for a chair in the French academy ; and so great was the reputation he had gained by his writings, that this learned body elected him by acclamation. The speech he delivered on the occasion, for modesty and simplicity, is deservedly celebrated. In consequence of the revolution, he was re- duced to a pittance merely sufficient to furnish the necessaries of life ; yet, in 1790, when M. de St. Priest offered him the place of librarian to the king, he expressed his gratitude, but declined accepting, lest it should interfere with his occu- pations in the cabinet, which he still continued to enrich. In 1792 his strength began to fail, and, in 1793, now a feeble old man, he was arrested as an aristocrat, and hurried to prison ; but was liberated the same night, by order of the committee. He died in 1795, regretted by all his relations as their common father. Besides his Anacharsis, he was author of many papers, principally on medals, in the collection of the academy of inscriptions, &c.

BARTHELEMY (ST.), a town of France, in the department of the Lot and Garonne, arrondisse- ment of Marmande, with 2300 inhabitants. Nine miles east of Marmande, and twenty-four north- west of Agen.

BARTHIUS (Caspar), a learned and copious writer, born at Custrin, in Brandenburg, in 1576. Mr. Baillet, in his Enfans Celebres, tells us, that at twelve years of age he translated David’s Psalms into Latin verse of every measure, and published several Latin poems. Upon the death of his father (who was professor of civil law at Frankfort, counsellor to the elector of Branden- burg, and his chancellor at Custrin), he was sent to Gotha, then to Eisenach, and afterwards, ac- cording to custom, went through all the different universities in Germany. He afterwards vicited Italy, France, Spain, England, and Holland, improving himself by the conversation and

works of the learned in every country. He studied also the modern languages, and his translations from the Spanish and French show that he was not content, with a superficial knowledge. Upon his return to Germany he led a retired life at Leipsic, his passion for study having made him renounce all sort of employment. He wrote a vast nnmber of books; the principal of which are, 1. Adversaria, a large volume in folio; the second and third volumes of which he left in

MS. 2. A Translation of JLneas Gazaeus. 3. A large volume of Notes upon Claudian, in 4to. 4. Three large volumes upon Statius, &c. He died at Leipsic, in 1658, aged seventy-one.

BARTHOLINA, in botany, a genus of plants, named after the naturalist Bartholinus. Class and order, gynandria morfogynia. Natural order, orchideae. Essential character : CAL. tu- bular at the base : PET. united to the base of the lip, whose spur is shorter than the germen. Stalks of the pollen elongated; their cells laterally fixed ; glands distinct, half covered by the ex- terior lobe. The principal species is, B. pecti- nata. Fringed bartholina.

BARTHOLINUS (Caspar), a learned phy- sician and anatomist of the seventeenth cen- tury, born at Malmoe, in Schonen, which then belonged to Denmark. At three years of age he had such a quick capacity, that in four- teen days he learned to read; and, in his 13th year, he composed Greek and Latin orations, and pronounced them in public. When he was about eighteen he went to the university of Copenhagen, and afterwards studied at Rostock and Wittemberg. He afterwards travelled, and neglected no opportunity of improving himself at the different universities which he visited. He was, in 1613, chosen professor of physic in that university, which he enjoyed eleven years ; when, falling into a dangerous illness, he made a vow, that if it should please God to restore him, he would solely apply himself to the study of divinity. He recovered and kept his word ; and soon after obtained the professorship of divinity, and the canonry of Roschild. He died in 1629, having written several small works, chiefly on metaphysics, logic, and rhetoric.

BARTHOLINUS (Thomas), a celebrated physi- cian, son of the former, born at Copenhagen, in 1616. After studying some years in his own country, he, in 1637, went to Leyden, where he studied physic three years.

He then travelled into France; and resided two years at Paris and Montpelier, for improvement. Afterwards going to Italy, he continued three years at Padua ; and at length went to Basil, where he obtained the degree of doctor of philosophy. Soon after, he returned to Copenhagen; where, in 1647, he was appointed professor of mathematics; and, in 1648, of anatomy, a branch better suited to his genius arid inclination ; which he discharged with great assiduity for thirteen years, and dis- tinguished himself by making several discoveries with respect to the lacteal veins and lymphatic vessels. His close application, however, having rendered his constitution very infirm, he, in 1661, resigned his chair; but the king of Den- mark allowed him the title of honorary professor. He now retired to a little estate he had purchased at Hagested, near Copenhagen, where he hoped to have spent the remainder of his days in peace and tranquillity ; but his house being burnt in 1670, his library, with all his books and MSS. was destroyed. In consideration of this loss the king appointed him his physician, with a hand- some salary, and exempted his land from all taxes ; the university of Copenhagen also ap- pointed him their librarian; and, in 1675, the king did him the honor to give him a seat in the grand council of Denmark. He wrote, 1. Anato-

mia Caspari Bartholini Parentis, novis Observa- tionibus primum locupletata. 8vo. 2.De Monstris in Natura et Medicina, 4to. 3. De Armillis Vete- rum, 8vo ; and several other works. This great man died in 1680.

BARTHOLOMEW (St.); from 13, a son, nbn, elevating, and tZJ'O, waters ; one of the twelve Apostles, and generally believed to be the same with Nathanael, for the following reasons ; 1. John never mentions Bartholomew but Na- thanael ; 2. the other Evangelists never mention Nathanael but Bartholomew : 3. John classes Philip and Nathanael, as the others do Philip and Bartholomew : 4. Nathanael is mentioned with the other apostles that met our Lord, after his resurrection, at the sea of Tiberias : and 5. Bartholomew is not a proper name, but a patro- nymic signifying the son of Tolmai orThilomseus; a mode of denomination common among the He- brews, and other ancient nations (seeBARJONAs), and which still prevails in some modern nations ; for instance in Russia, where Petrowitz, Alexio- witz, Alexandrowitz, &c. signify, the son of Peter, Alexis, Alexander, &c. It is said that this apostle travelled as far as India, to propagate the gospel : and Eusebius relates, that a famous phi- losopher and Christian, named Pantsenus, desiring to imitate the apostolical zeal in propagating the faith, and travelling for that purpose as far as India, found there, among those who yet re- tained the knowledge of Christ, the gospel of St. Matthew, written by St. Bartholomew. From thence he returned to the more northern and western parts, of Asia, and preached to the people of Hierapolis ; then in Lycaonia; and lastly, at Albania, a city upon the Caspian Sea, ; where his endeavours to reclaim the people from idolatry

were crowned with martyrdom, he being flead alive, and crucified with his head downwards.

BARTHOLOMEW, CAPE, the southernmost point of Staten-Land, in Le Maire straits, at the south extremity of South America.

BARTHOLOMEW, ST., one of the Caribbee islands, to which, in 1748, a colony was sent by the French, by whom it was ceded to Sweden in 1785. It is reckoned about fifteen miles in cir- cumference, and is now the only island which Sweden possesses in the Columbian Archipelago. It is very fertile, producing sugar, tobacco, cot- ton, indigo, and cassava, but having no water, except what is supplied by the rains, is not much resorted to. Many of the trees are valuable ; the aloe is held in high estimation, and there are others from which a gum of excellent cathartic qualities is extracted. The branches of the pa- rotane growing downwards, take root and rise in fresh stems; forming an almost impenetrable barrier. The species called sea trees, line many parts of the shore. The island also produces lignum vitae and iron-wood ; and a great variety of birds. The inhabitants also export a peculiar kind of lime-'Stone. The coast is surrounded with rocks, and cannot be safely approached without a pilot ; but it has a very capacious and well-sheltered harbour, capable of receiving and sheltering the largest ships. About half the in- habitants are Irish Roman Catholics, whose an- cestors settled here in 1666.

BARTHOLOMEW, ST. a river of South America,

in the province of A.itioquia, which fulls into the Madalena.

BARTHOLOMEW (ST.), one of the islands of the New Hebrides, in the South Pacific, three leagues from the north-west point of Mallicolo, from which it is separated by a channel, called Bou- gainville's passage. It is from six to seven leagues in circumference. Long. 169►► 23′ E., lat. 15►►41'S.

BARTHOLOMEW'S DAY (ST.), a festival of the Church, celebrated on the 24th of August. This day has been rendered infamous in the annals of France, for the massacre of the protestants in 1572, by the order of the bloody Catharine de Medicis, and her tyrannical son, Charles IX.

On Bartholomew's day also, in the year 1662, the act of uniformity, which obtained the royal assent on the 19th of May, took place, in conse- quence of which about 2000 ministers relin- quished their preferments in the church of Eng- land. The liturgy, with its alterations, carre out of the press on Bartholomew eve, and the follow- ing day was the ultimate time fixed by the act for the subscription ; so that all those throughout the kingdom who conformed, except a few in Lon- don, subscribed in ignorance of its contents.

' Bartholomew's day,' says Mr. Locke, ' was fatal to our church and religion, by throwing out a Y(TV great number (about, two thousand) of worthy, learned, pious, oithodox divines, who could not com;- up to this oath, and other tilings inti".:t act. And so great was the zeal in carry- ing 'a tiiis church affair, and so blind the obc dien.'o required, that, if you compute the time of passing this act \ith that, allowed for the clergy to subscribe the book of common prayer thereby established, you will iiud it could not be printed and distributed so as that one man in forty could have seen and icad t'.u; book they did so perfectly assent and consent to.' ××× ××× ' The matter was driven on,' says bishop Burnct (Hist, of his Times, volt i. p. 212, !ivo.j ^\itiiso much precipitation, that it seemed expected the clergy should subscribe implicitly to a book they had never seen. This was done by too many, as the bishops themselves informed me.' Among these were several, who, according to Mr. Locke's description of them, were ' taught rather to obey than to understand.'

I! AIM iioi.oMr.w'sGosi'Ki, (Si.), is mentioned in the preface to Origeii's Homilies on St. Luke, :uul in the preface to St. Jerome's commentary rally regarded as spu rious ; and placed by pope Gclasius among the apocryphal books.

I! viviHMLOMr.w's HnsiTTAi. (Si.),, in institution for t';e reception of iek an i wounded poor per sons, situa^d on f-e . nst side of Smithfield, and inciTjir.r.ted ; y H ;×××' < '.ti/MiS, of London, govern' >;., <, , poor, .-.dc'l little St. Bartho- lomew', tn"!i \V, >.rv" ."';!×××!.!. T: u building f >nm :×××!; .ivior. of St. Bartholo mew, in :; :iy 01,0 Kahere, aluvii il0'2. '.:××××××× ;.:';>×××. it Vi_ monaste- 'i- ×××-:>-××××××× : vear to it, on

*VI, and the munificence of the city and .pn*ate benefactors. This hospital having escaped the dreadful fire in 1666, was repaired and beautified by the governors in 1691. But the buildings be- came at length so ruinous, that a subscription was entered into in 1729, for defraying the expense of rebuilding it, on a plan comprehending four detached piles of building, to be joined by stone gate-ways, about a court or area. The four piles were erected and finished ; one of these piles contains a large hall for the*

governors at general courts, a counting-house for the com- mittees, and other necessary offices ; the other three piles contain wards for the reception of the patients, &c. It is governed by a president, treasurer, &c. It is attended by three physicians, and three surgeons, besides as many assistant surgeons. It has an apothecary, a chaplain, cook, steward, renter, matron, and porter. Since its enlargement, it is capable of accommodating 82O patients ; it extends relief also to a great number of out-patients.

BARTHOLOMITES, a religious order, found- ed at Genoa in 1307; the monks leading very irregular lives, the order was suppressed by pope Innocent X. in 1650, and their effects confiscated. In the church of the monastery of this order at Genoa, is preserved the image which it is pre- tended Christ sent to king Abgarus.

BARTLEMAN (J.), a very celebrated bass- singer, was educated under Dr. Cooke, and brought up in the choirs of the Chapel Royal and Westminster abbey. His first appearance as a professional singer was at the concerts at Free- masons' Hall, where the compass and sweetness of his fine baritone voice raised him at once to the top of his profession. He was immediately en- gaged in the ancient concerts, and became even- tually one of the proprietors and conductors at the Hanover-square rooms. He died in 1820, and was buried in the cloisters of Westminster Abbey, most of his professional associates of emi- nence attending the funeral. There is a hand- some tablet erected there to his memory.

BARTOLOCCI (Julius), a learned monk, and professor of Hebrew at Rome, was born at Cela- no, in 1613 ; and distinguished himself by writ- ing an excellent Latin catalogue of the Hebrew writers, in 4 vols. folio ; a continuation of which was drawn up by Imbonati his disciple. He died in 1687.

BARTOLOMEO (Francisco), whose real name was Baccio, a celebrated painter, born at Savig- nano, near Florence, in 1469. He was the dis- ciple of Cosimo Rosselli, but owed to the works of Leonardo da Vinci his extraordinary skill in painting. Raphael, after quitting the school of Perugino, studied perspective under him, with the art of managing and uniting colors. In 1500 he turned Dominican friar; and some time after was sent by his superiors to the convent of St. Martin, in Florence. He painted both portraits and histories ; but his scrupulous conscience would hardly ever suffer him to draw naked figures, though nobody understood them better. He died in 1517, aged 48.

BARTOLOZZI (Francis), an eminent en- graver, was born at Florence in 1728. His father v, ts a silversmith, and he was intended for thf

same business, but displayed so much taste and execution at the first handling of the graver, that he was placed at the Florentian academy, under Gaetano Biagio and Ignazio Hugford. Here Giovanni Cipriani was his fellow-pupil. He was subsequently articled to Joseph Wagner, of Venice, who employed him too much in copying from inferior masters. When this engagement was expired, he married a respectable Venetian lady, and accepted the invitation of cardinal Bottari to repair to Rome. Here he engraved his fine plates from the life of St. Nilus, and the heads of painters for a new edition of Vasari. He returned to Venice, where Mr. Dalton, libra- rian to George III. employed him to engrave some of the drawings of Guercino, and, pleased with the execution of them, offered him ––300 per annum to accompany him to England, and work on his account. Under this engagement he com- pleted his beautiful collection of Guercinos. Afterwards he worked on his own account, and for Mr. Alderman Boydell. He was highly distin- guished for the elegance of his designs for the benefit tickets of the higher performers of the Opera-house; and hearing that the celebrated Strange said he could execute nothing else, in a fit of emulation he produced his Clytie, and Vir- gin and Child, from Carracci and Carlo Dolci. About this time the red dotted or chalk manner became prevalent ; and Bartolozzi contrived to execute it so beautifully as to assist in seducing the public taste from the superior and legitimate style of the line. He was elected a member of the Royal Academy, on its institution. In 1802 he accepted an invitation from the Prince Regent of Portugal, to superintend a school of engravers at Lisbon, with a pension of ––100 per annum, a handsome house, and the produce of the engrav- ings. It is said a pension of ––400 was offered to him to remain in England; but that he would accept it only on condition that government would explain the matter to the prince Regent of Portugal. It is quite clear that all his past labors had left him in real need of one appointment or other. This interference being deemed improper, lie bade England farewell, in his seventy-fifth year, and was received at Lisbon with great dis- tinction. He died in that capital in his eighty- eighth year. Few artists have reached so dis- tinguished a rank in every species of engraving, as Bartolozzi. His etchings in imitation of the drawings of the great masters, admirably repre- sent the character and spirit of the originals ; and his Marlborough gems, musical tickets, and prints for Boydell's Shakspeare, exhibit exquisite proofs of taste. He was so generous as to finish a plate left incomplete by Ryland, at the request of that unhappy man, while under sentence of ––––leath for forgery, and exhibited many other i raus of a humane and benevolent united with a thoughtless character. Among the pupils of Bartolozzi were Sherwin, Tomkins, Cheeseman, and the two Vandramini.

BARTON-ON-HUMBER, a market-town and parish in the hundred of Yarborough, and county of Lincoln, 167 miles north from London;

containing 2500 inhabitants. It is seated on the south side of the Ilumber, over which there is a furry into Yorkshire, nearly six miles and a half

across. There is a great trade in corn and flour, as well as bricks and tiles, carried on, and a ma- nufactory of Paris whiting. The town consists of several streets irregularly built, and has two parish churches, the livings of the two parishes being united. Market on Monday.

BARTON (Eliz.), commonly called The Maid of Kent, was a religious impostor in the reign oV Henry VIII. She was originally a servant at Aldington, in Kent, who had long been troubled with convulsions, which distorted her limbs and countenance, and threw her body into the mos violent agitations. After she recovered, she is said to have counterfeited the same appearances. Masters, the minister of Aldington, with other ecclesiastics; thinking her a proper instrument for their purpose, persuaded her to pretend that what she said and did was by a supernatural im- pulse, and taught her to act her part in the most perfect manner. Thus she would lie as it were in a trance, then, coming to herself, would break out into pious ejaculations, hymns, and prayer ; sometimes delivering set speeches, sometimes uncouth monkish rhymes. She pretended to be honored with visions and revelations, to hear heavenly voices, and the most ravishing melody. Amongst other wickedness of the times, she de- claimed against heresy and innovations ; exhort- ing the people to frequent the church, to hear masses, to use frequent confession, and to pray to our lady, and the saints. This artful manage- ment, together with her great exterior piety, and austerity of life, not only deceived the vulgar, but the celebrated Sir Thomas More, bishop Fisher, archbishop Warkam, &c. : the last of whom appointed commissioners to examine her. She now declared, that the blessed Virgin had ap- peared to her, and assured her that she should never recover, till she went to visit her image, in a chapel of the parish of Aldington. Thither she accordingly repaired, proce-ssionally, and in pil- grimage, attended by above 3000 people, and many persons of quality of both sexes. She fell into one of her trances, and uttered many things in honor of the saints, and the popish religion : for herself, she said that by the inspiration of God, she was called to be a nun, and that Dr. Bocking was her ghostly father. Bocking was a canon of Christ's church, Canterbury, and most probably associate in carrying on the imposture. Meanwhile, the archbishop ordered her to be admitted into the nunnery of St. Sepulchre, Can- terbury ; where she had frequent inspirations and visions, and pretended to work miracles for all such as would make a profitable vow to our lady. The priests, her managers, having so far suc- ceeded, now announced the great object of her mission, i. e. to proclaim, that ' in case the king should divorce queen Catherine of Arragon, and take

another wife during her life, his royalty would not be of a month's duration, but he should die the death of a villain.' Bishop Fisher, and others in the interest of the queen, and of the Romish religion, hearing of this, held frequent meetings with the nun, the fathers and nuns of Sion, the Charter-house, Sheen, &c. Encouraged by the lenity of the government, the ecclesiastics in this conspiracy resolved to publish the reve- lations of the nun, in their sermons, throughout

the kingdom : tlioy had communicated them to the pope's ambassadors, to whom also they in- troduced the maid of Kant ; and they exhorted queen Catherine to persist in her resolutions. At length tins confederacy began to be a very serious affair, and Ilerry ordered the maid and her accomplices to be examined in the star-cham- ber. Here they confessed all the particulars of the imposture, and afterwards appeared upon a scaffold erected at St. Paul's Cross, where the articles of their confession were publicly read in their hearing. Thence they were conveyed to the Tower, until the meeting of parliament; who, having considered the affair, pronounced it a conspiracy against the king's life and crown. The nun, with her confederates, Masters, Bocking, Deering, Able, &c. were attainted of high treason, and executed at Tyburn, April 20, 1534; where she confessed the imposture, laying the blame on her accomplices the priests, and craving pardon of God and the king.

BARTRAMIA, in botany, pellilory : a genus of the decandria monogynia class of plants ; the calyx of which is a perianthium, cut into five parts; the corolla consists of five wedge-shaped petals ; the fruit is globular, and the seeds are i

i., in botany, a uenus of plants, r.ru.ui! nfier Linnrous' unfortunate friend, John iJarlso;, '□□□,□□□ ',). Class (iidynnnna ; order angiosper- n:i i. lis ::',:i;..iij characters are, c A L. perianth one- eaved : eni!.. inonojˆtalous : STAM. filaments Ion,-: [MM. ger;n ovate; style ir;n ; :-ir;ma o'tuso : r; u. □□\ipsule ovate: srn 3 h;np.ei\>i;s. The spories arc mostly peren i. coi.inLa, pedicularis, sen crista ,.inu; :, &;. iicd bartsia, na- tive of Yirj;ii;lr.. 15.] alii! i foiiiˆ alternis, &c. tij, iv.'. jVl'j-flowered bartsia, native of Si;,. ; i i. li. aipina foliis oppositis, &c. i>:.,e!ini,] i'.iiis, c.',1. Staeheliiiia alpina, eu- phrasia e./nle, e.c. i-'.uphrasia. rui;ra, ivc. Cha- iiiiviiry vui,are, is;'1. C linopoilium alpinum, &c. 'I i ticrium al])iiunn,ciatxo;;'onon, sun pcdicularis. Alpine Ijurisi.i, native of Britain ;

but the B. vis c'os.i, eup'arasia latifolia, sen alectorophos, &c. \ isrisi liartsia, or yc How marsh eye-bright, native en ilritain, is an annual. B. viscosa, marshy, or yellow mar-h eye-bright, was found by Mr. l.iuhtfoot in bogs and marshy places about Loch-

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i'AKi iu\ i uociiieY, one of t;u' apocryphal ';i:'ii|.nne,l in liie canon of the Uld Testa It hai li,' n icckon, .1 pirt of Jeremiah's ..![image] oi'tuii !.[image] bv the ancient

fathers as such. It is difficult to determine -"n what language it was originally written. There are three copies of it extant; one in Greek, the other two in Syriac.

BARULES, in church history, heretics who held that the Son of God had only a phantom of a body, that souls were created before the world, and that they lived all at one time.

BARUTII, an ancient town of Turkey, in Syria, with a Christian church of the Nestorian persuasion. It is situated in a fine fertile soil, but is inconsiderable now to what it was for- merly.

BARUTH, an Indian measure, containing seven- teen gantans: it ought to weigh about three pounds and a half English avoirdupois.

BARWICK (John), an English divine of the seventeenth century, was born at Wetherslack in Westmoreland, in 1612. He studied at Cam- bridge, where he took his degrees of B. A. and M.A, in 1635 and 1638. When the civil war broke" out he conveyed the university's plate, by their order, through bye roads to supply the king, who was then in great necessity. Through this, and other acts of loyalty, having rendered himself obnoxious to the parliament, particularly by keep- ing up a secret correspondence with the royal party, both before and after the king's death, he was at last committed to the tower, where he suffered great hardships for fifteen months, but was at last discharged, 1652, and, to the surprise of many, in better health than when he was in- carcerated. Upon the restoration he was made dean of St. Paul's in 1661 ; in which station he repeatedly hurt his

health, by his exertion in putting in order the archives of that church. He died of a pleurisy in 1664. His chief work was a Treatise Against the Covenant, which he published before the king's death.

BARWICK (Peter), physician to king Charles II. brother of the dean, was born in 1619, and studied also at Cambridge, where he took the degree of M. D. in 1655. Having settled in London, he soon rose to fame in his profession, by writing a defence of Dr. Harvey's discovery of the circulation of the blood. He was equally active and useful during the plague, and was no less successful in curing the small pox. He not only gave advice and medicines gratis to the poor, but also supplied their other necessities. He was. particularly kind to the sufferers for roy- alty. He wrote the life of his brother in Latin, in 1671, which he deposited in the college library at Cambridge, and in 1693, when in his seventy- fourth year, added an appendix in defence of the EIKOV Ba

BARYPYCNI; papvirvKvoi ; in the ancient music, such chords as formed the gravest notes of the several spissa. There were five barypycni in the scale. See PYCNI.

BARYTES, in chemistry, a genus of earths, which by Bergman, Lavoisier, and other eminent chemists, has been considered as a refractory metallic oxyd. This supposition has been con- firmed by the experiments of Ber/ elius and Pon- tm, who, led by Sir II. Davy's decomposition of potash and soda by galvanism, subjected this earth to the same a□□ent. Their experiments were

attended with complete success, and have been since verified by Sir II. Davy himself. To this metallic basis Davy gave the name of BARIUM, which see.

' Pure barytes, ' says Dr.Ure, ' is best obtained by igniting, in a covered.crucible, the pure crys- tallised nitrate of barytes. It is procured in the state of hydrate by adding caustic potash or soda to a solution of the muriate or nitrate. And ba- rytes, slightly colored with charcoal, may be obtained by strongly igniting the carbonate and charcoal mixed together in fine powder. Barytes obtained from the ignited nitrate is of a whitish- gray color ; more caustic than strontites, or per- haps even lime. It renders the syrup of violets green, and the infusion of turmeric red. Its specific gravity by Fourcroy is 4. When water in small quantity is poured on the dry earth

it slakes like quicklime, but perhaps with evolution of more heat. When swallowed it acts as a vio- lent poison. It is destitute of smell. When pure barytes is exposed in a porcelain tube, at a heat verging on ignition, to a stream of dry oxygen gas, it absorb the gas rapidly, and passes to the state of deutoxide of barium. But when it is calcined, in contact with atmospheric air, we ob- tain at first this deutoxide and carbonate of ba- rytes; the former of which passes very slowly into the latter, by absorption of carbonic acid from the atmosphere.'

*Again ••• 'water at 50••, Fahrenheit, dissolves one- twentieth of its weight of barytes, and at 212•• about one-half of its weight; though M. Thenard, in a table, has stated it at only one- tenth. As the solution cools, hexagonal prisms, terminated at each extremity with a four-sided pyramid, form. These crystals are often attached to one another, so as to imitate the leaves of fern. Sometimes they are deposited in cubes. " They contain about 53 per cent, of water, or 20 prime proportions. The -supernatant liquid is barytes water. It is colorless, acrid, and caustic. It acts powerfully on the vegetable purples and yellows. Exposed to the air it attracts carbonic acid, and the dissolved barytes is converted into carbonate, which falls down in insoluble crusts. It appears from the experiments of M. Berthollet that heat alone cannot deprive the crystallised hydrate of its water. After exposure to a red heat, when it fuses like potash, a proportion of water remains in combination. This quantity is a prime equivalent ••• !••• 125, to 9*75 of barytes. The ignited hydrate is a solid of a whitish-gray color, caustic, and very dense. It fuses at a heat a little under a cherry red ; is fixed in the fire; attracts, but slowly, carbonic acid from the atmosphere. It yields carburetted hydrogen, and carbonate .of barytes when heated along with charcoal, provided this be not in excess.'*

' Sulphur combines with barytes, when they are mixed together, and heated in a crucible. The same compound is more economically ob- tained by igniting a mixture of sulphate of barytes and charcoal in fine powder. This sul- phuret is of a reddish-yellow color, and when dry without smell. When this substance is put into hot water a powerful action is manifested.

The water is decomposed, and two new products are formed ; namely, hydrosulplmret, and hydro- guretted sulphuret of barytes. The first crystal- lises as the liquid cools; the second remains dissolved. The hydrosulphuret is a compound of 9-75 of barytes with 2-125 sulphuretted hy- drogen. Its crystals should be quickly separated by filtration, and dried by pressure between the folds of porous paper. They are white scales have a silky lustre, are soluble in water, and yield a solution having a greenish tinge. Its taste is acrid, sulphurous, and, when mixed with the hy- droguretted sulphuret, eminently corrosive. It rapidly attracts oxygen from the atmosphere, and is converted into the sulphate of barytes. The

hydroguretted sulphuret is a compound of 9-75 barytes wtth 4-125 bisulphuretted hydrogen; but contaminated with sulphite and hyposulphite in unknown proportions. The dry sulphuret con- sists probably of 2 sulphur + 9‘75 barytes. The readiest way of obtaining barytes water is to boil the solution of the sulphuret with deutoxide of copper, which seizes the sulphur while the hydro- gen flies off, and the barytes remains dissolved. Phosphuret of barytes may be easily formed by exposing the constituents together to heat in a glass tube. Their reciprocal action is so intense as to cause ignition. Like phosphuret of lime, it decomposes water, and causes the disengage- ment of phosphuretted hydrogen gas, which spon- taneously inflames with contact of air. When sulphur is made to act on the deutoxide of ba- rytes, sulphuric ac’d is formed, which unites to a portion of the earth into a sulphate. ‘ Its salts are all, more or less, white and transparent : the soluble sulphates make, with the soluble salts of barytes, a precipitate insoluble in nitric acid ; and they are all poisonous except the sulphate. See the respective ActDS, for the most useful.

BARYTONO, in the Italian music, answers to our common pitch of bass.

BARYTONUM; from /3apt/c, grave, and rovof, accent; in the Greek grammar, denotes a verb, which having no accent marked on the last syllable, a grave accent is to be understood.

BARZILLAI; from Sinn, iron, Heb. : l.A Gileadite of Rogelim, who supplied David and his few faithful friends with provisions, while they lay at Mahanaim, during the usurpation of Absalom (2 Sam. xvii. 27 ––– 29) ; 2. A Simeonite of Meholah, the father of Adriel, one of Saul’s sons-in-law (1 Sam. xviii. 19); 3. A priest who married a daughter of the hospitable Barzillai, and whose descendants returned from Babylon. Neh. vii. 63.

BAS, an island of France, on the coast of the department of Finisterre, to which department it belongs ; it is about a league in length, and is situated two leagues north of St. Pal de Leon.

BAS (James Philip Le), a rr-odern French en- graver, by whom we have some excellent prints. His great force seems to lie in landscapes and small figures, which he executed in a superior manner. His style of engraving is extremely neat; he proves the freedom of the etching, and harmo- nizes the whole with the graver and dry point. We have also a variety of petty vignettes by this artist. He flourished about the middle of the

BASALT.

present century ; but we have no account of the time of his birth or death.

BASAAL, in botany, an Indian tree which grows about Cochin.

BASA.LITES, a word used by Salmasius for

lUSALTF.S.

BASALT, ARTIFICIAL, or black porcelain, a composition, having nearly the same properties with, the natural basaltes, invented by Messrs. Wedgwood and Bentley, and applied to various purposes in their manufacture.

*BASALT, or BASALTES; from basal, iron, or /3a!' basalt are likewise found in the neighbourhood of Mount /F.tna in Sicily, of iieda in (colind. of the volcano in the island of *!o;:reon, an.! in the- ci-devant province of Viva- M;S in t '..">> snut'i of 3'r.mcf. It is found there- ior-' i?s -th ⬛⬛⬛' neighbourhood of active volcanoes,*

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twenty fert; but thesˆ descriptions not being so well authenticated as some which we possess of basaltes nearer home, we may proceed to remark, that in Ireland the basalt forming the Giant Causeway rises far up the country, runs into the sea, crosses at the bottom, and rises again on the opposite land. The immense pillars of it have; been very particularly described and examined in a work entitled Letters concerning the north- ern coast of the county of Antrim ; from which the following brief particulars are extracted : ⬛⬛⬛ ‘ 1. The pillars of the Causeway are small, not very much exceeding one foot in breadth, and thirty in length ; sharply defined, neat in their articulation, with concave or convex terminations to each point. (BASALTES, fig. 5.) In many of the capes ‘and hills they are of a larger size, more imperfect and irregular in their figure and articulation, having often flat terminations to their points. At Fairhead they are of a gigantic mag- nitude, sometimes exceeding five feet in breadth, and 100 in length ; often apparently destitute of joints altogether. Through many pails of tho country this species of stone is entirely rude and unformed, separating in loose blocks ; in which state it resembles the stone known in Sweden by the name of trappe. 2. The pillars of the Giant’s Causeway stood on the level of the beach, whence they may be traced through all de- grees of elevation to the summit of the highest grounds in the neighbourhood. 3. At the Cause- way, and in most other places, they stand per- pendicular to the horizon. In some of the capes, and particularly near Ushet harbour, in the isle of Baghery, they lie in an oblique position. At Doon Point, in the same island, and along the Balintoy shore, they form a variety of regular curves. 4. The stone is black, close, and uni- form ; the varieties of color are blue, reddish, and gray ; and of all kindj of grain, from extreme fineness to the coarse granulated appearance of a stone which resembles imperfect granite, abound- ing in crystals of schorl, chiefly black, though sometimes of various colors. 5. Though the stone of the Giant’s Causeway be in general compact and homogeneous, yet it is remarkable that the upper joint of each pillar, where it can be ascer- tained with any certainty, is always rudely formed and cellular. The gross pillars also, in the capes and mountains, frequently abound in these air-holes through all their parts, which sometimes contain fine clay, and other appa- rently foreign bodies : and the irregular bas- altes beginning where the pillars cease, or lying over them, is in general extremely honey- combed ; containing in its cells crystals of zeolite, little morsels of fine brown clay, some- times very pure steatite, and in a few instances, bits of agate.’*

In Staffa, one of the western isles of Scotland, the whole end of the island is supported by ranges of pillars, mostly about fifty feet high, standing in

natural colonnades, according as the bays and points of land have formed themselves, upon a firm basis of solid unformed rock. Above these, the stratum, which reaches to the soil or surface of the island, varies in thickness, as the island itself ii formed into hills or valleys, each hill, which lianyj ovei the valleys below, form-

in-r an ample pediment. Some of these, above sixty feet in thickness from the base to the point, are formed by the sloping of the hill on each side, almost into the shape of those used in architec- ture. Sir Joseph Banks observed that the bend- ing pillars of Staffa differ considerably from those of the Giant's Causeway. In Staffa they lie down on their sides, each forming the segment of a circle ; and in one place a small mass of them very much resembles the ribs of a ship. Those of the Giant's Causeway, which he saw, Tan along the face of a high cliff, bent strangely in the middle, as if unable at their first form- ation, while in a soft state, to support the mass of incumbent earth.

*Sir William Hamilton informs us, that in 1779 he picked up some fragments of large and regu- lar crystals of close-grained lava or basalt, in the neighbourhood of Vesuvius, the diameter of which, when the prisms were complete, might have been eight or nine inches. He observes, that Vesuvius does not exhibit any lavas regularly crystallised, and forming what are ealled Giants' Causeways, except a lava that ran into the sea, near Torre del Greco, in 1631, which has a small degree of such an appearance. As the fragments of basaltes which he found on this mountain, however, had been evidently thrown out of the crater in their proper form, he puts the question, * May not lavas be more ready to crystallise within the bowels of a volcano than after their emission? And may not many of the Giants' Causeways already discovered be the nuclei of volcanic mountains, whose lighter and less solid parts may have been worn away by the hand of time ? Mr. Faujas de St. Fond gives an exam- ple of basalt columns placed deep within the crater of an unextinguished volcano.'*

We suppose this writer to allude to the moun- tain of Aisa, called La Coupe, or the Col d'Aisa, situated near the village Entrague, in the Viva- rnis. This village, according ;to St. Fond, is placed on a kind of platform of volcanic matter above the torrent of the Volant, which has here excavated a bed of great depth and width, bor- dered on the right and left by grand ranges of basaltic columns. In the midst of a prodigious rampart of these columns, at different levels, may be seen a current of lava descending from a neighbouring mountain, and joining the columns that border the river.

Here we see, in the most unequivocal and convincing manner, that the lava, under the form of hard and compact basalt, has flowed at several times from the mountain, and has formed the great causeways at different heights, to which the lava is still united and ad- hering. We may follow the current of basalt up the declivity of the mountain, which has a conical form and a great elevation, and is entirely vol- canic from the base to the summit. According to St. Fond, it is the most remarkable and best characterised crater in all the Vivarais.

All the base of the conical mountain La Coupe is covered by porous and cellular lava in detached irregular masses, heaped on each other, so as to leave no doubt that they have been ejected in a liquid state by one or more formidable eruptions, and have taken their forms us they fell at the foot of the cone. On reaching the summit or edge of

the crater, we may see the whole mountain, which forms a regular cone resembling that of Vesuvius. The edges of the crater are steep, and formed in the shape of a tunnel ; the greatest diameter be- ing from 140 to 150 toises, and the depth about 600 feet. The lavas are colored, and converted into a kind of puzzolani, and mixed with great masses of black and sharp scoriae, which makes the descent difficult. At the bottom of this in- verted cone is a magnificent plantation of chest- nut-trees, which have flourished astonishingly in this ancient mouth of a volcano, having no other soil than the dry and friable puzzolani. It may be noticed, that the crater of Vesuvius was lined with lofty trees at the period of its ernptiou in 1631. At the bottom of the crater, in La Coupe, we may observe a breach or opening on the side facing the houses of the Col d'Aisa; there is a general inclination to tin's opening, which has served to give a passage to the lava. When we are arrived at the opening we may observe a stream of lava coming from the interior, and taking its course down the mountain, it descends in a waving direction amidst the porous lavas. This current is a true black basalt, compact and similar to that of the columns ; in certain parts its surface appears blistered, and in other places it becomes porous. Following the current of lava, after it has crossed the path, which is at the foot of the mountain, we may trace its course to the bed of a torrent not far from the high road. There may be seen, says St. Fond, a spectacle most gratifying to the geologist ; for the lava whilst still on the descent, and before it had reached the level ground, has effected a prismatic form ; and the lava at the bottom has formed a beautiful colonnade.

There is a similar conical mountain in the Viva- rais, with a distinct and much larger crater, called La Coupe de J,aujeac. The river Vignon flows at the foot of it. On its banks are immense ranges of basaltic columns, the most elevated of any in the Vivaraia. They enclose the borders of the river on each side for more than a league. Some of the prisms rise in one shaft to

the height of fifty feet; in other parts, the articulated columns form a kind of regular causeway. In some places the columns are bent, and above-we see immense ramparts of basalt, of more than 140 feet in height, in several ranges, spreading out like a fan, and diverging in every direction. On the left, the current of basalt covers several little hills of granite, and is moulded upon them. In some parts the compact lava forms one solid mass ; in other places it is arranged in great beds. Nothing can be more grand and varied, says St. Fond, than.the courseof the river Vignon to the Ardeche, where the great current of lava joins the streams that have flowed from the volcanoes of Thucyts and Neyrac. ••• -Faujas St. Fond sur les Volcuns eteints du Vivarais et du Velay.

Having noticed the principal localities 01 basalt, we may now observe that the structure or form in which it appears, presents one of its most striking peculiarities. This would seem to be essentially the same in the various and immense stores of it yet discovered ; so that the accurate description of one basaltic deposit might serve, as far as any purposes of science arc concerned,

BASALT.

for that of any other. Mr. I lamilton, for instance, the author of the Letters on Antrim, describes the Giant's Causeway in language which might at once be applied to the picturesque pillars of Staffa; telling us that the pillars of the former, varying in their length and thickness from 30 feet to 100, and from one foot to five respectively, rise from the level of the beach, and ascend gradually into the greatest elevations of the neighbouring hills. These colonnades, we are also informed, are generally perpendicular to the horizon, and particularly at the causeway itself; but it is added that, in the vicinity, they are not unfrequently observed lying in an oblique posi- tion, and assuming a great variety of regular curves. The same facts are recorded in reference to the famed rocks ofthe Cyclops. The columns there, as at Staffa and Antrim, are of various sizes and forms, as we have indeed already noticed ; some being four-sided, others hexagonal, heptagonal, octagonal, and even nine-sided ; which last is the rarest form which basalt ever assumes. The position, too, is equally various; some standing erect, whilst others are laid on their sides, piled above one another like sacks of <"ni in a granary. The jointed columns too are of ever-varying lengths and joints; some a few inches, oth rs many feet ioiv.r, found occasionally

ei:t. hut . "iHT.iliy I'.ieely fitted up, as by the •••Kinds o!' a iuo.il ^'- Jifui nuvhanie.

:' oniiron, that, the basaltes

“e th’-ir crijhi lot’i to tire and water; they

sreni to :_! !,’.v;i ,u first :i lava, he observes;

!>’;t :!iis, \iiik; ii;r.v.eiˆ.d in it water, was so dif

! in it. v. it’.i t!;e assistance of heat,

:ii to e: . “!:il!.: vˆh; u co! I. or coalesce into regu-

:i ! ,ait-s is not the effect of mere

*f’!si<'>i, !.e < s ;Vi
ॷ;:'. comparing its form*

.ॷ.r, if produced by fusion,

mi Jit t;> 1.:.- the i ;ॷ.ॷ..ॷ; of having i lowed very thin; !.nt i;i ;hat . i:.s liˆ\;i:re should be glassy : v ‘levi as i1. 15 ;ॷ-.’ , \ , ,i. -ihv. and devoid of cavities.

li-nee, \ve in iV in: ॷ:-; ind how it conies to pass \ a.‘i;;<-d, an ! even water, have

ॷ . n fॷnn ! er.. 1 ॷ d ,:i :n ..s- ; of basaltes. it i- !- io-.vn. MI e’liiiir. nation of this reasoning, ;’.t \’.n n 1 va rnns into ॷ!:ॷ.- sea, it does in most – aettni’v as:,i“ii<; the b:. Baltic structure more or !ॷ — pert', v'.ly : and, it is worthy of par- tieuhir observation, that aK the columnar trap v, hie'u I, is L.tU'aetod any attention on account of ॷ;ts ri uehuitv or beauty, is e.ther altogether insu- lar or MUiatr'i near the oee,;n.

As to its fonn;ition and analysis : ॷ ‘Ten years JI.TO,’ says .Mr. Her- man,’ it was a general opi- nion, th;it the surface of the earth, together with ti:e mountains, bad been produced by moisture. It i- true that some declared tire to be the original cause, but the greater number paid little atten- tion to this opinion. Now, on the contrary, the opinion th.it subterraneous lire had been the principal a.‘ent uams gronn I daily ; and every thing is supposed to have been melted, even to th ॷ ‘.rranite. My own opinion is, that both the ihv and water iia\e contributed their share in th.s operation: though in such proportion that the f oive of t’ae former (xtends :nuch farther than ॷhi; latter ; and, on t’ae < ontiary, that the fire has nnlv wo'ksd in sume ir.uts in liie surface of tlie

earth. It cannot be doubted that there has been some connexion betwixt the basaltic pillars and subterraneous fire; as they are found in places where the marks of fire are yet visible ; and as they are even found mixed with

lava, tophus, and other substances produced by fire. As far as we know, nature makes use of three methods to produce regular forms in the mineral kingdom. 1 . That of crystallisation or precipitation. 2. The crust- ing or settling of the external surface of a liquid mass while it is cooling : and 3. The bursting of a moist substance while it is drying. 1. The first method is the most common ; but to all appear- ance, nature has not made use of it in the present case. Crystals are seldom or never found in any quantity running in the same direction ; but either inclining from one another, or, what is still more common, placed towards one another in sloping directions. They are also generally separated a little from one another when they are regular. ###The nature ofthe thing requires this, because the several particles of which the crystals are com- posed must have the liberty of obeying that power which affects their constitution. The basaltic columns on the contrary, whose height is frequently from thirty to forty feet, are placed parallel to one another in considerable numbers, and so close together that the point of a knife can hardly be introduced between them. Be- sides, in most places, each pillar is divided into several parts or joints, which seem to be placed on one another. And indeed it is not uncom- mon for crystals to be formed one above another in different layers, while the solvent has been visibly diminished at different times : but then the upper crystals never sit so exactly upon one another as to produce connected prisms of the same length or depth in all the strata taken to- gether ; but each stratum, separately taken, pro- duces its own crystals. Precipitation, both in the wet and dry way, requires that the particles should be free enough to arrange themselves in a certain order ; and as this is not practicable in a large melted mass, no crystallisations appear, ex- cepting on its surface or in its cavities.

Bergman found that the component parts of various specimens of Basaltes were, at a medium 52 parts silex, 15 alumina, 8 carbonate of lime, and 25 iron.

Several modern mineralogists have analysed basalt, and other trap rocks, to discover their affinity with one another, and to the lava of vol canos, of which they are all conceived to be only varieties. Indeed the facts we have already given of the basaltic formations in France, seem to put the question at rest. The following results obtained by Dr. Kennedy, are extracted from the Edinburgh Philosophical Transactions.

The basalt from Staffa contains in 100 parts

Silex 48

Argil 16

Oxide of iron 16

Lime 9

Soda 4

Muriatic acid ... 1

Loss 6

100

BASALT.

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The lava of Catanea, Mount ./Etna, contains in basalt or wacke. Color velvet-black. Lustre

in 100 parts, vitreous. Scratches glass. Sp. gr. 3-25. Fuses

Silex ..... 51 with difficulty into a black glass. It consists of 47

Argil 19 silica, 26 alumina, 8 lime, 2 magnesia, 15 iron,

Oxide of iron .... 14-5 and 0‘5 water. It is found in the basalt of

Lime 9‘5 Arthur’s Seat, in that of Fifeshire, and in the

Soda 4 isles of Mull, Canna, Eigg, and Sky. It is found

Muriatic acid .... 1 also in the basaltic and floetz trap rocks of Eng-

Loss 1 land, Ireland, Saxony, Bavaria, Hungary, France,

and Spain.

100 BASAN. See BASHAN.

The greenstone of Salisbury craig, contains in BASANITE, in mineralogy, is a variety of

100 parts, silicious slate, commonly known under the name

Silex 46 of touchstone, and has been used both in ancient

Argil 19 and modern times, to determine the purity of

Oxide of iron . . . . 17 gold and silver by the color of the streak which

Lime 8 those metals leave when rubbed on it. The per-

Soda 3-5 manency or otherwise of the streak, under the

Muriatic acid .... 1 application of nitric acid, is a further test of the

Loss 5-5 purity of gold. Other stones have been occasion-

ally applied to this purpose. See ASSAY.

100 BASANWOW, in the Celtic mythology, was

The lava of Santa Venese, Mount .Etna, con- the son of Diodes, the king of the Sicambrians.

tains in 100 parts ˆe disappeared suddenly, after having reigned

Silex 50-75 thirty-six years, was supposed to have ascended

Argil 17-5 to heaven, and was honored by the Germans as

Oxide of iron. . . . 14-25 the god of armies.

Lime 10 BASARTSCHIK, a considerable town of

Soda 4 European Turkey, in Romania. It is well built,

Muriatic acid . . .1 ai►►d has clean and broad streets. It is situated

Loss 2-95 on the river Maritz.

BASARUCO, in commerce, a small base coin

100 in the East Indies, made of very bad tin. Of this

The greenstone of Calton hill, at Edinburgh,

contains in 100 parts, Slxth lower m value than the Kood- Three

Silex KQ basarucds are equal to two rees of Portugal.

Argil 18-50 BAS-BRETON, the language of the natives

Oxide of iron .’ .’ ‘. ‘. 16-75 of 5rteˆ??e’TTo[Brittany- .

Lime 3 BASLAmA, in antiquity, ridiculous or gro-

Sot}a 4 tesque figures, hungup by the ancient smiths be-

Muriatic arid ˆore their furnaces, as charms against envy.

LOSS 6.75 BAS-CHEVALIER. See BACHELOR.

BASE, v. n. & adj.~] Derived from Bacrtf,

100 BA'SELESS, | that upon which we tread,

The amorphous basaltes, known by the name of BA'SELY, (ˆ stand, or go, from Eaivu,

Rowley Rag, the ferrilite of Kirwan, of the speci- BA'SENESS, f Bau>►►j/, to go. Thus it

fie gravity of 2-748, afforded Dr. Withering 47-5 BASEBORN, I means, with regard to

of silex, 32-5 of alumina, and 20 of iron, at a BASE-STRING. J locality, any thing low;

very low degree of oxidation. Klaproth gives, the lower part of a pedestal, and the foundation

for the analysis of the prismatic basaltes of Ha- on which it rests; any thing spurious or mixed.

senberg, silex 44-5, alumina 16'75, oxide of iron It is metaphorically applied to sounds; to dis-

20, lime 9-5, magnesia 2-25, oxide of manganese positions of the mind; to actions; to general

0-12, soda 2-60, water 2. On a subsequent character. Thus it signifies whatever is lowered,

analysis, with a view to detect the existence of degraded, disgraced, shameful, vile, mean, and

muriatic acid, he found slight indications of worthless. It is, however, a stronger term of

it, but it was in an extremely minute propor- reproach than those employed to express its

tion. meaning : mean and vile, especially, convey a

On the whole, the affinity between lava and very inadequate sense of it. Base marks a high trap rock formations seems established, but for degree of moral turpitude; vile and mean de- further information we would refer the reader to note, in different degrees, the want of all value the interesting work of Dr. M'Culloch, on the or esteem; what is base excites our abhorrence ; western isles ; Dr. Boue's Essai Geologique sur what is vile provokes disgust ; what is mean 1′ Ecosse, Necker de Saussureˆ and the Geologi- awakens contempt. A base voice or sound, is a cal Essays of Messrs. Buckland, Conybeare, and l►►w deep voice or sound.

ij \ OA i rpri-" Mete the space from thy foote to the bate of the toure.

liAfcALHC HORNEBLENDE, occurs usually Chaucer. Attrolabie.

in opaque six-sided single crystals, which some- And I will yet be more vile than this, and will be

times act on the magnetic needle. It is imbedded base in mine own sight. 2 Sam.

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BASE.

Upon this litisc a curious work is rais'd,

Like \individed brick, entire and

P. Fletcher. Purplj Island. Instead of music, and base flattering tongues,

Which wait to tirst. salute my lord's uprise ; The cheerful lark wakes him with early song,

And birds' sweet whistling notes unlock his eyes. Id. By him Andicon pac'd of middle age,

His mind as far from rashness, as from fears ; Mating base thoughts, as much as desperat.: rage.

The world's loud thundcrings he unshaken hears, ?'or will ho death or life, or seek or fly;

lif ;uly for both ►►► He is as cowardly iVho longer fears to live, as he who fears to die. Id.

Wl-ut if it tempt thce tow'rd the flood, my lord? Or to the dreadful summit of the cliff. That beetles o'er his base into the sea? Shakspearc.

If lhat rebellion

Came, like itself, in base and abject routs, You, reverend father, and these noble lords, Had not been here. Id.

It could not else be, I should prove so base To sue and be denied such common grace. Id.

Why, bastard? wherefore base? When my dimensions are as well compact As honest madam's issue. Id.

The king is not himself, but basely led Py llattcrer.—. Id.

Whv brand they us

\Vi-.h -Vjv/ with tiusctu-ss / bastardy? Id.

I hive sounded the very bite-string of mortality.

Id. Henry IVth.

M. n oi' weak abilities in r.r. ;.t place, are like little vt.itucs set ou great li.Ui'i, mud.; the less by their ad- ●●●. .im .im ut. llacon.

Insurrection.; of /●●.'●●v people aiv commonlj more fu-)●●●;, >;, i:i iheir lit innin-s. Id.

l:i pipes, the he.ver the note hob's be, and tlio fur- ;h. r iVoiii the mouth of iho pipe, the more base sound ●●●y \ield. Id.

The ;ust and tm inured proportion of the air per- il to-.vir.U the imisiu'ss IT treblencss of tones, is ●●●- > "'. ●●● ol th" ev > atest ;-. -'crets in the contemplation of o'.ndi. Id.

This \o'm 1 i- 1 lii-t his lu'i \ith his father in the I-', ;;ml v. i:!: tv son. Citmden's Ron.

A hen' ●●●: .;. ,ii ."ue it m, ai -'uonas Essex in

i/i.s |-;: ..-..:●●●_●●●●●●● '!●●● -.-n. :.!'..'.. ii i;. Clarcnilin.

If forum" he;!, c nvyed i;.e .vc.ltli, thieves have iobbi .1 me, HP. fallier !,a \e not l^.L me Mieh revenues is others have, lhat I am ,i \tiin.;ijr hi.iiher buj^ly horn, 01 m. aa paren'a^e, a ilirt- liaul. r':; son, aia I

".ol 1'eJecLi '1 i 'I' iii, pi|●●'ei-:v, i'.i'-'.'i -.'., should a 1I1UI1?

‘];; l.ii-Lun.’. I’.uiii ; not mine. Anal. Jfelanchuly.

””> i ‘. r 1. ,.’.. , to he; ‘.vi u ae.i is! hi; ××× or ;eous feast, l!:il iv i i. b.-sotti d /..××××; i.’ MI ra:.i’,:!(l ×××

C’r.irus an.l bla-phe;.!----; his feeder. “liltons Cuinut. 1’h: ;i-.‘us \va; aM in v.hiie, having his bases and

Sini-e tlii1 perfi-c-tion? ar. sueii iii the pnrty I love, as the iVelii! ××× ol” ih. m cannot come unto any unnoble bear! ; sh :’:! t’in.: !.××××××××;. n, iia ××××,! uˆ (o such a height, be ××× ××××on. ;te, 1 I,.;-. < Id.

We h i! !, tie; , ;;: ××× th, re is not any mail of the.

Chiireh ol I’.ii i,;i!ii iji;; tii.; same man is also a mciu-

i.. r of tiie eummouv. ;.i:!i, nor any member of the

i ...miuonv. i ;.!L!I v, hieh is 110! r!-o of the rhureli cf

:. lam!; ;herefore,;i. In a f. :u.-.i t.ian,le, the b.ise

.‘i ililV-r fi-.Hji the si.h’s thei-i-oi’, and yet (me and . a.ne Hue i Kit’i a ”;××××’ and al MJ rt side; a*

side simply j a bate if it chance to he the- bottom and underlie the rest : so, albeit, properties and actions of one do cause the name of a commonwealth, qualities and functions of another sort, the name of the church to be given to a multitude, yet one and the self-same multitude may in such sort be botb.

Hooker. Ecclet. Pol Which when the cruel Amazon perceiv’d

Sha ‘ga.ii to storme, and rage, and rend her gall For very fell dcspight, which she conceiv’d

*To be so scorned of a 6a*e-born thrall, Whose life did lie in her least eye-lids’ fall. Spenser. Such is the power of that sweet passion,*

That it all sordid baseness doth expel. Id.

The silver-sounding instruments did meet

With the base murmur of the water’s fall j The water’s fall, with difference discreet,

Now soft, now loud, unto the wind did call ; The gentle warbling wind low

answered to all. Id. If the lords and chief men degenerate, what shall be hoped of the peasants and baser people.

Id. On Ireland.

Oh ! she is tbe pride and glory of tbc world ; Without her all the rest is worthless dross ; Life a base slavery ; empire but a mock ; And love, tbe soul of all, a bitter curse.

Rocliester'a Valentinian. Nor shall it e'er be said, that wight, With gauntlet blue and buses white, And round blunt truncheon by his side, So great a man at arms defy'd. Hudibras.

He, whose mind

I> > virtuous, is alone, of noble kind; Though poor in fortune, of celestial race ; And he commits the crime who calls him ba.'e.

Dryden.

At thy well-sharpcn'd thumb, from shore to shore, The trebles squeak for fear, the bases roar. Id.

Your soul's above the baseness of distrust,

Nothing but love could make you so unjust. Id.

We alleged the fraudulent obtaining his patent,

the baseness of his metal, and the prodigious sum to

bo coined. Swift.

When a man's folly must be spread open before the

angels, and all his baseness ript up before those pure

spirits, this will be a double hell. South.

It is base in his adversaries thus to dwell upon the

excesses of a passion. Atterbury.

At the first grin he cast every human feature out

of his countenance ; at the second he became the head

of a bass-viol. Addison.

A guinea is pure gold, if it has nothing but gold in

it, without any alloy or baser metal. Watts.

Hut see thy 6

Those wise old men, those plodding grave state

pedants,

Forget the course of youth ; their crooked Prudence, To baseness verging still, forgets to take Into their finespun schemes the generous heart, That through the cobweb system bursting lays Their labours waste.

Thomson's Tancred and Sigismunda.

When men of rank sacrifice all ideas of dignity to

ambition without a distinct object, and work with

low instruments for low ends, the whole composition

becomes low and base. Burke.

Oh, ye seven hills ! awaken, Ere your very base be shaken. Bynm.

BASE. A game or play ; to keep moving

about one spot of ground.

The first clay .of the challenge at base, or running, the king >.von. Rumet's Hist, of Reform.

BASE.

605

BASE, in architecture, is used for any body which bears another, but particularly for the lower part of a column and pedestal. The ancients, in the early times of architecture, used no bases. The doric columns in the temple of Minerva at Athens have none, but stand immedi- ately upon the floor of the porch. Columns afterwards came to be supported on square pieces called plinths, and after that on pedestals. The base of a column, of whatsoever order, on a pe- destal, is that parl which comes between the top of the pedestal and the bottom of the shaft of the column ; when there is no pedestal, it is the part between the bottom of the column and the plinth : some have included the plinth as a part of the base, but it is properly the

piece on which the base stands, as the column stands upon that. The pedestal also has its base as well as the co- lumn, and the pilaster. The base of columns is differently formed in the different orders; but in general it is composed of certain spires or circles, and was thence in early times called the spire of a column. These circles were in this case sup- posed to represent the folds of a snake as it lies rolled up ; but they are properly the represen- tations of several larger and smaller rings orcircles of iron, with which the trunks of trees, which were the ancient columns, were surrounded to prevent their bursting; these were rude and irre- gular, but the sculptor who imitated them in stone found the way to make them elegant. The base is different in the different orders : thus,

BASE, COMPOSITE, has an astragal less than the corinthian.

BASE, CORINTHIAN, has two toruses, two sco- tias and a fillet.

BASE, DORIC, has an astragal more than the Tuscan, though that was introduced by the mo- derns.

BASE, IONIC, has a lage torus over two slender scotias, separated by two astragals : though in the most ancient monuments of this order there are no bases at all ; which the architects are at a loss to account for.

BASE, TUSCAN, is the most simple of all others ; consisting of a single torus besides the plinth.

BASE, in chemistry. See BASIS.

BASE, in fortification, the exterior side of the polygon, or that imaginary line which is drawn from the flanked angle of a bastion to the angle opposite to it.

BASE, in geometry, the lowest side of the perimeter of a figure.

BASE 01- A CONIC SECTION, a right line in the hyperbola and parabola, arising from the com- mon intersection of the secant plane and the base of the cone.

BASE OF A RECTANGLED TRIANGLE, the side opposite the right angle, i.e. the hypothenuse.

BASE OF A SOLID FIGURE, the lowest side, or that on which it stands.

BASE OF A TRIANGLE, any side thereof is occa- sionally so called ; though properly it is the lowest side, or that which lies parallel to the horizon.

BASE, in gunnery, the least sort of ordnance, the diameter of whose bora is 1-f inch, weight 200 pounds, length 4 feet, load 5 pound?, shot 1ˆ pound weight, and diameter $ inch. ,

BASE COURT, in law, sometimes signifies any court not of record. ••• Such, is the Court-baron.

BASE ESTATES are such as base tenants have in their lands.

BASE FEE, a tenure in fee at the will of the lord, as distinguished from soccage, or free tenure; but, according to Lord Coke, a base fee is what may be defeated by limitation, or on entry, &c.

BASE TENURE (bassa tenura), holding by vil- lenage, or other customary service; as distin- guished from the higher tenures in capite, or by military service.

BASE, in music, see BASS.

BASE, in trigonometry. See ALTERN BASE.

BASE KNIGHTS, the inferior order of knights, as distinguished from barons and bannerets, who were the chief or superior knighis.

BASELLA, climbing nightshade, from Malabar. A genius of the trigynia order, belonging to the pentandria class of plants ; and in the natural method ranking under the twelfth order, holoracese. The calyx is wanting ; the corolla is seven-cleft, with the two opposite divisions broader and at last berried, there is one seed. 1. B. alb, with oval, waved, flaccid leaves, and small flowers and fruit. These plants will climb to a considerable height, and send forth a great number of branches ; so they should be trained up to a trellis, or fastened to the back of the stove ; otherwise they will twist themselves about what- ever plants stand near them, which will make a very disagreeable appearance. 2. B. rubra, with red leaves and simple footstalks, has thick, strong, succulent stalks, and leaves which are of a deep purple color. ••• This plant will climb to the height of ten or twelve feet, provided it is kept in a stove ; but in the open air it will not grow so large in this country ; nor will the seed come to perfection unless in very warm seasons. The flowers of this plant have no great beauty, but it is cultivated on account of the odd appear- ance of its stalks and leaves, and the flowers of a whitish green color tipped with purple.*

BASELLI or EASELS, in our old historians, a species of coin abolished by King Henry II. A.D. 1158.

BASEMENTS, in architecture. See ARCHI- TECTURE, Index.

BASE RING of a cannon, is the great ring next behind the touch-hole.

BASE ROCKET, in botany. See RESEDA.

BAS-EN-BASSET, or BASSET, a market town in the department of the Upper Loire, France, arrondissement of Issengeaux. It is the head of a canton and has 5000 inhabitants. Here are manufactures of blond lace, tobacco-pipes, and earthenware. It is three miles north-west of Monistrol, and twenty north-east of Le Puy.

BA'SˆNET, Fr. bassinet; Old Eng. basnyt ; a little bowl, a small basin; a part of military equipage, a kind of helmet or head-piece, worn originally by the French men at arms.

Notwithstanding at the last the king made him put on his basenet, and then took a surd with both his hands, and strongly with a good will strake him on the necke, and the same day hee made three other citizens knightG for his sake in the same place.

Stow, Ann. 1381. R. 2

Therefore he would her doo away all drevf; And that of him shee mote assur'd stand, He sent to her his busenet, as a faithful hand.

Spenser. Faerie Queene.

BASH, v. n. ~\ See To ABASH. This

BASH'FI;L, adj. / word, with all those of

BASH'FU LLY, adv. V the same race, Dr. John- BASH'MEST, n. s. i son says, are of uncer- BASH'FUI.MOSS, n. s. / tain etymology. Skinner imagines them derived from base or mean ; Min- sheu from vcrbucscn, J)ut., to strike with asto- nishment; Junius from /3ao►►c, which he finds in Hesychius to signify shame. The conjecture of Minsheu seems most probable. It is sometimes used as synonymous with modest and modesty; but not with a nice regard to accuracy. Modest signifies setting measure to ones estimate of one- self; but bashful, lady to be abashed. Modesty is a habit or principle of the mind ; bashfulness is a state of feeling. Modesty is at all times be- coming ; basfifulness is only becoming in females, or very younor persons, in the presence of their superiors. Modesty discovers itself in the ab- sence of every thin? assuming, whether in look, word, or action;*

bathfulness betrays itself by a downcast look, and a ti:nid air. A modest deportment is always commendable; a bashful temper is not desirable. ••• Craiib.

Are you not ashamed, hu.-h y;u net to broach and

sot abroad, in the view and f.i< e of the world, such

mockeries of religion .' Holland's Liviut, fol, 320.

It mi-b.t be cither for the laeke of learnyng and

good brvn^vn.; no (a :,rcat and common fault in

ereat priii'vs of Germany!, or els for his hushful na-

uin: in youth, which pi-. >;>ertie Xenophon wittely

tayn.1: il to be in Cvras at Kke yeares, jiidirins; buxfi-

f'ulniis in vouth, to be a '.'iv;.t token of virtue in age.

A .r/ttii.'i. Hi' jurt and J)ixcourse.

He b'o',...'d wi'.h ; n almo-,t bush fid kind of modesty, as if he feared the eyes of m in. Sidney.

They lu.ihe not to dc;ib- il: ••• ui-.es of otlier men.

I'.i;!:' mi the Rewlatiwis.

.\h ! see the \ir.in rose, bow sweetly slice Doth ;';r-.t peep :'url!i \vitli liii.s'tf'iil i:iod.'.stjc. i hat iaiier seemes the les at> •••:•••, liow more bold and free, mil sin; doth broad display'. 1 alter, bow she fades and falls away.

*Spenser**

His countenance was bold, and lashed not For (i:;\ on's looks, i,;:; scornful eye glance at him

Id. I ni'ver t.-rnj.t.-d lii-r with word too large ;

Jiuhlul Miicerity \vi:h i imcly love. Xliahspeare.

Hene.' Ii inli fid cunning ?

And nroMipt me plain a:ul hols iniioceiK-e. Id. .other, th,'oi;.;!i biix!

*ij’,/!,. <, suspicion, and timo rousnes., \vi.; not be sr< :i a! r id, loves darkness as ******* - "“el i :.i.:!; *** i.ilur *** i ! t, or to sit in lit;ht- sotne pla. e-j ; btili ****;. es, he will lu’ither*

*Kf , noi- b *** s.-, n by !.i, : -.,,!.’ Aunt. Mel.*

Mer -old n hulr. 1, – ,. rf.irehead hi-h, Her ‘ , i!i ,,f solid, ey; ,... liquid pearl ; lit neck an.! r.an :;o lit bar;: descry,

i;’,, >r’s Purple Island.

*!ier! > are o:b. ***,****—, ,..-‘*** ,-e n.i’ alto.’! tln-r so mucli*

***

opinion. bnjdcn.

*< >**r aii-h a- a: ,*** e to-ni ht, ”*

And b,i,’.‘t/.l in hi-, in,; a.’ u, Li ., cau’icv-.ly o’j-.c;,,,’.

Mi re bastifulness without merit is awkwardness. Id.

Doubtless there are men of great parts that are guilty of downright bashfulness, that by a strange he- sitation and reluctance to speak, murder the finest and most elegant thoughts, and render the most lively conceptions fiat and heavy. Toiler, No. 252.

*Our orators, with the most faulty bashfulness, seem impressed rather with an awe of their audience than with a just respect for the truths they are about to deliver ; they, of all professions, seem the most bash- ful who have the greatest right to glory in their com- mis**ion. Goldsmith. Essay III.*

So bright the tear in Beauty’s eye, Love half regrets to kiss it dry, So sweet the blush of bashfulnesi, Even pity scarce can wish it less. Byron.

BASHAN, or BASAN, a kingdom beyond Jor- dan, mentioned in Scripture. By Josephus, Eusebius, and Jerome, it is called Batanse. When the Israelites entered the land of Canaan, the whole country beyond Jordan, from that of the Moabites or Arabia, as far as mount Hermon and Lebanon, was divided into two kingdoms, viz. those of the Amorites, and the Bashanites : the former to the south, and the latter to the north. The kingdom of the Amorites extended from the river Arnon and the country of Moab, to the river Jabbok ; which, running obliquely from the east, was at the same time the boundary of the Ammonites, as appears from Numb. xxi. 24. and Deut. ii. 37. and iii. 16. It fell to the lot of the Reubenites and

Gadites, and Bashau, to the half tribe of Manasseh. To this was annexed a part of the hiily country of Gilead, and the district of Argob ; yet so that Bashan continued to be the principal and greatest part : but after the Babylonish captivity Bashan was subdivided, so that only a part was called Batanea or Basan, another Trachonitis, a third Aurunitis or Ituraea, and some part Gaulonitis ; but to settle the limits of each of these parts is now impossible. Bashan was a country famous for its pastures, and breed of large, cattle.

BASHAN, a mountain in the above kingdom, which seems to have retained its original name long after the Israelites were in possession of that country ; at least is often mentioned with a reference to its original inhabitants, who were idolaters and enemies to Israel. In this respect bringing back from Bashan, signifies the deliver- ance from bondage, even death. Bashan is refer- red to in another view : the country is exceedingly fruitful, and is therefore used to represent a nourishing state.

BASHANITES, the people of Bashan.

BASHAR EHX MOTAMKR, a principal man among the MotazalitPS, who varied in some points from the general tenets of the sect, extending man's free agency to a great length, even to the mak ing him independent. lie asserted, that God is not always obliged to do that which is best, for that, if he pleased, he could make all men true believers. Accordingly he taught that God might doom an infant to eternal punishment; but taught at the same time, that he would be unjust in so doing !

BASHARIAiS'S, a sect of Mahommedans, a subdivision of the Motazalites, who maintain the tenets of Bashar Ebn Mo tamer. See last article.

BASUAW, PASCIIA, or PACHA, a Turkish go-

vernor of a province, city, or other district. All Ksrypt is, on the part of the grand seignior, go- verned by a bashaw, who has in reality but little power ; but seems principally to be meant for communicating to his divan of beys, and to the divans of the several military ogiacs, the orders of the grand seignior, and to see that they be executed by the proper officers. When a bashaw- farms a country of the grand seignior, the fines that are paid, when any life drops upon the lands, belong to him. Originally all the lands of Egypt belonged to the grand seignior; and he still looks on them as his own : but his power being now lost, they all go to the next heir ; who must, however, be invested by the bashaw, and ne is therefore glad to compound

for a small sum. The nature of the bashaw's office requires him to be ever attempting means to cut off such as- are too aspiring, or engaged in designs that may be any way prejudicial to the Porte. This often occasions his own deposition ; but he is uncon- cerned about that, as his person is always sacred; and his losing his post is only a step to higher preferment. Bashaws include beglerbegs, and sometimes sangiachegs ; though a distinction is sometimes made, and the name bashaw is appro- priated to the middle sort or such as have two ensigns or horse-tails carried before them. Those who have the honor of three tails, are called beglerbegs ; and those who have only one, san- giachegs. The appellation of bashaw is also given by way of courtesy, at Constantinople, to the lords about the grand seignior's court, the officers in the army, and almost every person of any figure. A bashaw is made with the solem- nity of carrying a flag or banner before him, accompanied with music and songs by the Miria- lem, an officer whose business it is to invest the bashaws. Bashaw, used absolutely, denotes the prime vizier; the others of that denomination being distinguished by the addition of the pro- vince, city, or the like, which they have the command of; as the bashaw of Egypt, of Pales- tine, &c. The bashaws are the emperor's sponges. We find loud complaints among the Christians who reside in Turkey, of their avarice and extortions. As they buy their tjovernmp.nts, every tbincc is venal with them. When glutted ⬚⬚⬚With v.calth, the emperor frequently makes them a present of a bow-string, and becomes heir to all their spoil. There are also sub-bashaws, or deputy-governors under the bashaws.

BASHAW, CAPTAIN, is the title of the Turkish high admiral.

BASHEE ISLANDS, five islands in the Chinese sea, and two islets, almost wholly rock, visited by Dam pier in 1687, and so named from an agreeable intoxicating liquor found here, made from the sugar-cane. The principal one is Orange Islam!, being about twenty-two miles long, and six broad. The other are Monmouth, Grafton, Goats, and Bashee Proper. The soil is very fertile in the productions of these seas : in 1783 the Spaniards formed a settlement on the Bashee islands, in order to procure the gold which is said to be washed down by the torrents. The natives fabricate it into wire for ornaments.

BASHEMATH, the daughter of Ishmae!, one of Esau's wives It appears to have been also a

name of Adah, his first wife. See Gen. xxvi. 34. and xxxvi. 2.

BASEDOW (John Bernard), a celebrated writer, born at Hamburgh, in 1 723. After study- ing under Reimarus, he went to Leipsic ; and in 1753 was chosen professor of moral philosophy and the belles lettres at Soroe, in

Denmark. But having divulged some opinions in religion differing widely from Lutheranism, he was re- moved from this situation ; upon which he formed a plan of reformed education, and raised considerable snms of money for perfecting it. His plan, however, after a partial trial, proved unsuccessful ; and he died through intemperance and dissipation in 1790. His writings, though full of dogmatical assertions and fanciful opinions, show him to have been an ingenious man.

BASHILO, a river of Abyssinia, which sepa- rates Begamder from Amhara, and falls into the Bahr-el-Azergue, thirty miles south-east of Alata.

BASHKIRS, or BASCHKIRS, a people of the Russian empire. They call themselves Bash- kourt; and derive their origin partly from the Nogay-Tartars, and partly from the Bolgarians. Probably they are Nogays, whom the Bolgares adopted among them : their country at least is a part of the ancient Bolgaria. They formerly roamed about the southern Siberia under the conduct of their own princes : but to avoid the molestations of the Siberian khans, settled in their present possessions, about the rivers Volga and Ural, and were subject to the Kazanian khanate. On the overthrow of that state by czar Ivan. II. they voluntarily took refuge under the Russian sceptre : they afterwards, however, fre- quently revolted against the government, whereby their prosperity as well as their population has been considerably diminished. In the year 1770 they consisted of 27,000 families, having their homes in the governments of Usa and Perme. The Bashkirs liave been long without khans; and all their nobility have been gradually de- stroyed in the civil wars. At present every tribe or wolost chooses for itself one or more ancients, or starschinis; and the whole nation composes thiity-four wolosts. The huts or houses, which they inhabit during winter, are built after the Russian fashion ; the principal part, which the family commonly possesses, is furnished with large benches, which serve for beds ; the chim- ney, of a conical form, and of the height of an ordinary man, is in the middle of this division, and so ill constructed, that they are very liable to smoke : on this account the Bashkirs are very subject to various complaints of the eyes. In summer this people inhabit what the Russians call jurtes ; they are tents or covers of felt, which, like the huts, have several divisions and a chim- ney in the centre. A winter village contains from ten to fifty huts ; but the summer encamp- ment never exceeds twenty jurtes. These jurtes are a kind of barracks.

The bashkirs have some knowledge of the art of writing, and have schools ; but as it is from their own nation that they elect their priests and the instructors of youth, they remain in the pro- foundest ignorance. With some knowledge of tillage, they retain a liking to the pastoral life ; which spoils them for agricu.ti.re. They sow

but little grain ; consequently their harvests af- ford them) only few resources for the winter, being far from sufficient for their whole consumption. They apply with greater success to the cultivation of bees ; making hollows in the trees to serve the purposes of hives : which, to secure from the attacks of the 1 tears, they have invented a variety of ingenious contrivances, both as weapons and traps. One man, in frequent instances, is known to possess at least 500 hives. They have the art of finding out the mountains that contain mines ; but, like the Tartars, they would think themselves disgraced by working them themselves. It must be owned, however, that they have not the strength of body which that labor requires. Their practice is to let them out for a term of sixty years to Russian contractors ; assigning to them at the same time a tract of forest necessary for the forges. The poorest of them serve for wages in transporting the ore.

The women understand the art of weaving, fulling, and dyeing narrow coarse cloths; they likewise make the clothes for the whole family. They make a small quantity of linen of hemp ; hut they prefer weaving the filaments of the common nettle, as that plant requires no 'culture, and the linen they make of it is extremely coarse. They have not the unwholesome practice of steeping their hemp or their nettles in water, but leave them to dry in tiic air on the top of their huts during the autumn and winter; then strip- ping oil' the bark, they pound them in wooden mortars. The men follow the more difficult business of making felt, and of tanning leather. lk>th sexes wear shirts of the cloth made of net- tles; they also wear wide drawers, which de- scend to the ankle-bone, and a sort of slippers, like people in the East. Hoth men and women wear a long gown, that of the men being gene- rally of red cloth bordered with fur; this they bind round their middle with a girdle, or with the licit to which they fix their scimitar. The poor have a winter pelisse of sheep-skin, and the rich wear a horse-skin in such a manner that the mane covers their back and waves in the wind. The cap is of cloth like the frustum of a cone, and ten inches hi.;h ; and that of the rich is usually ornamented with valuable furs. The gown of the wives is made of fine cloth or silk, buttoned bcJ'oiv as high 'is the neck, and fastened by a broad girdle, which the richer classes have made of steel. Their necks ;md throats are covered with a sort of shawl, on which are several rows of coins, or a string of shells.

Tlu: principal wealth of this people consists in their lloeks ; it is especially from their horses that they derive the necessaries of life ; meat, milk, vessel, !/armei;1s. Yiiey have nearly as many and tveu rither more Miuep I>I;MI horses; and their horn -d cattle ar,:: about, hah' as numerous; they*

:ikp WIN(!., leu up ❓❓❓❓❓❓ >:>>e !.^ of ihc ordinary class has sell', an fc.vcr than l.it'vini thirty and fifty hors.-s, many ❓❓❓ s,,❓❓iv; 1000, 2000,

i'.nd i,, ❓❓❓ ❓❓❓❓❓❓ o,' t'io broad-tailed

. '❓❓❓' ❓❓❓'.'.'.(❓❓❓ N for (ho fineness

who dwell to the east of the Ural, and in the province of Isset. Some of them arc owners of not less than 4000 horses, who fatten in the richest pastures : the wasps and gnats oblige them in the month of June to quit these fine meadows, and retreat to the mountains ; the horses then lose their flesh and pine away, but regain their pristine vigor on coming down again to the plains in the month of July.

Though the Bashkirs experience a long and very severe winter, yet they abandon their flocks and droves to the inclemencies of the season. They have neither granaries nor barns f they only lay up a little hay, which they range in cocks round the trees, reserving it for the distempered cattle. Those that are healthy pick up a little grass or moss from beneath the snow, and are often reduced to the necessity of feeding on the bark of the young elms. No farther attention is paid to the camels than to wrap them in some wretched coverings of felt, which they sew about their body. The cattle towards the end of the winter are become lean, weak, and emaciated. Though the females are never kept apart from the males, they rarely bring forth out of season ; because the exhausted state of the flocks and herds, during the winter, is unfavorable to genera- tion. Neither the Bashkirs nor the Kalmucs suffer the colts and the calves to suck their dams except during the night, their practice being to milk them in the day-time for their own advan- tage ; kumiss, prepared from mare's milk, being their favorite liquor. (See KUMISS.) They are also fond of a mixture of sour milk ana mead, called arjan. In the spring they drink the sap of the birch, which they collect by means of deep incisions in the trees.

Their arms are the bow, the lance, the helmet, and coat of mail ; from the Russians they obtain sabres, musquets, and pistols. A Bashkirian army presents a truly curious spectacle ; ob- serving no order in marching, they only form into ranks when they halt. Every one leads a horse in his hand, which carries all his provisions . the load, however, is not heavy ; consisting only of cheese, some corn dried in the kiln, and a hand- mill to grind it to meal. With the meal they form a ball which they swallow, and which serves them for bread. Each warrior, dressed in his long gown, equips himself as he chooses or as he can. One has procured for himself the various kinds of arms, and carries a whole arsenal with him ; the other scarcely possesses more than one ill-conditioned weapon. Such troops as these rendered the

armies of the ancient Persians at once so numerous and so little formidable.

They are all well mounted, are skilful in draw- ing the bow, and dexterously manage their horses. A small number of Bashkirs are easily victorious over a numerous squadron of Kirghises; some- times one of their regiments will traverse a whole horde of Kirghises, put to flight by their very looks all the enemies they meet, and return tri- umphant without having sustained the slightest loss. The military service which they are bound to perform, and the only point in which they arc galled by the Russian yoke, consists in furnish- ing, in time of war, 3000 cavalry, which form thirty troops of 100 men each. The Bashkirians

are the most negligent and slovenly of the Tar- tars. In commerce they are the least intelligent; but, at the same time, they are the most hospi- table, the most lively, and the most brave. Their diversions at any religious festival, or at a marriage, consist in numerous libations of sour milk, singing, dancing, wrestling, and horse- racing, in which they excel. In their songs they enumerate the achievements of their ancestors, or their own, and sometimes their amorous adven- tures. Their songs are always accompanied with gestures, which render them very theatrical. Among them old age meets with the greatest re- spect. In their entertainments, it occupies the place of honor; and the stranger, to whom compliments are paid, is always set among the old men. ??? The language of these people is a Tartar dialect, very different from that spoken at Kasan. The Bashkirians are, like most of the Tartars, Mahommedans ; but though they have their mosques, their molaks, and their schools, they are much addicted to superstition and sor- cery. Their sorcerers challenge even the devil, and pretend to engage with him in combat ; and thus they delude the credulous vulgar, who con- sult them in their distress, and particularly when they lose any of their mares. Tooke's View of Russia, vol. i. p. 473. Chantreau's Travels, vol. i. p. 281.

BASHUYSEN (Hemy James Van), a learned and ingenious divine, born at Hanau, in 1679, where he became professor of the Oriental lan- guages, and ecclesiastical history. He was after- wards professor of divinity, and member of the royal society at Berlin ; and had a printing press in his house, from which he sent abroad some curious tracts, principally on rabbinical learning. He died in 1758.

BASIA ULTIMA. See ULTIMA.

BASIATRAHAGI, in botany, a name used by some for the common polygonum, or knot- grass.

EASIER, or BASIRE (Isaac), a learned and active divi ne in the seventeenth century, was born in the isle of Jersey, in 1607. For some time he was master of the college or free-school at Guernsey : but, at length, became chaplain to Thomas Morton, bishop of Durham, who gave him the rectory of Stanhope, and the vicarage of EgglesclifT, in Durham. In July, 1640, he had the degree of D. D. conferred upon him at Cam- bridge, by mandate ; and at Oxford the Novem- ber following. About that time he was made chaplain in ordinary to king Charles I. and got several other preferments, but did not long enjoy them ; for, in the beginning of the civil wars, being sequestered, plundered, and forced to fly, he repaired to king Charles at Oxford, before whom, and his parliament, he frequently preached. Upon the surrender of the Oxford garrison to parliament, unwilling to stay any longer in the British dominions, lie resolved to go and propa- gate the doctrine of the English church in the East, among the Greeks, Arabians, &c. Leaving, therefore, his family in England, he went first to Zante, an island near the Morea, where he made some stay ; and had good success in spreading imong the Greek inhabitants the doctrines of the English church, the sum whereof lie imparted to

several of them in a vulgar Greek translation of our Church Catechism. The effect of it was so remarkable, that it drew envy, and consequently persecution, upon him from the Latins. This occasioned his voluntary recess into the Morea, where the metropolitan of Achaia prevailed upon him to preach twice in Greek, at a meeting of some of his bishops and clergy, which was well taken. At his departure he left him a copy of the catechism above-mentioned. From thence, after he had passed through Apulia, Naples, and Si- cily again (in which last, at Messina, he officiated for some weeks aboard a ship), he embarked for Syria; and after some months stay at Aleppo, where he had frequent conversation with the pa- triarch of Antioch, then resident there, he left a copy of the Church Catechism, translated into Arabic, the native language of that place. From Aleppo he went in 1652 to Jerusalem, and so travelled over all Palestine. At Jerusalem he received much honor, both from the Greeks and Latins. Returning to Aleppo, he passed over the Euphrates, into Mesopotamia, where he in- tended to send the Church , Catechism in Turk- ish, to some of their bishops, who were mostly Armenians. This Turkish translation was pro- cured at Constantinople. After his return from Mesopotamia, he wintered at Aleppo, where he received several courtesies from the consul,

Mr. Henry Riley. In the beginning of 1653 he de- parted from Aleppo, and came to Constantinople by land, being 600 miles, without either servant, or Christian, or any man with him, that could so much as speak the Frank language : yet, by the help of some Arabic he had picked up at Aleppo, he performed that journey in the company of twenty Turks, who used him courteously be- cause he was physician to them and their friends. ??? After his arrival at Constantinople, the French Protestants there desired him to be their minister, though he declared to them his resolution to officiate according to the English liturgy, and promised to settle on him, in three responsible mens' hands, a competent stipend. Upon the Restoration, Dr. Easier was recalled by king Charles II. to England, in a letter written to Prince Ragotzi. But this unfortunate prince dying soon after, of the wounds he received in a battle with the Turks at Gyala, the care of his solemn obsequies was committed to the doctor by his relict, Princess Sophia, whereby he was kept a year longer out of England. At length, returning in 1661, he was restored to his prefer- ments and dignities; and made chaplain in ordi- nary to king Charles II. He wrote several books on divinity. Having for many years after the Restoration, quietly enjoyed his large re- venues, he died in 1676, aged sixty-nine. He wrote, 1. Deo et Ecclesise Sacrum, &c. 4to. Oxon. 1646; and 8vo. London, 1668. 2. Dia- triba de Antiqua Ecclesiae Britannicae Libertate, 8vo. Brug. 1656, which was translated into Eng- lish under the title of The Ancient Liberty of the Britannic Church, &c. 8vo. 1661. 3. The His- tory of the English and Scotch Presbytery, 8vo. London, 1659, 1660. 4. Oratio Privata, boni Theologi. (speciatim Concinnatoris Practici) Partes Praecipuas complectens, 8vo. London, 1670. 5. The Dead Man's Real Speech, &c.;

a funeral Sermon on the Death of Dr. John Cosin, Bishop of Durham, 8vo. London, 1673. BASIL, in botany. See OCYMUM. BASIL, or BASLE, a canton of Switzerland, see BASLE.

*BASIL, in mechanics, the name, among joiners, for the sloping edge of a chisel, or of the iron of a plane. To work on soft wood, they usually make the basil twelve degrees, and for hard wood eighteen ; it being remarked that the more acute the basil is, the better the instrument cuts ; and the more obtuse, the stronger, and fitter it *s for service.*

BASIL, AMERICAN FIELD. See MONARDA BASIL (Sx.), the Great, one of the most learned and eloquent doctors of the church, was born atCaesarea, in Cappadocia, about A.D. 328 ; and went to finish his studies at Athens, where he contracted a strict friendship with St. Gregory Nazianzen. He returned to his native country in 355, where he taught rhetoric. Some time after, he travelled into Syria, Egypt, and Lybia, to visit the monasteries of these countries ; and the monastic life so much suited his disposition, that upon his return home he resolved to follow it, and he was the first institutor thereof in Pon- tus and Cappadocia. His reputation became so great, that, upon the deatii of Eusebius, bishop of Ca'sarea, in 370, ho was chosen his successor. It wns with some difficulty that he accepted of this dignity; and no sooner was he raised to it than the emperor Valens began to persecute him, because he refused to embrace the Arian doc trine. He used his utmost endeavours to bring about a re-union between the eastern and western churches, who were then much divided, not only aoout points of faith, but with regard to Meletius and 1'aulinus, two bishops of Antioch ; .a dispute wnich was not terminated till nine months after his death. Basil had a share in all the disputes which happened in his time in the east, in regard to the doctrine of the church; and died January 1, 379. ××× There hare been several editions of his ×××works in Greek and Latin. The best is that, of Father Gamier, printed i-n Greek and Latin, in three .volumes folio. St. Basil's style is pure and elegant, his expressions are grand and sub- limp, and his thoughts noble and majestic. Erasmus places him among the greatest orators of antiquity.

BASH. (ST.), order of. The most ancient of all the religious orders. See BASH. IAN. BASH. STUNK. See Tin MIS. HASH., SYRIAN 1'ir.i.n. See ZIZIPHOKA. BASH, Wn.n. See TIIYMCS. BAM i., a physician and heretic, whom Alexius Comnenus caused to be burnt alive in 1118. lie ht Id that (iod bad another >on besides Jesus Chn:i, called Sathairael, who, having revolted from his duty to his father, was expelled heaven, and cast to the earth, with the angels whom he had mtiiif Ticed to take part with him; and that Jesus ChriM was al'tervvaids sent to destroy his power, who shut him up in hell, and altered his name by cutting of the last syllable. He allowed i'l.i followers everything in common, not ex cepting t!u :r v> i\ es.

B\S1J,A\, unr of the Philippine islands, in the midst of a cluster of smaller ones, off the

south-west extremity of Magindanoa. It is mountainous, and about sixty miles in circum- ference, abounding in rice, sugar-cane, and bananas. Wild hogs and deer are the principal animals of the interior, which is watered by con- siderable streams, but thinly peopled. Distant eighteen miles from Magindanao. Long. 121×× E., lat. 5×× 50′ N.

BASILARE Os, in anatomy, a barbarous de- nomination given to the os sphenoides, on account of its being situated at the bottom or basis of the skull; or because a great part of the brain rests hereon, as on its basis.

BASILEUS, /3a

BASILEUS, in ornithology, a name by which several of the old authors called the regulus cris- tatus, or golden-crowned wren.

BASILIAN Monks, the religious of the order of St. Basil. That saint having retired into a desert in the province of Pontus, founded a mo- nastery for the convenience of himself and his numerous followers ; and for the better regulation of the new society, drew up in writing the orders and rules he would have them follow. This order soon spread all over the east ; nor was it long before it passed into the west. The rule of St. Basil was approved by Pope Liberius, the same year in which it was written and published ; and afterwards by several other popes; and, in these last ages, by Pope Gregory III. who ap- proved the abridgment made of it by cardinal Bessarion, in the pontificate of Eugenius IV. Some authors pretend, that St. Basil, before he died, saw himself the spiritual father of more than 90,000 monks, in the east only. But this order, which flourished so greatly for more than three centuries, was afterwards considerably di- minished by heresy, schism, and a change of empire. The greatest storm it felt was in the reign of Constantine Copronymus ; who per- secuted the monks of St. Basil, imprisoning some, and banishing others; insomuch that the mo- nasteries were abandoned and spoiled of all their goods. The historians of this order tell us, that it has produced 1805 bishops; and beatified, or acknowledged as saints, 3010 abbots, 11,805 martyrs, and an infinite number of confessors and virgins. They likewise place among the re- ligious of the order of St. Basil, fourteen popes, some cardinals, and a very great number of pa- triarchs, archbishops, and bishops ; and they boast of several emperors and empresses, kings and queens, princes and princesses, who have embraced its rules. This order was introduced in the west in 1057 ; and was reformed in 1569 by Pope Gregory XIII. who united the religious of this order in Italy, Spain, and Sicily into one congregation; of which the monastery of St.

Saviour at Messina is the chief, and enjoys pre-eminence over the rest. Each community has its particular rule, besides the rule of St. Basil, which

is very general, and prescribes little more than the common duties of a Christian life.

BASILIANS. See BOGOMILI.

BASILIC, or BASILICI, /3a

BASILIC is also used in ecclesiastical writers, for a church. In this sense, the word frequently occurs in St. Ambrose, St. Austin, St. Jerome, Sidonius Appollinaris, and other writers of the fourth and fifth centuries. It is thought that the name was thus applied, from many of the an- cient churches having been formed of the Roman halls. In reality, on the conversion of Con- stantine, many of the ancient basilicae were given to the church, and turned to another use, viz. for Christian assemblies to meet in ; as may be collected from the passage in Ausonius, where speaking to the emperor Gratian, he tells him, the basilicae, which heretofore were wont to be filled with men of business, were now thronged with votaries praying for his safety : by which he must needs mean, that the Roman halls or courts were turned into Christian churches : and hence the name came to be a general name for churches in after ages.

BASILIC, is chiefly applied, in modern times, to churches of royaL foundation ; as those of St. John de Lateran, and St. Peter of the Va- tican, at Rome, founded by the emperor Con- stantine.

BASILICS, among the ancient Franks, were little chapels built over the tombs of their great men, so called, as resembling the figure of the sacred basilicae, or churches. Persons of inferior condition had only tumbas or porticuli erected over them. By an article in the Salique law, he that robbed a tumba or porticulus, was to be fined fifteen solidi ; bu.t he that robbed a basilica, thirty solidi.

BASILICS, in literary history, a name supposed to have been given by the emperor Leo to a col- lection of laws in honor of his father Basilius I.

who began it A. D. 867, and in the execution chiefly made use of Sabbathius Protospatharius, who carried the work as far as forty books. Leo added twenty books more, and published the work in 880. The whole, thirty years after, was corrected and improved by Constantine Por- phyrogenitus, son of Leo: whence many have held him the author of the basilica. Six books of the basilica were translated into Latin in 1557, by Gentian Hervetus. An edition of the Greek basilics, with a Latin version, has been since published at Paris, in 1647, by Annibal Fabrot- tus, in seven volumes. There are still wanting nineteen books, which are supposed to be lost. Fabrottus has endeavoured to supply in some measure the defect, from

the synopsis of the basi- lica and the glosses, of which several had been made under the succeeding emperors, and con- tained the whole Justinian law, excepting the superfluities, in a new and more consistent order, together with the later constitutions of the em- perors posterior to Justinian.

BASILICA, in anatomy, the interior branch of the axillary vein, running the whole length of the arm. It is one of the veins opened in bleeding.

BASILICA, or BASILICUS, in astronomy, a fixed star of the first magnitude, in the constel- lation Leo; called also Regulus and Cor Leonis.

BASILICA JULIA not only served for the hear- ing of causes, but for the reception and audience of foreign ambassadors. It was supported by 100 marble pillars in four rows, and enriched with decorations of gold and precious stones. In it were thirteen tribunals or judgment seats, where the praetors sat to despatch causes. See BASILIC.

BASILICA, MODERN. Palladio gives this name to the civil edifices which are found in many Italian cities, and the destination of which is en- tirely similar to the antique basilica. ‘ In imi- tation of the ancients,’ says this celebrated ar- chitect, ‘ the cities of Italy construct public halls which may rightly be called basilicae, as they form part of the habitation of the supreme ma- gistrate, and in them the judges administer jus- tice.’ ‘ The basilicae of our time,’ he continues, ‘differ in this from the ancient; that those were level with the ground, while ours are raised upon arches, in which are shops for various arts and merchandise of the city. There the prisons are also placed, and other buildings belonging to the public business. Another difference is, that the modern basilicae have the porticoes on the out- side, while in the ancient they were only in the interior. Of these halls there is a very noble one at Padua; and another at Brescia, remark- able for its size and ornaments.’ The most ce- lebrated of this kind is that of Vicenza; the exterior part of which was built by Palladio, and the whole so much altered that it may pass for his work. The body of the building is of much greater antiquity, though the date of it is un- known. Time, and various accidents had re- duced this edifice to such a state of decay, that it was necessary to think seriously of pre- venting its total ruin : for this purpose the most eminent architects were consulted, and the de- sign of Palladio was approved. He removed

tne ancient loggias, and substituted new porticoes of a very beautiful invention. These form two galleries” in height, the lower order of which is

ornamented with Doric engaged columns, at very wide intervals, to answer to the internal pillars of the old buildings ; the space between each column is occupied by an arch resting on two small columns of the same order, and a pi- laster at each side against the large columns, which leaves a space between it and the small columns of two diameters The upper portico of Ionic columns is disposed in the same manner, and a balustrade is placed in the archway. The entablature of the large orders is profiled over each column.

This edifice is about 150 feet long and sixty feet broad ; the hall is raised above the ground twenty-six feet; it is formed by vaults supported on pillars, and the whole is covered with a wooden dome,

BASILICATA, a territory of Italy, bounded on the north by the provinces of Otranto, Bari, and C'apitanata, on the west by the Principato, and a small part of the Tuscan Sea, on the south by Ca- labria, and on the east by the Gulf of Taranto. It is watered by several rivers; but as it is almost all occupied by the Appennine mountains, it is neither very populous nor fertile; however, it produces enough to maintain its inhabitants, and has a small quantity ot' cotton. The principal towns an; Acerenza the capital, Melfi, Tursi, Ra- poli.!, Muro, Lavello, Tricarico, Monte Peloso, and Venesa, which are all episcopal sees. Its extent is about 1,605,047 moggie ; five moggie being equivalent to four English acres; and it has a population of nearly 330,000 souls. It is watered by the Basiento, and several other streams. In this provinee are the ancient ruined eities of Ileraclea and Metapontum.

BASILICI, jSaffiAiicoi, in the Greek empire, was a denomination given to the prince's man- datories, or those who carried his orders.

BAMI ICON, in pharmacy, a name given to several compositions to be found in ancient me- dicinal writers. At present it is confined to three officinal ointments, distinguished by the epithets black, yellow, and green. See PHAR- MACY, ⬛⬛cc.

BASILHON, or BASIMCVM, in pharmacy, is oallee tctrapharmacum, as beinir composed of four simples, viz. resin, wax, pitch, and oil of olive. BAS1L1CUS SIM'⬛⬛, in ancient geography, the gulf of Mellasso, iu Asia Minor, which sepa- rates l.ycia and Caria.

BASILIDES, an Egyptian, who lived near the 1 euinninu' of the second century. He was educated in the Gnostic school, over which Dillon Mau-us is once said to have presided ; and with whom he agreed that Christ was a man hi appearance, that his body was a phantom, and .hut he trave. his form to Simon the Cyrenian, who was crucified in his stead. We learn from

Eusebius, that this heresiarch wrote twenty- lour hooks upon the gospel, and that he forged several prophets; to two of which he gave the nai'ie>- barcaba and bareoph. \Ve have still the fragment of a Ba<;lidian trospel.

BASILIDIANS, a denomination, in the se- cond century, from Basilides, chief of the Egyp- tian Gnostics. They acknowledged, according to

ancient writers, the existence of one supreme God, perfect in goodness and wisdom, who pro- duced from his own substance seven beings, or aions, of a most excellent nature. Two of these aions, called dynamis and sophia, i. e. power and wisdom, engendered the angels of the highest order. These angels formed a heaven for their habitation, and brought forth other angelic beings of a nature somewhat inferior to their own. Many other generations of angels followed. New heavens were also created, until the number of angelic orders, and of their respective heavens, amounted to 365, and thus equalled the days of the year. All these are under the empire of an omnipotent Lord, whom Basilides called Abraxas. The inhabitants of the lowest heavens, which touched upon the borders of the eternal, malignant, and self-animated matter, conceived the design of forming a world from that con- fused mass, and of creating an order of beings to people it. This design was carried into exe- cution, and was approved by the supreme God, who to the animal life, with which only the in- habitants of this new world were at first en- dowed, added a reasonable soul, giving at the same time to the angels the empire over them.

These angelic beings, advanced to the govern- ment of the world which they had created, fell by degrees from their original purity, and soon manifested the fatal marks of their depravity and corruption. They not only endeavoured to efface in the minds of men their knowledge of the supreme Being, that they might be wor- shipped in his stead, but also began to war against each other, with an ambitious view to enlarge every one the bounds of his respective dominion. The most arrogant and turbulent of all these angelic spirits, was that which presided over the Jewish nation. Hence, the supreme God, beholding with compassion the miserable state of rational beings, who groaned under the contest of these jarring powers, sent from heaven his son Nus, or Christ, the chief of the aions, that, joined in a substantial union with the man Jesus, he might restore the knowledge of the su- preme God, destroy the empire of those angelic natures which presided over the world, and par- ticularly that of the arrogant leader of the Jewish people. The god of the Jews, alarmed at this, sent forth his ministers to seize the man Jesus and put him to death. They executed his com- mands; but their cruelty could not extend to Christ, against whom their efforts were vain. Those souls who obey the precepts of the Son of God, shall, after the

dissolution of their mortal frame, ascend to the Father, while their bodies return to the corrupt mass of matter whence they were formed. Disobedient spirits, on the con- trary, shall pass successively into other bodies. There are several gems still subsisting, inscribed with the name Abraxas, which were used by the Basilidians as amulets against diseases and evil spirits. See ABRAXAS.

BASILIGOROD, or VASILIGOROD, a town of Russia, seated on the Volga, where the Sara falls into it. The inhabitants are employed in agri- culture and fishing. It is 112 leagues from Moscow. BASILINEA, in entomology, a species c> phalsena, a native of Austiia.

river of European Turkey, in the south of the Morea, which falls into the Gulf of Kolokythia, about four miles to the N. N. E. of the town of that name.

BASILIPPUM, in ancient geography, a town of Bsetica, in Spain; now called Cantillana, a citadel of Andalusia, above Seville, on the Gua- dalquiver.

BASILISCUS, in alchemy, the sublimate mercury of the philosophers.

BASILISCUS, in ornithology, a name given by some of the old authors to the regulus cristatus, or golden-crowned wren. It is a diminutive of basileus, king, another of its names, because of its golden crown.

BASILISCUS, BASILICUS, in zoology, a species of lacerta, which, according to Linnaeus, has the tail long and round, dorsal fin radiated, and back of the head crested. This is the basilisk of modern naturalists, and seems to unite the two genera of lacerta and draco. The remarks of Dr. Shaw, in the Gen. Zool. on this extraordinary creature, are highly interesting, and ought not to escape attention. It is, accordiny to this writer, parti- cularly distinguished by a long and broad wing- like process or expansion, continued along the whole length of the back, and to a very consider- able distance on the upper part of the tail, and furnished at certain distances with internal radii, analagous to those in the fins of fishes, and still more so to those in the wings of the draco volans, or flying lizard. This process is of different ele- vations in different parts, so as to appear strongly sinuated and indented, and is capable of being either dilated or contracted at the pleasure of the animal. The occiput, or hind part of the head, is elevated into a very conspicuous pointed hood, or hollow crest.

‘ Notwithstanding its formidable appearance,’ adds this author, ‘ the basilisk is a perfectly harmless animal ; and like many others of the lizard tribe, resides principally among trees, where it feeds on insects, &c. It has long ago been admirably figured in the work of Seba; and as it is an extremely rare species, has sometimes been considered, from the strangeness of its form, as a fictitious representation. There is, how- ever, in the British Museum, a very fine speci- men, well preserved in spirits, and

which fully confirms the excellency of Seba's figure; from which, in all probability, Linnaeus himself, who never saw the animal, took his specific description. The color of the basilisk is a pale cinereous brown, with some darker variegations towards the upper part of the body. Its length is about a foot and a half. The young or small specimens have but a slight appearance either of the dorsal or caudal process, or of the pointed occipital crest. The basilisk is principally found in South America, and sometimes considerably exceeds the length before mentioned, measuring three feet, or even more, from the nose to the extremity of the tail. It is said to be an animal of great agility, and is capable of swimming occasionally with perfect ease, as well as of springing from tree to tree by the help of its dorsal crest, which it expands in order to support its flight.'

Among the French naturalists, the iguane is a distinct genus of the oviparous quadrupeds, in

which the Linnsean lacerta basiiiscus is included under the name of basilisk.

The basilisk of the ancients existed only in the glowing fancy of their poets : they feigned it to be the most malignant of all poisonous ser- pents; as a creature whose breath empoisoned the very air, and whose baneful glance would alone prove fatal to all other animals. A crea- ture gifted with such extraordinary powers could have no common origin, and therefore it was as- serted to be the produce of the egg of a cock brooded upon by a serpent. Galen says its color is yellowish, and that it has three little elevations on its head, speckled with whitish spots, that have somewhat the appearance of a crown. .3Llian, Matthiolus, Pliny, Lucan, and others of the most distinguished ancients, relate many marvellous properties of this creature ; but, notwithstanding their authority, the basilisk, as they represent it, is most unquestionably fabulous. It is needless to add to this article any of the fables of Jerome Lobo, although Dr. Johnson has received some of them with an unwarrantable degree of credulity. The learned Prosper Al- pinus informs us, on the authority of some re- lations, which he seems to have credited, that near the lakes contiguous to the sources of the Nile, there is a number of basilisks, about a palm in length, and the thickness of a middle finger; that they have two large scales which they use as wings, and crests and combs upon their heads, from which they are called basilisci or reguli ; that is, crowned, crested, or kingly serpents. And he says, that no person can ap- proach these lakes without being destroyed by these crested snakes. Our traveller, Mr. Bruce, observes, that having examined the lake Goode- roo, those of Court Ohha and Tzana, the only lakes near the sources of the Nile, he never saw one serpent there, crowned or uncrowned ; and that he never heard of any : and, therefore, he believes this account as fabulous as that of the acontia, and other animals, mentioned by Prosper Alpinus, lib.

iv. cap. 4. The basilisk is a species of serpent frequently mentioned in scripture, though never described farther than that it cannot be charmed so as to do no hurt, nor trained so as to delight in music ; which all travellers who have been in Egypt allow is very possible, and frequently seen, Jerem. viii. 17.: Psalm ix. 13. However, it is the Greek text that calls this ser- pent basilisk ; the Hebrew generally calls it tsepha, which is a species of serpent real and known. Our English translation very impro- perly renders it cockatrice, a fabulous animal that never did exist. The basilisk of scripture seems to have been a snake, not a viper ; as its eggs are mentioned, Isaiah ix. 5 : whereas it is known to be the characteristic of the viper to bring forth living young. Brace's Travels in Abyssinia, vol. v. p. 201.

BA'SILISK, n. s. Lat. basiiiscus, from Gr (3a(TiX►►ricoc, of /SatrtXtvc, a king. A serpent, thus denominated either because its head is adorned with a tuft like a diadem, or because of its supe- rior strength it is the monarch of the reptile tribes. To this creature is ascribed the power of fascinating its victims with its eyes. See the article BASILISCUS.

That sleth right as the batilicvk sloth folk by a ve- fiime of his sight. Chaucer, The Pcrsunes Tale.

Basilisks ! whose breath Is killing poison, and whose looks are death.

Make me not sighted like the basilitk; I've look'd on thousands who have sped the better By my regard, but kill'd none so. Shakspeare.

Thine eyes, sweet lady, have infected mine. LADY ANNE. Would they were batilisksto strike thee dead, Id.

The basilisk was a serpent not above three palms long, and differenced from other serpents by advanc- ing his head, and some white marks or coronary spots upon the crown. Brown's Vulgar Errours.

BA'SII.ISK. A species of cannon or ordnance. We practise to make swifter motions than any you have; and to make them stronger and more violent than your's are ; exceeding your greatest cannons and basilisks. Bacon.

Your eyes, which hitherto have borne in them Against the French, that met them in their bent, The fatal balls of murdering basilisks. Shakspeare.

And thou hast talk'd

Of sallies, and retires ; of trenches, tents. Of palisadoes, frontiers, parapets ; Of buii'.i.iks, of cannon, culverin, Of prisoner's ransom, and of soldiers slam. Id. i)A>ii.!u> i!rav,n each by 100 yoke of oxen. Modern writ rs also uive UK- name basilisk to a much small, r and more si/.eablc piece of ordnance, \vliiri: the Hutch make fifteen feet long, and the I'reneh only ten. li carries forty-eight pounds. HAS! USSA. Sr►► UASILEI-S. HASILll S I. surnamed the Macedonian, emperor of the (Iivcks. lie was a common Milier, and of ;m obscure family in Macedonia, i.Tid yet raise. d himself to the throne: for, having]'!(►►► ;1 the (-mperor s.lichael by his address in the v.L/iKi'.'vmcnt of his horses, he became his i:r.it equerry, ;md then his great chamberlain, lie at h ir_th assassinated the famous Bardas, and was associated to (lie empire in 84'.'. lie ..hth ►►►. e;:eral council at Constanti nople : deposed the jiatriarch I'hotius, but in 8,'ii! r. ..!►►►. r. d him to the patriarchate; and de ainst the popes, who refused to admit him m'o t!r ir coimnunion. He was dreaded by the Saracens, \vhom he frequently vanquished; and h.ve lle eli'il in !';',ii. I'nder his reign the !!i'— s.aris embraced Christianity, and the doctrine of ►►►' ►►► (.reck d.ureh.

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BASILIUS III. succeeded John Zimisces, em peror of Constantinople, A. D. 975, and reigned, along with his brother Constantine X., for no less a period than fifty years. His brother sur- vived him three years, the one dying in 1025, and the other in 1028. See CONSTANTINOPLE. BASILUZZO, one of the Lipari islands. BA'SIN, n. ^ Fr. basin; Ital. bacile, bacino; BA'SINED. 1 it is often written bason, but not according to etymology. It is a term which de- signates a vessel in common use. It is also ap- plied to any hollow place capacious of liquids, and is technically employed by anatomists and artizans, to express any substance hollowed out, a round cavity, or a concave.

.But let us go now to that horrible swering of adju- ration and conjuration, as don these false enchaun- tours and nigromancers in basins full of water,

or in a bright swerd in a circle or in a fire, or in a sholder bone of a shepe : I cannot sayn but that they do- cursedly and damnably ayenst Crist, and all the fsith of holy chirche. Chaucer. The Persones Tale. After that he poured water into a basin, and be- ganne to wash his disciples feet. Bible, 1551.

*Let one attend him with a silver basin, Full of rose-water, and bestrewed with flow*rs.*

Shakspeare.

We have little wells for infusions, where the waters take the virtues quicker and better than in vessels and basins. Bacon.

And send her home Divested to her flannell in a cart, And let her footman beat the bason afore her.

Ben Jonson, New Inn

With scornful sound of bason, pot and pan, They thought to drive him thence, like bees in swarms. Harr. Ariost.

The jutting land two ample bays divides ; The spacious basins arching rocks inclose, A sure defence from every storm that blows. Pope. On one side of the walk you see the hollow basin, with its several little plantations lying conveniently under the eye of the beholder. Spectator.

If this rotation does the seas affect, The rapid motion rather would eject The stores the low capacious caves contain, And from its ample basin cast the main.

Blackmore. From step to step, with sullen sound,

The forc'd cascades indignant leap ; Now sinking fill the bason's measur'd round ; There in a dull stagnation doom'd to sleep.

Mason. Ode to a water-nymph. Thy barin'd rivers and imprison'd seas.

Young's Night Thoughts.

BASING, a village of Hampshire, north of Basingstoke, near which, in 871, Alfred was defeated by the Danes. It is equally memora- ble for the protracted siege sustained here by John, the fifth marquis of Worcester, in his seat of Basing-house, against the forces of the Parlia- ment. The investment commenced August 1643, and the answer made by the marquis to the first summons was, that ' if the king had no more ground in England

than Basing-house, he would maintain it to the uttermost.' It stood out till October, 1645, when Cromwell took it by storm, and burnt, it to the ground. A saying still exists in the neighbourhood, ' clubs trumps, as when Basing-house was taken ;' and tradition refers this to the surprise of the garrison, who were at cards when finally assaulted. The mai-

quis had written with a diamond on every pane of glass, Aymez Loyaulte, which is still the family motto. The plunder obtained by the parliamen- tary forces amounted to ––200,000, but their loss before the walls exceeded 2000 men. See Journal of the siege of Basing-house, Oxford, 1645.

BASINGE (John), more commonly known by the name of Basingstochius, or de Basing- stoke, was born at Basingstoke, a town of Hampshire, and from thence took his surname. He was a person highly eminent for virtue and learning. For having very good natural parts, he so improved them by study, that he became a perfect master of the Latin and Greek languages, an eminent orator, a complete mathematician, a subtle philosopher, and a sound divine. The foundation of his great learning he laid in the university of Oxford, and, for his further im- provement, went to Paris, where he resided some years. He then travelled to Athens, where he made many curious observations, and perfected himself in his studies, particularly in the know- ledge of the Greek tongue. At his return to England, he brought over with him several curi- ous Greek manuscripts, and introduced the use of the Greek numeral figures into this kingdom. He became also a very great promoter and encourager of that 'language, which was much neglected in these western parts of the world; and to facilitate it, he translated from the Greek into Latin a grammar, which he entitled The Donatus of the Greeks. He was archdeacon of London, and afterwards, of Leicester. He died in 1252.

BASINGSTOKE, a market town in Hamp- shire, which by means of a canal, begun in 1778, carries on an extensive trade. The navigation communicates with the Thames. The church is a vicarage, in the patronage of Magdalen college, Oxford. One of its vicars, Sir George Wheeler, the celebrated eastern traveller, annexed a library to the church. This town was the birth-place of Joseph and Thomas Warton, whose father was vicar. It lies sixteen miles north-east of Win- chester, and forty-six from London.

BASIOGLOSSUS, a muscle arising from the base of the os hyoides. See

ANATOMY.

BA'SIS. Lat. basis ; /Scwnc, from j3aivw, I go. See BASE. The foundation or the first principle of any thing ; the lowest of the three principal parts of a column, which are the basis, shaft and capital.

It must follow, that Paradise, being raised to this height, must have the compass of the whole earth for a basis and foundation. Raleigh.

How many times shall Caesar bleed in sport,

That now on Pompey's basis lies along

No worthier than the dust ! Skakspeare.

Ascend my chariot, guide the rapid wheels

That shake heaven's basis. Milton.

In altarwise a stately pile they rear ; The basis broad below and top advanc'd in air.

Dryden.

The friendships of the world are oft

Confederacies in vice, or leagues of pleasure ; Ours has severest virtue for its basis. Addison.

Or if no basts Dear my rising name, But the fall'n ruins of another's fame, Then teach me, heaven ! to scorn the guilty bays, Drive from my breast that wretched lust of praise.

Pope. Temple of Fame

BASIS, in ancient music and poetry, denotes the equability of sounds proceeding in the same tenor, and stands contradistinguished from arsis, or elevation, as well as from thesis or depression. BASIS, or BASE, in chemistry, any body which is dissolved by another body, which it receives and fixes, and with which it forms a compound, may be called the basis of that compound. Thus, for example, the bases of neutral salts are the alkaline, earthy, and metallic matters which are saturated by the several acids, and form with them these neutral salts. In this sense it is that these neutral salts are called salts with earthy bases, salts with alkaline bases, salts with metal- lic bases; also the appellations basis of alum, basis of nitre, basis of Glauber salt, basis of vitriol, &c. signifying the argillaceous earth, which, with the vitriolic acid, forms alum; the vegetable alkali,

which, with the nitrous acid, forms nitre; the mineral alkali, which, with the vitriolic acid, forms Glauber's salt; and the.metal which, with the vitriolic acid, forms a vitriol ; because the substances are supposed to be fixed, unactive, and only yielding to the action of the acids, which they fix, and to which they give a body and consistence.

BASIS or BASK, in geometry. See BASE. BASIS, in oratory, denotes the fourth member of a complete exordium, being that which suc- ceeds the apodosis, and prepares the way for the proposition.

BASIS, in pharmacy, the principal ingredient in compound medicines.

BASIUM, Lat. a kiss, a word used by che- mists, for an extemporaneous tincture of iron and copper, invented by Clossaeus.

BASK, v. a. & ra.) Backeren, Dutch, pro- BASKING. \ bably from the verb to

bake ; to warm by exposure to heat, whether of the sun or fire ; to lie in the warmth, used, says Johnson, almost always of animals ; and, if in the term animals he includes man, he is not far from the truth ; though it is sometimes applied to reptiles.

As I live by food, I met a fool, Who laid him down, and bash'd him in the sun, And rail'd on lady fortune in good terms, In good set terms, and yet a motley fool.

Sliakspeare.

Loue in her sunny eyes does basking play, Loue walks the pleasant mazes of her hair ; Loue does on both her lips for ever stray, And sows and reaps a thousand kisses there.

Cowley. The Change. Then lies him down the lubber fiend, And stretch'd out all the chimney's length Basics at the fire his hairy strength. Milton.

Tis all thy business, business how to shun, To bask thy naked body in the sun. Dryden.

About him, and above, and round the wood, The birds that haunt the borders of his flood , That bath'd within, or bask'd upon his side, To tuneful songs their narrow throats applied. Id. Some in the fields of purest aether play, And bask and whiten in the blaze of day. Pope. Unlock'd in covers let her freely run To range thy courts, and bask before the sun.

Tickell.

*O life ! thou universal wish ; what art thou ? Thou'rt but a day**** *a few uneasy hours :*

BAS

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BAS

Thy morn is greeted by the flocks and herds, And every bird that flatters with its note, Salutes thy rising sun : thy noon approaching, Then hastu the flies, and every creeping insect, To bash in thy meridian ; that declining, As quickly they depart, and leave thy evening To mourn the absent ray : the night at hand, Then croaks the raven conscience of time mispent, The owl despair screams hideous, and the bat Confusion, flutters up and down : Life's but a lengthen'd day, not worth the waking for. Howard's Charles I. The naked negro, panting at the Line, Boasts of his golden sands and palmy wine ; li(ishs in the glare, or stems the tepid wave, And thanks the gods for all the good they gave.

Goldsmith's Traveller. Too late, all lost, for ever lost, he sees The envy'd saints triumphing from afar, And angels basking in the smiles of God. Rowe. Childe Harolde basle'd him in the noontide sun Disporting there like any other fly.

Byron. Childe Harold.

BASKERVILLE (John), an eminent artist, especially in letter-founding and printing, was horn in 1706, at Vv'overley in Worcestershire, and was heir to an estate of about ***60 a year; the whole income of which he allowed to his parents till their deaths. In his early years he conceived a love for fine writing, and cutting in .ˆtone; and, being brought up to no particular profesion, he commenced writing-master in Bir- mingham when about twenty years of age. The improvements in different manufactures there soon drew his attention, and he applied to the japan business, which he carried on for a long time with distinguished excellence and success. In 17.00 lie applied himself to letter-founding, tli" bringing of which to perfection cost him much labor and expanse. In a few years he proceeded to printing; and his first work was an edit-on of Virgil, in royal 4to. which now sells for three guineas. He obtained leave from the university of Cambridge to print a bible in royal foho, and editions of the common prayer-book, in three sizes; for which he paid a large sum. \ !e afterwards printed Horace, Terence, Catullus, .Lucretius, Juvenal, Sallust, and Florus, in roval Ho; Virjil in 8vo.; and several books in 12mo. He published, likewise, some of the Kn.hsh classics. These performances are the 1 i st*

testimonies of Mr. Baskerville's merit; and !us name is deservedly ranked among those who, in mo'lern times, have brought the art of print- in'.; to its greatest perfection. Not meeting, how- ever, with that encouragement from the book- sellers, which he expected, he set up a letter- foundry for sale, a little before his death. lie died without i>v.!.:in 1775.

BASKI KVII.I i; fSir .Simon', an eminent anato- mist, and physician to king James I. and Charles I. was the son of Thorn, is Baskerville, apothecary, and born at Kxr-ter in 1,'>73. lie studied at Oxford, wh; re he early displayed his abilities, and at 1 ;st took his degrees of B. D. and M. D. in 1611. II- afterwards settled at London, where he beear,." a member, and was for some tune presid-Tit of the college of physicians. His reput.ition for l.-aniing and medicine, attracted t.,e attention and < steein ot the two sovereigns

above-mentioned, the latter of whom knighted him. He wrote some memoirs of his own life and times, and died in 1641, aged sixty-eight.

BA'SKET, n. s. basged, welch; bascctuda, Latin ; perhaps, from the French bosse, or from some British word signifying rush, ; basket is a vessel or utensil formed of osiers, rushes, of twigs, splinters, or other slender bodies inter- woven.

For I wol proche and beg in sondry londes, I wol not do no labour with min houdes, Ne make bashettea for to live there by, Because I wol not beggen idelly.

Chaucer. The Pardoneres Tale.

Here is a basket: he may creep in, and throw foul

linen upon him, as if going to bucking. Shakspeare.

Set down the basket, villain : ??? Somebody call my

wife : ??? You youth in a basket come out here. Id.

He threw out, to save life, Your British batkett, with a thousand dishes.

Holyday's Juvenal.

Poor Peg was forced to go hawking and puddling ; now and then carrying a basket of fish to the market.

Ar but knot.

His puissant sword unto his side, Near his undaunted heart, was ty'd, With

basket-hilt that would hold broth, And serve for fight and dinner both. Hudibras.

There was a time,

*When other regions were the swain's delight j And shepherdless Britannia's rushy vales. Inglorious, neither trade nor labour knew, But of rude basked, homely rustic geer, Woven of the flexile willow. Dyer. The Fleece. BASKET, as a measure, denotes an uncertain quantity ; as, a basket of medlers is two bushels, of assafcetida from twenty to thirty pound weight. The ancient Britons were noted for their inge- nuity in making baskets, which they exported in large quantities. They were of very elegant workmanship, and bore a high price. Martial takes notice of them : ***

Barbara de pictis veni bascauda Britannis, Sed me jam mavult dicere Roma suam. ' A basket I, by painted Britons wrought, Arid now to Rome's imperial city brought.' Baskets are generally made of osiers, stripped of their bark, and dressed according to the design of the basket. Large baskets or hampers are made without any preparation but soaking the wood, which is necessary for every size of bas- ket. No great capital of money or ingenuity is requisite to follow the business of a basket- maker; yet some practice as well as dexterity would seem necessary in forming fruit baskets used on tables, work baskets, table mats, &c.

BASKET, CORBEILLE, in architecture, a kind of vase, or figure piece of sculpture, in form of a basket, filled with flowers or fruits, serving to terminate some decoration.

BASKET Fisn a species of sea-star. See As-

TEKIAS.

BASKFT-MAKING, the weaving of reeds, twigs, or leaves together, for baskets, is an art in use among the rudest nations of the world ; even an inferior specimen is seen among the natives of Van Diemen's Land, consisting of a bunch of rushes tied together at each end, and spread out in the middle. Other tribes of this neighbour- hood make a basket of leaves interwoven, so skil- fully executed, that it retains either milk or wattr

BASKET-MAKING.

Very early in our history it is recorded that our ancestors made baskets, which were celebrated at Rome. At the same period, shields of vricker-work, plain or covered with hides, were common in Britain ; wicker boats, &c. Herodotus speaks of boats of this kind, covered with bitumen, on the Tigris and Euphrates. Such boats, about seven feet in diameter, are said to

be used at the present day on these rivers ; and similar ones, we know, are employed in crossing the most rapid streams of India. They are generally of a shal- low construction, from three to fifteen feet in dia- meter ; some will carry thirty men. They are made thus : ††† A number of pieces of split bam- boo, twenty for example, are laid on the ground, crossing each other near the centre, and there fastened with thongs ; the ends of the bamboos are then elevated by several persons, and fixed asunder at due distance by means of stakes, in †††which position they are bound by other long slips of bamboo. The latter are introduced alternately over and under the pieces first crossed, and tied at the intersections to preserve the shape. This being completed, beginning from the bottom to the centre, the parts above the intended height or depth of the basket-boat are cut off, and it is liberated from the stakes reversed, and covered with half-dressed hides sewed together with thongs. Six men will make one of these boats in as many hours. They are navigated by pad- dles where the water is deep, or are pushed over a shallow bottom with long poles ; and the pas- sengers are kept dry by planks at the bottom. The basket-boats on the river Kristna, in Hindos- tan, are about twelve feet in diameter, and four feet deep. Armies have been enabled by these conveyances to continue their march, and even heavy artillery has been transported by them. Sometimes they are towed by bullocks. In other parts of the world, houses, cottages, fences, and gates, are formed of basket or wicker-work. On the continent, a two-horse carriage, called a Hoi- stein waggon, of very considerable size, and fit to carry several persons, is composed of basket- work ; the same is done in Great Britain with regard to the bodies of gigs ; and an appendage of the stage-coaches, we know, is literally de- nominated the basket.

This is an art therefore, however numble in some of its branches, too extensively and too ser- viceably in exercise not to merit more attention than books of science have usually bestowed upon it. The materials employed have been very vari- ous. Twigs, branches, straw, and whalebone, rushes, roots of plants, the bowing bamboo, and the supple osier. The natives of some parts of South America make baskets of rushes, so closely interwoven as to hold water, and thousands of them are annually sold throughout the new re- publics. The Caffres and Hottentots are alike skilful with roots. Osiers or willows, however, are most adapted for this use. These are either taken entire, cut from the root, split asunder, or stripped of their bark, according to the work to oe produced ; in the latter case, they are previ- ously well soaked. The stripping is performed by drawing the willows through an iron-edged instrument called brakes, which removes the bark, ††uid the willows are then cleaned, so far as neces-

sary, by the manual operation of a sharp knife. Next they are exposed to the sun and air, and afterwards placed in a dry situation. But it is not less necessary to preserve willows with their bark in the same manner, for

nothing can be more injurious than the humidity inherent in the plant; and previous to use, they must be soaked in water some days. The barked or white osier is then divided into bundles or faggots according to size; the larger being reserved to form the strong work in the skeleton of the basket, and the smaller for weaving the bottom and sides. Should the latter be applied to ordinary work, they are taken whole, but for implements of slight and finer texture, each osier is divided intr splits and skeins ; which names denote the dif ferent degrees of size to which they are reduced. Splits are osiers cleft into four parts, by means of a particular implement employed for that pur- pose, consisting of two edge tools placed at right angles, whereby the rod is longitudinally divided down the pith. These are next drawn through an implement resembling the common spoke- shave, keeping the grain of the split .ext the wood or stock of the shave, while the pit' is pre- sented to the edge of the iron, which ir, set in an oblique direction to the wood : And, in order to bring the split into a shape still more regular, it is- passed through another implement called an up right, consisting of a flat piece of steel, each ena of which is fashioned into a cutting edge, like that of an ordinary chisel. The flat is bent round, so that the two edges approach each other at a greater or less interval by means of regulating screws, and the whole is fixed in a handle. By passing the splits between the two edges, they are reduced to skeins, the thickness of which is determined by the interval between the edges of the tool. All the implements required by a bas- ket-maker are few and simple : they consist, besides the preceding, of knives, bodkins, and drills for boring, leads for keeping the work steady while in process, and where it is of small dimensions, a heavy piece of iron, called a beat- er, which is employed to beat the basket close as it is augmented.

In makingan ordinary basket, the osiers are laid out in a length considerably greater than that of the finished work. They are ranged in pairs on the floor parallel to each other, at small intervals, in the direction of the longer diameter ; and this may be called the woof, for basket work is in fact a web. These parallel rods are then crossed at right angles by two of the largest osiers, with the thick ends towards the workman, who places his foot upon them ; and weaving each alter- nately over and under the parallel pieces first laid down, they are by that means confined in their places. The whole now forms what is technically called the slat or slate, which is the foundation of the basket. Next, the long end of one of the two rods is taken, and woven under and over the pairs of short ends all round the bottom, until the whole be woven in. The same is done with the other rod ; and then additional long osiers are also woven in, until the bottom be of sufficient size, and the woof be occupied by them. Thus the bottom, or foundation on which the superstructure is to be raised, is finished ; and

this latter part is accomplished by sharpening the iarge ends of as many long and stout osiers as may be necessary to form the ribs or skeleton. These are forced or plaited between the rods of the bottom, from the edge towards the centre, and are turned up in the direction of the sides ; then other rods are woven in and out between each of them, until the basket is raised to the in- tended height, or, more correctly speaking, the depth it is to receive. The edge or brim is finished by turning down the perpendicular ends of the ribs, now protruding and standing up over each other, whereby the whole are firmly and compactly united. A handle is adapted to the work, by forcing two or three osiers sharpened at the end, and cut to the requisite length, down the weaving of the sides, close together; and they are pinned fast, about two inches from the brim, in order that the handle, when completed, may be retained in its proper position. The osiers are then either bound or plaited, in such fashion as pleases the taste of the artist. This is the most simple kind of basket; some are of finer materials, and nicer execution. The skeins are frequently smoked and dyed, of different colors, by intermixing which, a good effect is pioduced.

At Liverpool, where there is an asylum for the blind, this art has, from its happy simplicity, been extensively taught, and is practised with SUCH. ess. In the city of Edinburgh, a number of the blind find similar employment in a blind asylum.

Some of the best materials for basket-making have been imported into Great Britain from .!□□□ ranre and Holland ; but the duration of the war indnced the inhabitants of this country to endea- vour to obtain a home supply ; and Mr. Philips, of I'.iy, lias received a premium from the Society of Arts, on account of his excellent observations on tins subject, lie also has been very success- ful in his cultivation of the osier. Of nine or ten species of osier, he remarks that only one, the grey or brinkled osier is of any use. See Trans- actions of the Society, and our article OSIER.

BV-K.IM; SHARK, in ichthyology, a species of Inik, the squalus maximus of .Linnaeus, so called from its lying in the sun on the surface of !'ie water. This rish inhabits the Arctic and r.uropean seas, feeds on the smaller cetaceous animals, and grows to a prodigious size, but is not \ery tierce. The liver is very large, and produces much oil. See SQTAI.US.

iiASLK, BAI.K, or BAˆIL. One of the nine- t'en cantons of Switzerland, which joined liu (onieUeracy in the year i."> 01. It is bound 1 on tile south Lv the canton of Solothurn ; "ii the north by the Brisgan ; on the east

by 1 ricktlud ; and on the west by part of Solothurn, tlie iormer diocese of Basle, and the Sundgau ; being upwards of twenty niiK-s in length, and bout eighteen in breadth. It contains three t<,v. ii.-., turn1)-se.vi n pans! es, .seven bailiwics, am! l/^.uou inhabitants; the supposed area being

□□□out l.'U Mjtiaiv miles. Although the mountains a;v barren, the lower parts are fruitful in corn uii'; un.e, ana tit for pasture; hemp also abounds 'i.:.e. It has many medicinal springs and baths, ""! the an is wholesome and temperate. The peopi'j are protestants : both men and women for

the most part wear the French dress ; but the lan- guage commonly spoken is German, though the French also is much used. By the constitution of 1803, the legislative power is vested in the large council of 1 35, elected from among the citizens at large ; it assembles every half year in the town of Basle, and sits for a fortnight at a time. The executive power is intrusted to the small council of twenty-five, chosen from among the members of the large council, and having at its head two burgomasters, who preside alternately. The whole canton is divided into the three districts of Basle (the town), Wallenburg, and Liestal, each of which is subdivided into fifteen corporations. Every inhabitant who rents land or houses to the value of 500 Swiss francs, has a seat in one of these corporations, and is by virtue of it entitled to vote at the election of members for the large council. This canton sends three representatives to the diet. Before the revolution its government was aristocratical ; and its revenues arise chiefly from secularised abbeys, and imposts on goods carried through the country, to and from France, Italy, and Germany. Besides the military esta- blishment of the city of Basle, there were two provincial regiments, consisting each of ten com- panies, and a troop of dragoons. At present the country furnishes two regiments of militia, each consisting of nine companies of fusileers, a com- pany of grenadiers, and one of dragoons. Ma- nufacturing establishments are found in every corner, particularly for those of silk, cotton, ribbons and paper. The clergy form in the capital a convention, and in the country three chapters ; over all these the first pastor of the cathedral pre- sides. Basle was the first canton which separated from the Helvetic confederacy, and adopted the new constitution ; and here, it is said, the first paper of modern times was manufactured.

BASLE, or BALE, the capital of this canton, is the largest city in Switzerland, having upwards of 200 streets, and six market-places or squares. Its environs are exceedingly beautiful, consisting of a fine level tract of fields and meadows. The city is divided into two parts by the Rhine, over which there is a handsome bridge ; the larger on the side of Switzerland, the lesser on that of Germany. It is thought by some to have risen on the ruins of the old Augusta Rauracorum. For its name it is indebted to Julian the Apos- tate, who named it in honor of his mother

Basilina. The houses are well built, but thinly peopled, Basle containing at present only 15,000 inhabitants, whereas in former times the town was crowded to excess. A hereditary enmity subsists between the inhabitants of the two divi- sions. The minster, or cathedral church, the town-house, and the arsenal, are objects worthy of attention. The university, founded here in 1459, has an excellent library, a cabinet of me- dals, and botanic garden ; the town has given birth to a number of eminent characters, particu- larly (Ecolampadius, Grynaeus, Buxtorf, Wet- stein, Hermann, the Bernouillis, and Euler ; Erasmus too resided here for many years, and lies interred in the cathedral. The commerce is extensive and flourishing, and is maintained chiefly by the manufacture of silk ribbons. The other manufactures of consequence are, silk stuffs,

cotton, paper, linen, and gloves ; there are also considerable bleachfields and dye-houses. The highest administrative power belongs to the large council of 280, out of which are chosen the mem- bers of the smaller council of 60. The Teutonic and Maltese orders have each a commander at Basle. It was remarked as a singularity in the clocks of this town, that they always struck an hour sooner than elsewhere; but this peculiarity no longer exists. Basle was formerly a city of the empire, and only ceased to be so on its join- ing the Swiss confederacy in 1501. Here was held a famous ecclesiastical council, between the years 1431 and 1444.

Basle was once the name of an independent bishopric, which had the Sundgau to the north, the canton of Basle to the east, that of Solothurn to the south, nnd Tranche Comte to the west. The bishop was a prince of the empire, and had a seat and vote at the diet of the Upper Rhine. He was at the same time in alliance with the se- ven catholic cantons, but was never called to the meetings of the Swiss diet. His ordinary resi- dence was at Porentrui. The whole bishopric contained, on 420 square miles, between 39,000 and 40,000 inhabitants. The nett revenue was valued at ––20,000 sterling, to which the mines contributed between ––3000 and ––4000. In 1792 the French took possession of that part of the bishopric which belonged to the German empire, and formed it into a department of their republic, under the name of Mont Terrible, with which they soon after incorporated several of the other districts that were previously connected with Switzerland. After this it was included in the department of the Upper Rhine. In 1815 the bishopric of Basle, with the town and territory of Bienne, was united to the Swiss republic, by the

congress of Vienna, and now forms part of the canton of Berne.

BASMAN, an island in the Persian gulf, five miles long, in the centre of which is a high hill. Latf. 25►► 24′ N.

BASNAGE (Henry), Sieur de Beauval, second son to Henry Basnage, and brother to James. He was admitted advocate in the par- liament of Rouen, in 1679. He did not follow the bar immediately upon his admission ; but went to Valencia, where he studied under M. de Mar- ville. Upon his return, he practised with great reputation till 1687, when the revocation of the edict of Nantz obliged him to fly to Holland, where he composed the greatest part of his works, and died in 1710. His chief work is Histoire d

BASNAGE (James ;, a learned author, and pas- tor of the Walloon church at the Hague, was bom at Rouen in Normandy, in 1653. He was the son of Henry Basnage, one of the ablest advocates in the parliament of Normandy. At seventeen years of age, after he had made him- self master of the Greek and Latin authors, as

well as the English, Spanish, and Italian lan- guages, he went to Geneva, where he began his divinity studies under Mestrezat, Turretin, and Tronchin; and finished them at Sedan, under the professors Jurieu and Le Blanc de Beaulieu. He then returned to Rouen, where he was received as minster, September 1676; in which capacity he remained till 1685, when, the exercise of the Protestant religion being suppressed at Rouen, he retired to Rotterdam, and was a minister pen- sionary there till 1691, when he was chosen pas- tor of the Walloon church of that city. In the year 1709 Pensionary Heinsius got him chosen one of the pastors of the Walloon church at the Hague, intending not only to employ him in religious but in state affairs. He was employed in a secret negociation with Marshal d'Uxelles, plenipotentiary of France at the congress of Utrecht; and he executed it with so much suc- cess, that he was afterwards entrusted with seve- ral important commissions, all which he dis- charged in such a manner as to gain a great cha- racter for his abilities and address; a celebrated modern writer has therefore said of him, that he was fitter to be a minister of state than of a parish. The abbe du Bois, who was at the Hague in 1716, as ambassador plenipotentiary from France, to negociate a defensive alliance between France, England, and the States Gene- ral, was ordered by the duke of Orleans, regent of France, to apply himself to M. Basnage, and to follow his advice ; they accordingly acted in concert, and the alliance was concluded in January 1717; and in return for his services he obtained the restoration of all his property in France. The catholics esteemed him no less than the protestants; and the works he wrote, which are mostly in French, spread his reputa- tion almost all over Europe; among these are, 1. The history of the Religion of the Reformed Churches. 2.

Jewish Antiquities. 3. The His- tory of the Old and New Testament; and many others. He died Sept. 12, 1723.

BASNET (Edward), dean of St. Patrick's, Dublin. He was born in Denbighshire, in Wales, and was preferred to the dean of St. Pa- trick's about 1537. He was a zealous promoter of the Reformation, and in 1539, when the re- bellion of O'Neal broke out, he laid aside' the dress of the dean for that of the soldier, and joined the army under the lord deputy. For his good services he was made a privy counsellor, and besides other marks of royal favor, had the lands of Kiltearn, in the neighbourhood of Dub- lin, assigned to him by the crown. He died in the reign of Edward VI.

BASNETUM, low Lat. a helmet. Bailey.

BASON, bassin, Fr. See BASIN.

BASON, in anatomy, pelvis. 1. A round ca- vity in form of a tunnel, situate between the an- terior ventricles of the brain, descending from its base, and ending in the point at the glandula pituitaria. It is formed of the pia mater, and receives the pituita, which comes from the brain, and passes through the pituitary gland, and thenre into the veins. 2. That capacity is also called pelvis, or bason, which is formed by the ossa ilia and os sacrum, and contains the bladder of urine, the matrix, and the intestines.

BASON, in glass-grinding, or dish. Glass- grinders use various kinds of basons, of copper, iron, Sec. and of various forms, some deeper, others shallower, according to the focus of the glasses that are to be ground. In these basons, convex glasses are formed, as concave ones are on spheres or bowls. Glasses are worked in basons two ways. In the first, the bason is fitted to the arbor, or tree of a lath, and the glass, fixed with cement to a handle of wood, is presented and held fast in the right hand within the bason, while the proper motion is given by the foot of the bason. In the other, the bason is fixed to a stand or block, and the glass with its wooden handle moved. The movable basons are very small, seldom exceeding five or six inches in diameter; the others are larger, sometimes above ten feet diameter. After the glass has been ground in the bason, it is brought smoother with grease and emery, polished with tripoli, and finished with paper cemented to the bottom of the bason.

BASON, in hat-making, a large round shell or case, ordinarily of iron,

placed over a furnace ; wherein the matter of the hat is moulded into form. The hatters have also basons for the brims or' hats, usually of lead, having an aperture in the middle, of a diameter sufficient for the largest '.luck to go through.

i).-o.\, in hydraulics, ;i reservoir of water, as the hason of a jet d'eau, or fountain; the bason of a port or harbour, of a bath, Sec. Basons an1 made witli clay, cement, or lead; but the diameter must be made four feet longer on each side thin the bason is to be. This will be taken up by the walls of clay. For the same reason, it must be dug two feet deeper than the intended depth of the water; because it is to be laid over eighteen inches thick with clay, and six inches wit'i gravel and paving. The wall is to be made with shards, rubbish, or Hints, with the natural rarth for mortar; and the clay must be well woiked, and trod firmly down with the naked feet. The way of making them with cement is, t-.i allow one foot niiu; inches every way for the vvi-'jk; then cut the banks perpendicularly, and raise a \all of masonry a loot thick, made of ;>.-bhle stones, or the like, laid in a mortar of nine and sand; the bottom is then to be covered t<> the same ihiekness ; and then the solid lining ot the cement is to be backed up against the v.alU, and over the bottom. This is to be made o! small llmts in beds of mortar, made of lime and cement, \hen this solid is eight inches thii k, ii must be plastered over the whole surface \ith cement, well sifted, before it lie mixed with the lime; and with this it is to be wrought over smooth with a trowel. The proportion of this ceiu' nt should be two-thirds of the cement, or powdered tile, to one-third of Him:; and this cement lias the property of hardening so under \vatcr, that it will become like stone or marble, and it will not be subject to decay for a long time. After the finishing, the bason should, for four or five days, be anointed over very often with oil, or bullock's blood, to keep it from flawing or cracking in the dr\ing; and after this, ii;e \ater should be let. in as soon as may be. The leaded basons are made witli walls a foot

thick, and a bottom of half a foot. These must be of rubble stones cemented with plaster ; for the lime will injure and eat the lead. The sheets of lead are to be spread over these walls and bottom, and seamed with solder. These basons, however, are but little in use now, from the ex- ††† pense of making them, and the danger of the lead being stolen. The waste pipes of fountains ought always to be made large enough for fear of choking. When the waste water is to be carried off in common sewers, it may be carried away in drains, or earthen pipes ; but when it is to serve for basons that lie below it, it is to be conveyed in leaden ones. ††† There are divers sorts of basons ; as

1. BASON EN COQUILLE, that shaped like a shell.

2. BASON, FIGURED, that whose plane or cir- cumference makes several turns and returns, cither straight, circular, or the like. Such are most of the basons of fountains at Rome.

3. BASON WITH A BALUSTRADE, that whose cavity is surrounded with a balustrade of stone, marble, brass, or the like.

4. BASON WITH A TRENCH, bassin a rigole, that whose border being of marble, or other stone, has a trench cut in it, whence, at certain distances, springs oat a thread of water, which lines the trench, and forms a kind of nape or gargle around the balustrade. Such is that of the fountain of the rock of the Belvidere at Rome,

BASON, in ship-building, a circular dock for the reception of ships.

BASON, SALE BY THE, at Amsterdam, is used for the public sales made under the direction of the vendu meester ; so called, by reason that, before adjudging the lot or commodity to the last bidder, they strike a brass bason, to give notice of it.

BASONS OF A BALANCE, two pieces of brass, or other matter, fastened to the extremities of the strings ; the one to hold the weight, the other the thing to be weighed.

BASOUDHA, a town of Hindostan, in the district of Bilsah.. Long. 78►► 13′ E., lat. 23►► 54′ N.

BASQUE ISLAND, an island in the river St. Lawrence, near the coast of Lower Canada. Long. 68►► 52′ W., lat. 48►► 15′ N.

BASQUES LES, or FRENCII BISCAY, a district of Gascony, France, which has the Bay of Biscay on the west, the river Adour and the Landes on the north, Beam on the east, and the Pyrenees on the south. It was formerly subdi vided into the three territories of Labour, Lower Navarre, and Soule, and is now included in the department of the Lower Pyrenees. It is very mountainous, and rather barren ; it rears, how- ever, a number of cattle. The inhabitants use a dialect which resembles that of the Spanish Biscayans, and is supposed to be a variety of the Celtic. The agility of the inhabitants is pro- verbial. It is not easy to imagine more grace and expression than they display in their mo- tions, or the spirit and activity of their dances.

BASQUES, Rio DE, a river in the province and government of Costa Rica, kingdom of Guati- mala, which falls into the Atlantic.

BASQUEVILLE, or BAQUEVILLE, a town of France, in Lower Normandy, with 2190 inha- bitants. Here are manufactures of serge, matrasses, and woollen stuffs. It had the title of county before the revolution, and is now the head of a canton, in the department of the Lower Seine, arrondissement of Dieppe. It is ten miles S. W. of Dieppe, and twenty-eight N. of Rouen.

BASRAH. See BASSORA.

BASRODE, a town of the Netherlands, in Flanders, on the Scheldt, near Dendermonde. It contains 2150 inhabitants.

BASS,) This is the word from which

BA'SSOCK. $ basket is supposed to be derived ; our gardeners even now call the soft sedge or rush with which they bind plants bass, which is the meaning of the word in the following cita- tion from Mortimer.

Having woollen yarn, bass mat, or such like, to bind them withal. Mortimer's Husbandry.

BASS, n. s., in Cumberland, a river-fish, of the perch kind ; in Hampshire, a sea perch.

BASS, in gardening, a soft kind of sedge or rush, used in binding plants, &c.

BASS, in geography, an insulated rock, about a mile in circumference, in the mouth of the Frith of Forth, at a small distance from the town of North Berwick, in East Lothian. It is steep and inaccessible on all sides, except on the S. W. and even there it is with great difficulty that a single man can climb up with the help of a rope or ladder. It was formerly kept as a garrison. A party of the adherents of James VII. surprised it at the revolution, and it was the last place in the three kingdoms that sub- mitted to the new government; upon which its fortifications were ordered to be neglected. In summer this remarkable rock, which rises to a great height above the water, in form of a cone, is quite covered with sea-fowl, which come hither to breed. The chief of these are the solan geese, (See BASSANUS), which arrive in June, and retire in September. At that period these birds are so numerous that they almost darken the air ; and the surface of the Bass is so covered with, nests, eggs, and young, that it is difficult to walk without treading on them. The ruins of the old castle, which was once the state prison for Scot- land, are situated at the north

end of the pre- cipice, which overhangs the sea in a tremendous manner. The Bass also contains a small warren for rabbits, and pasture for a few sheep. There is a beautiful spring of water in the centre, high on the rock. The force of the tides has now almost worn a hole through this rock. Long. 2►► 15′ W., lat. 56►► 3′ N.

BASS, in music, of uncertain etymology; whether from the Greek word /3a

instrument, or an instrument larger than ordi- nary, for the purpose. Musicians generally hold the bass the principal part of a concert, and the foundation of the composition; though others will have the treble the chief part. The late in genious Dr. Franklin, in his very curious letter to Lord Kaimes on this subject, declares it to be his opinion that the bass is unnecessary to some tunes, and gives some reasons in support of it, which the curious may see there. Exper. Ob- serv. &c. 4to. fifth edit. p. 489. Rousseau ap- pears to have been of the same opinion. See Diet, de Musique, an. 1768. ►►► Bass cliff, or F

cliff, the character is marked thus-

BASS, COUNTER, is a second or double bass, where there are several in the same concert.

BASS HARBOUR, a harbour in the Eastern seas, formed by several small islands," off the coast of Malacca, forty-five miles W. of Queda.

BASS ISLAND, an island in Lake Erie, four miles N. of Sundusky.

BASS RIVER, a river of East Greenland, which runs into the sea. Long. 50►► 10′ W., lat. 64►► 30′ N.

BASS-RELIEF. Whatever figures or repre- sentations are cut, stamped, or otherwise wrought, so that not the entire body, but only part of it, is raised above the plane, are said to be done in relief, or relievo ; and when that work is low, flat, and but little raised, it is called bass or low relief. When a piece of sculpture, a coin, or a medal, has its figure raised so as to be well dis- tinguished, it is called bold, and we say its relief is strong. Bass-reliefs of the Trajan and Antc- nine columns have been copied by Bartoli, and explained by Bellori, &c. Those of the arch of Severus by Suaresius. Some have also made maps of prospects of countries in basso-relievo. Phil. Trans. No. 6, p. 99. See BASSO RILIEVO.

BASS, THOROUGH, is the harmony made by the bass-viols, or theorbos, continuing to play both while the voices sing and the other instru- ments perform their parts, and also filling up the intervals when any of the other parts stop. It is played by figures marked over the notes, on the organ,

spinet, harpsichord, &c. and frequently simply and without figures on the bass-viol and bassoon.

BASS-VIOL, a musical instrument of the same form with that of a violin, but much larger. It is struck with a bow, as that is ; has the same number of strings ; and has eight stops, which are subdivided into semi-stops : its sound is grave, and has a much nobler effect in a concert than that of the violin.

BASS STRAIT, so called from the name of its dis- coverer, separates Van Diemen's Land from New Holland, and is not more than fifty leagues wide. It contains a chain of small islands, which run north and south. Van Diemen's land, which was hitherto supposed to be a part of New Hol- land, is thus ascertained to be a detached island ; as, proceeding through this strait, Mr. Bass ac- tually circumnavigated it. This discovery is not only interesting, as it establishes this geographi- cal fact, but may be useful, as it expedites the

passage from the Cape of Good Hope to Fort Jackson. See VAN DIEMEN'S LAND.

BASSA. See BASHAW.

BASSA, or GRAND BASSA, a country on the west coast of Africa, about 400 mifes south of Sierra Leone, where the American coloniza- tion Society has obtained a grant of land from the king for a settlement. One of their agents describes the Bassas as living in small villages, or clusters of cottages, in each of which there is a head-man, who has a plurality of wives, and is the owner of all the people in his town. The inhabitants of each village cultivate the ground in common, which is chiefly done by the women and boys; the men employ themselves in fishing, hunting and trade, and in directing those under them. The adults wear a piece of narrow cloth about their loins ; but the children are not bur- dened with any kind of clothing. They are very fond of beads and various other ornaments ; and are represented as good-natured people, but ex- tremely ignorant and superstitious, depending solely upon their gree-grees and devil worship, to whom they make daily sacrifices, and even dedicate a part of their regular food.

BASSAC, a town of France, in the Angoumois, department of the Charente,

arrondissement of Cognac, where was formerly an abbey. The numlrw of inhabitants is about 1000. On the 13th of March, loG',), a battle was fought near this place between the Catholics and Protestants, in which the latter wen; defeated, and a prince of Comic; was killed. It is on the right bank of the Charente, not far from Jarnac, and fifteen miles K.S. E. of Saintes.

BASSAI), or Br.sn, a:i Arabian name for the purple fucus of the Greeks, u- ˆd by the women to paint their cheeks, and 1 ; the dyers of cloths. It has been misunderstood by late authors, and interpreted coral; hut the error of tins is evident, since coral has none of tuesc properties. See MARGIAN.

*BASSAN (Giacomo do Pont), or LE BASSAN, a celebrated Venetian painter, born in 1510. I! is subjects generally were peasants and vil- lagers, cattle, landscapes, and historical designs; tin; figures wore wcli designed, and the animals and landscapes have; an agreeable resemblance ot simple nature. I ! is compositions cannot boast of much elegance ; but they have abundance of lorce and truth. His local colors are well ob- .******rve.l, h;s carnations brilliant, and the chiaro ˆcuro and perspective well understood. His toucli is irec and spirited, and the distances in his landscapes are always true, but sometimes too (iark in tlie nea:or parts. Ilis works are spread all over l-.i.i-op.' : many of them were purchased by Titian; and then; \ere several in the late 1-rencii kmu'V cabinet the royal palace, and the Hotel de Toulouse. They are readily known iro;n the similitude of characters and counte- nance in the fi-ures and animals, Sec., and par- ticularly from a violet or purple tint that pre- dominates in tlnni ail. Hut the genuine pictures <-f Ins own liairl are not so easily ascertained ; 1'e-cause Ins sons were i.iostlv employed in copy- ing the works of their father, v.liich lie sometimes retouched. A.-; he lived to he very old, he finished a gie;it number of pictures; yet from*

is i:i.'cu'ii>tancu Ins eunniie pictures are not

commonly met with. But the true pictures of Giacomo always bear a considerable price. He was also a lover of music and gardening, and used to intermingle among his plants figures of serpents, drawn so much to the life that his visi- tors were apt to mistake them for real ones. Hannibal Caracci himself, when he went to see him, was so far deceived by the figure of a book upon the wall that he went to take it off the sup- posed shelf. -He died in 1529.

BASSAN (Leander and Francis), sons of Giacomo, inherited their father's genius for painting, and distinguished themselves in the art; but unfortunately they also inherited a species of lunacy from their mother, which shortened their lives and their usefulness.

BASSANI (Giovanni Battista), maestro di capella of the cathedral church of Bologna, about the middle of the last century, was a very voluminous composer of music, having published no fewer than thirty-one different works. He is equally celebrated as a composer for the church and for concerts ; and being also a celebrated performer on the violin, he taught Corelli. His compositions consist of masses, psalms, motets with instrumental parts, and sonatas for violins : his fifth opera in particular, containing twelve sonatas for two violins and a bass, is much esteemed ; it is written in a style wonderfully grave and pathetic. He was one of the first who composed motets for a single voice, with accom- paniments of violins; a practice liable to objec- tion, as it assimilates church-music too nearly to that of the chamber. Two of his operas, viz. the eighth and thirteenth, were printed in London, by Pearson, above fifty years ago, with the title of Harmonia Festiva.

BASSANO, a flourishing town of Italy, on the river Brenta, in the Venetian territory. It is scarcely one Italian mile in circuit, but has spacious suburbs, and contains, according to the last French enumeration, 11,500 inhabitants. A stone bridge, 182 feet in length, connects it with the large village of Vicantino. The neighbour- hood is highly favorable to the cultivation of the vine and olive, and a good trade is carried on in silk, cloth, and leather. The extensive printing- office of Remontini issues a number of elegant publications. In the kingdom of Italy this town belonged to the department of the Tagliamento : Buonaparte erected it into a duchy, with ►►2,500 sterling annual revenue, which he conferred in 1809 on Maret, his minister for foreign affairs. It is twelve miles north of Vicenza, and twenty west of Treviso. Long. 11►► 43′ E., lat. 45►► 46′ N.

BASSANO, or BASSAN ELLA, a small town in the Papal states, the head of a duchy, belonging to the house of Colonna. It gives name to the lake of Bassano, from which issues the river La Barca, the ancient Cremera. Here was born the celebrated Venetian printer, Aldus Manutius. Three miles west of Orta.

BASSANO (ST.), a small town of Italy, in the duchy of Milan,, and district of Lodi.

BASSANUS, in ornithology, a species of Pe- lecanus, as large as a common goose, with a wedge-shaped tail ; body white ; bill and pri- mary quill-feathers black j and face blue. Gmelin. Latham, &c.

This is the common gannet, or solan goose, a bird found in great plenty on all the northern coasts of Britain, but rather less common to the southward. The adult birds have the plumage nearly all white ; but during the first years it is of a dusky color, and only speckled with white. The bill is bluish-ash color, about six inches in length, and has the nostrils placed in a furrow ; the mouth within is black ; the throat is bare ; and the skin very dilatable, forming a pouch of sufficient size to contain five or six herrings ; the legs are black, marked with a stripe of pea- green before ; and the claw of the middle toe is pectinated. The males and females are very much alike in plumage. The gannet is par- ticularly abundant in the isle of Ailsa in the firth of Clyde ; the rocks adjacent to St. Rilda ; the stalks of Souliskerry, near the Orkneys ; the Skelig isles off the coasts of Kerry, Ireland ; and the Bass island in the firth of Edinburgh. Dr. Hervey gives some account of the latter in these words. ‘ There is a small island, called by the Scotch Bass island, not more than a mile in circumference ; the surface is almost wholly covered during the months of May and June with nests, eggs, and young birds ; so that it is scarcely possible to walk without treading on them ; and the flocks of birds in flight are so prodigious as to darken the air like clouds ; and their noise is such that . you cannot without dif- ficulty hear your next neighbour’s voice. If you look down upon the sea from the top of the pre- cipice, you will see it on every side covered with infinite numbers of birds of different kinds, swimming and hunting for their prey ; if in sailing round the island you survey the hanging cliffs, you see in every cragg or fissure of the broken rocks innumerable birds of various sorts and sizes, more than the stars of heaven when viewed in a serene night ; if from afar you see the distant flocks either flying to or from the island, you would imagine them to be a vast swarm of bees.

*‘ The gannet,’ observes Dr. Latham, * inhabits the colder parts of this kingdom, and more es- pecially several of the northern isles, and in par- ticular that of Bass in Scotland, whence the name. It generally first makes its appearance in March, and after making a circuit’ of the island, departs in October or November. This race seems to be in pursuit of the herrings and pilchards, whose motions it watches ; and the fishermen know the coming of these fish by the appearance of the birds. That this is the in- ducement seems probable, as they are likewise seen, in the month of December, as far south as the coast of Lisbon and Gibraltar, plunging for sardinse. The gannet is also common on the coasts of Norway and those of Iceland, and now and then met with on the southern coast of Greenland. In America it is found on the coasts of Newfoundland, where it breeds, migrating in winter as far as Carolina : said also to have been met with frequently in the southern ocean ; but we are not clear whether the sort meant by them .s the common gannet, or the lesser one.’*

‘ The gannets,’ Mr. Pennant remarks, ‘ are birds of passage. The first appearance in those -slands beinij in March, and their continuance

till August or September, according as the in- habitants take or leave their first egg; but in general the time of breeding and that of their departure seems to coincide with the arrival of the herring, and the migration of that fish, which is their principal food, out of those seas.’ ‘ I have in the month of August,’ he adds in another place, ‘ observed in Caithness their northern mi- grations. I have seen them passing the whole day in flocks, from five to fifteen in each. In calm weather they fly high, in storms they fly low and near the shore ; but never cross over land, even when a bay with promontories inter- venes, but follow at an equal distance the course of the bay, and regularly double every cape. I have seen many of the parties makp a sort of halt for the sake of fishing ; then, darting head- long into the sea, make the water foam and spring up with the violence of their descent : after which they pursued their route. I enquired whether they ever were observed to return south- ward in the spring, but was answered in the ne- gative ; so that it appears, they annually encircle the whole island.’

They are well known on most of our coasts by different names. In Cornwall and in Ireland they are called gannets, and by the Welsh gan. It comes on the coasts of Cornwall in the latter end of the summer or beginning of autumn, hovering over the shoals of pilchards that come up through the St. George’s channel from the north sea. The gannet seldom comes near the land, but is constant to its prey ; and when the pilchards retire, which happens about the end of November, they are seen no more.

The nest of the gannet is composed of various materials, such as grass and water plants, inter- mixed with any thing the birds find floating on the water. Each bird, if undisturbed, would lay only one egg in the year ; but if that be taken away they will lay another, and if that be taken away also, they will lay a third, but no more. The young gannets, as well as the eggs, are eaten. Martin assures us, that the inhabitants of St. Kilda consume annually no less than 22,600 young birds of this species, besides an amazing quantity of their eggs ; these being their principal support throughout the year : they preserve their eggs and fowls in pyramidal stone buildings, covering them with turf ashes to pro- tect them from moisture. This is a dear-bought food, and earned at the hazard of their lives, either by climbing the most difficult and narrow paths, where to appearance they barely cling, and that too at an amazing height above the raging sea ; or else, being lowered down from above, they collect their annual provision, thus hanging midway ir. the air, and placing their whole dependence on the uncertain footing of one person who holds the rope by which they are suspended at the top of the precipice. The young birds are a favorite dish with the north Britons in general, during the season they are constantly

brought from the Bass isle to Edin- burgh, and are roasted and served up a little before dinner as a whet : the price they are sold for in the markets is twenty-pence a piece.

The following account of the gannets in the isle of St. Kilda is given by Mr. Macauley :

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pretend to say that these different nations of the feathered kind are taught to choose the Tiiost proper habitations and feeding places, and to shitt their quarters seasonably by the unerring hand of (Jod.

4 From the account given above of the multi- tudes of sea-fowls that seek their food on this coast, we may justly conclude that there must be inexhaustible stores of fish there. Let us for a moment contine our attention to the consump- tion made by a single speeies of fowls. The solan goose is almost insatiably voracious ; he ilies with great force and velocity, toils all the day with little intermission, and digests his food in a very short time ; he disdains to eat any thing worse than herring or mackerel, unless it be ma very hungry place, which he takes care to avoid or abandon. We shall take it for granted that Vie re are a hundred thousand of that kind around the rocks of St. Kilda; and this calculation is !>y far too moderate, as no less than twenty thou- ˆand ot this kind are destroyed every year, in- cluding the youi.g ones. NVe shall suppose, at tiie same tune, t'aat the solan geese sojourn in

these seas for about seven months in the year ; that each of them destroys five herrings in a day, a subsistence infinitely poor for so greedy a creature, unless it were more than half supported at the expence of other fishes. Here we have 100,000,000 of the finest fish in the world de- voured annually by a single species of the St. Kilda sea-fowls,' &c.

It is proper to observe that le grand fou of Brisson and Buffon, and great booby of Catesby, an inhabitant of the sea-shores of Florida, is supposed to be the young or at least a variety of pelecanus bassanus ; and that observed by navi- gators so common on Ascension island, peleca- nus piscator, a different species.

BASSATERRE. See BASSE-TERRE.

BASSEE, LA, in geography, a town of France, in the department of the North, the ci- devant French Netherlands, remarkable on ac- count of the many sieges it has sustained. It is seated on a canal which falls into the river Deule; eighteen miles south-west of Lille. Its principal commerce is in cattle, linen, and turf. Population about 2200.

BASSE, in ichthyology, the English name of the sea-wolf, the lupus piscis of authors. The Greeks have called this labrax ; and some of the later writers, as Paulus Jovius and others, spigola. It is properly a species of pearch, and is dis- tinguished by Artedi by the name of the pearch with thirteen rays in the second fin of the back, and fourteen in the pinna auri. See LUPUS, MARINUS.

BASSE, in writers of the middle age, a collar for cart-horses, made of flags. Hence also the round, matted cushion of flags, or hassock, used for kneeling in churches, is called basse ; in Kent a trush.

BASSE-COUR, in building, a court separated from the principal one, and destined for the stables, coach-houses, and livery servants. In the country it is applied to the yard, or place where the cattle, fowls, 8cc. are kept.

BASSE ENCIENTE, or BASSE ENCLOSURE, in for- tification, a false trench, made to hide a real one.

BASSEEN, a sea-port of Hindostan, the pro- vince of Aurungabad, separated from the island of Salsette by a narrow strait, in long. 72►► 54′ E., lat. 19►► 18′ N. The district around is in a very improved state of cultivation, although under a Mahratta government. Many of the cultivators are Roman Catholics. The Teak forests, which supply the marine yard at Bombay, lie along the western side of the Ghaut mountains, to the north and north-east of Basseen. In 1780 it was taken from the Mahrattas by the British, but re- stored in 1782. Distant 27 miles north of Bombay, and 152 south of Surat.

BASSEIN, or PERSAIM, a city in the south- west part of Pegu, where the British formerly had a factory ; but the Burmans now prevent any European vessel from entering this branch of the river Irtawaddy. Long. 95►► E., lat. 16►► 50′ N.

BASSEN, or BASSUM, a small town, castle, and lordship of Germany, in the county of Hoya, in Westphalia, with a Lutheran abbey. It belongs to Hesse Cassel ; but the abbey stands under the sovereignty of Hanover. Sixteen miles west of Hoya.

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BASSES, a numerous cluster of islets, called the Thousand isles by Maurelle, off the north-west point of New Guinea. The most south is in long. 139►► 27′ E., lat. 1►► 40′ S.

*BASSET, or BASETTE, a game at cards, said to have been invented by a noble Venetian, for which he was banished- It was first introduced into France by Signior Giustiniani, ambassador of Venice, in 1674. Severe laws were made against t by Louis XIV., to elude which they disguised Basset under the name of pour et centre, that is, * for and against,' which*

occasioned new arrets and prohibitions of parliament. The parties concerned in it are a dealer or banker; his assistant, \vho supervises the losing cards ; and the punter, or any one who plays against the banker. The other terms used in this game are : 1. The fasse or face, which is the first card turned up by the tailleur belonging to the pack, by which he gains half the value of the money laid down on every card of that sort by the punters. 2. The couch, or first money which every punter puts on each card ; each person that plays having a book of thirteen several cards before him, on which he may lay his money, more or less, at discretion.

3. The paroli, which is, when a punter having won the first stake, ind having a mind to pursue his good fortune, crooks the corner of his card, and lets his prize lie, aiming at a sept et le va.

*4. The masse ; when having won the first stake, the puntei is willing to venture more money on the same card. 5. The pay ; when the punter having won the first stake, be it a shilling, half- crown, guinea, or whatever he laid down on his card, and not caring to hazard the paroli, leaves off, or goes the pay : in which case, if the card turn up wrong, he loses nothing, having won the couch before; whereas, if it turn right, he by this adventure wins double the money staked. 6. The alpiew; much the same with paroli, and used when a couch is won by turning up or crooking the corner of the winning card. 7. Sept et le va, the first great chance or prize, when the punter, having won the couch, makes a paroli, and goes on to second chance ; so that if his winning card turns up again, it comes to sept et le va, which is seven times as much as he laid down on his card. 8. Quinze et le vaisthe next higher prize, when the punter, having won the former, is resolved to push his fortune, and lay his money a second time on the same card by crooking another corner ; in which case, if it comes up, he wins fifteen times the money laid down. 9. Trent et le va is the next higher prize, when the punter, crooking the fourth cor- ner of his winning card, if it turn up wins thirty- three times the money he first staked. 10. Soixant ft le va is the highest prize, and entitles the winner to sixty-seven times his first money ; which, if it
 ॐ ॐwere considerable, stands a chance to break the bank : but the bank stands many chances first of breaking the punter. This cannot be won but by the tailleur's dealing the cards over again. The rules of the game of basset are as follows : 1 . The banker holds a pack of fifty-two cards, and having shuffled them, he turns the whole pack at once, so as to discover the last card ; after which he lays down all the cards by couples. 2. The*

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punter has his book of thirteen cards in hi" hand, from the king to the ace ; out of these he tukes one card, or more, at pleasure, upon which he lays a

stake. 3. The punter may, at his choice, either lay down his stake before the pack is turned, or immediately after it is turned, or after any number of couples are down. 4. Sup- posing the punter to lay down his stake after the pack is turned, and calling 1, 2, 3, 4, 5, &c. the places of those cards which follow the card in view, either immediately after the pack is turned, or after any number of couples are drawn. Then, 5. If the card upon which the punter has laid a stake comes out in any even place, except the first, he wins a stake equal to his own. 6. If the card upon which the punter has laid a stake comes out in any even place, except the second, he loses his stake. 7. If the card of the punter comes out in the first place, he neither wins nor loses, but takes his own stake again. 8. If the card of the punter comes out in the second place, he does not lose his whole stake, but only one- half; and this is the case in which the punter is said to be faced. 9. When the punter chooses to come in after any number of the couples are down, if his card happens to be tut once in the pack and is the last of all, there is an exception from the general rule : for though it comes out in an odd place, which should entitle him to win a stake equal to his own, yet he neither wins nor loses from that circumstance, but takes back his own stake. This game has been the object of mathematical calculations. M. de Moivre solves this problem : to estimate at basset the loss of the punter under any circumstance of cards re- maining in the stock when he lays his stake, and of any number of times that his card is repeated in the stock. From this solution he has formed a table, showing the several losses of the punter in whatsoever circumstances he may happen to be. From this table it appears, 1. The fewer the cards are in the stock, the greater is the loss of the punter. 2. That the least loss of the punter, under the same circumstances of cards remaining in the stock, is when his card is but twice in it ; the next greater when but three times; still greater when four times ; and the greatest when but once. The gain of the banker upon all the money adventured at basset is 15s. 3d. per cent.

BASSET (Peter), a gentleman of a good family, was chamberlain, or gentleman of the privy- chamber, to Henry V. a constant attendant on that brave prince, and an eye-witness of his most glorious actions at home and abroad ; all which he particularly described in a work entitled, The Acts of King Henry V. which remains in MS. in the college of heralds.

BASSE-TERRE, the chief town of St. Chris- topher's, in the West Indies, situated at the south- east end of the island, and at the mouth of a river opening into a bay called Basse-Terre road. It consists of a long street, containing 800 houses is a place of considerable trade, and defended by three batteries. Long. 62►► 36′ W., lat. 17►► 24′ N.

BASSE TERRE, FORT DE LA, a castle of the island of Guadaloupe, on the west coast. It i$ also the name of a part of the island, between a point of

which, called Grosse Morne, to that of

as

Antigua in the Grande Tern:, the basin called the Great Cul de Sac is five or six leagues in length, and affords safe riding for ships.

BASSETING, in the coal mines, denotes the rise of the vein of coal towards the surface of the earth, till it comes within two or three feet of the surface itself. This is also called by the work- men cropping ; and stands opposed to dipping, which is the descent of the vein to such a depth that it is rarely, if ever followed to the end.

BASSETTO, a bass viol of the smallest size.

BASSEVILLE (Citizen), secretary to the French legation at Rome, one of the many vic- tims to the French revolution, but who fell, not by the hands of the zealots of liberty, but by the demons of despotism and priestcraft, in March 1793. Having received orders from the Con- vention to put up the arms of the republic over the consular house, instead of those of the ci-de-vant royalty, the popular furor was excited ; and, though Basseville himself, being a man of mode- rate principles, was against the measure, the blind zealots of superstition stabbed him in the belly with a razor, in the house of Moutte the banker, which they afterwards plundered and burnt, calling out ‘ Long live the pope ! ††† Long live reli- gion ! ‘ &c. Basseville died in thirty-six hours; and the convention decreed a pension to his widow, with reversion to his child, whom they u’ so decreed to be educated at the public expense.

HASSI (Laura), a celebrated Italian lady, of the eighteenth century. She received a liberal education, not only in the branches considered as belonging to her sex, but in the languages and sciences ; and such was her progress in learning, that in 1732, she got the title of Doctor of Phi- losophy. In 174.5 she read lectures on experi- mental philosophy, and continued to do so during her life. She married Dr. Verati, and preserved an excellent character, as the practiser of every virtue. She died in 1778.

BASSIA, a genus of the monogynia order, be- longing to the dodecandria class of plants, the characters of which are : The CA L. is quadriphyl- lous ; the con. oetofid, with the tube inflated; the STAM. are fifteen ; and the drupe is quin- (juespennous. There is but one species, viz. B. longifolia, native of Malabar.

HASS1GNY, a district of France, belonging, before the revolution, to Upper Champagne, and the duchy of Har. At present it is included in the department of the Upper Marne, with the exception of sonv small portions which are in the departments of the Yoscvs and Maese. There is in it a small t►►\vn of the snnu: name, but the clue! places arc C'haumont and Vaucouleurs.

KASS1V, Til \.\T !'., or HAˆLXTHWAITE, WAII.U, a lake in (.'nnibrnand, four miles long, and one !a'l, having en DM,- side the vale of Basvinothwate a:id tin; lofty Skiddaw, and on the other tin steep wuody mountains of Withop.

ilASSO, in n.uiic, generally signifies the bass, but sometime; in purfsof music for several \oiei s, the sin ;m.r bass is more? particularly so call, ►►►!. Thus also,

HY-.O Co.ri.iMAViT, or RtrnAvrr., implies the bass of the little chorus, which plays through out the whole pier.,1,

BASSO CONTINUO, the continual or thorough bass, distinguished with figures over the notes, for the organ, harpsicord, or theorbo. It origi- nally meant the accompaniment to the higher parts of a sonata, &c. in whatever cliff it was written.

BASSO RILIEVO. Italian. In sculpture, a modern term for that kind of sculpture in which the figures do not stand out from the ground in their full proportion. The term belongs exclu- sively to later times. Pliny (xxxiii. 11.) applies the word avay\virTa to workmanship of this kind ; but it is a term by no means so distinctive as the Italian basso-rilievo. All works in sculpture are classed as bassi rilievi when the subjects repre- sented are not isolated, but adherent to the ground, whether they are of a similar or different material, and applied or fixed to the ground, or form a part of the material in which they are wrought. There are three sorts of relief in sculp- ture, alto rilievo, mezzo rilievo, and basso rilievo. Strictly taken, alto rilievo is that relief in which the figures are entire, or nearly so, being attached only in a few places, and are relieved from tho ground like the metopes of the Parthenon ; mezzo rilievo is that in which half the figure stands clear from the ground, and the other appears buried therein ; and basso rilievo that in which the figures lose their projecture, and are represented as nearly flat, like the Panathenseic procession of the same temple. Custom, however, has nearly abolished two of these terms ; and basso rilievo is often applied to each sort, be the projections what they may.

The true basso rilievo, which has but small projection, requires more skill in the sculptor than that in which the projection is more con- siderable;

because it is extremely difficult to give a natural effect to a figure which is of its proper height and size, but falls short of its real thickness. What is more difficult even than this, in the style of sculpture now under consideration, is picturesque composition in grouping the figures, because the artist cannot, as in painting, employ different backgrounds remote from each other ; and as the shadows in sculpture are real, and not imitative, he must calculate his composition, and arrange its form for the light in which it is to be placed.

The ancients used bassi rilievi in decorating architectural designs, and in ornamenting their domestic furniture. All nations, however, in the history of the arts have used them, and they re- semble in style that of their other works. The Egyptians ornamented their temples with an innu- merable quantity of figures and hieroglyphics, of which the greater part have the outlines only sunk, and the area thus formed only painted ; but many of them are of the class bassi relievi. (See Denon's Travels ,n Egypt, Captain Norden, and Dr. Pococke; also the Egyptian sculp- tures in the British Museum, those brought to Europe by Belzoni, &c.) Their manner of exe- cuting these sculptures is singular: they first channelled an outline in the stone, and sunk it round the figure, so that it did not project beyond the original face ; being in fact more a species of engraving than sculpture. The cabinet of the royal library at Paris possesses a very curious Egyptian sculpture thus wrought, and many of

the same description are found in Egypt, princi- pally on the frontispieces of the temples where the Scarabeus extends his reign. The Persians were also partial to the use of bassi rilievi, as in the walls of Tschelminar, the ancient Persepolis. (See PERSEPOLIS.) They are executed in very high relief.

The Etruscans also used bassi rilievi ; but Winckelman errs in attributing to this people all those works in which the figures are clothed in draperies, with straight square folds, designed in a stiff formal style like the antique altar of the Cardinal Albani, on which is represented their twelve principal gods. On the contrary, every well informed archaiologist allows these and other similar monuments of art to belong to the very earliest period of the Greeks. Some bassi rilievi of clay, painted in water colors, found near the country of the Volscii, which are preserved in the cabinet of Cardinal Borgia, and published under his patronage, prove, beyond a doubt, that the Etruscans, like the Greeks, often painted their sculptural figures.

The bassi rilievi used by the ancients were often formed of baked clay :

sometimes of ivory and various metals, but oftener of marble.

Among the most celebrated Greek bassi rilievi of antiquity are those which Phidias carved in ivory, upon the shield and the base of the statue of Minerva at Athens. Those which ornamented the throne of Jupiter Olympus, executed by Al- camenes ; those of Apollo, at Amyclse, in Laconia ; the bassi rilievi of the temple of Hercules, at Thebes, executed by Praxiteles ; those of the temple of Delphos, the joint work of Praxias and Androsthenes ; the celebrated funeral monument of Mausolus, called the mausoleum, executed by Scopas, Bryaxis, Timotheus, and Leochares ; the thirty-six columns of the temple of Diana, at Ephesus, &c.

The sculptures in the metopes and pediments of the parthenon at Athens, which were entire in the time of Spon, who has described them, are in alto rilievo, like statues affixed to a back ground of marble. Their great size and height preserved them from those accidents to which they would have been liable in a lower situation, and to which, on the same account, they gave a less projection. Many of these invaluable relics of the brightest days of Grecian art, were brought to England by Lord Elgin, and are preserved in the British Museum.

As the greater part of the antique bassi rilievi, now remaining, are executed in marble, they form the principal criterion by which we can judge of the excellency of their sculptors. Many of the best preserved were used to ornament their altars, as is seen in those which are in the muse- um capitolinum. One of these represents die education of Jupiter, and the others the labors of Hercules. They were also used as decorations to the bases of statues, and oftener to their tombs; and even sometimes to the pedestals or stones on the margin of wells, as may be seen on one belonging to the last-named museum, representing the education of Achilles ; and a beautiful one of nymphs and fawns, in the British Museum.

The Romans made use of bassi rilievi to commemorate victories and embellish columns,

triumphal arches, &c. But the greater number now preserved were attached to sarcophagi. The custom of burning their dead had fallen into disuse, partly from a scarcity of fuel, and partly because they had acquired many of the religious opinions of the eastern nations, from whom they adopted the mode of occasionally interring the bodies of their dead in coffins of marble, and other valuable materials. Their numbers at length became immense, both in the city and in the environs of Rome, if we may judge only from those which are to be found in the cabinets of the curious. The bassi rilievi, with which these sarcophagi are ornamented, are usually wrought with little care, and by sculptors of mi- nor talents ; but they

preserve to us many of the finest compositions of their greatest artists, which were the admiration of antiquity. In many of the Greek bassi rilievi, the face of the deceased only is finished, and many antiquaries, from this cir- cumstance, have conjectured that it was a sort of manufacture in Greece, to make sarcophagi for the Romans, and that they were to be finished after they were sold. The bad style of these sculptures is no reason for supposing that these marbles were not carved in Greece, because in the time of the emperors, the best Grecian artists were removed to Rome, and those of meaner talents remained at home. From the great quan- tity of marble that Attica, and indeed all Greece, possessed, it is natural to suppose that those sculptors who remained behind in their country would execute bassi rilievi for sarcophagi, when so ready a sale was found for them at Rome. Many archaiologists have supposed that the greater part of the compositions which are found on these sarcophagi, were copied from the great masters, of which the originals (as the paintings of Panfenus and Polignotus in the ––oekile, &ic.) perished, when the cities of Greece were pillaged and ransacked.

The study of the ancient bassi rilievi is of great service in the history of the arts ; as from them may be collected many important facts of the mythology, customs, costume, &c. of the Ancients. The finest collections of bassi rilievi now exist- ing, are those of the British Museum, formerly the Townly collection; the Elgin marbles in the same museum; the collections of Mr. Thomas Hope, and Mr. Soane, the professor of architecture in the Royal Academy of London ; and several fine casts in the Royal Academy. In Paris they had some fine antique bassi rilievi in the Royal Mu- seum ; in the museum of the Augustins ; and many private collections. The application of bassi rilievi among the moderns is the same as among the ancients ; being used to decorate pub- lic buildings, palaces, churches, triumphal arches, theatres, concert rooms, and private houses ; fur niture, tombs, and other subjects of ornameuta. architecture. The most celebrated specimens of bassi rilievi (properly so called) of modern art in England, are those of the tympanum of the pediment of the East India house, by Bacon; the monument of Captain Millar in a pannel of St. Paul's cathedral, by Flaxman. Several otheis on the public monuments, erected in that cathe- dral, and in Westminster abbey, by Bacon, Banks, Bacon, jun. Rossi, Chantrey, Kendrick,

Hopper, and Westmacott And on the conti- nent, most of the sculptures are thus decorated, and embrace the names of the most celebrated artists. The Trench critics particularly admire the bassi rilievi on the Po;te St. Denys, begun

Baharin, and coffee from Mocha, iron, lead, and woollen cloth, from Europe. Some of these commodities are shipped on board small Arabian vessels; but the greater part is brought by Eu- ropean vessels. Yet all European commodities

by Girardon, and finished by Michel Anguiere, are dear here ; a decided preference is given to ‘ ⬛⬛⬛ .- – T- ⬛⬛⬛- ⬛⬛⬛ – ⬛⬛⬛ r⬛⬛v,~T … _n_j articles of English manufacture, especially broad

and those on the Eountain of the Innocents, called the Nymph’s Fountain, by the celebrated Jean Goujon.

BASSO RIPIENO, the bass of the ground chorus, or that which plays only in particular places.

BASSO VIOLINO, the bass for the bass viol.

BASSOON, bus son, Fr. low sound ; an in- strument which forms the natural base to the

cloth and watches. Many of the products of other countries are re-exported, and an extensive traffic is carried on in horses, which, being very strong and beautiful, are exported by the English. Its population was estimated by Mr. Parsons, who was here in 1775, at 200,000; but it is now thought not to exceed 60,000 ; but it is still the

hautbois. It is played like that instrument, with second city of the pachalic of Bagdad. It fell

a reed, and forms a continuation of its scale downwards. The reed is fixed to a crooked mouth-piece issuing from the side of the bassoon. Three keys communicate to the ventages which otherwise are too remote for fingering. The Italian name fagotto is derived from its appear- ance ; it consists of four tubes bound together so as somewhat to resemble a fagot. Its compass is three octaves, from double AA in the base, to a in the second space of the treble.

BASSORA, BALSORA, BOSSORA, or BASRA, a city between Arabia and Persia, situated in the extremity of the deserts of Irak, a little west of the Tigris, where it is navigable for vessels 500 tons, and not far from its junction with the Euphrates. It was built by the khaliff Omar, in the fifth

year of the Hegira, for the sake of carry- ing on more commodiously an extensive com- merce between the Syrians, Arabians, Persians, and India. It is at present a famous emporium of Eastern commerce, and stands upon a thick

into the hands of the Turks, (who took it from the Persians) in 1688 ; was re-taken by Persia in 1777, but resigned to the Turkish army the fol- lowing year. The Arabs expelled the Turks in 1787, but the latter, under Soliman Pacha of Bagdad, regained it shortly after, and have held it ever since. It is distant from Ispahan 210 miles south, 903 from Alexandretta, and 1815 south-east from Constantinople. Long. 44►► 46′ E., lat. 30►► 32′ N.

BASSOVIA, in botany, a genus of plants of the class pentandria, and order monogynia. Its generic characters are, CAL. perianth one-leayed : of COR. one-petalled : STAM. filaments five; anthers ovate: FIST, germ ovate; style short; stigma thickish : PER. berry ovate ; seeds very many. ►►► The only species is the B. sylvatica, a perennial, native of Guiana.

BASS VIOL. See BASS.

BASSUM, a district in the province of Nan- dere, in the Nizam's dominions, Hindostan. It

stony soil, as the name imports. That mouth of has an uneven hilly surface, intersected by several

the Tigris which empties itself into the Persian Gulf after passing the town, is called from it, the Bay of Bassora. The circumjacent country is regarded by the Arabs us one of the most delight- ful spots in Asia, and is certainly one of the most beautiful tracts in the world; however, the hot winds that frequently blow here are very trouble- some to travellers, and sometimes overwhelm them with sand. The city is inhabited by Nes- torians, Jews, Mahommedans, and Chaldean Christians, or Christians of St. John, which last art: pretty numerous. The walls are about seven miles in circuit, and twenty-live feet thick. The city is entered by five gates ; but much of this space is occupied by plantations and gardens, in- terspersed with canals, which are cleansed by the tide flowing into them twice every day, to the height of nine or ten feet. The city is indiffer- ently built ; tie houses very mean, and con- structed chiefly c f day; the streets are irregular, and notwithstanding the advantage of the canals, are kept in a lilthy state. Even the bazaars, though containing the lichest products of the East, are but miserable edifices. The English factory is the be>t building in the city. The abbe Rayiia! describes its trade as consisting of rice, sugar, plain striped and flowered mus- lins from Bengal, spici_s from Ceylon and the Molucca

islands, coarse white and blue cottons, from Coromandel, ean'a ;,ui,i, pepper, sanders- wood,from Malabar, r/i'd an.l .silver stuffs, tur- baus, shaw's, iiuligo, nui.'i Surat, pearls from

small streams, which flows into the Godavery ; and it lies between the twenty-first and twenty- second degrees of north latitude. The chief town is Bassan, which is situated six miles from the Gunga. Very little is known respecting this part of Nandere.

BAST, lime tree bark made into ropes or mats.

BASTAGA, from /3a

BASTAGARII, in ecclesiastical antiquity, those who carry the images of saints at pro- cessions.

BA'STARD, v. n. & adj.-\ Bostardd, Welch, BA'STARDIZE, f bastarde, Fr. of low

BA'STARDLY, l birth, from base,

BA'STARDY. J and ord, A. S., the

one signifies mean, disgraceful; and the other source and origin ; thus bastard means base- born. It is also applied to any thing not pro- ceeding from a legitimate source ; to whatever is spurious or mixed. In the earlier writers it is not uncommon to meet with bast without the termination ard.

When he was aryued, he sent to Harald, And said that a bastard no kyngdom suld hald.

It. Brunne.

.And so shee (queen Anne) putting in obliuion the bastardyng of her daughter, delinered into king Richard's hands her five daughters, as lambes "nee again committed to the custodie of the rauenoua woolfe. Grafton. Richard Hf.

ii A S T A R D S.

6:29

A.nd ouer this he (Sir H. Bolyngbrooke) hadde of bast, whiche after were made legyttymat, by dame Katheryne Swynforde iii sonnys.

Fabyan. Ann. 1386. R. 2. When thou shall find the catalogue enroll'd Of thy misdeeds, there shall be writ in text, Thy bastarding the issues of a

prince.

Ford's Love's Sacrifice.

Peace is a very apoplexy, lethargy, insensible, a getter of more bastard children than war's a destroyer of men. S/uikspeare.

I should have been what I am, had the maiden- liest star in the firmament twinkled on my bastard- ising. Id.

Once she slandered me with bastardy ; But whether I be true begot or no, That still I lay upon my mother's head. Id.

Words

But rooted in your tongue ; bastards and syllables Of no allowance to your bosom's truth. Id.

Score a pint of bastard. ††† Then your brown bastard is your only drink. Id.

We are bastards all ; And that most venerable man, which I Did call my father, was I know not where When I was stampt ; some coiner with his tools Made me a counterfeit : yet my mother seem'd The Dian of that time : so doth my wife The nonpareil of this. Donne.

Good seed degenerates, and oft obeys The soil's disease, and into cockle strays ; Let the mind's thoughts but be transplanted so Into the body, and bastardly they grow. Id.

She lived to see her brother beheaded, and her two sons deposed from the crown, bastarded in their blood, and cruelly murdered. Bacon.

He

That kills himself t' avoid misery, fears it, And at the best shows but a bastard valour.

Massinger.

Of all passions, as I have already proved, love is most violent, and of those bitter potions which this love-melancholy affords, this bastard jealousie is the greatest, as appears by those prodigious symptoms which it hath, and that it produceth.

Burton's Anatomy of Melancholy. In respect of the evil consequents, the wife's adul- tery is worse, as bringing bastardy into a family.

Taylor.

Him to the Lydian king Lycimnia bare, And sent her boasted bastard to the war.

Dry den.

Men who, under the disguise of publick good, pur- sue their own designs of power, and such bastard honours as attend them. Temple.

Not more of simony beneath black gowns, Not more of bastardy in heirs to crowns. Pope. A bastard, by our English laws, is one that is not only begotten, but born, out of lawful matrimony.

Blackstone's Commentaries. And these are men, forsooth ! Heroes and chiefs, the flower of Adam's bastards,

Byron.

BASTARDS; in the English law. The cele- brated Blackstone observes in his Commentaries on the difference between our common and the civil and canon law. The civil and canon laws do not allow the child to remain a bastard, if the parents afterwards intermarry : and herein they differ most materially from our law; which, though not so strict as to require that the child should be begotten, yet makes it an indispensible condition that it should be born after lawful wed-

lock. And the reason of our law, he continues, is surely much superior to that of the Roman, if we consider the principal end and design of establishing the contract of marriage, taken in a civil light, abstractedly from any religious view ; which lias nothing to do with the legitimacy or illegitimacy of the children. The main end and design of marriage, being to ascertain and fix upon some certain person, to whom the care, the protection, the maintenance, and the education of the children, should belong : 1 . Because of the very great uncertainty there will generally be, in the proof that the issue was really begotten by the same man ; whereas, by confining the proof to the birth, and not to the begetting, our law has rendered it perfectly certain what child is legiti- mate, and who is to take care of the child. 2. Because by the Roman law a child may be con- tinued a bastard, or made legitimate at the option of the father or mother, by a marriage ex post facto ; thereby opening a door to many frauds and par- tialities, which by our law are prevented. 3. Because by those laws a man may remain a bas- tard till forty years of age, and then become legi- timate by the subsequent marriage of his parents; whereby the main end of marriage, the protection of infants, is totally frustrated. 4. Because this rule of the Roman law admits of no limitation as to .the time, or number, of

bastards to be so legi- timated ; but a dozen of them may, twenty years after their birth, by the subsequent marriage of their parents, be admitted to all the privileges of legitimate children. This is plainly a great dis- couragement to the matrimonial state; to which one main inducement is usually not only the desire of having children, but also the desire of procreating lawful heirs. Whereas our constitu- tion guards against this indecency, and at the same time gives sufficient allowance to the frail- ties of human nature.

By the law of Scotland, following the canon law, bastards may be legitimated, or made Law- ful, 1. By the subsequent intermarriage of the mother of the child with the father; and this legi- timation entitles the child to all the rights of law- ful children. The subsequent marriage, which produces legitimation, is considered by the law to have been entered into when the child legiti- mated was begotten ; and hence, if he be a male, he excludes, by his right of primogeniture, the sons procreated after the marriage, from the suc- cession of the father's heritage, though these sons were lawful children from the birth. Hence, also, those children only can be thus legitimated, who are begotten of a woman whom the father might at that period have lawfully married. 2. Bastards are legitimated by letters of legitima- tion from the sovereign

A bastard, as such, is excluded by the Scottish law. 1. From his father's succession; because law knows no father who is not marked out-by marriage. 2. From all heritable succession, whether by the father or mother ; because he can- not be pronounced lawful heir by the inquest, in terms of the brief. And, 3. From the movable succession of his mother ; for though the mother be known, the bastard Is not her lawful child, and legitimacy is implied in all succession con- ferred by law. Yet a bastard,, though he cannot

succeed jure sanguinis, may succeed by destina- tion, where he is specially called to the succession by an entail or testament.

Every attempt to introduce the civil law, in this respect, into England, by declaring children legitimated by a subsequent marriage, has been steadily rejected. It was upon an occasion of this kind, that the barons of England, assembled in the parliament of Merlon, A.D. 1272, made that famous answer, ' Nolumus leges Angliae mutare.' 20 Hen. III. cap. 9.

From what has been said it appears, that all children born before

matrimony are bastards by our law : and so it is of all children born so long after the death of the husband, that, by the usual course of gestation;, they could not be begotten by him. But this being a matter of some uncertainty, the law is not exact as to a few days. But if a man dies, and his widow soon after marries again, and a child is born within such a time as that by the course of nature it might have been the child of either husband: in this case, he is said to be more than ordinarily legitimate; for he may, when he arrives at the years of discre- tion, choose which of the fathers he pleases. To prevent this, among other inconveniences, the civil law ordained that no widow should marry infra, annum luctus; a rule which obtained so ur early ancestors from the Komans, during their stay iu this island: for we (st .h'islKjd under tUu Saxoa and Danish ;.aY;v:!i:ient:.

Vs 1 astards may be 1-orn before the coverture

of n:arnaue-st.tte is. 1 euun, or after it is deter-

i. lined, so also children born during wedlock

may in some circumstances be bastards. As if the

so;. nd be out of the kingdom of England, or as

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dioveuine months, so that no access to his wife

1 presumed, her issue: during that period

shali he hazards. 1 !ut generally during coverture,

-.-i,f the husband shall be presumed, unless

the ce.htrary shall be shown; which is such a

s can onlv be proved by showing

him, to he elsewhere; for the general rule is

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(led, ions have considerably narrowed this rule.

it is now held that the husband's being within

the four seas is not conclusive evidence of the

h Jtimacy of ti;e child, and it is left to a jury to

mme whether the husband had access or

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! or incidental causes impotent. 2 Stra.940.

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'dity must be proved, and not a

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is children they are bastards; for

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le to the sentence of separation, unless ac-

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showii. So also if there be an appa-

>ilit\ of procreation on the part of

if lie be only eiijht years old, or

. liicn: liie issue of the wife shall be

i- '.iids. |,ikewisr, in ease i>t divorce in the

spiritual court a vinculo matrimonii, all the issue born during the coverture are bastards ; because such divorce is always upon some cause that rendered the marriage unlawful and null from the beginning.

As to the rights and incapacities which appertain to a bastard : the former are very few, being only such as he can acquire ; for he can inherit nothing, being looked upon as the son of nobody, and sometimes called nliusnullius,sometimes filius populi. Yet he may gain a surname by reputa tion, though he has none by inheritance. All other children have their primary settlement in their father's parish : but a bastard in the parish where born, for he hath no father. However, in case of fraud, as if a

woman be either sent by order of justices, or comes to beg as a vagrant, to a parish which she does not belong to, the bastard shall, in the first case, be settled in the parish from whence she was illegally removed ; or in the latter case, in the mother's own parish, if the mother be apprehended for her vagrancy. Bastards also born in any licensed hospital for pregnant women, are settled in the parishes in which the mothers belong. The incapacity of a bastard consists principally in this, that he cannot be heir to any one ; for being nullius fi- lius, he is therefore of kin to nobody, and has no ancestors from whom any inheritable blood can be derived. Therefore, if there be no other claim- ant upon an inheritance than such illegitimate child, it shall escheat to the lord. And as bas- tards cannot be heirs themselves, so neither can they have any heirs but those of their own bodies. For as all collateral kindred consists in being derived from the same common ancestor, and as a bastard has no legal ancestors, he can have no collateral kindred ; and consequently can hare no legal heirs, but such as claim by a lineal de- scent from himself. And therefore, if a bastard purchases land, and dies seised thereof without issue, and intestate, the land shall escheat to the lord of the see. A bastard was also, in strict- ness, incapable of holy orders ; and though that were dispensed with, yet he was utterly disqua- lified from holding any dignity in the church ; but this doctrine seems now obsolete ; and in all other respects there is no distinction between a bastard and another man. And really any other distinction but that of not inheriting, which civil policy renders necessary, would, with re- gard to the innocent offspring of his parent's crimes, be odious, unjust, and cruel, to the last degree; and yet the civil law, so boasted of for its equitable decisions, made bastards in some cases incapable even of a gift from their parents. A bas- tard may, lastly, be made legitimate and capable of inheriting by the transcendant power of an act of parliament, and not otherwise : as was done in the case of John of Gaunt's bastard children, by a statute of Richard II.

The principal duty of parents to bastard children, by the English law, is that of mainte- nance. For though bastards are not looked upon as children to any civil purposes ; yet the ties of nature, of which maintenance is one, are not so easily dissolved ; and they hold indeed as to many other intentions ; as particularly that a man shall not marry his bastard sister or daughter, &c. The

method in which the English law provides main- tenance for them is as

follows : When a woman is delivered, or declares herself with child, of a bastard, and will by oath before a justice of the peace charge any person with having got her with child, the justice shall cause such person to be apprehended, and commit him till he gives security, either to maintain the child, or appear at the next quarter-sessions to dispute and try the fact. But if the woman dies, or is married, before delivery, or miscarries, or proves not to have been with child, the person shall be discharged ; otherwise the sessions, or two justices out of the sessions, upon original application to them, may take or- der for the keeping of the bastard, by the charg- ing of the mother or the reputed father with the payment of money or other sustentation for ihat purpose. And if such putative father, or lewd mother, run away from the parish, the overseers by direction of two justices may seize their rent, goods and chattels, in order to bring up the said bastard child. Yet such is the humanity of our laws, that no woman can be compulsively ques- tioned concerning the father of her child till one month after her delivery ; which indulgence is, however, very frequently a hardship upon pa- rishes, by giving the parents opportunity to escape.

By the stat. 18 Eliz. c. 3, two justices may take order for the punishment of the mother and reputed father ; but what that punishment shall be, is not therein ascertained : though the con- temporary exposition was, that a corporeal pu- nishment was intended. By stat. 7 Jac. I. c. 4. a specific punishment, viz. commitment to the house of correction, is inflicted on the woman only. But in both cases, it seems that the pe- nalty can only be inflicted if the bastard become! chargeable to the parish ; for otherwise the very maintenance of the child is considered as a de- gree of punishment. By the last mentioned sta- tute the justice may commit the mother to the house of correction, there to .be punished and set on work for one year ; and in case of a second offence, till she find surety never to offend again. It was enacted by statute 21 Jac. I. c. 27. that if any woman be delivered of a child, which if bom alive, should by law be a bastard, and en- deavours privately to conceal its death, by bury- ing the child or the like; the mother so offending shall suffer death, as in the case of murder, un- less she can prove by one witness at least that the child was actually born dead. This law is to be met with also in the criminal codes of many other nations of Europe ; as the Danes, the Swedes, &c. but it has been repealed by 43 Geo. III. c. 58. called Lord Ellenborough's act, Women can only be convicted of murder in this case on proof of the child being actually born alive : but in all cases when a child would have been a bastard, are punishable for conceal- ment of birth, whether the child be born alive or otherwise, by imprisonment for two years.

BASTARDS, in history, a troop of banditti who rose in Guienne about the beginning of the fourteenth century, and joining with some English parties, ravaged the country, and set fire to the city of Saintes. Mezeray supposes

them to have consisted of the natural sons of the nobility of Guienne, who being excluded the right of inhe-

riting from their fathers, put themselves at the head of ~robbers and plunderers to maintain themselves.

BASTARDS, in the sea language, large sails of a galley, which will make way with a slack wind.

BASTARD CEDAR TREE, called guazuma in the West Indies.

BASTARD FLOWER PENCE. See ADENANTHERA. The flowers of this plant bruised and steeped in breast milk are a gentle anodyne, for which pur- pose they are often given in the West Indies to quiet very young children. The leaves are used in Barbadoes and the Leeward islands. In Jamaica the plant is called Sena.

BASTARD HEMP. See DATISCA

BASTARD ROCKET. See RESED .

BASTARD SCARLET is a name given to red dyed with bale-madder, as coming nearest the bow-dye, or new scarlet.

BASTARD STAR OF BETHLEHEM. See ALBUCA.

BASTARDY, according to Eustathius, was held among the Greeks as honorable as legitima- cy, down even to the time of the Trojan war ; but the course of antiquity seems against him. The ancient Greeks indeed, appear to have been proud of their reputed descent from the gods, but Potter and others show that there never was a time when bastardy was not a disgrace. In the time of our William the Conqueror, however, it seems not to have implied any reproach, that monarch himself not scrupling to assume the appellation of bastard. His epistle to Alan, count of Bretagne begins, Ego Willielmus,cognomento bastardus.

BASTARDY, in relation to its trial in law, is distinguished into general and special.

BASTARDY GENERAL, is a certificate from the bishop of the diocese, to the king's justices, after inquiry made, whether the party is a bastard or not, upon some question of inheritance.

BASTARDY SPECIAL, is a suit commenced in the king's courts, against a person that calls another a bastard.

BASTARDY, ARMS OF, should be crossed with a bar, fillet, or traverse, from the left to the right. They were not formerly allowed to carry the arms of their father, and therefore they invented arms for themselves ; and this is still done by the natural sons of a king.

BASTARNjE, or EASTERN, a people of German original, manners, and language, who extended themselves a great way to the east of the Vistula, the east boundary of Germany among the Sarmatae, as far as the mouth of the Ister and the Euxine, and were divided into several nations.*

BASTARNIC7E ALPS, in ancient geography, i mountains extending between Poland, Hungary, and Transylvania, called also the Carpets, and now the Carpathian mountains.

BASTAVOE, a bay on the east side of Yell, one of the Shetland islands. Long. 1►► 16′ W., lat. 60►► 59′ N.

BASTE’, -) Participle pass, basted,

BASTINA’DE, v. & n. >or hasten. Fr. bastonner. BASTINA’DO, v. & n.J Bazata, in the Armorick dialect, signifies to strike with a stick; from which perhaps baston a stick, and all its deriva- tives, or collaterals, may be deduced ; to strike,

beat, bang, betliwack with a cudgel ; so Cotgrave. Applied to noisy abuse with the tongue.

What cannoneer begot this lusty blood ? He speaks plain cannon, fire, and smoke und bounce; He gives the bastinado with his tongue ; Our ears are cudgrll'd ; not a word of his But buffets better than a fist of France, /ounds ! I was never so bethump'd with words Since I first call'd my brother's father dad.

Shaktpearo.

But tins courtesy was worse than a bastinado to Zelmane ; so with rageful eyes she bade him defend hiinselt". Sidney.

I am not apt upon a wound, Or trivial basting, to despond ; Yet, I'd be loth, my days to curtail.

Hudibras.

The beaten soldier proves most manful, That like his sword endures the anvil, And justly's held more formidable. The more his valour's malleable. But he that fears a bastinado, Will run away from his own shadow. Id.

Quoth she, I grant it is in vain For one that's basted to feel pain ; Because the pangs his bones endure Contribute nothing to the cure. Id.

Battings heavy, dry, obtuse, Only dulness can produce ; While a little gentle jerking Sets the spirits all a-\vorking. Swift.

Nick seized the longer end of the cudgel, and with it began to bastinado old Lewis, who had slunk into a corner, waiting the event of a squabble. Arbuthnot. In Turkey, says Montesquieu, where little regard is shown to the lives and fortunes of the subject, all causes are quickly decided. The bashaw, on a sum- mary hewing, orders whic 1) party he pleases to be bastinadoed, and then sends them about their business. lilackstone's Commcntariei.

BASTE, v. To baste meat ; to drop butter, or any thing else upon it as it turns upon the spit. This was formerly nvith a stick covered with fat, and it is therefore probable, that the term to haste, lo strike with a stick, came at length to be thus employed.

Sir, I think the meat wants what I have, a basting.

Shakspeare.

The fat of roasted mutton falling on the birds, will serve to baste them, and so save time and butter.

Swift.

HASTK', v. Bcstcn. To sew or stitch together slightly. l"r. tiaxtcr, to stitch.

And on her legs the painted buskins wore, liuxtfd with bands of gold on every side j And mailes b< twcene; and laced close afore.

Spenser. Faerie Queene. Shall the proud Lord

Thaf bmtf.i his arrogance with his own seam, And never suffers matter of the world Kilter his thoughts ; save such as do revolve And ruminate himself, shall he be worshipt j Of tl.at we hold an idol more than he.

S/iitftspcare. Troilus and Cressida, DASTF.KXA, a kind of vehicle, or chariot, used li\ the ancient Roman ladies. I'apias thinks, th;:t 1 :i-;'(ma was first written for vesterna, but the word veins Letter derived from the Greek tff/casw, puito, I carry. Salinasius observes, that tlit- hastrrna succeeded the lectica, or litter ; from '.vhich it difi'c.i-ed very little, except that the litter V'MS I'oriit: on the shouldrrs of slaves, and the lvi.jt'T),,i (it, iwn by beasts. The inside they cal-

led the cavea, or cage : it had soft cushions of beds, and glasses on each side like our chariots. Easterns passed from Italy into Gaul, and thence into other countries ; and to this we owe our chariots, which, though we call them currus, yet they have no conformity to the ancient currus, but are in effect basternae improved. The bas- terna appears also to have been used in war, for carrying baggage.

BASTI, in ancient geography, a town of the province of Batica in Spain, situated to the west of the Campus Spartarius, now called Baza in Granada.

BASTIA, a sea-port town of Albania, in Tur- key in Europe, over against the island of Corfu.

BASTIA, a town of the island of Corsica, on the north-east coast, seated on a hill, in the form of an amphitheatre. It is ill built, and has nar- row streets, but is defended by a citadel, and has a safe but not very commodious harbour. The inhabitants carry on a considerable trade in

wine, skins, pulse, oil, and figs, and the stilettos made here are much valued by the Italians. In 1745, it was bombarded and taken by the English, but restored to the Genoese the following year. The Austrians and Piedmontese besieged it unsuccess fully in 1748. It was annexed to France in 1768, and with the exception of a short period after its capture by the English in 1794, has remained ever since in the hands of that power. It con- tained a population of 11 or 12,000 souls, and before the French revolution it was the capital of the island, the seat of the governor, and of the principal offices of state, and courts of justice. It was also the see of the bishop of Marian and Acci. On the new modelling of the French ter- ritory in 1791, it was created the capital of the department of the Golo,and subsequently the head- quarters of the twenty-third military division. It is now the chief town of an arrondissement in the department of Corsica, the residence of a sub- prefect, and the seat of a civil and a commercial tribunal. Thirty-three miles E.N.E. of Calvi, and fifty-eight north-east of Ajaccio. Long. 9 26′ 30″ E., lat. 42►► 41′ 36* N.*

BASTIDE DE CLERENCE LA, a town of Lower Navarre, France, the head of a canton in the department of the Lower Pyrenees, arrondissement of Bayonne. It is about six miles E. S. E. of Bayonne, and has 2000 inhabitants.

BASTIDE, LA, a town of France, in Quercy, the head of a canton in the department of the Lot, arrondissement of Gourdon, with 1200 inhabitants, ten miles south-east of Gourdon.

BASTIDE DE SERON, LA, a town of France, in the county of Foix, department of the Arriege, arrondissement of Pamiers, with 1760 inhabitants, nine miles W.N.W. of Foix, and twelve north- west of Tarascon.

BA'STILLE, or} Bastille, Fr., bastide, Sp.

BASTILE, > from French bastir, to build,

BA'STILLIONS. j probably from the Greek and Latin basis, q. d. basitare, i. e. to raise upon a basis or foundation ; applied to military for- tresses, and to places of special defence, and of confinement.

These lordes caused battiles to be made rounde about the cytie, with which they troubled their ene- mier and assaulted the walles. Hall. King Henry VI.

B A S T I L E.

The same season there wa a capytayne at Calais,*

Sir Johan Dt-lnarnes, who receyued the bysshoppe

and his company with gretc ioyc ; and so they landed

lytell and lytell, and all their horses and baggage,

and so lodged in Calays, and thereabout in battylles

that they made dayly. Froissart. Crunyde, v. i. c. 329.

Our soldiers rose at the call of their captains, and

removed their munitions farr from the wall, providing

to fight more close and short along the high l/atttiles,

or countermures, which now, that they were finished,

overtopped ths walls. Holland. Ammiuma.

Thus fortune fares her children to empound,

Which on her wheel their bastile} bravely beeld.

Mirror for Magistrates. Near which there stands

A hostile built to imprison hands. Hudibras.

BASTILE, anciently used as a common name for a prison, under the feudal system in our own country, was a name particularly applied to several stˆte prisons in France : but that which was termed the bastile, by way of distinction, was situated near the gates of Paris, on the road to St. Anthony. The building was originally commenced by order of Charles V., and finished in 1383 under the reign of his successor. The original projector was Hugh d' Aubriot, mayor of Paris, who laid the first stone of the foundation on the 22d of April, 1370. Descended from an obscure parentage, this person had been raised by his merit into the favor of his sovereign, and so unqualified was the confidence reposed in him, that the charge of the capital was committed ex- clusively to his care.

The bastile, as planned by d' Aubriot, consisted only of two round towers, one on each side of the road leading into Paris, from the suburbs of St. Anthony, and united by means of a strong high wall, in the centre of which was the gate of the town. Several additional towers were afterwards erected, and in the succeeding reign two com- plete courts were formed by

means of intervening walls, which composed the body of the edifice. The road itself turned off to the right of the cas- tle, and left the whole building enclosed by a deep ditch, and secured by a counterscarp of nearly thirty-six feet from the bottom. The usual entry into the bastile was from St. Anthony street. Above the first gate was an armoury, and on the right side of the entrance a guard room. The first enclosure, from which a gate led to the arsenal, contained barracks for the garrison, coach houses and stables for the gover- nor and officers, shops for the sutlers, &c. A draw-bridge led from the court into the second enclosure, on entering which, was a guard-roam to the left, and the governor's house to the right ; and at the end a terrace, on which stood a pavi- lion, with beautiful walks, shaded with rows of trees. Opposite the governor's house was the entrance into the castle, and between the two were kitchens and other conveniences, erected on a blind bridge thrown across the ditch. From the second court was a draw-bridge, which led into the castle, and within the gate was another guard- room. The first court was 102 feet long, and seventy-two broad. It had six towers, and was terminated by a modern building, on the ground-floor of which was the council chamber and library, and over it the apartments of the Lieu- tenant du Roi, the surgeon, major, and other

officers, together with some rooms appropriated for prisoners of distinction. The second court was seventy-two feet long, and forty-two broad, containg two towers, and lodgings for persons belonging to the castle.

The prisoners were chiefly confined in the towers of the bastile, the entrances to which were secured hy double doors of oak, and con- ducted to a winding stair-case, lighted by narrow grated windows, which led to the rooms above, and the dungeon below. The dungeons had uo fire place, and instead of windows a small cre- vice towards the ditch, that served the twofold purpose of letting in air and light. They were arched, paved, and lined with stone, and were said to be places for the temporary punishment of those unhappy persons who might attempt to make their escape. In these dungeons the un- fortunate princes of Armagnac, sons of James, who was beheaded, were confined by Louis XL, the oldest of whom lost his senses in prison, and the youngest, obtaining his liberty on the death of the tyrant, related a tale of suffering which, if it were not corroborated by the most unqualified evidences, would almost exceed belief. Above each of these dungeons were four stories, con- taining each a single room, some of them having a small dark closet adjoining them, indented in the thickness of the wall. The rooms had each one window, glazed within, and doubly grated, one near the centre of the wall, and again at its exterior surface. Each room had a fire place and stove, the vents of the chimneys being se- cured by strong iron grates. The double doors were secured by several locks and bars, and many of the rooms had double ceilings ; the first was composed of lath and plaster, and the second of oak, supporting the floor of the room

imme- diately above. The walls and ceilings of these apartments were all plastered and white-washed, and the floors laid with tile or stone ; they were perfectly dry, owing to the extreme thickness of the building, being nearly seven English feet in diameter at the top, and gradually increasing downwards to the foundation. The three first stories were irregular polygons of about eighteen feet in diameter, and as many in height ; but the fourth, or top room, called calotte, was neither so large nor so high as the others, and was arched to support the stone roof or platform with which it was overlaid.

Such was the place of horror, in which hun- dreds were confined at the caprice of an arbi- trary monarch, or minister ; and so rigidly were the wretched victims concealed, that many have been shut up for years, cut off from all commu- nication with mankind, except the turnkeys and keepers of the prison, and neither friends nor relations have known what was become of the persons so mysteriously lost.

The officers who had the charge of the bastile were a governor, lieutenant du roi, a mayor, two adjutants, a surgeon and his assistant, a chaplain, and four turnkeys : these, with a com- pany of invalids and officers, lodged in the castle ; besides whom, a physician, two priests, a keepei of records, a clerk, a superintendent of buildings, and an engineer, who lodged in the town, his services being only occasionally required.

The king allowed the governor a daily sum for the maintenance of each prisoner, according to his rank in Society ; namely,

Livres.

For a prince of the blood ... 50 per day. For a marshal of France ... 36 For a lieutenant-general ... 24 For a person of quality or a member

of parliament 15

For an culinary judge, a priest, or

persons in the finances ... 10 For a respectable citizen ... 5

which, together with an additional salary for firing, candles, washing, &c., more than indem- nified him for the expenses of the prison.

The mode of arresting prisoners was by lettres de cachet, which were

sometimes signed by the king himself, and always countersigned by the minister of Paris, or one of the secretaries of state. We subjoin the following as a copy of one of these fatal instruments.

‘ MON COUSIN,

‘ Etant peu satisfait de votre conduite, je vous fais cette lettre, pour vous dire, que mon intention est qu’ aussitot qu’ elle vous aura etc remise, vous ayez a vous rendre en mon chateau de la Bastile, poury rester jusqu’ a mwvel ordre de moi. Sur ce je prie Dieu qu’il vous ait, mon Cousin, en sa sainte garde. Ecrit :\ Versailles, 2.”> Juin, 1748.

‘ Signe, Louis, 1 Voyer d’ Argenson.’ The above was inscribed,

‘A mon Cousin, le Prince de Monaco, Briga- dier en mon Infanterie.

Every prisoner, on coming to the Bastile, had an inventory made of every thing about him. His trunks, clothes, linen, and pockets, were searched, to discover whether there were any papers in them relative to the matter for which he was apprehended. It was not usual to search persons of a certain rank ; but they were asked for their knives, razors, scissars, watches, canes, jewels, and money. These were put into a box, and labelled, with the tower and number of the chamber in which lie was to be confined, and by which lie was afterwards called; so that the name of a pri>o!HT was, never pronounced, nor even known, among the inferior officers of the Bastile, the appellation beiiu’ No. l,dela Bertaudiere;

After this examination of his person, the pri- soner was usually conducted to his apartment. where he was carefully locked up, and an invalid soldier appointed to att nd him, who slept near him and waited upon him. The unhappy vic tim soon found that in this castle all was mystery, trick, artifice, and treachery; the attendant eonwyed all his words to the police, while the officers, turnkeys, valets, ivc. used every effort to draw

n to speak against government, merely tor the purpose of getting a reward for revealing what was said. On a prisoner’s lirst entrance, he was not permitted to write to any person, not even the lieutenant of the police. When a per-

son had obtained permission to write to the laHer gentleman, he might solicit the indulgence of being allowed to address a letter to his family, and receive their answers, which on some occa- sions was granted ; but letters when sent were commonly intercepted, and seldom delivered to the friends. The officers of the staff took, the charge of conveying the letters of the prisoners to the police, by whom they were sent regularly twice a day, and suitable answers were addressed to the major, who communicated them to

the pri- soner; bu' if no notice was taken of any request contained in the letter of the prisoner, it was to be considered as a refusal. A criminal might ask to see the lieutenant of the police when he came to the Bastile, and in that case the conver- sation always turned upon the cause of his con- finement. This gentleman would sometimes ask for written and signed declarations, and on these occasions nothing that the prisoner wrote or said was forgotten. A person confined in the Bastile was never anticipated in any thing ††† he must ask for every thing ; even for permission to be shaved, an office always performed by the surgeon ; who also furnished sick or indisposed persons with sugar, coffee, tea, chocolate, confections, and the remedies necessary for their complaints. Their hour of dining was eleven, and of supping, six ; and the time allowed for walking was commonly one hr>ur in the day, sometimes an hour in the morning and an hour in the evening, in the great court of the fortress.

To give the reader some imperfect idea of the internal discipline of the Basfile, under its mildest regime, we shall quote a short extract from the account of a prisoner, once confined there. ††† ' About five in the morning,' says he, ' on the 2d of April, 1771, I was awaked by a violent knocking at my chamber door, and was com- manded in the name of the king to open it. I did so, and an exempt of the police, three men and a commissary, entered my room. They de- sired me to dress myself, and began to search the apartment. They ordered me to open my drawers ; and having examined my papers, they took such as they chose and put them into a box, which, as I understood afterwards, was carried to the police-office. The commissary asked me my name, my age, the place where I was born, how long I had been at Paris, and the manner in which I had spent my time. The examination was written down ; a list was made of every thing found in the room, which, with the examination, I was desired to read, and sign. The exempt then told me to take all my body-linen, and such clothes as I chose, and to come with them. Having shut and sealed the drawers, they desired me to follow ; and in going out they locked the chamber door, and took the key. On coming into the street I found a coach, into which I was desired to go, and the others followed me. After sitting for some time, the commissary told me they were carrying me to the Bastile, and soon afterwards I saw the towers. They did not go the shortest and direct road : the coach stopped at the gate in the street of St. Anthony. I saw the coachman make signs to the sentinel, and soon after the gate was opened ; the guard was under arms, and the gate shut again. On coming

to the first draw-bridge, it was let down, the guard there also being under

*arms. The coach went on and entered the castle, where a third guard was stationed. I was conducted to a room that I heard named the council chamber. After an examination similar to that of the commissary, 1 was desired to empty my pockets, and lay what I had in them on the table. My handkerchief and snuff-box being returned to me, my money, watch, and indeed every thing else, were put into a box, and an inventory having been made, were sealed up in my presence. The major then called for the turnkey, whose tnrn of duty it was, and asked what room was empty. He said the calotte de la Bertaudiere. He was ordered to convey me to it, and to carry thither my linen and my clothes. The turnkey having done so, left me and locked the doors. The weather was still extremely cold, and I was glad to see him return soon after with fire-wood, .a tinder-box, and a candle. He made my fire, but told me, on leaving the tinder-box, that I might in future do it myself when so inclined. At eleven the turnkey entered with my dinner. Having spread the table with a clean napkin, he placed the dishes on it, cut the meat, and retired, taking away the knife; the dishes, plates, fork, spoon, and goblet were of pewter. The dinner con- sisted of soup and bouillie, a piece of roasted meat, a bottle of good table wine, a pound loaf of the best kind of household bread. In the evening at seven he brought my supper, which consisted of a roast dish, and a ragout. The same ceremony was observed in cutting the meat, to render the knife unnecessary to me. He took away the dishes he had brought for dinner, and returned at eight next morning to remove the supper things. Fridays and Saturdays, being fast or maigre days, the dinners consisted of soup, a dish of fish, and two dishes of vegetables ; the suppers of two dishes of garden-stuff, and an omelet, or something made with eggs and milk. The dinners and suppers of each day in the week were different, but every Friday was the same; so that the ordinary class of prisoners saw in the course of the first week their bill of fare for fifty years, if they staid so long. I had remained in my room about three weeks, when I was one morning carried down to the council chamber, atid again examined by the commissary. He then asked if I had any knowledge of some works he named, meaning those which had been written by me, if I was acquainted with the author of them, whether there were any persons concerned with him, arid if I knew whether they had been printed? 1 told him that as I did not mean to
ॠconceal any thing, I should avoid giving him tieedless trouble; that I was myself the author of the works he had mentioned, and guessed I was there on that account ; that they never had been printed ; that the work which I conceived was the cause of my confinement had never been shown to any, but one person, whom I thought my friend, and having no accomplices, the offence, if there was any, rested solely with myself. He said my examination was one of the shortest he had ever been employed at, for it ended here. I was carried back to my room, and the next day vas shaved for the first time since my confine-*

ment, it being usual never to shave a prisoner till after his first examination. A few days after- wards I wrote to the lieutenant of the police, requesting to be indulged with the use of books, pen, ink, and paper, which was granted ; but I was not allowed to go down to the library (a collection of about .500 volumes, founded by some prisoner in the early part of the eighteenth cen- tury) to choose the books. Several volumes were brought to me by the turnkey, who, when I de- sired it, carried them back and brought others.

After my last examination I was taken down almost daily, and allowed to walk about an hour in the court within view of the sentinel ; but my walks were frequently interrupted, for if any one appeared the sentinel called out ‘ au cabinet 1′ and I was then obliged to conceal myself hastily in a kind of dark closet in the wall.

‘ The sheets of my bed were changed once a fortnight. I was allowed four towels a-week, and my linen was taken to be washed every Saturday. I had a tallow candle daily, and in the cold season a certain number of pieces of fire wood. After being detained above eight months I was in- formed that an order had come to discharge me. I was desired to go down to the council chamber, every thing I had brought with me was returned, together with the key of my apartment, which I found exactly in the state I left it. During ray confinement I wrote many letters to several of my friends., which were always received with civility, but not one of them had been deli- vered.’

The above was a case of uncommon indul- gence, and displays a lenity unusual in the Bas- tile. In common cases the course pursued was as follows : ††† The prisoner, a few days after his entrance into the Bastile, was brought down to the council chamber, where a commission of interro- gatory was executed by the lieutenant of the police, a counsellor of state, a master of re- quests, a counsellor or a commissioner of the Chatelet. When the lieutenant of the police did not himself interrogate, he casually came at the end of the examination. These commis- sioners were mere tools. Frequently they at- tempted to frighten a prisoner : laying snares for him, and employing the meanest artifices to draw a confession from him. With this insidious view, it was customary to pretend proofs, and exhibit papers without suffering him to read them ; asserting that they were instruments of unavoidable conviction. Their interrogatories were always vague, and turned not only on the prisoner’s own words and actions, but on his most secret thoughts, and on the discourse and conduct of persons of his acquaintance, whom they likewise wished to bring into question. The examiner usually told the prisoner that his life was at stake ; that on that day his fate depended on himself; that if he made a fair declaration, they were authorised to promise him a speedy release ; but if he refused to confess he would be given up to a special commission : that they were in

possession of decisive documents, and authentic proofs, more than sufficient to ruin him ; that his accomplices had discovered all ; that the government had unknown resources, of which he could have no suspicion. The pri-

soners were thus beguiled by varied and infinitely multiplied interrogatories ; by promises, caresses, menaces, Sec. If the prisoner made the re- quired confession, the commissioners then told him that they had no precise authority for his enlargement, but they had every reason to ex- pect it ; that they were going to solicit it, &c. The prisoner's confession, far from bettering his condition, usually gave occasion to new interro- gatories, often lengthened his confinement, drew in the persons with whom he had connexions, and exposed himself to new vexations. But although there were rules adapted to all oc- casions, yet every thing was subject to excep- tions arising from influence, recommendation, protection, intrigue, &c. Very frequently, per- sons confined on the same account were treated very differently, according as their recommenda- tion was more or less considerable. The falsest things were told the prisoners with an air of sincerity and concern ; as ' it is very unfortunate that the king has been prejudiced against you. His majesty cannot hear your name mentioned without being irritated. The affair for which you have lost your liberty is only a pretext. They had designs against you before, you have power- ful enemies' These discourses were the etiquette of the place. It was in vain for a prisoner to ask leave to write to the king, for he never could obtain it. NY hat constituted the perpetual and most insupportable torment of this cruel and odious inquisition, was the vague, indeterminate, false, or equivocal promises, inexhaustible and constantly deceitful hopes of a speedy release, exhortations to patience, and blind conjectures, of which the lieutenant of the police and his ollicers were very lavish. To cover the odium of the barbarities exercised here, and slacken the y.eal of relations or patrons, to obtain justice for incarcerated innocence, the most absurd and contradictory slanders against the prisoner were frequently published ; whilst the true causes of imprisonment, and real obstacles to his release, were concealed. These resources, so infinitely varied, were inexhaustible. NY hen a prisoner who was known and protected had entirely lost his health, and his lite was thought in danger, he was always sent out; the ministry not choosing that persons well known should die in the Bas- tile. N \ henover a prisoner happened to die there, he was interred in the Parish of St. Paul, under the name of a domestic ; and this falsity was also written in this register of deaths, in order to deceive posterity. But there was another register in which the true names of the deceased were: entered ; thouuh it was not without great difficulty that extracts could be procured from it: and when this indulgence was granted, the com- missary of the1 Bastile

was first to be informed of the use the family intended to make of the extract. SINCII.AII DiMiu'.ss or.\N AGK.I) PRISONER IN TUT. BASTILK. Nowhere else on earth, per- haps has human misery, by human means, been rendered so lasting, so complete, or so remediless, as within the dire walls of the Bastile of France. Tliis the following case, the particulars of which are translated from that elegant and energetic writer M. Mercier, may sufficiently show. The heinous olffiice which merited an imprisonment

*surpassing torture, and rendering death a bles- sing, though for obvious reasons not specified by our author, is known from other sources to have consisted in some unguarded expression of dis- respect towards the Gallic monarch Louis XV. Upon the accession of his late unfortunate suc- cessor, the ministers then in office, moved by hu- manity, began their administration with an act of clemency and justice : they inspected the re- gisters of the Bastile, and set many of the pri- * soners at liberty. Among the number was an old man, who had groaned in confinement, for a period of forty-seven years, between four thick and cold stcne-walls. Hardened by adversity, which strengthens both the mind and the consti- tution, when men are not overpowered by it, he had resisted the horrors of his long im- prisonment with an invincible and manly spirit. His locks, white, thin, and scattered, had almost acquired the rigidity of iron ; whilst his body, environed for so long a time by a coffin of stone, haa borrowed from it a firm and compact habit. The narrow door of his tomb, turning upon its grating hinges, opened not as usual by halves ; and an unknown voice announced his liberty, and bade him depart. Believing this to be a dream, he hesitated ; but at length rose up and walked forth with trembling steps, amazed at the space he traversed : the stairs of the prison, the halls, the court, seemed to him vast, immense, and almost without bounds. He stopped from time to time, and gazed around like a bewildered traveller : his vision was with difficulty recon- ciled to the clear light of day : he contemplated the heavens as a new object : his eyes remained fixed, and he could not even weep. Stupified with the newly acquired power of changing his position, his limbs, like his tongue, in spite of his efforts, refused to perform their office ; at length he got through the formidable gate which so long before had closed upon him. When he felt the motion of the carriage designed to con- vey him to his former habitation, he screamed out, and uttered some inarticulate sounds ; and as he could not bear this new movement, he was obliged to descend. Supported by a bene- volent arm, he sought out the street where he had formerly resided : he found it, but no trace of his house remained : one of the public edi- fices occupied the spot where it had stood. He now saw nothing that brought to his recollection, either that particular quarter, the city itself, or the objects with which he had formerly been acquainted. The houses of his nearest neighbours, which were fresh in his memoiy, had assumed a new appearance. In vain were his*

looks directed to all the objects around him; he could discover nothing of which he had the smallest remembrance. Terrified, he stopped and fetched a deep sigh. To him, what did it import that the city was peopled with living creatures ? none of them were alive to him ; he was unknown to all the world, and he knew nobody : and whilst he wept, he regretted his dungeon. At the name of the Bastile, which he often pronounced, and even claimed as an asylum, and the sight of his clothes that marked a for- mer age, the crowd gathered round him : cu- riosity, blended with pity, excited their attention.

The most aged asked him many questions, but had no remembrance of the circumstances he recapitulated. At length accident brought in his way an ancient domestic, now a super- annuated porter, who, confined to his lodge for fifteen years, had barely sufficient strength to open the gate : he did not even know the master he had served ; but informed him that grief and misfortune had brought his wife to the grave thirty years before, that his children were gone abroad to distant climes, and that of all his rela- tions and friends none now remained. This re- cital was made with the indifference which people discover for events long passed, and almost for- gotten. The miserable man groaned, and groaned alone. The crowd around, offering only un- known features to his view, made him feel the excess of his calamities even more than he would have done in the dreadful solitude that he had lately quitted. Overcome with sorrow, he pre- sented himself before the minister, to whose hu- manity he owed that liberty which was now a burden to him. Bowing down, he said, ‘ restore me again to that prison from which you have taken me : I cannot survive the loss of my nearest relations ; of my friends ; and, in one word, of a whole generation. Is it possible in the same moment to be informed of this univer- sal destruction, and not to wish for death ? This general mortality, which to the rest of mankind comes slowly and by degrees, has to me been instantaneous, the operation of a moment. Whilst secluded from society, I lived with my- self only ; but here I neither can live with my- self nor with this new race, to whom ray anguish and despair appear only as a dream. There is nothing terrible in dying; but it is dreadful indeed to be the last.’ The minister was melted ; he caused the old domestic to attend this unfor- tunate person, as only he could talk to him of his family. This discourse was the single consolation that he received : for he shunned all intercourse with a new race, born since he had been exiled from the world ; and he passed his time in the midst of Paris in the same solitude as he had done whilst confined in a dungeon for almost half a century. But the mortification of meeting no person who could say to him, ‘ we were

formerly known to one another/ soon put at end to his existence.

The man with the mask was the most astonish- ing prisoner ever known to have been within the walls of the Bastile ; of whom, notwithstanding all the curiosity and conjecture that have been employed to ascertain his quality and pedigree, nothing authentic has transpired to the present time. In 1 698 he was brought from the island'of St. Marguerite by Mons. de St. Mars, the newly appointed governor of the Bastile, was attended with the greatest respect, maintained a sumptuous table, and had every possible indulgence shown him till the time of his death in Nov. 19, 1703. This mysterious prisoner, on his removal to the Bastile, was carried in a litter, accompanied by several men on horseback, who had orders to put him to death if he made the smallest attempt to show his face or otherwise discover himself. His face was concealed by a mask of black vel- vet with springs of steel, which were so contrived

that he could eat without taking it off. A phy- sician of the Bastile, who had often attended him, said he had never seen his face, though he had frequently examined his tongue and other parts o. his body ; but added, that he was admirably well made, that his skin was brown, his voice interest- ing; that he was very accomplished, read much, played on the guitar, and had an exquisite taste for lace and fine linen.

The pains taken for his concealment shows that he was a person of considerable quality and im- portance, and from the following circumstances it appears singular that he was never discovered. Whilst at St. Marguerite, he one day wrote something with his knife on a silver plate, and afterwards threw the plate through the window towards a boat which lay near the tower. A fisherman took up the plate and brought it to the governor, who, with great astonishment, asked the man if he had read the writing or shown it to any other person; and, although lie answered in the negative, put him into confinement till he was perfectly satisfied, after which he dismissed him, saying, ' It is lucky for you that you can- not read.' The abbe Papon says, in the year 1778 I had the curiosity to visit the apartment or this unfortunate prisoner : it looks towards the sea. I found in the citadel an officer in the inde- pendent company there, seventy-nine years of age. He told me that his father had often related to him that a young lad, a barber, having seen one day something white floating on the water, took it up. It was a very fine shirt, writ- ten almost all over; he carried it to Mons. de St. Mars ; who, having looked at some parts of the writing, asked the lad, with an appearance of anxiety, if he had not had the curiosity to read it. He assured him that he had not, but two days afterwards the boy was found dead in his bed.

Mons. de Jonca, for many years Lieutenant du Roi, kept an exact journal

of all that passed in the Bastile. He thus records the death of the black mask. ‘ Monday, Nov. 19, 1703. The unknown prisoner, whom Mons. de St. Mars brought with him from the island St. Marguerite, where he had been a long time under his care, and who has always been masked with a mask o. black velvet, found himself worse yesterday in coming from mass and died this evening at ten o’clock, without any great illness. The smell, however, is not less offensive. Mons. Girault, our chaplain, confessed him yesterday, his death being sudden he had not an opportunity of taking the sacraments ; but our chaplain exhorted him a few minutes before he expired. He’ was buried on Tuesday, the 20th of November, in the burying-place of our parish of St. Paul. His burial cost forty livres.’

Immediately after the prisoner’s death his apparel, linen, clothes, mattresses, and every thing that had been used by him, were burnt; the walls of his room were scraped, the floor was taken up, and every precaution used that no trace of him mighj he left behind ; and yet there are traces. When he was on the road from St. Marguerite to his last residence, Mons. de St. Mars was overheard to reply to a question of the prisoner, relative to any design against his life. ‘ No, prince, your

life i.i in safety; you must only allow yourself to be conducted.’ A prisoner told Mons. la Grange Chancel that he was lodged, with other prisoners, in the room immediately over this cele- brated prisoner, and found means of speaking to him by the vents of the chimney ; but he refused to inform them who he was, alleging, that it would cost his own life, as well as the lives of those to whom the secret might be revealed. Various have been the individuals supposed to be the masked prisoner; particularly the ‘duke de Beaufort, the count de \ ermandois, a foreign minister, and the dukeof Monmouth, have been conjectured in turn. Collateral facts, nevertheless, demonstrate that neither of these could have been the person. Voltaire, who has expressly written on this mys- terious affair, says, that the secret was known to Mons. de Chamillard, and that the son-in-law of that minister conjured him on his death-bed, to tell him the name of the man with the mask ; but he replied that it was a secret of state which he had sworn never to divulge. The most singular circumstance of the whole, perhaps, is, that dur- ing the confinement of this man with the mask no person of importance was missing in Europe; whence it has been thought that he was the twin brother of Louis XIV., whose birth was concealed by the advice of cardinal Richelieu, but himself preserved, lest, by the death of his brother,

it should be necessary to avow him.

Upon the whole, 'after a long series of oppres- sions, the horrors of the Bastile became so noto- riaus that in July, 17R9, the people made an attack upon the building, which held out a few hours and afterwards surrendered. The gover- nor was seized, carried through the streets, and afterwards beheaded. The major, aid-major, and lieutenantof the invalids, were killed in the streets. One soldier was killed and four wounded in the defence; but numbers were wounded, another killed, and two hanged, at the Greve, by the populace, as soon as they gained possession; the prisoners were feasted and made public spectacles in Paris, the governor's house and adjacent build- ings were levelled, and the mayor afterwards decreed that the whole edifice should be demo- lished. See Boulanvilliers' llistoire de 1'ancien Gouvernement, torn, iii.; Memoiresdu Marechal Due de Richelieu The History of the Bastile, 1. ond. 1790, 8vo.

B AST! MKNTOS, several small islands near Terra Firma, in South America, at the mouth of the bay cf Nombre de I)ios, east of Porto-Bello. '1 hese islands form a very good port which serves as a watering-place for smugglers. Here admiral Hosier lay with a British squadron many years ago, and the station being unhealthy it proved i'atal to himself and the greater part of his men. l.on.. 7'/J 40" \V., hit. 9►► 32' N. It was on this circumstance that Glover, the author of Leonidas, grounded his spirited ballad of 1 1 osier's (.host.

IS.xsi i N A IM., BAˆIONADK, or BASTONADO, the punishment of beating a criminal with a stick. J t was in use among the ancient Greeks, Romans, and Jews, anil still is among the Turks. The Romans called it fusti'_ati;>, f'ustium admonitio, or liu.tiiius ea-di ; which diti'ered from the flagel- latio, as the former was done with a stick, the

latter with a rod, or scourge. The fustigation was a lighter punishment, inflicted on freemen ; the flagellation more severe, and reserved for slaves. It was also called tympanum, because the patient here was beaten with sticks, like a drum. It is much used in the East to this day. The method there practised is this : the criminal being laid on his belly, his feet are raised, tied to a stake, and held fast by officers for the purpose, in which posture he is beaten by a cudgel on the soles of his feet, back, chine, &c. to the number of 100 or more blows. Dr. Shaw suggests (Travels, p. 253.), that it was probably in this manner that St. Paul was ' thrice beaten with rods.'

BASTION, n. s. Fr. bastion. A huge mass of earth, usually faced with sods, sometimes with brick, rarely with stone, standing out from a rampart, of which it is a principal part, and was anciently called a bulwark.

And with five bastions it did fence, As arming one for every sense. Marvell.

To ward : but how ? ay there's the question : Fierce the assault, unarm'd the ba.tt.ion. Prior.

BASTION, in fortification, a large mass of earth at the angles of a work, connecting the curtains to each other. It is formed by two faces, two flanks, and two demigorges. The two faces form the saliant angle, or angle of the bastion ; the two flanks form with the faces, the epaules or shoulders ; and the union of the other two ends of the flanks with the curtains, forms the two angles of the flanks. There are varions kinds of bastions : such as, ♦♦♦ Bastion composed, when two sides of the interior polygon are very une- qual, making the gorges also unequal. Bastion cut, or Bastion with a tcnailie, is that whose point is cut off, and which instead thereof has a re- en- tering angle, or an angle inwards, with two points outwards. It is used either when without such a contrivance the angle would be too acute, or when water or some other impediment hinders the carrying on the bastion to its full extent. Bastion deformed, is when the irregularity of the lines and angles throws the bastion out of shape ; as when it wants one of the demigorges, one side of the interior polygon being too short, &c. Bastion fiat, is one built in the middle of the curtain, when it is too long to be defended by the usual bastions of the extremities. Bastion half, or Demi-bastion, also called an epaulement, has but one face and flank. Bastion, solid, is one entirely filled up with earth to the height of the rampart, with- out any void space towards the centre. Bastion, void, or hollow, has the rampart and parapet rang- ing only round the flanks and spaces, so that a void space is left within towards the centre, where the ground is so low that if the rampart be taken, no retrenchment can be made in the centre, but what will lie under the fire of the be- sieged.

BASTOGNE, or BASTOGNAC, a large town of the duchy of Luxemburg, in the Netherlands. It carries on a considerable trade in corn and cattle, and was formerly much more flourishing than at present; but is still, after Luxemburg, the best town in this part of the Netherlands. The French took it in 1688, and demolished the fortifications. Twenty-two miles north-west of Luxemburg, and thirty-five south of Liege.

BASTON, BATON, or BATTON, in heraldry. See BATTON.

BASTON, BATOON, in architecture, a moulding 31 the base of a column,

called also torus. See ARCHITECTURE, Index.

BASTON, in law, one of the servants to the warden of the Fleet-prison, who attends the king's courts with a red staff, for taking into custody such as are committed by the court. He also at- tends on prisoners who are permitted to go at large by licence.

BASTON (Robert), a Carmelite monk, prior of the convent at Scarborough, and poetlaureat and public orator at Oxford, in the fourteenth century. Edward I. in his expedition into Scotland in \ 304, took Baston with him to celebrate his vic- tories over the Scots ; but the poet being taken prisoner, was obliged to change his note, and sing the successes of Robert Bruce. He wrote several books in Latin, on the Wars of Scotland, the Luxury of Priests, Synodical Sermons, &c.; and also a volume of Tragedies and Comedies in English. He died about A. D. 1310.

BASTONIER, or BATONIER, one who keeps the staff of a community, and carries or follows it in processions.

BASTWICK (Dr. John), born at Writtle, in Essex, in 1593. He was educated at Emanuel College, Cambridge, from whence he went to Padna, where he took his degree of M. D. He afterwards practised physic at Colchester; but being a man of warm imagination, and a good Latin scholar, he used great freedom in writing against popery. About 1633 he printed in Hol- land a Latin treatise, entitled Elenchus religionis Papisticae, with Flagellum "Pontificis et Episco- porum Latialium, in which the English prelates, thinking themselves aimed at, he was fined ►►1000 in the high commission court, excommu- nicated, prohibited from practising physic, his books ordered to be burnt, and himself to remain in prison until he recanted. Instead of recanting, he wrote in prison, Apologeticus ad praesules Anglicanos ; and another book called, The Li- tany ; wherein he severely exclaimed against the proceedings, and taxed the bishops with an in- clination to popery. He was now condemned by the star-chamber to pay a fine of ►►5000, to be pilloried, lose his ears, and endure perpetual imprisonment. The parliament in 1640 reversed these proceedings, and ordered Dr. Bastwick a reparation of ►►'5000 out of the estates of the commissioners who had prosecuted him.

BAT, v. & n.~\ Bar, Sax. This word seems BA'TLET, ˆto have given rise to a great BA'TON, f number of words in many lan-

B'ATTER. j guages ; as, battre, Fr. to beat; baton, battle, beat, batty, and others. It proba- bly signified a weapon that did execution by its weight, in opposition to a sharp edge; whence whirlbat and brickbat ; a heavy stick or club : the citation of Spenser gives another meaning, which agrees with the

provincial usage of the word in Sussex, where a walking-stick is called a bat; the bat is also now a common word for what was once the stick in driving back the ball at the game of cricket.

But vvliile he spake, lo Judas, oon of the twelve fame, and with him a greet company with swerdis and battis. Wicliffe. St. Matt, xxvi. 47.

Here were we first ybatred with the dartes Of our owne feers from the hye temples top.

Surrey,

But neither sword nor dagger he did beare ; Seemts that no foes revengement he did feare ; Instead of them a handsome bat he held. On which he leaned, as one far in elde. Spenser. Estsoones the ape himself gan to vpreare And on his shoulders high his bat to beare, As if good service he were fit to doe. Id.

Nay, come not near the old man, keep out, che vor ye, or I'se try whether your costard or my bat be the harder. Shakspeare.*

And I remember kissing of her batlet [a handle used in beating linen when taken out of the buck] and the cows' dugs that her pretty chopped hands had milked. Id.

They were fried in arm chairs, and their bones broken with bats. HahewilL

We came close to the shore and offered to land ; but straightway we saw divers of the people with bastons in their hands, as it were forbidding us to land. Bacon.

Get me a baton ; 'tis twenty times more court-like, and less trouble ; and yet you wear a sword.

Beaumont and Fletcher. Elder Brother.

That does not make a man the worse,

Although his shoulders with batoon

Be claw'd and cudgell'd to some tune. Hudibras.

BAT, "| Skinner's conjecture that

BAT'EYEP, this word is derived from the

BAT'TISH, (old Saxon word bat, a boat,

BAT'FOWLER, (because the creature it dc-

BAT'POWLING, j scribes, with its wings ex-

BAT'TY. J panded, resembles a boat

impelled by oars, is more ingenious than solid.

Our ancestors were accustomed to denominate

the animal back ; it is called so in Huloet's old

dictionary ; that and reremouse appear to have

been the usual words for it ; ' the other face had

wings like a backe or flindermouse.' See Knight.

Tryal of Truth, 1580, fol. 96; from hence,

probably, Dr. Jamieson's derivation of backie-

bird, its modern name in Scotland ; we know

not the reason for the change into bat.

See the bat hath flown

His cloister'd flight, ere to black Hecate's summons The shard-borne beetle with his drowsy hums Hath sung night's yawning peal, there shall be done A deed of dreadful note. Shakspeare,

Wool of bat, and tongue of dog, Adder's fork and blind worm's sting, Lizard's leg and owlet's wing, For a charm of powerful trouble, Like a hell-broth boil and bubble. , Id.

GON. You are gentlemen of brave mettle ; you would lift the moon out of her sphere if she would continue in it five weeks without changing.

SEB. We would so, and then go a bat-fowling.

Id. Tempest.

Yet could his bat-ey'd legions eas'ly see In this dark chaos. Fletcher. Purple Island. But then grew reason dark ; that she no more

Could the fair forms of good and truth discern ; Bats they became, that eagles were before ;

And this they got by their desire to learn. Davies.

Some animals are placed in the middle betwixt

two kinds, as bats, which have something of birds

and beasts. Locke.

Where swallows in the winter season keep, And how the drowsy bat and dormouse sleep. Gay. Bodies lighted at night by fire, must have a brighter lustre than by day, ••• as sacking of cities, bat- fowling. Peacham.

Far different there from all that charm 'd before,

The various terrors of that horrid shore ;

Those matted woods where birds forget to sing,

But silent buts in drowsy clusters clin . Goldsmith.

The birds of passage would in a dark night imme- diately make for a light-house, anu destroy them- selves by flying with violence against it, as is well known to bat-fowlers.

BAT, BATCH, BATE, or BAT/:. See BATZ.

BAT-FOWLING, a particular manner of bird- catching in the night-time, while they are at roost upon perches, trees, or hedges. They light torches or straw, and then beat the bushes : upon which the birds, flying to the flames, are caught either with nets or otherwise.

BAT, in zoology. See VESPERTILIO. BAT-HORSES, or BAW-HORSES, in military af- fairs, baggage-horses belonging to the officer when on actual duty. Bat-men, or Baw-men, originally servants hired in war time to take care of the horses belonging to the artillery, &c. The same name is now given to those who are ex- cused regimental duty for the express purpose of attending to the horses belonging to the officers.

BATA, in botany, the Musa Paradisiaca of Lin- naeus.

BATACOLO, a small fort and garrison on the east of the island of Ceylon. Lat. 7••45'N., long. 81•• ,')(/ K. This place h;is little or no con- nexion v.iih the south and west parts of the island, the harbour being

incommodious. Here is also an uncommonly bold shore, and immense rocks of very grotesque figures, such are the i nar's Hood, the Klephant, and the Pagoda Hocks.

BAT ANY, BATANG, or BATANY HOOK, a sea- port t'.iun on the east coast of the island of Gi- lolo, \hen: cruizing vessels were formerly kept by tlu- !)ute!i for the prevention of smuggling. Their is a spacious natural fortress on a point of land of very difficult aeeess, and containing se- veral houses and gardens. The whole area thus surrounded is about three miles in circum- ference.

BATAilDEAU, in bridge building. See

Coi ITU-DAMS.

BATATAS, in entomology, a species of aca- rus, found on the potatoe in Surinam, and some other parts of South America. It is rather rough and sanguineous; anterior legs as long as the body.

I5ATAVA, in ancient geography, a citadel of Yindelieia, so called from the Cohors Batava, in garrison under the commander in Hhatia ; now Passau ; bcinˆ called Batau, from the Batavi ; then Hassan, and I'assau; situated in Bavaria, at the confluence of the Danube, Inn, and lltz. See PASSAT.

BATAYJ, the ancient Batavians, a branch of ihe Catti, who, in a domestic sedition, being ex- pelled their country, occupied the extremity of the coast of (iiml, orthe modern Holland, at that time uninhabited, together with the island, called from them Insula Batavorum, situated among shoals. Thus, Luean, 1. 1, v. 131.

Vanjuoncs : liataviquo truces, quos a;rc rccurvo

Stridi nt.'.s ai'iu'rc tuij.i- :

'i'heir name Batavi they carried with them from < Jem. any, there being some towns in the territory ot the Catti, ca'led Battenberg, and Battenhau- sii:. T! n I : iveiy of the BaUvi, especially the

horsemen, procured them not only great honor from the Romans, being called their brothers and friends; but an exemption fiom taxes, being obliged only to furnish men and arms.

BATAVIA, a city on the north coast of the island of Java, the capital of the Dutch settle- ments in the East Indies. It stands at the mouth of the river Jacatra, in the bosom of a large commodious bay, which is one of the safest harbours in India. Lat.6►►12'N., long. 107″ 4′ E. The Jacatra

*passes through the micl*t of the town, and forms various canals of running water, all faced with freestone, and adorned with trees : over these canals are upwards of fifty bridges, besides those which lie without the town. The streets are all perfectly straight, and each, on an average, thirty feet broad. The houses are built of stone. The city is about a league and a half in circumference, and has five gates; but there are far more houses without than within them.*

A circular range of islands protects the har- bour of Batavia from any heavy swell, and ren- ders it safe anchorage, these are Onrust, Edam, Cooper's Isle, and Purmerend, containing ware- houses, hospitals, and naval arsenals. From the roadstead there are scarcely any of the buildings of Batavia visible, except the great church, the real being hid by the palms and other high spreading trees.

Batavia is well fortified, and the approaches both by sea and land are secured by strong out- works. On an island, at the entrance of the har- bour, there is a fort which command? that passage, and protects the extensive dock-yards. The citadel, on the east bank of the Jacatra, is a regular fortress, built of coral rock : it contains the house of the governor- general of the Indies-, and the principal authorities. The great church is said to have cost ►►80,000 ; but the public buildings, generally, are inferior. There are be- sides five other Christian churches, a mosque, and a temple belonging to the Chinese ; the stadt-house, bridewell, infirmary, orphan-house, and tw,o public hospitals, one of which is in the island of Purmerend. Here are also arsenals and magazines, well stocked with military stores and ammunition. The government consists of a council formal by the governor-general of the East Indies, who is president, the director-gene- ral, or governor of Java, nine members, and two secretaries. The power of this body is absolute ; and the governor-general may, on hjs own re- sponsibility, adopt any measures rejected by the others. The police and criminal magistracy is under a Fiscal, who can levy fines and inflict punishments at discretion. The regulation of all matters relating to navigation are under the marine fiscal ; and a Shah-bender, or captain of the port, acts as consul-general for all nations. A garrison of about 5000 men was main- tained by the Dutch, in Batavia, before it was captured by our troops, under Sir Samuel Auchmuty in 1811. At that period the number of inhabitants was 47,217.

In 1792 this city contained upwards of 50QO houses liable to be rated ; and a population of 115,960 souls, of which 6000 were citizens, 22,000 Chinese, and 1 7,000 slaves ! The total

population of Batavia and its immediate depen- dencies, is estimated at 150,000 souls. The last census of the town is as follows :

Europeans, 543; Arab, 318; Javanese, 3331 ; Bali-men, 7720 ; Moluccans, 82 ; native Dutch, 1485: Malays, 3155; Macassars, 4115; Sum- bay ans, 237; Timorotes, 24 ; Chinese, 11,854; Slaves, 14,239.

The principal articles imported are cloths, drugs, and opium, from Bengal ; camphor, ben- zoin, birds-nests (hirundo esculenta), coa-lin, and ivory, from Sumatra; garden-seeds, butter, Madeira and Constantia wines, from the Cape of Good Hope; porcelain, tea, silks, nankeens, alum, borax, sulphur, cinnabar, mother of pearl, paper, sweetmeats, and tobacco, from China; copper, sword-blades, camphor, soy, porcelain, lackered ware, and silks, from Japan. The ex- ports from Batavia are pepper, sugar, rice, coffee, and arrack ; sanchu, (burnt wine.) a kind of Chinese arack. To China, besides these arti- cles, they send birds-nests, of .the edible swal- low, vbicho do mar, sea-slug, or holothuria; cotton, spices, tin, rattans, sapan-wood, sago, and wax. To Borneo and the Moluccas, piece- goods, opium, and a few European articles. To the other Dutch settlements, rice. Bullion was the principal article imported from Europe be- fore the French revolution.

Batavia has always been unhealthy ; and the mortality in the garrison of the fort is almost in- credible. This arises evidently from the pecu- liar position of the town, and its injudicious or- naments. The plain around is flat, and filled with rice grounds, which must necessarily be often laid under water ; wrn'le the streets have each its canal and row of evergreens, which at once oc- casion pestiferous exhalations, and prevent a free circulation of the air. A part of the plain, also, on the left of the fort, is an impracticable morass. The thermometer at Batavia is seldom above 90□□, and usually as low as 84□□ : hence it is not excess of heat that makes it so unhealthy, yet such is the mortality, that one-fifth of the Euro- pean inhabitants die annually.

Amongst other causes of this, however, the in- temperance of the mode of living must not be overlooked. The vile habits of the Pagan and Mahommedan natives are but too contagious with the Europeans. The multitude of domestic slaves is a source of the worst habits : and most of the female part of society are a degenerate, debased race, lost in indolence and sensuality.

' Notwithstanding the republican form of the Dutch government,' says Mr. Hamilton, ' in no part of the world is the distinction of ranks so mi- nutely

and frivolously attended to as at Batavia, and the salaries allowed to the Dutch Company's servants being inadequate to the support of the establishment they think necessary for the sup- port of their dignity, corruption and bribery are universal. In society every individual is as stiff and formal, and as feelingly alive to every infrac- tion of his privileges, as if his happiness or mi- sery depended on the due observance of them. Nothing is more particularly attended to at en- tertainments by the master of the house, than the seating of every guest, and drinking their healths ui the exact order of precedency.

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To provide against future disputes on the subject of precedency, the respective ranks of all the company's servants were ascertained by a resolution of government, which was revised and renewed in 1764. The act by which these rules were first established consists of 131 articles, and enters into the most minute details respecting the carriages, horses, chairs, servants, &c. &c. of the company's servants.

' By the eighth article, little chaises for children, drawn by the hand, must not be gilt or painted but in exact proportion to the rank of the pa- rents. Ladies v/hose husbands are below the rank of counsellors of the Indies, may not wear at one time jewels more in value than six thou- sand rix dollars : wives of senior merchants are limited to four thousand ; others to three, two, and one thousand rix dollars.

'Article forty-ninth permits ladies of the higher ranks to go abroad with three female attendants, who may wear ear-rings of single middle sized diamonds, gold hair pins, petticoats of cloth, of gold, or silver gauze ; chains of gold and of beads, and girdles of gold; but they must not wear diamonds, pearls, nor any kind of jewels in their hair. Wives of senior merchants may have two, and ladies in an inferior station one female attendant, who may wear ear-rings of small dia- monds, gold hair pins, a jacket of fine linen, and a chintz petticoat ; but no gold or silver stuffs or silks, or any jewels, true or false pearls, or any ornament of gold. The eighty-third article recom- mends to the Dutch East India Company's ser- vants in Bengal, not to surpass their predecessors in pomp of dress and appearance ; and the 110th permits the director of the factory at Surat, when he goes abroad in state, to carry among other things, four fans, made after the fashion of the country, with the feathers of the bird of para- dise and cow-hair, with gold cases and hands. It is remarkable, that in these regulations the tax on carriages increases downwards, from the higher to the lower ranks, and penalties are attached to the infraction of these statutes.'*

The Chinese, who are the most effective part of the population, are indefatigably industrious, but notorious at the same time for cunning and dis- honesty. ‘ The Dutch,’ they say, ‘ have only one eye, but the Chinese have two.’ All the mecha- nic trades are carried on by them ; and the more wealthy are merchants, some of whom farm the customs and taxes. They inhabit a separate town, or campong, close to the city ; it is thronged with men and pigs, of which the Chinese keep some hundred thousands. The Malays, who are Mahommedans, have a bad character ; but they have been misrepresented by the Dutch, whose narrow, tyrannical policy has alienated the affec- tions of most of the natives. The Amboynese, generally employed as builders, are bold and tur- bulent.

The foundations of Batavia were laid in 1619 by the Dutch commodore Keen, and so prompt and successful were his companions, that it soon became the metropolis of the East India possessions. In 1629 it compelled an army of 200,000 Javanese to retire, after a siege of several months. Not long after, the viceroy rebelled against the emperor of Java : the DutcJi

did not fail to turn this circumstance to their own advantage; and at length contrived to get these sovereigns completely into their power. Their avarice and injustice, however, made the natives very anxious to emancipate themselves, and in 1722 a general conspiracy was discovered, only ;ust in time to prevent its execution. In 1740, not twenty years afterwards, 12,000 Chinese were massacred in one day, by order of the governor, on the plea, real or pretended, of a similar movement.

In 1798 a new camp at Welte Freden was established in a woody plain, a league and a half up the country. The road to it is along a fine causeway, with country seats on one side, and on the other a navigable canal. The barracks, which are built of wood and stone, occupy a third of the ground on the opposite side of the entrance. The Tannabang, a large Malay village, in which there are several Chinese families, stands on a height two leagues and a half from the city. Mester Cornells is a small fort, a league beyond Welte Freden, surrounded by small Javanese, Malay, and Chinese villages. The ground rises insensibly to Mester Cor- nelis, which is seen half a mile off. This fort lies in a hollow, on the bank of the great river, commanded by a small height. On the right and left of the road are bamboo barracks for the Maduran artillery, of which this is the depot. The fort is built of stone, but is not strong, the demi-bastions being scarcely two feet thick, by

four high, and surrounded by a dry ditch. The entrance is by a stone bridge, within which is the guard-house, and near to it another house occupied by the European artillery. The fort is quilted by another bridge on the opposite side, communicating with a range of wooden barracks, in which are tllj artillery officers arid companies under training.

The whole of the Dutch policy here has been wretchedly arbitrary and severe ; and although Sir Stamford Harries, the British governor, dur- ing our possession of the place, very successfully reformed their system, the new authorities are said to have returned to it. But Sir Stamford observes, ‘ of the splendor and magnificence which procured for this capital the title of the Queen of the East, little is now to be found. Streets have been pulled down, canals half filled up, forts de- molished, and palaces levelled with the dust. The stadt-house, where the supreme court of justice and magistracy still assemble, remains; mer- chants transact their business in the town during the day, and its warehouses still contain trie richest productions of the island, but few Euro- p’-ans of respectability sleep within its limits.’

HATAVIA, the ancient name of Holland. See HA i AVOP.IM.

1! \T.\ SAN REI-UULIC, one of the late de- mocratic stairs, formed upon the plan of the ! r”.ieh republic, out of the ci-devant United I’rovinns, ►►:: States of Upland. The Stadhold- ►►►►►►►►►►►MU- was ai> jli.siied in 1705 : a republic esta- l.’.ishfd March IT’.‘B. On the ‘24th of May 1806, vericd in’o a kingdom, in 1815 united uitli lleknnm. and in 1HFI MUM.

i; \1A\O!! I M OrpinuM, in ancient geo”ra-

phy, a town in the island of Batavia, mentioned by Tacitus : some suppose it to be Nimeguen.

BATCALE, or BATACOLE, a sea-port on the coast of Malabar, Hindostan, where the East India Company formerly had a settlement. In 1670 all the settlers were murdered by the natives; but it was again ceded to the company. Twenty miles north from Barcelore.

BATCH ELOR’S FEAR, a name given to a species of nightshade. See SOLANUM.

BATCH, the past participle of bakan, to bake ; any entire quantity ; a batch of bread is the bread baked at the same time.

How now, thou core of envy,

Thou crusty batch of nature, what's the news ?

Skakspeare.

Except he were of the same meal and latch.

Ben. Jorann.

BATCIIIAN ISLAND, one of the Moluccas, separated from Gilolo by a narrow strait, and situated between the equator and the first degree of south latitude. It is of an irregular shape, in length about fifty-two miles, by twenty the average breadth. In 1 775 the Sultan of Batchian claimed dominion over the islands of Ooby, Ce- ram, and Goram, but was himself entirely sub- ject to the influence of the Dutch. The inhabi- tants of Batchian are Malay Mahommedans. BATE, ˆ Dr. Johnson thinks it is con- BA'TAHLE, Mracted from debate; Skinner BA'TEFUL. j imagines that it is derived from Ang. Sax. beatan to beat to strike; Todd says positively it is from the Saxon bate, contention, strife or a make-bate. Among which fooles (mark Baldwine) I am one,

That would not stay myself in mine estate ; I thought to rule, but to obey to none,

And therefore fell I with my king at bate.

Mirror for Magistrates.

Naked as from the wombe we came, if we depart, What toyle to seeke that we must leve ? what bate

to vex the heart ? What lyef leade testey men, they that consume their

days

In inwarde frcets, untemper'd bates, at stryef with sum alwaies. Surrey. Ecclei. chap. iv. Pletyng the lawu For ev'ry strawe, Shall prove a thrifty man, With bate and strife, But by my life

I cannot tell you whan. Sir That. More Breeds no bate with telling of discreet stories.

Shaktpeare.

An honest, willing, kind fellow, as ever servant shall come in house withal ; and I warrant you no tell-tale nor no breed-Jute. Id.

This sour informer, this ftate-breeding spy,

This canker that eats up love's tender spring. This carry -tale, dissensious jealousy,

That sometimes true news, sometimes false, doth

bring. Id. Venus and Adonit.

These appear unto us like unto the hatable ground

lying betwixt England and Scotland, (whitest as yet

two distinct kingdomes) in so dubious a posture it is

hard to say to which side they do belong.

Fuller. General Worthies.

Eatable ground is terra pugnabilis Eatable ground seems to be the ground heretofore in question, whether it belonged to England or Scotland, lying between both kingdoms. Coteell.

He knew her haunt, pud hannted in the same, And taught h\s sheep her sheep in food to thwart ;

BATE.

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Which soon as it did hateful question frame,

H" might on knees confess his guilty part. Sidney.

BATE, ~\ Contracted from abate, old

BATE'LESS, /Saxon; to beat down; to de-

BATE'MENT, ►► press; to lessen; to diminish;

BA'TING. 3 to sink ; or cause to sink ; to cut off; to take away ; to remit.

Shall I bend low, and in a bondsman's key, With bated breath, and whisp'ring humbleness, Say this ? Shakspeare. Merchant of Venice.

GON. Sir, we were talking, that our garments seem now as fresh, as when we were at Tunis, at the mar- riage of your daughter : who is now queen.

ANT. And as the rarest thing that e'er came there, Bate, I beseech you, widow Dido. Id. Tempest.

Bardolph, am not I fallen away vilely since this

last plection ? Do I not bate ? Do I not dwindle ?

Why my skin hangs about me like an old lady's loose

gown. Id. Henry IV.

Yet I argue not

'Gainst Heaven's hand or will, nor bate a jot

Of heart or hope ; but still bear up and steer

Right onward. Milton.

Abate thy .speed, and I will bate of mine. Dryden.

When the landholder's rent falls, he must either bate the labourer's wages, or not employ or not pay him. Locke.

To abate, is to waste a piece of stuff: instead of asking how much was cut off, carpenters ask what batement that piece of stuff had.

Moxon'i Mechanical Exercises.

But I hate disputes ; and (therefore bating religious point?, or such as touch society,) I would subscribe to any thing which does not choak. me in the first pas sage, rather than be drawn into one. Sterne.

BATE, v. a term in falconry; to flutter the wings, as preparing for flight, particularly at the sight of prey : probably from battre. Fr.

All plumed like estridges that wing the wind ;

Bated like eagles haying lately bathed.

Shakspeare. I. Henry IV.

Hood my unmann'd blood bating in my cheek.

Id. Romeo and Jvliet.

It is a natural action with birds, after bathing, to shake the moisture from their wings; also when desirous of their food or prey, as in the following passage :

No sooner are we able to prey for ourselves, but they brail and hood us so

with sour awe of parents, that we dare not offer to bate at our desires.

Albumaxar. Old Play vii. 179.

The true meaning of the word is beautifully exemplified in the following passage of Bacon :

Wherein (viz. in matters of business) I would to God that I were hooded, that I saw less ; or that I could perform more ; for now I am like a hawk that bate.i, when I see occasion of service ; but cannot fly because I arn ty'd to another's first.

BATE (George), an eminent physician, born at Maid's Morton, near Buckingham, in 1608. In 1629 he obtained a licence, and for some years practised in and about Oxford ; chiefly among the Puritans. In 1637 he took his de- gree of M. D., and became so eminent, that when king Charles I. kept his court at Oxford he was his principal physician. When the king's affairs declined. Dr. Bate removed to London, where he became physician to the Charter-house, fellow of the college of physicians, and afterwards princi- pal physician to Oliver Cromwell. Upon the Restoration he again got into favor with the royal party, was made principal physician to king

Charles II., and fellow to the Roya. Society ; and this, as we are told by Wood, owing to a report raised by his friends that he gave the pro- tector a dose which hastened his death. Dr. Bate wrote in Latin a history of the civil wars in England, and some other tracts on physical sub- jects. He died at his house in Hatton-garden, and was buried at Kingston-upon-Thames in Surrey.

BATE (John), prior of the monastery of Car- melites at York in the fifteenth century, was borr in Northumberland, and educated at York and Oxford. Bate abundantly answered the hopes conceived of him, and became an eminent phi- losopher and divine, remarkable for his skill in the Greek tongue. He took the degree of D. D, at Oxford, and afterwards distinguished himself as an author. The Carmelites of York were so sensible of his merit, that, upon a vacancy, they offered him the government of their house ; which he accepted, and discharged that office with great prudence and success. He died in 1423, in the beginning of the reign of Henry IV.

BATE (Julius), a voluminous author, and an intimate friend of the celebrated Hutchinson ; by whose recommendation he obtained from Charles, duke of Somerset, a presentation to the living of Sutton in Sussex. His publications were: 1. An Essay towards explaining the first Chapter of Genesis, in answer to Mr. Warburton, 1741, 8vo. 2. The Philosophical Principles of Moses as- serted and defended against the Misrepresenta-

tions of Mr. David Jennings, 1744, 8vo. 3. Remarks upon Mr. Warburton's Remarks, shew- ing that the Ancients knew there was a Future State, and that the Jews were not under an equal Providence, 1745, 8vo. 4. The Faith of the Ancient Jews in the Law of Moses, and the Evi- dence of the Types, vindicated in a Letter to Dr. Stebbing, 1747, 8vo. 5. Micah, v. 2. and Mat- thow, ii. G. reconciled, 1749, 8vo. 6. An He- brew Grammar, formed on the Usage of the Words by the Inspired Writers, 1750, 8vo. 7. The Use and Intent of Prophecy, and History of the Fall, cleared, 1 750, 8vo. ; this was occasioned by Middleton's Examination of Sherlock. 8. The Blessing of Judah and Jacob considered, and the ./Era of Daniel's Weeks ascertained, in two Dis- sertations, 1753, 8vo. The Integrity of the He- brew Text and many Passages of Scripture vindicated from the Objections and Misconstruc- tions of Mr. Kennicot, 1755, 8vo. 10. A Reply to Dr. Sharp's Review, and Defence of his Dis- sertations on the Scripture Meaning of Eloim and Berith, 1755, 8vo. 11. A Reply to Dr. Sharp's Review and Defence of his Dissertation on the Scripture Meaning of Berith ; with an Appendix in Answer to the Doctor's Discourse on Cherubim, Part II., 1755, 8vo. 12. Remarks upon Dr. Benson's Sermon on the Gospel Method of Justification, 1755, 8vo. 13. Critica Hebraea, or a Hebrew English Dictionary without Points, &c. 1764, 4to. 14. A new and literal Transla- tion from the original Hebrew of the Pentateuch of Moses, and of the Historical Books of the Old Testament, to the end of II. Kings ; with Notes critical and explanatory, 1 737, 4to. This learned writer died April 7th, 1771.

BATE, or BHATTA ISLE an island of the pro-

vince of Gujrat, Hindostan, at the south-west extremity of the gulf of Cutch. It possesses a good harbour, and a fort, but is very barren. The town consists of about 2000 houses, principally inhabited by Hindoos. Long. 69□□ 21′ E,, lat. 22□□ 22′ N.

BATECUMBE, or BADF.COMBE (William), an eminent mathematician, supposed to have nou- rished about 1420, in the reign of Henry V. He studied at Oxford, where he applied himself to natural philosophy, but chiefly to the mathe- matics, in which he made a very great proficiency. His writings are: 1. Of the Formation and Use of the Concave Sphere. 2. Of the Solid Sphere. 3. Of the Use of the Astrolabe. 4. Philosophi- cal Conclusions.

BATEMAN (William), bishop of Norwich in the fourteenth century, was

born at Norwich. In 1328 he was collated to the archdeaconry of that see : soon after, he went to Rome, where he so distinguished himself that he was promoted by the pope to the place of auditor of the palace. He was likewise advanced by him to the deanery of Lincoln ; and sent twice as nuncio to endea- vour to procure a peace between Edward III. and the king of France. In 1343 he appointed him bishop of Norwich, and consecrated him with his own hands. In 1347 bishop Bateman founded Trinity-hall in Cambridge, for the study of the civil and canon laws ; and another hall dedicated to the Annunciation of the Virgin J\larv, for the study of philosophy and divinity. He was often employed by the king and parlia- ment in affairs of the highest importance. In 1354 he was, by order of parliament, despatched to the court of .Koine, with Henry duke of Lan- caster, and others, to treat, in the pope's presence, of a peace. This journey proved fatal to him; for he died at Avj'.nion, whore the pope resided, in 13. VI ,5, and was huru-d with great solemnity in the cathedral church of tlr.it city.

BATEN1TES, a sect of apostates from Ma- hommedanism dispersed through the Kast, who fell into the same abominable practices with the Ismaelians and Karmatians. The word properly signifies esoteric, or people of inward or hidden light ; they are also called Batenians.

BATES (William), D.I), an eminent non- conformist divine, horn in November 1625, was admitted of Emanuel college, Cambridge, and thence removed to King's college in 1644. He was one of the commissioners, at the conference in the Savoy, for reviewing the Liturgy, and was concerned in drawing up the exceptions against the Common Prayer ; however, soon after the Restoration, he was appointed chaplain to king Charles II., and became minister of St. Dun- slan's in the west, but was deprived of that bene- fice for nonconformity. He bore a very high character ; and was honored with the friendship of the lord keeper Bridtrman, the lord chancellor Finch, the earl of Nottingham, and archbishop Tillotson. At the Restoration he was offered the deanery of Litchtield, which he refused. He published Select Lives of illustrious and pious Persons, in Latin. His works, except his Select Lives, havt; been printed in one volume in folio, lie died July 14th, Ui'.i'.). Dr. Bates was well acquainted not only with theology, but with

poetry and the belles lettres ; his style has been much and justly praised for its elegance; and has obtained for him the appellation of the silver- tongued Bates.

BATH, one of the most elegant cities in the kingdom, and a bishop's see ; is situated in a delightful vale, and on the acclivity of a hill, facing the south and south-east, in the north-east extremity of Somersetshire, near the

borders of Gloucester and Wilts. It is twelve miles from Bristol, nineteen from Wells, thirty-eight from Salisbury, forty-two from Gloucester, sixty from Oxford, and 105 from London, by way of Chip- penham, or 107 through Devizes; surrounded by an amphitheatre of hills, of considerable eleva- tion, it enjoys, by means of the river Avon, which is here of considerable magnitude, and passes through a great portion of the city, a direct communication with the Bristol channel : the Rennet and Avon canal, which here falls into the Avon, completes the inland communication, by water, from London.

This was very early a favorite station of the Romans, and called by them Aqua Solis, Fontes Calidi, Badinia, and Thermae Achamannum. In 1755 the abbey-house or priory was taken down, and, about twenty feet below the surface, were discovered the remains of numerous Roman baths and sudatones, or sweating rooms, circular, semi- circular, and oblong ; paved with smooth flag- stones, with appropriate apartments adjoining, beautifully ornamented with tesselated pave- ments, &c. Such were the frigidarium, or outer room, where the bathers undressed ; the tepida- rium, or warmer apartment, within, and the oleothesion, a small room containing oils, oint- ments, and perfumes ; under these were vaults, ingeniously contrived to convey and retain the warmth required for the apartments above, la 444, when the Romans left this country, the city extended 12,000 feet in length, and 1150 in breadth ; and was surrounded by a wall nine feet thick, and twenty feet high ; some remains of which are now to be seen. The several gates have been taken down at different times (the west gate lately), to open and improve the ap- proaches.

Various other vestiges of this people are in the possession of private individuals, but most of them are preserved and classed in a building erected for that purpose, by the corporation ; amongst these are the remains and fragments of columns, cor- nices and capitals, of a magnificent temple, dedi- cated to Minerva, by Julius Agricola, on the present site of the great pump-room.

The coins which have been found, are chiefly those of Claudius, Vespasian, Trajan, Adrian, Antoninus Pius, Severus, Maximian, Carausius, and Constantine. Near the burial places of the soldiery, under Lansdown, quantities of urns, fibulae, armillae, and chains, have been dug up.

By the Saxons, Bath was known as Aceman- nes-ceaj-rn. the city of sick men; Acemannes- "cerii, and Lerbsefcun. It was a burgh town of the kingdom of Wessex. In 775 it was seized by Offa, king of Mercia, who established here a college of secular canons. During the incursions of the Danes in the eighth century, Bath was almost destroyed ; but, in the reign of Athelstan,

it "once more recovered its grandeur. Coins were at this time struck, and the grants to the monastery here augmented. King Edgar was inaugurated here, and gave many privileges to the town. Many of the Danish monarchs re- sided here. In the early part of the Confessor's reign it was held by his consort Eclitha; but it reverted to the crown after her father's death, and was attached to the royal demesnes in the time of William the Conqueror. In the reign of William Rufus, during the insurrection of Odo, bishop of Bayeux, and the Norman lords who espoused tl.e cause of the unfortunate Robert, it was plundered and burnt. The city owes its restoration to the liberality of John de Villula, a native of Tours, who purchased it of William II. for 500 marks, and obtained leave to remove the bishop's seat from Wells hither, uniting it to the monastery and church. He may indeed be considered as its second founder; all the public edifices were rebuilt by him ; and, becoming bishop of the see in the reign of Henry I., he bestowed large endowments on the monastery. The monks, a this and subsequent periods, are said to have greatly encouraged manufactures of woollen cloth. Corruption, however, crept among them, along with the rest of the religious orders ; and, in the reign of Henry VII., bishop King was compelled to introduce several regulations to correct their excesses. Bath is indebted to this prelate for her beautiful Abbey-church, &c., de- dicated to St. Peter and St. Paul, built in the form of a cross, and considered to be one of the finest specimens extant of the pure Gothic archi- tecture. It was begun by him in 1495, and finished in 1532. The dimensions of the win- dows are nearly uniform; they are large and beautifully formed : from the centre of the cross rises a tower 162 feet high, crowned with light open battlements. The body of the abbey is 210 feet long from east to west, and 126 from north to south ; and the breadth of the body and aisles is seventy-two feet. The principal en- trance at the west is through a fine arched door- way, and the attention of visitors is forcibly arrested by the excellent proportion and beauti- ful symmetry of this noble pile. In the interior is a handsome altar-tomb to the memory of bishop Montague. The vestry contains a small library, founded by bishop Lake. Bath has four parishes, each of which has its church. The abbey church is in the parish of St. Peter and St. Paul ; the names of the three others are St. James's, a freestone building, erected in 1768, at the west end of which is a square tower, contain- ing eight bells : St. Michael's, which was begun in 1734, has a fine dome, and is of the Doric order : Walcot church is dedicated to St. Swithin, and was rebuilt in 1780; this parish has a church entirely devoted to the accommodation of the lower orders, and contains four chapels of ease. In the reign of Elizabeth, the several parishes of Bath were consolidated into one rectory.*

Here are also two reading-schools, many pub- lic libraries, and literary and philosophical insti- tutions, the West of England Agricultural Society. &c.

Nor is Bath deficient in charitable establish-

ments. Here is a great hospital and infirmary, capable of receiving 150 patients, who have advice and the use of the waters gratis ; Bellot's hospital, and the Black alms ; the Stranger's Friend Society; the Eye Infirmary, and the Puerperal, or Child-bed Society. The free Grammar-school, and Blue-coat school, are also well-conducted establishments. The places of divine worship for dissenters are numerous ; that belonging to the Roman Catholics was for- merly the theatre.

By the census returned to parliament in 1832, Bath contained 7327 houses and 38,811 inha- bitants; exclusive of the out-parishes of Bath- wick, Bathhampton, Batheaston, and Bathford. The city was at one time governed by a steward ; but, in 1590, queen Elizabeth granted it a char- ter, declaring it a city, sole in itself, and vesting the government in a mayor, recorder, ten alder- men, and twenty-four common-council ; from the body of aldermen the mayor is elected, and from the council are chosen the chamberlain, two bailiffs, and two constables, annually. It sends two members to parliament, who are elected by the corporation. The see of Bath and Wells comprehends the whole county of Somerset, except a few churches in Bristol, and contains 388 parishes, and 503 churches and chapels. Sixty of the parishes are impropriate. The bishop's palace is at Wells. The vicarage of the abbey is included in the rectory of Bath, and Walcot is a rectory. Bath races are held in September, on Lansdown, one of the highest hills near the city, about three miles in extent. On this down is also held an annual fair, on the 10th of August, for cheese, cattle, horses, and all kinds of merchandise, and a fair is also held in Hollo- way, on the other side of the city, May 14th; two other fairs are held in the town.

By far the largest and finest part of this beau- tiful city is without the walls, particularly Queen Square, in the midst of which is a garden with gravel walks, and having an obelisk in the centre. Another principal ornament of this part of the town is the King's Circus, with three openings at equal distances, leading into as many streets. The fronts of the houses are adorned with three rows of columns, in pairs of the Doric, Ionic, and Corinthian orders, standing over each other, and the frieze is embellished with sculp- ture. In the centre is a large covered reservoir of water, filled from springs rising in the adjacent hills, and serving for the supply of the neighbour- hood.

The Royal Cresent is another striking object : the whole extensive front is of an elliptical form, consisting of thirty-one noble stone houses, uni- formly

built, with rustic basements, surmounted with columns of the Ionic order. It stands on an eminence, with an open and gentle declivity or lawn of twenty acres before it, down to the Avon, commanding delightful and uninterrupted prospects of the city, the vale below, and the river as it meanders towards Bristol ; as well as of the opposite hills, and numerous villas, ham- lets, and roads, which intersect and adorn it. Behind this crescent rise St. James's Square, Lansdown Crescent, Somerset Place, Camden Place, Portland Place, Catherine Place, Mount

Zion, a large extent of buildings on the summit of Beacon Hill ; Cavendish Crescent and Place, Lansdown Grove, Lansdown Place, and Belle Vue. Besides these are Belvidere, Belmont, and Paragon Buildings, Marlborough Buildings, Burlington Place, and many other intervening streets and buildings. Nothing indeed can be more picturesque than the appearance of this part of the town.

Across the Avon, on the eastern side of the city, stands Pulteney Bridge, an elegant structure, of one arch, covered on each side with shops, and leading immediately from High Street, in the centre of the city, to Bathwick, where several elegant new erections have lately arisen. Laura Place, which is a square, built in the form of a lozenge, is peculiarly beautiful ; and passing through the centre of this place diagonally, in a direct line from the bridge, is Great Pulteney Street, of considerable length, uniformly built, and lighted with gas. At the distant extremity of this street, in front, is Sydney Gardens, or Vaux- hall, which range and expand up the side of Claverton Hill, and are very tastefully laid out. Here also runs the Kennel and Avon canal, or- namented with two cast-iron bridges in the Chinese style. At the top of the hill is an ex- tensive plantation of firs. Around Sydney Gar- dens extends Sydney Place, an admirable speci- i(; the centre. In one of the winus ††† lu r late majesty, queen Charlotte, res; duiiim her illness in 1!U7; and near it e elegant iivjw parish ciiurch of Bath- †††vi ",, 1 uilt in the modern gothic style, and dedicated to St. Mary.

In t':e south-east part of the town is Orange

(im\ v, a >pac!ous area, planted with elms, and

;††† an obelisk in its centre; adjoining to this

†††,(.:††††††' the \alks where the Old Assembly Rooms

a;e -ituated, and near to tlicin are the North and

u Parades. Those are two elegant rows of

-es, each ii”0 feet long, elevated on arches,

id iiMitonii.lv lnu’lt, with paved terraces in front,

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*(***tieiiantiii’i vi< -w:, of Prior Park, the magnificent*

-cat of the late Halph Allen, esq. Beechen

i’, wit!i its hanuan;- woods, and Claverton

li1!’- i’i’ lily diversified with villas and enclosures,

*** T< >\!ied with an ornamental castellated*

ictnre, \iiicli is surrounded with a. plantation

>, to a o<;n>idenii)Ie extent. In the gardens

South Parade, on the banks of the

l.von, is now building an elegant new square,

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lookm the meadows, and commanding views of

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e !n.-rt!i-oa—torn o.\t"e'riitv 01 tiie town, at

the entrance from the London Road, are man} new ranges of magnificent buildings, with paved terraces, called Kensington, Piccadilly, Grosvc- nor Place, and Walcot Terrace.

The amusements of Bath are under the super- intendance of two masters of the ceremonies, who are elected to that office by the subscribers to the assemblies, balls, &c., one of whom presides at the Upper Rooms, and the other at the Lower Rooms. Besides these, there is a third appointed to preside at the city assemblies at the Tcw.i Hall. The lodging-houses are numerous and commodious, and adapted to all ranks who may be induced to seek benefit from these salutary waters. Sedan-chairs are established here, the fares of which are settled by the mayor and justices; and here are also hackney-coaches ana chariots, regulated as in London. Besides the Assembly Rooms and Pump Room, which are the usual promenades for persons of fashion, in wet or unfavorable weather; and the Riding Schools, which are the resort of equestrians on similar occasions ; the neighbourhood of Bath abounds with beautiful walks and rides, and particularly Clarerton Down, and Lansdown for the latter, affording the most salubrious air, and the most extensive prospects.

The old bridge over the Avon is a handsome structure, with stone balustrades. The inter- course between Bath and Bristol is very great, and besides carriages for the conveyance of goods, and private carriages of every description, there are not less than forty stage-coaches, that regu- larly pass forward and backward between the two cities. The whole city of Bath is amply supplied with the most excellent spring-water, brought from the neighbouring hills, and distri- buted to every house by means of leaden- pipes.

The Guildhall, situate on the east side of High Street, is worthy of such a city. Besides the Vestibule and the Public Hall, for the city sessions, court of record, justices' meetings, court of conscience, and other public business, is a record-room, the town-clerk's and other offices, and above stairs is a noble banqueting and ball- room, with a music-gallery, tea-room, drawing- room, &c. Behind this elegant structure is the market-place, which is exceedingly commodious, spacious, well paved, and under cover. The

markets are held daily for all kinds of provision ; and in point of supply and regulation are ex- celled by none in England. The principal days for butchers' meat, are on Wednesday and Satur- day; and for fish, Monday, Wednesday, and Friday. The city prison is a handsome edifice, built of freestone, near the river in Bathwick.

*After this general outline of the place, the seve- ral public baths next claim attention ††† these are, the King's, the Queen's, the Cro*s, the Hot, and the Corporation baths, whicn are the property and under the superintendence of the corpo- ration; besides which are the Kingston, or Abbey baths, now the property of lord Manvers, which are commodiously fitted up, and where invalids are accommodated at any hour of the day*

plaints, as well as in nervous, paralytic, rheu- matic, and gouty disorders. The King's bath is a large basin of sixty-five feet by forty, and con- tains rather more than 346 tons of water, when filled to its usual height. A brass hand-rail, of an octagonal form, encloses the centre : under it is a large reservoir, into which the main spring rises with great force, and from whence the water is conveyed, in its greatest purity, by means of pipes, to the pumps above, for drinking, as well as distributed with more equable heat through- out the bath, in which the main spring has its source; the sides of the bath are surrounded by a handsome colonnade of the Doric order, to shelter the bathers from the inclemency of the weather. Two commodious rooms are connected with this bath, fitted up with pumps and pipes to direct the hot water to any particular part of the body. The Queen's bath, which is attached to the King's, and opens into it, forms a square of twenty-five feet, and is furnished with similar conveniences; its temperature is somewhat lower. The Cross bath received its appellation from a cross erected in its centre by the earl of Mel- fort, in the time of James II. which is now removed. It is situate at the western extremity of Bath-street, about 150 yards from the two former, is of a triangular form, and has a small neat pump-room attached to it. Fahrenheit's thermometer rises in it to between 93 and 94.

From the pump of the

and states that on evaporation, a gallon has been found to contain of iron $ or ˆ parts of a grain ; calcareous earth 22†† grains, selenite 31 J grains, Glauber's salt 25J grains, sea salt 51 †† grains, which were mixed with an oily matter, but not more so than is common to all waters. From this it appears that the Bath waters are acidulous chalybeates, in

which iron and earth are kept suspended by means of aerial acid ; and that they are impregnated with a small portion of selenite, sea salt, and muriated magnesia. They were for a long time esteemed sulphureous; but they clearly are not, for they do not affect the color of silver or metallic solutions, nor produce any other effect of water impregnated with sulphur. There 13 some probability that azotic gas is an active ingredient in them, but this has not been properly ascertained. Dr. Gibbes has lately added to their impregnations the silicious earth. But their contents have never been sufficiently investigated to account for all their effects. They operate powerfully by urine, and promote per- spiration ; if drank quickly and in large draughts they purge, but if taken slowly and in small quantities have an opposite effect. These waters are adapted to atonic gout, to visceral obstruc- tions, nephritic complaints, dyspepsia, and to weak and exhausted constitutions ; they relieve externally in all the complaints for which the more stimulant power of the balneum is em- ployed. To the young and plethoric they are frequently injurious; and unless some evacua-

Dr. Dr. Dr.

Howard. Charlton. Lucas.

f King's bath

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119-)

< Hot bath . .

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(.Cross bath .

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The Hot bath stands about forty yards south- west of the King's, and is so called from the su- perior heat of its waters, which approaches to 117 of

Fahrenheit. This structure, which is about fifty-six feet square, was built under the direction of John Wood, Esq. The usual time of bathing in the King's and Cross baths is between six and ten in the morning, after which time the water is discharged, and the springs afford a fresh supply of water for the next day. The seasons for bathing are the spring and fall.

Dr. Higgens has proved that a Winchester gallon of Bath water contains.

oz. dwt. gr. Calcareous earth combined with

vitriolic acid in the form of

selenite 00 319ˆ

Calcareous earth combined with

acidulous gas 00 22ˆ

Marine salt of magnesia ... 00 22ˆ

Sea salt 9 1 i44

Iron combined with acidulous

gas 00 (ty,

Acidulous gas, besides that which

is contained in the above earth

and iron 12 0 0

Atmospheric air 20 0

Dr. Monro gives the highest degree of heat attributed to them by

Of

Fahrenheit's thermometer ;

tions are premised, they often disagree with the patient, occasioning headache, heat in the hands, drowsiness, and giddiness.

The other public buildings in Bath are the upper and lower assembly rooms. The former, in the immediate vicinity of the circus, was finished in 1791, at the expense of ––20,000 ; the ball room is 105 feet long, forty-three wide, and twenty-two high ; one of the card rooms is an octagon, forty-

eight feet in diameter, the other is seventy feet by twenty-seven ; these, with the tea and coffee rooms, library, billiard room, and other appropriate apartments, form the most su- perb suite of rooms dedicated to pleasure, in the kingdom. The lower assembly rooms, near the parades, are also very elegantly fitted up, and both are appropriated chiefly to public meetings, promenades, balls, concerts, cards, and other amusements, during the winter and spring sea- sons. The pump room presents unrivalled attractions ; it was built in 1797, is eighty-five feet long, forty-six wide, and thirty-four high ; the interior is adorned with columns of the Corin- thian order, crowned with a rich entablature. In a recess at the west end is a music gallery, and at the other end is a marble statue of Beau Nash ; here the company promenade and drink the waters from eight or nine till three, attended by an excellent band of music. The theatre, on the south side of Beaufort-square, was opened in 1805, and in point of size, elegance of structure, and magnificence of decoration, is superior to

any provincial theatre. The company of per- formers have long been esteemed the best out of the metropolis.

BATH, a town of Berkely county, Virginia. It is situated at the foot of a small mountain, known by the name of the Warm Spring mountain. Contiguous are springs much celebrated. The country round is agreeably variegated with hills, and the soil rich and well cultivated. It is thirty- five miles from Winchester, twenty-five from Martinsburg, and 269 from Philadelphia.

BATH, a large mountainous county of Virginia, sixty miles in length, and fifty in breadth. It is bounded on the east by Augusta, on the west by Green-brier county, on the north by Pendleton, and on the south by Bctetourt. In this county are two springs remarkable for their medicinal quality. They are called the warm and hot spring, and rise near the foot of Jackson's moun- tain, but more generally known by the name of the Warm-spring-Mountain. The hot spring, so called from its possessing a greater degree of heat than the warm spring, has frequently been so hot ns to have boiled an egg. Some believe its heat to be now diminished. The stream which issues from it is small. A fountain of common water, which rises near its margin, gives it a striking appearance. The warm spring rises about six miles t'n.'in the former, an- 1 issues with a bold stream sufficient to turn a 'list mi'], and to keep the \atur of its basin, v> ".:ich is marly 100 feet in circumference, at the vita! uannth. The water is stioiv.rest in the hottest weather, which occa- sions their beinu' visited in the months of

July ajid August. They remove rheumatisms and various oilier complaints, it rains here four or live days every week.

BATH, a town of the United States, New York, in the county of Steuben, handsomely situated on the cast si.ie of the river Conhocton. It con- tuiih'd in IBi.'J, \luu its trade and population \ere rapidly inert;, :si:i_r, fifty houses and stores, ;es;:U;S the country buildings. The Conhocton is litre seventy-live feet wide, and is navigable for boats to the Tioˆa. It is foity-two miles south-cast from Williamsburgh, and 200 north I'lvm Philadelphia.

l>Ai;i, a small town of Hyde county, North Carnima; situated near a bay which sets north :mm Tar river, eleven miles east by south of Vv ::□□□>'. iih;ton, and sixty-one south by west of

I .;'<□□□ lili.n.

HATH, a vilhce in the island of Jamaica, so named from a famous hot spring in its vicinity. i he vtau-r is sulphureous, and too hot to admit .1 h; nd i e;nu" held in it.

l'iv;n, in Jewish antiquity. Some distinguish :'.\c kinds of Hebrew measures so called, viz. the vreuter iiitii containing eighty pounds of water, or, according to Jos< phui, 1-140 Roman ounces; l', (second bath containing 100 ounces; the third, otiˆ ounce,; the fourth containing '2/> ounces; y.n! tlir lit:':, t1ˆ ounces of water. Some have ; :'.imatei tin; sacred hath at half as much again □□□is the i-omnioii i ,,th ; but there is no sufficient

; nn (>'!□□□ ihi-> □□□h-.-tiiirtioii. The word, in Hebrew, signifies 1 . r.i!ly a daughter. See HAIH-KOL.

HAIL, ,:i : .(tuliuivy, is used to signify the i'-i-iou vi T.' U!h< matter in certain operations.

In refining or cupelling, for example, the metals are "aid to be in bath when they are melted : thus, bath of gold signifies melted antimony when gold is purified in it; and bath of the king is the title given to melted antimony by alchemists, who style gold the king ce meti'.s, because gold only can resist the action of antimony.

BATH, KNIGHTS OF THE, a military order of England, concerning the origin of which antiqua- ries differ. The most probable account is that the ancient Franks and inhabitants of Lower Ger- many, with whom it is highly probable the Saxons, who invaded England, had the same descent, introduced it, with other customs, upon their settling here. These ancient Franks, when they conferred knighthood, practised bathing amongst other rites, before they performed their vigils; and they were hence denominated Knights of the Bath. Henry IV., on the day of his coronation in the tower of London, conferred the degree upon the forty-six esquires, who had watched all the night before, and had bathed themselves. From that time it was customary with our kings to confer this dignity preceding their coronations, the coronations of their queens, the births and marriages of the royal issue, &c. ; several knights of the bath were made at the coronation of king Charles II. in 1661 ; after which the order was neglected until 1725, when George I. revived it, and ordered a book of statutes for the govern- ment of it. By this the number of knights is fixed to thirty-eight, viz. the sovereign, and thirty- seven knights-companions. The apparel of a knight of the bath is a red fur coat, lined and edged with white, girded about with a white gir- dle, without any ornament thereon ; the mantle is of the same color and lining, made fast about the neck with a lace of white silk, having a pair of gloves tyed therein, with tassels of silk and gold at the end; which mantles are adorned upon the left shoulders with the ensign of the order, being three imperial crowns, or, surrounded with the ancient motto of this knighthood, Tria juncta in uno, wrought upon a circle gules, with a glory or rays issuing from the centre, and under it the lace of white silk heretofore worn by the knights of the bath. They have red breeches and stock- ings, and have white hats, with a plume of white feathers in them. The king allowed the chapel of king Henry VII. to be the chapel of the order; and ordered that each knight's banner, with plates of his arms and styles, should be placed over their several stalls, in like manner as the knights of the garter's in St. George's chapel in the castle, of Windsor; and he allowed them sup- porters to their arms. The dean of Westminster for the time being

is dean of the order ; the other officers are, bath king at arms, a genealogist, registrar, secretary, gentleman usher, and messen- ger. These several officers have their particular duties assigned them by the statutes. The office of genealogist is a distinct office of record, for the pedigrees of the knights of the order and their esquires, which are entered in a regular series, from 1 399, the period at which the order was originally instituted, to the present time.

An esquire of the order is allowed to hunt and fish in the king's royalty, and is exempt not only from serving the office of high sheriff, but any

parochial office. To prevent any abuses in the :laiming these privileges and exemptions, the following notification was inserted in the gazette in i803, previously to the installation of twenty-two knights, attended by their esquires, sixty-six in number.

' It is hereby notified, that no exemplificate will be issued to any esquire, from his royal highness the duke of York, after the ensuing installation, until it shall be certified to his royal highness, by the genealogist, that the pedigree and coat armour of the several knights and their respective esquires have been entered in the genealogical books of the order, in obedience to the said statutes. Given at the Horse Guards, this 13th day of May 1003; FREDERICK, acting as great master of the said most honorable military order of the bath.'

We need hardly add, that, both in the number of knights and the brilliancy of its appearance, this order maintained its full splendor at the coronation of the fourth sovereign of the House of Brunswick.

BATH METAL is a preparation of copper with zinc, which gives a more beautiful color than the calamine used in the preparation of the common brass. See PRINCE'S METAL.

BATHS, in ancient architecture, buildings of various descriptions erected for the purpose of bathing. Baths made a part of the ancient gym- nasia, though they were frequented more for the sake of pleasure than health. The most magni- ficent among the Romans, were those of Titus, Paulus yEmilius, and Dioclesian, of which there are some ruins still remaining. It is said that at Rome there were 856 public baths. Fabricius adds, that the excessive luxury of the Romans appeared in nothing more visibly than in their baths. Seneca complains, that the baths of ple- bians were filled from silver pumps; and that the freedmen trod on gems. Statius has plea- santly

described one in his poem upon the baths of Claudius Etruscus, the steward of the em- peror Claudius.

Nil ibi plebeium ; nusquam Temessea videbis ./Era, sed argento felix propellitur unda, Argentoque cadit, labrisque nitentibus instat, Delicias mirata suas, et abire recusat.

Macrobius tells us of one Sergius Oratus, a voluptuary, who had pendent baths hanging in the air. According to Dion, Maecenas was the first who made a bath at Rome ; yet there are instances of public baths prior to this ; but they were of cold water, small, and poorly deco- rated. Agrippa, in his aadilate, built a number of baths, where the citizens might be accommo- dated, either with hot or cold water, gratis. After his example, Nero, Vespasian, Titus, Domi- tian, Severus, Gordian, Aurelian, Maximian, Dio- clesian, and most of the emperors who studied to gain the affections of the people, erected baths laid with the richest marble, and wrought accord- ing to the rules of the most delicate architecture. The rich had baths at home, and frequently very magnificent ones, especially after the time that the practice of pillaging provinces had begun ; but they only used them on extraordinary occa- sions The great men, and even emperors them-

selves, sometimes bathed in public with the rest of the people. Alexander Severus was the first who allowed the public baths to be opened in the night during the heats of summer.

Dioclesian is said to have erected baths which would accommodate 1800 bathers. According to Alberti, in the eighth book of his architec- ture, the extent of an ancient Roman bathing establishment was at least 100,000 square feet. Now, if we consider the great extent of their ruins, the number of their apartments, courts, and halls, which were enclosed and served for recreation and exercise, Alberti does not err on the side of excess. They were generally of a square or oblong form, and surrounded with walls; this space had three enclosures, each of which surrounded the" building, as it were, one placed within the other. The first, or what sur- rounded the exterior, contained the halls in which the philosophers gave their instructions, and those which were used by,the athletae. The second division contained open places, planted with trees, for the exercise of the youths. In the third division, situated in the middle of the building, were the baths, surrounded with por- ticoes and open courts. Sometimes the entire building was enclosed by a park, like that of Alexander Severus, which contributed greatly to the embellishment of the whole structure.*

They were careful to place their public baths in a warm situation ; to protect them from the north winds, and expose them to the south or south- west as much as possible, that they might receive heat from the sun during

the hours in which the bath was generally used. In the baths of individuals, especially in towns or cities, they sometimes made a distinction between sum- mer and winter baths. In the first, they placed the cold bath towards the north, and in the win- ter baths, towards the south.

The Greek baths iwere usually annexed to palestrae or gymnasia, of which they were consi- dered as a part. These baths consisted of seven different apartments, usually separated from each other, and intermixed with other buildings belong- ing to the other sorts of exercises. These were, first, the cold bath, frigida lavatio; secondly, the olfEothesium, or room where they were anointed with oil; thirdly, the frigidarium, or cooling room; fourthly, the propnigeum, or entrance of the hypocaustum, or stove; fifthly, the vaulted room, for sweating in, or vapor bath, called concamerata sudatio, or tepidarium ; sixthly, the laconicum, or dry stove; seventhly, the hot bath, called callida lavatio. The baths separate from the palestrae appear to have been usually double, one for men, the other for women; but so near, that the same furnace heated both. The middle part was possessed by a large basin that received water by several pipes, and was surrounded by a balustrade, behind which there was an area for the reception of those who waited to use the bath. They were vaulted over, and only received light from the top. In the Roman baths, the first part that appeared, was a large basin, called KoXvpfiijOpa. in Greek, and natatio or piscina in Latin. in the middle was the hypocaustum, which had a row of four apartments on each side, called balnearia; these were the stove, the

bath, cold bath, and tepidarium. The two stoves, called laconicum and tepidarium, were circular and joined together. Their floor was hollow and suspended, in order to receive the heat of a large furnace, which was communicated to the stoves through the vacuities of their floor. This fur- nace also heated another room called vasarium, in which were three large brazen vessels called millaria, respectively containing hot, warm, and cold water; which were so disposed, that the water might be made to pass by syphons and pipes out of one or other of them into the bath, in order to adjust its temperature. The description is given by V'itruvius.

The baths or thermae of the Romans, as well as the gymnasia of the Greeks, were sumptuously decorated with bassi rilievi, statues and. paint- ings; the basins were of marble, the pavements of mosaic, and the cupolas splendidly deco- rated. The remains of those at Rome prove, more than any other of their architectural ruins, the love of magnificence and luxury which cha- racterised the ancient Romans; and as the public baths were

intended to collect together a great number of people, they were divided into so many various apartments, which afforded their architects an ample field for the display of taste and splendor of ornament. Agrippa ornamented the apartments of his bath with encaustic paint- ing, and covered the walls of the caldarium with slabs of marble, in which were inserted small paintings. In the earlier period of the Roman history, before the arts and luxuries of Greece were mucu known to, or practised by, the Romans, their baths were small and simple, only calcu- lated for the mere act of bathing, like that of

Scipio Africanus, described by Seneca. While the ruins of the baths of Titus, Caracalla, Nero, Dioclesian, and Antoninus, are the most splendid examples of these kinds of buildings, and an- ciently contained the finest statues that were brought from Greece. The Laocoon was found in the baths of Titus, and the Farnese Hercules in those of Caracalla.

In Italy and the east, baths on a large scale are still constantly seen. Denon, in his Egypt, des- cribes the hot vapor baths of the countries through which he passed ; and in St. Petersburgh, at Flo- rence, and in several European capitals, these are coming much into use.

BATHE (Henry De), a learned knight and justiciary of the thirteenth century, born at Bathe House, in Devonshire, the family seat. In 1238 he was appointed justice of the Common Pleas; and within the succeeding twelve years, an itine- rant justice for eight different counties. In 1251 he lost the royal favor, and being accused of ac- cepting bribes, perverting justice, &c. and, above all, of seditiously alienating the affections of hi majesty's subjects, Henry III. became so irritated against him, that De Bathe, either from his inno- cence, or popularity, being acquitted of the crimes laid to his charge, Henry is said to have declared from the throne, that whosoever should kill Henry De Bathe, should have a royal pardon for him and his heirs ! ••• Not long after, however, by the mediation of friends, and the payment of 2000 marks to the king, he was restored to favor, and all his former offices, along with that of jus- tice of the king's bench, which he enjoyed till his death in 1261.*

BATHING.

BATHE', ˆ Ang.-Sax. bathian, Dut. and

P. \TH', •• (ier. budcn, Swed. bada. To wet,

P>vni'i.va. J to immerse in water or other

liquid. A bath, the receptacle of the fluid, in

* 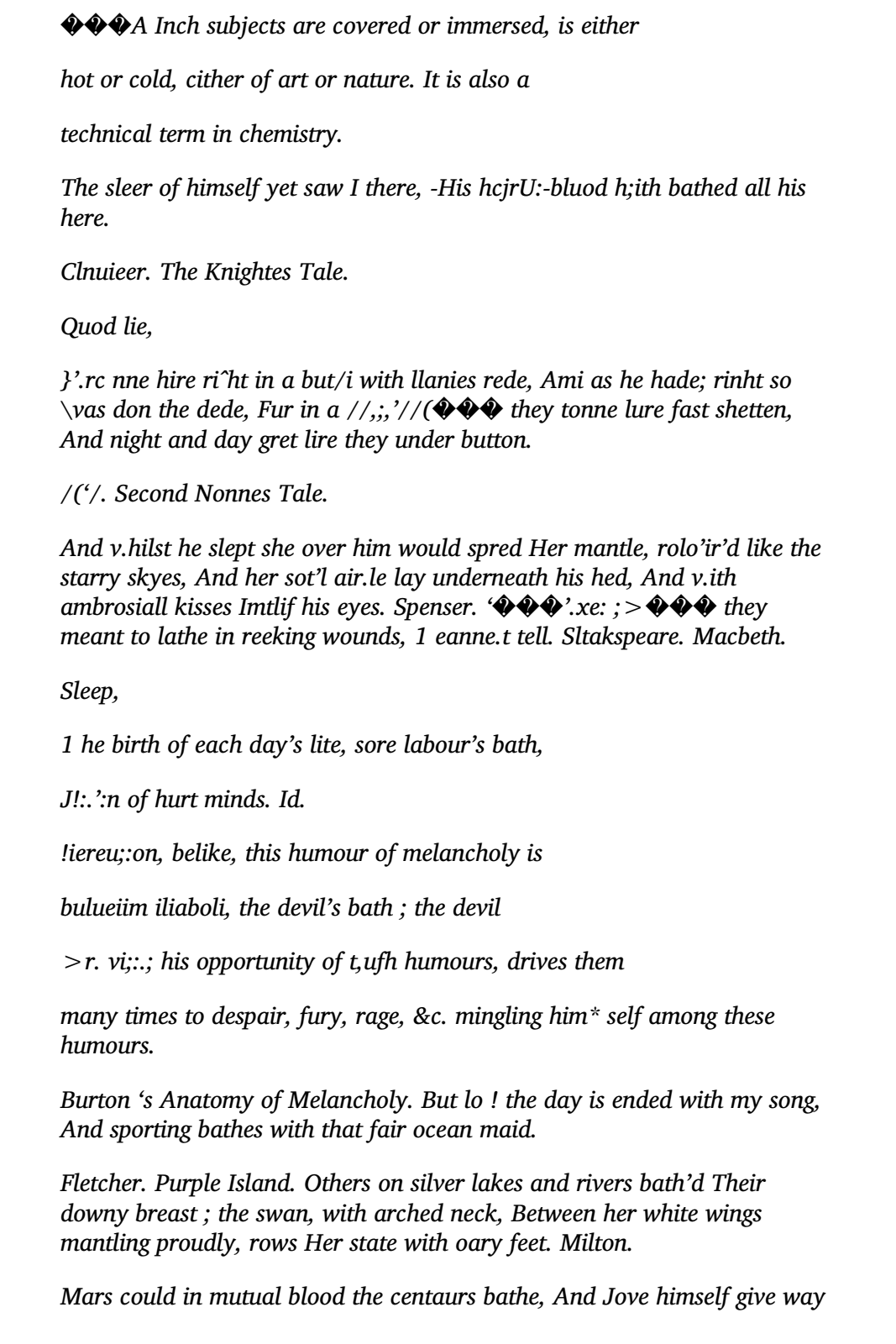 A Inch subjects are covered or immersed, is either*

hot or cold, cither of art or nature. It is also a

technical term in chemistry.

The sleer of himself yet saw I there, -His hcjrU:-bluod h;ith bathed all his here.

Clnuieer. The Knightes Tale.

Quod lie,

}'.rc nne hire riˆht in a but/i with llanies rede, Ami as he hade; rinht so \vas don the dede, Fur in a //,;,'//(they tonne lure fast shetten, And night and day gret lire they under button.

/('/. Second Nonnes Tale.

And v.hilst he slept she over him would spred Her mantle, rolo'ir'd like the starry skyes, And her sot'l air.le lay underneath his hed, And v.ith ambrosiall kisses Imtlif his eyes. Spenser. ' '.xe: ;> they meant to lathe in reeking wounds, 1 eanne.t tell. Sltakspeare. Macbeth.

Sleep,

1 he birth of each day's lite, sore labour's bath,

J!:.':n of hurt minds. Id.

!iereu;:on, belike, this humour of melancholy is

bulueiim iliaboli, the devil's bath ; the devil

>r. vi;:.; his opportunity of t,ufh humours, drives them

many times to despair, fury, rage, &c. mingling him self among these humours.*

Burton 's Anatomy of Melancholy. But lo ! the day is ended with my song, And sporting bathes with that fair ocean maid.

Fletcher. Purple Island. Others on silver lakes and rivers bath'd Their downy breast ; the swan, with arched neck, Between her white wings mantling proudly, rows Her state with oary feet. Milton.

Mars could in mutual blood the centaurs bathe, And Jove himself give way

to Cynthia's wrath.

Dryden.

She rear'd her arm, and with her sceptre struck The yawning cliff from its disparted height ; Adown the mount the gushing torrents ran, And cheer'd the vallies ; there the heav'nly mother Bath'd, mighty king, thy tender limbs.

Prior. First Hymn of CaUim. Queen lilies : and ye painted populace, Who dwell in fields, and lead ambrosial lives ; In morn and ev'ning dew, your beauties bathe, And drink the sun. Young.

Constantino survived that solemn festival about ten months ; and, at the mature age of sixty-four, after a short illness, he ended his memorable life at the palace of Aquyrion, in the suburbs of Nicomedia, whither he had retired for the benefit of the air, and with the hope of recruiting his exhausted strength by the use of the warm bath. Gibburt.

BATHING.

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BATHING, for medicinal or salutary purposes, demands consideration under several distinct heads ; in the first place, as the temperature of the bath may be concerned : thus we have cold, hot, and tepid or temperate baths. Secondly, as the mode may vary in the application of the media employed ; for immersing the body, pouring water over the whole, or part of its sur- face, the use of sponges or cloths to the naked body, immersing the body in or exposing it to vapor, and letting water fall from a greater or less height upon the head and shoulders, are, in fact, all varieties of bathing. We have, thirdly, also to consider the question of specific qualities in the agencies employed ; some substances, as we shall see in the sequel, being used for the im- pregnation of baths which are supposed to operate with positive powers of a medicinal kind. And, lastly, it may be remarked, that the material itself varies beyond the circumstance of temperature or peculiar quality ; for besides water and vapor, air and earth have been brought into requisition as subservient to the purposes for which the practice of bathing was instituted.

The term COLD BATH is generally made to in- clude the whole range of temperature, from a little above thirty-two to eighty degrees of Fah- renheit's thermometer ; by sudden immersion in water, of this low temperature, the whole surface becomes contracted, the bulbs of the hair, as a modern author states, are made con- spicuous, and the skin, resembling that of a newly picked goose, has been styled cutis anse- rina.

The debility and tremor are considerable, a sense of weight is felt in the head, the respi- ration is quick and laborious. These appearances are followed by a very different series. A glow soon returns to the surface, the weight in the head is almost instantaneously relieved, and every function appears to be carried on with increased activity. If a person stays for a longer period in the bath, the glow will be slighter and will soon disappear, while every previous symptom of debility will return and continue.

If this immersion be repeated at due intervals, and the stay in the bath be not improperly con- tinued, the general health and spirits are greatly improved, the different necessary evacuations properly carried on and supported, and the body and mind appear to act with increased vigor.

The explanation of these phenomena, says the author from whom we extract, is not difficult : the cold, by its sedative powers, represse's the circulation in the extreme vessels, and the fluids are accumulated in the larger arteries and veins : and he goes on to state, that re-action is set up to produce the subsequent glow ; this after-glow, however, and indeed the immediate impression of the cold w?ter, are probably more complicated operations than those persons imagine who readily receive the explication of the circumstances as referrible to a sort of mechanical action and re-action. The cold plunge seems to affect not merely by directing the blood inwardly upon the large blood-vessels and viscera, but there may be a constringing agency produced through the whole series of capillary vessels ; and the con-

sequent diminution of the capacity of these vessels, or of their diameter, must, as is well remarked by another writer on the subject, ne- cessarily increase that part of the resistance to the blood's motion which is derived from its friction against the sides of the vessels, and must therefore tend materially to lessen its- velocity. He might have added, that, upon this principle, the generation of cold, or rather the subduction of the sensation of heat is probably in a greater measure than would be the consequence of the mere cold immersion, had not this mode of ap- plying cold some constringing as well as mere sedative power ; this term sedative, we may here incidentally remark, has been employed by phy- siological and pathological writers with too much laxity of signification.

In considering the phenomena directly and indirectly produced by cold bathing, reference ought likewise to be had to the sensations ; for it will be found that both the first and subsequent effects are very materially regulated, both as to their degree and duration, by the condition of the percipient power. That sensation has a great deal to do, both with the principle of its operation and the salutary or injurious effects of cold bathing, has been shown with a great deal of ingenuity by the late Dr.

Currie, in his ex- periments on cold water as a febrifuge power ; and that the glow which succeeds to the first sensation of cold, may be ascribed in a great measure to the increased sensibility of the nerves after a partial torpor, cannot be denied. At the same time it must be admitted, that there is not only a relative but an actual increase of heat on the surface of the body, during the re-action following the temporary torpor ; and it is pro- bable, we are told, the causes concerned in the production of animal heat are called up into a more vigorous exertion in a strong constitution, whenever they are required for the purposes of life ; so that they at first supply the superficial parts of the body, during the immersion, with as much heat as is necessary to overcome the painful sensation of cold ; and afterwards, by a continuation of the same action, occasion an actual elevation of temperature above the natural standard.

It is worthy of remark, that re-action, as it is called, or heat following exposure to cold water, sometimes occurs, even when there has been no prior depression of temperature. Dr. Currie found that during the affusion of a bucket of cold salt water on the heads and whole bodies of two healthy persons, no depression of tem- perature was observable ; but, in a minute or two afterwards, although they remained without motion, the mercury rose two degrees ; and in a third person, of fee bier constitution, although the temperature remained equally unchanged during the affusion, it sunk in a minute after, half a degree. These effects seem to be almost entirely independent of any change in the state of the circulation, which must be rather retarded than accelerated, while the generation of heat is increased. It is true that the heart might be called into more powerful action at the same time that the pulsation of the wrist became feeble, from the permanent contraction of the

radial artery ; but the action of the heart would article (which is intended rather for popular than

*. *. . ..1 T ••• – J 1 r_ f ‘ 1 Jl A.’ \ ..1 1 . ,*

still be exhibited by the carotids, undisguised by this modification ; and the carotids have not been observed to beat more strongly in the cold bath than at other times, although Dr. Currie has remarked, that when the pulse could hardly be felt at the wrist, the heart pulsated with great steadiness and due force.

Much, it must be confessed, is wanting in the

for professional direction), to go through the various disorders in nosological order, for which the practice of cold bathing has been instituted ; suffice it to say, that it has generally been used and recommended in those conditions of fibrous debility which are under the grade of actual disease, and in which those medicinal agencies are demanded which pass under the name or

way of physiological experiment before we can tonic. Such states are marked by irregularities

satisfactorily explain the laws of temperature of in the displays of nervous power, by tremors, by

the human body, or the vascular changes that are more than natural sensibility to cold, by the easy

concomitant with, or perhaps in some measure excitation of profuse discharges from the skin,

the causes of, these changes ; and indeed it is not by head-aches, listlessness, and febricula, with

easy to say precisely upon what principles cold bathing, when it proves a sanative or salutary

lowness of spirits, irregular appetite, deficient digestion, and torpid bowels. Individuals, in

have been attended with much benefit to the constitution ; and yet we do see that much and

process, operates the beneficial purpose : a priori, this condition of the nervous and muscular we should scarcely have supposed that a tempo- powers, may be greatly benefited by the daily rary suspension, to be followed by excitation, employment of cold water to the surface, in the that excitation itself proving but transient, would manner immediately to be pointed out.

But it may be right first to dismiss the much agitated and very interesting question respecting

unequivocal good occasionally, nay frequently, the propriety of bathing or washing children; follows the temperate and judicious employment and this, perhaps, will be best'doneby extracting

from a modern writer on consumption. ' Immer- sion in cold water,' says

Dr. Reid, ‘ during the period of infancy, has been very generally recom- mended, and too frequently had recourse to in an indiscriminate manner, to preserve health and insure hardiness. The author has remarked several instances where sensible and sometimes serious injury has arisen from neglecting to ob- serve the precautions necessary to regulate the

of the agent now under consideration. Much mischief is also the result of its indiscriminate or injudicious use, and we shall now proceed to point out in what cases and circumstances cold bathing is desirable or admissible ; where it is contra-indicated ; and in what mode it is best administered.

It lias already been intimated that cold bathing may be used with advantage under certain modi- fications of febrile heat. ; it is, however, of the utmost importance to attend to certain precau- tions which its use demands, when employed as .1 febrifuge. Dr. Currie tells us that cold bathing or allusion, in fever, can only then be had re-

employment of this important agent in very early years. In infancy, danger to the lungs from cold bathing has been stated to exist in a very inferior degree ; and by the practice of dipping infants in cold water, susceptibility to the in-

course to with safety and goo.l effect, when the jurious impression of cold in succeeding years

has been thought to be materially diminished. This principle, in the abstract, is undoubtedly correct; and, with the exception and precautions now to be mentioned, may be pursued with pro- priety and advantage. Two infants may be sup- posed of one family, with reverse constitutions ; in the one, a general torpor, debility, and great susceptibility to the impression of cold shall pre- vail ; in the other, comparative vigor, activity, and warmth. To pursue, without discrimination, the same course with respect to immersion in water with each of these children, would be obviously improper. That degree of cold which would refresh and invigorate the one, would confirm debility, and augment torpor, in the other. A bath which is not cold to the sensa- tions must, in the first instance, at least, be re- sorted to for the weaker infant; and in neither case should immersion in cold water lie practised when the external temperature of the body is in- ferior in degree to its general standard, when after immersion the body appears to be chilled, or when returning heat is attended with febrile languor, instead of the grateful and genial warmth characteristic of the appropriate action of excit- ing powers. If the practice of immersion be guided by a cautions observance of these particu- lars, it may be pursued with safety, and will be attended with success; but a total neglect of it will not be n quisle or proper in this bathing were greatly preferable to the severe and

*beat of the body is steadily above the natural standard, when there is no sense of chilliness, and especially when there is no general nor pro- fuse perspiration. If used during the cold stage < >f fever, even though the heat be higher than natural, it brings on interruption of respiration, a fluttering, weak, and extremely quick pulse, and certainly might be carried so far as to ex- tingnish animation entirely. (ˆSee MEDICINE, article Fi.vru, &. <***).*

*In another affection, very opposite to fever, % i/. tetanus cold bathing has been used with decidedly beneficial effect ; and, in this case, it may be remarked that the principle of its opera- tion must be diff'ivnt ; the shock given to the *** > enns, and the whole order of organic move- ments being temporarily changed, having more seemingly to dov.ith its healing influence than any circumstances abstractedly connected with change of temperature. The observation is as i(ioerat. s, that, the remedy under re- i.'st adapted in these convulsive dis- u the\ are t ie result rather of general than connected with is tin! expression of e to it partly because ***c immediately to circumstances to unts and tendencies.*

incautious manner in which infants are frequently exposed to these violent and rapid changes in temperature.'

*We may further remark, that, both in the states of infancy and youth, cold bathing must be cautiously, and only under professional per- mission, employed, when the constitution is de- cidedly of a scrofulous cast; and more especially ***when, with that general condition of the organi- sation to which the term scrofula would be applied, tendencies manifest themselves of local or topical disorder. Under the somewhat me- chanical notion of hardening the frame, as some inanimate bodies are hardened by being plunged into cold media, cold bathing has been employed, and persevered in, to a deleterious extent ; and under the circumstances of consumptive disposi- tion, or verging towards any internal or visceral disorder, the shock, and irregular impulses, and internal rushes, if we may so say, which the frequent plunges into cold water imply, instead of strengthening, irritate the feeble frame, and assist the constitutional bias towards structural and irremediable disorder. Dr. Beddoes pre- sents an important and instructive example of this principle and practice, on the authority of the late Dr. Pulteney. ' T. C. was rickety in his infancy, and very weakly for several years after. In the winter of 1759 he had pleuretic symp- toms ; a rheumatic fever left him next summer afflicted with chronic rheumatism ; he was ad- vised to go into the cold bath ; he did so ; but on*

coming out again felt such an increased load, fainting, and anxiety, about the precordia, that he thought he should hardly recover the shock it gave him. Nevertheless he ventured in again a day or two afterwards, but experienced the for- mer symptoms in an aggravated degree, and from this time dated the disorder that terminated his life.'

As mischievous mistakes have occasionally arisen in the practice of cold bathing, from too abstractly considering it a tonic or strengthening process, so much error has connected itself with the mode and circumstances of immersion. It has been too generally considered that to be fitted for immersion, the body should be cooled down nearer to the temperature of the bath, than after a little exercise it is made ; and that if a person have hurried to the side of the water into which he is about to plunge, he ought to rest until part of the artificial heat he has produced from exercise, be dissipated in the surrounding air. This is an erroneous motion, which Dr. Currie was the first fully to refute and rectify ; it is singular how it should have arisen, since our own feelings, as well as our observation on the instinct of animals, seem to direct to a different conclusion and prac- tice. The opposite doctrine, too, was taught by the ancients. ' When we are fatigued or dried up by exercise (says Galen, as quoted by Dr. Young) the bath restores us to comfort, and defends us from fevers. A strong young man in the country will plunge into cold water at once, when heated, and be much refreshed by it. Ani- mals also, wash themselves when they are hot, by a natural instinct, as they eat when they are hun- gry, and seek warmth when they are cold. In fevers, if we had sufficient powers of discrimi-

nation, we might probably sometimes derive material advantage from the use of the cold bath, without premising the hot ; and some persons have been actually benefited by this remedy. But without a more intimate knowledge of dis- eases than we possess, we cannot generally ven- ture on the practice ; and least of all in hectic fevers, where there is not strength enough to bear the shock. A stout young man having a fever in warm weather, without visceral inflammation, would, bring on a salutary prespiration by bath- ing in cold water ; and if he were in the habit of cold bathing, he might have recourse to it with more confidence ; but for hectic, it is unsafe, especially where there is much emaciation ; thus in a hot and dry summer, those who have travelled far, and are become thin and weak, have no need of being cooled, nor would it be safe for them to use the cold bath, without first going into the warm. For we seem to be hardened by the cold bath, like iron when heated first ; and if we previously warm ourselves by exercise, the effect is the same.'

We have extracted these observations of Galen, because their practical inference is precisely the same, as that to which the good sense and phi-

losophic acumen of Dr. Currie have brought us; and because they are strongly contrasted with the vulgar conceit, which, almost universally, and still too generally, prevails. It is well observed by the writer from whom we now borrow (see supplement to the Encyclopaedia Britannica), that Dr. Currie's relation, of an adventure of his own, might almost be supposed to have been intended as a commentary on these remarks of Galen. ' On the first of September, 1778, two students of medicine at Edinburgh, set out on foot on a journey, a considerable part of which lay along one of the rivers of Scotland. They started by sun-rise, and proceeded with alacrity in the cool of the morning. At the end of eight miles they breakfasted, rested for an hour, and then resumed their journey. The day grew warm as it advanced, and after a march of eight miles more, they arrived heated, but not fatigued, on the banks of the river above mentioned, about eleven in the forenoon. Urged by the fervor of the day, and tempted by the beauty of the stream, they stripped instantly and threw themselves into the river. The utmost refreshment followed, and when they retired to a neighbouring inn, this was succeeded by a disposition to sleep, which was indulged. In the afternoon they pro- ceeded, and travelling sixteen miles further, at a single stretch, arrived at the inn where they were to sleep a little after sunset. The afternoon had been warm, and they perspired profusely ; but the evening was temperate and rather cool. They had travelled for some miles slowly, and arrived at the end of their journey, stiffened and wearied with exercise. The refreshment which they had experienced in the morning from bathing induced, however, one of them to repeat the experiment, and he went perfectly cool into the same river, expecting to relax his limbs in the water, and afterwards to enjoy profound sleep. The consequences were very different. The Tweed, which was so refreshing in the morning, now felt extremely cold, and he left the watei

hastily. No genial glow succeeded, but a feverish chill remained for some time, with a small fre- quent pulse, and flying pains over the body. Warm liquids, and frictions at length brought on considerable heat, and towards morning, perspi- ration and sleep followed. Next day, about noon, they proceeded on foot, but the traveller who had bathed was extremely feeble ; and though they had to perform a journey of a single stage only, as some part of it was difficult and mountainous, he was obliged to take the assistance of a carriage, which overtook them on the road. It was several days before he recovered his usual vigor.'

It is generally known that the Russian goes reeking from a bath, heated almost to the highest pitch of endurance, and immediately, without staying

to cool himself, rolls his naked body in snow: and the experiments made some time since by Fordyce and Blagden prove that a rapid transition from high heat to cold may, under some circumstances, be made with the utmost safety. So erroneous is the notion we are now combating, that the body requires to be cooled in order to render it fit for a chilling medium. Still, there are certain facts connected with the action of cold and heat on the living system, which prove that we must not take too precipi- tately, or in too unqualified a manner, the reverse rule for our guide through all circumstances. As an example, says a modern writer, of the injuri- ous tendency of a precipitate application of cold \hen tin: body is heated, in a more than ordi- nary decree, the sufferings of the Macedonian conqueror, iroin plunging into the river Cydnus, have frequently been adduced. Dr. Currie, how- ever, has endeavoured to prove, that the situation ot' Alexander, previously to bathing, was different from that more commonly imagined ; and that his subsequent illness, as related by his historian, ii referable to circumstances exactly opposite to those to which they are generally attributed. 1'roni the length and difficulty of the march, it is natural to suppose that he must have' been cooled as well as debilitated, by excessive perspiration and fatigue; and under such circumstances, im- mersion in the cold and rapid Cydnus was fol- lowed by the consequences which we should expect from the principles already laid down.

Other circumstances, however, have been arrived as evidences against the propriety and saKty of a sudden application of cold subse- quently to violent heat. Many well attested instances are on record, of instantaneous death, or violent disorders, which have terminated fatally, following imprudent exposure to cold, \hile the body has been overheated; and in some of these, the application of the noxious cause has confessedly been made previously to the production of fatigue or coldness. It is by no means uncommon for violent inflammation of the stomach or lungs to be occasioned by large draughts of cold water, incautiously taken to abate thirst, consequent upon excessive heat; and tlie injurious effects of the external appli- cation < >; coh! \aier, both to the whole surface, and men Iv to a part of the body, have been circ;uns!a:.tia!i\ ivUu.d.in order to invalidate or qualify 'he in: r.-nn < ot !M. v'um ⁂.

⁂ appari i'.l'v cyn'ra.l.t ;ory deductions,

(says Reid), on this very interesting subject, may perhaps be in some measure reconciled by the following considerations : ⁂

The state of the body, in relation to its suscep- tibility of being acted on by cold media, has more reference to the kind than degree of previ- ously existing heat; or, more correctly speaking, although an equal quantity of heat may be pre- sent in the system, such heat may be abstracted with

greater or less facility and safety, according to the mode in which it has been generated. The increase of temperature occasioned by what is termed an inflammatory action pervading the whole system, such as is sometimes observed in violent inflammation of the lungs; that attended with an extremely debilitated state of the vital power, as in instances of what has been termed improperly putrid fever; the heat consequent upon violent exercise, and that produced by communication from without, as in the example of hot baths, or exposures to other sources of great heat, while the body continues inactive ; are all essentially different in their nature : and, although in each case the quantity may be equal, and the thermometer applied to any part of the body shall indicate the same temperature, yet from such temperature alone it would be im- proper to form a judgment of the expediency and safety of the sudden application of cold. In the author's recollection a case occurred, of vio- lent inflammation of the whole thoracic viscera, which speedily terminated in death, almost im- mediately following a large draught of cold water, when the body had been heated from unusual exercise. The deceased was previously to the event a strong and healthy man, in the prime and vigor of life. In this case the injury appeared to arise, not from the sudden abstrac- tion of heat, but from the precipitate interrup- tion of those actions by which the increase of temperature had been generated. Had the same quantity of water equally cold been suddenly swallowed by a person oppressed and debilitated by febrile heat and irritation, these fatal conse- quences would not have succeeded, because in this latter case the cold fluid would have oper- ated in deducting from the superfluous quantity of generated and oppressive heat, and the re- freshing sensation excited in consequence would have stimulated the languid frame. The same principle likewise applies in the application of cold media, either partial or general, to the external surface. Dr. Beddoes relates the case of an obstinate eruptive affection being produced on the face, in consequence of the immersion of that part in cold water, when the subject of the affection was heated and thrown into perspira- tion by play. Had this immersion immediately succeeded to hot bathing, or been made during the existence of dry febrile heat, the injurious effects would not have resulted; for this reason, that the action of the cutaneous vessels would not in the latter cases have been injuriously interrupted, and thus indirectly stimulated into inordinate excitement.*

The seeming contrarieties of speculation on the subject of temperature, may, perhaps, likewise, in some measure, have arisen from the very im- portant circumstances of cooling applications

acting through successive moments, or by succes- sive quantities. If a person in a heated state drink half a pint of cool liquid, that may not sensibly reduce him below the natural healthy state. But if he p-'ur down double that quantity at once, the last half pint may be regarded as operating upon the system reduced by the first, and sinking into a dangerous chilliness. So im- mersion for a moment in a sunny river may strengthen and refresh, as many pedestrian travellers have experienced ; whereas delay in the water would be attended with great hazard, on account of the continued operation of a heat- abstracting medium upon a system sufficiently reduced in its temperature and action by the first plunge. Whatever might have been the actual condition of Alexander, when he plunged into the Cydnus, the .injurious effects of his bathing unquestionably originated from the sud- den reduction of heat below the standard of health. 'Vixque ingressi subito horrore artus rigore ceperunt: pallor deinde suffusus est, et totum propemodum corpus vitalis calor reli- quit.' In this case, perhaps, an exposure to cool air, or immersion in water of a superior tempera- ture, but which would nevertheless have abstract- ed a certain degree of heat from the languid frame, would have displayed effects exactly con- trary to what' the historian here relates. In like manner, the Russian, who reeking from his vapor bagnio, immediately rolls in snow ; or, who, after immersion in a bath which has been heated almost beyond endurance, instantaneously plunges into contiguous cold water, requires that the medium to which he is first exposed be extremely great, or the succeeding cold appli- cation would debilitate, and perhaps destroy. Upon this principle, likewise, the statement of Dr. Fordyce is explained, that a person passing from a violent degree of heat to much cold, will gradually return to his proper standard of tem- perature, while from a sudden change from heat o cold, when the heat has not been so high, diseases will often be generated.

To revert to the subject more especially under our present consideration, we may remark, that cold bathing will in general be found applicable to those conditions of nervous and muscular las- situde and weakness, in which, though the powers of the system are thus below their due grade, there is sufficient energy to insure a healthy re-action; while its use is objectionable and fear- ful, where local and especially visceral irritation of a vascular kind accompanies the general de- bility; and this condition of the frame, it is right to remark, is of more common occurrence than is sometimes suspected ; the topical affection often being masked, as it were, or concealed under the systematic weakness ; and the detection of that something which is thus preying upon the vitals requiring frequently the nicest tact, and most extended experience. It will have been remarked, that the two highest of the ancient authorities in medicine, speak of local and hectic circumstances as contra-indicating the propriety of cold immersion ;

and it will be recollected, that we gave a case in point, as substantiating the propriety of these cautions ††† cautions, how- ever, which on the other hand, must not be con-

ceived and acted upon with too much nicety, lest we lose sight altogether of radical weakness ; and fear to stimulate and excite, where excitation may prove abundantly serviceable.

In regard to the mode and times of using the cold bath, the following directions, taken from Dr. Willich, may be worthy attention. '1st, Every cold bath applied to the whole body ought to be of short duration ; all depends upon the first impression the cold makes on the skin and nerves, it being this impression which hardens us against the effects of rough and cold weather. 2d, The head should be always first wetted, either by immersion, by pouring water upon it, or the application of wet cloths, and then plunging over head into the bath. 3d, The immersion ought always to be sudden ; not only because it is less felt than when we enter the bath slowly and timorously, but likewise because the effect of the first impression is uniform all over the body, and the blood in this manner is not propelled from the lower to the upper parts. Hence the shower bath possesses great advan- tages, as it pours the water suddenly upon the whole body, and thus in the most perfect manner fulfils the three rules above specified. 4th, The due temperature of the cold bath can only be ascertained in relation to individual cases, as it extends from 33†† to 56†† of Fahrenheit, except in partial bathings, where the degree of cold may, and often ought to be, increased by ice, nitre, alum, salt, sal-ammoniac, or other artificial means. 5th, Gentle exercise ought to precede the cold bath, to produce some re-action of the vascular system upon entering it; for neither complete rest nor violent exercise is proper, previously to the use of this remedy. 6th, The morning or forenoon is the most proper time for cold bathing, unless it be in a river ; then the afternoon or towards the evening, when the water has been warmed by the sun, and the dinner has been digested, are the most eligible periods of the day ; a light breakfast will not be detrimental before using the bath. 7th, While in the water we should not remain inactive, but move about in order to promote the circulation of the blood from the centre of the body to the extremities. 8th, After immersion, the whole body ought to be wiped as quickly as possible, with a dry and somewhat rough cloth. Mode rate exercise out of doors, if convenient, is pro- per, and indeed necessary.'*

We now proceed to the consideration of hot or warm bathing, from the temperature of ninety to above a hundred degrees, about which much of what is erroneous in theory has also been con- ceived. As cold immersion was supposed to harden, by constringing and contracting the fibres of the body, so has it been thought that immersion in warm water would tend to

soften and relax the material fabric of which the frame is made up. That there may be something of foundation, in fact, for these notions, we would not in toto deny ; but it seems more consistent with the laws that govern organised existence to refer the effects to excitation, directly or indi- rectly induced, than to imagine the fibres of the body capable, or rather susceptible, of those mutations that take place in inanimate matter ;

CoG

BATH I N G.

and, in point of fact, we find that some indi- vidual or individuals in some circumstances, after a reiterated use of warm or hot water to the whole or part of the body's surface, shall be ren- dered firmer and more robust than they were prior to the employment of this relaxing agency. Another effect has also been attributed to the use of hot water, or vapor, as a bath, about which there is some reason also to doubt the full legiti- macy of the inferences that have been deduced : viz. its expanding or rarefying qualities, displayed upon the fluids of the body, more especially upon the blood ; and some writers have reasoned upon the operation of the hot bath from beginning to end under this assumption ; we are told, how- ever, by experimenters, that the blood is very little expansible by heat under any circumstances; and it has been observed, that the mean tempe- rature of all the fluids of the body is seldom ele- vated more than a degree or two by a bath of any kind; and even if the elevation were ten degrees, the expansion of all the circulating fluids would not exceed the bulk of a single additional ounce of blood or of water. So that to a certain sort of stimulation, rather than to mechanical or chemical impulse, are we to attribute the internal changes that occur in the fluids and solids of the body, from alterations of exterior temperature. That these changes to some extent do occur, is, how- ever, pretty certain ; and the swelling of the veins, with, indeed, the temporary increase of bulk in the feet, when immersed in hot water, would seem attributable either to an entrance of some of the fluid from without in among the fluids of the body (the possibility of which, as we shall immediately see, is questioned), or to an altered state of the fluids and secretions, and perhaps of the solids, induced by a modification and mixture of exciting and expanding agency; which, in our present state of knowledge respect- ing the laws and limits of vital forces in their contest with inanimate matter, would appear not sufficiently explained.

In observing upon the conditions of the body in which warm bathing is likely to prove salutary on the one hand, or is open to objections on the other, it may lie remarked, that some of the circumstances which render cold bathing fearful, cause \v:;nu ha! him: to be objectionable likewise. Thus, in apoplectic fulness, in tendencies to hatmorrhage from the lungs, or

from the head, in some species of asthma, and in many of the dis- orders ranged underthe division of phlegmasia; by systematic writers, we should equally avoid both the hot and eold bath; and were the old doctrines ut reaction and expansion permitted to explain our objections, we should say that, in the first case, rarelaetion uf fluids and consequent disteo- .MOM of \vs>el constituted the points of objection; v'iile in the oilier, tii'1 rush of fluids into vessels already in a condi:ion of' over excitement ren- dered the practise d,;: ..'erous ; and to some ex- tent, it does, \e n-prat, appear to us, in spite of K.odern refinements in theory, that we should be c. ❓❓❓. rrect in our leasomng.

There is one curious circumstance connected wiih the ('fleets of warm bathing upon the sys- tem, which is. that it may, by proper manage- ni'.nt, 1 c. 'mulish; to reduce the inordinate heat

of fever; and Dr. Currie has particularly recom- mended it with this view, in cases where objec- tions might lie against the employment of cold water for the same purpose; the possession of this property and influence may be taken in full proof that much remains still to be explained on the subject of living temperature ; it should be observed that the effect in question is often operated without reference to perspiration, or at least before perspiration appears externally upon the body ; and Dr. Currie has proposed an inge- nious explanation of the fact, by suggesting whether the secretion of the perspirable fluid, before it is poured out upon the surface, may not occasion an absorption of heat and conse- quent reduction of temperature, by the greater capacity that the matter of perspiration has for heat than the blood had from which it was formed. See TEMPERATURE (Animal), and PHYSIOLOGY.

From the mode and kind of excitation which warm bathing produces, it might be supposed that chronic rheumatism, that old-standing affec- tions of a paralytic kind, that contracted limbs from arthritic disorders, that spasms and ob- structions in the bowels, that many maladies which implicate the nervous organisation without producing plenitude of vessels, and that morbid conditions of the external surface, whether of the skin merely, or whether the cutaneous affection have had to do with the state of internal mem- branes and visceral derangement, would mate- rially be benefited by its judicious employment ❓❓❓ and this we find to be the case. In several of the functional disturbances that are incident to children, arising from the extreme mobility of the frame common to the infantile period of existence, warm bathing, by equalising the cir>- culation, and determining, as it is expressed, to the surface, often proves conspicuously, and very speedily serviceable ; but in instances of the occurrence of disorder, whether croupal, convulsive, or intestinal, it is often necessary to premise purging or blood-letting, especially should the child be of a full

habit, otherwise the stimulating, and, if we may be permitted to say so, expanding power of the heated water might tend to the production of vascular plenitude to a dangerous excess. It must be allowed that the tendency of warm bathing to occasion co- pious perspiration is calculated, in some mea- sure, to obviate the objection now preferred against its indiscriminate use ; but then the mis- chief is sometimes done before the system shall have been thus relieved ; and we have ventured upon this intimation, because we think, in the general way, too little regard is given in domestic medicine to "the circumstances calculated at once to promote the efficacy and insure the safety of the measure under consideration.

Without reference to actual or positive disease, it may be stated, generally, that warm bathing is serviceable in those low conditions of the ner- vous and vascular and muscular energy, in which the same use of cold water would prove rather injurious than useful ; it is a common, and occasionally a good practice, to premise its employment when it is eventually intended that the individual shall go into the cold bath; the

stimulus of the former being of such kind and extent as to insure against the hurtful tendency of the latter ; and the good which results from this method would prove that the idea is erro- neous, which supposes an individual more liable to take cold, as it is called, while using the warm bath than when not subjected to these changes of temperature. The ancients were in the practice of gradual transition from the hot bath or caldarium, to the tepidarium or cooler, and thence to the frigidarium or cold; but if there be any correctness in the principles above propounded, respecting the innoxious nature of cold immediately upon heat, these precautions in reference to successive temperatures, were un- necessary ; and, indeed, in some cases might be worse than useless.

With respect to the tepid bath very little need be said on the present occasion, since water from eighty to ninety degrees is very seldom em- ployed except as a mere abluent ; unless, indeed, in those instances of natural or artificial waters which are impregnated with substances that are conceived to have a specific agency of a medical nature. In some disorders of the skin, indeed, and in other chronic ailments, tepid bathing may occasionally be advisable when circumstances forbid the employment of water of either a very low or very high temperature. ,

The modes of using cold water are, first, by plunging, which is the best calculated, perhaps, to insure all the good of bathing ; secondly, by

affusion, or pouring water over the head and neck, which is especially applicable to those states of nervous weaicness, and vascular fulness and head-disorder, in which the common bath might be objectionable ; and, thirdly, by spong- ing the whole surface of the body immediately upon rising from bed ; which last practice may, in the case of most individuals, be pursued with safety and convenience. The writer of these remarks, since he has been accustomed to daily ablution in this way, has found himself much less liable to catarrhal disorder than before ; and it may be observed, that he tried, some years since, cold bathing by immejsion, without the same agreeable or salutary consequences; but part of this difference of effect he is disposed to attribute to a recent improvement in constitu- tional energy, which would probably insure, at the present time, more steady re-action, and better general effect than formerly followed im- mersion.

BATHS WITH MEDICINAL IMPREGNATIONS. In the article WATERS, we purpose to enter into a somewhat lengthened detail on the virtues that have been ascribed to the several medicinal springs that are resorted to by the invalid, and which are used as remedies, some in the way of internal administration, exclusively, others both externally and internally. We mean here principally to confine ourselves to one or two remarks, bearing upon the much agitated and &tili unsettled question, respecting the degree of efficacy that may be expected to attend immers- ing the body in water, containing particular im- pregnation, or applying such water in any manner to the external surface.

Vl.L JI1.

This question involves in it the very interesting one of cutaneous absorption, as it has been called ; in other words, the enquiry, whether, while the outer skin be whole and entire, any substances, however subtle, can be made to penetrate through it; it must, however, be recollected, that the negativing of this proposition would not imply the denial of all influence from exterior applica- tions, since the materials used may be of such a stimulating or irritating quality as to produce a sort of abrasion of the scarf or outer covering ; and since some of them being of a volatile kind, and surrounding the subject of the experiment with their fumes, the lungs may be the media through which the whole system may become im- pregnated with their qualities.

Now several authors, who have written on the subject of bathing, have all along assumed the permeability of the outer skin to the water em- ployed ; and one of them, Dr. Marcard, states that the sufferings of Tantalus will not be rated very highly by the naturalist. WTe have already said that the bulk of a limb, which is immersed in hot-water, is for a time augmented ; and this has been attributed by those who reason on the supposition of

cutaneous inhalation, or imbibing, to the actual penetration, through the skin, of some portion of the fluid. Many experiments, however, have been instituted, which seem to prove that there is some fallacy in this conclusion, and that the weight of the whole body is not at all added to by total immersion, for some length of time, in water even of a high tempera- ture.

Seguin, Rousseau, Currie, and others, have pursued a series of experiments, to which more particular allusion will be made in the article PHYSIOLOGY ; and from which they infer, that, while the skin is uninterfered with, either by mechanical pressure or by actual abrasion, no matter whatever, solid or fluid, medicinal or otherwise, can be received from without, the scarf skin being impenetrable to the most subtle material; in the words of Dr. Currie, 'though the exhalants of the skin pierce the epidermis (scarf skin), and come in contact with the ex- ternal air, the mouths of the absorbents terminate under it, and are covered by it; and while it remains unirritated and entire, no absorption of solid, liquid, or aeriform elastic fluid takes place on the surface. In the instances,' he adds, ' that are supposed to faror the contrary opinion, it will be found that the article absorbed is forced through the epidermis by mechanical pressure ; or that the epidermis has been previously de- stroyed by injury or disease ; or, if sound, that the article applied to it is of an acrid nature, which first irritates and erodes this tegument, and then, coming in contact with the mouths of the lymphatics under it, is of course absorbed. Seguin's words, expressive of this fact and prin- ciple, are equally decided and forcible : ' The epidermis is a barrier which no kind of virus (and he includes all internal matters) can pass while that tissue is in a sound state and perfectly whole; nor can they be absorbed by the skin.' For a more detailed discussion of this interest- ing topic we must refer, as above intimated, to the article PHYSIOLOGY. Under the word MEDI-

CINE, too, facts in support of, and against the doctrine of cutaneous inhalation will call for no- tice and comment ; we must here limit ourselves to stating that the anti-absorptionists have at least proved a great deal, so much so, that it may be very fairly doubted whether inferences respecting impregnations of the system by baths have not been deduced too hastily and empirically. But, op the other hand, it cannot be doubted that there are substances employed which have the power of forcibly permeating the outer skin by their irritating and eroding quality ; and are in this way either actually absorbed into the system ge- nerally, or by the sympathy which the

true skin constantly keeps up with internal organs ; the in- fluence of the remedy may in this manner be transmitted to the interior without any actual conveyance of matter. There is still another way in which medicinal substances may act upon the frame without being actually received into it, viz. either by corrugating and strengthening, or relaxing and mollifying the fibres of the body ; thus, chalybeate may be more tonic than com- mon water, by the tonic influence it exerts ex- teriorly. From what we have already advanced, however, in another part of the present paper, it will be understood that this principle of agency is of somewhat equivocal admission; and that it is at any rate much modified and limited by the laws of life.

It \vill not be proper to dismiss this part of our investigation without adverting to one par- ticular mode of exciting interior movements, through the medium of exterior medicinals, viz. by the use of mineral acids applied to the surface of the body; which, whether they act through the medium of the absorbing power, or whether their agency be effected by means of the nervous system, and that sympathetic relation which \ve have already stated the skin maintains with internal parts; certain it is that they do display an inlluence upon the frame which gives them a fair claim of admission into the catalogue of the- rapeutic agents. From Dr. Good's recently pub- li>hed volumes, entitled the Study of Medicine, we si till extract an account of the bath to which we now refer.

' There is yet another remedy,' says Dr. G. ' for affections of the biliary organs, &c. which of late years Iras excited great attention, and is now surmounting an ungenerous prejudice that was at first very extensively directed against it ••• and that is the diluted aqua regia bath, invented by Dr. Scott of Russell Square. For nearly thirty years he Ins been in the habit of using this preparation, and has tried it in almost every va- riety of strengths, and almost every variety of proportions which the two acids that enter into the composition may be made to bear to each other, lie commenced his experiments in India, \hen-, on account of the greater degree of torpi- tnde the liver is apt to acquire than in more temperate climates, lie was in the habit of form- ing his bath stronger, and making it deeper than he has found it proper to do in our own country ; and where, upwards of twenty years ago, he pliin.ed the duke of Wellington into one up to his chin, tor a severe hepatic affection he was tiien laboring under, and thus restored him to Len.lth in a short tui.e.'

In England it is not often that he finds it ne cessary to raise the bath much above the knees ••• and he frequently contents himself with a mere foot-bath or common wash-hand basin alone. In both which cases, however, the attendants on the patient should sponge him at the same time with the diluted aqua regia over the limbs, and occa- sionally over the

body.

The aqua regia should be compounded of three parts in measure of muriatic acid and two of nitric acid ; and, in preparing them for use, a pint of the combined acid is to be mixed with the same measure of water. It should, however, be observed by those who are inclined to foran this mixture extemporaneously at their own houses, that, if either of the acids be poured im- mediately on the other a large volume of very offensive gas will be disengaged ; on which ac- count it will be better to pour them separately and slowly on their proper measures of water.

If the acids be of adequate strength, the mix- ture, subdiluted for bathing, will, to the taste, have the sourness of weak vinegar, and perhaps prick the skin slightly, if very delicate, but not otherwise, after it has been applied to the sur- face for half an hour. But since these acids vary much in their degree of concentration, as distilled by different chemists, there will be some variation in their power. The strength of the bath, however, should not be much greater at any time than the proportion here laid down ; For otherwise it may excite a troublesome rash, and give a yellow hue to the nails and skin of the feet, or whatever other part is exposed to its action. A narrow tub, for a knee-bath, just wide enough to hold the feet and reach the knees, should contain three gallons of the pre- pared bath liquor, and consequently about nine ounces in measure of the diluted aqua regia. For a foot bath half a gallon may be sufficient, and a common wash-hand basin may be em- ployed as a vessel for the purpose. The feet should remain in the bath for twenty minutes or half an hour, and the legs, thighs, and abdomen, be in the mean time frequently sponged with the same. In the winter the water may be used warm ; but this is not necessary in the summer. The baths may be employed first daily for a fortnight or three weeks, and afterwards every other day, or only twice a week.

Dr. Scott affirms that he has employed this process with decided advantage in almost all cases dependent upon a morbid secretion of bile, whether the secretion be superabundant, de- fective, or depraved. He finds it often, within a few hours of the first bathing, increase the flow of bile and ameliorate its character ; and, in con- sequence hereof, excite an expulsion of dark- colored faeces, bright colored bile, or bile of a green brown or black color, like tar mixed with oil. He has told me, also, that when employed in the midst of a paroxysm of severe pain from spasm of the biliary ducts, or the passing of a gall-stone, he has often known it to operate like a charm, and produce almost immediate ease.

‘ This account,’ continues Dr. Good, ‘ may be rather overcharged from the ardent mind of its intelligent inventor ; but the process is worth following up, and varying in other proportions, as well as employing in other families

of dis-

eases. My own use of it is at present too limited to speak with decision; yet so far as I have tried it, it has certainly appeared to me to allay irritation, and produce a tonic effect. In two or three instances the advantage has been decisive ; and patients who had hitherto been seldom two months without a severe return of the complaint, have entirely escaped, and apparently lost the morbid predisposition. In a few other cases it has completely failed.'

Under the head of specific, as opposed to common bathing, it may perhaps be right to mention the sea water, which is generally imagined to possess some superior, and even different, efficacy from fresh water of the same temperature. It is a vulgar notion that exposure to sea water, in the way of accident or otherwise, does not so readily engender catarrhal disorder as would the like exposure to ordinary water ; and if this be a well-founded notion, there would seem to be some faculty possessed by the saline impregnation, capable of counteracting its other- wise injurious influence. How this operates, it does not seem very easy to understand, and we are disposed to suspect that there is some fallacy in the conclusion altogether ; it may be that ex- ternal circumstances, that habit, that the superior robustness of those individuals who are mainly exposed to sea water, may assist in its compara- tive negation of deleterious influence, and that the appendages to sea bathing may likewise act in aid of its superior salubrity, to a greater ex- tent than is usually conceived. While we throw out these intimations, we would not, at the same time, wish to be thought unjustifiably sceptical with regard to the greater power of sea, than of common bathing ; and it may be, that the recent project of causing 'the waters of the ocean to come galloping up to London,' is not mere quackery or chimera. ??? .

Dr. Parr observes that 'bathing in the sea is on the whole preferable to common bathing, as the heat is more uniform. It is, also, perhaps from the agitation of the water, more refreshing. Other causes of preference have been assigned ; one is the greater pressure of the water impreg- nated with salt ; the other the stimulus of that salt left on the skin. Each may have some effect, and the latter ground of preference is as- suredly more certain than the former. We cannot easily conceive how the momentary increase of pressure can have any considerable effect, except by the increase of momentum; and the stay in the sea is too short to expect much advantage from this source.'

VAPOR BATHS can scarcely be considered as specifically different from those of water, heated to an extremely high temperature. This mode of bathing, though lately used in this country more than formerly, has been more freely and 'gene- rally employed on the continent, and especially in Russia, where it constitutes one of the princi- pal luxuries of the inhabitants of all ranks: and it is there employed for a multitude of diseases. It conveys heat more gradually than immersion in water; at the same time, more heat can be applied to the body, and its application may be continued for a longer time. The vapor bath was used by the ancient Romans, as it is by the

modern Russians; but the former, as we have observed in a former part of the present article, did not practise the sudden transition which is common with the latter. See VAPOR.

AIR BATH. The celebrated Franklin, by his recommendation of reducing the temperature of the skin, in exposing the naked body to the air for some minutes, and thus causing a healthy excitation and pleasant feeling, in place of febrile irritation and morbid heat, has brought the prac- tice of air bathing into pretty general employ. It merely consists in getting out of bed without any clothing, and walking for a time on the cold floor, and then either putting on the clothes, or what is better, returning to the warm bed, and lying for some time previously to dressing. This may, indeed, be practised at any time of the night with safety, when the individual is restless and uncomfortable from feverish heat; the effect of it, by the way, proves that the irritation connected with febrile heat has reference to something be- yond the mere augmentation of temperature, since the re-action after returning to bed often brings with it as great, though not so uncom- fortable, a measure of heat as that which pre- vailed previously to the exposure to cold; a mild and gentle perspiration sometimes also succeeds, which likewise shows that the capil- lary vessels of the surface are brought into a very different condition of being, from what was their state prior to the temporary reduction of temperature.

On DRY BATHS, as they have been called, we have very little to offer. Some time since a good deal of attention was excited to a proposal, which indeed was put in practice, of burying the body in earth up to the chin, under the notion that its attractive or absorbing powers would draw mor- bid taints from the body, and thus restore health. In the commentaries of Van Swieten, on the aphorisms of Boerhaave, the following account is given of this practice : ××× ' I have beard from a person most deserving of credit, that through the whole kingdom of Grenada, they have a method of curing phthisis by an earth bath ; and I have since read the same account in the works of Francisco Solano de Lugue, who caused a pit to be dug in the earth, where no plants had been sown; and into this pit he put his patients up to the neck, and then covered them with the same earth which

had been dug out, and there left them till they began to shiver, when he caused them to be taken out and wrapped in linen cloths, wetted with rose water.' A Dr. Graham, too, an empiric, who gained some celebrity, pro- posed and employed earth bathing ; a practice (says a modern writer), which in the way he used it, consigned some of his patients to a per- petual mansion under the ground.

Sailors have been in the practice of employing warm sand baths for scurvy, and the ancients adopted many modes of exciting perspiration by dry heat ; it is said moreover to be a practice at this day, in some parts, to cover the body with horse dung, for several chronic ailments ; but these expedients are not in general thought avail- able by individuals of the present period, who make physiology and pathology the ground-wort of their remedial plans ; and we are not, there

fore, called upon to engage in any further dis- quisition respecting their alleged efficacy, or supposed modes of operation.

BATHING AMONG THE TTRKS. ??? In modern Turkey, as well as among the ancients, bathing makes a part of diet and luxury ; so that in every town, and even village, there is a public bath. Indeed the necessity of cleanliness, in a climate where one perspires so copiously, has rendered bathing indispensable; the comfort it produces preserves the use of it; and Mahomet, who knew its utility, reduced it to a precept. Of these baths, and the manner of bathing, particularly at Cairo, the following account is given by Savary, in his Letters on Egypt : ' The first apartment one finds, in going to the bath, is a large hall, which rises in the form of a rotunda. It is open at the top, to give a free circulation to the air. A spacious estrade, or raised floor, covered with a carpet, and divided into compartments, goes around it, on which one lays one's clothes. In the middle of the building, a jet d'eau spouts up from a basin, and agreeably entertains the eye. When you are undressed, you tie a napkin round your loins, take a pair of sandals, and enter into a narrow passage, where you begin to be sensible of the heat. The door shuts to; and at twenty paces off, you open a second, and go along a passage, which forms a right angle with the for- mer. Hero the heat increases. They who are afraid of suddenly exposing themselves to a M'- 'Tiger decree of it, stop in a marble hall, in the way to the bath properly so called. The Lath is a spacious and vaulted apartment, paved a- il lined with marble, a round which there are fp;:r closets. T; e vapor, incessantly rising

*from a toi n'.ain and ci-tern of hot water, mixes itself with tie I'linung perfumes. These, how- t *cr, are never burnt except the persons who ire in the bath desire it. They mix with the steam of the \uter, and produce a most agreeable effect. The bathers are not imprisoned here (is in Europe, in a sort of tub, where one is never at one's ca>e. Extended on a cloth spread out, the head supported by a small cushion, they stretch themselves fn-ely in every posture, whilst they are wrapped up in a cloud of odoriferous vapors, which penetrates into all their pores. After re- posing there some time, until there is a gentle moisture over the whole body, a servant comes, presses you gently, turns you over, and when the limbs ;ire become supple and flexible, h makes all the joints crack without any difficulty. He masses (i.e. touches delicately), and seems to knead tli.' tlesh %s ithout making you feel the smallest pain. This opt ration finished, he puts on a stuff o\e, and rubs \ on a longtime. During this operation, he detaches from the body of the pa- tient, u Inch is nmni'iu' with sweat, a sort of small scale-., and remo\e> even the imperceptible dirt that stops tut; pores. Tin; skin becomes soft and sanoth hke satin. He then conducts you into a i, pour-, the lather of perfumed soap upon your The ancients did more jin I treated them in a more U hii.st Telemachus was at ae beautiful 1'olycasta, the I urjiters of the king of 1'ylos, led the son ot \ ly>ses to the bath ; washed*

him with her own hands ; and, after anointing his body with precious oils, covered him with rich habits and a splendid cloak.' Pisistratus and Telemachus were not worse treated in the palace of Menelaus. ' When they had admired its beauties, they were conducted to basins of marble, where a bath was prepared ; beautiful female slaves washed them ; arid, after anointing them with oil, covered them with rich tunics and superb pellices.' The closet to which one is con- ducted is furnished with a cistern and two cocks ; one for cold, the other for hot water. There you wash yourself. Soon after the servant returns with a depilatory pomatum, which in an instant makes the hair fall oft0 the places it is applied to. Both men and women make general use of it in Egypt. It is composed of a mineral called rusma, which is of a deep brown. The Egyptians burn it lightly, knead it with water, mixing it with half the quantity of slacked line. This grayish jpaste applied to the hair, makes it fall off in two or three minutes, without giving the slightest pain. After being well washed and purified, yon are wrapped up in hot linen, and follow the guide through the windings that lead to the outer apart- ment. This insensible transition from heat to cold prevents one from suffering any inconvenience from it. On arriving at the estrade, you find a bed prepared for you ; and scarcely are you laid down before a child comes to press every part of your body with his delicate fingers, in order to dry you thoroughly. You change linen a second time, and the child gently grates the cal- losity of your feet with pumice stone. He then brings you a pipe and Moka coffee. Coming out of a stove where one

was surrounded by a hot and moist fog, where the sweat gushed from every limb, and transported into a spacious apartment, tpen to the external air, the breast dilates, and one breathes with voluptuousness. Perfectly massed, and, as it were regenerated, one expe- diences an universal comfort. The blood circulates with freedom ; and one feels as if disengaged from an enormous weight, together with a- suppleness and lightness to which one has been hitherto a stranger. A lively sentiment of existence diffuses itself to the very extremities of the body. Whilst it is lost in delicate sensations, the soul sympa- thising with the delight, enjoys the mo►►t agreea- ble ideas. The imagination, wandering over the universe, which it embellishes, sees on every side the most enchanting pictures, every where the image of happiness. If life be nothing but the suc- cession of our ideas, the rapidity with which they then recur to the memory, the vigor with which the mind runs over the extended chain of them, would induce a belief that in the two hours of that delicious calm that succeeds the bath, one has lived a number of years.' Such are the baths, the use of which was so strongly recommended by the ancients, and which are still the delight of the Egyptians. It is by means of them that they cure rheumatisms, catarrhs, and such cutaneous disorders as are produced by want of perspiration. There are no people who make more frequent use of them than the Egyptians, and there is no country where there are fewer asthmatic people. The asthma is hardly known there. The women are passionately fond of these baths, frequent

them at least once a week, and take with them slaves properly qualified to assist them. More luxurious than the men, after undergoing the usual preparations, they wash their bodies, and above all, their heads, with-rose water. It is there that female head-dressers form their long black hair into tresses, which they mix with precious essences instead of powder and pomatum. There they blacken the edge of their eye-lids, and

lengthen their eye-brows with cohel> a prepara- tion of tin burnt with gall-nuts ; and stain the finger and toe nails with the leaves of henne, a shrub common in Egypt, which gives them a golden color. The linen and clothing they make use of are passed through the sweet steam of the wood of aloes ; and when the work of the toilet is at an end, they remain in the outer apartment, and pass the day in entertainments.

BATHING OF HAWKS, or FALCONS, is done when they have been thoroughly reclaimed; they are then offered water to bathe in where they may stand up to the thighs, choosing a temperate clear day for that

purpose. By the use of bathing, a hawk gains strength, with a sharp appetite, and so grows bold.

BATH-KOL, i. e. the daughter of a voice, an oracle among the Jews, frequently mentioned in the Talmud. It was a fantastical way of divination invented by the Jews, though called by them a revelation from God's will, which he made to his chosen people, after all verbal pro- phecies had ceased in Israel. It was in fact a method of divination similar to the sortes Virgil- ianaB of the Heathens. For, as with them, the first words they happened to dip into, in the works of that poet, were a kind of oracle whereby they predicted future events ; so, with the Jews, when they appealed to Bath-kol, the first ⁂words they heard from any man's mouth were looked upon as a voice from heaven, directing them in the matter they were anxious to en- quire about.

*BATHMUS, Ba0/*oe, from paivot, I move; in anatomy, an appellation given to such cavi- ties of bones as receive the prominences of other bones into them.*

BATHRUM, a name given by ancient sur- geons to a kind of stool or bench proper for the reduction of dislocated bones. This is called (3a0pov 'iTTTroicparaov, or the hyppocratic stooj. Its description and use are represented at large by Sculterus. Arm. Chir. p. i.

BATHSHEBA, or BATSHUA, the daughter of Eliam, or Ammiel, wife of Uriah the Hittite. She was the mother of four sons by David, of whom Solomon and Nathan are reckoned in the genealogy of Jesus Christ.

BATHURST (Allan), earl of Bathurst, one of the most celebrated statesmen of queen Anne's reign, was born in 1684. His studies and his education were equally conducive to the brilliant figure he was destined to make in social life and in the senate, as a polite scholar, and a patriot. These talents he had an opportunity of displaying as early as 1705 ; when, at the request of his fa- ther, Sir Benjamin, and of the constituents of Ci- rencester, he was returned to parliament for that borough. He distinguished himself particularly in the struggles and debates relative to the union with Scotland, and firmly supported that mea- sure. Though he consented to act a subordinate character in the opposition planned by Mr. Har- ley and St. John, to the measures of the duke of

Marlborough, he was of infinite service to his party, and the loss of the battle of Almanza se- conded his efforts to dispel the intoxication of former successes. Amidst the storms of politics he steadily maintained a personal regard for Lord Somers, president of the council ; and when that nobleman was divested of office, Mr. Bathurst preserved his esteem. In consideration

of his zeal and services, the queen advanced him in 1711, to the dignity of a peer, by the title of baron Bathurst, of Battlesden, in Bedfordshire. He continued, however, to speak his sentiments with an undaunted freedom in the upper house ; and was a formidable opponent to the court mea- sures during the whole of Sir Robert Walpole's administration The acrimony of the prosecution carried on against the earl of Oxford, lord Bo- lingbroke, and the duke of Ormond, particularly stimulated his indignation and his eloquence ; and on this occasion he observed, ' that the king of a faction was but the sovereign of half his sub- jects.' The South Sea scheme having infected the whole nation with a spirit of avaricious enter- prise, an infinite number of families were involved in ruin. Lord Bathurst publicly impeached the directors, whose arts enabled them to amass sur- prising fortunes ; and moved for having them punished by a forfeiture of their estates. When the bill of pains and penalties against Atterbury, bishop of Rochester, was brought into the house of lords, among the many friends the bishop's eloquence and ingenuity had procured him was Lord Bathurst. He spoke against the bill with vehemence, and declared, he ' could hardly ac- count for the inveterate malice some persons bore to the ingenious bishop of Rochester, unless it was that they were infatuated, like the wild Ameri- cans, who believe they inherit not only the spoils, but the abilities of the man they destroy.' Sir Robert Walpole, having, after obstinate strug- gles, been forced to resign all his employments, Lord Bathurst was sworn' of the privy council, and made captain of the gentlemen pensioners, which post he resigned in 1744. He was ap- pointed treasurer to the Prince of Wales in 1757 and continued in the list of privy counsellors at the accession of George III. Lord Bathurst's integrity gained him the esteem even of his op- ponents ; and his humanity and his benevolence, the affection of all that knew him more intimately. He added to his public virtues all the good breeding, politeness, and elegance, of social in- tercourse. Congreve, Vanburgh, Swift, Prior, Rowe, Addison, Pope, Arbuthnot, Gay, and most men of genius in 'his own time, cultivated his

friendship, and were proud of his correspondence. Pope thus addresses him, in his Epistle on the Use of Riches :

' O teach us, Bathurst, yet unspoil'd by wealth ! That secrtt rare, between th' extremes to move, Of mad good nature, and of mean self-love.'

And Sterne, in his letters to Eliza, thus speaks of him : ' This nobleman is an old friend of mine : he was always the protector of men of wit and genius ; and has had those of the last century always at his table. The

manner in which his notice began of me, was as singular as it was po- lite. He came up to me one day as I was at the Princess of Wales's court; 'I want to know you, Mr. Sterne ; but its fit you should know also who it is that wishes this pleasure : you have heard, continued he, of an old Lord Bathurst, of whom your Popes and Swifts have sung and spoken so much : I have lived my life with ge- niuses of that cast, but have survived them ; and despairing ever to find their equals, it is some years since I have closed my accounts, and shut up my books, with thoughts of never opening them again : but you have kindled a desire in me of opening them once more before I die, which I now do ; so go home, and dine with me.' ' At eighty-five,' he continues, ' he has all the wit and promptness of a man of thirty ; a disposition to be pleased, and a power to please others beyond whatever I knew !' In the latter p;irt of his life, lie preserved his cheerfulness, and was always accessible, hospitable, and be- nctieent. lie delighted in rural amusements; and enjoyed the shade of many a lofty tree which he had planted himself. Till within a month of his deat!:, he constantly rode out on horseback two hours before dinner, and drank his bottle of cla- ret or Madeira after it. He used to declare in a ►►►o manner, he never could think of adopting f)r. Cado_ran's regimen, as Dr. Cheyne had assured him, tii'ty years ago, he would not live seven years longer, unless he abridged himself ot' his wine. Pursuant to this maxim, having invited several of his friends to spend a few cheerful days with him at his seat, and being one eveninir very loth to part with them; on his son the late chancellor's objecting to their sitting up any longer, and adding that health and long life \ere bc-M secured by regularity, he suffered him to ietir;j : but as soon as he was gone, the cheer- fid father :aid, ' Come, my good friends, since the old eentleman is gone to bed, I think we may venture to eraek another bottle.' lie was advanced to the dignity of earl in 1772; living to c the above nobleman, his eldest son, several years l,,rd liiuh cluncellor of Great Britain, and promo' d M the p'/erage in 1771, by the title of ihron .V'sley. Lord Ikithurst married Catha- inic, ('anuiiti r of Sir Peter Apsley, by whom he :.ad two >on -and five daughters. lie died, after a few days iMness, at his scat near Cirencester, in 177,"), a '.red ninety-one.

1! A i nrusr 'U;d]►►►!,). M. D. an eminent physi- ' i.ui and dhine, born in 1620. He studied divinity in Trinity College, Oxford ; but the times of con :u ->ion coining on, he applied himself in jihyˆie. lie took the degree of M. D. and iivsi to si; li emuti r.' <►►►, thai he wa.s. in the time

of the usurpation, appointed physician to the state. Upon the Restoration he quitted physic ; was elected F. R. S. and president of his college ; and having entered into holy orders, was made chaplain to the king, and afterwards dean of Wells. Soon after, he served as vice-chancellor of Oxford, and was nominated by king William and queen Mary to the see of Bristol, but refused to accept it. He was an orator, a philosopher, and a

poet : he possessed an inexhaustible fund of wit, and at eighty years of age, was a facetious companion. Ridicule was a weapon which he had always at hand. His poetical pieces in the Musae Anglicanae are excellent. He wrote seve- ral poems in English and Latin ; and died in 1704, aged eighty-four.

BATHURST, the chief town of a new settlement near the Great Fish River, on the eastward of the colony of the Cape of Good Hope. It is ra- pidly increasing. A large inn has been already built for the accommodation of visiters ; and as the site has been well chosen, Bathurst is ex- pected very soon to become one of the first towns in the colony.

BATHURST, also a new British settlement on the island of St. Mary, at the mouth of the Gam- bia, on the western coast of Africa. Sir George Collier, in his second report, on the settlements of this coast, says, 'The island of St. Mary, upon which Bathurst, the capital, is rising with the same rapidity that the most healthful climate, and most fruitful and productive country could desire, is a barren, sandy spot, in many places scarcely above the level of the sea. Buildings, combining neatness and beauty, are appearing ; and St. Mary bids fair to rival every spot on the lengthened line of coast of western Africa, in commerce and industry.'

BATHUS, in entomology, a species of papilio (Pleb. Rur.), with entire black wings, glossed with blue ; beneath white, with numerous black dots, and a continued fulvous band. Fabricius. Inhabits Austria. It is the papilio battus of Schmetterl, and papilio telephii of Esper.

BATHYCHRUS COLOR, in painting, a term used by the Greeks to express what the Romans call austerus color.

BATHYERGUS, from paQvtpyuv, to work deeply in the earth ; in zoology, a genus of ani- mals belonging to the order rodentia, class mammalia. Its generic character is, incisor teeth large, not covered by the lips, and wedge-shaped ; canine none ; grinders four on either side, above and below, the posterior sloping deeply outwards ; muzzle broad; eyes small; auricles none; tail short and bristly ; toes five on each foot, short and armed with thin flat nails. The two species are, 1. B. maritimus, Illig. Cur. ; mus maritimus, Lin. ; la grande taup du cap, Buff. ; Afri- can rat, Pen ; sand mole of the Dutch ; about the size of a rabbit, and of a cinereous brown color ; having a large head without auricles, and the nose slightly flattened, wrinkled, and black ; the legs are short, with four toes, long claws, and a thumb, with a short claw on the anterior extre- mities. Thehind legs are long, having five toes armed with short claws. It inhabits the Cape, where it is known by the name of zand mole. It burrows near the shore, and renders travelling on

horseback dangerous. Pennant says, they some- times let a horse sink in them up to the shoulders ! 2. B. capensis, Cur.; ffius capensis, Lin. Pall.; taup du cap de Bonne Esperance, Buff, Cape rat ; Pen. About seven inches long, of a dusky rufous ash brown color, with a white ftripe round the eye and ear, and on the vertex ; muzzle black. It is very common in the gardens at the Cape, and called, ‘ bless moll.’

BATHYLLUS and PYLADES, inventors of pantomime entertainments on the stage. Ba- thyllus succeeded in representing comedy ; Py- ►►ades in tragedy. The art consisted in expressing the passions by gestures, attitudes, and dumb show ; not, as in modern times, in machinery, and the fooleries of harlequin. They flourished at Rome, under Augustus, about A. D. 10. Each of them kept scholars, who perpetuated their master’s name : the followers of Bathyllus, who excelled in the comic calling themselves Bathylli ; and those of Pylades, who excelled in the tragic, calling themselves Pyladse.

BATILDA (St.), commonly called St. Badour, a Saxon princess, was carried away from Eng- land by pirates, and sold to Archambaud, mayor of the palace, where she was seen by Clovis II., who married her, and had by her Clotarius III., Childeric II., and Thierri III. She administered the government with great wisdom after his death, and after founding several abbeys, died about 680, in a monastery.

BATINDA, a small^district in Hindostan, in the north-west quarter of the province of Delhi, comprehending the Lachy jungle, celebrated for its breed of excellent horses, said to be descended from some of the Persian horses stolen from the camp of Nadir Shah, in the year 1739.

BATIS, in botany, a genus of the tetrandria order, belonging to the dicccia class of plants, the characters of which are : of the male, the amentum is four ways imbricated, and both the calyx and corolla are wanting ; of the female, the amentum is ovate, the involucrum dyphyllous ; calyx and corolla wanting ; the stigma is bilobate and sessile ; the berries condumate and four- seeded. There is but one species; viz. B. mantima, a native of Jamaica.

BATIS, in botany, the name by which Pliny and some authors call the sea-plant samphire.

BATIS, in ichthyology. See BATOS, and RAIA.

BATISCAN, a river of Lower Canada, rising in the ridge of mountains that run westerly into the interior from Quebec. It falls into the St. Lawrence, about fifty-four miles above that city. At its mouth, it is 350 yards broad, but is so shallow as not to be accessible for boats higher than six or seven miles up the stream, which is also interrupted by many falls and rapids.

BATISTE, in commerce, a fine white kind of Linen cloth manufactured in Flanders and Picardy. There are three kinds of batiste ; the first very thin ; the second less thin ; and the third much thicker, called Holland batiste, as coming very near the goodness of Hollands. The chief use of batiste is for neck-cloths, head-cloths, surplices, &c.

BATMAN, in commerce, a kind of weight used at Smyrna, consisting of six okes. Forty

batmans make a camel's load, and amount to about 720lb. in English weight.

BATMAN, PERSIAN, or BATTAMENT, is of two kinds : one called the king's weight, batman de chahi, or cheray, used for weighing most of the necessaries of life, equivalent to about l'2►►lb. Paris weight . the other called batman of Tauris, equal to 6lb. 4oz. Paris or Amsterdam weight. These are the proportions given by Tavernier. Chardin rates the Persian batmans somewhat lower, viz. the former at 12lb. 12oz. and the latter at 5lb. 14oz.

BATMAN, TURKISH, is also of two kinds ; the larger, containing six okes, ocques, at3|lb. Paris weight the ocque ; so that the batman amounts to about 22►►lb. the smaller, composed likewise of six ocques, at 15 oz. the ocque, amounting to 5lb. 10 oz.

BATMANSON (John), prior of the Carthu- sian monastery, in the suburbs of London. He was some time a student at Oxford, and inti- mately acquainted with Edward Lee, archbishop of York, at whose request he wrote against Eras- mus and Luther. He died in 1531, and was buried in the chapel belonging to the monastery. Bale says he was a proud forward person ; and that Erasmus, in a letter to the bishop of Winchester, calls him an ignorant fellow. But Pitts gives him the character of a man of genius, zeal, piety, and learning. He wrote, 1. Animadversiones in Annotationes Erasmi in Nov. Testamentum. 2. ATreatise against some of Luther's works. These two he afterwards retracted. 3. Commentaria in Proverbia Solomonis. 4. In cantica Canticorum. 5. De unica Magdalena. 6. Institutions Novi- ciorum. 7. De Contemptu Mundi. 8. De Christo duodenni.

9. On the words Missus est, &c.

BATONI (Pompeo), a celebrated Italian pain- ter, born at Lucca in 1708. He gained great fame by his productions, which were eagerly sought after by persons in the highest stations. So that honors and riches were heaped upon him ; the emperor Joseph granted him a patent of no- bility. He died in 1787. One of his most ad- mired pieces, is a representation of Simon the magician contending with St. Peter, in the great church dedicated to the apostle at Rome.

BATNEER, a town of Battie, and province of Delhi, in Hindostan. It is situated on th►► borders of a sandy desert, and was formerly a place of great consequence. It was taken by the celebrated Timur, or Tamerlane, in the year 1398, who put all the inhabitants to death, and burned the city. Long. 74►►. 45'. E., lat. 29►►. 28′ N.

BATON, in botany, a name by which some authors call the true turpentine tree.

BATON, in military affairs, a staff.

BATON A DEUX BOUTS, a quarter-staff.

BATON DE COMMANDEMENT, an instrument of particular distinction, which was formerly given to generals in the French army. Henry III. be- fore his re-ascension to the throne, was made ge- neralissimo of all the armies belonging to his brother Charles the IX., and publicly received the baton, as a mark of high command.

BATON ROUGE, a flourishing post town of Louisiana, on the east bank of the Mississippi,

about 140 miles above New Orleans. The po- pulation is estimated at 5000 or 6000 persons.

BATOON, in military affairs, a truncheon, or iiiarshal's staff

BATOONS OF ST. PAUL (Bastoncini di San Paolo), in natural history, a name given by some of the Italian writers, as Augustino Scilla, and others, to the lapides Judaici, or other spines of echini. These are found in vast abundance in the island of Malta; and, like almost everything else there, are denominated from St. Paul.

BATOKI (Stephen), king of Poland. He was born of a noble family in Transylvania, and elected prince of his native country in 1571 ; after which he gained such reputation, that upon the deposition of Henry, duke of Anjou, by the Poles, his party prevailed over that of Maximi- lian ; and, having married the princess Anne, he was crowned in 1576. lie proved an excellent prince, and successfully opposed both Russia and Sweden ; while he gained great honor to himself by his merciful conduct in the midst of the most horrible cruelties on the part of his enemies. He died in 1586.

BATOS, in ichthyology, the name given by Aristotle, and all the old writers, to the skait. They have generally called the male batos, and the female batis. It is a species of the raia, and distinguished by Artedi by the name of the va- ritˆated ray, with the middle of the back smooth, ;.:ul one nnv of spines on the tail. Albertus calls it the rayte, and rulms.

BATUAC1I1A, in zoology, one of the orders or ►►Teat divisions of the class Reptiles.

BATliACIHAS LAVIS, fromj3arpago►►i a frog; the fro.v-sti.nH1, a name applied by different writers to two very different substances; some iniiiersiamlinu' by it lumps of common flint, accidentally formed info this figure; and others, those pieces of amber which contain either a \hule frog, or ;>ny part of one.

nATHACliO.MYOMACIIIA, from /Sarpo- ii><;, 11 iVo;, /►►'(,►►►, a ;UC,UM', and fj.a\ia, a battle; tiiti Uilt'e or' ihu 1'ious and the mice, the title of ,i lino burlesque poem generally ascribed to i !o;ner.

BATH AC! IT'S, from pa-paxˆc, a frog; in yonln>jy, the fiog tish. A genus of animals be- Icii i ii'j; to the family pcrca, order acanthopte- r\ ;n, class, pisces. The generic character is head !l;:tt i.1 ! horizontally, larger than the body ; ►►►v.ntral fins straight, attached under the throat ; i'ir.->t doiˆd j'.u short, supported by three spmous ray.s ; second dorsal long and soi't, opposite to \iuehthe anal tin also soft ; mouth and gills very i'lvr: ill ilap spinod ; lips sometimes bearded. < '_retms was established by Schneider in his xh'; Icthyolo'.y, and named i'rom the im S!/e of tin: heail, i'i semlilini; that of the The species inhaliit the southern hemis- p 'i re, and are separated into two divisions, ihn-e viii'i and thov without beards or cirrhi on I'"1 lip. The priih ip.d are, 1. \ith beards, l>. didactylns ; tv.o lingered frog fish, inhabits ►►► 'Mm i ; i}. f;u, toad iish ; Garden states that :'! led by tie mhabitniits of Caro lina tin. ' toad !ish;' by il.u I rcnrh it has been ►►► (.rapand d< mi r.' Its h.ihits are very i n!.; k;iu\,ij nut u i-. (i'ii. -id' 'el i re lacious.

It is found in hot climates, and is taken on the coasts of Carolina. B.

grunniens, Schneid. ; cottus grunniens, Lin. Bloch; grunting bull head, Shaw ; grunting frog fish. This animal is about ten inches long; of a brown color marked with white on the sides ; inhabits Ame- rica and the Indian Seas. 2. Without beards. B. Surinamensis. B. Indicus, are founded by Bloch, the cottus insidtator, and B. guavina of the Havannah.

BATSCH (Augustus John George Charles), was born at Jena in 1761. He became professor of philosophy in the university of his native place, where he founded a society for the study of natural history, of which he was president. He died in 1802. His works are ••• 1. Elenchus Fungorum, 8vo. 2. An Introduction to the Knowledge and History of Vegetables, 8vo. 3. Essays on Botany and Vegetable Physiology, 8vo. 4. Botany, for Ladies and Amateurs, Svo. 5. Introductory Essay to the Knowledge of Animals and Minerals, Svo.

BATSEN, or BACS, a county and town of Hungary ; the county is bounded on the north by that of of Scholt, on the south by Bodrog, on the east by little Camania and the Theyss, and on the west by the Danube, which separates it from Sclavonia. It is inhabited by Hungarians and Rascians, and a few Germans. After being united with that of Bodrog, it was separated from it for several years, but was re-united by Joseph II. Since the introduction of the Spa- nish breed of sheep the trade in wool has been very considerable. This county has been fre- quently the theatre of war between Austria and Turkey. The capital, which was formerly more/ considerable than at present, and was the sec of a bishop, suffragan of Colocza, is situated four miles from the north side of the Danube, and twenty from the conflux of the Danube and Drave. Twenty miles north-east of Funfkir- chen, and seventy-five south of Buda. Long. 19••. 10'. E., lat. 46••. 18'. N.

BATTA, a country of Sumatra, stretching along the south-western shore between the Sin- keli and Tabuyong, runs across the whole island. This is one of those districts that have become known to us principally by the modern mis- sionary exertions. In the autumn of 1821 Mr. Burton visited the interior, opposite to the East India Company's settlement at Natal, and found it composed 'of rugged hills, covered with thick forests, and separated by ravines which often formed the beds of rapid rivers. His journey extended as far as Mora Summa, a station which has lately been / chosen by the Company's resi- dent at Natal, for the purpose of maintaining a freer communication with the Battas. This sta- tion is situated about the middle of the range of lofty mountains seen in a north-easterly direction from Natal hill, and within three days walk of the Mendeeling country, which is spoken of in the highest terms by the princes nearer the shore, who have visited it ; and is supposed to contain a population of 100,000 individuals. Mr. Bur- ton says, ' The country round

here is the most beautiful I have seen on Sumatra. It is culti- vated chiefly with labangs, for several miles in every direction. There is no sawah ground. The

Batta people of this place, unlike their neigh- bours, and unlike Batta people of other places, live on their respective farms, and not collected together in dusuns (villages). The houses scat- tered upon the surrounding hills, reminded me much of my favorite Gloucestershire, as I viewed them at a distance.'

The chief products of this country are pepper, plantains, Indian corn, camphor, cotton, indigo, cassia, and gum benzoin. Gold and sulphur are among its mineral treasures; the first of which Mr. B. had an opportnnity of seeing the Battas procure from the beds of the rivers, in the same way nearly as in South America. Among the animal tribes, monkeys, elephantc, and tigers, are numerous; but there are very few birds.

The Battas Mr. Burton describes as fine, tall, stout, good-looking people, superior in appear- ance to the generality of the Malays. They have a peculiarly fierce and independent look, are well dressed in cotton cloths, manufactured by the women, and wear English beads as orna- ments. ' These people,' he remarks, ' are per- fectly independent ; they have no idea of their own inferiority to any people on earth, and their carriage and behaviour tell you so. They are very polite in their own way, are good speakers, and know perfectly well how to manage every point of an argument, so as to turn it to their own advantage.'

The Battas have a settled language, which is extensively written and understood, and many neatly executed books. The whole population is estimated at a million, 2 or 300,000 of whom can read. ' I have begun to read their language,' says Mr. B., ' and find there is nothing to fear relative to its acquisition, the character is re- markably simple, and every sound having its representative mark, the language may be pro- nounced correctly by any person who has ac- quired the character, though he may not under- stand what he reads.' Mr. Prince, the Compa- ny's Natal resident, drew up a brief account of the religion of these people, at the request of SirT. S. Raffles, from which it appears to be compounded of the most ridiculous and barbar rous superstitions. They do not, however, wor- ship images, but believe in the existence of cer- tain deities, whose attributes indicate a much greater degree of knowledge and civilisation at some former period. Dee Battah AsseeAssee is the Creator and Father of all things, and is sup- posed

to have appointed three brothers as his agents to instruct mankind. Bataragourou, the god of justice; Seeree Padah, the god of mercy; but Mahalabhoolan, the third brother, soon dis- agreed with the other two, separated from them, and propagated tenets directly in opposition to theirs. He is therefore described as the source of ‘ discord and contention ००० the instigator of ma- lice and revenge ००० the inciter of anger ००० the source of fraud, deceit, lying, hypocrisy, and murder.’ He has the chief influence among the Battas, and they acknowledge that petitions are seldom of- fered to either of the others. The only semblance of a priest among them, is a person named Dat- too, who is skilled in all their superstitions ; and there is generally one of these to every village;

but the only religious ceremonies the existence of which Mr. Prince could ascertain, appeared to consist in an invocation of the manes of the dead. ‘ The influence of the Dattoos over tne deluded Battas is such,’ says Mr. P., ‘ that they will not engage in any undertaking, however trifling, without first consulting them. They ex- pound all their religious books, and, according to their interpretation, a day is chosen as propitious to the accomplishment of the desired object, whether it be a suit, a journey, or war. The moral conduct of these people appears to be in- fluenced by all the vile passions of an irregular and irritable constitution. ‘ Truth is seldom re- garded when in the way of their interests or feelings; and honesty is never founded on prin- ciple, but on the fear of detection. The general tenor of their lives has obliterated the recollec- tion and practice of the laws of Seeree Padah and Bataragourou, and they have no priesthood or rajah to recal them, or to reprove their obsti- nate adherenee to the principles of Mahalabhoo- lan, who is certainly no other than the devil.’

One of the amusements of this people is a peculiar and very cruel one, thus described by Mr. Burton. ‘ In one of the bazars,’ he says, ‘were about 100 persons amusing themselves with a most cruel game. They drive a small stake into the earth, and round it draw a circle, which they divide into four equal parts ; in each of the partitions different individuals put equal sums of money; to the stake is tied a young fowl, whose throat being cut, it flutters about for a short time, and then expires. The person whose money happens to be in the partition where the fowl lies after death, sweeps the stakes. The circle may be divided into as many parts as there are persons who wish to follow the amuse- ment. The man officiating as cut-throat was the imum, or priest, of the place.’

BATT./E, a people of ancient Germany, for- merly inhabitants of what is now called Hesse. Being dissatisfied with their situation there, they settled on the island formed by the Vahalis and the Rhine, which from them took the name of Batavia, or Batavorum Insula. Their govern- ment was a mixture of monarchy, aristocracy, and democracy. Their chief was,

properly speak- ing, nothing more than a principal citizen, whose business was rather to advise than to command. The principal men who exercised jurisdiction, and commanded the troops, in their respective districts, were chosen, as well as the kings, in an assembly of the people. A hundred persons, selected from among the people, presided over every county, and acted as chiefs in the different hamlets. The whole nation was, in some mea- sure, an army always in readiness. Each family composed a body of militia, which served under a captain of their own choosing. See BATAVI and BATAVORUM INSULA.

BATT'AIL, v. & n.~\ Fr. battaille, Ital. bat- BATTAIL'ANT, / taglia, Span, battala.

BATTAIL'OUS, ˆFrom the ancient Saxon

BATTA'LION, ibeatan, to fight, or to

BATTA'LIA. J strike. Battailous is hav-

ing the appearance of a battle ; battalia is the order of battle ; and battalion signifies the divi- sion of an army, and formerly an army itself.

Sir EJ-vvard also sone J?er gile gan he knowe, Dight him to bataile bone, his trumpes did he blowe.

R. Brwme.

Lest any time it were assail'd, Ful wcl about it was battailed, And round environ eke were set, Ful many a rich and fair touret.

Chaucer. Romaunt of the Rote. At many a noble armee hadde he be; At mortal battailes, hadde he ben fiftene ; And foughten for our faith at Tramissene ; In listes thries ??? and aye slain his foe. Id.

Soon after this I saw an elephant, Adorn'd with bells and bosses gorgeously, That on his backe did beare (as hatteilant) A gilden towre which shone exceedingly.

Spenser. Vision of the World's Vanities. But deeds of armes must I at last be fainn, And ladies love, to leave so dearely bought ? What need of armes where peace doth aye remaine, Said he, and battailes none are to be fought

? As for loose loves they are vainc, and vanish into nought. Id.

He started up, and did himself prepayre, In sun-bright armes, and battailous array ; For with that pagan proud he combatt will that day.

Id.

When sorrows come, they come not single spies, But in battalions. Shakspeare. Hamlet.

A fiery region, stretch'd In battailous aspect, and nearer view Bristled with upright beams innumerable Of rigid spears and helmets throng'd. Wilton. Next morning the king put his army into battalia.

Clarendon.

The pieri'M batltiliont disunited fall In heaps on heaps ; ouo fate o'erwhelms them all.

Pope.

BATTALIA, an army ranged in order of battle, or ready for engagement. The word seems formed from tin; Latin batualia, sometimes also written batalia, denoting a sort of military or gladiatorial exercisers fighting with foils, or tilting at a post. In this sense, we meet with the depth of a batta- lia; to march in buttalia, with the baggage in the middle; to break the battalia, See. In the Roman battalia, the bastati made the front. It further implies an army or considerable detach- ment of troops drawn up in order of battle, or in any other proper form to attack the enemy. Stv IvviTLi:

BATTAI.IOX, jn the British army, is an unde- termined body of infantry in regard to number, generally from f>00 to 1000 men. The royal regiment of artillery has consisted of ten batta- lions, exclusive of the invalid or veteran battalion. Sometimes regiments consist each of one batta- lion only ; but if more numerous are divided into several battalions, according to their strength ; so that every one may come within the number mentioned. A battalion of one of our marching regiments consists of 1000 and sometimes of l\!ui) men, officers and non-commissioned in- cluded. \hen there are companies of several re- giments in a garrison to form a battalion, those of the eldest regiment post themselves on the right, those of the second on the left, and so on till the yoim-vxt falls into the centre. The officers take thrir posts before th►►'ir companies, from the right ari'l left, according to seniority. Kach battalion iˆ divided into four divisions, and each division mioluo subdivisions, which are again divided

into sections. The companies of grenadiers being unequal in all battalions,

their post must be regulated by the commanding officer. See REGIMENT.

The Triangular BATTALION of ancient military history, was a body of troops ranged in the form of a triangle, in which the ranks exceeded each other by an equal number of men. If the first consisted of one man only, and the difference between the ranks was only one, then its form was that of an equilateral triangle : and when the difference between the ranks was more than one, its form was an isoscele, having two sides equal, or scalene triangle.

The Round BATTALION, is that in which the soldiers are ranged in concentric circles. This was much used by the Romans, and called in orbem. Caesar, in his Commentaries, has given many instances.

The Square BATTALION. M. Folard shows at large, in his book de la Colonne, the weakness of the square battalion, and decries the modern method of ranging battalions so shallow as to render them weak, and unable to support each other: so that they are easily penetrated or broken; an essential fault in tactics. The real strength of a corps, according to this author, consists in its thickness, or the depth of its files, and their connexion and closeness. This depth renders the flanks almost as strong as the front. He adds, that it may be laid down as a maxim, that every battalion ranged deep, and with a small front, will beat another stronger than itself ranged according to the usual method. (Polyb. torn. i. p. 7.) But this opinion of Folard has not been adopted in modern practice ; and his theory has been vigorously attacked by French tacticians. They admit the superior strength of his column to that of a modern battalion, if the action were to be decided with pikes and swords ; but where fire arms must be used, M. Folard's column is so very ill disposed for this purpose, that it must infallibly be destroyed.

BATTECOLLAH, BATUCATA, a large open town on the sea coast of the British district of North Canara. The name signifies the round town. It stands in lat. 13►► 56′ N., long. 74 37′ E, on the north bank of a small river, which waters a very beautiful valley, surrounded on every side by hills, and in an excellent state of cultivation. Eight dams are yearly made, at the public expense, in order to water the rice grounds, which are constructed of earth, and only intended to collect the stream. Battecollah contains two mosques, one of which receives an allowance of 100 pagodas from the Company, and the other half as much. Many of the Mahommedans are wealthy, and their commercial speculations extend to different parts of the coast. Here are a great many guddies, or temples, belonging to the followers cf Vyas ; and two Jain temples, the only remains of sixty-eight that were formerly in the place.*

BATTEL, v., n. & adj.ˆ It maybefrom the BAT'TLING, I Sax. batan, to bait,

BAT'TABLE, V says Mr. Todd. But

BAT'TLER, i Mr. Stevens thinks,

BAT'FUL. J that bat is an ancient

English word for increase. Perhaps it is from

the Goth. ga-b(itnan, to advantage. Batful is a compound of the two participles, bat and full. The verb appears to be founded upon the noun, and to signify to grow fat, to get flesh, to render fertile and fruitful. Bailable, is capable of cul- tivation. To batlel (the verb neuter) is to stand indebted in the college books at Oxford, for what is expended at the buttery in the necessa- ries of eating and drinking. At Cambridge size is used in a similar sense. Hence in the former university there is a student named a butteler or battler ; in the latter a sizer. At Eton, batlel is used to describe the small portion of food, which, in addition to the college allowance, the pupils receive from their dames. But in every appli- cation the word has reference to increase.

This is the grayne of mustard sede whiche when it was so fine and so little that the unlearned sort of English me could scarce possibly fele or see it, ye of your exceeding charitie and zcle towards your country folkes did in such wise helpe to some in the field of Englande, and did so cherishe with the sable batlcing yearth of the paraphrase, that where before it was in the eyes of the unlettered, the least of al sides, it is now shot up, and growe much larger in bredth the any other herbe of ye field. Udall. Luke, Preface.

The best advizement was of bad, to let her Sleepe out her fill, without encumbcrrnent ; For sleepe (they said) would make her battel better. Spenser. Faerie Queene.

For in the church of God sometimes it commeth to pass, as in over battle grounds, the fertile disposition whereof is good ; yet because it exceedeth due propor- tion, it bringeth forth abundantly, through too much ranknesse, things lesse profitable.

Hooker. Eccles. Pol.

Massinissa made many inward parts of Barbarie and Numidia in Africk (before his time incult and horrid) fruitful and bailable by this means.

Burton's Anatomy of Melancholy.

Thomas Sorrocold, or Sorocold, was born in Lan- cashire, became a battler or student of Brazen-nose college, in 1578, aged 17 years or thereabouts.

Wood. Athenae, Oxon.

Eat my commons with a good stomach, and battled with discretion. Puritan. Malone's Supplement.

The batful pasture fenc'd, and most with quickset

mound, The sundry sorts of soil, diversity of ground.

Drayton. Polybion.

BATTEL, in law, or TRIAL BY WAGER OF BAT- TFL, now disused. See APPEAL.

BATTEL ABBEY. See BATTEL.

BAIT ELM A, a town of Syria, the ancient Daphne; the scene, according to classical writers, of the transformation of the nymph of that name into a laurel. At a short distance these trees are numerous. It is said that temples dedicated to Daphne, Apollo, and Diana, stood on this spot; and that Gallus built a church at a later period, which Dr. Pococke conjectures may have been the remains of that of Apollo. He saw the remains of a Christian church, with Greek inscriptions on the walls, and supposed that it might have received the bones of Babylas, bishop of Antioch, and those of several other martyrs. There are fountains, and the remains of foundations, walls, and aqueducts, about Bat- telma, which is five miles south-west of Antioch. BATTELY (John), an English divine, born at St. Edmund's Bury, in Suffolk, in 1647, and

educated at Trinity college, Cambridge. Arch- bishop Sancroft made him his chaplain, and gave him the rectory of Adisham in Kent, and the archdeaconry of Canterbury. He wrote Anti- quitates Rutupinse, and Antiquitates Edmund- burgi. He died in 1708.

BATTEN, v. a.&n. A word, says Johnson, of doubtful etymology. Probably of the same derivation as battle, as it seems to have succeed- ed it, and to have the same meaning1. It is, however, with its predecessor, growing fast into desuetude. It signifies to fatten, or make fat ; to feed plenteously; to

fertilise; and to live in indulgence.

CORIO. Follow your function, go and batten on cold bits. Shahspeare.

A man may batten there in a week only, with hot

loaves and butter, and a lusty cup of muscadine and

sugar at breakfast, though he make never a meal all

the month after. Ford. Perkin Warbeck.

We drove afield,

Batt'ning our flocks with the fresh dews of night.

Milton.

Burnish'd and batt'ning on their food, to show The diligence of careful herds below. Dryden.

Twa mice, full blythe and amicable, Batten beside erle Robert's table. Prior.

The meadows here, with batt'ning ooze enrich'd, Give rpirit to the grass ; three cubits high The jointed herbage shoots. Philipi.

While ardent Sirius shoots a thirsty ray,

And autumn yet withholds retreating day, They range at large, and gambol through the stream, Frisk on the beach, or batten in the beam. Brooke. Go thou ; the moan of woe demands thine aid ;

Pride's licens'd outrage claims thy slumbering ire ; Pale genius roams the bleak neglected shade,

And battening avarice mocks the tuneless lyre.

Beattie.

BATTEN is chiefly used by joiners, in speak- ing of doors and windows of shops, &c. which are not framed of whole deal, &c. with stiles, rails, and pannels like wainscoat; but are made to appear as if they were, by means of these bat- tens, bradded on the plain board round the edges, and sometimes cross them and up and down.

BATTENS OF THE HATCHES, in sea language, are nailed along the tarpaulings, and serve to keep their edges close down to the hatches, in

order to prevent the wafer which washes over the deck from penetrating into the lower apartments of the ship.

BATTENBERG, a small town of Germany, in the grand duchy of Hesse, on the Eder, with an old castle, a bailiwic, and 720 inhabitants. Twenty-five miles north of Giessen.

BATTENHAUSEN, an ancient town of Ger- many, in the territory of the Catti.

BATTENKIL, a small river of North America, in the state of Vermont, which rises in Benning- ton county, and running south-west, afterwards turns directly west into the state of New York, where it falls into the Hudson, nearly opposite to Saratoga.

BATTER, v. & n.-v Fr. battre ; Ital. battere ;

BAT'TERER, /Germ, batten; of the same

BARTERING, ►► etymology as battail, viz.

BAT'TERY. J ancient Saxon beatan : ap-

plied to things it signifies to beat down, to shatter. The substantive designates a mixture of seveial

BAT

ingredients beaten together with some liquor; so called from its being so much beaten. Applied to persons, it describes thet urmoils and violence through which they have passed, and the worn- out condition in which they are left.

Man stondeth the sinne of contumelie or strif and '►►►heste, and battereth and forgeth by vilians reprevinges. Chaucer. The Persona Tale. When Cupid scaled first the fort Wherein my hart lay wounded sore, The battry was of such a sort, That 1 must yield or die therefore.

Horace. Uncertain Authort.

For now were the walls beaten with the rams, and many parts thereof shaken and battered: and at one place above the rest, by continual batterie there was such a breach, as the towne lay open and naked to the. fnemy. Holland's Livius, fol. 397.

Moreover take but three eextares or quarts of it being steeped, and it will yield a measure called modius, of thicke grewel or batter, called in Latin

puls. Id. Plinie, vol. i. p. 558.

They all that charge did fervently apply, With greedy malice and importune toyle, And planted there their huge artillery, With which they daily made most dreadful battery.

Spenser.

Sconce call you it ? so you would leave battering. I had rather have it a head. Shahspeare.

Many men neglect the tumults of the world, and i-are not for glory, and yet they are afraid of infamy, repulse, disgrace, they can severely contemn plea- sure, bear grief indifferently : but they are quite bat- tered and broken with reproach and obloquy.

Burton, Anat. Mel. Others to a city strong,

Lay T.ieire encarnp'd j by battery, scale, and mine, Assaulting. Milton.

Crowds to thn castle mounted up the street, lltitt'ring the pavement with their coursers' feet.

Dry den.

One would have all things little, hence has try'd Turkey poults fresh from th' egg in batter fry'd.

King.

*If you have a silver saucepan for the kitchen use, Vt me advise you to batter it well ; this will shew '***oujlant good housekeeping.*

ˆu-ift's Directions to the Cook. As the same dame, experienc'd in her trade, liy names of toasts retails each batter'd jade. Pope. The ordinary machines invented to batter or under- ii.ine the walls, were rendered ineffectual by the supe- rior .kill of the Romans. Gibbon. BA'IIM;, r. n. A word used only by work men.

The side of a wall, or any timber, that bulges from its bottom or foundation, is said to batter. Moxon.

BAI'IFK. In law, a violent striking of any man. In an action a-am.st a striker, one may lie found u'uilty of the assault, yet acquitted of the lial/ ini. Then: may therefore be assault without biJlinj ; but lultcry always implies an assault.

\Viiv does In: suffer this rude knave now to knock him about the sconce, with a diriy shovel, and will not tell him of his action of buttery? Shakspeare.

Sir, quo' the lawyr, not to flatter yc, You have as good ami fair a battery As heart can wiUi, and need not shame The proudest man alive to claim. Hudibras.

!5\ i i r.niM,, iii the military art, is the at- U. i nig a fortified place or work with heavy

BAT

artillery. To batter in breach, is to play furiously on a work, as the angle of a half moon, to demo"- lish and make a gap in it. In doing this, they never fire a piece at the top, but all at the bot- tom, from three to six feet from the ground. See BATTERY.

BATTERING RAM, in antiquity, a military engine used to batter and beat down the walls o. places besieged. It is said to have been invented by Artemorus of Clazomene, a Greek architect, who flourished A. A. C. 441. It is thus described by Josephus-: A vast beam, like the mast of a ship, strengthened at the one end with a head of iron, resembling that of a ram, whence it took its name, was hung by the middle with ropes to another beam, which lay across two posts ; and hanging thus equally balanced, it was by a great number of men drawn backwards and pushed forwards, striking the wall with its iron head. But this engine did most execution when it was mounted on wheels, which is said to have been first done at the siege of Byzantium under Philip of Macedon.

BATTERING RAM, in military affairs. See ARIES.

BATTERING RAM, in heraldry, a bearing or coat of arms resembling the military engine above described.

BATTERSEA, a village in Surrey, which gives the title of baron to the St. John family. Popu- lation about 5000. In the church is a monu- ment of Henry St. John, viscount Boling- broke, who was born here, and his second wife, who was a niece of Madame de Maintenon. On another to the memory of Sir Edward Winter, who lived in the neighbourhood, it is related that being a captain in the East India company's service, in the reign of Charles II., he was attacked in the woods by a tiger, when, placing himself on the side of a pond, as the tiger flew at him, he caught him in his arms, and falling back with him into the water, got upon him and kept him down till he was drowned. On the site of Bolingbroke House, which was pulled down in 1775, has been erected a horizontal windmill of very large

dimensions. The height of the main shaft is 120 feet, and the diameter at the bottom fifty-two. In 1771, a wooden bridge was built over the Thames at Battersea, under the direction of Mr. Holland, at an expense of ►►22,500.

BATTERY, in electricity, is a combination of coated surfaces of glass, commonly jars, so con- nected together, that they may be charged at once, and discharged by a common conductor. Mr. Gralath, a German electrician, was the first who contrived to increase the shock, by charging several phials at the same time. Dr. Franklin, after he had analysed the Leyden phial, and found that it lost at one surface the electric fire which it received at the other, constructed a battery of panes of large sash glass, coated on each side, and connected in such a manner that the whole might be charged together, and with the same labor as one single pane; and by bringing all the giving sides into contact with one wire, and all the receiving sides with another, he contrived to unite the force of all the plates, and to dis- charge them at once. Dr. Priestley describes a still more complete battery, of which he says,

that after long use he sees no reason for wishing the least alteration in any part of it. This bat- tery consists of sixty-four jars, each ten inches long, and two inches and a half in diameter, coated within an inch and a half of the top; forming in the whole thirty-two square feet of coated surface. The wire of each jar has a piece of very small wire twisted about the lower end of it, to touch the inside coating in several places ; and it is put through a pretty large piece of cork, within the jar, to prevent any part of it from touching the side, which would tend to promote a spontaneous discharge. Each wire is turned round, so as to make a hole at the upper end; and through these holes a pretty thick brass rod with nobs passes, each rod serving for one row of the jars. The communication between these rods is made by laying a thick chain over them, or as many of them as may be wanted. The bot- tom of the box, in which the jars stand, is covered with a plate of tin, and a bent wire touching the elate passes through the box, and appears on the outside. To this wjre any conductor designed to communicate with the outside of the battery is fastened, and the discharge is made by bringing the brass knob to any of the knobs of the battery. When a very great force is required, the quantity of coated surface may be increased, or two or more batteries may be used. But the largest and most powerful battery, is that which was employed by Dr. Van Marum, to the amazing large electri- cal machine constructed for Teyler's Museum at Haarlem. This grand battery consists of a great number of jars, coated as

above, to the extent of about 130 square feet; and the effects of it, which are truly astonishing, are related by Dr. Van Marum, in his description of this machine, and of the experiments made with it, at Haarlem, in 1785.

BATTERY GALVANIC. See GALVANISM.

BATTERY, in law, is the unlawful beating of another in breach of the peace. The least touch- ing of another's person wilfully, or in anger, is a battery ; for the law cannot draw the line between different degrees of violence, and therefore totally prohibits the first and lowest stage of it; every man's person being sacred, and no other having a right to meddle with it, in the slightest man- ner. Upon a similar principle, the Cornelian law, de injuriis, prohibited pulsation as well as rerberation ; distinguishing verberation, which was accompanied with pain, from pulsation, which was attended with none. But battery is in some cases justifiable or lawful; as, first, where one who hath authority, a parent or master, gives moderate correction to his child, his scholar, or his apprentice : second, in self-defence ; if one strike another, or only assault him, he may strike in his own defence ; and, if sued for it, may plead, son asault demesne, that it was the plaintiff's ori- ginal assault that occasioned it : third, in defence of goods or possessions, if one endeavour to deprive another of them, he may lay hands upon him to prevent him ; and in case he persist with violence, may beat him away : fourth, in the exer- cise of an office, as that of church-warden or beadle, a man may lay hands upon another to turn him out of church, and prevent his disturbing the congregation : and if sued for this or the like bat-

tery, he may set forth the whole case, and plead that he laid hands upon him gently, molliter ma- nus imposuit, for this purpose. On account of these causes of justification, battery is denned to be the unlawful beating of another : for which the remedy is, as for assault, by action of trespass vi et armis; wherein the jury will give adequate satisfaction in damages.

BATTERY, in metalline manufactures, or bat- tery works, includes pots, sauce-pans, kettles, and the like vessels, which, though cast at first, are to be afterwards hammered or beaten into form. Some make battery for the kitchen, bat- terie de cuisine, comprehend all utensils for the service of the kitchen, whether of iron, brass, cop- per, or other matters. Others take the term in a narrower sense, and restrain it to utensils of brass or copper. A society for the mineral and battery work of England, was incorporated by queen Elizabeth.

BATTERY, in the military art, is a parapet thrown up to cover the gunners, and men employed about the guns, from the enemy's shot. This parapet is cut into embrasures, for the guns to be fired through. The height of the

embrasures on the insid: is about three feet; but they slope lower to the outside. Their width is two or three fee,,; but they open to six or seven on the outside. The mass of earth betwixt two embrasures, is called the merlon. The platform of a battery is a floor of planks and sleepers, to keep the wheels of the guns from sinking into the earth ; and is always made slop- ing towards the embrasures, both to hinder the recoil, and to facilitate the bringing back of the gun. The powder magazines, from which the batteries are to be served, ought not to be far distant from them, nor from each other. The general one about sixty feet in the rear of the bat- tery, and the small ones about half that distance. The magazines are made either to the right or left of the battery, as the officer may think fit for deceiving the enemy: they are commonly built five feet under ground ; taking care to secure the sides and roof with boards, and cover them with earth, clay, or some such substance, lest fire should get in to the powder. The balls are generally piled up beside the rnerlons, between the embrasures, to be in readiness. Though in England engineers are employed to construct batteries, the officers of artillery, who are daily practising the different branches of their pro- fession, would seem to be the fittest persons to direct the situation and to superintend the con- struction of their own batteries. Batteries are of various kinds, viz.

BATTERIES CROSS, are batteries which play athwart one another upon the same object, form- ing there an angle, and causing more destruction ; because what one bullet shakes the other beats down.

BATTERY A RICOCHET is adapted to the method of ricochet, or duck and drake firing, first invented by Vauban, at the siege of Aeth, in 1692: the guns are loaded with small charges, and elevated so as to fire over the parapet; and the shot is thus made to bound along the opposite rampart, like a stone skimmed along the water. In a

siege they are generally placed at about 300 feet before the first parallel, perpendicular to the faces produced, which they are to enfilade. Thi? method has since been applied to mcrtars and howitzers with great success, which are of singu- lar use in action to enfilade the enemy's ranks; for when the men perceive the shells bounding about with their fuzes burning, expecting them to burst every moment, the bravest among them will hardly have courage to wait their approach.

BATTERY BOXES, square boxes to be filled with earth or dung, for the purpose of making batteries, where gabions and earth cannot be had.

BATTERY, COMRADE, or JOINT BATTERY, is when several guns play at the same time upon one place.

BATTERY, COFFER, is that where the sides of the wall and merlons only are formed of fascines, and all the cavities or included spaces filled with earth.

BATTERY, COVERED, or MASKED, is when the guns and men are covered by a bank made of fascines and earth, of about eighteen or twenty feet thick, and seven or eight feet high. The guns are generally from nine to eighteen pounders ; sometimes twenty-four pounders are used.

BATTERY D'ENFILADE, is one that scours or sweeps the whole length of a straight line.

BATTERY DE REVERS, that which plays upon the rear of the troops.

BATTERY EN ECHARPE, is that which plays obliquely.

BATTERY EX ROUAGE, is that used to dis- mount the enemy's cannon.

BATTERY NAILS, pins used for fastening the planks that cover the platforms, and not made of iron but of the toughest wood, because iron might be dangerous, by the iron-work of the wheels striking against them in recoiling, &c.

BATTERY OF A CAMP is usually surrounded with a trench and pallisades, at the bottom, and with a parapet on the top, having as many holes as there are pieces of artillery, and two redoubts on the wings, or places of arms, capable of cover- ing the troops, which are appointed for their defence.

BATTERY OF MORTARS differs from a battery of guns ; for it is sunk into the ground, and has no embrasures, it being designed to throw its charge up into the air. It consists in a parapet of about twenty feet thick, seven and a half in front, and six in the rear; of a berme about three feet broad, according to the quality of the earth; of a ditch twenty-four feet broad at top, and twenty at the bottom. The beds are not made sloping like the platforms for guns, but exactly horizontal : they should be nine feet long, and six broad, with right foot betwixt them, and nine from the part.

BATTKRY, OPEN, is a number of cannon, ge- nerally lield-picoes, ranged a-breast of one another, on a small natural elevation of the ground, or ;\n artificial bank of about a yard or two high.

BAVIT.KY, Sr.sx. or BTRIEP, batterie en terre, is that whose platform is

sunk into the ground, so that theie must be trenches cut in the earth, before the nur/./les of the guns, for them to fire out at.

BATTERY, FLOATING, a sea battery of mortars, generally composed of old ships considered unfit for active service, properly strengthened by balks and other timbers. Several improvements have been attempted on floating batteries in this country. Among others, a mortar battery, for the bombardment of the enemy's ports, has been invented by Sir W. Congreve, which is proof both against shells and red-hot balls. It is so contrived that the masts and sails can be securely disposed of in less than a quarter of an hour ; so that it then presents upon the water nothing but a mere hull, with sloping sides, which is rowed by forty men, under cover of the bomb- proof, and may, by the peculiar construction of the masts and rigging, be brought under sail again as expeditiously as dismantled. The rudder and moorings are wholly under water, and protected by the bomb-proof. The battery is armed with four large mortars, for bombard'- ment, and four forty-two-pounder carronades, for self-defence; though, from being covered with plates and bars of iron, she can neither be set fire to nor be carried by boarding. Four such vessels, though not more than 250 tons burden each, and drawing less than twelve feet water, would throw upwards of 500 shells into any place in one tide, and with the greatest precision ; both because from their construction they have nothing to apprehend from approaching the enemy's batteries, and because from the peculiar contrivance of the mortar-beds, the elevation of the mortars is not affected by the rolling or pitching of the vessel.

BATTEURS D'ESTRADE, scouts, or horse- men, sent out before, and on the wings of an army, two or three miles, to make discoveries ; of which they are to give an account to the general.

BATTIE (William), M. D., was born in De- vonshire, in 1704. He received his education at Eton ; and in 1722 was sent to King's College, Cambridge. His own inclination prompted him to the law ; but his finances could not support him at one of the inns of court. He therefore turned his attention to physic, and first entered upon the practice of it at Cambridge ; where in 1729 he gave a specimen of an edition of Iso- crates, which in 1749 he completed in 2 vols. 8vo. He afterwards removed to London ; and in 1738 or 1739 fulfilled by marriage a long en- gagement to a daughter of Barnham Goode, the under master of Eton, who is honored with a place in the Dunciad,for having abused Pope, in The Mock jKsop. A cousin now left the doctor ►►30,000. In the dispute which the college of physicians had with Dr. Schomberg, about 1750, Baltic took a very active part. In 1751 he pub- lished De Principiis Animalibus Exercitationes, in Coll. Reg. Medicorum, in three parts ; which were followed in 1752 by a fourth. In 1757, being physician to St. Luke's, he published A Treatise on Madness, in

quarto; and in 1762 Aphorismi de cognoscendis et curandis Morbis nonnullis, ad principia accommodati. In Feb. 1762 he was examined before a committee of the House of Commons, on the state of the private mad-houses in this kingdom, and received in their printed report a testimony honorable to

his abilities. In 1776 he was seized with a pa- ralytic stroke, of which he died June 1 3, aged seventy-five.

BATTIFOLIUM, or BATTIFOLLUM, a kind of tower or defence, frequently mentioned by Latin historians of the middle age. It seems to have been made of wood, and erected on sudden occasions.

BATTING STAFF, the same with BATLET. BATTISTA (Franco), a celebrated painter, born at Venice, was one of the disciples of Michael Angelo, whose manner he followed so closely, that, in the correctness of his outlines, he surpassed most of the masters of his time. His paintings are pretty numerous, and widely dispersed ; but his coloring being very dry, they are not much more esteemed than the prints he etched. He died in 1561.

BATTITURA, the scales that fly off from hot iron, when newly taken out of the fire and beaten on the anvil.

BATTLE, v. & ††.} Derivation, Old Saxon, BAT'TLEMENT, f bearan. See BATTAIL, BAT'TLEMENTED, t to fight; also to prepare BAT'TLING. J for fight. The substan

tive is used in various senses ; it sometimes is applied to an encounter between opposite armies ; and to a body of forces, or division of an army ; to the main or middle body of an army, says Nares, between the van and rear. Crabbe traces the verb to the Latin batuoj and to the Hebrew abut, to beat, signifying a beating. The words battle, combat, and engagement, are frequently, but incorrectly, used as synonymes. Battlei are fought between armies only. Combats are entered into between individuals, whether of the brute or human [species. Engagements are confined to no particular membe only to such as are engaged.

If houses strongly built,

And towers battled hie, Bv force of blabt be overthrown, When Eol's impes doe flie.

Turberville.

And he is bred out of that bloody strain That haunted us in our familiar paths : Witness our too much memorable shame, When Cressy battell fatally was struck, And all our princes captiv'd by the hand Of that black name ; Edward, black prince of Wales.

Sliahspeare.

The English army, that divided was Into two parts, is now conjoined in one ; And means to give you battle presently. Id.

The vaward, Zerbin hath in- government, The tiuke of Lancaster the battell guides, The duke of Clarence with the rereward went.

Harrington's Arietta,

The king divided his army into three battles ; where- of the vanguard only, with wings, came to fight.

Bacon.

Sicinius Dentatus fought in an hundred battles ; eight times in single combat he overcame, had forty wounds before, was rewarded with 140 crowns.

Anat Mel.*

He ended frowning, and his look denounc'd Desp'rate revenge, and battel dangerous To less than gods. Milton.

Go Michael, of celestial armies prince, And thou in military prowess next,

Gabriel, lead forth to battle these my sons Invincible ; lead forth my armed saints ; By thousands, and by millions. Id

Just so, by our example, cattle Learn to give one another battle. Hudibrat.

Through this we pass

Up to the highest battlement, from whence The Trojans threw their darts. Denhatn.

'Tis ours by craft and by surprise to gain : 'Tis yours to meet in arms, and battle in the plain.

Prior.

We receive accounts of ladies battling it on both sides. Addiitm.

Should he go farther, numbers would be wanting To form new battle and support his crimes. Id.*

I cannot find my hero ; he is mixed With the heroic crowd that now pursue The fugitives, or battle with the desperate.

*Byror**

There is given

Unto the things of earth, which time hath bent, A spirit's feeling, and where he hath lent His hand, but broke his scythe, there is a power And magic in the ruined battlement ; For which the palace of the present hour Must yield its pomp, and wait till ages are its doom

Id

Wave high your torches on each crag and cliff ??? Let many lights blaze on your battlements ??? Shout to them in the pauses of the storm,

And tell them there is hope

And let our deep-toned bell its loudest peals

Send cheerly o'er the deep

Twill be a comfort to the wretched souls In their extremity. All things are possible ; Fresh hope may give them strength, and strength deliverance. Maturin

BATTLES, ANCIENT. The ancients never joined battle without much ceremony and preparation ; as taking auguries, offering sacrifices, haranguing the soldiers, giving the word, or a tessera, &c. The signals were, sounding the classicum or ge- neral charge, and displaying a peculiar flag, called by Plutarch a purple robe. To which may be added, singing paeans, raising military shouts, and the like. A Roman legion, ranged in order of battle, consisted of hastati, placed in the front; of principes, who were all old ex- perienced soldiers, placed behind the former; and of triarii, heavy armed with large bucklers, behind the principes. The hastati were ranked close : the ranks of the principes were much opener, so that they could receive the hastati ; and those of the triarii opener still, insomuch that they could receive both the principes and the hastati within them, without any

disorder,, and still facing the enemy. When therefore the hastati found themselves unable to stand the enemy's charge, they retired gently within the principes, where joining with them, they renewed the combat. If these found themselves too weak to sustain the enemy, both retired among the triarii, where rallying, they formed a new corps, and charged with more vigor than ever. If these failed, the battle was lost ; the Romans had no farther resource. The moderns are unacquainted with this method of inserting or embattling one company into another ; without which the former cannot be well succoured or defended, and their places taken by others ; which was a thing the

Romans practised with great exactness. For the velites,and in later times the archers nnd slingers, were not drawn up in this regular manner, but either disposed of before the front of the hastati or scattered up and down upon the void spaces of the hastati, or sometimes placed in two bodies in the wings. These always began the combat, skirmishing in flying parties with the foremost troops of the enemy. If they were repulsed, which was usually the case, they fell back to the flanks of the army, or retired again in the rear. When they retired, the hastati advanced to the charge. As to the cavalry, it was posted at the two corners of the army, like the wings on a body ; and fought sometimes on foot, sometimes on horseback. The auxiliary forces composed the two points of the battle, and covered the whole body of the Romans. Other less usual forms of battle among the Romans were the cuneus, or wedge ; globus, or round form ; forfex, or pair of sheers ; turris, or an oblong square figure ; serra, or saw. The Greeks were inferior to the Romans in marshalling their armies for the battle, as they drew up their whole army in a front, and trusted the success of the day to a single force. They had three forms of battle for the horse, viz. the square, the wedge, and the rhombus or diamond form. The first held best for the defensive ; the latter for the offensive ; the wedge being preferred as bringing most hands to fight. ⍰⍰⍰

The Romans had their particular days, called pvteclares dies, wherein alone it was lawful to join battle ; and others wherein it was unlawful, called dies aeri. The Athenians, by the ancient laws of their country, were not to draw out their forces for battle till after the seventh day of the month. Lueian relates of the Lacedemonians, that, by the laws of l.ycurgus, they were not to light before full moon. Among the Germans it was reputed an impiety to right in the wane of the moon ; and Cfvsar tells us that Ariovistus was beaten by him, because, contrary to the laws of his country, he had fought when the moon was in her wane. The German soldiers were

intimidated with the apprehension, and afforded Caesar an easy victory; acie commissa, impeditos religione hostes vicit. Jerusalem was taken by Pompey in an attack on the sabbath day, when, by the superstitious notions of the Jews, they were not allowed even to defend themselves. The Romans did not carry their superstition so far ; their atri dies were only observed in respect of attacking; no day was too holy for them to defend themselves in. Among the ancients, we find frequent instances of battles in the night; it was by moon-light that 1'ompey beat Mithri- dates, and Seipio, Asdrubal and Syphax.

The Greeks notified the plaees of their battles and victories by adding the word NUCTJ ; whence iNicomedia, Micopolis, The^salonica, &c. The ancient Britons did the like, by adding the word Mais; -whence Maisseveth, Malmaisbury, Sec. The Kmrlish by the \ord field.

BATTI.I:, or B. \rn.i., a market town in the hundred of Battle, Hastings rape, Sussex, twenty- six miles south-east from Tunbridge, and fifty-six south from London ; containing 2ft52 inhabitants. Tlie ancient name was K|>iton, but the famous

bal'l.- of Hastings gave it its present name, in lOGf ; the conqueror first landed near Pcven- sey, a few miles distant. In memory of this important day, William founded a celebrated abbey, at Heathfield, or Headfield plain, called Battle-Abbey; one of those religious houses which had, formerly, the privilege of sanctuary. From its remains it appears to have been very magnificent, they being nearly a mile in circumference : its abbot was mitred. The gate-house is entire, and is converted into a sessions' house. On one part of the site of the abbey stands the family mansion of the Websters. The incumbent of the church is called the dean of Battle. Here is a charity school for forty boys. At no great distance is Beacon-hill, formerly called Standard-hill ; where the standard of the conqueror was first planted. The town has long been famous for making the best gunpowder in Europe. The market is on Thursday, till 1600 it was held on Sunday : it has also a very large market on the second Tuesday in every month.

BATTLE-AXES we're a principal part of the offensive armour of the Celtae. At the siege of the Roman Capitol by the Gauls, under Brennus, we find one of the most distinguished of their warriors armed with a battle-axe. And Am- mianus Marcellinus, many centuries afterwards, describing a body of Gauls, furnishes them all with battle-axes and swords. Some of the weapons have been found in the sepulchres of the Britons, on the downs of Wiltshire, and in the north of Scotland. Within these four or five centuries the Irish went constantly armed with an axe. At the battle of Bannockburn, king Robert Bruce clave an English champion down to the chine at one

blow with a battle-axe. The axe of Lochaber remained a formidable implement of destruction in the hands of the High- landers, nearly to the present period ; and it is still used by the city-guard of Edinburgh, in quelling mobs, &c.

BATTLE DYKES, a place in the parish of Oathlaw, in Angusshire, where there are the re- mains of a Roman camp, and a via militaris connecting it with another in the parish of In- verarity. They are supposed to have been erected by Agricola.

BATTLE-FA OLD, a place in Aberdeenshire, in the parish of Longside, where there are a great number of tumuli and other evidences, as well as the name, confirming the tradition of its having been the scene of a foreign invasion.

BATTLEFIELD, a small place in Shrop- shire, about five miles east of Shrewsbury, dis- tinguished as the scene of the memorable battle in which Henry IV. overthrew Hotspur's rebel- lion, in 1402, in memory whereof he founded a collegiate church, part of which is still used. A mound adjoining the church-yard, marks the burial place of the slain ; and a plot of ground called King's Croft distinguishes the place in which the royal tent was pitched.

BATTOL'OGIZE, } Fr. battologie; from

BATTOL'OGIST, Vthe Greek jSarroXoyjw,

BATTOL'OGY. J which means to do aj

Battus did, and which is described by Suidas in these words /SarroXoyta ij IloXvXoyia, battolo-

gj, is the multiplying of words, &c. Hesychius explains it ' empty, idle, unseasonable dis- course ;' and the translation of our Bible well expresses it by ' vain repetitions.'

After the eastern mode, they wagged their bodies, bowing their heads, and battologixing the name Al- lough Whoddaw and Mahumet very often.

Sir T. Herbert' t Travels, p. 191.

BATTON, in merchandise, a name given to certain pieces of wood or deal for flooring or other purposes.

BATTON, BATTUNE, or BAS- TON, Fr. baton, in heraldry, a staff truncheon, used as an abate- ment iu coats of arms to denote illegitimacy, thus :

BATTORY, a name given by the Hans Towns to their magazines or factories abroad. The chief of these batteries are those of Archangel, Novogorod, Bermen, Lisbon, Venice, and Ant- werp.

BATRACHUS, in ichthyology, a species of silurus, found in Asia and Africa. The dorsal fin is single, and contains sixty rays ; beards of the mouth eight. Lin. Mus. Fr. ??? The tail is entire.

BATTUS, a general of the Celti, who, ac- cording to Camden and Boetius, gave the first check to the Roman conquests, under Augustus; but, being routed in the reign of Tiberius, part of them settled at the mouth of the Rhine, where from him the country was named Batavia.

BATTUS, an order of ci-devant penitents at Avignon, and in Provence, whose piety carried them to exercise severe discipline upon them- selves both in public and private.

BATTUS, in the heathen mythology, a herds- men, whom Mercury turned into a touch-stone, for discovering, for a bribe, what he had pro- mised to conceal.

BATTUTA, in the Italian music, the motion of the hand or foot in keeping or beating time. Among Italian musicians, a battuta imports, in measure, or beating each time equally. This usually occurs after what they call recitati- vo, which is rather declaiming than singing, and in which little or no measure is observed.

BATUA, BUTUA, BUTHOE, or BUTHOECE, in ancient geography, a town of Dalmatia situated on the Adriatic ; now called BUDOA; which see.

BATUALIA, from batuere, Lat. to fence, the exercise of those who learned to fence.

BATUATORES, in antiquity, fencers.

BATUDA, a method of fishing mentioned in some middle age writers, wherein the fish are driven by beating the water with poles, till flocking into one place, they are the sooner caught.

BATTUECAS, LAS, a territory of Spain, in the province of Leon, almost insulated amid the high mountains of the bishopric of Covia, fifty miles distant from Salamanca. It forms .a sort of valley, a league in length, the inhabitants of which are supposed by some writers to have re- mained for ages unfcnown to the rest of Spain.

BATURIN, a town of European Russia, in VOL. III.

the Ukraine, on the river Sem, now in the go- vernment of Czernigov. The castle was formerly > the residence of the hetman, or commander-in- chief of the Cossacks. On the desertion of the hetman Mazeppa to Charles XII. of Sweden, in 1708, the town was taken by the Russians, sacked and burned, and all its inhabitants put to the sword. The empress Elizabeth made a perpetual grant of it, with part of the sur- rounding country, to the hetman Rasumoski, under whom the houses were rebuilt. It is eighty miles E. S. E. of Czernigov, the capital of the province.

BATURIUS. See BACUHIUS. BATUS, J"O, Heb. an Hebrew liquid measure, containing seventy-three sextaries.

BATTU (PuLO BATU). *An island off the western coast of Sumatra, situated immediately to the southward of the equinoctial line. In length forty miles, by ten the average width. Their exports are coooa-nuts, oil, and sivallo or sea slug. It is largely wooded, and the inha- bitants are subject to the Rajah of Buluam.*

BATTY or BHATTI, the country of the Baltics, or Bhatties, bounded on the north by the Pun- jab and the river Sutuleje, east by the district of Hurrianah, west by the desert, and south by Bicanere. From north to south it extends about 150 miles, and from east to west about 100, comprehending part of the provinces of Lahore, Delhi, and Ajmeer.

The productive part of the country is along the banks of the river Cuggur, from the town of Futte- habadto Batneer. The land within the influence of the inundations of this river produces wheat, rice, and barley, but the remainder of the Bhatty country, owing to a scarcity of moisture, is ste- rile and unproductive. The Cuggur is after- wards lost in the sands to the west of Batneer, though it is said formerly to have joined the Su- tuleje in the vicinity of Ferozepoor.

The capital is Batneer ; the other towns of note are Arroah, Futtehabad, Sirsah, and Ranyah. There is but little commerce carried on in this country, the inhabitants being more addicted to thieving than industrious pursuits. With the exception of the sale of their surplus grain, ghee, and cattle, the Batties have little inter- course with the neighbouring states. Their im- ports

are coarse white cloth, sugar, and salt, but the trade is inconsiderable. The Bhatties are properly shepherds. Their morals are very in- different, their neighbours describing them as cruel, savage, and ferocious thieves from their birth. The females are allowed to appear in public unveiled, and without any of that con- cealment so common over Hindosian.

BATZ, BATZEN, BAT, or BATE, in commerce, a small copper coin, mixed with a slight portion of silver, current in parts of Germany, and in Switzerland, and varying in value according to its alloy.

BAV'AR, or BAUER, or BOUWER (John Wil- liam), was born at Strasburgh in 1610, and be- came a disciple of Frederick Brentel. He had great genius, but the liveliness of his imagina- tion hindered him from studying nature, or the antique, in such a manner as to dives himself of his German taste, though he went to

Home to improve himself. In Italy he applied himself entirely to architecture, as far as it might contribute to the enrichment of his landscapes, which were his favorite subjects ; and for his scenes and situations, he studied the rich pros- pects about Frescati and Tivoli. He was fond of introducing battles, marchings of armies, skir- mishes, and processions ; but never arrived at a grandeur of design ; nor could he ever express the naked figure. His pencil however was light, his composition good, and his general expression beautiful. He painted in water-colors on vellum ; his coloring is glowing, but his drawing is in- correct. He etched from his own ideas nume- rous designs from Ovid's Metamorphoses, very much in the style and spirit of Callot, and died at Vienna in 1640.

BAVARIA, now one of the principal secon- dary states of Germany, was derived from a circle of the same name, bounded by Franconia and Bohemia on the north, Austria on the east, Tycol on the south, and Suabia on the west. The ori- ginal circle included a territory of 16,500 square miles, covered with a population of 1,300,000 inhabitants, and before the dismemberment of the German empire, in 1806, formed one of its great divisions. The numerous states which comprised it were formed into two divisions, governed by the ecclesiastical and secular benches, the former including the archbishop of Saltzburg, the bishops of Ratisbon, Passau, and Freysingen, the princely provostship of Berchtolsgaden, with the abbeys of St. Emerau, Niederand Ober Munster, in the city of Katisbon. The latter

consisted of tlic elector of Bavaria, the dukes of Neuburg and Salt/burg, the Landgrave of Leuchtenberg, the prince of Steinstein, the counts of Ilaag and Or- tenburgh, with the lords of Ehrenfels, Saltzburg, Pyrbaum, Ilohen-\ aldeck and Breiteneck, to- gether with a representative from the imperial town of Katisbon.

The greater part of this circle belonged to the elector, who was at that time one of the most powerful princes of Germany; and before the French revolution wielded the imperial autho- rity, not only over the countries of the secular bench, already mentioned, but over the lordships of Wiesenstein, Meindilheim, and Schwabach, in Suabia; most of the country of Krbach, in Fran- conia ; the palatinate of the Lower Rhine, in the circle of that name ; the principalities of Simmern, Lantern and Veldenz ; two-thirds of the country of Spanheitn ; half the bailliage of Homburg in the circle of the I pper Rhine, together with the duchies of .luliers and Berg, in the circle of Westphalia.

The ancient duchy of Bavaria formed a great nan of the circle, bordering on Austria, Passau, and Salt/burg on the east, Tyrol on the south, Suabia on the west, Neuburg and the Upper Pa- latinute on the north. It was formed of Upper and l.viwnr Havana, including, in round num- bers, a territory of 12 000 square miles, and a population of '.100,000 inhabitants.

Bavaria originally made a part of the llhaetia, Vindelicia, and ftoricum, of the ancients ; and received its Latin name Boiana, or Bojoaria, from the Bon, a people of Celtic Gaul, who co- lonised it at an early period. These people were

governed by native princes, till Charlemagne took possession of the country, and committed the government to some of his counts, and, on the partition of his imperial dominions amongst his grandsons, Bavaria was assigned to Louis the German. It bore the title of margraviate till the year 920, when Arnold, the reigning prince, was raised to the quality of duke. In 1623 Maxi- milian I., having assisted Ferdinand II. against his Bohemian insurgents, was elevated to the electoral dignity, after which few events of im- portance occurred till the year 1777, when the disputed succession, incident on the extinction of the reigning branch, produced a disposition in Austria to seize the whole electorate, and annex it to her dominions ; a measure which was happily prevented by the prompt and energetic conduct of Frederic II. After t|ie adjustment of the Aus- trian pretensions, the electorate enjoyed the blessings of peace till the French revolution, which involved all Germany in the flames of civil discord. The elector remained on the side of the imperialists till 1796, when the French marched a powerful army into his dominions, and con- cluded a treaty for the

cessation of hostilities. The year following was signed the treaty of Cam- po-Formio, and in 1801 that of Luneville; by which all the German dominions left of the Rhine, were annexed to France, and the elector lost the palatinate of the Rhine, the duchies of Juliers and Deux Ponts, with all his possessions in the Netherlands and Alsace, receiving as indemnities the bishoprics of Freysingen, Bamberg, Augs- burg, and Kempten, with ten abbeys, fifteen im- perial towns, and two imperial villages, besides the western part of the bishopric and town of Passau. In the conflicts between France and the continental powers, Bavaria remained neuter till 1805, when the elector entered into an alliance with Napoleon, and was shortly afterwards raised to the dignity of king, and had his dominions enlarged by the annexation of several important provinces.

Shortly after the campaign of 1806, when Aus- tria, to purchase peace, sacrificed part of her possessions, the kingdom of Bavaria received still a further enlargement, by the addition of Tyrol, Eichstadt, the eastern part of Passau, and other territories, when she began to assume a more important station amongst the surround- ing states. Another alteration occurred at the dissolution of the Germanic constitution, and the formation of the Rhenish confederation, when the duchy of Berg was resigned for the margraviate of Anspach, together with the imperial towns and territories of Augsburg and Nuremberg, in 1809, Bavaria took part with France againsi Austria, and again shared the spoils of conflict ; but subsequently ceded some of her territories to Wirtemburg and Wurtzburg ; and by another alteration, which shortly followed, exchanged a great part of Tyrol for the acquirement of Bay- reuth and Ratisbon.

Before the political proceedings of October 1809 the extent of Bavaria was calculated a 36,770 English square miles, and the population at 3,231 ,570 ; and it furnished in time of war a contingent of 30,000 troops. But by the treaty concluded at that time, she acquired an additional

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territory of 5550 square miles, and a population of 1,492,000, which augmented the Bavarian territories to 42,320 square miles, and the popu- lation to 4,723,570.

When the love of military conquest, and the intoxication of unparalleled success, induced

embosomed, together with wastes and marshes, which have not yet been brought to any conside- rable pitch of cultivation. Much of the ancient

palatinate swells into mountains, which are dark- ened with forests. The margraviate of Anspach is in part mountainous and sandy. But the ex-

*Napoleon to march the French armies to Mos- tensive and fertile plains that stretch along the ” ⁂ t *v,⁂.,⁂ nnrtVipm nnH rpntml rpcnons. and the wide, vallevs*

cow, the Bavarian troops were amongst those which were destined never to return. The king

northern and central regions, and the wide valleys which lie to the north and north-east of Munich,

of Bavaria now began to apprehend the conse- and are watered by the rivers Inn and Iser, serve to quences of this expedition upon the future sue- vary the general surface, and relieve the natural cess of the French emperor, and just at the period features of the landscape.

of that eventful crisis entered into a treaty with Mountains and hills are numerous m Bavaria, the emperor of Austria, and joined the allies in especially m Anspach, and the neighbouring dis- breaking that thraldom under which a great part tncts, together with the territories on the left of Europe labored. These important services bank of the Rhine. The Alps, branching oft m were not forgotten, and in the subsequent nego- a lofty chain, strike out the line of division be- ciations, at the congress of Vienna, the title of tween this kingdom and Tyro ; while the broken king was confirmed, part of the contribution surface of Bohemia is bounded by an elevated money paid by France was assigned him, and the range, the lateral branches of which diversify the support of a body of Bavarian troops at the ex- surface of the adjacent regions penSe of France was agreed to. With respect to . Bavana, from the position of its included area, territory, the remaining part of Tyrol was ceded is intersected by numerous rivers, which for the to Austria. The grand duchy of Wurtzburg, the most part, become tributary to the Danube. The principality of Aschaffenburgh, and the greater Inn descends from the lofty regions of eastern Lr” of the Ldevant French department of Mont Switzerland. Like its sister streams, it soon be- Tonnere, were acquired; amounting to about comes a rapid river; and, having collected a 4000 square miles, and more than half a million great body of water, rolls north-east through the

kingdom of Bavana, and having formed the line of boundary between that state and Austria, falls into the Danube. The Iser and the Lech origi- Chief Towns. nate in the mountains and cascades of Tyrol, and flow through the southern regions of Bavaria. Bamberg. jˆ former passes Munich, Mosburg, and Lands

Anspach. hut, after which it falls into the Danube, oppo-

Eichstadt. site to Deckendorf; and the latter proceeds

Passau. almost due north to the same receptacle. The

Ratisbon. IHer flows nearly parallel to the Lech, and joins

Kempten. the same- parent river near the city of Ulm.

Munich. The Nab rises in the range lying between Bohe-

The names of these circles are derived from mia and Bavaria, and the Altmuhl in the higher the principal rivers of the several districts, and parts of the margraviate of Anspach : the former a slight alteration in some of them has since joins the Danube, west of Ratisbon; and the occurred. The subsequent acquisitions are as latter a few miles higher up the stream. The

Danube is the grand river of Bavaria, and inter- sects the whole kingdom, east and west, though not without a considerable sweep towards the north.

These rivers greatly refresh the herbage and terranean productions of the kingdom generally, besides answering, to a considerable extent, the important purposes of an inland navigation.

The largest lake is that of Ammer, lying at the foot of the Alps. Other lakes are found in dif- ferent parts of the kingdom, but in general are not of sufficient importance to require distinct enumeration.

The climate and temperature of Bavaria are

4000 square of inhabitants.

In 1810 Bavaria was divided into the follow- ing circles :

Circles.

Upper Maine ˆ

Lower Maine }

The liezat

The Upper Danube

The Lower Danube

The Regen

The Iller

The Iser

follows :

The principality of Aschaffen-

Aschaffenburg.

Wurtzburg.

Landau.

burg ..... }

The grand duchy of Wurtzburg The circle of the Rhine, (late (

MontTonnere) ... }

The population of Bavaria is by no means equally distributed over its surface. The sides of the Danube, the lower districts of the grand duchy of Wurtzburg some districts of the margra- viate of Anspach, with the recent acquisitions on the left bank of the Rhine, are much more thickly inhabited than the other parts. Indeed, much of the southern portion consists of rugged moun- tains and other tracts, which are scarcely fit for habitation, except in the valleys formed by the several divisions of the Alps.

Surrounded as r, is by other countries, from which it is separated by mere arbitrary divisions, the outlines of Bavaria present nothing remarkable. The surface is greatly diversified, and the southern regions are mountainous and woody. The ground near the Alps lies higher than the general area, forming an ascent, in which numerous lakes are

various, owing to its relative situation, and the different degrees of elevation observable upon its surface, by which it is rendered capable of producing all the necessaries of life, together with many of its luxuries. While the vine flou- rishes in one part, the fir attains maturity in another ; but the native indolence of the inhabi- tants prevents their reaping all the advantages of their climate ; and thousands of acres of good land lie completely unoccupied. The valleys are gene- rally well watered, and possess a rich soil, while

the upland territories are overspread with rocks and forests. The plains produce grain, fruit, wine, hops, &c. Flax is cultivated in the dis- trict of the Bavarian desert. Vines flourish on the banks of the rivers Danube and Iser ; and much excellent fruit is grown in the vicinity of Landshut, although the most fertile parts are frequently spotted with oases and islands of sand, which seem at present to be incorrigible.

The mineral productions of Bavaria comprise copper, iron, marble, coal, gypsum, vitriol, and several kinds of argillaceous earth, the most noted of which is the species of clay of which the Passau crucibles are made. Iron and copper are the most important, and of the latter 3000 quintals are obtained annually. At Traunstein, near the confines of Saltzburg, are numerous rich salt-springs, which furnish employment to a great number of the inhabitants. Mineral waters are also common in Bavaria, but are generally con- sidered inferior to those found in many other parts of Germany.

The margraviate of Anspach is noted for its superior breed of horses, which have been of late much improved by an intermixture with those of England. The same degree of attention has been bestowed upon their cattle, by an intermix- ture with the Swiss breed. The coarse wool of their native flocks has also been much improved, by the introduction of Marines amongst the sheep, especially in Bavaria Proper. The wild animals of Bavaria arc bears, wolves, lynxes, foxes, wild boars, &c. The rivers are well stocked with fish, and in some of them beavers are common.

The principal towns are Munich, Augsburg, Bamberg, Anspach, Bayreuth, Amberg, Wurtz- bui-g, Eichstadt, Passau, Ingolstadt, and Nurem- l)ti r;ˆ, together with some others of less note : as, Kempten, I'Voysinircn, Landshut, Mosburg, Newburg, Nordlingen, Memmingen, Schweinfurt, Straubing, and others.

Munich, the capital, is seated on the river Iser, and in the year 181-1, contained as many as 60,000 inhabitants, besides 18,059, who inhabited the suburbs, and 20,000 strangers, who were supposed to visit it annually. It is the centre of tin' most valuable national manufactures, and was rendered, by the concordat of 1817, the seat of an archbishop.

The general manufactures and commerce of Havana, are under a restrictive influence, from the native indolence of the inhabitants, together with tin' numerous fasts and saints' days of the Koinan church. Their

manufactures, which in- clude linen, woollen, and cotton ch/hs, iron, fire-arms, earthenwares, \c., are chiefly directed to the supply of their domestic wants. Augsburg has manufactures of paper, gold, silver, jewelry, and cotton. It is engaged in the transfer of goods between Germany and Italy, and is the general locus of exchange lor the southern coun- ties of (lenii'iny. Friedburg is noted for its docks and watches. Philosophical instruments arc made at. Mcnich; and it was here that the Ml of lithography was discovered. Near Ilohen A>c!iau is an iron mine, the largest in the king- dom, togeiln r \ith foundries and forges, the pro- duce of which, with their grain, wood, wine, salt, .mil vitriol, lonii the duet exports.

The government of Bavaria is a constitutional monarchy. The National Assembly consists of two chambers ; and no tax can be imposed, or ge-neral law enacted, without their consent. The first chamber consists of the nobles, bishops, &c., and the second of deputies chosen once every six years by the landholders, universities, boroughs, cities, and clergy. The crown is hereditary in the male line, and only transferable to the female in the event of total failure of male issue. Louis I., of Bavaria, is a liberal prince, and the kingdom has flourished by his policy. A royal com-missioner presides over each of the circles intc which the nation is divided ; and commissaries of police are distributed in all the principal towns. A court of appeal also,is established in each cir- cle, to which causes may be removed ; and there is a supreme court at Munich, whose sentence is final. By the new constitution of Germany, ac- cording to the decisions of the late congress, Bavaria is made the first of its secondary king- doms, possesses one vote in the federative diet and four in the general assembly.

The Bavarian army, during the late war, amounted to 60,000 men ; but after the peace it was reduced to 40,000. The annual revenue is estimated at two millions ; burdened, however, with a considerable debt.

The inferior kingdoms of Germany are of too little importance to become principals in any European war, but they are frequently found very effective allies. For instance, in case of war be- tween France and Austria, the alliance of Bavaria with the former, would bring the French troops into the very heart of Germany ; and with the latter, would conduct the Austrian troops to the very borders of France. It is in this light only that the political importance of this kingdom can be duly estimated : a practical illustration of which took place in 1813, when, during the crisis in which Napoleon was endeavouring to establish himself at Dresden, Bavaria declared in favor of the allies.

The prevailing religion of Bavaria is the Ro- man Catholic. The inhabitants were formerly considered some of the most intolerant in Europe, and the

Bavarian bishops being independent princes, the power of the church knew no control ; but by the diffusion of superior light, liberal sen- timents began to prevail, the temporal authority of the ecclesiastics was abolishedin 1802, as were also many of the monastic institutions, and toleration was regarded as a civil right. There are now two archbishops, and four bishops ; the former, according to a concordat agreed to by the Pope in 1817, are those of Munich and Bamberg, and the latter those of Augsburg, Wurtzburg, Ratis- bon, and Eichstadt. The influence of the church is still greater in Bavaria than in any other par of Germany.

Bavaria has never risen to any remarkable distinction. Indeed the bigotry, ignorance, and intolerance, which formed the national character of the people, presented almost insurmountable obstacles to all liberal and enterprising views with respect to education, agriculture ind commerce. The almost ceaseless train of saints' days, and hory days, seemed to breed nothing but indolence and superstition. Bavaria now begins to emerge

from her long-cherished barbarism. Education is attended to ; academies, lyceums, and univer- sities,have been multiplied ; productions of foreign literature have been imported, to excite the emu- lation of native genius, and the effects of these generous efforts have already shone forth, in the improved condition of society, and the gradual advance of moral and physical renovation. Much, however, yet remains to be done, especially in those regions which were most darkened by religious superstition. But, calculating upon the measures of the present government, the eye of anticipation looks through a train of consequences to the distant period when the mists shall disperse, the clouds clear up, and Bavaria aspire to an equality with the other kingdoms of Europe.

The language of the Bavarians is a dialect of the German, which, however, they have neglected to cultivate; travellers agree in describing them as the most sensual and phlegmatic of the German nations.

The Bavarians are in appearance a stout and vigorous race of men, well adapted to bear the fatigues of war. They resemble the Irish pea- santry in their propensity to drink and quarrel ; and their manners at the close of the last century were coarse in the extreme. Amidst all the dirt, indolence, and laxity of morals, which are here carried to excess, the Bavarian is, in general, faithful to his word; which is almost the only good feature that is at all prominent. Many of the females are lively, handsome, and graceful ; but their charms are altogether personal, since intellectual cultivation is

scarcely a subject of attention.

The antiquities and curiosities are few in num- ber, but are calculated to awaken no ordinary feelings of interest and astonishment. In the capital, Munich, the objects most worthy of at- tention are the Cabinet of Natural Curiosities, the Library, the Arsenal, and the Ducal Gardens.

The Museum contains a complete series of busts of the Roman emperors, together with many other remarkable antiquities. Roman stations, roads, and coins, are frequent, and form, with the churches and castles, a charming colli- sion of objects, highly interesting to the architect, the statuary, and the antiquarian. But all the works of art are more than eclipsed by the more magnificent wonders of nature. The scenes in the interior of the mountains have often awakened the astonishment of the traveller, and left him over- whelmed by theterror of the sublime ; and no doubt many unexplored caverns yet remain which no human foot has ever trod. We shall select the following instance of these amazing recesses, as described by Mr. Parkinson, for the entertain- ment of the reader. It is to be found in his curious and valuable work The Organic Remains of a former WorM.

‘ Among the most remarkable of these caverns are those of Gaylenreuth, on the confines of Bayreuth. The opening to these, which is about seven feet and a half high, is at the foot of a rock of lime-stone, of considerable magnitude, and in its eastern side. Immediately beyond the open- ing is a magnificent grotto, of about 300 feet in circumference, which has been naturally divided by the form of the roof into four caves. The

first is about twenty-five feet long and wide, and varies in height from nine to eighteen feet ; the roof being formed into irregular arches. Beyond this is the second cave, about twenty-eight feet long, and of nearly the same width and height with the former. In this cave the stalactitic crust begins to appear, and in considerable quantity ; but not in such quantity as in the third cave, which is beautifully hung, as it were, with this sparry tapestry. The roof now begins to slope downwards, so that in the next, the last of these caves, it is not above four or five feet in height. In the caves forming this first grotto fragments of bones are found, and it is said that they were as plentiful here as they now are in the interior grottoes.

‘ The passage into the second grotto is about six feet high, and fourteen feet wide. This grotto, which extends straight forward sixty feet from the opening, and is about forty feet wide, and at its commencement about eighteen feet high, would commodiously hold 200 men. Its appearance is rendered remarkably interesting, from the darkness of its recesses, and from the various brilliant reflections of the light from the stalactites with

which its roofs and sides are covered. The constant drip of water from the roof, and the stalagmatic pillars on the floor, as- sist in perfecting the wonders of the scene. In this grotto no search was made for bones, on ac- count of the thickness of the sparry crust.

‘ A low and very rugged passage, the roof of which is formed of projecting pieces of rock, leads to the third grotto ; the opening to which is a hole, three feet high, and four feet wide. This grotto is more regular in its form, and is about thirty feet in diameter, and nearly round. Its height is from five to six feet. This grotto is very richly and fantastically adorned by the varying forms of its stalactitic hangings. The floor is also covered with a wet and slippery glazing, in which several teeth and jaws appear to have been fixed.

‘ From this grotto commences the descent to the interior caverns ; within only about five or six feet an opening in the floor is seen, which is partly vaulted over by a projecting piece of rock. The descent is about twenty feet, and occasioned to M. Esper and his companions some little fear, lest they should never return, but remain to aug- ment the zoolithes contained in these terrific mansions. This cavern was found to be about thirty feet in height, about fifteen in width, and nearly circular; the sides, roof, and floor, dis- playing the remains of animals. The rock itself is thickly beset with teeth and bones ; and the floor is covered with a loose earth, formed by animal decomposition, and in which numerous bones are imbedded.

‘A gradual descent leads to another grotto, which, with its passage, is forty feet in length, and twenty feet in height. Its sides and top are beautifully adorned with stalactites. Nearly twenty feet further is a frightful gulph, the open- ing of which is about fifteen feet in diameter ; and, upon descending about twenty feet, another grotto, about the same diameter with the former, but forty feet in height, is seen. Here the bones are dispersed about, and the floor, which is

formed of animal earth, has great numbers of them imbedded in it. The bones which are here found seem to be of different animals; but in this, as well as in the former caverns, perfect and unbroken bones are very seldom found. Some- times a tooth is seen projecting from the solid rock, through the stalactitic covering; showing that many of these wonderful remains may here be concealed. A specimen of this kind, which I possess, from

Gaylenreuth, is rendered par- ticularly interesting by the first molar tooth of the lower jaw, with its enamel quite perfect, rising through the stalactitic mass which invests the bone. In this cavern the stalactites begin to be of a larger size, and of a more columnar form.

‘ Passing on through a narrow opening in the rock, a small cave, seven feet long and five feet high, is discovered. Another small opening out of this leads to another small cave, from which a sloping descent leads to a cave twenty-five feet in height, and about half as much in its diameter, in which is a truncated columnar stalactite, eight feet in circumference.

‘ A narrow and difficult passage, twenty feet in length, leads from this cavern to another of twenty-five feet, which is everywhere beset with teeth, bones, and stalactitic projections. This cavern is suddenly contracted so as to form a vestibule of six feet wide, ten long, and nine high, terminating in an opening close to the floor, only three feet wide, and two high; through which it is necessary to writhe with the body on the ground. This leads into a small cave, eight feet liiuh and wide, which is the passage into a grotto twenty-eight feet high, and about forty- tlin o !oet long and wide. Here the prodigious cjiiantiiv of animal earth, the vast number of teeth, jaws, and other bones, and the heavy grouping of the stalactites, produced so dismal an appearance as to lead M. Ksper to speak of it as a perfect model for a temple for a god of the dead. Here- hundreds of cart-loads of bony re- mains mi’Jit be removed, pockets might be tilled with fossil teeth, and animal earth was found to reach to the utmost depth to which they dug. A piece of stalactite being here broken down, wa.-> found to contain pieces of bones within it, t1”.: r. mnants of which \vere left imbedded in the rock.

••• from this principal cave is a very narrow pa-Sd_e, terminating in the last cave, which is aln.M-t six feet in \idth, fifteen in height, and the san.e in li nu’th. In this cave were no animal re- main-, and the lloor was the naked rock.

‘Thus tar only could these natural sepulchres be traced ; but there is reason to suppose that tin c n mams v\ere dispo>ed through a greater part of this rock.’ Hy what means such im ineii-e quantities of animal materials were accu- mulated in these subterraneous abodes remains totally inexplicable, ami no reasonable conjectures have y i been offered on the subject.

11AVATA Tr.ui:.i:, i. e. a bavoch of land, an ancient division of band, in the highlands of S(oiland, mentioned by the Uegiam Majestatem, as con! ainin’_r thirteen acres, and distinguished tiom a smaller portion called davata terrae, a davoeh of land, which contained only four uratr.i, ••i t! v ti’_ht’i part of a bavuta i.e. 1-J

BAV AY, a small town of France, in the de- partment of the north (late province of Hainault), to which the French retired after the battle of Malplaquet, in 1709. It was taken by the Austrians in 1792, but recovered the same year. This was anciently the capital of the Nervii ; and a variety of Roman medals have been found in the neighbourhood. It has manufactories of woollen stuffs, stockings, and iron plate ; and was ceded to France by the peace of Nimeguen, in 1678. It stands on the road from Maubeuge to Valenciennes, about eight miles north-east of Quesnoy, and nearly thirty east of Douay.

BAUBEE'. A Scottish word for a halfpenny This coin, bearing the head of James the Vlth king of Scotland, when young, has been supposed by some to have been therefore called baubee, as exhibiting the figure of a baby. But Dr. Jamie- son says this is a great mistake ; the name, as well as the coin, being known before that prince's reign. Mr. Pinkerton derives it from the French bos-billon, or the worst kind of billon.

Though in the drawers of my Japan bureau.

To Lady Gripeall I the Caesars show,

'Tis equal to her Ladyship or me

A copper Otho, or a Scotch baubee.

Bramston's Man of Taste.

*And as to her false accusation of spoil, we did remit us to the conscience of Mr. Robert Riche-
on, master of the coining-house, who from our hands received silver, gold, and metal, as well coined as uncoined, so that with us there did not re- main the value of a baubee, or farthing.*

Knox. Hittory of the Reformation of Scotland.

BAUCHERVILLE, a port in lower Canada, on the south bank ef the St. Lawrence, opposite Montreal. It is beautifully situated, and remark- able as the retreat of several of the old French nobles, who spend their small incomes in a little society of their own.

BAUCIS, in fabulous history, a woman who lived with Philemon her husband, in a cottage in Phrygia. Jupiter and Mercury, travelling in the country, were well received by them, after having been refused entertainment by every-body else. To punish the people for their inhumanity, these gods laid the country waste with water ; but took Baucis and Philemon with them to the top of a mountain, where they saw the deluge, and their own little hut above the waters, turned into a temple.

They desired to officiate in this temple as priest and priestess, and that they might die both together, vs hich were granted them.

BAUCONICA, in ancient geography, a town of the Vangiones in Gallia Belgica, supposed to be the present OPPENHEIM, which see.

BAUD, a town of France in Brittany, the head of a canton in the department of Morbihan, arrondissement of Pontivy. Population 6200. 18 miles north-west of Vannes.

BAUDEKIN, BALDICUM, and BALDAKINUM, in our old writers, a cloth of gold, or tissue, upon which figures in silk, &c. were embroidered. Some writers regard it as only a cloth of silk.

BAUDELOT (Charles Cfesar), a learned advo- cate of Paris,was distinguished by his skill in ancient monuments ; he was received into the Academy of Belles Lettres in 1705. He wrote a Treatise on the Advantages of Travelling ; Letters and

Dissertations on Medals, &c; and died in 1722, aged seventy-four.

BAUDIER (Michael), of Languedoc, lived in the reign of Louis XII., and wrote 1. An Inven- tory of the General History of the Turks ; 2. The History of the Seraglio ; 3. Of the religion of the Turks ; 4. Of the Court of the King of China ; and 5. The Life of Cardinal Ximenes, &c.

BAUDISSERITE, in mineralogy, a compound mineral, found at Baudissero in Piedmont, com- posed principally of silver and magnesia. It passes into Meerschaum, or sea froth, of which bowls of pipes for smoking are frequently made.

BAUDIUS (Dominic), a professor of history in the university of Leyden, born at Lisle, in 1561. He studied at Aix-la-Chapelle, Leyden, and Geneva, and was admitted L. L. D. in 1585. Soon after, he accompanied the ambassadors from the states to England, where he became acquaint- ed with Sir Philip Sidney. He was admitted advocate at the Hague in 1587; but being soon tired of the bar, went to travel in France, where he remained ten years, and was much esteemed. Through the influence of Achilles de Harlai, first president of the parliament of Paris, he was ad- mitted advocate of the parliament of Paris in 1592. In 1602 he went to England

with Christo- pher de Harlai, the president's son, who was sent ambassador to London from Henry IV., but being soon after appointed professor of eloquence at Leyden, he settled in that university. Here he read lectures on history, and on the civil law. In 1611 the states conferred on him, in conjunc- tion with Meursius, the office of historiographer, and in consequence he wrote The History of the Truce. He was an elegant prose writer, as ap- pears from his letters, many of which were pub- lished after his death, and also an excellent Latin poet. His poems were first printed in 1587, and he published separately a book of Iambics in 1591, dedicated to Cardinal Bourbon. He died at Leyden in 1613.

BAUDOBRIGA, in ancient geography, a town of the Treveri in Germany, now Boppart, in the electorate of Triers. See BOPPART.

BAUDRAND (Michael Antony), a celebrated geographer, born at Paris in 1633. He travelled into several countries, and then applied himself to the revisal of Ferrarius' Geographical Diction- ary, which he enlarged by one half. He wrote, 1. Notes to Papirius Masson's description of the Rivers of France ; 2. A Geographical and His- torical Dictionary ; 3. Christian Geography, or an account of the Archbishoprics and Bishoprics of the whole world ; and made several maps. He died at Paris, May 29, 1700.

BAUERA, in botany, a genus of plants, class polyandria, order digynia. Its generic charac- ters are : CAL. inferior eight-fid : COR. eight petals, capsule bilocular, many seeded. The species are, 1. B. rubicefolia madder-leaved Bauera B. rubioides; Audr. Repos. t. 198, Curt. Mag. t. 715. Venten.Malmais.t.96. Native of New South Wales, first discovered in that country by Sir Joseph Banks. It requires the shelter of a green-house, or conservatory, and flowers during most part of the summer and autumn. Another species is mentioned by the name of B. humilis, in Ait.

Epit. 364, as introduced at Kew, from New Hoi" land in 1805, and flowering in June and July.

BAUGE, a drugget manufactured in Bur- gundy, with thread spun thick, and coarse wool.

BAUGE', a small town of France, in the depart- ment of the Mayenne and Loire, and late province of Anjou, famous for the victory gained by Charles VII. over the English in 1421. It is seated on the Coesnon, twenty-two miles east by north of Angers, and has about 3000 inhabi- tants.

BAUHIN (Casper, or Gaspar), an eminent anatomist and botanist, born at Basil in 1550. In 1580, he was chosen first professor of these sciences at Basil, and in 1614 was first professor of physic, and first physician of that

city, a distinction which he held till his death, in 1623. He wrote, 1. Anatomical Institutions; 2. Prod- romus Theatri Botanici, and other works.

BAUHIN (John), elder brother to Caspar, a great botanist, was born about the middle of the sixteenth century. He took his doctor's degree in physic in 1562, and afterwards became princi- pal physician to Frederick duke of Wirtemburg. The most considerable of his works is his Uni- versal History of Plants.

BAUHINIA, MOUNTAIN EBONY, in botany, a genus of the monogynia order, and decandria class of plants, ranking in the natural method under the thirty-third order, lomentaceae: CAL. quinquefid, and deciduous ; the petals, oblong ex- panded, and clawed, the superior one more distant, all inserted on the calyx ; the capsule, a legumen. There are 10 species, which are propagated by seeds, and must be sown in hot-beds, and are reared in a bark stove. The most remarkable are : 1. B. aculeata, with a prickly stalk, common in Ja- maica and other American sugar islands, where it rises to sixteen or eighteen feet, with a crooked stem. 2. B. acuminata, with oval leaves, a native of both the Indies, rising with several pretty strong, up- right, smooth stems, sending out slender branches, garnished with oval leaves divided into two lobes. 3. B. divaricata, with oval leaves, whose lobes spread different ways. This grows na- turally in great plenty on the north side of the island of Jamaica. 4. B. tomentosa, with heart- shaped leaves, a native of Campeachy ; and rises to twelve or fourteen feet, with a smooth stem dividing into many branches. 5. B. variegata, with heart- shaped leaves, and lobes joining to- gether, is a native of both the Indies. It rises with a strong stem upwards of twenty feet, divid- ing into many strong branches.

BAV'IAN. The same as babian. A baboon or monkey; an occasional but not a regular character in the old morris dance. From Dut. baviaan, Germ, pavian, a great monkey. He appears in act iii. scene 5, of The Two Noble Kinsmen, where his office is to bark, to tumble, to play antics, and exhibit a long tail with what decency he could. So babouin in French, and our baboon.

Where's the buvian ?

My friend, carry your tail without offence Or scandal to the ladies, and be sure You tumble with audacity and manhood ; And when you bark, do it with judgment.

Beaumont and Fletcfter.

BAU

BAVIN. Brushwood, or small faggots, made of such light and combustible matter, used for lighting fires. Still in use iu some counties.

The skipping king, he ambled up and down, With shallow jesters and rash bavin wits, Soon kindled and soon burnt.

Shakspeare. Henry IV.

Bavins will have their flashes, and youth their fancies, the one as soon quench'd as the others are burnt. Mother Bombie, 1594.

BAVIUS and M.KVIUS, two wretched poets of ancient Rome, who have been

' Damn'd to everlasting fame/ In that severe line of Virgil :

Qui Havium non odit amet tua carmina Msevi.

BAULEAH, a considerable town of Bengal, in a very fertile country, to the north-east of the Ganges. The East India Company have here a very extensive factory for silk, which supplies a third part of that material exported from Bengal.

BAULOT, or BEAULIEU, famous for his ope- rations in lithotomy. He was born in 1651, of parents in low circumstances, and he entered early into the army ; but after he had been some time a soldier, he got acquainted with an empi- rical surgeon, who pretended to cure the stone ; and having received some lessons from this man, lie assumed the monastic habit, though he be- longed to no religious order, calling himself brother James. Thus he travelled through vari- ous provinces, and performed various operations; and at last went to Paris. Here his practice was disapproved of at first; but having been success- ful in curing a boy, his patients soon after be- came numerous. After extracting the stone he left the wound to heal of itself. The famous Ciieseklen adopted and improved upon brother James's method. lie died in 1720.

HATM, in botmy. See MELISSA.

HAVM, B.VSTAP.I). See MELHTIS.

BAVM, SiiRUBr.Y. ??? See MOLUCCA.

BAUMAN ISLES, a cluster of islands in the South Pacific Ocean,

discovered in 1722, by the person whoso name they Lear, in his voyage round the world with M. lloggewein. They lie in \~2U of south latitude, and 173►► of west longi- tude. The largest is about twenty miles in circumference ; and the inhabitants were found to manifest a urntle and friendly disposition.

HAT MANNIANA, in entomology, a species of phakvna (tortrix) that inhabits Austria. The anterior \vin_s are yellow, with two ferruginous imastomising bands bordered with silver; poste- rior .mi1 interrupted.

iiAl MANS11OPLE, a remarkable cavern in the iinmˆv.ick states, principality of Blanken- luiru, (ienuany , situated in a steep rock near Uubelaml. It. consists of six or seven vaults, communicating by narrow apertures, and filled with stalactiti'1 petiil'actions, arranged in a thou- > >ai i fantastic lorms. No one has ever penetrat- ed 1,1 the bottom, on account of the dampness and impurity of the air, which extinguishes all iiuhts.

i►►A(Ml', (Antony), an eminent French che- ini>t io\vards tlii' close of the last century, who ;islinj;nis!i[image] himself by bis opposition to the

t:ory oi Lavuisie1'. and his colleagues. He prac- .-. :.:i ap"i;t> carv at l'a:i<, ami was, in 1775,

chosen a member of the Royal Academy of Sciences. On the establishment of the National Institute, he was also one of its members. His principal works are a Treatise on Theoretical and Experimental Chemistry, and a Manual of Pharmacy. He also wrote a Memoir on Argil- laceous Earths ; a Dissertation on ./Ether, &c. He died in 1805. He also wrote a great many articles in the Dictionnaire des Arts et Metiers. BAUME-LES-NONES, a town of France, the head of an arrondissement, in the department of the Doubs, seated on the river of that name, and having 2500 inhabitants. Five miles from this town is a remarkable cavern, containing a small brook, said to be frozen in summer, but not in winter. When the peasants perceive a mist rising out of this cave, they know that it will rain the next day. Before the revolution there were here two fa- mous abbeys, one for males, the other for fe- males. Sixteen miles north-east of Besancon. Long. 6►► 25′ E., lat. 47►► 21′ N.

BAUNACH, or PAUNACH, a market town of Bavaria, capital of the district of Gleusdorf, circle of the Maine. It is situated at the influx of a small river of the same name into the Maine, and lay formerly in the principality of Bamberg, in Fran- conia. Here is a bridge across the latter river, and the surrounding country is rich in corn and wine. Seven miles north of Bamberg.

BAVOSA, in ichthyology, a name given by Italians to a species of the ray fish, now called leviraia, and raia oxyrynchus, and by earlier authors, raja bos, bos marinus, and Icioraia. It is distinguished by Artedi as the variegated ray, with ten prickly tubercles on the middle of the back. See PHOLIS.

BAUR (Frederick William Von), a Russian general, born in the county of Hessian Hanau. He very early entered on a military life, and, in 1755, was in the British service as an officer of Hessian artillery. In 1757 he was advanced to the rank of general and engineer ; and was after- wards ennobled by Frederick II. of Prussia. He entered into the service of Catharine II. empress of Russia, in 1769, and was by her appointed director of the salt works in Novogorod. He also superintended two great works, the supply- ing of Moscow with water, and deepening the canal near Petersburg, at the end of which he constructed a commodious harbour. He died in 1783. He wrote Memoires Historiques et Geo- graphiques sur la Valachie, Sec. 8vo. ; and con- structed the Carte de Moldavie, pour servir de la Guerre ⬚⬚" tre les Russes et le Turcs, in seven sheets.

BAURAC, an ancient name for nitre, and some other salts, confusedly called nitre. The Arabians give the name to tincar or tincal, which, when refined, is called borax, but when rough, in little crystalline masses, like the small crystals of sal gem, mixed with earth or other impuri- ties, it is called tincal.

BAUTRU, a celebrated wit, and one of the first members of the French academy, was born at Paris in 1588, and died there in 1665. He was the delight of the whole court, but while he played the buffoon, took the usual privilege of saying what he pleased. Many of his bon mots are preserved. Once, when in Spain, having

been to see the famous library of the Escurial, where he found a very ignorant librarian, the king of Spain asked him what he had remarked ? Bautru replied, that ' the library is a very fine one ; but your majesty should make your libra- rian treasurer of your finances.' ' Why so ?' ' Because,' said Bautru, ' he never touches what he i-s entrusted with.'

BAUTZEN, or BUDISSEN, a considerable town of Germany, the capital of Upper Lusatia, in the kingdom of Saxony, with a strong ci- tadel. It is seated on the river Spree, thirty miles east by north of Dresden. Including

the suburb of Seidau, it contains a population of 11,000 or 12,000, most of whom are employed in manufactures, of which the principal are paper, cloth, linen, leather, and stockings. The provincial diet assembles at Bautzen, which is also the seat of the central post office. One half of the parish church is given to the Catholics, and the other to the Lutherans, the latter of whom are about three-fourths of the inhabitants. Here is also a collegiate establishment, called the provostship of St. Peter, all the members of which are Catholics, except the head, who is a Lutheran. The funds of this institution are extensive ; and it possesses large tracts of land, both in Saxony and Bohemia. The town-hall, academy, orphan-house, ingenious water ma- chines, as well as the public walks, are worthy of attention. Bautzen has suffered m'uch by fire, particularly in the years 1709, 1760, and 1767. It was also the scene of a bloody conflict between the French and allies in 1813, in which the for- mer were victorious. The language of the Wen- dens, or descendants of the ancient Vandals, is spoken at Bautzen nearly as much as the modern German.

BAW'BLE, l Bauble, or bable, s. Low Lat.

BAW'BLING.] baubella; but that word being found only in Hoveden, it is probable that the English may be the original, and the con- trary; perhaps both are from the Fr. babiole. Baciballum is found in Petronius Arbiter in a similar sense; and /3►►/3a\ta in Julius Pollux, vol. 16, for bracelets. ►►► Nares. Skinner suggests that it may be from babe, Ital. babolo, an infent; q. d. an infant's plaything. Any pretty, showy, trifling toy. It was anciently used to signify the badge of a fool. In its general signification the word is still current, but the office of a fool being obsolete, it requires, in the latter sense, some explanation. A fool's bawble was a short stick, with a head ornamented with asses' ears, fantastically carved upon it.

An idiot holds his bauble for a god, And keeps the oath which by that god he swears.

S/iabspeare. Titus Andronicus.

It had been fitter for you have found a fool's coat, and a bauble. Lingua, 0. PI. v. 129.

If every fool should wear a bable, fewel would be

It was also the subject of another proverb, which, as well as several allusions made to it, was of a licentious nature. It appears by the French proverb, subjoined by Ray, that the equivalent word in that language was marotte, which is now used for a person's particular- foible, or hobby-horse, L"fst-la sa marotte; it is

his hobby-horse. It is in general whether ap- plied to persons or things, a term of contempt.

And hapneth that the kynges foolc, Sat by the fire upon a stole, As he that with his bable plaide, And yet he heard all that thei saide, And thereof toke thei no hede.

Gower. Conf. Ann. In the reproof of chance

Lies the true proof of men : the sea being smooth, How many shallow bauble boats dare sail Upon her patient breast, making their way With those of nobler bulk ? But let the ruffian Boreas once enrage The gentle Thetis, and anon behold The strong-ribb'd bark through liquid mountains cut, Bounding between the two moist elements, Like Perseus' horse : Where's then the saucy boat, Whose weak untimber'd sides but even now Co-rivaPd greatness ? either to harbour fled, Or made a toast for Neptune. Even so Doth valour's show, and valour's worth divide In storms of fortune. Shaky eare.

A bawbling vessel was he captain of, For shallow draught, and bulk, unprizable ; With which such scathful grapple did he make. With the most noble bottom of our fleet. Id.

Paper !

Black as the ink that's on thee ; senseless bauble, Art thou a feodary, for this act, and look'st So virgin-like without. Id.

When a man begins truly to fear God, and is in the agonies of mortification, all these new-nothings and curiosities will lye neglected by as baubles do by chil- dren when they are deadly sick. Taylor's Sermons.

For who without a cap and bauble, Having subdued a bear and rabble, And might with honour have come ofF, Would put it to a second proof. Hudibras.

He (Cromwell) commanded a soldier to seize the mace : ' What shall we do with this bauble ? Here, take it away. It is you,' said he, addressing himself to the house, ' that have forced me to this, I have sought the Lord, night and day, that he would rather slay me than put me upon this work.'

Hume't History of England.

If, in our contest, we do not interchange useful notions, we shall traffick toys and baubles.

Government of the Tongue. This shall be writ to fright the fry away, Who draw their little bawbles, when they play.

Dryden.

A lady's watch needs neither figures nor wheels j 'Tis enough that 'tis loaded with bawbles and seals.

Prior.

Our author then, to please you, in your way, Presents you now a bawble of a play, In gingling rhyme. Granville.

A prince, the moment he is crown 'd, Inherits every virtue round, As emblems of the sovereign pow'r, Like other bawbles of the tow'r. Swift

Whate'er was light, impertinent, and vain, Whate'er was loose, indecent, and profane, (So ripe was folly, folly to acquit), Stood all absolv'd in that poor bauble, wit.

Churchill. Gutham, bk. iii.

BAW'COCK. A burlesque word of endear- ment, supposed to be derived from beau coq ; but rather perhaps from boy and cock. It seems to mean young cock, or fine fellow.

Why that's my bawcock. What has smutch 'd thy nose ? Shakspeare.

which signifies joy- ous, from baudy, dirty, or fiom the Goth, bauyan, to scrape together, thus

Id.

Good bawcock, bale thy rage ! use lenity, sweet chuck. Id. Henry IV.

BAWD', V-, n. s. & adj. ~] Either from baude,

BAWD'ILY, I

BAWD'INESS, [

BAWD'RY,

BAWD'SHIP,

BAWD'Y. J

bawd is a collector of filth, or obscenity. The French have bauderie, baudrie, that is pimping, keeping a bawdy-house. It refers to obscenity of language, and of intercourse. A bawd is either a male or female pander. It is more fre- quently applied, however, to the depraved mother in. the trade of debauchery, who either facilitate the illicit intercourse of the sexes, as procuresses, or as furnishing them with a place of meeting. Johnson says, somewhat coarsely, that bawdry is a wicked practice of procuring and bringing whores and rogues together.

This false theef, this sompnour quod the frere,

Had alway baudes redy to his hond,

As any hawke to Hue in Englelond.

Chaucer. The Freres Tale.

This thing is wonder mervaillous to me,

(Sin that thy lord is of so high prudence,

Because of which men shulde him reverence,)

That of his worship rekketh he so lite

His overr-st sloppe it is not worth a mite,

A.; in effect to him so mote I go ;

It is all baudy and to sore also.

But here, with al mine herte, I tliee beseche

That never in me thou dome sochc folie,

As I shall saine ??? vMethought by thy speche,

That this whiche thou ine doest for companie,

I should wenen it were a bauderie:

T am not \vode, all if I lend yhe :

It is not SD, that wote I well parde.

11 Ml hang handsome young men for the soote sinne

of i< ve,

Vi'lirn so 'lis knavery himselfe a bawdy Jack doth prove. Whetstone. Old Play.

Besides, bawdry is become an art, or a liberal science, as Luriun ealls it; and there be such tricks and subtleties, so many nurses, old women, panders, letter-carriers, beggars, physicians, friars, confessors, employed about it ; such occult notes, stenography, polygraphy, nunlius aniuiatus, or magnetical telling of tbeir minds, which ('aliens, the Jesuit, by the way, counts fabulous and false; cunning conveyances in this kind, that neither Juno's jealousie, nor Danae's custody, nor Aigo's vigilancy can keep them safe.

1'iurton. A nut. of Mel.

The eye is a secret orator, the lirst bawde, amoris porta, and with private looks, winking, glances, and smiles, as so many dialogues they make up the match many times and understand one another's meanings before they come to speak a word. Id.

Thy sin's not, accidental, but a trade: Mercy to thre would prove itself a bawd: "j'is ln'Si that thou diest quicklv. Shakspeare.

She says enough ; yet she's a simple bawd, That cannot say as much. Id.

Come, sing me a bnwdy song; make me merry; I was as virtuously given as a gentleman ,i.-ed to be ; virtuous enough : swore little ; diced not ai.ove seven times a week; went to a 6iut'(/i/-house, ;n't. ai.ove once in n quarter — ot an hour; paid money that 1 borrowed, ihree or four limes; lived well, and in ►►oocl !-,,,, ipass : and nu I live out of all order, "ut ot" all compass. /*

Id.

HEART. For my part I have once escaped ►►► and when I wed again, may she be ►►► ugly as an old bawd. VAINL. Ill-natured, as an old maid ►►► BELMOUR. Wanton as a young widow ►►► SHARP. And jealous as a barren wife.

Congreve. Old Bachelor.

Now nothing left, but wither'd, pale, and shrunk, To bawd for others, and go shares in punk. Pope. You may generally observe, that the appetites are sooner moved than the passions. A sly expression, which alludes to bawdry, puts a whole row into a pleasing smirk ; when a good sentence that describes an inward sentiment of the soul, is received with the greatest coldness and indifference. Spectator.

Has the pope lately shut up the bawdy-houses, or does he continue to lay a tax upon sin ? Dennis.

BAWDY-HOUSE. The keeping of a house of ill-fame is cognizable by ††† le temporal law, as a common nuisance, not only because it endangers the public peace by drawing together dissolute and debauched persons, and promoting quarrels, but because it tends to corrupt the manners of the people by an open profession of lewdness (3 Inst. 205. 1 Hawk. P. C. c. 74). Those who keep bawdy-houses are punished with fine and imprisonment, and also such infamous punish- ment as the court shall inflict ; and so is a lod- ger, who keeps only a single room for such pur- poses. Also persons resorting to a bawdy-house are punishable, and may be bound to their good behaviour. If a constable receives information that a man and woman are gone to a lewd house, he may carry them before a justice of peace with- out any warrant, and the justice may bind them over to the sessions. In London, they may carry them to prison ; and by the custom of the city, whores and bawds may be carted. By stat. 25 Geo. II. c. 36, made perpetual by stat. 28 Geo. II. c. 19, if two inhabitants, paying scot and lot, shall give notice to a constable of any person keeping a bawdy-house, the constable shall go with them before a justice of peace, and shall, upon the oath of such inhabitants, that they be- lieve the contents of such notice to be true, and their entering into a recognizance of ††20 each, to give material evidence of the offence, enter into a recognizance of ††30 to prosecute with effect such person for such offence at the next sessions. The constable shall be paid his reason- able expenses by the overseers of the poor, ascer- tainable by two justices ; and upon conviction of the offender, the overseers shall pay the two in- habitants ††10 each. A constable, neglecting his duty, forfeits ††20. Any person appearing as master or mistress, or as having rhe "are or man- agement of any bawdy-house, shall be deemed. the keeper of it, and liable to be punished as such. And a wife may be indicted and set in the pillory with her husband for keeping a brothel ; for this is an offence respecting the domestic eco- nomy and government of the house, in which the wife has a principal share.

BAWD-MONEY, a name given ††o the aleum athamanticum.

BAW'DRICKS, n. See BALDRICK. Belts, belt, according to Du Cange, is the

ring, belt, or girdle of a bold man, that is of a warrior. The word Is used by Sir Thomas More, by Hall, and by Fabian, and is spelt by them variously, bawd- rick, baudryck, and bawderyke.

And in her hand a sharp bone spear she held, And at her backe a bow and quiver gay, Stuft with steel-headed darts, wherewith she queld The salvage beasts in her victorious play, Knit with a golden bauldrick, which forelay Athwart her snowy breast. Spenser. Faerie Queene.

Fresh garlands too the virgins' temples crown'd ; The youths gilt swords wore at their thighs, with silver bawdricks bound. Chapman's Iliad.

BAWL, v. a. & n.) Vossius and Festus

BAWLING, > concur in thinking that

BAWLER, n. j this word is formed, a

sono vocis, from the sound of the voice ; Min-

shew and Skinner conjecture that it is from the

noise which dogs make in barking ; and Johnson

derives it from the Latin bulo, to hoot, to cry

with great vehemence, whether for joy or pain ;

to cry as in the market place, either wares or

news; a word always used in contempt.

They bawl for freedom in their senseless mood, And still revolt when truth would set them free.

Milton.

To cry the cause up heretofore, And bawl the bishops out of door. Hudibras.

Through the thick shades th' eternal scribler bawls, And shakes the statues

on their pedestals. Dryden.

From his lov'd home no lucre him can draw ; The senate's mad decrees he never saw, Nor heard at bawling bars corrupted law. Id.

Loud menaces were heard, and foul disgrace, And bawling infamy, in language base, Till sense was lost in sound, and silence flea the place. Id. Fabla.

So on the tuneful Margarita's tongue The list'ning nymphs and ravish'd heroes hung ; But cits and fops the heav'n-born musick blame, And bawl, and hiss, and damn her into fame. Smith.

I have a race of orderly elderly people, who can bawl when I am deaf, and tread softly when I am only giddy and would sleep. Swift.

It grieved me when I saw labours which had cost so much, bawled about by common hawkers. Id.

Fie ; fie miss, how you bawl ! ??? Besides, I have told you, you must not call me mother. Congreve.

A little child was bawling, and a woman chiding it.

L'Estrange.

If they were never suffered to have what they cried for, they would never, with bawling and peevishness, contend for mastery. Locke.

My husband took him in, a dirty boy ; it was the business of the servants to attend him, the rogue did bawl and make such a noise.

Ar but knot's History of John Bull.

When rosemary and bays, the poet's crown,

Are bawl'd in frequent cries through all the town,

Then judge the festival of Christmas near

Christmas ! the joyous period of the year. Gay.

BAWLING, among sportsmen, is spoke of the dogs when they are too busy before they find the scent good.

BAWM. See BALM. Bawmed, used by R. Brunne.

BAWN, n. in the Gothic bauun, Germ, bauen, a place to reside in; a dwelling; any edifice, whether a fortification or a common habitation, and with whatever materials constructed ; it is used by Spenser for an eminence. Jn Ireland, says Todd, a bawn is said to be a place near the house, inclosed with mud or stone walls, to keep the cattle from being stolen in the night.

But these round hills and square bawnes, which you see so strongly trenched and thrown up, wera (they say) at first ordained for the same purpose, th&t people might assemble themselves therein, and, there- fore, aunciently, they were called folkmotes, that is, 9 place, of people, to meete or talke of any thing that concerned any difference between parties and town- ships, which seemeth yet to me very requisite.

Spenser. View of the State of Ireland. Thus spoke to my lady the knight full of care, ❓❓❓ Let me have your advice in a weighty affair ; This Hamilton's bawn, whilst it sticks on my hand, I lose by the house what I get by the land j But how to dispose of it to the best bidder, For a barrack or malt-house, we now must consider. Swift. The Grand Question Debated.

BAWTREY, or BAWTRY, a market town and chapelry, in the parish of Blythe, West Riding of York. It stands near the river Idle, eight or ten miles from its fall into the Trent : is nine miles south-east from Doncaster, and 153 from London, and contains from 900 to 1000 inhabi- tants. This place has much trade from its river navigation, having mill and grindstones from Derbyshire, and lead, and all kinds of iron manu- factures, from Sheffield. It is a great thorough- fare to Scotland, and has a good market on Thursday, formerly on Wednesday.

BAXTER (Andrew), an ingenious metaphy- sical writer, was born in 1686 or 1687, at Old Aberdeen, and educated at King's College. About 1 724 he married the daughter of a clergy- man in Berwickshire. A few years after, he published in 4to, An Inquiry into the Nature of the Human Soul, wherein its immateriality is is evinced from the principles of reason and phi- losophy. In 1741 he went abroad with Mr. Hay, and resided some years at Utrecht ; having there Lord Blantyre also under his care. He made excursions from thence into Flanders, France, and Germany ; his wife and family re- siding, in the mean time, chiefly at Berwick. In 1737 he returned to Scotland, and resided till his death at Whittingham, in the shire of East Lo- thian. He drew up, for the use of his pupils and his son, a piece entitled Matho : sive, Cosmothe- oria puerilis, dialogus. In quo prima elementa de mundi ordine et ornatu proponuntur, &c. This was afterwards greatly enlarged, and pub- lished in English, in two volumes, 8vo. In 1750, he published an Appendix to his Inquiry. He died April 23, 1750, after suffering for some months under a complication of disorders.

BAXTER, (Richard), an eminent nonconformist divine, was born at Rowton in Shropshire, in 1615. He was somewhat unfortunate in his tutors, who were either men of little ability, or very inattentive to their charge; but his own genius and perseverance surmounted this ob- stacle ; and he was distinguished in early life for his learning, as well as his piety. He was or- dained in 1638, and upon the opening of the long parliament, was chosen vicar of Kidder- minster. In the heat of the civil wars he with- drew to Coventry, and preached to the garrison and inhabitants. When Oliver Cromwell was made protector, he would not comply with his measures, though he preached once before him. He came to London just prior to the deposing of Richard Cromwell, and preached before the

parliament the day before they voted the return of King Charles II. Upon the Restoration he was appointed one of the king's chaplains in or- dinary. He assisted at the conference in the Savoy, as one of the commissioners for the set- tlement of religion, and drew up a reformed liturgy. About this time he was offered the bishopric of Hereford, which he refused ; and de- sired only to resume his charge ut Kidderminster. He was not, however, permitted to preach there above twice or thrice after the Restoration. On this he returned to London, and preached oc- casionally about the city, till the act of unifor- mity took place. In 1662 he married Margaret, daughter of Francis Charleton, Esq. of Salop, a justice of the peace. She was a woman of great piety, and entered fully into her husband's views concerning religion. During the plague in 1665, he retired into Buckinghamshire; but afterward returned to Acton, where he staid till the act against conventicles expired ; and then his au- dience was so large that he wanted room. Soon after we find him imprisoned, but procuring an habeas corpus, he was discharged. After the indulgence in 1672 he returned to London ; and in 1682 he wa-s once more incarcerated and put to great expense. In 1684 he was again appre- hended, and at the commencement of the reign df .lames IF. was tried before justice Jefferies, tor his Paraphrase on the IS'evv Testament; \hich \vas called a scandalous and seditious book against the government. He continued in prison two years ; from whence he was dis- charged, and had his line remitted by the king, tie died in lo'.U ; and was buried in Christ Church. One of his biographers s;iys, rather boldly, of Kiehard Baxter, ' he could say what he \vonld, and lie could prove what he said.' i !e was honored, however, with the friendship of t:>e carl of Lmderdale, the earl of Balearras, L. Chief Justice i laics, l)rs. Tillotson, Barrow, &c. ami held correspondence with

*the most eminent fo- r i un divines, lie hitrtself wrote above 120 books, and had above sixty written against him. Bar- n>v, says, that ‘ his practical writings were never iiii nded, and his controversial seldom confuted.’ * ‘i.Liiˆer de lares that lie was a man famous for wei’.knes.s of body and strength of mind; for Livi.iij the strongest sense of religion himself, and c: \citm1-; a senst of it in the thoughtless and proili’jale ; i’or preaching more sermons, engaging in more controversies, and writing more books, tiian any other nonconformist of his age.. He sjioˆe, disputed, and wrote with ease ; and dis- covered the same intrepidity when he reproved Cromwell and expostulated with Charles II. as
ॠwhen he preached to a congregation of mechanics, ilis portrait, in full proportion, is drawn in his Narrative of his o\n Life and Times; which though a rhapsody, composed in the man- ner of a diary, contains a uivat variety of memorable things, and is itself, as far as it goes. a History of Nonconformity. Ilis most famous vorks wen.1, 1. The Saint’s Kverlasting Rest. ‘2. Call to the Cr.converted, of which 20,000 have been sold in one year ; and which has been trans- 1 ted into all tin J-‘.uropean languages. 3. Poor Alan’s 1 aindy Hook. 1. Dying Thoughts ; and tin; above-mentioned Paraphrase. His prac-*

tical works have been printed in four volumes folio. See BAXTERIANS.

BAXTER1ANS, in ecclesiastical history, those who adopt the doctrinal sentiments of Richard Baxter. The opinions maintained by this excel” lent man- were conciliatory, and have, since his time been embraced by many moderate and can- did men, of different sects and parties. Baxter’s system was formed not to inflame the passions and widen the breaches, but to heal those wounds of the church under which she had long lan- guished. Some controversialists, however, were much displeased with Baxter’s attempt; and we have heard of a pieoe in which supposed incon- sistencies in his doctrines are set in a kind of battle-array against each other; ॠ it is entitled Richard against Baxter.

The Baxterian strikes into a middle path, be- tween Arminianism and Calvinism, and thus endeavours to unite both schemes. With the Calvinist, he professes to believe that a certain number, determined upon in the divine councils, will be infallibly saved ; and with the Arminian, he joins in rejecting the doctrine of reprobation as absurd and impious ; admits that Christ, in a certain sense, died for all, and supposes that such a portion of grace is allotted to every man as renders it his own fault if he doth not attain to eternal life.

BAY, i The name of the tree which is

BAYS. S translated laurel, and of which hono- rary garlands were anciently made. Fr. baye, a berry, Lat. bacca. To wear the bays, is, in poet-

ical language, to be pre-eminent in excellence. The honorary crown or garland, which was be- stowed as a prize for literary or military, or indeed any other species of merit, bearing this name.

1 have seen the wicked in great power, and spread- ing himself like a green bay-tree. Bible.

See where she sits upon the grassie greene,

(O seemely sight!) Yclad in scarlet, like a mayden queene,

And ermines white : Upon her head a cremosin coronet, With damaske roses, and daffadillies set ; Soy-leaves betweene, And primroses greene, Embellish the sweete violet.

Spetuer. Shepheard's Calendar

So him they led through all their strectes along, Crowned with garlands of immortal bates, And all the vulgar did about them throng, To see the man, whose everlasting praise, They all were bound to all posteritie to raise

Spenser.

I can but laugh at both,

That strive and storme with stirre outrageous, For her, that each of you alike doth loth, And loves another, with whom now she go'th, In lovely wise, and sleepes, and sports, and playes ; Whitest both you here, with many z cursed oth, Swcare she is yours, and stirre up bloodie frayes, To win a willow bough, whilcst other weares the bay.*

Id.

See how the stubborn damsell doth deprave My simple meaning with disdaynfull scorn ; And by the bay which I unto her gave ; Accompts myself her captive quite forlorne. The bay quoth she, is of the victors born.

Yielded them by the vanquisht as theyr meeds,

And they, therewith, doe poetes heads adorne,

To sing the glory of their famous deeds.

But sith she will the conquest challenge needs,

Let her accept me as her faithful thrall,

That her great triumph, which my skill exceeds,

I may in trump of fame blaze over all.

Then would I decke her head with glorious bays,

And fill the world with her victorious prayse. Id.

To take a boat in a pleasant evening, and with musick to row upon the waters, which Plutarch so much applaudes, .'Elian admires, upon the river Peneus, in those Thessalian fields beset with green bayes, where birds so sweetly sing, that passengers, enchanted as it were with their heavenly musick, for- get forthwith all labours, care and grief; or in a gundilo, through the grand canale in Venice, to see those goodly palaces, must needs refresh and give content to a melancholy dull spirit.

Burton. Anal. Mel,

So up they rose, while all the shepherd-throng With their loud pipes a country triumph blew, And led their Thirsil home with joyful song : Mean time the lovely nymph, with garlands new, His locks in bay and honour'd palm-tree bound, With lilies set, and hyacinths around j And lord of all the year, and their may-sportings, crown'd. Fletcher' ►► Purple Island.

Like thunder 'gainst the bay, Whose lightning may enclose but never stay, Upon his charmed branches. Id. Faith. Shepherdess.

That name I say in whom the muse3 meete, And with such heate his noble spirits raise, That kings admire his verse, whil'st at his feete, Orpheus his harpe, and Phoebus casts his bays.

F. Beaumont.

Till critics blame, and judges praise, The poet cannot claim his bays. Swift.

Say, Britain ! could you ever boast Three poets in an age at most ? Our chilling climate hardly bears A sprig of bays in fifty years, While ev'ry fool his claim alleges, As if it grew in common hedges. Id,

Bid the warbling nine retire ; Venus string thy servant's lyre ; Love shall be my endless theme, Pleasure shall triumph over Fame : And when these

maxims I decline, Apollo! may thy fate be mine; May I grasp at empty praise, And lose the nymph to gain the bays. Prior.

The polish'd pillar diff'rent sculptures grace, A work outlasting monumental brass. Here smiling loves and bacchanals appear, The Julian star, and great Augustus here. The doves, that round the infant poet spread, Myrtle and bays, hang hov'ring o'er his head. Pope.

Yet suffer me, thou bard of wondrous meed, Amid thy bays to weave this rural weed. Gay.

B\Y', adj.) Lat. badius, old Fr. baye, bai, BAY'ARD, > rouge brun, Ital. baio, Gr. /Batf, BAY'ARDLY. j or paiov, the branch of the palm. Does it refer to the color of the bark? or the tenacity with which the branch adheres to the trunk; to intimate boldness, determination, or dogged firmness ? It is applied both to signify the color and spirit of a horse ; and also to men who are bold, blind, and self-willed. A bay horse is one whose color inclines to a chestnut ; and this color is various, either a light bay, or

a dark bay, according as it is less or more deep. All bay horses are commonly called brown by the common people. Bayard is another name for a horse of this complexion. It was likewise the appellation of a noted blind horse in the old romances ; whence, perhaps, the proverbial expression ' as bold as blind Bayard.' Rinaldo's horse, in Ariosto, is called Baiardo. There is an allusion to the proverb just cited, in the old play entitled Match at Midnight, ' Do you hear, Sir Bartholomew Bayard? But leap before you look.' Perhaps, says Nares, the whole proverb might be ' as bold as blind Bcyard, that leaps before he looks,' in allusion to another proverb, ' look before you leap.' Eyaid occurs in It. Brunne, and bay in Chaucer,

Upon a stede bay, trapped in steele.

Ye ben as bold as is Bayar : the blind, That blondereth forth, and peril careth non, He is as bold to run against a ston. As for to go besides in the way. Chaucer,

But as baiarde the blind stede Till he fall in the ditche a midde He gothe there no man will hym bidde, He slant so fer forthe out of rewle, There is no witte that maie hym reule.

Gower. Conf. Ann.

I marvel not so much at blind Bayards, which neuer take God's book in hand.

Bernard Gilpin's Sermons.

Who is more bold than the bayard blind ?

Mirror for Magistrates.

BAY, v. & n. From the Fr. abbot, which sig- nifies the last extremity. Its primary sense is the barking of a dog at hand, and relates to the condition of a stag, when the hounds are almost upon him. It does not refer to the assailant, but to his selected victim, and in the moment of his utmost peril. It is figuratively employed to describe the state of any thing surrounded by enemies. It is sometimes applied to the simple barking of a dog at . any object. In Spenser it is used in the sense of parley, before surrender- ing.

So well he woo'd her, and so well he wrought her, With faire entreatie and sweet blandishment, That at the last unto a bay he brought her, So as she to his speeches was content To lend an eare, and softly to relent, Spenser

Like dastard curres that, having at a bay The salvage beast embost in wearie chace, Dare not adventure on the stubborne pray, Ne byte before, but move from place to place, To get a snatch when turned is his face. Id.

Here wast thou bay'd brave hart, Here didst thou fall, and here thy hunters stand, Sign'd in thy spoil and crimson'd in thy Lethe ;

0 world, thou wast the forest to this hart, And this, indeed, O world, the heart of thee How like a deer, stricken by many princes,

Dost thou here lie. Shakspcare.

What, shall one of us,

Tbat struck the foi smost man of all this world, But for supporting robbers ; shall we now Contaminate our fingers with base bribes ? And sell the mighty space of our large honours, For so much trash as may be grasped thus ?

1 had rather be a dog, and bat/ the moon,

Than such a Roman. H

BAY

G86

BAY

We are at the stake, /llld bay'd about with many enemies. Id,

I was with Hercules and Cadmus once, When in the wood of Crete they bay'd the boar With hounds of Sparta. ldf

If he should do so,

He leaves his back unarm'd, the French and Welsh Baying him at the heels. Id.

This ship, for fifteen hours, sate like a stag among hounds at the bay, and was sieged and fought with, in turn, by fifteen great ships.

Bacon's War with Spain.

Fair liberty, pursued and meant a prey To lawless power, here turn'd, and stood at bay.

Denham.

Nor flight was left, nor hopes to force his way j Embolden'd by despair, he stood at bay ; Resolv'd on death he dissipates his fears, And bounds aloft against the pointed spears.

Dryden.

The hounds at nearer distance hoarsely bay'd ; The hunter close pursued the visionary maid ; She rent the heav'n with loud laments, imploring aid.

bow-window has now effectually supplanted it, in practice, and implies a semi-circular sweep, like a how. Mr. Tyrwhitt, in his Glossary to Chaucer, thus explains it :[illegible] *' a large window, probably so called because it occupied a whole bay, i. e. the space between two cross-beams.' \V e have the authority of an old dictionary for asserting that a bay-window meant also a bal- cony.*

And there, beside, within a bay-window,

Stood one in green, ful large of head and length,

And beard as black as feathers of the crow. There stands in sight an isle, hight Tenedon,

Rich, and of fame, while Priam's kingdom stood ;

Now but a bay, and rode unshure for shipu Surrey. Like as a ship that through the ocean vryde

Directs her course unto one certaine coast Is met of many a counter-winde and tyde,

With which her winged speed is let and crost. And she herself in stormie surges tort ;

Yet making many a horde and many a bay, Still winneth way, nor hath her compasse lost ;

Right so it fares with me in this lone way.

rt o J r

BAY.

He fee

Joyful he knew the lamp's domestic flame That trembled thro' the window ; cross the way Darts forth the barking cur and stands at bay. Gay. Sweet was the sound, when oft, at evening's close, Up yonder hill the village murmur rose ; There as I pass'd with careless steps and slow, The mingling notes came softcn'd from below ; The swain responsive as the milkmaid sung, The sober herd that low'd to meet their young j The noisy geese that gabbled o'er the pool, The playful children just let loose from school ; The watch-dog's voice that bay'd the whisp'ring wind, And the loud laugh that spoke tho vacant mind ; These all in sweet confusion sought the shade, And iill'd each pause the nightingale had made.

Goldtmith't Deserted Village. But the hound baycth loudly,

The boar's in the wood, And the falcon longs proudly

To spring from her hood. Byron.

To bathe.

les upon the cooling shade, and bayes His sweatic forehead in the breathing wind.

Spenser. Faerie Queene.

M\ , from the old Saxon bitgan, bi/gan, to bow or bond ; it is applied to the curvings of a shore; to recesses in barns, buildings, or windows, so say Skinner and Minshew; Nares thus de- lines it: a principal division in a building; pro- bably, as l)r. Johnson conjectured, a great square, in the framework of the roof, whence, barn of throe bays, is a barn twice crossed by beams, in large buildings having the Gothic framework to support the

roof, like Westminster Hall, the bays are tin- spaces between the sup- porteis; houses were estimated by the number of bays; as a term among builders, it also signi- fied every space left in the wall, whether for door, window, or chimney. See Chambers's Dic- tionari/ and hersy.

Coles, m Ins Latin Dictionary, makes a toy a space of a definite si/.e : ' a toy of building, men- sura vigintiquatuor pedum,' i. c. the measure of twenty-four feet.

HA Y-\ ix now, from Joy, siiprn ; not accord- ing to Minshew, from its resemblance to a bay on a coast, or round, for it was usually square ;

Id. Fable. Whose course is often stay'd, yet never is astray.*

Spenser.

I'd have some pleasant lodging i the high street, sir ', Or if 'twere near the court, sir, that were much better ', 'Tis a sweet recreation for a gentlewoman To stand in a bay-window and see gallants. Middleton. We have also some works in the midst of the sea, and some bayt upon the shore for some works, wherein is required the air and vapour of the sea. Bacon.*

A reverend Syracusan merchan., Who put unluckily into this bay. Shakspeare.

If this law hold in Vienna ten years, I'll rent the fairest house in it after threepence a bay. Id.

Why it hath bay-windows transparent as barrica- does, and the clear stones towards the south-north are as lustrous as ebony. Id.

Such murmur fill'd

The assembly, as when hollow rocks retain The sound of blust'ring winds, which all night long Had rous'd the sea, now with hoarse cadence lull Seafaring men o'er-watch'd, whose bark by chance Or pinnace anchors in a craggy bay After the tempest. Milton

The bay of St. Nicholas, where they first put in, lieth in sixty-four degrees, called so from the abbey there, built of wood, wherein are twenty monks, un- learned, as then they found them, and great drunk- ards : their church is fair, full of images and tapers. There are besides but six houses, whereof one built by the English. In the bay, over against the abbey, is Rose Island, full of damask and red roses, violets, and wild roses. Milton's History of Mutcovia.

Hail, sacred solitude ! from this calm bay, I view the world's tempestuous sea.

Rotcommon

Here in a royal bed the waters sleep, When tir'd at sea, within this bay they creep.

Dryden.

Some of you have bay. Id.

Blake having heard that a Spanish fleet of sixteen ships, much richer than the former, had taken shelter in the Canaries, immediately made sail towards them. He found them in the bay of Santa Cruz, disposed in a formidable posture. The bay was secured %kk ►► strong castle, well provided with cannon, besides seven forts in several parts of it, all united by a line of communication, manned with musqueteers.

Hume's History of England,

BAY

687

BAY

They gain by twilight's hour their lonely isle, T 3 them the very rocks appear to smile, The haven hums with many a cheering sound, The beacons blaze their wonted stations round, The boats are darting o'er the curly bay, And sportive dolphins bend them through the spray. Even the hoarse sea-bird's shrill discord ant shriek, Greets like the welcome of his tuneless beak ! Beneath each lamp that through its lattice gleams, Thi ir fancy paints the friends that trim the beams.

Byron.

BAY, in botany. See LAURUS.

BAY, in hunting, is when the dogs have earthed a vermin, or brought a deer, boar, or the like, to turn head against them. In this case, not only the deer, but the dogs are said to bay. It is dan- gerous going in to a hart at bay, especially at rutting time ; for then they are fiercest.

BAY OF ISLANDS, a bay on the east coast of New Zealand, so called from the number of islands off the shore. Here is good anchorage; high water takes place about eight o'clock at the full and change of the moon, when

the perpendi- cular rise of the tide is from six to eight fe'et. Abundance of fish frequent the bay, which the natives take with enormous nets made of a kind of grass, five fathoms deep, and 300 or 400 fa- thoms long. Round their villages nets lie in heaps, like hay-cocks covered with thatch, to resist the weather. All kinds of refreshment may be had here. Long. 135►► 38′ W., lat. 35►► 18′ S.

BAY OF ISLES, a bay on the east coast of the island of Georgia, so called from a great number of small islands in and before it. Long. 37►► 30 W., lat. 54►► 3'S.

BAY COLOR, a sort of red inclining to chest- nut, is formed from the Latin baius, and that from the Greek /3

BAY, PLUM. See GUAIAVA.

BAY, ROSE. See OLEANDER.

BAY SALT, a variety of common salt, (muriate of soda), obtained from sea-water, and which is thought to possess peculiar advantages for curing provisions. In the bay of Biscay, on the shores of the Mediterranean, and in the Bahama islands, the process for procuring it is thus simply car- ried on : ►►► An artificial pond is formed, of ten inches or a foot deep, and carefully lined with clay, at some convenient distance from the sea, so that one end may have a ready communication by means of a sluice, for the purpose of filling when necessary, while at the opposite end the brine pit communicates with smaller and shal- lower receptacles. In the large reservoir the sea-water is concentrated by evaporation, from the action of the sun and air ; and in the smaller ones the process is completed by removing the crust of salt as fast as it may be formed. Thus the salt obtained is deposited in large flattened octohedral crystals which do not deliquesce, in consequence of being free from the muriate of magnesia, with which the common salt is contami- nated. The process may be considered as one of /he most ancient applications of chemical princi- ples, for in hot climates, and especially in Egypt, it was taught by nature herself. See Pliny lib.

xxxi. cap. 7. France is thus furnished with a very profitable article for exportation into other countries. The salt made is of different colors, according to the color of the clay employed in making the pits. That of the French is brown, whence it is said comes the denomination of bay salt, and it is usually sold without further pre- paration ; though in some places they make it white by refining it in large flat cauldrons. The great difficulty which attends the making it in Great Britain arises from the heat of our summer not being sufficiently strong to evaporate a great quantity of sea-

water in a small portion of time.

BAYA, in ornithology, Indian grosbeak, or Loxica Indica, rather larger than a sparrow, with yellow brown plumage, yellowish head and feet, a light-colored breast, and a conic beak, very thick in proportion to his body. This bird is very common in Hindostan ; and described as surprisingly sensible, faithful, and docile. In a state of nature, it builds on the highest tree which it can find ; generally on the palmyra or Indian fig-tree, preferring that which overhangs a well or rivulet. There it suspends its bottle-shaped nest, so as for it to rock with the wind, and places it with its entrance downwards, to secure it from birds of prey. It is taught with ease to fetch a piece of paper, or any small thing which his master wants. Almost incredible tales are told of its docility ; and it is confidently asserted, that if a house or any other place be shown to him once or twice, he will carry a note thither immediately, on observing a proper signal. They are also trained by the youths of Benares to pluck off the pieces of gold called ticas, placed by way of ornament between the eye-brows of their mistresses, which they bring in triumph to the lover. The flavor of the eggs is said to be ex- quisite.

BAYAMO, a town on the east part of Cuba, on the river Estreo, which forms a bay on the coast, twenty miles below the town. It gives name to a channel between the small islands and rocks called Jardin de la lleyna, on the north- west, and the shoals and rocks which line the coast on the south-east, situated eighty miles W. S. W. of St. Jago Long. 76►► 50′ W., lat. 20►► 45′ N.

BAYANO, a considerable river of South Ame- rica, in the kingdom of Terra Firma, and pro- vince of Panama, which rises in the province of Darien, and falls into the sea twenty-four miles from the bay of Panama. Its mouth is in long. 78►► 55′ W., lat 9►► 3′ N.

BAYARD (Peter du Terrail de), esteemed by his contemporaries the model of soldiers and men of honor, and denominated ‘ the knight without fear and without reproach,’ was descended’ from an ancient and noble family in Dauphine. He was with Charles VIII. at the conquest of the kingdom of Naples; where he gave remarkable proofs of his valor, especially at the battle of Fornova. He was dangerously wounded at the taking of Brescia ; and there restored to the daughters of his host 2000 pistoles, which their mother had directed them to give him in order to- prevent the house from being plundered. At his return to France he was made lieutenant-general of Dauphine. He fought by the side of Francis

I at the battle of Marignan ; and that prince af- terwards insisted on being knighted by liis hand, after the manner of the ancient knights. The chevalier Bayard defended Mezieres during six weeks against Charles V.'s army. In 1524, at the retreat of Rebec (the general Bonnivet having been wounded and obliged to quit the field), the conduct of the rear was committed to Bayard, who, though so much a stranger to the arts of a court that he never rose to the chief command, was always called, in time of real danger, to the posts of greatest difficulty and importance. He put himself at the head of the men at arms : and animating them by his presence and example to sustain the whole shock of the enemy, he gained time for his countrymen to make good their re- treat. But in this service he received a wound which he immediately perceived to be mortal; and being unable to continue on horseback, ordered an attendant to place him under a tree, with his face towards the enemy ; then fixing his eyes on his sword, which he held up instead of a cross, he addressed his prayers to God; and in this posture calmly waited the approach of death. Bourbon, who led the foremost of the enemy's troops, found him in this situation, and express- ing his regret and pity at the sight, ' Pity not me,' cried the high spirited chevalier, ' I die as a man of honor ought, in the discharge of my duty ; they indeed are objects of pity, who fight against their kinu, their country, and their oath.' The marquis of Pescara, passing soon after, manifested his admiration of Bayard's virtue, as well as his sorrow for his fate, with the generosity of a gal- lant enemy ; and finding that he could not be removed with safety from that spot, ordered a tent to lie pitched, and appointed proper persons to attend him. He died, notwithstanding their care, as his ancestors for several generations had done, in the field of battle. Pescara ordered his body to be embalmed, and sent to his relations; and such was the respect paid to military merit in that ape, that the duke of Savoy commanded it to be received with royal honors in all the cities uf his dominions.

BAY AS, a town at the foot of Mount Amanus, on the gulf of Issus (now of Scanderun), the key to the celebrated defile (the Pylx- AmanicjE of the ancients), between it and Alexandretta (Scanderiin). The neighboring country is fertile, and thi! mountains, in summer time, a delightful retreat. It is exactly opposite the Ay as, the an- cient .T-g;v, when1 the survey of the southern coast ot Asia Minor, by captain Beaufort, in liil'2. was unfortunately terminated. The Aghas, in this and the neighbouring places, have long bid defiance to the authority of the Porte. See ilt'uitfwt's haru/ iid/ud.

BAYA/1J), or BAJA/ID, a city of Turkish Armenia, in the pachalic of i'r/.enun, on the de- clivity of a mountain, the summit of which, as well as the whole of this place, is strongly forti- fied. It contains two churches, three mosques, ami an ancient monastery called Kuril Itilleesea, celebrated for its beautiful architecture. The in- habitants, who amount to about IK), 000, are es- teemed the most handsome and warlikepeople in Armenia. The majority are Turks. Distant fifty —iles S. S. \ . of Krii-au, and 140 east of Er- zerum.

BAYEN (Peter), a celebrated French chemist, was born in 1725, at Chalons sur Marne. Hav- ing received a classical education, he studied pharmacy ; and, during the seven years' war, was chief apothecary to the French army in Germany. He was afterwards employed in analysing the mineral waters of France, on completing which, he settled at Paris, where he pursued his chemi- cal experiments with great reputation, till hi►► death in 1801. He pursued a tedious but certain mode of analysing minerals, by exposing them, without being reduced to powder, to the action of sulphuric acid at the temperature of the atmos- phere ; after this action had continued for a length of time, he got by lixiviation the sulphates formed by the combination of the acid with the different component elements of the stone. He did not make use of the trituration of the stone to an impalpable powder, nor its fusion with caustic potash, which facilitate the action of acids, and which are used with so much advan- tage at present. The account he has published of his analysis will, nevertheless, be instructive to the chemical student. His chemical tract have been collected in 2 vols. 8vo.*

BAYER (John), a German lawyer and astro- nomer of the latter part of the sixteenth and be- ginning of the seventeenth century, but in what particular year or place he was born, is not cer- tainly known : however, his name will be ever memorable in the annals of astronomy, on account of his excellent work, published in 1603, under the title of Uranometria, being a complete celestial atlas, or large folio charts of all the constellations, with a nomenclature collected from all the tables of astronomy, ancient and modern. By means of the Greek letters, which he used as marks of their relative magnitudes, the stars of the heavens may, with as great facility, be distinguished and referred to, as the several places of the earth are by means of geographical tables ; and our celes- tial globes and atlasses have ever since retained this method. Astronomers, in speaking of any star in the constellation, denote it by saying it is marked by Bayer, a, or /3, or y, &c. He greatly improved and augmented this work by subse- quent study. At length, in 1627, it was re-pub- lished under a new title, viz. Coelum Stellatum Christianum, i.e. the Christian Stellated Heaven ; or the Starry Heavens Christianised ; in this edition the Heathen names and characters, or figures of the constellations, were rejected, and others taken from the

scriptures, were inserted in their stead, an innovation, however, too great for general reception. In later editions of his work (in those of 1654 and 1661), the ancient figures and names were restored.

BAYER (Theophilus Sigfred), a learned philo- loger and antiquarian, born at Konigsberg irt 1694, applied himself successfully to the study of the eastern languages, particularly the Chi- nese, of which he acquired a great knowledge. ??? When about twenty-three years of age, he was appointed librarian at Konigsberg. In 1726 he accepted of an invitation to Petersburgh, and was there made professor of Greek and Roman anti- quities. In 1730, he published a very curious and learned work, entitled Museum Sinicum, in 2 vols. 8vo. He died at Petersburgh in 1738.

BAYEUX, a considerable town of France (the Beducassum and Bajoce, of ancient geogra- phy), in the department of Calvados, and lale province of Normandy. It was formerly the ca- pital of Bessin, and is still a bishop's see, whose jurisdiction extends over all the department. The cathedral church is accounted one of the finest in France, and contains a celebrated piece of tapes- try, representing the conquest of England by William I., supposed to have been the work of his queen Matilda. It consists of a web of linen, 442 feet in length, and about two feet in breadth. It is situated on the river Aure, four miles from the English Channel ; and carries on a good trade in corn, cattle, hemp, and butter, as well as in its own manufactures of lace, camblets, stockings, and leather. Inhabitants about 10,000.
BAYEUX (George), an advocate at Caen, who obtained the prize from the academy at Rouen for a poem on Filial Piety. He translated the Fasti of Ovid, on which he added valuable notes, printed in 4 vols. 8vo. He wrote also Reflec- tions on the Reign of Trajan, 4to. He was, however, unfortunate, and having been impri- soned at Orleans, fell in the massacre which took place there in 1792.

BAYLA, or BELA, a town of Persia, capital of the district of Lus, in the province of Mekran. It is situated on the north-east banks of the river Pooralie, and about a third of it is surrounded by a good mud wall. It consists of above 2000 mud and wood houses, of which 250 or 300 are inhabited by Hindoos, who are well treated here. Bayla is, on the whole, a neat town, the residence of the jam, or chief of Lus, who seems dependent on the khan of Kelat. His durbar, or hall of audience, is a very ordinary apartment. The cemetery of the jam and his family contains several curious tombs, ornamented with black and white pebbles, arranged in short quotations from the koran, and encircled with wreaths of the same

substance, which produce a pleasing effect. Distant 293 miles north of Kelat.

BAYLE (Peter), author of the Historical and Critical Dictionary, was born November 18, 1657, at Carlat, in France, where his father John Bayle was a protestant minister. In 1666 he went to the protestant university at Puylaurens, and in 1669 removed to that of Toulouse, whi- ther protestants at that time frequently sent their children to avail themselves of the learning of the Jesuits ; but here, to the great grief of his father, he embraced the Romish religion; being, however, soon sensible of his error, he left that university, and went to study at Geneva. After this he was chosen professor of philosophy at Sedan ; but that protestant university being sup- pressed by Louis XIV. in 1687, he was obliged to leave the city, and was soon after chosen pro- fessor of philosophy and history at Rotterdam, with a salary of about ►►45 a year. In 1682 ap- peared his Letter concerning Comets. And Father Maimbourg having published his History of Calvinism, wherein he endeavours to draw upon the protestants the contempt and resent- ment of the catholics, Mr. Bayle wrote a piece to confute it. The reputation which he had now acquired, induced the States of Friezland, in '. 684, to offer him a professorship in their univer-

sity ; but he wrote them a letter of thanks, and declined the offer. This same year he began to publish his Nouvelles de la republique des Let- tres. In 1686 he was drawn into a dispute with the famous Christina queen of Sweden. His Journal for April had noticed a printed letter, supposed to have been written by her Swedish majesty to Chevalier deTerlon, wherein she con- demns the persecution of the protestants in France; and had observed, that her tolerant spirit was ' a remainder of protestantism.' This pro- duced a letter to the philosopher, from that sin- gular woman, in which she says, ' You express so much respect and affection for me, that I par- don you sincerely ; and I would have you know, that nothing gave me offence but that remainder of protestantism, t>f which you accused me. I am very delicate upon that head, because nobody can suspect me of it, without lessening my glory, and injuring me in the most sensible manner. My fortune, my blood, and even my life, are en- tirely devoted to the service of the church ; but I flatter nobody, and will never speak any thing but the truth.' Mr. Bayle replied in a subsequent number of his work, to that princess's entire satis- faction. The persecution which the protestants at this time suffered in France affected Mr. Bayle ex- tremely. He made occasionally some reflections on their sufferings in his journal ; and some time afterwards he published his Commentaire Philo- sophique upon these words, ' Compel them to come in;' and in the year 1690 appeared his fa- mous Avis aux Refugiez, &c. which so excited the anger of M. Jurieu, that

he charged the author with being a traitor against the state. Bayle retorted with the utmost severity, and Jurieu re- plied with equal bitterness; till at last the magistracy of Amsterdam enjoined the contro- versialists not to publish any thing against each other before it had been examined by Mr. Boyer, the pensionary of Rotterdam. In Nov. 1690, Bayle advertised a Scheme for a Critical Dic- tionary. The public not approving his first plan, he threw it into a different form; and the first vo- lume was published in August, 1695, the second in October 'following. The work at last was ex- tremely well received by the public ; but it en- gaged him in fresh disputes, particularly with M. Jurieu and the Abbe Renaudot. Jurieu endeavoured to engage the ecclesiastical assem- blies to condemn the dictionary; and presented it to the senate sitting at Delft, but they took no notice of the affair. . The consistory of Rotter- dam granted Mr. Bayle a hearing ; and after having heard his answers to their remarks, declared themselves satisfied. Jurieu made another attempt with the consistory in 1698; and so far prevailed with them, that they exhorted Mr. Bayle to be more cautious with regard to his principles in the second enlarged edition of his dictionary, which was published in 1702. Bayle was a most indefatigable writer. In one of his letters to Maizeaux, he says, that since his twentieth year, he hardly remembers to have had any leisure. His intense application contributed to impair his constitution, and to increase a pul- monary disorder which had cut off several of his family. Judging it to be mortal he would take no remedies. He died the twenty-eighth of De-

cember, 1706, after he had been writing the greatest part of the day. Voltaire says of the Critical Dictionary ' it is the first work of the kind in which a man may learn to think ;' and remarks, that ' the decree of the parliament of Toulouse, when it declared his will valid in France, notwithstanding the rigor of the laws,' added, ' that such a man could not be considered as a foreigner.' Bayle, however, has been more correctly characterised as a sophist rather than a philosopher. With great powers of distinguish- ing truth from falsehood, he pushed enquiry into universal doubt, and remained in doubt because Vie thought indifferentism to truth a virtue, and therefore cultivated it. In private life he is said o have been an unassuming and temperate man ; out his writings abound with the bigotry of scepticism, and contain not a few uncharitable in- sinuations against that religious zeal which he never felt: moreover, he is notoriously indeli-

cate, and seems as if laboring to atone for dis- tracting by debauching the tyro's mind. Lord Lyttleton finely expostulates with him under the assumed character of Mr. Locke, in his Dia- logues of the Dead, vol. ii. Dialogue 24. p. 315. ' You have endeavoured,' says this excellent writer, ' and with some degree of success, to shake those foundations, on which the whole moral world, and the great fabric of social hap- piness, entirely rest ; how could you, as a philo- sopher, in the sober hours of reflection, answer for tins to your conscience, even supposing you had doubts of the truth of a system, which gives to virtue its sweetest hope, to impenitent vice its greatest fears, and to true penitence its best consolations ; which restrains even the least ap- proaches to guilt, and yet makes those allowances For the infirmities of our nature, which the stoic pride denied to it, but which its real imperfec- tion, and the goodness of its infinitely benevo- lent C'realor, so evidently require?'

BAYLY (Lewis), author of the Practice of Piety. He was born at Caennarthen in Wales, educated at Oxford, made minister of Evesham in Worcestershire, about 1611, became chaplain to king James, and was promoted to the see of Bailor in 161G. His celebrated book was de- dicated to Charles, prince of Wales; in 1734 it had reached the titty-ninth edition. He died in

1032.

BAY1SES (John), an English lawyer, born :it Middleham, in Yorkshire, in 17o8. He re- < eived the iirst part of his education at Rich- mond school, and afterwards went to Trinity College, Cambridge, from whence he removed to (iray's Inn. He became a member of the Constitutional Society, and wrote a number of anonymous pieces, chiefly political, in prose and verse. Then- 'ias also been attributed to him an Archaeological Letter on the subject of the poems printed by Chatterton under the name of Row- ley, addressed to dean Alilles. He proposed the ;-('[]ub.ication of lord Coke's tracts, a design prevented by his deatli in 1787.

l)A.\is 'Sir Thomas), an Knglish physician, bom about Io2'2, was educated at Christ's Col- lege, Cambridge, where he applied to the study of physie. He afterwards became professor of, music at (jivsham College; and travelled with

Sir John Finch to Italy and Constantinople. He died at Constantinople in 1681, much lamented by his companion, who survived him but a short time. They left between them ►►4000 to Christ's College.

BAY'ONET, t;. & n. Fr. bayonette. A short sword or dagger fixed at the end of a musket, by which the foot hold off the horse, so called be- cause the

first bayonets were made at Bayonne, in France.

One of the black spots is long and slender, and re- sembles a dagger or bayonet. Woudward.

You send troops to sabre and bayonet us into sub- mission. Burke.

Not a single head

Was spared ??? three thousand Moslems perish'd here. And sixteen bayonet pierced the seraskier. Hyron.*

You. should but give few cartridges to such Troops as are meant to march with greatest glory on. When matters must be carried by the touch Of the bright bayonet, and they all should hurry on, They sometimes, with a hankering for existence, Keep merely firing at a foolish distance. Id.

The town was entered : first one column made Its sanguinary way good ??? then another. The reeking bayonet and the flashing blade Clashed 'gainst the scimitar.

BAYONETS were formerly made with a round handle fitted to the bore of a firelock, and to be fixed there after the soldier had fired ; but they are now made with iron handles and rings, that go over the muzzle, and are screwed fast, so that the soldier fires with his bayonet on the muzzle of his piece, and is ready at once to act. This use of the bayonet fastened on the muzzle was a great improvement, first introduced by the French; to which, according to M. Folard, they owed a great part of their victories for some time afterwards ; and to the neglect of this, in suc- ceeding wars, and trusting to their fire, the same author attributes most of the losses they sus- tained. Of late the bayonet has come into very general use ; and some battles have been won by it without firing a shot. It was much encou- raged by Frederick the Great, who caused an inch and a half to be added to the length of the Prussian bayonet.

A French writer, in a work entitled L'Essai general de la Tactique, has proposed a method of exercising soldiers in a species of fencing or tilting with this weapon. But, as another very sensible author, Mauvillon, in his Essai sur 1'In- fluence de la Poudre a Canon dans 1'Art de la Guerre Moderne, justly asks, how can any man tilt or fence with so cumbrous an instrument and so difficult to be handled, as the firelock? It seems probable that great advantage may be ob- tained by a person who has been taught to use such a weapon scientifically, when contending with an individual ; but the niceties of parrying are not applicable to the charge in line ; a firm grasp and a quick and steady thrust are what is required.

BAYONNA, a well-built town of the pro- vince of Galicia, in Spain, situated on a smah bay of the Atlantic. It contains a collegiate church, a Franciscan convent, and a hospital , and is defended by a castle, with a governor and a small garrison. The inhabitants obtain

their livelihood by fishing. The Bay of Bayonna forms part of the Gulf of Vigo, nine miles south- west of Vigo, and twelve north-west of Tuy.

BAYONNA ISLES, or ISLAS DE SEYAS DE BAY- ONA ET D'ESTELAS, two small islands, with a number of insular rocks, situated in the Atlantic, at the entrance of the Bay of Bayonna, off the coast of Galicia, in Spain. They were called by the ancients Insulse Deorum, or the Isles of the Gods, and lie six miles N.N. W. of Bayonna.

BAVONNE, a rich, populous, and flourishing commercial town of France, in the department of the Lower Pyrenees. It is seated near the mouth of the Adour, which forms a good har- bour, and is divided into three parts : the great town on this side the Nive ; the little town be- tween the Nive and the Adour ; and the suburbs of St. Esprit, chiefly inhabited by Jews, beyond this last river. A citadel, constructed by Vauban, on the top of an eminence in the suburb, com- mands both the harbour and the town, which are further defended by small redoubts. A wooden drawbridge, which allows vessels to pass, and where a small toll is levied, connects the suburbs with the town. The ancient cathedral is remarkable for the height of the nave, and the delicacy of the pillars which support it. The quay is an elegant and frequented promenade ; but the most beautiful part of the city is the Place de Grammont. The bishop was formerly suf- fragan of the archbishop of Auch; he is now under the archbishop of Toulouse, and exercises jurisdiction over three departments, those of the Upper and Lower Pyrenees and of the Landes. Bayonne, before the revolution, was the seat of a provincial tax-office, and court of justice. At pre- sent it is the largest though not the chief town of the Lower Pyrenees, and the head of the most west- ern arrondissement, which consists of seven can- tons, and contains 70,000 inhabitants. An extensive commerce is carried on here with Spain, in which French and foreign goods are given in exchange for wood, iron, fruit, and the preciousonetals. The principal of the maritime trade is the cod and whale fishery ; in these branches from thirty to forty ships of 250 tons average, were lately em- ployed. Masts and other wood for ship-build- ing, brought from the Pyrenees, are exported to Brest and other ports of France. Hams, wines, and chocolate, are exported in great quantities to various parts. The military weapon called the bayonet was invented here in

the seventeenth century. The language of the people is the an- cient Biscayan or Basque. Forty-four miles W.N.W. of Pau, and 518 S.S.W. of Paris. Long. 1►► 24′ W., lat. 43►► 29′ N. Inhabitants about 13,000.

BAYONNE BAY, or LA MER DES BASQUES, a part of the Bay of Biscay washing the shores of the district cf Labour in the south of France.

BAYREUTH, or BAREITH, a principality of Germany, formerly included in the Circle of Franconia ; now forming a part of the kingdom of Bavaria. It is bounded by the Upper Pala- tinate and Bohemia on the east, and by the ter- ritories of Nuremberg and Anspach south. Its extent is estimated at 1760 square miles, and its population at 200,000 souls. Oberland is a hilly region ►►► the climate is cold, and much of

the soil barren, but it still affords good pasturage, and black cattle of a superior breed and sheep are reared here. The lower division, Unter- land, is flat, and in some parts sandy; but affords much fertile soil, and good crops of grain and tobacco. The last is sent in great quantities to Hamburgh and Bremen. Bayreuth is not destitute of minerals ; iron and marble are found in Oberland ; flax also constitutes a considerable production here, in spinning and working which into linen as well as into lace, a large portion of the population is employed. At the peace of Tilsit, Buonaparte appropriated this principality and an- nexed it to the kingdom of Bavaria in 1810. The upper division is included in the Circle of the Maine, the lower in that of the Rezat.

BAYREUTH, or BAREITH, the capital, is si- tuated near the Maine, and is a handsome town with broad and regular streets, entered by six gates. Among the public buildings which de- serve notice, are the old and new castles, the convents and churches, the barracks, the mint, and the gymnasium. Its chief manufactures are cloth, earthenware, and tobacco-pipes. It is about fifty miles north of Augsburg, in N. lat. 49►► 54', and E. long. 11►► 17′

BAYS, in antiquity. See BAY.

BAYZE, BAYS, or BAIZE, was first intro- duced into England, with says, serges, &c. by the Flemings; who, being persecuted by the duke of Alva for their religion, fled hither about the fifth of queen Elizabeth's reign; and had afterwards peculiar privileges granted them by act of parliament 12 Charles II. 1660. The ex- portation of bayze was formerly much more con- siderable than now, the French having learnt to imitate it. The English bayze, however, is still in request in Spain and Portugal, and even in Italy.

BAY'ZE. See BAIZE.

BAZA, or BACA, a town of Spain. Sec

BAfA.

BAZA, HOYA DE, See BACA.

BAZ'AAR, n. s. Persian buzsar, the market, now written bazaar, in the commercial language ofrthe East Indies. A constant market ; a kind of covered market.

This noble city (Cashan) is in compass not less than York or Norwich, about four thousand families being accounted in her. The houses are fairly built. The buzzar is spacious and uniform, furnished with silks, damasks, and carpets of silk.

Sir T. Herbert's Travel, (edit. 1677 p.) 223.*

BAZAR, BAZAAR, or BASAR, a denomination ori- ginally given by the Turks and Persians to a kind of exchange, or places where their finest stuffs and miscellaneous wares are sold. These are also called bezesteins. The word is of Arabic origin, where it denotes sale, or exchange of goods. Some of the eastern bazars are open, like the market-places in Europe, and serve for the same uses, particu- larly for the sale of the bulky commmodities. Others are covered with lofty ceilings, or domes, pierced to give light ; and in these the jewellers and other dealers in rich wares, have their shops. The bazar of Ispahan is one of the finest places in Persia ; yet, notwithstanding its magnificence, it is excelled by the bazar of Tauris, which is the largest that is known, having several times held

30,000 men ranged in order of battle. At Con- stantinople there are an old and new bazar, which are large square buildings, covered with domes, and sustained by arches and pilasters ; the former chiefly for arms, harness, and the like; the latter for goldsmiths, jewellers, furriers, and all sorts of manufactures. See ALEPPO.

BAZAS, a town of France, in the department of the Gironde, and late province of Guienne. It is built on a rock, and lies thirty miles south- east of Bourdeaux. Inhabitants about 5000. It was formerly the bishop's see of a very extensive diocese.

BAZAT, or BAZA, in commerce, a long fine- spun cotton, which comes from Jerusalem, whence it is also called Jerusalem cotton.

BAZEEGURS, a tribe of Indians, inhabiting different parts of Hindoostan, and recognised by several appellations, as Bazeegurs, Panchperees, Kunjura, or Nuts ; they follow a mode of life dis- tinguishing them from the Hindoos, and abstain from intermixing their families with them. The name Bazeegur is said to signify a juggler, and some etymologists find a derivation of conjuror from kunjura. They are found partly in wander- ing tribes, and partly adhering to fixed resi- dences.

The Bazeegurs are divided into seven castes, Charee, Athbhyeea, Bynsa, Purbuttee, Kalkoor, Dorkineo, and Gurgwar; but all the castes inter- marry. Their own historical traditions trace their descent from four brothers, who, finding it difficult to provide for their followers, resolved to separate, and direct their course respectively to e;ich quarter of the world; in consequence of which, one of them, named Sa, arrived in Bengal, from Gazeepour or Allahabad. His first abode v;is at Iloouly, and having governed his tribe peaceably during many years, he died at Uncour- poor. Sa left three sons who succeeded each other, and tin; succession regularly passed through several 'jenerations, and to Munbhungee, about fifteen or twenty years ago. At. that time, some ►►!' the castes considered a woman called Toota as their tine!'; but the power ascribed to her seems nu-rely nominal. Munbhungee, however, would in it suiier any of Toota's people to remain in the territory occupied by his sect; and the latter were equally jealous of the former.

Tiie features of the Bazeegurs do not decidedly ciii'er from those of other tribes around them. ;o:ij ►►► of their women are reputed beautiful, and ;uv 1 \ mi means scrupulous in forming tempo- rary alliances. They are Mahommedans in food uii i a];p u'ei ; some traversing the country as M ihoiuiiiedan Fakeers: a particular association a:!ion_r them has been accused of sacrificing human victims. Those called Panchperees seem to venerat" :i female deity, Kali, probably the s in ;umary goddess of the Hindoos. The Bazee- L UTS pro'ierly so called, are circumcised, and nave (uiests to officiate at their marriages and iiiru-rais, but their knowledge of the system of Aiah'iinet is \cry imperfect. They seem to '.-. knowledge an omnipotent beiiu', and believe V at all nature is animated hv one universal sp:nt, to \shich the MJU!, as a portion of it, will ;-Jt T death be united.

The marriage ceremony among them begins

by the bridegroom repairing to tne nut of hii elect, and calling aloud for her to be delivered to him. A near relation, guarding the door, resists his entrance, and pushes him away, while he is the object of taunts and

jocularity; at last the bride is brought forward. Both now receive the exhortation of a priest to practise mutual kind- ness, and the bridegroom, marking the bride's face with ochre, declares her his wedded wife, and she, on her part, does the same in return. The little fingers of their hands are now joined, and a scene of merriment commences from which the bride alone is spared. This consists chiefly in the progress to intoxication, for these people are addicted to the most immoderate use of spirits ; and after copious libations, a cavalcade is formed of the whole party, which moves on to the hut of the bridegroom. Several enigmatical ceremonies are performed before the door ; the mother of the bridegroom advances with a sieve containing rice, paint, and grass, with which the foreheads of the couple are touched, after being waved around them; and the bride is led into the house, before which there stands a small fresh branch of the mangoe tree in an earthen pot of water. In the evening the bride is conducted to her own hut, when the sober friends of the parties retire ; but the majority, and generally with the bridegroom among them, pass the night in a state of insensibility on some neighbouring plain.

The chief occupation of both the male and female Bazeegurs consists in feats of address and agility to amuse the public. The former are very athletic, and the women are taught a species of lascivious dancing. The men are also jugglers, tumblers, &c. The people of each set, or dra- matis personae, go out under a sirdar, or manager of a company, for a definite period, generally a year ; but no person can establish a set of actors without permission from the Nardar Boutah, or chief of the Bazeegurs, who receives a proportion of the profits. Each of five sets at Calcutta has a subordinate sirdar or ruler. These sirdars and the chief, apparently constitute a court for the trial of infringements of these regulations ; and if, on ap- plication of the tongue to a piece of red-hot iron, a suspected person be burnt, he is declared guilty of a fraud, which is expiated by a fine, or by the additional punishment of having his nose rubbed on the ground. The fine being paid, it affords a new opportunity for gratifying the strong propensity implanted in these people for ardent liquors. Sometimes differences are the subject of reference to a larger assembly; where, before commencing the business, both plaintiff and defendant must provide a quantity of spirits proportioned to the importance of the case ; the party non-suited bears the whole expense, and the assembly is regaled with the beverage pro- duced.

Some of the females practise physic, and cup- ping, and perform a kind of tattooing on the skin of the Hindoos of their own sex. The men, besides their usual occupations, collect medicinal herbs, and a certain bud, the latter is dried, and the former prepared by their wives as curatives, especially of female complaints : thus they find employment in the towns, in such vocations, or by the sale of trinkets, though both afford hut a

precarious subsistence. Some tribes also exhibit wild beasts to the vulgar, or offer mats fabricated by themselves for sale.

A striking coincidence has been remarked in the mode of life, the vocations, manners, and language of the different sects of these people and those of the gipsies scattered over Europe and Asia. Both the Bazeegurs and gipsies have a chief or king ; each has a peculiar language, bearing some reciprocal analogy, and different from that of the people among whom they reside. In India, and in Europe, they are equally an itinerant race; their pursuits, in so far as modi- fied by the manners of countries distant from each other, are alike; for the discrepancies they exhi- bit may reasonably be ascribed to an insensible acquisition of the habits of those near whom the various tribes of mankind dwell. They are equally indifferent as to the quality of the food serving for their subsistence; and equally igno- rant of systematic religious principles. All pre- serve the strictest adherence to their own sect, and sedulously abstain from intermixtures or intermarriages with those of every nation: and where infringements of these rules are seen, they are to be ascribed more to necessity than inclination. Another resemblance, which has probably been lost in the lapse of time, is sup- posed to consist in the three-stringed viol, intro- duced into Europe by the jugglers of the 13th century, which is exactly similar to the instru- ment now used in Hindostan. On uniting and combining the whole features of resemblance, it does not seem unlikely, that if Asia is their ori- ginal country, or if t'aey have found their way from Egypt to India, they may also have emi- grated farther at a period of remote antiquity, and reached the boundaries of Europe.

BAZGENDGES, in natural history, a sub- stance used by the Turks and other eastern na- tions in dyeing scarlet. They mix it for this purpose with cochineal and tartar, in the propor- tion of two ounces of bazgendges to one of cochineal. It seems to be no other than the horns of the turpentine tree. They are found also in China. Many things of this kind were sent over to Mr. Geoffrey at Paris from China, as the substances used in the scarlet dyeing of tliat country, and they all proved to be the same with the Syrian and Turkish bazgendges, and with the common turpentine horns. The lentisk, or mastic tree, also produces horns of a similar kind ; all being occasioned by the pucerons, which make their way ipto the leaves, to breed their young. See Reaumur's History of Insects, vol. vi.

BDELLA, in zoology, a genus of the class arachnides, order acera, family Riciniae. Generic character : palpi very slender, filiform bent, having a seta at the extremity ; eyes four; hind feet the longest.

BDELLIUM, n. s. Gr. pdiXXiov, Heb. nVia. An aromatick gum brought from the Levant, used as a medicine and a perfume. Bdellium is mentioned both by the ancient na- turalists, and in Scripture; but it is doubtful whether any of these be the same with the modern kind.

This bdellium is a tree of the bigness of an olive, whereof Arabia hath great plenty, which yieldeth a certain gum, sweet to smell to, but bitter in taste, called also bdellium. The Hebrews take the loadstone for bdellium. Raleigh.

BDELLIUM is a gummy resinous juice, pro- duced by a tree in the East Indies, of which we have no satisfactory account. It is brought into Europe, in pieces of different sizes and figures, externally of a dark reddish brown, somewhat like myrrh ; internally it is clear, and not unlike glue. If held in the mouth, it soon becomes soft and tenacious, sticking to the teeth. Laid on a red-hot iron, it readily catches flame, and burns with a crackling noise, and in proportion to its goodness it is more or less fragrant. Near half of its substance dissolves either in water or in spirit of wine ; but the tincture made with spirit is somewhat stronger and much more agree- able. Vinegar, or verjuice, dissolves it entirely. The simple gum is a better medicine than any preparation from it. Though one of the weakest of the deobstruent gums, it is sometimes used as a pectoral and an emmenagogue with advantage. Some authors suppose the word translated bdel- lium (Gen. ii. 12) signifies a precious stone ; others fine crystal or steel ; and Bochart insists that it denotes pearls, numbers of which are fished near the mouth of the river Pison, in the gulf of Persia.

BE, v. > This verb is so remarkably irre-

BE'ING, n. j gular, that it is necessary to set down many of its terminations :

Present. I am, thou art, he is, we are, &c. com, eant, ip, anon, Sax. I was, thou wast or wert,

pane,

we were, &c. pan paenon, Sax. The conjunctive mood,

I be, thou beest, he be, we be, &c.

beo, bifr, beo, beon, Sax. Its etymology is as uncertain as its forms are irregular. The simple words to which be is prefixed, are used also in their

simple form as verbs. When employed as an auxiliary, it ren- ders the verb passive. As a prefix, it appears in many instances to give emphasis to the applica- tion of the simple term. As to bedaub, to bepraise, to besmear, and particularly, say the compilers of the Encyclopedia Metropolitana, when derision or contempt is intended, as becurl, in Search ; bemuffle,&c. in Sterne; beprose, in Mallet; be- scutcheon, betagged, in Churchill; betailed, in Goldsmith. To exist, to have existence. It is also used in our old language, for the preposition by, and also for the participle been.

And who so saith, and weneth it fc►► A jape, or els a nicete, To wene that dremes after fal, Let who so liste a fole me call ; y' ,

For this trowe I and say for me, That dreames signifiaunce be Of gude and harme to many wightes, That dremen in hir sleep a nightes, Full many thinges covertly, That fellen after openly.

Chaucer. Romaunt of thr ll"se.

CU1U, C

-\ I was, tho

Prefer V paer' ter' the was, we

J pan

BUA

694

BEA

Before this world's great frame, in which all things Are now contain'd found any freeing place, That high eternal pow'r which now doth move In all these things, mov'd in itself by love.

***pen*er. Hymn on Hsarenly Love. BEL. Aye hopeless*

To have the courtesy your cradle promis'd, But to be still hot summer's tanlings and The shrinking slaves of winter.

GUI. Than be so,

Better to cease to be. Shakspeare.

Awake ! arise ! or be for ever fall'n. Milton. The mind is its own place/ and in itself Can make a heav'n of hell, a hell of heav'n. What matter

where, if I be still the same, And what I should be, all but less than he, Whom thunder had made greater ! Here at least We shall be free. Id.

Neither did thy wisdom herein proceed in time only ; but in degrees ; at first thou madest nothing absolute ; first thou madest things which should have being without life ; then those which should have life and being ; lastly, those which have being, life, and reason : so we ourselves in the ordinaiy course of generation, first live the life of vegetation, then of sense, and reason afterwards. Hall. Con.

O Happiness ! our being's end and aim ! Good, Pleasure, Ease, Content, whate'er thy name ; That something still which prompts the eternal sigh, For which we bear to live, or dare to die j Which still so near us, yet beyond us lies; O'crlook'd, seen double by the fool and wise.

Pone. Estay on Man.

Men would be ang'-ls, angels would be gods ; Aspiring to be spoils if angels fell, Aspiring to be angels, men rebel, Ami who but wishes to invert the laws Of order, sins against th' Eternal cause. Id.

For who, to dumb forgetfulness a prey, This plea-urn:, anxious, bciuij e'er resign'd, Left the warm precincts of the cheerful day, Nor cast one li.niriivi, ling'ring look behind.

Until' K!,rjyin a Country Churchyard. From court? and thrones return, apostate praise ! Thrci prostitute ' to thy first love return. Thv '.I", thv ! irc:itest, one: unrivall'd theme. l!;,,'k to thy fountain ; to that parent power, V\~u,, ;.iv;'i ili-j tonˆu- to sound, lit: thought to soai , The sovl to be. Young.*

TiiU is the bud of briny, the dim dawn ; Life's th' atre as vet is shut, ;uid death, S'l-'in..; deiith, alone can heave the massy bar, This . ross iiupediinent of clay remove, And make us embrvos of existence free. Id.

(Van1 o'er the 'nys thine hours have seen, Co -.'i! i>Yr tiiy (lays from anjuish free ,,. >i know .v'iatever thou hast been "!':; somei'ihi'j; better not t) (if. Byron.

iu.A'.'il, .□□□/. ~\ It. i; not to bu found in I ' \i H i r, (.,/'/. ' any Oi' ova- r;irly lexicons. i')!v(ii.) Dr. Johnson oilers no ety-

i!i'ihr_v. Sereiiius uivt'S the (loth, bachar, sig- suiiu' as bnu'li. The l-'ncy. Metro. eun;ccUirf tliat it i- derived from '/aini vc-1 l'□□i.r, iob(hd, to wreathe) wi'utcvi'L- ymls or siivrounds. The shore, parti- (iii;.rly t'.u.i j/ail iliat is bi-tl by the waves. '! i.,' kuise stones tiia! li>' b, tvvi'uu the waters'

td_t- and tin' niain laud.

'!'!□□□ □□□ ;',^ln rmi-ii, that walk lipnn the beach,

.care. King Lear.

Timor, hath made his everlasting mansion Upon the beached verge of the salt fl

The beachy girdle of the u ear Too wide for Neptune's hips. 1.1.

What! are men mad? Hath nature given them ryes To see this vaulted arch, and the rich crop Of sea and land, which can distinguish 'twixt The fiery orbs above, and the twinn'd stones Upon the number'd beach ? And can we not Partition make with spectacles so precious 'Twixt fair and foul? Id

Deep to the rocks of hell the gather'd beach They fasten'd, and the mole immense wrought on Over the foaming deep. Milton.

They find the washed amber further out upon the beaches and shores, where it has been longer exposed.

Woodward. Nor far remote

A broken torch □□□ an earless boat □□□ □□□ And tangled on the weeds that heap The beach where shelving to the deep □□□ There lies a white capote ! 'Tis rent in twain □□□ one dark-red stain The wave yet ripples o'er in vain.

Byron. Bride of Abydot

BEACH HILL, an ancient artificial mount, north of Coupar in Angus, on which justice is said to have been formerly administered in the open air. From the top of it there is a delight- ful prospect of the meandering of the Isla, through a fertile and extensive champaign country, varie- gated with fruitful fields and thriving villages. Some Roman urns have have been found on this mount.

BEACHLEY, or OLD PASSAGE, a point of land at the confluence of the Wye and Severn, Gloucestershire ; which from its insulated position has always been considered an important military post. Earth works of ancient British origin are still remaining ; and it is the terminating point of Offa's dyke. Here the Royalists, whom prince Rupert had sent forth to fortify the point in the wars of the commonwealth, were dislodged with great loss, and afterwards defeated in a pitchea battle. The royalist commander, Sir John Wyn- tour, is said to have escaped by a hazardous leap from a cliff, still

called Wyntour's Leap.

BEACHY-HEAD, on the coast of Sussex. It .is known to sailors by the name of the Seven Cliffs. The summit of the highest cliff, which is also the highest in the south of England, is 575 feet from the base. From this promontory to Arundel the hills are called South Downs, and are celebrated as sheep walks. On the west side of Beachy-Head is an artificial ca- vern, named Parson Darby's Hole ; consisting of two apartments, just above high water mark, dug out of the solid chalk. Tradition asserts it to have been the residence of a recluse, who was minister of East Dean.

BE'ACON, v. & ►►.} Sax. beacon, from

BE'ACONED, > been, a signal, and bec-

BE'ACONAGE. j nan, whence beckon, to

make a signal. Skinner thinks it is derived

from the Ang.-Sax be, and cennan, to ken, to

see. Any thing so placed, says the Ency. Met.,

that it may be kenn'd, seen, or distinguished ;

intended as a sign, notice, or warning, is a bea-

con. Its specific description connects with it instantaneous firing, in the moment of alarm from an enemy ; or of a constant light in the darkness, to direct navigators in their course, and warn them from rocks, shallows, and sandbanks.

His blazing eyes, like two bright shining shields, Did burn with wrath, and sparkled living fire ; As two broad beacons set in epnn fields Send forth their flames. Spenser. Faerie Queene.

Modest doubt is call'd The beacon of the wise. Shakspeare.

The king seemed to account of Perkin as a May- game ; yet had given order for the watching of beacons upon the coasts, and erecting more where they stood too thin. Bacon,

No flaming beacont cast their blaze afar, The dreadful signal of invasive war. Gay.

On the top of the steeple there remains an iron pitchpot, designed as a beacon, to be fired occasionally, to alarm the country in case of invasion. It takes its name from the Saxon becnian, to call by signs.

Pennant's Tour from Chester. Hoadley Church. Wherefore, among other reasons, a suit for beacon- age of a beacon standing on a rock in the sea, may be brought into the court of Admiralty, the admiral having an original jurisdiction over beacons.

Blackstone. Comment. III. The haven hums with] many a cheering sound, The beacons blaze their wonted stations round.

Byron.

The bat builds in his haram bower ; And in the fortress of his power The owl usurps the beacon tower.

Id. Giaour.

BEACONS anciently were intended as signals for the better securing the kingdom from foreign invasions. ??? See SIGNAL. On certain eminent places of the country were erected long poles, whereon were fastened pitch barrels to be fired by night, and to smoke by day, to give notice in a few hours to the whole kingdom of an ap- proaching invasion. These served to communi- cate intelligence as rapidly as the modern inven- tion of the telegraph. We find beacons frequently used among the primitive Britons and Western Highlanders. The besieged capital of one of our northern isles in the third century lighted up a fire upon a tower, and Fingal knew ' the green flame edged with smoke ' to be a token of attack and distress, (Ossian, vol. i. p. 195). There are to this day several cairns or heaps of stones upon the heights along the coasts of the Harries, on which 'the inhabitants used to burn heath as a signal of an approaching enemy.

BEACONS on the sea coasts, for guiding and preserving vessels at sea, by night as well as by day, are erected by the king's authority, being a branch of the royal prerogative. The king has the exclusive power, by commission under his great seal, to cause beacons, light-houses and sea marks to be erected in fit and convenient places, as well upon the lands of the subject, as upon the demesnes of the crown : which power is usually vested by letters patent in the office of lord high admiral. And by statute 8 Eliz. c. 13. the corporation of the Trinity-house are em- powered to set up any beacons or sea-marks wherever they shall think them necessary ; and if the owner of the land or any other person

shall destroy them, or shall take down any steeple, tree, or other known sea-mark, he shall forfeit ––100, or, in case of inability to pay it, shall be ipso facto outlawed.

BEACONAGE, a tax paid towards the maia- tenance of a beacon.

BEACON-HILL, a high rock in the parish of Muthil, in Perthshire, from whence a fire in the night might be seen at the distance of fifty miles east. The top of it is flat, and covered with ashes to a considerable depth. It is within two miles of Strageath, and may be seen from Camp's , Castle, and from almost every part of a Roman road, which runs from Strageath for several miles eastward, in a straight line, to the parks of Gask, where there are still the remains of a Roman station. From all which it is evident that it has been a place of signals, and hence derived its name. It is also called Eagle's Craig.

BEACON-HILL, 1. a hill in Essex, on the south side of the mouth of the port of Harwich, with a light-house on it : 2. another in Wiltshire, be- tween Marlborough and Sandy-Lane.

BEACONSFIELD, a town of Buckingham- shire, seated on a hill in the road between Lon- don and Oxford ; eight miles from Marlow and Uxbridge, and twenty-five W.N.W. of London. It has a market on Thursday, and two fairs, February 13th, and Holy Thursday. In its vicinity was the residence of the poet Waller, at Hall Barn, and of Edmund Burke, at Butler's Court. The duke of Portland's seat, Bulstrode, is also within a short distance. Population about 1736.

BEACUL, a town and fortress of Hindostan, in South Canara, on a point of land projecting into the sea. It consists of about 100 houses. Long. 75–– 9′ E., lat. 12–– 22′ N.

BEAD, -ˆ From bede, Ang. Sax.

BEAD'ROLL,

BEADS'MAN,

BEADS'WOMAN,

BEADS'BIDDING, J to request ; to pray : is likewise a small globe, or ball of glass, or pearl, or other substance; a number of these, strung upon a thread, are used by Papists to count their prapers. Beadroll is a catalogue of prayers, or, perhaps, originally a list of those to be prayed for in church, afterwards any list. Beadsman, a prayer man, commonly one who prays for another. From this use beads obtained their name, which are now any

small globular body, and most frequently used to denominate the little balls which are threaded and worn about the neck for ornament.

A paire of bedes eke she here

Upon a lace, all of white threde,

On which that she her bedes bede :

But she ne bought hem nevre a dele,

For they were given hire, I wot wele

God wote of a full holie frere,

That said he was her father dere,

To whom she hod oftener went

Than any frere of his covent. Chaucer.

Where that old woman day and night did piay

Upon her beades devoutly penitent ;

Nine hundred Pater-nosters every day,

And thrice nine hundred Aves she was wont to say ,

I.D, -\ From bede, Ang. Sax.

; > ’ROLL, i a prayer ; the past parti- JS’MAN, vciple of biddan, orare, to JS’WOMAN, i bid ; to invite ; to solicit ; OS’BIDDING, J to request; to pray: bead

And to augment her painful penance more Tin-ice every day in ashes she did sit, And next her wrinkled skin rough sackcloth wore, And thrice three times did fast from any bit.

Spenser.

An holy hospital,

In which seven beadrmen, that had vowed all Their life to service of high heaven's king. ††† Faerie Queene.

It was a friar of orders gray Walk'd forth to tell his beadt, And he met with a lady fair, Clad in a pilgrim's weeds. Old Ballad.

With scarfs, and fans, and double charge of brav'ry, With amber bracelets, beads, and all such knavery.

Shakspeare.

Thy spirit within thee hath been so at war, That beads of sweat have stood upon thy brow. Id.

In thy danger

Commend thy grievance to my holy prayer ;

For I will be thy beadsman, Valentine. Id.

The king, for the better credit of his espials abroad,

did use to hare them cursed by name amongst the

beadroll of the JRng's enemies. Bacon's Henry VII.

'Twas such a bountie

And honour done to your poore bedes woman, I know not how to owe it, but to thanke you.

Ben Jonsun. The Sad Shepherd. Several yellow lumps of amber, almost like beadt, †††with one side fiat, had fastened themselves to the uottom. Boyle.

Bring the holy water hither, Let us wash nnd pr.iy together : \V hen our beads are thus united, Then the foe will l!y affrighted. Herrick.

For who would rob a hermit of his weeds, His few books, or his beads, or maple dish, Or do his gray hairs any violence. Milton. Comus.

Then mi a; hi ye see

Cowls, hoods, and habits, with their wearers tost Anil flutter'd into rags ; then reliques, beads, Jndulgencies, dispenses, pardons, bulls, The sport of winds. Milton's Paradise Lost.

While the disjointed abbess threads The gingling chain-shot of her beadt. Marcell.

Tell your beads, says the priest, and be fairly

truss'd up, For you surely to-night shall in paradise sup.

i'finr. T kief and Cordelier. He taketh candle, beades, and holy watere, And legends eke of salutes, and bookes of prayere ; He ent'Tcth the room, and looketh round about, And haspeii the door to haspeii the goblin out.

Guy. Imitation of Chaucer. I by voice I seem in every hymn to hear, With ev'ry bead 1 drop too soft a tear. Pope.

Much is the Virgin teas'd, to shrive them free From crimes as numerous as her beadsmen be.

Byron.

Br.Aii, ID architecture, a round moulding, commonly made upon the edge of a piece of -tufi, in the Corinthian and Roman orders, cut or carved in short embossments, like beads, in necklaces. A plain bead is sometimes set on the t-due of each fascia of an architrave, and some- times also an astragal is thus cut. it is not uncommon to place a bead on the lining board of a door-case, or on the upper edges of skirting boards.

J5i'\i>, in assaying, the small lump or mass f►►l pure nu-tal separatrd from the scoriae, and seen

distinct and pure in the middle of the cupel while in the fire. Thus, in separating silver from its ore by means of lead, the silver remains in the form of a bead, when the lead, that had before assisted in the operation, is reduced to scoria. In this process, the bead of silver must be taken out of the cupel as soon as it is observed to be pure, lest, gowing cold, it should be congluti- nated to the cupel or litharge. This bead, when the assay is properly made, is always porous on the under side. See ASSAYING.

BEADS, in commerce, those glass globules vended to the savages on the coast of Africa ; thus denominated, because they are strung to- gether for the convenience of traffic.

BEADS, in devotional exercises, are much used by Roman Catholics, as in rehearsing and num- bering their Ave-Marias and Pater-nosters ; and a similar practice prevails among the dervises and other religious throughout the East, as well Mahommedan as Heathen. The ancient Druids appear also to have had their beads, many of which are still found ; at least, if the

conjectures of an ingenious author may be admitted, who takes those antique glass globules, having a snake painted round them, and called adder-beads, or snake-buttons, to have been the beads of our ancient Druids.

BEADS, BIDDING OF THE, a charge given by the Romish priests to their parishioners, at cer- tain times, to say so many Pater-nosters upon their beads for a soul departed.

BEADS, used in necklaces, are made of various materials, such as steel, garnet, coral, diamond, amber, crystal, pastes, &c. The common black glass of which beads are made for necklaces, &c. is colored with manganese only : one part of manganese is sufficient to give a black color to near twenty of glass.

BEA'DLE,) Sax. by'sell, a messenger;

BEADLE'SHIP.) Fr. bedeau, Span, bedel, Dut. bedelle. Junius derives it from biddan, beadan, to bid, to tell, to order ; because he proclaims and executes the will of his superiors, Beadle- ship is the office of a beadle, it occurs in Wood's Athenae Oxon. vol. ii. fol. 388.

A dog's obey'd in office. Thou rascal beadle, hold thy bloody hand : Why dost thou lash that whore ? Shakspeare.

And I, forsooth, in love! I that have been love's whip : A very beadle to a humourous sigh, A critick ; nay, a night-watch constable. Id.

They ought to be taken care of in this condition, either by the beadle or the magistrate. Spectator.

Their common loves a lewd abandon'd pack, The beadle's lash still flagrant on their back.

Prior.

BEADLE is also used for an officer in universi- ties, whose place is to walk before the masters at all public processions, &c. with a mace. Spelman, Vossius, and Sunnier, derive beadle from the Saxon ; in which sense bishops, in some ancient Saxon manuscripts, are called beadles of God, Dei bedelli. The translator of the Saxon New Testament renders exactor by bidele; and the word is used in the same sense in the laws of Scotland.

BEADLE is chiefly applied in Scotland to those church officers who keep the keys of the churches and seats, and occasionally attend the ministers and kirk sessions, in the exercise of their parochial duties. The office is somewhat similar, though not in every respect, to that of Church Warden in England.

BEAD-MAKERS, called by the French pater- nostriers, are those employed in the making, stringing, and selling of beads, for devotional purposes. At Paris, before the revolution, there were three companies of bead-makers; one who made them of glass or crystal; another of wood and horn; and the third of amber, coral, jet, Ice.

BEAD-PROOF, a term used by distillers to ex- press that sort of proof of the standard strength of spirituous liquors, which consists in their having, when shaken in a phial, or poured from on high into a glass, a crown of bubbles, which stand on the surface some time after. This is esteemed a proof that the spirit consists of equal parts of rectified spirits and phlegm. It however is a fallacious rule as to the degree of strength in the goods ; because any thing that will increase the tenacity of the spirit, will give it this oroof, though it be under the due strength.

BEAD-PROOF. A method of ascertaining the strength of spirituous liquors, invented by Mr. Brown of Glasgow. It consists of a number of small glass globules, or beads, marked so as to correspond with the degrees of a hydrometer. These beads have a small glass cylinder appended to them, which, being ground with emery, they are brought to the degree of lightness required. They are put up in a box, and being thrown into any spirituous liquor, at a medium temperature, say sixty degrees of Fahrenheit, the bead which re- mains suspended in any part of it denotes the specific gravity or the proportion of spirit it con- tains. Thus No. 1. remains suspended in any part of distilled water, of the required tempera- ture, which is the standard from which the pro- portion of spirit is computed. No. 32. remains suspended in any part of pure alkohol ; and all the intermediate beads indicate various propor- tions of water and spirit in the mixture. When these beads are made with accuracy, they seem to afford a more easy method of ascertaining the strength of spirits than any yet invented. See HYDROMETER.

BEA'GLE. Fr. bigles, perhaps from the Ital. piccolo, q. d. cani piccoli, smaller dogs. A small hound with which hares are hunted.

She's a beayle true-bred, and one that adores me.

Shakspeare.

The rest were various huntings. The graceful goddes svas array'd in green ; About her feet were little beagles seen, That watch'd with upward eyes the motions of their queen. Dryden's Fables.*

To plains with well-bred beagles we repair, And trace the mazes of the circling hare. Pope.

Already see the deep-mouth'd beaglei catch The tainted mazes -, and, on eager sport li.tent, with emulous impatience try Each doubtful trace. Armstrvtuj.

BEAGLE, in zoology, a valuable dog, kept en- tirely for hunting hares ; they are of small size> inferior to the hare in swiftness, but possess a very delicate scent ; and when they have found her, seldom fail of running a hare down.

BEAGLES are of various kinds, as the soutnern beagle, something less and shorter, but thicker, than the deep mouthed hound ; the fleet northern or cat beagle, smaller, and of a finer shape than the southern, and a harder runner. From these two, by crossing, is bred a third sort, held pre- ferable to either. To these may be added a still smaller sort of beagles, scarce bigger than lap- dogs, which make pretty diversion in hunting the coney, or even the small hare in dry weather ; but are otherwise unserviceable by reason of their size.

BEAK', -\ Ang.-Sax./>ycan, Ger. picken, BEAK'ED, (to pick or peck. The beak, says BEAK'ER, { theEncyclopediaMetropolitana, BEAK-JIEAD. J is that which picketh or peck- eth. It is applied generally to whatever is pointed or sharp. Thus the bill of a bird is called its beak ; the cup called a beaker, derives its name from the shape of its spout. But the Dutch beker Vossius derives from the Lat. bacar, and thus bacar or baccar, says the just mentioned authority, is perhaps from Bacchus. It means a vessel or cup for wine. This is a little forced. The term beak is now used to signify the fore- part of a ship. In the ancient galleys it was a piece of brass like a beak, fixed at their end, with which they pierced their enemies. It is also applied to a shoe peculiarly constructed, and to a prominence of land.

Father, I sweare by Ibis golden beahe, More fair and radiant is my bonny Kate, Then silver Xanthus, when he doth embrace The ruddy Simois at Ida's feet. Whetstone.*

A little wren in beahe with laurell greene that flew, Foreshew'd my doleful death, as after all men knew. Mirror for Magistratet, His royal bird

Prunes the immortal wing, and cloys his beak, As when his god is pleas 'd.

Shakspeare. Cymbeline

I boarded the king's ship, now on the beak, Now in the waist, the deck, in every cabin. Id.

The floating vessel swam Uplifted, and secure with beaked prow, Rode tilting o'er the waves.

Milton. Paradise Lost.

He asked the waves, and ask'd the felon winds, What hard mishap hath doom'd this gentle swain ? And question'd every gust of rugged wings That blows from off each beaked promontory : They knew not of his story ; And sage Hippotades their answer brings, That not a blast was from his dungeon straj-M : The air was calm, and on the level brine Sleek Panope with all her sisters play'd.

Id. Lycidca

Him thought, he by the brook of Cherith stood ; And saw the ravens with their horny beakes, Food to Elijah bringing ev'n and morn.

Id. Paradise Regained. With boiling pitch, another near at hand, From friendly Swedeu brought, the seams instops ; Which well laid o'er, the salt sea waves withstand, And shake them from the rising bealc in drops.

*Dryden**

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BEAM.

The magpie, lighting on the stock, Stood chatt'ring -with incessant din, And with her beak gave many a knock.

Swift.

And into pikes and musqueteers Stampt beakers, cups, and porringers.

Hudibrasf

With dulcet bev'rage this the beaker crown'd, Fair in the midst with gilded cups around.

Pope. Odyssey.

The hooked beak of the hawk-tribe, separates the flesh from the bones of the animal which it feeds upon, almost with the cleanness and precision of a dissect- or' knife. Paley's Natural Theology.*

It is as if the dcsart bird, Whose beak unlocks her bosom's stream, To still her famish'd nestlings' scream, Nor mourns a life to them transfenr'd j Should rend her rash devoted breast, And find them flown her empty nest.

Byron. Giaour.

BEAK, in ancient military affairs, was used for one of the battalia, or forms of ranging an army for battle, particularly by the Macedonians.

BEAK, in architecture, a little fillet left on the edue of a larmier, which forms a canal, and makes a kind of pendent chin, answering to what Vitruvius calls the mentum.

BEAK, in farriery, denotes a little horse-shoe, turned up, and fastened in upon the fore part of the hoof. It is used to keep the shoes fast, and to prevent them from being struck off by the horse, when by reason of any itch, or being much disturbed by the flies in hot weather, he stamps his feet violently on the ground.

BEAK, in orthinology : from the form and struc- ture of the beaks of birds, Linnaeus divides this whole family, or general class of animals, into six orders. See OUMTIIOI.I;(;Y.

BKAK, or BiiAK-Hi-.Aii, of a ship, that part without the ship, before the forecastle, which is listened to the stem, and is supported by the main knee. It is usually carved and painted, which adds beauty to utility. The beak, called by tht:(rreekstju/SoXov, by the Latin;, rostrum, was an imjiortant part in the ancient ships of war, which \ere hence denominated naves rostrata?. The beak \vas m::i!e of wood but fortified with biass and fastened to the prow, serving to annoy the cncmv's vessels. Its invention is attributed to 1'isiruˆ, as Italian. The first beaks were made lonii' and hiuh ; but afterwards a Corinthian, named Aristo, contrived to make them short and strong, and placed so low as to pierce the hostile vessels under water. By the help of these, great havoc was made by the Syracusans in the Athe nian fleet.

BrAKT.ii, in heraldry, a term used to express the beak or bill of a bird. When the beak and Icus nf'a fowl are of a difl'vnint tincture from the body, \e say beaked and membered of such a tincture.

BKALK, a river of England, which runs thiouuh part of the counties of Sussex and Kent, and falls into the Med\vay.

iJi A M. '.Mary '), particularly distinguished by her skill in painting, was the daughter of Mr. (..Yaddock, minister of Walton-upon-Thames,

and learned the rudiments of her art from Sir Peter Lely. She painted in oil, water colors, and crayons, and had much business ; her portraits were in the Italian style, which she acquired by copying pictures from Sir Peter Lely's and the royal collections. Her master, says, Mr. Walpole, was supposed to have had a tender attachment to her ; but as he was reserved in communicating to her all the resources of his pencil, it probably was a gallant rather than a successful one. Dr. Woodfall wrote several pieces to her honour,under the name of Belis-ia. Mrs. Beale died in Pall- mall, in 1 697, aged 65. Her paintings have much nature, but the coloring is stiff and heavy.

BEALSBURG, a town of the United States of America, in Kentucky, seated on the east bank of the Rolling-fork. It is fifteen miles XV. S.W. of Bairdstown, fifty south-west of Frankfort, and 890 from Philadelphia.

BEALT, or BUALTH or BUILTH, an ancient town in the hundred of Builth, and county of Brecon, agreeably situated on the western bank of the river Wye, in a romantic and extremely picturesque vicinity. It is 173 miles from London, contains a population of t946 souls, holds markets on Mondays, and fairs five times in every year. Two of the streets are con- venient, well disposed, and adorned by the parish church, four meeting houses of dissenters, the free school, founded in 1752, by Thomas Prichard, Esq., several comfortable inns, and many substantial private dwellings. The Gwynnes of Llanelwedd Hall, are lords of the manor of Builth. The contiguity of this place to the saline springs 0f Park-Wells has occa- sioned an increase in the number of wealthy and respectable inhabitants within the vlast twenty years. This was the Bullceum of the Romans, and many curious reliques of that bold nation are daily found in the adjacent districts. The castle, of Norman erection, is beautifully situ- ated on the summit of a picturesque hill. It was once possessed by the Mortimers but now belongs to the Gwynnes. Llewellyn, the last reigning prince of Wales was slain near this place, and his remains interred at a spot called "Cefn y bedd Llewellyn," a little distance from the town. BEAM, n. "") Bagms, Goth, beam Ang.- BE AM LIKE, adj. VSax. a tree; the etymology BEA'MY. J uncertain ; the applications

are various. See our scientific articles under this term.

Poise the cause in justice' equal scales, Whose beam stands sure, whose rightful cause pre- vails. Shakspeare.

The building of living creatures is like the building of a timber house ; the

walls and other parts have columns and beams, but the roof is tile, or lead, or stone. Bacon.

So much they could with their chariots by use and exercise, as riding on the speed down a steep hill, to stop suddenly, and with short rein turn swiftly, now running on the beam, now on the yoke, then in the seat. Milton. Hist. Eng.

He heav'd, with more than human force to move A weighty stone, the labour of a team, And rais' d from thence he reach' d the neighb'ring beam. Dry den.

BEAM.

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BEAM, v. n.~) Ang.-Sax. beamian, to shiae, BEA'MLESS, Mo emit rays, as from the sun ; BEA'MY. j any thing radiant.

Is aught on earth so pretious or deare

As praise and honour? or is ought so bright And beautifule as glories beanies appeare,

Whose goodly light than Phosbus lampe doth shine more clear ? Spenser.

How shall a worm, on dust that crawls and feeds, Climb to th' empyreal court, where these states reign, And there take view of what heav'n's self exceeds ? The sunless stars, these lights the sun distain : Their beams divine, and beauties do excel What here on earth, in air, or neav'n do dwell : Such never eye yet saw, such never tongue can tell.

Fletcher's Purple Island. Pile ten hills on the Tarpeian rock, That the precipitation might down stretch Below the beam of sight.

Shakspeare. Cariolanvt.

Sunk though he be beneath the wat'ry floor j So sinks the day-star in the ocean bed, And yet anon repairs his drooping head, And tricks his beams, and with new spangled ore, Flames in the forehead of the morning sky ; So Lycidas sunk low, but mounted high.

Milton. Lycidas.

No sun to cheer us but a bloody globe, That rolls above, a bald and beamlets fire.

Dry den and Lee.

What modes of sight betwixt each wide extreme, The mole's dim curtain, and the lynx's beam. Pope.

Truth bids me look on men, as autumn's leaves, And all they bleed for, as the summer's dust, Driven by the whirlwind : lighted by her beams, I widen my horizon, gain new powers, See things invisible, feel things remote, Am present with futurities ; think nought To man so foreign as the joys possest, Nought so much bis as those beyond the grave.

Young.

Attempered suns arire,

Sweet-&eam'd and shedding oft thro' lucid clouds A pleasing calm, while broad and brown below, Extensive harvests hang the heavy head.

Thomson's Seasons. The ghastly form, The lip pale quiv'ring and the beamless eye.

Id. Summer.

But lo ! from high Hymettus to the plain, The queen of night asserts her silent reign. No murky vapour, herald of the storm, Hides her fair face, nor gilds her glowing form j With cornice glimmering as the moon-beams play, There the white column greets her grateful ray, And bright around with quivering beams beset Her emblem sparkles o'er the minaret.

Byron. Corsair.

O Peace, thy injured robes upbind ! O rise, and leave not one behind Of all thy beamy train.

Collins's Ode to Peace. Otic cultivated spot there was, that spread Its flowery bosom to the noon-day beam, Where many a rose-bud rears its blushing head, And herbs for food with future plenty team.

Seattle's Minstrel.

BEAM, in architecture. Some of the best au- thors have considered the force or strength of beams, and brought their resistance to a precise calculation : particularly M. Varignon and M.

Parent. The system of the latter is as follows When, in a beam breaking parallel to its base which is supposed to be a parallelogram, two planes of fibres, which were before contiguous, are separated, there is nothing to be

considered in those fibres, but their number, bigness, ten- sion before they broke, and the lever by which they act : all these together make the strength or resistance of the beam to be broke. Suppose then another beam of the same wood, where the base is likewise a parallelogram, and of any big- ness, with regard to the other, the height or thickness of each of these when laid horizontal, being divided into an indefinite number of equal parts, and their breadth into the same number, m each of their bases will be found an equal number of little quadrangular cells, proportion- ate to the base whereof they are parts. These then will represent little bases, or, which is the same thing, the thicknesses of the fibres to be separated by the fracture of each beam : and, since the number of cells is equal in each, the ratio of the bases of both beams will be that of the resistance of their fibres, both with regard to number and thickness. Now the two beams be- ing supposed to be of the same wood, the fibres most remote from the points of support, which are those which break first, must be equally stretched, when they break. Thus the fibres, e. g. of the tenth division, are equally stretched in each case, when the first breaks ; and in whatever proportion the tension be supposed, it will still be the same in both cases ; so that the doctrine is entirely free and unembarrassed with any physical system. ??? Lastly, the levers whereby the fibres of the two beams act, are represented by the height or depth of their bases ; and of consequence the whole re- sistance of each beam is the product of its base by its Jieight; or, it is the square of the height mul- tiplied by its breadth : which holds not only in case of parallelogrammatic, but also of elliptic bases. Hence, if the base of two beams be equal, though both their heights and breadths be unequal, their resistance will be as their heights alone ; and, by consequence, the same beam laid on the smallest s'de of its base will resist more than when laid flat, in proportion as the first situation gives it a greater height than the second : and thus an elliptic base will resist more when laid on its greatest axis, than when on its smallest. Since in beams equally long the bases determine the proportion of their weights or solidities, and since their bases being equal, their heights may be different, two beams of the same weight may have resistances differ- ing to infinity : thus, if in one the height of the base be supposed infinitely great, and the breadth infinitely small, while in the other the dimensions of the base are infinite ; the resistance of the first will be infinitely greater than that of the second, though their solidity and weight be the same. If, therefore, all that was required in architecture were to have beams capable of supporting vast loads, and at the same time to be of the least weights possible, it is plain they must be cut thin as laths and laid edgeways. If the bases of two beams be supposed unequal, but the sum of the sides of the two bases equal, e. g. if they be either 12 and 12, or 11 and 13, or 10 and 14, &c. so that they always make 24 ; and further, if they

be supposed to be laid edgeways ; pursuing the sc- ries, it v/ill appear, that in the beam of 12 and 12, the resistance will be 1728, and the solidity or weight 144: and that in the last'or 1 and 23, the resistance will be 529, and the weight 23 : the first, therefore, which is square, will have less than half the strength of the last, with regard to its weight. Hence M. Parent remarks, that the common practice of cutting the beams out of trees as square as possible is reprehensible : he hence takes occasion to determine geometrically, what dimensions the base of a beam to be cut out of any tree proposed shall have, in order to its be- ing of the greatest possible strength ; or, which is the same thing, a circular base being given, he determines the rectangle of the greatest resistance that can be inscribed ; and finds that the sides must be nearly as 7 to 5, which agrees with ob- servation. Hitherto the length of the beams has been supposed equal ; if it be unequal, the bases will resist so much the less, as the beams are longer. To this it may be added, that a beam sustained at each end, breaking by a weight suspended from its middle does not only break at the middle, but also at each extreme ; or, if it does not actually break there, at least immediately before the mo- ment of the fracture, which is that of the equili- brium between the resistance and the weight, its fibres are as much stretched at the extremes as in the middle. So that of the weight sustained by the middle there is but one-third part which acts at the middle to make the fracture; the other two only acting to induce a fracture in the two ex- tremes. A beam may either be supposed only loaden with its own weight, or with other foreign wei'_rlils applied at any distance, or else only with those foreign weights. Since, according to M. Parent, the weight of a beam is not ordinarily above one-seventieth part of the load given it to sustain, it is evident that in considering several weights, they must all be reduced by the com- mon rules to one common centre of gravity. .M. Parent lias calculated tables of the weights that will be sustained by the middle in beams of various basrs and lengths, fitted at each end into walls, on a supposition that a piece of oak of an inch .square and a foot long, retained horizon- tally bv the two extremes, will sustain 315lb. in its middle In-fore it breaks, which it is found by experience it will.

BT.AM, in heraldry, is used to express the main hoi n of a hart, or buck.

BKAM, in huntini;', the main siem of a deer's head, or that part \liieh bears the antlers, royals, and tops; the little streaks whereof are called circles.

l!i AM, or IJoi.i.r.i;, in weaving, is a long and thick wooden cylinder placed

lengthways on the hack part of the loom of those who use the shut- tle. The threads of the warp of linen or woollen cloth, srr.;x-s, or other woollen .stuffs, are rolled upon the beam, and unrolled as the work goes on. That cylinder on which the stuff is rolled, as it is weaved, is also called the beam or roller, and is placed on the fore part of the loom.

Pii'vM 01 A IiAi.ANcr., is that piece of iron or wood, somewhat binder towards the middle than at the ends, where there are holes, through which run the. ropes or strings which hold the

scales; the beam is divided into two equal parts by a needle placed over it perpendicularly, and the centre of motion must be placed a little above the centre of gravity, that the beam may rest exactly in an horizontal position. See BALANCE.

BEAM OF AN ANCHOR. The straight part or shank of an anchor, to which the hooks are fastened.

BEAM OF A PLOUGH, a name given by ou. farmers to the great timber of the plough, int►► which all the other parts of the plough-tail are fixed. This is usually made of ash, and is straight, and eight feet long in the common plough : but in the four-coultered plough it is ten feet long, and its upper part is arched. The head of this beam lies on the pillow of the plough, and is raised higher, or sunk lower, as that pillow is elevated or depressed by being slipped along the crow-staves. Near the middle it has an iron collar, which receives the tow chain from the box, and the bridle chain from the stake or gallows of the plough is fixed in it a little below the collar. Some inches below this there is a hole, which lets through the coulter ; and below that there are two other small ones, through which the heads of the retches pass These are the irons which support the sheet, and with it the share. Farther backward still is a larger perforation, through which the body of the sheet passes ; and behind that, very near the ex- tremity, is another hole through which the piece called the hinder-sheet passes. See HUSBANDRY.

BEAMS OF A SHIP are the large main cross timbers, stretching from side to side, which hold the sides of a ship from falling together, and which also support the decks and orlops of the ship. The main beam is that next the main mast; and from it they are reckoned by first, second, and third beam. The great beam is also called the midship beam. There are usually twenty- four beams on the lower deck of a ship of seventy- four guns, and to the other decks additional ones in proportion as the ship lengthens above. Hence the following phrases in sea language :-

BEAM, BEFORE THE, signifies an arch of the horizon comprehended

between the line of the beam, and that point of the compass which she stems.

BEAM, ON THE, in sea language, denotes any distance from the ship on a line with the beams, or at right angles with the keel. Any object that lies east or west when the ship steers northward, is said to be on the starboard or larboard beam.

BEAM, ON THE WEATHER, signifies on the weather side of the ship.

BEAM-ANTLER, the branch of a deer's horn next the head.

BEAM-BIRD. See MOTACILLA.

BEAM, CAMBER. See CAMBER BEAM.

BEAM FEATHERS, in falconry, the longest feathers of a hawk's wing.

BEAM-FILLING, in architecture, the filling up the vacant space between the aising plate and roof with stones or bricks, laid between the raft- ers on the aising plate, and plastered on with loam; this is frequent where the garrets are not pargeted or plastered.

BEAMINSTER, a market town of Dorset- shire, in England, seated on the river Birton, six

miles from Bridport, and 141 west of London. A considerable manufactory of sail cloth, and also of iron and copper goods, is carried on here. It was nearly destroyed by fire in 1645 and 1686, and suffered severely from the same cause in 1781. Population 2290.

BEAN, } Saxon bean, bien, a well

BEAN'FED, > known vegetable. Etymology

BEAN'SHAPED. unknown. Junius derives it*

from the Greek wavov vel wavof ; but assigns

in our opinion a very unsatisfactory reason ••• so

called because they produce blood. And what

food does not?

But God wot that May thought in hire heste, When she him saw up sitting in his shirt, In his night cap, and with his necke lene : She praiseth not his playing worth a bene.

Chaucer,

And worse than that bare meat there did remain To comfort her when she her house had dight, Sometime a barley-corn, sometime a bean, For which she laboured hard both day and night.

Wyatt.

I jest to Oberon and make him smile, When I a fat and beane-fed horse beguile, Neighing in likenesse of a silly foale.

Shakspcare. Long let us walk,

Where the breeze blows from yon extended field Of blossom 'd beans Thomson. Spring,

On turnips feast whene'er you please,

And riot in my beans and pease. Gay's Fables.

Why does the pea put forth tendrils, the bean not j

but because the stalk of the pea cannot support itself,

the stalk of the bean can ! Paley.

BEAN. The old method of choosing king and

queen on Twelfth-day, was by having a bean

and a pea mixed up in the composition of a

cakt. They who found these in their portion of

cake, were constituted king and queen for the

evening.

Now, now the mirth comes, With the cake full of plums, Where beane's the king of the sport here , Besides we must know, The pea also, Must revell as queene in the court here.

Herrick's Hesper.

Cut the cake : who hath the beane shall be kinge ; and where the pease is she shall be queene.

Nichol's Progresses,

You may imagine it to be twelfth day at night, and the bean found in the corner of your cake, but it is not worth a vetch, I assure you.

Middl, New Wond. Anc. Dr. 272.

BEANS. ' Three blue beans in a blue bladder.' What is the origin of this whimsical combination of words, it may not now be easy to discover, but at least it is of long standing.

F. Hark, does't rattle ?

S. Yes, like three blue beans in a blue bladder, rattle bladder, rattle.

*Old Fortunatus. Anc. Dr. III. p. 128. Prior has it in his Alma : ***

They say

That putting all his words together 'Tis three blue beans in one blue bladder.

Cant. I. v. 25.

BEAN, in botany. See VICIA. BEANS, in antiquity, were applied to various ases. The ancients made use of beans in gather-

ing the votes of the people, and for the election of magistrates. A white bean signified absolu- tion, and a black one condemnation. Beans had a mysterious use in the lemuralia and parental!:, j where the master of the family, after washing, was to throw a sort of black beans over his head, still repeating the words, 'I redeem myself and family by these beans.' Ovid gives a lively description of the whole ceremony inverse. Ab- stinence from beans was enjoined by Pythagoras, one of whose symbols is, Kvapov airf %taQai, ab- stine a fabis. The Egyptian priests held it a crime to look at beans, judging the very sight unclean ! The flamen dialis was not permitted even to mention the name. The precept of Py- thagoras has been variously interpreted : some understand it of forbearing to meddle in trials and verdicts, which were then by throwing beans into an urn ; others build on the equivoque of the word KVUˆOS, and explain it by abstinence from sexual pleasures. Clemens Alexandrinus grounds the abstinence from beans on this, that they render women barren: which is repeated by Theophrastus, who extends the effect even to plants. Cicero suggests that beans are great ene- mies to tranquillity of mind. For a reason of this kind it is, that Amphiarus is said to have abstained from beans, even before Pythagoras, that he might enjoy a clearer divination by dreams.

BEANS, in dietetics, are said to be nutritive, but flatulent. The horse-bean has been often urged as a succedaneum for coffee, which in principles it much resembles; only that it con- tains but half the quantity of oil. Mr. Boyle describes several experiments of beans treated pneumatically to show the great plenty of air they afford, on which their flatulency is supposed to depend. The expansion of beans in growing, the same author found so considerable, that it would raise a plug clogged with above an hun- dred pounds weight.

BEANS, in farriery. See FARRIERY, INDEX.

BEANS, in fishing, with proper management, make the finest of all baits.

The method of pre- paring them for that purpose is this : take a new earthen pot glazed on the inside, boil some beans in it, suppose a quarter of a peck : they must be boiled in river water, and should be previously steeped in some warm water for six or seven hours. When they are about half boiled, put in three or four ounces of honey, and two or three grains of musk ; let them boil a little on, then take them off the fire. They are to be used in this manner: seek out a clean place where there are no weeds, that the fish may see and take the beans at the bottom of the water. Throw some in at five or six in the morning, and in the even- ing for some days. This will draw them to- gether, and they may be taken in a casting net in great numbers.

BEAN, BOG, or BEAN, BUCK. See MENYAN- THES.

BEAN, CAPER. Fabago. A plant. See ZY-

GOPHYLLUM.

BEAN-CO'), a small fishing-vessel or pilot-boat, common on the sea coasts and in the rivers of Portugal. It is extremely sharp forward, having its stem bent inward above into a great curve ;

the stem is also plated on the fore side with iron, into which a number of bolts are driven, to for- tify it, and resist the stroke of another vessel, which may fall athwart-hause. It is commonly navigated with a large lateen sail, which extends over the whole length of the deck, and is accord- ingly well fitted to ply to windward.

BEAN-FLOUR, called by the Romans lomen- tum, was of some repute among the ancient ladies as a cosmetic, wherewith to smooth the skin, and take away wrinkles.

BEAN-FLY, in natural history, the name given by authors to a very beautiful fly, of a pale pur- ple color, frequently found on bean-flowers. It is produced from the worm or maggot called by authors Mida.

BEAN GOOSE, in ornithology. See ANAS.

BEAN, KIDNEY, in botany. See PHASEOLUS.

BEAN KIDNEY, TREE. See GLYCINE.

BEAN, MOLUCCA, or Anacardium, the fruit of a tree growing in Malabar and other parts of the East Indies, supposed by some to be the Avicen- nia tomentosa; by others, the bontia germinans. The fruit is of a shining black color, of the shape of a heart flattened, about an inch long, termi- nating at one end in an obtuse point, and ad- hering by the other to a wrinkled stalk. It contains within two shells a kernel of a sweetish taste; betwixt the shells is lodged a thick and acrid juice or oil. The medicinal virtues of ana- cardia have been greatly disputed. Many have attributed to them the faculty of strengthening the nerves, fortifying the memory, and quicken- ing the intellect. Hence a confection made from them was once dignified with the title of confectio sapientiuni ; but which others have thought better deserving the name of confectio stultorum, as instances are said to have occurred of its having rendered people maniacal. But the kernel of anacardium is not different in quality from that of almonds. The ill effects attributed to this fruit belong only to the oil contained be- twixt the kernels, whose acrimony is so great, that it is said to be employed by the Indians as a caustic. This oil is of service externally for tetters, freckles, and other cutaneous deformities; which it removes only by exulcerating or excori- ating the part, so that a new skin comes under- neath. See A.NACAiinirM.

BT.AN TUI.K. See COUALLODENDRON.

BK.AN Tur.r., BINDING. Sec MIMOSA.

BEAR, c. -\ ?□□□. u. pret. / bore, or bare;

BEAII'KR, 7i. (part. pass. Innr or born; Sax.

BF.AH'IM;, i beoruin, bc-nan, beoran ; Gothic

BEAU'.N. Jbairun; Lat. pario ; and Heb. bara, to create. Dr. Johnson remarks, that this word is used with such latitude that it is not easily explained. The general divisions of its meaning are to yield, to brinˆ forth ; to carry, to convty. and to transport; to endure, to suffer, to support, and to undergo. Yet is it in all these various significations to be distinguished from the won Is employed to explain it. Bear conveys the idea, of creating within itself; yield that of giving from itself. Animals bear "their you:::.r; inanimate objects yield their produce. an apple tree bears apples ; the earth yields fruits. Jlfur marks properly the natural power ofbring- ing torth Something of its own kind; i/ic Id is said

of the results or quantum brought forth. Shrubs bear leaves, flowers, or berries, according to their natural properties ; flowers yield seeds plenti- fully, or otherwise, as they are influenced by circumstances. The second class of meanings attaching to this word, the sense of retaining as well as

generating, is expressed by the words carry, convey, and transport ; but these are not sy- nonymous to bear. To bear is simply to take the weight of any substance upon one's self; to carry is to remove that weight from the spot where it was ; we always bear in carrying, but we do not always carry when we bear. Both may be applied to things as well as persons; whatever receives the weight of any thing bears it ; what- ever is caused to move with any thing carries it. Convey and transport are employed for such actions as are performed not by immediate per- sonal intervention or exertion : a porter ca~rics goods on his knot; goods are conveyed in a waggon or a cart; they are transported in a ves- sel.- It is customary at funerals for some to bear the pall, and others to carry wands or staves ; the body itself is conveyed in a hearse, unless it has to cross the ocean, in which case it is trans- ported in a vessel. In the sense of suffering and endurance, which is the third class of meanings in which this word is to be understood, it is likewise to be distinguished from its exegetical representa- tives. To suffer is a passive and involuntary act ; it denotes simply the being a receiver of evil ; it is therefore the condition of our being ; to bear is positive and voluntary, it denotes the manner in which we receive the evil. To bear is a single act of the resolution, and relates only to common ills ; we bear disappointments and crosses ; to endure is a continued and powerful act of the mind. The first object of education should be to accustom children to bear contradictions and crosses, that they may afterwards be enabled to endure every trial and misery. To bear and en- dure signify to receive becomingly the weight of what befalls ourselves : to support signifies to bear either our own or another's evils ; for we may either support ourselves, or be supported by others ; but in this latter case we bear from the capacity which is within ourselves ; but we support ourselves by foreign aid, that is, by the consolations of religion, the participation anˆ condolence of friends, and the like. ••• Crabie. A.n almost infinite variety of shades of meaning, ap- proaching to and receding from these general divisions, must be observed by every one at all familiar with our best English writers.

For in trauayl of hys berying hys moder was first (led. R. Olouceiter.

For shall neuer brere here beries as a vyne.

Piers Plouhman.

Lo ! a virgyn schal haue in wonabe and sche s1 hal lere a sonc, and they schulcn clepe his name Eina- nuel. Wiclif. Matt. chap. i.

" I wol not fro the door wend Tyll I have my staff." Thou bribour then have

the todir end

Quod hi that was within ; and ley'd it on his bak, Right in the same plase as chapmen bereth their pak. Cfutueer. Canterbury Tulei.

BEAR.

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But he was mounted in his seat so high, And his wing-footed coursers him did beare So fast away, that ere his ready speare He could advance, he farre was gone and past, Yet still he him did follow everywhere. Spenser, Pan may be proud that ever he begot

Such a bellibone ; And Syrinx rejoice that ever was her lot

To beare such an one. Id. Shepheard's Calendar. But fayrest she, when so she doth display The gate with pearles and rubies richly dight ; Through which her words so wise do make their way, To beare the message of her gentle spright.

Id. Sonnets.

Withhold thine indignation, mighty heaven, And tempt us not to bear above our power !

Shakrpeare.

For my part, I had rather bear with you, than bear you ; yet I should bear no cross, if I did bear you ; for I think you have no money in your purse. Id.

The queen, that bore thee Oftner upon her knees than on her feet, Died every day she liv'd. Id.

There be some plants that bear no flower, and yet bear fruit ; there be some that bear flowers and no fruit ; there be some that bear neither flowers nor fruit. Bacun.

Where with his hands did help his feet to bear, Else could they ill so huge a burthen steer.

Fletcher's Purple Island. Majestic though in ruin : sage he stood With Atlantean shoulders fit to bear The weight of mightiest monarchies. Milton.

No keel shall cut the waves for foreign ware For every soil shall ev'ry product bear. Dryden, My message to the ghost of Priam bear ; Tell him a new Achilles sent thee there.

Id. Mneid..

A guest like him, a Trojan guest before, In shew of friendship, sought the Spartan shore, And ravish'd Helen from her husband bore. Garth.

Ye good distrest!

Ye noble few ! who here unbending stand Beneath life's pressure, yet bear up a while, And what your bounded view, which only saw A little part, deem'd evil, is no more ; The storms of wintry time will quickly pass, And one unbounded spring encircle all. Thomson. You'll see a draggled damsel here and there From Billingsgate her fishy traffic bear. Gay.

I fancy the proper means of increasing the love we bear our native country, is to reside some time in a foreign one. Shenttone.

Let a man be brought into some such severe and trying situation as fixes the attention of the public on his behaviour, ††† the first question which we put con- cerning him is not what does he suffer ? Lut how does he bear it ? If we judge him to be composed and firm, resigned to providence, aud supported by conscious integrity, his character rises, and his miseries lessen in our view Blair.

Each bears a prize of unregarded charms. Byron.

To bear up ; to stand fi.rm without falling ; not to sink ; not to faint or fail. So long as nature

Will bear up with his exercise, so long

I daily vow to use it. Shakspeare.

Persons in distress may speak of themselves with dignity ; it shews a greatness of soul, that they bear up bfcainrt the storms of fortune. Broome.

The consciousness of integrity, the sense of a life spent in doing good, will enable a man to bear up under any change of circumstances. Atterbury.

When our commanders and soldiers were raw and unexperienced we lost battles and towns : yet we bore up then, as the French do now ; nor was there any thing decisive in their successes. Swift.

To bear with. To endure an vnpleasing thing. They are content to bear with my absence and folly.

Sidney.

Though I must be content to bear with those that say you are reverend grave men ; vet they lie deadly, that tell you, you have good faces. Shakspeare.

Look you lay home to him.

Tell him his pranks have been too broad to bear with.

Id. Bear with me, then, if lawful what I ask.

Milton.

To bear in hand. To amuse with false pre- tences ; to deceive.

Your daughter, whom she bore in hand to love With such integrity, she did confess, Was as a scorpion to her sight. Shakspeare.

His sickness, age, and impotence, Was falsely bore in hand. Id.

He repaired to Bruges, desiring of the states of Bruges to enter peaceably into their town, with a re- tinue fit for his estate ; and bearing them in hand, that he was to communicate with them of matters of great importance, for their good. Bacon.

All which I suffer, playing with their hopes, And am content to win them into profit, And look upon their kindness, and take more, And look on that, still bearing them in hand.

Ben Jonson.

It is no wonder, that some would bear the world in hand, that the apostle's design and meaning is for presbytery, though his words are for episcopacy.

South.

To bear off. To carry away. I will respect thee as a father, if Thou bear'st my life off" hence. Shakspeare.

The sun views half the earth on either way, And here brings on, and there bears oˆthe day.

Creech.

Give but the word, well snatch this damsel up, And bear her off". Addison. Cato.

My soul grows desperate.

Ill bear her off. A. Philips.

To bear out. To support ; to maintain ; to de- fend.

I hope your warrant will bear out the deed.

Shakspeare.

I can once or twice a quarter bear out a knave against an honest man. Id.

Changes are never without danger, unless the prince be able to bear out his actions by power.

Sir J. Heyward.

Quoth Sidrophel, I do not doubt, To find friends that will bear me out.

Hudibras. Company only can bear a man out in an ill thing.

South.

I doubted whether that occasion could bear me out in the confidence of giving your ladyship any farther trouble. Temple,

To bear a brain. To exert attention. Inge- nuity or memory.

My lord and" you were then at Mantua : Nay, I do bear a brain.

Sttahspeare Romeo and Juliet.

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E A R.

But, still, take you heed, have a vigilant eye ××× Well, sir, lot me alone, I'll bear a brain.

All Fooli, Old Play, iv. 177.

To bear six and six. An obscure phrase, occur- ring in the Spanish Curate of Beaumont and Fletcher.

He's the most arrant beast.

MELI.. He may be more beast.

JAM. Let him bear six and six that all may blaze him. Span. Cur. ii. 3.

That the object is to make him a horned beast is plain from the context, but by what allusion is not so clear. He is to bear six and six, as his arms. After one or two unsatisfactory conjectures, it was suggested to me that the expression most probably alluded to the horns of a ram, which by the aid of a little fancy may be considered as two figures of six, placed back to back 9 6. That this is the true interpretation there seems no reason to doubt. Nares. Glossary

*BEARING-CLOTH. The mantle or cloth with
وو which a child is usually covered when carried to church to be baptised, or produced among the gossips by the nurse.*

Here's a sight for thee ; look there, a bearing-cloth for a squire's child \ look thee here, take up, take up boy ; open't. Shakspeare.

~\ Sax. beria, Germ, baer, Lat. ursus. Others derive it from the Greek (Sapof, which they interpret pilo- _ sum villosum (ursus, quasi (harsus, hirsutus, pilis hor- rens.) A hairy shaggy ani- mal, a she bear, shaggy, and of horrid aspect.

BEAU',

BEAR'UAITING, BEAR'GARDEN, BEAR'HERD, BF.AR'ISH,

BEAR'SI.EEK,

Bl- Au'l.IKl-:,

BEAT/SKIN, BEAII'WAUP, BKAR'WIII i.r.

His surcoat was a bearskin on his back.

In our own language we seem to allude to this de- generacy of human nature, when we call men, by way of reproach, sheepish, bearish, &c. Harris.

I must propose some methods for the improvement of the bt'ur-yarden, by dismissing all the. bodily actors to that quarter. Spectator.

Our nobility also kept their bear-ward. Pennant,

BEAR, the name of two constellations, called the greater and lesser bear; in the tail of the lesser bear is the pole star. The chiding billow seems to pelt the clouds, The wind-shak'd surge with high and monstrous

main,

Seems to cast waters on the burning bear, And quench the guards of the ever fixed pole, I never did like molestation view On the enchafed flood. Shakipeart.

Others derive it from the bear

That's fixed in northern hemisphere,

And round about his pole does make

A circle like a bear at stake,

That at the chain's and wheels about

And overturns the rabble rout. Butler's Hudibras. E'en then when Troy was by the Greeks o'erthrown The bear oppos'd to bright Orion shone. Creech.

BEAR, in astronomy. See URSA.

BEAR, in zoology. See URSUS.

BEAR, in heraldry ; this animal occurs as a charge in coats of arms, as, 'He beareth, or, a bear passant, sable ; by the name of Fitzourse :' and rampant, as in fig. 1 .

Fig. 1. Fig. 2.

Some have falsely reported, that bears bring their young into the world shapeless, and that their dams lick them into form. Calmet.

A cruel beare, the which an infant bore Bt!. \ixt his Hoodie jawes besprinkled all with gore.

Spenser.

I would 1 had bestowed that time on the tongues, that I have in fencing, dancing, and bear-baiting. O, had I but followed the arts.

ShaL-siicarc. Twelfth Night. They have lied me to a stake I cannot fly, But bear-like- I must light the course. Id. Macbeth. Virtue is of so little regard in these costermonger times, that true valour is turned bear-herd.

Id. Henry IV.

Like to a chaos, or an unlickM bear-whelp, That carries no impression like the dam. Id. Hen. VI. Call hither to the stake my two brave bears,

Bid Salisbury and Warwick come to me.

𝍏𝍏𝍏 Are these thy bears ; we'll bait thy bears to death. And munacle the benrtrard in their chains. Id.

Thou'dst slum a hear ;

Tint it" thy flight lay tow'rd the raging sea, Thou'dst meet the bear i' th' mouth. Id.

('< >K. (), by your leave, sir, I must he hold to raise you -, else your physic Will turn to t'uther sickness.

Mr. I.. 𝍏𝍏𝍏 I'hysic, bear-leech ?

Ceil;. "Yes; physic! You are mad. Ford.

The worsted bear came off with storo

Of Moody wounds, but all before :

t'or as Achilles dipt in pond,

\ as anabapti/.'d, tree from wound,

Made proof against dead-doing steel

All over but the pagan heel 𝍏𝍏𝍏 𝍏𝍏𝍏

So did our champion's arms defend

All of him but the latter end. Biitlcr'i Hudibrat.

Bears' heads are also borne in coat armour mostly erased, as in fig. 2. ' Argent, a chevron between three bears' heads erased, sable, muzzled, or ; by the name of Pennarth.'

BEAR, ORDER OF THE, was a military order in Switzerland, erected by the emperor Frederic II. in 1213, by way of acknowledgment for the service the Swiss had done him, and in favor of the abbey of St. Gall. To the collar of the order hung a medal, on which was represented a bear, raised on an eminence of earth.

BEAR, SEA. See PHOCA.

BEAR ISLAND, an island in Bantry bay, Ireland, six miles in length, and one and a half broad, hilly and rugged, where batteries have been erected

for the defence of the bay. Distant twelve miles from Bantry. Long. 9►► 45′ W., lat. 51►► 35′ N.

BEAR ISLAND, a small island in the Atlantic, on the coast of Main. Long. 68►► 20′ W., lat. 44►► 6′ N.

BEAR LAKE, BLACK, a lake of North America, in long. 1074 W., lat. 534 N. The navigation is full of impediments from islands and rapids.

BEAR LAKE, GREAT, a considerable lake in the north-west of America, near the arctic circle. The North-west Expedition reached it in the summer of 1820, and lieutenant Franklin and his

party wintered nere. In the ensuing spring they attempted to reach the ocean by the Copper- mine river ; but, unable to accomplish their ob- ject, they returned to this lake the same year in great distress, and passed a second winter in the neighbourhood.

BEAR TOWN, in Carolina county, Maryland, lies about seven miles north from Greensburgh, and about fifteen miles south-east from Chester- town.

BEAR'S BREECH, in botany. See ACANTHUS.

BEAR'S COLLEGE, a jocular expression for the bear-garden, commonly called Paris garden From the diet and the knowledge Of the students in bean' college.

Ben Jonwn. Mask of Gips.

BEAR'S EAR, in botany, a name sometimes given to the primula villosa, or auricula ; also to the saxifraga sarmentosa, or Chinese saxifrage.

BEAR'S FOOT, a name given to the nelleborus fcetidus.

BEAR'S FLESH was much esteemed by the ancients : even at this day the paw of a bear, salted and smoked, is served up at the table of princes.

BEAR'S GREASE was formerly esteemed a sovereign remedy against cold disorders, es- pecially rheumatisms. It is now much used in dressing ladies and gentlemen's hair.

BEAR'S SKIN affords a fur in great esteem, and on which depends a considerable article of com- merce, being used in housings, on coach-boxes,

&e. In some countries clothes are made of it, more especially bags wherein to keep the feet warm in severe colds. Of the skins of bears' cubs are made gloves, muffs, and the like.

To BEAR A BODY. A color is said to bear a body in painting, when it is capable of being ground so fine, and mixing with the oil so en- tirely, as to seem only a very thick oil of the same color.

BEARD, v. & n.~) The applications of this BE'ARDED, >word are better under-

BEAUD'LESS. j stood than its etymology ; the full obvious meaning of it is the hair that grows on the lips and chin. It is supposed to be derived from the German baren, to show or manifest, because the beard is an indication of manhood : but this is not to my mind satisfac- tory ; its metaphorical application is to the sharp prickles growing on the ears of corn ; to the barb of an arrow ; it also describes the hairy tuft that grows from the chin of some animals ; the beard of a horse is that part which bears the curb of the bridle ; the length of the beard marks age ; to beard also is to take or pluck by the beard in contempt or anger ; to oppose to the face; to set at open defiance ; adopted, accord- ing to Mr. Stevens, from romance ; in the old language of which it signified, to cut off the beard; beardless, without a beard ; a boy.

A merchant was thnre with a forked herd.

Chaucer. Prologue to the Canterbury Tales.

A Franklein was in this compagnie

White was his herd as is the daycsie. Id.

His berd as any sowe or fox was rede,

And thereto brode as though it were a spade.

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Upon the cop right of his nose he hade A wert, and thereon stode a tuft of heree, Rede as the bristles of a sowes eres. Id.

Art thou the caytive that defyest me, And for this mayd, whose party thou dost take ? Wilt give thy beard, though it but little be ? Yet shall it not her lockes for raunsome fro me free. Spenser.

He that hath a beard is more than a youth ; and he that hath no beard is

less than a man. Shaktp&ire.

shall a beardless boy,

A cockor'd silken wanton, brave our fields, And flesh his spirit in a warlike soil, Mocking the air with colours idly spread, And find no check. Id.

No man so potent breathes upon the ground, But I will beard him. Id.

and began to hem him round

With ported spears, as 'thick as when a field Of Ceres ripe for harvest waving bends Her bearded grove of ears, which way the wind Sways them. Milton.

Ere on thy chin the springing beard began, To spread a doubtful down, and promise man.

Prior.

Some thin remains of chastity appear'd, Ev'n under Jove, but Jove without a beard.

Dry den.

Would it not be insufferable for a professor to have his authority, of forty years standing, confirmed by general tradition and a reverend beard, overturned by an upstart novelist? Locke.

Paints, d'ye say ?

Why she lays it on with a trowel ••• Then she has a great beard, that bristles through it, and makes her look as if she were plastered with lime and hair.

Congreve. Double Dealer.

The beard, conformable to the notion of my friend Sir Roger, was for many ages looked upon as the type of wisdom. . Lucian more than once rallies the phi- losophers of his time, who endeavoured to rival one another in beards ; and represents a learned man who stood for a professorship in philosophy, as unqualified for it by the shortness of his beard. Spectator.

Girt with many a baron bold, Sublime their starry fronts they rear ; And gorgeous dames, and statesmen old In bearded majesty, appear. Gray.

The artificial part of a feather is the beard, or as it is sometimes I believe

called, the vane, By the beards are meant, what are fastened on each side of the stem, and what constitute the breadth of the feather ; what we usually strip off from one side or both when we make a pen.

Paleys Natural Theology. But if thy beard had manlier length, And if thy hand had skill and strength, I'd joy to see thee break a lance, Albeit against my own perchance.

Byron. Bride of Abydos.

I should have bearded him in halls of pride, I should have mated him in fields of death ; Not stolen upon his secret bower of peace, And breathed a serpent's venom on his flower.

Maturin's Bertram,

BEARDS. ' Neither errors nor beards,' as arch- bishop Tillotson says, ' are inconveniences lately sprung up in the world.' As the distinguishing sign of mature manhood, the beard has in all ages commanded attention, and received particu- lar veneration from the less civilised part of man-

kind. But Moses is the earliest legislator on the subject. The command which God gave by him to the Israelites, ' Thou shalt not man the corners of thy beard' (Lev. 1 9, 27.), seems clearly to al- lude to some previous well-known custom, probably of the Egyptians. Maimonides, as quoted by Whitby, describes the ' five corners' of the beard, ' none of which,' says he, ' much less all, they might sliave off, as the manner of the idolatrous priests was.' More Nevoch, c. xxxvii. Herodotus confirms this with regard to the Egyp- tian priests, who, as he tells us, shaved the head, chin, and whole body. Accordingly, most of the Egyptian figures are without beard. He further informs us, that in time of calamity, they suffered their beard and hair to grow. The Jews also, in time of mourning, neglected to trim their beards, that is, to cut off what grew superfluous on the upper lips and cheeks. But occasionally manifested their grief in great afflictions by plucking off the hair of their beard. The vene- ration of the Jews for this appendage of man- hood, in the brightest period of their history, is strongly exemplified in the indignation which was felt by the ambassadors of David, when they were outraged in this respect by Hanun the Am- iiionite, 2 Sam. x. ' The men,' it is said, ' were greatly ashamed,' and ' the children of Ammon stank before David.' We were lately much amused with the

argument of a learned modern Ji-w lor the obligation of wearing his beard : ‘ two or’ the strongest implications,’ he said, ‘ of the laws of his people required it ; the above com- mand, Lcv.xix. ‘27, not to mar its corners, which lie contended could only apply when the beard ###was worn ; and the uener 1 precept, Dent. xxii. 5, forbidding either sex to wear that which ‘per- taineth’ to the other ### a beardless face being, ac- cordini; to nature, he insisted, a woman’s face.’

The Assyrians, says Strabo, xvi., like the Ku-yjuiuns, permitted their beards to grow in ˆcasoIls of grief. The Persians, on the contrary, shaved not only themselves in honor of the dead, but tioeked tlie t.als, and cropped the manes, of their horses and mules Compare Her. ix. 24, 11. K. 4.r,.

According to the fables of the Greeks, when Thetis wished to revenge- the wrongs of her son, siic approached the knees of Jupiter with a kiss, url touched his beard in supplication. In the xime manner Dolon would have besought pity from Diomcde ; and it’ lie could have touched the warrior’s heard, his life, perhapr, would have I.. M ˆ(.-ine. //. K. 4T>4.

Athenn us obsorvi s that the (“.reeks always wore their hi ards till the time of Alexander ; and that the iir-t \v!ifi e;it it at Athens ever after bore the ad’iiMo’i < >! i;(i:r;, <,f, shaven, c.n medals. He re- '###vs tl’.at Alexander mniiiiaii ‘ d the Macedonians to b< > shaven, lest tin – th i ‘heir beards should u’ive a handle lint i:U fatiier, as well as j’lvderessors, are “it heanls. The ; d themselves ###ar is : th## custom,

however, was not invariable ; for the scholiast of Aristophanes, Nub. 120, asserts that the ancient philosophers shaved their beards. The Greeks continued to shave till the time of Justinian, under whose empire long beards came again into fashion, and so continued till Constantinople was taken by the Turks. The Roman philoso- phers affected to preserve the distinctive charac- ter of the mantle and long beard. Horace describes them :

‘ Tempore quo me

Solatus jussit sapientem pascere barbam.’

Sermon, 1. ii. sat. iii. v. 34ˆ

and AulusGell ius and Lucian express themselves in a similar manner. Persius seems to have been so convinced of the beard’s being the symbol of wisdom, that he thought he could not bestow a greater encomium on Socrates than calling him ‘ Magistrum barbatum.’

From the building of the city, till the year of its foundation 454, barbers

are said to have been unknown at Rome. They were first imported from Sicily by Publius Licinius. There is some contradiction however on this point among the ancient writers. Pliny, vii. 59, Aulus Gellius, iii. 4., and Varro, de Re Rust. ii. 2., concur in the foregoing statement. Livy, on the contrary, among the other signs of popular mourning, after the execution of Manlius Capitolinus, which took place in the year U.C. 369, enume- rates the letting the beard grow, which, unless shaving had been customary, could not have been noticed. Scipio Africanus is said to have been the first daily shaver at Rome. Slaves wore their beards and hair long ; but, when manumitted, shaved their heads in the temple of Feronia, and put on a cap, or ' pileus,' as a badge of liberty. Those who escaped from ship- wreck, shaved their heads ; and persons acquitted of a capital crime, cut their hair and shaved, and went 'to the capitol to return thanks to Jupiter. The Roman emperors shaved till the time of Adrian, who retained the mode of wearing the beard, as Plutarch tells us, to hide the scars in his face.

According to Suetonius, Calig. 10., the young Romans were first shaved when the toga virilis was assumed. Macrobius, Somn. Scip. i. 6., says it was about the age of twenty-one. Au- gustus did not shave before the age of twenty-f five. Young men with a long down, or ' lanugo,' upon the chin, were called 'juvenes barbatuli,' or ' benb barbati.' The day on which they first shaved, among the Greeks and Romans, was a festival ; visits of ceremony were paid them ; and they received presents from their friends, as Juvenal, Sat. iii. 186,

' Ille metit barbam, crinem hie deponit amati : Pleua domus libis genialibus.'

The first growth of the beard being consecrated to some god, usually to the Lares. Nero conse- crated his in a golden box, set with pearls, to Jupiter Capitolinus.

Persons of respectability had their children shaved the first time by others of the same, or greater quality, who by this means became god- fathers, or adoptive fathers, of the children : a custom which was handed down tc Rome Chris-

tian, in which a person became godfather of a child by barely touching his beard : thus historians relate, that one of the articles of the treaty be- tween Alaric and Clovis was, that Alaric should touch the beard of. Clovis, and become his god- father. This was also an ancient form of tokens on oath,

Aumoin, lib. iv.

Ecclesiastical discipline has varied much on the article of beards : sometimes they have been enjoined on the clergy from a notion of too much effeminacy in shaving, and that a long beard was more suitable to the ecclesiastic gra- vity ; at other times they are forbidden, from the supposed danger of pride lurking beneath a venerable beard. The Greek and Romish churches long disputed on this important matter. Since the time of their separation, the Romanists seem to have given more into the practice of shaving, by way of opposition to the Greeks ; and have even made some express constitutions ‘ de ra- dendis barbis.’ The Greeks, on the contrary, espouse very zealously the cause of long beards, and are extremely scandalised at the beardless images of saints in the Roman churches : There are still extant prayers used in the latter on the solemnity of consecrating the beard to God, when an ecclesiastic was shaven.

*The barbarous nations of Europe appear very generally to have shaved, some of them reserving the mustachios. When the Franks made them- selves masters of Gaul, and assumed the au- thority of the Romans ; the bondsmen were ex- pressly ordered to shave their chins ; a law which continued in force until the entire abolishment of servitude in France. So likewise, in the time of the first race of their kings, a long beard was a sign of nobility and freedom. Princes were emulous of having the largest beard ; Egin- hard, secretary to Charlemagne, speaking of the last kings of the first race, says, they came to the assemblies in the Champ de Mars in a car- riage drawn by oxen, and sat on the throne with their hair dishevelled, and a very long beard, crine profuso, barba submissa, solio residerent, et speciem dominantis effingerent. To touch any one’s beard, or cut off a bit of it, was, among the first French, the most sacred pledge of protection and confidence. For a long time all letters that came from the sovereign had, for greater sanction, three hairs of his beard in the seal. , There was long in being a charter of 1211, ***which concludes with the following words : Quod ut ratum et stabile perseveret in posterum, praesentis scripto sigilli mei robur apposui cum tribus pilis barbae meae. In the tenth century Robert of France, the famous rival of Charles the Simple, that it might be the more con- spicuous to his soldiers when he was in the field, used to let his long white beard hang down on the outside of his cuirass. French historians describe the beard of Henry IV., deservedly styled the Great, as diffusing over the counte- nance of that prince a high degree of amiable openness, and majestic sweetness. By the pre- mature death of that prince, the beard, hitherto so highly respected, experienced a sudden and fatal revolution. Louis XIII. mounted the throne of his father without one. ‘ Every one concluded immediately, that the courtiers, seeing their*

young king with a smooth chin, would look upon their own as too rough.

The conjecture proved right ; for they presently reduced their beards to simple whiskers, and a small tuft of hair under the nether lip. The people at first would not follow this dangerous example, and the duke of Sully never would adopt it. He kept his long beard, and appeared with it at court, and ob- serving himself ridiculed by the young, said to the king, ‘ Sir, when your father, of glorious memory, did me the honor to consult me on his great and important affairs, the first thing he did was to send away all the buffoons and stage- dancers of his court.’ Whiskers now attained their highest degree of favor, at the expense of expiring beards. A fine black whisker, elegantly turned up, was a very powerful mark of dignity with the fair sex, and it was no uncommon filing for a fa- vorite lover to have his whiskers turned up, combed, and pomatumed, by his mistress ; for this purpose, a man of fashion took care to be always provided with every little necessary article, espe- cially whisker wax. Whiskers were still in fashion in the beginning of Louis XIV’s reign. That prince, and all the great men of his reign, took a pride in wearing them. They were the ornament of Turenne, Conde”, Colbert, Corneille, Moliere, &c. But they now underwent several changes both in form and name : there were Spanish, Turkish, guard dagger, royal whiskers, 8cc., until their smallness proclaimed their ap- proaching departure. In English history we have no such copious details on this mighty subject. Although the ancient Britons are sup- posed to have shaved all but the upper lip, Edward the confessor is represented, on his great seal, with a large beard and mustachios. When spies, according to William of Malmesbury, were sent by Harold into the camp of William I. they returned with an assurance of victory, since their enemies were priests, they said, and not soldiers, being all shaven. William the conqueror, on his seal, appears with a short beard and musta- chios. Among the edicts which he imposed upon the English, few were considered more op- pressive than that which enjoined the practice of shaving. – Like a similar edict of Peter I. of Russia, it was perpetually disobeyed, and the hatred of it led in many cases to open insurrec- tion. The Romish clergy, it seems, assumed the right to legislate for princes on this topic among others. The beard of Henry I. was loudly con- demned by them ; Orderic Vitalis and Serlo both denounced it from the pulpit. The king, to avoid these fulminations, shaved the offending part; yet within twenty years we again find it on the effigy of Henry II. on his seal. In the reign of Henry VIII. it is well known, Sir Thomas More exhibited on the block this memorable orna- ment : and perceiving it was likely to bo cut by the axe of the executioner ; took it away, saying, my beard has not been guilty of treason : it would be an injustice to punish it. In Shaks-‘ peare we read of ‘ your straw-colored beard, your orange-tawny beard, your purple in-grain beard, and your perfect yellow.’ Bottom’s Histrionic Company are instructed to have ‘ good strings to their beards ;’ an advice which has escaped explanation. ‘ A beard of the General’s cut’ is

noticed in Henry V. ‘ A great round board’ is disapproved of in The Merry Wives of Windsor, and compared to ‘ a glover’s paring knife.’ Charles I. wore iruistachios and a short peaked beard : Charles II. mustachios alone : since the Revolu- tion, except among our modern soldiery, the face has been entirely smooth .- ►►► The Spaniards have a proverb, which perhaps suggested the new fashion in the Hussar regiment. Desde que no hay barba, no hay mas alma. ‘ Since we have lost our beards, we have lost our souls.’ Among ►►► the European nations that have been most curious in beards and whiskers, none have been more distinguished than Spain.

We cannot pursue the details of this subject much farther. The Portuguese, whose national character is similar to that of the Spaniards, have imitated them in this respect. We read, that in the reign of Catherine queen of Portugal, when John de Castro had taken the castle of Diu, in India, he was under the necessity of borrowing from the inhabitants of Goa a thousand pistoles for the maintenance of his fleet ; and that, as a security for the loan, he sent them one of his whiskers, telling them ‘ all the gold in the world cannot equal the value of this national ornament of my valor ; and I deposit it in your hands as a security for the money.’ The inhabitants of Goa, it is said, generously returned both the money and his whisker. Le Cointe observes, that the Chinese affect long beards extravagantly; but nature has baulked them, and only given them very little one.?, which, however, they cul- tivate with infinite care; the Europeans are strangely envied by them on this account. Among tlie Turks it is more infamous for any one to have hs beard cut off. tlum among us to be pub- iifly whipt or branded with a hot iron. There are in, my people in that country, who would prefer death to this kind of punishment. The Arabs make the preservation of their beards a capital point of religion, In cause Mahomet never cut his. ijoiieethe ra/or is never drawn over the Grand Seignior’s face. The Persians, who clip theia, and shave above the jaw, are reputed heretics. It is likewise a mark of authority and liberty ai:io:iˆ thorn, as well as amoii1ˆ the Turks. They \viio MJITV. in the sera/iio, havt; their beards shaven as a si’.n of their servitud..’. They do not suffer :t to ‘jrnw till the sultan as a reward h ..s set them at liberty.

< >;’ that singular variety of our rare, bearded wo :; n, many marvellous stories are told. He- ro lotus speaks of a people above Ilalicarnassus, t ,! ►►► i’e-da—enis. amongst whom the chin of the piii-.te-;, lit’ ‘.iintrva

regularly budded with a lar.ro heard, v.hrii any '.Treat public calamity impend.d. lie,, i. 1?.'). Hippocrates tells us of wo bearde 1 women of respectability, Phactusa d"ra, the wife of Pythias, and Uamysia of ! ha -os, t:ie v. ###!!### of (io:\;:ppus. Generally, where I'M peculiarity has occurred, the menses have fotallv ceased. Ku>el>ius N ieurembergius men- tions a woman, who had a heard reaching to her mvel ; and Hart hoi in s peaks of a bearded woman well known at Copenhagen. Whether it conviii'-'d Ins imp! rial majesty that beards no longer distinguished men, and therefore produced his decree -main! them, we are not told ; but a woman*

is said to have been taken in 1724, by the Prussian army in the battle of Pultowa, and carried to Petersburg, where she was presented to the Czar, Peter I. whose beard measured a yard and a half. We read in the Trevoux Dictionary, that there was a woman seen at Paris, who had not only a bushy beard on her face, but her body likewise covered all over with hair. The great Margaret, the governess of the Netherlands, is said also to have had a veiy long stiff beard, on which she prided herself; and preserved it with the greatest care. In the nursery of Albert, Duke of Bavaria, in the time of Wolfius, there was reported to be a virgin with a large black beard ; but these good ladies, young or old, have been singularly rare in modern times, and in all well- authenticated history.

BEARDS, in entomology, are two small, ob- long, fleshy bodies, placed just above the trunk, as in the gnats, and in the moths and butterflies.

BEARDS of COMETS. See COMET.

BEARDS OF HORSES. The part underneath the lower mandible, on the outside and above the chin, which bears the curb, is called the beard or chuck. It should have but little flesh upon it, without any chops, hardness, or swell- ing ; and be neither too high raised nor too flat, but such as the curb may rest in its right place.

BEARDS OF MUSCLES, OYSTERS, &c. denote assemblages of threads or hairs, by which those animals fasten themselves to stones. The hairs of this beard terminate in a flat spongy sub- stance, which being applied to the surface

BEARD (John), an English actor and singer, was brought up a sizer in the king's chapel. In 1737 he made his first appearance on the stage, at Drury-lane, in the character of Sir John Love- rule, in the Devil to Pay. About two years after he married lady Henrietta Herbert, daugh- ter of the earl of Waldegrave, and widow of lord Edward Herbert; but this connexion brought him little fortune, and though he gave up the stage, for some time, he returned again to it, until 1758, when he joined with Mr. Rich, whose

daughter he had married on the death of his for- mer wife. He died in 1763, aged seventy-four.

BEARDED BROTHERS, fratres barbati, are par- ticularly used in ecclesiastical writers for those otherwise called fratres conversi in the order of Grammont and of the Cistercians. They took this denomination because they were allowed to wear their beards, contrary to the rules of the professed monks.

BEARDED HUSK, among florists, a husk which is hairy on the edges, as that of the rose, &c.

BEARDED VENUS. The Romans paid their devotions to a bearded Venus, Veneri barbatae, supposed to have been of both sexes. A statue of her was found in the Isle of Cyprus.

BEARERS, at funerals, is applied to the sup- porters of the pall. The ancients had peculiar orders or officers of bearers, called by the Greeks KOTtfdToi ; by the Romans, lecticaril, The ves- pillones, or bajuli, were a lower sort of bearers, appointed for persons of inferior rank.

BEARERS, gestantes, in writers of the middle age, are sometimes used for a child's gossips,

because they hold the infant in their arms, and present him to the priest in the ceremony of baptism.

BEARERS, in heraldry, or supporters, are cer- tain figures, standing on the scroll, and placed by the side of an escutcheon, which they seem to bear up. They are, chiefly, figures of beasts : figures of human creatures, used for the like pur- pose, are more properly called tenants. Some make another difference between tenant and bearer, or supporter : when the shield is borne by a single animal, it is called tenant ; when by two, they are called bearers, or supporters. The figures of things inanimate, sometimes placed aside of escutcheons, but not touching, or seeming to bear them, though sometimes called bearers, are more properly called cotises. Bearers have formerly been taken from such animals as were borne in the shields; and sometimes they have been chosen as bearing some allusion to the names of those whose arms they are made to support. F. Menestrier traces their origin to the ancient tournaments, in which the knights caused

their shields to be carried by servants or pages under the disguise of lions, bears, griffins, black- amoors, &c. who also held and guarded the escutcheons, which the knights were obliged to expose to public view some time before the lists were opened. But Sir G. Mackenzie says, that the first origin and use of them are derived from the custom of leading such as are invested with any great honor to the prince who confers it, and of his being supported by two of the quality when he receives the svmbols of such honor : and, in remembrance of that solemnity, his arms were afterwards supported by any two creatures which he might choose. See SUPPORTERS.

BEARERS, in horticulture, denote the fruit branches, or such as bear fruit. The bearers, or bearing branches of an apple-tree, and the like, are found to be rougher, and fuller of asperities in their bark, than the other branches.

BEARERS OF A BILL OF EXCHANGE, denote the persons'in whose hands it is, and in favor of whom the last order or indorsement was made. When a bill, or order for money, is said to be payable to bearer, it is understood to be payable to him who first offers himself after it becomes due. To be paid a bill or order of this kind, there needs neither indorsement nor transfer; yet it is proper to know to whom it is paid.

*BEARING, in heraldry, a term used to express a coat of arms, or the figures of armories, by w-hich the nobility and gentry are distinguished from the other ranks of the people, and from one another. These signs of nobility with us are evidently a copy of the statues and images among the ancient Romans, which they used to expose before their houses on public days, and carried before the body at the funeral of a great person. The*e statues among them bore the resemblances of their noble ancestors. And a-s our coats of arms evidently were brought in the place of them, we may date the origin of heraldry in England, as now practised, from the time of the subversion of the Roman empire by the Goths and Vandals; who, as they destroyed many liberal arts, so they seem, in return, to have given birth to the science cf heraldry; for which their posterity, it must*

be confessed, are under few obligations. Thes►► warlike nations, having subdued the Roman em- pire and raised their glory by military service, became fond of the achievements of their ances- tors and great men, and derived their ensigns and titles of honor from what concerned a sol- dier. They first distinguished the whole com- munity into three ranks, which they named according to the different orders of military, miles, eques, and scutifer; and their posterity, willing to commemorate their honors, reserved to themselves their military ensigns, and these became what we call bearings, or arms, the marks of gentility or of families, some one of which had once deserved an elevation above the common rank of men. While the

direct de scendant of this honorable person carried his ensigns of honor for his distinction, the collateral branches also were ambitious of preserving the memory of their having belonged to such an honorable house ; and therefore assumed the same figure, but with some difference, to distinguish the distance from the original claim. In process of time, other families, who had de- served as well of their prince and country, whether in civil or military affairs, became de- sirous of the same sort of distinction, by way of perpetual memorial of their services ; and upon this occasion many other devices were formed into arms, and continued down to posterity in their several families. Armorial bearings, in the tenth and eleventh centuries, were single and plain, consisting only of few figures. Charges, differences, quarterings, &c. are the inventions of later times. See HERALDRY.

BEARING, in navigation, an arch of the horizon intercepted between the nearest meridian and any distant object, either discovered by the eye, or resulting from the sinical proposition ; as in the first case, at four P. M. Cape Spado, in the isle of Candia, bore south by west by the com- pass. In the second, the longitudes and latitudes of any two places being given, and consequently the difference of latitude and longitude between them, the bearing from one to the other is disco- vered by the following analogy : ††† As the meridi- onal difference of latitude is to the difference of longitude, so is radius to the tangent bearing. Bearing is also the situation of any distant object, estimated from some part of the ship according to her position. In this sense, an object so dis- covered must be either a-head, a-stern, a-breast, on the bow, or on the quarter. These bearings, therefore, which may be called mechanical, are on the beam, before the beam, abaft the beam, on the bow, on the quarter, a-head, or a-stern. If the ship sails with a side wind it alters the names of such bearings in some measure, since a distant object on the beam is then said to be to leeward or to windward ; on the lee-quarter or bow, and on the weather-quarter or bow.

BEARING, in sea language. When a ship sails towards the shore, before the wind, she is said to bear in with the land or harbour. To let the ship sail more before the wind, is to bear up. -To put her riˆht before the wind, is to bear round. A ship that keeps off from the land is said to bear off. When a ship that was to windward ccmea under a ship's stern, and so gives her the wind.

.she is said to bear under her Ice, &c. There is another sense of this word, in reference to the harden of a ship ; for they say a ship bears, when,

having too slender or lean a quarter, she will sink too deep into the water with an over- light freight, and thereby can carry but a small quantity of goods.

BEARING AWAY (as well as Bearing up) is improperly used to denote the act of changing the course of a ship, in order to make her sail before the wind, after she had sailed some time with a side-wind, or close-hauled.

BEARING OF AN ARCH, OR VAULT, denotes the effort which the stones make to separate by their gravity the piers or piedroits. This amounts to the same with what the French call pousse"e. See POUSSEE.

BEARING OF AN ORGAN" PIPE denotes an error or variation from the just sound it ought to yield.

BEARING OF A STAG, in hunting, is used in respect of the state of his head, or the croches which he bears on his horns. If one is asked what a stag bears, he has only to reckon the croches, but never to express an odd number ; as, if be had four croches on his near horn, and five on his far, a huntsman will say he bears ten, a false right on his near horn ; if but four on the near horn, and six on the far horn, he will say he bears twelve, a double false right on the near horn.

l>i \KING OIF is used by seaman, generally in business belonging to shippin'_r, for thrusting off. Thus in hoisting any thing into the ship, if it li.is caught hold of any part of the ship, or be- come any way cntanuh d, they say, bear it off fro; 1 1 the ship's side. So if they would have the bn ⬜⬜⬜⬜⬜⬜⬜. eh or mouth of a piece of ordnance, &c. put from them, they say, bear ofi', or bear about the breech.

l!i AIIIV: SAIL \TI.I. is said of a ship, when she is a stiil'-mnde'l ship, an 1 will not couch down on aside with a ere at deal of sail. When a ship is said to bear out her ordnance, itis meant, tlr.it her ordnance lies so hi>_di, and she will go so upright, that in rea⬜⬜ 'liable tight iiifj weather, she uill lie able to ki . p out lu-r lower tier, and not be forced to shut in her ports. The ship is said

!e uf wind. to earrv out nioiv sails, viz. a top

iil'.AitA, a ci-devant province of France I iin iae east ! v l>ii;onv, on the south by I he- mountains nf Arrau'Oii, on the west by Soule and pa 1 1 ⬜⬜t !\a.u':.', andon thenovthby (iascony, and .\nna_har. li had the title of \icomte as earl\ a> the iiinih century. It v.as afterwards iai><'d to a pi met] alr.y, and belonged, with Na- varre, in iieiiry l\ . \iiien he L-aine to the crown. ! iis sun, I .dius Mil, united it, v, itii that part of IN a1, a ire wlne'a \\as posse.>>ed l>y tiir: liouse of Aliiiet, to I ranee, in ItiJO. It.

now forms with Basques, the department of the lower Pyrenees, and is about sixteen leagues in length, and twelve in !>; cadth. I n u'eniTa! it is barren, yet tl\e plains \ieid considerable (;u,;iititie< of iiax, and Indian corn. It n aUo rich in mines of iron, copper, and lead, ,md li.►►- -j- JiMKiO in' abitaiits. The. capital

BE A UN, a city and canton of Switzerland. See HERN.

BEAST, "") Beste, Fr. bestia, Latin?

BE'ASTLIKE, j an animal distinguished from BE'ASTLINESS, ! birds, insects, fishes, and BE'ASTLY, | man ; an irrational creature ;

BE'ASTLIHOOD, I or a brutal savage man, who BE'ASTINGS. j practises any thing contrary to the decencies of life and the dictates of hu- manity.

If that the good man, that the bestes oweth, Wol every weke, er that the cock him croweth Fasting ydrinken of this well a draught, As thilke holy Jew our eldre taught, His bestes and his store shall multiplie.

Chaucer. Pardonere Tale.*

A beettli man parseyueth not tho thingis that ben of the spyrit of God, for it is foli to him.

Wickliff. 1 Cor. chap. iii. They held this land, and with their filthiness Polluted this same gentle soil long time ; That their own mother loath'd their beastlineu, And 'gan abhor her brood's unkindly crime.

Spenser. Faerie Queene.

And all wylde beasts, made vassals of his pleasures.

And with their spoyles enlarged his private treasures.

Id. Mother Hubbard's Tale.

Not that I being a beast, she would have me j

but that she, being a very beastly creature, lays claim

to me. Shakspeare.

With lewd, profane, and beattly phrase, To catch the world's loose laughter or vain gaze.

Ben J onion.

So may we see a little lionet, When newly whelpt, a weak and tender thing, Despis'd by ev'ry beast; but waxen great, When fuller times full strength and courage bring, The beasts all crouchen low, their king adore, And dare not see what they contemn'd before ; The trembling forest quakes at his affrighted roar.

Fletcher. Purple Island. The sixth, and of creation last, arose With evening harps and matin, when God said, Let th' earth bring forth soul living in her kind, Cattle and creeping things, and beasts of th' earth, Each in their kind. Milton.

Here sat she by these musked eglantines ; The happy flowers seem yet the print to bear : Her voice did sweeten here thy sugar'd lines To which winds, trees, beasts, birds, did lend an ear.

Drummond. Heaven's king

Keeps register of every thing : And nothing may we use in vain, Ev'n beasts must be with justice slain

Marvell. Wounded Fawn. Beast of a bird ! supinely when he might Lie snug and sleep, to rise before the light ! What if his dull forefathers us'd that cry, Could he not let a bad example die. Dryden.

Medea's charms were there, Circean feasts With bowls that turn'd enamour'd youths to beasts.

Id.

It is charged upon the gentlemen of the army, that the beastly vice of drinking to excess hath been lately, from their example, restored among us. Swift

Man cares for all ! to birds he gives his woods. To beasts his pastures, and to fish his floods. Pope.

0 ye woods, spread your branches apace ; To your deepest recesses I fly ;

1 would hide with the beasts of the chase, I would vanish from every eye.

Shenstone. Pastorulf.

Inspiring dumb

And helpless victims with a sense so keen Of injury, with such knowledge of their strength, And such sagacity to take revenge, That oft the beast has seem'd to judge the man.

Coicper. Task. b. vi.

BEAST, among gamesters, a game at cards, played in this manner : the best cards are the king, queen, &c. whereof they make three heaps, the king, the play, the troilet. Three, four, or five may play, and to every one is dealt five cards. But before the play begins, every one stakes to the three heaps. He that wins most tricks, takes up the heap called the play : he that has the king, takes up the heap so called : and he that has three of any sort, that is three fours, three fives, three sixes, &c. takes up the troilet heap.

BEAST, at ombre, is when the player, or person that undertakes the game, loses it to the other two, the penalty of which is a forfeiture equal to the stake played for.

BEAT, v. n.ˆi Sax. beatan, beotan, Germ.

BE'ATER, > batten, French, baltre, to strike,

B'EATING. j either with gentleness or vio- lence, with or without an instrumental medium ; mechanical or animal motion, rising and falling, or terminating on an object, it is used metapho- rically, and applied to almost every kind of re- gular or repeated motion.

To BEAT DOWN, is to lessen, to depress, to repel, or to conquer.

To BEAT UP, is to attack suddenly ; to alarm.

To BEAT IN, is to impress or to inculcate by frequent repetition.

To BEAT-ABOUT. To try different ways; to search ; to hunt for any thing.

And oftentimis I finde that thei mette With blody strokis, and with wordis grete Assaying how ther speris weren whette, And God it wote with many a cruel hete Gan Troilus upon his helme to bete : But nathelesse Fortune it naught ne would Of cithers honde that either dyen should.

Chaucer. Troilus and Creseide. And now the westerne winde bloweth sore, That now is in his chief soveraingntee Beating the withered leafe from the tree. Spenser. They've chose a consul that will from them take Their liberties ; make them of no more voice Than dogs, that are often beat for

barking.

Skakspeare.

Mistress Ford, good heart, is beaten black and blue, that you cannot see a white spot about her. Id.

Bid them come forth and hear Or at their chamber door I'll beat the drum, Till it cry, sleep to death. Id.

A turn or two I'll walk, To still my beating mind. Id.

The tempest in my mind

Doth from my senses take all feeling else,

Save what beats there. Id

It is strange how long some men will lie in wait to

speak, and how many other matters they will beat

uvrr to come near it. Bacon.

We are drawn on into a larger speech, by reason

of their so great earnestness, who beat more and more

upon these last alleged words. Hooker.

How frequently and fervently doth the scripture

beat upon this cause ! Hahcwell.

Beyond this flood a frozen continent Lies dark and wild, beat with perpetual storms Of whirlwind and dire hail. Milton.

They lay in that quiet posture, without making the least impression upon the enemy by beating up his quarters, which might easily have been done.

Clarsndon.

Tho' oft bound to peace Yet he never would cease To vex his poor neighbours with quarrels, And when he was beat He still made his retreat To his Clevelands, his hells, and his Carwells.

Mareell.

Some have been beaten till they know What wood a cudgel's of by the blow j Some kick'd until they can feel whether A shoe be Spanish or neat's leather.

Butler't Hudibras. He, with a careless beat

Struck out the mute creation at a heat. Dryden, Surveys rich moveables with curious eye, Beats down the price, and threatens still to buy. Id.

My temperate pulse does regularly beat ; Feel and be satisfied. Id.

When from the cave thou risest with the day To beat the woods, and rouse the bounding prey.

Prior.

I am always beating about in my thoughts for some- thing that may turn to the benefit of my dear coun- trymen. Addison. She persuaded him to trust the renegado with the money he had brought over for their ransom ; as not questioning but he would beat down the terms of it.

Id.

Our warriours propagating the French language, at the same time they are beating down their power.

Idl

Such an unlook'd-for storm of ills falls on me,

It beats down all my strength. Id.

Will fancies he should never have been the man

he is, had not he knocked down constables, and beat

up a lewd woman's quarters, when he he was a young

fellow. Id.

One sees many hollow spaces worn in the bottoms

of the rocks, as they are more or less able to resist the

impression of the water that beats against them. Id.

To find an honest man, I beat about, And lOve him, court him, praise him,

in or out.

Pope.

A man's heart beats, and the blood circulates, which it is not in his power, by any thought or voli- tion, to stop. Locke. I would gladly understand the formation of a soul, and see it beat the first conscious pulse. Collier. I remember, that once lying a bed, and having been put into a fright, I heard my own heart beat, but I took it to be one knocking at the door oftener than once, before I discovered that the sound was in my own heart. Reid. Enquiry into the Human Mind.

BEAT, in fencing, denotes a blow or stroke given with the sword. There are two kinds of beats; the first performed by the foible of a man's sword, on the foible of his adversary's, which in the schools is commonly called batterie, from the French battre, and is chiefly used in a pursuit, to make an open upon the adversary. The second, and best kind of beat, is performed with the fort of a man's sword upon the foible of his adversary's, not with a spring, as in binding, but with a jerk or dry beat, and is therefore most proper for the parades without or within the sword, because of the rebound a mat's sword

has thereby from his adversary's, whereby he pro- cures to himself the better and surer opportunity of risposting.

BEAT OF DRUM, in the military art, is diffe- rently performed, according to the different pur- poses intended. Notice is given by it of any sudden danger ; or, that scattered soldiers may repair to their arms and quarters : these are called beating an alarm, or to arms. It is also intended to signify, according to the different manners of sounding the drum, that the soldiers are to fall on the enemy : to retreat before, during, or after an Attack ; to move or march from one place to another : to come out of their quarters, to repair to their colors, 8cc.

BEATS of a watch or clock, are the strokes made by the fangs or pallets of the spindle of the balance, or of the pads in a royal' pendulum. To find the beats of the balance in any watch, or in one turn of any wheel : ❖❖❖ Having found the num- ber of turns, which the crown wheel makes in one turn of the wheel you seek for ; those turns of the crown-wheel, multiplied by its notches, give half the number of beats in that one turn of the wheel :

for the balance or swing has two strokes to every tooth of the crown wheel, inas- much as each of the two pallets has its blow against each tooth of the crown wheel ; whence it is, that a pendulum which beats seconds, has in its crown-wheel only thirty teeth. To explain this, suppose the numbers of a sixteen hour watch, wherein the pinion of report is 4, the dial-wheel 32, the great wheel 55, the 4)32(8

pinion of the second wheel 5, Sec. The

number of the notches in the crown- 5)55(11 wheel 17, being multiplied into 0336, 5)45(9 (the product arising from the continual 5j40(8

multiplication of the quotients 8,1 1,9,8,) ???

jves .107,712, for half the number of 17

;>eats in one turn of the dial-wheel ; for 8 tunes 17 is 130, which is half the number of beats in one turn of the contrate-wheel 40 ; and T- times 136 is 1224, the half beats in one turn of the second wheel ; and 1 1 times 1 224 is 1 3,464, the half-ueats in one turn of the great wheel 55 ; and 8 times 13,4o'l, makes 107,712. Multiply this by the two pallets, i. e. double it, it gives 21,'), 424, whic.li is the number of beats in one turn of the dial wheel, in 12 hours. To know how many luats this watch has in an hour, divide the beats in 12 hours into 12 parts, and it gives 17,952, which is called the tnihi of the watch, or the beats in an hour. I f this be divided into 60 parts, it ;_ivo 21.".) and a little more for the beats in a minute, a.id so you may proceed to seconds or thirds, liy the beats and turns of the fusee, the hours that any watch will go may be found, thus : As tli:' ln;:'s of ti'e b.'.hime in one hour are to the be'Us in one turn or' the fusee, so is the num- ber of thr turns 01 the fusee I ,to the continuance of the watch's going. Thus 201'.Hi : 26023 : : 12 : 16. To tin 1 the beats of the balance in one turn of the fuse.', say, as thenum! or of turns of the fusee, to the continuance of ',!'/; vetch's <.;oing in hours, so ure the (.'en's in oni h : : 20190 : 26928. To t'.nd the beat- of the balance in an hour, say, as the hour., of the \;it<'hv guing lo the number of turns of I'n-.' f-iee.
.. <??????? in MIC turn

of the fusee, to the beats of an hour , trius, 16 : 12 : : 26928 : 20196. Derhatn's Artificial Clock Maker, p. 14, &c. and 22. See also CLOCK-MAKING.

To BEAT AN ALARM, in military affairs, is to give notice by beat of drum of some sudden danger.

To BEAT A CHARGE, is to give the signal to fall upon the enemy.

To BEAT THE GENERAL, is to give notice to the forces that they are to march.

To BEAT THE REVEILLE, is to give leave, by beat of drum at day-break, to come out of quarters.

To BEAT THE TATTOO is to give notice to all to retire to their quarters.

To BEAT THE TROOP is to give notice to all to repair to their colors.

To BEAT UPON THE HAND, or TO CHACK, in the menage, is spoken of a horse, when his head is not steady, but he tosses up his nose and shakes it all of a sudden, to avoid the subjection of the bridle. Turkish horses are very subject to this fault. When they beat upon the hand nei- ther the best bits, nor the best hand, can fix their heads. Croatian horses are also very apt to beat upon the hand ; their bars being too sharp and ridged, so that they cannot bear the pressure of the most gentle bit. It is from this excess of sen- sibility of the mouth that a horse is apt to chack ; but in order to secure his head it is only necessary to put a small flat band of iron, beat arch-ways, under his noseband, which answers as a martin- gale. This will hinder him to beat upon the hand, but will not break him of the habit ; for, as soon as the martingale is taken off, he will fall into the same vice again.

BEATA, Lat. i. e. the blessed, one of the many titles given to the Virgin Mary by the Roman Catholics.

BEATER, in manufacturing, is applied to divers sorts of workmen, whose business is to hammer or flatten certain matters, particularly metals. Thus, 1. GOLD-BEATERS are artisans who, by beating gold and silver with a hammer on a mar- ble, in moulds of vellum and bullocks' guts, reduce them to thin leaves, fit for gilding, or silvering of copper, iron, steel, wood &c. Gold- beaters differ from flatters of gold or silver; as the former bring their metal into leaves by the hammer, whereas the latter only flatten it by pressing it through a mill preparatory to beating. 2. TIN-BEATERS are emplpyed in the looking- glass trade, whose business is to beat tin on large blocks of marble, till it be reduced to thin leaves, fit to be applied with quicksilver behind look- ing-glasses. See FOLIATING and GOLD-BEAT- ING.

BEATH, Ang.-Sax. bethian, bathian, to steep, dip, or bathe. In Suffolk and Norfolk, beathlng or bathing wood by the fire, means straitening unseasoned wood by heat ; and this is much the same as Spenser's meaning in the example. To bathe or warm in fire so as to harden. ††† Todd's Johnson.

And in his hand a tall young oake he bore Whose knottie snags were

sharpen'd all afore, And bcutli'd in fire for steelc to be insted.

Spenser. Faerie Queene.

BEATI'FICAL,ˆ From beatus, beatifico, BEATI'FICALLY, I to be happy ; to make BEA'TIFICATION, lhappy with the completion BEATI'FICK, C of celestial enjoyment. It BE'ATIFY, 1 is used only of heavenly

*BEATi'iU'DE. * fruition after death. Bea- tification is an acknowledgment made by the pope, that the person beatified is in heaven, and therefore may be reverenced as blessed; but is not a concession of the honors due to saints, which are conferred by canonisation.*

Beatifically to behold the face of God, in the ful- ness of wisdom, righteousness, and peace, is blessed- ness no way incident unto the creatures beneath man.

Hakewill.

If at the conversion of a sinner there is joy before the beatified spirits, the angels of God, and that is the consummation of our pardon and our consignation to felicity ; then we may imagine how great an evil it is to grieve the spirit of God, who is greater than the angels. Jeremy Taylor.

In midst of this city celestial,

Where the eternal temple should have rose,

Lighten'd the idea beatifical

End, and beginning, of each thing that grows.

Gilei Fletcher.

Admiring the riches of heaven's pavement Than aught divine or holy else, enjoy'd In vision beatifick. Milton.

About him all the sanctities of heav'n Stood thick as stars, and from his sight received Beatitude past utterance. Id.

It is also their felicity to have no faith ; for enjoy- ing the beatifical vision in the fruition of the object of faith, they have received the full evacuation of it.

Brown's Vulgar Err ours.

He set out the felicity of his heaven, by the delights of sense ; slightly passing over the accomplishment of the soul, and the beatitude of that part which earth and visibilities too weakly affect. Id.

We shall know him to be the fullest good, the nearest to us, and the most certain ; and consequently the most beatifying of all others. Brown.

We may contemplate upon the greatness and strangeness of the beatifick vision ; how a created eye should be so fortified, as to" bear all those glories that stream from the fountain of uncreated light. South.

The obedient, and the men of practice, are those sons of light, that shall outgrow all their doubts and ignorances, that shall ride upon these clouds, and triumph over their present imperfections, till persua- sion pass into knowledge, and knowledge advance into assurance, and all come at length to be com- pleated in the beatifick vision, and a full fruition of those joys which God has in reserve for them, whom by his grace he shall prepare for glory.

South's Sermons.

This is the image and little representation of hea- ven ; it is beatitude in picture. Taylor.

The use of spiritual conference is unimaginable and unspeakable, especially if free and unrestrained, bear- ing an image of that conversation which is among angels and beatified saints. Hammond.

I wish I had the wings of an angel, to have as- cended into Paradise, and to have beheld the forms of those beatified spirits from which I might have co- pied my archangel. ××× Dryden.

Over against this church stands an hospital erected by a shoemaker, who has been beatified, though never sainted. Addison.

For you alone his raptures can describe, And stem the impetuous joys that rise

Within your breasts when all unveil'd you view,

The wonders of the beatific sight. Mrs. Rotce,

BEATIFICATION, in ecclesiastical affairs, an act by which the pope declares a person beatified, or blessed, after his death. Jt is the first step

towards canonisation, or raising any one to the honor and dignity of a saint. No person can be beatified till fifty years after his or her death. All certificates or attestations of virtues and mi- racles, the necessary qualifications for saintship, are examined by the congregation of rites. This examination often continues for several years; after which his holiness decrees the beatification. The corpse and relics of the future saint are from thenceforth exposed to the veneration of all good Christians; his image is crowned with rays, and a particular office is set apart for him ; but his body and relics are not carried in procession. Indulgences likewise, and remissions of sins, arc granted on the day of his beatification ; which, though not so pompous as that of canonisation, is however very splendid. Beatification differs from canonisation in this, that the pope does not act as a judge in determining the state of the beatified, but only grants a privilege to certain persons to honor him by a particular religious worship, without incurring the penalty of superstitious worshippers; but in canonisation the pope speaks as a judge, and determines, ex cathedra,upon the state of the canonised. Beatification was intro- duced when it was thought proper to delay the canonisation of saints, for the greater assurance of the truth of the steps taken in the procedure, Some particular orders of monks have assumed to themselves the power of beatification. Thus Octavia Melchiorica was beatified with extraor- dinary ceremonies by the Dominicans.

BEATING, in book-binding. See BOOK- BINDING.

BEATING, in English law. See BATTERY.

BEATING, in hunting, a term used of a stag, which runs first one way and then another. He is then said to beat up and down. ??? The noise made by conies in rutting time is also called beat- ing or tapping.

BEATING, or PULSATION, in medicine, is ap- plied to the reciprocal agitation or palpitation of the heart and pulse, or arteries. Some physi- cians distinguish eighty-one different kinds of simple beatings, and fifteen compound ones. They compute sixty beats in the space of a minute as the proper number in a temperate man ; but} in fact, we generally find a greater number.

BEATING, in navigation, the operation of ma- king a progress at sea against the direction of the wind in a zig-zag line, or traverse, like that in which we ascend a steep hill, See TACKING.

BEATING, in paper-making, signifies the beat- ing of paper on a stone with a heavy hammer, with a large smooth head and a short handle, in order to render it more smooth and uniform, and fit for writing. Engines driven by

water are now used.

BEATING YLAX, or HEMP, is an operation in the dressing of these substances, to render them more soft and pliant. When hemp has been

swingled a second time, and the hurds laid by, they take the strikes, and, dividing them into dozens and half-dozens, make them up into large thick rolls, which, being broached on long strikes, are set to dry ; after which they lay them in a round trough made for the purpose, and there beat them well with beetles till they handle both without and within as pliant as possible, with- out any hardness or roughness to be felt: that done, they take them from the trough, open and divide the strikes as before, and, if any be found not sufficiently beaten, they roll them up and beat them over again. Beating hemp is a pun- ishment that was often inflicted on loose or dis- orderly persons, in houses of correction, before the happy invention of the tread-mill !

BEATING, or inflicting stripes, on the person, was one of the most ancient, as well as universal, species of punishment. Among the Romans it obtained, under the denomination of verberatio, fustigatio, flagellatio, pulsatio, &c. In the East it still prevails, under the name of BASTONADO, which see.

BEATING THE WIND was a practice in use in the ancient method of trial by combat. If either of the combatants did not appear in the field, at the time appointed, the other was to beat the wind, or make so many flourishes with his wea- pon ; by which he was entitled to all the advan- tages of a conqueror. 1'erhaps St. Paul alludes to this 1 Cor. i. -2C>.

I !i A TIM; TIMK, in music, a method of mea- suring and marking the time for performers in cone, rl, by a motion of the hand and foot up or (iov.ii successively, and in equal times. Kriow- ii;.;- tin tnii1 time of a crotchet, and supposing the measure actually subdivided into four crotchets, ;;nd tlir half measure into two, the hand or foot iii'ii!^ uj>, if \v]i;it it down with the very begin- ning of the first note or croU;iiL't, and then raise u w;tli the third, and then down with the begin- nin.v of the IP xi measure; this is called beating tiie lime. ; ami, by pr.ictiee, a habit is acquired of making the motion MTV equal. Each motion do\a and up is called a time or measure. The genera! ruh1 i<, to co:itri>e the division of the measure so, t'nut every down and up of the beating shall > nd \viili a particular note, on which greatly depends tiie distiuc'iiu ss ; and, as it were, l'ie sense of the

melody. ilenc;1 the beginning of everv time or beating in the measure is reckoned the accented part of it. ISratin time is denoted, in the Italian music, by the term of a battuta, which is u>ually put alter what they call recitative, where little or no time is observed, to denote that here they are to be_.in auain to mark or beat the time exactly. The Romans aimed at somewhat of harmony in tiie strokes of their oars; and had an oliieer called portis-eulus in each galley, whose business was to Liat time with the rowers, some- times by a pole or mallet, and sometimes only by his voice. '.('lie anei. n!s u arht d the rhythm in their musical compositions; I ait, to make it more observable m the practice, they lieat the measure 01 time in different maiiiu rs. The most usual consisted in a motion oi' the foot, which was raised from, and struck alternately auainst, tiie ground , a,eeurdiu_', t~ tiie modem method. Doing this was Lon'.moulv tiie piovmce of the

master of the music, who was thence called Utaoxopoc , and icopvˆaioc, because placed in the middle of the choir of musicians, and in an ele- vated situation, to be seen and heard more easily by the whole company. These beaters of mea- sure were also called by the Greeks voSoKrvirot, and 7ro►►oi/>i0oi, because of the noise of their feet; and ffvvTovaptot, because of the uniformity or mo- notony of the rhythm. The Latins denominated them podarii, pedarii and pedicularii. To make the beats or strokes more audible, their feet were generally shod with a sort of sandals, either of wood or iron, called by the Greeks icpouTrf&a, icpovTraXa, icpeuTrj/ra, and by the Latins pedicula, scabella, or scabilla, because resembling little stools or foot-stools. Sometimes they beat upon sonorous foot-stools, with the foot shod with a wooden or iron sole. They beat the measure not only with the foot, but also with the right hand, all the fingers of which they joined together, to strike into the hollow of the left. He who thus marked the rhythm, was called manuductor. The ancients also beat time with shells, as oyster shells and bones of animals, which they struck against one another, much as the moderns now use castanets, and the like instruments. This the Greeks called Kpq/ij3aXia►►►►j>, as is noted by Hesychius. The scholiast on Aristophanes speaks much to the same purpose. Other noisy instru- ments, as drums, "cymbals, citterns, &c., were also used on the same occasion. They beat the measure generally in two equal or unequal times; at least, this holds of the usual rhythm of a piece of music, marked either by the noise of sandals, or the slapping of the hands. But the other rhythmic instruments last-mentioned, and which were used principally to excite and animate the dancers, marked the cadence after another man- ner ; that is, the number of their percussions equalled, or even sometimes surpassed, that of the different sounds which composed the air or song played.

BEATITUDE, in divinity, denotes the fruition of God in a future life to all eternity. Beatitude is also used in speaking of the theses contained in

Christ's sermon on the mount, whereby he pronounces the poor in spirit, those that mourn, the meek, &c., blessed.

BEATITUDE, in ecclesiastical affairs, was a title anciently given to all bishops ; but of latter days has been restrained to the pope. It appears to have been sometimes also given to laymen.

BEATON (David), archbishop of St. Andrew's, and a cardinal of Rome, in the early part of the sixteenth century, was born in 1494. Pope Paul III. raised him to the degree of a cardinal in De- cember 1538 ; and being employed by James V. in negociating his marriage with the court of France, he was there consecrated bishop of Mire- poix. Soon after his instalment as archbishop of St. Andrew's, he promoted a furious persecu- tion of the reformers in Scotland ; but the king's death put a stop, for a time, to his arbitrary pro- ceedings, he being then excluded from affairs of government, and confined He raised, however, so strong a party, that, upon the coronation of the young queen Mary, he was admitted in the council, made chancellor, and procured a com- mission as legate u latere from the court of Rome.

*He now began to renew his persecution of here- tics : and, among the rest, of the famous protestant preacher George Wishart, whose sufferings at the *take he viewed from his window with apparent exultation. It is said, that Wishart, at his death, uretold the murder of Beaton, which indeed happened shortly after, he being assassinated in his chamber, May 29th, 1547. Beaton had great talents, and vices that were no less conspicuous.*

BEATON (James), a nephew of the archbishop, was born at Balfour, in 1530, and raised to the archbishopric of Glasgow, when about twenty-five years of age. In 1560 he collected the sacred vessels and records belonging to his cathedral, and embarked for France, where he died in 1603. He wrote a history of Scotland, but it was never printed.

BEATORUM INSULA, in ancient geography, was seven days journey west of Thebae, a district of the Nomos Oasites, and called an island, be- cause surrounded with sand, like an island with water; yet abounding in all the necessaries of life. Some suppose it to have been a third Oasis, in the Regio Aimnoniaca; and the site of the temple of Ammon answers to the above descrip- tion, as appears from the writers on Alexander's expedition thither. Ulpian says, it was a place of banishment for criminals from which there was no escape.

BEATSON (Robert), an ingenious and ex- tensive compiler of books, was born in 1742 at Dysart, in the county of Fife. At the age of fourteen he entered into the army, but rising no higher than to the rank of lieutenant, turned his attention to literature as a profession, and in 1786 published A Political Index to the Histories of Great Britain and Ireland, of which there have been three editions. In 1790 appeared his Na- val and Military Memoirs of Great Britain, in 3 vols. 8vo., to which he subsequently added three more; and in 1807 a Chronological Register of both I louses of Parliament from the Union. He obtained the degree of doctor of laws from the university of Edioburgh. and was a member of the Royal Society of Scotland. He died in 1818. lie was also the author of an Essay on vertical and horizontal Windmills.

BEATTIE (James), LL. D., professor of mo- ral philosophy and logic in the Marischal college, Aberdeen, was born in Kincardineshire, in 1735. His father, who kept a small shop in Laurence- kirk, and rented a farm in the neighbourhood, gave him all the education which could be ob- tained at the parish school, and afterwards sent him to the university of Aberdeen. There he pursued his studies with great diligence, and was soon preferred to a bursary. Having continued four years at the university, studying philosophy and divinity, with a view to the established church, and no prospect opening for him, he ac- cepted in 1753, of the office of schoolmaster and parish clerk in the parish of Fordun. Here he con- tinued four years, little known or noticed In 1758 he was appointed one of the ushers to the grammar school of Aberdeen, and soon after gained attention among the men of letters in the university. In 1760 he published a small volume of original poems and translations, and the same year was appointed professor of philosophy ; the

duties of which situation he continued to dis- charge till within a short time of his death. Aberdeen could at this period boast of Drs. Campbell, Gerard, Gregory, and Reid, among its professors ; and the benefits which their new associate must have derived from such company, were rendered still more invaluable, by the har- mony in which they lived with each other, and the familiar manner in which they communicated their sentiments. In a kind of literary club, which met twice a month, they discussed freely all the topics of literature and philosophy which occurred to any of them ; and it was in this society that those speculations took their rise, which have since made their names so familiar to all who read for instruction. In 1763 Mr. Beattie visited London, and in 1765 published his Judgment of Paris; this year also, he became acquainted with the poet Gray, and continued in close friendship with him while he lived. In 1767 he married a daughter of Dr. Dun, master of the grammar school ; and about this time seems to have begun his Minstrel, and his Essay on the Nature and Immutability of Truth ; the latter of which was published in 1770. It was designed particularly to

oppose the philosophy of Hume, who is said to have been so sensible of the strength of its arguments and popularity, that he never afterwards could hear the name of Beattie mentioned without displeasure. In 1771 ap- peared the first canto of that beautiful poem, The Minstrel, which was completed in 1774, and in a very short time ran through several edi- tions. In a second journey to London, he was introduced by his friend Dr. Gregory to Mrs. Montagu, and to all the distinguished literary society then in the metropolis. He visited Lon- don a third time in 1773, and associated for some months with Drs. Johnson, Porteus, and other eminent men. About this time he received an ho- norary degree of LLD.from Oxford; and obtained a pension from'the king of ►►200 per annum. He had also the honor of an interview with their majesties. This year there was a proposal for transferring Dr. Beattie to die university of Edin- burgh, but he declined it; and in 1774 two offers were made him in the church of England, one of them a living of ►►500 a year, with views of further preferment; but these he also declined. Dr. Priestley at this time made an attack upon him, of which, however, he took no notice. In 1776 he published a volume of Essays; and in 1783, Dissertations Moral and Critical, in one volume 4to, At the recommendation of the bishop of London, in 1786, he published two small volumes on the Evidences of the Christian Religion ; and in 1790 the Elements of Moral Science, being the outlines of his academical lectures. Dr. Beattie was very much tried by domestic affliction : his wife became the victim of hereditary insanity, and his two sons, James Hay and Montagu, died successively, after at- taining to manhood. The situation of his wife, and the precarious state of his own health, had sunk him into an habitual depression ; but the death of his eldest son James, who had been conjoined with him in the professorship, was so severe a shock to him that he never recovered from it. But the sudden death of his only remaining child

in 1796, completely unhinged his mind ; the first symptom of which was a temporary, but almost total loss of memory, respecting his son. At this time, after searching in every room in the house, he would say to his niece, Mrs. Glennie, ' You may think it strange, but I must ask you if I have a son, and where he is ? ' She then felt her- self,' says Sir William Forbes, 'under the painful necessity of bringing to his recollection his son Montagu's sufferings, which always restored him to reason. And he would often, with many tears, express his thankfulness that lie had no child, saying, ' How could I have borne to see their elegant minds mangled with madness ! ' When he looked for the last time on the dead body of his son, he said, ' I

have now done with the world.' His last publication was An Account of the Life, Character, and Writings of James Hay Beattie. His spirits from this period were never restored, and his health continued gra- dually to decline, till, in 1799, he was struck with palsy ; and, after being reduced to a state of permanent insensibility, this excellent man, all of whose labors tended to enlighten and be- nefit mankind, expired in June, 1803.

BEAU', ") From the Fr. beau, good, gay,

BEAL'ISH, >fine. The plural beaux is now

BKAL'SHIP.) Anglicised. A beau is a man of

dress, whose great care is to deck his person.

\ uLarly employed to designate a lover, who of

coui'sc must !,e a smart fellow. A beau was the

dandy of the last a"-;1, as a dandy is the fop of the

present.

\~hatv.ill not bcmi.c attempt to please the fair.

Dryden.

Tin' water nymphs are too unkind To A ill'roy ; are tin- land nymphs so?

-Ami iiy they all, at. once combined To shame a general, and a bean? Prior.

You will liecomc the delight of nine ladies in ten, and the envy of ninety-nine beaux in a hundred.

Swift.

A youth mure glitt'ring than a birth-night beau, That even in slumber caus'd her cheek to glow.

!'□□)><□□□ . Rape of the Lock. With varying vanities from ev'ry part, They shift the moving toy-shop of their heart, Where wigs with wigs, with sword-knots sword-knots

strivs ,

IH'IIIU- banish brni/.f, and coaches coaches drive. This erring mortals

l.viiv i;,a> call, Oh blind to truth! the sylphs contrive it all. Id.

Just at that time of life, vihe.i man by rule, The fop laid down, takes up the. graver fool, !>'<□□□ starti .1 up a fop, and load of show l.ook'd !;'.. : another Hercules turn'd beau.

Churchill.

Hi \r (Charles K;), a learned French author, burn at I 'a; is m 1701. lit.- became professor in the Kmal ColK;_!v, and sinetary of the Academy (it Insc; i jitxms. \ □□□ wrote a l.iˆtcrv ol the Lower Ki!i|);re, in -J-J \ii!s. \iiidi is ;aiic:i esteemed; also Opera I.a;in;e, published at 1'aris five years a'.'t'-T iii> death, in ;>, M.!S. 1'Jmo. lie died at I'aris in 177:'.

l!i u □□□!□□□!! I ev\ is le), brother of Charles, was als'> a n, an of considerable leaining. lie was born a! i'ariv in 17'JI. and became professor of ihBtonc in t1 e □□□:□□□-..ius, and mem-

ber of the academy of inscriptions. In 1746 he published an edition of Homer in Greek and Latin, 2 vols: and in 1750, the Orations or Cicero, 3 vols. : also a Discourse on the Poverty of the Learned. He died in 1766.

BEAUBASSIN, a bay in the straits of Magel- lan, on the coast of Terra del Fuego, so named by Bougainville. According to -his account, there is good anchorage in it from forty to twelve fathoms; the bottom of sand, small gravel, and shells. Long. 71□□ 13′ W., lat. 54□□ 22′ S.

BEAUCAIRE, a town of France, in the department of the Card and ci-devant province of Languedoc, on the Rhone, opposite to Taras- con, with which it has a communication by a bridge of boats. The fair of the Magdalen, which is held July 22, partly in the town, and partly under tents in an adjacent valley, for seven days, is one of the most famous in Europe, though of late it has declined. Beaucaire is ten miles east of Nismes. The canal of Aigues Mortes now extends to this town, where it communicates with the Rhone. On the Rhone, opposite Tarascon, are the picturesque ruins of an old castle. Its population is stated to be 8500. Long. 4□□ 39′ E., lat. 43□□ 50′ N.

BEAUCE, one of the former provinces of France, famous for its fertility in grain. It was situated between Perche, the Isle of France, the Blasois, and the Orleanais, Chartnes was its capi- tal. Beauce now forms a part of the department of the Eure and Loir.

BEAUCLERC, PORT, a good harbour in an island in the North Pacific, on the west coast of North America. Long. 226□□ 23′ E., lat. 56□□ 17′ N.

BEAUCLERK (Tophara), a gentleman of whom Dr. Johnson said, referring to his conver- sational power and facility of expression, that his talents were those which he had felt himself more disposed to envy than those of any whom he had known, lie was the son of lord Sidney Beau- clerk, and was born in December 1739. In 1768 he married lady Diana Spencer, daughter of the duke of Marlborough, whose previous marriage with viscount Bolingbroke had two days before beep dissolved by act of parliament. Mr. Beauclerk died at his house in Great Rus- sell Street, Bloomsbury, March 11, 1780, leaving by his wife a son 'and two daughters, and a very valuable library. Lady Diana Beauclerk long survived him, and died in August 1808, at the age of seventy-four. She was a lady distin- guished for her taste and skill in the arts.

BEA'VER. Sax. befer, Dut. bever, Germ. biber, Fr. bievre, l&t.Jlba. An animal, otherwise named the castor, amphibious, and remarkable for his art in building his habitation ; of which many wonderful accounts are delivered by tra- vellers. His skin is very valuable on account of the fur. Of this fur, hats of the best quality are manufactured, and therefore called beavers.

Highc on hors he sat, And on his hoi a Flaundrish bever hat.

Chaucer

Then unto him all monstrous beasts resorted, T5red of two kindes ; as griffons, minotaurs, Crocodiles, dragons beavers, and Centaures.

Spenser. Mother Hitbberd's Tale.

Ha ! you felt the wool of beaver ? Or swans' down ever ? Or have smelt o' the bad o' the briar, Or the nard in the fire, Or have tasted the bag of the bee ; Oh, so white ! Oh, so soft ! Oh so sweet is she !

Ben Jonsov.

They placed this invention upon the Leaver, for the sagacity and wisdom of that animal ; indeed from its artifice in building. Browne's Vulgar Krrours.

You see a smart rhetorician turning his hat, mould- ing it into different cocks, examining the lining and the button during his harangue : a deaf

man would think he was cheapening a beaver, when he is talking of the fate of a nation. Addition.

The broker here his spacious beaver wears,

Upon his brow sit jealousies and cares. Gay.

BEAVER, 1 From baviere, French ; baviere, BEAVERED.) says Cotgrave, is the bib, mocket, or moeketer, to put before the bosom of a slaver- ing child ; so that baviere or beaver, is, accord- ing to the Ency. Met., that part of the helmet which lets down to enable the wearer to drink, and which receives the drops or dribblings ; by Shakspeare and others, however, as the editor admits, it is quite oppositely applied.

His dreadful hideous head, Close couched on the beaver, seem'd to throw From naming mouth bright sparkles fiery red.

Spenser.

Big Mars seems bankrupt in their beggar'd host, And faintly through a rusty beaver peeps. Shakspeare. I saw young Harry, ??? with his beaver on, His cuisses on his thighs, gallantly arm'd, ??? Rise from the ground like feather'd Mercury, And vaulted with such ease into his seat, As if an angel dropp'd down from the clouds, To turn and wind a fiery Pegasus, And witch the world with noble horsemanship. Id. He was slain upon a course at tilt, the splinters of his staff going in at his beaver. Bacon.

His be.aver'd brow a birchen garland bears, .Dropping with infant's blood, and mother's tears.

Pope.

BEAVER, in zoology. See CASTOR.

BEAVER SKINS are a prodigious article of trade, being the foundation of the hat manufac- tory. In 1763 were sold, in a single sale of the Hudson's Bay Company, 54,670 skins. They vary in their colors ; the finest are black, but the general color is a chestnut brown, more or less dark: some have been found, but very rarely, white. They are distinguished by the names of coat beaver, which is what has been worn as coverlets by the Indians : parchment beaver, because the lower side resembles it ; and stage beaver, which is the worst, and is that which the Indians kill out of season, on their stages or journeys. Besides hats and furs, in which the beaver's hair is commonly used, they attempted in France, in 1699, to make cloths, flannels, stockings, &c. partly of beaver's hair, and partly of Segovia wool. This manufactory, which was' set up at Paris, in St Anthony's suburbs, suc-

ceeded at first pretty well ; and, according to the genius of the French, the novelty of the thing brought into some repute the stuffs, stockings, gloves, and cloth, made of beaver's hair. But they were found of very bad wear, and the

colors quickly faded : when they had been wet, they became dry and hard, like felt. When the hair has been cut off from the skins, to be used in the manufacture of hats, the skins are em- ployed by trunk-makers, to cover trunks and boxes; by shoe-makers; and by turners, to make sieves, &c: Merchants distinguish beaver skins into,

1. BEAVER, DRY, which is sometimes called lean beaver, and which comes from the summer hunting at the time when these animals lose part of their hair. Though this is inferior to the new beaver, yet it may also be employed in furs ; but it is chiefly used in the manufacture of hats. The French call it summer castor or beaver.

2. BEAVER, FAT, is that which has contracted a certain gross and oily humor, from the per- spiration which exhales from the bodies of the savages, who wear it For some time. Though this is a better kind than the dry beaver, yet it is used only in the making hats.

3. BEAVER, NEW, or WHITE BEAVER, also called Muscovy beaver, because it is commonly kept to be sent into Russia, is that which the savages catch in their winter hunting. It is the best, and the most proper for making fine furs, because it has lost none of its hair by shedding.

BEAVER CREEK, a river of North America, which falls into lake Erie at its east end, about seven miles south-east from Fort Erie. 2. A river of North America, which falls into the Alle- gany. Twenty-eight miles north-west from Pitts- burg. 3. A river of Kentucky, which runs into the Cumberland. 4. A river of Georgia, which runs into the Tennessee.

BEAVER ISLANDS, are a remarkable chain of small islands in lake Michigan, extending about thirty miles south-west. They appear beautiful, but the soil is barren.

BEAVER KILL, a river of North America, which falls into the Popachton branch of the Delaware.

BEAVER LAKE, in North America, lies in about 52►► 45′ N. lat., and 101►► 30′ W. long. .

BEAVER RIVER, so called from the multitude of beavers which frequent its banks, a river of North America, which rises on the eastern side of the rocky mountains, and falls into the Yellow- stone from the north.

Also a river of North America, which rises in the ridge of mountains that divides the waters which discharge themselves into Hudson's bay, from those which flow towards the Northern Ocean. It falls into Lake la Crosse, in about 56►► N. lat. and 108►► W. long.

BEAVER'S TOWN, a town of the United States of America, in the western territory, built in 1764. Eighty-five miles north-west of Pittsburg.

BEAUFORT a sea-port of the United States, in Carteret, North Carolina county, North Ame- rica. Fifty-five miles south by east of Newburn. Long. 77►► W., lat. 34►► 47′ N.

BEAUFORT, a town of the United States, in South Carolina, situated on the island of Port Royal, at the mouth of Coosawhatchie river It has an excellent harbour, and is seventy-three miles from Charlestown. Long. 80►► 55′ W., lat. 32►► 26′ N.

BEAUFORT EN VALLEE, a town of France, in

trie department of the Maine and I/)ire, late pro- vince of Anjou, with a castle. It contains two parishes, and formerly had a convent of Uecolets. Beaufort gives the title of a Duke in England] to the noble family of Somerset, who are lineally descended from John of Gaunt, duke of Lancas- ter, whose duchess resided here. It contains 800 houses, COOO inhabitants, and carries on an active trade in grain, wine, and hemp, with manufactures of linen and woollen stuffs, and hats. The village of Beaufort en Franchise, or Beaufort hors la Ville, is separated from this town by an arm of the river Coesnon. Fifteen miles east of Angers, and thirty-eight west of Tours.

BEAUFORT DISTRICT, a county of South Caro- lina, which lies on the sea-coast, between Com- bahee and Savannah rivers.

BEAUFORT (Henry), brother of Henry IV. king of England, was made fiftkep of Lincoln, .vhence he was translated to Winchester. He was also nominated chancellor of the kingdom, and sent ambassador to France. In 1426 he received a cardinal's hat, and was appointed legate in Germany. In 1431 he crowned Henry V I . in the great church of Paris. He died at Winchester in 1447. lie was a haughty, iarbxi- lent prelate, and Shakspeare is considered as giving a true portrait of him, when he describes

his last scene.

!>r \rrou r (Margaret), the foundress of Christ's ;md St. John's colleges in Cambridge; the only i!;u; '.liter and heir of John 'Heaufort, duke of Somerset, and of Margaret Bcauchamp, was born in 1111. She married in 14.",(> Edmund, earl of ilichmond, bv whom she had king Henry VII. i;iil died in l.')09, after having had two other husbands, namely, Sir Henry Stafford, and Thomas, lord Stanley, earl of Derby. By her marriage, according to bishop Fisher, with the earl of Ilichmond, and by her birth, she was allied to thirty kings and querns, within the fourth

Br.vri OUT (Lewis de), a celebrated writer of the eighteenth century. tie distinguished him- self in the literarv worll by several valuable v.orks, and was cho□□en fellow of the Royal Society

of_ London. He wrote the History of Germani- cus; Dissertation upon the Uncertainty of the five first Ages of the Roman Republic; History of the Roman Republic, or Plan of the Ancient Government of Rome. He died at Maestricht in

1795.

BEAUFORTIA, in botany, a genus of plants of the class polyadelphia, and order icosandria. Its generic characters are five groups of STAM. opposite to the petals: ANTHER, inserted into the base; bifid at the apex, lobes deciduous: CAPS. trilocular one-seeded, connate, included in the thickened tube of the calyx adnate at the base. It contains two species, natives of New Holland.

BEAUFRONT, a small town of Northumber- land, on the Tyne.

BEAUGENCY, a town of France, in the de- partment of the Loiret, and arrondissement of Orleans, seated on the Loire. Long. 1□□ 46′ E., lat. 47□□ 48′ N. ' It had formerly the title of county, has 4900 inhabitants, and is the head of a canton. It has a considerable trade in wine and brandy; a few cloth stuffs are also manufac- tured, and there are several tanneries. Over the Loire is a stone bridge. Fifteen miles south-west of Orleans, and eighteen north-east of Blois. . BEAUHARNOIS (Alexander de), a French nobleman, who perished during the revolution, and who was the first husband of the late em- press Josephine of France. He was born at Martinique, and going early in life to Paris, was elected deputy of Blois in the Constituent As- sembly, in which he joined the popular party. He proposed equality of punishments for all classes of citizens, and their eligibility to all offices. After the attempted flight of Louis XVI. Beauharnois was appointed adjutant-general to Luckner, general-in-chief of the army of

the Mo- selle, in which post he gave many proofs both of his courage and humanity. He was offered the place of minister of war, which he refused. Five days previous to the fall of Robespierre, he was condemned by the revolutionary tribunal, and perished on the scaffold, July 23d, 1794.

BEAUIIARNOIS (Eugene de), only son of the preceding, and viceroy of Italy under Napoleon, was intimately connected throughout life with his father-in-law. He is said to have governed Italy with great judgment and moderation, so as to conciliate the respect and esteem of the inhabi- tants in general. In the Russian campaign he commanded the Italian troops of the grand army. Napoleon's downfall in 1814 terminated Beauhar- nois's prosperity. In January, 1806, he married the princess Augusta Amelia, eldest daughter of the king of Bavaria, to whose court at Munich he retired on the restoration of Louis XVIII. and died there in 1824.

BEAULIEU, a village of Hampshire, four miles south-west of Southampton, in which are the remains of a Cistercian abbey, founded by king John in 1204. Its walls afforded an asy- lum to Margaret, the queen of Henry VI. after the battle of Barnet. The celebrated Perkiii Warbeck was protected here in later times; when their sanctity was so far respected, that though surrounded by an armed force, he was not seized, but voluntarily surrendered himself.

BEAULIEU, a small town of France, on tha

right bank of the Indre, in the government of Touraine. It had formerly the title of barony ; since the revolution it has been included in the department of Indre and Loire. It has 1500 inhabitants.

BEAUTY EU (Sebastian de Pontault de), a cele- brated French engineer, and major-general under Louis XIV. He published plans of all the battles and sieges of his master, to which he added his- torical subjects in perspective. He died in 1674. BEAUMARCHAIS (Hetet Augustin Caron de), an ingenious French artist and dramatic writer, was born at Paris in 1732. His father was a clock-maker, and early in life he applied himself with great diligence to that occupation. He invented a new escapement, the honor of which was contested by another artist, but the Academy of Sciences determined it in favor of young Beaumarchais. At the commencement of the revolution he retired to Holland, from whence he came to England, and was proscribed by the convention, yet he ventured to

return to his country, where he died in 1799. See ANTOI- NETTE.

BEAUMARIS, a borough, market, fair, and assizes town, in the hundred of Tyndaethwy, and county of Anglesea, situated on a level tract at the foot of Baron hill, and at the entrance of the Menai straits. It is 243 miles from Lon- don, holds markets on Wednesdays and Satur- days, fairs four times in the year, and contains a population amounting to 2205 inhabitants. The high street is handsome, open, and adorned with well built houses, the back streets remark- ably neat, and the villas on the green and along the shore graceful in design, and enjoy the pros- pect of an unrivalled landscape. The church, dedicated to St. Mary, is a spacious and elegant structure : the town hall affords accommodation to the members of the corporation on public occasions, and includes an elegant suite of assembly rooms. The county court, jail, custom house are on a scale proportioned to the ne- cessities of the place. The great facility 9f bathing afforded by a gently shelving strand, and the attraction of the majestic scenery encom- passing the bay, have occasioned a great influx of visiters to this remote and interesting little town. Public baths, reading and billiard rooms have been established here ; a noble inn erected by the principal proprietor, and a regular in- tercourse preserved with Liverpool and Chester by steam-boats. David Hughes, a native of Beaumaris, founded a free school, here A. D. 1600, and an almshouse for -six poor men, which number was augmented to ten, by the late and last Lord Bulkeley. The corporation consists of a mayor, recorder, two bailiffs, &c., and the borough is contributing with others in sending one member to parliament. Here the great and quarter sessions are held, and, although there is little trade, yet, owing to the secure asylum adjacent, called " Friar's road," vessels put in here both on the inward and outward passages ; many good sloops also belong to the port, and ships are frequently cleaned and refitted here on the beach. The character of the Beaumaris roadstead is not deteriorated by the melancholy loss of the Rothsay steamer, with 120 souls on

board, this catastrophe being wholly attributable- to the ill-conduct of the unfortunate persons who had charge of her. This place was the ancient Bonovium, a name exchanged for the Norman compound Beau-maris, or tke beautiful marsh, by King Edward I., the founder of the noble castle, which still constitutes one of the most interesting features in the beautiful scenery of this vicinity. The ruins are extensive, in good preservation, and the new entrance gate forms the termination of the principal street. This was a regular garrison until the reign of Henry VII. In 1642 it was again garrisoned and held by Thomas, subsequently, Lord Bulkeley, for Ring Charles, and surrendered^! last to General Mytton, having obtained con- ditions the most honourable. In the immedi- ate neighbourhood are Friars, the seat of Lady Williams, Baron Hill, the noble mansion of Sir R. B. Williams Bulkeley, bart., governor of the castle. In one of the shrubbery

walks of this elegant demesne is preserved an ancient stone coffin, brought thither from Friars, and sup- posed to have contained the mortal remains of Joan, daughter of King John, and consort of Llewellyn, Prince of Wales. The last Lord Bulkeley was a munificent benefactor of Beauma- ris, and his memory is cherished there with much fondness. To him are due the improvements of the town, augmentation of its charitable insti- tutions, new line of road, four miles in length, from the town to the Menai bridge, and many other works dictated by benevolence, and exe- cuted with wisdom. One ferry establishes a communication with Aber, at low water, and Garth Ferry with the city of Bangor, at all times of tide.

BEAUMELLE (Laurence), a French author, born at Vallerangue, in Lower Languedoc, in 1727. He was a man of considerable abilities, and went to Denmark, where he settled for some time as professor of belles lettres. He wrote a Defence of the Spirit of Laws ; Letters to Vol- taire ; Thoughts of Seneca ; a Commentary upon the Henriade; a Life of Mad. Maintenon, &c., but was twice confined in the Bastile for libels and satires. The king, however, appointed him his librarian in 1772. He died at Paris in 1773.
BEAUMONT (Francis), a celebrated dramatic writer, who flourished in the reign of James I., was descended,, from an ancient family of his name at Grace-Dien, in Leicestershire, where he was born about 1^*5k or 1586, in the reign of queen Elixabeth. Out of fifty-three plays, which are collected together aˆlfce joint labours of Beaumount and Fletcher, (for fcn account of their celebrated joint works, see FLETCHER,) Mr. Beaumont was concerned in the greater part, yet he did not live to complete his thirtieth year, death summoning him away in the begin- ning of March, 1615. lie was interred in the entrance of St. Benedict's chapel, Westminster, abbey.

BEAUMONT (Sir John), the elder brother of Francis the poet, was born in 1582, and edu- cated at Oxford, whence he removed to one of the inns of court. In 1626 he had the dig- nity of a baronet conferred oh him by king Charles I. He wrote, The crown of Thorns, a

poem, in eight books; Rosworth Field, and other poems; Translations from the Latin Poets ; and several poems on religious and po litical subjects: as, on the Festivals; on the Blessed Trinity ; a Dialogue between the World, ;>. Pilgrim, and Virtue ; Of the miserable State of Man; Of Sickness, &c. He died in 1628. His poetic genius was celebrated by Ben Jon- son and Michael Drayton.

BEAUMONT (Mad. le Prince de), a literary lady, a native of Rouen, in Normandy, who kept a boarding school for young ladies at London, and afterwards at Annecy, in Savoy, where she died in 1780. Her publications are, Magazin des Enfans ; Magazin des Adolescens ; Magazin des Jeunes Dames ; Nouveau Magazin Anglois ; Lettres de Madame du Montier ; and The New Clarissa.

BEAUMONT (Elie d'), a French advocate, born at Carentan in 1732. He distinguished himself by his interesting memoir in favor of the unfor- tunate family of Galas, the effect of which upon the nation was very great. Besides this, he wrote several other pieces of considerable merit. He died in 1785. The much admired novel, entitled, Letters of the Marquis de Roselle, was written by his wife, who died in 1783.

BEAUMONT DE LOMAGNE, a town of France, in Gascony, with 3700 inhabitants ; the head of a canton, situated in the department of the Tarn and Garonne. Here are manufactures of coarse cloths, hats, and leather. It stands on the small river Ghnone, twenty-eight miles north-west of Toulouse.

BEAUMONT LE VICOMTE, a town of France, in the province of Maine, and department of the Sarthe. It contains 2400 inhabitants, with ma- nufactures of woollen stuffs, and lies on the river Sarthc, fifteen miles north of Le Mans, and fif- teen south of Alencon.

BEAUMONT sun OJSE, a small town of France, with 2150 inhabitants. It is situated in the de- partment of the Seine and Oise, on the river Oise, twenty miles north of Paris.

BEAUMONT suit VINGEANNE, a town of France, in Burgundy, department of the Cote d'Or, ten miles west of Gray, and thirteen north-east of Dijon.

BKAUNF,, or BEAU i. NE, a town of France, in Burgundy, included since the revolution in the department of the (,'ote d'Or; the head of an arrondissement of nine cantons. It is tolerably v, (II fortified, and has a castle, with five suburbs. The only public establishment deserving men- tion is the hospital, founded in 1443, by the chancellor Hollin. In former times it was the third town in Burgundy, the seat of a gover- nor, and other functionaries, and the capi- tal of the district called from it the Beaunois. The town is particularly celebrated for its wines, and lies in an agreeable country, on the right bank of the Bouzcoise, not far from the Saone. Twenty miles S.S.W. of Dijon, and tvventy- thn.'e north-east of Autun. Inhabitants about

10/200.

BEA UN r, (James de), baron of Samblancai, an unfortunate financier under Francis I. \Vhjle that monarch was contending about the Milanese, 1iu;mne had settled mutters for sending 300,000

crowns to Lautrec, the commander, for paying die troops ; but the queen mother demanded the money for herself, threatening to ruin the super-intendant if he did not satisfy her demand, and thus obtained it. In consequence of the army not receiving the promised supply, they failed in their design, and laid the blame upon Samblan- cai, against whom they complained to the king. The baron endeavoured to justify himself, by laying before the king the real cause ; but the queen mother bribed his secretary to deliver to her the receipts she had granted to him, by which means he was deprived of the only evidence for substantiating his innocence ; he was accordingly accused of having made use of the money him- self, and was executed in 1527. He met his fate with the utmost intrepidity ; and his courage is commemorated in a beautiful epigram by the poet Marot.

*BEAU-PLEADER, or BEW-PLEADER, a writ on the statute of Marlbridge, whereby it is pro- vided that no fine shall be taken of any man in any court for fair pleading, i. e. for not pleading aptly, and to the purpose. **

BEAURAIN (John de), geographer to Lewis XV. was born at Aix in 1697. Besides con- structing a number of charts, he published a to- pographical and military description of the campaigns of Luxemburg, from 1690 to 1694. three volumes, folio. He died in 1771.

BEAUREGARD L'EVEQUE, a town of France, in the department of the Puy-de-Dome, has an elegant castle, which, before the revolu- tion, belonged to the bishop of Clermont. The memory of the celebrated Masillon is still che- rished here by the inhabitants. Beauregard is not far from the Allier. Nine miles east of Clermont-Ferrand .

BEAURIEU (Gaspard-Guillard de),an inge- nious French philosopher, born in the county of Artois in 1727. His most celebrated work was the Pupil of Nature, two volumes. He fell a sacrifice to the revolutionary storms, being left to perish in an hospital in 1795.

BEAUSOBRE (Isaac de), a very learned French Protestant writer, was born at Niort in 1659. He was forced into Holland to avoid the execution of a sentence, which condemned him to make the amende honorable, for having bro- ken the royal signet, which was put upon the door of a church of the reformed, to prevent the public profession of their religion. lie went to Berlin in 1694; was made chaplain to the king of Prussia, and counsellor

of the royal consis- tory. He died in 1738, aged seventy-nine, after having published, 1. Defense de la Doctrine des Reformes. 2. A Translation of the New Testament and Notes, jointly with M. Lcnfant. 3. Disser- tation sur les Adamites de Boheme. 4. Histoire Critique de Manichees, et du Manicheisme, two vols. quarto. 5. Several dissertations in the Bibliotheque Britannique, &c. M. Beausobre had strong sense, with profound erudition ; he preached as he wrote, with warmth and spirit.

BEAUSOBRE (Lewis), counsellor to the king of Prussia, was born at Berlin in 1730. He wrote Philosophical Dissertations on the Nature of Fire. Le Pyrrhonisme du Sage; and Les Songes d' Epi- cure. He died in 1783.

BEAUTY.

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Beaute, French ; from the ancient Latin, benus, i. e. bonus; fair; good; lovely. It is applied to external objects ; to what-) ever impaits pleasure 'and comes under the cognizance of the senses ; there is also an ideal world of beauty-; the various qualities of the

*BEAUTY, r. & n.^*

BEAUTE'OUS, BEAUTE'OUSLY, BEAUTEOUS'NESS, BEAUTI'FIER, BEATJTI'FUL, BEAUTI'FULLY, BEAUTIFUL'NESS, BEAUTI'FY, BEAUTJFY'ING, BEAUTI'LESS,

BEAUTY'WARNINO, J human mind and cha- racter, and the productions of the intellect which have a relation to taste ; beauty of scenery ; beauty of person; beauty of description, of thoughts, of words, of actions. But, for to spekin of her eyin clere ! Lo ! truily thei writtin that hire seien, That Paradis stode formed in hire eien ; And with hire riche beaute evirmore Strove love in hire aie which of hem was more.

Chaucer. Troilus and Creseide. Faire Marian, the muses onely darling ; Whose beautie shyneth as the morning cleare, With silver dew upon the roses pearling. Spenser. 'Tis beauty truly blent, whose red and white Nature's own sweet and cunning hand laid on.

Shakspeare.

Beauty and grace are like those beams and shinines that come from the glorious and divine sun, which are diverse, as they proceed from the diverse objects, to please and affect our several senses ; ' as the spe- cies of beauty are taken at our eyes, ears, or con- ceived in our inner soul,' as Plato disputes at large in his Dialogue de Pulchro, Phaedos, Hyppias ; and, after

many sophistical errors are confuted, concludes that beauty is a grace in all things, delighting the eyes, ears, and soul itself ; so that, as Valesius infers, hence whatsoever pleaseth our ears, eyes, and soul, must needs be beautifull, fair, and delightsome to us. Burton. Anat. Mel.

His hair (which the young men of Greece used to wear very long) was stirred up and down with the wind, which seemed to haye a sport to play with it as the sea had to kiss his feet; himself full of admirable beauty, set forth by the strangeness both of his seat and gesture ; for holding his head up full of unmoved majesty, he held a sword aloft with his, fair arm, which often he waved about his crown, as though he would threaten the world in that extremity. Sir Philip Sydney. Arcadia. A bed of lilies flow'r upon her cheek, And in the midst was set a circling rose ; Whose sweet aspect would force Narcissus seek New liveries, and fresher colours choose, To deck his beauteous head in snowy tire ; But all in vain ; for who can hope t' aspire To such a fair, which none attain, but all admire ?

Fletcher's Purple Island. Ask me no more where Jove bestows, When June is past, the fading rose ; For in your beauties orient deep, These flowers, as in their causes, sleep.

T. Carew.

But likeness soon together drew, What she did separate lay, Of which one perfect beauty grew, And that was Celia. Marvell.

O ! she has beauty might ensnare A conqueror's soul, and make him leave his crown At random, to be scuffled for by slaves.

Otway. Orphan.

Voi. in

Like blossom'd trees o'erturn'd by vernal storms, i Lovely in death, the beauteous ruin lay.

Young. Night Thoughts.

The lengthened night elaps'd, the morning shines Serene, in all her dewy beauty bright, Unfolding fair the last autumnal day.

Thomson. Seasons.

As lamps burn silent, with unconscious light, So modest ease in beauty shines most bright.

A. Hill.

Perhaps the most complete assemblage of beautiful objects that can anywhere be found, is presented by a rich natural landscape, where there is sufficient variety of objects ; fields in verdure, scattered trees and flowers, running water, and animals grazing.

Blair't Lectures.

A lady seldom listens with attention to any praise but that of her beauty. Johnson. Rambler.

The silver light, which hallowing tree and tower, Sheds beauty and deep softness o'er the whole, Breathes also to the heart, and o'er it throws A loving languor, which is not repose. Byron,

Her cheek of youth was beautiful, Till withering sorrow blanched the bright rose there. Maturin. Bertram ,

BEAUTY. Locke defines beauty, as, ' a certain composition of color and figure, causing delight to the beholder.' Mr. Burke, confining his defi- nition to the merely sensible qualities of things, states beauty to be ' that quality, or those qua- lities, in bodies by which they cause love, or some, passion similar to it.' Others define it, more generally, as a term whereby we express a certain relation of some object, either to an agreeable sensation, or to an idea of approbation. When, therefore, we say a thing is beautiful, we either mean that we perceive something that we ap- prove, or something that gives us pleasure : whence it appears, that the idea annexed to the word beauty is double ; which renders the word equivocal, and this is the source of most of the disputes on the subject of beauty.

Mr. Hazlett, in an ingenious dissertation on the subject, in the Supplement to the Encyclo- paedia Britannica, speaks of it as that property in objects by which they are recommended to the power or faculty of taste ००० the reverse of ugliness ००० the primary or most general object of love 01 admiration.

We do not regard works of science as alto- gether suited for dissertations on matters of taste. We find our space and our attention occupied with the more tangible and better defined objects of human knowledge. But we shall endeavour to collect the most respectable opinions on this disputed subject.

Beauty, says Dr. Reid, (Essay on the Intel- lectual Powers of Man, ch. iv.) is found in things so various and so very different in nature, that it is difficult to say wherein it consists, or what can be common to all the objects in which it is found. Of the objects of sense, we find beauty in color,

in sound, in form, in motion. There are beauties of speech, and beauties of thought ; beauties in the arts, and in the sciences ; beauties in actions, in affections, and in characters. In things so different, and so unlike, is there any quality, the same in all, which we may call by the name o. beauty ? Why then should things so different be called by the same name ? They please, and are

denominated beautiful, not in virtue of any one quality common to them all, but by means of several different principles in human nature. The agreeable emotion excited by them, and called beauty, is produced by different causes. However, though there be nothing common in the tilings themselves, yet the kinds of beauty, which seem to be as various as the objects to which it is ascribed, must have some common relation to us, or to something else, which leads us to give them the same name. All the objects we call beautiful, agree in two things, which seem to concur in our sense of beauty. First, when they are perceived, or even imagined, they produce a certain agreeable emotion or feeling in the mind ; and, secondly, this agreeable emotion is accompanied with an opinion or belief of their having some perfection or excellence belonging to them. Whether the pleasure we feel in con- templating beautiful objects may have any necessary connexion with the belief of their ex- cellence, or whether that pleasure be conjoined with this belief, merely by the good pleasure of our Maker, Dr. Reid does not determine. Beau- tiful objects excite an emotion of a soothing and enlivening kind, that sweetens the temper, allays angry passions, and promotes every benevolent affection, and disposes to other agreeable emo- tions, such as those of love, hope, and joy.

‘ There is nothing,’ says Ad;lison, ‘ that makes its way more directly to the soul than beauty, which iir.medialely diffuses a secret satisfaction and complacence through the imagination, and gives a finishing to any thing that is great and uncommon. The very first discovery of it strikes the mind with an inward joy, and spreads a cheerfulness and delight through all its faculties.’ This agreeable emotion, produced by beautiful objects, is accompanied with an opinion or judg- ment of some perfection or excellence of those objects, adapted by its nature for producing that emotion; and this, according to Dr. Reid, is a second ingredient in our sense of beauty. To assen, says this writer, that there is in reality no beauty in those objects, in which all men per- ceive beauty, is to attribute to man fallacious senses; and’ thus to think disrespectfully of the Author of our

being; who has diffused over all the \urks of nature a profusion of beauties, which are real, and not fanciful, and thousands of which our faculties are too dull to perceive. This author distinguishes our determinations with regard to the beauty of objects into two kinds, vi/. instinctive and rational. Jn the former case, objects slnke us at once, and appear beautiful at fust, sij.t, without any reflection, and without our being able to say \liy we call them beauti- ful, or b> ing able to specify any perfection which justifies our judgment. Whereas our rational judgment of beauty is grounded on some agree- able <|uabty of the object, which is distinctly con- ceived, and maybe specified. Beauty itself may be distinguished into original, and derived. It is natural and agree, ible to the strain of human sentiments and of human language, says Dr. Reid, that in many cases the beauty which ori- ginally and properly exists in the things signified, should be transferred to the siun ; that which is in the cause to the effect; that which is in the

end to the means ; and that which is in the agent to the instrument. E. G. The beauty of good breeding is not originally in the external beha- viour in which it consists; it is derived from the qualities of mind which it expresses ; and though there may be good breeding without the amiable qualities of mind, its beauty is still derived from what it naturally expresses. Good breeding is the picture ; these agreeable qualities are the ori- ginal; and it is the beauty of the original that is reflected to our senses by the picture.

Dr. Reid is of opinion, that beauty originally dwells in the moral and intellectual perfections of mind, and in its active powers, and that from this, as the fountain, all the beauty which we per- ceive in the visible world is derived. This was the opinion of the ancient philosophers ; and it has been adopted by lord Shaftesbury and Dr. Akenside among the moderns.

Mind, mind alone! bear witness earth and heav'n.

The living fountains in itself contains

Of beauteous and sublime. Here, hand in hand,

Sit paramount the graces. Here, enthron'd,

Celestial Venus, with divinest airs,

Invites the soul to never-failing joy.

AKENSIDE.

But neither mind, nor any one of its qualities or powers, is an immediate object of perception to man. These are perceived through the medium of material objects, on which their signatures are impressed. The signs of these

qualities are im- mediately perceived by the senses, and by them reflected to the understanding : and we are apt to attribute to the sign the beauty which is pro- perly and originally in the thing signified. Thus, the invisible Creator hath stamped on his works signatures of his divine wisdom, power, and be- nignity, which are visible to all men. The works of men in science, in the arts of taste, and in the mechanical arts, bear the signatures of those qua- lities of mind, which were employed in their production. Their external behaviour or con- duct in life expresses the good or bad qualities of their minds. In every species of animals we perceive by visible signs their instincts, appetites, affections, or sagacity ; and even in the inanimate world, there are many things analogous to the qualities of mind ; so that there is hardly any thing belonging to mind, which may not be re- presented by images taken from the objects of sense ; and, on the other hand, every object of sense is beautiful, by borrowing attire from at- tributes of the mind. Thus, the beauties of mind, though invisible in themselves, are per- ceived in the objects of sense, on which their beauty is impressed. Thus also, in those qua- lities of sensible objects to which we ascribe beauty, we discover in them some relation to mind, and- the greatest in those that are most beautiful. The qualities of inanimate matter, in which we perceive beauty, are sound, color, form, and motion : the first being an object of hearing ; and the other three of sight. These several qua- lities are particularly illustrated by Dr. Reid, with a view of evincing the beauty that respec- tively belongs to them. Of all the objects of sense, the most striking and attractive beauty is perceived in the human species, and particularly

in the fair sex. In the following well-known passage of Milton, this great poet derives the beauty of the first pair in paradise from those ex- pressions of moral and intellectual qualities, which appeared in their outward form and de- meanor.

Two of far nobler shape, erect and tall, Godlike erect ! with native honor clad, In naked majesty, seem'd lords of all, And worthy seem'd, for in their looks divine, The image of their glorious Maker, shone Truth, wis 'om, sanctitude severe, and pure : Severe, but in true filial freedom plac'd, Whence true authority in man ; though both Not equal, as their sex not equal seem'd ; For contemplation he, and valour form'd, For softness she, and sweet attractive grace.

And here we cannot forbear subjoining the ex- cellent reflections of Mr. Thomson, a late writer on the subject of beauty : ' If we should see a person employ himself with a sledge hammer to dash the enchanting form

of the Venus de Me- dicis to pieces, break her lovely limbs, and de- face her beauteous features, we should not hesi- tate a moment to pronounce him a savage barbarian, without taste, feeling, or sentiment; though his frenzy was employed only on a sense- less piece of stone : what then must we think of the diabolical savage, who exercises the worst of all cruelties (because the most lasting and affect- ing both to body and mind) on the most beauti- ful and amiable of all creatures on this side heaven? ††† made expressly for his happiness, so- lace, and delight ; ††† by first corrupting and be- traying her, and then basely abandoning her to perish with want, wretchedness, and misery.'

Dr. Blair (Lectures, vol. i. p. 101, &c.), in his enumeration of the separate principles of beauty, in each of those classes of objects, which most remarkably exhibit it, begins with color, as af- fording the simplest instance of beauty. With respect to this, he observes, that neither variety, nor uniformity, nor any other principle which he knows, can be assigned as the foundation of beauty ; and that it can be referred to no other cause but the structure of the eye, which deter- mines us to receive certain modifications of the "ays of light with more pleasure than others. As his organ varies in different persons, they have the ir different respective favorite colors. In some cases, he thinks it probable, that association of ideas has influence on the pleasure which we receire from color. Green, for instance, may appear more beautiful, by being connected in our ideas with rural prospects and scenes ; white with innocence ; blue, with the serenity of the sky. , Independently of such associations, those colors chosen for beauty are, generally, delicate, rather than glaring. Figure opens to us forms of beauty more complex and diversified. Under this head, regularity is first noticed as a source of beauty. Thus a circle, a square, a triangle, or a hexagon, please the eye by their regularity, as beautiful figures. But regularity is not the sole, or the chief foundation of beauty in figure. On the contrary, a certain graceful variety is found to be a much more powerful principle of beauty. Regularity, according to this author,

expresses beauty chiefly, if not solely, on account of its suggesting the idea of fitness, propriety, and use, which have always a greater connexion with orderly and proportioned forms, than with those which appear not constructed according to any certain rule. Nature, the most graceful artist, hath, in all her ornamental works, pur- sued variety with an apparent neglect of regula- rity. Mr. Hogarth, in his Analysis of Beauty, published about the year 1753, enumerates, as elements of beauty, fitness, variety, uniformity, simplicity, intricacy, and quantity ; and he ob- serves, that figures bounded by curve lines are, in general, more beautiful than those bounded by straight lines and angles. The beauty of figure principally depends, in his opinion, upon two lines which he has selected. One of them is the ' waving line,' somewhat in the form of the letter S : and this he calls

the ‘ line of beauty,’ which is found in shells, flowers, and such other ornamental works of nature, and is also common in the figures designed by painters and sculptors for the purpose of decoration. The other line, which he calls the ‘ line of grace,’ is the former waving curve, twisted round some solid body, and ex- hibited in twisted pillars and twisted horns, and in the curling worm of a common jack. Variety plainly appears, in the instances which he men- lions, to be so material a principle of beauty, that he defines the art of drawing pleasing forms to be the art of varying well ; and, according to him, the curve line, which is so much the favor- ite of painters, derives its chief advantage from its perpetual bending and variation from the stiff regularity of the straight line. Motion, says Dr. Blair, furnishes another source of beauty, distinct from figure ; being of itself pleas- ing, so that bodies in motion are, cseteris pari- bus, preferred to those at rest. But the quality of beautiful belongs to gentle motion, such as that of a bird gliding through the air, and that of a smooth running stream. In general, motion in a straight line is less beautiful than that in an undulating direction ; and motion upwards is also commonly more agreeable than motion downwards. The easy curling motion of flame and smoke is an object singularly pleasing, and exhibits an instance of Mr. Hogarth’s waving line of beauty. This artist observes, that, as all the common and necessary motions for the business of life, are performed in straight or plain lines, all the graceful and ornamental movements are made in waving lines-.

Dr. Beattie, in his Dissertations, Moral and Critical, has introduced, in his digression on beauty, some ingenious remarks on this subject. After observing that custom has a perpetual in- fluence in determining our notions of beauty, he proceeds to prove, that from associations founded on habit, many, or perhaps most of those pleas- ing emotions are derived, which accompany the perception of what in things visible is called beauty. With regard to the beauty or awkward- ness of motion, he observes, that the one will be found to please, and the other to displease, chiefly on account of certain disagreeable ideas suggested by the former, and of certain disagreeable ones associated with the latter. Motions, that imply ease, with such an arrangement and proportion

of parts in the moving object, as may give reason t2 expect its continuance without injury, are generally pleasing, at least in animals, especially when they betoken a sort of perfection suited to the nature of the animal. But

motions that betray infirmity, unwieldiness, imperfection, or the appearance of danger, cannot be called beau- tiful, because they convey unpleasing ideas. These observations are illustrated by a variety of apposite instances. Cicero (de Off. 1. i. sect. 36) blames every motion that alters the countenance, quickens the breath, or betrays any discompo- sure. Rousseau observes, that in running, a woman is destitute of that grace which attends her on other occasions. Perhaps, says Beattie, the jutting out of her elbows, the natural effect of her endeavouring, with lifted hands, to secure the most delicate part of the human frame, may give to her motion the appearance of timidity and constraint. Or, perhaps, she may fail in this exercise, merely because, according to our man- ners, she cannot be much accustomed to it.

It is not easy to convey, in so few words, so many charming ideas of beauty, in its several varieties of color, shape, attitude, and motion, as Gray has combined in the following image : ***

Slow melting strains their queen's approach declare ;

Where'er she turns the graces homage pay :

With arms sublime that float upon the air,

In gliding state she wins her easy way :

O'er INT warm cheek and rising bosom move

The bloom of young desire, and purple light of love.

Burke, in hi's Philosophical Inquiry into the Origin of our Ideas of the Sublime and Beau- tiful, excludes from the number of real causes of beauty, the proportion of parts, fitness, or that idea of utility which consists in a part's being well adapted to answer its end, and also perfec- tion; and he observes, p. 210, that beauty is, for the greater part, some quality in bodies, acting mechanically upon the human mind by the in- tervention of the senses. The qualities of beauty, as they are merely sensible qualities, which he enumerates, are the following : they should be comparatively small, smooth, various in the di- rection of their constituent parts; these parts should not lie angular, but melted, as it were, into each other; they should be of a delicate frame, without any remarkable appearance of strength; the eolors should be clear and bright, but not very strong and glaring; and any glaring color that is introduced should be diversified with others. Tluse are the seven properties upon which, according to this author, beauty

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1< ; properties that operate by nature, and ;ue L-ss liable to be altered by caprice, or confounded by a diversity of tastes, than any others. The physiognomy also, says Mr. Burke, lia-i a considerable share in beauty, especially in that of our m\n species. The manners give a certain determination to the countenance, which, bem_r observed to correspond pretty regularly with them, is capable of joining the effects of certain agreeable qualities of the mind to those of the body. So that to form a finished human bea<;ty, and to uive it its full influence, the face .mist be i:xp:e►►ive of such gentle and amiable anautit.s ;LM cunx'ipond with the softness, smooth

ness, and delicacy of the outward form. Fo►► Air. Burke's mode of illustrating and confirming his theory of beauty, the reader is referred to his work above cited.

Dr. Sayers, in his Disquisitions, Metaphy- sical and Literary, 8vo. in 1793, has given a new analysis of beauty, conducted on the principles which were applied by Dr. Priestley, in his Lec- tures on Oratory and Criticism, and by Mr. Ali- son, in his Essays on Taste, to the explanation of the intellectual pleasures, namely, the doc- trines of the Hartleyan school. His argument, summed up in a few words, is as follows: that individual of a class of objects is justly to be esteemed more beautiful than the rest, with the whole of which, or with its component parts, when properly understood, the greater number of the excellencies of its class are universally associated. The same may be asserted of any species of objects, when compared with any other species of its kind ; and that object may be justly esteemed a ' standard of beauty,' with the whole appearance, or with the component parts of which, when properly understood, all the excellencies of its kind are ' universally as- sociated.*

Mr. Alison's Essays, Mr. Knight's Analytical Enquiry, and Mr. D. Stewart's Dissertations on the Beautiful, and on Taste, in his Philosophical Essays, are each of them modern works of sterl- ing merit, and may be said to contain all the known truths of this subject.

Mr. Alison contends, that all beauty, or at least all the beauty of material objects, depends on the associations that may have connected them with the ordinary affections or emotions of our nature; and in this, which is the fundamental point of his theory, we conceive him to be no less clearly right, than he is convincing and judi- cious in the copious and beautiful illustration by which he .has sought to establish its truth. When he proceeds, however, to assert, that our sense of beauty consists not merely in the sug- gestion of ideas of emotion, but in the contem- plation of a connected series of such ideas, and indicates a state of mind in which the faculties, half active and half passive, are given up to a sort of reverie or

musing, in which they may wander, though among kindred impressions, fat enough from the immediate object of perception, we confess that he not only seems to us to ad- vance a very questionable proposition, but very essentially to endanger the evidence, as well as the consistency, of his general doctrine. In the long train of interesting meditations to which Mr. Alison refers, ००० in the delightful reveries in which he would make the sense of beauty consist, ००० it is obvious that we must soon lose sight of the external object which gave the first impulse to our thoughts ; and though we may afterwards reflect upon it, with increased interest and gratitude, as the parent of so many charm- ing images, it is impossible that the perception of its beauty can depend upon a long series of various and shifting emotions.

The work of Mr. Knight is more lively, va- rious, and discursive, than Mr. Alison's, but not so systematic or conclusive. It is the cleverer book of the two, but not the most philosophical

discussion of the Fubject. He agrees with Mr. Alison in holding the most important, and, in- deed, the only considerable part of beauty, to de- pend upon association, and has illustrated this opinion with a great variety of just and original observations. But he maintains that there is a beauty independent of association, prior to it, and more original and fundamental, the primi- tive and natural beauty of colors and sounds. Now this we look upon to be a heresy, and a heresy inconsistent with the very first principles of catholic philosophy. Language, it is be- lieved, affords no other example of so whimsical a combination of different objects under one ap- pellation, or of the confounding of a direct physical sensation with the suggestion of a so- cial and sympathetic moral feeling.

Mr. Stewart makes fewer positive assertions, and enters less into the matter of controversy. His Essay on the Beautiful is rather philological than metaphysical. The object of it is to show by what gradual and successive extensions of meaning, the word, though at first appropriated to denote the pleasing effect of colors alone, might naturally come to signify all the other pleasing things to which it is now applied. In this investigation he makes many admirable re- marks, and touches with the hand of a master upon many of the disputable parts of the ques- tion ; but he evades the particular point at issue between us and Mr. Knight, by stating, that it is quite immaterial to his purpose, whether the beauty of colors be supposed to depend on their organic effect on the eye, or on some association between them and other agreeable emotions, it being enough for his purpose that this was pro- bably the first sort of beauty that was observed, and that to which the name was at first exclu- sively applied. It is evident to us,

however, that he leans to the opinion of Mr. Knight, as to this beauty being truly sensual or organic. In observing, too, that beauty is not now the name of any one thing or quality, but of very many different qualities, ••• and that it is applied to them all, merely because they are often united in the same objects, or perceived at the same time and by the same organs, ••• it appears to us that he carries his philology a little too far, and dis- regards other principles of reasoning of far higher authority. To give the name of beauty, for example, to every thing that interests or pleases us through the channel of sight, includ- ing in this category the mere impulse of light that is pleasant to the organ, and the present- ment of objects, whose whole charm consists in awakening the memory of social emotions, seems to us to be confounding things together that must always be separate in our feelings, and giving a far greater importance to the mere identity of the organ of perception, than is war- ranted either by the ordinary language or ordi- nary experience of men. Upon the same principle, we should give this name of beautiful, and no other, to all acts of kindness or magna- nimity, and, indeed, to every interesting occur- rence which took place in our sight, or came to our knowledge by means of the eye : nay, as the ear is also allowed to be a channel for impres- sions of beauty, the same name should be given

to any interesting or pleasant thing that we hear, and good news read to us from the gazette should be denominated beautiful, just as much as a fine composition of music. These things, however, are never called beautiful, and are felt, indeed, to afford a gratification of quite a different na- ture.

BEAUTY IN THE FINE ARTS. Nothing here has been decided as to the nature and properties of abstract beauty itself, even if such a quality be acknowledged. If an Asiatic artist was to treat this subject, his principle, it is evident, would differ from that of a European. This must not, however, prevent us from studying some prin- ciples of beauty, as they are the foundation of the ornamental part of sculpture, painting, and architecture ; and govern the proportion of the human figure. Modern artists seem to have implicitly adopted Grecian ideas ; which circum- stance may account for the prevalence of the antique profile in modern pictures, which is cer- tainly a great inconsistency, when the subjects are chosen from any other than Grecian history ; there being one principle of beauty in the form of the Greeks, another in that of the Romans, and another in that of the modern Europeans, and yet they are all beautiful. Professor Cam- per, in his book upon the different forms of the human cranium, has endeavoured to trace this style of the straight or Grecian profile from a probable source. The projection of the mouth and depression of the forehead, with a flat nose, marks that kind of face which is the nearest allied to the brute creation ; there being but one degree between a dog, monkey, ape, ourang- outang, Calmuc, and negro. From the negro to the European countenance are many

degrees, which may be traced by an attentive study of the human species; and again, between the best modern faces and those of the antique, there are also many gradations of form and outline. Per- haps from the Greeks observing the resemblance between the lowest class of human countenances and those of monkeys, may be the reason why they conceived beauty to be as far as possible removed from all resemblance to them. As the lower part of the brutal face piojected, in such proportion they thought the same position of the human face should recede ; and as in the former there was a descent from the forehead to the nose, in the latter it should be perpendicular. As a small space between the eyes gives tho ap- pearance of an ape, they made the distance of man wide. As a great breadth of cranium at the eyes, ending above in a narrow forehead, and below in a pointed chin, marked the face of a savage; they gave a squareness of forehead and a breadth of face below, to express dignity of character. Hence, may be the origin of that ideal beauty, which has created so many schisms and feuds in art, and which nothing but a re- currence to nature can rectify. See IDEAL BEAUTY.

BEAUVAIS (Charles and William), two anti- quaries. William, born in 1698, was a member of the Literary Societies of Orleans, Cortona, &c.; he published a work on the Medals of the Roman Empire in 3 vols. 12mo. 1767, and died in 1773.

*Charles Nicholas was a native of Orleans, where he was born in 1745. He practised physic ***.it Montpelier, and is the author of some Essays on the History and Antiquities of his native city, a Topographical Description of Mount Olivet, and other tracts. His death took place in 1794.*

BF.AUVAIS (Vincent de), a friar of the Domi- nican order, was a native of the diocese of Beau – vais, in France. Louis IX. supplied him with the means of prosecuting his great work. It is a kind of Encyclopaedia, divided into four parts: the first entitled, Speculum Doctrinale, treats of the sciences in general, from grammar to theo- logy ; the second Speculum Historiale, contains a summary pf general history from the begin- ning of the world to the year 1254, of which there is a continuation by an anonymous author to 1494; the third part, or Speculum Naturale, relates to physics, or natural philosophy ; the fouith, Speculum Morale, is a treatise on vice and virtue. This last part was completed by another hand, Beauvais dying in 1224

BEAUVAIS, a city of France, the ancient Bel- lovacum, in the department of the Oise, and late province of the Isle of France, on the Therin. The cathedral is dedicated to St. Peter, and is much admired for its fine architecture, and the extra- ordinary elevation of the choir. It had formerly a groat number of relics, and a curious library. There are twelve other churches. The town was ineffectually besieged by the English in 1443; and l,y the duke of Burgundy in 1472, with an at my of 80,000 men. In this last siege the women visualised themselves by sallying forth against the besiegers, headed by Jeanne Laine, :md under a standard which was long after pre- served :u the church of t':.j Jacobins. There was, before the revolution, a procession on the 10th of July in memory of this exploit. Beau- vais \vas long the capital of Bcauvoisis, and t!'/,1 see of a bishop, who was the first of the three ecclesiastical counts and peers of France. At the coronation of the king, he carried the royal mantle. This bishopric was suppressed at the revolution. It is still a fortified town, though connnani' d by several heights, and con- tains about 12,o'00 inhabitants. It has several flourishing manufactures of linen and woollen cloths, calicos, serges, and tine tapestry. From its supposed impregnability, it has obtained the appellation "□□□' i..a I'uielle. Many eminent men have been horn here. It is about six leagues ficm 1'aris, in hit. 49□□ 2.V A'., and long. 2□□ 19′ E.

i: ..J:\1LI.IELIS (Francis de, duke de St. Aignan). ' s bom in 1007, and entered into the army. i. distinguished himself in several en- gau'eni:'i:t , ; 0,1 \h.eh account i.cuis XIV. raised him to i duk"doh,. lie was ;i;!roit in the di- trctien i ihe court festivals, and many of his verses are to be found in the works of Madame l)c-> 'ioulifVi -, of Scarron. \c. lie died in 1637.

..□□□i \ i vi 1.1 i rn- , Paul, duke de), eldest son of t'.ie above, was first uvutleman of the bed- chamber, m:ii> ";- < >f state, chief of the royal lounri! of finance, and governor of the duke of liur ;MU!-, t;r,.:i r of Louis XV lie died in 171 1 ,

probity of character; as well as for his success in the education of the duke of Burgundy which he shared with the celebrated Fenelon.

BEAUVILLIERS (Paul Hippolitus, duke de St. Aignan), son of the preceding, had the rank of lieutenant-general HI the army, the collar of the royal orders, and was a member of the French Academy. He was the author of Amusemens Litteraires, and a Memoir of the Transactions of the Academy of Inscriptions, on the cession made by Andrew Paleologus, of the empire of Constantinople and Trebizond, to Charles VIII. of France.

BEAUVOIR SUR MER, a maritime town of France in lae department of La Vendee, and late province of Poitou; twenty-three miles south-west of

Nantes. It lies near the sea-coast, opposite the Isie of Noirmoutier, and had for- merly the title of marquisate. It contains about 1 900 inhabitants, and trades in wood, wool, salt, cattle, and butter.

BEAU VOISIS, a ci-devant territory of France, formerly part of Picardy, and afterwards of the Isle of France. Beauvais was the capital.

BEAUZEE (Nicholas), a French author, born at Verdun in 1717. He became professor of grammar in the military school ; and wrote an Universal Grammar, or Exposition of the Elements of Languages, in two vols. 8vo. ; an Exposition of the Historical Proofs of Religion, and several other works. Having been elected member of the academy, he wrote the articles relating to grammar for the Encyclopaedia ; but though he was thus connected with infidels, he was himself a faithful churchman. He once asked Diderot how they came to elect him a member of the academy, being a Christian ? Diderot replied, ‘ Because we had not a gram- marian among us, and we considered you an honest man.’

BE’BATHE. Bathe, with the prefix be. See BATHE.

BEBELINGUEN, or BOBLINGEN, a town of Germany, in the duchy of Wirtemburg, seated on a lake from which proceeds the river Wurm, ten miles north-west of Stutgard.

BE’BLAST. Blast, with the prefix be. See BLAST.

BE’BLED, J Bled and blood, with the pre-

BF/BLOOD. } fix. See both.

BE’BLIND. See BLIND.

BE’BLISTER. Blister, with the prefix. See BLISTER.

BE’BLOT. Blot, and the prefix. See BLOT.

BE’BLUBBER. Blubber, with the prefix. See BLUBBER.

BEBRYCIA, in ancient geography, the name of Bithynia, so called from the Bebryces its in habitants ; who were afterwards driven out by two Thracian nations, the Bithyni and Thyni ; from whom, in process of time, the country took the name of Bithynia.

BEC, a town of France, in the department of the Lower Seine, and late province of Normandy, seated on a tongue of land, at the confluence of two rivers.

BECAH, or BEKAH, a Jewish coin, being half a. shekel. In Dr. Arbuthnot's table of re- ductions, the bekah amounts to 13-ˆrf. In Dr□□

Prideaux's computation to Is. Id. Every Is- raelite paid 100 bekahs a-head annually for the support of the temple.

BE'CALM, 3 Calm, and the prefix be.

BE'CALMING. $ See CALM. The prefix thus joined to give emphasis □□□, to add a syllable in the verse ; to give a ludicrous or endearing force to the term employed.

BECANCOUR, a river of Lower Canada, which rises to the south of St. Lawrence, and is afterwards increased by several tributary streams. After an easterly course of about forty-six miles, it diverges to the north-west for about twenty- one miles, and discharges itself into the St. Law- rence, seven miles below the town of Three Rivers.

BECASSINE, in zoology, a name given to the tringa minor, or sand-piper.

BECASSE, in zoology, a species of woodcock.

BE'CAUSE. Be and cause. Cause being ; there being cause ; because of his sickness ; i.e. his sickness is the cause. It formerly also ex- pressed the motive or end ; but is not now so used. It has in some sort the force of a prepo- sition. But because it is compounded of a noun, has of after it.

His squiers, which that stoden ther beside,

Excused him because of his sikenesse,

Which letted him to done his besinesse. Cliaucer.

God persecuteth us bycause we abase his holy Tes- tament, and bycause, when we knowe the truth, we folowe it not. Tyndall's Works.

Because thou hast, though thron'd in highest bliss, Equal to God, and equally enjoying Godlike fruition, quitted all to save A world from utter loss, and most been found, By merit, more than birthright, Son of Godj Found worthiest to be so, by being good, Far more than great or high ; because in thee Love hath abounded more than glory abounds, Therefore thy humiliation shall exalt With thee thy manhood also to this throne ; Here shalt thou sit incarnate, here shall reign Both God and Man, for both

of God and Man, Anointed universal king ; all power I give thee ; reign for ever, and assume Thy merits : under thee as head supreme Thrones, princedoms, pow'rs, dominions I reduce ; All knees to thee shall bow, of them that bide In heaven, or earth, or under earth, in hell. Milton. Why is our food so very sweet?

Because we earn before we eat.

Why are our wants so very few ?

Because we nature's calls pursue.

Whence our complacency of mind ?

Because we act our parts assign'd. Cotton.

BECCABUNGA, brooklime ; the trivial name of a species of veronica. See VERONICA.

BECCAFICO, in zoology, a small bird, scarely so large as the common linnet, and with a remarkably short body. Its head, neck, back, wings and tail, are of a greenish gray, and in some of greenish brown. It feeds on vegetables, berries, &c. and is common in the north of England, where, according to Ray, it is called the petty- chaps.

BECCARI (James Bartholomew), a physician of Bologna, was born in 1682. He was professor of chemistry at his native city many years, and published, in 1729, a Dissertation on the Impurity

of its Air, and in 1730 a Treatise on the Inter- nal Motion of Fluids; &c. He died 1796.

BECCARIA (John Baptist), an ingenious philosopher of the eighteenth century. He was a native of Mondovi in Piedmont, and became professor of philosophy at Palermo, and after- wards at Rome, from whence he removed to Turin. The king of Sardinia had a very great regard for him, and made him tutor to his sons. He made several important discoveries in electri- city, and wrote, 1. Experimenta quibus Elec- tricitas Vindex late constituitur, &c. 4to. Turin, 1771. 2. Electricismo Artificiale, 4to, 1772, translated into English, 4to. London, 1776 ; be- sides an Essay on the Cause of Storms and Tem- pests, and several pieces on the Meridian of Turin, &c. He died in 1781.

BECCARIA (Bonesana Caesar, marquis), was born at Milan in 173.5, and showed a very early propensity to philosophical subjects. He first studied under the Jeruits at Parma, but left col- lege at seventeen, and became

henceforth the director of his own useful researches. His de- votedness to the study of Jurisprudence and Po- litical Philosophy, was first determined by the Lettres Persannes of Montesquieu ; a production capable, indeed, of alluring a less enthusiastic mind. But his industry appears to have been chiefly stimulated by the patriotic and honorable desire of diffusing instruction among his country- men, whom he represents as abandoned to igno- rance; and who were little prepared for liberal opinions or political science. Fortunately, however, he gained the confidence of Count Fir- miani, then governor of that part of the Austrian dominions ; a nobleman, who, with comprehen- sive views of policy, concurred in every plan which was calculated for improving the state of the provinces.

Beccaria's first work appeared in the year 1762, and corfsisted of Observations on the De- rangement of the Currency in the Milanese States. Soon after he established a select lite- rary society at Milan, which, among other dis- tinguished men, included the brothers, Alessan- dro and Pietro Verri. Assisted by these friends, and patronised by Fermiani, he commenced a periodical published under the name of the Caflfe, a plan suggested to them by the cele- brity of our English Spectator. But, the most remarkable production to which this as- sociation gave rise, and that upon which the reputation of Beccaria was destined chiefly to rest, was the treatise on Crimes and Punishments (Dei Delitti e Delle Pene). This is said to have been undertaken at the earnest solicitation of Count Alexander Verri, who then discharged the functions of Protector of Prisoners (Protettore de' Carcerati) at Milan. It was written at the house of Peter Verri, where the meetings of the society were held ; and in concert with him the author, every evening, corrected what he had written during the day. In this manner this ce- lebrated work was completed in two months, and was printed in the course of the year 1764.

The author here breaks up most of the impor- tant ground that Sir Samuel Romilly, Bentham, and others, have so well Cultivated since : he is everywhere the advocate of reason, sound po-

licy, and humanity ; and, by examining the foundation, objects, ;ind consequent boundaries of penal law, he exposes the inefficacy as well as injustice of many provisions in the judicial code of his own country, and in those of other Euro- pean nations; ??? provisions only the more perni- cious in many cases, as derived from remote- times, and perverting our respect for established maxims into the most debasing and servile bar- barism. Six Italian editions were immediately called for ; and it is

computed that it has run through more than fifty editions and translations. As a most important conclusion resulting from this examination, or rather as concentrating a number of his conclusions, he closes his book with the following proposition : ••• ‘ In order that punishment may not be an act of violence, of one, or of many, against an individual member of society, it is essential that it should be public, prompt, and necessary, the least possible in the given case, and determined by the law.’

The prospects which Beccaria entertained as to the probable influence of his works, appears from the sentence of Lord Bacon, which he pre- fixed to some of the editions. ‘ It is not to be expected in any difficult undertaking, of whatever kind, that the same person who sows the seed should also reap the harvest ; but there must of necessity, be a preparation and gradual progress to maturity.’ ‘ Never,’ says a writer in the Bio- graphie Universelle, ‘did so small a book pro- duce so great an effect.’ The medal given by the academy of Herne was instantly bestowed upon Beccaria ; and the Kmpress Catharine II. in- vited him to St. Petersburgh, with the offer of an honorable station at her court; a proposal winch was the means of procuring him a similar distinction at home. In 1767 was issued an impe- rial order for establishing, in the Palatine College at [Milan, a Professorship of Public Law and Keonomics, under the title of Scienze Camerali. To this chair, endowed expressly for him, the marquis \as appointed on the 1st of November, 17••~i”, and commenced the dv.ties of it in the monih of January following. .From the preli- minary discourse (prolusione) which he pro- nounced on this occasion, and in which he sets forth the nhtiU of the institution, it appears that the only instructions which he received on his appointment, consisted in an order to deliver Ins discourses in tiie vulgar tom;ue ; an injunction as highly iamoraHe to the government as all the other circumstances of the transaction. His lec- tures, \iiich he received a special permission to deliver in hi- own house, attracted much notice. ‘I hey were not published during his life; but have since appeared, under the title of Klementi ,li 1 coiiomia ! bliliea, in the compilation of the Scntiun CiasMci Itahani de Kconomia Politica, pr.nted at Milan. One of his inferences on this sulked is, that ‘ every restriction on freedom, \s!i>tiier in tin; rase of commerce, or any other, “ii j.l to he a result from the necessity of pre- entinu’ an actual disorder, not. the effect of a pur| o.-t! or aim at amelioration.’ And he has ivp.Mtcd the same doctrine under di iVerent views, in vai ions passages.

1 ii I 77u ‘••• e pi i hli shod an l’.iu)ni“y into I he nature Nyir, p irt I. - uhr h he nˆver completed In

the following year he was appointed a member of the Supreme Economic Council ; on the sup- pression of which he was transferred to the Ma- gistracy of State; and, lastly, by a despatch of the 17th of January, 1791,

was named one of the Board for Reform of the Judicial Code, civil and criminal. His activity in the discharge of these important trusts is proved by the circumstance, that all the chief matters in those different de- partments were committed to his direction, or guided by his counsels. The most remarkable of his state papers were, various Ordinances re- lative to the grain ; a very important Despatch transmitted to the Court in 1771, which gave rise to the reform of the public money in 1778 ; a Plan, proposed in 1780,- for effecting an uni- formity in the weights and measures; and cer- tain Proposals, in 1786, founded on the tables of the population.

In 1776 the marquis made a journey to Paris, in company with Alessandro Verri, and there passed about three weeks in the society of D'Alembert, and other eminent men of letters : on his return he visited Voltaire. This seems to have been the only incident which, for a period of twenty- five years, diversified his manner of life, or in- terrupted his public duties. He died of apoplexy in the year 1793, having been twice married. He has the character of having been stedfast in his friendships; modest, but tenacious of his opinions; and much above jealousy or envy in regard to other literary men. It is related of him that the king of Naples, while at Milan, twice at- tempted to find him at his house; but that the marquis found means on both occasions to escape from his distinguished guest.

BECCLES, a town of Suffolk, seated on the Waveney. It has an elegant church, with a lofty spire ; and two free schools, one of them with ten scholarships for Emanuel college, Cambridge. There is a market on Saturday. It lies twelve miles south-west of Yarmouth, and 109 north- east of London.

BE'CHANCE, v. & adv. Be and chance. See CHANCE.

BE'CIIARM. Be and Charm. See CHARM. BECIIER (John Joachim), a celebrated che- mist, born at Spires in 1645, and connected with the most learned men in Europe. The emperor, the electors of Mentz and Bavaria, and other per- sons of high rank, furnished him with the means of making experiments in mathematics, natural philosophy, medicine, and chemistry. He was invited to Vienna, where he contributed greatly to the establishment of several manufactures, a chamber of commerce, and an India company ; but the jealousy of the ministers occasioned his disgrace and ruin. He was not less unfortunate at Mentz, Munich, and Wurtzburg ; which deter- mined him to go to Haerlem, where he invented a machine for working a great quantity of silk in a little time, and with few hands; but new mis- fortunes made him come to England, and he died at London in 1685. He wrote, 1. Physica Subterranea, which was reprinted at Leipsic in. 1703, and in 1739, in 8vo, with a small treatise, by E. Stahl, entitled Specimen Becherianum. 2. Experimentum Chymicuin Novum, 8vo. 3 Character pro

Instilutiones Chymica, seu Manuductio ad Phi- sophiam Hermeticam, 4to. 5. Institutiones ChymicBe Prodromi, 12mo. 6. Experimentum Novum ac Curiosum de Minera Arenaria Per- petua, 8tc.

BECHERA, in botany, a genus of plants, class, pentandria; order, digynia: CAL. five-cleft, with a globular tube : COR. five-petalled : CAP. two-celled and bi-valved. The name is derived from the reverend John Becher of Southwell Nottinghamshire, an accurate botanist, to whom the science is indebted for the discovery of the crocus nudiflorus. This plant is a native of Tranquebar.

BECHICS, BECIIICHA, among the old physi- cians, amount to much the same with pneumo- nics, thoracics, expectorants, and pectorals.

BECHIN, a town and circle of Bohemia, which abounds in salt mines and mineral waters, an:l particularly the singular mineral called Bechin stone. Bechin, the capital, has an an- cient castle. It was taken and burnt by general Bucquoy in 1619, and was often the scene of con- flict in the thirty years' war. It is seated on the river Luschintz, fifty miles south by west of Prague.

BECK, v. & n. 1 Sax. becken, Fr. bee, head.

BECK'IXG. $ To make a sign with the head ; a nod of command, or of intimation.

Bell, book, and candle, shall not drive me back, When gold and silver beck me to come on.

Shahspeare.

Oh this false soul of Egypt, this gay charm,

Whos►► eye bech'd forth my wars, and call'd them

home. Id. Antony and Cleopatra.

Neither the lusty kind showed iny roughness, nor

the easier any idleness ; but still, like a well-obeyed

master, whose beck is enough for discipline. Sidney.

Haste, thee, nymph, and bring with thee Quips, and cranks, and wanton wiles, Nods, and becks, and wreathed smiles. Milton. Then forthwith to him takes a chosen band Of spirits, likest to himself in guile, To be at hand, and at his beck appear. Id.

The menial fair, that round her wait, At Helen's beck prepare the room of state. Pope.

BECK, or BEKE, a word which imports a small stream of water issuing from some bourn or spring. The word is chiefly used among us in the composition of names of places originally situated on rivulets; such as Welbeck, Bourn- beck, &c. The Germans use beck in the same sense.

BECKET (Thomas), lord chancellor of Eng- land, and archbishop of Canterbury in the 12th century. The story of his birth is as extraordi- nary as that of his life. His father, Gilbert Becket, some time sheriff of London, went on a pilgrimage to Jerusalem, where being surprised and enslaved by a party of Saracens, his master's daughter fell in love with him; and when he made his escape, followed him to London. So singular an instance of heroic affection struck him; and after consulting with some bishops, he baptised her by the name of Matilda, from which marriage proceeded the haughty Thomas Becket Being raised to the archbishopric, he began the great dispute between the crown and

the mitre, and sided with the pope : at which King Henry II. was greatly offended ; and calling an assembly of the bishops at Westminster, offered six articles against papal encroachments, which he urged Becket to assent to. Becket, at the importunities of several lords, signed them ††† but relapsing he was ordered to be tried as a traitor; upon which he fled into Flanders. The king banished all his relations, and Becket excom- municated all his op posers. At last, after seven years, by the intercession of the French king and the pope, he returned ; but refused to absolve the bishops and others, whom he had excommu- nicated : upon this the king grew enraged ; and is reported to have said, in the presence of his court, then in Normandy, that he was an unhappy prince, who maintained a great number of insig- nificant persons about him, none of whom had gratitude, or spirit enough, to revenge him on a single insolent prelate. Hearing these exclama- tions, four gentlemen of the court started for Canterbury, determined upon assassinating the archbishop. They endeavoured to drag him out of the cathedral, but finding they could not do this without difficulty, they beat out his brains there, on the pavement: 29th of December, 1171. The assassins being- now afraid they had gone too far, durst not return to the king's court, but retired to Knaresborough in

Yorkshire, and at length took a voyage to Rome ; where, being admitted to penance by Alexander III., they went to Jerusalem; and, according to the pope's order, spent their lives in penitential austerities. In the mean time, king Henry was, or affected to be, much disturbed at the news of Becket's death, and despatched an embassy to Rome to clear himself from the imputation of being connected with it. Immediately all divine offices ceased in the church of Canterbury, for a year, excepting nine days ; at the end of which, by order of the pope, it was reconsecrated. Two years after, Becket was canonised; and the two following years, Henry returned to England, went to Can- terbury, where he did penance, as a testimony of his regret for the murder of Becket. When he came within sight of the church where the archbishop was buried, he alighted off his horse, and walked barefoot, in the habit of a pilgrim, till he came to the tomb. Here, after he had prostrated himself, and prayed for a considerable time, he submitted to be scourged by the monks, and passed all that day and night without refresh- ment, kneeling upon the bare stone. In 1221 Becket's body was taken up, fifty years after his murder, in the presence of Henry III. and a great concourse of the nobility, and deposited in a rich shrine, erected at the expense of Stephen Langton, archbishop of Canterbury. This was soon visited from all parts, and enriched with the most costly gifts and offerings : the miracles said to be wrought at his tomb were so numerous, that Gervase of Canterbury tells us, two large volumes, recounting them, were kept in the church. The monks used to raise his body every year; and the day on which this ceremony was per- formed, which was called the day of his transla- tion, was a general holiday : every fiftieth year a jubilee was celebrated to his honor, which lasted fifteen days: plenary indulgences were then

granted to all that visited his tomb ; and 1 00,000 pilgrims have been registered at a time in Can- terbury. The devotion towards him had almost effaced in this town the adoration of the Deity ; nay, even that of the Virgin. At God's altar, for instance, there were offered in one year ––3 2s. 6d.; at the Virgin's, ––63 5s. 6d. ; and at St. Thomas's ––832 12s. 3d. But next year the dis- proportion was still greater: there was not a penny offered at God's altar ; the Virgin's gained only ––4 Is. 8d.; but St. Thomas's had for its share ––954 6s. 3d. Louis VII. of France made a pilgrimage to this miraculous tomb, and bestowed on the shrine a jewel, which was esteemed the richest in Christendom. Henry VIII., to whom it may easily be imagined how obnoxious a saint of this character would appear, not only pillaged St. Thomas's rich shrine, but made the saint

himself be cited to appear in court, and be tried and condemned as a traitor. He ordered his name to be struck out of the calendar ; the office for his festival to be expunged from all breviaries; and his bones to be burnt, and the ashes thrown in the air. From Thomas Warton we learn, that Becket was the subject of poetical legends. The Lives of the Saints in verse, in Bennet's library, No. CLXV. contain his martyrdom and translation. This MS. is supposed to have been written in the fourteenth century. The same writer informs us, from Peter de Blois, that the palace of Becket was perpetually filled with bishops highly accom- plished in literature, who passed their time there in reading-, disputing, and deciding important questions of the state. These prelates, though n

BECKETS, in the marine, large hooks, or circular wreaths of rope, or wooden brackets, used to confine ropes, tackles, oars, or spars, in a convenient place till they are wanted. And to put the tacks and sheets in the beckets, is to hang up the weather-main and fore-sheet, and the lee-main and fuiv-tack, to a little knot and eye- beckct on the fore-mast, main, and fore-shrouds, when the ship is close hauled, to prevent them from hanging in the water-

BKCKINGHAM (Charles), an English dra- matic writer, the son of a linen draper in London, was born in 1(5(50; and educated under the learned Dr. Smith. lie early discovered an uncommon genius in poetry, two dramatic pieces of his writing heing represented on the stage before he was twenty years old. The titles of these plays are,] . Henry IV. of France; 2. Scipio Africanus. lie wrote, also, several other poems, and died IHth Feb. ITiiO, aged thirty-two.

BECKMANN i.lol.n;, forty-four years pro- fessor at GoU'mgen, a native of Hoya, in the elec-

torate of Hanover, and born in 1739. His father was a post-master and receiver of taxes. His mother became a widow when Beckmann was hardly seven years old, and, though left in nar- row circumstances, sent him, in his fifteenth year to the school of Stade, then under the care of Gehlen. In 1759 he repaired to Gottingen, to study for the church, but quitted it, and this design together, at his mother's death, in 1762, to fill the situation of professor of natural philosophy in the Lutheran academy at St. Petersburgh. Beckmann soon gave up this place, and made a journey through Sweden to acquire a detailed knowledge of its mines. Linnaeus receiving him hospitably at Upsal, he prolonged his stay there. In 1766 the governors of the university of Got- tingen appointed him, on the recommendation of Busching, professor to this celebrated establish- ment, of which he became one of the chief orna- ments. His mind, now entirely directed to the practical uses of human knowledge, conceived the idea of an

academical classification of the arts, both political and domestic. He therefore composed, as a guide, to serve him in this course of instruction, Treatises on Rural Economy ††† ††† On Policy ††† On Finance ††† On Commerce, and other departments of practical knowledge; and his lectures, which had at the time the recommen- dation of novelty, were attended by the flower of the youth of the most civilised nations of Europe. He was in the habit of accompanying them to the workshops, to give them a knowledge of the different processes and handicrafts. His notices on these subjects make five volumes in octavo, published at Leipsic from 1783 to 1805; and will furnish the most invaluable materials to the individual, or to any society who may hereafter venture to undertake the general history of the origin and progress of the mechanic arts. Great merit, also, belongs to his History of the earliest Voyages made in modern times; of which he lived only to publish eight numbers. Another result of the literary application of the industry of Beckmann was a return to the studies of humanity, to which we are indebted to him, likewise, for editions of the work De Mirabilibus Auscultationibus, attributed to Aristotle, 1786 ; of the Wonderful Histories of Antigonus Carys- tius, 1711 ; and of Marbodius's Treatise on Stones, 1799; publications which required the rare union of physical knowledge and sagacity with philological learning. The Royal Society of Gottingen had, in the year 1772, admitted him one of its members, and, from that period to 1783, Beckmann supplied their proceedings with several interesting memoirs, among which are : On the Reduction of Fossils to their Origi- nal Substances ††† On the History of Alum ††† On the Sap of Madder ††† On the froth of the Sea, from which the Heads are formed for the Nico- tian Fistulae ††† On the History of Sugar. Beck- mann died, 3rd of February, 1811, a member of almost all the learned societies of Germany and the north of Europe.

BECK'ON, v. & n. See to BECK.

Thou blinded god, quoth I, forgive me this offence, Unwittingly I went about to malice thy pretence. Wherewith he gave a beck, and thus methought he swore.

Thy sorrow ought suffice to purge thy fault, if it were

more ;

The virtue of which sound mine heart did so revive, That I rnethought was

made as whole as any man alive. Earl of Surrey.

For he that will be called with a beck,

Makes hasty suit on light desire,

Is ever ready to the check,

And burneth in no wasting fire. Wyatt.

Proceeding to the midst he stil did stand,

As if in mind he something had to say ;

And to the vulgare beckning with his hand,

In sign of silence, as to heare a play,

By lively actions he gan bewray,

Some argument of matter passioned ;

Which doeu, he backe retyred soft away,

And, passing by, his name discovered,

Ease, on his robe in golden letters cyphered.

Spenser.

It beckons you to go away with it, As if it some impartment did desire To you alone. Shahspeare.

The queen, fair Fancy, past ; And thro' her rainbow-tinged veil

A glance benignant cast ! Then, beck'ning to a secret glade,

- *Come see,' she cried, ' the train, Who own beneath this mystic shade*

My visionary reign.' Bishop.

Anon all this rout was brought in silence, And I by an usher brought to presence Of Lucifer ; then low, as well as I could, I kneeled, which he so well allow'd That thus he beck'd, and, by St. Anthony, He smiled on me well-favour'dly.

Heyuiood. The Pardoner.

So throng into the memory,

Of calling shapes, and beckoning shadows dire,

And aery tongues, that syllable men's names,

On sands and shores and desert wildernesses.

Milton.

With this his distant friends he beckons near, Provokes their duty, and prevents their fear. Dryden. What beck'ning ghost along the moonlight shade, Invites my steps and points to yonder glade. Pope. When he had raised my thoughts by those trans- porting airs, he beckoned to me, and, by the waving of his hand, directed me to approach. Addison.

All ether softening, 'Sober evening takes Her wonted station on the middle air, A thousand shadows at her beck. First, this She sends on earth, then that of deeper dye Steals soft behind ; and then a deeper still, In circle following circle, gathers round, To close the face of things. Thomson. Summer. They had not spoken ; but they felt allured As if their souls and lips each other beckon' 'd, Which being join'd like swarming bees they clung, Their hearts the flowers from whence the honey sprung. Byron.

BE'CLAP. Be and clap. See CLAP.

BE'CLAWE. Be and claw. See CLAW.

BE CLIP. Be and clip. See CLIP.

BE'CLOUD. Be and cloud. See CLOUD.

BE'COME, \ Be and come, Ang.-

BECOM'ING, n. adj. >Sax. curnan; Dutch ko-

BECOMING'LY. j men ; Germ, kommen ; Swed. komma. Bccuman, ingrcdi, occurrere, per- venire, snpervenire ; to go ; to enter in ; to meet with ; to come or attain to ; to come upon sud- denly : it likewise signifies to convene ; to con- cur ; and consequently to be convenient or con-

current; hence arises to befit; decent; appro- priate ; suitable ; and further, graceful ; orna- mental. See ENCY. MET.

The Lord God breathed into his nostrils the breath

of life, and man became a living soul. Genesis, ii. 7.

And unto the Jews I became a Jew, that I might

gain the Jews. 1 Corinth, ix. 24.

Upon that other side Damian Becomin is the sorwefullest man That ever was. Chaucer.

So soone as she was entred, round about Shee cast her eies, to see what was become Of all those persons which she saw without : But lo ! they streight were vanisht all and some ; Save that same woefull lady ; both whose hands Were bounden fast, that did her ill become, And her small waste girt rownd with yron bands Unto a brasen pillour, by the which she stands.

Spenser,

She to her sire made humble reverence, And bowed low, that her right well became, And added grace unto her excellence.

Id. Faerie Queene. I cannot joy, until I be resolv'd Where our right valiant father is become.

Shahspeare

If I become not a cart as well as another man, a plague on my bringing up. Id.

*I would I had some flowers o' th' spring that might Become your time of day ; and your's and your's, That wear upon your virgin branches yet Your maidenheads growing. Id**

Yet be sad, good brothers ; For, to speak truth, it very well becomes you. Id.

Your dishonour

Mangles true judgment and bereaves the state Of that integrity which should become it. Id.

What is then become of so huge a multitude, as would have overspread a great part of the continent. ; Raleigh.

But I should ill become this throne, O peers ! And this imperial sovreignty adorn'd With splendour, arm'd with power, if aught propos'd And judg'd of public moment, in the shape Of difficulty or danger, could deter Me from

attempting. Milton.

Perplex ‘d with thoughts, what would become Of me, and all mankind ? Id.

The first hints of the circulation of the blood were taken from a common person’s wondering what be- came of all the blood that issued out of the heart.

Graunt.

What will become, of me then ? for, when he is free, he will infallibly accuse me. Dryden.

Why would I be a queen ? because my face Would wear the title with a better grace j If I becamti it not, yet it would be Part of your duty then to flatter me. Id.

Wicherly was of my opinion, or rather I of his ††† for it becomes me so to speak of so excellent a poet.

Id.

Their discourses are such as belong to their age their calling, and their breeding ; such as are becom- ing of them, and of them only. Id. What became of this thoughtful busy creature, when removed from this world, has amazed the vulgar, and puzzled the wise. Rogers He utterly rejected their fables concerning their gods, as not becoming good men, much less those which were worshipped for gods. Stillinyjleet. Of thee, kind boy, I ask no red and white To make up my delight, No odd becoming graces, Black eyes, or little know-not-whats, in faces.

Sucfiliny.

732

BED.

BECSANGIL, the ancient Bithynia, a pro- vince of Natolia in Asia; bounded on the north by the Black Sea, on the west by the sea of Marmora, on the south by Natolia I’roper, and on the east by the province of Boli. The prin- cipal town is Bursa.

BECSKERECK, NAGY, i. e. GREAT, a mar- ket town of Hungary, in the county of Torontal, the capital of the circle of that name. It stands on the Bega, and has a salt office, and the right of choosing its own magistrate.

BECSKERECK, Kis, i. e. LITTLE, a small town of Hungary, in the county of

Temeswar, circle of St. Andrew.

BECTASH, preacher to Amurath I. sultan of the Turks, and founder of the sect of Bectasse.

Exo. Mine, and most of our fortunes, to night, shall be ??? drunk to bed. Dryden, Ant. and Cleop.

IROS. There's a palm, presages chastity, if nothing else.

CHAR. Even as the overflowing Nilus presageth famine.

IROS. Go, you wild bedfellow, you cannot soothsay.

Id.

And as the sleeping soldiers in th' alarm, Your bedded hairs, like life in excrements, Start up and stand on end. Id.

She's a bedswerver, even as had as those That vulgars give the boldest titles to. Id.

They have married me : I'll to the Tuscan wars, and never bed her. Id.

For he will be swine drunk, and in his sleep he

He is also said to have given rise to the order of does little harm' save to his Clothe, about him. Id.

Janissaries.

BECTASSE, a sect of religious among the Turks. All the janissaries belonging to the Porte are of this sect. The habit of the bectasse is white : on their heads they wear caps of several pieces; with turbans of wood twisted like ropes.

He loves your people, But tie him not to be their bedfellow. Id.

Misery acquaints a man with strange bedfellowt. /rf.

This sanguine Toward, this bedpresser, this horse- back breaker, this huge hill of flesh. Id.

Lying not erect, but hollow, which is in the making

They observe constantly the hour of prayer, of the bed; or with the legs gathered up, which is in ???which they perform in their own assemblies,

and make frequent declarations of the unity of God.

BECURL, be and curl. See CUIIL.

BED, v. & n. "^ A large family, from one BED'DING, etymon; Ang. Sax. bed-

BEI/CHAMUER, \dian; Germ.beddenorbet- BED'C -i.oTHF.s, ti '/i, stcrnere, bed ; that is,

BEI/IT.I.I.OW, says the etymologist, in

BED'MAKEI;, the Ency. Met., stratum,

BED'MATE, is the past participle of

Br.i/i'ovr, this verb; therefore we

BED' vi AI i, ; speak of a garden-bed, a

BED'PKESSER, bed of gravel, &c. Lithe

BED'STEAD, Ann. .Sax. bedde is soine

iii.nVni AW, times used for a table. See

BEI/SWEIIVEU, Mark iv. 21. From the BEI/HIP, strata of earth where things

Br.n'i:iTr, are deposited, &c., and in

Jii'.i/riMr., which, till disturbed, they

Br.i>'wAi;i>, repose; the word has been

BEI/WOHK. j to whatever bears applied

and supports ; to whatever is spread, or laid out, ►►► >r prepared, for the purpose of bearing and sup- porting. Thus it is more generally applied to a lodging; to something made to sleep on ; hence, figuratively, it is used for marriage. To bed is to go to bed with; to place in bed; to make partaker of the bed; to sow or plant in earth ; to lay in a place of rest or security; to lay in order ; to stratify ; to cohabit. The various deri- vatives explain, by their application, their own incaniii'jr.

.►►►th h

wife,

Chaucor.

Spenser.

t In'dtling may be had, then for a bed. Id.

On my knees I Leg, I'll vouchsafe me raiment, bed, and food.

Shak.tpeare.

the posture of the body, is the more wholesome.

Bacon.

There was a doubt ripped up, whether Arthur was bedded with his lady. Id.

Herbs will be tenderer and fairer if you take them out of beds when they are newly come up, and re- move them into pots with better earth. Id.

She was publickly contracted, stated as a bride, and solemnly bedded ; and, after she was laid, Maximi- lian's ambassador put his leg, stript naked to the knee, between the espousal sheets. Id.

Let coarse bold hands, from slimy nest, The bedded fish in banks outwrest. Donne.

So high as heav'd the tumid hills, so low, Down sunk a hollow bottom, broad, and deep, Capacious bed of waters. Milton.

Rigour now is gone to bed, And advice with scrupulous head. Id.

George, the eldest son of this second bed, was, after the death of his father, by the singular care and affec- tion of his mother, well brought up. Clarendon.

He was now one of the bedchamber to the prince. Id.

They were brought to the king, abiding them in his bedchamber. Hayward.

First, with assiduous care from winter keep, Well fother'd in the stalls thy tender sheep ; Then spread with straw the bedding of thy fold, With fern beneath, to fend the bitter cold. Dryden.

Arcite return'd, and, as in honour tied, His foe with bedding and with food supply'd. Id.

Those houses then were caves, or homely sheds, With twining oziers fenc'd, and moss their beds. Id.

See hoary Albula's infected tide O'er the warm bed of srnoaking sulphur glide.

Addison.

What charming bedfellows, and companions for life, men choose cvt of such women. Id.

I was deep.y in love with my bedmaker, upon which I was rusticated for ever. Id. Spectator.

I came the next day prepared, and placed her in a clear light, her head leaning to a bedpost, an- other standing behind, holding it steady.

Wiseman's Surgery.

Chimnies with scorn rejecting smoke j Stools, tables, chairs, and bedsteads broke. Swift.

BED may be more accurately defined a conve- nience for stretching and composing the body on, for ease, rest, or sleep ; consisting, generally, of feathers enclosed in a ticken case, and supported ny a frame work, called the bedstead, standing on pedestals. Mr. Whittaker in his history of Manchester observes, that it was universally the practice, in the first ages, for mankind to sleep upon the skins of beasts. It was originally the custom of the Greeks and Romans, as well as of the ancient Britons, before the Roman Inva- sion. These skins were spread on the floor of their apartments. Afterwards they were changed for loose rushes and heather: the Welsh a few years ago lay on the former, and many of the Highlanders of Scotland sleep on the latter to this day. In process of time, the Romans sug- gested to the interior Britons the use, and the introduction of agriculture supplied them with the means, of the neater convenience of straw beds. The beds of the Roman gentry at this period were generally filled with feathers, and those of the inns with the soft down of reeds. But for many ages the beds of the Italians had been constantly composed of straw; it still formed those of the soldiers and officers at the conquest of Lancashire; and from both, our countrymen learnt their use. But it appears

to have been taken up only by the gentlemen, as the common Welsh had their beds thinly stuffed with rushes as late as the conclusion of 'the twelfth century ; and with the gentlemen it continued many ages afterwards. Straw was used even in the royal chambers of England as late as the close of the fifteenth century.

In the Highlands heath is generally used as bedding even by the gentry; and a heath bed has been celebrated by travellers as a peculiar luxury, superior to that of down. In France and Italy straw beds are frequent to this day. But after the above period, beds were no longer suffered to rest upon the ground. The better mode, that liad anciently prevailed in the east, and long before been introduced into Italy, was adopted in Britain ; and they were now mounted on pedes- tals. This, however, was equally confined to the higher ranks. Beds still continued on the floor among the common people, and were laid along the walls of their houses, as one common dormi- tory for all the members of the family.

BED, in masonry, a course or range of stones; and the joint of the bed is the mortar between two stones, placed over each other.

BED, in sea language, a flat, thick piece of timber laid under the quarters of casks contain- ing any liquid, and stowed in the ship's hold.

BED, DINING, lectus triclinaris, or discubito- rius, that whereon the ancients lay at meals. The dining or discubitory beds were four or five feet high. Three of these were ordinarily ranged by a square table (whence both the table and the room where they ent, werp called triclinium), in such a manner that one of the sides of the table remained open and accessible to the waiters. Each bed would hold three or four, rarely five persons. They were unknown in Rome before the second Punic, war : the Romans, till then, sat down to eat on plain wooden benches, in imitation of the heroes of Homer, or, as Varro

expresses it, after the manner of the Lacedemo- nians and Cretans. See ACCUSATION.

BED OF A GREAT GUN ; that thick plank which lies immediately under the piece, being, as it were, the body of the carriage.

BED OF A MORTAR, with gunners, a soud piece of oak hollowed in the middle, to receive the breech and half the trunnions.

BED OF CORN, is a heap, flat at top, three or four feet high, otherwise called a couch. Corn, in granaries, keeps best in beds.

BED OF JUSTICE, in the ci-devant French cus- toms, a throne upon which

the king was seated when he went to the parliament. The king never held a bed of justice but for affairs that concerned the state, and then all the officers of parliament were clothed in scarlet robes.

BEDA, commonly called Venerable Bede, one of our most ancient historians, was born A. D. 672, near Weremouth, in the bishopric of Durham. He was educated by the abbot Benedict, in the monastery of St. Peter, near the mouth of the river Wyre. At the age of nineteen he was ordained deacon, and priest at thirty. About this time he was invited to Rome by Pope Ser- gius ; but it is not certain that he accepted the invitation. In 731 he published his Ecclesiasti- cal History ; a work of so much merit, notwithstanding the legendary tales it contains, that it were alone sufficient to immortalise the author. He died A. D. 735, of a lingering consumption, probably occasioned by a sedentary life, and long uninterrupted application to study and literary compositions, of which he left an incredible num- ber. He was buried in the church of his con- vent at Jarrow; but his bones were afterwads removed to Durham, and deposited in the same coffin with those of St. Cuthbert. Bede was undoubtedly a singular phenomenon in an ignorant and illiterate age. His learning, for the times, was extensive, his application incredible, his piety exemplary, and his modesty excessive. He was universally admired, consulted, and esteemed, during his life; and his writings are deservedly considered as the foundation of our ecclesiastical history. His language is neither elegant nor pure, but perspicuous and easy. All his works are in Latin. The first general collec- tion of them appeared at Paris in 1544, in three volumes, folio. They were printed again at the same place in 1554, in eight volumes. They were also published in the same size and number of volumes at Basil, in 1567, reprinted at Co- logne in 1613, and at the same place in 1688. Besides this general collection, there are several of his compositions, which have been printed separately, or amongst the collections of the writings of ancient authors ; and there are several MSS. ascribed to him, which are preserved in the libraries of Oxford and Cambridge.

BE'DABBLE. Dabble, with the prefix be. See DABBLE.

BE'DAFF. Daff, and the prefix be. SeeDAJF

BE'DAGGLE. Daggle, and the prefix be See DAGGLE.

BEDAH, or VEDAH, also called Battas or \V uvldas, a wild people inhabiting the mountains and forests in the interior of Ceylon. See CEYLON and BATTA.

BED

BEDAL, a market town in the north riding of Yorkshire, through which passes a Roman causeway to Richmond, Barnard Castle, &c. The parts adjacent are noted for hunting and road horses. It has a market on Tuesday : and is six miles from North Allerton, eight from Rich- mond, and 220 from London.

BEDALACH, in the materia medica, a name given by some writers to the gum bdellium ; but particularly to that kind of it which was brought from Arabia, and was of a yellowish color, like wax.

BEDALGENSE, a name given by the Arab astronomers to a fixed star of the first magnitude, in the right shoulder of Orion. It is of a ruddy color, by which it is easily distinguished.

BEDAMUNGALUM, a town of the Mysore, Hindostan, near the river Palar, which is here about forty feet wide. It was formerly a con- siderable place, but is now reduced. Salt abounds throughout the neighbouring country, which consists of poor black soil, and low wet grounds. Long. 78►► 24′ E., lat 12►► 58′ N.

BEDAN, a deliverer, and, probably, a judge of the Israelites, mentioned by the prophet Sa- muel (1 Sam. xii. 11.), in his expostulation with the people ; but not mentioned particularly else- where, in Scripture. Some suppose him to be the same with Barak ; others with Samson, who was Ben Dan, the son of Dan ; others, that he was Jair, and named Bedan after his ancestor.

BEDARIDES, a town of France, near the Rhone, formerly in the papal county of Venais- sin ; hut, since the revolution, included in the department of Vaucluse. The population is about 1700, and the environs are fertile and beautiful. Five miles north of Avignon.

BF/DARK. Be and dark. See DARK.

BEDARRLEUX, or BEC DU RIEUX, a town of France, on the river Orbe, in the department of the llrr.iult. It lias 3340 inhabitants, with manufactures of drugget and woollen stuffs, which are exported as far as into Germany. Thirty three miles west of Montpelier. Long. 3►►15’E., lat. 43►► ;>?’ N.

HE’DASH Be and dash. See DASH.

BF,‘1)A\Y. Of uncertain etymology. Awake on the watch. See AUAW, to watch over, to keep under.

lil’/DAC 15. He and daub. See DABBLE and DALE.

BrnciiA.Miir.R, LORDS OF THE, in the British court, are twelve noblemen who attend in their turns, each a month ; during’ which time they anciently lay iu the king’s bedchamber, and wait-d on him when he dined in private.

Kl.miAl’OI.LAM, a town of Hindostan, in tlie Mysore, fourteen miles west of Gurram- conda.

15 F. 1)1) Kit, l>F.i)Lii,or BE UK, a valley of Arabia, where the tribe of Koreish was defeated by Ma- hornet in the iirst year of the liejira, A.D. 622. Distant forty miles from Mecca, and twenty from Medina.

BEDDUAM, a town of Ceylon, eighty miles south or (‘andy,

BEDD1NGTON, a village of Stirry, between Carshalton and Croydon, adjoining which is Bed- dington I’ark, where queen Elizabeth is said to

have resided. The parish church is an ancient Gothic building, with stalls in the aisle like a cathedral.

BEDDOES (Thomas), M.D. a physician of considerable celebrity, was born at Shiffhal, Salop, in the year 1760. He was educated at Bridgenorth, Oxford, and Edinburgh. In 1786 he took his doctor’s degree, and was appointed professor of chemistry at Oxford ; an appoint- ment which his political opinions, on the break- ing out of the French Revolution, did not permit him to retain. In 1793 he removed to Bristol, where he began a series of medical and physiolo- gical researches, experiments, lectures, &c. ; which might have established for him a lasting reputation. He was capable of great things but aimed at too much. Publications upon a variety of subjects political, scientific, and medical, came from his pen in rapid succession, until 1808, when he was seized with a liver complaint, which proved fatal in the course of that year. Of his numerous works, the principal are; 1. A Translation of Spallanzani’s Dissertations on Natural History, 1784; reprinted in 1790. 2. A Translation of Bergman’s Essay on Elective Attractions, 1785. 3. Translations of Scheele’s Chemical Essays, 1786. 4. Chemical Experiments and Opinions, extracted from a work published in the last cen- tury, &c.

BEDE. See BEDA.

BE’DEAD. Be and dead. See DEAD.

BE'DECK. Be and deck. See DECK.

BEDELL (Dr. William), a learned prelate, born at Black Notley, in Essex, in 1750, and educated at Emanuel College, Cambridge, where he obtained a fellowship in 1593. After being some time minister of St. Edmund's Bury, he went to Venice, as chaplain to Sir Henry Wot- ton, the'English ambassador, and continuing eight years in that city, contracted an intimate ac- quaintance with the famous Father Paul ; during this time he translated the English Common Prayer Book into that language ; and drew up an English grammar for Father Paul, who de- clared he had learned more from him in divinity than from any one. At his departure Paul pre- sented him with his picture, the MSS. of his History of the Council of Trent, his History of the Interdict and Inquisition, with other literary donations. In 1629 Dr. Bedell obtained the bishopric of Kilmore and Ardagh in Ireland, and applied himself vigorously to reforming abuses. He procured an Irish translation of the common Prayer-Book, which he caused to be read in his cathedral every Sunday. The New Testament having been translated by archbishop Daniel, he patronised a corresponding version of the Old Testament; which was afterwards printed at the expense of the great Mr. Boyle. In 1624 he published a controversial book against the Roman Catholics, which he dedicated to Charles, prince of Wales ; and assisted the arch- bishop of Spalatro in finishing his famous work De Republica Ecclesiastica. When the rebel- lion broke out in Ireland, in October 1641, the bishop at first did not feel the violence of its effects ; for the very rebels had conceived a great veneration for him, and they declared he should be the last Englishman they would drive

out of Ireland. About the middle of December, however, the rebels required him to dismiss the people who had taken refuge with him ; and, upon his refusing to do this, they seised him and his family, and carried them prisoners to the castle of Cloughboughter, putting them all ex- cept the bishop in irons. After being confined for about three weeks, the bishop and his sons were exchanged for some of the principal rebels ; but the worthy prelate died soon after, on the 7th February, 1642, his death being chiefly occasioned, it is said, by this imprisonment. The Irish rebel chiefs, and a large part of their force, accompanied his body to the church- yard.

BE'DELVE,! Be and delve. See DELVE.

BEDELVEN. S

BEDENGIAN, in botany, a name given by Avicenna and Serapion to the pomum amoris, or love-apple, a sort of fruit used in food by the Italians, and some other nations, and seeming to be the third species of the strychnos, or solanum, mentioned by Theophrastus. The author first describes two kinds of this plart, the one of which occasioned sleepy disorders, and the other threw people who eat of it into madness. After these, which he properly accounts poisonous, he mentions a third, which was cultivated in gar- dens, for the sake of the fruit, which, he says, is large and esculent. This is certainly the same with bedengian.

BE'DEVIL. Be and devil. See DEVIL.

BE'DEW, 1 Ang.-Sax. deawian, to wet, to

BE'DEW. J moisten.

Both nations shall, in Britaine's royal crowne, Their diff'ring names, the signes of faction, druwne j The silver strcames which from this spring increase, Bedew all Christian hearts with drops of peace.

Beaumont. Bosworth Field.

For never, gentle knight, as he of late, So tossed was in fortune's cruell freakes, And all the while salt tears bedeaw'd the hearers' cheaks. Spenser.

What slender youth bedew'd with liquid odours, Courts thee on roses, in some pleasant cave ? Milton.

Thrice happy he ! who, on the sunless side Of a romantic mountain, forest-crown'd, Beneath the whole collected shade reclines ; Or in the gelid caverns, woodbine wrought, And fresh bedew'd with ever-spouting streams, Sits coolly calm. Tliomson.

May all the youths, like me, by love deceiv'd, Not quench the ruin, but applaud the doom ! And when thou dy'st, may not one heart be griev'd, May not one tear bedew the lonely tomb ! Hammond.

Go, my boy, and if you fall, though distant, ex- posed, and unwept by those that love you, the most precious tears are those with whirh heaven bedews the unburied head of a soldier.

Goldsmith. Vicar of Wakefield.

BEDFORD (John, duke of), a younger son of Henry IV., was Shakspeare's ' prince John of Lancaster.' During the reign of Henry V. he took a leading part in the conquest of France ; and was, after the death of the king,

appointed regent of that country. He displayed great mili- tary skill in the battle of Verneuil in 1424. The only blemish in his character is his cruel and unjustifiable treatment of the maid of Orleans.

He survived this event about four years, and dying at Rouen, in 1435, was buried in the ca- thedral of that city. Bedford deserves notice as a patron of the arts. A curious proof of his taste in them is still existing in the Bedford Missal, a small thick folio volume, highly illuminated, described by Mr. Dibdin in his Bibliomania, page 253.

The dukedom of Bedford, now enjoyed by the Russel family, is perfectly distinct from that of this prince. The title has been twice revived since his time.

BEDFORD (Francis Russel, duke of), an illus- trious English nobleman, and distinguished agri- cultulist; was bora July 23d, 1765. Upon the death of his grandfather in 1771, he succeeded to the title and fortunes of his family. He received the first rudiments of education, we believe, at Loughborough house, a fashionable preparatory school: from this place he was re- moved at an early age to Westminster-school, but he did not remain long at this celebrated seminary. Here it was that, in consequence of a blow from a cricket ball, he became subject to an inveterate hernia, which proved the ultimate cause of his premature death. His grace, at the university, applied to his studies with more diligence than most young noblemen, and soon acquired the esteem of his fellow-students, and of those who superintended his conduct. Early in life he manifested a strong predilection for the amusements of the turf, but this was soon weakened (though not destroyed) in consequence of a superior attachment to the more rational pursuits of agriculture. On his first outset in public life he was connected with Mr. Fox, and became a firm and disinterested supporter of the whig principles. It was long before he could so far overcome his natural diffidence as to speak in public; although, in private com- pany, the clearness of his judgment, the solidity of his remarks, and the strength and accuracy of his expression, had decidedly proved that his grace possessed the chief requisites of a distinguished orator. What the persuasions of his friends could not effect, was at length un- expectedly produced by a momentary glow of indignation. In a debate in the house of lords, the duke imagined himself personally alluded to by one of the speakers. He rose and defended himself and his party by a most able and ani- mated reply. From that period he occasionally spoke upon the most important questions that divided the house, and was constantly heard, even by his political adversaries, with the most respectful attention. His eloquence was rather solid and masculine than brilliant and showy ; he did not trim up his language with the gaudy flowers of the rhetorician, but always spoke with such accuracy, and dignity of style and manner, as

naturally resulted from the profound medita- tion of an enlarged and cultivated mind.

But the duke of Bedford was not merely eminent as an orator and politician ; he deserved much regard as an anxious promoter of agricul- cure, and every art subservient to that highly important pursuit. The late Mr. Bakewell was one of his first instructors in the knowledge of cattle ; but he soon equalled, if not excelled, his

muster, at least in a knowledge of the subject, though not perhaps in success as an improver of the different breeds. His improvements in farm- ins:, as well as grazing, were very considerable. His experimental farm consisted of about 3000 acres, and it was in a state of cultivation, before his time, unexampled in this country. In the practice of irrigation his grace was remarkably successful, and he evinced its wonderful effects upon seveial hundred acres of land. The far- mers and graziers for miles round his family seat at Woburn will long remember his grand annual sheep- shearings held there; from which every one returned pleased with the hospitality and affability of the noble duke, and with the prospect of advantage to the agricultural in- terests of the nation at large, which the pre- miums here offered were likely to produce. His grace was never married. His death was occasioned by the strangulation of the hernia already spoken of; which was brought on by playing at tennis. He died March 2d, 1802, in his thirty-seventh year.

BEDFORD, the chief town of Bedfordshire, is a place of great antiquity, supposed to be an ancient Roman station, and by some the Lacli- dorum of Antoninus ; although Camden is of a different opinion, from the fact of its not standing on any of the Roman roads, as also from no Roman coins having been found in the immediate vicinity. It is situated on the river Ouse, ten miles from Olney, and fifty miles north of London ; and, according to the census of 1821, contains upwards of 1070 houses, and .”>46t> inhabitants.

Bedford is supposed to be the Bedicanford of the ancient Saxons, called Bedician Forda, for- tress of the Ford, from its fortifications, which commanded the river, and rendered the place almost impregnable. Several ancient battles were fought here, between the Britons and the Saxons, particularly one in 572, the obstinacy of which has been justly celebrated. It has also been the scene of many severe and bloody con- flicts with the Danes, and of many other changes and remarkable events, since, the

extinction of' the Danish power. Oli'a, king of the Mercians, chose this town as his burial place, and his re- mains were accord inu'ly interred in a small chapel, on the brink of the river; but both the royal deposit and the chapel containing them have been long swept away l>y a violent inundation. Shortly alter the Morman conquest, \ illiam Rufus gave the barony of Bedford 1o 1'ain de Beauchamp, who built a stronj; castle, adjoining the town. rlh is place, in il:)7, stood a siege against king ***tophen and his army, and was afterwards com- mitted to Faux de lirent, a royal favorite. But tin*** *ˆentli-man, having fortified it strongly, set the royal pout-rat defiance, and having other- wi>e rendered himself obnoxious to Henry III. the king, in 1'224, marched with an army to re- duce him to obedieiici- ; and alter a siege of two months, which forms one of the most curious details in F.nˆlish history, the place was stormed by tour assaults, and taken, the castle was dis- mantled, the trenches filled up, and of the site on w'nch it stood only a few traces are now visible. Before the conquest, here was a collegiate church,*

dedicated to St. Paul, which was afterwards re- moved to the parish of Goldington, about a mile distant. Numerous other religious houses, in the town and suburbs, were founded at an early period, of which scarcely any vestiges remain. A bridge of great antiquity stood over the river, which is hence navigable to the German Ocean '; but that edifice being in a state of great decay, was removed in 1013, and a new and handsome one was erected on its site, preserving the com- munication between the northern and southern divisions of the town. Bedford is generally con- sidered a compact, handsome place, containing the parishes of St. John, St. Mary, St. Cuthbert, St. Peter, and St. Paul. It is governed by a mayor, recorder, aldermen, two chamberlains, and thirteen common council men. It gives the title of duke to the family of Russel, and, as early as 1295, sent two members to parliament, the election of whom is vested in about 1400 voters, consisting of burgesses, freemen, and householders not receiving alms. The town is a borough and corporation by prescription, and the earliest charter is dated in 1166, 100 years after the conquest. Of the five churches three are on the north side of the river, and two on the south. St. Paul's is a very handsome Gothic edifice with a spire. It has a fine organ, a very ancient stone pulpit, and contains an altar tomb with brass figures of Sir William Harpur and his lady, the former of whom, a great benefac- tor of the town, died in 1574. The dissenters in Bedford are numerous and respectable. There are three Independent chapels, one of which was built as early as 1707, and a second in 1772. The celebrated John Bunyan was one of the pastors of the original meeting-house, which preceded both, from 1671 to 1688, and during the thirty-two years exercise of his ministry in that place and the neighbourhood, suffered twelve years imprisonment, in the course of which he finished his celebrated work entitled The Pil- grim's

Progress. A free grammar school was founded here in 1556, by Sir William Harpur, a native of Bedford, who, in the sixteenth century, was elevated to the dignity of lord mayor of Lon- don. It was endowed with thirteen acres of land, which, being now let for building, produces an improved rent of ––6000 per annum, the surplus of which is applied to other purposes of a chari- table nature ; ––700 is given in small premiums for the apprenticing of children, and ––800 is given in marriage portions, of ––20 each, to forty poor maidens of the town, with restrictions that the young women must be of good reputa- tion, between the ages of sixteen and fitty, and married within two months after receiving the gratuity. An infirmajy, capable of receiving thirty-eight patients, was erected in 1803; to- wards the building aad endowment of which Mr. Whitbread, one of the members of parlia- ment for the borough, gave ––8000. A new gaol was erected in 1801, towards which the same gentleman contributed ––500. In 1812 was erected an asylum for lunatics. The assizes and sessions of the county are held in the Shire hall, erected in 1753.

The principal manufacture is lace, but in the house of industry an extensive manufactory of

flannel has been established, which has consider- ably reduced the poor's rates.

The soil in the neighbourhood is singularly productive of good wheat and barley, which are chiefly sent to the markets of Hitchin and Hert- ford. There are six annual fairs, besides a wool fair, which has been established by the Agricul- tural Society of the county. There are also two weekly markets ; one on Saturday, for corn, and another on Tuesday for cattle. A consider- able trade is carried on in coals, timber, and iron, which are brought by the river from Lynn and Yarmouth.

The bailiff of Bedford is a name which the inhabitants of Ely have from time immemorial given to the inundations of the Ouse, the waters of which, after violent rains, frequently over- spread the island, so as to suspendall pursuits, and confine the people prisoners till they are abated.

BEDFORD, a county of the United States, in Virginia, bounded on the north by James river, east by Campbell, west by Botetourt, and south by Franklin county. It is thirty-four miles in length, and twenty-five in breadth. Chalk and gypsum are met with in this county. It is agreeably variegated with hills. The chief town is New London.

BEDFORD, a large mountainous county of Pennsylvania, bounded on the north by Hunting- don, east by the North mountain, west by the Alleghany mountain,and south by part of Washing- ton and Alleghany counties, in the state of Mary- land. It is fifty miles in breadth from north to south, and fifty-four in length from east to west; and is divided into nine townships, viz. Bedford, Woodbury, Hopewell, Dublin, Providence, Bel- fast, Bethel, Colrain, Cumberland valley, and Londonderry. The chief waters are the Rays- town branch of the Juniatta, Wills, and Licking creek. The chief mountains are Wills, Evils, Warriors, Sideling-hill, Dunnings, &c. and a few others of inferior magnitude. The valleys between some of these are extensive, rich, and in many parts well cultivated. Limestone and iron ore are found in many places. This county was pur- chased from the Indians in 1768 by Wrilliam Penn, and established in 1771.

BEDFORD, a post town of Pennsylvania, and capital of the above county, situated on the south side of the Raystown branch of Juniatta river, between two small creeks. The town stands on an eminence, and is embosomed by still loftier hills on all sides ; that on the west rising to the altitude of 1300 feet, and that on the east 1100. It is regularly laid out, and contains a brick market-house, a stone jail, a court-house, a brick building for keeping the records of the county, and a bank. The inhabitants are supplied with water from a spring at the distance of half a mile, which is conveyed by wooden pipes to a reservoir in the centre of the town. It was incorporated by an act of the assembly, passed in the winter session of 1 795, and is governed similar to Chester. It is ten miles west of Philadelphia. Long. 3►► 16′ W., lat. 40►► 0′ N.

BEDFORD NEW, a sea-port and post town in the county of Bristol, Massachusetts, United States of America, is about fifty-two miles south

of Boston, the capital of that province. Seated pleasantly on an arm of the sea, which stretches from Buzzard's Bay, and forms the estuary of the Accushnet river, it commands an extensive pros- pect, with a spacious and commodious harbour. As late as 1810 Bedford included Fairhaven, on the opposite side of the estuary, which has since been incorporated into a distinct town. Its popu- lation, after the above division, was computed at something more than 5000, many of whom are engaged in commerce. The chief buildings are a bank, five places of worship, and a library, be- sides which there is a considerable academy, for the use of the Society of Friends. The amount of shipping belonging to the port in 1818 was 24,000 tons. The vessels are employed in the whale, cod, and other fisheries, with the excep- tion of a few which trade to Europe and the West Indies. The average value of exports from this port of America has been calculated at 130,000 dollars; the imports are not accurately known. Ship-building is

carried on to a con- siderable extent, and a weekly newspaper is pub- lished. The town lies in lat. 41►► 38′ N., lon►►- 70►► 54′ W.

BEDFORD, a town of the United States in West Chester, county of New York, thirty-five miles N. N. E. of New York. Long. 70►► 51′ W.

BEDFORD, a town of Virginia, 100 miles south- west of Richmond.

BEDFORD, a town of the United States in the west end of Long Island, New York. Four miles north-west of Jamaica bay, and six east from the city of New York.

BEDFORD, a township of New Hampshire, in Hillsborough county. It lies on the west bank of the Merrimack, fifty-six miles west of Ports- mouth.

BEDFORD, CAPE, a cape on the coast of Labra- dor, in Davis' straits. Long. 67►► 50′ W., lat. 67►► N. ; also a cape at the north-east extremity of New Holland. Long. 214►► 45′ W., lat. 15►► 16′ S.

BEDFORD, NEW, a town of Massachusetts, in Bristol county. Fifty-eight miles south of Bos- ton. Long. 70►► 52′ W., lat. 40►► 41′ N.

BEDFORD LEVEL, an extensive tract of low land, stretching over part of the counties of SuffulkjNorfolk, Huntingdon, Lincoln, Northamp- ton, Cambridge, and the Isle of Ely, including a su- perficial area of nearly 400,000 acres, or 625 square miles. It appears from various phenomena, noticed by different authorities, that the greater part of this space anciently consisted of dry and cultivated land, although from mismanagement, neglect, or some convulsion of nature, it lost its fertility, and assumed its present appearance. Numerous trees of considerable dimensions, re- mains of buildings, with other natural and arti- ficial productions, found at various depths below the surface, sufficiently evince, that it could not always have been a morass ; although they furnisi no means of ascertaining the original causes and steps of its deterioration. Dugdale states, that in draining the isle of Axholme, many oaks, firs, and other trees were found at the depths of three, four, and five feet ; the roots were firm in the earth, and the trunks had been evidently burnt down, as the ends were reduced to a kind of charcoal. ' The oaks were lying in multitudes,

and of an extraordinary size, being five yards in compass, and sixteen

yards long, and some smal- ler, of a great length, with a great quantity of acorns, and small nuts near them.' Coincident with the above statement, is the following of Mr. Elstob, in his Historical Account of the Bedford Level; which relates, that ' in 1764, many roots of trees were found near Boston in Lincolnshire, in the position in which they had grown, at the depth of eighteen feet below the thin pasturage of the surface.' But the most remarkable cir- cumstance is, that not only trees, but the foun- dations of buildings, a smith's forge, with many of his tools, several iron articles, horse-shoes 8cc. have been found near Boston, at sixteen feet depth in the soil. Tacitus, in his Life of Agricola, states that ' the Britons complained of their hands and bodies being worn out and consumed by the Romans, in clearing the woods, and embanking the fens,' in which he is thought to allude more particularly to the destruction of the forests, which anciently covered a considerable part of the Bed- ford Level. Henry of Huntingdon, a writer of the time of king Stephen, who reigned from 1136 to 1154, describes this part of the kingdom ' as very pleasant and agreeable to the eye, watered with many rivers which run through it, diversi- fied with many large and small lakes, and adorned with many woods and islands.' William of Malmsbury, who flourished in the reign of Henry II., Stephen's successor, describes this tract of country in the most favorable terms, and mentions with astonishment the size of the trees, by which many parts of it were adorned. This statement forms a singular coincidence with those already given, and is corroborated by facts and evidences yet remaining, which furnish, perhaps, the best illustration of this singular and interesting sub- ject.

It is evident, from the above testimonies, that the inundation, by which this beautiful country was converted into the present morass, must have happened 'after the period of the latter historian, although the precise circumstances which led to it are not determined. This is certain, that the country was completely overflowed, and that it was rendered almost impassable, even for boats, by the sedge, reeds, and mud, with which it was covered, while the putrid effluvia, arising from the stagnant waters, destroyed the health of the inhabitants.

The reign of Edward I. was distinguished by an unsuccessful effort to drain these fens, and several succeeding attempts, in the reigns of Henry VI. and Charles I., after involving consi- derable expenses, were alike unfortunate. At length, in the year 1634, Francis, earl of Bed- ford, in conjunction with thirteen gentlemen, un- dertook the Herculean task, and to a considerable length succeeded ; whence the whole of this farming district was called after his name. As a considerable part of the estate of this nobleman consisted of possessions in the vicinity of this rnnrsh, which had been granted to his ancestor on the dissolution of the monasteries, by Henry \ 1 1 1 ; he prosecuted the work with the greater assiduity, on the promise of

having 95,000 acres assigned him in case of a successful accomplish- ment of his enterprise. The king granted an

immediate charter of incorporation, and within three years and a-half from the before mentioned period, the public surveyor, at the instance of the commissioners, set out the land. The right of this corporation was afterwards opposed, and the earl dispossessed of the reward of his services; but the civil wars giving a new direction to the schemes of political enterprise, William Duke o Bedford was, in 1649, restored to the possession of his rightful patrimony, and under the patron- age of a new act, operations were continued upon an extensive scale ; and in 1653, after an expense of ►►400,000, the level was thought to be fully drained, and the original grant was finally con- firmed. The new territory was afterwards (for the better regulation of property), divided into three districts, viz. the northern, middle, and southern. A surveyor was appointed for each of the former, and two for the latter; numerous contentions, litigatioas, charters, and laws, have nevertheless issued ; for further information upon which we refer the reader to the Beauties of England and Wales, vol. ii. and Elstob's Historical Account of the Bedford Level. Notwithstanding all that has been done, much fine land remains undrained in this part of En- gland ; and, in the winter season, is subject to frequent inundations. It is the haunt of vast flocks of water fowl, which are taken in consi- derable numbers. As many as 3000 couple are often sent to the London markets in one week, from a single decoy, in the neighbourhood of Ely.

BEDFORDSHIRE, a small inland county of Enghnd, bounded on the north and north-west by Northamptonshire, on the east by the counties of Huntingdon, Cambridge, and Hertford, and on the west by those of Buckingham and Northamp- ton. Its limits are winding and irregular, and the only natural ones are the Ouse, for a short space on the east and west, and a small rivulet on the south-west border. Its form is nearly oval ; it is thirty-six miles in extreme length, from eighteen to twenty-two in breadth, and 145 in circumference.

The total of land in this county has been variously calculated. The report of the Board of Agriculture states the superficial area at 307,200 acres. The returns to parliament, relative to the poor's rates, make it 275,200 acres; but Dr. Becke, in his Observations on the Income Tax, gives the content at 293,059 acres ; whilst the Population Returns of 1821 state the area at 463 square miles, which is rather more than the mean of the three preceding numbers, and is founded upon the Trigonometrical Survey of England and Wales. According to one, we believe, of the most correct authorities, the superficial content of land in Bedfordshire is computed at 296,320 square acres, of which 80,000 are in a course of tillage, and

168,000 employed in pasturage. This populated area includes 124 parishes, with ten market towns, in which are 13,640 houses, and upwards of 71,000 inhabitantˆ of whom 4155 families are employed in commerce and manufactures, and 9431 in agriculture. It is in the Norfolk circuit, province of Canterbury, and bishopric of Lincoln, and is divided into nine hundreds, viz. Barford, Biggleswade. Clifton,

Flitt, Manshead, Redborne, Stodden, Willey, and Wixamtree. Its rivers are the Ouse, the Ivel, the Lea, and the Ouzel, together with a few others of inferior note, which come more properly under the denomination of streams. The Ouse is made navigable to Bedford, and divides the county into two parts. Nearly the whole of Bedfordshire lies upon the eastern side of the grand ridge, which separates the waters which flow into the German Ocean from those which pour themselves into the Irish Sea : its general inclination is there- fore towards the east, and in that direction its principal rivers flow.

The face of the county is generally varied with small hills and valleys, few of which aspire to the height of mountains. There are, nevertheless, some of a bolder description. The Chiltern hills, composed of a vast mass of chalk and flint stones, lie along the southern border, and form a lofty range, which, rising to an unusual altitude, and irregularly projecting over the valleys, gives the whole landscape a remarkable appearance. The clay hills are stretched over the northern part, and a ridge of sand hills enters the county from the west, in a direction towards the north-east. From the south-east corner to the middle of the county runs a line of good dairy land ; the western side is, for the most part, flat and sandy. The north and east portions have a deep soil, which produces large crops of corn, and is gene- rally well wooded. The alluvial soils, which pre- vail in Bedfordshire, generally consist of yellow and dark colored clays, which are diversified with tracts of chalk and sand. On the south of Luton and Dunstable particularly, the upper stratum is chalk, blended with numerous layers of flints and silicious earth, which is succeeded by hard chalk alone. The mineral productions of the county are limestone, coarse marble, and some coal. The fuller's earth, which is found so plentifully, is a kind of mixed clay, chiefly obtained in the neighbourhood of Woburn, and is of great use in cleansing woollen goods. Mineral springs are also found in different parts of the county, al- though they have not acquired much celebrity. The chief are those of Barton, Bedford, Bletsoe, Blunham, Bromham, Bushmead, Clapham, Cranfield, Holcot, Milton Ernest, Odell, Perten- hall, Riseley, Silsoe, Turvey, and Wrest Garden. Some of these are saline, and

others chalybeate, whilst several have not been yet analysed.

The climate of Bedfordshire, from its situation as an inland county, is of a medium temperature and moisture. From meteorological observations, made at Leighton-Buzzard, for four years, ending with 1804, it appeared that the mean monthly height of the baromptpr was 29►►52 inches ; that of the thermometer, with a northern aspect, and in the open air, observed at eight o'clock in the morning, was 47►► 2. The average quantity of rain per month was 1,93 inches, and the evapo- ration 1'05. Thus, by multiplying these numbers by 12, we have 23'16 and 12'6, the former of which is little more than the average of London. The most prevalent wind observed during this period was the south-west. Upon the whole, this county does not appear to be remarkably salu- brious, since, from the late returns of the popu- lation, fewer instances of longevity were found,

in proportion to the number of inhabitants, than in many others of the united kingdom.

This county has never been remarkable for the extent of either its commerce or manufactures. The most general employment is the making of lace, and preparing straw-plat for the manufac- ture of hats, bonnets, baskets, toys, mats, &c. The market-towns, for the promotion of internal commerce, are, Bedford, Ampthill, Dunstable, Biggleswade, Leighton-Buzzard, Luton, Potton, Shefford-Tuddington, and Woburn. Four mem- bers are sent from this county to parliament, in which the Russel, Osborne, and Whitbread fa- milies have a preponderating influence.

When the Romans landed in Britain, A. A. C. 55., this county was included in the district in- habited by the Catieuchlani, whose chief, Cassi- belinus, headed the force of the whole island against Caesar, and the year following was totally defeated. In 310 the emperor Constantine di- vided Britain into five Roman provinces, when this county was included in the third division, called Flavia Caasariensis ; in which state it con- tinued 426 years, when the Romans quitted Bri- tain. A severe battle was fought at Bedford in 571 or 580, between the Saxons and the Britons. At the establishment of the kingdom of Mercia (one of the divisions of the Saxon heptarchy), it was considered as part of that kingdom ; and so continued from 582 to 827, when, with the other petty kingdoms of the island, it became subject to the West Saxons, under Egbert, and the whole was named England. In 889 Alfred held the sovereignty, when England was divided into counties, hundreds, and tythings, and Bed- fordshire first received its present name.

In the tenth and eleventh centuries, this county was the seat of various conflicts with the Danes, which terminated in the final expulsion of the invaders. Many castles had been erected during these periods, most of

which were demolished by king John, during his progress to the north, except that of Bedford, which was dismantled by Henry III. ; after which the county is noted for few remarkable occurrences till the year 1642, when it entered into an association against Charles I.

The remains of both Saxon and Gothic archi- tecture are to be seen in several of the churches, as also a few specimens of stained glass in their windows. Roman antiquities, also, are frequently discovered in the county. It is intersected by three Roman roads, and interspersed with mili- tary stations. A fortification, called Totternhoe Castle, is seen on the brow of a hill, about two miles from Dunstable, and consists of a lofty cir- cular mound, with a slight vallum around its base ; at a distance from which is a much larger one, of irregular form. The other remarkable re- mains are, a Roman station at Sandy near Potton, (the Magiovinum of Antoninus,) by others sup- posed to be the ancient Salenae, containing thirty acres, where many urns, coins, &c. have been dug up. Another atMadining-bowre, or Maiden- bower, one mile from Dunstable, containing about nine acres, which Camden supposes to have been a Roman station, from the coins of the emperors having been frequently dug up there, and calls it Magintum. Leighton-Buzzard B

*supposed to have been a Roman camp, and ano- ther is at Arlesey near Shefford, and a Roman ampltitheatre may be traced near Bradford Magna. The Roman road, Icknield-street, crosses this country; entering at Leighton-Buzzard, from whence it passes Dunstable, where it inclines northward over Warden hills to Baldock in Hert- fordshire. The Watling-street enters this county near Luton from St. Albans, passes a little north of Dunstable, where it crosses the Icknield-street, and from thence to Stoney Stratford in Bucking- hamshire. A Roman road also enters near Potton, passes on to Sandy, and from thence to Bedford, where it crosses the Ouse, and proceeds to New- port Pagnell in Buckinghamshire. The following antiquities in this county are well worthy of attention : Bedford Bridge and Priory ; Chick- sand Abbey, near Shefford ; Dunstable Priory, near Luton ; Eaton Park House, or Eaton Bray ; Five Knolls, near Dunstable ; Newnham Priory, near Bedford ; Northill church, three miles from Biggleswade ; Summeris Tower, near Luton ; Warden Abbey, near Shefford ; Woburn Abbey ; and Woodhill Castle, or Oddhill Castle, near Harwood. ***

John duke of Bedford, third son of Henry IV. king of England, commanded the English army in France in 1422 ; and, after mak- ing himself master of that kingdom, died at Rouen in 1435, where a handsome monument was erected to his memory. One of the courtiers of Charles VIII. having advised him to destroy it, the king answered, ‘ Let him rest in peace, \vlio, when living, made all the French tremble.’

BEDIM, be and dim. See DIM.

BEDIZEN, be and dizen. See DIZEN.

BED’LAM, n. & adj. } Corrupted from

BED LAMITI;. \bethlehem, the name

of a religious house in London, converted after- wards into an hospital for the mad and lunatic. The adjective, in the sense of mad, is applied to things as well as persons.

Let’s follow the old carl, and get the bedlam To li’iul liim whore IK; would ; his roguish madness Allows itself to any thing. Shafapeare.

One morning very early, one morning in the spring, I heard a maid in Bedlam, who mournfully did sing, Her chains she, rattled on her hands, while sweetly

thus sung she, I love my love, because I know my love loves me.

Prior.

If wild ambition in thy bosom reign, Alas’, thou boast ‘st thy sober sense in vain; In these poor bedlamites thyself survey, Thyself less innocently mad than they.

Fitzgerald.

At this rate we are wonderfully mistaken when we speak of Don Quixote as a madman, and of Leonidas, Brutus, Wallace, Hampden, Paoli, as wise, and good, and great ! The case it seems is just the reverse ; these deserve no other names than that of raving bedla Beattie. Don Quixote.

BF. 1)1.1$, or BETI.IS, a strong town of Asiatic Turkey in the IVirhalic of Van, lat. 38►► 34′ N., and long. 4‘2J 3.V I-.. It is placed in a narrow defile, defended by a triangular castle, between two lofty mountains, and traversed by the river Ku/ur, -which joins the .Ini Rabat below. Here aie many public buildings deserving notice, and

among them several medresehs, or colleges, which, together with the list of eminent writers who hare been natives of this place, show that learning was much encouraged by its former rulers. The castle contains 300, and the, town about 5000, houses within its precincts. This fortress submitted to the Mussulman arms under the caliphate of Omar (A. D. 647), and was conquered by the Turks under Sultan Murad IV. (A. D. 1634). Its inhabitants are Ruzegis, a tribe of Kurds and Armenians, in nearly equal proportions, who amounted in the middle of the seventeenth century to about 80,000. The strength of its position has often enabled them to maintain a virtual independence of the Porte.

BEDLOE (William), who assumed the title of captain, was an infamous adventurer of low birth, in the reign of Charles II. He had tra- velled over great part of Europe under different names and disguises, as a man of rank and for- tune. Encouraged by the success of Gates, he gave an account of Godfrey's murder, and added many circumstances to the narrative of the for- mer. These villains had the boldness to accuse the queen of entering into a conspiracy against king Charles I's life. A reward of ––500 was voted to Bedloe by the Commons. He is said to have asserted the reality of the plot on his death-bed: but it abounds with absurdity, con- tradiction, and perjury. He died at Bristol, August 20th, 1680. Giles Jacob informs us, that he was author of a play, called The Excom- municated Prince, or the False Relict, 1679. The printer of it having, without the author's knowledge, added a second title, and called it The Popish Plot in a Play, greatly excited the curiosity of the public, who were, however, much disappointed, when they found the plan of the piece to be founded on a quite different story. Anth. Wood, however, asserts that this play was written partly! if not entirely, by Thos. Walter, M. A. of Jesus College, Oxford.

BED-MOULDING, in architecture, usually consists of an ogee, a list, a large boultine, and another list under the coronet.

BEDNORE, or BIDDANORE, a district in the north-west extremity of the Mysore, llindostan, on the summit of the western Ghauts. From the elevation of the country, the season is a month later here than on the sea coast. The exports consist of cattle of small size, pepper, betel-nut, cardamoms, sandal-wood ; the imports are salt, rice, cocoa-nuts, oil, turmeric, and cotton cloths. When overrun by Hyder, in 1762, the Bednore dominions extended over the maritime province now named Canara, and to the east over a tract of open country, extending to Sunta, Bednore, and Hoolukera, within twenty miles of Chittel- droog.

BEDNORE, or BIDDANORE, a town of Hindos- tan, capital of the district of that name, 452 miles south-east of Bombay, and 187 north-west of

Seringapatam. It was taken by the British in 1783, and retaken soon after by Tippoo Sultan; but on his defeat and death, in 1799, the town and its suburbs became subject to the British. It is said to have been once a well-fortified and magnificent city, containing 20,000 houses : at the time of the sultan Tippoo's death, it con-

sisted of about 1500 houses, besides huts. When taken by Hyder, in 1763, it was eight miles in circumference, and it is said the plunder actually realised amounted to twelve millions sterling. He afterwards changed its name to Hydernagur.

BEDOTE, To doat upon, to pet, to befool; obsolete.

To bedote this I ween was their interest.

BEDOWINS, or BEDWINS, the nomade inha- bitants of the Arabian and African deserts, whose name, derived from the Arabic bedowi, ' a native of the desert,' answering to the Arabes scenitae of the ancients, or Arabs dwelling in tents, agrees with their mode of living in encampments, pitch-ing their movable habitations wherever they can find pasturage, and changing their site as often as plunder, famine, and other circumstances may require.

They are the purest and best preserved of all the Arab tribes, tracing their origin to the twelve tribes of Ishmael, mentioned in Gen. xvi. 11, xxv. 12; and are the lineal descendants of those ancient Arabs mentioned by the Greek historians, whose site they occupy, and whose customs, manners, prejudices, and superstitions, they ri- gorously preserve. These people have been fre- quently confounded by ecclesiastical writers with the Edomites, Amalekites, and other neighbour- ing nations to the Hebrews ; but it is evident that the latter nations, although branches derived from the same stock, differ in many important points from the genuine Bedowins.

Dwelling in the interior of those vast deserts which extend from the confines of Persia to Morocco, the true Arabians have had little foreign intercourse, and have never mixed with surrounding nations, either by conquest or cap-ture ; few emigrations occurred even at the epoch of the revolution effected by Mahomet : on which account, the prophet, in his Koran, is continually styling the Arabs of the desert infi- dels and rebels ; nor has the lapse of time since that period effected any remarkable change in their national character. They still answer the description given by the angel in prophecy, ' wild men, whose hand is against every man, aud every man's hand

against them ;' and their mode of living, at the present day, is precisely the same as that mentioned by Diodorus Siculus, nearly 2000 years ago. It has, indeed, been thought remarkable, that Diodorus should ob- serve silence with respect to their predatory habits; but it is highly probable that, at that time, they were so much restrained by the vigi- lance of the Roman government, as rarely to have an opportunity of exhibiting that distinguishing feature of their character.

The wandering life of these people arises in a great measure from the site they occupy. To paint to himself these deserts (says Mr. Volney,) the reader must imagine a sky almost perpetually inflamed, and without clouds, immense and boundless plains, without houses, trees, rivulets, or hills, where the eye frequently meets nothing but an extensive and uniform horizon, like the sea, though in some places the ground is uneven and stony. Naked as it is almost invariably on all sides, the earth presents nothing but a few wild plants thinly scattered, and thickets, whose

solitude is rarely disturbed but by antelopes, hares, locusts, and rats. Such is the nature of nearly the whole country, which extends 600 leagues in length and 300 in breadth, stretching from Aleppo to the Arabian Sea, and from Egyp►►t to the Persian Gulf. It must not, however, be imagined that the soil in so great an extent is everywhere the same; it varies considerably in different places. On the frontiers of Syria, for example, the earth is in general fat and culti- vable, nay even fruitful. It is the same also on the banks of the Euphrates : but in the internal parts of the country, and towards the south, it becomes white and chalky, as in the parallel of Damascus; rocky, as in the Tih and the Hed- jaz ; and a pure sand, as to the eastward of Ye- men. This variety in the qualities of the soil is productive of some minute differences in the condition of the Bedowins. For instance, in the more sterile countries, that is, those which pro- duce but few plants, the tribes are feeble and very distant ; which is the case in the desert of Suez, that of the Red Sea, and the interior of the great desert called Najd. Where the soil is more fruitful, as between Damascus and the Euphrates, the tribes are more numerous, and less remote from each other ; and, lastly, in the cultivable districts, such as the pachalics of Aleppo, the Hauran, and the neighbourhood ofc Gaza, the camps are frequent and contiguous. In the former instances, the Bedowins are purely pastors, and subsist only on the produce of their herds, and on a few dates and fresh meat, which they eat either fresh or dried in the sun and re- duced to a powder. In the latter, they sow some land, and add cheese, barley, and even rice, to their flesh and milk diet. In those districts where the soil is stony and sandy, as in the Tih; the Hedjaz, and the Najd, the rains make the seeds of the wild plants shoot, and revive the thickets, ranunculi, wormwood, and kali. They cause marshes in the lower grounds, which pro- duce reeds and grass, and the plain assumes a tolerable degree of verdure.

While the rains continue, the soil produces great abundance both for the herds and their masters ; but on the re- turn of the heats every thing is parched up, and the earth, converted into a gray and fine dust, presents nothing but dry stems as hard as wood, on which neither horses, oxen, nor even goats can feed. Such is the situation in which nature lias placed the Bedowins, to make, of them a race of men equally singular in their physical and moral disposition.

The peculiarities of the Bedowin Arabs are so striking, that their neighbours the Syrians regard them as extraordinary beings, especially those tribes which dwell in. the depths of the deserts, such as the Anasa, Kaibar, Tai, and others, which never approach the towns. When, in the time of Sheik Daher, some of their horsemen came as far as Acre, they excited the same curi- osity there as a visit from the savages of America would among us. Everybody viewed with sur- prise these men, who were more diminutive, meagre, and swarthy, than any of the known Be- dowins. Their withered legs were only composed of tendons, and had no calves. Their bellies seemed to cling to their backs, and their hair was

frizzled almost as much as that of the negroes. They, on the nt.ber hand, were no less astonished ai every thing; they saw ; they could nei.ier con- ceive how the houses and minarets could stand erect, nor how men ventured to dwell beneath them, and always in the same spot; but above all, they were in ecstacy on beholding the sea, nor could they comprehend what that desert of water could be. The Arabs of the frontiers are not such novices ; there are even several small tribes of them, who, aving in the midst of the country, as in the valley of Bekaa, that of the Jordan, and in Palestine, approach nearer to the condition of the peasants ; but these are despised \y the others, who look upon them as bastard Arabs and Rayas, or slaves of the Turks. The Bedowins in general are small, meagre, and tawny, owing to the heat of the climate, their con- tinual exercise, and extraordinary abstinence; but well formed, active, and alert in a high de- gree, having expressive countenances, and bright sparkling eyes. Their beards are remarkably thin, their hair is black and wiry. The two ends of the shawl which forms their turban, hang down upon their shoulders, and constitute almost the only distinction between the dress of the Be- dowins and other Arabs. Their sheiks wear very wide sleeves to their robes, and girdles richly embroidered. They also preserve a single lock from the crown of the head, by which, in common with other superstitious Mussulmans, they believe the prophet will carry them up to Paradise They are continually stroking and anointing their beards; to spit upon which is the*

greatest possible offence, and the loss or diminu- tion of it will cause an Arab to wander far from his tribe, and even from his country, to avoid the derision consequent upon such a catastrophe. The abstinence of the Bedowins has long been celebrated ; indeed the inferior classes live in a state of almost habitual wretchedness and famine, especially amonˆ the tribes of the Najd and the Iledjaz. It will appear almost incredible to us, but is an undoubted fact, that the quantity of food usually consumed by the greatest part of them does not exceed six ounces a day. Six or seven dates soaked in melted butter, a little sweet milk or curds, is the Bedowin's common allow- ance, and he deems himself happy when he can add a small quantity of coarse flour, or a little ball of rice. Meat is reserved for the greatest festivals; and they never kill a kid but for a ir,;u riace or funeral. A few wealthy sheiks alone kill young camels occasionally, and eat baked rice with their victuals. In times of dearth, the vulgar, always half famished, do not disdain the most w retched kinds of food : and eat locusts, rats, li/anls, and serpents, broiled on briars. Henri! are they such plunderers of the cultivated lands, and robbers on the high roads. Habit undoubtedly has its influence in enabling them to .support this extraordinary abstemiousness, by preventing the dilatation of the stomach, other- wise common to the human constitution; whilst the extreme heat of the climate destroys in a great measure the activity and tone of the diges- tive organs. \ lien we consider the influence of ###-Innate, custom, and discipline, the real wants of the)n:dowin appuar few, and easily satisfied ;

and it has been questioned whether even the above abstinence arises from choice or necessity. But, depending for provisions entirely on the oases, or small islands of verdure, which lie scat- tered upon the desert, the produce of which is often destroyed by the hot pestilential winds, his means appear still more contracted than his exigencies, and leave no doubt that necessity is the parent motive.

M. Volney remarked that the sheiks, that is the rich, and their attendants, were always taller and more corpulent than the common class. He has seen some of them above five feet five and six inches high ; though in general they do not (says he) exceed five feet two inches. This dif- ference can only be attributed to their food, with which the former are supplied more abundantly than the latter : the effects of this are equally evident in the Arabian and Turkish camels, for the latter, dwelling in countries rich in forage, are far more robust and fleshy than the former.

With respect to their internal constitution and government, the Bedowins are divided into sepa- rate tribes, each composed of one or more prin- cipal families, the members of which bear the title of sheiks, i. e. chiefs or lords. These families have a great resemblance to the patricians of Rome, aiid the nobles of modern Europe. One of the sheiks has the supreme command over

the others. Mr. Neibuhr styles him the grand sheik. He is the general of their little army ; and some- times assumes the title of emir, which signifies commander and prince. The more relations, children, and allies he has, the greater is his strength and power. To these he adds particu- lar adherents, whom he studiously attaches to him, by supplying all their wants. A number of small families also, who, not being strong enough to live independent, stand in need of protection and alliances, range themselves under the ban- ners of this chief; forming by their union the elementary parts of what is called a kabila, or tribe. The tribes are distinguished from each other by the name of their respective chiefs, or by that of the ruling family ; and when they speak of the individuals who compose them, they call them the children of such a chief, though they may not be all really of his blood, and he himself may have been long since dead. Thus they say, Beni Temin Oulad Tai, the children of Temin and of Tai. This mode of expression is even applied, by metaphor, to the names of countries : the usual phrase for denoting its in- habitants being to call them the children of such a place. Thus the Arabs say, Oulad Masr, the Egyptians ; Oulad Sham, the Syrians ; they would also say, Oulad Fransa, the French ; Ou- lad Moskou, the Russians ; a remark which is not unimportant to ancient history.

The principal sheik has an indefinite and almost absolute authority. He nevertheless leads a simple life, and commonly studies the welfare of his subjects. Persons of this descrip- tion, according to M. Volney, who in 1784 resided with one of the most powerful in the country of Gaza, may be compared to our sub- stantial farmers. A sheik who has the command of 500 horsemen, does not disdain to saddle and bridle his own horse, and give him barley and

chopped straw. In the tent, his wife makes the coffee, kneads the dough, and superintends the dressing of the victuals. His daughters and kins- women wash the linen, and go with pitchers on their head, and veils over their faces, to draw water from the fountaia These manners are highly antique, and agree precisely with the descriptions of Homer, and the history of Abra- ham in the book of Genesis.

Every grand sheik considers himself, in a po- litical point of view, absolute lord of his whole territories ; he exacts duties upon all goods car- ried through his dominions, to which impositions those who send caravans through the desert to Mecca, are obliged to submit. The Bedowins, on the other hand, keep open the wells for them ; permit the free passage of

merchandise, escort the caravans, and if they sometimes pillage them, the haughty perfidious conduct of the Turkish offi- cers is the invariable cause. The latter affect to consider the former as rebels, and violate their engagements. The Arabs take their revenge by pillaging the caravans. When the famous Ali Bey conducted the Egyptian caravan to Mecca, he refused to defray all the duties on the road, but promised to pay the rest on his return. This promise was broken, and the year following, the Arabs assembled in greater numbers, and obliged the captain of the caravan to pay for himself and Ali Bey both. The Turks exclaimed against this as an act of robbery ; yet the Arabs had only done themselves justice. The conduct of Abdal- lah, pacha of Damascus, who commanded the Syrian caravan in 1756, was still more odious. When the sheiks of the tribe of Harb came to meet him, to receive the stipulated toll, he gave them a friendly invitation to visit him, but instead of paying the toll, cut off their heads, and sent them to Constantinople, as a proof of his victory over the rebel Arabs. The stroke which the latter suffered by the death of their chiefs, prevented their attempting any thing in revenge either that or the following year; the caravans travelled in triumph to Mecca; and the Turks boasted of the valor and prudence of Abdallah Pacha. But, in the third year, the dark storm of vengeance burst over the heads of the aggressors, when the Arabs, with an army of 80,000 men, under the command of the sheik of the Anaese tribe, routed the Turks with great slaughter, and confiscated the treasures of a large caravan. These violent measures, however, may be con- sidered as only the effects of perfidy and pro- vocation. Mr. Niebuhr observes, that the Bedowins are not cruel, and do not murder those whom they rob, except where the travellers stand upon the defensive, and in the contest kill one of their number; in which case the Arabs proceed according to the law of retaliation. A mufti of Bagdad, returning from Mecca, says the same author, was robbed inNedsjed. He entered into a written agreement with the robbers, who en- gaged to conduct him safe and sound to Bagdad for a certain sum, payable at his own house. They delivered him to the next tribe ; those to a third, and he was thus conveyed from tribe to tribe, till he arrived safe at home.

An European, belonging to a caravan which was plundered, had been infected with the plague

upon liis journey. The Arabs, seeing him too weak to follow his companions, took him with themselves, lodged him without their camp, attended him till he was cured, and then sent him to Basra. An Englishman, who was tra- velling express to India, and could not wait for the departure of a caravan, hired two Arabs at Bagdad, who were to accompany him to Basra. By the way he was attacked by some sheiks, against whom he at first defended himself with his pistols ; but, being hard pressed by their lances, was forced to surrender. The Arabs, upon whom he

had fired, beat him till he could not walk. They then carried him to their camp, entertained him for some time, and at last con- ducted him safe to Basra. When Mr. Forskal was robbed by the Arabs in Egypt, a peasant, who accompanied him, was beaten by the robbers because he had pistols, although he had made no attempt to defend himself with them. Pil- laging expeditions amongst the Arabs are con- sidered as lawful hostilities against enemies, who would defraud the nation of their dues, or against rival tribes, who have undertaken to protect illegal traders.

*The tribes of the Bedowins are extremely numerous, and to attempt an enumeration of them would be a hopeless task. Soyuti, in the fifteenth century, collected many interesting accounts respecting them ; but all investigations must, from the very nature of the subject, be exceedingly imperfect. The principal noticed by modern travellers lie in the following order : ***

I. Those on the southern and eastern side of the Great Arabian and Syrian Desert, extending from the province of Nejed and El Ahsa to the banks of the Euphrates.

1. Bern Khaled (the children of Khaled), in El Ahsa.

2. Beni Kiyab, on the northern side of the Persian Gulf, and in Persia.

3. Beni Lam, on the Tigris.

4. Montefic, or Montefij, on the Euphrates, between Basra and Baghdad.

II. Those on the borders of Mesopotamia (Al Jezirah), nominally subject to the pacha of Baghdad.

1. Tai, one of the most ancient and powerful tribes, occupying the fertile plains between Mosul and Nisibis, and rendered illustrious by one of its princes named Hatim, the subject of many well-known romances.

2. Some other tribes which are small and un- important.

III. Those on the borders of Syria, who provide escorts for the caravans of pilgrims to Mecca.

1. The Mawali.

2. The Beni Saker

3. The Fahili, and

4. A numerous and powerful tribe, master cf the whole caravan route

between Aleppo and Medinah; and, during the reign of the Wahhabis, one of their most effective adherents. It is di- vided into five inferior clans, and extends from Syria to the Nejed.

IV. More than one hundred other tribes have been mentioned by the writers whose names are

at the close of this article ; besides which there are several in Oman, Hadramaut, Mahrah, and other provinces of the Arabian peninsula, who have never been visited by Europeans. Bedo- wins also occupy a large portion of Egypt, stretch along the banks of the Nile, almost to the confines of Abyssinia, and are found even in the Sudan itself, as far as the fifteenth degree of east longitude. The latter call themselves branches of the Anezehs, Joha'inahs, and other well-known tribes in the Arabian and Syrian deserts. The Bedowins in Sudan retain the Arab cast, both in complexion and features, bearing no similitude to the negroes, and one of the Bern" Hassan, established in Dar Katakii, near Bornii, whom Burckhardt met at Mecca, was of a dark brown color, ' approaching to a copper tinge ;' yet ' his features were decidedly Arab,' having nothing of the Negro in them. ??? Burckhardt' s Nubia, p. 477.

Each of the Bedowin tribes appropriates to itself a tract of land, forming its territorial do- main ; and collected in camps, which are dispersed through the country, make a successive progress over the whole, in proportion as it is exhausted by the cattle. Hence it is, that within a great extent few spots are inhabited, and these vary from one day to another ; but as the entire space is necessary for the annual subsistence of the tribe, whoever- encroaches on it is deemed a violator of property; tins is with them the law of nations. If, therefore, a tribe, or any of its subjects, enter upon a foreign territory, they are treated as enemies and robbers, and a war breaks out. Now, as all the tribes have affinities with each other by alliances of blood or conventions, leagues are formed which render these wars more or less general. The manner of proceeding on such occasions is very simple. The offence made known, they mount their horses and seek the enemy ; when they meet they enter into a parley, and the matter is frequently made up; if riot, they attack cither in small bodies or man to man. They encounter each other at full speed with fixed lances, which they sometimes dart, not- withstanding their length, at the flying enemy: the victory is usually decided by the first shock; tin' vanquished take to flight full gallop over the naked plain of the desert, and the night generally fa\ors their escape from the conqueror. The tribe which has lost the battle immediately strikes its tents,

removes to a distance by forced marches, and seeks an asylum among its allies. 1 he enemy, satistied with their success, drive their herds farther on, and the fugitives soon after return to their former situation; although t:;e slauuhter made in these engagements fre- quently sous the seeds of hatreds which originate future dissensions.

An eye for an eye, and a tooth for a tooth, was, we know, exacted by the law of Moses ; and the universality of this l.ex Talionis is one oi the distinctive marks of the Uedowin race, prevailing through the whole extent of the

<illegible>a'lian deserts. By this law the blood of every .
<illegible>ui must be avenged by shedding that of his

irderer. This vengeance is called tar, or re-

'- i.ition ; and the right of exacting it devolves

'<illegible>< t!;c I'eaiest of kin to the deceased. So nice

are the Arabs on this point of honor, that if any one neglects to seek his retaliation he is dis- graced for ever. He therefore watches every opportunity of revenge : if his enemy perishes from any other cause, still he is not satisfied, and his vengeance is directed against the nearest relation. These animosities are transmitted as an inheritance from father to children, and never cease but by the extinction of one of the families, unless they agree to sacrifice the criminal, or purchase the blood for a stated price, in money or in flocks. Without this satisfaction there is neither peace, nor truce, nor alliances, between them, nor sometimes even between whole tribes : there is blood between usy say they on every occasion ; and this expression is an insurmount- able barrier. Such accidents being necessarily numerous in a long course of time, the greater part of the tribes have ancient quarrels, and live in an habitual state of war; which, added to their way of life, renders the Bedowins a military people, though they have made no great progress in war as an art. Their camps are formed in a kind of irregular circle, composed of a single row of tents, with greater or less intervals. These tents, made of goat or camel's hair, are black or brown, in which they differ from those of the Turkmen, which are white. They are stretched on three or four pickets, only five or six feet high, which gives them a very flat appearance ; at a distance, one of these camps seems only like a number of black spots ; but the piercing eye of the Bedowin is not to be deceived. Each tent inhabited by a family is divided by a curtain into two apartments, one of which is appro- priated to the women. The empty space within the large circle serves to fold their cattle every evening. They never have any intrenchments ; their only advanced guards and patroles

are dogs ; their horses remain saddled and ready to mount on the first alarm ; but as there is neither order nor regularity, these camps, always easy to surprise, afford no defence in case of an attack : accidents, therefore, very frequently happen, and cattle are carried off every day; a species of marauding war in which the Arabs are very ex- perienced. The tribes which live in the vicinity of the Turks are still more accustomed to attacks and alarms. The latter never cease to wage secret or open war against them. The pachas study on every occasion to harass them. Some- times they contest with them a territory which they had let them, and at others demand a tribute which they never agreed to pay. Should a family of sheiks be divided by interest or ambition, they alternately succour each party, and conclude by the destruction of both. Frequently too they poison or assassinate those chiefs whose courage or abilities they dread, though they should even be their allies. The Arabs, on their side, regarding the Turks as dangerous enemies, watch every opportunity to do them an injury, cut their harvests, carry off their flocks, and in- tercept their communication and commerce, making it their study to put them to every in- convenience, and deprive them of every thing but life.

Notwithstanding the depredations which render them a terror to those around them, among

themselves they are remarkable for a good faith, a disinterestedness, and a generosity, which would do honor to the most civilised people. The rights of hospitality are scrupulously re- garded. The tent of a Bedowin is an asylum amongst all the tribes, and the moment a stranger, or even an enemy, flying for refuge arrives there, his person becomes instantly inviolable ; from that moment it would be reckoned an in- delible shame to satisfy even a just vengeance at his expense, and all the power of the sultan would be insufficient to force a refugee from the protection of a tribe, but by its total extermina- tion. Ali Bey (Don Pedro de la Badia), informs us, that when one of the Bedowins heard that his wife had given some food to his enemy, who by mistake solicited charity at his tent, he replied, ‘ I should probably have killed my enemy had I found him here, but I should not have spared my wife if she had forgotten the law of hospi- tality.’ What little the Bedowin possesses he is ever generous to divide, he sits at the door of his tent, and invites passengers to partake of his repast ; and to observe the conduct of the Bedowin Arabs towards each other, one would be tempted to suppose they had all things in common.

With respect to their domestic laws, Mr. Ni>> - buhr tells us, ‘ that,

although the Mahommedans are permitted to have four wives, the Bedowins, who are poor, and cannot easily find the means of subsistence, content themselves with one, for the most part. Those who are in the easiest cir- cumstances, and who have two wives, seem to have married so many, chiefly that they might superintend their concerns in two different places. The conduct of our sheik of Beni Said, as well as his conversation, led us to make this reflection. The disagreement that subsisted between his two wives afforded an instance of some of the inconveniences that attend polygamy. The dress of the females in the desert, although simpler, is in reality the same as that worn by the ordinary women of Egypt, although the wife of one of our sheiks wore an uncommon piece of dress : brass rings of an enormous size in her ears. These women living remote from the world, and being wholly occupied in the management of their domestic affairs, appear to be, from these circumstances, less shy and scrupulous than the other women of the east. They make less difficulty of conversing with a stranger, or exposing their faces unveiled before him.'

The property of the Bedowin, like his wants, lies within a small compass, and consists of movables, of which the following is a pretty exact inventory : ††† A few male and female camels ; some goats and poultry ; a mare and her bridle and saddle ; a tent ; a lance sixteen feet long ; a crooked sabre ; a rusty musket with a flint or matchlock ; a pipe ; a portable mill ; a pot for cooking; a leathern bucket; a small coffee roaster ; a mat ; some clothes ; a mantle of black wool ; a few glass or silver rings, which the women wear upon their legs and arms. If none of these are wanting their furniture is complete. But what the Arab takes most pleasure in is his mare, which is his chief support, and assists him /n his excursions. They prefer the mare on ac-

count of her superior docility, and her milk, together with the improbability of her neighing, to the betrayment of the rider. The Arabs trace the genealogies of their favorite horses to the mares of Mahomet's stud, or even to those of Solomon's. The power of enduring hunger and fatigue in these animals is astonishing. The Emir visited by the Chevalier d'Arvieux was saved by a mare, who carried him three days and nights, without rest or food, and conveyed him out of the reach of his enemies. The attach- ment of the Bedowin to his horse is almost as proverbial as the fleetness of the animal itself. He inhabits the same tent, is treated with the same care, and is almost as much caressed as the children of the family ; which gives the Arabian steeds a docility and tractability which no other breed possesses. Niebuhr, indeed, speaks of the Kohlaniet, or thorough bred Arabian horses, as not possessing any beauty, or other excellence than swiftness ; but it is highly probable that he was deceived by the wretched condition in which they are commonly kept, from the great difficulty of procuring fodder. He appears also to have been equally misinformed, as to the little value set

upon them by the Turks ; since the fact is certain, that the Turks esteem them highly, and give immense prices for them, when they can meet with the genuine Arab breed.

The simplicity of the Bedowins has long been celebrated, and numerous illustrations of it have been given. Their love of poetry is well known, and the most ancient Arabian poems, containing the lively descriptions of their customs and opinions, are the productions of Bedowins. The book of Job affords a more ancient picture of the same nation ; and both its phraseology and imagery are susceptible of much illustration from the poems and romances of the early Arabs. Tales in prose form another part of their favorite amusements, after the manner of the Adventures of Antar and Ablat, and the Arabian Nights. They have a peculiar passion for such stories, and employ in them almost all their leisure, of which they have a great deal. In the evening they seat themselves on the ground, at the thresh- old of their tents, or under cover, if it be cold ; and there, ranged in a circle round a little fire of dung, their pipes in their mouths, and their legs crossed, they sit a while in silent meditation, till on a sudden one of them breaks forth with, once upon a time, and continues to recite the adventures of some young sheik and female Be- dowin : he relates in what manner the youth first got a secret glimpse of his mistress ; and how he became desperately enamored of her: he minutely describes the lovely fair; boasts her black eyes, as large and soft as those of the gazelle ; her languid and impassioned looks, her arched eye-brows, resembling two bows of ebony; her waist straight and supple as a lance; he forgets not her steps, light as those of the young filley ; nor her eye-lashes, blackened with kool ; nor her lips painted blue ; nor her nails, tinged with the golden colored henna; nor her breasts, resembling two pomegranates ; nor her words, sweet as honey. He recounts the sufferings of the young lover, so wasted with desire and pas- ,sion that his body no longer yields any shadow.

At length, after detailing his various attempts to see his mistress, the obstacles of the parents, the invasions of the enemy, the captivity of the two lovers, &c. he terminates, to the satisfaction of the audience, by restoring them, united and happy to their paternal tent ; and receives the tribute paid to his eloquence, in the Ma cha allah (an exclamation of praise, equivalent to admi- rably well !) he has merited. The Bedowins have likewise their love songs, which have more sentiment and nature in them than those of the Turks and inhabitants of the towns ; doubtless, because the former, whose manners are chaste, know what love is; while the latter, abandoned to debauchery, are acquainted only with enjoy- ment. These tales, together

*with a few traditional receipts in medicine, and a practical knowledge of a few of the constellations, constitute the whole of their literature; and their ignorance in other respects is very remarkable. The following anecdote by Mr. Niebuhr, has been thought ***worthy of insertion. 4 In one of those expedi- tions, a few years since, undertaken against the pacha of Damascus, who was conductor of the Syrian caravan to Mecca, the tribe of Anaese, which gained the victory, showed instances of their ignorance, and of the simplicity of their manners. Those who happened to take goods of value knew not their worth, but exchanged them for trifles. One of those Arabs having ob- tained for his share a bag of pearls, thought them rice, which lie had heard to be good food, and gave them to his wife to boil, who, when she found that no boiling could soften them, threw tin m away as useless.'*

With respect to religion, the freedom of the Bedowins is remarkable. There is, however, a strikinu" difference between the Arabs of the towns and those of the desert. While the former crouch under the double yoke of political and religious despotism, the latter live in a state of perfect freedom from both. On the frontiers of the Turks, indeed, the Bedowins, from policy, preserve the appearance of Mahommedanism; but so relaxed is their observance of its cere- monies, and so little fervor lias their devotion, that they are generally considered as infidels, who have neither law nor prophet. They even make no difficulty in saying that the religion of Mahomet was not made for them : ' For (add they) how shall we make ablutions who have no water! How can we bestow alms who are not rich ? \N liy should we fast in the llamadan, since he whole year with us is one continued fast? Anil what necessity is there for us to make the pilgrimage to .Mecca, if God be present every- where /' In short, every man acts and thinks as lie pleases, ana the most perfect liberty exists amoiiLC them.

Their superstitious dread of charms appears from the following passage of Burckhardt's Ac- count of his Journey in the Peninsula of Mount Sinai. He had made it a rule never to let the Arabs, among whom he was travelling, see him write ; but ' on one occasion his long absence from his companions roused their curiosity. One of them came to look utter him, and seeing him immovably fixed, squatted down on the ground, and closely muffled up, he approached on the

tiptoe, and suddenly lifting up the cloak which skreened him, detected a book in his hand. ' What is this ?' exclaimed the Arab, ' What are you doing ? I shall not make you answerable for it at present, because I am your companion ; but I shall talk further to you about it when we are at the convent.' When they had returned to their halting place, Burckhardt, ' requested him to tell what he had further to say.' To this the Bedowin replied, in a passionate tone, ' You write down our country, our mountains,

our pasturing places, and the rain which falls from heaven; other people have done this "before you, but I at least will never assist in the ruin of my country.' Burckhardt assured him that he liked the Arabs too well to wish to injure them. ' On the contrary,' he added, ' had not I occasionally written down some prayers ever since we left Taba, we should most certainly have been all killed, and it is very wrong in you to accuse me on account of that, the omission of which would have cost us our lives.' He was startled at this reply, and seemed nearly satisfied. ' Per- haps you say the truth,' he observed ; ' but we know that some years since, several men, God knows who they were, came to this country, visited the mountains, wrote down every thing, stones, plants, animals, even serpents and spiders, and since then little rain has fallen, and the game has greatly decreased.' The same opinions pre- vail in the mountains as are current among the Bedowins of Nubia, and they believe that a sor- cerer, by writing down certain charms, can stop the rains and transfer them to his own country.' Travels in Syria and the Holy Land, p. 519.

Notwithstanding this general ignorance and credulity, the Bedowins possess considerable strength of genius ; their poems abound with native similitudes, which embellish by their force and variety, and are distinguished by unexpected epigrammatic turns. The skill, also, with which they draw an unforeseen inference, or bring out an unexpected result, shows the acuteness of their understandings, habituated to a rapidity of plan and execution. Their talent for repartee is well known. When one who could repeat all the Hadith or sayings of Mahomet by heart, was asked how his memory could retain so many different sentences at once, he instantly replied, 'just as the sand in the desert retains all the pearly drops that fall from the heavens without losing a single one of them.' Amusing sketches of these people may be found in Volney, Son- nini, Bruce, and other Asiatic travellers ; but the most accurate are those of the Chevalier d'Arvieux, Memoires; six tomes, in 12mo. Paris 1735, edited by Father Labat, Niebuhr, Besch- reibung von Arabien, p. 379. Seetzen, Von Zachi, Monathliche Correspondenz, 1819, Fe- bruary and March. Description de 1'Egypte, Memoires par Dubuis et Larrey ; also in Burck- hardt's Travels, who, as he took great delight in rtudying the manners and characters of the Be- dowins, has left a separate and detailed account of them.

Living constantly, as the Arabs do, under their camel's hair tents, occupied as they are solely with the care of their flocks and herds, speaking nearly the same language, and placed many of

See DRENCH and DRINK.

them in the same regions as the Israelites under Moses, their customs and habits bear in many res- pects a strong resemblance to those of the Jewish patriarchs. The Memoires of the Chevalier d'Arvieux, already quoted, have supplied much curious and useful information on this subject, the perusal of which will interest the reader, and by comparing the articles, as he proceeds, with the Jewish narrative, he will find his views of the patriarchal period, with respect both to the geography and political incidents of it, greatly enlarged.

Those who are fond of tracing the effect pro- duced by local circumstances upon the genius and national character of a people, will find much interesting matter for their consideration in the detailed particulars of the history of this remarkable people. For further historical au- thorities, we refer to the Mezhar of Soyuti ; the great historical works of Abu I'Feda, Shahristdni, and Makrizi; Pococke's Specimen Historic Ara- bum ; Sale's Preliminary discourse to his transla- tions of the Koran ; Burckhardt's Translations from Makrizi (Nubia, Appendix, No. iii.) Qua- tremeres Mimoires sur I'Egypte, ii. 190 ; Jackson's Account of Morocco ; Sonnini, Voyages en Egypte, and Volney's Travels, ii. 25.

BED'RAGGLE, be and draggle. See DRAGGLE.

DE'DRAWE, be and draw. See DRAW.

BE'DREINTE,

BE'TREINTE.

BEDRI, a town and district in the pachalic of Bagdad, the former surrounded by fine gardens. It is the frontier of the Turkish empire.

BEDRIACUM, in ancient geography, a vil- lage of Italy, situated, according to Tacitus, be- tween Verona and Cremona, but nearer the latter than the former. From an account given by that historian, Cluverius conjectures that the ancient Bedriacum stood in the place where the town of Caneto now stands. This village was re- markable for the defeat of the emperor Galba by Otho, and afterwards of Otho by Vitellius,

BE'DRIBBLE, be and dribble. See DRIB- BLE.

BEDRIP, BEDREPE, or BEDERAPE, the cus- tomary service which inferior tenants anciently paid their lord, by cutting down his corn, or doing other

work in the field.

BE'DROPT, be and drop. See DROP.

BEDWIN, GREAT, a town of Wiltshire, six miles south of Hungerford,and seventy west from London. It was anciently a borough by prescrip- tion, and sent two members 'o parliament. It is said to have been a considerable city in the time of the Saxons, and that the traces of its for- tifications are extant. It is situated by the side of the Kennet and Avon canal. The church is spacious, with a lofty tower, and is constructed entirely of flints.

BEE, -\ Ang.-Sax. beo. Wachter

BEE-GARDEN, [derives the name from the

BEE-HIVE, f Old Saxon byan, which sig-

BEE-MASTER. 3 nines to build, and to inhabit, because the animals designated by the term dwell together under one government, and con- struct their habitations with great skill and in- dustry.

Monsieur Cobweb ; good Monsieur, get your wea- pons in your band, and kill me a red-bip'd humble bee on the top of a thistle ; and good Monsieur bring me the honey bag. Shahspeare.

So work the honey bees,

Creatures that by a ruling nature teach

The art of order to a peopled kingdom. Id.

For that doth wrong must look to be wronged again ;

Habet et musca splenem, et formica sua bilis inest.

The least fly hath a spleen, and a little bee a sting.

An asse overwhelmed a thisselwarps's nest, the little

bird pecked his gaul'd back in revenge, and the

humble-fcee in the fable flung down the eagle's eggs

out of Jupiter's lap. Burton. Anat. Mel.

As bees

In spring time, when the sun with Taurus rides, Pour forth their populous youth about the hive In clusters ; they among fresh dews and flowers Fly to and fro ; or on the smoothed plank, The suburb of their straw built citadel, New rubb'd with balm, expatiate and confer Their state affairs. Milton.

They that are bee-masters, and have not care enough of them, must not expect to reap any consi- derable advantage by them. Mortimer. A convenient and necessary place ought to be made choice of for your apiary or bee-garden. Id. To have BEES IN THE HEAD. A phrase mean- ing to be choleric; to have that in the head which is easily provoked, and gives pain when it is. Also to be restless. To have ' a bee in the bonnet,' is a similar phrase.

But, Wyll, my maister hath bees in his head, If he find me here pratinge, I am but deade.

Damon and Pith. O. PI. He has a head full of bees.

Ben Jonson. Barth Faer.

BEE, in natural history, a genus of insects, the characters and habits of which are fully given under the general name, apis. The principal species are there also described. See APIS.

BEE, in astronomy. See APIS.

BEE, in metaphorical language, denotes sweet- ness, industry, &c. Thus Xenophon is called the Attic bee, on account of the great sweetness of his style. Antonius got the denomination of Melissa, or the bee, on account of his collection of common places. Leo Allatius gave the ap- pellation of apes urbanae, i. e. city bees, to the illustrious men at Rome from 16 30 to 1632.

BEE, or BIE, in the Saxon language, signifies a station ; and in this sense makes part of the names of several places in Scotland ; such as Cairnbie, Middlebie, Overbie, &c. Perhaps also the different Beestons, &c, in England may have had their names from the same origin.

BEE-BIRD. See COLIBRI.

BEE-BREAD, BEE'S-BREAD, or BEE-GLUE, the farina of flowers collected by the working bees : called by tiie ancients propolis. See APIS. We feel, however, the following remarks of Mr. Bon- ner's too sensible and important to be omitted here : ••• ' The substance, commonly called bee- bread,' he says, ' is to be found at the bottom of many of the cells, and is frequently covered over with honey. The bees carry it home in loads upon their legs, or rather their thighs. It is generally o a yellow color, but

often takes its color from the flowers from which it is collected. Various con- jectures have been made by different authors re-

*specting its use. Some allege that the bees eat it ; hence the name bee-bread. Others suppose, that after being taken into their stomachs, it is con- verted by some peculiar action of their internal juices into wax, of which everybody knows their combs are made. But an objection to this hy- pothesis arises from the consideration, that the bees, when first put into an empty hive, carry little or none of this stuff on their legs for some time, till a great number of combs are made ; and that after the combs are completed (which they generally are within two Or three weeks after the swarm have taken possession of the hive), the bees still continue to carry in this stuff during (.he whole working season. To this, however, it may be replied, that, perhaps, as they have no cells to put it into at that time, they carry it home in their bellies, where it probably undergoes a speedy change in passing through their bodies, and may thereby be converted into perfect wax, with which they manufacture their combs. There is another class of authors, who suppose that the bee-bread is used by the old bees to feed the young ones in the cells, by the mouth, as pigeons feed their young ones. To this it may be objected, that the young bees surely cannot make use of all the bee-bread, which the old bees are almost constantly carrying into the hive, when they are at work. Perhaps both these last hypotheses may be true ; as it may riot only serve to feed the young bees, but also, by passing through the bo- dies of the old ones, maybe converted into wax ; with which bees not only build their combSj ***when a swarm is newly put into a hive, but also seal up both their young in the cells, and their honey in the combs. If this supposition be true, then the consumption of bee-bread, through the course of the year, but especially during the honey and breeding seasons, must be very great; and therefore we need not be surprised at the quantities imported by the working-bees. But, whatever truth may be in either or both of these theories, I am certain of one thing, that the bees do not live on bee-bread alone ; for they will die of hunger, although there be plenty of it in the hive, if there be no honey in it; whereas, when they have abundance of honey, they will live without bee- bread, at least for many weeks. Reaumur, however, says, that it is absolutely necessary for food to bees. For my part, I have always observed the bees most busily employed in carrying in this stuff while the young bees are breeding ; but when they want a queen, and have no esrgs to rear another, they immediately give over carrying it into the hive ; thinking (as it would seem), that as they have no young bees to feed or seal up in the cells, it would be an idle business to bring any more of it home; especially as they do not make much use of it themselves, and have more already in the hive, than they will stand in need of, for their own use.'*

BEE-EATER. See MFKROPIS.

Bri.-in vr.s. See APIS.

BEE in MBI.E. See BOMBYLIUES.

BEKBAX, a pass in the high road between Algiers and C'onstantina. The rocks which cross it are in many cases hewn down like so many doors, which has led the Arabs to give it

BEE

the appellation of beeban, or gates. Six miles north of Accaba.

BEECH,) Bece and boc, Old Saxon ; ˆij-yof,

BEE'CHEN, > and Latin fagus. The 0. andˆ/'.

BEE'CHY. 3 being changed into 6. The mast bearing tree in the earliest ages furnished food for man.

The smooth-leaved beeches in the field receive him, With coolest shades till noontide rage is spent.

Fletcher's Purple Island

Black was the forest, thick with beech it stood.

Dryden. With diligence hell serve us when we dine,

And in plain beechen vessels fill our wine. Id.

I know not why the beech delights the glade,

With boughs extended, and a rounder shade ;

Whilst towering firs in conic forms arise,

And with a pointed spear divide the skies. Prior.

Dull are the pretty slaves, their plumage dull. Ragged, and all its brightening lustre lost ; Nor is that sprightly wildness in their notes Which, clear and vigorous, warbles from the beech.

Thomson's Seasons,

Not a pine in my grove is there seen, But with tendrils of woodbine is bound ; Not a beech 's more beautiful green, But a sweet-briar twines it

around.

Shenstone. Pastorals.

BEECH, in botany. See FAGUS.

BEECH-FORK, a river of the United States in Kentucky, and one of the three principal sources of the river Salt, which rise in three dif- ferent parts of Mercer county; and, winding westward, unite and form that large navigable river, about fifteen miles from the Ohio.

BEECH GALL, in natural history, a hard knot on the leaf of the beech, containing the maggot of a species of fly. There are some- times only one of these upon a leaf, some- times more1; they always grow from the same point, owing to the fly's having laid so many eggs in the same spot. They are of an oblong figure somewhat flatted, and shaped like the stone of a plum. They are so hard as not to be broken between the fingers ; their substance seems of the same nature with that of a nut-shell. In each gall there is only one cavity inhabited by a white worm, which in time passes through the nymph state into that of the fly, to which it owed its origin.

BEECH MAST, the fruit of the beech-tree; a triangular seed, like an acorn, containing a whitish oleaginous pith, of a very agreeable taste. It is used for fattening hogs, deer, &c. It has sometimes, even to men, proved an useful substi- tute for bread. Chios is said to have endured a memorable siege by means of it.

BEECH OIL, an oil drawn by expression from beech mast. This oil is very common in Picardy, and used there, and in other parts of France, instead of butter ; but most of those who take a great deal of it complain of pains and a heaviness in the stomach. An attempt was made some years ago to introduce the manufacture of beech- oil into England, and a patent was granted to the proprietor, but without success ; the country people turning their mast to better account in feeding hogs with it, than by selling it to the pa- tentee for oil.

BEEDER, a province in the Deccan, Hin- dostan, now possessed by the Nizam, situated

principally between the sixteenth and eighteenth degrees of north latitude.

To the north it is bounded by Aurungabad and Nandere ; on the south by the river Krishna ; to the east it has the province of Hyderabad ; and to the west the pro- vince of Bejapoor. In length it maybe estimated at 140 miles, by sixty-five the average breadth. The surface of this province is uneven and hilly, but not mountainous, and it is intersected by many small rivers which fertilise the soil, and flow into the Beemah, Krishna, and Godavery. The country is very productive, and under the ancient Hindoo government contained a redun- dant population, but is now thinly peopled.

BEEDER, a town in the province of Beeder, of which it is the capital. Lat. 17►► 47′ N., long. 77►► 48′ E. It is fortified with a stonewall, a dry ditch, and many round towers. The wall is six miles in circumference, and the town which it encloses stands in an open plain, except the east side, which is a rising ground about 100 yards high. The remains of many good buildings are to be seen in this decayed city. It was formerly noted for works of tutenague inlaid with silver, and be- fore the Mahommedan invasion, was the capital of a Hindoo sovereignty. Travelling distance from Hyderabad, seventy-eight miles, from Delhi 857, from Madras 430, and from Calcutta 980 miles.

BEEF', n. & adj.~\ Fr. boeuf, from the Lat- BEEF'-EATER, >ios, bovis, Gr. /3ouc, from BEEF'-WITTED. j (Sow (/3o

Have by the night, accursed thieves, Slaine his lambes, or stolne his beeves.

Browne. The Shepherd's Pipe. A. pound of man's flesh Is not so estimable or profitable, As flesh of muttons, beeves, or goats.

Shakspeare.

The plague of Greece upon thee, thou mongrel beef- witted lord . /

One way a band select from forage drives A herd of beeves, fair oxen, and fair kine, From a fat meadow ground. Milton.

The fat of roasted beef falling on birds, will baste them. Swift.

On hides of beeves, before the palace-gate, Sad spoils of luxury ! the suitors sate. Pope.

BEEF-EATERS, (Beaut'etiers), yeomen of the guard to the king of Great Britain, so called from being stationed by the sideboard at great royal dinners. They are kept up rather from state than for any military service. Their arms are a sword and lance. They were first raised by Henry VII. in the year 1485, and anciently con- sisted of 250 men of the first rank under gentry, and of a larger stature than ordinary, each being required to be six

feet high. At present there are but 100 on constant duty and seventy more

not on duty ; and when any one of the 100 dies, his place is supplied out of the seventy. They go dressed after the manner of king Henry VHIth's time. Their first commander, or captain, was the earl of Oxford.

BEEF-EATER, in zoology, the English name of the Buphaga Africana. See BUPHAGA.

BEEP ISLAND, one of the smaller Virgin islands in the West Indies, between Dog Island on the west and Tortola on the east, about five miles long and one broad. Long. 63►► 2′ W., lat. 18►► 23′ N.

BEEF TEA, in medicine, the substance of beef, extracted by boiling it in water, which is now very generally prescribed, and with great success, in all diseases of debility, when the stomach is not able to digest solid food.

BEEK (David), an eminent portrait-painter, was born at Arnheim, in Guelderland, in 1621, and became a disciple of Vandyck ; from whom he acquired a fine manner of penciling and co- loring. He possessed, besides, that freedom of hand, and rapidity of execution, for which Van- dyck was so remarkable. King Charles I. when he observed his expeditious manner of painting, was so surprised, that he told him, he supposed he could paint if he was riding post. He was appointed portrait-painter to queen Christina of Sweden ; and by her recommendation, most of the illustrious persons in Europe sat to him for their pictures. Having an earnest desire to visit his friends in Holland, he left the court of Swe- den much against the queen's inclination, and died soon after at the Hague, where, it is sus- pected that he was poisoned. This happened in 1656, when he was only thirty-five. A singular adventure happened to him, as he passed through Germany. He was suddenly and violently taken ill at the inn where he lodged, and seeming to all appearance dead, was laid out as a corpse. His servants expressed the strongest marks of grief for the loss of their master ; but consoled them- selves, while they sat beside his bed, by drinking very freely. At last one of them said to his com- parions, ' our master was fond of his glass while alive, let us give him one glass now : ' and raised up his master's head to pour the liquor into his mouth. Beek, on this opened his eyes ; and by proper management and care recovered perfectly.

BEELE, a kind of pick-axe, used by the miners for separating the ores from the rocks in which they lie ; and called a tubber by the miners of Cornwall. The iron part of it weighs about eight or ten pounds. Though it is steeled at each end, it wears out so fast, that it requires new points once a fortnight.

BEELIKE, or BEEUCH,a town of Prussia, in the duchy of Westphalia, with

a Benedictine pro- vostship. Twelve miles E. N. E. of Arensberg, and thirteen north-west of Brilon. Long. 8►► 27′ E., lat. 51►► 30′ N.

BEELZEBUB, BEELZEBUL. See BAAL-

ZEBUB.

BEEMAH, or BEWRAH RIVER (Bhima, ter- rific), rises in the mountains to the north of Poonah, not far from the source of the Godavery, and passes within thirty miles to the east of Poonah, where it is esteemed sacred. It is one of the principal rivers that join the Krishna,

which it does near the town of Firozegur, in the province of Beeder. The length of its course, including the windings, may be estimated at 400 miles. The horses most esteemed by the Mah- rattas, are those bred on the banks of the Beemah.

BEEMEN, or SHEEMEN, in astronomy, seven stars of the fourth magnitude, following each other, in the fourth flexure of the constellation tridanus.

*BEER', * Ger. and Dut. bier. Gold*

BEER'-HOUSE, ►►ast thinks from pyris, beer

BEER'-BREWER. j being first made of pears.

Vossius derives it from the Lat. bibere, to drink ;

Noel from beor, describing a kind of beverage

made from honey. Johnson traces it to bir,

Welsh, and adds, liquor made of malt and hops.

It is distinguished from ale either by being older

or smaller.

Oh, let them come, and taste this beer, And water henceforth they'll forswear.

Thomas Nabbet, in Ellit.

Among those that were without the fort, and which

were of the foresaid company of Captaine Ribault,

there was a carpenter of threescore years olde, once a

bere-b~ewer. HaUuyt't Voyages.

Here's a pot of good double beer, neighbour ; drink-

Skakspeare'

Flow, Welsted! flow, like thine inspirer, beer; Tho' stalo, not ripe ; tho' thin, yet never clear j So sweetly mawkish, and so smoothly dull ; Heady, not strong ; and foaming, tho' not full.

BF.F.R is perhaps any fermented liquor made from a farinaceous grain, but generally from barley. It is, properly speaking, the wine of bar- ley. Under the article AI.E, we have entered upon the subject of brewing that article pretty generally. The only other species of beer is porter. See therefore, AI.E, I'OKTEU, and BREWING. Small or Table Beer, we may here add, is usually made, particularly in quantity and for sale, by mashing with a fresh quantity of water what is left after the beer or ale wort is drawn off; and sometimes from a small quantity of malt brewed on pur- pose. Two parts of London table beer may be considered equivalent in strength to one of ale ; but, according to the legal distinction, (59. Geo. 111. c. .">:;. sect. 2.V), all beer sold above the price of IBs. JH.T barrell is deemed ale, or strong beer, and pays ale duty, viz. 10s. per barrel ; and beer, of the price of 18s. per barrel, or under, exclu- sive of the duty, namely, 2s. per barrel, is consi- dered as table beer within the meaning of the act.

The final gravity of table beer wort is usually from 11 to 12,;")0ll)s. per barrel. Every brewer, however, fixes that final standard strength, which he finds most suitable to his trade.

BEKU, in weaving, nineteen threads running through the whole length of the piece.

BEER, in ancient ˆeoˆraphy, a city twelve miles north of Jerusalem, on the roadtoShechem ; where Jotliam the son of Gideon concealed him- self from his bloody brother Ahimelech.

BF.KR, or Hi LK I'.LIM, a place in the country of the Moabites, where the Israelites dug wells. lumbers, \xi. 18.

Hi KR, Bri r.jioK, l>!v.,or BTRAHSHICK, atown of Asiatic Turkey, in the

government of Orfa,

the ancient Thiar or Barsampse. It stands upon a lofty eminence on the west bank of the Eu- phrates, which is here deep and rapid, about 130 yards broad. A bridge of boats conveys ca- ravans from Aleppo to Orfa at this point, for which privilege a pontage is paid here. Niebuhr says, it consists of 500 houses, protected by a citadel and a wall ; but the whole place is in a di- lapidated condition. It was long deemed im- pregnable, and is still considered a place of strength. Pococke notices a collection of ancient arms and armour, which he saw here. Among these were various sorts of foil arrows : many of them pointed with iron, and to the extremities of some, combustible matter, made up in a triangular form, was attached, which being ig- nited was carried into the town which it was intended to set on fire. There was another sort to which iron bottles, or cases filled with similar combustibles, were fixed, which were inflamed previous to their discharge. The cross-bows were straight, and were about five feet long There were also a variety of slings. Some writers are ot opinion that these arms were Roman, as they correspond with the description given of them by Ammianus Marcellinus. Considerable trade was carried on to Bagdad by means of ves- sels descending the river. Beer is sixty-seven miles from Orfa; 115 south-west of Diarbekir; and 114 north-east of Aleppo. It is the great tho- roughfare from Aleppo to Diarbekir and Persia.

BEERALSTON, an ancient borough in the county of Devon, England, disfranchised by the reform bill in 1832.

BEER, EAGER, is used by calico-printers, chemists, lapidaries,, scarlet-dyers, vinegar mer- chants, white-lead men, &c.

BEER LA-HA-ROI, in ancient geography, a place between Kadesh and Shur, south of Canaan,where the angel appeared to Hagar. Gen. xvi. 14.

BEER MACHINES, are contrivances by means of which that liquor is drawn from three or foui casks at once, and delivered from cocks placed close together in the bar of a tavern or other con- venient place above the cellar. These machines are nothing else than an assemblage of small lift pumps, whose suction pipes communicate with the casks containing the beer: they are now very common in London and other large towns. The internal part of the machine consists of four lift pumps, firmly fixed between two blocks of wood, and in each of which semicylindric excavations are made to contain the barrels : these are held together and fastened .. *the case enclosing the pumps by two screws between each barrel, seen plainly in the figure. The upper part of the case of the pumps is a half cylinder, and has four narrow openings in it, corresponding to the axis of each pump ; in these openings the levers which give mo- tion to the*

pump buckets move : they are bent, the angular point being the centre on which they move : a short arm has the pump rod joined to it, and to a long one is affixed the handle. The centre pins of the levers are supported on a piece of wood fixed in the case nearly in the axis o►► its cylindric head ; the pump rod is divided into two branches ; at their lower ends which receive a pin, joining them to the bucket rod, through which the pin passes. The rod is continued above

as well as below the joint : the lower part goes into the pump, and the upper slides through a brass collar fixed to the back of the case; this collar is included between the two branches of the pump rod : its use is to confine the bucket rod to move truly vertical, while the pump rod being attached to it at only one point can obey the irregular motion occasioned by the lever de- scribing a circular arc. The bucket rod passes through a stuffing box in the top of the pump, through which it moves easily, and yet without permitting the escape of any liquor by it : below this it is screwed into the branches of the bucket, which has a valve in it, and is surrounded by soft leather, which makes it fit the barrel of the pump without leaking. In the bottom of the barrel another valve, similar to that in the bucket, is placed, and a close tube leads from it to a leaden pipe, bringing the liquor from the casks in the cellar. At the upper part of each barrel a small leaden pipe is soldered : these pipes are bent up- wards, and come through the side of the case. Sometimes the pipes leading from the two first pumps are brought into one, and both deliver through the same spout ; for the convenience of mixing two kinds of beer. . The operation of the pumps is exactly the same as the common sucking- pump. Some beer-pumps (as those invented by Mr. Rowntree of Blackfriar's-road) are of a more complex construction.

BEERING'S or BEHIUNG'S BAY, is situated in the sixtieth degree of latitude, on the west coast of North America, and received this name from captain Vancouver, in honor of Vitus Beh- ring, who visited these shores in 1740, and an- chored in a large bay, the position of which was not correctly ascertained. Captain Cook assigned this appellation to a different part of this shore ; but as he only saw it at a distance, he could not perceive the tract of low ground that stretches from the base of the mountains which he sup- posed to bound the bay. Vancouver found that this low land precluded all appearance of a bay, in the place which Captain Cook had assigned to it ; and therefore, as the name was intended to be applied to the bay in which Behring an- chored, he transferred it to

that which Mr. Dixon had previously called Admiralty Bay. There is no other Bay, he tells us, between Cape Suck- ling and Cape Fairweather, in which Behring could have found shelter.

BEERING'S ISLAND, an island in the North Pacific ocean, which is sometimes classed with the Aleutian chain, of which it may be considered the most western link. It extends 104 miles in length, by fifteen in breadth ; is mountainous and sterile. The west coast is elevated, the northern point low land ; the principal mountains, called the Hanavoy ridge, consisting of granite and sand- stone, contain many caverns. There are two bays on the coast, wherein vessels in the fur trade winter, but they are shallow, of dangerous access, and exposed to the north winds; the climate is ri- gorous. No wood grows here, but various kinds of plants are common. Several small streams issue from the lakes and pools near the shore. Mine- rals of value are said to have been found, and pieces of native copper are cast ashore after storms. The surrounding seas abound in whales ;

phocse are numerous on the shores, and multi tudes of sea otters ; black and blue foxes formerly inhabited the island. The sea cow was an object of pursuit, but, so incessantly sought after, that the species is either extinct or deterred by danger from approaching the island, as none have been seen on it since the year 1708. When the sea otter, whose numbers have also been greatly di- minished, disappears in March, it is replaced by the sea lion, because in the northern regions ani- mals frequent particular places in the most regular succession. This island was discovered in 1740, or 1741, by Vitus Beering, a Dane, a commodore in the Russian service. The latitude of this island is about 55►► N., and the long. 167►► E.

BEEROO, a country of central Africa, to the south of Bambara, and having Ludamar on the west. The government is in the hands of the Moors. It is probably very populous, since Walet, the capital was reported to be larger than Tombuctoo ; but the interior is little known.

BEERSHEBA; from 1X3, a well, and ySV, he sware, or njj' yO, an oath ; a city to the south of the tribe of Judea, adjoining to Idumea, where, anciently, Abraham and Isaac swore friendship to Abimelech. It stood twenty miles south of Hebron, and forty-two in the same direction from Jerusalem. When Eusebius wrote, A. D. 315, it was still a considerable town, nupr) /uytorij, garrisoned by Roman soldiers. The boundaries of the Holy Land are often described in Scrip- ture as extending from Dan to Beersheba (2 Sam. xvii. 11); and after the separation of the king- doms of Judah and Israel, the boundaries of the former are mentioned as from Beersheba to Mount Ephraim. The Beersheba which is de- scribed by the historian of the Crusades (Jaco- bus de Vitriaco, Hist. Hieros. 36 ; Gulielmus Tyrius, xiv. 22), as situated ten or twelve miles from Ascalon, is

a different place.

BEES HEAD (Sr.), a lofty promontory, with a light-house on the top of it, about five miles from Whitehaven, to which it is connected by one continued range of rocks rising perpendicu- larly from the beech.

BEES, SAINT, a town in the county of Cum- berland, between Whitehaven and Egremont, noted for its public school. It had once a nun- nery, the church of which is still used, and the free grammar-school has a good library. The schoolmaster is appointed by the provost and fellows of Queen's College, Oxford. The parish is of great extent, and appears, from its ruins, to have been fortified by the Romans at all the con- venient landing places.

BEESTINGS, BREASTINGS, or perhaps more properly BEASTINGS, a term used by country people for the first milk taken from a cow after calving. The beestings are of a thick consist- ence, and yellow color, seemingly impregnated with sulphur. Dr. Morgan imagines them pecu- liarly fitted and intended by nature to cleanse the young animal from the recrements gathered in its stomach and intestines, during its long habitation in utero. The like quality and virtue he supposes in women's first milk after delivery ; and hence infers the necessity of the mother's suckling her own child, ratW than committing it to a nurse whose first miltc is gone.

BEET'LING,

BEETLE'BROWS,

BEETLE'BUOWED,

BEETLE'HEADED,

BEETLE'STOCKED.

BE'ET, n. s. Lat. beta, the name of a plant. See BETA.

BEET, in botany. See BETA.

BEETLE, v. & n. ^ Beetle, an insect, the name probably derived (from the word beat, be- Tcause it heavily beats the | air with its wings. Beetle,) a mallet ; a three-marr- beetle, was one so heavy that it required three men

to manage it, two at the long handles, and one at the head. Beetle headed, probably in allusion to this it means a thick and heavy skull. Beetlebrow is an overhanging heavy brow. To beetle is to hang over like the top of a cliff.

BEETHOVEN (Louis Von), born in Bonn, 1772, was the son of a tenor singer in that place, (according to Fayolle's Dictionary of Musicians, a natural son of Frederick William II., king of Prussia). His great talent for music was early cultivated. He astonished, in his eighth year, all who heard him, by his execution on the violin. In his eleventh year he played Bach's Wohl Tem- perirtes clavier, and, in his thirteenth, composed some sonatas. These promising appearances of great talent induced the then reigning elector of Cologne to send him, in 1792, in the character ot his organist, to Vienna, that he might accomplish himself there in com position, under the instruction of Haydn. Under Haydn and Albrechtsberger he made rapid progress, and became, likewise, a great player on the piano forte, astonishing every one by his extempore performances. In 1809 he was invited to the new court of the king of West- phalia, at which several men of distinction, and among them his pupil the archduke Rodolph, bishop of Olmihz, who persuaded him to remain. He composed his principal works after 1801. A few years before his death, a cold, caught by com- posing in the open air, produced a deafness, which became troublesome. Instrumental music has received from his compositions a new cha- racter. Beethoven united the humor of Haydn with the melancholy of Mozart, and the character of his music most resembles Cherubini's. Besides his great symphonies and overtures, hisquintetts, quartetts, and trios for stringed instruments, his numerous sonatas, variations, and other pieces for the piano forte, in which he shows the great richness of his imagination, he also com- posed vocal music, but with less success. He died March '20, 1827, near Yirnna, in the great- u>t poverty.

BIT.TI.K, in entomology. See ATTELABUS, and Sc AKAii.trs.

Brrn.r., in mechanics, is likewise called a stamper, and by paviours a rammer.

BETA LI,, lie and fall. See FALL.

BF/FIGHT. 15e and tight. See FIGHT.

BF/F1T. lie and lit. See FIT.

BK'IOAM. lie and foam. See FOAM.

J?F/F( )()!.. lie and fool. See FOOL.

BF/FOKK, i Compounded of be and

BKFOHF/HAM), 5-fore, written differently in

BF.I on r.'i IMT.. J different eras of our literature, as /)//(i;r, In/far^', Icforn, and bcfurne. When re- ferring to tune, it signifies anterior or prior; to place- in front, or in presence of; and to the state of the. mind it expresses preference.

His profession is to deliver precepts necessary to eloquent speech ; yet so, that they which receive them, may be taught, beforehand, the skill of speak- ing- Hooker.

In this realm of England, before Normans, yea, be- fore Saxons, there being Christians, the chief pastors of their souls were bishops. Id. Ecclet. Pul.

Heavenly born,

Before the hills appear'd, or fountain flow'd,

Thou with eternal wisdom didst converse. Milton.

You tell me, mother, what I knew before, The Phrygian fleet is landed on the shore.

Dryden.

Your soul has been beforehand with your body, And drunk so deep a draught of promis'd bliss, She slumbers o'er the cup. Id.

I have not room for many reflections, the last cited author has been beforehand with me, in its proper moral. Addison.

BEFORT, a ci-devant district of France, OH the frontiers of Switzerland, now comprehended in the department of the Upper Rhine. Though comparatively sterile, it has excellent iron mines ; these, and the forges connected with them, em- ploy a large portion of its population.

BEFORT, or BELFORT, once the capital of the county, and now of an arrondissement, is a small but strong town, seated on the Savoureuse. It was ceded to France by the treaty of Westphalia, in 1648. It is important as being a pass from Al- sace to Franche Comte" ; and it is, by its central position, enabled to carry on a good trade in the wines of Burgundy and Champagne. It is si- tuated at the point of meeting of several great roads, viz. of two from Paris, two from Switzer- land, one from Strasburg, and one from Lorraine. The county and town of Befort were ceded by Austria to France in 1648. In 1659, Louis XIV. granted them to cardinal Mazarin ; and in 1 781 they were obtained by the duke of Valen- tinois, who lost

them at the Revolution. The fisheries and forests, as well as the mines, are considered very productive. Befort is about thirty-five miles south-west of Colmar, .and seventy in the same direction from Strasburg Lat. 47►► 38′ N., long. 6►► 57′ E.

BE'FRIEND. Be and friend. See FRIEND.

BE'FRINGE. Be and fringe. See FRINGE.

BEG', v. "] Ger. beggeren.

BEG'GAR, v., n. s., & adj. It is probably

BEG'GABLE, v. a corruption of

BEG'GARY, baggar, because,

BEG'GING, n. says the Ency-

BEGGAR'ING, [clopsedia Metro-

BEGGAR'LINESS, j politana,beggars

BEGGAR LY, adj. & adti. carry with them

BEGGAR'FEAR, bags, into which

BEGGAR'MAID, they put the alms

BEGGAR'MAN, that may be

BEGGAR'WOMAN. J bestowed upon

them. To beg, is to ask, to entreat, with a view

to obtain any object. It is the gentle force of

persuasion opposed to violence and demand.

To beggar, is to reduce to a state of dependence

on the gratuitous aid of others. To bring into

the condition of imploring favor.

And she was clad full porely, All in an old torne courtpy,

BEG

As she were all with dogges tome, And both behind and eke beforne Clouted was she beggerly. Chaucer.

He raiseth up the poor out of the dust, and lifteth up the beggar from the dunghill, to set them among

princes.

Samuel.

Touching God himself, hath he revealed that it is his delight to dwell beggarly? And that he taketh no pleasure to be worshipped, saving only in poor cot- tages ? Hooker.

So as their begging now them failed quite ; For none would, give, but all men would thorn wyte ; Yet would they take no pains to get their living, But seeke some other way to gaine by giuing, Much like to begging, but much better nam'd ; For many beg, which are thereof asham'd.

Spenser. Mother Hubbard's Tale. On he brought me into so bare a house, that it was the picture of miserable happiness and rich beggary.

Sidney.

Well, whiles I am a beggar, I will rail, And say, ??? there is no sin, but to be rich ; And being rich, ray virtue then shall be, To say, ??? there is no vice but beggary! Shahspcare.

For her person

It beggar'd all description ; she did lie In her pavilion, cloth of gold, of tissue, O'er-picturing Venus. Id.

I will ever, though he do shake me off To beggarly divorcement, love him dearly. Id.

He finds it his best way to be always craving, be- cause he lights many times upon things that are dis- posed of or not beggable. Butler.

thy suppliant

I beg and clasp thy knees ; bereave me not, Whereon I live, thy gentle look, thy aid, Thy counsel in this uttermost distress. Milton. What subjects will

precarious kings regard ? A beggar speaks too softly to be heard. JJryden. These shameful beggars of principles, who give this precarious account of the original of things, assume to themselves to be men of reason. Tillotson.

BEG, a place in Ayrshire, in the parish of Galston ; celebrated for being one of the retreats of the patriotic Sir William Wallace, where, in a rude fortification, attended by only fifty of his friends, he obtained a complete victory over 200 Englishmen.

BEG, or BEY, in the Turkish government. See BEY. Beg is more particularly applied to the lord of a banner, called in the Turkish language sangiak beg. A beg has the command of a cer- tain number of the sipahis, or horse, maintained by the province: under the denomination of tima- riots. All the begs of a province obey one go- vernor-general, called begler-beg, or beyler-beg, <-j. d. lord of lords, or of the beys of the pro- vince.

BEGS, or BEGHS, of Egypt, generals who have the command of the militia or standing forces of the kingdom ; and are appointed to se- cure the country from the Arabs, as well as to protect the pilgrims in their annual expeditions to Mecca. The begs, several of whom are de- s'cended from the ancient race of the Mamalukes, are very rich and powerful, maintaining 500 fighting men each for their own guard, and the service of their court. On discontents, they have frequently risen in rebellion. They are often at variance with the bashaw, whom they have more inau once imprisoned and plundered. VOL III

BEGA (Cornelius), painter of landscapes, cat- tle, and conversations, was born at Haerlem in 1620, and was the disciple of Adrian Ostade Falling into a dissipated way of life, he was dis- inherited by his father : for which reason he cast off his father's -name, Begeyn, and assumed that of Bega ; his early pictures being marked with the former, and his later works with the other. He had a fine pencil, and a delicate manner of handling his colors, so as to give them a look of neatness and transparence ; his performances are so much esteemed in the Low Countries as to be placed among the works of the best artists. He caught the plague from a woman whh whom he was deeply enamoured, and died a few days after her, aged forty-four.

BEGA, ST. an Irish virgin, who is said to have lived a solitary life of devotion at the spot in the county of Cumberland, where the town of St. Be►►s was afterwards built, and thus named after her.

BEGALLED, be and galled. See GALLED. BEGAWED, be and gawed. See GAWED. BEGAY, be and gay. See GAY. BEGEMDER, a fertile province of Abyssi- nia, bounded by Dembea on the west, Samen on the north, Angot

on the east, and Amhara on the south. It includes the dependency of Lasta, and its length has been stated at 180 miles, and its breadth at sixty. There is a much greater proportion of what may be called level ground here, than in almost any of the other provinces in this alpine region. The mountains abound with iron, and afford good pasturage for the noble herds of cattle, with which Begemder is stocked. Mr. Bruce was informed that it was capable of rais- ing 45,000 effective cavalry. The southern boundary is full of deep and rugged ravines. BE'GET, -v Be and get. Ang.Sax. be BEGET'TER, I gettan, gettan. To obtain, to BEGET'TING,V produce as effects; to produce BE'GOT, i as Occidents ; to generate, to BEGOT'TEN. y procreate; to become the father of, as of children.

A yonge man called Melibcus, mighty and riche, begate upon his wif, that was called Prudence, a daughter which that called was Sophie. Chaucer.

next he did beget

An infinite increase of angels bright,

All glist'ning glorious in their Maker's light.

Spenser

But first come the hours, which we begot In Jove's sweet paradise, of day and night, Which do the seasons of the year allot. Id

see here he all the pleasures

That Fancy can beget ou youthful thoughts, When the fresh blood grows lively, and returns Brisk as the April buds in primrose season.

Milton.

Love is begot by fancy, bred By ignorance, by expectation fed. Gra-nville. Men continue the race of mankind, commonly without the intention, and often against the consent and will, of the begetter. Locke.

My whole intention was to beget, in the minds ot men, magnificent sentiments of God and his works.

Cheyne.

Son of the Father, first begotten Son ! Ere the short measuring line of time begun, The world has seen thy works, and joy'd to see The bright effulgence manifest in thee. Parnell.

BEGGHE, (ST.), the founder of the order of the Beguards, and probably of that of the Be- guines. She flourished about A. 1). 680.

BEGHERME, an extensive country in the eastern part of central Africa, little known. It is said to have Bomou on the north, Bergoo on the east, and Cassina on the west, and to be go- verned by a sultan of its own, dependent on that of Bornou ; according to Dr. Seetzen it has lately been annexed to Bergoo, which is also de- pendent upon Bornou.

BE'GILT, be and gilt. See GILT. BE'GIN, v. & n. ~\ I began or begun ; I have BEGIN'NER, (begun. Sax. bejinnan,

BEGIN'NING, I from be, or by to, and jan- BEGIN'NINGLBSS.) jan, jaan, or jan, to go; applied to the first motion towards any act, pur- pose, or design ; to enter upon existence, to have its original.

Mindes he our tears ; or ever moued his eyen ? Wept he for ruth ? or pitied he our loue ? What shall I set before, or where begin ? Surrey

Thus heaping crime on crime, and grief on grief, To loss of love adjoining loss of friend,

I mean* to purge both with a third mischief, And, in my woe's beginner, it to end. Spenser.

They began at the ancient men which were before the house. Ezekiel.

By peace we will begin. Shakspeare.

I'll siiia; of heroes and of kings. Begin my muse ! Cowley.

They are, to beginners, an easy and familiar intro- duction ; a mighty augmentation of all virtue and knowledge in such as arc entered before. Hooker,

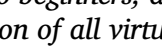 if ye know,

Why ask ye, and superfluous begin Your message, like to end as much in vain?

Milton.

Bet/in every (lay to repent ; not that thou shouldst a* all defer it ; but all

that is past ought to seem little to thee, seeing it is so in itself. Begin the next dav with the same zeal, fear, and humility, as if thou hudst never heijun before. Taylor.

The air was soon after the fight begun Far more inilam'd by it than by the sun.

Marvell.

Youth, what man's age is like to be, doth show; We may our end by our beginning know. Den/mm.

P > V viewing nature, nature's handmaid, art, Makes mighty things from small beginnings grow :

Thus lislies first to shipping did impart, Their tail the: rudder, and their head the prow.

Dryden.

The understanding is passive ; and whether or not it will have the.'n beginnings, and materials of know- ledge, is not in its o\vu power. Locke.

These systems are so many enchanted castles ; they appear to be something ••• they are nothing but appearances : like them, too, dissolve the charm, and they vani.h from the sight. To dissolve the charm, we must hegin at the bet/inning of them : the expres- sion may lie odd, but it is signilicant.

Bolinylmike,. Study of History.

llapt into future times, the bard begun, A virgin > hall conceive. Pope

I have taken a list of several hundred words in a sermon of a new beginner, which not one hearer could I'Oisibiy understand. Swift.

BE'GIRT, ^ Saxon begierdan, begyrdrm.

BE'GIRTED. S gyrdan; to close in round about ; be and gird, to bind with a girdle ; to shut in with a siege; to beleaguer; to block up.

Begird th' Almighty throne, Beseeching, or besieging. Milton.

Or should she, confident As sitting queen adorn'd on beauty's throne, Descend, with all her winning charms begirt, T' enamour. Id.

At home surrounded by a servile crowd, Prompt to abuse, and in detraction

loud : Abroad begirt with men, and swords, and spears ; His very state acknowledging his fears. Prior.

BEGLERBEG, a governor of one of the prin- cipal governments in the Turkish empire, and next in dignity to the grand vizier. To every beglerbeg the grand seignior gives three ensigns or staves, trimmed with a horse-tail, to distin- guish them from the bashaws, who have but two; and from simple begs, or sangiac begs, who have but one. Five of the beglerbegs have the title of viziers, viz. those of Anatolia, Babylon, Cairo, Romania, and Buda. The beglerbegs appear with great state, and a large retinue, especially in the camp, being obliged to bring a soldier for every 5000 aspers of rent which they enjoy. Those of Romania brought 10,000 effective men into the field. The beglerbegs are become al- most independent, and have under their jurisdic- tion several sangiacs or particular governments, and begs, agas, and other officers, who obey them.

BEGLERBEGLTK, or BEGLIERBEGLIK, the province or government of a beglerbeg. These are of two sorts, viz. 1. Beglerbeglik, basilo, which have a certain rent assigned out of the cities, countries, and signiories allotted to the principality : and are in number twenty-two, viz. those of Anatolia, Caramania, Diarbekir, Damascus, Aleppo, Tripoli, Trebizond, Buda, Temeswar, &c. 2. Beglerbeglik, salianae, for maintenance of which is annexed a salary or rent, collected by the grand seignior's officers with the treasure of the empire. These are in num- ber six, viz. those of Cairo, Babylon, &c.

BE'GNAW. Be and gnaw. See GNAW.

BE'GONE. Be and gone. Decayed or worn. Far advanced, or sunk deep, either in weal or woe. Also, the imperative be, and the past par- ticiple gone ; as go, depart ; generally expressing impetuosity or displeasure. As, Get out of my sight.

I was a lusty one

And faire, and riche, and yonge, and well begone.

Chaucer.

And witteth well, that one of the Is with treasour so full begone, That if ye happe thereupon, Ye shall be riche men for ever. Cower.

Begone, I will not hear this vain excuse ; But, as thou lov'st thy life, make speed from hence.

Shakspeare.

Begone, the goddess cries with stern disdaiu, Begone ! nor dare the hallow'd stream to staiu. She fled, for ever banish'd from the train.

Addison.

BEG 11

Ungrateful wretch ! begone, and no longer pollute my dwelling with thy baseness ; begone, and never let me see thee again. Go from my doors ; and the only punishment I wish thee, is an alarmed conscience, which will be a sufficient tormentor. Goldsmith.

BEGONIA, in botany, a genus of plants of the polygamia monoecia class ; the characters of which are these : the flowers are of two kinds ; the one is the male flower, composed of four leaves, some broader, and others narrower ; the other, which produces the embryo fruit, is of the rosaceous sort, and is composed of several petals, arranged in a circular form, and placed on a foliated cup, which finally becomes a trigonal alated fruit, divided into three cells, and con- taining small seeds. Willdenow describes twenty-five species of this genus, which belong principally to the West India Islands. See Transactions of the Linntean Society, vol. i.

BE'GORED. Be and gored. See GORE.

BE'GRAVE. Be and grave. See GRAVE.

BE'GRIME. Be and grime. See GRIME.

BE'GRIPE. Be and gripe. See GRIPE.

BE'GROW. Be and grow. See GROW.

BE'GRUDGE. Be and grudge. See GRUDGE.

BEGSHEHRI (BeVshehri) a town and cap- taincy in the Pachalic of Karaman-ili, Anatolia. The town is protected by a castle built by Ala- ud-din, the Seljuke sultan in the twelfth century. This district contains 122 smaller, and 12 larger, fiefs, called by the Turks Zimarets and Ziya- mets.

BEGUARDS, or BEGHARDS, the third order of the religious of St. Francis in Flanders. They were established at Antwerp in the year 1228, and took St. Begghe for their patroness, whence they had their name. From their first institution they employed themselves in making linen cloth, each supporting himself by his own labor, and united only by the bonds of charity, without having any particular rule. But pope Nicholas IV. having confirmed that of the third order of St. Francis in 1289, they embraced it in 1390. They were

greatly favored by the dukes of Bra- bant, particularly John II. and John III. who exempted them from all contributions and taxes. See FRANCISCANS.

BEGUE, an old term for the natural mark in the mouth of a horse, which distinguishes his age. It is probably derived from the French, in which the same word signifies a stutterer.

BEGUE (Lambert le), the founder or restorer of the order of the Beguines, flourished about the end of the twelfth century.

BE'GUILE,-\ Be and guile. Guile, from

BE'GUILERS, (gewiglian, and wile, from wig-

BE'GUILING, tlian, to deceive, to allure into a

BE'GUILTY. J snare ; the worst kind of wick- edness ; hence the general term guilt. The be- guilers and the beguiled divide our species, with the exception of those who are abused and hated by both, because they have wisdom without knavery, and goodness without folly, qualities equally detestable to the deceivers and the de- ceived.

This miller smiled at hir nicetee, And thought, all this n' is don but for a wile, They wenen that no man may hem begile.

Clmucer.

For often he that will begile, Is guiled. with the same guile. And thus the guiler is beguiled. Gower.

When we escape from a little wile, and know the beguiler, we thinke that we are beguiled already wita other greate wiles. Golden Book.

Her lips, most happy each in other's kisses, From their so wisht imbracements seldome parted, Yet seem'd to blush at such their wanton blisses ; But, when sweet words their ioyning sweet disparted. To th' eare a dainty musique they imparted, Upon them fitly sate delightful smiling, A thousand smiles with pleasing stealth beguiling : Ah, that such shows of ioyes should be all ioyes ex- iling. Spenser. And often did beguile her of her tears, When I did speak of some distressful stroke That my youth suffered. Shukspeare.

Sweet, leave me here awhile ; My spirits grow dull, and fain I would

beguile The tedious day with sleep. Id.

By easy commutations of publick penance, for a private pecuniary mulct, thou dost at once beguilty thine own science with sordid bribery, and embolden the adulterer to commit that sin again without fear.

Bishop Sanderson.

Some cursed fraud

Of enemy hath beguiled thee, yet unknown, And me with thee hath ruin'd, for with thee Certain my resolution is to die. Milton.

Whosoever sees a man, who would have beguiled and imposed upon him by making him believe a lye, he may truly say, that is the man who would have ruined me. South.

While o'er his lips her lovely forehead bow'd, Won by his grateful eloquence, which sooth'd With sweet variety the tedious march, Beguiling time. Glover. Leonids.

BEGUINAGE, the place of residence of a society of Beguines. See next article. The finest beguinage in Flanders was that of Malines. That of Antwerp was very spacious, and had two separate churches.

BEGUINES, a congregation of nuns, which must not be confounded with the Beghards, founded either by St. Begghe, or by Lambert le Begue. They were established first at Liege, and afterwards atNivelle in 1207; and from this last settlement sprang the great number of Be- guinages, which are spread over all Flanders, and which have passed from Flanders into Germany. In the latter countiy, some of these religious fell into extravagant errors, persuading themselves that it was possible, in the present life, to arrive to the highest perfection, even to impeccability, and a clear view of God ; in short, to so eminent a degree of contemplation, that there was no ne- cessity, after this, to submit to the laws of mortal men, civil or ecclesiastical. The council of Vien- ne, in 1113, condemned these errors, and abo- lished the order of Beguines ; permitting, never- theless, those among them, who continued in the true faith, to live in chastity and penitence, either with or without vows. It is by favor of this lat- ter clause, that there still subsist (or at least sub- sisted till lately) so many communities of Be- guines in Flanders ; who, subsequently to the council of Vienne, conducted themselves with so much wisdom and piety, that pope John XXII. by his decretal, which explains that of his predecessor made in the council of Vienne, took them under

nis protection ; and Boniface VIII. in another, exempted them from the secular tribunal, and put them under the jurisdiction of the bishops. There was scarce a town in the Low Countries in which there was not a society of Beguines; and even at Amsterdam there was a very flourishing one. These societies consisted of several houses placed together in one enclosure, with one or more churches, according to the number of Be- guines. There was in every house a prioress, or mistress, without whose leave they durst not stir out. They made a sort of vow, in the following

terms : ‘ I promise to be obedient and

chiste as long as I continue in this Beguinage.’ They observed a three years noviciate before they took the habit. They were formerly habited in different manners ; some in gray, others in blue ; but of late they all wore black. When they went abroad, in Amsterdam, they put on a black veil. Formerly they had as many different sta- tutes as there were societies. In the visitations of the year 1600 and 1601, by the archbishop Matthias Hovius, they were forbidden, under the penalty of a fine, to have lap-dogs.

BEHABAN, a town of Persia, in the province of Pars. It is the capital of the district of Kho- gilaea, and is pleasantly situated in an extensive and highly cultivated valley, which is intersected by the rivers Zab and Jerahi. The walls are three miles in circumference, and the population is 10.000. It is Io3 miles from Shiraz.

BEHALF. This word Skinner derives from //(///’, and interprets it, for my half; as, for my part. It seems, to he rather corrupted from ln: hoof, protit; the pronunciation degenerating easily to bc/nifc ; which, in imitation of other words so sounded, was written, by those who knew not the etymology, ln’half. For my or your p’\rt or share, or sake. Whatever is done in favour, for the sake of, either in support or vin-

Yet this 1 say in liir lirluilfe If Helen were hir leeke, ‘ Sir Paris nerd not to disdaine llir ! hrou h the seas to seekc. Turberville. He mi;j.ht, in hi> presence, defy ail Arcadian knights, in the //i /;►►;’/’ of his mistress’s beauty.

Sidney.

Michael this my behest have thou in charge, Take to thee from umomj; the

Cherubim, ‘! !:v I’hc.ice ot tiair.inj; warriors, lest the fiend, Or in behalf of man, or to invade Vacant possession, some new trouble raise ; Haste thi-e, and from the paradise of God Without remorse drive out the sinful pair. Milton.

Were but my heart as naked to the view. Marcus would see it bleed in bis hchalf. Addison.

Never was any nation blessed with more frequent interpositions of divine providence in its behalf.

Atterbury.

i!!;.‘i IANC. He and hang. See HANG.

!’[image] t Al’I’i’.V He and happen. See HAPPEN.

U-‘.’IIATKI). K and hate. See HATE.

i .[image] 1A’\ !.. ►►► > !>►►►.’ and have ; be and haviour.

tii ii.\ VIM,, (‘xn\. ha1.,, ii. An-r.-Sax.habban.

I!; UA’V !Oi !!,) See I i AY i and I ! \viorn. :o 2< >\fin. to subdue, to discipline, its ancient .IP ; now obsult te senˆ:1. To carry, to act, to . r, ii:< i ones' ►►►-(.!('. Manmis, carriage, gesture,

appearance. It is taken in either a good or bad sense, as he behaved well or ill.

The beautiful prove accomplished, but not of great spirit ; and study, for the most part, rather behaviour than virtue. Bacon.

He who adviseth the philosopher, altogether de- voted to the Muses, sometimes to offer sacrifice to the altars of the Graces, thought knowledge imperfect without be/taviour. Wott

But who his limbs with labours, and his mind Behaves with cares, cannot so easy miss.

Faerie Queene. With such sober and unnoted passion

He did behave his anger ere ‘twas spent,

As if he had but prov’d an argument. Shakspeare.

One man se,es how much another man is a fool, when he dedicates his

behaviour to love. Shakspeare.

Get ye all three into this box-tree ; Malvolio's coming down this walk ; he has been yonder i'the sun, practising beliaviow to his own shadow, this half hour : observe him for the love of mockery.

Shakspeare.

To their wills wedded, to their errours slaves, No man like them, they think, himself behaves.

Denltam.

We so live, and so act, as if we were secure of the final issue and event of things, however, we may behave ourselves. Atterbury.

We are not, perhaps, at liberty to take for granted that the lives of the preachers of Christianity were as perfect as these lessons ; but we are entitled to con- tend, that the observable part of their behaviour roust have agreed in a greater measure with the duties which they taught. Paley.

BE'HEAD, 1 Be and head. See HEAD.

BEHEADING, $ To head, or behead, is to take off, cut off, strike off, the head : a Gallican accomplishment, greatly in vogue during the Revolution.

His beheading he underwent with all Christian magnanimity. Clarendon.

Mary, queen of Scots, was beheaded in the reign of queen Elizabeth. Addison.

I think it was Caligula who wished the whole city of Rome had but one neck, that he might behead them at a blow. Spectator.

She (Anne Boleyn) was beheaded by the execu- tioner of Calais, who was sent for, as more expert than any in England. Hume.

On each side they fly,

By chains connext, and, with destructive sweep, Behead whole troops at once. Philips.

Lord Clarendon relates that he (marquis of Argyle) was condemned to be hanged, which was performed on the same day ; on the contrary, Burnet, Woodrow, Heath, Echard, concur in stating that he was be- headed ; and that he was condemned upon the Satur- day, and executed on the Monday. Paley.

BEHEADING, & capital punishment, wherein the head is severed from the body by the stroke of an axe, sword, or other cutting instrument. Decollatio, or beheading, was a military punish- ment among the Romans. Among them the head was laid on a cippus, or block, placed in a pit dug for the purpose ; in the army, without the vallum ; in the city, without the walls, at a place near the porta decumana. Preparatory to the stroke, the criminal was tied to a stake, and whipped with rods. In the early ages the blow was given with an axe, and was but clumsily performed; but in after-times with a sword, which was thought the more reputable manner of dying : when the executioners grew more expert,

and took off the head with one circular stroke. St. Paul thus says that the magistrate ‘ beareth not the sword in vain.’ In England, beheading is the punishment of nobles, being reputed not so disgraceful as hanging. In France, during the revolutionary government, the practice of be- heading by an instrument called a guillotine (so denominated from its inventor, Dr. Guillot,) was very general. It resembles an instrument long ago used for the same purpose in Scotland, called the maiden, and which is still preserved in Edin- burgh. See GUILLOTINE and MAIDEN. It is doubtless the most speedy, and least painful, of capital punishments.

BE’HEARD, be and heard, past participle of the verb to hear. See HEAR.

BEHEM (Martin), an eminent geographer of the fifteenth century, was born at Nuremberg. Assuming the existence of a western continent, he is said to have applied, in 1459, to Isabella, regent of the duchy of Burgundy and Flanders, to supply him with a vessel, with which he dis- covered the island of Fayal, one of the Azores, or at least established a colony of Flemings there, for the discovery is claimed for Gonsalvo Velho, a Portuguese. After residing at Fayal for twenty years, in 1484 (eight years before the expedition of Columbus), according to letters of his still preserved, it is said, in the archives of Nurem- berg, he induced John II. of Portugal, to intrust him with the command of an expedition to the south-west. He is said, at this time, to have dis- covered Brasil, and even to have sailed to the Straits of Magellan, which he mathematically delineated on a map. These letters bear date 1486; and the event is related in the Latin Chronicle of Hartman Schedl, and by Peter Mateus, who wrote on the canon law two years before the expedition of Columbus. His dis- coveries are likewise referred to by Cellarius and Riccioli, the first of whom

mentions the service which his charts afforded Magellan ; and the latter asserts that Columbus obtained direct informa- tion from Behem in Madeira. He was knighted by the king of Portugal, and otherwise honored as a person of great merit ; although these re- wards some writers attribute to his discovery of Congo. He died at Lisbon in in July 1506, leaving no works behing him, except the chart before" mentioned, and a terrestrial globe, still in the library of Nuremberg, &c. Dr.Robertson treats the story of his discovery of America as a legend; it is certainly strange that he should leave the world without more formally claiming it ; but the memoir of M. Otto, in vol. ii. of the American Philosophical Transactions, may be profitably consulted on this curious question.

BEHEMOTH, n. s. Behemoth, in Hebrew, signifies beasts in general, particularly the larger kind, fit for service. But Job speaks of an animal behemoth, and describes its properties. Bochart has taken much care to make it the hippopotamus, or river-horse. Sanctius thinks it is an ox. The fathers suppose the devil to be meant by it.

Calmet.

His vastness : fleec'J the flocks and bleating rose

As plants : ambiguous between sea and land,

The river-horsˆ and scaly crocodile. Milton.

Behold ' in plaited mail Behemoth rears his head. T/wmson

BEHEMOTH is generally supposed by commen- tators, as well as natural historians, to mean either the elephant or the river-horse. The late Mr. Bruce endeavours to prove that the rhino- ceros is the animal meant by this word. Others think that this word denotes the same animal with mammoth, a huge creature, generally supposed to be extinct; but whose bones are frequently found in marshy grounds in Asia and America. See MAMMOTH/ According to the Jewish rab- bin, God, in the beginning, created two behe- moths, male and female ; the female was killed and salted to be reserved as an entertainment for the faithful whenever the Messias shall come ; the male is still living, and when the last day arrives, God will kill it, and give it to the Israel- ites, who shall then rise from the dead. Calmet relates that the Jews are still so convinced of these extravagant traditions, that it is a common custom to swear by the share that they are to have of Behemoth hereafter. Job xl. 15. See Calmet's Dictionary, and Harmer's Observations on Scripture, vol. ii.

BE'HELD, participle passive from BEHOLD, which see.

All hail ! ye virgin daughters of the main ! Ye streams, beyond my hopes, beheld again ! Pope.

BE'HEN,) Valerian roots ; a name of the BEN.] silene inflata or bladder campion

BE'HEST, Be and hest; Goth, haitan; A Shatan, hatan; Dutch, htten; Germ, heissen. command ; precept ; mandate ; the declared will of any personage, power, or sovereignty. To breken forword is not min entente Behest is dette, and I would hold it fayn All my behest I can no better sayn. Chaucer.

Her tender youth had obediently lived under her par?nts' behests, without framing, out of her own will, the forechoosing of any thing. . Sidney.

To visit oft those happy tribes, On high behests his angels to and fro Pass'd frequent. Milton.

In heav'n God ever blest, and his divine Behests obey, worthiest to be obey'd. Id.

The plain, by slow degrees, shall rise Higher than erst had stood the summit hill ; For time must nature's great behest fulfil. Prior.

BEHET, -\ See BEHEST. 1-rom hatan,

BEHI'GHT, I to promise, is the primary

BEHO'TE, V sense. It also signifies to en-

BEHO'TEN, I trust ; to commit ; and some-

BEHE'TEER, J times to name, or call. See

HIGHT. Likewise to command ; to adjudge ; to

address ; to intend ; to reckon ; to esteem.

-In right ill array

Bohold now behemoth, which I made with thee ; he eatcth grass as an ox. ►►'0"'

Scarce from his mould Behemoth, biggest born of earth, upheav'd

She was with storm and heat, I you behight (inform).

Chaucer.

False faitour, Scudamour, that hast by flight And foule advantage this good knight dismay'd, A knight much better than thyself behight (esteemed).

Spenter.

The author's meaning should of right be heard, He knoweth best to what end he enditeth ; Words sometimes bear more than the heart behighteth

(means). Mirror for Magistrates.

And him restoring uuto living light, So, brought unto his lord, where he did sit Beholding all that womanish weake fight ; Whom soone as he beheld he knew, and thus behight

(addressed). Spenser.

There it was judged, by those worthy wights, That Satyrane the first day best had donne ; ??? The second was to Triamoud behight (adjudged). Id. So taking courteous conge, he behight (commanded) Those gates to be unbarr'd ; and forth he went. Id.

But now aread, old father, why of late Didst thou behight (name) me born of English blood, Whom all a faeries son do nominate ? Id.

That most glorious house that glis'treth bright, Whereof the keys are to thy hands behight (en- trusted) By wise Fidelia. Id.

Sir Guyon, mindful of his vow yplight, Uprose from drowsy couch, and him addrest Unto the journey which he had behight (proposed or

premised). Id.

BEIIE'W, v. be and hew. See HEW. BEHIND, prep. ~~i The imper. be, and the BEHIND, adv. > noun hind. Goth, hinder; BEHINDHAND. j Sax. bcliindan, hindan, after. Posterior in time or space, dilatory, too late. There is a distinction, however, to be ob- served between the meaning of after and behind: after respects order; lu'liind respects position: one runs after a person, or stands behind his chair. After is used either figuratively or li- terally; behind is used only literally. See CRABBE.

Whan that thou wendrst homeward by the mell, Right at the entree of the

dorp behind,

Thou shall a cake of half a bushel find, That was ymaked of thin owen incle Which that 1 halpc my fader for to stele.

Chititi-cr's Canterbury Tales.

After the overthrow of this first house of God, a second was erected ; but with so great odds, that they wept, which beheld how much this latter came behind it. Hooker.

Therefore the prince, whom great affaires in myud Would not permit to make there longer stay, Was forced there to leave them both behynd Tn that good hermit's charge, whom he did pray To tend them well, so forth he went his way.

Spenser.

All hurt behind, backs red, and faces pale \ iih flight and agued fear ! .Mend and charge home, Or, liy the tires of heaven, I'll leave the foe, And make my wars on you. Shaktpeare.

And these, thy offices, So rarely kind, are as interpreters Of my behindhand slackness. Id.

••• Ills ponderous shield, r.thereal temper, massy, large, and round, r.elmid him caˆt. Milton.

Such is the swiftness of your mind, 'Jhat like the earth's, it leaves our sense behind.

Dryden.

M hat he gave me to publish, was but a small part

of what he left In liind him. Pope.

Consider, whether it, is not bitter to be half a

jear heltiiidlitnid with the fashionable part, of the

xvurld, than to strain beyond his circumstances.

Spectator.

We cannot be sure that wo nave all the particulars before us ; and that there is no evidence behind, and yet unseen, that may cast the probability

on the other side. Locke.

In the journey of life some are left behind, because they are naturally feeble and slow ; some because they miss the way, and many because they leave it by choice, and, instead of pressing onward with a steady pace, delight themselves with momentary de- viations, turn aside to pluck every flower and repose in every shade. Johnson. Rambler.

BEHIRAT EL MERDJ, or KHOTAIBE, a lake of Syria, about seven or eight leagues in circum- ference. It has no visible outlet, and the waters not exhibiting any sensible increase by the rivers and the melting of snow which it receives, it is supposed to discharge them by some subterra- neous channel. Distant twenty-one miles east of Damascus.

BEHMEN (Jacob). See BOEHMEN.

BEHN (Aphra), an authoress, descended from a good family in Canterbury, was born in the reign of Charles I. Her father's name was Johnson, whothrough the interest of lord Willoughby, to whom he was related, was appointed lieutenant- general of Surinam. Mr. Johnson died on the voyage thither; but his family reaching Suri- nam, settled there for some years. Here Aphra formed an intimacy with the American prince Oroonoko, and his beloved Imoinda, whose ad- ventures she relates in her celebrated novel of that name, and which Mr. Southerne afterwards made the ground-work of one of the best trage- dies in the English language. On her return to London, she became the wife of Mr. Behn, a mer- chant, of Dutch extraction ; but her wit, abilities, and some less creditable qualifications, having brought her into estimation at the court of Charles II. she was sent over to Antwerp, where, by means of her influence over Vander Albert, a Dutch- man of eminence, she, in 1666, sent home in- telligence of the design formed by De Ruyter, to burn the English ships in their harbours. In her return to England she was nearly lost in a storm. From this period she devoted her life entirely to pleasure and the Muses ; and her wit gained her the acquaintance of Dryden, South- erne, and other men of genius. She published Miscellaneous Poems ; Histories and Novels ; translated Fontenelle's Plurality of Worlds, and annexed a criticism on it ; her Plays make four volumes. The character her plays should main- tain in dramatic history, it is difficult to deter- mine, as their faults and perfections are equally striking. In all, even the most indifferent of her pieces, there are strong marks of genius and understanding. Her plots are full of business and ingenuity, and her dialogue everywhere sparkles with the dazzling lustre of genuine wit. But then she has been accused of interlarding her comedies with the most indecent scenes, and giving an indulgence in her wit to the most in- delicate expressions. Pope, in his characters of women, alludes to Mrs. Behn under her poetical name of Astrea :

The stage how loosely does Astrea tread, Who fairly puts her characters to bed.

After a life intermingled with numerous disap-

pointments, she died April 16, 1689, and lies interred in Westminster Abbey.

BEHO'LD, N Compounded of the in BEIIO'LDEN, / tensive be and hold, it sig- BEHO'LDING, \ nines to hold or fix the eye BEHO'LDEB, i on an object ; it is derived BEHO'LDINGNESS,ˆ from the Saxon behealdan. It is sometimes employed as an interjection, in order to excite attention or admiration. Behol- den, participle adjective. Dut. Gehouden. To be held, and as applied to the mind, to be held in obligation. Beholdingness expresses the state of being obliged. Hold in the sense of being under bond or obligation, is used by Gower, Conf. Am. book vii. and also in book viii. Behold is used by Wiclif, and some of the elder writers, in the sense of preference, to look on with favor.

Maistere we witen that thou art soth fast and thou techist in treuth the wey of God, and thou char- gist not of ony man, for thou beholdist not the per- sone of men, therefore seye to us, what it seemeth to thee. Wiclif. Matt. chap. xxii.

They should consider howe deeply they wer bounden and be/widen to hym, therefore, and with devout thankes inwardlye remember his inestimable bouty therin. Sir Thomas More's Workes.

His pleasure was, that for our saluacion we should to him be beholdyng, and not to the kepyng of the lawe. Udall. Galathies. cap. ii.

This olde Soudannesse Ordeined hath the feste of which I tolde ; And to the feste, Cristen folk hem dresse. In general ya, both yonge and olde Ther may men fest and realtee beholde And deintees, mo than I can you devise ; But all to dere they bought it or they rise.

Chaucer. Cant. Tales. Dan Troilus, as he was wont to gide, His yonge knightis, ledde hem up and downe In thilke large temple on every side ; Beholding aie the ladeis of the toune, ???Jow here, now there ; for no devocioune Had he to none, to revin him his rest, But gan to praise and

lackin whom he lest.

/

All sodainely she saw transfigured Ker linncn stole to robe of scarlet red, And moone-like mitre to a crowne of gold ; That even she herself much wondered At such a chaunge, and ioyed to behold Herself adorn 'd with, gems and iewells manifold.

Spenser.

With him went Hope in rancke, a handsome mayd, Of chearuful looke, and lovely to behold; In silken samite she was light array'd, And her fayrc locks were woven up in gold. Id.

The king invited us to his court, so as I must ac- knowledge a beholdingness unto him. Sidney.

In this, my debt, I seem'd loth to confess, tu that I shunn'd be/wldinyness. Donne.

When Thessalians on horseback were beheld afar off, while their horses watered, while their heads were depressed, they were conceived by the spectators to be one animal. Brown's Vulgar Errours.

*I found you next, in respect of bond, both of near alliance, and particularly of communication in stu- dies : wherein I must acknowledge mys*lf beholden to yt)U> Bacon.*

Horns, whicli such as you are fain to be beholden to your wives for. Shakspeare.

Little are we beholden to your love, And little look'd for at your helping hands. Id.

For Brutus' sake, I am beholdenˆ to you. Id.

But I will haste, and from each bough and brake Each plant and juiciest gourd will pluck such cheer To entertain our angel guest, as he Beholding shall confess, that here on earth God hath dispens'd his bounties as in heaven.

Milton.

When out of hope behold her ! not far off, Such as I saw her in my dream, adorn'd With what all earth or heaven could bestow. To make her amiable. Id.

The philosophy you have condescended to reveal to us is most extraordinary. We are beholden to you for your instruction. Shaftesbury.

Man looks aloft, and, with erected eyes, Beholds his own hereditary skies. Dryden.

At this the former tale again he told, With thund'ring tone, and dreadful to behold.

Id.

The Saviour comes, by ancient bards foretold ! Hear him, ye deaf ; and all ye blind beltold ! Pope. I think myself mighty beholden to you for the reprehension you then gave us. Addison. We, who see men under the awe of justice, cannot conceive what savage creatures they would be without it ; and how much beholden we are to that wise con- trivance. Atterbury.

BEHO'OVE,

BEHO'VE, v. & n. BEHOOF, BEHOVE'FUL, BEHOVE'FULLY, BEHOV'ABLE, BEHO'VEDLY, BEHOVE'LY. Her majesty may alter any thing of those laws, for her own behoof, and for the good of the people.

Spenter.

It is very behooveful in this country of Ireland.

where there are waste deserts full of grass, that the

same should be eaten down. Id.

Tell us of more weighty dislikes than these, and

that may more behoovefully import the rcformadon.

Id.

Laws are many times full of imperfections ; and that which is supposed behooveftd unto men, proveth oftentimes most pernicious. Hooker.

For better examination of their quality, it behooveth the very foundation and root, the highest well-spring and fountain of them, to be discovered. Id.

Madam, we have cull'd such necessaries As are behooveful for our state to-morrow.

Shakspeare.

No mean recompence it brings To your behoof: if I that region lost, All usurpation thence expell'd, reduce To her original darkness, and your sway.

Milton.

Wert thou some star, whirh from the ruin'd roof Of shak'd Olympus by mischance didst fall ; Which careful Jove, in nature's true behoof, Took up, and in fit place did reinstall. Id.

Because it was for the behoof of the animal, that, upon any sudden accident, it might be awakened, there were no shuts or stopples made for the ears.

Ray.

It may be most behoove-eul fo. princes, in matters of grace, to transact the same publicly ; so it is 9&

Sax. behopan, it is a duty. To be fit; to be Ijneet: either with respect ' to duty, necessity, or con- venience. It is used only impersonally with it.

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and

BEI

requisite in matters of judgment, punishment, censure, '.hat the same be transacted privately,

Clarendon.

It would be of no behoof, for the settling of go- vernment, unless there were a way taught, how to Vnow the person to whom belonged this power and dominion. Locke.

lie did so prudently temper his passions, as that none of them made him wanting in the offices of life, which it behooved or became him to perform.

Atterbury.

But should you lure the monarch of the brook, Bvhoove►► you then to ply your finest art. Thomson.

BEI1OWL, be and howl. See HOWL.

eighteen miles north of Weimar, and twenty north-east of Erfurt.

BEIDELSAR, in botany, a name by which some authors call the apocynum Syriacum, or Syrian dog's-bane, a poisonous plant.

BEJETZK, or BESHEZH, a town of Russia, in the government of Twer, the capital of a circle of the same name. Here are 3100 inhabitants ; and an annual fair is held here, which lasts five days. The principal articles for sale are giain, iron, silk, and cotton stufi's. It is forty-eight miles N. N. E. of Twer, 260 south-east of St. Peters- burg.

BEJIGHUR, a town in the Mahratta territo-

BEJA, or BEX A, an appanage of the queens rjes, in the province of Agra, Hindostan, about

of Portugal, in the province of Alentejo, com- prehending a city, three towns, and twenty-one parishes. The chief place is the city of Beja, which was raised to the rank of duchy by King John II., and has a population of 6000 inhabi- tants. It was anciently the Roman Pax Julia. It is the see of a bishop, who is suffragan of Com- postella, and lies on the side of a hill, in a de-

seventy miles south-west from Agra. It stands at the extremity of a low hill, and has an upper and lower fort. The surrounding country con- sists of ranges of low hills much covered with jungle, and separated from each other by inter- mediate plains, intersected by deep ravines ; but upon the whole, well supplied with water. BEILD, beeld, shelter. Old Sax. be-hlidan,

lightful tract of country, seventy-two miles to cover, to protect, to shelter.

S. S. E. of Lisbon. Long. 7►► 50′ W., lat. 37►► 55. N.

BE.TADE, be and jade. See JADE.

BEJAGUR (Vijayaghar), a district in the province of Mulwah, situated about the twenty- second degree of north latitude. It is possessed by different Mahratta chief's. The chief towns are Awass, Sindwah, and Gherowd.

BE.IAPE, be and jape; perhaps as jabber, and gibe, from Germ, gabburen ; Fr. gabcr; Ital. gubbure. To joke, mock, deride, delude, jeer.

Thou hast bcjaped hero dark Theseus And falsely changed hast thy name thus.

Chaucer.

!!F..lAP()'eTK, a city of Hindustan. See Yi-

M AI'OIK.

BEJAR, a to\n of KsUvniadura in Spain, in the district of Phicentia, famous for its baths. It is seated in ;: very a reeable valley, surrounded \;rli hiuh mountains, whose tops are always co- vered \ith sno\v. litre tlie duke of Bejar had a handsome palace: it v.as raised to a dukedom '►►►i the house of XunLa in 1 14-f. In this neigh- i>i. urhood are forests tilled with game, and

tine

*I! mil' Sjj!Vll'_*

exeei lent I'IM). ! t l mil! h auitated Lcib n miles o!i'. I'.LV.SI, or BI.IA-IT :,edan Ara"S.

! Hl-.N !.':►►►; S'i i.i.i..i , a n:ine <;i\ omers to the principal fixed s i;on ; ot!.er\vise called, ecu n ; l<}\ 1 et\\ ►►►aining tht ti tii-li , and i —; ►►►e;-o;n! or th s i)e Steliis

so a lake abounding tended that this lake >tonn as to be heard

i lii.eral sect of i\la-

' 'en by some t IPS in each ►►►da, thou;.;h

►►►i-n corda and beil ►►►eniiu niH-r to stars only of the ;nd:ng t',;e hitter to seve ;d. 1 leniM s has a trea- :ed bv

‘. de Sacrobos-

of Saxony, in ‘hiirjnv,’, since The castle of from Kollcda,

BEILSTEIN, in mineralogy, axe-stone, a green stone, remarkable for its toughness, and used by the South Sea islanders, the New Zea- landers, for making hatchets, &c. Images of idols and personal ornaments have also been made from it; numbers of which have been brought to this country, and may be seen in both public and private cabinets.

BEIN, BEINN, or BHEIN, in the Gaelic lan- guage, signifies a mountain, and accordingly makes part of the names of a considerable num- ber of hills and mountains in Scotland; particu- larly,

BEIN-AN-!NI, in Argyllshire, which has a seam of coals in it, that has been twice attempted to be wrought, but from various causes given up.

BEIN-AN-LOCHAN, i. e. the hill of the lake, in Argyllshire, so named from a lake which washes its base.

BEIN-AUDLANICH, in Ranoch, in the parish of Fortingal, Perthshire, about 3500 feet above the level of the sea, &c.

BEINASCHI (Giovanni Battista), historical painter, was a Piedmontese, and born in 1634. He studied at Rome, under Pietro del Po ; and some say atterwards under Lanfranc. It is cer- tain he was particularly fond of Lanfranc’s works, and became so thoroughly acquainted with his style and manner, that many of his pic- tures are, at this day, accounted the works of Lanfranc. He was an admirable designer; his invention was lively, and he was not only expeditious but correct. His merits procured him the honor of knighthood, whence he. is styled cavalier.

BEINHEIM, a fort of France, in the depart- ment of the Lower Rhine, and ci-devant pro- vince of Alsace ; seated on the Sur, near its confluence with the Rhine.

BEIRA, a province of Portugal, bounded on the west by the Atlantic ocean, on the south by the Portuguese Estremadura; on the south-east by the Spanish Estremadura ; on the east by the piovince of Tralos Monies, and Entre-Duero-e- Minho; and on the north bv the river Douro.

It extends in length about thirty-four leagues, and in breadth about thirty leagues, and is di- vided into six commarcas. The chief episcopal city is Coimbra, which is likewise an university ; and Viseu, also a bishopric, and formerly the capital of a dukedom. It contains, altogether, seven episcopal cities, 230 towns, and 900,000 inhabitants. The country is equally agreeable and fruitful, producing corn, wines, &c. in abundance, and the hills affording excellent pas- ture to cattle and sheep. Of late, however, the grain has been said not to be sufficient for home consumption ; and that the chestnut-trees, which cover many of the mountains, supply the place of it to many of the lower orders of the people. Olive plantations are numerous, and their produce, with that of the vineyards, forms the chief exports. Mines, both of silver and lead, were formerly wrought in the mountainous dis- tricts, and rich specimens of ore have been found near Lamego ; but since Portugal ob- tained her American possessions, the inhabitants have been prohibited from extracting the precious metals.

BEIRAM, or BAIRAM. See BAIRAM. BEISCH (Joachim Francis), a painter of landscapes and battles, born at Ravensburgh in Suabia in 1665. He was taught the rudiments of the art by his father; and first employed at the court of Munich in painting the battles of the emperor Maximilian Emanuel in Hungary. While that prince was absent on some of his expeditions, Beisch took the opportunity of visit- ing Italy, and it is a sufficient testimony of the perfection to which he arrived to say, that even Solimene copied several of his landscapes. The scenes of his landscapes are agreeably chosen, and picturesque : his touch is light, tender, and full of spirit ; and his style of composition re- sembles that of Caspar Poussin, or Salvator Rosa. He etched several pleasing views in a good taste, but these prints are scarce. He died in 1748.

BEISSKER, in ichthyology, a name given by Gesner and others to the fish commonly called mustela fossilis. It is a species of the cobitis, distinguished by Artedi by the name of the bluish cobitis, with fine longitudinal lines on each side. Schonefeldt calls this the pacilia, and Johnson the piscis fossilis.

BEISTON, a township in the parish of Bun- bury and county of Chester, distinguished for the ruins of a fortress built in the year 1220, by Randle Blundeville, earl of Chester. It enclosed an area of about five or six acres, and was guarded on the accessible side by a vast moat cut in the solid rock. The other side rose on a mass of insulated rocks, almost perpendicularly, to the height of 366 feet. In the time of Henry VIII. .his stately pile was almost dilapidated : yet in Uie civil wars of Charles I.'s reign, we find it in a state of defence, which rendered it a most im- portant post. Tt was garrisoned for the parlia- ment, when a Captain Sandford, a celebrated cavalier, undertook to scale its perpendicular side; and having thus gained entrance with eight men, he intimidated the commander, Cap- tain Steel, and

compelled him to surrender. Steel was ,ioon afterwards shot for cowardice. The

royalists were then besieged for upwards of four months. Prince Rupert relieved them ; but the castle was a second time invested, and a block- ade of eighteen weeks reduced the garrison to the most piteous extremity of famine. Never- theless, after a gallant defence, they obtained honorable terms, and the castle was immediately dismantled by order of the parliament.

BEIT-EL-FAKIH (the Doctor's-house), a town and district of Arabia, in lat. 14□□ 31′ N., long 43□□ 2′ E. It was founded by a Mussulman saint, named Ahmid ibn Musa, in the seventeenth century, and is the great emporium of the coffee trade, the best samples of that article being pro- duced in the neighbouring mountains. The quantity carried to Mocha, twenty-five leagues distant, is about 4000 bales of 313 pounds each, of which thirteen pounds are allowed for pack- age, unless the English or French happen to be there, when it is greater. A bale generally costs forty- two Spanish piastres, which, with all duties and expenses, makes the coffee amount to 14ˆrf. per pound. Several European powers have had residents at Beit-el-Fakih, and merchants resort thither from many parts of the east. It is subject to the imam of Yemen, and has risen considerably since the ruin of Ghalefkah, a town on the Red Sea, formerly the port of this part of Arabia.

BEIZA, or BEIZATH, in Hebrew antiquity, 1 , a word signifying an egg ; 2, a certain mea- sure among the Jews ; 3, a gold coin, weighing forty drachms, among the Persians, who gave out that Philip of Macedon owed their king Darius 1 000 beizaths, or golden eggs, for tribute money, but Alexander the Great refused to pay them, saying, that the bird which laid these eggs was flown to another world.

BEKES, or BEKESCH, a populous and thriving market town of Hungary, in the above county. It is situated on the river Black Ka- rosch, and was formerly a place of strength. It is inhabited by aboriginal Hungarians, who pro- fess the reformed faith, and have a parish church.

BEKESCH, a county of Hungary, bounded on the north by great Cumania and Bihar, on the east by Zarand, on the south by Arad, and on the west by Zolnok and Czongrad. It forms a square of nearly forty miles, and contains four towns, sixteen villages, and about 55,000 inhabi- tants, who are composed of Hungarians, Bohe- mians, Sclavonians, and Walachians, professing the Greek, the Lutheran, and the Catholic reli- gions.

BEKIA, BECouYA,or BEQUIA, a small island among the Grenadilloes, in

about lat. 13►► N., belonging to Britain, and chiefly valuable for turtle. It produces also wild cotton and water- melons. It lies sixty miles north-east of Gre- nada. The French have called it Little.

BEKISS, be and kiss. See Kiss.

BEKKER (Balthazar), a famous Dutch di- vine, born in 1634 at Warthuisen, in the province of Groningen. In 1679 he was chosen minister at Amsterdam, where he published The World Bewitched, an ingenious piece against the vulgar notion of spirits. It raised such a clamor against him,- that he was deposed from the ministry, but the magistrates of Amsterdam

continued his pension. His opinions were, that the essence of spirits consists in thinking ; that therefore spirits cannot act on bodies or other spirits : and that those texts, which speak of their actions arc metaphorical. The possessions in the gospels he ascribes to mental disorders. He died in 1698.

BEKNOWE, be and know. See KNOW.

*BEL, *?m, i. e. the Lord, Heb. Chald. or Belus, the supreme god of the ancient Chaldeans, or Babylonians. He was considered as the founder of the Babylonian empire; and supposed to be the Nimrod of Scripture ; the same with the Phoenician Baal. See BAAL and BABY- LON.*

BEL, in botany, the name of a plant called by some the cucumis capparis, or caper cucumber. This plant is very imperfectly described to us ; and we find among the Arabian writers, that the fruit was called by that name, as well as the whole plant. Avicenna, who gives the fullest account of it, says that it was an Indian plant, resembling in growth the common cucumber, but bearing a fruit like the caper : he tells us that this fruit was the only part of the plant used in medicine, and that it was very hot and bitter, being somewhat like ginger in the fiery taste.

BEL (Matthias), an eminent Hungarian divine, born at Orsova in 1684. He at first studied physic at Halle, but gave it lip for theology, and .jecame rector of the school at Presburg, and minister to a Lutheran congregation there. He wrote, among other works, a History of Hungary, which was so much admired, that the emperor Charles \ 1. appointed him his historiographer, and ennobled him ; and notwithstanding his be- ing a

Lutheran, the pope in 1736 sent him his picture, and many large gold medals. He was a member of the Royal Society of London, and of the academies at Berlin and Petersburg. He died in 174'., aged sixty-five.*

Mi-.i, (Charles-Andrew, son of Matthias), was born at Presburg in 1717. In 1741 he was ap- pointed professor extraordinary at Leipsic, and in 17,J(> professor of poetry, and librarian to the university, with the title of counsellor of state. lie wrote l)e \ era ( )rii,'ine et Epocha Hunnorum, \c. 4to. ; besides which lie conducted the Acta Kniditorum from 17.VI to 1781. He died in

1782.

Hi i. VND mi. DKACON, nir. HISTORY OF, an apocrjphal and uncanonical book. It was al- ways rejected by the; Jewish church, and is ex- tant neither in the Hebrew nor the Chaldee language, nor is there any proof that it ever was so. St. Jerome u'ives it the title of the Fable of Del and the I)ragou.

lil-'.LA, a large town of Hungary, in the county of Xips. It wa< one of the sixteen towns wiiieh were mortgaged to Poland in 1412, and is inhabited by (lerman Lutherans, who gain alive- lihoud by the tillage of the ground, and a trade in wine, iron, and tobacco.

HKI.AiiOlK, be and labor. See LABOR. I>KLAC, or HT.I.I.AC, a city of France, in the department of the I pper Yifnue, and ci-devant province of Lyonnois ; seated on the Vincon, iwcnty miles north of Limoges, and 160 south of Paris. It contains 3'J01 inhabitants.

BELACED, be and laced. See LACE. BE'LAMIE, i Fr. bel amie, bel amour; a BE'LAMOUR. $ friend, a paramour, a gallant, a consort.

Wise Socrates

Pour'd out his life, and last philosophy, To the fair Critias, his dearest belamie.

Faerie Queenc.

Lo, lo, how brave she decks her bounteous bow'r With silken curtains and gold coverlets, Therein to shroud her sumptuous belamour. Id.

BEL'ATE,) , BEL'ATEDNESS. J be and late" ^ LATE"

Fairy elves,

Whose midnight revels, by a forest side, Or fountain, some belated peasant sees, Or dreams he sees. Milton's Paradise Lost.

Or near Fleetditch's oozy brinks, Belated, seems on watch to lie. Swift.

BELATUCADRUS, the name of an ancient British idol, recorded in old inscriptions ; and supposed by Selden and Vossius to be the same with Belenus.

BE'LAY, > Be and lay. To waylay, to lie

BE'LAYED. $ in wait, to place in ambush, to overlay, to cover.

'Gainst such strong castles needeth greater might,

Than those small forces ye were wont belay,

Spenser,

All in a woodman's jacket he was clad, Of Lincolne greene, belayd with silver lace. Id.

The speedy horse all passages belay,

And spur their smoking steeds to cross their way.

Dryden.

To BELAY, on board a ship, signifies the same as fasten. Tims they say, belay the sheet, or tack, that is, fasten it to the kevel, by winding it several times round a last, &o.

To BELAY A ROPE, a sea term ; to splice : to mend a rope, by laying one end over another.

BELBEIS, a town of Egypt, near the Syrian frontier, four miles north-west of Suez. It was formerly well fortified, and the only bulwark of the kingdom on this side. Buonaparte, in 1798, availed himself of it, and strengthened the forti- fications against the Turks. Its population is now scarcely a third of what it formerly was, and does not exceed 5000. It has been supposed to be the ancient Bubastum, but D'Anville rather thinks that it was Pharbothus. A junction here takes place of the canals derived from different parts of the Nile.

BELCH', v. & n. \ Sax. bealcan. To eject

BELCH'ING. S wind from the stomach; to

eruct. To issue out, as by eructation. To throw out from the stomach ; to eject from any hollow place. It is a word implying coarseness, hate- fulness, or horror.

The bitterness of it I now belch from my heart.

Sltalapeare.

They are all but stomachs, and we all but food ; They eat us hungerly, and, when they're full, They belch us. /if.

This thing, nor man, nor beast, turns all his wealth In drink ; his days, his years, in liquor dronching : So quaffs he. sickness down, by quaffing health ; Firing his cheeks with quenching ; strangely quench- ing

His eyes with firing ; dull and faint they roll'd ; But, nimble lips, known things and hid unfold ; Belchings, oft sips, large spits point out the tale he told. Fletcher's Purple Island.

Immediate in a flame,

But soon obscur'd with smoke, all heav'n appear'd, From those deep-throated engines belch'd, whose roar Imbowell'd with outrageous noise the air, And all her entrails tore, disgorging foul Their devilish glut, chain'd thunderbolts, and hail Of iron globes. Milton.

The waters boil, and belching from below, Black sands as from a forceful engine throw.

Dryden.

A triple pile of plumes his crest adorn'd, On which with belching flames Chimaera burn'd.

Id.

The symptoms are, a sour smell in their faeces, belchings, and distensions of the bowels.

Arbuthnot on Aliment.

BE'LEAGUE, ˆ Be and league. Germ.

BE'LEAGUER, > lagen, Dut. laeghen, be-lae-

BF/LEAGUERER. j gfien, Svved. beleagra, Ang.- Sax. licjan, to lay, to place before, to attach, to besiege ; to lie before a town, in order to force it to capitulate.

Their business, which they carry on, is the general concernment of the Trojan camp, then beleaguered by Turnus and the Latins. Dryden's Dufresnoy.

Against beleaguer'd heav'n the giants move ; Hills pil'd on hills, on mountains mountains lie, To make their mad approaches to the sky. Dryden.

BE'LEE, v. a. A term use'd in navigation. To place in a direction unsuitable to the wind.

But he (sir) had th' election ; And I (of whom his eyes had seen the proof At Rhodes, at Cyprus, and on other grounds Christian and heathen) must be be-leed, and caTm'd, By debitor and creditor. Shakspeare. Othello.

BELEM, a town and fortress of Portugal, in Estremadura, about a mile from Lisbon, on the north side of the Tagus, and designed to defend the entrance of the river. Here all ships that sail up to Lisbon must bring to. The fortress is on an island in the middle of the Tagus, and on the opposite side is the station for quarantine. After the earthquake of 1755 the royal family of Portugal removed their residence to this town, where they occupied a wooden house. On 3d September, 1758, king Joseph narrowly escaped assassination in this neighbourhood. The town ⬛⬛⬛was founded by king Emanuel, and contains, besides the royal palace, an hospital for decayed noblemen, and a rich monastery of Hieronymites, the church of which encloses the tombs of many kings and princes of the royal family.

BELEMNITE, in mineral conchology, a species of fossil organic remains, occurring in chalk formations, but very sparingly in the upper beds of that substance. It is, however, abundant in the beds immediately below the chalk : its form is cylindrical, pointed at one end, and having a conical hollow at the other. The animal is considered to have belonged to the tes-taceous molluscae, and to have been contained in a multilocular univalve shell ; but the fossil does not present itself in a sufficiently perfect state to furnish an accurate knowledge of its form. Its substance is fibrous carbonate of lime, radiating perpendicularly from the axis of the cylindrical

body. In the districts in which they are foumi they have been vulgarly called thunderboltsv

BELEM'NITES, n. s. From pt\os, a datt or arrow, because of its resemblance to the point of an arrow. Arrowhead, or finger-stone, of a whitish, and sometimes a gold color. See BE- LEMNITE.

BELEMNOIDES, or BELENNOIDES, in anatomy ; from /StXoc a dart, and eiSoc form ; the shooting fortli of the bone called aliformis, which is the sixth in the basis of the scull.

BELENNUS, in ichthyology, the name of a small anguiliform fish, called by some blennis. It is a sea fish, and very scarce. It approaches much in figure to the English bull-head, or mil- ler's thumb, the cottus of authors.

BELENUS, in mythology, a name which the Gauls gave to the sun, which they also called Mithra ; and, as some suppose, the same with the Baal of Scripture, and the Belus of the As- syrians.

BELERIUM, in ancient geography, a pro- montory of the Dumnonii or Damnonii, the west- most Britons. It is now called the Land's End, in Cornwall.

BELESIS, or NANYBRUS, said by some ancient historians to have been the founder of the Baby- lonish empire, and, in conjunction with Arbaces the Mede, to have put an end to the kingdom of the Assyrians, by the defeat and death of Sarda- napalus. Belesis is represented both as a hero and a crafty knave. It is said he was base enough to endeavour to obtain from his col- leagues, by treachery, the immense treasures which had been concealed in the conflagration at Nineveh. When the secret was discovered, he was called to an account, and tried by the other chiefs who had been assistant in the war, and who, upon his confession, condemned him to lose hi head. But Arbaces freely forgave him, left him in possession of the treasure, and also the independent government of Babylon, saying, The good he had done ought to serve as a veil to his crime. Under the successor of Arbaces he became a man of show and effeminacy, of whom we hear nothing more that is worthy of notice.*

BELESME, or BELLESME, a town of France, in the department of the Orne, and ci-devant province of Perche ; seventy-five miles south-west of Paris.

BELESTAT, a town of France, in the de- partment of the Arriege, remarkable for a spring which regularly flows and ebbs.

BELEZ, or BELZ, a town of Austrian Galicia, circle of Zokien, not far from

the river Bug, with a castle. It once belonged to Poland, and was the capital of a circle in Red Russia ; but was annexed to Austria, at the first partition of Po- land, in 1772. The town is large, but neither" rich nor commercial. It lies in the middle of a plain, at the extremity of which is a morass; the houses are of wood, 'and the only buildings of note are the churches of the Catholic and Greek communions. The extensive oak forests in the neigbourhood yield abundance of potash. 148 miles east of Cracow, and 152 S.S.E. of Warsaw. Long. 24►► 12′ E., lat. 50►► 24′ N.

BELFAST, a sea-port town in the county of Antrim, Ireland, situated at the mouth of the

BEL

Lagan river, here crossed by a stone bridge of found. He whose trade it is to found or cast twenty-one arches, and at the extremity of Bel- bells.

fast Lough, or Carrickfergus Bay. The appear- Those that make recorders know this, and likewisc- ance of the place is cheerful and animated. The Mfotmdersm fitting the tune of their bells. Bacon. streets are broad, well paved, cleaned, and lighted, BELFRY, BELFREDUS, is used by military and the public buildings and institutions nume- writers of the middle age, for a sort of towe~ rous. Amongst them are the Collegiate Institu- erected by besiegers, to overlook and command tion, the Belfast Academy, Linen Hall, commercial the place besieged. Belfry originally denoted a buildings, two churches, Roman Catholic chapels, high tower, where sentinels were placed to watch meeting-houses of different dissenters, lunatic the avenues of a place, and prevent surprise from asylum, infirmary, &c., all on a scale suited parties of the enemy, or to give notice of fires by to the liberality of this very spirited place, ringing a bell. In the cities of Flanders, where A museum and botanic garden has lately beer? there is no belfry on purpose, the tower of the added to the list of scientific institutions, and the chief church serves the same end. The word healthy condition of two daily journals sufficiently belfry is compounded of the Teutonic bell, and testify the reading character of the inhabitants, freid peace, because the bells were rung for pre- The port of Belfast ranks next after Cork in serving the peace. Belfry is now used for that amount of imports and exports. In 1832 the part of a steeple wherein the bells are hung. This number of vessels belonging to this port was 219, is sometimes called by middle age writers campa- their tonnage amounting to 23,681. Of these 60 nile, clocaria, and tristegum. It is likewise used were engaged in foreign, and 159 in the coasting for the timber work which sustains the bells in a trade. The total number of vessels entered at the steeple, or that wooden structure to which

th1? same period exceeded 2500, carrying upwards of bells in church steeples are fastened. 250,000 tons. The imports are various; the ex- BELG/E, the ancient inhabitants of Gallia ports consist of glass, vitriol, pottery, refined Belgica, stiled by Caesar the bravest of the Gauls,. sugar, porter, whiskey, besides the staple manu- being untainted by luxury. See BELGIUM. The f'actures, cotton and linen. To these are to be first migration of the Belgae into Britain took added a very extensive trade in butter, oatmeal, place at a very early period ; some of the latest pork, and provisions generally, for the Liverpool colonies were established here but a short time prior

market, shipped from this quay. The gros? amount of customs may be estimated annually at ►►'200,700. An inland trade is facilitated by means of the Lagan navigation, which, opening into

to the Roman invasion. At that time their m?in hody inhabited the present Hampshire, Wiltshire, and Somersetshire. Those on the south coast, according to Caesar, Com. 1. v. c. 10, had passed

Lough Neagh, affoids a communication with four over from different parts, and still retained the counties. The town is governed by a sovereign, names of the states from which they descended. twelve burgesses, and a commonalty, under a The last by Divitiacus, thekingof the Suessiones, by the provisions of one of the most powerful Belgic nations of Gaul ; and, having obtained a firm settlement on the British coast, he continued to exercise his au- thority on both sides of the channel. The Ro- mans found in these tribes the most powerful nited States of opponents to their arms ; and the honor of their situated on the final subjugation was reserved for Vespasian, who fought thirty-two battles, and took more than twenty towns, before he could regard his Bedford. ►►► A conquest of them as complete. After this the Romans greatly improved the country of the Belgae by their celebrated military ways, the erection and rebuilding of towns, &c. ; among the most celebrated of which were Ventae Bel- garum, the present Winchester, and Aquas Solis, the modern Bath. See BATH and WINCHESTER. BEL'GARD, n. s% Fr. belle egard. A soft glance ; a kind of regard ; an old word, now wholly disused.

Upon her eyelids many graces sat, Under the shadow of her even brows, Working belyards, and amorous retreats.

Faerie Queene.

BELGICA, a town of the Ubii in Gallia Bel- gica, midway between the Rhine and the Roer : now called Balchusen, a citadel of Juliers.

BELGICA GALLIA, or BELGIC GAUL, one of Caesar's three divisions of Gaul, contained be- tween the ocean to the north, the Seine and the Marne to the west, the Rhine to the east, but on the south at different times within different limits. Augustus, instituting everywhere a new partition of provinces, added the Sequani ††^†† Helvetia,

iharhT of .lames I . the reform bill, returns two members to parlia- ment. This is a permanent military station. Distance north from Dublin 102 miles. Popu- lation about 50,000.

I?!. I 1 AM, a] 0:.t tO.'. !l O

America, in llu- di.li'ict oi' .' west side of tin1 lYnoliscot; 246 miles from Bos ton, and .†††")'.) 1 from Philadelphia. ††† A town of Pennsylvania, in the county ol lo\r.shj|) of the I Hited States, in Hancock c.ouniv, district of Maine, on the mouth of the Penohscot.

l!i i FAS-! !>\i, a bay on the coast of the dis- trict of Maine, which runs into the land by three

1.1 i.()\V

l.el;

r. v. ii ei

i'rom bell and flower, its tkmer; in Latin cunt- is a vast number of the . The tallest pyramidal peach-leaved belHovver. vi d U'liiouer. 4. Gar- oii'j, ieavi- s and ilowers; rlihry 1". Hs. 5. Canary -aves and a tuberose root. roois, commonly ooking-glass bel-

Alnv,

L:

aiket town in TSorthumbcr- U †††:, sr.it.'d on the ridge of a k 10. :d, twelve miles from i'o;n London. . n. .s. Irom bell and

who till then made a part of Celtic Gaul, to the Belgic.

BELGINUM, a town of the Treviri, in Gallia Belgica : now called Baldenau,

in the electorate of Triers.

*BELGIUM, a kingdom of Europe, formerly called the Austrian Netherlands, bounded on the N. by Holland ; on the E. by Germany ; on the S.W. by France, and on the N. W. by the Ger- man ocean. It extends from 49►► 25′ to 51►► 30′ N. lat. and from 2►► 40′ to 6►► 30′ E. Ion., com- prises 14,459 square miles, and sustains a popu- lation of 4,082,427 souls, including the province of Luxemburg. Its chief rivers are the Scheldt, which is both broad and deep, and the Maese, which flows from France to Holland. Forests constitute a characteristic feature of this coun- try ; those of Namur, Liege, Luxemburg, and Soignees are very extensive, and the remains of the famous forest of Ardennes have hitherto escaped the axe. Brussels, on the river Senne, is the capital, but Antwerp, Ghent, Bruges, Ostend, Liege, Namur, Maestricht, Louvain, and Luxemburg, are all remarkable places, either for their commercial relations, military strength and position, or literary or other celebrity. Genappe and Waterloo, otherwise unimportant, will be remembered by the desperate and decisive battles fought in their vicinities. The history of Belgium will be found connected with that of Holland, until the revolt of the latter from the crown of Spain. Belgium continued under Spanish con- trol even after the independence of Holland. Early in the eighteenth century, it passed into the possession of the Austrians, and so remained until the breaking out of the French revolution, when it was wrested from the Austrians and annexed to France in the year 1795. Upon the overthrow of Napoleon, the congress of Vienna attached Belgium to Holland, constituting there- by a kingdom, to be denominated " the Nether- lands." This union appears to have been solemnized without the existence of any previous affection between the contracting parties, and accordingly, upon the successful termination of the revolution of Paris in 1830, the Belgians rose en masse and threw off, in the most entire man- ner, the yoke of Holland. *►►► Their independence was declared on the fourth of October, 1830, after several sanguinary conflicts with their for- mer masters at Antwerp, Brussels, and other places. On the fourth of June,- 1831, the Bel- gian congress elected Prince Leopold of Saxe Cobourg as their king, who was solemnly crowned at Brussels, on the twenty-first of July following. After the accession of Leopold, the Dutch con- tinued to manifest a disinclination to a peaceful separation, and even retained possession of the citadel of Antwerp ; remonstrances from the courts of Great Britain, France, Russia, Austria, and Prussia, for its restitution, proving fruitless, a French army set down before the fortress, which was defended with undaunted bravery by general Chasse, and, after a deplorable sacrifice cf lives, succeeded in obtaining its surrender. See NETHERLANDS and HOLLAND.*

BELGRADE, the ancient Alba Graecorum, a city of European Turkey, the capital of Servia, seated on a hill a little above the confluence of the Save

and the Danube. Belgrade was for-

merly large, strong, and populous, surrounded with a double wall, flanked with towers, and defended by a castle, built with square stones. The suburbs are still very extensive, and the appearance of the place imposing. The dilapi- dated walls of the fortress enclose the principal mosque, and the residence of the pacha, or governor, of Servia. Belgrade has always been an important bulwark on the north-west of Tur- key ; a strong garrison is maintained here, and most of the inhabitants consist of the families of the Janissaries, who defend it. The whole popu- lation is estimated at twenty or twenty-five thousand ; and when the town was taken by the Austrians, in 1789, about 7000 of them were soldiers. It is, indeed, rather a military depot than a trading city.

In the fifteenth century it was unsuccessfully attacked by Amurath II. ; but was taken by Soly- man, the Ottoman emperor, in 1522. Being re- taken by the Imperial army, under the elector of Bavaria, in 1688, it reverted again to the Turks in 1690, with whom it remained till August 1717, when it 'surrendered to prince Eugene ; and will always be famous in military history by the bat- tle fought at this time in its vicinity, and which was the last grand victory obtained by that prince. It then remained in possession of the Austrians for twenty-two years, during which they were en- gaged in repairing and strengthening its defensive works. In 1739, however, it was given up to the Turks, on condition that these should be de- molished ; but so important did the possession of it always appear to the Austrians, that they again invested it in 1789, under the command of Field- marshal Laudohn. The suburbs were all carried sword in hand, and the garrison surrendered upon honorable terms. About 300 pieces of artillery and vast military stores, were said to be found in the fortress on this capture. It was again re- stored to the Turks, however, by the peace of Sis- tova, in 1791, under whom it has since remained. Long. 20►► 10′ E., lat. 44►► 43′ N.

BELGRADE, a small town of Romania, on the strait of Constantinople.

BELGRADE, a township of the United States, in Lincoln county, district of Maine, between the Kennebeck and the Androscoggin.

BELGRADO, a town, late of Friuli, in the Venetian territories in Italy. It stands near the river Tagliameuto.

BELGRAM, a town in the Nabob of Oude's territories, twelve miles north-east from Kanoge in lat. 27►► 13′ N., long. 80►► 3′ E. "it is o. considerable antiquity, and is still distinguishec by a ruinous fort and moat. The buildings ap- pear to have been in the best style of Mogu architecture.*

BELIAL, bjTˆa, Heb. i. e. wicked, worthless, or unprofitable ; a name given in Scripture to the devil. Thus the inhabitants of Gibcah, who abused the Levite's wife, Judges xix. 22, are styled sons of Belial. Hophni and Phineas, the high priest Eli's eldest sons, are likewise called sons of Belial, 1 Sam. ii. 12, upon account of their crimes. And that the name Belial denotes the devil, is evident, from what St. Paul says, 2 Cor. vi. 15.

BELIDES, in mythology, the fifty daughters of Danaus. See DANAIDES.

B ELI DOR (Bernard Forest de), a Catalo- nian engineer in the service of France, member of the Academies of Sciences at Paris and Ber- lin, and of the Royal Society of London ; he was a celebrated mathematician, and author of a number of military tracts, in which the science of mathematics is applied to military uses. He died 1765, aged seventy.

BE'LIE, v. a. From be and lie. To coun- terfeit ; to feign ; to mimic. To calumniate ; to raise false reports of any man. To give the lie to; to charge with falsehood. To give a false representation of any thing. To fill with lies.
BELI'EVE,t7.) The old Sax. lyfan, be BELI'EVE, n. \ lyfan, is the English to BELI'EF, I live, to belive. In Pier's

BELIE'FUL, I Plouhman to bring forth

BELIE'FULNESS,) > your btlyve is to bring BELI'EVABLE, forth that by which you BELIE'VER, live. It was early applied

BELIEV'ING, to Christianity, and to re-

BELIEV'JNGLY,) ligion, as the revelation of life; and as crediting the divine testimony was the means of life immortal, that credit was called life and belife ••• hence to believe. It is now of much more comprehensive import. Be- lief is credit given to something which we know not of ourselves, on account of the authority by which it is delivered. It is likewise the theolo- gical notice of faith ; the creed and body of tenets held by the professors of faith ; to believe is the act or habit of the mind ; in reference to all these a believer is one that gives credit to a testimony ; a professor of Christianity.

Sire, it is Cristos might, That helpeth folk out of the. fe rules snare, And so ferforth, she gan our lay declare, 'lliat she the constable, or that it were

eve, Converted, and 0:1 Crist made him beleve.

Chaucer.

And though that I, unworthy son of Eve,

Be sinful, yet accepteth my beleve. Id.

As he that readeth Caesar's Commentaries, believing

the same to he true, hath hereby a knowledge of

Causar's life and notable acts, because he believeth the

history of C;tsar ; yet it is not properly said, that he

beliereth in Caesar, of whom he looketh for no help

nor benefit, even so, he that believeth that all that is

spoken of God in the Bible is true, and yet liveth so

imgodlily, that he cannot look to enjoy the promises

and benefits of God ; although it may be said that

such a man hath a faith and belief to the words of

(►►od, yet it is not properly said that he believeth in

(Jod, or hath such it faith and trust in God, whereby

lie may surely look for grace, mercy, arid everlasting

life at God's hand. Homily on Faith.

Infidels themselves did discern, in matters of life,

when believers did well, when otherwise. Hooker.

If he which writeth do that which is forcible, how

should he which readeth be thought to do that, which,

in itself, is of no force to work belief, and to save

Irlifrtrs? Id.

Discipline betcan to enter into conflict with

churches, which, in extremity, had been believers of

it. Id.

And sundry battels, which she had atchieved With great successe, that her hath glorifide, And made her famous, more than is believed ; Ne would I it have ween'd had I not late it prieved,

Spenser.

Superstitious prophecies are not only the belief of fool, but tho talk sometimes of wise men. Bacon. Now God be prais'd, that to believing souls*

Gives light in darkness, comfort in despair.

Shakspeare. Horatio says, 'tis hut our fantasy ;

And will not let belief take hold of him

Touching this dreaded sight, twice seen of us. Id.

When suddenly stood at my head a dream,

Whose inward apparition gently moved

My fancy to believe I yet had being

And liv'd. Milton.

The action is baptizing or immersing in waters ; the object thereof, those persons of any nation, whom his ministers can by their instruction and persuasion render disciples ; that is, such as do sincerely believe the truth of his doctrine, and seriously resolve to obey his commandments. Barrow.

Adherence to a proposition which they are per- suaded, but do not know, to be true, is not seeing, but believing. Locke.

Though they are, I believe, as high as most steeples in England, yet a person, in his drink, fell down, without any other hurt than the breaking of an arm.

Addison on Italy.

I could not be so duped, even by the arch-enemy himself, as to be made to question the divine nature of those, comforts ; but I have been made to

believe (which you will say, is being duped still more) that God gave them to me in derision, and took them away in vengeance. Cowper's Correspondence, vol. 2.

BELIEF, in its general and natural sense, de- notes, 1. A strong assent of the mind to the truth of any proposition. In this sense, belief has no relation to any particular kind of means or arguments, but may be produced by any means whatever. Thus, we are said to believe our senses, to believe our reason, to believe a witness, &c. And hence, in rhetoric, all sorts of oroofs, from whatever topics deduced, are called 7Ti

BELIEVERS, in church history, an appellation given, towards the close of the first century, to those Christians who had been admitted into the church by baptism, and instructed in all the mysteries of religion. They had also access to all parts of divine worship, and were authorised to vote in the ecclesiastical assemblies. They were thus called in contradistinction to the ca- techumens who had not been baptised, and were debarred from these privileges.

BELI'KE, > Be and like. See LIKE.

BELI'KELY, $ Belike in our older writers, and in vulgar speech, at the present day, is used for it is likely, probably, perhaps. It is some- times used in a sense of irony, as it may be supposed.

There came out of the same woods a horrible foul bear, which fearing, belike, while the lion was pre- sent, came furiously towards the place where I was.

Sidney.

Lord Angelo, belike, thinking me remiss in my office, awakens me with this unwonted putting on.

Shakspeare.

Josephus affirmeth, that one of them remained in his time ; meaning, belike, some ruin or foundation thereof. Raleigh.

We think, belike, that he will accept what the meanest of them would disdain. Hooker.

God appointed the sea to one of them, and the land to the other, because they were so great, that the sea could not hold them both ; or else, belike, if the sea had been large enough, we might have gone a fishing for elephants. Breretu. on Lang.

BELINGELA, in botany, a name given by some authors to the malum insanum, or mad apple.

BELIO, in ancient geography, a river of Lu- sitania, called otherwise Limseas, Limeas, Limius, and Lethe, or the River of Oblivion : the boundary of the expedition of Decimus Brutus. The soldiers refusing, out of superstition, to cross, he snatched an ensign out of the hands of the bearer, and passed over, by which his army was encouraged to follow. He was the first Roman who ever proceeded so far, and ventured to pass. The reason of the appellation, according to Strabo, is, that in a military expedition a sedi- tion arising between the Celtici and Turduli after crossing that river, in which the general was slain, they remained dispersed there; and from this circumstance it came to be called the river of Lethe, or Oblivion. It is now called Lima.

BELISARIUS, general of the emperor Jus- tinian's army, who overthrew the Persians in the East, the Vandals in Africa, and the Goths in Italy. See ROME. But after all his great ex- ploits, he was falsely accused of a conspiracy against the emperor. The real conspirators had been detected and seized, with daggers hidden, under their garments. One of them died by his own hand, and the other was dragged from the sanctuary. Pressed by remorse, or tempted by the hopes of safety, he accused two officers of the household of Belisarius ; and torture forced them to declare that they had acted according to the secret instructions of their patron. Posterity will not hastily believe, that a hero, who in the vigor of life had disdained the fairest offers of

ambition and revenge, should stoop to the murder of his prince, whom he could not long expect to survive. His followers were impatient to fly ; but flight must have been supported by rebellion, and he had lived enough for nature and for glory. Belisarius appeared before the council with less fear than indignation: after forty years service, the emperor had prejudged his guilt ; and injustice was sanctified by the presence and authority of the patriarch. The life of Be- lisarius was spared, but his fortunes were se- questered; and, from December to July, he was guarded as a prisoner in his own palace. At length his innocence was acknowledged, his freedom and honors were restored, and death, which might be hastened by resentment and grief, removed him from the world about eight months after his deliverance. That he was de- prived of his eyes, and reduced by envy to beg his bread, is a fiction of later times ; which has obtained credit, or rather

favor, as a strange example of the vicissitudes of fortune. The source of this idle fable may be derived from a miscellaneous work of the twelfth century, the Chiliads of John Tzetzes, a monk. He relates the blindness and beggary of Belisarius in ten verses, Chiliad iii. No. 88. 339 ††† 348. in Corp. Poet. Graec. torn. ii. p. 311. This romantic tale was imported into Italy with the language and MSS. of Greece; repeated before the end of the fifteenth century by Crinitus, Pontanus, and Volaterranus ; attacked by Alciat for the honor of the law, and defended by Baronius, A. D. 561, No. 2, 8cc. for the honor of the church. Tzetzes himself had read in other chronicles, that Belisarius did not lose his sight, and that he recovered his fame and fortunes. The statue in the Villa Borghese at Rome, in a sitting posture, with an open hand, which is vulgarly given to Belisarius, may be ascribed with more dignity to Augustus in the act of propitiating Nemesis. ††† Winkelman's Hist, de I Art, torn. iii. p. 266.

BELI'VE. adv. bihve, Sax. probably from bi and hj-e, in the sense of vivacity, speed, quick- ness. Speedily ; quickly : a word out of use.

By that same way the direful dames do drive Their mournful chariot, fill'd with rusty blood, And down to Pluto's house are come belive.

Faerie Queene.

BELK, one of the Serangani islands in the Eastern seas, high, and with a bold north coast. It is partly cultivated, and the inhabitants have plenty of cocoa nuts and yellow wax. It is the most northerly of the group, which consists of three, and lies about twelve miles from Magin- danao.

BELL, v. & n.~\ Bel, Sax. supposed by

BEL'FRY, f Skinner to come from pelvis,

BEI/ROPE, (Latin, a basin; Ang.-Sax.

BEL'RINGER. J bellan, signifies to bellow,

and to sound a bell. A vessel, or hollow

body of cast metal, formed to make a noise

by the act of a clapper, hammer, or some other

instrument striking against it. Bells are in the

towers of churches, to call the congregation

together. It is used for any thing in the form of

a bell, as the cups of flowers. Belfry is a tower

where bells are hung.

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ELL

Get thcc gone, and dig my grave thyself, And bid the merry bells ring to thy ear, That thou art crowned, not that 1 am dead.

Skakspeare.

Now see that noble and most sov'rcign reason Like sweet belli jangled out of tune. Id.

As the ox hath his yoke, the horse his curb, and the faulcon his belli, so hath man his desires.

Id. As You Like It. Where the bee sucks, there suck I, In a cowslip's bell I lie. Id. Tempest.

What time the native bellman of the night, The bird that warned Peter of his fall, First rings his silver bell t' each sleepy wight, That should their mindes up to devotion call, She heard a monstrous noise below the hall.

Spencer.

The humming bees, that hunt the golden dew, In summer's heat on tops of lilies feed, And creep within their bells to suck the balmy seed.

Dryden,

He has no one necessary attention to any thing but the bell, which calls to prayers twice a-day.

Addison. Spectator.

How too like is this (cracked) bell to scandalous and ill-lived teachers ! His calling is honourable : his noise is heard far enough : but the flaw which is noted in his life, mars his doctrine, and offends those ears which else would take pleasure in his teaching. Bishop Hall.

When cockle-shells turn silver bells,

And muscles grow on every tree, When frost and snow shall warm us aw,

Then sail my love prove true to me.

Burns1! Ballads.

I'ut the sound of the church-going bell These vallics and rotks never hoard,

Never sighed at the sound of a knell,

Or smiled when a Sabbath appear'd. Cowper.

To itar tfic BIT. i,. To be the first; from the wether, that carries a bell among the sheep, or the first horse of a drove that lias bells on his collar.

Th;i Italians have carried away the bell from all other nations, as may appear both by their books and works. Huhewell.

To .tfiakc tin BKM.S. A phrase in Shakspeare, taken from the bells of a hawk.

\eitlier the king, nor he that loves him best, The proudest lie that holds up Lancaster, Dares stir a wing, if Warwick s/iukcs his bells.

$/iakspeare.

To Brn, r. n. from the noun. To grow in buds or flowers, in the form of a bell.

Hups, in the beginning of August, bell and are sometimes ripe. Mortimer.

lit i i.-t A-iiio.M.i), di!). from bell and fashion. lla\ii:'_j tlie form of a bell ; campaniform.

The thorn-apple rises with a strong round stalk, having large Ml-fnMancil flowers at the joints.

Mortimer,

Br.i i.. The parts of a bell, are the body or barrel, the chipper, on the inside, and the ear or cannon, by which it hangs to a large beam of wood. The matter of which it is usually made is a composition called bell-metal. The thick – jie.vs of a bell's edge is usually one-fifteenth of the diamc'.-i', and its heiuht twelve times its thickness. The -A \ fotinders have a diapason, or hel!>c;do, \hcnjwith they measure the size,

thickness, weight, and tone of their bells. For the method of casting bells, see FOUNDRY.

The theory of the sound of bells belongs pro- perly to acoustics, but wo may here observe that the most sonorous bell, according to a paper by M. Reamur ˆMem. Acad. Par. 1726), may be formed of the segment of a sphere. The sound of a bell, says the Campanalogia, arises from a vibratory motion of the parts thereof, much like that of a musical chord. The stroke of the clapper, it is evident, must change the figure of the bell, and of round make it oval, but the metal having a great degree of elasticity, that part which the stroke drove farthest from the centre will fly back again, and this even somewhat nearer to the centre than before ; so that the two points, which before were the ex- tremes of the longer diameter, now become those of the shorter. Thus, the circumference of the bell undergoes alternate changes of figure, and by means thereof gives that tremulous motion to the air, in which sound consists. M. Per- rault maintains, that the sound of the same bell, or chord, is a compound of the sound of the se- veral parts thereof ; so that where the parts are homogeneous, and the dimensions of the figure uniform, there is such a perfect mixture of all these sounds, as constitutes one uniform, smooth, even sound : and the contrary circumstances, produce harshness. This he proves from the bell's differing in tone according to the part you strike ; and yet strike it anywhere, there is a motion of all the parts. He, therefore, considers bells as composed of an infinite number of rings ; which according to their different dimensions, have different tones, as chords of different lengths have; and when struck, the vibrations of the parts immediately struck, determine the tone; being supported by a sufficient number of consonant tones in the other parts. Mr. Hawks- bee, and others have found J)y experiment, that the sound of a bell struck under water is a fourth deeper than in the air : though Marsennus says, it is of the same pitch in both elements. This writer has treated largely of the different metals of which bells are formed, of their figure, crassitude, and degrees of ponderosity, as they respect each other in a given series.

Bells are observed to be heard farther, placed on plains, than on hills ; and still farther in val- leys than on plains ; the reason of which it will not be difficult to assign, if it be considered, that the higher the sonorous body is, the rarer is its medium ; consequently the less impulse it receives, and the less proper vehicle it has to convey it to a distance.

The use of bells is very ancient as well as ex- tensive. We find them among Jews, Greeks, Romans, Christians, and Heathens, variously ap- plied, as on the necks of men, beasts, birds, horses, and sheep : but chiefly hung in build- ings, either religious, as in churches, temples, and monasteries ; or civil, as in houses, markets, and baths ; or military, as in camps and frontier towns. Among the Jews it was ordained, that the lower part of the blue tunic which the high priest wore, when he performed certain religious ceremonies, should be adorned with pomegran- ates and golden bells, intermixed equally and at

equal distances. The sacred historian mentions the use and intent of them in Exod.xxviii. 33 ††† 35. ‘ It shall be upon Aaron to minister, and his sound shall be heard when he goeth in unto the holy place before the Lord, and when he cometh out, that he die not.’ The sound of the numerous bells gave notice to the assembled people that the most awful ceremony of their religion had commenced. It was a signal, ppr- haps, that they should prostrate themselves at the moment in which the high priest entered the sanctuary with a vessel of incense, in order that their prayers might ascend with the column of fragrance before the throne of heaven. The kings of Persia, from a remote period, are said to have had the hems of their robes adorned like the Jewish high priests with pomegranates and golden bells.

The poet, Cowper, gives a moral turn to this circumstance, worth remembering :

With golden bells, the priestly vest, 4nd rich pomegranates bordered round,

The need of holiness expressed, And called for fruit as well as sound.

The prophet Zachariah, xiv. 20, speaks of bells hung to war-horses.

Among the Greeks, those who went the nightly rounds in camps or garrisons, carried with them a little bell, which they rung at each centry-box to see that the soldiers on each watch were awake. A codonophorous, or bell-man, also walked in funeral processions, at a distance before the corpse, not only to keep off the crowd, but to advertise the flamen dialis to keep out of the way for fear of being polluted by the sight, or by the funeral music. The priest of Proserpine, at Athens, called hierophantus, rung a bell to call the people to sacrifice. There were also bells in the houses of great men to call up the servants each morning. Zonaras assures us, that bells were hung with whips on the triumphal chariots of their victorious generals, to put them in mind that they were still liable to public jus- tice. Bells were put on the necks of criminals going to execution, that persons might be warned by the sound to avoid meeting so ill an omen, as the sight of the hangman, or the condemned criminal. Maggi has given the print of a wretch whose neck is weighed down by an enormous bell, while his back is exposed to the lash of the hangman.

The responses of the Dodonsean oracle were doubtless in part conveyed by bells. The de- scription of it which Strabo has left (lib. vii.), the lebetes of Virgil, the pelves of Juvenal, and the tironitus ahe.nl of Ausonius, admit of no other interpretation. The bells were of copper, and so suspended round

the temple, that one being struck put the whole in motion ; and, by the manner in which the sounds died away, the priestess framed her revelation. Plutarch men- tions (Symp. xiv.) a bell in the Grecian fish- markets, which reminds the writer of this article of an exactly similar construction in the little sea-port town of his birth.

Strabo connects with this custom a curious story. A musician being deserted by his au- VOL. III.

ditory in the town of Jassus, found it was the fish-bell which had attracted them away. One per- son alone remained, as if decidedlypreferring his melody. The grateful harper approached, thanked his hearer for the honor which he paid to the art, and congratulated him on the superior pu- rity of taste which prevented him from accom- panying the rabble, which had vanished at the first stroke of the bell. 'Has the bell rung?' answered the other, ' alas ! I am deaf; good morning to you !'

Ornamental bells in building, after the manner of the Chinese, were clearly in use among the Romans. Pliny (vii. 45, xxxvi. 13,) mentions the monument of Porsenna as decorated with pinnacles, each of which was surmounted by bells. The dream of Augustus transferred a similar ornament from the portals to the roof of the Capitoline Jove, (Suetonius, Oct. xci.)

On the origin of church bells, Mr. >Vhitaker, in his History of Manchester, observes, that bells being used, among other purposes by the Romans, to signify the times of bathing, were naturally applied by the Christians of Italy to denote the hours of devotion, and summon the people to church.

The first application of them to ecclesiastical purposes is, by Polydore V7irgil and others, ascribed to Paulinus, bishop of Nola, a city of Campania, about the year 400. Hence, it is said, the names Noise and Campanae were given them ; the one referring to the city, the other to the country. Though others say they took the latter of these names, not from their being in- vented in Campania, but because it was here the manner of hanging and balancing them, now in use, was first practised. It is obvious, that during the days of early persecution, any public summons to the meetings of Christians would have betrayed them to their enemies. In Britain, bells were used in churches before the con- clusion of the seventh century, in the monastic societies of Northumbria, and as early as the sixth, even in those of Caledonia. They were, therefore, used from the first erection of parish churches among us. Those of France and Eng- land appear to have been furnished with several bells. In the time of Clothair II. king of France, A. D. 610, the army of that prince was frighted from the siege of Sens, by the ringing of the bells of St. Stephen's church. The second

ex- cerption of Egbert, A. D. 750, which is adopted in a French Capitulary of 801, commands every priest, at the proper hours, to sound the bells of his church, and then to go through the sacred offices to God. And the council of Euham, in 1011, requires all the mulcts for sins to be ex- pended in the reparation of the church, clothing and feeding the minister of God, and the pur- chase of church vestments, church books, and church bells. These were sometimes com- posed of iron in France; and in England, as formerly at Rome, were frequently made of brass. As early as the ninth century there were many cast of a large size and deep note. In- gulphus mentions, that Turketulus, abbot of Croyhnd, who died about A.D. 870, gave a great bell to the church of that abbey, which he

named Guthlac ; and aftorwnrds six others, viz. two which he called Bartholomew and Hetelin, two called Turketul and Tatwin, and two named Pega and Bega, all which rang together; the same author says, Non erat tune tanta conso- nantia campanarum in tola Anglia. Not long after, Kinseus, archbishop of York, gave two great bells to the church of St. John at Beverly, and at the same time provided that other churches in his diocese should be furnished with bells. Mention is made by St. Aldhem, and William of Malmesbury, of bells given by St. Dunstan to the churches in the west. The number of bells in every church gave occasion to a curious and singular piece of architecture in the cam- panile or bell-tower; an addition, which is more susceptible of the grander beauties of architec- ture than any other part of the edifice, and is generally therefore the principal or rudiments of it. It was the constant appendage to every parish church of the Saxons, and is actually mentioned ns such in the laws of Athelstan. The Greek Christians are usually said to have been unac- quainted with bells till the ninth century, when their construction was first taught them by a Venetian. But it is not true that the use of bells was entirely unknown in the ancient eastern churches, and that they called the people to church, as at present, with wooden mallets. Leo Albtius, in his Dissertation on the Greek Tem- ples, proves the contrary from several ancient writers, lie says bells first began to be disused ainon.r them after the takinv of Constantinople by tin' Turks; who, it seems, prohibited them, lest, their sound should disturb the repose of souis, which, according to them, wander in the air. lie adds, that they >till retain the use of !>el!s in places ivmote iVo:n the intercourse of the Turks, particularly very ancient ones in Mount Athos. 1". Simon thinks the Turks prohibited the Christians the use of hells, rather from poli- tical than iv'-Lious reasons, as the ringing of bdls mi'Jit serve as

a signal for the execution of revolts, \c.

!n the daik aˆesbe'ls were constantly baptised

nd ar.o.ntfd, o'.i.'o chrism, itis, as well as exor-

: bl, ,-<.:' by the bishop; from a belief,

':at w'. :i thi -monies were performed, they

('evil out of the air, to

eil'ii tempests, extinguish lire, and even to re-

vivi.' the dead. The ritual for these ceremonies

N contained in the Roman pontifical.; arid it

:□□□ usual in their baptism to <;:\ e to bells the

name o!

□□□f'U'dshire, p. :□□'.n, then: is u relation of the

set rf bells in Italy with great ce-

veniuny, a short time before the publication of

ilnt work : ai.,1 □□> late as September, 1782, the

.'ames's Chror.icle contains a.n account of

□□□ lovers 01 ecclesiastical < eremonies running

: t I'ans. to Si □□□ the ceremony of

o"St. Sulpicius, of which*

t-'.- kini and C,IH en, mon ieur, and madame, were

' ?sn -\ Abbey, near

' several names

ite-.'ter, or ra-

Th.e l:e!!s of

*shire, had their names cast about the verge of every one in particular, with these rhiming hex- ameters : ***

fromina Campanis haec indita sunt quoquc nostris.

1. Hoc signum Petri pulsatur nomine Christi.

2. Nomen Magdalen campana sonate melode.

3. Sit nomen Domini benedictum semper in evum.

4. Musa Raphaelis sonat auribus Immanuclis.

5. Sum Rosa pulsata mundique Moria vocata.

Weev. Fun. 122.

By an old chartulary, once in the possession of Weever the antiquary, it appears that the bells of the priory of Little Dunmow in Essex, were, A. D. 1501, new cast, and baptised by the names 6f St. Michael, St. John the Evangelist, St. John the Baptist, the Virgin Mary, and the Holy Tri- nity. Weever further mentions, that bells had frequently this inscription :

Funera plango, Fulgura frango, Sabbata pango, Excito lentos, dissipo ventos, Paco cruentos.

Durandus mentions six kinds of bells in the ancient monasteries, viz. Squilla rung in the refectory ; cymbahim in the cloister ; nola in the choir; nolula or dupla in the clock; campana in the steeple; and signum in the tower. Belethus has much the same; only that for squilla he puts tintinnabulum, and places the campana in the tower, and campanella in the cloister. Others place the tintinnabulum or tinniolum in the refectory or dormitory; and add another bell called corrigiuncula, rung at the time of giving discipline or to call the monks to be flogged. The cymbalum is sometimes, also, said to have been rung in the cloister, to call the monks to meat.

Abroad, bells are found of great magnitude. In the steeple of the great church at Rouen in Normandy there was in modern times a bell with the following inscription :

Je suis George de Ambois, Qui trcnte cinque mille pois. Mes lui qui me pesera, Trcute six mille me trouvera. I am George of Ambois, Thirtie five thousand in pois ; But he that shall weigh me, Thirtie six thousand shall

find me.

The great bell at St. Peter's in Rome weighs 1 8,607 pounds. In the Palazzo Vecchio at Flo- rence, is one weighing 17,000 pounds; and it is raised 275 feet from the ground. Great Tom, of Christ Church, Oxford, weighs 17,000 pounds; of Lincoln, 9894 pounds. The bell of St. Paul's, London, 8400 pounds.

It is a common tradition that the bells of King's College chapel, in the university of Cam- bridge, were taken by Henry V, from some church in France, after the battle of Agincourt. They were taken down some years ago, and sold to Phelps, a bell-founder, in Whitechapel.

The Musurgia Universalis of Kircher describes a bell at Erfurth, which was cast in the year 1497, by Gerard Von de Campis, at the expense of the citizens, the neighbouring princes, and noblemen. Its thickness is a quarter and half quarter of an ell; its height four ells and three quarters ; its exterior periphery fourteen ells and a half; and its weight 252 cwt. Twenty-four

men are required to ring it, besides two men who, on each side, push forward the clapper. Its sound is plainly heard at the distance of three German leagues. Its fundamental note is D sol re, but it gives also F faut, making a consonance of a minor third. But from the above account, Sir John Hawkins (Hist, of Music, iv, 211) has doubted whether the bell is ever rung at all ; that is, whether it is elevated by a rope and wheel. The action of the twenty-four men is obscurely described ; but the two are plainly employed not in ringing but in tolling.

A bell in the church of St. Ivan, at Moscow, weighs 127,836 pounds. But the wonder of travellers is the unsuspended bell in the Krem- lin of that city. It was cast in 1653, in the reign of the empress Anne, and a fire took place in the building erected over it. The metal thus became hot, and the water, which fell upon it while in this state, occasioned a fracture, by which it was rendered useless. Dr. Clarke, in his Travels, has given the following account of it: ‘ It reaches from the bottom of the cave to the roof. The entrance is by a trap-door, placed even with the surface of the earth. We found the steps very dangerous ; some of them were wanting, and others broken, which occasioned me a severe fall down the whole extent of the first flight, and a narrow escape for my life in not being dashed upon the bell. In consequence of this accident, a sentinel was

stationed afterwards at the trap-door, to prevent people becoming vic- tims to their curiosity. He might have been as well employed in mending the steps, as in wait- ing all day to say they were broken. The bell is truly a mountain of metal. They relate that it contains a very large proportion of gold and silver; for that, while it was in fusion, the nobles and the people cast in, as votive offerings, their plate and money. It is permitted to doubt the truth of traditionary tales, particularly in Russia, where people are much disposed to relate what they have heard, without reflecting on its proba- lity. I have endeavoured, in vain, to assay a small part. The natives regard it with super- stitious veneration, and they would not allow even a grain to be filed off. At the same time it may be said, the compound has a white shin- ing appearance, unlike bell-metal in general; and perhaps its silvery aspect has strengthened, if not given rise to, a conjecture respecting the richness of its materials. On festival days, the peasants visit the bell as they would a church, considering it an act of devotion ; and they cross themselves as they descend and ascend the steps. The bottom of the pit is covered by water, mud, and large pieces of timber, which, added to the darkness, render it always an unpleasant and unwholesome place, in addition to the danger arising from the steps which lead to the bottom. I went frequently there, in order to ascertain the dimensions of the bell with exactness. We applied a strong cord close to the metal in all parts of its periphery, and round the lower part where it touched the ground ; taking care at the same time not to stretch the cord. From the piece of the bell broken off, it was ascertained that we had thus measured within two feet of its

lower extremity. The circumference obtained was sixty-seven feet and four inches; which allows a diameter of twenty-two feet, five inches, and one third of an inch. We then took the perpendicular height from the top of the bell, and found it correspond exactly with the state- ment made by Hanway, namely, twenty-one feet, four inches and a half. In the stoutest part, that in which it should have received the blow of the hammer, its thickness equalled twenty- three inches. We were able to ascertain this, by placing our hands under water where the fracture had taken place, which is above seven feet high from the lip of the bell. The weight of this enor- mous mass of metal has been computed to be 443,772 pounds; which, if valued at three shil- lings a pound, amounts to ––66,565. 16s. lying unemployed, and of no use to any one.

In 1684, Abraham Rudhall, of Gloucester, brought the art of bell-founding to great perfec- tion. His descendants in succession continued the business ; and by a list published by them, it appears, that at Lady-day, 1774, the family, in peals and odd bells, had cast to the amount of 3594. The peals of St. Dunstan's in the east, and St. Bride's, London, and St. Martin's in the Field's, Westminster, are in the number. See FOUNDRY.

The practice of ringing bells in change, or regular peals, is said to be peculiar to England ; whence Britain has been termed the bell-ringing island. The custom seems to have commenced in the time of the Saxons, and was common before the conquest. The tolling a bell is nothing more than the producing a sound by a stroke with the clapper against the side of the bell, the bell itself being in a pendent position and at rest. In ringing, the bell, by means of a wheel and a rope, is elevated to a perpendicular; in its motion to this situation the clapper strikes forci- bly on one side, and in its return downwards on the other side of the bell, producing at each stroke a sound. There were in London, for- merly, many societies of ringers, particularly one known by the name of the College Youths: of this it is said the celebrated Sir Matthew Hale, was, in his youthful days, a member ; and in the life of that judge, by bishop Burnet, are some facts that at least prove his attachment to such exercises. Ringing has sometimes claimed the name of a science, and peals have been com- posed which bear the name of inventors. Some of the most celebrated of these were composed about fifty years ago by one Patrick. This man was a maker of barometers ; in his advertise- ments he styled himself Torricellian Operator, from Torricelli, who invented instruments of this kind. The ancient peals do not appear to have exceeded five in number. Holden, in his Treatise on the natural grounds of Harmony, remarks, that ‘ the completest and most perfect ring is a peal of six, in which, whether ascend- ing or descending, the hemitone holds the mid- dle position, as it does in both the natural and the durum hexachord ; in the molle hexachord the tritonus intervenes.’ cap. vi. Stowe, in his Survey of Xˆornhill Ward, mentions, rhat in 1430 a sixth bell was added to the peal of five

in the chnrch of St. Michael ; after which it was accounted the best ring of bells, for harmony and sweetness, in all England.

The theory of ringing may he completely learned from either the Campanologia (of 1733), or the Ilarmonia Universalis (the Latin not the Trench work) of Mersennus, in which he lias enu- merated and reduced to musical notation, the changes of the hexachord, or the Tintirmalo- gia, or Art of Kinging, (1068), in which every possible change of diatonic sound, from two bells to twelve, is laid down ; and innumerable passages presented wholly new to musical com- position. This may easily be imagined, when it is recollected, that in the simple arrangements of natural sound, without the intervention of a single flat or sharp, twelve bells produce 479,001,000

changes. Not all the changes, however, if reduced into an air, would be equally agreeable or practicable ; and it is somewhat remarkable, (hat in the art of ringing, melody has never been studied. Mechanical order and succession has been all in all ; and Dr. Burney, from whom we borrow the observation, states, that even in the clams or collision of two bells together in counterpoint, no knowledge of har- mony has ever been displayed.

The number of changes upon a given number of bells is readily calculated : S rz 1×2×3×4 X .... n. So that the changes upor

]Vo poal, in -\ -on;! t\ve! ve, we believe, has ever been erected. The churches h;a ing twelve bells, in London, HIV St. lit-id, "s, St. Martin's in the 1'iehls, St. ?dichad's Corn'iill, St. Leonard's Shorediteh, Si. Saviour's Southwark, St. Giles's Cripple-at.', ai, i Christ Church Spitalfields. In ti, i' country, York Minstc.r, Cirencester, Great St. Mary's Cambridge, St. Martin's Birming- ham. St. Peter's Maiicroft Norwich, St. Chad's Shrewsbury, and I'ayne Church Gloucestershire, have the same number.

It i-^ calculated that twelve changes may be rung

in oii" minute, that is 7'JO in an hour. On this

computation, all the. possible changes on twelve

.! not be rung in le.-s than seventy-five

year-;, t'-n months, and ten days.

A peal is the whole number of changes which

cat! 'M; nnrj: on any u'Hen number of bells: and

'.'. style of each peal diiiers according to the

\ an .:;.!<□□□!! in t!:e succession of these changes, so

each peal L- distinguished by a peculiar name,

-. !:.::> are in psa iuo-iy. The peal of regular

□□□Us, is called a grandsire.

penuiit.itions aie represented in the fol-

12345

13542

31234

25143

;o 1 1 Q

21354

35142

23415

OZ'i 1 O

54231

23145

53412

24.", 51

4532 '-.

32415

54321

42531

43512

34251

45231

45213

34152

43521

42513

54123

B 31425

45312

24153

51432

13452

54132

B 21435

15342

14325

51423

12453

13524

41352

15243

14235

31542

43125

12534

41253

35124

34215

51543

42135

53214

32151

25134

24315

52341

23541

52314

23451

25431

25314

53241

32541

24313

52134

35421

35214

42153

51243

34512

53124

B 41235

15423

43152

51342

14253

14532

B 41325

15432

12435

41523

14352

14523

21453

45132

13425.

41532

24135

54312

31452

45123

42315

53421

34125

54213

43251

35241

43215

52431

34521

32514

42351

25341

35412

23154

24531

23514

53142

S 21345

25413

32154

51324

12354

52143

S 32145

15234

12345

51234

13254

12543

15324

13245

21534

The letter B, in the above example, signifies a bob, or an alteration in the direction of the changes. S denotes single; a term used when half the peal is rung, and, also, when one change only remains. A plain bob, grandsire bob, or single bob minor, is the peal of regular permuta- tion on six bells. A

grandsire treble is the same on seven. A bob major the same on eight. Caters the same on nine. Ten in, or bob royal, the same on ten. Cinques the same on eleven. Twelve in, or bob maximus, the same on twelve. In the grandsire treble complete, there are 5040 changes: to >ring through which, admitting 720 changes in an hour (a number which cannot be> kept up), seven hours would be required. It is plain that this is the most extensive complete peal which can be rung. The next in order, the bob major, contains 40,320 changes, and could not be rung even on a light peal in less than twenty-four hours, a length of time during which no eight men could stand to the labor.

These regular changes, in which the place of two bells only is altered in each round, are called plain changes. When the place of more than two bells is altered, and the changes do not succeed each other progressively, but by inter- vals, they are called cross changes.

The bell, the regular motion of which guides the rest, is called the hunt, and it is generally the treble bell. In the above example, the figure 1 represents the hunt; it moves from its own place into the second's place, and so on till it reaches fifth's place, which is called hunting up behind. Ilert it strikes two blows, called lay ing behind a whole pull; and it then hunts back again in the reverse order, and so on to the end

of the peal. ' The first step/ says the Campa- riologia, ' he (the learner) makes in this art, is to learn perfectly to set a bell, both back stroke and fore; and to have it so much at his com- mand, as that he may be able to cut it down at either hand (being the sally or back stroke), and set it again the next pull ; without which he can- not attain to any perfection or knowledge in this art. And, to make this the more easy to him, he must observe to keep the rope tight or stiff, to stand upright to his bell, not stirring, or using any ungenteel posture; which in ringing, as well as dancing, is very ridiculous. When he is mas- ter of this, he may then try to ring one round in three, four, five, or six bells, and afterwards in eight or ten, wherein, as in all ringing, the princi- pal thing to be observed is a true and exact compass, which in music is called time, other- wise the ringing becomes very unpleasing and disturbing to the hearers, and may be compared to the nauseous music of a country fiddle-player oefore a company of boors and peasants going to the celebration of a homely country-wedding.' p. 11.

In the Low Countries, particularly at Ghent and- Antwerp, is a species of

chime termed caril- lons, played with great labor by a performer, the carrilloneur, upon a number of bells, disposed in a scale of tones and semitones like a harpsi- chord. The bass is played by pedals ; the treble by violent strokes of the hands edgeways upon a series of projecting sticks, which act as keys. From this barbarous and unwieldy music, the term carillon has been applied to a small keyed instrument, imitating a peal of hand-bells, in which box hammers are made to strike iron bars of different lengths. Handel employed this instrument as an accompaniment in his air, ' O let the merry bells ring round,' in L'Allegro ; and to the chorus, ' Welcome, welcome, mighty king,' in Saul. See CHIMES.

The Passing BELL was anciently rung for two purposes ; one, to bespeak the prayers of the mi- nister and all good Christians for a soul just departing; the other, to drive away the evil spirits who were supposed to wait about the house, ready to seize their prey, or to molest and terrify the soul in its passage. By the ringing of this bell, for Durandus informs us evil spirits are much afraid of bells, they were thought to be kept aloof: and the soul, like a hunted hare, gained the start, or had what is by sportsmen called law. Hence, perhaps, exclusive of the additional labor, was occasioned the high price demanded for tolling the greatest bell in the church. This dislike of spirits to bells is men- tioned in the Golden Legend, by W. de Worde. ' It is said, the evil spirytes that ben in the regyon of thayre, doubte moche when they here the belles rongen: and this is the cause why the bells ben rongen whan it thondieth, and whan grete tempeste and outrages of 'wether happen, to the ende that the fiends and wycked spirytes shold be abashed and flee, and cease of the movynge of tempeste.' Lobineau observes, that the custom of ringing bells, at the approach of thunder, is of some antiquity; but that the design was not so much to shake the air and so ××× !nsil>aU> the thunder, as to call the people to

church, to pray that the parish might be pre- served from disasters.

Legends Concerning BELLS, as mignt ce ex- pected, are endless. The bells at Canterbury are said to have rung of themselves on the murder of Thomas a Becket : but the influence of bells as exorcists has occasionally failed. The history and antiquities of Shrewsbury, by Phillips, con- tains the following item: 'This yere 1533 upon twelfie daye in Shrewsbury, The Dyvyll appearyd in Saint Alkmonds church e there when the priest was at high masse, with great tempeste and darknesse, so that as he passyd through the churche, he mounted up the steeple in the sayde churche, tering the wyers of the seid clocke, and put the print of hys clawes upon the 4th bell, and tooke one of the pynnacles away with hym, and for thetyme stayed all the bells in the church- es within the said towne, that they could ney- ther toll nor ringe.' It is clear that this is simply the reference of a thunder storm to diabolical agency. We are told of a bell of St. David, which cured the King

of Dublin of a mortal disease by applying it to his cheek. This was preserved in the church of Glascwm in Rad- norshire. It was portable, and endowed with great \irtue. Giraldus Cambrensis says, that ‘ a certain woman secretly conveyed this bell to her husband, who was confined in the castle of Raidergwy nearWarthrenia, which Rhys, son of Gruffydd, had lately built, for the purpose of his deliverance. The keeper of the castle not only refused to liberate him for this consideration but seized and detained the bell ; and in the same night, by Divine vengeance, the whole town, ex- cept the wall on which the bell hung, was con- sumed by fire.’ A similar bell, called Bangu,. was kept in all Welsh churches during Popish times. On the day of a funeral, the sexton took it to the house of the deceased. When the pro- cession began a Psalm was sung, and the bell- man sounded the Bangu in a solemn manner, till the corpse arrived at the church. Within the memory of living persons this custom is said to have prevailed in Wales. We must mention yet one more marvellous bell in Ireland, which, unless it were tied fast every night, used to wander far from home into another church ! We read also of a comet, which in the time of Pope Calixtus III. cast upon the Turks all the mis- chief which it threatened, in consequence of the ringing of bells, by order of the pontiff, pre- cisely at noon. Plat, in vita.

We may finally observe (with Stavely, on Churches,) that anciently and sometimes besides the before specified offices, an extraordinary and dreadful use was also made of bells, and that was the cursing by Bell, Book, and Candle : the manner whereof, he-adds, I hope, will not be altogether impertinent here to relate ; out of an. anciert Festival, and the articles of the general great curse, found at Canterbury, A. D. 1562. It was solemnly thundered out once in every Quarter; ‘ The Fyrst Sonday of Advent, at comyng of our Lord Jhesu Cryst : the fyrsl Sonday of Lenteen : The Sonday in the Feste of the Trynyte : and Sonday within the Utas (Oc- taves) of the blessed Vyrgin our Lady St. Mary.’ At which action the prelate stands in the pulpit

in his Aulbe, the cross being lifted up before him and the candles lighted on both sides of it, and begins thus, ‘ By authority, God, fader, Son, and Holy- Ghost, and the glorious Moder and Mayden, our Lady St. Mary, and the Blessed Apostles Peter, and Paul, and all Apostles, Martyrs, Confessors, Vyrgyne, and the hallows of God ; All thos byn accursed that purchases writts, or letters of any leud court, or to let the prOcesse of the law of holy church of causes that longen skilfully to christen court, the which should not be demed by none other law : And all that maliciously bereaven holy chirch of her right, or maktn holy chirch lay fee, that is hal- lowed and blessed. And also all thos that for malyce or wrathe of parson, vicare, or

priest, or of any other, or for wrongfull covetyse of himself witholden rightful tyths, and offerings, rents, or mortuaries from her own parish church, and by way of covetyse fals lyche taking to God the worse, and to hemself the better, or else torn him into another use, then hem oweth. For all chrysten man and women been hard bound on pain of deadly sin, not onlyche by ordinance of man, but both in the ould law, and also in the new law, for to pay trulyche to God and holy chirch the tyth part of all manner of encrease that ihoy winnen trulyche by the grace of God, both \v itli her travell, and alsoo with her craftes whatsoe they be truly gotten.' ' And then concludes all with the curst; itself, thus:' 'And now by :uitli(>ritiIKT sins or gyven hem hereto ××× ×××ither lu-lp or council, soe they be departed froe

"I, and all lioli t hirch : and that they have noe part of the passyon of our Lord Jhesu Cryst, ne of noe Sacraments, ne no part of the prayers ..m:××ig .'liristen folk : lint that they be accursed of God, ai.d of tin; (lurch, froc the sole of her mot io the crown of her hede, sleaping and wakiii'j';, sittni.;- and standing, and in all her v. ords, and. in all lit r werks ; but if they have uoe u'raee of (,od io amend them here in this lyfe, for to dwt II iii tin: pain of hell forever wit'nouten nd: liat : liat. Doe to the boke : 'iiiench the randies: rug tlio bell: Amen, \ n> :i ' ' And then the book is dapp'd together, ilie candies Mown out, and the bells rung, with t most dreadful noise made by the congregation (present bewaihirj; the aeairsed persons concerned m that blaek dooai denounced against them.' 236.

Tlie uses of bells \ere Miimued up in the fol- h'v-.iii'j, diMieh, as well us one above mentioned:

I. ami" l)i u:;i vrriini, j.l.-!. <×××,×××××××! vnco, cemjuga cierum,

l)i-l'i!iii ins j.loro, IH-S'.CSJI f'.i;'.'>, fi-slii iluriiro.

IMII, in au;h;teetuve, is used to denote the imdv of the I'oniithian and Composite capital, !'\ leason of IK re-, ×××inhlanee to the figure of a lull inverted. lt:s ,ls< > ealled \aseatul tambour, and soi-ietinu s eon,.-!. '! i e naked of the bell should al\ a\ > he e\ i n :uid the bottom ××l t,n; Hut

perpendicular with t!ie column. See

i:c H i i i i : i ui'.

iiii.i, in clieini.-irv, denote.; a glass vessel pl,i< ed o\ui some matte;' in a >t ;to of exhalation, '×××ither to coileet tin; vapor or gather the flowers. t'liemical b'.-lls ,ia> a -.011 of iveeptades chiefly used in prep.tna , t1,, '××× sj irit of sulphur, for

gathering and condensing fumes into a liquor. BELL, DIVING. See DIVING. BF.LI, (Benjamin), member of the Royal College of Surgeons, and F. R.S. Edinburgh, was born at Dumfries, in 1749, and after a classical education, under the celebrated Dr. George Chapman, began his medical studies at Edinburgh, in 1766. About 1770 he went to Paris, and from thence to London. Mr. Bell returned to Edinburgh in 1772, with a design of settling there. His address and dexterity, and the success of his cures in the infirmary, were soon observed, but his fame was not confined to the circle of prac- tice: in 1778 he published A Treatise on the management of Ulcers, &c. which soon passed through several editions, and was occasionally im- proved by the author. He afterwards incorpo- rated it into his System of Surgery, of which Mr. Bell published the first volume in 1783 which was well received. He completed it in 1788. Before the year 1801 it had gone through six editions, receiving, as they came out, whatever improve- ments his experience could add : the 7th edition, considerably improved, was that year published in 7 vols. 8vo. In the year 1793 Mr. Bell pub- lished a Treatise on the Gonorrhoea Virulenta, and Lues Venerea, 2 vols. 8vo. which passed to a third edition. In 1794 appeared a more enlarged treatise on The Hydrocele, on Sarcocele or Cancer, and other diseases of the Testes, than what was contained in his System of Surgery. In 1782 Mr. Bell published the first volume of a Series of Essays on Agriculture, with a plan for the speedy improvement of land in Great Britain ; the 2d volume of which he was preparing for the press immediately before his death. He also sent abroad into the world several anony- mous political tracts. Mr. Bell married a daughter of the Rev. Dr. Hamilton, professor of Divinity ; and some years before his death he was assisted in his professional pursuits by his eldest son, Mr. George Bell. He made different tours for the improvement of his health about the year 1800, but nature continued to fail, and he expired without any sympton of pain, ou 4th April, 1806.

BELL (John), an eminent surgeon of Edin- burgh, delivered anatomical lectures there, and published some professional works of considerable importance. Among these are Discourses on the Nature and Cure of Wounds, 8vo ; The Anatomy of the Human Body, 3 vols. 8vo ; Principles of Surgery, 3 vols. 4to. A few years ago he travel- led to Italy, and dying at Rome in 1820, left for the press a work published in 1825 with the title of Observations on Italy, 4to.

BELL (Henry Nugent), a student of the Inner Temple, of considerable heraldic and genealogi- cal research. His exertions were the means of the recovery of the dormant Huntingdon Peer- age. He died October 18, 1822, on the day a verdict was given against him fora sum of money advanced to him by Mr. Cooke, an engraver, to- wards the investigation of a claim to an estate. He published an account of the claim to the Huntingdon peerage.

BELL (Elizabeth), of Kinvaid, and her friend Mary Gray, of Lednock, celebrated in the well known song, Bessy Bell and Mary Gray, were

both natives of Perthshire, where these estates are situated. The history of these young ladies is recorded by the ministers of Methven and Monedie, in Sir J. Sinclair's Stat. Ace. Vol. III. 604; and X. 621.

BELLA (Stefano De la), an eminent engraver, born at Florence, A.D. 1610. His father was a goldsmith ; and he began to follow that business, but whilst learning to draw, Callot's prints fell into his hands ; with which he was so delighted, that he prevailed upon his father to permit him to apply to engraving; and he became the dis- ciple of Canto Gallina, the instructor of Callot. Bella at first imitated the manner of Callot, but soon adopted one, his own, which in freedom and spirit is said even to have surpassed that of his fellow pupil. He went to Paris A. D. 1642, where he formed an acquaintance with Israel Silvestre, and was much employed by Henriete, Silvestre's uncle. Some time after, Cardinal Richelieu engaged him to go to Arras and make drawings of the siege of that town by the royal army. After staying a considerable time at Paris, his family affairs obliged him to return to Florence ; where he obtained a pension from the Great Duke, and was appointed to instruct Cosmo, his son, in the art of design. He was subject to violent head-aches, which terminated his life, A.D. 1664, when he was only fifty-four years of age. He drew very correctly, with great taste, and vast fertility of invention. The animation which appears in his works compensates for their slightness, which we can hardly be surprised at when we are told that he engraved 1400 plates.

BELLADONA, in botany the trivial name of a species of Atropa. See ATKOPA.

BELLADONA LILY. See AMARYLLIS.

BELLAI (William du), lord of Langey, a French general who signalised himself in the service of Francis I. He was also an able nego- ciator, so that the emperor Charles V. used to say, that Langey's pen had fought more against him than all the lances in France. He was sent to Piedmont in quality of viceroy, where he took several towns from the Imperialists. His address in penetrating into the enemy's designs was sur- prising. In this he spared no expense, and thereby had intelligence of the most secret of the imperial councils. It being then the interest of France to favor the king of

England, he was extremely active in influencing some of the French universities to give their judgment agreeable to the desire of Henry VIII. on the subject of divorcing Queen Catharine. He was sent several times into Germany to the princes of the Protestant league, and was made a knight of the order of St. Michael. He was also a man of learning, and composed several works ; the most remarkable of which was the History of his Own Times, in Latin, divided into several parts, each consisting of eight books ; most of which, however, have been lost. He died at St. Sapho- rin, between Lyons and Roan, the 9th January, 1542, and was buried in the church of Mans.

BELIAMORESKOY-LEPOROI,apnmncfe, of Russian Lapland, on the White Sea, which is called in the language of the country Bella or Bieloi More.

BELLAMY (Thomas), was born at Kingston- upon-Thames in 1745, and bred a hosier, became subsequently a publisher, and also an author. Among other things, he produced Sadaski, a novel, Lessons from Life, Miscellanies, and The Friends, a musical interlude. He was the original projector and editor of the Monthly Mirror. He died in 1800.

BELLARDIA, in botany, a genus of plants, of the class tetandria : order monogynia : CAL. four-cleft : NECT. with a four-lobed margin, surrounding the style : CAPS, two-celled, two- partible, many-seeded. One species ; a native of Guiana.

BELLARMIN (Robert), an Italian Jesuit, one of the best controversial writers of his time. In 1576 he read lectures at Rome with such ap- plause, that Sixtus V. sending a legate into France in 1590, appointed him as an attendant divine, in case any dispute should arise in re- ligion. He returned to Rome, and was raised successively to different offices, till at last, in 1599, he was honored with a cardinal's hat ; his acceptance of which, it is said, they were ob- liged to force, by threatening him with an ana- thema, in case of refusal. It is certain that no Jesuit ever did greater honor to his order, and that no author ever so well defended the Romish church. Protestants have owned this ; for, during the space of fifty years, there was scarcely any considerable divine among them, who did not fix upon this author for the subject of his books of controversy. Notwithstanding the zeal with which he maintained the power of the pope over the temporality of kings, he displeased Sixtus V. in his work De Romano Pontitice, by insisting that the power which Jesus Christ gave to his vicegerent was only indirect, and had the morti- fication to see it put into the index of the In- quisition, though it was afterwards removed. He left, at his death, one half of his soul to the Virgin Mary, and the other to Jesus Christ.

BELLASPOOR, a town of Delhi, Hindostan, on the east side of the Sutubje

river, which is here 100 yards broad. Lat. 31►► 35′ N., long. 76►► 21′ E. It is well built, and exhibits a re gularity not often seen in this part of Hindostan. The streets are roughly paved, and the houses built of stone and mortar. From Bellaspoor, fertile valleys, though not wide, extend to Bi-polie ; and it is the residence of the ranny, or female ruler of the Calowr territory.

BELLATRIX, in astronomy, a ruddy glittering

star of the second magnitude, in the left shoulder

of Orion. It takes its name from bellum, war,

as being anciently supposed to have a great

influence in kindling wars, and forming warriors.

BELLE, -v Belle, Fr., from the Latin

BELL'YCHE, / bellus, is applied to the female,

BEL'DAM, Vas beau to the male. Beldam,

BEL'SIRE, i now a term of derision and re-

BELL'IBONE. j proach, literally signifies fair

lady. Bellibone, bonny belle ; bonny lass ;

JleUyche occurs in Pier's Plouhman. Beldam,

in Ford, simply, as an aged woman ; and

Shakspeare applies it to the earth, ►►► shakes the

old beldame earth : he uses it, however, in its

common acceptation. Belsire occurs in Drayton.

Who this land in such estate rnamtain'd, As his groat bclsire Brute from Albion's heirs it won.

Drayton.

Pan may be proud that ever he begot

Such a bellibone, ,

And Syrinx rejoice that ever was her lot

To bear such a one. Spenser.

PER. I saw the bouncing bellibone,

WILL. Hey, ho, lionibell,

PER. Tripping over the dale alone,

WILL. She can trip it very well.

Id. Shepherd's Calendar.

What motive could compel

A well-bred lord t' assault a gentle belle?

O sav, what stranger cause, yet unexplor'd,

Could make a gentle belle reject a lord. Pope.

BELLEAU (Remi), a French poet, born at Nogent le Rotrou. He lived in the family of Renatus of Lorraine, Marquis of Elbeuf, general of the French galleys; and attended him in his expedition into Italy in 1557. This prince highly esteemed Belleau for his courage and abilities, and entrusted him with the education of his son, Charles of Lorraine. Belleau was one of the seven poets of his time, who were denominated the French Pleiades. He translated the odes of Anacreon, but is thought not to have preserved all the natura! beauties of the original. !!is pastoral pieces are most in esteem. He ai-o wrote un excellent poem on the Nature of Precious Stones ; lie died at Paris in 1577, in tin- family of the Duke d'Flbeuf.

BELl.E DF, Nrn, in botany, a name given bv the i-rcnch to the Hower of the jalap.

" MF.L1.KFOUF.ST (Francis de), a French au- thor, born in (iuienne in 1530. lie was seven years of age when lie lost his father; but his mother, though K:t't in poor circumstances, con- tribiiu..! all in h< r jxnvcr to his education. lie was sii; ported some yt ars by the. queen of Na \ap.\j, sifter to]"raiu:is I. Some time after, he \e:it to study at I .ourdeaux, then u,t

Toulouse, ami ,‘t I’M a! i’aris ; \hcre he becanie acquainted \>tii .nv persons of quality. l!e \roie. 1. A 1 1 i-iory of the Nine Charleses of France. ‘-‘. Annotations on the Books of St. \uu’ustine. :;. An I nhrrsal History of the Vv orhl. 1. Tiic Chronicles of Nicholas Gillet auu’i’.ientcd. .’). An t mversal Cosmography. ti. Annals, or a tieneral ilistiuy ot France: and many other vvorks. He die,! in l.”)8^.

J! F.J. 1. F.CiAii i) K, a strong harrier town of France, in the department of t!u: E;i stern Py- renees, j,!iid ci-devant [Hovhic!.: of iloussillon, on tiie frontiers of Catuionia. it commands a pas- sage tl.i-ouji the i’yivnean i-.ionntains. Early in the ;□□□! volut!on::ry war it was tu:- en by Spain, and stood a severe sie □□□:□□□ by tin; French in. ,‘nly and Aug. I? 1.”-!; ‘out was ohii’_,”.i to sum nder at discretion on the 1 Mil o; Sej

l! □□□ i i i □□□’. \K,.L, a t”.\n of , ranee, in the de-

p;. ;□□□:;.[image] <□□□;' uie Sam ,- a; 'i! i.<.':;e.and late pro-

□□□:: t.: □□□ Saone, fifteen

iii’iio i.onh- !□□□-; of Cii.d .1;.-. i.un.;, 5J 10′ K.,

Franco, called also . s lYiMi ii;i.’ coast

of the deportment of the Morbihan, in the ci- devant Brittany. It is the largest of the French European islands, being fifteen miles long and five broad. It is a mixture of craggy rocks and fertile soil ; but the inhabitants are very poor, and the principal trade carried on in it is the curing of pilchards. There are three harbours in the island, every one of which is defective, either in being exposed, shallow, or dangerous of en- trance. Its chief town is Le Palais, besides which it contains three county towns, 103 villages, and about 5000 inhabitants. In 1742 it was erected into a duchy, in favor of Marshal Belleisle. The town of Palais has a citadel fronting the sea, fortified principally by horn- works, provided with two dry ditches, the one next the counterscarp, and the other so contrived as to secure the interior fortifications. This ci- tadel is divided from the larger part of the town by an inlet of the sea, over which there is a bridge of communication. la this state was the island in 1761, when an expedition was under- taken against it by a British fleet, under the command of Commodore Keppel, having on board a considerable land force, commanded by General Hodgson. The fleet sailed from Spit- head on the 29th of March, and arrived before Belleisle on the 7th of April. The attempt to land was made in three places with great reso- lution ; but the British were at last repulsed, with the loss of 500 men. It was not before the 25th of April that the weather allowed a second attempt, which was successful, though the as-

sailants had many obstacles to encounter. The French were driven into Palais, and fnere the chevalier de St. Croix, a brave and experienced officer, resolved to hold out to the last extremity. It was not till ihe 7th of June that he capitu- lated, and the garrison marched out with the honors of war. At this siege the marine corps, then newly formed, gave the first signal proofs of that intrepidity, discipline, and fidelity, for which they have ever since been so much dis- tinguished. The island was restored to the French by the treaty of 1763. Long. 3►► 6′ W., lat. 47►► 18′ N.

BELLE-ISLE, an island of North America, lying at the mouth of the strait between New Britain and the north end of Newfoundland; whence the passage between them is called the Straits of Belle- Isle. The island is twenty-one miles in circuit, and the nearest land of the La- brador coast is sixteen miles distance. It has a harbour for fishing vessels, and a cove which will admit shallops. Long. 55►► 15′ W., lat. 51►► 58′ N.

BELLENDEN, or BALLANTINE (William), a Scottish writer, who flourished in the beginning of the seventeenth century, was professor of hu- manity, 01 belles-lettres, at Edinburgh, and master of the requests to James I. of England. But both appointments are supposed to have been only nominal, since he appears to have re- sided almost constantly at Paris, where, by the favor of bis sovereign, he was enabled to live in easy circumstances. There he published in 1608 his Cicero Princeps, a singular work; in which he extracted, from Cicero's writings, detached pastures respecting monarchial government, with

the line of conduct to be pursued, and the virtues proper to be encouraged by the prince himself. This treatise, when finished, he dedicated to the son of his master, Henry, Prince of Wales. In 1612 he published a work of a similar nature, called Cicero Consul, Senator Senatusque Ro- manus. He now conceived a plan of a third work, De Statu prisci Orbis, which was to con- tain a history of the progress of government and philosophy, to their various degrees of im- provement under the Hebrews, Greeks, and Romans. He proceeded so far as to print a few copies of this work in 1615, when it was suggested to him that his treatises De Statu Prin- cipis, De Statu Reipublica, and De Statu Orbis, being on subjects so nearly resembling each ►►► other, there might be a propriety in uniting them into one work, by republishing the whole under the title of Bellendenus de Statu. With this view he recalled the few copies of his last work, and the three treatises

appeared together under the new title in 1616. These pieces were reprinted by the late Dr. Parr. He inscribed them to Mr. Burke, Lord North, and Mr. Fox, whose talents and virtues he celebrates in a preface of seventy-six pages, and enters upon a very free and bold discussion of public men and measures, under names borrowed from antiquity. Bellenden wrote another work, published after his death, De tribus Luminibus Romanorum, whom he conceives to be Cicero, Seneca, and the elder Pliny. Dr. Middleton has been charged with borrowing not only the matter, but the arrangement, of his Life of Cicero, from Bellenden, without the least acknowledgment.

BELLENDENA, in botany, so called by Mr. Brown, in honor of John Bellenden Ker, Esq. a scientific botanist ; class tetrandria, order monogynia : natural order proteaceae. Its essential characters are : PET. four, regular and spreading : COR. white, and soon falling : STAM. inserted into the receptacle : GERM, two-seeded : STIG. simple : CAPS, without wings, not bursting : SEEDS one or two. 1. B. montana, mountain bellendena. ††† The only known species ; found by Mr. Brown on the mountains of Van Diemen's land, but as yet unknown in our gardens. This is a perfectly smooth shmb : the leaves are scat- tered, flat ; three-cleft at the extremity : flowers scattered, rarely in pairs : seed-vessel colored, furrowed along one edge.

BELLER, BELLAY, or BELLEY, a town of France, in the department of the Ain, and capital of the ci-devant district of Bugey ; seated near the Rhone, among the hills, on the borders of Mont Blanc, twelve or sixteen miles north-west of Chamberry, and 250 south-east of Paris.

BELLEROPHON, or BELLEROPHONTES, in fabulous history, the son of Glaucus, king of Epirus, happening accidentally to kill his brother, he fled to Proetus, king of Argos, who gave him a hospitable reception : but Sthenobea, his queen, falling in love with him, and finding that nothing could induce him to injure his benefactor, she accused him to her husband of an attempt to violate her honor. Pruetus, however, not willing to infringe the laws of hospitality, sent him to Jobates, king of Lysia, and father of Sthenobea, with letters desiring him to put him to death;

whence the proverb, Bellerophontis literas afferet, equivalent to carrying the letters of Uriah. That prince, at the receipt of these letters, was celebrating a festival, which prevented Bellerophon's destruction. lobates, however, sent him in the mean time to subdue the Solymi, the Amazons, and Lysians, and thought to get rid of him by exposing him to the greatest dangers ; but by his prudence and courage he came off victorious, lobates next employed him to destroy the Chi- msera : when Minerva, or, according to others, Neptune, in consideration of his innocence, fur- nished

him with the horse Pegasus, by whose assistance he killed the Chimaera. lobates, on his return, being convinced of his truth and in- tegrity, and charmed with his heroic virtues gave him his daughter Philonoe in marriage, and declared him his successor; which when Sthenobea heard, she killed herself. Bellerophon at length growing vain with his prosperity, re- solved, by the assistance of Pegasus, to ascend the skies ; when Jupiter checked his presumption, by striking him blind ; on which he fell down to the earth, and wandered till his death in con- tempt and misery : but Pegasus mounting into heaven, Jupiter placed him among the constel- lations.

BELLES LETTRES. ••• Of the meaning of this term no precise definition has yet been given. It appears to be a vague designation, under which every one may include whatever he pleases. Sometimes we are told, that by the belles lettres is meant the knowledge of the arts of poetry and oratory ; sometimes that the true belles lettres are natural philosophy, geometry, and other essential parts of learning ; and sometimes that they comprehend the art of war, by land and sea. In treating on the belles lettres, some even talk of the use of the sacraments, &c. See Rollin on the Belles Lettres. Some comprehend under the term all those instructive and pleasing science? which occupy the memory and the judgment, and do not make part either of the superior sciences, or of the polite arts (see ARTS), or of mechanic professions . hence they make history, chronology, geography, genealogy, bla- zonry, philology, &c. the belles lettres. In a word, it were an endless task to attempt to enumerate all the parts of literature which dif- ferent learned men have comprehended under this title.

BELLEVILLE, a town of France, in the de- partment of the Rhone, and ci-devant district of Beaujolois, seated near the Saone. Wine is its principal article of commerce.

BELLEVOIS, painter of sea-pieces, is known through all parts of Europe, though no parti- culars have been handed down concerning his life. He died in 1684. His subjects are views of havens, sea-ports, shores, calms, and storms at sea. In his calms he shows peculiar excellence. His pictures are often in public sales ; and those of his best style are sold pretty high.

BELHE1M, a large market town in the circle of the Rhine, and district of Spire, subject to Bavaria. The population, which amounts to 1500, is partly Catholic, partly Calvinistic, and partly Lutheran. The first two persuasions have churches.

BEI,

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BELLICA COLUMN A, in antiquity, a column near the temple of Bellona, from which the consuls or feciales threw javelins towards the enemy's country, by way of declaration of war.

BELLI'CAL, -v Latin, bellum, bellicum,

BELLI'COUS, (_ warlike ; waging war. Old

BELLI'QUE, i Douglas introduces, in his

BELLI'GERENT. 3 translation of the ,/Kneid, the

word bellical in the sense given. Feltham, in

his Resolves, denominates Caesar ' the hellique

Caesar.'

Never mind, brother Toby, he would say, by God's blessing we shall have another war break out again some of these days ; and when it does the belligerent powers, if they would hang themselves, cannot keep us out of the play. Sterne,

BELLICULI, or BELLIRICI MARINI, among naturalists, denote a species of sea-shells of an umbilical figure, sometimes of a white color, spotted with yellow ; and sometimes of a yellow, streaked with black lines.

BELLIDUFF, an ancient tumulus, in the parish of Meigle, Angus-shire, which tradition says is the spot where Macbeth fell. At some distance, a stone of granite, twenty tons in weight, stands almost erect, to commemorate, it is said, the death of one of his generals. 'But, (Dr. 1 May fair, who records this tradition, observes that) that tyrant, it is more probable was slain at Lumphanan, in the Mearns.'

BKLUE, from Beul aith, Gaelic, i.e. the month of the Tonl ; a parish of Scotland, situated in Banfl'shire (exempt the tov, n of Fochabers, whieh lies in the county of Murray,) extending from north to south about six miles, and from cast to west nearly four, on the left bank of the river Spey. It contains about 1000 inhabitants. The soil is abundantly fertile in grain, sown grass, potatoes, and pasturage for cattle. Among its spontaneous productions is the rare plant, called satyrium repens. The town of Fochabers lies on the other side of the river, and the parish church is now built there. A handsome bridge lias been thrown over the Spey at this place by the duke of Gordon. On a rising ground stands Gordon Castle, the seat

of the duke of Gordon, the front of which is />u8 feet in length. Near this place the duke has a capital salmon fishery on the Spey.

BELLING, Mpplied to hops, denotes their opening and expanding to their customary shape, supposed to bear some relation to that of a bell. Hops blow inwards the. end of July, and bell the latter end of August or the beginning of Sep- tember.

!>!'.!. l.INGHAM'S HAY is on the west coast of America, in the uulf of Georgia, extends from north to south about twelve miles, and has every- where <;□□□()(>d anchorage. The bordering shores are in1.-.!! and r

BKLLIN1 .(lentil □□□, a \ e;ie!iau painter, born in i-l'Jl. lie was employed by the republic of Venice: and to him and his brother John, the \ ciietians an- indebted for the beautiful paint- nigs which aic tube seen in the council-hall. Mahomet 11. emperor of the Turks., having seen some of his performances, was so struck with

them, that lie wrote to the republic, entreating them to send him. Bellini accordingly went to Constantinople, where he executed many excel- lent pieces. Amongst the rest, he painted the decollation of St. John the Baptist, whom the Turks revere as a great prophet Mahomet ad- mired the proportion and shadowing of the work; but he remarked one defect in regard to the skin of the neck, from which the head was separated ; and, in order to prove the truth of his observation, he sent for a slave and ordered his head to be struck off. This sight so shocked the painter, that he could not be easy till he had obtained his dismission ; which the grand seignor granted, and made him a present of a gold chain. The republic settled a pension upon him at his return, and made him a knight of St. Mark. He died in 1501.

BELLINI (John), brother to Gentil, painted with more art and sweetness; and died in 1512, aged ninety.

BELLINI (Laurence), an eminent physician, born at Florence in 1643. After having finished his early education, he went to Pisa, where he was assisted by the generosity of the grand duke Ferdinand II. and studied under two of the most learned men of that age, Oliva and Borelli. At twenty years of age he was chosen professor of philosophy at Pisa, but had acquired such a repu- tation for his skill in anatomy, that the grand duke procured him a professorship in that sci- ence. This prince was often present at his lee- tores. About thirty years after, Bellini, rlow in his fiftieth year, accepted of an invitation to Florence, where he practised physic with great success, and was advanced to be first physician to the grand duke Cosmo III. He wrote in Latin : 1 . An Anatomical Discourse on the

structure and use of the Kidneys. 2. A Speech by way of thanks to the serene duke of Tuscany. 3. Of the Urine and Pulse, of Blood-letting, Fevers, and Diseases of the Head and Breasts. 4. Several Tracts concerning urine, the motion of the heart, and bile, &c. lie died January 8th, 1703, His works were read and explained publicly, during his life, by the famous Scotch physician, Dr. Pitcairn, of Leyden.

BELLINZONA, a district of Switzerland, on the east bank of theTicino. It has for boundaries the country called the Gray League of the Gri- soris, the lake of Como, and the districts of Riviera, Locarno, and Lugano, containing 530 square miles, 46,000 inhabitants, and twenty parishes. On the re-organisation of the Swiss republic in 1798, Bellinzona constituted for some time an independent canton, but was formed in 1801, along with the other Italian districts of Switzerland, into the canton of the Ticino, of which the town of Bellinzona is capital.

BELLINZONA, a town of Switzerland, formerly the capital of the preceding district, and now of the canton of the Ticino, is at the extremity of a valley of the same name, where two projecting rocks leave only sufficient room for the course of the Ticino, and the road to Milan. The town is built on these rocks, and forms the main pass on the Italian side of nount St. Gothard. It con- tains 1500 inhabitants, an old citadel (formerly tiie residence of the governor of/ the district), a

collegiate church, and three convents. It is well built, has its own magistrates, and is much bene- fited by the continual passage of merchandise between Switzerland and Italy. It suffered much in the campaign of the French and Russians in 1799. Twenty-five miles S.S.W. of Como, and forty south of Zurich.

BELLIRICI MARINI See BELLICCLI.

B ELLIS, in botany, the daisy ; a genus of the syngenesia order, and the polygamia superflua class of plants; ranking in the natural method under the forty-ninth order, composite discoides. The receptacle is naked and conic ; there is no pappus ; the calyx is hemispherical, with equal scales; and the seeds are ovated. There are three species, and many varieties. 1. B. annua, with leaves on the lower part of the stalk, is a low annual plant growing naturally on the Alps, and the hiHy parts of Italy. 2. B. hortensis, the garden daisy, with a large double flower. 3. B. perennis, the common

daisy, with a naked stalk, and one flower, grows naturally in pasture lands in most parts of Europe. It is often a. trouble- some weed in the grass of gardens, and so is never cultivated.

BELLIS MAJOR. See CHRYSANTHEMUM.

BELLIUM, in botany, bastard daisy; a genus of plants of the class syngenesia, order polyga- mia superflua. Generic character is receptacle naked ; seeds conical ; crown paleaceous, of eight leaves; awned, and furnished with a pap- pus: leaflets of the calyx equal. It is a genus allied to bellis, containing two species, one of which is a native of Italy, and the other of the Levant.

BEH.METAL, a composition of tin and cop per malted together, which is more sonorous than e\ther of these ingredients taken apart. The ordinary proportion is about twenty-two or twenty-three pounds of tin to 100 pounds of cop- per; though it varies according to the size of the bells ; a greater quantity of copper being used in the greater bells than in the smaller. Some add lead and brass, others zinc or spelter. Though tin is specifically lighter than copper, yet the gravity of the compound is greater than that of copper. Some speak of a native mineral under the denomination bell-metal, from which Becher affirms he procured zaffer and smalt. See CHE- MISTRY.

BELL-MUSCHUS, in botany, a name given by some authors to the plant called bamia mos- chata, the inosch seed.

BELLON, a distemper common in countries where they smelt lead ore. It is attended with languor, intolerable pains and sensations of gri- ping, and generally costiveness. It frequently proves fatal. Beasts, poultry, &c. as well as men, are subject to this disorder: hence the term

BELLON GROUND, for the space round the smelting houses, because it is dangerous for an amimal to feed upon it.

BELLON, or BELLOHIUS (Peter), a celebrated French physician, born at Caen, in Normandy, was the author of many tracts on botany, natural history, &c. and gave name to the genus of plants called Bellonia.

BELLONA, in Pagan mythology, the goddess of war, is generally reckoned the sister of Mars ;

some represent her as both his sister and wife. She is said to have been the inventress of the needle ; and from that instrument is supposed to have taken her name. BtXovi;, a needle. She was of a cruel and savage disposition, and is commonly represented in an attitude expressive of fury ;

her hair composed of snakes, clotted with gore, and her garments stained with blood : thus she drives the chariot of Mars, with a bloody whip in her hand; or sometimes holding a 'light- ed torch or brand; at others a trumpet. She had a temple at Rome,near the circus Flaminius, before which stood the column of war, from whence the consul threw his lance when he de- clared war. She was also worshipped at Cu- mana, in Cappadocia: and Camden observes, that in the time of the empe- ror Severus, there was a tem- ple to Bellona in the city of York. This goddess is repre- sented on medals of the Brutii, &c. as in the annexed figure, with a shield in both her hands, and a spear resting on her shoulders.

BELLONARII, in antiquity, priests of Bel- lona. The bellonarii cut and mangled their bodies with knives and daggers, to pacify the deity, In this they are singular, that they offered their own blood, not that of other creatures, in sacrifice. In the fury and enthusiasm wherewith they were seized on these occasions, they ran about raging, uttering prophecies, and foretell- ing slaughter, devastations of cities, and revolu- tions of states : whence Martial calls them turba entheata Bellonoe. In after-times they seem to have abated much of their zeal, and to have turned the whole into a kind of farce, content- ing themselves with making signs and appear- ances of cutting. Lampridius tells us, the emperor Commodus, out of a spirit of cruelty, turned the farce again into a tragedy, obliging them to cut and mangle their bodies really.

BELLONIA, in botany, a genus of the mono- gynia order, and pentandria class of plants. The characters are, the flower is wheel-shaped, of one leaf with a short tube, but spread open above, and cut into five obtuse segments; it has five stamina, which close together ; the germen is situated under the receptacle of the flower, which afterwards becomes an open turbinated seed-vessel, ending in a point, having one cell filled with small round seeds. Of this genus there is only one species known, viz. B. aspera, or shrubby bellonia, which has a rough balm leaf. It is very common in the warm islands of America.

BELLORI (John Peter), of Rome, a cele- brated antiquary and connoisseur : author of the lives of the modern painters, architects, and sculptors, and other works on antiquities. He died in 1696.

BELLOVACI, a people of Gallia Belgica, reckoned the bravest of the Belgae ; who anciently possessed that part of France called Beauvoisis, before the revolution in the isle of France.

BEL'LOW, -^ Ang.Sax. hlowan ; a low

BEL'LOWER, >ing; a loud roaring noise,

a storm ; any continued noise that mav cause terror.

Till, at the last, ho heard a dreadful sound, Which thro' the wood loud bellowiny did rebound.

Spenser,

Jupiter became a bull, and bellowed; the green Neptune a ram, and bleated. Shakspeare.

Ho fastened on my neck, and bellow'd out, As he'd burst heaven. Id.

The rising rivers float the nether ground ; ˆ And rocks the bellowing voice of boiling seas rebound.

Drydcii,

What bull dares bellow, or what sheep dares bleat, Within the lion's den? Id,

But now the husband of a herd must be Thy mate, and Inflowing sons thy progeny. Id.

The dull fat captain, with a hound's deep throat, Would bellow out a laugh in a base note. Id.

This gentleman Is accustomed to roar and bellow so terribly loud, that he frightens us. Taller.

BELLOWS are properly defined a machine, so contrived as to expire and inspire the air by turns, by enlarging and contracting its capacity. This machine is used in chambers and kitchens, in forges, furnaces, and foundries, to blow up the fire : it serves also for organs and other pneumatic instruments, to give them a proper detvree of air. All these ;ire of various construc- tions, according to their different purposes; but in general they are composed of two flat boards, sometimes of an oval, sometimes of a triangular h.nire. Two or more hoops, bent according to the I'rjure of the boards, are placed between them; a piece of leather, broad in the middle, and nar- row at both ends, is .nailed on the edges of the boards, which it thus unites together; as well as on iliu hoops which separate the boards, that the leather may the easier open and 1'old asain :

a tube of iron, brass, or copper, is fastened to the luidermost ho. i:\], and there is a valve within that covers the holes in t'ae under board, to keep in the air

Anaeharsis, the Scythian, is said to have been the mvenior ei bellows. Their action bears a near ailinity u> that, of the lungs; and what we call blowing in the latter, ailbrds a '_ood illustration i >f what is called ivspirin ;□□□ in the former. Ani- ni.il hie :'... □□□'. f may on sonse. occasions '.ie subsisted by blowing int;> the lung.- with a pair of bellows. i)r. Hooke's experiment is remarkable: having 1 .id the thoL\r: of a dog haiv, by cutting away the ribs and diaphragm, pericardium, &.c. and haying cut oil' the aspera arteria below the epi- Uotlis, ; 'lid hoiiii;! it on the nose of a bellows, he found, (hat a.s he bkr.ved. the dog recovered, and ;is in1 ceased, iell convulsive.; and thus was the aii;ma! hi.pt a ternately alive and dead above the s'pae,' of an hoi r. There are bellow s made wholly 01 woiid, witiio'it anv leather about them; one ol which i.< prus □□□. rved in the repository of the !!o\al Soci. ty ; :in 1 !)r. l'!c:t describes another in the cop; cr-wu ;□□□'>.; at !□□□'!!;. >tou .a Su.fibrdshire. . o:i indite, the lungs, and by occasional pressure on the breast !□□□> imitate the i'cla n of naUiiv! breathii;,;.

i or the great operations of metalluruy, such as ;;:\ c,i iiinjoiiiiui.ii c'Jiistru- jlioii, and gieat power,

are found necessary, and have generally assumed the name of BLOWING MACHINES, which see.

Chinese BELLOWS consist of a box of wood, about two feet long, and one foot square ; though the machine may be made of any requisite dimen- sions. The opposite boards are exactly paralle. to each other, smooth, and varnished both on the outer and inner sides. A thick square board of wood, which exactly fits the internal cavity of the box, is pushed backwards and forwards, from end to end of the box, by means of a cylindrical rod of wood, which comes out at an aperture in the centre of one end of the box, and in order to make the rod move steadily, and prevent the escape of air, the aperture through which the rod passes has a wooden tube projected from it to the distance of a little more than an inch. For the conveniency of pushing the rod backwards and forwards, its extremity is furnished with a handle, or cross bar of wood, like the head of a gimlet, by which it can be laid hold of. In the bottom of the box, at each end, there is a small conical or plug valve, concealed in the upper board of the box. The two valves below admit air alternately into the box, while the valves, above alternately discharge the air; and, at the same time, the Valves prevent the air from return- ing the same way it had once passed. The upper board is double, and the space betwixt them serves as a reservoir in which the accumulated

air is condensed. Into the side of this reservoir, between the boards, a metallic pipe is inserted, which conducts the air, in a constant stream, into the furnace or forge. It is evident that if the movable board or piston, within the box, be pushed by the rod from the end next the handle to the opposite end of the box, all the air in the box will be forced up through the valve above that end of the box ; while the under valve at that end will shut, and prevent its escape doyvn- wards : at the same time new air will rush in through the under valve next the handle, and again fill the box. By pulling out the rod, the movable board or piston will be drawn in the opposite direction, and all the air in the box will now be forced up through the upper valve next the handle, into the reservoir, and from thence, as it cannot escape by the opposite valve, rush through the metallic pipe into the furnace. Thus these valves, by opening and shutting alternately, as long as the piston or movable board is pushed or drawn by the rod, backwards and forwards, from end to end of the box, a constant and pow- erful stream of air will be blown into the furnace. The above description is copied from a machine of this sort, which the ingenious Dr. Lind, of "Windsor, brought from Canton, in China. By its help he could melt pig-iron in a small fur- nace, consisting of an Austrian crucible, fixed on a table. Such bellows are neither so costly, nor so apt to go wrong, as those composed of leather. They may be made of any dimensions, and may be wrought by any power as well as that of the hand. It is surprising that no attempts have been made to bring them into use in this country.

BELLOWS, HYDROSTATIC. See HYDROSTATICS.

BELLOWS OF AN ORGAN are commonly six feet long, and four broad ; each having an aperture

of four inches, that the valve may play easily. There should likewise be a valve at the nose of the bellows, that the one may not take the air from the other. To blow an organ of sixteen feet, there are required four pairs ofthese bellows. They are wrought by a man called the blower ; and, in small organs, by the foot of the player.

BELLOWS, WATER, a contrivance to save ex- pense in the fusion of metals, wherein water, falling through a funnel into a close vessel, sends from it so much air as blows the fire. See FUR- NACE.

BELL-PEPPER, in botany. See CAPSI- CUM.

BELL-ROCK, or CAPE, a dangerous ridge of sunken rocks, lying about

twelve miles east from the point of Fife-ness, and an equal distance south from Arbroath harbour, between the openings of the Friths of Tay and Forth. The ridge extends about a mile in length, and half a mile in breadth ; the top of the rock only being seen a few hours at low water in spring tides. This rock not only renders the navigation of the Tay and Forth very hazardous, but is also highly dangerous to all ves- sels navigating coast-wise. Every year, formerly, vessels of great value were wrecked upon it, and there is reason to suspect that many which were supposed to have foundered at sea, have suffered on this dangerous reef. It is a remarkable fact that hardly a single instance has been known of a vessel being saved which had the misfortune to strike upon this rock. Captain Brodie of the royal navy placed a beacon on it some years ago, but though the greatest care was taken to have it properly secured, the first storm broke the chains, and the beacon was driven ashore. Previous to the erection of the new and noble light-house now placed here, it was commonly remarked that even if it were practicable to erect it upon such a sunken rock, no one would be found hardy enough to live in an abode so dread and dreary, and that it would fall to the lot of the projectors themselves to possess it for the first winter. The bill appointing commissioners for this great under- taking, however, passed both houses of parliament late in the session of 1806. In the following summer, a vessel was fitted out as a floating-light, and moored off the Bell-rock. Captain Brodie Lad previously constructed a very ingenious model of a cast-iron light-house standing on pil- lars ; and Mr. Murdoch Downie, author of se- veral marine surveys, brought forward a plan of a light-house, to stand upon pillars of stone. Mr. Telford, the engineer, was also employed in some preliminary steps, connected with Mr. Downie's enquiries. But Mr. Stevenson, engi- neer for the commissioners of the northern light- houses, modelled the first design, which was sub- mitted to the opinion and advice of Mr. Rennie. This distinguished engineer coincided with Mr. Stevenson in preferring a building of stone, upon the principles of the Eddystone light-house.

The BELL-ROCK Licnx-nouse is a circular building, the foundation-stone of which is nearly on a level with the surface of the sea at low-water of ordinary spring-tides ; and consequently at high-water of these tides, the building is immer- sed to the height of about .fifteen feet. The two first or lower courses of the masonry are imbed-

ded into the rock, and the stones of all the courses are dovetailed andjoined with each other^ forming one connected mass from centre to cir- cumference. The successive courses of the work are also connected by joggles of stone ; and to prevent the stones from being lifted up by the force of the sea, while the work was in progress, each stone of the solid part of the building had two holes bored through it, entering six inches into the course immediately below, into which oaken tree nails, two inches in

diameter, were driven, after Mr. Smeaton's plan at the Eddystone. The cement used at the bell-rock, like that of the Eddystone, was a mixture of pozzolano, earth, lime, and sand, in equal parts, by measure. The building is of a circular form, composed of stones of the weight of from two tons to half a ton each. The ground course measures 42 feet in diameter, and the building diminishes, as it rises to the top, where the parapet-wall of the light- room measures only 13 feet in diameter. The height of the masonry is 100 feet, but including the light-room, the total height is 115 feet. The building is solid from the ground course to the height of 30 feet, where the entry-door is situate, to which the ascent is by a kind of rope-ladder with wooden steps, hung out at ebb tide, and taken into the "building again when the water covers the rock ; but strangers to this sort of climbing are taken up in a chair, by a movable ciane projected from the door, from which a narrow passage leads to a stone stair-case 13 feet in height. Here the walls are seven feet in thickness, but they generally diminish from the top of the stair-case to the parapet-wall of the light room, where they measure one foot in thick- ness. The upper half of the building may be described as divided into six apartments for the use of the light-keepers, and for containing light- house stores. The lower or first, formed by an inside scarfement of the walls at the top of the stair-case is chiefly occupied with water tanks, fuel, and the other bulky articles ; the second floor is for the oil, cisterns, glass, and other light-room stores ; the third is occupied as a kitchen ; the fourth is the bed-room, the fifth the library or strangers' room, and the upper apartment forms thelight-room. The floors of the apartments are of stone, and the communication is made by means of wooden ladders, excepting in the light- room, where every article being fire proof, the steps are made of iron. There are two windows in each of the three lower apartments, bnt the upper have each four windows. The casements are all double, and are glazed with plate-glass, having besides an outer storm-shutter, or dead light of timber, to defend the glass from the waves and spray. The parapet wall of the light- room is six feet in height, and has a door which leads out to the balcony or walk formed by the cornice round the upper part of the building; which is surrounded by a cast-iron rail, wrought like net-work. This rail rests upon batts of brass and has a massive coping, or top rail, of the same metal. In the kitchen, there is a grate or open fire-place of cast iron, with a smoke tube of the same metal, which passes through the several apartments of the light-room, and heats them in its passage upwards. This grate and

chimney merely touch the building, without being included or built into the walls, which, by this means, are neither weakened, nor liable to be injured by it. The timber of the doors, the pannelled partitioning of the rooms from the stairs, and the bed frames and furniture in general, are of wainscot.

The light-room, and its apparatus was entirely prepared at Edinburgh. It is of an octagonal figure, 12 feet across, and 15 in height, formed with cast-iron sashes, glazed with large plates of polished glass, measuring about 2 feet 6 inches by 2 feet 3 inches, each plate being a quarter of an inch thick. The light-room is covered with a dome roof of copper, terminating in a large gilded ball, with a vent-hole in the top. The light of the Bell-rock is very powerful, and is readily seen at the distance of six or seven leagues, when the atmosphere is clear. The light is from oil, with Argand burners placed in the focus of silver plated reflectors, measuring 24 inches over the lips ; the silvered surface or face being hollowed or wrought to the parabolic curve. That the Bell-rock light may be easily distinguished from all other lights upon the coast, the reflec- tors are ranged upon a frame with four faces or sides, which, by a train of machinery, is made to revolve upon a perpendicular axis once in six minutes. Between the observer and the reflectors, on two opposite sides of the revolving frame, shades of red glass are interposed, in such a manner, that during each entire revolution of the reflectors, two appearances, distinctly differ- ing from each other, are produced; one is the common bright light familiar to every one, but, on the other, or shaded sides, the rays are tinged of a red color. These red and bright lights, in (he course of each revolution, alternate with intervals or darkness, which, in a very beautiful ;:nd simple manner, characterise; this light.

In fnuvy weather two large hells of about 12 '.'\vt. each, are tolled day and night by machinery. Vessels who cannot see the lights, thus get \varn hi'_c to put about. The establishment at the Hell-rock, consists of a principal light- keeper, who has (JO guineas per annum, paid quarterly, a principal assistant, \ho has 55 gui- neas ; and two other assistants at ")*U guineas each, "**Mdes a sail of uniform clothes, in common v. ith the oilier light-keepers of the northern light- iKMi-.es, every three years. Wiiile at the rock, these men get a stated allowance of bread, beef, liutte;', oat-meai, pot-baric-,, and vegetables, besides small beer, an I aa allow, nice of fourpence per day each for the purchase of tea and other iie"(s.;ai'i! s. At Arbroath, the most contiguous ;o\n oil the opposite coast, a suite of buildings has been ended, when; each liˆht-keeper has ihi'ie apartments for his family. Here the master i'!'d mate, of the li'Jit-houst; tender, have also accommodation for their families ; a plot or piece of an enclosed uanlen Around is attached to each !io-i-e, and likeuise a seat in tine of the pews in t::e par !> church of Arhro.'lh. Connected with .< tber,' :s a sv.'na! to\\er erected, bent .~n> f, I in heij.t. At tilt: top of n i;* *). PHI',' with "ii*

excellent jive feet c'd upon a ..i.Mid. From ti.;:; Touir, :> ;>et el roi resiioiuiiiLV >:.:'!;iis is

arranged, and kept up with the light-keepers at the rock. Three of the light-keepers are always at the light-house, while one is ashore on liberty, whose duty it is for the time to attend the signal room ; and when the weather will admit of the regular removal of the light-keepers they are six weeks at the rock, and a fortnight ashore with their families.

The attending vessel for the Bell-rock, and the light-houses at the isle of May and Inchkeith, in the Firth of Forth, is a very handsome little cutter of about 50 tons register, carrying upon her prow a model of the light-house, and is appropriately named the Pharos. She is stationed at Arbroath, and is in readiness to proceed for the rock at new and full moon, or at spring-tides, carrying necessaries, and the light-keeper on leave, to the rock, and returning with another. This vessel is navigated by four men, including the master, and is calculated for carrying a boat of 16 feet keel, or of sufficient dimensions for land- ing at the rock in moderate weather. The master and mate are kept in constant pay, and have apartments in the establishment ashore ; the for- mer, acting as a superintendent, has the charge of the buildings and stores kept at Arbroath.

BELLUUE, in zoology, the sixth order of tho mammalia; the character of which is, that the;r fore teeth are obtusely truncated, their feet hoofed their walk heavy, and their food vegetables. See ZOOLOGY.

BELLUGA, in ichthyology, a large fish, accounted a species of sturgeon, and called by Artedi, accipenser tuberculis carens It is like the sturgeon in shape, but its snout is shorter and thicker. Of its row or spawn is made cavear, and some of them are so large as to yield 200 weight of it. The fish is very C9inmon and very large in the Volga, near the city of Astracan. It has been caught there thirty-six feet long, and eighteen thick. It is also found in the Don, and other rivers, and in the Baltic and Caspian seas. See ACCIPENSER.

BELLULA Bos, in icthyology, a name given by Paulus Jovius to that species of the ray fish which was called by the old Greek and Latin writers bos marinus, and by the late authors raja oxyrynchus. It is distinguished by Artedi, by the name of the variegated ray, with ten prickly tubercles on the middle of the back.

BELLUM, Lat. war ; in old law, trial by combat.

BELLUNESE, a territory of Italy, which be- longed to the Venetians, till ceded to Austria, by the treaty of Campo Formio. It now forms a part of

the Lombardo-Venetian kingdom, and lies between Friuli, Cadorino, Feltrino the bishopric of Trent and Tyrol. It is thirty miles long, and twenty-two broad, and produces plenty of corn, wine, fruits, &c. besides rearing great numbers of cattle. It contains besides the capi- tal, Belluno, 200 towns, villages, arid fcrts, with 40,000 inhabitants.

BELLUNO, a town of Italy, and a bishop's see; is situated among the Alps, on the river Piave.

BELLUTUS (Sicinius), a plebeian Roman, who, about the year of Rome 256, headed the people in their opposition to the exorbitant power

of the Senate and Patricians ; and under whom they retired to the Mons Sacer, about three miles from Rome, intending to form a new establish- ment for themselves, till, after repeated messages sent in vain by the senate, Meneriius Agrippa persuaded them to return, by the well known fable of the belly and the other members. On this occasion the tribune-ship being first instituted, Bellutus was appointed the first of the five Tri- bunes, A. U. C. 560. See HOME

Gothie/ balgs ; Ang.- Sax. btxlg; Lat. bulga ; that part of the human body which reaches from the head to the thighs, containing the bowels ; the womb ; any thing that swells out to a large capacity. To belly out,

is to swell out; to in- flate ; to sketch ; to dis-

BELLY, v. &. n.

BELLY'ACHE,

BELLY'BOUND,

BELLY'CHEER,

BELLY'FULL,

BELLY'FARE,

BELLY'SLAVE,

BELLY'GOD,

BELLY'PINCHED,

BELLY'TIMBER,

BELLY'WORM. tend.

The body's members

Rebell'd against the belly ; thus accus'd it : ??? That only like a gulf it did remain, Still cupboarding the viand, never bearing, Like labour with the rest. Shakspeare.

Do you set down your name in the scroll of youth, that are written down old with all the characters of age ? Have you not a moist eye, a dry hand, a yellow cheek, a white beard, a decreasing leg, an increasing belly ? Id.

This night, wherein the cubdrawn bear would

couch,

The lion and the belly-pinched wolf Keep their fur dry, unbonnetted he runs. Id.

Back and side go bare, go bare,

Both hand and foot go cold :

But belly, God send thee good ale enough,

Whether it be new or old. Still. Old Song.

With Methos, Gluttony, his guttling brother,

Twin parallels, drawn from the self-same line ; So foully like was either to the other.

And both most like a monstrous belly'd swine.

Fletcher. Purple Island.

What infinite waste they made this way, the only story of Apicius, a famous bellyyod, may suffice to shew. Hakewett.

Thus, by degrees, day wastes, signs cease to rise, For lellying earth, still rising up, denies Their light a passage, and confines our eyes.

Creech's Manilius.

Loud rattling shakes the mountains and the plain, Hcav'n bellies downwards, and descends in rain.

Dry den.

'Midst these disports, forget they not to drench Themselves with bellying goblets. Philips.

The strength of every other member Is founded on your belly-timber. Prior.

BELLY in anatomy, the abdomen. See ANA- TOMY, Index.

BELLY, DRAGON'S, venter draconis, is used by some astronomers to denote the point in a pla- net's orbit, wherein it has its greatest latitude, or is farther distant from the ecliptic, more frequent- ly called its limit.

BliLMONTE, a town of Italy, in the hither Calabria and kingdom of Naples. It is situated on the coast of the Tuscan sea. It is celebrated for its fine marbles.

BELOCK, be and lock. See LOCK.

BELOE (William), a native of Norwich, educated at Cambridge. About 1 773 he became assistant to Dr. Parr, who was then head master of the Norwich grammar school. lie shortly after obtained the vicarage of Earlham. Re- moving to the metropolis, he was made master of Emanuel College, Westminster, and he joined with Archdeacon Naresin establishing and editing the British Critic. His connexion with this work continued till the close of the forty-second volume. He also obtained the living of Allhal- lows, London-wall, a prebend in St. Paul's, and the desirable post of a librarian to the British Museum. Of the last situation, however, he was deprived, in consequence of the loss of some valuable prints, which were stolen by a dishonest artist. He died at Kensington in 1817. He translated Herodotus, and Aullus Gellus, and was the author of Miscellanies, 3 vols. Anecdotes of Literature and Scarce books, 6 vols. 8vo. The Sexagenarian (his own memoirs), 2 vols. Svo.and some works of minor importance.

BE'LOMANCY, n. s. From j3t\os and fjiav- rtia.

Belomancy, or divination by arrows, hath been in request with Scythians, Alans, Germans, with the Africans and Turks of Algiers.

B-rown's Vulgar Errours.

BELOMANCY, BELOMANTIA, was practised in the east, but chiefly among the Arabians, and in different ways. One was to mark a parcel of arrows,

and put eleven or more of them into a bag : these were drawn out ; and according as they were marked or not, they judged of future events. Another way was to have three arrows, upon one of which was written, ‘ God orders it me :’ upon another, ‘ God forbids it me ;’ and upon the third nothing. These were put into a quiver, out of which one was drawn at ran- dom ; if it happened to be that with the first inscription, the thing was to be done : if it chanced to be that with the second, it was let alone ; but if it it proved that without inscrip- tion, they drew over again. Belomancy is an ancient practice, and probably that which Ezekiel mentions, chap. xxi. 21. At least St. Jerome understands it so, and observes that the practice was frequent among the Assyrians, and Baby- lonians. Something like it is also mentioned in Hosea, chap. iv. only that slaves are mentioned instead of arrows, which is rather that of de- mancy than belomancy. Grotius, as well as Je- rome, confounds the two together, and shows that it prevailed among the Magi, Chaldeans, and Scy- thians ; whence it passed to the Sclavonians, and thence to the Germans, who, as Tacitus observes made use of it

BELON (Peter), born at Mans, in France flourished about the middle of the sixteenth century. He was murdered near Paris by one of his enemies, in 1565. His principal works are, 1. De Arboribus Coniferis, 4to. Paris, 1553. 2. Histoire de la Nature des Oiseaux, fol. 1555. 3. Portraits d’Oiseaux, 4to. 1557.

4. Histoire des Poissons, 4to. 1551, with plates.

5. De la Nature et Diversite” des Poissons, 8vo.

1555.

BELONE, in ichthyology, the trivial name of a species of esox. See Esox.

BE’LONO, r. n. Hutch bclatigcn. To ho the property, province, or husiness of; to ad- here, appertain, or have relation to. To light on a part of a field belonging to Boaz. Ruth.

There is no need of such redress ; Or if there were it’not belongs to you.

Shakspeare.

The declaration of these latent philosophers belc,n

To Jove the care of heav'n and earth belongs

Dry den. He went into a desart belonging to Bethsaida.

Luke. To whom belongest thou ? whence art thou ?

1 Samuel.

The faculties belonging to the supreme spirit, are unlimited and boundless, fitted and designed for in- finite objects. Cheyne. He careth for things that belong to the Lord.

1 Corinth.

BELOSTOMA, in zoology, a genus of insects of the order hemiptera, family hydrocorisae. Its generic character is, fore feet terminated by a single hook ; antennse semi-pectinated. There is no European species.

BE'LOVED, part. From belove, derived of love. It is observable, that though the partici- ple be of very frequent use, the verb is seldom or never admitted ; as we say ' you are much be- loTcil by me,' but not ' I dclovc you.' Loved; dear.

1 tli-iik it is not meet, ?.';.ik Antony, so \vi 11 Mm-eil of C;usar, Snould outlive Cajsar. Shakspeare.

In likeness of a dove

The Spirit descended, while the Father's voice From heav'n pronounc'd him his beloved Son.

Milton.

Each lonely scene shall thee restore, For thee the tear he daily shed ; />('/ (/!' V till life can charm no more, And iiiourn'd till pity's self he dead.

Collins' Dirge.

lU'Vl.OW, prep. &. adc. } Be and low. Low

Hr.'i.owr, r. $ is the past participle

of the Ang.-Sa. verb, licjau, jiicrre. cubiere.

7>(Aw/, is to troat as a latrl. I'ndcr, in place ;

*not lii'ili : imlirtiuin * ; unworthy of; in the lower*

(???(; in hell; in earth, in opposition to

heaven.

For all bclotr the moon I would not leap.

Shakspeare.

He'll beat AuiUlhis' head below his knee, .A:,d tread upon his neck. Id.

To men standing tifi.nr on the ground, those that be on the top of Paul's seem much less than they are, ;n\d cannot he known; hut, to men above, those below seem noiliini; so much lessened, and may be known.

Bacun.

The urpev regions of the air perceive the collection

His sultry heat infects the sky ;

The Lrrourui Icivw js pitvehM.the hcuv'ns above us fry.

Dry den.

"Tit. much below me on his throne to sit ; But when I do, you shall petition it. Id.

This said, he led them up the mountain's brow, And show'd them all the shining fields b^elow. Id.

The gladsome ghosts iu circling troops attend ; Delight to hover near, and long to know What bus'ncss brought him to the realms below. Id.

When suff'ring saints aloft in beams shall glow, And prosp'rous traitors gnash their teeth below.

Tichell.

And let no tears from erring pity flow, For one that's bless'd above, iminortaliz'd below.

Smith.

The fairest child of Jove, Below for ever sought, and bless'd above. Prior.

The noble Venetians think themselves equal at least to vhe electors of the empire, and but one degree below kings. . Addimm.

His Idylliums of Theocritus are as much below his Manilius, as the fields are below the stars. Felton.

Sieur Gaulard, when he heard a gentleman report, that at supper they had not only good cheer, but also savoury epigrams and fine anagrams, returning home, rated and belowted his cook as an ignorant scullion, that never dressed him either epigrams or anagrams.

Camden.

Father of all above and all below, O great ! and far beyond expression so, No bounds thy knowledge, none thy power confine, For power and knowledge in their source are thine.

Parnell.

BELPECH, a town of France, in Languedoc, department of the Aude. In 1369 this place was taken by the English, and among the pri- soners was Isabella, mother of the queen of France. It is seven miles north-west of Mire- poix, and twelve south-west of Castelnaudary. Long. 150►► E., lat. 43►► 12′ N.

BELSHAZZAR, NABONADIUS, or LABYNI- TUS, the last king of Babylon, is generally agreed to have been the son of Evil-Merodach, by the celebrated Nitocris, and grandson of Nebuchad- nezzar the Great. He succeeded upon the- deaths of his uncle-in-law Neriglissar, and his infant cousin Laborosoarchod (with whom some authors confound him), about A. M. 3393, or, according to others, 3449. He is said to have reigned seventeen years, but was so devoted to pleasure, that nothing is recorded of him, excepting his folly, dissipation, and impiety, till the last day of his reign and life: when the miraculous vision of the hand-writing on the wall, denouncing the immediate overthrow of his empire, alarmed him and his impious nobles, in the midst of their guilty festival ; and led him to apply for advice, when too late, to the long neglected prime minister and prophetic instructor of his grand- father. See Daniel, chap. v. Babylon was taken by Cyrus, Belshazzar slain, and the king- dom transferred to the Medes and Persians ; A. M. 3410, or 3466, and about A. A. C. 538. See BABYLONIA.

BEL'SWAGGER, n. s. A cant word for a whoremaster.

You are a charitable beltwagger ; my wife cried out fire, and you cried out for engines. DiyAen.

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Volume IV (Belt - Caeruleocephalus)

The London Encyclopaedia

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THE

LONDON ENCYCLOPEDIA,

VOL. IV.

BENEDICT TO CADIZ.

J. Huddun, Printer, Castle Street, London

THE

LONDON ENCYCLOPAEDIA,

UNIVERSAL DICTIONARY

SCIENCE, ART, LITERATURE, AND PRACTICAL MECHANICS,

COMPRISING A

POPULAR VIEW OF THE PRESENT STATE OF KNOWLEDGE.

ILLUSTRATED BY

NUMEROUS ENGRAVINGS, A GENERAL ATLAS,

AND APPROPRIATE DIAGRAMS.

Sic oportet ad librum, presertim misceltanei generis, legendum accedere Icctorcm, ut solct ad cotivivium conviva cinlis. Ooimrator annititur omnibus satisfacere ; et tamen si quid apponitur, quod hujus aut illius palato non rcspondeat, et bic et ille urbane dissimulant, ct alia fercula probant, ne quid contristent convivatorem. Erasmus.

A reader should sit down to a book, especially of the miscellaneous kind, as a well-behaved visitor does to a banquet. The master of the feast exerts himself to satisfy his guests ; but if, after all his care and pains, something should appear on the table that does not suit this or that person’s taste, they politely pasĀ« it over without notice, and commend other dishes, that they may not distress a kind host. Tratulatim.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITANˆ

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

IN TWENTY-TWO VOLUMES. VOL. IV.

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THE

LONDON ENCYCLOPEDIA.

BELT', n. s. Sax. belt, Lat. baltheus. A girdle ; a cincture in which a sword or some weapon, is commonly hung.

Full many ladies often had assay'd, About their middles that fair belt to knit.

Spenser.

He cannot buckle his distemper'd cause Within the belt of rule. Shakspeare.

Ajax slew himself with the sword given him by Hector, and Hector was dragged about the walls of Troy by the belt given him by Ajax. South _

Then snatch'd the shining belt, with gold inlaid ; The belt Eurytion's artful hands had made. Dryden.

BF.LT, BALTHEUS, a kind of military girdle,

exceed a mile in width, so that the entrance frorr the Cattegat is completely commanded. Ir other parts of the strait the water expands ir width to an extent of eight or ten miles. The route from Jutland to Copenhagen, by way ol Fredericia, though circuitous, is preferred on account of the regularity and security of the con- veyance. The shores of the Little Belt are sel- dom steep or rugged, but contain several sandĀ« banks ; and the current from the Baltic to the Cattegat is of considerable strength. The depth varies from four fathoms to twenty-seven. The passage of both Belts is attended with consider- able risk

for large vessels, which on that account

commonly of leather, wherewith the sword or generally pass through the Sound ; the Great other weapons are sustained. Belts are known among the ancient and middle-age writers by divers names, as Z.

BELT, a disease in sheep, is cured by cutting their tails off, and laying the sore bare; then casting mould on it, and applying tar and goose-grease.

BELT, BELTIS, in ecclesiastical writers of the middle age, signifies a string of beads.

BELT, in surgery, signifies a bandage; thus quicksilver belts are used for the itch ; belts for keeping the belly tight, and discharging the water in the operation of tapping, &c.

BELTS, FASCIAE, in astronomy, two zones or girdles surrounding the body of the planet Jupi- ter. See ASTRONOMY.

Belt, however, was much frequented by British ships during the stoppage of the Sound, from 1807 to 1814, in consequence of our hostilities with Denmark.

The Lesser lies to the west of the Great Belt, between the island of Funen and the coast or Jutland. It is not three miles in average breadth, and very crooked.

BELTAN, or BELTEIN, a superstitious cus- tom of the Highlands of Scotland. ‘ It is,’ says Mr. Pennant, in his Tour, ‘ a kind of rural sacrifice performed by the herdsmen of every village on the first of May. They cut a square trench in the ground, leaving a turf in the middle : on that they make a fire of wood, on which they dress a large caudle of eggs, butter, oatmeal, and milk ; and bring, besides the ingredients of the caudle, plenty of beer and whisky ; for each ol the company must contribute something. The rites begin with spilling some of the caudle on the ground, by way of libation : on that, every one takes a cake of oatmeal, upon which are raised nine square knobs, each dedicated to some

BELT, THE GRFAT AND LITTLE, two straits of particular being, the supposed preserver of their

Denmark, connecting the Baltic with the Catte- gat. The former runs between the island of Zealand and that of Funen, at the entrance of the Baltic. In 1658 it was so completely frozen over, that Charles

Gustavus, king of Sweden, marched across it with a design to take Copen- hagen. It varies in depth from five to twenty fathoms, and its greatest width is about twenty miles. The neighbouring shores afford several good and convenient harbours. The chief dan- ger in the navigation arises from the sand banks, and the number of small islands. The passage- boats cross in summer from Nyborg in lunen to Corsoer in Zealand, a distance of fifteen miles, in tiie course of three or four hours. In the middle of the passage is the small island of Sprogoe. Vessels passing this strait pay a toll at Nyborg, where a guard ship is stationed. At i redericia, where the tolls are levied, it does not

flocks and herds, or to some particular animal the real destroyer of them : each person then turns his face to the fire, breaks off a knob, and flinging it over his shoulder, says, This I give to thee, preserve thou my horses ; this to thee, preĀ» serve thou my sheep ; and so on. After that they use the same ceremony to the noxious ani- mals : This I give to thee, O fox ! spare thou my lambs : this to thee, O hooded crow ! tins to thee O eagle ! When the ceremony is over, they dine on the caudle; and after the feast is finished \vliat is left is hid by two persons deputed fot that purpose ; but on the next Sunday they re-assemble and finish the rehques of the first enter- tainment.' Dr. James Robertson, minister of Callander, gives a very different, and seemingly more credible account of this festival, in Sir John Sinclair's Stat. Ace. Vol. xi. 620. 'Upon the first day of May,' says the Dr., ' which is called

Beltan, or Baltein day, all the boys in a town- ship or hamlet, meet in the moors. They cut a table in the green sod, of a round figure, by cast- ing a trench in the ground, of such circumference as to hold the whole company.' After dressing the caudle as above-mentioned ā ' They knead a cake of oatmeal, which is toasted at the embers against a stone. After the custard is eaten up, they divide the cake into so many portions, as similar as possible to one another in size and shape, as there are persons in the company. They daub one of these portions all over with charcoal, until it be perfectly black. . They put all the bits of the cake into a bonnet. Every one, blindfold, draws out a portion. He who holds the bonnet, is entitled to the last bit. Whoever draws the black bit, is the devoted person who is to be sacrificed to Baal, whose favor they mean to implore, in rendering the year productive of the sustenance of man and beast. There is little doubt of those inhuman sacrifices having been once offered in this coun- try, as

well as in the east, although they now pass from the act of sacrificing, and only compel the devoted person to leap three times through the flames; with which the ceremonies of this festival are closed.' The Dr. in a note traces the origin of this and other superstitions from our ancient Druidism. ' Bal-tein signifies the fire of Baal. Baal, or Ball, is the only word in Gaelic for a globe. This festival was probably in honor of the sun, whose return, in his appa- rent annual course, they celebrated, on account of his having such' a visible influence, by his genial warmth, on the productions of the earth. That the Caledonians paid a superstitious respect to the sun, as was the practice among many other nations, is evident, not only by the sacrifice at Baltein, but upon many other occasions. When a Highlander goes to bathe, or to drink waters out of a consecrated fountain, he must always approach by going round the place, from east to west on the south side, in imitation of the appa- rent diurnal motion of the sun. When the dead are laid in the earth, the grave is approached by going round in the same manner. The bride is conducted to her future spouse, in the presence of the minister, and the glass goes round a com- pany, in the course of the sun. This is called, in Gaelic, going round the right, or the lucky way. The opposite course is the wrong, or the unlucky way.'

BELTESHAZZAR, the name given to the prophet Daniel, by Nebuchadnezzar's chief eunuch.

BELTURBET, a market town of Ireland, in the county of Cavan, situated on the river Erne, eight miles from Cavan, and sixty from Dublin. Before the uniou, it sent two members to the Irish parliament. All articles offered for sale in the market pay toll in kind. They principally consist of oatmeal, potatoes, and yarn. Brewing and distilling are also carried on here. It ap- pears to have been once a military station ; there being some ancient fortifications still visible.

BELTZ, or BELZO, a province of Red Russia in Poland, bounded by Leopold on the south, by Chelm on the north, Little Poland on the east, and Volliynia on the west.

BELTZ, or BELZO, a town of Poland, and ca- pital of the province, seated on the confines of Upper Volhynia, among marshes, thirty-five miles north of Lemberg.

BELVEDERE, a town of European Turkey, on the west coast of the Morea, and standing on the site of the ancient Elis. It is poorly built, but receives the name of Belvedere from its fine situation. It is the

capital of a province which comprises the Messenia and Elis of the ancients, and is one of the most beautiful and fertile in Greece. The town is thirty-six miles south of Patras, and sixty-five west of Corinth. Long. 21Ā° SO* E., lat. 37Ā° 59′ N.

BELVEDERE, in the Italian architecture, &c. denotes either a pavilion on the top of a build- ing, or an artificial eminence in a garden ; the word literally signifying a fine prospect.

BELVIDERE, in botany. See CHENOPO-

DIUM.

BELVIS, a small town of Spain, in Estrema- dura, with a castle, seated between two mountains.

BELUGA, in zoology, a name of the delphi- nus albicano ; this fish occasionally containing a morbid concretion called the beluga stone. Its figure is globular or oval ; it is of a yellowish white color, smooth polished surface, and be- tween the size of a pigeon's and goose's egg. It is ponderous, and requires a strong blow to break it. When scraped and sprinkled on hot iron it emits a faint urinous smell, and calcines into a light insipid grayish earth. The Asiatics of the Volga give it in doses of from ten grains to a dram, in calculous disorders ; and they be- lieve also that it facilitates childbirth.

BELULCUM, a chirurgical instrument for extracting darts, arrows, &c. from wounds.

BELUNUM, in ancient geography, a town of Rhaetia, above Feltria, in the territory of the Veneti ; now called Belluno.

BELUR, a general name given to the Alpine region which divides the southern part of ancient Scythia, or Great Bucharia, from Little Bucharia. It lies in about the 37th degree of north latitude, and the 71st of east longitude.

BELUR TAGH, a range of mountains in central Asia, which runs nearly north and south, about the 71st degree of east longitude. The term, in the Mongul language, implies 'the dark or cloudy mountains.' They belong to a part of the ancient Imaug, and are perpetually covered with snow.

BELUS, in ancient geography, a small river of Galilee, at the distance of two stadia from Ptolemais, running from the foot of Mount Car- mel out of the lake Cendevia. Near this place, according to Josephus, was

a round hollow or valley, where was a kind of sand fit for making glass ; which, though exported in great quanti- ties, was found to be inexhaustible. Strabo says, the whole of the coast from Tyre to Ptolemais has a sand fit for making glass ; but that the sand of the rivulet Belus and its neighbourhood is a better sort ; and here, according to Pliny, the making of glasĀ» was first discovered.

BELUS. See BEL.

BELUSSA, a market town of Hungary, in the county of Trentschin, near which are warm sulphur springs.

BEM I

BELWE'THER, n. s. From bell and wether. A sheep which leads the flock with a bell on his neck.

The fox will serve my sheep to gather. And drive to follow after their belwether.

Spenser.

To offer to pet your living by the copulation of cattle ; to be a bawd to a belwether. Shaksjieare.

The flock of sheep and belwether thinking to break into another's pasture, and being to pass over another bridge, jostled till both fell into the ditch. Howel.

BELZONI (John Baptist), a modern traveller, celebrated for his discoveries in Egyptian anti- quities. He was, according to his own preface to hisT ravels, born at Padua, of a Roman family, and his original destination was to a monastic life. The disturbed state of his country, how- ever, in consequence of the French invasion in 1800, induced him to seek an asylum in Eng- land, whither he repaired in 1803. Here he married, and continued to reside nine years. Being considerably more than six feet high, ro- bust and well proportioned, he at one time exhi- bited feats of strength at Astley's amphitheatre ; but subsequently devoted himself to the grand object of exploring the north-eastern shores of Africa. Taking Mrs. Belzoni with him he left England in 1815, and passed by Portugal and Spain to Malta and Egypt, where he was much encouraged and assisted in his researches by Mr . Salt, the British consul. He returned to England in 1820, to lay the results before the public, and published a Narrative of the Operations and re- cent Discoveries within the Pyramids, Temples, Tombs, and Excavations, in Egypt and Nubia ; and of a Journey to the

coast of the Red Sea, in search of the ancient Berenice ; and another to the Oasis of Jupiter Ammon, 4to; together with forty-four illustrative plates in folio. In 1821 Mr. Belzoni exhibited, at the Egyptian Hall in Piccadilly, a model of the tomb which he had explored near Thebes; fac-similies of the paintings on the walls of one or two of the se- pulchral apartments, with other Egyptian curi- osities. This exhibition attracted much public attention, and probably proved very profitable ; but in Paris the following season it did not meet with equal success. Our traveller afterwards undertook an expedition of discovery to the den- tral parts of Africa, and reached the mouth of Benin river on the coast of Guinea, in the autumn of 1823. On the night of the 24th of November he set off for Gato with a gentleman of some influence with the king of Benin. But having reached Benin he was seized with a disease which speedily terminated in death, and was interred at Gato ; the following monumental inscription being placed over his grave :

Here lie the remains of

J. B. BELZONI ; Who was attacked with dysentery at Benin,

(On his way to Houssa and Timbuctoo,) On the 26th of November, and died at this

place, December 3, 1823.

BEMA, /3Ā»j/ia, denotes a step or pace. The bema made a kind of itinerary measure among

BEN

the Greeks, the length of which was equivalent to one cubit and two-thirds, or to ten palms. Whence also the term /3Ā»jju

BEMA, in ecclesiastical writers, denotes 1. The altar and sanctuary in the ancient churches. In this sense it means the third or innermost part of the church, answering to our chancel. 2. The bishop's chair or throne, in the sanctuary, was called bema from the steps by which it was as- cended. 3. The reader's desk. This in the Greek church was called /3?;/ia ypoˆwv, in the La- tin church ambo.

BEMA was particularly used by the Manichees for their altar, which was in a different place from that of the Catholics. Bema was also a denomination given by this sect to the anniver- sary of the day on which Manes was killed, which with them was a solemn feast and day of rejoicing. One of th$ chief ceremonies of the feast consisted in setting out and adorning their bema or altar with great magnificence.

BE’MAD. Be and mad. See MAD. BE’MARTYR. Be and martyr. See MARTYR. BE’MASK. Be and mask. See MASK. BE’MAUL. Be and maul. See MAUL. BE’MAZE. Be and maze. See MAZE. BEMBER, a chain of mountains in Asia, which divide India from Tartary.

BEMBO (Flavio), a native of Amain, in Naples, the inventor of that most useful instru- ment in navigation, the mariner’s compass, nourished about the beginning of the fourteenth century.

BEMBO (Peter), a noble Venetian, secretary to Leo X. and afterwards cardinal, was one of the best writers of the sixteenth century. He was a good poet, both in Italian and Latin ; but he is justly censured for the looseness and immodesty of some of his poems. He published also A History of Venice ; Letters; and a book in praise of the Duke and Duchess of Urbino. He died in 1547, aged seventy-two.

BE’METE. Be and mete. See METE. BEMETRE, in ornithology, a name by which the Portuguese in the Brasils call a greenish black bird of the starling kind, common there, and more generally known by its Brasilian name, pitan- guaguacu.

BEMILUCIUS, in mythology, a surname of Jupiter, represented young and beardless. BE’MINGLE. Be and mingle. See MINGLE. BE’MIRE. Be and mire. See MIRE. BEMIST. Be and mist. See MIST.

BEMOAN, > u c nyr

J Be and moan. See MOAN. BEMOANING. }

BEMOCK. Be and mock. See Mocx.

BEMOIL. Be and moil. See MOIL.

BEMONSTER. Be and monster. See MON- STER.

BEMOURN. Bi or be and mourn. Goth. mawran ; Ang.-Sax. murnan, to mourn, to grieve for, to lament.

BEMUFFLED. Be and muffle; muffle the diminutive of muff. See MTFF.

BEMUSE. Be and muse. See MUSE.

BEN, in botany, the oily acorn, or ben-nut; a whitish nut, the size of a small filbert and of a roundish triangular shape, including a kernel of

the same figure, covered with a white skin. It is the fruit of the hyperanthera moringa, a native of the East Indies. These nuts, on expression, yield one-fourth of their weight of a yellow insi- pid oil, which does not grow rancid with long keeping. It is impregnated with the odor of roses, jessamine, and other flowers, by stratifying them with cotton dipped in the oil, and repeating the process with fresh flowers, until the oil becomes sufficiently odorous; after which, it is squeezed out from the cotton in a press. In this manner the celebrated huile antique de la rose, or otto of roses, is prepared.

BEN-ABOURD, or BEXAVOURD, the Table hill, a mountain of Scotland, between the shires of Aberdeen and Inverness. It is about three miles long, and nearly flat at the top, presenting a huge barren mass of rock, rising to the height of 3940 feet above the level of the sea. A few topazes and beryls are sometimes found there.

BEN LEDI, a mountain in the county of Perth, in Scotland, rising 3009 feet above the level of the sea; on the summit is a small lake.

BEN-LOMOND, a mountain in the county of Stirling, in Scotland. It rises comcally from Lochlomond, above the level of which it towers 3240 feet, and above that of the sea 3262. It is chiefly composed of granite and masses of quartz. It is entirely the property of the duke of Mon- trose.

BEN MACDUIE, a mountain on the western confines of the county of Aberdeen, in Scotland, the second highest in Britain : It is 4300 feet in height.

BEN NEVIS, a mountain in the county of Dum- barton, in Scotland, rising 4370 feet above the level of the sea. It is the highest in Britain. It is chiefly composed of porphyry and red granite, and it contains a vein of lead ore richly impreg- ntaed with silver.

BENA, or BENE, a town of Piedmont, in the district of Mondovi, on the road from Finale to Turin, from which it is about twenty-eight miles distant. It is a fortified place, defended by a castle; and contains nearly 5000 inhabitants, it was taken by the French in April, 1796.

BENACO, a department of the late Italian republic, so named from the Benacus, compre- hending part of the ci-devant Venetian territory of Verona, and the whole of the late territory of Saio, on the lake of Garda. It is now a part of the Lombardo- Venetian kingdomˆ It was eighty Italian miles long and fifteen broad, and being partly level,

partly mountainous, exhibits one of the most charming spots in Italy. It abounds in corn, wine, oil, silk, fruits, lemons, oranges, iron, lead, copper, marble, granite, &c. It contains forty-two parishes, 150 villages, one large, and several small towns ; and sent nine deputies to the two councils of the republic. Its population in October, 1797, was 150,895. Desenzano was the capital.

BENJE LAPIS, in the natural history of the ancients, the name given by the earliest writers o that fossil body, afterwards called thracius ā ¢apis.

BENAIAII, n'J3, i. e. the Lord's building, the son of Jehoidah, one of David's heroes, and captain of his guards. Having adhered to Solo-

mon's interest, in opposition to Adonijah, he was appointed general instead of Joab. He appears also to have been appointed public executioner, an office, it would seem, not held dishonorable in those days; we find him ordered to put to death Joab and Adonijah. His personal prowess, in killing the lion, the Egyptian, and the two Moabitish champions, is recorded in 2 Sam. xxiii. 20.

BENARES. See BANARES.

BENAVENTO, or BENAVENTE, a town of Spain, in Leon, with the title of duchy. It is seated on the river Ezla, forty miles south of Leon, and has a strong castle ; but though it con- tains nine parishes, an abbey, two convents, three hospitals, and other public establishments, the population does not exceed 3000. The churches are old, but well built, and the palace of the dukes is a noble and very ancient struc- ture. Not far from the town is a famous monas- tery of Hieronymites. It is twenty miles north of Zamora.

BENAVIDIO (Marc), a lawyer, born at Pa- dua in 1489, and died in 1582. His principal works are, 1 . Dialogus de Concilio, 4to. Venet. 1541. 2. Epitome Illustrium Jurisconsultorum, 8vo. Patav. 1553; printed afterwards in Fichard's Lives of Lawyers, Patav. 1665; and in Hoff- man's edition of Pancirollus, 4to. Leips. 1721. 3, Illustrium Jurisconsultorum Imagines, fol. Rom. 1566; Venet. 1657. 4. Observationes Legales, 8vo. Venet. 1745. 5. Polymathia Libri Duodecim. Venet. 1558. &c.

BENBECULA, Beau-vealla, Gael., a small island on the west coast of Scotland, belonging to the parish of South Uist, from which it is separated by a narrow channel, nearly dry at low water. It is a low island,

about nine miles in length, and nearly the same in breadth. The soil is sandy, and unproductive. Great quanti- ties of sea-weed are thrown annually upon the coast, from which the inhabitants make kelp. There are the remains of a large Danish tower upon it, said to contain the ashes of the daughter of a Danish chief. It is situated between the islands of North and South Uist. Long.8Ā° 10′ W., lat. 57Ā° 26′ N.

BENBOW (John), an English admiral, born about 1650. He was brought up to the sea, in the merchant service, and in 1680 commanded a ship in the Mediterranean trade, with which he beat off a Sallee rover. His gallantry being reported to Charles II. of Spain, he invited the captain to court, and gave him a letter of re- commendation to king James, from whom he received a commission in the navy. He was afterwards sent to the West Indies by king Wil- liam, where he relieved the British colonies ; and when he returned home he was greatly honored, though the house of commons severely censured those who had sent out the squadron. He was despatched a second time to that quarter ; and, not long after his arrival, fell in with the French admiral, Du Casse, near St. Martha, on the Spanish coast. A skirmishing action com- menced, and continued three or four days ; but on the last, the other ships having fallen a-stern, left the admiral alone engaged with the French. In this situation, though a chain-shot had shat-

tered his leg, he would not be removed from the quarter deck, but continued fighting till the morning, when the French sheered off. The admiral made signal for his ships to follow, but his orders were not attended to ; and he was thus obliged to return to Jamaica, where he caused the officers who had behaved so basely to be tried by a court- martial, and the most cul- pable suffered as they deserved. The heroic tar did not long survive this disappointment : it ag- gravated the effects of his wound, and he died on the 4th Nov. 1702.

BENCH, v.&cn.t Sax. benc ; Fr. bane ; a

BENCHER. i mound, heap, any eminent

or rising place. See BANK. Any thing elevated as a seat. Grown to mean a seat of justice, where judges sit. It is also used to designate the per- sons seated on a bench for the purpose of admi- nistering justice.

Those gentlemen of the inns of court are called benchers, who have been readers ; they being admitted to plead within the bar are also

called inner barris- ters. The benchers being the seniors of the house, are intrusted with its government and direction, and out of them is a treasurer yearly chosen.

Blount, Chamber.

And in a little herber that I have, That benched was on turves fresh igrave, I bad men shoulden me my couche make.

Chaucer. ‘Rie seats and benches shone of ivory,

An hundred nymphs sat side by side about.

Spenser. His cupbearer, whom I from meaner form

Have benched, and rear’d to worship. Shakspearc.

To pluck down justice from your awful bench ; To trip the course of law. Id.

Cyriac, whose grandsire on the royal bench

Of British Themis, with no mean applause,

Pronounced, and in his volumes taught our laws,

Which others at their bar so often wrench.

Milton.

All Rome is pleased when Statius will rehearse, And longing crowds expect the promised verse ; His lofty numbers with so great a gust They hear, and swallow with such eager lust : But while the common suffrage crowned his cause, And broke the benches with their loud applause, His muse had starved, had not a piece unread, And by a player bought, supplied her bread.

Dry den. Fools to popular praise aspire

Of pubLc speeches, which worse fools admire ;

While from both benches, with redoubled sounds.

The’ applause of lords and commoners abounds.

Id.

‘Twas benched with turf, and goodly to be seen, The thick young grass arose in fresher green.

I was taking a walk in the gardens of Lincoln’s Inn ; a favour that is indulged me by several benchers, who are grown old with me. Tatler.

BENCH, or BANC, in law. See BANK.

BENCH, AMICABLE. See AMICABLE BENCHES.

BENCH, FREE, signifies that estate in copy- .iold lands which the wife, being espoused a vir- gin, has, after the decease of her husband, for her dower, according to the custom of the manor. As to this free bench, manors have various cus- toms ; and in those of East and West Enbourne, in the county of Berks, and other parts of England, there is a custom alluded to in the

Spectator, 614, 623, that when a copy-hold tenant dies, the widow shall have her free bench in all the deceased husband’s lands, whilst she lives single and chaste ; but if she is guilty of incontinency, she shall forfeit her estate ; never- theless, upon her coming into the court of the manor, riding on a black ram, and having his tail in her hand, and at the same time repeating a form of words prescribed, the steward is obliged, by the custom of the manor, to re-admit her to her free bench.

BENCH, KING’S, a court in which the king was formerly accustomed to sit m person, on which account it was moved with the king’s household. This was originally the only court in Westmin- ster-hall, and from this it is thought, that the courts of common pleas and exchequer were de- rived. As the king in person is still presumed in law to sit in this court, though only repre- sented by his judges, it is said to have supreme authority ; and the proceedings in it are sup- posed to be coram nobis, that is, before the king. This court consists of a lord chief justice and three other justices or judges, who are invested with a sovereign jurisdiction over all matters whether of a criminal or public nature. All crimes against the public good, though they do not injure any particular person, are under the cognizance of this court ; and no private subject can suffer any unlawful violence or injury against his person, liberty, or possessions, but a proper remedy is,afforded him here ; not only for satisfac- tion of damages sustained, but for the punishment of the offender; and wherever this court meets with an offence contrary to the first principles of jus- tice, it may

punish it. It frequently proceeds on indictments found before other courts, and removed by certiorari into this. Persons ille- gally committed to prison, though by the king and council, or either of the houses of parliament, may be bailed in it ; and in some cases even upon legal commitments. Writs of mandamus are issued by this court, for the restoring of officers in corporations, &c. unjustly turned out, and freemen wrongfully disfranchised. The court of King's Bench, is now divided into a crown and plea side ; the one determining crimi- nal, and the other civil causes. On the crown side, or crown office, it takes cognizance of all criminal causes, from high treason down to the most trivial misdemeanour or breach of the peace. Into this court also indictments from all inferior courts may be removed by writ of certiorari; and tried either at bar, or at nisi prius, by a jury of the county out of which the indictment is brought. The judges of this court are the su- preme coroners of the kingdom ; and the court itself is the principal court of criminal jurisdic- tion known to the laws of England. For which reason, by the coming of the court of King's Bench into any county (as it was removed to Oxford on account of the sickness in 1 665), all former commissions of oyer and terminer, and general gaol-delivery, are at once absorbed and determined ipso facto. Into the court of King's Bench has reverted all that was good and salu- tary of the star-chamber. On the plea side, this court determines all personal actions commenced by bill or writ ; as actions of debt, upon the

case, detinue, trover, ejectment, trespass, waste, &c. against any person in the custody of the marshal of the court, as every person sued here is supposed to be by law.

BENCOOLEN, BENCAULU, or FORT MARL- BOROUGH. The chief establishment of the East India Company, on the Island of Sumatra, on the south-west coast. Lat. 3Ā° 50′ S., long. 102Ā° 3'E.

The lands for this settlement were taken pos- session of, by treaty with the natives, so far back as 1685 ; and in 1698 this settlement had al- ready cost the company Ā£200,000. It was at this time very unhealthy. The foundations of Fort Marlborough were laid in 1714; but, in 1719, the settlers were expelled by the natives who, how- ever, being more alarmed at the Dutch in the absence of the English, soon permitted the latter to resettle.

In 1760 the French, under Comte d'Estaign, destroyed the English settlements here. But they were quickly re-established ; and three

years after Fort Marlborough, which had hitherto been a subordinate of Fort George, or Madras, was formed into an independent presidency. The establishment, however, exceeding the revenue Ā £90,000 per annum, and the settlement having become of little importance as a commercial es- tablishment, since pepper could be more ad- vantageously supplied from Prince of Wales' Island and Malabar; in August, 1801, the directors ordered it to be reduced to a residency, under the government of Bengal. One cargo of pepper of the value of Ā£15,000 is all that is now sent annually from Bencoolen ; and in 1810 the woollen goods exported in return, were valued only at Ā£4276. In fact provisions and refresh- ments of all sorts are scarce and expensive here, and the trade is insignificant. The imports are opium, piece goods, and grain; and the chief exports pepper, other spices, and bullion.

BEN-COWSE, a fortified town of southern Algiers. The walls are of mud, and it is de- fended by a small garrison, with three or four pieces of cannon. In its vicinity are to be seen the remains of a considerable city, consisting of broken pillars, walls, and cisterns ; here too, the inhabitants show the tombs of what they call the seven sleepers, whom they suppose to have been Mussulmans, and to have taken their final sleep here. It is about sixty-three miles south-west of Constantia.

BEND, v. & n. ˆ Sax. ben'&an ; Fr. bander ;

BENDE*, > as Skinner thinks from Lat.

BENT. Jpandare. To make crooked ;

to crook; to inflect, or incline in a particular direction.

The rainbow compasseth the heavens with a glo- rious circle, and the hands of the Most High hath bended il- Ecclu,.

It never yet was bent, ne bent it now

Albe the stroke so strong and puissant were,

That seemed a marble pillour it could bow.

Spenser.

They bend their bows, they whirl their slings around : Heaps of spent arrows fall, and strew the ground : Aud helms, aud shields, and rattling arms resound.

To that sweet region was our voyage bent, When winds, and every warring element, Disturb'd our course.

U.

Octavms and Mark Antony Came down upon us with a mighty power, Bending their expedition toward Philippi.

Shakspeare.

Why dost thou bend thy eyes upon the earth, And start so often, when thou sitt'st alone ?

He js within, with two right reverend fathers,

Id.

Id.

Id.

Divinely bent to meditation.

I'm settled, and bend up Each corporeal agent to this terrible feat. Your gracious eyes upon this labour bend.

Fairfax.

Then, with a rushing sound, the' assembly bend Diverse their steps ; the rival rout ascend The royal dome. Pope.

Men will not bend their wits to examine, whether things, wherewith they haue been accustomed, be good or evil. Hooker.

When he fell into the gout, he was no longer able to bend his mind or'thoughts to any publick business.

Temple.

As a fowler was bending his net, a blackbird asked him what he was doing ? L' Estrange.

To incline.

But when to mischief mortals bend their will, How soon thay find fit

instruments of ill ! Pope.

To BEND THE BROW. To knit the brow ; to frown.

Some have been seen to bite their pen, scratch their head, bend their brows, bite their lips, beat the board, and tear their paper. Camden.

BEND, in heraldry, an honorable ordinary formed by diagonal lines drawn from the dexter, or right corner at top, to the sinister base, or left corner at bottom, which is supposed to represent a shoulder belt or scarf, and to show the wearer to be valiant in war. The content of the bend when charged is the third part of the field, but uncharged it contains only the fifth. The bend taken absolutely signifies the dexter-bend, as in fig. 1 . Otherwise it is called a bend sinister, as in fig. 2. Bends are composed of either plain or crooked lines ; engrailed, wavy, crenelle, flory, &c. as in fig. 4. the bend crenelle.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

The bend has four different diminutives; namely, the bendlet, the garter, the cottice, and the ribbon. In-bend is when a charge is borne

” n*-nv* 10 Ā»T11G11 a UllcUˆC IS UU1I1C

Dryden. sloping from the dexter chief to the sinister base,

BEN

after the manner of a bend, as in fig. 3. a wyvern volant in-bend.

BEND EMIR, or BUND EMEER, called the Cyrus by ancient geographers, a river of Persia, which flows through the plain of Mendesht, and on entering the districts of Kurjan is divided into numerous artificial channels, for the pur- pose of irrigation. The portion which is not expended in this way, is received by the lake Baktegan.

BENDER, a town of Bessarabia, in European Turkey, seated on the river Dneister, memorable for being the retreat of Charles XII. after he was defeated by the Russians at the battle of Pultowa, in 1709. In 1770 the Russians, under Panin, took Bend er by storm, put the

greater num- ber of the inhabitants to the sword, and reduced the town to ashes. It was given back, however, at the peace of Kaynardgi. Prior to this siege, Bender contained 30,000 inhabitants, of whom one-half were soldiers. The Russians got pos- session of it a second tine, on the 15th November, 1789, almost without firing a shot ; and, although it was restored at the peace of Jassy, they again made themselves masters of it in the last war, and retained it at the peace of 1812. 100 miles east of Jassy, and 100 west of Oczakov. Long. 29Ā° 36′ E., lat. 46Ā° 50′ 32″ N.

BENDIDIA, in antiquity, ptvSidtia, festivals, not unlike the Bacchanalia, celebrated by the Athenians in honor of Diana.

BENDING, in a general sense, the reducing a straight body into a curve, or giving it a crooked form. The bending of timber boards, &c. is effected by means of heat, whereby their fibres are so relaxed that you may bend them into any figure.

BENDING, in the sea-language, the tying two ropes or cables together : thus they say, bend the cable, that is, make it fast to the ring of the anchor ; bend the sail, make it fast to the yard.

BENDLETS,in heraldry, one of the diminutives of the bend, which is in size half the breadth of the bend. Bendlets are some- times borne in an unusual man- ner, called enhanced, i. e. lifted up to a place in which they are not usually borne, as three bend- lets, gules.

BENDS, in a ship, the same with what is called wails or wales : the outmost timbers of a ship’s side, on which men set their feet in climbing up. They are reckoned from the water, and are called first, second, or third bend. They are the chief strength of a ship’s sides; and have the beams, knees, and foot-hooks bolted to them.

BENDY, in heraldry, or bendwise ; an i epithet for a thing that is divided four, six, or more parts drawn sloping like a bend, as in the annexed figure, bendy wavy. The general custom of England is to make an even number ; but in other countries this is not regarded.

BENEAPED. A ship is said tobebeneaped, when the water does not flow high enough to

bring her off the ground, over a bar, or out of a dock.

BENE’ATH. Sax. beneofc; Dut. beneden. The imperative of to be,

compounded with neath, according to Mr. Tooke. Below, lower. Sometimes used in the Bible for the place of future punishment.

And he seide to hem, ye ben of bynethe, I am of aboue : ye ben of this world, I am not of this world. Wiclif. Jon. cap. viii. Our country sinks beneath the yoke ; It weeps, it bleeds, and each new day a gash Is added to her wounds. Shahspearc,

I destroyed the Amorite before them ; I destroyed his 'fruits from above, and his roots from lieneath.

Amos.

Any thing that is in heaven above, or that is in the earth beneath. Exodus.

Their woolly fleeces, as the rites required, He laid beneath him, and to rest retired. Dryden, And oft on rocks their tender wings they tear, And sink beneath the burdens which they bear. Id.

Ages to come might Ormond's picture know j And palms for thee beneath his laurels grow.

Prior.

We have reason to be persuaded, that there are far more species of creatures above us, than there are beneath. Locke.

He will do nothing that is beneath his high station, nor omit doing any thing which becomes it.

Alterbury.

Beneath his feet pale Envy bites her chain, And snaky Discord whets her sting in vein.

Beaumont.

Thy reliques, Rowe, to this fair urn we trust And sacred, place by Dryden's awful dust : Beneath a rude and nameless stone he lies, To which thy tomb shall guide enquiring eyes.

Pope. Epitaph on Mr. Rowe.

BENEDEK, a market town of Transylvania, in the county of Lower \Veissenburg, not far from the borders of Hungary, with Hungarian and Walachian inhabitants, and a Protestant church.

BENEDETTO, (ST.) or BENDITTO, a con- siderable town of Italy, in the Mantuan, seated on the Po ; famous before the revolution for the richest and finest convent in all Italy. The ce- lebrated countess Mathilda died and was buried in it.

BENE'DICT, ˆ Lat. benedicere, bene-

BENEDIC'TION, > dictum. Having mild and

BENEDIC'TIONARY. j salubrious qualities. An old physical term. It is now applied to wish- ing well or imploring benefits; also for tharrks.

It is not a small thing won in physick, if you can make rhubarb, and other medicines that are benedict, as strong purges 33 those that are not without some malignity. Bacon.

A sovereign shame so bows him ; his unkindness, That stript her from his benediction, turn'd her To foreign casualties, gave her dear rights To his dog-hearted daughters. Shakspeare.

From him will raise

A mighty nation ; and upon him showei My benediction so, that in his seed, All nations shall be blest. Milton .

Could he less expect Than glor and benediction, that is, thanks ? /a.

8

BENEDICT.

Prosperity is the blessing of the Old Testament ; but is placed between 540 and 550. He wai adversitv is the blessing of the new ; which carrieth looked upon as the Elisha of his time ; and is the greater benediction, and the clearer revelation of reported to have wrought a great number of mi- God's favour. Bacon. racies, which are recorded in the second book

Ridley observes, there is not the least mention of of the dialogues of St. Gregory, any saint whose name corresponds with this, either BENEDICT XIII. (Vincenzio Maria Orsini), was in the Roman Calendar, the service in Usum Sarum, the eldest son of the duke of Gravina, a nobleman

of Naples. In 1672 he was raised by family influence to the dignity of cardinal, but it was with difficulty that he could be made to accept of

the pontificate. With a view to reform his court he held a provincial synod in the Lateran in 1 725, but was defeated by the Jesuits. He also is said to have expressed a wish for the dif-

an appellation given to the song of the three fusion of scriptural knowledge, and encouraged children in the fiery furnace, on account of its the distribution of the Bible jn modern Ian- beginning with the word benedicite. The use of guages. Another great object with him was, if this song in Christian worship is very ancient, it possible, to unite the four religious communities appearing to have been sung in all the churches, of Christendom, and he proposed, that four

or in the benedictionary of Bishop Athelwold.

Gammer Gurton'i Needle, activ. sc. 1. Note.

Such ingenious and industrious persons are de- lighted in searching out natural rarities ; reflecting upon the Creator of them his due praises and bene- dictions, Ray-

BENEDICITE, among ecclesiastical writers,

as early as St. Chrysostom's time.

councils should be held in different places, con-

BENEDICT, abbot of Peterborough, was edu- sisting of representatives of the Romish, Greek, cated at Oxford, became a monk in the monas- Lutheran, and Calvinistic churches. This scheme tery of Christ Church in Canterbury, and some failed ; but the purity of his intention seems un- time after was chosen prior. Though he had been a great admirer of Becket, and wrote a life of him, he was so much esteemed' 'by Henry II.

deniable. Benedict lived with the utmost fru- gality, and has been called more a monk than a pope. His great fault was his implicit confidence

that by the influence of that prince he was elect- in cardinal Coscia, to whom he left the entire

ed abbot of Peterborough," A. D. 1177. He assisted at the coronation of Richard I. A. D. 1189; and was advanced to be keeper of the great seal A.D. 1191. But he did not long

management of his government, and who much abused it. He died

February 1731, in the sixth year of his pontificate. His works were pub- lished in 1728, in three volumes folio, under the

enjoy this high dignity, as he died A. D. 1193. title of Opere di Benedetto XIII.

He also wrote a History of Henry II. and Richard I. from A.D 1170, to A. D. 1192: which has been much and justly esteemed by our greatest antiquaries, as containing one of the best accounts of the transactions of those times. A beautiful edition of this work was published at Oxford, in two volumes, by Mr. Hearne, A. D.

1735.

BENEDICT XIV. (Pope), Prosper Lambertini of Bologna, was also celebrated for his learning and moderation, which gained him the esteem of all sensible Protestants. He was the patron of learned men and celebrated artists ; and an ela- borate writer on theological subjects. His works make twelve vols. in folio. He died in 1758.

BENEDICTINS, in church history, an order

BENEDICT (ST.) the founder of the order of the of monks, who profess to follow the rules of St.

Benedictin monks, was born in Italy about A. D. 480. He was sent to Rome when very young, and there received the first part of his education. At fourteen he was removed from thence to Subiaco, about forty miles distant,

Benedict. The Benedictins, being those only that are properly called monks, wear a loose black gown, with large wide sleeves, and a ca- puche, or cowl, on their heads, ending in a point behind. In the canon law, they are styled black

Here he lived a most ascetic life, and shut himself friars, from the color of their habit. The time up in a cavern, where nobody knew any thing when this order came into England is well

known ; for to it the English are said to owe their conversion from idolatry. In 596 Pope

of him except St. Romanus, who, we are told, used to descend to him by a rope, and to supply

him with provisions. Being afterwards disco- Gregory sent hither

Augustin, prior of the monas-

vered by the monks of a neighbouring monastery, they chose him their abbot. Their manners, however, not agreeing with his, he returned to

tery of St. Andrew at Rome, with several other Benedictin monks. St. Augustin became arch- bishop of Canterbury ; and the Benedictins

his solitude ; whither many persons followed founded several monasteries in England, as also him, and put themselves under his direction, so the metropolitan church of Canterbury, and all

that in a short time he built twelve monasteries, In 528, or 529, he retired to mount Cassino, where idolatry was still prevalent, there being a temple of Apollo erected on it. He instructed

the cathedrals that were afterwards erected. Pope John XXII. who died in 1354, after an exact enquiry, found that since the first rise of the order, there had been of it twenty-four popes,

the people in the adjacent country, and having near 200 cardinals, 7000 archbishops, 15,000

tonverted them, broke the image of Apollo, and bishops, 15,000 abbots of renown, above 4000

built two chapels on the mountain. Here he saints, and upwards of 37,000 monasteries.

founded a monastery, and instituted the order of There have been likewise of this order twenty

Ins name, which in time became so famous., emperors arid ten empresses, forty-seven kings,

Here too he composed his Regula Monachorum, and above fifty queens, twenty sons of emperors,

which Gregory the Great mentions as the most and forty-eight sons of kings ; about 100 prin-

sensible and best written piece of that kind ever cesses, daughters of kings and emperors ; be-

published. The time of hi* death is uncertain, sides dukes, marquisses, earls, countesses, \c.

innumerable. The order has produced a vast number of eminent authors and other learned men. Their Rabanus set up the school of Ger- many. Their Alcuinus founded the university of Paris. Their Dionysius Exiguus perfected the ecclesiastical computation. Their Guido in- vented the scale of music ; and their Sylvester the organ. They boast to have produced An- selmus, Ildephonsus, Venerable Bede, &c. There are nuns likewise who follow the order of St. Benedict ; among whom those who call them- selves mitigated, eat flesh three times a week, on Sundays, Tuesdays, and Thursdays: the others observe the rule of St. Benedict in its rigor, and eat no flesh unless they are sick.

BENEDICTION, in the modern Romish church, is used, in a more particular manner, to denote the sign of the cross made by a bishop, or pre- late, as conferring some grace on the people. The custom of receiving benediction by bowing the head before the bishops, is very ancient ; and was so universal that emperors themselves did not decline it. Under the name benediction the Hebrews also frequently understand the presents which friends make one to another, in all pro- bability because they are generally attended with blessing, and compliments, both from those who give and those who receive them.

BENEDICTION is also used for an ecclesiastical ceremony, whereby a thing is rendered sacred or venerable. In this sense benediction differs from consecration, as in the latter unction is applied, which is not in the former ; thus, the chalice is consecrated, and the pix blessed ; as the former, not the latter, is anointed ; though, in common usage, these two words are applied pro- miscuously. The spirit of superstition has intro- duced into the Romish church benedictions for almost every thing. We read of forms of bene- dictions for wax candles, for boughs, for ashes, for church vessels, and ornaments; for flags or ensigns, arms, first-fruits, houses, ships, pascal eggs, cilicium, or the hair cloth of penitents, church-yards, &c. In general, these benedic- tions are performed by aspersions of holy water, signs of the cross, and prayer suitable to the nature of the ceremony. The forms of these benedictions are found in the Roman pontifical, in the Roman missal, in the book of ecclesi- astical ceremonies printed in pope Lee X's time, and in the rituals and ceremonies of the different churches, which are found collected in father Martene's work on the Rites and Discipline of the Church.

BENEDICTION, BEATIC, benedictio beatica; is the viaticum given to dying persons. The pope too begins ail his bulls with this form :

Salirtem et apostolicum benedictionem.

BENEDICTION, NUPTIAL, the external cere- mony performed by the priest in the office of matrimony, This is also called sacerdotal and matrimonial benediction, by the Greeks wpoXoyta and KportXtota. The nuptial benedition is not essential to, but the confirmation of, a marriage in the civil law.

BENED1CTIONALIS LIBER, an ancient church book, containing the forms of the divers sorts of benedictions given by bishops, priests,

i BEN

BENEFACTION,) Lat. benefacio. The

BENEFAC'TOR, > act of conferring a bene-

BENEFAC'TRESS. j fit, or the benefit con- ferred : which is the more usual sense.

Then swell with pride, and must be titled gods, Great benefactor* of mankind, deliverers, Worshipped with temple, priest, and sacrifice.

Milton.

From that preface he took his hint, though he had the baseness not to acknowledge his benefactor.

Dryden.

I cannot but look upon the writer as my benefactor, if he conveys to me an improvement of my under- standing. Addison.

Whoever makes ill returns to his benefactor, must needs be a common enemy to mankind. Swift.

One part of the benefactions, was the expression of a generous and grateful mind. Atterbun;.

BEN'EFICE, BEA'EFICED, BENEF'ICENCE, BENEF'ICENT,

BENE'FICELESS,

Beneficence. Lat. benefacio, bene fact- ens, beneficent ia, be- nejice, benejicium. In feudal times benefice

BENEFI’CIAL, n. & adj. \ was applied to tK: gratuitous donations of estates; to things given for the benefit

of the church. Be-

BENEFI’CIALLY,

BEXEFI’CIALNESS,

BENEFI’CIARY,

BENEF’ICENCY. neficence is benevolence, good will, kind wishes in operation and endeavour.

And of the priest eftsoons ‘gan to enquir?,

How to a benejice he might aspire. Spenser.

Much to himself he thought, but little spoke,

And, undeprived, his benejice forsook. Dryden.

The duke of Parma was tempted by no less pro- mise, than to be made a feudatory, or beneficiary king of England, under the seignory in chief of the pope. Bacon.

The usual rate between the beneficed man and the religious person, was one moiety of the benefice.

Aylig*.

A benefice is either said to be a benefice with the cure of souls, or otherwise. In the first cas?, if it be annexed to another benefice, the beneficiary ii obliged to serve the parish church in his own piv:> t person. Id.

You could not extend your beneficence to so many persons ; yet you have lost as few days as Amvlius.

Dryden.

Love and charity extends our beneficence to the miseries of our brethren. Rogers.

Such a creature could not have his origination from any jess than the most wise and beneficent Being, the great God. Hale.

But Phoebus, thou, to man beneficent,

Delight’st in building cities. Prior.

Not any thing is made to be beneficial to Mm, but all things for him, to shew beneficence and grace in them. Hooker.

This supposition grants the opinion to conduce to order in the world, consequently to be very beneficial to mankind. Tiliotion.

The war, which would have been most beneficial to us, and destructive to the enemy, was neglected.

Swift.

Are the present revolutions in circular orbs more beneficial than the other would be 1 Bentley.

BENEFICE, in authors of the middle age, is used for a fee, sometimes denominated more peculiarly beneficium militare. In this sense, benefice was an estate in land, at first granted for life only ; so called, because held ex mero

BEN

beneficio of the donor ; and the tenants were bound to swear fealty to the lord, and to serve him in the wars. In after-times, as these tenures became perpetual and hereditary, they left their name of beneficia to the livings of the clergy ; and retained to themselves the name of feuds.

BENEFICE, in an ecclesiastical sense, is a church endowed with a revenue for the perfor- mance of divine service ; or the revenue itself assigned to an ecclesiastical person, by way of stipend, for the service he is to do that church. All church preferments, except bishoprics, are called benefices ; and all benefices are, by the canonists, sometimes styled dignities: but we now ordinarily distinguish between benefice and dignity ; applying dignity to bishoprics, dean- eries, archdeaconries, and prebendaries ; and benefice to patronages, vicarages, and donatives. Benefices are divided by the canonists into sim- ple and sacerdotal. In the first there is no obligation but to read prayers, sing, &c. ; such ā¢are canonries, chaplainships, chantries, &c. : the second are charged with the cure of souls, or the direction and guidance of consciences ; such as vicarages, rectories, &c. The Romanists again distinguish benefices into regular and secular.

BENEFICE IN COMMENDAM is that, the direc- tion and management of which, upon a vacancy, is given or recommended to an ecclesiastic, for a certain time, till he may be conveniently pro- vided for.

BENEFICES, REGULAR, or titular, in the Ro- mish church, are those held by a religious, or a regular who has made profession of some reli- gious order ; such are abbeys, priories, con- ventuals, &c. ; or rather, a regular benefice is that which cannot be conferred on any but a religious, either by its foundation, by the insti- tution of some superior, or by prescription ; for prescription, forty years possession by a religious makes the benefice regular.

BENEFICES, SECULAR, are only such as are to be given to secular priests, i. e. to such as live in the world, and are not engaged in any monastic order. All benefices are reputed secular, till the contrary is made to appear. They are called secular benefices, because held by seculars ; of which kind are almost all cuies.

BENEFICES, VACATING OF. The canonists distinguish three manners of vacating a benefice, viz. 1. De jure, when the person enjoying it is guilty of certain crimes expressed in those laws, as heresy, simony, &c. 2. De facto, as well as de jure, by the natural death or the resignation of the incumbent ; which resignation may be either express, or tacit, as when he engages in a state, &c., inconsistent with it, as, among the Romanists, by marrying, entering into a religious order, or the like. 3. By the sentence of a judge, by way of punishment for certain crimes, as concubinage, perjury, &c.

BENEFICIARII, in Roman antiquity, de- noted, 1. Soldiers who attended the chief office-rs of the army, being exempted from other duty. 2. Soldiers discharged from the military service or duty, and provided with beueficia to subsist on. These were probably the same with the former, and both might be comprised in the

same definition. They were old experienced soldiers, who having served out their legal time, or received a discharge as a particular mark of honor, were invited again to the service, where they were held in great esteem, exempted from all military drudgery, and appointed to guard the standard, &c. These, when thus recalled to service, were also denominated evocati ; before their recal, emeriti. 3. Soldiers raised to a higher rank by the favor of the tribunes or other magistrates. Beneficiarius frequently occurs in the Roman inscriptions found in Britain, where consulis is always joined with it ; but besides

beneficiarius consulis, we find in Gruter bene- ficiarius tribuni, praetorii, legati, pnefecti, pro- consulis, &c.

BENEFICIARY, beneficiarius, is particularly used for a beneficed person, or one who receives and enjoys one or more benefices. A beneficiary is not the proprietor of the revenues of his church", he has only the administration of them, though unaccountable for the same to any but God.

BENEFICIARY is also used, in middle age writers, for a feudatory or vassal. The denomi- nation was also given to the clerks or officers who kept the accounts of the beneficia, and made the writings necessary thereto.

BENEFICIO PRIMO ECCLESIASTICO HA- BENDO, a writ directed to the lord chancellor, &c. by the king, to bestow the benefice that shall first fall, in the king's gift, on this, or that man.

BENEFICIUM, in military matters, among the Romans, denoted a promotion to a higher rank by the favor of some person in authority.

BENEFIELD (Sebastian), an eminent divine of the seventeenth century, born in 1559, at Prestonbury in Gloucestershire, and educated at Oxford.

BENEFIT op CLERGY, a privilege origin- ating in a pious revenue for the church, whereby the clergy were formerly exempted from the jurisdiction of lay tribunals. In England it was at first intended to apply to clerical felons only, but, as all who could read were considered clerks, it has become so generally diffused, that now every member of the community is entitled to this benefit. Peers, whether they could read or not, were always entitled to it, and, in the reign of William and Mary, it was extended to women. Under shelter of this benefit, Roman Catholic clergy, accused of felony, finally obtained a trans- ference of their trial to an ecclesiastical tribunal. In particular cases, by the old statute law of En- gland, benefit of clergy was denied to criminals, but the 7 and 8 Geo. IV. provides, " that bene- fit of clergy, with respect to persons convicted of felony, shall be abolished." In the United States this privilege, in its original import, has been formally abolished by an enactment setting forth that " benefit of clergy shall not be used or allowed upon conviction ot any crime, for which, by any statute of the United States, the punish- ment is declared to be death."

Bli'NEMPT, adj. See NF.MPT. Named; marked out : an obsolete word.

.Much greater gifts for guerdon thou shall gain, I Jian kid or cosset, which I thee benempt; I'ht-n up, I say. fc/jcrijfr.

BEN

BENENAIM, BKNK.NATH, BEXEN ASCII, or BEXENAT, in astronomy, the outermost star of the second magnitude, in the tail of ursa major. It is also called allioth.

BENEPIACITO, in music-books, signifies, if you please ; or if you will.

fiĀ£NĀ£RTH, a feudal service formerly ren- dered by the tenant to his lord, with his plough and cart.

BENESOEUF, a town of Egypt, seated on the western shore of the Nile, and remarkable for its hemp and flax.

To BE'NET, v. a., from net; to ensnare; to surround as with toils.

Being thus benetted round with villains, Ere I could mark the prologue, to mv bane They had begun the play. ShaJupeare.

BENEVENTO, a duchy of Italy, in the king- dom of Naples, with an archbishop's see ; it is situated near the confluence of the rivers Sabato and Galore, in a fertile valley called the strait of Benevento. It was once a more considerable territory, but now consists only of the city of Benevento, and a small surrounding district of about eleven square miles ; comprising that city and seven villages and hamlets, with a popula- tion of about 24,000 individuals. It is a fertile tract, producing excellent wine and fruit, besides feeding numbers of cattle, and yielding some corn ; it has also many excellent springs. This district was first erected into a duchy by the Lombards in 571. The successor of its first prince, Zotto, conquered a great part of the country, which now constitutes the kingdom of Naples : after this it passed into the hands of the Saracens and Normans. The modern duchy of Benevento, however, long maintained its in- dependence, and was, in the eleventh century, granted to the Holy See by the emperor Henry II. in exchange for some jurisdictions he pos- sessed at Bamberg. From that time it may be said to have remained in possession of the church; for though there has scarcely been a sovereign of Naples who has not seized it in the course of his reign, it has always returned to the original possessor. Buonaparte availed himself of the disputes between the Neapolitan and Papal powers, to seize upon this duchy, which he conferred on his minister Talleyrand, whom he created duke of Benevento. The Beneventine duchy acknowledged this new master for about ten years; when its annual revenue was about 14,000 ducats, or

Ā£2300.

BENEVENTO, the capital of the above duchy, is situated on a steep declivity, at the point of a hill, between two narrow valleys; the one watered by the Sabato, and the other by the Galore, which unite into one stream below the town. This city in general is well built ; but several of the most populous streets are narrow, and some of them so steep as to be impassable for carriages. It contains about 18,000 inhabi- tants. Few places except Rome can boast of more antiquities. Its origin seems to be hid in obscurity ; but there is no doubt that it was one of the principal towns of the Samnites. See BENEVENTUM.

The arch of Trajan, now called the Porta Aurea, forms one of the entrances to the city.

This arch, though it appears to great disadvan- tage from the walls and houses that enclose it on both sides, is in tolerable preservation, and one of the most magnificent remains of Roman grandeur. The architecture and sculpture are both singularly beautiful. This elegant monu- ment was erected A. D.I 14, about the com- mencement of the Parthian war, and after the submission of Decebalus had entitled Trajan to the surname of Dacicus. The order is Compo- site, the materials white marble, the height sixty palms, length thirty-seven and a half, and depth twenty-four. It consists of a single arch, the span of which is twenty palms, the height thirty- five. On each side of it, two fluted columns, upon a joint pedestal, support an entablement and Tin attic. The intercolumniations and frieze are covered with basso-relievos, representing the battles and triumph of the Dacian war. In the attic is the inscription. As the sixth year of Trajan’s consulate, marked on this arch, is also to be seen on all the military columns he erected along his new road to Brundusium, it is probable that the arch was built to commemorate so bene- ficial an undertaking. The whole upper division, representing the apotheosis of the emperor, nearly approaches to the perfection of the finest Grecian bas reliefs. Benevento also possesses the remains of several other excellent pieces of sculpture, and those of a Roman amphitheatre. Scarce a wall is built of any thing but altars, tombs, columns, and remains of Roman archi- tecture. The cathedral is a Saracenic edifice, dedicated to the Virgin Mary. It was built in the sixth century, enlarged in the eleventh, and altered considerably in the thirteenth, when arch- bishop Roger adorned it with a new front. To obtain a sufficient quantity of marble for this purpose, he spared neither sarcophagus, altar, nor inscription; but fixed them promiscuously and irregularly in the walls of his

barbarous structure. Three doors (a type of the trinity, according to the rules established by the mystical Vitruvii of those ages), open into this facade. That in the centre is of bronze, embossed with the life of Christ; and the effigies of the Bene- ventine Metropolitan, with all his suffragan bishops. Near one of the town gates an ancient monastery presents a good specimen of the style which prevailed during the early period of the lower Greek empire. The castle is said to have been built in the year 1323. This town has often suffered greatly by earthquakes. In 1688 it was almost destroyed by one; and the arch- bishop, afterwards pope Benedict XIII., was dug alive out of the ruins, having been pre- served by an incurvated beam that fell over him. On his promotion to the papal chair he rebuilt the city. It was afterwards greatly damaged by another earthquake in 1703. It has given birth to three popes.

BEM-:VE\TUM, a town of the Samnites, formerly called Maleventum from the unwhole- someness of the wind, and under that appellation mentioned by Livy ; but after a Roman colony was led thither, A. U.C. 485, it came to have the name of Beneventum, as a more auspicious title. It is mentioned by Horace as an ancient city, said to have been built by Diomedes, before.

the Trojan war. Near it, on the Appian way, stood the city of Caudium, at the narrow pass near which (the Furcae Caudinae) the Samnites obliged two Roman armies to pass under the yoke, in the year of the city 433. About fifty years afterwards, Pyrrhus was defeated in the same neighbourhood by the Consul Curius Den- tatus. Here also the brutal Charles of Anjou, king of Naples, triumphed over his rival Man- fred in 1266.

BENEV'OLENCE,-\ Benevolentia, Latin, BEKEV'OLENT, (from bene and volens,

BENEV'OLENTLY, Ā£ well-willing ; friendly; BEKEV'OLOUS. J kind ; gracious ; fa-

vorable ; benevolence ; a good-will.

Grasp the whole worlds of reason, life, and sense,

In one close system of benevolence. Pope.

Thou good old man, benevolent as wise. Id.

Nature all

Is blooming and benevolent like thee. Thomson.

A benevolous inclination is implanted into the very frame and temper of our church's constitution. Fuller. Moderation of the Church of England, p. 509.

It is the benevolent passions only, which can exert themselves without any regard or attention to pro- priety, and yet retain something about them that is engaging. Smith. Moral Setrfiments.

BENEVOLENTIA REGIS HABENDO, a form in ancient fines, to purchase the king's favor, in order to be restored to estate, title or place.

BENFELD, or BENFIELD, a town of France, in the department of the Lower Rhine, the ci- devant Alsace, seated on the Ille, fifteen miles south-west of Strasburg. Its fortifications were demolished in consequence of the treaty of West- phalia.

BENGAL.

BENGAL, a large province of Hindostan, lying between the twenty-first and twenty- seventh degrees of north latitude. It is bounded on the north by Nepaul and Bootan; on the south by the bay of Bengal ; on the east by the Burmese territories ; and on the west by Bahar. Its length may be estimated at 350 miles, and its average breadth at 300. The northern frontier is guarded by a broad belt of low land, covered by impene- trable woods ; beyond this rise the bold moun- tains of Hindostan. On the south, it is protected by the forests and shallows of the coast, the out- lets of the Ganges, and the difficult access to its only port; while on the west, where alone an enemy is to be apprehended, the natural frontier is strong, and the contiguous region sterile and thinly inhabited. The river Ganges flows along Bengal in a south-easterly direction, separating the whole country into two territorial divisions, of which, in case of invasion, the eastern tract would present an asylum to the inhabitants.

Abul Fazel in 1582 describes the province as follows : ā ' The soubah of Bengal is situated in the second climate. From Chittagong to Kurhee is 400 coss difference of longitude; and from the northern range of mountains to the southern ex- tremity of Sircar Madarun (Birbhoom) compre- hends 200 coss of latitude. When Ofissa was added to Bengal,

the additional length was computed to be forty-three coss, and the breadth twenty coss. Bengal was originally called Beng. The soubah of Bengal consists of twenty-four sircars, and 787 mahals. The revenue is 1,49,61,482 sicca rupees; and the zemindars, who are mostly koits, furnish 23,330 cavalry, 801,158 infantry, 170 elephants, 4260 cannon, and 4400 boats.

At the period when the institutes of Acber were compiled, the government of Bengal ex- tended to Cuttack, and along the Mahanuddy River, Orissa not being then formed into a dis- tinct soubah, as appears from the arrangement of the twenty-four sircars immediately following, of which the last five are in Orissa.

‘ 1. Oudumbher, or Tandeh; 2. Jennetabad ;

3. Futtehabad ; 4. Mahmoodabad ; 5. Khalife- tabad ; 6. Bokla; 7. Purmeah; 8. Taugepoor; 9. Ghoraghaut; 10. Pinjerah; 11. Barbuckabad ; 12. Bazooha; 13. Soonargong; 14. Silhet; 15. Chatgong; 16. Shereefabad ; 17. Solima- bad ; 18. Satgong; 19. Madarun; 20. Jellasir; 21. Buddruck; 22. Cuttak; 23. Kullangdun- paut ; 24. Raje Mahindra.’

Anterior to theˆcessions made by the Nabob of Oude, in 1801, the regions immediately governed by the Calcutta presidency, comprehended the entire soubahs of Bengal and Bahar, part of the soubahs of Allahabad, Orissa, and Berar, and some tracts of country which had maintained their independence during the most flourishing period of the Mogul empire, consisting of part of the Morung, Cooch Bahar, and other districts, which have become tributary since the English became possessors of Bengal.

The greater part of the country forms one vast alluvial plain, descending imperceptibly to the sea, and annually covered by the inundations of the Ganges. Beng, the ancient name of this level region, is supposed to have been the origin of the present name of the province, while the higher lands, above the limit of the inundation, were called Varendra, or Barendra. Chati-gang, or Chittagong, Silhet, and Be”rb’hum, are the only parts of the province which can be called moun- tainous, and they scarcely deserve the name.

The rivers, besides those gigantic streams, the Ganges, the Brahma-putra, and Megna, are the Rup-narain, Damoda, Te”st&, Curam, Corotoya, Manas, Cosi, and Conki. The J’hils, called lakes, are rather morasses, or inundated valleys, than lakes ; but are generally navigable for boats in the wet seasons. To check as much as pos- sible the force of the inundation, embankments are indispensable, and the

sum allowed by go- vernment for their maintenance, amounted in 1815 to 247,457 rupees, or Ā£30,932. 2s. 6d. sterling.

The periodical winds prevalent in the Bay of Bengal, extend their influence over the entire level, until diverted by chains of mountains.

These that prevail over that part of the country facing the head of the bay, are north and south ; the former of which blows during the cold season, the latter during the hot. The period of their change, however, seems earlier on the eastern side of the Delta, than on the western ; and, in this respect, corresponds with a difference observed in the periodical winds on the respective shores of the bay. In Bahar and Assam, the most com- mon winds are east and west, also corresponding with the changes of seasons. In the month of April, and in the south-east quarter rather earlier, there are frequent storms of thunder and light- ning, attended by heavy squalls from the north-west, which happen at the close of the day ; and during this period great caution is necessary in navigating the large rivers. In the beginning of June, the periodical rains commence, and com- monly last till the middle of September, when they are succeeded by an excessive heat, which, however, gradually diminishes as the year ad- vances. If the rains break up early in Septem- ber, the heat becomes almost intolerable, and is attended with a great sickness and mortality, es- pecially among Europeans.

Although, properly speaking, there are but three seasons in the year, viz. the cold, hot, and rainy, the inhabitants commonly assign six, each continuing two months. The spring and dry seasons occupy four months, during which the heat progressively increases, till it becomes almost insupportable, even to the natives ; the sun’s beams are too powerful for the eyes at noon-day, and the large stars, as Venus and Jupiter, shine with surprising lustre. Mild showers in the east districts, and the thunder-storms called north-westers in the middle, nevertheless, cool and refresh the atmosphere, and the scorched in- habitants are at length relieved by the rainy season, during the first two months of which the rains are heavy and almost unremitting ; an in- terval of many successive days is rare. In the two subsequent months, the intervals are more frequent, and of longer duration, and the climate becomes more sultry. The rivers, and especially the Ganges, which begins to rise before the com- mencement of the rainy season, in the third month reach their greatest height, and the Delta

becomes overflowed. A striking scene now pre- sents itself: large sheets of water, with ears of rice floating on the surface, stupendous mounds and dykes, at intervals checking the progress of the inundation, and navigation over fields sub- merged to a considerable depth, and peasants embarked on rafts, with their families and cattle, repairing to market, or to the higher grounds, present an association of objects, which are no- vel and interesting in the highest degree to a stranger.

At the approach of winter the rivers decrease, the showers cease to fall, and the inundation drains off; after which, as the cold season comes on, fogs and heavy dews produce an almost continued dampness, which, combined with the effects of a tropical sun, is injurious to the health of Europeans, and annually carries oft' great numbers of our fellow-countrymen. Frost and extreme cold are experienced in the higher lati- tudes, and even in the flat country ice is obtained

by the simple process of assisting evaporation in porous vessels, although the atmosphere is much warmer than the freezing temperature.

The original soil of Bengal appears to be clay mixed with a considerable portion of silicious sand, fertilised by various salts, together with decayed vegetable and animal substances. These form a compost highly productive, which, com- bined with moisture, and the heat of the climate, accounts for a luxuriance and rapidity of vegeta- tion almost unparalleled. In the flat country sand alone forms the general basis of the succeed- ing strata of superincumbent earth and a period of thirty years is scarcely sufficient for covering it with soil sufficient to reward the labors of the husbandman. Beneath the annual inundations however fertilisation is extremely rapid, owing to the rich deposits, and the dissolution ot'the clay.

The assemblage of peasants in their villages, their small farms, and their want of enclosures, present an insurmountable barrier to all great improvements in husbandry ; but in a country subject to the incursions of pirates and banditti, called Dacoits, together with the ferocious ra- vages of tigers, and other wild beasts, solitary dwellings would be insecure.

In Bengal and Bahar, not more than one-third of the land is tilled, exclusive of lays and fallows; being little more than one acre of cultivated land to every inhabitant. Labor is, nevertheless, ex- tremely cheap ; in some districts not more than a penny or two-pence per day

for a man ; but fuel, herbs, and fruit cost nothing; the wife spins and weaves cotton, to clothe herself and husband; and the children run about naked. Near the sea, rice, further up wheat and barley, in the middle districts the mulberry, and in the northern and western divisions the poppy, are primary objects of cultivation. Rice is the species of grain most extensively cultivated, and is almost infinitely varied, from the periods and si- tuations in which it is grown. The best is that ga- thered in at the beginning of the winter. The wild plant sows itself about that time, and vegetates with early moisture at the approach of the rains, during the continuance of which it ripens, and drops its seed as before. Wheat and barley are sown at the commencement of ihe cold season, and reaped in the spring. A great variety of pulse is sown or reaped in the winter. Maize is cultivated mostly in the western districts, where the soil is poor, and the surface hilly. Mustard, linseed, sesamum, and palma Christi, are exten- sively cultivated for the sake of the oils extracted from them, which, as well as that expressed from the cocoa-nut, have a vast consumption. Tobacco, cotton, indigo, together with the mulberry and poppy, require land peculiarly appropriated to them ; and of indigo, newly cleaned ground pro- duces the largest crops. The Bengalese plough is peculiarly defective : the share, having neither width nor depth to stir a new soil, can onfy scratch the surface of what has often been turned before. This deficiency the natives endeavour to supply by ploughing the land several times over ; a second ploughing crosses the first, and a third is sometimes given diagonally to the pre- ceding. These, frequently repeated, and followed by a branch of a tree, or some other substitute

for a harrow, pulverise the soil, and sweeten it for the reception of the seed. The field, after it has been sown, must be watched for several days, to defend it from the depredations of numerous flocks of birds by day, and of large bats by night ; the same care is also necessary with fields of maize and millet, when the harvest approaches maturity, particularly in regions that are much infested with wild boars, elephants, buffaloes, and deer. For this purpose a bamboo stage is erected, similar to those used in Arabia, and re- presented in Niebuhr's plates. On these watchmen are placed, to scare away the rapacious intruders. Every harvest in Bengal is reaped by the sickle, the scythe being unknown. The practice of stacking corn, to be preserved for seed, is unusual ; the corn is trodden out by cattle, after which it is winnowed by the wind, and stored in jars of unbaked earth, or in

baskets made of large twigs, which are deposited in circular huts, raised one or two feet above the surface of the ground. The rotation of crops, which engrosses so much attention among the enlightened cultivators of Europe, is not understood in India, and a course of husbandry, extending beyond the year, was never dreamed of by a Bengalee farmer. The tanks, or reservoirs, and embankments, for the management of forced rice by irrigation, are in so miserable a state of decay, as to become pub lic nuisances, by the pestilential vapors which they exhale. Manure is never employed, except in the growth of mulberry, tobacco, poppy, sugar, and some other articles. The land, though per- mitted a lay, never lies fallow. In short, a worse system of management can scarcely be imagined than that employed by the natives of Bengal.

Small commons, interspersed among the arable lands, and downs or forests in the hilly districts, furnish the cattle with provender. Grass is cut for them when in the stall, and their dung col- lected for fuel. The Indian, by means of almost unparalleled perseverance, obtains the object of his toil, notwithstanding the apparent inade- quacy of the wretched implements he employs ; and, as the want of capital prevents the subdivi- sion of labor, he turns his hand from one branch of his trade to another, with an adroitness which is observed by Europeans with surprise. Every manufacturer, artist and laborer, work- ing on his own account, conducts the whole process of his art himself, from the formation of _ his tools to the sale of his produce in the mar- ket. Wages are extremely low, and, as the usual hire of a plough is less than sixpence per day, ten ploughs may be employed for about thirty shillings per week. Rice is cleaned by persons who undertake that work on condition of returning five-eighths of the weight freed from the husk, and receiving the overplus for their labor. Five quarters per acre are accounted a large crop, and a return of fifteen for one on the seed. Although the laborers are commonly hired servants, in some districts slaves are em- ployed, but they are humanely treated. A strong evidence of the improvement of agrieulture in this province is afforded by the fact, that from 1790 to 1800, notwithstanding an increased ex- port of grain, together with a very extensive growth of sugar, indigo, and other articles, rice

became more abundant and lower in price than had been known since Bengal was ceded to the English ; nor has any thing like a famine been experienced since 1770.

The orchard in this province is what chiefly attaches the peasant to his native soil, owing to the superstitious veneration which he retains for the trees planted by his ancestors. Orchards of mangoes (mangifera

Indica) adorn the plain in every part of Bengal ; the palmira, or wild date (elate sylvestris) abounds in Bahar ; the cocoa- nut thrives in. those parts of the province within and near the tropic, and the date tree (phoenix dactylifera) over the whole region. Plantations of areca are found in the central parts of the province ; the bassia thrives in the hilly districts, and on the poorest soils ; its inflated corols are esculent and nutritious, yielding by distillation an intoxicating spirit ; and from its seeds is ex- pressed a grateful oil, which, in the mountainous districts, is used instead of butter. Numerous clumps of flourishing bamboos diversify the whole face of the country. So rapid is the growth of this plant, that it completes its greatest height within a single year ; and in the year suc- ceeding the wood acquires all that hardness and elasticity for which it is so highly valued. A single acre of bamboos yields more wood than ten of any other tree. Potatoes have been in- troduced by Europeans, and are said to be little inferior to any in our own country, although the watery insipidity of tropical plants is a circum- stance commonly complained of by Europeans.

The staple productions of Bengal are sugar, tobacco, silk, cotton, indigo, and opium. The sugar-cane, the name of which was scarcely known to the ancient inhabitants of Europe, grew luxuriantly in every part of Bengal, and its adjacent territories, especially in the districts of Benares, Bahar, Birbhoom, Rungpoor, Mid- napoor and Burdwan. This plant was intro- duced from India to Arabia, and thence to Europe and Africa. From Benares to Rung- poor, and from the borders of Assam to Cuttack, oilcake is frequently applied to it instead of ma- nure ; and so great is its fertility in Bengal, that there seems to be no other bounds to the pos- sible production of sugar than the limits of the demand. The internal consumption is vast, and the manufacture so cheap, that raw suuar may be purchased in the Calcutta market under 18s. 6d. per maund, of about eighty pounds weight.

Tobacco was unknown in India, as well as to Europe, before the discovery of America. Ac- cording to a proclamation made by Jehangire, and mentioned in his memoirs, it appears that it was introduced by Europeans, either in his own reign, early in the seventeenth century, or during that of his father Acber, and was too congenial with the habits of the Asiatics not to come very soon into general use, especially as the practise of inhaling the smoke of hemp leaves, and other intoxicating drugs, was both ancient and univer sal. The cultivation of it prevails mostly in the northern districts, over every part of Hindos- tan, requires a good soil, and including every charge for duties and agency, may be procured in the market of Calcutta at the low price of eight shillings per maund.

Cotton is cultivated in every part of Bengal ; and that grown in the eastern districts is of very superior quality, fit for the most delicate manu- factures. Large quantities are likewise brought from the banks of the Jumna and the Deccan ; but the best import is that brought by land from Nagpoor to Mirzapoor, in the province of Ben- ares, and sold there for about Ā£2. 5s. per cwt. although its average priqe in Nagpoor is not more than two-pence half-penny per pound. The name of this article is derived from the Arabic kutn, pronounced cootn.

Europe was anciently supplied with silk through the medium of India ; the original lan- guage of which has names both for the silk-worm and for the silk in a state of manufacture. Amongst the numerous tribes of Hindoos", de- rived from a mixture of the original tribes, are two separate classes, whose appropriate occupa- tions were the feeding of silk-worms, and the spinning of silk. A peasant who feeds his own silk-worms, has full employment for his family. The rearing of them is, however, chiefly confined to the district of Burdwan, and the banks of the Bhagirathai and Great Ganges, from the fork of these rivers to the distance of one hundred miles down their streams. The Company's investment is made principally at Cossimbazar, Rungpoor, Malda, Radna

Indigo, which derives its name from India, has been cultivated there from the earliest period, and that country anciently supplied all Europe, till the produce of America engrossed the public attention, and drove the Asiatic manufacture out of the market. The perseverance of a few indi- viduals has restored this branch of Bengalee com- merce to its original channel, by no other means than the manufacture of a superior article; for, with respect to the culture, no material change has taken place in the practice of the natives. The total manufacture of indigo in Bengal, in 1807 and 1808, was not less than 120,000 fac- tory mannds ; and the aggregate sold at the 1'ast India Company's sales, in 1810, amounted to 5,253,489 Ibs." and netted Ā£1,942,328. In 1814 no fewer than 102,524 factory maunds (8,200,000 Ibs.) were entered at the custom- house at Calcutta.

The consumption of animal food is insufficient to render the rearing of cattle an object of any considerable profit, although stock can be grazed at the very low rate of half a rupee, or even a quarter of a rupee (the former equal to Is. 3d. the latter to 7-ˆd. of our money), per annum. The tattoos, or native horses, are a thin , ill-shaped, miserable

breed, unfit for labor ; bullocks alone are used in the plough and team. The sheep are a dark, gray-colored, thin, diminutive braed ; but when fattened make excellent mutton. Some of them have four horns, two on each side of the head. Pariah dogs infest the streets throughout all the towns, jackals every thicket, and the approach of the enemy is announced by the howling of the numerous flocks of them which

then quit their retreats in the jungles. Apes and monkeys swarm in the woods, and, being sacred animals, are often fed by pious Hindoos. The brahminy, or sacred ox, rambles about the vil- lages without molestation, and is both pampered and caressed by the people, who consider this a meritorious act of religion. Crows, kites, spar- rows, and mayanas (coracias Indica), familiarly hop about the habitations of the Bengalese ; and storks, from their erect stately gait called adju- tants by the European soldiers, are almost as common as the toads, snakes, lizards, and in- sects, on which they feed.

Fish is extremely plentiful, of which a great diversity of kinds is found in the Ganges and its branches. They often become the food of the poorest natives, and the smallest kind are equally acceptable in a curry, the standing dish in every Hindoo family, which, with a pilau nearly com- prehends their whole art of cookery. The bickly, or cockup fish, are extremely rich ; but the highest flavored fish in Bengal, and perhaps in the whole world, is the polynemus paradisea, or mango fish, so called from its appearing in the rivers during the mango season. Mullet are found in all the rivers, and are killed with small shot, as they swim against the stream. The turtles are indifferent, but the small oysters from the v,oast of Chittagong are excellent. Alligators and porpuses abound in all the rivers of Bengal. The natives of Bengal are handsome and lively, of highly polished manners, possessing a soft expression of countenance, and mildness of character. Though thin, they are small and well shaped, of an olive tint, black hair and eyes, oval face and aquiline noses. The clothing of the poor consists of little else than a rag round their waists. The rich, when abroad, have dresses much like the Mahommedans ; but within doors resume their old national costume, consisting of different pieces of cloth twisted round the body, with one end tucked into the folds. Upon the head nothing is worn. The women rub red lead on their foreheads, blacken their teeth with a preparation of vitriol and iron filings ; and are peculiarly fond of trinkets. Rings of shell lac round the arms, and bracelets of mother-of-pearl are favorite ornaments ; as are also trinkets gene- rally ; and proud is the woman who hears herself described as walking like a duck or an elephant, having teeth as black ami red as the seeds of the pomegranate ; a nose like a parrot’s beak ; hands and feet as wide spreading as the water- lily ; lips as red as the

fruit of the talacucha, and a chin as plump as a mango. Widows of a pure caste, however handsome, are stripped of their ornaments, condemned to sleep on the ground, exposed to damp, vermin, and other incon- veniences, and to act as menial servants to the young, who are decked out in the finery of which their elders have been deprived. This, in all probability, is one reason why so many prefer the funeral pile, with the expectation of bliss in another world.

The natives of the mountains beyond Bengal, along the northern boundary, indicate, by their features, a Tartar origin. The inhabitants of the eastern hills and plains adjacent, are obviously of peculiar derivation, whilst the elevated tract

included in the western part of Bengal, is peopled by several races of mountaineers, the probable aborigines of the country. Distinguished in character, language, manners, features, and re- ligion, from the Hindoo nation, the race des- cended from this stock people the vast moun- tains which bulge from the centre of India ; and some tribes of them have not yet emerged from the savage state. In the mixed population of the middle districts, the Mahommedans and Hindoos claim the pre-eminence. Among the former may be discriminated the Moghul, the Afghan, and their immediate descendants from the naturalised Mussulmen ; and among the latter the peculiar traits of a Bengalese from those of the Hindostany. The native Beugalese have been thought pusillanimous ; and the descend- ants of foreign settlers are fond of tracing their origin to the countries of their ancestors. No native, however, has any motive to distinguish himself in the army, as he cannot rise higher than a soubahdar, a rank inferior to an ensign.

Slavery, in its severest sense, is unknown in Bengal. Domestic slavery is, indeed, allowed by law, but the slaves are rather treated as hereditary servants. The marriage of slaves is never impeded, and many children are born in that condition ; but it is thought disreputable to sell them, and an act of piety to grant their manumission. Parents themselves usually meet the demands of the market, by disposing of the children which poverty and misfortune have rendered them unable to support. The prices given even in that case for infants is extremely small, except either when the purchaser is a Brahmin of some religious order, who wants a disciple to assist him in begging, or when he is the master of a troop of dancing girls and prosti- tutes, who wishes to replenish his stock. Slaves in Bengal are, in all cases, placed under the pro- tection of the law.

Of the population of Bengal various estimates have been given at different times ; none of which, however, are thought equal to the real amount. In 1789 Sir William Jones estimated the inhabi- tants of Bengal and Bahar at 24,000,000. Mr. Coleman, in 1793, made them 27,000,000. Another estimate, formed in 1790, carries the population of Bengal, Bahar, and Benares, to 32,787,500. Under the direction of the marquis Wellesley, in 1801, was taken a more accurate mrvey than any of the preceding ; the result of which has never been communicated to the pub- lic in any authentic form. The average upon the whole, in well-peopled districts, is about 200 to every square mile, and the total population of the three provinces al/eady named more than 30,000,000. The population of Bengal, under the British government, has undergone a progressive increase, surpassing that of England, although it has met with some severe checks : as in 1770, when one-fifth of the inhabitants perished by famine; in 1784, when the same calamity pre- vailed; in 1787, when great numbers in the eastern provinces perished by inundation ; and in 1788, when there was a partial scarcity.

Small villages line the banks of the rivers as thickly as in the most populous parts of China, and are surprisingly numerous. The cheerful,

bustling mu.titudes of men, women, children, poultry, and cattle, all mixed and crowded to- gether, which continually meet the traveller's eye, as he sails or is towed along from place to place, show a sense of security, and at appearance ot happiness, which will in vain be sought for be- yond the demarcation of the Company's terri- tories. Even pirates and banditti have been effectually checked, and will no doubt in a few years be entirely extirpated.

In point of national character, the native Ben- ga'ese are artful, fraudulent, indolent, and thrift- less. Flattering pictures have, indeed, been given of their morals by some writers who were evidently misled by partial and erroneous views, whilst the Protestant missionaries, on the other hand, have given a delineation exactly the re- verse. To obtain information from a source, the purity of which cannot be controverted, we must have recourse to the records of the courts, and the reports of the magistracy ; which furnish pre- cisely the species of evidence that is required. From these we learn that robbery, even when accompanied by great atrocities, neither occa- sions remorse in the offenders, nor detestation in the public ; that a general want of moral princi- ple is notorious, in both Mahommedans and Hin- doos, the lower classes of the former having adopted the idolatrous usages of the latter ; that the bloody execrable worship of Call sanctifies the most atrocious barbarity ; that perjury is scarcely considered a crime ;

and that the de- praved character of the Hindoo mythology, com- bined with the Mahommedan doctrine of fatality, exerts a powerful and deleterious influence upon the sentiments and habits of the people. The abolition of mutilation and pecuniary commuta- tion for murder, acquittal in default of proof of a malicious intention to assassinate, with other regulations established in our Indian tribunals, have in some measure diminished the mass of crime, and rectified the leading defects of the Mahom- medan law ; and at some future period may have the effect to purge out the old leaven, and pro- duce a more extended reformation in the de- praved manners of the people.

Considerable pains are now taken with the rising generation. The native children are early taught the elements of their language. About the age of five they are sent to the village school- master, who assembles them under the shade of a spreading tree, and, on a plan similar to the one adopted in our National Schools, teaches them to read and write in six months. They are next oc- cupied for a year in learning to write with a reed and ink on the leaves of the palmira (elate syl- vestris), and acquiring the rudiments of arithmetic, together with a knowledge of the common tables of weights and measures. Writing on paper, and summing, commonly finish their education. The arithmetic necessary for agricultural and com- mercial pursuits is taught separately, and mensu- ration and book-keeping are learned practically in some shop or warehouse, where the youth is placed upon his leaving school. The Hindoos anciently wrote with iron styles, instead of reeds, upon the narrow leaves of the palmira. Their books consist of separate leaves, which are filed on iron pins, and guarded at the top and bottom

with a flat strip of wood. The whole is tied with a string, and wrapped up in a cloth. One rupee is paid for every 32,000 letters; so that the Ma- hab'harat would cost sixty rupees (about Ā£8) ; the Ramhyan 24 (Ā£ 3); and the Sri B'hagavat 18 (Ā£2. 10s.). Divinity, astrology, and law, are al- most the only sciences now studied, and learning has been long on the decline. The natives are, nevertheless, quick and inquisitive, and would probably be much improved by their intercourse with Europeans, but for that supreme contempt for other nations, generated by the notion of their being designated Hindoos.

The Bengalese, generally, are abstemious in their diet. In the morning, and at noon, the common repast amongst the upper classes is parched

or parboiled rice, seasoned with sour milk, tamarinds, or molasses; amongst the poor, a little water with some salt, or acid fruit. Milk is always dressed in some way before it is used ; butter is boiled, and by that means converted into g'hi, which keeps well, and may be used a year after it has been prepared. Their sweet- meats are fried in oil or butter, and the principal meal is made in the evening. Spirituous liquors are very seldom used for the purpose of intoxica- tion, but preparations of hemp and opium are found very powerful substitutes.

The Mahommedans are computed at one tenth of the population, and abound mostly in the eastern districts. Of the four great Hindoo classes, the Brahmin, Khetri, and Vaisya, amount to a fifth part of the total population. Commerce and agriculture are universally permitted to all classes ; and, under the general denomination of servants to the other three divisions, Sudras seem to be allowed to prosecute any manufacture. The Brahmins of this country are looked up to through- out the whole of Hindostan, and are said to have descended from five families introduced from Canoj, or Cdnya cubja, some centuries previous to the Mahommedan conquest. The first in rank are the Culinas. Of the Sudras, the Vaidyas, or medical tribe, rank first ; next the Cayasthas, or Ca'its, the writers and accoui.tants ; besides which there are nine other tribes of uncontaminated Sudras, from whom a Brahmin may condescend to receive a cup of water. It may be observed that none but Brahmins and Sudras are of genuine Bengalese origin, and in the latter tribe are in- cluded, not only the true Sudras, but also the several castes whose origin is ascribed to the promiscuous intercourse of the four classes. The purity of caste is maintained by a sort of clubs, or lodges, called dols, which are again subdivided into smaller societies. In practice, however, little attention is paid to the limitation of caste ; so that even Brahmins daily exercise the menial profession of Sudras. The occupation appropriated to each tribe is merely entitled to a preference, the gates of almost all professions being opened indiscriminately. Animal food, also, is by no means universally proscribed among the Hindoos ; and the Agora Punt'h, a .privileged order of mendicants, have even been suspected of anthropophagy.

A rigid observance of all the frivolous and laborious ceremonies prescribed by their religion is thought amongst the genuine Hindoos to be VOL. IV.

their truest glory ; but truth and honesty are so little in request among them as never to be looked for, and scarcely to be desired. ' A man of in- tegrity,' says a late publication, ' is a wonderful phenomenon ; and one conscientious in his whole conduct may be safely pronounced to

be an un- known character.' Their dead ought, strictly, to be burnt ; but those who cannot afford to raise a funeral pile, stick a whisp of straw into the mouth of the corpse, and then throw it into the nearest river. To the rivers also they carry their expiring relatives when all hope is over, and leave them to die without assistance, or to be carried off by sharks and tigers. The self-im- molation of widows has lately been so far checked by the police as to prevent the exercise of any compulsory means.

The hateful distinction of caste in Bengal an- nihilates every feeling of humanity towards the inferior classes, who, being considered as persons accursed by the gods, have no kindness to expecf from those who are the favorites of heaven. Even common fowls are thought by the Hindoos impure. Ducks and pigeons are lawful, geese are kept as pets and rarely sold ; but turkeys, with almost all other fowls, are to be met with only amongst the Mahommedans and Portuguese. Dogs and cats are merely tolerated ; to kill a dog in order to relieve him from a lingering death would be a crime, and to feed him is no virtue. These animals wander about in a wretched half- starved condition, and even children show no disposition to render them any kindness.

The mechanical arts among the Bengalese are not in a state of great perfection. Their music is harsh and unharmonious ; their dancing lifeless and ungraceful. Hymns or love songĀ«, in honor of Crishna the Indian Apollo, and his favorite Ilad'ha, sung by the boatmen while rowing on the rivers, are almost the only airs that have any thing of melody. The different trades are pro- fessedly confined to different castes, and some of them held in great contempt. Tailor's work is almost the exclusive employment of Mussulmans. The barbers, who pare nails, pick ears, and shave heads, are a pure caste, and are therefore well paid. A woman who cuts her hair is thought to commit a great breach of delicacy, and none but immodest ones ever smoke. The Bengalese ar- tificers are not only clumsy, but indolent ; and their metallic manufactures have none of that finish which distinguishes the blades of Damas- cus, and the filigree of Tunis. Paper was intro- duced by the Mahommedans, by whom it is usually made.

Amongst the most prominent manufactures of the Bengalese are to be enumerated plain muslins, distinguished by various names, according to the fineness and closeness of the texture ; as well a? striped, flowered, or chequered. Muslins, de- nominated from their patterns, are made chiefly in the province of Dacca, to which the manufac- ture of the thinnest sort of fine muslins is almost exclusively confined. Other kinds, more closely woven, are fabricated on the western side of the Delta of the Ganges ; while a coarser sort, cha- racterised by a

more rigid texture, together with turbans, handkerchiefs, &c. of a similar quality, is not limited to any particular district. Inferior

muslins both plain and flowered, are obtained from the northern parts of Benares. Calicoes, as they are manufactured in Bengal, include various kinds of cloth, to which no English names have been fixed, and which throughout the whole of Eprope, are known chiefly by the Indian deno- mination cossaes (khasahs), are manufactured in that part of Bengal north of the Ganges, from Maulda to Berbazie, between the Mahanuddy and Tsamutty rivers. Similar articles are made near Taunda, in the dominions of the nabob of Oude. Baftas are made on the western frontier of Benares, in the neighbourhoods of Allahabad and Lucki- pore, the province of Bahar and other districts. Gurraes are the manufacture of Birbhoom; gezis and gezinas are woven in most districts, but chiefly in the Doab of the Ganges and Jumna, toge- ther with other kinds of cloth, the names of which are less familiar to the English reader. Sanaes are the chief fabric of Orissa and the district of Midnapoor, whilst some are imported from the territories immediately contiguous. On the northern frontier of Bengal Proper, sackcloth is manufactured from packthread, and serves as clothing to the mountaineers. Blankets are of universal manufacture, and canvass, made from cotton, is woven chiefly in the neighbourhood of Patna and Chittagong. In the centre of the Doab, a coarse cotton cloth, dyed red with clieap mate- rials, are made for home consumption, whilst other sorts, dyed of various colors, especially blue, is prepared for inland commerce and for ex- portation. Both fine and coarse calicoes receive a topical dyeing, with permanent and fugitive colors, as well for common use as foreign com- merce. Benares, the cities of Patna and Cal- cutta, with their immediate vicinities, are the principal seats of the manufacture of chintzes. The art, long since invented, appears to have been indigenous to India, and is brought to great perfection. Dimities of various kinds, and damask linen, are made at Tandah, Patna, Dacca, and other places. In the neighbourhood of Moorshedabad is the chief seat of the manufac- ture of wove silk and taffeta, both plain and flowered. Tissues, brocades, and ornamented gauzes, are manufactured at Benares, although plain gauzes are woven in the western and southern regions of Bengal. The manufacture of mixed goods, composed of silk and cotton, thrives mostly at Maulda and Boglipoor.

The rum distilled in Bengal proves little infe- rior to that of Jamaica,

leather has been made there with considerable success ; and the natives have also arrived at considerable perfection in the fabrication of saddles, harness, military accoutre- ments, boots, shoes, &c. and at Calcutta is manu- factured an excellent species of canvass, which has, in some places, superseded the use of that imported from Europe.

The commerce of Bengal is extensive, consist- ing for the most part in piece goods, silk, salt- petre, opium and indigo. A considerable quantity of filature silk is exported to the western parts of India : a large proportion of it is sold at Mirzapoor, and passes thence to the Mahratta dominions, and the centrical parts of Hindostan. Tisser, or wild silk, is procured in abundance from the adjacent territories, where the worms are found in several species of trees

common in the forests of Assam, Silhet, and the Deccan. The color and lustre of this silk is far inferior to that of the domesticated insect, and the cones, although large, are but sparingly co- vered. Its cheapness, however, is a consider- able recommendation : the aggregate production of it might be increased by encouragement ; and large quantities, exported to Europe, might be used in the fabrication of coarse silks, or mixed with wool and cotton, might form, as it does now in India, a beautiful and acceptable manufacture.

Various drugs used in dyeing are exported to England ; as galls, turmeric, safBower, or car- thamus, myrobalans, roots of morinda, which dye a beautiful color on cotton, and blossoms of the nyctanches, very useful for giving a perma- nent color to silks.

The number of articles brought from Bengal at present might easily be augmented ; and should freight ever be reduced so low as it might be afforded, corn might be exported to Europe. Rice, barley, and wheat may be shipped in Cal- cutta for nearly tBe same price, viz. two rupees and a half per bag, containing two maunds, or from 3s. 4d. to 3s. 6d. per cwt. and rum might be exported at the low price of from Is. 6d. to Is. 9d. per gallon. Liquorice and ginger might be exported to any extent. Anotto (bixa orel- lana), coffee, cocoa, cochineal, and even tea, would succeed in this and the adjoining pro- vinces, which comprehend every variety of tropical climate. Madder also grows wild on the neighbouring mountains. Gum Arabic, and many other species of gums and resins, both for manufacture and medicine, numerous varieties of drugs and vegetable oils, tincal, from the high table-land of Thibet together with sal ammoniac, and alkalies both mineral and vegetable, might be procured in great quantities at a small ex- pense, though seldom imported by British merchants.

Besides the above articles, which are to a cer- tain extent restricted to Bengal and its imme- diate territories, India furnishes aloes, assafcetida, camphor, cassia lignea, cassia buds, benzoin, cardamums, cowries, arrangoes, cinnabar, china- root, nutmegs, cloves, cinnamon, mace, elephants' teeth, numerous gums, pepper, mother-of-pearl, quicksilver and rhubarb from China, senna, saffron, sago, scammony, anise, coriander and cumin seeds, hemp and flax, which, with all their varieties and substitutes, abound here to greater extent than in any other part of the world. The true hemp is little sed by the natives, ex- cept for the oil expressed from the seed, for me- dicine, and for an intoxicating ingredient often mixed with the tobacco of the hookah. The Euro- pean goods sent out to India are too well under- stood to require enumeration. The trade between Bengal and the different coasts of the Indian ocean is very considerable. The exports to Madras on the coast of Coromandel are grain, sugar, pulse, saltpetre, molasses, ginger, clarified butter, long pepper, oil, wrought and unwrought silks, muslins, spirits, and provisions. The im- ports are chiefly salt, red wood, !ong cloth, izaris (striped calicoes for trowsers), and chintzes, with a balance either in specie or government bills. To China, the next great mart for Calcutta com- ri.odities, besides the exports named above, are

sent opium, gunpowder, iron, fire-arms, &c. and tutenague, sugar- candy, tea, alum, dammer, porce- lain, lacquered ware, and a vast variety of manufactured articles are imported in return. The trade to Bombay consists of the first-named articles, with the addition of sacking and hempen ropes : amongst the returns may be reckoned teak- timber (tectona), ivory, and lac. To the gulfs of Arabia and Persia, Bengal sends her staple commodities ; to Ava and the Birman empire, in addition, fire-arms, stores, naval and military N with a great variety of European goods. From the eastern islands and the Malay coast, she im- ports pepper, wax, dammer, brimstone, tin, gold- dust, spices, betel-nut, benzoin, specie, &c. From Manilla, besides specie, indigo of a very superior quality, sugar, sapan wood &c. From the Malabar coast, sandal wood, coir rope, pep- per, cardamums, cargoes of cotton, wool, &c From Pegu, teak timber, elephants' teeth, lac, and various other articles.

For inland commerce the province of Bengal possesses many important advantages, being watered by the Ganges from its western boundary to the sea, and intersected in every direction by navigable

streams, which fall into that river. There is no division totally destitute of naviga- tion during the rains, and scarcely any part, in the driest seasons, situated more than twenty miles from a navigable river. Rivulets, lakes, and water courses, communicating with great rivers, frequently conduct boats to the peasant's door. The vessels used in this inland navigation are various, adapted to the several streams they are intended to traverse. Flat clinker-built vessels are used in the rapid and shallow streams of the western districts; bulky and lofty-sided barks are commonly employed in the wide and stormy navigation of the lower Ganges. Low, deep, vessels are commonly used in the east, and are best adapted to a sea full of creeks and inlets. In one navigation, wherein vessels descend with the stream and return with the track rope, their con- struction recognises neither the sail nor the oar. In another, wherein boats in the same voyage are assisted by the stream of one creek, and opposed by the current of the next, as in the Sunder- bunds, and under banks impracticable for the track rope, the oar is the principal dependence ; a winding course in narrow passages affording few opportunities for the exhibition of the sail. Often grounding in the shallows, vessels would not be safe if constructed with a keel, for which reason, all vessels built in this province want this necessary appendage for quick sailing. The expense of building a Bengalese vessel is com- paratively trifling. A circular board lashed to a bamboo forms the oar ; a triangular frame suffi- ciently ballasted, serves for an anchor; a few bamboos bound together form the mast ; a cane of the same species becomes a yard to the sail, which itself is generally a piece of coarse sacking, manufactured from the fibrous stem of the rushy crotularia, or hemp hibiscus ; resin from the trees of the woods serve to pay the seams ; and a thatch of straw, with mats, shelters the mer- chandise, and answers the purpose of a deck. Of these vessels, equipped and navigated with equal frugality, the number employed on the rivers of

Beiigal and Bahar is so great as to furnish em- ployment to no fewer than 300,000 men.

For land carriage there are not the same facilu ties, the highways in general not being in a condition to admit of distant journeys in wheel carriages. Formerly the communication was better assisted ; a magnificent road, carried from the banks of the Goggrah or Dewah, to the Brah- mapootra, formed a safe conveyance through countries subject to inundation, for a distance of 400 miles. Of this road few remains are at pre- sent visible, and the beaten path in general directs the traveller. Liability to inundation, and want of good materials, must always impose great difficulty and expense in the construction of carriage roads, whilst the poverty of tlie agri- cultural population

would not admit of the establishment of tolls. To expedite military movements, the Bengal government have com- pleted an excellent road from Calcutta to Benares, which, so far as it goes, has greatly contributed to the general convenience.

Notwithstanding the superior advantages of water carriage, the cultivator derives little advan- tage from it ; and is for the most part obliged to adopt the other mode. His crops are commonly disposed of as soon as they are reaped, on which occasion he commonly becomes a prey to opu- lent speculators, who, after they have made a monopoly, fix the prices, and compel the pea- sant on the return of sowing time to pay exorbi- tantly for his seed, and very often take mortgages of his estates.

The trade carried on by the East India Com- pany is regulated in the first instance by the Board of Tiade, consisting of two members, and a nominal president, a member of the supreme council. Subordinate to this board are com- mercial agents, stationed in different places, and assisted by the civil powers and native officers.

Hats, or open markets, held on fixed days, in an open plain, and marked by a flag, were anciently the only places at which commercial transactions took place. Shop-keeping, which is still by no means universal, appears to have been introduced by the Mahommedans. Bazaars are an assemblage of shops, collected in one building or area, for the greater convenience of the inhabi- tants ; and ganjs, or banders, are grain markets, or ports, in the canals and branches of rivers, inhabited by merchants or retail traders, unde? the protection of the nearest police officer.

The currency consists of cauries or cowries, and rupees ; the former of which is used only for small change, gold being seldom seen out of Calcutta. The potdars, or money changers, have no shop, but sit in the open market with heaps of cowries piled up before them. In the morn- ing they give cowries in exchange for silver, at the rate of 5, 760 for a rupee; but in the evening will not receive them again at a lower rate than 5,920 for a rupee ; thus, by a profit of 3 per cent, upon good mini money, imposing upon the ignorance and improvidence of the people. A stil' greater harvest is reaped by these harpies, it consequence of the fluctuating exchange on clip- ped or debased coin. Advances are also made to servants, who are paid in monthly wages, and

who thus lose from 65 to 70 per cent, in the course of the year.

The revenue of Bengal is derived chiefly from assessments on the land, made in consequence of the system established by the Moguls, by which the conqueror is considered as the proprietor of the soil ; and, in all probability, the zemindars, or land owners, were nothing more than agents appointed to collect the revenue. Grants were also made in favor of the rajas, who had before enjoyed an independent authority. These, whe- ther considered as tributary chiefs, or as feud- atories, were looked upon by the Mussulman lawyers as officers of the sultan, and were con- sidered as holding their lands in virtue of their office, and therefore as liable to suspension or removal at the sultan's pleasure. The ryot, or cultivator, is described as a tenant paying rent, and his superior as landholder; but, strictly speaking, his rent was originally a contribution to the state, and the zemindar, standing between nim and government, received that levy on behalf of the crown. In the rule for dividing the crop, whether by custom or by special engagement, the proportions were the following, viz. half to the landlord, and half to the tenant; one-third to the landlord, and two-thirds to the tenant ; two- fifths to the landlord, and three-fifths to the tenant

The standafct for the regulation of the rates has been lost ; but it appears from observations made on the Bengal revenues by the late James Grant, Esq., that the assessment was limited never to exceed the proportion of one-fourth part of the gross produce of the soil. In early times the demands of the Hindoo sovereigns were more moderate, five-fifteenths being the smallest proportion ever assessed by the Ma- hommedans, and three-fifteenths more than were ever exacted by the Hindoos. The Mahabharat states, that the prince was to levy a fiftieth of the produce of the mines, and a tenth of corn. Menu and other legislators authorise the sovereign to exact an eighth, a tenth, or a twelfth part of grain, according to circumstances ; and a sixth of the clear annual produce of trees. It is not dear whether any thing like hereditary authority was ever considered as vested in the zemindars, even under the Hindoo princes, although it is certain tfrat the same lands descended from the father to the son, for many generations. At present, however, from motives of expediency, they are declared the proprietors of the soil, and the assessment on their estates has been irrevo- cably fixed, according to a valuation made du- ring the administration of lord Cornwallis. Besides this assessment or jama, levied on the zemindars, there is an excise, or ab-diri (a duty on spirits), rates or sayir, levied on personal property ; the customs

imposed as import duties, tolls at the entrance of towns, on canals, &c. together with stamp duties, and a tax on the pil- grims to Budd'ha Gaya, Jagannat'h in Oresah, Prayag at the conflux of the Ganges, and Jam- muna, near Allah-abad.

A poll tax, called jaziyeh was imposed by the khalif Omar, on all persons not of the Mahomme- dan faith ; the Mussulman conquerors of Hindos- tan imposed it on the natives as infidels. It was,

nevertheless, abolished by the emperor Acber, and although, at a subsequent period, Aureng- zebe attempted to revive it, he failed in the attempt.

Free lands are appropriated to the use of brahmins, bards, encomiasts, ascetics, priests, and mendicants, or as a provision for several public officers. The greater part of them were originally granted in small portions of waste ground.

The class of needy land proprietors is nume- rous, and the greatest landholders are poor. Responsible to government for a tax, originally calculated at ten-elevenths of the expected rents of their estates, they have no probable surplus above their expenditure ; so that any unexpected calamity may involve a zemindar in difficulties, from which by no economy of his own can he possibly be retrieved.

The civil and military governments of the Ben- gal presidency are vested in the supreme council, consisting of the governor-general, and three counsellors ; the former appointed by the king, at his pleasure, the latter by the court of direc- tors, from the civil servants of twelve years standing. For the administration of justice throughout the dominions subject to this presi- dency, there is one supreme court at Calcutta, six courts of appeal and circuit, attached to six different divisions, and forty inferior courts, or rather magistrates, stationed in the following districts or cities : ā

Agra,

Allahabad,

Alyghur,

Backergunge,

Bareily,

Bahar,

Benares,

Birbhoom,

Boglipoor or Mong-

hir,

BurJwan, Balasore, Bundelcund, Cawnpoor, Chittagong, Dinagepoor, Dacca Jelalpoor, Etaweh, Furruckabad, Goracpoor, Hooghly, Juggernauth,

Jessore, Jionpoor Meerat, Midnapoor, Mymunsingh in

Cuttack, Moorshedabad, Moradabad, Mirzapoor, Nuddea, Purneah, Raujeshy, Ramghur, Rungpoor Sarun,

Saharunpoor, Shahabad, Silhet, Tiperah, Tirhoot, Twenty-four pergu-

nahs.

The courts of circuit consist of three judges, with an assistant, and native officers, both Ma- hommedan and Hindoo, who make their circuits at stated periods. Criminal causes are tried by the Mahommedan law, but so modified as to ap- proach nearly to our own, and when the sentence is capital, or imprisonment is awarded beyond a defined period, the punishment is not executed till it receives the confirmation of the Nizamut Adawlet, or supreme criminal court at Calcutta. In country districts, the officer who in his crimi- nal capacity has the appellation of magistrate, is also the civil judge of the city or district in which he resides. He tries all civil suits within

Jiia jurisdiction, and has for his auxiliaries a registrar, one or more of the junior civil servants, together with native lawyers. An appeal, how- ever, lies in almost all cases to the provincial court, within the jurisdiction of which they reside. To try petty suits, the district magistrate is em- powered to appoint native commissioners, with an appeal lying to himself. Each district or zilah, is subdivided into portions of about twenty miles square, in each of which a darogha, or head police officer, is stationed, with a body of armed followers under his authority, for the apprehen- sion of criminals, on receiving

authority from the magistrate. The average size of a district in this presidency is about 6000 square miles. The ultimate court of civil appeal is the Sudder Dew- anny Adawlet, in the city of Calcutta, to which all causes involving personal property beyond 5000 rupees value are referrible ; and, if the property contested amount to Ā£5000 sterling, an appeal lies from the sentence of this court to the king in council.

Under the Mahommedan and Hindoo gover- nors, suitors pleaded their own causes, who, being ignorant of the subtile usages of law, were fre- quently duped by the policy of their superiors. In 1793 regular native advocates, educated at the Mahommedan and Hindoo colleges at Calcutta and Benares, were appointed to plead in these courts, for regular fees ; who, being equally acquainted with the laws, rules, and practice of the court, impose an effectual check on the neg- ligence or misconduct of the judge .and his assistants. Provisions have also been made against the corruption of those on whom the ad- ministration of justice depends, and if any individual of the Company's servants is convicted of having received a present from either of the parties who may bring a cause before him, his offence is deemed a misdemeanour in law. Writ- ten pleadings in the native languages have been introduced for the sake of precision; written evidence is sometimes admitted, when the wit- nesses are women, to whose appearance in pub- lic the Asiatics have a great dislike ; and great indulgence is granted to the scruples of the caste. Suits between native and British subjects, or between the latter alone, are determined before the supreme conrt of judicature, with an appeal to the king in council. A chief justice, with two puisne judges nominated by the crown, consti- tute this court. It is held at Calcutta, and a jury of British residents exclusively decides the cause in criminal actions ; the court alone in civil ones. Fourteen attornies and six barristers are attached to this court. The Mahommedan law, as to the substance of it, still continues the foundation of criminal jurisprudence ; but both Mahommedans and Hindoos, for the most part, enjoy the benefit of their respective usages.

Private war and assassination, which the weak- ness of former governments had fostered, are now no longer frequent; incursions from banditti are still more uncommon, and theft, housebreakine, &c. have received an effectual check by the vigi- lance of the watchmen and police. A ˆrime of the most frequent occurrence in this country, though almost unknown elsewhere, is the murder of children ; neighbours, friends, and rtlathes,

are often the perpetrators of these horrid deeds, in order to obtain the

trinkets with which the child is decorated. Much attention has been paid of late to the state of the jails, and the health of the prisoners. The superintendents of the police, appointed in 1812, visit each district in rotation, and make a report accordingly to the governor-general in council.

The laws of inheritance, among both Mahom- medans and Hindoos, divide the testator's property equally among all his heirs : which, be- sides opening a door to endless litigations, presents an effectual barrier to the improvement of landed property, and prevents the proprietor from acquiring that stability and consideration which would render him useful to his family and the state. This want of the privilege of primo- geniture, together with other causes, has now thrown the wealth of the country into the hands of merchants and traders, resident in the great towns, who feel the superior security which they enjoy under the British government. The gene- ral poverty of the landholders is the effect of improvidence, extravagance, and dissipation, arising from their almost universal insensibility to any but immediate consequences ; as also from their committing the management of their estates to unprincipled and rapacious agents. The female zemindars are generally under the direc- tion of brahmins, who exercise an authority over the consciences of their patrons, and exert a con- siderable influence over their public conduct. To this concealed authority the agent submits, and conciliates it at the expense both of the zemin- dar and the state.

All the commercial, financial, political, and judicial offices, with a very few exceptions, are filled by the civil servants of the Company; and all vacancies are supplied by annual recruits of young men, to the number of about thirty, sent out from England, at the age of eighteen, under the name of writers. These youths, after having completed. three years residence in the country, are eligible to an office of Ā£500 per annum value ; after six to one of Ā£1500 ; after nine to one of Ā £3000 ; and after twelve to one of Ā£4000 and upwards. The number of civil servants in the year 1811 was as follows: ā in Bengal 391; under the Madras presidency 206 ; under that of Bombay 74 ; forming a total of no fewer than 671. The whole expense for the same year, including European uncovenanted assistants, amounted to Ā £1,045,400 sterling.

Commercial residents, for purchasing the in- vestments of the Company, are stationed at Bareily, Bauliah, Commercolly, Cossimbazar Dacca, Etaweh, Golagore, Goracpoor, Hurria Hurripaul, Jungeypoor, Keerpoy, Luckipoo- and Chittagong, Midnapoor, Maulda, Patna Rungpoor, Radnagore, Soonamooky, Santi- poor. The collectors

of the government customs are at Dacca, Cawnpoor, Calcutta, Benares, Patna, Moorshedabad, Hooghly, Furruckabad. The diplomatic residents are at Delhi, Luck- now, Hyderabad, Nagpoor, Mysore, Poonah, and with Dowlet Row Sindia, who seldom stays long in one place.

The number of native troops in the three presidencies, called sepoys (Ā«ipahis), or soldiers

amount to 122,000, of whom 9000 are cavalry, equally divided between Madras and Bengal. The non-commissioned officers are natives, and those who have commissions, to the number of nearly 3000, are Europeans. Each presidency is also furnished with one regiment of Europeans, besides artillery and engineers ; the total num- ber of whom, with their officers, who rise by seni- ority, exceeds 4000. About 22,000 of the king's troops, also, are usually stationed in India, at the entire expense and disposal of the Company; both armies being under the same commander-in- chief. The total expense in 181 1 was Ā£1,154,695 sterling. The annual appointment of cadets for the three presidencies may be averaged, annually, at 120 for the military, and ten for the marine service. The number of officers in the Com- pany's service, on the Bengal establishment, amounted, in 1811, to 1571; occasioning an ex- pense of Ā£872,088 per annum. The number of resident Europeans in the Bengal presidency, out of the service, was computed, in 1810, at

2000.

The towns of Bengal are divided into dif- ferent quarters, each of which is allotted to a different trade or nation. The Portuguese occupy one, the Mussulmans a second, the Hindoos a third ; although this division, latterly, is but little observed. The houses, which are generally nothing more than huts with sloping roofs, resembling an inverted boat, are called bangala ; whence the English bungalow, synonymous in India with the ' cottage.' The houses of the rich are merely a collection of huts within the same enclosure. Walls of mud, reed-hurdles, or split bamboos, a floor raised one or two feet from the ground, and occasionally a platform of bamboos at one end within, as a sleeping room and a place of retreat in times of inundation, constitute the whole of these habitations. The door, in general, is the only opening for the admission of light and air, few of their best constructed edifi- ces having any thing like windows ; and, instead of different apartments in the same house, sepa- rate huts are commonly

constructed. In towns the houses are frequently of brick, and flat roofed, two stories high, consisting of a body and two ā¢wings enclosed by a high wall. In the upper story resides the family god, and the inhabi- tants in the apartments below. Ou each side of the court are verandas or open galleries, for the convenience of spectators on holidays, when reli- gious ceremonies are performed. The apart- ments have scarcely any article of furniture except a loose mat, a few dishes for pan or betel-nut (piper betle), some utensils of brass, and a hukkah or spiral tobacco-pipe. An empty house, or shed, is the only accommodation which can be procured by the traveller; and to obtain this is frequently a work of considerable difficulty. As the religion of the Brahmins prescribes works of benevolence not for the good of men but for the gratification of the gods, any regard for pub- lic utility seldom enters into the mind of a devout Hindoo; who plants a grove, digs a tank, &c. regardless whether the trees afford a covering for tigers, or whether the tank be a public nuisance.

The districts into which Bengal is at present subdivided are Backergunge, Birbhoom, Burd-

wan, Chittagong, Hooghly, Jessoie, Mymun- singh, Moorshedabad, Nuddea, Purneah, Rau- jeshy, Rungpoor, Silhet, Tipperah, the twenty-four pergunnahs, and Midnapoor, although this last belongs properly to Orissa. Calcutta is the capital, for which see CALCUTTA.

Before we proceed to the description of the above-mentioned diitricts, we will give an ac- count of the maritime frontier called the Sunder-bunds, Sunder-bans, (sundara-vansa, the beauti- ful wood), which is a woody tract of country stretching 180 miles along the Bay of Bengal, intersected by an intricate maze of streams and creeks, having eight magnificent openings which may be regarded as outlets of the Ganges. The shelving sides of all these streams clearly evince the alluvial origin of the low lands of Bengal. Two of the passages that intersect this beautiful region are navigable, viz. the southern or Sunder- bund, the northern or Balliaghaut. The former of these, which is the widest and deepest, falls into the Hooghly river sixty-five miles below Calcutta. Its course is through a thick forest, affording an asylum to ferocious animals, in which, during the day, not a sound is heard except the call of birds and the chattering of monkeys. Alligators are often seen sleeping on its banks, and enor- mous tigers spring upon the traveller who ven- tures to intrude upon their solitary retreat. This widely extended wilderness is, with some trifling exceptions, the property of government, and may hereafter be a source of revenue. A survey was made of it in 1812 ā 13, by captain Morri- son of the Bengal engineers; and in 1814 a com- missioner was appointed to

examine the validity of all claims to lands in it, as also to assess those lands that had been brought into a state of culti- vation. The salt of this region is esteemed holy, being manufactured from the mud of the Ganges.

Saugor island, Sagor island, (Ganga-sagara, i. e. the confluence of the Ganges and the ocean,) about twenty miles in length and five in breadth, is so intersected by creeks that its precise limits are difficult to define. It lies west of the chan- nel creek, and the anchorage near it, being more open to the fresh sea breezes than Calpee or Diamond harbour, affords a better and more healthy situation for shipping. The island, from its situation at the very mouth of the Ganges, is thought by the Hindoos a place of peculiar sanctity; and, at the full moons of January and November, is rendered still more sacred by the sacrifice of human victims. Many of these are voluntary, consisting of aged persons weary of life, and infants devoted by their parents; who, in gratitude for their having been blest with five children, throw the fifth into the river. Some are, nevertheless, involuntary, and in one case a child, twelve years of age was forced by his parents a second time into the waves. The Sastras, indeed, do not prescribe such sacrifices: but the vow, in compliance with which they arc made, is thought inviolable. The island is inha- bited by a few Gosains, (Goswamu, religious mendicants) who levy contributions as the disci- ples of Capila, a sage, supposed to have lived 2000 years before the vulgar era. There are sufficient ruins upon the island to show that it was once numerously inhabited. Im order to render this

spot subservient to the interests of government, the whole has been leased to a company, who are to hold the land rent free for thirty years, and afterwards at the annual assessment of four anas per big'hat (about one shilling and nine- pence per acre), for ever. -The undertakers have subscribed 250,000 rupees (Ā£31,250 of our money), and one fifth of the land was cleared before the commencement of April 1819.

Edmonstone's island, near the former, and almost equally remarkable, exhibits a striking instance of the manner in which the whole Delta of the Ganges has been formed. It lies in lat. 21Ā° 35′ N., and long. 88Ā° 20′ E upon the very- spot where the Sagor shoal appeared in former maps. It was nothing more than a sand-bank in 1813, not having emerged above the waves; but in 1818 formed itself into a distinct

island east and west ; two miles in length by half a mile in breadth; and, from the decreasing depth of the channel betwen it and Sagor, it is highly proba- ble that before any very considerable lapse of time the two islands will be united. At the period before alluded to, vegetation had already commenced in the central and most elevated parts of the surface. Salsolas and Ipomaea pes caprse had given it a verdant coloring; and, by daily binding the drifting sand, were contributing to form the basis of a fertile soil.

1 . 1 he district of Backergunge : it was formed about the year 1800, from the southern quarter of the Dacca Jelalpore district. A part of this division called Boklah, in the time of Acber, now Ismaelpoor, extends chiefly along the western bank of the Puddah, or Great Ganges, nearly to its mouth at the island of Rabnabad, which forms the south-east angle of the Bengal Delta; the west of Hidgellee being the other. In 1584 the whole of this region was overwhelmed by an inundation'; and from the succeeding rava- ges of the Mughs, aided by the Portuguese, who inhabited Chittagong, it continues to the present time in a state of great depopulation. From its vicinity to the Sunderbunds it is inter- sected by numerous rivers, and mantled by a covering of jungle. It is also infested with enor- mous tigers and alligators, together with numer- ous gangs of dacoits or robbers. The remains of several Portuguese colonies, planted two cen- turies pgo, still exist, and exhibit a melancholy proof of the extreme degradation to which it is possible for Europeans to descend. They are a meagre, imbecile, puny race, blacker than the natives, and held in universal contempt.

Backergunge, the capital of the above district and residence of the judge and magistrate, is situated 120 miles from Calcutta in lal. 22Ā° 42′ N., and long. 89Ā° 20′ E.

Ravan-abad and Dak'hin-shah-baz-pur are islands, of which the latter, at the junction of the Megna with the sea, is about thirty miles long and thirteen broad. It contains excellent salt-works, but is almost inundated during the rainy season. The navigation of the neghbour- ing channels is rendered dangerous by the bore, or overwhelming rush of the tide.

2. Birboom, or Berb'hum (Virabtrumi, the Land of Heroes), is bounded on the north by Monghirand Rajemal,on the south by Burduan and Pachete, on the east by Raujeshy, and on

the west by Monghir and Pachete. In the Ayin Acbari it is called the Sercar of Madarun, and in 1784 its superficial extent comprehended

3858 square miles. . The greater part is rocky, woody, and uncultivated; but is now rising in prosperity and importance. Coals and excellent iron ore are found in the hills; but the iron- works established in 1814, at the Moaand Hugli river, have not succeeded. The chief navigable river is the Adji, and the chief towns Surool, Sooro, and Nagore. The roads and bridges are kept in good repair, and the latter are formed of the palmeira (elate sylvestris). Birboom is the largest Mahommedan zemindary in Bengal, and in the time of Sher Shah, the Afghan, was conferred on Assud Ullah, father of Budder ul Zemaun, of the Afghan or Patan tribe, the better to enable him to protect the western frontiers from the incursions of the barbarous Hindoos of Jeharcund. This grant anciently resembled the ancient military fiefs of Europe, but was resumed, in 1763, by Cossim AH Khan. In Baidyanauth, or Desghur, is a celebrated temple, containing an illustrious lingam, or phallus, round which the pilgrims make many circuits, washing it with libations of holy water, in order to procure favorable dreams. So celebrated is this place of pious resort, that, notwithstanding the great danger there is of being murdered on the road, no fewer than 6000 devout persons from Bahar alone are said to visit it annually. The population of Birboom, as taken by marquis Wellesley, in- 1801, amounted to 700,000 per- sons.

3. Burdwan (in Sanscrit Vardhaman, pro- ductive), is bounded on the north by Birboom and Raujeshy, on the south by Midnapoor and Hooghly, on the east by the Hooghly jiver, on the west by Midnapoor and Pachete ; and is' si- tuated between the twenty-second and twenty- fourth degrees of north latitude. It came into our possession in 1760, y and may be considered the most fertile territory in India. Environed as it is by the jungles of Midnapoor, inOrissa, of Pachete and Birboom, it appears like a garden surrounded by a wilderness. This district, in 1784, contained, according to major Renncl's measurement, 5174 square miles, although the original zemindary did not exceed 3280. Sub- sequently to 1722 it was conferred on Keerut Chund, the first known primogenitor of the pre- sent family, and, in 1790, the existing rajah paid to government a yearly rent of Ā £400,000 sterl- ing. The chief "towns are Burdwan, Bissun- poor, and Keerpay; the principal rivers the Hooghly and Dummoodah. Villages are nume- rous, and most of them have schools, but there are no colleges for teaching the Mahommedan or Hindoo law. The population is supposed to be about 2,000,000, of whom one-sixteenth are Mahommedans. The remains of several forts are visible, supposed to have been originally constructed as a defence against the Mahrattas. Cutwa, in lat. 23Ā° 37′ N., and long. 88Ā° 10′ E., ia celebrated as the place near which took place the wejl-known engagement between our

troops and those of Cossim AH in 1763.

The only rajahs possessing rank are those ot Burdwan and Bissunpoor, both of whom now maintain so few followers in their service, that

when they appear abroad for purposes of state or ceremony, they are obliged to hire a retinue, al- though before the establishment of the present system, the number of persons called zemindary pykes, employed for police and other purposes, was upwards of 21,000.

4. Chittagong (Chaturgrama, or as some Gaong Orgam), lies at the south-eastern extre- mity of the province, between the twenty-first and twenty-third degrees of latitude, and is bounded on the north by Tipperah district, south by Aracan, east by the Birman empire, and west by the sea ; its entire superficies comprehending an extent of territory 120 milts in length, by 25 its average breadth. This district contains about 2987 square miles of unproductive hills and plains ; arable land nearly in the proportion of two to one, and was divided formerly into four large and 140 small perguunahs, partioned among 1400 landholders. The original grant of this district, like the former, resembled a mi- litary fief, and was superseded by a division into distinct zemindaries, when the protection of the frontier ceased to require a military establish- ment. The principal river cannot admit ships of any size, and, at a considerable distance be- yond the limits of the harbour, there are bars in thĀ« mouths of all streams which flow into the sea between that river and the boundary of Aracan. The southern part of this district, to- wards the Nauf river, which forms the line of separation between the British and Birman ter- ritories, is mountainous, and had been consi- dered as almost incapable of cultivation till 1814, when enquiries, occasioned by the great emigrations from the neighbouring countries, evinced that between the ranges of hills are nu- merous plains and valleys, susceptible of im- E’ovement, as those of Chacaria, Ramu, and argauia, the last of which is estimated at ten miles each way. A large number of emigrating Mug’hs have settled on the borders of the Bri- tish territory; some under the character of hus- bandmen, others as pedlars or mechanics. The natural features of the interior are mountains, and beds of torrents, which roll forward to the sea. Both the inland waters and those of the ocean are continually encroaching on the labors of the cultivator. Its frequent change of level, maritime position, and lofty altitude, confer upon this region peculiar advantages, and render it

highly proper for the production of coffee, pepper, spices, and many other valuable pro- ductions of Asia.

Islamabad (the Abode of the True Faith), the present capital of this district, is extremely well situated for maritime commerce, ship-building, &c. The Company have likewise an extensive establishment on the coast for the manufacture of salt. A considerable profit is derived from the elephants taken in the forests by the natives, who engage to provide a certain number an- nually. The sea air and bathing on this coast are considered extremely beneficial, for which reason it is much resorted to by Europeans.

About twenty miles north of Islamabad, is a remarkable hot well, named Sectacond, the sur- face of which, as it emits inflammable air, is capable of being ignited \ty the application of fire. This, like all other natural phenomena, is

esteemed sacred among the Hindoos, as is also another hot spring in the vicinity of Monghir.

Chittagong, it is probable, belonged originally to the extensive and independent kingdom of Tipperah; but, being a frontier province, where the two religions of Brahma and Buddha met, it was the subject of endless litigation, and was sometimes governed bv the sectaries of one doc- trine, and sometimes by those of the other. It is supposed to have been subdued in the begin- ning of the sixteenth century, by the Afghan so- vereigns of Bengal, but afterwards, during the wars of the Moguls and Afghans, reverting to the Buddhists, fell into the possession of the rajah of Aracan. In the beginning of the seventeenth century it was visited by the Portuguese, who, co-operating with the rajah, greatly depopulated the south-eastern quarters of Bengal. In 1638, during the reign of the emperor Shah Jehan, Makat Ray, one of the Mugg chiefs, who held Chittagong for the rajah of Aracan, having in- curred his master's displeasure, sought the pro- tection of the Mogul sovereign, which led to the acquisition of this province by the Mogul go- vernment. In 1666 Shayistah Khan, the soubahdar of Bengal, having equipped a powerful fleet at Dacca, despatched it down the Mcgna, under the command of Omeid Khan, who, having pre- viously conquered the island of Sundeep, pro- ceeded against this province and laid siege to the capital, which, though strongly fortified, and containing, according to the Mogul's historians, 1223 pieces of cannon, was speedily taken, and its present name conferred on it.

This province at an early period attracted the notice of the East India Company, who, in 1686, proposed to remove their factory from

Hooghly to this station, and establish by force a fortified residence. In 1760 it was ceded to that body by the nabob Jaffier Ali Khan. The population of this district, as taken in 1801, under the direction of the marquis Wellesley, amounted to 1,200,000 souls. The capital, in lat. 22Ā° 22′ N. and long. 91Ā° 42′ E., was a great emporium in the time of Acbar.

Coxe's bazaar, at the mouth of the river Nauf, occupying an elevated open site at the termina- tion of a range of lofty cliffs, is clear of wood, and has excellent water. In 1816 it was ho- nored by the erection of a custom-house on the Aracan frontier.

Sun-deep, or Sun-dip (the Island of the Moon), is at the mouth of the Megna, a broad stream formed by the united waters of the Ganges and Br'ahmapootra. Its soil is alluvial, and its su- perficial extent about sixteen miles by eight. It was possessed in the beginning of the seven- teenth century by Portuguese pirates, under Se- bastian Gonzales; which individual, after reigning a few years, was expelled by the rajah of Aracan, who, in 1666, was also expelled by the fleet of Shayistah Khan, when the country became sub- ject to the Mogul. Salt seems at present to be the article of manufacture.

The hilly tracts of this district are chiefly in- habited by the Chumias and the Cukies, or Lunc- tas. The Chumias, a migratory people, seldom remaining nore than two years in one place, oc- cupy the lower range of hills to the north and east, and are subject to the Bengal government.

The Cukies, in appearance resembling the Tar- tars, inhabit the more distant and elevated ranges. They are hunters and warriors, divided into many independent tribes; are much given to theft, and live mostly on animal food. The Hindoo distinctions of caste are not known.

5. Hooghly district, situated principally be- tween the twen*v -second and twenty-third de- grees of latitude, and extending along both sides of the river of the same name, is bounded on the north by Burdwan and Kishenagur, south by the sea, on the east by Jessore and the Sunder- bunds, and on the west by Midnapoor. The land is low, flat, and fertile, and the part bor- dering upon the sea, overgrown with jungle, is extremely unhealthy ; its inland navigation is excellent, the surface being intersected on all sides with rivers and their branches.

Three- fourths of this division remain in a state of na- ture, and are the abode of tigers, alligators, with numerous other species of vermin and reptiles.

The town of Hooghly, situated on the west of the river of that name, in lat. 22Ā° 54′ N. and long. 88Ā° 28′ E., was formerly the Bunder, or great sea-port of this part of India, and the place where the Mogul's duties were collected. The French, Portuguese, and Danes, had facto- ries here, and were subsequently permitted to possess each a town, comprehended however, within ten miles extent along the river. Abul Fazel, in 1582, describes it as follows : ' There are two emporiums, about a mile distant from each other, one called Statgong, the other Hoogh- ly, and its dependencies, both of which are in the possession of the Europeans.' The name of Hooghly is not mentioned in Faria de Souza's History of Bengal, where it is named Golin.

Jn 1625 the Dutch, and in 1640 the English, ā¢were permitted to build factories here, but the trade was exposed to continual exactions. The first serious quarrel between the Moguls and Europeans happened at Hooghly, in 1 632, when it belonged to the Portuguese. The Moguls with a strong army besieged it for three months, during which period the Portuguese made many offers of submission. All terms were, however, rejected by the besiegers, who having sprung a mine, carried the place by assault, and com- menced a most dreadful slaughter of the Portu- guese. For the latter there seemed no escape ; many who attempted to reach their boats were drowned, and those few who gained their ships in safety were immediately attacked on all sides. The captain of the largest vessel, having on board no fewer than 2000 men, women, and children, with all their wealth, rather than fall into the hands of the Mahommedans, blew up his ship, and many others followed the example ; till, of sixty-four large vessels, fifty-seven grabs, and 200 sloops anchored opposite the town, only one grab and two sloops remained. In 1686 the English were involved in hostilities by the imprudence of three of their soldiers, who quarrelled with some of the nabob's peons. The action that followed was the first ever fought by the English in Bengal, and ended in the defeat of the nabob's troops. A disadvantageous peace was nevertheless shortly made, and the English, thinking themselves insecure in Hooghly, which

was an open town, removed to Chata-nati, or Cal- cutta. Hijeli, or Hijala, west of the river, in lat. 21Ā° 50′ N. and long. 88Ā° 10′ E., consists of salt and redeemed marsh land, close to the mouth of the river. It was formerly the capital of a fanjdari, or military station, in the subah or province of Orisah, but in the reign of Shah Jehan was

annexed to Bengal.

Culpee, in lat. 22Ā° 6′ N., and long. 88Ā° 25′ E., situated on a creek near the east bank of the river, is surrounded by wood, and very unhealthy. Kedgere, or Kijari, in lat. 20Ā° 55′ N., and long. 88Ā° 16′ E., lies at the mouth of the river, where it is nine miles in width. Ships of war generally anchor here, the air being much more salubrious than Diamond Harbour, where the Company's ships unload, and take in the greater part of their homeward cargoes. Stat- gong (the seven villages), was anciently a place of considerable note, though now sunk in com- parative insignificance. It is situated on a creek, a little to the north-west of Hooghly, and in the middle of the sixteenth century small vessels were not able to approach. Fulta, in lat. 22Ā° 19′ N., and long. 88Ā° 20′ E., on the east bank of the river, is a village near which ships find safe anchorage, and are protected from the swell.

Barrackpoor, about sixteen miles above Cal- cutta, has a park with a small menagerie, and is the station where the native corps, amounting to 4000 men, are in cantonment. An institution is established here for the instruction of cadets in the artillery and engineer corps ; and, in the cold season, horse races are practised, under the patronage of the military.

Chander-nagar (in Sanscrit, Chandra-nagara), is a French settlement, advantageously situated west of the river Hooghly, and contained, in 1814, 41,377 inhabitants.

Chinsurah, Chinchura, better known by the name of llougli, being situated near the suburbs of that anciently renowned city, is the principal Dutch factory in this part of India, and was es- tablished in 1656. The Dutch have no other possessions there, except their fort ; the territory round it depending on the government of the country. One inconvenience attending this set- tlement is a sand-bank, that prevents ships from coming up nearer to it than Tulta, about twenty miles below Calcutta ; occasioning of course an additional expense to the government. A school established in this place by Mr. May, for the in- struction of native children, had on its list, in 1814, upwards of 1080 scholars. Reading, writing, and arithmetic, are taught to all ; and English, as a reward to the most deserving.

The Portuguese formerly made Bandel, which is eighty leagues from the mouth of the Ganges, and a quarter of a league above the Hooghly, the principal seat of their commerce. Their flag is still displayed, and there are a few unhappy wretches remaining there, who have forgotten their country after having been forgotten by it.

This factory has no other employment than that of supplying the Moors and the Dutch with mistresses.

Serampore, a Danish settlement, is situated on the west side of the Hooghly river, about twelve miles above Calcutta. It extends about *

mile along the river, but is very narrow, and has no fortifications. It is the head quarters of the Baptist missionaries.

6. Jessore (Jasar, the Bridge), situated between the 22nd and 24th degrees of north latitude, is bounded north by the Ganges, south by the sea, east by Kishenagur, and west by Dacca, Back- ergunge, and Jelalpoor. The southern part of this district, in the Sunderbunds, formed by al- luvion, and the successive changes of the chan- nels of the Ganges, is extremely fertile, though at the same time low, flat, and unhealthy. Its productions are numerous and valuable, of which indigo is the most important. A great proportion of the southern tract is covered with jungle, and inhabited by pirates and salt makers. The ze- mindary of Jessore was originally named Yusef- poor, in the revenue books, and early in the eighteenth century was conferred by Jaffeir Khan on Kishenram, a Khaist from Orissa. The chief towns are Jessore, or Moorly, Mahmudpoor, and Culna; and the population, as taken in 1801, amounted to 1,200,000, in the proportion of nine Mahommedans to seven Hindoos.

7. Mymun Singh, situated principally between the 24th and 25th degrees of north latitude, is bounded on the north by the Garrow Mountains and the district of Rungpoor, on the south by Dacca Jelalpoor, on the east by Silhet and Tip- perah, and on the west by Raujeshy and Di- nagepoor. This district is of more recent for- mation than the adjacent ones, on which account it underwent no separate mensuration in 1784. It is low, flat, and fertile, and, since the perpe- tuation of the decennial settlement, is much improved. It is intersected by the great river Brahmapootra, into which flow innumerable tributary streams, and during the height of the rains the whole face of the country is nearly submerged. The chief town, Bygonbary, on the west side of the great river, in lat. 24Ā° 46′ N., and long. 90Ā° E , is the residence of the judge and collector, subordinate to the Dacca court of cir- cuit; and the population, in 1801, amounted to 600,000, in equal proportions of Hindoos and Mahommedans. Siraj-ganj on the J’ hinayi, near the confluence of that river and the Conayi, is perhaps,

next to Calcutta, the greatest mart in the whole province, although not to be found in any map.

8. Moorshedabad was formerly included in the Raxvjeshy, but has lately passed among the mo- derns as a, separate division. Its boundaries are very difficult to define, but it may generally be considered as having the Ganges and Jellingi rl.ers to the north and east, Nediya to the south, and Uirboom to the west. In 1813 it was con- sidered as the worst regulated of any part of the province ; in consequence of which an assistant magistrate was appointed to reside within its capital. It is remarkable, that whereas this part of the province was formerly considered as par- ticularly healthy, it js now extremely the reverse.

Moorshedabad, the capital seated on the most sacred branch of the Ganges, was originally called Muckhsoosabad till 1704, when Moor- shed Coolee Khan transferred to this place the seat of government, and conferred the present name, it stretches eight miles in length, cover-

ing both sides of the Bhagiratty or Cossimbazar River, about 120 miles above Calcutta. The streets and buildings are bad, as is the case in most Indian towns ; but the transit commerce is very great, and the river, with the exception or' one interval in the year, is covered with boats ol all sizes. From the month of October to May, when the river is nearly dry, much of the com- merce is removed to B'hagwan Gola, a port on the parent stream of the Ganges. A canal be- tween the two streams, formed in 1813, has been of great service; but the unhealthiness of the place, which, in 1814, almost exceeded belief, has caused the population visibly to decline. The Mootyjeel, or Pearl Lake, in this neigh- bourhood, is one of the windings of a former channel of the Cossimbazar River, and in the reign of AH Verdy Khan, was dignified wit'i a palace ornamented with columns of black marble from the ruins of Gour, the ancient capital of Bengal. A considerable part of the town is pro- tected from inundation solely by the Bulabeg pushtah, or projecting embankment, which every year occasions great expense to the government. Gang robbery, or dacoity, is common ; and the charges for the city police, in 1814, were esti- mated at the annual expense of 36,000 rupees, ˆĀ£4500).

When the seat of government was removed from Dacca, by the Nabob Jaffier Khan, Moor- shedabad became the metropolis, and continued so till the conquest of the province by the Bri- tish, in 1757, when it was virtually superseded by Calcutta. It remained, however, from its centrical situation, the seat of the collector-gene- ral of the board of revenue till 1771. At pre- sent, besides being the residence of the

native prince, Moorshedabad is the head quarters of a court of circuit, including the following subordi- nate districts : viz. 1 . Monghir, or Boglipoor ; 2. Purneah ; 3. Dinagepoor ; 4. Rungpoor ; 5. Raujeshy ; 6. Birboom ; and 7. Moorshedabad. The population, in 1801, was estimated at 1,020,572, in the proportion of one Mahomme- dan to three Hindoos.

9. Nuddea (Nara-dwipa, the new island), sit- uated between the 22nd and 24th degrees of north latitude, is bounded on the north by Rau- jeshy, on the south by Hooghly and the Sunder- bunds, on the east by Jessore, and on the west by the Hooghly river. It was anciently called Oukerah, and more recently Kishenagur, from the zemindar who held it. Its soil is peculiarly fertile in all the dearer productions of Indian growth, but so light as to require a fallow for three successive years. Jasarush (from which a red dye is extracted), and pipal (piper longum), are grown here in great perfection. Cultivation has greatly increased since the decennial settle- ment The inland navigation spreads itself through every part of the district; but the ne- cessary embankments are difficult of formation, owing to the extreme lightness of the soil. In 1784, according to the mensuration taken by Major Rennell, this district comprehended 3115 square miles, and in 1801 contained a popula- tion of 764,000, in the proportion of two Ma- hommedans to seven Hindoos. The chief towns are Nuddea, Kishenagur, and Santipoor.

Nuddea, at the confluence of the Jellinghy and Cossimbazar rivers with the Hooghly, in lat. 23Ā° 25′ N., and long. 88Ā° 24′ E, was the capital of a Hindoo principality, previous to the Mogul conquest of Hindostan ; but, on the invasion of Mahomet Bukhtyar Khiljee in 1204, was taken and entirely destroyed. It was afterwards dis- tinguished as a school for Hindoo learning, and upon the decline of that Brahminical seminary, during Lord Minto's administration, a sum of 13,000 rupees (Ā£1600), was assigned for its support.

Chogdah, east of the Hooghly river, thirty-four miles north of Calcutta, is celebrated as the place where the Hindoos used formerly to drown them- selves in the holy stream : it is said they are now satisfied with the mere ceremony of immersion.

Palasi, or Plassey, is the place near which Lord Clive, with an army of 3000 men, of whom 900 only were Europeans, completely routed the

Nabob with no fewer than 50,000 troops, by which victory he acquired the possession of Bengal.

Agha-deep, Aga-dip, or Agra-dwipa, is a place of pilgrimage where the Hindoos resort, on ac- count of the supposed image of Crishna, and brings a revenue to its proprietor of Ā£300 per annum. It was seized by the late Raja Nob Kishn (Nava Crishna), for a debt, but was re- covered by a law suit.

10. Purneah (Purinya), situated about the 26th degree of north latitude, is bounded on the north by the Morung hills, in the Nepaul terri- tories, on the south by Monghir and Rajemall, on the east by Dinagepoor, and on the west by Tirhoot and Boglipoor. Abul Fazel, in .1582, describes it as follows : ‘ Sircar Poorneah, con- taining nine mahals ; revenue, 6,408,793 dams. This Sircar furnishes 100 cavalry., and 5000 in- fantry.’ This district, comprehending 5119 square miles, is a compact, well-watered flat, diversified with a few hillocks; in the north- eastern angle, in the region contiguous to the Mahanada, and near Manihari, not far from the Ganges, is a calcareous stone, the only rock in the whole district. The soil, though in some places light and sandy, is in general fertile, pro- ducing opium, fir-masts, and other valuable tim- ber, together with the common productions of India. The northern part is covered with im- mense woods, and very thinly inhabited. Nu- merous shallow lakes and morasses are formed in deserted beds of rivers, and almost all the streams have changed their courses since the date of the Bengal atlas drawn up by Major Rennell ; the high lands are, nevertheless, most productive. The rains do not last so long, neither are the heats so scorching, in this district, as they are further east and south, by which means the cli- rmte is rendered more healthy and salubrious. The prevailing winds are south during the.rainy season, but north in the winter, and the frost ex- ceedingly severe. Potatoes were introduced here by Mr. Smith, of Nat’h-pur, and had come into general use among the natives before 1810. The cattle of this district are excellent; butter made from buFaloes’ milk is clarified, and exported under the name of G’hi. The Saul timber, with several other species, from the woods on the Mo-

rung boundary, is floated in the rainy season down to Calcutta. The chief rivers are the Co- sah, and Mahanada; the chief towns, Purneah, Tanjepoor, &c. ‘The population, as taken i:i 1801, amounted to 1,450,000, in the proportion of seven Mahommedans to ten Hindoos.

During the Mahommedan government, this was a frontier military province, under the rule of a foujdar, subordinate to the soubahdar, or viceroy ; possessing, nevertheless, a consider;’ Lie share of

independence Of these provincial governors Syef Khan is the most remarkable, who ruled until his death in 1759, when he was succeeded by Soulet Jung ; on whose death the government was usurped by Shouket Jung, or Khadim Hossein Khan. This rebellion was quelled in 1763, by Cossim Ali Khan, the nabob of Bengal. In 1765 Purneah devolved with the rest of the dcwani (stewardship) to Lord Clive.

Purneah, or Pur'rnya, the capital of the above district, lies in lat. 25Ā° 45′ N-, and long. 88Ā° < >3′ E. 124 miles north-west by north from Moorsheda- bad. It is rather a crowd of villages than a town, and is of late extremely unhealthy. The best part of it is east of the Saongri river, and consists of one wide street, opposite to which is Ram-bagh, a dry sandy plain, on which are erected the houses of the Europeans, courts of justice, &c. Nat'h-pur is situated in lat. 26Ā° 17′ N., and long. 87Ā° 3′ E., on the bank of the Cosi, in the wet season, but some miles distant after the water has retired.

11. Raujeshy (Rajshahi), situated principally between the twenty-fourth and twenty-fifth de- grees of latitude, is bounded on the north by Dinagepoor and Mymunsingh, on the south by Birboom and Kishenagur, on the east by Dacca, Jelaldoor, and Mynumsiug, and on the west by Monghir and Birboom. It is traversed by the Ganges, and its innumerable arms, by the over- flowing of which, from July to Novembeˆ it is almost entirely submerged. The tract, peculiarly liable to inundation, was anciently called Va- rendra. About Ilariyal the (ountry is woody and wild. The shallow lakes, or j'hils, are pro- tected by a guard-boat, under the command of a jemadar, or corporal ; but since the decennial settlement the improvement is considerable. Within the limits of this province are produced four-fifths of all the raw or manufactured silk used or exported from Hindostan. Numerous commercial towns and populous cities, are also contained in it, from which the manufactures are supplied.

The zemindary in 1784, according to Major Rennell's measurement, contained 12,909 square miles, and yielded a revenue of twenty-four .lacks of rupees. The population, in 1801, amounted to 1,500,000, in the proportion of three Mahommedans to five Hindoos. The chief towns are Commercolly, Nathor, the re- sidence of the judge and magistrate, Balia, &c.

Raj-mahal (the King's palace), anciently called Acbar-'nagar, and Canc-jol, though belonging to Bengal, is now attached to Bahar. It lies on the south-west bank of the Ganges, and was for- merly the seat of an important military govern ment, established on the confines of the

two

provinces, for the purposes of securing the passes, especially that of Telia-gar'hi.

Tellia-gurry, or gully, in iat. 25Ā° 2′ N., long. 87Ā° 43′ E., was originally called Ag-mahal, and exchanged into Raj-mahal by Man-sing'h, who, in the reign of Acbar, made it the capital of Bengal. Sultin Shujaa, the brother of Aurang- zeb, made it the metropolis of Bengal and Bahar, for which its situation is extremely well adapted. The ruins of his magnificent palace, called Sangi-dalan, are still visible, and the tomb of Mirair, the son of Jafer Ali, is kept in good repair.

Sicly-gully, or Sancri-gali (the narrow pass), one of the most celebrated defiles in Hindostan, is about eight miles north by west fron Raj- mahal, and forms the boundary between Bengal and Bahar. It is not, as was supposed, the only pass by which the former of these provinces is accessible, since the Mahrattas, in 1742, invaded it from another quarter.

Oudanulla, a small town in Iat. 24Ā° 56′ N., andˆ long. 87Ā° 52′ E., although 300 miles dis- tant from the sea, is the nearest place where any thing so coarse as gravel can be found in the bed of the Ganges. It is also distinguished by the extensive lines formed in 1764, by Kasim Ali, and forced by major Adams. Few traces of them now remain.

12. Rungpoor (Rungapura), situated in the north-eastern extremity of the province, about the twentieth degree of latitude, is bounded on the north by the Bootan hills, on the south by the Mymunsing, on the east by the Brahmapoo- tra, and on the west by Dinagepoor. Separated from Cooch Bahar by the river Durlah, it is an extremely irregular district, the boundaries of which, being ill defended, are exposed to con- tinual incursions from the neighbouring states. The river Caratoya, which divides this district from Dinag-pur, is continually shifting its course, as are most of the other streams by which it is traversed. To the north-east are several lakes, the largest of which lies five miles north of Jugig'-hopa, and on the eastern side is a red soil, called Ranga-nati, covered with stately forests, overgrown with plants of an extraordi- nary size. East of the Brahmapootra and Chon- cosh, is a considerable extent of hilly country, surrounded on all sides by low lands. The heat is more moderate than in the western regions of the

province; and the cocoa-nut, which has been supposed to require the proximity of the sea, flourishes at Goal-parah, 250 miles from the nearest coast. The face of the country is open, flat, and well-watered ; the soil fertile. The chief rivers are the Teesta, Durlah, and Brahma-pootra. The chief towns are Rungpoor, Mun- gulhaut, and Guzgotta.

In this district the inhabitants, having no mills, dress their wheat like rice, and all the gear necessary for carrying on a small farm of one plough may be bought for seven shillings. Rhinoceroses, elephants, and black bears, are found in the forests. The frontiers, bordering on Morung and Butau, are inhabited by wandering tribes of mountaineers, called Kichacs, or Gidar- niars, who live by robbing and plundering. The natives, in general, are unhealthy, and numbers

die in their infancy. Prostitution is extremely common, and is carried on by a regularly organised society, which is the less surprising as the country forms a part of Camarupa, the Paphian empire of the Hindoos. In 295 houses were found 460 women from twelve to twenty-five years of age, besides a number of others more advanced in years, who, together with several men and boys, the offspring of this abandoned community, acted in the capacity of servants. These women, though they affect the manners of the Hindoos, are of Mahommedan origin, and may be adduced, in the face of our modern infidels, as another proof of the superior morality of the Mahomme- dan code. The Mussulmans of this district, when in distress, frequently address their prayers to the saints and deities of their idolatrous neighbours.

Rangpoor, or Rungpoor, under the Mogul government, was a military station, on the fron- tier, towards the Morung and Cooch Bahar, and was first partially wrested from the rajah of the latter district in the reign of Shah Jehan, when it was formed into a circar. It was afterwards completely conquered by the generals of Aurung- zebe in 1660-1, when it received the name of Fakercoondy; and, with the pergunnah of Koondy, formed the modern district of Rung- poor, comprehending a territory of 2679 square miles, distributed into several zemindaries. Within the jurisdiction of this district may be included that of Rangamatty, and the adjoining rajahship of Cooch Bahar, comprising in all the dimensions of its financial divisions 6610 square miles. In 1765 it fell, with the rest of the pro- vince, into the possession of the English, since which it has been progressively advancing in the scale of improvement. The ruins of Comota- pur, and the city of Pril'hi Raj, in the division of Sanyasi-gota, show what the splendor of this country must have been when in the zenith of its glory. The air, it is said, is not extremely salubrious ; and glandular swellings in the throat are frequent among the inhabitants.

Rungpoor, in Iat. 25Ā° 43′ N., long. 89Ā° 22′ E., is rather an assemblage of four distinct villages than a town. It is’” frequently named as the capital of Assam, but is in reality only the mili- tary station to the real capital Gergonge. A considerable number of towns form a circle round the Rungpoor division, which is twelve miles in length by ten in breadth. There are few public buildings of brick, as temples, mosques, &c., and the Europeans reside at D’hap, near an excellent road, shaded with tiees West of Rungpoor is a bridge, built in the reign of Roodra Singh, by workmen from Ben- gal, which may be deemed the western gate of the military fortress. The protection on the south is an immense causeway, or line of fortifi- cation, extending from Namdaugh to theDhekow Chilmarry, or Chilmari, is a place of great resort, particularly on account of a neighbouring sand-bank, called Varum chiir, a place of pilgri- mage to the Hindoos. Near Ranga-mati, o. Rungamutty, is the great forest of Parbat Joyar Goalpara, (Goal-para), on the south side o. the Brahmapootra, in Iat. 26Ā° 8′ N., and long. 90Ā° 38′ E., is the principal mart for the people

of Assam, who come nither to barter coarse cloths, sticklac, tar, wax, and gold, for salt. There is a considerable fishery at the beautiful lakes called Toborong, north of Jugig’hopa, where 1400 mauuds (112,000 pounds), are an- nually taken and dried ; one-half of which quantity goes as tribute to the raja of Bijni. Near the village of Tocor is a very remarkable hill, formed of one vast mass of granite.

13. Silhet (Srihata, a rich market), situated between the twenty-fourth and twenty-fifth de- grees of latitude ; is bounded on the north and east by a lofty ridge of mountains, inhabited by several wild tribes ; on the south by Tipperah and Mymunsingh, and on the west by Mymun- singh. The mountains which form the boundary of this district rise with peculiar abruptness from the plains on the western side, and are probably branches of the great chain of Himalaya, stretch- ing in a south-easterly direction, through Chati- gang and Aracan, to the Indian Ocean. The mountainous scenery of this district is very striking and delightful, when contrasted with the flat landscapes of Bengal. Conical hills, rising at intervals, form one broad basis, clothed to their summits with the charms of freshness and verdure ; and lofty mountains, in the directions before described, rising like a wall to an extra- ordinary height, are objects which delightfully break and diversify the prospects in many parts of this interesting region : 350 miles from these mountains, to the east, lies the pro- vince of Yun-nan, in the Chinese empire ; and the intervening space consists of wild and rugged land, at present imperfectly

explored. In 1784 Silhet contained 2861 square miles, of which the revenue was only 233,924 rupees. It forms the most easterly part of the Company's possessions in Hindostan, and, in 1582, was described by Abul Fazel as follows : ' Sircar Silhet, containing eight mahals, revenue 6,681,621 dams. This sircar furnishes 1100 cavalry, 190 elephants, and 42,920 infantry. Sircar Silhet is very moun- tainous. It furnishes many eunuch slaves for the seraglio.' During the rains the greater pro- portion of the land is laid under water by the overflowing of the Soormah and other rivers. When the floods are at their greatest height there is more than ten feet of water, in the midst of which the elevated sites of villages appear like islands. After the waters have drained off, the land is in excellent condition for the cultivation of rice. Food is remarkably cheap, the average price of rice being four or five maunds per rupee. In 1801 grain in the husk sold for fifteen rupees the 100 maunds, or rather less than a quarter of a farthing per pound, and wages were proportionably low. Limes and oranges are cheap, and of superior quality ; the latter are grown in plantations, which, from their ex- tent, might be called forests, and are sold on the spot 1000 for a rupee. It is very remarkable that in all our territories in Hindostan, there are only three places where excellent oranges are produced ; viz. S&t-gar'h, between Madras and Bangalore ; CUjmd-pur, near D'haca, where they are delicious ; and Silhet where they are little inferior. The hills in these places abound in limestone, which is perhaps the reason why the

soil is so favorable to the growth of the orange. Chunam (i. e. Chtinah Lime), wax, ivory, and other articles, are procured from the K'hasias (Cosseahs), natives of the hills eastward. Aguru, (fragrant Aloe-wood, the Agallochum of the ancients, or Excrecaria Agallocha), and wild silk, are also articles of commerce. From the cheapness of the necessaries of life there is little occasion for gold and silver coin; a more minute subdivision of value being required. The rents are paid in cowries, which have become the medium of commercial transactions generally. The chief towns are Silhet, the capital, Azmeri- gunge, Laur, &c. The Soorma and Megna are the principal rivers, and the population of this district, in 1801, amounted to 492,495 inhabi- tants, in the proportion of two Mahommedans to three Hindoos. Slavery, and the sale ot children by their parents, appear to have existed amongst the people from time immemorial.

Under the Mogul government, Silhet was formed into a foujedarry, or military station. Its actual dimensions, since the dismemberment of several pergunnahs, are computed at 2861 miles, and divided into 146 small pergunnahs, held by about the same number of zemindars.

14. Tipperah, situated principally between the 22nd and 24th degrees of north latitude, is bound- ed on the north by Silhet and Dacca, on the south by Chittagong and the sea, on the east by the hills and deep forests, which separate it from the Birman dominions, and on the west by the great river Megna, and the district of Dacca Jela'poor. It was described by Abul Fazel, in 1582, as follows : ' Bordering upon Bhatty is a very extensive country, subject to the chief of Tipperah, him they style Yeyah Manick. Who- ever is possessed of the rajahship bears the title of Manick, and all the nobility are called Nar- rain. Their military force consists of 1000 elephants and 200,000 infantry, but they have few or no cavalry.' . This district is also named Roshenabad, and forms the chief eastern bound- ary of the province.ˆ In 1784 it was estimated to comprehend 6618 square miles, since which period various lands have been added. Its eastern limits are not yet accurately defined, being extremely wild, clothed with extensive forests, and abounding with elephants, &c. The gayal (a species of ox), is also found in a wild state. The region about the Megna, from Daoud Caundy to Luckipoor, is rich and fertile. It is celebrated for the production of the betel-nut, which is held in so great estimation among the Birmans and Arracaners, that they come annually and buy it nearly all up for ready mo- ney, after which they form contracts for the suc- ceeding year. The cotton goods of this district, baftaes and cossaes, are celebrated all over the world. The elephants are numerous, but inferior to those of Chittagong and Pegu. The height of this animal has been greatly exaggerated In India that of females is commonly from seven to eight feet, and that of males from eight to ten, measured at the shoulder as horses are. The largest ever known with certainty, belonged to Asoph ud Dowlah, the nabob of Oude, of %vhich animal the perpendicular height at the shoulder was ten feet six inches One belonging to the

nabob of Dacca measured ten feet. The height required by the government, for elephants em- ployed in their service, is nine feet.

Tipperah appears to have been the seat of an independent Hindoo principality, for many cen- turies after the Mahommedan conquest of the rest of Bengal; although its limits were probably at that period more contracted. The Mahomme- dan historians call it the country of Jagenagur. In 1279 it was invaded by Toghril, the Patan governor of Bengal, who plundered the inhabi- tants, and brought away 100 elephants. In 1343 it was invaded by Ilyas, the second independent sovereign of the province, who carried off a great quantity of plunder.

For many succeeding years the state nevertheless preserved its independence, but was at last brought into subjection in 1733, when a nephew of the Tipperah rajah's fled to Dacca, and procured for his assistance an army of men under the command of Meer Hubbeib Oolah, who put him in possession of the govern- ment, on condition of paying a large annual tri- bute ; so that the whole province became vir- tually a part of the Mogul empire (itself at that time on the eve of dissolution), and changed its ancient name for that of Roushenabad. It came into our possession, with the rest of Bengal, in 1 765 ; and in 1 801 was estimated to contain 750,000 population, in the proportion of three Mahommedans to four Hindoos.

,15. Twenty-four pergunnahs, a small district, situated on the south side of Calcutta and east of the Hooghly River, comprehend a territory of 882 square miles, which, in 1757, became the zemindary of the Company, and jaghire of Lord Clire. In 1765 was obtained a ten years pro- longation of the Jaghire to his Lordship, after the expiration of which it reverted to the Company. Within its boundaries are no fewer than 190 seminaries maintained by charity lands and vo- luntary contributions, in which Hindoo law, grammar and metaphysics, are subjects of edu- cation. There is also one madrissah, or college, for teaching the Mahommedan law. In 1813 this district was much infested with dacoits, or ri- ver pirates, though in an evident state of improve- ment. The jama, or land tax, amounted in 1814 to 1,249,003 rupees (Ā£156,125. 7s.6rf.), and the Ab-cari or excise to 1,249,003 rupees (Ā£11,834. 7s. 6d.) It was also observed, that the lands subject to the jama were better cultivated than those that were exempted. The total population of the twenty-four pergunnahs, the town of Cal- cutta, which is sometimes included in them, and the adjacent territories within twenty miles, are estimated at nearly 3,000,000, in the proportion of three Hindoos to one Mahommedan. Budge- budge, in lat. 22Ā° 29′ N. and long. 88Ā° 20′ E., is remarkable on account of its capture in

1756.

16. Midnapoor (Mednipur), properly belong- ing to Orissa, but long attached to Bengal, and now considered one of its districts, lies between the 22nd and 23rd degrees of latitude. It is bounded on the north by Ramgur and Burdwan, on the south by the independent zemindary of Mohurbunge and Balasore, on the west by Sing- bhoom, Mohurbunge and part of Raragur, and on the east by Burdwan, Hooghly and the sea. Its

area, in 1784, contained 6102 square miles, but has since received

considerable additions, and is now estimated in round numbers at 7300 miles. In 1770 the greatest famine ever recorded in his- tory visited this district, and swept away nearly half its inhabitants. In 1801 it was found to contain one million and a half of inhabitants, and, although the soil is rich and fertile, two thirds of the district are described as consisting of jungle, and swarming with noxious animals. The clear- ing of the land is said to be prevented by the same superstitious prejudices as prevail in Ram- gar'h. In this district there are several forts of mud and stone, now in ruins, from one of which named Bataw, were lately removed twenty un- serviceable pieces of artillery . The private houses of the zemindars, and other men of note, frequently consist of ruined forts. Celibacy is in this part of Bengal extremely uncommon ; an unmarried Hindoo man of twenty-five, or an unmarried girl of fifteen, being scarcely to be found, and, al- though the women in general are prematurely debilitated, few marriages are unproductive. The facility of rearing children is extreme. As soon as a child is weaned it lives upon rice, like its parents, requires no care, goes naked for two or three years, and enjoys the best of health. Polygamy, prostitution, religious austerity, and the circumstance of young widows not marrying a second time, have nevertheless considerable influence upon the numerical population. The small pox also commits great ravages, owing to the unwillingness of the natives to practice inoculation.

The principal places of Midnapoor are the town of the same name, 70 miles west by south from Calcutta, Jellasore, Pipley, and Narraingur.

Of the existence of Bengal as a separate king- dom, there is no other evidence than its distinct language and peculiar written character. At the time of the war of Mahabharat, it consisted of three kingdoms, and afterwards formed part of the Maghada empire, from which it was dismem- bered before the Mahommedan invasion. The last Hindoo prince of this province, mentioned in history, was Lacshmanyah, who held his court at Nuddeah. During the reign of Cuttub ud Deen, the sovereign of Delhi, Mahomet Buk- htyar Khilijee was despatched to invade Bengal. This general captured the metropolis, expelled Lacshmanyah, and afterwards proceeded to Gour, where he established his capital, and reared his mosques on the ruins of Hindoo temples. The whole of this province is said to have been subdued in one year, and the death of the rajah at Juggernauth, where he retired immediately upon his defeat, gave little hope of a restoration. From this time Bengal was ruled by governors delegated by the sovereigns of Delhi, until 1340, when Fakher ud Deen, having assassinated his master, revolted, and after laying the foundation of an independent monarchy, was defeated and put to death. He was succeeded, in A.D.

1343, by Ilyas Khauje, from whom the succession con- tinued till 1538, when Mahmood Shah was ex- pelled by Shere Shah the Afghan, and Bengal once more became an appendage to the throne of Delhi. In 1576 it was conquered by the generals of the emperor Acbar, and four years

afterward formed into a soubah, or vice-royalty of the Mogul empire, by Rajah Tooder Mull. During the government of Azim Khan. A. D. 1534, the English obtained permission to trade with their ships to Bengal, in consequence of a firmaun from the Emperor Shah Jehan; but were restricted to the port of Pipley, where they established their factory. In 1642, during the reign of Sultan Shujah, the second son of Shah Jehan, and brother of Aurergzebe, Mr. Day, the agent who had so successfully established the settlement at Madras, proceeded on a voyage of experiment to Balasore, whence he sent the first regular despatch ever received by the court of directors from Bengal, recommending a factory at Balasore. In 1656 the factories of the Com- pany were withdrawn, owing to the oppression and extortion which they experienced. In 1664 Shaista Khan succeeded to the throne, during whose government the French and Danes estab- lished themselves in the province. In 1680 Mr. Job Charnock was restored to his situation of chief at Cossimbazar, and in the year follow- ing, Bengal was constituted a distinct agency from fort St. George, or Madras. It was in 168G that in consequence of a rupture with the Foujdar, or native military officer of Hooghly, as already described, that the agent and council retired to Calcutta. In 1689 Ibrahim Khan ascended to the supremacy, and in 1693, upon the death of Mr. Job Charmock, Mr. Eyre succeeded him, the seat of the Company's trade continuing at Chattanuttee. Sir John Goldesborough was sent out as general commissary and superintendent of all the Company's possessions, but he also died in 1694, having confirmed Mr. Eyre as chief. In consequence of the rebellion of Soobha Singh, in 1696, the foreign settlers, viz. the Dutch at Chinsurah, the French at Chandenagore, and the English at Chattanuttee, obtained permission to put their factories in a state of defence, the first instance of the kind ever tolerated within the limits of the Moˆul dominions. In 1700 the reigning prince Azim Ushaun, grandson to Aurengzebe, permitted the Company's agents, in consideration of a valuable present, to purchase the three towns of Chattanuttee, Govindpoor, and Calcutta, with the lands adjacent to their fortified factory, and Mr. Eyre the chief, having strength- ened the fort, denominated it Fort William, in compliment to

the King,

In 1706 the whole stock of the Company had been removed to Calcutta, where the garrison consisted of 129 soldiers, of whom sixty-six were Europeans, exclusive of the gunner and his crew. After the invasion of Hindostan by Ahmed Shah Abdalli in 1746, and the death of the emperor Mahomet Shah in the year following, the Mo- gul empire, with the exception of the region in the immediate vicinage of Delhi, may be con- sidered at an end. In 1756 Seraje ud Dowlah, grandson to the late nabob, AH Verdy Khan, showed a very hostile feeling towards the Euro- peans, he took possession of the three provinces in the month of April, and on the 20th of June captured Calcutta, on which occasion he shut the prisoners, to the number of 146, in a room 20 feet square, where they all perished, with the ex- ception of twenty-three individuals. On the first

of January in the year folk wing, Calcutta was retaken by Admiral Watson and Colonel Clive, and the tyrant defeated at Plassey, on the 20th of June. Crimes seldom go long unpunished, and this monster is said to have been assassinated in the July following by the son of his successor, in the twentieth year of his age, and the fifteenth month of his reign.

From this period may be dated the commence- ment of the British government in Bengal. The Devvanny, however, was not fully obtained till 1765, when lord Clive procured it from Shah Allum, on condition of paying him the annual sum of twenty-six lacks of rupees, and also se- curing him a territory in Upper Hindostan, both of which he forfeited, in 1771, by putting himself under the protection of the Mahrattas. The acqui- sition of theDewanny, observes anative historian, ‘ was settled without hesitation or argument, as easily as the purchase of an ass, or any other animal, without envoys or reference eitlur to the king of England, or the Company.’ In 1767 lord Clive returned to his native country, and was succeeded by Mr. Verels and Mr. Cartier. A circumstance which occurred about this period, serves to show the state of the inhabitants. In August, 1770, a most alarming phenomenon ap- peared, of a large black cloud at a distance in the air, which sometimes obscured the sun, and seemed to extend a great way over and about Calcutta. The hotter the day proved, the lower this cloud seemed to descend, and for three days it occasioned great speculation. The brahmins pretended that this phenomenon, which was a cloud of insects, would make its appearance three times ; and if ever they descended to the earth, the country would be destroyed by some untimely misfortune. They said, that about 150 years before, there had been such another bad time, when the earth was parched

for want of water ; and this cloud of insects made its appear- ance, though it came much lower the second time than it had done before. On the third day, the weather being very hot and cloudy, they de- scended so low that they could be plainly seen. They seemed to be about the size of a horse- stinger, with along red body, large head and eyes, keeping close together like a swarm of bees, and, to appearance, flying quite on a line. None, however, were caught, the people being so much frightened by the prognostications of thebnhmins. Whilst it rained, they continued in one position for near a quarter of an hour ; then they rose five or six feet at once, and in a little time descended as much, until a strong north-west wind blew for two days successively. During its continuance they ascended and descended, but more precipi- tately than before; and next morning the air was quite clear. For some days before the cloud made its appearance, the toads, frogs, and in- sects, which, during the rains, make a continual noise through the night, disappeared, and were neither heard nor seen, except in the river.

The year 1772 was distinguished by a change in the administration, and Mr. Hastings was appointed governor. This gentleman was super- seded thirteen years afterwards by Sir J. Macpher- son, who held the administration till the arrivalof Lord Cornwallis in 1787. During his lordship's

government, which lasted until August, 1793, the land revenue was permanently settled, a code of regulations enacted, the army and magistracy new-modelled, and various additional improve- ments laid down, in which his successor, Lord Teignmouth, perfectly acquiesced ; and the mar- quis Wellesley, during a residence of some years, viz. from 26th of April, 1798, to the 20th of August, 1805, had the honor of completing them.

The Marquis Cornwallis, on his second mission, arrived at Calcutta in July 1805, and died at Ghazipoor, near Benares, on the 5th of the following October. His successor, Sir Geo. H. Barlow, conducted the administration till the arrival of Lord Minto, in July 1807, and on his lordship's return to Europe in 1813, the earl of Moira, who has recently been re-called, assumed the reins of government.

For further and more particular information on the various subjects connected with this arti- cle, we refer the reader to Colebrooke,

Stewart, Tennant, Grant, Asiatic Researches, Asiatic Journal, Asiatic Annual Register, Lambert, Bruce, Lord Teignmouth, Milburn, Ward's Re- ligion of the Hindoos, Lord Valentia's Travels, &c. &c.

BENGAL, BAY OF, is a portion of the Indian Ocean, in figure resembling an equilateral tri- angle, similar to that formed by the continent of the Deccan, &c. south of India, and improperly called the peninsula. The western side extends from Bengal to Ceylon ; the eastern from Bengal to Junkseylon, the remaining one across the bay from Ceylon to Junkseylon. Each angle maybe estimated at 1 120 miles in length, the whole being comprehended within the eighth and twentieth de- grees of north latitude. The western coast of the bay is inhospitable forshipphig, especially for ships of burden, there being no commodious harbour. On the contrary, the opposite coast affords many excellent harbours, as Aracan, Cheduba, Ne- grais, and Syriam, in Pegu, near Martaban ; Tavoy River, King's Island, Junkseylon, Tele- bone, Pula Lada, and several others in the Mer- gui Archipelago. The winds in the bay are said to blow six months of the year from the north-east, and the other six from the south-west, which, thougli not strictly accurate, is sufficiently

so for common purposes. It is remarkable that in many parts of India, strong winds are observed upon the shore during March and April, blowing directly from the sea, while in the offing it is perfectly calm. Thus, in Bengal, about that period, are strong southerly winds, while in the bay calms prevail until May and June. The south-west monsoon does not commence on the Malabar coast till the opening of the rainy sea- son, although in-shore is visited by strong westerly winds from about the vernal equinox. The tides and currents of the bay run with great velocity ; and, as opposite currents frequently meet, a rip- pling is formed, extending in a straight line for several miles, with a sound resembling that of breakers. The numerous rivers that open on the coast carry into the bay such quantities of slime and mud, that the sea appears turbid at a great distance from the shore. The eastern and western coasts differ very materially. Coroman- del has no soundings thirty miles from the shore ; the east coast has soundings as far distant as two- degrees. Coromandel opens the prospect of a comparatively clear country ; the eastern side is covered with wood. Coromandel is extremely hot, from the winds blowing over arid sands ; the eastern coast is always cool. On the former side of the bay, the mouths of the rivers are choked with sand ; on the latter they are deep and muddy. Coromandel is often visited with de- structive gales; the eastern coast has these but seldom.

The laud bordering on the summit of this bay, from Point Godavery to

Cape Negrais, is under- stood in the Hindoo Puranas by the term Calinga, and is divided into three parts : l.Calinga Proper, which extends from Point Godavery to the western branch of the Ganges ; the natives of which are called Calingi by ˆ;Elian and Pliny. 2. Madhya, or Middle Calinga, in the Delta of the Ganges, which Pliny corruptly calls Medo Galinca. 3. Moga Calinga, extending from the eastern branch of the Ganges to Cape Negrais, in the country of the Mias or Muggs, called by Pliny Macco Calingae. This term Calinga, simply refers to a country abounding with creeks, and might be applied to the sea coast about the mouths of the Indus with equal propriety.

BENGAL QUINCE, in botany, the English name of the cratajva marmelos of Willdenow ; and segle marmelos of Correa, and others.

BENGAL STRIPES. See GINGHAMS.

BENGO, a river of Angola in Western Africa, having a town of the same name at its mouth. It falls into the Atlantic, in lat. 8Ā° 50′ S.

BENGUELA, a province of Angola, bounded on the east by the river Rimba, on the north by the Coanza, and extending west quite to Cape Negro, where the Portuguese possess the only European settlements. Benguela was formerly governed by its own kings ; but was entirely ruined by the incursions of the barbarous Giagas, so that its being conquered by the Portuguese, proved a happiness to the natives. The interior is little known, but the country is reputed very

unhealthy. It produces abundance of salt, and the mountains are said to abound in copper. Co- ral beads are at once the favorite ornament and the only money of this district. The chief town is Benguela de san Felipe, where the Portuguese have a fort, and the viceroy resides, north of the bay of Behguela, in long. 12Ā° 50’., lat. 12Ā° 54′ S. The harbour is reckoned commodious and safe.

BENHADAD I. ; Ttfr J3, Heb. i. e. a son of noise ; the son of Tabrimon, king of Syria, who bribed by the king of Judah, broke his league with Baasha, king of Israel, and ravaged the northern parts of that kingdom. See 1 Kings xv. 18.

BENHADAD II. the son and successor of Ben- hadad I. was a still more terrible scourge to the Israelites. 1 Kings xx. and xxii. and 2 Kings v ā viii.

BENIN.

BEXHADAD 111. the son of Hazael, king of Sy- ria, was contemporary with Joash and Jeroboam, kings of Israel. 2 Kings xii ā xiv.

BEN-HINNOM, or HINNOM, in ancient geography, a valley in the suburbs, and east of Jerusalem, either a part of, or conjoined with the valley of Kidron; infamous for sacrificing children to Moloch by fire. The place in the valley where the idol stood to which the sacrifice was made, was called Tophet (2 Kings xxiii. 10. Jer. vii. 31, 32, and xix. 2.) from the beating of drums or tabors, to drown the cries of the children ; called also Geenon or the Valley of Ennon ; whence some derive Gehenna, the place of fu- ture punishment.

BENI, a large navigable river of the province of Cuzco, in Peru. It has its rise in the Andes, and runs from east to west, until it enters the Ucayale, a branch of the Amazons. On its shores are many missionary settlements.

BENJAMIN, pn'J3 Heb. i. e. the son of the right hand, the youngest son of Jacob by Rachael, and parent of one of the tribes of Israel. Dr. Home takes particular notice of the circum- stances and place of his birth, as figurative of the birth of the Messiah.

BENJAMIN, of Tudela, a learned Jew of the twelfth century, born at Tudela in Navarre. He is supposed to have explored the countries to the north of the Euxine and Caspian as far as Chinese Tartary ; where he collected considerable infor- mation respecting the Oriental tribes of the Jews. His narrative is curious, but romantic ; and was first published at Constantinople in 1543, with a Latin translation by Arius Montanus. There are, also, English and French versions.

BENJAMIN, a gum. See BENZOIN.

BE'NIGHT. Be and night. See NIGHT. To darken ; to surprise with the coming on of night ; figuratively, to cloud with ignorance.

He that has light within his own clear breast May sit i' th' centre and enjoy bright day ; But he that hides a dark soul, and foul thoughts, Benighted walks under the mid-day sun ; Himself is his own dungeon. Milton.

Those bright stars that did adorn our hemisphere, as those dark shades that did benight it, vanish. Boylt.

A storm begins, the raging waves run high, The clouds look heavy, and benight the sky. Garth.

The miserable race of men, that live Benighted Lalf the year, benuinb'd with frosts, Under the polar Bear. Philipi.

Being benighted, the sight of a candle, I saw a good rfay off, directed me to a young shepherd's house.

Sidney.

Here some benighted angel, in his way, Might ease his wings ; and, seeing heaven appear In its best work of mercy, think it there. Dryden.

But what so long in vain, and yet unknown By poor mankind's benighted wit is sought, Shall in this age to Britain first be shown. Id.

BE'NIGN, ~\ French, benigne, bcnignetc; BENIG'NANT, f Ital. and Span, benigno, benig- BENIG'N, tnita, benignidad. Kindness of BEX IGN'LY. J intention ; gentle ; courtesy ;

actually good ; generous and liberal ; soothing ;

emollient, in opposition to what is irritating

and malignant. ā¢ Vol. IV

This is ynough, Grisilde min ! quod he,

Be now no more agast, ne evil apaid ;

I have thy faith and thy benignitee

(As we! as ever woman was), assaid,

In grot cstat and pourelich arraied.

Chaucer. Cunt. Tales.

This turn hath made amends ! Thou hath fulfilled Thy words, Creator bounteous and benign ! Giver of all things fair. Milton.

So shall the world go on, To good malignant, to bad men benign. Id.

We owe more to Heaven, than to the sword, The wish return'd of so benign a lord. Waller.

What Heaven bestows upon the earth, in kind in- fluences and benign aspects, is paid it back in sacrifice and adoration. South.

They who delight in the suffering of inferiour crea- tures, will not be very compassionate or benign. Locke.

Different are thy names, As thy kind hand has founded many cities, Or dealt benign thy various gifts to men. Prior.

It is true, that his mercy will forgive offenders, or his benignity co-operate to their conversion. Brown.

Although he enjoys the good that is done him, he is unconcerned to

value the benignity of him that does it. South,

These salts are of a benign mild nature in healthy persona ; but in others retain their original qualities, which they discover in cachexies. Arbuthnot.

Bones receive a quicker agglutination in sanguine

than in choleric bodies, by reason of the benignity of

the serum, which sendeth out better matter for a

callus. Wiseman.

Tis amazement more than love,

Which her radiant eyes do move ;

If less splendour wait on thine,

Yet they so benignly shine,

I would turn my dazzled sight

To behold their milder light. Waller.

Oh, truly good, and truly great ! For glorious as he rose, benignly so he set Prior,

BENIGNUS (St.), an Irish divine of the fifth century, said to have been a disciple of St. Patrick, and to have been his successor in the see of Armagh. He died in 468. A work on the Life and Miracles of St. Patrick, the'Munster Book of Reigns, and an Irish poem on the con- version of his countrymen, are ascribed to him.

BENIHASSEN, a proyince of Morocco, on the shores of the Atlantic. It abounds in corn, and is said by Mr. Jackson to contain 300,000 inhabitants. Sallee is the chief town.

BENI-MEZZAB, a southern district of Algiers, inhabited by a tribe of Arabs bearing this name, who pay a mere nominal submission to the Algerine state. The chief town is Gar- deiah.

BENIN, an extensive kingdom on the coast of Africa, whose boundaries are not precisely ascer- tained, although the name seems to be generally applied to that part of the coast extending from the Rio Lagos to the Rio Formosa. It derives its name from the river Bonny

or Bani, which flows from the north-west. It was first explored, as Di Barros asserts, in 1486, by Alfonzo de Aveiro, in consequence of a request from the king that missionaries might be sent to instruct him in the Christian religion. The same author mentions an embassy of the Portuguese, sent tc a great distance in the interior, for the purposf

of visiting a prince called Ogane, to whom the king of Benin was tributary. This major Ren- nell supposes to be the celebrated kingdom of Gana, established by the Arabians on the Niger.. The entire coast presents a succession of estua- ries, the origin of which has never been explored. These, dividing themselves into branches, inter- sect each other, and form a number of alluvial islands; and not unfrequently small floating islets, covered with shrubs and bushes, are brought down towards the sea. A recent traveller ima- gined from this aspect of the coast that the estu- aries in question might form the embouchure of the great central river of Africa, the termination of which remains enveloped in mystery. At least the number of outlets appear to be the mouths of one large stream, forming a delta in the interior, like that of the Nile or the Ganges. The banks of these rivers, though fertile and agreeable, are extremely insalubrious, and parti- cularly fatal to Europeans, so that the vessels which ascend them for the purpose of procuring slaves, commonly lose a great part of their crews before they return. This may be one rea- son why, notwithstanding the facilities of navi- gation, fewer attempts have been made to ex- plore the interior from this part of the African coast than from almost any other.

There does not appear to have been any esta- blishment on the coast before 1786, when the French erected a fort at the mouth of the For- mosa, on the island of Borodo, ceded to them by the king of Wari. This was afterwards destroyed by our cruisers in 1793.

The land in general is low and woody; in some parts it has rivers and lakes, but in others there is a scarcity of water. The soil is every where alluvial, and highly productive, even where fresh water cannot be obtained, as is the case between Gato and Benin. It has a great Dumber of wild beasts, particularly elephants, lions, tigers, leopards, baboons, monkeys, wild boars, deer, 8cc. The birds are partridges, of which some are blue and some green, turtles, wild ducks, woodcocks, &c. Indian corn and yams are the ordinary food of the natives, and serve in the room of bread ; they have two sorts of beans, like horse-

beans, but not near so good. Their fruits are cocoa-nuts, cormantine apples, bananas, wild figs, &c. Gold-dust is not found in this kingdom, which, together with the absence of other mineral productions, shows that the higher lands must be at a considerable distance. The negroes have several colors which might serve for painting, and a good sort of soap made with palm-oil and wood-ashes ; palm-oil, salt, and acori or blue coral, are articles of trade; they have, also, a great deal of cotton, which not only serves for their own use, but is ex- ported to distant places. A little above Arebo the country is extremely marshy and full of islands, overgrown with lofty trees; it is also incommoded with vast numbers of mosquitoes, which stins? terribly, and render the skin full of pustules. There are three principal villages, to which the negroes come from the inland countries to traffic. One is called Boodadou, and consists of about fifty-five houses or huts, for they are made with reeds and covered with leaves. The

second, called Arebo, is much larger than the former, and pretty well stocked with inhabitants ; the houses of this village have much more room, but are built after the same manner as the for- mer. The third is named Agaton and was built upon a hill, and was almost ruined by the wars ; but has been lately rebuilt by the negroes on account of its agreeable situation. Great Benin is the capital and residence of the king. The inhabitants are very exact in their trading, and will not recede from any of their old customs ; this renders them so slow in their dealings, and backward to pay their debts, that even traders are sometimes obliged to sail before they receive satisfaction; but then they are paid when they return. Some of the merchants are appointed by the government, which demands a sort of cus- tom, though very trifling. There are three sorts of officers under the king; the first are always near him, and none can address him but by their means : of the second sort, one takes care of the slaves, another of the cattle, another of the streets, another of war, and so on. Children go almost naked till they are fourteen, when they wrap a cot- ton cloth round their middles : the richer sort put on a sort of calico gowns, when they go abroad, with a kind of drawers ; but within they are con- tented with their usual cloth : the women of the superior rank wear their cotton cloths like petti- coats, and have a covering round their shoulders, but keep it open before. The rich inhabitants of Benin live upon beef, mutton, and poultry ; their drink is water, and brandy when they can get it. The poorer sort live upon dried fish, bana- nas, and beans ; their drink is water and palm- wine. Their chief handicrafts-men are, smiths, carpenters, and curriers: but they perform all their work in a very bungling manner. The men have as many wives as they can keep, whom they take without any ceremony,

except giving a treat to their relations : when M. Palisot de Beauvois was in this country, one of the king's ministers had no fewer than 400. The wives of the lower sort may go where they please ; but those of the rich are shut up. The husband, generally speaking, is jealous of his wives with respect to his own countrymen, but extremely indulgent to their connexion with Europeans, and not unfrequently offers them himself. In other cases when a woman is caught in adultery she is turned away, and the goods of the man are forfeited to the husband ; but if the relations of the woman are rich, they prevail with him to overlook the fault by dint of pre- sents. They use circumcision, which is per- formed seven days after the children are born, at which time the father makes a feast for the relations ; they have also customs, relating to un- cleanness, resembling those of the Jews. Thieves are punished by making the party amends, if they can, otherwise they are bastinadoed; but murder is always punished with death. When a person is only suspected of a crime, they have several ways of putting him to a trial, like the fire ordeal, or the bitter water of the Jews ; bu they are of such a nature, that the innocent may be as often condemned as the guilty. The reli- gion of this country, like that of the rest of this coast, is a fetish (fertico) worship, debased by

the grossest superstition. They believe in one almighty and invisible God; yet worship images a? well in a human form as in those of inferior animals. They look upon these lesser deities as mediators between God and man ; some of these idols are in the hovise, and some in cabins by themselves. Every fifth day is holy ; on which the rich kill cows, sheep, and goats ; and others, dogs, cats, and fowls, which they distribute among their poor neighbours.

The government of Benin is entirely absolute, and the king, like most of the negro princes, has a despotic power. He is venerated almost as a deity by his subjects, and is constantly at- tended by three grandees, through whose agency all affairs are transacted. He never appears in public, except twice in the year, at the yam-feast andthe cowry-feast, and then human sacrifices are offered up. On these occasions he is surrounded with his wives and a great number of officers, who walk out in procession, and begin the feast by sacrificial oblations. This done, he bestows victuals and wine among the multitude, which is imitated by his officers. On those whom the king wishes to confer peculiar honor, he bestows a string of coral, equivalent to one of our orders of knighthood; but it is death afterwards to lose this badge, or

even to quit it for an instant. One traveller mentions a case in which this ornament had been stolen: and in consequence, the original possessor, the thief, and three persons who had known the crime without disclosing it, were put to death. At the de- cease of the king a great number of his attendants are buried alive along with him ; and the descrip- tions given by the older navigators of the massa- cres made on these occasions are as horrid as similar scenes in Ashantee described by Mr. Bowditch. The obsequies are followed by a splendid festival celebrated with every species of intoxication and debauchery. It is, however, to be regretted that we have no authentic descrip- tion of this country more recent than those of Nyendael and Bosman; the last of which was written more than a century ago.

Great Benin, the capital of the kingdom, and residence of their kings, is seated in the interior, on an open plain, and is enclosed by a wide ditch. Its extent, according to some travellers, is truly immense; it is said to be eighteen miles in circumference ; to have one street three miles long, and many others of nearly equal dimensions. There are markets in the town twice a day, where the natives sell cows, cotton, elephants' teeth, European merchandises, and other valua- ble commodities; separate quarters being allotted for each distinct species of traffic. The women attend the markets, till the ground, and manage their domestic concerns. The king's palace con- sists of a great number of square enclosures, pre- senting an irregular and confused heap of build- ings, made of boards and clay, including houses for the royal person, his women, and officers, besides stables, magazines, repositories, &c. The buildings are covered with shingles, and the near- est springs are a furlong distant, which must be a serious inconvenience in so hot a climate. The king's family is, however, smaller than those of the neighbouring monarchs, the number of his

wives seldom exceeding six hundred. In the midst of the royal enclonre \s a wooden tower about seventy feet high, made like a chimney, and on the top is a brazen serpent, hanging with his head downwards : this is well made, and is the most curious thing in the town. There is a gallery of statues, but so wretchedly carved, that there is no knowing what they represent with- out being told : behind a curtain there are eleven brazen heads, with an elephant's tooth on each ; these are the king's idols : his throne is made of ivory, on which he sits in a pavilion of Indian stuff. All the inhabitants of this town and coun- try go under the denomination of the king's slaves ; and some say, that none of them wear any habit till given them by the king; but this seems to be only a salvo to account for the great number of men and women that are daily seen naked in the streets ; for if it be true, that the king of Benin can bring 100,000 fighting men into the

field, his subjects must be very numerous ; and it is scarcely probable he could bestow garments upon them all. The buildings of the town generally consist of huts, thatched with the leaves of the fan-palm (latania) ; and the town wall is com- posed of trunks of trees interwoven in the man- ner of a palisade. Jabu, west of the Formosa, is a place of considerable importance, and in rank, perhaps, next to the capital : blue and white cot- tons, manufactured here, are taken by the Portu- guese for the use of their slaves in Brasil. Wari, an island at the mouth of the Riode EscavoorDos Forcados (slave's or hangman's river), formerly gave its name to an independent state. The Benin river in this kingdom has many arms, or sou rces ; some of them so large that they de serve the name of rivers; it abounds with fish, which the inhabitants eat smoke-dried as well as fresh. The place of trade in this river is at Arebo, about 120 miles distant frorg its mouth ; and to this place the ships may sail up. Those who take this voyage see the mouths of a great many rivers fall into the principal channel on the right and the left : but how far it ascends into the country is not known.

The natives are remarkably courteous and hos- pitable; they have the faults and the virtues of negroes; generally, they are benevolent and faithful ; but irascible, vindictive, indolent, anc1 thoughtless; the slaves of an inhuman and d<Ā» grading superstition. The females are said to be lively and handsome, fond of ornament, and to use great art in dressing their hair. The attachment of these people to their country is beyond all bounds : how must this heighten the wretchedness of those who are carried off in slave ships! The number of these unhappy vic- tims, from Bani alone, before the abolition, amounted to nearly 20,000 annually ; and it is to be feared that the French and Portuguese have renewed the traffic to a great extent since the conclusion of the continental war.

This state, like many other negro kingdoms, has at times acquired an extensive influence over the petty principalities in the neighbourhood. At present, the islands of Wari (Waree, Owheri, Owarre, or Awarri), and Bani (Bonny on the east, and Jabu on the west), are tributary to the sovereign of Benin

Robertson's Notes on Africa, 297. Le Groing and Palisot de Beauvais in the Annales des Voyages. Smith's Voyage to Guinea.

BENINI (Vincent), a learned physician, born at Cologne, in 1713. He settled and practised at Padua, where he kept a printing press in his house, from whence he sent into the world several good editions of classical authors. He wrote in Latin, Notes on Celsus ; in Italian, Observations upon the Poem of Alamanni, entitled Culture, and a Translation of the Syphilis of Fracastorius. He died in 1764.

BEN'ISON, n. s. Benir to bless ; benissant, Fr., blessing ; benediction : not now used, un- less ludicrously.

We have no such daughter ; nor shall ever see That face of hers again ; therefore, begone, Without our grace, our love, our benison. Sltahspeare.

Unmuffle, ye fair stairs, and thou, fair moon, That wont'st to love the traveller's berusun. Milton.

BENISUWEEF, a town of Egypt, on the west bank of the Nile, in El Wostani, and the residence of a bey. It is adorned with many mosques, and has manufactories of carpets, woollens, and linens. Standing in lat. 29Ā° 9′ N., long. 30Ā°. 32′ E.

BENLAWERS, a mountain of Scotland, in the county of Perth, supposed to be the third highest in the island of Britain. Height 40 15 feet.

BENLOMOND, a mountain of Scotland, in the county of Dumbarton, chiefly composed of granite, with immense masses of quartz. It rises from Lochlomond, a beautiful lake, to the height of 3240 feet above its level, and 3262 above the evel of the sea. Its sides are covered with fine natural woods, and it gives rise to several rivers.

BENMACDUIE, a mountain of Scotland, on the western confines of the county of Aberdeen, and the second highest mountain in the island of Britain. During one of the hottest days of Sep- tember, Fahrenheit's thermometer was found to stand at 47 degrees on the summit. Height 4300 feet.

BENMORE, a mountain of Scotland, in the county of Perth, of a conical form. Height 3903 feet.

BENNAVENTA, orBENNAVENNA,an ancient town of Britain, on the Ausona Major, or the Antona of Tacitus : supposed to be Northamp-

ton on the Nen; but according to Camdon, Weedon, a village six miles to the west of North- ampton.

BENNET (Christopher), a physician of the sixteenth century, was a native of Raynton, in Somersetshire. He was educated at Lincoln College, Oxford ; and published a treatise on consumptions, entitled, Theatri Tabidoram Ves- tibulum, &c. ; also, Exercitationes Diagnostics, cum Historiis demonstrativis, quibus Alimento- rum et Sanguinis vitia deleguntur in plerisque morbis, &c.

BENNET (Henry), earl of Arlington, was born of an ancient family in Middlesex. In the be- ginning of the civil war, he was appointed under secretary to George Lord Digby, and afterwards entering as a volunteer in the royal cause, re- ceived several wounds at Andover. He conti- nued faithful to the royal interest in foreign parts, and was made secretary to the duke of York ;

knighted by Charles II. at Bruges in 1658; and sent envoy to the court of Spain. Charles, upon his restoration, made him keeper of the privy purse, and principal secretary of state. He had always a peculiar dislike to the lord chancellor Hyde ; who considered him as a concealed papist. In 1670 he was of the council, entitled the Ca- bal, and one of those who advised shutting up the exchequer. In 1672 he was made earl of Arlington and viscount Thetford, and soon after K. G. He was appointed in 1673 one of the three plenipotentiaries to Cologne, to mediate a peace between the emperor and the king of France. The House of Commons, the same year, drew up articles of impeachment against him ; but in 1674 he was made chamberlain of the king's household. But his interest declined be- fore his death, which took place in 1685. His letters to Sir William Temple were published after his death, and are much esteemed.

BENNET (Thomas), D. D. an eminent divine, born at Salisbury in 1763, and educated at Cam- bridge. In 1700 he was made rector of St. James's, Colchester ; afterwards he was lecturer of St. Olave's, Southwark, and morning preacher at St. Lawrence, Jewry ; at last he was presented to the vicarage of St. Giles's, Cripplegate. He wrote, 1. An Answer to the Dissenters' Plea for Separation. 2. A Confutation of Popery. 3. A Discovery of Schism. 4. An answer to a book entitled Thomas against Bennet. 5. A Confu- tation of Quakerism. 6. A brief History of the joint Use of pre-conceived Forms of Prayer. 7. An Answer to Dr. Clarke's Scripture Doctrine of the Trinity. 8. A Paraphrase, with Annota- tions, on the Book of Common Prayer. 9. An Hebrew Grammar, and other pieces. He died October 9th, 1728.

BENNET, an herb; the same with avens. BENNET, in botany. See CARYOPHYLLUS. BENNETT (Agnes Maria), a celebrated no- velist, wrote Anna, or Memoirs of aWelsh Heiress- 4 vols. an impression of which was sold on the day of publication. Juvenile Indiscretions, 5 vols. ; Agnes de Courci, 4 vols. ; Ellen, Countess of Castle Howell, 4 vols. ; The Beggar Girl and her Benefactors, 5 vols. The last production of her pen was, Vicissitudes abroad, or the Ghost of my Father, 6 vols. ; 2000 copies of which are said to have been disposed of the day it made its ap- pearance. Most of her novels have been often re-printed, and some have been translated into French and German. She died at Brighton in

1805.

BENNEVIS, a mountain of Scotland, in the county of Dumbarton, the highest in the island of Great Britain. It rises 4370 feet above the level of the sea. A great portion of this mountain consists of porphyry, of different shades, and beautiful red granite. It also contains a vein of lead ore, richly impregnated with silver. On one side of the mountain there is an immense precipice. The summit is generally covered with snow.

BENNINGTON, a county of the State of Vermont, in North America, bounded North by Rutland, east by Windham, south by the State of Massachusetts, west by a due north and south line, which divides it from the State of New York.

It is thirty-four miles from north to south, and nineteen from east to west. The population is upwards of 17,000. Bennington and Manchester are the two principal towns. In the mountains are found large quantities of iron ore ; and in the neighbourhood of Bennington, the capital, there is a fine marble quarry.

BENNINGTON, a post town of the county, and formerly the seat of government, is situated near the south side of the Hoosack river, and contains a population of about 3000, engaged in manufactures of cotton, wool, and paper. A battle was fought near this town in 1 777, between bri- gadier-general Starke, at the head of COO militia, and a detachment of general Burgoyne's army, in which, after a doubtful conflict, the Americans were victorious. The county courts are held alternately here and at Manchester. Bennington has also an academy and a weekly newspaper. It is thirty-seven miles north-east of Albany, 298 from Philadelphia, and 395 from Washington.

BENOIT (Renatus), a doctor of theSorbonne, and rector of St. Eustathius at Paris, in the six- teenth century. He was a secret favorer of the protestant religion; and, that his countrymen might be able .to read the bible in their own tongue, he published at Paris the French trans- lation, which had been made by the reformed ministers at Geneva. It was approved of by se- veral doctors of the Sorbonne before it went to press, and Charles IX. had granted a privi- lege for printing it. Yet when it was published it was immediately condemned. He had been before this confessor to Mary queen of Scots during her stay in France, and attended her when she returned to Scotland. Some time before the death of Henry III., Dr. Benoit, or some of his friends with his assistance, published a book, en- titled, Apologie Catholique, i. e. The Catho- lic Apology, in which it was showed, that the protestant religion, which Henry king of Navarre professed, was not a sufficient reason to deprive him of the crown of France. When Henry IV. ā¢was resolved to embrace the Catholic religion, he also assisted at the assembly in which that monarch abjured protestantism. The king promoted him to the bishopric of Troyes in Champagne, 1597, but he could never obtain the papal bull to be installed. However, he enjoyed the temporalities of that bishopric, till he resigned it. He died in

1608.

BEXOIT (Elias), a French protestant divine, born at Paris in 1640. On the revocation of the edict of Nantes, he retired to Holland, and be- came pastor of the church at Delft, where he died in 1728. He wrote a History of the Edict of Nantes, 5 vols. 4to, 1693, and several tracts of lesser note.

BENOWM, the capital of the Moorish king- dom of Ludamar, in central Africa. According to Mr. Park, who was detained here some time in captivity, it presents to the eye the appearance of a number of dirty looking huts, scattered irre- gularly over a large extent of ground, and resem- bling a camp rather than a town. Long. 7Ā° 10′ W., lat. 15Ā° 5′ N.

BENSERADE (Isaac de), an ingenious French poet of the sixteenth century, born at Lyons-la-Foret, in Normandy, had the good

fortune to please the cardinals Richelieu and Mazarin. After the death of Richelieu, he got into favor with the duke de Breze, whom he ac- companied in most of his expeditions. When this nobleman died, he returned to court, where his poetry was highly esteemed. He wrote, 1.

A Paraphrase upon Job. 2. Verses for Inter- ludes. ā¢ 3. Ron'deaux upon Ovid. 4. Several Tragedies, A sonnet which he sent to a young lady with his Paraphrase on Job, being put in competition with the Urania of Voiture, caused him to be much spoken of as the head of a party against that celebrated author. Those who gave the preference to Benserade's performance, were styled the Jobists, and their antagonists the Uranists ; and the dispute long divided the whole court and the wits. He withdrew at last from court, and retired to Gentilly. The bark of the trees of his garden there were full of inscriptions, which, Voltaire is of opinion, were the best of his productions. Benserade suffered at last so much from the stone, that he resolved to submit to the operation of cutting ; but a surgeon, by way of precaution, letting him blood, pricked an artery, and instead of endeavouring to stop the effusion of blood ran off. There was but just time to call Commire, his friend and confessor, who came soon enough to see him die. This happened on the 19th of October, 1691, in the eighty-second year of his age.

BENSON (Dr. George), a learned dissenting clergyman, born at Great Salkeld, in Cumber- land, in 1699. At eleven years of age he was able to read the Greek Testament. He after- wards studied at Dr. Dixon's academy at White- haven, from whence he removed to the university of Glasgow. In 1721 he was chosen pastor of a congregation of dissenters at Abingdon in Berk- shire ; in 1729 he received an invitation from a society of dissenters in Southwark, with whom he continued eleven years ; and in 1 740 was chosen by the congregation of Crutched Friars, colleague to the learned Dr. Lardner. The first fruit of his studies presented to the public was, A Defence of the reasonableness of Prayer. The light which Mr. Locke had thrown on the obscurest parts of St. Paul's epistles, by making him his own ex- positor, encouraged and determined Mr. Benson to attempt to illustrate the remaining epistles in the same manner. In 1731 he published A Pa- raphrase and Notes on the Epistle to Philemon, as a specimen. This was well received, and th(author encouraged to go on with his design Mr. Benson proceeded with great diligence and reputation, to publish Paraphrases and Notes on the Epistles to the Thessalonians, Timothy, anc' Titus; adding, Dissertations on several impor- tant Subjects, particularly on Inspiration. Ii 1735 he published his History of the first Plant- ing of Christianity, taken from the Acts of the Apostles, and the Epistles, in 2 vols. 4to. He also wrote, The Reasonableness of the Christian Religion; The History of the Life of Jesus Christ ; A Paraphrase and Notes on the seven Catholic Epistles ; and several other works of high repute. Many of high rank in the church of England, as Herring, Hoadly, Butler, Benson, Coneybeare,

&c. showed him great marks of favor and regard. He pursued the same studies

with great application and success till the time of his death, which happened in 1763.

BENTHAM (James), an English divine and nistorian , received the first part of his education at Ely, after which he went to Trinity College, Cambridge. In 1771 he published the History and Antiquities of the Church of Ely, with ā¢ plates, 4to ; and was presented to the rectory of Northwoldin 1774, but exchanged it for a prebend of Ely in 1 779. In 1783 he obtained the rectory of Bow-Brickhill, and when the dean and chap- ter of Ely resolved upon a general repair of the church, he was nominated clerk of the works In his work on Ely Cathedral, was first brought forward the presumed origin of the pointed arch, the chief feature of the Gothic style, and that on which the whole seems to be formed. Bentham supposed this kind of arch might have been de- rived from the intersection of two semi-circular arches, such as are seen on the walls of buildings erected soon after the conquest. Other writers have since adopted this hypothesis, and Dr. Milner, in particular, has supported it with much learned ingenuity. But attempts have been rather unfairly made, to deprive Mr. Bentham of the credit of his suggestion. The writer of the arti- cle Gothic Architecture in Rees's Cyclopaedia, also states, that ' the poet Gray drew up the architectural part of the History of Ely Cathe- dral.' This is successfully rebutted in the me- moirs of Bentham, prefixed to the new edition of the History published in 1812, where it is shown, that the architectural essay in question, far from having been written by Gray, was actually drawn up before Bentham was ac- quainted with the poet, and was the occasion of their subsequent intercourse. Another extraor- dinary attack on the reputation of the Ely his- torian has been made by Cole, the Cambridge antiquary, who coarsely asserts it to have been written by his brother Edward Bentham, divinity professor at Oxford ; for which statement there seems to be not the slightest foundation. Mr. Bentham died in 1794, aged eighty-six.

i.)i.i\ iiiAi.i ˆJeremy), an English lawyer, never known at the bar, but much distinguished as a writer upon legislation and politics. He was born at Houndsditch on the 15th of February, 1747-8, and evinced a

remarkable priority in his early years. He read Rapin's History of England at three years of age, was a good French scholar at seven, was admitted of Queen's Col- lege, Oxford, at thirteen, and gradated an A. B. at sixteen years old. He was a sound lawyer ; familiarly acquainted with all the living lan- guages of Europe, through most countries of which he had actually travelled, and his character may be said to have developed itself more early and more fully in foreign kingdoms than at home. Having been enrolled a citizen of France, lie was elected a member of the French Institute at a period when only three vacancies existed, Jhe nomination to one of which was reserved for Buonaparte. His works were published in France, Germany, and England, and to his friend M. Dumont the world are indebted for the preservation of many of his most valuable fragments. Amongst his principal published works are, 1. Traites de Legislation, civile et

penale ; 2. Theorie des Peines et des Recom penses; 3. Fragments on Government, in op- position to judge Blackstone ; 4. Defence of (Economy, against Burke ; 5. Essai sur le Tac- tique des Assemblies Politiques ; 6. Essay on Usury ; 7. Plan of Parliamentary Reform ; 8. Observations on Prohibitory and Restrictive Commercial Systems, &c. &c. The close of his life was in perfect unison with the great pros- pect of its dawn. Having professed and prac- tised philosophy during a lengthened life, he sunk into the repose of the grave with true magnanimity. In his will, which was written with a firm hand, he has mentioned those sincere friends to whom he had always been tenderly attached, and, with the same contempt of prejudice and , singular desire of advancing the most valuable interests of the human race, he boldly bequeathed his remains to a school of anatomy. He expired at his house in Queen Square Place, West- minster, on the 6th of June, 1832, in the 85th year of his age ā and the intentions of his will have been faithfully carried into effect.

BENTHEIM, formerly a county of Westpha- lia, but now of the kingdom of Hanover, con- taining about 25,000 inhabitants.

BENTINCK (William), first earl of Portland, was born of a noble family in Holland. He came over to England in company with the prince of Orange, to whom he had endeared him- self by a very remarkable instance of affection and fortitude. That prince having the small pox, his physician pronounced it necessary that he should have the warmth of a young person in bed with him ; and Bentinck, though he never had the disorder, instantly offered himself for that hazardous service. He in this way caught the disease to such a degree as was considered very dangerous, but he recovered ; and ever after his master had the most affectionate esteem for him. When the prince ascended the

throne of England, he created Bentinck earl of Port- land, and granted him the lordship of several lands in Denbighshire ; but parliament being discontented at the grant, it was revoked, and the earl compensated elsewhere. He was em- ployed in different high offices, both civil and military ; and attended his master on his death bed. Bentinck died in 1709, and was interred in Westminster Abbey.

BENTINCK (William Henry Cavendish), third duke of Portland, was born in 1738, and educated at Oxford. He sat for some time in the house of commons, as member for Weobly, and was called to the upper house by the death of his father in 1762. In 1765 he became lord chamberlain during the Rockingham administration. In the American war he acted with the opposition, and in 1782 was appointed lord lieutenant of Ireland, but remained there only three months, in conse- quence of the breaking up of the administration. After the memorable coalition, which fell before the rising fortunes of Mr. Pitt, the duke acted with the whig opposition until 1792, when he was elected chancellor of Oxford, and soon after joined with Mr. Burke in his alarm at the French revolution. He was, in 1794, made secretary of state for the home department, which he held until the resignation of Mr. Pitt in 1801, and was then

appointed president of the council, which he held until 1805 On the resignation of lord Grenville, in 1807, he was appointed first lord of the treasury, and was nominally prime minis ter ; but the chief duties of administration devolved on Mr. Percival, the chancellor of the exchequer. He died of the stone in 1808, with tire character of an upright and respectable, if not very able statesman.

BENTINCK'S ARMS, two branches of an inlet of the North Pacific Ocean, discovered by Van- couver, on trie west coast of North America : one to the north-east, the other to the south-east. Long. 233Ā° to 233Ā° 21′ E., lat. 52Ā° 0′ to 52Ā° 25′ N.

BENTINCK'S ISLAND, anislandof New Holland, ten or eleven miles in length, near the bottom of the gulf of Carpentaria.

BENTIVOGLIO, a small town of Italy, in the papal territory, ten miles north-east of Bo- logna, with a castle. Long, 11Ā° 34′ E., lat. 44Ā° 47′ N.

BENTIVOGLIO (Guy), cardinal, born at Fer- rara, in the year 1579. He studied at Padua ; and leaving the university, went to reside at Rome,

where he became universally esteemed. He was sent nunrio to Flanders and France, and in both employments his behaviour was such as gave great satisfaction to Paul V. who made him a cardinal in 1621. Bentivoglio was at this time in France, and when he returned to Rome the king of France entrusted him with the manage- ment of the French affairs at that court. Pope Urban VII. had a high regard for him on account of his fidelity, disinterestedness, and consum- mate knowledge in business. He was much beloved by the people, and esteemed by the car- dinals. He died 7th September, 1644. He left several works ; the most remarkable of which are, A History of the Civil Wars of Flanders ; An Account of Flanders, with Letters and Me- moiis.

BENTLEY (Dr. Richard), an eminent critic and divine, was born at Oulton, in the parish of Rothwell, near Wakefield. His ancestors, pos- sessed an estate, at Heptonstall, in the parish of Halifax. His mother taught him his accidence. To his grandfather Willis, who was left his guar- dian, he was in part indebted for his education ; and, having gone through the grammar-school at W akefieid with singular reputation, he was ad- mitted of St. John's College Cambridge, May 24, 1676 ; being then little more than fourteen. On the 22d of March, 1681-2, when only nine- teen, he stood candidate for a fellowship, and would have been unanimously elected had he not been excluded by the statutes, on account of his being too young for priest's orders. Soon aftef, he became a school-master at Spalding. But he did' not continue long in this situation. From a letter of his grandfather's, it appears, that he was with Dr. Stillingfleet at the deanery of St. Paul's, April 25, 1683. He had been recommended by his college to the dean as preceptor to his son ; and Dr. Stillingfleet gave Mr. Bentley his choice whether he would carry his pupil to Cambridge or Oxford. He fixed upon the latter university on account of the Bodleian library, to the con- sulting of the MSS. of which he applied with the

closest attention. Being now of age he made over a small estate, which he derived from his family, to his eldest brother, and laid out the money he obtained for it in the purchase of books. In July 1683 he took the degree of A. M. at Cambridge. In 1692 Dr. Stillingfleet, being now bishop of Worcester, collated him to a prebend in that church, and made him his chaplain. That learned prelate, as well as Dr. Wm. Lloyd, then bishop of Litchfield, had seen many proofs of Bentley's extraordinary merit, and concurred in recommending him as a fit person to open the lectures upon Mr. Boyle's foundation, in defence of natural and revealed religion. This gave him a fine opportunity of

establishing his fame, and he resolved to cm- brace it. Sir Isaac Newton's Principia had been published a few years, but it was little known and less understood. Mr. Bentley therefore spared no pains, in exhibiting to the public the profound demonstrations, which that excellent work fur- nishes in proof of a Deity ; and applied to Sir Isaac himself for the solution of some difficulties, which had not fallen within the plan of his treatise. His lectures, therefore, highly raised his reputation as a preacher; notwithstanding a mistake, which laid him open to the raillery of Dr. Keill, viz. of proving the rnoon not to turn round her axis, because she always shows the same face to the earth. In 1693 he was made keeper of the royal library at St. James's. Next year arose the famous dispute between this cele- brated critic and the honorable Mr. Boyle, re- specting the epistles of Phalaris. The Dr. asserted them to be spurious, the production of some sophist, and altogether contemptible as a literary performance. The chief pieces which appeared in this noted controversy were, 1. Dr. Bentley's Dissertation upon the Epistles of The- mistocles, Socrates, Euripides, Phalaris, and the Fables of JEsop, at the end of the second edition of Mr. Wotton's Reflections on Ancient and Mo- dern Learning; but afterwards printed by Dr. Bentley entire, with great additions to his far- ther defence of it, in answer to Mr. Boyle. 2. Dr. Beutley's Dissertation on the Epistles of Phalaris, and the Fables of /Esop, examined by the honorable Charles Boyle, Esq. ; a book more commonly known by the title of Boyle against Bentley. 3. Dr. Bentley's Answer to the above, commonly known by the name of Bentley against Boyle ; a curious piece, interspersed with a great deal of true wit and humor. The victory was at the time adjudged to Mr. Boyle, and the ridicule of the wits exercised upon Dr. Bentley. Thus Dr. Garth :ā

So diamonds take a lustre from their foil, And to a Bentley 'tis we owe a Boyle.

Some wits of Cambridge drew Bentley's pic- ture in the hand of Phalaris's guards ; whom they represented putting him into their master's bull ; while a label proceeded from the Doctor's mouth with these words, ' I had rather be Roasted than Boyled.' But H. Walpole, speak- ing of Boyle's translation of the Epistles of Phalaris, says, ' This work occasioned the famous controversy with Dr. Bentley; who alone, and unworsted, sustained the attacks of the brightest

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geniuses in the learned world, and whose fame has not suffered by the wit to which it gave oc- casion ; ‘ and Dodwell, who resided at Oxford during the controversy, declared to the Christ- church men, that he never learned so much from any book of the size, in his life, as he had done from Dr. Bentley’s Answer to Boyle. In 1696, at the public commencement, Mr. Bentley was created D. D. by the university of Cambridge ; and sometime after admitted ad eundem, in the university of Oxford. In 1700 he was presented t* the mastership of Trinity College, Cambridge, which is reckoned worth near Ā£1000 per anuum ; and, in 1701, was collated to the archdeaconry of Ely. Being thus placed in a state of ease and affluence, he married, and indulged his inclina- tion in critical pursuits. The fruits of his labors, which he occasionally published, displayed such erudition and sagacity, that by degrees, he ob- tained the character of being the greatest critic of the age. In the meanwhile, however, a com- plaint was brought against him before the bishop of Ely, by several of the fellows of his college, who charged him with embezzling the public money, and other misdemeanors. In answer to this, he published in 1710, The present State of Trinity College, 8vo ; and thus began a quarrel, which was carried on with the most virulent ani- mosity on each side, for above twenty years. In 1716, upon the death of Dr. James, he was ap- pointed regius professor of divinity at Cambridge ; annexed to which was a good benefice in the bishopric of Ely. King George I. on a visit to the university in 1717, having, as usual nominated by mandate several persons for a doctor’s degree in divinity, our professor, to whose office it be- longed to perform the ceremony called creation, demanded four guineas from each person, be- sides a broad piece of gold, and absolutely refused to create any doctor without these fees : hence there arose a long and warm dispute, during frhich, the doctor was first suspended, and then degraded ; but on a petition to his majesty for relief from that sentence, the affair was referred to the court of King’s Bench, where the proceed- ings against him being reversed, a mandamus was issued, charging the university to restore him. A concise account of his controversies with his college and the university, may be seen in Mr. Gough’s Anecdotes of Topography. There are likewise, in the Harleian collection of MSS. in the British Museum, No. 7523, some authen- tic papers relative to these proceedings. Dr. Bentley was endowed with a natural hardiness of temper, which enabled him to ride out both these storms without any extraordinary disturb- ance, or interruption to his literary pursuits. His principal works, besides those already men- tioned, were, 1. His Animadversions and Re- marks on the poet Callimachus. 2.

Annotations on the first two Comedies of Aristophanes. 3. Emendations, &c. on the Fragment of Menander and Philemon. 4. Remarks upon Collin's Dis- course of Free-thinking. 5. Beautiful and cor- rect editions of Horace, Terence, Phsedrus, and Milton, with notes. In 1721 he published pro- posals for printing a new edition of the Greek Testament, and St. Hierom's Latin version ; in

which edition he intended to make no use of any MS. that was not at least 1000 years old. Upon these proposals Dr. Middleton published some remarks ; and the work never made its ap- pearance. He died at his lodge in Trinity Col- lege, July 14,1742, aged eighty. To his latest hour, he could read the smallest Greek testament without spectacles. He died of a pleuritic fever.

BENTVOGEL SOCIETY, a celebrated society of Flemish painters, established at Rome, into which they received all of their own nation who came to reside at Rome, and desired to be ad- mitted as members.

BE'NUM, } Be and num : num is

BENUMM'EDNESS. (the past tense and past particle of niman. Benumen, Saxon ; to make torpid ; to take away the sensation and use of any part by cold, or by some obstruction; to stupify.

So stings a snake that to the fire is brought, Which harmless lay, with cold benummed, before.

Fairfaxˆ

It seizes upon the vitals, and benums the senses ; and where there is no sense, there can be no pain.

South.

Will they be the less dangerous, when warmth shall bring them to themselves, because they were once frozen and benummed with cold ? L' Estrange.

These accents were her last : the creeping death Benummed her senses first, then stopped her breath.

Dryden.

BENYOWSKY (Maurice Augustus, count de), a singular adventurer of the last century, a magnate of the kingdoms of Hungary and Po- land,

and one of the chiefs of the Polish confede- racy in 1767. He was taken prisoner by the Russians, and sent in exile to Kamtschatka, where the governor entrusted to his care the education of his son and three daughters : the youngest of these fell in love with him, and her parents con- sented to the match. But the chief object of Benyowsky being the deliverance of himself and his fellow exiles, he scrupled not in effecting it to kill the governor, and was enabled to seize a vessel and sail from Kamtschatka, accompanied by ninety-six persons. Nothing more is heard of his wife except that she died the following September at Macao. There our adventurer en- tered into an engagement with the French East India Company, and proceeded with his com- panions to the Isle of France, whence he sailed for Europe in 1772, and, touching at Madagas- car, arrived in France in the July of that year. The French ministry, approving his plan for a settlement, he embarked once more for the Isle of France and Madagascar, but the settlement at the latter place being inadequately supported, fell into great confusion, and Benyowsky aban- doned it. Quitting the French service, he in- duced the natives to believe that he was a descendant of one of their kings formerly car- ried away to Europe, and was actually elected their chief. On this he sailed to Europe in a brig, which he had freighted for the Cape of Good Hope, to submit proposals for acquiring the aid and protection of Great Britain. He, however^ failed in these endeavours, but induced several private

merchants to supply him with a vessel and mer- chandise to the value of Ā£4000. Touching at the cape, and at Sofala on his return, he anchored at the bay of Atanagara in Madagascar, in July 1785, where he unloaded his cargo, on which those on board sailed away with the vessel and deserted him. Unintimidated by this disaster, he departed for his settlement of Angoneti, and soon had a body of natives under his com- mand, with whom he attacked the French factory. His proceedings now induced the government of the Isle of France to send a ship with sixty re- gulars to Foulpoint. The count had constructed a redoubt, which he attempted to defend with two cannon, two Europeans, and thirty natives. The latter fled on the first fire, and Benyowsky, receiving a ball in the breast, fell behind the parapet, and in a few minutes afterwards ex- pired. This bold and eccentric adventurer it is evident only wanted a wider theatre to make him a conspicuous subject of history. He met his death in May or June 1786.

BENZOATS, neutral salts composed of earths, alkalies, or metallic oxides, and benzoic acid ; the principal are the following : ā Benzoat of alumine has a sharp bitter taste, is soluble, deliquesces in the air, and forms dendritical crystals. Ben- zoat of ammonia is very soluble in water, deli- quesces in the air, and forms, with difficulty, feather-shaped crystals. Benzoat of barytes is rĀ«ot alterable by exposure to the air. Benzoat of lime is, perhaps, the only one of these salts found native ; it exists abundantly in the urine of cows, and has been discovered in that of some other animals among the herbivorous quadrupeds ; it forms sweet tasted, white, ihining, pointed crys- tals, soluble in cold, but more so in hot water. Benzoat of magnesia has a .sharp bitter taste, and forms feather-shaped crystals. Benzoat of pot-ash has a sharp saline taste, very soluble in water, deliquesces in the air, and is easily crys- tallisable in the form of pointed feathers. Ben-zoat of soda resembles the preceding, except that it effloresces in the air, and its crystals are larger. On account of the weakness of the affinity that benzoic acid has for the different substances with which it unites, benzoats may be decom- posed by any of the strong acids.

BENZOIC ACID. This acid was first obtained from the resin which goes under the name of Ben- zoin, and was therefore called flowers of Ben-zoin, or Benjamin (see BENZOIN). It is now, however, known as a peculiar acid, not exclu- sively obtainable from the benzoin, but also to be procured from other vegetable balsams. It is found in Storax, in the Tolu and the Peruvian 1 talsams, in cinnamon, in ambergris, in the urine of children, and, according to some chemists, in the urine of many graminivorous animals. Berzelius has shown it to be the main ingredient of that acid which is procured by the destructive dis-tillation of tallow. It is supposed that very many vegetable substances contain this acid, and especially some of the grasses. Hence it is con-jectured the source of its presence in the urine of the graminivora.

Ure, in the Philosophical Transactions of 1822, has stated the following as the composition of bchzoic acid : ā

Carbon .

Oxygen

Hydrogen

66-74

28-32

4-94

The results of Berzelius's investigation on the same substance do not materially differ.

This acid was first, we are told, desribed in 1608 by Blaise de Vigenere in his treatise on fire and salt. ' The usual method of obtaining it/ says Dr. Ure, ' affords a very elegant and pleasing example of the chemical process of sublimation. For this purpose a thin stratum of powdered ben- zoin is spread over the bottom of a glazed earthen pot, to which a conical tall paper covering is fitted ; gentle heat is then to be applied to the bottom of the pot, which fuses the benzoin and fills the apartment with a fragrant smell, arising from a portion of essential oil and acid of benzoin, which are dissipated into the air; at the same time the acid itself rises very suddenly in the paper head, which may be occasionally inspected at the top, though with some little care, because the fumes will excite coughing. This saline sublimate is condensed in the form of long needles, or straight filaments of a white color, crossing each other in all directions. When the acid ceases to rise, the cover may be changed, a new one applied, and the heat raised; more flowers of a yellowish color will then rise, which require a second sublimation to deprive them of the empyreumatic oil they contain.'

Scheele's method of procuring the benzoic acid consists in powdering a pound and a half of gum benzoin with four ounces of quicklime, and then boiling them for half an hour in a gallon of water, constantly stirring. When cold, the clear liquor is poured off, and what remains is boiled a second time in four pints of water, the liquor being poured off as before. The mixed liquids are to be boiled to one-half and filtered through paper : muriatic acid is. now gradually to be added, until it ceases to produce a precipitate. The liquid is to be decanted off from this precipitate, the powder dried in a gentle heat, and sublimed into cones of white paper, from a proper vessel, placed in a sand bath.

The digestion of the benzoin in hot sulphuric acid has been recommended as the best method of procuring the benzoic acid crystals. ' If,' says Ure, 'we concentrate the urine of horses or cows, and pour muriatic acid into it, a copious precipitate of benzoic acid takes place ; and this is the cheapest source of it. Fourcroy recom- mends employing the muriatic acid, to extract it from the water that drains out of dunghills, cow- houses, and stables.

Benzoic acid has a very peculiar odor, which is not disagreeable : it is sweetish and hot to the taste ; it reddens the color of litmus. It exists

in the form of a light powder, crystallised in fine needles. Its specific gravity is 0-667. It is said to be so little alterable by the air as to have been kept in an open vessel twenty years without losing any of its weight! It is occasionally, but not very frequently, employed in medicine : it, however, enters into the composition of the com- pound tincture of camphor of the London Phar- macopoeia.

BEQ

Foi its combination with earths, alkalies, &c. see CHEMISTRY.

BENZOTN, n. s. A medicinal kind of resin imported from the East Indies, and vulgarly called Benjamin. It is procured by making an incision in a tree, whose leaves resemble those of the lemon-tree. The best comes from Siam, and is called amygdaloides, being interspersed with white spots, resembling broken almonds.

Trevoux. Chambers.

The liquor we have distilled from benzoin, is sub- ject to frequent vicissitudes of fluidity and firmness.

Boyle.

BENZOIN, or BENJAMIN. The tree which produces this substance is principally found in the island of Sumatra. Incisions are made into it in order that the juice may exude, which comes from the tree in the form of a thick balsam. It eventually changes to a reddish brown color. It is soluble in alcohol, but is precipitated from it by water. The specific gravity of this resin is 1‘092. The opaque fluid formed by the admix- ture of water with the alcoholic solution of Ben- zoin is used by perfumers as a cosmetic under *he name of lac virginale. Brande’s products, is obtained by distillation from 100 grains of the resin, were benzoic acid nine grains, acidulated water 5-5, butyraceous and empyreumatic oil 60, brittle coal 22, and a mixture of carbonated hy- drogen and carbonic acid gas, computed at 3- 5. The oil afterwards was found to yield five grains more of the acid, making the proportion 14 to

100.

Benzoin is soluble also in ether, and in sul- phuric and acetic acids. Solutions, likewise, of potash and soda dissolve it. Nitric acids act on it with violence, and a portion of artificial tannin is thereby formed. It is dissolved sparingly by ammonia.

BE’PAINT, v. a., from paint ; to cover with paint.

Thou knowest the mask of night is on my face, Else would a maiden blush bepaint my cheek.

Skakspeare.

BE’PALE. Be and pale. See PALE.

BE’PEARL. Be and pearl. See PEARL.

BE’PEPPER. Be and pepper. See PEPPER.

BE’PLASTER. Be and plaster. See PLASTER.

BE’PLUME. Be and plume. See PLUME.

BE’POWDER. Be and powder. See POWDER.

BE’PRAISE. Be and praise. See PRAISE.

BE’PROSE. Be and prose. See PROSE.

BE’PURPLE. Be and purple. See PURPLE.

BE’QUALIFY. Be and qualify. See QUALIFY.

BE’QUEATH, ˆ Ang.-Sax. becwathan.

BE’QUEST, v. & n. t To announce; to declare

BE’QUEATH ER, I the will or determination ;

BE’QUEATHMENT. J a legacy by will.

She had never been disinherited of that goodly portion, which nature had so liberally bequeathed to her. Sidney.

Then weete ye, sir ! that we two brethren be,

To whom our sire, Milesio by name, Did equally bequeath his lands in fee,

Two islands, which ye there before you see.

Them therefore as bequeathing to the winde, I now Ā«epart, returning to thee never, And leave this lamentable plaint behinde. But doo thou haunt the soft downe-rolling river,

And wilde greene woods, and fruitful pastures minde ; And let the flitting aire my vaine words sever. Id.

Let's choose executors, and talk of wills ; And yet not so ā for what can we bequeath, Save our deposed bodies to the ground.

Shaktpeare

Methinks this age seems resolved to bequeath pos- terity somewhat to remember it. Glanville.

For you whom best I love and value most, But to your service I bequeath my ghost.

Dryden's Fablet.

He claimed the crown to himself ; pretending an adoption, or bequest, of the kingdom unto him by the Confessor. Hale.

BEQUIERES, BEQUIEES, or ABOUKIR, an island and bay on the coast of Egypt, at the mouth of the Nile, near which admiral Nelson gained, over the French fleet, one of the most com- plete victories which adorn the annals of Britain. BER, in botany, a name used by some au- thors for the Indian jujube ; that species of the jujube tree, on which the gum lacca of the shops is usually found.

BERA, king of Sodom, contemporary with Abraham, who had his country terribly ravaged by Chedorlaomer and his allies.

BERA, a district in the island of Celebes, on the east coast, extending from the river Barn- pang to the point of Lassoa. It was ceded to the Dutch by the rajah of Bony. Much of it is unproductive, but it affords pretty good small ship timber. The most wealthy inhabitants are merchants, and ship builders. There is also a species of cloth manufactured here from the cot- ton of the district.

BERABZAN, a long lake in New North Wales, lying north and south, and narrowing gradually to the south till its waters join those of Lake Shechary, and form Seal River, which falls into Hudson's Bay, at Churchill Fort. BE'RAIN. Be and rain. See RAIN. BERAMS, a coarse cloth, made with cotton thread, which comes from the East Indies, and particularly from Surat.

BERAR, a soubah of the deccan of Hindos- tan, bounded on the north

by Malwa and Alla- habad, east by Gundwana, south by Aurungabad and the Godavery, and east by Khandish and Al- lahabad. Its limits are inaccurately denned ; but, including the small modern province of Nan- dere, which properly belongs to it, the length may be estimated at 230 miles, by 120 the ave- rage breadth. Less is known of the interior parts of Berar than of most of the other countries of Hindostan. Nagpoor has been generally called the capital ; but that town is in fact in the neighbouring province of Gundwana. The capi- tal of Berar is Ellichpoor. The country in gene- ral is elevated and hilly, abounding in strong holds ; some of which, as Gawelghur, were thought impregnable, until taken by our army under the intrepid VVellesley. The principal rivers are the Godavery, Tuptee, Poornah, \Vur- da, and Kaitna. Yet, though well supplied with water, Berar as a whole is but little culti- vated, and thinly inhabited. The cultivated parts produce rice, barley, wheat, cotton,ˆopium, sugar, and a little inferior silk. The Berar bul- locks are reckoned the best in the Deccan. The

principal towns are Ellichpoor, Gawelghur, Nar- nallah, Poonar, Nandere, and Patery. Three- fourths of the province are included within the territories of the Nizam, and the remainder is either occupied by, or tributary to, the Nagpoor and Malwah Mahrattas.

BERAT, or ARNAUTH BELGRADE, a town of Albania, in European Turkey, with 12,000 inha- bitants, the capital of a pachalic. It is on the site of the ancient Eordea, on the river Kevroni, (the Apsus of the ancients), forty miles north- east of Aulona.

BE’RATE. Be and rate. See RATE.

BERAT’TLE. Be and rattle. See UATTLE.

BERBER, in the plural Beraber, pronounced Breber, in Africa, a people spread over nearly the whole of Northern Africa. The appellation of Barbary is said to be derived from them (see BARBARY), and they are perhaps the descend- ants of the ancient Numidians, whose country they occupy. Mount Atlas is their principal abode; to the south they are bounded by the Negro states and the edge of the great Sahra.

BERBERII, in medicine, a name given by some to the palsy.

BERBERINA, in entomology, a species of tipula ; wings, sooty, incumbent; the base and marginal spot white ; the thorax and abdomen red : it feeds on the barberry, and forms small strumous excrescences on the branches.

BERBERINA, in natural history, a species of vorticella, of a simple oval form, with a branched rigid stem and white granulations. This is vorticella composita, floribus ovalibus muticis, stirpe ramusa of Linn. Brachionus berberiformis of Pallas ; and Pseudopolypus beriformis of Roesel. Found in fresh water in Europe ; usually in clusters.

BERBERIS, in botany, the barberry, or pip- peridge bush. A genus of the monogynia order and hexandria class of plants ; the characters of which are: CAL. consisting of six leaves; the petals six, with two glands at the ungues ; no stylus ; the berry two-seeded. The species are three, viz. 1. B. Canadensis, is a native of that country from whence it takes its name, and for- merly common in British gardens. 2. B. cretica, with a single flower in each footstalk, at present very rare in Britain ; the plants being tender whilst young, and most of them killed by severe frost. It risesthree or four feet high, but sends out many stalks from the root, which are strongly armed with spines at every joint : 3. B. vulgaris, the common barberry, grows naturally in hedges in many parts of England and some parts of Scotland ; but is also cultivated in gar- dens on account of its fruit, which is pickled and used for garnishing dishes. The berries, which are so acid that birds will not feed upon them, are moderately astringent ; and have been given with success in bilious fluxes, and diseases pro- ceeding from heat, acrimony, and thinness of the juices. Among the Egyptians barberries are used in fluxes and in malignant fevers. The roots boiled in ley, dye wool yellow. In Poland they dye leather of a most beautiful yellow with the oark of the root. The inner bark of the stems dyes linen of a fine yellow with the assist- ance of alum. This shrub should never be per-

mitted to grow in corn lands ; for the ears of wheat that grow near it never fill, and its in- fluence in this respect has been known to ex- tend across a field of 300 or 400 yards. Cows, sheep, and goats eat it; horses and swine re- fuse it.

BERBICE, a river of South America, in the colony of that name, which rises about 100 miles from the coast, and, after a circuitous course, flows into the Atlantic, in the seventeenth degree of north latitude, and fifty-eighth of west longitude. It is a broad stream, generally shallow, -with a bar in the sea five miles from its mouth. It is, however, capable of admitting vessels which draw fifteen or sixteen

feet of water to Fort Nassau, about fifty miles above its mouth : about a mile from the sea it receives the Canje. The country along its banks is low and flat, but has numerous sugar plantations.

BERBICE, a district and colony of Guiana, named after the preceding river, extends nearly 300 miles from the sea. When the colony in 1796 came into possession of the English, the coast was regularly surveyed, and laid out into two parallel lines of estates, with a navigable canal between them. The river Canje flows be- hind the second both banks of which are cul- tivated to a considerable height up the country. The line of estates facing the sea are called the coast estates, the second line consists of the canal estates, and those behind are called the Canje estates. The capital is NEW AMSTERDAM, which see.

The chief product of the coast estates is cotton, but the most valuable are those which are adapt- ed to the growth of sugar. The agricultural laborers are chiefly slaves : about 200 are gene- rally employed on an estate which produces an annual average of 140,000 cwt. of coffee, and 10,000 cwt. of cocoa. Besides sugar, coffee, cocoa, tobacco, cotton, and arnotta, are cultivated here. This last was managed exclusively for a long time by the native Indians, who macerated the seed in the juice of lemons, mixed with the dissolved gum of the manna tree, and thus pro- duced a celebrated crimson paint, with which the Indians adorn themselves. The arnotta is now cultivated by the European settlers as a dye-stuff. The population of this colony, according to Mr. Bolingbroke, was, in 1805, 2500 whites, 1000 free people of color, and 40,000 slaves; making a total of 43,500 individuals.

In 1815 a paper returned to the House of Commons, gives the following population : ā Whites . . 550 Colored people . 240 Black . . 25,169

25,959, making, as com- pared with Mr. B.‘s account, a vast decrease. The climate is certainly very unhealthy, from ex- cess of moisture ; but the heat is not usually so great as the latitude alone would lead us to expect. I ahrenheit’s thermometer seldom rises above 90Ā°, and in general during May, June, and July, it is a little above 80Ā°. The lowest poin’ to which it descends at any season is 75Ā° : but changes of weather take place very suddenly

The exports and imports of Berbice,

Imports. Exports.

In 1809 { were 1 Ā£193,663 Ā£49,662 1810 * valued at J 191,566 51,785 In the years ending the 5th of January, there were imported into Great Britain from Berbice, of rum, ā ā¢

1810. 1811. 1812. 1813.

Gallons, 20,355 61 93* 1866 23,139 And, in the year ending 5th of January 1813, there was imported of sugar 9084 cwts. In 1819 the exportation of cocoa from the colony amounted to 17,665 cwts. and in 1810, to 22,582 cwts. In the former year the exportation of cotton was 1,874,195 Ibs. ; and, in the latter year, 1,656,057 Ibs. By 56 Geo. III. (1816), c. 91, Berbice is placed on the same footing in relation to the regulations of trade, as the British West India islands. The subjects of the king of the Netherlands, who are proprie- tors in Berbice, may import into it from the Netherlands the usual articles of supply for their estates, but not for trade ; wine imported for the use of their estates, to pay a duty of 10s. per ton. The Dutch proprietors may export their produce, but not to Britain ; both exports and imports to be in ships belonging to the Nether- lands, the duties to be the same as those payable by British proprietors. The principal commerce of the colony being with the Netherlands, no official returns of the exports and imports have been lately published in this country. See AMERICA, SOUTH, for a general account and history of the British possessions here.

BERCARIA, BERQUERIA, or BEIIKERIA, in writers of the middle age, denotes a sheep-fold, or sheep-cote, for the safe keeping a flock of sheep. The word is abbreviated from berbi- caria ; of berbex, detorted from vervex. Hence also a shepherd was denominated berbicarius and berquarius.

BERCHEM, or BERGHEM (Nicholas), a painter, born at Haerlem in 1624. He was instructed by several eminent masters; and added to their fame. His cattle and figures are justly held in high estimation ; and many of them have been finely engraved by Visscher.

BERCHEROIT, or BERKOITS, a weight used at Archangel, and in all the Russian dominions, to weigh such merchandises as are heavy and bulky. It is about 364lbs. English avoirdu- pois weight.

BERCHET (Peter), an eminent historical painter, was born in France in 1659, and at the age of eighteen was employed in the royal palaces. He came to England in 1681, to work under Rambour, a French painter of ar- chitecture; but, after staying a 'year, returned to Marli. He came again, and was sent by King William to the palace he was building at Loo, where he was employed fifteen months ; and then came a third time to England, where he had considerable business. Mr. Wai- pole says, that he then painted the ceiling of the chapel of Trinity College, Oxford, the stair- case at the duke of Schomberg's in Pall-mall, and the summer-house at Ranelagh. His drawings in tho academy were much approved.

Towards the close of his life he retired to Mary-le-bonne, and died in 1720.

BERCHTOLSGADEN, a town and princi- pality of Germany, thirteen miles south-west of Saltzburg. The district is mountainous, con- taining six towns and twenty villages. Fossil salt, of which 87,000 quintals are produced annually, is the chief article of trade. The town of Berchtolsgaden contains about 3000 in- habitants. There is a small manufacture of bone and wooden toys here.

BERCIUS, an ancient Briton, unworthy of the name, who urged the emperor Claudius to invade his native country.

BERDA, in ichthyology, a species of spa- ms, inhabiting the Red Sea. It is of a whitish gray ; lateral scales, marked in the middle with a single transverse brown band ; dorsal spines re- cumbent. The body of this fish is oval ; back gibbous, with pale bands ; white beneath, scales broad, entire. The crown is naked, sloping; iris, white; nostrils, large; four long, conic, sublate, teeth ; grinders, numerous, hemisphe- rical, those behind largest; upper lip, long; gill-covers, entire ; lateral line, nearest the back ; fins, brown ; pectoral ones transparent and lan- ceolate ; tail, two-lobed.

BERDASH, in antiquity, was a name for- merly used in England for a certain kind of neck-dress ; and hence a person who made or sold such neck-cloths was called a berdasher, from which is derived the word haberdasher.

BERDOA, a town of Persia, in Erivan, seated in a fertile plain, ten miles west of the river Kur, and sixty-two south by east of Gan- gea.

BEREA, BERCEA, or BERRHCEA, in ancient geography, a noble city of Macedonia, situated near Pella, the birth-place of Alexander the Great.

In this town St. Paul preached with great success.

BEREANS, in ancient church history, the inhabitants of Berea. They are highly com- mended in scripture for their ready reception of the gospel, upon a fair and impartial examina- tion of its agreement with the Old Testament prophecies.

BEREANS, in modern church history, a sect of Protestant dissenters from the church of Scot- land, who take their title from, and profess to follow the example of the ancient Bereans, in building their system of faith and practice upon the scriptures alone, without any regard to human authority.

The Bereans agree with the great majority of Christians, both Protestants and Catholics, re- specting the doctrine of the Trinity ; which they hold as a fundamental article of the Christian faith; and they also agree in a great measure with the professed principles of both our esta- blished churches, respecting predestination and election, though they allege, that these doctrines are not consistently taught in either church. But they differ from other sects, 1, In rejecting all natural religion ; 2, in their opinion of faith, holding it to be a simple credence of God’s wo id, but always accompanied with the pers&aal as su ranee of salvation; 3, they consider unbelief the sin against the Holy Ghost; and 4, they

interpret almost all the Psalms as expressly typical or prophetical of Jesus Christ, in which last point they seem to agree with the Hutchin- sonians.

The Bereans first assembled as a separate so- ciety of Christians in the city of Edinburgh, in autumn 1773, and soon after in the parish of Fettercairn, their principal leader and founder being a Rev. Mr. Barclay, a seceder from the Scottish church. Their doctrine has found con- verts in various places of Scotland, England, and America.

BE’REAVE, -) Be and reave. Ang.-Sax.

BEREAVE’MENT, >reafi

BE’REFT. j of ; to deprive of. It has ge-

nerally the particle of before the thing taken away.

He nigh, them drew, to stay the avenger's forse j And gan inquire how was that steed bereaved, Whather by might extort, or else by slight deceived.

Spenser.

Swift running rivers still did stand, And the wild beasts their furie did withhold, To follow Orpheus' musick through the land ; And the oakes, deep grounded in the earthly mold, Did move as if they could him understand ; And the shrill woods, which were of sense bereaved, Through their hard bark his silver sound received.

Id.

All your interest in those territories Is utterly bereft you, all is lost. Shakspeare.

Madam, you have bereft me of all words;

Only my blood speaks to you in my veins. Id.

That when thou comest to kneel at Henry's feet, Thou mayest bereave him of his wits with wonder.

Id.

Bereave me not,

Whereon I live ! thy gentle looks, thy aid, Thy counsel, in this uttermost distress. Milton. The chief of either side bereft of life,

Or yielded to the foe, concludes the strife.

Dryden.

BERECYNTHUS, in entomology, a species of papilio, with the wings entire, black above, with a yellow margin, and six ocellar spots under the posterior pair. This is the papilio berecynthia of Cramer, and inhabits Surinam.

BEREGH, a town and county of Hungary, on the north bank of the Theyss, containing together a population of 46,000 persons. There was formerly a castle of the same name in the neigh- bourhood. It is separated from Galicia by the Carpathian mountains.

BEREGONIUM, in ancient geography, a city of Caledonia, in Argyllshire, said to have been the capital of Scotland, but of which scarce a vestige now remains. It stood between two hills, in the district of Ardchattan, and the com- mon people believe it to have been destroyed by fire from heaven.

BEREILLY. See BAREILY.

BERENGARIANISM, an appellation given, by ecclesiastical writers, to the opinion of those who deny the reality of the body and blood of Christ in the eucharist. The denomination took its rise from Berengarius, who, about A. D. 1035, maintained that the bread and wine, after conse- cration, do not become the true body and blood of our Lord, but only a figure and sign thereof. Berengarianism was strenuously opposed by Lan- tranc, Guitmond, Adelmanus, Albericus, &c.;

and synods were held, wherein the author was condemned at Rome, Versailles, Florence, Tours, &c. He retracted, and returned again to his opinion more than once ; signed three several Catholic confessions of faith ; in the second, third and fourth councils of Rome : but still relapsed, to his former opinions when the storm was over; though Mabillon maintains, and seemingly on good grounds, that he died an orthodox Ca- tholic.

BERENICE, daughter of Ptolemy Auletes king of Egypt, succeeded her father before his death. This banished prince implored the as- sistance of the Romans, and Pompey restored him. Berenice, to support herself on the throne, allured a prince, whose name was Seleucus, descended from the kings of Syria, and admitted him to her nuptial bed, and to her sceptre. She was soon Weary of him, and put him to death. She next cast her eye on Archelaus, who married her, and put himself at the head of her troops to repulse the Romans. He was killed in battle. Ptolemy returned to Alexandria, and put his re- bellious daughter Berenice to death.

BERENICE, queen of Ptolemy Euergetes, king of Egypt, cut off her hair in pursuance of a vow, and consecrated it in the temple of Venus. This being afterwards lost, Conon the mathematician, in compliment to her, declared that the queen’s locks had been conveyed to heaven, and com- posed those seven stars near the tail of the bull, called to this day coma Berenices, or Berenice’s hair.

BERENICE, the daughter of Costobarus and Salome, sister to Herod the Great, was married first to her cousin Aristobulus, son of Herod

and Mariamne. He having a brother who married the daughter of Archelaus king of Cappadocia, often upbraided Berenice that he had married' below himself in wedding her. Berenice related all these discourses to her mother, and exasperated her so furiously, that Salome, who had much power over Herod's mind, made him suspect Aristobulus, and was the principal cause that urged this cruel father to get rid of him. She married again ; and having lost her second husband, went to Rome, and got into the favor of Augustus. But, above all, she insinuated herself into the good graces of Antonia, the wife of Drusus, which in the end proved of great service to Agrippa.

BERENICE, the grand-daughter of the preceding, and daughter of Agrippa I. king of Judea, was betrothed to one Marcus, but he died before the marriage. Soon after, she married her uncle Herod, who, at the desire of Agrippa, both his brother and father-in-law, was created king of Chalcis by the emperor Claudius. She lost her husband in the eighth year of the emperor Claudius; and, in her widowhood, it was rumored she committed incest with her brother Agrippa. To put a stop to this report, she offered herself in marriage to Polemon king of Cilicia, provided he would change his religion. He accepted her offers, was circumcised, and married her. Berenice soon left him, and he abandoned Judaism to return to his former re- ligion. She was always on good terms with her brother Agrippa, an ' seconded him in his attempt

to prevent the desolation of the Jews. She brought Titus into her snares ; but the murmurs of the Roman people hindering her from becoming his wife, she was contented with the title of mistress to the emperor. The French stage, in the seventeenth century, resounded with the amours of Titus and Berenice.

BERENICE, in ancient geography, the name of several cities, particularly of a celebrated port town on the Sinus Arabicus ; now called SUEZ, which see.

BERENICE'S HAIR, or COMA BERENICES, a constellation of the northern hemisphere, con- taining, according to the ancients, but seven stars ; but, in the Berlin catalogue, forty-eight. It is in a triangular form, near the tail of Leo.

BERESFORD'S ISLANDS, supposed to be the same which Perouse calls the Sartine Islands, a group of islands in the North Pacific Ocean, and so called by captain Dixon. Long. 129Ā° 57′ W., lat. 50Ā° 52′ N.

BERESINA, or BEREZINA, a river of White- Russia, rising near Polozk, and traversing the government of Minsk, in which it gives its name to a small town, forty-four miles north-east from Minsk. It finally falls into the Dnieper, near the town of Strzesno ; and will be ever memorable for the total defeat of the French on its banks, during their retreat from Moscow in 1812.

BEREZOV, a large town of Siberia, on the Soswa, a few miles above its confluence with the Ob. It is the most northern station in Siberia in which the horse can live in health ; and has three stone churches and a chapel. It supplies Tobolsk with dried fish in summer, and frozen fish in winter. The inhabitants, who are chiefly Cossacks, subsist by hunting, fishing, and a small commerce in furs.

BER-FISCH, in icthyology, a name given by the Germans to the common perch.

BERG, a duchy of Germany, in the circle of Westphalia, belonging to Prussia. It is bounded on the north by the duchy of Cleves, on the east by the county of Mark and the duchy of West- phalia, on the south by Wetteravia, and on the west by the diocese of Cologne, from which it is separated by the Rhine. It is about 150 miles in length, and twenty-four in breadth. It is very fruitful along the Rhine, but mountainous and woody towards the county of Mark. Among the various territorial exchanges to which Prussia was forced to accede, in the disastrous war of the French revolution, the duchies of Berg and Cleves were transferred to France. This valuable ac- quisition Buonaparte then conferred on general Murat, with the title of Duke of Cleves and Berg: but it was re-assigned to Prussia, by the con- gress, in 1815; and now contains an area of nearly 1200 square miles, with a population of 295,000 individuals. Iron, copper, lead, and quicksilver, are found here, and give employment to a great number of the inhabitants : the manu- factures include iron, steel, linen, woollen, cot- ton, and silk ; and are said to be very flourishing.

BERG, a county of the Netherlands, in Guelderland, district of Zutphen. The chief town, a small place, is likewise called Berg.

BERGAMASCO, a province of Italy, late in the territory of Venice, but now belonging to

Austria. It is bounded on the east by the Bres- cian, on the north by the Valteline, on the west and south by the Milanese. It extends about thirty-six leagues from north to south, and thirty from east to west. It is watered by several rivers, which render it very fertile, and produces great quantities of chestnuts. The northern part, which is mountainous and barren, has mines of iron, and quarries of marble, and other stones. There are a great number of villages, but Bergamo the capital is the only city. Around it is a fertile country in wine. The people are said to be very industrious. They are well stocked with cattle, and make fine tapestry. This province was in- cluded in the Italian republic, and divided into two departments, viz. that of Serio, and that of the Adda and Oglio. Its population is about

360,000.

BERGAMO, anciently Bergomum, a conside- rable town of Northern Italy, the capital of the pre- ceding province. It was built by the Gauls, and stands on ten small hills, in the form of an am- phitheatre. It is fortified with walls, bastions, and ditches, besides two castles. To one there is a covered passage from the city. It is said to be seven Italian miles in circumference, and has thir- teen parish churches, besides convents, seven hospitals, and 25,000 inhabitants. Before the revolution it was the see of a bishop : the cathe- dral is a noble structure. Here is also a fine palace, called the Fiera, built in the form of a quadrangle, and containing 500 apartments. In the square within it a great fair is annually held, and it has a marble fountain in the centre. The chief trade is in silk, fine and coarse cloths, camlets, spices, and drugs. It is chiefly sup- plied with its grain from the Milanese and other parts of Lombardy. After suffering greatly in the wars of the Guelphs and Gibellines, this city was in the twelfth century governed by its own princes. In 1509 Louis XII. seized upon it, but it was soon restored to the Venetians. After Buonaparte had taken it, in 1796, it became the capital of the department of Serio, in the Cisal- pine Republic. It lies twenty miles north-west of Brescia, and thirty north-east of Milan . Long. 9Ā° 47′ E., lat. 45Ā° 46′ N.

BERGAMO (James Philip de), an Augustin monk, born at Bergamo in 1434, wrote in Latin a Chronicle from the creation of the world to the year 1503, and a treatise of Illustrious Women. He died in 1518.

BERGAMOT, in commerce, a coarse tapestry, manufactured with flocks of silk, wool, cotton, hemp, ox, cow, or goat’s hair, and supposed to be invented by the people of Bergamo in Italy.

BERGAMOTS are a species of citron (citrus medica), produced at first

casually by an Italian grafting a citron on the stock of a bergamot pear tree, whence the fruit produced by this union participated both of the citron and the pear. The fruit has a fine taste and smell, and its essential oil is in high esteem as a perfume. *

BERGANDER, in ornithology, a name by which some have called the anas tadorna, shieldrake, or burrough duck ; a beautiful species of duck, common on the coasts of Lanca- shire.

BERGAS, or BERGASE, a town of Romania

in European Turkey, the see of a Greek arch- bishop, seated on the Larissa.

BERG EL, or MARKTBERGEL, a large market town in the kingdom of Bavaria, circle of the Rezat, belonging formerly to the principality of Bayreuth, in Franconia.

BERGEN, anciently Bergi, a city of Norway, the capital of Bergenhuus. It is the see of a bishop, and has a strong castle and a good port. It is a large place ; but is subject to fires, being all built of wood. It stands in a deep bay, sur- rounded with mountains almost inaccessible ; the corn consumed is almost all imported ; a miscel- laneous commerce, and the fisheries, occupying the chief attention of the inhabitants: 12,000 barrels of herrings have of late been exported an- nually. Other exports are copper, iron, pitch, tar, and hides. The imports, besides grain, are wine, salt, sugar, coffee, tea, and hardware. Population about 15,000. It is 200 miles north- west of Gottenburg, and 350 north by west of Copenhagen.

BERGEN, a town and island of the Baltic, now subject to Prussia. It is the residence of a governor, and is protected by a castle. Here is also a convent of noble nuns, and a population of about 1600 persons. Thirteen miles north-east of Stralsund.

BERGEN, a town of Holland, noted for two bloody battles, on the 19th of September and 2d of October, 1799, between the English and Rus- sian forces, and the Dutch and French, which terminated in favor of the former. It is situated among woods, four miles north-east of Alkmaer.

BERGEN, a mountainous and rough county of New Jersey, bounded on the east by Hudson River, which separates it from the state of New York, north-west by Sussex, south-west by Pegunnock river, which divides it from Morris county, and Pasaick river, which separates it from Essex, north-east by the state of New York, and south by Arthur Kull, or Newark Bay, which divides it from Staten Island. It is thirty miles in length and twenty-five in breadth, divided into six townships. In this county is a mine of copper ore, which has of late been wholly neg- lected. The chief town is Hakensack.

BERGEN, a town of New Jersey, situated in the preceding county, about three miles west by north of New York city. It is regularly laid out, and contains a reformed Dutch church. It is ninety- two miles north-east of Philadelphia.

BERGENHUUS, the most western province of Norway, very mountainous and barren, some- times called the bishopric of Bergen. It is di- vided into fifty-four parishes, but contains few towns beside the capital.

BERGEN-OP-ZOOM, a territory and ci- devant marquisate of Dutch Brabant, consisting of a considerable tract of land, containing several villages, besides the town, and some islands in the Scheldt.

BERGEN-OP-ZOOM, a town and fortress of Dutch Brabant, in the above territory; seated on an emi- nence, in the middle of a morass, about a mile and a half from tne eastern branch of the Scheldt, witn which it has a communication by a navigable canal. The houses are well built, and the market- places and squares handsome and spacious. The

church, before the last siege, was reckoned

BERGERA, in botany, a genus of plants, class decandria, order monogynia. CAL. five- parted : COR. five-petalled : STIG. turbinate ; berry two-seeded ; species one : a tree with a shady head ; leaves ovate, lanceolate, unequal, slightly serrate ; corymbs terminal and compound. A native of the East Indies.

BERGERAC, a town of France, in the de- partment of the Dordogne, forty-eight miles east of Bourdeaux, on the great road from Auvenjne to Bourdeaux. It stands on the east side of the Dordogne, in a beautiful and fertile valley. Be- fore the reign of Louis XIII. it was a much more considerable place than it is at present : when the edict of Nantes was revoked it contained not less than 40,000 Calvinists. This measure was

the destruction of its prosperity : the inhabitants, at a late enumeration, were only 8665 ; but it is still defended by a castle, and has a confined trade in brandy, wine, corn, and chestnuts. It has also manufactures of paper, earthenware, and woollen stuffs.

BERG-GRUIN, in natural history, the name of an earth used in painting, and properly called green ochre, though not known among the color- men under that name. It is found in many parts of Germany, Italy, and England, commonly in the neigbourhood of copper mines, from particles of which metal it receives its color.

BERGHAUSEN, a town of Germany, in the late province of Wetteravia, and circle of the Upper Rhine.

BERGHMOT, BERGHMOTE, or BERGHMOTH, vulgarly Barmote; from berij, Sax. a hill, and mo'oe, a meeting ; a court held on a hill for de- ciding pleas and controversies among the miners of England in Saxon times.

BERGIA, in botany, a genus of plants, class decandria, order pentagynia. CAL. quinque-par- tite : PET. five : CAPS, globular, with five pro- tuberances, five-celled, and five-valved : SEEDS numerous : species two. 1. B. aquatica, native of India. 2. B. glomerata, native of the Cape.

BERGMAN (Sir Torbern), a celebrated chemist and natural philosopher, was born in 1735 at Catherineberg in West Gothland. His

father was receiver-general of the finances, and had destined him to the same employment ; but nature had designed him for the sciences. To them he discovered an irresistible inclination from his earliest years. His first studies were confined to mathematics and physics : and the efforts that were made to divert him from science having proved ineffectual, he was sent to Upsal with permission to follow the bent of his inclina- tion. Linnaeus at that time filled the whole king- dom with his fame. Instigated by his example, the Swedish youth flocked around him ; and ac- complished disciples leaving his school, carried the name and the system of their master to the most distant parts of the globe. Bergman was struck with the splendor of this renown ; he at- tached himself to the man whose merit had pro- cured it, and by

whom he was very soon distin- guished. Applying himself first to the study of insects, he made several ingenious researches into their history ; and, among others, into that of the genus tenthredo, so often and so cruelly preyed upon by the larvae of the ichneumons, that nestle in their bowels and devour them. He discovered that the leech is oviparous ; and that the coccus aquaticus is the egg of this animal, from whence issue ten or twelve young. Lin- naeus, who had at first denied this fact, was struck with astonishment when he saw it proved. Vidi et obstupui ! he exclaimed, and wrote it in the memoir when he gave it his sanction. Mr. Bergman soon distinguished himself as an astrono- mer, naturalist, and geometrician ; but these are not the titles by which he acquired his fame. The chair of chemistry and mineralogy, which had been filled by the celebrated \Vallerius, be- coming vacant by his resignation, Mr. Bergman was among the number of the competitors : and without having before this period paid any par- ticular attention to chemistry, he published a memoir on the preparation of alum that astonished his friends as well as his adversaries. Being elected, after considerable opposition, he had now the hard task of satisfying the hopes conceived of him. He did not follow the common track in the study of chemistry. As he had received the lessons of no master, he was tainted with the prejudices of no school. He applied himself to experiments without paying any attention to theories ; repeating those often which he con- sidered as the most important and instructive. He first introduced into chemistry the process by analysis ; and his views in this respect have been adopted by most modern chemists of eminence. The productions of volcanoes had never been analysed, when Messrs Ferber and Troil brought a rich collection of these into Sweden. At the sight of them Mr. Bergman conceived the design of investigating their nature. He examined first the matters least altered by the fire : he followed them in their changes progressively, imitating their more complicated appearances. In his laboratory, he observed the process of nature; the combat of flames and explosions ; the chaos in which the elements seem to clash with, and to confound, one another. The continual applica- tion of Mr. Bergman to these studies having af- rected his health, he was adrised to interrupt fliem if he wished to prolong his life : but he

found happiness only in study, and wished not to forfeit his reputation by a few years more of inactivity and languor. He exhausted his strength, and died in June 1784. The university of Up- sal paid the most distinguished honors to his memory ; and the academy of Stockholm voted a medal. Dr. Cullen says, ‘ No name is more il- lustrious in the annals of chemistry than Berg- man’s : ā no one has

contributed more than he to the rapid advancement which this science has made in the present century. Nor has any other philosopher applied the principles of Lord Bacon with greater skill or attention in the investigation of nature. Ardent enthusiasm, and patient as- siduity in the pursuits of science ; candour, modesty, clearness of judgment, and comprehen- sion of mind ; qualities, the union of which con- stitutes the true philosopher, appear to have been happily conjoined in this great man. The num- ber and the accuracy of his experiments, the simplicity and ingenuity of his processes, the beauty and plausibility of his theories, command the admiration and respect of every intelligent reader of his works.' These are, 1. A Physical Description of the Earth, two vols. 8vo. 1770 ā 1774; translated into the Danish, German, and Italian languages. 2. Various Eloges of the Members of the Academies of Stockholm. 3. An edition of Scheffer's Physic. 4. Opuscula Physica et Chemica, 1779 ā 1790 ; part of which was translated by Dr. Cullen, under the title of Physical and Chemical Essays, 2 vols. Lon- don, 1786.

BERGMANNIA, in entomology, a species of phaloena tortrix : wings pale yellow ; fascia of whitish tint, the third bifid. This insect is found in Germany and the northern parts of Europe.

BERGMANNITE. A massive mineral of a greenish, grayish-white, or reddish color. Lustre pearly. Fracture fibrous, uneven, and slightly translucent on the edges. Scratches felspar. Fuses into a semitransparent enamel. It is found at Fredericks warn in Norway, in quartz and felspar.

BERGOO, or BERGU, a considerable Negro state, called Mobba by the natives, Dar Seleih by the eastern, and Wadai by the western Arabs. It lies north-west of Dar Fur, and it is dependent on Bornu ; its sultan, about twenty years ago, effected the conquest of Bagirmah, by order of the sovereign of that state. The natives are chiefly Mahommedans, and live in circular reed huts, with conical roofs. But the king and some of the merchants have mud houses. The country is watered by the Misselad, a river which falls into the lake Fitri ; but has few other permanent streams. Natron is the prin- cipal export; but chalk, rock-salt, and iron-ore, are found here. The capital is Warah, a walled town, sixteen days distant from Birni, the capital of Bairnu.

BERG-REICHENSTEIN-KASCHPER- SCHBE-HORY, a royal mining town of Bo- hemia, in the circle oif Prachin, having 3000 inhabitants. It is seated on a mountain, which formerly contained gold and silver mines. In the town are several glass-houses. Tweaty miles west of Prachatitz, and thirty-six W.S”. W. of Bechin. Long. 13Ā° 26′ E., lat. 49Ā° G’ N.

BERKELEY.

BERGSTADT, a market town of Moravia, in the circle of Olrautz. It had formerly consider- able mines in the neighbourhood. Eighteen miles north of Olmntz.

BERG ST. VINOX, BERG ST. WINOX, or BERGUES ST. VINOX, a town of France, in the department of the North, the ci-devant Flanders. It is seated on the Colme, at the foot of a moun- tain, five miles from Dunkirk, and twenty-one from Ypres. The air is often very unwholesome, especially to strangers. The Colme serves instead of A canal to Hondschotte, St. Omer’s, and Gra- velines. There is likewise a canal to Dunkirk. The villages in its territory are famous for butter and cheese, of which they export great quantities. The population is about 5000.

BE’RHYME. Be and rhyme. See RHYME.

BERIA, BERIE, or BERRY, in old writings, seems to signify a large open field ; and those cities and towns in England which end with that word, are built on plain and open places, as is ā¢roved by the learned Du Fresne, who ob serves .hat heria Sancti Edmundi, mentioned by Mat. Paris, sub ann. 1174, is not to be taken for the town, but for the adjoining plain. To this may he added, that many flat and wide meads, and other open grounds, are called by the name of berries and berry fields ; thus the spacious meadow between Oxford and Ifley was, in the reign of king Athelstan, called bery ; and though these meads have been interpreted demesne or manor meadows, yet they were truly any flat ‘or open meadows that lay adjoining to any villa or farm.

BERIBERI, the name of a disease among the Indians : a species of palsy.

BERITH, a Hebrew word, which, in our version of the Scriptures, is translated covenant. The learned Catcott says the root of berith is bar or barr, to cleanse or purify ; and in this sense it is used in Jer. ii. 22,

and Mai. iii. (2, where it is translated soap. Some will have the substance designed in these two texts to be the kali, or salt wort, from the ashes of which soap is made ; and others, after Rudbeck, make it to be the dye of the purple fish.

BERING'S STRAITS. See BEERING'S STRAITS.

BERKELEY (Dr. George), the celebrated bishop of Cloyne, was the son of a clergyman in Ireland, distinguished by his piety and learning. He was born at Kilcrin in 1684, and educated at Trinity College, Dublin, where he attained a fellowship. His first essays as a writer were published in the Spectator and Guardian, which he adorned with many pieces in favor of virtue and religion. His learning and virtues early in- troduced him to the acquaintance of many great and learned men ; among others to that of the earl of Peterborough, Dr. Swift, and Mr. Pope. The earl made him his chaplain, and took him as his companion on a tour through Europe in 1714-15. During his absence he was elected a senior fellow of his college, and created D. D. per saltum. Upon his return, lord Burlington conceived a high esteem for him on account of his great taste and skill in architecture, an art which Mr. Berkeley had made his particular .study while in Italy. He was recommended by this nobleman to the duke of Grafton, who took

him over to Ireland in 1721. In 1722 his for- tune received a considerable increase from a very unexpected event. On his first going to London, in the year 1713, Dean Swift introduced him to the family of Mrs. Esther Vanhomrigh (the cele- brated Vanessa), and took him often to dine at her house. Some years before her death, this lady removed to Ireland, and fixed her residence atCelbridge, a pleasant village in the neigh>our- hood of Dublin, most probably with a view of often enjoying the company of Swift. But find- ing herself totally disappointed, upon discovering the dean's connexion with Stella, she was so en- raged at his infidelity, that she altered her inten- tion of making him her heir, and left her whole fortune (near Ā£8000) to be divided equally between Mr. Marshall, afterwards one of the judges of the court of common pleas in Ireland, and Dr. Berkeley, whom she had not seen for some years. ID 1724 the doctor resigned his fel- lowship, being promoted by the duke of Grafton to the deanery of Derry. Some time before this, he had been projecting a benevolent plan for the better supplying the churches in our foreign plan- tations, and converting the natives of America to Christianity, by erecting a college in the BERMU- DAS, or Summer Islands, which see. He was warmly engaged about the same time, in concert with Swift, Bolingbroke, and others, in a scheme for establishing a society for the improvement of

the English language, in imitation of the acade- my of France. But Harley, the great patron of it, falling from power, this design proved abor- tive. In 1728 Dr. Berkeley married Anne, the eldest daughter of R. H. John Forster, Esq. speaker of the Irish house of commons; and almost immediately after passed over to America to found his college. On his arrival at Newport, in Rhode Island, he contracted for the purchase of lands for the purposed establishment, fully ex- pecting that the money would, according to the charter he had obtained, be immediately paid. His expectations, however, were disappointed; and after various delays and excuses, he was at length informed by bishop Gibson, in whose dio- cese, as bishop of London, the whole of the West Indies was included, that upon application to Sir Robert Walpole, he received the following remarkable answer : ‘ If you put this question to me as a minister,’ said Sir Robert, ‘ I must and can assure you, that the money shall most un- doubtedly be paid as soon as suits with public convenience; but if you ask me as a friend, whether dean Berkeley should continue in Ame- rica expecting the payment of Ā£10,000, I advise him by all means to return home to Europe, and give up his present expectation.’ Accordingly the dean, after having expended a great part of his private fortune, and more than seven years of his life, in the prosecution of so laudable a scheme, found himself compelled to return to England. In 1734 he was advanced to the bishopric of Cloyne. When the earl of Chesterfield was lord- lieutenant of Ireland, he made him an offer of the richer see of Clogher, but he declined it, say- ing, his neighbours and he loved one another, and he x;ould not think of forming new connex- ions in his old days. In 1752, finding the infirmities of age come upon him, he asked leave

io resign his bishopric, and to obtain in lieu of it a canonry of Christ Church, Oxford. But the king declared he should die a bishop in spite of himself, giving him full liberty to reside where he pleased. His last act before he left Cloyne, was to sign a lease of the demesne lands in that neighbourhood, to be renewed yearly, at the rent of Ā£200, which he directed to be distributed every year until his return, among poor house- keepers of Cloyne, Youghal, and Aghada. He now settled at Oxford, to superintend the edu- cation of a favorite son, and died there suddenly, on Sunday evening, Jan. 14th, 1753, as he was hearing his lady read a sermon of Dr. Sherlock’s. His remains were interred at Christ Church, where there is an elegant marble monument erected to his memory. Pope sums up bishop Berkeley’s character in one line. After mention- ing some particular virtues that distinguished other prelates, he ascribes

‘ To Berkeley every virtue under heaven.’ His works! are, 1 . Arithmetica absque Algebra, aut Euclide Demonstrata, 1707. 2. Theory of Vision, 1709. 3. The Principles of Human Knowledge, 1710. 4. Dialogues between Hylas and Philonous. 5. Three Sermons in Favor of Passive Obedience and Non-resistance, 1712. 6. A Proposal for Converting the Savage Ameri- cans to Christianity, &c. 1725. 7. The Minute Philosopher, 2 volumes, 8vo. 8. The Analyst, written against the doctrine of fluxions and ma- thematics in general, as favorable to infidelity ! A Defence of Free-thinking in Mathematics, 1735. 9. The Querist, 1735. 10. A Discourse addressed to Magistrates, 1736. 11. Siris; a Chain of Philosophical Reflections and Enqui- ries concerning the Virtues of Tar Water, 1744 and 1747; which was followed by Further Thoughts on Tar Water, 1752. In 1784 a new edition of the bishop’s entire works was published in two volumes, 4to. Dublin and London.

BERKELEY, a small market town and beautiful vale of Gloucestershire, giving the title to an earldom ; about a mile east from the Severn. A religious house existed here in Edward the Con- fessor’s reign. In Berkeley Castle, founded by Roger de Berkeley, soon after the Conquest, Ed- ward II. was cruelly murdered, September, 1 327. The assassins were Sir John Maltravers and Sir Thomas Gourney, at the instigation of the queen and her paramour Mortimer. ‘ His crie,’ says Holinshed, ‘did move many within the castele and town of Bircklei to compassion, plainly hearing him utter a waileful noyse, as the tor- menters were about to murder him, so that dyvers being awakened thereby (as they themselves con- fessed), prayed heartilie to God to receyve his soule, when they understode by his crie what the matter ment.’ An apartment called the dungeon room is still shown, in which the deed is said to have been perpetrated. Berkeley is the birth- place of Dr. Jenner, the discoverer of vaccine inoculation. It carries on a good trade in tim- ber, coals, malt, and cheese, and is distant fif- teen miles S. S. W. of Gloucester, nineteen N. N. E. of Bristol, and 113 west of London.

BERKELY, a fertile and populous county of Virginia, bounded on the east and north by Po- tomac river which separates it from the state of

Maryland, on the south-east by London county, on the south-west and west by Hampshire, and on the south by Frederic county. It is forty miles in length, and twenty in breadth. Chief town, Martinsburg.

BERKESZ, a free market town, the capital of a circle in the county of

Zolnok, Transylvania. In it are several castles, and aCalvinistic church; most of the inhabitants are potters. The environs are rich in grapes, chestnuts, and fruits.

BERKESZ, a market town of Hungary, in the district of Kowar, on the borders of Transyl- vania, inhabited by aboriginal Hungarians.

BERKHAMSTEAD, or BARKHAMSTEAD, GREAT, a market town of Hertfordshire ; for- merly of more note than at present. The Romans called it Durobrivse. On the north side of the town are the remains of a castle, which is said to have been once the residence of the kings of Mercia. In this town a parliament was held in 697 ; and here William the Conqueror, having been stopped by the inhabitants cutting down the neighbouring woods, swore to maintain the laws of his predecessors. Henry II. also for a while kept his court here. The children of James I. were nursed at Berkhamstead, and that prince made it a corporate town ; but its privileges were lost in the civil wars. It is situate by the side of the river Gade and the Grand Junction canal, which run together in a line with the high road from Watford, to two miles beyond Berk- hamstead. The town consists of one handsome broad street. The church is- a large gothic struc- ture, the roof supported by twelve pillars, orna- mented with figures of the apostles. It has the remains of several chapels or oratories. The chief trade here is in bowl-turning, shovel and spoon making, &c. It lies nine miles from St. Alban's, and twenty-six north-west of London.

BERKHEYA, in botany, a genus of com- pound flowers, dedicated to the honor of Dr. John le Francq van Berkhey. Class and order, syngenesia polygamia-frustranea. Natural order compositae. Ess. ch. receptaculum cellular. Seeds hairy. Crown chaffy, serrated or fringed. CAL. of one leaf, clothed with imbricated leafy scales. The species of this genus are confined to the Cape of Good Hope and its neighbour- hood. They are generally perennial, often shrubby. They embrace Thunberg's whole ge- nus of rohria, and several of them have been referred by Linnaeus to gorteria, atractylis, or even xeranthemum.

BERKHEYDEN, or BRECKBERG (Job), was born at Haerlem in 1637. He studied landscape painting on the borders of the Rhine, and after he had made himself master of that style, prac- tised the painting of figures, taking his models from husbandmen, shepherds, and innkeepers, whom he represented at their feasts, dances, conversations, &c. His pictures were well handled, and agreeably colored, and some of them are very highly esteemed. Having heard much of the munificence of the elector palatine, and finding it difficult to procure an introduc- tion, he fixed upon a scheme, which

fortunately answered his purpose. Having often observed the elector going out to the chase, he took par- ticular notice of all the nobility in his train ;

and then, in conjunction with his brother, finished two pictures, containing the portraits of the prince, and his principal attendants. When the pictures were finished, Berkheyden prevailed upon an officer of the household to place them in a gallery, through which his highness passed at his return. The prince no sooner observed them, than he expressed the greatest surprise and satisfaction at the performance ; enquired after the artist, and ordering them to be brought into his presence, rewarded them nobly for their work. Job Berkheyden died in 1693.

BERKLEY, a township of Massachusetts, Bristol county, and fifty miles south of Boston.

BERKLEY, a town of South Carolina, the chief town of the county of the same name.

BERKLEY, a county of Virginia, which lies west of the Blue Ridge, north of Frederic county, and is separated from the state of Maryland on the north and east by Potomac river. It is about forty miles long, and twenty broad.

BERKLEY'S SOUND, a bay on the north-west coast of North America, on the east side of Quadra's Isles, seventy miles south-east of Nootka Sound.

BERKS, or BERKSHIRE, an inland county of England, which contains the whole of the ancient British principality inhabited by the Atribatii, who are supposed to have come originally from Gaul. When Constantine divided the island into Roman provinces, in 310, this principality was included in Britannia Prima, the first division, whose boundaries were the English channel on the south, and the Thames, and Se- vern on the north. On the establishment of the Heptarchy, this part of the country was included in the kingdom of the West Saxons. When Alfred, a native of Wantage in this county, divided England into counties, hundreds, and parishes, in 889 ; this division first received its appellation of Berocshire, or Berkshire. At the period of the conquest, Berkshire had a popu- lation of between 40,000 and 50,000. At present it is in the Oxford circuit, the province of Canter- bury, and

diocese of Salisbury. It is subject to an archdeacon, whose jurisdiction extends no further than the limits of the county, and divided into four deaneries, Abingdon, Newbury, Wal- lingford, and Reading. The general shape of it somewhat resembles the form of a slipper or sandal. Its boundaries are chiefly natural, and highly picturesque ; the Thames meandering in a varied line along its northern and eastern sides, throws it into such an irregular form, that, while in some places it is nearly thirty miles in breadth, in others it is less than four. On the south, the hills of Surrey and Hampshire afford a charm- ing variety of landscape ; and from the eminences in its western extremity, the eye is gratified with many enchanting scenes in the adjoining coun- ties of Gloucester, Oxford, and Wiltshire. It extends from 51Ā° 19′ to 51Ā° 48′ north latitude, and from 34-J-‘ to 1Ā° 43′ west longitude. Its extreme length from Old Windsor to Buscot is about forty-eight miles ; and its extreme breadth from Witham to Sandhurst (which, by the way, is taking rather an oblique line,) about twenty- nine miles. Its circumference is nearly 208 miles.

From the report published by order of the

House of Lords in 1 805, it appears that ‘ the area of Berkshire is 744 square statute miles, equal to 476,160 statute acres ; the number of inhabitants on each square mile, containing 640 acres, is 191 persons, making a total of 145,289.’ Dr. Beeke, professor of modern history in the university of Oxford, from the trigonometrical survey taken by order of government, makes Berks, including some insulated parts, to contain about 464ˆ500 square acres, according to the following distribution : ā

Acres. Arable land about 255,000

Meadows and dairy land in the vale . 72,000 Sheepwalks, chiefly unenclosed . . 25,000 Other dry pastures, parks, &c. . . . 30,000

Wastes, chiefly barren heaths . . . 30,000 Woods, copses, &c 30,000

Other space occupied by buildings, courts, fences, roads, rivers, &c.

~_ _nft

‘

Total . . 469,500

The great natural divisions of Berkshire are four. 1. The Vale,

generally called the White Horse Vale, extending from Buscot to Streatley, and bounded on one side by the Thames, and on the other by the White Horse Hills, a continu- ation of the Chiltern range. 2. The Chalky Hills, which run nearly through the centre of the lower part of the county. 3. The Vale of Ken- net. 4. The Forest division, commencing on the east of the Loddon, and extending the breadth of the county to Old Windsor. The principal rivers and streams are the Thames, the Kennet, the Loddon, the Lambourn, the Ock, the Au- bourn, the Emme, and the Broad water. Most topographical writers take notice of a peculiarity in the Lambourn, that its stream is always full in summer, and almost lost in winter; but Mr. Lysons denies this, and contends that it has throughout the whole year an equal fulness.

The substratum of this soil consists generally of chalk and calcareous matter, or of gravel, with clay at greater or less depths. The vale is remarkably fertile, and its prevailing soil, is a strong, gray, calcareous loam, in which vegetable mould is intimately mixed with cretaceous earth. Among the chalky hills, there are intermediate tracts of considerable fertility, where the super- ficial stratum is composed of vegetable mould, mixed with chalk, flint, and gravel. In general the hills form excellent sheepwalks, being co- vered with a fine turf. In the vale of Kennet gravel soils predominate, varying, however, considerably in their qualities, admixtures, and depths from the surface. In this district there is a peculiar kind of peat, which is equally valuable as fuel or manure. This has been defined by Kirwan as a ‘ stratification of fossil trees in all directions, mixed with a reddish or brownish- red slimy moss, formed of the carbonic particles of vegetables, and united with their astringent juices and calorific oleaginous ffficulae.’ Sir Humphrey Davy found it to consist of

Oxide of iron 48

Gypsum 32

Muriate of sulphur and potash . 20

BERKS.

The northern parts of the forest district have a gravelly soil, diversified by strong loam and clay ; the central parts a tenacious clay ; and the southern parts sand and gravel. At Catsgrove, near Reading, there is a stratum of chalk, thirty feet in thickness, lying upon a bed of flint. Above die chalk is a stratum of sandy clay, about a foot thick, covered by a layer of oyster- shells, two feet in depth. Similar strata of sand, with oyster-shells, are found for two miles round Reading, at

various depths, from fifteen to twenty-five feet. Here likewise have been discovered an inferior kind of ochre, and dif- ferent species of echini. Fossil-shells, sharks' teeth, parts of fishes, and other marine produc- tions, are also found in various parts. Pipe- clay and potters-clay are in considerable quan- tites ; and shell-marl was discovered in the vale of Kennet in 1794. There is a mineral spring at Cumnor which possesses a mild cathartic quality ; another a mild chalybeate at Sunning- hill, near Windsor; and Gorrick-well, in the parish of Oakingham, is strongly impregnated with steel.

The greatest portion of the land in Berkshire is freehold, though there are copyholds in different parts ; and leases on lives, and leases renewable every seven years, under deans and chapters, and other corporate bodies, are pretty frequent. The farms are of all sizes, which induces men of various amounts of capital to enter into agri cultural pursuits; and while rank and fortune are nowhere more respected or more beneficial in their influence, there is no part of England where a virtuous independence is more general. The late Mr. Pitt is stated to have said on one occasion, ' that no minister of this country could command ten votes in Berkshire.' The total amount of real property, assessed under schedule A, for the property-tax in Berkshire, in 1815, was Ā£652,082 ; and the amount of the poor rates the same year was Ā£122,352, at the rate of 3s. 9d. in the pound.

The soil is well adapted to wheat and barley, great quantities of which are grown, the latter being chiefly sent to London after being made into malt. There are many large dairy farms, particularly in the White Horse Vale : the cattle and sheep are large and valuable, and of the latter there is a peculiar breed ; the distinguish- ing qualities of which are their great size, their height on the legs, and weight when fatted : they have black faces, Roman noses, black or mottled legs and long tails. The Berkshire swine have also been long famous.

No inland county possesses more advantages in point of navigation than Berkshire. In its western division, no part of the triangle formed by the Thames on the north-east, the Kennet on the south, and the Wilts and Berks' canal on the west, is distant more than twelve miles from water-carriage ; and in the east and south-eastern parts, the distance is nowhere greater from the Basingstoke canal. The Kennet and Avon canal, not long since completed, begins a little above Newbury, and runs nearly parallel to the Kennet, till it enters Wiltshire in the neigh- bourhood of Hungerford.

Berkshire is divided into twenty hundreds,

containing twelve market towns and t!Ā»ree ou- roughs. It sends nine members to parlia- ment ; the county three ; Reading, Windsor, and Abingdon two each. The twelve market towns are Abingdon, Farringdon, Hunger- ford, East Ilsley, Lambourn, Maidenhead, Newbury, Oakingham, Reading, \Vallingford, Wantage, and Windsor; Ilsley is a noted sheep market, held on every alternate Wednes- day from Easter to Midsummer ; 20,000 sheep are sometimes sold in a day-, and the annual average exceeds 250,000; Oakingham has a large supply of poultry, chiefly bought for the London market; and Farringdon is famous for its bacon and hams. This county is esteemed healthy, even in the valleys ; it produces abund- ance of timber, principally oak and beech, and has reputable manufactures of woollen, sail- cloth, and paper. At Bisham there are copper- works, rather at present in a declining state, but the mills have been thought the most powerful and complete in the kingdom for rolling sheet copper, making bolts for ship-building, and hammering copper pans and bottoms. From 600 to 1000 tons of copper have been used here annually.

This county has long been distinguished as containing a favorite royal residence ā the only one, indeed, that our kings possess worthy the name ā at Windsor. The castle was founded by William the Conqueror. Edward III. was born here, where he afterwards instituted the illustrious order of the garter ; and its forest has long af- forded the pleasure of the chace to our monarchs. The park is stocked with numerous herds of deer, and a part of it has been much improved by the establishment of experimental farms, ma- naged under the immediate direction of his late majesty. In this county are also Frogmore, Cumberland-Lodge, Cranbourn-Lodge, and other residences belonging to the royal family, besides above 150 noblemen and gentlemen’s seats.

The Roman Watling-street, from Dunstable, enters Berkshire at the village of Streatley, be- tween Wallingford and Reading, and crossing this county proceeds to Marlborough. Another Roman road from Hampshire, the Spinae of Camden, enters this county, reading to Reading and Newbury, where it divides : one branch extends to Marlborough in Wiltshire, and the other to Cirencester in Gloucestershire. A branch from the Icknield-street proceeds from Wallingford to Wantage. There is a Roman camp near Wantage on the brow of a hill, of a quadrangular form ; there are other remains of en- campments at East Hampstead, near Oakingham, White Horse Hill, and Pusey ; and upon Sino- dunhill, near Wallingford. At Lawrence Walt- ham is a Roman fort, and near Drenchworth is Cherbury castle, a fortress of Canute. Uffing- ton castle, near White Horse Hill, is

supposed to be Danish; and near it is Dragon Hill, sup- posed to be the burying-place of Other Pendragon, the British monarch. Near White Horse Hill are the remains of a funeral monument of a Danish chief, slain at Ashdown by Alfred. On White Horse Hill, near Uffington, is the outline of what is called a horse, although it bears quite as great a resemblance to a greyhouTKl. It is

formed by cutting away the turf from the face of the chalk. Its origin is uncertain, but Mr. Ly- sons observes, that a singular figure appears fre- quently on the British coins, resembling this animal, and he, in consequence, ascribes this piece of antiquity to the ingenuity of the Britons. Specimens of Saxon architecture are found in Avington church, and the nave of the church at Windsor. The churches of Uffington, Englefield, and Farringdon, and the chapel of Little Farringdon, are superior specimens of the early Gothic : and of the later Gothic, there is no existing exhibition more complete or beau- tiful than St. George's chapel, Windsor.

Berkshire has occasionally been the scene of military operations, from the time of Offa until the Revolution. During the civil wars was fought the first battle of Newbury, in which lord Falkland lost his life, in September, i643, and on the 10th of October of the following year, a second battle of that name, in which both par- ties claimed the victory ; the royal party was ex- pelled from the whole county, excepting Wal- lingford, in 1646. In 1688 there was a skirmish at Reading, on the eve of the revolution.

The population of Berkshire, in the census of 1832, was as below: ā

Males 65,546

Females 66,431

Total . . . 131,977 Families chiefly employed in agri-)

culture ..... $

Families chiefly employed in trade, }

&c. 5

All other families 4,158

Average number of persons in each)

family ..... $

The increase of population at several follow- ing periods has been thus stated : ā

Dates.

1750 ! 1801 . 1811 . 1821 1832

Inhabitants.

92*700

112,800 122.300 134,700 145,289

Increase. 6nt in 5Ā°

21 a per cent, in 51 years. 8 per cent, in 10 years. 10 per cent, in 10 years.

See Lyson's Magna Britannia; Manor's Agri- cultural Report of Berkshire ; Beauties of Eng- land and Wales; Smith's Map of the Strata of England, and Memoir.

BERKSHIRE, the most westerly county of Mas- sachusetts. It is bounded on the north by the State of Vermont, on the east by Hampshire county, on the west by the State of N ew York, and on the south by the State of Connecticut. It is fifty-one miles from north to south, and eighteen from east to west, and is divided into twenty- five townships. This county is considerably mountainous and hilly; in some of the hills are found quarries of marble. The chief town is Stockbridge.

BERKSHIRE, a township of Vermont, in Frank- lin county.

BERLIN, a city of Germany, formerly the ca- pital of the electorate of Brardenburgh, and uow of the whole Prussian dominions ; one of

the largest and best built cities in Europe. The streets are broad, strait, clean, and well paved ; and some of them very long and elegant. There are also several large and beautiful squares, with pleasant walks. It is surrounded with handsome gardens, which produce excellent fruit. The Spree, that crosses the city, has com- munications

by canals with the Havel, Oder, and Elbe, as well as with the Baltic Sea and German Ocean, which greatly facilitate commerce. Ber- lin is divided into five parts, once distinct towns, without reckoning the suburbs, which are ex- tensive. They were first united under one magistrate in 1714. In all, the city contains thirty-three churches, principally Lutheran and Calvinistic, with a few for the Roman Catholics. Contrasting Berlin with Hamburgh, Dr. Neale says, ‘ None of the offensive peculiarities in the appearance of the latter city, are here visible ; the traveller, in the course of sixty miles, seems to have borrowed the wings of time, and out- stripping the slow and gradual progression of the arts for four centuries, finds himself, on a sudden, placed as it were in the midst of an Italian city, surrounded with wide and dry streets, spacious squares, avenues, bridges, porticoes, palaces, triumphal arches, statues, and cupolas ; and, in- stead of the jutting abutments of mean brick buildings, beholds on all sides the ample pro- portions of stately edifices ā the triumph of hu- man industry over the sterility of nature, a modern Palmyra raised by the wand of an en- chanter amidst the hyperborean deserts of Bran- denburg.’ Frederic II. is supposed to have expended yearly in the improvement of this city 400,000 dollars, about Ā£65,000 sterling, and in that of Potsdam 200,000 dollars, Ā£32,500; the police is well regulated, and the produce of the excise is above Ā£20,000 sterling. In the suburb called Spandau is a royal palace fur- nished in exquisite taste. Adjoining to Stralau is a house and garden belonging to the king. The royal gate of the city is defended by a half moon, and two bastions, covered with brick; it fronts the royal street, which is one of the longest and most frequented in the city, and it contains several handsome houses, particularly those be- longing to the ministers of state. The royal street is crossed by five others. On the new bridge, which is of stone, over the Spree, is an equestrian statue of William the Great, which is esteemed an exquisite piece of workmanship. After passing this bridge, the king’s palace ap- pears, which is a superb edifice, four stories high. No palace in Europe is more magnifi- cently furnished. Its fine gardens, however, are now converted into a place of arms. The king’s stables near the palace, are large, and front the great street. The mangers are of stone, and the pillars, that divide the stalls, of iron, adorned with the king’s cypher. Over the riding- house is a theatre, where plays have been acted and balls given for the entertainment of the court. The arsenal consists of four rectangular buildings, forming a cour* in the middle; each front has three large porticoes. On the principal gate is a medallion of Frederic II. in bronze. We follow, in the rest of our description, the main divisions of this noble city.

BERLIN.

I. Berlin Proper, founded by the margrave Albert, surnamed the Bear, in the year 1163, contains thirty-nine streets. The best buildings in this part of the city are the post-office, the governor's house, and the council-chamber; the Calvinist parish church, and the Joachimsthal academy; the garrison church, built in 1722, and adorned with the portraits of generals Schwerin, Keith, Winterfield, Zeithen, and Von Xleist, the poet. Here also are deposited a number of colors and other trophies taken in the tield. The other buildings are the Lutheran parish churches of St. Nicholas and St. Mary, the Brandenburg county meeting-house, the Jewish synagogue, the new guard-house, the French church, the united Berlin and Coin Lutheran academy (the funds for which were left by a Ve- netian merchant), the royal arsenal, from which the whole Prussian army is supplied with cloth- ing; Frederic's hospital, in which above 800 children are educated gratis; the porcelain ma- nufactory, the seminary for cadets, in which 224 young noblemen are instructed in language, sciences, and the exercises of the field ; the new theatre, &c. The suburbs of Berlin Proper are the King's quarter, the Spandau quarter, So- phienstadt, and the Stralau quarter. In these are to be seen the large workhouse, the new mint, the ..public storehouse, the summer palace of Mon Bijou, with its pleasure gardens, the exten- sive hospital of La Charite, the sugar refineries, and the hospital of invalids, built in 1748, and fitted to contain above a thousand inmates. About two miles from the town is the mineral spring called Frederic's Well, with a bath, and other conveniences; it was first opened in 1761. Across the main branch of the Spree, between Berlin Proper and Coin, there is a fine free-stone bridge, of five arches, and 160 feet in length, or- namented with the statue of the elector Frederic William.

II. Coin, or Cologne on the Spree, also founded by the margrave Albert, and at one time surrounded with walls and ditches. The Spree here divides itself into two branches, form- ing a sort of island on which the town is built. The streets are twenty-five in number, regular, and well built. The most remarkable edifice here is the royal castle, 430 feet in length, and 276 in breadth. In it is the king's library, which contains upwards of 200,000 volumes, and re- ceives a frequent increase, as two copies of every new book must be deposited in it by the pub- lishers. In this castle are also to be seen the cabinet of antiquities, minerals, and medals, with the museum of natural and artificial cu- riosities. In this quarter of the town are the principal government offices, such as the council of state, the general directory of war, finance, and royal domains, the war treasury, &c. Near the castle stands the magnificent cathedral be- longing to the Calvinists, first opened for public worship in 1750. The other objects worthy of

notice, are the new custom-house, the royal mews, the gallery of paintings, the military school, in which fifteen young noblemen are educated for a military life at the expense of the state, the market-place, the new tilt-yard, &c. New Coin, which once formed a part of the old

town, consists of four streets, running paiallel to the bank of the Spree. Here are large store- houses of salt and iron, with sugar refineries, and the observatory of Krosigke. The suburb of Coin, or, as it is sometimes called, of Co- penick, is finely situated, and was first included within the outer walls in 1736.

III. Fredericswerder, or Frederic's Island, was founded by the elector Frederic William I. and is composed of nineteen streets. The prin- cipal church is divided between the German and French Protestants, and at some distance fram it is the French academy, as also the Fredicswer- der academy, which was rebuilt in 1794. Other excellent establishments in this part of the town are the medical college, the old custom-house, the old mint, the royal hunting lodge, in which is at present the royal bank, the palaces of the margrave Von Schwedt and the prince of Prussia, the royal arsenal and foundry, the stamp-office, &c. In this quarter of the city, likewise, is the principal Lombard, where money is lent on goods.

IV. Dorotheenstadt, or New Town, founded by the same elector, and named after his wife. It lies between Fredericswerder, Fredericstadt, and the Spree, and is not of great size, having only six regular streets, but in these are some splendid buildings. We notice the Lutheran, German, and French reformed church, so called from its being used in common by all three com- munions, the palace of prince Henry, now the university, the king's mews, the building for- merly occupied by the academy of painting, sculpture, and architecture ; the royal academy of sciences, with its elegant hall, library, and cabinet of medals, the observatory, the anato- mical theatre, the handsome opera-house, the principal Catholic church, built in 1773. Here also is a fine alley of linden trees, above half a mile in length, and 160 feet wide, with various other promenades and labyrinths. The univer- sity was instituted so lately as 1810, and is rather the union of several former seminaries than a new establishment ; the number of students in the first session was 232.

V. Fredericstadt, founded by the elector Fre- deric III. in 1688, is the largest of the five towns of which the city of Berlin is composed, and contains twenty-three broad and well-built streets, of which Leipziger-strasse is the most re- markable for beauty, and Fried rick-strasse for

length. Here are situated the principal courts of law, the gold and silver fabrics, connected with the 6rphan-house at Potsdam, the porcelain manufactory, the magnificent palace of the grand master of the order of Malta, the palace of count Reuss, the Jerusalem, Trinity, and French churches, and the Bethlem church, belonging to the Lutherans of Bohemia. Here also are the statues of general Schwerin and Winterfeld, and the excellent seminaries called Realschule, in which are taught the languages, and all the arts and sciences of civil life.

Berlin contains a population of about 1 80,000 individuals, besides the military, who are seldom less than 30,000. Nearly one-fourth af the people \ are employed in various manufactures, the principal of which are silk, porcelain, cotton,

linen, laces, jewellery, clocks and watches, and several metallic articles. In the silk manufactories, the number of looms is above 2000, employing in all nearly 3000 workmen, and working silk to the value of about Ā£400,000 a-year ; of this nearly one-fourth is exported. This city was taken October 9, 1 760, by an army of Russians, Austrians, Saxons, &c. who totally destroyed the magazines, arsenals, and foundries, and seized an immense quantity of military stores, and a number of cannon and arms. Berlin again suffered the fate of a captured city, after the battle of Jena, in 1806. It is forty-two miles north-west of Frankfort on the Oder, ninety north of Dresden, and 300 north by west of Vienna. Long. 13Ā° 31′ E., lat. 52Ā° 32 N.

BERLIN, a flourishing town of York county, Pennsylvania ; situated on the south-west side of Conewago creek, at the confluence of a small stream. It is thirteen miles west of York-town, and 101 west of Philadelphia.

BERLIN, a thriving town of Somerset county, Pennsylvania ; situated on a branch of Stony creek, which empties into Conemaugh river, on the west side of Allegany mountam. It is thirty miles west by south of Bedford, and 240 west of Philadelphia.

BERLINS, though named from the preceding city, are said by some to be the invention of the Italians, and the word to be derived from berlina. The berlin is a very convenient ma- chine to travel in, being lighter, and less apt to be overturned than a chariot. The body is hung

high, on shafts, by leather braces ; and, instead of side windows, some have screens to let down in bad and draw up in good weather.

BERLINA, a name given in Italy to a sort of stage whereon criminals are exposed to public shame.

BERLUCCIO, in ornithology, the name of a small bird of the bortulanus kind, and much re- sembling the yellow-hammer, but something smaller, and longer-bodied.

BERMUDA HUNDRED, a port of entry, and post-town of Virginia. It is situated in Ches- terfield county, on the west side of James river, a few miles above the junction of the Appomat- tox, and about nineteen direct below Richmond. It is, 315 miles south-west by south of Phila- delphia.

BERMUDAS, or the SUMMER, or SOMER'S ISLANDS, a cluster of islands in the Atlantic Ocean, lying almost in the form of a shepherd's crook, in long. 64Ā° 0′ W., lat. 32Ā° 20′ N. be- tween 200 and 300 leagues distant from the nearest place of the continent of America, or any of the other West India Islands. The whole number of the Bermudas is said to be about 400, but very few of them are habitable. The principal is St. George's, which is not above sixteen miles long, and three at most in breadth. St. George's town is at the bottom of the principal haven ; and is defended by four forts, which com- mand the entrance. The town has a handsome church, a library, and a good town-house, where the governor, council, &c. assemble. It is uni- versally agreed that the climate of this and the other Bermudas has undergone a surprising altera- tion for the worse since they were first discovered ;

the air being much more inclement, and the soil more barren, than formerly. This is ascribed to the cutting down those fine spreading cedars, for which the islands were famous, and which sheltered them from the blasts of the north wind at the same time that it protected the under- growth of the delicate plants. In short, the Summer Islands are now far from being desirable spots and their natural productions are but just sufficient for the support of the inhabitants. The cultivated districts are appropriated to the growth of Indian corn, pulse, fruits, and vegetables. The first yields two crops a year, one harvest being in July, and the other in December. In 1785 the growth of cotton was attempted, but with no great success, there not being more than 200 acres appropriated to it. At first tobacco was raised upon these islands ; but being of a worse quality than that growing on the continent, the trade is now almost closed. Large quantities of ambergris were also

originally found upon the coasts, and afforded a valuable commerce ; but that trade is also reduced, as well as their whale trade. The Bermudas, however, might still pro- duce some valuable commodities, were they pro- perly cultivated. About three or four feet below the surface, a chalky stone is found which is easily chisseled, and is exported for building houses in the West Indies. Their palmetto leaves, if properly manufactured, might turn to excellent account in making hats : and their oranges are still valuable. The soil is also said to be excellent for the cultivation of vines. The chief resource of the inhabitants for subsistence is in the remains of their cedar wood, of which they fabricate small sloops, with the assistance of the New England pine, and sell them in the American ports. Their turtle trade is also of value ; they rear a great variety of tame fowl, and have wild ones in vast plenty. The red wood peculiar to these islands, feeds worms, which change to flies, a little larger than cochineal, instead of which they are used. Another plant peculiar to them is a kind of creeping darnel, whose root is most powerfully emetic. Fish likewise abound upon the coast. Among the insects, the spider is remarkable for its size, and its beautiful colors diminish the disgust it in- spires : Its web is in color and substance a per- fect raw silk, and running from tree to tree, small birds are sometimes so entangled in it, as hardly to be able to escape. No species whatever of venomous animals are found here. All the at- tempts to establish a regular whale fishery on these islands have hitherto proved unsuccessful. The water, except that which falls from the clouds, is brackish ; and the same diseases reign here as in the Carribee Islands. They have seldom any snow, or even much rain ; but when it does fall, it is with great violence, and the north or north- east winds render the air very cold. The storms come with the new moon : and if there is a halo or circle about it, it is a sure sign of a tempest, which is generally attended with dreadful thunder and lightning. There are but two places on the large island where a ship can safely come near the shore, and these are so well covered witn high rocks, that few will choose to enter it with- out a pilot ; a vessel of ten tons burden cau

scarcely enter the roads. The Bermudians have been characterised as remarkable for the kind treatment of their slaves, and their general good morals. The women are thought handsome, but given to dress. A royal dock-yard and naval arsenal have lately been established here for refitting the king’s ships, belonging to the North American station. This has consequently in- creased the population of the Archipelago,

which is estimated at about 70,000, half being slaves.

Other of the Bermudas are St. David's, Cooper's, Ireland, Somerset, Long Island, Bird Island, and Nonsuch. A few villages and farms are scattered over most of them.

The official value of the imports and exports of the Bermudas was

Imports. Exports.

For 1809, Ā£11,648 Ā£34,279

1810, 1,137 36,613

The north point of these islands lies in lat. 32 34′ N., long. 63Ā° 28′ W.

John Bermudas, a Spaniard, is commonly said to have discovered these islands in 1527 ; others attribute the discovery to Henry May, an En- glishman, who was shipwrecked upon St. George's. Shortly after, the deputy governors of Virginia were also wrecked here, and built each of them a new ship of the cedar they found, in which they sailed to Virginia. On their arrival, that colony was in such distress, that lord Delawar, upon (he report which his deputy governoi-s made him of the plenty they found at Bermudas, des- patched Sir George Summers to bring provisions from thence to Virginia. Sir George, after a tedious voyage, reached the place of his destina- tion, where soon after his arrival, he died, and the sailors he had left departed in their cedar ship for England. Two sailors, Carter and Waters, being apprehensive of punishment for their crimes, had secreted themselves, however, when Sir George was first wrecked upon the island, and had ever since lived upon the natural productions of the soil. Upon the second ar- rival of Sir George, they enticed one Chard to remain with them : but, differing about the so- vereignty of the island, Chard and Waters were on the point of cutting one another's throats, when they were prevented by the prudence of Carter. Soon after they found a piece of ambergris weighing about eighty pounds, besides smaller pieces, which in those days were sufficient, if properly disposed of, to have made each of them master of a fortune. They, therefore, came to the resolution of transporting themselves, and it, in an open boat to Virginia or Newfoundland. In the mean time, the Virginia Company claimed the property of the Bermudas islands ; and sold it accordingly to 120 persons of their own so- ciety, who obtained a charter from king James. This New Bermudas Company, as it was called, now fitted out a ship with sixty planters on board to settle on the Bermudas,

under the command of Richard Moor. The new colony arrived upon the island just at the time the sailors were about to depart with their ambergris ; which Moor having discovered, he immediately seized and disposed of it for the benefit of the company.

So valuable a booty gave them abundant spirits, and the adventurers settled themselves upon St George's island, where they raised cabins. Moor, we are told, built eight or nine forts or rather blockhouses, and planned out the town of St. *ā¢ George as it now stands. The fame of this set- tlement awakened the jealousy of the Spaniards, they appeared off St. George's with some vessels ; but being fired upon from the forts, sheered off; though the English at that time were so ill pro- vided for a defence, that they had scarcely a barrel of gunpowder on the island. During Moor's government, the Bermudas were so in- fested with rats, which had been imported into them by the English ships, that they even covered the ground, and had nests in the trees. This ca- lamity lasted five years, and at last suddenly ceased. Moor was succeeded by a Captain Daniel Tucker, who improved upon all his pre- decessor's schemes, and particularly for the cul- ture of tobacco. In 1619 Captain Tucker re- signed his government to Captain Butler. By this time the high character which the Summer Islands bore in England rendered it fashionable for men of the highest rank to encourage their settlement ; and several of the first nobility of England purchased plantations here. Captain Butler brought over with him 500 passengers, who became planters on the islands, and raised a monument to the memory of Sir George Summers. The island now contained about 1000 whites, and Captain Butler applied himself to give it a new form of government by introducing an assembly : the government till this time being administered only in the name of the governor and council. A body of laws was likewise drawn up. We shortly after read of 3000 English being settled in the Bermudas, and several persons of distinction had the curiosity to visit them from England. – Among these came Waller the poet, who has celebrated this spot in one of his poems, as the most delightful place in the world. The accounts given of the serenity of the climate, induced the ingenious bishop Berkeley to form a plan for founding a college there, for the purpose of propagating Chris- tianity among the American Indians. In 1725 he published a proposal of this kind in London, which after some time was approved by the go- vernment, and subsequently brought into the House of Commons by Sir Robert Walpole. A charter was ultimately granted by his Majesty for the establishment of a college, to be called St. Paul's College, in Bermudas, to consist of a president and nine fellows, who were bound to maintain and educate the children of American Indians at Ā£10 a

year each. To promote this philanthropic purpose, the parliament passed a vote for Ā£20,000. In 1728 Berkeley sailed to America to carry his intentions into effect ; but after he had been kept waiting there for some time, the money was not paid, and the scheme was relinquished.

BERN, or BERNE, a canton of Switzerland, which holds the second rank in the diet; although it is by far the largest, containing, before the late revolutions, almost one-third of the whole country. Its present boundaries are Uri, Underwwlden, and Lucerne on the cast ; Aargau and Solothurn

on the north ; the Jura mountains, Fribourg, and Vaud on the west, and Valais on the south. It was increased in 1815 by the greater part of the bishopric of Bale, and the town and terri- tory of Bienne ; but had previously lost, in 1798, more than a fourth of its former extent, the two new cantons of Aargau and Vaud (including the bailiages of Peterlingen and Avenche) being erected out of it. The portion left is divided into the five districts of Bern (the town), the Oberland, the Landgericht, the Emmenthal, and the Seeland, each of which is subdivided into thirteen tribes or corporations. The large council now consists of 195 members, who are chosen by these corporations, and form the legislature of the canton, a committee of which bears the name of the small council, and has at its head two magistrates, possessed of the executive power. The great council assembles for only three weeks in the half year ; the other i? per- manent. The established religion is Calvinism, nearly the same with that of the church of Scotland. The ministers are divided into dean- eries and classes, and hold yearly chapters and synods. They are kept in a greater dependence on the civil power here than in the other cantons, and none suffered to interfere in matters of state; but religious discipline is here very strict. The canton is divided into twenty-four upper baili- wics, and comprehends 3667 square miles, and 338,009 inhabitants. The southern boundary, viz. that on the side of the Valais, consists of a chain of very high mountains ; towards the north the country begins gradually to flatten, and is in many places highly productive in fruit, vines, and corn. Of the last of these articles, however, the total quantity yielded is not sufficient to supply the domestic consumption. In the moun- tainous parts the principal object of attention is the breeding of cattle and horses, the export of which, as well as of cheese, is very extensive. Salt is found in a few places. Accounts are kept in batzen and kreutzers : a piece of ten batzen is also called a frank, and is worth forty-four Rhenish kreutzers, or about 15d.

sterling.

Bern joined the Swiss confederacy in 1353, and enjoyed, from its size and political importance, the next place among the cantons, to Zurich. The legislative power was vested in the great council of 299; the executive was in the hands of the small or daily council of twenty-seven, chosen out of the former. This canton, at an early period of the Reformation, withdrew from the church of Rome, and by secularising the re- venues of its numerous and opulent ecclesiastical establishments, materially enriched the public treasury. The change of faith was probably at- tended by few excesses, as many ancient mo- nastic buildings remain. An aristocratic spirit, however, gradually prevailed in the constitution, and in 1764 a law was passed, by which 243 patrician families were declared the only persons eligible to seats in the council, and consequently to offices of trust or distinction. This step ex- cited great clamor, particularly among the in- habitants of the Pays de Vaud, who considered themselves treated as a conquered people; and on the entry of the French in 1798, the aristo- cratic party was overthrown, and a new constitu-

tion framed. Buonaparte erected the Pays de Vaud into an independent state, thus depriving Bern of the most profitable portion of its territory ; and the congress at Vienna, in 1815, when it professed to bestow on it an equivalent in the Eveche, confirmed the disruption of the Pays de Vaud. What remains of this canton, however, is unrivalled in its scenic attractions. In Ober- land the range of the Alps is fully as magnificent, and perhaps bolder in its outline than that of Chamouni ; the verdure and the foliage are en- chantingly rich, and the cascades are both nu- merous and beautiful. At Breintz the Giesback has seven successive falls; and the Staubback is thrown down above 900 feet of perpendicular descent. At Hindelbank, about seven miles from Berne, is a chef d' oeuvre of Nahl, the monument of Mad. de Langhans, which the tra- veller should also notice : nor, if objects of phi- lanthropy have charms for him, will he omit to visit the well ordered seminary of Professor Fel- lenberg at Hofwyl, whose system of education, both for the poor and wealthy, is admired throughout Europe. The buildings which were only finished in 1822, are more considerable in extent than those of almost any other public institution in Swisserland. The prevailing lan- guage is German, but the higher orders speak French. The revenues of the state amount to 600,000 dollars. The canton furnishes 5824 to the confederate army, and 104,080 francs to their support. The chief manufacture is linen, of which 10,000 bales are exported annually by way of Lyons, silk goods, stockings ; and clocks and watches are also made in the town. Hides, horses, cattle, cotton cloth, and cheese are also exported.

BERN, a city of Switzerland, and capital of the preceeding canton, is situated upon a penin- sula formed by the Aar. It is said that the taking of a bear by Berchtold V., Duke of Zaeringhen, on the day on which the foundation of this city was laid, gave occasion to its name ; hence it is often in Latin called Arctopolis, i. e. the city of the bear, and has a bear for its coat of arms. Near the Neufchatel gate are always kept a number of bears, in two enclosures, with trees for them to ascend and play upon. The houses are mostly built of white free-stone, and in the principal streets, have piazzas or arches under them. Most of the streets are paved with flints, and traversed by a canal lined with stone, which is brought from a considerable distance. The city is large, standing almost in the middle of the canton, and containing several churches, of which one is called the Great Church, and its first minister the dean, who is the head of the city clergy. From an inscription near the door of this church, it appears that the first stone of it was laid in 1421. It is a fine gothic edifice. In this city is also a college, a large public library, and a museum; a guildhall; a well stored arsenal ; and sereral hospitals. In the arsenal is a wooden statue of the famous William Tell. On the east side of the city is a handsome stone bridge ; and near the great church a very fine platform, several hundred feet in height, which makes a most delightful walk.

Bern stands 1700 feet above the level of the lake of Geneva, from which city it is seventy-

five miles distant ; and fifty from Basle and Zurich. Population 12,900.

The BERN MACHINE is an engine for rooting up trees, invented by Peter Sommer, a native of Bern in Switzerland. There is nothing in the construction of this machine which entitles it to a particular description. The contrivances for tearing up trees that exhibit ingenuity or origi- nality of construction, will be found under TREES. See on this subject also Young's Natural Philo- sophy, vol. ii. p. 199.

BERNACLE, in ornithology, a species of goose. See ANAS and BARNACLE.

BERNARD (Dr. Edward), a learned astro- nomer, linguist, and critic, was born at Perry St. Paul, on the 2d of May, 1638, and educated at Oxford, where he became, in 1669, Savilian professor of astronomy. His principal works are : 1. Tables of the Longitude* and Latitudes of

the Fixed Stars. 2. De Mensuris et Ponderi- bus Antiquis Libri Tres, 8vo. Oxon. 1688. 3. Orbis eruditi Literatura a Charactere Samari- tico deducta, printed at Oxford, from a copper- plate, on one side of a broad sheet of paper, pre- senting at one view the alphabets of different nations. 4. Etymologicflm Britannicum, &c. printed at the end of Dr. Hick's Grammatica Anglo-Saxonica, &c. 4to. Oxon. 1689. 5. Chro- nologiae Samaritanae Synopsis, in two tables, besides notes on part of Stephanus Byzantinus ; and on Cotelerius' edition of the ancient fathers.

BERNARD (St.), the first abbot of Clairvaux, was born A. D. 1091, in the village of Fontaine, in Burgundy. He acquired so great a reputa- tion by his zeal and abilities, that all the affairs of the church appeared to rest upon his shoulders, and kings and princes seemed to have chosen him for a general arbitrator of their differences. It was owing to him that Innocent II. was ac- knowledged sovereign pontiff; and after the death of Peter Leonis, anti-pope, that Victor, who had been named successor, made a voluntary ab- dication of his dignity. He convicted Abelard at the council of Sens, in 1140. He opposed the monk Raoul ; he persecuted the followers of Arnold of Brescia; and in 1148 he obtained the condemnation of Gilbert de la Pore6, bishop of Poitiers, and Eon de 1'Etoile, at the council of Rheims. Bayle says he thus verified his mother's dream, that she should bring forth a white dog, whose barking should be very loud ! He preached up the crusade under Louis VII. and when com- plaint was made that he had brought an infinite number of Christians to slaughter, without going out of his own country, he said that the sins of the Croises had hindered the effect of his pro- phecies. He is said to have founded 160 mo- nasteries, and to have wrought a great number of miracles. He died August 20th, 1153, aged sixty-three. The best edition of his works is that of 1690, by father Mabillon.

BERNARD (Sir Thomas), a modern scholar and philanthropist, was the son of Sir Francis Bernard, formerly governor of New Jersey, and afterwards of Massachusetts Bay. He was edu- cated at Harvard College, in New England, after which he came to this country, and studied the law at Lincoln's Inn. He was called to the bar ia 1780, but practised only as a conveyancer.

Appointed treasurer to the Foundling Hospital in 1795, he greatly improved the estates be- longing to that charity ; and he was the principal projector and supporter of the Society for Bet- tering the Condition of the Poor. Sir Thomas likewise displayed a considerable taste in the fine arts, and was active in the establishment of the Royal Institution and the British Gallery. In 1809 he succeeded to the title of

baronet, and was soon afterwards made doctor of civil law at Oxford. He was also chancellor of the see of Durham. His publications chiefly relate to the management or instruction of the poor ; except a work entitled Spurina, or the Comforts of Old Age, 8vo. which exhibits considerable learning. He died at Leamington Spa, in Warwickshire, in 1818, aged sixty-seven.

BERNARD CASTLE, a market town in the parish of Gainsford, Darlington Ward, Durham, 246Ā£ miles north from London, on the banks of the river Tees. It was originally built by Bernard Baliol, great grandfather to John Baliol, king of Scotland. The castle, belonging to the earl of Darlington, is of great antiquity. The principal street is spacious, and nearly three-fourths of a mile long, and the houses neat. The market- house is an open structure of fine free-stone, covered with slate, and surrounded by an octa- gonal colonnade ; and here is held one of the greatest corn-markets in the north of England. About two miles from this place a sulphurous water springs from a rock in the bed of the river Tees. This town was formerly famous for the manufactory of white leathern breeches, and for tammies or Scotch camlets : in the manufacture of which, a number of weavers are yet employed. Here is an ancient hospital, founded by John Baliol. Here are four annual fairs, and a market on Wednesday.

BERNARD (St.), THE GREAT, in geography, a mountain of Switzerland, in the Valais, on the frontiers of Piedmont, fifteen miles N.N.W. of Aosta. It has long been celebrated for its ro- mantic and picturesque scenery, and is always visited by travellers. Hannibal has been sup- posed to have conducted the Carthaginian army by this pass into Italy; and it was by the same route that Buonaparte led his troops to the plains of Lombardy before the battle of Marengo. The summit of this mountain is about 11,000 feet above the level of the sea; the highest pass is about 8000 feet. Here a monastery has been for nearly nine centuries devoted to the accommodation of all travellers who choose to stay to refresh themselves; and they and their horses are most hospitably entertained gratis for three days. When the weather is bad, the monks and their servants, assisted by a peculiar breed of dogs, traverse all pails of the mountains in search of travellers who have lost their way. When every trace of ? road has been defaced by a fall of snow, the dogs will point out the path to the guides ; and even when the traveller has been overwhelmed, and lies sunk beneath the snowy mass, these animals will frequently dis- cover him. The revolutions of Europe, we greatly regret to add, have deprived this noble establishment of the greatest part of its” posses- sions, so that contributions for its support are

now thankfully received by the fraternity. The summit, Velan, is in lat. 45Ā° 48′ N. and long. 7Ā° 2’E.

BERNARD (Little St.), is to the south-west of the Great St. Bernard, on the opposite side of Mont Blanc. It forms a part of the ancient Alpes GraitE. The pass lies over this into Savoy ; the summit is 7200 feet from the level of the sea.

BERNARD’S TOWN, a town of New Jersey, in Somerset county. Also a township of Massa- chusetts, in Hampshire county, 110 miles from Boston.

BERNARDINE (St.), was born atMassa, in Tuscany, in 1380. In 1404 he entered into a Franciscan monastery near Sienna, where he became a famous preacher, and was afterwards sent to Jerusalem as commissary of the Holy Land. On his return to Italy, he preached with such applause, that the cities of Ferrara, Sienna, and Urhino, desired pope Eugenius IV. to ap- point him their bishop : but Bernardine refused the honor, accepting only the office of vicar-ge- neral of the friars of the Observance for all Italy. He repaired and founded above 300 monasteries in that country ; died in 1444 ; and was canonised in 1450 by Pope Nicholas. His works were published at Venice in 1591, in 4 vols. 4to.

BERNARDINES, an order of monks, founded by Robert, abbot of Moleme, in the beginning of tlie twelfth century,’ and reformed by St. Ber- nard. They wear a white robe with a black scapulary ; and when they officiate are clothed with a large white gown with great sleeves and a hood. They differ but little from the Cistertians.

BERNAU, a town of the Middle Mark of Brandenburgh, Prussia. The principal trade is in beer, of which large quantities are brewed. It is seated on the Pancho, fourteen miles N.N.E. of Berlin.

BERNAY, a town of France, in the depart- ment of the Eure, Upper Normandy. It contains 6470 inhabitants, and carries on a considerable trade in corn, cattle, cider, and flax, with manu- factures of paper, wax-candles, linen and woollen cloths. It stands on the Carentonne, sixteen miles E.S E. of Lisieux, and twenty-eight W.N.W. of Evreux.

BERNBURG, a district and small town of Germany, in the principality of Anhalt. The town stands on both the banks of the Saale, the opposite parts being united by a bridge. It is defended by a castle strongly situated on a rock, and encompassed with ditches. The population of the district is about 30,000 ; it is fertile, and yields from its mines, wines, and fruits, an annual revenue of 200,000 dollars. The population 01 the town does not exceed 3000 ; manufactures of iron, earthenware, starch, glass bottles, and powder. It is about twenty miles west of Des- sau, and the same distance south of Magde- burg.

BERNERAY, one of the smaller Hebrides, about five miles in circumference, of sandy soil, but productive when manured. In the centre is a fresh water lake, abounding in eels. This island is supposed to have been once entirely de-

voted to religious ceremonies ; it has still a wood of yew trees, which it is thought formed a holy grove, and the remains of two chapels, dedicated to St. Asaph and St. Columbus. Remarkable phenomena are exhibited here by the tides. Long. 7Ā° 8′ W., lat. 57Ā° 42′ N.

BERNERAY GREAT, an island of the Hebrides, on the north-west side of the island of Lewis, in Loch Roag, about twelve miles long and four broad.

BERNERAY, LITTLE, a small island of the He- brides, on the north - west side of Lewis, in Loch Roag, four miles long, and one broad.

BERNERS (Juliana), daughter of Richard Berners, of Berners Roding, and sister of lord Berners, was born at Roding, in Essex, about the beginning of the fifteenth century. She is celebrated by various authors as very learned ; and, doubtless, had the best education that could be obtained in that age, as she was appointed prioress of Sopewell nunnery, near St. Alban's, about 1460, or rather earlier. She was very beautiful, and fond of masculine exercises, such as hunting, hawking, &c. ; writing treatises on these subjects, as well as upon Heraldry, which were so popular, that they were published in the very infancy of printing. Her treatise on Hunt- ing is written in rhyme, and affords strong evi- dence of the barbarity of that age. Her work on heraldry begins with the following curious piece of information : ' Of the offspring of the gentilman Jafeth (she certainly meant Shem), came Habraham, Moyses, Aron, and the pro- fettys ; and also the kyngs of the right lyne of Mary, of whom that Gentilman Jhesus was borne, very God and man ; after his manhode kynge of the land of Jude and of Jeus, gentil- man by his modre Mary, prince of cote armure,' &c. We have given a more engaging extract from her treatise

on Fishing, in the article ANGLING, which see. The time of her death is not known.

BERNHARDIA, in botany, a name given by Houston to a genus of plants, characterised by Linnseus under the name of croton.

BERNICLA, in ornithology, the trivial name of a species of goose. See ANAS.

BERNICLE, in natural history, a species of shell fish, called by some concha anatifera. It is composed of five shells or valves, and agrees according to Lister with the pholas, both in the disposition and number of its valves.

BERNICLE, in zoology, a species of lepas. See LEPAS.

BERNIER (Francis), surnamed the Mogul, on account of his travels and residence in that country, was born at Angers, in France Having taken his degree of M.D. at Montpelier, he set out, in 1654, and travelled to Egypt, the Holy Land, and the empire of the Moguls. He wrote : 1 . Histoire de la Derniere Revolution des Etats du Grand-Mogul, 4 vols. 12mo. 1670, 1671, often reprinted under the title of Voyages de Francois Bernier, and translated into English, 8vo. 1671, 1675. 2. Memoires sur le Quietisme des In- des, &c.

BERNIER'S ISLAND, a small island situated near the mouth of Shark's Bay, on the west coast

of New Holland, so called by the French expe- dition of discovery, fitted out in 1801. It is, in a great measure, surrounded by coral reefs, which render the approach very dangerous. The vegetation is almost confined to a species of Cyprus, the roots of which cover the ground. Here is a beautiful species of kangaroo ; and some lizards were discovered between four and five feet in length. The island is situated in the twenty- fifth degree of south latitude.

BERNINI (John Laurence), called cavaliero Bernini, a Neapolitan, famous for his skill in painting, sculpture, architecture, and mechanics. He resided chiefly at Rome, and first began to be known under pope Paul V. who died in 1621, his successor, Gregory XV.

conferred on him the honor of knighthood. Urban VIII. employed him in decorating the church of St. Peter, and other public works ; and Rome was indebted to him for some of its greatest ornaments. He executed three busts of Charles I. of England, from a picture by Vandyck ; on viewing which, he is said to have observed, that it was ‘ the most unfortunate looking face he ever beheld.’ In ā¢ consequence of the pressing invitation of Louis XV. he visited Paris, though then about sixty- eight years of age ; and after making a bust of that monarch, returned to Rome, where he died in 1680, aged eighty-two.

BERNO, abbot of Richenou, in the diocese of Constance, who flourished about A.D. 1008, is celebrated as a poet, orator, musician, philoso- pher, and divine. He was the author of several treatises on music, particularly De Instrumentis Musicalibus, De Mensura Monochordi, &c. But the most celebrated of his works is a treatise De Musica, seu Tonis, which he wrote and dedicated to Pelegrinus, archbishop of Cologne. He was highly favored by the emperor Henry II. and succeeded so well in his endeavours to promote learning, that his abbey of Richenou was as fa- mous in his time, as those of St. Gaul and Cluni, then the most celebrated in France. He died in 1048, and was interred in the church of his mo- nastery, which he had dedicated to St. Mark.

BERNOUILLI, or BERNOULLI (Daniel), the son of John Bernouilli, a celebrated physician and philosopher, was born in Groningen, Fe- bruary 9th 1700. He was intended for trade, but his genius quickly led him into different pursuits. He passed some time in Italy, and at twenty-four refused to be president of an aca- demy meant to have been established at Genoa. He spent several years at St. Petersburgh with great credit; and in 1733 returned to Ba- sil, where he successively filled the chair of physic, and of natural and speculative philoso- phy. In his first work, Exercitationes Mathe- matics, he took the only title he then had ; viz. ‘ Son of John Bernouilli,’ and never would suffer any other to be added to it. This work appeared in Italy with the great inquisitor’s privilege added to it, and it classed Bernouilli in the rank of in- ventors. He now gained or divided nine prizes, from the Academy of Sciences,which were contend- ed for by the most illustrious mathematicians in Europe. His first prize he gained at twenty- four years of age. In 1734 he divided one with his father, whic‘1 the latter is said to have

construed into a want of respect. Besides this, he declared his conviction of the philosophic triumph of Newton, against whom his father had contended all his life. In 1740 Mr. Bernouilli divided the prize, On the Tides of the Sea, with Euler and M’Laurin. In 1738 he

succeeded his father in the Academy of Sciences, and was himself succeeded by his brother John ; this place, since its first erection, i. e. eighty-four years, never having been without a Bernouilli to fill it. He was extremely respected at Basil ; and to bow to Daniel Bernouilli, when they met him in the streets, is said long to have been the first lesson which every father gave his children. He used to mention two adventures, which he said had given him more pleasure than all the other honors he had received. He was travelling with a learned stranger, who, being pleased with his conversation, asked his name : ‘ I am Daniel Bernouilli,’ answered he, with great modesty ; ‘ And I,’ said the stranger (who thought he meant to laugh at him), * am Isaag Newton.’ Another time he was giving a dinner to the famons Koe- nig the mathematician, who boasted, with a sufficient degree of self-complacency, of a diffi- cult problem he had resolved with much trouble. Bernouilli went on doing the honors of his table ; and, when they went to drink coffee, presented him with a solution of his problem, more elegant than his own. He died in 1782.

BER.NOUILLI (James), a celebrated mathema- tician, born at Basil, the 27th of December 1645. Having taken his degrees in the university of Basil, he applied himself to divinity, not so much from inclination as complaisance to his father. He gave, however, very early proofs of his genius for mathematics, and soon became a geometrician, without any assistance from masters, and at first almost without books ; for he was not allowed to have any of this kind : and if one fell by chance into his hands, he was obliged to conceal it. This severity made him choose for his device, Phaeton driving the chariot of the sun, with these words, Invito patre sidera verso, ‘ I traverse the stars against my father’s inclina- tion.’ In 1656 he began his travels. When he was at Geneva, he fell upon a method to teach a young girl to write, though she had lost her sight when she was but two months old. At Bourdeaux he composed universal gnomonic tables, but they were never published. He re- turned from France to his own country in 1680. About this time there appeared a comet, the return of which he foretold ; and wrote a small treatise upon it, which he afterwards translated into Latin. He went soon after to Holland, where he studied the new philosophy. After having visited Flanders and Brabant, he canˆe to England. Here he contracted an acquaintance with the most eminent scientific men of the day ; and had the honor of being frequently present at the philosophical conferences heH at the house of Mr. Boyle. He returned to Basil in 1682; and gave a course of lectures in natural philoso- phy and mechanics. In 1682 he published his Essay of a New System of Comets ; and the year following, his Dissertation on the Weight of Air. Leibnitz, about this time, having published in the Acta Eruditorum at

Leipsic, some heads ot

his new Calculus Differentialis, or Infinimens petits, Bernouilli, and one of his brothers, dis- covered at once the beauty and extent of it, and unravelled its profoundest problems with such success, that Mr. Leibnitz declared the invention belonged to them as much as to himself. In 1687, the professorship of mathematics at Basil being vacant, James Bernouilli was appointed to it, and discharged his trust with such universal applause, that a great number of foreigners at- tended his lectures. In 1699 he was admitted, as a foreign member, into the Academy of Sciences at Paris; and in 1701 he received the same honor from that of Berlin. He wrote se- veral pieces in the Acta Eruditorum of Leipsic, the Journal des Spavans, and the Histoire de 1′ Academic des Sciences. But nis assiduous ap- plication to his studies brought on the gout, and by degrees a slow fever, of which he died, Aug. 16th, 1705, aged fifty-eight. He appointed that a spiral logarithmical curve should be inscribed upon his tomb, with the words, Eadem mutata resurgo.

BERNOUILLI (James), the son of John Ber- nouilli, grandson of John, and nephew of Da- niel, was born at Basil in October 1759, and was educated for the law. But at twenty years of age he read public lectures on experimental philoso- phy in the university of Basil, for his uncle Da- niel. Being disappointed of succeeding him, he accepted the office of secretary to count Breuner, the emperor's envoy to the republic of Venice; and remained in this city till 1786, when, on the recommendation of his country- man, M. Fuss, he was invited to succeed M. Lexell in the academy of St. Petersburgh, where he continued till his death, the 3d of July 1789. He had, at this time, been married only two months, to the youngest daughter of John Albert, the son of the celebrated Leonard Euler.

BERNOUILLI (John), the brother of James, and also a celebrated mathematician, was born at Basil the 7th of August, 1667. He labored with nis brother to discover the method used by Leibnitz, ip his Essays on the Differential Cal- culus, anĀ«? rive the first principles of the Inte- gral Calcu.s. Our author also, with Messrs. Huygens and Leibnitz, was the first who gave he solution of the problem proposed by James Bernouilli, concerning the catenary, or curve formed by a chain

suspended by its two extremi ties. John Bernouilli had the degree of doctor of physic at Basil, and two years afterwards was named professor of mathematics in the university of Groningen. It was here that he discovered the mercurial phosphorus or luminous barometer ; and resolved the problem proposed by his brother concerning Isoperimetricals. On the death of his brother James, the Academic Senate of Basil appointed him to succeed him, without assembling competitors ; an appointment which he held during his whole life. In 1714 was published his Treatise on the Management of Ships ; and in 1730 his memoir on the Elliptical Figure of the Planets gained the prize of the Academy of Sciences. The same academy also divided the prize, for the question concerning the inclination of the planetary orbits, between our author and his son Daniel. John Bernouilli was

a member of most of the academies of Europe, and received as a foreign associate of that of Paris in 1699. After a long life spent in the constant study and improvement "of all the branches of the mathematics, he died on the 1st of January 1748, in the eighty-first year of his age. Of five sons which he had, three pursued the same sciences with himself. One of these died before him ; but the two others, Nicholas and Daniel, he lived to see become eminent and much respected. The writings of this great man were dispersed through numerous periodical me- moirs of the learned academies of Europe, as well as in many separate treatises : and the whole of them were carefully collected and published at Lausanne and Geneva, 1742, in four volumes, quarto.

BE'ROBBED. Be and rob. See ROB.

BEROLINENSIS, in entomology, a species ofcantharis; color, black; antennae, and wing- cases yellowish, with black tips ; legs ferrugin- ous. Also a species of curculio ; color, whitish, varied beneath ; thorax black, sides variegated ; two undulated black bands on the wing-cases. Also a species of cryptocephalus, crioceris. The head and thorax are scarlet and glossy ; wing- cases and eyes black ; legs fulvous ; a native ot Prussia.

BEROE, or BERCEA, in ancient geography, a town of Syria ; it has been the tradition for some ages, that it is the modern Aleppo. It is called Chalep in Nicetas, Nicephorus, and Zonaras.

BEROEA. See BEREA.

BEROOT, or BAIROUT. See BAIROUT.

BEROSUS, priest of the temple of Belus at Babylon, in the time of Ptolemy Philadelphus, wrote the history of Chaldea, which is often cited by the ancients, and of which Josephus gives some curious fragments. The Athenians, accord- ing to Pliny, caused his statue with a golden tongue, to be placed in their Gymnasium. See BABYLONICS.

BEROTH, or BEROTHAI, a city of Syria, sup- posed to be the same with Chun, which was conquered by David, and from which he carried off a great deal of brass. Some reckon it the same with Berytus. See 2 Sam. viii. 8, and 1 Chron. xviii. 8.

BERQUARIA, or BERQUERIA. See BER- CARIA, and BERICARIA.

BERQUIN (Lewis de, lord of Berquin), a French Protestant martyr, was a native of Artois, and for some time king's counsellor to Francis I. He published a book against the monks, which engaged him in a controversy with William Quernus, one of the most violent inquisitors of his time, and at last subjected him to a prosecu- tion for heresy. The articles of accusation were chiefly drawn from his writings ; but upon trial he was acquitted. His accusers alleged, that the royal influence saved him on this occasion On a second trial the decision was that his books should be burnt, and himself along with them, unless he should retract and make submission. But Francis I. returning from Spain, wrote to the parliament to be cautious how they proceeded in the affair against his counsellor. Accordingly Berquin was soon after liberated ; and, contrary to the advice of his friend Erasmus, commenced

a prosecution for irreligion against his accusers. The issue now was, that he was sentenced to make a public recantation ; which he, with the greatest heroism, refusing, he was condemned as an obstinate heretic, to be strangled on the Greve, and afterwards burnt. This cruel death he suffered at Paris, A.D. 1529; being then about forty years of age.

BERQUIN (Arnauld), a celebrated French author, born at Bourdeaux in 1749. His Idylls, abounding in good sense and sweetness, spread his reputation as an ingenious and agreeable writer; and quickly passed through several editions. The work, however, which has given the greatest celebrity to his name, is his Amides Enfans, the Children's

Friend, in 6 vols. 12mo. Tt has gone through many editions, and been translated into English and other languages. Berquin died in 1791.

BERRA, in old records, a plain open heath.

BERRE, a lake of France, in the department of the mouths of the Rhone, and ci-devant pro- vince of Provence.

BERRE, a strong town of France, situated on the above lake. It is remarkable for the quantity and goodness of the salt made in it, but the air is unwholesome. It was taken, by the duke of Savoy, after a long siege, in 1591, during the wars of the league ; and though all the rest of the province submitted to Henry IV. he could not drive the Savoyards from Berre, till it was given up in 1598, in consequence of the treaty of Vervins. It lies thirteen miles south-west of Aix.

BERRETINI DA CORTONA (Peter), painter of history and landscape, was born at Cortona in 1596, and was a disciple either of Commodi or Ciarpa, or both. He went young to Rome, and studied the antiques, the works of Raphael, Buo- narotti, and Polidoro ; by which he highly im- proved his taste. He worked with remarkable freedom ; his figures are admirably grouped ; his distribution is truly elegant, and the chiaro- scuro judiciously observed. Through his whole compositions there appears uncommon grace, particularly in making the airs of his heads always agreeable. His coloring in fresco is far superior to what he peformed in oil. By the best judges it is agreed that he must be allowed to have been the most agreeable mannerist that any age has produced. He died in 1669. Some of his most capital works are in the Barberini palace at Rome, and the Palazza Pitti at Flo- rence.

BERRETONI (Nicholas), history painter, was born at Macerata in 1617, and became a disciple of Carlo Maratti, with whom he attained such excellence, that he excited the envy of his master. His early works, after he quitted the school of Maratti, were in the style ot Guido ; and they could not have a higher encomium. He died in 1682.

BERRIMAN (Dr. William), was the son of Mr. John Berriman, apothecary in London, where he was born in 1688. He studied at Oriel Col- lege, Oxford, where he took his degrees, and became lecturer of Allhallows, in Thames Street, and St. Michael's, Queenhithe. In 1720 he was appointed chaplain to Dr. Robinson, bishop

of London, who collated him to the living of St. Andrew's Undershaft; and in 1727 he was elected fellow of Eton College. He died in 1750, aged sixty-two. He wrote, 1. A seasonable view of Whiston's Account

of Primitive Doxo- logies. 2. An Historical Account of the Trini- tarian Controversy, in eight sermons, at Lady Moyer's lecture. 3. Brief Remarks on Mr. Chandler's Introduction to the History of the Inquisition. 4. Sermons at Boyle's lectures, 2 vols. 8vo. 5. Christian Doctrines and Duties explained and recommended, in 2 vol.3. 8vo. ; and other works.

BER'RY, v. & n. Sax. beriijj, from bean to bear. Any small fruit, with many seeds or small stones.

She smote the ground, the which straightforth did

yield

A fruitful olive tree, with berries spread, That all the gods admired. Spenser.

The strawberry grows underneath the nettle,

And wholesome berriet thrive and ripen best,

Neighbour'd by fruit of basest quality. Shafupeare. For drink, the grape

She crushes ; inoffensive must, and meaths From many a berry, and from sweet kernels pressed She tempers dulcet creams. Milton. and -Jerry-bearing thorns,

That feed the thrush (whatever some suppose),

Afford the smaller minstrels no supply. Cotcper.

BE'RYL. Lat. beryllus; Gr. /SjjpvXAoc- A kind of precious stone.

May thy billows roll ashore The beryl and the golden ore. Milton.

The beryl of our lapidaries is only a fine sort of cornelian, of a more deep bright red, sometimes with a cast of yellow, and more transparent than the common cornelian. Woodward.

BERRY (Sir John), a brave English naval officer, was born at Knowston in Devonshire, in 1635. He received the honor of knighthood for his gallant conduct at the battle of Southwold Bay. In 1 682 he was captain of the Gloucester frigate, in which he was conveying the duke of York to Scotland, but either by the inattention or unskilfulness of the pilot, the ship was lost at the mouth of the Humber. Berry, however, by his uncommon presence of mind, saved

the Duke, for which he was advanced to a flag. He com- manded under lord Dartmouth at the demolition of Tangier ; and on his return was made a com- missioner of the navy, which he held with his other appointments after the Revolution. He was poisoned on board his ship, lying at Ports- mouth, in 1691.

BERRY, or BERRI, a former province and duchy of France, bounded on the south by La Marche, on the west by Touraine and Poitou, on the north by the Blaisois, Sologne, the Orleannois Proper, and the Gatinois, and on the east by the Niver- nois and the Bourbonnois? It is fertile in timber, corn, and wine. The wool is much esteemed, and large and fine pastures abound here : con- siderable quantities of cloth are also made in the province. The Cher divides the province into Upper and Lower Berry ; the former being on its east, and the latter on its west bank. It is also now divided into the departments of Cher and Indre, the capital of the one being fiourges, and that of the other Chateauroux. Since the

reign of king John, Berri has given a title to one of the royal family of France.

BERRY ISLANDS, a cluster of small islands among the Bahamas, to the north-west of New Providence, and upon the south side of the chan- nel communicating with the Florida stream. Long. 79Ā° 10′ W., lat.25Ā° 28′ N.

BERS, in ancient medicine, an electuary used by the Egyptians to excite delirium.

BERSA, in old law, a bound, compass, or fence.

BERSARII, in writers of the middle age, a kind of hunters, who pursued wild beasts. The word seems derived from the barbarous Latin bersare, to shoot with a bow ; on which suppo- sition it should denote archers only. Or it might be derived from bersa, the fence of a park ; in which view, it should import those who hunt in parks or forests. Hincmar speaks of inferior officers in the court of Charlemagne, denomi- nated bersarii, veltrarii, and bevarii. Spelman takes the first to denote those who hunted the wolf; the second those who had the superinten- dency of the hounds for that use ; and the third those who hunted the beaver.

BERSATRIX, in old records, a rocker of young children in a cradle.

BERSCHETE, a sea-port town of Istria, on the coast of the Adriatic. It stands on a high rock, about twelve miles south of Fiume, and is noted for its trade in wine and oil. Lat. 45Ā° 27′ N., and long. 14Ā° 35 E.

BERSE, in botany, the name given by French writers to the sphondylium, or cow parsnip, a species of umbelliferous plants common in our meadows, and known by its large rough leaves and remarkable height.

BERTHEAU (Charles), a French protestant divine, born in 1610, at Montpelier, where his father, Charles Bertheau, was minister. He studied in France and Holland, and was ad- mitted minister at Vigan, in 1681, when only twenty-one years of age. In 1682 he was chosen pastor of the church in Montpelier, and soon after promoted to that of Paris. But the revo- cation of the edict of Nantz drove him, and thousands more, to seek shelter from persecution in our land of liberty. He came to England in 1685, and in 1686 was called to the Walloon church, in London, where he discharged his pas- toral duties for about forty-four years, with much applause. He died, December 25th 1732, having previously published Discourses on the Cate- chism, and two volumes of Sermons.

BERTHIER (Alexander), prince of Neuf- chatel, in the reign of Napoleon. We first hear of him when Duphot was killed in a popular tumult at Rome ; Berthier was then despatched thither by the French Directory, and entering the city on the 10th of February, 1798, dissolved the papal government. On the 15th he pro- claimed the Roman Republic, and sent pope Pius VI. a prisoner to France, where he died. In 1800 Berthier commanded in Italy, and gained a complete victory over the Austrians, at Montebello. He afterwards served in the unfor- tunate expedition to St. Domingo. He was finally rewarded with the rank of marshal ; made duke of Neufchatel in 1806; and in 1809

prince of Wagram and Neufchatel. He exe- cuted some important trusts under Napoleon, and was with him it the period of his first abdi- cation in 1814; a short time subsequent to the completion of which, Berthier was killed by falling, or being thrown, from a window into the street.

BERTHIER (Victor Leopold), a brother of the preceding, rose to the rank of general of division in the French service, and was distinguished at the battle of Austerlitz, and the taking of Lu- beck. He died at Paris in 1807.

BERTHING, in sea language, denotes the raising or bringing up of ship sides. Thus they say, a clincher has her sides berthed up before any beam is put into her.

BERTHINSECK, an old feudal law, by which a man was not to be hanged for stealing a sheep or a calf, that he could carry away in a sack on his back ; but only whipped.

BERTHOLLET (Claude Louis), a modern French chemist, was a native of Talloire, in Savoy. He studied medicine at Turin, and took a doctor's degree; after which he practiced at Paris, and obtained the appointment of physician to the duke of Orleans. His earlier researches in chemistry led him to consider the composition of ammonia, the combinations of azote, and the na ture of what Sir Humphrey /Davy has called chlorine, or oxygenated muriatic acid. He was admitted a member of the Academy of Sciences in 1780, and supplied to it some valuable con- tributions. In 1792 he was nominated a member of the committee on coinage ; and, in 1794, of the committee on agriculture and the arts. He was also made professor of chemistry in the Poly- technic school ; and nominated a learned mem- ber of the National Institute. His name was inscribed first on the list. In 1796 he was sent by the French authorities into Italy, to select objects of art and science to be transferred to Paris. In 1798 Buonaparte took Berthollet with him to Egypt, and on returning as he did with that general to Europe, he was appointed a mem- ber of the conservative senate under the consular government. On the restoration of Louis XVIII. in 1814, Berthollet was nominated a member of the chamber of Peers, with the title of count ; and as he did not take his seat in the chamber during the hundred days of Buonaparte's second reign, he retained his rights and dignity on the second restoration of the Bourbons. He had long fixed his residence at the village of Arcueil, near Paris, where he associated a body of scien- tific students, who aided him in his experimental investigations : and here he died after a short illness in 1 822, aged seventy-four. The separate works of Berthollet are ā Observations sur 1′ Air, 1 776 ; Precis d' un Theorie sur la Nature de 1'Acier, sur ses preparations, &c. 1789; Ele"- mens de 1′ Art de la Teinture, first published in 1 vol. 8vo, and enlarged to 2 vols. 1804; De- scription du Blanchiment des Toiles, 1795; Re- cherches sur les Loix d' Affinite, 1801 ; Essai de Statique Chimique, 1803, 2 vols. 8vo. Most ot which have been translated into English.

BERTHOLON (N. de St. Lazare), was born at Lyons, and received the rudiments of his edu- cation at St. Lazare, which he quitted for Mont-

pelier, where he became professor of medicine and philosophy. He was subsequently called to fill the historical chair in the central school of Lyons, where he continued till his death in 1799. His works are treatises On the Electricity of the Human Body in a Healthy and in a Diseased State ; one entitled De 1′ Electricite des Vege- taux, in 8vo; and another, De 1′ Electricite” des Meteores. An Essay on the Method of ascer- taining the period at which Wine in a state of fermentation has acquired its greatest strength; another on the Means most conducive to the Prosperity of the manufacturing interest at Lyons ; Theorie des Incendies, 4to ; Preuves de I’efficacite des Paratonneres, 4to ; Des Avantages que la Physique et les Arts peuvent retirer des yErostats, 8vo ; De 1′ eau la plus propre a la Ve- getation, in 4to, &c. &c. He was also the dis- coverer of several ingenious inventions; and first introduced lightning conductors, on Franklin’s principle, into France.

BERTHOUD, a county and bailiage of six parishes in the canton of Bern, Switzerland, nine miles north-east of Bern. There are. some baths here, much frequented.

BERTHOUD (Ferdinand), a celebrated French mathematician, was born in the county of Neuf- chatel in 1727. His father’s profession was that of architect, and the son was intended for the church, but, having shown a taste for mechanical contrivances, an experienced workman was ob- tained to instruct him in clock making ; and he was afterwards sent to Paris to improve in that art. He settled in Paris in 1745, and applied himself lo the making of chronometers. By order of the French government, a voyage was made from La Rochelle to the West Indies and Newfoundland, for the express purpose of trying the chronome ters of Berthoud, when it was found that they gave the longitude with only a quarter of a de- gree of longitude of error, after a cruize of six weeks. Satisfactory results were also obtained from his chronometers in the expedition of Ver- dun, Borda, and Pingre, which was appointed to try them, together with those of Le Roy. Ber- thoud finally became chronometer-maker to the Admiralty, and member of the French Institute and Legion of Honor ; and, being regular in his habits of life, retained the use of his faculties to the last. He died, of hydrothorax, at his coun- try-house, in the Valley of Montmorency, in 1807, at the age of eighty. His principal pub- lished works are ā Essai sur 1′ Horlogerie, 1786, ‘I vols. in 4to ; two Tracts on Chronometers, 1773; De la Mesure du Temps, 1787, in 4to; Les Longitudes par la Mesure du Temps, 1775, in 4to ; a Tract on Chronometers, 1 782, in 4to ; Histoire de la Mesure du Temps par les Hor- loges, 1802, 2 vols.

in 4to; 1'Art de Conduire et de Regler les Pendules, et les Montres, 1 760, in 12mo. In this last tract popular directions are given for regulating clocks and watches.

BERTIE, a populous and fertile county of Kdenton district, North Carolina. It is bounded on the east by Albemarle sound, on the north-east by Hartford county, on the north by Nor- thampton, on the north-west by Halifax, and on the south and south-west by Roanoke River, which divides it from Martin and Tyrrel coun-

ties. The lands in this county are low and fer tile. The chief town is Windsor.

BERTIERIA, in botany, a genus of plants : class, pentandria ; order, monogynia. COR. four-cleft : STIO. bilamellate ; berry, two-celled, and many seeded. Species, one : a shrub with downy branches, and white, panicled, terminal flowers ; a native of Guiana.

BERTINERO, a town of Romagna in Italy, with a strong citadel. It is the see of a bishop ; and seated on a hill.

BERTIOGA, a sea-port of Brasil, five leagues south of St. Sebastian, with an excellent harbour. The inhabitants are very enterprising in the whale fishery; but the climate is often over- powering to Europeans.

BERTIUS (Peter), professor of philosophy at Leyden, was born in Flanders in 1565. He lost his professorship for taking part with the Arminians, upon which he went to Paris ; where, in 1620, he abjured the protestant religion, and was made Cosmographer to the king, and royal Professor of Mathematics. He died in 1626> aged ninety-four. He published, 1. Commen- taria in Rerum Germanicorum ; in 12mo: 2. A good edition of Ptolemy's Geography, in Greek and Latin; folio : 3. De Aggeribus et Pontibus: 4. Introductio in Universam Geographiam; besides several tracts.

BERTRAM (Cornelius Bonaventure), a na- tive of Tours in Poitou, was born, 1531, of a respectable family. He became professor of Hebrew at Geneva, Lausanne, and Fiankendal, and in 1588 corrected Calvin's version of the Old Testament. He was also the author of a treatise on the Jewish republic, Geneva, 1580, and Leyden, 1641 ; Lucubrationes Frankenda- lenses, 1585; and a parallel between the He- brew and Syriac languages ; besides which, he superintended the publication of a new edition of Pagnin's Thesaurus. He died at Lausanne in 1594.

BERTRAM (Philip Ernest), was a native of Zerbst, born 1726. He became professor of the law at Halle, and published a history of Anhalt in 8vo; a continuation of that of Spain by Her- rera, 4to ; and a Treatise on the History of Learning, 4to ; and died in 1777.

A monk of this name, but more generally known by that of Ratramnus, belonged to the abbey of Corbie, in the ninth century. He wrote against Hincmar, archbishop of Rheims, on the subject of predestination; and his treatise, comprised in two books, is to be found in the Vindiciae Predestinationis. He also wrote a work against transubstantiation (two editions of which have since been published ; the one in 12mo, 1686, in Latin and French ; the other in English, printed at Dublin, 1753), and another on the miraculous conception.

BERVIE, or BERVY, a royal burgh and pa- rish of Scotland, in Kincardineshire, seated on the mouth of a river of that name. Its charter was granted in 1342, by king David II.; who, in returning from England, was forced by stress of weather, to land here, where he met with the utmost attention. It has a weekly market, and fairs in May and September. It appearsHo have been formerly a fishing station ; but the fisher-

men have long been removed to Gourdon. Ber- vie also was long famous, or rather infamous, for smuggling. Manufactures of sail-cloth, thread, and linen yarn, have been estabished here ; and the first machine erected in Scotland for spin- ning flax, was set u-p at Bervie. It unites with Arbroath, Brechin, and Montrose, in sending a member to the British parliament; and is situated twenty-three miles south-west of Aberdeen, and thirteen north of Montrose. Long. 2Ā° 0′ W., lat. 56Ā° 40′ N.

BERULIANS, a sect of Christians in the twelfth century, who affirmed that all human souls were created in the beginning of the world.

BERWICK (James Fitzjames, duke of), the natural son of James duke of York, afterwards James II. by Arabella Churchill, sister of the duke of Marlborough, was born in France in 1670, and, embracing a military life, served under the duke of Lorraine at the siege of Buda in 1686, where he was wounded. He also distin- guished himself in Ireland, in the contest be- tween James and William III. He rose, in the service of France, to the rank of marshal ; and commanded in Spain

during the war of the suc- cession, particularly at the battle of Almanza in 1707, when he defeated Charles II. and esta- blished his competitor Philip on the Spanish throne. He put an end to this war in 1714, by the taking of Barcelona. On hostilites arising be- tween France and Germany, in 1733, the duke of Berwick was again called into the field ; and at the siege of Philipsburgh, the following year, he was killed by a cannon shot, June 12th. His Me- moirs, written by himself, were published at London in 1779.

BERWICK-UPON-TWEED, so called to distin- guish it from North Berwick in East Lothian, is an English town of some importance, situated on the north side of the Tweed, and within one mile of the sea ; the river being navigable up to the town. At the mouth of the Tweed, however, is a bar, so that the port can only be entered by vessels of small draught. Berwick formerly im- ported considerable quantities of timber, iron, and flax, from the Baltic ; but its chief depen- dence has been recently upon the export of sal- mon to London, sent fresh in boxes stratified with ice ; and in the distribution of the agricul- tural produce of Berwickshire, Tiviotdale, North Durham, and the northern part of Northumber- land. The Berwick smacks have long been noted for safe and expeditious sailing.

Berwick, when it belonged to Scotland, was a principal royal borough, and regularly fortified, first on the ancient Scottish, and then on the old Spanish or Italian system. Remains of both systems appear, together with the ruins of its castle : the town is also surrounded with walls, on which cannon are mounted. The bridge over the Tweed contains fifteen arches, and measures 1164 feet long and seventeen feet wide. It was begun in the reign of queen Elizabeth, and ended in the tenth of Charles I.

Berwick has long been annexed to England,

with a triangular territory reaching about four

miles up the river Tweed, and nearly as much

along the sea, containing from four to five thou-

sand acres of useful farm land. It is governed of course by the English law, and the town au- thorities are a mayor and four bailiffs, who con- stitute the sheriff. The mayor, recorder, and justices, or all who have been mayors, hold ge- neral and quarter sessions, and a court of gaol- delivery at one or other of the quarter sessions, when necessary. The

guild or corporation con- sists of the mayor and all the burgesses, nearly a thousand, in whom are all elections, and the entire management of a very valuable landed property within the bounds, the far greater part of which they divide among themselves, instead of apply- ing it to great and useful public purposes. In 1796 the population was estimated at 7930 ; it is now above 8000. The town-house is a hand- some structure, with a stately spire 150 feet high, and a choir of eight bells. The barracks, capable of accommodating 600 men, form, with the store- house, a handsome square. The staff of the garrison consists of a governor, lieutenant-gor vernor, fort-major, &c. The corporation pos- sesses the manor of Tweedmouth and Spittal, in the county of Durham. The borough sends two members to parliament. Besides the church, which is a spacious building, without a spire, there are four places of worship for Presbyterians ; and the Baptists, Methodists, and Catholics, have each a chapel. The town is well supplied with water from springs about a mile and a half without the walls, whence it is conveyed to a large reser- voir, sixty feet in length, sixteen broad, and eight deep. There are no manufactures of any im- portance : but here have been sometimes shipped in one year, besides salmon, 60,000 quarters of grain, 2000 packs ‘of wool, and eggs to the value of Ā£20,000 ; the salmon fisheries have let for more than Ā£l 0,000 yearly. Many improvements have been made latterly; the streets are well- paved, and the foot-paths made comfortable : a new pier stretches a considerable way into the sea.

In Domesday-book, Berwica denotes a grange or farm village belonging to some town or manor; and is equivalent to Bere-tun or Barton, still having that signification in Devonshire, and other parts of England. Chalmers hesitates between the former etymology of this place, and the Anglo-Saxon Bar, nudus, bare; and Wic, vicus, castellum, sinus ; a village, castle, or curv- ing reach of a river.

Berwick was formerly the chief town of the county of this name, and the theatre of many bloody conflicts between the English and the Scots. After repeated sieges, it was, in 1502, finally ceded to England ; and by a treaty be- tween Edward VI. and Mary queen of Scotland, declared to be a free town, independent of both states. Upon the death of Elizabeth, in 1603, James VI. of Scotland was proclaimed here; and, when that monarch passed through the town, he confirmed its ancient privileges, and added many, which still remain. Its market days are Wednesday and Saturday; and a fair is annually held for the sale of horses and black cattle, on the Friday of Trinity week. It is 336 miles north-west from London, and fifty-four south-east from Edinburgh.

BERWICK, NORTH, a royal burgh and sea-port

on the coast of Haddington, Scotland, of con- siderable antiquity ; but its old charter being lost, it obtained a new one from James VI. It joins with Jedburgh, Lauder, Haddington, and Dun- bar, in electing a member of Parliament. A small quantity of kelp is annually made ; but its only regular trade consists in the exportation of grain. It is situated thirty miles north-west of Berwick.

BERWICK, or Abbotstown, a town of the United States, in York county, Pennsylvania, thirteen miles west of York, ajid 103 west by south of Philadelphia. Lat. 39Ā° 52′ N.

BERWICK, or NEW BERWICK, a small town of the United States of America, Northumberland county, Pennsylvania, on the north side of the east branch of Susquehannah river, 160 miles north-west of Philadelphia. Lat. 41Ā° 2′ N.

BERWICKSHIRE, a county situated at the south-east extremity of Scotland, on the shores of the German or British Ocean, and adjoining the north-east border of England. It derives its name from Berwick-upon-Tweed, which was formerly its head borough, or county town; and is bounded on the east by the German Ocean, and a part of the mouth of the Firth of Forth ; on the north by East Lothian ; on the north-west by Mid-Lothian ; and by Roxburghshire on the west and south-west. The southern boundary is formed by the river Tweed, dividing it from Roxburghshire on the west, Northumberland in the middle, and North Durham in the east. This county, formerly inhabited by the ancient British nation, called Ottadini, was part of the Roman province of Valentia. Many hill forts are to be found on its eminences, interspersed with a few Roman camps. One singular rem- nant of antiquity, called Herritsdyke, may be traced in an oblique direction almost through the whole extent of the county, from a camp or hill fort, on Hareffaulds in Lauderdale, to the banks of the Whittader, near the Tweed, a dis- tance of twenty-three miles, in a strait line; which seems to have been intended as a defence against the sudden incursions of the neighbour- ing barbarous tribes. Home castle, and Fast castle, are the only ruins of border fortresses of importance. On a flat elevated peninsula, close to Eyemouth, still called ‘ the tort,’ there are very distinct remains of a regular modern fortification, forming a crown-work across the gorge, which joins this peninsula to the main land. It was the work of a French engineer during the minority of Mary queen of Scots. Dunse is the capital : for Berwick

does not now belong to Scotland ; and the other towns are few and inconsiderable; COLDSTREAM, GREEN LAW, LAUDER, and EYEMOUTH, being all that are worth naming. See these articles in our work. The extreme length is 31 Ā£, and the extreme breadth 19i, statute miles; and the entire superficies of the county extends to about 285,000 English acres, of which about 100,000 are arable, and 185,000 are composed of moors and hill pasture.

Lammermoor is the north-eastern hill district of this county ; having Iˆiuderdale on the west, and the Merse on the south and south-west. Besides these three large divisions, the county is divided into three presbyteries, Churnside,

Dunse, and Lauder ; and these are subdivided into thirty-one parishes. The districts of Lam- mermoor and Lauderdale are of considerable extent, and the general range of hills runs in- land from the sea, at St. Ebb's Head, nearly west ; but intersected by many narrow vales, chiefly tending towards the south, in which most of the streamlets flow; though the rivers of the vale land run from the west towards the east. From the main range of hilLs, various spurs jut out towards the south ; and there are several detach- ed or isolated hills in different places of the vale of the Merse. That vale is also much diversified by numerous swells and knolls, and winding deep dells, in which the streamlets of the lower country flow in search of the larger waters and rivers. The northern sides of the Lammermoor hills are of considerable steepness, but belong to East Lothian ; while the southern slopes are moderate, and blend gradually into the vale. In many places the tops of the hills form extensive elevated table-lands, which slope almost insensibly towards the south. The higher land is usually a bare unfertile moor; while the slopes, called the moor edges, are generally useful laud, and sometimes of excellent quality. Two of the table-lands are crossed by the prin- cipal great roads leading from Edinburgh to Berwick and Kelso; one at the Press inn, called Coldingham Moor, once a royal forest ; the other at Blackshiels. But the features of this county have been little attended to in any survey. Clint Hill, at the north-west extremity of the Lammermoor chain, is said to be 1544 feet above the level of the sea ; the general range may average about 1000 feet ; the whole termi- nating in three precipitous rocky promontories, at St. Ebb's Head on the south, Earn's Cleugh in the middle, and Fast Castle on the north. The Tweed rather skirts Berwickshire in a wind- ing course of forty miles, than belongs to the county, as no portion of its territory crosses that fine stream. Whitadder and Blackadder are the principal rivers, though the former rises in East Lothian ; and both united run into the Tweed near Berwick. Lander or Leader, entirely be- longing to Lauderdale, and giving name to it, runs from north to

south, and falls into the Tweed at the south-west corner of the county. Eden, which rises at the west end of the Merse, runs into the Tweed in Roxburghshire. The Eye is the only stream of any consequence in the county which runs directly into the sea.

This cannot be called a mineral district. The rocks and lower hills are composed of most irregularly stratified schistic stone, or hardened clay, with yolks of whin-stone, and very thin quartz veins, mixed with a kind of steatitic half lapidified substance, called leek. In the higher muirs, there is a good deal of amorphous and splintery trap, or bastard whin-stone. Rocks of breccia, or coarse pudding-stone, are found in several parts : the outer pier of the harbour of Eyemouth is built, without cement, of a stone of this kind, found in a rocky promontory contigu- ous ; and has withstood for almost forty years the fury of the German Ocean without any apparent waste. No coal worth working has ever been found in this county ; that article is

therefore procured partly by sea, but chiefly by ˆin expensive land-carriage from the Lothians, and from the south side of the Tweed. The whole coast has but two ports into which any thing of importance can be brought. Yet, under these obvious disadvantages, a large portion of the county, indeed almost the whole of the Merse, is cultivated in the best style of modern husbandry. No district of the same extent in Britain, unites more successfully the most ap- proved management of arable land, with that of live stocB. cuid pasture. The leading feature in the husbandry of this neighbourhood is, the alternation of corn with pulse, herbage, or roots ; or what is commonly called white and green crops : but the farmers of Berwickshire, adopting this course invariably, have rendered it more productive, and better suited to their soil and climate, by reserving their cultivated herbage, red and white clovers, with rye grass, from the plough, for two or more years, so that above half the cultivated land is always pastured by sheep and cattle. In the most improved parts the sheep are almost universally of the New Leices- ter breed, and the short-horned English breed of cattle are in much request. Farms, which are generally held on leases of nineteen years, are of all sizes, from 40 to 1000 acres and upwards; but the more common size, in the Merse, is from 400 to 600 acres. The farm-houses, out-build- ings, and cottages, recently erected, are very substantial and convenient. In 1795 the rental of the county was

Ā£112,000; but as assessed to the property tax in 1811, it was Ā £240,126; so that in sixteen years the value of property had more tuan doubled.

Paper is almost the only manufactured article exported from this county : but here are bleach- fields, breweries, corn-mills, and other small establishments for the home supply ; some of the millers also are in the practice of purchasing grain, which they sell in Berwick and Dalkeith markets, after converting it into flour, meal or shelled barley. The chief exports, therefore, are raw produce ; the imports coal, iron, lime, tim- ber, and groceries. The value of the cattle and sheep driven to Edinburgh, to Morpeth, and several markets in England, amounts to a very large sum ; the stationary live stock alone having been estimated, several years ago, at nearly half a million sterling. There are eight small fishing stations on the coast. Eyemouth, the principal harbour, has been improved at a great expense, and is private property. Here there is a profit- able sea fishery ; and one still more advantage- ous, for salmon, is carried on in the Tweed.

Berwickshire exhibits numerous traces of military operations and ruins. Perhaps its most interesting remains of antiquity, however, are the nunnery of Coldingham and Dryburgh abbey. A deep glen, called the Pease, in the north-east angle of the county, on the road from Edinburgh to Berwick, has been celebrated in history as one of the natural defences of Scotland. The bridge which has been thrown over it, consists of four ar.‘hes ; and its romantic situation, and stupen- dous height of 123 feet from the small stream l.ylow, render it an object of considerable curio- sity. Comparing the number of inhabitants at the three periods when the different censuses

have been taken, we shall perceive that no great increase has taken place :

Inhabitants. In 1801 there were 31,600

BERY, or BURY, in the Saxon language, from beorg, Sax. a hill or castle, signifies the villa or seat of a nobleman ; a dwellingˆ or mansion house, being the chief of a manor ; for heretofore noblemen’s seats were castles situated on hills, of which we have still some remains; as in Here- fordshire there are the beries of Stockton, Hope, &c. It was anciently taken for a sanctuary.

BERY. See BERIA.

BERYL, in natural history, called also aqua marina, is a pellucid gem

of a bluish green color,* found in the East Indies, and about the gold mines of Peru ; we have also some from Silesia, but what are brought from thence are oftener colored crystals than real beryls ; and when they are genuine, they are greatly inferior both in hardness and lustre to the oriental and Peruvian kinds. The beryl, like most other gems, is met with both in the pebble and columnar form, but in the latter most frequently. In the pebbla form it usually appears of a roundish but flatted figure, and commonly full of small flat faces, irregularly disposed. In the columnar or crys- talline form, it always consists of hexangular columns, terminated by hexangular pyramids. It never receives any admixture of color into it, nor loses the blue and green, but has its genuine tinge in the degrees from a very deep and dusky, to the palest imaginable of sea-water hue. The beryl in its perfect state approaches to the hard- ness of garnet, but is oftener softer ; and its size is from that of a small tare to that of a pea, a horse-bean, or even a walnut. In many respects the beryl resembles the emerald ; but chiefly in the crystals of both being divisible parallel to the sides and extremities of a regular hexahedral prism. Externally the beryl is shining, with a vitreous lustre. In general it is transparent, though sometimes only semi .ransparent. The specific gravity is 2‘7. Vauquelin analysed a specimen of it, and found n to contain, 69 silica, 15 alumina, 14 glucina, 1 oxide of iron, and 2 lime ; by the analysis of this stone Vauquelin dis- covered the earth he called glucina. When cut, and polished, the beryl has a considerable lustre, and is ranked among gems; though when com- pared with the ruby, topaz, sapphire, &c. its value is very trifling.

The beryl seems to have received its Hebrew name from the resemblance of its color to that of the sea. It was the tenth stone in the breast- plate of the Jewish high-priest ; whereon Zebu- Ion, whose dwelling was at the haven of the se?, was engraved. It may be imitated, by adding to twenty pounds of crystal glass, made without manganese, six ounces of calcined brass or cop- per, and a quarter of an ounce of prepared zaftre. Beryls have also had cabalistic uses. ‘ A beryl,’ says Aubrey, in his Miscellanies, ‘ is a kind of crystal that hath a weak tincture of red. There are certain formulas of prayer to be used before they make the inspection, which they term a call. In a manuscript of Dr. Forman of Lambeth, which Mr. Elias Ashmole had, is a discourse of this

and the prayer ; also there is a call which Dr. Napier did use. James

Harrington, (author of Oceana), told me that the Earl of Denbigh, then ambassador at Venice, did tell him that one did show him three several times, in a glass, things past and to come. . When Sir Marmaduke Lang- dale was in Italy, he went to one of these magi, who did show him a glass, where he saw himself kneeling before a crucifix. He was then a Pro- testant ; afterwards he became a Roman Catholic. He told Mr. Thomas Henshaw, R. S. S. this himself.'

feERYLLINA, in entomology, a species of chrysis. The head and thorax are of a greenish blue, abdomen green, rufous and blue, legs blue, with testaceous -dots.

BERYLLINUS, a species of cimex spino- sus ; thorax spined obtusely, and dentated ; tips of the spines and bifid shield of the head green- ish blue.

BERYLLUS, in entomology, a species of cimex rotundatus, that inhabits India. Middle size, pale border of the thorax orange ; on the wing-cases, a ferruginous spot, and marginal black lines.

BERYTUS, in ancient geography, a sea-port town of Phoenicia, on the Mediterranean, so an- cient as to be thought to1 have been built by Saturn. It was destroyed by Tryphon, but re- built by the Romans. Agrippa placed here two legions, whence it became a colony. It enjoyed the jus Italicum, and had an excellent school for the study of the law in Justinian's time. It is now called BAIROUT, which see.

BES, or BESSIS, an ancient Roman weight containing two thirds of the as, or eight unciae. The bes originally weighed two asses ; whence the origin of the word, quasi binus as.

BES was also used in land-measuring, to denote two thirds of the jugerum, or acre, See JUOERUM.

BESAILE, in common law, a writ that lies where the great-grandfather or great-grandmother was siezed the day that he or she died, of any lands or tenements in fee-simple ; and after his or her.death, a stranger entered the same day upon him, and keeps out the heir.

BESAINT. Be and saint. See SAINT.

BESANCON, an ancient and populous city of France, once the capital of the ci-devant pro- vince of Franche Comte", and now the head of an arrondissement, and chief town of the depart- ment of the Doubs. It has an university, now called a lyceum, and had formerly a parliament. It is seated on the Doubs which divides it into two parts,

the greatest of which is a peninsula. The entrance is nearly closed by a mountain, on which is built a large fort, that commands the city. It is entered by six gates. There are many names of places, in and about the city, that are plain indications of its antiquity, as Chamars, Campus Martis, Chamuse, Campus Musarura, Chandane, Campus Dianae, &c. The metropolitan church is built at the bottom of St. Stephen's hill, and is a very handsome structure. The great hospital of the order of the Holy Ghost is also a structure worth seeing. The streets are wide and hand- some, and the houses are generally of stone, and .veil built ; particularly in the neighbourhood of the square called Battun. On the invasion of

Gaul by the Romans, it was a town of some importance, and received successively the names oˆ Civitas Sequanorum, Chrysopolis, and Vison- tiumorVesontio, of which its present name seems to be a corruption. Caesar took it from the Se- quani. It was at the height of its prosperity in the reign of Aurelian, but was afterwards nearly destroyed by the Germans and Huns. The Burgundians rebuilt it ; and it received great pri- vileges as a city of the empire, but was ceded to Spain at the peace of Westphalia. In 1668, and 1674, it was taken by the French, and confirmed to that power at the peace of Nimeguen. The archbishop was a prince of the empire until the peace of Ryswick. At present it is a bishop's see, and the metropolitan has for his diocese the departments of the Doubs, the upper Saone, and the Jura ; under, him are the bishops of Autun, Metz, Strasburg, Nancy, and Dijon. Here is a celebrated school of artillery, and a manufactory of arms. Other manufactures are silk stockings, woollen stuffs, linen, calico, leather, hats, clocks, and watches. The trade is in corn, wine, cattle, cheese, iron, pins, &c. The population is about 28,200. The learned institutions comprise an Academy of Sciences founded in 1752, a Literary and Military Society founded in 1753, and an Academy of Painting and Sculpture founded in 1773 ; which were all suppressed by the revolu- tion, but have lately been revived. The public library contains some rare manuscripts, and a good collection of medals. The arrondissement has a population of 93,000, in seven cantons. Fifty-six miles east of Dijon, and 235 south-east of Paris.

BESANT, or BEZANT. See BEZANT.

BESBOROUGH ISLAND, an island on the north-west coast of America, in Norton-Sound, about six miles from the main land. Long. 161Ā° 15′ W., lat. 64Ā° 10′ N.

BESCAT’TER. Beandscatter. See SCATTER.

BESCHECK, a lake of Macedonia, in Euro- pean Turkey, near the smaller lake of St. Basil, with two towns in its vicinity, called the greater and lesser Bescheck. It is about twelve miles in length, and six or eight in breadth ; the adja- cent country is very beautiful.

BESCHTAN, or the Five Mountains, a mountain range of Asia, in the government of Caucasus, forming the most northern of the Cau- casian chain. A pyramid of hewn stone was shivered to pieces by lightning here about the year 1801 . A hot spring of a sulphureous nature, and of the temperature of 156 degrees, is dis- charged from the side of the mountain, which, on the approach of rain is completely enveloped in vapor, and proves a true barometer to the neighbouring inhabitants. This range was known to Ptolemy by the name of the Hippie, or horse mountains, and very fine horses are still bred. The Circassians who dwell among these moun- tains, submitted to the czar Iwan Wassiliewitch in 1553. There is now an establishment of missionaries at its base, belonging to the Scottish Missionary Society and over which a native of North Britain has long presided. Distant 30 miles from Georgiefsk.

BESCORN’. Be and scorn. See SCĀ«RN.

BESCRATCH’. Be and sciatch. See SCRATCH.

BESCRAWL’. Be and scrawl. See SCRAWL.

BESCREEN’. Be and screen. See SCREEN.

BESCRIB’BLE. Be and scribble. See SCRIBBLE.

BESCUM’BER. Be and scumber. From Dutch schuymer, scum. To do any dirty act ; to dirty ; to scatter dirt or filth.

Our Muse is in mind for the untrussing a poet ; I slip by his name ; for most men doe know it ; A critick, that all the world bescumbers With satyricall humours and lyrical numbers.

Ben Jonson.

BESCUTCH’EON. Be and scutcheon. See SCUTCHEON.

BESEE’,) Be and See. Goth, saihwan ; BESEEM’. J Ang.-Sax. seon, beseon ; Dutch sien ; Germ, sehen. To see, to look at. Vide SEE.

BESEECH’, v.ttn.ˆ From Sax. pecan ;

, BESEECH’ING, n. I Dutch versoeken. To

BESEECH’ER, ventreat; to supplicate;

BESEEK’, i to implore ; sometimes

BESOUGHT’. J before a person. To

beg ; to ask before a thing.

I beseech thee for my son Onesimus, whom I have begotten in my bonds. Philemon, 10.

I beseech you, Sir, pardon me ; it is only a letter from my brother, that I have not all over-read.

Shakspeare. But the voice of God To mortal ear is dreadful ; they beseech That Moses might report to them his will, And terror cease ; he grants what they besought.

Milton.

But Eve fell humble, and besought His peace, and thus proceeded in her plaint. Id. Before I come to them, I beseech your patience, Whilst I speak something to ourselves here present.

Spratt.

I, in the anguish of my heart, beseech you To quit the dreadful purpose of your soul.

Additon.

BESEEM’, ā¢} Be and seem. Dutch be- BESEEM’ING, n. fziemen. To become; to be BESEEM’LV. 3 fit ; to be decent for. What form of speech or behaviour, beseemeth us in our prayers to Almighty Good ? Hooker.

This oversight Beseems thee not, in whom such virtues spring.

Fairfax.

Verona's ancient citizens Cast by their brave beseeming ornaments.

Shakspeare.

What thoughts he had, beseem* not me to say ; Though some surmise he went to fast and pray.

Dryden.

BESEEN'. From besie, skinner. This word, says Johnson, I have only found in Spenser. Adapted, adjusted, becoming.

Forth came that ancient lord and aged queen, Armed iu antique robes down to the ground, And sad habiliments right well beseen.

Fairie Queene. Then her they crowne their goddess and their

queene, And deck with flowres thy altars well beseene.

Spenter.

BESET'. Be and set. Sax. bejnttan. To besiege ; to hem in ; to enclose, as with a siege. To waylay ; to surround. To embarrass, to per-

plex ; to entangle ; without any means of escape. To fall upon ; to harass.

Alas ! (quoth Absalon), and wala wa ! That trewe love was ever so yvell besette, Than kiss me ā sin that it may be no bette.

Chaucer. Canterbury Tales.

But they him spying, both with greedy force

At once upon him ran, and him beset

With strokes of mortal steel. Faerie Queene.

Draw forth thy weapon, we' are beset with thieves ;

Rescue thy mistress. Shakspeare.

Thus Adam, sore beset replyed. Milton.

Sure, or I read her visage much amiss,

Or grief besett her hard. Rowe.

We be in this world beset with sundry uneasinesses,

distracted with different desires. Locke.

Cato shall open to himself a passage. Addison.

True fortitude I take to be the quiet possession of

a man's self, and an undisturbed doing his duty,

whatever evil besets, or danger lies in his way. Id.

I know thou lookest on me as on a wretch Beset with ills, and covered with misfortunes.

Id.

BESEW. Be and sew. See SEW.

BESHADE'. Be and shade. See SHADE.

BESHINE'. Be and shine. See SHINE.

BESHREW'. Be and shrew. The original of this word is somewhat obscure ; as it evidently implies to wish ill, some derive it from heschryen, Germ, to enchant. Topsel, in his Book of Ani- mals, deduces it from the shrew mouse, an ani- mal, says he, so poisonous, that its bite is a severe curse. A shrew likewise signifies a scold- ing woman ; but its origin is not known.

Beshrew thee, cousin, which did'st lead me forth Of that sweet way I was in to despair. Shakspeare.

Now much beshrew my manners and my pride, If Hennia meant to say Lysander lied. Id,

Nay, quoth the cock, but I beshrew us both, If I believe a saint upon his oath.

Dryden's Fable*.

BESHUT'. Be and shut. See SHUT.

BESIDE', 3 Be and side. Ang.-Sax. side ;

BESIDES’. 5 Dutch slide ; Germ, seyt ; Swed. sida ; by the side : distinguished from behind and before; out of the right course, either of path of direction, of mind. Something placed by the side ; in addition ; over and above, not according to though not contrary; not of the number.

And him beside marcht amourous Desyre,

Who seemd of ryper yeares then the other sweyne

Yet was that other swayne this elder’s sire,

And ga/e him being, commune to them twayne.

Spenser.

The men said unto Lot, hast thou here any besides ?

Genesis.

Festus said with a loud voice, Paul, thou art beside thyself; much learning doth make thee mad.

Acts.

Thereto a great advantage eke he nas Through his three double hands thrise multiplyde, Besides the double strength that in them was : For still when fit occasion did betyde, He could his weapon shift from syde to syde, From hand to hand ; and with such nimblesse sly. Could wield about, that ere it were espide, The wicked stroke did wound his enemy Behinde, beside, before, as he it list apply. Npwfcrr

BES

70

Only be patient, till we have appeased The multitude betide themselves with fear. Shuktpeare.

You are too wilful blame, And, since your coming here, have done Enough to put him quite beside his patience. Id.

Beside the hearse a fruitful palm-tree grows, Ennobled since by this great funeral. Fairfax.

He caused me to sit down beside him. Bacon.

Doubtless, in man there is a nature found, Beside the senses, and above them far. Sir J. Demies. Of vagabonds we say

That they are ne'er beside their way. Hudibras.

At his right hand, Victory Sat eagle-winged : beside him hung his bow. Milton.

Fair Lavinia fled the fire Before the gods, and stood beside her sirs. Dryden.

Beridis, you know not, while you here attend, The* unworthy fate of your unhappy friend. Id.

Fair is the king-cup that in meadow blows ; Fair is the daisy that beside her grows. Gay.

Now under hanging mountains, Beside the falls of fountains, Unheard, unknown, He makes his moan. Pope.

And dead, as living, 'tis our author's pride Still to charm those who charm the world beside. Id.

The Stoicks did hold a necessary connexion of causes ; but they believed that God doth act pra&ter et contra naturam, besides and against nature. Bramhall.

Providence often disposes of things by a method beside and above the discoveries of man's reason.

South.

It is beside my present business to enlarge upon this speculation. Locke.

Outlaws and robbers, who break with all the world besides, must keep faith among themselves. Id.

Precepts of morality, besides the natural corruption of our tempers, are abstracted from ideas of sense.

Addison.

Some wonder that the Turk never attacks this treasury. But, besides that he has attempted it for- merly with no success, it is certain that the Venetians keep too watchful an eye. Id.

BESIEGE’, v. & n.,-\ Be and siege. See

BESIEGE’MENT, /SIEGE. To beleaguer;

BESIEG’ER, Ā£ to lay siege to ; to be-

BESIEG’ING. J set with armed forces ;

to endeavour to win a town or fortress, by sur- rounding it with an army, and forcing the de- fendants, either by violence or famine, to give admission.

A nd he shall besiege thee in all thy gates, until thy high and fenced walls come down. Deuteronomy.

And after of her mischefe and her woe, Now that she was besieged and ytake.

Chaucer. Cant. Tales.

The queen, with all the northern earls and loids, Intends here to besiege you in your castle. Sfiakspeare.

Thou shalt behold Whether by supplication we intend Address, and to begirt the almighty throne Beseeching or besieging. Milten

There is hardly a town taken in the common forms, ā¢where the besiegers have not the worse of the bargain.

Swift.

BESIL’VER. Be and silver. See SILVER.

BESISTAN, or BEZESTEIN, a name given by the Turks to those places at Constantinople, Adrianople, &c. where the merchants have their shops, and expose their merchandises to sale. Synonymous, therefore with BAZAAR, which see.

BESIT’. Be and sit. See SIT.

BE’SLAVE. Be and slave. See SLAVE.

BESLAVER. Be and slaver, or slabber. See SLAVER.

BESLER (Basilius), an apothecary at Nurem- berg in Germany, and an eminent botanist, pub- lished a work entitled Hortus Eystetensis, and gave name to the genus of plants called besle- ria.

BESLERIA, in botany, a genus of the angio- spermia order, and didynimia class of plants. Of this genus there are three species ; viz. 1 . B. christata, with stalks growing single, and a five- leaved involucrum. 2. B. lutea, with simple footstalks growing in clusters, and spear-shaped leaves. 3. B. melittifolia, with branching foot- stalks and oval leaves. All are natives of the warm parts of America, and cannot be preserved in this country without artificial heat

BESLIME'. Be and slime. See SLIME.

BESLUB'BER. Be and slubber, slobber, slaver. See SLAVER.

BESLUR'RY. Be and slurry. See SLURRY.

BESMEAR'. Be and smear. See SMEAR.

BESMIRCH'. Be and smirch. See SMIRCH.

BESMOOTH'. Be and smooth. See SMOOTH.

BESMUT. Be and smut. See SMUT.

BESNOW. Be and snow. See SNOW.

BESNUF'FED. Be and snuff. See SNUFF.

BESOLDE (Christopher), born at Tubingen, 1577, published a Synopsis of the Art of Politics, and of the Transactions from the Creation of the World to the reign of the emperor Ferdinand, both in 8vo ; A History of the Ottoman Em- pire ; A Brief Account of the Kings of Jerusa- lem ; Documents Illustrative of the History of the Religious Houses in Wirtemberg, 4to; a quarto volume of Philological Dissertations ; Documents connected with the Cqllegiate Church of Stutgaid, and with the Church of Backhenang ; and two treatises, entitled Virginum Sacrarum Monumenta, and Prodromus Vindiciarum Eccle- siast. Wirtemb. 4to. He made a public abjura- tion of Protestantism, and died in 1638

BE'SOM. From Germ., butsen, to cleanse ; Sax. ber-m, herrna; an instrument to sweep with.

I will sweep it with the besom of destruction, saith the Lord of hosts. Isaiah xiv. 22.

Bacon commended an old man who sold besoms: a proud young fellow came to him for a besom upon trust ; the old man said, Borrow

of thy back and belly, they will never ask thee again-, I shall dun thee every day. Bacon.

BESORCH, a coin of tin, or some base metal, current at Ormus, at the rate of seven forty-ninth parts of a farthing sterling.

BESORE'. Be and sore, Ang.-Sax. syrwan, syrewan, syrewain ; to vex ; teaze ; to hurt ; to annoy; to mortify. So him they led on to the courts of day,

Where never war nor wounds abide him more ; But in that house eternal peace doth play,

Acquieting the souls that new besore, Their way to heaven through their own blood did score.

G. Fletcher. Christ's Triumph after Death.

BESORT/, v. & n. From the Latin sors ; to suit; to fit; to become; to arrange and dis- pose wild distinct classes or kinds.

Such men as may besort your age, And know themselves and you. Shakspeare.

BES

I crave fit disposition for my wife, With such accommodation and betort, As levels with her breeding. Id.

BESOT', -\ Be and sot. Can it be,

BESOT'TED, (says the Ency. Met. from

BESOT'TEDLY, Ā£ sodden, sod, sot? One

BESOT'TEDNESS. * who soddens himself with di inking. Thersites calls Ajax ' a sodden-witted lord.' To infatuate ; to stupify ; to dull ; to take away the senses by enjoyment and too much indulgence to doating.

Paris, you speak Like one besotted on your sweet delights. Shakspeare.

Trust not that beauty ; but restore the prize Which ho, besotted on that face and eyes, Would rend from us. Dryden.

Swinish gluttony

Ne’er looks to heaven amidst his gorgeous feast, But, with besotted base ingratitude, Crams, and blasphemes his feeder. Milton.

Or fools besotted with their crimes. That know not how to shift betimes. Huaibras.

He is besotted, and has lost his reason ; and what then can there be for religion to take hold of him by ?

South.

BESOUR’. Be and sour. See SOUR. To wax sour, or sharp.

How should we abhor, and loath, and detest this old leaven that so besowres all our actions ; this hea- thenism of unregenerate carnal nature which makes our best works so unchristian. Hammond.

BESOZZI, or BEZUTIUS (Ambrose), a painter of eminence, born at Milan in 1648. He worked some time under Joseph Danedi, or Montalti, and afterwards went to Rome, where he studied from the antiques and the pictures of the greatest mas- ters, and at last perfected himself in the school of Giro Ferri. His great excellency consisted in painting architecture, friezes, imitations of boss- relievos, and other decorations. He died at Milan in 1706, aged fifty-eight.

BESPAN’GLE. Be and spangle. See SPANGLE. Any thing shining ; brilliant; drops in clusters.

For now the last day’s evening dew Even to the full itself doth shew, Each bough with pearl bespangling. Drayton.

Not Berenice’s locks first rose so bright, The heavens bespangling with dishevelled light. Pope.

BESPATTER. Be and spatter. See SPATTER. To besmear and soil by spitting ; to throw filth at random at any object, so as partially and irre- gularly but not wholly to cover it ; figuratively, to asperse and calumniate.

Those who will not take vice into their bosoms, shall yet have it bespatter their faces.

Government of the Tongve.

His weapons are the same which women and chil- dren use ; a pin to scratch, and a squirt to bespatter.

Swift.

Fair Britain, in the monarch blest, Whom never faction could bespatter. Id.

BES PAWL'. Be and spawl, Ang.-Sax. spcetan. To spit ; to spattle. See SPAUL. They bespatled hym, and byspitted hym.

Ball. Acts of English Votaries. See how this remonstrant would invest himsi-lf, conditionally, with all the rheum of the town, that he might have sufficient to bespaul his brethren.

Milton. Animad.

BESPEAK', } Be and speak. See SPEAK. BESPEAK'ER. i To bespeak is not merely to

give utterance to words; we use it to express a wish ; to put in a claim ; to order, as of a tradesman, for something forthcoming ; to be- speak a play is to request its performance at a particular time ; to request attention ; to ad- dress ; to betoken ; to foreshow.

With hearty words her knight she 'gan to cheer, And, in her modest manner, thus bespahe : Dear knight ā Faerie Queene.

If you will marry, make your love to me ! My lady is bespoke. Shakspeare.

Here is the cap your worship did bespeak. Id.

He shook his mitred locks, and stern bespoke How well could I have spared for thee, young swain, Enow of such as for their bellies' sake Creep, and intrude, and climb into the fold. Milton.

At length with indignation thus he broke His awful silence, and the powers bespoke. Dryden.

Then staring on her with a ghastly look, And hollow voice, he thus the queen bespoke. Id.

My preface looks as if I were afraid of my reader, by so tedious a bespeaking of him. Id.

When Baboon came to Strutt's estate his trades- men waited upon him to bespeak his custom. Arbuthnot. 0 do not run too fast : for I

Will but bespeak thy grave and die. Marvel.

A heavy writer was to be encouraged, and accord- ingly many thousand copies were bespoke. Swift.

They started fears, bespoke dangers, and formed ominous prognosticks, in order to scare the allies. Id.

When the abbot of St. Martin was born, he had so little the figure of a man, that it bespoke him rather a monster. Locke.

He has dispatched me hence, With orders that bespeak a mind composed. Addison.

They mean not with love to be the bespeaker of the work, but delight in the wm-k itself. Wotton.

There dwelt a sage called Discipline ; his head, Not yet by time completely silvered o'er, Bespoke him past the bounds of peakish youth, But strong for service still and unimpaired. Cowper.

BESPECK'LE. Be and speckle. See SPECKLE. A peculiar kind of spotting; an intermixture of colors ; to mark.

Her chaste and modest vail, surrounded with celes- tial beams, they overlaid with wanton tresses, and in a flaming tire bespeckled her with all the gaudy al- lurements of a whore.

Milton, Of Reformation in England.

BESPENT'. Be and spend, from the Latin pendo, to weigh. See SPEND. To weigh out ; to give out ; to distribute.

BESPET',) ,, , . c c BESPIT.' j Be and SPU- See SPIT-

BESPICE'. Be and spice. See SPICE. To mix various species of aromatics ; to drug or to flavor liquor with aromatic ingredients.

Thou might'st bespice a cup

To give mine enemy a lasting wink. Shakspeare.

BESPOT'. Be and spot. See SPOT. To cover with spots.

Thy blameful lines, bespotted so with sin, Mine eye would cleanse, e'er they to read begin.

Dray tun.

BESPREAD'. Be and spread. See SPREAD. At peep of day, when in her crimson pride

The morn bespreads with roses all the way Where Phoebus' couch with radiant course must glid> .

The hermit bends his humble knees to pray.

Thomas Loil ā¢ā¢

BESPRENT'. To besprinkle.

And first within the porch and jawes of hell , Sate deep remorse of conscience, all bes]>rt >it With tt.n-c". Mirror fur Magistral!

BES 72

My head besprent with hoarie frost I finde, An by myne eye the crowe his clawe doth wrigat.

Spenter.

His nuptial bed,

With curious needles wrought, and painted flowers bespread. Dryden.

They ceased ; when on the tuneful stage Advanced a bard, of aspect sage ; His silver tresses, thin besprent, To age a graceful reverence lent. Wartan.

BESPRIN'KLE. Be and sprinkle. See SPRINKLE. To asperse; to scatter about; to wet any object, as by showers or drops.

Herodotus, imitating the father poet, whose life he l.ad written, hath besprinUed his work with many fabulosities. Brown.

A purple flood

Flows from the trunk, that welters in the blood :

The bed besprinkles, and bedews the ground.

Dryden.

BESPURT'. Be and spurt. See SPURT. To cast forth; a rapid irregular

movement; to spurt water is to eject it from a syringe, from the mouth, or any vessel ; to bespurt is thus to cast any fluid upon an object.

I suppose, and more than suppose, it will be no- thing disagreeing from Christian meekness, to handle such a one in a rougher accent, and to send home his haughtiness well bespurted with his own holy water.

Milton.

BESSARABIA, a territory of Russia in Eu- rope, comprehending a part of Moldavia ceded by the Porte at the peace of Bukharest in 1812, and Bessarabia Proper, called Bujak by the Turks. Between 45Ā° and 48Ā° N. lat., 28Ā° and 31Ā° E, long., containing about 8800 square miles. It is bounded on the south by the Pruth and the Danube, on the west by a small river, called Rakitno, on the north by the Dniester, and on the east by the Black sea; and divided into two parts: 1. The Moldavian division containing seven trinuts, or circles ; Khotini, Khotim, or Choczim, Soroka, Orkhe% Faltshi, Khotornitchan, Codrz, and Gretchan. 2. Bessarabia Proper, subdivided into the circles of Bender, Kausharian, and Ismail-Tomarovian. Bessarabia Properwas the Scythian desert of the ancients. The popu- lation has been estimated at 300,000 ; but it is probably much below that number, as the country has been almost depopulated by the wars of the neighbourhood. Bulgarians, Moldavians, Ar- menians, Jews, Tartars, and Servians constitute the bulk of its inhabitants ; and to these may be added Gipsies. In the lakes of Ak-kirman, salt is manufactured, shagrin at Ismail ; these are almost the only manufactures. The Russian government has raised a considerable revenue from the fisheries, and salt works, as likewise from duties on spirits, &c. the whole amounting to perhaps 3,000,000 piastres or Ā£150,000.

BESSARION, titular patriarch of Constanti- nople, was born at Trebizond. He was very zealous to reunite the Greek with the Latin church, and engaged the emperor John Paleologus to interest himself in bringing about this great work. He appeared at the council of Florence, and harangued the fathers on this topic. The Greek scnismatics conceived so mortal an aversion to

him, that he was obliged to remain in Italy, where pope Eugenius I. honored him with the purple in 1439. He fixed his abode in Rome, and would have been raised to the papal chair, if cardinal Alain had

not opposed it, as injurious to the Latin church to choose a Greek, however illustrious. He was employed in several embas- sies, but that to France proved fatal to him. When legate to this court, he happened to visit the duke of Burgundy, before he saw Louis XI. which so piqued the capricious haughty mo- narch, that he gave him a very ungracious recep- tion. He even took the cardinal legate by the beard, saying Barbara Graeca genus retinent quod habere solebant ; an affront which so chagrined him, according to Matthieu, as to occasion his death at Ravenna, upon his return in 1472. Bessarion loved and protected the literati. Argyropilus, Theodore of Gaza, Poggio, Lau- rentius Valla, &c. formed in his house a kind of academy. His library was large and curious; and the synod of Venice long preserved it. He left some works, which rank among those which helped to revive letters ; as, Defensio Doctrirwe Platonics, &c. Translations of some pieces of Aristotle, Orations, Epistles, &c.

BESSE, a copper coin, current at the island Ormus, in the Persian gulf, equal to four cosbegs, or Ifd sterling.

BESSE, in ichthyology, the sea wolf.

BESSI, the ancient inhabitants of Bessica, a fierce and barbarous people, noted for their ‘rob- beries. Their chief city Uscudama is now known by the name of Adrianople. They lived under their own kings till the consulate of M. Licinius, Lucullus, and C. Cassius Varus ; when Lucullus invaded their country, and having gained a great victory over them, took their metropolis, and subjected the whole nation to the Roman laws. The Romans, notwithstanding they had subdued them by force of arms, still suffered them to live under their own kings. But Piso, while he governed Macedon as proconsul, having treache- rously seized Rabocentus, whom Suetonius calls prince of the Bessi, caused him to be publicly beheaded. This so exasperated the nation, that they revolted ; but were overcome by Octavius the father of Augustus. During the civil wars of Rome, they attempted anew to recover their liberty, but were again defeated by the famous M. Brutus. In the reign of Augustus, one Volo- gesus, a native of the country, and priest of Bac- chus, having, under pretence of religion, drawn together great crowds of people, made himself master of this country ; and entering the Cher- sonesus, committed the most dreadful ravages. He was at last, however, overcome by L. Piso ; who obliged the inhabitants to lay down their arms. From this time the Bessi continued sub- ject to the Romans, without attempting any mow to recover their liberty.

BESSICA, in ancient geography, a district of Thrace towards mount Haemus, to the south of the Hebrus ; inhabited by the Bessi.

BESSIS CENTESIM* denotes two thirds of centesimal interest, or usury at 8 per cent. BEST, adj. & adv. } Used as the irregular BEST'NESS. J superlative of good. Sax.

bet, betejia, betrr, good, better, best. That

BES

which has good qualities in the highest degree ; the utmost power ; the highest perfection. To improve to the utmost.

For I dare swere wel, if that she Had among tenne thousande ybe, She wolden have be, at [with] the bette, A chefe myroure of all the feste.

Chaucer. Boke oftJte Duchesse. He shall dwell in that place which he shall choose, in one of thy gates, where it liketh him best.

Deut. xxiii. 16.

And he will take your fields, even the best of them,

and give them to his servants. 1 Sam. viii. 14.

When the best things are not possible, the best may

be made of those that are. Hooker.

Let there be freedom to carry their commodities

where they may make the best of them, except there

be some special cause of caution. Bacon.

The duke did his best to come down. /

I profess not talking : only this, Let each man do his best. Skakspeare.

When he is best, he is little more than a man ; and when he is worst he is little better than a beast.

Id.

He does this to the best of his power. Locke.

I think it a good argument to say, the infinitely

wise God hath made it so, and therefore it is best.

But it is too much confidence in our own wisdom, to

say, I think it best, and therefore God hath made it

so. Id.

My friend, said he, our sport is at the best.

Addison.

His father left him an hundred drachmas ; Alnas-

char, in order to make the best of it, laid it out in

glasses. Id.

We set sail, and made the best of our way till we

were forced, by contrary winds, into St. Remo. Id.

An evil intention perverts the best actions, and

makes them sins. Id.

BESTAIN'. Be and stain. Chaucer uses distain. See STAIN. To mark with spots; to spoil or vitiate the color.

We will not line his thin bestained cloke

With our pure honours. Shakspeare.

BESTARCHA, a dignity in the courts of the emperors of Constantinople, supposed to answer to that of the master of the chancery among us. The word seems to have been formed from ves-tarcha, by a change of the v into b.

BESTEAD'. Be and stead. See STEAD. To be in place ; to be in stead. It also signifies accommodation, good or ill : when used in this sense, Dr. Johnson says it should be written bested. Milton uses it in the sense of advantage, ā ' How little you bestead ;' that is confer, or bestow.

For were a manne for her bestadde, She woulde ben right sore a dradde.

Chaucer. Romaunt of the Rote.

They shall pass through it hardly bestead, and

hungry. Isaiah.

Hence, vain deluding joys ! The brood of folly, without father bred ;

How little you bestead, Or fill the fixed mind with all your toys !

Milton.

He who looks so deformedly and dismally, who to outward sight is so ill bestead, and so pitifully ac- coutred, hath latent in him much of admirable beauty and glory. Barrow.

BES

BESTIAL’, n. 8c adj. ˆ See BEAST. To re BESTIAL’ITY, (duce what is in its own

BE’STIALIZE, (nature superior, to the

BE’STIALLY. J condition or state of a

beast; a degradation of reason and of humanity. I have lost the immortal part of myself, and what

remains is bestial. Shakspeare. Othello.

O foul descent ! that I who erst contended

With gods to sit the highest, am now constrained

Into a beast, and mixed with bestial slime,

This essence to incarnate and imbrute,

That to the height of Deity aspired.

But what will not Ambition and Revenge

Descend to. Milton.

For those, the race of Israel oft forsook Their living strength, and unfrequented left His righteous altar, bowing lowly down To bestial gods. Id.

The things promised are not gross and carnal,

such as may court and gratify the most bestial part

of us. Decay of Piety.

His wild disordered walk, his haggard eyes, Did all the bestial citizens surprize. Dryden.

What can be a greater absurdity, than to affirm

bestiality to be the essence of humanity, and darkness

the centre of light?

Arbttthnot and Pope's Mart. Scrib.

Thus fornication, incest, rape, and even bestiality, were sanctified by the amours of Jupiter, Pan, Mars, Venus, and Apollo. Goldsmith.

BESTIARII, in Roman antiquity, those who fought against beasts, or who were exposed to them by the sentence of the law. There were four kinds of bestiarii; viz. i. Those who made a trade of it, and fought for money. 2. Such young men as, to show their strength and dex- terity in managing their arms, fought against beasts: Augustus encouraged this practice in young men of the first rank ; Nero exposed him- self to it : and it was for the killing beasts in the amphitheatre, that Commodus acquired the title of the Roman Hercules. 3. The third kind was, where several bestiarii were let loose at once, well armed, against a number of beasts. 4. The fourth kind were those condemned to the beasts, consisting either of prisoners taken in war, or slaves guilty of some enormous crimes ; these were exposed naked, and without defence : nor did it avail any thing to conquer and kill the beast, fresh ones being continually let loose on them, till they were put to death. But it seldom happened that two were required for the same man ; on the contrary, one beast frequently despatched several men. Cicero mentions a lion, which alone despatched 200 bestiarii. Those who s acceded the first were called tiptBpoi, and the last WXOXJH; among the Romans meridiani.

BE'STICK. Be and stick. See STICK. Ang.- Sax. sticcan. To stick, to pierce.

Truth shall retire

Bestttck with slanderous darts ; and works of faith Rarely be found : so shall the world go on, To good malignant, to bad men benign. Milton

BESTIL'LED. Be and still. See STILL. To make quiet ; to calm ; to tranquillise. The choral muses droop ! Their harps unstrung,

The lutes and laurel wreaths neglected fall ‘. Commerce beitilled her many-nationed tongue,

Whilom so busy in her bustling hall. Cunningham.

BES

BESTIR . Be and stir. See STIR. To steer, to move, to put into vigorous action. It is seldom usˆd otherwise than with the reciprocal pronoun.

I am scarce in breath, my lord. ā No marvel, you have so beitirred your valour, you cowardly rascal !

Shakspeare.

As when men wont to watch On duty, sleeping found by whom they dread, Rouse and bestir themselves ere well awake.

Milton.

Bestirs her then, and from each tender stalk Whatever earth, all-bearing mother, yields, She gathers. Id.

But, as a dog that turns the spit Bestirs himself, and plies his feet To climb the wheel, but all in vain, His own weight brings him down again.

Hudibras.

What aileth them, that they must needs bestir themselves to get in air, to maintain the creature’s life. Ray.

BESTORM’. Be and storm. See STORM. To agitate, to drive about furiously ; to assail with irresistible violence.

Religion ! Providence ! an after state ! Here is firm footing ; here is solid rock ! This can support us ; all is sea besides : Sinks under us, bestorms, and then devours.

Young.

BESTOW, ˆ Ang.Sax. stow. That is BESTOW’ING, > place. Bestow is to collect BESTOW’ER. j into a place ; to put, to confer, to give or grant. It has a very extensive appli cation, as the following extracts will show.

All the dedicated things of the house of the Lord did they bestow upon

Baalim. 2 Chrvn. xxiv. 7.

And thou shalt bestow that monej for whatsoever thy soul lusteth after, for oxen, sheep, or for wine.

Deut. xiv. 26.

And when he came to the Tower, he took them from their hand, and bestowed them in the house.

2 Kings v. 24.

Our Saviour doth plainly witness, that there should not be as much as a cup of cold water bestowed for his sake, without reward. Hooker.

All men would willingly have yielded him praise ; but his nature was such as to bestow it upon himself, before any could give it. Sidney.

Good reverend father, make my person yours ; And tell me how you would bestow yourself.

Shakspeare.

And though he was unsatisfied in getting, Which was a sin ; yet in bestowing, madam, He was most princely. Id.

That bay they enter which unto them owes The noblest wreaths which victory bestows.

Marvell.

Sir Julius Caesar had, in his office, the disposition of the six clerks' places ; which he had bestowed to such persons as he thought fit. Clarendon.

Spain to your gift alone her Indies owes, For what the powerful takes not, he bestowt.

Dryden.

They all agree in making one supreme God ; and that there are several beings that are to be worshipped under him ; some as the bestowers of thrones, but subordinate to the Supreme. Stillingfleet.

BESTRAUGHT', part. Of this participle I have not found the verb ; by analogy we may

derive it from bestract ; perhaps it is corrupted from distraught. Distracted; mad; out of one's senses ; out of one's wits.

O goddesse sonno, in such case canst thou sleepe Ne yet, bestraught, the daungers doest foresee That compasse thee ? or hearst the faire windes blowe ?

Surrey.

Ask Marian, the fat alewife, if she knew me not. What! I am not bestraught. Shakspeare.

BESTREAK'. Be and streak. See STREAK To draw a stroke with a pen, a line ; to bestreak is to mark with lines.

Besides, as presents for my soul's delight, Two beauteous kids I keep bestreaked with white.

Beat tie.

BESTREW,) Be and strew. See STREW. BESTROWN'. J To scatter ; to disperse ; to sprinkle over a surface

Good morrow to this primrose too,

Good morrow to each maid, That will with flowers the tomb bestrew

Wherein my love is laid. Herrich.

Those blossoms also, and those dropping gums, That lie lestrown unsightly and unsmooth, Ask riddance, if we mean to tread with ease.

Milton. Pale pansies o'er his corpse were placed,

Which, plucked before their time, Bestrewed the boy, like him to waste

And wither in their prime. Colling.

BESTRIDE'. Be and stride. See STRIDE. To stretch ; generally applied to the legs ; whe- ther to cross a horse, to pass over, to pass on with effect, to walk with energy, or to stand over an object; to command or secure it.

He bestrid

An o'erpressed Roman, and i' the consul's view Slew three opposers : Tarquin's self he met, And struck him on his knees. Shakspeare.

If thou see me down in the battle, and bestride me, so ; 'tis a point of friendship. Id.

He doth bestride a bleeding land, Gasping for life under great Bolingbroke. 'Id. Why, man, he doth bestride the narrow world Like a colossus. Id.

That I see thee here,

Thou noble thing ! more dances my rapt heart, Than when I first my wedded mistress saw Bestride my threshold. Id.

He bestrides the lazy pacing clouds, And sails upon the bosom of the air. Id.

Venetians do not more uncouthly ride Than did their lubber state mankind bestride.

Dryden.

Make him bestride the ocean, and mankind Ask his consent to use the sea and wind. Waller.

The bounding steed you pompously bestride, Shares with his lord the pleasure and the pride.

Pope.

With the first pause the resting rowers gave, He waits not ā looks not ā leaps into the wave, Strives through the surge ā beitrides the beach ā and

high Ascends the path familiar to his eye. Byron.

BESTRUT'. Be and strut. See STRUT. The common word is a-strut, assumed consequence in walking. Swelled out, distended, is the primary sense : ' Paps bestrut with milk,' occurs in Holland's Plutarch.

BET 7,

TJESTUD'. Be and stud. Ang.-Sax. studu : A post, ; a pillar ; any thing fixed ; from sted, tud, the past participle of the verb to stand. ā Ency. Met. To bestud, is to fix any thing like gems in a crown, or stars in the firmament, that keep their places.

And when the golden glorious sun goes down, Would she put on her stzr-bestudded crown Drayton.

The sea o’er fraught would swell, and the’ unsought

diamonds

Would so imblaze the forehead of the deep, And so bestud with stars, that they below Would grow inured to light, and come at last To gaze upon the sun with shameless brows.

Milton’s Comus.

BESWAD’DLED. Be and swaddle. See SWADDLE. To swathe, to fasten, to bind toge- ther.

Hence cradles see, with lisping statesmen spawn ! And infant limbs beswaddled in the lawn. Whitehead.

BESWYN’KLE. Ang.-Sax. To labor. Hence Chaucer calls a laborer, swinker.

BET, v. & n. ˆ Sax. pe’bbian, to wager ; peb,

BET’TING, > a wager; from which the ety-

BET’TOR. j mologists derive bet. I should rather imagine it to come from betan, to mend, increase, or bet, as a bet increases the original waĀ°;er. A wager ; something laid to be won upon certain conditions. Betan is to better, to support, says the Ency. Met. ; and hence con- cludes, that to bet is to support an opinion by risking any thing upon it.

He drew a good bow : and dead? John of Gaunt loved him well, and betted much upon his head.

Sluihspeare. He flies the court for want of “‘lotbes ;

Cries out ‘gainst cocking, since :ie cannot bet.

Ben Joruon.

The god unhappily engaged, Complained, and sighed, and cried, and fretted,

Lost every earthly thing he betted. Prior.

The hoary fool, who many days Has struggled with continued sorrow, Renews his hope, and blindly lays The desperate bet upon to-morrow. Id.

His pride was in piquette, Newmarket fame and judgment at a bet. Pope.

The gamester too, whose wits all high or low, Oft risks his fortune on one desperate throw, Comes here to saunter, having made his bets, Finds his lost senses out and pays his debts.

Goldsmith.

BETA, /3sra, the second letter in the Greek alphabet, answering to our B ; also used by the Greeks as a numeral for two.

BETA, in botany, the beet; a genus of the digynia order, and pentandria class of plants ; ranking in the natural method under the twelfth order, holoraceae : CAL. four leaves; there is no corolla ; the seeds are kidney-shaped, and situated within the base of the calyx. There are four species, viz. 1. B. cicla, the root of scarcity, has been much recommended to agriculturists of late years. Mr. Loudon (Practice of Agricul- ture, 1. iii. p. 798,) says, ‘ it is supposed by Pro- fessor Thaer to be a mongrel between the red and white beet. It has a much larger bulb than either, and that bulb, in some varieties, grows in great part above ground. It has been a good deal cul- tivated in Germany and Switzerland, both for its

leaves and roots ; the leaves are either used as spinach or given to cattle; and the roots are either given to cattle, used in distillation, or for extracting sugar. The culture of the field-beet in Britain is very recent, and it may be ques- tioned whether it has any advantages over the turnip for general agricultural purposes. It ad- mits, however, of being cultivated on ridgelets, and with as little manual labor as the turnip, while it will prosper on a stronger soil, and near large towns it is not liable to the depredations usually committed on turnips or carrots, as the root is unpalatable either raw or boiled. The variety preferred in Germany is one slightly tinged with red for cattle, and the pale-yellow variety for the distillery and sugar manufacture. It is also called the field-beet, and is in England, particularly near London, applied to the fat- tening of stock, and the feeding of milch cows. Their milk is said to be much improved and increased by it. 2. B. hortensis, the common white beet, is cultivated in gardens for the sake

of its leaves, which are frequently used in soups. The root seldom grows larger than a man's thumb. 3. B. maritima, the sea beet, grows naturally by the sea side, and in salt marshes, in many parts of England. It has been supposed by many to be only a variety of the common white beet ; but Mr. Miller assures us he has been unable to make any variation in them by culture. The Hortus Kewensis distinguishes a species of this name by its having its flowers in pairs. 4. B. vulgaris, the red beet, with a pyramidal root, has large, thick, succulent leaves, which are for the most part of a dark green or purple color. The roots are large, and of a deep red. The larger these roots grow the tenderer they are, and the deeper their color the more they are esteemed. The varieties of this species are the common red beet, the turnip-rooted beet, and the green-leaved red beet.

The common white beet is sown by itself, in the beginning of March, upon an open spot of ground, not too moist. When the plants have put out four leaves, the ground should be hoed as for carrots, carefully cutting up the weeds, and also the plants where too near each other, leaving them at least six inches asunder. In three or four weeks, the ground should be hoed a second time, to cut up the weeds and thin the plants, for by this time they will be out of dan- ger ; so should not be left nearer than eight or nine inches, if regard is had to the goodness of the leaves ; and if it be of the Swiss kind, with broad leaves, the plants must not be nearer than a foot. In six weeks after, the ground should be hoed over a third time, to destroy weeds. After this the plants will spread and prevent the weeds from growing, and the leaves will soon be fit for use. The outer large leaves should be first gathered, leaving the small inner ones to grow large ; by which method a small spot of ground will supply a moderate family for a whole year, provided the plants are not allowed to run to seed, for in that case they will not be good. The red beet is frequently sown with onions, carrots, or parsnips ; but if these are not to be soon removed, the beets ought to be sown by themselves. They require a deep light soil ;

the seeds should be sown in March, and must be treated in the same manner as the former sort ;

the East; composed of the nut of the areca catechu, in the proportion

of one-half, one-

but the plants should not be left nearer than a quarter of quick lime, and one-quarter of the

foot, or in good land a foot and a half ; for the leaves will cover the ground at that distance. The roots will be fit for use in autumn, and

leaves of the piper betle and tobacco. The lime used with the nut is called chunam, and is ob- tained from the calcination of shells, as producing

raw. The latter has undergone no change ; the former is cut in slices, boiled with a small

continue good all winter ; but in the spring, the finest kind ; it is employed either boiled or

when they begin to shoot, they will be hard and

stringy.

The juice expressed from the roots is a power- quantity of terra japonica, and then dried,

ful errhine. The root of the red beet is some- The immediate consequences of eating this

times used to improve the color of claret. By compound are reddening the saliva, and giving

some it is recommended to cultivate the white a bright hue to the lips; in progress of time, the

beet in large quantities as food for cattle. Mar- teeth are rendered quite black by it; if thechu-

graff, the Prusian chemist, first procured sugar nam be omitted, the saliva will not be tinged ;

from the root of the white beet in 1747. At the and its pernicious operation on the enamel of the

commencement of the present century the che- teeth may be averted, by rubbing them with a

mists of France bestowed great attention upon preparation that coats

them with a black sub-

this subject. For a description of the mode of stance, which does not yield to any dentrifice,

preparing the sugar, see Huet de la Croix, Notice and preserves them from corrosion. The effects

sur la Betterave, considered principalement sous which recommend it are the dispelling of nausea,

le rapport des benefices que sa culture doit pro- exciting an appetite, and strengthening the sto-

curer au cultivateur, 8vo. Paris, 1812.

BETAG'. Be and tag. knit, bind, connect.

The last grave fop of the last age, In a superb and feathered hearse, Bescutcheoned and befogged with verse

mach. It also possesses nutritious and enliven- To tack or tag ; to ing qualities, which render it particularly accept- able.

As an article of luxury betel has given rise to various ceremonial usages in the East. Persons of the more polished classes, after the first saluta- Churchill. tion, present it as a token of politeness : to omit BETAH, or TIBHATH, a city of Syria, which it would be considered neglect, and its rejection David took from Hadadezer. 2 Sam. viii. 8. would be an affront. No one of inferior rank BETAIL'ED. Be and tail. See TAIL. should address a dignified individual without

BETAKE'. Be and take. See TAKE. To the previous chewing of betel ; two people seldom give, to recommend, to take to, commit to, deli- meet without exchanging it ; and it is always ver to, resort or recur to. offered on occasion of ceremonious interviews.

I trust in Goddes bountie ; and therefore ā¢e box containing it is of silver or gold, and

My marriag*, and miu estat, and rest, of elegant workmanship. In some countries it

I him betake, he may don as him lest. is not uncommon for the guest who receives the

Chaucer. Canterbury Tale*, betel from his host to pass it between his

thumb

But Absolon ! that saith full oft ; Alas ! and fore-finger, and apply his own chunam,

My soul betake I unto Sathanas, which never gives offence. Philtres and charms

But me were lever than all this town (quod he), are often conveyed with the chunam. The Mahom-

Of this despit awroken for to be. Id. medans abstain from it as an indulgence during

Then to his hands that writ he did betake, the Ramadan, and females of the higher ranks

Which he disclosing read. Spenter. are said to pass tneir lives in doing little else than

The adverse party betaking itself to such practices chewing it. When the Cingalese retire to rest as men embrace, when they behold things brought to at night they fill their mouths with it, and re- desperate extremities. Hooker, tain it there until they awake. The poor keep it Thou tyrant! jn straw purses, lodged in some fold of their Do not repent these things ; for they are heavier

dress. Betel is a considerable article of traffic in India, China, and indeed throughout Asia. In

Than all thy woes can stir : therefore betake thee To nothing but despair.

The rest, in imitation, to like arms Betook them, and the neighbouring hills uptore. ”’*”’ “Ā« Ā„~ā¢ ”’ ” Ā°” “^

Milton amounted in a single year to Ā£138,836.

BETELGUELE, or BEDELGAEZE, a Soft she withdrew ; and like a wood-nymph light,

the British settlements of Bombay, Madras, and Bengal, the value of it, as an import, recently

Oread or Dryad, or of Delia’s train,

Betook her to the groves. Id.

With ease such fond chimeras we pursue, As fancy frames for fancy to subdue ; But when ourselves to action we betake, It shuns the mint, like gold that chymists make.

Dry den.

BETALK'. Be and talk. See TALK. To tell ; to give an account.

fixed

star, of the first magnitude, in Orion's hind shoulder.

BETEN, in ancient geography, a town in the tribe of Astiur.

BETEEM'. From Ang.-Sax. taemian. To pour forth ; to produce; to give; to grant; to bestow.

So would I, said the' enchanter, glad and fain Beteem to you his sword, you to defend ; But that this weapon's power I well have kenned

BETEL, or BETLE, in botany, a name given To be contrary to the work tbat ye intend,

to an Indian plant (a species of piper) See Faerie Queene.

PIPER. Rain, which I could well -ā

BETEL, or BETELE, is more commonly used Beteem them from the tempest of mine eyes.

fĀ»r a compound masticatory, in great request in Shakipeare.

BET 77

Although he could have well beteemed to have thanked him of the ease he proffered, yet loving his own handy-work, modestly refused him.

Milton. Animad,

BETH, the second letter of the Hebrew alpha- bet, answering to our B, and used also by the Jews as a numeral for two. Beth, in literary history, makes the title of a multitude of books in the Hebrew language ; e. gr. Beth Avoth, or the house of the fathers ; Beth Elohim, or the house of God ; Beth Israel, or the house of Israel, &c.

BETHABARA,in ancient geography, the house of passage; a' term therefore by many referred to the passage at Jericho, where the Israelites passed over dry-shod ; by Lightfoot, to the pas- sage at Scythopolis : but Cellarius refers it to the mid-way between both, because there were doubt- less several passages or fords on the Jordan. Here John is said to have baptised on the other side Jordan, John i. 28.

BETHABARA, a town of North Carolina, on the west side of Grassy Creek, which unites with the Gargales, and several others, and falls into the Yadkin. This town was settled in the year 1753 by the Moravian brethren, who emigrated from Pennsylvania. It is seven miles north- west of Salem, and 183 west of Halifax.

BETHAGLIA, or BETH-HOGLAH, a town of the tribe of Benjamin (Joshua xviii. 21). In Jerome's time there was a village called Agla, ten miles from Eleutheropolis, towards Gaza, and supposed to be Bethaglia.

BETHANIA, a post-town of North Carolina, four miles north-west of Bethabara. It is regu- larly laid out, and was settled about the year 1759, by Moravians from Pennsylvania. It is ten miles north-west of Salem.

BETHANIA, or BETHANY, a village and tract of land, at the foot of mount Olivet, on the west side, about two miles east of Jerusalem, where Lazarus dwelt and was raised from the dead ; and where the ascension of our Saviour hap- pened. The Turks still pretend to show Lazarus's house and grave. They also show the house of Mary Magdalen, at a little distance. Dr. Rich- ardson was shown them both, as he was told, in 1818. The name of Bethany was sometimes extended to the whole tract of ground from the village itself to Bethpage (John xxiv. 50, Acts i, 12.), a circumstance which ought to be borne in mind, in order to prevent an apparent contra- diction between the account of the resurrection given by St. Luke in his Gospel, and that after- wards given in the Acts of the Apostles. The Bethany mentioned in the Gospel, is the district including the part of the Mount of Olives men- tioned in the Acts.

BETHARA, a place south of the Galilean Sea; upon the borders of Ephraim, where the Midianites, pursued by Gideon, crossed the Jor- dan.

BETHARAN, in ancient geography, a town of Paraea, on the other side Jordan, said to have been called Livias or Libias, in the Greek man-

ner, by Herod, in honor of Livia ; and of the same latitude almost with Jerusalem ; called also Julias -by Josephus, who always calls the Livia of Augustus Lia.

BET

BETHAVEN, in ancient geography, a town in the tribe of Ephraim, south-east of Bethel (Josh. vii. 2). It is also a name given to Bethel by Hosea, after the establishment of the idolatry of Jeroboam there ; meaning it to have become the house of iniquity, from being the house of God.

BETHBARA, a place in the land of Galilee, where Gideon called the Ephraimites to stop the flying Midianites (Judg. vii. 24), supposed to be the same with Bethara.

BETHCAR, a city of the Danites, to which the Israelites under Samuel pursued the Philis- tines. 1 Sam. vii. 11.

BETH-DAGON, a city of Palestine, on the borders of the land of Israel.

BETHEL, a city of Samaria, on the borders of the tribe of Benjamin, anciently called Luz ; but they seem to be distinguished (Joshua xvi. 2). They were, however, contiguous places. Bethel was properly the place of Jacob's vision, and Luz, or Lus, an adjoining town, afterwards crlled Bethel. It was twelve miles north-east of Jerusalem Dr. Clarke remarks, that the nature of the soil is still an existing comment upon the record of the stony territory, where he took of the stones of the place, and put them for his pillow.

BETHER, or EITHER, a city of Palestine, which some place near Jerusalem, and others near Caesarea and mount Carmel. About A. D. 1 30 it sustained a terrible siege, when the blood, which ran down the river, is said to have colored the waters of the sea to some distance.

BETHESD A, (called in the Greek, KoXtˆ/3Ā»j0pa npo/3arucĀ»j, and thence in the Vulgate, Piscina Probatica, because, according to some, the sheep were washed in it, which were appointed for sacrifices,) was the Hebrew name for a pool or public bath, which had five porticoes, piazzas, or covered walks around it. It was called Bethesda, monn'3, Beth Chezda, or the House of Mercy, because, as Pool, in his Annotations, observes, the erecting of public baths was an act of great kindness to the common people, particularly a bath with the virtues of the description this pos- sessed. From the Greek word icoXv/t/3jj0pa being used by Josephus (Antiq. xv. 3), to denote the baths of Jericho, Macknight, in his Harmony of the Gospels, concludes that their

opinion is without proper foundation, who affirm, that this pool served for washing the sheep designed for sacrifice, before they were driven into the tem- ple, and for washing the entrails of the beasts sacrificed there. Besides, he thinks it incon- sistent with the situation of Bethesda, near the sheep-gate, or market, as our English transla- tors have rendered the Greek itri ri\ 7rpo/3ariKij icoXv/t/3Ā»j0pa, though some copies have it, Ev TIJ, &c., in the south-east wall of the city. The nature of the cures performed here, as recorded John v. 2, 3, &c., has been much controverted. Some writers confine the miracle to the season of the particular feast mentioned in verse 1, as they understand sara icaipov, by times, verse 4, which our translators render, a certain season, to mean at that season, since the evangelist does not say that the waters of Bethesda had their sanative quality at any other feast; and they instance the

silence of Philo and Josephus respecting this miracle as confirming their interpretation. Mack- night observes, that the silence of these writers is worthy of little regard, as they have omitted greater transactions which they had an opportu- nity to know. It must here be observed, that the fourth verse of this chapter of St. John is not in Beza's Cambridge MS. nor in one or two more of some authorities. Griesbach has marked it as doubtful, yet he leaves it in the text. But though it should be rejected, the difficulty for which some would have it cancelled, remains: because the seventh verse implies, that cures were performed in this pool, and that only one at a time was cured ; if so, it is as easy to con- ceive that an angel moved the water, and gave it its healing quality, as to fancy those cuies were performed miraculously in any other way. Grotius, Lightfoot, and Doddridge, think that the angel is said to have descended, not because he was ever seen to do so, but because the Jews were per- suaded that God brought such things to pass by the ministration of angels ; so that from that vio- lent motion of the water, and the cure following it, the presence of an angel was inferred. Dr. Hammond supposes, that the waters became medicinal by being impregnated with a healing warmth from the blood and entrails of the sacri- ficed beasts that were washed there. Whitby asks, how this healing virtue, if natural, could be applied to the cure of all diseases? how one only could be cured when many, probably, entered at the same moment ? and why, since numerous vic- tims were- slain at other feasts, should the case occur

only at the passover? Lightfoot, also, shows, that the entrails were washed in a laver in the temple, and not in this pool.

Doddridge believes the waters to have been partly mineral and medicinal, to have been used for general bathing, and to have been endued with a miraculous power not long before the ministry of Christ. He, also, holds, that the virtue ceased either immediately after the mira- cle, or at the death of Christ; and that this accounts for the silence of Josephus. Maundrell, who visited the Holy Land in 1696, describes a Bethesda, which our modern travellers, Dr. Clarke and Dr. Richardson, do not mention. Maundrell says, it was 140 paces in length, forty in breadth and eight in depth; dry, and having at its western end dire*3 blind arches, which he sup- poses were remains of the five porches ; but how did these survive the destruction of Jerusalem?

BETH-GAMUL, a city of the tribe of Reuben, which was taken by the IVIoabites, and afterwards pillaged by the Chaldeans.

BETH-HACCEREM, a city, seated on a hill, between Jerusalem and Tekoah, and noted for its vineyards,

BETH-I1OGLAH, a city belonging to the Benjamites, about half way between Jericho and Jordan.

BETH-HORON, in ancient geography, two towns of Samaria ; both in the tribe of Ephraim, built by Shera, grand-daughter of Ephraim, 1 Chron. viii. 24, and both restored by Solomon, after falling to decay. 1 Kings ix. 17, and 2 Chron viii. 5, viz.

1. BETH-HORON, NETHER, was situated on a

mountain, and therefore Josephus and Jerome mention going up or ascending. It stood on the public road to Lydda and Csesarea, distant 100 stadia, or twelve miles, from Jerusalem. On account of this vicinity, some allot it to the tribe of Benjamin.

2. BETH-HORON, UPPER, was- distant almost the whole breadth of the land of Ephraim, from the Nether Beth-Heron, the Upper being in the north and the Nether in the south of that tribe. Josh. xvi.

BETHINK'. Be and think See THINK. To recal to reflection : to bring back to conside- ration, or recollection. It is generally used with the reciprocal pronoun, and of before the sub- ject of thought.

They were sooner in danger than they could almost bethink

themselves of change. Sidney.

Cease then my tongue, and lend unto my mind, Leave to bethink how great that beautie is Whose utmost parts so beautifull I fynd. Spenter. I, better bethinking myself, and misliking his de- termination, gave him this order. Raleigh.

He himself,

Insatiable of glory, had lost all : Yet of another plea bethought him soon. Milton. The nets were laid, yet the birds could never be- think themselves, till hampered and past recovery.

L' Estrange. Ah bethink how through thy regions

Mianight horror fearful howled, When like wolves the Danish legions Through thy trembling forests prowled.

Mickle. Ballad.

Borne in his arms from yon Serai Say wert thou lingering there with him to fly ? Thou needest not answer ā thy confession speaks, Already reddening on thy guilty cheeks; Then lovely dame bethink thee ! and beware.

Byron. Corsair.

BETH-JESIMOTH, a city of the Reubenites, about ten miles east of the Jordan. It was taken by the Moabites, and afterwards destroyed by the Chaldeans.

BETHLEHEM, =r6rY3 i. e. the house of bread ; called also Bethlehem Ephratuh, a town of Palestine, in the tribe of Judah, the birth- place of David and of our Saviour. It was once much more flourishing than at present, and stands on an eminence, six miles south-east of Jerusalem, in a country full of hills and valleys. Mr. Parsons visited it in 1821, and says, passing from Bethany through the beautiful plain, called the valley of Rephaim, ' Bethle- hem, at this distance, assumes an appearance of splendor far beyond what it actually possesses. The monastery erected over the manger, stands a little east of the village. Still further eastward, we saw the valley where the shepherds heard the angels sing, at the birth of the Saviour.' Here is a convent, containing three religious houses devoted to the Greeks, Franks, and Ar- menians, and described as a massy, heavy- looking structure, more like a fortification. A grotto, said to contain the manger in which our Lord lay, has an altar, a fine picture, and numer- ous silver and crystal

lamps; ten monks consti- tuted the whole society here a few years since, most of whom were Spaniards. The popula- tion of Bethlehem is said by Mr. Parsons to

consist of about 1500 Catholics, 1000 Greeks, a few Armenians, and a few Turks. The inha- bitants are chiefly employed in making wooden crucifixes and crowns, which are set in mother- of-pearl, and exported into different parts of Europe and Asia. But its chief ornament is the stately church, erected by the empress Helena, over the place where the Saviour was bora, and bearing her name. It is built in the form of a cross, and the top of it commands a fine view of the surrounding countiy. The roof is of cedar, covered with lead, and supported by four rows of lofty pillars, ten in a row, and each formed of one entire piece of white marble. The walls were overlaid with the same beautiful stone, but it is said that the Turks have carried it away to adorn their mosques. The upper ends of the cross terminate in three semicircles, in each of which there is an altar. Over the chancel is a large cupola, of which the outride is covered with lead, and the inside adorned with beautiful mosaic workmanship. There are also shown the tomb of Rachael, the wells for the water of which David longed, the fountains of Solomon, the cave in which David cut off the skirt from the robe of Saul, &c. &c. Perhaps these tradi- tional vestiges of our religion, whether in each particular true or false, have kept alive the remembrance of its leading events in ages, and amongst modern tribes, that have had no access to superior evidence. Dr. Clarke was particularly struck, throughout his travels in Judea, with the singular coincidence between its general present appearance and the descriptions of the Bible.

BETHLEHEM, a town in the land of Zebulon. Josh. xix. 5.

BETHLEHEM, a post and borough town of the United States, in Pennsylvania; pleasantly situated in Northampton county, on the north side of Leheigh river, over which is a large wooden bridge. It is partly built upon an eminence, and partly on the bank of Manakisy Creek, which runs into the Leheigh on the west side of the town. The town is. laid out in regular streets, and built chiefly of limestone. The town contains a population of about 1500 indi- viduals, who are all Moravians. Two schools here, one for boys, and another for girls, are

in high repute. Besides the common dwelling-houses, it contains a large church, and extensive build- ings, appropriated to the different classes of the society ; as the unmarried men, the young women, and the widows. Various manufactures are carried on, and the strictest discipline is attended to. Dr. Franklin visited this settlement, soon after its establishment, and was much pleased with their peaceable manners, their social, disinterested habits, and their orderly worship. He enquired into their alleged use of the lot in marriage; and was told it was by no means general ; but that the elders of the community, being generally con- sulted by the young persons of

might,' said the Moravians, ' if tho parties were to choose for themselves.' It is twelve miles south-west of Easton, and fifty-three north by west of Philadelphia. Long. 0Ā° 14′ W. lat. 40Ā° 37′ N.

BETHLEHEM, a town of the United States, with a post office, in Lichfield county, Connec- ticut, on the head of Southbury river, which runs into the Housatonick. It is about eight miles south of Lichfield, and 196 from Phila- delphia.

BETIILEHEM-EPHRATAH. See BETHLEHEM,.

BETHLEHEMITES, or BETHLEMITES, in church history, were monks introduced into England, A. D. 1257, habited like the Dominicans, except that, on their breast, they wore a star with five rays, in memory of the star or comet which appeared over Bethlehem at the nativity of our Saviour. They were celled at Cambridge, and had only one house in England. Also an order of religious in Peru, who came originally from Guatimala in Mexico, where they were insti- tuted by the venerable Peter Joseph of Befa- neur, for the service of the poor. Innocent XI. in 1687, approved the institute.

BETHLEN, a walled market town of Transyl- vania in what is called the inner county of Szol- nok. It stands on the river Tzamos, and has a castle.

BETH-PEOR, a town of the Reubenites, on the other side Jordan, at mount Fogor, over against Jericho, six miles above Livias. . It had a temple sacred to the idol Baal-Peor, Numb. xxv. 5, called Bel-Phegor by the Vulgate, and interpreted Priapus by Jerome.

BETHPHAGE, a place at the west declivity of mount Olivet, Matt. xxi. 1, from which it is supposed that the whole of that declivity, with a part of the valley, and the extreme skirts of the city, went under the common name of Beth- phage.

BETHRAL'. From thrall. To enslave; to conquer ; to bring into subjection. See THRALL.

Ne let that wicked woman 'scape away, For she it is that did my lord bethral.

Shakspeare.

BETHSAIDA, the house of hunting or fish- ing, a town near the desert of the same name in Galilee, on the western shore of the lake Gen- nesareth. It was the city in which St. Andrew and St. Peter followed their fishing trade; as also the native place of St. Philip. The un- belief of its inhabitants drew down from our Saviour a bitter denunciation. Matt xi. 21.

BETHSAN, BETHSHAN, or BETHSHEAN, a town of Samaria, in the half tribe of Manasseh, on the borders of Galilee, about half a league from the Jordan, having half of its territory in the Peraea. It was afterwards called Scy- thopolis; and was distant from Tiberias, on the lake Gennesareth, 120 stadia, or fifteen miles to the south ; and from Jerusalem to the north 600 stadia, or seventy-five miles. Josephus says, it was the greatest city of all the Decapolis. It is called Baeson by Stephanus.

BETH-SHEMESH, a city of Judah, which belonged to the priests: memorable for the return of the ark to it, by the Philistines, as well as for the severe punishment of the inhabitants

for their profanity in looking into it. 1 Sam vi. Lysias, the Syro-Grecian general, besieged it with

12_i9 The circumstance of 75,000 being an army of 65,000 men ; but Judas Maccabaeus

here stated to be slain in one village has been forced him to raise die siege. The Syrians, how-

thought incredible. But the present Heb. text ever, took it the following year, and kept it till

supports our common rendering. Dr. Kenni- Jonathan retook it. cott however, instances three reputable MSS. in

which the words

BETIDE'. Be and tide, pret. It betided,

iSs Q'ttrnn, fifty thousand or betid ; part . pass, betid. From Sax. tab. See arew*uuu,,aJl Josephus omits all men- TIDE To happen to; to befal; to bechance, Uon of the 50,000. The supposed omission of a whether good or bad ; to come to pass; to b single letter 3 ke, like, or equal to, in the com- mon reading, would render this circumstance less extraordinary, i. e is reading DˆOPO (kecha- mashim) for 3'Bfon (chamashim). The passage would then read, ' He smote of the people seventy men, equal to (or rulers of) 50,000 men' : that is they were governors or chiefs of the peo- ple. This was also the name of 2. A town of Egypt, supposed to be the same with Aven, or On. 3. A town of Israel, on the frontiers of the tribe of Issachar. 4. A town of Palestine, belonging, to the tribe of Naphthali, from which the Canaanites were not expelled.

BETH-SHITTAH, a district of Palestine, to which the Midianites fled when they were routed by Gideon. It belonged to the Manas- sites; and is supposed to have been situated south-west of the sea of Tiberias.

BETH-TAPPUAH, a city on the south-west border of Canaan ; said to have been situated

fourteen miles beyond Raphia, not far from the Butrtiat our charityj > e not too nice ? Nile.

BETHUEL, the son of Nahor, cousin of Abraham, and father of Laban and Rebekah.

BETHUEL, or BETHUL, acityof the Simeonites, the scene of the apocryphal story of J udith and Holophernes.

BETHUMP. From thump. To beat; to ay blows upon ; a ludicrous word:

I was never so bethumpt with words, Since first I called my brother's father dad.

Shakspeare.

BETHUNE, a town of France, in the depart- ment of the Pas de Calais (the ci-devant Artois),

of true frendes there be too fewe

But sothfast frendes, what so betide, In every fortune wolleii abide. Chaucer.

And leaveing there this ladie all dismayed. Went forth streightway, into the forest wyde, To seek if he perchance asleep were layed, Or whatso else were unto him betyde : He sought him farre and neare, yet him no where he spyde. Spenser.

She, when her turn was come her tale to tell, Told of a strange adventure that betided, Betwixt the fox and the' ape by him misguided. Id.

In winter's tedious nights, sit by the fire With good old folks, and let them tell thee tales Of woeful ages long ago betid. Shakspeare.

If he were dead what would betide of thee ? Id.

But say, if our deliverer up to heaven Must reascend, what will betide the few, His faithful, left among the' unfaithful herd, The enemies of truth. Milton.

What should then betide

Come, let us those we can to real bliss entice.

Throngh many a clime 'tis mine to go, With many a retrospection curst ;

And all my solace is to know

What'er betidet I've known the worst.

Thomson.

Byron*

BETIME',) Ang.-Sax. tima, by time ; good

BETIMES'. > time ; early time. See TIME. Seasonably ; before it is late ; soon ; before long time has passed ; early in the day.

Whiles they are weak, betimet with them contend ; For when they

once to perfect strength do grow, Strong wars they make. Spenser.

There be some have an over early ripeness in their

containing 7000 inhabitants. It is the capital of yearSj which fadeth &<,āā¢āā>,; these are first such as an arondissement of eighteen cantons.; is sur- rounded with walls, and has been well fortified. The city and the castle taken together are of a triangular figure, but the former is a very irregu- lar building. The houses are indifferent, and the streets ill-paved; but there is a large handsome market-place, and several churches. Here is made excellent cheese, in which, as in corn and flax, a tolerable trade is carried on ; there are, besides, manufactures of linen, and vines are

have brittle wits, the edge whereof is soon turned.

Bacon. He tires betimet, that spurs too fast betimet.

Shakspeare.

He that drinks all night, and is hanged betimet in the morning, may sleep the sounder next day. Id.

To measure life learn thou betimes, and know Toward solid good what leads the nearest way.

Milton.

Remember thy Creator in the days of thy youth j

Eartially cultivated in the surrounding country, that is, enter upon a religious course betimes. Tillotion.

a 1710 it sustained a siege of six weeks, and Short is the date, alas ! of modern rhymes ;

was taken by the allied army under the duke of And >tis but just to let them live betimes. Pope.

Marlborough, but was restored to France at the BETIS, governor of Gaza, under Darius, was

peace of Utrecht. It is seated on a rock near the famous for his valor and loyalty. He defended

river Brette, and is traversed by the Lave, which a place of consequence with a few men against

falls into the Lys. Twenty miles north-west of Alexander, who was there shot through the shoul-

Arras, and 134 north of Paris.

der. Betis thinking him slain, returned trium-

BETHUNE (Maximilian de), duke of Sully, phantly to the city; but in a second assault, he

See SULLY.

BETHZUR, in ancient geography, a city on the south of Judah, and borders of Edom, near Hebron. It was fortified by Rehoboam, and was very strong during the Machabean war.

was wounded and brought to Alexander, who basely ordered him to be put to death.

BETLEY, a market town of Staffordshire, seated on the confines of that county, next to Cheshire, in a sandv but not unfruitful soil. It

is about eight miles from Newcastle-under-Line, sixteen N.N.W. of Stafford, and 157 from ‘Lon- don. It supplies Newcastle with almost all its

BET

BETORN’. The past participle of thevei’i to tear ; to pull or rend asunder.

BETOSS’. Be and toss. See Toss. To

motion.

What said my man, when my betosted soul

Shakspeare.

this word

BETRAY’ER, > from the French trahir ; Latin BETRAY’ING. j tradere. To give into the

vegetables ; and there is a large cattle fair held throw ; to heave ; to

agitate ; to put into violent here in July.

BETLIS, a strong town of Armenia or Turco-

mania, belonging to a kind of independent bey or Did not attend him as we rode ?

prince. It lies on the road from Tauris to Alep- BETRAY', 1 Junius derives po, and the passage between the mountains is so narrow, that ten men can defend it against 1000.

There is a castle on an eminence exactly in the hands of enemies by treachery, or breach of trust :

middle. This eminence is so steep on all sides, -with to before the person, otherwise into. To

that it is impossible to get up but circuitously. discover that which has been entrusted to se-

The people in and about the town are shepherds, crecy ; to expose to evil by revealing something

but are ready to take up arms at the command entrusted ; to make known something that were

of their prince. It is 150 miles east of Diarbek. better concealed; to make liable to fall into

Betlis is an ancient city, founded, according to something inconvenient; to show; to discover;

the Armenians, by Alexander the Great. The to delude ; and deceive.

Persians obtained a signal victory over the army If ye be come to fctrayme to mine enemies, seeing

of Soliman here in 1534. The population of the there is no wrong in my hands, the God of our fathers

town and neighbouring villages is computed at look thereon, and rebuke it. 1 Chroruclei.

26,000 Kurds, Turks, Armenians, and Syrians. Jesus said unto them > The Son of man shall be

The country around, denominated Kurdistan, is betrayed into the

hands of men. Matthew.

a fine and highly cultivated valley,' producing The wige man doth say of fear > that it is a be.

fruit, grain, and honey. The Armenians have four churches here, and as many monasteries, and enjoy great liberty. Long. 42Ā° 50′ E., lat. 37Ā° 30′ N

BETO'KEN, (Be and token. See TOKEN.

BETO'KENING. S To signify ; to maik ; to re- present ; to foreshow ; to presignify.

We know not wherefore churches should be the worse, if, at this time, when they arĀ« delivered into

trayer of the forces of reasonable understanding.

Hooker r

But when of him no aunswere she received, But saw him senseless by the squire up-staide, She weened well that then she was betraide. Spenser. His abilities : created him great confidence; and this was like enough to betray him to great errours.

King Charles. How, would'st thou again betray me,

God's' own possession, 'ceremonies fit to betoken such Bearing my words and doingˆ to the Lord ! Milton.

interest, and to accompany such actions, be usual.

Hooker.

A. dewy cloud, and in the cloud a bow, Conspicuous, with three listed colours gay, Betokening peace from God. Milton.

The kindling azure, and the mountain's brow, Illumed with fluid gold, his near approach Betoken glad. Thomson.

Ire, envy, and despair, Which marred his borrowed visage, and betrayed Him counterfeit, if any eye beheld. Id.

'Tis in return James does our fleet betray (That fleet whose thunder made the world obey.)

Marvell.

There are only a few betrayers of their country they are to purchase coin, perhaps at half price, and

This, I say, being a current opinion, the wise men vend it among us, to the ruin of the publick. Swift. would be apt enough to conclude, that the present star For it is the opinion of goodness which creates easi- betokened the birth of that Prince of whom (as they ness of trust : and by trust we are betrayed to power.

might easily have heard) it had been so very long foretold, ā ‘ There shall come a star out of Jacob, and a sceptre shall rise out of Israel.’ Portent.

If bursting heart, and maddening brain-r- And daring deed, and vengeful steel ā And all that I have felt ā and feel ā Betoken love ā that love was mine ; ā And shewn by many a bitter sign. Byron’s Giaour.

BETONICA, BETONT, in botany, a genus of The bold betrayer flutters still, the gymnospermia order, and didynamia class of And fans the breath prepar’d to tell, plants ; ranking in the natural method under the Ah, why this ruin so attractive made, forty-second order, verticillatse. CAL. awned; Or why, fond man, so easily betrayed? the upper lip of the COR. ascending and flattish; Why heed we not, while mad we hasta along, and the tube cylindric. There are five principal The gentle voice of peace, or pleasure’s song,

Shaftesbury.

He was not to be won, either by promise or reward, to betray the city. Knolles^

The bright genius is ready to be so forward, aa often betrays itself into great errours in judgement.

Watt*

To stifle passion, is no easy thing ; A heart in love is always on the wing ;

Parneil

species, viz. 1 . B. Alpina, the least Alpine betony. 2. B. Danica, the greater Danish betony. 3. B. In- cana, the hoary Italian betony, has a

flesh- colored flower. 4. B. officinalis, is the species chiefly worth notice. It is a low plant growing in woods and shady places in several parts both

Collins' Eclogitet. Escaped from shot ā unharmed by steel, Or scarcely grazed its force to feel ā Had Selim won ā betrayed ā beset ā To where the strand and billows met. Byron

BETRIM', v. a., from trim. See TRIM. To '

of England and Scotland. 5. B. orientalis, the deck; to dress; to grace; to adorn; to embel- eastern betony, has very long narrow leaves, and lisa ; to beautify ; to decorate. a thick spike of flowers. BETOMCA AQUATICA.

BETONICA PAVLI. Vot. IV.

See SCROPHULARIA. See VERONICA.

Thy banks with pioned and twilled brims, Which spungy April at thy hest betrims, To make cold nymphs chaste crowns.

BET

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BETROTH',-) Be and troth, i.e. truth;

BETROTH'MENT.] Goth, trauan; Ang.Sax. owan ; Germ, irawen, betrawen ; to trow ; to affiance; to pledge the truth; to promise or vow ; to keep the truth ; or to be true and faith- ful ; to pledge or bind to the true and faithful performance of ; particularly applied to the pro- mise to enter into the marriage contract.

Ency. Met.

And what man is there that hath betrothed a wife, and hath not taken her? let him go and return into his house. Deuteronomy.

There might I see how Ver had every blossom hent,

And eke the new betrothed birds, y-coupled how they

went. Earl of Surrey.

He, in the first flower of my freshest age, Betrothed me unto the only heir Of a most mighty king, most rich and sage. Spenser.

You have been contracted to a maid j Nor are you therein, by my life, deceived ; You are betrothed both to a maid and man. Shakspeare.

To her, my lord, Was I betrothed, ere I Hermia saw. Id.

By soul's public promise she Was sold then, and betrothed to Victory. Cowley.

If any person be consecrated a bishop to that church, whereunto he was not before betrothed, he shall not receive the habit of consecration, as not being canonically promoted. Ayliffe.

BETROTHMENT is either* solemn, made in the face of the church, or private, before wit- nesses out of the church. To betroth by giving arrhte, or earnest, is called by middle age writers subbarrare. In Russia the betrothing is always performed in the church, and is indissoluble; formerly it was eight days previous to the mar- riage. During this interval, the bride was only visited by the bridegroom, and the girls of her acquaintance, who amused her with singing. On the last evening the young women brought the bride into the hot bath, and plaited and tied up her hair, singing at the same time ballads descriptive of her future happiness. ' Now,' says Mr. Pinkerton, ' it is one of the three offices of marriage, and is accompanied with the exchange of rings. Then follows the matrimonial coro- nation, which is properly the marriage rite ; and tirdly, the dissolving of the crowns. See MAR- RIAGE. Among the ancient Jews, the betrothing was performed, either by a writing, or by a piece of silver given to the bride, or by cohabitation and consummation. This latter engagement, according to the Rabbins, was allowed by the law (Deut. xxiv. 1.), but was afterwards forbid- den by the ancients, on account of the abuses that might happen, and for preventing clandes- tine marriages. After the marriage was con- tracted, the young people had the liberty of seeing each other. If during this time the bride should trespass against that fidelity she owed to her bridegroom, she was treated as an adultress. (Seld. Uxor. Heb. 1. ii. c. 1., and Matt. i. 19).' The nuns of the Annunciada hold an annual feast in honor of the desponsation, or betroth- ment of the Virgin Mary to Joseph. Buxtorf Synag. Judaic, cxxxix. preserves the form of a written betrothment still in use among the Jews. Dr. A. Clarke says, 'This custom has been im- memorially observed among the inhabitants of Ireland, who have not only this but many other

BET

Asiatic ci'stoms, which added to various authen- tic historic proofs,

are collateral evidence that they received the Christian religion, not from the popes of Rome, but through the means of Asiatic missionaries.'. But this argument is not conclu- sive ; our Anglo-Saxon ancestors had the same custom. See Mr. Turner's able History, vol. ii. p. 83.

BETRUST. Be and trust. See TRUST. To entrust; to put into the power of another, in confidence of fidelity.

Betrutt him with all the good which our own ca- pacity will allow us, or his sufficiency encourage us, to hope for, either in this life, or that to come. Grew.

Whatsoever you would betrutt to your memory, let it be disposed in a proper method. Watts.

BETSEY'S ISLE, or ISLE WILLAUMEZ, a small, high, and fertile island on the east coast of Van Diemen's Land, lying at the entrance of Denvent river.

BETTER, v. n. adj. & adv. The adjective is used as the irregular comparative of good, from Ang.Sax. beteran and betrian, from betan, to beat ; to correct ; amend ; improve : hence it has grown to mean superiority; advantage; having good qualities in a greater degree than something else ; to surpass ; to exceed ; to ad vance ; to support ; a higher rank.

Then it was better with me than now. Hosea.

Having a desire to depart and be with Christ j which is far better. Philippiant.

A better preest, I trowe, that no wher none is, He waited after no pompe ne reverence, Ne maked him no spiced conscience : But Cristes lore, and his apostles twelve, He taught ā but first he folwed it himselvp.

Chaucer. Cant. Tales. Prologue.

The Corinthians that morning, as the days before, had the better. Sidney.

He hath borne himself beyond the promise of his age ; he hath, indeed, better bettered expectation, than you must expect of me to tell you. Shakspeare.

What you do

Still betters what is done ; when you speak sweet, I'd have you do it ever. Id.

He has a horse better than the Neapolitan's ; a

better bad habit of frowning than the count Palatine.

Id. Merchant of Venice.

Their betters would be hardly found, if they did not live among men, but in a wilderness by them- selves. Hooker.

The cause of his taking upon him our nature, was to better the quality, and to advance the condition thereof. Id.

The voyage of Drake and Hawkins was unfortu- nate ; yet, in such sort, as does not break our pre- scription, to have had the better of the Spaniards.

Bacon. You think fit

To get the better of me, and you shall ; Since you will hare it so ā I will be yours. Southern.

A fairer person lost not heaven ; he seemed For dignity composed and high exploit : But all was false and hollow ; though his tongue Dropt manna, and could make the worse appear The better reason, to perplex and dash Matures! counsel. Milton,

But Jonathan, to whom both hearts were known, With well-timed zeal, and with an artful cate, Restored and bettered SOOP the nice affair. Cowley.

Here, you shall see a noble title worne, (That had not mis-beseemed one better borne) By him, whose virtues are of little pritfe, And whose estate, was gotten by his vice.

Geo. Wither.

That ye thus hospitably live, Is mighty grateful to your betters, And makes e'en gods themselves your debtors.

Prior.

The Romans took pains to hew out a passage for these lakes to

discharge themselves, for the bettering of the air. Addison.

He that would know the idea of infinity, cannot do better, than by considering to what infinity is attri- buted. Locke.

Better for us, perhaps it might appear, Were there all harmony, all virtue, here. Pope.

When vice o'er all mankind prevails, And weighty interest turns the scales, Must I be better than the rest, And harbour Justice in my breast ? On one side only take the fee, Content with poverty and thee ? Moore.

He asked no question ā all were answered now By the first glance on that still ā marble brow ! It was enough ā she died ā what recked it how ? The love of youth, the hope of better years, The source of softest joy and tenderest fears, The only living thing he could not hate, Was reft at once ā and he deserved his fate. Byron.

BETTERTON (Thomas), a celebrated actor in the reign of Charles II. was born in West- minster in 1635, and excelled in Shakspeare's characters of Hamlet, Othello, Brutus, and Hot- spur. In 1695 he opened a new playhouse in Lincoln's-inn-fields, but the scheme did not suc- ceed. He died in 1710, and was buried in Westminster Abbey. He wrote The Woman made a Justice, a comedy ; the Unjust Judge, or Appius and Virginia, a tragedy, written origin- ally by Mr. John-Webster, and altered by Bet- terton ; The Amorous Widow, or the Wanton Wife ; Dioclesian, a dramatic opera, &c.

BETTIAH, a district of the province of Bahar, Hindostan, situated between the twenty-seventh and twenty-eighth degrees of north latitude. On the west it is bounded by the river Gunduck, and on the east by Tyrhoot. It retained its in- dependence till the year 1765, when it was subdued and annexed to Champarun by the British government. In the 'fifteenth century the Hindoo prince of this country was of so much consequence, that the Afghan emperor Sekunder demanded his daughter in marriage. In culti- vation and manufactures it is at present inferior to other parts of Bahar, but its woods yield abundance of fine ship-building timber.

BETTIAH, the capital of the above district, and formerly a strong fortress, was taken and destroyed by the Afghans in 1498, and is now a middling-sized town. It is situated in lat. 26Ā° 47′ N., long. 84Ā° 40′ E.

BETTINELLI (Saverio or Xavier), in biogra- phy, a distinguished poet

of Mantua, was born in 171 8 ,and died inl 808 . He published a new edition of his works in twenty-four volumes, 12mo. Ve- nice, 1799-1801, which contain, 1. Ragiona- mente filosofici, con Annotazioni. 2. Dell' Kmusiasmo delle Belle Arti, two volumes. 3. Dia.oghi d' Amore, two volumes. 4. Risorgi-

rnento negli Studj, nelle Arti e ne Costume dopo il Mille, three volumes. 5. Delle Lettere e delle Arti Mantovane ; Lettere ed ArtiModenesi, one volume. 6. Lettere dieci di Virgilio agli Arcadi, one volume. 7. Italian Letters from a Lady to her Friend on the Fine Arts, and Letters from a Friend, copied from the Originals, three volumes. 8. Poetry, three volumes. 9. Trage- dies, two volumes. 10. Lettere a LesbiaCidonia sopra gli Epigrammi, two volumes. 11. An Essay on Eloquence. He was a Jesuit, and one of the most celebrated of that order: in 1751 was entrusted to him the superintendence of the college of nobles at Parma, where he remained eight years. In 1755 he travelled in Germany, Italy, and France, with the sons of the prince ot Hohenlohe. Voltaire, whom he visited, wrote the following in an edition of his own works, which he sent to Bettinelli's inn : ā

Compatriote de Virgile, Et son secretaire aujourd'hui, C'est a vous d'ecrire sous lui ; Vous avez son ame et son style."

' Fellow-countryman of Virgil, and at present his secretary, it is for you to write 'in his name : you possess his soul and his style.' .After settling at Verona for some time, he returned to his own country.

BETTOOR, a flourishing town on the banks of the Ganges, containing several handsome Hin- doo temples. Long. 80Ā° 5′ E., lat. 26Ā° 52′ N.

BETTOORIAH, a district of Bengal, IOC miles long by about twenty broad, on the north- east bank of the Ganges; now included in the collectorship of Raujeshy. The Ganges is said to have formerly run through this district, which is still much intersected by small rivers, and sub- ject to inundations. It is consequently well adapted for the cultivation of rice, and produces immense quantities. It lies principally between the twenty-fourth and twenty-fifth degrees of north latitude..

BETTS (John), M. D. physician in ordinary to Charles II. was educated at Oxford ; when he died is uncertain. He wrote, 1. Of the Origin and Nature of the Blood; and, 2. The Anatomy of Thomas Parr, who died in the 152d year and ninth month of his age ; with the Ob- servations of the celebrated Dr. William Harvey, and others of the king's

physicians, who were present.

BETULA, in botany, the birch-tree : a genus of the tetrandria order, and monoecia class of plants ; ranking in the natural method under the fiftieth order, amentaceae. CAL. of the male roonophyllous, trifid, and triflorous : COR. parted into four segments ; the female calyx is mono- phyllous, trifid, and biflorous ; the seeds have a membranaceous wing on both sides. There are six species, viz. 1. B. alba, the common birch- tree, is so well known as to need no description. It is generally of a humble growth, but in a pro* per soil and situation will grow to a great height, and considerable size. 2. B. alnus, the alder- tree, will grow to large timber. Wherever the soil is or can be made pasturable, the alder should by no means be permitted to gain a foot- ing. Its suckers and seedlings poison the herb,-

age; and it is a fact well known to the observant ends: they will then strike root, and become

husbandman, that the roots of the alder have a peculiar property, of rendering the soil they grow in moist and rotten. Of the native species, Han- bury enumerates five, viz. 1. The long-leafed. 2. The white. 3. The black. 4. The hoary- leafed, and 5. The dwarf-alder. ā 3. B.lenta, the Canada bircb grows to sixty or more feet in

ood plants by the autumn following; whilst fresh twigs will have sprung up from the stools, to be ready for the same operation. The layers, therefore, should be taken up, and thi operation performed afresh. If the plants designed for stools have made good shoots the first year, they need not be headed down, but plashed near the

height. The leaves are heart-shaped, oblong, ground, and all the young twigs layered. Thus smooth, of a thin consistence, pointed, and may an immediate crop be raised, whilst young

very sharply serrated. They differ and the varieties of this species go ‘names of 1. Dusky Canada birch ; 2. White

in color ; shoots will spring out in great plenty below the by the plashed part, for layering the succeeding year. This work may be repeated every autumn or

paper-birch ; 3. Poplar-leafed Canada birch ; winter ; when some of the strongest layers may

4. Low-growing Canada Birch, &c. ā 4. B. nana, the dwarf birch, with roundish leaves,

be planted out, if wanted ; whilst the others may be removed into the nursery, to grow stronger

grows naturally in the northern parts of Scot- before they are removed ; 3. cuttings also, if

land, and Euiope generally, and on the Alps, set in a moist shady border in the beginning of

It seldom rises above two or three feet high. October, will frequently grow: but as this is not

It has slender branches garnished with round a sure method, and as these trees are so easily

leaves, but seldom produces flowers here. The catkins and seeds are- the principal food of grouse,

propagated by layers, it hardly deserves to be put in practice. The alder, like the other aqua-

ptarmigans, &o. The Laplander turns this tic natives, may be raised either from suckers, humble shrub to account, for fuel, and driving from cuttings, or by layering ; and no doubt from away the gnats ; when covered with the rein seed, though this mode of propagation is seldom deer's skin, it serves him for a bed. 5. B. nigra, practised in this country.

the black Virginia birch-tree, will grow to up- The bark of the birch seems in a manner in- wards of sixty feet in height. The branches are corruptible. In Sweden the houses are often spotted, and more sparingly set in the trees than covered with it. It frequently happens that the the common sorts. There are several varieties wood is entirely rotten, when the bark is per- of this species, differing in the color, size of the fectly sound. In Kamtschatka it is used for leaves, and shoots ; such as, 1. the broad-leaved making drinking cups. It abounds with a resin- Virginian birch; 2. the poplar-leaved birch; ous matter, to which its durability is owing: in 3. the paper birch; 4. the brown birch. ā 6. B. consequence, it is highly inflammable; and in purnila, American, or hairy dwarf birch. Linn, the northern countries torches are made of

this Syst. 849. Reich, iv. 127. B. nana. Kalm. bark sliced and twisted together. The bark itself ii. 263. Leaves obovate, crenate; resembling consists of two different substances; a thick the nana ; a native of North America, and intro- brittle brownish red one ; and several very thin duced into Kew garden in 1762, by Mr. James smooth white transparent membranes, in which Gordon. The alba is easily propagated : it may the inflammable property resides. The thick be raised either from seeds or layering ; and it part is less resinous, and has a roughish taste, will flourish in almost any soil and situation. It has been thought to possess some medicinal The method of propagating the foreign sorts of virtues, but concerning these, experience has as birch is, 1. from seeds sown in beds of fine yet determined nothing certain. Upon deeply mould, covering them over about a quarter of an wounding or boring the trunk of the tree, in the inch deep. During the time they are in the beginning of spring, a sweetish juice issues, seminary, they must be constantly weeded, sometimes in so large a quantity as to equal the watered in dry weather, and, when about one or weight of the whole tree and root ; one branch two years old, according to their strength, they will bleed a gallon or more in a day. Horses, should be planted in the nursery in rows, cows, goats, and sheep, eat the leaves of all the Weeding must always be observed in summer, species of betula ; but swine refuse them. When and digging between the rows in winter ; and eaten by cows, they are said greatly to increase when the plants are about three or four feet the quantity of the milk. With the addition of high, they will be of a good size to be planted sugar, and properly fermented, its juice makes a out for the shrubbery quarters. A part may pleasant wine. Mr. Loudon says, ‘ birch wine be then taken up for such purposes ; whilst the has been made from an open grove of about 100 remainder may be left for standards, to answer birch trees, near Overton Hall, for sixty or other purposes ; 2. these trees may also be pro- seventy years past. Thirty trees or more are pagated by layers ; and this is the way to con- tapped in a season, about six or eight inches tinue the peculiarities in the varieties. A suffi- above the ground, in March. Apiece of bark cieut number of plants should be procured, and about three quarters of an inch in diameter, is set upon a spot of double dug ground, three cut out with a gouge, and the wood penetrated yards distant from each other. The year follow- an inch or more ; an iron spout is then driven ing, if they have made no young shoots, they should be headed to within half a foot of the ground, to form the stools, which will then shoot

into the bark below the hole, which conducts the sap to a bottle. In warm weather the holes soon grow up, and will cease to run in four or

five

vigorously the summer following; and in autumn days; but in windy weather they will run for a

month. Some trees will runtwenty-four”gallons in twenty-four hours, others not half a pint. The

ihe young shoots should be plashed near the btools, and the tender twigs layered near their

BET

frater is sold at sixpence a gallon to those who make small wine as a substitute for small beer. If the water is scalded (not boiled) it may be kept a month before it is made into wine; if not, it will not keep above a day or two. For making the wine, two pounds of coarse sugar, and a quarter of a pound of Malaga raisins, are added to every gallon1 of birch water, when cold : it is then boiled about an hour, until it is observed to grow clearer, when it is set to cool, and when about at the same heat that beer is set to work, a toast of bread spread with yeast is put into it, and for four days suffered to work freely, when it is barrelled, and the same quantity of raisins as before, and about an ounce of isinglass to every twenty gallons, are added : it seldom works out of the barrel, and in two or three weeks is ready for close bunging down, to remain for three months, when it should be bottled off, and in two or three weeks after it rs fit for drinking, but is the better for keeping longer.

BETUL7E, in entomology, a species of cur- culio, of a golden green color in one sex, and blue in the other, with a spine on each side of the anterior part of the thorax ; a native of Eu- rope.ā Also a species of cryptocephalus ; color black ; thorax orbicular and hairy ; wing-cases brown, with obscure streaks : a native of Prussia. Also a species of attelabus, the curculio exco- riato-niger of Degeer ; color black, with legs formed for leaping. ā Also a species of cimex found on the white alder in the north of Europe. The head is muricated ; thorax denticulated ; an- terior part of the wing-cases dilated. ā Also a species of papilio, with brown wings, yellowish beneath ; with two white streaks on the posterior ones : the larva is green, with pale oblique lines, and white on the sides; pupa glossy and ferru- ginous. The male is distinguished by a fulvous spot on the upper wings. ā Also a species of tenthredo, tenthredo ferruginea of Degeer, body red ; thorax, vent, and eyes black ; wings brown behind: inhabits Europe. ā Also a species of coccus, found on the white alder. It is round, and of a bay color.

BETULEIUS (Sixtus), an able grammarian, Latin poet, and philosopher, was born at Mem- mingen, in 1500 ; his true name was Birck. He taught the belles lettres and philosophy with re- putation ; and became principal of the college of Augsburg, where he died, June 16th, 1554. He wrote, 1 . Notes on Lactantius, printed with the works of that father, fol. Bas. 1563; 2. Com- mentaries on Cicero de Natura Deorum, 8vo. Bas. 1550; 3. Three Dramatic Pieces inserted in the Dramata Sacra, 2 vols. 8vo. Bas. 1547 ;

4. Novi Testament! Concordia Graeca, Bas. 1546 ;

5. Oracula Sybillina Gr. cum Castigationibus, 8vo. Bas. 1545.

BETUWE, BETUE, or BETA w, a fertile island of Guelderland, forty miles long and ten broad, formed by .the bifurcation of the Rhine above Nimeguen, and by the union of its streams near Worcum. It is the ancient Batavia, and formerly gave the name Batavians to the inhabitants of the Dutch Netherlands.

BETWEEN',) The Anglo-Saxon impera-

BETWIXT'. $ live be, and twegen or twain.

ā Enc. Met. Betwixt is the imperative be, and

the Gothic tuos, or two. ā Tooke. Between was formerly written twene, atweene. bytweene. These words are variously used, but always implying their primary sense. In the intermediate space which divides. From one to another ; noting in- tercourse, belonging to two ; bearing a relation to two ; difference ; a' distinction of one from another. Between is properly used of two ; and among of more ; but perhaps this accuracy is not always observed.

The cercles of his eyen in his hed They gloweden betwixen yelve and red ; And like a griffon loked he about; With kemped heres on his browes stout.

Chaucer. Canterbury Talet.

Welcome, my sweet ; alas ! the stay of my welfare ; Thy presence bringeth forth a truce betwixt me and my care. Earl of Surrey.

Five years since there was some speech of mar- riage

Betwixt myself and her. Shakspeare.

He should think himself unhappy if things should go so between them, as he should not be able to acquit himself of ingratitude towards them both.

Bacon.

If there be any discord or suits between them and any of the family, they are compounded and appeased.

Id.

Nor would I, for the world, my heart should bee Inthralled by one that might not marry me; Or such like passions bee perplexed in, ˆ

As hang betwixt a vertue and a siiine. Or such as whether way soe're I went, Occasioned guilt or shame or discontent ; For, howsoe're wee manage such like things, Wee handle winding vipers that have stings.

Geo. Wither.

Friendship requires that it be between two at least ; and there can be no friendship where there are not two friends. South.

Their natural constitutions put so wide a difference between some men, that art would never master.

Locke

BEVECUM, a town in Brabant, in the kingdom of the Netherlands ; memorable for being the place where the Duke of Marlborough encamped, after forcing the French lines, in 1705 ; and where he rested after the victory of Ramillies, in 1706. It lies seven miles south of Lou- vain.

BEVEL, n. & v. In masonry and joinery, a kind of square, one leg of which is frequently crooked, according to the sweep of an arch or vault. -It is movable on a point or centre, and so may be set to any angle. An angle that is not square is called a bevel angle, whether it be more obtuse or more acute than a right angle To bevel is to cut to a bevel angle. From Germ. bugel, diminutive of bug, from bugen, to bow.

The BEVEL, of carpenters, is made with a . movable tongue, to strike angles. It differs from the square and the mitre in being movable,

whereas they are fixed ; the first at 90Ā°, the second at 45Ā°. Hence a bevel angle is any angle not a right angle.

BEVEL, in heraldry, is a chief broken or open- ing like a carpenter's rule.

BEVELAND, North and South, two islands of the Netherlands, in the province of Zealand, formed by two branches of the Scheldt. The former, on the east side of the island of Walche-

ren, is about six miles long and four broad, and is formed by what the Dutch call the Easter Scheldt. It was destroyed by a dreadful inun- dation in 1532, so that nothing but the tops of the church steeple and the highest buildings could be seen ; but the ground being raised by the alluvial depositions, it was afterwards drain- ed and brought into cultivation. South Beve- land is separated from North Beveland by the island of Wolfersdyke, and is about twenty-four miles in length, and from five to eight miles in breadth. It is said to be one of the most agree- able of those belonging to Zealand, and contains the town of Goes, with some villages and forts; and has a trade in corn. Both these islands were occupied by the British, in 1809, during the expedition to Walcheren.

BEVELLING, in ship-building, the art of hewing a timber with a proper and regular curve, according to a mould which is laid on one side of its surface. See SHIP-BUILDING.

SEVER, v. & n. \ From the Lat. bibere, to

BEV'ERAGE. J drink. The afternoon and

evening potations at colleges were called bevers ;

beverage is applied to any wholesome or pleasant

liquid that is used for drink.

I am his cupbearer ; , If from me he have wholesome beverage,

Account me not your servant. Shukspeare,

Grains, pulses, and all sorts of fruits, either hread or beverage may be made almost of all.

Brown's Vulgar Errours. A pleasant beverage he prepared before Of wine and honey mixed. Dryden.

Thine Pomona's choicest gift, The tastefuh apple rich with rosy juice : Theme of thy envied song, Silurian bard, Affording to the swains, in sparkling cups, Delicious beverage. Dodsley.

BEVERCHES, in old records, customary ser- vices done by tenants to their lords, under the feudal system.

BEVERIDGE (William), a learned English prelate in the beginning of the eighteenth cen- tury, was born in 1638, and educated in St. John's college, Cambridge ; where he distin- guished himself so early by his knowledge of the oriental languages, that he published in his twentieth year a Latin treatise on the Excellency and Use of Oriental Languages, in which he re- views the several merits of the Hebrew, Chaldee, Syriac, Arabic, and Samaritan 'tongues. About the same time, also, he produced a Syriac gram- mar. Upon the deprivation of Dr. Ken, bishop of Bath and Wells, tor not taking the oaths to the government, in 1691, he refused the offer of that see, though he was then chaplain to king William and queen Mary. In 1704 he was consecrated bishop of St. Asaph; in which high function he approved himself a truly primitive bishop. He died at Westminster Abbey, in 1707, aged seventy-one. As his whole life was spent in acts of piety and charity, so at his death, he left the bulk of his estate for the propagation of the gos- pel, and promoting Christian knowledge at home and abroad. His Private Thoughts upon a Christian Life has always been a very popular book. Among his other works are, 1. De Lin- guarum Orientalium, &c. Praestantia et Usu, &c.

8vo. Lond. 1658; 2. Institutionum Chronologi- corum Libri Duo, &c.4to. Lond. 1669 ; 3. Svvo- SIKOV, sive Pandectae Canonum, 8cc. 2 vols. folio, Oxon. 1672; 4. Codex Canonum Ecclesiz, &c. 4to. Lond. 1679 ; 5. The Church Catechism Ex- plained, 4to. Lond. 1704. . His executors, after his decease, printed Thesaurus Theologicus, 4 vols. 8vo. ; The Necessity of frequent Commu- nion ; An Exposition of the Thirty-nine Articles, folio; A Defence of the Old Version of the Psalms ; and above 1 50 sermons, in twelve 8vo. and two folio volumes.

BEVERLACIUS (Joannes), or John of Be- verley. See JOHN, ST.

BEVERLEY, an ancient borough and market town of Yorkshire,

governed by a mayor, a re- corder, and twelve aldermen. It sends two members to parliament, elected by the freemen, who are about 1500 in number. The minster here is a neat structure, and the roof is an arch of stone. Dr. Stukely says it was founded by king Athelstan, and is inferior to York minster in nothing but its size, In it are several monu- ments of the Percies, earls of Northumberland. In 1664 the grave of St. John of Beverley, arch- bishop of York, was discovered here, with many bones and relics. From an inscription on a plate, it appeared that the church was consumed by fire in 1188, and that, upon the rebuilding, the bones which were collected were deposited in the vault of John of Beverley. There are two other parish churches; a free school, with two fellow- ships, six scholarships, and three exhibitions, to St. John's College, Cambridge ; and nine alms'- houses. The Liberties are said to contain above 100 towns, and parts of towns, in Holdeniesse and other parts of the East Riding. The town is a mile in length, and the market-place contains four acres of land. It is adorned with a beauti- ful cross, supported by eight free-stone columns, each of an entire stone ; the whole erected at the expense of some of the former borough members. The town, altogether, is well built ; the streets are well paved, broad, neat, and clean. The principal trade is in malt, oat-meal, and tanned leather ; and the poor people support themselves by making bone lace. Markets, Wednesdays and Saturdays. Inhabitants about 7500. It is nine miles north from Hull, twenty-eight from York, and 183 from London.

BEVERLEY, a post town of Massachusetts, in Essex county, situated on the north side of Salem Bay, and connected with the town of Salem by a bridge of 1500 feet in length. The inhabitants are devoted partly to navigation and the fisheries, and partly to agriculture ; there is a bank, and, lately, a manufacture of cotton has been estab- lished here. It is twenty miles north-east of Boston. Long. 70Ā° 50′ W., lat. 42Ā° 31′ N.

BEVERLEY (John of). See JOHN, ST.

BEVERUNGEN, a town of Germany, in the diocese of Paderborn, seated on the confluence of the rivers Bever andWeser. Long. 9Ā° 30′ E., lat. 51Ā° 40′ N.

BEVIN (Elway), an eminent musician and composer in the reign of queen Elizabeth. Dr. Child was his pupil. He composed sundry ser- vices and anthems. Before Bevin's time- the precepts for the composition of canons are said

TO have been known to few; and the resolution of a canon into its elements, and reducing it into score, was deemed a work of almost as great difficulty as the original composition. Rewrote A brief and short Instruction of the Art of Music, &c. published in 4to. 1631, and much esteemed.

BEULAH, a figurative name given to the Jewish nation and church, in Isaiah Ixii. 4.

BEURT-SCIIEEPEN, or BEURT SCHUYTEN, turn -boats; vessels at Amsterdam which have the exclusive privilege of taking in goods in the provinces ; so called because they sail in turn, according to specific regulations.

BEUTHEN, a lordship and circle of Upper Silesia, created a free barony by the ‘ emperor Leopold, in 1 796. It has for boundaries Oppeln on the west and north, and Poland on .the east. The inhabitants speak the Polish language, and are mostly Ca!tholics.

BEUTHEN, the chief town of the above district, frequently called Upper Beuthen, contains several churches and religious houses, and about 1700 inhabitants, among whom are between 100 and 200 Jews. Here are manufactures of cloth, earthenware, and calamine, besides some con- siderable breweries. About 9600 cwt. of cala- mine are made in the course of a year. It is likewise the residence of the governor of the circle. Thirty miles north-east of Ratisbon, lat. 50Ā° 18′ N., long. 18Ā° 53′ E.

BEUTHEN, LOWER, is a considerable town on the Oder, containing a population of about 3000 individuals. It stands in a fertile country, and has fifty vessels engaged in the trade of the river; it is also noted for its breweries.

BE’VY, n. Beva, Italian ; etymology un- knownā applied to birds that go in company. Skinner says, to drink, and derives it from bi-< bere, bevere. We read of a bevie of ladies, a bevy of jacks. By sportsmen the term is now confined, says the Ency. Met. to quails. And in the midst thereof, upon the floor,

A lovely bevy of fair ladies sat,

Courted of many a jolly paramour.

Faerie Queene.

And wither reimes this bevie of ladies bright,

Raunged in a rowe. Spenser.

None here, he hopes, (In all this noble bevy, has brought with her

One care abroad. Sltakspeare.

From the tents behold

A Jbevy of fair women richly gay

In gems and wanton dress, to the harp they sung

Soft amorous ditties, and in dance came on.

Milton.

BEWAIL',) Be and wail, Serenius says,

BEWAJL'ING. J from the Isl. vela , Goth. wail, planctus, plaint; waila, to cry out as in anguish ; to deplore, to lament, to bemoan, to express sorrow.

In this city he

Hath widowed and unchilded many a one,

Which to this hour bewail the injury.

Shakspeare. Thy ambition,

Thou scarlet sin, robbed this bewailing land

Of noble Buckingham, my father-in-law. Id.

Yet wiser Ennius gave command to all His friends, not to bewail his funeral.

Sir John Denluim.

BEW

And if I must bewail the blessing lost, For which our Hampdens and our Sidneys bled, I would at least bewail it under skies Milder, among a people less austere, In scenes which, having never known me free, Would not reproach me with the loss I felt. Cowper. BEWARE', from be and ware, or wary ; that is, cautious: thus, in an old treatise, "l have found be ye ware. See WARY. Eejriruan, Saxon ; warer, Danish.

To regard with caution ; to be suspicious of danger from : generally the particle of goes before the thing which excites caution. It is observable, that it is only used in such forms of speecli as admit the word be : thus we say, he may beware, let him beware, he will beware ; but not, he did beware, or he has been ware.

Thither came Uriel, gliding through the even On a sun-beam, swift as a shooting star In autumn thwarts the night, when vapours fired Impress the air, and shows the mariner From, what point of his compass to beware Impetuous winds. Milton.

You muot beware of drawing or painting clouds, winds, and thunder, towards the bottom of your piece.

Dryden.

Every one ought to I e very careful to beware what he admits for a principle. Locke.

Warn'd by the sylph, oh, pious maid beware! This to disclose is all thy guardian can ; Beware of all, but most beware of man. Pope.

BEWDLEY, or BEAULIEU, a borough and market town of Worcestershire, seated on the Severn; three miles from Kidderminster, and 128 north-west from London. It has its name Bewdley, Beawley, or Beaulieu, from its plea- sant situation on the declivity of a hill over-looking the river, and commanding a most beautiful prospect, it was formerly accounted so delightful a place, that Henry VII. built a house in it for prince Arthur, which he called Tiken-hall, and here that prince was married to the proxy of Catherine of Spain, afterwards the wife of his brother, Henry VIII. Bewdley sent burgesses to parliament very early, and great privileges were bestowed upon it by Edward IV. and Henry VII. Its present charter, by whichit sends one member to parliament, and is governed by a bailiffand burgesses, recorder, steward, town- clerk, &c. was settled in the reign of Queen Anne. It is neat and well built, and carries on a considerable trade, by the Severn, in malt, salt, glass, iron ware, leather, and Manchester goods. Market on Saturday. Pop. in 1832 was 7384.

BEWEEP'. Be and weep, Ang.-Sax. wepan, bewepan. To weep over or upon; to bedew with tears.

Old fond eyes,

Beweep this cause again ; I'll pluck ye out, And cast you, with the waters that you lose, To temper clay. Sluilupeare.

Larded all with sweet flowers, Which bewept to the grave did go With true love showers. Id,

BEWET', v. a., from wet. To wet; to moisten ; to bedew ; to water.

His napkin, with his true tears all bewet, Can do no service on his sorrowful cheeks.

Shulapeare. Tit. And,

BEWICK (John), an artist, who, in conjunc- tion with his brother Thomas Bewick, carried the art of engraving on wood to great perfection. They were settled at Newcastle-on-Tyne, where they printed in 1700 a History of Quadrupeds, an 8vo volume, which still maintains its credit, and were engaged in making engravings for a History of British Birds (published~in 1797, 8vo.) when John Bewick died of a consumptive disease, December 5th, 1795. The author of the Pur- suits of Literature has bestowed a merited eu- logium on him.

BEWIL'DER. Be and wild. Wild is op- posed to what is tamed or subdued ; a wild or wilderness is applied to a place unsubdued or uncultivated, or unrestrained by man. ā Ency. Met. To bewilder is to lose in pathless places ; to confound for want of a plain road ; to per- plex ; to entangle ; to puzzle.

We parted thus ; I homeward sped my way, Bewildered in the wood till dawn of day. Dryden.

We no solution of our question find ; Your words bewilder, not direct the mind. Blackmore.

Our understanding traces them in vain, Lost and bewildered in the fruitless search. Addison.

First Fear, his hand, its skill to try, Amid the chords bewildered laid, And back recoiled, he knew not why \ Even at the sound himself had made. Collins.

BEWITCH', ˆ Be and witch. Ang.-Sax.

BEWITCH'ER, wiccian. To enchant; to

BEWITCH’ERY, use sorcery ; to injure by

BEWITCH’ING, ˆ-witchcraft or charms; to

BEWITCH’FUL, charm; to please to such

BEWITCH’INGLY. a degree as to take away

BEWITCH’MENT. J the power of resistance ;

fascination ; power of charming.

And honour, glory, praise, renown, and fame, That men’s proud hearts bewitch with tickling plea- sure,

An echo is, a shade, a dream, a flower, With each wind blasted, spoiled with every shower.

Fairfax.

Come, come away, frail, silly, fleshy wight, Ne let vaine words bewitch thy manly hart, Ne diuclish thoughts dismay thy constant spright In heavenly mercies hast thou not a part ? Spenser.

Look how I am bewitch’d ; behold, mine arm Is like a blasted sapling withered up. Shahtpeare.

Doth even beauty beautify,

And most bewitch the wretched eye. Sidney.

I will counterfeit the bewitchment of some popular man, and give it bountifully to the desirers.

Shakspeareˆ

My flocks are free from love, yet look so thin ; What magick has bewitched the woolly dams, And what ill eyes beheld the tender lambs ?

Dryden.

There is a certain betcitchery, or fascination, in words, which makes them operate with a force beyond what we can give an account of. South.

Let me observe, that oblique vision, when natural, was anciently the

mark of bewitchery and magical fascination, and to this day ‘tis a malignant ill-look.

Spectator.

The wanton beauty whose bewitching arts Have drawn ten thousand wretched souls to hell.

Mn. Route.

BEWRAY’, or > Probably from the Ang.-

BERAY. 5 Sax. wrigan, to cover; that

is with dirt, with filth, and thus to signify to befoul, to bespatter with dirt. ā Ency. Met.

Let them that do so, understand, that they beray, sile their hands more, when they lay them on any other man than their owne husbandcs, than though they blacked them in soote.

Vires. Instruction of Christian Women.

Being, as it were, in a small puddle of mire, she (the .moon) is but a little sullied or berayed therewith, and so quickly getteth forth of it.

Holland. Plutarch.

BEWRAY’, ~) Ang.-Sax. wregan, wreian ; BEWRAY’ER, > to accuse ; to inform ; to be BEWRAY’ING. Jan informer; to betray; to discover perfidiously. Formeily it was used to signify simply to discover or make visible. How shall thou to thj lady freshe May, Tellen thy wo ? she wol alway say nay ; Eke if thou speke she wol thy no bewrein; God be thin help I can no better sein.

Chaucer. Canterbury Tales. O messager fulfilled of dronkenesse ! Strong is thy breath ; thy limmes faltren ay ; And thou bewreiest alle secrenesse ; Thy mind is lorn, thou janglest as a jay, Thy face is turned in a new array.

Id.

She saw a pretty blush in Philoclea’s cheeks bewray a modest discontentment. Sidney.

Men do sometimes bewray that by deeds, which to confess they are hardly drawn. Hooher

But Blandamour, whenas he did espie His chaunge ot cheere that anguish did bewray ; He woxe full blithe, as he had got thereby, And gan thereat to triumph without yictorie.

Spenser

Fair feeling words he wisely ‘gan display, And, for her humour fitting purpose, fain To tempt the cause itself for to bewray.

Faerie Queene.

When a friend is turned into an enemy, and a bewrayer of secrets, the world is just enough to ac cuse the perfidiousness of the friend. Addison

BEX, a small town of Switzerland in the canton of Bern, remarkable for its salt works ; which are entered by a subterraneous passage cut through the solid rock.

BEXUQUILLO, in the materia medica, a name given to the white ipecacuanha in Peru.

BEY, among the Turks, signifies a governor of a county or town. The Turks write it begh or beg, but pronounce it bey. The word is particularly applied to a lord of a banner, whom they call sangiac beg or bey. The provinces of Turkey are divided into sangiacs, each of which qualifies a bey : and these are all commanded by the governor of the province, whom they call begler-beg, that is, lord of all the beghs or beys of the province. The title properly belongs to the chiefs who hold grants of land on military tenure, according to the ancient feudal system ot Europe. These beys are similar to our ancient bannerets.

The BEY OF TUNIS is the prince of that place, has a despotic power within his jurisdiction ; at the season for collecting the tribute from the Arabs, he is sometimes assisted by a body of troops from Algiers; and is, with the dey of Algiers, nominally subject to the Porte.

BEYLERBEG. See BEG, sect. 2, and BEG-

LEE-BEG.

BEYOND’. Sax. bejeonb, bejeon’oan. The imperative be, compounded with the past participle geond, geoned, or goned, of the verbgan, gangan, or gongan, to go, to pass ; so that, ‘ beyond any place,’ ‘ be passed that place,’ or ‘ be that place passed.’ ā Tooke. It is however used in a va- liety of senses : for instance ā Before, at a distance not yet reached ; on the farther side of; farther onward than some given spot ; past, out of the reach of; above, to a greater degree than above in excellence; remote from; not ā¢within the sphere of. To go beyond is to de- ceive, to circumvent, see 1 Thess. iv. ver. 6, That no man go beyond, and defraud his bro- ther in any matter.

Neither is it beyond the sea, that thou shouldst say, Who shall ,go over the sea for us, and bring it unto us? Deut. xxx. 13.

Now we are on the land, we are but between death and life ; for we are beyond the old world and the new. Bacon.

Beyond the infinite and boundless reach Of mercy, if thou didst this deed of death, Art thou damned, Hubert. Shakspeare.

She made earnest benefit of his jest, forcing him to do her such services as were both cumbersome and costly ; while he still thought he went beyond ter, because his heart did not commit the idolatry.

Sidney.

He that sees a dark and shady grove, Stays not, but looks beyond it on the sky.

Herbert.

the universal host upsent

A shout that tore Hell’s concave, and beyond Frighted the reign of Chaos and old Night.

Milton.

Yet these declare Thy goodness beyond thought, and power divine.

Id.

, The just, wise, and good God neither does nor can require of man any thing that is impossible, or natu- rally beyond his power to do. South. His satires are incomparably beyond Juvenal’s, if to laugh and rally is to be preferred to railing and declaiming. Dryden.

With equal mind, what happens let us bear ; Nor joy, nor grieve, too much for things beyond our care. Id. Fables.

What's fame t a fancied life in others breath, A thing beyond us, even before our death : Just what you hear, you have. Pope.

Old wives there are, of judgment most acute, Who solve these questions beyond all dispute ; Consult with those and be of better cheer, Marry, do penance, and dismiss your fear. Id. We cannot think men beyond the sea will part with their money for nothing. Locke.

All, all on earth is shadow, all beyond Is substance ; the reverse is folly's creed ; How solid all, where change shall he no more.

Young.

It is that settled, ceaseless gloom, The fabled Hebrew wanderer bore ; That will not look beyond the tomb,

But cannot hope for rest before. Byron. Apart he stalked in joyless reverie, And from his native land resolved to go, And visit scorching climes beyond the sea. With pleasure drugged he almost longed for woe, And e'en for change of scene would seek the shades

below.

Id. Childe Harold.

BEYRAMITCH, a large city of Asia Minor, in the district of Troas, and pachalic of the Dardanelles, distant from the straits about fifty miles. It is a well built place, abounding with antiquities, particularly some sarcophagi, con- sisting of large single blocks of granite. The ruins of a temple, dedicated to Jupiter, have been recently discovered here.

BEYS (Giles), a celebrated printer at Paris, in the sixteenth century ; the first introducer of the consonants J.and V.

BEZA (Theodore), an eminent reformer, was born at Vezelai, in Burgundy, June 24th 1519. He was brought up by his uncle Nicholas de Beza, counsellor of the parliament of Paris, till the month of December, 1528, when he sent him to study at Orleans, and afterwards at Bourges, where he was under the care of Melchior Wol- mar, under whom he made extraordinary pro- gress, and from whom he imbibed the principles of Calvinism. His uncle intended him for the bar ; but the law not suiting his disposition, he spent most of his time in reading the Greek and Latin authors, and in composing verses. In

1539 he took up his licentiate's degree, and went to Paris. He fell into the usual snares of youth, and wrote some licentious pieces. Sickness alarmed him ; and on recovering he fulfilled a vow he made, of declaring for the reformed reli- gion. This he did by going to Geneva, and making public profession of it. In 1549 he ac- cepted of the Greek professorship at Lausanne, where he also read lectures in French, on the New Testament. Having settled at Geneva, he became the colleague of Calvin in the church and university. Being sent to Nerac with a view to the conversion of the king of Navarre, and to confer with him upon affairs of import- ance, the king expressed, both by letters and de- puties, his desire, that Beza might assist at the conference of Poissy. The assembly hearkened attentively to his harangue, till, speaking of the real presence, he said, ' that the body of Jesus Christ was as distant from the bread and wine, as the highest heaven is from the earth.' Upon this, some cried out, Blasphemavit ! others has- tened away. Cardinal de Tournon desired the king and queen either to silence Beza, or permit him and his company to withdraw. Beza, throughout the conference, behaved with great ability. He often preached before the queen, the prince of Conde, and in the suburbs of Paris. After the massacre of Vassy, he was de- puted to the king to complain of this violence. The civil war followed soon after, during which the prince of Conde kept him with him ; and while the prince was imprisoned, he lived with admiral de Coligni, and did not return to Ge- neva, till after the peace of 1563. In 1571 he was chosen moderator at the national synod of Rochelle; and the year after assisted at that of Nismes ; after this, he assisted at the conference of Montbeliard and of Bern. The infirmities of age beginning to afflict him in 1 596, he could seldom speak in public; and he left it off en- tirely in the beginning of 1600. However, in 1597, he wrote some animated verses against the Jesuits, on occasion of the report that was made of his recantation and death. He died 13th of

October, 1605. His chief works are, 1. Confes- sio Christiana fidei, 8vo. 2. De Haereticis a civili Magistratu puniendis, 8vo. 3. Comedie du Pape Malade, 8vo. 4. Traduction en vers Franpais des Pseaumes omis par Marot. 5. His- toire de la Mappemonde Papistique, 4to. 6. Le Reveilmatin des Francois et de leurs voisins, 8vo. 7. De Peste

Quaestiones duae Explicatae ; una, sit ne Contagiosa? altera, an et Quatenus sit Christianis per Secessionem Vitanda? 8. Histoire Ecclesiastique des Eglises Reformees au Roya ume de France, 3 TO!S. 8vo. 9. Icones Virorum Illustriura, 4to. 10. Tractatio de Re- pudiis et Divortiis; Accedit Tractatus de Poly- gamia, 8vo. 11. Epistola Magistri Passavantii ad Petrum. Lysetum. 12. The New Testament translated into Latin, with notes, folio. Beza gave a Greek MS. of the third or fourth century, of the gospels and acts of the apostles, to the University of Cambridge, where a fac-simile of it was published in 1793, in 2 vols. folio.

BEZALEEL, the son of Uri, of the tribe of Judah, an artificer, employed by Moses in erect- ing the tabernacle, and supposed to have been in some degree inspired for that purpose.

BEZANS, in commerce, cotton cloths which come from Bengal ; some are white and others striped with several colors.

BEZANT, round flat pieces of bullion with- out any impression, supposed to have been the current coin of Byzantium. This coin was probably intro- duced into coat armour by those who went to the Holy Wars, as in the annexed figure. Ermine on a fess, gu)es, three bezants. The bezant was of pure gold, but whether it was the same as the Persian bizant, worth about two dinars, each dinar being equal to twenty or twenty-five drachms, is uncertain, as writers are not agreed respecting its value. It had, perhaps, as general a currency as any coin. It was current from the rise of the eastern empire to its fall, in all its provinces ; and likewise in those countries which had been provinces of the western empire ; and among others in Britain, where they were re- ceived in payments. Dr. Henry (History of England, vol. iv. 275,) estimates its value at 9s. 4%d. of our present money. The gold of- fered by the king of England on the altar at the feast of the Epiphany and the Purification, is called besant.

BEZANTLER, the branch of a deer's horns, next below the brow-antler.

BEZEK, 1. A city of Judah, about two miles from Beth-zur, and west of Bethlehem ; the ca- pital of Adoni-Bezek's kingdom. 2. A city south of Bethshan west of Jordan.

BE'ZEL, J 7i. *. That part of a ring in which

BE'ZIL. 5 the stone is fixed.

BEZIERS, or BESIERS, an ancient and well- built town of France, in Lower Languedoc, near a canal of that name. It was formerly a

bishop's see, and gave birth to the learned Barbeyrac . The neighbourhood is fertile and the site highly sa- lubrious. The valley of the Orbe is bounded by hills, which are covered with vines and to the summit of a natural amphitheatre.

The beauty of it, as seen from the town, is in- creased by the eight sluices of the grand canal, which form as many fine water-falls. There is a cathedral and collegiate church here, several religious houses, and two hospitals; a good trade in wine, oil brandy, almonds, corn, wool, and silk ; and manufactures of cotton, fustian, and other stuffs, stockings, earthenware, brandy, and leather. An Academy of Sciences was founded in 1723, and has survived the revolution. It stands thirty-eight miles south-west of Mont- pelier, in lat. 43Ā° 20* N., and long. 3Ā° 17′ E.

BEZOAR. This name, which is derived from a Persian word, implying an antidote to poison, was given to a concretion found in the stomach of an animal of the goat kind. It was, of course, highly valued for this imaginary qua- lity, and the name was thence extended to all concretions found in animals.

According to Fourcroy, Vauquelin, and Ber- thollet, these are of eight kinds. 1. Super- phosphate of lime, which forms concretions in the intestines of many mammalia. 2. Phosphate of magnesia, semitransparent and yellowish, and of spec. grav. 2-160. 3. Phosphate of ammonia and magnesia. A concretion of a gray or brown color, composed of radiations from a centre. It is found in the intestines of herbivorous ani- mals, the elephant, horse, &c. 4. Biliary, color reddish-brown, found frequently in the intestines and gall-bladder of oxen, and used by* painters for an orange-yellow pigment. It is inspissated bile. 5. Resinous. The oriental bezoars, pro- cured from unknown animals, belong to this class of concretions. They consist of concentric layers, are fusible, combustible, smooth, soft, and finely polished. They are composed of bile and resin. 6. Fungous, consisting of pieces of the boletus igniarius, swallowed by the animal. 7. Hairy. 8. Ligniform. Bezoars were for- merly considered so highly alexipharmic, that other medicines of that kind received the name bezoardics, and so efficacious were they once thought, that they were eagerly bought at im- mense prices. They were sometimes taken in- ternally, and in other cases worn around the neck, as preservatives : it is said that in Portugal it has been customary to hire them at the price of 10s. per day. This great value of the bezoar gave birth to many fabrications under the name, and various tests were proposed to detect artifi- cial stones. Three bezoars sent to Buonaparte by the king of Persia, were found by Berthollet to be nothing but woody fibre

agglomerated.

BEZOARDIC acid, a name given to the acid extracted from the urinary calculi formed in the kidneys or gall-bladder

BEZOARDICA TERRA, a name used by some authors for a medical earth dug in the pope's territories, and more frequently called terra no- ceriana.

BEZOAR'DICK, adj. From bezoar. Medi- cines compounded with bezoar.

The besoardickf are necessary to promote sweat, and drive forth the putrified particles. .Flayer.

BEZOLA, in ichthyology, a truttaceous_fish of the albula kind, called by Gesner the albula cae- rula. It resembles the herring in shape, is of a

dusky bluish color, and does not essentially dif- fer from the lavaretus.

B FA, B MI, in solmisation (music), accord- ing to the hexachord of Guide Aretinus, this ex- pression denotes, that, when in modulation the interval B-natural is required, the syllable mi should be sung, and the key designated by B-mi, because the half tone falls between the B-natural, and C, and belongs to the hexachord of G, the fourth space bass clef: as,

c A B-natural c D E ut re mi fa sol la

if, on the contrary, the modulation requires the

interval B-flat, then the syllable fa should be

sung, and the key designated by B-fa : as,

F fourth line, G A B-flat c D

ut re mi fa sol la

As the gamut of Aretin was composed only o* six notes, namely, ut re mi fa sol la, there was no leading note to the octave, and as they sung by the system of mutation, the name of mi was given to all notes

separated only from the one above, by a semi-tone ; and the name of fa to every note which was separated from the one below, by a semi-tone ; thus the leading note to ut, called mi in solmisation, was designated by the name of B-mi, and the same note descending by one semi-tone, called fa in solmisation, was designated B-fa.

BHADRINATH, VADARINATHA, a town and temple in the province of Serinagur, Northern Hindostan, on the west bank of the Alacananda River, in the centre of a valley. It is built on the sloping bank of the river, and contains only twenty or thirty small houses, for the accommo- dation of the Brahmins and other attendants on the temple. This is in the form of a cone, with a small cupola, surmounted by a square shelving roof of copper, over which is a golden ball (gilt) and spire. The height of the building is forty or fifty feet, and the era of its foundation is very re- mote. A warm bath, supplied by a spring of hot water that issues from the mountain, is strongly tainted with a sulphureous smell, and close to it is a cold spring. There are also several other springs in the neighbourhood.

The idol, Bhadrinath (the lord of purity), is a human figure, about three feet high, cut in black stone or marble, dressed in a suit of gold and silver brocade, the head and hands being unco- vered. His temple has more beneficed lands attached to it than any sacred Hindoo establish- ment in this part of India, and is said to possess 700 villages, in different parts of Gurwal or Ke- maoon, all under the jurisdiction of the high- priest, who holds an authority nominally inde- pendent. The number of pilgrims who visit this place annually is estimated at 50,000, who come from the remotest quarters of India. They ge- nerally assemble at Hurdwar.

BHATGAN, or BHATGONG, a town in Nor- thern Hindostan, situated in the valley of Nepaul, eight miles east by south of Catmandoo. Its ancient name was Dhurmaputten, and it is called by the Newars Khopodaise. This town is the favorite residence of the Brahmins of Nepaul, containing many more families of that order than

Catmandoo and Patan together, though in size it is the least considerable of the three; yet its palace and the buildings in general are of a more striking appearance, owing to the excellent quality of the bricks. The former sovereigns of this state possessed but a small share of the valley ; but their dominions extended eastward to the banks of the Goosey. Bhatgong is the Benares of the Ghoorkhali do- minions, and is said to contain many valuable ancient Sanscrit manuscripts.

BHATTIA, a town in the western extremity of the Gujrat Peninsula, situated a few miles to the east of Oaka. It contains about 500 houses, chiefly inhabited by Aheers, an industrious class of the peasantry, originally herdsmen, but who of late years have applied themselves to the cul- tivation of land. The country to the north of Bhattia exhibits an appearance of cultivation and prosperity superior in general to the rest of the peninsula. The grain chiefly raised is bajeree.

BHURTPORE, a strongly fortified town of Hindostan, in the province of Agra; the capital of the Jauts. It was erected by a Jaut chief, in the reign of Aurungzebe, who gained consider- able power during the civil wars between that prince and his brothers. In the year 1768 his successors had extended their territory within a few miles of Delhi, westward, and their alliance was much courted. On the breaking out of the last Mahratta war, the Jaut rajah, Runjeet Sing, promised to assist the British, but afterwards formed an alliance with Scindea and Holkar, in consequence of which this territory was invaded by Lord Lake ; the fortress of Deeg, and several places were taken, but Bhurtpore endured a me- morable siege. The British are said to have lost in it more men than by any three pitched battles they ever fought in India. It submitted at last, worn out by our perseverance. At the moment when we write this,, despatches from India an- nounce that it has been again besieged by the British, under lord Combermere, and was taken by storm in January, 1826. This tribe is said to be remarkably brave and handsome ; and less bigotted to their superstitions than many other of the Hindooˆ. It stands in long. 77Ā° 28′ E., lat. 27Ā° 13′ N.

BIA, in commerce, a name given by the Siamese to those small shells which are called cowries throughout almost all the other parts of the East Indies. See COWRIES.

BIABACERKIF, a town of Russia, in the government of Kiov.

BIACULEATUS, in ichthyology,, a species of balistes, having two ventral spines. This is the piscis cornutus of Willoughby. It is of an elon- gated form, white, cinereous above, rough to the touch, being covered with very short bristly hairs. It is a native of the East Indies, and is a voracious kind, feeding probably on marine worms and crabs. The Dutch call it hooni- visch; and the French, baliste a deux piquans.

BI.ZEUM, fiiatov, in rhetoric, a kind of counter argument, whereby something alleged for the adversary is retorted against him, and made to conclude a different way : for instance, Occidisti, quia adstitisti interfecto. ā fiiaiov, Immo quia adstiti interfecto, non occidi ; nam si

id esset, in fugam me conjecissem. ‘ You killed the person,

because you were found standing by his body.” Biasum, ‘ Rather I did not kill him, because I was found standing by his body ; since, if I had,

I should have fled away.’

BIJEUM, in medicine, a kind of saline or sea- wine, used by the ancient Greeks in various dis- orders. It was made of grapes gathered a little before ripe, and dried in the sun ; then pressed, the juice put up in casks, and mixed with a large proportion of sea-water. Dioscorides seems to describe it as made of grapes steeped in sea- water, and then pressed.

BIAFARA, or BIAFRA, a district of Lower Africa, south-east of Benin, with a capital of the same name, said to be situated about sixty miles up the river Camarones. This river, though broad, is extremely shallow, and the country has been very partially explored.

BIAFARAS, a people who inhabit part of the archipelago of the Bissagos. See BISSAGOS.

BIAFORA, in the customs of the middle age, a form of alarm to arms ; on the hearing whereof, the inhabitants of towns or villages were to issue forth, and attend their prince. The word seems originally from Gascony ; and the Italians even now, on a sudden insurrection of the people, commonly cry, Via-fora, changing the B into V.

BIALOGOROD, or AKERMAN, a strong town of Bessarabia, in European Turkey, seated on the lake Vidono, near the sea-side.

BIALYSTOCK, or BIALLISTOK, a town of European Russia, in the government of Grodno, and formerly included in the Polish palatinate of Podlachia. It was formerly the capital of this part of the country, and contains a noble castle with extensive gardens. The whole population is about 5000; the greater part of whom are Roman Catholics. Lat. 53Ā° 2′ N., long. 22Ā° 30′ E.

BIANA, an ancient city of Hindostan, for- ” merly the capital of Agra ; but now belonging to the Jauts. The remains of an extensive fort are

to be traced here, and the city contains a number of stone houses. The vicinity produces fine indigo ; and there were formerly mines of copper worked here. At the close of the fourteenth century it was the residence of a.u independent Afghan chief, who assumed the title of king. Lord Lake took it the last Mahratta war. Long. 77Ā°16’E., lat. 26Ā°56’N.

BIANCHI (Francis), called II Frari, a painter, born at Modena; master of one of the most es- teemed painters that ever appeared, Antonio Corregio. His coloring was delicately fine; his attitudes full of grace ; and his invention ex- tremely grand. His works have an astonishing beauty, and are prized almost as highly as those of Corregio. He died in 1520.

BIANCHI (Antonio), a Venetian gondolier and porter of the last century, who raised himself from obscurity by his genius. His most ad- mired work is, II Davide Re d’ Israele, published in folio in 1751. He also wrote a poem, entitled

II Templi ovvero il Salomone, 4to, 1 753 ; a Trea- tise on Italian Comedy ; and an Oratorio, called Elia sur Carmelo. ā Biog. Univ.

BIANCHI (John), generally known by the name of James Plancus, was a native of Rimini, and born in 1693. He practised medicine with considerable reputation, and wrote ā Lettere In-

torno all Cataratta, 4to ; Observazioni intorno unj Sezione Anatomica, 4to ; De Monstris, 4to ; Ston i Medica d’un Apostema nel lobo destro del Cere- bello, 8vo ; Discorso sopra il vitto Pitagorico, 8vo ; a Treatise on the Baths of Pisa ; another respecting a giant ; a third on scarce shells ; an account of a girl named Cattarina Vizani, &c.; Epistola Anatomica ad Jos. Puteum Bononien- sem, 4to ; Dissertazione de Vesicatori, 8vo ; and Fabii Columnae Phytobasanos. He was con- sidered very skilful in his profession, and died in 1775.

BIANCHINI (Francis), one of the most learned men of his time, was born at Verona in 1662, of an ancient family. His taste for natural philosophy and mathematics induced him to es- tablish the academy of Altofili, at Verona. He went to Rome in 1684; and was made librarian to cardinal Ottobini, afterwards pope Alexander VIII. He also became canon of St. Mary de la Rotonda, and at length of St. Lawrence in Da- maso. He was esteemed by the learned ; and was a member of many academies. He pub- lished, 1. Three Memoirs on the Comet of 1684. 2. Another on the Comet of 1702. 3. Relazione della linea meridiana orizzontale e della ellissi polare fabricata in Roma. 4.

Epistola de Eclipsi Solis, 1724. 5. Hesperi et Phosphori nova Phenomena, sive Observations circa Planetam Ve neris, fol. 6. F. Bianchini Astronomicae et Geo- graphicae Observations, fol. 7. De Emblemate, nomine atque institute Alethophilorum, 4to. 8. Istoria Universale Provata con Monumenti e Fi- gurata con Simboli degli antichi, 4to. 9. De Ka- lendario et cyclo Caesaris ac de Paschali canone S. Hippolyti, fol. 10. Camera et Inscrizioni Sepolcrali, fol. 11. Del palazzo de' Caesari. 12. An edition of Anastasius Bibliothecarius' history cf the Popes, fol. 13. Opuscula Varia, 2 vols. 4to. He died in 1729, aged sixty-seven.

BIAN'GULATED,) adj. From Lat. binus

BIAN'GULOUS. f and angulus. Having

two corners or angles.

BIANOR, in entomology, a species of papilio, a native of the East Indies. The wings are black, with five rufous lunules on the posterior pair. It is doubtful whether this is a distinct species from P. Paris ; perhaps only a sexual dif- ference.

BIARCHUS, an officer in the court of the emperors of Constantinople, who was intrusted with the care and inspection of the provisions of the soldiers.

BIARUM, in botany, a name by which the people of Egypt at this time call the root of nilufar, or saba ./Egyptica, growing on the Nile.

BI'AS, v. n.s. adj. & adv. 2 Biais, Fr. said

BI'AS DRAWING, 5 to come from bi-

hay, an old Gaulish word, signifying cross or thwart. It is used metaphorically for to turn away from a right, fair, impartial judgment ; to prejudice ; any thing which turns a man to a par- ticular course, or gives the direction to his mea- sures ; propension ; inclination ; any thing which turns, or is turned, aside.

Every action that hath gone before, Whereof we have record, trial did draw Bias and thwart, not answering the aim.

Shakfpeare. Troiltu and Cretsida.

BIB

Blow till thy bias cheek Outswell the cholic of puft Aquilon. Id.

Madam, we'll play at bowls ā 'Twill make me think the world is full of rubs, And that my fortune runs against the bias.

Shakspeare.

You have been mistook :

But nature to her bias drew in that. Id.

As for the religion of our poet, he seems to have some little bias towards the opinions of Wickliff.

Dryden.

Were I in no more danger to be misled by ignor- ance, than I am to be biassed by interest, I might give a very perfect account. Locke.

A desire leaning to either side biasses the judg- ment strangely ; by indifference for every thing but truth, you will be excited to examine. Watts.

Thus nature gives us, let it check our pride, The virtue nearest to our vice allied ; Reason the bias turns to good or ill. Pope

BIAS, a celebrated philosopher, and one of the seven sages of Greece, flourished about A. A. C. 606. He was accustomed to say, 'It is a sickness of mind to wish for impossible things.' During the siege of Priene, his native city, being asked why he was the only one who returned from the place without car- rying any thing with him, he replied, That he carried his all with him ; meaning, that his knowledge and virtue were the only blessings that were peculiarly his own, since they could not be taken from him. lie expired while pleading for one of his friends.

BIAS, in entomology, a species of papilio that inhabits Cayenne. The wings are black, glossed with blue ; brown beneath, with a white margin.

BIATHANATI, /3ia0avarotff, from /3ia, vio- lence, and Sravaroc, death, the same with suicides. BIATIIANATOS, the title of a work of Dr. Donne's, published at London in 1664, 4to. wherein he undertook

to prove this paradoxical position, ‘ That suicide is not so naturally sin as that it may never be otherwise.’

BlB,Ā«.s. &V.N From the Lat. bibere, to drink.

BIB’BER, f* A bib,’ according to Skinner,

BIB’BING, {‘ is a cloth stretched over the

BIB’ULOUS. 3 breast of an infant, that it may

imbibe the overflowing liquid’ from its mouth ;

to bib is to tipple ; to sip, to drink frequently ;

to be a sot ; a wine-bibber is a person given to

wine, who drinks it to excess.

This miller hath so wisely bibbed ale, That as a hors he snorteth in his slepe. Chaucer. We’ll have a bib for sporting of Uiy doublet ; And a fringed mackender hang at thy girdle ; I’ll be thy nurse, and get a coral for thee, And a fine ring of bells. Beaumont and Fletcher. He playeth with bibbing mother Meroe, as though so named because she would drink mere wine without water. Camden.

To appease a froward child, they gave him drink as often as he cried ; so that he was constantly bibbing, and drank more in twenty-four hours than I did.

Locke.

I would fain know, why it should not be as noble Ā» task to write upon a bib and hanging sleeves, as on the bulla and praetexta. Addison.

Strowed bibulous above, I see the sands, The pebbly gravel next, the layers then, Of mingled moulds, of more retentive earths.

Thomson

BIB’BLE-BAB’BLE. Babble-bubble, frivol- ous, unmeaning talk.

Malvolio, Malvolio, thy wits the heavens restore ā¢ endeavour thyself to sleep, and leave thy vain bibble. babble. Shakspeare,

BIBERACH, a city of Wirtemberg, the head of an upper bailiwic, in the

district of the Danube. It was formerly free and imperial, subject to its own magistrates. It is seated in a pleasant fertile valley on the river Reuss, and has a large manufac- ture of fustians. Here are also manufactures of linen, woollen, and cotton goods, and leather ; and a considerable trade in salt. It has also some hot baths. In September, 1796, a victory was ob- tained in its neighbourhood, by the French re- publican army, over the Austrian general Latour, and in 1802 this city and territory were ceded to Baden, who transferred them in 1806 to the king of Wirtemberg. Population about 4500, of whom two-thirds are Lutherans, and the rest Catholics. It lies eighteen miles S. S. E. of Ulm. Long. 10Ā°. 2′ E., lat. 48Ā° 10′ N.

BIBERACH, is also the name of a neat market town, castle, and lordship, of the Bavarian do- minions, in the circle of the Upper Danube and district of Wertingen. It is situated on the river Schmutter, and belonged formerly to the counts of Fugger. It contains about 1200 in- habitants, and is much resorted to by Catholics on account of a miraculous crucifix said to be found in one of the churches. Nine miles from Augsburg.

BIBIENA, a territory of Tuscany, situated around a town of the same name, on the banks of the Arno.

BIBIENA (Ferdinand Gall), an excellent painter and architect, born at Bologna in 1657, and surnamed Bibienafrom the territory in which his father was born. He acquired such reputa- tion by his skill in architecture, the decorations of the theatre, and perspective, that the duke of Parma invited him to his court, and made him his first painter and architect. Bibiena at length went to Vienna, where he had the same honors and advantages. He wrote two books of archi- tecture ; and died at Bologna, at above eighty years of age.’ His sons followed with success the same professions.

BIBIENA (Bernardo da), a Roman cardinal, born of obscure parentage, in 1470. Having entered into the service of the family of Medici, and being a man of considerable address, he was very instrumental in securing the election of Leo X. by whom he was made a cardinal, and employed on several missions of importance. His ambition, however, having excited the jea- lousy of Leo, it was suspected he was poisoned in 1520 ; but there seems to be no good grounds for this suspicion. Bibiena’s comedy, entitled Calandra, is still in esteem among the Italians.

BIBIO, the wine-fly, in entomology, a species of the musca genus, a very small fly, found fre- quently among empty wine-casks. It is pro-

duced from a small, oblong, red worm, very common in the sediments of wine. Fabricius defines the generical character of bibio from the sucker, feelers, and antennae. The sucker con- sists of three bristles and a sheath of a single valve ; feelers very short ; antennae connected at the base, and pointed at the tip.

BITBLE, ~\ Literally, a book, pro-

BI'BLE-BEAR'ING, f bably from BvjSXof, or Bt/3-

BIB'LICAL, ˆXoc, an Egyptian plant, of

BIB'LICIST. J which the ancient papyrus,

or material for writing upon, was made. Rolls of these, written upon, were called books, Bibles. It is now pre-eminently, if not exclusively, ap- plied to the Jewish and Christian Scriptures ā the volume of Divine Revelation. Biblical is applied to any thing that relates to the Bible : thus a critic, who employs his studies in eluci- dating or explaining the Scriptures, is called a biblical critic. Bible-ftearing is a very significant word to denote a hypocrite thus employing him- selfā ' to be seen of men.'

A saint-seeming and bible-bearing hypocritical pu- ritan. Montagu's Appeal.

Her studie was but litel on the Bible.

Chaucer. Cant. Tale*.

To tellen all would possen any Bible. That o wher is. Id.

If we pass from the apostolick to the next ages of the church, the primitive Christians looked on their bibles as their most important treasure.

Government of the Tongue.

We must take heed how we accustom ourselves to a slight and irreverent use of the name of God, and of the phrases and expressions of the holy bible, which ought not to be applied upon every slight occasion.

Tillotson.

In questions of natural religion we should confirm and improve, or connect our reasonings by the divine assistance of the bible. Watts.

To make a biblical version faithful and exact, so that it may represent the true text of the original in the best manner, is very different from giving it a shewy and modernised appearance. Archbishop Newcome.

Augustine and Jerome corresponded upon biblical subjects infinitely less important. Parson to Travis.

Biblicist was an ‘ appellation given to the school- men of the twelfth and thirteenth centuries, who made the Scriptures the chief subject of their studies, and the text of their lectures, without deriving any succours from reason or philosophy.’

BIBLE, Greek /3i/3\oe, the book; a name ap- plied by way of eminence to the collection of sacred writings, or the Holy Scriptures of the Old and New Testaments; known also by va- rious other appellations, as, the Sacred Books, Holy Writ, Inspired Writings, &c. The Jews styled the Old Testament mpo (Mikrah), which signifies the lesson or lecture. Christians must of course regard the entire collection of canon- ical books, belonging to both of the Divine Covenants, as furnishing the basis of all true reli- gion ; ‘ so ttait,’ as the church of England well expresses it, ‘ whatsoever is not read therein, nor may be proved thereby, is not to be required of any man, that it should be believed as an article of faith, or be thought requisite or necessary to salvation. ‘ It is therefore a vulgar, though very common, error to apply the term Bible to the Old Testament exclusively. A writer Of the New Testament (St. Peter) leads the way (2 Epist. iii. 16) in ranking its books with TOQ Xonrac ypaˆac, ‘the other Scriptures’; and

as early as St Chrysostom’s days it seems to have been used thus to designate the whole Inspired Volume. ‘ I therefore exhort all of you, ‘ says that eminent father (Col. H. 9, torn. xi. p. 391,) ‘to procure to yourselves Bibles (/3t/3Xta). If you have nothing else, take care to nave the New Testament, particularly the Acts of the Apostles and the Gospels, for your constant instructors. ‘ And Jerome says (In Is. c. 29, torn. ii. p. 246,) ‘ that the Scriptures, being all written by one Spirit, are one book.’

The Canon of Scripture, or Biblical Canon, is the accredited list of those books which Jews and Christians with regard to the Old Testament, and Christians almost unanimously with regard to the

New, agree to hold as authentic and inspired : they are also called canonical in contradistinction from others called deutero-canonical, apocryphal, pseudo-apocryphal, &c. which either are not acknowledged as divine books, or rejected as heretical or spurious. See APOCRYPHAL.

The critical history of the Bible divides itself into 1. The history of the formation and arrange- ment of the Jewish canon; 2. The formation of the Christian canon. 3. The history of ancient and modern versions of the Scriptures as a whole, or in part, in various languages.

SECT.

OF THE CANON OF THE HEBREW SCRIPTURES.

In endeavouring to arrive at a settled canon of the ancient or Hebrew Scriptures, we have the great advantage of corroborating our researches as Christians by the labors and decisions of emi- nent Jewish critics; so that whatever may be objected against the authority of the present canon of the Old Testament, either in behalf of any books which are not in it or against any that are, may be sufficiently answered, in most cases, by this single consideration, viz. that we receive the same and no other books than such as were received by the Jewish church in the time of our Saviour ; for we can quote lists of them procured by the first Christians, and catalogues which they made of them soon after the destruction of Jeru- salem.

It is clear that the Pentateuch, or five books of Moses, were collected shortly after the deathof that legislator, for they were deposited together (Deut. xxxi. 24. 26) ‘in the tabernacle, ‘ in the side of,’ or near the ark. Here also were accumulated, accord- ing to the invariable tradition of the Jews, the other sacred books as they were produced ; and Solo- mon transferred the whole extant in his time, from the tabernacle to the temple. To Ezra is assigned the honor of having collected together and perfected, a complete copy of the ancieit Scriptures. After having been concealed in the dangerous days of the idolatrous kings of Judah, and particularly in the reigns of Manasseh and Amon, it was found in the days of Josiah, the succeeding prince, by Hilkiah the priest, in the temple. Prideaux supposes, that during~the preceding reigns, the book of the Law was so de-

stroyed and lost, that, besides tnis copy of it, there was then no other to be obtained, and re- fers to the surprise manifested by Hilkkh, on the discovery of it, and the grief expressed by Josiah when he heard it read, as plainly showing that neither of them had seen it before, 2 Kings, xxii, s ā 13. 2 Chron. xxxiv. On the other hand, Dr. Kennicott contends, that long before this time there were several copies of the Law in Israel, during the separation of the ten tribes, and that there were some copies of it also in the possession, at least of the prophets and priests belonging to the two more faithful tribes of Judah and Benjamin. He thinks that the sur- prise expressed by Josiah and the people, at his reading the copy found by Hilkiah, may be ac- counted for by adverting to the history of the preceding reigns, and particularly recollecting what a very idolatrous king his grandfather Ma- nasseh had been ; wanting neither the will nor the power to destroy the copies of the Law, if they had not been carefully secreted. This solemn reading of it by Josiah would doubtless awaken his own and the peoples' earnest attention; more especially as the copy produced was possibly the autograph of Moses. From this time copies of the Law were extensively multiplied among the people ; and though, within a few years, the ori- ginal copy might be burnt with the city and temple, it is certain that Daniel had d copy of the Scriptures with him at Babylon; for he quotes the Law, and mentions the prophecies of Jeremiah. Dan. ix. 11. 13, ix. 2. It appears also, from the sixth chapter of Ezra, and from the ninth chapter of Nehemiah, that copies of the Law were dispersed among the people. It is unnecessary, therefore, to suppose, with some of the fathers, that Ezra restored the Scriptures by a divine revelation, after they had been lost and destroyed in the captivity; an opinion resting only on the authority of a fabulous relation, which occurs in the fourteenth chapter of the se- cond apocryphal book of Esdras. What Ezra did may be comprised in the following particulars. He collected and collated as many copies of the sacred writings as he could find, and out of them all formed one complete copy, adjusted the va- rious readings, corrected the errors of trans- cribers, and, as some say, annexed the ' Keri chetibs,' which are found in the margins of the ancient MSS. He likewise made additions in several parts of the different books which ap- peared to be necessary for their illustration, correction, and completion. To this class of additions, we may refer the last chapter of Deu- teronomy, which, as it gives an account of the death and burial of Moses, and of the succession of Joshua after him, could not have been written by Moses himself. Under the same head have also been included many other interpolations in the Bible, which create difficulties that cannot be solved without allowing them; as in Gen. xii. 6, xxii. 14, xxxvi. 3. Exod. xvi. 35. Deut. ii. 12, iii. 11. 14. Prov.

xxv. 1. The interpo- lations in these passages are ascribed by Prideaux to Ezra ; and others which were afterwards added, he attributes to Simon the Just. Ezra also changed the old names of several places that were become obsolete, putting instead of them the

new names by which they were at that time called ; instances of which occur in Genesis xiv. 4, where Dan is substituted for Laish, and in several places in Genesis, and also in Numbers, where Hebron is put for Kirjath Arba, &c. He likewise wrote out the whole in the Chaldee character, changing for it the old Hebrew character, which has since that time been retained only by the Samaritans, and among whom it is preserved to this day.

Dupin contends that Nehemiah was princi- pally concerned in compiling and collecting' this canon ; for proof of which he refers to the letter of the Jews of Jerusalem, written to the Jews ot Egypt, mentioned in the beginning of the second book of Maccabees, in which it is said, that Ne- hemiah had collected the books of the Kings, of the Prophets, and of David. It is said that this canon was then approved by the grand Sanhe- drim, the great synagogue or council of seventy, and published by its authority. It is, however, says Dupin, more apparent that about that time the number of the sacred books was fixed among the Jews by a canon, which the whole Jewish nation received and followed ; so that they looked no longer upon such books as sacred and divinely inspired, which were not contained in it.

The canon of the whole Hebrew Bible seems, says Kennicott, to have been closed by Malachi, the latest of the Jewish prophets, about fifty years after Ezra had collected together all the sacred books which had been composed before and during his time. Prideaux supposes the canon was closed by Simon the Just, about 150 years after Malachi. Be this as it may, it seems well established, that Judas Maccabaeus repaired the temple, and replaced in it every thing neces- sary for the performance of divine worship (I Mace. iv. 36 ā 59), which included a correct copy of the Hebrew Scriptures, if not that of Ezra himself. And that this copy remained in the temple until the destruction of Jerusalem and the subversion of the Jewish polity under Titus, when it was carried in triumph to Rome, amcng the other spoils which he had taken.

From the New Testament, as well as from the testimony of Josephus, it appears that this stan- dard canon of Old Testament Scripture was di- vided into the three parts, of the Law, the Pro- phets, and the Hagiographa, or Psalms (Luke xxiv. 44). Josephus, Contra Apion. i. 8. torn. ii. p. 441 ., says the canonical books were distributed into three

classes ; the first containing the five books of Moses ; the second, thirteen historical and prophetical books, written from the time of the death of Moses to Artaxerxes ; and the third, four books of hymns and of morality ; the whole number amounting to twenty-two. The first class therefore comprehended Genesis, Exodus, Leviticus, Numbers, and Deuteronomy ; the second Joshua, Judges, with Ruth, Samuel, Kings, Chronicles, Ezra with Nehemiah, Esther, Isaiah, Jeremiah with Lamentations, Ezekiel, Daniel, and the twelve minor prophets ; and the third Job, the Psalms, Proverbs, and Ecclesiastes, and the Song of Solomon. The whole passage is as follows :

‘We have not an innumerable multitude of

books among us, disagreeing from and contra- dicting one another, but only twenty-two books, containing the records of all past imes, which are justly believed to be divine. Five of them be- long to Moses, which contain his laws, and the traditions concerning the origin of mankind, till his death. But as to the time from the death of Moses, till the reign of Artaxerxes king of Persia, who reigned after Xerxes, the prophets who were after Moses wrote down what was done in their times in thirteen books. The remaining four books contain hymns to God, and precepts for the conduct of human life. Our history, indeed, has been written, since Artaxerxes, very particu- larly ; but it has not been esteemed of equal au- thority with the former by our forefathers, because there had not been an exact succession of prophets since that time. And how firmly we have given credit to these books of our own nation, is evi- dent by what we do : for, during so many ages as have already passed, no one has been so bold as either to add any thing to them, to take any thing from them, or to make any change in them.; but it is become natural to all Jews, immediately, and from their very birth, to esteem these books to contain divine doctrines, and to persist in them ; and, if it be necessary, willingly to die for them.’ Josephus contra Apion, lib. 1. sect. 8.

There is some’ variety of opinion, among the fathers, as to the classification of the books of Ruth, Job, the Song of Solomon, &c. at this time : but that all our present canon was con- tained in this ancient one is confirmed by the modern division of the sacred books among the Jews, who now enumerate twenty-four. The Law is still the first division, containing the five books of Moses : the Prophets are divided into the former and latter, with regard to the time when they flourished respectively. The former prophets, containing the Books of Joshua, Judges, and 1 and 2 Samuel, and 1 and 2 Kings. ; and the two

last being each considered as one book. The latter prophets comprise the writings of Isaiah, Jeremiah, Ezekiel, and the twelve minor prophets, whose books are reckoned as one. The Cetubim, or Hagiographa, consist of the Psalms, Proverbs, Job, Song of Solomon, Ruth, Lamentations of Jeremiah, Ecclesiastes, Esther, Daniel, Ezra and – Nehemiah (reckoned as one), and 1 and 2 Chroni- cles, which also are reckoned as one. In the modern copies of the Hebrew Scriptures, the Song of Solomon, Ruth, Lamentations, Ec- clesiastes, and Esther, are placed immediately after the Pentateuch, under the name of the five Megilloth, or volumes. This order, however, is not always observed.

We pass over minor divisions in this place, as well as the rnodern one, into chapters and verses, referring the reader for the latter to the word CHAPTER. The council of Trent having extracted frorn Luther's writings the position ' that no books should be reckoned a part of the Old Testament beside those received by the Jews,' (see Sarpi's History), have included, for no other reason that we can find, the Apocryphal books of Tobit, Judith, The Book of Wisdom, Ecclesiasli- CUF, Baruch, 1 Maccabees, and 2 Maccabees, in the sacred canon. See our article APOCRYPHA.

A canon of the ancient Scriptures thus delivered

to us by those to whom were 'committed the oracles of God,' has been perpetuated by numerous MSS. preserved both by Jews and Christians with scrupulous care, and is happily distributed, in modern times, by the invention of printing, into every region of the globe. Hebrew MSS. of the Old Testament are extant in the form of rolls and square : the former being generally the shape of those found in the Jewish synagogues. To ensure their correctness, ap- proved scribes have been from before out Saviour's time employed upon the task of tran- scribing them ; and although superstition may have dictated a great portion of such rules as the following, the observance of them it is clear must have had an unquestionable tendency to preserve pure the sacred text. Carpzov and other critics tell us that the copies of the law must be transcribed according to the Jews (and these rules are said to be observed to the present day), from ancient MSS. of approved cha- racter only, with pure ink, on parchment pre- pared from the hide of a clean animal, for this express purpose, by a Jew, and fastened together by the strings of clean animals. Every skin must contain a certain number of columns of prescribed length and breadth, each column comprising a given number of lines and words. No word must be written by heart or with points, or without being first orally pronounced by the copyist : the name of God is not to be written but

with the utmost devotion and atten tion ; and previously to writing it, the pen must be washed. The want, or the redundance of a single letter, the writing of prose as verse, or verse as prose, respectively, vitiates a MS. and when a copy has been completed, it must be examined and corrected within thirty days after the writing has been finished, in order to deter- mine whether it is to be approved or rejected. The Hebrew text of these MSS., it should here be remarked, was originally transcribed without any breaks or divisions into chapters and verses, or even into words ; so that a whole book, as anciently written, was in fact but one continued sentence, or rather word. When various readings therefore had arisen in the lapse of ages, the Jews had recourse to a canon or rule which they called masora or tradition, consisting of the most minute critical notices, which they placed in the margin of their copies of the text, and which tells us the different reading of the words which are redundant or defective ; how often the same word is found at the beginning, middle, or end of a verse, the different significations of the same word ; the agreement or conjunction of one word with another ; what letters are pronounced, and what are inverted, together with such as hang perpendicular : they even took the number of each letter, for the Jews cherish their sacred books with such reverence, that they make scru- ple of changing the situation of a letter, which is evidently misplaced : supposing that some mys- tery has occasioned the alteration. They have likewise reckoned which is the middle letter of the Pentateuch, which is the middle clause of each book ; and how many times each letter of the alphabet occurs in all the Hebrew Scriptures. See Walton's Prolegomena, c. viii.

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Five examplars have been more particularly celebrated amonij the Jews for their correctness, the Codex of llillel, of BPH Asher, also called the Jerusalem, or Palestine Codex ; of Ben Napthali, or the Babylonian Codex ; the Pentateuch of Jericho, and the Codex Sinai. But, in the seven- teenth and eighteenth centuries, collections of He- orew MSS. were made by Christian critics, which have placed a most minute acquaintance with every part of the sacred text within the power of almost every modern student. Rabbi Joseph Athias, in his celebrated edition of the Hebrew Bible, printed at Amsterdam 1661 and 1667, may be said indeed to have led the way to this good work. He was succeeded by Jablonski, in his Bible printed at Berlin 1699, by Vander Hooght iu 1705, Opitz in 1709, J. H.Michaelis in 1720, and Houbigant m 1753.

In this last year Dr. Kennicott first announced to the public his

important and extensive plan, for collating Hebrew MSS., in his First Dis- sertation on the state of the printed Hebrew text. Of his progress, and the circumstances that at- ended it, we have a detailed account in the Dis- sertatio Generalis, published with the second vo- lume of his Bible. Having proposed ten years as the time which, he thought, would be necessary for collating the Hebrew and Samaritan MSS., he was enabled by his singular assiduity to fulfil his own expectations and those of the public. Pa- tronised by his Majesty and a great number of liberal friends to the undertaking, both at home and in foreign countries, in the list of whom are no fewer than seven crowned heads, several princes, cardinals, archbishops and bishops, be- sides universities, public libraries, and many of the most eminent literati in various parts of Europe ; and amongst whom a subscription of Ā£10,000 was raised ; Dr. Kennicott instituted va- rious and extensive enquiries after MSS. at Con- stantinople, Warsaw, Venice, Bologna, Mantua, Pavia, Genoa, Lisbon, Geneva, Utrecht, Erfurt, Berlin, Stockholm, and Hamburgh. The nu- merous Hebrew MSS. of the latter place were collated by the celebrated Reimarus, who not only concurred in but applauded the under- taking. In the prosecution of this work, it was discovered, that the printed editions of the He- brew Bible, which had been supposed to agree, and on the agreement of which the notion of the integrity of that text had been founded, very much differed from one another ; and particu- larly, that the oldest editions agreed most with the oldest and best MSS., and the modern editions, with the latest and worst. As one proof of this, it is alleged, that the variations in the first edition (in 1488) from Van der Hooght (in 1705) amount to 12,000. In the year 1767 Dr. Kennicott derived great advantage from his own examination of the Paris MSS., both Hebrew and Samaritan, and from the la- bors of Dr. Gill, a celebrated Baptist minister, who collated for him all the passages quoted in the Talmud. An Hebrew MS-, which once belonged to a synagogue at Jerusalem, was at this time purchased by his Britannic Majesty ; and our author himself, hoping to obtain other treasures from the East, sent to Canton, and had nearly succeeded in procuring a MS. from the Jews at Cai-fong-fu, in the province of VOL. TV.

Honan. But though he failed in China, he suc- ceeded in America, and procured a complete Hebrew MS. from a Jew at New York. During the tenth and last year of this collation, eight Danish MSS. were sent to Oxford for the au- thor’s own examination, as were also six others from Toledo, by Dr. Bayer. Collations of other MSS. were furnished, at

the same time, fro n Silesia, Cologne, Strasburg, Konigsburg, Upsul, Leyden, and Ireland. The indefatigable author, having thus collected materials for his noble un- dertaking, no less honorable to his country than to himself', proceeded to digest the variations, with which he was furnished, under their severa. books, chapters, and verses. During this opera- tion, he formed a plan for a more complete scrutiny of the best MSS. through Europe, by send- ing some well qualified person to re-examine the MSS. already collated, and to examine the rest in passages of greater moment, and where suc- cess seemed at all probable. Mr. (afterwards Dr.) Bruns, a learned German, was selected for this embassy: and he was honored with letters from the secretaries of state here, to all our foreign ambassadors, as well as from the rulers of the two synagogues in London. The places in which he thus examined MSS. during a tour of three years, were Paris, Louvain, Cologne, Mentz, Worms, Manheim, Nuremburgh, Augsburgh, Stutgard, Carlsruhe, Strasburgh, Basle, Zuric, Berne, Geneva, Turin, Casale, Veruli, Milan, Genoa, Leghorn, Sienna, Rome, Florence, Bo- logna, Cesena, Modena, Reggio, Parma, Man- tua, Padua, Venice, Udina, Goritia, Gradisca, Trieste, Vienna, Dresden, Leipsic, Erfurt, Jena, Dessau, Berlin, Hamburgh, Helmstadt, Cassel, Amsterdam, Utrecht, Leyden, and the Hague. The variations contained in nearly 700 bundles of papers, being at last digested, including the collections made by Dr. Bruns ; and the whole, when put together, being corrected by the ori- ginal collations, and then fairly transcribed into thirty folio volumes, the work was put to press in 1 773 ; and both volumes, with the general disser- tation, were finished in July 1780.

The writer of this paper cannot here forget the admirable peroration of one of Bishop Marsh's lectures at Cambridge, on the subject of the im- mense mass of readings, many of them very in- significant, thus obtained. ' You will be ready,' he observed, ' perhaps, with me to say, How many learned lives and what a vast sum of money has thus been expended in comparatively fruitless labor; for no controversy of importance either between Jews and Christians, or any of the sects into which they are respectively divided, has been affected by them. No : it was worth all their lives and labors to know there was nothing to do!'

Of the different printed editions of ihe Hebrew Bible it is not necessary for us here to speak par- ticularly. Best amongst the best, of course where it can be obtained and duly appreciated, is Dr. Kennicott's work ; to which may be added De Rossi's important supplement, published at Par- ma between the years 1784 and 1799, in five 18mo. volumes. The Psalter, issued about the year 1477, was the first book printed in Hebrew. It had the complete commentary of

Kaboi Kim- chi annexed. The Pentateuch was printed al

Bologna in 1482 ; and' the Greater and Lesser Prophets followed in 1484 and 1486 : the Hagio- grapha was first printed at Naples in 1487, and a copy of this edition is in the library of Eton College. At length the whole Hebrew Bible appeared complete from the Socini press in 1488. In 1494 was published that edition of the Hebrew Scriptures, at Brescia, from which Luther made his German translation : thus early uniting the invention of printing with the refor- mation of religion. This was also the basis of Bomberg's celebrated edition of the Hebrew Bible, and of the Complutensian, Antwerp, and Paris Polyglott versions. Bomberg's second edition, printed at Venice in 1525-6, is the basis of all our modern Hebrew Bibles. For BIBLES, POLYGLOTT, see the close of this article.

SECT. II. ā OF THE FORMATION OF THE CHRIS- TIAN OR NEW TESTAMENT CANON.

Jesus Christ and his apostles adverted con- stantly to the Scriptures .of the Old Testament as testifying of him ; it is also remarkable that they quote sometimes the Septuagint, if not other ver- sions of the ancient Scriptures. Thus they, in fact, adopt the Jewish canon, and set the seal of a direct divine approval upon it at the close of a far greater period of time from its commence- ment than has elapsed since that important and unequivocal sanction was given. But Chris- tianity in primitive times was not a national religion, and was long before it even received public toleration ; tins will, in part, perhaps, account for the comparatively late date at which we find any public body or council who furnish us with the accredited canon of early Christians. Le Clerc observes upon this (H. E. ann. 100. mim. iii. iv. et ann. 29. num. xcii.), * We no where read of a council of the apostles, or of any assembly of the governors of Christian churches, convene;! to determine by their authority, that such a number of gospels, neither more nor fewer, should be received. Nor was there any need of it, since it is well known to all, from the concurring testimony of contemporaries, that these four gospels are the genuine writings of those whose names they bear, and since it is also manifest that there is in them nothing unworthy of those to whom they are ascribed, nor any thing at all contrary to the revelation of the Old Testament, nor to

right reason. There was no need of a synod of grammarians to declare ma- gisterially what are the works of Cicero or Virgil. In like manner, the authority of the gospels has been established by general and perpetual con- sent, without any decree of the governors of the church. We may say the same of the apostoli- cal epistles, which owe all their authority, not to the decisions of any ecclesiastical assembly, but to the concurring testimony of all Christians, and the things themselves which are contained therein.' From the decree of the council of Laodicea, held A. D. 363, it appears that there were writings at that time already known by the title of canonical. In its last canon that council declares ' that private psalms ought not to be read in the church, nor any books not canonical, but only the canonical books of the Old and New Testament;' after which follows a catalogue or

enumeration of such books, in which are omitted all the apocryphal books of the Old Testament, and the Revelation in the New. The forty seventh canon of the council of Carthage, assem- bled A. D. 397, ordains, ' that nothing beside the canonical Scriptures be read in the church. The council's canon of the New Testament is the same as that now received. From the manner in which the epistle to the Hebrews is mentioned, there is reason to suspect, that it was not so generally received as the other thirteen epistle? of St. Paul was. The ' Revolution' seems rathe; omitted from the Laodicean, than as an inspired book.

If we now advert, therefore, to the authentic writings of ancient authors, we shall find, that they had the same canon of the New Testament with that which is generally received to this day. Accordingly, the catalogue of canonical books furnished by Origen about A. D. 230 ; Eusebius, A. D. 315; Athanasius, A. D. 326; Cyril, A. D. 348 (the book of Revelation excepted); Epi- phanius, A. D. 368 ; Basil and Gregory Nazian- zen, and Amphilochius, A. D. 370 ; Gregory Nyssen, A. D. 371 ; Jerome, A. D. 392 ; Augus- tine, A. D. 395 ; Rufinus, A. D. 397 ; Innocent 1 bishop of Rome, A. D. 402 ; Isidore of Pelusium, and Cyril of Alexandria, A. D. 412; Cassian, A. D. 424 ; Prosper of Aquitain, and Eusebius bishop of Lyons, and Sedulius, A. D. 434 ; Leo, bishop of Rome, and Salvian presbyter of Mar- seilles, A. D. 440; Dionysius, falsely called the Areopagite, A. D. 490 ; Gelasius, bishop of Rome A. D. 494 ; Andrew, bishop of Caesarea, A. D. 500 ; Facundus, an African bishop, and Arethas, A. D. 540 ; Cassiodorius, A. D. 556 ; Photius, patriarch of Constantinople, A. D. 858 ; Oecumenius, A. D. 950; Theophylact, A. D. 1070 (the Revelation excepted) ; and Nicepho- rus Callisti, A. D. 1325; agrees with that which is now received among both Catholics and Pro- testants, as well as in the

Greek church.

It is worthy of notice here, that as Protestants we have thus the sanction of the entire Jewish church for our received canon of the Old Testa- ment, and the rejection of the Apocrypha ā and that of the Catholic as well as Greek church for all we hold to be the Christian Scriptures. A late futile attempt to bring forward an Apocry- phal New Testament, is no further worth notice here than as giving us an occasion to refer to Mr. Home's excellent examination of that per- formance, in his Introduction to the Critical Study of the Holy Scriptures, vol. ii. p. 687.

Very anciently, the New Testament consisted of two codes or collections, called gospels and epistles, or Evangelion and Apostolion. Tertul- lian distinguishes the gospels by the names of the writers, and calls them, our Digesta or digests, in allusion, as it seems, to some collec- tion of the Roman laws digested into order. As to the order of the several gospels, it appears that, in Tertulliari's time, they were disposed in the African churches according to the quality of the writers ; those two occurring first which were written by apostles, and then the other two written by apostolical men. In some of the most ancient MSS. now extant, the orderof the several evangelists is Matthew, John, Luke,

Mark. The order of the four gospels has been generally Matthew, Mark, Luke, John ; then follow the Acts, St. Paul's Epistles, the Catholic epistles, and the Revelation. All the hooks of the New Testament were written in Greek, ex- cept the gospel of St. Matthew, who, according to St. Jerome, first wrote in Judea in the Hebrew anguage.

The MSS. of the New Testament still extant exceed in number those of any single classic whatever: more than 380 were collected by Griesbach alone. They have been dispersed over all parts of the globe ; and several of them are upwards of 1200 years old. It is true that many of them are not entire ; the most, in num- ber, containing the Gospels; some the Gospel and Acts of the Apostles only ; others the Gospel, Acts, and Epistles ; and but a few the Revelation of St. John. Thirty thousand various readings were found in those collected by Dr. Mill, and 150,000 are said to be contained in the researches of Griesbach. Yet the most correct and accu- rate of the ancient classics

are more depraved, mutilated and inaccurate. Not a hundredth part of these various readings makes any perceptible variation in the meaning of the sacred writers; evident verbal errors constitute by far the major part of them ; substitutions of one word for another ; or an immaterial transposition of words in a sentence. The most inferior of these manu- scripts in the judgment of critics, does not per- vert or resign a single article of the faith of Christians, or omit or alter one moral precept. The variations may indeed prove that God has not been pleased, by a standing miracle, to pre- vent those accidents affecting the sacred books which are never supposed to affect the credit or utility of other writings; but the general sense of the inspired penmen has been made more evident and unequivocal by these researches, and the flaws and imperfections thus discovered on the surface of the foundation stones, serve only to de- monstrate the antiquity of our faith. The most important single MS. copies of the New Testa- ment are, 1. The Codex Alexandrinus, see ALEXANDRINVS, where a specimen is furnished.

2. The Codex Vaticanus (these two contain also the Septuagint version of the Old Testament).

3. The Codex Cottonianus. 4. The Codex Beza;. 5. The Codex Ephremi. 6. The Codex Claramontanus. 7. The Codex Argenteus. 8. The Codex Rescriptus of St. Matthew's Gospel, in Trinity College, Dublin. 9. The Codex Laudianus. 10. The Codex Boerneianus, &c. Michaelis has given a catalogue of 292, and bishop Marsh, his annotator, has added 197, to which they respectively refer ; and to these celebrated works, ā Wetstein's Proleg. N. T., bishop Marsh's Michaelis, and Mr. Home's Intro- duction, already adverted to, we must refer the reader for further information on this topic.

The principal sjandard-text editions of the Greek New Testament are those of Erasmus, who gave the world the first printed edition of the entire New Testament in 1516 ; the Com pluteusian, forming the fifth volume of the Com- plutensian Polyglot.!, published in 1522 ; that of Robert Stephens, first published in 1546 ; and the Elzevir Greek Testament, published in 1624. The text in common use has been copied, with a

few exceptions, fronn that of Beza, who closely followed R. Stephens. Griesbach is the Ken- nicott of New Testament criticism ; and the student who can possess himself of his and Wetstein's labors, is well furnished in this department of sacred literature ; the best editions are Wetstein, 2 volsi folio, 1751 ; Griesbach, 2 vols. 8vo., 1796. Bishop Marsh says of the former ' He alone contributed more to advance the criticism of the Greek Testament than all who had gone before him :

and this task he performed not only without support, either public or pri- vate, but during a series of severe trials, under which a mind of less energy would infallibly have sunk. In short, he gave a new turn to the cri- ticism of the Greek Testament, and laid the foundation on which later editions have built.'

SECT. III. ā OF THE PRINCIPAL VERSIONS OF THE BIBLE, ANCIENT AND MODERN.

Our observations, and the facts we have re- corded thus far, principally relate to the original languages of the Bible. Long prior to the destruction of the Jewish polity, a most impor- tant version of the Old Testament in Greek, was executed among that ancient people of God. This is called the Septuagint, either because it was executed, as has been stated, by six approved scribes from each of the twelve tribes, at the re- quest, as we are told, of Ptolemy Philadelphus; or because it was sanctioned by the Sanhedrim or Great Council of the Jews, who were seventy in number. Dr. Hody, ' De Bibliorum Textibus Originafibus,' &c., who seems accurately to have studied its origin, states that this version was made by the Jews Jiving at Alexandria, for the use of themselves and many thousands of their brethren, who were then settled in Egypt, and who, living among the Greeks, generally used the Greek language : that the whole was not trans- lated at once ; but the Pentateuch, about 285 years before Christ; and that when Antiochus Epi- phanes forbad them to recite any part of the law, the Jews translated into Greek Isaiah, the follow- ing prophets, &c., for the use of the temple at Heliopolis and the Alexandrian synagogues. It is clear, from the number of Coptic words in this version, and several peculiar modes of expression, that this was a work under- taken either in Egypt, or by Jews much con- nected with that country; and the most proba- ble opinion is, that the Pentateuch was exe- cuted in the joint reigns of Ptolemy Lagus, and his son Philadelphus; Joshua, not less than twenty years after the death of the latter ; and the other books at subsequent unknown periods. We have alluded to those quotations of this ver- sion in the New Testament which fully prove it to have been well accredited among the Jews incur Saviour's time. Of the Septuagint version, the Alexandrian and Vatican codices are the most ancient transcripts; and there are four principal printed editions, from, one or more of which all subsequent editions have been copied, viz. the Complutensian, the Aldine, the Vatican, and the Oxford, or Dr. Grabe's edition. Various other ancient versions are of considerable importance to the criticism and interpretation of Scripture. The Greek version of the Old Testament by Aquila, a Jew of the second century ; another by

fheodotion, contemporary with Aquila ; and a third by Symmachus, in the early part of the third century of the Christian era, may here be noticed. Origen mentions three others, whose ages and authors are unknown.

A Syriac version of the Hebrew Bible was made as early as the close of the first century, and is called the Peschito, or Literal version, from its close adherence to the original. It is of great value to the biblical critic ; and was printed both in tHe Paris and I Condon polyglotts.

A Coptic version was made from the Septua- gint, probably in the second or third, and cer- tainly before the seventh century. Of this ver- sion only the Pentateuch and book of Psalms are printed. A Sahidic version of the Old Tes- tament, i. e. into the language of Upper Egypt, made at this time, does not appear to have been published.

An Ethiopic or Abyssinian version was made from the Septuagint, it is supposed, about the second or third century. Only a few books and fragments of which remain.

The Armenian version was executed towards the close of the fourth, or early in the fifth cen- tury : the Sclavonic, or old Russian, in the ninth century. The former was first printed in 1666, and the latter in 1519 and 1570.

A Gothic version was executed about the mid- dle of the fourth century by Ulphilas, a bishop of the Mseso-Goths. Signer Mai has recently discovered in the Ambrosian library at Milan, some fragments of the books of Rings in this version, which had been lost.

An Arabic version of the Old Testament ap- peared about the tenth century ; having for its translator R. Fuadia Gaon ; but the Pentateuch and Isaiah are all that remain of it. Other Arabic translations are extant, but of little anti- quity or authority.

Several early Persian versions of the Septua- gint seem to have been made, but most of them remain in MS. The translation of the Pentateuch, printed in the London Polyglott, was executed by a Jew in the eleventh or twelfth century

The Italic was an ancient Latin version of the Septuagint, in common use in St. Jerome's time; a revision of it was undertaken by him, and gra- dually introduced throughout theWestern church, until at length Pope Gregory the Great gave it the sanction of the popedom. It is this revision of the Italic version that now forms the well- known Vulgate, and which the council of Trent has declared to be authentic, and commanded to be used in all sermons, expositions, &c. It alone, therefore, is used in the Romish church ; but some passages of the ancient Vulgate are left in the Missal, and the Psalms. The two principal edi- tions of the Vulgate are those of popes Sixtus V. and Clement VIII. The former was printed in 1590, after the most ancient MSS. and best printed copies had been collated, as it was said, and the most learned men assembled out of all the nations of the Christian world : the pope himself presiding over the whole, and correcting the proof sheets. This edition was then published with a tremendous excommunication of every person, who should presume ever afterwards to alter the least pnrtiole of it.

The othorˆ edition was published in 1592. by Clement VIII; but so different from that of Sixtus, as to contain two thousand variations, some of whole verses, and many others clearly contradictory in the sense ; yet this edition is also pronounced authentic, and enforced by the same sentence of excommunication with the former.

Modern versions are so multiplied, and are in- creasing so rapidly in various quarters, that we can only attempt to present the reader with a list of the principal ones: ā

I.āIN THE LANGUAGES OF MODERN EUROPE.

The New Tes-

tament was

The Old

In the Language or

firet printed

Testament in

Dialect.

in

1478

Spanish (Valencian.)

1522

1536

German (Luther’s.)

1526

1534

English (Tindal’s)

.

1535

French.

1534

1541

Swedish.

1524

1550

Danish.

...

1560

Dutch.

. .

1562

Italian.

1556

1569

Spanish.

1519

1581

Russian.

1525

1529 ā¢}

Helvetian.

. .

1553 1

Lower Saxon.

1548

1642

Finnish.

1553

- – – I

Croatian

1571

r

Basque.

1567

1588

Welsh.

1574

1589

Hungarian.

.

1584 J

Wendish.

.

1584

Icelandic.

.

1588

Pomeranian.

1585

1596

Polish.

1593

Bohemian.

1638

Modern (Greek

1648

ā¢ ‘ ‘ ?

Wallachian.

1657 J

Romanese

1660

Lithuanian.

1666

- ,

Turkish.

1602

1685

Irish.

1685

1689 -N

Livonian.

1685

1689 /

Esthonian.

1686

. ‘

Esthonian.

1727

1719 3

Dorpatian. Grisons.

1706

1728

Upper Lusatian.

1755

Lapponic.

< 1748- > t 63-67 5

1772

Manks.

1767

1802

Gaelic.

C 1712 t 1781

1748-53 1783

Portuguese,

1769

1776

Italian.

1793-4

Spanish.

1820

...

Maltese.

1820

Samogitian.

1821

Judaeo-Polish.

1821

ā¢ ā¢ ˆ

Modern Russ.

1820

ā¢ ‘ ‘ f

Karelian dialect, (St,

\

Matt.)

1821

. . . I

Mordwassian (4~Gos.)

1821

. . .J

Tcheremissian, do.

BIBLE.

101

11.ā IN THOSE OF MODERN AFRICA AND

The New

I

AMERICA.

Testament

The Old ā¢ In the Language or

was first

Testament in

Dialect.

The New

Testament

The Old

In the Language or

printed in

was first

Testament in

Dialect.

f

Gen. Ex. ˆ

printed in

AFRICAN.

1771-80 > 1820 |

and Lev. >

1771-833

Cingalaz ..

Matt. >

1816 5

Bullom.

1668 1809-14

1731-33

1815-2′ -J

Malay.

1822

Amharic dialect.

1811- (

1815-20 i

Chinese.

AMERICAN INDIAN.

13-16 $

1661

3 Ep. John

1818

1663

Virginian. Delaware.

Matt. & } John y

1661 3

Formosan.

John

Psalms ?

Indian Massacnusett.

1813

j ^JjJ? !

Tartar.

1709

1709 j

Matt.

1820

Orenburgh-Tartar.

Mark and

J

1815-20

Calmuc-Tartar.

J ohn

\j

Mohawk.

Matt, and

j

1781

i ‘

•

Luke

i ‘ ‘

Mongolian-Tartai

1804

1815

3

1809- >

13-19 5 1799

Esquimaux. Greenlandish.

Matt. Luke and John

1818-21

? 1743

Georgian. Otaheitean,orTahitan

WEST INDIAN.

1781

. .

Creolese.

The above have, of course, been in main

III. ā IN THE LANGUAGES OF MODERN

The New

Testament

The Old Irj the Language or

was first

‘estament in Dialect.

printed in

1816

. . . ‘ā¢ Arabic.

1815

. . . Persian.

1818

rGen. &} < Lev. > Pushtoo. C 1822 3

4 Gosp. 3

1816 5

. . . ! Bulocha.

1808

1811-18 Sanscrit.

1811

| ˆA i Sikh, or Punjabee.

1819

. . . Assamese.

1819

. . . Kashmiree.

1819

. . . Wutrh, or Multanee.

1820

Guzerattet.

1819

Bikaneer.

1818

Kunkuna.

1822

B ,

Maruwar.

1822

Oojuvinee.

1822

Bundelkundee.

1822

.

Nepaulese.

1807)

Pent. and-. Historical 1 Books, i

1812-15 3

Mahratta.

1812 $

Ditto, j

1806-12 5

Hindee.

‘ ‘I

Psalms 3

1747 5

Hindoostanhee.

1808-14 i

1801 5

1801-5 3

Bengalee.

1807

1809-14 5

Orissa.

1820

. . . Canarese.

1715

1723-28

Tamul.

Mark (

1812 (

Telmga, or Teloogoo

instances made by missionaries, and, of the Asiatic Translations, the major part by the Baptist mis- sionaries at Serampore. See BAPTIST MISSION.

BIBLES, POLYGLOTT. ā Polyglott Bibles con- tain the sacred text and versions of the Scrip- tures in various languages. In 1501 Aldus Manutius the elder, a celebrated printer, first projected an undertaking of this kind, in col- lateral columns of Hebrew, Greek, and Latin ; only one sheet however was printed. In 1516 ippeared at Genoa the Pentaglott Psalter of Agostino Justiniani, bishop of Nebo : it was in Hebrew, Arabic, Chaldee, Greek, and Latin, accompanied with g'.os.ses and scholia. In 1518 John Potken published at Cologne the Psalter in Hebrew, Greek, Latin, and Ethiopic.

The Comptufensian Poli/glott, so called from the Latin name of Alcala in Spain, where it was printed, was the first polyglott edition of the whole Bible. This celebrated work was begun in 1502, and though completed in fifteen years, costing cardinal Ximenes (see ALCALA) the sum of 50,000 ducats, it was not published until 1522. It is complete in six folio volumes. The first four contain the Old Testament in Hebrew, Greek, and Latin, with the Chaldee paraphrase at the bottom of each page : the fifth is occupied with the New Testament in Greek and Latin ; and the sixth with critical apparatus.

The Antwerp, sometimes called the Spanish and Royal Polyglott, was published in 1572 by Christopher Plantin of Antwerp, under the patronage of Philip II. of Spain. The Old Tes- tament is printed in Hebrew, Greek, Iˆalm, and Chaldee ; and contains, beside the Complutensian versions, a Chaldee paraphrase left by cardinal Ximenes, in the public library at Alcala. The whole work forms eight vols. folio ; and has a Syrian version of the New Testament, together with the Latin version of S. Pagninus, revised by Arius Montanus, the presiding editor. The first five contain the Old and New Testaments, and the three last are filled with lexicons, grammars.

&c. Only 500 copies were printed ; the greater part of which being lost

in a voyage to Spain, complete sets are very- rare.

The Paris Polyglott of 1645, printed by An toine Vitre, is in ten folio volumes, and is a magnifi- cent work. It was executed at a ruinous expense by a M. Le Jay, and contains all that is inserted in the Complutensian and Antwerp Polyglotts, with the addition of the Samaritan Pentateuch and its version. It has no critical apparatus.

The London Polyglott of bishop Walton was published in 1657 in six folio volumes. The first volume contains a very extensive critical apparatus (the Prolegomena itself, written by Bishop Walton, being a treasure of sacred criti- cism), and also the Pentateuch. The second and third volumes comprise the remaining books of the Old Testament ; the fourth the Apocrypha, and a threefold Targum on the Pentateuch, viz. two in Chaldee, and one in Persic. The fifth the New Testament. The sixth contains various readings, and critical elucidations of the whole. The Pentateuch of this most noble work is in Hebrew, Greek, Syriac, with the Chaldee paraphrase, Hebrseo-Samaritan, Samari- tan, and Arabic, accompanied with the Latin Vulgate, and six other Latin versions of the various oriental ones. The Samaritan Pentateuch is the only part of the Old Testament in that language. The other volumes of the Old Testa- ment are nearly similar, only that there is an Ethiopic version of the Psalms. The New Testament exhibits the Greek, Syriac, Persic, Vul- gate, Arabic and Ethiopic versions, at least as far as the end of the Gospels, for here the Persic closes, and separate Latin versions accompany all the oriental ones. This work is not considered complete without the Lexicon Heptaglotton, published by Dr. Edmund Castell at London, in 1669, in two volumes folio. It contains a joint lexicon of the Hebrew, Chaldee, Syriac, Samari- tan, Ethiopic, and Arabic languages, together with a separate lexicon of the Persic, and brief grammars of the several tongues.

The Leipsic Polyglott of 1750 is in three vols. folio, edited by C. Reineccius. The Old Testa- ment is in Greek, Latin, and German : the New, in ancient and modern Greek, Syriac, and German.

Our account of these important works must

not close without noticing the spirited attempt of a respectable bookseller of this metropolis to add a second London Polyglott to the fore- going list. In 1816 Mr. S. Bagster commenced his 4to. and 8vo. Polyglott, comprising the He- brew text of the Old Testament, from Van der Hooght's edition, the Samaritan Pentateuch from Dr. Kennicott's edition of the Hebrew Scriptures, the Septuagint Greek

version of the Old Testa- ment from Bos's edition of the Roman or Vati- can text, the Latin Vulgate, and the authorised English version. The New Testament is given in Greek from Dr. Mill's edition, with the whole of the important various readings from Dr. Qriesbach's edition, printed at Leipsic in 1805; and is accompanied by the Peschito, or old Syriac version, the Latin Vulgate, and the authorised English version. The Apocalypse, and such of the Epistles as are not found in the old Syriac, are given from the Philoxenian or new Syriac version. The text of the Latin Vul- gate version is taken from the edition of Pope Clement VII. The authorised English version is accompanied with the marginal renderings, references, &c. The Hebrew of the 4to. copies is pointed ; the 8vo. copies may be procured both with and without points. Price of the 4to. copies Ā£5. 5s.

After a most calamitous fire which happened in 1822, destroying an entire impression of a Polyglott Bible in the modern languages, Mr. Bagster was induced to project a small folio Polyglott Bible to be completed in one volume, which he says will comprise the original Hebrew text, and the Greek Septuagint version of the Old Testament ; the original Greek Text, and the venerable Peschito or old Syriac version of the New Testament, the Samaritan Pentateuch, the Vulgate Latin, the authorised English version, Luther's German version, Ostervald's French ver- sion, Diodati's Italian version, and P. Scio's Spanish version. The types from which this Polyglott is printed are entirely new, and together with the paper of singular beauty. Mr. B. has lately added the modern languages to his 8vo. Polyglott; which, complete, is sold at Ā£7. 3s.

For a more particular account of the several translations of the Bible into the languages of the British isles, see ENGLISH, IRISH, and WELSH BIBLES.

BIBLE SOCIETIES.

BIBLE SOCIETIES. ā The most striking charac- teristics of the times in which we live, are the voluntary religious associations to which they have given birth. Among these it will be readily admitted that Bible Societies are the first in magnitude and importance. How they arose ? what has been their progress ? and what will be their probable results ? are questions which the patriot, the philanthropist, and the Christian, must frequently revolve. Indeed they have been discussed by men of all parties in politics and religion ; and every variety of talent has been brought to their elucidation. In tracing their origin, the philosophical enquirer cannot fail to

be struck with the felicitous combination of matured protestantism, .and the unrestrained en- joyment of religious freedom, to which these institutions are mainly indebted fortheir existence. When the schism was first made, which broke the unity of the Catholic Church, and dissolved the charm of its infallibility, it was predicted that endless divisions among the reformed would be the disastrous consequence ā and that thus the new religion would be exterminated by its own violence ; or that the refractory sovereigns and kingdoms, which had thrown off their allegiance to the holy pontiff, would be driven, of necessity, to take refuge once more in his paternal bosom.

And, it must be confessed, that the religious dis- tractions and civil commotions which marked the early progress of the Reformation, and which, like heterogeneous elements, frequently threatened an explosion fatal to the existence of society, contributed not a little to encourage a belief that the prediction would be realised. It was the interest of the Papal See to extend and to strengthen this conviction ; while protestant rulers, in church and state, unwittingly lent themselves to support this political manoeuvre of their arch adversary. Hence division, discord, and anarchy, became the hereditary reproach of Protestants ā while it was bruited throughout the earth that the internal peace which universally prevailed, where the pope's authority was ac- knowledged, arose from that unity of faith which, in all Catholic states, was the bond of perfect- ness. It was reserved for later generations to discover that this loudly-boasted tranquillity was but the crouching of ignorant and besotted slaves at the feet of civil and ecclesiastical despotism ; and that the convulsions which so long and so fearfully distracted the repose of protestant Europe, were the natural consequences of a mighty struggle between light and darkness ā between freedom and tyranny. The ecclesiasti- cal Revolution, so suddenly effected by Luther, was the first dawn of liberty to Europe. It was, however, but a spark, feeble and vacillating, and sometimes on the point of extinction. It was long before it shone forth with a lustre, which bespoke the divinity of its origin, and the mdestructibleness of its nature. The daemons and the darkness united to smother it in its birth, and retired with that reluctance with which con- querors, in a thousand battles, at last yield up victory and life together. It was not till the principles of protestantism began to be well understood by the Protestants of England, and till they had worked out a good degree of civil liberty for their country, that its blessings could be very largely distributed, or extensively en- joyed. Its first introduction among us

was very inauspicious. ā¢ It came merely as the engine of state policy, and was forced into an unnatural alliance with the lust and wilfulness of the most detestable tyrant that ever outraged the decen- cies of life, and insulted the patience of man- kind. ‘ The defender of the faith,’ not contented with the nattering distinction of being a royal and favored son of the church, resolved to usurp the authority of its infallible head, and to sub- ordinate to himself a hierarchy of his own, sur- rounded with the mists and darkness of popery. The nation was at the first scarcely conscious of any change ā they retained almost every thing of popery but the name ā the monarch was as ab- solute as the pope, but not quite so crafty. The twilight of knowledge awakened the thrill of gladness-m the hearts of a distinguished few who had been waiting for the morning, and who thought they saw, notwithstanding the gloom which yet ˆprevailed, the indication of its ap- proach. Still, protestantism had but an incipient existence. It was during the next reign that it seemed to emerge into conscious being ; and then it was that freedom to think and judge in matters of re!i.:iou, produced extravagancies and diver-

sities of opinion ā for this, Protestants as they were, the ecclesiastical rulers were not prepared ; and they fell upon the expedient, so constantly resorted to by the church which they had re- cently abandoned, namely, to extinguish heresy by the massacre of heretics. There was no civil freedom then to throw its aegis over the virtuous beings who had violated no law, and who, there- fore, deserved no punishment : and they were committed to the flames. Popery returned with vengeance, and executed with fiendish satisfac- tion the lex talionis on the protestant murderers. For more than half a century, the protestant faith triumphed ; but it was confined within the limits of the hierarchy, and under the absolute control of the sovereign It had no toleration, and therefore could exercise no charity. The clergy condemned, and the queen executed, all who dared to question the infallibility of either. In the subsequent reigns of James and the first Charles, the spirit of protestantism began to work. The translation and circulation of the Scriptures induced multitudes to read them ; and the natural consequence was a diversity of opi- nions, and at length a variety of sects. Unhap- pily, the notion of an exclusive church, and of absolute uniformity in matters of faith, which some of the early reformers imported from Rome, was the reigning dogma of them all ; and hence the idea of mutual extermination commended it- self to each of them as a sacred duty. Of course, the party that could wield the sword of power, and second its anathemas with the vengeance of the state, had the greatest facilities for the per- formance of their duty, and enjoyed, in the highest degree, the pious luxury of persecuting,

even unto death, their unoffending fellow-sub- jects. It was not possible that such a state, of things could long continue. Either ecclesiastical despotism must triumph in the annihilation of every sect but its own, or civil freedom must result from the struggles of the contending par- ties. The balance was long held in doubtful vacillation ; but the religious spirit proved at last too mighty for the policy and the power that aimed to destroy it. The conflicts which mutual persecution provoked and inflamed, ended, hap- pily for the protestant cause in Europe, in laying the foundation of a civil constitution, which, in its progress to perfection, will not fail to secure equal rights to all good subjects, whatever be their religious creed or ecclesiastical discipline. The throne, while the ‘ baby Charles’ (the en- dearing terms in which the Royal Solomon used to speak of the heir apparent ā the martyr of blessed memory) sat upon it, was placed as a barriei against the tide of religious freedom, then mightily setting in, and which would have moved on in its majestic course, a confluence of undis- turbed and tributary streams, enriching and beautifying all around it, but for this unnatural and most impolitic obstruction. What was the consequence i pent up and confined, it became an impetuous and boiling torrent, bearing away, with irresistible fury, the monarch, and every, vestige of his proud regalia. The Protectorate was a season of light, and to whatever desperate expedients the head of the commonwealth was impelled, by the necessity of circumstanceˆ the

principles of general freedom were industriously which led to its formation, may be traced to the sown. Like the dragon’s teeth of Cadmus, they moral wants of the people, created by that system

came up armed men, at the period of the glorious Revolution, and drove into merited exile the

of universal instruction, which had, for severa. years, been in active operation. To which wa

last of the Stuarts. Then it was that the rights of may likewise add the zealous efforts of the clergy,

conscience were expressly recognised by the law both in and out of the establishment, to diffuse

of the land ; and freedom of worship was granted throughout the land the spirit and the principles

to all, without exception, on condition, how- of religion. A reading

population, and a po-

ever, that the seceders from the dominant church pulation awakened to a powerful conviction of

should submit to certain civil privations and the truth and value of the Holy Scriptures, must,

disabilities. This change, though not iu all re- of necessity, produce an unusual demand for

spects what a liberal and just policy ought to the sacred volume ; and, at least, multitudes

have devised, and though it left something of would be thus prepared to give it a prompt and

the wormwood and the gall of a persecuting cordial welcome. At this period, too, the spirit

spirit to embitter religious differences, was yet of active and inquisitive benevolence was abroad

fraught with the happiest consequences; which, ā the moral wants of the British empire were

during the lapse of nearly two centuries, have not contemplated with a partial or an exclusive

been accumulating the richest benefits upon the eye : but commercial energy and missionary zeal

nation. Proscriptions, fines, and imprison- had laid bare the forlorn and wretched condition

ments, have given place to controversy, rivalry, of the greatest part of Christendom, and of the

and charity. The bigots of all parties content whole pagan world ; while facilities of communi-

themselves with exuding harmless venom : the cation were opened by these means with every

state has extracted their teeth, and they cannot quarter of the globe. All these circumstances

lute. Too many of the clergy of different churches will account for the rapid growth of the Bible

are still ‘ good haters ;’ but they can now only Society, and for the grand principle on which it

imprecate the vengeance they were formerly ac- is founded, and on which its usefulness, its per-

customed to inflict : and it is the prayer of the manency, and prosperity depend. The object,

righteous only that availeth much. The haughty namely, the circulation of the Scriptures, was

arid exclusive assumption of the church is con- pressed upon the attention of the original foun-

sistently abandoned by Protestants, and is claimed ders of the institution by an occurrence of a very

only by the mother of harlots. The Church of trivial nature ; then the magnitude of that object,

England, in her article on this subject, speaks the language of every Christian community.

as embracing the whole habitable world, im- pressed them with the conviction that it coujd

She claims indeed pre-eminence, and this is not be achieved on ordinary principles, nor by

cheerfully conceded to her learning, her wealth, ordinary means. The principles and the means

and her numbers ; but the churches of dissent required they found in the Catholicism which

have also ‘ a local habitation, and a name.’ The prevailed among British Protestants ; and in the

spirit of emulation which has long prevailed divine inspiration and sufficiency of the Scrip-

among both the established and the protected churches, is of the right kind, and has, amonˆ them all, promoted, in a very eminent degree the

interests of true religion. Every extension of toleration, every step in advance towards per- fect freedom, has allayed the animosities of party . and in proportion as Christians of various de- nominations have been brought upon equal terms into civil contact with each other, mutual

tures themselves, on which that Catholicism might erect its noble superstructure of spiritual bene- volence.

At the time the project of this great society was contemplated, the sources in existence, from which a distribution of the Scriptures might be expected, were few, and certainly, from their con- stitution, inadequate to supply the biblical ne- cessities of the world. The principal societies

good will, brotherhood, and charity, have been which made the dispersion of the Scriptures a

the happy consequences. The most perfect state collateral or an exclusive object, are the follow-

of society is where the right of private judgment, ing. The figures subjoined denote the year iu

in matters of religion, is equally claimed and -which each was founded : ā

conceded through all the extent of its probable The Society for Promoting Christian

and practical results ; and where the civil go- Knowledge . . 1698

vernment extends equal protection to all v.ho The Society for the Propagation of the Gos-

exercise that right, whether they conform to the pel iu Foreign parts 1701

creed of their rulers or dissent from it. To this The Society in Scotland for Propagating

state public opinion at least was rapidly approx- Christian Knowledge . . .1 709

imating at the period when the British and Fo- The Society for Promoting Religious

reign Bible Society began its splendid and mar- Knowledge among the Poor . . 1750

vellous career; nor could it have obtained The Bible (now the Naval and Military

existence among us tinder different circumstances. Bible) Society 1780

If there had been less of liberal feeling and sen- The Society for the Support and Encou-

timent in the British churches, or less of toler- ragement of Sunday Schools . . 1785

ance in the government, or less of freedom in The French Bible Society . . . 1792

the spirit of our laws, the plan of such an institu- For an account of the principal operations of

tion could never have been conceived; or, if these associations, see CHRISTIAN KNOWLEDGE,

conceived, it must have appeared altogether ab- SOCIETY FOR PROMOTING, ā GOSPEL, SOCIETY FOR

surd and impracticable. PROMOTING THE, ā NAVAL AND MILITARY DIBLF

But the more proximate and immediate causes SOCIETY, &c. &c.

BIBLE SOCIETIES.

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That these institutions existed, was an evidence to every reflecting mind, that something similar, but of far greater magnitude, would soon be re- quired ; and that the Holy Scriptures, flowing in these comparatively narrow and confined chan- nels, would never satisfy the desires which would thus be excited for their universal diffusion ; and it was, in fact, a serious dearth of this kind in the principality of Wales, which none of the ex- isting Societies could supply, that was the direct cause of originating that which by way of emi- nence we very justly denominate THE BIBLE SocrETY. From the year 1787 to the year 1793, the most affecting and earnest appeals were made in

behalf of the poor of the Principality to obtain for them a supply of Welsh Bibles. The Society for promoting Christian knowledge, the only source whence the necessary supply could be obtained, turned a deaf ear to every complaint and remonstrance ; and negociation, however kept open and on whatever terms maintained, alto- gether failing, was at length abandoned in de- spair. In 1796, however, this venerable So- ciety, impressed with a sense of the necessity for some further exertions, and believing at last the reasonableness of the pleas urged in favor of a new edition of the Scriptures in the Welsh language, passed an order at its board for the printing of 10,000 of the Welsh Bible, Common Prayer, and singing Psalms, with 2000 extra Testaments; and in 1798 this order was executed.

It was long hoped by the friends of humanity and religion, that the facts disclosed by the cor- respondence of the Society for Promoting Chris- tian Knowledge with the clergy and gentry of the Principality, and the certainty of their funds being increased to any amount which the exigency of the case would require, of which they could not entertain a reasonable doubt, would have induced that Society, to make another effort. But the inhabitants of WaTes having looked in vain to this quarter, in the month of December, 1802, the Rev. T. Charles, B. A. of Bala, a mi- nister of the Established Church, a man of zealous piety, and indefatigable exertion, and whose ha- bits and connexions rendered him intimately familiar with the spiritual wants of his country- men, being in London ; proposed a contribu- tion in aid of a plan for printing and dis- tributing the Scriptures among them. On the seventh of that month, the subject having been introduced by Mr. Joseph Tarn, the present as- sistant secretary and accountant of the British and Foreign Bible Society, in a circle of friends who had met to transact a different business, Mr. Charles proposed his suit in behalf of his countrymen : describing the want of Welsh Bi- bles, and the failure of all attempts to obtain them in the usual channel, and urging with im- portunate earnestness, the necessity of resorting in this painful extremity to new and extraordinary means.

This proposition gave rise to a conversation of some length. In the course of which it was sug- gested, that as Wales was not the only part of the kingdom in which such a want as had been de- scribed might be supposed to prevail, it would be desirable to take such steps as might be likely to stir up the public mind to a general disper-

sion of the Scriptures. This suggestion pro ceeded from a dissenting clergyman, the Rev. J. Hughes, one of the Society's present Secretaries, and was warmly encouraged by the rest of the company, who, with the proposer, were mem- bers of the Religious Tract

Society, and who had met to transact the business of that institution. To this casual conversation we are to trace the dawn of those measures, which, expanding with time and progressive discretion, issued at length in the proposal and establishment of the British and Foieign Bible Society.

Mr. Hughes was desired to prepare in writing such an address as might contain, in a more digested form, the substance of his unpremedi- tated observations. In the mean time, the subject was introduced to the notice of various individuals of distinguished reputation for piety and benevolence. Among these was William Wilberforce, Esq. who, at a private interview, conferred with the parties who had solicited his advice ; and furnished such hints as his enlight- ened mind and liberal heart would be likely to suggest. A similar communication was made to Charles Grant, Esq. and attended with a similar result.

The Rev. C. F. A. Steinkopff, minister of of the German Lutheran church in the Savoy, and one of the Society's present secretaries, vo- luntarily tendered his services to promote the design, in the course of a journey which he was about to make to the continent of Europe. His offer was thankfully accepted, and he was accord- ingly requested to enquire particularly into the want of the Scriptures in such places as he should have occasion to visit. Similar enquiries were directed to be promoted in Ireland, and in other parts of the United Kingdom.

In the course of May 1803, Mr. Hughes pre- sented an impression of his Essay. The con- clusion is in a spirit which has from the commencement to the present time so truly characterised the society, and is in itself so com- plete a refutation of all those calumnies heaped upon the motives of its patrons and supporters,, that the most brief notice of the institution would be defective, if it were not introduced to adorn and to hallow the page. ' God puts honor upon mortals by employing their agency in the ful- filment of his promises, and in the promotion of his glory ; and if those of his designs may be considered as indicating an approach to- wards maturity, which most unite and engage his servants ; is it not probable that knowledge and salvation will follow close in the train of those labors, to which, with respectful de- ference, we now call the attention of the Christian world. May we not therefore look forward to a large meeting of our fellow-Chris- tians,whose unanimous and loud voice shall encou- rage us to go on and do all that is in our hearts? But should we in this respect be disappointed, our labor will not be regretted, if it serve in a few instances to draw more attention to the Bible ; if it contribute to the strength of societies already established ; and especially if it promote

the spirit of distribution among those, who, hav- ing long regarded the truth as it is in Jesus, have yet done little toward enriching the world with Us

treasures. Conscious, however, Of having dis- charged a duty, and encouraged to expect some favorable result, we here conclude, leaving our exhortations with the consciences of men, and our prayers in the bosom of God.'

Copies of this Essay were industriously cir- culated, and it cannot be doubted hut that the public mind was thus prepared to entertain the project so clearly stated, and so powerfully sup- ported. It was not, however, till the month of January, 1804, that the measures for carrying it into effect had attained a sufficient degree of ripeness in the estimation of its conductors, to justify the consideration of steps for carrying them into actual execution. A plan which had been sketched in the preceding year now under- went revision, and the title was altered at the suggestion of the late Reverend and benevolent John Townsend (the founder of the Deaf and Dumb Asylum), from * A Society for promoting a more extensive circulation of the Holy Scrip- tures, both at home and abroad,' the form in which it originally stood, to the definite and more comprehensive designation of THE BRITISH AND FOREIGN BIBLE SOCIETY. Things being thus far advanced, it was determined to convene a public meeting : a circular address was accord- ingly drawn up, which unfolded the plan, so far as it was at that time matured, and announced a public meeting to be held at the London Tavern, on Wednesday the 7th of March, 1804. It was subscribed by the following names :

Granville Sharp William Alers Joseph Benwell Henry Boase Robert Cowie Samuel Foyster Joseph Smith Gosse

Richard Lea Alexandei Maitland Samuel Mills Joseph Reyner Herman Schroeder Christopher Sundius George Wolff.

The future secretary and historian of the So- ciety, Mr. Owen, received from Mr. Hughes two copies of the Essay on the Excellence of the Holy Scriptures, one for his own use, and the other he was requested to present to the bishop of London (Porteus), to whom he was chaplain, and to solicit his lordship's patron age to such an institution as that Essay was de- signed to recommend. With part only of this request did

he comply ā he merely presen'ed the pamphlet ; and beyond that, as he candidly ob- serves, * he neither felt himself authorised nor inclined to proceed.' So completely, indeed, had the presumption of its impracticability taken pos- session of his mind, that he is not aware of hav- ing given the plan any further consideration, till the receipt of the circular revived the recollection of it ; and the name of his intimate and valued friend, Granville Sharp, at the head of the sig- natures, determined him to attend the meeting, at which its merits were to be publicly and solemnly discussed.

By the provisional committee Mr. Owen was re- quested to move the series of resolutions which were designed to form the basis of the proposed society. 'He rose,' ne says, 'by an impulse which he had neither the inclination nor the power to disobey. Surrounded by a multi-

tude of Christians, whose doctrinal and ritual differences had for ages kept them asunder, and who had been taught to regard each other with a sort of pious estrangement, or rather of consecrated hostility ; and reflecting on the ob- ject and the end which had brought them so har- moniously together; he felt an impression winch the lapse of more than ten years has scarcely diminished, and which no length of time will en- tirely remove. The scene was new : to him it appeared to indicate the dawn of a new era in Christendom ; and to portend something like the return of those auspicious days, when ' the mul- titude of them that believed were of one heart and of one soul ;' and when as a consequence of that union, to a certain degree at least, ' the word of God mightily grew and prevailed.' After giving utterance to these feelings, in the best way he could, Mr. Owen moved the resolutions which had been consigned to his care, which were unanimously and enthusiastically adopted . The institution was considered as established, and more than Ā£700 were immediately sub- scribed.

THE BRITISH AND FOREIGN BIBLE SOCIETY naving been thus established, Mr. Owen felt it important to make an early communication of the fact to his diocesan and patron, the amiable and pious bishop Porteus. In this communica- tion he availed himself of the confidence with which he knew the bishop honored him, and entered into a minute detail of all the circum- stances which at the recent meeting had deeply impressed his own heart ; he particularly des- scribed the comprehensive principle on which the society was constituted, and the spirit of can- dour and liberality in which it had been formed, submitted to his lordship that the challenge so liberally given on the part of the dissenters, ought on the part of the church to

be as liberally accepted; and expressed his conviction that it was equally expedient for the honor of the church, and for the accomplishment of the society's object, that the ministers and members of the establishment should give it their decided countenance and support. After a reasonable delay, the bishop replied to this communication in very satisfactory and encouraging terms. In the course of his reply, his lordship distinctly stated that he very much approved the design of the Bible Society ; and that he had mentioned it to several of his friends who also approved of it.

' The Committee,' says Mr. Owen, ' which was nominated at the formation of the society, and on which the executive measures had de- volved, consisted of individuals highly respecta- ble, and conscientiously devoted to the service of the institution. But the diversity of religious sentiment, connexion, and denomination , by which they were characterised, may naturally be sup- posed to have thrown serious obstacles in the way of that mutual understanding which is the only sure basis of a sincere and steady co-opera- tion. Never, perhaps, before, were thirty-six persons brought together for the prosecution and attainment of a common purpose, whose views and habits and prejudices exhibited a greater and more unpromising variety. Strangers in mnnv

instances to each other's persons, and not a little disaffected to each other's religious systems, they had to struggle against feelings, to which time and mutual alienation had given in a manner the authority of principles ; and to balance the value of the object itself against that of the minor con- siderations which must be sacrificed in order to attain it. It is not therefore to be wondered at, that, in the outset of their proceedings, a com- mittee thus composed should experience no or- dinary embarrassment. A sense of propriety dictated that parties so strangely diversified should mutually advance towards each other with wariness and reserve : and it is natural to conclude, that in the exercise of this caution they should occasionally betray those emotions of jealousy which served to demonstrate how much they were indebted to the influence of the Bible for effecting their approximation to a common standard.'

In this important stage of its progress, when trie committee, previously to a general and public meeting, were called upon to make their final arrangements, not only as to elementary princi- ples, but as

to detail, and every part of the prac- tical machinery of the infant institution entrusted to their hands, the great questions which de- manded their most serious attention and ultimate determination, related

First, To the simple consideration of what they were to distribute.

Second, As the society consisted of a union of all denominations of Christians, to the propor- tion in which each should be represented in the committee.

Third, To the secretariat, involving the same delicate question with that of the constituent principle of the committee ; and

Fourth, To the presidency and patronage. 1 . As to the first, namely, what they were to distribute, the founders of the society, without discussion, or even distinct recognition, had as- sumed certain principles which they took for granted were universally maintained by Protes- tants, and on which they were universally agreed, however diversified their sentiments on other subjects : these were the divine and exclusive authority of the Scriptures in matters of religion ; the capacity and consequent obligation of all men to search, the Scriptures for themselves, as the only inspired media through which to obtain the knowledge of salvation ; that all men who have derived their religion from the Holy Scriptures, however they may differ in their religious opini- ons, may with equal confidence appeal to the divine volume as the only standard of thtir faith and practice ; that it is the duty of all men who profess religion themselves, and who derive that religion from the Scriptures, to circulate those Scriptures as the only authoritative and infalli- ble means of conveying religion to others. These principles are all included in the establishment of a Bible Society : but they are instantly vio- lated, if the integrity, purity, and complete- ness of the Scriptures be in any measure sacri- ficed ; they apply to the Bible, and the Bible alone ; to the Bible in all its parts, ā to the entire vo- lume, without the smallest deduction or addi- tion. The great question then to be determined

by the new society which assumed such princi- ples as their basis, was, whether any version of the Scriptures existed, in the truth and fairness of which all the various denominations of Christians, who were to unite in the circulation, perfectly agreed. Happily the authorised version of the English Bible, which was in the hands of all, and which all equally esteemed, presented it- self; and to guard against the possibility of its de- terioration, or of its ever becoming the engine of party, it was suggested by the bishop of London, that the

authorised version, without note or com- ment, should be the only book in the languages of the United Kingdom, to be circulated by the Society. This proposal allayed all existing fears, and threw an effectual barrier in the way of all future jealousies. It equally interested the churchman and the dissenter ; the definition was too precise and clear to admit of controversy or disagreement, and to this simple principle is to be traced the harmony, the zeal, and the energy which, from the moment of its adoption, for so many years, distinguished the British and Fo- reign Bible Society.

2. The constituents of the Committee presented more formidable difficulties than were at first anticipated. This question was peculiarly cal- culated to excite party feeling, and to awaken prejudice and distrust even in the most upright and liberal minds. Are all denominations of Christians to be represented in the committee by members of their respective bodies' and, if they are, in what proportion ? What is to decide their proportion; piety, wisdom, wealth, or numbers? and must everyone take his seat in the committee, as a stickler for the honor and pre-eminence of his own party ? All these en- quiries seemed to open a wide field for discus- sion and angry controversy. But here, too, divine principles triumphed over human pride, and a happy suggestion, the fruit of wisdom, candour, and forbearance, soon terminated a discussion which might have led to the most dis- astrous consequences. Attending to the sug- gestion, it was determined the committee should consist exclusively of laymen ; that of the thirty- six members, to which number it was limited, six should be foreigners resident in or near the metropolis ; and of the remaining thirty, one- half should be members of the established church, and the other half members of other Christian denominations. In order, however, to secure the services of the clergy, and of ministers ge- nerally, provision was made for their admission to a seat and a vote in the committee, on the terms which made them members of the society ; a provision which, while it concealed their names, recognised their privileges and retained their co- operation.

3. The business of appointing secretaries was one of equal difficulty with that of the formation of the committee. This, however, yielded to the spirit of wisdom and liberality which so eminently distinguished the individuals with whom the institution itself originated. Th? secretariat was divided into three distincv branches of office, and each had a representative. The reverend Josiah Pratt was appointed secre- tary to represent the established church; the

Rev. Joseph Hughes as the organ of the dis- senters; and the Rev. Mr. Steinkopff, as the foreign secretary, to maintain the interests of the foreign churches. The resignation of Mr. Pratt, soon after his acceptance of his office, a measure dictated perhaps by his prudent solicitude for the general acceptance of the Society among the higher clergy, to which he felt that the name of a marked and well-known evangelical clergy- man might be objectionable, prepared the way for his able, ardent, and eloquent successor, the Rev. John Owen. Thus was everything re- garding the executive of the institution ami- cably arranged, and it only remained, that a name of sufficient weight and distinction in the coun- try should grace its list of patronage, and give sanction to an object which conferred infinitely more honor that it could ever receive. It was deemed highly important, if not indispensable, to gain the concurrence and support of the most influential body in the kingdom, the clergy of the established church, as well as the co- operation of its most zealous and efficient lay-members. In accomplishing this object, to a degree which far exceeded the most sanguine expectations of the Committee, they were greatly assisted by the lord bishop of London. It was his lordship's suggestion that induced their applica- tion to Lord Teignmouth to become the president of the society ; and on the day after Lord Teign- P'outh's nomination to the presidency, the 15th of May, the bishops of London and Durham sent in their names as subscribers of five guineas annually to the funds of the society ; and before the close of the ensuing June,both these prelates, together with the bishops of Exeter (afterwards of Salisbury) and St. David's (now of Salisbury) accepted re- spectively the office of vice-president. Sir William Pepperell, Bart. Vice-admiral (now Lord Gambier), Charles Grant, Esq. William Wilberforce, Esq. and Henry Stratton, Esq. were other names that were quickly enrolled.

We subjoin the entire code of principle and management, as it was completed a little before the first anniversary.

LAWS AND REGULATIONS OF THE BRITISH AND FOREIGN BIBLE SOCIETY.

1. The designation of this Society shall be The British and Foreign Bible Society, of which the sole object shall be to encourage a wider cir- culation of the Holy Scriptures, without note or comment. The only copies in the languages of the United Kingdom to be circulated by the so- ciety, shall be the authorised version.

2. This Society shall add its endeavours to those employed by other societies, for circulating the Scriptures through the British dominions;

and shall also, according to its ability, extend its influence to other countries, whether Christian, Mahommedan, or Pagan.

3. Each subscriber of one guinea annually shall be a member.

4. Each subscriber of ten guineas at one time, shall be a member for life.

5. Each subscriber of five guineas annually sliall be a governor.

6. Each subscriber of fifty pounds at one time, o; who shall, by one additional payment, increase

his original subscription to fifty pounds, shall bis a governor for life.

7. Governors shall be entitled to attend and vote at all meetings of the committee.

8. An executor paying a bequest of fifty pounds, shall be a member for life ; or of one hundred pounds, a governor for life.

9. A committee shall be appointed to conduct the business of the society, consisting of thirty- six laymen, six of whom shall be foreigners, resident in London or its vicinity, half the remainder shall be members of the church of England, and the other half members of other denominations of Christians. Twenty-seven of the above number, who sliall have most fre- quently attended, shall be eligible for re-election for the ensuing year. The Committee shall ap- point all officers, except the treasurer, and call special general meetings ; and shall be charged with procuring for the Society suitable patron- age, both British and Foreign.

10. Each member of the society shall be entitled, under the direction of the Committee to purchase Bibles and Testaments at the Society's prices, which shall be as low as possible.

11. The annual meeting of the Society shall be held on the first Wednesday in May, when the treasurer and committee shall be chosen, the accounts presented, and the proceedings of the foregoing year reported.

12. The president, vice-presidents, and treasu- rer, shall be considered, ex officio, members of the Committee.

13. Every clergyman or dissenting minister who is a member of the Society, shall be entitled to vote at all meetings of the committee.

14. The secretaries for the time being, shall be considered as members of the Committee; but no person deriving any emolument from the Society shall have that privilege.

15. At the general meeting, and meetings of the Committee, the president, or m his absence, the vice-president first upon the list, then pre- sent ; and, in the absence of all the vice-presi- dents, the treasurer; and, in his absence, such member as shall be voted for that purpose ; shall preside at the meeting.

16. The Committee shall meet on the first Monday in every month, or oftener if necessary.

17. The Committee shall have the power of nominating such persons as have rendered essen- tial services to this institution, either members for life, or governors for life.

18. The Committee shall also have the power of nominating honorary members from among foreigners who have promoted the objects of this society.

19. The whole of the minutes of every gene- ral meeting shall be signed by the chairman.

Such was the origin of the British and Foreign Bible Society ; and such were the principal steps by which it was trained from its elementary ex- istence, in a crude suggestion and in unpromis- ing obscurity, to the ripeness of its plan in a well-digested system, an organised establishment, and a regular and dignified patronage.

While a spirit of mutual forbearance and kind- ness reigned in the Committee, on whom devolved the important charge of the executive of the

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institution ; it prepared them for the- most vigor- ous measures in promoting and carrying forward its great and characteristic object. The word of God united them, and they felt a concentration of energies, wholly devoted to the design of its circulation. The chairman and the secretaries possessed, in a peculiar manner, all those quali- ties of adaptation which fitted them for their respective departments

in the great scheme ot philanthropic operation. Perhaps, says Mr. Owen, it would not have been possible to find throughout the British dominions a man in whom the qualities requisite for the first chairman of Ihe British and Foreign Bible Society were so completely united, as they were in this venerable ohilanthropist. A churchman in faith, in cha- rity a universalist, he stamped upon the insti- tution, while it was yet tender, those characters which suited its constitution and its end; and, while he made it respected by the sanction of his name, he improved it by the influence of his example.

Lord Teignmouth, from character, extensive knowledge of the world, and influence in society, from his Christian benevolence, and tempered zeal, his prudent sagacity, and ready prompti- tude, his skill to devise, and his ability to exe- cute, was admirably fitted to sustain the duties of that high office, to which the concurring suf- frages of all who felt interested in the success of the institution, had spontaneously called him.

In Hughes, Owen, and Steinkopff, were hap- pily blended and contrasted those points of union and of difference which secured the com- bination of all their powers and influence to the great object they respectively had in view.

‘ Calm-eyed ethereal Faith, and ardent Hope, And seraph Love.’

Such were the men ; a threefold cord which only death could sever ; and which continued firm and unbroken till their more ardent spirit had out- stripped its fellows in zeal, in labor, and suc- cess, and obtained therefore an earlier heaven.

The Society having been nominally formed on the 7th of May 1804, from that period its Committee held periodical meetings, for the most part weekly, till the Society was completely or- ganised, and its business brought into a regular train ; afterwards they adhered to a general reso- lution which convened them on the first Monday of every month ; though on every occasion of exigency or importance they met more frequently.

The first proceeding resorted to, with a view to the execution of the Society’s design, was the appointment of different sub-committees, for the several departments of its practical business. These subordinate committees began their opera- tions with great spirit in the month of March.

Three considerations appear in this early stage of their existence to

have occupied the principal solicitude and attention of the Committee ; the care of the Society's funds, the improvement of its general interest, and the prosecution of en- quiries directed to the accomplishment of its objectā the circulation of the Scriptures. Of the two former it is not necessary that we should say more than that they were prosecuted with great /earnestness, and with most encouraging success.

The Committee, whose proper business it was to ascertain the dearth of the Scriptures both at home and abroad, and to supply the means of removing it, directed their first efforts to the Principality and to Ireland ; they were anxious that copies of the sacred volume, in the Welsh and Irish languages, should be put into immediate circulation. Mr. Steinkopff was also deputed to open a foreign correspondence, in order to the promotion of the Society's object abroad. While these measures were in a train, the Committee was occupied for several months in enquiries and negociations respecting the Chinese MS. of the New Testament in the British Museum. Dr Antonio Montucci had published in October and November 1801, in the Gentleman's Maga- zine, an account of this MS., and when he heard of the formation of the Bible Society, this gentleman addressed a letter to Mr. Hughes, offering his services as editor, should it be thought expedient to print the MS. A corresˆ- pondence was now therefore opened with per- sons of distinction, and supposed to be well acquainted with Chinese literature. Sir George Staunton rendered the Committee all the assist- ance in his power, and imparted to them a great deal of knowledge from his own former inter- course with China. The object of the corres- pondence was, however, at length deemed either inexpedient or impracticable at this time ; and, though it was not totally abandoned, it was in- definitely deferred. While the Committee were anxiously looking around to facilitate the printing new editions of the Scriptures in Welsh and Irish, Mr. Andrew Wilson commenced a negociation with the university of Cambridge, for the intro- duction of his improved mode of printing Bibles and Testaments by the employment of stereotype plates ; this negociation was brought to a favorable issue ; and the syndics of the press had concluded to adopt bis process for printing Bibles and Tes- taments at the very period in which enquiries were making into the best mode of obtaining supplies of both in the languages of the united kingdom. To the Committee of the British and Foreign Bible Society the plan of print- ing the Scriptures by stereotype offered so many and important advantages, that, after mature de- liberation, a resolution was passed that a number of Bibles and Testaments in stereotype should be immediately ordered, and, among that number, 20,000 Welsh Bibles in 12mo., and

5000 ad- ditional Testaments in a larger type. This mea- sure was determined upon at a meeting on the 3d of September 1804, and the determination was notified to the University of Cambridge without delay.

On the 23d of July in this year, with a view to extend the foundation of the institution, and to associate with it whatever would be likely to consolidate its strength, facilitate its proceedings, and augment its respectability, it was determineˆ by the Committee to address the two great Religious Societies in London and Dublin, denominated respectively, ‘ the Society for Pro- moting Christian Knowledge,’ and ‘ the Associa- tion for Discountenancing Vice, and Promoting the Knowledge and Practice of the Christian Religion.’ The object was to assist these ?ocieties

in that part of their plan and constitution which related to the circulation of the Scriptures only. From the Dublin Association a ‘respectful and friendly acknowledgment was transmitted in re- turn by order of the Board. Dr. Gaskin, and the Society of which he was an accredited organ, made no acknowledgment. Another measure, directed to the enlargement of the Society’s con- nexions, and its more complete introduction to notoriety and usefulness, was that of addressing the parochial clergy, dissenting ministers, and other respectable persons, individually, as far as might be practicable throughout the united king- dom. For this purpose a circular, containing a plan of the institution, extracts of corres- pondence, and a list of subscribers, was prepared ; and very extensively distributed, free of expense to the receiver, through the medium of the post.

The correspondence abroad produced the most gratifying assurances of approbation, and of a oordial disposition to co-operate in promoting the design of the institution as it regarded foreign countries. To the imperial city of Nuremberg a donation of Ā£100 was granted in the event of a Bible Society being formed in that place ; the result of this proposition was the establishment of the first FOKEIGN BIBLE SOCIETY. The foun- dation of it was laid on the 10th of May 1804. From Stuttgard, Professor Dnick, librarian to the elector (now king) of Wirtemberg, in reply to the letter in which he had been addressed, trans- mitted important intelligence relative to the ver- sions of the Scriptures in the Wirtemberg library, amounting in all to more than 4000 different editions of the whole Bible, or of distinct

parts of the same, and accompanied his account with expressions of the highest gratification and sur- prise at the motive and object of those enquiries to which his answer was requested. Communi- cations were opened with Sweden, with Holland, and with Berlin ; at the latter place it was the wish of several distinguished persons to form a Society for the purpose of printing an edition of the Bohemian Bible, and Ā£100 was voted from the British and Foreign Society on this con- dition, in aid of this most desirable and neces- sary object. The most remarkable circumstance elicited by this general correspondence by the Society's agents through different parts of the continent of Europe, was an address from a Roman Catholic clergyman in Suabia, indicative of an improved temper in the members of that church, and the harbinger of a better understand- ing than had hitherto subsisted between them and their brethren of other denominations. The con- cluding paragraph in the letter of this excellent Roman Catholic divine to the Committee of the Protestant Bible Society, is so unique that it de- serves an introduction into our pages.

' Now, I beg you, my dear brother in Christ, to receive these few lines in love. I wrote them, trusting it might be acceptable to your venerable Society. I cannot express in terms sufficiently strong, the fervency of my joy and of my love towards all who, throughout England, heartily believe in Jesus Christ as their only Saviour, and zealously endeavour to extend the Redeemer's kingdom. I embrace them all as the beloved and elect of God, as friends and brethren in Christ,

let them be of whatever name, or belong to whatever church or denomination. The more distant the countries, and the more different the outward forms and establishments are, the more I rejoice, if I am privileged to hear that an ever faithful Lord and Saviour is gathering from among them a flock of believing people. Truly God has a numerous army of reserve in England, who do not bow before the Baal of the age, nor sacrifice to the god of the times. Let all who know his name, glorify him for his mercy ! May the peace of God, and the all-sufficient grace of our Lord Jesus Christ, be with you all.' This letter the Committee regarded as an invitation to occupy a field from which they had considered themselves as altogether excluded, and they re- solved to place 1000 copies of the Protestant New Testament, then printing at Nuremberg, at the disposal of this zealous correspondent, for distribution by sale or gift among the Roman Catholics of Suabia and Bavaria; and directed him to be assured of their sincere disposition to afford the members of his communion every de- gree of aid consistent with the principles and means of the institution. These transactions comprehend every thing which it is material to record, in

the history of the Society's attempt to establish a system of foreign relations, from its commencement to the month of December 1804.

In the meantime, the measures adopted for supplying the inhabitants of the united kingdom with the Scriptures in the English and Welsh languages, continued to be prosecuted with un- abated vigor ; and advanced as rapidly as, from the more tardy process of casting the stereotype plates, and other impediments inseparable from the execution of great and important concerns, could be reasonably expected

Things had attained this state, when an inci- dent occnred which afforded the Society an op- portunity of making the first application of its funds to the printing of a portion of the Scrip- tures in a foreign language, under its own im- mediate direction. Captain John Norton, chief of the Mohawk Indians, who inhabit Upper Canada, was then in England, and, having be- come a decided convert to Christianity, he un- dertook the translation of the Evangelist John into their tongue. After due investigation of the claims of his translation, it was accepted by the Committee, and forthwith printed. By this act a very important portion of the sacred book was put into the hands of more than 8000 souls, who were allies of the British government.

About this period also the foundation was laid for that biblical library, which, by gradual ac- cumulation, is now become considerable and im- portant. It was determined that of every edition or translation of the Holy Scriptures, or of parts thereof, printed under the auspices of the British and Foreign Bible Society, six 01 more copies should be transmitted to be lodged in its de- pository ; and that an appeal should be made to the community at large, through the medium of certain daily newspapers, and periodical publi- cations of character, soliciting donations of Bibles, Testaments, or portions of the Scriptures, in the ancient and modern languages. The first fruits of this determination were a munificent

present from Granville Sharp. Esq., of thirty-nine copies of the Holy Scriptures, or certain portions of them, in various languages, together with the Irish and Italian versions of the English liturgy. The commencement of the year 1805 was ren- dered memorable in the anals of the Society by a serious and protracted discussion, relative to the text at that time preparing for the purposed edi- tion of the Welsh

Bible. This discussion was begun by imputations thrown upon the integrity of the agents on whom the Society devolved the task of carrying this Jtluable undertaking through the press. The accuser was a Rev. J. Roberts, described by the Rev. Dr. Gaskin, as * a very respectable clergyman and eminent Welsh scholar, who had been employed by the Society for Promoting Christian Knowledge, in correct- ing the press of the last Oxford edition of the Welsh Bible.' The charge of this Rev. censor, which, through the medium of Dr. Gaskin, as Secretary of the Society for Promoting Chris- tian Knowledge, was transmitted to all the Bishops whose names appeared as Vice-Presi- dents of the British and foreign Bible Society, amounted to this, ' That improper alterations had been made in the present orthography of the Welsh version of the Bible.' Trifling and vexa- tious as the imputation on the face of it must have appeared, especially considering the quar- ter in which it originated, it was nevertheless very patiently and impartially examined. The result is before the public in the Rev. Mr. Dealtry's 'Vindication of the British and Fo- reign Bible Society.' It is highly honorable in all respects to the Rev. Mr. Charles of Bala, who had kindly proffered his services to the Society, to prepare a copy of the Welsh Scriptures for the press. And now that the fact is ascertained, that the new Society are engaged in vigorous operations to meet this emergency, the tardy Bartlett's Buildings Society, jealous of its upstart rival, announces a resolution of ' the Board/ passed on March 12th 1805, to print 20,000 Welsh Bibles from its former edition of 1746, which they subsequently altered to that of 1752. Accusing at the same time the British and Fo- reign Bible Society of rivalry and opposition to the Society for Promoting Christian Knowledge, because they had directed their first efforts to re- lieve that specific moral necessity which had been the principal reason for the formation of their Society. The Bible Society, however, in this as well as in all its subsequent conflicts, was trium- phant. Mr. Charles was exonerated from the suspicion of attempting or intending any change in the translation, and the Committee expressed their real satisfaction in having been able to show that the confidence reposed in him had been amply justified. The charge of rivalry fell point- less to the ground, when it was clearly shown, that the first order for printing an edition of the Welsh Scriptures on account of the Bible So- ciety was dated on the 3d of September, 1804; and that the first information which the Com- mittee of that Society received, that the Society for Promoting Christian Knowledge had come to a resolution at their last meeting to print an edi- tion of 20,000 Welsh Bibles, was made, in the words of the quotation, by a member of both

Societies, on the 18th of March, 1805. ' The spirit of rivalry in this

case' says Lord Teign- mouth, < must have been prophetic.' But, to end all dispute, and to prove to the venerable Society, that the more recent institution, which she regarded with such unreasonable jealousy, had no sinister interest to serve, no envy to in- dulge, no vanity to gratify, the Bible Society resolved to supersede their own revised copy, and to adopt the text of their opponent as the foundation of their projected edition.

About this time intelligence was received from Bale, in answer to the communication addressed to that place, inviting its inhabitants to co- ope- rate with the British and Foreign Bible Society in the advancement of its foreign objects. The parties who had been addressed, announced their willingness to adopt the proposal of forming a Bible Society for their town and vicinity ; but added, that from local difficulties, they were not yet in a condition to proceed to such an establish- ment ; they had therefore determined, under present circumstances, to unite their exertions with those of their brethren at Nuremberg. An in- teresting letter was also transmitted from the Rev. Mr. Oberlin, minister of a parish in Alsace, con- taining five villages, and embracing a mixed reli- gious population of Roman Catholics, Lutherans, Reformed, and Baptists. Mr. Oberlin had been supplied with funds from England for the pur- chase of French and German Bibles, intended for distribution, and this was the occasion of his writing to the Society, through the medium of its foreign secretary.

Coincident with the receipt of these commu- nications from Germany was that of the first re- gular information relative to the design enter- tained by the Baptist missionaries at Serampore, to engage in an extensive system of Oriental translations : it was a letter from Mr., now Dr. Carey at Calcutta, to the secretary of the mission, the late Rev. Andrew Fuller; and it represented the missionaries as already employed on four languages, and as possessing considerable ad- vantages, should they be adequately supported, for translating the Bible into all the languages of the East. *

Such was the state to which things had arrived, in both the domestic and foreign department, when a publication appeared, which opened upon the Society the first of those many attacks by which it was destined to be assaulted. The title of this publication, was, An Address to Lord Teignmouth, President of the British and Foreign Bible Society, occasioned by his Address to the Clergy of the Church of England ; by a Country Clergyman. At this distance of time, and when so much of the effervescence of irritated feeling has passed off, we cannot but wonder at the mighty stir which this most puerile and insigni- ficant pamphlet was the means of exciting. It was hailed by

the ultra-orthodox among the clergy as a composition of great ‘ pith and mo- ment.’ It was circulated with matchless industry, and the following postulates of this modern eccle- siastical Locke, were repeated with a solemnity, and a confidence, which rendered dissent some- thing worse than heresy.

‘ Christian charity no where recommends asso-

ciations of discordant principles, combinations of men professedly at variance, and in hostility, with each other ; but Christian charity enjoins that which renders all these elaborate societies useless ; it teaches and OBLIGES Christians to be like-minded, to have one faith, one baptism, one speech, and one hope of their calling.’ ā Address, p. 11.

‘- It is to be expected that each member of your heterogeneous society will raise his portion of books for the promotion of his particular opi- nions ; for it is easily seen, that a Bible given away by a Papist, will be productive of popery, the Socinian will make his Bible speak and spread Socinianism, while the Calvinist, the Bap- tist, and the Quaker will teach the opinions pe- culiar to their sects. Supply these men with Bibles (I SPEAK AS A TRUE CHURCHMAN), and you snpply them with arms against yourself.’ ā Ibid p. 13.

A meeting was convened at London House, which was composed of lord Teignmouth, the bishops of London, Durham, and Exeter, and the Rev. John Owen, the clerical secretary of the institution. The formidable bill of indictment was produced, and poor Lord Teignmouth and Mr. Owen put upon their defence. The latter allayed the apprehensions of the venerable con- servators of the church’s safety, and, with a meek- ness and earnestness which did them honor, they requested Mr. Owen to undertake the defence of the Bible Society, against its weak, yet evidently malignant opponent. Thus urged, Mr. Owen yielded a ready compliance, and in the course of three weeks brought before the public a pamphlet entitled * A Letter to a Country Clergyman, occasioned by his address to lord Teignmouth, &c. by a Suburban Clergyman.’ ,In this pro- duction Mr. Owen appears to the greatest advantage as a controvetsialist, a gentleman, and above all as a Christian.

The first anniversary of the Society was cele- brated on Wednesday

the 1st of May, 1805, at the New London Tavern, Cheapside. ‘ The scene presented on this interesting occasion,’ says Mr. Owen, ‘ was distinguished by features which gave it an irresistible influence over the kindest and most elevated affections of the heart.’

The society now became more extensively known, the subject of more general enquiry and discussion ; and its patrons and friends multi- plied in full proportion. In Wales the spirit diffused itself with great rapidity. In Scotland the co-operation became more extended and organised ; and during the year 1806 The Society incorporated by royal charter, for Propagating Christian Knowledge, being invited to patronise and co-operate with the British and Foreign Bible Society, cordially assented to the proposal. Ireland was not neglected ; though she required more to interest and excite her into action, on account of her ignorance and spiritual degra- dation ; yet intelligence was conveyed across the channel, correspondence with many influential persons was carried on, and thus a foundation was laid for that superstructure which shortly after indicated sc rapid a progress.

Every month added something to the increase

of its strength on the continent; a Roman Ca tholic Bible Society, roused by the example of the Protestants at Nuremberg, was established at Ratisbon under the superintendance of the Rev Mr. Wittman, director of the ecclesiastical semi- nary in that place. The address of this truly pious divine to Christians of the Roman Catholic persuasion throughout Germany, is peculiarly simple, liberal, and devout. We must refer how- ever to Mr. Owen’s History, for a perusal of this invaluable document, vol. i. page 174.

At Halle in Saxony, the Society’s application aoout this time began also to take effect. And the Rev. John Janicke, stimulated by the example of Nuremberg, and encouraged by the generous proposal of the British and Foreign Bible Society, exerted himself with so much judgment and perseverance, that the foundation of a Bible Sooiety was laid in Berlin in the com- mencement of 1806, under the direction of some noblemen and other persons of great distinction and exemplary character.

In the meantime, the wants of Great Britain were neither forgotten, nor lightly considered. Much exertion was made to accelerate the pro- duction of some fruits from the stereotype press, in order that the desirable business of distribu- tion might commence among the necessitous part of the British population. This object was obtained in September, 1805, when an impres- sion of an octavo English

Testament was announced as ready for delivery, and the work of distribution commenced without delay.

The Dublin Association was also assisted, as were subsequently the Naval and Military Bible Society in London, and certain other religious institutions ; by being permitted to share with the British and Foreign Bible So- ciety in its advantageous arrangements with the University of Cambridge : and every opportu- nity was eagerly embraced of supplying, both directly and indirectly, the scriptural wants of the country, and of exciting attention to the im- portance of reading and dispersing the lively oracles of God. One of the earliest and most be- neficial results from the distribution in Ireland, combined with other exertions of a similar de- scription in that country, was the establishment of a Bible Society at Dublin.

The attention of the Society was about this time excited to the consideration of the Gaelic Scriptures. Representations were transmitted from persons of credibility, stating that in the Highlands of Scotland very few persons were in possession of a complete Bible ; that among those who possessed a single volume of the four in which the Scriptures had been published, the proportion did not exceed one in forty ; that the price of a complete copy was beyond the ability of the poor to purchase it ; and that, in fact, it was not easily procurable at any price. It was added, that, in the island of Sky, containing about 15,000 persons, scarcely one Gaelic Bible was to be found .

It further appeared, on the authority of ar Address, delivered in May, 1803, by the Secre tary to the Society in Scotland for Propagating Christian Knowledge, that out of 335,000 per- sons in the Highlands, 300,000 were considered

not to understand any other language than the Gaelic, so far at least as to comprehend a book written, or a continued discourse.

After due enquiry, and deliberate discussion, the Society resolved upon the measure of fur- nishing the Highlanders with an impression of the Gaelic Bible from an universally accredited text.

Shortly after the ousiness of the Gaelic Bible had been taken up, ihe case of the numerous prisoners of war was brought under the Society’s consideration, and excited a very lively sympa- thy in their favor, and a strong disposition to administer to their relief; and now was a begin-

ning made in that department of beneficence, which afterwards occupied so greatly the labors of the Society, and by means of which its spiri- tual bounty was conveyed to so many receptacles of ignorance, misery, and vice.

This, perhaps, is the most appropriate place in which to explain the nature and operation of the Auxiliary Societies and Associations, which, commencing in London in 1805, have done more to secure the prosperity of the British and Fo- reign Bible Society, than all the other means put together, which wise and enlightened benevo- lence has yet been able to devise.

AUXILIARY SOCIETIES were the first in order; these, it was proposed, should unite the energies of a county, or a large district. Each Auxiliary to possess its own patrons, president, treasurer, and secretaries, and to tiansact its own business upon the fundamental principles of the Parent Institution ; securing to all its members the same privileges. These auxiliaries were to receive subscriptions, and to distribute copies of the Scriptures at cost, or reduced, prices, or gratuit- ously, as they might deem necessary ; and after deducting from the aggregate contributions of the year the sums they expended, to transmit the remainder, through the treasurer, to the general fund in London. When it was found that the extent of a county was too great, or its towns and villages too numerous to be easily managed by the Auxiliary, Branch Societies originated, connecting themselves with their respective auxiliaries, just as these were connected with the Parent Society. But the grand instrument was yet wanting, that which should combine the greatest moral good with the most astonishing augmentation of pecuniary support. This was the principal of Local Associations, which was no sooner applied, than the happiest results imme- diately followed. The association was designed to embrace the pence of the poor, in the form either of weekly deposits, for the purchase of Bibles, which they received from the Committee, as soon as these d'eposits amounted to the stipu- lated price ; or of free subscriptions, which, it was believed, the pious poor would take the greatest delight in contributing, and thus advanc- ing the cause, according to their ability, in the success of which they were equally interested with their more opulent brethren ; but from the promotion of which, they had hitherto been ex- cluded by their poverty. Where there existed Branch Societies, the associations were to trans- mit their funds to that in their immediate vici- nity; if not, to their county or district auxiliary,

deriving from them their required supplies of the Scriptures. By this admirable system, the moru1 benefits and the pecuniary resources of the Bri- tish and Foreign Bible Society, were happily united. The benevolence of all classes of the community was laid under requisition ; while the worst abuses likely to arise from indiscriminate and gratuitous distribution of the Scriptures were effectually guarded against. It was not, how- ever, matured at once ; during the first six years of its history, the society received comparatively but little support from its auxiliaries, and it was not till a much later period that local associations for the poor were organised.

Early in the year 1806 an attempt was made, as it afterwards appeared, by the same individual, who, under the title of a country clergyman, had before violently assailed the society, to detach from it the countenance and support of its epis- copal patrons. The attack was in the form of a letter to the bishop of London. The writer, no doubt, presumed upon the natural timidity of his lordship's character, and it is really distressing to perceive how such a mind as that of Porteus could be affected by the insolent abuse of an anonymous calumniator ; affected to such a de- gree as to vacillate between supporting and abandoning an object, which he had deliberately espoused upon principle, merely because it was united with the additional merit of having pro- voked the blind and bigotted hostility of a Pa- pist in disguise. Mr. Owen too was all appre- hension and terror ; and we are not to wonder at his trepidation, when we consider how well he was acquainted with the difficulties which had been surmounted, in attaching to the society its episcopal patronage, and the conviction which he felt that the loss of that patronage would have involved ' the institution in certain and irreme- diable destruction.' But thousands now felt the delightful assurance, that the success of the Bible Society depended neither upon the smiles of episcopacy or presbyterianism. It was the badge and the glory of the catholic church, and was identified with the churches of England, Scotland, Rome, or any other churches upon the face of the earth, only so far as they cherished a catholic spirit.

We must pass on rather hastily over the sub- sequent years of the Society's labors and suc- cesses, referring our readers, for more detailed and minute statements, to the very full, though somewhat tedious, volumes of Mr. Owen, and to the annual reports of the institution itself. From 1806 to 1809 the Society gradually advanced in public favor, and in more extended usefulness. Under these auspices, and patronised by the king of Prussia, an edition of the Bohemian Bible, amounting to 3000 copies, was put to press. To Konigsberg, the capital of Prussia, and to the province of Jethuania,

containing a population exceeding a million of souls, the So- ciety devoted much of its attention, aud prepared the way for active operation. The case and cir- cumstances of the inhabitants of Iceland passed also under their review, and measures were adopted to furnish this interesting and destitute people with the sacred Scriptures ; the Society offering to defray half the expense of an edition

of 5000 Icelandic Testaments. It was at this time, and arising out of circumstances connected with this last measure, that the Society became acquainted with two of their most zealous and indefatigable agents, who for several years effec- tually promoted their interests in the northern parts of Europe. The Rev. Messrs. Pater- son and Henderson, during the year 1806 penetrated into Russia, in connexion with Karass, a missionary settlement to the north of the Caspian Sea. The missionaries occupying, that station were the Rev. Henry Brunton and the Rev. Robert Pinkerton : these gentlemen, with their associates, having been induced to undertake the translation of the New Testament into the Turkish and Tartar dialects, applied to the British and Foreign Bible Society, in order to obtain encouragement and aid towards the performance of so desirable an undertaking. The Committee, regarding the proposed work as prsgnant with great and extensive advantages, determined to supply the translators with a new fount of Arabic types, and a sufficient quantity of paper and ink, to enable them to execute an impression of 5000 copies. About this time the Committee opened a correspondence with arch- bishop Plato, the metropolitan of the Greek church in Russia, with a view to interest that eminent and learned prelate in measures for promoting the circulation of the Scriptures in Russia. The application was successful, and the most promising field that was ever opened to the labors of any benevolent institution, presented itself, on this occasion, to the Bible Society. It was occupied for several years, and with the most encouraging tokens of success. The So- ciety’s exertions were likewise directed to the French at St. Domingo, the Spaniards at Buenos Ayres; to the British settlers, soldiers, and colo- nists, in North America ; to the Cape of Good Hope, New South Wales, and Van Diemen’s Land ; to the felons and other prisoners in New- gate; to the case of Mahommedans and heathens whose spiritual instruction, too long overlooked by the bulk of European Christians, had begun to awaken in the breasts of a few the emotions of sympathy and anxious consideration.

Dr. Carey having introduced to the Society the scheme of Oriental Translations, so nobly projected by the Baptist missionaries at Serampore, and Dr. Buchanan's Memoir on The Ex- pediency of an Ecclesiastical Establishment for British India, having furnished the additional, and very important information, that, ' under the auspices of the College of Fort William, the Scriptures were in a course of translation into almost all the languages of Oriental India,' it was determined to appropriate Ā£1000 to an ob- ject, in all respects so deserving of encourage- ment and aid ; and a grant to that amount was accordingly made. A regular intercourse now commenced between the conductors of the Bri- tish and Foreign Bible Society, and the leading friends of Christianity in the heart of British India; and it appeared to the former in a high degree desirable to take all practicable steps in order to cherish and improve the connexion. With this view, a second grant of Ā£1000 was made on the 4th of May, 1807 ; and on the 15th

of June, it was further determined to cend 500 English Bibles and 1000 Testaments, from the London Depository, and 250 German Bibles and 500 Testaments, from the institution at Halle, for the use of the army and navy, and other Europeans in India.

It was about this time that the British and Foreign Bible Society conceived the design, of promoting a correct and acceptable impression of the Arabic Scriptures. The subject under- went very serious and repeated examination; and extended correspondence was carried on with the bishops of London and Durham, the profes- sors of Arabic in both our Universities, and other persons of competent information, with a view to the ascertainment of a standard text, and such other points as required to be accurately known previously to a formal and conclusive determina- tion. So many difficulties, however, combined to retard the execution of the purpose, that the Committee, finding their own plans altogether immature, and unwilling to sacrifice any further delay, determined to subscribe for 300 copies, as a temporary expedient.

In 1807 Mr. Twining published his attack upon the British and Foreign Bible Society, so far as their views were directed to India. This gen- tleman accused the Society of meditating an inter- ference in the religious opinions of the native inhabitants of India ; and denounced that inter- ference as fraught with the most disastrous con- sequences to our possessions in the East. This brought forth an able refutation from the pen of Mr. Owen, who in his address to the chairman of the East India Company, occasioned by Mr. Twining's letter to that gentleman, undertook to prove, that neither in the object, the

patronage, nor the proceedings, of the Society, was there any thing to justify the charge of culpable interfe- rence with the religious systems of India, or to authorise the apprehension of these alarming consequences to our sovereignty in the East, which had been so confidently predicted. Mr. Twining and his coadjutors were not satisfied either with this, or the various other replies which were written in defence of the missionaries, as well as of the Bible Society. They continued to fulminate an alarm, and were encouraged in their pagan and idolatrous zeal, by those gentle- manly Christians, the redoubted critics of the North. But though reason could not silence, time has rendered them false prophets ; and they now stand corrected before the world, either as fanatics or impostors. A man should never pretend to pro- phecy unless he can work miracles. Mr. Twining was no conjurer, and hence the Edinburgh Re- view for once ceased to be oracular. The noble president of the Bible Society followed on the same side of the question, by publishing his Considerations on the Practicability, Policy, and Obligation of Communicating to the Natives of India the Knowledge of Christianity ; with Ob- servations on the Prefatory Remarks to a Pam- phlet, published by Major Scott Waring, by a late resident in Bengal. Of this production, Air. Owen justly says,' It would be difficult to speak in terms proportioned to its merits, without incurring the suspicion of a design to write its panegyric.' Controversy neither suspended the exertions of

the Committee, or weakened the favorable im- pressions which the Bible Society had already produced on the public mind. Both at home and abroad, the great cause gradually and si- lently extended its influence, so that in April 1810, that is six years after its establishment, thirteen auxiliary societies were formed in various parts of the kingdom, while at Basle, Berlin, and Stockholm, the Scriptures were widely circulated in different languages ; beyond the Atlantic, fields of useful exertion presented themselves. Philadelphia took the lead, and an efficient Bible Society soon obtained an establishment in that city. The example thus set was soon followed, and in the course of the first year from the com- mencement of the Philadelphian Institution, six kindred establishments were formed : the Con- necticut Bible Society at Harford ; the Massa- chusetts, at Boston ; the New Jersey, at Prince- ton ; and three at New York, under the respec- tive designations of The New York Bible Society ; and The New York Bible and Common Prayer- book Society.

Now commenced the Wordsworthian contro- versy, designed by the assailant of the Bible Society, the Rev. Dr. Wordsworth, dean of Borking and chaplain to the archbishop of Can- terbury, to withdraw the patronage of the esta- blished clergy from the institution. The ground of objection assumed by this dignified person, was singular enough, and, but for various reasons unconnected with the literary controversy, an uninformed reader might very innocently have hailed Dr. Wordsworth as a friend of the Bible Society, supporting its claims, and covering its enemies with ridicule by a severe ironical at- tack.

This learned adversary of the Bible Society assumed, that the great cause of Christian know- ledge, the inestimable interests of piety, and peace, and true religion, would be injured and retarded by the Bible Society ; because the sup- port which the clergy and others might be dis- posed to render to that institution, would with- draw from the Society for Promoting Christian Knowledge, funds which would otherwise be appropriated to its support. We can only refer our readers to the answers which this weak and puerile work elicited from Lord Teignmouth and the Rev. Mr. Dealtry. Unfortunately for Dr. Wordsworth, he had assumed, what he was not prepared to prove, and which was instantly re- futed by the facts of the case. The greatest benefactor the Society for Promoting Christian Knowledge ever had, both as it regards the aug- mentation of its receipts and the increase of its zeal, is unquestionably the Bible Society. Mr. Dealtry, by a comparison of the average receipts of the Society for Promoting Christian Know- ledge, for four years preceding, with those of the five years immediately succeeding the establish- ment of the British and Foreign Bible Society, draws this general conclusion : ā

‘ Not only have the receipts and subscriptions increased, but the rate of increase has been greatly accelerated since the establishment of the Bible Society; and it should be particularly observed that the funds and subscriptions of both Societies received their greatest augmentation in the same

year; viz. in the year ending March 1809.’ We are constrained, with great reluctance, to aban- don the form of narrative in our account of the further progress of this wonderful moral engine, the British and Foreign Bible Society, and to refer to the dry figures, and statements of its own reports, for what it has received and what it has achieved, in extending its influence and in circulating the Scriptures in the dif- ferent languages of the world, from the year 1810 to the present period. It is incumbent upon us, however, very briefly to notice the con- troversies which have marked this portion of its history.

In the summer of 1810, the Rev. Dr. Words- worth made his second appearance as an oppo- nent of the Society, in a letter of 157 pages, addressed to Lord Teignmouth, president of the British and Foreign Bible Society, in vindica- tion of reasons for not becoming a subscriber to that institution. To this elaborate and extended diatribe; written with some warmth of temper, and calculated by the station of its author, the massiveness of its bulk, and the pomp and cir- cumstances of its subscription ā implying that it was composed within the walls of 'Lambeth palace,' and finished on ' St. Peter's day,' ā to pro- duce no inconsiderable impression. The Rev. Mr. Dealtry replied, in a volume replete with sound information, solid argument, and acute and elo- quent retort. ' If, says Mr. Dealtry, addressing Dr. Wordsworth, ' from the 157 pages of your pamphlet, I were to subtract the observations which are merely personal, ā the discussions which are utterly irrelevant, ā the multiplicity of bodings, which it is not difficult to make on all subjects, ā the mistakes in fact, and the fallacies in reasoning, ā the conclusions without proof, and the conjectures without probability, ā I cannot but remark, that the argument would be short- ened, and its effect diminished, in a degree hardly calculable.' This description of Dr. Wordsworth's Letter, a description by no means exaggerated, will account for the length into which Mr. Dealtry felt himself compelled to go in his ' Vindication of the British and Foreign Bible Society.' The discussion having been, for the most part, controversial, both in matter and in tone, it would answer no good purpose to exhibit it, either in detail or analysis. Of Mr. Dealtry's ' Vindication,' however, it must be said, that it was a seasonable and masterly pub- lication : it took in the whole scope of the ques- tion, and sifted to the bottom all the objections relevant and irrelevant which Dr. Wordsworth and others had advanced ; and while it raised the character of the writer, it contributed Very greatly to establish the growing reputation of the British and Foreign Bible Society.

On the 12th of December, 1811, the important name of Cambridge was added to the list of of Auxiliary Bible Societies ; but the accom plishment of this object, so honorable to the parties with whom it originated, as well as to those by whom it was conducted to its issue, was not, however, effected without experiencing a very formidabble and decided opposition.

This opposition proceeded from the Rev. Dr. Marsh, Margaret Professor of Divinity ; a person

of considerable learning, dexterous abilities, and profoundly versed in the tactics of controversy. In an Address to the Senate, the professor con- trasted the British and Foreign Bible Society with the Society for Promoting Christian Know- ledge, and contended that the latter was entitled to exclusive encouragement and support. The opening of the professor's address, though suffi- ciently ingenious, and adapted to ensnare the unwary, was certainly constructed too much on the model of a recruiting advertisement, to be worthy of a cause wherein accuracy of statement and dignity of manner were peculiarly required.

- We have at present,' says the professor, ' two very extensive Bible Societies, the one founded in 1699, the other in 1804. Both of our arch- bishops, and all our bishops, with the prince regent at their head, are members of the former : neither of the two archbishops, and only a small proportion of the bishops, are members of the latter.'

From the constitution of the two Societies, and their respective objects, the professor contends, that ' our encouragement of the ancient Bible Society must contribute to the welfare of the established church ;' while, ' our encouragement of the modem Society, not only contributes nothing to it in preference to other churches, but may contribute even to its dissolution.'

To this Address, which formed the text-work for much of what was said on the 12th of Decem- ber, a reply was produced by the right honorable N. Vansittart, then chancellor of His Majesty's ex- chequer; and 1000 copies of it were printed, and on the recommendation of his royal highness the duke of Gloucester, were distributed among the persons assembled at the formation of the Cam- bridge Auxiliary Society.

For this reply from a member of the University of Oxford, the cause was indebted to the some- what indiscreet zeal of the author of the Address; the occasion of it is thus explained by Mr. Vansittart, in the introduction of his Letter. ' Dear Sir,

' I beg to return you my best acknowledgments for the communication of your Address to the Senate of Cambridge ; which I the more strongly feel as a mark of your kind attention, as I have not the honor of belonging to that university, and as, it is a considerable time since I have been so fortunate as to have had an opportunity of meeting you, you were perhaps not aware that you were sending your Address to a member of the British and Foreign Bible Society; but I accept as a proof of kindness your candid and friendly admonition, which affords

me an oppor- tunity of justifying myself to you as a church of England man, for contributing my assistance to that institution. I never, indeed, before thought it necessary to offer any apology for so doing; for though 1 was aware, before I engaged in the Society, that it had been represented as danger- ous to the church, it appeared to me that this charge had been so completely refuted, that it is with no less surprise than regret that I now learn that you still think it well founded.'

Of the reply itself, it may be affirmed, in general, that it contains, within a small compass, a clear and satisfactory refutation of the charges

advanced by the learned professor against the principle and tendency of the institution. The style is chaste, the sentiments pious and liberal; and the Letter is characterised throughout by such a tone of candor and urbanity, as either to make the reader forget that he is perusing a con- troversial pamphlet, or to induce him almost to be in love with controversy. But it will be necessary to advert to a few particulars.

The professor had described the Society as deficient in patronage. On this topic Mr. Van- sittart thus observes: ā ' Among the vice-presi- dents are already numbered one of the arch- bishops of Ireland, and five English, and two Irish bishops. I doubt whether the Society for Promoting Christian Knowledge, which now, as you observe, enjoys the countenance of the whole episcopal bench, was, at so short a period from its formation, honored with the support of so large a body of the prelates ; and I should hoj e the time might not be far distant, when the two Societies may equally nourish under the general patronage of them all.' To the objection against the principle of associating with Dissenters, and its probable injuriousness to the interests of the Church, the right honorable author thus judici- ously replies : ā ' The co-operation of Church- men and Dissenters in religious matters, so far as they can conscientiously co-operate, seems to me one of the most efficacious means of lessen- ing both the political and religious evils of dis- sent. It dispels prejudices, promotes candor and good-will, and must prepare the mind for the reception of that truth which every one per- ceives to be no less the object of those who differ from him than his own : from such a communica- tion the church of England has nothing to fear, and every thing to hope: as holding (in our judgment at least) that middle line of truth in which all opposite opinions have a tendency to coincide.' ' And is that truth,' Mr. Vansittart asks, ' more likely to be acknowledged and embraced, by minds embittered by mutual jea- lousy and aversion, or by such as have been previously softened by conciliation?' With re- gard to the

measure recommended by the pro- fessor,ā that all Churchmen should withdraw from the Society, and leave it wholly in the hands of the Dissenters ā Mr. Vansittart shows, that it is fraught with inevitable mischief. ‘ If anything can make the Society dangerous, this must do it; because there can be no check to any sectarian spirit which might introduce itself, and which must be unavoidably irritated by so harsh, and, I think, so unjust an indication of jealousy.’ One of two consequences, Mr. Van- sittart contends, must result from such a pro- ceeding ; either the reduction of the Society to utter insignificance, an evil sorely to be deprecated, or the future administration of it in nearly the same manner as before, by augmented zeal, activity, and exertion on the part of the Dissent- ing interest. ‘ This latter alternative,’ he ob- serves, ‘ is to transfer to Dissenters all the honor and influence of whatever has been done, and whatever may be done, by an institution the dawn of which is so glorious, but which is visi- bly rising into brighter day. Shall it be said,’ asks Mr. Vansittart, ‘ that the Dissenters alone

have carried the word of God to every nation under heaven? Or shall the church of England continue to claim the leading part in this impor- tant work? And can the church of England stand so secure upon a narrow and exclusive policy, as by deserving the blessing and uniting the prayers of all people, nations, and lan- guages ?(

To the general tendency of the professor’s advice Mr. Vansittart opposes the following admirable statement and most salutary counsel. ‘ The existence of dissent will perhaps be inse- parable from religious freedom, so long as the mind of man is liable to error; but it is not un- reasonable to hope, that hostility may cease where perfect agreement cannot be established. If we cannot reconcile all opinions, let us endeavour to unite all hearts.’

These arguments, Mr. Vansittart observes, had induced him to consider his taking a part in the concerns of the Bible Society, not only con- sistent with, but a proof of, the sincerity and warmth of his attachment to the church of Eng- land ; and < far from repenting,' he adds, ' of what I have done, I feel convinced I shall least of all repent of it as I appproach that state in which the distinction of Churchman and Dis- senter shall be no more.'

In the following year, the Margaret Professor, author of the Address

which we have thus sum- marily dismissed, produced his threatened Stric- tures on the Principles of the British and Foreign Bible Society, in an elaborate pamphlet, en- titled, ‘ An Enquiry into the Consequences of neglecting to give the Prayer Book with the Bible, interspersed with Remarks on some late Speeches at Cambridge, and other important matters relative to the British and Foreign Bible Society.’

The appearance of this publication was greeted with numerous replies ; and its fallacies were ex- posed, among others, by the caustic pleasantry of Dr. Clarke, the vigorous animadversion of Mr. Dealtry, the conclusive reasoning of Mr. Otter, and the luminous refutation of Mr. Vansittart. To these advocates, was added the Rev. C. Simeon, who, in the preface to Four Sermons on the Liturgy, very ably defended both himself, and the clerical members of the British and Foreign Bible Society, against the accusation conveyed through the assumption upon which the hypothesis of the professor was built.

The amount of what was stated in these .seve- ral replies sufficiently evinced that the Society for Promoting Christian Knowledge had greatly augmented the number of its subscribing mem- bers ; that the issue of Prayer-Books, both from that Society and other sources, had largely in- creased ; and that there was every encourage- ment to conclude, as well from experience as from the reason of the thing, that, by a steady co-operation on the part of the church members of the Society, both the honor and the interest of the church would keep pace with the reputa- tion and prosperity of the institution.

In connexion with those writers, who met the Professor’s * Enquiry* with direct replies, may be mentioned the Rev. Robert Hall, who, in a

speech of extraordinary ability at the Second Anniversary of the Leicester Auxiliary Bible Society, on the 13th of April, 1812, gave to every thing that was deserving of notice in that attack, a most acute and masterly confutation.

The Professor’s subsequent attacks required little refutation; and the friends of the Society left them unanswered to their fate.

Now started up Dr. Edward Maltby, a cler- gyman of the protestant church of England, whose objection to the Bible Society was of a very different character to that of his prede- cessors ; these had contended, that in giving the Bible, the Society gave too little ; the object of this assailant was to prove, that in so doing the Society gave too much. ‘ The whole Bible ought not, in his opinion, to be given to the bulk of

the people.' According to this Protestant- papist, ' out of sixty-six books, which form the contents of the Old and New Testament, not above seven in the Old, nor above eleven in the New, appear to be calculated for the study or comprehension of the unlearned.'

Against this attack, which threatened to re- duce the Bible, in the hands of the common people, to less than one-third of its former dimen- sions, the British and Foreign Bible Society, or rather Christianity itself, was very ably defended by the Rev. J. W. Cunningham, Vicar of Harrow.

To the Observations of Mr. Cunningham, the author who had provoked them made no reply. He was not, perhaps, aware of the mis- chievous consequence of his theory, till he saw them so acutely exposed ; and he very judici- ously abandoned his pamphlet to the fate it de- served, and which, in the hands of Mr. Cunning- ham, it could rrot be expected to escape. If Dr. Maltby had not shown his respect for Christianity by a work of no ordinary merit, in its illustration and defence, he would have laid himself open to the suspicion of no very friendly designs towards our holy religion, and the institutions by which it is promoted. But, in fact, the cause of the So- ciety is that on the side of which the Scriptures, and every church which professes to be founded upon them, are decidedly ranged ; and they who will oppose it, can find no other weapons to em- ploy against it than such as 'have been unde- niably forged in the camp of the Philistines.'

We do the next opponent too much honor, by introducing him into our pages, and notice him not on his own account, but simply for the pur- pose of inserting the comments of the Bishop of St. David's, now of Salisbury, on a very con- temptible performance, which bears upon its title-page the name of the Rev. Henry Norris, curate of St. John's, Hackney ; purporting to bĀ« a Practical Exposition of the Tendency and Pro- ceedings of the British and Foreign Bible So- ciety ; ā of this wretched Exposition the learned prelate remarks, that he ' holds it to be a most unjustifiable attack on the Bible Society ;' add ing, that ' it is so destitute of the demonstration which it professes to give, so defective in its pre- mises, so inconclusive in its inferences, and so reprehensible in its calumnies respecting the church members of the Society, ' that it might be left to its own refutation.' A few skirmishes.

in the public journals, and a warfare of a some- what graver character,

employed the champions of the Bible Society, at distant intervals, till the death of the Rev. John Owen, which sad event took place atRamsgate, September 26th, 1822, in the fifty-seventh year of his age. It was obvious to the friends of the institution, as it was un- doubtedly felt with deep chagrin by its enemies, that it gained ground with every past assault upon its character, while the opposition to it, increasingly divested of its pretensions to reason, truth and piety, became more and more en- feebled ; strong only in prejudice and malignity. Mr. Owen lived to effect one of the greatest works ever achieved by man ; and he was permitted to see that work triumph over the most formidable hostility. He died in the hour of victory ; nothing can better illustrate his character, than the just tribute of respect which was paid to his memory by the Rev. Joseph Hughes, one of his sur- viving colleagues., See ‘ Attachment to Life,’ a Sermon on the Death of the late Rev. J. Owen, M.A.

Hitherto amidst unrivalled prosperity, the British and Foreign Bible Society, through evil report, and through good report, had maintained its undeviating majestic course. If a storm oc- casionally raged without, peace and harmony prevailed within. The numerous and diversified energies which it attracted, it also combined ; and when a world rose up in arms against it, it was irresistible in its might. Having survived opposition, and humbled and silenced its most powerful adversaries, it was everywhere greeted with applause. It had nothing to do but to con- centrate all its wonderful resources upon its direct and legitimate objects. The field was won, and now all that was required was its occu- pation. Under circumstances thus auspicious, how deeply is it to be regretted, that conflicting interests and opinions should have arisen to dis- tract its operations, and almost to threaten its extinction. We trust that the day of extreme peril is past, and that the cause which has brought so many differing parties to coalesce, will at length allay the ferment which has been excited; and once more unite hearts, if it cannot reconcile opinions. We refer, and we do it with sincere pain, lo the controversy in the Bible So- ciety, respecting the Apocrypha : we think that there ought never to have been a question as to the simple and legitimate principle on which the Society was constituted. If the Bible was to be the band of union, and if, jealously to guard against the possibility of breaking it, the condition was subjoined that it should, in every case, be without note or comment ; it surely never could have been in the contemplation of its original founders to circulate any thing but whnt was in- spired, or, at least, accredited by all the parties united, as the word of God. The simple prin- ciple of diffusing the Scriptures alone was adopted, among other reasons, chiefly because it would for ever close the door

of controversy, by leaving nothing to be discussed ; because the Scriptures offered common ground which Chris- tians of all denominations could occupy, without compromising their peculiar and respective tenets.

Now, we are of opinion, that a society thus con- stituted, has as much right to circulate Protestant prayer books, popish legends, and Hindoo shasters, as Jewish legends and apocryphal fables. That is, they have no right to do either; for when they circulate with the Scrip- tures, which all consider of equal authority, writings which one of the parties associated on the common principle deny to be sacred ; they break faith with the public, and violate the solemn pledge which was laid down as the only founda- tion of their union. In this view the proceed- ings of the Committee of the British and Foreign Bible Society, in conniving at the circulation of the apocryphal books, or aiding that circula- tion with their funds, appears to us decidedly in- consistent. Still we think that men may be in- consistent, without being so far criminal as to justify the withdrawment from them of public confidence. The circumstances of the case would perhaps have betrayed their most violent censors into the same inconsistency ; and from the im- placable spirit which some of them have dis covered, we fear they would not have retraced their steps with the same humility. We believe that the Committee have abandoned the Apocrypha altogether ; and are well satisfied with the fol- lowing resolution, dated November 21, 1825: ‘ That the funds of the Society be applied to the printing and circulation of the canonical books of Scripture, to the exclusion of those books, and parts of books, which are usually termed Apo- cryphal ; and that all copies printed, either en- tirely or in part, at the expense of this Society, and whether such copies consist of the whole, or of one or more of such books, be invariably is- sued bound, no other book whatever being bound with them ; and further, that all money grants to societies or individuals, be made only in conformity with the principle of this regula- tion.’ We only wish they had never adopted any other. But we acquit them of all sinister inten- tions ; we have still confidence in their prin- ciples and management; and we are happy to believe that the connexion of the Sociaty with the circulation of the apocrypha, has chiefly been incidental, indirect, or owing to circumstances which the Committee believed they could not prevent or control. While therefore we ap- plaud the vigilance which detected the evil, and still more the magnanimous zeal which first re- monstrated with the offenders, and afterwards brought the whole under the review of the pub- lic ; we must deeply regret the extreme intem- perance of language and spirit, and the illiberal acrimony, amounting to uncivilised rudeness and anti-christian

intolerance with which some of the best men upon earth have been treated by their brethren on the other side of the Tweed. We willingly turn from this unhallowed conflict, which we would gladly terminate by bringing the parties under the influence of that divine be- nevolence which first brought them to love each other. While it was one and undivided this in- stitution was truly great ; but must dwindle into useless insignificance the moment it ceases to be girt with that charity which is the bond of per- fectness.

BIBLIA, or BIB LI A PETRAHIA, in a military sense, a machine used by the ancients for throw- ing stones or darts.

BIBLIANDEJR, (Theodore), professor of divi- nity at Zurich, in the sixteenth century. He attempted a new edition of the Koran; the text of which he corrected, by collating the Arabic and Latin copies. To this edition he subjoined the life of Mahomet and his successors ; and pre- fixed an apology, by way of preface, which hˆs been much exclaimed against.

BIBLICI. See BIBLISTS:.

BIBLIOGRAPHY, from /3i/3A.oc, a book, and ypa(f>u, to write, a name which has been recently employed both in Great Britain and on the con- tinent, to comprehend every thing that relates to books ; and as every branch of knowledge is con- tained in them, by a strange kind of reasoning, Bibliography is made to denote a science which comprehends all the other sciences. One modern writer on the subject prefers the more general term Bibliology, which he divides into seven different heads, viz. 1. Glossology or the know- ledge of languages. 2. Diplomacy, or the know- ledge of writings. 3. Bibliopeia, or the com- position of books. 4. Typography, or the knowledge of printing. 5. Bibliopoly, or the knowledge of bookselling. 6. Bibliography, or the knowledge of books. 7. Universal Literary History. These various heads are branched out into innumerable subdivisions, embracing every subject to which the human mind has ever been directed.

Bibliography, in fact, to have any intel- ligible sense, should be confined to the bare description and arrangement of books, or the duty of an intelligent librarian. In such an arrangement it is certainly necessary to follow some general division of knowledge; but, for

divers reasons, it cannot be proper to adopt that classification which results from a perfect ac- quaintance with the sciences. To consult the books of such a library it would then be requisite first to have read them. In the article LIBRARY we shall suggest some of the best practical con- siderations on this subject.

B1BLIOMANCY, divination performed by means of the Bible; otherwise called sortes biblicae, or sortes sanctorum. It consisted in taking passages at hazard, and drawing indica- tions thence concerning things future. It was much used at the consecration of bishops. It was a practice adopted from the heathens, who drew the same kind of prognostication from the works of Homer and Virgil. In 465 the council of Vannes condemned whoever practiced this art to be cast out of the communion of the church; as did the councils of Agde and Auxerre. But in the twelfth century we find it employed as a mode of detecting heretics.

In the Gallican church it was long practised in the election of bishops ; children being em- ployed, on behalf of each candidate, to draw slips of paper with texts on them, and that which was thought most favorable decided the choice. A similar mode was pursued at the installation of abbots, and the reception of canons: and this custom is said to have con- tinued in the cathedrals of Ypres, St. Omer and Boulogne, so late as the year 1744. In the

Greek church we read of the prevalence of this custom so early as the consecration of Athana- sius, on whose behalf the presiding prelate, Cara- calla, archbishop of Nicomedia, opened the gos- pels upon the words, ‘ For the devil and his angels.’ Matt. xxv. 41. The bishop of Nice first saw them, and adroitly turned over the leaf to another verse, with was instantly read aloud : ‘ The birds of the air came and lodged in the branches thereof.’ Matt. xiii. 32. But this passage appearing irrelevant to the ceremony, the first became gradually known ; and the histo- rian who has recorded the fact, remarks, that the church of Constantinople was violently agitated by the most fatal divisions during the patriarch- ate ! Mr. Southey tells us, that both the cele- brated founders of Methodism, Mr. Wesley and Mr. Whitfield, occasionally practised this method of deciding upon some of their earlier religious plans. For another kind of Bibliomancy, not very dissimilar, the *?T2 fi3, Bath-Kol, or daughter of the voice, in use among the Jews, See BATH-KOL.

F. J. Davidius, a Jesuit, has published a Bibli- omancy under the borrowed name of Veridicus Christianus.

BIBLIOMANIA, an extravagant passion for books, arid particularly those called curious or rare, from whatever cause ; or a desire for accu- mulating them beyond all reason and necessity ; a passion at once well satirised and stimulated in the productions of the author of a modern work under this title.

BIBLIOTHECA, from /3t/3\oc, a bookv and QTJKTI, repository, properly signifies a library, i>. repository of books.

BIBLIOTHECA, in literature, denotes a collec- tion of the treatises of various writers on a cer- tain subject : thus, we have historical bihliothecse, as that of Diodor us Siculus ; mythological biblio- thecse, as that of Apollodorus ; theological and sacred bibliothecre, as those of Ravenellus; the Bibliotheca Veterum Patrum, or collection of the works of the early Fathers of the Christian church, published by Duport and others at Lyons, in 1677, in thirty folio volumes, &c. It is also used for a catalogue of the books in a library: such are the Bibliotheca Thuanaea, Bibliotheca Du-Boisiana, &c.

BIBLIOTHECA, in sacred literature, is applied to the books of the Old and New Testament, in respect to their excellency, and sufficiency for the uses of the Christian life.

BIBLIOTHECARIAN, or BIBLIOTIIECAKY, a librarian, or keeper of a library. The word is also used for the author of a bibliotheca, or a catalogue of books. In this sense P. L'Abbe, Gesner, Lipenius, Struvius, Fabricius &c. are celebrated bibliothecarians.

BIBLIOTHE'CARY, A Bi/3\iov, a book, and

BIBLIOTHE'TICAL, ' OT)KT], a depository ; a

BIBLIOTHE'KE, i place where books are

BIBLIO'LATRY. J deposited. The li-

brary bibliothecury is a librarian; bibliolatry is book idolatry.

What I said in my epistle to my reverend frieni and master, Doctor James, the incomparably indus- trious and learned bibliothecary of Oxford, I profess still ; but I hold those canons of the apostles unca- n unit1 ;il. Hall

BIC

This invention of erecting libraries, especially here at Rome, came from Asinius Pollio, who, by dedicat- ing his bibliotheque, containing all the books that ever were written, was the first that made the wits and workes of learned men a publicke matter, and a be- nefit to a commonweale. Holland. Plinie.

If to adore an image be idolatry,

To deify a book is bibliolatry. Byron.

BIBLIST7E, or BIBLISTS, an appellation given by Romish writers to those who pro- fess to adhere to Scripture alone as the sole rule of faith, exclusive of all tradition, and the supposed authority of the church. In this sense, all Protestants are, or ought to be, biblists. The word among Christians, answers nearly to caraites or textuaries among the Jews. But it arose more particularly from the doctors being divided, towards the close of the twelfth century, into two classes, viz. the biblici, and the scholas- tici ; the former were called doctors of the sacred page, becaxise they explained the doctrines of Christianity in their manner by the sacred writ- ings; their reputation, however, declined, and the scholastic theology prevailed in all the Euro- pean universities till the time of Luther.

BIBLUS, (3ij3\oc, in botany, an aquatic plant in Egypt, called also papyrus, of whose skin the ancient Egyptians made paper. Hence the Greeks gave the denomination of /3tj8\of to books.

BIBRACTE, in ancient geography, a citadel of the ˆEdui, according to Strabo ; but Caesar describes it as a town well fortified, large and populous, and of the greatest authority among that nation Some consider it to be Autun, others, Beurect, or Bevray, four miles north-west of Autun, in the department of the Saone and Loire.

BIBROCI, an ancient people of Britain, who inhabited that part of Berkshire, now called the Hundred of Bray.

BICANERE, a principality in the north- west of Hindostan, the precise dimensions and limits of which are scarcely ascertained. It extends from about 27Ā° 40′ N. lat. to 29Ā° 45’, and fiom 72Ā° 10′ to 74Ā° 15′ E. long.; and its superficial area probably amounts to about 17,000 square miles. It is bounded on the north by the country of the Battles; on the east by the territories of Hurrianah and Shek- hawuttee, in the province of Delhi; on the south-east by Jeypour; on the south-west by Jesselmere; and on the west by Bahawulpoor. This country is, in

general, a sandy plain, and water extremely scarce; but, as this circumstance constitutes a means of defence against invaders, it is tolerably well cultivated, and produces camels and sheep. The rajah is of the Rajpoot tribe, tributary to the Jondpore rajah, though his subjects are principally Jauts. Vast tracts are occupied with hills and valleys of loose heavy sand ; the former from twenty feet to 100 in height, shifting their position and altering their shape according to the influence of the wind; and, during summer, the moving sand frequently exhibits the phenomenon of the mirage, or threatens to overwhelm the exhausted traveller. But in the midst of arid tracts, the water-melon, a juicy fruit, grows in profusion, attaining the remarkable size of three or four feet in circum-

ference. The seeds are sown by the natives, and also grow wild. Water seems to be obtained only at immense depths.

The wild ass, famous for its speed and shy- ness, is often found here in herds. Antelopes and foxes are also seen in some parts. Of domesticated animals, horses, bullocks, and camels, are in great abundance; especially the last. The population is very scattered and uncer- tain. The rajah's military force amounts to about 10,000 men.

BICANERE, the capital of the above district, is spacious and well built. It is surrounded by a wall and encompassed by a broad and deep ditch. Long. 73Ā° 30′ E., lat. 28Ā° 55′ N.; from 270 to 280 miles north-west of Delhi.

BICALCARATUS, in zoology, a species of pavo; color, brown; the head slightly crested, and two spurs on each leg. This is pavo Chi- nensis of Brisson ; 1'eperonnier of Buffon ; petit paon de Malacca of Sonnerat ; and iris peacock of Latham.

BICARINATA, in zoology, a species of lacerta, with a tail compressed, and carinated above; and four rows of carinated scales on the back, of a gray color, and is found in Soutli America and India.

BICAUDA, from bis, double, and cauda, tail, in ichthyology, the name of a well tasted fish of the genus of xiphias. It is five feet long, or more, and a foot and a half broad at the breast, tapering gradually towards the tail : covered with a thick and rough skin, brown on the back and sides; and has three short bony prickles. Its belly is white; its fins of a brownish gray, and the back one has several beautiful black spots.

BICAUDALIS, in anatomy, an appellation given by some to a muscle of

the external ear, on account of its having two tails ; but which is sub- ject to great variety, having sometimes only one, and sometimes three tails ; in which cases it is called intricalis and tricaudalis.

BICAUDALIS, in ichthyology, a species of ostracion, of a triangular shape, with two sub- caudal spines and ten rays in the dorsal fin.

BICE', n. s. The name of a color used in painting. It is either green or blue.

Take green bice, and order it as you do your blue bice ; you may diaper upon it with the water of deep green. Peacham.

BICE, or BISE, in painting, is a color pre- pared from the lapis armenus. It bears the best body of all bright blues used in common work, as house-painting, &c. [but it is the palest in color. It inclines to be a little too sandy, and therefore requires good grinding. Next to ultra- marine, which is too dear to be commonly used, it lies best near the eye of all other blues.

BICEPS, the name of several muscles; as the biceps humeri or cubiti, biceps tibiae, &c. See ANATOMY.

BICESTER, BISSETER, or BURCHESTLR, a well built and ancient town of Oxfordshire, on the road between Oxford and Buckingham, about twelve miles from each, and fifty-five from London. It is noted for its good malt-liquor, and its lace. It has a mancet Ā«n Friday, and several sheep fairs. Inhabitants about 2600.

BICHAT (Maria Francis Xavier), a French

physician of considerable eminence, who was born in 1771, and died, much regretted, in 1802. He uus a pupil of the celebrated Desault, and wrote, 1. Recherches Physiologiques sur la Vie ot la Mort, 8vo. 1801. 2. Anatomic Generale applique a la Physiologic, &c. 4 vols. 8vo.. L'ans, 1801.

BICIIET, a quantity or measure of corn, which differs according to the places where it is used. The bichet is not a wooden measure, as the minot at Paris, or the bushel at London, but is com- pounded of several certain measures. It was used in many parts of France, &c.

BICHET denotes, also, a certain quantity of land, as much as may be sown by a bichet of corn.

BICINCTA, in entomology, a small species of vespa; color black, thorax spotted, with two yellow bands on the abdomen : found at the Cape of Good Hope. Also a species of teri- thredo: body black, two belts on the abdomen: mouth and shanks yellow : a native of Europe.

BICINUM, from bis, and cano, to sing, in church music, the singing of two, either together or alternately.

BICIP'ITAL, adj. 3 Biceps, bicipitis, Lat.

BICIP'ITOCJS, adj. 3 Having two heads. It is applied to one of the muscles of the arm.

A piece of flesh if exchanged from the bicipital muscleˆ)f either party's arm. Brown's Vulgar Errovrs.

While men believe bicipitous conformation in any species, they admit a gemination of principal parts.

Id.

BICK'ER, -\ Probably of Ang.Sax. ori

BICK'ERER, 'gin, pycar, to peck at, to be

BICK'ERING, (always attacking, skirmishing,

BICK'ERMENST. J or quarrelling. Skinner sug- gests the verb pickeer as the etymon ; to fight with pikes or spears, and from the brandishing ;md glimmering; flashing of these, perhaps is de- rived the application of the word to any thing that quivers, and is fitful, unsteady, giving a wavering light.

When that thine husbonde is to bed ygo,

While that he slepith cut his throte atwo ;

For in my dreme it is ywarned me,

How that my nevewe shall my bane ybe ;

But which In'ot \ wherefore I woll be siker :

if thou say naie, we two shall have a biker.

Chaucer. Leycnde of Hypermnettra.

When Artegall arriving happily,

Did stay awhile their greedy Uckerment,

Till he had questioned the cause of their dissent.

Spenser.

They fell to such a bickering, that he got a halting, and lost his picture. Sidney.

And from about him fierce effusion rowled

Of smoke, and bickering flame, and sparkles dire.

Milton.

The bickering sabre's shivering jar ā And pealing wide ā or ringing near Its echoes on the throbbing ear ; The death-shot hissing from afar ā The shock ā the shout ā the groan of war ā Reverberate along that vale, More suited to the shepherd's tale.

Byron. Giaour.

BICKERTON (Sir Richard), a brave English naval officer, was promoted to the rank of lieute- nant on the 8th of February 1745. After several removals, he was appointed captain of the Glas-

gow of twenty guns, and ordered to the West Indies, where he greatly distinguished himself. In June 1773, when the king reviewed the fleet at Portsmouth, captain Bickerton steered his Majesty's barge, and on the 24th of the same month received the honor of knighthood on board the Barfleur. In 1777 he was appointed to the Terrible of seventy-four guns, one of the ships attached to the Channel fleet, and was pre- sent at the engagement with the count d'Orvil- liers, off Ushant, on the 27th of July. In May next year, he was ordered on a cruise in the bav, and had the good fortune to fall in with thirty French merchant-ships, richly laden, under con voy of three frigates. Eight of the trading vessels were taken; but the war ships and the remainder escaped. In 1782 Sir Richard sailed with a convoy to India, and arrived in time to join Sir Edward Hughes, and share in the encounter which took place with Suffrein, in June 1783; when the French, after an engagement of three hours, thought proper to haul off. Soon after this action, intelligence of peace arriving in India,

hostilities ceased, and Sir Richard returned to England in 1784. In 1786 he was appointed commodore on the Leeward Island Station; from whence he returned as a passenger in September, 1787, and was promoted to the rank of rear- admiral of the blue. In 1790 he was made vice- admiral of the white, and appointed to command as port-admiral at Plymouth. He died on the 25th of February 1792; leaving his son, Sir Richard, a baronet, at that period rear-admiral of the blue ; and in 1806, vice-admiral of the white.

BICKERTON'S ISLAND, an island of the South Pacific, in the nineteenth degree of south lati- tude, and 175th of west longitude. It was dis- covered by the Spanish captain Morello in 1781, and is called Lattai by the natives. It consists principally of a conical volcano, having its base covered with a fertile soil, and its sides clothed with forests. Its products are bananas and cocoa nuts. This is also a name given to a small island in the gulf of Carpenteria, about four miles from the shore of New Holland.

BICLINIUM, in Roman antiquity, a chamber with two beds in it ; or a table with only two couches.

BICOLOR, in entomology (of two colors), the name of several different species of insects, according to Fabricius, Gmelin, and other wri- ters, but which are too numerous to enumerate.

BICOLOR, in conchology, a species of donax, marked with elevated striae, which decussate a few transverse ones ; rufous, with a white ray on one side. Also a species of pinna found in the Red Sea. This is thin and inflected at the late- ral margin ; yellow, with dark brown rays, and a few longitudinal striae.

BICOLOR, in ornithology, a species of alcedo ; color green, and golden rufous beneath ; a black and white waved band on the breast ; the wings and tail spotted with white. A native of Cayenne. Also a species of fringilla ; the Bahama sparrow of English writers ; color, head and breast, black ; back, wings, and tail, green- ish ; length four inches. Also a species of lanius, color blue ; white beneath. This is lanius Ma-dagascariensis caeruleus of Brisson ; pie-griesche

bleu de Madagascar of Buffon : and blue shrike of Latham. Also a

species of loxia found in the East Indies only ; the brunor of Buffon. Also a species of muscicapa, a native of Guiana ; the black and white flycatcher of Latham.

BICOLORATA, in entomology, a species of phalaena geometra; wings blue and striated; anterior pair black, spotted with white ; inhabit- ing Surinam. Also a species of scarabaeus melolontha; color green; testaceous beneath; legs tipped with gold.

BI CORD ATA, a species Df cicada, ranatra; wing-cases black on both sides ; a line in ‘the middle ; the legs yellow. Inhabiting Carniola. BIC’ORNE, adj. > Lat. bicornis, having two BIC’ORNOUS, adj. 3 horns.

We should be too critical, to question the letter Y, or bicornous element of Pythagoras ; that is, the making of the horns equal. Brown’* Vulgar Errowrt. BICORNE Os, or two horned bone ; in ana- tomy, the same with the os hyoides.

BICORNES, an order of plants in the frag- menta methodi naturalis of Linnaeus, so termed from the antherse having in appearance two horns. BICORNIS, in anatomy, an extensor muscle of the arm, otherwise denominated radius exter- nus, and extensor carpi radialis.

BICORNIS, in natural history, a species of pla- naria, with an ovate-lanceolate obtuse body, of a grayish ash-color, dotted with black ; and two very short divergent tubes on the fore part. This is the fasciola punctata of Pallas. Also a species of actinia found in the North sea. This kind is hemispherical-oval, and glabrous with two horns. BICORNIS, in entomology, a species of scara- baeus, with two horns on the thorax ; a curved horn on the head, and rufous wing-cases. In- habiting South America. Also the name of a species of hispa, curculio, cassida, mantis, apis, and aranea.

BICORNIS POIXICIS MANUS, the proper exten- sor muscle of the thumb ; also called tricornis ; and abductor pollicis longus.

BICORPORAL SIGNS, or BicoRPOREASiGNA, from bis, and corpus body ; in astronomy, those signs of the zodiac which have two bodies, or consist of two figures ; such as gemini, pisces, and Sagittarius.

BICOSTELLA, in entomology, a species of phalsena tinea, found in Europe. Color cinere- ous, with a brown stripe on the anterior wings ; feelers advanced ; antennae downy.

BID’, ˆ Sax. bifcban. To desire ; to ask ; BID’DER, S to call ; to invite ;

to command ; to BID’DING. 3 order; before things or persons; to offer ; to propose ; as to bid a price ; to pro- claim ; to offer; or to make known by some public voice ; to pronounce ; to declare ; to denounce ; to pray. See BEAD.

Wondring upon this thing, quaking for drcde, She saide : Lord ! indigne and unworthy Am I to thilke honour, that ye me bede.

Chaucer. Canterbury Tales.

Go ye into the highways, and, as many as you shall find, bid to the marriage. Matt. xxix. 9.

You are retired,

As if you were a feasted one, and not The hostess of the meeting ; pray you bid These unknown friends to ‘s welcome.

Shaktpeare,

Saint Withold footed thrice the wold, He met the nightman,, and her nine fold, Bid her alight, and her troth plight. Id.

I am bid forth to supper, Jessica ; There are my keys. Id. Merchant of Venice. Thyself and Oxford, with five thousand men, Shall cross the seas, and bid false Edward battle.

Id. Henry VI

Come, and be true.

ā Thou bidit me to my loss ; for true to thee Were to prove false. Id. Cymbeline.

Or if the star of evening and the moon Haste to thy audience, Night with her will bring Silence, and deep listening to thee will watch, Or we can bid his absence, till thy song End, and dismiss thee ere the morning shine.

Milton.

If patiently thy bidding they obey, Dismiss them not disconsolate ; reveal To Adam what shall come in future days, As I shall thee enlighten; intermix My covenant in the woman’s seed renewed ; So send them forth, though sorrowing, yet in peace.

Id.

She bid war to all that durst supply The place of those her cruelty made die.

Waller.

To give interest a share in friendship, is to sell it

by inch of candle ; he that bids most shall have it :

and when it is mercenary, there is no depending on it.

Collier on Friendship.

When a man is resolute to keep his sins while he lives, and yet unwilling to relinquish all hope, he will embrace that profession which bids fairest to the reconciling those so distant interests. Decay of Piety

‘Tis these that early taint the female soul, Instruct the eyes of young coquettes to roll, Teach infants’ cheeks a bidden blush to know, And little hearts tiĀ» nutter at a beau.

Pope’s Rape of the Lock.

Our bans thrice bid ! and for our wedding day . My kerchief bought ! then pressed, then forced away.

Gay.

He looked upon several dresses which hung there,

exposed to the purchase of the best bidder. Addison.

She [Fancy] bidt the flattering mirror, formed to

please,

Now blast my hope, now vindicate despair ; Bids my fond verse the love-sick parley cease, Accuse my rigid fate, acquit my fair.

Shenstone’s Elegies.

BIDALDI, or BIDARII, an ancient kind of foot soldiers mentioned by the French histori- ans, armed with two darts. Hence the original of the word, which seems to be a corruption of bidardi, or a binis dardis. They are also called bidaus, bideaux, bidauts, and pitauts.

BIDASSOA, or VIDASSO, a considerable river of Spain, which rises in the Pyrenees, and falls into the Bay of Biscay, between Andaye and Fon- tarabia. This river was long a subject of con- tention between France and Spain, but is now common to both nations. The duties paid by those passing from France to Spaiu belong to the latter, and by those who pass the contrary way to the former. At, the mouth is th; Isle of Phea- sants, on which the peace of the Pyrenees was signed in 1659.

BIDDERMAN (John Gottlieb), was born at Naumberg in Germany, in 1705, and became rector of the college there This he resigned for the more lucrative situation of rector of the pub- lic school at Friedburg in 1 747> and continued

in its duties until his death in 1772. He was the author of several learned treatises, among; which are, De Latinitate Maccaronica ; A eta Scholastica, in eight volumes ; and Selecta Scho- lastica, in two ; De arte Obliviscendi ; De Inso- lentia Titulorum Librarioram; De Religione Eruditorum, &c.

BIDDEFORD. a port of entry, and post

town, of the district of Maine, North America,

- situated in York county, at the mouth of Saco

river. It is 105 miles from Boston, and 452

from Philadelphia.

BIDDEFORD, a sea-port and post town of the United States of America, in the province of Maine, containing above 1000 inhabitants, and 105 miles from Boston.

BIDDEFORD, or BIDEFORD, a market and sea- port town of Devonshire, seated on the river Torridge, near its junction with the Taw, over which there is a good stone bridge of twenty-four arches. It is a large and populous place, and carries on a considerable trade, principally to the West Indies and America ; it is also engaged in the Newfoundland fisheries. The custom-house is a good building,

opposite a noble quay, where ships of large biirden may unload. Oak bark is exported here in considerable quantities. Car- pet, woollen, and earthenware manufactures are established in the town, and the neighbourhood abounds with fine timber. The church was twice enlarged during the last century, and here are two respectable dissenting chapels. It is governed by a mayor, recorder, seven aldermen, and ten capital burgesses, who, in the reign of Edward I. and II., sent two members to parlia- ment ; but the poverty of the place shortly after induced the inhabitants to decline this burden. The market is on Tuesday, and well supplied with corn, cattle, and provisions. It is thirty miles north of Exeter, and 201 west from London.

BIDDING is also used for proclaiming or noti- fying. In this sense we meet with bidding of the bands, the same with what is otherwise called asking.

BIDDING, or OFFERING, denotes the rising price of a thing at a sale or auction. The French call it encherir. It answers to what the Romans call licitari ; they used to bid by holding up the hand or finger.

BIDDING OF THE BEADS. See BEADS.

BIDDING PRAYER. It was a part of the office of the deacons in the primitive Christian church, to be monitors and directors of the people in their public devotions. To this end they used certain forms of words, to give notice when each part of the service began. This was called by the Greeks KIIOVTTUV, and by the Latins praedi- care : which therefore do not ordinarily signify to preach, as some suppose, but to perform the office of a crier (>jj(n>Ā£, or preeco) in the assem- bly : whence Synesius and others call the deacons upoKTjpvKit, the holy criers of the church, appoint- ed to bid or exhort the congregation to pray and join, in the several parts of the service of the church. Agreeably to this ancient practice is the form, Let us pray, repeated before several of the prayers in the English liturgy.

BIDDLE (John), one of the most eminent writers among the English Socinians, was born

at Wotton-under-Edge in Gloucestershire, and educated in the free school of that place. He was here particularly noticed by George Lord Berkeley, who allowed him an exhibition of Ā£10 a year. While at school he made a translation of Virgil's Bucolics, and of the first two Satires of Juvenal. At thirteen he was sent to Oxford, and entered a student in Magdalen-hall. In 1G41 the magistrates of Gloucester chose

him master of the free school there, and where he was much esteemed ; but contracting some opinions concerning the Trinity different from those com- monly received, and expressing his thoughts with freedom, he suffered various persecutions and imprisonments in the time of the Commonwealth. During one of these confinements, which lasted for several years, being reduced to great indi- gence, he was employed by Roger Daniel of London, to correct the impression of the Greek Septuagint Bible, which that printer was about to publish. In 1651 the parliament published a general act of oblivion, which restored him to liberty. He was however afterwards imprisoned on account of his tenets; and the Protector, in October, 1655, seems to have doomed him to be confined for life in St. Mary's castle, in the Isle of Scilly. Soon after, he was allowed 100 crowns a year for subsistence. But in 1658 he was again at liberty. After the Restoration, he was fined Ā £100 for preaching, and each of his hear- ers Ā£20, or to lie in prison till the fines were paid ; which being put in execution, Bid die contracted a jail distemper, of which he died 22d Sept. 1662, in the forty-seventh year of his age. His life was published in Latin in 1682, by Mr. Farrington, who represents him as pos- sessed of extraordinary piety, charity, and hu- mility. He would not discourse, we are told, of those points, in which he differed from others, with those that did not appear religious accord- ing to their knowledge ; and was a strict observer himself, and a severe exacter in others, of reve- rence in speaking of God and Christ. He had so happy a memory, that he retained word for word nearly the whole New Testament, not only in English, but in Greek.

BIDE, l Sax. biban. To endure ; to suf- BI'DING. $ fer : commonly to abide ; to dwell ; to live; to inhabit; to remain in a place; to continue in a state. It has probably all the sig- nifications of the word abide.

Certes your strife were easie to accord, Would ye remit it to some righteous man, Unto yourselfe, said they! We give our word To bide what judgment ye shall us afford. Spenser. And they also, if they bide not still in unbelief, shall be grafted in. Romans, xi. 23.

Safe in a ditch he bides,

With twenty trenched gashes on his head,

The least a death to nature.

Shakspeare. Macbeth.

Who of all ages to succeed, but feeling The evil on him brought by me,

will curse My head ? Ill fare our ancestor impure, For this we may thank Adam; but his thanks, Shall be the execration ; so besides Mine own that bide upon me, all from me Shall with a fearful flux on me redound ; On me as on their natural centre light, Heavy though in their place. Milton.

BID i-

The wary Dutch this gathering storm foresaw. And durst not bide it on the English coast. JDryden.

BIDENS, in botany, (water hemp-agrimony : a genus of the polygamia aequalis order, and syngenesia class of plants ; ranking in the natu- ral method under the forty-ninth order, compo- site oppositifoliae. The receptacle is paleaceous; the pappus with erect scabrous awns ; and the calyx imbricated. Of this genus Linnaeus enu- merates thirteen species, none of which appear to merit much notice, except the tripartita, found by the sides of rivulets, ditches, and lakes, both in Scotland and England. It grows to the height of two feet, and has its leaves divided into three or often five, lanceolate serrated lobes, with yel- low flowers. A decoction of it with alum, dyes yarn of a yellow color. The seeds have been known sometimes to destroy the cyprinus aura- tus, or gold fish, by adhering to their gills and jaws.

BIDENS, in conchology, a species of mytilus, dentated and slightly curved, having the poste- rior margin inflected, and the hinge bidentated. A native of the Mediterranean and Atlantic. Also a species of nerita, smooth, and inner lip bidentated. This shell is black, reddish, or some- times yellow, clouded with whitish, with three Mack bands.

BIDENS, in entomology, a species of scarabaeus, found in America. The head and thorax are brassy-green and downy : wing-cases testaceous, glossed with green. Also the name of a species of formica, vespa, cimex, sphex, mantis, curculio, and cassida.

BIDENTAL, } Bis, two, and dens a tooth,

BIDEN'TALE. S Latin, having two teeth.

Ill management of forks is not to be helped, when ,hey are only bidental. Swift.

BIDENTAL, in Roman antiquity, a place olasted with lightning ; which was immediately consecrated with the sacrifice of a bidens. The place was afterwards accounted sacred, and it was unlawful to enter it or to

tread upon it; for which reason it was commonly surrounded with a ditch, wall, hedge, ropes, &c. See next article.

BIDENTALES, in Roman antiquity, priests instituted to perform certain ceremonies when thunder fell on any place. Their office was the sacrificing a sheep of two years old, which in Latin is called bidens ; whence the place struck with thunder obtained its name of bidental.

B1DENTATA, in entomology, a species of apis inhabiting America. The abdomen is brown, with five whitish belts ; vent bidentated. Also a species of phalaena noctua. A native of Europe; wings brown ; a bidentated streak in the middle. Also a species of chrysis, a native of Europe. Color shining blue; thorax armed with two teeth, and at the vent also are three short teeth.

BIDENTATUS, a species of bostrichus; color black and testaceous, and armed at the ex- tremity with two hooked spines. Also a species of cryptocephalus crioceris. A native of Africa. Also a species of cerambyx found in South America. The thorax spinous ; wing-cases bidentated and brown. Also a species of ich-

neumon that inhabits Europe. Color black, and on the thorax are two teeth. Also a species of cimex spinosus, found only in France. Color brown ; thorax armed with two teeth on the an- terior part beneath.

BIDENTES, in middle age writers, denotes two-yearlings, or sheep of the second year. The wool of these bidentes, or two-years-old sheep, being the first shearing, was sometimes claimed as a heriot to the king, on the death of an abbot. Among the ancient Romans, the word was ex- tended further to any sorts of beasts used for victims, especially those of that age ; whence we meet with sues bidentes.

BIDET, a nag or little horse, formerly allowed each trooper and dragoon, for his baggage, &c It has lately been applied to a convenient wash- ing basin, across which the operator sits.

BIDLEI, an order of magistrates at Sparta, five in number, whose business was to superin- tend the ephebi, and be present at their exercises, wrestlings, &c.

BIDI-BIDI, in zoology, a name of the rallus Tamaicensis of Latham.

BI DIS, in ancient geography, a small city of Sicily, near Syracuse, whose ruins are still seen about fifteen miles to the south-west, with a

church called S. Giovanni di Bidini.

BIDLAKE (Dr. John), was born in 1755 at Plymouth, and brought up at the grammar- school there, of which, having completed his education at Christ Church, Oxford, he was afterwards the high master. Three years before his death, he was seized with an epileptic fit in the pulpit, while delivering the Bampton lecture at St. Mary's, which terminated in the total loss of sight. In addition to the lecture above men- tioned, he published an Introduction to Geogra- phy, 12mo. ; The Sea; The Country Parson; The Summer Eve ; The Year ; and Youth ; po- ems, separately printed in octavo, &c.

BIDLOO (Godfrey), author of several trea- tises in anatomy, was born at Amsterdam, March 12th, 1649. In 1688 he was professor of anatomy at the Hague, and in 1694 at Ley den, when king William III. of England appointed him his physician; which he held with his professorship. He published in Latin, 1. The Anatomy of the Human Body, demonstrated in 105 cuts, ex- plained by the Discoveries of the Ancient and Modern Writers. 2. An Oration upon the An- tiquity of Anatomy. 3. A Letter to Anthony Leuwenhoeck on the Animals sometimes found in the Livers of Sheep, &c. 4. Two Decades of Dissertations in Anatomy and Chirurgery ; and other pieces. He died at Leyden in April, 1713. BIDON, a liquid measure, containing about five pints of Paris, that is, about five quarts Eng- lish wine measure. It is seldom used but among ships' crews.

BIDREAP, an old feudal service, by which a tenant was obliged to reap his landlord's corn.

BIE (Adrian de), an eminent painter, waĀ« born at Liere in 1594. After learning the rudi ments of the art from different masters, he travelled to Rome, where he spent six years in studying the best masters. His industry was then rewarded with proportionable success; for he found encouragement among the most honorable

persons at Rome, and in every part of Italy. His penciling was so exceedingly neat, and his (ouch and coloring so very delicate, that he was frequently employed to paint on jasper, agate, porphyry, &c.

BIEEZ, a town of Poland, in the palatinate of Cracovia, remarkable for

its vitriol mines.

BIELAU, a considerable town of Silesia, in the circle of Reichenbach, containing between 6000 and 7000 inhabitants, who are chiefly employed in weaving serge, fustian, and muslin, and export ?reat quantities. It contains several good houses, with four Catholic aad Lutheran churches, and a castle.

BIELEFELD, a town of the Prussian states, the capital of the county of Ravensberg, in the grand duchy of the Lower Rhine. There are 5500 inhabitants, who conduct flourishing manu- factures of leather, soap, woollen stuffs, linen, and thread, along with excellent bleaching grounds. The trade in linen is large, and at one time brought yearly into circulation half a mil- lion dollars of foreign money. Twenty-two miles north of Lippstadt, and twenty-five east of Munster.

BIELGOROD, an old town of European Rus- sia, near the southern borders of the government of Kursk. It was built by the grand duke Wladimir in 990; is an archbishop's see, and contains 9000 or 10,000 inhabitants, who carry on a good trade in honey, wax, tallow, leather, and soap. This town submitted to the arms of Potemkin in 1 790, and is sixty-eight miles south- west of Kursk.

BIELLA, BIELA, or BIOGLIO, a small popu- lous town of Piedmont, the capital of a small district, called from it the Biellese. It is partly on the summit, and partly on the declivity of a hill near the Cervo and Opora, and divided into Upper and Lower town, containing four churches and four monasteries. Population 8250. Twenty- four miles north-west of Vercelli, and Unity-five N. N. E. of Turin.

BIELO-OzERo, or BIELOSERSK, i. e. White Lake, a lake in the government of Novogorod, European Russia, so called from its bottom being of white clay. It is about thirty miles long, and eighteen broad, and receives a number of small streams ; the Scheksna flows from it southward to the Volga. This lake abounds in fish; and on its south bank stands the town of Bielosersk.

BIELOPOLJE, a town of European Russia, in the government of Charkov, with 9050 inhabi- tants, who are engaged in agriculture and the distillation of brandy. Eighty-eight miles N.N.W. of Charkov, and 555 S. S. E. of St. Petersburg!!.

BIELOSERSK, a town in the government of Novogorod, European Russia, on the south bank of the lake of Bielo-Ozero. It is the capital of a circle, and consists of the fortress and the sub- urb ; having 2800

inhabitants, who support themselves principally by fishing. Sixty-four miles north-east of Vologda, and 220 E. N. E. of Novogorod.

BIENNE, a district of Swisscrland, between the lake of that name, and a branch of the Jura range of mountains. It was annexed to the canton of Bern by the congress of Vienna in 1815, iiud is in ˆ‘tent about 150 square miles; the

population nearly 6000. The bishop of Basle was the former sovereign, under whom it pre- sented the phenomenon of a Protestant state, having a Catholic ruler; but his power was materially limited by the privileges of the people. Forming an important pass into Swisserland, it was early taken possession of by the French in 1798, and when annexed for awhile to their em- pire, was included in the department of the Upper Rhine.

BIENNE, or BIEL, the capital of the foregoing district, is situated on the Suss, at the north- ern extremity of the Bienne lake. It has about 2700 inhabitants, who carry on various manufactures of iron, wire, leather, and chintz. The town is about fifteen miles north-west of Bern.

BIENNE, LAKE OF, in the above district, is about nine miles long and four broad, lying north-east of that of Neufchatel, with which it is connected by the river Thielle. The scenery on both sides is highly picturesque, interspersed with vineyards, country houses, &c. The town of Nidau is a pleasing object on its eastern shore. Near the southern extremity is the island of St. Peter, sometimes called Rousseau's Island, from its having been the place of that philoso- pher's residence ; who was so partial to this spot, that he deemed the two months he spent there, 'so happy,' he says, 'that he could have passed his whole existence there, without even a mo- mentary wish for another situation.

BIEN'NIAL, lasting or continuing two years; from bis two, and annus a year.

Then why should some be very long lived, others only annual or biennial ? Ray on the Creation.

BIENNIAL PLANTS, plants that last only two years. Numerous plants are of this tribe, which, being raised one year from seed, generally attain perfection either the same, or in about the period of a twelvemonth (a little less or more), and the following spring or summer they flower, and perfect seeds ; soon after which they commonly perish : or if any survive another year, they dwindle, and gradually die off; so that biennials are always in their prime the first or second summer. Biennials consist both of esculents and flower plants. Of the esculent kinds, the cab- bage, savoy, carrot, parsnip, beet, onion, leek, &c. are biennials. Of the flowery tribe, the Can- terbury bell, French honeysuckle, wall-flower, stock, July flower, sweet-william, China pink, common pink, mattod pink, carnation, scabious, holly-hock, tree mallow, vervain mallow, tree primrose, honesty, or moonwort, &c. are all of this tribe; all of which being sown in March, April, or May, rise the same year, and in spring following shoot up into stalks, flower, and per- fect seeds in autumn ; after which rrost of them dwindle : though sometimes the wall-flowers, holly-hocks, carnations, and pinks will survive and flower the following year; but the plants become straggling, the flowers small and badly colored ; it is therefore eligible to raise a supply annually

from seed ; although wall-flowers, car- nations, and pinks may be continued by slips and layers.

BIER’, Ang.-Sax. bseran, to bear; from to bear, as fcretrum, in Latin, from fero. A car

riage, or frame of wood, on which the dead are carried to the grave.

And now the prey of fowls he lies, Nor wailed of friends, nor laid on groaning bier.

Spenser.

They bore him bare-faced on the bier, And on his grave rained many a tear. Shaktpeare.

He must not float upon his watery bier Unwept. Milton.

No friend’s complaint, no kind domestic tear Pleased thy pale ghost, or graced thy mournful bier.

Pope.

l?ut the white shroud, and each extended tress, Long ā fair ā but spread in utter lifelessness, Which late the sport of every summer wind, Escaped the baffled wreath that strove to bind ; These ā and the pale pure cheek, became the bier ā But she is nothing ā wherefore is he here.

Byron’s Corsair.

BIER, was in former times, more particularly used for that whereon the bodies of saints were placed in the church, and exposed to the vene- ration of the devout. This is also called, in middle-age writers, lectus, feretrum, lectica, and loculus; and was usually enriched with gold, silver, and precious stones.

BIERS, among the ancient Romans, were dif- ferent according to the rank of the deceased. That whereon the poorer sort were carried was called sandapila ; that used for richer persons, lectica, lectica funebris, sometimes lectus. The former was only a wooden chest, vilis area,

which was burnt with the body ; the latter was enriched and gilded. It was carried bare, or uncovered, when the person died a natural and easy death ; when lie was much disfigured or distorted, it was veiled or covered over.

BIERON, or BIHERON (Mademoiselle), an in- genious Parisian lady, was born in 1719 and died in 1795. She studied most of the fine arts with success ; but is chiefly deserving of notice for her knowledge of anatomy, and the curious mo- dels in wax of various parts of the animal struc- ture, which, together with her paintings on vellum of subjects belonging to natural history, are pre- served in the Museum of Natural History at Paris. The empress of Russia bought several for her cabinet, now in the Museum of Natural History at Petersburgh.

BIKSBOSCH, a lake or arm of the sea, be- tween Dort and Gertruydenburg, in South Hol- land. It was formed by the bursting of the dykes in the year 1421, when seventy-two villages with their inhabitants (which, including the peasantry, are said to have been 100,000 iu number,) were suddenly overwhelmed and de- stroyed. The only remains of this once fruitful tract are a few islands. It is supplied with wa- ter from the Maese, and gives rise to the broad water of Holland's-diep, or Haringsvliet.

BIEST'ING, n. s., byf-tmg, Saxon. The first milk given by a cow after calving, which is very thick.

And twice besides, her biestings never fail To store the dairy with a brimming pail. Dryden.

BIETIGHEIM, a town and upper bailiwic of Wirtemberg, at the coniluence of the Metter and the Enz. It is the seat of an ecclesiastical

superintendent, and contains 2200 inhabitants Here is a handsome stone bridge across the Enz The territory is fertile in wine and fruit : fifteen miles north of Stutgard, and thirty S. S. E. 01 Heidelberg.

BIFA'RIOUS, adj., Lat. bifanus ; twofold; what may be undeistood two ways.

BIFASCIANA, in entomology, a species of phalaena tortrix. The anterior wings, testaceous ; two oblique bands, and mark at the apex, brown. Inhabiting Europe.

BIFASCIATA, in concnology, a species of bulla, somewhat tapering and white, with two broad reddish bands at the aperture. Also a species of cypraea, of an oblona; form ; color, purplish, with a straw-

colored and narrow white band. Also a species of neriia: color, black; with two hoary bands and white tip. A native of India.

BIFASCIATUS, in entomolo-jy, a species of scarabae is that inhabits Coromatidel : on the thorax is a triple protuberance, with an erect horn on the head ; wing-cases, black ; with two rufous bands. Also a species of dennestes, of a black color : a native of the Cape of (Jood Hope. Also a species of bostrichus, found in Siberia; color, black ; wing-cases, yellow ; with two bluish- black denticulated bands. Also a species of cryp- tocephalus, inhabiting Africa.

BIFASCIELLA, a species ofphalani, tinea; wings, glossy ; with two bands of white, the hinder one interrupted ; head, rufous : a native of Denmark.

BIFERJE, plants that flower twice a year, m spring and autumn, as is corrmon between the tropics.

BI'FEROUfc, adj. Lat. biferens; bearing fruit twice a year.

BIFFA, in middle-age writers, a machine for casting stones and darts, having a movable coun- terpoise, which turned round its yard.

Bl'FlD, adj. \ Lat. bifidus, a botanical term ;

BI'FIDATED. J divided into two ; split in two ; opening with a cleft.

BIFIDUS, in entomology, a species of cimex reduvius : color, black ; with a rufous band on the wing-cases, and an erect bifid spine on the scutel. Inhabiting China.

BIFOLD', adj. Lat. from binus and fold; two- fold ; double.

If beauty have a soul, this is not she ; If souls guide vows, if vows arc sanctimony, If sanctimony he the gods' delight, If there be rule in unity itself, This is not she : O madness of discourse ! That cause sets up with and against thyself! Bifold authority, Sha'kspeare. Troilia and Cressida.

BIFORIS, in natural history, a species of echinus, having at the base five furrows, and ten flexuous radiated lines ; and two oblong perfora- tions near the vent.

BI'FORM, > Bis and forma; double formed;

BI'FORMITY. } having two shapes.

And from whose monster-teeming womb, the earth Received what much it mourned, a biform birth.

Croxall. Ovid. Met.

Strange things he spoke of the biformity

Of the Dizonians. More. Song of the Soul.

BIG

BIFRONS, in entomology, a species of bren- tus, inhabiting Cayenne : color, black ; wing- cases, striated ; with glabrous yellow spots. Also a species of ichneumon : color, black ; the front, white, with a black spot beneath the antennae. Also, in natural history, a species of nereis, a native of the North Sea. It is depressed : pe- duncles, with a simple setigerous papilla, cirrated above. This creature is continually in motion ; about an inch long, of a brownish color ; head, white; eyes, four; cirri, seven; body, attenuated at both ends, and consisting of fifty-six joints.

BIFRONS, in ancient mythology, an appellation of Janus, who was represented with two faces, as being supposed to look both backwards and for- wards, to time past and future ; though other reasons for it are recited by Plutarch. Some- times he was painted with four faces, and styled quadrifrons, as governing the four seasons.

BIFRONTED. Bis and frons. Having two fronts ; double fronted.

Lictors, gag him : doe ; And put a case of vizards o'er his head, That he may look bifronted as he speaks. Ben Jo-nson.

BIFURCATED, J Lat. from binus two, and BIFURCATION. $furca a fork. Shooting out by a division into two heads ; divisions into two ; opening into two parts.

The first catachrestical and far derived similitude, it holds with man ; that is, in a bifurcation, or divi- sion of the root into two parts. Brown's Vulgar Errours. A small white piece, bifurcated, or branching into two, and finely reticulated all over. Woodward.

BIFURCATUS, in entomology, a species of cimex oblongus, inhabiting Germany : color, blackish ; abdomen, pale yellow, and bifurcated. BIG' v & adj. ˆ Big may be a prefix to BIG'GER, or almost any thing. Its ety-

BIG'LY, mology is uncertain ; but its

BIG’NESS, meaning, from usage, is ob-

BIG’BELLIED, , vious enough. Skinner de- BIG’BONED, frives it from peg, Danish, BIG’NAMED, which signifies the belly.

BIG-SOUNDING, Perhaps, says the etymolo- BIG’SWOLN, gist in the Ency. Met. it is

BIG’UDDERED. J from the Ang.Sax. bycgan, byggan, to big, to build. Jatnieson and Ritsori both agree as to this usage of the word. How ever, it cannot be restricted to enlargement by building. It takes an infinitely wider range ; thus it signifies comparative bulk, greater or less ; teeming, pregnant, great with young, tumid, full of something, and desirous or about to give it vent ; distended, ready to burst ; used often to express the effects of any passion ; great in air and mien ; proud ; swelling ; consequential, not the ox which is great, but the frog that apes the ox; that would be great, but is only big; yet is it sometimes used in a better sense, as great in spirit ; lofty ; brave.

How else, said he, but with a good bold face, And with big words, and with a stately pace ?

Spenser.

If you had look’d big, and spit at him, he’d have *un- Shakspeare. Winters’ Tale,

His gentle lady,

Big of this gentleman, our theme, deceased As he was born. Id. Cymbeline.

What art thou ? have not I An arm as big as thine ? a heart as big ? Thy words, I grant, are bigger : for I wear not My dagger in my mouth. /^.

Thy heart is big ; get thee apart, and weep.

Id. Julius Caesar.

When we have laugh’d to see the sails conceive, And grow bigbellied with the wanton wind.

Shakspeare.

If panicum be laid below, and about the bottom of a root, it will cause the root to grow to an excessive bigness. Bacon.

A bear big with young hath seldom been seen.

Id.

Lately on yonder swelling bush, Biff with many a common rose, This early bud began to blush. Waller.

Behold a wonder ! they but now who seemed In bigness to surpass earth's giant sons, "Now less than smallest dwarfs in narrow room Throng numberless, like that pygmean race Beyond the Indian mount. Milton.

The big-boned oxe, in pace is very slow, And in his travaile step by step doth goe.

Geo. Wither.

In his prosperous season, he fell under the reproach of being a man of big looks, and of a mean and ab- ject spirit. . Clarendon.

To grant big Thraso valour, Phonnio sense, Should indignation give, at least offence. Garth. Would'st thou not rather choose a small renown, To be the mayor of some poor paltry town ; Bigly to look, and barbarously to speak ; To pound false weights, and scanty measures break ?

Dryden.

We pursued our march, to the terror of the market people, and the miscarriage of half a dozon bigbellied women. Addison.

The great, the important day, Big with the fate of Cato and of Rome. Id.

Might my bigswoln heart

Vent all its griefs, and give a loose to sorrow. Id. A troubled ocean, to a man who sails in it, is, I think, the biggest object that he can see in motion.

Spectator.

Several sorts of rays make vibrations of several bignesses, which, according to their bit/nesses, excite sensations of several colours ; and

the air, according to their bignesses, excites sensations of several sounds.

Newton’s Opticks.

her bosom heaved

Unwonted sighs, and stealing oft a look Towards the big gloom, on Celadon her eye Fell tearful, wetting her disordered cheek.

Thomsonˆ

BIG, Scotch barley, a species of HORDEUM, which see.

BIG SANDY RIVER, a river of North America, which separates the state of Virginia from that of Kentucky, and falls into the Ohio, in lat. 38Ā° 30′ N. It is about sixty yards wide, and navigable for sixty miles. Little Sandy River falls into the Ohio, about twenty miles west of Big Sandy River.

BIGA, in antiquity, a chariot drawn by two horses abreast. Chambers observes it ought ra- ther to be written Bigae, in the plural ; being derived from bijuga, two horses joined by a jugum, or yoke. Chariot-races, with two horses, were introduced into the Olympic games in the ninety-third Olympiad : but the invention was much more ancient, as we find that the heroes in

the Iliad fight from chariots of this kind. The moon, the night, and the morning, are bymytho- logists supposed to be carried in bigse, the sun in a quadriga. Statues in bigs were at first only allowed to the gods, then to conquerors in the Grecian games ; under the Roman emperors, similar statues, with bigae, were decreed to great and well-deserving men, as a kind of half tri- umph, being erected in most public places of the city. Figures of bigac were also struck on their coins.

BIGA, BIGATA, or BIROTA, in writers of the middle age, a cart with two wheels.

BI’GAM, “} Aic and ya/itw, twice and to BIG’AMOUS, f unite in marriage. A bigame, BIG’AMIST, Ā£is either a man or woman

BIG’AMY. J who has been twice married, whether the first spouse be living or not. This is the precise meaning of the word ; but it is now applied only to those who have contiacted matrimony twice, and where all the parties are alive. This is both a civil and canonical of- fence.

A beauty-waning and distressed widow Seduced the pitch and height of all his thoughts To base declension, and loathed bigamy.

Shakspeare.

Randal determined to commence a suit against

Martin, for bigamy and incest. Arbuthnot and Pope.

By the papal canons, a clergyman that has a wife,

cannot have an ecclesiastical benefice ; much less can

a bigamist have such a benefice according to that law.

Ayliffe.

Bigamy, according to the canonists, consisted in marrying two virgins successively, one after the other, or once marrying a widow.

Blackstone’s Commentaries.

BIGAMY properly signifies being twice mar- ried, but with us is used as synonymous to polygamy, or having a plurality of wives at once. Such second marriage, the former husband or wife being alive, is simply void, and a mere nullity, by the ecclesiastical law of England ; and yet the legislature has thought it just to make it felony, by reason of its being so great a violation of the public economy and decency. Whatever specious reasons may be urged for it in eastern nations, it never obtained in this part of the world, even from the time of our German ances- tors, who, as Tacitus informs us, ‘ prope soli barbarorum singulis uxoribus content! sunt.’ It is therefore punished by the laws both of ancient and modern Sweden with death. And in Britain it is enacted by stat. 1 Jac. I. c. 11, that if any person being married, do afterwards marry again, the former husband or wife being alive, it is felony, not within the benefit of clergy. The first wife *Ā» this case shall not be admitted as an evidence against her husband, because she is the true wife ; but the second may, for she indeed is no wife at all : and so vice versa, of a second hus- band. The 18 Eliz. c. 7, s. 2 and 3 (a statute not noticed by Blackstone), inflicts the punish-

ment of branding in the hand, and imprisonment for any term not exceeding one year; and by 35 Geo. III. c. 67. s. 1 . bigamy is subjected to the lame punishments with grand or petit larceny, Jhe effect of which is, that the burning in the land may be commuted for seven years' trans- {ortatinn, and the limit to the duration of the

imprisonment is wholly taken away. The sl?- tutes, however, against second marriages, exceps persons whose first husband or wife has been absent for seven years, without the knowledge of the party remarrying, though that absence be within the king's dominions; or has been absent out of the kingdom, whether with or without the knowledge of the party remaining in England. It is also no offence to marry during the life of a first husband or wife, where there has been a divorce of a former marriage ; or where that marriage has been declared void by sentence of an ecclesiastical court.

BIGARII, in antiquity, the drivers of BIG*, which see.

BIGATI, in antiquity, a kind of ancient Ro- man silver coins, on one side whereof was re- presented a biga, or chariot drawn by two horses. The bigatus was properly the Roman denarius, whose impression, during the times of the Com- monwealth, was a chariot driven by Victory, and drawn either by two horses or four ; according to which it was either denominated bigatus or quadrigatus.

BIG-BONE CREEK, a river of Kentucky, which falls into the Ohio, so named from the large bones found near it.

BIGGA, a small island of Scotland, in Yill Sound, among the Northern Shetland Isles : one half of it belongs to the parish of Belting, and the other to that of Yell.

BIGGAR, a parish of Scotland, in the county of Lanark, about six miles long from east to west, and three and a half broad from south to north, forming a kind of irregular oval. The tra- dition is, that a battle was fought near it between the Scots under Sir William Wallace, and an English army of 60,000 men, wherein great slaughter was made on both sides.

BIG'GIN. Fr. beguin. A child's cap, says Dr. Johnson. Beguins, from whence it is de- rived, were an order of nuns, who wore the peculiar kind of cap, which has obtained this de- signation.

Sleep now !

Yet not so sound, and half so deeply sweet

As he, whose brow with homely biggin bouud,

Snores out the watch of night. Shakspeare.

You that have sucked the milk of the court, and from thence have been brought up to the very strong meats and wine of it ; been a courtier from the biggin to the nightcap (as we may say) ; and you, to oft'end in such a high point of ceremony as this ? and let your nuptials want all marks of solemnity.

Ben Jonson.

Mr. Gifford interprets the phrase from ' the biggin to the nightcap,' from infancy to age.

BIGGLESWADE, a market town of Bed- fordshire, on the river Ivel, over which there is a handsome bridge. It was almost destroyed by fire in 1785, when property to the amount of Ā£24,000 was consumed. The town, however, has been much improved since. It is one of the greatest barley markets in England. It is five miles south-east of Bedford, and forty-five north of London. Inhabitants, about 3000.

BIGHORN RIVER, one of the North Ameri- can rivers, which rises in the Rocky Mountains, near the sources of the Flatte and the Yellow-stone, and having passed through the east.iri

range of these mountains, joins the latter in the forty-seventh degree of latitude. It is navigable *or cait>es to a great distance, and flows through a fine open timber country.

BIGHT, n. s. It is explained by Skinner, the circumference of a coil of rope.

BIGLAND (Ralph), an English herald and topographer, was a native of Kendal inWestmore- land, and appointed garter king at arms in 1780. He died in 1784, having employed himself in making collections for a history of the county of Gloucester. His son Richard published from his MSS. in one volume folio, the first part of the Antiquities of Gloucestershire. 1792.

BIGNON (Jerome), a French writer, born at Paris in 1590. He made great progress under the care of his father, in philosophy, mathematics, history, civil law, and divinity. At ten years of age he gave the public a specimen of his learning, in a Description of the Holy Land; two years after he published a Discourse con- cerning the Principal Antiquities and Curiosities of Rome, and A summary Treatise concerning the Election of Popes. Henry IV. now desired to see him, and appointed him page to the dau- phin, afterwards Louis XIII. He wrote at this time a Treatise of the Precedency of the Kings of France, which he dedicated to Henry IV. who ordered him to continue his researches, but the death of that prince interrupted them. In 1613 he published the Formulae of Marculphus. He was, in 1620, made advocate general in the grand council, then counsellor of state, and at last ad- vocate general in the parliament. In 1641 he resigned his offices in favor of his son, and was appointed chief keeper of the king's library. At last this great man, who had always made reli- gion the basis of his virtues, died with the most exemplary devotion, in 1656, aged sixty-six.

BIGNONIA, in botany, trumpet flower, or scarlet jessamine : a genus of the angiospermia order and didynamia class of plants ; ranking, in the natural method, in the fortieth order, per- sonatae : CAL. quinquefid and cup-form: COR. bell-shaped at the throat, quinquefid, and bellied underneath. The siliqua, bilocular; and the seeds with membranous wings. Of this genus Linnaeus enumerates seventeen species; of which the following are the most remarkable : 1. B. catalpa, a native of Carolina, Virginia, and the Bahama islands. It has a strong woody stem and branches, rising twenty feet high, orna- mented with large heart-shaped leaves, five or six inches long. 2. .B. capreolata, or tendril bignonia, a native of North America, a fine climber, which rises by the assistance of tendrils or claspers. 3. B. radicans, the climbing ash- leaved bignonia, is a native of Virginia and Ca- nada. It rises thirty or forty feet high, having pinnated opposite leaves of four pair of serrated lobes, and an odd one. 4. B. sempervirens, or evergreen climbing Virginian bignona, is a native of Virginia, Carolina, and the Bahama islands. 5. B. unguis, the claw- bignonia, a deciduous climber, is a native of Barbadoes and the other West India islands. It rises by the help of claw-like tendrils, the branches being very slen- der and weak; and by these it will overtop bushes, trees, &c. twenty or thirty feet hio-h. Vor.. IV.

BIGOIS, a nymph who is gaid to have written a book in the Tuscan language, concern ing the Art of Interpreting Lightnings. This was kept at Rome, in the temple of Apollo, with others of a similar nature.

BIGORNEAU, in natural history, a name given by Bellonius to that genus of cochleae, called the simi-circular mouthed, or semi-lunar kind, including the nerita.

BIGORRE, a former county of France, which now forms the department of the Upper Py- renees.

BI'GOT, ~\ This word cannot be traced.

BI'OOTED, / It is supposed by Camden and

BI'GOTTICK, \ others, to take its rise from so me

BI'GOTICAL, i occasional phrase. The Fren >vi

BI'GOTRY. J apply it to one superstitiously religious, and to a hypocrite. A man devoted unreasonably to a certain party ; prejudiced in favor of certain opinions; a blind zealot. It is used often with to before the object of zeal ; as a bigot to the Cartesian tenets.

Presbyterian merit, during the reign of that weak, bigutted, and ill-advised prince, will easily be com- puted. Swifl.

Bigoted to this idol, we disclaim Rest, health, and ease, for nothing but a name.

Garth.

In philosophy and religion, the biguts of all parties are generally the most positive. Wattt.

Were it not for a bigotry to our own tenets, we could hardly imagine that so many absurd, wicked, and bloody principles should pretend to support them- selves by the Gospel. Id.

I shall only, in one word, mention the horrid effects of bigotry and avarice in the conquest of Spa- nish America ā a conquest, on a low estimation, effected by the murder of ten millions of the species.

Burke.

BIGOT, in Italian bigontia, is used to denote a Venetian liquid measure, containing the fourth part of an amphora, or half the boot.

BIGOT (Emeric), the son of John Bigot, Sieur de Sommeuil, one of the most learned and most honest men of the seventeenth century, was born at Rouen, in 1626. His love of learning di- verted him from

public employments. He applied himself solely to the sciences, and greatly increased the magnificent library left by his father. He had a weekly assembly of literati at his house, besides much correspondence with those abroad. M. Menage and Nic. Heinsius were his most intimate friends. He translated Palladius's Life of St. Chrysostom from the Greek ; concerning which a curious anecdote is recorded in the Hist, des Ouvrages des Scavans, for Feb. 1690, p. 267. ' Mr. Bigot's design was to add the Epistle' from St. Chrysostom to ' Cesarius, which he had found in a library at Florence, to the Life: ā but it appeared so express against transubstantiation, that the examiners obliged him to suppress it'. He was very modest, and an enemy to contro- versy. He died at Rouen, December 28th 1689, aged sixty .

BIGOT (William), a learned French physiciau and philosopher, under Francis I., was born a Laval, in Maine, in 1502. He was unfortunate almost from his birth : fourteen of his family died of the plague, of whom his nurse was the last. The neighbours being afraid to take care of hin.,

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he was exposed by the side of a road under a hedge, and his father found him in this situation. As he grew up his education was neglected, and he early plunged into debauchery. He retired however into the country, where he acquired a relish for study; and without the assistance of instructors, made himself master of Greek, medi- cine, astronomy, and astrology, &c. He after- wards went to Germany, and was admitted professor of philosophy at Tubingen. Differing with the other professors, he returned to France, and was patronised by Mess. Du Bellai. He would have been promoted at the court of France, had he not incurred the displeasure of some per- son in the confidence of Francis I. The story as told by Melancthon, is, that Castellan represented him to that monarch, as an Aristotelian philoso- pher, and being asked by the king, what that was, replied he is one who prefers common- wealths before monarchies. Bayle, however, is at great pains to refute this story. Be that as it may, Bigot accepted an invitation to the univer- sity of Nismes, where his zeal for its privileges raised him many new enemies, and while he went to Paris to get the dispute settled, new misfor- tunes occurred in his domestic affairs. In particular, his wife already the mother of two daughters, was detected in an amour with a musician, on whom our author inflicted the punishment of Abelard. For this his enemies attempted to bring him to capital punishment ; but though long confined, he escaped ; as did his

wife during his imprisonment. He was the author of 1. Christiana Philosophise praeludium ; 2. Somnium ad Gul. Belaium, Msecenatem suum ; 3. Carmen ad Jesum Christum ; &c. &c.

BIGOTRY is always to be distinguished from an honest zeal, which is an ardor of mind arising from the love of truth, and exciting the possessor to defend and propagate what he considers its principles. Bigotry is prejudice combined with a degree of malignity, and mostly prevalent amongst the ignorant, and those who are naturally of a morose and contracted mind. It is generally manifested more in unimportant sentiments, or the circumstantials of religion than the essentials of it. Simple bigotry is the spirit of persecution without the power ; persecution is bigotry armed with power, and carrying its will into act. As it is the effect of ignorance, so it is the nurse of it, because it precludes free enquiry : it overlooks the liberty that all man have of thinking for them- selves, cuts the very sinews of that charity which hopeth all things, and destroys moderation and good will.

BIG-ROCK BRANCH, the Ness-head branch of the river Allegany. The branch called Big- hole Town joins it, and forms the Allegany, eight miles north-east from and above Venango Foot.

BIGUBA, a small state and town of western Africa, situated on the northern bank of the Rio Grande, about fifty or sixty miles from its mouth.

BIGUTTATA, in entomology, a species of cantharis, found in Europe. The thorax black, wing-cases black, and yellow at the tip. This is telephorus niger, femoribus flavis, tlytris apice luteis of Degeer. Also the name of a species of cicada and also sylpha.

BIL

BIGUTTATOR, a species of ichneumon; color black, with two dots on the scutel, native of Sweden.

BIGUTTATUS, a species of curculio, that is found in Germany. Also a species of crypto – cephalus, native of Austria. Also a species of carabus, that lives under the bark of trees in Sweden.

BIGUTTULUS, a species of gryllus locusta: thorax cruciate, wing-cases clouded, and marked with a white spot near the tip. This is acrydium biguttulum of Degeer.

BIHACZ, a strong town of Hungary, in Croa- tia, seated in an isle formed by the river Unna.

BIIIAMATA, in entomology, a species of hispa, of an oblong, depressed shape, unarmed, black, spotted with red, shells truncated and hooked, native of India. ā¢

BIHAR, a town and district of the eastern part of Hungary, bordering on Transylvania. It is partly a mountainous district, the plains are chiefly inhabited by Hungarians, and the hilly parts by Walachians. The former are es- teemed superior both in purity of language and morals to the rest of their countrymen. The whole population is about 230,000.

BIJANAGUR, a city in the Balaghaut ceded territories, in the south of India, once the capital of a great Hindoo empire, but now in ruins. Its modern name is ANNAGOONDY, which see.

BIJORE, an Afghan district of the province of Cabul, lying on the shores of the Indus. – It contains eight extensive valleys, of which Rod is the largest. It is only partially possessed by the Yusefzei tribe, many portions being occupied by the Mohmand, Sahi, Shinvvari, and Turcalani tribes.

BIJORE, the capital of the above district, is situated fifty-five miles from the river Indus. There is a tradition that the descendants of the Greeks, who accompanied Alexander to India, kept possession of this district for a considerable period. Long. 70Ā° 43′ E., lat. 34Ā° 8′ N.

BIJORKO, an island of Sweden, in the lake of Malar, on which there stood formerly a royal palace, and a small town. It is fifteen miles west of Stockholm.

BIJUGUM FOLIUM, in botany, denotes a winged leaf, bearing two pair of foliolae.

BIL, in ichthyography, a name given in some parts of England to a peculiar species of cod- fish, called by Willoughby asellus luseus. It is distinguished from the cod by its smallness, by its being shorter and broader in its shape, by the paleness of its color, and largeness of its scales, though it agrees with it in having a beard under the chin.

BILANCIIS DEFERENDIS, a writ anciently directed to a corporation, for the carrying of weights to a haven, and there to weigh wool.

BI'LANDER, n. s. Fr. belandre; a small vessel of about eighty tons burden, used for the carriage of goods. It is a kind of hoy, ma- nageable by four or five men, and has masts and sails after the manner of a hoy. They are used chiefly in Holland, as being particularly fit for

the canals. Savary, Trevou.t.

Like bilanders to creep Along the coast, aad land in view to keep. Dryden.

BILE.

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BILANDER in navigation, a small merchant ship with two roasts, distinguished from other vessels of the same kind by the form of the main- sail. Few vessels are now rigged in the manner of bilanders : the name has been variously ap- plied in different countries.

BILARIUS PORUS, the biliary pore, or hepa- tic duct, a considerable appendage of the liver, formed from the concurrence of a multitude of small ramifications springing from its glands, which unite into several trunks equal in magni- tude to the branches of the hepatic arteries ; and accompany them branch for branch through the whole substance of the liver ; being wrapped up in the same capsula with the porta.

BILATERAL COGNATION, denotes kindred, on both sides, that of the father as well as mother.

BIL'BERRY, n. s., from Sax. bihj, a bladder and berry, according to Skinner ; vitis idaea. A small shrub; and a sweet berry of that shrub; whortleberry

Cricket, to Windsor's chimneys shall thou leap ; There pinch the maids as blue as bilberries. Shakspeare.

BILBILIS, in ancient geography, a town of Hispania Citerior, the birth place of Martial, now supposed to be Calataiud in Arragon.

BIL'BO, ~\ A sword, or rapier ; and

BIL'BOES, >also stocks for the feet;

BIL'BOESMITH. j used for punishing offenders at sea, they derive their name from bilboa where they were manufactured ; and bilbo is a cor- ruption of bilboa.

To be compassed like a good bilbo, in the circum- ference of a peck, hilt to point, heel to head.

Slialcspeare. Methought I lay Worse than the mutines in the bilboes. Id.

BILBOA, formerly BELVAO, the good ford, a town of Spain, the capital of Biscay Proper, having an excellent harbour at a short distance from the Bay of Biscay. It was built in 1300, on the margin of a navigable stream, by Diego Lopez de Ilaro, and soon became flourishing. The nouses are well built, generally with projecting roofs, the streets paved and clean. Several canals pass through them, and convey water from the river. The population is about 15,000, who carry or an extensive commerce. Spanish wool of between 50,000 and 60,000 sacks, of two hun- dred weight each, have been sent out here in a year. Its other exports are iron, chestnuts, oil, and wine. Bilboa also imports salt, hemp, fish, materials for ship-building, .colonial produce, British and French manufactures, drugs. ,&c. The number of vessels which anually enter the harbour is between 500 and 600. It stands fifty miles south of St. Sebastian, in lat. 43Ā° 14′ N, and long. 2Ā° 42′ W.

BILCOCK, in zoology, a synonyme of the vallus aquaticus, or water rail.

BILDAD, one of Job's four friends, is sup- posed to have been a descendant of Shuah, one of Abraham's sons by Keturah; as he is ex- pressly styled a Shuhite. In his reasoning with Job, he proceeds upon the mistaken idea, that misfortune is always the attendant of criminality.

BILDGE, for BILGE, of a ship, the bottom of

her floor, or the breadth of the place the ship rests on when she is a- ground.

BiLDGE-PuMPS, or burr-pumps, are those that carry off the bildge water.

BILDGE WATER, that which lies on the ships' floor, and cannot go to the well of the pump,

BILE'. See BOIL.

BILE'. } From bilis, Lat., and which

BIL'IARY, ˆVossius has no doubt is from

BIL'IOUS. i the Greek

The liver minds his own affair ; Kindly supplies our publick uses ; And parts and strains the vital juices ; Still lays some useful bile aside, To

tinge the chyle's insipid tide : Else we should want both gibe and satire ; And all be burst with pure good nature. Prior.

Why bilious juice a golden light puts on, And floods of chyle in silver currents run.

Garth. Dispensary.

Voracious animals, and such as do not chew, have a great quantity of gall ; and some of them have the biliary duct inserted into the pylorus. Arbuthnot.

The gall-bladder is a very remarkable contrivance. It is the reservoir of a canal. It does not form tho channel itself, i. e. the direct communication between the liver and the intestine, which is by another pas- sage, viz. the ductus hepaticus, continued under the name of the ductus communis, but it lies adjacent to this channel, joining it by a duct of its own, the ductus cysticus ; by which structure it is enabled, as occasion may require, to add its contents to, and increase the flow of bile into the duodenum. Patey's T/teology.

BILE, The fluid secreted by the liver. It varies in color and consistence in different ani- mals, and in the same animals under different circumstances. Its appearance, however, for the most part is of a yellowish green, the shades on one side or the other predominating with irregu larity ; sometimes, indeed, it is nearly brown, and at other times almost colorless. Its taste is more or less bitter ; the bile from the ox, which has been the principal subject of experiment, being exceedingly so, while human bile has much less of bitterness.

When, says Mr. Brande, the bile of the ox is distilled, it affords about 90 per cent, of insipid water; the residuum is brown, bitter, and may be redissolved in water : it affords traces of uncom- bined alkali, which appears to be soda. The acids render bile turbid, and separate from it a sub- stance, which possesses many of the properties of albumen. It is likewise coagulated by alco- hol; and upon filtering off the clear liquor, and evaporating it, an inflammable fusible substance is obtained, of an intensely bitter flavor, combined with 'a portion of soda and common salt : this has been termed the resin of bile, and appears to be the principle which confers upon it its chief peculiarities. We should, therefore, conclude, as the result of these observations, that bile con- sists of water, albumen, soda, a bitter resin, and some minute portions of saline matter.

Thenard has determined the composition of ox-bile, as follows ; but

the substance denomi- nated picromel among the following items, is thought by Mr. Brande to be an educt rather than a product, since the process by which it was procured by Thenard is very complex :

K 2

32

Water Resin

Picromel . Yellow matter Soda

BILE.

700 or a little more

24 60-5

variable in this case 4

4

Phosphate of soda 2 Muriate of soda . 3-2 Sulphate of soda 0-8 Phosphate of lime 1‘2 Oxide of iron . a trace. Berzelius, in remarking upon this analysis, questions its accuracy altogether, and denies even the presence of resin in bile. This last chemist states the composition of the fluid in question to be as follows : ā

Water . v . 907-4

Biliary matter . . 80‘0

Mucus of the gall-bladder . 3-0

Alkalies and salts, common to } ā,, all animal fluids <

1000

It ought to be recollected, in all experiments upon this fluid, that it is, as above intimated, very different even from the same subject at dif- ferent times. Dr. Monro, jun. describes a very interesting case, showing that bile after a meal, is secreted in larger quantities than at ordinary times. ‘I attended,’ says he, ‘a case in which there was an abscess in the liver, and a preternatural communication between that organ and the lungs, through which the bile was secreted, and discharged by coughing. The quantity thus discharged was very different at different times. It was always greater after meals, and

especially for an hour or two after dinner-‘ Bichat, too, proved the same fact by experiment. This last physiologist says, ‘ that t he bile which is secreted during abstinence, is divided between the duodenum and gall-bladder, and that the portion of it which goes into the latter, receives a more active character (un cha- ractere d’acrete, une teinte fonce”e) : it should he recollected too, that the secretion itself is much regulated and modified by varied conditions of the nervous power, and organic energies. This last particular is of course more applicable to bile from the human subject than to that from ani,Tials, whose existence is less complicated, and not so much under ihe influence of external cir- cumstances.

Thenard states, that no picromel is traceable in human bile, and that no other ingredient can be found in it than yellow matter, albumen, resin, and saline substances ; the extract from human hile, affords, however, precisely the same salts as are discoverable in that from the ox, viz., un- combined soda, muriate, sulphate, and phosphate of soda, phosphate of lime, and oxide of iron.

The bile of the dog, the sheep, the cat, and the calf, was found precisely like that from the ex. In the pig’s bile, no picromel nor albumen, nor even yellow matter, was discovered. The bile of birds has a larger quantity of albuminous matter, and the picromel which it yields, is said to be not sensibly sweet, but possessed of a sharp and bitter taste.

The yellow matter appears to be that by which, with slight exception, the fluid under notice is principally characterised ; and this matter seems

to be the same, from whatever species of animal the bile may have been taken. This is insoluble by itself, but becomes capable of solution, when combined with the other principles and ingre- dients of which the bile is composed. All acids decompose human bile.

How is bile formed ? The liver is generally known to be the organ which secretes this fluid, although there ar many among the lower tribes of animals that ave furnished with a secretion answerable in its apparent qualities and purposes to bile, but in which no organ corresponding in structure and appearance with the liver has hi- therto been detected ; and in cases where, as in man, and the higher order of animals, this organ (the liver) is manifestly the organ by which the bile is formed, it does not seem lobe ascertained with precision what is the actual portion of the organ that is destined for ihe purpose. The liver is remarkable for being furnished with a vessel

(the vena portarum) by which venous blood is conveyed into its substance ; while other organs of secretion are supplied only with arterious blood : it has hence been supposed that this ve- nous blood is for the formation of bile, while that which is transmitted besides from the large artery of the liver (the hepatic artery) is intended for the nourishment merely of the viscus ; and, to say the least, there seems to be some founda- tion for this hypothesis, although the inference from structure and apparent office is modifiable by circumstances, to which we shall advert in the articles PHYSIOLOGY and MEDICINE. It would seem to be pretty certain, that the actual secretion of the fluid takes place in that part of the liver's substance which is termed granular ; but, as we have above intimated, the bile is dif- ferent when it is poured out into the intestines from what it is when first formed ; and the ra- tionale of these changes will fall to be considered in other places, especially in those parts of our work to which we have just referred the reader.

Uses of the bile. The direct and obvious office, says a modern writer, of the liver is the secretion of bile, which in most animals is suffered to accumulate in a pear-shaped reservoir adhering to its concave surface, and denominated a gall-bladder. Yet in many ani- mals, even of different classes, we perceive no such reservoir, as the elephant, rhinoceros, stag, camel, goat, horse, trichecus, porpoisp, rat, os- trich, and parrot ; while we do not know of a reptile that is destitute of it. In the human subject, it has also been wanting, of which Dr. Cholmely gives a singular example in the sixth volume of the Medical Transactions ; but such a deficiency has only occurred in infants who have fallen victims to it soon after birth, before which period as there is no transit of feces through the intestinal canal, and perhaps no peristaltic action, it does not appear to be necessary.

Perhaps, indeed, antecedently to birth, there is no bile secreted. In the case related by Dr. Cholmtly, although the whole of the bile, as fast as it was secreted, seems to have been carried back into the system, the sallowness of the skin is not noticed to have occurred till the day after birth, from which time the child exhibited a deeper and deeper hue, till it died of convulsions at the end of five weeks.

Tt has reasonably, therefore, been supposed that one chief use of the

bile is to stimulate the lacteal vessels, and maintain the peristaltic action of the alvine canal. Yet in jaundice the lacteals perform their office, and in lientery the peristaltic action is peculiarly brisk, though the intestines are without this fluid. Hence, Dr. Fordyce re- garded the bile as of no service whatever in the digestive process ; and Sir E. Home has given an example of a child that fed heartily, seemed to digest the food well, and had regular stools, and was nevertheless without a gall-bladder, or even a duct of any kind leading from the liver to the duodenum ; and however stimulant the bile may be to the coats and emunctories of the intes- tines, it has a sedative rather than a stimulant power upon the blood, and instead of rousing to additional energy, produces weariness and in- activity.

BuĀ« recent experiments of Mr. Brodie have proved , that, whatever force there may. be in some of the above objections, the main office of the bile is clearly to change the nutritious part of the chyme into chyle, and to separate from it the ex- crementitious matter. Mr. B. tied a ligature around the duct which leads from the liver into the intestines, and, in all the cases in which the experimen* was made, it was found that the con- version of chyme into chyle (see CHYLE) was in- variably and completely prevented ; so that we are furnished with evidence of demonstrative force to show, that for the due nutrition of the system, as well as for the proper actions of the intestinal canal, the presence of the bile is abso- lutely necessary.

Mr. Brodie meets such objections as have been advanced above, and others, in the following way : ‘ If the bile be so essential, how is it that persons occasionally live a considerable time in whom the flow of the bile into the duodenum is interrupted? On this point it may be remarked, 1st. It seldom happens that the obstruction of the duct is so complete as to prevent the passage of the bile altogether ; and the circumstance of the evacuation being of a white color in jaundice and other diseases, may prove the deficiency, but does not prove the total absence of bile. 2dly. That in the very few authenticated cases which have occurred of total obliteration of the duct in the human subject, there has been always, I be- lieve, extreme emaciation, showing that the func- tion of nutrition was not properly performed. 3dly. That the fact of individuals having occa- sionally lived for a few weeks or months under these circumstances, only proves that nutrition may take place to some extent without chyle being formed. In my experiments,’ he adds, * I found that the more fluid parts of the chyme had been absorbed, and probably this would have been sufficient to maintain life during a limited portion of time.’

For an account of Biliary calculi, see CAL- CULUS.

BILEDULGERID, or BELAD AL JERID, the tountry of dates, a district of Africa, south of Algiers. It is almost square, extending more iian eighty leagues every way, from lat. 28Ā° 30′ b 32Ā° 50′ N., and from long. 6Ā° to 12Ā° W. It AS bounded on the north by Tunis, on the east

by a ridge of lofty mountains which divide it from Tripoli and part of Gudamis, on the west by the countries of Zeb and Mezeb, and on the south by the province of Verghela. This country is barren and mountainous, producing little beside dates, which grow here in such profusion, that the face of half the country is covered over with the trees. The climate is unhealthy, and the people lean, swarthy, and shrivelled ; with their eyes inflamed, from the reflection of the sun-beams. The showers of dust and sand, driven by the high winds, frequently bury men and cattle in whole caravans. The inhabitants are also much afflicted with scurvy in the gums, &c. but they are remarkably free from other diseases. The plague is said not to be known in Biledulgerid. The tribes of this region are a mixture of Africans and wild Arabs : the latter, who pride themselves in their superiority of birth and talents, being quite independent, pursue scarcely any other occupation besides hunting ostriches and plundering. The Africans live with considerable regularity in small villages. Besides dates, and ostriches, the common food here is the flesh of goats and camels; drinking either the broth in which the flesh is boiled, or the milk of their camels ; for they seldom taste water. There is scarcely a town in the whole country, or a stream of water that deserves notice.

BILFINGER (George Bernard), was borr 23d January, 1693, at Canstadt, in Wirtemberg ; and by a singularity of constitution, hereditary in his family, came into the world with twelve fingers and twelve toes, which an early ampu- tation happily corrected. His father was a Lu- theran minister, and from his earliest years discovered his great inclination to learning. He studied in the schools of Blaubeuern and Bo- benhausen, and afterwards entered into the theological seminary of Tubingen. Here the works of Wolf inspired him with a taste for the Wolfean philosophy, and that of Leibnitz. He wished, at least, to try to connect theology with his favorite science of philosophy, and in this spirit composed a tract, entitled De Deo, Anima, et Mundo, a work which met with great applause, and contributed to the advancement of the author to the office of preacher at the castle of Tubingen. In 1719 he obtained from his friends a supply of money, which enabled him to spend some time at Halle, to pursue the lessons of Wolf, and after two years returned to Tubingen, only to find his lectures deserted, and himself shunned for his new notions. After this had lasted almost four years, he received an

invitation to go to Petersburg, as professor of logic and metaphysics, and member of the new academy of Peter I. He was received in this city, where he arrived in 1725, with great consideration. The Academy of Sciences at Paris having pro- posed about this time the famous problem, on the cause of gravity, Bilfinger gained the prize of a thousand crowns. This success drew the attention of all the learned of Europe to his name; and Charles Edward, Duke of Wir- temberg, finding that the author was one of his subjects, hastened to recal him. The czar, after having made some useless attempts to detain

nitn, granted him a pension of four hundred florins, and a present of two thousand. He quitted Petersburg in 1731. Returning to Tu- bingen, the university greatly prospered under his care; and is said to be conducted to this day according to the excellent regulations he established. The duke appointed him in 1735 privy-counsellor, a nomination not simply hono- rary, for Bilfinger saw himself raised at once to considerable power. He now employed almost two years in laboring to understand the sta- tistics of his country, its political situation, &c. and ultimately became one of the most en- lighted ministers it ever produced. He was the author of that strict union which has long united Wirtemberg and Prussia, and of the importance to which the hereditary Prince of Wirtemberg was raised at Berlin. In 1737 the duke nomi- nated him president of his consistory, and se- cretary of the grand order of the chase. He was also curator of the university of Tubingen, and member of the Royal Academy of Berlin. He was never married, and died at Stuttgard, the 18th of February, 1750. His works, besides papers published in the Memoirs of the St. Pe- tersburg and Paris Academies of Science, are : 1. Disputatio de Harmonili praestabiiiia, Tu- bingen, 1721, in 4to. 2. De Harmonia Animi et Corporis Humani maxime prastabilita Com- mentatio Hypothetica, Frankfort on the Maine, 1723, in 8vo. This work was inserted in the Expurgatory Index at Rome in 1734. 3. De Origine et Permissione Mali, praecipue Moralis, Commentatio Philosophica, ib. 1724, in 8vo. 4. Specimen Doctrine Veterum Sinarum Moralis et Politico, Frankf. 1724, in4to. 5. Dissertatio Historico catoptrica de Speculo Archimedis, Tu- bingen, 1725, in 4to. 6. Dilucidationes Philo- sophica; de Deo, Anima Humana, Mundo, et Generalibus Rerum Affectionibus, ib. 1725, in 4to. 7. Bilfingeri et Holmanni Epistolas de Harmonia Praestabiiita, 1728, in 4to. 8. Dis- putatio de Natura et

Legibus Studii in Theologia Thetici, ib. 1731, in 4to. 9- Disputatio de Cultu Dei Rationali, ib. 1731. 10. Notae Breves in Ben. Spinosae Methodum Explicandi Scripturas, Tub. 1732, in 4to. 11. De Mysteriis Christianas Fidei Generatim Spectatis Sermo, Reeitatus 1732, Tub. 1732, in 4to. 12. Elementa Physices, Leipzig, 1742, in 8vo. 13. La Citadelle Couple, Leipzig, 1756, in 4to.

BIL'GEN, n. > Gothic, bulgia, to swell;

BILGE', v. J that which bulges or bellies out ; the bilge, according to Skinner, is the com- pass or breadth of a ship's bottom ā her belly ; to bilge, therefore, is when by any violence, such as striking on a rock, she opens her bulge or belly so as to let in the water ; it is another term for springing a leak.

The next morning, at day-break, she (the Wager) struck on a sunken rock, and soon after bilged, and grounded between two small islands, at about a mus- quet shot from the shore.

Anson't Voyage round the World.

BILHAH, a city of the Simeonites, in Judea.

BILIMBI, in botany, a tree celebrated in the East Indies for its uses in medicine. European I otanists call it mains Indica, fructu pentagona, or the Indian apple tree, with the five-cornered

fruit. It seldom grows to above twelve feet high, and is not commonly wild, but carefully culti- vated in gardens, where it flowers all the year round. The juice of the root is drank as a cure for fevers. The leaves boiled, and made into a cataplasm with rice, are famed in tumors, and the juice of the fruit is used in almost all external heats. The fruit is pleasant to the taste when ripe, and is commonly eaten.

BIL'INGSGATE, n. s., a cant word, borrowed from Bilingsgate in London, a place where there is always a crowd of low people, and frequent brawls and foul language; ribaldry; foul lan- guage. See BILLINGSGATE.

There stript, fair rhetorick languished on the

ground, And shameful bilingsgate her robes adorn. Pope.

BILINGUIS, properly denotes, 1. A person who has two tongues in his mouth ; an instance of which is given by Dolaeus. 2. A person who speaks two languages. It is in law applied to a jury impanelled

between an Englishman and a foreigner, which should consist half of foreigners and half pf Englishmen.

BILIN, a town of Bohemia, in the circle of Leitmeritz, near a mountain of the same name, remarkable for the variety of herbs found on it, as well as for stones and metals. Here is also a mineral spring. It is seventeen miles west of Leitmeritz.

BILIN EATA, in entomology, a species of leptura; color blackish-brown, with two lines on the thorax, and scattered dots on the yellow wing- cases : inhabiting Carniola. Also a species of cantharis ; thorax yellow, with four brown dots : wing-cases yellow, with a fuscous line. A native of the Cape of Good Hope. Also a species of chrysomela, found in Scandinavia ; color green, glossed with gold ; anterior of the thorax exca- vated ; and a double blue line on the wing-cases. Also a species of phalaena geometra; wings testaceous yellow, with a broad stripe across, and a brown and a white margin.

BILINEATUS, in entomology, a species of ichneumon ; color black, with two yellow lines in front ; abdomen depressed ; legs red.

BILINEATUS, in ichthyology, a Chinese species of pleuronectes. It is thin, long, yellow above, with a brown margin ; reddish-white beneath ; covered with small scales.

BILINEATUS, in zoology, a species of coluber; color rufous, with two yellow stripes. This is la double-raie of count le Cepede, and bilineated snake of Dr. Shaw.

BILITZ, or BIELITZ, a principality of Austrian Silesia, enclosed by the lordship of Plesse, the principality of Teschen, and the kingdom of Poland. The town of Bilitz lies on the river Biala, and has a castle. The inhabitants, who amount to 3360, are chiefly cloth-weavers. This place stands opposite to the Polish town of Biala, with which it has communication by a bridge across the river. It is fifteen miles E.N.E. of Teschen. Long. 18Ā° 59′ E., lat. 49Ā° 48′ N.

BILK’, v a., derived by Mr. Lye from the Gothick biliacan. To cheat; to defraud, by running in debt, and avoiding payment.

BILL.

Bilked stationers for yeomen stood prepared.

Dry den.

What comedy, what farce can more delight, Than grinning hunger, and the pleasing sight Of your bilked hopes. Id.

BILL, v. & n., Ang.-Sax. bile ; the beak of a bird; the snout of a beast; the nose of a fish; the beak of a ship ; ‘ billing and cooing,’ the courtship of birds ; now a common phrase for those little tendernesses which love employs to express the ardor of its affection : a very amiable weakness.

Their bills were thwarted crossways at the end, and with these they would cut an apple in two at one

snap.

Carew

In his bill An olive leaf he brings, pacifick sign ! Milton.

Still amorous, and fond, and billing, Like Philip and Mary on a shilling. Butler.

On the other side, Tom Faddle and his pretty spouse, wherever they come, are billing at such a rate, as they think must do our hearts good who behold them. Spectator.

O let them ne’er with artificial note, To please a tyrant, strain their little bill, But sing what heaven inspires, and wander where they will. Beattie.

In the curlew, woodcock, and snipe, there are three pair of nerves, equal almost to the optic nerve in thickness, which pass first along the roof of the mouth, and then along the upper chap down to the point of the bill, long as the bill is. Paley’s Theology.

BILL’ “) Sax. bille, tpibille ; a two-

BIL’LETS, > edged axe. A kind of hatchet

BILL’MAN. J with a hooked point, used in

country work, as a hedging bill ; so called from

its resemblance in form to the beak of a bird of

prey ; a kind of weapon anciently carried by the

foot; a battle-axe. Junius thinks billets are

pieces of wood cut with a bill.

And drove at him with all his might and mayne A forest-bill, which both his hands did strayne.

Spenser.

Yea, distaff women manage rusty bills ; Against thy seat both young and old rebel.

Shakspeare.

Standing troops are servants armed, who use the lance and sword, as other servants do the sickle or the bill, at the command of those who entertain them,

Temple.

Preserve this groaning branch, O hear my prayer, Spare me this one, this one poor billet spare ; That having many fires and flames withstood, Its ancient testimonial may last good, In future times to prove, I once had wood.

King. The last Billet.

The ranks of Hll-men in order to battle are always environed with pikemen, for the bill-men serve spe- cially for execution if the enemy be overthrown.

Oldy's Life of Raleigh.

BILL', v. & ?i. ā¢) Ang.Sax. bille, unde BIL'LET, v. & n. >Grseco Barb. j3iX\oc; Gallic DILI/MAKER. j and Belgic billet. To en list ; to enroll ; to put or write upon the muster- roll. In whatever different applications the word is employed it retains the original mean- ing of writing. ' To billet a soldier or other person is by note, bill, or particular in writing, to appoint his quarters or lodgings. A bill seems to bo applied to a statement in writing of

certain particular things, as a bill of indictment, a bill of costs,' &c.

He does receive

Particular addition from the bill That writes them all alike. Shakspeare. Retire thee ; go where thou art billeted : Away, I say. Id.

How now, for mitigation of this bill, Urged by the commons ? doth his majesty Incline to it, or no ? Id.

Ordinary expence ought to be limited by a man's estate, and ordered to the best, that the bills may be less than the estimation abroad. Bacon.

No new laws can be made, nor old laws abrogated or altered, but by parliament; where billt are pre- pared and presented to the two houses. Id. His masterpiece was a composition that he billed about under the name of a sovereign antidote.

L'Estrange.

When he found tnis little billet, in which was only written ' Remember Caesar,' he was exceedingly con- founded. Clarendon.

Like him that took the doctor's bill, And swallowed it instead o' the pill. Hudibras. Let them, but under your superiours, kill, When doctors first have signed the bloody bill.

Dryden.

And in despair, their empty pit to fill, Set up some foreign monster in a bill. Id.

The fourth thing very maturely to be consulted by the jury, is, what influence their finding the bill may have upon the kingdom. Swift.

It may seem somewhat difficult to make out the bills of fare for some of the forementioned suppers.

Arbuthnot.

There will be no way left for me to tell you that I remember you, and that I love you, but that one, which needs no open warrant, or secret conveyance ; which uo bills can preclude, nor no kings prevent.

Pope —o Atterbttry.

All that a bill of exchange can do, is to direct to whom money due, or taken up upon credit, in a fo- reign country, shall be paid. Locke.

Let us then calculate, when the bulk of a fagot or billet is dilated and rarified to the degree of fire, how vast a place it must take up. Digby on Bodies.

‘Twas then, Belinda ! if report say true,

Thy eyes first opened on a billet-doux.. Pope.

Most who took in the weekly bills of mortality, made little other use of them, than to look at the foot, how the burials increased or decreased.

Grant.

As he never said ā No ā to any request in his life, he has given them a bitt, drawn by a friend of his upon a merchant in the city, which I am to get changed. Goldsmith.

We’ll add a title ā

Count Arnold ; it hath no ungracious sound, And will look well upon a iiZ/ei-doux.

Byrˆn. Deformed Transformed.

BILL is a word of various legal uses The best definition is that of the learned and laborious author of the Law Dictionary. ‘ It is a decla- ration in writing, expressing either the wrong the party complaining hath suffered by the party complained of, or else some fault committed against some law or statute of the realm ; and this bill is sometimes addressed to the Lord Chancellor of England, especially for uncon- scionable wrongs done to the complainant, and sometimes to others having jurisdiction, according as the law directs.’

The BILL IN EQUITY, ‘addressed to the Lord Chancellor,’ is a formal statement, in the style of a petition, wherewith a complainant or orator, as he is termed in the bill, commences his suit ; here he sets forth at length the circumstances of fraud, breach of trust, hardship, or the like, under which he suffers, without remedy by common law ; humbly praying that he may be relieved at the hands of the court, and that the defendant may be compelled to answer, upon oath, the matters charged against him. The answer is ordinarily the second stage in all plead- ings in courts of equity.

Actions in the courts of law are either by ‘ Original’ or by ‘ Bill ;’ that is, by an original writ issuing out of the Court of Chancery (or at least,

by process, supposing in legal fiction such a writ to have issued), and returnable to the par- ticular court of law ; or by bill filed in the first instance in that particular court.

A BILL OF MIDDLESEX is a process of the Court of King's Bench, forming a part of the scheme whereby it obtains its jurisdiction in civil actions.

A BILL OF EXCEPTIONS is a formal statement drawn up on the trial of a cause, and sealed by the judge, wherein an objection is stated to some decision of his, either in admitting or refusing evidence, in a challenge of a juror, in mis-stating the legal effects of facts, &c. Its intent is, to enable the party against whom judgment is given, should be appeal by writ of error to a superior tribunal, to have this alleged judicial mistake taken into consideration. This by the common law he could not do, as objections of this nature would not appear on the face of the record, or written pleadings ; and, to remedy this defect, the right of tendering to the jddge a bill of exceptions was provided by the statute of Westminster the second, 13 Edw. I. ch. 31, and it is made compulsory on the judge to affix his seal to it.

A BILL OF EXCHANGE is in modern times a request in writing, addressed by one person to another, desiring him to pay a sum of money to some third person, or to any person to whom either that third person, or the first person him- self, who makes the request, may afterwards order it to be paid, and that, either immediately, or at any specified distance of time. This is presented to the person to whom it is addressed, for his assent or acceptance. If he gives his assent to it, be notifies it by signing his name on the bill, with the word 'accepted,' and, from that time, he becomes liable to pay it, according to its tenor. The party, in whose favor it is drawn, indicates to what person it shall be paid by indorsing it ā that is, by writing on the back of it to that effect, and authenticating it by his signature. The person who makes the bill is the drawer ; he to whom it is addressed the drawee ; and, when he has accepted it, the acceptor; he in whose favor it is drawn, the payee ; and any other person whom he appoints, by indorsement, to receive the money, the in- dorsee ; and all parties into whose hands it may come, by subsequent circulation, holders. When the payee writes nothing but his name on the back, he is said to indorse it in blank, and it is thenceforth payable to any holder. The law of bills of exchange has become in this country a

very important and extensive branch of study. Mr. Chitty and Mr. Justice Bayley have both published valuable treatises on it.

A BIIX OF INDICTMENT is the written state- ment of an offence imputed to a prisoner, which is, in the first instance, laid before the grand jury ; and if, upon examination of ex parte evi- dence, they declare it to be ‘ a true bill,’ the prisoner is arraigned and takes his trial ; the evidence, in order to convict him, being expected tp correspond with the bill or indictment. See Starkie’s Treatise on Criminal Pleading, 2 vols. 8vo. London, 1822.

BILL OF SALE is a contract, which must be by deed under seal, whereby the proprietor of goods and chattels passes his right and property in them to another : being made solemnly, and with the seller’s seal affixed, he is bound by it, and not allowed to show, as he might in the case of a mere parol contract, that it was made without good or valuable consideration, and that, there- fore, in law the property did not pass, and no action can be maintained to recover it. See

ASSUMPSIT.

The BILL OF RIGHTS was an important statute, the second of the first year of William and Mary, so called as being declaratory of the rights ot British subjects. See Blackstone’s Comment. vol. i. p. 128.

BI~L, in mechanics, an instrument made of iron, edged in the form of a crescent, and adap- ted to a handle. It is used by basket-makers, plumbers, and gardeners. When short, it is called a hand-bill, and when long, a hedge-bill.

BILL, in physiology, a cartilaginous substance covered with skin, forming the beak of a bird. The bill performs the office of teeth in some birds, and serves as a weapon. In the parrot kind it is hooked, and serves to climb, and catch hold of boughs. The upper bill of this bird is filled with rows of cross bars ; and the under bill, which is much shorter, shuts within the upper, and draws against the roof of the mouth ; by wnich a kind of mastication is affected, before the meat passes into the craw. The phcenicopter bill is a true hyperbola, pointed at the end like a sword ; and the upper bill moves in eating, the lower being fixed contrary to those of all other kinds. The woodpecker’s bill is strong, and sharp enough to dig holes in the heart of the hardest timber. In the island of Ferro, a fixed reward is given for the bills of ravenous birds : all watermen are obliged to bring a certain num- ber yearly to the country courts, at the feast of St. Olaus ; when they are thrown into a heap, and burnt in triumph. Plott gives divers instances of monstrous irregularities in the bills of birds . particularly of a raven, whose mandibles crossed each other, the lower

chap turning upwards and the upper downwards-, ffat. Hist. Stafford, cli vii. sect. 4.

BILL, in trade, both wholesale and retail, as also among workmen, signifies an account of goods delivered to a person, or of work done.

BILL, BANK, is a note of obligation signed on behalf of the company of the bank, by one of the partners or their cashiers. Or it is an obligation to pay on demand either to the bearer or to order ; in Scotland, it is understood to be to order.

BILL BROUGHT INTO PARLIAMENT, a paper containing propositions, offered to both houses to be passed by them, and then presented to the king to pass into a law. To bring a bill into the house, if the relief, sought by it, is of a private nature, it is first necessary to prefer a petition ; which must be presented by a member, and usually sets forth the grievance to be remedied. This petition when founded on facts that may be disputed is referred to a committee, who examine the matter, and accordingly report to the house ; and then, or otherwise upon the mere petition, leave is given to bring in the bill. In public matters, the bill is brought in upon motion made to the house, without any petition. Formerly bills were drawn in the form of petitions, and entered upon the parliament rolls with the king's answer subjoined; not in any settled form of words, but as the circumstances required ; and, at the end of each parliament, the judges drew them into the form of a statute, which was entered on the statute rolls. In the reign of Henry V., to prevent mistakes and abuses, the statutes were drawn up by the judges before the end of the parliament ; and in the reign of Henry VI. bills in the form of acts, according to the modern custom, were first introduced. The persons directed to bring in the bill, present it in a competent time to the house, drawn out on paper, with a multitude of blanks, or void spaces, where any thing occurs that is dubious, or necessary to be settled by parliament itself, such especially as the precise date of times, the nature and quantity of penalties, or of any sums of money to be raised, being indeed only the skeleton of the bill. In the house of lords, if the bill begins there, it is when of a private nature referred to two judges, who examine and report the state of the facts alleged, to see that all neces- sary parties consent, and to settle all points of technical propriety. ā This is read a first time, and at a convenient distance a second time : and, after Ā«ach reading, the speaker opens to the

house the substance of the bill and puts the question, Whe- ther it shall proceed any farther ? The introduc- tion of the bill may be originally opposed, as the bill itself may on either of the readings ; and if the opposition succeed, the bill must be dropped for that session1; as it must, also, if opposed with success in any subsequent stage. After the second reading, the bill is committed ; that is referred to a committee: which is either selected by the house, in matters of small importance ; or else, upon a bill of consequence, the house resolves it- self into a committee of the whole house, which is composed of every member ; to form it, the speaker quits the chair, another member being appointed chairman, and may sit and debate as a private member. In these committees the bill is debated clause by clause, amendments made, the blanks filled, and sometimes the bill entirely new modelled. After it has gone through the com- mittee, the chairman reports it to the house, with such amendments as the committee have made : the house then reconsiders the whole again, and the question is repeatedly put upon every clause and amendment. When the house has agreed or disagreed to the amendments of the committee, and sometimes added new amendments of its

own, the bill is then ordered to be engrossed, or written in a sf rong gross hand, on one or more Ions;- rolls of parchment sewed together. When this is finished, it is read a third time, and amend- ments are sometimes then made to it ; and if a new clause be added, it is done by tacking a separate piece of parchment on the bill, which is called a rider. The speaker then again opens the contents ; and holding it up in his hands, puts the question, whether the bill shall pass? If this be agreed to, the title to it is then settled : which used to be a general one for all the acts passed in the session, till in the fifth year of Henry VIII. distinct titles were introduced for each. After this, one of the members is directed to carry it to the lords, and desire their concur- rence ; who, attended by several more, carries it to the bar of the house of peers, and there delivers it to their speaker, who comes down from his woolsack to receive it. It there passes through the same forms as in the other house, ex- cept engrossing, which is already done; and if re- jected, no more notice is taken, but it passes sub silentio, to prevent unbecoming altercations. But if it is agreed to, the lords send a message by two masters in chancery, or sometimes two of the jud- ges, that they have agreed : and the bill remains with the lords, if they have made no amendment to it. ā But if any amendments are made, such amendments are sent down with the bill to re- ceive the concurrence of the commons. If the commons disagree to the amendments, a confer- ence usually follows between members deputed from each house ; who for the most part settle and adjust the

difference : but if both houses remain inflexible the bill is dropped. If the com- mons agree to the amendments, the bill is sent back to the lords by one of the members with a message to acquaint them therewith. The same forms are observed, mutatis mutandis, when the bill begins in the house of lords. But when an act of grace or pardon is passed, it is first signed by his majesty, and then read once only in each of the houses, without any new engrossing or amendment. And when both houses have done with any bill, it is deposited in the house of peers, to wait the royal assent; except in the case of a bill of supply, which, after receiving the concurrence of the lords, is sent back to the house of commons. For the manner of giving the royal assent, See ASSENT.

Before the invention of printing, acts of par- liament were usually published by the sheriff of every county ; the king's vrit being sent to him at the end of every session, together with a transcript of all the acts made at that session, commanding him, ' ut statua ilia, et omnes articulos in eisdem contentos, in sin- gulis locis ubi expidire viderit, publice" pro- clamara, et firmiter teneri et observari facial.' And the custom was to proclaim them in his county court, and there to keep them, that who- ever would, might read or take copies theieof ; which custom continued till the reign of Henry VII. An act of parliament thus made is the ex- ercise of the highest authority that this kingdom acknowledges. It has power to bind every sub- ject in the land, and the dominions thereunto be- longing; nay, even the king himself, if particu-

larly named therein. And it cannot be altered, amended, dispensed with, suspended, or repealed, but in the same forms and by the same authority of parliament : for it is a maxim in law, that it requires the same strength to dissolve as to create an obligation. It was formerly held, that the king might in many cases dispense with penal statutes; but now by statute, 1 William and Mary, stat. 2, cap. 2, it is declared that the sus- pending or dispensing with laws, by royal authority, without consent of parliament, is illegal.

BILL OF APPEAL. See APPEAL.

BILL OL ATTAINDER. See ATTAINDER.

BILL OF ENTRY, an account of the goods en- tered at the custom-

house, both inwards and outwards. In this bill must be expressed the merchant exporting or importing, the quantity of merchandise, and the divers species thereof; and whither transported, and from whence.

BILL OF LADING, or memorandum, is an ac- knowledgment signed by the master of a ship, and given to a merchant, &c. containing an account of the goods which the master has receiv- ed on board from him, with a promise to deliver them at an intended place, for a certain salary. Each bill of lading must be treble ; one for the merchant who loads the goods, another to be sent to the person to whom they are consigned, and the third to remain in the hands of the mas- ter of the ship. It must be observed, however, that a bill of lading is used only when the goods sent on board a ship are but part of the cargo : for when a merchant loads a whole vessel on his own personal account, the deed passed between him and the master of the ship is called charter- party. See CHARTER-PARTY.

BILLS OF MORTALITY. These are summed up every week, month, quarter, or year, according to the population of the place ; hence called weekly bills, monthly, quarterly, or yearly bills. The London bills of mortality, which were the first in Britain, are composed by the company of parish-clerks, and express the number of christ- enings of each sex, and the number of deaths from each disease. These bills were first com- puted after the Plague in 1592, at which time they included 109 parishes. This number has has since been increased to 146.

BILL OF STORE, a license granted at the cus- tom-house to merchants, by which they have liberty to carry, custom free, all stores ana ne- cessary provisions for their voyage.

BILL OF SUFFERANCE, a license granted to a merchant, at the custom house, suffering him to trade from one English port to another without paying custom.

BILLERICAY, a market-town in the hundred of Barnstaple, Essex, four miles east from Brent- wood, and twenty-three east from London. At Blunts'-Walls, near this place, are traces of a Roman fortification and ditch. The market, on Tuesday, is well supplied with corn.

BILLERICAY, a township in Middlesex county, Massachusetts, twenty miles north of Boston.

BILLES, in traffic, a name given by the French, and afterwards by other nations, to the masses of raw steel which has been tempered for

sale, and is ready to be wrought into tools,

&c. This in working loses its temper, but re- covers it again by plunging it into cold water.

BILLET, in military affairs, a well-known ticket for quartering soldiers, which entitles each soldier, by act of parliament, to candles, vinegar, and salt, with the use of fire, and the necessary utensils for dressing and eating their meat. Publicans, and other persons obliged to furnish quarters, have been relieved by a further allow- ance of 6d. each man per diem for the cavalry, and 4d. each man per diem for the infantry ; which makes the whole sum for each man's die" and small beer, \0d. per diem. They are also, by a subsequent act, entitled an Act for the Re- lief of Innkeepers, &c. allowed 4Ā£d. for each horse's hay and straw, in addition to the former 6d. By a circular, dated War Office, 24th May, 1816, to general officers commanding districts, in conformity with an Act for fixing the Rates of Subsistence to be paid to 'Innkeepers and others on quartering Soldiers, the rate of allowance for the hot-meal, provided for non-commissioned officers or private soldiers on a march in South Britain, is fixed at the sum of Is. per diem, until the 24th ultimo inclusive, and from and after that day at the sum of Wd. per diem; and that the sum to be paid to innholders, and others on whom any of the horses belonging to his majesty's forces shall be quartered, is fixed at Is. 2d. per diem, until the 24th ultimo inclusive, and at lOd. per diem from and after that day.

BILLET, in heraldry, a bearing in form of a long square. They are supposed to represent pieces of cloth of gold and silver ; but Guillem thinks they represent a letter sealed up, and other authors take them for bricks. Billets signifies that the escutcheon is all overstrewed with billets, the number not ascertained.

BILLETS, or BILLET WOOD, small wood for fuel ; the assize of which was formerly to be en- quired of by justices.

BILLETINS, or Brothers of Charity, a society of religious hospitallers, founded about A. D. 1297. They took the third order of St. Francis, and the scapulary, making three usual vows, but without begging.

BILLETON, an island in the Indian Seas, of a circular form, about fifty miles in length, and forty-five in breadth, situated between Sumatra and Borneo. Long. 108Ā° E., lat. 3C S.

BILLIARDS. This game is played on a rec- tangular table, with little ivory balls, which are driven into hazards or holes. It was invented by

the French, but was played differently from what it now is ; having a pass iron fixed on the table, through which the balls at particular periods of the game used to be played ; but this method is quite laid aside. The French, Ger- mans, Dutch, and Italians, brought this game into vogue throughout most parts of Europe, and it soon became a favorite diversion in England, particularly with persons of rank. It has, how- ever, of late years been prostituted by the designing among the lower classes ; but it will never be out of fashion, being very entertaining, and affording that moderate exercise which ren- ders it the more agreeable. The table on which the game is played is generally about twelve feet long, and six wide ; it is covered with fine green

cloth, and surrounded with cushions to prevent the balls rolling off, and to make them rebound. There are six holes, nets, or pockets, fixed at the four corners, and the middle, opposite to each other, to receive the balls, which when put into them are called hazards. The making of a hazard, that is, putting the adversary's ball in, at the usual game, reckons two in favor of the player. The game is played with sticks called maces, or with cues ; the first consists of a long straight stick, with a head at the end, and is the most powerful instrument of the two : the cue is a thick stick diminishing gradually to a point of about half an inch in diameter ; this instrument is played over the left hand, and supported by the fore-finger and thumb. It is the only in- strument in vogue abroad, and is played with amazing address by the Italians and some of the Dutch ; b\it in England the mace is the prevail- ing instrument, which the foreigners hold in con- tempt, as it requires not near so much address to play the game with it as with the cue ; but the mace is preferred for its peculiar advantage, which some professed players have introduced under the name of trailing, that is following the ball with the mace to such a convenient distance as to make it an easy hazard. The degrees of trailing are various, and have different denomi- nations, viz. the shove, the sweep, the long stroke, the trail, and the dead trail or turn up, all which secure an advantage to a good player according to their various gradations ; even the butt end of the cue becomes very powerful when it is made use of by a good trailer.

The following are the rules observed in the common game of billiards : 1. For the lead, the balls must be put at one end, and the player must strike against the farthermost cushion, in order to see what will be nearest the cushion that is next to them. 2. The nearest to the cushion

is to lead, and choose the ball if he pleases. 3. The leader is to place his ball at the nail, and not to pass the middle pocket ; and if he holes himself in leading, he loses the lead. 4. He who follows the leader must stand within the corner of the table, and not place his ball beyond the nail. 5. He who plays upon the running ball loses one. 6. He who touches the ball twice, and moves it, loses one. But these two rules are seldom if ever enforced, especially in England. 7. He who does not hit his adver- sary's ball loses one. 8. He who touches both balls at the same time, makes a foul stroke, in which case if he should hole his adversary, no- thing is gained by the stroke ; but if he should put himself in, he loses two. 9. He who holes both balls loses two. 10. He who strikes upon his adversary's ball, and holes himself, loses two. 1 1 . He who plays at the ball without striking it, and holes himself, loses three. 12. He who strikes both balls over the table, loses two.

13. He who strikes his ball over the table, and does not hit his adversary's ball, loses three.

14. lie who retains the end of his adversary's stick when playing, or endeavours to baulk the stroke, loses one. 15. He -who plays another's ball or stroke without leave, loses one. 16. He who takes up his ball, or his adversary's without leave, loses one. 17. He who stops either ball

when running, loses one, and being near the hole loses two. 18. He who blows upon the ball when running loses one, and if near the hole loses two. 19. He who shakes the table when the ball is running loses one. 20. He who strikes the table with the stick, or plays before his turn, loses one. 21. He who throws the stick upon the table, and hits the ball, loses one.

22. If the ball stands upon the edge of the hole, and after being challenged, it falls in, it is no- thing, but must be put where it was before.

23. If any person, not being one of the players, stops a ball, the ball must stand in the place where it was stopped. 24. He who plays with- out a foot upon the floor, and holes his adver- sary's ball, gets nothing for it, but loses the lead. 25. He who leaves the game before it is ended, loses it. 26. Any person may change his stick in play. 27. If any difference arise between players, he who marks the game, or the majority of the company, must decide it. 28. Those who do not play must stand from the table, and make room for the players. 29. If any person lays any wager, and does not play, he shall not give advice to the players upon the game.

Besides the common winning game, which is twelve up, there are several other kinds, viz. the losing game, the winning and losing, choice of balls, bricole, carambole, Russian carambole, the bar hole, the one hole, the four game, and hazards. I. The losing game, is the common game nearly reversed; that is to say, except hitting the balls, which is absolutely necessary, the player gains by losing. By putting himself in, he wins two; by putting his adversary in, he loses two; but if he pockets both balls, he gets four. This game depends greatly upon particular strengths, and is therefore very necessary to be known to play the winning game well. II. The winning and losing game is a combination of both games ; that is to say, all balls that are put in by striking first the adversary's ball, reckon towards game; and holing both balls reckons four. At this parne, and the losing, knocking over, or forcing the balls over the cushion, goes for nothing, the striker only loses the lead. III. Choice of balls, is choosing each time which ball the player pleases, which is doubtless a great advantage, and is generally played against losing and win- ning. IV. Bricole is being obliged to hit a cushion, and make the ball rebound, or return to hit the adversary's ball, otherwise the player loses a point. This is a great disadvantage, and is reckoned between even players to be equal to receiving about eight or nine points. V. Caram- bole, is a game introduced from France. It is played with three balls, one being red, which is neutral, and is placed upon a spot on a line with the string nail (i. e. that part of the table whence the player strikes his ball at first setting off, and which is generally marked with two brass nails). Each antagonist, at the first stroke of a hazard, plays from a mark, which is upon a line with it, at the other end of the table. The chief object at this game is, for the player to hit with his own ball the two other balls, which is called a carambole, and by which the player wins two. If he puts in the red ball he gets two ; Ā«o that seven may be made at one stroke, by caram-

holing and putting in both balls. This game re- sembles the losing, depending chiefly upon par- ticularly strengths, and is generally played with the cue. The game is sixteen up ; yet is reckon- ed sooner over than the common game. The next object of this game, after making what we have distinguished by the carambole, is the baulk ; that is, making the white ball, and bring- ing the player's own ball and the red one below rhe stringing nail, whence the adversaries begin. By

this means the opponent is obliged to play bricole from the opposite cushion, and it often happens that the game is determined by this situation. VI. The Russian carambole is a game introduced irom abroad, and is played in the following manner : the red ball is placed as usual on the spot made for that purpose ; but the player when he begins, or having been holed, never places his ball on any particular place or spot; he being at liberty to put it where he pleases. When he begins to play, instead of striking at the red ball, he leads his own gently behind it, and his antagonist is to play at which he thinks proper ; if he plays at the red ball and holes it, he scores three as usual towards the game, which is twenty-four instead of sixteen points ; and the red ball is put upon the spot again, at which he may strike again or take his choice which of the two balls to push at, always following his stroke till both balls are off the table. He is entitled to two points each time that he caramboles, the same as at the other game ; but if he caramboles, and puts his own ball into any hole, he loses as many as he might “nave got had he not holed himself : for example, if he strikes at the red ball, which he holes, at the same time caramboles and holes himself, he loses five points ; and if he holes both balls when he caramboles, and likewise his own, he loses seven, which he could have got if he had not holed his own ball. In other respects it is play- ed like the common carambole game. VII. The bar hole, is so called from the hole being barred which the ball should be played for, and the player striking for another hole; when this game is played against the common game, the advan- tage for the latter, between equal players, is reckoned to be about six. VIII. The player at the one hole, though it seems to those who are not judges of the game to be a great disadvan- tage, has in fact the best of it ; for, as all balls that go into the one hole reckon, the player en- deavours to lay his ball constantly before that hole, and his antagonist frequently finds it very difficult to keep one or other ball out, particu- larly on the leads, when the one hole player lays his ball (which he does as often as he can) on

eight, as it is at five, seven, or nine, at the single game. X. Hazards, are so called because they depend entirely upon the making of hazards, there being no account kept of any game. Any number of persons may play, by having balls that are numbered ; but the number seldom ex- ceeds six, to avoid confusion. The person whose ball is put in, pays so much to the player accord- ing to what is agreed to be played for each hazard; and the person who misses, pays half the price of a hazard to him whose ball he played at. The only general rule is not to lay any ball a hazard for the next player, which may be in a great measure avoided, by always playing upon the next player, and

either bringing him close to the cushion, or putting him at a distance from the rest of the balls. The table, when hazards are played, is always paid for by the hour.

BILLINGSGATE, the principal market of London for fish, is said to be very ancient. Bailey derives its name from Belinus, one of the fabulous kings of Britain, long before the Roman invasion. But he gives two other more probable derivations, viz. from bellan, Teut. to roar ; alluding to the noise of the waters (or the fish- wives), and from belte, Sax. a purse. The tolls here are appointed by statute. All persons buying fish in this market may sell the same in any other market by retail, but none but fishmongers are allowed to sell it in shops ; and if any person shall buy any quantity of fish at Billingsgate for others, or any fishmonger shall engross in the market, they incur a penalty of Ā£20. Fish im- ported by foreigners shall be forfeited, and the vessel, &c. See BILINGSGATE.

BILLINGSLEY (Sir Henry), an eminent magistrate and mathematician of the sixteenth century, was born at Canterbury, and educated at Oxford, after which he served an apprentice- ship to a haberdasher in London. Having com- menced business for himself, he was very successful, and became very wealthy. He was much respected among the citizens ; and filled the offices of sheriff, alderman, and lord mayor ; the last of which was in 1598, when he received the honor of knighthood. He entertained in his house one Whitehead, an expelled friar, who was deeply skilled in the mathematics ; to whom he became a student, and soon acquired himself great repu- tation as a mathematician. The first edition of Euclid's Elements in English was published by him in 1570, with annotations drawn from t' e MSS. of his tutor, in folio. To this work Dr. Dee wrote a learned preface. Sir Henry died in 1606.

BILLINGSPORT, a town in Delaware, twelve miles below Philadelphia, fortified, for the

the brink of the hole; leading for that purpose defence of the channel, during the American war.

from the opposite end, which in reality he has no

right to do ; for the lead should be given from

the end of the table at which the hazard is made :

but this advantage is often taken of novices.

IX. The four game, consists of two partners on

each side, at the common winning game ; who

play by succession after each hazard, or two

points lost. The game is fifteen up ; so that the

point or hazard is an odd number, which makes

a miss at this game of more consequence than it

is at anjther; being as much at four, six, or

Opposite this fort several large frames of timber, neaded with iron spikes, denominated chevaux de frizes, were sunk to prevent the British ships from passing. A curious machine was after- wards invented to raise them.

B1LLINGTON (Elizabeth), a celebrated English singer, was born in England in 1770, her father, Mr. Weichsell, being a native of Saxony. At an early age she attained to an extraordinary proficiency on the piano-forte under Schroeter. At fourteen she made her first appearance as a

singer at Oxford ; and at sixteen years of age married Mr. Billington, a performer on the double-bass, whom she accompanied to Dublin. From Ireland she returned to London, where she appeared at Covent Garden for the first time, as Rosetta, in Arne's Love in a Village, and met with such unprecedented encouragement as to se- cure her an immediate engagement at the salary of Ā£1000, and a benefit, for the remainder of the season. She continued to take lessons of Mor- tellari, a celebrated Italian master then in Lon- don, and, on the closing of the theatre, repaired to Paris, in order to profit by the instructions of Sacchini. She returned to England in 1785, and appeared at. the concerts of ancient music. From this period no music meeting, opera, or concert, was considered complete without her. In 1793 she visited Italy, and performed at the theatre of St. Carlos at Naples ; Bianchi composing ex- pressly for her, his celebrated opera ' Inez de Castro.' Her husband here died suddenly or" apoplexy, just as she was

preparing to set out for the theatre. In 1796 she appeared at Venice, and at Rome, being everywhere received with great applause. In 1801 she returned to the London stage, and delighted the whole musical world by her Mandane ; a performance never since equalled in the English Opera ; and con- tinued incessantly the favorite of the public till her final retirement from public life in 1809. In 1817 she quitted England, and died after a short illness at St. Artien, an estate she had purchased in the Venetian territories. Though always known as Mrs. Billington, this lady married a second time, to a M. Felipent, in 1799. BILLION. A million of millions. BILLIONS, in arithmetic; contraction of bi- millions, or twice millions, the word millions oc- curring twice in explaining the meaning of the word ; millions of millions. Billions, in nume- ration, occupy from the thirteenth to the eigh- teenth column, to the left. See ARITHMETIC.

BILL'ON. Lat. bulla. Base metal of gold or silver alloyed with copper. ā Ency. Met.

BILLON, or BILLIO; from bulla, bullion, Lat.; in coinage, a composition of precious and base metals, where there are most of the latter. Where- fore, billon of gold signifies gold under twelve carats fine ; and billon of silver, silver under six penny- weights. So little attention was paid for- merly to the purity of gold and silver, that the term billon of gold was applied only to that which was under twenty-one carats, and billon of silver to that which was lower than ten penny-weights. BILLON, or BILLOM, a town of France, the head of a canton, in Lower Auvergne, and in the department of the Puy de Dome. It lies in a fruitful country ; but the manufactures have gone to decay. Population 5200. Twelve miles E. S. E. of Clermont-Ferrand, and seventeen north of Issoire.

BILLOUNJAH, a district of Hindostan, iu the province of Gundwana, adjoining the British province of Bahar. It is occupied by chieftains who have been frequently compelled to pay tri- bute to the Moguls and Mahrattas ; but who in the hills, with which it abounds, are nearly inde- pendent. It lies between 24Ā° and 25Ā° N. lat., und 84Ā° and 85Ā° E. long.

BIL'LOW. v. & n. \ Germ, bilge ; Dan

BIL'LOWV. \bolg; probably of the

same original with Sax. bilij, a bladder. A wave

swoln, and hollow ; to swell, or roll as a wave ;

swelling; turgid; wavy.

The waves come rolling, and the billows rore Outrageously, as they outraged were, Or wrathfull Neptune did them drive before His whirling charet for exceeding feare.

Spenser.

And as the stately vessel glided slow, Beneath the shadow of that ancient mount, He watched the billows' melancholy flow, And, sunk albeit in thought as he was wont, More jtlacid seemed his eye, and smooth his pallid front. Byron's Childe Harold.

BILMA, a vast desert of Africa, south-east of Fezzan, and bordering on Bornou. It is a most inhospitable and burning tract of sand, which the caravans are ten days in passing : but contains the famous lakes of Domboo, which supply salt for the Cashna and Bornou markets, and as fai as to the south of the Niger.

BILOBUS, in entomology, a species of scara- baeus, with two lobes on the thorax ; a simple horn on the head, and the wing-cases striated. Found in the south of Europe. Also a species of dytiscus, color black; except the mouth, ver- tical two-lobed spot, thorax, sutural line, base, and margin of the wing-cases, which are yellowish- white. Also a species of cimex spinosus; thorax obtusely dentated ; wing-cases grayish-red ; vent with two lobes. A native of Europe.

BILOBUS, in ornithology, a'species of chara- drias, the wattled plover of Latham. It is a na- tive of the Malabar coast. The bill and legs are yellow ; frontal skin naked, and pendulous in two lobes ; body yellowish-gray above ; white beneath. Gmelin, &c. This is pluvier a lam- beaux of Buffon.

BILOCULAR, in botany, a term applied to a capsule that has two cells.

BILSTON, a town, township, and chapelry, in the parish of Wolverhampton, in the north division of the hundred of Seisdon, and county of Stafford, England. The town extends a length of [one mile along the great parliamentary Road to Shrewsbury and* Holy head, and pre- sents the same gloomy appearance as all places situated in coal districts usually do. In the vicinity are mines of iron, stone, coal, limestone, &c.,worked extensively by steam engine, and every improved system of machinery. The manu- factures of Bilston consist of enamelled and japanned goods, and of various descriptions of hardware. Commerce is promoted by the vi- cinity to the Stafford and Birmingham canals, whereby communication is opened with the prin-

cipal towns in England. The population of the parish exceeds 12,000 souls; and, by the Reform Bill passed in 1832, this township is made con- tributary to Wolverhampton, in returning two members to parliament.

BILSAH, a town belonging to Dowlet Row Sindia, in the province of Malwah, Hindostan; situated on the Betwah River, in lat. 23Ā° 33′ N-, long. 77Ā° 50′ E. It is enclosed with a stonewall, defended by square towers, and a ditch. The

streets are spacious, and contain several good nouses. This place is situated nearly on the south-west extremity of the district, where it is contiguous to that of Bopal. The country is celebrated all over India for the excellent quality of the tobacco. It is open, and well cultivated. To the east, on a high and steep rock, is a dur- gah, consecrated to the memory of a Mahomme- dan saint, named Jelal ud Deen Bokhari. Distant from Oojain 140 miles, from Nagpoor 249, from Benares 416, from Calcutta, by Mundlah, 867 miles.

BILSEN, or BILSON, a town of Germany, in the ci-devant bishopric of Liege. It was the rendezvous of the duke of Marlborough in 1706, previous to the battle of Ramillies. It lies six miles west of Maestricht, and fourteen north of Liege.

- BILSON (Thomas), bishop of Winchester, the place of his birth and education. In 1565 he was admitted perpetual fellow of New College ; in 1570 M. A.; in!579B.D.; and in 1580 D.D. His first preferment was that of master of Win- chester school ; he was next made prebendary, and afterwards warden, of Winchester college. In 1596 he was consecrated bishop of Worcester; and, about a year after, translated to the see of Winchester, and sworn of queen Elizabeth's privy council. He was one of the principal managers of the Hampton-court conference in 1604 ; and the English translatioa of the Bible, in the reign of king James I., was finally corrected by this prelate, and Dr. Miles Smith, bishop of Gloucester. He died in 1616. Authors agree in giving him the character of a learned divine, an able civilian, and an upright man. His style is in general much more easy and harmonious than that of his contemporaries. His works are: 1. Several Latin poems and orations ; MSS. in Ant. Wood's library. 2. The true Difference

between Chris- tian Subjection and Unchristian Rebellion,Oxford, 1585, 4to.; London, 1586, 8vo. 3. The Per- petual Government of Christ's Church, London, 1593, 4to., black letter, &c.

BIMA, a town and district in the north-east extremity of the island of Sumbava, governed by an independent sultan, whose dominion extends over part of the neighbouring islands. The town stands on a commodious harbour, encompassed by lofty mountains, and is gained by a channel of great depth. The language spoken here is esteemed one of the radical dialects of the east, and extends over the greater part of the island of Ende, or Floris. The sultan having invited the Dutch at one period to form a settlement here, Bimu oecame dependent on Macassar ; but was ā¢ taken by the British, and they appointed a resident here.

BIMACULARIS, in entomology, a species of phalsena, found in Europe. The anterior wings are brown, with two brown spots.

BIMACULATA, in conchology, a species of tellina, found in the European and American seas ; of a somewhat rotundated triangular shape, rather broad, whitish, with two sanguineous spots within.

BIMACL-LATA, in entomology, a species of sil- pha, found in Barbary : color black ; head of the antennae globose ; legs ferruginous.

BIMACULATUS, in ichthyology, a species of Salmo : body compressed, and marked with two spots ; anal fin with thirty-two rays. This is a native of South America.

BIMATICAL, of two years continuance.

BIM EDI AL, in mathematics. If two medial lines, asABandBC, commensurable * only in power, containing a rational rectangle, are com- pounded, the whole line A C will be irrational, and is called a first bimedial line. B

A + C

See Euclid, lib. x. prop. 38.

BIMINI, one of the Bahama islands, inhabited by the native tribes, near the north-west extremity of the Great Bahama bank, and the east point of Florida. It is about eight miles long, and diffi- cult of access from the numerous shoals with which it is surrounded. It is covered with beau- tiful groves.

BIMUCRONATUS, in entomology, a species of scarabaeus, inhabiting Amboyna. It is tes- taceous; shanks of the anterior legs large, and bearded ; shield of the head mucronated on both sides, and bordered with fine hairs.

BINACLE or BINNACLE. See BINNACLE.

BINAROS, a walled sea-port of Valencia, Spain, near the mouth of a river which falls into the Mediterranean. It has a harbour at a short distance from the town, with from six to nine fathoms water. The adjacent country produces excellent wine.

BI'NARY, bis, binus; two, twofold, double.

THOR. I have 'em already, Somerton. SOMERTON. Binal revenge all this,

Ford. Witch of Edmonton.

So that this matter was rightly called heaven ; and the union of the passive and active principle in the creation of this material heaven is the second day's work, and the binarie denotes the nature thereof.

More. The Philosophick Cabbala.

BINARY, ARITHMETIC, that wherein unity, or 1 and 0, are only used. Mr. Leibnitz shows it to be very expeditious in discovering the pro- perties of numbers, and in constructing tables : and Dangecourt, in the History of the Royal Academy of Sciences, gives a specimen of it in arithmetical progression, where he shows that because in binary arithmetic only two characters are used, therefore the laws of progression may be more easily discovered by it than by common arithmetic. All the characters used in binary arithmecic are 0 and 1 ; and the cypher multi- plies every thing by 2, as in the common arith- metic by 10. Thus 1 is one; 10, two; 11, three: 100, four; 101, five; 110, six; 111, seven; 1000, eight; 1001, nine; 1010, ten: which is built on the same principles with com- mon arithmetic. Hence appears the reason of the celebrated property of the duplicate geome- trical proportion in whole numbers ; viz. that one number of each degree being had, we may thence compose all the other whole numbers above the double of the highest degree.

BINARY LOGARITHMS, are a species of logar- ithms contrived and calculated by M. Euler (Tentamen Novae Theorise Musicae, chap, vii.) for facilitating musical calculations ; wherein 2 is made the unit, or modulus, instead of 10, as in

the common logarithms, or 1 in the hyperoolic logarithms.

In these logarithms, the powers of 2 have suc- cessively 1, 2, 3, 4, &c. for their logarithms, as in the following table, for the first 10 numbers, viz.

Numbers. Binary Logarithms.

1 0-000000

2 1-000000

3 1-584963

4 2-000000

5 . . . 2M21928

6 2-584963

7 2-807356

8 3-000000

9 .... 3-169925 10 3-321928

Musical calculations are performed with great ease by the binary logarithms, owing to their representing the decimal values of the intervals, in terms of the octave as unity.

BINARY MEASURE, in music, a measure which is beaten equally, or where the time of rising is equal to that of falling. This is usually called common time.

BINARY NUMBER, that composed of two units.

BINCHE, or BINCK, a town of the Nether- lands, of Hainault, on a stream that joins the Haisne at a short distance. From 1554, when it was burnt by Henry II. of France, it has under- gone frequent sieges and change of masters. In May 1794 several engagements took place near this town between the French and Austrians. Population 3800.

Twelve miles E. S. E. of Mons.

BIND', v. &Ā».-* Ang.-Sax. bindan. To

BIND'ER, > confine; to enchain; to fix

BIND'ING. Jby circumvolution; to fas- ten ; to connect ; to put under constraint ; to con- tract ; in hinder; to Btop ; to compel ; to oblige. Binding is a bandage, a cover, a ligament: a binder is either the agent, or the instrument em- ployed in binding.

Wilt thou play with him, as with a bird ? or wilt thou bind him for thy maidens 1 Job.

Who hath bound the waters in a garment ?

Proverbs.

Keep my commandments, and live ; and my law, as the apple of thine eye. Bind them upon thy fingers, write them upon the table of thine heart.

Id.

When he saw him, he had compassion on him, and went to him, and bound up his wounds. Luke.

And now perforce they have him prisoner taken ; And now they doe with captive bands him bind ; And now they lead him thence of all forsaken, Unlesse some succour had in time him overtaken.

Spenser. All which accepting, and with faithfull oth

Bynding himselfe most firmly to obey,

He up arose, however lief or loth,

And swore to him true fealtie for aye. Id.

Though I am bound to every act of duty,

I am not bound to all that slaves are free to.

Sfiahspeure.

Now I am cabined, cribbed, confined, bound in 1 o saucy doubts and fears. Id.

Was ever book, containing such vile matter,

So fairly bound ? Id.

Rhubarb hath manifestly in it parts of contrary operations ; parts that purge, and parts that bind the body- Bacon.

The more we are bound up to an exact narration, we want more life, and fire, to animate and inform the story. Felton.

Unjust, thou sayst,

Flatly unjust, to bind with laws the free, And equal over equals to let reign, One over all with unsucceeded power. Milton.

Adown her shoulders fell her length of hair : A ribband did the braided tresses bind, The rest was loose, and wantoned in the wind.

Dryden.

Sir Roger was staggered with the reports concern- ing this woman, and would have bound her over to the county sessions. Addison.

As one of these, in days of yore, Rummaged ft. shop of learning o'er ā Not like our modern dealers, minding Only the margin breadth, and binding. Gay.

The law, by which all creatures else are bound, Binds man, the lord of all. Cotoper.

BIND', ra. s., a species of hops.

The two best sorts are the white and the grey bind ; the latter is a large square hop, and more hardy. Mortimer.

BINDING, in falconry, implies tiring, or when a hawk seizes.

BINDING, in fencing, a method of securing or crossing the adversary's sword with a pressure, accompanied with a spring from the wrist. Unless a man, by some kind of cross, render his adversary's sword incapable to offend him during the time of his performing a lesson upon him ; he may receive from his adversary, either a for- tuitous contretemps, or an exchanged thrust, before the recovery of his body after a thrust. The great objection made against the frequent use of binding, is, that when a man, in perform- ing it, cleaves too much to his adversary s sword, he is liable to his adversary's slipping of him, and consequently of receiving either a plain thrust, or one from a

feint.

BINDING JOISTS, in architecture, are those joists in a floor, into which the trimmers of stair- cases, or well-holes of the stairs, and chimney- ways, are framed ; they ought to be stronger than common joists.

BIND'WEED, n. s., Lat. convolvulus, the name of a plant.

Bindweed is the larger and the smaller ; the first sort flowers in September, and the last in June and July. Mortimer

BINGAZI, a sea-port of Barca, in Africa, defended by a wall and castle, once a large and beautiful city, but now reduced. It contains, however, 5000 inhabitants, and has an excellent harbour for ships of 200 tons burden. But there are some quicksands in the vicinity. It carries on also a considerable trade in corn and flocks of sheep.

BINGEN, a fortified town on the left bank of the Rhine, in the duchy of Hesse, near the borders of the Prussian dominions. It is famous for the culture of a particular kind of wine called scharlach. The population is about 3000. The waters of the Rhine, near this place, being

confined by shelving rocks, form the dangerous whirlpool called Bingerloch. Bingen was taken and retaken by the French almost every year, between 1792 and 1796. Its fortifications were destroyed by Louis XIV., but were ordered to be renewed by Buonaparte when first consul. Bingen is about twenty miles west of Mentz. Lat. 49Ā° 55′ N., long. 7Ā° 48′ E. " See BINGIUM.

BINGHAM (ˆJoseph), an antiquarian of Wakefield, was born in 1 660, educated at Oxford, and ejected from a fellowship thrice, on account of his supposed heterodoxy ; he died in 1723. His Origines Ecclesiastics was the most important of his works, which were published altogether in 2 vols. folio. 1725, and translated into Latin by Grichow, in 11 vols.4to. Hall. 1724ā 1738, and 1751 ā 1761. The first volume of his laborious work appeared in 1708, and the whole was eventually completed in 10 vols. 8vo. ; an edition being also printed in 2 vols. folio. It was shortly after translated into Latin, and acquired a great circulation on the continent, being still esteemed a standard work. Trelawney, bishop of Win- chester, collated him, in

1712, to the living of Havant, near Portsmouth ; the failure, however, of the South Sea scheme, in 1720, in which he had embarked the whole of his savings, reduced him to comparative indigence ; and his death taking place within three years after, he was not able to retrieve himself. Six of his children sur- vived him ; the eldest of whom collected and published his father's works, in 2 vols. folio, 1725. Among them are a Scholastic History of Lay Baptism, originally printed in 8vo. 1712 ; and a Discourse on the Mercy of God to Penitent Sinners.

BINGIUM, in ancient geography, a village or town of the Vangiones in Gallia Belgica, now called Bingen.

BINNACLE, or BITTACLE, in navigation, is used to denote the box in which the compass is placed for steering a ship. In all ships steered by a wheel, it is common to have two binnacles, or a double binnacle, for the convenience of the steersman, on either side of the wheel; but in this case the compasses are necessarily so near together as to affect each others direction, and thereby to render doubtful the course of the ship. To avoid this, sliding binnacles are some- times employed. But those now in general use in the navy are Sir Home Popham's binnacles, being formed agreeably to the instructions of that distinguished officer. They consist of a square box, about two feet high, and eighteen inches on the side, with a top in the form of the frustum of a square pyramid, the bottom of which fits accurately upon the top of the box. The four sides of the frustum are of plate glass, whereby the compass card, which is about level with the upper part of the square box, may be distinctly seen in the day time ; ami for the night, there are provided thin copper screens, which shut up those sides not neqessary for the steerman's immediate purpose, and which at the same time assist to reflect the light of the lamp on the other side, strongly upon the card. The lamp itself is attached to one of these screens, a hole being cut in it just sufficient to admit what light is necessary. As there would be great

liability of breaking these glass faces, the four edges of the frustum are defended by strong wooden frames with projecting edges ; and at top with a flat piece of wood that also projects considerably beyond the glass, which latter, by this means, is pretty well protected from injury. See one of these in our plate BINNACLES, fig. 1, and the lamp, fig. 2.

In vol. xxxi. of the Transactions of the Society of Arts, an improved ship's binnacle is described by Mr. G.Preston of Wapping. It has a cylindrical top, which encloses the lamp, and which gives a powerful light vertically on the compass, but is seen by no one except the man

at the wheel. Fig. 3 is a representation of this binnacle in perspective, as it stands on the deck of a vessel opposite the steering wheel. Fig. 4 is a section of the box, containing the lamp and reflectors ; AA, fig. 3 is a square box closed by a door in front, which is omitted in the drawing, to show the interior. This box is fixed down in a proper situation on the deck, and supported at a convenient height to view the compass card which it contains, the two sides being exactly parallel to the ship's keel. B is a shelf in the box, to support a board C, which exactly fits the box, but having its angles taken off to permit it to slide in and out more freely ; it has a stem a of brass wire standing up from the centre of it, and terminating in a sharp point, on which the compass card is freely sus- pended ; being then included within a circular hole made in the top of the box, and its divisions reading against a line called by seamen the lub- ber line, drawn on a piece of white paper seen plainly in the figure. The opening on the top of the box is surrounded by an octangular lanthorn, which has glass panes in all its sides half way up from the bottom, to admit light in the day time ; but at night these are closed by sliding shutters a a a. The compass is seen through the glass 6, which is placed at a proper inclination to command the view of the card : the lamp is situated in a circular box fitted into a ring F, at the top of the lantern frame ; and has a dome G with a chimney d, to take off the smoke. The section, fig. 4. will explain the in- terior parts ; H H are the sides of a cylindrical box which fits into the ring F. fig. 3.: ee and ff are the sections of the two brass circles called the gimbals. 1 1 K K is a brass box which fits into the ring F, and has at its bottom a large plane convex lens, K K, which concentrates the light of the lamp above, and throws it down on the card beneath. The lamp LL is just within the box ; it consists of a deep copper hoop, forming the external surface, with a lid at the top, and at bottom half way down, which have each a hole through their centres, and may there- fore be considered as rings ; another hoop being soldered within these, forms a complete hollow ring in which the oil is contained, as shown at LL fig. 4. this being filled at the tubes gk. The wick i is situated in a kind of spout which pro- ceeds from the interior of the ring to its centre ; and being very narrow, diminishes the light very little ; for, as shown in the figure, the frame is made to project over the end of it, and then comes in the centre of the hole, that the lens K K may throw the light down with the greatest

effect ; and to increase this a reflector is added. M is a kind of conical

chimney, which stands over the lamp and includes the light : the conical part II of this is turned within, and well polished to reflect the light downwards. By this means the card is well illuminated, and if the shutters a a a are put down, no light is shown which would be perceived by an enemy at sea ; for the only aperture b directs the light upwards, and that in a direction where it will not fall on any part of the ship. The lamp is trimmed or lighted by taking out the box from the ring at the top of the lantern ; the lamp of course comes with it, and there is a hole on one side to give access to it : if it is to be filled with oil, the box is turned upside down, and the gimbal e/keeping the lamp horizontal, it may be filled or taken out, to clean the conical reflector, and the lens also if they require it. . ā¢ Gilbert's double binnacle lamp, is exhibited in fig. 5. I) EFG in the lantern and L the lamp; A A are two condensing lenses, and B B two others, so adjusted to these as to throw the light, after being brought to a focus, upon the two mirrors M M, from which it is reflected strongly upon the two cards N S, N S ; by a proper ad- justment of the two lenses, the light is made to converge and diverge in any degree, and thereby to illuminate the card only. The contrast of" this intense light with every thing else dark, renders the card so exceedingly bright, that in the darkest night the steersman sees it more dis- tinctly than in the brightest day; at the same time not a single ray of light escapes that can be seen by an enemy. Messrs. Gilbert have also a single binnacle lamp upon the same prin- ciples.

BINNOCH, a Scots patriot, in the days of Robert Bruce, who, during the usurpation of Edward I., assisted Bruce in recovering the castle of Linlithgow from the English. Having been employed to supply the castle with hay, he in- troduced armed men in his cart without suspicion, who soon made themselves masters of it, and opened the gates to then countrymen. He was rewarded with some lands, which descended to his posterity, the Binnings of \Vallyford, who bore for their arms a hay wain, with this motto Virtute doloque.

BIN'OCLE, n. s., from binus and oculus, a kind of dioptric telescope, fitted so with two tubes joining together in one, as that a distant object may be seen with both eyes together.

Harris.

BINOC'ULAR, adj. Lat., from binus and orultts, having two eyes.

Most animals are binocular, spiders for the most part octonocular, and some senocular. Derham.

BINOCULAR TELESCOPE, a kind of dioptric telescope fitted with two tubes, joined in such a manner that one may see a distant object with both eyes at the same time. See OPTICS.

BINODIS, in entomology, a species of for- mica, a native of Egypt : color black ; head rufous ; with two tubercles on the petiole.

BINOMIAL, a quantity consisting of two

terms or members, connected by the sign -{ā¢ or

ā¢ ā , viz. plus or minus ; as a | b, or 3a ā 2r ,

r a3 + b, or x- ā 2 ,/ r, &c. ; denoting the

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sum or the difference of the two terms. lint t!i ā¢ difference is also sometimes named a residu il- and by Euclid an apotome. The term binomial was first introduced by Robert Recorde ; see his Algebra, p. 462.

BINOMIAL CURVE, is a curve whose ordinate is expressed by a binomial quantity ; as the curve whose ordinate is xz x b + d.re!e. Stirling, Method. Dijf. p. 58.

BINOMIAL, IMAGINARY, or BINOMIAL, IM- POSSIBLE, is a binomial which has one of its terms an impossible or imaginary quantity ; as a \ ^/ ā b. Dr. Maskelyne has given a me- thod of finding any power of an impossible binomial, by another like binomial, in his intro- duction prefixed to Taylor's Tables of Loga- rithms ; which is as follows : The quantities a and b being given, it is required to find the posver of the impossible binomial a Ā± ^/ ā b3

whose index is ā , that is, to find (a Ā± >/ ā

ā by another impossible binomial, and thence the

value of (Ā« + V ā – 62) + (a ā v/ ā b") which is always possible, whether a or b be the greater of the two.

Solution. Put ā ~ tang, z, then

(fl Ā± v/ ā b-) n ā (a2 +

X (cos.. * Ā±

ā sin2 m z). n

Hence a + ˆ ā 6Ā«) + (a ā V ā b3} = (a* +

x 2 cos. ā z ā (a x sec. z] x 2 cosin

ā(bXcosecz} x2cos. ā z, where the first or n

second of these two last expressions is to be used according as z is an extreme or mean arc ;

or rather because ā is not only the tangent of z

but also the tangent of z + 360Ā°, z + 720Ā°, &c. ; therefore the factor in the answer will have se- veral values, viz. ā

2 cos. āz ; 2 cos. ā (x + 360Ā°) ; 2 cos. – – (x f n n ?z

72oĀ°j, &c. the number of which, if m and n be

whole numbers, and the fraction ā in its least

n

terms, will be equal to the denominator n ; other- wise, infinite. These computations, it is obvious, may be much facilitated by taking the logarithms of the quantities concerned.

BINOMIAL LINE, or SURD, is that in wrnu* at least one of the parts is a surd. Euclid enu me-ates six kinds of binomial lines or surds,

L

in the tenth book of his elements, which are ex- actly similar to the six residuals or apotomes there treated of also, and of which mention is made under the article APOTOME. These apo- tomes, however, become binomials by only changing the sign of the latter term from minus lo plus, which therefore are as below.

BINOMIAL LINES, EUCLID'S Six. First 3 + ,/ 5, 4th 4 + x/ 3, 2d V 18 + 4, 5th V 6 + 2, 3d V 24 + ,/ 18, 6th v/ 6 + V 2. BINOMIAL ROOT, in algebra, a root composed of only two parts connected with the signs plus or minus. ā Harris.

BINOMIALS, RULES FOR EXTRACTING THE SQUARE ROOTS OF; such as of a + V b or ˆ c -f ,y b. Various rules have been given for this purpose. The first is that of Lucas De Burgo, in his Summa de Arith. &c. which is this : When one part, as a, is rational, divide it into two such parts, that their product may be equal to ˆth of the number under the radical 6 ; then shall the sum of the roots of those parts be the root of the binomial sought : or their difference is the root when the quantity is residual. That is, if c f e rr a, and ce ā %b ; then is *J c + ˆ eā A/ a + v/ 6 the root sought. As if the binomial be 23 + V 448 ; then the parts of 23 are 16 and 7, and their product is 112, which is Jth of 448 ; therefore the sum of their roots 4 + ˆ/ 7 is the root sought of 23 + V 448. De Burgo gives also another rule for the same ex- tractions, which is this . The given binomial being, for example, ˆ/ c f Ā«/ b, its root will be

ā So in the foregoing example, 23 + ˆ/ 448, here ˆ c = 23, and ˆ/ b =. V 448 ; hence \ J c ā llj, and i ˆ/ c ā b ā i ˆ 232ā 448ā i V81 āˆ ;

therefore J iT7c + A J c ā b =. J 11* 4- 4i

of Sir Isaac Newtoi.‘s applies to all roots of hi nomials whatsoever.

BINOMIALS, SIR ISAAC NEWTON’S RULE FOR ANY ROOT OF. Of the given quantity a Ā± b, let a be the greater term, and c the index of the root to be extracted. Seek the least number n, whose power nc. can be divided by a a ā bb without a remainder, and let the quotient be q ā¢

Compute ˆJ’a + 6 . ˆ/ q in the nearest in- teger number, which call r ; divide a ˆ/ 1 by its greatest rational divisor, calling the q.iotient s ;

n

and let the nearest integer number above

2s

be t : so shall

t s Ā± V ? s8 ā n

be the root

. 4 + N/ 7 >s the root sought, before. Again, if the binomial be ,/ 18 f .0; here c = 18, and b = 10; therefore i v

hence,

25

:ˆ6 =

2 ā v/~2=

consequently V y +

+ 1

is the

root of ˆ 18 + ˆ/ 10 sought. And this latter rule has been used by all other authors, down to the present time.

BINOMIALS, RULES TO EXTRACT THE CUBIC

AND OTHER HIGHER ROOTS OF. This is Useful

in resolving cubic and higher equations, and was introduced with the resolution of those equations by Tartalea and Cardan. The rules for such ex- tractions are in a great measure tentative. Tar- talea, Bombelli, Gerard, Demoivre, and Dr. Wai-

sought, if the root can be extracted. And this rule is demonstrated by s'Gravesande in his Commentary on Newton's Arithmetic. And many numeral examples, illustrating this rule, are given in s'Gravesande's Algebra, above-men- tioned, p. 100; as also in Newton's Univers. Arith. p. 53, 2d edit, and in Maclaurin's Al- gebra, p. 118. Other rules may be found in Schooten's Commentary ont the Geometry of Des Cartes, and elsewhere.

BINOMIAL SURD. See BINOMIAL LINE. BINOMIAL THEOREM, in algebra; is used to denote the celebrated theorem invented by Sir Isaac Newton for raising a binomial to any power, or for extracting any root of it by an approxima- ting infinite series. Stifelius and others, about the beginning of the sixteenth century, knew how to raise the integral powers, not barely by a con- tinued multiplication of the given binomial, but by means of a table of numbers formed by con- tinual addition, which showed by inspection the co- efficients of the terms of any power of the binomial contained within its limits ; but still they could not, independent of a table, and of any of the lower powers, raise any power of a binomial at once by determining its powers from one another only, viz. the second term from the first, the third from

the second, and so on as far as we please, by a general rule, and much less could they extract general algebraic roots in in- finite series by any rule whatever. Dr. Hutton has shown, in the Historical Introduction to his Mathematical Tables, p. 75, that Mr. Henry Briggs, about the year 1600, was the first who taught the rule for generating the terms succes- sively one from another of any power of a bino- mial, independent of those of any other power, for he gives the binomial theorem in words, wanting only the algebraic notation in symbols, as it stands at this day, and as it was extended by Newton to roots or fractional exponents long after Briggs had given it in the case of integral powers. ‘ The theorem being thus plainly taught by Briggs, about the year 1600, (says Dr. Hutton,| I am surprised, that a man of such general read- ing, as Dr. Wallis was, could possibly be igno- rant of it, as he plainly appears to have been, from the eighty-fifth chapter of his Algebra,

hs, have given rules for extracting the cube roots, where he fully ascribes the invention to Newton ;

&c. of binomials: for which we shall refer to the works of these authors, as the following rule

and adds, that ‘he himself had formerly sought for such a rule, but without success; or how Mr.

John Bernoulli!, not half a century since, could himself first dispute the invention of this theo- rem with Newton, and then give the discovery of it to Pascal, who was not born till long after it had been taught by Briggs, (see Bernouilli’s Works, vol. iv. p. 173). But I do not wonder that Briggs’s remark was unknown to Newton, who owed almost every thing to genius, and very little to reading ; and I have no doubt that he made the discovery without any light froir. Briggs, and that he thought it was new for all powers in general, as it was indeed for roots, and quantities with fractional and irrational expo- nents.’ Thus it appears that Briggs discovered in part what Newton afterwards rendered more Complete and universal, for he found about the year 1666 that if m were put for any whole num- ber whatsover, the co- efficients of the terms of

the rath power of 1 + x would be 1, ā , ā ,

m ā 1 m m ā 1 m ā 2

ā – ā , ā , ā – ā , ā – ā , &c. till we come

to the term , which will be the last

m

term. But how he discovered this proposition, he has not told us ; nor has he even attempted to give a demonstration of it. Sir Isaac Newton, after he had discovered this rule for generating the co-efficients of the powers of 1 ā¢+ā¢ x, when the indexes of those powers where whole numbers, conjectured that it might be possibly true like- wise when they were fractions. He therefore ā¢esolved to try whether it was or not, by apply- ing it to such indexes in a few easy instances, and particularly to the indexes Ā£ and |, which, if the rule held good in the case of fractional indexes, would enable him to find series equal

to the values 1 + x}% and 1 + jfy, or the square root and cube root of the binomial 1 + x, and when he had in this manner obtained a series for i + .v] Ā£or the square root of 1 +x, he multiplied the said series into itself, and found that the product was 1 + x ; in like manner he obtained a series which he suspected to be equal to IH- *)J> and by multiplying the said series twice into itself, the product he found to be 1 + x, hence he concluded that the former series was really equal to the square root of 1 -f x, and the latter to its cube root, and from these and a few more such trials he concluded universally, that the rule was true in all cases, whether the index m stood for a whole number, or a fraction of any

kind as i, |, f , g, or in, general, Ā£ . This dis-

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covery of Newton's appears first to have been given to the world, but without a demonstration, by Dr. Wallis in his Algebra, chap. 85, in the year 1685, though it was inserted in Sir Isaac's first letter to Mr. Oldenburgh, the secretary to the Royal Society, dated July 13th, 1676; and the said letter was shown to Mr. Leibnitz, and probably to other mathematicians of that time, yet it remained for some years without a demon- stration, either in the case of integral powers or roots. At last it was demonstrated, in the case of integral powers, by means of the properties of

figurate numbers, by Mr. James Bernouilli, in the third chapter of his Treatise de Arte Con- jectandi, published in 1713, about eight years after his death, but probably written in the latter years of the preceding century. That part of his book relating to the properties of

figurate num- bers, from which the binomial theorem may be deduced, was published at his native place Basil or Basle in Switzerland, in 1692. Various other demonstrations have been given of this very im- portant theorem by more modern mathematicians, some of which are by means of the doctrine of FLUXIONS (which see), and others more legally from the pure principles of alg-ebra only ; among the best of that kind is that given by Dr. Hutton in his Mathematical Tracts, vol. i. where a full account is given of what others have done upon this subject. A demonstration of it is also givea from algebraical principles, by Mr. Abratn Robertson of Oxford, in the London Philosophi- cal Transactions for 1795, part ii. The binomial theorem is engraved on Sir Isaac Newton's mo- nument in Westminster Abbey as one of his greatest discoveries.

The Newtonian theorem, in one of its most sim- ple forms is 1 + p}* :r 1 + np + . Ti.Ti ā 1 .n ā 2

71 .71 < 1

2. 3.

'p3, &c. ; and the following

improvement of it is given by Dr. Hutton, in the Appendix to his Mathematical and Philosophical Dictionary, where it is said to have been lately dis- covered by Mr.Bonnycastle of the Royal Military Academy, and then published for the first time. Lets:z;> ā 2/>a + ip3 ā i p4 + $p5, &c. This series, as is well known, is equal to the hyperbo- lic logarithm of 1 + p. The improved form of the theorem is this,

2.3″ ' 2.3.4

s47i4, &c. Also if s = p + % p2 f \p3 f \p4 4- $ps, &c. or the hyperbolic logarithm of 1 ā p, then

s4 n4, &c.

Dr. Hutton also gives a demonstration of this form of the binomial theorem, and, from principles purely algebraical, he also shows how it may be applied to the construction of logarithms, and the solution of exponential equations ; but we must observe, that he is mistaken in supposing this discovery of Mr. Bonnycastle's to be entirely new, and that it was never before published ; for the same series for a binomial is taken notice of by Euler in different parts of his writing. It is particularly mentioned in his Calculus Differen- tialis, part 2. chap.,

iv., where he says that aw

. w . log, a w2. (log. of to3, (log. a)3

1 1 . 2 1.2.3 ‘

&c. the very same, he adds, that had formerly been obtained in the Introduction (Int. in Anal. infin). We have been induced to mention this oversight of Dr. Hutton’s, rather with a view to prevent our readers from being led into a mistake concerning the inventor of this form of the bino- mial theorem, than to cavil at a gentleman who

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fm done so much for the improvement of the sjience of mathematics.

BINOMI’NOUS, adj Lat., from b’.nm and nr’/wc-n, having two namts.

BINOMIUS, from bis, and nomen, name; in middle age writers, denotes a person with two names. Most Christians anciently were binomii, as having had other names in their heathen state, which they changed at their conversion. Be- sides, it was an ancient custom for parents to give names to their children immediately after they were born, and sometimes other ones after- wards at their baptism ; one of which frequently became a cognomen, or surname. It was a constant practice to assume a new name at baptism, as the religious still do in the Ro- mish church, on their reception into the mo- nastic state ; and Jewish proselytes at their circumcision.

BINTANG, an island in the Eastern seas, on the coast of Malacca, at the entrance of the straits of Sincapore. It is about thirty-five miles in length, and eighteen in breadth, surrounded by rocky islets. The island produces gold dust; its principal town is Reheo or Rio, which was taken and destroyed by the Portuguese in 1527, and is governed by a sultan. Long. 104Ā° 30′ E., lat. 1Ā° 2′ N.

BIOBIO, or BIOPHIO, a large river of Chili ; rises in the Andes, and after running through veins of gold and fields of sarsaparilla, enters the South Sea, near the city of Conception, opposite the Isle of Avequirina, in lat. 37Ā° 0′ S. It is the northern boundary of Chili, and its entrance known by two remarkable hills, called the Teats of Biobio, which are situated at the north, be- twixt it and the bay of Conception, and serve to both as land-marks for navigators. It is about one mile across at the mouth,' has good depth of water in the middle, and the tide rises about seven feet and a half at the full and change of the moon.

BIOCOLYT7E, from /?Ā«Ā», violence, and (coXvw, to hinder ; in the Byzantine empire, an order of officers appointed to prevent the violence fre- quently committed by the soldiers. They were suppressed by the emperor Justinian.

BIOGRAD, a town of Dalmatia, anciently Alba Maritima, and the former residence of the kings of Croatia. It has a good harbour at a distance from the town, secured by several small islands, and is considered as belonging to the county of Zara ; being nearly twenty miles south-east of the town of that name.

BIOG'RAPHER,} From /3Ā»oC, life, and

BIOG'RAPHY, Sypaˆw, I write. Biogra-

BIOGKAPH'ICAL.) phy is that portion of li- terature which is devoted

to the lives of indivi- duals.

Our Grub-street biographer* watch for the death of a great man, like so many undertakers, on pur- pose to make a penny of him. Additon.

In writing the lives of men, which is called biogra- phy, some authors place every thing in the precise order of time when it occurred. Wattt.

The necessity of complying with times, aud of sparing persons, is the great impediment of biography.

Johnson.

. BIOGRAPHY is undoubtedly the most entertain- ing and instructive kind of history. It admits of all the painting and passion of romance ; but with this capital difference, that our passions are more keenly interested, because the characters and incidents are not only agreeable to nature, but strictly true, few books more attract or are more proper to be put into the hands of young people, than those of a biographical kind. The history of this study is that of the whole republic of letters. We would only suggest that groupes of biographical memoirs, chronologically arranged, are much wanted as a kind of appendix to all our popular histories.

BIOLYCflNIUM, from /3ioc,life, and \VXH>S. light; a substantial fire, flame, or heat, which some ancient physicians supposed inherent or actually lodged in the heart, and remaining there as long as life lasts. Some would have it to have been the human soul, others the animal spirits, and others the Deity, that did the office of a biolychnium, and was the spring of all the actions and motions of the body. Casp. Hoff- man and Couringius have written treatises on the ancient doctrine of the lamp of light or innate heat.

BION, a bucolic poet, a native of Smyrna, lived at the same time with Ptolemy Philadelphus, whose reign reached from the fourth year of the 123d Olympiad to the second year of the 133d. He was an incomparable poet, if we may believe the lamentations of his disciple Moschus. His few pieces which are left do not contradict this testimony.

BION, surnamed Borysthenites, because he was a native of Borysthenes, was a philosopher of a great deal of wit, but very little religion : he flourished about the 120th Olympiad ; but falling sick, like many other profane persons, he became superstitious.

BIORKO, an island of Sweden, in the Malar, three miles from

Stockholm, where anciently stood Birca.

BIOTA, in zoology, a name introduced by Dr. Hill for the POLYPE, which see.

BIOTHANATI, from /3ta, violence, and Oavarof, death, in some medical writers denotes those who die a violent death. The word is also written, and with more propriety, biathanati sometimes biaeothanati. In a more particular sense, it denotes those who kill themselves. In this sense the word is used both by Greek and Latin writers. See SUICIDE.

Also a name of reproach given by the Heathens to the primitive Christians, for their constancy and forwardness to lay down their lives in martyrdom.

BI'OVAC, n. s. “) Fr. from wey wacfi, a

BI'HOVAC, > double guard, Germ. See

BI'VOUAC. j BIVOUAC.

BI'PAROUS, adj. Lat. from binus and pario. Bringing forth two at a birth.

BIPARTITE, adj. Lat. from binus and par- lior. Having two correspondent parts ; divided into two.

BI PARTITION, n.s. from bipartite. The act of dividing into two ; or of making two cor- respondent parts.

BI'PED, n. s. Lat. bipes. An animal with two feet.

No serpent, or fishes oviparous, have any stones at all ; neither biped nor quadruped oviparous have any exteriourly. Brown's Vulgar Errours.

BIP'EDAL, adj. Lat. bipedalis. Two feet in length ; or having two feet.

BIPEN'NATED, adj. Lat. from binus and penna, having two wings.

All bipennuted insects have poises joined to the body. Derham.

BIPENNIS, a two-edged axe, used anciently by the Amazons in right ; as well as by the sea- inen, to cut asunder the cordage of the enemy's vessels. It was a weapon chiefly of the oriental nations, made like a double axe, or two axes joined back to back, with a short handle. Modern writers usually compare it to our halberd or partizan ; from which it differs in that it had no point, or that its shaft or handle was much shorter.

BIPET'ALOUS, adj. Lat. of bis, and Gr. irtToXov. A flower consisting of two leaves

BIPLICATA, in conchology, a species of Voluta. It is of a tapering shape, smooth, white spotted with yellow, and dotted with black ; lip acute; pillar with two plaits.

BIPUNCTARIA, in entomology, a species of phalsena, geometra; anterior wings cinereous, undulated with brown; aduskyband in the mid- dle, and two black dots.

BIPUNCTATA, a species of apis, inhabit- ing Siberia. This insect is black, hairy, and with two yellow belts ; the first with two lateral black dots. Also a species of aranea, with a black, globose abdomen, marked with two excavated dots.

BIPUNCTATUM, a species of opatrum, color brown, thorax cylindrical and immargi- nate, with two hollows.

BIPUNCTATUS, a species of bmchus, inha- biting Helvetia. It is cinereous; wing-cases brown, with an ocellar, black dot at the base of each. Also, a species of carabus, of a brassy color, with two dots on the wing-cases.

BIPUNCTELLA, in entomology, a species of phalaena, tinea, wings cinereous brown, with a marginal white spot. Also a species of phala? na, tinea, with fuscous wings, with a common den- tated white stripe ; thorax snowy- white with two black spots. This is tinea echiella of Schmetterl.

BIPUSTULATA, a species of cantharis, mala- chius. of a green color ; apex of the wing-cases red. This is thelephorus viridianeus nitidus of Degeer.

BIPUSTULATUM, a species of opatrum, inhabiting Pomerania. Its form is narrow and elongated ; color ferruginous : wing-cases slightly

grooved.

BIPUSTULATUS, a species of attelabus; found in North America: color black, with a rufous spot at the base of each of the wing-cases.

BIQUAD'RATE, ; n. s., in algebra. The

BIQUADRATIC*. $ fourth power, arising from the multiplication of a square number or quan- tity by itself. Harris.

BIQUADRATIC EQUATION, is that which rises to four dimensions, or in which the unknown quantity rises to the fourth power; as a-4 j Ā«j ; -f

bx* 4- ex 4- d ā¢=. 0. The first resolution of a biquadratic equation was given in Cardan's Algebra, chap. 39, being the invention of his pupil and friend, Lewis Ferrari, about the year 1540. This is effected by means of a cubic equation, and is indeed a method of depressing the biquadratic equation to a cubic, which Car- dan demonstrates and applies in a great variety of examples. We subjoin

Euler's Rule for BIQUADRATICK EQUATIONS, The celebrated Leonard Euler gave, in the sixth volume of the Petersburgh Ancient Com- mentaries, for 1738, an ingenious and general method of resolving equations of all degrees, by means of the equation of the next lower degree, and among them of the biquadratic equation by means of the cubic ; and this last was also given more at large in his Treatise on Algebra trans- lated from the German into French in 1774, in 2 vols. 8vo. The method is this : Let x* ā ax*

ā b x ā c ā 0, be the given biquadratic equa- tion, wanting the second term. Take/zz Ā£ a, g =. -faaa \ \c, and h~fabb; with which values of f, g, ft, form the cubic equation, z2 ā

fz* j gz ā h ā 0. Find the three roots of this 'cubic equation, and let them be called p, g, r. Then shall the four roots of the proposed biqua- dratic be these following, viz.

When Ā£ b is positive ; When Ā£ b is negative ā¢' 1st. 2d.

3d.

4th. ^/ p ā ^/q ā ^Jr. ā ^J p ā *J q ā v/V.

The following is Mr. SIMPSON'S RULE. Mr Simpson gave also a general rule for the solution of biquadratic equations, in the second

edition of his Algebra, p. 150, in which the given equa- tion is also resolved by means of a cubic equa- tion, as well as the two former ways ; and it is investigated on the principle, that the given equa- tion, is equal to the difference between two squares ; being indeed a kind of a generalisation of Ferrari's method. Thus, he supposes the

given equation, viz.

x* f px3 f qx2 + rx 4- srz a? 4- %px 4 A I*

ā B* 4 C]2; then from a comparison of the like terms, the values of the assumed letters are found, and the final equation becomes

A3 ā igA2 + &A ā */ā 0

-

where k ā %pr ā s, and / ā ˆr2 4 s ' ˆp* ā q. The value of A being found in this cubic equa tion, from it' will be had the values of B and C, which have these general values, viz.

— . Henoe, 2 B

finally, the root x will be obtained from the assumed equation x2 + %px + A5* ā B x 4- C *} ā¢=. 0, or x2 + %px + A ā Ā± Bx Ā± C, in four several values. Mr. Simpson subjoins an obser- vation, viz. that ' the value of A, in this equation, will be commensurate and rational, and there- fore the easier to be discovered, not only when all the roots of the given equation are commen- surate, but when they are irrational and even impossible.' But this has since been found erro- neous, as the instances in which it holds true,

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are very few indeed, in companson with the nuin ber of those in which it fails. For other me- thods of solving biquadratic equations, see AL- GEBRA. For the construction of biquadratic equations, see Des Cartes's Geometry, with the Commentaries of Schvoten and others.

BIQUADRATIC PARABOLA, a curve of the third order, having two infinite legs, and expressed by one or other of these three equations, viz.

a3 JT ~ v4 , as in fig. 1 .

a3x ā y ā (Py1, as in fig. 2.

Ā«3.r ā y ā a + b -y3 ā afcy, as in fig. 3,

Fig. 1.

Fig. 3.

where x r= A P the absciss y rz P Q the ordinate, 6 zz A B, c ā AC, and a zz a certain given quantity. But the most general equation of this curve is the following, which belongs to fig. 4. a y zz J4 f b x3 + ex3 dx \ e ;

Fig. 4.

Ā« /I KJ> ./7\ 7V I R

\

Fi?. 5.

In

where JT zz Ap or A P the absciss, and ā y or + y is the ordinate p m or P M, also a, 6, r, d, e, are constant quantities; the beginning of the absciss being at any point A in the indefinite line A P. But if the beginning of the absciss A be where this line intersects the curve, as in fig. 5, then the nature of the curve will be defined by this equation a X p m zz Ap x Bp x Cp x Dp, wherever the point p is taken in ‘ Fig. 6. the infinite lines R S. When the I j

curve has no serpentine part, as \ fig. 6, the equation is more simple, \ P/B being in this case barely a x pm ā %, &

zz Ap” x pB,

BIQUADRATIC POWER is the squared square, or fourth power of any number or quantity. Thus sixteen is the biquadrate, or fourth power of two, or it is the square of four, which is the second power of two.

BIQUADRATIC ROOT, of any quantity, is the square root of the square root, or the fourth root of that quantity. So that the biquadratic root of sixteen is two, and the biquadratic root of eighty-one is three.

B1QUALAR, among the Algerines, a cook of the divan.

BIQUINTILE,an aspect of the planets, when they are 144 degrees distant from each other. It is thus called, because they are distant from one another by twice the fifth part of 360 degrees.

BIR, or BEER, a town of Asiatic Turkey, in the province of Diarbeck, with a castle where the governor resides, seated on the eastern bank of the Euphrates. Long. 38Ā° 6′ E., lat 36Ā° ItfN.

BIRAGUE (Clement), a Milanese engraver, and the inventor of the art of cutting diamonds,

flourished about A. D. 1580. His first perform, ance on stone was a portrait of Don Carlos prince of Spain. He lived long at the court of Philip II.

BIRAO, in botany, the name given by the in- habitants of the Philippine islands to a plant more commonly known among botanical writers by the name tugus, and supposed by Camelli, who carefully observed it on the spot, to be the true amomum of the ancient Greeks.

BIRBHOOM, a district of Bengal. See BENGAL.

BIRCH TREE, n. s. Sax. bine, Lat. betula. The leaves are like those of the poplar; the shoots are very slender and weak; the catkins are produced at remote distances from the fruits, on the same tree ; the fruit becomes a little squamose cone ; the seeds are winged, and the tree casts its outer rind every year. Miller.

BIRCH, in botany. See BETULA. Various uses are made of different pails of this tree, par- ticularly, 1 . Birch bark, being bituminous and consequently warm and emollient, is used in fu- migations to correct a distempered air. The inner silken bark was anciently used for writing tables before the invention of paper ; though Ray rather assigns the office of paper to the cuti- cle, or outer skin, which peels off yearly. And with the outward, thicker, and coarser part, are houses in Russia, Poland, and other northern tracts, covered, instead of slates and tile. The Indians make pinnaces with white cedar, which they cover with large flakes of birch bark ; sewing them with thread of spruce roots, and pitching them, as the ancient Britons did, with the willow. Pliny speaks of a bitumen actually procured from the birch tree.

BIRCH (Thomas), D. D. historical and biogra- phical writer, was born in Loffdon in 1705. His parents were Quakers ; and his father, Joseph Birch, a coffee-mill maker by trade. The son, by unremitted diligence, though he had not an uni- versity education, became qualified to take orders in the church of England. In 1728 he married the daughter of

the Rev. Mr. Cox, to whom he was curate ; but his felicity was of short duration, Mrs. Birch dying in less than twelve months after their marriage. In 1 732 he was recom- mended to lord chancellor Hardwicke, then attorney-general ; to whom, with the succeeding Earl, he was indebted for all his preferments. He was first presented with the living of lilting in Essex in 1732. Mr.Birchwas chosen amemberof the Royal Society, Feb. 20th 1734-5 ; and of the Society of Antiquaries, Dec. llth 1735, of which he afterwards became director till his death. Be- fore this, the Marischal College of Aberdeen con- ferred on him, by diploma, the degree of M. A. 1 743. By the interest of Lord Hardwicke, he was now presented to the sinecure rectory of Llandewy Wrefey in Pembrokeshire; in 1743-4, to the rectory of Siddington St. Peter's, in Glou- cestershire, and soon after, to the united rectories of St. Michael, Wood-street, and St. Mary, Stain- ing; and in 1745-6, to those of St. Margaret Pattens, and St. Gabriel, Fenchurch-street. ā In Jan. 1752, he was elected one of the secreta- ries of the Royal Society. In 1753 the Maris- cb?l College of Aberdeen created him D. D. He

also became one of the trustees of the British Museum; and in 1761, rector of Debden in Essex. In the latter part of his life he was chaplain to the princess Amelia. ..His health de- clining in 1765, he was ordered to ride for the recovery of it ; but going out for this exercise, January 9th 1766, was unfortunately thrown from his horse, on the road betwixt London and Hampstead, and died on the spot, in the sixty- first year of his age. He bequeathed his library of books and MSS. to the British Museum. He like- wise left about Ā£300 to be laid out in government securities, for the purpose of increasing the sti- pend of the three assistant librarians of that esta- blishment. His principal publications were, 1. The General Dictionary, Historical and Criti- cal ; including a new translation of Mr. Bayle, and interspersed with several thousand new lives. The whole design was completed in 10 volumes folio. 2. Dr. Cudworth's Intellectual System (improved from the Latin edition of Mosheim), his Discourse on the true Notion of the Lord's Supper, and two Sermons, with an Account of his Life and Writings, 2 vols. 4to. 1743. 3. The Life of the Hon. Robert Boyle, 1744 ; prefixed to an edition of that excellent philosopher's works, revised by Dr. Birch. 4. Lives of Illustrious Persons of Great Britain, annexed to the engravings of Houbraken and Vertue, 1746 ā 1752. 5. An Enquiry into the Share which King Charles I. had in the Trans- actions of the Earl of Glamorgan. 1747, 8vo.

6. An edition of Spenser's Fairy Queen, 1751, 3 vols. 4to. with prints from designs by Kent.

7. The Miscellaneous Works of Sir Walter Ra- leigh ; to which was prefixed the Life of that great man, 1751, 2 vols. 8vo.. 8. The Theological Moral, Dramatic, and Poetical Works of Mrs. Catharine Cockburn; with an Account of her Life, 1751, 2 vols. 8vo. 9. The Life of Dr. John Tillotson, Archbishop of Canterbury ; compiled chiefly from his original Papers and Letters, 1752, 8vo. 10. Milton's Prose Works, 1753, 2 vols. 4to ; with a New Life. 11. Memoirs of the reign of Queen Elizabeth, from 1581 till her death, 1754, 2 vols. 4to. 12. The History of the Royal Society of London for Improving Natural Knowledge, from its first rise, 4 vols. 4to. 1756 and 1757. 13. The Life of Henry Prince of Wales, eldest son of king James I. compiled chiefly from his own papers and other MSS., " 760, 8vo. His numerous communications to the Royal Society may be seen in the Philoso- phical Transactions, &c. Dr. Birch was a pioneer of literature ; to him Dr. Johnson was repeatedly obliged for literary information : he bestowed on him a Greek epigram, and for many years corresponded with him. But he is said to have satirically observed ā ' Tom Birch is as brisk as a bee in conversation, but no sooner does he take a pen in his hand, than it becomes a torpedo to him, atid benumbs all his faculties.'

BIRCH WINE. See BLTULA.

BIRCH'EN, adj. from birch. Made of birch.

His beavered brow a birchen garland bears. Pope.

BIRD (William), an eminent musician and composer, was one of the children of the chapel in the reign of Edward VI., and brought up under Tallis. The early compositions of Bird

were mostly for the service of the church. He published a work entitled Sacrarum Cantionum, quinque vocum, in 1589; among which is that noble composition Ci vitas Sancti tui, which has so long been sung as an anthem to the words ' Bow thine ear, O Lord.' He was also the au- thor of a work entitled Gradualia, ac Cantiones Sacrae, Quinis, Quaternis,Trinisque vocibus Con- cinnatae, lib. primus. Of this there are two edi- tions, the latter published in 1610. He seems to be the first among English musicians that ever made an essay in the composition of that elegant species of vocal harmony, the madrigal ; the La Virginella of Ariosto, which he set in that form for five voices, lˆiug the most ancient En- glish musical composition of the kind . Of

his com- positions for private entertainment, there are ex- tant, Songs of sundry Natures, some of Gravitie, and others of Myrth, fit for all Companies and Voyces, printed in 1589; and two other collec- tions of the same kind, the last printed in 1611. But the most permanent memorials of his fame are his motets and anthems ; to which may be added, a fine service in the key of D with the minor third, the first composition in Dr. Boyce's Cathedral Music, vol. iii. and that well-known canon of his, Non nobis Domine. Bird died in

1623.

BIRD (Edward), R.A. a painter of eminence, who died at Bj-istol in November, 1819. He excelled in comic subjects, and was at once dis- tinguished for an accurate attention to nature, and facility of execution. He was patronised by the marquis of Stafford, who placed in his celebrated gallery, among the works of the old masters, the first picture of any consequence painted by Bird . His ' Chevy Chace' procured him the appointment of historical painter to the princess Charlotte of Wales ; his ' Psalm Singers' in a country church was painted for his majesty : others of his productions are in the collections of various amateurs.

BIRD', v. & n.

BIRD'ING,

BIRD'CAGE,

BIRD'CATCH'ER,

BIRD'ER,

BIRD'BOLTS,

BIRD'EYE,

BIRD'EYED',

BIRD'ING-PIECE,

BIRD'LIKE,

BIRD'LIME,

BIRD'LIMED,

BIRD'LOOPS,

BIRD’MAN,

BIRD’SPELLING.

Ang.Sax. braeidan, to broaden, that is to spread, or to expand, as with wings ā hence the appli cation of the word as a generic description of the feathered tribe. Johnson, however, derives it from the Saxon, bird or brud, a chicken. In common talk, fowl is used for the larger, and bird for the smaller kind of feathered animals.

On every bough, the birdet herd I syng With voice of angell, in hir harmonic.

Chaucer. Assemblie of Fowlet.

And all the while sweet musicke did divide Her looser notes, with Lydian harmony ; And all the while sweet birdes thereto applide Their daintie layes and dulcet melody, By caroling of love and iollity. Spenser.

How Michael the archangel shall sound his trum- pet, how he shall gather all the scattered Jewes in the Holy Land, and there make them a great banquet, wherein shall be all the birds, bea*!s,

fishes that ever God made, a cup cf wine that grew in Paradise, and hath been kept in Adam’s cellar ever since. At the first course shall be served in that great oxe, in Job. iv. 10. ‘ that every day feeds on a thousand hills ;’ Psal. 1. 10, that great leviathan and a great bird, that laid fcn egge so big, that by chance tumbling out of the nest, it knocked down 300 tall cedar*, and breaking as it fell drowned 160 villages. This bird stood up to the knees in the sea, and the sea was so deep, that a hatchet would not fall to the bottom in seven years. Burton. Anat. Mel.

The poor wren,

The most diminitive of birds, will fight, Her young; ones in her nest, against the owl .

Shakspeare.

1 do invite you to-morrow morning to my house to breakfast ; after

we will a birdtTig together. Id.

To be generous and of free disposition, is to take those things for birdbolts that you deem cannon bul- lets. Id’

I will creep up into the chimney. ā There they al- ways use to discharge their Wrdwy-pieces ; creep into the kill hole. Id-

And on her shield the lone bird might be seen, The Arabian bird shining in colours new ; Itself unto itself was only mate ; Ever the same but new in newer date : And underneath was writ ‘ such is chaste single state.’ Fletcher. Purple Island.

A poor lark entered into a miserable expostulation with a birdcatcher, that had taken her in his net.

L’Eitrange.

As a fowler was bending his net, a blackbird asked him what he was doing : why, says he, I am laying the foundations of a city ; and so the birdman drew out of sight. Id.

Holly is of so viscous a juice, as they make birdlime of the bark of it. Bacon’s Nat. Hist.

As the wakeful bird

Sings darkling, and in shadiest covert hid Tunes her nocturnal note. Milton.

With stores of gather’d glue contrive To- stop the vents and crannies of their hive ; Not birdlime, or Idean pitch, produce A more tenacious mass of clammy juice. Dryden.

There sings

A bird unseen ā but not remote ā Invisible his airy wings, But soft as harp that Houri strings His long entrancing note. Byron. Bride of Abydot.

BIRD, BLACK. See TURDUS.

BIRD, BLUE. See MOTACII.LA.

BIRD-CALL, or DECOY-BIRD, a bird trained up to call and allure other birds into the fowlers’ nets. See BIRD-CATCHING.

BIRD, CANARY. See FRINGILLA.

BIRD, DUNG. See UPUPA.

BIRD, HUMMING. See TROCHILUS.

BIRD, MESSAGE, avis internuncia, a peculiar species of birds employed to carry letters either for expedition or safety. See CARRIER Pi-

CEON.

BIRD, MOCKING. See TURDUS.

BIRD OF PARADISE. See PARADISE.

BIRDS, CYPRIAN, aves cypricae, a kind of odorous candles.

BIRDS, METHOD OF MAKING FEATHERED PICTURES OF. Mr. Edwards, in his Natural History of Birds, vol. ii. p. 119, gives the following recipe for making pictures of birds with their natural feathers: First, take a thin board, or pannel of dial or wainscot, well seasoned,

that it may not shrink : then smoothly paste on it white paper, and let it dry; and if the wood casts its color through, you may paste on a second paper; let the second paper dry; then get ready any bird, and draw it as exact as may be on your papered pannel, of its natural size; middle sized birds are best for this work, then paint what groundwork, or tree, or other thing you design to set your bird on, together with the bill and legs of the bird in water-colors, leaving the bird to be covered with its own natural fea- thers. You must prepare the part to be feathered, by laying on pretty thick gum Arabic, dissolved in water, with a large hair-pencil; then lay the pannel flat, and let it dry hard ; when dry, cover it with gum-water a second time, and let it dry; and then a third, in case it does not lie with a good body on the paper; the thickness of a shil- ling, when dried hard, is sufficient. When your piece is prepared, take the feathers off from your bird as you use them ; beginning always at the tail and points of the wings, and working upwards to the head ; observing to cover that part of your draft with the feather that you take from the same part in your bird, letting them fall one over another in their natural order: you must prepare your feathers by cutting off the downy part that is about their bottoms; and the larger feathers must have the insides of their shafts shaved off with a knife to make them lay flat ; the quills of the wings must have their inner webs clipped off, that in laying them the gum may hold them by their shafts. When you begin to lay them, take a pair of steel

pliers to hold the feathers in ; and have some gum-water, not too thin, and a large pencil, ready to moisten the gummed ground-work by little and little as you work it: then lay your feathers on the moistened parts; which must not be waterish, but something tacky or clammy to hold the fea- thers. You should prepare a parcel of small leaden weights, in the form of sugar-loaves, which you may cast in sand by first making holes in its surface with a pointed stick; these weights will be necessary to set on the feathers you have newly laid on, to hold them to the gum till they are dry: but you must be cautious lest the gum come through the feathers; for it not only smears them, but dries to the bottoms of the weights, and you will be apt to pull off the feathers with the weights, which will disorder your work : when you have wholly covered your bird with feathers, you must, with a little thick gum, stick on a piece of paper cut round, of the bigness and in the place of the eye, which you must color like the eye of the bird. When the whole is dry, dress the feathers round the outline that may chance to stare a little, and rectify what may be mended in any other part : then lay a sheet of clean paper on it, and on that a. heavy book, or some such thing, to press it: after which it may be preserved in a frame covered with a glass.'

BIRDS, METHODS OF PRESERVING. Various methods have been attempted for preserving birds from putrefaction, so as to retain their na- tural form and position, as well as the beauty of their colors and plumage. A good antiseptic for animal substances has been much enquired

after; as, for want of it, many curious animals, and birds particularly, from foreign parts, entirely miscarry, and others of the finest plumage are devoured by insects. The following improved methods by Dr. Lettsom seem to be the least troublesome and the most complete : ā ' After opening the bird by a longitudinal incision from the breast to the vent ; dissecting the fleshy parts from the bones ; and removing the entrails, eyes, tongue, and brains (which in large birds may be extracted through the eye-holes with a surgeon's director), the cavities and inside of the skin are to be sprinkled with the powders mentioned below. Glass eyes, which are preferable to wax, are then to be inserted, and the head stuffed with cotton or tow; and a wire is to be passed down the throat through one of the nostrils, and fixed on the breast bone: wires are also to be introduced through the feet, up the legs and .thighs, and inserted into the same bone; next, fill the body

with cotton to its natural size, and sew the skin over it : the attitude is lastly to be attended to, and whatever position the subject is placed in to dry, it will be retained afterwards. The drying compound is as follows : ā ā¢

Corrosive sublimate ... Ā£ Ib.

Saltpetre, prepared or burnt . Ā£- Ib.

Alum burnt Ā£ Ib.

Flowers of sulphur .... j Ib.

Camphor J Ib.

Black pepper 1 Ib. ā¢

Tobacco, ground coarse . . 1 Ib.

Mix the whole, and keep it in a glass vessel, stopped close. Small birds may be preserved in brandy, rum, arack, or first; runnings ; though the color of the plumage is liabje to be extracted by the spirit. Large sea-fowl have thick strong skins, and such may be skinned ; the tail, claws, head, and feet are carefully to be preserved, and the plumage stained as little as possible with blood. The inside of the skin may be stuffed as above. Kuckahn observes (in the Phil. Trans, vol. Ix. p. 319,) that 'baking is not only useful in fresh preservations, but will also be of very great service to old ones, destroying the eggs of insects : and it should be a constant practice once in two or three years to bake them over again, and to have the cases fresh washed with camphorated spirit, or the sublimate solution, which would not only preserve collections from decay much longer, but also keep them sweet.' hut Dr. Lettsom remarks, that ' Baking is apt to crimp and injure the plumage, unless great care be used : and therefore the proper degree of heat should be ascertained by means of a feather, be- fore such subjects are baked.' And he prescribes as the best preservative, boxes well glazed : and he adds, '\Vhen the subject is to be kept for borne time in a hot climate, it should be secured in a box filled with tow, oakum, or tobacco, well sprinkled with the sublimate solution.' In Gui- ana, the number and variety of beautiful birds is so great, that several persons in the colony advan- tageously employ themselves, with their slaves and dependents, in killing- and preserving tTese animals for the cabinets of naturalists in different parts of Europe. The method of doing this, as related by Mr. Bancroft (in his Nat. Hist, of

Guiana,) is, 'to put the bird which is to be pre- served in a proper

vessel, and cover him with high wines, or the first running of the distillation of rum. In this spirit he is suffered to remain for twenty-four or forty-eight hours, or longer, till it has penetrated through every part of his body. When this is done, he is taken out, and his feathers, which- are no ways changed by this immersion, are placed smooth and regular. It is then put into a machine, made for the purpose, among a number of others, and its head, feet, wings, tail, &c. are placed exactly agreeable to life. In this position they are all placed in an oven very moderately heated, where they are slowly dried ; and will ever after retain their natural position, without danger of putrefaction.' BIRDS, SINGING, are, the nightingale, black- bird, starling, thrush, linnet, lark, throstle, Ca- nary bird, bullfinch, goldfinch, &c. See some very curious experiments and observations on the singing of birds. ā Philosophical Transactions, vol. Ixiii. part. ii. No. 31. Their first sound is called chirp, which is a single sound repeated at short intervals ; the next call, which is a repeti- tion of one and the same note ; and the third sound is called recording, which a young bird continues to do for ten or eleven months, till he is able to execute every part of his song ; and when he is perfect in his lessons, he is said to sing his song round. Mr. Pennant has proved their notes to be no more innate than language in man ; they all sing in the same key ; and the honorable Daines Barrington has attempted to reduce their comparative merits to a scale : and to explain first how they came to have particular notes. See SONG OF BIRDS.

BIRD-BOLT, a small arrow with three heads, which was dis- charged at birds from a cross- bow. This arrow is borne in coat- armour as in the annexed figure. Argent three bird-bolts sable.

BIRD-CALL, a little stick cleft at one end, in which is put a leaf of some plant, wherewith to counterfeit the crier's call of several birds, and bring them to the net, or snare, or lime- twig, to be taken. A laurel-leaf fitted on the bird-call, counterfeits the voice of lapwings ; a leek that of nightingales, &c.

BIRD-CATCHING the art of taking birds or wild-fowl, whether for food, for the pleasure of their song, or for their destruction, as being pernicious to the husbandman, &c. The me- thods are by birdlime, nets, decoys, &c. See BIRDLIME, and DECOY.

In the suburbs of London there are many persons, who, during the months of October and March, get their livelihood by an ingenious, and we may add, a scientific, method of bird-catch- ing, which is totally unknown in other parts of Great Britain. The reason of this trade being confined to so small a compass arises from there being no

considerable sale for singing birds ex- cept in the metropolis : and as the apparatus for this purpose is heavy, and must be carried on a ˆan's back, it prevents the bird-catchers going to above three or four miles distance. This me- thod of bird catching must have been long prac-

tised, as it is brought to a most systematic per- fection, and is attended with very considerable expense. The nets are a most ingenious piece of mechanism ; are generally twelve yards and a half long, and two and a half wide ; and no one,

usual time. They therefore, in June or July, put them into a box made quite close, under two or three folds of blankets, and leave their dung in the cage to raise a greater heat ; in which state they continue, being perhaps examined but

he becomes eye-witness of the puller's sue- once a week to have fresh water. As for food,

till

cess, would imagine that a bird, which is so very quick in all its motions, could be caught by the nets flapping over each other. The wild birds fly, as the bird-catchers term it, chiefly during the month of October, and part of September and November ; as the flight in March is much less considerable than that of Michaelmas. The se- veral species of birds of flight do not make their appearance precisely at the same time, during the months of September, October, and Novem- ber. The pippet, a small species of lark, but inferior to the others in singing, for example, be- gings to fly about Michaelmas, and then the woodlark, linnet, goldfinch, chaffinch, green- finch, and other birds of flight succeed ; all of

the air is so putrid, that they eat little during the whole state of confinement, which lasts about a month. The birds frequently die under the operation; and hence the value of a stopped bird, as the bird-catchers style it, rises greatly. When the bird has thus prematurely moulted, he is in song whilst the wild birds are out of song, and his note is louder and more piercing than that of a wild one ; but it is not only in his note he re- ceives an alteration, the plumage is equally im- proved. The black and yellow in the wings of the goldfinch, for example, become deeper and more vivid, and acquire a beautiful gloss, which is not to be 'seen in the wild bird. The bill,

which in the latter is black at the end, in the

which arc not easily caught, or in any numbers stopped bird becomes white and more taper, as at any other time; and more particularly the does its legs : in short there is as much difference pippet and the woodlark. These birds, during between a wild and a stopped bird, as there is -ā¢ā¢ ā¢ .Ā«-ā¢-.Ā«.. ˆ—n between a horse kept in body clothes and one at

grass. When the bird-catcher has laid his nets, he disposes his call-birds at proper intervals. There is a most malicious joy in these call-birds, to bring the wild ones into the same captivity ; which may likewise be observed with regard to decoy ducks. (See DECOY.) Their sight and hearing infinitely excels that of the bird-catcher. The moment they see a hawk, they communicate the alarm to each other by a plaintive note ; nor will they then jerk or call though the wild birds are near. But at any other time, the instant that the wild birds are perceived, notice is given by one of the rest of the call-birds, as by the first hound that hits on the scent to the rest of the pack ; after which, follows the same sort of tumultuous joy. The call-birds, while the bird is at a distance, do not sing as a bird does in a chamber, they invite the wild ones by what the bird-catchers call short jerks, which, when the birds are good, may be heard at a great distance. The ascendency by this call is so great, that the wildest bird is stopped in its flight ; and, if not a sharper, as the bird-catchers style a bird acquainted with the nets, lights boldly within twenty yards per- haps of three or four bird-catchers, on a spot which otherwise it would not have taken the least notice of. Nay, it frequently happens, that if only half a flock are caught, the remainder will immediately afterwards light in the nets, and share the same fate ; and should only one bird escape, that bird will suffer itself to be pulled at till it is caught ; such a fascinating power have these call-birds. Here it is worth mentioning, that the bird-catchers frequently lay considera- ble wagers whose call-bird can jerk the longest, as that determines the superiority. They place them opposite to each other, by an inch of can- dle ; and the bird who jerks the oftenest before the candle is burnt out, wins the wager. There have been instances of a bird giving 170 jerks in a quarter of an hour ; and of a linnet, in such a trial, persevering in its emulation til.1 it swooned from the perch. Birds, when near Ā«ach other, and in sight, seldom jerk or sing. They e-t.her

the Michaelmas and March flights, are chiefly on the wing from day-break to noon, though there is afterwards a small flight from two till night ; but this is so inconsiderable, that the bird-catchers take up their nets at noon. It well deserves the attention of the naturalist

whence these periodical flights of certain birds arise. As the ground, however, is ploughed during the months of October and March for sowing the winter and spring corn, it should seem that they are thus supplied with a profu- sion both of seeds and insects, which they cannot so easily procure at any other season. It has been observed, too, that during their sitting, they fly always against the wind ; hence there is a great contention amongst the bird-catchers who shall gain that point ; if, for example, it is westerly, the bird-catcher who lays his nets most to the east is sure almost of catching every thing, provided his call-birds are good : a gentle wind to the south-west generally produces the best sport. The bird-catcher generally carries with him five or six linnets, of which more are caught than any other singing bird, two goldfinches, two greenfinches, one woodlark, one redpoll, a yellow hammer, titlark, and aberdavine, and perhaps a bullfinch ; these are placed at small distances from the nets in little cages. He has besides what are called slur-birds, which are placed within the nets, are raised upon the slur, and gently let down at the time the wild bird approaches them. The slur is a movable perch to which the bird is tied, and which the bird- catcher can raise at pleasure by means of a long string fastened to it. The slur birds generally consist of the linnet, goldfinch, and greenfinch, which are secured to the slur by what is called a biace ; which secures the bird without injuring the plumage. It is a sort of bandage, formed of a slender silken string, fastened lound the body, and under the wings, so as to hinder the bird from being hurt, let it flutter ever so much. As it has been found that there is a superiority in birds that are in song, the bird-catchers con- trive that their mil birds should moult before the

fight, or use short and wheedling calls; the icrking of these call-birds, therefore, face to face, is a most extraordinary instance of con- tention for superiority in song.

Various methods are used to catch different kinds of birds. The bullfinch, though not pro- perly a singing bird, or a bird of flight, as it does not often move farther than from hedge to hedge, yet, as it sells well on account of its learning to whistle tunes, and sometimes flies over where the nets are laid, the bird-catchers have often a call-bird to ensnare it, though most of them can imitate the call with their mouths. It is re- markable that the female bullfinch answers the purpose of a call-bird as well as the male, which is not experienced in any other species of birds taken by the London bird-catchers. The

night- ingale is not a bird of flight, in the sense in which bird-catchers use this term. Like the robin, wren, and many other singing birds, it only moves from hedge to hedge, and does not take the periodical flights in October and March. Those who catch these birds make use of small trap-nets, without call-birds ; and are considered as inferior in dignity to other bird-catchers, who will not rank with them. The arrival of the nightingale is expected by the trappers in the neighbour- hood of London, the first week in April : at the ā¢ beginning, none but cocks are taken ; but in a few days the hens make their appearance, gene- rally by themselves, though sometimes with a few males. The latter are distinguished from the fe- males not only by their superior size, but by a great swelling of their vent, which commences on the first arrival of the hens. They are caught in a net trap, the bottom of which is surrounded with an iron ring ; the net itself is rather larger than a cabbage-net. When the trappers hear or see them, they strew some fresh mould under the place, and bait the trap with a meal- worm. Ten or a dozen have been thus caught in a day. The common way of taking larks (see ALAUDA) is in fhe night, with nets called trammels. These are usually made of thirty-six yards in length, and about six yards over, with six ribs of packthread, which at the ends are put upon two poles about sixteen feet long, and made lesser at each end. These are to be drawn over the ground by two men, and every five or six steps the net is made to touch the ground, otherwise it will pass over the birds without touching them. When they are felt to fly up against the net, it is clapped down, and then all are safe that are under it. The darkest nights are best for this sport ; and the net will not only take larks, but all other birds that roost on the ground. In the depth of winter people sometimes take great numbers of larks by nooses of horse-hair. The method is this: Take 100 or 300 yards of packthread; fasten at every six inches a noose made of double horse- hair ; at every twenty yards the line is to be pegged down to the ground, and so left ready to take them. The time to use this is when the ground is covered with snow, and the larks are to be allured to it by some white oats scattered all the way among the nooses. They must be taken away as soon as three or four are hung, otherwise the rest will be frightened ; but though the others are scared away just where the sports-

man comes, they will be feeding at the other end of the line, and the sport may be thus con- tinued for a long time. Those caught in the day are taken in clap-nets of fifteen yards long, and two and a half broad ; and are enticed within their reach by bits of looking glass, fixed in a piece of wood, and placed in the middle of the nets, which are put in a quick whirling mo- tion by the string the larker commands ; he also

makes use of a decoy-lark. These nets are used only till the fourteenth of November ; for the larks will nt>t dare to frolic in the air, except in fine sunny weather ; and of course cannot be inveigled into the snare. When the weather grows gloomy, the larker changes his engine, and makes USP of a trammel-net, twenty-seven or twenty-eight feet long, and five broad ; which is put on two poles eighteen feet long, and carried by men under each arm, who pass over the fields and quarter the ground as a setting dog : when they hear or feel a lark hit the net, they drop it down, and so the birds are taken. Linnaeus observes that the male chaffinches fly by themselves, and in the flight precede the females; but this is not pecu- liar to them. When the tit-larks are caught in the beginning of the season, it frequently hap- pens, that forty are taken and not one female among them ; and probably the same would be observed as to other birds (as has been done with relation to the wheat-ear), if they were attended to. Experienced bird-catchers tell us, that such birds as" breed twice a year generally have in their first brood a majority oˆmales, and in their second of females, which may in part account for the above observation.

The following method of catching wild pigeons is eagerly pursued as a diversion in different parts of Italy, particularly by the inhabitants of Cava in the Hither Principato, and is thus de- scribed by Mr. Swinburne. The people 'as- semble in parties ; and if any stranger chances to stray to their rendezvous, they give him a most cordial welcome. I am not in the least sur- prised (says Mi. Swinburne) at their passionate fondness for this sport, as I found it extremely bewitching, keeping the attention constantly alive, and the springs of the mind pleasingly agitated by expectation; the situations where the toils are spread are incomparably beautiful, the air is pure and balsamic, and every thing around breathes health and satisfaction. When the periodical flights of stock-doves return from the northern and western parts of Europe to gain warmer regions for their winter abode, the fow- ler repairs to the mountain and spreads his nets across the intermediate hollows, the passes through which the birds direct their course, to avoid unnecessary elevation in their flight. These nets are hung upon a row of large trees planted for the purpose. The branches being very thick and close at top, and the bole lofty and bare, a great opening is left below for the toils, which reach to the ground ; and by means of pulleys, fall in a heap with the least effort. Some- times they are extended upon poles that exceed the height of the trees. At a small distance is a lofty circular turret, like a column with a little c.ipital or cap, upon which a man is stationed to watch the approach of the game. As lie com

mands a free view over all the country, and practice has made his sight as acute as that of the lynx, he descries the birds at a wonderful distance. The doves advance with great velo- city ; but the alert watchman is prepared for them ; and just as they approach his post, hurls a stone above them with a sling : upon this the whole flock, whose fears have birds of prey for their great object, supposing' the stone to be an enemy of that kind ready to pounce on them, dart down like lightning to avoid the blow by pass- ing under the trees; but there they rush into the jaws of death, by dashing against the net, which instantly drops and so entangles them that not one of them can escape the active hands of the fowler. These birds are sometimes taken by dozens at one fall, and are accounted fine eating. The dexterity with which the slingers manage their weapon is very remarkable ; they throw the stone to a great height without any violent effort, and even without whirling the sl'ng round before they discharge the pellet. In the Pyrenean mountains where the same diver- sion is followed, the watchmen use a bow and arrow, trimmed with the feathers of- a hawk.'

The following simple but ingenious method of catching aquatic birds is used in Mexico by the natives. The lakes of the Mexican vale, as well as others in the kingdom, are frequented by a prodigious multitude of ducks, geese, and other water-birds. The Mexicans leave some empty gourds to float upon the water, where those birds resort, that they may be accustomed to see and approach them without fear. The bird catcher goes into the water so deep as to hide his body, and covers his head with a gourd : the ducks come to peck at it ; and then he pulls them by the feet under water.

Great numbers of the inhabitants of the Ork- neys feed, during the season, on the eggs of the birds of the cliffs. The method of taking them is so very hazardous, as to prove the extremity to which the poor people are driven for want of food. Shapinsha, Sanda, Hoy, Foula, and Noss Head are the most celebrated rocks ; and the neighbouring natives the most expert climbers and adventurers after the game of the precipice. The height of some are about fifty fathoms ; their fronts roughened with shelves or ledges sufficient only for the birds to lay their eggs upon. To these the dauntless fowlers ascend, pass in- trepidly from one to the other, collect the eggs and birds, and descend with the same indiffer- ence. In most places the attempt is made from above : they are lowered from the slope conti- guous to the brink by a

rope, sometimes made of straw, sometimes of the bristles of the hog : they prefer the last even to ropes of hemp, as it is not liable to be cut by the sharpness of the rocks ; the former is apt to untwist. They trust themselves to a single assistant, who lets his companion down, and holds the rope, depend- ing on his strength alone; which often fails, and the adventurer is sure to be dashed to pieces or drowned in the sea. The rope is often shifted from place to place, with the depending weight of the fowler and his booty. The person above receives signals for the purpose, his associate being out of siˆht ; who, during the operation,

by help of a staff, springs from the face of the rocks, to avoid injury from the projecting parts. But the most singular species of bird-catching is on the holm of Noss, a vast rock severed from the Isle of Noss by some convulsion, and only about sixteen fathoms distant. It is of the same stupendous height as the opposite precipice, with a raging sea between ; so that the inter- vening chasm is of matchless horror. Some adventurous climber reaches the rock in a boat, gains the height, and fastens several stakes on the small portion of earth which is to be found on the top ; correspondent stakes are placed on the edge of the correspondent cliffs. A rope is fixed to the stakes on both sides, along which a machine, called a craddle, is contrived to slide ; and by the help of a small parallel cord, fas- tened in like manner, the adventurer wafts him- self over, and returns with his booty.

In some remote parts of Russia there is prac- tised a singular invention for taking great quantities of gelinottes or grous. They choose the most open places in the birch woods ; and there plant long forks in the earth opposite the larger trees, on these are laid a horizontal stick, gallows-ways, to which are tied small bun- dles of ears of corn. At a small distance from this contrivance, is a kind of large funnel or in- verted cone, made with long birch twigs, thin and flexible, the lower extremities stuck in the earth, very near to one another ; but by spread- ing towards the top, it forms an opening of above a yard in diameter. In this opening is placed a wheel made of two circles that intersect each other, and are surrounded with straw and ears of co’rn. This wheel turns on an axis fas- tened to the sides of the funnel, so that there is room enough between the sticks of the cone and the circles to admit of the wheel’s turning freely about. The birds first perch upon the trans- verse sticks near the tree ; and when they have a mind to fall upon the cord tied to the wheel, they must necessarily stand upon one of the pro- jecting parts of the circles of which it is com- posed. At that instant the wheel turns, and the gelinotte falls head foremost to the bottom of the trap, which is there so contracted that he cannot get out. They sometimes find the machine half full of

gelinottes.

The manner of bird catching in the Ferro islands is exceedingly hazardous. The cliffs which con- tain the objects of their search are often 200 fathoms in height, and are attempted both from above and below. In the first case, the fowlers provide themselves with a rope 80 or 100 fathoms in length. The fowler fastens one end about his waist and between his legs, recommends himself to the protection of the Almighty, and is lowered down by six others, who place a piece of timber on the margin of the rock, 10 preserve the rope from wearing against the sharp edge. They have besides, a small line fastened to the body of the adventurer, by which he gives sig- nals that they may lower or raise him, or shift him from place to place. The last operation is attended with great danger, by the loosening of the stones, which often fall on his head, anJ would infallibly destroy him, were it not pro- tected by a strong thick cap; but even that ii

found unequal to save him against the weight of the larger fragments of rock. The dexterity of the fowlers is amazing ; they will place their feet against the front of the precipice, and dart themselves some fathoms from it, with a cool eye survey the places where the birds nestle, and again shoot into their haunts. In some places the birds lodge in deep recesses. The fowler will alight, disengaee himself from the rope, fix it to a stone, and at his leisure collect his booty, fasten it to his girdle, and resume his seat. At times he will again spring from the rock, and with a fowling net placed at the end of a staff, catch the old birds that are flying to and from their retreats. When he has finished his dread- ful employ, he gives a signal to his friends, who pull him up, and share his hard earned profit. The feathers are preserved for exportation : the flesh is partly eaten fresh, but the greater part is dried for winter's provision. The fowling from below has also its share of danger. The party goes on the expedifion in a boat ; and when it has attained the base of the precipice, one of the most daring, having fastened a rope about his waist, and furnished himself with a long pole with an iron hook at one end, either climbs or is thrust up by his companions, who place a pole under his breech, to the next footing spot he can reach. He, by means of a rope, brings up one of the boat's crew ; the rest are drawn up in the same manner, and each is furnished with his rope and fowling staff. They then con- tinue their progress upwards in the same man- ner, till they arrive at the region of the birds ; and wander about the face of the cliff in search of

them. They then act in pairs ; one fastens himself to the end of his associate's rope, and, in places where birds have nestled beneath his footing, he permits himself to be lowered down, depending for his security on the strength of his companion, who has to haul him up again ; but it sometimes happens that the person above is overpowered by the weight, and both perish. They fling the fowls into the boat, which attends their motions. They often pass seven or eight days in this tremendous employ, and lodge in the cran- nies which they find in the face of the precipice. BIRDLIME is prepared in different ways. The best birdlime is made of the middle bark of the holly boiled seven or eight hours in water, till it is soft and tender : then laid in heaps in pits in the ground and covered with stones, the water being previously drained from it; and in this state left for two or three weeks to ferment, till it is reduced to a kind of mucilage. This being taken from the pit is pounded in a mortar to a paste, washed in river water, and kneaded, till it is freed from extraneous matters. In this state it is left four or five days in earthen vessels, to fer- ment and purify itself, when it is fit for use It reddens tincture of litmus. Exposed to a gentle heat it liquefies slightly, swells in bubbles, be- comes grumous, emits a smell resembling that of animal oils, grows brown, but recovers its pro- perties on cooling, if not heated too much. With a greater heat it burns, giving out a brisk flame and much smoke. The residuum contains sul- phate and muriate of potash, carbonate of lime and alumina, with a small portion of iron.

The misleto affords a juice superior to that of the holly ; and if a young shoot of the com- mon alder be cut through, a stringy juice will draw out in threads, and follow the knife liko birdlime or the juice of the holly.

When birdlime is to be put in wet places the common birdlime is apt to have its force soon taken away. It is necessary, therefore, to have recourse to a particular sort, which, from its property of bearing water unhurt, is called wa ter birdlime ; and is prepared thus rˆ-Take a pound of strong birdlime ; wash it in spring wa ter till the hardness is all removed ; then beat it well that the water may be separated, so as not a drop remains ; then dry it well and put it into an earthen pot ; add to it as much grease as will make it run, with two spoonfuls of strong vinegar, one spoonful of oil, and a small quantity of Ve- nice turpentine. Let the whole boil for some minutes over a moderate fire, stirring it all the time. Then take it off; and, where there is occa- sion to use it, warm it, and cover the sticks well with it. This is the best sort of birdlime for snipes, and other birds that frequent wet places. The most successful method of using birdlime is this : ā Cut down the branch of any bushy tree whose twigs are thick, straight, and smooth ;

the willow and the birch tree afford the best of this kind. Let all the superfluous shoots be trimmed off, and the twigs all made neat and clean ; they must all be well covered with the birdlime within four inches of the bottom. No part of the bark, where the lime should come, must be left bare ā¢ but it is a nice matter to lay it on properly ; for if it be too thick it will give the birds a distaste, and they will not come near it ; and if there be too little of it, it will not hold them when they are there. When the bush is thus prepared, it must be set up in some dead hedge, or among bushes, near the outskirts of a town, or the like, if in the spring ; for these places are the resort of the small birds at that time. If it be used in summer, the bush must be placed in the midst of a quick-set hedge, or in white-thorn trees, near fields of corn; and, in the winter, the proper places are about stacks of corn, hovels, barns, and the like. When the lime-bush is thus planted, the sportsman must stand as near it as he can, without being discovered ; and with the mouth, or otherwise, make such notes as the birds do when they attack or call one to another. The time of day for this sport is from sunrise to ten o'clock, and from one to sunset. Another very good method of bringing the birds together is by a stale : a bat makes a very good stale, but it must be fastened so as to be in sight at a distance. An owl is a still better stale ; for this bird never goes abroad but it is followed by all the small birds. They will gather together in great num- bers about it; and, having no convenient place to sit on but the lime-bush, many will be taken. If a living owl or bat is not to be had, the skin stuffed will serve the purpose, and will last twenty years. Some have used the image of an owl carved in wood, and painted in the natural colors ; and it has been found to succeed very well.

BIRDS-CHERRY, n. s. padus Theophrasti A plant.

BlllDS'EYE, n. s. ad< nit. The name of a plant.

BIRDS'FOOT, n. s. ornithopodium. The name of a plant.

BlRDS'iNEST, n. s. An herb.

BIRDS-NEST, PURPLE. See ORCHIS.

BIRDS-NESTS, in natural history and cookery, the nests of a small Indian swallow (See Hi- RUNDO), very delicately tasted, and

frequently mixed among soups. On the sea coasts of China, at certain seasons of the year, there are seen vast numbers of these birds. They leave the inland country at their breeding time, and come to build in the rocks, and fashion their nests out of a mat- ter which they find on the shore, washed thither by the waves. The nature of this substance is scarcely yet ascertained. According to Kempfer it is molluscae or sea-worms ; according to M. le Poivre, fish-spawn ; according to Dalrymple, sea- weed-, and according to Linnaeus it is the animal substance, frequently found on the beach, which fishermen call blubbers or jellies. The nests are hemispherical, and of the size of a goose's egg, and in substance much resemble the ichthyocolla or isinglass. The Chinese gather these nests, and sell them to all parts of the world ; they dis- solve in broths. &c. and make a kind of jelly of a very exquisite flavor. These nesls are found in great abundance in Sumatra, particularly about Croe, near the south end of the island. Four miles up the river of that name is a large cave, where the birds build in vast numbers. The nests are distinguished into white and black, of which the first is by far the more scarce and valu- able, being found in the proportion of one only to twenty-five. ' The white sort, ' says Mr. Marsden, ' sells in China at the rate of 1000 to 1500 Spanish dollars the pecul; the black is usually disposed of at Batavia for about twenty dollars the same weight, where it is chiefly con- verted into glue, of which it makes a very supe- rior kind. The difference between the two has been supposed to be owing to the mixture of the feathers of the birds with the viscous substance of which the nests are formed : and this they de- duce from the experiment of steeping the black nests for a short time in hot water, when they are said to become in a great degree white. Among the natives I have heard some assert, that they are the work of a different species of bird. It was suggested to me that the white, might probably be the recent nests in which they were taken ; and the black, such as had been used for a number of years successively. This opinion appearing plausible, I was particular in my enquiries as to that point, and learned what seemed much to corroborate it. When the natives prepare to take the nests, they enter the caves with torches, and forming ladders according to the usual mode, of a single bamboo notched, they ascend and pull down the nests, which adhere in numbers together, from the side and top of the rock. They informed me, that the more regularly the cave is stripped, the greater proportion of white nests they are sure to find, and that on this experience they often make a practice of beating down and destroying the old nests in larger quantities than they trouble themselves to carry away, in order that they may find white nests

the next season in their room. The birds, during their building time,

are seen in large flocks on the beach, collecting in their bills the foam which is thrown up by the surf, of which there is little doubt but they construct their nests, after it has undergone, perhaps, a preparation from a commixture with the saliva, or other se- cretion, with which nature has provided them for that purpose.'

BIRDS-PEPPER. See CAPSICUM.

BIRD ISLAND, an island of the North Pacific Ocean, discovered in 1788 by the captain of the Prince of Wales, and afterwards visited by Van- couver in 1794. This solitary island or rock derives its name from the multitude of birds which crowd upon it. It has the form of a sad- dle, high at each end and low at the middle. Its greatest extent, which is in 'j. direction south seventy -four degrees west, and north seventy- four east, does not exceed one mile ; nor is it more than a league round. Its northern, eastern, and western extremities rise perpendicularly from the ocean in rugged cliffs, inaccessible but to its winged inhabitants. On its southern side the ascent is not so steep ; and on the western shore is a small sandy beach,where, in fine weather and a smooth sea, a landing might be made. Here Vancouver saw some appearance of verdure, but neither tree nor shrub ; every other part consisted only of naked rock. The Sandwich Islanders speak of it by the name of Modoo Manoo, that is, Bird Island ; and it seems to claim some pre- tensions to be ranked in the group of the Sand- wich Islands, being thirty-nine leagues north and fifty-one west of Onehow. Long. 198Ā° 8′ E., lat. 23Ā° 6′ N.

BIRD ISLAND, an islet in Strangford Lough, on the coast o(Ireland, eight miles south of Newtown. 2. A small island in the Eastern seas, six miles north of Pulo Lucotta. 3. An island in the South Pacific Ocean, about four miles in circumference, which was discovered by captain Cook in 1769. 4. A small island in the Eastern Indian Sea, near the west coast of Su- matra. 5. An island in the South Pacific, near the north-west coast of New Georgia, discovered by captain Cook in 1775. 6. An island in the Indian Sea, about four miles in circumference, covered with green shrubs and rocky in the cen- tre. 7. A small island off the coast of Africa. Lat. 24Ā° 20′ S. 8. A small island near the east coast of Newfoundland, six miles south-east of Cape Bonavista. 9. A small island in the gulf of St. Lawrence, sixty-three miles west of Cape Anguilla, on the island of Newfoundland. Long. 60Ā° 45′ W., lat. 47Ā° 55′ N. 10. A small island in the Carribean Sea. A long bank, called the Bank of Aves, extends from this island to St. Eustatius, about 130 miles totheN.N.E.

BIRD ISLANDS, small low islands near the north-east coast of New

Holland, which, when seen by captain Cook, were almost covered with birds. 2. Sixteen miles west of Cape Gren- ville. 3. A cluster of islands in the Carribean Sea, near the coast of South America. 4. Two islands near the north coast of the island of Antigua, in the West Indies, distinguished by the names of Great and Little, though they are both small.

BIRD'STARES, n. s oracus. A plant.

BIRMINGHAM.

BIRDSTONGUE, n. s. An herb.

BIREMIS, from bis, double, and remus, an oar, in Roman antiquity, a vessel with two rows of ;ars, concerning the disposition of which authors are not agreed.

BIREN (Ernest John), duke of Courland, was descended from a humble family, his father being simply huntsman to a former duke of Courland. Ernest received his education at the university of Konigsburgh in Prussia, and in 1714 visited Petersburgh, to solicit the situation of a court-page, which he was refused on account of his mean descent. He then returned to Cour- land, and obtained the favor of Bestucheff, the chancellor, who introduced him to the duchess dowager and regent, Anne ; who, charmed with his address, made him her chief favorite, and pro- moted him to almost the entire government of the country. When Anne ascended the throne of Russia, it was stipulated that Biren should not accompany her ; but she soon sent for him, and during her whole reign he ruled in Russia, as at Courland, with sovereign sway, almost peopling the deserts of Siberia with exiles : 20,000 are said to have been despatched there during his administration of ten years. Mr. Coxe says he even treated his mistress with the most haughty violence ; but on the other hand it is universally admitted, that Russia flourished under his in- fluence, and that he was careful to employ men of ability in every department. On the death of Ferdinand duke of Courland, in 1737, Anne compelled the nobles to choose him for their sovereign ; and he now boldly crushed every vestige of freedom in the states. He prevailed on the empress, on her death-bed, to nominate her nephew Ivan, then an infant, her successor, and himself regent during his minority ; and at her death, endeavoured, with his usual decision, to secure his authority. But prince Munich, at the head of a strong party, succeeded in seizing his person in 1740, and conducting him to Siberia in his

turn. Here he remained, with five rou- bles a day for his maintenance, during the whole reign of Elizabeth. On the accession of Peter III. the exiles were all recalled. Offers were then made to him to induce htm to resign his duchy, but this he always refused to do. He was at length, in 1763, restored to all his honors by Catharine II.; and died at Mittau in 1772, in his eighty-third year.

BIRGANDER, n. s. chenalopex. A fowl of the goose kind.

BIRKENBERG, a small market town of Bohemia, in the circle of Beraun, near the town of Przibram, with a productive silver mine.

BIRKENFELD, a town and bailiwic of Germany, in the circle of the Upper Rhine, in- cluding thirty-two villages and two iron foun- dries. It was taken by the French in 1794; and became the principal place of a district of the same name, in the department of Sarre. The own recently contained 1061, and the canton 5892 persons. The district comprehends thirty- eight communes, and its whole territorial extent includes 1615 kiliometres. It is situated thirty miles E. N. E. of Treves, and thirty N. N. W. of Deux-Ponts.

BIRKENFELD, the late capital of the county,

seated near the river Nahe. Long. 7Ā° 14′ E., lat. 49Ā° 35′ N.

BIRKENHEAD, or BERKENHEAD (Sir John), a famous political author, born about 1615 Being secretary to archbishop Laud, he created him M. A. in 1639; and in 1640, procured him to be chosen probationer fellow of All Souls Col- lege. This obliged him to reside constantly at Oxford ; and on king Charles I's making that city his head-quarters during the civil war, he conducted a journal in defence of the royal cause, by which he gained great reputation. By the king's recommendation, he was chosen reader in moral philosophy; which he enjoyed till 1648, when he was expelled by the parliamentary visi- tors. He afterwards retired to London, and wrote several poetical pieces ; for which he ac- quired the title of the loyal poet, and suffered several imprisonments. On the Restoration, he was created LL.D. by the university of Oxford ; and in that quality, as an eminent civilian, was consulted by the convocation, Whether bishops ought to be present in capital cases ? He was about the same time elected to serve in parlia- ment for Wilton. He was knighted, November 14th, 1662; and, upon Sir Richard Fanshaw's vacating the office, was appointed to succeed him as master of requests. He afterwards re- ceived various royal favors, which drew upon him some very severe attacks from those who opposed the court. His memory has been trans- mitted with

honor to posterity by Dryden, Lang- baine, and Winstanley. He died in Westmin- ster, December 4th, 1679.

BIRMAN, or BURMBAN EMPIRE. See BURMHAN.

BIRMINGHAM, a large market and manu- facturing town of Warwickshire, on the river Rea, formerly called Birmisham, from the name of the lords of the manor. The principal part of the town stands on the side of a hill, nearly in the form of a half moon. The lower and older part is filled with the >vorkshops and warehouses of the manufacturers. The upper part of the town contains a number of new and regular streets, and a handsome square. Birmingham has several good churches, particularly one in the lower part of the town, which is an ancient build- ing with a very tall spire ; and another, which is a grand modern structure, having a square stone tower with a cupola and turret above it. The Old Church has a peal of twelve bells, and a set of chimes. St. George's church, near Constitu- tion Hill, one of the seventy lately voted by par- liament, is a still more recent edifice, just finished. It is also in contemplation to erect another new church at Dale-end. Here are also five chapels of ease of the established religion, including a new chapel, lately built at Bordesley, in the suburbs, besides a great number of meet- ing-houses for dissenters of all denominations, and two synagogues for the Jews. Here are also a due variety of charitable endowments. The free school is a very ancient institution, but the present building, a large and handsome edifice, with a neat tower in the centre, and a statue of Edward VI. in front, was erected in 1707; the blue coat school was established in 1724, which receives 150 boys, and forty gitls ; into the dis-

Centers' chanty school forty boys and twenty fe*irls are admitted ; the general hospital, erected in 1766, is supported by voluntary contributions and many large bequests, it possesses an income of about Ā£1000 per annum, and, upon an ave- rage, acjommodates upwards of seventy patients weekly. This town is governed by two consta- bles and two bailiffs, and was erected into a borough under the reform bill passed in the year 1832. It returns two members to the imperial parliament, the two bailiffs being the returning officers ; and the borough comprises the parishes of Birmingham and Edgbaston, and the townships of Bordesley, Duddeston, Nechels, and Deritend. The amount of population according to the census of 1832, was 146,936 souls, of whom abput 20,000 families are returned as employed in trade and manufactures. The art of si;iin- ins; glass has been carried to great perfection here by Mr. Eginton, whose works, in

a style superior to any ancient remains preserved, now adorn many churches and other edifices throughout the kingdom. There are also very extensive brass foundries, and numerous articles, useful and ornamental, are executed of that material : there are also manufactories of whips, and papier ma- chee commodities. Here arc two crosses, the one called the Welsh and the other the Old Cross ; over the latter is held the court of requests, esta- blished in 1752, and occasionally some of the town ā¢ meetings. Also an elegant new theatre. In the summer season the inhabitants have the amusement of a Vauxhall; and in the winter there are concerts and balls in a superb assembly- room, at the hotel.

Birmingham was for many centuries noted for its extensive leather-market, which is now gone to decay. The greatest advantage to this empo- rium of trade, is the extension, of late years, of its canal navigation, now communicating with most parts of the kingdom. The old canal, cut in 1768, brings the raw materials, and fuel from the Wednesbury collieries; this again, in 1772, was extended to AtLerley, and thence communi- cates to the Severn by Shrewsbury, Gloucester, and Bristol, ami joins the Trent to Gainsborough,- Hull, and London. It has also a junction with the Grand- Lin j Canal, through Staffordshire, to Manchester and Liverpool, thereby conveying the produce ot' its manufactories entirely by water carriage to the principal sea-ports of the British Ocean, the Irish Sea, and St. George's Channel. By means of the New or Birmingham and Fazely canal, a communication is opened to Tamworth, Polesworth, Atherston, Nuneaton, Coventry, and Oxford ; and thence by the canal, or Thames, to London. The place ip dvery vear improving rapidly. In most of the principal streets the foot-paths are paved with flag-stones, and the whole town is lighted with gas. In 1822, an act was passed for rebuilding the bridge over the Rea, at Deritend. There are a number of noblemen's and gentlemen's seats in the neighbourhood ; together with the famous Soho works, belonging to Messrs. Boulton and Watt, forming one of the most extensive manu- factories in the kingdom, as well for the number of hands it employs, as for the variety of articles it produces. It consists of four squares, with

connecting ranges of shops, like streets, capable of employing above 1000 workmen, in all the varieties of the button, buckle, plated, or argent- moulu, steel, and trinket manufactures. The improved steam-engines of Messrs. Boulton and Watt, also made here, deserve to rank among the most extraordinary inventions of the age. Lately there has been erected, at Lady-Well, the com- pletest set of baths in the kingdom. The prin- cipal bath consists of an oblong piece of waterT thirty-six yards by eighteen, situate in the centre of a garden, having

twenty-four recesses for un- dressing, and being surrounded by a wall ; be- sides seven marble baths, which are at all times ready for hot and cold bathing. Dr. Price notices this as the healthiest town in England ; the soil around is a red sand, which preserves the place remarkably dry : and it is worthy of obser- vation, that from the register of burials, in the average of six years, ending 1801, the scale of mortality was as one to fifty-nine only, whilst that of Manchester appears to have been one to- thirty-seven, and the metropolis of London as one to thirty-one. The market, on Thursday, is well supplied with all kinds of provision and cattle ; it has also two other markets, and large cattle fairs on the Thursday in Whitsun-week, and 29th September.

This town is supposed to have existed in the reign of king Alfred ; but it was not a place of note for centuries after. In 1643 it was besieged and taken by prince Rupert, and ordered to be burnt to the ground ; but, owing to some pro- pitious circumstances, the conflagration did very little damage. In the year 1665, or 1666, Birmingham suffered severely from the plague ; and in a short time subsequent to this it began to be considerably enlarged. In the year 1700, however, it consisted only of thirty streets. Be- fore the Revolution, its other manufactures were confined to coarse iron wares'; but the skill of its artists was brought into great notice and exertion by the following circumstance. William III. having expressed his regret, that it should be necessary to import fire-arms from foreign coun- tries, Sir Richard Newdigate, member of parlia- ment for Warwickshire, engaged, on the part of his constituents, to supply the demands of go- vernment ; and an order, which was sent to Bir- mingham, having been speedily and satisfactorily executed, it has continued from that period to furnish the greatest proportion of muskets, swords, and other smal arms. In 1745 Mr. Boulton's invention of inlaid steel for buckles, watch-chains, and other articles, was brought to perfection ; and in 1764 the great works at Soho were established. Subsequent to these improve- ments, the town appears to have made the most rapid advances to wealth and prosperity : yet in 1795, it is said, there was but one cannon in the place. In the year 1791 serious riots took place in Birmingham, when two Unitarian places of worship, and the celebrated Dr. Priestley's house and valuable library, were destroyed by the po- pulace, whose disorders were continued during several days ; and it is calculated that property was destroyed to the value of Ā£50,000. Distant sixty-two miles north-west of Oxford, eighty-seven north of Bristol, and 109 N. N. W. of London.

BIRTH.

BIRNAGHUR, an ancient decayed city of Gujerat, in Hindostan, which formerly contained 300 temples, now in ruins. The inhabitants were principally Brahmins.

BIRNAM, a hill of Scotland in Perthshire, celebrated by Shakspeare in his tragedy of Mac- beth. It rises, with a rude and striking magnificence, to the height of 1580 feet above the level of the sea, in the parish of Little Dunkeld. It looks full in the face, at the distance of about twelve miles, the celebrated Dunsinnan hill, the seat and fortress of Macbeth. Within the range of an arrow from this mount, are to be seen a number of tumuli or small heaps of stones, about the length of a human body. Higher up the same face of Birnam, are the ruins of an oblong square building, with circular turrets at the corners. It is called (in Gaelic) Forhaillon. Bir- nam was anciently a forest, and a part of the royal domain of Scotland.

BIROSTRIS, in conchology, a species of bulla, inhabiting Java. It has two beaks, which are elongated and smooth; margin thickened outwardly. ā Lister.

BIROTA, or BIROTUM, in Roman antiquity, a kind of vehicle, so denominated from its moving upon two wheels. It carried about 200lbs. weight, and was drawn by three mules.

BIRRUS, or BYRRUS, in Roman antiquity, 1 . A cloak made of woollen cloth, worn by the soldiers. 2. A robe anciently worn by the priests or bishops.

BIRSHA, king of Gomorrah, one of the five kings who rebelled against Chedorlaomer. Gen. xiv.

BIRT, n. s. A fish, the same with the TURBOT ; which see.

BIRTH’,

BIRTH’DAY,

BIRTH’DOOM,

BIRTH’MARK,

BIRTH’NIGHT,

BIRTH’PLACE,

BIRTH’RIGHT,

BIRTH’TIDE,

BIRTH’STRANGLED.

The third person of the verb to bear. Ang.- Sax. beorthe; Germ, burt, from the verb bar en. ā¢Whatever beareth is a birth; a convenient place to moor a ship in is called a birth; also the proper place on board to put

chests, &c. is called the birth of the mess ; to bear, is however not only to sustain ; but bear into life, into existence, used of vegetables as well as of animals. Birth is likewise the act of carrying into life. It is figuratively used for extraction, lineage, rank by descent. Birthdoom is used as kingdom, dukedom, privilege by birth. Birthright is the right of the first-born ; the privileges to which a man is born.

Paraventure in thilke large book WTiich that men clepe the Heven, ywritten was With sterres, whan that he his birthe took, That he for love should han his deth, alas ! For in the sterres, cleer than is glss, Is writen, God wot, who so coud it rede, The deth of every man withouten drede.

Chaucer. Canterbury Tales.

I was in thilke same looser yeeres

(Whether the Muse so wrought me from my byrth, Or I too much beleeved iny shepheard peeres.) Somedelc y bent to song and musickes mirth.

Spenser’s Shepheard’s Calender.

VOL. IV.

Most virtuous virgin, born of heavenly birth.

Spensei ,

The people fear me ; for they do observe Unfathered heirs, and loathly births of nature.

Shakspeare.

This is my birthday ; as this very day Was Cassius born. Id.

My birthplace hate I, and my love ‘s upon This enemy’s town. Id.

Thy blood and virtue

Contend for empire in thee, and thy gooHness Shares with thy birthright. Id.

Let us rather

Hold fast the mortal sword ; and like good men, Bestride our downfallen birthdom. Id.

Finger of birthstrangled babe, Ditch-delivered by a drab. Id. Macbeth. That poets are far rarer births than kings, Your noblest father proved. Ben Jonson.

that the true

Anointed king Messiah might be born Barred of his right ; yet at his birth a star, Unseen before in heaven, proclaims him come, And guides the eastern sages. Milton.

Orient light,

Exhaling first from darkness, they beheld, Birthday of heaven and earth. Id.

Thou hast been found By merit, more than birthright, Son of God. Id.

The' angelick song in Bethlehem field, On thy birthnight, that sung the Saviour born.

Id. Paradise Regained.

In Spain, our springs like old metis' children be, Decayed and withered from their infancy ; No kindly showers fall on our barren earth, To hatch the seasons in a timely birth. Dryden.

While no baseness in this breast I find, I have not lost the birthright of my mind. Id.

Your country dames,

Whose cloaths returning birthday claims. Pnor I loved her first, I cannot quit the claim, But will preserve the birthright of my passion.

Otway.

To say that liberty and property are the birthright of the English

nation, but that, if a prince invades them by illegal methods, we must upon no pretence resist, is to confound governments. Addison.

In ships decayed no mariner confides, Lured by the gilded stern and painted sides ; Yet at a ball unthinking fools delight In the gay trappings of a birthday night Swift. See through this air, this ocean, and this earth, All matter quick and bursting into birth. Pope..

Much I misdoubt this wayward boy Will one day work me more annoy ; I never loved him from his birth.

Byron. Bride of Abydos.

BIRTH, in midwifery. See MIDWIFERY.

BIRTH, or BERTH, in sea language, the station in which a ship rides at anchor, either alone or in a fleet, Comprehending the extent of the space in which she* ranges at the extent of her cables. Thus, the seamen say, ‘ she lies in a good birth,’ i. e. in a convenient situation, or at a proper dis- tance from the shore and other vessels; and where there is good anchoring ground, and shelter from the violence of the wind and sea,

BIRTHDAY, the anniversary return of the day whereon a person was born. Th$ ancients placed a good deal of religion in the celebration of the birthdays, and took omens from thence of the felicity of the coming year. The manner of celebrating birthdays was by a splendid dress;

wearing a sort of rings peculiar to that day; offering sacrifices; the men to their genius, of wine, frankincense; the women to Juno ; giving suppers, and treating their friends and clients ; who in return made them presents, wrote and sung their panegyrics, and offered vows and good wishes for the frequent happy returns of the same day. The birth-days of emperors were also cele- brated with public sports, feasts, vows, and medals struck on the occasion. But the ancients, it is to be observed, had other sorts of birth-days besides the day on which they were born. The day of their adoption was also reputed as a birth-day, and celebrated accordingly. The emperor Adrian, we are told, observed three birth-days, viz. the day of his nativity, of his adoption,

and of his inauguration. In those times it was held, that men were not born only on those days when they first came into the world, but on those also when they arrived at the chief honors and com- mands in the commonwealth, e. g. the consulate. Hence the expression of Cicero, in his oration ad Quirites, after his return from exile : ‘ A paren- tibus, id quod necesse erat, parvus sum pro- creatus ; a vobis natus sum consularis.’

BIS AL NIL is frequently mentioned among the Arabian writers ; and as al nil signifies only of the river Nile, the whole name should seem to express the character of some poisonous plant growing in the Nile.

EISA, or BIZA, a coin of Pegu, cunent there for half a ducat. It is also a weight used in that kingdom, equal in Venetian weight to 2 Ib. 5 oz.

BISACUTA, in middle-age writers, an axe with two edges, or which cuts either way ; or a missive weapon pointed at both ends. Walsing- ham represents the securis bisacuta as peculiar to the Scottish nation. See BATTLE-AXE.

BISALTA, a town in Egypt, anciently called Acanthos.

BISALTIDE, in entomology, a species of papilio, inhabiting Surinam. The wings are fulvous, black at the tips ; with two ocellar dots on the anterior pair, and three on the posterior ones.

BIS-ANNUAL, a name given by botanists to those plants which ordinarily do not flower till the second year.

BISARCA, in botany, a name used by some authors for the herb tarragon.

BISB./EA ; from /3Ā«r/3ij, a vine ; a feast cele- brated by the Messapii after the pruning of their vines, to obtain of the gods that they might grow again the better.

BISCARA, or PESCARA, a town of Africa, in Bidadulgerid, belonging to Algiers. It once be- longed to the province of Zeb in Numidia, and still retains some remains of the ancient city. It is surrounded by a mud \vall; and defended by a few cannon. In the hot season the town is often almost depopulated by the abundance of scorpions, to whom the inhabitants are obliged to leave it for a time. It has a small trade in slaves and dates. It stands in lat. 34Ā° 40′ N., and long. 5Ā° 15′ E. The natives are found in dif- ferent employments at Algiers.

BISCAY, a province of Spain, bounded on the north by the sea called

the Bay of Biscay, on the south by Old Castile, on the west by the Asturias, and on the east by France and Navarre. It com-

prises the three provinces of Alava, Guipuzcoa* and Biscay Proper, and is in general mountainous and barren ; but in some places it produces corn, and everywhere a great quantity of apples, oranges, and citrons. The people make cider of the apples, which is their common drink. They have also wine called chacolino, which is pleasant, but will not keep long. Their valleys pro- duce a little flax, and their hills a great deal of ship-timber. The sea affords them excellent fish of all sorts. Copper and marble are also found here ; and a spring near the village of Aguana produces salt, great quantities of which are ex- tracted by evaporation. This province likewise contains several mineral springs, hot and cold. One has been mentioned, which is thought to have a communication with the sea, though situated thirty-seven leagues from the shore. The water not only rises and falls with the tide, but, when the sea is much agitated, it often overflows. The wool that is exported here comes from Old Castile ; but their greatest riches are derived from their mines of iron ; which is extremely good^ and transported to all parts. They are famous for the manufacture of swords and knives. Biscay is the country of the ancient Cantabri, so imper- fectly subdued by Augustus, and slightly an- nexed to the Roman empire. Their mountains have in all ages afforded them opportunities of withdrawing themselves from every yoke that has been attempted to be imposed upon them, and fostered an hereditary bravery. The king of Spain, it is said, who is simply called Lord of Biscay, has no right to impose taxes here; but a demand is made in his name, and the supply granted in the shape of a donative, or free gift, the manner of raising it remaining with the states of the province. No custom-house was allowed within the province until lately ; nor is any bishop to be found here. Biscay furnishes a specific contingent of men to the army and navy, which exempts it from the militia laws and impress. A great portion of the inhabitants assume the title of noblesse, or gentry. The population is small in proportion to the extent of its territory ; for the whole does not contain more than 310,000 inhabitants. In this are included 4000 priests, 2043 monks and nuns ; and 1 17,000 persons who claim the rank of noblesse. In the 720 parishes of which this province consists, there are 4 cities, 176 towns, and 446 villages. The chief towns are Bilboa, Orduna, Durango, Fontarabia, St. Sebastian, Tolosa, and Victoria. The inhabitants of Biscay are a people quite distinct from the other Spaniards. Their language is accounted aboriginal, and unmixed with either Italian, French, or Spanish ; it seems to be a dialect of the Celtic, and is described as very soft, harmonious, and energetic. The Biscayners are

stout, brave, and choleric to a proverb. The best sailors in Spain belong to the ports of Biscay, and its mountains produce a very valuable race of soldiers. Even when out of their own province, it is said, they are amenable only to the grand Judge of Biscay, who holds his court at Valladolid ; and this is a privilege of which they are very jealous. Guipuzcoa enjoys nearly the same privileges as Biscay Proper, except, that as the frontier of the kingdom, it

receives garrisons, and is defended by fortified towns. The women are beautiful, tall, light, and merry; their garb is neat and pastoral ; their hair falls in long plaits down their backs ; and a veil or handkerchief, twisted round in a coquetish manner, serves them for a very becoming head- dress. OQ Sundays they generally wear white, tied with rose-colored knots.

4 The lordship of Biscay/ says a modern traveller, ‘ still presents, in many respects, a striking picture of the simplicity of ancient man- ners. The country is covered with detached houses, without any decoration, but commodious; each placed in the middle of the proprietor’s manor, and near a river. Their proximity and con- nexion make them look like villages. Most of these houses, and their dependencies, are in- habited by persons whose families have possessed them from time immemorial. Their proprietors are called Eche-jaunes, or lords of houses. Dis- tricts composed of a certain number of these houses are called republics; the parish church usually standing in the centre. Antique villas appear at certain distances among these modest habitations ; they are all of simple architecture, and most of them flanked with square towers. These have likewise been transmitted from father to son for many ages. It would be a disgrace to sell them. Their possessors, under the title of Parientes-magores, are, as it were, the elders of the district. They were formerly regarded as chiefs and judges, and still preserve a marked distinction and preponderance.’ Although many of the nobility are in reduced circumstances, and often cultivate their domains with their own hands, they retain a real respectability in the eyes of their neighbours ; and there is an old proverb among them, la pobreza no es vileza, ‘ poverty is no blemish/ See Townsend’s Journey, and Laborde’s View of Spain.

BISCAY, BAY OF,’ that part of the Atlantic Ocean which opens between the Island of Ushant, near the western promontory of France,

and Cape Ortegal, the north-west point of Spain. It washes all the western coast of France, with the northern shores of the peninsula, and advances, between St. Sebastian and Bayonne, nearly to the western extremity of the Pyrenees. The entrance into this bay is known to mariners from a remarkable swell of the. sea.

Also a large bay on the south coast of New- foundland, between Cape Race, and Cape Pine, about the beginning of the fifty-fourth degree of west longitude.

BISCAY, NEW, one of the provinces into which the kingdom of Mexico, or New Spain, was for- merly divided, and which now forms part of the intendancy of Durango. It is bounded on the north by New Mexico, on the east by New Leon, on the south by Zacatecas, and on the west by Culiacan.

BISCHITZ, a market town of Bohemia, on the Elbe, in the circle of Buntzlau.

BISCHOFSBURG, a town of East Prussia, in the circle of Heilsberg, with 1600 inhabitants. Here is a Catholic church, and most of the in- habitants are of that communion. Considerable quantities of yarn and linen are manufactured and exported. Fifty-four miles south of Konigs- berg.

BISCHOP (Abraham), son of Cornelius, was instructed by his father to design historical sub- jects and portraits ; but preferred the painting of fowls, particularly those of the domestic kind, to any other subjects. He designed every object after nature, and usually painted in a large size, such as ornamental furniture for grand halls.

BISCHOP (Corn.), portrait and history painter, was born at Antwerp in 1630, and was the disci- ple of Ferdinand Bol. His pencil, coloring, and manner resembled those of his master ; and by judges, he is esteemed not inferior to him in historical subjects or portraits, having been al- ways assiduous to study after nature. However, an impartial judge would perhaps think his compositions heavy, and without expression. He died in 1674.

BISCHOP, or BISCOP (John De), an excellent painter and engraver, born at the Hague in 1646. He is spoken of with great commendation, and his drawings are held in the highest estimation by the curious. But he is best known as an en- graver ; and his works are numerous. They are chiefly etchings, harmonised by the graver; and though slight, yet free, spirited, and pleasing. He gives a richness to the color and a

roundness to the figures, far beyond what is usually done with the point, so little assisted by the graver. It is said that he owed his excellency to his ge- nius alone, having never studied under a master. He worked chiefly at Amsterdam, where he died in 1786, aged forty.

BISCHROMA, in music, the same as our triple quaver. See CHROMA.

BISCHWEILER, a flourishing town of France, in Alsace, department of the Lower Rhine. It contains 3400 inhabitants, for the most part Calvinists, who manufacture cloth, madder, tobacco, and leather, and carry on a small trade on the Matter, the river on which it is situated. Four miles south-east of Hagenau, ten north of Strasburg.

BISCIA, in ichthyology, a name by which some have called the acus, or tobacco-pipe fish.

BISCOT, in law, a fine of two-pence on every perch of land, for not repairing banks.

BI'SCUIT, n. s. From Lat. bis, twice, and Fr. cuit, baked. A kind of hard dry bread, made to be carried to sea: it is baked for long voyages four times. Of more general applica- tion to compositions, whether sweet or other- wise, prepared by the pastrycook and confec- tionˆr.

The biscuit also in the ships, especially m the Spa- nish gallies, was grown hoary, and unwholesome.

Knolles's Hist.

Many have been cured of dropsies by abstinence from drinks, eating dry biscuit, which creates no thirst, and strong frictions four or five times a-day. A rbuthnot on Diet.

BISCUIT, SEA, is a sort of bread much dried, to make it keep for the service of the sea. It was formerly baked twice, or oftener, and pre- pared six months before the embarkation. It will keep good a whole year. The process of biscuit-baking for the British navy is as follows, and it is equally simple and ingenious : The meal, and every other article, being supplied with much certainty and simplicity, large lumps of

dough, consisting merely of flour and water, are mixed up together; and, as the quantity is so im- mense as to preclude by any common process a possibility of kneading it, a man manages, or, as it is termed, rides a machine, which is called a horse. This machine is a long roller, apparently about four or five inches in diameter, and about seven or eight feet in length. It has a play to a certain exten- sion, by means of a staple in the wall, to which is inserted a kind of eye, making its action like the machine by which they cut chaff. The lump of dough being placed exactly in the centre of a raised platform, the man sits upon the end of the machine, and literally rides up and down throughout its whole circular direction, till the dough is equally indented ; and this is repeated till it is sufficiently kneaded, at which times, by the different positions of the lines, large or small circles are described, according as they are near to, or distant from the wall.

The dough is now handed over to a second workman, who slices it with a prodigious knife ; and it is then in a proper state for the use of those bakers who attend the oven. These are five in number ; and their different departments are as well calculated for expedition and correctness as the making of pins, or other mechanical employ- ments. On each side of a large table, where the dough is laid, stands a workman ; at a small table near the oven stands another ; a fourth stands by the side of the oven to receive the bread ; and a fifth to supply the peel. By this arrangement the oven is as regularly filled, and the whole exercise performed in as exact time, as a military evolution. The man on the further side of the large table moulds the dough, having previously formed it into small pieces, till it has the appearance of muffins, although rather thin- ner, and which he does two together, with each hand ; and as fast as he accomplishes this task, he delivers his work over to the man on the other side of the table, who stamps them with a docker on both sides with a mark. As he rids himself of this work, he throws the biscuits on the smaller table next the oven, where stands the third work- man, whose business is merely to separate the pieces into two, and place them immediately under the hand of him who supplies the oven, whose work of throwing, or rather chucking tn*e bread upon the peel, must be so exact, that if he looked round for a single moment, it is impossi- ble he should perform it correctly. The fifth receives the biscuit on the peel, and arranges it in the oven; in which duty he is so very expert, that though the different pieces are thrown at the rate of seventy in a minute, the peel is always disengaged in time to receive them separately. ā As the oven stands open during the whole time of filling it, the biscuits first thrown in would be first baked, were there not some counteraction to such an inconvenience. The remedy lies in the

ingenuity of the man who forms the pieces of dough, and who, by imperceptible degrees, proportionably diminishes their size, till the loss of that time, which is taken up during the filling of the oven, has no more effect to the disadvan- tage of one of the biscuits than to another. So much critical exactness and neat activity occur in the exercise of this labor, that it is difficult to

decide whether tlie palm of excellence is due to the moulder, the marker, the splitter, the chucket, or the depositor ; all of them, like the wheels of a machine, seeming to be actuated by the same principle. The business is to deposit in the oven seventy biscuits in . a minute ; and this is accomplished with the regularity of a clock ; the clack of the peel, during its motion in the oven, operating like the pendulum. The biscuits thus baked are kept in repositories, which receive warmth from being placed in drying lofts over the ovens, till they are sufficiently dry to be packed into bags, without danger of getting mouldy ; and when in such a state, they are then packed into bags of a hundred weight each, and removed into storehouses for immediate use.

The number of bakehouses belonging to the victualling-office at Plymouth are two, each of which contains four ovens, which are heated twenty times a day, and in the course of that time bake a sufficient quantity of bread for 16,000 men. The granaries are large, and well constructed ; when the wheat is ground, the flour is conveyed into the upper stories of the bake- houses, whence it descends through a trunk in each, immediately into the hands of the work- men.

The bakehouse belonging to the victualling- office at Deptford consists of two divisions, and has twelve ovens, each of which bakes twenty shoots daily (Sundays excepted) ; the quantity of flour used for each shoot is two bushels, or 112lbs, which baked produce 102lbs of biscuit. Ten pounds are regularly allowed on each shoot for shrinkage, &c. The allowance of biscuit in the navy is one pound for each man per day, so that one of the ovens at Deptford furnishes bread daily for 2,040 men.

But it must be confessed, that sea-biscuit of the best preparation often carries in it a principle of destruction. Sometimes it is in the bran, which occasions insects, and hollow spaces in the inte- rior part of the biscuit, giving it a disposition to mould; and sometimes it is a want of cleanliness which prevails in the bread-room of the vessel. M. Cardon, a biscuit-baker of Hesse, in con- junction with others of the business, has recently made experiments, the result of which is : that lOOlbs. of

flour give 126 of dough ; which, di- vided into cakes of eight or nine ounces, when well baked, afford 90lbs. of biscuit. Instead of making use of old. leaven, and of ten or twelve pounds weight to each quintal of flour, he re- commends to use the leaven while fresh, in a quantity of fifty pounds, and to make the dough less firm, that it may be kneaded with more ease. He has shown biscuit made after this manner, Jo several masters of ships, who have found it ex- cellent, and that it stands the test of floating on the surface of water, without falling to pieces.

BISCUTELLA, BUCKLER-MUSTARD, or Bas- tard Mithridate mustard : A genus of the tetra- dynamia order, and siliculosae class of plants. The silicule is flat, compressed, rounded, above and below two-lobed, and the leaves of the calyx are gibbous at the base. There are ten species, ch iefly natives of the Levant, and adj oining shores, except B. Peruviana, which, as its name imports, grows wild in Peru.

BISHOP.

BI'SECTION. J turn, to cut. To divide into two parts.

The rational horizon bisecteth the globe into two equal parts. Brown't Vulgar Errours.

BISEGMENT, n. s. in geometry, a part di- vided into two equal parts.

BISELLIARI, or BISELLIARII, in antiquity, those who enjoyed the honor or privilege of the Bisellium. The word occurs in an old in- scription, en. plaetorio viviro augustali bisellia- rio. Gruter, Inscr. p. 1099. Scaliger in his index to Gruter, mistook the biselliarii for artificers who made these seats.

BISELLIUM, from bis, and sella, a chair, in antiquity, a kind of seat or chair, larger and richer than ordinary, big enough to hold two persons, wherein to sit in courts, theatres, and other public assemblies.

BISERRULA, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, papilionacete : the legumen is locu- lar and flat; and the partition contrary ; serrate on the edges. Of this genus there is only one spe- cies known ; viz. B. pelecinus, an annual plant with purple flowers, growing in Italy, Sicily, Spain, and the south of France.

BISERTA, a lake of Africa, in Tunis. The mullets in this lake are the best in Barbary.

BXSERTA, a large gulf of Africa, and the Sinus Hipponensis of the ancients. It is formed by the Capes Blanco and Ziebeb ; and has a beau- tiful sandy inlet near four leagues wide, which once admitted the largest vessels, but through the negligence of the Turks can now admit only those of the smallest size, and is in danger in a short time of being totally choked up. Some remains of the pier of Hippo are extant ; by which it appears to have run out into the sea so as to break the north-east wind, and make this one of the safest and most beautiful havens in these parts.

BISERTA, a town of Africa, in the kingdom of Tunis, seated on the gulf. It was formerly very considerable, and is said to have contained 6000 houses. Biserta has about eight villages under its government ; a large plain called Matter or Mater ; and the territory of Chore?, the Clypea or Corobis of the ancients. This is a tract of great extent, and would be very fertile were it not for the frequent incursions of the Arabs.

BISET (Charles Emanuel), a painter of con- siderable eminence, born at Mechlin in 1633, was remarkable for introducing a multitude of figures into his designs, with an extraordinary variety of drapery. His general subjects were conversations, balls, concerts, and assemblies of genteel persons. His pictures had a strong effect at a distance, and even when nearly inspected, showed a neatness of pencil, a spirited touch, and a good expression.

BISET, n. s. a stock dove, or young pigeon.

BISET YE, from bis, and seta, bristle, in na- tural history, a genus of flies of the class of se- ticaudae, distinguished by their having two hairs growing out of their tails. There are many spe- cies, and they are usually divided by authors into two principal kinds ; such as have sharp ends,

and such as have blunt ones. There are several gpecies of the former found in our hedges.

BISHARYE, a tribe of Bedowin Arabs, in habiting part of the mountains on the west of the Red Sea, between Abyssinia and Egypt. Mr. Burckhardt passed through these regions in his route from the country of the Berbers, to the western shores of the Arabian Gulf. Here he found two tribes of Arabs, the Ababde and the Bisharye ; the latter

of whom he thus describes : ‘ The Bisharye, who rarely descend from their mountains, are a very savage people, and their character is worse even than that of the Ababde. The only cattle are camels and sheep ; and they live entirely on flesh and milk, eating much of the former raw : according to the relations of se- veral Nubians, they are very fond of the hot blood of slaughtered sheep ; but their greatest luxury is said to be the raw marrow of camels. A few of these Arabs occasionally visit Dere or Assouan with senna, sheep, or ostrich feathers ; the ostrich being common on their mountains, and their senna is of the best kind. In exchange for these commodities, they take linen shirts, and dhourra, the grains of which they swallow raw, as a dainty _ and never make it into bread. These traders do not long remain on the banks of the Nile, as the dread of the small pox drives them back to their tents. The Bisharye are much addicted to theft, and will even rob the house of the person who receives them as guests. Their youth make plundering excursions as far as Dongola, and along the route to Sennaar, mounted upon ca- mels, of a breed superior to any other that exists between the shores of the Mediterranean and Abyssinia. Few of the Bisharye speak Arabic. They fear none but the Ababde, who know their pasturing places in the mountains, and often sur- prise their encampments.’ The females, he states, are as handsome as those of Abyssinia ; but very licentious.

BISHBESH, a town of Lower Egypt, on that branch of the Nile reaching from the canal ot Trajan to the ancient Pelusiac, which joined lake Menzaleh. It appears to be the ancient Bubaste, a city celebrated for religious rites and Baccha- nalian orgies. The remains here are stupendous ; enormous masses of granite, almost all mutilated, lie in great heaps, many of them made into mill- stones, some of which, completely cut, have been left on the spot, probably from their enormous size. Forty miles north-east of Cairo. Long. 31Ā °52’E., lat. 30Ā° 33′ N.

BISH’OP, v. & n.~\ ETTKTKOTTOC, from tiri and BISH’OPING. I (TKOTTSW, to look into. Lat

BISH’OPHOOD, \episcopus, an overseer. BISH’OPLIKE, C From the Latin the Saxons BISH’OPLY, I formed bij-cop, which was

BISH’OPRICK. J afterwards softened into bishop, a high order of clergy in the church of Rome and church of England. Ayliffe has well defined a bishop, to be an overseer or superin- tendent of religious matters in the Christian church.

And to a bishop, and his constable, eke, He took his wif to kepe ;

when he is gon To Scotland ward, his foraen for to seke.

Chaucer. Canterbury Talcs*

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BISHOPS.

Scarce can a bishoprick forpass them by,

But that it must be gelt in privitie. Spenser.

You shall find him well accompanyed

With reverend fathers, and well learned bishoja.

Shakspeare. They are prophane, imperfect, oh ! too bad, –

Except confirmed and bishoped by thee. Donne.

It will be fit, that, by the king's supreme power in rauses ecclesiastical, they be subordinate under some bishop, and bishaprick of this realm.

Bacon's Advice to Villiers.

Their zealous superstition thinks, or pretends, they cannot do God a greater service, than to destroy the primitive, apostolical, and anciently universal go- vernment of the church by bishops. King Charles.

When bishops shall lay all religion by,

And strive by law to establish tyranny. Marvell.

In case a bishop should commit treason and felony, nnd forfeit his estates, with his life, the lands of his bishaprick remain still in the church. Smith.

A virtuous woman should reject marriage, as a good man does a bishoprick ; but I would advise neither to persist in refusing. Addison. Spectator.

Bloody contests in the streets, and in the churches too, showed what an object of ambition the bishoprick of Rome was, even before the destruction of the western empire. Bolingbroke.

To BISH'OP, is to confirm.

BISH’OP, n. s. A cant word for a mixture of port wine, oranges, sugar and cloves. Come buy my fine oranges, sauce for your veal, And charming when squeezed in a pot of brown ale ; Well roasted with sugar and wine in a cup, They’ll make a fine bishop when gentlefolks sup.

Swift,

BISHOPS. ā In the dead languages, the word now commonly translated bishop, was originally used with a political meaning, as when Plutarch says, H&vra Sttiire icat TTO.VTOV siriffKoiroe qv avrta *Ā«&ac, omnia ipsi administrabat et curabat Phi- dias ; or Cicero is called episcopus orse et Cam- paniae.

On the introduction of Christianity, it came to be used in an ecclesiastical sense ; and may be considered either in relation to one church or assembly of Christians, or to a number of churches united under one superintend eut. The former is the mode in which the Presbyterians and Eng- lish dissenters generally consider the term to be used in the New Testament : the lattet, that in which the Roman Catholics and the Established Church regard it.

‘ From the time of Ignatius, A. D. 100,’ say the Episcopalians, ‘ the word bishop has been universally used to denote the highest of the three orders of clergy in the Christian church, which are the bishops, nriaieoiroi, the presbyters or elders, Uptofivrtpoi, and Deacons, Aiaicovot. It is our belief that in the times of the Apostles, the three orders existed in subordination to each other, and that whilst Episcopacy has, on the ground of being an apostolic institution, an equal claim with the presbytery to our respect, it pos- sesses, as being the order to which presbyters have been always subject, aright of pre-eminence over the other orders of the clergy.’

Presbyterians, on the other hand, regard all the teachers of religion as essentially equal in authority. They argue that no vestige of pre-eminence one over the other appears amongst the apostles, the evangelists, or the seventy disci-

ples; that the terms nrioitoiros and are used as synonymous, and convertible in al- most every passage of the New Testament where they occur ; or, in other words, that the same persons who are called nrioicoiroi, are likewise called vpifffivTipoi, the former expression being the name of office, and the latter the epithet of respect. In proof of this assertion, they adduce a well- known passage in the twentieth chapter of the Acts of the Apostles, where we are informed, that Paul,

having summoned the elders of the church at Ephesus, TUC TrpstrjSurepac rjjc tKK\nffias, the presbyters of the church, addressed them, that is the elders or presbyters, in the following words : ‘ Take heed, therefore, to yourselves, and to all the flock over which the Holy Ghost hath made you (the presbyters) fmaicoirse, bishops or overseers.’ ‘ Here,’ says Dr. Campbell, ‘ there can be no question, that the same persons are denomi- nated presbyters and bishops ‘ ‘ Nor does this pas- sage,’ the presbyterians add, ‘by any means stand alone. There is a similar one in the epistle to Titus, chapter i. ver. 5. compared with verses 6 and 7, and 1 Pet. v. 2.’ ‘ The bishops or pres- byters of the apostolical age,’ they further con- tend, ‘ were usually the pastors each of a single congregation.’ They say, usually the pastors, each of a single congregation, because, as they affirm, there are instances where two or more pastors have been allotted to one Christian assembly ; though the converse of this proposition is not true, that there are instances in the age referred to, of two or more congregations subjected to the authority of one bishop. In establishing the pro- position enunciated above, it is asserted, that, when Titus, acting in the capacity of an extraor- dinary minister, was left at Crete, it was, for the following purposes, among others, ‘ that he should ordain presbyters or bishops in every city. Tit. i. 5. Now, from this statement, they say, it is evident, at first sight, that these presbyters or bishops could not be diocesans. Had it been the intention of Paul to establish, by the agency of Titus, a diocesan authority in Crete, we should have found one individual put in possession of that authority, with a college of priests for his assistants. But this was not the case : Titus was left to ordain presbyters or bishops in every city, that is, to furnish the Christians of each city with an ordinary pastor.

Some ancient catalogues contain an account of eleven pastors in this island at the period imme- diately following this; a fact, it is said, obviously inconsistent with the episcopalian hypothesis. They further quote the instructions of Acts xiv. 23, as of a similar kind, and Dodwell’s admission. ‘ Est sane admodum peccaria omnis ilia argu- mentatio, qua colligitur discipline ecclesiastics in posterum recipiendse, rationem omnem fe Scripturis Novi Fcederis esse hauriendam. Nul- lus enim est qui idprofitiatur aperte sacn Scrip- toris locus.’ Paranesis, N. 14. Can that, there- fore,’ the presbyterians ask, ‘be an institu’aon of Christ, for which there is no authority in the sa- cred writings, and which, according to the author just quoted, was not in existence before the con- clusion of the apostolical period.’

The identity of these orders is contended for by Suicer. (Thesaurus Eccles. vol. i. p. 80.) in

voce, firunoiroc] ā¢ ‘ Bishops and presbyters were not different orders in the apostolic church,’ he says ‘ but constituted one and the same degree or order, and therefore were by divine right equal in dignity and authority.’ He adduces the testimonies of Theodoret upon Philipp. cap. i. where the apostle mentions the bishops and deacons. Theodoret, observes : ‘ ETrierKOTrae rove TTpiffj3vTtpovc Ka\d ctfjiQoTtpa yap tl\ov KCLT tKtivov TOV Kaipov ra bvopara ‘ He calls the presbyters bishops, for they had at that time both the names.’ Afterwards this quotation from (Ecumenius, a writer of the ninth century : ā ‘ OVK firfiSij tv /uĀ£ TfoXti TroXXoi fjdav iāiaKOTToi aXX’ iTTiffKOTrovc TOVQ TTptffflvTfpovg jcaXei TOTS yap en ZKOWWVOVV TO!Q bvofiaoi, nai ol iiridKowoi did- tovoi Kai irpfffjivTtpoi tKa\ovvTO, Kal TO fp.ira\iv cl 7rpĀ£(T/3t;rĀ£po(. sTrtffKOTroi.’ ‘ It is not because there were many bishops in one city, that he ad- dresses the bishops and deacons, but he calls the presbyters, bishops ; for at that time they still had the same names in common, and the bishops were called deacons and presbyters, and, vice vers&, the presbyters, bishops : and again, Theo- doret, in 1 Tim. iii. ‘ Tovc avToisg iKaXovv VOTE 7rpĀ£KCU firioicoirovc .’ ‘ They once called the same persons presbyters and bishops.’ In reply to those statements some Episco- palians (as Bishop Taylor in his Episcopacy As- serted) contend that, of necessity there must be found in scripture a form of church government; that James the brother of our Lord is called an apostle (Gal. i. 29.) and yet he was not of the number of the twelve, but was bishop of Jeru- salem and had precedence there, summing up the decision of the counsel, Acts xv. 1 9., Ato tyw rpti/w wherefore I judge. See also Acts xii. 17. ; the majority however of the respectable advocates of Episcopacy now observe, that while we may collect from the application of the word iiriffKoirt} in Acts 1. 20, to express the office held by the Apostles, taken in conjunction with the circum- stance of St. Peter I. ii. 25. terming our Lord himself the shepherd and Bishop, iTu’cxoTroc, of our souls, that the office of a bishop was one of high rank and great responsibility, we must not look to the revealed word of God for proof of the establishment of a church government, but must examine carefully the history of the Church in the first three centuries ; and enquire what was the actual state of the Christian world during that period. At the head of the fathers, whom they quote upon this subject, stands Ignatius. According to Chrysostom he was the frequent and familiar associate of the apostles, and received episcopal ordination from them by the imposition of hands. In an epistle to the Magnesians as- cribed to this

eminent person, he distinctly refers to three orders of functionaries existing in the same church : mentioning Damas as bishop of Magnesia, Bassus and Apollonius as presbyters, and Tatian as deacon. In his Epistle to the Philadelphians, a similar enumeration is given : ‘ Attend,’ says he, ‘ to the bishop, to the presby- tery, and to the deacons.’ A passage from his epistle to the Trallians is yet more emphatic and conclusive : ‘ Be ye subject,’ he says, ‘ to the bishop as to Jesus Christ, to the presbyters as the apostles of Jesus Christ, and to the deacons

as ministers of the mysteries of Jesus Christ ;’ and he adds, with an anxiety and earnestness not to be expected in so early a writer upon such a subject, these remarkable words, ‘ without these there is no elect church, or congregation of holy men.’ To the same purpose the authority of Clement, bishop of Alexandria, who also lived in the second century, is adduced : He, too, speaks of the three orders of functionaries existing in the church and mentions several persons who had arrived at the episcopal dignity, through the in- termediate gradations of presbyter and deacon. To the testimonies of Ignatius and Clement, the Episcopalians also add those of Tertullian, Cy- prian, Origen and Jerome. In Eusebius it is added there exists catalogues of Bishops up to the times of the Apostles at Jerusalem, Antioch, Alexan- dria, Rome, Jerusalem, Laodicea, and Casarea ; and that not one instance can be produced during that period, nor any instance at all until the time of the Reformation, of any Christian church, pro- fessing the pure faith, which was not governed by Bishops. ā Such is an impartial statement of the arguments on both sides of this disputed question.

The Church of Rome is episcopal, and the church of England so far acknowledges the va- lidity of the ordination of that church that a Romish priest is only required to abjure its pe- culiar errors, and he can officiate without re- ordination. The late Dean Kirwan of Ireland, we believe, was thus ordained in the Romish church.

The Greek Church is also episcopal, having metropolitans, archbishops and bishops, who are always chosen in Russia from among the archi- mandrites, or heads of the monasteries : the synod presenting two or three candidates to his im- perial Majesty, who decides on one.

At the Reformation episcopacy was lost or dis- continued in several countries, not so much from objections to that form of government as from the manner in which the existing prelacy had abused it. Thus the Lutherans in the conclusion of the Augustan confession express themselves as having no view to depriving the Bishops of their govern-

ment, but only to ask them to let the gospel be purely preached. Let them give us an hierarchy said Calvin, in which the bishops may be so above the rest, as they refuse not to be under Christ, and depend upon him as their only head ! In England and Sweden episcopacy was preserved : in Scotland it withered from the first ; and the discipline finally established became a mixture of the Lutheran superintendency and the Calvi- nistic presbytery.

The Bishops of the Church of England are twenty-seven in number, including the two Arch- bishops. The province of Canterbury includes twenty two dioceses ; viz. Canterbury, Lon- don, Winchester, Bangor, Bath and Wells, Bris- tol, Chichester, Ely, Exeter, Gloucester, Hereford, Litchfield and Coventry, Lincoln, Llandaff, Nor- wich,Oxford, Peterborough,Rochester, Salisbury, St. Asaph, St. David's, Worcester. The pro- vince of York includes five, viz. York, Durham, Chester, Carlisle, Sodor and Man. The spiritual functions which are the peculiar dis- tinctions of the order, are those of ordination and confirmation. They also have a power of gover-

ning the clergy of their respective dioceses, and of admonishing, and suspending ecclesiastical per- sons from the performance of the services of the church. They institute to benifices upon the presentation of the patrons, but, if the presenta- tion belong to the Bishop, the act of institution is then termed collation. They license persons to serve as curates, either to assist the resident ministers of parishes, or to supply their absence. They have power to call the clergy to reside on their benifices under severe penalties for non-compliance; and to licence them to be absent from their cures, under special circumstances either of privilege or of personal necessity. By the common law, the bishop is to certify the judges, touching legitimate and illegitimate births and marriages; and by that and the ecclesiastical law, he is to take care of the probates of wills and granting administrations. A bishop's power is confined to his own diocese. He is assisted in his duty by his archdeacons, who are termed by the Canon law the ' Bishops' Eyes.' The bishop, by his archdeacons, visits his diocese every year, and generally in person every three years, at which time confirmations are held ; during the Bishop's personal visitations the power of his archdeacon is suspended.

By virtue of their bishoprics the prelates of England are lords of parliament, and form part of one of the three estates of parliament,

under the name of the lords spiritual. They sit in the upper house, as holding, or being supposed to hold, baronies of the king ; for William the Con- queror changed the spiritual tenure of frank almoin or free alms, under which the bishops held their lands during the Saxon government, into the feudal or Norman tenure by barony, which subjected their estates to all civil charges and assessment from which they were before exempt ; and in right of succession to those ba- ronies, which were unalienable from their res- pective dignities, the bishops and abbots were allowed their seats in the House of Lords. Bishops take rank next to viscounts. A difference however exists in the privileges of the bishops, as respects their being tried by their peers upon indictment for treason, or felony, or misprision of either ; and sitting upon such trials in the court of the lord high steward : from this privilege they are excluded on the ground of not being noble in blood. Custom has also practically excluded them from sitting on trials for capital offences, upon impeachments, or indictments in full parliament. They have usually withdrawn voluntarily in such cases, but have entered a protest expressing their right to stay.

The archbishop of Canterbury is styled Me- tropolitanus et Primus totius Ang'lise. The arch- bishop of York, Primus et Metropolitanus Angliae. They are called Metropolitan, because they were at first consecrated in the metropolis of their province. The archbishop of Canterbury hath precedence before all the nobility of the realm, immediately after the blood royal, he hath the privilege of crowning the king of England, and hath prelates for his officers. The bishop of London is his provincial dean, the bishop of Winchester his chancellor, the bishop of Lincoln Aia vice-chancellor, the bishop of Salisbury his

precentor, the bishop of Worcester his chaplain. He hath the power of dispensation in any case not contrary to the law of God, and on this right is founded his power of granting special licenses to marry at any time or place, to hold two livings and the like, and also his power of conferring any degrees in prejudice of the uni- versities. The archbishop of York is next in precedence ; he hath precedence before all dukes not of the blood royal, and before all the great officers of state except the lord chancellor. He hath the privilege to crown the queen consort, and to be her perpetual chaplain. The bishop of Durham is next, the bishop of Winchester next, the remainder according to their seniority of consecration. But if any be a privy coun- cillor he ranks after the bishop of Durham.

A suffragan is a titular bishop advanced to assist the bishop of any diocese in his spiritual function, or one who supplies the place of the bishop, so that by his suffrage, matters committed to him are

determined. They are regulated by an act of Henry VIII (26 Hen. VIII. c. 14). By this act, every bishop at his pleasure may present two honest and discreet spiritual persons within his diocese to the king, that he may give one of them the title, style, and dignity of any of the following sees: Thetford, Ipswich, Col- chester, Dover, Guildford, Southampton, Taun- ton, Shaftsbury, Molton, Marlborough, Bradford, Leicester, Gloucester, Shrewsbury, Bristol, Pen- rith, Bridgewater, Nottingham, Grantham, Hull, Huntingdon," Cambridge, Penrith, Berwick, St. Germain, and the Isle of Wight.

In Ireland there are four archbishops : Armagh, primate of all Ireland ; Dublin, primate of Ireland; Cashel, primate of Munster; Tuam, primate of Connaught. And eighteen bishops : Meath, Kildare, Derry, Raphoe, Limerick, Ardfert and Aghadoe, Dromore, Elphin, Down and Connor, Waterford and Lismore, Leighlin and Ferns, Cloyne, Cork and Ross, Killaloe and Kilfenora, Kilmore, Clogher, Ossory, Killala and Achonry, Clonfert and Kilmacduagh. By an act 18 Car. I. c. 10, a bishopric in Ireland is declared, incompatible with any ecclesiastical dignity or benefice in England or Wales. The church of England has also bishops of Quebec, Nova Scotia, and Calcutta; and latterly have been consecrated a bishop of Barbadoes, and of Jamaica.

The right of electing bishops is vested, if not by law, at least by the practice of the church, in the king. Immediately after the demise of any prelate, notice of that circumstance is given to the crown by the dean and chapter of his ca- thedral ; who, at the same time, request permission to supply, by their choice, the vacancy which has taken place. His majesty then issues what is called a conge d'elire, accompanied by a missive, or recommendation of some individual to the benefice. This recommendation has the full effect of a command ; for the dean and chapter have not the privilege of rejection. Should they decline electing, and persist in de- clining for the space of twelve days, they incur the severe penalties of a prsemunire, under which term are implied, outlawry, or exclusion from the king's protection ; a forfeiture to the crown

of lands and tenements, goods and chattels ; and imprisonment during his majesty's pleasure. After the interval of twelve days just alluded to, the king presents, by his letters patent, to the vacant see. The election,

or presentation, is next intimated to the archbishop of the province, who is required to proceed without delay in con- firming the bishop elect. Should he decline, he likewise incurs a prsemunire. The mandate, re- quiring confirmation, bears the authority of the great seal. As soon as it is received by the archbishop, it is transmitted to an officer called his vicar-general. The ceremony of confirmation then takes place. Those who have any objections to the new bishop, are solemnly invited to appear and substantiate them, and are denounced as contumacious, if they refuse to do so. The oaths of allegiance and supremacy, together with that of canonical obedience, and that against simony are next administered. A minute of the proceedings is then read by the vicar-general, after which the bishop is installed or constituted the ecclesiastical superior of his diocese, being fully invested with episcopal authority; though, according to some lawyers, he cannot lay claim to the temporalities of his benefice, unless he shall have been consecrated by the archbishop. The ceremony of consecration differs in some respects from that of confirmation. It must be performed, as we have just intimated, by the archbishop ; or in particular cases by three bishops, lawfully commissioned for that purpose. The essential parts of this ceremony, according to Burnet, (art. xxxix. p. 564), are prayer and the imposition of hands ; but to these are added in- vestiture -vith the episcopal vobes, together with the use &r a certain form of words adapted to the occasion. The age at which persons are qualified to be made bishops in the English church is thirty.

BISHOPS, TITULAR, or BISHOPS IN PARTIBUS INFIDELIUM, in ecclesiastical nistory, those with the title of a bishopric, whose diocese was in the possession of infidels or heretics. The de- nomination took its rise from the expulsion of the bishops and clergy out of the Holy Land by the Saracens ; when flying into Italy for shelter, coadjutories were given for their sub- sistence.

BISHOPS, VAGUE, those without any diocese, sometimes attendant on camps, or in foreign countries, for the conversion of infidels. They were sometimes also granted by popes to mo- nasteries, exempt from the jurisdiction of the diocesan, where they perform all the episcopal functions.

BISHOP-ABBOT, episcopus abbas, was an abbot invested with the episcopal order; of which we meet with several in the richer and more con- siderable monasteries.

BISHOP AND HIS CLERKS, in geography, some little islands and rocks on the coast of Pembroke- shire, near St. David's in Wales, which are

very dangerous to mariners. Sheep are pastured on three ; the others afford a retreat to sea fowl, which are caught for the sake of their down. A light-house was erected in 1777. Distant four miles west of St. David's. Long. 5Ā° 20′ W., hit. 51Ā° 54′ N.

BISHOP'S COURT, an ecclesiastical court, neld in the cathedral of each diocese, the judge whereof is the bishop's chancellor, who judges by the civil and canon law; and if the diocese be large, he has his commissaries in remove parts, who hold what they call consistory courts, for matters limited to them by their commission.

BISHOP'S CASTLE, a market town and parish of England, in the county of Salop, on the river Clun. It was formerly a borough and corporate town, returning two members to parliament, but was disfranchised by the reform bill in 1832. Population 2000. Distant eight miles from Montgomery, sixteen S. S. W. of Shrewsbury, and 152 north-west of London.

BISHOPS STORTFORD, a market-town of Hert- fordshire, on the borders of Essex, thirteen miles south-east from Ware, and thirty north from Lon- don ; containing 3358 inhabitants. It has a canal made navigable to the river Lea, with an extensive range of warehouses for storing corn and malt, which articles constitute its principal business. Between Hockeril and Stortford, on an artificial hill, a castle was built in the time of William the Conqueror, called Castle Hill, the remains of which were entirely pulled down in 1649, and an inn built with the materials. King John granted the town a charter of incor- poration, and in the reign of Edward I. it was summoned to send members to parliament, a privilege it does not now enjoy. The four principal streets face the cardinal points, and it is kept very clean by the river Stort, which runs through it. The church is a vene- rable gothic structure, containing many ancient monuments. The free-school is a handsome edifice, of a square form, in the centre of the High-street. Here are several well-endowed alms-houses for aged persons, and a good mar- ket on Thursday.

BISHOPS WEARMOUTH, a parish of the county of Durham, standing on the river Wear. It was once a place of considerable note, and its church, the mother church to Sunderland. On the north side of the river lies Monks Wearmouth, so called from an extensive monastery ,which was twice destroyed by the Danes and Scots. In the neighbourhood are several manufactories, and the trade and intercourse have been lately much benefited by the erection of a cast-iron bridge over the river, planned under the direc- tion of Rowland Burdon, Esq. M. P. for Dur- ham. It is 100 feet high, and 236 long,

having only one arch. Population 7000. Distant 12Ā£ miles from Durham, and 272 from London.

BISI (Bonaventura), a celebrated miniature painter, was born at Bologna, and a disciple of Lucio Massari. Instead of working from his own invention, he imitated in small size, the pic- tures of Guido, Corregio, Titian, and other great masters, and these he finished with astonishing grace, neatness, and beauty. He died in 1661. BISIGNANO, a town of Naples, in the Hither Calabria. It has a strong fort, a bishop's see, and the title of a principality. It is seated on a mountain near the river Boccona.

BISILIQUOUS, in botany, having the seed contained in two pods, proceeding from one flower.

BISK', n. s. Fr. bisque, soup ; broth made by boiling several sorts of flesh.

A prince, who in a forest rides astray, And, weary, to some cottage finds the way. Talks of no pyramids, or fowls, or bisks of fish, But hungry sups his cream served up in earthen dish.

King.

BISK, or BISQUE, in cookery, a rich sort of broth or soup, made of pigeons, chickens, force- meat, mutton gravy, and other ingredients. The word is French, formed from the Latin biscocta ; because the bisque, consisting of a diversity of ingredients, needs several repeated coctions to bring it to perfection. There is also a demi- bisque, made at low expense, in which only half the ingredients are used ; and a bisque of fish, made of carps, minced with their roes and lobsters.

BISLINGUA, double-tongued, a name used by many authors for the narrow-leafed ruscus, or butcher's broom, called by many others, the Alexandrian bay, or laurus Alexandria.

BISMAR, a Danish denomination for a small weight used in the Orkneys, for weighing small quantities of butter, from a merk to a lispund or twenty-four merks.

BISMILLAH, a solemn form used by the Mahommedans at the beginning of all their books and other writings, signifying, In the

name of the most merciful God. It is also used among the Arabs as a word of invitation to eat.

BISMUTH, a genus of metals Its generic characters are reddish-white, soft, brit- tle, specific gravity 9‘822, easily melting, and soluble in acids. The species are, B. nativum, seu wismutum nativum ; B. ochraceum, seu wismutum pulverulentum, flowers of bismuth, or bismuth ochre ; B. sulphuratum, seu wismu- tum sulphure, sulphurated bismuth, or sulphuret of bismuth ; B. martiale, seu wismutum lamellis cuneatis, martial sulphurised bismuth. Bismuth is somewhat liarder than lead, and is scarcely, if at all malleable. The internal face, or place of fracture, exhibits large shining plates, disposed in a variety of positions ; thin pieces are con- siderably sonorous. It melts at a temperature of 480Ā° Fahrenheit, and its surface becomes covered with a greenish-gray or brown oxide. A stronger heat ignites it, and causes it to burn with a small blue flame ; at the same time that a yellowish oxide, known by the name of flowers of bismuth, is driven up. This oxide appears to rise in consequence of the combustion ; for it is very fixed, and runs into a greenish glass when exposed to heat alone. This oxide consists of 100 metal + 11*275 oxygen, whence its prime equivalent will be 9-87, and that of the metal itself 8 87. In a strong heat, and a closed vessel, it sublimes entire, and crystallises very distinctly when gradually cooled. The sulphuric acid has a slight action upon bismuth, when it is concen- trated and boiling. Sulphureous acid gas is exhaled, and part of the bismuth is converted into a white oxide. A small portion combines with the sulphuric acid, and affords a deliques- cent salt in the form of small needles. Nitric acid dissolves bismuth with the greatest rapidity and violence ; at the same time that much heat is extricated, and a large quantity of nitric oxide

escapes. The solution, when saturated, affords crystals as it cools ; the salt detonates weakly and leaves a yellow oxide behind, which efflo- resces in the air. Upon dissolving this salt in water, it renders that fluid of a milky white, arid lets fall an oxide of the same color. The nitric solution of bismuth exhibits the same property when diluted with water, most of the metal fall- ing down in the form of a white oxide, called magistery of bismuth. This precipitation of the nitric solution, by the addition of water, is the criterion by which bismuth is distinguished from most other metals. The magistery or oxide is a very white and subtile powder ; when prepared by the addition of a large quantity of water, it is used as a paint for the complexion, and is thought gradually to impair the skin. The liberal use of any paint for the skin seems indeed likely to do this ; but there is reason to suspect, from the resemblance between the general proper- ties of lead and

bismuth, that the oxide of this metal may be attended with effects similar to those which the oxides of lead are known to pro- duce. If a small portion of muriatic acid be mixed with the nitric, and the precipitated oxide be washed with but a small quantity of cold water, it will appear in minute scales of a pearly lustre, constituting the pearl powder of perfu- mers. These paints are liable to be turned black by sulphuretted hydrogen gas. The muriatic acid does not readily act upon bismuth. Alkalies precipitate its oxide : but not of so beautiful a white color as that afforded by the affusion of pure water. The gallic acid precipitates bis- muth of a greenish-yellow, as ferroprussiate of potash does of a yellowish color. There appear to be two sulphurets, the first a compound of 100 bismuth to 22‘34 sulphur; the second of 100 to 46‘5 ; the second is a bisulphuret.

This metal unites with most metallic sub- stances, and renders them in general more fusible. When calcined with the imperfect metals, its glass dissolves them, and produces the same effect as lead in cupellation ; in which process it is even said to be preferable to lead.

Bismuth is used in the composition of pewterr in the fabrication of printer’s types, and in vari- ous other metallic mixtures. With an equal weight of lead, it forms a brilliant white alloy, much harder than lead, and more malleable than bismuth, though not ductile ; and, if the propor- tion of lead be increased, it is rendered still more malleable. Eight parts of bismuth, five of lead, and three of tin, constitute the fusible metal, sometimes called Newton’s, from its discoverer, which melts at the heat of boiling water, and may be fused over a candle in a piece of stiff paper, without burning the paper. One part of bismuth, with five of lead, and three of tin, forms plumber’s solder. It forms the basis of a sympathetic ink. The oxide of bismuth precipi- tated by potash from nitric acid, has been recom- mended in spasmodic disorders of the stomach, and given in doses of four grains, four times a-day. A writer in the Jena Journal says he has known the dose carried gradually to one scruple without injury.

Bismuth is easily separable, in the dry way, from its ores, on account of its great fusibility.

It is usual, in the processes at large, to throw the bismuth ore into a

fire of wood, beneath which a hole is made in the ground to receive the metal, and defend it from oxidation. The same process may be imitated in the small way, in the exami- nation of the ores of this metal ; nothing more being necessary than to expose it to a moderate heat in a crucible, with a quantity of reducing flux ; taking care, at the same time, to perform the operation as speedily as possible, that the bis- muth may be neither oxidised nor volatilised. See SALT.

Its affinities for the metals and acids are nearly in the following order : ā

Bismuth. Oxide of Bismuth.

Lead, Oxalic acid,

Silver, Arsenic,

Gold, Tartaric,

Mercury, Phosphoric,

Antimony, Sulphuric,

Tin, Muriatic,

Copper, Nitric,

Platinum, Fluoric,

Nickel, Saclactic,

Iron, Succinic,

Sulphur. Citric,

Lactic, Acetic, Prussic, Carbonic.

BISNEE, a district of Hiridostan, between Bengal and Assam, the rajah of which is tribu- tary to both of these states. It is situated on the north side of the Brahmapootra river, between 26Ā° and 27Ā° of northern latitude. Bisnee, the capital, is the residence of the rajah, who is very poor.

BISOMUM, or DISOMUM, in Roman anti- quity, a tomb for two dead bodies, or the ashes of two. The ancients frequently buried two, three, or four bodies in the same sepulchre, dis- posed beside each other; for it was held an im- piety to lay one on the top of another. Hence the

sepulchres of the primitive Christians had the words bisomi, trisomi, qnadrisomi, &c. inscribed on them, to indicate the number of bodies de- posited in them.

BISON, in zoology, the trivial name of a spe- cies of bos. See Bos.

BISON, in entomology, a species of scarabseus ; thorax, the anterior part, pointed ; and two luna- ted horns on the head. Found in Spain, and the southern parts of France. Color black.

BISPINOSA, in entomology, a species of mantis, thorax roundish, bidentated in front ; wing-cases very short, and bordered with yellow. Also a large species of cicada, inhabiting the island of Sumatra. Color brown, with a single spine on each side of the thorax ; wings dusky, with a streak of black spots.

BISPINOSUS, a species of cerambyx steno- corus, inhabiting South America. Thorax un- armed, and slightly tuberculated ; wing-cases bidentated ; joints of the antennae armed with spines; body testaceous. ā Also a species ofcara- bus, found in Europe. Color black ; posterior part of the thqrax truncated ; anterior shanks two spined. ā Also a species of tabarms, a native of

Sweden. Color brown ; abdomen ferruginous, and black at the base, with two spines on the scutel.

BISSACRAMENTALES, a denomination given by Romish writers to protestants, on ac~ count of their only holding two sacraments.

BISSAGOS, a group of islets which lie off the western coast of Africa, between the Gambia and Sierra Leone, near the mouth of the Rio Grande. The principal isles amount to the number of sixteen. Bissao, Bulama, Jate, Bussi, and Manterre, are alluvial islands, separated from the continent only by inconsiderable streams. Galpinas, Areas, Formosa, Canabac, Carache, Corbelle, Genthera, Cavallo, Mel, Ca- segu, and Cove, are in the open sea. Besides these there are a great number of smaller islands, of which the most remarkable are Bourbon, Sar- ciere, Poelon, Papaygo, and Los Parcos. To- wards the ocean these islands are covered by a succession of banks of sand and mud, which ren- der the approach to them very dangerous. The banks extend more or less from the 9th to the 12th parallel, and as far east as the meridian of Ferro. The inhabitants are called Bissagos, or Bijugas. They are a tall, robust, and intrepid race, fond of war. Such is their pride, that they will even commit suicide, on receiving an affront which they cannot avenge. They are said at the same time to be very

ingenious, and ready of comprehension. The Biafaras, a much milder race, who inhabited the islands nearest to the continent, have been driven out by them, and now inhabit the banks of the Rio Grande. An ‘ attempt was made in 1792 to plant a colony upon Bulama, one of these islands, which how- ever failed. See BULAMA.

BISSAO, one of the largest of the archipelago of the Bissagos, is forty miles long by thirty wide. It rises towards the middle in a hollowed plain, and is extremely fertile, producing abun- dantly millet, rice, lemons, limes, bananas, with oxen and cows of a remarkable size. The inha- bitants are called Papels, and are enterprising and warlike; many Portuguese have also long been settled here. This island has a fine road, with a muddy bottom, and excellent anchorage at a place called the Great Port. Long. 14Ā° 10 W., lat. 11Ā° 24′ N.

BISSART (Peter), professor of canon law in the university of Bologna, was descended from the earls of Fife in Scotland, and born in that country in the reign of James V. He was edu- cated at St. Andrew’s : from thence he removed to Paris ; and, having spent some time in that university, proceeded to Bologna, where he commenced LL. D. and was afterwards appoint- ed professor of canon law. He continued in that employment several years with great repu- tation, and died in 1568. He is said to have been not only a learned civilian, but an excellent poet, orator, and philosopher. Patricii Bissarti opera omnia, viz. poemata, orationes, lectiones feriales, &c. Lib. de irregularitate, &c. were pub- lished at Venice in 1565, 4to.

BISSEL/EON, in the ‘materia medica, a name used in many works of the most ancient Greek and Roman writers, to express the oil of pitch, or the fluid substance which swims at the surface

Ā«t melted pitch, and was used in many external disorders.

BISSET (Robert), a native of Scotland, was educated at Edinburgh for the clerical profession. He took the degree of LL. D., and becoming a schoolmaster at Chelsea, employed himself largely in writing for the press. His chief pro- ductions are ā A History of the Reign of George III. 6 vols. 8vo. ; the Life of Edmund Burke, 2 vols. 8vo. ; and an edition of the Spectator, with lives of the authors, 6 vols. He died in 1805, aged forty-six.

BISSEXTIALIS, or BISSEXTIALIS OLLA, an ancient measure or vessel, containing twelve ounces, or two sextaries.

BISSEXTILE, n. s. Lai. from bis, and sex- tilis, leap year; the year in which the day, arising from six odd hours in each year, is in- tercalated.

The year of the sun consisteth of three hundred and sixty-five days and six hours, wanting eleven minutes ; which six hours omitted, will, in time, de- prave the compute : and this was the occasion of bistettile, or leap year. Brown.

Towards the latter end of February is the bissextile, or intercalar day ; called biisextile, because the sixth of the calends of March is twice repeated.

Holder on Time.

BIS'SON, adj. Derived by Skinner from by, and sin, blind.

But who, oh ! who hath seen the mobled queen

Run barefoot up and down, threatening the flames

With bitson rheum ? Shakspeare. Hamlet.

BISTI, in commerce, a small coin of Persia. Some say that is among the current silver coins of Persia, and worth only a little above three farthings of our money; others speak of it as a money of account ; perhaps it is used for both.

BISTONIS, in ancient geography, a lake of Thrace near Abdera, on which dwelt the Bis- tones : hence 1 . B. turbo, a wind blowing from Thrace ; and 2. B. tyrannus, an epithet used by Lucan, for Diomedes king of Thrace, who fed his horses with human flesh.

BISTORT, or knotgrass, in botany, the trivial name of a species of polygonum. See

POLYGONUM.

BISTOURY, a surgeon's instrument used in making incisions, of which there are three sorts ; the blade of the first turns like that of a lancet : but the straight bistoury has the blade fixed in the handle ; die crooked bistoury is shaped like that of a half moon having the edge on the in- side.

BISTRE, the burnt oil extracted from the soot of wood. It is of a brown transparent color, having much the same effect in water- painting, where alone it is used, as brown pink in oil. Though this color is extremely service- able in water-colors, and much valued by those who know and can procure it : yet it is not in general use, perhaps on account of its not being easily procured of a perfect kind ; hardly any of it being good, except that imported from France. Bistre may, however, be prepared with great ease in the following manner : take any quantity of soot of dry wood, but let it be of beech, if possible. Put it into water in the proportion of

two pounds to a gallon, and boil them half an hour : then after the fluid has stood some little time to settle, but while yet hot, pour off the clearer part from the earthy sediment at the bottom ; and if on standing longer it forms ano- ther earthy sediment, repeat the same method, but this should be done only while the fluid re- mains hot ; evaporate then the fluid to dryness ; and what remains will be good bistre, if the soot was of a proper kind. The goodness of the bistre may be_ perceived by its warm deep brown color, and transparency when moistened with water.

BISTRIATA, in entomology, a species of cicada deflexa, inhabiting France. Color yellow, with two transverse bands of brown.

BISTRIGALIS, a species of phalaena. Color black; cinereous wings, with two ferruginous streaks, and a black dot. Inhabiting Europe.

BISTRIGARIA, a species of phalaena geo- metra, with cinereous wings, undulated with two linear streaks. Found only in Europe.

BISTRIGATA, another European species of phalaena geometra; griseous, with two whitish streaks.

BISTRITZA,a market town of Hungary, in the district of Besztercze, and county of Trent- schin, on the Waag, with a castle and a Catholic church. Six miles north-east of Bolesko.

BISULCATUS, a species of curculio, inha- biting Italy. Color black, with a cinereous border, and two furrows on the beak.

BISULCUS, a species of ichneumon. Color black, with two impressed lines before ; legs rufous ; sting short.

BITCH’. n. s. Sax. bitxe ; the female of die canine kind, as the wolf, the dog, the fox, the otter ; opprobriously applied to a woman who is a virago.

And at his feet a bitch wolf suck did yield

To two young babes. Spenser.

I have been credibly informed, that a bitch will

nurse, play with, and be fond of young foxes, as much

as, and in place of, her puppies. Locke.

Him you call a dog, and her a bitch. Pope.

John had not run a madding so long, had it not been for an extravagant bitch of a wife. Arbuthnol.

BITCHE, a town and lordship of Lorraine, at the foot of one of the Vosges mountains, near the Schwolbe. It is built in the form of a half moon, and contains 2715 inhabitants. Since the revolution it has been the chief place of a canton in the department of the Moselle. On a hill overlooking the town is the strong citadel, which was taken by Louis XIV. in 1670, but given back at the peace of Ryswick. When the lordship came into the possession of France, this castle was repaired and strengthened. Bitche was one of the barrier fortresses delivered over by the allies in 1815, for a limited time, to the supervision of Lord Wellington. Sixteen miles E. S. E. of Sarguemines, and eighteen east of Weissembourg. Long. 7Ā° 30′ E., lat, 49Ā° 4′ N. BITE' v. & n.ˆi Ang.Sax. bitan, literally to BI'TER, I make an incision, or to man

BI'TING, ! gle with the teeth ; metapho-

BI'TINGLY, | rically, whatever wounds the BIT' v. & n. f mind; hurts or gives pain, BIT'LESS. J like a bite, whether by strata-

gem or force ; whatever would take us in or prey upon us ; whatever is sharp or acrid ; piercing or penetrating. A bit is a small portion of any thing; like what is taken from a larger sub- stance' by a bite of the mouth. It is also ap- plied to the instrument attached to the bridle of a horse, and which crosses his mouth, and re- mains there till the bridle is removed ; he champs the bit, but he cannot masticate it ; it sometimes signifies all the iron appurtenances of a bridle ; a biter is

not only one that takes in another, but that is himself taken in ; a sharper bites, that is, he deceives you, and gives you pain by his duplicity and dishonesty ; but he also is a biter, who, like a fish, eagerly swallows the bait by which he is hooked and caught.

Right as a serpent hideth under floures Til he may see his time for to bite. Chaucer.

With that, at him, a quivering dart he threw, With so fell force and villeinous despite, That through his habericon the forke head flew, And through the linked mayles empierced quite, But had no power in his soft flesh to bite. Spenser. Others the utmost boughs of trees doe crop, And brouze the woodbine twigges that freshly bud ; This with full bit doth catch the utmost top Of some soft willow. Id.

Sir Guyon, as by fortune then befell, Forth from the thickest preasse of people came ; His owne good steed, which he had stolen, toclame ; And the' cue hand seizing on his golden bit, With the' other drew his sword. Id.

We have strict statutes, and most biting laws, The needful bits and curbs of headstrong steeds.

Shukspeare.

My very enemy's dog,

Though he had bit me, should have stood that night Against my fire. Id.

These are the youths that thunder at a playhouse, and fight for bitten apples. Id.

No empty hopes, no courtly fears, him fright ; Nor begging wants his middle fortune bite, But sweet content exiles both misery and spite.

Fletcher. Purple Island.

I have known a very good fisher angle diligently four or six hours for a river carp, and not have a bite.

Walton.

There are few that know all the tricks of these

lawyers ; for aught I can see, your case is not a bit

clearer than it was seven years ago. Arbuthnot.

John was the darling ; he had all the good bits, was

crammed with good pullet, chicken, and capon. Id.

If on Parnassus top you sit, You rarely bite, are always bit. Swift.

Let a man be ne'er so wise,

He may be caught with sober lies ;

For, take it in its proper light,

Tis just what coxcombs call a bite. Id.

Great barkers are no biters. Camden.

A biter is one who tells you a thing you have no

reason to disbelieve in itself, and perhaps has given

you, before he bit you, no reason to disbelieve it for

his saying it ; and, if you give him credit, laughs in

your face, and triumphs that he has deceived you.

He is one who thinks you a fool, because you do not

think him a knave. Spectator.

If you had allowed half the fine gentlemen to have

conversed with you, they would have been strangely

bit, while they thought only to fall in love with a fair

l*dy. Pope.

He bought at thousands, what with better wit You purchase as you want, and bit by bit. Id.

The evil consequences which sometimes arise from the want of that timely intimation of danger which paiii gives, is known to the inhabitants of cold coun- > tries by the example of frost-bitte.t limbs.

Paley's Theology.

Who thundering comes on blackest steed ? With slackened bit and hoof of speed.

Byron. Giaour.

BITS, in the menage. See HORSES, and ME- NAGE.

BITS, or BITTS, in ship-building, the name of two great timbers, usually placed abaft the man- ger, in the ship's loof, through which the cross- piece goes : the use of it is to belay the cable thereof, while the ship is at anchor.

BITHYNIA, an ancient kingdom of Asia, formerly known by the names of Mysia, Myg- donia, Bebrycia, Mariandynia, and Bithynia. It was bounded on the west by the Bosphorus Thracius, and part of the Propontis, on the south by the river Rhyndacus and Mount Olympus, on tli— north by the Euxine Sea, and on the east by the river Parthenius. The chief cities were Myrlaeae, Nicomedia, Chalcedon, Heraclea, and Prusa. As to its history, we find nothing of moment recorded, except the infamous conduct of Prusias, one of its kings, in delivering up to the Romans Hannibal, the great Carthaginian general, who fled to him for protection. His great grandson, Nicomedes IV., bequeathed the kingdom to the Romans. From them it was taken by the Turks, to whom it still remains subject, and retains its ancient name.

BITHYNIARCHA, the superintendent of the sacred games in ancient Bithynia.

BITHYNIARCHIA, a sort of superior priest- hood in ancient Bithynia, to which belonged the superintendency of the sacred games, and which gave an exemption to the Bithyniarcha from the care of tutorage.

BITIS, in zoology, a species of coluber, found in Brasil. Above, yellow, varied, with white and red, and transverse brown bands ; beneath, yellow, with a middle row of very minute scales.

BIT NOBEN, salt of bitumen. A white saline substance lately imported from India, which is not a natural production, but a Hindoo preparation of great antiquity. It is called in the country, bit noben, pandanoon, and soucher- loon, and popularly khala mimuc, or black salt. This salt is more extensively used in Hindostan, than any other medicine whatever. The Hindoos use it to improve the appetite and digestion ; they also consider it as a specific for obstructions of the liver and spleen ; and it is in high estima- tion in paralytic disorders,

cutaneous affections, and indeed all chronic disorders of man and beast.

BITONTO, an episcopal town of Naples, in the Terra di Bari, seated in a plain eight miles south of the gulf of Venice; and 118 miles east of Naples. It is celebrated for the victory ob- tained by the Spaniards in its neighbourhood over the Imperialists, 25th May 1734, and which resulted in the entire subjugation of Naples to Don Carlos of Spain. Philip V. caused a pillar to be erected on the field of battle, and gave the title of duke of Bitonto to the count of Monte-

mar, the Spanish general. It contains about 13,000 inhabitants.

BITTACUS, in natural history, a name given by Ctesias, and other Greek authors, to the parrot.

BITTER, adj. & n.ˆ Of the same deriva- BIT'TERFULL, f tion as bite ; but ap-

BIT'TERLY, i plied particularly to the

BIT'TERNESS. * taste ; that which is pun-

gent, penetrating and unpalatable ; distasteful ; nauseous ; hence it is figuratively employed to ex- press anguish of heart; excessive grief ; calamity and woe ; as likewise hatred ; malice ; implaca- bility ; severity of temper ; piquancy,; satire and keenness of reproach.

For, God it wote, he sate full oft and songe, Whan that his sho ful bitterly him wronge, Ther was no wight, save God and he that wiste In many a wise how sore that I him twiste.

Chaucer. Canterbury Tales. Thereto the blatant beast, by them set on, At him began aloud to bark and bay With bitter rage and fell contention, That all the woods and rockes nigh to that way Began to quake and tremble with dismay. Spenser.

And there beside him sate upon the ground His wofull ladie, piteously complayning With loud laments, that most unlucky stound, And her sad selfe with carefull hand constrayning To wype his wounds, and ease their bitter payning.

Id.

Friends now fast sworn, Unseparable, shall within this hour, On a dissension of a doit, break out To bitterest enmity. Shakspeare.

Noble friends and fellows, whom to leave Is only bitter to me, only dying. Id.

I so lively acted with my tears, That my poor mistress, moved therewithal, Wept bitterly. Id.

Indeed, my younger boy presumed too much Upon his manhood, gave him bitter words, Drew his sword first ; and so, I know not how, For I was out of my wits, he fell with's head Just in my bosom. Webster.

Bitter and earnest writing must not hastily be con- demned. Bacon.

And shun the bitter consequence : for know, The day thou eatest thereof, my sole command Transgrest, inevitably thou shalt die. Milton.

Bitter constraint, and sad occasion dear, Compels me to disturb your season due. Id.

Tell him, that if I bear my bitter fate, Tis to behold his vengeance for my son.

Dryden.

Bitter is an equivocal word ; there is bitter worm- wood, there are bitter words, there are bitter enemies, and a bitter cold morning. Watts' Logick.

The word of God, instead of a bitter, teaches us a charitable zeal. Spratt.

Pierpont and Crew appeared now to have contracted more bitterness and sourness than formerly, and were more reserved towards the king's commissioners.

Clarendon.

What energy the hand

Of virtue mingles in the bitter tide, Of passion swelling with distress and pain, To mitigate the sharp with gracious drops Of cordial pleasure. Akenside.

Love shews all changes ā hate, ambition, guile, Betray no further than the bitter smile.

Byron. Corsair.

Thou mockest my weakness ; and woiilĀ«ljĀ»

steel

My breast before the time when it must feel. But trifle now no more with my distress, Such mirth hath less of play than bitterness. Iii

But, oh ! the scenes ‘mid which they met and parted. The thoughts, the recollections, sweet and bitter!

Maturin. Bertram.

BITTERFIELD, a town belonging to the Prussian states, in the duchy of Saxony, on the Mulda. It has 2000 inhabitants, and was founded by a colony of Flemings, whose de- scendants, forming an independent body, are said to possess all things in common. Here are many cloth-makers and potters. Sixteen miles south of Dessau, and eighteen S. S. W. of Wit- temberg. Long. 12Ā° 23′ E., lat. 51Ā° 39′ N.

BITTER PRINCIPLE. ‘ Many vegetable sub- stances,’ says Dr. Thomson, ‘ have an intensely bitter taste, and on that account are employed in medicine, by brewers, &c. This is the case with the wood of the quassia amara and excelsa, the common quassia of the shops ; with the roots of the gentiana lutea, common gentian; the leaves of the humulus lupulus, or hop ; the bark or wood of the spartium scoparium, or common broom: the flowers and leaves of the anthemis nobilis,orchamomile, and many other substances. Some of these bodies owe their taste to the pre- sence of a peculiar vegetable substance, differing from every other, which may be distinguished by the name of the Bitter Principle. When water is digested over quassia for some time it acquires an intensely bitter taste and a yellow color, but no smell. When water thus impregnated is evaporated to dryness, in a low heat, it leaves a brownish yellow substance which retains a cer- tain degree of transparency. It continues duc- tile for some time, but at last becomes brittle. This substance I shˆll consider as the Bitter Principle in a state of purity. If it contains any foreign body it must be in very minute propor- tion. This substance I find to possess the fol- lowing properties : 1 . Its taste is intensely bitter. Color brownish yellow. 2. When heated, softens and swells, and blackens ; then burns away with- out flaming much, and leaves a small quantity of ashes. 3. Very soluble in water and alcohol.

4. Does not alter the color of infusion of litmus.

5. Lime water, barytes water, and strontian water occasion no precipitate. Neither is any precipitate thrown down by silicated potash, aluminated potash, or sulphate of magnesia.

6. The alkalies occasion no change in the diluted solution of the bitter precipitate. 7. Oxalate of ammonia occasions no precipitate. 8. Nitrate of silver renders the solution muddy, and a very soft flaky yellow precipitate falls slowly to the bottom. 9. Neither corrosive sublimate nor nitrate of mercury occasion any precipitate. 10. Nitrate of copper, and the ammoniacal solu- tion of copper, produce no change ; but muriate of copper gives the white precipitate, which falls when this liquid is dropt into water. 11. Sul- phate and oxymuriate of iron occasion no change. 12. Muriate of tin renders the solution muddy, but occasions no precipitate unless the solution be concentrated, in that case a copious precipitate falls. 13. Acetate of lead occasions a very co-

pirtus white precipitate, but the nitrate of lead produces no change. 14. Muriate of zinc occa- sions no change. 15. Nitrate of bismuth pro- duces no change, though when the salt is dropped into pure water, a copious white precipitate appears. 16. Tartar emetic produces no change, but when the muriate of antimony is used the white precipitate appears, which always falls when this salt is dropped into pure water. 17. Muriate and arseniate of cobalt occasion no change. 18. Arseniate of potash produces no effect. 19. Tincture of nut-galls, infusion of nut-galls, gallic acid, occasions no effect. These properties are sufficient to con- vince us that the Bitter Principle is a substance differing considerably from all the other vegetable principles.' A second and third species of the Bitter Principle are also pointed out by this author, and his conclusions have been sanctioned by Mr. Brande. Dr. Murray (see his Chemistry), however, objects to them in toto.

BITTERS, in medicine, have been divided by Mr. Gray (Elements of Pharmacy) into the pure bitters, viz. absinthium (wornvvood), aloes spi- catve extractum (socotrine or Turkey aloes), aloes vulgaris extractum (hepatic or Bombay aloes), amygdala amara (bitter almond), centaurii cacu- mina (centaury tops), colocynthidis pulpa

(bitter apple pulp), gentianae radix (gentian root), me- nyanthes (bogbean), quassiae lignum (quassia wood), simaroubae cortex (mountain damson bark), spartii cacumina (broom tops), taraxaci radix (dandelion). The aromatic bitters are anthemides flores (chamomile), calami radix (sweet flag root), cascarillae cortex (cascarilla bark), cuspariaj cortex (angustura bark), lauri folia (bay leaves), limonum cortex (lemon peel), marrubium (horehound), myrrha (myrrh), valerianae radix (valerian root). The astrin- gent bitters are the various barks, while only one sweet bitter is enumerated as a drug, namely, the dulcamaras caules (bitter sweet stalks). Many medical men condemn the continued and dietetic use of bitters, as render- ing the person employing them more than com- monly liable to apoplexy and paralytic seizures : in proof of which it is alleged that many indivi- duals who had taken the Portland powder for a length of time, have unexpectedly fallen victims to palsy and apoplexy. But it is to be recol- lected that the tendency to gout and paralysis is very often co-existent ; and although every habi- tual excitant is to be avoided, the occasional use of them is often very beneficial.

BITTERN,) Fr. butour ; a bird with long BIT'TOUR. \ legs, and a long bill, which feeds upon fish ; remarkable for the noise which he makes, usually called bumping.

The poor fish have enemies enough, besides such unnatural fishermen as otters, the cormorant, and the bittern. Walton.

Then to tne water's brink she laid her head ; And, as a bittour bumps within a reed, To thee alone, 0 lake, she said, I tell. Hryden.

BITTERN, in ornithology. See ARDEA.

BITUBERCULATA, in entomology, a spe- cies of cassida : color black, with a white mar- gin ; wing-cases spotted with black, a single

tubercle at the base of each. A native of Cay- enne.

BITUBERCULATUS, a species of curculio, a native of New Zealand : color, ferruginous ; thorax length of the wing-cases, and dotted, with two tubercles on the back. Also a species of cryptocephalus crioceris, a native of Africa : color, fulvous ; wing-cases, pale, bordered witli fulvous.

BITU'ME, \ Lat. bitumen; Gr. TTITVS, BITU'MED, I mOoc, vtQvs, from iriw. A BITU'MEN, vkind of slime mortar, says BITU'MENATED, I Golding, issuing out of the BITU'MENOUS. * ground in divers places

about Babylon, and which was one of the in gredients used in building the wall of that once famous city. It is also sometimes scummed off lakes, as the Asphaltis in Judea, and is occa- sionally of so hard a consistence as to be used for coals. >

Mix with these

laaean pitch, quick sulphur, silver’s spume,

Sea onion, hellebore, and black bitume. May.

Where is Marcus' Scaurus Theater, the bihiminaled

walls of Babylon ? and how little rests of the Pyra-

wids of Egypt ! Feltham.

It is reported, that bitumen mingled with lime, and

put under water, will make as it were an artificial

rock, the substance becometh so hard. Bacon.

The fabrick seemed a wood of rising green, With sulphur and bitumen cast between. Dryden.

BITCMEN. This term includes a consider- able range of inflammable mineral substances, burning with flame in the open air. They are of different consistency, from a thin fluid to a solid ; but the solids are for the most part lique- fiable at a moderate heat. The principal bitu- mens are : Naphtha ; a fine, colorless oil, which issues out of clay in Persia and Media. It is highly inflammable, and is decomposed by distillation. It dissolves resins, but is not itself soluble either ir. alcohol or ether. It is the lightest of all the dense fluids, its specific gravity being 0'708. Petroleum, which is a dark oil, found dropping from rocks or oozing from the earth, in various parts of Europe and Asia : this also is insoluble in alcohol, and contains a por- tion of the succinic acid. Barbadoes tar, which is a viscid black inflammable substance, also in- soluble in alcohol, and containing the succinic acid. Asphaltum, mineral pitch, of which there are three varieties . the cohesive ; the semi-com- pact, maltha; the compact, or asphaltum. These are smooth, inflammable substances, which melt easily, leaving but little ashes, if pure. They are partially acted on by alcohol and ether.

Mineral tallow, a white substance resembling tallow. It was found in the sea on the coasts of Finland, in the year 1736 ; and is also met with in some rocky parts of Persia. It is near one- fifth lighter than tallow ; burns with a blue flame, leaving a black viscid matter behind, which is with more difficulty consumed. Elastic bitumen, of which there are two varieties: 1. Mineral caoutchouc, the color of which varies from yel- lowish brown to olive blackish or reddish brown. The light colored is often in a semi-fluid state, and adheres to the fingers ; the olive brown is solid and elastic. 2. Suberiform mineral caout-

chouc. This substance, when recently cut, exactly resembles fine close cork in color and texture ; but, by exposure for a few days to the air, it becomes of a pale reddish brown color. The different sorts of coal are also ranked as bi- tuminous substances.

BITUMEN HYBLEANUM, in mineralogy, a name given by Boccone and others to a peculiar species of bituminous fossil, which is flexible while in the earth. It is a stony substance, smelling like the common bitumens, and composed of a very great number of thin plates, laid regularly on one another. When burnt in a candle the bitu- minous smell is perceived very strong ; and the stone, though when first taken up it be flexible like paper, yet in time hardens and becomes brittle like other fossils of that lax consistence. There are found whole hillocks covered with it. This does not prevent their bearing plants and herbage, the roots of the grass, &c. insinuating themselves between the laminae of this stone, and getting nourishment there.

BITUMEN JUDAICUM. See ASPHALTUM.

BITUREX, BITURICJE, or BITURIGES, after- wards corrupted to BOURGES, the name of Ava- ricum, from the custom in the lower age of call- ing towns from the names of the people. See AVARICUM.

BITURIGES, or BITURIGES CUBI, the ancient inhabitants of that part of Gallia Celtica, after- wards assigned to Aquitania, now called Berry.

BITURIGES VIBISCI, a people of Aquitain.

BIVENTER, in anatomy, called also digas- tric, or two-bellied, a muscle of the lower jaw. See ANATOMY.

BIVITTATUS, in entomology, a species of scarabaeus melolontha, inhabiting Brasil : color yellow and glossy ; on the head and thorax two common stripes, and many abbreviated green striae on the wing-cases. Also a species of cur- culio, found in St. Thomas's Island : black ; wing-cases striated with dots; marginal and dorsal interrupted stripe of yellow.

BIUMBRES, an appellation given to the in- habitants of the torrid zone, because, at two dif- ferent seasons of the year, their shadows are projected two different ways. The same with the Amphiscii.

BI’VALVE, ˆ From Lat. bimts and valva.

BI’VALVED, > Having two valves or shut-

BIVAI/VULAR.) ters : a term used of those fish that have two shells, as oysters ; and of those plants whose seed-pods open their whole length, to discharge their seeds, as peas.

In the cavity lies loose the shell of some sort of bivalve, larger than could be introduced in at those boles. Woodward.

BIVOUAC. See BIOVAC.

BIVOUAC, Ger. a guard, is used for a guard performed by a whole army at a siege, or when lying before an enemy, and during the night ; but in modern military usage is frequently ap- plied to any number of men keeping night-watch or guard at a distance from quarters ; and an army that does not encamp, but lies under arms all night, is, in like manner, said to bivouac.

The excubiffi of the Romans correspond with these duties, which were done night and day.

BIXA, in botany, the roucou or arnotto tree ; a genus of the monogynia order, and polyandria class of plants ; ranking, in the natural method, under the thirty-seventh order, columniferae : COR. ten-petaled : CAL. quinquedented : the CAPS. hisped and bivalved. Of this genus there is but one species known, viz. B. orellana, a na- tive of the warm parts of America. It rises with an upright stem to the height of eight or ten feet, sending out many branches at the top, forming a regular head, garnished with heart-shaped leaves, ending in a point, and having long foot-stalks. The flowers are produced in loose panicles at the end of the branches. See ARNOTTO.

. BIZARRE, in botany, a term used among florists for a particular kind of carnation, which has its flowers striped or variegated with three or four colors.

BIZOCHI, or BISOCHI, in church history certain heretical monks, who are said to have assumed the religious habits contrary to the ca- nons, rejected the sacraments, and maintained other errors.

BIZZARO, in the Italian music, a fanciful kind of composition, sometimes fast, slow, soft, strong, &c. according to the composer’s fancy. BLAB’, v. & n. ~\ Junius refers to babbling; BLAB’BING, n. >in Dutch, blabberen. ‘ Per- BLAB’BER, v. 3 haps,’ says the Lexicon of the

Ency. Met. ‘ from labben; Ang.Sax. lapian, to lap or lip.’ To talk from the lips without thought or consideration; to let out, as if un able to contain it, all that we know ; to betray from mere folly without malice or design. Dr. Johnson says, it usually implies rather thought- lessness than treachery ; but may be used in either sense.

Might I enioy my love till I unfold it, I’d lose all favours when I blabbing told it.

Spenser.

Why have I blabbed ? Who shall he true to us, When we are so unsecret to ourselves ? Shakspeare.

Your mute I’ll be ; When my tongue blabs, then let mine eyes not see.

Id.

The secret man heareth many confessions ; for who will open himself to a blab, or babbler? Bacon.

To have revealed

Secrets of man, the secrets of a friend, Contempt and scorn of all, to be excluded All friendship, and avoided as a blab. Milton. Whoever shews me a very inquisitive body, I’ll shew him a blab, and one that shall make privacy as publick as a proclamation. L’ Estrange.

I should have gone about shewing my letters, under the charge of secrecy, to every blab of my acquaintance. Swift,

Nor whisper to the tattling reeds, The blackest of all female deeds : Nor blab it on the lonely rocks, Where echo sits, and listening mocks. Id. Nature has made man’s breast no windores, To publish what he does within doors ; Nor what dark secrets there inhabit, Unless his own rash folly blab it. Hudibras.

Sorrow nor joy can be disguised by art, Our foreheads blab the secrets of our heart.

Dry den.

It is unlawful to give any kind of religious worship to a creature ; but the very indices of the fathers can- not escape the index expurgatorius, for blabbing so great a troth. Stillingfleet.

B L A C K.

BLACK’, v. n. & adj. *} Ang.-Sax. blac-ian,

BIACK’EN,

BLACK’ENER,

BLACK’ING,

BLACK’ISH,

BLACK’LY,

BLACK’NESS,

BLACB’BROWED,

BLACK’EYED,

BLACK’FACED,

BLACR’GUARD,

BLACK’MOOR,

BLACK’NESS,

Germ, black. Of un- known etymology. Li- terally applied to the color of the night; to darkness ; figuratively, to what obscures, pol- ‘ ‘ lutes, or soils a charac- ter or reputation; to whatever is gloomy, dis- mal, fearful, and terri- fic ; to that which is concealed ; to nefari- ous, wicked, foul, atro-

BLACK’VISAGED. cious and disgusting criminality. It therefore describes natural objects, mental apprehensions, and moral delinquencies. Over them all it throws the pall of night, the gloomy horrors of the outer darkness.

In the twilight, in the evening, in the black and dark night. Proverbs.

The heaven was black with clouds and wind, and there was a great rain. 1 Kings.

Him had lever, I dare wel undertake, At thilke time (than all his wethers blake), That she had had a ship bireself alone, And therefore, wost thou what is best to done.

Chaucer. Cant. Tales.

By that the welkin Phoebus gan availle His wearie waine, and now the frostie night Her mantle black through heaven gan overhayle.

Spenser.

Here no night-ravens lodge, more black than pitch, Nor elvish ghosts, nor ghastly owles doe flee. Id.

A dire induction am I witness to ; And will to France, hoping the consequence Will prove as bitter, black, and tragical. Shaktpeare.

She hath abated me of half my train ; Look'd black upon me. Id.

His faults in him seem as the spots of heaven, More fiery by night's blackness. Id.

Come, gentle night ; come, loving, black-browed

night, Give me my Romeo. Id.

More to west The realm of Bocchus to the blachmoor sea. Milton.

Either my country never must be freed, Or I consenting to so black a deed. Dryden,

Rise, wretched widow, rise ; nor, undeplored, Permit my ghost to pass the Stygian ford : But rise, prepared in black to mourn thy perished lord. Id.

Let us blacken him what we can, said that mis- creant Harrison of the blessed king, upon the wording and drawing up his charge against his approaching trial. South.

Let a black-guard boy be always about the house, to send on your errands, and go to market for you on rainy days. Swift.

They are no more afraid of a Uackamore, or a lion, than of a nurse or a cat. Locke.

There would emerge one or more very black spots, and, within those, other spots of an intenser blackness.

Newton.

His tongue, his prating tongue, had changed him

quite

To sooty blackness from the purest white. Addison. To horse ! to horse ! my coal-black steed

Paws the ground and snuffs the air !

There is not a foal of Arab's breed

More knows whurm he must bear.

Byron. Deformed Transformed.

VOL. IV.

BLACK, THE COLOR or. Black is supposed to be owing to the absence of light, most of the rays falling upon black substances being not re- flected but absorbed by them. ā¢ Concerning the peculiar structure of such bodies as fits them for appearing in this or that particular color, see the article COLOR.

BLACK, in painting. There are several species of blacks used in painting, of which the following are the principal. Frankfort black, of which there are two sorts, one a natural earlh inclining to blue ; and the other, made from the lees of wine burnt, washed, and ground with, ivory, bones, or peach stones. This black is much used by the copper-plate printers, for their fine ink to work their engravings. Ivory, black is burnt ivory, or bones reduced to powder, and ground in oil or water as required. Spanish black is burnt cork reduced in a similar manner. Harts black is that which remains in the retort after the spirits, volatile salt, and oil have been extracted from hartshorn, and, when properly levigated, answers the purpose of painters nearly as well as ivory black. Lampblack is originally the soot collected from lamps, but is generally prepared in England at the turpentine manufac- tories, by burning the dregs after the refining of pitch or other resinous matter, or small pieces of pitch pine in furnaces constructed for the pur- pose ; the smoke is made to pass through a long horizontal flue, terminating in a close boarded chamber, which has its roof covered with a coarse cloth, through which the air passes, and leaves the soot or lamp black behind. The goodness of this black depends much on its lightness and depth of color.

BLACK (Joseph), M. D. celebrated for his che- mical discoveries, was born in France, on the banks of the Garonne, in 1728. His father, who was born in Belfast, of a Scottish family which had settled there, being engaged in the wine trade made Bourdeaux the chief place of his

residence ; where he was distinguished as a man of exten- tensive information, and liberal sentiments. The character of Mr. Black attracted the attention, and gained him the friendship, of the benevolent and discerning Montesquieu, then one of the presi- dents of the court of justice in the province ; and fragments of their correspondence are pre- served in the Black family. Mr. Black sent his son Joseph, at about twelve years of age, to Belfast, for his education-. He removed to the university of Glasgow in 1746. While he studied at that university, his attention appears to have been chiefly engaged by physical science; and he gained the particular notice of Dr. Dick, then professor of natural philosophy. Having finished the ordinary course of study, he deter- mined on medicine as his profession. About this time the university of Glasgow appointed Dr. Cullen lecturer on chemistry ; a science which had hitherto been considered more as a curious than as an useful art ; but this great man having taken a wide and comprehensive view of the unoccupied field of philosophical' chemistry, and being satisfied that it was susceptible of great improvement, determined to enter the un- beaten path, and to lead his followers to all those regions which are included in this compreneu-

sive and attractive science. Mr. Black became his pupil; and now, perhaps, the foundation was laid of that knowledge and fame which he af- terwards acquired as a philosopher and a chemist. Dr. Cullen was interested in the progress of his students, and delighted in encouraging and as- sisting them. He soon perceived that the bias of the young philosopher's pursuits accorded with his own. Mr. Black was received into the closest intimacy, and became a valuable assist- ant to Dr. Cullen, in his chemical operations; the experiments of the pupil being often stated as good authority in proof of what was advanced by the lecturer. To complete his medical stu- dies, Dr. Black went to Edinburgh in 1751, at which period the mode of lithontriptic medi- cines, particularly lime-water, in alleviating Jhe pains of stone and gravel, divided the opi- nions of professors and practitioners. This was an interesting subject both to the physician and chemist; and particularly suited the taste of Mr. Black. From some of his memorandums, he seems at first to have held the opinion, that the causticity of alkalies is owing to the igneous matter which they derive from quick-lime ; but, after prosecuting his experiments, this grand secret of nature was developed to his view; which led him to

conclude, that the acrimony of these substances was not owing to their com- bination with igneous particles; that it was their peculiar property ; and that they lost this property and became mild, by combining with a certain portion of air, which he named fixed air; because it was fixed or become solid in the substances into the composition of which it entered. This grand discovery, which forms one of the most important eras in chemical science, was the subject of his inaugural dissertation, pub- lished when he obtained his medical degree in the university of Edinburgh. Dr. Cullen about this time was removed to Edinburgh, leaving the medi- cal chair at Glasgow vacant; and Dr. Black was considered amply qualified to fill it. Accordingly, in 1756, the university of Glasgow appointed him professor of anatomy and lecturer on che- mistry ; but the former branch either did not suit his taste, or he did not consider himself qualified to be useful in it; for he soon after made arrange- ments with the professor of medicine, by which the departments were exchanged, taking upon himself that of the institutes and practice of medi- cine. Dr. Black was now in a situation, fortu- nately for the public and for science, which allowed him full time to dedicate his talents to cultivating his favorite science of chemistry. At first, however, his lectures on medicine chiefly occupied his attention ; and in them he gave great satisfaction. He also became a favorite phy- sician in Glasgow. Between the years 1759 and 1763 his speculations concerning heat, which had occupied his attention at intervals, from the commencement of his philosophical investiga- tions, were brought to maturity; and his dis- coveries in this department of science were by far the most important of all that he made. The nature of these investigations will appear in their proper place; but it may be observed here, that although Dr. Black never published an account of his doctrine of latent heat, by detailing it every

year subsequent to 1762, in his lectures, which were attended by scientific men from all parts of Europe, gave an opportunity for others to avail themselves of his researches. The ideas which Dr. Crawford adopted respecting the capacity of bodies for heat, were originally borrowed from Dr. Black; and the investigations of Lavoisier rind Laplace concerning heat, which they pub- lished many years after, were evidently derived from him; some of them, indeed, being the very experiments suggested by him. M. De Luc, however, having expressed his admiration of Dr. Black's theory of latent heat, offered to become his editor, and Dr. Black was prevailed upon to communicate the proper information ; but what was the surprise of the doctor and his friends, when the Idees sur la Meteorologie of that phi- losopher were published in 1788, to find the doc- trine claimed by De Luc as

his own; the writer only expressing his satisfaction, from what he had learned, that Dr. Black's opinions and his coin- cided! Dr. Cullen being appointed professor of medicine in the university of Edinburgh, in 1766, left the chemical chair of that university vacant; and Dr. Black, who had filled his place in Glasgow, was now, with universal consent, appointed to succeed him in Edinburgh. Here his talents were still more conspicuous, and he was more extensively useful. The consequence was, perhaps, in some respects to be regretted; his whole attention was directed to his lectures, with a view to adapt them to the most illiterate of his hearers ; and thus the improvement of the science was neglected. He was, however, com pletely successful in his object; for his lectures were not only instructive, but delightful, and the knowledge of chemistry was greatly extended. The delicacy of Dr. Black's constitution was doubtless another reason why he did not contri- bute more towards rearing that noble superstruc- ture of chemical science, the foundation of which he had been the means of establishing on a firm basis. The slightest cold, or the smallest ap- proach to repletion, instantly affected his breast, and brought on a degree of fever, followed by a spitting of blood, of two or three days continu- ance. Only relaxation of thought and gentle ex- ercise restored him ; but whenever he engaged in close study on any subject, a sensible increase of his complaints was the consequence. He indeed seemed to have no ambition to appear as an author; but when his friends, desirous he should have the honor of his discoveries, and prevent others from adopting them as their own, urged him to publish an account of his investigations, he repeatedly began the task, and as often laid it aside. It was the necessity of placing what was pointed at in his inaugural dissertation in a proper light, that brought his Experiments on Magnesia, Quick-lime, and other Alkaline Sub- stances, to public view ; and after much entreaty, his Observations on the more ready Freezing of Water that has been boiled, was published in the Philos. Trans, for 1774; to which, if we add his Analysis of the Waters of some Boiling Springs in Iceland, made at the desire of his friend T. J. Stanley, Esq. which was read to the Royal Society of Edinburgh, and published by the council ; we mention all the works from his pen that he ever

printed. Dr. Black anxiously wished that he might not long be confined to a sick-bed ; and in this he was fully gratified. Siting at

table, on the 26th of November, 1799, with his accustomed fare, some bread, a few prunes, and a measured quantity of milk diluted with water, with the cup in his hand, when his pulse was to give the last stroke, he rested it on his knees, and expired without a convulsion, shock, or stupor, to announce or retard the approach of his end. Dr. Black was a stranger to none of the elegant accomplishments of life; he had a fine musical ear, with a voice to obey it in the completest manner; and he not only sung and performed on the flute, but he could sing a plain air at sight. Though he had not studied drawing, he possessed considerable talent as a painter. He was a lover of society, and beloved in it; his countenance was pleasant, and his manners graceful. His Lectures on the Ele- ments of Chemistry were published in 2 vols, 4to. in 1803, by Dr. Robison, who prefixed a memoir of the author, to which we are indebted.

BLACK, in geography, a river of North America, in Vermont, which rises near Shrewsbury, in Rut- land county, and passing into Windsor county, runs south for several miles, till at last, turning south-east, it falls into the Connecticut, opposite to Charlestown.

BLACK, the name of another river in Vermont, which rises in Minden township, Orange county, and running north about thirty miles, falls into the lake Memphremagog.

BLACK'BERRIED Heath, Lat. empetrum. The name of a plant.

BLACK'BERRY, n. s. The fruit of the bramble.

The policy of these crafty sneering rascals, that stale old mouse-eaten cheese Nestor, and that same dog-fox Ulysses, is not proved worth a blackberry.

Shakspeare.

Then sad he sung the Children in the Wood ; How blackberries they plucked in desarts wild, And fearless at the glittering faulchion smiled. Gay.

BLACK'BERRY, Bush, n. s. Lat. rubus. A species of bramble.

BLACK'BIRD, n. s. from black and bird. The name of a bird.

Of singing-birds, they have linnets, gold-finches> blackbirds, thrushes, and divers others. Carew,

A schoolboy ran unto it, and thought The crib was down, the

blackbird caught. Swift.

BLACK-BIRD, in ornithology. See TURDUS.

BLACK-BOOK, a book kept in the Exchequer, in which the orders of that court are entered. See EXCHEQUER.

BLACK-BOOK OF THE ENGLISH MONASTERIES was a work that gave a detail of the scandalous enormities practised in religious houses; and was compiled by the visitors under king Henry VIII. to blacken them, and thus hasten their dissolution.

BLACKBURN, a market-town of Lancashire, seated on the Blackwater, near the river Der- went, and containing about 27,090 inhabitants. It carries on a great trade, but is chiefly noted for its manufactures of calicoes. Muslins and cotton have also been added ; and it is much im- proved by the late inland navigation ; it has now communications with the rivers Mersey, Dee, Ribr

ble, Ouse, Trent, Severn, Humber, Thames Avon, &c. The reform bill has conferred on this place the privilege of sending two members to the imperial parliament. Over the river are four stone bridges. It lies eight miles east of Preston, and 212 from London.

BLACKBURN, a river of Scotland, in Roxburgh- shire, remarkable for its beautiful water-falls, and no less so for a natural bridge of stone over it. See BRIDGE, NATURAL.

BLACKBURNE (Francis), archdeacon of Cleveland, was born at Richmond, in Yorkshire, in 1705. He was admitted pensioner of Catha- rine Hall, Cambridge, at the age of seventeen, and took the degree of bachelor. Being elected conduct or chaplain-fellow he was ordained dea- con, on this title, in 1728. In 1739 he took priest's orders, on his induction to the rectory of his native town Richmond, and was for some time chaplain to Dr. Hutton, archbishop of York, by whom he was collated, in 1750, to the archdea- conry of Cleveland, and in the same year to the prebend of Bilton. In the course of this year he wrote An Apology for the Author of a Book, en- titled, Free and Candid Disquisitions relating to the Church of England, &c. supposed to have been himself. He subsequently printed several single sermons and charges. In 1 756 he published a work entitled No Proof in the Scriptures of an Inter- mediate State of Happiness or Misery, between Death and the Resurrection. He wrote several other pieces on the same topic, concluding, in 1 765, with A Short Historical View of the Contro- versy concerning the Intermediate State : of which work

an edition, with large additions, was pub- lished in 1772. In 1768 he began to publish his sentiments on subscription to articles of faith in Remarks on the Rev. Dr. Powell's Sermon in Defence of Subscription ; a work preliminary to The Confessional; or a Full and Free Enquiry into the Right, Utility, Edification, and Success of Establishing Systematical Confessions of Faith and Doctrine in Protestant Churches, 8vo, 1766. This consists of eight chapters, the three first of which contain a view of the rise and progress of confessions of faith, the right to establish them, and their utility and expediency when established ; the fourth and fifth chapters examine bishop Burnet's mode of justifying subscription, and expose the casuistry of those who pursue a different method; the sixth and seventh appreciate the sentiments and reasoning of the writers who plead for a latitude, and whence the practice of subscribing in different senses has been derived ; and the last sums up the whole. The work excited considerable attention , and a supposition being entertained that the ˆwriter would not remain in the church, some leading members of the dissenting congregation in the Old Jewry, London, on the death of Dr. Chandler, in 1766, invited Dr. Blackburne to succeed him. This proposal he declined ; but shortly after refused'a living of considerable value, because it required him to renew his subscription, although the revenue of all his other preferments did not exceed Ā£200 per annum. In 1768 he published Considerations on the present State of the Con- troversy between the Protestants and Papists of Great Britain and Ireland, in which he denies

the title of the latter to toleration on Protestant principles, on the ground, that persecutors on system ought not to receive toleration. In order to restrain abuses which had crept into the spiri- tural court at Richmond, he accepted in 1767 the office of commissioner to the commissary of that archdeaconry, and acted in that capacity with great skill and judgment. When advanced in years, he adopted the idea of writing the life of Martin Luther, but was diverted from the design by the death of the philanthropic Mr. T. Hollis, a memoir of whom was undertaken by archdeacon Blackburne. He executed his pro- fessional duties to the last, dying at his parson- age-house at Richmond, August 7th 1787. Dr. Blackburne, though connected with

that party by relationship, was not, it seems, a Unitarian. On the secession of Dr. Disney from the church, he drew up an answer to the question, * Why are you not a Unitarian?' which was not published, however, until after his decease. There appears considerable inconsistency in his continuing within the pale of an establishment, to whose lead- ing feature of a subcription to the articles he so decidedly objects: yet he is said to have con- sidered the imposition, rather than the sense of them, the object of his dissent; and so to have excused himself for retaining his preferment. BLACK-CATTLE, n. s. Oxen, bulls, and

COWS.

The other part of the grazier's business is what we call black-cattle, produces hides, tallow, and beef for exportation. Swift.

BLACK FOREST, a celebrated forest in Ger- many, in Suabia, more properly called the

SCHWATZWALD, which 566.

BLACK FRIARS; a name given to the Domini- can order; called, also, predicants and preaching friars ; in France Jacobins.

BLACKGUARD. This name was originally given to the scullions and coal-carriers to great houses and royal residences, who, in the progresses of the families from one place to another, usually rode in the carts with the pots and kettles. In modern nomenclature it stands for the low, base, vulgar, and impudent, whether they ride in coaches, or drive them ; whether they wear stars or black shoes.

BLACKBALL (Dr. Offspring), bishop of Exeter in the beginning of the eighteenth cen- tury, was born at London, 1654, and educated at Cambridge. For two years he refused to take the oath of allegiance to king William and queen Mary, but at last submitted, though he condemned the Revolution, and all that had been done pur- suant to it. He was a man of great piety, had much primitive simplicity and integrity, and a constant evenness of mind. In a sermon before the House of Commons, January 36th, 1699, he animadverted on Toland's assertions in his Life of Milton, that Charles I. was not the writer of the Basilike, and on some insinuations against the authenticity of the Holy Scriptures; which produced a controversy between him and that author. In 1600 he preached a course of ser- mons in St. Paul's at Boyle's lecture, which were afterwards published; and was consecrated bishop of Exeter in 1707. He died at Exeter in 1716.

BLACKIIEATH, a fine elevated plain, in the county of Kent, five miles south-east of Lon- don, situated in the parishes of Greenwich, Lewisham, and Lee, and commanding very beau- tiful prospects both of the metropolis, and th*VII. The site of Michael Joseph's tent was shown to Lambard when he wrote his Perambu- lations of Kent. It was called The Smith's Forge, for Joseph, one of the ringleaders in this insur- rection, was by trade a blacksmith. Cardinal Campeius was received here on his arrival by a splendid deputation from the court, in 1519; and Henry VIII. twenty-one years afterwards, chose it as the spot on which he met Anne of Cleves. Holinshed, 948. In the year 1780 a cavern was discoverd on the side of the ascent to Blackheath by the Dover road, consisting of seven spacious apartments, from twelve to thirty- six feet wide, some with large conical domes, thirty-six feet high, supported by a column of chalk, forty-three yards in circumference; 170 feet from the surface of the ground is a well of clear water twenty-seven feet deep. This noble plain is annually lessening by the number of houses erected on it.*

BLACK ISLAND, an island near the coast of America, belonging to the state of Rhode island. Long. 71Ā° 35′ W., lat. 41Ā° 7′ N.

BLACK ISLANDS; islands near the coast of Labrador. Long. 56Ā° 30′ W., lat. 53Ā° 54′ N.

BLACKBALL HEAD, a cape on the south-west of Ireland, at the north side of the entrance into Bantry bay, in the county of Cork. Long. 9Ā° 55′ W., lat. 51Ā° 32′ N.

BLACKHEAD, a cape on the east coast of Ire- land, at the north entrance into Belfast Lough, four miles north-east of Carrickfergus. 3. A cape on the south coast of Ireland, on the west side of Kinsale harbour, five miles south of Kinsale. 3. A cape on the west coast of Ire- land, on the south side of the entrance into Gal- way bay. Long. 9Ā° 11′ W., lat. 53Ā° 7′ N. 4. A cape on the west coast of Scotland, in the county of Wigton, six miles W.S.W. of Stran- raer. 5. A cape of England, on the coast of Cornwall. Long. 5Ā° 4′ W., lat. 50Ā° 1′ N. 6. A cape on the east coast of New Zealand, twenty-two miles N.N.E. of cape Kidnappers. 7. A cape on the east coast of Labrador. Long. 64Ā° 50′ W., lat. 59Ā° 58′ N.

BLACKING is a term sometimes used to sig-

nify a factitious black ; as shoe-black, &c. A mixture of ivory or lamp-black with linseed oil makes a common oil-blacking. For a shining watery blacking small beer is used, in the pro- portion of about a pint to two ounces of ivory black, with the addition of half an ounce of brown sugar, and a quarter of an ounce of gum arabic. The white of an egg substituted for the gum makes the black more shining ; but is sup- posed to hurt the leather, and make it apt to crack. The famous "compositions under this name, that whiten the walls of the royal parks, &c., and the neighbourhood of various large towns, are notorious, we believe, for containing large portions of the oil of vitriol for the benefit of the tanners and shoe-makers. A celebrated maker and vender of one of these nostrums, we understand, actually reduced himself to blind- ness by his long attention to the concocting of it.

BLACK LAND, in agriculture, a term by which husbandmen denote a particular sort of clay soil, which, however, they know more by its other properties than by its color, which is rarely any thing like a true black, and often but a pale gray. This, however pale when dry, always blackens by means of rain; and when ploughed up at these seasons, it sticks to the ploughshares, and the more it is wrought, the muddier and duskier colored it appears. This sort of soil always con- tains a large quantity of sand, and usually a great number of small white stones.

BLACK-LEAD, n. s. from black and lead. A mineral found in the lead-mines, much used for pencils ; it is not fusible, or not without a very great heat.

You must first get your black-lead sharpened finely, and put fast into quills, for your rude and first draught. Peacfiam.

BLACK LEAD; plumbago. See LEAD, BLACK.'

BLACK LEATHER, is that which has passed the currier's hands, where, from the russet, as it was left by the tanners, it is become black, by having been scored and rubbed on the grain side with a solution of vitriolated iron, or, as it is vulgarly called, copperas. See LEATHER.

BLACK-LEGS, a name given in Leicestershire to a disease frequent among calves and sheep. It is a kind of jelly which settles in their legs, and often in the neck, between the skin and the flesh.

BLACKLOCK (Thomas), D. D., a Scottish divine and poet, was born in 1720, at Annan, in Dumfriesshire. His father was a bricklayer, respectable in his character, but of limited means. Before he was six years old, this son lost his sight by the small-pox ; and being thus incapable of exercising any

trade, his father encouraged the inclination he had early shown for books. By the aid of his companions at home he acquired some knowledge of Latin ; and poetry, in his peculiar circumstances, possessed of dourse irresistible attractions for him. At twelve years of age he produced some pieces of consi- derable merit. At the age of nineteen he lost his father : and, some of his poems having been shown to Dr. Stevenson of Edinburgh, that gentleman formed the benevolent design of pro- curing for him in Edinburgh a classical educa- tion. Thither he accordingly went in 1741, as a student of divinity, and continued his studies

at the university till 1745. In 1746 he pub- lished a volume of his poems in 8vo., and obtained, among other literary acquaintance, that of the celebrated David Hume, who warmly interested himself in his favor. In 1754 these poems had reached a second edition in 8vo. Mr. Spence, professor of poetry at Oxford, from regard to the author, prefixed an account of his life and writings. About this time he made him- self acquainted with the French language. In 1759 he was licensed as a preacher by the pres- bytery of Dumfries, and obtained no small re- putation by the different sermons he preached, of which he left some volumes in MS. Having married in 1762, he obtained, by Lord Selkirk's interest, the royal presentation to the parish of Kirkcudbright, but the inhabitants strongly op- posing the presentation, a moderate annuity was proposed to Mr. Blacklock upon his resigning his right to the living. With this provision he finally removed, in 1764, to Edinburgh, and opened a school, in which he continued until within a short time befofe his death. In 1767 the university of Aberdeen conferred on him the degree of D. D. Dr. Blacklock died after an illness of only eight days, on the 7th July, 1791. Besides his poems above-mentioned, he wrote Paraclesis, or Consolations deduced from Natural and Revealed Religion, &c. ; also the Graham, an Heroic Ballad, 1774. See the article BLIND.

BLACK MAIL, in antiquity, a certain rate of money, corn, cattle, or other matter, anciently levied on the inhabitants of towns on the Scottish borders, by various persons allied with notorious robbers and adventurers of that neighbourhood, in order to be freed and protected from pillage. It was prohibited as felony, by 43 Eliz. c. 13.

BLACK MONKS, a denomination given to the Benedictines, called in Latin nigri monachi, or nigro monachi; sometimes ordo nigrorum, the order of blacks.

BLACKMORE, (Sir Richard), a physician, and voluminous writer of theological, poetical, and medical works. Having declared himself early in favor of the Revolution, king William, in 1697, knighted him, and chose him one of his physicians in ordinary. On queen Anne's acces- sion, Sir

Richard was also appointed one of her physicians. Dryden and Pope treated his poe- tical performances with great contempt ; and in a note in the Dunciad, we are informed that his ‘ indefatigable muse produced no less than six epic poems : Prince and King Arthur, twenty books ; Eliza, ten ; Alfred, twelve ; The Re- deemer, six ; besides Job, in folio ; the whole book of Psalms; The Creation, seven books; Nature of Man, three books; and many more.’ Gay gives us a satirical catalogue of his principal performances, which we have not space to insert. It will be quite enough for the reader to know, with regard to his Scripture pieces,

What wonders then the man grown old did, Sterahold himself he out Sternholded ; Made David seem so mad and freakish, All thought him just what thought king Achish. . – No mortal read his Solomon, But judged Rehoboam his own son; Moses he served as Moses Pharaoh, And Deborah as she Sisera.

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Addison, however, in the Spectator (No. 339), bestowed some liberal commendations on his poem on the Creation ; and Johnson, at the close of a dull, sarcastic life of the poet, eulogises the same production. He died October 9th,

1729.

BLACK MOUNTAINS, a chain of mountains in Germany, in the circle of Suabia, one of the nighest and most rugged of which, Mount Ro- tensolhe, was the scene of a most obstinate con- test between the French and Austrians on the 9th July, 1796. The centre of the French army under General St. Cyr was four times repulsed, but the fifth charge proving successful, the Aus- trians were driven from the mountain with the loss of 1100 men.

BLACK NIB, a cape of Ireland, in the Irish Sea, on the east coast of the county of Down. Long. 5Ā° 24′ W., lat. 54Ā° 21′ N.

BLACK PROCESSION, in ecclesiastical writers. Anciently at Malta, there was a black proces- sion every Friday, where the whole clergy walked with their faces covered with a black veil.

BLACK-PUD’DING, n. s. from black and pudding. A kind of food made of blood and grain.

Though they were lined with many a piece

Of ammunition bread and cheese,

And fat black-puddings, proper food

*For warriours that delight in blood. Hudibras^*

BLACK RENTS, the same with BLACK MAIL, which see.

BIACK RIVER, a town of New Jersey, twenty- one miles N. N. W. of New Brunswick.

BLACK RIVER, a river of Ireland,

BLACK-ROD, n. s. from black and rod. The usher belonging to the order of the garter ; so called from the black rod he carries in his hand ; he is of the king's chamber, and likewise usher of the parliament.

BLACK. SEA, or EUXINE. See EUXINE.

BLACK SHEEP, in Oriental history, the ensign T standard of a race of princes, once settled in Armenia and Mesopotamia ; hence called the dynasty of the black sheep.

BLACK'SMITH, n. s. from black and smith, A smith that works in iron ; so called from being very smutty.

The blacksmith may forge what he pleases. Huwel.

Shut up thy doors with bars and bolts ; it will be impossible for the blacksmith to make them go fast, but a cat and a whoremaster will find a way through thera- Spectator.

BLACK, SPANISH, so called, because first in vented by the Spaniards, and most of it bought from them ; is no other than burnt cork, used in various works, particulary among painters.

BLACKSTONE, or PAWTUCKET, a river of the United States, in Massachusetts, which rises in Worcester county and running south-east passes into the State of Rhode Island, and runs over Pawtucket Fells, in that state, where mills are erected. Here it gets the name of Providence, and turning S. S. E. falls into the Naraganset Bay. It is navigable up to Providence, in ships of 950 tons burden.

BLACKSTONE (Sir William), an eminent Eng- lish lawyer, was born in London in July 1723. His father, a silk mercer and citizen of London, died

some months before his birth. He was the youngest of four children; and his mother died before he was twelve years old. From his birth, therefore, the care of his education and fortune was kindly undertaken by his maternal uncle, Mr. Thomas Bigg, an eminent surgeon of London. At seven years of age he was sent to the Charter-house, and applied himself to every branch of youthful education, with the same assiduity which accompanied his studies through life. At the age of fifteen he was at the head of the school, and well qualified to be removed to the university. He was accordingly entered a commoner at Pembroke college, in Oxford, on the 30th November, 1738, and the next day matriculated. About this time he obtained Mr. Benson's gold Milton prize-medal, for verses on that poet. In February, 1739, the society of Pembroke college unanimously elected him to one of Lady Holford's exhibitions for Charter- house scholars. Before he was of age he com- piled a treatise entitled Elements of Architecture, jntended for his own use only. Having made choice of the law for his profession, he was en- tered in the Middle Temple on the 20th Novem- ber, 1741, and on this occasion composed his Lawyer's Farewel to his Muse ; since published by Dodsley in the fourth volume of his Miscella- nies. In November, 1743, he was elected into the society of All-souls college ; and in the November following delivered the anniversary speech in commemoration of archbishop Chichele, the founder, and other benefactors of the house . From this period he divided his time between the university and the Temple. In the former he pursued his academical studies, and on the 12th June, 1745, commenced batchelor of civU law ; on the 28th November, 1746, he was called to the bar. Though little known in Westminster- hall, he was actively employed, during his occasional residence at the university, in attend- ing to its interests, and improving its interior concerns. In May, 1749, as a small reward for his services, and to give him further opportuni- ties of advancing the interests of the college, he was appointed steward of their manors. And in the same year, on the resignation of his uncle, Seymour Richmond, Esq., he was elected re- corder of the borough of Wallingford in Berk- shire. April 26th, 1750, he commenced doctor of civil law, and thereby became a member of the convocation, which enabled him to extend his views ;)eyond the circle of his own society,

to the general oenefit of the university. In the summer, 1753, he took the resolution of wholly retiring to his fellowship and an academical life, still continuing the practice of his profession as a provincial council. His

Lectures on the Laws of England appear to have been an early and favorite idea ; for immediately after he quit- ted Westminster-hall, he entered on reading them at Oxford ; and even at their commence- ment, such were the expectations formed from the acknowledged abilities of the lecturer, that they were attended by a very crowded class of young men of the first families. But it was not till 1758 that the lectures in the form they now bear were read at the university. Mr. Viner having by his will left not only the copyright of his abridgment, but other property to a consi- derable amount, to the university of Oxford, to found a professorship, fellowship, and scholar- ships of common law, Mr. Blackstone was, on the 20th of October, 1758, unanimously elected Vinerian professor, and on the 25th read his in- troductory lecture. His lectures were now of such established reputation, that he was invited to read them himself to his late majesty Geo. III. when prince of Wales. This he declined, in consequence of his engagements in the university; but transmitted copies of many of them for the perusal of his royal highness. It is doubtful whether the Commentaries were originally in- tended for the press; many imperfect and incor- rect copies, however, having been taken, and a pirated edition being expected to appear in Ireland, the learned lecturer thought proper to print a correct edition himself ; and in Novem- ber, 1765, published the first volume, under the title of Commentaries on the Laws of England : in the course of the four succeeding years the remaining parts of this admirable work appeared. Before this period, the reputation his lectures acquired him, had induced him to resume his practice in Westminster-hall ; and, in a course somewhat inverted from the general progress of his profession, he who had quitted the bar for an academic life, was sent back from the college to the bar, with a considerable increase of business. He was likewise returned to parliament, first as member for Hindon, and afterwards for West- bury in Wilts. In the celebrated Middlesex election case he drew upon himself the attacks of various persons of ability in the senate, and likewise the animadversions of Junius ; which circumstances probably strengthened his aversion to a parliamentary life. On the resignation of Mr. Dunning in 1770, he was offered the place of solicitor-general, which he refused ; but soon after, on the promotion of Sir Joseph Yates to a seat in the court of common pleas, accepted a seat on the bench, and on the death of Sir Joseph succeeded him. As a judge he was not inactive, and, when not occupied in the duties of that station, was generally engaged in some scheme of public utility. The act for detached houses for hard labor for convicts, as a substitute for transportation, owed its origin in a great measure to him ; as well as a considerable augmentation of the judges' salaries. This respectable author and valuable man died on the 14th February, 1?80, in the fiftieth year of his age

BLACK STRAKES, a range of planks immedi- ately above the wales in a

ship's side. They are always covered with a mixture of tar and lamn- black.

BLACK/TAIL, n. s. from black and tail. A fish ; a kind of perch, by some called ruffs, or popes. See POPE.

BLACKTHORN, n. s. from black and thorn. The same with the sloe. See PLUM, of which it is a species.

BLACK TIN, in mineralogy, a denomination given to the tin ore when dressed, stamped, and washed ready for the blowing house, or to be melted into metal. It is brought into this state by means of beating and washing ; and when it has passed through several buddies, or washing troughs, it is taken up in form of a black powder, like fine sand, and called black tin.

BLACK WADD, in mineralogy. See MANGA- NESE.

BLACKWALL (Anthony), A. M. a learned author, after completing his academical educa- tion at Cambridge, was appointed head master of the free school, and lecturer of All-hallows, in Derby, where he distinguished himself in 1706 by an edition of Theognis. He was afterwards head- master of the free school at Market-Bosworth in Leicestershire. Here he published, anonymously, A New Latin Grammar, being a short, clear, and easy Introduction of young Scholars to the Knowledge of the Latin Tongue; containing an exact account of the two first parts of Gramma. , In his Introduction to the Classics, first pub- lished in 1718, 12mo. he displayed the beauties of the writers of antiquity to the understanding and imitation even of common capacities, in a concise and admirable manner peculiar to him- self. But his most celebrated work, and one which is still considered as a standard book on the subject, is the Sacred Classics Defended and Illustrated ; or, an Essay humbly offered towards preserving the Purity, Propriety, and True Elo- quence of the Writers of the New Testament, in 2 vols. He died at Market Bosworth, April 8th,

1730.

BLACKWALL, an important hamlet of the county of Middlesex, adjoining to London, on the east side of the Thames. Here are very extensive docks and yards for shipping. The wet docks are the most capacious and best constructed of any in Great Britain. Vast quantities of nuts and fragments of trees were found here in dig- ging some of them in 1790. See DOCKS.

BLACKWATER, a river of England, in the county of Essex, which rises from Saffron Wai- den, in the north-west part of the county, and is at first a continuation of the river Pant. Having passed Bocking, Coggeshall, and Kelvedon, it joins the Chelmer at Maiden, and flows into an estuary called Blackwater Bay, celebrated for the quality of its oysters. 2. A river of

England, which rises near Cranbourn, in the county of Dorset, and joins the Stour near its mouth. 3. A river of Ireland, which rises on the confines of Kerry, and running through the counties of Cork and Waterford, falls into the sea at Youghall Bay. Also, 4, a river of Ireland, which runs into Lough Neagh, five miles N.N.E. of Charlemoot. 5. A rivur of Virginia, which runs into the Atlantic at

Black Bay. Long. 76Ā° 10′ W., lat. 36Ā° 30′ N. 6. A river of Maryland, which runs into the Chesapeake. Long 76Ā° 15′ W., lat. 38Ā° 24′ N. Also, 7, a river of New Hampshire, which joins the Merrimack. Long. 71Ā° 38′ W., lat. 43Ā° 24′ N.

BLACKWELL (Alexander), a native of Scot- land, who, not succeeding in his own country as a physician, endeavoured to establish himself as a printer in London. Here he also failed, then went to Sweden and practised physic ; but en- gaging in a conspiracy with count Tessin, he was tortured and beheaded in 1747. The British ambassador was recalled the same year ; among other reasons, for the imputations thrown on his Britannic Majesty in the trial of Dr. Blackwell. Soon after which appeared a genuine Copy of a Letter from a Merchant in Stockholm, to his Correspondent in London, containing an impar- tial Account of Dr. Blackwell, his Plot, Trial, &c. ; in this work he is said to have denied on the scaffold the crime for which he died.

BLACKWELL (Elizabeth), wife of the preced- ing, published a curious Herbal, containing 500 cuts of useful plants, taken from the life, of which an improved edition, with the text in La- tin and German was published at Nuremberg, in folio, 1750 ā 1760 ; and at Leipzig, in 8vo.

1794.

BLACKWELL (Thomas), brother of the preced- ing Alexander Blackwell, was born in 1701, and died in 1757. He wrote, 1. Enquiry into the Life and Writings of Homer, 1 735 ; and again in 1736. 2. Proofs of the Enquiry, &c. 1736. 3. Letters concerning Mythology, 8vo. 4. Memoirs of the Court of Augustus, 2 vols. 4to. 1755 ; and a third volume, which was posthumous.

BLAD'DER, v. & n. Ang.-Sax. blaedr, Germ. blatter; Dutch, bladder; Swed. bladra; from the Ang.-Sax. blaed, wind, a vessel made of elastic materials,

and capable of distension by air or liquid of any kind ; that vessel in the body which contains the urine ; a blister raised on the skin ; a pustule, &c. any thing puffed or inflated.

That huge great body which the giant bore Was vanquished quite, and of that monstrous mass Was nothing left, but like an empty bladder was.

Spenser.

I have ventured,

Like little wanton boys that swim on bladders, These many summers in a sea of glory, But far beyond my depth : my highblown pride At length broke under me. Shakspeare.

A bladder but moderately filled with air, and strongly tied, being brought near the fire, grew ex- ceeding turgid and hard; but being brought nearer to the fire, it suddenly broke, with so loud a noise as made us for a while after almost deaf. Boyle.

The contents of the gall-Madder are not exactly of the same kind an what passes from the liver through ihe direct passage. Paley't Theology.

BLADDER, in anatomy, a thin expanded mem- braneous body, found in several parts of an ani- mal, serving as a receptacle of some juice, or of some liquid excrement; from whence it takes various denominations, as urine-bladder, gall- bladder, 8cc. Below a certain magnitude they are more usually denominated in the diminutive, vesicles, or vesiculae. See AIR-BLADDER, and AIR-VESSELS.

BLADDER, by way of eminence, is a large ves- sel, which serves as a receptacle of the urine of animals, after its secretion from the blood in the kidneys. This is sometimes also called, by way of distinction, the urinary bladder, vesica uri- naria. The bladder is situated in the pelvis of the abdomen ; in men immediately on the rec- tum ; in women on the vagina uteri. Though the urinary bladder be naturally single, yet there have been instances of nature varying in this par- ticular. The bladder of the famous Casaubon, upon dissecting his body after his death, was found to be double; and in the Philosophical Transactions, we have an account of a triple bladder found in the body of a gentleman, whc had long been ill, and no one could guess the cause. The urinary bladders of brutes are dif- ferently contrived from the human bladder, and from each other, according to the structure, eco- nomy, and manners of living of each creature. See ANATOMY.

BLADDER, AIR. See AIR-BLADDER. BLADDER, GALL. See ANATOMY.

BLADE/ N Blade, n. s. Sax. bias's, BLA'DING, / bleˆ, Fr. bled. The spire of BLA'DED, \ grass before it grows to seed ; BLA'DY, I the green shoots of corn which BLADEB'ONE. j rise from the seed. This seems to be the primitive signification of the word blade; from which, I believe, the blade of a sword was first named, because of its simili tude in shape ; and, from the blade of a sword, that of other weapons or tools. But why, it may be asked, was this term applied to grass originally. Blat is a corruption of plat, and plat signifies flat, ā the shoulder-blade, then, will be the flat-bone of the shoulder. The spire of grass is flat : but we are accustomed to asso- ciate with the term blade not only the flatness, but the sharpness of the spear and the sword. Etymology is, after all, but a very conjectural species of knowledge. Blade is metaphorically appjied to any who pretends to the sharpness or brightness of a sword blade ; thus used it is an expression of contempt.

He sought all round about, his thirsty blade To bathe in blood his faithless enemy.

Faerie Queene.

For it is a kind of grasse with a stalk, as big as a great whc a ten reed, which hath a blade issuing from the top of it, on which, though the cattle feed, yet it groweth every day higher, until the top be too high for an oxe to reach. Sir Francis Drake Revived.

When Phoebe doth behold Her silver visage in the watery glass, Decking with liquid pearl the bladed grass.

Sltalupeare.

Anon comes Pyramus, sweet youth, and tall, And finds his trusty Thisby's mantle slain. Whereat, with blade, with bloody blameful blade, He bravely broached his boiling bloody breast j And, Thisby tarrying in mulberry shade, His dagger drew and died. Id.

Boldly assault the Necromancer's hall ; Where, if he be, with dauntless hardihood, And brandish'd blade, rush on him, break his glass, And shed the luscious liquor on the ground.

Milton. Ctmnt.

“You’ll find yourself mistaken, Sir, if you’ll take upon you to judge of these blades by their garbs, looks, and outward appearance. L’Eftrange.

If we were able to dive into her secret recesses, we should find that the smallest blade of grass, or most < cntemptible weed, has its particular use. Swift.

Then, turning about to the hangman, he said, Dispatch me, I pri’thee, this troublesome blade.

Prior.

Be his this sword, whose blade of brass displays A. ruddy gleam, whose hilt a silver blaze. Pope.

He fell most furiously on the broiled relicks of a shoulder of mutton, commonly called a bladebune.

Pope.

Stir not ā lest even to thee perchance Some erring blade or ball should glance.

Byron. Bride of Abydot.

BLADE, in botany, that part of a plant which arises out of the concave of the sheath, and, at the top, usually divides into two parts, which are covered with globules of the same nature as those of the apices, but not so copious. See BOTANY.

BLADE, in commerce, a thin slender piece of metal, either forged by the hammer or run and cast in moulds to be afterwards sharpened to a point, edge, or the like. Sword blades are made by the armourers, knife- blades by the cutlers, &c. The English and Damascus blades are most esteemed. Among the French, those of Vienne nave the preference. The conditions of a good blade of a small sword are, that it be light and tough, apter to bend thaĀ« break. When it will stand in the bend, it is called a poor man’s blade.

BLADE-BONE. See ANATOMY.

BEAD EN, a county of North Carolina, in the district of Wilmington, bounded on the south by Brunswick, on the north by Cumberland, on the east by New Hanover, on the west by the state of South Carolina, and on the north-west by Robe- son county. The chief town is Elizabeth.

BLADEN (Martin), a lieutenant-colonel under the duke of Marlborough, was afterwards made a Jord of trade, and employed in various civil ca- pacities. He is principally known as the trans- lator of Caesar's Commentaries. Bladen was the uncle of Collins the poet.

BLADENSBURG, a post town of Maryland, in Prince George's county, on the east side of a branch of the Potomac, about seven miles above Washington. It is thirty-eight miles south-west by south of Baltimore, and 140 south-west by west of Philadelphia.

BLADHIA, in botany, a genus of plants of the class pentandria, and order monogynia. The generic character is, CAL. five-partite : COR. ro- tata, rivefid : BERRY one seeded : SEED arillate. Four species are described, all natives of Japan.

BL/ERIA, in botany, a genus of the tetran- dria monogynia class of plants. Its characters are: CAL. quadripartite: COR. quadrind : STAM. inserted in the receptacle, and the fruit a capsule, with four cells, containing many seeds. There are two species.

BLvESLING, in zoology, a synonyme of the greater coot, or fulica atenina. See FULICA.

BL/ESUS, among medical writers, the same with balbus ; a stammerer or iisper.

BLAFART, in commerce, a small coin cur-

rent at Cologne, worth something more than a farthing of our money.

BLAGRAVE (John), was the second son of John Blagrave, Esq. of Bulmarsh-court in Berk- shire, and descended of an ancient family. Being sent to Oxford, he applied himself chiefly to the study of mathematics ; but without taking any degree. In his mansion near Reading, he pas- sed most of his days, and died there in 1611. Among other charities, he left Ā£10 to be an- nually disposed of in the following manner : On Good-Friday, the church-wardens of each of the three parishes of Reading send to the town-hall ' one virtuous maid, who has lived five years with her master ;' there, in the presence of the magistrates, the three throw dice for the Ā£10. The losers are returned with a fresh one the year following, and again the third year, till each has had three chances. His works are, 1. A Mathematical Jewel, London 1585 fol. 2. Of the Making and Use of the Familiar Staff, London 1590, 4to. 3. Astrolabium Uranicum Generate, London, 1596, 4to. 4. The art of Dialling, London, 1609, 4to.

BLAGRAVE (Joseph), a descendant of the same family, was born at

Reading about the year 1609, and died at the age of seventy, leaving behind him an Introduction to Astrology, of which art he was a noted professor. He also wrote the Astrological Practice of Physic, printed in 8vo. a book on surgery, and a supplement to Culpepper's Herbel.

BLAIN', n. s. Sax. blegene. Dut. bleyne ; a pustule ; a botch ; a blister.

Itches, blains,

Sow all the Athenian bosoms, and the crop Be general leprosy. Shaktpeare.

Botches and blains must all his flesh imboss, And all his people. Milton.

Whene'er I hear a rival named, I feel my body all inflamed ; Which, breaking out in boils and blairu, With yellow filth my linen stains. Swift.

BLAIN, among farriers, a distemper incident to horses, being a certain bladder growing on the root of the tongue, against the wind pipe, which swells so as to stop the breath. See FAR- RIERY.

BLAIR, (Hugh), an eminent divine and critic of the eighteenth century, was descended Srom the Blairs of Blair, in Ayreshire. His great- grandfather, Robert Blair, was a strenuous op- poser of Episcopacy in Scotland. The subject of this memoir was the son of Mr. John Blair, a res- pectable merchant, and one of the magistrates of Edinburgh. He was born on the 7th of April, 1718, and obtained his education at the high school. In the year 1739 he received the degree of M. A. He was licensed to preach by the presbytery of Edinburgh on the 21st of October, 1731. Upon the 23d of September, 1742, he was ordained minister of Colessie in Fifeshire. In 1743 he was admitted second minister of the Cannongate , he removed to lady Testers, within the city, on the 4th of October, 1754 ; and from thence to the high church on the 15th of June, 1758. In 1757 the university of St. Andrews presented him with the degree of D.D. In 1755 his friends prevailed on him to deliver a course

of lectures on Rhetoric and Belles Lettres. This considerably raised his reputation, already of the first rank as a preacher, and in 1760 the town council of Edinburgh appointed him professor of Rhetoric in the university. In 1762 his ma- jesty was pleased to confer a salary upon the office of Ā £70 per annum. Dr. Blair first pro- posed, and carried into effect a subscription, to enable Mr. Macpherson to collect what remained of Ossian's poems, and wrote a dissertation to establish their authenticity.

After reading his lectures in the university more than twenty years, he was induced to publish them in 1783. But the composition of sermons, and pulpit eloquence, had always been his chief object of pursuit, and the basis on which he wished to rest his fame. Crouded audiences, of every rank in life, had long decided the public opinion of his merits as a preacher. He even rendered religion fashion- able among many in the higher ranks by whom it had formerly been despised. In 1777, there- fore, he published a volume of sermons, which reqtiired a most extensive and rapid circulation, and was succeeded by a second volume in 1779. In 1780 he obtained a pension of Ā£200 a year, at the particular request it is said of her late majesty. His growing infirmities, in 1783, in- duced him to retire from the regular discharge of his professional duties, and an addition was now made of Ā£100 a year to his pension. Other volumes of his sermons have been pub- lished since his decease. Their circulation has been unparalleled, and they have been translated into most of the languages of Europe. With a taste nice and discriminating, a judgment clear and well informed, language chaste and per- spicuous, Dr. Blair attains a happy medium between the declamatory addresses of the French preachers, and the abstruse metaphysical style of many of our English divines. Everything he discusses is made attractive, and our moral feelings are warmed and invigorated by the most exquisite and imperceptible art : but some reasonable objections have been taken to the singular absence of principles, peculiarly re- ligious, in his sermons. ‘ Scriptural doctrines’ says a valuable contemporary, ‘ do not always appear to have been illustrated by him with sufficient attention, nor Scriptural motives to have obtained a place due to their importance ; and too strong a bias may perhaps be observed, in his writings, in favor of moral discussions, abstracted from the consideration of the truths inculcated by Re- velation.’ Dr. Blair died on the morning of Saturday the 27th of December, 1800, in the eighty-third year of his age, and the fifty-ninth of his ministry.

BLAIR (John), L. L. D. and F. R. S. an emi- nent chronologist, was educated at Edinburgh; and was for some time usher to a school in Hedge Lane, London. In 1754 he gave the world that valuable publication, The Chronology of the History of the World, from the Creation to the year 1753. Illustrated in LVI. Tables. This vo- lume, in which he is said to have been assisted by his cousin Dr. Hugh Blair, is dedicated to lord chancellor Hardwicke ; it soon established his fame, and produced a happy change in his destiny. In January 1758, he was elected F. R. S. and in

1761, F.S.A. In 1756 he published a second edition of his tables. In September 1757 he was appointed chaplain to the princess Dowager of Wales, and mathematical tutor to the duke of York; and in 1761 obtained a prebendal stall at Westminster, the vicarage of Hinckley, and the rectory of Burton Goggles in Lincolnshire. In September 1763 he attended his royal

pupil on a tour to the continent ; visited Lisbon, Gib- raltar, Minorca, and the principal cities in Italy, aud several parts of France ; and returned in August 1764. In 1768 he annexed to the new edition Fourteen Maps of Ancient and Modern Geography, for illustrating the Tables of Chrono- logy and History, and a Dissertation on the pro- gress of Geography. In March, 1771, he was presented to the vicarage of St. Bride's in London. In April, 1776, he resigned St., Bride's, and was presented to the rectory of St. John in West- minster. He died June 24th 1782. A course of his Lectures on the Canons of the Old Tes- tament were published by his widow.

BLAIR (Robert), a Scottish divine and poet, was born in 1701, and died in 1747. He was the author of the well-known poem entitled The Grave, first printed in 1743, and since fre- quently reprinted.

BLAISE, a river of France in the department of Eure and Loire, formerly giving name to the Blaisois, a ci-devant province of France, bounded on the north by Beauce, on the east by the Or- leannois, on the south by Berry, and on the west by Touraine.

BLAISE (St.), a martyr who suffered in the fourth century, under Dioclesian, by command of Agricola, governor of Cappadocia. He is said to have had his flesh torn with iron combs pre- vious to his being beheaded, which seems to be the cause for the respect paid to his memory by wool-combers.

BLAISE (St.), KNIGHTS OF, a military order instituted' by the kings of Armenia. Justinian calls them knights of St. Blaise and St. Mary, and places them not only in Armenia, but in Palestine. The precise year of their institution is not known,*

BLAIZE, CAPE, a promontory on the coast of West Florida, in the Gulf of Mexico, which separates the bay of Apalache on the east from that of St. Joseph ; into which last it turns in the shape of a shepherd's crook.

BLAKE, (Robert), a famous English admiral, bom in August 1589, at Bridgewater in Somer- setshire, where he was educated. He went from thence to Oxford, in 1615, and in 1617, he took the degree of B. A. In 1623 he wrote a copy of verses on the death of Camden, and soon after Jeft the university. The puritan party re- turned him member for Bridgewater, in 1640 ; and he served in the parliament army with great courage during the civil war : but when the king was brought to trial, he highly disap- proved the measure as illegal, and said fre- quently, ' he would as freely venture his life to save the king, as ever he did to serve his par- liament ' In 1648-9 he was appointed, in con- junction with colonel Dean and colonel Popham, to command the fleet ; and soon after blocked

up prince Maurice and prince Rupert in Kinsale

harbour. On their getting out, Blake followed them from port to port : and at last attacked them in that of Malaga, burnt and destroyed their whole fleet, two ships only excepted; the Refor- mation, in which prince Rupert himself was, and the Swallow, commanded by prince Maurice. In 1652 he was constituted sole admiral ; when he defeated the Dutch fleet commanded by Van Tromp, Ruyter, and De Wit, in three several engagements, in which the Dutch lost eleven men of war, thirty merchant ships, and 15,000 men. . Soon after, Blake, and his colleagues, with a grand fleet of 100 sail, stood over to the Dutch coast; and forced the enemy into the Texel, where they /were kept some time by Monk and Dean, while Blake himself sailed northward. At last, however, Tromp escaped and drew to- gether a fleet of 120 men of war. On the third of June, therefore, Dean and Monk came to an engagement with the enemy off the North Fore- land, with indifferent success : but the next day Blake coming to their assistance with eighteen ships, gained a complete victory. In April 1653, Cromwell having turned out the parliament, and assumed the supreme power, Blake is said to have observed on this occasion to his officers, ‘ It is not for us to mind state affairs, but to keep foreigners from fooling us.’ In November 1054 Cromwell sent him with a strong fleet into the Mediterranean, with orders which he well ex- ecuted to support the honor of the English flag. In the beginning of December, Blake came into the road of Cadiz, where he was treated with all imaginable respect : a Dutch admiral would not hoist his flag while he was there ; and his name was now so formidable, that a French squadron having stopped one of his tenders, which had been separated from Blake in a storm, the ad- miral, as soon as he knew to whom it belonged, sent for the captain on board, and drank Blake’s health before him with great ceremony, under a discharge of five guns. The Algerines were so much afraid of him, that, stopping the Sallee rovers, they obliged them to deliver up what English prisoners they had on board, and sent them freely to Blake, to purchase his favor. This, however, did not prevent his coming on the 10th of March before Algiers, and sending an officer on shore to the dey to demand satisfaction for the piracies committed on the English. The dey conciliated him by an apology, accompanied with a large present of fresh provisions, and Blake leaving Algiers, sailed on the same errand to Tunis, where the dey returned for answer a de- fiance and denied him the liberty of taking iu fresh water. ‘ Here, said he,’ are our castles of Go- letta and Porto Ferino ; do your worst.’ Blake now, therefore, deliberately demolished these for- tresses, and sent nine of the enemy’s own ves- sels, which he found in the harbour, up

to the town as fire-ships. This daring action spread the terror of his name through Africa and Asia. From Tunis he sailed to Tripoli, and to Malta, and obliged the respective governments to restore the effects taken by privateers from the English, and so established the glory of the English name, that most of the princes and states of Italy thought fit to pay their compli- ments to the protector, by solemn embassies.

He passed the next winter either in lying before Cadiz, or in cruising up and down the straits ; and was at his old station, at the mouth of that harbour, when he received information that the Spanish plate fleet had put into the bay of Santa Cruz, in the island of Teneriffe. Upon this he weighed anchor, with twenty-five men of war, on the 1 3th of April 1657 ; and on the twentieth rode off the bay of Santa Cruz, where he dis- covered'sixteen Spanish ships, in the form of % half-moon. Near the mouth of the haven stood a strong and well defended castle ; besides which there were seven forts round the bay, joined by a line of communication manned with musketeers. To make all safe, Don Diego Diagues, general of the Spanish fleet, caused the smaller vessels to be moored close along the shore ; while the six large galleons stood farther out at anchor, with their broadsides towards the sea. Notwith- standing these advantages possessed by the enemy, and the strength of the place, Blake burnt or sunk all the ships of the Spanish fleet, and by a fortunate change of wind came out without loss. It is here worthy of remark, that Blake's own brother having failed in some part of duty during this service, he immediately re- moved him from his command, although he still behaved to him with fraternal affection. Finding a complicated disorder of a dropsical and scor- butic kind, now making rapid progress, he sailed for England, and amidst his frequent enquiries for the sight of the English coast, expired while the fleet was entering Plymouth-sound, August 27th, 1657. The protector ordered him a mag- nificent public funeral in Westminster Abbey, whence, however, his body was pitifully expelled at the Restoration ; and Englishmen suffered a prince, who himself betrayed their country, to remove this brave admiral's bones, as those of a a rebel, to St. Margaret's church-yard.

BLAKEA, in botany, a species of the class dodecandria monogynia : with a calyx composed of six leaves below, and entire above ; six petals, and a six-celled polyspermous capsule. There is only one species.

BLA'ME, v. & n.

B.LAM'ING,

BLAMA'BLE,

BLAM'ABLENESS,

BLAME'ABLY,

BLAME'FUL,

BLAME'LESS,

BLAME'JLESSLY,

BLAME'LESSNESS,

BLA'MER,

BLAME'WORTHY,

BLAME'WORTIMNESS. J than to reprove ; we simply charge with a fault in blaming ; but in reproving, severity is mixed with the charge ; reproach expresses more than either; it is to blame acrimoniously; to blame is simply to find fault with ; to pass an unfavorable judgment upon ; it is, for the most part, the act of a su- perior.

Immortal God ! that savedst Susanne

Fro false blame, and thou merciful mayde,

Mary, I mene, daughter to seint Anne,

My socour be, or elles shall I die. Chaucer.

Dut. blamen. Fr. blasmer. Ital. biasimare Probably from the Greek, Bt/ SXa/tjuai, per- fect of the verb /3Xa?rrw, to hurt, signifying to fdeal harshly with. ā ā¢ Blame is the mildest daughter in the severe family of censure; to blame, expresses less

' He wondered at her -wisedome hevenly rare, Whose like in women's wit he never knew ; And when her corteous deeds he did compare, Gan her admire, and her sad sorrow rue, Blaming of fortune, which such troubles threw, And ioyd to make proofe of her cruelty On gentle dame, so hurtlesse and so trew.

Speiuer.

The soveraigne of the seas he blames in vaine, That once sea beaten will to sea againe. Id.

Our power

Shall do a courtesy to our wrath, which men May blame, but not controul. Shakspeare.

I unspeak mine own detraction ; here abjure The taints and blames I laid upon myself, For strangers to my nature. Id.

Blunt-witted lord, ignoble in demeanour, If ever lady wronged her lord so much, Thy mother took into her blameful bed Some stern untutored churl. Id.

Although the same should be blameworthy, yet this age hath forborn to incur the danger of any such blame. Hooker.

In me you've hallowed a pagan muse, And denizoned a stranger, who, mistaught By blamers of the times they marred, hath sought Virtues in corners. Donne.

Fair angel, thy desire which tends to know The works of God, thereby to glorify The great workmaster, leads to no excess That reaches blame, but rather merits praise.

Milton.

Porphyrius, you too ar did tempt your fate j Tis true, your duty to me it became ; But, praising that, I must your conduct blame.

Dryden.

Each finding, like a friend, Something to blame, and something to commend.

Pope.

In arms, the praise of success is shared among many ; yet the blame of misadventures is charged upon one. Hayward.

They lay the blame on the poor little ones, some- times passionately enough, to divert it from them- selves. Locke.

It is the wilful opposing explicit articles, and not the not believing them when not revealed, or not with that conviction, against which he cannot blame- lessly, without pertinacy, hold out, that will bring dan- ger of ruin on any. Hammond.

BLAMONT, or BLANBENBERG, a town of France, in Lorraine, the head of

a canton in the department of the Meurthe. It is seated on the Vezouse, sixteen miles east of Luneville, and thirty-two E.S. E. of Nancy. Population 1860. Long. 6Ā° 52′ E., lat. 48Ā° 40′ N.

BLANC, MOUNT, so called from the mountain, was a French department from 1792 till 1815. It consisted of the Duchy ofSavoy. Itwasbound- ed on the west by the Rhone, which separates it from the department of the Ain; on the north by the lake of Geneva ; on the east by the Alps, which divide it from the Valais and Piedmont ; and on the south by the departments of the Upper Alps and Isere. It was eighty-three miles in length from west to east, and sixty-seven in breadth from north to south; though some geographers make it ninety miles long and eighty broad. The surface is hilly, and the air cool, but the soil is fertile ; and those mountains which are not covered with snow in winter abound with pastures that feed vast numbers of cattle. The lakes swarm with

fish, and the woods with stags, fallow deer, roˆ bucks, wild boars, marmots, hares, partridges wood-cocks, pheasants, &c. The inhabitants are sober and industrious. The principal rivers are the Arc, the Isere, and the Arve. Chamberry is the capital. This was the ancient patrimonial inheritance of the dukes of Savoy, before they became kings of Sardinia. For its history, be fore its annexation to France, see SAVOY.

BLANC, MOUNT ; Fr. Mont Blanc, i. e. the white mountain ; a stupendous mountain of France, in the above department, the highest elevation of the Alps, and, indeed, of Europe. Its mantle of circumvenient snow gives it this name.

As seen from the Col de Balme, and the vale of Chamouni, the summit of Mont Blanc seems to be of a roundish form, its surface smooth and covered with snow, its whole appearance uniting beauty with grandeur, and its towering head rising majestically above the surrounding mountains ; but, when seen from the valley of Aosat, its sides are less completely covered with snow, its aspect is more rugged and dark, and the prospect which it presents partakes more of the wild and terrific. It rises imperceptibly from amidst the numerous irregular mountains which bound the vale of Chamouni, then terminates rather abruptly in a point or top called Aiguille de Goute, or Dome de Goute". Beyond this height, with a considerable hollow between, it forms another mount, called by some Little Mont Blanc, or, more properly, the Middle Dome. From this station it gradually sinks again into a concave surface, in the midst of which is a small pyramid of ice ; and then reaches its highest point of elevation, which is in the shape of a compressed hemisphere, and is called from its form La Bosse du Dromedaire. Upon a nearer inspection, the summit of this gigantic mountain is found to be a very najrrow ridge, lying nearly in a horizontal

direction, resembling the roof of a house ; and, at its west end particularly, scarcely sufficiently broad to admit of two persons walking abreast. The snow which covers the top is encrusted with ice, of a firm consistence, but penetrable by a staff; and beneath this icy surface, especially on the declivities of the summit, is discovered a soft dusty snow without any cohesion.

Strata of granite form the highest rocks of Mont Blanc, running parallel to one another, and nearly in a vertical direction. Those on 1 lie east side are mixed with steatites; those C!i the south with school and lapis corneus ; and some of them, about 150 yards below the sumir.it. have the appearance of having been shivered with lightning. According to M. De Luc. its height above the level of the sea is 2391 J French toises, or 15,304 English feet; according to Sir George Shuckburgh 15,662 feet; and, according to other observations, 15,680 feet, or nearly three English miles above the level of the sea.

M. De Saussure observed the silene acaulis, or moss campion, in flower, at the elevation of 11,392 feet above the sea; still higher, on the most elevated rocks, he found the lichen sulphu- reus and lichen rupestris of Hoffman ; and, on the summit, he noticed two butterflies on the wing, which he supposed to have been dnven

thither by the wind. On the top of Mont Blanc, on the third day of August, Reaumur's thermometer stood, in the shade, at 2ˆ, below the freezing point, or 27 of Fahrenheit ; while, at the same time, at Geneva, it was found at 22'6 or 82 of Fahrenheit, which gives a difference . of nearly 25 degrees of Reaumur, or 55 of Fahren- heit, between the temperature of the atmosphere at both places. De Luc's barometer fell to lb'-0ˆ, while it stood at Geneva at 27'2ˆ, a difference of 11-2, with a small fraction. By ex- periments with the hygrometer the air was found to contain six times less humidity than that of Geneva ; and to this extreme dryness of the at- mosphere, the burning thirst, which Saussure and his companions experienced in the extraor- dinary elevation, is supposed to have been owing. While fifteen or sixteen minutes are sufficient to boil water at Geneva, and fourteen or fifteen at the sea side, it requires half an hour on the top of this mountain. By experiments with the electrometer, the electricity of the air was found to be positive, and the balls diverged only three lines ; and by experiments with lime water, and the caustic alkali, atmospheric acid, or fixed air, was detected in the atmosphere. Owing to the extreme rarefaction of the air, sounds were re- markably feeble, and

the report of a pistol dis- charged on the summit, did not exceed that of a small Chinese cracker in a room. From the same cause respiration becomes exceedingly difficult at so immense an altitude ; and it was found that the pulses of three persons which beat at Cha- mouni, in a state of repose, 49, 60, and 72, were increased, on the summit of Mont Blanc, to 98, 112, and 100.

A sketch of the adventurous attempts to ascend this noble mountain may not be uninteresting to the reader. The first adventurer upon this arduous task was M. Couteran, who took the three guides of Chamouni, Michael Paccard, Victor Tissay, and Marie Coutet. They set out from the priory about eleven o'clock in the even- ing, on the 13th of July 1776 ; and after spend- ing fourteen hours in surmounting many danger- ous ascents, crossing valleys of ice, and traversing plains of snow, reached the top next to Mont Blanc, about 13,000 feet above the Mediterranean. They at first imagined themselves to be within a league of its summit ; but soon perceived that it would require four hours more to reach it ; and as the day was advanced, and the vapors gather- ing into clouds, they were obliged, with regret, to relinguish their enterprise ; and, after a journey of twenty-two hours, arrived at Chamouni about eight o'clock in the evening.

The indefatigable Bourrit was the next tra- veller, who, after repeated unsuccessful attempts, departed from Bionasay on the llth of September 1 784, accompanied by six guides, and was scaling, as he expressed it, the rampart of Mont Blanc, when he was so extremely affected by the intensity of the cold as to be unable to proceed. But two of his guides, Marie Coutet, and Francis Guidet, having gone before their company, ascended to the dome of Goute ; passed the middle dome, and walked along the ridge between that and the summit, as far as some high rocks, which appear from the vale of Chamouni like small points in

the snow ; but the approach of night compelled them to return.

On the 4th of September, 1785, Marie Coutet, and James Balmat, reached a place un.der a rock at a considerable elevation, where they passed the night ; and setting out before sun-rise, passed the dome of Goute, and were proceeding towards the summit, when a violent storm of hail obliged them to desist. On the 1 3th Messieurs de Saus- sure and Bourrit, with twelve guides, left Biona- say, passed the night at a hut, which they had ordered to be constructed, about 7808 feet above the level of the sea, and reached the dome of Goute next morning without much difficulty; but a fresh fall of snow rendered farther progress impracticable. In July, 1786, six guides of Cha- mouni failed in another attempt ; but James Balmat, one of their number, having been sepa- rated from his companions, passed the night in a spot above the dome of Goute, more than 12,000 feet above the level of

the sea ; and, having re- connoitred the situation next morning, observed a place of more easy access than any that had hitherto been attempted. On his return to Cha- mouni he communicated his observation to Dr. Paccard, a physician of the place, who attended him during a severe indisposition, the effect of the cold and fatigue to which he had been ex- posed ; and, in gratitude for that gentleman's at- tendance, engaged to conduct him to the summit of the mountain. They set out from Chamouni on the 7th of August, spent the night on the mountain of La Cote ; at three in the morning pursued their route to the dome of Goute ; passed under the middle dome towards the east, along the ridge which is seen from Geneva, and which lies on the left of the summit. Here Dr. Paccard was almost deterred by the cold and fatigue from pursuing the enterprise ; but encouraged by Balmat to proceed, and frequently walking side- ways to shelter their faces from the piercing wind, they at length, about six o'clock in the afternoon, and after an ascent of fifteen hours, attained the summit of Mont ;Blanc. They re- mained about half an hour on this memorable spot, where the cold was so intense as to freeze the provisions in their pockets, congeal the ink in their inkstands, and sink the mercury of Fahrenheit's thermometer to 18Ā£ degrees ; their faces were excoriated, their lips swelled, and their sight greatly debilitated by the reflexion of the snow.

On the 13th of August, 1787, M. de Saussure set out from Chamouni, accompanied by eighteen guides, and provided with a tent, mattrasses, philosophical instruments, and all necessary ac- commodations. They passed the first night on the top of the mountain La Cote ; encamped at four o'clock in the following afternoon, about 12,762 feet above the level of the sea; and next morning pursued the ascent in places frequently so steep that the guides were obliged to hew out steps with a hatchet. After a very slow progress, and frequent halts for breath, they reached the summit about eleven o'clock in the forenoon ; where they remained four hours and a half, en- joying a most sublime and extensive prospect, and making a variety of useful and interesting experiments. Here they observed the surround-

ing mountains, not in regular lines and continued ridges, as they appear when viewed from the plain, but in the most irregular groups and insulated masses ; connected indeed at their bases, yet com- pletely detached from each other, distinct in their forms, and separated at their summits. In this elevated station they experienced great difficulty of respiration, which was increased by the slightest exertion, by a stooping posture, and by the use of

wine or brandy ; were kept in a state of con- tinued fever, and tormented with a burning thirst; felt no appetite for food, no relish for strong liquors, no relief in any thing but in draughts of fresh water. About two o'clock in the afternoon they began to descend ; and arrived next morning, without any accident, at the valley of Chamouni. On the eighth of August, a few days after Saussure's expedition, Mr. Beaufoy, an English gentleman, succeeded in a similar at- tempt ; but, on account of the enlargement of the chasms in the ice, it was accomplished with greater difficulty. See Core's Travels in Switzer- land, vol. 2. Saussure's Voyages dans les Alpes, vol. 4.

The following account of an attempt to reach the summit of Mont Blanc in 1820 was supplied by one of the gentlemen of the party to the New Monthly Magazine, and is interesting as contain- ing one of the best descriptions of the avalanche of these regions with which we are acquainted. The writer, Mr. Dornford, says it is the only original account of the attempt yet published. ' About the middle of last August I arrived

at Geneva, accompanied by my friend H , of

Brazenose, whom I had fallen in with at Berne, and who was, like myself, devoting a part of the long vacation to a Continental tour. I had, be- fore leaving England, set my heart upon ascend- ing Mont Blanc, and found no difficulty in pre- vailing on my companion, who had already made the tour of the greater part of Switzerland, to accompany me. Having called on a gentle- man of Geneva, to whom I had an introduction, with a view of making the necessary enquiries, I learnt from him that a small party were then on the point of setting out with the same inten- tion. I lost no time in finding them out, and proposing to share in their undertaking; and the, following afternoon, August 16, we set off toge- ther, in a hired caleche, for the valley of Cha- mounix. Our party consisted of four persons. Our new acquaintances were Le Chevalier Hamel, a Russian, then employed by the em- peror in making some philosophical observa- tions in the neigh boui hood, and M. Sellique, an optician of Geneva, and native of Paris, a man of considerable attainments in various branches of natural philosophy. His grand object in ac- companying us was to make trial of a new ba- rometer, of his own construction, in measuring the height of Mont Blanc, the accuracy of some former observations for the same purpose hav- ing been recently called in question. Dr. Hamel had already made, ten days before, an unsuccessful attempt to reach the summit by a different route, being the same which Saussure attempted in 1785.

' At length, the long-expected morn arrived : at four o'clock we were summoned from our

beds, where we had not enjoyed much sleep, and about five we all set out

on foot, making with the guides a party of sixteen. These latter were each furnished with a knapsack pretty well loaded, in which were placed provisions for three days for the whole party, mathematical in- struments, additional clothing for ourselves on the following day, four blankets, &c.

- *Our caravan assumed a most romantic ap- pearance; tbs costume of the guides, each with a French knapsack, and one or two with old pe- lisses, being decidedly military. It reminded me strongly of a party of guerillas in the Py-~ renees, where uniformity either in dress or ap- pointments was considered as an unnecessary refinement. We had each a large straw hat tied under the chin, and a spiked-pole, about eight feet long, in our hands. Besides this, our shoes were furnished with short spikes at the heels to assist us in the descent. We were clothed as lightly as possible, that the motion of our limbs might not be impeded, for we were told to expect a march of eleven or twelve hours, the latter half of which was to be spent in climbing.*

‘ In about two hours we reached the last human abode, being a chalet or summer-cottage, inha- bited by Francois Favret, who had been one of Saussure’s guides, and whose son was in our party. The veteran mountaineer, Favret, ac- companied us about three hours higher up to the edge of the glacier, to carry his son’s knapsack, and then followed us with his eyes till we dis- appeared in one of the awful fissures, with which it is everywhere intersected. We had left the wood behind us just before we reached the chalet, and the ascent was now considerably steeper. We trod for some time a very preca- rious path along the brink of an awfully deep and precipitous ravine, where I occasionally felt some tendency to dizziness. This feeling, how- ever, I concealed so successfully, that I believe neither the guides nor my companions had any suspicion of it ; and by following Saussure’s ad- vice, in the published account of his ascent, and fixing my eyes steadfastly upon the precipice, I gradually accustomed myself to the view, and was soon enabled to pursue my path with the greatest confidence. By the time we reached the Pierre de L’Echelle, a large round stone, where we halted for breakfast, on the edge of the glacier, I felt quite at home, and resigned myself completely to the delightful sensations which our situation inspired. In a cavern below this rock our guides found a ladder, which they had left there the year before, and which they employ in the passage of the Glacier de Bossons, now close before us. It was about half-past nine when we reached this resting place, and we felt disposed to do justice to a couple of cold fowls, which were produced from the knapsack of one of the guides. These were soon despatched, together with a bottle of light French wine, and in twenty-five minutes we resumed our march.

‘ Five minutes march from the Pierre de L’Echelle brought us to the edge of the Glacier de Bossons, and we entered immediately on a track, which baffles all description. The Mer de Glace, which has been compared to a sea sud-

denly congealed in the midst of a storm, cannot, our guides assured us, enter into competition with it. The fissures are so frequent, so wide, so.deep, the different views, varying every in- stant, which the scenery presents, are so awful, so fantastic, that no adequate idea of them can be presented to the mind by the most eloquent pen. At one time the traveller finds himself denied apparently all further progress by an immense precipitous tower of ice : this is sur- mounted by a stair-case of notches, which one of the guides cuts in the ice with a hatchet, which he carries for that purpose. Then he must de- scend into an awful chasm, from which he must emerge in the same manner. Again he meets with fissures, called by the guides crevasses, of unknown depth, which are crossed by laying the ladder over them, and passing on all fours. If the crevasse be too wide for the length of the ladder, the traveller must descend down one side, and re-ascend the opposite one, which is the most formidable method of all. On one or two occasions, when we came to crevasses of this description, we were obliged to descend by the ladder upon a wall of ice, not above a foot in breadth, which divided the crevasse longitu- dinally. This would not hold above one or two at a time, so that the first party were forced to mount the opposite brink, before the second party descended ; and the ladder was thus passed backwards and forwards, until all had crossed, one of the guides remaining all the time station- ary on the wall to move the ladder. Here the least giddiness would probably have been fatal, but happily we were by this time so well broken in, that we contemplated the blue gulphs on each side with tolerable composure.

- *During the first part of the passage of the glacier, we were exposed to the fall of some glo- bular masses of ice, which, from the velocity with which they whizzed past us, must have come from a considerable height. One of the guides, however, stood sentry on an elevated post, to advertise us of their approach. In se- veral places, bridges of snow, of very different degrees of strength, are formed across the cre- vasses. Dr. Hamel was impatient, and offered to show the way over one, for, to our eyes, there seemed to be no danger ; but our guide obliged us to return some distance to find another me- thod of passing over the crevasse. In about ten minutes, we arrived at a spot considerably lower, from whence we could see the bridge in*

profile ; and we then saw that his suspicions were well- founded, the farther side of the bridge not being above six inches thick ; so that had we persisted, one or two of the party must have fallen through. I mention this as an instance of the extreme caution of the guides, where there is any real danger, and to prove the falsehood of a charge, which was afterwards brought against us, of having forced the guides to proceed contrary to their better judgment. In about three hours, we reached the further side of the glacier, a distance of somewhat less than a mile.

‘ \V e now ascended several slopes of snow of different elevations, from thirty to sixty degrees, in a zig-zag direction. I think this method of prr needing brought the danger more home to

my mind than any other. The surface being quite hard, the guides were obliged to cut notches for our steps, and these being very irre- gular, the difficulty of maintaining the balance was much increased : a single false step might have been fatal, and the view of the immense distance we must in that case inevitably fall, tended to unnerve the mind. After proceeding in this way, for about an hour, we arrived by a very steep slope, at the base of the Grand Mulct, a name given to a ridge of rocks, or rather a single rock, which rises almost perpendicularly to a great height, out of the eternal snow which sur- rounds it on all sides, and which is, from the na- ture of its construction, generally bare of snow itself. In ascending this ridge, we had a new species of danger to contend with. Our steps were all upon loose fragments of the rock, which was schistous. These occasionally gave way beneath our tread, and fell, with a tremendous noise, into the depths below. Owing, however, to the caution of our excellent guides, who per- petually warned us against suspicious stones, we surmounted this perilous ascent without any ac- cident. At half-past four we reached the summit of the ridge, where we were to pass the night; having been about eleven hours and a half walking and climbing, almost without intermis- sion : our guides soon constructed for us a kind of tent, but scarcely had we got under cover than it began to rain, and in about an hour we had a violent thunder-storm, which continued, with but little intermission, during the whole night. In the morning the way was equally dangerous to advance or retreat; or rather the latter, on examination, was found impossible ; and it was soon too late to proceed upwards, since it was absolutely necessary to return to the same rock to sleep, so that, at length, we made up our minds to pass another night in our pre- sent bivouac.

‘Our amusements during the day of our com- pelled halt, were very similar to those of a piquet on an outpost, which commands a view of the enemy’s camp ; for the greater part of the time was spent in looking through an excellent teles- cope belonging to M. Sellique, and in reconnoi- tring the

ground below. From our elevated post, we saw distinctly the windows of our hotel at the Prieure, and sometimes fancied we discovered some one there watching us in a similar manner. Sometimes we lounged over a pamphlet of Saus- sure's ascent, from which we gathered that he had taken a day and a half to arrive at our pre- sent situation, accompanied by eighteen guides. We made arrangements for letting off our rockets at night, and some considerable time was occu- pied in mending one of Dr. Hamel's barometers, an air-bubble having found its way into the tube during the ascent of the day before. I was em- ployed in making a bottle of lemonade for the following day, when it was pronounced excel- lent, and proved an admirable substitute for the wine, against which our feverish palates revolted. The evening of this day being also rainy, we reserved our fireworks for the following one, to celebrate our return ; but about two o'clock in the morning we saw the stars through the aper- tures of our canvass, though the fog still seemed

rising from the valley. We were thus kept in suspense until five o'clock, when the sun, silver- ing with its rays the summit of the mountain, appeared, as it were, to invite us onward.

'At twenty minutes past eight we arrived at the Grand Plateau, where the rug was soon spread, and we were glad to repose for a few minutes. From this height we had a most magnificent view of the scenery below. The morning fog having been gradually dissolved, we now saw everv thing with the utmost distinctness. Hither- to we had seen nothing beneath us but a tranquil sea of white clouds, pierced here and there by the summit of some elevated crag, which appeared like an island in the midst of the deep ; but now the whole valley was thrown open to our sight. We had a distinct view of the Lake of Geneva, and the heights beyond : while the ridge of the Jura bounded the panorama to the west. The Aiguille du Midi, which, during the early part of our ascent, had seemed to vie in height with Mont Blanc itself, now lay at our feet. The Dome de Goute, on our right, was still a little above us ; and we saw several avalanches, which had fallen from thence during the night. We had not, as yet, suffered much from the difficulty of respiration, partly because \ve had addressed ourselves to the ascent with empty stomachs, and partly from the steady deliberate step with which we continued to asctnd. Though we felt no great appetite, yet, at the urgent entreaties of the guides, who assured us that we should feel it absolutely impossible to eat as we advanced higher up, we finished two more of the chickens. The lemonade proved much more acceptable, for we had now arrived at a high state of fever, and our thirst was incessant. About nine we

resumed our march, with the expectation of reaching the summit at half-past eleven, and without another regular halt. After having pro- ceeded an hour and a quarter, according to our usual method, in a zig-zag course, in the direc- tion of the summit, and having at length reached the level of the Dome de Goute", still at some distance on our right, we suddenly made an ob- tuse angle to the left, and thus leaving the Dome behind us, directed our course towards the east- ern shoulder of the mountain, called by the guides the Mont Maudit. On our arrival there, we were to make one more bend to the right, and this last tack, to use a nautical phrase, would conduct us to the summit. In turning the cor- ner of the Mont Maudit, we expected to incur some difficulty ; but it was the last, the ascent from thence to the summit being very gradual. In encountering these mauvais pas, as the guides call them, recourse was to be had to the ropes, to attach ourselves together by threes in a party ; but, as this passage was a work of five or ten minutes only, we did not anticipate much danger; or rather, it was hardly possible to think of danger, with the end of all our toils so full in our yjew. We were now scarcely 400 yards below the level of the summit, and expected to reach it in less than A., hour.

ā¢About twenty minutes after the change in our direction above alluded to, the difficulty of breathing gradually increasing, and ourthirst being in'cessant, I was obliged to stop half a minute

to arrange my veil ; and the sun being at that moment partially concealed by a cloud, I tucked it up under the large straw hat which I wore.

In this interval, my companion H and three

of the guides passed me, so that I was now sixth in the line, and of course the centre man.

H was next before me ; and, as it was the

first time we had been so circumstanced during the whole morning, he remarked it, and said we ought to have one guide at least between us, in case of accident. This I overruled by referring him to the absence of all appearance of danger at that part of our march, to which he assented. I did not then attempt to recover my place in front, though the wish more than once crossed my mind, finding, perhaps, that my present one was much less laborious. To this apparently trivial circumstance I was indebted for my life. A few minutes after the above conversation, my veil being still up, and my eyes turned at inter- vals towards the summit of the mountain, which was on the right, as we were crossing obliquely the long slope above described, which was to conduct us to the Mont Maudit, the snow sud- denly gave way beneath our feet, beginning at the head of the line, and

carried us all down the slope to our left. I was thrown instantly off my feet, but was still on my knees and endeavour- ing to regain my footing, when, in a few seconds, the snow on our right, which was of course above us, rushed into the gap thus suddenly made, and completed the catastrophe by burying us all at once in its mass, and hurrying us down- wards towards two crevasses about a furlong below us, and nearly parallel to the line of our march. The accumulation of snow instantly threw me backwards, and I was carried down, in spite of all my struggles. In less than a minute I emerged, partly from my own exertions, and partly because the velocity of the falling mass had subsided from its own friction. I was obliged to resign my pole in the struggle, feeling it forced out of my hand. A short time after- wards I found it on the very brink of the crevasse. This had hitherto escaped our notice, from its being so far below us, and it was not until some time after the snow had settled, that I perceived it. At the moment of my emerging, I was so far from being alive to the danger of our situa- tion, that on seeing my two companions at some distance below me, up .to the waist in snow, and sitting motionless and silent, a jest was rising to my lips, till a second glance showed me that, with the exception of Mathieu Balmat, they were the only remnants of the party visible. Two more, however, being those in the interval between myself and the rear of the party, having quickly re-appeared, I was still inclined to treat the affair rather as a perplexing though ludicrous delay, in having sent us down so many hundred feet lower, than in the light of a serious accident, when Mathieu Balmat cried out that some of the party were lost, and pointed to the crevasse, which had hitherto escaped our notice, into which, he said, they had fallen. A nearer view convinced us all of the sad truth. The three front guides, Pierre Carrier, Pierre Balmat, and Auguste Tairray, being where the slope was somewhat steeper, had been carried down with

greater rapidity, and to a greater distance, and had thus been hurried into the crevasse, with an im- mense mass of snow upon them, which rose nearly to the brink. Mathieu Balmat, who was fourth in the line, being a man of great muscular strength, as well as presence of mind, had sud- denly thrust his pole into the firm snow beneath, when he felt himself going, which certainly checked, in some measure, the force of his fall. Our two hindermost guides were also missing, but we were soon gladdened by seeing them make their appearance, and cheered them with loud and repeated hurrahs. One of these, Julien Devouassoux, had been carried into the crevasse, where it was very narrow, and had been thrown with some violence against the opposite brink. He contrived to scramble out without assistance, at the expense of a trifling cut on the chin. The other, Joseph Marie Couttet, had been dragged out by his companions, quite senseless, and nearly black from the weight of snow which had been upon him. In a

short time, however, he recovered. It was long before we could con- vince ourselves that the others were past hope, and we exhausted ourselves fruitlessly for some time in fathoming the loose snow with our poles. When the sad truth burst upon us, our feelings may perhaps be conceived, but cannot be ex- pressed. The first reflection made involuntarily by each of us ā ‘ I have caused the death of those brave fellows,’ however it was afterwards over- ruled in our calmer moments, was then replete with unutterable distress. We were separated so far from one another by the accident, that we had some distance to come before we could unite our endeavours. The first few minutes, as may be readily imagined, were wasted in irregular and unsystematic attempts to recover them. At length, being thoroughly convinced, from the relative positions of the party when the accident happened, that the poor fellows were indeed in the crevasse, at the- spot pointed out by Mathieu Balmat, the brother of one of them; in our opinion, only one thing remained to be done, and that was to venture down upon the snow which had fallen in, and, as a forlorn hope, to fathom its unknown depths with our poles. After having thus made every effort in our power for their recovery, we agreed to abandon the enterprise altogether, and return to the Grand Mulet.’

The party did make every possible effort to ascertain the situation of their lost companions. They ventured, against the judgment of the remaining guides, on the loose snow, and, after thrusting in their poles to their full length, knelt down and applied their mouths to the end, shouting along them, and then listening for an answer, in the fond hope that they might be still alive, sheltered by some projection of the icy walls of the crevasse; ‘but, alas !’ adds the nar- Tator, ‘ all was silent as the grave, and we had too much reason to fear that they were long “ince insensible, and probably at a vast depth beneath the snow on which we were standing. We could see no bottom to the gulf on each side of the pile of snow on which we stood; the sides of the crevasse were here, as in other places, solid ice, of a cerulean color, and very beautiful to the VOL. IV.

eye. Two of the guides, our two leaders, had followed us mechanically to the spot, but could not be prevailed upon to make any attempts to search for the bodies. One of these soon pro- posed to us to continue the ascent. This was Marie Couttet, who had escaped so narrowly with his life; but Julien Devouassoux loudly protested against this, and resolutely refused to advance. Whether or not we could have pre- vailed on a sufficient number to accompany us to the summit, I cannot say ; but we did not bring the point to trial, having now no room left in our minds for any other idea

than that of the most bitter regret. I hardly know whether we should then have felt sufficient interest to lead us a hundred yards onwards, had that been the only remaining interval between us and the sum- mit. Had we recovered our lost companions, I am sure the past danger would not have deterred us ; but to advance, under present circumstances, required other hearts than ours.'

BLANC DE BERRY, a town of France, in the department of the Indre, and ci-devant province of Berry ; seated on the river Creuse, which di- vides it into two parts. The land about it is barren, and full of trees, heath, and lakes. It is thirty-five miles east of Poitiers. Population about 4000.

BLANC COURSIER HERALD, created by patent on the revival of the order of the Bath, 1725, ' to attend the first and principal companion of the order for the time being.' He enjoys all rights, privileges, and immunities as any other herald ; and his office is united, and perpetually consoli- dated with the office of genealogist of the said order.

BLANCA, an island on the coast of Terra Firma, and one of the small Antilles, north of Margaretta.

BLANCHARD (James), a painter, was born at Paris, who acquired the rudiments of his pro- fession under Nicholas Bolleri his uncle ; but left him at twenty years of age, and travelled into Italy. He staid two years at Rome, and from thence went to Venice, where he became charmed with the works of Titian, Tintoret, and Paul Ve- ronese, and followed their manner. His capital piece is a picture of the descent of the Holy Ghost, in the church of Notre Dame. He died in the flower of his age, in 1683. Blanchard is esteemed the best of the French colorists.

BLANCHE', v. 1 Fr. blanc; Ital. bianco;

BLANCH'ER, J Span, bianco ; Ang.Sax. bli can; Germ, blicken ; blinken, to shine, to glitter, to twinkle or blink ; and, by consequence, to whiten. Thus to blanch is to illuminate ; to whiten; to give a fair appearance ; a fair face to any thing ; it is now obsolete in the sense of blinking ; that is of shrinking from, and evading what is un- pleasant ; though it has this meaning as used by Sidney. ā Ency. Met.

The judges thought it dangerous to admit ifs and ands, and to qualify treason ; whereby every one might express his malice, and blanch his danger.

Bacon.

Optimi consiliarii mortui ; books will speak plain, when counsellors blanch.

Id.

You can behold such sights, And keep the natural rubj of your cheeks, When mine is blanched with fear. Shaktfearc.

A way of whiting wax cheaply may be of use ; and we have set down the practice of tradesmen who blanch it. Boyle.

And sin's black dye seems blanched by age to vir- tue. Dryden.

Their suppers may be bisket, raisins of the sun, and a few blanched almonds. Wiseman.

BLANCHE, CARTE. See CARTE.

BLANCHE DE LA PORTE, the wife of Baptista de la Porta, a native of Padua, distinguished her- self, in the thirteenth century, ' by her courage and her chastity. On the death of her husband at the siege of Bassano, she was violated by the conqueror Acciolinus ; and, to escape the repe- tition of his brutality, she threw herself into the tomb of her husband, and caused a stone to fall upon her, by which she was crushed to death.

BLANCHING, in coinage, the operation per- formed on the planchets, or pieces of silver, to give them the requisite lustre and brightness. Pieces of plate are also blanched when it is wished to have them continue white, or have only some parts of them burnished. See ME- TALLURGY.

BLANCH-LYON, one of the pursuivants at arms.

BLANCO, CAPE, a promontory of European Turkey, on the south coast of the Morea. Long. 21Ā° 56′ E., lat. 36Ā° 44′ N. 2. A cape on the south coast of the island of Sicily. Long. 13Ā° 10′ E., lat. 35Ā° 28′ N. 3. A cape on the north coast of Corsica, a little to the west of Cape Corso. 4. A promontory on the south coast of Corfu, one of the Ionian islands. Long. 20Ā° 6′ E., lat. 39Ā° 28′ N. 5. A cape on the north coast of Spain, in the principality of Asturias. Long. 6Ā° 54′ W., lat. 43Ā° 35′ N. 6. A promontory on the west coast of Ivipa, one of the Pithyusae islands. Long. 1Ā° 16′ E., lat. 39Ā° 1′ N. 7. A cape on the south coast of the island of

Majorca. Long. 2Ā° 45′ E., lat. 39Ā° 21′ N. 8. A promon- tory of Naples, on the east coast of Calabria. Long. 17Ā° 25′ E., lat. 38Ā° 59′ IS. 9. A cape of Syria, in the Mediterranean. Long. 35Ā° 6′ E., lat. 33Ā° 2′ N. 10. A cape on the west coast of Natolia. Long. 26Ā° 18′ E., lat. 38Ā° 14′ N. 11. A cape on the south-west coast of the island of Cyprus. Long. 32Ā° 15′ E., lat. 35Ā° 12′ N. 12. A cape on the western coast of Africa. It pro- jects to a considerable distance into the sea, and except Cape Verd, forms the most westerly point of this continent. It was discovered by the Por- tuguese in 1441. The approach is dangerous. Long. 16Ā° 58′ E., lat. 20Ā° 47′ N. 13. A cape on the coast of Morocco, near Mazaˆan. Long. 9Ā° 20′ W., lat. 33Ā° 10′ N. 14. A cape in Tunis, near Bizerta. Long. 9Ā° 50′ E., lat. 37Ā° 15′ N. 15. A cape on the coast of Peru, about 120 miles west of Guayaquil. It forms the south point of the great gulf of Tumbez, or Guayaquil. Long. 81Ā° 6′ W., lat. 4Ā° 18′ S. 16. A cape on the coast of the province of Costa Itica, and king- dom of Guatimala. 17. A cape on the coast of Brasil, in the province of Paraiba. 18. A cape on the coast of Terra Firma, and province of Venezuela. 19. A cape on the north-western point of the bay of Salinas, in the tenth degree of ā¢JOrthern latitude, on the coast of Terra Firma. In some maps it is called the western point of

the gulf of Nicoya. 20. A cape on the north- west coast of New Albion. 21. A cape of Pata- gonia, south-east of Julian Bay, eight leagues west of Pepys' island.

BLANCS MANTEAUX, a name originally given to the Servites, or servants of the Blessed Virgin, on account of their white cloaks ; but since ap- plied to divers sorts of religious, who have suc- cessively inhabited the house of the Servites. BLAND', adj. \ Lat. blandus, soft ; mild ; BLAN'DIMENT, / gentle. To smooth ; to sof BLAN'DISH, v ten ; to flatter by words or

BLAN'DISHING, i gestures ; kind speeches ; BLAN'DISHMENT. J tender caressing.

The little babe up in his arms he hent, Who, with sweet pleasure and bold blandishment, 'Gan smile. Spenser.

Lo ! there before his face his ladie is, Under black stole hyding her bayted hooke, And, as half blushing ofired him to kis, With gentle blandishment and lovely looke, Most like that virgin true, which for her knight him took. Id.

Mustering all her wiles, With blandished parleys, feminine assaults, Tongue-batteries, she surceased not day nor night To storm me over- watched, and wearied out.

Milton.

In her face excuse

Came prologue, and apology too prompt ; Which, with bland words at will, she-thus addressed.

Id.

Each bird and beast, behold Approaching two and two ; these cowering low With blandishment. Id.

Adam waked, so customed, for his sleep Was aery light, from pure digestion bred, And temperate vapors l>lan

Strong were his hopes a rival to remove, With blandishments to gain the public love. Dryden.

An even calm

Perpetual reigned, save what the zephyrs bland Breathed o'er the blue expanse. Thornton.

BLAND (Elizabeth), daughter of Robert Fisher of Long-acre, and wife of Mr. Nathaniel Bland, a linen-draper in London, was a lady distinguished in the seventeenth century by her skill in the Hebrew, particularly in writing the Hebrew character. A philactery in Hebrew, of her writing, is preserved among the curiosities of the Royal Society.

BLANDA, in ancient geography, a Roman city in the territory of Barcino, in Hispania Cite- rior : now called Blanes.

BLANDFORD, or BLANPFORD-FORUM, a market town of Dorset, ten miles north-west from Wimborne-Minster, and 103Ā£ west from London. It is situate on the Stour, near the Downs; and contains 2643 inhabitants, em- ployed in trade and manufactures, principally that of shirt-buttons, made by females. This was a British town long before the arrival of the Romans. It gives the title of marquis to the duke of Marlborough; and is governed by a bailiff and ten common-councilmen, who have power to purchase and enjoy lands in fee; a common seal, and a serjeant-at-mace. It for- merly sent members to parliament. Two of the

capital burgesses can determine suits in the bo- rough, not exceeding Ā£10. The church is a neat modern structure, in the Grecian style. The streets are handsome, and the houses generally built of brick.

Blandford has suffered more by fires than any other town in England. Camden and Coke mention one which happened before 1579 ; and by another, in 1677, it was almost destroyed. In 1713 a fire consumed the greatest part of East-street; and in 1731 the whole town, except that part of East-street which had been before burnt, was destroyed. This fire began at a soap- boiler's at the corner of two streets, and commu- nicated to a grocer's, where was a cask of gun- powder, which, being blown up, dispersed the burning thatch and embers in every direction, communicating them also by the drift of a strong wind, to the neighbouring villages of Blandford, St. Mary, and Brianstone. ' Almost the whole town,' it is said by a spectator, ' was in flames to- gether about seven o'clock ; and the goods and furniture carried into the streets for safety, were abandoned to destruction by the owners. The church was long preserved, but the steeple at length caught fire, and was quenched oftener than once. At midnight, however, the flames were seen breaking through the roof, and in two hours afterwards the lead melted ; the stones split, and flew ; nay, so fervent and irresistible was the heat, that the bells themselves dissolved and ran down in streams.' On this occasion fourteen persons perished, 400 families were burnt out of their houses, and the value of the property destroyed, exclusive of what was covered by insurances, amounted to Ā£84,348. To add to the calamity, the small pox was raging at the time, yet of sixty families infected by it, who were all removed under hedges in the fields, only one person died. A great scarcity of provisions prevailed the morning after the fire, but this was soon relieved by the neighbourhood, and sixty wooden buildings were speedily erected to shel- ter the sufferers. Towards the rebuilding of the town, king George II. subscribed Ā£1000, the queen Ā£200, and the prince of Wales Ā£100.

Near Blandford stood the famous Damary oak, which was rooted up for firing in 1755. In 1747 it measured seventy-five feet high, the branches extending seventy-two; the trunk at the bottom was sixty-eight feet in circumference, and twenty-three in diameter ; it had a cavity in its body fifteen feet wide. During the civil war, and till after the Restoration, an old man sold ale in it ; and when the town was burnt down, it sheltered a whole family.

BLANDFORD, a thriving town of Virginia, pleasantly situated in a plain, on the eastern branch of Appamatox river, containing 1200 in- habitants. It is ten miles north-east of Peters- burg. The marshes in the vicinity of the town, which formerly rendered it unhealthy, are now drained.

BLANDFORDIA, in botany, a genus of what Linnaeus calls the patrician order. Class, hexan- dria; order, monogynia. Natural order, coro- naiae, Linn. Its essential characters are, COR. fun- nel-shaped, with six marginal segments : filaments inserted into the tube: CAPS, stalked, of three cells:

SEEDS, numerous and bristly. The species are, 1. B. nobilis, scarlet blandfordia. 'Bracteas but half the length of the partial stalks while in flower. Leaves narrow-linear.' Br. ā Native of the neighbourhood of Port Jackson. 2. B. gran- diflora, large-flowered blandfordia. Bracteas nearly as long as the partial stalks while in flower ; the inner but one-third as large us the outer. ā Observed at Port Jackson by Mr. Brown.

BLANDONONA, in ancient geography, a small city of Liguria in Italy : now called Bron, or Broni.

BLANDRATA (George), an Italian physician of the sixteenth "century, who successively pro- fessed Popery, Lutheranism, Calvinism, Ariari- ism, and Socinianism, and was at length assassi- nated by his nephew, to whom he had left his property, in 1593. In 1568 he printed a con- troversial treatise entitled Brevis Enarraiio Dis- putationis Albanas de Deo trino, &c. in one volume 4to.

BLANES, anciently Blanda, a sea-port of Spain, in Catalonia, seated near the Todera, twenty miles south of Girona.

BLANK' v. n. s. & adj. (This is undoubted-

BLANK'N ESS. $ ly of the same etymo-

logy, and of the same meaning as blanch. It is used, however, more frequently in a metaphori- cal sense, to express the emotions of the mind when inward terror turns the face pale ; and the white and ghastly look reveals the astonishment and dismay which are working in the breast. Paper unsoiled is blank, that is, white ; thus any thing without marks or characters is blank : blank also signifies nonplused ; confounded : to blank is to evade; to confuse; to efface; to annul : a blank is \vhen any thing is wanting.

All former purposes were blanked, the governour at a bay, and all that charge lost and cancelled.

Spenser.

Our substitutes at home shall have blank charters, Whereunto, when they know that men are rich, They shall subscribe them for large sums of gold.

ShaJispeare.

If you have heard your general talk of Rome, And of his friends there, it is lots to blanks My name hath touched your ears. Id,

For him, I think not on him ; for his thoughts, Would they were blanks, rather than filled with me.

Id.

Slander,

Whose whisper o'er the world's diameter, As level as the cannon to his blank, Transports its poisoned shot. Id.

DCKE. And what's her history.

Vio. A blank, my lord : She never told her love, But let concealment, like a worm i'the bud, Feed on her damask cheek. Id,

To the blank moon

Her office they prescribed ; to the' other five Their planetary motions. Stilton.

Dagon must stoop, and shall ere long receive Such a.discomfit, as shall quite despoil him Of all these boasted trophies won oh me, And with confusion blank his worshippers. Id.

If the atheist, when he dies, should find that his soul remains, how will this man be amazed and blanked ! Tittotsoii.

Adam, soon as he heard The fatal trespass done by Eve, amazed, Astonied stood and blank; while horror chill Ran through his veins, and all his joints relaxed.

Milton.

For the book of knowledge fair, Presented with an universal blank Of

nature's works, to me expunged and rased.

Id.

There without such boast, or sign of joy, Solicitous and blank, he thus began. Id.

In fortune's lottery lies A heap of blanks, like this, for one small prize.

Dryden.

She has left him The blank of what he was ;

I tell thee eunuch, she has quite unmanned him.

la.

I cannot write a paper full as I used Ā»o do ; and yet I will not forgive a blank of half an inch from fou. Swift.

Life may bĀ« one great blank, which, though not blotted with sin, is yet without any characters of grace or virtue. Roger.*

So strong the zeal to rmmortalize himself Beat in the breast of man, that even a few, Few transient years, torn from the abyss abhorred Of blank oblivion, seems a glorious orize, And even to a clown. Cowper. Task.*

BLANK, a small copper coin, formerly current in France, at the rate of five deniers Tournois. There were also greater blanks, or pieces of three blanks, and others of six, in respect where- of the single sort were called little blanks; but of ate they are all become only monies of account.

BLAKK, in coinage, a plate or piece of gold or silver, cut and shaped for a coin, but not yet stamped.

BLANKS, in judicial proceedings, certain void spaces sometimes left by mistake. A blank (if something material be omitted) in a declaration, abates it ; and such a blank is a good cause of demurrer.

BLANK VERSE, in modern poetry, that com- posed of a certain number of syllables, without the assistance of rhime. See POETRY.

BLANKENHEIM, a small territory of Ger- many, which had the title of a county, and was part of that of Eyffel, near the archbishopric of Cologne and duchy of Juliers ; it was annexed to France in the revolution, and included in the department of the Rhine and Moselle.

BLAN'KET, v. & n.) French, blanchet. A

BLAN'KETING. > woollen cover, soft, and

loosely woven, spread commonly upon a bed, over the linen sheet, for the procurement of warmth ; a covering. To blanket, is to cover with, to hide, to toss in a blanket. It is used metaphorically by Shakspeare, from the verb to blank.

Nor heaven peep through the blanket of the dark, To cry, hold ! hold ! Shalupeare.

My face 111 grime with filth ; Blanket my loins ; tie all my hair in knots. Id.

The abilities of man must fall short on one side or -other, like too scanty a Mnnh-t when you are a-bed ; if you pull it upon your shoulders, you leave your feet bare ; if you thrust it d >wn upon your feet, your ā¢huulders are uncovered. Temple.

Ah, oh ! he cryed ; what street, what lane, but

knows Our purgings, pumpings, blanketings, and blows ?

Pope.

BLANKET, in commerce, a warm woolly sort of covering. For the manufacture of blankets, W it- ney in Oxfordshire has long been famous. See

WlTNEY.

BLANKOF (John Teunisz), a painter of great talent, was born at Alcmaer in 1628, and re- ceived his earliest instruction from Arent Tier- ling. He was afterwards the disciple of Peter Scheyenburg and Caesar Van Everdingen ; after which he went to Rome, and copied the best masters. He was admitted into the society of Flemish painters called Bentvogels, who gave him the name of Jan Maat, and by that name he is most generally known. His subjects are land- scapes, views of rivers, sea-shores, havens, ports, &c. which he executed with a light free pencil. He died in 1670.

BLANQUILLE, in commerce, a small silver coin, current in Morocco and on the coast of Barbary, worth about three-halfpence.

BLAPS, in entomology, one of the fabrician genera of coleopterous insects; the palpi cla- vated, and four in number; jaws straight and bifid ; lip

membranaceous and cleft ; and the antennae moliniform at the tip. Gmelin adopts the genus only as a subdivision of pimelia. BLAPSICULA, in botany, a species of cyanus. BLARE, in commerce, a small copper coin of Bern, nearly of the same value with the batz.

BLAREGNIES, a town of France, in the ci-devant province of Hainault. Near this place the English and their ‘ allies, under the duke of Marlborough, obtained a very bloody victory over the French, in 1709. The armies on each side consisted of 120,000 men, of whom at least 30,000 were killed. This battle is most com- monly called the battle of Malplaquet. See MALPLAQUET. Blaregnies is seven miles south of Mons.

BLAS, a cape of South America, on the coast of Darien, and kingdom of Terra Firma, which runs two leagues into the sea, and is very dan- gerous. It is eighteen miles from Porto Bello, and sixty-two from Carthagena. BLASE (Bishop). See BLAISE. BLASIA, in botany, a genus of the cryptoga- mia class and hepaticae order of plants : male, solitary ; female, no calyx ; capsule, imbedded in the frond, oblique, one-celled, with a tubular mouth ; seeds, numerous. One species only, B. pusilla, a native of Britain, which grows natu- rally on the hanks of ditches and rivulets, in a gravelly or sandy soil. It grows flat upon the ground in a patch, composed of numerous thin, green, pellucid leaves, marked with a few whitish veins near the base, divided and subdivided into obtuse segments obscurely crenated on the edges. The margins of the leaves are a little elevated, but the interior parts adhere close to the ground by a fine down which answers the purpose of roots. The seeds are so small as to be almost imperceptible.

BLASKETS, or FERRITERS ISLANDS, a clus- ter of islets in the Atlantic, near the west coast of Ireland. The largest is about three miles

long and half a mile broad, lying at the north

side of the entrance into Dingle bay. Long.

10Ā° 22′ W., lat. 52Ā° 5′ N.

BLASPHE’ME, “I Low Lat. blasphemo ;

BLASPHE’MER, j Old Fr. blasphemer ; Gr.

BLAS’PHEMERESS, PXacHprmtiv, BaXXw, Peto,

BLASPHE'MING, to assail ; and <(,n,fama,

BLAS'PHEMOUS, I fame or reputation. Blas-

BLAS'PHEMOUSLY. phemy, therefore, in its

BLAS'PHEMY. J simple acceptation, is an

assault upon character. But it is now almost

exclusively applied to any insult offered to the

Deity.

From thence into the sacred church he broke And robd the chancell, and the deskes downe threw, And altars fouled, and blasphemy spoke, And the images, for all the goodly hew, Did cast to ground, whilest none was them to rew.

Spenser.

I punished them oft in every synagogue, and com- pelled them to blaspheme. Acts.

0 man, take heed how thou the gods dost move, To cause full wrath, which thou canst not resist ; Blasphemous words the speaker vain do prove.

Sidney.

*The truest issue of thy throne By his *wn interdiction stands accursed, And does blaspheme his breed. Shakspeare.*

But that my heart's on future mischief set,

1 would speak blasphemy, ere bid you fly ;

But fly you must. Id.

And darest thou to the Son of God propound To worship thee accurst ; now more accurst For this attempt, bolder than that on Eve, And more blasphemous 1 Milton.

For this he shall live hated, be blasphemed, Seized on by force, judged, ana to death condemned,

Id.

Even that blasphemer himself would inwardly re- verence his reprover, as he in his heart really despises him for his cowardly base silence. South.

Where is the right use of his reason, while he would blasphemously set up to controul the commands of the Almighty ? Swift.

Intrinsick goodness consists in accordance, and sin in contrariety, to the secret will of God ; or else God could not be denned good, so far as his thoughts and secrets, but only superficially good, as far as he is pleased to reveal himself, which is perfect blasphemy to imagine. Hammond.

Blasphemy, strictly and properly, is an offering of some indignity, or injury, unto God himself, either by words or writing. Ayliffe.

A man can hardly pass the streets, without having ais ears grated with horrid and blasphemous oaths and curses. Tillotson.

Those who from our labours heap their board, Blaspheme their feeder, and forget their lord. Pope.

Inspire me, night ! with all thy tuneful spheres, Whilst I with seraphs share seraphic themes, And shew to men the dignity of man, Lest I blaspheme my subject with my song. Young.

Pale meagre spectres wander all around, And pensive shades and black deformed gl.osts, With impious fury some aloud blaspfteme. Mrs. Rowe.

BLASPHEMY is a crime recognised by the civil and canon law, and by both the statute and common law of England. Justinian adjudged to it the punishment of death. An old Scotch law doomed the ofi'ender to undergo the ampu tction of his tongue. By the canon law the

punishment of k is only a solemn penance upon laymen, in the church, and by general custom, either a pecuniary or corporal punishment, but not death. The 9 & 10 William HI. enacts, that the offence shall be visited with legal inca- pacities and imprisonment. This statute ex- pressly included Anti-Trinitarians, but so much of it as affected them was repealed by the Trinity Bill, which passed in 1813; notwithstanding which, it is doubted whether the common law does not still regard the denial of the Trinity as a crime.

The English word is derived from the Greek, and the original is a compound term, bearing the signification of wounding the reputation, of de- traction or calumny. The Hebrew word, which is translated by the Greek term, now explained in the LXX., and by blasphemy in the English version, is of the same meaning, Ā«)TJ opprobrium vel convicium, aut

blasphemia est hujus radicii interpretatio. ā Concord. Sac. Bib.Heb. Calasio, ed. Romaine. Both words denote slander, or, wilful, malignant falsehood against whomsoever directed. But, as amongst the Jews contumelious language with regard to Jehovah was the highest of crimes, the Hebrew word was at length ap- propriated to that particular offence.

Dr. Campbell is the only modern critic who has treated expressly of the subject of blasphemy, with a view to correct some popular mistakes upon it. ' In theological disputes, nothing is more common,' says he, ' to the great scandal of the Christian name, than the imputation of blasphemy, thrown by each side upon the other. The injustice of the charge on both sides will be manifest on a little reflection, which it is the more necessary to bestow, as the commonness of the accusation, and the latent but contagious motives of employing it, have gradually perverted our conceptions of the thing.

'It has been remarked,' he adds, 'already, that the import of the word j3\affi)ˆa is maledi- centia, in the largest acceptation, comprehending all sorts of verbal abuse, imprecation, reviling, and calumny. Now let it be observed, that when such abuse is mentioned as uttered against God, there is properly no change made in the significa- tion of the word ; the change is only in the appli- cation, that is, in the reference to a different object. The idea conveyed in the explanation now given is always included, against whomsoever the crime be committed. In this manner every term is understood that is applicable to both God and man. Thus the meaning of the word disobey is the same, whether we speak of disobeying God or of disobeying man. The same may be said of believe, honor, fear, &c. As, therefore, the sense of the term is the same, though differently applied, what is essential to constitute the crime of detraction' in one case, is essential also in the other. But it is essential to this crime, as com- monly understood, when committed by one man against another, that there be in the injurious person the will or disposition to detract from the person abused. Mere mistake in regard to character, especially when the mistake is not conceived by him who entertains it to lessen the character, nay, is supposed, however erroneously, to exalt it, is never construed by any one into

the crime of defamation. Now, as blasphemy is, in its essence, the same crime, but immensely aggravated by being committed against an object infinitely superior to man, what is fundamental to the very existence of the crime will be found in this, as in every other species which comes under the general name. There can be no blas- phemy, therefore, where there is not

an impious purpose to derogate from the Divine Majesty, and to alienate the minds of others from the love and reverence of God.' ā Preliminary Disserta- tion, prefixed to his Gospels, 8vo. vol. i. p. 448.

It has been a matter of considerable discus- sion in modern times, how far a crime, in its nature so difficult properly to define ā in its strict sense, perhaps, so rarely committed ā and the decision upon which it seems so unjust to place in the hands of any one religious party, should remain at all a matter for prosecution by the laws of a civilised state. On the one hand it is contended, that, as Christianity is a part and portion of the law in every country maintaining an established religion, it seems to be involved with the just defence of that religion that blasphemy should be punished ; that it is immoral ; and that contumely of the Deity, or even of the books of inspiration, ought not to be diffused among the unthinking and the young.

To this it is replied, ' Deorum injuriae diis cura,' though calumny and slander, when affecting our fellow men, are punishable by law ; for this plain reason, because an injury is done and a damage sustained, and a reparation therefore due to the injured party ; yet, this reason cannot hold where God and the Redeemer are con- cerned, who can sustain no injury from low malice and scurrilous invective ; nor can any reparation be made to them by temporal penalties ; for these can work no conviction or repentance in the mind of the offender ; and, if he continue impenitent and incorrigible, he will receive his condign pu- nishment in the day of final retribution.' See Furneaux's Letters to Blackstone. Second ed. pp. 70, 71-

The punishment of constructive blasphemy by law seems still more open to abuse ; for, as the above able writer observes, ' laws for the punish- ment of blasphemy may be easily turned to the destruction of all religious liberty : for what is blasphemy, in the general sense of the term, but uttering something dishonorable or injurious to the Divine Being? And what controverted re- ligious sentiment is there, which under this ge- neral notion, by a court and jury of bigots, may not be condemned as blasphemy ? The Athena- sian 'styles the Arian a blasphemer, the Arian the Athanasian ; the Calvinist the Arminian, the Arminian the Calvinist : and thus the same laws, differently applied as different parties prevail, will prove fatal to the religious liberty of all of them in their turn.'

BLASPHEMY AGAINST THE HOLY GHOST. Di- vines are not agreed with respect to the nature of the sin thus denominated (Matt. xii. 31.), and the giounds of the extreme guilt ascribed to it. Tillotson maintains, that it consisted in mali- ciously attributing the miraculous operations whidi Christ performed by the power of the Holy Ghost to the devil. Ur.Whitby refers it to

the dispensation of the Holy Ghost, which com- menced after our Lord's resurrection and ascen- sion; and those, he says, were guilty of the crime who persisted in their unbelief and blas- phemed the Holy Ghost, representing him as aa evil spirit. The crime was unpardonable, bo cause it implied a wilful opposition to the last and most powerful evidence which God would vouchsafe mankind, and precluded the possibi- lity, by rejecting the means, of recovery. In this sentiment Dr. Doddridge coincides. Bishop Pearce's remarks here are excellent. ' Under the Jewish law there was no forgiveness for wil- ful and presumptuous sins : concerning them it it is said in Numb. xv. 30, 31, 'The soul which doeth ought presumptuously, the same re- proacheth the Lord ; and that soul shall be cut off from among the people, because he hath de- spised the word of the Lord and hath broken his commandments.' See, to the same purpose, Numb. xxxv. 31. Lev. xx. 10. and 1 Sam. ii. 25 With regard to the seculum futurum, the age to come, or the Christian dispensation, no forgive- ness could be expected for such sinners as these Pharisees were ; because when they blasphemed the Holy Spirit of God, by which Jesus wrought his miracles, they rejected the only means of forgiveness, which was the merit of his death applied to men by faith, and which, under Christianity, was the only sacrifice that could atone for such a sin : in this sense, as things then stood with them, their sin was an unpardonable one. But then it is not to be concluded from hence, that if they repented of this blasphemy, they could not obtain forgiveness.' The bishop then quotes an observation of Athanasius, (vol.i. p. 237. Ed. Col.) ' Christ does not say to him that hlasphemeth and repenteth , but to him that blasphemeth, and therefore he means, tr him that continueth in his blasphemy ; for with God there is no sin that is unpardonable,'

BLAST', v. & n.~\ From Sax. blaefc; Germ. BLAST'ER, { blusen ; to blow. A sudden

BLAST'ING, i gust or puff of wind : to

BLAST'MENT. J blast, is to strike with an impetuous and destructive force; to wither; to desolate ; to destroy ; to make a shrill, loud, and sudden noise, by blowing a trumpet, or any in- strument of wind music ; to cut off prematurely to render infamous ; to confound ; to strike with terror.

By the blast of God they perish.

Job.

But rede that boweth doune for every blast ā

Ful lightly cesse wind, it wol arise ;

But so nil not an oke whan it is cast. C/iancer.

The blossome which my braunch of youth did heare, With breathed oighes is blowne away and blasted.

Spenser. Sftepheard's Calender.

A myghty tre and ol a noble heyght Whose beaute blasted was with boystuous winde, His leaups loste, the sappe was from the rynde.

'

1 am no bluster of a ladie-'s beauty, Nor bold intruder on her special favours, 1 know how tender reputation is, And with what guards it ov.ght to be prrsorverf.

Keaiitnont and J'letchet.

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They that stand high have many blasts to shake

them; And if they fall, they dash themselves to pieces.

S/takfpeare. Welcome, then,

Thou unsubstantial air, that I embrace ; The wretch that thou has blown unto the worst Owes nothing to thy blasts. Id.

In peace, there's nothing so becomes a man, As modest stillness and humility ; But when the blast of war sounds in our ears, Then imitate the action of the tyger. Id.

In the morn and liquid dew of youth, Contagious blastments are most imminent. Id.

You nimble lightnings, dart your blinding flames Into her scornful eyes ! infect her beauty, You fen-sucked fogs, drawn by the powerful sun, To fall and blast her pride. Id.

First Buckingham, that durst 'gainst him rebel,

Blasted with lightning struck, with thunder fell ;

Next the twelve commons are condemned to groan,

And roll in vain at Sisyphus's stone. Marvell.

Blast him 0 heavens ! in his mad career,

And let this isle no more his frenzy fear. Id.

He blew his trumpet ā the angelick blast

Filled all the regions. Milton.

The Veline fountains, and sulphureous Nar, Shake at the baleful blast, the signal of the war.

Dryden.

Three ships were hurried by the southern blast, And on the secret shelves with fury cast. Id.

Oh ! Portius, is there not some chosen curse, Some hidden thunder in the store of heaven, Red with uncommon wrath, to blast the man Who owes his greatness to his country's ruin ?

Addison. She that like lightning shined, while her face

lasted,

The oak now resembles, which lightning had blasted.

Waller.

Agony unmixed, incessant gall, Corroding every thought, and blasting all Love's paradise. TJiomson.

He shews himself weak, if he will take my word when he thinks I deserve no credit ; or malicious, if he knows I deserve credit, and yet goes about to blast it. Stilling fleet.

And, with a withering look, The war-denouncing trumpet took, And blew a blast so loud and dread, Were ne'er prophetic sounds so full of woe. Collins.

Nor deemed before his little Jay was done One blast might chill him into misery. Byron.

BLAST is also applied in a more general sense to any forcible stream of wind or air, excited by the mouth, bellows, or the like.

BLAST, in agriculture and gardening, a name for what is otherwise called a blight.

BLASTING, among miners, a term for the tearing up rocks, which they find in their way, by gunpowder. The old method of doing this was to make a long hollow of a large eˆin-barrel in the rock they would split ; this they rilled with gunpowder; then they firmly stopped up the mouth of the hole with clay, except a touch- hole, at which they left a match to fire it. More ‘ commonly now, however, a straw filled with gunpowder is introduced among shot, at the bot- tom of a cylindrical hole in the rock, Some of the hardest rocks at Fort William and at Bristol were thus exploded by Mr. Joseph.

BLASTING OF WOOD, the rending in pieces logs of wood, such as roots of trees, &c. by means of gunpowder. A very simple method has been described by Mr. Knight of Foster Lane, Lon- don, which is thus effected : the instrument used is a screw, with a small hole drilled in the centre. The head of the screw is formed into two strong horns, for the more ready admission of the lever with which it is to be turned, and a wire, for the purpose of occasionally clearing the touch-hole. When a block of wood is to be broken, a hole is to be bored with an auger to a proper depth, and a charge of gunpowder introduced. The screw is to be turned into the hole till it nearly touches the powder; a quick match is then to be put down the touch-hole till it reaches the charge. The quick match is eighteen inches long, to afford the operator an opportunity of retiring, after lighting it, to a place of safety : it is made by steeping a roll of twine or linen thread in a solu- tion of saltpetre.

BLASTUM MYSOLITUM, in the materia me- dica, a term used by some writers to express the cassia lignea, or cassia bark, when not peeled off from’the branches, but kept with the wood.

BLASTUS, in sacred history, chamberlain to king Herod. See Acts xii. 20.

BLATANT, adj. Fr. blattant. Bellowing as a calf.

But now I come unto my course again To his atchievement of the blatant blast ; Who all this while at will did range and raine, Whilst none was him to stop, nor none him to re- straine. Spenser.

You learned this language from the blatant beast.

Dryden.

BLATOBULGIUM, in ancient geography, a place of the Brigantes in Britain, having a camp of exploratores or scouts near Solway Frith and

promontory ; now called Bullness.

BLATTA, or cock-roach, a genus of insects belonging to the order of hemiptera, or such as ā¢ have four semicrustaceous incumbent wings. The head of the blatta is inflected towards the breast ; the antennae, are hard like bristles ; the elytra and wings are plain ; the breast is smooth, roundish, and is terminated by an edge or margin ; and there are two small horns above the tail. This insect resembles the beetle ; and there are ten species, viz. 1. B. Africana is ash-colored, and has some hairs on its breast. It is found in Africa. 2. B. alba is red, the margin of the breast is white. It is found in Egypt. 3. B. Americana is of an iron color, and the hind part of the breast is white. The wings and elytra are longer than its body. It is found in America and the south of France. 4. B. Orientalis is of a dusky ash-color, has short Ā«lytra, with an ob- long furrow in them. This species is frequent in America. 5. B. nivea is white, with yellow feelers. It is a native of America. 6. B. Suri- namensis is livid, and the breast edged with white. It is a native of Surinam. Beside these there have been added by Fabricius, Gmelin, &c. viz. maderae, /Egyptiaca,Occidentalis, Australasia, erythocephala, Capensis, Indica, nivea, irrorata, viridis, Brasiliensis, petiveriana, cincta, picta, va- riegata, ruficollis, maculata, marginata, nitidula, fusca, deusta, chlorotica, latissima, aterrima.

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perspicillaris, Asiatica, schjefferi, sylvestris, Penn- sylvanica, livida, rufa, grisea, minutissima, ap- tera, punctulata, ocellata.

BLATTA, in middle age writers, denotes a pur- ple in the wool or silk, dyed with the liquor of the fish of the blatta. It was also used, accord- ing to some, for the kermes ; and, according to others, for the purple worm.

BLATTA BYZANTINA, in physiology and phar- macy, a testaceous body, being the operculum, or lid of a turbinated shell, whose fish yields a purple dye. In Dioscorides's time, the best was brought from the Red Sea, viz. the palest and the fattest ; the blacker and less from Babylon, or the Persian Gulf; but in later times they took up with those found about Constantinople ; whence the present blatta of the shops had its name.

BLATTARIA, Tournefort's generic name for the verbascum of Linnaeus. See VERBASCUM.

BLATTARIA, from blatta, a moth or little worm ; the title of Scopoli's twelfth natural class, in his Flora Carniolica.

BLATTER, } Lat. blatero, from blatio.

BLATTERA'TION, > Vossius derives it from

BLATTER'OON. j the Gr. BXarov, for BXˆrov, cast, thrown forth ; to roar ; to make a sense- less noise; babbling; chattering; blabbing; bolting out any thing.

For before it (the tongue) she hath set a pallisado of sharp teeth, to the end that if, peradvcnture, it will not obey reason, which within holdeth it hard, as if with a strait bridle, but it will blatter out and not tarry within, we might bite it until it Wed again, and so restrain the intemperance thereof.

Holland. Plutarch.

She rode at peace, through his only pains and ex- cellent endurance, however envy list to blatter against him. Spenter.

I hate such blateroons. Howell't Letters.

BLATUM. See BLADUM.

BLAU, a river of Germany, in the circle of Suabia.

BL AVET, a sea-port town of France, in the de- partment of the Morbihan, and ci-devant province of Britanny, situated at the mouth of the river of that name. It was one of the stations of the royal navy of France, and called Port Louis, after Louis XIV.

B.LAVIA, or BLAVIUM, in ancient geography, a town of Aquitain, on the north bank of the Garonne, below its confluence with the Dor- dogne, now called Blaye.

BLAYE, an ancient and strong town of France, in the department of the Gironde, and late province of Guienne. It is situated on the Garonne, has a harbour much frequented by fo- reigners, and the ships which sail to Bourdeaux are obliged to leave their guns here. The river is 3800 feet broad at Blaye ; for which reason a battery was built upon an island in 1689, to command the vessels that sail up. The city is built on a rock, and has a citadel with four bastions, which is called the Upper Town. The lower town is separated from the upper by a small river; and the merchants reside in it. The trade of Bluye consists chiefly in wines and brandy. The neighbourhood produces a great dral of corn, which is also sometimes exported.

It is twenty miles north of Bourdeaux. Popu- lation about 4000.

BLAYNEY (Benjamin), D. D., was educated at Oxford. He was originally of Worcester Col- lege, but quitted it in 1787, on obtaining a fel- lowship at Hertford College. He resigned the latter appointment for a canonry of Christ Church, with the professorship of Hebrew annexed. He also enjoyed the rectory of Polshot, Wilts, which he held at his death, which took place in 1801. He very ably superintended the common version of the English Bible printed at the Clarendon press, 4to. 1769, (see BIBLE), and published, 1. A Dissertation by Way of Enquiry into the true Import and Application of the Vision related by Dan. ix., &c. 4to, 1784. 2. Jeremiah and Lamen- tations, a New Translation, with Notes Critical, &c. 8vo. 1784. 3. Zechariah, a New Transla- tion, with Notes Critical, &c. ; to which is added a New Edition, with Alterations, of the Disser- tation on Daniel, 4to. 1797.

BLAZE', t?. & n.~\ Ang.-Sax. blaesan, to

BLA'ZEN, (blow; Germ, blasen; Dutch,

BLA'ZING, tbl&esan; to emit aflame,

BLA'ZURE.) like a blast; a flame;

blase implies more the light than the heat ; dif- fusion of light suddenly, widely, rapidly ; meta- phorically, applied to a rapid and wide diffusion of a report ; to an account of ensigns armorial in proper terms; to any thing set forth conspi- cuously ; ostentatiously.

But he went out, and began to publish it much, and to blaze abroad the matter. Mark.

This lady brought in her right hond Of brenning fire a blazing brond, ā Whereof the flame and hole fire Hath many a lady in desire Of loue brought. Chaucer.

Utterers of secrets he from thence debarred, Babblers of folly, and blazers of crime. Spenter.

And eke you virgins that on Parnasse dwell, Whence floweth Helicon, the learned well, Help me to blaze Her worthy praise, Which in her sexe doth all excell. Id,

I cannot tell you what was this knightes name, nor of what countre, but the blasure of his armes was goules, two fusses, sable, a border sable.

Froissart. Cronycle.

When beggars die, there are no comets seen ; The heavens themselves blaze forth the death of princes. Shakspeare.

The main blaze of it is past ; but a small thing would make it flame again. Id. Coriolamu.

Thy throne is darkness in the abyss of light, A blaze of glory that forbids the sight. Dryden.

What groans of men shall fill the martial field ! How fierce a blaze his flaming pile shall yield ! What funeral pomp shall floating Tiber see ! Id.

Thus you may long live an happy instrument for your king and country ; you shall not be a meteor, or a blazing star, but Stella fixa ; happy here, and more happy hereafter. Bacon.

The noise of this fight, and issue thereof, being blazed by the country people to some noblemen there- abouts, they came thither. Sidney.

Such musick worthiest wore to blaze The peerless height of her immortal praise. Whose lustre leads us. Milton.

For what is glory but the blaze of fame, Thn people's praise, if always praise unmixt? la.

BLEACHING.

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But, mortals, know, 'tis still our greatest pride To blaze those virtues which the good would hide.

Pope.

Then glossy smooth lay all the liquid plain. Id.

This, in ancient times, was called a fierce ; and you should then have blazed it thus : he bears a fierce sable between two fierces, or. Peacham.

Those hearts that start at once into' a blase, And open all their rage like summer storms At once, discharged, grow cool again and calm.

C, Johnson's Medeea.

If of Dryden's fire the blaze is brighter, of Pope's ihc heat is more regular and constant. Johnson.

Slow sinks, more lovely ere his race be run, Along Morea's hills the setting sun ; Not as in northern climes obscurely bright, But one unclouded blaze of living light! O'er the hush'd deep the yellow beam he throws, Gilds the green wave that trembles as it glows.

Byron's Corsair.

BLAZEY BAY, a bay of the English channel, on the south-west coast of the county of Corn- wall, between Fowey and Deadman Point. BLAZ'ON, n. & v. "} Fr. blasonner ; general BLAZON'ER, S applications the same as

BLAZON'RY. 3 blaze; to blaze and,. to

blazon are the same, only that the latter is mfre exclusively applied to the figures on ensigns ar- morial.

0 thou goddess,

Thou divine nature ! how thyself thou blaxonett In these two princely boys ! they as, gentle As zephyrs blowing below the violet, Not wagging his sweet head. Shakspeare.

One that excels the quirk of blazoning pens, And in the essential vesture of creation, Does bear all excellency. Id.

What is this but libelling against the senate, And blazoning our injustice everywhere? Id,

But this eternal blazon must not be To ears of flesh and blood. Id,

I am a gentleman. ā I'll be sworn thou art j Thy tongue, thy face, thy limbs, action, and spirit, Do give thee five-fold blazon. Id,

Proceed unto beasts that are given in arms, and teacJi me what I ought to observe in their blazon.

Peacham.

Give certain rules as to the principles of blazonry.

Id. on Drawing.

King Edward gave to them the coat of arms, which I am not herald enough to blazon into English.

Addison.

BLAZON, a market town of Austrian Galicia, circle of Zolkien, with a Catholic and a Greek church. There is also a village ofthis name in the circle.

BLAZONING, or BLAZONRY, in heraldry, the decyphering the arms of noble families. The word originally signified the blowing or winding of a horn ; and was introduced into heraldry as a term denoting the description of things borne in arms, with their proper significations and intend- ments, from an ancient custom the heralds, who were judges, had of winding a horn at justs and tournaments, when they explained and re- corded the achievements of knights. See HE- RALDRY.

BLEACH', v. n. & adj.) Ang.-Sax. blican,

BLEACH'ER. > ablican, dealbare ;

Germ, bleicken; Dutch, bleycken; Swed. bleka. To whiten ; to whiten by exposure in the open air; to grow white.

When turtles tread, and rooks and daws ; And maidens bleach their summer smocks. Shakspeare.

The white sheet bleaching in the open field. Id,

For there are various penances enjoined ; And some are hung to bleach upon the wind ; Some plunged in waters. Id,

And Turner, gay, up to his perch to march, With face new bleached, smoothed, and stift with starch. Marvell.

The deadly winter seizes ; shuts up sense j Lays him along the snows, a stiffened corse, Stretched out and bleaching in the_northern b'ast.

Thornton.

Albeit unworthy of the prey-bird's maw, Let their bleached bones, and blood, unbleaching stain, Long mark the battle-field, with hideous awe. Byron.

BLEACHING is the art of discharging from cotton, linen, woollen, and other goods, their na- turally dark tinge, and rendering them white. It is an art which has attended the very dawn of civilisation in all parts of the globe. In Egypt, India, and Syria, the efficacy of natron, the nitre of Scripture, in this process, was evi- dently known from a remote period ; (Jer. ii. 22,) and Pliny states (lib. xviii. c. 51), that the an- cient Gauls were well acquainted with the use of a lixivium made from the ashes of burnt ve- getables, as a detergent, and knew how to com- bine it with animal oil, so as to form a powerful soap. That in the eastern parts of the world this art, like almost every other, should have remained stationary for ages, will not occasion surprise ; but that, in enlightened Europe, a process so im- portant should have been altogether neglected by men of science, until within a very recent pe- riod, seems astonishing. Such, however, is the fact. Until towards the close of the last century

it had made little or no advances ; and to Messrs. Scheele and Berthollet, foreign chemists (par- ticularly to the latter) is to be awarded the honor of effecting a peaceful but entire revolution in this ingenious art.

This is not now, therefore, the practice of wetting cloths on the field, and trusting, with the uncivilised Indian, to the sun and air, to accom- plish the whiteness of them ; but a process essen- tially chemical, and calling into operation some of the most splendid, because useful discoveries, of a Thenard, a Watt, and a Davy. As the old process is far from being entirely exploded, however, in remoter parts of this country4 and because it will assist the reader in appreciating the march of science upon this subject, we shall treat in this paper, I. Of the old plan of bleach- ing. II. Of the chemical substances now em- ployed in that art. III. Of the machinery used. And, IV. Of the principal improvements in the modern mode of bleaching.

I. ā OF THE OLD PLAN OF BLEACHING.

There are many materials which it is necessary to bleach previously to their being manufactured, and especially those of the more delicate kind, as silk for example, since they would not be able to endure the violence of several of the processes without injury to the tender woof. Such pro- cesses, however, do no injury to the strong tex- ture of linen or hempen cloths, and hence they are uniformly woven before they are committed to the bleacher’s hands.

Let us, however, follow up these materials from their simplest and rudest state. If ripe flax be examined, it will be found to be composed of fibres or filaments united together by the sap, enveloping a semiligneous substance, and covered with a thin bark. It is the fibrous part only that is used for making cloth, and it must there- fore be previously separated from the other matters. The sap or succulent part is composed of extractive principle and water, and the first process is to separate this substance, which holds the filaments together. As soon as the flax is pulled, it is steeped in soft water until the putre- factive fermentation takes place. This degree of fermentation begins with the succulent part, as being more susceptible of decomposition than the rest. Were the flax to be continued long in this state the whole substance of it would be de- composed or destroyed, upon the same principle that malt is injured by too loi.g steeping, or that wort loses its substance by too long a fermenta- tion. It must therefore be taken out of the water while yet green, and before the whole of its sap is separated. Well water and brackish water must be carefully avoided, as also that which flows over gypseous soil. Such water accelerates putrefaction, and hurts the quality of the hemp and flax. This is perfectly agreeable to the prin- ciples of chemistry : it is thus that a little salt accelerates animal putrefaction, while a greater quantity tends to prevent it. The portion of sa- line substances taken up by the water hastens corruption, by extending the putrid fermentation even to the filaments, which it blackens and spoils, while it ought to operate only on the juices.

The flax, when taken from the water, is spread out upon the grass to dry. During the fermen- tation and decomposition which thence result, there is a speedy combination of oxygen and carbon. Exposure on the grass facilitates the escape of the carbonic acid into the atmosphere, and the plants become of a whitish-gray color. It is known that a lee very slightly alkaline may be substituted with advantage, for this long and noxious operation ; it is therefore certain, that a chamber from twenty to thirty feet in length, into which the steam of alkaline caustic water, of the strength of one-fourth of a degree only, is intro- duced, will be sufficient to produce the same effect as watering on an immense quantity of hemp and flax, suspended on basket-work, in less time, and with less expense, than are required for the different manipulations of watering. The losses occasioned b, the negligence of workmen, who, by suffering the hemp and flax to macerate too long, give time to the decomposition to reach the filaments, which renders them brittle, and occa-

sions a considerable waste, will also be avoided In this process the artist can follow every mo- ment the progress of his operation, and stop it at the favorable period. Nothing now remains but the wood, and the flax or fibrous part. The wood is a hollow tube covered over very com- pactly with the flax. To separate the wood, it must be kiln-dried, in order to render it

frangible or brittle ; but care must be taken not to apply too much heat, for fear of injuring the flax.

It is next to be beaten or broken, by which means the flax is not only divided into small fibres, but most of the wood is separated, and the part which adheres is reduced to small fragments. To separate these again-, the flax is to be scutched, or threshed, in small parcels at a time, either by manual labor, or mills contrived for the purpose. Hackling is the last process ; which is nothing more than drawing or combing the flax in small parcels at a time, through a pile or group of polished and sharp steel spikes, placed firmly in wood through an iron plate. The spikes are placed pretty close together : the first hackle (for different hackles must be used) is coarse, the se- cond finer, and the third finer still. The process or hackling answers a double or triple purpose ; first, it divides the fibres of the flax, as much as this can be effected by mechanical means ; secondly, it separates the minute fragments of wood which escaped the process of scutching; and lastly, it separates the short coarse flax, commonly called tow.

Spinning and weaving are too well known to need description. The linen, as it comes from the loom, is charged with what is called the wea- ver's dressing, which is a paste of flour boiled in water ; and as this is brushed into the yarn of the warp before it is woven, it is somewhat diffi- cult to separate it when dry. To discharge this paste, the linen must be steeped in water for about forty-eight hours ; when this extraneous substance undergoes a kind of fermentation, which does not extend to the substance of the linen itself, upon the same principle that the green sap is disengaged from the flax with- out injury to its texture. The linen being well washed after this fermentation, contains nothing that water can separate; it is of a grayish white color, although the fibres of which it is composed, when divested of every adventitious substance, are naturally very white. In this state the cloth is committed to the bleacher, and the process of whitening com- mences. Under the old system it consisted of the following series of operations: 1. Steeping and milling. 2. Bucking and boiling. 3. Al- ternate watering and drying. 4. Scouring or acidifying. 5. Soaping. 6. Starching and bluing.

1 . Of steeping and milling. ā Green linen, in the different changes which it has undergone, contracts a great degree of foulness. This is chiefly communicated to it by the matters used in the dressing, which should be effectually cleared off. The first thing therefore that is to be done in the bleach-field is to take off all that filth that is fo- reign to the flax, and might, in unskilful hands, be fixed in the cloth. This is the object of steep ing, and to accomplish this end, the cloth is laid

in blood-warm water. A smaller degree of heat than that would not dissolve the dressing so soon : and a greater might coagulate and fix, in the body of the linen, those particles which we design to carry off. In a few hours the dressing made use of in weaving is dissolved, and mixed with the water ; and as it had acquired some degree of acidity before application, it becomes a species of ferment. Each ferment promotes its own par- ticular species of intestine motion ; the putrid ferment sets in motion the putrefactive fermenta- tion ; the vinous ferment gives rise to the vinous fermentation ; and the acid ferment to the acetous fermentation. That there is a real fermentation going on in steeping is evident from the air-bub- bles which immediately begin to rise, from the scum also which gathers on the surface, and from the intestine motion of the whole liquor. Tuat it must be the acetous fermentation appears from this, that the vegetable particles, already in part scoured, must first undergo this process. The consequence of this operation on the whole is, that the cloth comes out freed in a great measure from its superficial dirt, and more pliant and soft than it was before. The first question to be de- termined on these principles is, What are the most proper liquors for steeping cloth ? Those which, by the old method, are used by bleachers are plain water; lee and water, equal parts; and rye meal or bran mixed with water : but they always make use of lee when they have it. After steeping, the cloth is carried to the putstock-mill, to be freed of all its loose foulnesses. While it presses gently, it also turns the cloth ; which is continually washed with a stream of water. Care must be taken, however, that no water be de- tained in the folds of the linen, otherwise that part may be injured.

2. Of Bucking and Boiling. ā This is the most important part of the whole process, and deserves a very nice examination ; its design is to loosen and carry off, by the help of alkaline lixivia, that particular substance in cloth, which is the cause of its brown color. All ashes used in lee, pearl- ashes Ā«xcepted, ought to be well pounded before they are put into the copper ; for the marcroft and cashub are very hard, and with some diffi- culty yield their salt : as these two last contain a very considerable proportion of a matter which will in some degree tinge white cloth, and as this is dissolved much more by boiling than by the inferior degrees of heat, while the s-xlts may be as well extracted by the latter, the water should never be brought to boil, and should be conti- nued for some time longer under that degree of heat. The pearl-ashes should never be put in till near the end, as they are very soluble in water. If these salts were always of an equal strength the same quantities would make a lee equally strong, but they are not. Salts of the same name differ very much from each other. The Muscovy ashes become weaker every day, as every bleacher must have observed, till at last they turn quite efl'ete. A decoction from them when new must differ very

much from one when they have been long kept. Hence the necessity of some exact criterion to discover when lees are of an equal strength. The taste cannot serve, as t'.isu is so variable, cannot be described to another,

and is blunted by repeated trials. The proof-ball has been found to serve the purpose of the bleach- field sufficiently ; and, by discovering the specific gravity, to show the quantity of alkaline salts dissolved. But it cannot show the dangerous qualities of these salts ; for the less caustic and less heavy this liquor is, the more dangerous and corrosive it may be for the cloth. The third lee, which they draw from these materials by an in- fusion of cold water, in which the taste of lime is discoverable, appears plainly to be more dan- gerous than the first. The second lee, which they extract from the same ashes, and which is reckoned about a third in strength, when com- pared to the first, must be of the same nature ; nor should it be used without an addition of pearl-ashes, which will correct it.

It is necessary that the cloth should be made dry before bucking, that the salts may enter into the body of the cloth along with the water; for they will not enter sufficiently if it be wet, and by acting too powerfully on the external threads, may endanger them. The degree of heat is a very material circumstance in this operation. As the action of the salts is always in proportion to the heat, it would appear more proper to begin with a boiling heat, by which a great deal of time and labor might be saved. The reason why this method is not followed appears to be this : if any vegetable or vegetable substance is to be softened and to have its juices extracted, it is found more proper to give it gentle degrees of heat at first, and to advance gradually, than to plunge it all at once in boiling water. This last degree of heat is so strong, that, when applied at once to a vegetable, it hardens instead of soften- ing its texture. Dried vegetables are immedi- ately put into boiling water by cooks, that these substances may preserve their green color, which is only to be done by hindering them from turn- ing too soft. Boiling water has the same effect on animal substances; for if salt beef be put into it, the water is kept from getting at the salts from the outside of the beef being hardened. But if it bĀ« considered how much of an oily substance there is in the cloth, especially at first, which will for some time keep off the water, and how the twisting of the threads, and the closeness of the texture, hinders the water from penetrating, we shall find that if boiling water were put on it at once, the cloth might be liable in several parts to a dry heat, which would be much worse than a wet one. That the lees have not access to all parts of the cloth at first, appears plainly from this, that when it has lain after the first bucking, till all the lees are washed out, it is as black in some parts as when it was steeped : which must be owing to the discharge of the coloring parti- cles from those places to which the lee has access, and to their remaining where it has not. It would seem advisable then, in the first bucking or two, when the cloth is foul, to use the

lee con- siderably below the boiling point; that by this soaking or maceration, the foulness may be en- tirely discharged, and the cloth quite opened for the speedy reception of the boiling lee in the buckings which succeed. The lees should like- wise be weakest in the first buckings, because then they act only on the more external parts ;

whereas, when the cloth is more opened, and the field of action is increased, the active powers ought to be so too. For this reason they are the strongest after some sourings. In all coarse cloths, however, boiling is substituted in place of bucking. This species of linen cannot afford the time and labor necessary for the latter ope- ration ; and therefore they must undergo a shorter and more active method. As the heat continues longer at the degree of boiling, the lees used for the coarse cloth must be weaker than those used for the fine. There is not so much danger from heat in the coarse as in the fine cloth, because the former is of a more open texture, and will allow the lee to penetrate more speedily. In the closer kinds, however, the first application of the salts should be made without a boiling heat being used.

3. Of alternate watering and drying. ā After the cloth has been bucked it is carried out to the field, and frequently watered for the first six hours. For if, during that time, when it is strongly impregnated with salts, it is allowed to dry, the salts approaching close together, and assisted by a greater degree of heat, increasing always in proportion to the dryness of the cloth, act with greater force, and destroy its very tex- ture. After this time, dry spots are allowed to appear before it gets any water. In this state it profits most, as the latter part of the evaporation comes from the more internal parts of the cloth, and will carry away most from those parts. The bleaching of wax helps to confirm this ; for it seems to whiten most when the last particles of water are going off. This continual evaporation from the surface of the cloth shows that the de- sign of the operation is to carry off somewhat re- maining after the former process of bucking. This appears likewise from a fact known to all bleachers, that the upper side of cloth, where the evaporation is strongest, attains a greater de- gree of whiteness than the under side. But it is placed beyond all doubt by experiment, which shows that cloth turns much lighter by being exposed to the influence of the sun, air, and winds, even though the salts have been washed out of it.

4. Of souring, or acidifying. ā It is well known to all chemists that alkaline salts are convertible, by different methods, into absorbent earths. Fre- quent solution in water, and evaporation of it again, is one of these methods. The

transmuta- tion then of these salts, which are not volatilised or washed away, must be continually going on in the cloth under the alternate waterings and dryings of the former process : not much indeed after the first two or three buckings, because the salts, not having entered deep into the cloth, are easily washed off or evaporated. But when they penetrate into the very composition of the cloth and minutest fibres, of which the first vessels are made, they find greater difficulty of escaping again, and must be more subject to this trans- mutation. But if we consider the bleaching ashes as a composition of lime and alkaline salts, we must discover a fresh fund for the deposition of this absorbent earth. The common caustic, a composition of this very kind, soon converts itself, if exposed to the open air, into a harmless

earthy kind of powder. The effect of frequent buckings and bleachings is that of loading the cloth with this substance. It becomes then ne- cessary to take it out. No washing can do that, because earth is not soluble in water. Nothing but acids can remove it. These are attracted by the absorbent earth, join themselves to it, and compose a kind of neutral imperfect salt, which is soluble in water, and therefore easily washed out of the cloth. The acid liquors used com- monly have been butter-milk, which is reckoned the best, sour milk, infusion of bran, rye-meal, &c. kept for some days till they sour. Sour whey is thought to give the cloth a yellow tinge. The linen ought to be dried before it is put in the sour, that the acid particles may penetrate along with the watery, through the whole. A few hours after it has been there, air-bubbles arise, the liquor swells, and a thick scum is formed, and there is an increase of heat, manifesting signs of fermentation. Sours that are made of bran, rye- meal, &c. ought to be prepared before use, for by this means so much time will be saved. Be- sides, when the water is poured upon the cloth and bran, as is done in the management of coarse cloth, the linen is not in a better situation than if it had been taken up wet from the field ; and by this means the acid particles cannot penetrate so deep. Again, this method of mixing the bran with the cloth may be attended with yet worse consequences. All vegetable substances when much pressed fall into the putrescent, and not the acetous, fermentation. This often happens to the bran pressed betwixt the different layers on the linen, which must weaken the cloth. Hence, all sours should be prepared before the cloth is steeped in them ; and none of the bran or meal should be mixed with the cloth. The sours are used strongest at first, and gradually weakened till the cloth has attained to its whiteness. In the first sourings there is more of the earthy matter in the cloth, from the many buckings it has undergone, than what there can be after- wards. As the quantity of this matter decreases, so should the strength of the sour. There is not, however, the least danger at any time from too strong a sour. Dilute sulphuric acid is some- times employed instead of vegetable acids.

5. Of soaping and hand rubbing. ā After the cloth comes from the souring, it should be well washed in the washing-mill, to take off all the acid particles which adhere to its surface. All acids decompose soap by separating the alkaline salts and oily parts from each other. Were this to happen on the surface of the cloth, the oil would remain, nor would the washing-mill after- wards be able to clean it. From the washing- mill the fine cloth is carried to be rubbed by women's hands with soap and water. As the liquors, which are generally employed for sour- ing, are impregnated with oily particles, many of these must lodge in the cloth, and remain, notwithstanding the preceding milling. It is probable that all the heavy oils are not evapo- rated by bleaching. Hence it becomes necessary to apply soap and warm water, which unite with, dissolve, and carry them off. It is observed, that if the cloth when it is pretty white get too much soap, the following bleaching is apt to

make it yellow ; on that account they often wring out the soap. It is a matter worth enquiring into, whether it be better to use hard or soft soap for the cloth. Most bleachers agree that the hard is apt to leave a yellowness in the cloth ; and it is said that hard soap is disused in Holland on this account. As there must be a considera- ble quantity of sea-salt in the hard, which is not m the soft soap, and as this salt appears prejudi- tial to cloth, the soft soap ought certainly to be preferred.

But the management of coarse cloth is very different in this operation from that of fine. In- stead of being rubbed with hands, which would be too expensive, it is laid on a table, run over with soap, and then put betwixt the rubbing- boards, which have ridges and grooves from one side to another like teeth. These boards have small ledges to keep in the soap and water, which saves the cloth. They are moved either by hand, or by a water-wheel, which is more equal and cheap. The cloth is either drawn by degrees through the boards by men ; or, which is better, the same wheel moves two rollers, with ridge and groove, so that the former enters the latter, and by a gentle motion round their own axis the cloth is gradually pulled through the boards. This mill was invented in Ireland about thirty years ago, and the Irish bleachers use it for their fine as well as coarse cloths. But the objections against these rubbing-boards are considerable. By rubbing on so unequal a sur- face the fibrous part of the cloth is worn ; by which means it is much weakened. These boards also give the cloth a cottony surface, so that it does not long keep clean. They also flat- ten the threads, and take away all that roundness and firmness which is the distinguishing property of cloth bleached in the Dutch method. For these reasons they must be very

prejudicial to fine cloth, and should never be used in bleach- ing it. As they seem to be in some measure necessary to lessen the expense of bleaching coarse linen, they ought never to be xised above twice, or thrice at most. They might be render- ed much more safe by lining their insides with some soft elastic substance, that will not wear the cloth so much as the wooden teeth do. Short hair has been tried in one instance, and was found to answer very well. When the coarse cloth has undergone a rubbing, it should be im- mediately milled for an hour, and warm water poured now and then on it to make it lather. This milling has very good effects ; for it clears away all the dirt which the rubbing-boards have loosened, and which at the next boiling would have discolored the cloth ; and besides that, it makes the cloth less cottony, and more firm than when whitened by the rubbing only.

6. Starching and bluing, which is the last operation in the process of bleaching, is too sim- ple to need a particular detail, and is conducted in the common mode to which laundry-women are accustomed. It often happens, indeed, that the cloth, when exposed to the weather to be dried after this operation, gets rain, which un- does all again, and forces the bleacher to a new expense. To remedy this inconvenience, some bleachers very properly employ a dry-house,

where the cloth may be dried after this operation in any kind of weather.

This method of bleaching was formed on the theory of the coloring matter, of each fibre of the hemp or flax, entering into the minute fila- ments, of which they are composed. Some ex- periments of Mr. Kirwan have proved that this matter was chiefly resinous. Hence the first lee, or solution of potash, is supposed to act upon the external coating of these filaments, separa- ting and exposing them to the action of the air, or rather to the acidifying principle with which it is impregnated, and which is known as oxygen gas. The second boiling in potash opens a second layer, and thus, successively, layer after layer, until the whole is divided, or opened to the centre. Were the solution of potash suf- ficiently strong to force its way at once to the centre, it would act upon the filaments them- selves, and destroy the texture of the cloth.

Each filament, after the process of potash, re- tains an impregnation of coloring matter, so intimately united as to resist the further action of it. This can only be removed by the slow and gradual influence of the oxygen gas of the atmosphere. From the properties of oxygen gas and potash, their manner of operating is very obvious. The oxygen gas dissolves in each boiling a certain quantity of the coloring matter, with which it forms carbonic acid gas, and partly divides the filaments that eluded the action of potash. The carbonic acid gas, from its vola- tility, flies off and mixes with the atmosphere. Thus, alternately, the one dissolving, and the other burning

out (for bleaching is slow combus- tion), the linen is whitened. Now to obtain this result by the common mode of the action of the oxygen of the atmosphere, requires a long period of time, in consequence of the necessity of a frequent repetition of the same process. To hasten this result, thereforp, by a more manage- able and concentrated application of oxygen, has been the uniform effort of every modern chemist who has turned his attention to this important art,

II. ā OF THE CHEMICAL SUBSTANCES AT PRE- SENT EMPLOYED IN BLEACHING.

It will here be useful to take a brief view of the principal substances usually employed in this art ; both those which have been continued from the former practice, and the new chemical agents adverted to. These are 1. Pot and pearl ashes. 2. Soda. 3.. Soap. 4. Oxygena- ted muriatic acid. 5. Oxymuriate of lime. 6. Sulphuric acid.

Pearl and potash, as imported from America, is of three sorts, the first or best containing from sixty to sixty-five per cent, of real alkali, the remainder being sulphate and muriate of potaĀ«h, muriate of soda, uncombined charcoal, and carbonic acid, mixed with about six per cent, of water. The second sort is inferior, and the third is sometimes largely and purposely mixed with common salt to give it weight. It is of course the bleacher's interest to procure that which contains the least of these adventitious salts. Pearl-ashes differ only from potash, in containing a greater quan- tum of carbonic acid, and forming a milder alkali, as it is termed. The strength of a solu-

tion made from either is generally ascertained by the hydrometer. But, as the salts are not always of a uniform degree of purity, other tests have been proposed on the principle of saturating these alkalies by an acid. The following is M. Ber- thollet's method. 'Sulphuric acid,' he says, diluted with water till it is brought to a deter- minate point of concentration, answers well. By saturating a certain weight of this dilute acid with a fixed weight of fine pure chalk, dried by the heat of boiling water, the standard may be fixed. This acid is the one most readily to be had, and whose constitution is most uni- form. The chalk selected for determining its concentration is a substance equally common; it does not present the difficulties which occur in procuring pure potash, and the temperature of boiling water, employed for drying it, can be yery easily observed with precision. To avoid the embarrassment attending the preparation of standing acid, a quantity of it

sufficient for the trials of many years may be made at once.

Were these analyses made on pieces of pot- ashes, taken at random from the barrels, only ambiguous results would be got, because in the same barrel there are often different qualities. The experiment should, therefore, be made only on solutions prepared on the great scale as lees, and always with the same weights of alkali to the same number of measures of water. The most expeditious manner of making these solu- tions in the cold, is to suspend the potash at the surface of the water in a vessel of iron, pierced with a great number of holes, or formed of coarse iron wire. They should not be drawn off till we are certain that the whole potash is dissolved, and till by agitation the liquid is ren- dered uniform. Besides these circumstances, the assay of potashes requires slips of paper stained with litmus, or any other color equally sensible to acids, as that of mallows, radishes, &c. We should also procure a glass rod, a small glass measure, and lastly, a tube having as many times the capacity of the small measure, as measures of water have been employed to one quintal of potash.

We fill the tube with the solution of potash, and transfer it into the goblet. We next fill the same tube with the test acid, which is also poured into the goblet; we agitate with the glass rod, and then draw a trace on one of the slips of stained paper with the extremity of this rod moistened with the mixture. If the trace do not become red, we add to the goblet a small measure of the test acid, stir, and then make another trace on the paper, alongside of the former. If the color of the paper be not now changed, we add one measure of acid more, and continue thus till the last drawn trace is red.

If we wish to compare the qualities of several potashes, it is obvious, that we must regard as the best that which has required the greatest number of measures of acid to produce a red streak, since it is the one which saturates most acid. It is also obvious, that we might express numerically the qualities of the different species of potash, representing them by the number of measures of acid which each of them has satu-

rated; which amounts to counting the traces formed on the paper in each trial, taking the first for as many as the tube contains of little measures, and adding unity for each of the fol- lowing marks till the last, which we should not reckon, because its color indicates that we have passed the term of its saturation.

Another method has been suggested by Dr. Higgins of Dublin : to take a given quantity of the alkali, and dissolve it in twice its weight of boiling water, stirring the mixture during the solution of the salt; while yet warm, it must be filtered through unsized paper. When all the liquor has passed

through the filter, a very small quantity of cold water is gradually poured on the saline residuum on the filter, in order to wash out the remainder of the alkali. The undissolved salt, remaining on the filter, is sulphate of pot-ash, which must be carefully taken off, dried, and weighed, in order to ascertain its quantity. To determine whether any common salt is contained in the alkali which has been filtered, evaporate the clear solution a little in a sand-bath, and set it in a cool place for twenty-four hours ; at the end of which time, any common salt it may contain, will be found crystallised in the form of regular cubes at the bottom of the vessel. The sulphate of potash and common salt being dried, weighed, and deducted from the weight of the crude al- kali employed, will give the precise weight of the pure alkali it contains. Carbonate of soda, or the mineral alkali, is also sometimes used as an agent in bleaching. Little difference is observ- able between its effects to those of the vegetable alkalies, when the strength of the alkaline-lees and other circumstances are the same. As a detergent it is well calculated for the finishing of the finer fabrics of muslin ; it being ascertained that six ounces of pure carbonate of soda, mixed with ten ounces of soap, produce effects in bleaching equal to one pound and a half of soap, when used by itself.

" The barilla, as imported from Spain, is in large masses, of a dark gray color, and usually contains about twenty-three per cent, of pure alkali, never more than thirty-three. The rest of the mass is charcoal, and common salt mixed with sulphate and sulphite of soda.

M. Descroizilles employed for many years the test suggested above, of saturating a given quantity of alkaline salt with diluted sulphuric acid, and has given the following table of the mean result: ā

Real Alkali In 100 Parts.

Best American pearl ashes . . 60 to 73 Caustic ditto pot-ashes in reddish) cn

lumps $6(

Second ditto ditto in gray lumps 50 55 Second ditto pearl ashes ... 50 55 White Russian pearl-ashes . . 52 58 White Dantzic ditto 45 52

Alicant barilla 20 33

Inferior kinds of barilla ... 10 15

Natron 20 30

Salt of tartar of the shops . . 72

Mr. Karwin gives the following table of thĀ« compositions of salts : ā

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readily than others, the whole, however, being more or less affected. When the oxygenated muriatic acid has thus exhausted its action', it is found to be reduced to the state of ordinary mu- riatic acid; the coloring particles have, there-

Alkali. Acid. Water. Crystallised carbonate of) 41 43 16

potash i

Ditto carbonate of soda 21Ā£ 14J 64

Ditto ditto desiccated . 60 40 _

Soap we need not here dwell upon ; the best fore, abstracted its oxygen. If we evaporate the

white and soft soaps are those most commonly liquid, in order to examine the state of the co- loring particles, we find that it yields a blackish

USThe great modern agent used in bleaching, residuum, as if its particles had suffered a slight

and that which has given all its celebrity and fa- combustion. It is in this way also that colors

cility to the new plan, is oxygenated muriatic are more or less speedily destroyed by the action

acid Berthollet thus describes it :- of the air, especial y when it is promoted by

Muriatic acid, the marine acid of the old the solar beams. Hence the oxygenated mu-

chemists, and the hydrochloric of the modem riatic acid easily and quickly produces the effects

French school, combines with oxygen, and which air and light operate m a longer space of

thereby assumes the properties of oxygenated time, because the oxygen,

deprived in part of its

muriatic acid: but, to make this combination ef- elasticity, and adhering loosely to the acid, en- ters readily into combination

fective, the oxygen must have lost its elastic state. Thus it exists in the oxide of manganese

with the sub- stances for which it has an affinity.

*Slctie. J-I1U3 II CA.1313 111 UlC *->AIUC >JI uuĀ»ug lip ā¢ iU*

(manganese of commerce) in very considerable Other methods of procuring the oxygenated quantity. When, therefore, one part of oxide muriatic acid have been adopted. A very com- of manganese is mixed with four parts of the mon one is to take equal parts, by weight, ot fuming, or six parts of ordinary, muriatic acid, common salt and manganese, intimately mixed one portion of the acid combines with the oxide together. Some bleachers moisten the mixture of manganese, with the disengagement of the with water, to the consistence of a thick paste, oxygen superfluous to this combination, which, so that the dissolved salt may incorporate more combining immediately with another portion of intimately with the manganese. An equal weight the muriatic acid, thus forms the oxygenated of sulphuric acid is then taken as of the other The operation is promoted and com- materials, which is diluted with its bulk of water,

- *and allowed to cool before being poured into the retort on the combined salt and manganese. The charge for the distillation thus consists of equal parts of salt, manganese, and sulphuric acid, diluted with an equal bulk of water. This is the method-m the neighbourhood of Glasgow.*

In Ireland the proportions are generally said

muriatic.

pleted by the action of heat. The oxygenated muriatic acid assumes on its separation the ga- seous state, when it is soluble in water. The resulting liquid is of a greenish-yellow color, and of a very penetrating odor. If the tem- perature approaches that of freezing water, the oxygenated muriatic acid gas becomes concrete, and adheres to the tube which conducts it into the water, whence it precipitates, so that the liquid is less impregnated than at a somewhat higher temperature.

It is easy to show that the oxide of manganese contains much oxygen; for, on urging it with a strong fire, it evolves a great quantity ; after which, the

oxide can produce but very little oxygenated muriatic acid. We may be easily satisfied also of the existence of oxygen in the oxygenated muriatic acid. We have only to expose to the light of the sun a phial filled with the above liquid, from which phial a bent tube dips under a receiver filled with water. Bubbles of air are soon disengaged, which pass into the receiver, constituting an elastic fluid, which pos- sesses all the properties of pure air or oxygen gas. When these bubbles cease to issue, the liquid has lost its odor, color, and all its dis- tinctive properties. It is now water impreg- nated with ordinary muriatic acid. The compo- sition and decomposition, therefore, equally prove, that oxygenated muriatic acid is simply a combination of muriatic acid and oxygen.

to be:

Manganese 6 parts

Common salt 6 parts

Sulphuric acid . ... 5 parts

WTater 5 parts.

In Germany and France :

Manganese 20 parts

Common salt 64 parts

Sulphuric acid .... 44 parts

Water 54 parts.

For the happy discovery of the advantages of this mode of bleaching we are indebted to an ac- cidental circumstance. The celebrated Scheele, as we have intimated, while employed in making experiments on manganese, about the year 1774, noticed its powers in rendering vegetable sub- stances colorless. This he communicated to Berthollet in France, about the year 1 786, and the latter lost no time in applying the properties of this curious substance to the most important practical purposes. In 1 789 he published his ex- periments on the application of it to the bleaching of cotton and linen cloth : Mr. Watt of Birming-

But this speedy decomposition by light shows, ham, we believe, having previously been made that the oxygen very readily abandons the mu- acquainted with it by that distinguished chemist

riatic acid, either to assume the elastic state, or to enter into other combinations ; and it is on this that the characteristic properties of oxygenated muriatic acid depend.

If vegetable colors be plunged into oxy- since been generally adopted in Great Britain, gei.ated muriatic acid, they disappear more or Ireland, and throughout Europe. less quickly ; and when there is a mixture of But oxygenated muriatic acid used alone v?as different coloring particles, some disappear more soon found to weaken the texture of the cloths,

The new method of bleaching was now quickly and successfully introduced into manufactories at Valenciennes, Rouen, and Courtray ; then into those of Manchester and Glasgow ; and it has

and its vapors were suffocating. An addition The oxymuriatic acid has since been combined of alkali to the liquor was now tried, and potash by Mr. Tennant with lime in the dry way, for which became generally used for that purpose. This imorovement he mstly received another patent.

This improvement he justly

patent.

relieved &theˆo'rkman~ by dep"rmngrthe~acid of A great saving is thus made by the bleacher in

the expense of the alkali; the improvement in fact constituted almost another new era in the history of bleaching. The concrete oxymuriate

of lime is diffused in water by agitation, and the

proposed t'obeˆused," "in 1798, by Mr. Tennant of insoluble matter is allowed to settle until the

its vapors, without destroying its bleaching powers. Yet it diminished them ; and the potash, which was all lost in the process, was very ex- pensive. An oxymuriate of lime wasˆ therefore

Glasgow. He demonstated that the oxymuriatic acid would combine with the alkaline earthsˆ lime, barytes, or strontites, and form oxy muriates easily soluble in water. To obtain it, it is

liquor becomes clear.

In the Quarterly Journal of Science and the Arts, for July, 1822, Dr. Ure has published a paper on the composition and manufacture of

merely requisite to pass the gas, as it is disen- chloride of lime, where the proper proportions of

the ingredients employed in its formation are in- vestigated. ‘ When a mixture of sulphuric acid, common salt, and black oxide of

gaged, through slaked lime till it be saturated.

This lime is afterwards dissolved in a certain

proportion of water, which solution is then uimiuiuu sa.u, Ā«tuu umtn. UAIUC Ā«Ā« manganese.

ready to be employed. In regard to this em- says he, ‘ are the ingredients used, the absolute

ployment of lime, Berthollet observes, the oxyge- proportions are :

29-70 100-00

nated muriate of lime has one advantage over the lixivium of Javelle (the oxygenated muriate of potash or soda), from the great difference of price between lime and potash or soda ; and its state of condensation, and desiccation, renders its carriage less expensive. But it has also the inconvenience of transforming a portion of the oxygenated muriatic acid, and of containing superoxygenated muriate, which cannot be indi- cated in this combination by nomenclature, which is precise only with regard to very uniform com- binations : it appears even that the proportion of superoxygenated muriate is considerable : for if, after expelling by a slight degree of heat the oxy- genated muriatic acid which had retained its properties, the remaining substance be examined, it is found no longer to produce discoloration ; and if it be urged with a stronger heat in this state, much oxygen gas is disengaged. Welter tells us, that in his comparative experiments he had observed, that the gas condensed by lime produced only one-tenth of the effect which may be obtained when it is received in water. The use of the oxygenated muriate of lime must there- fore be disadvantageous ; but it may be convenient for certain purposes, from the facility of carriage

1 atom muriate of soda, 7-50

atom peroxide of) manganese $

2 atoms oil of vitriol) (1.846 sp.gr.)]

And the products

ought to be Chlorine disengaged Sulphate of soda Protosulphate of man- ganese Water

5-50 21-78 73-30

12-25 48-52 163-30

25-25 10-000 336-60

1 atom, 4-5

1 9-0

1 9-5

2 2-25

17-82 35-64

37-62 8.92

25-25 100.00

‘ These proportions are, however, very different from those employed by many, nay, 1 believe, by all manufacturers ; and they ought to be so, on account of the impurity of their oxide of manga- nese. Yet making allowance for this, I am afraid that many of them commit great errors in the relative quantities of their materials.

‘ From the preceding computation it is evident that one ton of salt, with one ton of the above

and preservation, where the economy of the pro- native (impure) oxide of manganese, properly

cess is of secondary consequence. Under this treated, would yield 0-59 of a ton of chlorine,

point of view it merits the commendation which which would impregnate 1 -41 ton of slacked

it has received. lime, producing two tons of bleaching powder,

The addition of sulphuric acid to the solution stronger than the average of the commercial

of the oxygenated muriate of lime, increases the specimens ; or, allowing for a little loss, which is

effect, by the decomposition of the superoxyge- unavoidable, would afford two tons of ordinary

nated muriate ; but to produce this effect fully, power, with a little more slaked lime.' a quantity of acid is required, which might be- I have lately analysed, says this excellent

come dangerous. These objections do not apply chemist in his new edition of Berthollet on Dyeing,

****. Ā«l._ ā.],]:*: _ r i _ 11 i ā¢ i t * t r J *._ i _ p .1 i.ii_ i _ā¢ . __i_*

to the addition of chalk, which has been recom- mended by Descroizilles, of which he makes use in his elegant manufactory. Its value is very

two samples of recently made bleaching powder, made by two eminent manufacturers, one in Scotland, the other in England, and found the

Chlorine 18-00

Lime 37-00

Muriate of lime . . 28-50

Water 16-50

16-7 31-3 29-0 23-0

trifling ; and although our experiments appear to composition as follows : prove that it somewhat lessened the total effect of the oxygenated muriatic acid, yet this diminu- tion is so small that it may be neglected. Hence, though the process with the simple oxygenated muriatic acid may be executed without incon- venience, there is no harm in employing the ad- diton of chalk, so as to repress the greater part of

the odor. We even recommend not to omit its The above quantity of lime is associated or

jse, whenever persons are not very well in- mixed with the chlorine. The muriate of lime

d in conducting the operations with the (chloride of calcium) is formed in the process,

customary attentions which are required.' and is a product very disadvantageous to the

100-00 100-0

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manufacturer, since it takes up about one-half of his chlorine unprofitably, and adds a compound to his powder, probably injurious to the bleacher. Bleaching powder may be formed, which con- tains no appreciable proportion of the muriate of lime, as I have shown in the above memoir. By proper management the manufacturer of chloride of lime might therefore double his useful product at scarcely any additional expense.

Sulphuric Acid, or oil of vitriol, when pure, is a colorless fluid, without smell, and slightly viscid. The specific gravity of the sulphuric acid of commerce is generally 1850, about twice the weight of distilled water, but the French chemists make it 2-2553 or more. The manu- facture of it is now carried on to a great extent in Great Britain. It is sometimes adulterated with lead, and supersulphate of potash ; a por- tion of the former being taken up during its formation, in chambers of that metal ; hence a white precipitate is often found in the bottom of the bottles containing it.

In popular language, sulphureous acid may be said to be a solution of sulphur in oxygen, which doubles the weight of this gas, without

Fig. 1.

augmenting its bulk. It obviously, therefore, consists by weight of equal quantities of the two constituents. Its equivalent will either lu 2 oxygen (2 sulphur ā 4 ; or 1 oxygen f 1 sulphur ā 2. Now the analysis of sulphite of

barytes by Berzelius gives 209-22 base to 86-53 acid ; which being reduced, presents for the prime equivalent of sulphureous acid, the number 4. See SULPHURIC ACID.

III. OF THE MACHINERY USED IN BLEACHING.

This of course must be principally regulated by the scale and kind of business carried on No pursuit has better paid for the introduction of scientific machinery, when it has been carried to any considerable extent ; and, where heavy cot- ton cloths or linen are whitened, it requires considerable aid from machines. Amongst them a water wheel of sufficient power to give motion to the dash wheels, or wash stocks, rollers, or squeezers, &c. is conspicuous.

2. Wash Stocks are assistants in turning and washing the linen, now almost exploded ; but the following diagram will show the construction:

Fig. 2.

Fig. 1. is a front and fig. 2. a side view of this invention. A, A, are the stocks or feet, sus- pended on iron pivots at B, and receiving their motion from wipers on the revolving shaft C. The cloth is laid in at D, and by the alternate strokes of the feet, and the curved form of the turnhead E, the cloth is washed and gradually turned ; while a stream of water rushes on the cloth through holes in the upper part of the turnhead. These machines are often found in the bleaching grounds in Scotland and in Ireland ; and are sometimes made with double feet, sus- pended above and below two turnheads, and wrought with cranks. They perform from twenty- four to thirty strokes per minnte.

2. A more preferable and scientific mode of accomplishing this object is found in the use of the dash wheel, plate I. figs. 1 and 2. The pieces of cloth are put into the quadrantal com- partments of the wheel, into which a stream of pure water flows through a circular slit in its posterior surface. By the rotation of the wheel, the cloth is dashed backwards and forwards between the quadrantal partitions. Twenty-five levolutions per minute is the proper speed of a wash wheel, six feet in diameter. Some persons VOL. IV.

suppose them to perform better with twenty-six or twenty-seven revolutions. But any consider- able deviation from this velocity either impairs the utility of the machine, or destroys its func- tions altogether. The parts are so distinctly delineated by the artist, as to supersede the necessity of letters of reference and minute ex- planations.

Squeezers are rollers, represented in plate II. figs. 2 and 3, whose motion draws the cloth between them, after it has passed the dash-wheel. I have

here given one constructed by Parkinsor of Manchester. A is the lower roller. B the upper roller. C D a lever which presses upon the brass of the upper roller. F E another lever to increase the power connected with C D. The extremity of F is kept down by a pin : in some cases a weight is used instead of it.

Plate II. fig. 1. is a bucking boiler, and ex- hibits the fire-place, the iron boiler, surmounted by the wooden crib, with its grated bottom, and the central iron pipe.

We come now to the most important articles of the bleachers' establishment, the apparatus for obtaining the oxymuriatic acid. This is repre- sented in plate III.

Fig. 1. is a horizontal projection according to the line A' B', and a section of one of the fur- naces according to C D. A, tub of immersion. B, receiver. M, M, M, M, M, plates which close exactly the space between the upper shallow tub, and the sides of the receiver. Only the side looking to the furnace is left open. Q, pipe into which the syphon for running the acid into the immersion tub is introduced. O, O, cross pieces which support the shallow tubs, and are fixed into the extremities, N, N, N, N, of four uprights. K, circular groove cut out in the plate, which closes the space between the second shallow tub and the side of the receiver, for the passage of the conductor tubes, one of which is traced in the figure. C, C, partition which separates the receiver from the furnaces. D, plan of a furnace, of the boiler E, serving for a sand bath, and of the matrass F. which communicates by the tube G with the intermediate bottle H, enclosed in its double box I: in the furnace, round the sand bath, and opposite each angle, channels have been cut, which serve as chimneys and registers. A section of the second' furnace D is made at the height of the fire-place, that the grate d may be perceived, and the plate of iron d', which sepa- rate the fire-place from the ash-pit.

Fig. 2. Vertical sectiou of the receiver, and of the immersion tub, according to the lines A B and C D. L, L, L, shallow tubs, separated from each other by the cross pieces O, fixed on the uprights N. The space between them and the . sides of the receiver is closed by the plates M, M, M, so as to leave a free space, but on sides alternately opposite ; that is to say, from the side of the furnaces to the inferior shallow tub, as also to the superior, and on the side of the immersion tub, to the middle shallow tub. P, P, P, tubes which allow the gas to pass from one shallow tub to its superior, when it contains

a stratum of it, equal to the length of these tubes. The tube of the upper shallow tub is made long enough, as is shown, to disperse the gas, which being undissolved in the water, would be diffused in the air, and annoy the workmen. K, conductor tube, which proceeds from the intermediate bottle, and terminates under the lower shallow tub. Q, pipe which communicates down to the bottom of the apparatus, in order that the syphon R may conduct the most concentrated acid (aqueous chlorine) into the immersion tub. S, tube of safety. D, elevation of the furnace provided with all its distillatory apparatus.

Fig. 3. The vertical projection of the two dis- tillatory apparatuses, according to the line D, D. The letters indicate the same objects as in the two preceding figures.

Fig. 4. The vertical section of a furnace, and of one of the boxes, with a view of showing its internal form, and the position of the sand bath.

Fig. 5. Plan of a furnace without a sand bath. Fig. 6. Plan and elevation of the boiler serving as a sand bath. Fig. 7. F, matrass ; T, cork of the matrass. Fig. 8. V, small syphon to draw out the air from beneath the shallow tubs. Fig. 9. I, box, with two square cells, serving to con- tain the intermediate bottles, drawn on a double scale. Y, small box, which encloses the bottle held in one of the cells, by the corners X, X, X, X. Fig. 10. Elevation of the same box, fur-

nished with its two bottles. Plan and elevation of the small boxes Y.

Plate IV. fig. 1, 2, 3, 4, represent the appa- ratus for the running offices. The same letters serve for the same objects in these different figures.

Fig. 1. Vertical section of the apparatus. A, tub. B, boiler, the bottom of which is concave, and provided with a stop-cock T. On the pipe to which this stop-cock is attached, a socket is soldered, into which the glass tube V enters, that communicates by another kneed' socket with one of the wooden pipes F, which afford passage to the steam. This tube serves to show what height the liquor rises to in the boiler. The bottom of this is sustained on the edges of the interior masonry of the furnace, except iu the part corresponding to the aperture S, through which the smoke passes off. Its edges are turned back on the masonry for receiving the tub, they are then raised round it, in order that the vapor and the liquid may not find an outlet between the tub and the boiler. H, grating of deal, the ribs of which rest at their ends on the edges of the masonry of the furnace, and which are sup- ported by two bars. 1 1, connected with the grating by four copper straps, which bear upon the corners. D, body of the pump. It-has at its lower part an inverted cup, pierced with small holes, to prevent in the

aspiration (sucking), the introduction of bodies, which might hinder the valves from shutting, or might scratcli the body of the pump. It is prolonged by a thin copper pipe, C, which, at the upper part of the tub, carries a copper heel, on which the cylinder of copper, K, rests. This cylinder stands on four castors. It carries four sockets, to each of which an arm, X, X, is adjusted, of a length equal to the diameter of the tub, and pierced with holes, like the bulb of a watering pot. In order that the lee raised by the pump may be diffused, the pipe of the pump is perforated in like manner with small holes, in the whole portion which cor- responds to the copper cylinder; and, in order that the lee may not run off by the bottom of this cylinder, it presses exactly at this part on the pipe of the pump. The arms X are fitted on like the bayonet to the muzzle of a musket ; they are taken off, for the introduction and removal of the cloths. The cylinder is terminated by a ratchet wheel L, the number of whose teeth should be a prime number, in order that having no exact divisor, the arms may not be periodically brought back to the same positions. The ratchet L is set in motion by a rod a, hooked to one of the pieces of wood that form the frame-work, on which the balance-beam d of the pump rests, and fixed very freely by a pin to a horizontal rod 6. This rod is fixed in like manner by its other extremity, to one of the branches of a bell movement M, whose other branch communicates by the rod c, with the balance-beam. Hence, on turning the handle e, every movement of the balance-beam is communicated to the rods, and onwards to the ratchet, which, for each stroke of the piston, percurs the space of one tooth. The body of the pump D, and the pipe C, are joined by two straps and screws. Under these straps passes an iron collar, traversed by six bolts, whose screwed ends are fixed with nuts to a copper platform placed

on the grating. By this means the pump rests on the grating, and bears no weight on the bot- tom of the boiler. The pipe C is also held fast at its upper end by an iron strap, adapted to and fixed on the cross bar /'. G represents the cop- per funnel, by which are introduced the solution of potash, and the waters necessary for the lixi- vium. It terminates in one of the tubes F, to prevent the solution of potash spouting out on the adjoining pieces. P indicates the form of the fire-place, the grate being at R, and the ash-pit at Q. The smoke issues by the aperture'S, of which only half the altitude is seen here ; it cir- culates by the flue U round the boiler, entering then into the tube of the chimney, which rises vertically.

Fig. 2. Horizontal section of the tub taken above the platform of copper /, on which are fixed by nuts the six bolts which support the body of the

pump, m, furnace door. The dotted lines nn, indicate the separation formed by fire bricks, in the flue which rins round the boiler, and which determines the entrance of the smoke into this passage, as well as its issue into the vertical pipe p.

Fig. 3. Vertical projection of the apparatus taken in another direction, h, register, with which the chimney p ought to be furnished, q, rim of the boiler turned up on the outside of the tub.

Fig. 4. Horizontal projection of the appara- tus, according to the line T" G'".

Fig. 2. V, horizontal projection of the body of the pump, in which the details of the adjustment of the piston are represented. D, vertical sec- tion of the body of the pump; R, clack valve. S, piston ; T, cup attached by a strap to the lower extremity of the body of the pump.

Fig. 4. Horizontal projection, and vertical sec- tion of the cylinder K, which bears the sockets to which the arms X X are adjusted. C, copper pipe, to which is soldered the heel x. y, y, brass castors which rest on the heel x, and which sup- port the cylinder K. u, u,u, sockets, having an opening for receiving the knob soldered to the extremity of the arms. L, ratchet wheel fixed, to the upper part of the cylinder K. It contains in the figure seventeen teeth. These two figures have been made on a double scale, in order that the details might be better understood. The apparatus for the oxygenated muriatic acid, and for the running off of lees, are on the same scales.

N. B. To avoid embarrassing the figures, a small plank is not represented here, which when the apparatus is constructed on as large dimen- sions as the present, should be placed at about two metres (yards) from the ground, for throwing the goods upon, and from which a child can hand them to the workman, who arranges them in the tub.

Fig. 5. Vessels for the testing of potashes. 1. Small measure ; it is filled by plunging the bulb into the liquid, and stopping the tube with the finger whenever it is full. It may then be car- ried without fear of losing what it contains. To make it flow, the finger has only to be lifted. 2. Tube, containing up to the mark fifty times the small measure. 3. Goblet or jar in which the mixture of the test acid is made, and the solution of potash. 4. Tube employed for stirring, and

making the traces on stained paper. For the trial of the oxygenated muriatic acid, the small measure is filled with the solution of indigo, which is poured into a glass jar of the same form as the above, or into a glass tumbler ; then the number of measures is introduced that are required for

discharging its color.

*Fig. 6. Ordinary distribution (arrangement) of the mode of running off lees. 1. Tub, on whose bottom a wooden grating is placed, or some simple pieces of wood, which prevent the cloths, when heaped, from choking up-*the aperture of the pipe 3, by which the lee falls back into the boiler. 2. Boiler, here represented cut verti- cally through its diameter, in order to see its form. Those usually employed are different, and do not possess the advantage which the pre- sent one does, of directing the liquid, which spouts up, when the ebullition is brisk, towards the middle of the boiler. It has been, moreover, represented as mounted on a furnace different from those which the bleachers usually construct. Its construction is nearly the same as that of the furnace of*

Fig. 1. The form of this boiler and of its fur- nace is adopted in a great many dye-houses. When their dimensions are good, there is much economy of fuel, and convenience of manipu- lation. Those of the figure have been copied from well constructed furnaces. If pit coal be burned, the height of the fire-place should be diminished a little, and if turf, a little increased. Instead of sinking the furnace into the ground, its bottom may, however, be put nearly on a level with that of the tub, and the lee made to fall back from the tub into the boiler by a kneed pipe, which reaching to near the bottom of the tub, and opening above the boiler, does the office of a syphon, and reconveys to it the lees which had gone through the whole thickness of the goods. We come now to

IV. THE PRINCIPAL IMPROVEMENTS IN THE

MODERN MODE OF BLEACHING.

These appear 1 . In the use of the wash-stocks or dash wheels, already described, in which the goods, after being steeped, are cleansed from the weavers' and any other loose stuflfattached to them. They are now deposited in layers one above another in a large wooden vat of circular form, sometimes called a kieve, which is then filled with old alkaline lee, at a blood-heat, under which they are carefully kept, moderately compressed. In a few hours an intestine motion is observable, and an increase of temperature takes place ; the liquid swells ; bubbles of air rise to the surface ; and a thick scum is thrown up. The fermenta- tion, which we have noticed in describing the old plan, is now found to proceed for twelve or eighteen hours, according to the weather. When it ceases the goods are withdrawn from the vat, and again carried to the stocks or dash-wheel, in order to be cleared. This must be particularly attended to ; if left too long in the steep, after the acetous fermentation ceases, the putrid fer- mentation begins, and the extraneous colored and other matters, in place of being

discharged from the goods, are fixed in them; and the fib;c of the cloth is corroded.

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S. In the use of the bucking tub. ā The boiler having been charged with alkaline lee, the goods are placed over it in the vat or kieve already mentioned, and here represented with a central iron pipe, and grated bottom. Whenever the water or alkaline lee boils briskly, its vapor, confined by the goods in the crib, presses on the surface of the liquid, and forces this to issue in a sudden stream from the top of the pipe, whence it is spread over the surface of the goods, and gradually percolates down through them. The liquid in its descent becomes slightly cooled: but after a little while, accumulating and becoming hot a?ain in the boiler, a new eruption of boiling liquid takes place. When linen cloths are nearly white, they are sometimes gently boiled with pearl-ashes, or pearl-ashes and soap, in common cast-iron boilers, with a stop-cock at the bottom ; or the boiler already described may be used.

3. In the immersion of the goods in the oxymu-

riate of potash or lime. ā We have already dis- cussed the formation and operation of these lees. It need only be added here that their specific gravity is generally about 1005.. The period of immersion is ten or twelve hours. Souring is ac- complished by the use of sulphuric acid, as already hinted, which is made about as strong as good vinegar. But it must be well washed out, or the goods will infallibly rot when dry. The following has been given as a summary of the entire pro- cess. ‘ A parcel of goods consists of 360 pieces of those linens which are called Britannias. Each piece is thirty-five yards long, and they weigh on an average ten pounds each : the weight of the parcel is, in consequence, about 3600 pounds, avoirdupois weight. The linens are first washed, and then steeped in alkaline lee, as formerly described under these processes ; they then undergo the following operations :

1st. Bucked with 60 lb pearl-ashes, washed, exposed on the field. 2d. Ditto – . 80 . . do . . do. . do. . . . do. . 90 . potashes . do. . 80 . . do. . . do. . 80 . . do. . . do. . 50 . . do. . . do. . 70 . . do. . . do. . 70 . . do. . . do.

9th. Soured one night in dilute sulphuric acid, washed. 10th. Bucked with 50 ft pearl ashes, washed, exposed on the field, llth. Immersed in the oxymuriate of potash twelve hours. 12th. Boiled with 30 fc pearl-ashes,

washed, exposed on the field.

13th. Ditto . . 30 . . do. . . do. do do.

14th. Soured, washed.

2d. Ditto 3d. Ditto 4th. Ditto 5th. Ditto 6th. Ditto 7th. Ditto 8th. Ditto

do. .

do.

do.

do.

do.

do.

do.

do. do. do. do. do. do. do.

The linens are then taken to the rubbing board, and well rubbed with a strong lather of black Boap, after which they are well washed through pure spring water. At this period they are carefully examined, and those which are" fully nleached are laid aside to be blued and made up for the market; while those which which are not fully white, are returned to be boiled and steeped in the oxymuriate of potash, and soured, until they are fully white.' It may be here re- marked that magnesia has been suggested as a substitute for lime in the above process ; but its high price will long forbid its general use.

The bleaching of calicoes is conducted upon the same general plan, as that of hnen : only the object here is not so much perfect whiteness, as that the goods be well-rooted, as it is called, or completely freed of all coloring and vegetable oils. The process is therefore easier than that of hnen bleaching. Fast-colored cottons are bleached in the following way :ā After the starch or dressing is well removed by cold water thev are gently boiled with soap, washed, and im- mersed ma moderately strong solution of oxymu- riate of potash or lime. This process is repeated

1 the white parts of the cloth are sufficiently pure. They are then soured in sulphuric acid i these operations be well conducted, the colors instead of being impaired, will be greatly im- proved, having acquired a delicacy of tint which no other process can impart.

In the bleaching of muslins of the coarser

nd, such as jaconet, after they have been

steeped and washed, they are boiled in a weak solution of pot and pearl-ashes ; then being again washed, they are twice boiled in soap alone, and then soured in very dilute sulphuric acid : when washed from the sour, they are again boiled in soap, washed, and immersed in the oxymuriate of potash. The boiling in soap, and steeping in the oxymuriate, is now repeated, until the muslin is a pure white. They are then soured and washed in pure spring water. In bleaching the finer fabrics of muslin, such as the mull mull and book muslins, nearly the same process is followed as the above for bleaching of jaconet ; only that, on account of the fineness of the fabric, no pearl-ashes are used in boiling, but soap alone. The following is the practice fol- lowed by a very skilful bleacher of muslins near Glasgow : ā In fermenting muslin goods, we sur- round them with our spent lees from the tempe- rature of 100Ā° to \5(f Fah., according to the weather, and allow them to ferment for thirty-six hours. Iii boiling 112 pounds, zr 112 pieces of yard-wide muslin, we use six or seven pounds of ashes and two pounds of soft soap, with 36C gallons of water, and allow them to boil for sis hours; then wash them, and boil them again, with five pounds of ashes, and two pounds of soft soap, and allow them to boil three hours ; then wash them with water, and immerse them into the solution of oxymuriate of lime, at five on the test tube, and allow them to remain from six to twelve hours ; next wash them, and im- merse them into diluted sulphuric acid at the

specific gravity of 8| on Twaddle's hydrometer ā 1-0175, and allow them to remain an hour. They are now well washed, and boiled with 2J pounds of ashes, and two pounds of soap, for half an hour ; afterwards washed and immersed into the oxymuriate of lime as before, at the strength of three on the test tube, which is stronger than the former, and allowed to remain for six hours. They are again washed and im- mersed into diluted sulphuric acid at the specific gravity of three on Twaddle's hydrometer ā 1-015. If the goods be strong, they will require another boil, steep, and sour. At any rate, the sulphuric acid is well washed out before they re- ceive the finishing operation with starch.

'With regard to the lime, which some use instead of alkali, immediately after fermenting, the same weight of it is employed as of ashes. The goods are allowed to boil in it for fifteen minutes, but not longer, otherwise the

lime ā¢will injure the fabric.'

1'or BLEACHING OF PAPER. See PAPER- MAKING.

For BLEACHING OLD PAPER: Boil your printed paper, for an instant, in a solution of caustic soda : that from kelp may be used. Steep it in soap-suds, and then wash it ; after which it may be reduced to pulp. The soap may be omit- ted without much inconvenience. For old written paper to be worked up again : steep it in water acidulated with sulphuric acid, and then wash it well before it is taken to the mill. If the water be heated it will be more effectual. To bleach printed paper, without destroying its texture : Steep the leaves in a caustic solution of soda, either hot or cold, and then in a solution of soap. Arrange them alternately between cloths, as paper-makers do thin sheets of paper when de- livered from the form, and subject them to the press. If one operation does not render them sufficiently white, it may be repeated as often as necessary. To bleach old written paper, without destroying its texture : Steep the paper in water acidulated with sulphuric acid, either hot or cold, and then in a solution of oxygenated mu- mtic acid ; after which immerse it in water, that none of the acid may remain behind. This paper when pressed and dried, will be fit for use as before. Chaptal says ' simple immersion in the oxygenated muriatic acid, and a longer or shorter continuance in it, according to the strength of the liquor, are sufficient to bleach a print; but when a book is the object other pre- cautions are necessary. As it is requisite that the acid should moisten all the leaves, care must he taken to open the book well up, and to make its boards rest on the edge of the vessel, so that the paper alone dips into the liquor. Such leaves as are sticking together, must be adroitly separated, that they may be all equally impreg- nated. The liquor assumes a yellowish tint, the paper becomes white, and after two or three hours the book is withdrawn, in order to be plunged into pure water, which is to be renewed from time to time, to carry off any remaining oxygenated muriatic acid, along with its dis- agreeable smell.

' This process has succeeded with me pretty well. It was the first which I employed. But too frequently the color of the leaves was varie-

gated : sometimes several pages have not been at all bleached ; and I was forced to adopt a surei process. We begin by unstitching the books, and reducing them to leaves. These leaves are set in squares contrived in a shallow leaden tub, with very thin plates, so that the leaves, laid flat, are separated from one another by hardly per- ceptible intervals. The acid is then poured gently in, making it fall on the sides of the tub ; and, to prevent the leaves from being deranged after the operation is finished, the acid is drawn off by a stop-cock placed in the bottom of the tub. This liquid is replaced by fresh water, which washes the paper, and deprives it of the

odor of the oxygenated acid. It is now hung up to dry, smoothed, and bound. I have res- tored by this means several precious works, which were of no value from their bad condition. The leaves may be set also upright in the tub, a position which offers some advantages, as they are less readily torn. For this purpose I con- structed a wooden frame, .which I fixed down at the height which I thought suitable, confor- mably to the height of the leaves that I wished to bleach. This frame supported very thin slips of wood, leaving between them intervals of half a line. I placed two leaves in each of these intervals, and fastened them with two small wedges of wood, which I pushed between the slips so as to press the leaves against them. I give the more preference to this process, be- cause, when the operation is done, I lift out the frame with the leaves, and plunge the whole into fresh water. By this operation, not only books are restored, but the paper receives a de- gree of whiteness which it never had. This acid has also the advantage of effacing spots of ink which frequently depreciate books and prints. This liquor does not attack the stains of grease or oil ; but it has been long known, that a weak solution of potash (caustic alkali) is a sure means of removing these marks.*

‘ When I have had to repair engravings in such bad condition that they exhibited merely fragments pasted down on paper, I was afraid of spoiling these fragments in the liquor, from the loosening of the paste. In this case, I took the precaution of enclosing the print in a large cylindrical jar, which I inverted over a glass, into which I put the proper mixture for dis- engaging oxygenated muriatic gas. This aeriform substance filled the interior of the jar, and acted on the print, consuming the filth, destroying the spots of ink, while the fragments remained glued, and thus preserved their relative po^- sition.’

BLEACHING POWDER, or SALT. CHLORIDE OF LIME, which see. It is also called oxymuriate of lime.

BLEAK’, -\ The same word as bleach,

BLEAK’NESS, ^differing only in the applica-

BLEAK’Y, i lions. Bleach conveys the

*BLEAK’LY. * simple idea of whitening in the*

air, but bleak supersedes the notion of cold, as

the herbage is bleached or bleaked by piercing

winds ; figuratively used to express whatevei

is chill, dreary, cheerless, and desolate.

Intreat the north

To make his bleak winds kiss my parched lips, A ud comfort me with cold. Shahspeare.*

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The goddess that in rural shrine Dwellest here with Pan, or Sylvan, by blest song Forbidding every bleak unkindly fog To -ouch the prosperous growth of this tall wood.

Milton.

On shrubs they browse, and, on the Ueaky top Of rugged hills, the thorny bramble crop. Dryden.

The parching dog-star, and the bleak north-east.

Prior.

Her desolation presents us with nothing but bleak and barren prospects. Addison.

Say, will ye bless the bleak Atlantic shore, Or bid the furious Gaul be rude no more? Pope.

The inhabitants of Nova Zembla go naked, without complaining of the bleakness of the air ; as the armies of the northern nations keep the field all winter.

Addison.

On some bleak shore or solitary den Far from the path and cheerful haunts of men. Rowe.

BLEAK', n. s. alburnus, from his white or bleak color. A small river fish.

The bleak, or fresh-water sprat, is ever in motion, and therefore called by some the river-swallow. His back is of a pleasant, sad sea-water green, his belly white and shining like the mountain snow. Bleaks are excellent meat, and in best season in August.

Walton.

BLEAR', v. & adj.~\ Germ, bluen, from

BLEAK'S ESS, (which is derived the

BLEARED'NESS, I Dutch, blaer, a blister,

BLEAK'EYED. "pustule or tumor. It is

applied to diseases of the eye, which, by rheum or water, produce dimness or obscurity of vision. Metaphorically, to dim; impede; or obstruct the sight, as if disordered with blains, and watery inflammation.

Full wel coude I him quite With blearing of a proud milleres eye, If that me list to speke of ribaudrie ! But ik am old ; me list not play for age ; Gras time is don, my fodder is now forage.

Chaucer. Canterbury Tales.

All tongues speak of him, and the bleared sights Are spectacled to see him. Shakspeare.

It is a tradition that blear eyes affect sound eyes.

Bacon. Thus I hurl

My dazzling spells into the spongy air, Of power to cheat the eye with blear illusion, And give it false presentments. Milton,

It is no more in the power of calumny to blast the dignity of an honest man, than of the blear-eyed owl to cast scandal on the sun. L' Estrange.

The defluxion falling upon the edge of the eyelids, makes a blearedness. Wiseman.

When I was young, I, like a lazy fool, Would blear my eyes with oil to slay from school ; Averse to pains. Dryden.

His blear eyes ran in gutters to his chin; His beard was stubble and his cheeks were thin.

Id.

Is it not a pity now, that tickling rheums Should ever teaze the lungs and blear the sight Of oracles like these ? Cowper.

BLEAT', v. & n. } Ang.-Sax. blaetan ; Lat.

BLEAT', $ balare; to cry as a sheep

or iamb.

We were as twinned lambs, that did frisk in the

sun, And bleat the one at the other. Shakspeare.

ifou may as well use question with the wolf, Why he hath made the ewe bleat for the lamb.

Id. Merchant of Venice.

Jehovah, who, in one night, when he pass'd, From Egypt marching, equalled with one stroke Both her first-born and all her bleating gods. Milton.

While on sweet grass her bleating charge doth lie, Our happy lover feeds upon her eye. Roscommon.

What bull dares bellow, or what sheep dares bleat Within the lion's den ? Dryden.

Set in my ship, my ear reached where we rode, The bellowing of oxen, and the bleat Of fleecy sheep. Chapman.

Full swell the woods ; their every musick wakes, Mixed in wild concert with the warHinij brooks, Increased the distant bleatings of the hills. T.'io nsun. With innocent dismay a bleating flock Crowd back, affrighted at the rolling tides.

G. West.

BLECHINGLEY, or BLETCHINGLEY, a town of Surrey, two miles from Godstone, and twenty- one south of London, sends two members to parliament ; and has done so ever since parliaments existed. The bailiff who returns the members is chosen annually at the lord of the manor's court. The town stands on a hill, and has a fine prospect as far as the Sussex South Downs.

BLECHNUM, in botany, a genus of plants, class cryptogamia, order filices. Fructification a continued longitudinal line, each side the rib of the frond parallel with it ; involucre continued from the surface, opening towards the rib : spe- cies eight ; one or two natives of England.

BLECHUM, in botany, a genus of plants, class didynamia, order angiospermia : CAL. in five deep equal segments : COR. funnel-shaped : CAPS, two-celled, valved, and a contrary par- tition, at length separating in portions : SEED v several, with awl-shaped props.

B. brownei ; dense-piked blechum , leaves ovate, slightly toothed; spikes quadrangular; bracteas ovate, downy. Native of the West Indies ; a perennial, two or three feet high ; flowers of no great beauty.

B. erectum, upright blechum ; leaves oblong, somewhat toothed, smooth ; spikes ovate ; brac- teas nearly smooth Found in the western parts of Jamaica. Stem erect, rather shrubby ; flowers blue.

B. angustifolium, narrow-leaved blechum ; leaves linear-lanceolate ; spikes oblong ; bracteas ovate, hairy. Native of the Carribee Islands. Herbaceous, a foot high, with tumid joints ; leaves smooth on both sides ; flowers small, blue.

BLEED', l Ang.Sax. bljedan, from bla

BLEED'ING. t sen. Dut. blosen, signifies to grow red ; blaeden is to let out the red ; that is, the blood ; to bleed then is to lose blood ; to run with blood ; to die by violence ; when any liquid flows or drops from a body, either naturally or in consequence of incision, that body is said to bleed.

The cruel steele, which thrilled her dying hart,

Fell softly forth, as of its own accord ;

And the wyde wound, which lately did dispart

Her bleeding brest, and riven bowels gored,

Was closed up as it had not been sored. Spenter. I bleed inwardly for my lord. Shakspeare.

Bleed, bleed, poor country ! Great tyranny, lay thou thy basis sure For goodness dare not check thee. Id.

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When Greeks joined Greeks, then -was the tug of war, The laboured battle sweat, and conquest bled.

Lee's Alexander.

The lamb thy riot dooms to bleed to-day ; Had he thy reason, would he skip and play 1 Pope.

For me the balm shall bleed, and amber flow, The coral redden, and the ruby glow. Id.

That from a patriot of distinguished note, Have bled and purged me to a simple vote. V, Patriots have toiled, and in their country's cause Bled nobly ; and their deeds, as they deserve, Receive proud recompense. We give in charge Their names to the sweet lyre. Cowper.

The only heart ā the only eye Had bled or wept to see him die, Had seen those scattered limbs composed, And mourned above his turbaned stone ā That heart hath burst ā that eye was closed ā

Byron.

BLEEDING, a haemorrhage or flux of blood from a wound, rupture of a vessel, or other acci- dent. See HEMORRHAGE.

BLEEDING AT THE NOSE, OB EPISTAXIS. See EPISTAXIS,

BLEEDING OF PLANTS is drawing out the sap of plants, otherwise called tapping. See TAP- PING.

BLEKINGEN, a province of Sweden, having the title of county, situated in South Gothland. It is bounded by Smaland on the north, Schonen on the west, and the Baltic on the other sides. In length it is about 100, and the breadth twenty-five miles, including a surface of less than 1000 square miles, with about 67,000 inha- bitants. Though great part of it is mountainous and woody, it is considered one of the most agreeable parts of Sweden. The inhabitants subsist chiefly by hunting, fishing, and breeding of cattle. Carlscrona is the capital.

BLEM'ISH, v. & n. ~\ Junius says from BLEMISH'LESS, {blame; Fr. from bleme,

BLEMISH'MENT, { which signifies white ; BLEMISH'ING. 3 a blemish is that which

stains or spots what would otherwise, and what ought to be perfectly white. Thus any natural deformity is a blemish ; any speck or injury which mars beauty or destroys proportion. Metaphori- cally it is any thing that sullies, taints, or tarnishes a reputation, that was before sound, fair, and pure ;

thus it signifies turpitude ; reproach, and disgrace.

If any natural blemish blot our face, You do protest it gives our beauty grace.

Dray ton.

Full many lords, and many knights her loved, Yet she to none of them her liking lent, Ne ever was with fond affection moved, But ruled her thoughts with goodly government For dread of blame, and honor's blemishment.

Spenser. Faerie Queene.

Likelier that my outward face might have been

disguised, than that the face of so excellent a mind

could have been thus blemished. Sidney.

That you have been earnest, should be no blemish

or discredit at all unto you. Hooker.

Open it so from the eyelid, that you divide not

that-, for, in so doing, you will leave a remediless

blemish. Wiseman.

First shall virtue be vice, and beauty be counted a

blemish,

Ere that 1 leave with song of praise her praise to so- lemnize. Sidney.

Live thou, and to thy mother dead attest,

That clear she died from blemish criminal.

Faerie Queene.

Is conformity with Rome a blemish unto the church of England, and unto churches abroad an ornament ?

Hooker.

Not a hair perished :

On their sustaining garments not a blemish, But fresher than before. Shakspeare.

Evadne's husband ! 'tis a fault To love, a blemish to my thought. Waller.

This three years day these eyes, tho' clear

To outward view of blemish or of spot, Bereft of light, their seeing have forgot.

Milton. Sonnets. Not that my verse would blemish all the fair ;

But yet if some be bad, 'tis wisdom to beware.

Dry den. That your duty may no blemish take,

I will myself your father's captive make. Dryden.

Such a mirth as this is capable of making a beauty, as well as a blemish, the subject of derision. Addisim.

Those, who, by concerted defamations, endeavour to blemish his character, incur the complicated guilt of slander and perjury. Id.

To all apparent beauties blind,

Each blemish strikes an envious mind. (< *y.*

BLEMMYES, or BLEMYES, a fabulous peo- ple of Ethiopia, said to have no heads ; their eyes, mouth, &c. being situated in their breasts. See ACEPHALI. Bochart derives the word blemm- yes from ˆ3 which implies negation, and filn brain ; in which sense the Blemmyes should have been people without brains.

Bryant, rejecting the pure Greek aĀ«0a\oc, forms three Egyptian wards, Ac-caph-el, which he interprets, the Rock consecrated to the Sun. This, which is the same with Cahen-caphel, (icvvoKtQaXog) he affirms was a university in Upper Egypt, which furnished all the temples with priests.

*A barbarous people of this name appeared in the third century, as the allies of the Egyptians against Dioclesian. ' The number of the Blemm- yes,' says Gibbon, * scattered between the island of Meroe and the Red Sea, was very inconsider- able ; their disposition was unwarlike ; their weapons rude and inoffensive. Yet in the public disorders these barbarians, whom antiquity, shock- ed with the deformity of their figure, had almost excluded from the human species, presumed to rank themselves , among the enemies of Rome. Such had been the unworthy allies of the Egyp- tians ; and, while the*

attention of the state was engaged in more serious wars, their vexatious inroads might again harass the repose of the province. With a view of opposing to the Blemmyes a suitable adversary, Dioclesian per- suaded the Nobatse, a people of Nubia, to remove from their ancient habitations in the deserts of Libya, and resigned to them an extensive but unprofitable territory above Syene and the cata- racts of the Nile; with the stipulation, that they should ever respect and guard the frontier of the empire.' See Gibbons History, chap. xiii. vol. ii. p. 144; Strabo, lib. xvii. p. 1., 172; Pompo- nius Mela, lib. i. c. 4.

BLENCH', v. & n.y See to BLANCH and to

BLENCH'ER, > BLINK. To shrink from;

BLENCH'ING. 3 to start back; to gives

away : to hinder ; to obstruct. Not much used.

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111 observe his looks ;

I'll tent him to the quick ; if he but blench, I know my course. Shahspeare.

Patience herself, what goddess ere she be, Doth lesser blench at sufferance than I do. Id.

*Hold you ever to our special drift ; Though sometimes you do blench from this to that, As cause doth minister. *"ā¢*

The rebels besieged them, winning the even ground on the top, by carrying up great trusses of hay before them, to blench the defendants sight, and dead their shot. Carem-

BLENCH, or BLANCH, a sort of tenure of land. To hold land in blench, is by payment of a sugar- loaf, a couple of capons, a beaver hat, or the like, if demanded ; nomine albae firmae, i. e. in name of blench.

BLEND', v. -) Ang.Sax. blendan ; Swed. BLEN'DER, > blanda, to mix ; to mingle to BLENT', part.) gether ; to compound. For- merly to pollute ; to spoil ; to corrupt : but in this sense it is now wholly obsolete.

The moon should wander from her beaten way, the times and seasons of

the year blend themselves by disordered and confused mixture. Hooker.

Which when he saw, he burnt with jealous fire ; The eye of reason was with rage yblent.

Faerie Queene.

Regard of worldly muck doth foully blend, And low abase the high heroick spirit. Id.

Tis beauty truly blent, whose red and white Nature's own sweet and cunning hand laid on.

Shafupeare.

The mistion taught by the ancients is too slight or gross ; for bodies mixed according to their hypothesis, would not appear such to the acute eyes of a lynx, who would discern the elements, if they were no other- wise mingled, than but blended but not united. Boyle.

He had his calmer influence, and his mien Did love and majesty together blend. Dryden.

The grave, where even the great find rest, And blended lie the' oppressor and the' oppressed.

Pope.

BLEND, among mineralists, a species of lead marcasite; by miners called mock ore, mock lead, and wild lead. The German mineralists call it blende, whence our denomination blinde. It answers to what in Agricola is called Galena inanis. It usually lies immediately over the veins of lead ore, in the mines which produce it, for it is not found in all. When the mi- ners see this, they know the vein of ore is very near.

BLEND-METAL IRON, a coarse sort of iron from the Staffordshire mines, used for making nails and heavy ware ; in some places also for horse-shoes.

BLEND-WATER, or Morehough, a distemper incident to black cattle, comes either from the blood, from the yellows, or from the change of ground. To cure it, take bole armoniac, and as much charcoal dust as will fill an egg shell, a good quantity of the inner bark of an oak, dried and pounded together to a powder, and give it to the beast in a quart of new milk and a pint of earning.

BLENHEIM, a village of Germany, in the circle of Suabia, memorable for the defeat of the l-'rench and Bavarians in 1704, by the English and their allies, under the duke of Marlborough and prince Eugene. The French army amounted

to 60,000 veterans, commanded by Marshal Tal- lard and the elector ' of Bavaria. The allied army, commanded by Eugene and Marlborough, amounted to about 52,000 men, troops who had long been familiar with victory, and who had seen the French, the Turks, and the Russians, fly before them. Both armies, after many marches and counter marches, approached each other. The French were posted on a hill near Hochstet ; their right covered by the Danube and Blenheim ; their left by the village of Lutzengen ; and their front by a rivulet, the banks of which were steep, and the bottom marshy. Their position being advantageous, they were willing to await the enemy rather than offer battle. Marlborough, however, resolved to engage them at all events, in consequence of an intercepted letter from Villeroy, intimating that he was preparing to cut off all communication between the Rhine and the allied army. The dispositions, therefore, being made for the attack, the cannonading began about nine in the morning, and continued to about half-past twelve. The troops then ad- vanced to the attack ; the right under the di- rection of prince Eugene, the left headed by Marlborough, and opposed to Marshal Tallard. Marlborough, at the head of the English troops, having passed the rivulet, attacked the cavalry of Tallard with great bravery. Prince Eugene had not yet attacked the forces of the elector ; and it was near an hour before he could bring up his troops to the engagement. Tallard had posted a large body of forces in Blenheim, and he now made an attempt to bring them to the charge. They were attacked by a detachment of Marlborough's troops so vigorously, that instead of assisting the main body they could hardly maintain their ground ; and the French cavalry being thus taken in flank, was totally defeated. The English army now penetrated the French centre, while the forces in Blenheim were sepa- rated by another detachment ; and Tallard was made prisoner by the Hessian Troops, who were in the allied army. Meanwhile, prince Eugene having repulsed the enemy, the rout became general, and the consternation of the French soldiers was such that they threw themselves into the Danube, without knowing whither they fled. The allies being masters of the field of battle, surrounded the village of Blenheim, and com- pelled a body of 13,000 men, who had maintained their ground, to lay down their arms. Thus ended the battle of Blenheim, one of the most complete victories that ever was obtained; 12,000 French and Bavarians being slain in the field or drowned in the Danube; and 13,000 made prisoners of war; besides 100 pieces of cannon. All the French baggage, together with their military chest, fell into the hands of the allies. Next day, when the duke of Marlborough visited his prisoner the marshal, the latter

assured him that he had overcome the best troops in the world. 'I hope, Sir,' replied the duke, 'you will except those troops by whom they were conquered.' Blenheim lies three miles north east of Hochstet, and twenty-five north-west of Augsburg. Long. 10Ā° 25′ E., lat. 48′ 40′ N.

BLENHEIM-HOUSE, a princely house erected in honor of the duke of Marlborough at Wood-

stock, neat Oxford, which with the manor of Woodstock was settled on the duke and his heirs, in consideration of the eminent services by him performed for the public; and for building of which house the sum of Ā £500,000 was granted by parliament, &c. The tenure by which the manor of Woodstock is held, is the presenting at the castle of Windsor annually, on the day on which the battle of Blenheim was fought, a flag embroidered with fleurs-de-lis. In the park formerly stood a royal palace, where king Ethel- red called a parliament, and where Alfred is said to have translated Boetius de Consolatione Phi- losophise. It was the principal residence of Henry II., who erected a house here for the abode of Rosamond Clifford, his favorite mis- tress. Here also he received homage from Rees, prince of Wales, knighted his son Geoffry, and gave away his cousin, the lady Ermengard, to William, king of Scotland. Edward II. was born here, as was Edward the Black Prince ; and here Elizabeth was confined during part of the reign of Mary. The palace retained its regal splendor till the civil wars, when it was nearly destroyed. Near the bridge, to the north, there have been planted two sycamore trees on the spot occupied by its last remains. A stately column, 130 feet high, with a statue of the duke on the top, and the pedestal inscribed with tablets of his titles and achievements, is now the principal object in the park. This beautiful mansion extends from wing to wing, 348 feet, after the design of Vanbrugh. On a pediment, towards the garden, is a bust of Louis XIV., taken from the gates of Tournay. The entrance is through a handsome portal, on the top of which is a reservoir of water ; this leads to a quadrangle, where are the offices, theatre, &c. The hall is supported by Corinthian pillars, the ceiling of which is beautifully painted, represent- ing Victory crowning the victorious duke. The pictures in the bow-window room are by Schia- voni, Reynolds, Kneller, Tintoret, Rubens, Teniers, Giorgioni, &c., and the tapestry repre- sents the various battles of the duke, one of which is that of Blenheim. The east dressing-room is furnished with crimson damask, and decorated with several capital paintings, as well as the duke's dressing room, and the grand cabinet. The

saloon is grand and proportioned to the general magnificence ; the lower part is lined with marble ; on the sides are pictures of the inhabitants of different nations, in their pro- per costume, and on the ceiling is a representa- tion of the duke stopped in the career of his victories by Peace, and Time reminding him of ttie rapidity of his own flight. The library is 183 feet in length, exclusive of the book-cases, and contains a very valuable collection. At one end of the room is a statue of queen Anne by Kysbrack, and at the other a marble bust of Alexander the Great, found at Herculaneum ; besides several other fine busts and portraits. In the chapel, which occupies one of the wings, is a superb monument to the memory of the first duke and duchess, by Rysbrack. The gardens are spacious and well laid out : at one of the extremities is a fountain, designed from a model of that iu the Piazza Navona at Rome. The four

river gods, represented as the guardian genii of the waters, also the horses and the lion, deserve particular attention, as exquisite pieces of sculp- ture. About the middle of the grand approach is a magnificent bridge of three arches, the water being formed into a lake, which covers a spacious valley, surrounded by an artificial decli- vity of a considerable depth.

BLENNIUS, the BLENNY, in ichthyology, a genus of fishes belonging to the order of jugu- lares. Essential characters : the head slants or declines to one side ; there are six rays in the membrane of the gills ; the body tapers towards the tail ; the belly fins have only two blunt bones ; and the tail fin is distinct. The most remarkable are, 1. B. cornutus, with a simple ray above the eyes, and a single black fin. 2. B. cristatus, with a longitudinal bristly crest betwixt the eyes. The above two are natives of the Indies. 3. B. galeria, with a transverse membraneous crest upon the head, is found in the European seas. 4. B. gunnellus has ten black spots on the back fin. It is found in the Atlantic Ocean. 5. B. orellaris, with a furrow betwixt the eyes, and a large spot on the back fin. It is found in the European seas. 6. B phycis, with a kind of crested nostrils, a cirrus or beard on the under lip, and a double fin on the back. It has seven rays in the gill mem- brane ; the anus is surrounded with a black ring ; and the tail is roundish. The two last are found in the Mediterranean Sea. 7. B. vivipa- rus has two tentacula at the mouth. Schone- velde first discovered this species; Sir Robert Sibbald afterwards found it on the Scottish coast. They bring forth 200 or 300 young at a time. Their season of parturition is a little after the depth of winter. Before Midsummer they quit the bay and shores, and retire into the deep, where they are commonly taken.

BLENNORRHCEA, from p\ivva, mucus, and (06w, to flow ; a gleet ; a discharge of mucus from the urethra, arising from weakness.

BLEPHARIES, in anatomy, the hair of the eyelids, or the part on which it

grows.

BLEPHARON ; /3Xetf>apov, Greek, the eyelid. BLEPHAROXYSTUM, from /SXˆapov and Ā£vw, to scrape off; an instrument for pulling hairs out of the eye-lids.

BLERA, in old records, peat or turf. BLESS', or ") Ang.Sax. blissian, bles BLISS', sian,belysan, blithe,belithe,

BLESS'ED, blisson, blithsome, i. e. be-

BLESS'ETAY, lissom, belithesome. From

BLESS'EDFUL,)>the Ang.Sax. lysan, to BLESS'EDNESS, loosen or slacken. To dis BLESS'ER, solve ; to set free ; to soothe;

BLESS'ING, [to free from pain of body ;

BLESS'FULNESS. J anguish of mind ; to pacify ; to gratify; to confer happiness; to make happy ; to prosper ; to render successful ; to wish happiness to another ; to pronounce a benediction upon him ; a devout expression of goodwill ; to praise ; to glorify ; to celebrate . To be blessed, in the theological sense, is to be holy and happ"y ; happy in the favor of God ; happy in the felici- ties of heaven.

And this is the Messing wherewith Moses the man of God blessed the children of Israel, before his deatjti.

Deuteromnny

BLE

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BLE

He blessed, and brake, and gave the loaves. Ma.cc. All generations shall call me blessed. Luke.

Bletsed are the dead which die in the Lord. Rev.

He sayde, Frendes ! I am hore and old, And almost, God wot, on my pines brink; Upon my soule somewhat most I think, I have my body folily dispended, Blessed be God that it shall ben amended.

Chaucer. Canterbury Tales.

Unto us there is one only guide of all agents na- tural, and he both the creator and worker of all in all, alone to be blessed, adored, and honoured by all for ever. Hooker.

Many times have I, leaning to yonder palm, ad- mired the blessedness of it, that it could bear love with- out the sense of pain. Id.

Earthlier happy is the rose distilled, Than that, which, withering on the virgin thorn, Grows, lives, and dies in single blessedness.

Sltakspeare.

The quality of mercy is not strained ; It droppeth as the gentle rain of heaven Upon the place beneath. It is twice blessed ; It blesseth him that gives, and him that takes. Id.

The person that is called, kneeleth down before the chair, and the father layeth his hand upon his head, or her head, and giveth the blessing. Bacon.

But blessed be that great power, that hath us blessed With longer life than earth and heaven can have.

Dames.

How hast thou disturbed

Heaven's blessed peace, and into nature brought Misery uncreated till the crime Of thy rebellion. Miltun.

This kingdom enjoyed the greatest calm, and the fullest measure of felicity, that any people, in any age, for so long time together, have been blessed with.

Clarendon.

Happy this isle, with such a hero blest ; What virtue dwells not in his loyal breast? Waller.

In vain with folding arms the youth assayed To stop her flight, and strain the flying shade; ; But she returned no more, to bless his longing eyes.

Dryden.

When thou receives! praise, take it indifferently,

and return it to God, the giver of the gift, or blesser

of the action. Taylor.

It is such an one, as, being begun in grace, passes

into glory, blessedness, and immortality. South.

0 hospitable Jove ! we thus invoke,

Blets to both nations this auspicious hour. Id.

A just and wise magistrate is a blessing as extensive as the community to which he belongs ; a blessing ā¢which includes all other blessings whatsoever, that re- late to this life. Atterbwy.

Peace to thy gentle shade, and endless rest ! Blest in thy genius, in thy love too blest ! Pope.

Sun ! ā Didst thou fly thy Maker's pain, or start, At that enormous load of guilt,

Which bowed His blessed head, o'erwhelmed his cross.

Young. In His blest life

1 see the path, and in His death the price ; And in His great ascent, the proof supreme

Of immortality. Id.

My soul is caught ;

Heaven's sovereign blessings, clustering from the cross,

Rush on her, in a throng, and close her round,

The prisoner of amaze. Id.

That dread shall vanish with the favouring gale, Which love to-night hath promised to my sail ; No danger daunts the pair his smile hath blest ; Their steps still roving, but their hearts at rest.

Byron. Bride ofAbydos.

Bi ESS (Henry), painter, was born at Bovines near Dinant, 1480. He acquired his skill by the strength of his natural genius, assisted by a diligent study of Patenier's works; and rendered himself eminent, particularly by his landscapes. His best performances were bought by the emperor

Rodolph, and are still preserved at Vienna. His style in historical subjects resembled that of the Flemish artists. But he crowded several subjects into one design. Notwithstand- ing this impropriety his pictures are in great request ; they are styled the owl pictures, for he fixed an owl, as his peculiar mark, in each of them. He died in 1550.

BLESSINGTON, a market town of Ireland, in the county of Wicklow, on the Liffey. Before the union it sent two members to the Irish par- liament. Distant five miles south-west of Naas, and twenty north-west of Wicklow.

BLETA ALBA, an epithet given by some to the milxy urine voided in some disorders of the kidneys, ranked by Paracelsus among the causes of the phthisis.

BLETIA, in botany, a genus of plants of the class gynandria, order monandria. Its essential characters are: CAL. and petals distinct: LIP sessile, hooded: STYLE unconnected: ANTH. a terminal deciduous lid. 1. B. Tankervillise. Lady Tankerville's bletia. Lip undivided, with a short spur ; leaves radical, elliptic-lanceolate. 2. B. verecunda, tall bletia. Petals converging ; lip without a spur; middle lobe broader than long; lateral ones contracted upwards. Stalk more or less branched. Native of the West Indies. 3. B. florida, purple bletia. Petals spreading; lip without a spur; middle lobe somewhat wedge-shaped ; lateral ones dilated at the summit; stalk branched. Native of the warmest parts of the West Indies. It is twelve or eighteen inches in height. 4. B. hyacinthia, hyacinthine bletia. Petals lanceolate, spreading ; lip without a spur ; stem leafy. Native of China. 5. B. capitata, . capitate bletia. Lip without a spur ; callous internally near the base ; stem leafy. Native of the West Indies.

BLETON, or BLETTON ( ), a prac- titioner of the art of rhabdomancy, or the faculty of discovering subterraneous treasures, springs, &c. by means of a rod, who met with many par- tisans among men of science in Italy, France and Germany. Dr. Ritter, a member of the academy of Munich, advocated the virtues of the hyd ro- mantic baguette, which he endeavoured to explain by means of galvanism. After Bleton this fa- culty, real or supposed, has sometimes been called Bletonism. See BAGUETTE, and Mem- oire Phhsique et Medicinal montrant des Rap- portes evidens entre les Phenomenes de la Baguette Divinatoire et ceux de Magnetisme et

Electricite, Par M. T (Thouvenel), Paris,

1781, 12mo.

BLETTERIE (John Philip Rene" de la), pro- essor of eloquence at Paris, was born at Hermes in 1696, and died in 1772. His principal works are, 1.

The Life of the Emperor Julian, 12mo. Paris, 1735, 1746, and translated into English in 1 746. 2. The History of the Emperor Jovian, 2 vo!s. 12mo. Paris. 1748; abridged by Mr.

Duncombe in The Select Works of the Emperor Julian, 2 vols. 8vo. 1789. 3. A Translation of some of the Works of Tacitus, 2 vols. 12mo. Paris, 1755. He also edited Masclef's Hebrew Grammar, &c.

BLEYME, in farriery, an inflammation in the foot of a horse, between the sole and the bone. Bleymes are of three sorts : the first, bred m spoiled wrinkled feet with narrow heels, are usually seated in the inward or weakest quarter; the second infects the gristle, and must be extir- pated as in the cure of a quitter-bone ; the third is occasioned by small stones and gravel between the shoes and the sole. For a cure, pare the foot, let out the matter, if any, and dress the sore like the prick of a nail.

BLIESCASTEL, a lordship, castle and town of Prussia, in the grand duchy of the Lower Rhine, formerly belonging to the count of Leyen, under the sovereignty of the elector of Treves. The town stands on the river Blies, and has a population of 1300 inhabitants. In 1783 the French were driven out of their camp here by the Prussians, but regained possession of it next day. Five miles west of Deux-Ponts, and ten east of Sarrebruck.

BLIGHIA, in botany, so named in honor of admiral William Bligh. Class octandria, order monogynia. CAL. in five deep segments : PET. five : STYLE none : CAPS, superior, three cells and three valves: SEEDS solitary. B. sapida, akee- tree. Native of Africa, whence it was transported to the West Indies in 1778. The fleshy tunic, or support, of the seed is said to be a delicate article of cookery, resembling the white flesh of a chicken or frog.

BLIGHT', v. & n.\ The etymology un BLIGHT'ED, > known ; perhaps, says the

BLIGHT'ING. j Ency . Met. from the Ang.-

Sax. lihtan, belihtan, to alight ; to descend ; to fall upon ; to strike, as with mildew ; to blast, to wither ; to hinder from fertility.

When you come to the proof once, the first blight of frost shall most infallibly strip you of all your glory,

L'Estrange.

This vapour bears up along with it any noxious mineral steams ; it then blasts vegetables, blights corn and fruit, and is sometimes injurious even to men.

Woodward.

I complained to the oldest and best gardeners, who often fell into the same misfortune, and esteemed it some blight of the spring. Temple.

The Lady Blast, you must understand, has such a particular malignity in her whisper, that it blights like an easterly wind, and withers every reputation that it breathes upon. . Spectator.

My country neighbours do not find it impossible to think of a lame horse they have, or their blighted corn, till they have run over in their minds all beings.

*Loche^*

But lest harsh care the lover's peace destroy, And roughly blight the' tender buds of joy, Let reason teach. Lyttleton.

O smite, ye heavens serene ; ye mildews wan, "\ e blighting whirlwinds, spare his balmy prime, Nor lessen of his life the little span.

Beattie. JUim'rd.

BLI

What exile from himself can flee ? To zones, though more and more remot Still, still pursues where'er I be, The blight of life ā the demon thought.

Byron. Childe Hareld.

Yes,

Thus pale, cold, dying, thus thou art most fit

To be enfolded to this desolate heart ā

A blighted lily on its icy bed. Maturin. Bertram

BLIOHT, in husbandry, a disease incident to plants, which affects them variously, the whole plant sometimes perishing by it, and sometimes only the leaves and blossoms, which will be scorched and shrivelled up, the rest remaining green and flourishing. Some have supposed that the blights are usually produced by an easterly wind, bringing vast quantities of insects'

eggs along with it, from some distant place ; and that these, being lodged upon the surface of the leaves and flowers of fruit trees, cause them to shrivel up and perish. To cure this distemper they advise the burning of wet litter on the windward side of the plants, that the smoke may be carried to them by the wind, which they suppose will destroy the insects and thereby cure the distemper. Others direct the >ise of tobacco dust, or to wash the trees with waU,r in which tobacco stalks have been infused for twelve hours ; which they say will destroy those insects and recover the plants Pepper dust scattered over the blossoms of fruit- trees, &c. has been recommended as very useful in this case ; and there are some that advise the pulling off the leaves that are distempered. The true cause of blight seems to be continued dry easterly winds for several days together, without the intervention of showers, or any morning dew, by which the perspiration in the tender blossom is stopped ; and, if it so happens that there is a long continuance of the same weather, it equally affects the tender leaves, whereby their color is changed, and they wither and decay. The best remedy for this distemper is to wash and sprin- kle the tree, &c. from time to time with common water ; and, if the young shoots seem to be much infected, let them be washed with a woollen cloth, so as to clear them, if possible, from this gluti- nous matter, that their respiration and perspira- tion may not be obstructed. This operation ought to be performed early in the day, that the mois- ture may be exhaled before the cold of the night comes on ; nor should it be done when the sun shines very hot. Another cause of blight in spring is sharp hoary frosts, which are often suc- ceeded by hot sunshine in the day-time. These are the most sudden and certain destroyers of the fruits that are known.

BLIN', v.

BLIND', v. & n.

BLIND'ING, w. & adj.

BLIND'FOLD, v. & adj.

BLIND'LY,

BLIN D'N ESS,

BLIND'SIDE.

the Eiicy. Met. to obstruct the vision; to de- prive of sight ; applied also to the understand- ing ; want of discernment ; foresight. Ignorant, any thing obscure ; hard to find, dark and ur.- seen : whatever misleads is said to blind.

Ang.-Sax. blind, blindan, blindian ; Germ, blinden, or blenden, from the Ang.-Sax. blinnan, to stop. Junius, and after him Tooke and

I will smite every house of the people with blind- net. Zechariah. Of whose hand have I received any bribe, to blind mine eyes therewith? and I will restore it.*

1 Samuel.

When they had blindfolded him, they struck him on the face. Luke.

Right so, a man that long hath blind ybe, He may not sodenly so well ysee, First when his sight is newe come again, As he that hath a day or two ysein.

Chaucer. Canterbury Tales Full dreadfully he shooke, that all did quake, And clapt on bye his coloured winges twaine, That all his meiny it affraide did make : Tho' blinding him againe, his way he forth did take.

Spenser.

The blinded god, which hath ye blindly smit, Another arrow hath your love's hart hit. Id. You nimble lightnings, dart your blinding flames Into her scornful eyes ! Shakspeare.

To grievous and scandalous inconveniences they make themselves subject, with whom any blind or secret corner is judged a fit house of common prayer.

Hooker.

There be also blind fires under stone, which flame not out j but oil being poured upon them, they flame out. Bacon.

This my long-suffering, and my day of grace, They who neglect and scorn shall never taste, But hard be hardened, blind be blinded more.

Milton.

Those other two, equalled with me in fate, So were I equalled with them in renown ! Blind Thamyris, and blind M xonides ; And Tiresias, and Phineas, prophets old. Id.

Where else

Shall I inform my unacquainted feet

In the blind mazes of this tangled wood ? Id.

The blind man that governs his steps by feeling, in

defect of eyes, receives advertisement of things

through a staff. Digby.

For what are lights to those who blinded bee ? Or, who so blinde, as they that will not see ?

Geo. Withers.

Disguised in all the mask of night, We left our champion on his flight ; At Mind-man's buff to grope his way, In equal fear of night and day. Hudibrai.

Hardly any thing in our conversation is pure and genuine ; civility casts a blind over the duty, under some customary words. L' Estrange.

Oh happiness of blindness ! Now no beauty Inflames my lust; no others good my envy, Or misery my pity ; no man's wealth Draws my respect, nor poverty my scorn.

Dcnltam's Sophy.

A blind guide is certainly a great mischief; but a

guide that blinds those whom he should lead, is un-

tiuubtedly a much greater. South.

Whensoever we would proceed beyond these simple

ideas, we fall presently into darkness and difficulties,

and can discover nothing farther but our own blind-

ntss and ignorance. Locke.

How ready zeal for interest and party, is to charge

atheism on those, who will not, without examining,

submit, and blindly swallow their nonsense. Id.

Who blindfold walks upon a river's brim, When he should see, has he deserved to swim ?

Dryden.

A postern door, yet unobserved and free, Joined by the length of a blind gallery, To the king's closet led. li't

Ail authors to their own defects are blind; Hadst thou but, Janus like, a face behind, To see the people, what splay mouths they make ; To mark their fingers pointed at thy back. Id.

The women will look into the state of the nation with their own eyes, and be no longer led blindfold by a male legislature. Additon.

How have we wandered a long dismal night, Let through blind paths by each deluding light!

Roscommon.

He is too great a lover of himself; this is one of his blindtides ; the best of men, I fear, are not with- out them. Swift. The state of the controversy between us he endea- voured, with all his art, to blind and confound.

Stiltingfleet.

There is no darkness like the cloud of mind On Grief's vain eye ā the blindest of the blind! Which may not ā dare not see ā but turns aside To blackest shade, nor will endure a guide.

Byron's Corsair.

BLINDES, or BLINDS, in the art of war, a sort of defence commonly made of osiers, or branches interwoven, and laid across between two rows of stakes, about the height of a man, and four or five feet asunder, used particularly at the heads of trenches, when they are extended in front towards the glacis; serving to shelter the workmen, and prevent their being overlooked by the enemy.

BLINDING was a species of punishment anci- ently inflicted on thieves, adulterers, perjurers, and others ; and from which the ancient Christians were not exempt. Sometimes lime and vinegar, or barely scalding vinegar, was poured into the eyes, till their balls were consumed; sometimes a rope was twisted round the head till the eyes started out. In the middle age, they

changed total blindness for a great darkness, or diminu- tion of sight, which they produced by holding a red hot iron dish or basin before the eyes, till their humors were dried, and their coats shrivel ā¢ led up. The inhabitants of the city of Apollonia executed it on their watch when found asleep.

BLINDING, VOLUNTARY. Democritus, accord- ing to Plutarch, Cicero, and A. Gellius, put out his own eyes, that he might be less disturbed in his mental contemplations, when thus freed from the distraction of the objects of sight.

BLINDMAN's BUFF; a play in which some one is to have his eyes covered, and hunt out the the rest of the company.

BLINDNESS is a deprivation so serious, and presenting such irresistible claims on our atten- tion and sympathy, that expedients for the relief and comfort of that portion of our fellow crea- tures thus afflicted, have interested the benevolent of all ages and nations. For the diseases that produce this malady we refer to the articles EYE. GUTTA SERENA, and VISION. Our object in the present paper is to consider what alleviations and consolations may be offered to the blind ; of what attainments they are capable ; and what are their sensations and opinions on particular sub- jects, as compared with those of the more favored poition of mankind.

It has been enquired whether blind persons suffer, on the whole, any real diminution of the powers of perception. Their hearing, their touch, and their smell, are in many instances far more

acute than those of any around them ; and with regard to some mental operations, their advan- tages are obvious, and their powers of memory, reflection, and abstraction of mind, unquestion- ably superior to those of other individuals. It is also remarkable that they generally exhibit a more than ordinary share of cheerfulness. Traces of ancient opinions upon this appear in the tales, false or true, told of Deinocritus, who is repre- sented as being proverbially the ' laughing phi- losopher ;' and as having inflicted a voluntary blindness on himself that he might think the more intensely.

But most of these advantages we may be told are the acquisitions of habit urged by necessity ā but still they are important alleviations of the lot of the blind ; they make the fact highly probable, that in the sum of their enjoyments, as well as of their perceptions, they are more nearly equal to their fellow creatures than superficial minds imagine, and demonstrate the

goodness of that Source of all bliss, who is alike to all ā invisible. It is almost demonstrable that our great Milton had, notwithstanding his bitter complaints on this account, been less absorbed in

thoughts that voluntary move

Harmonious numbers, as the wakeful bird Sings darkling, and in shadiest covert hid, Tunes her nocturnal note ;

and more of the political partisan, had he been more fortunate in this respect. We need not here transcribe those complaints for the ten-thousandth time, nor more than allude to the parallel situation of perhaps the greatest poet of antiquity.

fov irepi MOUIT' (iplXrjire, SiSa S' ayaBov re, KO.KOV rer '000aA./juiv fiiv a/tĀ«p

Odyss. 1. 0 v. 63, 64.

Dear to the muse, who gave his days to flow With mighty blessings mixed with mighty woe ; In clouds and darkness quenched his visual ray, Yet gave him power to raise the lofty lay. Pope.

In poetry, therefore, however dependent it may seem on the impression of visible objects upon the mind, the blind may ever rank among their fellow sufferers two of the mightiest names. In the highest branches of the mathematics too they have excelled. St. Jerome mentions a Didy- mus of Alexandria, who 'though blind from his infancy, and therefore ignorant of letters, ap- peared so great a miracle to the world, as not only to learn logic, but geometry also to perfec- tionā which seerns,' adds this father, ' the most of any thing to require the help of sight.' Cicero also states that his preceptor in philosophy, Dio- dorus,' professed geometry after he became blind, and described his diagrams accurately to his scholars.' Parallel modern instances of profi- ciency in these sciences are found in professor Saunderson and Mr. Grenville.

The former seems to have acquired most of nis ideas by the sense of feeling, having been deprived of sight at the age of twelve months. This sense became with him most exquisite : for though he abandoned all attempts at distinguish- ing colors, in a set of Roman medals he could distinguish the genuine from the false, it is said, though they had been counterfeited in such a

manner, as to deceive a connoisseur, who judged of them only by the eye. His sense of feeling was so acute, that he could perceive the least variation in the state of the air ; and in a garden where observations were made on

the sun, he took notice of eveiy cloud, that interrupted the observation, almost as justly as those who could see. He could tell when any thing was held near his face, or when he passed by a tree at no great distance, provided the air was calm, and there was little or no wind, by the different pulses of air upon his face. He also possessed a sensi- bility of hearing to such a degree, that he could distinguish even the fifth part of a note ; and by the quickness of this sense not only discriminated persons with whom he had once conversed so long as to fix in his memory-the sound of their voice, but he could judge of the size of a room into which he was introduced, and of his distance from the wall ; and if he had ever walked over a pavement in courts, piazzas, &c. which reflected a sound, and was afterwards conducted thither again, he could exactly tell in what part of the walk he was placed, merely by the different notes that reached his ear. Dr. Saunderson, it is well known, was Lucasian professor of mathematics at Cambridge, and invented a palpable arith- metic, minutely described in Diderot's Letters on the Blind. It consisted of a square board of a convenient size, divided by parallel lines into a considerable number of smaller squares. Each of these smaller squares, or separate departments, was pierced with nine holes, standing in three parallel rows ; and by fixing a pin in one or other of these nine holes, the nine digits were denoted, according to the position of the pin. In order to facilitate his calculation, Saunderson made use of two sizes of pins, a larger and a smaller. The pins with large heads were always placed in the centre holes of the squares ; and when they stood alone, without any small pins, they denoted the cypher. The number 1 was denoted by a pin with a small head, placed in the centre of a square ; the number 2, by a large pin in the centre, and a small one at the side, in the hole which was first in order ; the number 3, by a large pin in the centre, and a small one in the second hole at the side ; and so on in order to the number 9. Thus any sum could be ex- pressed in a number of squares, corresponding to the number of its figures. Dr. S. was accus- tomed to express also by this means his geome- trical demonstrations, the pins serving to make angles either alone or with silk threads connect- ing them.

Mr. Grenville, who had lost his eye-sight, also contrived an arithmetical machine, consisting of a square board full of holes, and ten sets of pegs of different forms, corresponding to the nine digits and cypher. By far the most simple and commodious of these machines, however, seems to be that of Dr. Henry Moyes ; of which he has himself inserted an account in the Ency. Brit, third edit. He informs us, that when he began to study the principles of arithmetic, he soon found that a person deprived of sight could scarcely proceed in that useful science, without the aid of palpable symbols representing the ten numerical characters ; and being then unac-

quainted with Saunderson's method, he embraced the obvious, though, as he afterwards found, im- perfect expedient, of cutting into the form of the numerical characters, thin pieces of wood or metal ; which being arranged on the surface of a board, by means of a lamina of wax, readily re- presented any given number. It soon, however, occurred to him, that his notation, consisting of ten species of symbols or characters, was much more complicated than was absolutely necessary ; and that any given number might be distinctly expressed by three species of pegs alone, viz. two with heads of the form of a right-angled triangle, and distinguished from each other by having a notch cut in the oblique side or hypothenuse of one of them, their other two sides being, one of them a continuation of the peg, and the other at right angles to it ; and the third peg having a head of the form of a square. These pegs were to be stuck into a board of about a foot square, and divided into 576 little squares, by lines which were cut a little into the wood, so as to form a superficial groove. At each angle or in- tersection of the grooves, a hole was made for the insertion of the pegs. Sixty or seventy of each kind of pegs were necessary, which were placed in a case consisting of three boxes or cells, one for each set.

'Things being thus prepared,' says Dr. M. ' let a peg of the first set (with a plain triangular head) be fixed into the board ; and it will acquire four different values, according to its position respecting the calculator. When its sloping side is turned towards the left, it denotes one, or the first digit ; when turned upwards, or from the calculator, it denotes two, or the second digit ; when turned to the right, it represents three ; and when turned downwards, or towards the calcu- lator, it denotes four, or the fourth digit. Five is denoted by a peg of the second set, with a notched triangular head, having its sloping side, or hy- pothenuse, turned to the left ; six, by the same turned upwards ; seven, by the same turned to the right ; and eight, by the same turned directly down, or towards the body of the calculator. Nine is expressed by a peg of the third set, with a square head, when its edges are divided to right and left ; and the same peg expresses the cypher, when its edges are directed up and down. ā When it is necessary to express a vulgar fraction, I place the numerator in the groove im- mediately above, and the denominator in that immediately below the groove in which the in- tegers stand; and, in decimal arithmetic, an empty hole in the integer groove represents the comma or decimal point. By similar breaks, I also denote pounds, shillings, pence, &c. ; and by the same expedient, I separate, in division, the divisor and quotient from the dividend. Co- efficients and indices, in algebra and fluxions, are supplied upon similar principles.'

This gentleman lost his sight by the small-pox in his early infancy. He never

recollected to have seen : 'but the first traces of memory I have,' says he, ' are in some confused ideas of the solar system.' Possessed of native genius, and ardent in his application, he made rapid advances in various departments of erudition ; and not only acquired the fundamental principles of mechanics,

music, and the languages, but likewise entered deeply into the investigation of the profounder sciences, and displayed an acute and general knowledge of geometry, optics, algebra, astronomy, chemistry, and in short of most of the branches of the Newtonian philosophy. Mechanical exer- cises were the favorite employments of his infant years. At a very early age he made himself ac- quainted with the use of edged tools so perfectly, that, notwithstanding his entire blindness, he was able to make little wind-mills ; and he even con- structed a loom with his own hands. ' By a most agreeable intimacy and frequent intercourse which I enjoyed with this accomplished blind gentleman, whilst he resided at Manchester,' says his biographer, Dr. Bew, ' I had an oppor- tunity of repeatedly observing the peculiar man- ner in which Jie arranged his ideas and acquired his information. Whenever he was introduced into company, I remarked that he continued some time silent. The sound directed him to judge of the dimensions of the room, and the different voices of the number of persons that were present. His distinctions in these respects were very accurate ; and his memory so retentive that he seldom was mistaken. I have known him instantly recognise a person, on first hearing him speak, though more than two years had elapsed since the time of their last meeting. He deter- mined pretty nearly the stature of those he was speaking with by the direction of their voices ; and he made tolerable conjectures respecting their tempers and dispositions, by the manner iu which they conducted their conversation. It must be observed that this gentleman's eyes were not totally insensible to intense light. The rays refracted through a prism, when sufficiently vivid, produced certain distinguishable effects on them. The red gave him a disagreeable sensation, which he compared to the touch of a saw. As the colors declined in violence the harshness lessened, until the green afforded a sensation that was highly pleasing to him, and which he described as conveying an idea similar to what he felt in running his hand over smooth polished surfaces. Polished surfaces, meandering streams, and gentle declivities, were the figures by which he expressed his ideas of beauty : rugged rocks, irregular points, and boisterous elements, fur- nished him with expressions for terror and dis- gust. He excelled in the charms of conversation ; was happy in his allusions to visual objects ; and discoursed on the nature, composition, and beauty of colors, with pertinence and precision. Dr. Moyes was a striking instance of the power the human soul possesses of finding resources of satisfaction even under the most rigorous calami- ties. Though involved ' in ever during darkness,' and excluded from

the charming views of silent or animated nature ; though dependent on an undertaking for the means of his subsistence, the success of which was very precarious ; in short, though destitute of other support than his genius, and under the mercenary protection of a person whose integrity he suspected, still Dr. Moyes was generally cheerful, and apparently happy.'

The attempts which have been made to sup- ply the blind with tangible musical characters, or signs, have not been attended with the success

which their delight in that science might have in- duced us to expect. In Tansure's Musical Grammar it is recommended that the blind should be provided with a smooth board, with ledges of deal glued on it at proper distances, to repre- sent the five lines of the musical staff; with such additional lines as occasion may require. In these ledges, as well as in the intervals between them, a number of holes are to be drilled for the reception of a variety of pegs, intended to indi- cate the various kinds of notes in music ; such as semibreves, minims, crotchets ; together with the rests, flats, sharps, bars, &c. In another con- trivance for the same purpose, in some asylums of the blind, a stuffed cushion is substituted for the board of Tansure, upon which strings are sewed to represent the musical staff; and the pegs intended to denote the various musical characters are fixed upon sharp pointed wires, by which means they may be stuck into any required part of the cushion.

In 1786 an Essay on the Education of the Blind was printed at Paris, under the patronage of the Academy of Sciences. It is the produc- tion of M. Haiiy, and does him great honor. Here we find a detail of a great variety of ex- pedients by which the blind may be successfully instructed in the mechanic arts, as well as in music, arithmetic, geography, &c., and may even be taught to read, write, and print. In order to instruct the blind in music, at the institution of which M. Haiiy communicates the details in this work, musical characters of every necessary form were cast in metal, and so many in number as to represent upon paper, by elevations on its surface, all the possible varieties that occur. In teaching geography, which was the department of M. Weissenbourg and Mad. Paradis, the circumfer- ence of countries was marked out by a tenacious and viscid matter, and the different parts of the maps were covered with a kind of sand, mixed with glass in various modes ; the order of the towns being distinguished by grains of glass of a greater or less size ; or, according to the plan of M. Haiiy, the limits of the maps, for the use of the blind, were marked by a small rounded iron wire ; and by some difference, either in the form or size of every part of a map, the pupils were assisted in distinguishing one part from another.

The manner in which the blind are taught to write and print is as follows : The pupil, by re- peated experiments, having familiarised himself to the forms of the letters as drawn in relief, both in their direct and inverted position, gradually learns to impress them upon strong paper, a little moistened, with the point of a blunt iron pen or stylus, which marks without piercing the paper. By this means the letters become perceptible to the touch, on the one side sunk, and on the other in relievo ; and thus the blind may be enabled to form and decipher, not only the characters required in common language, but also mathematical diagrams, geographical plans, and all the characters employed in arith- metic, music, &c. In printing, the blind com- positor has a box for every letter, on the outside of which is marked, in relief, the peculiar charac- ter belonging to each. By this means he is

enabled readily to choose and arrange his types, and when they are set, he makes use of a strong paper, slightly moistened, like that employed in writing, in order to render it more easily sus- ceptible of impressions. Having laid this upon his types, by the operation of the press, or the strokes of a small hammer, he raises an impres- sion upon the paper, which, when dry, is suf- ficiently obvious to the touch to enable the blind to read by their fingers, and is so durable as to be by no means easily effaced. The types therefore are set, not in the reverse, but in the direct order, so that the characters may appear in relievo, in the same order, on the opposite side of the paper. Dr. Blacklock mentions that he was in possession of a copy ofM.

Haiiy V Essay, which was printed in the manner now described, and also bound by the blind pupils of the Parisian institution, with great neatness. An English translation of the Essay is annexed to the edition of that gentleman's poems, printed at Edinburgh in 4to., in 1793.

Dr. Blacklock was himself, amongst the most interesting of modern blind men. We have given (see BLACKLOCK) a sketch of his life already. Deploring the condition of the blind, he fur- nishes some original expressions, and one of the most powerful passages on this subject in the En- glish language. To the blind, says he, the visi- ble universe is annihilated ; he is perfectly conscious of no space but that on which he stands, or to which his extremities can reach. Sound, indeed, gives him some ideas of distant objects ; but those ideas are extremely obscure and indistinct. They are obscure, because they consist alone of the objects whose oscillations vibrate in his ear ; and do not necessarily suppose any other bodies with which the intermediate space may be occupied, except that which gives the sound alone : they are indistinct, because sounds themselves are frequently ambiguous, and do not uniformly and exclusively indicate their real causes. And though by them the idea of distance in general, or even of some particular distances, may be obtained, yet they never fill the mind with those vast and exalting ideas of exten- sion, which are inspired by ocular perception. For though a clap of thunder, or an explosion of ordnance, may be distinctly heard after they have traversed an immense region of space ; yet, when the distance is uncommonly great, it ceases to be indicated by sound ; and, therefore, the ideas acquired by auricular experiment, of exten- sion and interval, are extremely confused and in- adequate. The living and comprehensive eye darts its instantaneous view over expansive valleys, lofty mountains, protracted rivers, illimitable oceans. It measures, in an indivisible point of time, the mighty space from earth to heaven ; or from one star to another. By the assistance of telescopes, its horizon is almost indefinitely ex- tended, its objects prodigiously multiplied, and the sphere of its observation nobly enlarged. By these means, the imagination, inured to vast im- pressions of distance, can not only recal them in their greatest extent, with as much rapidity as they were at first imbibed, but can multiply them, and add one to another, till all particular boun- daries and distances be lost in immensity.

' Thus nature, by profusely irradiating the facˆ of things, and clothing objects in a robe of diver- sified splendor, not only invites the understand- ing to expatiate on a theatre so extensive, so diversified, and so attractive ; but entertains and inflames the imagination with every possible ex- hibition

of the sublime or beautiful. The man of light and colors beholds the objects of his atten- tion and curiosity from afar. Taught by expe- rience, he measures their relative distances ; distinguishes their qualities, determines their situations, positions, and attitudes; presages what these tokens may import; selects his favor- ites ; traverses in security the space which divides them from him ; stops at the point where they are placed ; and either obtains them with ease, or immediately perceives the means by which the obstacles that intercept his passage to them may be surmounted. The blind not only may be, but really are, during a consider- able period, apprehensive of danger, in every motion towards any place from whence their contracted power of perception can give them no intelligence. All the various modes of delicate proportion ; all the beautiful varieties of light and colors, whether exhibited in the works of nature or art; are to them irretrievably lost. Dependent for every thing but mere subsistence, on the good offices of others; obnoxious to injury from every point, which they are neither capacitated to perceive, nor qualified to resist : they are, during the present state of being, rather to be considered as prisoners at large, than citi- zens of nature. The sedentary life, to which by privation of sight they are destined, relaxes their frame, and subjects them to all the disagreeable sensations which arise from dejection of spirits. Hence the most feeble exertions create lassitude and uneasiness. Hence the native tone of the nervous system, which alone is compatible with health and pleasure, destroyed by inactivity, exasperates and embitters every disagreeable im- pression. Natural evils, however, are always supportable ; they not only arise from blind and undesigning causes, but are either mild in their attacks, or short in their duration ; it is the mise- ries which are inflicted by conscious and reflect- ing agents alone, that can deserve the name of evils. These excoriate the soul with ineffable poignancy, as expressive of indifference or malig- nity in those by whom such bitter potions are cruelly administered. The negligence or wan- tonness, therefore, with which the blind are too frequently treated, is an enormity which God alone has justice to feel, or power to punish.'

Excellence in sculpture does not appear to us so remarkable in the blind. The artist of whom Aldrovandus speaks, became blind at twenty years of age, and yet ten years after made a per- fect marble statue of Cosmo II. de Medicis : and another of clay, like Urban VIII. Bartholin also tells us of a blind sculptor in Denmark, who distinguished perfectly well, by mere touch, all kinds of wood, and even the colors of them ; and De Piles (Cours de Peint. p. 329.) of another who thus took the likeness of the duke de Bracci- ano in a dark cellar, and made a marble statue of king Charles I. with great justness and ele- gance.

Musical attainments we seem also to expect as a matter of course with the blind ; but to teach its theory to others would appear as difficult a task as

any that they could undertake. Yet Sir John Hawkins assures us that the blind Sulinas Treatise on the Scientific Principles of Harmony, is equal to any that is extant. As to practical musicians we need only mention the well-known instance of Mr. Stanley, the organist of St. An- drew's, Holborn, and at the Temple. He is said to have been one of the most pleasing and accu- rate of performers, as well as a very superior composer and instructor. So delicate was his ear that he could accompany with the thorough- bass any lesson which he heard for the first time, thus anticipating the harmony before the chords were sounded.*

Authors of good credit mention a very surpris- ing blind guide who used to conduct the mer- chants through the sands and deserts of Arabia. See Leo Afric. Descr. Afr..lib. vi. p. 246. and Casaub. Treat, of Enthus. c. ii. p. 45. Dr. Bew, in the Transact, of the Manchester Society, men- tions an instance not less marvellous in our own country. 'John Metcalf, a native of the neigh- bourhood of Manchester, where he is well known, became blind at a very early age, so as to be entirely unconscious of light and its various effects. This man passed the younger part of his life as a waggoner, and occasionally as a guide in intricate roads during the night, or when the tracks were covered with snow. Strange as this may appear to those who can see, the employ- ment he has since undertaken is still more extraordinary : it is one of the last to which we could suppose a blind man would ever turn his attention. His present occupation is that of a projector and surveyor of highways in difficult and mountainous parts. With the assistance only of a long staff, I have several times met this man traversing the roads, ascending precipices, exploring valleys, and investigating their several extents, forms, and situations, so as to answer his designs in the best manner. The plans which he designs, and the estimates he makes, are done in a manner peculiar to himself; and which he cannot well convey the meaning of to others. His abilities in this respect are nevertheless sa great, that he finds constant employment. Most of the roads over the Peak in Derbyshire, have been altered by his directions; particularly those in the vicinity of Buxton : and he is at this time constructing a new one betwixt Wilmeslow and Congleton,with a view to open a communication to the great London road, without being obliged to pass over the mountains.'

Those of our readers who wish to pursue these extracts, will find an interesting account of a blind French lady, of remarkable acquirements, in the Annual Register, 1762. But a more remarkable case of providential compensation for this mala- dy, united with that of deafness, occurred in the practice of Sir Hans Sloane. Of this lady it is said, ' During the privation of her sight and hearing, her touch and her smell became so ex- quisite, that she could distinguish the different colors of silk and flowers, and was sensible when any stranger was in the room with her. After she became blind, and deaf, and dumb, it was

not easy to contrive any method by which a ques- tion could be asked her, and an answer received. This, however, was at last effected, by talking with the fingers, at which she was uncommonly ready. But those who conversed with her in this manner, were obliged to express themselves by touching her hand and fingers, instead of their own. A lady who was nearly related to her, having an apron on, that was embroidered with silk of different colors, asked her, in the manner which has been described, if she could tell what color it was ? and after applying her fingers attentively to the figures of the embroi- dery, she replied, that it was red, and blue, and green ; which was true. The same iady having a pink colored ribbon on her head, and being willing still further to satisfy her curiosity and her doubts, asked what color that was? Her cousin, after feeling some time, answered that it was pink color : this answer was yet more astonishing, because it showed not only a power of distinguishing different colors, but different kinds of the same color; the ribbon was not only discovered to be red, but the red was discovered to be of the pale kind called a pink. This unhappy lady, conscious of her own uncom- mon infirmities, was extremely unwilling to be seen by strangers, and therefore generally retired to her chamber, where none but those of the family were likely to come. The same relation, who had by the experiment of the apron and ribbon discovered the exquisite sensibility of her touch, was soon after convinced by an accident, that her power of smelling was acute and refined in the same highly astonishing degree. Being one day visiting the family, she went up to her cousin's chamber, and after making herself Known, she entreated her to go down, and sit with her among the rest of the family, assuring ner that there was no other person present ; to tnis she at length consented, and went down to the parlour door; but the moment the door was opened, she turned back, and retired to her own chamber much displeased ; alleging that there were strangers in the room, and that an attempt had been made to deceive her ; it happened in- deed that there were strangers in the room ; but they had come in while the lady was above stairs, so that she did not know that they were there. When she had satisfied her cousin of this par- ticular, she was pacified ; and being afterwards asked how she knew there were strangers in the room, she answered, by the smell.' Her friends she generally distinguished by feeling their hands. A lady, with whom she was very well acquainted, coming in one very hot day, after having walked a mile, presented her hand as usual ; she felt it longer than ordinary, and seemed to doubt whose it was ; but after spanning the wrist, and measur- ing the fingers, she said, ' It is Mrs. M., but she is warmer to-day than ever I felt her before.' To amuse herself in the mournful and perpetual solitude and darkness to which her disorder had reduced her, she used to work much at

her nee- dle ; and her work was uncommonly neai and exact. She used also sometimes to write ; the characters were very pretty, the lines all even, and the letters placed at equal distances from each other; but the most astonishing particular VOL. IV

of all, with respect to her writing, is, that she could by some means discover when a letter had by mistake been omitted, and would place it over that part of the word where it should have been inserted, with a caret under it. It being doubted whether she had not some faint remains both of hearing and sight, many experiments were made to ascertain the fact ; some of which, when she accidentally discovered them, gave her prodigious uneasiness, on account of her being suspected of insincerity. At length Sir Hans Sloane, after being permitted to satisfy himself by such experiments and observations as he thought proper, pronounced that she was abso- lutely blind and deaf.

Institutions for the reception and instruction of the blind have long been the honor of London, Liverpool, and Paris. Dr. Guillie has published some modern improvements on the conduct of the latter, with extracts from which, we shall close this article. ' The discovery (says he) of printing books in relief, is one of the most impor- tant for the instruction of the blind. It is by the assistance of these books, which have no other inconvenience than that .of being bulky, that they are taught the elements of languages, and fix in their minds the beautiful passages of history and morality which they have learnt ; for they know much better what they have read, than what they have heard, and we therefore augment as far as our means will admit the library of the blind with works which we think fitted for their instruc- tion. They have already two catechisms, the office for morning and evening, French, Latin, Greek, English, and Italian grammars. One would hardly believe with what rapidity they read in these books, if we did not see it at the public exercises. The use of a thicker ink, or one which would dry and be felt on the paper, has been tried it seems here and failed. By means of these books the blind are even said to teach young people who can see to read, and these in return then become their preceptors in many useful acquirements.

Writing is taught by means of a wide thick board, having a fixed bottom. Upwards there is a parallelogram opening with hinges on the left side, and kept shut on the right by two small copper bolts. An improvement has been lately made, by substituting instead of a wooden bottom a thick silk which receives and retains the traces of the letters from the stilet or pencil ; this affords the blind man the advantage of reading what he has written. Mr. Heilman, a blind man, who proposed this improvement, has also contrived a portative portfolio for the blind, by means of which they may write, and read di- rectly with the greatest ease what they have written. This frame is

furnished with several movable rods of iron. Below its two great ascending pannels, there is on each side abroad steel spring, stretching from one extremity to the other, fixed at one end by two English screws, and at the other only stopped at pleasure by a turning bolt. It is between these springs and the lower part of the sides of the frame that the paper is placed, which -.emains immovable under the rods. The mathematics are taught on an improvement of Saundi'i son's method, by rejecting the symbols

that have merely an arbitrary value. The letters and cyphers which we make use of at present, (says Dr. G.) are in no respect different from the common ones. These cyphers are mounted on a transversal chevron, the fractions are mounted in the same manner, but the upper part of the chevron is hollowed in a square form to receive a movable cylinder in the form of a wedge, by means of which the numerator and denominator are indicated, and then the necessary changes. Strings that may be placed horizontally or vertically, serve to indicate the divisions of the numbers.'

' People (he continues) are astonished to see our pupils go through a course of optics as well as those who see, and they admire their sagacity in speaking of dioptrics and catoptrics. As we do not wish to enjoy an admiration that is mi- merited, we must declare that what makes the demonstration of all the phenomena of optics easy to them, is that they reduce every thing to lines. They perceive only palpable points where we see colored prints ; for they have not, nor can they have any idea of colors.' Yet the fol- lowing anecdote approaches to some idea. ' One of the pupils at the institution, translating at a public exercise the first strophe of the second ode of the first book of Horace, was stopped at these words, et rubente dextera, &c. by the ex- aminer, who asked him the proper translation of the words rubente dextera : the young man trans- lated it, his flaming right hand. Being pressed again to translate literally the epithet rubente, he gave the equivalent red. Being asked again what he understood by a red arm, he answered that he did not think, like Locke's blind man, that the color red was like the sound of a trumpet ; nevertheless he could form no proper idea of it, but that he had at first translated rubente, flaming, because he had been told that fire is red, whence he had concluded, that heat is always accompanied by redness, which determi- ned him to mark the anger of Jupiter by the epithet flaming, because when one is irritated one is hot, and when one is hot, one must be red.' At an early period of the Paris institution, the pupils of the deaf and dumb school were mixed with them at the same convent, and various successful and unsuccessful attempts were made by each of these interesting groups of

children, to communicate with the others. At first when the blind had learnt that the deaf and dumb spoke to each other in the dark, by writing on the back, they conceived that this method might succeed also with them. This new language soon became common to the two families ; the deaf and dumb, who found it tiresome to have written on their back what they could see per- fectly well, attempted to make the blind write in the air, as they do themselves ; this means, which was as long as the former, appeared more un- certain, as the blind wrote ill in that way ; they therefore preferred the characters the latter made use of; but as these characters cannot be easily transported, the dumb taught the blind their manual alphabet, and the one by sight and the other by touch, easily found by the inspection of their fingers, the letters that are formed by their different combinations. Nevertheless this

manual alphabet only exhibiting words, slackened conversation amazingly. They felt the want of a more rapid communication, and the blind learnt the theory of the signs of the deaf and dumb : each sign thus representing a thought, the communication was complete. This study was long and tedious, because it supposes a pretty complete knowledge of grammar : but the wish to talk got the better of all these difficulties, and in a few months, the signs being perfectly well known, took place of all the other means till then employed. The exchange between them was performed in the following manner. 'When the blind had to speak to the deaf and dumb, he made the representative signs of his ideas, and these signs more or less exactly made, trans- mitted to the deaf and dumb the idea of the blind. When the deaf and dumb in his turn wished to make himself understood, he did it in two ways ; he stood with his arms stretched out and motionless before the blind person, who took hold of him a little above the wrists, and without squeezing them, followed all the motions they made; or if it happened that the signs were not understood, the blind man put himself in the place of the deaf and dumb, who then took hold of his arms in the same manner, and moving them about as he would have done his own before a person who could see, he filled up the deficiencies of the first operation, and thus completed the series of ideas which he wished to communicate to his companion. ' But the degree of instruction of the scholars not being the same, they could not make use of the signs equally well.' In fact it sometimes became a mournful failure altogether. See DEAF and DUMB. And for the first effects of sight on those who have been couched, See COUCHING.

BLINDNESS, in farriery, a disease incident to horses, especially those of an iron-gray, or dapple- gray color, when ridden too hard, or backed too young. It may be discovered by the walk, which in a blind horse is always unequal, because he dares not set down his feet boldly when led; though if the same horse be mounted by an expert horseman, and if himself be

mettled, the fear of the spur will make him go more freely ; so that his blindness can hardly be perceived. Another mark of loss of sight is, that upon hearing any body enter the stable, he will prick up his ears, ami move them backwards and forwards, being in continual alarm by the least noise. Dr. Lower first showed the ordinary cause of blindness in horses, which is a spongy excrescence, growing in one, sometimes in two, or three places of the uvea, which being at length overgrown, covers the pupil when the horse is brought into the light, though in a dark stable, it dilates again. Horses that lose their sight at certain periods o;~ the moon, are said to be moon-blind.

BLIND RAMPART, caecum vallum, among the ancients, was that beset with sharp stakes, con- cealed by grass or leaves growing over them.*

BLIND'WORM, n. s. Cecilia; from blind and worm. A small viper, called likewise si slow worm ; believed not to be venomous.

The greater slow worm, called also the Wind worm, is commonly thought to be blind, because of the little- ness of his eyes. Grew.

You spotted snakes, with double tongue, Thorny hedgehogs, be not seen ; Newts and blindworms, do no wrong ; Come not near our fairy queen. Shakspeare.

BLINK', u. & n.-\ See To BLANCH, and To BLINK'ERS, / BLENCH. To blink, is to

BLINK'ING, Vgive the eye the twinkling

BLINK'ARD, i motion or apparent action BLINK'EYED. J of a star; to twinkle; to wink ; to look with the eye partially closed ; and as this is frequently done to avoid, evade, escape, elude, shun, or shrink from any sudden action upon the ey e ; to blench or to blink is consequently to avoid, or cause to avoid ; to evade ; to escape ; to elude; to shun, shrink, or start from. ā Ency. Met. art. BUNK. It also is used to mean see- ing obscurely ; and for the winking which indi- cates any thing rather than evasion, or a desire to avoid.

The swete visage, and amorous blenking Of fair Creside, sometime his oun darling.

Chaucer.

The amorous blynckt flee to and fro, With sugred words that make a show, That fansie is well pleased withall, And findes itself content. Turberville.

What's here ! the portrait of a blinking ideot.

Shakspeare.

Sweet and lovely wall, Shew me thy chink, to blink through with mine eye.

Id. Midsummer Night' t Dream. In some parts we see many glorious and eminent stars, in others few of any remarkable greatness, and in some none but blinkards, and obscure ones.

Hakewell.

For as with pigmies who best kills the crane, Among the hungry he that treasures grain, Among the blind the one-eye'd blinkard reigns, So rules among the drowned he that drains.

Marvell.

So politick, as if one eye Upon the other were a spy j That, to trepan the one to think The other blind, both strove to blink.

Hudibras.

His figure such as might his soul proclaim ; One eye was blinking, and one leg was lame.

Pope.

This floor let not the vulgar tread, Who worship only what they dread, Nor bigots who but one way see, Through blinkers of authority.

Green. The Grotto.

BUNKS, among ancient sportsmen, denoted boughs broken down from trees, and thrown in the way where deer were likely to pass, to hinder their running, or rather to mark which way the deer ran, in order to guide the hunter. BLINKS, in botany. See MONTIA. BLISS', "j Sax. bhrye, fiomblrSapan,

BLISS'FUL, to rejoice. The highest de-

BLISS'FULLY, gree of happiness ; blessed- BLISS'FULNESS,) > ness ;

felicity ; generally BLISS'LESS, I used of the happiness of BLISS'EDNESS, | blessed souls. See To BLISS'EDLY. J BLESS.

Ther ā as a wedded man in his estat, Liveth a lif blisful and ordinal, Under the yoke of mariage ybond : vel may his herte in joye and blisse abound.

Chaucer. Canterbury Tales.

Yet swimming in that sea of blissful joy,

He nought forgot. Faerie Quetne.

A mighty Saviour hath witnessed of himself, I

am the way ; the way that leadeth us from misery

into bliss. Hooker.

Dim sadness did not spare That time celestial visages ; yet mixed With pity, violated not their bliss. Milton.

With me All my redeemed may dwell, in joy and bliss. Id.

Reaping immortal fruits of joy and love, Uninterrupted joy, unrivalled love, In blissful solitude. Id.

The two saddest ingredients in hell, are depriva- tion of the blissful vision, and confusion of face.

Hammond.

So peaceful shalt thou end thy blissful days, And steal thyself from life by slow decays. Pope.

First in the fields I try the silvan strains ; Nor blush to sport on Windsor's blissful plains. Id.

Condition, circumstance, is not the thing ; Bliss is the same in subject or in king. Id.

Sometimes with Scipio she collects her sail, And seeks the blissful shore of rural ease.

Thomson .

BLIST'ER v. & n. Dutch bluyster ; perhaps blaest, from Ang.-Sax. blaestan. To blow, to puff up as a pustule, or blain. A pustule formed by raising the

cuticle from the cutis and filled with serous blood. This is sometimes the effect of disease, of accident, and of design. In this state she gallops, night by night, O'er ladies' lips, who strait on kisses dream, Which oft the angry Mab with blisters plagues, Because their breaths with sweetmeats tainted are.

Shakspeare.

Look, here comes one, a gentlewoman of mine, Who falling in the flaws of her own youth, Hath blistered her report. Id.

Such an act

That blurs the grace and blush of modesty ; Calls virtue hypocrite ; takes off the rose From the fair forehead of an innocent love, And sets a blister there. Id.

If I prove honeymouth, let my tongue blister, And never to my red-looked anger be The trumpet any more. Id.

Upon the leaves there riseth a tumour like a blister.

Bacon.

I found a great blister drawn by the garlick, but had

it cut, which run a good deal of water, but tilled again

by next night. Temple.

I blistered the legs and thighs ; but was too late : he

died howling. Wiseman.

Embrace thy knees with loathing hands,

Which blister when they touch thee. Dry den.

Blistering, cupping, bleeding, are seldom of use

but to the idle and intemperate ; as all those inward

applications, which are so much in practice among us,

are, for the most part, nothing else but expedients to

make luxury consistent with health. Spectator.

BLISTER, in surgery and medicine, vesicato- rium; epispasticum. 1. The name of a topical application, eplastrum vesicatorium, which when put on the skin raises the cuticle in the form of a vesicle, filled with serous fluid. Various sub- stances produce this effect ; but the powder of the cantharis, or blistering fly, is what operates with most certainty and expedition, and is now invariably used. It is an established principle, that where morbid action exists, it may often be removed from the system by inducing action

of a different kind in the same or a neighbouring part. On this principle is explained the utility of blisters in local inflammation and spasmodic action, and it regulates their application in pneu- monia, gastritis, hepatitis, phrenitis, angina, rheu- matism, cholic, and spasmodic affections of the stomach ; diseases in which they are employed with the most marked advantage. A similar principle exists with respect to pain; exciting one pain often relieves another. Hence blisters give relief in tooth- ache, and some other painful affections. Lastly, blisters, by their operation, communicate a stimulus to the whole system, and raise the vigor of the circulation. Hence, in 'part, their utility in fevers, of the typhoid kind, though in such cases they are used with still more advantage to obviate or remove local in- flammation.

Practitioners used formerly to mix powder of cantharides with an ointment, and dress the part with this composition. But such a dressing not unfrequently occasioned very painful affections of the bladder, a scalding sensation in making of water, and very afflicting stranguries. The treat- ment of such complaints consists in removing every particle of the fly from the blistered part, making the patient drink abundantly of mucila- ginous drinks, giving emulsions and some doses of camphor. These objections to the employ- ment of salves containing the lytta, for dressing blistered surfaces, led to the use of mezereon, ā¢uphorbium, and other irritating substances, which, when incorporated with ointment, form very proper compositions for keeping blisters open, which they do without the inconvenience of irritating the bladder, like the blistering fly. The favorite application, however, for keeping open blisters, is the savine cerate. On the use of the savine cerate, immediately after the cuticle raised by the blister is removed, it should be observed that experience has proved the advan- tage of using the application lowered by a half or two thirds of the unguentum

cerae. An attenĀ«- tion to this direction will produce less irritation and more discharge, than if the savine cerate were used in its full strength. Fomenting the part with flannel, wrung out of warm water, has been found a more easy and preferable way of keeping the blistered surface clean, and fit for the impression of the ointment, than scraping the part, as has been directed by others. An occa- sional dressing of unguentum resinae flavae, is a very useful application for rendering the sore free from an appearance of slough, or rather dense lymph, which has sometimes been so firm in its texture as to be separated by the probe, with as much readiness as the cuticle is detached after blistering. As the discharge diminishes, the strength of the savine dressing should he propor- tionably increased. The ceratum sabinse must be used in a stronger or weaker degree, in pro- portion to the excitement produced on the pa- tient's skin.

BLITE, in botany. See BLITUM.

BLITH. See BLYH.

BLITHE, -\ Belit/tc, belMesome, belissom,

BLITH'LY, for blithe, blithesome, blissom.

BLITH'SOME, I See BLEST. Gay; sprightly;

BLITP'NESS. } cheerful; lively; joyous;

freshness of spirits ; the high pulsation of co rpo- real and mental health, not often possessed, especially by compilers of dictionaries.

Would'st sen blithe looks, fresh cheeks, beguile Age ? would 'st see December smile 1 Crashoto.

We have always one eye fixed upon the counte- nance of our enemies ; and, according to the blithe or heavy aspect thereof, our other eye sheweth some other suitable token either of dislike or approbation .

Hooker.

Then sigh not so, but let them go, And be you blithe and bonny. Shakspeare

For that fair female troop thou sawest, that seemed Of goddesses, so blithe, so smooth, so gay ; Yet empty of all good. Milton

To whom the wily adder, blithe and glad : Empress ! the way is ready, and not long. Id,

And the milkmaid singeth blithe, And the mower whets his scythe. Id,

Blither than hare that hath escaped the hounds, The house prorogued, the chancellor rebounds.

Marcell,

Frosty blasts deface

The blithsome year : trees of their shrivelled fruits Are widowed. Philips.

Should he return, that troop, so blithe and bold, Precipitant in fear, would wing their flight. Pope.

BLITUM, the Elite : a genus of the digynia order, monandria class of plants; natural order, twelfth, holoraceae : CAL. tnfid;no petal; SEEF> single, included in a berry-shaped calyx. There are three species, viz. 1. B. capitatum, with flowers in clustered beads at the joints and crown of the stalks, a native of Spain and Portugal, but has been long preserved in the British gardens, for the beauty of its fruit. 2. B. Tartaricum with triangular acutely indented leaves, a native ā¢ of Tartary. 3. B. virgatum, with small heads growing from the sides of the stalks, a native of the South of France and Italy. It seldom grows more than a foot high; the leaves of the same shape with those of the capitatum, but smaller.

BLOAT', v. & adj.) Probably from blow.

BLOAT'EDNESS. i See BLOW. To swell with wind ; to grow turgid ; to be swollen with in- temperance; turgidity.

The bloat king. Sliakapeare. Hamlet.

His rude essays

Encourage him, and bloat him up with praise,

That he may get more bulk before he dies. Dryden.

I cannot but be troubled to see so many well-shaped innocent virgins bloated up, and waddling up and down like big-bellied women. Addison.

If a person of a firm constitution begins to bloat, from being warm grows cold, his fibres grow weak.

Arbuthnot.

Lassitude, laziness, bloatedness, and scorbutical spots, are symptoms of weak fibres. Id.

Fast by her side a listless maiden pined

With aching head and squeamish heartburnings ;

Pale, bloated, cold, she seemed to hate mankind,

Yet loved in secret all forbidden things. Thornton.

BLOATED FISH, or BLOATED HERRINGS, in our statutes, are those which are half dried. See Stat. 18 Car. II. c. 2. They are made by steep- ing them in a peculiar brine, and then hanging them in a chimney to dry.

BLOATING, in medicine, a puffing up of the exterior habit of the body, lodged chiefly in the adipose cells. It is styled by physicians em- physema.

BLOCKS.

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BLORBEll, n. s. From blob. A word used in some counties for a bubble.

There swimmeth also in the sea a round slimy sub- stance, called a blabber, reputed noisome to the fish.

Carets.

BLOB'BERLIP, n. s. From blob, or blabber and lip. A thick lip.

They make a -wit of their insipid friend, His blobberlips and beetlebrows commend. Dryden.

BLOB'LIPPED, adj.) Having swelled or

BLOB'BERLIPPED, J thick lips.

A blobberlipped shell, seemeth to be a kind of mus- sel. Grew.

His person deformed to the highest degree ; flat- nosed, and blobberlipped. L' Estrange.

BLOCH (George Castaneus), bishop of Ripen, in Denmark, was born in 1717, and died in 1773. He published Tentamen Phoenicologices Sacra, &c. 8vo. Hafn. 1767.

BLOCH (Mark Eliezer), a Jew, and a naturalist of Anspach, was born in 1723, and died in 1799. He was the author of Ichthyologie oder Natur- geschichte der Fische, 12vols. 4to. Berlin. 1785; besides a Treatise on the

Generation of Worms in the Intestines, and another on the Waters of Pyrmont, &c.

BLOCK', v. & n. ~\ From the Ang.-Sax.

BLOCK'ADE, v. & n. lycan, belican ; to shut ;

BLOCK'HEAD, to close; to shut up; to

BLOCKHEAD'ED, lock ; quoted by theEncy .

BLOCK'HEADLY, Met. from Somner. A

BLOCK'HEADISM, ˆ-block is a piece of tim-

BLOCK'HOUSE, ber, or other substance,

BLOCK'ISH, capable of being placed

BLOCK'ISHLY, anywhere; to close up

BLOCK'ISHNESS, an avenue,orto obstruct

BLOCK'LIKE. J ingress, either to include

or exclude. It also is applied to any mass of

matter, which in a rude or artificial shape may be

used for various manual purposes, and employed

in mechanics and naval architecture. Blockhead

is metaphorically used to designate a lumpish,

stupid, heavy, dull-witted animal of the human

species. In this application it would be more

correct to drop the head as superfluous, and to

convert the adjective into the substantive.

with blade all burning bright

He smott off his left arme, \rhich like a block Did fall to ground, deprived of native might.

Spenser.

The country is a desert, where the good – Gained inhabits not ; born ‘s not understood ; There men become beasts, and prone to all evils ; In cities blocks. Donne.

What tongueless blocks were they, would they not speak 1 Shakipeare. Richard III.

Rochester water reacheth far within the land, and is under the protection of some block-houses.

Raleigh.

Can he ever dream, that the suffering for righteous- ness sake is our felicity, when he sees us run so from it, that no crime is block enough in our way to stop our flight ? Decay of Piety.*

Recommend it to the governor of Abingdon, to send some troops to block it up, from infesting the great road. Clarendon.

The states about them should neither by increase Ā«f dominion, nor by blocking of trade, have in it their j.-ower to hurt or annoy. Id.

At the instant of his death, having a long bearu, after his head was upon the block, he gently drew his beard aside, and said, This hath not offended the king. Bacon.

Says a blockheaded boy, these are villainous crea- tures. L’ Estrange. Small causes are sufficient to make a man uneasy, when great ones are not in the way : for want of a block, he will stumble at a straw. Swift.

Some have mistaken block and posts, For spectres, apparitions, ghosts.

Butler. Ifudibrat. We idly sit like stupid blockheads, Our hands committed to our pockets. Id.

A blockhead rubs his thoughtless skull, And thanks his stars he was not born a fool

Pope.

Round the goddess roll

Broad hats and hoods, and caps, a sable shoal ; Thick, and more thick, the black blockade extends.

Id.

The enemy was necessitated wholly to abandon

the blockade of Olivenza. Tatler.

Homer's apotheosis consists of a groupe of figures ;

cut in the Fame block of marble, and rising one above

another. Addison.

BLON'KET, n. s. I suppose for blanket.

Our blanket livery's been all too sad For thilke same reason, when all is yclad With pleasure. Spenier.

BLOCK, in architecture, statuary, &c. a piece of marble from the quarry, before it has received any form.

BLOCK, in carving of wood, is a form made of pear-tree, box, or other hard and close-grained wood, free from knots, on which figures are cut in relievo, with knives, chissels, &c.

BLOCK, in falconry, the perch whereon a bird of prey is kept. It is covered with cloth.

BLOCK, in geography, a small island of the United States, belonging to Rhode Island, lying twenty-one miles S. S. W. of Newport. It was incorporated in 1672, by the name of New Shore- ham Township. It is a division of Newport county, and is the most southerly land in the state. The shores abound with great variety of fish.

BLOCK, in mechanic arts, a large piece of solio wood whereon to fasten work, or to fashion it; strength and stability being the requisite proper- ties. In this sense, we say a chopping block; a sugar-fin^' > block, &c.

BLOCK, ^MOUNTING, an eminence usually of stone, but in steps or notches, serving as a help to mount on horseback. These were much in use among the ancients, who were unacquainted with stirrups. The Romans erected them at proper stations all along their great roads. See ANABA- THRA.

BLOCKS, in the navy and marine architecture are a species of pulley very extensively used for the purposes of forming and regulating tackle, the lifting and removing of guns, anchors and stowage ; they are also in use occasionally for other architectural and heavy works. The me- chanical

power employed is clearly that of the pulley, and the construction of this article hav- ing hitherto been very simple, and its appear- ance homely, it has received a name like the butchers' and the barbers' block, which would

indicate it to come from the hand of nature ra- ther than that of art.

They are designated generally by the number of sheaves, as they are called, i. e. wheels or pullies, which the shell, or outside, can contain ; and hooks, ropes, chains, &c. are attached to them in various ways. The annexed diagrams repre- sentāfig. 1 the single, fig. 2 the double, fig. 3 the treble, and fig. 4 the fourfold blocks, in common use.

1.

Fig. 2.

Fig. 3.

The single block contains only one sheave, or wheel ; a double block, as may be inferred, has sheaves, one below the other ; and so on.

The shells of very large blocks are made of se- parate pieces of wood, as the cheeks of the shell, its partitions, &c. These are called made blocks. The shell is formed of several pieces of elm plank, suited to the cheeks, sheave-holes, and partitions, and is strongly bolted together by three bolts at each end, driven through and ri- veted, with a washer, at the points.

Blocks are again divided into thick and, thin blocks ; the former being intended to receive large ropes, and the latter small ones. The fol- lowing may serve as a general idea of the mode of making the common kind of blocks, in private yards, and in the old way, before the introduction of the block-machinery in our dock-yards : ā

The shells being sawn to their length, breadth, and thickness, the corners or angles are sawn off. The workman then gauges, or marks out the size of the sheave-hole in the middle, one-sixteenth larger than the thickness of the sheave, and once the thickness longer than the diameter, for a single-sheaved block. In blocks of two sheaves the partition is kept in the middle, and is one- sixth less than the sheave-hole ; each sheave-1 ole is gauged on the two opposite sides, and in the same manner for blocks with a great number of sheaves. The blocks are then jambed up edge- ways, with wedges, in a clave, or frame, and the sheave-holes are made in this manner

: the length and breadth are first gauged out, and

holes are bored half way through the block, aloiu? the part gauged out, with an anger of the size o> the sheave-hole ; then the sheave-hole is gauged and bored on the opposite side in the same man- ner, so as to meet the opposite holes. Blocks from ten inches and upwards have one hole bored at each end and cut through with a chissel, and the wood is sawed out with a rib-saw. All blocks have the sheave-holes cleared by chissels, and by burrs at the corners. Blocks that are tĀ« have iron straps should have the straps fitted on before the wood is cut out of the middle. The hole for the pin is bored through the middle of the block, one-tenth less than the diameter of the pin. The outsides and edges of the shell are next rounded off by the stock-shave, and neatly finished by the spoke-shave. In the royal navy, blocks are left thick upon the edges of the cheeks, but, in merchant-ships, the edges are sometimes thinned off to a small square, and somewhat rounded off.

The scores, which are the grooves to receive the strap, are gauged out along the outside of the cheeks, and tapered in depth from nothing at the pin, to half the thickness of the strap, at the ends of the block, for a single score ; and the same on each side of the pin for double scores, which are made when the block is to have double straps. The scores are gauged down across the breast of the block, to half the size of the strap, in order to allow for the serving. After the score is cut, the sheaves are fitted ; they are one-tenth thicker than the diameter of the rope intended for running on them, and five times that thickness in diameter. The hole for the pin should be bored through the centre of them by a bit, fixed in the mandrel of a turning lathe, or with a stock and bit, and opened out with an auger, one-sixteenth larger than the pin, that it may easily turn. ;> They are then put in a lathe and turned smooth, and the outer circum- ference hollowed one-third of its thickness, that the rope may embrace it closely.

The diameter of the pin is the thickness of the sheave, and is turned in a lathe, except its head, which is left octagonal, to prevent its turning in the block ; and the pin is driven through the holes in the block and sheaves. After the sheaves are fitted, the inside of the sheave-hole, at one end of the block, is gauged hollow, to admit the rope, and correspond with the sheaves ; and a small neat chamfer is taken off the edges. The proportions for single, double, treble, fourfold, and other blocks, are, ā the length is:eight times the breadth of the sheave-hole, which is one-six- teenth of an inch more than the thickness of the sheave ; the thickness of the sheave is one-tenth more than the diameter of the rope it is intended for ; and the diameter of the sheave is five times the thickness. The breadth of the block to be six times the thickness of the sheave, and the thicic- ness to be one-half the length, or nearly so. Flat thin blocks must be three-eighths of the

length thick; but all blocks having more than one sheave, increase their thickness more, in the above proportion, by the additional number of sheave-holes, and middle parts, or partitions ; the thickness of each partition to be one sixth less than the breadth of the sheave-hole. These are the general dimensions, but thev sometimes

vary, according to the use for which they are in- tended.

In the shell is fixed the sheave or sheaves, ā¢which are circular pieces of wood (usually lignum vitas), or sometimes brass, or cast metal, with a groove, turned on its edge, for the reception of the rope ; and, in the best blocks, called coaked sheaves, the sheave has a brass bush fitted in the centre, with a round hole through it to receive the pin.

The pin, or axis, on which the sheave revolves, is made of lignum vitse, cocus, or a West India wood, called green-heart; but the best blocks have brass pins. The pin is supported by pass- ing through the sides of the shell of the block, which is made of elm, ash, or other tough wood, with a hole morticed through it, to receive the sheave, and confine it to revolve steadily, though freely, upon its pin, and at the same time keep the rope from getting off the groove in the edge of the sheave. When the block contains two or more sheaves, as many mortises are made. Some- times the same pin serves all the sheaves, and at other times the sheaves are placed one above the other ; having, of course, separate pins.

The strap is a rope, or, in some cases, a band of iron, encompassing the shell of the block, in a notch, or scoring, cut round the block to receive it. The strap terminates in an eye of rope, or hook of iron, by means of which one of the blocks of a tackle is attached to the object upon which it is to act as a mechanical power, while the other block is suspended from some fixed support. The former is called the running- block, and the latter the standing-block.

We can only specify a few of the principal blocks of other descriptions in common use.

Bee Blocks are generally made of elm ; they are seven-ninths the length of the bee, and two inches in depth, for every foot in length, and seven-eighths that depth in thickness. They are trimmed square, chamfered on the outside edges, and fitted with a sheave in one end : a hole is cut in the other end, to be fitted with a sheave should the other fail. The sheave-hole is two-sevenths the length of the block, and one-fourth the length of the sheave-

hole in breadth, and half the length of the sheave-hole within the end. Bee-blocks are bolted to the bow-sprit at the outer end under the bees, and the bolts serve as the axis, or pin, for the sheave to work on ; the fore- topmast stay reeves through the sheave-hole at the foremost end of the starboard bee-block ; and the fore-topmast-preventer, or springstay, through the sheave-hole at the after end of the larboard bee-block.

Cat-Blocks are two or three-fold, with an iron strap and a large hook to it, and employed to draw the anchor up to the cathead.

Cheek-Blocks are half shells, bolted against the masthead ; the chief bolt serves for the pin of the sheave ; they receive the halyards and stays of their respective masts.

Clew-garnet-Blocks have single sheaves, and are suspended from the yards by a strap with two eyes; a lashing surrounds the yard, and passes through the eyes so as to suspend the block be- neath the yard : these blocks receive the clew- garnets, or ropes, which haul up the clews of

the sail ; this is applied to the main and fore- yard.

Clew-line-Blocks are for the same purpose as the preceding, but applied to the top-sails, top- gallant, and sprit-sails. A great improvement has lately been made in these blocks by Mr. Brunell, inventor of the block machinery at Portsmouth. The old clew-line and clew-game- blocks, for they are the same except in size, were a single sheaved block, strapped with two eyes, as above ; a knot was made in the end of the clew-line, or garnet, just at the place where it was attached to the clew of the sail, to prevent the corner thereof being drawn into the block. This was not effective, and frequent inconve- nience arose ; for the sail being so constantly in motion, the rope had a great tendency to get en- tangled with the sail, and drawn over the sheave. The improved block in question is shown in fig. 3. The two holes at a a are where the ropes go in and out again. The sheave is situated in the centre of the block, so as to be wholly enclosed, except a mortice at b, where the sheave is put in. The strap surrounds the lower part of the block ; then both ends pass through a hole in the upper part about c crossing each other. They are then formed into an eye, by which the block is sus- pended from the yard. By this means no ac- cident can happen, as the garnet, or rope, is so en- closed in the block, that it cannot be deranged by any violence, nor the sail be drawn into the block.

D-Blocks are lumps of oak in the form of the letter D, from twelve to sixteen inches long, and eight or ten feet wide. They are bolted to the ship's side in the channels, to receive the lifts, &c.

Deep-sea-line-blocks are small wooden snatch- blocks (see forward), about from nine to eleven inches long.

Fish-Block is hung in a notch at the end of the davit, and serves to haul up the flukes of the anchor to the ship's bow.

Girtline-Blocks, in rigging, the foremast, main, and mizen-mast, are lashed round the masthead, above the top of the cap; one to hang on each side. The girtlines that reeve through them, lead down upon deck, for hoisting the rigging, tops, and crosstrees, and the persons employed to place the rigging over the masthead.

A Heart Blockis a block of wood, with a large hole in the centre, at the bottom of which are four or five scores round the outside, a groove is cut to admit of a rope, called a stay, &c.

A Heart, is sometimes (fig. 5) used in the merchant service, with a round hole I, for the heel of the gib-boom to rest in, which is bevelled for that purpose. The bottom of the heart m, is also bevelled according to the sleeves of the bow-sprit.

Long-tackle Blocks, have two single sheaves (fig. 6) placed one above the other, in the same shell. The lower sheave is only two thirds the size of the other ; it is used in combination with a common single block, to form the long tackle, for loading, or any other purchase. In the Royal Navy and East India service they are used as yard tackles. The rope is reeved through it in the same manner as it would be through a common double block ; but it is preferred, where it is convenient, because the strap being inthecen-

're of the resistance, it hangs more steadily than when the sheaves are on one pin.

The Main-sheet Block, is used for the sheet tackle of the main-sail-booms of small vessels. The pin projects from each side of the block, being, in all, the same length as the block ; the fall or rope of the tackle is belayed or twisted round this pin, to stop it. This block is either single or double, and has a hole through the end, to receive its strap.

Monkey Blocks, are sometimes used on the lower yards of small merchant ships, to lead, into (lie mast or down upon the deck, the run- ning rigging belonging to the sails. Some are only small single blocks, attached, by a strap and iron swivel, to iron straps, which embrace and nail to the yard,

the block turning to lead the small running ropes in any direction; others are nearly eight square, with a roller working in the middle, and a wooden saddle beneath, to fit and nail to the yard.

*Rine-pin Blocks are in !>hape something like the nine pins (fig. 7) from which it derives its name, though flattened on the sides, and used to lead the running ropes in an horizontal direction. Their lengths are generally confined to the place in which they are fixed ; and this is, for the most part, under the cross-pieces of the fore-castle and quarter-deck bits. The breadth of the block, sheave, &c. is governed by the rope, and taper at the ends, to three-eighths of the breadth of the middle; the pins at each end, serving as a verti- cal axis, are two-thirds of the size of the end, and the thickness is five-eighths of the breadth. These blocks may be turned in a lathe, and flattened *fter with a spoke-shave.*

Shoe Blocks, are two single blocks, cut in a solid piece, transversely to each other, so that the sheave of the upper one lies in a contrary direction to that of the lower one; they serve for legs and falls of the bunt-lines, but are sel- dom used.

A Shoulder Block (fig. 8) is a large single block, left nearly square at the upper end, and cut sloping in the direction of the sheave. These blocks are used on the lower yard-arms, to lead in the topsail sheets; and, on topsail-yards, to lead in the top-gallant-sheets; and, by means of the shoulder, are kept upright, and prevent the sheets from jambing between the block and the yard ; they are also used at the outer end of the boomkins, to lead in the fore-tackle.

Sister Blocks, are similar to two single blocks, and formed out of a solid piece, about twenty inches long, one above the other. Between the blocks is a scoring for a middle seizing; a round head is turned at each end, and hollowed under- neath, to contain the end seizings; along the sides, through which the pins are driven, is a groove or scoring, large enough to receive part of the topmast shrouds, in which it is seized. These blocks receive the lifts and reef-tackle pen- dants of the topsail-yards.

A Snatch Block (fig. 9) has a single sheave, with a notch cut through one of its cheeks, to admit the rope, or fall, to be lifted in and out of the block, without putting if. end through first. The strap does not, in this, surround the block, but is put through a ho\e, oorea through the

divided end. The figure is represented with two tails, which may be made up for a hook, a thim ble, or eye, according to the situation where it is to be used, which is, generally, for the main, or fore-sheet, blocks of square-rigged vessels.

Snatch Blocks are also (fig. 10) iron bound, terminating at the notched end of the block, with a swivel-hook, or an eye bolt, large enough to receive several turns of lashing, which fastens the block to its fixed support. That part of the strap over the notch, in the side, lifts up with a hinge, and is confined down, when the rope is in the block, by a small pin, put across, through the end of the pin of the sheave, which projects up from the block sufficiently to pass through an eye made in the hinge part of the strap. The strap on the other part of the block is let into the block, and confined by the pin and some nails. These blocks are used for heavy purchases, where a warp, or hawser, is brought to the capstan.*

Strap-bound Blocks are single blocks, with a shoulder left on each side, at the upper part, to admit the strap through, a little above the pins. These blocks are used at the clews of the quarter- sails, for the clew-garnets or clew-lines; and, under the yards, the shoulder preserves the strap from chafing.

Thick and Thin, or Quarter Block, is a double block with one sheave thicker than the other, and is used to lead down the topsail-sheets, and intended for the clew lines ; a single block would be cheaper and better, as the thin sheave is seldom used for the clew lines, it being found rather to impede than to facilitate their move- ments.

Voil, or Voyal blocks, are single sheave blocks. The length is ten times the thickness of the sheave-hole, which is three-eighths more than the thickness of the sheave ; the thickness of the sheave is one-tenth more than the diameter of the voil ; and the diameter of the sheave is seven times the thickness. The breadth of the block should be eight times the thickness of the sheave; and the thickness two-sevenths of the length. This block is double-scored, the sheave is coaked with brass, and the pin is iron, and nearly as thick as the sheave. It is used in heaving up the anchor. The voil passes round the jear capstan, and through the block, which is lashed to the main-mast, and the cable is fastened, in a tem- porary manner, to the voil in several places. It is seldom used, except in the largest ships of the royal navy.

The blocks lashed to a ship's principal yards are : To the lower yards. ā The jear block, bunt- line blocks, leech-line block, lift blocks, and topsail-sheet blocks, strapped together ; quarter and slab-line blocks, strapped together ; clew- garnet blocks, tricing blocks, preventer-brace blocks; pendant blocks, studding-sail-halyard blocks.

To the topsail-yards. ā Buntline and tye-blocks, strapped together ; top-gallant-sheet block, and lift block, strapped together ; jewel bldck, and brace-pendant blocks, clew-line blocks, and block to lead down the top-

gallant sheets.

To the top-gallant-yards. ā Jewel, clew-line and brace-pendant blocks.

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To the mizen-yard. ā Jear block, derrick block, signal-halyard block, throat-brail, middle-brail, and coak-brail blocks.

To the cross-jack-yard. ā Quarter blocks, jear blocks, and lift and topsail-sheet blocks, strapped together.

To the bowsprit. ā The bee block, bolted to the bowsprit at the outer end, under the bees ; fore-bow-line blocks, lashed on each side the fore- stay-collar ; fore-topsail-bowline block, lashed to an eye-bolt in the bowsprit-cap.

BLOCK HOUSE, in military affairs, is a name sometimes given to a permanent brick or stone fort able to resist cannon shot. Such an one formerly stood on the bridge of Dresden ; and it is generally built on a bridge, or on the brink of a precipice or river, serving to command a pass, river, or ford. A wooden fort of this kind is sometimes made to move on wheels or rollers, and is sometimes erected on a vessel, &c. Its design is to defend a party against musketry. There is a model of one constructed by Major Gordon of the Artillery, in the Royal Military Repository at Woolwich. It was made during the late contest with America, of timber felled for the purpose, and squared where it was necessary ; it is, however, very strong, and could safely defy any attack except that of cannon.

BLOCK MACHINERY. ā The immense demand of blocks for the royal navy, and the importance of having them both accurately and substantially made, induced the British government to patronise, in 1781, the undertaking of the late Mr. Walter Taylor of Southampton, who ob- tained a patent in that year for an improvement in the construction of the sheaves or pulleys ; and the patentee enjoyed, for many years afterwards, the contract for supplying the royal navy with blocks. He manufactured them

at wood-mills, on the river Itchen, near Southampton, by means of machinery which was wrought by water.

A Mr. Dunsterville of Plymouth also made improvements in the construction of blocks, to ā¢which he adapted machinery wrought by horses ;

Brunell's prices . Contract prices

Saving in first cost

The first and most material parts of this ma- chinery were carried into operation at Plymouth in 1804. The able artist, however, kept adding to them other machines for making dead eyes, trucks, and all manner of block-maker's wares, besides circular and upright saws, lathes, engines for turning pins, rivetting, polishing, &c. till the year 1808, when he considered the whole system to be complete : and from that period it was in incessant occupation to the conclusion of the war, without any thing but ihe most ordinary and un- avoidable repairs being requisite, and with very little attention from Mr. B. himself. They make all the blocks now used in the navy, which may be said to be of not less than 200 sorts and sizes, and consist of forty-four machines, which form

but he never prosecuted thisbusiness on any con siderable scale.

In 1801 government found it expedient to erect new wood-mills, for various operations, in the dock-yard at Plymouth, and about this time happily, Mr. Brunell, an American artist of great mechanical skill, had just completed a working model of his block machinery, or a set of con- trivances for the entire formation of a block from the inmost pin to the completion of the shell, and the putting the whole together. This model being exhibited at the admiralty, was referred to the inspection of general Sir Samuel Bentham, and, on his recommendation, the artist was im- mediately taken into the public service.

Mr. Brunell stated that he could effect by his machinery, 1. A greater uniformity of size and construction in all blocks contracted for in sets, or in which the same sorts were required, a cir- cumstance which would increase the quantity of waste wood that might be employed, and in- crease the difficulty of counterfeiting them. The sheaves or shivers would be so mathematically true, and so exact to each other in their thick- nesses and diameters, that every sheave of any particular size would equally fit any shell of the size for which it was intended ; and the inconve- nience to which ordinary blocks are liable from the friction of the ropes against one, or alter- nately both, of the sides of the mortices, was pro- posed to be

removed by placing a sheet of metal on the upper part of the mortice, bent to the proper shape by an engine adapted for the pur- pose. 2. He could add strength where it was wanted, by making the head and bottom more substantial, and less liable to split ; and 3. by leaving the wood between the two mortices thicker, he could admit a better bearing for the pins ; all of which would be accomplished with- out requiring any dexterity on the part of the workman, but entirely by the operation of the machinery.

Mr. Brunell's calculation of the saving as to the cost of blocks to the Navy Board, compared with the former contract prices, was as follows :

Blocks of

8 inch.

12 inch.

16 inch.

21 inch.

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8 11'

18 If ˆ

2 3Ā£

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13 6

27 Of

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2 6Ā£

4 6i

8 11

three sets ; that is three blocks of different sizes may be proceeding in all their stages at the same time ; though in some of these stages one machine may operate upon two, or even ten blocks at the same time. The whole was long set in motion by means of a capital steam-engine, of thirty-two horses' power, erected by Messrs. Boulton and Watt ; and the only manual labor required was simply to supply the wood as it is wanted, and to remove the blocks from one part of the ma- chinery to another, till perfectly finished : so that a common laborer could act in this business with very little instruction. To relieve the labor of this engine, a second was afterwards added.

It has been calculated that four men, with the machinery as it now stands, can complete (he

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BLOCK MACHINERY.

shells of as many blocks as fifty men could do by the old method ; and that six men will furnish as many sheaves as before required sixty ; that these ten men, in displacing the labor of 110, can with ease finish in one year from 1 30,000 to 140,000 blocks of different sorts and sizes, the total value of which cannot be less than Ā£50,000. This is stated to be the average number which was annually made from the year 1808 to the conclusion of the war; and found to be fully sufficient for supplying the wear and tear of blocks, not only in the naval, but also in the ordnance department.

During the late war 1000 sail of ships were at one Ā£time incommission ; a ship of seventy- four guns requiring the following blocks for her equipment :

No.

Single blocks from 5 to 26 inches . . . 622 Double ditto from 7 to 26 ditto . . . 130 Various other blocks, generally large, and ˆ several of them treble .... J For each of the 74 guns, 6 blocks . . . 444

Total . 1270

Besides dead eyes, hearts, parrels, a puttock-plates, all manufactured the mills .....

d”)

at >

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160

Of all kinds in a 74 gun ship . 1430 it follows that probably a million of blocks were in wear, at that period, in these our wooden walls. To the completion of this machinery, Mr. Brunell, as we have already intimated, gave his whole attention from the month of September 1802 to June 1808, receiving only a daily allow- ance of one guinea ; when therefore it was in full operation, and ascertained to be so completely national an improvement, it very properly be- came a question in what manner the author of the invention should be further rewarded. Gen. Bentham suggested that the savings of one year on the contract prices would be a fair remune- ration for the time, labor, and ingenuity, bestow- ed on these machines. It was no easy matter, however, to ascertain with precision what the actual savings amounted to. Mr. Brunell, by estimate made them Ā £21,174.; Mr. Rogers, clerk to general Bentham, by estimate Ā£12,742.; and the general finally . . . Ā£l 6,621 0 0 Add six years’ allowance at one
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guinea per day, about . $ 2,400 For the working model . . . 1,000 0 0

And Mr. Brunell received aboutĀ£20, 000 0 0 The whole cost of the steam-engine, machinery, building, interest of money, &c. amounted, it has been said, to Ā£53,000. the net compensation we see for profits, was about Ā£18,000. ; therefore the whole expense of the concern was completely cleared in four years; and the savings of Ā£18,000 on one year’s manufactured articles of the value of Ā£50,000, are somewhat more than Brunell had originally calculated.

Kvery body who visits Portsmouth dock-yard makes a point of visiting the block-machinery ; we therefore think it may be of use to attempt

to follow the process of making a block from the rough wood till the completion of it.

The first wing of the building is occupied by upright and circular saws, used for a variety of purposes not immediately connected with the making of blocks. The only operation connect- ed with it here is that of converting the rough elm or ash timber (most commonly the former), into its proper scantling ; that is to say, squaring it by the upright or straight-cutting saw, and then, by a circular saw, cross-cutting it into a certain number of

parallelopipedons, whose lengths may bear the required proportion to the thickness of the log. Some of these are again cut longitudinally, according to the thickness that may be required for the shell of the block, especially those for single and double blocks, which of course are thinner than three and four- fold-blocks. This operation is performed by a ripping-saw ; and the logs thus cut out are then taken into the second wing of the wood-mills, and here commences the process of making

I. THE SHELL, which is performed by the boring machine, or by means of a centre-bit ap- plied to the middle of the shell, and which bores a hole for the centre pin of the sheave, while another bores one, two, or three holes at right angles to the direction of the first, to admit the first stroke of the chisel, and at the same time to serve for the head of the mortice or .mortices, according as the intended block is to contain one, two, or three sheaves. When thus bored, the log is carried from hence to the morticing-machine, a most ingenious piece of mechanism. The block being firmly fixed on a movable car- riage, the latter is so contrived as to be made to advance to the cutting chisels, which are fixed in a movable frame. Every time the frame with the chisels ascends, the block in its carriage ad- vances a little, so as to present to the chisels a fresh surface of wood to be acted upon at each stroke of their descent; and this up and down motion is continued with such rapidity that the chisels make from 100 to 130 strokes in a minute, until the proper length has been morticed out ; when, by a boy raising a handle, the machine is stopped precisely when the chisels stand at their greatest elevation. The chips cut are thrust out of the mortice by small pieces of steel attached to and projecting from the back of each chisel. They are each of them besides armed with two cutters, placed at right angles to the edge, called scribers, which mark out the width of the chip to be cut at each stroke. These scribers answer another purpose ; their cutting is so true as to leave the two sides of the mortice so perfectly smooth as to require no further trimming or polishing. The next thing is to remove the block from the morticing-machine to a circular saw, in order to have the four corners taken off, by which operation it is reduced to an octagonal shape. This saw being fixed into a table or bench, the workman has nothing more to do than to slide each log along the surface of the table in the direction of the line marked out for the saw to cut it. A further operation is to place the block upon the shaping-machine. This is thought one of the most effective and striking contriv- ances in the whole machinery. It consists prin-

cipally of two equal and parallel circular wheels moving on the same axis, to which one of them is firmly fixed, but on which the other is made to

slide ; so that these two wheels may be placed at any given distance from each other, and blocks of any size admitted between their two rims or peripheries. For this purpose, both rims are divided into ten equal parts, for the reception of ten blocks, which are firmly and immovably fixed between the two wheels. When the double wheel with its ten attached blocks is put in mo- tion, the outer surfaces of the blocks, or those which are farthest from the centre, strike with great violence against the edge of a chisel or gouge fixed in a movable frame, which, being made to slide in a curved direction in the line of the axis, cuts those outward faces of the blocks to their proper curvature, which can be altered in any way the workman pleases, by a contriv- ance attached to the cutting-tool. As soon as the tool has traversed the whole length of the block, or over the space contained between the two peripheries of the wheels, the machine is thrown out of the gear, and its prodigious velocity checked by a particular contrivance. The ten blocks are then by a single operation, and with- out removing them, each turned one-fourth part round, and another fourth part of their surface brought outwards, which being exposed to the cutting instrument, traversing in the same direc- tion as before, have the same curvature given to these new surfaces. A third side is then turned outwards, and after that the fourth and last side, when the whole ten blocks are completely shaped, and ten other octagonal logs applied to the peripheries to undergo the same operation. The immense velocity with which these wheels revolve, and the great weight with which their peripheries are loaded, would make it dangerous to the workmen or bye-standers, if by the vio- lence of the centrifugal force any of the blocks should happen to be thrown off from the rim of the wheels ; to prevent the possibility of such an accident, an iron cage or guard is placed be- tween the workman and the machine. The shell of the block being now morticed and completely shapen, the last operation is performed by the scoring-machine, which, by means of cutters, scoops out a groove round tbe longer diameter of the block, deepest at the ends, and vanishing to the central hole for the pin on which the sheave turns. The intention of this groove or channel is to receive the hempen or iron strap which surrounds the block. The only thing that now remains for completing the shell, is the re- moval of the little roughnesses from the surface, and giving to it a kind of polish, which is done by the hand.

II. OF THE SHEAVES. ā The wood of these, as we have said, is generally lignum vitae ; but iron or bell-metal have occasionally been substituted. A kind of porcelain was once introduced as a material, and answered well enough for some particular purposes, but was not be trusted in situations liable to sudden jerks and irregular motions of the block. In the navy sheaves are almost invariably of lignurh vitse ; a few perhaps of ebony. The machinery employed for making this part of the block consists of a circular saw

by which the log is cut into plates of the thick- ness required. These plates are carried to a crown saw which bores the central hole, and at the same time reduces them to a perfect circle of the proper diameter. The sheave thus shaped is next brought to the coaking-machine, a piece of mechanism little inferior in ingenuity to the shaping-machine. The effect of the operation is very curious. A small cutter in traversing round the central hole of the sheave forms a groove for the insertion of the coak or bush, the shape of which is that of three semicircles not concentric with each other, nor with the sheave, but each having a centre equally distant from that of the sheave. The manner in which the cutter tra- verses from the first to the second, and from this to the third semicircle, after finishing each oi them, never fails to attract the notice of visitors. So very exact and accurate is the groove cut foi the reception of the metal coak, and so uniform in their shape and size are the latter cast in moulds, that they are invariably found to fit each other so nicely, and without preparation, that the tap of a hammer is sufficient to fix the coak in its place. The coaks are cast with small grooves or channels in the inside of their tubes, which serve to retain the oil or grease, without which it would soon ooze out, and the pin become dry. The sheave, with its coak thus fitted in, is now taken to the drilling-machine, which is kept in constant motion. In casting the coaks a mark is left in the centre of each of the three semicircles. This mark is applied by a boy to the point of the moving drill, which speedily goes through the two coaks and the intermediate wood of the sheave. A copper pin, cut from wire, of the proper length and thickness, is inserted into the holes thus drilled ; and the sheave is then taken to the rivetting-hammer, which is some- thing like a small tilt-hammer, and can easily be made to strike on the pin with greater or less velocity, according as the workman presses with more or less force on the treadle. The rivetting being performed, the next operation is that of broaching the central hole on which the sheave turns, by means of a steel drill or ciitter. The last process consists in turning a groove for the rope to run in round the periphery of the sheave, and this operation is performed by a lathe, which is so constructed, that while this groove is cutting round the rim of the sheave, another part of the engine is turning smooth the two surfaces or faces of the sheave ; and this lathe can be made to adapt itself to sheaves of different diameters. The shell and the sheave being now completed, there remains only the iron pin, which, passing through the two sides of the former, serves as the axis on which the latter turns wi'hin the mortice. These pins are also made, turned, and polished by engines for the purpose, so that, with the ex- ception of strapping by rope or iron, the whole block is now completed.

The French, in the dock-yard of Brest, have long been in the practice of making blocks by horse-machinery ; .but they have not attempted any thing like a shaping-machine, or a substitute for it.

BLOCK, SPRING, an invention of Mr. IIop- kinson of Philadelphia, to assist a vessel in sail-

mg. The principles of it are thus explained, in his paper published in the Transactions of the American Philosophical Society :ā ‘ The masts,

rards, and rigging of a ship, receive the first im- pulses of the wind. All these are in some degree elastic. Every twisted rope is a spiral spring, and every spar capable of being a little bent. But let us suppose that the ropes were all composed of straight strands, that the masts and yards were inflexible, and the sails made of thin light wood ; in such a case, I suppose that the vessel, in sailing by the wind, would make but little head-way, whatever the shape of her bottom might be, but would expend the force of the wind in heeling, and slipping to leeward. If this is true, her sailing must be considerably assisted by any means that shall increase the act-ˆ ing spring of her rigging. For this purpose I have contrived what I call a spring block, to be applied to such parts of the rigging as will admit of it with safety and convenience, and where its operations will be most advantageous; but parti- cularly to the sheet-ropes, and if practicable to the dead eyes, in lieu of what are called the chains. In the diagram is a figure of this invention. A, is a block made in the usual manner, having a ring or eye, B, at one end. C, is a spiral spring, linked at one end to the hook, D E, and at the other to the ring F, which is to be annexed by a staple to the timber-head, or by some other means, to the place where it is to be applied. The spring C must be of well tempered steel, and proportioned in strength to the service it is to perform. Within the cavity or pipe, formed by the spiral spring, there must be a chain of suitable strength, called a check chain, repre- sented separate at G, connected by links to the hook D E, and ring F. When the spring is not in action, this chain is slack; when the spiral spring is extended by the force of the wind, as far as it can be without danger of injury, the check-chain must then begin to bear, to prevent its further extension, and, if strong enough, will be an effectual secu- rity against failure.

BLOCK ISLAND, an island off the coast of Connecticut, in North America, and in the state of Rhode Island. It is forty-six miles in length, and its extreme breadth is thirty-eight miles. The southern part of it is in N. lat. 41Ā° 8’.

BLOCK (Daniel), a portrait painter, born at Stettin, in Pomerania, in 1580, who gave such early proofs of genius as induced his parents to place him as a disciple with Jacob Scherer. His extraordinary merit recommended him to the prince of Mecklenburg, who retained him in his service forty-four years. He died in 1611.

BLOCK (Joanna Koerten), was a native of Amsterdam, born in 1650, and celebrated for her beautiful models in wax, her engravings on chrystal and glass, &c. and her copies of paint- ings in paper, executed with the scissars. For three pieces of this latter description she is said to have refused 1000 florins from the elector palatine ; and a sum four times as large from the

empress of Germany, for a trophy similarly cut out. She died in 1715.

BLOCKADE, in the art of war, the blocking up a place, by posting troops at all the avenues leading to it, to keep supplies of men and pro- visions from getting into it ; and by these means proposing to starve it out, without making any regular attacks. To raise a blockade, is to force the troops that keep the place blocked up from their posts.

BLOCK AND BLOCK, in sea language, is a phrase used, when on hauling any tackle, haul- yard, or the like, to which two blocks belong, the two meet and touch ; so that they can haul no farther.

BLOCK-BATTERY, in the military art, denotes a wooden battery on four wheels, movable from place to place, whereby to fire en barbe, or over the parapet ; sometimes also used in galleries and caspments, where room is wanted.

BLOCK-BRUSH, in heraldry, a bunch of knee- holm, or bastard myrtle, formerly used by butchers to clean their blocks. It forms a part of the armorial bearings of the Butchers' Com- pany.

BLOCK-CARRIAGE, in artillery, is a carriage used for the conveyance of mortars and their beds from one place to another.

BLOCKING, in middle age writers, a Tcind of burial, used for persons who died excommmu- nicated.

BLOCKLAND (Anthony), history and por- trait painter, was of a noble family, and born at Montfort in 1532. He was trained under Fran- cis Florus, whose manner he followed. The airs of his heads were noble, and the profiles of his female figures approached near to the taste of Parmigiano. Several of his works are in excel- lent gusto, particularly a Venus, and the history of Joseph and his Brethren. He died in 1583.

BLOCKSBERG, or BROKSBERG, sometimes called the Brocken, Mons Bructerus, a mountain of Hanover, the highest point of the rugged dis- trict of Hartz. It is about 3600 feet above the level of the sea, and its summit presents a view of nearly 8000 square miles. Tradition, founded no doubt on the religious ceremonies of the Pagan Germans performed here in ancient times, makes this mountain the resort of all the witches of the north; and the spectre of the Brocken, though a phenomena perfectly natural, is calcu- lated to strike the ignorant peasant with terror, and even to exite surprise in the philosopher. It is seen either in the morning or the evening, when the spectator at the top of the mountain happens to be placed in a right line between the sun and a cloud hovering in the atmosphere at a small distance, and is merely the image of the spectator reflected from the cloud, as from a mir- ror, but in a magnified and distorted shape.

BLOCKY, among jewellers, an epithet given to a diamond when its sides are too upright, by its table and collet being too large.

BLO ED IT, in mineralogy, a fibrous substance recently analysed by Jahn, and found to consist of sulphate of magnesia, and of soda and water.

BLOEMART (Abraham), painter of land- scape, cattle, history, and portraits, was born at Gorcum in 1564, according to Houbraken, but

according to Sandrart,.in 1667, and lived mostly at Utrecht. In his youth he imitated the works of Floris, but his own genius proved his princi- pal director. He formed a manner peculiar to himself, making nature his model, particularly in cattle, in which he excelled. He died in 1647. He left four sons all artists.

BLOEMART (Cornelius), the youngest son of the preceding, was born, in 1603, at Utrecht. The first principles of drawing and painting he learned from his father, but his inclination for engraving led him to apply wholly to that pursuit. He first studied under Crispin de Pass, and after- wards went to Rome, where he died in a very advanced age. His manner of engraving was not only quite original, but the source to which we may trace that style in which the greatest French masters excelled. His works are justly held in high estimation. They are very nume- rous, yet many of them difficult to be procured.

BLOEMEN (John Francis Van), surnamed by the Italians, Orizonti. See ORIZONTI.

BLOEMEN (Norbert Van), brother of the pre- ceding, was a painter of portraits and conver- sations ; but his merit was very inferior to his brother's, although he had a great deal of employment.

BLOEMEN (Peter Van), a celebrated painter, born at Antwerp, was also brother of John Fran- cis, with whom he lived for several years at Rome. As soon as he found himself competently skilled in his art, he returned to his native city, where, in 1699, he was appointed director of the academy. His composition is rich, and his pictures are generally filled with a number of figures. His subjects are military, or Italian fairs, markets, and festivals.

BLOIS, an ancient city of France, in the de- partment of the Loire and Cher, and ci-devant province of Blaisois, seated on the Loire, in one of the most agreeable districts of France, The castle is its great ornament. At first view, it seems to be two distinct buildings, but it is joined by a passage cut out of the rock. Joining this, on the west side, is the tower of Chateau Regnaud, which may be seen twenty miles distant. That part of the castle which was built by the duke of Orleans, in 1632, is a superb edifice, but unfinished. It was the birth place of Louis XII., and the scene where the duke of Guise and his brother the cardinal were assassinated, in 1587, by order of Henry III. ; Catherine de Medicis, also died here in 1589. The court before it, where the church of St. Saviour is built, is very large, and was formerly used for tournaments. On all the gates of the city there was formerly an image of the Virgin Mary, who it was believed, freed the natives from the plague in 1631. The cathedral, the Jesuits' church and college, and the Episcopal palace are handsome buildings. But the bishopric, which was last filled by the celebrated Gregoire, has been suppressed. About three-fourths of a mile from the city, the water runs down the clefts of a rock into a large aqueduct, supposed to be of Roman construction, by which it is conveyed into a reservoir near the walls, and thence distributed by leaden pipes through the city. The trade of Blois is chiefly in wine and brandy; but the inhabitants also

make some serges and stuffs, and excellent watches, and hardware goods. It is situated thirty-six miles south-west of Orleans.

BLOMBERG (Barbara), a young lady of quality in Ratisbon, mistress of the emperor Charles V., and the mother of his natural son, the celebrated Don John of Austria.

BLOMEFIELD (Francis), an English clergy- man and topographical writer, was the author of Collectanea Cantabrigiensia, or Collections relating to Cambridge University, Town, and County, Norwich, 1750, 4to ; and of An

Essay towards a Topographical History of the County of Norfolk; continued by the Rev. Charles Parkin, Fersfield, 1739-1775, 5 vols. folio ; re- printed in 11 vols. 8vo, in 1805-1810. He was rector of Fersfield in Norfolk, and died in 1755 or 1756.

BLOND (Christopher Le), painter of portraits in miniature, and various subjects on paper, was born in 1670. He became first known at Rome in 1716, as painter to Count Martinetz, and, at the solicitation of Overbeke, went to Amsterdam, where he was employed to paint portraits for bracelets, snuff-boxes, &c. After spending some years in the Low Countries, he came to England, and commenced a new method of painting mezzo-tinto plates in colors. He had another merit with which few inventors begin, for he commu- nicated his secret in a thin quarto, entitled Colo- ritto, or The Harmony of Coloring in Painting reduced to Mechanical Practice, under easy Pre- cepts and Infallible Rules. Le Blond next set on foot a project for copying the cartoons of Raphael in tapestry, and made drawings from the pictures for that purpose. Houses were built and looms erected at the Mulberry Ground at Chelsea; but the expenses being too great, or the contributions not being equal to his expectations, the scheme was suddenly defeated , and Le Blond disappeared, to the no small dissatisfaction of those who were engaged with him. From hence he went to Paris, where he died in 1740, in an hospital. He was author of a treatise in French, on Ideal Beauty.

BLONDEL (David), a protestant minister, distinguished by his skill in history, was bornr at Chalons sur Marne, and admitted minister at a synod of the isle of France, in 1614. He was afterwards made an honorary professor with a suitable pension, by the national synod of Charenton. On the death of Vossius, he was chosen professor of history in Amsterdam, whither he went in 1650. He wrote, 1. A De- fence of the Reformed Churches of France. 2. A Work against the Decretal Epistles. 3. De Episcopis et Presbyteris ; 4. Pseudo Isidorus ; 5. A Treatise of the Sybils, wherein he proves their oracles false ; 6. A Treatise concerning Pope Joan, wherein he offended some of his protestant friends, by discrediting the story of the female pope ; 7. De Formula Reg.nante Christo; 8. Considerations Politiques et Re- ligieuses; on the war between the republics of England and Holland, and some other pieces. Bayle informs us that he had a singular way of studying : he lay on the floor, and had arounu him the necessary books for the work in liana. He died in 1655, aged sixty-four.

BLONDEL (Francis), regius professor of mathe- matics and architecture at

Paris, was employed .n several negociations, arrived at the dignity of marshal de camp and counsellor of state, and was appointed to teach the dauphin mathematics, he was also made member of the academy of Sciences, and director of the Academy of Ar- chitecture. He died at Paris in 1 686, aged sixty- eight. He wrote, 1 . Notes on Savot's Architec- ture ; 2. A Course of Mathematics ; 3. Archi- tecture Fran9oise, 2 vols. fol. 1772; 4. Cours d'Architecture Civile, 9 vols. 8vo. a work, the second part of which appeared in 1773, being left unfinished at his death ; 5. A Treatise on For- tification, &c.

BLONDUS (Fluvius), an historian born at Froli, in Italy, in 1388, was secretary to Eugenius IV. and other popes. He wrote, 1. Romae Instauratse Lib. iii., dedicated to Eugene IV. 2. Rotnse Triumphantis Lib. X, dedicated to Pius II. 3. Italiae Illustrate Lib. viii. 4. De Origine et Gestis Venetorum ; besides three de- cades of a general history of Rome, the MS. of which is still preserved in the library of Modena.

BLOOD, v. & n.

BLOOD'Y, n. & adj.

BLOOD'INESS,

BLOOD'ILY,

BLOOD'LESS,

BLOOD'HOUND,

BLOOD'BOLTERED,

BLOOD'HOT,

BLOOD'LET, v.

BLOOD'LETTER,

BLOOD'GUILTINESS,

BLOOD'SHED,

BLOOD'SHOT,

BLOOD'SUCKER,

BLOOD'THIRSTY,

BLOOD'YFLUX,

BLOOD'YMINDED,

BI.OOD'VESSEL.

See BLEED. The red liquor that circulates in the veins and arteries. Progeny ; family ; kin- dred ; descent ; high ex- traction; the corporeal ā¢part of man. Sometimes applied to the temper of the mind ; to that which is the life; and to every agent and instrument by which the life may be affected.

But flesh, with the life thereof, which is the blood thereof, shall you not eat. Genesis.

The voice of thy brother's blood crieth unto me frojn the ground. Id. iv. 10.

He washed his garments in wine, and his clothes in the bloud of grapes. Id. xlix. 1 1.

When wicked men have slain a righteous person in his own house, upon his bed, shall I not therefore now require his blood at your hand ? 2 Samuel iv. 11.

Flesh and blood hath not revealed it unto thee, but my Father which is in heaven. Matt. xvi. 17.

Of kinges blood of Perse is she descended, I say not that she hadde most faircnewte, But of hire shape she might not be amended.

Chaucer. Canterbury Tale.*

He red, and measured many a sad verse, That horrour gan the virgin's hart to perse, And her faire locks up stared stifle on end, Hearing him those same bloody lines reherse, And, all the while he red, she did extend Her sword high over him, if aught he did offend,

Spenser.

Full many mischiefs follow cruel wrath ; Abhorred bloodshed, and tumultuous strife, Unmanly murder, and unthrifty scath. Faerie Qveene.

And high advancing his blood-thirsty blade, St ruck one of those deformed heads. Id,

And were there rightful cause of difference, Yet were it not better, fair it to accord, Than -with bloodguiltiness to heap offence, And mortal vengeance join to crime abhorred ? Id.

I am a gentleman of blood and breeding. Shakipeare.

It will hare blood ; they say, blood will have blood.

Id.

As many and as well-born bloodi as those Stand in his face, to contradict his claim. Id.

We will no more meet, no more see one another : But yet thou art my flesh, my blood, my daughter. Id.

The blood-boltered Banquo smiles upon me.

Id. Macbeth. I grant him bloody,

Luxurious, avaricious, false, deceitful. Id.

Thou bloodier villain Than terms can give thee out. Id.

God keep the prince from all the pack of you ; A knot you are of damned blood-sucker.*

Id. Richard III.

Shall prove a deadly bloodshed but a jest, Exampled by this heinous spectacle. Id. King John.

By continual martial exercises, without blood, she made them perfect in that bloody art. Sidney.

The nobility cried out upon him, that he was a bloodsucker, a murderer, and a parricide. Hayward.

Before you let blood, deliberate upon it, and well consider all circumstances belonging to it.

Burton. Anatomy of Melancholy.

So when the never-settled Scythian Removes his dwelling in an empty wain : When now the sun hath half his journey ran, His horse he blood, and pricks a trembling vein ; So from the wound quenches his thirsty heat : Yet worse ; this fiend makes his own flesh his meat ā¢ Monster ! the ravenous bear his kind will never eat. Fletcher. Purple Island*

The news put divers young blood-s into such a fury

as the ambassadors were not, without peril, to be out

raged. Bacon.

When the faculties intellectual are in vigour, not

drenched, or, as it were, blooded by the affections.

Id. Apothegms.

War brings ruin where it should amend ; But beauty, with a bloodiest conquest, finds A welcome sovereignty in rudest minds. Waller.

A man, under the transports of a vehement rage, passes a different judgment upon murder and blood- shed, from what he does when his revenge is over.

South.

A crow lay battering upon a muscle, and could not, for his blood, break the shell to Ā«.ome at the fish.

L'Ettrangt:. The bloody fact

Will be avenged ; and the' other's faith approved Lose no reward ; though here thou see him die, Rolling in dust and gore. Milton's Paradise Loil.

Though they should wash their guilty hands In this warm life blood, which doth part From thine, and wound me to the heart. Yet could they not be clean : their stain Is dyed in such a purple grain. MarveL..

Will you, great sir, that glory blot, In cold bloud, which you gained in hot ? Hudibras. Hear this, hear this, thou tribune of the people '. Thou zealous, public bloodhound, hear and melt !

Drydoit.

This day the poet, bloodily inclined, Has made me die, full sore against my mind. Id.

Then all approach the slain with vast surprise, And scarce secure, reach out their spears afar, And Hood their points, to prove their partnership in war. Id. FaUoa.

BLOOD.

And, though the villain 'scape awhile, he feels Slow vengeance, like a bloodhound, at his heels. Swift. This mischief, in aneurism, proceedeth from the ignorance of the blood-letter, who, not considering the errour committed in letting blood, binds up the arm carelessly. Wiseman.

Cold, by retarding the motion of the blood, and suppressing perspiration, produces giddiness, sleepi- ness, pains in the bowels, looseness, bloody fluxes.

Arbuthnot on Air.

The chyle is riot perfectly assimilated into blood

by its circulation through the lungs, as is known by

experiments in blood-letting. Id. On Aliments.

And that the winds their bellowing throats would

try, When reddening clouds reflect his bloodshot eye.

Garth.

He was blooded up to his elbows by a couple of Moors, whom he butchered with his own imperial hands. Addison.

The skins of the forehead were extremely tough and thick, and had not in them any blood-vessel, that we were able to discover. Id. Spectator.

A good piece of bread first to be eaten, will gain time to warm the beer blood-hot, which then he may drink safely. Locke.

It will manifest itself by its bloodiness ; yet some- times the skull is so thin as not to admit of any.

Sharp's Surgery.

Did not the painted kings of India greet Our queen, and lay their sceptres at her feet ? Chiefs, who full bowls of hostile blood had quafft, Famed for the javelin and envenomed shaft, Whose haughty brows made savages adore, Nor bowed to less than stars or sun before. Tickell. The heart contracts four thousand times in one hour ; from which it follows that there pass through the heart every hour four thousand ounces, or three hundred and fifty pounds of blood. Now the whole mass of blood is said to be about twenty-five pounds ; so that a quantity of blood, equal to the whole mass of blood, passes through the heart fourteen times in one hour ; which is about once every four minutes.

Paley.

BI.OOD; the fluid contained in the arteries and veins. While circulating in these vessels it ap- pears homogeneous and uniform, but when taken from these it very shortly separates into distinct parts. In the first instance, a vapor exhales from extravasated blood which has a peculiar smell ; but this exhalation, when condensed into a liquid, differs very little from mere water. Soon a film appears on the surface of the blood, which is preparatory to the separation of the mass into a firm red substance called the cruor, and a yellowish liquid or serum. The first is resolva- ble again into two parts, viz. the red globules and the fibrin, or what has been called the coa- gulable lymph ; this coagulable lymph appearing on the surface of the crassamentum, in greater or less quantity, both, as the blood may have been more or less tardy in separation, and as it may contain more or less of fibrin; the properties of this lymph differing very little from those of the fibrin, which is obtained from muscular fibre; and which, indeed, is regarded as the essence of muscular fibre. Fibrin, then, exists in the largest proportions under conditions of high health; and, in individuals of different species, the quantity of this ingredient has been said to bear a relation to the ferocity and strength of the animal.

The red globules of the blood were first accurately examined by Mr. Hewson; it is a curious fact respecting these, that although they appear readily to dissolve in water, and thus im- part their color to the solvent, they still retain, under this solution, their globular shape, and thus remain colorless globules. The diameter of these globules has been stated so low as from l-4000th to l-6000trf part of an inch. According to some they become elliptical in order to accom- modate themselves to the decreasing diameter of the vessels they have to pass through. Prevost and Dumas state that the elliptical form of the globules is common to birds, and to the cold blooded animals; while in the mammaline they are always spherical. These last physiologists remark, that the size of the globule varies from 3ˆ of an English inch in man, the dog, pig, &c. to 7ˆ5 in the she-goat.

There has been much controversy respecting the principle upon which the color of the blood depends. Eerzelius and others have ascribed it to the oxide of iron entering into its composition ; while Dr. Wills, and subsequently Mr. Brande and Vauquelin, have attributed it, and apparently with much more correctness, to an animal sub- stance of a peculiar nature. Mr. B., when inves- tigating the coloring matter of the blood dis- tinctly from its crassamentum, did not find it to contain a greater proportion of iron than the other principles; the theory, then, says a modern chemist, which accounts for the red color of the fluid in question, by the presence of iron, maybe considered as completely set aside; and the same chemist, Dr. Henry, gives, from Vauquelin, the following method of obtaining, in a

separate form, this coloring matter.

Let the coagulum of blood, well drained upon a hair-sieve, be digested in four times its weight of sulphuric acid, diluted with a double propor- tion of water, at the temperature of 160Ā° of Fahrenheit for five or six hours. Filter the liquor while yet hot, and wash the residuum with a quantity of hot water, equal in weight to the acid which has been employed. Concentrate the liquor to half its bulk ; then add pure ammo- nia till there remain only a slight excess of acid. After having agitated the liquor allow it to stand, and a purple sediment will be deposited. This sediment is to be washed with distilled water till the washings cease to precipitate the nitrate of baryte. It may then be drained on filtering paper, and dried at a very gentle heat.

The serum or watery portion of the blood is differently stated, as to its composition, by dif- ferent chemists; and it is probable that much variation actually takes place according to the different circumstances of the individual from whom it has been taken. Its specific gravity is about 1-030. When exposed to heat it is con- verted into coagulated albumen, from which, by pressure, a small quantity of a saline liquor may be made to oose, which is distinctly called the serosity of the blood. This last consists, accord- ing to Berzelius, of water, of soda holding albu- men in solution, of muriates of soda and potasb, of acetate of soda, and an animal matter always accompanying the laĀ«t ingredient, forming, toge- ther, the muco-extractive matter of Marcet. Dr

Bostock and Marcet could discover no albumen in the serosity of the blood, but only the muco- extractive or uncoagulable matter just mentioned. Serum, evaporated by a heat' below that which coagulates it, yields a semi-transparent substance resembling amber, the insoluble part of which is albuminous; and it is important to observe that the mineral acids, in their action upon serum, produce insoluble compounds, which resemble fibrin treated in the same way. Hence it has been inferred, that albumen and fibrin are nearly one and the same principle. Upon the whole, ā¢we may, perhaps, receive the following analysis of Berzelius as presenting a pretty correct account of the contents of the serum generally ; it differs very little from one given by Dr. Marcet.

Water 905'0

Albumen 80-0

Muriate of potash and soda . 6‘0 Lactate of soda with animalˆ

matter (the muco-extrac- > 4‘0 . tive matter of Marcet). 3

Soda and phosphate of soda

with do 4-1

Loss 0-9

1000-0

While the solid part consists of the coloring matter and fibrin, and albumen in the propor- tions, according to Berzelius, of sixty-four of the former to thirty-six of the latter in 100. The coloring matter yielding by incineration the fol- lowing residue : ā

Oxide of iron . . . 50‘0 Sulphosphate of ditto . 7‘5 Phosphate of lime with fi-0 magnesia.

Lime 20-0

Carbonic acid and loss 16‘5

100-0

It is thought by Berzelius that the coloring matter rather contains the bases of these sub- stances than the substances themselves ; and the same products may be obtained, he says, by inci- neration from the mere albuminous portion of the erassamentum, with the exception of iron; a result which still leads this last chemist to infer that a ferruginous principle has to do with the impartation of color; an effect which, according to him, ‘ though not depending on the presence merely of an oxide of iron, may be produced by a compound of which that oxide is an essential part.’

It has been well observed by Magendie, in his recently published Elements of Physiology, that ‘ the respective relations in the quantity of serum and cruor, coloring matter and fibrin, are variable according to an infinity of circum- stances;’ and this variability ought ever to be taken into account when experiments are insti- tuted either upon the whole mass of blood or on its separate parts.

The fluidity of the blood while circulating, and its coagulation when separated from its appropriate vessels, have constituted a subject of physiological speculation and enquiry. It was natural to suppose that the constant motion

which circulation implies caused this homogeneous and fluid condition, but that this is not at any rate a full explanation of the fact is proved by isolating a portion of the vascular system from the general mass; by thus causing the blood in the vessel so isolated, to be at rest; which, not- withstanding this quietude, maintains for a length of time the character and appearance of circu- lating fluid; while, on the other hand, coagula- tion takes place in blood separated from its ves- sels, even though the mass be agitated during the process of extravasation.

The phenomenon, then, is to be explained by, or rather referred to, vital action, and not to motion abstractedly; we say referred to, inas- much as the announcement of a law must always be regarded as a different thing from the physical explanation of a fact. John Hunter overlooked this distinction, and thus fell into error when he assumed the vitality of the blood, and talked of the stimulus of necessity : all his positions and reasonings on this head, however ingenious and plausible, being reducible to the truism that the blood coagulates because it must coagulate.

In a fluid of such importance as the blood, it will readily be inferred that many material changes are constantly going on, both of a phy- sical and chemical kind, so as to modify consti- tutional temperaments, regulate the condition of health, and influence morbid affections; these changes, however, have not hitherto been ascer- tained with any thing like a precision sufficient to authorise inferences as to the connexion of such and such variations with such and such maladies. Indeed the seemingly innoxious na- ture of the blood, while the frame is under the influence of the most noxious poisons, is a strik- ing fact in the animal economy. It has, for ex- ample, been ascertained that the flesh, and, a for- tiori, the blood, of an animal that is laboring under hydrophobia, and which animal, by its saliva, is capable of inoculating another with the specific disease, may be eaten with impunity.

*Again, puncture the veins of an individual who is the subject of small-pox *ake blood from that subject and mix it with the blood of another, you will not by this process impart the sickness ; an impartation which every one knows to be effected with facility by a very minute portion of the matter taken from the pustules that charac- terise the disorder.*

In conformity with the same principle, it is found that the blood of a patient, laboring under diabetes, does not yield the saccharine principle to the chemical experimenter, notwith- standing that the very essence of this distemper consists in the copious separation of sugar from the blood by the action of the kidneys. But, for further information on these interesting points^ and for the modifications of which the facts are susceptible, we must refer the reader to the several articles of MEDICINE, PHYSIOLOGY,

PATHOLOGY, and SECRETION. Under the words RESPIRATION and PERSPIRATION we shall likewise have to consider the color and temperature of the blood, in their connexion with exterior and interior circumstance

We shall conclude the present article by remark- ing that there have been very different) estimates

formed with respect to the average quantity of olood contained in the body. Some have calcu- lated it at 100 pounds, while others have rated it so low as thirty. From .this last to forty, or a little more, the average may, perhaps, be cor- rectly taken of the quantity of blood contained in the human system at the adult period. Man, it is said, has a considerably larger proportion of blood, relatively to his size and weight, than the inferior animals.

BLOOD, IN DIET. As a species of food, it has been disputed whether blood really affords any nourishment or not. The best judges, however, are now generally agreed that it is nutritious ; and though out of the body, like the white of an egg, it is very insoluble, yet, like that too in the body it is commonly of easy digestion. It is, however, highly alkalescent in hot climates ; on which account alone the prohibition of it to the Israelites was very proper. Even in this coun- try, when blood was used as food in great quantity, the scurvy was more frequent than at other times. In some countries we are told of barbarians who were accustomed to intoxicate themselves by drinking the warm blood of ani- mals.

The eating of blood was prohibited to Noah, Gen. ix. 3, 4, and to the Jews, Lev. xvii. 10 ā 14. In the latter instance principally, it has been said, with a view to its use in sacrifices, or as a token of respect to the altar, at which the blood of every victim was presented before God. In- deed this is expressly stated to be the reason on one occasion. The prohibition was repeated by the apostles at the council of Jerusalem, Acts xv. and confirmed and defended, we are told, by all the fathers, except St. Augustin ; the universal practice both of the eastern and western churches being to avoid the eating of it till his time. In many churches, even of the west, this was the case much longer. The question is, whether the apostolic precept to abstain from blood, was only a temporary deference to the weakness of the Jewish converts, or a perpetual precept founded on moral principles, and consequently still obligatory ? The former opinion is that of the majority of modern critics, though the advo- cates for the latter urge, that blood was

prohibited with the original grant of animal food to man ; that the prohibition is joined with that of forni- cation, which is an immorality; and that no- thing like an express repeal of the apostolic decision can be found.

Two respectable controversialists upon another subject, the Rev. R. Hall of Bristol, and Rev. Jos. Kinghorn of Norwich, have lately taken the opposite sides of this question also. Mr. Hall says of the insinuation respecting abstaining from blood : ‘ I have not the smallest doubt that it is, of perpetual force, however little it may be regarded in modern practice. The precept was invariably observed by the faithful from the time of Noah ; it resulted from the solemn and unanimous decision of the apostles, and is of more ancient origin than any other Christian institute.’ Reply to the Rev. Jos. Kinghorn, in vindication of the practice of Free Communion, pp. 50, 51. Mr. Kinghorn quotes the learned Spencer as expressing his opinion that the Gentile Christians VOL. IV.

are required to abstain from pollutions of idols, and from fornication, and from things strangled, and from blood, because they were the causes, the attendants, and the signs of idolatry.’ He considers the Noahic precept, after Geddes and other Hebrew critics, as intended to forbid ‘ eat- ing the flesh with the blood of the animal while alive,’ or before the creature was properly slain. He then alleges the express permission of the law (Deut. xiv. 21.) for Gentiles to eat of any thing that died of itself, i. e. with the blood in it, as a proof that there could be no immorality in the practice. It would certainly seem clear, according to this, that the Ethiopian eunuch, or any other Gentile Christian, might have innocently eaten of such food, if so disposed, before the decision of the apostolic council.

BI.OOD, USES OF, IN RELIGION. The blood of victims was anciently the portion of the gods ; and accordingly was poured or sprinkled on the altar in oblation to them. ‘ The priests made an- other use of blood, viz. for divination. The streaming of blood from the earth, fire, and the like, was held a prodigy or omen of evil. The Roman priests were not unacquainted with the use of blood in miracles; they had the fluxes of blood from images, ready to serve a turn ; wit- ness that said to have streamed from the statue of Minerva at Modena, before the battle at that place. But we know not whether in this their successors have not gone beyond them. How many rela- tions in ecclesiastical writers of Madonas, cruci- fixes, and wafers, bleeding ! The liquefaction of the blood of St. Januarius at Naples, repeated annually for so many ages, seems to transcend, by far all the frauds of the Grecian or Roman priesthood. But the chemists at last divulged the secret ; and M. Neuman at Berlin, performed the miracle of the liquefaction of dried blood, with all the circumstances of the Neapolitan miracle. We shall not occupy our pages with the profuse fables of the Franciscans and Domi- nicans, respecting our Saviour’s blood. But Matt.

Paris assures us, that Henry II. summon- ed his nobles and prelates to celebrate the feast of St. Edward in St. Peter's church, chiefly pro veneratione sancti sanguinis Christi nuper adepti, ' in veneration of the holy blood of Christ lately acquired.' And various other British mo- nasteries pretended to be possessed of this pro- fitable relic.

BLOOD, in farriery, denotes a distemper in the back of a horse, which makes him in going draw his head aside, or after him ; the cure is by slit- ting the length of two joints under the tail, and thus letting the beast bleed plentifully.

BLOOD, in law, is distinguished, as either half, or whole blood. 1. Half blood is applied to persons descended from one common ancestor, either on the father's or mother's side, by two different marriages. 2. Whole olood is a per- son descended from the same couple of ancestors.

BLOOD (Thomas), commonly called colonel Blood : was a disbanded officer of Oliver Crom- well's, who first distinguished himself by engag- ing in a conspiracy to surprise the castle of Dublin ; which was defeated by the vigilance of the duke of Ormond. Escaping to England, he meditated revenge against that nobleman, ana

actually seized him one night in his coach in St. James's-street, and bound him on horseback be- hind one of his associates, resolving to hang him at Tyburn, with a paper pinned to his breast : but when they reached the fields, the duke threw himself and the assassin, to whom he was fasten- ed, to the ground ; and while they were strag- gling, he was rescued by his servants. The authors of this attempt were not, however, then discovered. After living a considerable time among the malcontents in Ireland, and after- wards in Holland, he returned to England, with recommendations to the republican party ; went to Scotland, where he contributed much to the breaking out of the insurrection ; and was present in the action of Pentland Hills on the 27th of No- vember, 1666. He returned to England, where he rescued his friend Captain Mason from a party of soldiers, who were conducting him to his trial. In 1671 Blood formed a design of carrying off the crown and regalia from the tower ; and was very near succeeding. He had bound and wounded Edwards, the keeper of the jewel office, and had actually left the tower with his prey ; but was overtaken and seized, with some of his associates. When questioned, he frankly avowed the enterprize

; but refused to discover his ac- complices. ‘ The fear of death, he said, should never engage him either to deny a guilt, or be- tray a friend.’ These extraordinary circum- stances made him the general subject of conver- sation ; and King Charles II. was moved with an idle curiosity to see and speak with a person so noted for his courage and his crimes. Blood wanted not address to improve this opportunity of obtaining a pardon. He told the king that he had been engaged, with others, in a design to kill him with a carabine above Battersea, where his majesty often went to bathe; but that when he had taken his stand among the reeds for that purpose, he found his heart checked with an awe of majesty ; and he not only relented himself, but diverted his associates from their purpose. That he had long ago brought himself to an en- tire indifference about life, which he now consi- dered lost; but that his associates had bound themselves by the strictest oaths to revenge the death of any of their confederacy ; and that no precaution nor power could secure any one from the effects of their resolutions. Whether these considerations excited fear or admiration in the king, Blood secured his object ā a pardon; and Charles is said to have carried his kindness still farther, and to have granted him an estate of Ā £500 a year in Ireland. ā¢ He even encouraged his attendance about his person, and while old Edwards, who had bravely ventured his life, and had been wounded in defending the crown and regalia, was forgotten and neglected, this man, who deserved to be hanged, became a kind of fa- vorite. Blood enjoyed his pension about ten years, when being charged with fixing a scandal- ous imputation on the duke of Buckingham, he was again thrown into prison ; yet, though the damages were laid at Ā£10,000, this adventurer found bail. He died, however, soon after, on the 24th of August, 1680.

BLOOD, FIELD OF. See ACELDAMA.

BLOOD-HOUND, in zoology, the canis sagax of

Linnaeus (see CANIS), le chiencourant of Buffon, the slow hound of the Scots. The hound or dog, with long, smooth, and pendulous ears. Ā»It was a dog of great use, and in high esteem with oui ancestors : and was employed to recover anv game that had escaped wounded from the hunter or been killed and stolen out of the forest, it was remarkable for the acuteness of its smell, tracing the lost beast by the blood it had spilt ; whence the name is derived. This species could, with the utmost certainty, discover the thief by following his footsteps, let the distance of his flight be ever so great, and through the most se- cref and thickest coverts : nor would it cease its pursuit till it had taken the felon. They were likewise used by Wallace and Bruce during the civil wars. The poetical historians of the two he- roes frequently relate very curious passages on this subject ; of the service these dogs were to their masters, and the escapes they had from

those of the enemy. The blood-hound was in great request on the confines of England and Scotland ; where the borderers were continually preying on the herds and flocks of their neigh- bours. The true kind was large, strong, mus- cular, broad-breasted, of a stern countenance, of a deep tan-color, and generally marked with a black spot above each eye.

BLOOD-LETTING, the operation of bleeding, or letting blood. Under this term is comprehended every artificial discharge of blood made with a view to cure or prevent a disease. Blood-letting is divided into general and topical. As exam- ples of the former, venesection and arteriotomy may be mentioned; and of the latter, the appli- cation of leeches, cupping-glasses, and scarifi- cation.

BLOOD-RED HEAT, the last degree of heat given by smiths to iron in the forge.

BLOOD-RUNNING ITCH, in farriery, a disease in a horse, proceeding from an inflammation of the blood by over heating, hard riding, or other severe labor ; which, getting between the skin and flesh, makes the beast rub and bite himself ; and, if not cured, sometimes turns to a highly infec- tious mange.

BLOOD, SALAMANDER'S, the redness remain- ing in the receiver, after distilling the spirit of nitre.

BLOOD, SATYRION, a ruddy liquor produced from the roots of satyrium, baked with bread, and liquefied, as it were, into blood, by a long digestion.

BLOOD-SHOT. See OPHTHALMIA.

BLOOD-SNAKE, the English name of the hae- morrhus.

BLOOD-SPAVIN. See FARRIERY.

BLOOD, SPITTING of, or haemoptoe. See ME- DICINE.

BLOOD-STONE. See HELIOTROPE.

BLOOD-VESSELS. See ANATOMY

BLOODY FLUX. See MEDICINE.

BLOOM', v. & n. \ Germ, blume ; Dutch,

BLOOM'ING, > bloem ; Goth, blowa ; Ang.,

BLOO'MY. j Sax. blosm, blosmi;m

Skinner thinks from blaen, to swell ; to break out, as the flower which precedes the fruit. Wachter, from blazen, to blow ; to breathe out odors. Somner gives blotsmian, to germinate;

to flourish ; that is to bud ; to blossom ; to bear flowers. Ency. Met. Bloom carries with it the idea of freshness as well as fragrance ; whatever has the bloom upon it, is in its loveliest, freshest state ; pure ; untouched ; untainted : thus it is applied, figuratively, to youth in its vigor; to beauty in its prime; to intellectual and moral excellencies in their state of unsophisticated ma- turity.

*Th * rod of Aaron for the house of Levi was bud- ded, and brought forth buds, and bloomed blossoms, and yielded almonds. Numbers xvii. 8.*

Kites and customs, now superstitious, when the strength of virtuous, devout, or charitable affection bloomed them, no man could justly have condemned as evil. Hooker.

It is a common experience, that if you do not pull off some blossoms the first time a tree bloometh, it will blossom itself to death. Bacon's Nat. Hist.

How nature paints her colours, how the bee Sits on her bloom, extracting liquid sweet. Milton.

O nightingale ! that on yon bloomy spray Warblest at eve, when all the woods are still Id.

Beauty, like the fair Hesperian tree

Laden with blooming gold, had need the guard

Of dragon-watch with unenchanted eye,

To save her blossoms and defend her fruit

From the rash hand of bold incontinence.

Id. Comits.

Departing spring could only stay to shed Her bloomy beauties on the genial bed, But left the manly summei in her stead. Dry den.

Were I no queen, did you my beauty weigh, My youtii in bloom, your age in its decay.

Id. Aurer.gzebe.

The bloom of opening flowers, unsullied beauty, Softness, and sweetest innocence she wears And looks like nature in the world's first spring.

Rowe's Tamerlaine. Oh she is all perfection !

All that the blooming earth can send forth fair ā¢, All that the gaudy heavens could drop down glorious.

Lee's Theudosius.

Hear how the birds, on every bloomy spray, With joyous musick wake the dawning day. Pope. Pleasures are like poppies spread,

You seize the flower, its bloom is shed. Burns.

One spot exists ā which ever blooms,

Even in that deadly grove.

Byron. Bride of Abydos.

BLOOM, in the iron-works, has yet to undergo many hammerings before it become iron fit for the smith's use, and be made what they call the ancony. See ANCONY.

BLOOM, HALF, a round mass of metal, which comes out of the finery of an iron work.

BLOOMFIELD (Robert), an English poet, was born in 1766, at Honington, near Bury St. Edmund's, in Suffolk, where his father was a tailor ; and his mother, who became a widow shortly after our poet's birth, kept a village school. Being taught to read by her, at the age of eleven he was taken into the employ of his uncle, a farmer, and engaged for a year or two in the labors of husbandry; after this, the delicacy of his constitution induced his elder brother, who was a shoemaker in London, to bring him to the metropolis, and teach him that trade, at which he worked for several years. Being fond of reading books of amusement, and especially poetry, he at an early age began to exercise his

talents in making verses, some of which he sent to the newspapers. At length he produced a poem of considerable extent, entitled, ' The Farmer's Boy,' describing the occupations of the husbandman through the four

seasons of the year. This piece was shown in manuscript to book- sellers and others, from whom it attracted little attention, till it fell into the hands of Capel Lofft, Esq., of Troston, near Bury, who, on pe- rusal, was so much struck with its beauties, that he immediately corrected and prepared it for the press, and shortly after published it with notes, and a prefatory account of the author, from which the preceding facts are derived. Both the poem and the poet now became the objects of general curiosity and applause. His book passed through many editions in a short time, and Messrs. \ er- nor and Hood, by whom it was published, acted with considerable liberality to the author. The duke of Grafton became his patron, and be- stowed on him a small annuity, and appointed him under-sealer in the seal-office; but this si- tuation he was forced to resign on account of ill health. He then again worked at his trade as a shoemaker, and employed himself in constructing /Eolian harps. He also published Wild Flow- ers, and two or three other volumes of poetry, which must haveadded to his emoluments ; but en- gaging in the book-trade, he became a bankrupt; and to add to his difficulties, in the latter part of his life, he was afflicted with violent head- aches, and became nearly blind. At length he left the metropolis, and went to Shefford in Bedfordshire, for the benefit of his health. He, however, was gradually reduced to such a state of nervous irri- tability, that apprehensions were entertained of his becoming insane. His death took place Au- gust 19th 1823. His last production, Hazlewood- Hall, a Village Drama, appeared shortly before his decease. But his literary reputation will always rest principally on his first work, which, under the disadvantageous circumstances of its composition, must be considered an extraor- dinary performance.

BLOOT (Peter), a Flemish painter, whose works are seldom seen in Britain : nor are they easily purchased abroad, being highly esteemed and carefully preserved in private collections. His subjects were boors drinking, feasting, dancing, &c. He died in 1667.

BLORE', n. s. from blow. Act of blowing ; blast : an expressive word, but not used.

Out rushed, with an unmeasured roar, Those two winds, tumbling clouds in heaps ; ushers to either's blore. Chapman's Iliad.

BLOS'SOM, v. & n.-) See BLOOM. To prut BLOS'SOMED, > forth flowers; to have

BLOS'SOMY. j the hue, the sweetness,

the freshness of flowers newly blown. We ge- nerally call those flowers blossoms, which are not much regarded in themselves, but as a token of

some following production.

Although the fig-tree shall not blossom, neither shall fruit be in the vines, yet will I rejoice in the Lord. Habb. iii. 17.

Lo how the trees grenyth that naked wer, and

nothing

Bare this mouth afore : but their sommer clothing

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BLO

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BLO

Lo how Nature maketh for them everichone . And as many as ther be he forgetteth none ! Lo how the season of the yere and Averell ahoures, Doeth the bushin burgyn out blossoms and floures.

Chaucer. Canterbury TaleĀ». Long worke it were Here to account the endlesse progeny Of all the weeds that bud and blossoms there.

Spenser.

The blossome which my braunch of youth did beare With breathed sighes is blown away and blasted. Id.

This is the state of man : to-day he puts forth The tender leaves of hope ; to-morrow blossoms, And beats his blushing honours thick upon him.

Shaktpeare. Henry VIII. Cold news for me :

Thus are my blossoms blasted in the bud, And caterpillars eat my leaves away.

Id. Henry IV.

The pulling off many of the blossoms of a fruit tree, doth make the fruit fairer. Bacon's Natural History.

To bis green years your censure you would suit, Not blast the blossom, but expect the fruit. Dryden.

It called Narcissa long before her hour ; It called her, tender soul, by break of bliss, From the first blossom, ā from the buds of joy ; Those few our noxious fate unblasted leaves In this inclement clime of human life. Young.

BLOT', v. & n.) Fr. blottir; Ang.Sax. be BLOT'TING. J hlidan. Be-hlot is the regu- lar past tense and past participle ; hence our English blot, which is literally to cover. Tooke observes, and the Metropolitana after him, that ' a blot upon any thing extends just so far as that thing is covered, and no farther' To render illegible by covering. It is figuratively used to express any mark of disgrace, any stigma that may be fixed upon a particular action, or a ge- neral character.

A lie is a foul Hot in a man ; yet it is continually in the mouth of the untaught. Eccl. xx. 24.

And sad repentaunce used to embay His body in salt water smarting sore, The filthy blottes of sin to wash away. Spenser. Amongst all knights he blotted was with blame, And counted bnt a recreant knight with endless shame. Id.

What foul disgrace is this To so faire ladie, as ye seeme in sight, To blot your beautie, that unblemisht is, With so foule blame as breach of faith once plight, Or change of love for any world's delight. Id.

Make known,

It is no vicious blot, murder, or foulness. That hath deprived me. Shakspeare. King Lear.

You that are king

Have caused him, by new act of parliament, To Wot out me, and put his own son in.

Id. Henry VI.

Unknit that threatening unkind brow ; It blrtt thy beauty, as frost bites the meads, Confounds thy fame. Id. Taming of the Shrew. I remember, the players have flften mentioned it as an honour to Shakspeare, that in his writing (whatsoever he penned) he never blotted a line. Mv answer hath been, would he had blotted a thousand.

Ben Jonson.

Powers that erst in heaven sat on thrones ; Though of their names in heavenly records now Be no memorial, blotted out and rased By their

rebellion from the books of life Milton.

He sung how earth blots the moon's gilded wane, Whilst foolish men beat sounding brass in vain.

Cowley.

Let flames on your unlucky papers prey, Your wars, your loves, your praises, be forgot, And make of all an universal blot.

Dryden. Juvenal.

O Bertram, oh no more my foe, but brother ! One act like this blots out a thousand crimes.

Dryden.

My guilt thy growing virtues did defame ; My blackness blotted thy unblemished name.

Id. Mneid.

These simple ideas, offered to the mind, the under- standing can no more refuse, nor alter, nor blot out,, than a mirrour can refuse, alter, or obliterate, the images which the objects produce. Locke.

For mercy's sake restrain thy hand, Blot not thy innocence with guiltless blood.

Rowe.

For thee I would my dearest friend resign, And from my heart blot every name but thine. Id.

Even copious Dryden wanted, or forgot, The last and greatest art, the art to blot. Pope. A man of the most understanding will find it im- possible to make the best use of it, while he writes in constraint, perpetually softening, correcting, or blotting out expressions. Swift.

A disappointed hope, a blot of honour, a stain of conscience, an unfortunate love, will serve the turn.

Temple.

BLOTCH', v. & n.' From the Ang.Sax. blodig, that is, bloody; for instance, a bloody tumor : or from blaese, a blaze, which it resem bles in its fiery appearance, and its burning heat. Skinner, as quoted by the Metropolitana.

The one might be employed in healing those blotches and tumours which break out in the body, while the other is sweetening the blood and rectifying the constitution. Spectator.

Spots and blotches, of several colours and figures, stragglinK over the body ; some are red, others yeK low, or black. Harvey.

To BLOTE, v. a. To smoke, or dry by the smoke ; as bloted herrings, or red herrings.

BLOTED CHINA-WARE, a sort of china, loaded with color in an irregular manner. This pleases some, but it is a defective sort of ware, the large blotches of colors having been only laid on to cover the blemishes of the first baking.

BLOTELING, or BLOOTELING (Abraham), a designer and engraver of Amsterdam, flourished about 1670. From the style of his etchings, which have great merit, he is supposed to have frequented the school of the Visschers.

BLOUNT (Sir Henry), an English writer, born at Tittenhanger, in Hertfordshire, in 1602. After a regular education, he set out on his tra- vels in 1634; and, becoming acquainted with a janissary at Venice, accompanied him into the Turkish dominions. Having been abroad two years, he returned and published a relation of his travels in the Levant, which went through se- veral editions. He was knighted by Charles I. and was at the battle of Edge-hill ; but after the king's death was employed by the parliament and by Cromwell. After the Restoration he was high sheriff of Hertfordshire. He published, 1. An account of his Travels. 2. Six Comedies written by John Lilly, under the title of Court Comedies. 3. The Exchange Walk, a satire;

and 4. An Epistle in praise of Tobacco He died October 9th 1682.

BLOUNT (Sir Thomas Pope), Bart., eldest son of Sir Henry, was born at Upper Holloway, in Middlesex, September 12th 1649. He distin- guished himself as a lover of liberty, a sincere friend to his country, and a true patron of learn- ing. He was made a baronet by Charles II., in whose reign he represented St Alban's in two parliaments, and was knight of the shire in three parliaments after the Revolution. He wrote in Latin, 1. A Critique on the most celebrated Writers. 2. Essays on several subjects. 3. A Natural History, extracted out of the best mo- dern writers. He died June 30th 1697, in the forty-eighth year of his age.

BLOUNT (Charles), younger brother of ,Sir Thomas, wrote Anima Mundi; or, An Historical Narration of the Opinions of the Ancients, con- cerning Man's Soul after this Life, according to unenlightened Nature, which gave great offence, and was complained of to the bishop of London. But the work which rendered him most known, was, his translation of Philostratus's Life of Apollonius Tyanaeus, published in 1680; which was soon suppressed. He published another work of the same kind the same year, called Great is Diana of the Ephesians, &c. in which, under color of exposing superstition, he struck at revela- tion. In 1684 he printed An Introduction to Polite Literature. In the warmth of his zeal for the Revolution, he wrote a pamphlet to prove king William and queen Mary conquerors; which was condemned to be burnt by both houses of parliament. The close of his life was very un- happy. After the death of his wife, he became enamoured of her sister, whose only objection was their prior connexion by marriage; yet the lady agreed to abide by the decision of compe- tent divines : on which he stated a case as that of a third person, with great learning and ad- dress; but the archbishop of Canterbury and other divines decided against him. He shot himself in 1693.

BLOUNT (Thomas), a learned English barrister, of the seventeenth century, born at Bordesley in Worcestershire, had not an university education ; but by strength of genius and great application wrote, 1 . The Academy of Eloquence, or Com- plete English Rhetoric, 12mo. 1654, often re- printed. 2. Glossographia, or a Dictionary of Hard Words, 8vo. London, 1656, of which there were at least five editions. 3. The Lamps of the Law, and the Lights of the Gospel, 8vo. ibid. 1658. 4. Boscobel, the first part in 1660, the second in 1681. 5. A Law Dictionary, fol. ibid. 1671. 6. Fragmenta Antiquitatis, or An- cient Tenures of Land, &c. 8vo. 1679 and 1784, which has been lately reprinted in 4to. 7. A Catalogue of the Catholics who lost their Lives in the King's Cause, during the Civil War, printed at the end of lord Castlemain's Ca- tholic Apology. 8. A Pedigree of the Blounts, printed in the Complete Gentleman, 1661. He died in 1679.

BLOUNTSVILLE, a post town of the United States, in North Carolina.- It is thirty miles S.S.E. of Halifax, and 413 from Phila- delphia.

BLOW', v.~\ Ang.Sax. blawan, to cast BLOW'ER, (forth; to send out air, with vio BLOW'ING, Hence, and noise ; when natural BLOWN'. J breathing is accelerated, it be- comes puffing and blowing; when the air is stirred beyond the zephyr which plays with the summer beam it becomes wind ; and we say the wind blows. To blow always implies effort; the Metropolitana says excess. Query ?

The priests shall blow with the trumpet. Joshua. When ye blow an alarm, then the camps that lie on the east parts shall go forward. Numbers.

Blow the trumpet among the nations. Jeremiah. I have created the smith that bloweth the coals.

Isaiah.

A fire not blown shall consume him. Job

At his sight the mountains are shaken, and at his ā¢will the south wind bloweth. Ecclus. xliii. 16.

His sea horses did seeme to snort amayne, And from their nosethrilles blow the brynie streame, That made the sparkling waves to smoke agayne And flame with gold ; but the white fomy creame Did shine with silver and shoot forth his beame.

Spenser.

Here's Mrs. Page at the door, sweating and blow- ing, and looking wildly. Shakipeare.

Rather at Nilus' mud

Lay me stark naked, and let the water-flies Blow me into abhorring. Id.

When icicles hang by the wall, And Dick the shepherd blows his nail,

And Tom bears logs into the hall, And milk comes frozen home in pail. Jd.

A plague of sighing and grief ! it bluws a man up like a bladder. Id.

Your breath first kindled the dead coal of war, And brought in matter that should feed this fire . And now t'is far too huge to be blown out With that same weak wind which enkindles it. Id.

No blown ambition doth our arms incite, But love, dear love, and our aged father's right.

Id. King Lear.

Blow winds and crack your cheeks ! rage ! blow! You cataracts, and hurricanoes, spout Till you have drenched our steeples, drowned the cocks ! Id.

All the sparks of virtue, which nature had kindled in them, were so blown to give forth their uttermost heat, that justly it may be affirmed, they inflamed the affections of all that knew them. Sidney.

Where the bright Seraphim in burning row, Their loud uplifted angel trumpets blow. Milton. His praise, ye winds, that from four quarters Mow Breathe soft or loud ; and wave your tops ye pines, With every plant in sign of worship wave. Id.

What if the breath that kindled those grim fires, Awaked should blow them into sevenfold rage, And plunge us into flame. Id.

Fair daughter, blow away those mists and clouds, And let thy eyes shine forth in their full lustre.

Denhatx.

These primitive heirs of the Christian church could not so easily blow off the doctrine of passive obedience.

South.

Says the satyr, if you have gotten a trick of blow- ing hot and cold out of the same mouth, I've e'en done with ye. L' Estrange.

It blew a terrible tempest at sea once, and there was one seaman praying. Id.

If it blows a happy gale, we must set up all our sails ; though it sometimes happens that our natural heat is more powerful than our care and correctness.

Dry den ˆ

BLO

Their chief blown up in air, and waves expired, To which his pride presumed to give the law. Id.

The trumpets sleep, while cheerful horns are blown, And arms employed on birds and beasts alone.

Pope.

On the next day, some of the enemy's magazines blew up ; and it was thought they were destroyed on purpose by some of their men. Tatter.

Ye too, ye winds ! that now begin to blow With boisterous sweep, I raise my voice to you.

Thomson's Seasons.

BLOW', v. & n. } Ang.-Sax. blowan, to blow.

BLOW'TH, n. >To bloom, blossom, or bear

BLOW'ERS. 3 flowers ; to bud ; to burgeon ; to spring; to flourish. ā Somner.

The first age was by ancient historians called Golden; ambition and covetousness being as then but greene, and newly grown up, the seeds and ef- fects whereof were as yet but potential, and in the blowth and bud. Raleigh.

Tulips are generally divided into three classes, ac- cording to their seasons of flowering. But there is no occasion for making any more distinctions than two, viz. early and late blowers. Miller.

We lose the prime to mark how spring Our tender plants, how blows the citron grove, What drops the myrrh, and what the balmy reed.

Milton. This royal fair

Shall, when the blossom of her beauty's blown,

See her great brother on the British throne.

Waller.

Fair is the king-oup that in meadow blows ; Fair is the daisy that beside her grows. Gay.

For thee Idume's spicy forests blow, And seeds of gold in Ophir's mountains glow.

Pope.

For me, when I forget the daring theme, Whether the blossom blows, the Summer ray Russets the plain, inspiring Autumn gleams, Or Winter rises in the blackening East, Be my tongue mute, may Fancy paint no more, And, dead to joy, my heart forget to beat. Thomson. No fiowers embalmed the air, but one white rose, Which on the tenth of June by instinct blows, By instinct blows at morn, and, when the shades Of drizzly eve prevail, by instinct fades.

Churchill. The Prophecy of Famine.

BLOW', i Dutch blowe. The act of

BLOW'GEVER, \ striking; a stroke; a sudden, impetuous, injurious, assault ; a hit, a knock, a stroke : figuratively, any calamity that comes in a moment; any act of hostility : a sudden event; the stroke of the king of terrors; death.

The tyrant thundered his thicke blowes so fast, That through the yron walls their way they rent, And even to the vitall parts they past, Ne ought could they endure, but all they cleft or brast.

Id.

Our Lord Jesus might bothe have destroyed the wicked byshop, and also have letted this blowgeuer.

Udall. John, chap, xxviii.

A most poor man, made tame to fortune's blows, Who by the art of known and feeling sorrows Am pregnant to good pity. Id. King Lear.

Be most abated captives to some nation Than won you without blows. Shahspeare.

A woman's tongue,

That gives not half so great a liljw to the car, As will a chestnut. Id. Taming of the Shrew.

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But to turn tail, or run away, And without blows give up the day, Or to surrender ere the assault, That's no man's fortune, but his fault.

Butler's Hudibras. Assuage your thirst of blood, and strike the blow.

Dryden.

Every year they gain a victory, and a town ; but if they are once defeated they lose a province at a blow. Id.

Unarmed if I should go, What hope of mercy from this dreadful foe, But woman-like to fall, and fall without a blow ? Pope. Words of great contempt commonly finding a re- turn of equal scorn, blows were fastened upon the most pragmatical of the crew. Clarendon.

To all but thee in fits he seemed to go, And it was my ministry to deal the blow. Parnell.

Such dire achievements sings the bard that tells Of palfrey'd dames, bold knights, and magic spells ā Where whole brigades one champion's arms o'er-

throw,

And cleave a giant at a random blow ; Slay paynims vile that force the fair, and tame The goblin's fury and the dragon's flame. Tiekell.

But first, ere came the rallying host to blows, And rank to rank, and hand to hand oppose, Gulnare and all her haram handmaids freed, Safe in the dome of one who held their creed, By Conrad's mandate safely were bestowed, And dried those tears for life and fame that flowed.

Byron's Corsair.

BLOW, in fencing, differs from a thrust, as the former is given by striking, the latter by pushing.

BLOW, in law. See BATTERY.

BLOW, MILITARY, that given with a sword on the neck or shoulder of a

candidate for knight- hood, in the ceremony of dubbing him. It seems to have taken its rise from the ancient ce- remony of manumission. In giving the blow, the prince used the formula, Esto bonus miles, ‘ Be a valiant soldier ;’ upon which the party rose a complete knight, and qualified to bear arms in his own right.

BLOW (Dr. John), a musician and composer, was a native of Collingham in Nottinghamshire. Upon the death of Purcell, in 1695, he became organist of Westminster Abbey, and in 1699 composer to the king. Blow was a composer of anthems while a chapel-boy, and distinguished by Charles II. for his merit. He composed at that early period that beautiful song, ‘ Go per- jured man.’ He set to music an ode for St. Ce- cilia’s day in 1684, the words by Mr. Oldham, published with one of Purcell. He also pub- lished a work entitled Amphion Anglicus, in 1700, in imitation of Purcell’s Orpheus Britan- nicus, and containing compositions foi one, two, three, and four voices, with a thorough bass for the organ, harpsichord, &c. He likewise pub- lished a collection of lessons for the harpsichord, and Dryden’s ode on the death of Purcell. There are also extant of his composition various hymns printed in the Harmonia Sacra, and a great number of catches. He died in 1708.

BLOWING, a ceremony in the ancient admi- nistration of baptism, whereby the catechumen, upon rehearsing the renunciation, blew three blasts with his mouth, to signify that he rejected the devil. Something like this is still retained

m the Russian church. The priest who adminis- ters baptism, is enjoined to blow thrice on the child’s face, making the sign of the cross and pronouncing the words, exi ab eo Satan.

BLOWING, in gardening, the action of flowers, whereby they open and display their leaves. The regular blowing season is in the spring; though some plants have other extraordinary times and manners of blowing, as the Glaston- oury thorn. Some flowers also, as the tulip, close every evening, and blow again in the morning. Annual plants blow sooner or later, as their seeds are put into the ground ; whence the curious in gardening sow some every month in summer, and have a constant succession of flowers. The blowing of roses may be retarded by shearing of the buds as they expand.

BLOWING OF FIRE-ARMS, is when the vent or touch-hole is run or gullied, and becomes ā¢wide, so that the powder will flame out.

BLOWING OF GLASS, one of the methods of forming various kinds of works in the glass ma- nufacture. It is performed by dipping the point of an iron blowing-pipe into melted glass, and blowing through it with the mouth, according to the circumstances of the glass to be blown. See GLASS.

BLOWING OF TIN, denotes the melting of its ore, ufter being first burnt, to destroy its mundic.

BLOWING MACHINES, in the arts and manu- factures, are improved bellows or instruments for producing the strongest continued current of air, for a given purpose, or for facilitating the com- bustion of fuel, and the production of heat.

For the common bellows which bears the greatest resemblance to lungs, see BEL- LOWS. It was a very early contrivance for artificial blowing. The blast, however, in this machine, is not continuous, but in puffs ; or at intervals of time required for the air to enter through the valve ; the blowing interval being as the areas of the apertures to the filling in- terval. This was for some time attempted to be remedied by employing two bellows which blew alternately, the blowing of one taking place while the other was filling. To this succeeded the invention of what are called double bellows, which was a valuable acquisition in the art of blowing. We have only to take a third board exactly of the shape of the two belonging to the single bellows, and connect it with the lower board by a piece of leather similar to that of the single bellows, making two cavities exactly similar, and separated by the lower board of the single bellows, which now becomes the middle board of the double. The third board we shall now call the lower board. This latter has a valve in it exactly similar to the first, which still retains its place in the new construction. The middle board is now fixed in a horizontal po- sition, the pipe being placed to the fire to be blown. The lower board is held down by a weight, which keeps the lower cavity constantly full of air, and the top board has a weight laid upon it which presses all the air out of the upper cavity through the pipe. The requisite action by which the blowing is performed, is, first, to lift up the lower board. This forces the air from the lower into t!ie upper cavity, the valve in the middle

board preventing its return. The weight on the upper board now presses the air with a uniform blast through the pipe. During this time the lower board descends, which fills the lower cavity with air from the atmosphere. This again rises, and gives its contents to the upper cavity, and thence through the nose-pipe. Hence we see that irregular puffing blast, which belongs to the single bellows, is here confined to the lower board only, which supplies air to the upper cavity, while the upper board is constantly pres- sing uniformly upon the air in it. But this does not completely obviate the

irregularity of the blast. So long as the lower board is not in action, the pressure of the upper board being uniform, the blast is the same. Every time, however, the bottom board rises to force the air into the upper cavity, an extra pressure is given to the air in the upper cavity, and a temporary puff is produced. In the application of bellows to the smith's forge, the continued blast was of less importance than in the blast-furnaces applied to the smelting or refining of ores. The single bellows are at present almost exclusively em- ployed by anchor-smiths and cutlers, while the blacksmith and most others use double bellows, which are doubtless better.

In France and on the Continent, where bel- lows have been wholly formed of wood, instead of the flexible sides of leather, they consist of two boxes, each open on one side, and the one being just capable of containing the other. The outer box being placed with the mouth upwards, the other is made to descend into it, with the mouth downwards ; the latter being capable of moving up and down, while the other remained fixed. In the bottom of the fixed box is a valve like the common bellows, and a pipe on the same level, to let out the blast. The change of capacity, by the motion of this box, causes the blast, and with less waste of power than that oc- casioned by the bending of the leather in the common bellows.

A machine of this kind appears in our plate BLOWING MACHINES, figs. 1, 2, 3. A B C P E F, fig. 1, is a wooden box, which has its top and two sides flat or straight, and the end, B A E, formed into an arched or cylindrical surface, of which the line F P at the other end is the axis. This box is open below, and receives within it the shallow box K II G M, &c. fig. 2, which ex- actly fills it. The line F P of the one coincides with F P of the other, and along these lines is a set of hinges, on which the upper box turns as it rises and sinks ; the lower box is made fast to a frame sunk in the ground. A pipe or tube, Q Q> proceeds from the end of it and terminates at the furnace, where it ends in a small pipe called a tuyere. This lower box is open above, and has in its bottom two large valves, VV, opening inwards. The conducting pipe is also sometimes furnished with a valve opening out- wards, to prevent burning coals from being sucked into the bellows when the upper box is drawn up. The joint along P F is made tight by thin leather nailed along it. The sides and ends of the fixed box are made to fit the sides and curved end of the upper box, so that this last can be raised and lowered round the joint

F P without sensible friction ; and yet without suffering much air to escape ; but as this would not be sufficiently air tight, by reason of the shrinking

and warping of the wood, a farther contrivance is had recourse to. A slender lath of wood divided into several joints, and covered on the outer edge by soft leather, is laid along the upper edges of the sides and ends of the lower box. This lath is so broad that when its inner edge is even with the inside of the box, its outer edge projects about an inch. It is kept in this position by a number of steel wires, which are driven into the bottom of the box and stand up touching the sides. By these means the laths are pressed close to the sides, and curved end of the movable box, and the spring wires

S'eld to all their inequalities. A bar of wood, S, is fixed to the upper board, by which it is either raised by machinery, to sink again by its own weight (having an additional load laid on it), or it is forced down by a crank or wiper of the machinery, and afterwards raised by the same. The operation here is precisely the same as in the common household bellows. When the board is lifted up, the air enters by the valves V V, fig. 3, and is afterwards expelled at the pipe Q Q. These machines, used in the larger metallurgic operations of mining countries, and throughout the continent, are sometimes of very great size, and are made capable of expelling ninety cubic feet of air at one stroke, repeated eight times in a minute.

English blowing machines have been chiefly improved by means of a piston and cylinder, the latter commonly of iron, but sometimes com- posed of wood on the plan of coopers' work. The piston is surrounded with a broad strap of thick soft leather, and stuffed similarly to that of the steam engine. The cylinder is furnished with one or more large valves in the side or bottom, by which the air enters when the piston is drawn upwards, and is expelled of course when it goes down : this action driving it along a large pipe which terminates in a small orifice connected with the furnace, and sometimes with a wind cellar or reservoir of air, which supplies forges, 8tc. by means of a cock. The piston in these cases is raised by water or other works ; and sometimes two or more are working at a time to ensure a uniform blast.

The blowing machine of Chastillion consists of two cylinders, A, B, fig. 4, loaded with weights, which are suspended from the two extremities of a lever, or beam, moving about a central fulcrum E. From the top of each there is a large flexible pipe, which are both united in H, whence a pipe HT leads to the tuyere. There are valves at G and H opening upwards, into the flexible pipes ; and other valves, L, M> adjoining to them, in the top of each cylinder, opening inwards, but kept shut by a slight spring. Motion is given to the lever by a machine, which may of course have water, wind, or stearn, for its "impelling agent. The operation of this engine is evident : when the cylinder A is descending, the water entering at its bottom compresses the air, and forces it along the pipe F II K T. In the mean time the cylin- der B is rising, the air finding an entrance through ihe valve M :

having reached the top, it begins to and Ā»he other to ascend, and thus the

blast is rendered nearly continuous, but certainly not so equable as is desirable in most cases. An improvement upon this construction has been introduced at the Patent Iron Cable Manufactory of Messrs. Brunton and Co. Commercial Road; where, instead of the flexible pipe K H T, a pipe is standing up a little above the surface of the wa- ter under each cylinder ; through which the air is made to pass by the compression caused by the descent of each cylinder ; the air also passing into a general reservoir or wind chest, is kept constantly under a given pressure and led to any required point. The lever to which the cylin- ders are suspended, is attached immediately to the beam of a small steam engine applied wholly to this purpose, and thus the utmost uniformity of action is secured. Each of these is, in fact, a species of hydraulic bellows. The extensive use of coal in smelting iron, first rendered it necessary in this country to construct durable machines, capable of affording a powerful and constant blast. The first cylinders of magnitude used as blowing machines were erected by Mr. John Smeaton, in 1760, at the Carron Iron Works. The pumps were wrought alternately by a water wheel, having four cranks upon its axis, each of which moved the piston of a cylinder, which had a stroke of four feet six inches ; the diameter of each cylinder being also four feet six inches. Where a fall of water could not be obtained, steam engines were employed to work the pumps. A water regulator has been introduced of late years, connected with a double acting blowing cylinder, wrought by a steam engine.

A machine of this kind, of large dimensions, is represented in fig. 5. It is wrought by a steam engine of thirty-five horse power, with a steam cylinder of thirty-three inches diameter, acting with a seven feet stroke. On the opposite end of the beam from the steam cylinder is jointed the rod D, which is turned exceedingly true, so as to move through the stuffing box without allowing any air to escape, and without any un-Ā» necessary friction. A quantity of hemp is placed round the rod in the box a a, which forms part of the lid of the cylinder, and is held tight by the iron nuts bt b. The piston is fitted to the lower end of the rod D, and is packed with leather so as to fill exactly the internal diameter of the cy- linder A A. To this cylinder are fixed four necks, B, F, G, H ; two of which, B, F, contain the suction valves, by which the air enters the cylinder, while the other two contain the forcing valves, through which the air is expelled at every elevation and depression of the piston into the chambers I, K, and through the pipes L, M, into the regulating receiver O P, which is of the form of a parallelopipedon, or an inverted box without the lid, and is immersed in a cistern RS, filled with water. Let us suppose that the piston is at the bottom of the cylinder A A, and begins to be raised by the engine. The air above the piston will obviously be condensed, and forcing open the hanging valves

in the neck G, will rush through them into the pipe L, and thence into the receiver O P. While the piston thus rises and condenses the air above it, there is a vacuum below the piston, and the external air rushfi through the valves in the neck F, and fills th space below the piston. When the piston descend .

*Page ?47 Vtl *.*

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from the top to the bottom of the cylinder, the air below it is condensed, and forced through the valves in the neck H into the pipe L, and thence into the receiver OP, while the space above the piston is a vacuum, and is instantly filled by the rush of the external air through the valves in the neck B. This operation is repeated at every stroke of the engine ; the cylinder full of air, which is inhaled at the necks B and F, being forced through the opposite necks G and H. When the piston reaches the top or bottom of the cylinder, there would evidently be a short cessa- tion in the blast of air that passes into the fur- nace, were it not for the regulating receiver O P. When the air is forced into this receiver, the water within it is pushed out or displaced, and rises in the cistern, so that the surface of the water in the cistern is often six, seven, or eight feet higher than the surface of the water in the re- ceiver. The air in the receiver, therefore, is pressed upwards by a column of water, six, seven, or eight feet high, so that if there should be any intermission in the supply of air from the cylinder, the blast will be

kept up by the extru- sion of the air in the receiver. The receiver O P, as shown in the figure, is composed of a great number of cast iron plates, united by screws and flaunches. Its size in the drawing is purposely diminished, in order to comprise it within the limits of the plate. The general size is forty feet in length, twelve feet in depth, and twelve feet in breadth. The water cistern is then forty-seven feet long, fourteen feet deep, and nineteen feet broad. The receiver is supported upon blocks of wood and masonry ; its lower edge being two feet from the floor of the cistern, to allow a free passage for the water. The buoyancy of the receiver is overcome by a great quantity of ma- sonry placed upon the top of it. ; but we have omitted this in the figure, for the purpose of show- ing the manner of uniting the plates of which it is composed.

A valve, loaded with a weight, is placed at T in the horizontal pipe. The weight is sufficient to keep the valve shut when the engine works with a proper velocity ; but when it works too hard, the excess of air will escape through the valve. When this happens, the velocity of the engine must be diminished.

The horizontal pipe N M, after bending down- wards, is divided into two branches X, Y, which, by a series of pipes, convey the air round the furnace, so as to introduce the blast at opposite sides of the hearth ; a practice which is now pretty generally followed.

The cylinder AA is made of cast iron, with a flaunch at each end. The upper necks G, B, are cast in the same piece with it, but the lower ones, H, F, are screwed to the under flaunch of the cylinder. The valves within the necks B and F open inwards. They are made of leather, covered with plates of iron, and are screwed, by a pro- jecting part of the leather, against the external plate, a, of the chamber, so as to cover three cor- responding apertures in the plate (see fig. 2), xy, which is screwed to the neck by a number of bolts, shown in the figure. This plate is removed when the valves require any material repairs ; tout any trifling adjustments may be made, by

the workman's thrusting his hand through one of the valves to repair the adjacent one. The plates which carry the valves in the chambers I, K, are not movable ; but apertures are left above to give access to the valves. These apertures, when the engine is at work, are covered by the \idsh,h, which are fixed down by screws at each end.

The piston is rendered air-tight by means of a ring of leather screwed on the upper and one on the under side of the piston, which, in conse- quence of their elasticity, press gently against the inside of the cylinder. In order to renew these rings when worn out, there is a hole in the lid, and another in

the bottom of the cylinder, suf- ficient to admit a man for that purpose. In some cases a movable lid in the piston.

The cylinder is held down by four large bolts, two of which are seen in the figure at d, d, passing through a massive pier of brickwork or masonry, sufficiently stable to keep the cylinder steadily in its place. The cistern R S is placed at a much greater distance from the cylinder than is repre- sented in the figure, lest the tremulous motion produced by the violent concussion of the in- cluded air should make the cistern leak. An ac- cident of this nature ought to be carefully pre- vented ; as the water which escapes may insinuate itself into the sand of the casting-house, and oc- casion the most perilous explosions, when the hot metal is introduced into the moulds.

The internal diameter of the cylinder A A is five feet two inches, and the stroke seven feet. It is capable of blowing one furnace, when working at the rate of six strokes per minute.

But the blowing machine lately erected at the smithery in his Majesty's dock-yard, Woolwich, is perhaps the most powerful and most complete in the kingdom. It is equal to the supply of air for forty forge fires, amongst which are those for forging anchors, iron knees, and other heavy smithery works. It is represented in our plate II. BLOWING MACHINE; fig. 1, being a perspective view of the engine, and figs. 2, 3, and 4, elevations and sections of the blowing cylinders. The part seen in fig. 1, is only that which appears above the level of the floor. The other part is below, and may be seen in figs. 2, 3, and 4. The length of the cylinders is five feet five inches, of which two feet four inches appear above the floor ; the interior diameter of each cylinder is four feet eight inches, and the length of the stroke is also four feet eight inches ; which is i epeated in each of the three cylinders A, B, C, twenty times per minute, which corresponds to an expulsion of nearly 5000 cubic feet of air per minute. The fourth cylinder, D, is used only to regulate the pressure, as will be explained below.

The motion communicated to the piston rods is so contrived, that while one piston rod is at its highest point, another is half way down, or up, and the other quite down. A large iron wind-chest, twenty-two feet five inches in length, is placed on proper stone supports or pillars in the cellar below, and upon this are fixed the four cylinders A, B, C, D, the latter being open to the chest at its bottom, but the others are closed From this chest, under the cylinder C, proceeds the main eduction pipe, shown in the elevations, figs. 3 and 4, and from this, branch pipes proceed

to the several forges, each pipe near the forge being furnished with a cock, so that the blast may be turned off or on at pleasure.

In fig. 3 will be seen a short cylinder behind ihe eduction pipe, in which is a valve shown more particularly in fig. 2, where the section is made to pass through the axis both of the valve cylinder and blowing cylinder ; the former ele- vation being at right angles to the principal axis of the machine, and that in fig. 4, parallel to the same, neither of which therefore embrace the valve cylinder, which is placed somewhat on one side.

On the principal axis, fig. 1, are seen three ec- centric wheels, furnished with iron straps, fig. 3, which are connected with the lever under the wind chest, seen in fig. 3, at E : and these wheels are so arranged, in respect to the corresponding crank, that when the piston of any cylinder is either above or below, the lever, fig. 3, is horizon- tal, and the valve a then exactly closes the hole A, fig. 2. When the piston in this figure begins to ascend ; the end, E, of the lever, fig. 3, con- tinues to ascend also, and the other end, F, des- cends, and being connected with the valve rod at G, fig. 2, this also descends, and thereby opens a communication between the interior of the cylinder and the atmosphere, which former thus receives a fresh supply of air. This valve con- tinues to descend till the piston is half way up; it then begins to ascend till the piston is at its highest point, when the valve has again exactly the position shown in the figure. The piston now descends, but the valve rod still continues to ascend, and thereby opens a communication between the cylinder and wind chest, into which latter the air is forced by the action of the piston. When this latter is halfway down, the valve rod has reached its highest point, and then continues to descend with the piston till the latter is down, when the hole h is again covered with the valve, and the whole is situated as at first, to have the process again repeated as above described. By these means the cylinders are successively opened to the atmosphere, and then to the wind chest, and a constant influx of air is produced. To pre serve a steady action in the valve rods, they are made to pass through guards level with the floor, as shown in figs. 1 and 2. The cylinder, D, has no bottom, being open to the wind-chest, and its piston, which weighs 700 Ibs. serves only to regulate the pressure, which amounts to about one-fourth Ib. per square inch. When the pres- sure exceeds this, the piston rises and opens a safety valve connected with this cylinder at the back, not seen in our drawing, but the operation of which will be easily conceived. The form of the bottom of the cylinder, shown in fig. 2, is peculiar only to that particular section, the other part of the bottom is perfectly flat, its purpose is to furnish a communication with the valve cy- linder.

BLOWING SNAKE, in zoology, a name given in Virginia to a species of serpent, resembling the European viper, but considerably larger, and

remarkable for inflating and extending the surface of its head before it bites. Its wound is fatal.

BLOW-PIPE, the blow-pipe has become in

chemistry, mineralogy, &c. so extremely useful an instrument, as to form an essential article in the laboratory. It is employed to raise an intense heat by the flame of a lamp or candle, and operates by rapidly and strongly throwing a current of air through the flame, against the object to be heated. The blow-pipe is capable of heating a small object in a manner that would be difficult to heat a large quantity of the same substance in the most powerful furnaces ; with this advantage also that the process is much more under the inspection of the operator We refer to LABORATORY for an account of the more scientific inventions and improvements of this kind.

The blow-pipe of artificers, consists of a co- nical metal tube, regularly tapering from the size convenient to be held in the mouth to that of a small pin : The small end is bent with a regular curvature, so as to be nearly at right angles to the main tube. This pipe being held in the mouth, and a regular stream of air discharged through it into the flame of a candle, the flame is pro- jected sideways into a long conical spiracle of fire, which is of a blue color at its root, or the part where it joins the flame ; farther on it is of a yellow cast, growing more and more faint towards the extreme point- The object to be heated is held so that the flame 'strikes upon it; or, if it is large, it should be placed upon a piece of charcoal, which reverberates the flame forcibly on all sides of the object, and at the same time maintains the heat by its own combustion. This instrument is very effective in the hands of a skilful operator. ' There is an artifice, says Dr. Ure in the blowing through this pipe, which is more difficult to describe than to acquire. The effect intended to be produced is a continual stream of air for many minutes, if necessary, without ceasing. This is done by applying the tongue to the roof of the mouth, so as to inter- rupt the communication between the mouth and the passage of the nostrils ; by which means the operator is at liberty to breathe through the nos- trils, at the same time that by the muscles of the lips he forces a continual stream of air from the anterior part of the mouth through the blow- pipe. When the mouth begins to be empty, it is replenished by the lungs in an instant, while the tongue is withdrawn from the roof of the mouth, and replaced again in the same manner as in pronouncing the monosyllable tut. In this way the stream may be continued for a long time without any fatigue, if the flame be not urged too impetuously, and even in this case no other fatigue is felt than that of the muscles of the lips. A wax candle, of a moderate size, but thicker wick than they are usually made with, is the most convenient for occasional experiments ; but a tallow candle will do very well. The candle should be snuffed rather short, and the wick turned on one side toward the object, so

that a part of it should lie horizontally. The stream of air must be blown along this horizontal part, as near as may be without striking the wick. If the flame be ragged and irregular, it is a proof that the hole is not round and smooth ; and if the flame have a cavity through it, the aperture of the pipe is too large. When the

hole is of a proper figure, and duly proportioned, the flame consists of a neat luminous blue cone, surrounded by another flame of a more faint and indistinct appearance. The strongest heat is at the point of the inner flame.'

BLOW-PIPE, in anatomy, is a straight hollow brass tube, of an elongated conical form, about six inches in length, and open at both ends. The large end is three- tenths of an inch in diameter, the smaller is of the size of a needle's point. It is used for blowing air into the col- lapsed vessels of a dead subject, in order to ascertain the course of them.

BLOWZE, ā¢) One who by exposure to BLOVZED, >wind and weather has a ruddy BLOW'ZY. j and coarse complexion ; an appearance of boisterous health ; unfeminine.

I had rather marry a fair one, and put it to the hazard, than be troubled with a blowze ; but do thou as thou wilt, I speake only of myselfe.

Burton. Anat. of Mel.

I protest I do not like to see my daughters trudging up to their pews all blowzed and red with walking, and looking for all the world as if they had been winners of a smock race. Goldsmith.

BLUB', "^ From bleb ; Germ. blaen>

BLUB'BER, v. & n. > to inflate ; to swell ; to

BLUBBER'IKG. j tumify. To blubber is to indulge in unseemly violent weeping, so as to distend the cheeks and inflame the eyes; the precise idea is distension.

Fair streams represent unto me my blubbered face ; let tears procure your stay. Sidney.

The wild wood gods, arrived in the place, There find the virgin doleful,

desolate, With ruffled raiment, and fair blubbered face, As her outrageous foe had left her late.

Faerie Queene. Even so lies she Jilubbering and weeping, weeping and blubbering.

Shakspeare. Romeo and Juliet.

A thief came to a boy that was blubbering by the side .of a well and asked what he cried for.

L' Estrange.

Soon as Glumdalclitch missed her pleasing care, She wept, she blubbered, and she tore her hair. Swift.

Thou sing with him, thou booby ! never pipe Was so profaned, to touch that bhtbbered lip. Dryden.

Tired with the search, not finding what she seeks, With crutl blows she pounds her Itmbbered cheeks. Id.

Dear Chloe how blubbered is that pretty face, Thy cheek all on fire, and thy hair all uncurled, Pri'thee quit this caprice ; and (as old FalstafF says) Let us e'en talk a little like folks of this world. Prior.

The maudling hero, like a puling boy Robbed of his play-thing, on the plains of Troy, Had never blubbered at Patroclus' tomb. Churchill.

BLUBBER is the fat of whales and other large sea animals, whereof train oil is made. It is properly the adeps of the animal : it lies imme- diately under the skin, and over the muscular flesh. In the porpoise, it is firm and full of fibres, and in- fests the body about an inch thick. In the whale its thickness is ordinarily six inches ; but, about the under lip, it is two or three feet thick. The whole quantity yielded by one of these animals ordinarily amounts to forty or fifty, sometimes eighty hundred weight, or even more.

BLUBBER, SEA. See MEDUSA and URTICA. BLUCHER (Gebharal Lebrecht Von), a ce- lebrated Prussian general, was born at Rostock, in 1742. At the age of fourteen he entered the Swedish service, but being taken prisoner he transferred Iris services to Prussia. After the seven years' war he resigned his commission in disgust, and devoted himself to agriculture, but was recalled to his old regiment as major, by William II. and fought at the head of it till the battle of Leystadt, September 18th 1794, when he was made major-general. In 1806 he took possession of Erfurt and Muhlhausen, and after the battle of Jena made an

*extraordinary retreat through Lubeck, by which he drew the French across the Oder. On the taking of Lubeck he was obliged to capitulate, but was soon ex- changed for marshal Victor. He was now em- ployed in the war department, till the renewal of hostilities against France in 1813, when he displayed the utmost activity and courage for the deliverance of Europe. At Lutzen the order of St. George was given to him by the emperor Alexander, and on the 26th of August he de- feated Macdonald at Katsbach. The glorious victory of Leipzic was in a great degree owing to his exertions ; and he pursued the flying enemy across the Rhine with such celerity as to be called by the Russians * Marshal Forwaids.' After the battle of Montmartre, on the 31st of March, he would have severely retaliated the wrongs of Berlin upon Paris, had he not been re- strained by the allied sovereigns, whom he accom- panied to England, and was received with enthu- siasm. His military glory attained its height at the battle of Waterloo. In a preceding engage- ment he had been defeated, his horse shot under him, and a whole regiment had charged and been repulsed over his person. After this great victory, to which he contributed by bringing up the Prussian forces towards the close of the battle, he was created prince of Wahlstadt, and received several additional orders of knighthood. Falling ill at Kriblowtz in 1819, the king of Prussia visited him repeatedly during his last sickness, which carried him off on the 12th of September in that year.*

BLUE', "] Sax. blseo ; Fr. bku. Une

BLUE'LY, of the seven original colors.

BLUE'NESS, So says Johnson; but he

BLU'ISH, ' attempts not either the ety-

BLTJISH'NESS, Vmology or the definition. BLU'EYED, It seems to be derived from

BLUE'HAIRED, the Ang.Sax. bleo, to BLUE'SWOLLEN, blow ; on which the writer BLUE'VEJKED. J in the Encyclopaedia Me tropolitana has ventured a very ingenious, and as it should seem satisfactory conjecture: ā ' may not the blue, formerly blewe sky, be the blew-en, or blown skye, ā the sky from which the clouds are blown, dispersed. , Vossius derives cceruleus from coelum. As other colors take their name from that by which they are pro- duced, may not blue, the color of the clear sky after wind, derive its name from this cir- cumstance.' The blowing color ; the color ex- posed to view by the dispersion of the clouds ; the blew-en, or blown sky.

BLU

Happily I him spide, Where in a bush he did him hide, With winges of purple and blewe.

Spenser. Sliepheard's Calendar.

The blew in black, the green in gray is tinct. Id.

There is gold, and here My bluest veins to kiss ; a hand that kings Have lipt and trembled kissing. Shakspeare.

Where fires thou findest unraked, and hearths un-

swept, There pinch the maids as blue as bilberry. Id.

0 coward conscience how dost thou afflict me ! The lights burn blue. Is it not dead midnight ? Cold fearful drops stand on my trembling flesh. Id.

Side sleeves and skirts, round underborne with a bluish tinsel. Id.

These blue-veined violets whereon we lean, Never can blab, nor know they what we mean. Id.

Why else this double object in our sight Of flight pursued in the air, and over the ground, One way the self-same hour ? why in the east Darkness ere day's mid course, and morning light More orient in yon western cloud, that draws O'er the blue firmament a radiant white, And slow descends, with something heavenly fraught ? Milton. Paradise Lost. This isle,

The greatest and the best of all the main,

He quarters to his blue-haired deities. Id. Cotnus.

In a moment our liquor may be deprived of its blneness, and restored to it again by the affusion of a few drops of liquor. Boyle on Colours.

At last, as far as I could cast my eyes Upon the sea, somewhat, methonght, did rise Like bluish mists. Drydcn.

Nor to the temple was she gone, to move With prayers the blue-eyed progeny of Jove. Id.

Why does one climate and one soil endue The blushing poppy with a crimson hue, Yet leave the lilly pale, and tinge the violet blue ?

Prior.

There was scarce any other colour sensible besides red and blue ; only the blues, and principally the se-

This esquire he dropped his pen full soon, While as the light burnt bluely. Swift.

Rise, then, fair blue-eyed maid, rise and discover Thy silver brow, and meet thy golden lover.

Crasltaw.

1 could make, with crude copper, a solution with- out the Uuishness that is wont to accompany its vulgar solution. Boyle.*

Here, in full light, the russet plains extend ; There, wrapt in clouds, the bluish hills ascend. Pope.

Deep in the grove, beneath the secret shade, A various wreath of odorous flowers she made ; Gay motleyed pinks and sweet jonquils she chose, The violet blue, that on the moss-bank grows ; All sweet to sense, the flaunting rose was there : The finished chaplet well adorned her hair.

Collins' Eclogues. In vain she [Circassia] boasts her fairest of the

fair,

Their eyes' blue languish, and their golden hair; Their eyes, in tears, their fruitless grief must send ; Those hairs, the Tartar's cruel hand shall rend. Id.

Long Pity let the nations view The sky-worn robes of tenderest blue, And eyes of dewy light. Id. Ode to Pity.

Look, how he laughs, and stretches out his arm, And opens wide his blue eyes upon thine To hail his father ; while his little form Flutters, as winged with joy. Byron.

BLUE is one of the seven colors into which the rays of light divide when refracted through a glass prism. For an account of the particular struc- ture of bodies by which they appear of a blue color, see CHROMATICS.

BLUE ASHES, Cendre blue, Fr. by corruption, Saunders blue, much used in water-colors ; but in oil they grow greenish, being of the nature of verdigris. They are found in the form of a soft stone, in places where there are copper mines, and water only is used in levigating them, to re- duce them to a fine powder. This kind of blue ought to be used in works to be seen by candle

light, as in scene painting; for though a great deal of white is mixed with it, it appears very beautiful, notwithstanding it has a greenish cast.

BLUE'BOTTLE, n. s. cyanus; from blue and bottle ; a flower of the bell-shape ; a species of bottleflower ; a fly with a large blue belly.

If you put bluebottles, or other blue flowers, into an ant-hill, they will be stained with red : because the ants thrust their stings, and instil into them their stinging liquor. Ray.

Say, sire of insects, mighty Sol, A fly upon the chariot" pole Cries out, What bluebottle alive Did ever with such fury drive? Prior.

BLUE CAP, an English name for a peculiar species of fish of the salmon kind, distinguished by a broad blue spot on the head, whence they have their name. These seem not to breed with us ; but appear in our rivers only at certain seasons, when there have been violent north winds. This fish is seldom found single ; so that the fishermen rejoice at their taking one of them, as they expect a large shoal of them at hand.

BLUE HILLS, a range of mountains in New England, whose first ridge in New Hampshire passes through Rochester, Barrington, and Not- tingham.

BLUE JAPAN. ā Take gum-water, and white lead, a sufficient quantity ; grind them well upon porphyry : then take isinglass size, and the finest and best smalt, sufficient quantities : mix them well, and add, of the white-lead, before ground, so much as may give it a sufficient body. Mix all these together to the consistence of a paint.

BLUE MOUNTAINS, a range of mountains in the island of New Holland, north-west of the British settlement at Port Jackson. 2. A chain of mountains longitudinally intersecting the island of Java. 3. A range of mountains in Northampton county, Pennsylvania, which extend from south-west to north-east, and a short way across the Delaware. 4. A range of mountains which run from south-east to north-west, through Surrey county, in the island of Jamaica.

BLUE RIDGE, the easternmost ridge of the Al- legany mountains, in Pennsylvania and Virginia, about 130 miles from the Atlantic, and rising to the height of 4000 feet above the level of the sea ; thickly covered with large trees to the very summit. Some of the mountains are rugged and stony ; in others the soil is found to be rich and fertile. See ALLEGANY.

BLUE, LACMUS or LITMUS. This is a beautiful blue, made of lacmus in the following manner : Take an ounce of lacmus, and boil it in a pint of small beer wort, till the color is as strong as

you would have it ; then pour off the liquor into a gallipot, and let it cool for use.

BLUE, PRUSSIAN, is considerably in use among painters, though inferior to the ultramarine blue. The following process for making the finest sort of Prussian blue with quicklime, is given in the History of the Academy of Sciences at Paris for the year 1756 : ā

Take 3lbs. of ox's blood, dried and reduced into a kind of small scales, an equal quantity of quicklime newly baked, 2lbs. of red tartar, and lib. Soz. of saltpetre ; pulverise the whole grossly and put it into a crucible, placed in the midst of a great furnace, and give it a gradual fire. Afterfour hours, when the matter is reduced into a kind of paste which emits no more smoke, and is equally red, throw it by spoonfuls into two pails of boil- ing water; and, having filtrated the lixivium, mix it with a solution of 6lbs. of alum, and lib. 8oz. of green vitriol. This operation will yield but 7oz. of fecula; but its beauty will make suffi- cient amends for the small quantity.

BLUE, SAXON, a dye made by dissolving indigo in oil of vitriol by which the indigo becomes of a much more lively color.

BLUE STONE, or POWDER, used in washing of linen, is the same with smalt, either in the lump or powdered. When the smalt is taken from the pot, it is thrown into a large vessel of cold water : this makes it more tractable, and easily powdered.

BLUE, ULTRAMARINE (beyond sea), from its being first brought into Europe out of India and Persia ; .one of the richest and most valuable co- lors used in painting, is prepared from lapis la- zuli, by first calcining the stone in an iron pot ; then grinding it very fine on porphyry 5 mixing it up with a paste made of wax, pitch, mastich, turpentine, and oil; and at last washing the paste well in clear water, to separate the coloring part from the rest, which precipitates to the bottom, in form of a subtile, beautiful, blue powder. The water is then poured off, and the powder dried in the sun.

BLUFF', l Bluntless; coarseness;

BLUFF'NESS. S roughness of manner.

Like those whom stature did to crowns prefer, Black-browed and bluff, like

Homer's Jupiter. Dryden.

BLUFF-HEADED, among sailors is applied to a ship that has an upright stern.

BLUING, the act or art of communicating a blue color to bodies otherwise destitute thereof. Laundresses blue their linen with smalt ; dyers their stuffs and wools with woad or indigo.

BLUING OF IRON, a method of beautifying that metal sometimes practised ; for mourning buckles, swords, and the like. The manner is this : Take a piece of grind-stone or whet-stone, and rub hard on the work, to take off the black scurf from it : then heat it in the fire ; and as it grows hot, the color changes by degrees, coming first to light, then to a darker gold color, and lastly to a blue. Sometimes also they grind in- digo and sallad-oil together ; and rub the mixture on the work with a woollen rag, while it is heat- ing, leaving it to cool of itself.

BLUNDER, v. & n.~\ ' Dutch, blunderer;

BLUN'DERER, ˆperhaps, says Dr.

BLUN'DERINOLY, {Johnson, from blind.

BLUN'DERHEAD. 3 The blind miss their

way ; stumble ; mistake ; and were not their infirmity known, would thus expose themselves to contempt. To blunder is to act in the com- mon affairs of life, as a stranger to a country would act in the dark, and as a blind man conducts himself without a guide; a blunderer is one who betrays great want, or obliquity of understanding, by the silly and barefaced mis- takes into which he is constantly falling ; a blun- derer is a fool of the stupid class.

We blundren, ever, and poren in the fire ; And for all that, we faille of our desire.

Cftaucer. Cant. Tales.

At the rate of this thick-skulled blunderhead, every plow-jobber shall take upon him to read upon divinity.

L'Estrange.

The grandees and giants in knowledge, who laughed at all besides themselves as barbarous and insignifi- cant, yet blundered and stumbled

about their principal concern. South.

He seems to understand no difference between titles of respect and acts of worship; between ex- pressions of esteem and devotion ; between religious and civil worship : for he blunders and confounds all these together ; and whatever proves one, he thinks proves all the rest. Stillingjieet.

He who now to sense, now nonsense leaning, Means not, but blunders round about a meaning. Pope.

Another sort of judges will decide 'in favour of an author, or will pronounce him a mere blunderer, ac- cording to the company they have kept. Watts.

But how shall I thy endless virtues tell In which thou dost all other books excel ? No greasy thumbs thy spotless leaf can soil, Nor crooked dog's-ears thy smooth corners spoil ; In idle pages no errata stand,

To tell the blunders of the printer's hand. Tickell,

He ne'er suspects his want of skill,

But blunders on from ill to ill ;

And, when he fails of all intent,

Blames only unforeseen event. Gay's Fables.

What blundering puppies are mankind,

In every science always blind. Id.

BLUN'DERBUSS, n. s. from blunder. A gun that is charged with many bullets, so that, without any exact aim, there is a chance o< hitting the mark.

There are blunderbusses in every loop-hole, that go off of their own accord at the squeaking of a fiddle.

Dryden.

BLUNDERBUSS, a well-known fire-arm, con- sisting of a wide, short bore, capable of hold- ing a number of musket-shot or slugs ; doing great execution in a crowd.

BLUNT, v. & adjr\ The past participle

BLUNT'ING, of the Ang.Sax. blin

BLUNT'ISHNESS, j nan, to blin ; to stop.

BLUNT'NESS, ˆ-See Tooke. To stop in

BLUNT'LY, I its progress towards a

BLUNT'POINT'ED, pointer edge; to dull;

BLUNT'WITTED, J to deaden ; to render obtuse. Thus it is opposed to whatever is sharp or pointed ; smooth, and delicate ; when applied to the understanding it indicates dullness, approaching to stupidity; and to manners un- couth; incivility, and abruptness.

If the iron be blunt, and he do not wet the edge, then must he put to more strength. Eccles.

For weak was my remembrance it to hold, And bad her tongue that it so bluntly told. Spemer.

Thanks to that beauty, which can give an edge to the bluntest swords. Si'l:iei/.

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BLU

His silence grew wit, his bluntncss integrity, Ins lii-astly ignorance virtuous simplicity. Ā«w

Valentine being gone, I will quickly cross, 15 v some sly trick, blunt Thurio's dull proceeding.

Shaktpeare.

Blunt not his love ;

Nor lose the good advantage of his grace By seeming cold.

I can keep honest counsels, mar a curious tale in

telling it, and deliver a plain message bluntly. Id.

Blunticitted lord, ignoble in demeanour.

To use too many circumstances, ere one come to

the matter, is wearisome ; to use none at all is blunt.

Bacon.

Whitehead, a grave divine, was of a blunt stoical nature. Due day the queen happened to say, I like thee the better, because thou livest unmarried. He answered, Madam, I like you the worse. Id.

A man of honest blood, Who to his wife, before the time assigned For childbirth came, thus bluntly spoke his mind.

Dryden.

So sicken waning moons too near the sun, And blunt their crescents on the edge of day. Id.

Earthy limbs and gross allay Blunt not the beams of heaven, and edge of day.

Id.

He had such things to urge against our marriage, As, now declared, would blunt my sword in battle And dastardize my courage. Id.

Manage dispute with civility ; whence some readers will be assisted to discern a difference betwixt blunt- ness of speech and strength of reason. Boyle.

The crafty boy, that had full oft essayed To pierce my stubborn and resisting breast, But still the bluntiuis of his darts betrayed. Suckling. The mayor of the town came to seize them in a lihmt manner, alleging a warrant to stop them.

Walton.

Tis not enough your counsel still be true : Blunt truths more mischief than nice falsehoods do.

Pope.

And sorely would the Gallic foeman rne If subtile poniards, wrapt beneath the cloke, Could blunt the sabre's edge, or clear the cannon's smoke. Byron.

BLUR', v. & n. Probably from the Dutch, bleere, a pustule ; or blain, or

spot : to blur is to blot ; partially to deface ; to sully ; to stain ; to smear ; to disfigure.

Such an act,

That blurs the grace and blush of modesty, Calls virtue hypocrite. Sliakspeare.

Long is it since I saw him ;

But time hath nothing blurred those lines of favour, Which then he wore. Id.

Man, once fallen, was nothing but a great blur ; a total universal pollution. South.

Sarcasms may eclipse thine own, But cannot blur my lost renown. Hudibras. Concerning innate principles, I desire these men to say, whether they can, or cannot, by education anil custom, be blurred and blotted out? Locke.

BLURT'. Probably from blur, to throw out hastily : in a bad sense, to cast a reproach in- considerately and without reflection. But it is used indifferently for whatever bolts out of the lips, and is said without consideration.

That name to which Ā»very knee lx>ws, both of things in heaven, and things on earth, and things under the earth, whether they be angels or devils, re- quires from you more respect and honour, than to be

idly blurted out with every rash and foolish expres- sion. Hi.

And yet the truth may lose its grace, If blurted to a person's face ; Especially if what you speak, Should crimson o'er the glowing cheek. Lloyd. Others cast out bloody and deadly speeches at ran- dom ā¢ and cannot hold, but blurt out those words which afterwards they are forced to eat. Hakewell. They had some belief of a Deity, which they, upon surprisal, thus blurt out. Government of the Tongue.

They blush if they blurt out, ere well aware, A swan is white, or Queensbury is fair. Young. BLUSH', v. &,n."J Dut. blosen, blose ; per-

BLUSH'ET, 1 haps from bltesen, to blow ;

BLUSH'FUL, I to exhale. Therefore na-

BLUSH'ING, (turally applied to the first

BLUSH'LESS, I appearance of the colors

BLUSH'Y. J in flowers as they disclose

their variety and beauty. To redden or grow rosy with the vermil tint. Its application, there- fore, to the effect which emotion of any kind, and especially modesty, or conscious shame, produces in the countenance, is very natural. The sudden rising of color in the cheeks is, from whatever cause, to blush ; hence, too, the word has been applied to any sudden appearance, or to the first manifestation of a subject. Thus Locke observes, ' all purely identical propositions, obviously, and at first blush, appear to contain no certain in- struction in them.'

Amphyon blush't as red

As any glowing flame : And Orpheus durst not shew his face,

But hid his head for shame. Tuberville

This beast had ii homes, like the lambe at a blush j

but all counterfet and fals in very deede, for he spake

as did the dragon, the homes of Christ are his high

kingdom in the world. Bale's Image.

Hee blusht to see another sunne belowe, Ne durst againe his fierie face out showe. Spenser.

Pale and bloodless,

Being all descended to the lab'ring heart, Which with the heart there cools, and ne'er returneth To blush and beautify the cheek again. Shakspeare,

Go to, little blushet, for this anan Youle steal forth a laugh in the shade of your fan.

Ben Jonson. To-day he puts forth

The tender leaves of hope ; to-morrow blossoms, And bears his blushing honours thick upon him. Id. Stratonica entering, moved a blushy colour in his face ; but deserting him, he relapsed into paleness and languor. Harvey on Consumptions.

But here the roses blush so rare, Here the mornings smile so fair, As if neither cloud, nor wind, But would be courteous, would be kind.

Crashaw.

Shame causeth blushing ; blushing is tlie resort of the blood to the face ; although blushing will be seen in the whole breast, yet that is but in passage to the face. Bacon.

To the nuptial bower

I led her blushing like the morn ; all Heaver., And happy constellations, on that hour Shed their selectest influence. Milton.

Small is the worth Of beauty from the light retired : Bid her come forth, Suffer herself to be desired, And not blush so to be admired. Waller.

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BOA

From every Hush that kindles in thy cheeks, Ten thousand little loves and graces spring To revel in the roses. Howe. Tamerlane.

The virgin's wish, without her fears, impart ; Excuse the blush, and pour out all the heart. Pope, Along those blushing borders, bright with dew.

Tfiomson.

Won by the charm Of goodness irresistible, and all In sweet disorder lost, she blushed consent. Id.

BLUSHING is generally excited by a sense of shame, from consciousness of some failing or imperfection. It is supposed to be produced from a sympathy between the nerves which branch from the brain to the eye, ear, muscles of the lips, cheeks, &c.

BLUSTER, v. & Ā«.\ From blast, bltxstan, BLUS'TERER, f to blow; to roar bois

BLUS'TERING, ˆterously, as a violent

BLUS'TEROUS. J wind ; the voice of the

storm : hence the term is applied to manners rude and uncourteous ; to language loud, voci- ferous and threatening, accompanied with cor- responding gestures. A blusterer is a bully, who is more formidable for his noise than his courage ; one who puffs, swaggers, and looks big. The Pistol

of all generations. ā See Shak- speare. Henry IV. Part II.

Earth his uncouth mother was, And blustering ./Eolus his boasted sire. Spenser. So now he storms with many a sturdy stoure ; So now his blustering blast each coast doth scour.

Id.

He bloweth and blustereth out at last his abominable blasphemy against the blessed Sacraments of Christ.

Sir Thomas More.

Spare thy Athenian cradle, and those kin, Which in the bluster of thy wrath must fall With those that have offended. Shahspeare.

The skies look grimly,

And threaten present blusters. Id.

My heart's too big to bear this, says a blustering

fellow; I'll destroy myself. Sir, says the gentleman,

here's a dagger at your service ; so the humour went

off. L' Estrange.

A coward makes a great deal more bluster than a

man of honour. Id.

To the winds they set

Their corners ; when with bluster to confound Sea, air, and shore, Milton.

The ancient heroes were illustrious

For being benign, and not blusterous. Hudibras.

Either he must sink to a downright confession, or

must huff and bluster, till perhaps he raise a counter-

atonn. Government of the Tongue.

Virgil had the majesty of a lawful prince, and

Statius only the blustering of a tyrant. Dryden.

There let him reign the jailor of the wind ; With hoarse commands his breathing subjects call, And boast and bluster in his empty hall. Id.

So by the brazen trumpet's bluster, Troops of all tongues and nations muster. Swift. BLYTH, a parish and market-town of Notting- ˆhamshire, in the hundred of Basset-Law, three 'miles south from Bawtry, and 151 N. N. W. from London. The church is a spacious and hand- some structure. It had formerly a strong castle, a priory of Benedictine monks, and an hospital for lepers ; but there are now no remains of either. It is a vicarage in the patronage of Trinity Col- lege, Cambridge. Market on Wednesday.

BLYTHE, a river of England, which runs into the German Ocean, near Southwold, in the county of Suffolk. 2. A river of England, which runs into the Tame, in the county of Warwick. 3. A river of England, which runs into the sea at Blythe, in the county of Northumberland. 4. A river of England, which rises in the county of Stafford, near Cheadle, and runs into the Trent.

BO, a cluster of six or seven islands in the Eastern seas, lying E. S. E. of the southern ex- tremity of Gilolo. The most western is five or six miles round, low, and flat, the second some- what higher, and the third the largest of the group. They are well inhabited, and supply navigators with abundance of cocoa-nuts, dried fish and salt. Long. 126Ā° 25′ E , lat. 1Ā° 17′ S.

BOA, or BOAE-ARUM, in ancient geography, an island on the coast of Illyricum, over against Tragurium, a place of banishment for con- demned persons, now called Bua, an island in the Adriatic, joined to the continent and to Tra- guriam, now Trau, by a bridge.

BOA, in zoology, a genus of the order serpentes, class amphibia. The characters are, that the belly and tail are both furnished with scuta ; no rattle. There are ten species, viz.

1. B. constrictor, has 240 scuta on the belly, and sixty on the tail. This is an immense animal : often thirty-six feet in length ; the body is very thick, of a dusky white color, and its back is in- terspersed with twenty-four large pale irregular spots ; the tail is of a darker color ; and the sides are beautifully variegated with pale spots. The head is covered with small scales, and has no broad laminae betwixt the eyes, but has a black belt behind them. The tongue is fleshy, and very little forked1. Above the eyes, on each side, the head rises high. The scales of this serpent are all very small, roundish and smooth. The In- dians, who adore this monstrous animal, use the skin for clothes, on account of its smoothness and beauty.

There are several of these skins preserved, and to be seen in the different mu- seums of Europe. The flesh is eaten by the In- dians and Negroes of Africa. It frequents caves and thick forests, where it conceals itself, and suddenly darts out upon strangers, wild beasts, &c. When it chooses a tree for its watching- place, it supports itself by twisting its tail round the trunk or a branch, and darts down upon sheep, goats, tigers, or any animal that comes within its reach, twists itself several times round their body, and by the vast force of its circular muscles bruises and breaks all their bones. After the bones are broken, it licks the skin of the ani- mal all over, besmearing it with a glutinous kind of saliva. This operation is intended to facili- tate deglutition, and is a preparation for swal- lowing the whole animal. If it be a stag, or any horned animal, it begins to swallow the feet first, and gradually sucks in the body, and last of all the head. After this serpent has swallowed a stag or a tiger, it is unable for some days to move ; the hunters who are well acquainted .with this circumstance, always take this opportunity of destroying it. 2. B. canina, has 203 scuta on the belly, and seventy-seven on the tail ; it is greenish and variegated with white belts. It is a native of America, lodges in the hollow trunks

of trees, and is about four feet long, and as thick as the small of the arm. 3. B. cenchria, has 256 scuta on the belly, and fifty-seven on the tail. It is of a yellow color, with white eye-like spots. It is a native of Surinam. 4. B. con- tortrix, has 150 scuta on the belly, and forty on the tail : the head is broad, very convex, and has vesicles containing poison in the mouth, but no fang ; the body is ash-colored, interspersed with large dusky spots ; and the tail is about one- third of the length of the body. This serpent is found in Carolina. 5. B. enydris, has 270 scuta on the belly, and 105 on the tail. The color is a dusky white, and the teeth of the lower jaw very long. It is a native of America. 6. B. hortu- lana, has 290 scuta on the belly, and 128 on the tail. It is of a pale color, interspersed with livid wedge-like spots. It is a native of America. 7. B. murina, has 254 scuta on the belly, and sixty- five on the tail. The color of it is a light blue, and round spots on the back. It is a native of America. 8. B. ophrias, has 281 scuta on the belly, and eighty-four on the tail ; the color is nearly the same with that of the constrictor, but browner. 9. B. scytale has 250 scuta on the belly, and seventy on the tail. The body is ash- colored and bluish, with round black spots on the back, and black lateral rings edged with white. It is a native of America ; and, like the constrictor, though not so long, twists itself about sheep, goats, &c. and swallows them whole. 10. B. fasciata ; fasciated boa.

Plates of the belly 233 ; of the tail thirty-six. Inhabiting India ; color yellow, marked with numerous blue trans- verse bands, continued at equal distances throughout the whole length of the animal. The bite of this snake is poisonous in a high degree.

BOADICEA, or VOADICEA, a valiant British queen in the time of the emperor Nero, wife to Prasutagus, king of the Iceni in Britain, who by will left the emperor and his own daughters his co-heirs, in expectation by that means of procur- ing Nero's protection for his family ; but he was no sooner dead, than the emperor's officers seized all. Boadicea opposing these unjust proceedings, they ordered her to be publicly scourged, and her daughters to be violated by the soldiers. The Britons now took arms, to the number of 120,000, with Boadicea at their head ; and made a general and bloody massacre of about 80,000 Romans. The whole pro"ince of Britain would have been lost, if Suetonius Paulinus had not hastened from the isle of Mona to London with 10,000 men. A second battle was fought with great valor and doubtful success, till at last victory inclined to the Romans. Boadicea, who had behaved with all the bravery imaginable, either died of chagrin or was poisoned, A. D. 61.

BOAE-ARUM. See BOA.

BOANERGES, from Ā»33 and Ojn, Syr; a title given by our Saviour to the apostles James and John, and explained by the context, Mark, iii. 17, to signify Sons of Thunder, o itsrw vtoi /3j)ovri;c. It seems, says Parkhurst, ad. verb, to be the Galilean pronunciation of the Hebrew Vjn Ā»J3 : now 1PJH properly signifies a violent trembling, a commotion, and may therefore be

well rendered by /3poi>n}, thunder, which' is a. violent commotion in the air. When our Saviour thus named the sons of Zebedee he seems plainly to have had an eye to that prophecy of Haggaiˆ xi. 6. 'Yet once and I will shake (tĀ£Pj;"HD) the heavens and the earth,' which is applied by the apostle to the Hebrews, xii. 26, to the great alteration made in the economy of religion by the publication of the gospel. The name imports therefore that James and John should be eminent instruments in accomplishing the great change, and should, like thunder or an earth- quake, mightily bear down all opposition by their inspired preaching. Parkhurst compares with this title the image used by Virgil, who calls the Scipios. Mna. vi. 642, duofulmina belli.

BOAR', ˆ Sax. ban. Dut. beer, the male BOAR'ISH. S swine. Boarish is brutish, sav- age, vulgar, and cruel.

To fly the boar, before the boar pursues, Were to incense the boar to follow

us.

Shakspeare. Wherefore to Dover ?

GLOD. Because I would not see thy cruel nails Pluck out his poor old eyes ; nor thy fierce sister In his anointed flesh stick bearish fangs. f

She sped the boar away.

His eyeballs glare with fire, suffused with blood ; His neck shoots up a thickset thorny wood ; His bristled back a trench impaled appears.

Dryden.

BOAR, in zoology. See Sus. BOAR, WILD, among huntsmen, has several names, according to its different ages : the first year it is called a pig of the saundcr, the second it is called a hog, the third a hog-steer, and the fourth a boar ; when leaving the saunder he is called a singler or sangler. The boar generally lives to twenty-five or thirty years, if he escapes accidents. The huntsmen abroad generally kill the boar with their swords or spears : but great caution is necessary in making the blows ; for he is very apt to catch them upon his snout or tusks ; and if wounded and not killed, he will attack the huntsman in the most furious manner. The place to give the wound with the spear is either between the eyes in the middle of the forehead, or in the shoulder. When the animal makes at the hunter there is no escape but by courage and address ; if he flies he is sure to be overtaken and killed. If he makes doubles and windings he is to be watched very cautiously, for he will attempt getting hold of the spear in his mouth ; when nothing can save the huntsman but another person attacking him behind. Were it not for the forks of the boar-spears that make it impossible to press forward upon them, the huntsman who gives the creature his death's wound would seldom escape falling a sacrifice to his revenge. The modern way of boar-hunting is generally to despatch the creature by all the huntsmen striking him at once : but the ancient Roman way was, for a person on foot, armed with a spear, to keep him at bay ; and in this case the boar would run of himself upon the spear to come at the huntsman, and push for- ward till the spear pierced him through. The hinder claws of a boar are called guards. In the corn he is said to feed, in the meadows or fallow-

fields to rout, worm, or fern; in a close to graze. The boar is farrowed with as many teeth as he will ever have; his teeth increasing only in bigness, not

in number: among these there are four called tushes, or tusks; the two highest of which do not hurt when he strikes, but serve only to whet the other two lowest, with which the" beast defends himself, and frequently kills, as being- greater and longer than the rest. Among the Romans boar's flesh was a delicacy; a whole one has been sometimes served up as a dish of state. Sometimes the boar was the military ensign in lieu of the eagle.

BOAR'-SPEAR, re. s. From boar and spear. A spear used in hunting the boar.

And in her hand a sharp boar-spear she held, And at her back a bow and quiver gay, Stuffed with steel-headed darts. Faerie Queene,

Eschion threw the first, but missed his mark, And struck his boar-spear on a maple bark. Dryden. BOARD', i;. & n. ") Ang.-Sax. bra?dan. BOARD'ER, SJunius and Tooke, as

BOARD'ING. J quoted by the Kncy.

Met. agree that ' board, by the omission of the letter r, is from broad.' A board is a plank of wood. A table is composed of several of these, and is therefore called a board. To board is to put boards together for a covering, either as a floor, a roof, or a deck of a ship. Boarding is connected with all of these : to get into a ship, either peaceably or by assault, is to get on board. A table, and its entertainment, are both deno- minated board. Persons sitting at a table to transact business in their corporate capacity, are also termed a board. To board is likewise to be a boarder at the table of another. To make the first attempt upon a mau, to surprise him by accosting him. Boarding-house is a house of public, or more private entertainment. Board- wages are wages allowed to servants to supply their own provisions ; and boarding-school is a school where the pupils live with the teacher.

With the saw they sundered trees in boards and planks. Raleigh.

That we might not part, As we, at first did board with thee, Now thou would 'st taste our misery.

Herbert.

I boarded the king's ship : now on the beak, Now in the waste, the deck, in every cal in, I flamed amazement. Shakspeare.

In bed he slept not, for my urging it ;

' At board he fed not, for my urging it. Id.

Sure, unless he knew some strain in me, that I

knew not myself, he would never have boarded me in

this fury. Id.

Away, I do beseecu you both, away , 111 board him presently. Id. Hamlet.

Soon after which, three hundred lords he slew, Of British blood, all sitting at his board.

Faerie Queene.

Whom, thus at gaze, the palmer 'can to board

*With goodly reason, and thus fair bespake. /rf_*

They learn what associates and correspondents

they had, and how far every one is engaged, and

ā¢what new ones they meant afterwards to try or board.

Bacon's Henry VII.

I wish the king would be pleased sometimes -to be present at that board ; it adds a majesty to it. Bacon. VOL. IV

Whatever Earth, all bearing mother, yield In India East or West, or middle shore In Pontus or the Punic coast, or where Alcinous reigned, fruits of all kinds, in coat Rough or smooth rined, or bearded husk or shell, She gathers tribute large, and on the board Heaps with unsparing hand. Milton.*

Both better acquainted with affairs, than any other who sat then at that board. Clarendon.

What more than madness reigns, When one short sitting many hundreds drains ; And not enough is left him to supply Board-wages, or a footman's livery. Dryden.

Now board to board the rival vessels row, The billows lave the skies, and ocean groans below.

Id.

May every god his friendly aid afford ; Pan guard thy flock, and Ceres bless thy board.

Prior.

Our captain thought his ship in so great danger, that he confessed himself to a capuchin, who was on board. Addison.

A blockhead, with melodious voice, In &>arrfĀ«rĀ«/-schools can have his choice. Swift. Having thus boarded the whole room, the edges o some boards lie higher than the next board. There" fore they peruse the whole floor ; and, *here they find any irregularities, plane them off.*

Moxon's Mechanical Exercises.

We are several of us, gentlemen and ladies, who board in the same house ; and, after dinner, one of our company stands up, and reads your paper to us all. Spectator.

BOARD, in gaming, is applied to a machine, or frame, used in certain games, as a draught- board, a chess-board, &c.

BOARD, in the language of seamen, admits of various significations, according to the words conjoined with it. Thus, 1. A good board; a ship is said to make a good board when she gets up much to windward, or advances much at one tack, and sails upon a straight line. 2. A long board is when the ship stands a great way off before she tacks. 3. Board and board is when two ships come so near as to touch one ano- ther, or when they lie side by side. 4. A short board is when she stands off a little. 5. Back board, the same with ASTERN. 6. To board it up, is to beat it up, sometimes upon one tack, and sometimes upon another. 7. To go on board, or to go a-board, signifies to go into the ship. 8. To make a board is to turn to windward, and the longer your boards are, the more you work into the wind. 9. To slip oft" the board is to slip down by the ship's side. 10. Weather board, the windward side.

BOARD OF AGRICULTURE. See AGRICUL- TURE.

The BOARD OF CONTROL was first instituted in 1784, by stat. 24 Geo. III. sess. 2, c. 25, with a view of directing and aiding the East India Company, in the executive government of India, and establishing a power of control in this . kingdom. Ihis board was further established and regulated by the stat. 33 Geo. III. c. 52, the operation of which commenced in India on the 1st of February 1794. By the former act six persons were to be nominated by the king, as commissioners for the affairs of India ; but by the latter, the number, instead of being limited to

to six privy-counsellors, is indefinite, depending tice, formerly held in the counting house of thĀ«

upon the king's pleasure ; of which number the king's household, for taking cognizance of all

two principal secretaries of state, and the chan- matters of government within the court. It had

cellor of the exchequer are to be three ; and his also the authority of preserving the peace for majesty, if he pleases, may add to the list two

commissioners, not of the privy-council ; and the person first named in the king's commission is to be president. The king may give Ā£5000 a year among such of the commissioners as he pleases ; which, together with the salary of the secretary and officers, and other expenses of the board, are to be paid by the India Company ; the whole not to exceed Ā£16,000 per annum. The mem- bers of this board, and their officers, are sworn to execute the several powers and trusts reposed in them, without favor or affection, prejudice or malice. Three commissioners must be present to form a board. The powers of the board are to superintend, direct, and control all acts, operations, and concerns, which relate to the

twelve miles round the king's court wherever it should be, excepting at London. It was abol- ished in 1782.

BOARD OF TRADE, bureau de commerce ; an office in the French polity, established in 1723, composed of eight persons of knowledge in arts, commerce, navigation, and manufactures ; it was their duty to inspect plans of public advantage ; to promote, by liberal rewards, the full and com- plete disclosure of discoveries in the arts, and manufactures ; and thus to facilitate the cir- culation of useful facts, in every channel of industry.

The BOARD OF TRADE AND PLANTATION'S was established in England by king William III., for settling all disputes and regulations relating

civil and military government, and revenues, of to commerce and colonies. Before tin's time

the British territorial possessions in India, sub- ject to certain restrictions. They and their officers are to have access to the papers and records of the Company, and to be furnished with copies or extracts of such of them as shall be re- quired. They are also to be furnished with copies of all proceedings of general courts, and courts of directors, within eight days, and with copies of all despatches from abroad, relating to matters of government or revenue, immediately after their arrival. No orders on these subjects are to be sent by the Company to India, until approved by the board ; and when the commis- sioners vary or expunge any part of the des- patches proposed by the directors, they are to give their reasons ; and all despatches are to be returned to the court of directors in fourteen days. The directors may state their objections to any alteratipns, and the commissioners are to re-consider them ; and if they interfere with what the directors deem matter of commerce, the directors may apply to the king in council to determine betwixt them. But the board is re- stricted from the appointment of any of the

matters of commerce had been generally referred to a fluctuating committee of the privy council. A permanent board was now therefore established, but finally abolished in 1780.

BOARD-WAGES, a certain annual or stipulated sum allowed to household servants for main- tenance. Board-wages, granted to the menial officers and servants ot the crown, commenced in 1629, when the necessities of king Charles obliged him to retrench the expense of his house- hold, by abolishing the greatest part of the daily tables in his palace, eighty in number, and sub- stituting a fixed allowance in their room.

BOARDING, in a naval engagement, a desperate and furious assault made by the men of one ship on those of aaother. It may be performed in different places of the ship, according to their circumstances and situation, by the assailant de- tachin'g a number of men armed with pikes, pistols, cutlasses, &c. on the decks of his antago- nist. This, however, is rarefy attempted by king's ships, which generally decide the combat without grappling; but it is often practiced by privateers, who, bearing down on their opponent's

Company's servants. If the directors, on being quarter or broadside, drop a shell from the bow- called upon to propose despatches on any subject sprit, which projects over the enemy's deck, and, relating to government or revenue, shall fail to in the midst of the confusion thus occasioned, do so within fourteen days, the board may rush aboard, and easily overpower all opposi- originate their own despatches on that subject, tion.

The board is not to authorise an increase of BOARDING-PIKE, a pike

made use of in board- salaries, or any allowance or gratuity to be ing ships during an engagement, granted to persons employed in the Company's BOARIA LAPPA, or LAPPAGO, a name given service, except the same shall be first proposed by the ancient Romans to the fruit or rough by the Company ; and their intention and reasons balls of the common aparine or cleavers. Pliny for such grant are to be certified to both houses calls it lappae boariae, or lappae caninae, and some- of parliament, thirty days before the salary can times canarise. commence. The directors are to appoint three BOARULA, in ornithology, a species of mo-

their members to be a committee of secrecy, tacilla, called in England the gray wagtail. The

through whom despatches, relating to govern- color of this bird is cinereous above, yellow

mem, war, peace, or treaties, may be sent to or beneath ; tail-feathers dark, and pale at the

:eived from India. This committee, and their edges. This is an European bird, and, like

clerks, are to be sworn to secrecy. Orders of the rest of the wagtail tribe, frequents watery

directors, concerning the government or revenues places.

of India, once approved by the board, are not BOAS, in entomology, a species of scarabams,

subject to revocation by the general court of inhabiting Sierra Leone. Thorax retuse, exca-

propnetors. See EAST INDIA COMPANY. vated, bidentated; horn of the head recurved

BOARD OP GREEN CLOTH, was a court of jus- and simple.

BOATS.

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BOAST, v. & n.ˆj Cotgrave derives it from BOAST'ER, the French bosse, which he

BOAS/FUL, explains, swollen ; risen ;

BOAST'ING, J>puffed up. Any thing

BOAST'INGLY, raised on a surface, and

BOAST'IVE, which is itself hollow, and

BOAST'LESS. J without substance ; some-

thing tumid and inflated. This at once gives us the origin and the meaning of the word in its general acceptation. To boast is to swell above our natural dimensions , is to be the subject of a moral disease, which, as it increases in magni tude, diminishes the health and vigor of the pa- tient. A boaster is a self-complacent manufac- turer of lies to set off his own imaginary great- ness ; who forms a very exaggerated estimate of himself, and labors to deceive others on the same subject, and to the same amount ; used, as it sometimes is, m the sense of glorying in others, it is not reprehensible.

Let not him that putteth on his harness, boast him self as he that putteth it off. Kings'*

Confounded be all them that serve graven images, that boast themselves of idols. Psalm xcvii. 7.

They that trust in their wealth, and boast them- selves in the multitude of their riches.

Psalm xlix. 6.

Thus with your mouth you have boasted against me> and multiplied your words against me.

Seek. xxxv. 13.

Thou, that makest thy boast of the law, through breaking the law dishonourest thou God ?

Romans ii. 23.

For I know the forwardness of your mind, for which I boast of you to them of Macedonia.

1 Cor. ix. 2.

For if I have boasted any thing to him of you, I am not ashamed. 2 Cor. vii. 14.

And is the toast of that proud ladies' threat, That menaced me from the field to beat, Now brought to this ? Spenser.

My sentence is for open war : of wiles, More unexpert I boast not : then let those Contrive who need, or when thoy need, not now.

Milton.

The spirits beneath,

Whom I seduced, boasting I could subdue The' Omnipotent. Id.

Neither do the spirits damned Lose all their virtue, lest bad men should boast Their specious deeds. Id,

If they vouchsafed to give God the praise of his goodness ; yet they did it only, in order to boast the interest they had in them. Atterbury.

We look on it as a pitch of impiety, boastingty to avow our sins ā¢, and it deserves to be considered, whe- ther this kind of confessing them, have not some affi- .nity with it. Decay of Piety.

No more delays, vaiu boaster! but begin ! I prophecy beforehand I shall win : I'll teach you how to brag another time. Dryden.

He the proud boasters sent, with stern assault, Down to the realms of night. Philips.

Boastful, and rough, your first son is a squire ; The next a tradesman, meek, and much a liar.

Pope.

Not Tyro, nor Myceiie, match her name, Nor great Alcmena, the proud boasts of fame. Id. The world is more apt to find fault than to com- mend ; the boast will probably be censured, when the great action that occasioned it is forgotten. Spectator.

The boast of heraldry, the pomp of power, And all that beauty, all that wealth e'er gave, Await, alike the" inevitable hour ; The paths of glory lead but to the grave.

Gray't Elegy.

Kingdoms, by thee to sickly greatness grown, Boast of a florid vigour not their own.

Goldsmith. Deserted Village.

BOAT', -\ From the Germ, batten; to BOAT'MAN, I thrust ; to dash ; to drive along. BOAT'SWAIN, VSo says Wachter, as quoted by BOAT'LIKE, i the Ency. Met. Ang.Sax. BOAT'WISE. J bate or bat. This derivation refers more to the manner of conducting this species of vessel through the water, than to the nature of the thing itself. But perhaps that which distinguishes a boat from all other nau tical craft, is its comparative diminutiveness, and its being impelled along by oars rather than by sails rilled with wind. Yet the boatswain is an officer that is not required in such boats, at least according to the present duties allotted to that personage. Formerly the servant, the swain or swein, who managed the oars, received this appellation.

I do not think that any one nation, the Syrian ex- cepted, to whom the knowledge of the ark came, did find out at once the device of either ship or boat, in which they durst venture themselves upon the seas.

Raleigh's Essays.

Where the remote Bermudas ride In the' ocean's bosom unespied ; From a small boat that rowed along, The listening winds received this song.

Marvell.

Boatmen through the crystal water show, To wondering passengers, the walls below.

Dryden.

That booby Phaon only was unkind, An ill-bred boatman, rough as waves and wind.

Prior.

Sometimes the meanest boatswain may help to pre- serve the ship from sinking.

Howell's Preeminence of Parliament. Reef topsails, reef, the boatswain calls again.

Falconer's Shipwreck,

Hark to the boatswain's call, the cheering cry ! While through the seamen's hands the tackle glides.

Byron.

Another morn ā another bids them seek, And shout his name till echo waxeth weak ; Mount ā grottoā cavern ā valley searched in vain, They find on shore a sea-6oa<' broken chain ā Their hope revives. Byron. Corsair,*

BOATS. The construction, machinery, and even the names of boats, are very different, ac- cording to the various purposes for which they are calculated, and the services on which they are to be employed. Thus they are occasionally slight or strong, sharp or flat-bottomed, open or decked, plain or ornamented ; as they may be designed for swiftness or burden, for deep or shallow water, for sailing in a harbour or at sea, and for convenience or pleasure.

The Long-Boat is the largest boat that usually accompanies a ship, is generally furnished with a mast and sails, and may be armed and equip- ped for cruising short distances, against mer- chant-ships of the enemy, or smugglers, or for impressing seamen, &c. ; her principal employ, however, is to bring heavy stores or provisions

on board, and also to go up small rivers to fetch water, wood, &c.

The Launch is a boat which of late years has greatly superseded the use of the long boat ; it is longer, more flat-bottomed, and, by rowing a greater number of oars, is better adapted for going up narrow and shallow rivers. See the article LAUNCH.

The Barge is a long, narrow, light boat, employed to carry the principal sea-officers, as admirals, and captains of ships of war, on shore, and a1-" very unfit for sea. See the article BARGE.

A Pinnace resembles a barge, but is smaller, never rowing more than eight oars; whereas, a barge never rows less than ten. The pinnace is for the accommodation of the lieutenants, &c.

The Cutters of a ship are broader, deeper, and shorter, than the barge or pinnace ; they are fitter for sailing, and commonly employed in carrying light stores, provisions, passengers, &c. to and from the ships. In the structure of this sort of boats, the lower edge of every plank in the side over-lays the upper edge of the plank below it, which is called clinch-work. They are generally rowed with six oars, sometimes only with four ; in which case they are termed jolly- boats.

Yawls are something less than cutters, nearly of the same form, and used for similar services. Of all the small boats, a Norway yawl seems to be the best calculated for a high sea, as it will often venture out to a great distance from the coast of that country, when a stout ship can hardly carry any sail.

A Gig is a long narrow boat used for expedi- tion, generally rowed with six or eight oars, and is mostly the private property of the captain or commander.

The Jolly-Boat is a smaller boat than a yawl, kept on board ships for going on shore, and other light work.

The above more particularly belong to ships of war; as merchant-ships seldom have more than two, viz. a long boat and a yawl ; when they have a third it is generally calculated for the countries to which they trade, and varies in its construction iccordhigly.

A H kerry is a light sharp boat, used in a river or harbour for carrying passengers from place to place. The wherries allowed to ply about Lon- don, are either scullers, which means a single person with two oars, or two persons rowing with each an oar. The Portsmouth wherries are built broader and larger than those on the Thames, and allowed to be a very safe descrip- tion of boats, and will often keep the sea when those of a larger class are obliged to run into port : they have frequently been known to cross the channel to France with safety, at different seasons of the year, and seldom meet with any accident.

A Punt is a sort of oblong flat-bottomed boat, nearly resembling a floating stage used by ship- wrights and calkers, for breaming, calking, or ‘ repairing a ship’s bottom, and is chiefly used for one person to go on shore in from small vessels. It is also frequently used to go after wild-fowl during the winter season, when they

hover about the coasts. The boatman is fur- nished mith a long musket, fixed in the bow of the boat, and generally steers with a scull in the stern, while he lays on his back in the bottom of the boat ; he takes the advantage of the tide to go down on the birds, and fires, without taking any particular aim, as the flock are rising out of the water, by which means he frequently brings down a great many.

A Moses is a flat-bottomed boat, used in the West Indies for bringing off hogsheads of sugar from the sea-beach to the shipping which are anchored in the roads, and is termed single or double according to its size.

A Felucca is a large and strong passage-boat, used in the Mediterranean,

having from ten to sixteen banks of oars. The natives of Barbary often employ boats of this sort as cruisers.

The Society of Arts voted the gold medal in the year 1807 to Mr. Christopher Wilson, Richard Street, Commercial Road, London for a secure sailing-boat, which is described in Vol. XXV. of the Society's Transactions as Mr. Wilson's Neutral-built-self-balanced-boat.

Mr. Wilson claims two distinct improvements, viz. the neutral mode of building, and the appli- cation of the hollow sides or balance' bodies. The first of these improvements relates to boats, barges, &c. in general ; the other to such boats only as are designed for despatch, safety, or plea sure. But with respect to these claims, it is but justice to state, that he has been anticipated in them both. Mr. Boswell, to whom the navy is much indebted for many useful hints, had a boat built in June 1803, the internal framing of which was precisely the same as in that of Mr. Wilson's ; and the only difference was, that, instead of having slips laid on the inside of the seams with blair or other calking, they were rivetted on with- out, and the seams calked. This boat was ex- hibited in London, and a description of it published in No. LXII. of the Repertory of Arts, New Series, &c. The second improvement claimed by Mr. Wilson, is essentially the same as that for which Mr. Lionel Lukin obtained a patent in the year 1785, the specification of which was published in the Repertory of Arts Vol. III. First Series.

The difficulties and danger of passing a bar in stormy weather, and of landing troops on a beach, when there is much surf, or a great swell, have given rise to various experiments, to prevent boats being swamped or stove ; and among others, that of applying air trunks to boats built in the common way, agreeably to a plan lately proposed to the admiralty by Vice Admiral Hunter, who, after forty years experience in dif- ferent parts of the world, strongly recommends it as the very best possible method yet thought of, to prevent boats sinking in case of being struck by a heavy sea, or filled in going through a surf. This plan is simple and practicable for preventing the loss of lives when a boa. is sent from her ship in bad weather ; or when troops are to be car ried in boats through broken water, which maj occasion their shipping enough to fill or swamp the boat in deep water ; and the Admiral is of opinion, that if every ship, whether in his Ma- jesty's or merchant's service, were to have at all

times a set of these trunks ready to apply, when they have occasion to use

their boats in bad weather, many valuable lives would be saved.

To those acquainted with the force of a heavy sea, it must appear much more difficult to pre- vent a boat from being stove, than from being sunk. A mechanic has suggested that a much greater decree of stability might be given to our commoti boats or small vessels, and that they might be made to resist the shock of the waves, by diminishing their centre of gravity at the instant such a measure was found necessary, which would greatly augment their general gravity and resistance. lie proposes, that in the vertical plane of the boat's centre of gra- vity, there be placed a rod of iron, formed of several fillets of the same metal : at the ex- tremity of this rod let there be fixed a weight of iron or lea:!, the specific gravity of which may be in proportion to the effect required to result from it. When there is no occasion for employing this weight, it might be contained in -i place made in the bottom, or keel, of the vessel, which part might be easily appropriated for that purpose, without the weight occasioning any embarrasment or friction.

The rod might be secured by an apparatus very easily made; and it might be provided with teeth, by which it could be manoeuvred by a crane, by means of a single handle ; the weight might be made to descend to the depth of eighteen, twenty, or twenty-four inches, beneath the lower plane of the keel ; and it will appear evident that the descent of this weight niust cause a difference in the power of the boat's resistance against the efforts of the waves. See the LIFE BOAT, below.

Trim the BOAT, is an order to sit in the boat in such a manner as that she shall float upright in the water, without leaning to either side.

To bale the BOAT is to throw or scoop out the water that may have got in her bottom, by leak- age or otherwise.

Moor the BOAT, is an order to fasten a boat with two ropes, so as that the one shall counteract the other, and keep her in a steady position.

BOAT'S CREW are the men appointed to man any particular boat, as the barge's crew, cutter's crew, &c.

BOAT, LIFE. The life-boat is a modem inven- tion of the utmost consequence to the lives and safety of seafaring persons.

The construction of a boat for the preservation of lives from ships driven on the shores of this kingdom, was originally suggested by the sub- scribers to the News Room at the Law House, South Shields, in 1789; who, from situation, were the more immediate spectators of the de- struction inevitably attending vessels and their crews coming on the sand at the south

entrance of Tynemouth Haven.

In September, 1789, the ship Adventure, of Newcastle, was stranded on the Herd Sands, on the south side of Tynemouth Haven, in the midst of the most tremendous breakers; and all the crew dropped from the rigging, one by one, in the presence of thousands of spectators ; not one ot whom could be prevailed on by any reward

to venture out to her assistance in any boat of the common construction. On this melancholy occasion the gentlemen of South Shields called a meeting of the inhabitants, and premiums were instantly offered for plans of a boat which should be the best calculated to brave the dangers of the sea, particularly of broken water. Many pro- posals were accordingly offered, but the preference was given unanimously to Mr. Greathead's, who was immediately directed to build a boat at the expense of the committee. This boat went off on the 30th of January, 1790, and so well has it answered, and even exceeded, every expecta- tion, in the most tremendous sea, mat during the last twenty-five years not less than 300 lives have been saved at the entrance of the Tyne alone, which otherwise must have been lost.

*The principle of Mr. Greathead's boat appears to have been suggested by the following simple fact : ā Take a spheroid, and divide it into quarters; each quarter is elliptical, and nearly resembles the half of a wooden bowl, having a curvature with projecting ends ; this, thrown into the sea or broken water, cannot be upset or lie with the bottom upwards. The length of the boat is thirty feet; the breadth *ten feet; the depth, from the top of the gunwale to the lower part of the keel in midships, three feet three in- ches; from the gunwale to the platform (within), two feet four inches ; from the top of the stems (both ends being similar) to the horizontal line of the bottom of the keel, five feet nine inches. The keel is a plank of three inches thick, of a proportionate breadth in midships, narrowing gradually towards the ends, to the breadth of the stems at the bottom, and forming a great con- vexity downwards.*

The stems are segments of a circle, with con- siderable rakes, The bottom section, to the floor-heads is a curve fore and aft, with the sweep of the keel.

The floor timber has a small rise curving from the keel to the floor-heads. A bilge plank is wrought in on each side, next the floor-heads, with a double rabbet or groove, of a similar thick- ness with the keel ; and on the outside of this are fixed two 'bilgetrees, corresponding nearly with the level of the keel.

The ends of the bottom section form that fine kind of entrance observable in the lower part of the bow of the fishing-boat called a coble, much used in the North. From this part to the top of the stem it is more elliptical, forming a considerable projection.

The sides, from the floor-heads to the top of the gunwale, flaunch off on each side, in propor- tion to above half the breadth of the floor. The breadth is continued far forwards towards the ends, leaving a sufficient length of straight side at the top. The sheer is regular along the straight side, and more elevated towards the ends. The gunwale fixed to the outside is three inches thick. The side?, from the undˆr part of the gunwale, along the whole length of the regu- lar sheer, extending twenty-one feet six inches, are cased with layers of cork to the depth of six- teen inches downwards ; and the thickness of tins casing of cork being four inches, it projects at the top a little without the gunwale. The cork

on the outside is secured with thin plate, or slips of copper, and the boat is fastened with copper nails.

The thwarts, or seats, are five in number, double banked ; consequently, the boat may be rowed with ten oars.

The thwarts are firmly stanchioned. The side oars are short, with iron tholes and rope gro- jnets, so that the rower can pull either way. The boat is steered with an oar at each end ; and the steering oar is one-third longer than the rowing oar.

The platform placed at the bottom, within the boat, is horizontal, the length of the midships, and elevated at the ends for the convenience of the steersman, to give him a greater power with the oar. The internal part of the boat, next the sides, from the under part of the thwarts down to the platform, is cased with cork; the whole quantity of which, affixed to the life-boat, is nearly seven hundred weight. The cork indis- putably contributes much to the buoyancy of the boat, is a good defence in going along-side a vessel, and is of principal use in keeping the boat in an erect position in the sea, or rather for giving her a very lively and quick disposition to recover from any sudden cant or lurch, which she may receive from the stroke of a heavy wave. But, exclusively of the cork, the admirable con- struction of this boat gives it a decided pre- eminence. The ends being similar the boat can be rowed either way, and this peculiarity of form assists her in rising over the waves. The curva- ture of the keel and

bottom facilitates her move- ment in turning, and contributes to the ease of the steerage, as a single stroke of the steering oar has an immediate effect, the boat moving as upon a centre. The fine entrance below is of use in dividing the waves, when rowing against them; and, combined with the convexity of the bottom, and the elliptical form of the stem, ad- mits her to rise with wonderful buoyancy in a high sea, and to launch forward with rapidity, without shipping any water, when a common boat would be in danger of being filled. The flaunching or spreading form of the boat, from her floor-heads to the gunwale, gives her a con- siderable bearing ; and the continuation of the breadth well forward, is a great support to her in the sea; and h has been found, by ex- perience, that boats of this construction are the best sea-boats for rowing against turbulent waves.

The internal shallowness of the boat from the gunwale down to the platform, the convexity of the form, and the bulk of cork within, leave a very diminished space for the water to occupy ; so that the life-boat, when filled with water, con- tains a considerable less quantity than the com- mon boat, and is in no danger either of sinking or upsetting.

It may be presumed by some, '.hat in cases of high wind, agitated sea, and broken waves, a boat of such bulk could not prevail against them by the force of oars ; but the life-boat, from her pe- culiar form, may be rowed a-head, when the attempt in other boats would fail. Boats of the common form, adapted for speed, are of course put in motion with a small power ; but for want of buoyancy and bearing, are over-run by the

waves and sunk, when impelled against them ; and boats constructed for burden meet with too much resistance from the wind and sea when opposed to them, and cannot, in such cases, be rowed from the shore to a ship in distress.

Mr. Greathead gives the following instructions for the management of the life-boat : ā The boats in general of this description, are painted white on the outside ; this color more immediately engaging the eye of the spectator, when rising from the hollow of the sea, than any other. The bottom of the boat is at first varnished (which will take paint afterwards), for the more minute inspection of purchasers. The oars she is equip- ped with are made of fir of the best quality ; having found, by experience, that a rove ash oar, that will dress clean and light, is too pliant among the breakers ; and when strong and heavy, from rowing double-banked, the pur- chase being short, sooner exhausts the rower ; which renders the fir oar, when made stiff, preferable.

In the management of the boat she requires twelve men to work her ; that is, five men on each side, rowing double-banked, with an oar slung over an

iron thole, with a gromet (as pro- vided), so as to enable the rower to pull either way, and one man at each end to steer her, and to be ready at the opposite end to take the steer oar when wanted. As, from the construction of the boat, she is always in a position to be rowed either way, without turning the boat : when manned the person who steers her should be well acquainted with the course of the tides, in order to take every possible advantage ; the best method, if the direction will admit of it, is to head the sea.

The steersman should keep his eye fixed upon the wave or breaker, and-encourage the rowers to give way as the boat rises to it, being then aided by the force of the oars, she launches over it with vast rapidity, without shipping any water. It is necessary to observe, that there is often a strong reflux of sea, occasioned by the stranded wrecks, which requires both dispatch and care in the people employed, that the boat be not damaged. When the wreck is reached, if the wind blows to the land, the boat will come in shore without any other effort than steering.

The particular construction of this boat will be best understood by referring to our plate, LIFE- BOAT, where fig. 1, represents a cross section of the boat.

F F, the outside coatings of cork.

c o, the inside cork filling.

H H, the outside planks of the boat.

i, one of the stems of the boat.

K, the keel.

N N, the timber-heads.

p, the thwarts, or rowers's seats.

R, one of the stantions under the thwarts, each being thus firmly supported.

3, a section of the gang-board, which crosses the thwarts, and forms the passage from one end of the boat to the other.

T, the floor-heads, or platform for the rower's feet.

u u, the two bilge pieces, nearly level with the keel.

w w, the gunwales.

x, a ring-bolt for the head-fast, there being another also at the other end.

Y, platform for the steersman.

Fig. 2 is a Longitudinal Section of the Life Boat.

E E E, the sheer or curve of the boat.

i i, the two sterns or ends.

K, the keel.

L L, the aprons, to strengthen the stems.

M M, the sheets, or place for passengers

N N, timber-heads or boat-fastenings.

o o o o, the tholes, on which the oars are

ung by gromets.

T, the flooring under the rowers' feet.

Fig. 3. Plan of a Truck or Carriage, with four Wheels, to convey the Boat to and from the Sea.

a, an oblong frame of wood, consisting of two long pieces, hollowed a little, to admit the body of the boat, and secured by the cross-pieces, b b.

c c c c, four low wheels, each sunk or hollowed in the middle, to run better upon a rail-way or timber-road.

d d, two indents made in the side-timbers, that the bottom of the boat may be firm therein.

e e, two small rollers, movable in the cross- timbers, for the keel of the boat to slide upon.

ff, two long rollers, one at each end of the frame, to assist in raising the boat upon, or slid- ing it off, the truck or carriage.

Fig. 4. A, the copper bolt, with one end en- tered into the wood previous to fixing the tube.

B, a piece of timber or ship's side, into which the bolt is intended to be driven.

Fig. 5. c c c c, the parts of the iron tube fas- tened together, ready to be put on the bolt A.

D D D D, iron or brass rings, with thumb-screws placed over the joints of the tube, to hold them firm together.

E E E E, the thumb-screws, which keep the rings and tube firm in their proper places.

F, two points formed on the lower ring; they are to stick into the timber, and to enable the tube to be held firm in its place.

Fig. 6. Shows the separation of the parts of the tube, which is effected by slackening the thumb-screws and rings. To put them together, you slide the rings over the joints, placed as close as possible; then, by tightening the thumb- screws, you will have them firm together, and may continue the tube to any length, from one foot to whatever number is required.

Fig. 7. G H, two steel punches or drifts, to be placed on the head of the copper bolt, within the tube, whilst driving. The blow given upon the punch drives forward the bolt. The shortest of them should be used first, and, when driven nearly to its head, should be taken out of the tube and the longer punch applied in its place.

The life-boat is generally kept in a boat-house close to the beech, where it rests on four low ā¢wheels, or trucks, concave, for rolling on oars or spars laid on the sand, so as to run out at a moment's notice. But, where the way over which she must be dragged is rough, and the safety of her frame would be endangered, another expedient is adopted. This consists of two wheels, twelve feet in diameter, with a movable

arched axis, to which a pole is fixed for a lever. The boat is suspended between the wheels, under the axis ; towards each extremity of which is an iron pin. When the pole is perpendicularly elevated, the upper part of the axis becomes depressed, and a pair of rope slings encompass- ing the bpat, being fixed to the iron pins, she is raised with great facility by means of the pole, which is then fastened down to her stern. There are commonly two crews, each consisting of twelve men, employed to navigate the life-boat, to whom rewards are distributed according to the success of their enterprise.

On the first alarm of a vessel in danger, the life-boat immediately puts to sea; when some ex- perienced steady person takes the command. Her head should be kept to the sea, and she must possess an accelerated velocity to

meet the wave. Great caution is to be observed in approaching a wreck, where the reflux of the waves is often productive of danger, and it is considered safest to go to the lee quarter. This, however, depends on circumstances. See Great- head's Report of the Evidence respecting the Invention of the "Life-Boat. ā Transactions of the Society of Arts, Vol. X. XX. and XXV.

After the value of the invention had been acknowledged by the presentation of a gold medallion to Mr. Greathead, by the Society of Arts, as also one by the Royal Humane Society, and various gratuities in money, Parliament, on the 9th of June 1802, unanimously voted him Ā£1200. The committee of Underwriters, likewise, at Lloyd's Coffee-house in London, having voted Mr. Greathead 100 guineas, appropriated Ā£?000 of their funds for the purpose of encouraging the building of life-boats on different parts of the coasts of the kingdom. Life-boats have been sent from Britain, on the order of the Emperor of Russia, who signified his approbation by pre- senting the inventor with a diamond ring, and by the Kings of Prussia, Denmark, and those of other states.

Previous to Mr. Greathead's invention, a patent was granted to Mr. Lionel Lukin, a coach- maker in London, for ' an improvement in the construction of boats and small vessels, which will neither sink nor upset.' The essence of the invention rests on the propriety and practice of out riggers, well known to the natives of the South Sea Islands. Projecting gunwales are built to vessels of the ordinary construction, sloping from the top of the common gunwale towards the water, so as not to interrupt the oars in rowing; and from the extreme projection returning to the side in a faint curve, at a suitable distance above the water-line. These pro- jecting gunwales are very small at stem and stern. and gradually increase to the requisite dimensions: and they may either be solid, consisting of light substances, of cork, or hollow. In the in- side of the vessel at stem and stern, and at the sides where projecting gunwales are unnecessary, as also under the seats and thwarts, are to be enclosures or bulk-heads, water-tight, or filled with substances specifically lighter than water ' By this means,' the inventor observes, ' the boat or vessel will be so much lighter than the body of the water it must displace in sinking,

that it will with safety carry more than its com- mon burden, though the remaining space should by any accident be filled with water.' To give

stability to the vessel, the inventor further pro- poses to affix a false keel of cast iron or other metal along the centre of the real one. The patent granted to Mr. Lukin is dated in 1785. It has not been discovered that he obtained any honorary reward for his invention ; but, in the year 1807, a gold medal was voted by the Society for the Encouragement of Arts, to Mr. Christo- pher Wilson, for a secure sailing-boat, or life- boat, which is balanced exactly according to Mr. Lukin's device, by empty projecting gunwales. For a particular description of this boat, which is called the neutral-built self-balanced boat, see the article BOAT.

Captain G. W. Manby, of the Royal Navy, has observed in his Essay on the Preservation of shipwrecked Persons, that the simplest method of giving the properties of preservation to any boat, is to well lash empty casks securely to it, so as to give it buoyancy; and, for the advantage of keeping it in an upright position, when launch- ing from a flat shore or beaching, it should have bilge boards of equal depth with the keel, which likewise resists its upsetting ; and a stout pro- jecting rope, with swellings upon it, surrounding its gunwale, would serve as a fender to prevent its being stove. See the article SHIPWRECK.

Metallic Life-Boat. A metallic life-boat, on pneumatic and hydrostatic principles, that will neither sink nor upset, yet serve all the ordinary purposes of ships' boats, either for rowing or sailing was lately tried at London-bridge, on the ebb-tide, during the time of the greatest fall, with her crew on board, and filled with water; when she passed through with the greatest safety, and discharged a considerable portion of the water purposely put into her. These life-boats are described as being made of malleable iron, lead, and tin; one of twenty feet long and six feet wide, drawing only ten inches water, with twenty-five persons; and possessing valves that, without pumping or personal aid, discharge ail the water from them ; which valves act occa- sionally as pneumatic or air valves: they are hydrostatically ballasted with confined water, taken in or put out at pleasure ; and are remark- ably buoyant and lively in agitated water.

BOAT, TO BALE, or FREE THE BOAT, in navi- tion, is to fling out the water. To find the boat is to save her from beating against the sides of the ship. To moor the boat, to fasten it with ropes. To trim the boat is to keep her even. To wind the boat is to bring her head about.

BOAT-BILL. See CANCROMA.

BOAT-FLY, notonecta, a water insect, whose back is shaped like the bottom of a boat ; the hind legs, which are thrice as long as the fore, aptly enough resembling a pair of oars. Ac- cordingly, contrary to all other creatures, he swims, says Moufet, on his back. See NOTO- HECTA.

BOAT-HOOK, an iron hook, with a sharp point on the hinder part of it, fixed on a long pole, used in bringing it to, or pushing it from any other boat, ship, &c.

BOATION. Lat. boare. The roar or bel-

lowing of an ox : any roaring, or loud sounding noise.

BOAT-ROPE, the rope by which the boat is fastened to the stern of the ship.

BOATSWAIN, an officer on board a ship, who has charge of all her rigging, ropes, cables, an- chors, sails, flags, colors, pendants, &c. He also takes care of the long-boat and its furniture, and steers her either by himself or his mate. He calls out the several gangs and companies to the execution of their watches, works, and spells ; and he is also a kind of provost-marshal, seizes and punishes all offenders that are sentenced by the captain or court-martial of the whole fleet. It is the duty of the boatswain particularly to direct what relates to the rigging of a ship, after she is equipped from a royal dock-yard. He ought to take care that the blocks and running ropes are regularly placed, so as to answer the purposes for which they are intended ; and that the sails are properly fitted to their yards and stays, well furled or reefed when occasion re- quires. It is likewise his office to assist with his mates in the necessary business of the ship, and to relieve the watch when it expires; and he is ordered by his instructions to perform his duty with as little noise as possible.

BOATSWAIN'S MATE has the peculiar com- mand of the long-boat, for the setting forth of anchors, weighing or fetching home an anchor, warping, towing, or mooring ; and is to give an account of his store.

BOAZ, the son of Salmon, by Rahab the harlot, of Jericho, the second husband of Ruth, and great grandfather of David. Also a name given by Solomon to one of the principal pillars of the temple.

BOB , v. & n.ˆv Of uncertain etymology. BOB'CHERRY, f Skinner deduces it from Span. BOB'TAIL, fbobo, foolish. A bob formerly BOB' WIG.) signified a mock or jeer. It is now usually applied to any short jerking ac- tion. The verb also means to cut, as a cut tail is a bobtail ; to beat, to drub, to bang ; to play backwards and forwards; to play loosely against any thing; any thing pendant, which when stirred by the air, or any other motion, dangles, and jerks to and fro. Shakspeare and L'Estrange employ it in the sense of cheating, and gaining by fraud. Bob is a technical term used among ringers.

Wete ye not wher stondeth a litel toun, Which that ycleped is 6oi-up-and-

down, Under the blee in Canterbury way.

Chaucer. Canterbury Tales.

I am sharply taunted, yea sometimes with pinches, nips, and bobt. Ascham's Schoolmaster.

Those bastard Britons whom our fathers Have in their own. land beaten, bobbed, and thumped.

Shakspearc. Avaunt you curs ! Be thy mouth or black or white, Or bobtail tike, or trundle tail, Tom will make him weep and wail. Id. I have bobbed his brain more than he has beat my bones. /rf.

Live Roderigo,

He calls me to a restitution large, Of gold and jewels that I bobbed from him, As gifts to Desdemona. Id,

There was a bobtailed cur cried in a gazette, and one that found him brought him home to his master. L'Estrange.

You may tell her,

I'm rich in jewels, rings, and bobbing pearls, Plucked from Moors' ears. Dryden.

The gaudy gossip, when she's set agog, In jewels drest, and at each ear a 606. Id.

Bobcherry teaches at once two noMe virtues, pa- tience and constancy ; the first, in adhering to the pursuit of one end ; the latter, in bearing a disap- pointment. Arbuthnot and Pope.

A young fellow riding towards us full gallop, with a bobwig and a black silken bag tied to it, stopt short at the coach, to ask us how far the judges were be- hind. Spectator. When Tom to Cambridge first was sent,

A plain brown 606 he wore ; Read much, and looked as though he meant To be a fop no more. Shenttone.

BOBARTIA, in botany, a genus of the di- gynia order, and triandria class of plants ; rank- ing in the natural method under the fourth order gramina, CAL. imbricated : COR. a bivalve glume, above the receptacles of the fruit. Of this genus there is only one species known, which i? a native of the Indies.

BOB'BIN. Fr. bobine. A quill for a spin- ning wheel ; also a skain of gold or silver thread. ā Cotgrave.

I'm sure I always loed consign Con's hazle eyes, and her pretty long fingers, that she twists this way and that, over the haepicalls like a parcel of bobbins.

Golddtmith.

BOBBING, among fishermen, a manner of catching eels, thus performed : scour well some large worms, and with a needle run a twisted silk through them from end to end, taking so many as that they may wrap about a

board a dozen times at least : then tie them fast with the two ends of the silk, which done, fasten all to a strong cord, and fix on a plummet about three-quarters of a pound weight, and make the cord fast to a strong pole. Let this lie at the bottom till you feel the eels tug lustily at the bait, and when they have swallowed it sufficiently, gently draw up the rope to the top, and bring them ashore.

BOBBINS are turned in the form of a cy- linder, with a little border jutting out at each end, bored through to receive a small iron pivot. They serve to spin with the spinning-wheel, or to wind worsted, hair, cotton, silk, gold, and silver.

BOBILEE, a town and fortress of Hindostan, in the circar of Cicacole, famous for sustaining an attack of the French in 1757, under M. Bussy. The fortress, which was of a square form, extended about 200 feet on each side. The rampart and parapet were covered by a shed of strong thatch, supported by posts; the eaves of this shed projecting over the battlement, and af- fording shelter to those on the rampart, which it guards against the sun and rain. An area of 500 yards or more, in every direction round the fort, is preserved clear, of which the circum- ference joins the high wood, which is kept thick, three or four miles in breadth, around this centre. Few of these forts permit more than one path through the woods, which is com-

manded at every turn by breast-works. The en- trance of the path from without is defended by a wall exactly similar in construction and strength to one of the sides of. the fort; having its round towers at the ends, and the square projection in the middle.

Such were the defences of Bobilee, which will serve as a general specimen of the Indian po- ly gar forts, against which M. Bussy marched with 750 Europeans, of whom 250 were horse, four field-pieces, and 11,000 peons and sepoys, the army of Vizeram Rauze, who commanded them in person.

*1 The attack commenced,' says Mr. Hamilton, ' at break of day*on the 24th of January, 1 757, with the field-pieces against the four towers ; and by nine o'clock several ot the battlements were broken. All the leading parties of the four di- visions then advanced at the same time with scaling ladders ; but, after much endeavour for an hour, not a man had been able to gain the rampart, and many had fallen wounded. Other parties followed with little success, until all were so fatigued, that a cessation was ordered; during which the field-pieces, having beaten down more of the parapet, gave the second attack greater advantage; but the ardor of the defence in- creased with the danger. The garrison fought with the indignant ferocity of wild beasts, de- fending their dens and families ; several of them stood, as in defiance, on the top of the battle- ments, and endeavoured to grapple*

with the first ascendants, hoping with them to twist the lad- ders down, and this failing, stabbed with their lances ; but, being wholly exposed, were easily shot by aim from the rear of the escalade. The assailants admired, for no Europeans had seen, such excess of courage in the natives of Hin- dostan, and continually offered quarter, which was always answered by menace and intention of death ; not a man had gained the rampart at two in the afternoon, when another cessation of attack ensued. On this, Rangaroo assembled the principal men, and told them there was nĀ® hopes of maintaining the fort ; and that it was immediately necessary to preserve their wives and children from the violation of the Europeans, and the still more ignominious authority of Vizeram Rauze.

‘ A number, called without distinction, were allotted to the work. They proceeded every man with his lance, a torch, and a poniard, to the habitations in the middle of the fort, to which they set fire indiscriminately, plying the flame with straw prepared with tutch or brimstone ; and every man stabbed, without remorse, the woman or child, whichsoever attempted to escape the flame and suffocation. The massacre being finished, those who accomplished it, returned like men agitated by the furies, to die themselves on the walls.

‘ Mr. Law, who commanded one of the divi- sions, observed, while looking at the conflagra- tion, that the number of defenders was consider- ably diminishtd, and advanced again to the attack. After several ladders had failed, a few grenadiers got over the parapet, and maintained their footing in the tower, until more secured the possession. Rangaroo, hastening to the de-

fence of the tower, was killed by a musket-ball. His fall increased the desperation of his friends, who crowding to revenge his death, left other parts of the rampart bare. The other divisions of the French troops having advanced, numbers on all sides got over the parapet without oppo- sition; nevertheless, none of the defenders quitted the rampart, or would accept quarter, but each advancing against or struggling with an antagonist, would resign his poniard only with his death.

‘ The slaughter of the conflict being over, another much more dreadful presented itself in the area below. The transport of victory lost all its joy; all gazed on each other with silent as- tonishment and remorse, and the

fiercest could not refuse a tear to the destruction spread before them. Four of the soldiers of Kangaroo on seeing him fall, concealed themselves in an un- frequented part of the fort until the night was far advanced, when they dropped down from the walls, and speaking the same language, passed unsuspected through the quarters of Vizeram Rauze. They concealed themselves in the thicket, and in the third night after, two of them crawled into the tent of Vizeram Rauze, and stabbed him in thirty-two places, and were imme- diately cut to pieces. Had they failed, the other two remaining in the forest, were bound by the same oath to perform the deed or perish in the attempt.' Orme, &c. Distant thirty-two miles west of Cicacole.

BOBINGEN, a market town of the Bavarian States, in the circle of the Upper Danube, dis- trict of Goggingen, with 1400 inhabitants. Nine miles south of Augsburg.

BOBISATIO, or BOCEDISATIO, in music, de- notes the using of the seven syllables, bo, ce, di, ga, lo, ma, ni, to express the seven musical notes in lieu of the six introduced by Aretinp, ut, re, mi, fa, sol, la, as has been sometimes done by the Netherland and German musicians since the beginning of the seventeenth century, to avoid the mutation necessary in the use of the latter.

BOBRAWA, Upper and Lower, two market towns of Moravia, in the circle of Brunn, twenty- six miles north-west of Brunn.

BOBROBA, a market town of Austrian Ga- licia, in the circle of Sandecz, on the river Biala, on the borders of the circle of Jaslow.

BOB-STAY, a rope used to confine the bow- sprit downward to the stem, or cut-water. The use of the bob-stay is, to draw down the bow- sprit, and keep it steady ; and to counteract the force of the stays of the fore-mast, which draw it upwards.

BOCA DEL TORO, a channel of the Spanish main, which enters into Almirante Bay, east of the island of Bocaloro. Long. 82Ā° 8′ W., lat. 9Ā° 6′ N.

BOCALIEU, a small island near the east coast of Newfoundland.

BOCALORO, an island of the Spanish main, near the coast of Veragua, at the entrance into Almirante Bay, about thirty miles in circum- ference. Long. 82Ā° 16′ W., lat. 9Ā° 12′ N.

BOCANUM, in ancient geography, a town of Mauritania Tingitana, to the south of Mount Atlas, supposed to be Morocco.

BOCARDO, in logic, the fifth mode of the first figure of syllogisms, wherein the first pro- position is particular and negative ; the second, universal and affirmative ; and the third, or conclusion, particular and negative. Thus :

Boc Some animal is not man.

> R Every animal has a principle of sensation.

DO Therefore something has a principle of sensation that is not man.

BOCAS, Dos, Rio DE, a large river of Brazil, South America. It rises in the country of the Bacares and Cariputangas Indians, and joins the Tajipuru. After its junction, the two rivers run in different directions, the latter to- wards the north, until it falls into the Amazons, a little before this river enters the sea, and the Dos Bocas towards the east, until it falls into the Toccantins. The two rivers, in their course, enclose the island of Joannes, which is nearly of a triangular figure, and which divides the great stream of the Amazons into the two mouths, by which it disembogues itself into the sea.

BOC AT, a fine valley of Syria, in which are situated the ruins of BALBEC, which see.

BOCAULT'S BAY, ā¢ a bay in the Straits of Magellan, on the coast of Patagonia, in which Bougainville anchored in 1767. Long, of the anchoring place 71Ā° 6′ W.

BOCCA, in glass-making, the round hole in the working furnace, by which the metal is taken out of the great pots, and by which the pots are put into the furnace. This is to be stopped by a cover made of earth and brick, and removable at pleasure, to preserve the eyes of the workman from the violence of the heat.

BOCCACIO (John), one of the most cele- brated and learned of Italian writers, was born in Tuscany in 1313. His father first placed him with a merchant, and soon after with a professor of the canon law. Still, however, he thought of nothing but poetry. In the prosecution of his studies generally, however, he sought the best masters, and, not having an income sufficient for his expenses, was particularly indebted to Pe- trarch both for money and books. He became early a great admirer of the Greek language, and procured a Latin translation of Homer to be made for his own use. The republic of Flo- rence honored him with the freedom of that city ; and employed hirn in public affairs, particularly to negociate the return of Petrarch : but this poet not only refused the application, but per- suaded Boccacio also to retire from Florence, on account of the factions which prevailed. Hav- ing quitted Florence, he went to several places in Italy, and

stopped at last at the court of Ro- bert, king of Naples ; where, conceiving a violent affection for that prince's natural daughter, he remained a considerable time. He also made a long stay in Sicily, where he was in great favor with queen Joan. He returned to Florence when the troubles were appeased: but being averse from the course of life he must have followed there, he finally retired to Certaldo. His great application to study here brought on an illness, of which he died in 1376. He wrote, 1. De Genealogia Deorum. 2. De Montium, Sylva- rum, Fluviorum, &c. nominibus. 3. De Claris Muliebris. 4. De casibus Virorum et Fcemina-

rum illustrium, which work was translated into English by Lydgate. 5. Eclogae. The Italian poems are, 6. La Teseide. 7. II Filostrato. 8. Amoroso Visione. 9. Nimfale Fiesolano. 10. Rime. His productions in Italian prose are, 11. L'Amorosa Fiametta. 12. II Filocopo. 13. Nimfale d'Ameto. 14. L'Urbano. 15. Origine vita et Costumi di Dante. 16. II Corbaccio, a satire. 17. Commento sopra la Commedia di Dante. But his II Decamerone, a collection of a hundred stories or novels, feigned to have been related in ten days, has been the chief basis of his modern fame ; though it is said not a little to have corrupted the morals of its female readers. Petrarch thought this composition con- tained so many charms that he translated it into Latin ; and it is a very curious and striking pic- ture of the manners of the times, and the frauds and licentiousness of priests and monks ; the language is eminently elegant and pure for the period. This work has passed through innu- merable editions, a copy of the first of which, that of Valdafer, in 1471, was knocked down at the duke of Roxburgh's sale to the duke of Marl- borough for Ā£2260.

BOCCALE, or BOCAL, a liquid measure used at Rome, answering to what is called a bottle among us, being equivalent to about an English quart. Seven boccales and a half make a rubbia.

BOCCALINI (Trajan), a celebrated satirical writer, born at Rome, who, in the beginning of the seventeenth century, obtained the admiration of all Italy, by his refined and delicate cri- ticisms. Sovereign princes did not escape the lash of his satire. The cardinals Borghese and Gaetan having declared themselves his pro- tectors, he published his Ragguagli di Parnasso, and La Segretaria di Apollo, which is the conti- nuation of the former. These works were re- ceived by the public with uncommon applause. He at length printed his Pietra di Parangone ; wherein he

attacked the court of Spain, exposing its designs against the liberties of Italy. The Spaniards complained of him in form, and re- solved to be revenged. Boccalini retired to Venice, but was there assassinated in a very strange manner. He lodged with a friend, who having risen early one morning, left Boccalini in bed : a minute after, some armed men entered his chamber, and gave him so many blows with bags full cf sand, that they left him for dead ; so that his friend returning some time after, found him speechless. Great search was made at Ve- nice for the murderers, but, though they were never discovered, it was universally believed that they were employed by the court of Spain.

BOCCARELLA, in the glass manufacture, a small hole or aperture of the furnace, one of which is placed on each side the bocca, almost horizontally with it. Out of them the servitors take colored or finer metal from the filing pot.

BOCCHUS, a king of Mauritania, who de- / livered Jugurtha in fetters to Sylla.

BOCCIARDI, called Clementone, history and portrait painter, born at Genoa in 1620, was the disciple of Bernardo Strozzi, and aiterwards studied at Rome. By an excellent genius, and industrious application, he united and blended the antique and modern gusto, in a

style that exhibited both gracefulness and strength. Most of his works, except his por- traits, which were lively, natural, and graceful, are in the chapels of Genoa, Pisa, and other ci- ties of Italy.

BOCCONI (Sylvio), a celebrated natural his- torian, born at Palermo in Sicily. After he had gone through the usual course of studies, he was ordained priest, and entered into the Cistercian order, when he changed his name Paul into Syl- vio. In pursuit of his favorite study, natural history, he travelled through 5Jalta, Italy, the Low Countries, England, France, Germany, Poland, &c.; and in 1696, was admitted 3 member of the academy of Virtuosi in Germany. Upon his return to Sicily, he retired to a con- vent near Palermo, where he died in 1704, aged seventy-one, leaving many curious works on bo- tany and other subjects. His Observations on Natural History vvere published in French at Amsterdam 1674, and in Dutch 1744.

BOCCONIA, greater tree celandine : a genus of the monogynia order and dodecandria class, natural order twenty-seventh, rhsedese : CAL. is diphyllous : COR. none : STY. bifid : the berry dry, and monospermous. B. frutescens is es- teemed for the beauty of its large foliage. It is very common in Jamaica and other warm parts of America, where it grows to

the height of ten or twelve feet, having a straight trunk as large as a man's arm, and covered with a white smooth bark. B. cordata has the leaves cordate, a little lobed. A native of China. PANICLE elongated, with single, not divided branches : CAL. white, as in the preceding species, but larger : STAM. about twenty-four : STYL. none : STIG. bilamel- lated sessile.

BOCCORE, in natural history, first or early fruit. We are informed by Pliny, in his Natural History, book xvi. chap. 26, that the fig-tree bore two kinds of fruits, at different periods; the first, which was named boccore, came before the leaves ; after that, the leaves ; and the true fig followed them. This name is still given to the first or early produce by the Algerines and Tunisians, and was formerly used in Palestine. See Nahum, chap. iii. ver. 12; and the miracle of Christ, as recorded by Mark and Matthew.

BOC HART (Matthew), a learned protestant divine of the seventeenth century, was minister of Alencou, and author of, 1 . A Treatise against Relics. 2. Another against the Sacrifice of the Mass, printed at Geneva in 1658. 3. A Dia- logue on the Difficulties which the Missionaries raised against the Protestants of France. This work led the Elector Palatine to attempt the re- union of the Lutherans and Calvinists at Augs- burg. 4. Diallacticon, a work containing a plan for that purpose; dedicated to the Elector, and printed at Sedan in 1662. Some have con- founded this author with his cousin Samuel.

BOCHART (Samuel), one of the most learned men m the seventeenth century, was born at Rouen in Normandy, and studied successively at Parisunder Thomas Dempster, at Sedan, Saumur, and the university of Oxford. Hence he went to Leyden, where he applied himself to oriental learning, under Erpenius and Ludolf. He was a great proficient in the oriental languages, and many

years pastor of a protestant church at Caen, where he was also tutor to Wentworth Dillon, earl of Roscommon. In the castle of Caen he distin- guished himself by his public disputations with father Veron, held in presence of a great number of Catholics and Protestants. His reputation was increased in 1646, by the publication of the two parts of his Geographia Sacra, entitled Phaleg and Canaan ; as well as by his Hierozoicon, printed at London in 1675. This treats de Animalibus Sacrae Scripturse. In 1652 the queen of Sweden invited him to Stockholm, where

she gave him many proofs of her esteem. At his return to Caen he 'died suddenly, while he was speaking in the academy, on the 16th of May 1667, aged seventy-eight. A complete edition of his works was published in Holland, in 2 vols. folio, 1712. His death gave occasion to the following epitaph : ā

Scilicet haec cuique est data sors sequissima, talis Ut sit Mors, qualis vita peracta fuit.*

M us arum in gremio teneris qui vixit ab annis Musarum in gremio debuit ille mori.

To him it was appointed, by an equal lot, that his death should resemble his life. He, who from his tender years had lived in the bosom of the Muses, ought also in the bosom of the Muses to die.

BOCCHETTA, LA, a narrow pass and ridge of the Appennines, which separates Genoa from Lombardy. It is very narrow, and of difficult passage ; for, though the distance from Novi to Genoa is not more than thirty miles, it often requires fourteen hours to travel from the one place to the other. This pass was formerly con- sidered as the key to the Genoese territory, and defended by redoubts ; but the Imperialists forced their way through it in 1746, and the French effected the same object in 1 796. The neighbour- hood is noted for yielding a beautiful superfine stone variegated with marble.

BOCHIM, in ancient geography,a place where the Hebrews assembled after Joshua's death, supposed to have been near Shiloh. Judg. ii. 1ā10.

BOCHIUS, or BOCQUI (John), a Latin poet, born at Brussels, in 1 555 . He travelled into Italy, Germany, Poland, and Muscovy, and at his re- turn became secretary to the duke of Parma. During his journey from Smolensko to Moscow and Livonia his feet were so severely frost bitten, that amputation was ordered ; but the Czar, John Basilides, coming with an army to ravage the country, Bochius fled as fast as he could, and being overtaken, stript, and beaten by the Russians, the exercise restored the use of his limbs. He died in 1609. The critics in the Netherlands set so great a value on his poetry, that they gave him the name of the B.elgic Virgil. He wrote, 1 . De Belgii Principatu. 2. Parodia Heroica Psalmorum Davidicorum. 3. Observa- tiones Physics, Ethicse, Politico, et Histories, in Psalmos. 4. Vita Davidis. 5. Orationes. 6. Poemata.

BOCHNIA, a town of Austrian Galicia, noted for its salt mines. These have been worked ever since 1261, and seem still to be inexhaustible, employing a vast number of workmen, and

yielding annually about 900,000 quintals of salt. The town is situated on the road from Lemberg to Cracow, twenty miles east of the latter city, and contains about 3200 inhabitants, who are chiefly employed in the mines. Alabaster is obtained in the neighbourhood.

BOCKHOLDT (John), a pretended prophet among the Anabaptists of Germany, in the begin- ning of the sixteenth century. He was ajourneyman tailor of Leyden, one of Munzer's followers, and an associate of Matthias, who also pretended to the gift of prophecy. These two fanatics, in 1533, established a numerous party at Munster. Having made themselves masters of the city, they de- posed the magistrates, confiscated the estates of such as had escaped, and deposited the wealth they amassed together in a public treasury for common use. They made preparations of every kind for the defence of the city ; and sent out emissaries to the Anabaptists in the Low Countries, inviting them to assemble at Munster, which was now dignified with the name of Mount Sion, that from hence they might be deputed to reduce all the nations of the earth under their dominion. Matthias, who was the first in command, was soon cut off in an act of phrensy, by the bishop of Munster's army; and was succeeded by Bockholdt, who was proclaimed by a special designation of Heaven, as he pretended, king of Sion, and invested with legislative powers like those of Moses. The extravagances of Bockholdt were too numerous to be recited ; it will be sufficient to add, that the city of Munster was taken after a long siege and an obstinate resistance, and Bockholdt the mock monarch punished with an ignominious death. See ANABAPTISTS.

BOCKHOLT, or BOCHOLT, a town and balii- age of Prussia, situate in the grand duchy of the Lower Rhine, principality of Munster, on the borders of Cleves, and containing three parishes, and the large village of Weerdt, with a population of about 1200 inhabitants. The town of Bocholt is seated on the river Aa, has 2600 inhabitants, and furnishes good grain, brandy, cotton, and silk; in the neighbourhood there are valuable iron mines. In 1802 both the town and bailiwic were granted as an indemnity to the prince of Salms, and, after forming part of the French empire, came to Prussia with the rest of the principality in 1815. Thirty-six miles W.S. W. of Munster, and twenty-four east of Cleves.

BOCK-LANDS, in the time of the Saxons, were what we now call freehold lands, held by persons of rank, by charter or deed in writing. It was distinguished from folkland, or copy-hold land, held by the common people without any written deed.

BODDAERTI, in ichthyology, a species of gobius, found in the Indian Ocean. The body is bluish-brown, beneath pale yellow, convex shape, tapering in a slight degree towards the tail, and covered with small soft

scales.

BODE', v. & TI.-S Ang.-Sax. bodian. To

BO'DEN, v. I make known; to manifest;

BODE'WORD, \ to announce ; to portend ;

BODE'MENT, ito foreshow: to exhibit a

BO'DING. } sign or token, either of fu-

ture good, or ill. In the first sense it is used by our elder writers, as in It, Brunne, ' Tho

bode came to the king,' is simply the news came; it was made known.

There was the dove, with her eyeii so meke ; The jelous swan, ayenst his deth that singeth ; The oule eke, that of deth the bode he bringeth

Chaucer. Assemblie of Foules. This bodes some strange eruption to our state.

Hamlet.

This foolish, dreaming, superstitious girl Makes all these bodements. Shakspeare.

Macbeth shall never vanquished be, until Great Birnam wood to Dunsiuane's high hill

Shall come against him

That will never be :

Sweet bodements, good. Id.

I have seen them,

Like boding owls, creep into tods of ivy And hoot their fears to one another nightly.

Beaumont's Bonduca.

other harm

Those terrors which thou speak'st of did me none ; I never feared they could, though noising loud And threatening nigh ; what they can do as signs Betokening, or ill boding, I contemn As false portents, not sent from God, but thee.

Milton.

You have opposed their false policy with true and great wisdom ; what they boded would be a irischief to us, you are providing shall be one of our principal strengths. Spratt'f Sermons.

It happened once, a boding prodigy ! Dryden.

If fiery red his glowing globe descends, High winds and furious tempests he portends ; But, if his cheeks are swoln with livid blue, He bodes wet weather by his watery hue. Id.

Sir, give me leave to say, whatever now The omen prove, it boded well to you. Id.

That raven on yon left-hand oak (Curse on his ill-betiding croak) Bode me no good. Gay's Fables.*

But cawing rooks and kites that swim sublime In still repeated circles, screaming loud The jay, the pie, and e'en the boding owl, That hails the rising m"on, have charms for me.

Cowper's Task.

BODGE', v. & n. A word in Shakspeare, which is perhaps corrupted from boggle. To boggle ; to stop ; to fail ; to make bungling work ; a low unskilful tailor is commonly called a botcher. Bodge and botch are nearly the same word ; the difference seems to be only in their pronuncia- tion and orthography.

With this we charged again ; but out, alas ! We bodged again : as I have seen a swan, With bootless labour, swim against the tide.

Shakspeare.

BODIANUS (Portuguese bodiano), in ichthy- ology, a sea fish like the tench. Bloch, Lace"p. Cuv. Schneid., Bodian, belonging to the family of percbides, and order acanthopterygii. Its generic character is, preopercule

neither spined nor serrated ; opercule having one or more spines. Lace”pede subdivides this genus into two ; 1st. such as have the tail forked or divided, and 2d. such as have it round and single. Cu- vier has, however, preferred the number of the spines to form a subdivision on. These are always placed at the posterior margin of the opercule which is loose; and Cuvier does not consider

that any possess more than three spines. The species are, B. guttatus, Bloch; B. Jacob Evert- son, Lacep. ican-ocara of the Japanese; ganimin of the Malays, Jew fish, Brown, with three spines. The general size is from twelve to eigh- teen inches, but Bloch believes that the Jew fish, described by Brown in his History of Jamaica, and which measured six feet in length, belongs to this species. It has the dorsal, caudal, and anal fins partly covered with small scales, of a yellowish color, and edged with violet. B. boenak, Bloch, Lacep. ; B. zebra, Shaw ; striped bodian, also with three spines, and, B. louti. Lacep. ; perca louti, Linn. ; louti of the Arabs, about two feet long. Also, B. miniatus, schneid perca miniata, Forsk. ; zarban of the Arabs. Of a cochineal red color spotted with blue, native of the red sea. With two spines : B. argenteus, Bloch ; silver bodian. Body oblong, and covered with small silvery scales ; the fins are yellow, and the tail edged with blue. It has been taken in the Mediterranean. B. sebae, Schneid.; perca oblonga, Seba ; seba bodian. Body round, head marked with eight or nine brownish zones. With one spine : B. aya, Bloch, Lacep. ; B. ruber, Schneid ; acara aya of the Brasilians, red bodian. General color red, the back of a deep crimson^ the belly silvery. B. marginatus, Bloch ; B. apua, Lace”p ; parati apua of the Brasilians, marginated bodian. B. striatus, Schneid ; striated bodian. B. macrocephalus, Lacep. ; great-headed bodian.

BO’DICE, n. s. From bodies. Stays; a waistcoat quilted with whalebone, worn by women.

Her bodice halfway she unlaced ; About his arms she slily cast The silken band, and held him fast. Prior.

This consideration should keep ignorant nurses and bodice makers from meddling.

BODIN (John), a native of Angers, one of the ablest men in France in the sixteenth century, famous for his Method of History, his Republic, and other works. He was in great favor with Henry III. who imprisoned John de Serre for writing an injurious piece against Bodin, and forbade him upon pain of death to publish it. But his favor was not of long continuance. The duke of Alencon, however, gave him several employments ; and carried him to England with him as1 one of his counsellors, where he had the pleasure to see his book, de Republica, read pub- licly in the University of

Cambridge, having been translated from the French into Latin. In the Ragguagli of Boccalini ne is condemned, as an atheist, to the fire,, for having said that liberty of conscience ought to be granted to sectaries. Upon the death of the duke of Alencon, Bodin retired to Laon, where he married. He had an office in the presidial of the city ; and in Charles IX's time, was the king's solicitor with a com- mission for the forests of Normandy. He died of the plague at Laon, in 1596,

BOD'KIN, n. s. Boddiken, or small body.ā Skinner. A diminutive of body ; a small sharp instrument; a dirk; an instrument with an eye, resembling a common needle, blunted at the point, and used to draw a thread or ribbon through a loop'; an implement formerly used to dress the hair.

t Then dorste no wight clepen hire but dame : Was non so hardy, that went by the way, That with hire dorste rage, or, ones play But if he wol be slain, of Simekin, With parade, or with knif or bodekin.

Chaucer. Canterbury Tales.

Each of them had bodkins in their hands, where- with continually they pricked him. Sidney.

Now meet thy fate, incensed Belinda cried, And drew her deadly bodkin from her side ; The same, his ancient personage to deck, Her great great grandsire wore about his neck, In three seal rings ; which, after melted down, Formed a vast buckle for his widow's gown : Her infant grand-dame's whistle next it grew, The bells she jingled and the whistle blew ; Then in a bodkin graced her mother's hairs, Which long she wore, and now Belinda wears.

Pope's Rape of the Lock.

If I had stuck him with my bodkin, and behaved myself like a man, since he wont treat me like a woman, I had, I think, served him right. Spectator. ā¢

BODLEIAN LIBRARY, in literature, a library in Oxford, called after its founder, Sir Thomas Bodley, which is noted throughout Europe, for its immense collection of valuable books and manuscripts.

BODLEY (Sir Thomas), founder of the Bodleian library at Oxford, was born at Exeter, in 1544. When he was about twelve years of age, his father, being a Protestant, was obliged to leave the kingdom. He settled at Geneva with his family, and continued there till the death of queen Mary. In that university, then in its infancy, young Bodley studied the learned languages, &c. under several eminent professors. On the accession of queen Elizabeth, he returned with his father to England, and was soon after entered of Magdalen College, Oxford. In 1563 he took his degree of B.A. and the year following was admitted fellow of Merton. In 1565 he read a Greek lecture in the hall of that college ; in 1566 he took his degree of M. A. and read na- tural philosophy in the public schools. In 1569 he was one of the proctors of the university, and for some time officiated as public orator. In 1576 he quitted Oxford, and made the tour of Europe, but returned to his college after four years absence. He became gentleman-usher to queen Elizabeth, in 1563; and in 1565 married the widow of Mr. Ball, a lady of fortune. He was soon after sent ambassador to the king of Den- mark, and other German princes. He was next charged with an important commission to Henry 1IL of France ; and in 1588 went ambassador to the United Provinces, where he continued till 1597. On his return to England, finding his preferment obstructed by the jarring interests of Burleigh and Essex, he retired from court, and could never afterwards be prevailed upon to accept of any employment. He now began the foundation of the Bodleian library, which was completed in 1599. Soon after the accebsion of king James I. he received the honor of knighthood, and died in 1612. He was buried in Merton College. His monument is of a black and white marble, on which stands his effigy in a scholar's gown, surrounded with bo\>ks. At the four cor- ners are the emblematical figures of grammar,

rhetoric, music, and arithmetic. Sir Thomas was a polite scholar, an able statesman, and a worthy man. Granger observes, that he merited much as a man of letters, but incomparably more in the ample provision he made for literature, and that his library is a mausoleum which will per- petuate his memory as long as books themselves endure. Sir Thomas wrote his own life to the year 1609, which in 1703 with the first draught of the statues, and his letters, were published by Hearne, from the originals in the Bodleian.

BODMIN, a borough town of Cornwall, where the summer assizes are held, seated in a bottom between two hills, which renders the air unwholesome. It consists chiefly of one street, and the many decayed houses show that it has once been a place of greater note. It has a mayor, sends two members to parliament, and manufactures serge. It had formerly the privi- lege of the coinage of tin. It is united with the parishes of Helland, Llanhydrock, and Llaninet, in the privilege of sending two members to par- liampnt.

Population of the new borough 4396.

BODON, the ancient Vimimacum, a fortified town of Bulgaria in European Turkey, with an archbishop's see. It is seated on the Danube, twenty-six miles west of Widdin.

BODUNGEN, GEEAT, a market town and castle of Saxony, on the river Bode, in the prin- cipality of Schwartzburg-Sondershausen. Here are some woollen manufactures, and a potash- work. Five miles-north of Bleicheroda.

BOD'Y, v. & n. \ Sax. boˆ>i5. It ori BOD'IED, I ginally signified the

BOD'ILESS, \height or stature of a

BOB'ILY, adj. & adv. I man. It is however a BOD'Y-GUARD. J word of most extensive

and various application. It is applied to the material substance of an animal opposed to the immaterial soul ; to the entire person ; to matter as opposed to spirit ; to the trunk of an animal or a tree, as distinguished from the limbs or branches ; to reality as opposed to mere re- presentation; to the main substance, the mass of any thing ; to a collected number of men united for any common purpose. To body, body forth, and embody, is to impart substantial form and shape ; to clothe ideas in words ; to give to airy nothing a local habitation and a name; to give to spirit a corporeal dwelling.

All the valiant men arose, and went all night, and took the body of Saul, and the bodies of his sons, from the wall. Samuel.

Take no thought for your life, what ye shall eat, or what ye shall drink ; nor yet for your body, what ye shall put on. Matthew.

A shadow of things to come ; but the body is of Christ. Colossianr.

Over all, this strength of body and worldly hardi-

nesse causeth, full oft, to many, peril and mischance.

Chaucer. Canterbury Tales.

So every spirit, as it is most pure, And hath in it the more of heavenly light, So it the fairer bodie doth procure To habit in, and it more faireiy dight With chearfull grace and amiable sight ; For, of the soule, the bodie, forme doth take ; For soule is forme, and doth the bodie make.

Spenser's Hy-nius.

BOD

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BOE

Surely, a wise body's part it were not to put out his ā¢fire, because his foolish neighbour, from whom he borrowed wherewith to kindle it, might say, were ic not for me thou wouldst freeze. Hooker.

There is in the knowledge both of God and man this certainty, that life and death have divided be- tween them the whole body of mankind. Id. Of such as resorted to our Saviour Christ, being present on earth, there came not any unto him with belter success, for the benefit of their souls' everlast- ing happiness, than they whose bodily necessities gave occasion of seeking relief. Id.

A deflowered maid ! And by an eminent body that enforced The law against it. Shakspeare.

'Tis a passing shame, That I, unworthy body as I am, Should censure thus on lovely gentlemen. Id.

This is the very coinage of our brain ; This bodiless creation ecstacy Is very cunning in. Id.

Whatever hath been thought on in ihis state, That could be brought to bodily act, ere Home Had circumvention. Id,

As imagination bodies forth The forms of things unknown, the poet's pen Turns them to shape. Id.

Thence sent rich merchandizes by boat to Baby- lon ; from whence, by the body of Euphrates, as far as it bended westward ; and, afterward, by a branch thereof. Raleigh.

All philosophers impute the miseries of the body to the soul. Burton's Anat. Mel.

God saw,

Surveying his great work, that it was good : For of celestial bodies first the sun, A mighty sphere he framed, unlightsome first, Though of ethereal mould. JMilton.

From these corporeal nutriments perhaps Your bodies may at last turn all to spirit, Improved by tract of timej and winged, ascend Ethereal, as we, or may at choice Here or in heavenly paradises dwell. Id.

All civility and reason obliged every body to submit.

Clarendon.

The van of the king's army was led by the general and Wilmot ; in the body was the king and the prince ; and the rear consisted of one thousand foot, com- manded under colonel Thelwell. Id. There were so many disaffected persons of the no- biliiy, that there might a body start up for the king.

Id.

V irtue atones for bodily defects ; beauty is nothing

worth, without a mind. L' Estrange.

Even a metalline body, and therefore much more a

vegetable 01 animal, may, by fire, be turned into

ā¢water. Boyle.

These are but shadows, Phantoms bodiless and vain, Empty visions of the brain. Swift.

I shall now mention a particular wherein your whole body will be certainly against me, and the laity, almost to a man, on my side. Id.

Nothing was more common, than to hear that reverend body charged with what is inconsistent; despised for their ooverty, and hated for their riches.

Id.

As clearness of the brdily eye doth dispose it for a quicker sight ; so doth freedom from lust and passion dispose us for the most perfect acts of reason.

Tillotsm.

This city has navigable rivers, that run up into the ā¢body of Italy ; they might supply many countries with fish. Addison.

I am informed, that several asses are kept in

body-cloaihs, and sweated every morning upon the

heath. ‘ Id.

When pigmies pretend to form themselves into a

body, it is time for us, who are men of figure, to look

about us. Id. Gttardian.

It is his human nature, in which the godhead

dwells bodily, that is advanced to these honours, and

to this empire. Watts.

Know then whatever cheerful and serene Supports the mind, supports the body too.

Armstrong’s Art of Preserving Health. But ah ! what woes remain ! life rolls apace, And that incurable disease old age, In youthful bodies more severely felt, More sternly active shakes their blasted prime.

Id.

BODY, as distinguished from the soul, becomes the subject of ANATOMY, which see. The height of the human body has been said to be different in different parts of the day. It ceases to grow in height, when the bones are arrived at a degree of firmness and rigidity, which will not allow of a farther extension by the effort of the heart and motion of the blood.

BODY, in painting, or To bear a body, sig- nifies that the colors are of such a nature as to be capable of being ground tine, and mixing with the oil entirely, so as to seem only a very thick oil of the same color.

*BODY, in physics, ari*extended solid substance, of itself utterly passive and inactive, indifferent either to motion or rest.*

BODY, in the art of war, a number of forces, horse and foot united, and marching under one commander.

BODY, in the menage. A horse is chiefly said to have a good body when he is full in the flank. If the last of the short ribs be at a considerable distance from the haunch bone, although such horses may for a time have pretty good bodies, yet, if they are much labored, they will lose them; and these are properly the horses that have no flank. It is also a general rule that a man should not buy a light-bodied horse, and one that is fiery, because he

will soon destroy himself.

BOEBERA, in botany, a genus of plants. Class syngenesia ; order polygamia : CAL. double ; the outer many-leaved ; inner eight-leaved : receptacle naked : down simple. One species only. ā B. chrysanthemoides. A Mexican plant ; erect, branched; leaves pinnate; with toothed leaflets ; flowers yellow.

BOECE, or BOETHIUS (Hector), a Scottish historian, was born at Dundee about A. D. 1470, and studied with applause in the university of Paris, where he became acquainted with Erasmus, and laid the foundation of a friendship which was honorable to him. In 1500 he was recalled to Aberdeen by bishop Elphinston, who made him principal of that university. Gratitude for this promotion engaged him to write, with particular attention, the Life of that prelate. It appeared in his history of the diocese of Aberdeen ; and may be considered, perhaps, as the most valuable portion of that work. His History of Scotland, a more useful undertaking, was first published in 1526. In 1574 it underwent a second impres- sion, and was enriched with the eighteenth book and a part of the nineteenth. A farther continue-

tion of it was executed by Joannes Fenerius Pedemontanus. Boece died about A.D. 1550. He has been compared, and not without reason, to Geoffrey of Monmouth He had a propensity to- fable and exaggeration : a fault, for which the elegance of his expression does riot compensate. His judgment was not equal to his genius : and his fictions as a historian are a contrast to his probity as a man. John Ballenden, archdeacon of Murray, translated his history into the Scottish language at the desire of James V. This trans- lation William Harrison converted, though with imperfections, into English; and his associate Hollingshed published his work in his Chronicle, with additions and improvements by the in- genious Francis Thynne.

‘ BOECLER (John Henry), a German critic and historian, was born in 1611, at Cronheim, in Franconia, and died in 1692, leaving among his works, 1. Editions of Herodian, 8vo. ; Suetonius, 4to. 1647; Manilius, 4to. 1655 ; Terence, 8vo. 1657; Cornelius Nepos, 12mo., Ultraj., 1665; Polybius, 4to. 1666, 1670, 1680; also part of Tacitus, Paterculus, Virgil, Herodotus, and Ovid, &c. 2. De Jure Gallise in Lotharingiam, 4to. 3.

Dissertatio de Scriptoribus Graecis et Latinis, &c. 8vo. ibid. 1674. 4. Bibliographia- Historico-Politico-Philologica, 8vo. 1677. 5. Historia Belli-Sueco-Danici, annis 1643 ā 1645, 8vo., Holm., 1676; Argentorat. 1679. 6. His- toria Universalis, See. 8vo. ibid. 1680. 7. Notitia Sacri Imperi Romani, 8vo. ibid. 1681. 8. De Rebus Saeculi post Christum XVI. Liber Memo- rialis, 8vo., Kiel, 1697. 9. Bibliographia Critica, 8vo. Leips. 1715.

BOEDGEROENS, a chain of small islands, in a spacious bay of the South Pacific Ocean, near the north coast of New Guinea. Long. 135Ā° 33′ E., lat. 2Ā° 25′ S.

BOEDROMIA, in antiquity, solemn feasts held at Athens, in memory of the succour brought by Ion to the Athenians, when invaded by Eu- molpus son of Neptune, in the reign of Erechtheus. But, according to Plutarch, the Boedromia were celebrated in memory of the victory obtained by Theseus over the Amazons, in the month Boed- romion.

BOEDROM1ON, in chronology, the third month of the Athenian year, answering to the latter part of August and beginning of September.

BOEHMEN (Jacob), called the Teutonic philosopher, was a noted visionary of the seven- teenth century, born in a village of Germany, near Gorlitz, in 1575. He was bred a shoe- maker ; and, marrying, supported a large family by this occupation ; until, after amusing himself with chemistry, a visionary turn of mind, heated by sermons and German divinity, overpowered his common sense, and produced raptures and notions of divine illumination. These he first gave to the world in 1612, by a treatise entitled Aurora, or the Rising of the Sun, which being censured by the magistrates of Gorlitz, he re- mained silent for six years : but improving that interval by pursuing the flights of his imagina- tion, he resumed his pen ; and resolving to re- deem the time lost, he, in the remaining six years of his life, published above twenty books, which greatly needed what he concluded with, A Table

of Principles, or Key to his Writings. This ap- peared in 1624, and he did not long survive it. He died early in the morning of the 18th of November in that year. Boehmen has not been without numerous admirers both in Germany and England; among whom was the famous William Law, author of Christian Perfection, &c. who published an English edition of Jacob Boeh men's works in 2 vols. 4to.

BOEHMERIA, in botany, a genus of plants, class monoecia, order tetrandria. Male : CAL. four- parted ; no COR. Female: no CAL. crowded scales, between each of which is an obovate gem: STYLE one : SEED single and compressed. Species five : West Indian or American plants.

BCEOTIA, an ancient kingdom of Greece, founded or rather restored by Cadmus, and so named by him from the ox which is said to have directed him to the place where he built the capital of his new kingdom, better known after- wards by the name of Thebes. Its original names were Aonia, Mesapia, Ogygia, and Cadmeis, and it forms at present a part of Livadia. This coun- try is celebrated as the birth-place of Pindar, Hesiod, and Plutarch, &c. ; and its fountains, particularly the Helicon, as the seat of the Muses. Its ancient medals are dis- tinguished generally by the shield called Scutum Bceoti- cum, frequently bearing also the figure of Neptune, who was particularly honored there. As the inhabitants were more generally distinguished as a nation by the name of Thebans, we refer to the article THEBES for their history, &c.

BOERHAAVE (Herman), one of the greatest physicians, as well as the best of men, that any age has ever produced, was born in 1688 at Voorhout, a village near Leyden. At the age of sixteen he found himself without parents, protec- tion, advice, or fortune. He had already studied theology and the other ecclesiastical sciences, with the design of devoting himself to a clerical life; but the science of nature, which had equally engaged his attention, soon engrossed his whole time. This illustrious person, whose name after- wards spread throughout the world, and who left at his death above Ā £200,000, could at that time barely live by his labors, and was compelled to teach the mathematics to obtain his bread. But in 1693, being admitted M.D., he began prac- tice ; and his merit being at length discovered, many powerful friends patronised him, and pro- cured him three professorships in the university of Leyden : viz. those of medicine, chemistry, and botany. The Academy of Sciences at Paris, and the Royal Society at London, invited him to become one of their members. He communicated to each his discoveries in chemistry, and his fame was now rapidly diffused throughout Europe- The city of Leyden became in his time the school of Europe for chemistry, as well as medicine and botany. When Peter the Great went to Holland in 1715, to instruct himself in maritime affairs, he also attended Boerhaave, and his reputation is said to have spread as far as China : where a Mandarine wrote to him with this inscription, ‘ To the illustrious Boerhaave, physician in

Europe;’ and the letter came regularly to him. It has been affirmed, that, from the time of Hip- pocrates, no physician has more justly merited the esteem of his contemporaries, and the thanks of posterity, than Boerhaave.

*His piety, and the qualities of his heart, also deserve commendation. It was his daily practice through life, as soon as he rose in the morning, which was generally very early, to retire for an hour to prayer and medita- tion on the Scriptures. He often told his friends, when they asked him how it was possible for him to go through so much fatigue, that it was this which gave him spirit and vigor in the business .of the day. The health of the body, he said, must be promoted by the tranquillity of the mind ; and that he knew of nothing which could support himself, or his fellow-creatures, amidst the various distresses of life, but a well-grounded confidence in the Supreme Being. This he strongly exemplified in his own severe illness in 1722, by which the course of his lectures as well as his practice was long interrupted. He was for five months confined to his bed by the gout, until he determined to try whether the juice of fumitory, endive, or succory, taken thrice a day in a large quantity (viz. above half a pint each dose), might not contribute to his relief; and by a perseverance in this method he recovered. Boerhaave never regarded calumny or detrac- tion, nor ever thought it necessary to confute them. ' They are sparks,' said he, * which, if you do not blow, will go out of themselves. The surest remedy against scandal, is to live it down by a perseverance in well doing.' Being once asked by a friend, who had often admired his patience under great provocations, whether he knew what it was to be angry, and by what means he had so entirely suppressed that im- petuous and ungovernable passion ; he answered, with the utmost frankness and sincerity, that he was naturally quick of resentment ; but that he had, by daily prayer and meditation, at length at- tained a mastery over himself. About the middle of the year 1737 he felt the first approaches of the illness which brought him to the grave, viz. a disorder in his breast, which at times threatened him .with immediate suffocation, and terminated in an universal dropsy. During this lingering illness, however, his firmness did not forsake him ; he neither intermitted the necessary cares of life, nor the proper preparations for his death, which took place the 23d day of September, 1738, in the seventieth year of his age. The city of Ley- den has raised a monument in the church of St. Peter, Salutifero Boerhavii genio sacrum. It consists of an urn upon a pedestal of black marble : six heads, four of which represent the four ages of life, and two the sciences in which Boerhaave excelled, from a group issuing between the urn and its supporters. The capital of this basis is decorated with a drapery of white mar- ble, in which the artist has shown the different emblems of disorders and their remedies. Above, upon the surface of the pedestal, is the medallion of Boerhaave : at the extremity of the frame, a ribband displays the favorite motto of this learned man ; Simplex sigillum veri, ' Truth unarrayed.' He wrote, 1. Institutiones Medicae ; 1. Aphorism! de Cognoscendis et Curandis Mor- VOL. IV.*

bis; 3. Institutiones et Experiments Chemicie; 4. Libellus de Materia

Medica, et Remediorum Formulis quae Serviunt Aphorismis ; 5. Elementa Chemiae ; 6. De studio Hippocratico ; 7. De Usu Ratiocinii Mechanici in Medic.ina ; 8. De Compa-r rando certo in Physicis ; 9. De Vita Bernardi Albani ; 10 and 11. Indices Plantarum in horto Lugd. Bat.; 12. De Fabrica Glandularum ; 13 and 14. Atrocium Morborum Historiae ; 14. De Lue Aphrodisiaca, 8cc.

BOERHAAVIA, a genus of the monogynia order, belonging to the monandria class of plants : CAL. none : COR. monopetalous, campanulated, and plaited : SEED one, naked. There are twelve species, all natives of the West Indies. Some of their plants rise five or six feet high, but most of them only eighteen inches or two feet. The principal are : B. esceta of the West Indies, with ovate undulate leaves, and white corolla with five reddish stripes. B. excelsa, with a longer stem, and longer purple flowers.

BOERNERIANU3 CODEX, in biblical history, a MS. of part of the New Testament, noted G, in the second part of Wetstein's New Testament. It belonged to Dr. C. F. Boerner, was collated by Kuster, and described in the preface to his edition of Mill's Greek Testament. It contains the epistles of St. Paul, that to the Hebrews ex- cepted, which was formerly rejected by the church of Rome ; it is written in Greek and Latin, according to one of those versions which were in use before the time of Jerome. The Latin is interlined between the Greek, written over the text, of which it is a translation. That it is an ancient MS. appears, says Michaelis, from the form of the characters, and the want of accents and marks of aspiration. From the corres- pondence of the letters r, s, and t, in the Latin translation, to that form which is found in the Anglo-Saxon alphabet, it is inferred that this MS. was written in the west of Europe, probably between the eighth and twelfth centuries. This MS. is preserved at present in the electoral library at Dresden.

BOETES, small guns made of wrought or cast iron, which are laid in a vertical position, after they have been loaded with gunpowder, and then plugged up with a wooden stopper. These guns are let off, like other pieces of ord- nance, by applying the match to the bottom of the box. The train, along which the fire is con- veyed, consists of gunpowder with bran, in oider to secure the latter from moisture.

BOETHICUS, in entomology, a species of hesperia, inhabiting India. The wings are tailed, bluish-brown, pale ash color beneath, and un- dulated with whitish ; a double ocellar spot in the anal angle.

BOETHIUS (Hector). See BOECE.

BOETHIUS, or BOETIUS (Flavius Anicius Man- lius Torquatus Severinus),

a prose as well aj political writer of the sixth century, descended of one of the noblest families in Rome. He was born about the period when Augustulus, whose fears had induced him to a resignation of the em- pire, was banished, and Odoacer king of the Herulians began to reign in Italy, viz. about A. D 479. Boetius's father dying while he was an inĀ» fant, his relations undertook the care of his edu%

cation. His excellent parts were soon discovered ; and to enrich his mind with the study of philoso- phy, as well as to perfect 'him in the Greek lan- guage, he was sent to Athens. Returning young to Rome, he was soon distinguished and pro- moted to the principal dignities in the state, and at length to the consulate. Though living in great affluence and splendor, he studied theology, mathematics, ethics, and logic ; and his success in each of these branches appears from his works still extant. At this time Theodoric the Goth had attempted to ravage Campania ; and it was owing to the vigilance and resolution of Boetius that that country was preserved from destruttion. At length, Theodoric, having murdered Odoacer, became king of Italy, where he governed thirty- three years with prudence and moderation, during which time Boetius possessed a large share of his esteem and confidence. Justin, em- peror of the East, now made an edict condemning all the Arians, except the Goths, to perpetual banishment from the eastern empire: in this edict Hormisda bishop of Rome, and the senate, concurred. But Theodoric, who was an Arian, was extremely troubled at it, and conceived an aversion against the senate for the share they had borne 'in this proscription. Of this disposition in the king, three men of profligate lives and despe- rate fortunes, Gaudentius, Opilio, and Basilius, took advantage ; and entertaining a secret desire of revenge against Boetius, for having been in- strumental in the dismission of Basilius, they accused him of several crimes; such as the stifling a charge, which was to involve the whole senate in the guilt of treason ; and an attempt, by dethroning the king, to restore the liberty of Italy ; and, lastly, they suggested that, to acquire the honors he possessed, Boetius had recourse to magical art. He was at this time at a distance from Rome ; however, Theodoric transmitted the complaint to the senate, enforcing it with a sug gestion that the safety, as well of the people as the prince, was rendered very precarious by this supposed design to exterminate the Goths : and the senate, without summoning him to his de- fence, condemned Boetius to death. The king,

however, mitigated the sentence to banishment. Ticinum, now Pavia, in Italy, became the place of his exile ; and here, separated from his relations, who had not been permitted to follow him, he endeavoured to derive from philosophy those comforts which it was capable of affording, and composed that valuable discourse, entitled De Consolatione Philosophise. About two years after his banishment, Boetius was beheaded in prison by the command of Theodoric. His tomb is to be seen in the church of St. Augustine, at Pavia. The extensive learning and eloquence of this great man are conspicuous in his works, which seem to have been collected with great rare ; an edition of them was printed at Venice, one volume folio, in 1499. In 1570 Glareanus, f Basil, collated that with several MSS., and published it, with a few various readings in the margin. His chief performance, De Consolatione Philosophise, is well known in the learned world. Our Saxon king Alfred, whose reign, though happy upon the whole, was attended with great vicissitudes of fortune, had recourse to it at a

time when his distresses compelled him to Seek retirement ; and, that he might the better impress upon his mind the noble sentiments inculcated in it, he made a complete translation of it into the Saxon language. Carnden relates that queen Elizabeth also, during the time of her confine- ment by her sister Mary, read, and afterwards translated it into very elegant English. Boetius is also .the most considerable of all the Latin writers on music ; his treatise De Musica sup- plied for some centuries the want of those Greek MSS. which were supposed to have been lost.

BOFFRAND (Germain), a celebrated French architect, was the son of a sculptor by a sister of the famous Quinault, and born at Nantes in. 1667. He was trained under Hardouin Mansard, who trusted him with the execution of his greatest works. His manner of building approached to to that of Palladio. He was employed by many German princes, and constructed a number of bridges, &c. He was admitted into the French academy, and wrote a book on the principles 01 architecture, with an account of the various plans, elevations, &c. of the principal works he had ex- ecuted. He was a man of a disinterested spirit, and pleasing manners. He died at Paris in 1755, aged eighty-eight.

BOG', v. & n.-\ Dutch, boogen ; Irish, bog ;

BOG'GY, { Fr. bague. That which gives

BOG'LAN D, t way to pressure ; a ground too

*BOG'TROTTER. * soft to bear the weight of any*

body ; marshy ; swampy. Ang.-Sax. bugan, to

bow ; to bend ; to yield.

Through fire and through flame, through ford and whirlpool, o'er bog and quagmire. Shakspeare.

A gulf profound ! as that Serbonian bog, Betwixt Damiata and mount Casius old.

Milton.

All unawares,

Fluttering his pennons vain, plumb down he drops Ten thousand fathom deep ; and to this hour Down had been falling, had not, by ill chance, The strong rebuff of some tumultuous cloud, Instinct with fire and nitre, hurried him As many miles aloft : that fury stay'd, Quenched in a boggy syrtis, neither sea, Nor good dry land ; nigh foundered on he fares, Treading the crude consistence half on foot, Half flying ; behoves him now both oar and sail,

Milton.

He walks upon bogs and whirlpools ; wheresoever he treads, he sinks. South.

Learn from so great a wit, a land of bogs, With ditches fenced, a heaven fat with fogs. Dryden. He is drawn, by a sort of ignis fatuus, into bogs and mire almost every day of his life. Watts.

BOG properly signifies a quagmire covered with grass, but not solid enough to support the weight of the body, in which sense it diners only from marshes or feus, as a part from the whole. These soft masses of earth have been sometimes known to move out of their place. There was an instance of this in the year 1697, about Charle- ville, in the county of Limerick. A noise was heard for some time under ground like that of thunder at a great distance; arid soon after this the earth of a large bog in the neighbourhood began to move, and a hill situated in the middle of it stood no longer above the level of the rest, but sunk flat.

Not only the bog itself moved, but the neigh- bouring pasture-lands also, though separated by a large and deep ditch, partook of the motion for a considerable time, the surface of the moving earth rising into a sort of waves, but without breaking up or bursting any where. The pas- ture-lands rose very high, and were carried on in the same motion till they rested

upon a neigh- bouring meadow, the whole surface of which they covered, remaining sixteen feet deep upon it. The whole quantity of the bog was torn from its former'seat and left great gaps in the earth where it had joined, which threw up foul water, and very stinking vapors. Phil. Trans.. No. 233.

BOGALCUND, a district of Hindostan, in the province of Gundwana ; bounded on the west by the British possessions in Bundelcund ; on the east by the territory of Manwas ; and wa- tered by the rivers Soane, Bichanuddy, and Be- hennuddy. It lies in about the 25Ā° N. lat. and 82Ā° E. long. Its exact dimensions, though not ascertained, appear to be considerable. It is in great part fertile, and well cultivated with wheat, barley, and peas ; the natives have also nume- rous herds of black cattle, and large flocks of sheep, and it is traversed by good roads. Its ac- cess from Allahabad, to which it was annexed by Aurengzebe, is by a pass called Sohagee Ghaut, long, steep, and difficult, having at its extremity a strong redoubt. From hence Bogalcund is quite table-land. The inhabitants, called Bo- gals, Bogheleis, or Boghels, are reported to have migrated hither from Guzerat many centuries ago, and gradually to have encroached on their neighbours. They consist of five different tribes, acknowledging the same government, but without admitting an equal control, or paying the like obedience to it. Part, or the whole, profess the Mahommedan religion, and many temples are to be seen here. Three of these tribes follow a practice, too general in the east, of destroying their infant daughters. The chief town is Rewah, which is a populous place, situate on the small river Bichanuddy, rising twenty miles eastward, and joined by the Behanuddy just above the town. The streams run immediately under a large fort in, the capital, which includes the re- sidence of the rajah, and the houses of the most respectable inhabitants. It stands in lat. 24Ā° 37′ N., and 81Ā° 25′ east longitude ; distant 126 miles north-east of Benares. Bogalcund has its own independent rajahs, who formerly exercised considerable influence over India affairs, and have afforded an asylum to some of the most powerful princes of the East in adversity. Here the family of Humayoon, er iperor of the Moguls, retired from Delhi, on au usurpation of his throne in 1542, and the great Acber, his son, was born soon after. The empress having ar- rived was taken immediately, we are told, in labor ; but the astrologers having determined that the child, to be fortunate, must be born a little later, the mother was actually suspended by the legs two hours to retard the birth !

BOG'GLE, v. & n. ~\ Johnson says from

BOG'GLER, Ā£ Dutch, bogil, a spectre ;

BOG'GLISH. j a bugbear; a phantom :

but he does not tell us how bogil obtained this meaning. We are inclined to the etymology of

BOG

Skinner, adopted by the Ency. Met., that boggle is the diminutive of bog. and that its de- finition is, to stick in the mud ; laboring in vain to disembarrass yourself; to proceed as if every moment sinking in a bog, or apprehensive of it : hence to boggle is to attempt a thing clumsily ; to be perplexed and to hesitate. The idea of a spectre or bugbear connected with the bog, is probably derived from the luminous vapors and exhalations which are general in bogs, and which often assume fantastic shapes, sufficient to alarm and terrify the ignorant rustic who may approach them at night.

You boggle shrewdly ; every feather starts you.

Shakspeare.

You have been a boggier ever. Id.

And never boggle to restore The members you deliver o'er, Upon demand. Httdibrat,

Nature, that rude, and in her first essay, Stood boggling at the roughness of the way, Used to the road, unknowing to return, Goes boldly on, and loves the path when worn.

Dry den.

The well-shaped changeling is a man that has a ra- tional soul, say you? Make the ears a little longer, and more pointed, and the nose a little flatter than ordinary, and then you begin to boggle. Locke.

BOGIN (John Baptist), a native of Turin, was born in 1701. At seventeen he was made a doctor of laws, and in 1 730, Victor Amadeus raised him to be high chancellor. Under Charles Emmanuel he also filled several high offices with distinguished talent and success. Piedmont and Sardinia are indebted to him for many use- ful institutions. He was however dismissed after the death of Charles Emmanuel He died .n 1784

BOGLION BOGLIUNO, or BULLION, a mar- Ket town of Austria, in the province of Istria, countv of Mitterburg, situated in a hilly country wmcn abounds in corn, oil, and wine. Twenty- seven miles S. S. E. of Trieste.

BOGLIPORE, or BHAGELPORE, a considera- ole district of the province of

Bahar, Hindostan. It is nearly equally divided by the Ganges, and part of it is very productive. About the year 1780, Mr. Cleveland, a British judge and col- lector, first introduced civilisation among them. The country abounds with tigers, and other wild animals ; very fine honey is also found.

BOGLIPORE, the capital of the above district, on the south bank of a branch of the Ganges, is about two miles from that river. It is handsome and flourishing, being the residence of all thf civil officers, and has an extensive manufacture of mixed silk and cotton cloths.

BOGMARUS, or VOGMERE, in ichthyology, the Virgin of the Gulphs, so called by Schneider, a genus of fishes, of the order acanthopterygii, family taenioides. Its characters are : dorsal fin extends along the whole back ; the pectoral fins are small ; and the tail consists of four radii. No anal or ventral fins. The species are 1 . B. islandicus, about four feet long, with the body long and compressed, covered with deciduous silvery scales ; the vertex parallel with the back, broad above the nostrils, and keel-shaped near the spine : from the middle the body begins to diminish, and terminates in a sharp tail. 2. B.

lanceolatus, Cuv. ; regalec lanceole, Laeep. ; lance-tailed vogmere. This fish is described by Lace"pede in his genus regalecus, but it cannot belong to that as it does not possess any ventral fins.

BOGODUCHOW, a considerable town of Charkov, in European Russia. The occupation of the inhabitants is the tanning of leather ; the population 6800, Here are held six yearly markets. Eighty-four miles N. N.W. of Charkov.

BOGOMILI, or BOOˆRMIT, in church his- tory, a sect of heretics, which arose about the year 11 79. They held that the use of churches, of the sacrament of the Lord's Supper, and all prayer, except the Lord's Prayer, ought to be abolished ; that the baptism of Catholics is im- perfect ; that the persons of the Trinity are une- qual ; and that they oftentimes made themselves risible to those of their sect.*

BOGORODITZK, a town of Russia, in Eu- rope, the capital of a circle in the government of Toula. It consists of eight principal and six cross-streets, and has an imperial castle, with a garden, four churches, 400 houses, and 5000 in- habitants, sixteen miles east of Toula, and 456 S. S. E. of St.

Petersburgh. %

BOGOTA, Rio DE, or FUNCĀ«A, a large river of South America, in the kingdom of New Grar nada, rising near the city of Santa Fe. After watering the elevated plain on which that city stands, it forms the cataract of Tequendama. A little above the fall, the river is about 140 feet wide, but it suddenly contracts to the width of forty feet before it reaches the crevice. Here, by a kind of double bound, the water is precipi- tated downwards nearly 600 feet perpendicular;, from the yawning gulf, a column of vapor rises like a thick cloud, and may be seen at Santa Fe, a distance of fifteen miles.

BOGOTA is also a river in the kingdom of Quito, which unites itself with the Santiago and San Miguel, before they form the port of Limona in the Pacific Ocean.

BOGW ANGOLA, a large and flourishing town of Bengal, in the district of Moorshedabad, on the south bank of the Ganges, which en- croaches upon it rapidly ; the houses are there- fore entirely constructed of wood, bamboos, and mats. It is chiefly inhabited by the agents of the merchants of Moorshedabad, and is the depot of great part of the commodities destined to or from that city during the dry season.

BOHADDIN, or BOH-A-EDDYN, an eminent Arabian writer and statesman, better known in the East under the appellation of Ibn Sjeddad, the son of Sjeddad. He was born at Mossui in the year 539 of the Hegira, 1145 A. D., and be- came early eminent in the study of the Koran, as well as that of jurisprudence. At the age of twenty-seven, he became repeater or lecturer at Bagdad ; and soon after professor in a College founded at Mossui. In 1187, he made the pil- grimage to Mecca, and proceeded to visit Jeru- salem and Hebron. In passing through Damas- cus, he was sent for by the sultan Saladin, then waging war against the enemies of the faith. He, therefore, composed a treatise on The Laws and Discipline of Sacred War; and made a collec- tion of all the passages in the Koran and books

of traditions, in which the extermination of in- fidels is recommended. This work, on his re- turn, he presented to Saladin, who received it with great favor. Bohaddin afterwards wrote several works on Jurisprudence, Morals, and Divinity ; and finally, a Life of Saladin, of which the learned Schultens published an excellent edi- tion in folio, at Leyden, 1732.

BOHAR, in ichthyology, a species of sciaena, a native of Arabia. The color is red, lineated, and clouded with white. The body is of an oblong form, and covered with smooth scales ; there are two large spots on the back, which disappear after the fish is dead. There are two short cirri : in the

upper jaw two subulate teeth, projecting beyond the lower. The lateral line runs nearer to the back. Dorsal and anal fins rounded behind, and the unarmed part of both scaled, the spines of the latter growing gradually larger : ventral con- nected by an intermediate membrane. Tail bifid.

BOHEMIA, an ancient kingdom of the Aus- trian empire, in the centre of Germany, so called from the Boii, a branch of the Celts, who passed from Gaul into Germany about 600 years before the Christian era. Having proceeded to the frontiers of Quadi and Sarmatia, they settled themselves in that part of the ancient Hercynian forest, under their leader Segovesus. About the period of the birth of Christ, they were conquered by the Marcomanni, who held the country till the sixth century, when they were driven out by the Sclavonians, under a leader named Czechow, after whom the Bohemians still call themselves Czechowians, and their country Czechy. Some writers state that they at this time received the knowledge of Christianity.

Bohemia is situated between latitude 48Ā° 30′ and 51Ā° 5’, and bounded by Saxony and Silesia on the north, Bavaria and Austria Proper on the west and south, and Moravia on the east. It is of an oval figure, comprising about 20,245 square English miles, and a population, accord- ing to the latest enumeration, of 3,203,300 indi- viduals, or about 158 persons to each square mile. It once included, besides the present kingdom, Moravia, Silesia, and Lusatia. In 1751 Bohemia was divided into sixteen circles, exclusive of Prague, which ranks as a separate district, each of which derives its name from its chief town. The following was their extent and population in 181 1 : ā

Circles. Square miles. Population.

Prague, district of 55 . . 81,966

1. Beraun . . . 1406 . . 131,770

2. Biczow . . . i-053 . . 195,117

3. Budweis . . . 1670 . . 169,025

4. Buntzlau . . . 1617 . . -313,592

5. Chrudim ... 1362 .. 241,786

6. Czaslau ... 1298 .. 178,259

7. Elnbogen ... 1000 .. 188,472

8. Kaurzim . . . 1037 . . 142,805

9. Klattau ... 872 .. 139,265

10. Koningsgratz . . 1287 . . 262,802

11. Leutmeritz . . 1349 . . 291,138

12. Pilsen .... 1596 . . 168,943

13. Prachin ... 1830 .. 209,416

14. Rakonitz . . , 1064 . . 133,015

15. Saatz .... 819 .. 118,086

16. Tabor .... 1277 . . 159,639

The Moldau, flowing from north to south, di- vides Bohemia into two parts, and, passing the capital, falls into the Elbe. Werner thinks that the site of this kingdom was once occupied by a great inland sea, the waters of which finally forced their way through the rocky pass by which the Elbe now passes the Bohemian frontier into Saxony. This is at the present time its princi- pal river, receiving in its course the tributary streams of the Moldau, the Auxa, the Crelitz, the Orlitz, the Dobrawa, the Iser, and the Eger. The surface of Bohemia is one general and con- tinued declivity towards the centre. Round the north-east frontier stretch the Sudetic chain and the Riesengebiirge ; the mountains of Moravia encompass it on the south and south-east ; the Bohmervvald (a part of the ancient Sylva Her- cynia), rises on the west, and the Erzgebiirge on the north. No stagnant waters or marshy lands, are found. Its immense margin of mountains is com- posed of granite, upon which mica, gneis, slate, porphyry, and other primitive rocks are depo- sited ; on which again, rest limestone, sandstone, floetz, and other species of later formation. The highest summits of the Bohmerwald are covered with a kind of brushwood ; but the upper parts of Riesengebiirge are almost bare, and the snow remains in hollows during the whole year. The loftiest and most naked branch of this chain is called, in German, Riesengeburge, the moun- tains of the giants. The Sudetes are a noble rampart of mountains, surmounted by mountains placed almost transversely. Their principal masses are composed of granite, round which, as a nucleus, are formed strata of porphyry, and mica and clay slate. On the south-east the gra- nite disappears, and the mountains dwindle. This

intermediate chain, which connects the Su- detes with the Carpathian Alps, is called by a general name Moravian Hills, or Gezenkerge- biirge, lowered mountains. The mountains of Carlesberg and Maunhast gird Bohemia on the south, and touch, on the west, the hills named the Forest of Bohemia (Bohmer-Wald), which are much less elevated than the Sudetes, and are clothed with verdure to the top. At the western extremity of Bohemia, the Fichtelge- biirge, or mountain of pines, rises to the height of 3630 Rhenish feet, and forms a common centre to the three chains which separate Franconia from Saxony, as well as Bohemia from Saxony and Bavaria. Between Saxony and Bohemia, run the mountains named Erzgebiirge, or me- tallic mountains, which join the Sudetes in Lu- satia. On the Saxony side, these mountains rise to the height of 3600 or 3700 feet above the level of the sea. On the Bohemian side, they present a great number of basaltic elevations ending in peaks, which give a most beautiful and pictu- resque finish to this part of the scenery.

The climate of Bohemia is said to be delight- ful ; and the spring season of Italy itself not more enchanting. Neither summer nor winter occur in extremes ; the same mountains that shelter it from winds, afford those salubrious streams which refresh and fertilise every thing around them. The soil of its noble plains is also extremely fertile, supplying not only its numerous population, but the greater part of

Silesia and Saxony, with grain. Hops, flax, and hemp, are also grown in considerable quantities ; as well as many kinds of superior fruit. The first of these articles is nowhere excelled : and vineyards, upon a small scale, are interspersed through the country. From the Statement of the Extent and Produce of arable lands in Austria, made by M. Blumenbach in 1816, it appears that the extent of arable land in this country is 2,828,437 joch, and taking away one-third as fallow land, 1,885,618 joch remain, whence the average of each joch will be at least thirteen metzen. The joch is about an English acre and a half, and a metzen If Winchester bushels; by dividing, therefore, 22 f by 1Ā£, we shall have 15J bushels as the average produce of each English acre. The entire yearly average, from 1785, has been 1,874,241 metzen of wheat, 10,067,145 metzen of rye, 4,149,429 metzen of barley, and 8,278,546 metzen of oats. The extent of the Bohemian vineyards is stated by this writer at about 4408 joch, and the produce at rather less than six eimers per joch, which gives 26,448 eimers for the whole produce. M. Blumenbach states the average return for the above period to have been annually 26,326 eiraers, Now, the eimer being equal to fifteen English wine gal- lons, this is only about sixty gallons, or less than a hogshead for each English acre.

Excellent cattle are bred here, and very valua- ble horses. The breed of sheep also has been decidedly improving of late years, but their num- bers

seem to be decreasing. In 1813 they stood thus : ā

Oxen Cows Horses Sheep

257,779

617,476

119,122

1,090,241

The whole produce of the Austrian empire in the last article of stock not being more than 2,669,627. Here are also vast herds of swine, and domestic and wild fowl, and all sorts oi game in abundance.

The minerals of Bohemia are also important. Gold has been found in various parts, but has not been worked with much success. The richest silver mines were once at Kuttenburg, but these are now inundated. From Joachimstahl, the district of Elnbogen, and the circles of Pilsen and Prachin, are yielded about 2400 marks, of eight ounces, annually. Of iron, diffused through the mountains of Bohemia, 200,000 quintals ; a little copper and lead from Elnbogen, and va- luable tin from Bohemia proper. The revenue of the mine production, altogether, is taken at about Ā £100,000 yearly, a million florins of Vienna. Other minerals afforded by the country are, anti- mony, arsenic, bismuth, cobalt, zinc, sulphur, and black and brown coal. Alum is also abundant, and in some parts limestone, and porcelain clay. There are also rich quarries of beautiful marble, especially at Tesin in the circle of Beraun. Jasper is found in considerable quantities, as. well as alabaster, asbestus, serpentine. Several gems are found in Bohemia, viz. sapphire, topaz, precious garnet, hyacinth, and pyrope. The sapphires are small, and of but little value ; th<Ā± topazes scarcely equal those of Saxony ; thepre-

cious garnet has a good fire and water ; the hya- cinths are small, and not fit for the purposes of jewellery , and the pyrope, (the carbo pyropus of the ancients), is remarkable for its fine deep blood-red color and great transparency, and is in high estimation. Very fine agates also occur.

Linen is an article of much importance in Austria; and Bohemia and Moravia are the principal seats of the manufacture. In the year 1801 the number of spinners of flax in Bohemia alone, amounted to 230,000 ; the

*weavers to 85,000 ; and, by the calculations made in 1808, they appeared to be increasing. The manufactures include, in addition to linen, woollens, cottons, silks, cambrics, thread, laces, hats, paper, ribbands, stockings, hardware, porcelain, mirrors, fire-arms, and tin works of all descriptions. The com- merce of Bohemia is fettered by the soccage of the towns, and the want of great points of con- centration ; still there are few countries where the balance of trade is more uniformly favorable. It is said, that there is also another circumstance extremely prejudicial to the interests of the na- tives ; the disproportionate number of Jews, and, in some districts, of Greeks and Armenians, who have engrossed almost all the trade of thecountry. * It is a demonstrable and notorious fact,' says Schreyer, in his work on the Commerce and Manufactures of Bohemia, * that in every town, and in everyplace where the Jews are established, the Christian tradesmen are reduced to the most wretched condition, and that the Jews have en- riched themselves at their expense. The traffic is principally in its own manufactures, and the countries to which Bohemia principally exports, are Austria, Spain, Portugal, Italy and Turkey. The elegance of its cut glass ware, we should here add, occasions such a demand for it, that it is sent not only to most of the European na- tions, but to America. There is a chamber of commerce resident at Prague, subordinate to that of Vienna. This chamber consists of a president, who is, at the same time, a privy counsellor, of six counsellors, and some other officers. Subor- dinate to them are eight inspectors of the pro- vinces, who make regular tours through the districts assigned them, examine the various factories, and give in a report of them to the chamber.*

No part of the Austrian dominions, except perhaps some parts of Italy, is equally populous, The number of inhabitants in 1789, amounted to 2,852,463; in 1811 to 3,137,495 : of the latter number 1,429,725 were males, and 1,684,543 females ; yet it is asserted, and desolate towns, castles, and villages, confirm the account but too well, that Bohemia is in this respect inferior to what she was in former days, before religious and political persecution drove thousands of her in- habitants from their homes.

The emperor of Austria is at present king of Bohemia, and the general government consists of six courts. 1. The Council of Regency, or great Royal Council, which consists of the su- preme Judge, or Burgrave of Bohemia, with eighteen Lieutenants of the king, and other as- sessors. 2. The superior Chamber of Justice in which the Grand Master of (he kingdom presides. '}. The Chamber of fiefs. 4. The new Tribunal,*

for judging the appeals of the German vassals, having a president, vice-president, and other officers. 5. The Royal Chamber of finances, under the superintendence of a president and vice-president ; and the Chancery, which always follows the Court, and is consequently established at Vienna.

The States or Legislative bcdy, con- sist of the nobles, clergy, and deputies, from several towns, which meet annually at Prague, the capital, rather to receive the orders of the Court than to enact any legislative measures. There are also Courts of Justice established in each of the circles, with the privilege of appeal to the High supreme Court at Prague.

The Bohemian nobility are not numerous, but are on the whole in better circumstances than in other parts of Germany : there are reckoned ten princes, 110 counts, 82 barons, and 238 knights. The peace establishment of the army consists of between 50,000 and 60,000 men; all matters relative to which, are under the management o! a military tribunal instituted at Prague. The annual revenue is about Ā£2,000,000 English money. The number of towns in the whole kingdom was, in 1811, 266, burghs 295, villages and farms 11,892, houses 521,700: there are also 41 decayed towns and villages, and 516 ruined castles. Its ouly mercantile towns are PRAGUE and TOEPLITZ, which see.

The inhabitants are in general brave, handsome, and active ; bearing a general resemblance both in appearance, manner, and language, to the Poles. Dubravius, bishop of Olmutz, in the sixteenth century, thus strikingly describes them : ā As this land is under the influence of the lion, so its inhabitants have the qualities of that noble animal. Their high breast, their sparkling eyes, their long and thick hair, their vigorous limbs, their strength, their courage, their resistance to obstacles, every circumstance shows evidently that the lion is their star, as he is their emblem.' They are beyond comparison the best of the im- perial troops. The language is a dialect of the Sclavonic, nearly allied to the Polish, but con- taining more words of German origin. They formerly used the Russian character, but Latin has been now in use for many centuries. The Austrian government has made frequent attempts to supplant the Bohemian by the German lan- guage, particularly by the appointment of Ger- man teachers in the schools ; but though German is the language of all the courts and public busi- ness, and spoken in all the towns, the Bohemian must still be considered as prevailing.

The Roman Catholic is the established reli- gion, and after the banishment of the Hussites and Protestants in the fifteenth and seventeenth centuries, was almost the only one in the king- dom, except that of the Jews. It was not in- deed till the edict of toleration passed by Joseph II. in 1781, that the Protestants here declared their numbers, or enjoyed the free exercise of their worship. The total number of dissenters from the church of Rome is now about 100,000, of whom 46,000 are Jews, 34,000 Calvinists, 11,000 Lutherans, and the remnant of the Greek church and other persuasions. The Jews have synagogues in several places, an university at Prague, and eighteen rabbins stationed in dif

ferent parts of the country The Catholic church is under the archbishop of Prague, who has for suffragans the bishops of Leutmeritz, Konigs- gratz, and Budweis ; and is ex-officio legate of the apostolic see.

While Christianity, as we have seen, is sup- posed to have been first introduced into Bohe- mia about the sixth century ; the inhabitants seem to have had but an imperfect acquaintance with it till the middle of the ninth, when the Greek religion and customs were adopted by them, and continued to be maintained until Bolislaus the Good re-established the Romish domination. Bohemia will ever be famous in the annals of Protestantism. Here the reformation of church

buses was nobly begun in the fourteenth and fifteen centuries, by John Huss and Jerome of Prague ; and these courageous champions of the primitive faith were brought to the stake, at the council of Constance in 1415. Their adherents were at the same time put under the ban of the empire, and a bloody war ensued. Previously to the great reduction of monastic institutions made in the Austrian dominions by Joseph II. there were in Bohemia no less than 165 of these foundations, whereof only about one half now remain. The establishments for education and literature have, on the other hand, been greatly augmented and improved. In 1785 there was erected an Academy of Sciences and an university at Prague, as well as fifteen acade- mies for youth in different parts of the kingdom : there are moreover twenty high schools, above 2200 town and country schools, 200 schools of industry, and forty ladies' schools. An Agricul- tural Society was established in 1766, arid there are several other institutions for the promotion of the arts, particularly music, in which the Bohe- mians have been long celebrated.

The greatest disadvantage of this beautiful country, is the extreme depression of its pea- santry, and the entire want of a middle class of society. Latterly the peasantry of the imperial domains have been liberated from their old feudal thraldom, and it is hoped, that the Bohe- mian nobles may gradually be induced, by their own evident interest, to follow the example of their sovereign : but generally the whole of its inhabitants are divided into the abject poor, or the petty kings of the land. See Raymond's Tableau Statistique de la Monarchic Autrichienne, 1809; Riesbeck's and Neale's Travels; and Hassel's Stoats und Address- Handbuch der Teutschen Bundes-Staaten, 1816, &c.

BOHEMIA, a short navigable river of the United States, in the eastern shore of Maryland. It rises near the divisional line of the state of De- laware, and, after running west about six miles, turns W. N. W. and falls into the Elk, about four miles above Turkey-point.

BOHEMIAN BRETHREN, a sect of Christian eformers which sprung up in Bohemia in 1467. They treated the church of Rome as the whore predicted in the Revelation ; and rejected the sacrament of the Romish church ; and chose laymen for their ministers ; they held the Scrip tu-es to be the only rule of faith, and kept no fesdvals but Christinas, Easter, and Whitsuntide. Jn 1504 they were accused by the Catholics to

king Ladislaus II. who forbad them to hold any meetings either private or public. When Lnther declared himself against the church of Rome, the Bohemian brethren endeavoured to join his party. At first that reformer showed a great aversion to them ; but the Bohemians sending their deputies to him in 1523, with a full account of their doctrines, he acknowledged that they were a society of Christians, whose doctrine came nearest to the purity of the gospel. They published another confession of faith in 1535, in which they renounced anabaptism, which they at first practised : upon which a union was con- cluded with the Lutherans.

BOHMERWALD, the Bohemian forest, a ridge of mountains in Germany, penetrating Bavaria Proper on the west, and Passau. It separates the former from the Upper Palatinate, and is almost entirely covered with wood, par- ticularly on the Bohemia side. Here are also a number of iron works, glass houses, &c. The highest points are the Arber and Rachelberg.

BOHOL, or BOOL, one of the southern Phi- lippine isles, discovered by Magellan, 1621. It is about thirty-two miles in length, and twenty in breadth, and has been said to yield some gold. The chief town is Loboe. Distant ninety miles north of Mindanao.

BOHUN (Edmund), was born at Ringsfield, Suffolk, and was a member of Queen's College, Cambridge, but quitted the university, on the breaking out of the plague in 1666, without taking a degree. He entered at the Temple, and in 1675 took out his dedimus as a magistrate for the county of Suffolk, but having rendered him- self obnoxious to James II. that monarch re- moved him from the commission. On the ac- cession of William and Mary his name was replaced. His works are, A Defence of king Charles IPs Declaration, 4 to ; another of Sir R. Filmer against Algernon Sydney, and a preface to the former author's Patriarcha, in 8vo ; two dictionaries, one Geographical, in 8vo, the other Historical, Geographical, and Poetical, in folio ; The Justice of Peace's Calling, 8vo ; a History of the Desertion, &c. 8vo, 1689; A Life of Bishop Jewel, and a Character of Queen Eliza- beth,

both in 8vo. He also wrote a Treatise on the doctrine of Passive Obedience, in 4to., and translated Puffendorf's Germany, Sleidan's His- tory of the Reformation, and Wheare's Mode of Reading History. He died some time in the reign of queen Anne.

BOHUS, or BAUDS, a government of West Gothland, now forming the greater part of the province of Gotheborg, Sweden. It bears the title of duchy, and extends in length about 112 English miles from the fortress of this name to Frederickshall in Norway ; its greatest breadth is eighteen English miles. It is bounded on the east by Elfsborg, and on the west by the Scagger- rack, and contains thirteen bailiwics. It is for the most part level, and diversified by fertile meadows, forests, lakes, and rivers. Of the last, the most considerable is the Gotha-Elf, which falls into the North Sea near Kongelf. The inˆ habitants maintain themselves by agriculture, the manufacture of salt, fishing (particularly her-, rings), and a trade in wood, cattle, hides,

pitch, and lime. Tt includes the valuable islands of Oroust and Tjoern.

BOII, a people of Gallia Celtica, who inha- bited the country extending from the Ligeris, or Loire, to the Elaver, or Allier ; whence came the Boii of Gallia Cisalpina, whose migration is re- lated by Livy.*

BOIL', v. & n.ˆ Fr. bouillir ; Lat. bullio.

BOIL'ING, >To be agitated by heat; to

BOIL'ER J fluctuate with heat; to be*

fervent or evanescent ; to move with an agita- tion, like that of boiling water ; to be in hot liquor; to cook by heated water ; to seeth. It is, figuratively, expressive of an animated, ardent, eager state of feeling ; speaking, or acting.

Nay, 111 come ; if I lose a scruple of this sport let me be boiled to death with melancholy. Shakspeare.

Fillet of a fenny snake, In the cauldron boil and bake. Id.

To try whether seeds be old or new, the sense cannot inform ; but if you

boil them in water, the new seeds will sprout sooner. Bacon.

In eggs boiled and roasted, into which thetwater en- tereth not at all, there is scarce any difference to be discerned. Id.

That such alterations of terrestrial matter are not impossible, seems evident from that notable practice of the boilers of salt-petre. Boyle.

While we perhaps,

Designing or exhorting glorious war, Caught in a fiery tempest shall be hurled Each on his rock transfixed, the sport and prey Of racking whirlwinds, or for ever sunk Under yon boiling ocean, wrapt in chains ; There to converse in everlasting groans Unrespited> unpitied, unreprieved. Ages of hopeless end. ililtM.

So through the mortal fruit we boil

The sugar's uncorrupting oil ;

And that which perished while we pull

Is thus preserved clear and full. Marvell.

That strength with which my boiling youth was fraught,

*When in the vale,of Balasor I fought. Dryden^*

Well I knew

What perils youthful ardour would pursue, That boiling blood would carry thee too far. Dryden.

If you live in a rich family, roasting and boiling are below the dignity of your office, and which it be- comes you to be ignorant of. Swift.

Suppose the earth removed and placed nearer to the sun, in the orbit of Mercury, there the whole ocean would boil with extremity of heat. Bentley.

A few soft words and a kiss, and the good man melts ; see how nature works and boils over in him.

Gangrene.

Then headlong shoots beneath the dashing tide, The trembling fins the boiling waves divide. GayĀ»

Borne by the outrageous flood

To distance down he rides the ridgy wave,

Or whelmed beneath the boiling eddy sinks.

Thomson.

BOILEAU, SIEUR DESPREAUX (Nicholas), the celebrated French poet, was born at Paris in 1636. His relations first designed him for the law, and he was admitted advocate. But he im- bibed a strong aversion for the bar, and com- menced the study of theology; but he here again could not long endure the chicanery of the school divinity ; he therefore renounced the Sorbonne, and devoted himself to the belles lettres. Like a late noble poet of our own country, Boileau

commenced his career as a satirist of his com- peers, and, at the age of thirty, published a col- lection of poems, attacking a host of inferior writers. The writers attacked, assailed him in return, and the duke de Montausier, and other moralists, expressed some dislike to the spirit of detraction thus aroused. Our poet now, there- fore, assumed the courtier toward that noble per- sonage, and lavished all manner of flattery on the vain-glorious Louis XIV. His ninth satire, A Son Esprit, is deemed a master- piece of keenness and polished irony. His satires were followed by his Art of Poetry, and, in 1674, by his mock- heroic poem of the Lutrin, founded on a trifling dispute between the treasurer and chanter of the holy chapel. These poems thoroughly establish- ed his reputation, and secured the good graces of the court, who gave him a pension, and the exclusive privilege of printing his own works. He was also appointed, in conjunction with Racine, royal historiographer. His ode on the taking of Namur was a result of this appoint- ment; but to lyric poetry his genius was not adapted. At court, he now appeared, it is said, with manly freedom, and often ventured upon observations unusually bold. When the king asked his opinion of a few verses which he had composed, ‘ Nothing, Sire, is impossible to your majesty,’ he replied ; ‘ you wished to make bad verses, and you have succeeded.’ In 1684 he was received into the French Academy, and the Academy of Inscriptions. He was as remark- able for his integrity, his innocence, and diffusive benevolence, as for the keenness of his satires. He died of a dropsy on the 2d of March, 1711, in the seventy-fifth year of his age. There are two actions recorded of Boileau, which suffi- ciently prove that this inexorable satirist had a most generous and friendly heart. When Patru, the celebrated advocate, who was ruined by his passion for literature, found himself under the painful necessity of selling his extensive library, and had almost agreed to part with it for a moderate sum, Boileau gave him a much supe- rior price ; and, after paying the money, added this

condition to the purchase, that Patru should retain, during his life, the possession of the books. The other instance is yet nobler : when it was rumored at court, that the king intended to retrench the pension of Corneille, Boileau. hastened to Madam de Montespan, and said, that his sovereign, equitable as he was, could not, without injustice, grant a pension to an author like himself, just ascending Parnassus, and take it from Corneille, who had so long been seated on the summit ; that he entreated her, for the honor of the king, to prevail on his majesty rather to strike off his pension, than to withdraw that reward from a man whose title to it was in- comparably greater; and that he should more easily console himself under the loss of that dis- tinction, than under the affliction of seeing it taken away from such a poet as Corneille. This magnanimous application had the success which it deserved, and it appears the more noble, that the rival of Corneille was the intimate friend cf Boileau. The long unreserved intercourse whi

dying farewell of the latter is the most expressive eulogy on the private character of Boileau : ‘ Je regarde comme un bonheur pour moi, de mourir avant vous,’ said the tender Racine, in taking a final leave of his faithful and generous friend.

BOILING, or EBULLITION, the bubbling up of any fluid. The term is most commonly applied to that bubbling which happens by the applica- tion of fire, though that which ensues on the mixture of an acid and alkali is sometimes also distinguished by the same name. Boiling, in general, is occasioned by the discharge of an elastic fluid through that which is said to boil ; and the appearance is the same, whether it is common air, fixed air, or steam, that makes its way through the fluid. The boiling of water is proved by Dr. Hamilton of Dublin, in his Essay on the Ascent of Vapor, to be occasioned by the lowermost particles of the water being heated and rarefied into vapor by reason of the vicinity of the bottom of the containing vessel ; in consequence of which, being greatly inferior in specific gra- vity to the surrounding fluid, they ascend with great velocity, and lacerating and pushing up the body of water in their ascent, give it the tumul- tuous motion called boiling. That this is occa- sioned by steam, and not by particles of air or fire, as some have imagined, may be very easily proved in the following manner : let a common drinking glass be filled with hot water, and then inverted into a vessel of the same ; as soon as the water in the glass begins to boil, large bub- bles will be observed to ascend in the

glass, which will displace the water in it, and in a short time there will be a continual bubbling from under its edge ; but if the glass is then drawn up, so that its mouth may only touch the water, and a cloth dipt in cold water be applied to the outside, the steam withih it will be instantly con- densed, and the water will ascend so as to fill it entirely, or very nearly so. See EVAPORATION. BOILING, in the culinary art, is a method of dressing meats by coction in hot water, intended to soften them, and dispose them for easier di- gestion. The effects of boiling are different ac- cording to the kinds and qualities of the water. Pulse boiled in sea water grows harder ; mutton boiled ir the same becomes softer and tenderer. BOINITZ, a market town of Hungary, in the circle of Boinitz and county of Neitra. Here is a castle, Catholic church, and, in the suburbs, a warm bath. The circle contains five market towns. Eleven miles W. N. W. of Kremnitz.

BOIS-LE-DUC, a large town of the Nether- lands, in Dutch Brabant, situated at the conflux of the Dommel and Aa, which here takes the common name of the Diest. It is called, in Brabant, s' Hertogenbosch, or simply Bosch, which has the same meaning as Bois-le-Duc, namely, the Duke's Wood, the dukes of Brabant being accustomed to take the diversion of the chace in this neighbourhood. Duke Godfrey laid the foundations of the town in the year 1184, which was finished by his son Henry in 1 196, and again considerably enlarged in 1453. It is entered by four gates, and surrounded with walls, flanked by seven bastions ; and can be insulated at pleasure from the rivers adjacent. It is, be- sides, protected by the forts of Crevecceur, Isa-

bella, St. Anthony, an 1 the strong citadel called Papen-Briel. The cathedral, which is dedicated to St. John, and built in 1366, is one of the finest structures in the Netherlands. It had formerly a wooden tower, which could be seen from Ant- werp, but was destroyed by lightning in 1584. Four other churches have been converted into warehouses. There were formerly sixteen mo- nasteries here ; that of the Jesuits is now the go- vernor's palace, and the rest are suppressed. The population, about 14,000, carry on a considerable trade in corn, manufacturing knives, needles, and bleaching. Bois-le-Duc suffered severely in the religious wars of the sixteenth century, and did not fall finally into the hands of the Dutch till 1629. In September, 1794, an action took place near this town, between the British and French, in which the latter had the advantage, and on the 9th October of the same year the place was in- vested by Pichegru, and surrendered without much opposition. In January, 1814, it was sur- rendered to the Prussian army under General Bulow, after a siege of some weeks duration. The bishopric of Bois-le-Duc was founded by pope Paul IV. but is now suppressed. Eighteen miles E. N. E. of Breda, and forty-two S. S. E. of Amsterdam.

BOISSARD (John James), an antiquarian, born at Besanpon, the author of several collec- tions of Roman antiquities. He had a great passion for this study ; and drew with his own hand plans of all the ancient monuments of Italy. He died at Mentz, October 30th, 1602. His other principal works are, Theatrum Vitae Hu- manae; which contains the lives of 198 famous persons, with their portraits. A treatise de Divi- natione et Magicis Prsestigiis. These works are scarce, and esteemed by the antiquarians.

BOISSEAU, a French bushel, being the twelfth part of a septier, and somewhat less than our London peck and a half. A boisseau of wheat weighs twenty pounds ; our peck of wheat-meal fourteen.

BOISTOUS, ˆ Dutch, busen; Germ.

BOIS'TOUSLY, beisin. The Dutch bi-

BOIS'TOUSNESS, ! ister or byster is furi-

BOIS'TEROUS, f ous; raging; turbulent.

BOIS'TEROUSLY, | The German beisin, to

BOIS'TEROUSNESS. J pierce through; to bite

like a severe biting north wind : hence boistous

and boisterous ; and both are applied, says the

Ency. Met. to any thing turbulent, tempestuous,

stormy, violent ; to any thing coarse, rude, and

noisy. Spenser uses it in the sense of ponderous

and clumsily violent. The adjective is used by

Woodward as descriptive of excessive heat.

I am a boistous man, right thus I say. Chaucer.

He on a day in open audience Ful boistously hath said, hire this sentence. Id.

His boisterous club, so buried in the ground. He could not rearen up again so light, But that the knight him at advantage found.

Faerie Queene,

By a divine instinct, mens' minds mistrust Ensuing danger ; as by proof we see The waters swell before a boisterous storm.

Shakspeare.

A sceptre, snatched with an unruly hand, Must be as boisterously maintained as gained. /d.

BOK

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His sweetness won a more regard TJnto his place, than all the boisterous moods That ignorant greatness practiseth. Ben Jonson. Yet oft in words he spends his boitterou threat j That his hot blood, driven from the native seat. Leaves his faint coward heart empty of lively heat.*

Fletcher's Purple Itland.

As good for nothing else, no better service With those thy boisterous locks, no better match For valour to assail, nor by the sword Of noble warrior, or so to stain his honour, But by the barber's razor best subdued.

Milton's Samtvn Agonistes.

God into the hands of their deliverer Puts invincible might,

To quell the mighty of the earth, the oppressor,' The brute and boisterous force of violent men.

Milton.

As when loud winds a well-grown oak would rend Up by the roots, this way and that they bend His reeling trunk, and with a boisterous sound Scatter his leaves, and strew them on the ground.

Waller.

Another faculty of the intellect comes boisterously in, and wakes me from so pleasing a dream. Swift.

BOKHARA, a city of Tartary in Asia, and capital of Great Bukharia, situated one days journey to the north of the river Jehun, or Amu. In 1219 it was besieged by Jenghiz Khan. At that time, besides the city-walls, which were very strong, Bokhara had an outward enclosure twelve leagues in

compass ; which shut in not only Che suburbs, but also many pleasant seats and farms watered by the river Soghd, from whence the ancient Sogdiana took its name. The Mogul army arrived before the place in July, and continued the siege during the following winter. In March, 1220, they forced the outer wall. Sul- tan Mohammed had left in the city a very nume- rous garrison under the command of three gene- rals, who now made a sally at the head of 20,000 men : but, being repulsed with great loss, their courage failed them ; and, returning into the city by one gate, they passed out by another with their families, hoping to escape by the darkness of the night. Their design, however, was dis- covered, and being pursued by a detachment of 30,000 Moguls, they were overtaken at the Amu, and after a bloody dispute, were almost all cut to pieces. Meantime, Jenghiz Khan, being in- formed of the confusion into which the city had been thrown by the desertion of the garrison, ordered an attack to be made on all sides simul- taneously ; but while lie was preparing for this, the magistrates and clergy went out and presented him with the keys. Jenghiz Khan granted them their lives, on condition that they discovered all who should be suspected of being in the sultan's interest; which they promised to do upon oath. The young people, however, who were displeased with the surrender, retired with the governor to the castle, which was very strong, and resolved to defend it to the last extremity. Jenghiz Khan, having taken possession of the town, entered on horseback to the great mosque, and taking up the Koran threw it under the feet of his horses. Some days after, having assembled the principal people, he addressed them from a pulpit erected for that purpose in his camp, mentioned the per-

fidious behaviour of the sultan towards him, and told them that God had sent him to rid the %vorld of such men. He testified his satisfaction for their having freely furnished his army with ne- cessaries; and promised to restrain his soldiers from plundering, but commanded them to deliver up what they had hidden. Notwithstanding their strict compliance with this requisition, the tyrant soon after caused the city to be burnt to the ground, on pretence that some of the sultan's soldiers were concealed in it. The castle sur- rendered at discretion soon after ; and was also demolished. Bokhara continued in ruins for some years, but at length Jenghiz ordered it to be rebuilt. It is now large and populous ; and is the residence of a khan, who is altogether de- spotic. The town is seated on a rising ground, with a slender wall of earth and a dry ditch. The houses are low, built mostly of mud ; but the caravansaries and mosques, which are nume- rous, are all of brick or stone. The bazaars or market places, which have been stately buildings, ' are, with the trade of the place, greatly decayed. Great numbers of Jews and Arabians frequent this place, though they are much oppressed and frequently deprived of all their property by the khan or his attendants. At best they pay heavy taxes, and it is almost criminal to be rich. The

inhabitants are chiefly employed in manufactures of cotton yarn, calico, and soap. The city is a famous school for the Mahommedan priesthood ; and the population has been said to amount to 1,100,000. See BUKHARIA, GREAT.

BOL (Ferdinand), a celebrated painter of his- tory and portraits, born at Dort in 1611, and educated at Amsterdam. He studied in the school of the celebrated Rembrandt Gerretsz, and imi- tated the style of his master with success, both in pictures and engravings. Bol's etchings are bold and free. The lights and shadows in them are broad and powerful, which renders the effect striking ; but they want that lightness of touch and admirable taste, which those of llembrand. possess. Bol died at Dort, the place of his birth, in 1681, aged seventy.

BOLABOLA, or BORABORA, one of the Sand- wich isles, about twenty-four miles in circum- ference. It has a very lofty double peaked mountain in the centre ; is almost barren on the east side, but has trees and bushes on the rocky parts of the west. Along the coast is a border of low fertile land, covered with the bread-fruit and cocoa-nut trees, which are also seen on many of the surrounding islets. This is a popu- lous island, but there is only one harbour in it. BOLCA, MONTE, a hill or mount in the neighbourhood of Verona, in the north of Italy, celebrated for the abundance and remarkable va- riety of the organic remains which it exhibits, as well as for the striking relations these bear to minerals of volcanic origin. This spoi has long attracted the attention of philosophic enquirers ; various collections of its petrifactions have been made, and a considerable number of laborers occasionally employed in digging and preparing specimens. The formation of this hill is peculiar to itself; it consists of various substances, among which are marie, spar, basalt ; coal and amber ; marine plants, insects, fishes, and the remains of

terrestrial animals in a state of petrifaction. Con- nected with these, we find basaltic columns, scorije, lava, and other volcanic productions. The petrified substances do not lie in horizontal strata, but the masses of stone wherein they are contained are imbedded in the sides of the hill. The stone (in which the fishes are enclosed) is wholly calcareous, of a light color, of a dull though fine grain, and entirely destitute of any crystalline or sparry appearance. Some beds consist of a range of certain species, possessing a considerable similarity ; while in others, ani- mals of the most opposite

habits, and inhabiting different regions of the globe, as well as different elements of nature, are strangely brought into contact, and confusedly blended in one hetero- geneous mass. Corals, shell-fish, sea and river fish of various kinds ; insects, bones of different species of birds, remains of elephants, bears, and other quadrupeds, requiring for their existence different climates, are here united in extraordi- nary assemblage. The chaetodon mesaleucus, lately taken near the shores of Japan, and in the African seas, has also been found in a perfect state in the rocks of Bolca ; as well as the chje- todon argus, bearing a perfect resemblance to those caught in the rivers and stagnant lakes of India. The American cimex has also been dis- covered here. A young shark, now preserved in a cabinet, merits particular observation. It is only twenty-five inches in length, wanting a small portion of the tail, and four in breadth. The ravenous nature of the animal is disclosed by the contents of its stomach, which exhibit a quantity of sea crabs, in a half digested state. There have also been discovered the skeletons of two fishes imprinted on the same stone ; one of which has seized the head of the other, and seems in the act of swallowing it. However desirous we may be to enter into a more minute description of this hill, and to state the various theories that have been proposed to account for its formation, our .imits will not permit us, and we must refer our readers to the more extensive works of Bozza, Spada, Pini Testa, and Fortis, as also the Socie- tas Physicorum Veronensium, Ittiolitologia Vero- nese del Musaeo Bozziano.

BOLD', v. & adj.ˆ[Ang.-Sax. bald, says BOLD'EN, I Dr. Johnson ; byldan, says

BOLD'KACE, | Tooke; both have nearly the

BOLD'FACED,) > same signification : they are BOLD'HEDE, I applied to the strength and

BOLD'LY, | firmness of a well-com-

BOLD'NESS. j pacted, consolidated build-

ing; to any thing firmly constructed ; prominent and powerful, whether in nature or art, as a bold coast ; or in statuary, a bold figure. The adjective metaphorically describes what is fearless, daunt- less ; spirited ; courageous ; magnanimous ; in- trepid. It is however frequently used in a bad sense, to signify temerity, and whatever is daring, audacious, and impudent. To bold or bolden, is to inspire, to give confidence.

The wicked flee when no man pursueth ; but the righteous are bold as a lion. Proverbs.

Thou dranke, eke, of his vessels boldly, Thy wif, eke and thy wenches, sinfully Dranke of the same vessels sondry wines ;

And heried false goddes, cursedly ; Therefore to thee yshapen ful gret pine is.

Chaucer's Canterbury Tales. And as she lookt about, she did behold

How over that same dore was likewise writ,

Be bolde, be bolde, and every where be bolde;

That much she mused, yet could not construe it

By any ridling skill or commune wit.

At last she spyde at that rowmes upper end

Another yron door on which was writ,

Be not too bold, whereto though she did benfl

Her earnest miude, yet wist not what it might intend.

Spenser.

That moderation, which useth to suppress boldness, and to make them conquer that suffer. Hooker.

Quick inventers, and fair ready speakers, being baldened with their present abilities to say more, and perchance better too, at the sudden for that present, than any other can do, use less help of diligence and study. Ascham's Schoolmaster .

I am much too venturous

In tempting of yonr patience, but am baldened

Under your promised pardon. Shakspeare.

I speak to subjects, and a subject speaks,

Stirred up by heaven thus boldly for his king. Id.

Thus we may boldly speak, being strengthened with the example of so reverend a prelate. Hooker.

Wonderful is the case of boldness in civil business :

what first 1 Boldness. What second and third ?

Boldness. And yet boldness is a child of ignorance and

baseness, far inferior to other parts. .Bacon.

He looked and saw wide territory spread

Before him, towns, and rural works between,

Concourse in arms, fierce faces threatening war,

Giants of mighty bone, and bold emprize. Milton,

His distance, though it does not instruct him tc think wiser than other princes, yet it helps him tc speak with more boldness what he thinks. Temple.

Boldness is the power to speak or do what we in- tend, before others, without fear or disorder. Locke,

I can be bold to say, that this age is adorned with some men of that judgment, that they could open new and undiscovered ways to knowledge. Id.

How now boldface ! cries an old trot : sirrah, we eat our own hens, I'd have you know ; what you eat, you steal. , L' Estrange.

The figures are bold even to temerity. Cotoley.

Which no bold tales of gods or monsters swell,

But human passions, such as with us dwell.

Waller.

The boldness of the figures is to be hidden some- times by the address of the poet, that they may work their efl'ect upon the mind. Dryden.

Catachreses and hyperboles are to be used judi- ciously, and placed in poetry, as heightenings and shadows in painting, to make the figure bolder, and cause it to stand off to sight. Id.

I have seen those silliest of creatures ; and, seeing their rare works, I have seen enough to confute all the boldfaced atheists of this age.

Bramhall against Hobbes.

BOLE, in natural history, a viscid earth, less coherent, and more friable than clay ; more readily uniting with water, and more freely sub- siding from it; it is soft and unctuous to the touch ; adheres to the tongue ; and by degrees, melts in the mouth, impressing a light sense of astringency. Specific gravity 1-4 to 2. It may be polished. If it be immersed in water after it is dried, it falls asunder with a crackling noise. It occurs in wacke and basalt in Silesia, Hesse, and Sienna in Italy, and also in the cliffs of . the Giant's Causeway. It was formerly much

vised in medicine, particularly the Armenian and French. Several of these earths have been com- monly made into little cakes or flat masses, and stamped with certain impressions ; from which circumstance they received the name of terra sigillatae, or sealed earths. It is often mixed with honey, and applied to childrens' mouths when afflicted with aphthae. It forms, like all argillaceous earths, a good tooth-powder, when mixed with some aromatic.

BOLE, ARMENIAN, is of a bright red color, with a tinge of yellow. It is one of the hardest and most compact bodies of this class, and not smooth and glossy like the others, but generally of a rough and dusty surface.

BOLE, FRENCH, is of a pale red color, varie- gated with irregular specks of white and yellow. It is much softer than the Armenian, and slightly effervesces with acids.

BOLE OF BLOIS is yellow, lighter than most of the other yellow earths, and effervesces strongly with acids.

BOLE, SILESIAN, is of a pale yellow color, and acids have no sensible effect upon it.

BOLENI./E, or BOLJE, in natural history, a name given by ancient writers to stones of a roundish figure, marked with several ridges and lines. They are the same with those called brontiae and ombriae, both being imagined to fall from the clouds in time of thunder storms ; but they are really a common species of echinitae.

BOLESLAUS, I., king of Poland, was the son of Mieceslaus, duke of Poland, who, having embraced Christianity, had desired the title of king from the pope, but was refused it. Boles- laus found more favor with the

emperor Otho III., whom he entertained splendidly at Gnesna, during his pilgrimage to visit the relics of St. Adelbert; and who, in return, not only prevailed on pope Sylvester II. to confer the royal dignity upon Boleslaus, but invested him with his own robes, and gave him some of the insignia of the empire, A.D. 1001. Boleslaus was a brave and liberal monarch. He repulsed the Bohemians; chastised the Moravians ; punished the idolatrous Prussians, for the murder of St. Adelbert, whose body he redeemed ; and re-established Stopolcus, grand duke of Russia, deposed by his brother Jaroslaus. He married Judith, daughter of Geisa duke of Hungary, by whom he had several children, and died A. D. 1025.

BOLETIC ACID. Braconnot was the first to obtain this acid. He extracted it from the express- ed juice of the boletus pseudo igniarius described below. After boiling the juice, and carefully evaporating it to the consistence of a syrup, he digested it repeatedly in alcohol. What remained he dissolved in water, and from this solution he produced a white precipitate, by dropping nitrate of lead into it. Having washed the precipitate, he exposed it to a current of sulphureted hydro- gen gas, and thus engendered two different acids ; one a small portion of the phosphoric acid, the other in the form of permanent crystals, was the boletic acid, which was purified by solution in alcohol and recrystallisation. The crystals 'of boletic acid are prismatic, and of a white color ; they require 180 parts of water at 68Ā°, and forty-five parts of alcohol for solution. The aqueous solu-

tion reddens vegetable blues, and precipitates nitrate of lead ; it also precipitates the peroxide of iron from its solutions, but not the protoxide. The solutions of nitrate of silver and mercury, when treated with the boletic acid, throw down a white precipitate. This acid unites with alkalies and earths, and thus forms salts which may be named boletates.

BOLETO LICHEN, a name given by M. Jus- sieu to a plant, which partakes of the nature of the moreille and of the liverwort, and which he has accurately described in the Mem. Acad. des Sciences, Paris, 1728. This plant has the smell of the common mushroom, and, when young, has a viscous liquid contained under the foldings of its head, which, when the plant is arrived at maturity, dries into the form of an extremely subtile yellow powder, which is the seed.

BOLETUS, in botany, a genus of the order of fungi and cryptogamia class of plants. Lin- naeus enumerates fourteen species ; Gmelin 107. The following are the most remarkable : ā B. bo- vinus, is frequent in woods and pastures. It is generally of a brown color, though sometimes tawny, yellowish brown, reddish brown, deep red, purple, or greenish brown. The flesh is yellow, white, or reddish. The young plants are eaten in Italy, and esteemed a great delicacy. The Germans also account them a dainty,

calling them gombas, and brat-bulz. Cows, deer, sheep, and swine will feed upon this and other boleti, and are sometimes greatly disordered by them. B. igniarius, or touchwood spunk, is frequent on the trunks of old trees of all kinds, especially ash. This fungus is made use of in Germany and some parts of England for tinder. The Ger- mans boil it in strong lee, dry it and boil it again in solution of salt-petre. The Laplanders burn it about their habitations, in order to keep off a species of the gadfly, fatal to the young reindeer. Boletus, acaulis pulvinatus levis, po- ris tenuissimis of Linnaeus, has been much used by surgeons as an external styptic. Though still employed on the continent, our surgeons have not much confidence in it. B. laricis, the agaric of the shops, grows on old larch trees. It is an irregular spongy substance, extremely light, and of a uniform snowy whiteness. It cuts freely with a knife, and readily crumbles betwixt the ringers into a powder. It has no remarkable smell ; its taste is at first sweetish ; but on chew- ing for a short time, it proves acrid, bitter, and nauseous. Agaric was formerly in great esteem as a catharic, but it is now rejected both by the London and Edinburgh Colleges, though it still retains a place in most of the foreign pharmaco- poeias. Its infusion in water is yellowish, sweet tasted, and reddens vegetable blues. It contains muriate of potash, sulphate of lime, and sulphate of potash. Water boiled on agaric, becomes gelatinous on cooling ; and ammonia is exhaled by the addition of lime. Resin of a yellow color, with a bitter-sour taste, may be extracted from it by alcohol. It yields benzoic acid, by Scheele's process. The strong acids act with energy on agaric, and the nitric evolves oxalic acid. Fixed alkalies convert it into a red jelly, which emits an ammoniacal smell. B. suber- osus, or white cork spunk, grows commonly ou

the trunks of birch and willow trees in England. The upper surface is quite white, generally .covered with a short strong down, but sometimes smooth. The internal substance is thick, white, tough, light, and spongy, like cork.

BOLEYN (Ann), queen of Henry VIII. of England ; memorable in the English history as the first cause of the Reformation, as the mother of queen Elizabeth, under whom it was com- pletely established, and on account of her own sufferings. She was the daughter of Sir Thomas Boleyn, and born in 1507. Being taken into France at seven years of age by Henry VIIl's sister, the wife of Louis XII. she remained in the service of queen Claudia, the wife of Francis I. and after the death of that princess, went to the duchess of Alencon. Becoming maid of honor to queen Catharine of

Spain, Henry VI IPs first wife, that prince fell violently in love with her, and, determining to make her his wife, was induced to set on foot the divorce of Catharine. He married Ann Boleyn privately upon the 14th of November, 1532, and as soon as he perceived that she was pregnant, made his marriage public. She was declared queen of England on Easter-eve, 1533, and crowned the first of June following. On the 7th of September she became the mother of queen Elizabeth; and continued to be much beloved by Henry, till 'the charms of Jane Sey- mour fired that tyrant's heart in 1536. Then his Jove for Ann Boleyn was changed into violent hatred : he believed, or pretended that he be- lieved, her to be unchaste, and caused her to be imprisoned and tried. She was indicted of high treason, as an incontinent queen, according to .the statute made in the twenty-sixth year of this reign : so that the law which was made for her and the issue of her marriage, was now made .use of to destroy her. She was condemned to be either burnt or beheaded ; and underwent the latter punishment on the 19th of May, 1536.

BOLI, a large town of Natolia, in Asiatic Turkey, the capital of a district, and the residence of a governor. It stands in a fertile neighbour- hood, which supplies Constantinople with a great quantity of wood. The town is surrounded by a palisade, and contains numerous public edifices. Ruins are also seen in the vicinity, and marble fragments with Greek inscriptions are extant, half way between Boli and Jeredave, or Jere- dedel, from which it is distant forty miles. Seventy-four miles north-west of Angora, and 140 east of Constantinople.

BOLINGBROKE (Lord Viscount). See St. JOHN.

*BOLINGBROKE, a market town of Lincolnshire, in England, of great antiquity, but now in a mean condition. It is twenty-nine miles east of Lincoln. It was the birth-place of Henry IV. thence named Henry of Bolingbroke. It gives *itle of viscount to the family of St. John. The church was formerly very large, but the greatest part was destroyed in the civil war of Charles I. Market on Wednesday.*

BOLKENHAYN, a town and castle, the capi- tal of a circle in the principality of Schweidnitz, Silesia. It contains a Catholic and a Lutheran .church, and 1350 inhabitants, who are engaged

in the manufacture and sale of linen. The circle produces abundance of cattle, wood, and pit coal, and contains 60,000 inhabitants. It is enclosed by Bohemia, and the Silesian circles of Schweid- nitz, Hirschberg, Jauer, and Striegau. The number of towns is six ; villages ninety-four ; churches fifty. The town of Bolkenhayn is ten miles north-west of Schweidnitz, and forty south— west of Breslau.

BOLL', v. & n. > Germ, bol, any thing that BOL'NINGS. 5 grows round or globular; or whatever is made round by circumvolution; by winding or turning on a centre ; to rise out ; to swell out in a round form or shape. See BALI. and BOWL.

Ghe ben bolnum with pride.

Wicklif. 1 Cor. chap. v.

A little boll or cup to sacrifice and offer unto the gods withatl. Holland's Livivs.

Yet Phoebus loves her still, and carting round Her bole, his arms, some little warmth he found.

Dryden. Ovid's Metamorphoset. The storm for Bertram ! ā and it hath been wit !i

me

Dealt with me branch and bole, bared me to the roots.

Maturin's Bertram.

BOLLARDS, large posts set into the ground on each side of a dock. On docking or undock- ing ships, large blocks are lashed to them ; and through these blocks are reeved the transporting hawsers to be brought to the capstans.

BOLLITO, a name by which the Italians call a sea-green color in artificial crystal. To pre- pare it, put into the furnace a pot filled with forty pounds of good crystal, first carefully boiled and purified, without any manganese : then take twelve ounces of powder of small leaves of cop- per thrice calcined, and half an ounce of zaffre in powder : mix them and put them at four times into the pot, that they may the better mix with the glass ; stirring them well each time of putting in the powder, lest the mixture should swell and run over.

BOLLOS, in the mines of Peru, a name given to the bars of silver procured there from the ore, by the operation of fire and aquafortis.

BOLOGNA, an ancient, rich, and populous city of Italy, the capital of the Bolognese, and the second city of the papal territories. Its ancient name was Felsina. It is five miles in circumference, and contains about 70,000 in- habitants. The streets are narrow, and the carriage roads considerably below the porticoes, or covered footpaths. Its churches and eccle- siastical

buildings are the great ornaments of the place. Here is the celebrated leaning tower of Garisenda, which inclines about eight feet from the perpendicular line; and not far from it is the tower of Assinelli, built by Gerardo Assinelli in 1109, and the highest in Italy, except the cupola of St. Peter's at Rome. Its altitude is 371 feet. It is a square tower, ascended by 464 wooden steps, and leans between three and four feet from the perpendicular. In the church of St. Petro- nius, the coronation of Charles V., by pope Clement VII., took place in 1530. This church is 360 feet long, and 154 broad, with three handsome chapels on each side. It contains a meridian line, drawn in 1653, and renewed in 1695, which is half the length of the church, and

f oasists of pieces of red and white marble inlaid, about three or four inches broad. Being out of repair in 1776, they were renewed under the direction of M. Zanotti. The gnomon is eighty- three feet high, and a circular image of the sun, seven or eight inches in diameter, is admitted through an aperture in the roof. Another noble pub- lic building of Bologna is the Palazzo Publico,the residence of the pope's legate, the president of the council, &c. It is in the great market-place, and is of vast magnitude, containing the courts of justice and the arsenal, adorned with numer- ous statues and paintings. There is a large area in front, in the centre of which is a noble marble fountain. The university, supposed to have been founded in the year 433, by Theo- dosius, was greatly enlarged by Charlemagne, and is said to have been formerly attended by 10,000 students. It first encouraged the study of the Roman law in modern times, and received in consequence the title of Mater Studiorum. Here too was the seat of the celebrated Caracci's school of painting. Bologna is also celebrated in Italian history as the seat of various impor- tant families ; among whom the Lambertini have ever been eminent, and from them was descend- ed pope Benedict XIV., who presented his native city with his whole library, philosophical instruments, &c. esteemed of great value. A flourishing silk manufacture has been conducted here ever since the middle of the fourteenth cen- tury. On the banks of the Reno are established between 300 and 400 mills in constant work. Cloth and silk stuffs are also made ; and satins, damasks, taifeta, velvet, gauze, crape, and linen, give occasion to an active trade with Genoa, Leghorn, and Venice. The Academy of Sciences was founded in 1712 by the learned count Mar- sigli, one of the generals of pope Clement XL The fertile country around has obtained the ap- pellation of La Grassa: here vineyards, separated by rows of elms and mulberry

trees, and inter- spersed with melons, olives, 8cc. enchant the eye. Tobacco is also cultivated with great success, and the hemp grows to the height of twelve or thirteen feet. The French entered Bologna on the 19th of June, 1796, and made prison- ers the cardinal legate and the papal garrison. An armistice, concluded on the twenty-third of that month between the pope and Buonaparte, left the legation of Bologna (otherwise called the Bolognese), in the occupation of France ; and it was ceded in full, along with Ferrara and Ro- magna, by the subsequent treaty of Tolentino. Bologna was shortly after declared a free and independent state, in league with Ferrara, Mo- dena. and Reggio ; it was subsequently incorpo- rated with the Cisalpine republic. In the campaign of 1799 this city was taken by the Austrian general Klenau, with the valuable magazines of the army of Macdonald ; but, after the battle of Marengo, it again fell into the hands of the French, and was created the capital of the department of the Reno. It was restored to the pope in 1815, and is twenty-four miles south- east of Modena, twenty-six south-east of Ferrara, forty-eight north of Florence, and 180 N. N. W. of Rome.

BOLOGNA, or the BOLOGNESE, one of the Italian

States, containing about 200,000 inhabitants; it is bounded on the north by Ferrara, on the west by Modena, on the south by the duchy of Tus- cany, and on the east by Romagna, and is watered by a great number of small rivers, which renaer its soil, the most fertile perhaps of any in Italy. It produces all sorts of grain and fruits ; particularly muscadine grapes, which are in high esteem ; and has mines of alum and iron. This country, anciently belonging to the Boii and the Ligures, became in the middle ages a republic, under the protection of the emperors of Germa- ny. After being sold by a faction to the arch- bishop of Milan, the people shook off the yoke, but in the year 1513 they put themselves under the dominion of the pope, on condition that they should preserve their privileges. The head of the province now is a legate of the pope, who is commonly a cardinal, and is changed every three years ; ecclesiastical affairs, however, are subject only to the archbishop.

BOLOGNE, or BOULOGNE. See BOULOGNE.

BOLOGNIAN, or BONONIAN STONE, a phos- phoric substance, .first discovered near Bologna, in Italy, whence its name. It was supposed to contain some metallic matter, from its great spe- cific gravity ; but is now found to be only a compound of mucilage and sulphate of barytes. If sulphate of barytes be first heated to ignition, then finely powdered, and made into a paste with mucilage ; and this paste divided into pieces a quarter of an inch thick, and dried in a mode- rate heat, be exposed to the beat of a wind furnace, by placing them loose in the midst of the charcoal ;

a pyrophorus will be obtained, which, after a few minutes exposure to the sun's rays, will give light enough in the dark to ren- der the figures on the dial-plate of a watch visible. Mr. Scheffer, in the Memoirs of the Academy at Stockholm, for 1753, has communi- cated some experiments on a stone of this kind from China, wnich prove that it perfectly agrees with the description given in several books, of a stone called petuntse by the Chinese, said to be used in their porcelain manufactures.

BOLSCHERETSK, an important fortress and town of Kamtschatka, formerly the capital of that peninsula. It is situated on the banks of the Bolschaia Reka, twenty miles from its mouth, in a country almost entirely covered with rein-deer moss, whereon vast herds of rein-deer, formerly consisting of. 2000 or 3000, belonging to the crown, were pastured. The town is small, con- sisting of log houses. There is a church here, a court-room, and barracks for the military, and also a number of, huts of the Kamtschadales. Bolscheretsk was built in 1701 or 1703, destroyed in 1707, and rebuilt in 1711. The insecurity of the harbour has lately caused the seat of govern- ment to be transferred to Nischery Kamtschatka, at a considerable distance.

BOLSENA, LAKE OF, so called after a small town in the neighbourhood, once a bishop's see; called also Lacus Tarquiniensis, is about thirty miles in circuit, and surrounded by mountains, covered with noble forests. The whole presents the appearance of a vast amphitheatre, with a margin of towns and villages. The lake contains the two small islands of Mariana and .Bisentina;

the latter adorned with a fine Franciscan con- vent. The town of Bolsena is eight miles south of Orvieto and is known as the spot where the pretended miracle was wrought, which led to the institution of Corpus Christi day in 1252.

BOLSOVER, a market town of Derby, nine jniles east from Chesterfield, and 145 from Lon- don; containing 1245 inhabitants; it is plea- santly situate on the borders of Nottinghamshire. Here the Danes kept a garrison, and a few of their earth-works are remaining. It has a spacious and magnificent castle, founded by the family of Hastings, earls of Abergavenny, and is noted for the manufacture of tobacco-pipes. Market on Friday.

BOL'STER, v. & n. -\ Ang.-Saxe. bolster, BOL'STERED, ˆbolstre; from boll,

a

BOL'STERER, i round or ball, and ster

BOL'STERING, J or stre, straw, a roll of

straw, used generally for that article which sup- ports and raises the head in bed ; a pad or quilt to hinder any pressure, or fill up any vacuity ; to bolster is to give artificial support ; to uphold ; to maintain ; to supply for this purpose a tem- porary expedient : thus to bolster up the credit of an individual, is not to put it into a state of security, or actually to retrieve it, but to afford it insufficient, and in point of justice very ques- tionable, assistance.

We may be made wiser by the publick persuasions

grafted in men's minds, so they be used to further

the truth, not to bolster errour. Hooker.

It was the way of many to bolster up their crazy

doating consciences with confidences. South.

Mortal eyes do see them bolster More than their own. Shakspeare. Othello. Perhaps some cold bank is her bolster now, Or 'gainst the rugged bark of some broad elm Leans her unpillowed head. Milton.

Up goes her hand, and off she slips The bolsters that supply her hips. Swift.

This arm shall be a bolster for thy head ; I'll fetch clean straw to make a soldier's bed.

Gay.

BOLSTER, among surgeons, a soft yielding substance, either laid under the head or a broken limb. In this sense, bolsters are contrived for crooked, bunched, and otherwise distorted backs, shoulders, &c.

BOLSWAERT, an ancient town of the Ne- therlands, in West Friesland, thirteen miles south-west of Leenwarden, and seven S. S. E. of Harlingen. It has a good port, carrying on an excellent leather and woollen trade. Near the town, which is about two miles in extent, was formerly an abbey of the Cistertians, where the Munster Anabaptists took refuge in 1534, and where William, count of Holland, was buried in the fourteenth century. Population 2800.

BOLSWERT, or BOLSUERD (Boetius Adam A.), an engraver at Antwerp, flourished about 1620. He worked with the graver only; and imitated the free open style of the Bolemarts with great success. When he worked from Rubens, he altered that style ; and his plates are neater, fuller of color, and more highly finished. The two following are mentioned as capital : 1 . The Resurrection of Lazarus, a large upright plate ; and the Last Supper, its companion.

BOLSWERT, or BOLSUERD (Scheltius A.), was the brother of Boetius Adam, but greatlj nis superior. He worked entirely with the graver, and never called in the assistance of the point. His general character is thus drawn by Basan : 'We have a large number of prints, which are held in great esteem, by this artist, from various masters ; but especially from Rubens, whose pictures he has copied witli all possible know- ledge, taste, and great effect. The freedom will which this excellent artist handled the graver the picturesque roughness of etching, which he could imitate without any other assisting instru- ment, and the ability he possessed of distinguish- ing the different masses of colors, have alway been admired by the connoisseurs, and give hirr. a place in the number of those celebrated en- gravers, who are desirous of rendering their works as useful as they are agreeable, and of acquiring a reputation as lasting as it is justly merited.'

BOLT', v. & n. I Dutch, boult; BoXtf. An BOL/UPRIGHT. S arrow ; a dart ; lightning ; a thunder-bolt; the bar or fastening of a door; a chain ; a lock used to secure the legs of felons. To bolt is to throw to; to shoot; to build; to strengthen ; to confirm ; to send away ; to drive out ; to rush or cause to rush out ; to start out with the quickness of an arrow : metaphori cally, to speak without caution ; to blurt out anj thing precipitately.

Her mouth was sweet as bracket or the moth, Or hord of apples laid in hay or heth. Winsing she was as is a jolly colt, Long as a mast and upright as a bolt.

Chaucer. Canterbury Tale, It was upon a holiday, When shepheard groomes han leave to play**

I cast to go a shooting ; Long wandering up and down the land, With bow and bolts in either hand, For birdes in bushes tooting.

Spenser. Shepheard's Calender. But wise and wary was that noble pere ; And lightly leaping from so monstrous maine, Did fayre avoide the violence him nere ; It booted nought to thinke such thunderbolts to bear.

Spenser.

This Puck seems but a dreaming dolt, Still walking like a ragged colt, And

oft out of a bush doth bolt, Of purpose to deceive us. Drayton.

Yet marked I where the bolt of Cupid fell ; It fell upon a little western flower, Before milk-white, now purple with love's wound.

Shakspeare.

Tis not in thee, to oppose the bolt Against my coming in. Id.

It is great

To do that thing that ends all other deeds, Which shackles accidents, and bolts up change.

Id.

That I could reach the axle, where the pins are Which bolt this frame, that I might pull them out !

Ben Jonson.

Oh, I am wounded ā not without,

But angry Cupid bolting from her eyes,

Hath shot himself into me like a flame.

Id. Volpone.

BOL

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BOL

As a thief to unheard the cash

Of some rich burgher, whose substantial doors, Cross-barred and bolted fast, fear no assault, In at the window climbs, or o'er the tiles ; So clomb this first great thief into God's fold : So since into his church lewd hirelings climb.

Milton.

I hate when vice can bolt her arguments, And virtue has no tongue to check her pride. Id. They erected a fort, and from thence they bolted like beasts of the forest, sometimes into the forest, sometimes into the woods and

fastnesses, and some- times back to their den. Bacon. As the house waĀ« all in a flame, out bolts a mouse from the ruins to save herself. L' Estrange. I have reflected on those men who, from time to time, have shot themselves into the world. I have seen many successions of them ; some bolting out upon the stage with vast applause, and others hissed oft. Dryden. Singed with the flames, and with the bolts trans- fixed, With native eaith your blood the monsters mixed.

Id.

The bolted gates flew open at the blast ; The storm rushed in, and Arcite stood aghast. Id. As I stood boltupright upon one end, one of the adies burst out. Addison.

Was there no bolt, no punishment above ? No, none is equal to despairing love.

Hazard's Scanderbeg.

Sir, this vermin of court reporters, when they are forced into day upon one point, are sure to burrow in another ; but they shall have no refuge : I will make them bolt out of all their holes. Burke.

BOLT', M. ~\ Germ, beutelen, bluter.

BOULT'ER, (To bolt the bran ; to sift

BOULT'ING-HUTCH, Ā£or separate, the fine from

BOULT'ING-TUB. J the coarse, the good from the bad : hence to examine ; to scrutinise with a view to discrimination ; to purify, to purge.

He now had boulted all the flour. Spenser.

In the bolting and sifting of fourteen years of power and favour, all that came out could not be pure meal.

Wctton. The fanned snow.

That's bolted by the northern blast twice o'er.

Shahspeare.

I cannot bolt this matter to the bran, As Bradwardin and holy Austin can. Dryden.

It would he well bolted out, whether great refrac- tions may not be made

upon reflections, as upon di- rect beams. Bacon.

The judge, or jury, or parties, or the council, or attornies, propounding questions, beats and bolts out the truth much better than when the witness delivers only a formal series. Hale,

Time and nature will bolt out the truth of things through all disguises, L' Estrange.

BOLT, in architecture, an iron fastening fixed to doors and windows. They are generally dis- tinguished into three kinds, viz. plate, round and spring bolts.

BOLT, in commerce, twenty-eight ells of can- vas. Also a narrow piece of silk of indefinite measure.

BOLTS, in gunnery, are of several sorts, as, bolts, bed, the four bolts that fasten the brackets of a mortar to the bed. Bolts, bracket, the bolts that go through the cheeks of a mortar, and by foe help of quoins keep her fixed at the given devation. Bolts, prise, the large knobs of iron

on the cheeks of a carriage, which keep the handspike from sliding, when it is poizing up the breech of a piece. Bolts, transum, that go between the cheeks of a gun-carriage, to strengthen the transums. Bolts, traverse, the two short bolts that, being put one in each end of a mortar-carriage, serve to traverse her.

BOLTS, in ship-building, are iron pins, of which there are several sorts, according to their different makes and uses.

BOLTS, FEND, or FENDER, made with long and thick heads, and struck into the uttermost bends of the ship, to save her sides from bruises.

BOLTS, FORELOCK, have at the end a forelock of iron driven in to keep them from starting back.

BOLTS, RAY, have jags or barbs on each side, to keep them from flying out of their holes.

BOLTS, RING, are for bringing-to the planks, and those parts to which the breeches and tackle of the guns are fastened.

BOLTS, in ship-building, are made of copper or iron, pointed at one end. They vary in length from two to fifteen feet, and in diameter from three-quarters to an inch and quarter or more ; receiving particular names according to the parts of the vessel in which they are driven, by what is

called a monkey. The weight of copper bolts in an English seventy-four gun ship, is reckoned at about thirty tons, and the iron bolts for the upper works weigh not less than forty more. A superior mode of driving them has lately been suggested, particularly where they are not of great weight, by Mr. Phillips' tubes, represented in the diagram below.

Fig. 1.

Fig. 3.

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Fig. 2.

Figs. 1 and 2 are steel punches or drifts, placed on the head of the copper bolt whilst driving. Fig. 3 is the iron tube fastened together, ready to enclose the bolt. Iron rings with screws, d, e,f,g,ht are placed over the joints of the tube to hold them firmly together ; and the points, F F, on the lower ring are to stick into the timber, in order to preserve the tube steady in driving See Transactions of the Society of Arts, vol. xix.

Very powerful machines are required for the drawing of bolts in repairing a ship ; the most approved in our dock-yards are Bolton's and Hookey's.

BOLTING, or BOULTING, among millers, the act of separating the flour from the bran, by means of a sieve or bolter.

BOLTING-CLOTH, BOLSTER-CLOTH, or BULT- ING-CLOTH, a linen or hair cloth for sifting meal or flour.

BOLTING-MILL, a versatile engine for sifting with more ease and expedition. The cloth round this is called the bolter.

BOLTON-LE-MOOR, a market town of Lan- cashire, on a stream that joins the Irwell, noted for its extensive manufactures of cotton goods. Between 1781 and 1831, the population had increased to about 43,396 persons. The Flem- ings first established the cotton manufacture here, and it retained the pre-eminence in that branch of commerce for a considerable time; and while the trade of Manchester was chiefly in coarse woollens. Here Sir Richard Arkwright was born, and passed great part of his early

life. There are several good libraries ; and the methodists have a Sunday school, in which more than 1000 children are instructed, gratis, in reading and writing. – Long. 2′ 15 W., lat. 53Ā° 55′ N. By the canal navigation, Bolton communicates with all parts of the kingdom. Besides the original parish church, here is a newly built church, several chapels for dissenters, a Catholic chapel, and a grammar school. Here is also a dispen- sary, a public library, and news-rooms, besides other useful and charitable institutions. Between this place and Wigan, great quantities of canal coal are found, which, although easily lighted, will hold fire as long as any coal whatever ; it is perfectly smooth when parted into pieces, and although of the deepest jet black, will not soil a cambric handkerchief ; of this substance turners make snuff-boxes, salts, candlesticks, 8cc. In the neighbourhood are some medicinal waters. Here the earl of Derby was executed in 1651, for proclaiming king Charles II. By the provi- sions of the reform bill, this town is permitted to return two members to parliament. The borough comprises Great and Litile Bolton, and Haulgh, a detached tpart of Little Bolton e- cepted. The borough-reeves are the returning officers.*

BOLTON, or BOULTOX (Edmund), an ingenious English antiquarian, who lived in the beginning of the seventeenth century. His principal work is his Nero Caesar, or Monarchy Depraved, printed at London in 1624, folio, and adorned with several curious prints of valuable medals. Besides this, he wrote : 1 . An English Transla- tion of Lucius Florus's Roman History. 2. Hypercritica, or a rule of judgment for reading or writing our Histories. 3. The Elements of Armories, &c. and some other works.

BOLTONIA, in botany, a genus of plants ; class syngenesia, order polygamia superflua. Ess. ch. receptacle cellular, hemispheric ; SEED, margin toothed and two-awned : CAL. imbricate : SPECIES, two, natives of North America.

BOLT ROPE, in naval affairs, the rope passing round the sail, to which the edges of it are sewed, to prevent the sail from tearing : the bottom part of it is called the foot-rope ; the sides, leeches ; and if the sail be oblong or square, the upper part is called the head-rope.

BO LUC BASSI, the chief of a'company among the Turks, or a captain over 100 janissaries.

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that is larger than an ordinary sized pea, and yet not too large to be swallowed.

BOLZAS, in commerce, a kind of ticking brought from the East Indies.

BOMB', v. & 7i. "") Bombarda, says Vos-

BOM'BARD, v. & n. sius, a new word for a

BOM'BARDIER, new thing ; bombo et ar-

BOM'BARDMENT, [dere, sound and flame ;

BOMB'KETCH, '"noise and mischief. A

BOMB'VESSEL, bomb is a murderous

BOM'BILATION, machine constructed to

BOMB'CHEST. J vomit out iron balls by

the force of gunpowder. To bomb, to bombard, is to besiege and attack with bombs. ' Bom- bard-phrase,' a compound used by Ben Jonson to imply more sound than sense ; sounding or noisy, as a bomb, or bombard. Bombchest, from bomb and chest. A kind of chest filled usually with bombs, and sometimes only with gunpowder, placed under ground, to tear and blow it up in the air, with those who stand on it. Bombketch and bombvessel. A kind of ship strongly built, to bear the shock of a mortar, when bombs are to be fired into a town.

An upper chamber being thought weak, was sup- ported by a pillar of iron, of the bigness of one's arm in the midst ā¢ which, if you had struck, would make a little flat noise in the room, but a great bomb in the chamber beneath. Bacon,

How to abate the vigour or silence the bombilation of guns, a way is said to be by borax and butter, mixt in a due proportion, which will almost take off the report, and also the force of the charge.

Brown's Vulgar Errourt,

They planted in divers places twelve great bom- bardt, wherewith they threw huge stones into the air, which, falling down. into the city, might break down the houses. Knolles,

The loud cannon missive iron pours, And in the slaughtering bomb Gradivus roars.

Rowe

Our king thus trembles at Namur, Whilst Villeroy, who ne'er afraid is,

To Bruxelles marches on secure, To bomb the monks, and scare the ladies.

Prior.

A medal is struck on the English failing in their at- tempts on Dunkirk, when they endeavoured to blow up a fort, and bombard the town. - Addison.

Genoa is not yet secure from a bombardment, though it is not so exposed as formerly. Id,

Nor pould an ordinary fleet, with bomb-vessels, hope to succeed against a place that has in its arsenal gal- leys and men of war. Id. on Italy. The

bombardier tosses his ball sometimes into the midst of the city, with a design to fill all around him with terrour and combustion. Tatler^ From the earliest dawning of policy to this dayt the invention of men has been sharpening and im. proving the mystery of murder, from the first rude essay of clubs and stones, to the perfection of gun nery, cannoneering, bombarding, mining. Burke

BOMB, a hollow iron ball, or shell, filled with gunpowder, and furnished with a vent for a fusee, or wooden tube, filled with combustible matter, to be thrown out from a mortar ; which has its name from the noise it makes. The fusee, being set on fire, bvirns slowly till it reaches the gunpowder, which goes off at once, bursting thft shell to pieces with incredible violence ; whenc the use of bombs in besieging towns. Thft*

largest are about eighteen inches in diameter. By whom they were invented is not known, and the time is uncertain, some fixing it to 1588, and others to 1495. The shell being filled with gunpowder, the fusee is driven into the vent or aperture, within an inch of the head, and fastened with a cement made of quick lime, ashes, brick dust, and steel filings, worked together in a glutinous water ; or of four parts of pitch, two of colophony, one of turpentine, and one of wax. This tube is filled with a combustible matter, made of two ounces of nitre, one of sulphur, and three of gunpowder dust, well rammed. To preserve the fusee, they pitch it over, but uncase it when they put it into the mortar, and cover it with gunpowder dust ; which, having taken fire by the flash of the powder in the chamber of the mortar, burns all the time the bomb is in the air; and the composition in the bomb being spent, it fires the powder in the bomb, which bursts with great force, blowing up whatever is about it. The great height a bomb goes in the air, and the force with which it falls, makes it go deep into the earth. Bombs may be used without mortar- pieces, as was done by the Venetians at Candia, when the Turks had possessed themselves of the ditch, rolling down bombs upon them along a plank set sloping towards their works, with ledges on the sides to keep the bomb right for- ward. They are sometimes also buried under ground to blow up. See CAISSON. Bombs were not commonly used till 1634, and then only in the Dutch and Spanish armies. One Malthus, an English engineer, is said to have carried them first into France, where they were used at the siege of Collioure. The French invented a new sort of bombs of vast weight, called comminges. The art of throwing bombs makes a branch of gunnery, founded on the theory of projectiles,

and the qualities of gunpowder. See GUNNERI, PROJECTILES, GUNPOWDER, &c.

BOMBA, in zoology, a species of trichoda belonging to the genera of vermes infusoria. This kind is of a changeable form, with a few hairs on the anterior part. It is found abundant n stagnant water ; the body is thick, somewhat pellucid, of a yellowish color, and filled with paler molecules.

BOMBARDING, or BOMBARDMENT, the act of assaulting a city or fortress, by throwing shells 'nto it, in order to set fire to and ruin the houses, churches, magazines, &c. and to do other mis- chief. As one of the effects of the shell results from its weight, it is never discharged as a ball from a cannon, that is, by pointing it at a certain object : but the mortars in England are fixed at an elevation of forty-five degrees; that is, in- clmed so many degrees from the horizon, that the shell describes a curve, called the military pro- jedile. Some mortars (5Ā£ inch brass) have of late been constructed to fire at different eleva- tions, upon brigadier-general Lawson's principle.

BOMBARDO, a musical instrument of the wind kind, much the same as the bassoon, and used as a bass to the hautboy.

BOM'BASIN, (Lat. bombyx. Any soft

BOM'BYCINOUS. S or deHcate wool adapted for weaving garments; a slight silken stufl' for mourning.

In six months after, came the silkeworms oo Silkeworms spin and weave webs like to those of the spiders, and all to please our dainty dames, who thereof make their fine silkes and velvets, forme their costly garments and superfluous apparell, which are called bombycina. Holland. Plinie.

BOMBASINE is also applied to stuffs crossed of cotton.

*BOMBASIUS (Paul), a native of Bologna, gained esteem by the profession of philology about the beginning of the sixteenth century. He taught Latin and Greek at Naples, and was professor of Greek at Bologna. His abilities induced Cardinal Pucci to make him his secre- tary, with a good salary. He lived very easy at Rome with the cardinal, till that city was plun- dered under Clement VII. when he was killed, while endeavoring to get into the castle of St. Angelo. He was an intimate friend and corres- pondent of Erasmus, who has preserved some of his letters, and gives him a good character. BOM'BAST, v., n. s. & adj. or-\ Of the same BTJM'BAST, * origin as bom-*

BOM'BASTICK, i basin. Ac-

BOM'BASTRY. J cording to

Johnson, it is a stuff of soft loose texture, used formerly to swell the garment, thence used to signify bulk or show without solidity. Fustian ; big words, without meaning.

He, as loving his own pride and purpose, Evades them with a bombast circumstance, Horribly stuffed with epithets of war. Shakspeare.

Not pedants' motley-tongue, soldiers' bombast, Mountebanks' drug-tongue, nor the terms of law, Are strong enough preparatives to draw Me to hear this. Donne.

Are all the flights of heroick poetry to be concluded bombast unnatural, and mere madness, because they are not affected with their excellencies? Dryden.

A theatrical, bombast ick, windy phraseology of he- roick virtue blended and mingled up with a worse dissoluteness, and joined to a murderous and savage ferocity, forms the tone and idiom of their language and their manners. Burke.

BOMBAST, in composition, is a serious en- deavour, by strained description, to raise a low or familiar subject beyond its rank ; which, instead of being sublime, never fails to be ridiculous. The mind in some animating passions is indeed apt to magnify its objects beyond natural bounds : but such hyperbolical description has its limits; and, when carried beyond these, it degenerates into burlesque, as in the following examples : He roared so loud and looked so wondrous grim, His very shadow durst not follow him. Ben Johnson, in his Sejanus (Act. 5.), makes that proud minister say,

Great and higk

The world knows- only two, that's Rome and I. My roof receives me not : 'tis air I tread, And at each step I feel my advanced head Knock out a star in heaven.

A writer who has no natural elevation of genius is extremely apt to deviate into bombast. He strains above his genius, and the violent effort he makes, carries him generally beyond the bounds of propriety. But even the best poets some- times deviate into bombast, or sink into bathos, when they go beyond nature, in aiming at the sublime. See SUBLIME.

BOMBAY.

8OMBAX, in botany, the silk-cotton tree : A genus of the polyandria order, and monodelphia class of plants : natural order seventeenth colum- niferae : CAL. qumquifid : STAM. five or more ; the capsule is ligneous, quinquelocular,and quinque- valved : the seeds are woolly, and the receptacle pentagonous. The species are six in number. I. B. ceiba, with a prickly stalk, a native of America. 2. B. heptaphyllum, with leaves cut into seven parts : the cotton is of a fine purple color. 3. B. pentandria, with a smooth stalk, growing naturally in the Indies, where they ar- rive at a great magnitude, being soma of the largest trees in those parts. These plants, being natives of warm climates, must always be kept in a stove. They are raised from seeds, pro- cured in the capsules from the places where they grow naturally. These are to be sown in spring, in pots of light earth, plunged in a substantial hot-bed of dung or tan, where the plants will appear in three or four weeks. They must then be placed separately in small pots, plunging them in the bark-bed, giving them shade and water, and shifting them occasionally into larger pots with fresh earth. Water them plentifully in summer, but moderately in winter. The dark short cotton of the first and third species is used by the poorer inhabitants of those places where such trees grow, to stuff pillows or chairs, but is generally deemed unwholesome to lie upon. The beautiful purple down of the heptaphyllum is spun, wrought into clothes, and worn, without being dyed any other color, by the inhabitants of the Spanish West Indies, where the tree naturally grows. Large piragues, or canoes fit to carry a sail, are made both at Senegal, and in America, of the trunk of the silk-cotton tree, the wood of which is very light, and unfit for any other pur- pose.

BOMBAX, in entomology, is applied by Lin- nseus to such insects as have incumbent wings, and feelers resembling a comb.

BOMBAY, Bom-bahia, Port. i. e. Good Bay, an island on the western coast of India, the seat of one of the English presidencies. It is situated in 18Ā° 58′ N. lat., and 72Ā° 38′ E. long.; and is about seven miles in length, and twenty-one in cir- cumference. The natives call it Mambei. A narrow arm of the sea separates it from Salsette and the coast of Malabar.

This island was early taken possession of by the Portuguese; and was ceded, in 1662, to the English, as part of the dowry of the Infanta Catharine, on her marriage with Charles II. ; but on a squadron being despatched to India, to receive investiture of the island, the Catholic clergy were unwilling that it should be delivered into the hands of heretics, and induced the gover- noi to resist its transfer. Above two years elapsed before this object could be effected, during which period the English squadron buried upwards of 200 of its men in the Swalley roads. At length a treaty

was agreed to, by which the inhabitants were to enjoy the free exercise of their religion, with the possession of their estates, under the crown of England ; but the revenue of the island being not equal to its expenditure, the king, in 1668, made a full grant of it to the East India Company. Its excellent harbour has

doubtless been the chief recommendation of this island; a thousand ships, it is said, can ride in it, protected from every wind. On the approach of the monsoons, vessels, in other ports of India, are obliged to stand out to sea, in order to pre- vent inevitable destruction. At this period the harbour of Bombay, and Trincomallee, in the island of Ceylon, are the only ports we possess which are capable of affording a retreat. Near the southern extremity of the island stands the light-house, which is of a circular form. It rises from the sea to the height of 150 feet, and shows a light at the distance of twenty-one miles. Butcher's Island is nearly opposite to Bombay Castle, at a distance of three miles ; and about two miles from this is the small but celebrated island of Elephanta. The two small islands of Henery and Kenery are situated at the entrance of the harbour, which is furnished with dock- yards, and an arsenal convenient for building and refitting ships.

The new dock is a magnificent work, both as to design and execution. With all these advan- tages Bombay is indeed a most important naval arsenal : within these few years ships of from 600 to 1000 tons have been built in its yards, equal to any in the world in durability and beauty of construction. In 1810 the Minden, a seventy-four gun ship, was built by the Parsees without any assistance from Europeans. The highest spring tides rise here to the height of seventeen feet, and the height of the ordinary tides is fourteen feet. In consequence of these advantages the dry dock of Bombay has scarcely its equal for size and convenience, having three divisions, with a pair of strong gates to each, so that it is capable of receiving three ships of the line at one time.

Bombay, enjoying from its insular situation the full advantage of the sea breezes, is cooler in point of climate than most parts of the Indian conti- nent. The rains last about four months, and continue with little interruption from about the end of May to the beginning of October., It was formerly reckoned the grave of the English ; but is considered more salubrious since the building of a wall to prevent the salt marshes formed by the sea, and by an order that the na- tives should not manure their cocoa-nut groves with putrid fish. Still many Europeans are attacked, on their first arrival, by the diseases of all warm climates, provoked in many cases by irregularity, against which they cannot be too much guarded. The soil is sterile, and incapable of much improvement, producing nothing but a little rice, cocoa-nuts, and a few Indian fruits.

Under the Portuguese government Bombay is said to have contained about 10,000 inhabitants; Niebuhr informs us, that when he visited it, in 1763, they were estimated at 140,000, although within twenty years they did not amount to 70,000, so that in this short period the number appears to have been more than doubled. In the year 1803 Sir James Mackintosh computed the number of inhabitants at 150,000. These consist of English, Portuguese, Indian Catholics, Hin- doos, Parsees (see our article PARSEES for an account of this remarkable sect), Mahommedans of different sects, and some Armenian Christians.

The English have a handsome church ; and the establishment of chaplains for their presidency is four in number, but the list is rarely full. The Roman Catholics have a bishop of Bombay ; they are numerous, and their churches are sump- tuously ornamented. Government, it is said, vioes not allow the Catholics to exert their zeal for the conversion of the natives, but under great restrictions.

The city of Bombay, about a mile in length, is defended, both towards the land and sea, by very extensive fortifications. The houses are not, in general, either handsome or commodious, having only one floor; but they are not flat roofed, as in the other parts of the East, being covered with tiles in the European manner. The English prefer glass windows, but the other inhabitants form them of small pieces of transparent shells framed in wood. The floors are a composition of lime made from shells, extremely durable and remarkably smooth. The government house is a handsome edifice. A causeway, connecting Bombay with Salsette, is a public work of considerable magnitude, and insures the country a constant supply for the markets ; but it has been thought injurious to the harbour. The markets furnish mutton (often lean and hard), excellent fish, game (principally the red-legged partridge), and large frogs, which are in great request among the Portuguese and Chinese, onions, for which they are famous, common and sweet pota- toes, inferior cheese, buffalo-beef, butter and milk. Bombay sends to China a large quantity of cot- ton, sandal-wood, pepper, gums, drugs, pearls, ivory and gems, sharks' fins and edible birds' nests. The ships are generally detained there fiom July to January. Coffee, barilla, hemp, manufactured goods from Surat, with many of the above articles, are also sent 1 Europe.*

Bombay is the seat of the English government for the coast of Malabar. The council consists of a governo' an-d three members ; but they are under the control of the government-general of Bengal, with respect to treaties of peace with the native powers, the making of war or concluding of peace, collecting and applying revenues, le- vying and employing forces, &c. ; and they are required in all cases to obey the orders of the government-general, unless the directors of the Company have sent out contrary orders not known to the government-general, of which, in that case, they are to give the government imme- diate advice. The regular military and marine corps do not amount to 3000 men ; but the whole army forms a body of more than 21,000, chiefly Mahrattahs, who retain their own language and customs. The number of the principal civil servants is 106. Besides the governor and council, stationed at the presidency itself, there are magistrates and commercial residents at the chief towns of the different provinces subject to their government. There is one supreme court of judicature held under the recorder; in which the practitioners are three barristers and three at- torneys. Besides the capital, the places of some importance on the island are MAZAGONG, FORT SURF, MAHINT, and MALABAR POINT, which ste. Its na\igable streams are the Tapti, Ner- beda, and Mehindsi.

BOMBELLA, in entomology, a species of bombyx, inhabiting Austria, the wings of which are cinereous, sprinkled with fuscous. This is Tinea Bombycella of the Vienna catalogue.

BOMBERG (Daniel), an eminent printer, born at Antwerp. He was the first who printed Hebrew books at Venice. He began with an edition of the Bible in 4to. in 1511 : and after- wards printed many others in folio, 4to. and 8vo. He printed a folio edition in 1517, with the commentaries of the rabbins, dedicated to pope Leo X. and another under the inspection of Rabbi Jacob Haiim in 4 vols. folio, in 1525. He also printed three editions of the Talmud, each of which cost him 100,000 crowns. One of these was begun in 1 520, and consisted of 1 1 vols. folio. He brought the art of printing He- brew books to such perfection, says Mr. Bayle, that the Jews allege, that since his death the Hebrew printing has continually grown worse.

BOMBIC ACID. Acid of the silk-worm. Silk-worms contain, especially when in the state of chrysalis, an acid liquor in a reservoir placed near the anus, which is obtained by expressing their juice in a cloth, and precipitating the mu- cilage by spirit of wine, and also by infusing the chrysalides in that liquor. This acid is very penetrating, of a yellow amber color, but its nature and combinations are not yet well known.

BOMBINA, in entomology, a large species of curculio, described by

Fabricius, as a native of Cayenne. This insect is of a ferruginous brown color, and the wing cases striated, with black elevated tubercles.

BOMBINA, in zoology, a species of rana, or frog, the belly of which is orange, spotted with sky-blue, and the pupil of the eye triangular. Blumenb. This kind appears to be extremely variable in point of color and markings. The triangular form of the pupil of the eye, the most striking criterion of this species, can only be observed in a full light, for when examined in the shade its shape is circular.

BOMB-KETCH, a vessel built for the use of mortars at sea, and furnished with all the appa- ratus necessary for a vigorous bombardment. Bomb-ketches are built remarkably strong, to sustain the violent shock produced by the dis- charge of the mortars. The modern bomb-vessels generally carry two ten-inch mortars, four sixty- eight pounders, and six eighteen-pounders car- ronades : and the mortars may be fired at as low an angle as twenty degrees ; their principal in- tention, at these low angles, being to cover the landing of troops, and protect our coast and har- bours. A bomb-ketch is generally from sixty to seventy feet long from stem to stern, and draws eight or nine feet water ; carrying two masts, and usually of 100 to 150 tons burden. The tender is generally a brig, on board of which the party of artillery remain till their services are required on board the bomb-vessel.

BOM BUS, in medicine, denotes a murmuring noise, as of wind breaking out of a narrow into a large cavity, frequently heard in the intes- tines. The bombus heard in the ears, in acute diseases, is laid down by Hippocrates as a sign of death.

BOMBUS, in music, an artificial motion with

tne hands, imitating in cadence and bar nony the buzzing of bees. The word is originally Greek, and signifies the buz or noise of bees, gnats, and the like. In this sense, bombus made one of the species of applause used by ancient auditories.

BOMBYCILLA, in ornithology, wax-wing, a genus of birds detached from the chatterers, of the order passeres. Its generic characters are : beak short, slightly depressed : nostrils oval, and covered with small feathers : feet four- toed. There are two species, namely ā B. Bo- hemica. Bohemian wax-wing, or chatterer. B. Carolina, Carolina wax-wing.

BOMBYLIUS, in entomology, the humble- bee, a genus of insects belonging to the order of diptera. The rostrum is long, bristly and bi- valved; the bristles being fixed between the horizontal valves. Mr. Ray reckons nineteen

species, but Linnaeus only five ; viz. 1. B. ater has red wings, but a little blackish at the base ; and green feet. 2. B. Capensis, with the wings spotted with black, an ash-colored body, and white behind. It is a native of the Cape of Good Hope. 3. B. major,' with black wings.

4. B. medius, with a yellowish body, white behind, and the wings spotted with yellow.

5. B. minor, with unspotted wings. These are natives) of Europe.

BOMBYLOPHAGUS, the humble-bee eater, in zoology, the name of a fly of the tipula kind, which is larger and stronger than the common kinds ; and, loving honey, it seizes on the humble- bees, and destroys them, in order to get at the bag of honey which they contain. It is of a blackish color in the body ; its head is of a bright red, and the eyes very large and pro- minent. It is chiefly found in mountainous places.

BOMBYX, among ancient naturalists, signi- fies indifferently either silk or cotton.

BOMBYX, in ancient music, a kind of instru- ment, which in Aristotle's time, was made of a reed, and, by reason of its length, was difficult to play on : 2. a contrivance of horn for shutting and opening the holes of wind instruments.

BOMBYX, an extensive genus of lepidopeterous insects. See ENTOMOLOGY.

BOMBYX is also a name given to the silk- worm.

BOMILCAR, the son of Hamilcar, a Cartha- ginian general, who, being suspected of con- spiring with Agathocles, was crucified in the midst of Carthage.

BOMMEL, a fortified town of Dutch Guel- derland, situated on an island called Bommeler Waard, formed by the Maese and Waal. It contains a population of nearly 3000 inhabitants ; but the harbour is obstructed by sand, and its trade has in consequence declined. During the latter part of 1794, and the beginning of 1795, the French several times attempted to cross the Waal, near this town, which, with the adjoining fort of Saint Andrew, fell at this period into their hands. They afterwards drove the allies from their entrenchments at the point of the bayonet. It stands about sixty miles nearly north-east of Antwerp.

BOMMELER WAARD, the insula Batavo-

rum of Caesar, an island in the Netherlands formed by the Maese and the Waal, about fifteen miles long, and six broad. Being a strong place, it has often been taken and retaken. In the beginning of the civil wars, a detachment of Spanish troops were surrounded hereby a Dutch fleet ; the dykes were opened, and the island laid under water. But the troops who took refuge in the citadel were relieved by a sudden frost, which obliged the Dutch to retreat. In 1600 it sur- rendered to prince Maurice of Orange ; in 1672 it was taken by the French, under marshal Turenne, but was abandoned in the following year. It had formerly a governor appointed by the states- general.

BOMONICI, from jSwjioc, an altar, and vutij, victory ; conquerors at the altar, in Grecian an tiquity, young men of Lacedoemon, who con- tended at the sacrifices of Diana which of them was able to endure the most lashes ; being scourged at the altar of the goddess. Plutarch relates that some of them would have endured this discipline the whole day, and even to death itself.

BON, or BAN, in botany, a name given by some authors to the tree, the kernel of whose fruit is the coffee. The fruit they call buna.

BONA, by the Moors called Balederna, and by the Arabs blaid-el-Aneb, a sea-port of Algiers, formerly rich and populous, and the capital of the province. It is supposed by some to be the ancient Hippo, the see of St. Austin, and a sea-port built by the Romans ; the ruins of which city are seen near. It is now a mean place, poorly built, and thinly inhabited Bona was taken by the pirate Barbarossa, and joined to Algiers ; but as quickly lost, and re- covered by its old masters the Tunisians, who did not keep it long ; and Charles V. landed in it when he invaded Algiers. This was one of the settlements of the French African Com- pany, established during the reign of Louis XIV. They carried on here a considerable trade : in one year they exported 10,000 quintals of wool, 5000 of wax, 50,000 bullocks' hides, and 100,000 bushels of corn. The annual value of these exports is estimated at Ā£28,575.. Bona is also resorted to on account of the coral banks in the vicinity. In 1805 the English obtained the cession of this town, and of these banks, which in 1816 was treacherously taken from them by the Turks, a circumstance that gave rise to the memorable expedition sent against Algiers under lord Exmouth. From a continual discharge of ballast, and a neglect of cleansing, the road for the ships is good for nothing before the town, but a little farther west is deeper. It is sixty-six miles N. N. E. of Constantia.

BONA DEA, in heathen mythology, the good goddess, one of the names of

Cybele. Others say, she was a Roman lady, the wife of one Faunus, and famous for her chastity, and that after her death she was deified. Her sacri- fices were performed only by matrons ; and in so secret a manner, that it was no less than death for any man to be present at the assembly. See CYBELE. Cicero reproaches Clodius with having entered into this temple disguised as a singing woman, and having by his presence pol-

luted the mysteries of the good goddess. What kind of mysteries these were, we may learn from Juvenal, Sat. vi. 313.

BONA, in law, from bonus, Lat. good, is va- riously applied, e. g. 1. Bona fides. When a person performs any action, which he believes at the time to be just and lawful, he is said to have acted bona fide. 2. Bona gratia was anciently used respecting divorces, which were brought about amicably for some just reason, with the consent of both parties and without any crime on the part of either ; as in cases of old age, disease, barrenness, monachism, captivity, or the like. 3. Bona mobilia, movable effects. 4. Bona notabilia, such goods as a person dying has in another diocese than that wherein he dies, amounting to the value of Ā£5 at least ; in which case the will of the deceased must be proved, or administration granted in the court of the archbishop of the province, unless, by compo- sition or custom, any dioceses are authorised to do it, when rated at a greater sum. 5. Bona ‘ patria, an assize of countrymen or good neigh- bours, where twelve or more are chosen out of the country to pass upon an assize, being sworn judicially in the presence of the party. 6. Bona peritura, perishable goods. By stat. 13. Ed. I. cap 4. the cargo of a ship that has been cast away shall be kept for a year and a day, and restored to the rightful owner ; but if the goods be such as will not endure so long, they are bona peritura, which the sheriff is allowed to sell, and to account in money for the value. 7. Bona vacantia, goods in which no person can claim a property, such as royal fish, ship- wrecks, treasure-trove, waifs and estrays. These goods by the law of nature, and by the imperial law, belonged to the first occupant or finder ; but in the modern constitutions of European govern- ments, they are annexed to the supreme power by the positive laws of the state.

BONARELLI (Gui Ubaldo), an Italian count, was entrusted with several important ne- gociations, and esteemed an able politician and learned philosopher. He was the author of a fine Italian pastoral, intitled, Filli di Sciro. He died at Fano, in 1608, aged 45.

BONARIENSIS, in ornithology, a species of loxia or grosbeak. The head and back of the heck blue ; body blackish above, yellow beneath ; belly and vent yellow. The bill blackish ; legs red. This is the marigold grosbeak of Latham, and noir souci of Butfon. Also a species of tanagra, inhabiting Bonaria ; the color black, glossed with violet, and with greenish on the wings and tail. The female is of a brown color, with the head black, and glossed with blue. Also a species of motacilla, color black ; throat and sides ferru- ginous ; face, chin, middle of the belly, and ex- terior tail-feathers, white. Buffon calls this demi-fin noir et roux. It is the white-chinned warbler of Latham.

BONASIA, in entomology, a species of cicada found in America; the thorax bicornuted, and edged with white ; at the base of the wings is a white spot. Also the name of a species of pa- pilio ; the wings fuscous, with a common fulvous band ; the lower pair spotted at the base with Mack.

BONASIA, in ornithology, a species of the tetrao.

BONASUS, in zoology, a species of wild ox of the size of the tame kind, but of a thicker body, and having on its neck a mane like that of a horse, and horns very short and crooked. See GLAMA.

BONAVENTURA, a sea-port of South America, on the coast of Popayan, in Terra Firma. The climate is very unhealthy.

BONAVENTURE, a learned cardinal, born in Padua, in 1332. He studied at Paris, and joined the order of St. Augustine, of which he was made general in 1377. In 1378 Pope Ur- ban VI. made him cardinal, which engaged him to defend the rights of the church against Francis de Carraris of Padua ; and this so enraged that petty despot, that he caused him to be murdered by an arrow, as he passed St. Angelo's bridge at Rome, A. D. 1386. He wrote, 1. Commen- taries on the Epistles of St. John and St. James. 2. Lives of the Saints. 3. Speculum Mariaa. 4. Sermons, &c.

BONAVENTURE (St.), a celebrated cardinal, originally named John Fidanzo, and called from his works, the seraphic doctor. He was born at Bagnarea in 1221, and became a monk of the order of St. Francis in 1243, a doctor of Paris in 1255, and general of his order in 1256. After the death of Clement IV. the cardinals, dis- agreeing about the election of a new pope, so- lemnly engaged to elect him who should be named by Bonaventure, even though it should be himself, but he chose Theobald archdeacon of Liege, who was then in the Holy Land, and took the name of Gregory X. This pope, in return, in 1272, made him cardinal and bishop of Alba, and appointed him to assist at the second general council of Lyons, where he died in 1274. His works, which are chiefly on di- vinity, were

printed at Rome in 8 vols. folio. Bellarmine praises him highly, and even Luther styles him vir prasstantissimus, a most excellent man. He was canonised by Sixtus IV. in 1482.

BONAVENTURE ISLAND, an island of Lower Canada, in the district of Gaspe, situated about one mile and a half from the coast, near the entrance of Chaleur bay. It is little better than a barren rock ; but is resorted to as a fishing place. BON AVISTA, an island in the Atlantic Ocean, the most easterly and first discovered off the Cape de Verd islands. It is twenty miles long, and thirteen broad ; has plenty of goats and cotton, with some indigo; and belongs to Portugal. The inhabitants are remarkable for slothfulness : they have a town and two roads where ships come to an anchor. One of which, called the English road, is handsome and spacious : it has a few rocky shallows, but if these can be avoided, vessels find everywhere from four to thirteen fathoms of water. The other, the Portuguese road, though not quite equal, has the advantage of being nearer the city. The northern side ac- cording to Captain Cook, is in long. 22Ā° 59′ E., lat. 16Ā° 17'N.

BONAVISTA, CAPE AND BAY or, on the east side of Newfoundland. The cape lies in W. long. 52Ā° '32', N. lat. 48Ā° 15'; and was discovered by John Cabot, and his son Sebastian, in 1497,

in tne service of Henry VII. king of England. The bay is formed by the cape and that of Cape Freels, opening fifteen leagues apart.

BONAWASI, a small town in the province of North Canara, on the confines of the Bednore district. In Hyder's time it contained 500 houses, but is now much reduced. This place is noted by Ptolemy, and is said to have had a dynasty of kings, who ruled 1450 years before the chris- tian era.

BONCIARIUS (Marc Antony), a disciple of Muretus,andagoodLatinwriterwasbornin 1555, near Perugia, where he taught languages. Among his scholars was his own father, originally a shoe- maker, who wishing to turn Jesuit at forty-seven years of age, was obliged to acquire some learning from his son. Bonciarius was afflicted with the gout, and at last lost his sight. He died in 1616. He wrote, 1. De Arte Grammatical. 2. Tri- umphus Augustus, a poem in 4 books. 3. Letters, printed at Marpurg in 1604. 4. Epicurus, sive Dialogus de Antiqua Philosophia.

BOND', n. & adj. "j Bond, Sax. bound. BOND'AGE, It is written indiffe-

BOND'MAN, or rently in many of its

BONDS'MAN, senses, bond or band;

BOND'MAID, the past tense and past

BOND'FOLK, ˆparticipleof the verb

BOND'SERVANT, to bind. Bond is that

BOND'SERVICE, which fastens or con-

BOND'SLAVES, fines; constrains or ob-

BOND'WOMAN, or liges; forces or com-

BONDS' WOMAN. J pels ; it is the massy

chain that galls the limbs of the captive ; it is the natural ligaments which hold the parts of the animal frame together; it is the moral power which holds society and societies in voluntary union; it is the tie of duty; the legal instrument by which contracting parties are bound and held in obligation ; it is the compul- sory power that makes the West India planter a dealer in blood, and the poor African his ter- rified, degraded, and miserable slave.

And if thy brother, that dwelleth by thee, be ā¢waxen poor, and be sold unto thee, thou shall not compel him to serve as a bond-servant.

Leviticus xxv. 39.

Upon those did Solomon levy a tribute of bond- service. Kings. All her ornaments are taken away ; of a free- woman she is become a bond-slave. 1 Mace. ii. 11. Whether we be Jews or Gentiles, whether we be bond or free. 1 Cor. xii. 13.

Ne lasse flatering in hire worde, That, purely, her simple record Was found as true as any bonde Or trouthe, of any manes honde.

Chaucer's Boke of the Dmhesse. O great Orgoglio ! greatest under skye, O hold thy mortall hand for ladies' sake ; Hold for my sake, and doe him not to dye, But vanquisht thine eternall bondslave make, And me, thy worthy meed, unto thy leman take.

Spengtr.

But man/forgetfull of his Maker's grace, No less than angels, wnom he did ensew, Fell from the hope of promist heavenly place Into the mouth of death, to sinners dew, And all his offspring into thraldome threw, Where they for ever should in bondes remaino Of never dead yet ever dying paine. Id. Hymnes.

Amongst the Romans, m making ot a bondman free, was it not wondered wherefore so great ado should be made ? the master to present his slave in some court, to take him by the hand, and not only to say, in the hearing of the publick magistrate, I will that this man become free ; but, after those solemn words uttered, to strike him on the cheek, to turn him round, the hair of his head to be shaved off, the ma- gistrate to touch him thrice with a rod ; in the end, a cap and a white garment given him. Hooker.

Wedding is great Juno's crown ; O blessed bond o.f board and bed ! Sliakspeare.

To be a queen in bondage is more vile Than is a slave in base servility. Id.

Go with me to a notary, seal me there

Your single bond. Id.

There left me, and my man, both bound together ;

Till, gnawing with my teeth my bunds asunder,

I gained my freedom. Id.

Shall I play my freedom at tray trip and become

a bond-slave. Id.

You only have overthrown me, and in, my bondage

consists my glory. Sidney.

Love enjoined such diligence, that no apprentice,

no, no bond-slave, could ever be, by fear, more ready

at all commands, than that young princess was. Id.

My lords, the senators, Are sold for slaves, and their wives for bondswomen.

Ben Johnson's Cataline.

There lies he now, bruised with so sore a fall, To his base bonds and loathsome prison thrall, Whom thousand foes besiege, fenced with frail yield- ing wall. Fletcher's Purple Island. However I with thee have fixed my lot, Certain to undergo like doom ; if death Consort with thee, death is to me as life ; So forcible within my heart I feel The bond of Nature draw me to my own, My own in thee, for what thou art is mine ; Our state cannot be severed, we are one, One flesh ; to lose thee were to lose myself. Milton. Commonly the bond-slave is fed by his lord, but here the lord was fed by his bond-slave. Sir John Davies. He must resolve by no means to be enslaved, and brought under the bondage of observing oaths, which ought to vanish when they stand in competi- tion with eating and drinking, or taking money. South.

What if I ne'er consent to make you mine ; My father's promise ties me not to time ā¢, And bonds without a date, they say, are void.

Dryden.

Let any one send his contemplation to the extre- mities of the universe, and see what conceivable hoops, what bond he can imagine, to hold this mass of matter in so close a pressure together. Locke.

Observe, in working up the walls, that no side of the house, nor any part of the walls, be brought up three feet above the other, before the next adjoining wall be brought up to it, so that they may be all joined together, and make a good bond.

Mortimer's Husbandry.

If she has a struggle for honour, she is in a bon- dage to love ; which gives the story its turn that way.

Pope.

O hope, sweet flatterer! thy delusive touch Sheds on afflicted minds the balm of comfort ā Relieves the load of poverty ā sustains The captive, bending with the weight of bonds ā ' And smooths the pillow of disease and pain.

Glover's Boadicecˆ A day, an hour of virtuous liberty, Is worth a whole eternity in bondage.

Addison's Cato.

BON

Inglorious bondage! human nature groans Beneath a vassalage so vile and cruel, And its vast body bleeds through every vein.

Blair's Grave.

Death opens the gate of fame, and shuts the gate of envy after it ; it unlooses the chain of the captive, and puts the bondsman's task into another man's hands. Sterne.

I have struggled through much discouragement, and much opposition : much obloquy ; much ca- lumny, for a people with whom I have no tie, but the common bond of mankind. Burke.

Hereditary bondsmen ! know ye not Who would be free themselves must strike the blow.

Byron.

All, all forgotten ; and shall man repine That his frail bonds to fleeting life are broke. Id.

BOND, in law, is a deed whereby the party obliges himself, his heirs, executors, or adminis- trators, to pay a certain sum of money to another at a day appointed. If this be all, the bond is called a simple one, simplex obligatio. But there is generally a condition added, that if the obliger does some particular act, the obliga- tion shall be void, or else shall remain in full force : as payment of rent, performance of cove- nants in a deed, or repayment of a principal sum of money borrowed of the obligee, with interest ; which principal sum is usually one-half of the penal sum specified in the bond. In case this con- dition is not performed, the bond becomes for- feited, or absolute at law, and charges the obliger while living ; 'and after his death the obligation descends upon his heir, who, on defect of per- sonal assets, is bound to discharge it, provided he has real assets by descent as a recompense. If the condition of a bond be impossible at the time of making it, or be to do a thing contrary to some rule of law that is merely positive, or be uncertain, or insensible, the condition alone is void, and the bond shall stand single and uncon- ditiona1 : for it is the folly of the obliger to enter into such an obligation fronrwhich he can never be released. If it be to do a thing that is malum in se, the obligation itself is void : for the whole is an unlawful contract, and the obligee shall take no advantage from such a transaction. And if the condition be possible at the time of making it, and afterwards becomes impossible by the act of God, the act of law, or the act of the obligee himself, there the penalty of the obligation is saved : for no prudence or foresight of the obligor could guard against such a contingency. On the forfeiture of a bond, or its becoming

*single, the whole penalty was reco- verable at law : but here the courts of equity interposed, and would not permit a man to take more than in conscience he ought, viz. his principal, interest, and expenses, in case the forfeiture accrued by non-payment of money borrowed ; the damages sustained upon non- performance of covenants ; and the like. And the statute 4 and 5 Ann. c. 16. hath also enacted, in the same spirit of equity, that in case of a bond, conditioned for the payment of money, Ae payment or tender of the principal sum due, with interest and costs, even though the bond be forfeited and a*suit commenced thereon, shall be a full satisfaction and discharge.*

BOND, in masonry and brick-laying, is wheu

bricks or stones are as it were knit aud inter- woven ; and when they say, make good bond, they mean that the joints are not made over, or upon other joints ; but reach at least six inches, both within the walls and on the surface, as the art of building requires.

BOND (John), a commentator on Horace and Persius, was born in Somersetshire, in 1550, and educated at Winchester. In 1569 he was entered a student at Oxford. He took his degree of B.A. in 1573, and that of M.A. in 1579 ; soon aftei which he was appointed master of the free school at Taunton, Somersetshire. In this employment he continued many years with great reputation, but, being at length weary of his laborious em- ployment, he commenced physician, and became eminent in that capacity. He died in 1612 ; he wrote, 1. Commentarii in Poemata Q. Horatii, 8vo. 2. Commentarii in sex Satyras Persii ; Lond. 1614, 8vo.

BONDAGE properly signifies the same with slavery, but in old law books is used for villenage. See VILLENAGE. Tenants in bondage paid he- riots, and did fealty ; they were not to fell trees in their own garden, without licence of the lord.

BONDAGE BY THE FORELOCK (Bondagium per anteriores crines capitis), was when a freeman renounced his liberty, and became slave to some great man, which was done by the ceremony of cutting off a lock of hair from the forehead, and delivering it to his lord, denoting that he was to be maintained by him for the future. Such a bondman, if he reclaimed his liberty, or was fugitive from his master, might be drawn again to his servitude by the nose, whence, it is said, the origin of the menace to pull a man by the nose.

BOND-MEN, in Roman antiquity, were of two kinds, the one called servi,

who were those either bought for money, taken in war, left by succession, or purchased by some other lawful acquisition; the others born of their bond women, and called vernse. We may add a third kind, men tioned by Justinian, called adscriptitii glebse, or agricensiti ; who were not bound to the person, but to the ground or place, and followed him who had the land. These in our law are called villains regardants, as belonging to the manor or place.

BONDOKDAN, in Turkish' polity, a title given to the master of the ordnance in the ser- vice of the sultan of Egypt. It is derived from the Turkish word bond'uk, a nut, and applied metaphorically to a musket ball. It was the sur- name of the Sultan Bibars.

BONDORF, a county of Suabia, belonging formerly to the Benedictine abbey of St. Blasius. It is situated in the Black Forest, and, in 1802, was transferred to the grand prior of Heitersheim; in 1805 to the king of Wirtemberg, and in 1806 to the grand duke of Baden. Including the lordship of Blumeck, it contains 7500 inhabitants, and yields a revenue of about Ā£5000 sterling. It was formerly divided into eight parishes, con- taining the balliages of Bondorf, Ewatingen, and Bettmaringen. Bondorf, the chief town, has 820 inhabitants, and is the head of the bailiage, in the circle of the Danube, in the Baden dominions, twenty-eight-miles north of Zurich, and six N .N . W . of Stuhlingen.

BONE.

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BONDOU, a kingdom on the western side of Africa ; bounded on the east by Bambouk, on the south-east and south by Tenda, on the south- west by Woolli, on the west by Foota Terra, and on the north by Kajaaga. It lies between 12Ā° and 14Ā° of N. lat. and between 8Ā° and 11Ā° W. long. The name of its capital is Fat- teconda. Its soil is in many places naturally fertile, the face of the country well wooded, and agreeably diversified by gentle inequalities. Without much culture it yields rice and Indian corn in abundance, and its advantages for pasture encourage the breeds of the useful quadrupeds. The inhabitants are of the race of the Foulahs, and profess the Mahommedan faith. Their govern- ment is monarchical but not absolute. The lower orders are kept in a state of vassalage by indivi- dual proprietors, but the master has not the power of life and death over his slave. Every town or district has a chieftain or governor, who distributes justice and preserves order. Their arts are few and rude, and their efforts principally confined to acquire the means of subsistence. In the towns, however, schools are established for teaching the young, whether born of parents professing the true faith, or of pagans, to read the koran. The

commerce of the people of Bondou is conside- rable, when compared with that of some of the surrounding states, and the necessaries of life can be procured in abundance. Mr. Park could purchase a fowl for a button or bit of amber, and fin six or eight amber heads he could have bought a bullock Goats' flesh and mutton were pro- portionably cheap. Poultry of all kinds, except the turkey, could be found everywhere, and Guinea fowls and partridges abounded in the fields. Their trade consists of slaves, gold-dust, ivory, gums, and perfumes ; for which they obtain iron, salt, and trinkets. The king demands a tax from traders, which is considered as heavy.

BOND-SOCOME, an old law term, signifying an obligation to grind at the mill of the lord of the manor. See THIRLAGE.

BONDUC, in botany, the name given by Plu- mier to a genus of plants, characterised by Lin- naeus under the name of guilandina.

BONE', v. & n. -\ Ang.-Sax. ban; Germ.

BONED', I bein; Swed. and Dutch,

BONE'LESS, \ been ; similar to Bai-

BO'NY, i vf.iv, to go ; to step for-

BONE'ACHE, J ward : hence bone, be-

cause by virtue of the bones we are enabled to walk; to go; to exercise locomotion. Bonelace is lace worked or manufactured upon bones. Boneset, to set a dislocated or fractured bone into its place.

To make no bones. To make no scruple : a metaphor taken from a dog, who readily swal- lows meat that has no bones. Bones is used, figuratively, for dice.

We strive, as did the hound es for the bone; They fought all day, and yet her part was none, Ther came a kyte, while that they were so rothe, And bare away the bone betwixt hem bothe.

Chaucer's Cant. Tales.

And underneath their feet all scattered lay, Dead skulls and bones of men whose lives had gone astray. Spenser.

I have given suck, and know How tender 'tis to love the babe that milks me.

I would, while it was ?miling in my face,

Have pluckt my nipple from his boneless gums,

*And dasht the brains out. Shahtpeare^*

Should God create another Eve, and I Another rib afford, yet loss of thee Would never from my heart ; no, no, I feel The link of nature draw me : flesh of flesh, Bone of my bone thou art, and from thy state Mine never shall be parted, bliss or woe. Milton,

Puss had a month's mind to be upon the bones of him, but was not willing to pick a quarrel. L' Estrange.

The learned rabbins of the Jews Write there's a bone, which they call leuz, I' the rump of man, of such a virtue, No force in nature can do hurt to. Butler's Hudibras.

But then my study was to cog the dice, And dexterously to throw the lucky sice : To shun ames ace, that swept my stakes away ; And watch the box, for fear they should convey False bones, and put upon me in the play. Dryden.

Like jEsop's hounds contending for the bone, Each pleaded right, and would be lord alone. Id.

At present my desire is to have a good bonesetter.

Denham

Unlike to living sounds it came,

Unmixed, unmelodised with breath ;

But grinding through some scrannel frame,

Creaked from the bony lungs of death. Langhorne.

Some have amused the dull sad years of life (Life spent in indolence, and therefore sad,) With schemes of monumental fame ; and sought By pyramids of mausolean pomp, Short-lived themselves, to immortalize their bones.

Cowper.

BONE is the hardest arid most compact part of animal structure ; it will be found defined in the article Anatomy : ' A uniform substance of a firm texture, without fibres, plates, or cells, but penetrated through by very delicate vessels; capable of being rendered artificially softer or harder,

without any abstraction or addition of its substance that is perceptible.' This sub- stance, although apparently different from other portions of the frame, is pretty nearly similar in ultimate composition. ' Bone,' says Richer- and, ' deprived of the principle to which it owes its consistence, becomes soft, flexible, and resem- bles a cartilage which is resolvable by long maceration into a cellular tissue, similar to that of other parts. This tissue contains a pretty considerable number of arteries, veins, and lymphatics. The bones, therefore, are mere cel- lular parenchymas, whose areolae contains a crystallised saline substance, which they separate from the blood, and with which they become incrusted, by a power inherent in their tissue, and peculiar to it. This earthy substance may be separated from the other portions of the structure by immersing the bone in nitric acid diluted with a sufficient quantity of water ; or the same result may be obtained by inverting the analysis. If a bone be exposed to boiling heat for a few hours in Papin's digester, all its organised parts become dissolved, melt, and furnish a quantity of gelatine, after which there remains only an inorganic saline concretion. The different proportions of the saline to the organised part, vary considerable at different periods of life ; the bones of the embryo are at first quite gelatinous. At the period of birth, and during the first years of life, the organic

part of the bone is in greater proportion ; the bones are less apt to break, more flexible, pos- sessed of more vitality, and, when fractured, are more speedily and more easily consolidated. In youth the two constituent parts are nearly in equal quantities ; in adults the earthy and saline part forms two-thirds of die osseous substance ; at last, gradually increasing in quantity, this earthy and saline part displaces, in old people, the part that is organised ; hence their bones are weaker and more liable to fracture, and unite less readily. It may be said, therefore, that the quantity of calcareous earth deposited in bones, is in the direct ratio of the age ; and that, on the contrary, the energy of the vital faculty of these organs, their flexibility, their elasticity, and their aptitude to become con- solidated when their continuity is destroyed by accidents, are in an inverse ratio.

Of what, then, is this saline and earthy matter, which gives compactness and solidity to bone, constituted ? Phosphate of lime enters so largely into the composition of the calcareous principle, that this salt has generally been considered its essence ; modern chemists have, however, detected several other saline substances in bone, and the following extracts from Dr. Ure's Chemical Dictionary will present the reader with what has been ascertained, in respect to the kind, and proportion of these substances.

‘ Calcined bones,’ according to Berzelius, ‘ are composed in 100 parts of 31-9 phosphate of lime, 3 fluate of lime, 10 lime 1-1 phosphate of magnesia, 2 soda, and 2 carbonic acid, 100 parts of bones by calcination are reduced to 63. Fourcroy and Vauquelin found the following to be the composition of 100 parts of ox bones, 51 solid gelatine, 37-7 phosphate of lime, 10 car- bonate of lime, and 1-3 phosphate of magnesia; but Berzelius gives the following as their consti- tuents: 33-3 cartilage, 55-35 phosphate of lime, 3 fluate of lime, 3-85 carbonate of lime, 2-05 phosphate of magnesia, and 2-15 soda, with, a little common salt.

About 1-40 of phosphate of magnesia was obtained from the calcined bones of fowls by Fourcroy and Vauquelin. When the enamel of teeth, rasped down, is dissolved in muriatic acid, it leaves no albumen like the other bones. Fourcroy and Vauquelin state its components to be 27-1 gelatin and water, 72-9 phosphate of lime. Messrs. Hatchet and Pepys rate its com- position at 78 phosphate of lime, 6 carbonate of lime, and 16 water and loss. Berzelius, on the other hand, found only 2 per cent, of combusti- ble matter in teeth. The teeth of adults, by Mr. Pepys, consists of 64 phosphate of lime, 6 car- bonate of lime, 20 cartilage, and 10 water or loss.’

The enamel of teeth seems to be free from cartilage, as it dissolves entirely in diluted nitric acid.

Origin and growth of BOXES. ā In the embryo, the parts that are eventually bone, consist ; first, of a gelatinous substance, which next becomes, in some instances, cartilaginous ; this change does not at all take place until some time has elapsed from the period of conception; and it is, indeed, doubtful whether the intermediate state of cartilaginous existence has place at all

in those bones which are formed early. Accord- ing to Beclard and Serres, these last, that is those which are very early formed, pass imme- diately from their mucous or gelatinous, to their ossific state; or rather, the process of ossific deposit at once commences in this gelatinous condition. This being the case, it would seem, as stated by Dr. Copland in his notes to Richer- and’s Physiology, that ‘ cartilage is rather a pro- visional function, than a stage of ossification ; a temporary condition of structure for the pur- pose of performing the offices of bone, and not a requisite antecedent to the ossific process.’

The mode in which soft yielding parts are con- verted into the harshness and inflexibility of bone, is exceedingly curious and interesting; to this subject we shall have more especially to advert in the article PHYSIOLOGY, and it may here suffice to state that the calcareous matter

is re- gularly deposited from the vessels which furnish it into cavities and canals that are hollowed for its reception ; the ossification commencing in the centre of the matrices, arid proceeding towards the surface ; the canals into which the ossific matter is deposited, become lined with a vas- cular membrane, which is evidently organised, for the purpose of assisting in the bony form- ation ; it does not seem to have been quite made out, whether the concreting matter is eject- ed from its secreting vessels and membranes in a fluid state, or whether the deposit is, ab origine, solid ; but it is most probable, as sug- gested by Beclard, Copland, and others, that the earthy matter is first thrown out into the mem- brane and cartilage in a fluid form, and that its subsequent solidification arises either from the deposit of a larger proportion of earthy matter, or from an absorption of the vehicle which gives it a fluid condition, or from the joint operation of both these causes.

There is one curious fact with respect to the changes which the progress of ossification im- plies, and which would seem, in proof, that de- position and absorption are constantly going on in organised bodies, even after the acme may have been obtained of destined formation or structure ; it is this, that a tinge will be given even to the internal and central parts of the bones, by taking certain substances into the sto- mach, mixed with food; and, that this discolor- ation will gradually disappear when we cease to administer the materials in question. The bones of adult animals, and those most remote from the centre of circulation, will be the longest in undergoing this change, but even in these it is eventually effected. Du Hamel supposed that the bones would become colored and color- less in concentric layers, if an animal were fed, alternately, one week with madder and one without ; and he supposed that additional mat- ter was given to bone in the manner that succes- sive layers are effected in the woody parts of trees ; but he was mistaken in the fact, and it has been well observed, that the inference he deduced from the supposition is inconsistent with the regular and proportionate bearing that the osseous always maintains with the other por- tions of the animal frame: ā if they increased, according to the hypothesis of Du Hamel, by

successive layers, they would grow, as age ad- vanced, into masses vastly disproportioned to their destination and use.

The union of bones, after fracture, it may here be permitted us just to

observe, is in a srreat measure similar to their first formation. Membranous matrices are first developed by the actions that are set up in the system, and then, into those newly formed membranes, ossific deposits are successively made in the manners above described. The principle upon which the periosteum, or membranous lining of bones, is subservient to their growth and nourishment, will be discussed under the head of PHYSIOLOGY.

Bones are extensively employed in the arts. Both in their natural state, and dyed of various colors, they are made into handles of knives and forks, and other articles of turnery. In the article AMMOSIA it will be found how extenr-ively these substances have been used for the manufac- turing of volatile alkali, the coal of which forms bone black ; or, if they are afterwards calcined to whiteness in the open air, they constitute the bone ashes of which cupels are made, and which, finely levigated, are used for cleaning articles of paste and some other trinkets, by the name of burnt hartshorn. The shavings of hartshorn, which is a species of bone, afford an elegant jelly; and the shavings of other bones, of which those of the calf are best, are often employed in their stead. On this principal Mr. Proust has recommended an economical use of bones, particularly with a view to improve the subsis- tence of the soldier ; he first chops them into small pieces, throws them into a kettle of boil- ing water, and lets them boil about a quarter of an hour. When this has stood till it is cold, a quantity of fat, excellent for culinary purposes when fresh, and at any time fit for making can- dles, may be taken off the liquor. This in some instances amounted to an eighth, and in others, to a fourth of the weight of the bones. After this, the bones may be ground, and boiled in eight or ten times their weight of water, of which that already used may form a part, till about half is wasted, when a very nutritious jelly will be obtained. The boiler should not be of copper, as this metal is easily dissolved by the jelly ; and the cover should fit very tight, so that the heat may be greater than that of boiling water, but not equal to that of Papin's digester, which would give it an empyreuma. The bones of meat that has been boiled are nearly as pro- ductive as fresh bones ; but Dr. Young found that those of meat that had been roasted afforded no jelly, at least, by simmering or gently boiling.

Shells, by which several marine and some land animals are covered, crusts, or the covering of crustaceous animals, such as lobsters &c, horn, an animal matter principally membranous, and cartilage, are substances which, in a sort of gra- duating succession, hold an intermediate place between the completeness of bony structure, and decidedly fleshy substance. Indeed the link might be extended through ligament, tendon, and membrane into muscle ; but to treat of these several substances, either as chemical bodies, or portions of animal organisation, is not the pro- vince of the present article : and we have already

stated that in ultimate composition there is not so much difference as might & priori be supposed betweeen these different portions of organic totality.

BONE- ACE, a game at cards played thus : the dealer deals out two cards to the first hand, and turns up the third, and so on through all the players, who may be seven, eight, or as many as the cards will permit : he that has the highest card turned up to him, carries the bone ; that is, one half of the stake ; the other half remaining to be played for. Again, if there be three kings, three queens, three tens, &c. turned up, the eldest hand wins the bone. But the ace of dia- monds is bone-ace, and wins all other cards whatever. Thus much for the bone ; and as for the other half of the stake, the nearest to thirty- one wins it ; and he that turns up or draws thirty- one wins it immediately.

BONE-SETTING, the art of replacing dislocated bones, and of joining the parts of fractured ones. See SURGERY, Index.

BONET (Theophilus), an eminent physician, born at Geneva March 15th, 1620. He took his degree of M.D. in 1643, after he had gone through most of the famous universities, and was for some time physician to the duke of Longue- ville. Meanwhile his skill in his profession ob- tained him considerable practice ; but, being seized with deafness, it obliged him to retire from business. He wrote, 1. Polyalthes, sive Thesau- rus Medico-practicus, 3 vols. fol. ; 2. Labyrinth! Medici Extricati; 3. Medicinae Septentrionalis Collatitia ; and other works.

BONFADIO, or BONFADIUS (James), one of the most elegant writers of the sixteenth century, was born in Italy, at Gazano, near Salo. He was secretary to the cardinal Merinos, and after his death to the cardinal Ghinucci. He afterwards read public lectures on Aristotle's politics, and on rhetoric ; and was made historiographer to the republic of Genoa. He applied himself to compose the annals of that state, in which he satirised some great families. This creating him enemies, he was accused of unnatural crimes, and condemned to be burnt. Some say that this sentence was executed ; and others that his pu- nishment was changed, and that he was beheaded, A. D. 1550. His History of Genoa is esteemed. We have also some letters, some orations, and Latin and Italian poems of his, which were print- ed at Bologna, in 1746, 8vo.

BONFELD, a market town of Wirtemberg, in the district of the Lower Neckar, with a fine castle, six miles north-west of Heilbronn.

BONFINIUS (Anthony), nourished in the fifteenth century. He was a native of Ascoli in Italy, and attached himself to the belles lettres. Matthias Corvinus, king of Hungary, having heard of his learning, sent for him,

retained him, and settled upon him a pension. He wrote, 1. A History of Ascoli ; 2. A Treatise on Virginity and Conjugal Chastity ; 3. A History of Hun- gary ; and other works.

BON'FIRE, n. s. From ban, good, Fr. and/;r. A fire made for some public cause of triumph and exultation.

Ring ye the bells to make it wear away, And bonjiret make all day. S/wfi-c r.

How came so many bonfires to be made in queen Mary's days ? Why she had abused and deceived her people. South.

BONFRERIUS (James), a learned Jesuit, born at Dinant in 1573. He wrote a Commen- tary on the Pentateuch, and learned notes on the Unomasticon, or description of the places and towns mentioned in the Scripture. He died at Tournay in 1643, aged seventy.

BONGARS, or BONGARSIAS (James), a native of Orleans, was one of the most learned men of the sixteenth century. He was for nearly thirty years employed in the most important negoti- ations of Henry IV. at the courts of the princes of Germany. A zealous protestant ; when very young he had courage to write and post up in Rome a spirited answer to a bull of pope Sixtus V. The public is obliged to him for the edition of several authors who had written the History of the Expeditions to the Holy Land ; he also published among other works an edition of Justin, in which he restored several passages. He died in 1612, aged fifty-eight.

BON'GRACE, Fr. n. s. bonne grace. A fore- head-cloth, or covering for the forehead. Not now used. Skinner.

I have seen her beset all over with emeralds and pearls, ranged in rows about her cawl, her peruke, her bongrace, and chaplet. Hakewill on Providence.

BOXGRACE, in sea language, a frame of old ropes, or junks of cables, laid along the bows, sterns, and sides of ships sailing in cold lati- tudes, to preserve them from damage by the flakes of ice.

BONI, a considerable state of the island of Celebes. Its present capital is at

the head of the Bay of Boni, and the natives are called Bugis ; they were converted to the Mahommedan religion about the year 1512, and acquired their present politi- cal influence, and their victory over the Macas- sars of Goa, by the alliance and intrigues of the Dutch, about the latter end. of the seventeenth century. See CELEBES. The bay, sometimes called Buggis Bay, and Sewa by the natives, is on the south coast of Celebes, extending about 180 miles in length, and 55 or 60 in average breadth. It is environed with towns and villages, but full of rocks and shoals.

BONI, an island in the Eastern Seas, lying off the harbour of Boni, on the north-east coast of Waygeeoo, is sandy, low, and woody, inhabited only by a few fishermen.

BOMFACE, I., pope of Rome, was elected A. D. 418, and exerted himself much to establish the supremacy of Rome over the other churches. St. Augustine dedicated to him his book against the Pelagians. He died A. D. 423.

BONIFACE II. governed the papal see only a year and two days. He was elected on the death of Felix IV. A. D. 530, but was opposed by the anti-pope Dioscorus. He appointed Vigilius his successor, but afterwards annulled his appoint- ment, finding Vigilius not popular, He died in 531.

BONIFACE III. was elected A. D. 606, and reigned ouly eight months and twenty-three days; yet in that short period, by favoring the emperor Phocas, he got the important title of ‘ universal bishop exclusively conferred on him-*

self and his successors. Alstedius dates the De- ginning of the reign of the Beast under this pope- He was succeeded by

BONIFACE IV., who obtained the additional favor from Phocas, of converting the famous heathen temple, built by Agrippa, called the Pantheon, into a church. Several literary works are ascribed to him, but they are suspected to be spurious. He died A. D. 614, in the ninth year of his pontificate, and was canonised.

BONIFACE V. was elected pope on the death of Deusdedit, A. D. 618, and was succeeded by Honorius in 626.

BONIFACE VI. was raised to the papal ehair on the death of Formosus, A. D. 895, but enjoy- ed his pontifical dignity only fifteen days.

BONIFACE VII. has the title of anti-pope, be- cause in 974 he caused Benedict VI. to be strangled in prison, and after the election of Benedict VII. removed the treasures of the church to Constantinople. He however

return- ed after the death of Benedict, and caused his successor, John XIV., to be murdered ; but died himself soon after, and his body was dragged by the feet about the streets.

BONIFACE VIII. obtained the pontifical dig- nity in 1294. Alstedius says that ‘ he entered like a fox, reigned like a lion, and died like a dog.’ In 1297 he canonised St. Louis king of France; and in 1 300 instituted a jubilee to be held every hundred years following. At this jubilee he dressed himself in his pontifical habit, and the next in imperial robes ; telling the em- peror Albert’s ambassadors that their master’s election was of no avail without his authority. He boasted that he was the keeper of the keys of heaven ; and caused two drawn swords to be carried before him as emblems of his two-fold authority. He died of fever in 1303.

BONIFACE IX. was elected pope A. D. 1389, on the death of Urban VI., and enjoyed the papal dignity fourteen years and eleven months, but not without competitors; for at this time there was a succession of anti-popes at Avignon for about fifty years, which Roman Catholic writers style ‘ the grand schism,’ and sometimes there were three popes existing at once. He died A. D. 1404.

BONIFACE (St.), an Englishman born at Credi- ton in Devonshire, and originally named Wilfrid. He preached the gospel among the barbarous nations; and though created archbishop of Mentz by Gregory II. soon after resigned his office to go and preach in East Friesland, where he was martyred by the pagans on the 5th of June, 754. His letters were published by Senarius.

BONIFACIO, a sea-port of Corsica, at the south extremity of the island, from which the straits between Corsica and Sardinia have their name : but the harbour is difficult of access. The chief employment of the inhabitants is in the coast fishery. Population about 3000.

BONIS ARRESTANDIS. See ARRESTANDIS.

BONIS, ARRESTO, &c. See ARRESTO.

BONIS NON AMOVENDIS, in law, is a writ di- rected to the sheriffs of London, &c. charging them, that a person against whom judgment is obtained, and prosecuting a writ of error, be not

suffered to remove his goods until the error is determined.

BONN, or BON, an ancient and strong city of Prussia, once the residence of the elector of Cologne. It is of great consequence in time of ā¢war, from its situation on the Rhine, and was well fortified by the elector, who had a fine palace and beautiful gardens here. It suffered severely from bombardment when garrisoned by the French in 1689, and again in 1703, when it was taken by the duke of Marlborough. In 1717 the greater part of the fortifications were demolished. A valuable cabinet of natural his- tory, collected in 1769, was destroyed by the French in 1794. The academy was instituted in 1777, received the titles and privileges of an university in 1786, and was converted by the French, first into a central school, and afterwards into a Lycee. Bonn was formerly in the French department of the Rhine and Moselle, and lies in an agreeable and fertile country. The popu- lation at the end of the last century was stated to be 11,000, one-half of whom were artists and mechanics, and the rest attached to the court of the elector of Cologne, which was held here since .the year 1268 ; it is now not above 9000. The only trade carried on is in the hands of Jews, who are about 200 in number, and live in a sin- gle street. The town has four parish churches ; that of St. Martin is built in the form of a ro- tunda. The monastic establishments have been mostly suppressed.

BONNA, in ancient geography, one of the fifty citadels built by Drusus on the Rhine; sup- posed by some to be the same with the Ara Ubi- onum; now called Bonn.

BONNA, in zoology, a name given by Pliny and others to the Bonasus.

BONNAGE, in our old feudal customs, not yet wholly abolished, an obligation on the part of a tenant to cut down, when called upon, part of the proprietor's corn.

BONNEFONS (John), a Latin poet, born at Clermont in Auvergne, and lieutenant-general of Bar sur Seine, acquired great reputation by his Pancharis, and other poems. He died in 1614, at the age of sixty.

BONNER (Edmund), bishop of London, of infamous memory., was born at Hanley in Wor- cestershire, and generally supposed to be the natural son of one Savage, a priest ; who was the natural son of Sir John Savage of Clifton, in the same county. Strype, however, says he was assured that Bonner was the legitimate offspring of a poor man, who lived in a cottage known in his day by the name of Bonner's Place. About 1512 he entered student of Broadgate Hall in Oxford, and in 1519 was admitted bachelor of the canon and civil law. About the same time he took orders, and obtained preferment in ;the diocese of Worcester. In 1526 he was created

doctor of canon law. Having acquired the cha- racter of a shrewd politician and civilian, he was distinguished by cardinal Wolsey, who made him his commissary for the faculties, and heaped upon him a variety of church preferments. He possessed at one time the livings and preferments of B'aydon and Cherry-Burton in Yorkshire, Rijiple in Worcestershire, East Dereham in Nor-

folk, a prebend of St. Paul's, and the archdea- conry of Leicester. Bonner was with the cardinal atCawood,when he was arrested for high treason. After the death of that minister, he soon insinua- ted himself into the favor of Henry VIII. who made him one of his chaplains, and employed him in several embassies, particularly to the pope. In 1532 he was sent to Rome with Sir Edward Kame, to answer for the king, whom his holiness had cited to appear in person or by proxy. In 1533 he was again despatched to Clement VII. at Marseilles, upon the excommu- nication of king Henry on account of his divorce. On this occasion he threatened the pope with so much resolution, that his holiness talked of burn- ing him alive, or throwing him into a cauldron of melted lead ; upon which Bonner thought fit to return home. In 1538, being ambassador in France, he was nominated bishop of Hereford ; but before consecration was translated to the see of London, and enthroned in April 1540. Henry VIII. died in 1547, while Bonner was ambassa- dor with the emperor Charles V. During this reign he was zealous in his opposition to the pope ; and, to please the king, favored the Refor- mation ; but on the accession of young Edward, he refused the oath of supremacy, and was com- mitted to the Fleet ; however, he soon thought fit to promise obedience to the laws, and was ac- cordingly released. He continued to comply with the Reformation ; but with such manifest neglect and reluctance, that he was twice repri- manded by the privy council, and in 1549, after a long trial, was committed to the Marshalsea, and deprived of his bishopric. The succeeding reign gave him ample opportunity of revenge. Mary was scarce seated on the throne, before Bonner was restored to his bishopric ; and soon after appointed vicegerent and president of the convocation. From this time he became the chief instrument of papal cruelty ; and is said to have condemned no less than 200 Protestants to the flames in three years. Nor was this monster of a priest more remarkable for his cruelty than his boldness. When queen Elizabeth came to the crown, he had the insolence to meet her, with the rest of the bishops, at Highgate. But in the second year of her reign, refusing to take the oaths of allegiance and supremacy, he was again deprived and committed to the Marshalsea; where he died in 1569, after ten years confine- ment. There cannot be a stronger instance of the comparative lenity of the protestant church, than its suffering this miscreant to die a natural death. Several pieces were published under his name.

BONTVET, n. s. Fr. bonnet. A covering for the head ; a hat ; a cap. Bonnet

is also applied to certain small sails attached to the larger sails of ships.

This same day the Salamander being under both her corses and bonnets, happened to strike a great whale with her full stemme. Hakluyt'a Voyages.

Go to them with this bonnet in thy hand, And thus far having stretched it, here be with them. Thy knee bussing the stones ; for, in such business, Action is eloquence. Shakspeare. Coriolanut.

They had not probably the ceremony of vailing the bonnet in their salutations ; for, in medals, they stiil have it on their heads. Add'uon.

Next Camus, reverend sire, went footing slow, His mantle hairy, and his bonnet sedge, Inwrought with figures dim, and on the edge Like to that sanguine flower, inscribed with woe.

Milton's Lycidas.

BON'NET, in fortification, a kind of little ra- velin, without any ditch, having a parapet three feet high, anciently placed before the points of the saliant angles of the glacis.

BONNET A PRESTRE, or priest's cap, in fortifica- tion, is an outwork, having at the head three saliant angles, and two inwards. It differs from the double tenaille only in this, that its sides, in- stead of being parallel, are like the queue d'hironde, or swallow's tail, that is, narrowing or drawing close at the gorge, and opening at the head.

BONNET (Chas.) a naturalist and metaphy- sician, was born at Geneva in 1720. He was intended for the law, but accidentally meeting with the Spectacle de la Nature, of Le Pluche, and Reaumur's Memoirs on 'Insects, he resolved to devote himself to the study of nature. At the age of twenty he had made several discoveries in entomology, and at twenty-seven he formed his system of vegetable physics. About this time he appeared as a writer in a Treatise on Psycho- logy, which was followed by his Analytical Essay on the Mental Powers. In 1762 and 1764 he published Considerations on Organised Bodies, and also Contemplations of Nature. His last work was Palingenesia, or Thoughts on the Past and Future State of Animal Beings. He was a mem- ber of the Royal Society of London, and of seve- ral other learned bodies. He died at Geneva May 20th, 1793.

BONNETELLA, in entomology, a species of tinea. The wings are white, with two little sil- very lines, the posterior one of which is waved; a native of Europe.

BONNETIA, in botany, a genus of class polyandria, order monogynia. CAL. five-leaved ; PETALS five, CAPS, three-celled, three-valved ; SEEDS many Species but one, a native of Cayenne ; a tree with obtuse glabrous leaves, and purple flowers.

BONNEVAL (Claudius Alexander count de), known in the latter part of his life by the name of Osman Bashaw, descended from a family re- lated to the blood-royal of France, entered at the age of sixteen into the service of that crown, and married the daughter of the marshal de Biron. He made the campaign in Flanders in 1690 ; but soon after left the French army, and entered into the imperial service under prince Eugene, who honored him with an intimate friendship. The intrigues of the marquis de Prie, his inveterate enemy, ruined his credit, however, at the court of Vienna, and caused him to be banished the empire. He then offered his service to the republic of Venice and to Russia ; which being declined, his next tender vas to the grand seignior, who gladly received him. It was stipulated that he should have a body of 30,000 men at his disposal ; that a go vernment should be conferred on him, with the rank of bashaw of three tails, and a salary of 10,000 aspers per day ; and that in case of a war he should be commander-in-chief. The first ex-

pedition he engaged in after his arrival at Con- stantinople was to quell an insurrection of Arabia Petraea, which he effected ; and at his return had large offers made him by Khouli Khan, but did not choose to accept them. Some time after, he commanded the Turkish army against the em- peror, over whose force he gained a victory on the Danube. But Bonneval on his return, not- withstanding his services, was first imprisoned, and then banished to the island of Chio. The sultan, however, continued his friend ; and the evening before his departure made him bashaw- general of the Archipelago, which, with his former appointment of beglerberg of Arabia, rendered him one of the most powerful persons in the Ottoman empire. In this island he found a retirement quite agreeable to his wishes. He did not however long enjoy it, being sent for back, and made topigi or master of the ordnance, a post of great honor and profit. He died in this employment, aged seventy-five, in 1747, and left memoirs of his own life.

BON'NY, ā¢} A comparatively modern

BON'NILY, > word, not introduced into our

BONNI'NESS. J earlier lexicons. It is de- rived, no doubt, from the French,

ban, bonne. It is now rather a Scottish than an English word, and signifies handsome, beautiful, gay, merry, cheerful, blithe. It seems to be generally used in conversation for plump and healthy. O bonnie, bonnie was hir mouth,

And cherry were hir cheiks,

And clear, clear was her yellow hair

Whereon the reid bluid dreips.

Edam of Gordon, in Percy. Then sigh not so, but let them go,

And be you blithe and bonny. Shakepeare

Match to match I have encountered him,

And made a prey for carrion kites and crows

Even of the bonny beast he loved so well. Id.

Thus wailed the louts in melancholy strain,

Till bonny Susan sped across the plain. Gay

How can I busk a bonny bonny bride?

How can I busk a winsome marrow ?

How love him on the banks of Tweed, That slew my luve on the braies of Yarrow.

W. Hamilton's Braes of Yar'ow. Wee, modest, crimson-tipped flower,

Thou's met me in an evil hour;

For I maun crush amang the stoure Thy slender stem,

To spare thee now is past my power,

Thou bonnie gem. Burns.

BONNY, among miners, a bed of ore, differing only from a squat as being round, whereas the squat is flat. . See SQUAT.

BONNYCASTLE (John), late professor of mathematics, at the Royal Military Academy at Woolwich, was born at Whitchurch in Buckinghamshire. Though of respectable parentage, he was chiefly indebted to his

own exertions for the extensive knowledge which he acquired. He came to London young, and married, when only nineteen, a lady named Rolt, on whose death, soon after, he became private tutor to the two sons of the earl of Pomfret. After spending two years at Easton in Northamptonshire, he was appointed one of the mathematical masters at Woolwich, where for more than forty years he devoted his time to that important establishment,

and to the composition of his able works on the mathematical science. The Scholar's Guide to Arithmetic was his first production, and has passed through many editions. His Guides to Algebra and Mensuration have also long been ranked among the most useful school-books. He also wrote a Treatise upon Astronomy, 8vo. ; the Elements of Geometry, 8vo.; a Treatise on Plane and Sphe- rical Trigonometry, 8vo. ; a Treatise on Algebra, 2 vols. 8vo. : and was the author of a translation of Bossut's History of the Mathematics. He also wrote various articles in the early part of Dr. Rees's Cyclopaedia, and died atWoolwich, May 15, 1821.

BONO ET MALO, WRIT DE, in law, a special ā¢writ of gaol-delivery, anciently used for each particular prisoner.

BONONC1NI (Giovanni), an eminent com- Doser of music, who for some time divided the opinions of the cognoscenti of this kingdom with respect to the comparative merits of himself and the great Handel ; which gave occasion for the well-known epigram on the disputes between Tweedle dum and Tweedle dee, said to have been written by Swift. An Italian opera was published with Bononcini's name prefixed to it, entitled Pharnaces.

BONONIA, an ancient town of Gallia Bel- gica, supposed to be the Portus Iccius of Caesar, and the Gessoriacum of Mela. Peutinger's map expressly calls Gessoriacum Bononia. It is now BORCLOGNE.

BOXOXIA, a town of Italy, in Gallia Cispa- dana ; a name probably given by the Gauls, with reference to the Belgic Bononia. Its ancient name when in the hands of the Tuscans, who were expelled by the Gauls, was Felsina. In A.U. C. 563 the Romans led a colony thither; which about the beginning of the Actian war, was in- creased by Augustus, and was the Colonia Bo- noniensis of Tacitus. It is now called Bologna. See BOLOGNA.

BONOXIA, a town of Moesia Superior, on the Danube ; now Bodon in Bulgaria.

BOXOXIA, a town of Pannonia Inferior, be- tween Mursa to the north-west, and Taurinum to the east.

BONOXIA (John de), a native of Sicily, arch- deacon of Palermo, and chaplain to Charles V. He was deputed by the emperor to an assembly of divines, who met in 1553, to decide the question whether the people should be allowed to read the Bible in the native language. Bo- nonia violently espoused the negative side, and the assembly decided accordingly. He published a work on predestination at Louvain in 1555.

BOXOXIAX STOXES, See BOLOGNIAN.

BONONIENSIS, in ornithology, the greater lapwing, the tringa Bononiensis of Gmelin, and vanellus Bononiensis major of Brisson. The legs are ochraceous ; head and upper part of the neck chestnut; body black above, beneath white ; throat and breast spotted with ferruginous.

BONPLANDIA, in botany, class pentandria, order monogynia. Its generic characters are : CAL. five-toothed : COR. monopetalous, tube longer than the calyx: STAM. five, inclining: PIST. germ superior; STYLE capillary: STIG. bifid : PER. capsule ovate, three-sided :] SEEDS three. B. geminiflora, an annual plant : a native of Spain.

BONS-HOMMES, or BON-HOMMES, a sort of hermits of St. Augustin, founded by F. de Paula. They were brought over into England in 1283, by Edmund earl of Cornwall, and settled at Ashridge in Bucks, besides which, they had only one house more at Edington in Wiltshire. They followed the rule of St. Austin, and wore a blue ha. .it. The name is said to have arisen from Louis VI. of France, who used to call F. de Paula, prior to the order, Le bon homme. Till then they had been called the Minimi, or the order of Grammont.

BONTIA, or wild olive of Barbadoes, a genus of the angiospermia order, and didynamia class of plants; natural order, fortieth, personate : CAL. is quinquepartite : COR. is bilabiated; in- ferior lip tripartite and revolute ; the drupe is ovate and monospermous, with the apex turned to one side. One species only, viz. B. daphnos- des, with a yellow corol, having a purple line down the lower lip. This plant is generally cultivated in Barbadoes for hedges and other fences, being of rapid growth, and soon attain- ing its natural height of about ten feet.

BONVICINO (Alexander), called Le Moretto, history and portrait painter, was born at Rovate in 1514. He was a disciple of Titian, but having seen the designs of Raphael, he gave himself up entirely to study those masterpieces of art and genius ; which he did with such judgment that he

be- came an exceedingly good painter. His works were eagerly bo'ught up, being admired for the tenderness of the penciling ; the correctness and spirited expression of the figures ; the neatness of the finishing; and the rich variety of the draperies. He was equally excellent in portrait, and by many was placed in competition with Titian himself. He died in 1564.

BONVOULOIR ISANDS. They are reefs of the archipelago of Louisiade, in the South Pa- cific Ocean. The French voyagers who sailed in quest of La Perouse, saw some of the natives in two masted canoes, which were well carved, and with steering paddle, or helm, both behind and before. The people were of middle size, and had woolly hair : shy and distrustful, but, unlike most of the southern islanders, testified no particular desire for iron.

BONUS HENRICUS. See CHENOPODITJM.

BONZES, Indian priests. The Tonquiuese have a pagod or temple in each town ; and each pagod has at least two bonzes belonging to it ; some have thirty or forty. These bonzes, to dis- tinguish themselves from the laity, wear a chap- let about their necks consisting of 100 beads ; and carry a staff, at the end of which is a wooden bird. They live upon the alms of the people; yet are very charitably disposed, and maintain several orphans and widows out of their own collections.

BONZES OF CHIXA are the priests of the Fo- hists, or sect of Fohi. It is one of their estab- lished tenets, that great rewards are allotted for the righteous, and punishments for the wicked in the next world ; and that there are various man- sions in which the souls of men will reside, ac- cording to their different degrees of merit. But, in order to deserve the favor of Heaven, the bonzes instruct the people to treat the priests

with respect and reverence, to support and maintain them, and to erect temples and mo- nasteries for them. They tell them, that unless they comply with their injunctions they will be cruelly tormented after death, and pass through a disagreeable variety of transmigrations; that they will be changed into mules, asses, rats, mice, &c. The Chinese borrzes, according to F. le Comte, are a gang of dissolute idle fellows. All their aim is to excite people to commiserate their abject condition : to which end they have various impostures. When the common arts of address fail them, they try what public acts of penance will do. Some of them drag heavy chains thirty feet long after them ; some sit in the highway knocking their heads against flint stories ; others set particular drugs on fire upon their heads ; all these are

several ways 0f draw- ing the attention and exciting the compassion of the people, and they seldom fail of success. F. Navarette tells us, that the bonzes are obliged to chastity ; and that on the '2d of April, 1667, a petty king of Canton had condemned eleven of them to be burnt alive for incontinence. He adds that it was reported of an empress of the last reigning family, who had a particular kind- ness for the bonzes, that she granted them a dis- pensation for the use of women during three days. The bonzes of China, according to the same author, are computed at 50,000. It has been observed that there is so strong a likeness between the apparent worship of many of the priests of Fo (see Embassy to China, vol. ii. p. 100) and that which is exhibited in churches of the Roman faith, that a Chinese conveyed into one of the latter, might imagine the votaries he there saw were adoring the deities of his own country. On the altar of a Chinese temple, be- hind a screen, is frequently a representation which might serve for the Virgin Mary, in the person of 'Shin-moo', or the Sacred Mother, sitting in an alcove with a child in her arms, and rays proceeding from a circle which are called a glory round her head, with tapers buining con- stantly before her. The long loose gowns of the Ho-shangs, or priests of Fo, bound with cords round the waist, would almost equally suit the friars of the order of St. Francis, trie for- mer live like the latter in astateof celibacy, reside together in monasteries, and impose occasionally upon themselves voluntary penance and vigor- ous abstinence.

BONZES OF JAPAN are, for the generality, gentlemen of the highest extraction ; for when a gentleman of quality finds his family grow too numerous, nay, when he has only two sons, he generally makes the youngest a bonze, to prevent all domestic broils and confusions. These priests are dressed in various colors; their apartments are very commodious, and situated in the healthiest parts of the country.

BOO'BY,) A word of no certain etymo- BOOBY'ISH. f logy. Henshaw thinks it a corruption of bull-beef, ridiculously. Skinner imagines it to be derived from Span, bobo, foolish. Junius finds bowbard to be an old Scottish word for a coward, a contemptible fellow ; from which he naturally deduces booby : but the original of bowbard is not known. Thus

far Dr. Johnson. Instead of bowbard beim; considered by Junius as an old Scottish word, the Ency. Met. says he derived it from the Greek Bov/3apac, as heavy as an ox. Ruddiman derives bowbard from the Latin bubo, an owl ; both indicating heaviness ; dulness ; stupidity. The writer of the lexicon department in the Ency. Met. has ventured the following ingenious conjecture : ' The English booby is probably no more than an emphatic repetition of boy, sc. boy, boy ; a boy indeed ; a mere boy ; having none but boyish childish qualities and disposi- tions ; a simpleton. The verb boyed is used by Beaumont and Fletcher in a manner which strongly

confirms this supposition. 'Baffled and boyed,' i. e. made a boy ; a child ; a booby; made a fool of; befooled. There is a sea-fowl, re- markable for its stupidity, called by the sailors a booby. These birds are easily caught; or if they belonged to our own species we should say, ' taken in.' A board is no sooner thrown out upon the surface of the water but the booby souses upon it with such violence as to be in- stantly stunned and taken. An excellent speci- men of a fool.

Young master next must rise to fill him wine, And starve himself to see the booby dine. King.

Where yet was ever found a mother, Who'd give her booby for another. Gay.

BOODH, BOUDDHA, or BUDDHA. See BUDDHA.

BOOK', v. & n. ") Sax. hoc, supposed from BOOK'FUL. boc, a beech, because they

BOOK'ISH, wrote on beechen boards ;

BOOK'ISHLY, as liber, in Latin, from the

BOOK'ISHNESS, rind of a tree. To be well BOOK'LESS, {ˆbooked, in Gower, is to be

"BOOK'BINDER, ' well read in books ; learn- BOOK'MAN, ed in books ; booklearned.

BOOK'MATE, To book, in modern usage,

BOOK'KEEPING, is to write into a book. It BOOK'SELLER, is variously applied in BOOK WORM. j composition. In books, is familiarly to hold in kind remembrance. With out book, by memory ; by repetition ; without reading. A book is either a volume, a particu- lar part of a work, or a register ; a tradesman's ledger, in which he keeps his accounts. And in this bolte were written fables That clerkes had, in olde time, And other poets put in rhyme To rede, and for to be in minde While men loved the law of kinde. This bohe ne spake but of such things, Of quenes lives, and of kinges. And many other thinges smale, Amonge al this I fonde a tale.

Chaucer. Bohe of the Duchetse. Which to requite, the Red-crosse knight him gave A booke, wherein his Saviour's testament Was writt with golden letters rich and brave ; A worke of wondrous grace, and able soules to save.

Spenser.

See a look of prayer in his hand ; True ornaments to know a holy man.

Shakspeare.

I'll make him yield the crown, Whose bookish rule hath pulled fair England down.

Id.

This civil war of wits were much better used On Navarre and his bookmen ; for here 'tis abused Id,

BOOKS.

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This Armado is a Spaniard that keeps here in court, A phantasm, a monarch, and one that makes sport To the prince and his bookmatet. Id.

I beseech your grace, let it be booked with the rest of this day's deeds ; or I will have it in a particular ballad else, with mine own picture on the top of it.

Id.

I'm not bookish, yet I can read waiting-gentle- woman in the 'scape. Id. Winter's Tale. They might talk of booklearning what they would, jut he never saw more unfeaty fellows than great clerks. Sidney. Sermons read they abhor in the church ; but ser- tnons without book, sermons which spend their life in ikeir birth, and may have public audience but once.

Hooker.

The modern dedications of books and writings as to tatrons is not to be commended ; for books, such as are worthy the name of bouks, ought to have no pa- trons but truth and reason. Bacon. Bookt must follow sciences, and not sciences books.

Id.

ever during dark

Surrounds me, from the cheerful ways of men Cut off, and for the book of knowledge fair Presented with a universal blank Of Nature's works, to me expunged and rased, And Wisdom at one entrance quite shut out.

Milton.

Neither does it so much require booklearning and scholarship., as good natural sense, to distinguish true and false, and to discern what is well proved, and what is not. Bwnet's Theory.

He mude wilful murder high treason ; he caused the marchers to book their men, for whom they should make answer. Dames on Ireland.

Whate'er these booklearrted blockheads say, Solon's the veriest fool in all the play. Dryden. He will quote passages out of Plato and Pindar, at his own table, to some boohlcarned companion, with- out blushing. Swift.

The bookful blockhead, ignorantly read, With loads of learned lumber in his head, With his own tongue still edifies his ears. And always listening to himself appears. Pope. Among those venerable galleries, and solitary scenes of the university, I wanted but a black gown, and a salary, to be as mere a bookworm as any there.

Id. Letters.

I was so much in his books, that, at his decease, he left me the lamp by which he used to write his lucu- brations. Addiion. Xantippe follows her namesake ; being married to a bookish man, who has no knowledge of the world.

Spectator.

The bookseller who heard him speak, And saw him turn a page of Greek, Thought what a genius have I found. Gay. Books, like friends, should be few and well chosen. Joineriana, 1772.

*BOOKS are the staple materials of a LIBRARY. Under the latter head, therefore, we shall present *he reader with the criteria of rare, scarce, and useful books, together with the best general mode of arranging them. Here we confine our- selves to the ancient materials and early forms of books.*

The Latin words liber and codex, as well as our own Anglo-Saxon boc, or book, clearly in- dicate the early use of the rind or bark of trees .for the purpose of making books. In the early part of the first American war some Trans-Atlan- tic Friends, it is said, were advocates for return- ing to this, among other primitive customs. VOL. IV.

They suggested, Dr. Franklin has told us, the use of the bark of trees for the drawing up of deeds and contracts to avoid the duty and stamp upon paper. But their countrymen preferred a bolder mode of settling the

question. The leaves of trees were, perhaps, a still earlier material of books ; but both kinds of books are in use to this day among semi-barbarous nations. The Rus- sians, not long since, discovered a considerable library of bark books among the Calmuc Tartars : the leaves were remarkably thick, long, and narrow, and had been prepared previously to be- ing written upon, by a double coat of black var- nish. Copies of the Malay gospels and other books are frequently brought from the east, written on long slips of reed or bark, fastened by strings at each end.

Local circumstances, the progress of the arts, and the relative importance of the record or in- formation to be perpetuated, have suggested tne use of a variety of other materials. Among them are mentioned plates of lead and copper, hardened clay, slate, horn, stone, and wood. Josephus speaks of two columns, the one of stone, the other of brick, on which the children of Seth wrote their inventions and astronomical discoveries. Porphyry mentions some pillars, preserved in Crete, on which the ceremonies practised by the Corybantes in their sacrifices were recorded. Hesiod's works, it is said, were originally written upon tables of lead, and de- posited in the temple of the Muses, in Boaotia. The ten commandments, delivered to Moses were written upon stone we know ; and Solon's laws upon wooden planks. Tables of wood, box, and ivory, were common among the ancients : when of wood they were frequently covered with wax, that people might write upon them with more ease, or erase what they had written. Hence the ancient stylus had a pointed and a flat end. The leaves of the palm-tree were afterwards used instead of wooden planks, and the finest and thinnest part of the bark of trees, particularly of the tilia, phillyrea, papyrus, the lime, the ash, the maple, and the elm.

Job, while wearied by indefinite calumny, he wishes his adversary had written a book, is parti- cularly anxious that his early and remarkable tes- timonies to the doctrine of a resurrection should ' be gra.ven with an iron pen and lead on the rock for ever,' as our version expresses it. Pliny (Nat. Hist. lib. xiii. c. 1,) states that writing on lead (plumbulis volumnibus) was of great antiquity, and came in practice next after the writing on barks and leaves of trees : it was used, he adds, particularly ' in recording public transactions.' Parkhurst says, I apprehend the cutting or sculpturing on the rock (Job. xix. 24,) to be here mentioned as a different and more durable method than even the engraving on lead. This ancient book, according to the same critic, probably alludes to the writing on linen in chap. xxxi. 35, and wearing the record as a tiara on the head.

Leather was an early animal substitute for the less durable vegetable materials ; the endeavour to improve it gave rise, doubtless, to the invention of parchment, on which most of the ancient MSS. extant are written. See MANUSCRIPT-

BOOK-BINDING. ā At what period book-binding, in its present form, came into use does not appear to be correctly ascertained. The earliest account we have of books inforrns us that they consisted of rolls of papyrus or parchment, fastened or strung- together, see BOOKS. We learn from Olympio- dorus, ‘ that the Athenians erected a statue to the memory of that man who bound books by means of glue.’ These rolls were fastened together, either in the centre or from the end, by means of a boss, upon which the most cunning and curious art was frequently lavished: it is probable that the value or importance of the MS. was sometimes indicated by the style of ornament introduced upon these bosses or fastenings.

Experience must soon have shown the great convenience of folding these sheets of vellum into fours or twos. It appears, however, that the previous method of a long roll continued to the days of Catullus, about forty years before Christ, and even for some time afterward. As soon, however, as the folded form came into use, the necessity of a cover of some description became apparent; and hence gradually arose book-binding in its present shape. These covers were, no doubt, at first a simple leaf of parch- ment or some other skin ; but this, of itself, would so”on have been found insufficient, and probably suggested the use of boards, which appear for a long time, to have been made of oak, as numerous specimens of books with oaken covers or boards are now existing, of a date as late as the sixteenth century.

The progress of book-binding, from the simple cover of the ancients to the magnificent style of decoration used by the modern book-binders, is a curious subject, and has never yet been attempted to be described. The earliest ornamented book, of which any account can be traced, is the Book of St. Cuthbert, supposed to have been bound in the middle of the seventh century; it is described by Ethelwold, one of the monks of Lindisfarne, as having been bound with gold and precious stones, Bib. Dec. Vol.i. p.l. This book, consisting of a Latin text of the Gospels on vel- lum, is now in the British Museum; but the original binding has been replaced by a Russia coating; having, most likely, been despoiled of its ornaments at the period of the Reformation.

The next early specimen, of which we have any notice, is a Latin Psalter of the ninth cen- tury; the binding of this volume consists of oaken boards; on the exterior of the first of which is a large brass crucifix, formerly, perhaps, covered or washed with silver, from which it does not appear that at that period the leather or parchment cover was used over the boards. Another

MS., supposed to be of the tenth or eleventh century, is also bound with oaken boards, the outside of one of which is inlaid with pieces of carved ivory, which Dr. Dibdin supposes to have been executed at a later period, probably from the piety of some subsequent owner of the book. Another very curious specimen of the twelfth century is thus described in Moule's Bibliotheca Heraldica, p. 493 : ā ' The original book upon which, all our kings, from Henry I. to Edward V[., took the coronation oath, is now iu the library of a gentleman in Norfolk. It is

a MS. of the four Evangelists, written on vel luin, the form and beauty of the letters nearly approaching to Roman capitals. It appears to have been written and bound for the coronation of Henry I. The original binding, which is still in a perfect state, consists of two oaken boards, nearly an inch thick, fastened together with stout thongs of leather and the corners defended with large bosses of brass. On the right-hand side, as the book is opened, of the outer cover is a cru- cifix of brass double gilt, which was kissed by the kings upon their inauguration, and the whole is fastened together by a strong clasp of brass, fixed to a broad piece of leather secured with two brass pins.' In archbishop Whitgift's Hospital at Croydon, is a folio Bible, printed by Barker, given to the Society by Abraham Hartwell, secretary to the archbishop in the year 1599. This Bible is preserved in a very curiously orna- mented cover, with laige brass bosses and clasps of the most elaborate workmanship; forming one of the most curious specimens of ancient binding extant. The binding has been repaired, in a wretched and most unfeeling manner, at the ex- pense of Mr. John Lett, of Lambeth, in the year 1813, 214 years after its original binding.

Velvet seems to have been a favorite covering for books at an early period; but of this no notice appears of any specimen earlier than the fourteenth century, when Dr. Dibdin says, it is expressly noticed by Chaucer,

' 3 ttent? bofees clortjeo in blade ana KB;1

meaning, I presume, 'bound either in black or red velvet; for neither calf, vellum, nor forrell, could be said to be black or red.' Bib. Decani. vol. ii. p. 447, note.

Coeval with velvet, silk seems lo have been used as a cover for books. Vellum appears to have been introduced for binding in the early part of the fifteenth century, but then was quite plain. About the year 1510 vellum bind- ings began to be stamped, and there are now existing, in various libraries, some very delicately executed specimens of this stamped binding, totally different from any ornamental decoration that has been produced in modern times. Calf leather appears to have come into use about the same time as vellum ; although Dr. D. mentions a specimen of stamped calf

binding of the thir- teenth century. At the beginning of the sixteenth century all the skill of the workman was lavished in ornamenting the sides, the backs being then quite plain, without even a lettering- ihe large centre ornaments of the sides, in common use at this time and the following century, are certainly superior, in boldness and beauty of design, to any of modern use. From this period up to the com- mencement of the present century there does not ap- pear any very material improvement in book-bind- ing; and, during the greater part of the eighteenth century, the art rather retrogaded than advanced. A very slight inspection of the work of this period will prove the truth of the assertion, the shape of the books being clumsy, and the orra- ments totally devoid of taste. Of late years, however, a spirit of improvement has arisen. The study of the antique has now become general,

and book-binding lias fully participated, with other arts, in the advantages which it has im- parted.

In order to render the following account intel- ligible, it will be necessary to begin with a description of the principal tools and imple- ments used in the process of bookbinding.

1. The Standing Press. ā This must be firmly, as well as conveniently, fixed; it consists of two upright cheeks, about six feet in height, placed about twenty-four inches apart. Between these cheeks, about five inches from the bottom, is placed the bed; and, near the top, the head, con- taining a box for an iron screw. The bed is about four inches, and the head usually twelve inches in thickness ; both are firmly fastened to the cheeks by means of grooves. The swinging board, to which the screw, of about three inches diameter, is fixed, works perpendicularly between the head and bed of the press; and, by means of turning the screw into the box or lowering it, is either raised or depressed. The screw is worked by means of an iron bar, about five feet in length, to which the united strength of four men is fre- quently applied when the press is filled with books.

2. The Cutting or Laying Press consists of two strong cheeks lying horizontally across what is termed the shaving tub, which is a frame for holding the shavings from the edges of the books. It was formerly the practice to place the press across a tub, whence the name. Within the left cheek are cut worms for two wooden screws to work in ; these are passed through two opposite holes in the right cheek, and are about two feet in length, having large heads to introduce the press pin, by which the books

are pinched between the cheeks. On one side of the left cheek are nailed two slips of wood, about an inch and a half asunder, forming a groove for the plough to ran in.

3. The Plough. ā This, also, consists of two light cheeks, which are drawn together by a sin- gle screw in the centre; in one of these cheeks a groove is cut, exactly the thickness of the knife, which is fixed to the plough by means of an iron bolt, passing through the cheek, having a screw at the top to receive a nut; the knife then lies flat upon the cheeks of the cutting press. The mode of using it is as follows : the book intended to be cut being screwed up with a very small portion of the margin above the press, the plough is placed in the groove and opened so as to let the point of the knife clear the book ; the head of the screw is then grasped with the right hand and the other end with the left and in this way moved backward and forward with a steady regu- lar motion, at every turn contracting the screw a little, until the knife has passed through the book and removed the parts intended to be cut away.

4. The Sewing Press ā The bed is of hard T?ood, about one inch thick, fifteen inches wide, and about three feet in length ; an opening is cut in it extending within a few inches of each end, aud about an inch from the front edge ; this open- ing is about three quarters of an inch wide. At both ends of the bed, in a parallel line with the opening, are fixed two wooden screws, furnished with nuts, supporting a bar for fastening the

strings or bands upon which the books are sewed; this bar rises and falls as the nuts are raised or lowered ; the bands for sewing the books upon being fastened to the bar, the other end is twisted round small brass keys, introduced into the open- ing, and when the requisite number are so fixed they are made tight by raising the nuts under the bar.

5. The Beating-Iron is a plate or anvil, about five inches thick, and from eighteen inches to two feet square. It is firmly fixed on a piece of timber nearly of the same diameter let into the ground.

6. The Beating-Hammer is short and heavy, generally weighing about fourteen pounds ; the face of this is perfectly smooth and inclining to convex, the handle being about six inches in length.

7. The Backing- Hammer is similar to a shoe- maker's hammer, which is well known.

8. Pressing Boards are made of beech or other hard w>od, the small ones about half an inch thick, the larger ones thicker in proportion; these are of course flat, and of various sizes from folio to 12mo.

9. Cutting Boards are thin wedges of beech of different lengths.

10. Backing Boards are thicker than cutting boards, and the thick edge is bevelled off in order to make the ledge they are intended to form in the back of the book sharp.

TOOLS FOR FINISHING.

1 1 . Rolls are used in ornamenting either the sides or backs of books. The roll is a brass wheel, upon the edge of which is cut the figure intended to be impressed on the book ; they are of various patterns, from plain lines up to the most elaborate and classical designs, and are mounted on a carriage of iron, made to receive the axle of the roll, and a long wooden handle rested against the shoulder when used.

12. Pallets are also of brass, about two inches in length, upon the edge of which the pattern is cut in the same manner as the roll, but are only applicable to the backs of books.

13. Back Tools are ornaments of various de- scriptions, as flowers, crests, coats of arms, &c., cut in brass and fixed in handles about six inches in length.

14. Alphabets of all sizes are also cut in brass and fixed in handles, in the same manner as the back tools.

The art of book-binding may be divided into three distinct parts, each part being usually performed by different persons.

1. Folding, sewing, and collating.

2. Forwarding, or the state of the book from the sewing to the covering.

3. Finishing.

The book being given to the binder in sheets, the first process is folding ; this, as well as sew- ing, is done by women, the pages being all placed exactly opposite to each other, and folded by means of an ivory folder : this must be done with considerable care, as, upon it, depends the regular appearance of the margin, absolutely ne- cessary to a well bound book.

The book when folded, is taken by the for-

warder to the beating iron, and being divided into portions of about fifteen sheets, is beaten until it lies firm and smooth, the sheets being repeatedly shifted, so as to present each sheet to the action of the beating hammer ; but, when recently printed books are to be bound, this operation must be performed in a very limited degree, otherwise it will cause the ink to set off on the opposite page. The book is then carefully col- lated by the signatures at the bottom of each sheet, and four leaves of blank paper being placed at each end, the volume is divided into thin parts by pressing boards, and placed in the standing press, where, being firmly screwed down, they are left for some hours. The books when taken out of the press are put three or four together according to the thickness, and the edges of the sheets being brought quite square and even, by striking them smartly on the back and head upon the table or press, are placed between two boards in the cutting press, and five or six grooves are made in the back with a saw, to hold the bands upon which they are to be sewed. v'

The books are next given to the sewer, and being placed upon the sewing press, with the title page upwards, the bands are fixed to the press, as already described ; they are then ad- justed so that each cord shall come into a groove in the back of the book. Sometimes where great strength is required, as in Bibles, &c., the bands are made to project upon the back, in which case the sawing is omitted, and the books are sewed with raised bands. The blank paper is ten lifted with the left hand, and being turned over is laid on the sewing press against the bands, and the needle being put in near the top with the right hand, is passed out by the left, close to the band ; the needle is then inserted on the other side of the band and brought out at the next band, and so on until it is sewed all along : the first sheet of the book is then put on the press, and the needle being put in at the bottom, it is in like manner sewed from bottom to top, but as the back would be too much swollen with the thread, were each sheet sewed throughout (ex- cept where the sheets are unusually thick) it is necessary to sew two whole sheets or three ialf sheets at once, passing from top to bottom, or from tail to head, by taking one stitch in the first sheet, then taking a stitch on another, and returning to the first, a third stitch is given ; the second sheet is then opened, the fourth stitch is made ; and so on alternately until the end is reached by the kettle stitch made beyond the bands : if three half sheets are sewed on, the same method is pursued. When the books are all sewed, the keys are taken out and the strings are drawn through the threads to the proper lengths and cut separate.

The books now pass into the hands of the forwarder, whose first business it is to see that the back is quite square, and no thicker in one part than another; if the books are for extra binding, two leaves of marbte or coloured paper are pasted down to the second fly leaf; the upper leaf being left loose to preserve the marble

Faper from damage in the course of the work, or common binding, the outside two white leaves are pasted together. The backs of the

books are then to be glued, and must dry gra- dually ; the bands are then opened, and scraped away, in order to render the covers smooth when they are let into the boards.

The next process is backing, the book being laid on its side, on the press, the back is rounded with the backing hammer, at the same time draw- ing it over with the hand ; it is now placed be- tween the backing boards, the edge of the board being about one-eighth of an inch from the back of the book, and .being put into the cutting press, and care being taken that it is quite even, it is well hammered down so as to form the grooves on both sides to hold the boards and render the back quite smooth and firm.

The boards are now to be cut to the proper width, previously to being put to the book ; to ascertain which the width of the book is taken by compasses from the groove to the fore-edge, piercing through three or four leaves to ascer- tain how much must be cut away, allowing for the projection of the boards, which are then cut ‘ with the plough ; the boards are then placed on each side of the book, and two holes being made with an awl opposite each slip or band, they are fastened to the book by the slips being drawn through the holes, and first well pasted; the ends of the bands are then cut off, nearly close to the board, and being placed on a small anvil, which is screwed into the end of the press for this pur- pose, are to be beaten flat or knocked down with the backing hammer ; the books now in boards, are again pressed in the standing press, and the backs covered with thick paste, which is rubbed off as they stand in the press, with a handful of shavings. The next operation is cutting : the top of the book is marked on the beginning board by a square from the front; the book is placed between two boards, the one at the end of the book being above it, and that at the beginning even with the mark. It is then put into the cutting press with the first board or runner exactly even with the cheek, the part to be cut away projecting above the press ; when cut, the book is taken out, and the length to which it is to be cut is ascertained by measuring from the head to the tail with compasses ; the boards are then drawn down from the tail to the head, and being adjusted for the size of the square, for both ends, the book is again placed in the cutting press, and the part marked cut away ; the fore-edge is next cut, by the back, which is now round, being brought perfectly flat ; this is done by introducing two pieces of thin beech, called trindle, between the back of the book and the boards, the ends of the trindle resting on the inside of the boards, and the back of the volume resting on the middle, the boards standing out from the book at right angles, thus j,, the stem of the letter T representing the book, and the arms the covers ; the cutting boards are then placed at each side of the book, and

the whole being taken firmly between the palms of the hands, the back is struck smartly two or three times on the press ; this brings the volume quite flat: the cutting board at the end of the book is then placed in a line with a mark which has been made with a bodkin, along the front of the board, and that at the beginning about an eighth

of an inch below it ; it is now taken in the left hand, and turned up to see that the back is square, as well as sufficiently flattened, and is then placed in the press for cutting; the board at the beginning even with the cheek of the press, and that at the end standing as much above it as the cover is intended to project be- yond the book ; the leaves are then cut through as already stated.

Coloring or Gilding of the Edges. ā For books in common bindings, the edges are merely sprinkled brown, red, or other colors, by a brush beaten against an iron pin.

To marble the edges, the books are dipped in a trough filled with gum water, with the various colors floating upon the surface. This process is never performed by bookbinders, being a se- parate business.

Gilding the edges is also a distinct trade ; lYie gold is laid on with white of egg, and afterwards burnished.

When the edges are colored or gilt, the books are next head-banded. The head-band is a small piece of vellum cut to the size of the square, a part of the board which projects beyond the book. Head-bands are fixed to the top and bot- tom of the book, silk or cotton thread being twisted round, either of one, two, or three colors. The back of the book is then lined with cartridge or other thick paper, and well dried by a slow fire, being frequently rubbed with a folding-stick to spread the glue. A piece of triple cartridge paper is then cut out exactly the size of the back, and carefully moulded to the shape; and upon this false back four or five pieces of double leather form the bands : the book is now ready for covering. The leather to make the cover is then pasted all over with thick paste, and is drawn over the book, and the edges carefully turned over, the corners being cut off. The bands are then rubbed on each side with the edge of a cut- ting-board, or other hard piece of wood, to make them square and neat ; the book being covered must be left until quite dry, and is then handed over to the finisher.

The first business of the finisher is to rub the edges, squares, and bands, a second time, with a piece of hard wood ; the thick edges of the leather

inside of the board are now pared away, and, if a set of books, the volumes are arranged in order, to see if the bands are all in a line. The covers are then washed with paste-water. Calf leather, as well as Morocco, is now gene- rally colored in the dressing ; if, however, the white leather is used, it is colored brown of various tints, by being washed over with a solu- tion of salt of tartar, or sprinkled with copp'eras- water : sometimes, if the leather is good, the books are finished quite white, and if done care- fully, this has a very chaste and neat appearance. Two pieces of Morocco pared thin, exactly the size of the pannel formed by the bands, are now stuck on the spaces between the bands, generally between the first and second and the second and third; when these are dry the back is again washed with paste-water. It is now glaired three times with white of egg, which must be carefully laid on with a soft sponge,-each coat of glaire being allowed to dry before the next is laid

on. As soon as it is dry enough to be touched without smearing, the back is rubbed over with palm oil, and the gold having been cut into strips the width of the back of the book, the edge of the book is laid upon the strip of gold, and the book being carefully taken up, the gold falls over and immediately adheres to the oily matter on the surface of the glaire ; in this manner the back is entirely covered with leaf gold, and the tools required for the ornaments being selected are allowed to heat gradually by a charcoal fire The book being firmly fixed in the press, the tools for the ornaments are stamped on, taking care that the tools are neither too hot nor too cold ; as in the former case the brilliancy of the gold will be injured, and in the latter case the impression will not be perfect. The loose gold is then wiped off into a cotton cloth (which being preserved, becomes valuable), and the book is lettered ; this is done by taking up] the letters singly, and pressing them when warm upon the lettering piece. This requires very great nicety, and can only be done properly after long prac- tice. The letter's ought not only to be placed exactly straight, but at regular distances from each other, and each line at its proper distance from the other ; the loose gold is now rubbed off, and the back of the book is polished with an iron polisher, the book being fixed in the press and rubbed on the back with the iron heated. The sides of the book are now washed with paste-water, and then glaired three times with white of egg. Common bindings are merely edged round the board with one or two lines of gold, which is done by rubbing the edge of the roll with an oily cloth ; the gold being cut into slips the width required, the roll is passed over them, and the oil causes the gold to adhere to it. The roll is then pressed gently and steadily upon the board, and as it moves along the impression is left on the book. For extra work, the pattern being marked out on the side, the gold is laid on in the same manner as for the back, and the tools are worked, and then the loose gold wiped off; the polishing iron is now passed over the book, which is

then pressed between pieces of polished horn, tin, or papier-mache"e boards, to increase and ftx the gloss. The edges of the leaves are now burnished with an agate, the book being firmly fixed in the press for the purpose ; after this the insides and edges of the boards are polished, and the book is finished.

Blind tooling is done in the same manner, without the use of the gold.

The above is a general outline of the art of book-binding; and, it is presumed, will convey a tolerable idea of the process to such as desire information upon the subject. It is, however, one of those trades that require long and atten- tive practice to make a skilful workman. Within the memory of the writer of this article, the whole trade has undergone a complete change. About thirty years ago, the general run of bind- ing was what is termed calf-gilt, and this was all done one pattern ; the sides a running mar- ble, of copperas, and salt of tartar, and the backs white, with colored lettering pieces; the backs were, at that time, quite flat, bands beinj; only used for school-books ; and as hollow backs

were almost unknown, the books were made ex- ceedingly stiff, to prevent the leather from wrink- ling when they were opened. The marble be- fore mentioned is entirely exploded, except for sheep-bindings. At its invention the greatest caution was used to keep it a secret, and books were obliged to be sent to the inventor to be marbled, at a high price ; the process is, how- ever, very simple ; but as it is never used in good work, no notice of it is taken in the precedr ing account ; but it may be briefly stated, that after the book is washed and glaired, it is spread open, between two rods, or wands, laying in a slanting position ; a wisp, or brush, is dipped in water, which is thrown on coarsely ; as it runs

down the book, strong copperas water is thrown on with a brush, beat against an iron bar, an dim- mediately after a small quantity of solution of salt of tartar; as soon as the colors are set, which they do immediately, the book is washed, and it certainly presents a very curious appear- ance. The general introduction, or rather re- vival, of bands, has taken place within the last few years ; formerly they were considered essen- tial to strength, but are now merely ornamental, being fixed t6 the cover, which, in order to make the book open more freely, is generally loose from the back of the book, and termed a hollow back.

BOOK-KEEPING.

BOOK-KEEPING is a mercantile term used to denote the method of keeping commercial ac- counts of all kinds, in such a manner, that a man may thereby know at any time the true state of his affairs with clearness and expedition.

The origin of this art must be considered as coeval with that of commerce, and as Italy", or rather Venice, was the parent of European com- merce, the first production on book-keeping, made its appearance at the same place ; hence all plans for books that were formed after this model, were said to be arranged according to the Italian, or, as it is commonly called, the Double Entry system ; by which is meant, that for every sum carried to the Dr. of any person, or thing, there must be a corresponding sum placed to the Cr. of some other person or thing.

The method of book-keeping which answers these purposes most clearly and concisely is the best. The Italian method, by Double Entry, is generally preferred ; at least, it is founded upon the most universal principles, and is the most convenient in extensive and complicated business : and the accountant who understands it, will find little difficulty in following, or even in inventing, other methods that are better accom- modated to any particular purpose.

But, as the method by Single Entry has also its advantages, being more convenient for trades- men, and all others who do not carry on business very extensively, we shall subjoin directions respecting that method ; and conclude with an account of the Subsidiary Books, most of which are equally necessary in both methods.

PART 1.

OF THE ITALIAN METHOD BY DOUBLE ENTRY.

The Italian method requires three principal books, viz. the Waste Book, Journal, and Ledger.

SECT. I. ā OF THE WASTE BOOK.

*The waste book, or day book, contains an exact register of all occurrences in business in the same order as they take place. It begins *.vith. an inventory of every thing belonging to the owner, a list of the debts due to him, and of the debts he owes to others : It is carried on with a full relation of all the money he receive? o-*

pays ; of all the goods he buys or sells ; and of every other occurrence in his business. Each article should be entered as soon as the transac- tion takes place, and should be clearly expressed in the plainest language. It

should require no supply from the accountant's memory, but shouki be fully intelligible to any person, however un- acquainted with the business : at the same time, it should be written with all convenient brevity ; and, therefore, sometimes refers to invoices and other accounts, for particulars. The accountant's first care should be to have nothing defective or ambiguous ; his second, to have nothing super- fluous.

The date is written in text on the top of each page. The articles are separated from each other by a line ; and the transactions of one day are separated from those of another by a double line, in the middle of which there is a blank space for inserting the day of the month. This book must be kept with the greater care and accuracy, as it contains the materials from which the other books are composed. Besides, it is the book whose authority is trusted to, and which must be exhibited to judges, or arbiters, when an account is disputed. As the journal is filled up from the waste book, and ought to be a fair copy 01 it ; the authority of the latter is esteemed more authentic, unless there be an obvious mistake through hurry ; and either of these books is de- pended on rather than the ledger, which, from its form, is more liable to error, and may be more easily vitiated by a fraudulent design.

As the waste-book contains the whole sub- stance of the business, it may be applied so as to afford any information that can be wanted : but the labor of consulting it would be very great, and much exposed to the risk of omissions. To prevent this inconvenience, the ledger is used, in which the articles are arranged in a methodi cal order. We shall consider it next ; because the journal, though it comes before it in the order of writing, cannot be well understood, till the nature of the ledger be explained.

SECT. II. ā OF THE LEDGER.

In the ledger, articles of the same kind are

collected together; and, for that purpose, it is

divided into many accounts, under which the

different branches of business are arranged.

Each account is introduced by a proper title, to explain the nature of the articles it contains; and articles of opposite kinds, which belong to the same account, are placed on the opposite pages of the same folio ; for instance,

money received on the one side, and money paid on the other ; or goods bought on the one side, and goods sold on the other. The left hand page is called the Debtor side of the account, and the right-hand page the Creditor side. The dif- ference between the sums of the Dr. and Cr. side is called the Balance.

Accounts in the ledger are of three kinds.

I. Personal accounts. It is necessary to open an account for every person or company with whom there are any dealings on credit. At opening the books, if they be indebted to the owner, the debt is entered on the Dr.; but, if he be indebted to them, it is entered on the Cr. Dunns? the course of the business, goods sold on trust, money paid, and every thing for which they are accountable to him, is entered on the Dr. ; but goods bought on trust, money received, and every thing for which he is accountable to them, is entered on the Cr. The balance shows how much they owe him, when the Dr. side is greater ; and how much he owes them, when the Cr. side is greater.

II. Real Accounts. By this we understand accounts of property of whatever kind, such as ready money, goods, houses, lands, ships, shares in public companies and the like. The account of ready money is entitled Cash; but those who keep an account with a Banker, generally debit the Firm with monies paid, and credit it with monies drawn out. On the Dr. side, the money on hand at opening the books is entered, and afterwards every article of money received. On the Cr. side, there is entered every article of money paid out ; and the balance shows how much ought to be on hand. The sum of the Dr. side of this account is or ought to be always greater than that of the Cr. side.

Accounts of goods' are generally ruled with inner columns for entering the quantities. When the books are opened, the goods on hand are entered on the Dr. side of the respective ac- counts ; the quantities being placed in the inner, and the values in the outer column. Goods bought are entered in the same manner, and goods sold are entered on the Cr. side ; the quantities and values being placed in the proper columns. Charges laid out on goods are entered on the Dr. side ; and, when an incidental ad- vantage arises from them, such as the public bounty, it is entered on the Cr. If the sums of the inner columns on the opposite sides be equal, it shows that the goods are all sold, and then the balance of the money column shows the gain or loss. If the Cr. side be greater, it is gain; if the Dr. side be greater, it is loss. If the quan- tity in the inner column be greater on the Dr. side, it shows that part of the goods are on hand ; ."ml their value must be added to the sum of the Cr. side, in order to determine the gain or loss.

Accounts of ships contain on the Dr. the value of the ship when the books are opened, and all txpenst'S laid out thereon ; on the Cr. all freights

received. In like manner, accounts of houses or lands have the value of the subject, and all repairs, or other charges, entered on the Dr. and all rents or other profits received on the Cr. If the subject be sold in whole or in part, the sale is entered on the Cr. And the balance, after valuing the subject (if any) on hand, shows the gain or loss.

III. Accounts of Stock, Profit and Loss, and their subsidiary accounts, which are sometimes called fictitious accounts.

The Stock account contains on the Dr. the amount of the debts which the owner owes when the books are opened ; and on the Cr. the amount of ready money, goods, debts, and property of every kind belonging to him : therefore the ba- lance shows what his nett stock is ; or, in case of bankruptcy, how much his debts exceed his ef- fects. There is nothing further entered on this account till the books are balanced ; and then, if the business has yielded profit, the nett gain is entered on the Cr. ; if it has been unsuccess- ful, the nett loss is entered on the Dr. ; after which the balance shows the nett stock at the time the books are closed.

The Profit and Loss account contains every article of gain on the Cr. and every article of loss on the Dr. The balance shows the nett gain or loss, and is transferred to the proper side of the stock account, as mentioned above. ā¢ This account is partly composed of articles that occur while the accounts are running. For example, legacies received are entered on the Cr.; goods lost or destroyed on the Dr. The rest of the articles are those of gain and loss, arising from the real accounts, which are collected, when the books are balanced.

It has been found convenient to open several Subsidiary Accounts, in order to shorten and methodise that of profit and loss. These contain certain articles of gain or loss, which may be reduced under distinct heads. They are in ef- fect so many parts of the profit and loss ac- count, and their balances are entered on the proper side of that account when the books are closed. Thus,

The Interest account contains on the Dr. sums paid or incurred for interest ; and on the Cr. sums received, or become due for it.

Commission account contains on the Cr. ar- ticles of gain received or owing for trouble in transacting business for others. There are sek dom any entries on the Dr.

Charges of merchandize contains on the Dr all charges paid or incurred on

the business, which do not belong to any particular account, as shop-rent, public burdens for trade, clerk's wages, postage, and the like. If any of these should afterwards be charged to some other ac- count, the sum so charged is entered on the Cr.

Account of proper expetises contains on the Dr. money or any thing else, withdrawn from the trade for our private use. There are seldom any entries on the Cr. The amount of this account, as well as the former, is not properly loss ; but as it has the same effect in diminishing the stock, it is placed in the same manner to the Dr. of Profit and Loss, or in case of a partner- ship, to the private account of the party.

Loss by bad debts contains on the Dr. such entered on the Dr. of cask because money is

debts as we reckon desperate; and on the Cr. received; and on the Cr. oflinen, because linen

any of these which may happen to be unexpec- is delivered : therefore we write cash Dr. to liner,

tedlv recovered. to which we annex the nature of the transaction.

Account of abatements contains on the Dr. The article thus entered is called a journal post ;

discounts allowed by us on payments received ; cash is called the Dr. ; linen, the Cr. ; the words

- *cash Dr. to linen,' the entry ; and the words that*

on the Cr. discounts allowed to us on payments made. It is particularly useful in retail business, where discounts are often given, to show how much they amount to.

Insurance account contains on the Cr. pre- miums received for making insurances ; and, on the Dr. losses sustained on the same ; there may be several accounts of this kind. Insurances against sea-hazard and fire are the most common, the balance shows the gain or loss which arises irom being concerned in insurance.

When goods are received, the transaction is entered on the Dr. of the

account of goods. If they are bought for ready money, it is also entered on the Cr. of cash ; if on trust, it is entered on the Cr. of the seller ; if they be ex- changed for other goods, it is entered on the Cr. of the goods delivered ; if they be obtained by- some profitable business, without any return, it is entered on the Cr. of profit and loss.

When goods are delivered, the transaction is entered on the Cr. of the account of goods ; and, if they be sold for ready money, it is also entered on the Dr. of cash ; if on credit, it is entered on the Dr. of the purchaser ; if exchanged for other goods, it is entered on the Dr. of the goods re- ceived ; and if they be given gratis, or destroyed, it is entered on the D. of profit and loss.*

Thus, every article in any account, whether personal or real, or belonging to profit and loss, corresponds to some other article on the oppo- site of a different account. The same sum is entered on the Dr. of one account and on the Cr. of the other; and it follows from this, that, if all the accounts in the ledger be added, the amount of the sums of the Dr. will be equal to those of the Cr.

SECT. III. ā OF THE JOURNAL

The journal is a fair record of all the transac- tions compiled from the waste-book, in the same order as they stand there.

When we are to enter any article in the jour- nal, we must consider which account in the ledger it will require to be placed to, both on the Dr. and Cr. and write the former account Dr. to the latter account ; then we annex an explanation of the article, and place the sum in the money column.

Example. ā (Waste-book). Sold for ready money, 30 yards linen, at 3s. Ā £4 10 ā

(Journal). Cash Dr. to Linen. Sold 30 yards, at 3s. ... Ā£4 10 ā

Or, if the money be paid into the hands of the Danker, the firm will be Dr. and the linen Cr. without carrying it through the cash account ; the

follow, the narration.

Where a banking account is kept, the pay- ments made by cash or acceptances ought to be kept in a small book, and may be journalised either daily, weekly, or monthly, without passing through the waste-book; the nature of the tran- saction being stated on the counterpart of the check, or, if it is an acceptance, then bills pay- able will be debited and the banker's account credited.

The purpose of expressing the article in this form, is to point out the accounts in the ledger, to which it will require to be posted, and thereby enable the accountant to write the ledger with more ease than he could do, if it were filled up immediately from the waste-book. The learner will be able, from this example, to enter any simple article in the journal, providing he knows the accounts to which it should be posted on the Dr. and Cr. of the ledger.

GENERAL RULES FOR JOURNAL ENTRIES.

I. Every thing received, or person account- able to us, is Dr.

II. Every thing delivered, or person to whom we are accountable, is Cr.

As the whole art of writing the journal de- pends on a proper choice of the Drs. and Crs. we shall give some particular rules for the most common cases, and a few examples for the illus- tration and practice of each.

Rule I. A thing received is Dr. to the per- son from whom it is received, when nothing is delivered in return.

Rule II. The person to whom any thing is de- livered, is Dr. to the thing delivered, when no- thing is received in return.

Rule III. A thing received is Dr. to the thing given for it.

Rule IV. Goods and other real accounts are Dr. for all charges laid out on them. If money be laid out, they are Dr. to cash; if any thing else be delivered, they are Dr. to the thing de- livered; if the charge be taken in trust, they are Dr. to the person to whom it is due.

Rule V. When rents of houses' or lands, freight of ships, bounties on goods, or any other profits from real accounts are received, cash is Dr. to the account from which the profit arises : if any thing besides money be received, the ar- ticle received is Dr. : if they remain unpaid, the person who owes them is Dr.

Rule VI. When an article of loss occurs, profit and loss, or some subsidiary account, is Dr. If the loss be paid4n ready money, it is

principal use of which is, that, if a number of Dr. to cash ; if it is paid in any thing else, it is

fmall sums are taken in the course of the day, tash may be debited, and, when the amount is paid in at the bankers, he is charged therewith m one line and cash credited in the same way. Here we consider, that the article

must be

Dr. to the thing delivered. If it remain unpaid, it is Dr. to the person to whom it is owing.

Rule VII. When an article of gain occurs, that is not immediately connected with any real account, cash, the article received, or the person

accountable for it, is Dr. to profit and loss, or tc some subsidiary account.

Rule VIII. When one person pays money, or delivers any thing else to another on our account, the person who receives it is Dr. to the person who pays it. Thus, (Waste-book.) John Fairney has paid the bank of Scotland, on my

account . . Ā£100

These rules will make the learner acquainted with the forrn of the journal, and extend to the greatest part of the simple transactions that occur in domestic trade. The technical sense of the words Dr. and Cr. has a kind of analogy to their meaning in common language, but is not ~ precisely the same. Thus, in Ex. Rule VIII. the journal entry is, Bank of Scotland Dr. to John Fairney ; by which we are not to under- stand that the bank is indebted to John Fairney; for a debt between them has no connexion with our business, and therefore ought not to be entered in our books : the meaning of the entry is, that the bank becomes indebted to us by the transactions narrated ; and that we become in- debted to John Fairney by the same.

The journal should be written by one person, in a fair hand and at leisure hours. The articles are separated, and the titles and dates marked in the same manner as in the waste-book. The entries are written in half text, for ornament and distinction. In the inventory, the designation (or the business, station, and place of residence,) of every person is mentioned ; and the same is done the first time that any name occurs in jour- nal entry. At other times, it is sufficient to enter the name without the designation, unless we have dealings with two persons of the same name; in which case, it is always necessary to annex the designation, in order to distinguish them. The narration should be complete, without referring to the waste-book ; and so clear, that every per- son, acquainted with the style of the journal, may understand it with ease. When the post is written, we enter the folio of the journal against the article, on the margin of the waste-book, to show how far the writing of the journal is ad- vanced.

OF THE SUBSIDIARY BOOKS.

Though all merchants accounts may be kept by the waste-book, journal, and ledger, alone ; yet men of great business find it convenient, either for abridging these, or for other ends, to use some others, generally called subsidiary or subservient books ; the most common of which are the following : viz.

I. The CASH-BOOK is kept in a folio form, like the ledger, and serves to abridge the cash ac- count there. On the left-hand page, or Dr. side, cash is charged Dr. for all the sums received ; and on the right-hand page, cash is made Cr. for all. the sums paid. Once a-week, or, which is more ordinary, once a-month, this book is posted to the ledger; or, first to the journal, by two entries, viz. cash Dr. to sundries, for all the re- ceipts, and sundries Drs. to cash, for all the pay- ments. By this means the cash account in the ledger will be so far contracted as to consist of twelve lines, viz. one for each month in the year.

II. Book of CHARGES of MERCHANDISE, or PETTY CASH BOOK. This book is only paged, and designed to abbreviate the cash book. It contains particular charges on goods and voyages ; such as carriage, custom, freight, cra- nage, wharfage, &c. also other expenses that affect trade in general ; such as, warehouse rent, shop rent, accountant's wages, postage of letters, and the like. At the end of each month the money columns of this book are added up, and the sum carried to the credit side of the cash book.

III. The BOOK of HOUSE EXPENSES is also paged, and designed to ease the cash book. It contains all disbursements for family provisions, servants' wages, house rent, apparel, utensils, &c. The money columns of this book are also added up at the end of each month, and the sum trans- ferred to the credit side of the cash book.

IV. The INVOICE BOOK, used chiefly by fac- tors, is paged, and contains copies of the in- voices of goods sent to sea, or of goods received from abroad.

V. The SALES' BOOK is also chiefly used by factors; and into it is posted, from the waste- book, the particular sales of every consigned cargo ; by which the several articles of a sale, that lie scattered in the waste-book, are brought together, and represented under one view, and that in a manner more full and minute than in the ledger. This book exhibits the sales of every consignment separately and by themselves : to which are subjoined the respective charges, such as freight, custom, the factor's commission, as also abatements allowed to buyers, &c. whose sum subtracted from the gross amount of sales gives the neat proceeds. From this book, when a

cargo is sold off, an account of sales is drawn out, in order to be transmitted to the employer.

VI. The BILL BOOK is intended to furnish a merchant with a ready way of knowing the time when bills become payable to or by him.

VII. LETTER BOOK. It is very imprudent in any person to send away a letter of business, without keeping a copy of it ; and therefore, to prevent the bad consequences of such a careless practice, merchants are provided with a large book in folio, into which is copied verbatim every letter of business before it be sent off. So that this book, together with the letters received (which must also be carefully kept in files or boxes), makes a complete history of all the deal- ings that pass betwixt a merchant and his corres- pondents ; which may be very useful on many occasions.

VIII. POCKET BOOK. This is a small book, of a portable size, which a merchant carries in his pocket when business calls him abroad to a tavern, a fair, the country, or other places. In this he sets down the bargains he makes, the ex- penses he is at, the debts he pays or sums he receives, with every other part of business he transacts while abroad ; as also any occurrence or piece of news he thinks worth while to record. And when he comes home, he transfers the things contained in this book, each to their proper places in the waste-book, or books sub- sidiary.

The above are the subsidiary books most in

ne: but a merchant may keep some, and neg- lect others, or invent more as the nature of his business requires.

SECT. IV. ā OF POSTING THE LEDGER.

The first thing to be done in the ledger, is to allot a proper space for each account. The ac- counts may be either opened in the same order that they occur in the journal ; or accounts of the same kind may be placed together ; the per- sonal on one part of the ledger, and the real ac- counts in another. The accounts of Stock, and Profit and Loss, are generally placed at the be- ginning.

The number of the folio is marked in text at each corner of the top line ; and the titles of the accounts are written in text through both folios, if necessary. The word Dr. is prefixed to the title on the left-hand page ; and contra Cr. an- nexed to it on the right-hand page.

An index must be provided, for pointing out the folios where the accounts are opened. The titles of the accounts are entered alphabetically in the index, and the number of the folio annexed. Personal accbunts are entered by the first letter of the surname ; companies, by the first letter of the surname of the fir ;ā¢ā letter of the first partner ; and all other accounts, by the first letter of the first word. The most convenient kind of index is a long book, of twenty-four leaves.

In posting the ledger, first, look for the Dr. of the journal post in the index, under the proper letter, which directs to the folio of the ledger where the account is, if it be already opened : if not, you must allot a space for it, write the title, and enter it in the index. Then enter the article on the left-hand page of the account under the title of the former article, by writing the date on the margin, and the name of the creditor on the line, with the word to prefixed, and a short nar- ration of the transaction annexed, and inserting the sum in the money column, and the quantity, if it be an account of goods, in the inner column. Then turn to the account of the Cr. of the journal-post, and enter the article in the right- hand page, prefixing the word by to the name of the Dr.

*This being done, turn to the journal, and mark on the margin the number of the folios to which the article is posted. The figures which point out the reference to the Dr. and Cr. folios should be separated by a line ; for example, if the Dr. entry be on the first folio, and the Cr. entry on the eighth, the reference is marked $ These figures show how far the posting is advanced, and are useful in comparing the books. The figures for dates or references, should be written in a lighter hand, than the figures in the columns for money or quantity. Some prefer entering the folio of the ledger against each account at once, and to make a *J or . before it, when posted into the ledger.*

There is often a reference column ruled in the ledger, for pointing out the other entry, corres- ponding to any article. In this column, the folio of the Cr. entry is marked against the Dr. article, and the folio of the Dr. entry against the Cr. article.

An article in the ledger is generally compre-

hended in one line. The narration should be as full as can be contained in that bounds. If it cannot be narrated completely, the journal is re- ferred to for further particulars, by writing per Journal (or p. J.), either after an incomplete nar- ration, or immediately after Dr. or Cr. when there is no room for a proper narration. In com- plex posts, there can seldom be any narration annexed to the single Dr. or the single Cr. The entry is generally To sundries per J. or, By sun- dries per J. If the sense of the whole article

can be narrated, it should be done ; but it is impro- per to narrate the first or any other part of the article, and omit the others : ā

When the space allotted for an account in the ledger is filled up, the account must be transported to another folio. For this purpose add the co- lumns on both sides, and write against the sum, Transferred to folio , inserting the number of the folio where the new account is opened, in the reference column, or on the line, if no refer- ence-column be used.

The books should be written up as frequently as can be done conveniently ; so that the journal may keep pace nearly with the waste-book, and the ledger with the journal. Each book should be carefully revised, and compared with the book from which it is posted. In comparing the ledger, observe the following directions.

Begin with the first journal post, and turn to the folio of the ledger where the Dr. is entered, which you are directed to by the marginal refer- ence, and compare the date, entry, and sum. If they correspond, it is well ; if not, the ledger must be altered till it correspond with the journal. Then place a dot before the reference figure in the journal, and mark, thus A, before the sum in the ledger. Proceed in the same manner to com- pare the Cr. of the journal post, and all the fol- lowing posts in their order. The dots in the journal show how far the comparison is advanced, and the marks in the ledger show what articles are compared. The sums of accounts transported should be left blank till the books be compared ; as an error in any article will occasion an altera- tion in the sum.

In correcting errors in the ledger, observe the following rules : I. If an article be omitted, do not attempt to interline it at the place where it should have been ; but insert it under the last article, when you discover the omission, and mark a cross x against it on the margin, and another at the place where it should have been. II. If you discover a mistake immediately when committed, correct it without cancelling any thing, as in this example : To cash, say, To James Spence received to account. III. If you have written a line entirely wrong, or in a wrong place, write the word Error at the end, prefix a cross, and omit or cancel the sum. IV. Cancel errors, by drawing a line lightly through them, so that the old writing may still be legible ; by which it will, be evident, that the book has not been vitiated for a fraudulent purpose. The same method should be followed in correcting errors in the journal.

When the comparison of the books is finished, glance over the ledger, to observe if the mark of comparison be affixed to every article.

Because tne whole sum ..f the Dr. side of the

and shortest. It is generally used by shop- ledger should be equal to the whole sum of the keepers, and requires two principal books, a day Cr., it is proper to try if they correspond. For book and ledger.

‘ ā¢ ‘ ~ ” The DAY BOOK begins with a list of the debts

due to the owner, and of the debts due by him to others. Then every transaction by which new debts are contracted, or former debts discharged, is entered as it occurs with the quantities and prices of goods bought or sold, or other circum- stances necessary for explaining the transaction. When goods are sold on credit we write A. B. [the purchaser] Dr. and then mention the article

The labor bestowed \orarticleswiththeratesandamount. When we

upon it is not lost, as the sums may be reserved pay money we write C. D. [the receiver] Dr. to for assisting to collect the balances. cash ; when we buy goods, Ā£. F. [the seller] Cr.

for the articles purchased; when we receive money, G. H. [the payer] Cr. by cash.

If debts be discharged or contracted by any

this purpose, you may add the Dr. of every ac- count, except such as are already balanced, placing the sums in an inner column, and extending them at the end of one or more folios, as you find most convenient, to the outer column : and, as you go along, add the Cr. in the same manner. If the sum total of both sides be equal, it gives a presumption that the books are right; if they differ there is certainly some mistake. This is called the Trial Balance.

assisting

SECT. V. ā OF BALANCING THE BOOKS. Before we explain the method of balancing the

books, it will be proper to direct the learner how other means, the person who becomes indebted

to balance particular accounts. When we settle to us, or to whom we pay a debt we formerly

accounts with any person, and ascertain how owed, is entered Dr. and the person to whom we

much is owing at either hand, it is necessary to become indebted, or who pays a debt he formerly

balance his account in the ledger, and open a new owed, is entered Cr. and the nature of the tran-

one, beginning with the sum that was due ac- saction explained, cording to the settlement : and when we clear accounts again, we must go back to that article,

and no farther.

If any article be charged on either side, at the

The LEDGER contains an account for every per- son with whom there are dealings on credit, where the articles for which he is accountable to us, and those for which we are accountable to

time of" settling, they must be immediately en- him, are placed in opposite pages of the same tered on the waste book ; from which they will folio ; the Dr. articles on the left-hand pages, pass in course to the journal and ledger ; and a re- and the Cr. articles on the right-hand pages, mark must be entered in the waste-book, that the To POST TIIE LEDGER, allot a space for every account was settled, and the balance transferred person or company whose name occurs in the list to the proper side of the new account. This re- of debts at the beginning of the day book ; write mark is transcribed in the journal ; and the ledger the title and enter the debts an the proper side, account is balanced, when it occurs, in the referring to the page of the former ledger, where course of posting. the account was; and enter the name in an

If the balance be due to you, write on the Cr. index prepared as directed PART I; then pro- By balance due to him to Dr. new account, and ceed to post the articles from the day book in insert the sum due to you ; after which the amount their order, in the accounts of the persons they of both sides will be equal, or vice versa. Add belong to, allotting a space for the account and the account, placing the sums opposite to each writing the title, if it was not opened before, other ; and, if the sides be unequal, draw a dia- The date of the article is written on the margin ; gonal line through the vacant space of the shorter and the transaction is entered on the Dr. side, side, and close the old account by drawing lines when the person is marked Dr. in the day-book,*

under the sums. Then open the new account immediately under the old one, or in a new folio, if the old one be full, by writing on the Dr., To balance of former account due by him, and vice versa.

and on the Cr. side, when he is marked Cr. in the day-book.

When a single article is bought or sold, we mention it, with the quantity and rate, in the ledger ; but when several articles are bought or

Merchants generally balance their books once sold at the same time, it is more usual to enter

a year. The design of this operation is, to col- only the sum of the whole, writing To sundries;

lect the various branches of their business, dif- or By sundries, and referring to the day-book for

fused through the books, into a concise abstract : particulars. The number of the folio, in which

to ascertain the gain or loss since the last balance : each article is posted, is marked on the margin

and exhibit the present state of their affairs. If of the day-book. If the space assigned for an

the business be of such a kind, that most of the account be filled up, it must be transferred to

branches naturally come to an issue at a certain another folio.

time of year, that time is the proper one for mak- Instead of entering the Dr. and Cr. articles on

ing the balance. Otherwise the end of the year, opposite pages, some enter them all on the same

,‘rthe least busy time, maybe chosen. page, and rule two sets of money columns, one

for extending the sums of the Dr. articles, and

PART II. another for the sums of the Cr. articles ; but this

OF BOOK-KEEPING BY SINGLE ENTRY. PlaT”iS ˆrecommended

1 hose who Keep their books >‘pon this plan,

Having explained the method of book-keeping ought also to have a CASH BOOK, and an IN- by Double Entry, we shall add a few directions VOICE BOOK; which will make it unnecessary to for keeping books by Single Entry ; because this enter the particulars of such articles iu the day- method, although less perfect, is yet the simplest book.

316

BOOK-KEEPING.

Ji-urual.

Fol.

WASTE BOOK.

London, 1st January, 1826.

Thomas and John Wilson commenced business with a capi pital of Ā £20,000 each . . . . .ā¢

Purchased Ā£30,000 Exchequer Bills At Ā£5 premium Interest Brokerage, Is. per Ā£100

Ā£31,500

130

15

Opened a banking account with Messrs. Jones and Co. and paid in . . . . ā ¢-“ā¢ ‘

10

Purchased of William Lennox,

10 pipes Port wine in bond, at Ā£40 10 butts Sherry 45

Purchased of Garry and Co.

500 pieces linen, 30 yards each,

is 15000 yds. at 2s. . . : Ā£1500 0

Six months discount . . .37 10s.

Smith and Co. of Oporto advise, per letter, 2d Jan. that they have shipped for our account, 20 pipes Port wine, per Europe. Invoice amount And advise their draft at 3 months date.

24

Purchased of Mitchell and Co.

1000 cask tallow, nett 7000 cwt.2qrs. at 32s, Ā£11200 16 0 Discount for cash 2Ā£ per cent . ā¢ 280 ā 6

Payable in 14 days, say 7th Feb.

London, 1st February, 1826. Purchased a ship at Lloyd's, and" received Ā £50 for the

bargain . . . –

Paid same to Jones & Co., per Bankers' Book.

Shipped 100 casks tallow to Liverpool, per Hero, 600 cwt. at 40.

Messrs. Hood & Co. paid Moss & Co. to our credit with Jones & Co.

[See Banker's Book.

Sold James Hunter,

10 pipes sherry, at Ā£55. Terms, Cash. [See Banker's Book.

Purchased the brig Hero, of Thomas Preston, for cash, at ...

[See Banker's Book.

Ā£

40,000

31,645 1,355

40,000

400 450

850

1,462

610

10,920

50

1,200

1,200

550

1000

Credit Brig Hero,

For freight of 20 pipes port, at 50s

50

Paid duty on 20 pipes port, at Ā£45 10s.

[See Banker's Book.

Received of W. Lennox,

Freight of 100 piper of wine, per Hero, and paid Jones & Co.

[See Banker's Book.

910

250

Journal.

Pol.

4

4

5 5

5 5

5

BOOK-KEEPING. WASTE BOOK.

London, February 1st, 1826. Subscribed to the Fund for the Distressed Manufacturers. [See Banker's Book.

6

Ā£

50

i.

0

317

d.

0 0

Sold Ā£10,000 Exchequer Bills, At Ā£5 10s. per cent, per ann. Ā£10,550 0 0 Interest . 15 10 0

10,560

10

10,565 10 0

Deduct brokerage Is. per. . 500

Paid Jones aiid Co. the above. [See Banker's Book.

rch 6th, 1826. Sold the following gdotis, for cash To John Williams, 20 pipes port wine, duty paid, at / 100 per pipe To Warren and Co. 500 pieces linen, 15,000 yds. at 2s. Received, 30th March, per Banker's Book.

i 1 5 –

2000 1,500

0 0

0 0

3,500

0

0

0 6

Sold the following goods, To S. Wilson, 500 casks tallow, 3500 cwt. at 40s. Payment by his acceptance at 6 months. To E. Jones, 400 casks tallow, 2500 cwt. 2 qrs. at 39s.

For cash [See Banker's Book. a

7,000 4,875

0

19

Sold the brig Hero, To T. King, for cash [See Banker's Book.

900

0

0

N. B. Such of the foregoing entries as refer to the Banker's Book, may be omitted in the Waste Book altogether, or not, according to the wish of the party, as they come regularly into the Journal through the Banker's Book.

CASH, OR BANKER'S BOOK.

Dr. JONES & CO. BANKERS

PER CONTRA. Cr.

o "o

Ā£.

S.

d.

5

Ā£.

S.

d.

1826.

ā

1826.

.

Jan. 1.

Po sundry, per journal

1

8,355

0

0

Jan. 10

Paid Wm. Lennox

3

850

0

0

24

To Exchequer Bills, pro-

3

30

Paid Garry & Co. . . .

1,462

10

0

ceeds of Ā£10,000.

10,560

10

0

Paid Mitchell & Co.

10,000

0

0

Feb. 10.

To wine acct. for 10 b.

4

Feb. 10

Paid for brig Hero . .

1,000

0

0

550

0

0

Paid duty on 20 p. Port .

910

o

0

To brig Hero, for freight .

Paid Distressed Mauufac-

Do. do. . .

250

o

o

10

10

o

To profit and loss, p. jour-

Paid Smith & Co. . . .

610

0

0

50

o

o

Apr. 30

Paid Mitchell & Co. . .

4

920

15

7

To tallow acct. pd. by Moss

Paid profit and loss, rent,

& Co

1,200′

0

0

taxes, &c

170

0

0

Mar. 30.

To wine acct. received for

5

Paid clerks' salaries and

5

20 p. Port . . . .

2,000

0

0

sundry charges

450

0

0

To do. for 10 p. Port . .

500

0

0

Paid T. Wilson drawn out

21,579

1

11

To linen account, 500 ps.

1,500

0

0

Paid J. Wilson . . . .

21,579

2

0

To tallow acct. 400 cks.' .

4,875

0

0

To brig Hero, sold her for

900

19

6

To tallow acct. paid in}

0

0

S. Wilson's accept. due >

7,000

1

Sept, 18)

0

0

April 30.

To Exchr. bills, proceeds

6

1

per journal .

21,650

10

0

59,441

19

6

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59,441

19

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London, 1st January, 1826. The first three Entries in Waste-Book may be Journal- ized, as follows : Sundry Dr. to Sundry. To Thomas Wilson, his Ac- count of Capital . . . ā John Wilson, do. . .

Exchequer Bills, purchased Ā£30,000 at Ā£.5 Prem. Interest and

Brokerage . . . . Jones & Co. Paid to them

10

X

20000 20000

0 0

0

0 0

0

7

11

12

13 14

5

T

9

13

16 13

5

i

Wine Account, Dr. to Smith & Co For 20 pipesPort, $ā¢ Europe

24

6H

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16

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0

0

19 0

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0

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0 0

0

6 0

0 6

0 7

Tallow Account. Dr. to M For 1000 csks., at 32s. Ā£ Disc, for Cash, 2iprct.

Payable in 14 day

itchell 7000 ct

11200

280

, say 7

kCo .2qr

16 6

10920

40000

Feb.

31645 8355

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10

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0 0

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0

London, 30 March, 1826. Jones & Co. Dr. to Sundry. To Wine Account, Reed, for 20 pipes Port Reed. ” 10 ” ” ā Linen Account, Reed, for 500 pieces ā Tallow Account,

cwt. qr. Reed. 400 casks, 2500 2 ā Brig Hero, sold her for ā Tallow Account, Wilson’s acceptance .

2000 500

1500

4875 900

7000

40000

Linen Account, Dr. to Garry & Co. For 500 pieces, 15000 yds. at 2s. Ā £1500 Disc, for Cash, 2iper.ct. 37 10

1462

ā

WineAcct. Dr. to W.Lennox For 10 pipe&Port, at Ā£40 ā 10 butts Sherry at Ā£45

400 450

1 0 0

0

0

0

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0

16775

19

Sundry. Dr. Jones & Co. Smith & Co. Paid them .... Mitchell & Co. Paid them ....

610 920

0 15

850

ā¢1

Sundry Dr. To Jones & Co. W. Lennox, 30th paid him Garry & Co. ” ā them

850 1462

10000

1530

15

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pose the concern at this date, the sheet, viz.

T. Wilson J. Wilson Profit and Loss ExchequerBills Jones and Co. Wine Acount Linen Account Tallow Account Pr.Jackson,B.D Brig Hero

i

er which the folio de.

London, 30 Apr

Sundry. Dr. to Pi Wine Account, Ā§ Linen Account, Tallow Account, Brig Hero,

wounc follow

Debtor. L

21084 22027

‘431 12

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Ā«. d.

10 1311

or the ill be tl

Credit L.

20000 20000 39

630 37 2155

250

boo le I

Dr. t.

10

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ks a-

d.

11 11

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12312

WineAcct. Dr. to BrigHero. For frt. of 20 pipes at 50s.

50

0

0

0 0

0 0 0

Jones & Co. Dr. to Sundry, as per Banks' book, fol. 1. To Wine Account, 10 Reo. for 10 pip. Sherry To Brig Hero, 10 Rec. Frt. Ā£50

" 200

*To Profit and Loss, 10 * Profit on a ship To Tallow Acct. 1 paid by Moss & Co.*

550 300

50 1200

0 0

0 0

311

43112

wing Journ

il, 1826.

ofit & Loss.

ained –

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il entri<

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Sundry. Dr. to Jones & Co. Brig Hero, 1 Purchase money . Wine Accouut, 10 Duty on 20 pipes Profit and Loss, 10 Distressed manufs.

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lones & Co. Dr. To Exchequer Bills Proceeds of Ā£20,000 . . .

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Profit Sc Loss, Dr. to Sundry. To Thos. Wilson, his share ā John Wilson, ā ā

Sundry. Dr. Jones St Co. T. Wilson, drawn out . . J. Wilson, ā ā . .

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Exchequer Bills, Dr. To Profit and Loss. For Int. &c. on that Acct.

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LEDGER.

Dr. THOMAS WILSON. Cr.

1826.

Apr. 3f

To Jones ana Co. drawn out

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By Sundry, per Journal By Profit and Loss his share

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Dr. JOHN WILSON. Cr.

1826.

Apr. 30

To Jones and Co. drawn out

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By Sundry, per Journal . By Profit and Loss his share

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Dr. PROFIT AND LOSS. Cr.

1826.

Feb. 10 Apr. 30

To Jones and Co. . . . Ditto . . ...

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Dr. EXCHEQUER BILLS. Cr.

1826.

Jan. 1 Apr. 30

To Sundry, purch. Ā£30,000 To Profit and Loss . . .

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By Jones and Co. per Journal Ditto ....

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Dr. JONES AND CO. Cr.

1826.

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By Profit and Loss .

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Dr. WILLIAM LENNOX. Cr.

1826.

Jan. 30

To Jones andCo. in full.

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BOOK-KEEPING.

LEDGER.

Dr. WINE ACCOUNT Cr.

1826.

Jan. 10

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FoW. Lennox,10 pipes Port Ditto . 10 buttsSherry ToSmith & Co.20 pipes Port To Brig Hero, freight . . To Jones ft Co. duty on 20

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To Profit and Loss, gained

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Dr. LINEN ACCOUNT. Cr.

1826.

Jan. 20 Apr. 30

To Garry and Co. 500 ps. To Profit and Loss, gained

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1826.

Mar.30

By Jones and Co. 500 ps.

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Dr. GARRY AND CO. Cr.

1826.

Jan. 30

To Jones and Co. in full

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Jan. 30

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Dr. SMITH AND CO. Cr.

1826.

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To Jones and Co. . . .

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By Wine Account . . .

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Dr. TALLOW ACCOUNT. Cr.

1826.

Jan. 24

Apr. 30

To Mitchell and Co. 1000 casks 7000 cwt. . . . To Profit and Loss, gained

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Feb. 10 Mar.30

By Jones and Co. 100 casks By ditto . . 400 By ditto . . 500

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Dr. MITCHELL AND CO. Cr.

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Dr. BRIG HERO. Cr.

1826.

Feb. 10 Apr. 30

To Jones add Co. . . . To Profit and Loss, gained

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By Wine Account ... By Jones and Co. . . . By ditto .....

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BOO

BOOKSELLERS' MARKS. An acquaintance with marks, on the title pages of books, is of some use ; because many ancient books have no other designation either of printer, bookseller, or even city. The anchor is the mark of Raphelengius at Ley- den ; the same with a dolphin twisted round it, of the Manutii at Venice and Rome ; the Arion of Oporinus at Basil; the caduceus, or Pegasus, of the Wecheliuses at Paris and Francfort; the cranes of Cramoisy ; the compass of Blantin at Antwerp ; the fountain of Vascosan at Paris ; the sphere in a balance, of Janson and Blaew at

Amsterdam ; the lily of the Juntas at Venice, Florence, Lyons, and Rome ; the mulberry-tree of Morel at Paris; the olive-tree of the Ste phenses at Paris and Geneva, and the Elzevirs at Amsterdam and Leyden ; the bird between two serpents, of the Frobeniuses at Basil ; the Truth of the Comelins at Heidelberg and Paris ; the Saturn of Colinoeus ; and the printing-press of Badius, Ascensius, &c.

BOOK-WORM is an insect of the mite kind, which afterwards becomes a fly, bred from eggs deposited in the month of August in books, especially in the leaves nearest the covers. It js not unlike the mite or blatta found in corn. When the time of its transformation approaches, it seeks to get into Ā £he air, and eats through, till it gets to the extremity of the book. The mixture of juice of wormwood and other bitter ingredients in the paste (which is an expedient used by book-binders), is no security to books against book-worms. The best security is from mineral salts, which all insects hate. For this purpose book-binders ought to mix with the paste employed in binding, the salt called arcanum dupli- catum, alum, and vitriol. With this precaution books may be preserved from all injury by this mischievous little creature. M. Prediger, in his Instructions to German Book-binders, (Leipsic, 1741,) recommends making paste of starch, instead of flour; and advises to powder slightly the books, their covers, and the shelves on which they stand, with a mixture of powder of alum, and fine pepper ; and in the months of March, July, and September, to rub the books with a piece of woollen cloth steeped in powdered alum.

BOO'LY, n. s. An Irish term.

All the Tartarians, and the people about the Cas- pian Sea, which are naturally Scythians, live in hordes ; being the very same that the Irish boolies are, driving their cattle with them, and feeding only on their milk and white meats. Spenser.

BOOM' , n. s. From Dutch, boom, a tree. In sea language, a long pole used to spread out the clue of the studding sail ; and sometimes the clues of the mainsail and foresail are boomed out. A poll with bushes or baskets, set up as a mark to show the sailors how to steer in the channel, when a country is overflown. A bar of wood laid across a harbour, to keep off the enemy.

The yards secure along the booms reclined, While some the flying cords aloft confined.

Falconer's Shipwreck. As his heroick worth struck envy dumb, Who took the Dutchman, and who cut the boom.

Dryder VOL. IV.

To BOOM, v. n. From the noun. A sea term. To rush with violence ; as a ship is said to come booming, when she makes all the sail she can. Diet. To swell and fall together.

Booming o'er his head,

The billows closed ; he's numbered with the dead.

Young. Forsook by thee, in vain I sought thy aid,

When booming billows closed above my head.

Pope.

BOOMITES, a kind of agate, of remarkable brightness and transparence, which represents the figures of shrubs, trees, mosses, &c. in the man- ner of the dendrachates, or mocho-stone.

BOON', n. From Sax. bene, a petition. A gift; a grant; a benefaction; a present.

Vouchsafe me for my meed but one fair look : A smaller boon than this I cannot beg, And less than this, I'm sure, you cannot give.

Shakspeare.

That courtier, who obtained a boon cf the emperor, that he might every morning whisper him in the ear, and say nothing, asked no unprofitable suit for him- self. Bacon. The blustering fool has satisfied his will,

His boon is given j his knight has gained tne day,

But lost the prize. Dryden's Fablet.

What rhetorick didst thou use To gain this mighty boon? she pities me.

Addison. Cato.

Sated with Nature's boons, what thousands seek With dishes tortured from their native taste, And mad variety, to spur beyond Its wiser will the jaded appetite. Armstrong.

BOON', adj. Fr. bon. Gay, merry ; as a boon companion.

Flowers, worthy of Paradise, which not nise art In beds and curious knots, but Nature boon Poured forth profuse on hill, and dale, and plain.

Milton. Satiate at length,

And heightened as with wine, jocund and boon,

Thus to herself she pleasingly began.

Id. Paradise Lost.

I know the infirmity of our family j we play the boon companion, and throw our money away in our cups. Arbuthnot.

BOONDY, a town of Hindostan, the resi- dence of a rajah, in the province of Ajmeer, and tributary to the Mahrattas. It is situated on the declivity of a long range of hills, which run nearly from east to west. The palace of the rajah is a large massy stone building, well forti- fied. In the retreat of the British toops under colonel Manson in 1804, the rajah rendered them considerable assistance.

BOONEN (Arnold), portrait painter, born at Dort in 1669, was at first a disciple of Arnold Verbuis, and afterwards of Godfrey Schalcken, with whom he continued six years. The sweet- ness of his coloring, and the neatness of his touch, with a striking likeness in his portraits, procured him many admirers. He painted sub- jects by candle light very naturally, and much more of his work was requested than it was pos- sible for him to undertake. He painted Peter the Great of Muscovy; Frederic I. of Prussia; the duke of Marlborough, many of the princes of Germany, and most of the noblemen who attended the Czar ; but his excessive appli- cation, to answer the multitude of his engage-

nients, iirpaired his health, while it enriched him. He died in 1729, aged thirty-two.

BOONSBOROUGH, a small town of Ken- tucky, agreeably situated on the south side of the river Kentucky, about 160 miles above its con- fluence with the Ohio, and twenty south-east of Lexington.

BOOPS, in entomology, a species of sphex, inhabiting Germany. Color, black ; three seg- ments of the abdomen, and the tarsi of the legs,

testaceous.

BOOPS, in zoology, the specific name of the pike-headed whale ; Balsena boops of Linnaeus. It is distinguished by having double spiracles on the snout, and a horny protuberance at the extremity of the back. This is the Jupi- ter fish of Anderson; the French name it la Jubarte. See BAUENA.

BOOPTHALMUS, from /3Ā«c, an ox, and o9(f>aXfivc, an eye; a kind of gray agate with large dark blue circles in it, resembling an ox's eye.

BOOR', ~) Dutch, boer; Germ, bauier.

BOOR'ISH, > In Anglo-Saxon it is only found

BOOR'ISHLY.J in composition, as gebure, a countryman ; a ploughman, one who lives by works of husbandry ; a tiller of the ground; there- fore rustic, uneducated, clownish, coarse, barba- rous; the savage of a civilized country.

Therefore, you clown, abandon, -which is, in the vulgar, leave the society, which, in the boorish, is company of this female. Shakspeare. As You Like It.

ThĀ« bare sense of a calamity is called grumbling ; and if a man does but make a face upon the boor, he is presently a malecontent. L'Estrange.

BOORHANPOOR, a city of Hindostan, in the Mahratta territories, and the province of Khandesh, of which it was formerly the capital. It stands on the north-west side of the river Tuptee, in lat. 21Ā° 20′ N., long. 76Ā° 20′ E. The town is the chief place of a singular sect of Mahommedans, named Bohrah, or Ismaeeliah, de- riving their origin from one of the early followers of the prophet. They spread over all the countries of the Deccan, and carry on an extensive commerce. In Surat there are 6000 families of Bohrahs, and in Oujain 1500. A younger brother .of the moullah, or high- priest, resides at Oujain, and exercises both a temporal and spiritual authority over the Bohrahs resident there. This city was taken possession of by the British under Colonel Stevenson in 1803, but was restored at the con- clusion of the peace in December. It is much fallen from its former grandeur. Travelling dis- tance from Nagpoor 256, Poonah 288, Bombay 340, and Calcutta, by Nagpoor, 978 miles.

BOOROOJIRD, a city of Persia, in the pro- vince of Irak, standing on the declivity of a mountain. It is a flourishing place, and belong- ing to it is a district peopled by an agricultural tribe called Lack. Population 12,000.

BOORO, an island in the eastern seas, be- tween the third and fourth

degrees of south latitude, and the 126th and 127th of east longi- tude. In length seventy-five miles, by thirty- eight miles the average breadth. The principal settlement is Cajelli, at the bottom of a gulf of the same name. The Dutch built a stone fort here, which was blown up in 1689; since which

they have only had an enclosure of pallisadoes. Buffaloes and rice abound here, also bananas, cocoa-nuts, lemons, citrons, and bitter oranges : it is on this island that the best cajeputa oil is procured.

The Chinese trade here for cabinet and dif- ferent species of dye woods. Part of the inhabi- tants are Mahommedans, but the interior is inhabited by the aborigines or horaforas, who live dispersed among inaccessible mountains. The south is much infested by the Papuas from New Guinea.

BOORS is a distinctive appellation of the peasants of Russia. In the ukases, and other public documents, they are divided into the free and vassal Boors ; the former being the link between the burghers and the vassal peasantry. Free Boors must not be alienated or sold, and they possess property,provided they pay the taxes, and perform their tasks of labour to the state, or to their lords. To this class of the Russian peo- ple belong foreign colonists, who have settled as husbandmen, as well as the single house owners ; as also the Cossacs, Kalmucs, Tartars, and other nomadic tribes, who inhabit the steppes. The vassal Boors are slaves ; not only disquali- fied for possessing property, but entirely, with every branch of their families, at the disposal of their lords, by whom they may be exchanged or sold like any other property. In Little Russia is an intermediate class, attached as a sort of fixed property to the land, from which they can neither be alienated nor sold. The whole pea- santry consists of three classes ā Crown Boors,. Mine Boors, and Private Boors. ‘ Dr. Clarke says, ‘ Traversing the provinces south of Moscow, the land appears as the garden of Eden, a fine soil, covered with corn, and apparently smiling in plenty. Enter the cottage of the poor laborer, surrounded by all these riches, and you find him dying of hunger, or pining from bad food, and in want of the common necessaries of life. Ex- tensive pastures, covered with cattle, afford no milk for him. In autumn the harvest yields no bread for his children. The lord claims all the produce. Can there be a more affecting sight than a Russian family having got in an abundant harvest, in want of the common stores to sup- port them, through the rigor of their long and inclement winter!’

The late emperor Alexander, though he only gave absolute freedom to the Boors of Courland, will long be remembered for his rational plans of ameliorating the condition of this class gene- rally, by encouraging the diffusion of useful and religious knowledge among them. He also re- moved

the disqualification of a peasant to engage in any business, or carry on any manufacture on his own account, by an Imperial ukase, dated 28th December 1818 (old style); and encourage- ment is held out to them to avail themselves of this important concession. Estates in Russia are valued by the number of vassals they feed ; this human stock being valued at from 200 to 300 rubles each.

BOOSHATTER, formerly the city of Utica, famous for the retreat and death of Cato, lies about seven miles inland from Porto Farino in the bay of Tunis. Nothing remains of its ancient grandeur, except part of a large aqueduct, somp

cisterns, and other ruins, which cover a large ex- tent of ground, and show it to have been a con- siderable place. The sea came up anciently to this city, though now seven miles distant.

BOOSNAH, a town and district of Bengal, formerly the residence of a foujidar. Aboo Tu- rab khan, who held this office about the year 1730, was murdered by Sittaram, a chief of ban- ditti, who was soon after taken, and, with his male followers, impaled alive ; the women and children were sold as slaves. The district is rich and well cultivated. The town stands in long. 89Ā° 39′ E., lat. 23Ā° 32′ N.

BOOT', v. & n.~\ Ang.Sax. betan, orbotan. BOOT'LESS. ˆBot, in Saxon, is recom BOOT'LESSLY, (pense, repentance, or fine, BOOT'V. J paid by way of expiation.

Botan is to repent, or to compensate ; the pre- cise idea, according to Tooke, is to make up by one thing a deficiency in another. If another puffers injury or loss, we do not repair it in kind, but give an equivalent benefit. To boot, is also something superadded. It is the surplus of a bargain ; the overflowing of an advantage ; some- thing thrown in over and above. Its general application is, to profit and advantage ; to com- pensate or reward ; to serve or be of service to. Boot and booty are the same, namely, acquisi- tion, profit, and advantage : but the latter is ap- plied to what is taken from an enemy ; to what is acquired by the marauder and the bandit in their depredations. To play booty is to play dishonestly, with an intent to lose.

Stiche evil is not alwaie botelesse; Why ? ā put not thus impossible thy

cure, Sithe thing to come is often avanture.

Cluwcer's Troilus and Cressede, So forth he fared, as now befell, on foot, Sith his good steed is lately from him gone ; Patience perforce : helplesse what may it boot To fret for anger or for griefe to mone, His palmer now shall foot perforce alone. Spenser. Whereas the damned ghosts in torments fry, And with sharp shrilling shriekes doe booteleste cry.

Id.

God did not suffer him, being desirous of the light of wisdom, with bootlest expence of travel, to wander in darkness. Hooker.

It shall not boot them, who derogate from reading, to excuse it, when they see no other remedy j as if their intent were only to deny that aliens and stran- gers from the family of God are won, or that belief doth use to be wrought at the first in them, without sermons. Id.

For what I have, I need not to repeat ; And what I want, it boots not to complain.

Shakspearc.

Thrice from the banks of Wye, And sandy-bottomed Severn, have I sent Him bootless home, and weather-beaten back. Id.

, Bootless speed,

When cowardice pursues, and valour flies. Id.

My gravity.

Wherein, let no man hear me, I take pride, Could I, with boot, change for an idle plume, Which the air beats for vain. Id.

Canst thou, O partial sleep, give thy repose To the -wet seaboy, in an hour so rude ; And, in the calmest and the stillest night, With all appliances and means to boot, Deny it to a king ? Id.

Others, like soldiers, armed in their stings, Make boot upon the summer's velvet buds. Id.

And I will boot thee with what gift beside, That modesty can beg. Id. Antony and Clenpatra.

One way a band select from forage drives A herd of beeves, fair oxen, and fair kine, Their booty. Milton.

His conscience is the hue and cry that pursues him ; and when he reckons that he has gotten a booty, he has only caught a Tartar. L'Estrange.

He might have his mind and manners formed, and be instructed to boot in several sciences. Locke.

*What boots the regal circle on his head, That long behind he trails his pompous robe **

Pope.

BOOT' n. & v. 1 Ang.Sax. abutan, about ; BOOT'CATCHER, $ because, says Skinner, boots go round, or about, the legs. ' It is more pro bably,' says the Ency. Met. ' from the Ang.-Sax. botan ; Dut. boeten, to boot ; to superadd ; to supply ; to add something more to make up a deficiency in something else. The boot of a coach is something superadded to the coach ; boots for the legs are an additional covering or protection for the legs.' Perhaps it is rather from the Welsh, bwtias; pronounced booCias (a pair of boots), derived from hot, any round body.

His bootes souple, his hors in gret estat, Now certainly he was a fayre prelat.

Chaucer's Canterbury Tales _

His lacquey with a linen stock on one leg, and a boot-hose on the other, gartered with a red and blue list. Id.

That my leg is too long ā ā No ; that is too little. ā I'll wear a boot, to make it somewhat rounder. Id.

A booted judge shall sit to try his cause, Not by the statute, but by martial laws. Dryden. The ostlei and the bootcatcher ought to partake.

Swift.

Bishop Wilkins says he does not question but it will be as usual for a man to call for his wings, when he is going a journey, as it is now to call for his boots.

Addison's Guardian

BOOT, among the ancient Romans, was called ochrea ; and by middle age writers, greva, gam- beria, bainberga, bembarga, or benberga. The boot is said to have been the invention of the Carians. It was at first made of leather, after- wards of brass or iron ; whence Homer calls the Greeks

brazen-booted. The boot was used by the foot, as well as by the horsemen. It only covered half the leg ; some say the right leg, which was more advanced than the left, it being advanced forwards in an attack with the sword; but in reality it appears to have been used on either leg, and sometimes on both. Those who fought with darts or other missile weapons, advanced the left leg foremost, so that this only was booted.

BOOT, Bordekin, a mode of torture used to extort confession. A boot, stocking, or buskin of parchment, being put on the leg moist, and brought near the fire, in shrinking squeezes the leg violently, and occasions intolerable pain. There is also another kind of boot, consisting of four thick strong boards bound round with cords ; two of these are put between the criminal's legs, and the two others placed one on the outside of one leg, and the other on the other ; then, squeez- ing the legs against the boards by the cords, the

criminal's bones are severely pinched, and some- times even broken.

BOOTAN, a considerable region of northern Hindostan, lying between Bengal and Thibet, and principally between the 26th and 28th degrees of north latitude. It is supposed to be 200 miles from east to west, and ninety miles from north to south. It is mountainous, and in many parts extremely cold, but highly cultivated and pro- ductive. Situated without the tropics, it is free from the periodical rains ; and the climate is in general favorable to both European and Asiatic fruits. The forests also produce fine firs and other timber. The deb or deu rajah, who re- sides at Tassisudon, is tributary to the lama of Thibet. The principal towns are Tassisudon, Poonakha, Wandipore, Ghassa, and Murrichom. The inhabitants are robust and fair, of the Boodh religion. Most of the laborious duties of life are performed by the women. Their liouses are in general of one story, but 4he palace of the rajah is a lofty pile. The glandular swelling of the throat, commonly found in mountainous districts, is very frequent here. Bootan produces a hardy breed of horses called tangans ; they are in general pyebald, and about thirteen hands high. Numbers are brought annually to Rung- pore, loaded with the produce of their own coun- try, and of Thibet and China. The district is supplied with silk from Bengal, and with tea from China ; of this herb they are excessively fond. The government is very jealous of a free intercourse with Bengal, requiring passports from all travellers; and boast that they were never invaded by the Mahommedans or

Chinese. Their customs approach to those of the Birmans or inhabitants of Ava.

BOOTES, a constellation of the northern he- misphere, consisting of twenty-three stars ac- cording to Ptolemy's catalogue, of eighteen in Tycho's, of thirty-four in Bayer's, of fifty-two in Hevelius's, and of fifty-four in Flamstead's catalogue ; one of which, in the skirt of his coat, is Arctu rus, a star of the first magnitude. Bootes is represented as a man walking, and grasping a club in his right hand, and is fabled to have been Icarius, who was transported to heaven because he was a great cultivator of the vine ; for when Bootes rises, the vine begins to shoot.

BOOTH', w. s. Vul.boed;yfe\sk,bwth. A house built of boards, or boughs, to be used for a short time.

The clothiers found means to have all the quest made of the northern men, such as had their booths in tke fair. Camden.

Much mischief will be done at Bartholomew Fair by the fall of a booth. Swift.

Booths sudden hide the Thames, long streets ap- pear, And numerous games proclaim the crowded fair.

Gayf

BOOTH (Barton), a famous tragedian, born in Lancashire in 1681, and educated at West- minster, under the celebrated Dr. Busby. He was intended for the church, but his success in the Latin plays, commonly performed by the scholars, gave him an inclination for the stage ; and, absconding from school, he went to Dublin, and commenced actor. His first appearance was

in the part of Oroonoko, in which he received great approbation. From this time he continued improving ; and, after two successful campaigns, returned to his native country. Having, by letter, reconciled himself to his friends, he obtained a recommendation from Lord Fitzharding to Mr. Betterton, who gave him all the assistance in his power. The first part he appeared in at London was that of Maximus in Lord Rochester's Valen- tinian, wherein his reception exceeded his most sanguine expectations. His performance of Artaban, in Rowe's Ambitious Stepmother, established his reputation. In Pyrrhus, in the Distressed Mother, he shone without a rival. But he was indebted to a happy coincidence of merit and chance, for that height of fame which he at length attained in the character of Cato, as drawn by Addison in 1712. For this being considered as a party play, the Whigs, in favor of whose principles it was evidently written, thought it their

duty strongly to support it, while the Tories, unwilling to have it considered as a reflection on their administration, were still more vehement in their approbation. They made a- collection of fifty guineas in the boxes during the performance, and presented them to Mr. Booth. He also re- ceived an equal sum from the managers, in con- sideration of the great success of the play. Nor were these the only advantages he reaped from his success ; for Lord Bolingbroke soon after procured a special licence from queen Anne, re- calling all the former ones, and nominating Mr. Booth as joint manager at Drury-lane with, Wilks, Cibber, and Dogget. In 1704 Mr. Booth had married a daughter of Sir William Barkham, Bart, who died in 1710, without issue. In 1719 he married the celebrated Miss Hester Santlow, a woman of a most amiable disposition, whose great merit as an actress, added to the ut- most discretion and prudential ceconomy, had enabled her to save a considerable fortune. During the twenty years in which Mr. Booth, continued a manager, the theatre was in the greatest credit ; and his death, which happened on the 10th of May 1733, contributed not a little to its decline. He wrote a dramatic work, en- titled Dido and JĀ£neas; and a superior Latin in- scription to the memory of Mr. William Smith, an actor.

BOOTH (Henry), earl of Warrington, was bora in 1651, and member for Chester in several par- liaments during the reign of Charles II. Being a zealous Protestant, he was active in promoting the bill for excluding the duke of York from the throne. This, with his vigorous and constant opposition to the arbitrary measures then prevail- ing, rendered him so very obnoxious to the court, that in 1684 (soon after his becoming Lord De- lamere, by the death of his father), he was com- mitted close prisoner to the tower, and though liberated soon after, he was committed a second and third time in 1685 ; at last, in Jan. 1686, he was tried for high treason ; but in spite of all the efforts of the court and the bloody Jefferies, was acquitted by his jury. After this, he lived re- tired till matters ripened for the Revolution, to which he contributed by raising forces, and every other means in his power. Upon its aconH- plishment, he was made a privy counsellor,

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chancellor of exchequer, lord lieutenant of Chester, &c. ; but though he held some of these offices for life, he was dismissed from others, as he opposed the court measures, and wished for further limitations of the royal prerogative. To avoid all appearance of ingratitude, his dismis- sion was accompanied with the creation of the new title of Earl of Warrington, in 1690, and a pension of Ā£‘2000 a year. He died 2d January, 1694. He wrote several political tracts, and the Case of William Earl of Devonshire ; which, with his speeches made in parliament, and some family prayers, were published in one volume, 8vo. in 1694.

BOOTH (Abraham), a dissenting clergyman of the Baptist persuasion, was born at Blackwell, in Derbyshire, in 1734, of poor parents. He had consequently but little education, and at an early age was placed with a stocking-weaver. He studied the Scriptures di’jgently, however, and became so well versed in them as to be called to the ministry among the Baptists, and he at the same time opened a school at Sutton-Ashfield. In 1769 he was ordained pastor of the church in Prescot-street, Goodman’s-fields, where he exer- cised his charge in a great professional conduct and a spotless character till his death in 1806. He wrote, 1. The Reign of Grace, 8vo. 2. Glad Tidings to Perishing Sinners. 3. The Death of Legal Hope, the Life of Evangelical Obedi- ence, 12mo. 4. An Essay on the Kingdom of Christ. 5. Pastoral Cautions. 6. Paedobaptism Examined, 3 vols. and some other works.

BOOTON, an island of the Eastern Seas, ly- ing off the south-eastern extremity of Celebes, in about the fifth degree of south latitude. Its length may be estimated at eighty-five miles, and its width at twenty miles. It is separated from the island of Pangansane by a strait which is pass- able for square rigged vessels. This island is high and woody, but well cultivated, and produces rice, maize, yams, a variety of tropical fruits, and abundance of the wild bread fruit tree. Fowls, goats, buffaloes, and fish, are also to be procured here. The inhabitants are very tawny, of short stature, and ugly ; their language on the sea coast is the Malay, and their religion Mahomme- dan. The Dutch had formerly a settlement in the bay of Booton, and held the chief of the island under a sort of subjection. On the east side is a bay, named by the Dutch Dwaal, or Mistake Bay, into which if a ship be drifted by the currents, she cannot get out until the west monsoon sets in, and even then it is difficult. A Dutch governor, going to Banda, was detained in this gulf a whole year.

BOOT-TOPPING, in sea language, the act of cleaning the upper part of the

ship's bottom, or that part which lies immediately under the surface of the water, and daubing it over with tallow, or with a mixture of tallow, sulphur, resin, &c.

BOOTY', -)

BOOT'ING, v. > See BOOT.

BOOTY' ING. j

If it be indeed an incendiary letter, what if you and I, sir, go there ; and when the writer comes to be paid for his expected booty, seize him. Goldsmith

BOOTY, among the Greeks, was divided in common among the army, the general only claim- ing a larger share. By the military discipline of the Romans, spoils taken from the enemy be- longed to the republic, particular persons having no right to them. Sometimes indeed they di- vided it among the soldiery, to animate them, and serve in lieu of a reward. But this distribu- tion depended on the generals, who were to con- duct themselves herein with great equity and moderation ; otherwise it became a crime of pe- culation to lay hands on the pillage. The con- suls Romulus and Vaturius were condemned for having sold the booty taken from the TEqui. During the Jewish republic, the booty was di- vided equally between the army and the people ; but under the kings a different kind of distribu- tion obtained. Among the Mahommedans, two- thirds of the spoils are allowed to the army ; the other third to God, to Mahomet and his rela- tions, and to the orphans, the poor, and the pil- grims. Among us, formerly, the booty was di- vided among the soldiers. If the general be in the field, every body takes what he can lay hold of: if the general be absent, the booty is distri- buted among the soldiers, two parts being allowed the cavalry, and one to the infantry. A captain is allowed ten shares, a lieutenant six, and a cor- net four.

BO'PEEP. Bo and peep ; childish play, not always confined to children. A kind of advanc- ing and retiring ; looking and hiding the face, for the mere purpose of drawing each other on to further amusement. It is sometimes played by parent and child ; by knave and fool ; by the gallant and his wanton.

The woman wantonnesse, shee comes with 'ticing

traine ;

Pride in her pocket plaies bopeepe, and bawdry in her braine. Gasgoigne's Flowers.

Then they for sudden joy did weep,

And I for sorrow sung, That such a king should play bopeep,

And go the fools among. Shakspeare.

Rivers,

That serve instead of peaceful barriers, To part the' engagements of their warriours, Where both from side to side may skip, And only encounter at bopeep. Hudtbras.

There the devil plays at bopeep, puts out his horns to do mischief, then shrinks them back for safety.

Dryden.

Just so, in life he runs about, Plays at bopeep, now in now out; But hurts no mortal creature. E. Moore.

BOPYRUS, in entomology, a genus of the class arachnides, order tetracera, and family assellota, of Latreille : the monoculi of Linnseus. They live by suction on different marine Crustacea.

BOQUINIANS, BOQUINII, a sect of Sa- cramentarians, who asserted that the body o. Christ was present in the Eucharist o.tly to those for whom he died ; viz. the elect.

BOQUINUS, the founder of the sect of Bo- quinians, a Lutheran divine, who taught that Christ did not die for all mankind, but only for the faithful, and consequently was only a parti- cular Saviour. In this opinion he was not sin- gular.

BORA, in natural history, the name used for the bufonites, by some authors ; these are sup- posed by many to be real stones, but are only the teeth of a fish.

BORACIC ACID. To procure this acid, dis- solve borax in hot water, filter the solution, then add sulphuric acid by little and little, till the liquid has a sensibly acid taste, and when cool, a great number of small shining crystals will form. These are the boracic acid. They are to be washed with cold

water, and drained upon brown paper. Homberg first obtained this acid separate in 1702, by distilling a mixture of borax and sulphate of iron.

Boracic acid appears in the form of thin irre- gular hexagonal scales, of a silvery whiteness, having a kind of greasy feel. It has af first a sourish taste, then a bitter cooling impression, leaving an agreeable sweetness. It is not brittle but ductile ; it has no smell. Exposed to the fire it swells, losing its water of crystallisation, and in this state it is called calcined boracic acid. It melts a little before it is red-hot, but it does not flow freely till it is red. After fusion it is a hard glass, unaltered in its properties, for on being dissolved in boiling water it crystallises as before. This glass is much used in the compo- sition of false gems.

Boiling water dissolves scarcely one-fiftieth part ; cold water much less. It is more soluble in alcohol, and alcohol containing it burns with a green flame. If mixed with finely powdered charcoal, it is capable of vitrification ; and with soot it melts into a black bitumen-like mass, so- luble in water, and not easily burned to ashes ; part sublimes. With the assistance of a distil- ling heat it dissolves in oils, especially mineral oils ; and with these it imparts a green color to spirit of wine. When rubbed with phosphorus it does not prevent its inflammation, but an earthy yellow matter is left behind. It dissolves none of the metals except iron and zinc, and perhaps copper; but it combines with most of the metallic oxides, as it does with the alkalies. It is of great use in analysing stones that contain a fixed alkali.

Crystallised boracic acid is a compound of fifty-seven parts of acid and forty-three of water. The honor of discovering the radical of boracic acid, is divided between Sir H. Davy and MM. Gay Lussac and Thenard. The first, on applyˆ ing his powerful voltaic battery to it, obtained a chocolate-colored body in small quantity; but the two latter chemists, by acting on it with po- tassium in equal quantities, at a low red heat, formed boron and sub-borate of pot ash. See BORON.

The boracic acid has been found in a disen- gaged state in several lakes of hot mineral waters in Tuscany, in the proportion of nearly nine grains in a hundred of water; and also adhering to schistus, on the borders of lakes, of an obscure white, yellow, or greenish color, and crystallised in the form of needles.

BORACITE. Borate of magnesia. A cry- stallised mineral found in gypsum in the Kal- berg in Brunswick, and at Segeberg in Holland. It is translucent, and of a shining lustre ; color yellow, gray, or greenish-white. Vauquelin's

Analysis gives 83P4 boracic acid, and 16‘6 mag- nesia. Its most remarkable property is, that like the tourmalin it becomes electric by heat ;

and it has four electric poles, the perfect angles always exhibiting negative electricity, and the truncated angles positive. BORAGO, BORAGE, in botany, a genus of

?lants, of the class pentandria, order monogynia. he generic character is, CAL. five cleft : COR. rotate, having at its orifice five obtuse emarginate teeth. It contains seven species, the most re- markable of which is the B. officinalis, or com- mon borage, employed in medicine as a refrige- rant. It grows wild in this country, but was brought from Aleppo.

BORAK, AL, in the Mahommedan theology, the animal, something between a mule and an ass, which carried the prophet on his journey from Jerusalem to heaven. The night on which he performed this excursion is called Leilat al MeeVage, the night of the ascension.

BORANA, in entomology, a species of tortrix, inhabiting Sweden. The head cinereous, and thorax fuscous.

BORASSUS, in botany, a genus of plants de- scribed by Linnaeus. The male and female flowers grow on separate plants, and are called by different names, in the Hortus Malabaricus; the male being called ampana, and the female carimpana: CAL. aspathe; spadix amentaceous, imbricate: COR. three-parted. Fern, styles three: drupe three-celled, three-seeded. One species only, a native of India, a palm with leaves folded like a fan, and cut at the edges.

BORAX is a salt, in appearance similar to alum, brought originally from the East Indies ir. an impure state, and afterwards purified m Europe. It was long uncertain whether this salt was a natural or factitious substance ; but it is now ascertained that it is naturally produced in the mountains of Thibet, from whence othe- parts of the eastern continent are supplied. Mr Kirwan, in his mineralogy, informs us, that Mr. Grill Adamson sent some to Sweden in 1772, in a crystalline form, "as dug out of the earth in Thibet, where it is called pounxa, my-poun, and houi-poun. It is said to have been found in Saxony in some coal-pits.

Borax is found, in commerce, in three different states. 1. Borax, Chinese, is somewhat pure, and is met with in the form of small plates or masses irregularly crystallised, and of a dirty white. It appears to consist of fragments of prisms and pyramids, confounded together with- out any symmetrical arrangement. A white pow- der appears on the surface, thought to be of an argillaceous nature. 2. Borax, crude, tincal, or chrysocolla, comes from Persia in greenish masses, of a greasy feel, or in opaque crystals of 'an olive green, which are six-sided prisms ter- minated by irregular prisms. There are two varieties of these crystals, differing in

magnitude. This salt is very impure by the addition of foreign matters. Mr. Kirwan tells us, that this kind is called brute borax, tincal, or chrysocolla, and that it is in the form of large, flat, hexangular, or irregular crystals, of a dull white or greenish color, greasy to the touch, or in small crystals, as it were cemented together by a rancid yel-

lowish oily substance, intermixed with marl, gravel, and other impurities. 3. Borax, Dutch, or purified borax, is in the form of portions of transparent crystals of considerable purity. Py- ramids with several facets may be observed among them, the crystallisation appearing to have been interrupted. Its taste is styptic; it converts syrup of violets to a green ; and when exposed to heat, it swells up, boils, loses its water of crystallisation, and becomes converted into a porous, white, opaque mass, commonly called calcined borax. A stronger heat brings it into a state of quiet fusion ; but the glassy sub- stance thus afforded, which is transparent, and of a greenish-yellow color, is soluble in water, and effloresces in the air. It requires about eighteen times its weight of water to dissolve it at the temperature of sixty degrees of Fahrenheit ; but water at the boiling heat dissolves three times this quantity. Its component parts, according to Kirwan, are, boracic acid thirty-four, soda seventeen, water forty-seven.

Borax serves as a flux to verifiable earths, with which it forms a good glass, and is employed in making artificial gems. It vitrifies clay, but much less completely than siliceous earths; and from this property it adheres to the inside of cru- cibles, and glazes them. The acid of borax, as well as the borax in substance, is made use of to fuse vitrifiable earths, with which it forms clear and nearly colorless glasses : by the assistance of heat it dissolves the earth precipitated from the liquor of flints. It unites with ponderous earth, magnesia, lime and alkalies, and forms, with dif- ferent substances, salts distinguished by one gene- ral name of borax, though only that formed by the combination of sedative salt and mineral alkali is used in the arts. It is used in many other che- mical operations as a flux, besides that of glass making ; and the dyers also use it for giving a gloss to silks. In medicine it is occasionally given in cardialgia as an antacid. Its solution is in common use as a cooling gargle, and to detach mucus, &c. from the mouth in putrid fever; and mixed with an equal quantity of sugar, it is used in the form of powder to remove the aphthous crust from the tongue in children.

BORBETOMAGUS, in ancient geography, a city of the Vangiones on the Rhine ; now called Worms.

BORBONIA, in botany, a genus of the decan- dria order, and diadelphia class of plants; natu- ral order, thirty-second, caryophylleae : STIG. emarginated : CAL. spines pointed ; the legumen is pointed. There are eight species, all natives of warm countries. They are a kind of broom ; and rise to the height of ten or twelve feet, but in Europe seldom above four or five. They must be kept constantly in the stove, and may be propagated by shoots ; but as these are gene- rally two years before they put forth roots, the best method is by seeds, which must be procured from their native places.

BORBONICA, in ornithology, a species of motacilla; color grayish; a yellowish gray be- neath ; quill and tail-feathers brown, edged with gray. This is the ficedula borbonica of Brisson ; and the Bourbon warbler of Latham. Inhabit- ing the islands of Bourbon and Madagascar.

BORBONICUS, a species of turdus, of a cine- reous olive color; crown black; abdomen and vent yellow; tail fuscous, with two obsolete bands near the tip. Inhabits the isle of Bourbon. This is the Bourbon thrush of Latham.

BORBONIUS (Nicholas), a French Latin poet of the sixteenth century. He was highly esteemed by the mast learned men of his time. His poems were printed in 1540.

BORBORlANI, BORBORITES, in church his- tory, a sect of gnostics, in the second century, who, besides embracing the errors of these here- tics, denied the last judgment. Their name comes from BopjSopoc, filth; on account of a cus- tom they had of daubing their faces and bodies with dirt.

BORBORYGMUS, BopjSopvy/ioc; Greek, a rumbling of the intestines.

BORD HALFPENNY, a small toll by custom paid to the lord of the town for setting up boards, tables, booths, &c. in fairs or markets.

BORD LANDS, the defaesnes which lords an- ciently kept in their hands, for the maintenance of their board or table.

BORD LODE, 1. a service required of tenants, to carry timber out of the woods of the lord to his house: 2. the quantity of provision which the Bordarii, or bordmen, paid for their bord lands.

BORD SERVICE, the tenure of bord lands, by which some lands in certain places are held of the bishop of London, and the tenants now pay sixpence per acre, in lieu of sending provision as formerly for their lords' table.

BORDA (John Charles), a French mathema- tician and natural philosopher ; was born at Dax, in the department of the Landes, 1733. He studied under the Jesuits, who endeavoured to induce him to enter into their order, and was afterwards intended for a civil employment ; but, in consequence of his passion for geometry, he was suffered to devote himself to the sciences. In 1756 he laid before the Academy a Memoir on the motion of Projectiles, which procured him admission into that body. The year following he was aide-de-camp to M. de Maillebois at the battle of Hastembeck, and on his return to Paris was employed as inspector of the dock-yards. In this situation he made numerous experiments on the resistance of fluids and the velocity of motion. In 1767 he published a valuable Dissertation on Hydraulic Wheels; and, in 1768, another on the Construction of Water-pumps. He was now appointed sub-lieutenant in the marine, and sent with Pingre on a voyage of discovery to the South Seas, of which an account was published in 2 vols, 4to. 1778. He afterwards served under count d'Estaing in America, when he dis- covered many defects in the construction of ves- sels, which led to some important improvements in naval architecture. He also produced an invention called the Circle of Borda, the first idea of which was given by Meyer. Besides^ this he was the contriver of the mensuration-rod, for ascertaining new station-lines. He also pro- jected a reform in weights and measures; for whicn purpose he published Tables of Lines, at his own expense. One of his last labors was the determination of the length of the pendulum

vibrating seconds at Paris ; where he died, greatly lamented, in 1799.

BORDARII, often mentioned in the Domes- day inquisition, were distinct from the servi and villani, and seem to be those of a less servile con- dition, who had a bord or cottage, with a small parcel of land allowed to them, on condition they should supply the lord with poultry and eggs, and other small provisions for his board and entertainment. Though, according to Spelman, the bordarii were inferior to the villani, as being limited to a small number of acres.

BORD AT, in commerce, a small narrow stuff, manufactured in some parts of Egypt, particu- larly in Cairo, Alexandria, and Damietta.

BORDE (Andrew), M. D. was born at Peven- sey in Sussex, early in the sixteenth century. In his Introduction to Knowledge, he says, that he was a student of Oxford. He entered a brother of a Carthusian convent in or near London ; but, not liking their discipline, he returned to Oxford, and applied to physic. Some time after, he embarked for the continent; and, as he expresses it, ' travelled through and round about Christen- dom, and out of

Christendom into some parts of Africa.' In 1541, and 1542, he resided at Mont- pelier, where he was made M. D. and after his return to England received the same degree at Oxford. From his preface it appears that he had also been in Scotland. Having satisfied his in- clination for travelling, he settled first at Peven- sey, afterwards at Winchester, and finally in London, where he became first physician to Henry VIII ; notwithstanding which, he had the misfortune to end his life in the Fleet prison, in 1549. Wood says, ' he was esteemed a noted poet, a witty and ingenious person, and an excel- lent physician.' Pitts calls him a man of suffi- cient learning, but too volatile. His writings are, 1. A Book of the Introduction of Knowledge, the ā¢whych doth teach a Man to speak part of all man- ner of Languages, &c. Lond. 1 542, 4to; dedicated, from Montpelier, to the lady Mary, daughter of Henry VIII. It is written partly in verse, and partly in prose. 2. The Breviary of Health, Lond. 1547, 4tQ. 3. Dietary of Health, Lond. 1576, 8vo. 4. The Merry Tales of the Madmen of Gotham : printed, says Wood, in the time of Henry VIII., in whose reign, and after, it was accounted a book full of wit and mirth, by scholars and gentlemen. It is now sold only on the stalls of ballad-sellers. 5. A Right Pleasant and Merry History of the Mylner of Abingdon, with his Wife and his Fair Daughter, and of Two Poor Scholars of Cambridge ; Lond. 4to. 6. A Book of every Region, Country, and Province, &c. published by Hearne at end of Benedictus abbas Peterb. de vita Henrici II., Oxf. 1735; 8vo. 7. The Principles of Astronomy, Lond. 12mo. The author says, that he wrote this little book in four days, jwith one old pen, without mending.

BORDELL', ˆ A brothel. Menage thinks

HORDEL'LO, >the old French bordeau is

BOR'DELLER. j compounded of board and

eau, because such places were heretofore by the

water side. Wrachter contends that bordell is the

diminutive of the Ang.-Sax. bord, a house ;

and properly signifies domuncula, a small house.

And the same shall the man tell plainly, with

all the circumstances, and whether he hath sinned with common bordel women or non,, or don his sin in holy times or none. Chaucer's Canterbury Tales.

From the bordello it might come as well, The spital, or picthatch. Ben Jonson.

Making even his own house a stew, a bordel, and a school of lewdness, to instil vice into the unwary ears of his poor children. South.

BORDENTOWN, a thriving town of the United States in Burlington County, New Jersey ; seated on the east side of the Delaware, twenty- six miles above Philadelphia, and four south- east by south of Trenton. As it stands on a rising ground, about seventy feet perpendicular above the Delaware, between two creeks which run into that river, it is extremely healthy.

BOR'DER, v. & Ā». { Fr. border ; Out.

BOR'DERER. i boorden, from board ;

and also aboard, in its consequential usage. To approach ; to accost, or accoast ; to be, or come near upon ; close to the edge or confines ; close to : also to surround with an edge or border. Border is the outer part or edge of any thing ; the confines of a country ; the outer part of a garment ; a bank raised round a garden and set with flowers.

If a prince keep his residence on the border of his dominions, the remote parts will rebel ; but if he make the centre his seat, he shall easily keep them in obedience. Spenser

All over her a cloth of state was spred, Not of rich tissew, nor of cloth of gold, Nor of ought else that may be richest red But like a cloud, as likest maybe told, That her brode-spreading wings did wyde unfold ; Whose skirts were bordered with bright sunny beames.

Id.

I saw a thousand huntsmen, which descended Downe from the mountaines bordering Lombardic, That with an hundred speares her flanks wide rended.

u.

They of those marches, gracious sovereign ! Shall be a wall sufficient to defend Our island from the pilfering borderers. Shaktpeare.

The king of Scots in person, with Perkin in his company, entered with a great army, though it chiefly consisted of borderers, being raised somewhat sud- denly. Bacon.

Sheba and Raamah are those parts of Arabia, which border the sea, called the Persian gulf.

Raleigh.

Yet on she moves, now stands and eyes thee fixed, About t' have spoke, but now with head declined, Like a fair flower surcharged with dew she weeps, And words addressed seem into tears dissolved, Wetting the borders of her silken veil.

Milton's Samson Agmistet.

The light must strike on the middle, and extend its greatest clearness on the principal figures ; diminish- ing by degrees, as it comes nearer and nearer to the borders. Dryden.

All wit which borders upon profaneness, and makes bold with those things to which the greatest reverence is due, deserves to be branded with folly.

TiUotson. Volga's stream

Sends opposite, in shaggy armour clad, Her borderers ; on mutual slaughter bent, They rend their countries. Philipt.

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My spouse and boys dwell near thy hall,

Along the bordering lake,

And when they on their father call

What answer shall she make. Byron.

BORDERS, among florists, the leaves which stand round the middle thrum of a flower.

BORDERS, in gardening, are made to enclose parterres, that they may not be injured by walk- ing in them. Borders are made either circular, straight, or in cants; and are turned into knots, scrolls, volutes, and other compartments. They are rendered very ornamental by the flowers, shrubs, yews, &c. that are raised in them. They are always laid with a sharp rising in the middle ; to render them more agreeable to the eye : the largest are allowed five or six feet, and the small- est commonly four.

BORDERS, or BORDURES, in heraldry, are either plain or indented as in fig. 1 vert; a bor- dure indented, argent. Borders are charged in the same manner as the field ; thus a border

Fig. 1.

Fig. 2.

analuron consists of birds, as in fig. 2. He bear- eth, argent; a bordure, vert; enaluron of martlets, or; so borders enuercy composed of beasts; ver- doy, of vegetables; entoyer, of inanimate things. BORD'RAGINGS. Probably ravages com- mitted on the borders.

Long time in peace his realm established, Yet oft annoy'd with sundry bordragings Of neighbour Scots, and foreign scatterlings.

Spenser.

BORDUNI, or BORDONE (Paris), an excellent Italian painter, born at Venice about 1512. He was the disciple of Titian ; but has been admired more for the delicacy of his pencil, than for the truth of his outlines. For Francis I. of France, he drew not only abundance of history pieces, but the portraits of several court ladies, in so fine a manner, that original nature was hardly more charming. Hedied in 1587, aged sevety-five. BORE', v. & n. I Ang.Sax. borian. Wach BO'RER. 3 ter and Skinner think the

Greek, irtpav, to pierce ; whence the Lat.forare, to bore, is the parent of this word ; to pierce ; to penetrate through ; to make a hollow, or a cavity through ; to push forwards towards a certain point. Metaphorically, to teaze by ceaseless re- petition ; like the unvarying continued action of a borer.

Those milk paps,

That through the window bars bore at men's eyes, Are not within the leaf of pity writ. Shakspeare.

I read in his looks

Matter against me ; and his eye reviled Me as his abject object : at this instant He bores me with some trick. He's ?one to the king ; I'll follow and outstare him. Id.

Mulberries will be fairer, if you bore the trunk of the tree through, and thrust, into the places bored, wedges of some hot trees. Bacon.

BOR

It will best appear in the bores of wind instruments ; therefore cause pipes to be made with a single, double, and so on, to a sextuple bore ; and mark what tone every one giveth. Id,

But Capys, and the graver sort, thought fit The Greeks' suspected present to commit To seas or flames ; at least, to search and bore The sides, and what that space contains to' explore.

Denham.

Into hollow engines long and round, Thick rammed, at the' other bore with touch of fire Dilated, and infuriate. Milton.

Nor southward to the raining regions run j But boring to the west, and hovering there, With gaping mouths they draw prolific air.

Dryden.

We took a cylindrical pipe of glass, whose bore was about a quarter of an inch in diameter. Boyle.

These diminutive caterpillars are able, by degrees, to pierce or bore their way into a tree, with very small holes ; which, after they are fully entered, grow to- gether. Rcy.

Consider, reader, what fatigues I've known, What riots seen, what bustling crowds I bored, How oft I crossed where carts and coaches roared.

Gay.

BORE', ˆ The past tense, and past par- BORN'. J ticiple of the verb to bear. See BEAR, And on his arme a bounch of keyes he bore, The which unused rust did overgrow ā¢, Those were the keyes of every inner door, But he could not them use, but kept them still in store. Spenser,

Only a target light, upon his arm He careless bore. Fletcher's Purple Island.

Their charge, was always born by the queen, and duly paid out of the exchequer. Bacon.

The great men were enabled to oppress their in- feriours ; and their followers were born out and coun- tenanced in wicked actions. Davies.

But he his wonted pride Soon recollecting, with high words, that bore Semblance of worth, not substance, gently raised Their fainting courage,

and dispelled their fears.

Milton's Paradise Lost, The father bore it with undaunted soul, Like one who durst his destiny controul ; Yet with becoming grief he bore his part, Resigned his son, but not resigned his heart.

Dryden. 'Twas my fate

To kill my father, and pollute his bed By marrying her who bore me. Id.

Upon some occasions, Clodius may be bold and insolent, born away by his passion. Swift.

BORE (Catharine de), wife of Luther, the celebrated reformer, was the daughter of a pri- vate gentleman, and was born about A. U. 1499. Having been early immured in the monastery of Nimptschen, she left it, along with other eight nuns in 1523, during the bustle of the holy week, and was married to Luther in 1526. On these accounts the Catholic writers raised many calumnies against her, from which Mr. Bayle has very completely vindicated her; and points out num- berless mistakes of Varillas and others concerning her. He gives her an excellent character, and mentions, that Luther was satisfied so with his choice, that he said, ' he would not change his condition for the wealth of Crcesus.' She bore him five children, and survived him a few years. She died at Torgau in 1552, aged fifty-three.

BO'REAL. Lat. borealis, from boreas, the name given to the north wind ; airo rye /Soije, says Vossius, from its bellowing, roaring noise.

BOREALIS, in conchology, a species of venus; lentiform, wit"h very remote membranace- ous transverse striae ; color, dirty white. Inhabit- ing the north of Europe.

BOREALIS, in entomology, a species of tabanus, distinguished by having the eyes with three pur- plish bands; abdomen black; thorax brown; legs black. A rare species. Also a species of coccinella, of a reddish or yellowish color, with twelve black dots on the wing-cases, and four on the thorax. A native of the cape of Good Hope.

BOREALIS, in natural history, a species of clio, of a whitish color, the head terminated in a flesh- colored pointed papilla ; tentacula three, fleshy, and

thick at the mouth. Inhabiting the north seas. Also a species of echinorhynchus, found in the intestines of the Eider duck.

BOREAHS, in ornithology, a species of anas, with a narrow bill, green head, white throat and abdomen. This is the Gauland duck of Latham. A native of Iceland. Also a species of tringa, the belly and legs of which are fuscous; body cinereous above, white beneath; tail and wings dusky. This is the Boreal sand-piper of Latham. Also a species of motacilla, of a green color; yellow beneath ; front, throat, and temples ferru- ginous ; tail rotund, feathers on the sides and at the tips white. A native of Kamtschatka ; the rusty-headed warbler of Latham.

BOREALIS, AURORA. See AURORA.

BO'REAS. The north wind.

But all this glee had no continuance ; For eftsoones winter gan to approche ; The blustering Boreas did encroche, And beate upon the solitary Brere, For nowe no succour was seene him neere. Spenser.

Beat on proud billows ; Boreas, blow : Swell curled waves high as Jove's roof; Your incivility doth show That innocence is tempest proof ; Though surly Nereus frown, my thoughts are calm ; Then strike, affliction, for thy wounds are balm.

Old Song.

** If tradition may be credited, this excellent old song was written by Sir R. L'Estrange.*

Now from the north Of Norumbega, and the Samoed shore, Bursting their brazen dungeon, armed with ice And snow and hail, and stormy gust and flaw, Boreas and Caecias and Argestes loud. And Thracios rend the woods, and seas upturn.

Milton.

BOREAS is derived by Chambers from the Greek, /3opo, food ; because the north wind creates an appetite. Anciently boreas signified the north- east wind blowing at the time of the summer solstice.

BOREAS, in ancient mythology, is repre- sented as the son of the giant Astraeus, by the goddess Aurora, and to have reigned in Thrace, because Thrace lay north of Greece. He ravished Orithya the daughter of Erechtheus, king of Athens, who bore him Zetus and Calais two of the Argonauts, and six daughters. Ho is ?lso said to have carried off Chloris,

the daughter

of Arcturus. The Greeks paid divine honors to Boreas. The Megalopolitans honored him as their chief deity; and the Athenians, considering him as their ally, by his marriage with their ancient king's daughter, implored his aid in their wars with the Persians. He is represented on the temple at Athens with his robe before his mouth, as if he felt the cold of the climate over which he presides; agreeably to which, Ovid calls him gelidus tyrannus, the shivering tyrant. He is usually described by the Roman poets as violent and impetuous.

BOREASMI, feasts instituted at Athens in honor of Boreas.

BOREL (Peter), M. D. was the son of James Borel, who published several poems, and was born at Castres in 1620. He applied himself to the study of physic, and practised with great success in the city of Castres ; where he collected a fine museum of natural curiosities, of which he published a catalogue in 1645, in 4to. Towards the end of 1653, he went to Paris, and was soon after made king's physician; and, in 1674, was received into the Academy of Sciences. His works are Historiarum et Observationum Medico- Physicarum, Centura prima et secunda, 8vo. ; Bibliotheca Chemica, 12mo; De Vero Teles- copii Inventore, 4to; Tresor des Recherches et Antiquites Gauloises, 4to.; Poeme a la Louangc de rimprimerie; Carmina in laudem Regis, Reginae, et Cardinalis Mazarini, 4to. ; Auctarium ad vitam Peirescii, 4to.; Commentum in Anti- quum Philosophum Syrum. Hortus seu Arma- mentarium Simplicium Plantarum et Animalium ad Artem Medicam Spectantium, 8vo.; DeCura- tionibus Sympatheticis, 4to. ; Discours Prouvant la Plurality des Mondes.

BORELLJ (John Alphonsus), was born at Castel Nuovo, Naples, on the 28th of January 1608. He was educated at Rome, where he made such rapid progress under the care of Cas- telli, and acquired so great a reputation, that he was invited to teach mathematics at Messina in Sicily. In 1647 and 1648, a fever having broken out in that island, Borelli paid particular atten- tion to the disease, and published a treatise upon it at Cosenza, entitled, Delle Ragioni delle Febri Maligni di Sicilia, 12mo, 1649. He now re- moved to Pisa, wheie he was appointed profes- sor of philosophy and mathematics. He was also honored with a seat in the Academy del Cimento. He now applied his mathematical knowledge to explain the functions of the animal economy; and, between the years 1659 and 1664, wrote numerous letters to Malpighi upon that subject. But being engaged in the revolt of Messina, he was obliged to quit Sicily and retire to Rome, where he lived under the patron- age of queen Christina. He was under the necessity, however, of teaching mathematics in the pious schools in the convent of St. Pantaleon, where he died of a pleurisy on the 31st

Decem- ber 1679, in the seventy-second year of his age. Borelli corresponded with the leading philoso- phers of his time, particularly with Mr. John Collins, Oldenburgh, Dr. Wallis, Mr. Boyle, and Malpighi. His principal writings are: 1. Delle Ragioni delle Febri Maligni di Sicilia, Cosenza, 1649, 12mo. 2. Delia Cause delie

Febri Maligni. Pisa, 1658, 4to. 3. Apollonii Pergaei Conicorum, lib. v. vi. et vii, Florent. 1661, fol. 4. De Renum usu Judicium, accom- panied by Bellini's treatise De Structure Renum. Strasburg, 1664, 8vo. 5. Theorise Medicorum Planetarum ex Causis Physicis Deductse, Florent.

1666, 4to. 6. De vi Percussionis, Bologna,

1667, 4to 7. Euclides Restitutus. Pisa, 1668, 4to. 8. Osservatione intorna alia vista in eguali degli Occi, published in the Journal of Rome for 1669. 9. De Motionibus Naturalibus de Gravitate Pendentibus. Regio Julio, 1670, 4to.

10. Meteorologia jEtnea, Regio Julio, 1670, 4to.

11. Osservatione dell' Ecclissi Lunari 11 Gen- naro 1675, published in the Journal of Rome for 1675, p. 34. 12. Elementa Conica Apol- lonii Pergaei, et Archimedis Opera, nova et bre- viori methodo demonstrata. -This work was printed at Rome, in 1679, in 12mo., at the end of the third edition of his Euclides Restitutus. 13. De Motu Animalium, published after his death.

BORER, an instrument used to make holes in various substances with. There is a very curious and simple machine of this kind used in America, consisting of the common centre-bit of the car- penters, followed by a wide flat thread-screw, hammered up from a plate of iron, or steel : it is said that it is used to bore holes, several feet in length, and it does it with this peculiar advan- tage, that it clears out the cuttings, without being itself drawn out, as is done with the auger, the gimblet, and other similar tools. Whether this advantage would be as completely obtained in boring perpendicularly down, to considerable depths, is not so certain, but that it would be completely effected in horizontal, or slightly inclined holes, will appear beyond a doubt, by the following description of its mode of working: the cuttings or shavings formed by the tool, are partly by their own weight, and partly by fric- tion against the internal cylindrical surface, pre- vented from revolving along with the screw, the consequence is, that they are pressed against its thread, and slide along it towards the handle ; now as this motion, or shifting of the thread, is quicker than the progress of

boring, by which the whole tool is carried forwards, the cuttings must come out with a speed ncn/ly equal to the difference between these two motions. Mr. Eccleston produced to the Society of Arts, an instrument for boring peat, which consists of a cylindrical body, six inches in diameter, and about two feet long; one half of the mouth is sharpened like a carpenter's auger, and at the other end there is an aperture (through which the peat, introduced by the action of boring, is drawn out), over which are some slips of iron, joined at the top, and terminated by a screw, by which it is connected with the common boring- rod.

BORG-BREGE. See BORGI FRACTURA.

BORGE, or BORGHA, in Saxon law, a pledge of security for another's keeping the peace, and conforming to the laws.

BORGE-FoRDS, or BORUAN-FIORDER, in geo- graphy, a district of Iceland, once famous for its warm baths, erected by Snorra Sturleson, an his- torian of the thirteenth century. They were so

large and well planned, that a hundred persons could bathe in them at one time. Near them was a remarkable one which received the name or cross bath, from the inhabitants of the western part of the island being baptised in it, A. D. 1000.

BORGHETTO, a town of Italy, in the Vero- nese, near which Buonaparte obtained a victory over the Austrians, in June 1796.

BORGIA (Cardinal), See ALEXANDER VI.

BORGIA (Csesar), natural son of pope Alexan- der IV. was a brave general, but a most aban- doned villain. See ITALY. It is incredible what numbers he caused to be taken off by poison, or by the sword. Assassins were constantly kept in pay by him at Rome, for removing all who were obnoxious or inconvenient to him. He experienced various turns of fortune, being sometimes very prosperous, sometimes the re- verse. He narrowly escaped dying by poison in 1503 ; for having concerted with his father a de- sign of poisoning nine newly created cardinals at once, for the sake of possessing their property, the poisoned wine, destined for the purpose, was by mistake brought to and drank by themselves. The pope died of it, but Csesar, by the vigor of his youth, and the force of antidotes, after many struggles, recovered. This, however, was only to outlive his fortune and grandeur, to see himseli depressed, and his enemies exalted ; for he was soon after divested of all his acquisitions, and sent a prisoner to Spain. He escaped, however, and got safe to king John of Navarre, his brother- in-law, who was then at war with his subjects. Caesar served as a volunteer,

and was killed in 1507. Machiavel, in his celebrated book, en- titled The Prince, proposes this villain as a pattern to all princes, who would act the part of wise and politic tyrants.

BORGI FRACTURA, BORG BREGE, or BORGH- BREACH, in ancient law writers, denotes a break- ing of the pledge or security given by the mem- bers of tithings for the behaviour of each other.

BORGO DI SAN SEPOLCRO, a town of Italy, in Urbino, on the borders of Tuscany. It is seated near the source of the Tiber, fifty miles east of Florence. On the 30th of Sept. 1789, this town was much damaged by an earthquake, which destroyed many houses and palaces, with part of the cathedral, some churches, and a vil- lage five miles distant. About 1000 persons perished.

BORGOGNONE IL, a celebrated painter, whose real name was Giacomo Cortese, but he is commonly called Borgognone, from the country where he was born, abovit 1605. He was much admired for his grand manner of painting battles. He had been an officer of rank in the army. Towards the close of his life he retired to the Jesuits' con vent in Rome, where he is said to have taken sanctuary to get rid of a bad wife, but happily surviving her, he lived in great esteem and honor till 1675.

BORING, in practical mechanics, may describe a variety of operations by which either the earth, solid bodies, or blocks, have a given portion excavated, or by which the internal surfaces of cylindrical vessels are made true and smooth. The common functions of the carpenter's gimblet,

drill, or bow, might therefore be expressed by this term ; but it has been more particulary ap- plied of late to the action of those machines which have been invented for finishing the cy- linders of steam-engines, blowing-machines, pump-barrels, &c., and for boring the earth.

For BORING OF CANNON, see CANNON.

BORING OF CYLINDERS for steam-engines, blowing-machines, the barrels of large pumps, &c. is generally performed by steel-cutters, which describe a cylindrical course on the inside sur- face of the cylinder already cast, while it re- mains fixed. Steam-engine cylinders were first. made of brass, or copper and tin mixed; but cast-iron has of late become the universal ma- terial. The cutters are fixed in what is called the cutter-head, which turns with the boring bar, while it is impelled round the interior surface of the

cylinder by a rack, with a pinion moved by a lever and weight. A hollow tube of cast-iron is generally the axis or boring-bar employed, having a groove through it, the length of which is proportioned to the length of the cylinder. The cutter-head is composed of two cast-iron rings, the first of which is accurately fitted on the bar, which is made truly cylindrical, so that this ring may slide along it ; the second ring is fixed round the first by wedges ; and on its cir- cumference are eight notches to receive the steel-cutters, also fixed in by wedges. The first ring is fixed on the bar, so as to make the whole cutter-head move round with it by means of two smaller bars, which go through notches in that ring, and pass through the groove of the boring- bar. These small bars have each a round hole in the part which passes through the geometrical axis of the boring-bar ; through these holes there passes a bolt, which forms the end of the rack ; a key is put through the end of the bolt, which prevents the rack from being drawn back by the lever and weight ; and by this means the rack, impelled by the lever and weight, pushes forward the cutter-head, which is at the same time re-volving with the boring-bar: the connexion of the rack and cutter-head being round, and in the axis of motion, the rack is thereby free from the circular motion of the cutter-head. This boring- bar was invented in the works of Mr. Wilkinson, at the time when accurately bored cylinders came to be required in consequence of Mr. Watt's improvements in the steam-engine. In the following machines the cutters advance by a train of wheels deriving their motion from the power that turns the boring-bar.

A patent was granted in 1799 to Mr. Mur- doch of Redruth for an improved method of constructing steam-engines. He proposes to employ an endless screw for boring, turned by the. moving power; this screw to work into a toothed wheel, whose axis carries the cutter-head. This method, he says, produces a more smooth and steady motion than the usual mode of fixing the boring-bar immediately on the axis turned by the moving power. Mr. Murdoch forms the cylinder and steam-case by casting them of one solid piece, and then boring a cylindrical inter- stice, by means of a tool made of a hollow cy- linder of iron, with steel-cutters fixed to its edge, and acting like a trepan. The chambers of brass

pumps, whose diameter is small, are fixed within iron rings, by means of screws, in the same manner as described below in Mr. Murray's ap-paratus. The rings are made accurately cylindri- cal by turning, as is also the boring-bar. The boring-bar has four cross arms on its outer ex- tremity, to one of which a handle is fixed, whereby a workman makes the boring-bar revolve. The cutter-head is made to advance along the boring- bar by a screw. See Repertory of Arts, Vol. XIII.

In 1802 Mr. Billingsley, of the Bowling Iron- works, near Bradford, constructed an apparatus in which the boring is performed perpendicularly.

See Repertory of Arts, second series, Vol. II. p. 322. One object is, that the boring-dust may fall out, and not remain on one side of the cylinder, wearing the cutters; and in this way the cylinder may be bored through without changing the cut- ters. Another advantage proposed is, that the cylinder may be made more true, and not deviate from its cylindrical form by its own weight, a circumstance which is found to take place in large and slender cylinders when laid on their side. In this method the cylinder is fixed with screws by the flanges, where it is most capable of resistance, and the screws are disposed so as to press the cylinder equally all round. The operation, it is also contended, may be thus sooner performed, in consequence of less time being required to fix the cylinders, and no at- tendance being necessary to change the position of the bar on the axis of the pinion. The mechanism for propelling the cutters is as fol- lows : ā A leather strap passing over the boring- bar, communicates the revolving motion of the boring-bar to a wheel, which gives a slow motion by a train of wheels and pinions to an axis, bearing two pinions which work into two racks ; these racks push the boring-head and cutters slowly forward on the boring-bar, at the same time that the boring-head is devolving with the boring-bar. The velocity with which it is re- quired that the cutters shall advance, varies as the diameter of the cylinder varies, the moving power remaining the same ; and, by altering the train of wheel-work, the cutters may be made to advance with any given velocity.

Our plate BORING, figs. 1, 2, 3, and 4, ex- hibits different views of a machine for boring cylinders, invented 'by Mr. Murray of Leeds. Fig. 1 is an elevation, and fig. 2 a plan, of the machine. W, fig. 1 and 2, is the spur wheel, deriving its motion from water or steam, and communicating a revolving motion to the boring- bar. The toothed wheel A, fig. 1, moves round with the boring bar, B, on which it is fixed ; it gives motion through the wheels D and E, and to the screw S, whose threads act on the two racks, which racks are fixed to the cutter-head H, and revolve with it. The velocity with which the cutter-head is impelled along the cylinder, depends upon the number of threads of the screw in a given length, and on the proportions of the wheels A, C, D, and E, to each other. By varying the velocity of the screw, the cutter- head may be made to move in either direction, up or down the cylinder. F is a pinion, whose axis ends in a square, which may be wrought by a key so as to bring the cutter-head out of the

cylinder, or push it home by the hand when that is required. Screws, passing through two iron rings, fix the cylinder in its bed, as represented in

fig. 4. Fig. 3. is a transverse elevation of the collar, in which the end of the bar at A, fig. 1.,

BORING THE BARRELS OF MUSKETS AND SMALL ARMS is generally conducted by means of a boring bar, turned by the same mill that turns the grinding stones for polishing the outside ; square pieces of iron being first forged of a proper length and breadth ; and the two long edges, which had been previously thinned off, welded together on a mandril. The barrel thus formed, is fixed by a screw on a carriage that moves in iron grooves, and is carried towards the boring-bar by a rope which passes over pullies, and has a weight hanging from its end. The barrels are cooled while boring by means of water from a trough. After the barrel is bored, the interior surface of the bore is polished by the action of the boring-bar. During the operation, an iron gauge of an inch and a half in length, and of a diameter equal to the proposed diame- ter of the musket, is made frequent use of to ascertain the progress made; and the barrel is occasionally held to the light and looked through. If it contains a flaw, the place of the flaw is marked on the outside, and the barrel is put on the mandril again, for the defective place to be heated and hammered over again ; a gauge is also used to &ee whether the barrel be crooked or straight. When it has no flaws, and the boring has pro- ceeded satisfactorily, the barrel is taken to the grinding mill, and undergoes the operation of outside polishing. Rifle-barrels are placed on a bench twelve feet long. The boring-bar is guided by a matrix or female-screw, whose spiral curve is similar to the spiral of the rifles in- tended to be made ; the boring-bar being fixed to a male-screw, which passes through the female, and fits it exactly. The female-screw, having four threads and as many furrows, is also fixed to the bench. These threads, in general, return to the point of the circumference from which they set out, or make a revolution in the length of about two feet. The male-screw has at one end an iron bar attached to it, by which it is put in motion ; at the other extremity is fixed the boring-bar, which passes through the barrel to be rifled ; the boring-bar has a cutter fixed in, it, which forms a spiral furrow in the barrel when the screw is turned by the handle. The number of spiral threads in rifle-barrels is from three to twelve. When the threads and furrows are re- quired to be in straight lines, a straight lined matrix is of course used. In order that the threads may be placed at an equal number of degrees of the circumference from each other, the bench is furnished with a brass plate, divided in the same way as the plate of the machine for cutting the teeth of clock-wheels.

BORING OF PORTLAND STONE, so as to form pipes, was proposed by Sir George Wright in 1805. His method is as follows: ā A hole is drilled through the block of stone, in which a

long iron bolt is inserted for the saw to work round as a centre ; this bolt

forms the axis of the cylinder which is to be taken out, and projects considerably beyond the block at both ends. Another hole is drilled in the intended circum- ference ; into this the blade of the saw is intro- duced. The frame of the saw is so disposed, that, when it is wrought to and fro, the blade is guided by means of the centre bolt so as to describe the intended cylindrical circumference. In this way a solid cylindrical core of stone is detached, and a cylindrical cavity or pipe left in the block. Or the saw may be made to describe a circle without drilling a hole in the centre, by drilling a hole in the circumference, and fixing on the surface of the stone two metallic concentric rings, so that the hole shall be included in the interstice between the rings. The saw is then introduced into the hole, and, being worked, it cuts in the circular path formed by the interstice of the rings. See Repertory of Arts, second series, Vol. VIII.

Mr. Murdoch's method, for which he obtained a patent in 1810, is perhaps preferable. He em- ploys a cylindrical saw to form the pipe. A plug of wood is inserted in the centre of the in- tended pipe; this receives the lower end of a vertical spindle, longer than the intended pipe : the spindle is square, and has sockets sliding on it. On the upper part of the spindle is a pulley or toothed-wheel, by which the spindle is made to revolve. Near the lower end of the spindle is a wheel, having a circumference like a hoop, three inches broad. The diameter of this wheel is somewhat less than that of the pipe to be bored. It regulates the motion, and fits in the inside of a tube of metal attached to the spindle. The diameter of the tube is nearly equal to that of the intended pipe ; its length is greater by two feet. On the lower edge of the tube is a rim of metal, so much thicker than the tube, that the groove cut in the stone by the rim may ad- mit the tube to move freely in it. This rim has an edge like that of a stone-cutter's saw, and performs here the office of a saw. The tube is caused to make a reciprocating circular motion round the spindle. There is a cistern placed above the tube, for the purpose of conveying a mixture of sand and water into the cylindrical groove formed in the stone, whilst the machine is working. Pipes, made of stone in the above way, have been tried for conveying water in and about the streets of London. They were joined by means of Parker's cement, as the best material for forming the joints; but were generally cracked by the motion of carriages above, and allowed the water to escape.

BORING FQR WATER has been lately intro- duced, in and near the metropolis, for the pur- pose of obtaining large supplies of water without the sinking of a well. We have witnessed its success with great satisfaction, and suppose that our readers will be gratified with the following description of the process from the London Journal of Science, No. xxxiii.

The first operation is to dig a circular hole about six or eight feet deep, and five or six feet wide, in the centre of which the boring is to bĀ» conducted,

as shown in our plate BORING FOS WATER. The nandle, fig. 2, having a femalt-

screw in the bottom of its iron shank, a wooden bar or rail passing through the socket of the shank, and a ring at top, is the instrument to which all the boring implements are to be at- tached. A chisel, fig. 3, is first employed, and connected to this handle by its screw at top. If the ground is tolerably soft, the weight of the two workmen, bearing upon the cross-bar and occasionally forcing it round, will soon cause the chisel to penetrate ; but if the ground is hard or strong, the workmen strike the chisel down with repeated blows, so as to peck their way. The labor is often considerably reduced, by means of an elastic wooden pole, placed horizontally over the scene of their operations, from which a chain is brought down, and attached to the ring of the handle. This pole is usually made fast at one end as a fulcrum, by being set into a heap of heavy loose stones ; at the other end the laborer gives it a slight up and down vibrating motion, corresponding to the beating motion of the workmen below, by which means the elasticity of the pole in rising lifts the handle and pecker. When the hole has been opened by a chisel, as far as its length will permit, that instrument is withdrawn, and a sort of cylindrical auger, fig. 4, attached to the handle, fig. 2, for the purpose of drawing up the dirt or broken stones which have been disturbed by the chisel. A section of this auger is shown in fig. 5, by which the internal valve will be seen. The auger being introduced into the hole, and turned round by the workmen, the dirt or broken stones will pass through the aperture at bottom, shown at fig. 6, and fill the cylinder, which is then drawn up and discharged at the top of the auger, the valve preventing its escape at bottom.

To penetrate deeper into the ground, an iron rod, fig. 7, is now to be attached to the chisel, fig. 3, by screwing on to its upper end, and the rod is also fastened to the handle, fig. 2, by screwing into its socket. The chisel having thus become lengthened, by the addition of the rod, it is again introduced into the hole, and the operation of pecking, or forcing it down, is car- ried on by the workmen as before. When the ground has been thus perforated, as far as the chisel and its rod will reach, they must be with- drawn, in order again to introduce the auger, fig. 4, to collect and bring up the rubbish, which is done by attaching it to the iron rod in place of the chisel. Thus, as the hole becomes deepened, other lengths of iron rods are added, by connect- ing them together, as figs. 7, 8. The necessity of thus frequently withdrawing the rods from the hole, renders it extremely inconvenient, if not impossible, to raise them by hand. A tripedal standard

is therefore generally constructed, by three scaffolding poles tied together, over the hole, as shown in the plate, from the centre of which a wheel and axle, or a pair of pulley blocks, are suspended, for the purpose of hauling up the rods, and from which hangs the fork, fig. 10. This fork is to be brought down under the shoulder, near the top of each rod, and made fast to it by passing a pin through two little holes in the claws. The rods are thus drawn up, about seven feet at a time, which is the usual distance between each joint, and at every haul a

fork, fig. 11, is laid horizontally over the hole, witli the shoulders of the lower rod resting be- tween its claws, by which means the rods are prevented from sinking down into the bore again, while the upper length is unscrewed and re- moved. In attaching and detaching these lengths of rod, a wrench, fig. 12, is employed, by which they are turned round, and the screws forced up to their bearing. The boring is sometimes per- formed for the first sixty or a hundred feet, by a chisel of two inches and a half wide, and cleared out by a gouge of two and a quarter diameter, and then the hole is widened by a tool, such as shown at fig. 13. This is merely a chisel, as fig. 3, four inches wide, but with a guide, a, put on at its lower part, for the purpose of keeping it in a perpendicular direction ; the lower part is not intended to peck, but to pass down the hole previously made, while the sides of the chisel operate in enlarging the hole to four inches. The process, however, is generally performed at one operation, by a chisel of four inches wide, as fig. 3, and a gouge of three inches and three quarters, as fig. 4. The most unpleasant circumstance at- tendant upon this business is the occasional breaking of a rod into the hole, which sometimes creates a delay of many days, and an incalculable labor in drawing up the lower portion.

Having obtained water in the quantity desired, the hole is dressed or finished in this operation, by passing down it the diamond chisel, fig. 1 4 ; this is to make the sides smooth previously to putting in the pipe. This chisel is attached to rods and to the handle, as before described, and in its descent the workmen continually walk round, by which the hole is made smooth and cylindrical. And now, in order to keep it pure and uncontaminated with mineral springs, loose earth, &c. the hole is cased for a considerable depth with a metallic pipe of tin or copper, about a quarter of an inch smaller than the bore ; each length being let down, is held by a shoulder resting in a fork, while another length is soldered to it, and so on. We have seen a beautiful stream of water thus obtained from a depth of 320 feet, and rise above the ground constantly to a height of forty feet. It then formed a first moving power in the machinery of a brewery. From the depth of 280 feet was brought up the tooth of an unknown animal, between the size of that of the largest ass and that of a horse.

BORING OF WOODEN PIPES is performed by means of spoon-formed

augers, beginning with one of small diameter, and proceeding to employ successively others of larger diameter. Those used for conveying water in London are generally made of elm, and bored out of one trunk. When a tree is to be bored, it is fixed on a carriage, with a rack on the under part. This fits into a pinion, whose axis passes through gudgeons on a fixed frame. On the axis of the pinion is a ratchet wheel, moved by two catches, which de- rive their motion from the wind or water power that turns the auger ; and the pinion is moved iu a direction that brings the tree towards the auger. The apparatus is the same as the one employed in saw-mills. The tree is made to advance by ropes, which pass over a windlass wrought by men, whilst the auger is turned by a horse-mill.

Wooden pipes are also frequently bored by an auger having at its outer end a wooden drift or handle, which is put in motion by the workman. The trees are placed on tressels, and there are also tressels of a convenient height that support the auger ; there is also a lathe to turn one end of the tree conical, so as to fit into a conical cavity in the end of the adjoining tree, and thus form a joint water-tight. The end of the tree, which receives the adjoining pipe within it, has a surface at right angles to the axis of the pipe. Into this surface is driven an iron hoop, whose diameter is some inches greater than the diameter of the aperture of the pipe. This prevents the tree from splitting when the conical end of the next tree is driven home. When the tree is crooked, a bore is driven in from each end, and the two bores meet, forming an angle. An auger, whose stalk is formed spirally for some way up, is figured in Bailey's Machines of the Society of Arts. The object of this is that the chips may be delivered without taking the auger out of the hole. A patent was granted in 1796 to Mr. Howell of Oswestry, for boring wooden pipes by a hollow cylinder, made of thin plates of iron, about an inch less in diameter than the hole to be bored. To one end of this cylinder is fixed a flange about a quarter of an inch in breadth, and one part of this flange is to be divided, so that, being of steel, a cutter is formed thereby. The object of this is to bore out a solid cylinder of wood, capable of being converted into a smaller pipe, or of being applied to some other use in carpentry. This kind of borer is like the trepan, which is a hollow cylinder of steel, saw-toothed on the edge, and, when made to revolve rapidly on its axis, in the hand of the surgeon, it saws or bores out circular pieces of the flat bones of the head. See Repertory of Arts, vol. IX.

BORING, in mineralogy, a method of piercing the earth with scooping

irons, which, being drawn back at proper times, bring up with them samples of the different strata through which they have passed ; by the examination of which the skilful mineralogist will be able to guess whereabouts a vein of ore may be, or whether it will be worth while to open a mine. It is also a practice employed by the mineralogist to dis- cover the different strata which lie beneath tthe surface of the earth, by sinkers to form wells and pits, or to tap springs, so as to draw off the water that lodges in their neighbourhood ; in the last case, it is performed in the bottom of ditches, or drains previously made.

BORIQUEN, or CRAB-!SLAND, one of the Carribee islands, in North America, five miles south-west of Porto Rico. The English formerly had a settlement there, but were driven away by the Spaniards. Long. 66Ā° W., lat. 18Ā° N.

BORISTHENES, in ancient geography, the largest river of Sarmatia Europea, described by Mela and Herodotus, as the most pleasant of all the rivers of Scythia, calmer than all of them in its course, and very agreeable to drink : it fed very rich pastures, it is added, and produced large fish of the best flavor, and without bones; rising from springs unknown, it comes a great way, its course is a distance of forty days, and so far it is navigable. It is now called the Dneiper or Nieper.

BORITH, in botany, an herb thought to be the kali or saltwort. In Jer. ii. 22, it is translated nitre.

BORJA, a town of Arragon, in Spain, with three parish churches, five convents, and an hos- pital. It lies near Monte Cayo, and in one of the most agreeable spots of the province. Here sprung the family of Borja or Borgia, and the notorious pope Alexander VI. It is the capital of a district of the same name, which contains twenty-seven villages and hamlets, with a popu- lation of 3000. The environs of the town abound in wine, flax, and wool. Twenty-four miles north of Calatayud, and thirty-four W.N.W. of Saragossa. Long. 1Ā° 34′ W., lat. 41Ā° 50′ N.

BORJA, SAN FRANCISCO DE, the capital city of the province of Mainas, the kingdom of Quito, in South America. It is situated on the Pastaza, which falls into the Amazons, in long. 76Ā° 24′ W., lat. 4Ā° 28′ S.

BORJA (St.), a missionary settlement of South America, in the province of Moxos, 100 miles north-west of Trinidada. There are two other missionary settlements of the same name, one on the river Uruguay, in lat. 28Ā° 39′ 51″ S., long. 57Ā° 56′ W.

BORKUM, an island on the coast of East Friesland, in the kingdom of

Hanover, situated between the mouths of the East and West Ems. It is included in the bailiwic of Greetyz, and so low in the middle, that at high water it is sepa- rated into two. The whole island is in circuit about twelve miles. It has a governor, a minis- ter of the Calvinistic faith, and a school-master. The inhabitants are for the most part sea-faring people. The rest of the population rear cattle, and make considerable gains from shipwrecks.

BORLASE (Edmund), M. D. an English writer of the seventeenth century, was the son of Sir John Borlase, one of the Lords Justices of Ireland in 1643. He studied at Dublin, and afterwards at Leyden, where he took his degree of M. D. He afterwards practised physic with great success in Chester. He wrote, 1. Latham Spaw in Lancashire, 8vo. 2. The reduction of Ireland to the Crown of England. 3. The His- tory of the Irish Rebellion. 4. Brief Reflections on the Earl of Castlehaven's Memoirs, &c. He died in 1682.

BORLASE (William), a very learned antiquarian, of an ancient family in Cornwall, was born at Pendeen, in 1695-6. He studied at Oxford, and in 1718 took his degree of M. A. In 1720 he was ordained a priest, and in 1722 made rector of Ludgvan in Cornwall. In 1732 lord chan- cellor King presented him to the vicarage of St. Just, his native parish. Finding that the copper works of Ludgvan abounded with mineral and metallic fossils, he collected them from time to time, and thence was led to study at large the na- tural history of his native country. Being also struck with the numerous monuments of antiquity that are to be met with in Cornwall, he deter- mined to gain as accurate an acquaintance as pos- sible with Druidical learning, and with the religion and customs of the ancient Britons. In 1750 he was admitted F.R.S. and, in 1753, published in folio, at Oxford, his Antiquities of Cornwall, a second edition of which was published at Lon-

don, in 1769. His next publication was, Obser- vations on the Ancient and Present State of the Islands of Scilly, and their Importance to the Trade of Great Britain; Oxf. 1756, 4to. In 1758 came out his Natural History of Cornwall, Oxford, folio. He sent a variety of fossils and remains of antiquity, to be be deposited in the Ashmolean museum, for which he received the thanks of the university in 1758, and in March 1766 the degree of LL. D. He married in 1724, and died in 1772, aged seventy-seven, leaving two sons. Among his other literary connexions, was Mr. Pope ; and there is still existing a large col- lection of letters written by that poet to Dr. Bor- lase. He furnished Pope with many of the fossils, which adorned his grotto at Twickenham, where his name, in capitals, was long

seen. On receipt of his present, Pope wrote to him, ‘ I am much obliged to you for your valuable collection of Cornish diamonds ; I have placed them where they may best represent yourself, in a shade but shining.’

BORN’, pass., derived from thĀ« word To bear, in the sense of bringing forth ; as, my mother bore me twenty years ago; or, I was born twenty years ago. It is usually employed in re- lation to circumstances : as, he was born a prince ; he was born to greatness.

Amongst those knights there were three brethren

bold,

Three bolder brethren never were ybome; Borne of one mother in one happy mould, Borne at one burden in one happie morne ; Thrice happie mother ! and thrice happie morne ! That bore three such, three such not to be fond.

Spenter.

Be bloody, bold, and resolute ; laugh to scorn The power of man ; for none of woman born Shall harm Macbeth. Shakspeare.

When we are born, we cry, that we are come To this great stage of fools. Id.

For nature’s law with fruitless sorrow mourn, But die, O mortal man ! for thou wast born. Prior.

Two rising crests his royal head adorn j Born from a god, himself to godhead born. Dryden.

I was born to a good estate, although it now turn- eth to little account. Swift.

In stress of weather most, some sink outright ; O’er them, and o’er their names, the billows close, To-morrow knows not they were ever born.

Young’s Night Thoughts. To what gulphs

A single deviation from the track Of human duties leads even those who claim The homage of mankind as their born due, And find it, till they forfeit it themselves. ‘ Byron.

What is here

Which look like death in life, and speak like things Born ere this dying

world ? They come like clouds.

Id. Heaven and Earin,.

BORN (Inigo, baron), the German mineralo- gist, was born of a noble family at Carlsburg, in Transylvania on the 26th of December 1742. He studied at an early age in the college of the Jesuits, Vienna, who, perceiving his talents, prevailed with him to enter into the order. From Vienna he went to Prague to study the law. Having completed his education, he set out on a tour through Hungary, part of Germany, Holland, the Netherlands, and France, and upon his re-

turn to Prague devoted himself to sciences con- nected with natural history and mining. He was received in 1 770 into the department of the mines and mint. In June 1770 he set out on a mineralogical tour through Translyvania, and Hungary, of which he gave an account in a series of letters addressed to the celebrated Ferber, who published them in 1774. He here com- plains of his ignorance of botany. This work was translated from the German by R. E. Raspe, and published at London, in 1777. In the beginning of August 1 770 Born had nearly lost his life, by descending into a mine, and brought upon him a disease that embittered the remainder of his days. ' To explain the common firing of Felso-Banya,' says he, 'and the great effects pro- duced by so small an expense of wood, I visited the great mine when the fire was hardly burnt down, and when the mine was still filled with smoke. An accident made me tarry somewhat longer in the shaft, by which the smoke went off. In short, I lost my senses, and fifteen hours after I was restored to myself by blisters and other applications. My lips were swoln, my eyes ran with blood, and my limbs in general lamed. Without the assistance of a skilful young physi- cian at Nagy-Banya, and the great care of the upper administration inspector, Baron Gerham, in whose house I lodge, you would have been deprived of your friend ; and the question is still whether he is to be saved. A violent coughing, and acute pains in the loins, which alternately put me on the rack, are. I fear, more than suffi- cient to destroy this thinly framed machine. If that should be the case, then my friend, I desire you to have my name at least inserted in the martyrology of naturalists.' He now travelled in a bad state of health from Nagy-Banya to Schemniz, where he arrived in the beginning of September ; and in October set out for Vienna, for the purpose of obtaining medical advice. In 1771 he went to Prague, and was appointed counsellor of the royal mines in Bohemia. Here he published, A Treatise Written by the Jesuit Poda on Mining Machinery; and in 1772 his Lithophylacium Borneanum, or a catalogue of a collection of fossils, which he afterwards sold to the honorable Mr. Greville forflOOO. In 1774 he was chosen a fellow of the Royal Society of London. In 1776 he was finally called to Vienna, by the empress Maria Theresa, to arrange and describe the

Imperial cabinet of natural history; in consequence of which he published a magni- ficent work describing the shells in that cabinet ; but. the deˆh of the empress prevented the pro- gresi of ihf undertaking. Joseph II. however, patronise 1 our author, made him counsellor of the nx.ies, and employed his talents in improving th. processes for the extraction of metals. In \ 786 he published his Treatise on the Process ot Amalgamation. His next work was An Arranged Catalogue of Mad. Raab's Collection of Fossils, published in 1790. At the time of his death, he was engaged in writing A History of the Reign of the Emperor Leopold II, and a Treatise on Mineralogy. This took place in August 1791. Baron Born was the founder in 1775 of a literary society at Prague, which has produced several volumes of memoirs. He was a member of the*

society of illuminati, and zealous against the encroachments of the clergy and the monastic orders. He wrote a satirical work entitled Mo- . nachologia, in which he has parodied the classifi- cation and language of natural history, in a descriptive catalogue of the different orders of Monks. But his genius was ill adapted for satire, and some of his friends disclaim this work as his own composition.

BORNA, a town in the circle of Leipzig and kingdom of Saxony, situated between two arms of the Wiehra, on the road from Leipzic to Altenhurg. It contains 3200 inhabitants, who manufacture baracan, plush, woollen stuffs, and earthenware. In the neighbourhood is a marble quarry. Borna, being nearly burnt to the ground in 1750, has been since rebuilt in a much neater style. It is ten miles N.N.E. of Altenburg, and twelve S. S. E. of Leipzic.

BORNEO, BONA FORTUNA, or PULA KALA- MANTAM, as it is called by the Malays, is the greatest and most important of the Sunda islands, and was supposed, before the discovery of New Holland, to be the largest island in the world. On the north it has the Philippine islands ; Java on the south; Sumatra on the west; and Celebes on the east. It extends from the fourth degree of south latitude to the eighth degree of north latitude, and from 109Ā° to 119Ā° E. longitude. It is about 780 miles in average length, and its breadth, which is nearly equal throughout, except towards the north, is about 720 miles. Its ex- treme length is 900 miles, and its circumference 3000 miles. It is formed by a central range of mountains declining towards the sea, and its ex- tensive forests, and the deep verdure of its fields, preserve a perpetual freshness in the atmosphere. So that it is not exposed either to hot land winds, as the coast of Coromandel, nor to the violent

heats which prevail in Calcutta and Bengal. The climate is indeed said to be unusually temperate for the latitude, but the island is, from its marshes and other causes, unhealthy for Europeans.

At the foot of the Crystal Mountains is a large lake, which gives rise to all the rivers of the island. Of these the principal are the Banjar- massin, Succatana, Lava, Sambas, and Borneo. The last is navigable far above the town of that name, for vessels of considerable burthen ; the only difficulty is at the mouth, where the chan- nel is narrow, and not above seventeen feet broad at high water.

The soil is fertile in a high degree, yet such is the indolence of the inhabitants, that they live in the most abject poverty. All the tropical fruits grow in perfection, besides several other species scarcely known anywhere else, particularly the madang, which resembles a large apple, and the balono, not unlike a large mango. We may also notice the kanari, a handsome tree bearing an oblong nut, the kernel of which, besides being extremely palatable, abounds in an excellent culinary oil. The sago palm (metroxylon sagu) is not extensively cultivated in this island, although it is indigenous ; and appears to require all the violence of an eastern monsoon to bring it to perfection. A tree which yields the best camphor, is also peculiar to this island and Su- matra. Mr. Colebrooke gave in the Asiatic VOL. IV,

Researches, vol. xii. the first scientific descrip- tion of it, and has named it dryobalanops cam- phora. It belongs to a different family from the laurel tribe, to which it was formerly ascribed, and is a native of plains not far distant from the coast. The camphor is found in a concrete state in the veins and fissures of the wood ; so that the tree must be cut down in order to procure it. It sells for four times as much as camphora, the produce of the laurus, from Japan, i. e. about Ā£4. 4s. per pound avoirdupois. The forests furnish the finest building.timber ; a black wood, the root of which is very precious ; a fragrant eagle-wood, ebony, and sandal-wood ; besides trees which yield a great quantity of pitch and resin. Pepper of various kinds has been reared in this island, chiefly by the Chinese ; the most remarkable of which is the vatian. They fix in the ground a large stake, which supports the plant, and keeps the ground between the rows extremely clear ; often thinning the leaves, that the clusters of pepper may be the more exposed to the sun. A single plant sometimes bears seventy, or even seventy-five clusters. Borneo produces likewise abundance of aromatic plants, cassia, camphires, benjamin, and wax. It is thought that spiceries would succeed well.

There are several peculiar animal productions here, particularly the oncas, a species of apes, whose body is white and black, and from whose entrails

is extracted the most perfect bezoar. The ourang-outang is common in the forests ; and in some of them there are whole families, or rather flocks, of red apes. An animal is likewise sometimes to be seen here, the fur of which is like that of the beaver. With the exception of the sparrow hawk, there is no bird in Borneo which resembles those of Europe. The plumage of many is beautiful beyond description; its parroquets, in particular, have attracted the ad- miration of travellers. Goats, swine, cows, horse, and buffaloes, are common.

Borneo is also rich in its mineral productions. The diamonds of this island have been thought preferable even to those of Hindostan ; the most productive mines are those at Ambauwang, be- yond Molucca, in the district of Banjar-massin, and at Landac and Pontiana. Diamonds are likewise fished up by divers in several of the rivers. The fishery is carried on chiefly in the months of January, April, July, and October. Four kinds are distinguished by the natives ; the white, which they call verna ambon, or white water ; the green, which are called verna loud ; the yellow, named verna sakkar ; and a kind between the yellow and the green, which bear the name of verna bessi. Many of them are found from four to twenty-four carats, and some- times even thirty or forty carats. The total amount of diamonds found in a year seldom ex- ceeds 600 carats.

Gold is nowhere in this neighbourhood sa abundant as at Borneo. The greater part is an alluvial deposit, obtained by washing and sifting the sand or mud of rivers. The chief mining operations are carried on by the Chinese colo- nists, in the high lands between the rivers Pon tiana and Sambas, and at Montradak, a village two days journey from the coast. It is an ullu-

vial tract, occupied by a population of 36,000 Chinese, and intersected by numerous streams. They pay an annual tribute of about Ā£900, and are nearly independent. They pay their labor- ers by monthly wages and their board. An experienced miner receives about twenty-four Spanish dollars a year. They labor very nearly twelve hours in the twenty-four. ‘ The mines/ as Mr. Crawfurd was informed, ‘ are longitudi- nal excavations, following the course of the mine- ral stratum ; the ore being seldom more than five or six feet below the surface, and the veins usually ten feet and forty feet wide, making fif- teen or sixteen feet a common depth for the whole mine.’ The access is by means of wooden steps, and the ore is extracted and brought up by manual labour with spades and baskets. The largest mines

are cleared by the Chinese water-wheel, and the ore is washed in a trough lined with bark. The produce of a mine worked by 200 laborers for thirty-five days, is about 320 bungkals, ā 555J oz. troy; the smallest amounts to 140 bungkals, ā 243 oz. troy. The charges on such a mine for that time amount to 2104-78 Spanish dollars, and its produce may be estimated at 2000 bungkals of gold dust, worth 4848‘00 Spanish dollars ; the gross profit for the same time will be about 2743‘22, ā Ā£1090. 16s. The annual produce of the mines of Sambas is about 88-342 oz. of pure gold.

Borneans rely on the Telinga settlers from Coromandel for assaying the precious metals, of which they are entirely ignorant.

Rich copper mines and plenty of load-stone are found at Mampava, at Pulo Bongorong, near Borneo Proper. In Sarawan, a country about sixty miles to the north of Sambas, veins of tin abound, as rich as those of Banca; but the works have been abandoned in consequence of the oppression of the government : there is also a valuable iron-mine in Matan, the metal of which is said to be equal to any in Sweden.

Boats of about five or six tons are employed on the coasts of this island with whole families on board, in fishing for the swallo, a sea slug, in seven and eight fathoms water. They also dive for it; the best, which is the black, being pro- cured in deep water, and some of them being of the weight of half a pound. They are sold to the Chinese at four and five dollars per pecul (133| pounds).

The native inhabitants occupy the interior, and are divided into tribes, speaking different dialects, and markedly distinguished by manners, customs, and religion, from the colonies of Malays and other conquerors of) these tribes, who possess the coast. In the neighbourhood of Pontiana and Sambas they are called Dayers ; at Benjar-masing, Biajus ; at Burni, Moruts ; and on the northern side of the island, Orang Idan. Their history it is impossible to trace. The last named tribes are fair and robust, the Dayer darker than the Malays. The whole are sunk in barbarism, and much afflicted with cutaneous disorders. They are said to acknow- ledge a Supreme Being, whom they worship under the name of Dewatta ; and to whom, as the cre- ator, preserver, and ruler of the universe, they utter prayers for prosperity in this world, and

happiness in the next. It is one of their religious tenets, we are told, that their fate in a future life depends on the number of human beings whom they shall have slain in their combats, or in their ordinary quarrels, and that their hap- piness or respectability will then be proportioned to the number of human skulls which they have in their possession. They are very courageous, but dangerous enemies; using poisoned arrows, which they

shoot through a hollow tube. The skulls of their foes they preserve as trophies : they live by the chace, and despise agriculture or commerce. Some are said to wear gold front teeth, having pulled out the natural ones. According to the Malays, their ferocity is ex- treme, but the Portuguese missionaries give a very different character of them. The fact is, we are ignorant of them altogether, except through the suspicious channel of information conveyed by their oppressors.

The Malayans of the coast are said to have migrated from Malacca, Johor, &c. in the four- teenth century, and certainly have exhibited no very virtuous political character for the imitation of their neighbours.

Borneo has been long divided into three dis- tinct kingdoms : 1 . Burni or Borneo Proper, from Tanjong Dato in lat. 3Ā° 15′ N. to Kanuk- ungan in the Straits of Macassar, 1Ā° 15′ N. 2. Sukadana (Sukadunya, an earthly paradise), from Tanjong Dato to Tanjong Sambar, formerly belonging to the sultan of Bantam : and 3. Ben- jar-masing, from Bendar-masing, the usual port. Borneo Proper, one of the most ancient states, includes a considerable portion of the western coast, and is bounded on the north by Maludu, and on the south by Pontiana. Its eastern limits are unknown. The soil here is fertile, and the inhabitants are principally a colony of Malays : the government is a feudal despotism, of which the seat is Burnaii or Borneo, the capi- tal of the island, built on a swamp. The houses are built on stages, fixed on piles, and accessible only by ladders : canals watering every street. The river is navigable above the town ; but its entrance is obstructed as we have seen. Here the commerce is almost entirety in the hands of the Chinese. But the English have a factory, and carry on a small trade in piece-goods. The public markets are held sometimes in one place, and sometimes in another; and consist of a number of boats loaded with the necessaries of life, and the various articles of merchandise, and crowds of purchasers rowing up and down the river.

Along this coast we find the states belonging to Sukadana, of which the first is Sambas, having a capital of the same name thirty miles inland, and on a navigable river. It is built on a simi- lar foundation and soil to the town of Borneo. The rajah of Pontiana, in the neighbourhood, applied not long since to the English, then in possession of Batavia, for assistance against the piracies of the Sambaese, and in 1813 the rajah was driven into the interior, and his capital taken by storm. Mampava, a little to the soutii of Sambas, is the principal opium market on the coast. The mouth of the river is here also ob structed by a bar and some small islands.

B O R N O U.

Pontiana or Pontianak, is a powerful state on this side of Borneo, and the sovereign a prince who has of late much studied the welfare of his subjects. The capital stands on the river Lava. Landac, on the northern side of this river, has a town on the projecting brow of a hill, which is only accessible by a long flight of steps, and nearly enclosed by two rivers. This kingdom and Sukadana were ceded by the king of Ban- tam to the Dutch in 1778, and they kept posses- sion of these districts till the middle of the late war.

Sukadana, the next territory on the western coast, was anciently the most powerful district in this part of Borneo. In 1786 it was attacked and destroyed by the Dutch, but has since been rebuilt. It does not appear to have been fre- quented by any modern Europeans; and an interval of more than two degrees of latitude and five of longitude, between Sukadana and the next state, appears a complete blank in the maps attached to Mr. Crawfurd's late work.

Banjar-masing, near the southernmost point of Borneo, is also placed upon a large and deep river, and, like most of the other streams of Borneo, obstructed at the mouth by a bar of sand. The population in 1780 was estimated at nearly 9000; many of the inhabitants are foreigners, particularly Chinese, who carry on a considerable trade. The residence of the sultan is at Marta-]>ura or Bumi-kin-chana, fifty or sixty miles up the river, and was built in 1771. This part of Borneo was often frequented by the Dutch for its pepper and valuable minerals. In the begin- ning of the last century the English also had a nourishing establishment at Banjar-masing ; but the natives compelled the Company to abandon it. They attempted in 1766 to form a settlement at the northern extremity of Borneo, on the island of Balambangan, which was ceded to them by the king of Soloo, and stationed here a few Europeans, and a garrison of 300 soldiers, Europeans and blacks. In 1772 this garrison was greatly reduced by contagious diseases, and the fort which they had constructed, being badly fortified, was suddenly attacked, and the whole establishment destroyed. The English may now be said to be masters of all the northern coast of the island, which was delivered up to them by the Soloos. The places ceded are, Pandassan, Tampassook, Abia, Amboug, Salaman, Tawar- ran, Juannan, and Palatan, as far as Keemanees. In this extent of coast there are some good har- bours ; and it is much more populous than the country north of Pirate's Point, which extends a little beyond the spacious harbour of Sandakan, as far as Towson Abia.

BORNEUS, in ornithology, the long-tailed scarlet lory. Color red, quills and tail-feathers at the tips green, a blue spot on the wings, orbits fuscous. Inhabits India. Its bill is orange, orbits of the eyes bare of feathers, lower tail coverts red, bordered with blue.

BORN HOLM, an island in the Baltic sea, south-east of Schonen in Sweden, the most eastern of the Danish isles. It is 100 miles from the nearest part of Zealand, and forty from the coast of Sweden ; thirty miles in length, and above eighteen in breadth. There is but one

considerable town, Roune or Ronnelly, with a great number of villages scattered over its surface. It is fertile and populous, and exports grain, sheep, and great quantities of salted salmon, to Copenhagen. The inhabitants near the coast are chiefly employed in fishery, while many of those in the interior are engaged in the marble and stone quarries, coal pits, and vitriol works. Bornholm was conquered by the Swedes in 1566; but, soon after, the inhabitants, under the conduct of Jens Roefords, voluntarily surrendered themselves to the king of Denmark. In 1678 a body of 5000 Swedish troops, in their passage from Pomerania to Sweden, being shipwrecked on this island, such of them as remained were made prisoners of war. The inhabitants defend the island by their own militia. The governor resides at Roune. This island was held by the British for a short time in 1809.

BORNII, in conchology, a species of tellina, transversely striated, bent on one side, with red rays.

BORNOU, or BERNU, called by the Arabs Berr Nuh, i. e. the land of Noah, a powerful and extensive interior kingdom of Africa, is bounded on the north by Canem, on the east by Bagirmi, on the south by Lekvang, Tzelkba, Kalo and Szikkeh, and on the west by Cano or Canno. It lies between the parallels of 10Ā° and 20Ā° north latitude, and 12Ā° and 22Ā° east longitude, as far as at present known. The Mussulman negroes consider it as one of the four great monarchies of the world ; an opinion mentioned both to Mr. Lucas at Tripoli, and to Mr. Bow- ditch at Ashantee. The country consists of mountainous ranges, separated by plains of sand, amidst which but one stream of any magnitude seems to flow, the Halemm Chad or Tsad, whose course is, according to the best accounts, from south-west to north-east, and which is probably the Jad of Burckhardt. It is called in Bagirmi Gambarro, according to Captain Lyon. A beau- tiful virgin was formerly thrown into it once a year. It overflows its banks in the rainy season, and a canal between it and the capital, to which it approaches within about four miles, conveys part of its waters into public reservoirs ; it then assumes the appearance of a large lake, and hence perhaps the discordant accounts given by dif- ferent travellers. The houses are supplied from wells. The soil near this stream is said to be a rich black mould highly fertile. Clay is found in other districts, and iron ore, and the mountains abound in stone. Two kinds of natron, white and red, are found in a remote desert. The climate is divided into the rainy season, which commences about the middle of April, with strong southerly and south-

easterly winds, and continues till the latter end of October ; the dry season then commences, and the heat is moderate with some degree of cold, mornings and evenings. Some parts of the country are covered with wood. Date palms, phrenix dactylifera, and dumo cucio- fera thebai'ca, are found in abundance. The Suldi is a large tree, the fruit of which yields an oil useful for curing rheumatism ; the Englim, zutam, alfi, mitzki, mendadeh and kerrageh are also large trees of which only the names are known. The kedei'nah brars an eatable fruit,

from the kernel of which an oil is extracted, com- monly used by the natives as a substitute for olive oil. Many trees produce an edible gum. The hen- na lavvsonia inermis, is also common, and its leaves are used as in Egypt and Arabia, for the purpose of giving a scarlet dye to the hair, nails, &c.

Kasab and kamfuli, two species of sorghum, are the grain produced. Writing reeds grow wild ; and several sorts of beans, as well as to- bacco, are cultivated. Slow spreading shrubs called Lundu have an edible root much used. It is dried in slices, and may then be kept from year to year. Another root of a tree, with whose name we are unacquainted, is prepared for use by boiling without any further process.

In the woods the monkey tribe abounds (fli), particularly the simia hamadryas, and another of a dusky red. It is called in the Bernawa language fli sumsu, the red monkey, and is very mischie- vous. There are also many camelopards (zi- rafah in the woods, browsing on the young shoots. Here also are lions, foxes, wild dogs (sometimes eaten), buffaloes, some fine hippopotami and several kinds of antelopes. In the pastures, large flocks of sheep and goats are found. Birds of great beauty in point of plumage are also com- mon, amongst which the matzakeech, a species of flamingo is distinguished. Ostriches are also hunted for their feathers. Bornou is much infested with dangerous loathsome reptiles, es- pecially snakes and scorpions, centipedes and toads. The guinea worm is likewise common, and swarms of wild bees.

BORNOU the capital of the empire, is situated about 600 miles south-east of Morzouk, and 420 miles west of Sennaar. It is said to be a town of greater extent than Tripoli ; but the houses are very irregularly placed, so that the spaces be- tween them have no appearance of streets. Throughout

the empire the same mode of build- ing prevails. Four walls, enclosing a square, are first erected ; within these, and parallel to them, are built four other walls ; the intervening space is then divided into different apartments, and covered with a roof. Thus the space within he interior walls determines the size of the iourt; the space between the walls determines ihe width of the apartments ; and the rooms are of the same height as the walls. On the outside of the house there is usually a second square or large yard, surrounded by a wall, for the accom- modation of the cattle. In the construction of the walls, the following method is said to be in- variably adopted : A trench being made for the foundation, is filled with dry and solid materials, rammed in with force, and levelled ; over these is placed a layer of tempered mud or clay, in which are regularly fixed a proper number of stones. Thus, with alternate layers of clay and stones the wall is raised to the height of six or seven feet, when the workmen suspend its pro- gress for a week, that it may have time to settle, and become compact ; for which purpose they water it every day. The roofs are formed of branches of the palm tree, intermixed with brush- wood, and covered with layers of earth, in such a manner as at first to be water proof, though the violence of the wind and rain generally des- troys them before the end of the second year.

The whole building is white-washed with a species of chalk. The only articles of household fur- niture among the lower classes are mats covered with a sheep skin, upon which they sleep, an earthen pot, a pan of the same kind, two or three wooden dishes, two wooden bowls, an old carpet, a lamp for oil, and sometimes a copper kettle. Besides these, the richer inhabitants pos- sess leathern cushions stuffed with wool, several brass and copper vessels, a handsome carpet, and a sort of candlestick ; for instead of vegetable oil, which is used by the common people, they occasionally employ the light of candles. The capital is surrounded by a wall of fourteen feet in height, the foundations of which are from eight to ten feet deep, and which seems to be very firmly built. A ditch surrounds the whole ; and in the wall there are four gates, opening to the east, west, north, and south, which are care- fully shut every evening at sunset.

The palace is also surrounded with high walls, which form a kind of citadel, and is built in a corner of the town. Provisions are sold in pub- lic markets within the city; but for other rticles a weekly market is held, as in Barbary, v thout the walls. There is a great mosque towhLh the sultan goes every Friday to prayers, and distri- butes larges urns in alms to the poor ; provisions are also distributed to them : and strangers, who present themselves to his majesty on that occasion, are treated with the greatest condescension. He rides out once a year through a part of the city into the open country, arrayed in all his pomp and ac- companied by his courtiers gorgeously attired. The multitudes that attend on this occasion, are such it

is said as to grind to powder the trunks of trees over which they pass ! The name of the prince who reigned here about twenty years ago, was Ahmed, ibn Hasan, ibn Mahmud, ibn Abd- er-rah Man ibn Taher. We know, from Leo Africanus, that this empire was existing at least four hundred years ago. The monarchy is elec- tive but not hereditary : though the election is confined to the royal family. On the death of a sovereign, the privilege of choosing a successor among his sons, is conferred by the nation on three of the most distinguished men, or elders, and, during their deliberations, the princes are confined in separate chambers of the palace. When their choice is made, they proceed to the apartment of the sovereign elect, and conduct him in silence to the corpse of his father, which cannot be interred till this ceremony is passed, there they expatiate freely on the character of the departed, and conclude with this awful warning, ‘ you see before you the end of your mortal catreer ; the eternal which succeeds to it will be miserable or happy, in proportion as your reign shall have proved a curse or a blessing to your people.’ The new sovereign is then brought back to the palace, amidst the loud acclamations of the multitude, and is invested by the electors with all the slaves, and two-thirds of all the lands and cattle of his father ; the remaining third being kept as a provision for the other children. But fatal dissensions in the royal family, are said to be the consequences of this mode of election. It often happens that the most popular or the most ambitious of the rejected princes, creates a

powerful party, and assured of foreign aid, pre- pares in secret the means of revolt. ‘ But stained with such kindred blood/ says the writer who has drawn up the account of Bornou from Mr. Lucas’s communications, ‘ the sceptre of the vic- torious rebel is riot lastingly secure ā one revo- lution invites and facilitates another; and till the slaughter of the field, the sword of the execu- tioner, or the knife of the assassin, has left him without a brother, the throne of the sovereign is seldom firmly established.’

The military force consists chiefly of cavalry, armed with the sabre, lance, pike, and bow, and defended by shields of hides. Fire-arms, though not entirely unknown to them, are too difficult to be procured for common use. When the sultan levies an army for the purpose of taking the field, he is said to have a custom of causing a date tree to be placed as a threshold to one of the gates of his capital, and command- ing his horsemen to enter the town one by one, that the parting of the tree in the middle, when worn through by the trampling of the horses, may serve as a signal that the levy

is complete. The taxes are paid by the poor in kind, by the rich in gold, or in male and female slaves. The ministers of religion, the learned and pilgrims, are exempt from taxation. A contribution for the maintenance of the poor is paid in the month of Ramadan, called Siccah coin by the Arabs, and Ungumszeka, by the Bernawa. The Inha- bitants are chiefly Mahommedans, who circumcise both sexes, and who have many Abyssinian negro slaves. Some French slaves were formerly possessed by the Sultan, who were allowed to dress as Europeans, and who were employed by him in the establishment of a cannon foundry. Gold and silver is coined by the Sultan, and Spanish and imperial dollars, as well as Venetian zecchins, are current

Salt, of a superior kind, is an extensive manu- facture here, and is obtained from the ashes of a thorny plant, boiled and purified. The natives also cultivate tobacco, though they never smoke its leaves, but use them for chewing, and manu- facture them into snuff. It is remarkable that none but the Christians, Moghrebines, and other foreigners, are in the habit of smoking.

Whips are made out of the hide of the ox and hippopotamus, and wax and tallow into candles. Two kinds of fermented liquor are in use: the one called Amderku, is made from dates steeped in water, then adding meal, and squeezing the whole through a cloth. The liquor is used after it has stood two or three days. The second cal- led sza, is made from duirah or meyz, and is ex- tremely intoxicating.

The inhabitants likewise manufacture coarse linen, blue, cotton, and calicoes, and are not unacquainted with the art of making musical in struments ; having lutes with five horse-hair strings, and wooden trumpets. The use of flint and steel is known, but they usually kindle a flame, by rubbing one stick held perpendicularly upon another placed in a horizontal position. Sewing and packing needles, rings of silver, gold and brass, and embroidered quilts, are also among their manufactures. The inhabitants, though composing sc many different nations, are said to*

be alike in their appearance, having a black com- plexion, but features different from those of trie- negroes. Their dress usually cdnsists of a girdle for the waist, a turban consisting of a red wool- len cap, surrounded by folds of cotton ; together with a loose robe of coarse colored cotton.

BORODINO, a small town of Russia, near the Moskwa, and about ninety miles west of Moscow, is remarkable for the great battle fought in its neighbourhood, 7th of September, 1812, between the French and Russians. The latter having collected a force of 120,000 near this place, deter- mined to make a stand here in favor of the an- cient capital. On the right was the

river Moskwa, on their left a thick coppice of underwood, en- closing a battery, and the whole length of their line, aboutfour miles, was protected at intervals by batteries, particularly towards the river. The country however was flat : and his left being particularly vulnerable, Kutusoff, the Russian general, threw up a redoubt about half a mile in its front. Of this redoubt the French van, however, gained possession on the 5th. On the 7th, the French being commanded by Buonaparte in person, both armies were drawn up by sun- rise, and the bateries on each side manned with several hundred field pieces : the firing began at six o'clock, and soon became general in the centre and Russian left. The French, after making some impression with their artillery and musketry, marched forward to attack particular points in the Russian position, not successively, but simultaneously ; and the too great length of the line afforded an advantage to an enemy habi- tuated to advance in masses. Accustomed to avail himself of the slightest mistake of an enemy, Buonaparte now directed an attack on the Russian left, in front, along the coppice, instead of taking the extremity of the flank, where Kutusoff ex- pected it, and where he had stationed a protect- ing corps. The French pushed forward, and carried several batteries ; and though the Russi- ans were reinforced, and returned to the charge with great intrepidity, their recovery was attempt- ed in vain. The enemy were strong, and their force well distributed. Success fluctuated awhile in the centre, where the Russians at one time re- took a great battery, and drove the French back with dreadful carnage ; but the failure on their left enabling the enemy to throw a mass of force into this quarter, the result was an irruption which nothing could withstand, and the final loss of the position. About eight o'clock in the morning the French first got possession of the Russian batteries ; the reiterated attacks of the latter prolonged the engagement till noon, and even till two o'clock, after which the fighting became partial, and soon ceased. Eugene Beauharnois, Murat, and Ney, greatly distin- guished themselves in this battle. On the side of the Russians fell prince Bagration, a general of considerable courage and talent. The loss of the Russians was about 30,000, and that of the French nearly equal. There was no pursuit, but in the course of the following night the Russians evacuated their remaining batteries on the right.

BOROLYBICUS, the north-west wind.

BOROM.EUS (St.) See BORROMEUS.

*BORON, the combustible basis of boraci**

acid. Boron is solid, tasteless, inodorous, and of a greenish-brown color. Its specific gravity is somewhat greater than water.

BORONIA, in botany, a genus of the class oc- tandria, order monogynia: CAL. four-parted; petals four, ANTH. pedicelled : STYLE short : STIG. capitate : CAPS, four, united : SEEDS coated. Four species, all natives of New South Wales.

BOR'OUGH', > Goth, bairgan; Ang.-

BOROUGH'MONGER,) Sax. beorgan, brigan, byrgan, to bar; to defend; to fortify. It sig- nified anciently a surety, or a man bound for others ; a fortified town ; now it means a town with a corporation, possessing the privilege of the elective franchise. Rotten-boroughs. See CORNWALL, OLD SARUM. Borough-monger is a political nuisance, dealing unlawfully in the purchase or sale of the elective franchise ; almost as respectable as a common informer.

A borough, as I here use it, and as the old laws still use, is not a borough town, that is, a franchised town ; but a main pledge of an hundred free persons, therefore called a free borough, or, as you say, franc- plegium. For borth, in old Saxon, signifieth a pledge or surety : and yet it is so used with us in some speeches, as Chaucer saith, St. John to boroh ; that is, for assurance and warrantry. Spenser.

And, if a borough chuse him not, undone. Pope.

No office clerks, with busy face, To make fools wonder as they pass, Whisper dull nothings in his ear 'Bout some rogue borough-monger there. Cowper.

Hence chartered boroughs are such public plagues, And burghers, men immaculate perhaps In all their private functions, once combined, Become a loathsome body, only fit For dissolution, hurtful to the main. Id. Task.

BOROUGH, English, is a customary descent of lands or tenements, whereby in all places where this custom holds, lands and tenements descend to the youngest son ; or, if the owners have no issue, to his youngest brother. Cowell.

BOROUGH. The learned author of the Insti- tutes observes, that ' of Boroughs, some be walled, and some not ;' and that the word borhoe signified a pledge, and was ' taken, in former times, for those companies of ten families, which were one another's pledge. According to Spel- man, the ancient Saxons gave the name burgh to those called, in other countries, cities. But divers canons being made for removing the epis- copal sees from

*villages and small towns to the chief cities, the name city became attributed to episcopal towns, and that of borough to all the rest ; though these too had the appearance of cities, as being governed by their mayors, and having laws of their own making, and sending representatives to parliament, and being fortified with a wall and castle, and the like. We read in the old authorities, that * every city is a borough, but every borough is not a city.' ' It is to wit,' says Littleton, sect. 164, 'that the ancient towns called boroughs, be the most ancient towns that be within England ; for the towns that now be cities or counties, in old times were boroughs, and called boroughs, for of such old towns called boroughs, came the burgesses of the parliament, &c.*

BOROUGH, or BURGH, was particularly ap- propriated to such towns and villages as sen

burgesses or representatives to parliament Boroughs are equally such, whether they be in- corporate or not ; there being great numbers of our English boroughs not incorporated ; and, on the contrary, several corporations that are not boroughs ; e. g. Kingston, Deal, Kendal, &c. Boroughs are distinguished into those by charter or statute, and those by prescription or custom. The number of boroughs in England and Wales, including cities and cinque ports, which elect members, is 201 ; some of which send one, some two representatives.

It has been a question disputed with great zeal among antiquaries, at what period the represen- tatives of boroughs were first called to take a share in the national councils. Some have traced their origin to the Saxon Wittenagemote : others, on the contrary, have maintained, that the Commons formed no part of the great council, till some time after the conquest.

The advocates of the high antiquity of the Commons maintain, that they are to be traced even in the original customs of the ancient German nations, among whom, according to Tacitus (de Mor. Germ. c. 25.), all freeholders enjoyed an equal right with the nobles to assist in important councils. This right they exercised, upon their first settlement in foreign countries, by assembling together in open plains ; and this is asserted to have been the practice among the Anglo-Saxons, the meadow near Staines, in which king John granted the great charter, being called Runnemede, or the meadow of council, be- cause in ancient times it had been usual to meet there on the business of the nation. This custom, it is said, had gone into disuse previously to the Norman government; and the meeting in the reign of king John is the only instance of its having been revived. The words of an act of the 4th Edw. III. say, ' it is accorded, that a parliament shall be holden every year once, and more often, if need be,' it may hence, easily be

inferred, that it was rather regarded as a privi- lege of which they earnestly desired the frequent enjoyment, than as a burden, as some have as- serted, from which they wished to be exempt. There were some boroughs, indeed, which, on account of their poverty, were unable to bear the expense of sending members to parliament, and therefore declined the exercise of that privi- lege ; but it were unfair to form any general con- clusion from these particular cases. Besides, there are examples of boroughs petitioning to be restored to the use of the privilege of sending members to parliament, after a very long inter- ruption.

It seems incredible, it is added, that, if the whole legislative power had before the reign or Henry III., been always in the hands of the no- bility and the king, they should not have op- posed the extension of it to so many persons of inferior rank ; nor is it probable, that any new measure of such magnitude and importance, introduced by the earl of Leicester, while acting at the head of the nobles and the people in a very dangerous contest against the crown, should have been confirmed and perpetuated by Ed- ward I. But among the close rolls of the twenty- fourth of that king, there is a writ of summons

to parliament, in which it is asserted, not as an innovation introduced by the earl of Leicester, ‘ but as a maxim grounded on a most equitable law, established by the foresight and wisdom of sacred princes, that what concerns all, should be done with the approbation of all ; and that dangers to the whole community should be ob- viated by remedies provided by the whole com- munity ;’ a species of language which could not, with propriety, have been used by Edward I. if the practice of summoning the commons to par- liament had been a measure of recent introduc- tion. It is, moreover, observed, that there is not the slightest intimation, in any of the oldest writs for sending up representatives from cities or boroughs, that such elections were a novelty. Two claims are “Still extant, made in the reigns of Edward II. and III. which have been held forth as decisive of the antiquity of the custom of sending citizens and burgesses to parliament, even from towns that were held under subjects, and not immediately of the crown. These are the claims of the towns of St. Albans and Barnstaple. In the petition of the borough of St. Albans, presented to parliament in the reign of Edward II., the petitioners assert, that though they held in capite of the crown, and owed only for all other service their attendance in parlia- ment, yet the sheriff had omitted them in his writs ; whereas, both in the reign of the king’s father, and all his predecessors, they had always sent members. Reference is also made to a sta- tute of the fifth year of Richard II. sect. 2,

which enacts, ‘ that all and singular persons and com- monalties, which from henceforth shall have the summons of the parliament, shall come from henceforth to the parliaments in the manner as they are bound to do, and have been accustomed within the realm of England, of old times. And if any person of the same realm, which from henceforth shall have the said summons (be he archbishop, bishop, abbot, prior, duke, earl, baron, banneret, knight of the shire, citizen of city, burgess of borough, or other singular person or commonalty), do absent himself, &c. he shall be amerced and otherwise punished, according as of old times hath been used to be done within the said realm in the said case/ There is like- wise a petition of the Commons in the second parliament of Henry V. which sets forth, ‘ that as it hath ever been their libertie and freedom, that there should no statute nor law be made, unless they passed thereto their assent, con- sidering that the commune of your land, the which is and ever hath been a member of your parliament, be as well assenters as petitioners,’ &c. Those on the other hand, who deny the high antiquity of the Commons’ house of parlia- ment observe, that, in those periods to which its origin is referred, no such class of men as are denominated citizens and burgesses had any po- litical existence. Although Tacitus affirms, that, among the ancient Germans, the consent of all the members of the community was required in every important deliberation ; yet he speaks not of representatives ; and this ancient practice, mentioned by the Roman historian, could only have place among tribes where every citizen might, without inconvenience, be assembled uoon any

extraordinary emergency. With regard to t!\III., and which abounded in factions, re- volutions, and convulsions of all kinds, the House of Commons never performed one single legislative act, so considerable as to be once mentioned by any of the numerous historians of that age, they must have been totally insignifi- cant ; and in that case, what reason can be as- signed for their ever being assembled ? The magna charta of king John provides, that no scutage or aid should be imposed, either on the land or towns, but by consent of the great council ; and, for more security, it enumerates the persons entitled to a seat in that assembly, the prelates and immediate tenants of ths crown, without any mention of the Commons : An uu-

thority (says Hume) so full, certain, and explicit, that nothing but the zeal of party could ever have procured credit to any contrary hypothesis. The first unequivocal notice which is given by historians of any representatives being sent to parliament by the boroughs, occurs during the reign of Henry III. in the year 1265 ; ā at a period when the earl of Leicester had usurped

the royal authority, and summoned a new par- liament to London ; an assembly he fixed upon a more democratical basis, than any which had been called together, since the foundation of the monarchy. Besides the barons of his own party, and several ecclesiastics, who were not immediate tenants of the crown, he ordered re- turns to be made of two knights from each shire, and, deputies from the boroughs. The prece- dent, however, appears to have been regarded as the act of an usurpation, and to have been dis- continued in subsequent parliaments, until the 23d year of Edward I., who, in consequence of his pecuniary embarrassments, occasioned by liis foreign and domestic military expeditions, again had recourse to the measure of summoning the representatives of the boroughs to parlia- ment ; and this period seems to be the real and true epoch of the House of Commons, and the dawn of popular government.

At first, these representatives of boroughs did not, properly speaking, compose any essential part of the parliament : they sat apart both from the barons and knights, who appear to have re- garded them as personages of a very inferior rank. Having given their consent to the taxes required of them, their business was considered as finished, and they separated, even although the parliament still continued to sit, and to can- vass the national business. By this union, how- ever, they gradually acquired more weight ; and it became customary for them, in return for the supplies which they granted, to prefer petitions to the king for redress of any grievances of which they found reason to complain. Still the Com- mons do not yet appear to have assumed the character of legislators. Throughout. the reign of Edward I., their assent is not once expressed in any of the enacting clauses, nor in the ensuing reigns, untill the 9th of Edw. III. nor in any of the enacting clauses of 16th Richard II. Nay, even so late as Henry VI., from the beginning till the 8th of his reign, the assent of the Com- mons is not once expressed in any enacting clause. (See Ruffhead's Statutes, preface, p. 7). So little were they accustomed to transact public business, that they had no speaker till after the parliament 6th Edward III., and, in the opinion of most antiquaries, not till the first of Richard II. The burgesses did not even form the same House with the knights of shires. But as their wealth and consideration increased, so did also their public importance ; and, in the reign of Henry V., the commons required, that no laws should be framed merely upon their peti- tions, unless the statutes were worded by them- selves, and had passed their House in the form of a bill. They were, at length, united in ' the same house with the knights of shires. This, however, according to Mr. Carte (Hist. v. ii. p. 451), did not take place until the 16th Edward

III. and instances afterwards occur of the burghs and burgesses acting separately.

Burgesses were first admitted into the Scottish parliaments by Robert Bruce, A. D. 1326; in the preamble to the laws of Robert III. they are ranked among the constituent members of that as- sembly. By the articles of union the Scotch bo- roughs sent 15 members to parliament : the reform bill returned 11 for towns and 14 for boroughs.

BOROUGHS, in the law of Scotland, are corpo- rate bodies, erected by the king's charter ; and consisting of the inhabitants of a certain district, and its jurisdiction. They hold either of the crown, or of a subject i hence they are distin- guished into boroughs royal, and boroughs of regality or barony. All royal boroughs have power, by their charters, to choose annually such office-bearers or magistrates as are specified in the grant; generally a provost, bailies, dean of guild, treasurer, and common council, who are elected in terms of the set or constitution of the borough. The magistrates of royal boroughs have the same civil jurisdiction within the borough, as the sheriff in his territory. They are also empowered by special statute, 1644, c. 35, revived by 1663, c. 6, to value and sell ruinous houses, when the proprietors refuse to rebuild or repair them. Their criminal juris- diction is now confined to petty riots. By the charters of some royal Scottish boroughs, the magistrates are constituted justices of the peace within the bounds of their erection ; and, since the union, the eldest magistrate of every royal borough is named, as a matter of course, in all the commissions of the peace. In all matters of police, the magistrates and town council must concur, as the full representatives of the com- munity. In this capacity they enact bye-laws, choose persons into offices which are in their gift, &c. ; and they may not only proportion the public taxes among the inhabitants, but also im- pose taxations, for the utility of the borough, by their own authority, provided they have not only the consent of the magistrates and council, but of the special corporations burdened.

In boroughs of barony and regality, the right of electing magistrates is, by the charter, vested sometimes in the inhabitants themselves, and sometimes in the baron or superior. Their jurisdiction extends to the cognisance of debts, and questions of possession between the inhab- itants ; and the superior's jurisdiction is always cumulative with that of the magistrates.

The convention of royal boroughs is composed of deputies or commissioners, one from each borough, who were as early as 1487, c. 3, au- thorised to meet yearly, to consider of the ' wel- fare of merchandise, the gude rule and statutes for the common profite of burrowes, and to pro- vide for remeid upon the skaith and injuries sus- tained within the burrowes.' Their powers were confirmed and enlarged by many subsequent acts ; and accordingly that body have been in the practice of meeting annually in Edinburgh, for the purpose of regulating the matters com- mitted to their charge.

BOROUGH ENGLISH, in English law, is a cus- tom in certain manors and boroughs, respecting he descent of lands, whereby they are inherited

by the youngest, instead of the eldest son. Ac- cording to Glanville (lib. 7. cap. 3. to 9, cited by Co. Litt. 110), this name was given because uie custom originated in England. Like that of ‘ Gavelkind,’ however, it was of Saxon birth, but was recognised and retained under the Nor- man law. Different reasons have been assigned for this singular custom. Littleton says, be- cause the youngest son, by reason of his tender age, is presumed to be more helpless than the rest of his brethren. Other authors have given a much stranger reason to the custom, and say, that the lords of certain lands having anciently the privilege of breaking the seventh command ment with their tenants’ wives, on their wedding night, their tenement descended not to the eldest son, but to the youngest son, because he was more certainly the offspring of the tenant ! The last custom alluded to, however, never pre- vailed in England, although it obtained in Scot- land, under the name of mercheta, or marcheta, until it was abolished by Malcolm III. Black- stone endeavours to trace the origin of this spe- cies of descent in a more rational way, by de- ducing it from the practice of the Tartars, and other pastoral tribes ; among whom, according to Father Du Halde, this mode of descent to the youngest son also prevails. The reason as- signed for it is this, that among nations composed totally of shepherds and herdsmen, the elder sons, as soon as they are capable of leading a pastoral life, migrate from their father with a certain allotment of cattle, and go to seek a new habitation ; while the youngest, who remains last at home with his father, is naturally the heir of his house, the rest being already provided for. This custom, of the elder son’s separating from the father, is also to be found among other nor- thern nations. In our law it is one of those customs of which it is technically said ‘ the law takes notice,’ ā that is, when proof shall have been adduced that certain lands are subject to the custom of borough English, the law will adjudge the right therein accordingly, without calling on the youngest son to prove what that custom is.

If a copyhold in borough-english be surren- dered to the use of a person and his heirs, the right will descend to the youngest son according to the custom. And a youngest son shall inherit an estate in tail in borough-english. But an heir at common law shall take advantage of a condition annexed to borough-english land ; though the youngest son shall be entitled to all actions in right of the land, &c. And the eldest son shall have tithes arising out of land borough- english : for tithes of common right are not in- heritances descendible to an heir, but come in succession from one

clergyman to another.

Borough-english land being descendible to the youngest son, if a younger son dies without issue male, leaving a daughter, such daughter shall inherit jure reprsesentationis. It has been ad- judged where a man hath several brothers, the youngest may inherit lands in borough-English : yet it is said where a custom is, that land shall go to the youngest son, it doth not give it to the youngest uncle, for customs shall be taken strictly ; and those which fix and order the descents of inheritance, can be altered only by parliament.

BOROUGHS, in Scotland. See LAW.

BOROUGHS (Royal), in Scotland, are corpora- tiˆns made for the advantage of trade by charters granted by several of their kings ; having tne privilege of sending commissioners to represent them in parliament, besides other peculiar privi- leges. The royal Boroughs are not only so many distinct corporations, but also constitute one entire body, governed by, and accountable to, one general court, anciently called the court of four boroughs, held yearly to treat and determine con- cerning matters relating to the common advantage of all boroughs. The four boroughs which composed this court were Edinburgh, Stirling, Roxburgh, and Berwick ; which two last falling info the hands of the English, Linlithgow and Lanerk were put in their places ; with a saving to the former, whenever they should return to their allegiance. But this court not being suffi- cient to answer the necessities of the royal bo- roughs, they were all empowered, under James III. in 1487, to send commissioners to a yearly convention of their own, which was then ap- pointed to be held at Inverkeithing but is now held at Edinburgh, under the denomination of the convention of boroughs, vested with great power, and having for their object the benefit of trade, &c. See BOROUGH, p. 344.

BOROUGHBRIDGE, a market town in the west riding of Yorkshire, seated on the river Ure, over which there is a handsome stone bridge. It is a place of little trade, but many Roman coins have been found in the vicinity ; and a sanguinary battle was fought near this place by the earls of Hertford and Lancaster, against the troops of Edward II. in 1322, wherein they were defeated, and the latter taken prisoner and exe- cuted. It formerly sent 2 members to parliamen. but was disfranchised by the reform bill in 1832. 17 miles N.W. of York, 218 N. by W. of London.

BOROUGH-COURTS are certain courts held in boroughs by prescription, charter, or act of par- liament : such are the sheriff's court, and court of Hustings in London

BOROUGH-HEAD, or HEAD-BOROUGH, one of the lowest magistrates among the Anglo-Saxons, and the chief man of the decenary, tithing, or free-burg, consisting of ten families. He was also called the tithing-man, and, in sorm: countries, the borough-holder, bors-holder, or borough's-elder. Alfred made every house- holder answerable for the behaviour of his family, slaves, and guests, if they lived three days ip his house ; and ten neighbouring householders formed themselves into a corporation, under the name of a decennary, or tithing, of which the head-borough was the president. Every man was punished as an outlaw, who did not register himself in some tithing; nor could any one change his habitation, without a warrant or cer- tificate from the head-borough of the tithing to which he formerly belonged. \Vhen any person in any tithing was guilty of a crime, this officer was summoned to answer for him ; and if he were not willing to be surety for his appearance and his clearing himself, the criminal was com- mitted to prison for trial. If he fled, the bors- holder and decennary became liable to inquiry, and were exposed to the penalties of the law.

Thirty one days were allowed them for pro- ducing the criminal : and if they did not find him within that time, the bors-holder, with two other members of the decennary, was obliged to appear, and, together with three chief members of the three neighbouring decennaries (making twelve in all), either to swear that his decennary was free from all privity both of the crime com- mitted, and of the escape of the criminal, by fine make satisfaction to the king. The severity of this regulation was afterwards a little mitigated, and the oaths of all the members of the tithing to which the criminal belonged, to the above effect, were admitted as a sufficient exculpation, provided that, at the same time they promised to present him to justice, as soon as they could apprehend him. By this every man was obliged to keep a watchful eye over the conduct of his neighbours ; and was in a manner surety for the behaviour of those of his division ; hence these decennaries received the name of frank-pledges. See TITHING.

BOROZAIL, a disease, epidemic in the coun- tries about the river Senegal ; similar to the lues venera.

BORRA, or BORRADH, in Gaelic antiquity, a pile of stones, but differing both from a cairn and a dun, in extetnal figure, as well as in size and design. Outwardly these borras were cover- ed with heath or grass so as to appear natural protuberances, and surrounded with wood. In their internal construction, they were oblong, and divided into small apartments. They were generally built on an eminence. Mr. M'Farlane of Kilsinan, describes one of them in his parish, ' forty yards long, of considerable breadth, and amazing depth. At the bottom, from one end to the other, there was a number of small cells, end to end, each made up of five to seven large flags. Each cell was about five feet long, four broad, and five high. One large flag made up each side, and another of a curved figure, to throw off the water, covered them for a roof; the end was made up of two, and an opening between them, wide enough for a man to squeeze himself through.' He thinks they were intended as places of concealment for the plunder, which the ancient clans, in the ages of irregular govern- ment, carried off from each other. Stat. Ace. XIV. 127.

BOR'REL, n. $. It is explained by Junius without etymology. A mean fellow ; one who wears coarse and shabby garments, and therefore considered low and vulgar. Mr. Tyrwhit derives it from bureau, which signifies a coarse cloth of a brown russet.

That is to say, if I begay, sire shrewe ! I wol renne out my borel for to shcwe.

Chaucer. Cant. Talet. Siker thou speakest like a lewd sorrel,

Of heaven to deemen so : Howbe I am rude and barrel,

Yet nearer ways I know. Spenser.

BORRELLISTS, in church history, a Chris- tian sect in Holland, so named from their foun- der Borrel, a man of good learning in the Hebrew, Greek, and Latin tongues. They reject the use of the sacraments, public prayer, and all other external acts of worship. They assert, that all

the Christian churches of the world have dege- nerated fronˆthe pure apostolic doctrines, because they have suffered the word of God, which is infallible, to be expounded, or rather corrupted, by doctors who are not infallible. They lead a very austere life, and employ a great part of their goods in alms.

BORRHAUS (Martin), professor of divinity at Basil, first named Cellarius. He was born at Slutgard in 1499, and acquired the friendship of Melancthon, at Wirtemburg, where he had many scholars, and made much money. But after- wards falling in with Stubner, the anabaptist, he adopted

his fanaticism, and in a conference with Luther in 1522, showed an extravagant degree of zeal. In 1525 being in Prussia, he was impri- soned on account of his principles, which, how- ever, he still defended, and wrote several books to support them. Opinions, true or false, are not to be altered by compulsion. The failure of the prophecies of his brethren fanatics, represent- ing the immediate renovation of all things, at length converted him, and made him not only change his profession but even his name. He retired to Basil in 1536, turned glazier for a livelihood, married, and at last was admitted professor of rhetoric and divinity in that univer- sity. He wrote, 1 . Notes on Aristotle's Politics, in 1545. 2. A Commentary on Aristotle's Rhe- toric, in 1551. 3. Another on the Pentateuch, in 1557. 4. One on Isaiah, and the Revelations, in 1561. 5. One on Job and Ecclesiastes, in 1564. He died at Basil, in 1564, of the plague.

BORRI, or BURRHUS (Joseph Francis), a fa- mous chemist and quack of the seventeenth century, was a Milanese, and a most consummate villain. In his youth, he was quite debauched, but afterwards set up for a very religious man, and pretended to inspiration. He engaged his deluded followers in vows of poverty, while he had the address to draw from them all their mo- ney. His design was to bring about a revolution in Milan, but some of his disciples being appre- hended, he fled to Strasburgh, and afterwards to Amsterdam ; whence, after figuring some time with eclat as a great chemist, he decamped in the night, with much money and many jewels, which he had swindled from the public. He next im- posed upon the simplicity of Q. Christina, of Sweden, and led her to bestow a great sum in search of the philosopher's stone ; and soon after put Frederick III. king of Denmark, upon the same vain and expensive search. On that mo- narch's death he fled to Turkey, but was appre- hended on the frontiers and sent to Rome, where he was condemned to perpetual imprisonment. In 1672 he abjured his errors, and was allowed to attend the duke of Estrees, when the physi- cians had given him over. The extraordinary cure he performed, astonished all good Catholics. He died in the castle of St. Angelo, in 1695, aged seventy-nine.

BORRI, or BOBERRI; the Indian name for turmeric ; also an Indian ointment, in which the roots of turmeric are a chief ingredient.

BORRICHIUS,one of the most learned men of his age, the son of a Lutheran minister in Denmark, was born in 1626. He studied

physic In the university of Copenhagen, and be- gan to practise during a

most terrible plague that made great havoc in that city. He travelled, but before his departure in 1660, was appointed pro- fessor in poetry, botany, and chemistry ; and at his return discharged his duties with great assi- duity. He was raised to the office of counsellor in the supreme council of justice in 1686; to that of counsellor of the Royal Chancery in 1689 ; and died of an operation for the stone in 1690. He published, 1. Docimasia Metallica. 2. Her- metis Egyptiorum et chemicorum Sapientia. 3. Conspectus chemicorum. 4. Lingua Phar- macopaeorum. 5. Dissertatione de poetis Graecis et Latinis. . 6. De Ortu et Progressu Chemise ; and several other works.

BORRISOK.EN, a village in Tipperary.

BORROMEAN ISLANDS, in geography, two islands situated in the bay of the lake, called Lago di Maggiore, or Lago di Locarno, in the Milanese, and so denominated from their having belonged to the Borromeo family. One of the islands is called Isola Bella, and the other Isola M idve. They are a league distant from each oth r, and derive the various beautiful scenes and objects which they present, from the taste and liberality of the Counts Renatus and Yitalian Borromeo. Originally barren rocks, these noblemen, with immense labor and ex- pense, furnished them with numerous terraces, grottoes, gardens, fountains, groves of cedars, cypress, citron trees, orange trees, laurel, &c. which render them scenes of enchantment, and a kind of terrestrial paradise. Bishop Burnet and Keysler speak of them as the finest places in the world in their time. They ‘ can be compared to nothing more properly,’ says the latter, ‘ than to pyramids of sweetmeats ornamented with green festoons and flowers.’

‘ As the taste of mankind alters with a succes- sion of years, I consider them/ observes Mr. Archdeacon Coxe, at a later period, ‘ only as a monument of expense and folly. Terrace rises above terrace in regular gradations, bordered with flower-pots? or gigantic statues of horses, gods, and goddesses. The whole is raised upon arches, and the soil has been brought from the shore to cover them.’ He adds, however, ‘ the palace is magnificent, and contains a profusion of marbles and paintings. The lower part of the house overhangs the lake on one side, where several apartments are furnished in the style of grottoes ; the floors, pillars, and walls, are inlaid with various colored stones, marbles, and shells ; the view and coolness united make this part a delicioiis summer retreat. If any thing justly gives this island the appellation of enchanted, it is the prospect from the terrace. The gradual diminution of the mountains from the regions of eternal snow to the rich plain ; the sinuosity of the lake ; its varied’ banks ; the bay of Marzozzo bounded _by vast hills ; the neighbouring burgh of Palanza, and more distant view of Laveno ; the numerous villages ; the Isola Madre, on which is a palace of the Borromean family ; and another*

island sprinkled with fishermens' huts, form a delightful assemblage. These is- lands, and the whole western coast of the lake to the village of Locarno, were ceded to the king of

Sardinia by the late empress queen at the treaty of Worms, in consideration of the assistance which she received from that monarch.' See Code's Travels in Switzerland, v. iii.

BORROMEO, or BORROMEUS (St. Charles), cardinal and archbishop of Milan ; a personage of great note in the Romish kalendar, and whose sincere piety, simplicity of manners, and zeal for reformation, render him indeed a character equally interesting and instructive to the mem- bers of any church. He was the son of Gilbert Borromeo, count of Arona, and Mary of Medi- cis, and was born at the castle of Arona upon Lake Maggiore in the Milanese in 1538. When he was about twelve years old, Julius Caesar Bor- romeo resigned an abbacy to him of a consider- able revenue, which was considered as an here- ditary possession of the family. Charles accepted of it, but applied the revenues wholly in charity. Having acquired a sufficient knowledge of the languages at Milan, he studied the civil and ca- non law at Pavia. He received great advantage from the conversation of Francis Alciat, one of the most learned men of the age, for whom he after- wards procured the purple. He would accept no benefice but upon condition that he should be at liberty to apply the revenue to public uses. In 1554 his father died, an event which brought him back to the castle of Arona ; where, though he had an elder brother, Count Frederick, he was requested by the family to take upon him the domestic affairs, to which he at length consented. In 1559 he finished his studies, and took his de- gree of D. D. The promotion of his uncle Pius IV. to the pontificate in 1560, seemed to have very little effect upon him ; but he was soon made protonotary, entrusted with the seals of the ecclesiastical state; and created cardinal- deacon, and soon after archbishop of Milan. In obedience to his uncle, he lived in great splen- dor, yet retained his own temperance and humi- lity. He now established an academy, the works of which have been published in many volumes, intitled Noctes Vaticanae. About this time he also formed a design of founding a college at Pavia, which should be both a school of science, and an asylum from vice. He accordingly raised a large edifice upon ground which belonged to the family of Borromeo in that city ; he obtained from the pope several benefices, which he at- tached to his building ; and he provided it with all things necessary out of his own revenue. Upon the death of his only brother Frederick, his rela- tions, his friends, and even the .pope himself, ad- vised him to quit the church and marry, that his family might not become extinct. Charles, how- ever, contrary to the expectations of tjie world, received the priesthood, and addressed the pope in these terms: 'Do not complain of me, Holy Father, for I have taken a spouse whom 1 love, and

on whom my wishes have been long fixed.' There was a \ery intimate friendship between Borromeo and Don Barthelemy des Martyres, archbishop of Prague, and author of the work entitled Stimulus Pastorum. This work falling into Borromeo's hands, gave him an earnest de- sire to become a preacher. Having obtained permission to visit his church, he set out for Milan, where he was received with the most dis-

tinguished nonors. He was, however, soon re- called to Rome ; the pope was dying ; and Charles arrived just in time to administer to him the last sacraments, on the 7th January, 1566, and, by his influence, to moderate the cabals of the conclave, in the election of his successor, Pius V. Borromeo then gave himself up to the reformation of his diocese, where the most flagi- tious irregularities were openly practised ; and though he met with much opposition, prevailed by an inflexible constancy, tempered with great sweetness of manners. The most formidable opposition he had to struggle with was that of the Brothers of Humility. Three provosts of this order entered into a conspiracy to cut him off"; and one ot their confederates called Jerom Donat, surnamed Farina, took upon himself to execute the bloody design. For this purpose he mixed with the crowd that went into the archi- episcopal chapel, where the cardinal spent an hour every evening in prayer; and fired a har- quebuss at him, loaded with ball and a considera- ble quantity of shot. It is said that the ball struck him on the spinal bone, but fell down at his feet without doing any other damage than soiling his rochet, and that the shot tore away part of a wall and went through a table. This was reckoned a miracle, but what was more to his honor, than if it had been one, he made every exertion to procure a pardon for the assassin. But the pope was inflexible ; the monk was exe- cuted, and the order suppressed. In 1576 Mi- lan was visited by the plague, which swept away incredible numbers ; and the behaviour of Bor- romeo on this occasion was truly Christian and heroic. He went about giving directions for accommodating the sick, and burying the dead, with a zeal and attention that were at once ar- dent and deliberate, minute and comprehensive ; and his example stimulated others to join in the good work. The continual labors and austerities of Borromeo shortened his life, and he died at Milan, the 4th of Nov. 1584, lamented by the whole province. Borromeo was canonised the 1st of Nov. 1610. Many churches and chapels, and religious societies, have since been erected to his honor.

BOR'ROW, v. & n.\ Dutch, borgen; Ang. BORˆROWER, /Sax. beorgian; of

the

BOR'ROWING, fsame origin with bo-

BORS'OLDER, 3 rough. In Chaucer and

the old writers, borrow or borowe is used in the sense of a security ; a pledge. To borrow, in mo- dern usage, is to take up money or other pro- perty of another upon a promise, pledge, or se- curity given, to repay or return it: opposed to lending. . It is also occasionally employed to signify what in common parlance would be called stealing ; taking without leave ; using another's property as if it were our own.

This Palamon answered ; ' I grant it thee ;' And, thus, they ben departed til a morwe, Whan echc of hem hath laid his faith to borwe.

Chaucer's Cant. Tales, Fye ! Fye ! deformed w ight, Whose borrowed beautie now appeareth plaine To have before bewitched all men's sight ; O leave her soone or let her soone be slaine ! Spenser.

Yet of your royal presence I'll adventure

The borrow of a week. Shukspeare

Neither a borrower nor a lender be ; For loan oft loses both itself and friend, And borrowing dulls the edge of husbandry. /d.

Go not my horse the better, I must become a borrower of the night For a dark hour or twain. Id.

He borrowed a box of the ear of the Englishman, and swore he would pay him again when he was able. Id.

Upon his shield the silver moon did bend Her horned bow, and round her arrows spend : This word in silver wrote, ' I borrow what I lend.'

Fletcher's Purple Island.

Night would invade : but there the neighbouring

moon

(So call that opposite fair star) her aid Timely interposes, and her monthly round Still ending, still renewing, through mid heaven, With borrowed light, her countenance triform, Hence fills and empties to enlighten the earth, And in her pale dominion checks the night. Milton. Where darkness and surprize made conquest cheap !

Where virtue borrowed the arms of chance,

And struck a random blow ! Dryden.

Some say that I am a great borrower ; however, none of my creditors have challenged me for it. Pope.

Mark me, Clotilda,

And mark me well, ā 1 am no desperate wretch, Who borrows an excuse from shameful passion To make its shame more vile ; ā I am a wretched but a spotless wife.

Maturin's Bertram.

BORROWING and HIRING, in law, are con- tracts by which a qualified property may be transferred to the hirer or borrower ; in which there is only this difference, that hiring is always for a price or stipend, or additional recompense : borrowing is merely gratuitous. . But the law in both cases is the same. They are both contracts, whereby the possession and transient property is transferred for a particular time or use, on con- dition and agreement to restore the goods so hired or borrowed, as soon as the time is expired, or the use performed, together with the price or sti- pend (in case of hiring) either expressly agreed upon by the parties, or left to be implied by law, according to the value of the service. By this mutual contract, the hirer or borrower gaii?i a temporary property in the thing hired, accompa- nied with an implied condition to use it with moderation, and not to abuse it ; and the owner or lender retains a reversionary interest in the same, and acquires a new property in the price or reward. Thus, if a man hires or borrows a horse for a month, he has the possession and qualified property therein during that period ; on the expiration of which his qualified property terminates, and the owner becomes, in case of hiring, intitled also to the premium or price for which the horse was hired. There is one species of this reward the most useful of any, but con- cerning which many good and learned men have much perplexed themselves and others, by doubts about its legality in foro conscientiae. That is, when money is lent on a contract to receive not only the principal sum again, but also an in- crease by way of compensation for the use, which is generally called interest by those who think it

Lawful, and usury by those who do not. See IN- TEREST.

BORROWSTOWNNESS, a sea-port town of Scotland, in the county of Linlithgow, on the south side of the Forth, two miles north of Lin- lithgow, and nineteen west from Edinburgh. It has a good harbour, and is surrounded with col- lieries and salt works ; its chief trade consisting in salt and coals. It has a fair and races on the 16th of November. Borrowstownness has a cus- tom-house, and formerly traded to a considerable extent with different parts of the kingdom, as well as foreign ports. At present the whole ex- ports do not exceed 10,000 tons annually, and the tonnage of the shipping belonging to the port is much reduced. Five whale ships, however, still belong to the port. The trade of Borrows- townness has declined in consequence of the navigable canal bet%veen the Clyde and Forth, and most of its trade has been transferred to Grangemouth, standing at the termination of this canal. There are two weekly markets, Monday and Friday.

BORSCHOD, a county of Hungary, bounded on the north by those of Gomor and Torn, on the east by Ujvar, Semplin and Saboltsch, and on the south and west by Hewisch and Meograd. It possesses a highly favored climate, and is one of the most fruitful districts in the kingdom. Abund- ance of corn, excellent wine, and forest timber, are its valuable products ; and most of the rivers are stocked with excellent fish. The rearing of cattle is also conducted with activity, and many thousand head of oxen are annually exported. The inhabitants are for the most part native Hungarians, but mixed with Bohemians, Sclavo- nians, and Germans. The total number is above 93,000, of whom about 1000 are Jews. It is divided into the circles of Mischkolz, Erlau, Sendro, and St. Peter, in which there- are ten market towns and 159 villages, with 84 Calvinist parishes, 52 Catholic, ten Greek, and one Lu- theran.

BORSE HOLDER, among the Anglo-Saxons, one of the lowest magistrates, whose authority extended only over one free burgh, tithing or de- cennary, consisting of ten families. See BO- ROUGH.

BORSELLA, in the glass-works, an instru- ment wherewith glasses are extended or contracted at pleasure; also smoothed and levigated.

BORTAN, a river of North America, in Ver- mont, which rises in Westmore township, Orange county, and after running north-west unites with the river Black.

BORTHWICK CASTLE, a magnificent ruin, originally of astonishing strength. It was built by William, the first Lord Borthwick, about A. D. 1430. It measures about seventy-four feet by sixty-eight without the walls,

which are of hewn stone firmly cemented, thirteen feet thick near the bottom, and gradually contracted to about six near the top ; and, besides the sunk story, ninety feet in height to the battlement, but including the roof, which is arched and co- vered with flags, 110 feet high. The great hall is forty feet long, and had been elegantly adorned with lustres, paintings, tapestry, &c. On the first floor are state rooms, formerly accessible by

a draw-bridge. Notwithstanding its strength, i was taken by Oliver Cromwell in 1650.*

BORYPTES, in natural history, a gem of a black color with red and white spots.

BOS (John Baptist, Du), a celebrated author and member of the French Academy, was born at Beauvais in 1670, and finished his studies at the Sorbonne. In 1695 he was made one of the committee for foreign affairs, and was aftenvards charged with some important transactions in Eng- land, Germany, Holland, and Italy. At his re- turn to Paris he was made an abbe, and chosen perpetual secretary of the French Academy. He was the author of several excellent works ; the principal of which are, 1. Critical Reflections upon Poetry and Painting, 3 vols. 12mo. 2. The History of the four Gordians, confirmed and illus- trated by medals. 3. A Critical History of the Establishment of the French Monarchy among the Gauls, 2 vols. 4to, 4 vols. 12mo. He died at Paris in 1742.

Bos (Jerome), born at Bois-le-Duc about 1470, had a peculiar pleasure in painting devils, spec- tres, and enchantment ; though, therefore, he possessed considerable powers as a painter, his pictures rather excite horror mixed with surprise than real delight. The most remarkable paint- ing of this master's hand, now in the Escurial, is an Allegory of the Pleasure of the Flesh, in which he represents the principal figure in a carriage drawn by monstrous forms, preceded by demons, and followed by death. His manner was less stiff than that of most of the painters of his time, and his draperies in better taste. His pictures have always been much esteemed, and yield considerable prices. At Bois-le-Duc is a pic- ture of the flight into Egypt by him, which is well executed. He also engraved a number of plates, all which exhibit his fanciful humor. He died about 1530.

Bos (Lambert), an eminent critic, son of the rector of the college at Worcum in Holland, born in 1670. He completed his education un- der the celebrated Vitringa,at Franeker, where he became Greek professor in 1 704, and continued in that situation till his death in 1717, much acce- lerated by his intense application to study. His edition of the Septuagint with Prolegomena, and various readings, printed in 1709 at Franeker, in 2 vols. 4to. is greatly admired. Among his other works are, Exercitationes

Philologies, &c. 8vo. 1700, reprinted in 1713; Antiquitatum Graeca- rum Descriptio; Animadversiones ad Scriptores quosdam Graces; Thomae Magistri Eclogae cum Notis; an improved edition of Vilerius' Greek Grammar ; and a treatise in great estima- tion with grammarians, entitled Mysterii Ellip- seos Graecae expositi Specime, a Variorum edition of which appeared at Leipsic in 1809.

Bos, in antiquity, was used for an ancient Greek silver coin : called, also, didrachmus, being equivalent to two drachms. It was called bos as having on it the impression of an ox, and chiefly obtained among the Athenians and Delians; being sometimes also struck of gold. From this arose the phrase bos in lingua, applied to those who had taken bribes to hold their tongue.

Bos, the ox, in zoology, a genus of quadru peels belonging to the order of pecora. The cha-

racters of this genus are taken from the horns and teeth. The horns are hollow within, and extended in the form of crescents : there are eight fore teeth in the under jaw, and none in the upper, their place being supplied by a hard membrane ; and there are no dog teeth in either jaw. Linnaeus enumerates six sjpecies, but Mr. Robert Kerr, in his Animal Kingdom, or Zoolo- gical System of Linnaeus, describes nine species and seventeen varieties. As he is one of the oest writers on the subject, and has added every thing important from Gmelin, Mr. Pennant, and other eminent writers on zoology, we have adopted his classification, with the exception only of the bonasus and the Indicus, which he ranks as varieties of the bos taurus, but which we cannot help considering as distinct species, as indeed most other authors have ranked them : upon this account, therefore, the species we have to describe are eleven in number, viz.

I. Bos AMERICANUS, the American bison, with short black rounded horns, and a great in- terval between their bases. On the shoulders is a vast hunch, consisting of a fleshy substance, much elevated. The fore parts of the body are thick and strong; the hinder parts slender and weak. The hunch and head are covered with a very long undulated fleece, divided into locks, of a dull rust color: this is at times so long, as to make the fore part of the animal look shapeless, and to obscure its seeing. During winter, the whole body is clothed in the same manner. In summer the hind part is naked,

wrinkled, and dusky. The tail is about a foot long; at the end is a tuft of black hairs, the rest naked. It inhabits Mexico, the interior parts of North America, and in the Savannahs; and is fond of marshy places, where it lodges amidst the high reeds. In Louisiana they feed in herds innumerable, pro- miscuously with multitudes of stags and deer, retiring in the sultry heats into the shade of tall reeds, which border the rivers. They are exceed- ingly shy; and very fearful of 'man, unless they are wounded, when they pursue their enemy, and become very dangerous. The chase of these animals is a favorite diversion of the Indians. The uses of these animals are various. Powder- flasks are made of their horns. The skins are very valuable; formerly the Indians made of them the best targets. When dressed they form an excellent buff; the Indians dress them with the hair on, and clothe themselves with them; the Europeans of America use them for blankets, and find them light, warm and soft. The flesh is a considerable article of food, and the bunch on the back is esteemed a very great delicacy. The Indians prefer the flesh of the cows. The hair or wool is spun into cloth, gloves, stockings, and garters, which are very strong, and look as well as those made of the best sheeps' wool; Pownal assures us, that the most luxurious fabric might be made of it. The fleece of one of these animals has been found to weigh eight pounds. Their sagacity in defending themselves against the attacks of wolves is admirable. When they scent the approach of a drove of those ravenous creatures, the herd casts itself into the form of a circle; the weakest keep in the middle; the strongest are ranged on the outside, presenting

to the enemy an impregnable front of horns: when taken by surprise, numbers are sura to perish. Attempts have been in vain made to domesticate them. They weigh from 1600 to near 3000 pounds.

II. ' Bos ARNEE,' says Mr. Kerr, ' has long erected semilunar horns, which are flattened, an- nularly wrinkled, with smooth, round, approaching points; and inhabits India, north from Bengal. This animal is of vast size, and is hitherto non- descript. A skeleton of the head with the horns is in the Edinburgh College Museum.' ' A British officer, who met with one in the woods above Bengal, says, it is about fourteen feet high, that it partakes of the form of the horse, bull, and deer, and is very bold and daring. This establishes its genus, as all the other horned ani mals, of the ruminant or cloven-footed tribe, are shy and timid.'

III. Bos BARBATUS, the bearded ox, or Cape auroch, ' has short horns; a beard on the chin, whence the name, and curly hair on the breast. It inhabits the country north of the Cape. The Namaquas call it baas, or the master courier, on account of its vast swiftness. It is like the com- mon ox, but larger and of a gray color. The head is small.'

IV. Bos BONASUS has a long mane : its horns are bent round towards the cheek, and not above a span long. It is about the size of a large bull, and is a native of Africa and Asia. See BONASUS.

*V. 1. Bos BUBALUS, the common buffalo, has large black horns, first extended outwards, then bent backward and inward, and plain before. The hair on the back is very hard, but thinly scattered over the body. It is a native of Asia ; but they are tamed in Italy, and used for the same purposes as black cattle in other countries. They draw carriages, and are guided by a rope tied to a string thrust through their*noses. This buffalo is larger than an ox, has a thicker body, and a very hard hide. His pace is slow, but he will carry a great burden. They feed in herds: the cows go twelve months with young, and yield plenty of milk, of which very good butter and cheese, is made. Their flesh is pretty good, but not to be compared to beef. The wild buffalo is a very fierce and dangerous animal; he often attacks travellers, and tears them in pieces. However, they are not so much to be feared in woods as in the plains, as their horns, which are sometimes ten feet long, are apt to be entangled in the branches of trees, which gives those who are surprised by them time to escape. They are excellent swimmers, arid will cross the largest rivers without any difficulty. They run wild in great troops on the coast of Malabar. Strangers are allowed to hunt and kill them at pleasure. The following varieties are mentioned by Messrs. Pennant and Kerr : ā*

2. Bos BUBALUS ANOA is a native of the island Celebes, and is not bigger than a middle sized sheep, very fierce and wild, of a dark ash color, inhabiting the rocks. Mr. Loten, when in India, put some of them into a paddock, and in one night's time they killed fourteen or fifteen of his deer by ripping up their bellies. No parti- cular description has yet been given of it.

3. Bos BUBALUS GUAVERA has a hunch ou

the back, which stands up in a sharp ridge; the lower halves of the legs are white. It inhabits Ceylon.

4. Bos BUBALUS SEMINUDUS has small horns, compressed sideways, taper, sharp pointed, and standing backwards. The rump and thighs are naked, whence the epithet seminudus, half-naked. It is small, of the size of a Welsh runt. The hair on the fore part of the body is bristly, and so thin,

that the skin appears. On the rump are two dusky perpendicular stripes, and on the thighs, two transverse.

VI. Bos CAFER, the Cape buffalo, inhabits the interior part of Africa, north of the Cape of Good Hope, but does not extend to the north of the Tropic. They are said to be greatly superior in size to the largest English ox : they hang their heads down, and have a most ferocious and male- volent appearance. They will lie quietly in wait in the woods, and rush suddenly on passen- gers, and trample them, their horses, and even oxen of draught, under their feet. They are also found in the interior parts of Guinea. Sparrman, describing one that was shot, says, ‘ the entrails perfectly resembled those of an ox; but were much larger, and indeed gave us no little trouble in clearing them away; for the diameter of this creature’s body was full three feet: the length eight feet, the height five and a half, and the fore legs two and a half long ; the larger hoofs were five inches over; from the tip of the muzzle to the horns was twenty-two inches. This animal in shape, very much resembled the common ox; but the buffalo has much stouter limbs, in pro- portion to its height and length. Their fetlocks hang likewise nearer to the ground. The horns are singular, both in their form and position : the bases are thirteen inches broad and only an inch distant from each other; by which there is formed between them a narrow channel, in a great mea- sure bare of hair. Measuring them from this, the horns rise up in a spherical form, with an elevation of three inches at most. In this way they extend over a great part of the head, viz. from the nape of the neck to the distance of three inches and a half from the eyes ; so that the part from which they grow out, does riot occupy a space of less than seventeen or twenty inches in circumference. From hence bending down on each side of the neck, and becoming more cylin- drical by degrees, they form a curve, the convex part of which is turned towards the ground, and the point up in the air; which, however, at the same time is generally inclined backwards. The distance between the points of the horns is fre- quently above five feet; the color is black; and the surface, to within about a third part, measured from the base, is very rough and craggy, with cavities sometimes an inch deep. The eyes are somewhat sunk within their prominent orbits. This, together with their near situation to the bases of the horns, which hang somewhat over its pendant dangling ears, and its usual method of holding its head inclined to one side, gives the buffalo a fierce and treacherous aspect. His disposition corresponds with his countenance. He hides himself among the trees, and skulks there till somebody comes very near him, when he rushes out at once and attacks him. Not con-

tent with killing the person whom he attacks, he afterwards tramples upon him with his hoofs and heels, and with his horns and teeth tears to pieces and mangles the whole body, stripping off the skin by licking it with his tongue. Notwith- standing this, the buffalo will bear to be hunted ; though

sometimes he will turn and pursue his hunter, whose only dependence in that case is upon the swiftness of his steed. The surest way to escape is to ride up a hill, as the great bulk of the buffalo's body prevents him from being able to vie with the fine limbed horse in swiftness; though, on the other hand, the buffalo, in going down hill, gets on much faster than the horse. The flesh of the buffalo is coarse and not very fat, but full of juice, and of a high and not disagree- able flavor. The hide is thick and tough, and is in great request with the farmers for thongs and harness ; being the only halters that can be depended upon for securing horses and oxen ; so that they cannot get loose by snapping them asunder, which they are otherwise apt to do when the lions and wolves make their appearance in the neighbourhood.'

VII. Bos GRUNNIENS, or hog cow, has short, erect, sharp pointed, cylindrical horns, bent out- wards. The body is so hairy, that the hair hangs down upon its knees like a goat. The color of the body is black, but the front is white. It has bristles on its back and hind-legs, and it grunts" like a hog. The tail resembles that of a horse, and is covered with very long flowing silky hairs. It is an inhabitant of the north of Asia. Mr. Kerr enumerates four varieties of this species, viz. 1. B. grunniens ecornis: 2. B. grunniens ferus, the wild grunting ox: 3. B. grunniens ghainouk, a domesticated variety of the wild breed: 4. B. grunniens sarlyx, a degenerated race, not particularly described.

VIII. Bos INDICUS, the Indian ox, with all its varieties, are considered by Gmelin, as varie- ties of the bos taurus; but,, as Mr. Kerr observes, 1 many of them have such remarkable differences as would constitute, in other genera, sufficient marks for specific distinction.' They have a large fatty lump on the shoulders. They differ much in size and in the form of their horns. Some are very large, and of a reddish color; with horns short, and bending close to the neck, others very small, with horns almost upright, bending a little forward. The following are the chief varieties: 1. B. Indicus major, with short horns bending backward, inhabits India, Africa, and Madagas- car : 2. B. Indicus minimus; it inhabits Surat, and is used to draw children in small carts : 3. B. Indicus minor, the zebu, or little Indian buf- falo, with short erect horns turned a little for- wards, and a lump on the shoulders. It is the common beast of burden in India.*

IX. Bos MOSCHATUS, the musk ox of Hud- son's bay, is about the size of a Scotch bullock; has a thick body and short legs. The horns are large, and are united at their origin in the skull ; but immediately after, they fall down on each side of the crown of the head, then taper away small, the points turning up, and out. The horns of an old bull are about two feet in length, as well as in circumference, and weigh about thirty pounds each. The hair is black, and

grows to a great length ; underneath wldch is a very fine ash-colored wool. The male only has the curious scalp; the female is covered with hair. They live in herds from thirty to eighty or a hundred. The bulls are very few in proportion to the cows. It is rare to see more than two or three full grown bulls with the largest herd ; and from the number of males which at times are found dead, the Indians are of opinion that they kill each other in contending for the females at the rutting season.

X. Bos PUMILUS, the dwarf ox, has horns almost erect, which close at the base, recede in the middle, and approach at the points. It in- habits Africa, and was seen at Cairo by Belon, who says it came from Morocco. It is larger than a roe but less than a stag; has a thick neck, ele- vated shoulders, and short legs : the hair is brown and shining, and the tail is terminated by long and coarse hairs.

XI. Bos TAURUS, the domestic bull and cow, has cylindrical horns bent downwards, and loose dewlaps. The bull, or male, is naturally a fierce and terrible animal. When chafed, he has an air of sullen majesty, and often tears up the ground with his feet and horns. The princi- pal use of the bull is to propagate the species; although he might be trained to labor, his obe- dience cannot be depended on. A bull, like a stallion, should be the most handsome of his species. He should be large, well made, and in good heart ; he should have a black eye, and a fierce aspect; but an open front, a short head, thick, short, and blackish horns, and long shaggy ears; a short and straight nose, large and full breast and shoulders, thick and fleshy neck, firm reins, a straight back, thick fleshy legs, and a long tail well covered with hair. Castration remarkably softens the nature of this animal; it destroys all his fire and impetuosity, and renders him mild and tractable, without diminishing his strength ; on the contrary, after this operation, his weight is increased, and he becomes fitter for the purposes of ploughing, &c. See Ox. The females of all those species of animals which we keep in flocks, and where increase is the princi- pal object, are much more useful than the males. The cow produces milk, butter, cheese, &c. which are principal articles in our food, and besides answer many useful purposes in various arts. Cows are generally in season, and receive the bull from the beginning of May to the middle of July. Their time of gestation is nine months, which naturally brings the veal to our markets from the beginning of January to the end of April. However luxury has fallen upon methods of interrupting this natural course, and veal may be had almost every month

in the year. Cows, when improperly managed, are very subject to abortion. In the time of gestation, therefore, they ought to be observed with more than ordi- nary care, lest they should leap ditches, &c. Neither should they be suffered to draw in the plough or other carriage. They should be put into the best pasture, and should not be milked for six weeks or twa months before they bring forth their young. The cow comes to the age of puberty in eighteen months, but the bull requires two years ; and it is better to restrain them till they

be full three years. From three to nine years these animals are in full vigor; but when older, they are fit for nothing but to be fed for the butcher. A milch cow, ought to be chosen young, fleshy, and with a brisk eye.

The criteria of a beautiful cow has been thus expressed.

She's long in her face, she's fine in her horn, She'll quickly get fat, ā ¢without cake or corn, She's clear in her jaws, and full in her chine, She's heavy in flank, and wide in her loin.

She's broad in her ribs, and long in her rump, A straight and flat back, with never a hump ; She's wide in her hips, and calm in her eyes, She's fine in her shoulders, and thin in her thighs.

She's light in her neck, and small in her tail. She's wide in her breast, and good at the pail, She's fine in her bone, and silky of skin, She's a Grazier's without and a Butcher's within.

There is a great variety in the color of oxen- A reddish or black color is most esteemed. The hair should be glossy, thick, and soft; when otherwise, the animal is either not in health, or has a weakly constitution. The ox eats very quick, and soon fills his first stomach; after which he lies down to ruminate, or chew the cud. The first and second stomachs are continuations of the same bag, and very capacious. After the grass has been chewed over again, it is reduced to a kind of mash not unlike boiled spinage; and under this form it is sent down to the third sto- mach, where it remains and digests for some time ; but the digestion is not fully completed till it comes to the fourth stomach, from which it is thrown down to the guts. The contents of the first and second stomachs are a collection of grass and other vegetables roughly macerated ; a fermentation, however, soon commences, which makes the grass swell. The communication be- tween the second and third stomach is by an opening much smaller than the gullet, and not sufficient for the passage of the food in this state. Whenever then the two first stomachs are dis- tended with food, they begin to contract, or rather perform a kind of reaction. This reaction com- presses the food, and makes it endeavour to get out : now the gullet being larger than the pas-

sage between the second and third stomachs, the pressure of the stomach necessarily forces it up the gullet. The action of ruminating, however, appears to be in a great measure voluntary ; as anjmals of this kind have a power of in creasing the reaction of their stomachs. After the food undergoes a second mastication, it is then re- duced into a thin pulp, which easily passes from the second to the third stomach, where it is still further macerated ; from thence it passes to the fourth, where it is reduced to a perfect mucilage, every way prepared for being taken up by the lacteals, and converted into nourishment. What confirms this account of chewing the cud is, that as long as these animals suck, or feed upon liquid aliment, they never ruminate ; and in the winter, when they are obliged to feed upon hay and other dry victuals, they ruminate more than when they feed upon fresh grass. Bulls, cows, and oxen, are fond of licking themselves, espe- cially when lying at rest. But this practice

should be prevented as much as possible ; for as the hair is an indigestible substance, it lies in the stomach or guts, and is gradually coated by a glutinous substance, which in time hardens into round stones of a considerable bulk, which sometimes kills them, but always prevents their fattening, as the stomach is rendered incapable of digesting the food so well as it ought. The age of these animals may be distinguished by the teeth and horns. The first fore-teeth fall out at the age of six months, and are succeeded by others of a darker color, and broader. At the end of sixteen months, the next milk teeth like- wise fall out ; and at the beginning of the fourth year all the fore teeth are renewed, and then they are long, pretty white, and equal : however, as the animal advances in years, they become un— equal and blackish. The horns of oxen four years of age, are small, pointed, neat, and smooth, but thickest near the head : this thick part next season is pushed further from the head by a horny cylinder, which is also terminated by ano- ther swelling part, and so on (for as long as the ox lives, the horns continue to grow) ; and these swellings become so many annular knots, by which the age may easily be reckoned : but from the point to the first knot must be counted three years, and every succeeding knot only one year. The bull, cow, and ox, generally live about four- teen or fifteen years. Ox beef is very nourish- ing, and yields a strong aliment; the flesh of a cow when well fatted and young is not much in- ferior. Bull beef is hard, tough, and dry ; for which reason it is not much used for food. Veal is well tasted, easy of digestion, and rather keeps the body open than otherwise. For the uses of the various parts of these animals, see Ox. The

northern countries of Europe produce the best cattle of this kind. In general they bear cold better than heat ; for this reason they are not so numerous in the southern countries. There are but few in Asia to the south of Armenia, or in Africa beyond Egypt and Barbary. America produced none of this species till they were car- ried there by the Europeans. But the largest are to be met with in Denmark, Podolia, the Ukraine, and among the Calmuc Tartars ; like- wise those of England, Ireland, Holland, and Hungary, are much larger than those of Persia, Turkey, Greece, Italy, and Spain ; but those of Barbary are least of all. In all mountainous countries, as Wales, the Highlands of Scotland, &c. the black cattle are small, but hardy ; and when fattened make excellent beef. In Lapland they are mostly white, and many of them want horns. The British breed of cattle, Mr. Pennant observes, has in general been so much improved by foreign mixture, that is difficult to point out the original kind of these islands. Those which may be supposed to have been originally British are far inferior in size to those on the northern part of the European continent ; the cattle of the Highlands of Scotland are exceedingly small, and many of them, males as well as females, are hornless : the Welsh runts are much larger ; the black cattle of Cornwall are of the same size with the last. The large breeds now cultivated through most parts of Great Britain, are either entirely of foreign extraction, or our own im- VOL. IV.

proved by a cross with the foreign kind. The Lincolnshire kind derive their size from the Hoi- stein breed ; and the large hornless cattle that are bred in some parts of England, come origi- nally from Poland. There are many varieties o this species : among which the following ar& mentioned by Mr. Kerr and Professor Gmelin. 2. B. Taurus Abyssinicus, the Abyssinian ox, has a hunch on its back, and the horns adhere to the skin only, and hang pendulous. It inhabits Abyssinia and other parts of Africa. 3. B. Tau- rus Africanus, the lant, is white and has elegant horns, slender legs and black hoofs. It inhabits Africa, and is swifter than most horses. The hide is said to be impenetrable by a bullet. Some reckon it a species of antelope. 4. B. Tau- rus bison, has horns reflected forwards, a hunch- ed back and a long mane. It is white, and is supposed by Buflbn to be the same with the bonasus and the ferus : but Gmelin ranks them as distinct. It is quite a different animal from the American bison. 5. B. Taurus ferus, the wild ox, inhabits the marshy woods of Poland, Prussia, and Lithuania. It is supposed to be the original stock of all the European domestic breeds. It has thick short horns, reflected for- ward, and a curly forehead. About 250 years ago there was found in Scotland a wild race of cattle, which were of a pure white color, and had, if we may believe Boethius, manes like lions. Mr. Pennant says, he cannot but give credit to the relation ; having seen in the woods of Drumlanrig in North Britain, and in the park belonging to Chillingham castle in Nor- thumberland, herds of cattle probably derived*

from the savage breed. The former appear to have been exterminated by the late duke of Queensberry. They had lost their manes, but retained their color and fierceness ; they were of of a middle size, long legged, and had black muzzles and ears ; their horns fine, with a bold and elegant bend. They were wild as any deer ; on being approached they would instantly take to flight, and gallop away at full speed ; never mix with the tame species, nor come near the house, unless constrained to it by hunger in very severe weather. Frequent mention is made of our savage cattle by historians. One relates that king Robert Bruce was (in chasing one of these animals), preserved from the rage of a wild bull, by the intrepidity of one of his courtiers, from which he and his lineage acquired the name of Turnbull. Fitz-Stephen names these animals uri sylvestres, among those that harboured in the great forest, that in his time lay adjacent to Lon- don. Another enumerates among the provisionˆ at the great feast of Nevil, archbishop of York, six wild bulls ; and Sibbald assures us that in his days a wild and white species was found in the mountains of Scotland, but agreeing in form with the common sort. These were probably the same with the bisontes jubati of Pliny, found then in Germany, and might have been common to the continent and our island; the loss of their savage vigor by confinement might occasion some change in the external appearance, as is frequent with wild animals deprived of liberty ; and to that %ve may ascribe their loss of mane. The urus of the Hercynian forest, described by

Caesar (lib. vi.) was of this kind ; the same which is called by the modern Germans, aurochs, i. e. bos sylvestris. 6. B. Taurus Madagascariensis, the boury, or Madagascar ox, is of a large size, and white color, with pendulous ears, and a hunched back.. It inhabits Adel and Mada- gascar.

BOSC (John du, lord of Esmandreville), pre- sident of the Court of Aids at Rouen, was one of the many martyrs to the protestant religion in France, during the bloody reign of Charles IX. Bayle gives him an excellent character. He was made counsellor and commissary of requests in 1554, and was promoted to the second presi- dency, January 26th, 1562; but was beheaded the 1st of November following, as one of the authors of the resistance of Rouen to the arms of the king. Le Laboureur says ‘ he was worthy of a better fate, having all the great qualities that are to be desired in an accomplished magis- trate.’ He wrote 1. Joannis Boschsei Neustrii

irĀ«pt Auccuoya/itac, De Legitimis Nuptiis ; 2. A Treatise of the Number Seven ; 3. De Numae Pompilii Sacris, a work which gave great offence tĀ« the Catholics.

Bosc (Peter du), the greatest protestant preacher of his age, was the son of W. Du Bosc, advocate of Rouen, and born at Bayeux in 1623. He studied at Montauban and Saumur, and made such rapid progress, that in 1645 he was chosen minister at Caen. He was soon considered as a perfect orator, and was repeatedly pressed to ac- cept of the church of Charenton, but he and the people of Caen were so fond of each other, that nothing but persecution could part them. This began in 1664, when he was confined to Chalons by a lettre de cachet, but was liberated soon after, and the joy of the people of all persuasions was so great upon his return, that even the Catholics rejoiced ; and one gentleman made two Franciscan friars so drunk upon the occasion, that one of them died on the spot. The bishop of Chalons was particularly kind to him. In 1665 he began to signalise his prudence as well as his eloquence, in defending the protestant churches against persecutions. In 1666, the king having published a declaration against them, all the churches sent deputies to Paris ; but the drawing up their memorials was com- mitted by the rest to M. du Bosc, who was de- puted from those of Normandy. In 1668 he alone had an audience of the king, wherein he succeeded so well, that some melioration was obtained. And Bayle observes, if it had been possible to save the reformed churches by nego- ciation he would have done it. But in 1685 he himself was interdicted ; whereupon he went to Rotterdam, where he was minister till his death in 1692. He published several volumes of ser- mons ; and after his death, his son-in-law, M. le Gendre published a valuable collection of his memoirs, requests, petitions, &c. relating to the churches, with his speeches, letters, and poems, in Greek, Latin, and French.

BOS'CAGE, n. s. Boscage, Fr., wood or woodlands. The representation of woods.

We bent our course thither, where we saw the appearance of land ; and, the next day, we might plainly discern that it was a land flat to our sight,

and full flf boscage, which made it shew the more dark. Bacmt.

Cheerful paintings in feasting and banqueting- rooms ; graver stories in galleries ; landskips and botcage, and such wild works, in open terraces, or summer-houses. Wotta$

BOSCAGE, among painters, a landscape re- presenting much wood and trees.

BQSCAGE, or BOSCAGIUM, in law, 1. food which trees yield to cattle ; as mast, &c. Manwood says, to be quit of boscage is to be discharged of paying any duty for windfall wood in the forest. 2. A tax on wood.

BOSCAN (John), a Spanish poet of the six- teenth century, born at Barcelona. He was the friend of Garciiasso de la Vega, another Spanish poet. They were the first who made any great improvement in the poetry of their nation, and their pieces were printed together. Boscan, who died about A. D. 1542, principally succeeded in sonnets.

BOSCAWEN (Edward), a brave British Ad- miral, was the second son of Hugh, lord viscount Falmouth. Having early entered into the navy, he was, in 1740, captain of the Shoreham ; and behaved with great intrepidity as a volunteer under admiral Vernon, at the taking of Porto Bello. At the siege of Carthagena, in March 1740-1, he had the command of a party of sea- men, who attacked and took a battery of fifteen twenty-four pounders, though exposed to the fire of another fort of five guns ; and was appointed to the command of the Prince Frederic of seventy guns. In May 1742 he returned to England, and married Frances, daughter of William Glan- ville, Esq. and the same year was elected repre- sentative for Truro. In 1744 he was made captain of the Dreadnought of sixty guns ; and soon after took the Medea, a French man of war, the first king's ship taken in that war. May 3d 1747 he signalized himself under admirals An- son and Warren, in an engagement with the French fleet off Cape Finisterre, and was wounded in the shoulder with a musket-ball ; the whole ten French ships of war were taken. On the 15th July he was made rear-admiral of the blue, and commander in chief of the land and sea forces employed on an expedition to the East Indies ; and on the 4th of November sailed from St. Helen's, with six ships of the line, fivo frigates, and 2000 soldiers. On the 29th July, 1748, he arrived at St. David's, and soon after laid siege to Pondicherry ; but the men growing sickly, and the monsoons being expected, the siege was raised, and he showed himself as much the general as the admiral in his retreat. Soon after, he received news of the peace, and Ma- dras was delivered up to him by the French. In April 1750 he arrived at St. Helen's in the Exeter, and found that in his absence he had been appointed rear admiral of the white. He was the next year appointed one of the lords commissioners of the admiralty, and chosen an elder brother of the Trinity house. In February

1755 he was appointed vice-admiral of the blue- On the 19th April he fell in with and took the Alcide and Lys, of sixty-four guns each. In

1756 he was appointed vice admiral of the white; and in 1758 admiral of the blue, and

commander in chief of the expedition to Cape Breton; when, in conjunction with general Am- herst, and a body of troops from Ntw England, the important fortress of Louisbourg, and the whole island of Cape Breton, were taken, for which he afterwards received the thanks of the House of Commons. In 17.59, being appointed to the command in the Mediterranean, he arrived at Gibraltar, where, hearing that the Toulon fleet, under M. de la Clue, had passed the Straits, to join that at Brest, he got under sail, and on the 18th of August engaged the enemy. His ship, the Namur of ninety guns, losing hei main- mast, he shifted his rlag to the Newark ; and, after a sharp engagement, took three .large ships, and burned two in Lagos Bay, and the same year arrived at Spithead with his prizes, and 2000 prisoners. On December 8th, 1760, he was appointed general of the marines, with a salary of Ā£3000 per annum, and was also sworn one of the privy council. He died in 1761.

BOSCH (Jacob Vanden), a painter of still life, was born at Amsterdam in 1636. He painted summer fruits of various kinds, with such natural and transparent color, that they appeared deli- cious, and almost real. He died in 1676.

BOSCHAERTS (Thomas Willeborts), a ce- lebrated painter, was born at Bergen-op-zoom ; and when very young, exhibited decided proofs of genius. He proved, under Gerard Segers, a most ingenious artist. Antwerp being at that time the seat of arts, he there executed such a number -of noble pieces as added greatly to the splendor of that city. In 1642 Henry Frederic prince of Orange, and his son prince William, employed him in their service ; and he painted portraits for most of the persons of quality then living. He died in 1670.

BOSCHAS, in ornithology, the common mal- lard, or wild duck, the specific distinction of \vliich consists in the plumage being of a cine- reous color ; the tail-feathers recurvate ; bill strait ; collar white.

Gmelin mentions several distinct varieties of this bird, in the Syst. Nat. the characters of which are described as follows : ā Cirrhata, above gray, beneath white, crest cinereous; Persica, head and upper parts of the neck cinereous, beneath yel- lowish ; major, back sooty. This is larger than the .others, measuring two feet and a half in length ; grisea, entirely cinereous, with the legs and bill black; naevia, with the back black, spotted with yellowish ; nigra, having the head and collar black.

In England only a small number of wild ducks are found in the summer ; because, at that time, they remain in the more northern parts of Europe, and only return to us towards the winter. In F ranee this species is not often seen till the win- ter ; appearing in October, and again departing northward in the spring.

BOSCOVICH (Roger Joseph), a distin- guished natural philosopher, was born at Ra- gusa, on the Adriatic, the llth of May, 1711. Of the rank and circumstances of his parents, nothing has come down to us ; and we are left to conjecture their condition in life from the edu- cation they gave to their son, which was both liberal and well directed. Boscovich, like many

others who have risen to eminence, did not dis- play very marked tokens of ability at school ; and even when he was sent to study philosophy under the Jesuits, who were, at that period, the prin- cipal guides of education in Italy, he seems to have attracted notice rather as a docile and re- gular youth, than as one from whom the sciences were destined to receive either cultivation or ex- tension. In his fifteenth year he was admitted into that celebrated order, and was immediately sent to Rome, where he enjoyed great advantages as to the means of acquiring knowledge. Upon entering on the studies which were prescribed by the rulers of his fraternity, his mind received a new direction^ but his assiduity and perse- verance continued unabated : and after devoting two years to Christian ethics, and to the consti- tutions and rules of his 'order, he returned with avidity to extend his knowledge of the classics, and particularly of the structure and laws of Latin verse ; an accomplishment which, at that time, was deemed essential to a perfect and elegant education. Having completed his no- viciate, he was sent to the Roman college to study mathematics and physical science ; and it was in these pursuits that his great talents first became conspicuous, and secured for him the admiration of his contemporaries. As a reward for his uncommon diligence and success, he was exempted from the operations of a statute by which novices were oound to teach Latin and the principles of composition, fire years before en- tering upon the study of theology. In the theory of religion, however, he seems to have made very little progress. His mind was captivated with those researches only which led to the dis- covery of physical and mathematical truth ; on which account, it is not surprising that his fa- vorite authors belonged to the school of Newton, rather than those of Thomas Aquinas. His emi- nence, as a mathematical scholar, very soon pointed him out as the fittest person to fill th& office of mathematical professor, in the Jesuit college at Rome. For this appointment he was, indeed, particularly well qualified, both by his knowledge of everything that modern science had effected, and also by his intimate acquaint- ance with the works of the ancient geometricians. But his attention was not confined to the in- struction of youth : he was already revolving in his mind some of those sublime and original conceptions which

afterwards astonished the scientific world, and laid the foundation of his peculiar system of Natural Philosophy. In the public disputations, which were then practised in the schools, he advanced his opinions, with the view of ascertaining to what objections they were exposed, and also of deriving from the col- lision of kindred minds, whatever light could be thrown upon enquiries so far removed from the ordinary walks of human thought. While he performed the arduous duties of his professor- ship, he published tracts upon the following very important and difficult subjects : ā the Transit of Mercury ; the Spots in the Sun ; the Aurora Bo- realis ; the Construction of Spherical Trigonome- try; the Figure of the Earth ; the Ancient Argu- ments for the Rotundity of the Earth ; a New Telescone to Determine Celestial Objects ; Oscilla-

ling circles; on Infinites, and Infinitely little Quantities ; the Motion of Bodies in Unresisting Spaces ; the Aberration of the Fixed Stars ; the Inequalities in Terrestrial Gravity, in Astronomy ; on the Limits of Certainty in Astronomical Obser- vations ; on the Solid of Greatest Attraction ; the Cycloid; the Logistic Curve lines; the Vires Vivre; the Comets; Light; Tides; the Rainbow; the Cal- culation of Fractions , the Moon's Atmosphere ; the Centre of Gravity ; the Law of Continuity ; Lenses and Dioptrical Telescopes ; the Objective Micrometer ; and the Divisibility of Matter. The variety and depth of the investigations constitute the strongest evidence that could possibly be ad vanced, in proof of the great industry and tran- scendent acquirements of Boscovich. Nor did his reputation fail to keep pace with his learning; for he was already known and admired over the greater part of Europe. Universities and other learned bodies conferred on him the highest marks of their esteem ; and his presence was deemed an honor at the courts of princes. Pope Benedict XIV. and John V. king of Portugal, consulted him on architecture, hydrodynamics, and similar subjects ; and he was employed to correct the topography of the papal states, and to measure a degree of the meridian there. But it was not only as a man of science that Boscovich stood high in the estimation of the world ; he was also consulted and employed in a diplomatical capacity. He was commissioned by the senate of Ragusa to repair to London, to remove cer- tain suspicions on the part of the British govern- ment, relative to some ships of war which were said to be fitting out in their port for the service of France, and was received by the learned in this country with a respect becoming his well-earned fame. In return for the attention shown to him by the Royal Society, he addressed to them an

elegant Latin poem on the Wjlar and lunar eclipses. He could not, however, comply with their invitation to join the members of that learned body who went to America in 1762, to observe the transit of Venus over the sun's disk. Upon his return to his native country he was appointed to be mathematical professor in the university of Pavia, and to superintend the astro- nomical observatory in the Royal College of Brera. After six years residence in this situa- tion, he was preferred, by the empress queen, to the chair of astronomy and optics in the palatine schools of Milan : and here he might have ended his days in affluence and tranquillity, but for that signal and striking visitation which soon after befel the order of which he had taken the vows. The extensive influence of the Jesuits had long rendered them objects both of suspicion and fear, even among the best consolidated states of Europe. During the early part of the last cen- tury, their power was gradually undermined, and their members were treated with hostility, even by those who professed the warmest attach- ment for the Romish communion, and supported the other monastic societies. In 1773, accord- ingly, an edict was procured for demolishing the society of Jesuits ; and, so strictly was it exe- cuted, that no exemption was afforded to the most eminent or respected of that celebrated brotherhood : i II were proscribed, and stripped

of office and emolument; and Boscovich himself was obliged to seek refuge in the city of Paris. He was, indeed, appointed by the French govern- ment to be one of their directors of optics for the sea service, and received a pension ; but he does not seem to have enjoyed much happiness in that country, or to have regarded his situation in any other light than that of a wretched depend- ence upon the generosity of rulers, who had been very active in creating the distress which com pelled him to accept of it. . His manners were naturally grave, and his temper somewhat irri- table ; while the painful reflection, that the Jesuits were no more, and that his own consequence was involved in their ruin, contributed not a little to embitter his life, and to render his society less agreeable to the gay and volatile people among whom he sojourned. After a residence of ten years, accordingly, he solicited leave to return to his native country; and, arriving at the city of Bassano, he published, in five vols. 4to, a collection of the Works which he had written at Paris. Upon leaving Bassano, he directed his course to Rome, to visit several distinguished persons who had been the companions of his youth, and were now the sharers of that con- tempt and suspicion which were everywhere pointed against their fallen order. He then pro- ceeded to Milan, where he revised some of his own works, and also prepared for the press the poems of the celebrated Benedict Stay, who had written several volumes in Latin verse on the philosophy of Descartes. While thus employed, however, and enjoying the society of those friends to whom early affection and a common grief had engaged his heart, his leave

of absence from Paris, which was limited to two years, drew to a close ; and it thus became necessary either to return to the duties of his office, or to give in his resignation. He preferred the latter. He could not tear himself from the bosom of those who alone were able to amuse the languor of advan- cing age ; and, although he was not insensible to the kindness of the French government, he came te a firm determination to withdraw himself from their patronage, and to relinquish every claim upon their attention. His life was now rapidly approaching its end. He had been some time subject to attacks of the gout; and other in- firmities now pressing upon him, completely overcame his constitution, both in body and mind ; and this distinguished and illustrious philosopher sunk into hopeless fatuity. After lingering five months in this melancholy con- dition, death terminated his existence, on the 13th of February, 1787, in the seventy-sixth year of his age. We would willingly, did our limits permit, exhibit an outline of the Theoria Philo- sophise Naturalis of Boscovich, but we must reˆt satisfied with a few general observations on its leading principles and object. It holds so much of the Leibnitzian hypothesis, as to teach, that the elements of matter are simple and unex- tended ; but it departs from it, in denying the continued extension of these elements, and in asserting that they are perfectly homogeneous. With Newton, Boscovich maintained the exist- ence of mutual forces or powers, which vary, according to the distance, by certain laws ; but

he went further, m asserting that these powers are both repulsive and attractive, and that when either of these terminates the other begins. The theory of the Philosophia Naturalis seems to em- brace, as its first principles, the following views ā that the primary elements, or atoms of matter, are indivisible, unextended, simple, homoge- geous, and finite in number ; that they are dis- persed in an immense space, in such a manner that their distance from each other may extend to any assignable interval; that this interval may be indefinitely enlarged or diminished, but can- not entirely vanish. From this doctrine it fol- lows, that the contact of one atom with another is utterly impossible, because the greatest force with which the one could approach the other, could not overcome that repulsive power which prevents the vanishing of the interval which sub- sists between all individual elements of matter. This is indeed tantamount to the assertion, that the attractive power can never overcome the re- pulsive ; but as it is impossible to explain this doctrine without the aid of diagrams, we shall not enter into it. On the subject of light, Bos- covich adheres to the opinions of Newton, that it is an efflux or eradiation of matter from the sun, propagated with immense celerity, and entering into certain bodies, from

which it may be extri- cated by chemical analysis. ā¢ Agreeably to this general doctrine, he maintains, that although the atoms of light are inconceivably numerous, they are still finite in number ; and in explaining the wonderful properties with which the matter of light is connected, he calls in, with considerable success, the application of his principle relative to repulsion. His notions of electricity coin- cided with those of Franklin, which he reduces very ingeniously to the fundamental principles of his theory ; and we are not certain but some of the late discoveries, by means of electrical energies, lend a considerable degree of support to the speculations of Boscovich. We may mention, in concluding, that our author also at- tempted to explain sensation on the principles of his philosophy, and arrived at conclusions simi- lar to those of the Hartleian hypothesis, with respect to the vibrating motion of the nervous and cerebral matter as the organ of sense. It is enough, however, to have mentioned it; for every new attempt of this kind has only proved more convincingly, that the subject is placed at an immeasurable distance beyond the reach of human investigation.

BOSEA, Golden-rod Tree : a genus of the digynia order, and pentandria class of plants : CAL. is pentaphyllous ; there is no corolla, the berry monospermous. Of this genus there is but .one species, viz. : B. yervamora. It is a native of the Canary and Carribee islands. It has been long an inhabitant of the British botanic gardens, but has never been observed to flower in this country. A strong woody shrub, the branches come out very irregular, and make con- siderable shoots every summer, which should be shortened in spring.

BOSHMEN, BOSHUANAS, BOSJESMANS, or BUSHMEN, a species of Hottentots, so called, according to Sparrman, from their dwelling in woody or mountainous places. They were compa-

ratively unknown to Europeans till visited by Mr. Trutter and Mr. Somerville, whose observations were given to the public by Mr. Barrow, in the appendix to his voyage to Cochin-China. Since that time several narratives of journeys amongst them have been published. Their territory is stated by Lichtenstein to extend from the twenty- fifth to the twentieth degree of south latitude, thirty or forty days journey north from the river Kuruhman. They are evidently of the same original stock with the Caffrcs, but somewhat altered ; inferior in bodily strength and stature, they surpass them in civilisation and in the arts of life. Their towns are of considerable magni- tude. Leetakoo was estimated by its first visitants to contain from 10,000 to 15,000 inhabitants; and though it has suffered by intestine broils, it seems still to contain 7000 or 8000. This city is the capital of the Matchappin tribe, the only one among the Boshuanas yet visited by Euro- peans. Beyond them are the Wauketzens, said to be more numerous, and

their agriculture more improved, but they seem to be ferocious and treacherous. The Chojas, the Marootzees, and the Morolongs, are also mentioned as powerful and numerous tribes. The race seems to improve as it extends northwards, since the Macquanas, the most remote, are also the most numerous and most advanced in the arts. Mr. Salt supposes them to be the same who are called by the Portuguese, Makooanas, and who inhabit immediately in the interior from Mo- sambique. It was through them accordingly that the inhabitants of Leetakoo had first heard of white men.

The Bosjesmans are a species of Hottentots, who, although they do not live within the colony of the Cape, have been, and appear but too likely to be, long connected with its history and in- terests. Their name is connected with their ha- bits, and derived, according to some writers, from their usual mode of attack, that is, from behind the thickets or bushes of the country : a great part of their lives is certainly occupied in predatory excursions. Mr. Campbell having asked one of a remote tribe ' for what end man was made ? ' the answer was, ' for plundering expeditions.' They neither rear cattle nor cultivate the ground ; but subsist, when at home, on the larvte of ants and locusts, which they are very dexterous in securing, the bulbs of the iris, and a few grami- neous roots.

They speak a dialect of the same language as the common Hottentot, but are singularly op- posed to him in the general vigor of their cha- racter. No human being can be more active and cheerful than the Bosjesmans; they emulate the antelope of their favorite fastnesses in agi- lity, and a horse is not able to keep up with them over hilly, or even rough ground. In the day-time they confine themselves to the huts of their kraals, lest the boors should surprise them, and from 180 to 200 will thus herd together in the remote districts of the colony ; but they will often dance the night entirely away, especially at the approach of summer.

Their kraals are composed of distinct huts, about three feet high and four wide, made ot two mats, one of which is bent semicircularly

between two sticks, and left open before, the other closes the hut behind. In the centre the Bosjesman hollows a little circle to hold a whisp of straw, on which he sleeps, coiled round some favorite domestic or hunting animal. When on their expeditions, however, the loftiest chasms of the mountains are their chosen retreats. Mr. Barrow observed the sides of some of these caverns to be ornamented with various sketches of animals, drawn with

great truth and spirit. The upper part of the cave was completely co- vered with a black paint of a pitchy, bituminous character, supposed to be the poison used by the tribe. The weapons which they carry are a small hassagai, uniformly dipped in poison, and a bow and arrows of inferior size. From childhood they are inured to these weapons ; and the boys of a kraal have their bows and well-furnished quivers. In these the men carry from seventy to eighty arrows at a time, with sticks to procure a fire by friction ; their poison and poison brush ; pieces of red ochre and iron ; and shafts to repair their stock of arrows.

In stature the Bosjesmans are exceedingly diminutive ; the men measuring only from four feet six, to four feet nine inches in height ; and the women not more than four feet four inches. Their personal appearance is extremely forbid- ding. The high cheek-bones, rounded eye-lids, and flat nose, of the Hottentots are thrown into a hollow visage, in which the chin is very promi- nent, and a sharp rolling eye, gives a sort of ferocious intelligence to the whole. The men have no dress whatever, and the women only a Hottentot belt round the waist, of which the apron is cut in front into threads ; they wear caps on their heads, and all the trinkets they can procure suspended from their tufts of hair about the neck. The men ornament themselves with a piece of wood or porcupine's quill sus- pended to the nose.

They practice bigamy; the elder men gene- rally having one young wife, and another who is past child-bearing. The projection of the poste-, rior part of the female in these tribes is still more monstrous than in the Hottentot women. If the letter S, it has been wittily observed, be considered as the one expressive of the line of beauty, to which degrees of approximation are admissible, the Bosjesman women are entitled to the first rank in point of form. A section of the body, from the breast to the knee, seems, in fact, the very shape of that letter. It is not to be for- gotten, however, that the women of neither of these races are in any situation to check such a singular mode of growth, or to feel its awkward- ness ; and it may be questioned whether many of the laboring females in this country, are not as widely different in the general shape of their persons, from the higher ranks, who dress tighter and more carefully, as these women are from them. They also possess the other sexual pecu- liarity of the Hottentot female, which wholly disappears in both cases, on their marriage with an European.

In their dispositions, seen under every cir- cumstance of provocation, and for ages goaded by the bad treatment of the Dutch, the Bosjes- maus are sanguinary and wantonly destructive.

' Should they seize a Hottentot,' says Mr. Barrow, ' guarding his master's cattle, not con- tented with putting him to immediate death, they torture

him by every means of cruelty that their invention can frame ; as drawing out his bowels, tearing off his nails, scalping, and other acts equally savage. Even the poor ani- mals they steal are treated in a most barbarous and unfeeling manner ; driven up the steep sides of mountains, they remain there without any food or water, till they are either killed for use, or drop for want of the means of supporting nature.'

When a horde is surrounded by the farmers, and little chance is perceived by them of effecting their escape, they will fight it out most furiously, as long as a man shall be left alive. It frequently happens, on such occasions, that a party will vo- lunteer the forlorn hope, by throwing themselves in the midst of the colonists, in order to create confusion, and to give to their countrymen, con- cealed among the rocks, or in the long grass, at the expense of their lives, an opportunity of exercising more effectually their mortal weapons upon their enemies, and at the same time to fa- cilitate the escape of their wives and children. Their plundering expeditions are conducted not without system. If in carrying off their booty they should chance to be pursued, they always divide ; one party to drive away the cattle, while the other continues to harass the pursuers ; and when the peasantry prove too many for them, they stab and maim the whole herd with poisoned weapons. On all such plundering expeditions, they carry, in addition to their bows and arrows, lances that resemble the Kaffre's hassagai, but of a much smaller size, and always dipped in poison. Their bows are remarkably small, and, in the hands of any one but a Bosjesman, would be entirely useless. From their earliest infancy they accustom themselves to the use of the bow ; all the little boys who came to us at the kraal, carried their bows and small quivers of arrows. A complete quiver contains about seventy or eighty, made like those of the Hottentots ; and, in addition to these, a few small brushes to lay on the poison ; pieces of iron, red ochre, leg bones of ostriches cut in lengths and rounded, and two little sticks of hard wood to produce fire. This is done by placing one horizontally on a piece of withered grass, and whirling the other verti- cally between the hands, with the point acting in a hollow place, made in the surface of the former. In a few seconds of time, the velocity and fric- tion set the grass in a blaze.' See An Account of the Cape of Good Hope, 8vo.

BOS'KY, adj. Fr. bosquet, woody.

And with each end of thy blue bow dost crown My bosky acres, and my unshrubbed down. Shaktpeare.

I know each lane, and every valley green, Dingle, or bushy dell, of this wild wood, And every bosky bourn from side to side. Milton.

BOSMAIFE, an island of Russia, in the pro- vince of Astracan, ten miles

below the city. See

ASTRACAN.

BOSNA SERAGNO, BOSNA SERAI, or SERAI, a large town of Turkey, the capital of Bosnia, 1 10 miles south-west of Belgrade. It is generally garrisoned by Janissaries, and is surrounded by thick

turretted walls connected by an old citadel. Al- together they mount eighty pieces of cannon. Here are manufactures of lances, daggers, and other arms, in which is the chief trade. There are perhaps 500 Catholic and 100 Greek fami- lies interspersed among a population of 12,000. The town is an appanage to the mother of the sultan. Eastward are extensive fertile plains.

BOSNIA, a province of Turkey in Europe, bounded on the north by Sclavonia, on the east by Servia, on the south by Albania, and on the west by Croatia and Dalmatia. It belongs en- tirely to the Turks : but they were on the point of being expelled from it by the Christians, when the Spaniards invaded Sicily, and obliged the emperor to conclude the peace of Passarowitz in 1718, by which he gave up Bosnia to the Turks. It is 200 miles long and 75 broad, containing about 1 3,200 square miles. Though mountainous, it contains fruitful spots, especially in the north. The breed of cattle is excellent, and the wool little inferior to that of Spain. Many of the sheep are sent to fatten on the banks of the Adi Ā£6 in Italy. Here are considerable iron mines, and some few of gold and silver. The inhabitants (Bosniacks) are of Sclavonian origin, and use the purest dialect of the Sclavonian lan- guage. They are generally of the Greek religion, but Mahommedanism is not uncommon, the towns being mostly inhabited by Turks. The total number of native inhabitants does not ex- ceed 80,000 ; that of the Turkish militia is esti- mated at 50,000.

In ancient times the name of Bosnia was Pan- nonia Inferior ; in the middle ages it had its own governors, who were vassals of the sovereign of Hungary ; but in the wars between that power and the Turks, the ā¢ latter succeeded in rendering Bosnia tributary. It continued so till 1463, when Stephen V. the last king of the country, was taken by Mahomet II. and flayed alive, after which his dominions were incorporated with the Tur- kish empire. The modern province is of greater extent than the ancient kingdom, and is divided into Upper and Lower ; the whole forms the go-

vernment of a pacha, under whom are eight de- puty governors called sandgiaks. Lower Bosnia is madĀ« up of the above kingdom, and is divided into the three sandgiaks of Banjaluka, Orach, and Bosna-Serajo, so called from their chief towns. The last is the capital of the country, although the pacha has his seat at Travnik. Up- per Bosnia (otherwise called from the river of that name the kingdom of Rama) consists of portions of Croatia and Dalmatia, with the pro- vince of Herzegovina, or duchy of St. Saba.

BO'SOM, v. & n.

BO'SOM-FRIEND,

Bo'sOM-PARTNER,

BO'SOM-INTEREST,

Bo'SQM-LOVER,

BO'SOM -SEC RET,

BO'SOM-VICE,

Bo'sOM-CHEAT,

Bo'sOM-SLAVE,

Bo'sOM-BARRIER.

Ang.Sax. bosme ; Dutch, boesem ; Germ. busem; Junius derives it from Bow, Booxw, I feed ; I nourish. Skin ner and Wachter from the French poser, for reposer, to rest; to lean upon ; because infants rest and repose

upon the bosom. These appear, however, un- satisfactory to the etymologist in the Ency. Met., r;nd, with his usual research and acumen, he

has suggested what is ingenious, if not con elusive : as we already owe him so much, we shall, without scruple, lay him under further contributions. ' Those,' says he, ' whose ears are accustomed to the change of letters, will easily understand that bosm may arise from fcethm, and this foethm from fassen, fatten, to seize ; to embrace. In this uncertainty a ner/ attempt to trace the -word may be allowed. In Ang.-Sax. we have bu-gan, to bow; bugsum, buhsum. Hence, perhaps, bosme. In Dutch, boogken, to bow; boogsaem. Hence, perhaps, boesem. In German, beugen, to bow; beugsam ; and hence, perhaps, busem. In confirmation it may be remarked, that the Latin sinus, and the Greek KO\TTOC, are the bosom, and also a bay or bow. Bosom then may be so called from its form or shape ; bowing ;

bending ; curving ; arching. It is also applied to that within, or beneath the bosom; as the heart; the feelings or passions; the affections; the desires of the heart : to bosom ; to store ; to treasure up in the bosom ; to seat or fix deeply. The bosom of the deep, the bending surface of the deep ; a bosom-friend, a friend of our affections; a friend affectionately beloved ; entrusted with all the secrets of our bosom; the depository of our feelings and affections, and so of the other compounds.' Ency. Met. Art. BOSOM.

And this chanon toke out a crosselet Of his bosome and shewed it to the preest.

Chaucer's Cant. Tales. Soone her garments loose Upgathering, in her bosome she comprized, Well as she might, and to the goddesse rose ; Whiles all her nymphes did like a girlond her en- close. Spenser.

There with thy daughter Pleasure they doe play Their hurtlesse sports, without rebuke or blame, And in her snowy bosome boldly lay Their quiet heads, devoid of guilty shame. Id.

Unto laws thus received by a whole church, they which live within the bosom of that church, must not think it a matter indifferent, either to yield, or not to yield, obedience. Hooker.

Bosom up my counsel, You'll find it wholesome. Shakspeare.

Our good old friend, Lay comforts to your bosom ; and bestow Your needful counsel to our businesses. Id.

If you can pace your wisdom In that good path that I could wish it go, You shall ha,ve your bosom on this wretch. Id.

This Antonio,

Being the bosom-lover of my lord, Must needs be like my lord. Id.

Whose age has charms in it, whose title more, To pluck the common bosoms on his side. ā¢ Id,

"No more that Thane of Cawdor shall deceive Our bosom-interest; go, pronounce his death. Id

Those domestic traitors, bosom-thieves, Whom custom hath called wives, the readiest helps To betray the heady husbands, rob the easy.

Ben Jonson.

So have I often seen a purple flower, Fainting through heat, hang down her

drooping head, But soon refreshed with a welcome shower, Begins again her lively beauties spread, And with new pride her silken leaves display ; And while the sun doth now more gently play, Lays out her swelling bosom to the smiling day.

Fletcher's Purple Island.

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BOS

I do not think my sister so to seek, Or so unprincipled in virtue's book, And the sweet peace that bosoms goodness ever.

Milton.

Towers and battlements' it sees, Bosomed high in tufted trees, Where perhaps some beauty lies, The cynosure of neighbouring eyes. Id.

To whom the great Creator thus replied :

0 son, in whom my soul hath chief delight, Son of my bosom, Son who art alone

My word, my wisdom, and effectual might !

Id. Paradise Lost.

The fourth privilege of friendship is that which is here specified in the text, a communication of secrets. A bosom-secret, and a bosom-friend, are usually put to- gether. South.

I feel death rising higher still and higher Within my bosom ; every breath I fetch Shuts up my life within a shorter compass.

Dryden's Rival Ladiet.

He sent for his bosom-friends, with whom he most confidently consulted, and shewed the paper to them ; the contents whereof he could not conceive.

Clarendon.

From jealousy's tormenting strife For ever be thy bosom freed. Prior.

She, who was a bosom-friend of her royal mis- tress, he calls an insolent woman, the worst of her sex. Addison.

To happy convents, bosgmed deep in vines, Where slumber abbots, purple as their wines. Pope. No further seek his virtues to disclose,

Or draw his frailties from their dread abode ; There they alike in trembling hope repose,

The bosom of his father and his God. Gray.

The only art her guilt to cover,

To hide her shame from every eye, To give repentance to her lover,

And wring his bosom is ā to die. Goldsmith. Not the soft sighs of vernal gales, The fragrance of the flowery vales, The murmurs of the crystal rill, The vocal grove, the verdant hill, Noi all their charms, though all unite Can touch my bosom with delight. S. Johnson. Reply not ā tell not now thy tale again ; Thou lov'st another ā and I love in vain ; Though fond as mine her bosom, form, more fair,

1 rush through peril which she would not dare.

Byron's Corsair.

BO'SON, n. s. corrupted from boatswain. The barks upon the billows ride,

The master will not stay ; The merry boson from his side His whistle takes, to check and chide

The lingering lads' delay. Pope.

BOSPHORICUM MARMOR, a name given by the ancients to a species of marble, of a yellow- ish white colour, with beautiful veins of a some- '- hat darker hue ; called also, from its transpa- rency, phengites.

BOSPHORUS, or BOSPORUS, from fiovc, a bullock, and Tropoc, passage; in ancient geogra- phy, a long and narrow sea, which it is sup- posed a bullock may swim over. In a more general sense, it is a long narrow sea running in between two lands, or separating two conti- nents, and is chiefly confined to two straits in the Mediterranean sea, viz. 1. Bosphorus Cimme- rius, or the Scythian Bosphorus, so named from its resemblance to the Thracian ; and, 2. Bos-

phorus Thracius, the Thracian Bosphorus, now commonly called the Straits of Constantinople, or the Channel of the Black Sea, the strait through which the Black Sea pours its waters into the Propontis, or Sea of

Marmora. It is called Bogaz by the Turks, and divides Europe from Asia. It is about a mile broad, between Constantinople on the European side, and Scu- tari on the Asiatic. Tournefort supposes the name to have arisen from the ox market being held near this strait.

BOSQUET (Francis), a learned prelate of France in the seventeenth century, was born at Narbonne, and studied at Toulouse. Before he took orders he had been intendantofGuienne and Languedoc, attorney-general of Normandy, and counsellor of state. In 1648 his friend John de Plan tavit resigned his bishopric of Lodeve to him. In 1655 he was made bishop of Mont- pelier, and continued so till his death, ill his sixty-third year, A. D. 1676. His works were, 1. A History of the Gallican Church ; 2. History of the Eight Popes who resided at Avignon ; from 1300 to 1394: 3. The Liberties of the Gallican Church : and, 4. Notes on the Canon Law.

BOSQUETS, in gardening, from boschetto, Ital. a little wood ; groves or compartments in gardens, formed by branches of trees disposed either regularly in rows, or wildly and irregularly, according to the fancy of the owner.

BOSS', v. & n.) ' Bosse, Fr. from pusa,

BOS'SED, > which is formed from $vaa,

BOS'SY. j tyvvcua, inflo ; vffa, pusa,

busa, bussa, bosse. From pusa the Latins formed pusula, pustula (a pustule'). Menage. ' Bosse, bokeler, shield, or the knoll of a hill.' Kilian, Bosseln, to push out ; to force ; to protrude.' ā Wachter. ' Boss, res quasi e"xtumescens ; any thing rising up.' ā Skinner. A boss is, therefore, any thing rising or raised up ; swollen ; pro- jecting ; thrusting ; or pushing forth.' Ency. Met. 1 An ornament raised above the rest of the work ; a shining prominence ; protuberances on an- cient bucklers or bridles. Johnson.

He runneth upon him, even on his neck, upon the thick bosses of his bucklers. Job xv. 26.

A broche she bare upon hire low colere,

As brode as is the bosse of a bokelere.

Chaucer. Canterbury Tales.

And on her shoulder hung her shield, bedeckt Upon the bosse with stones that shined wide, As the faire moone in her most full aspect ; That to the moone it mote be like in each respect.

Spenser.

True is that I at first was dubbed knight By a good knight, ā the knight of the red-crosse ; Who, when he gave me armes in field to fight, Gave me a shield, in whieh he did endosse His deare Redeemer's badge upon the bosse. Id,

What signifies beauty, strength, youth, fortune, embroidered furniture, or gaudy bosses? L' Estrange.

This ivory, intended for the bosses of a bridle, was laid up for a prince, and a woman of Caria or Maconia dyed it. Pope.

A boss, made of wood, with an iron hook, to hanu on the laths, or on a ladder, in which the labour. .ā¢ puts the mortar at the britches of the tiles. Muxun.

If a close appulse be made by the lips, then i, framed M; if by the boss of the tsngue to the palatr, near the threat, then K. Holder.

There they formed

Their ardent virtues : in the bossy piles, The proud triumphal arches ; all their wars, Their conquests, honours, in the sculptures live.

Dyer's Ruins of Rome.

BOS'SAGE, n. s., in architecture, any stone that has a projecture, and is laid in a place in a building to be afterwards carved. Rustic work, which consists of stones, which seem to advance beyond the naked of a building, by reason of in- dentures or channels left in the joinings : these are chiefly in the corners of edifices, and called rustic quoins.

BOSSE, a glass bottle, used in the French ar- tillery, very thin, and containing four or five pounds of powder. Round the neck four or five matches are hung, after it has been well corked ; a cord, two or three feet in length, is tied to the bottle, which serves to throw it. The instant the bottle breaks, the powder catches fire, and every- thing within the immediate effects of the explo- sion is destroyed or injured.

BOSSE (Abraham), an able engraver, born at Tours, well skilled in

perspective and architec- ture. He wrote two treatises, which are esteem- ed : the one on the manner of designing, and the other upon engraving.

BOSSLEA. In botany, a genus of plants, class diadelphia, order decandria'; CAL. two- lipped, the upper lip heart-shaped ; legume pe- dicelled, compressed, many-seeded. One spe- cies only, B. petrophylla; a New Holland shrub. BOSSU (Rene le), born at Paris in 1631, was admitted a canon regular in the abbey of St. Ge- nevieve in 1649; and, after a year's probation, took the habit. He taught literature with great success in several religious houses for twelve years. He then published a parallel betwixt the principles of Aristotle's natural philosophy, and those of Des Cartes, with a view to reconcile them; which was but indifferently received. His next treatise was on epic poetry ; which Boileau declared one of the best compositions on that subject in the French language, and which pro- duced a friendship between them. He died in 1680, and left a great number of MSS

BOSSU ET (James Benigne), bishop of Meaux, was born of an ancient family at Dijon, in 1627. He was placed, while young, imder the care of the Jesuits, who, on the discovery of his abilities, sought to gain him for their order ; he was removed to Paris, and entered at the college of Navarre ; and in 1652 took hiˆ degrees in divinity. He after- wards went to Mentz, where he was made a canon. Here he applied himself to the study of the Scriptures and the fathers, especially of St. Augustin ; until, becoming a celebrated preacher, he was invited to Paris, and appointed to preach before the king. He was particularly celebrated ior his funeral orations. At court he maintained an unusual dignity and independency of cha- :acter ; and, without any solicitation on his part, was created bishop of Condom, a dignity which ne resigned in 1 670, on being appointed precep- tor to the dauphin. In this situation he wrote for his pupil his celebrated Discourse on Univer- sal History. When the prince's education was completed, Louis XIV. raised him to the see of Meaux, and appointed him counsellor of state,

and almoner to the dauphiness and duchess of Burgundy. He was also made a member of the French Academy and superior of the Royal Col- lege of Navarre. The leisure which he now en- joyed, was devoted to the defence of the Catholic church, both against infidels and Protestants ; and some years before his death he retired to his diocese, and devoted himself to the duties of his functions there. While thus engaged he died in 1704, at the age of seventy-seven. His Ex- position of the Roman Catholic Faith, addressed principally to Protestants, was nine years waiting the approbation of the pope. The points on which he chiefly lays stress, are the antiquity and unity of the churches, and the accumulated authorities of fathers, councils, and popes. He was ably answered by Claude and other

ministers of the French Calvinists, as also by archbishop Wake, who, in his Exposition of the Doctrine of the Church of England, exposes the management and artifice used in the suppression and altera- tion of Bossuet's first edition. This great orna- ment of the French church was zealous for the re-union of the churches, but nothing was to be yielded as a matter of right. He was not an advocate for the infallibility of the pope, or for his assumed right of deposing kings. On the contrary, he resisted these doctrines with energy, and lost a cardinal's hat by opposing Innocent XI. in claims contrary to the independence of the crown and clergy of France. But though a pro- found enemy to persecution, he raised no re- monstrances against the cruel treatment of the Hugonots by Louis XIV.

BOSTANGI BASCHI, or chief gardener, in the Turkish affairs, an officer who has the super- intendance of the gardens, water-works, and houses of pleasure, with the workmen employed therein, one of the most considerable posts in the Turkish court.

BOSTON, a corporation and market town of Lincolnshire, which sends two members to par- liament, is commodiously seated on both sides of the Witham, over which it has a cast-iron bridge, newly erected, and, being near the sea, enjoys a good trade. Its name is an abbreviation of Bo- tolph's town, from Botolph, a Saxon, who had a monastery here, and is supposed to have been its founder. It had formerly, besides St. Botolph's monastery, a priory, four friaries, and three col- leges, whose lands Henry VIII. gave to the town. It had likewise two churches, St. John's and St. Botolph's ; the former of which has long since gone to decay, and not the least remains of it are now visible; the church-yard is however used as a burying-ground. St. Botolph's church is a handsome structure of the ornamented, pointed architecture, and is the largest parochial church known without cross aisles, being 300 feet long within the walls, and 100 feet wide. It is ceiled with English oak, supported by tall slen- der pillars ; it has 365 steps, fifty-two windows, and twelve pillars, answerable to the days, weeks, and months of the year. Its tower, the highest in Britain, was begun to be built in the year 1309, and is 282 feet from the level of the river, having a beautiful octagon lantern on the top, which is a guide to mariners as they enter the dangerous channels ef Lynn and Boston Deeps ;

and may be seen forty miles round the country. The architecture of the whole is light, yet mag- nificent. The interior is furnished with a good organ, a clock with chimes, and eight bells.

The market-place is spacious, and is orna- mented by a handsome market cross, in which is a good chamber appropriated to the purposes of corporation meetings, card assemblies, &c. Here is also a handsome theatre, with generally a good company of actors. Among the charitable foun- dations are, a free grammar-school, two charity schools, a general dispensary, and two national schools on Bell and Lancaster's plan. It has also a neat theatre. Here are, besides, several places of religious worship for dissenters; the town, of late, has been much extended, and con- siderably improved by lighting, paving, and cleansing the streets, deepening the river, and enlarging the harbour. The public libraries and news-rooms are well supported and furnished ; the market-place is spacious, and is ornamented with a handsome cross, and commodious assem- bly-room. In the reign of Henry I. a gang of desperadoes, who came to the fair in the disguise of monks and priests, set fire to Boston ; but by its thriving trade it soon recovered the damage sustained. The Hans-Towns established a guild for wool here, but when the prohibition on the importation of wool was passed, the trade gra- dually declined : however, the enclosures of late years, and its navigation, have again revived its consequence. In 1772 the corporation built a good fish-market, by which the town is well sup- plied with both sea and river fish. Besides a considerable export of oats and other grain, it has a growing trade to the Baltic for hemp, tar, timber, &c. The neighbouring country being rich marsh land, it feeds vast numbers of sheep and oxen, remarkable for their size and fatness : and the fens have been largely enclosed of late, and yield noble crops of oats. The town was first incorporated by Henry VIII.; and Elizabeth gave the corporation a court of admiralty over all the neighbouring sea-coasts. It is governed by a mayor, recorder, twelve aldermen, and eighteen common council, with a judge-advocate, town-clerk, &c. The members are elected by the resident freemen, who pay scot and lot. Bos- ton was the birth-place of John Fox the martyro- logist. It is thirty-six miles S.S.E. of Lincoln, and 116 N. of London.

BOSTON, the metropolis of Massachusetts, and ' one of the most flourishing of the Eastern States of North America, was founded in 1630, and is situated in Suffolk)county, in a peninsula of about four miles in circumference, at the head of Mas- sachusetts Bay. Here originated that resistance to the British authorities which terminated in the independence of the United States. The isthmus which connects this peninsula to the main land is at the S.S.W. end of the town. It is not very regularly built, but lies in the form of an amphi- theatre on a rising ground, around the head of the bay, which gives it an agreeable appearance in sailing up the harbour. This is one of the best in the United States, safe from every wind, and accessible at all seasons for vessels of the greatest burden. Five hundred vessels may ride at an- chor here ; yet the entrance, defended by two

forts, is so narrow, that but two ships can get in a-breast. About eighty wharfs face the harbour ; the amount of shipping arrived here in 1815, was 143,420 tons, the greatest amount belonging to any part of the Union, except New York.

The neighbourhood is fertile and populous, connected with the capital by noble roads, while the Middlesex canal opens a wide communica- tion with the interior. Charlestown, but one mile to the north, is connected with this canal, by a bridge over the river Charles. The public buildings of Boston are a state-house, court- house, work-house, a council-chamber, a trea- surer and secretary's office, a bridewell, and a powder magazine, besides seven public schools, and eleven churches for congregationalists, episco- palians, baptists, quakers, and Roman catholics. Several humane and literary societies are also in- corporated, for benevolent purposes, and sup- ported with great liberality. On the west side of the town lies the Mall, a handsome public walk, ornamented with several rows of trees. Beacon Hill has an elegant monument erected in com- memoration of some of the most important events in the Revolution. Although now so flourishing, no town in the United States has been more re- tarded in its progress than Boston. In 1676 a fire consumed forty-five houses, a church, and several storehouses. In 1697 another fire de- stroyed eighty houses, seventy warehouses, and several ships. In 1727 it was much damaged by an earthquake. In 1747 the court-house and public records were burnt. In 1760 houses and property to the amount of 444,000 dollars were destroyed by fire, which also did much damage in 1761 and 1764. During the siege of 1775 upwards of 400 houses were destroyed by the British troops. In 1787 above 100 houses were burnt; and July 30th, 1794, forty houses, seven rope-works, and several storehouses, were entirely consumed, to the amount of 200,000 dollars. In consequence of these disasters, an order was at this time made by the town authorities, that no houses should hereafter be built of wood to the height of more than two stories.

BOSTON, EAST, or what may be called the O'd Town, consists of numerous streets, lanes, and alleys, having little regularity or convenience ; but they are clean, and for the population con- tained, and the business conducted here, pre- served in good order. There are, however, some spacious streets, such as State and Common Streets, and a few others. The former being on a line with Long-wharf, where strangers usually land, exhibits a flattering idea of the town. Se- veral new streets, consisting of large stores and warehouses, connect it with India wharf.

Franklin Place, adjoining Federal Street theatre, is a great ornament to the town. It contains a monument of Dr. Franklin, who was a native of this town, and is encompassed on two sides with buildings, which, in point of elegance, are not exceeded in the United States. Here are kept, in capacious

rooms, given and fitted up for the purpose, the Boston library, and the valuable col- lections of the historical society. Most of the public buildings are handsome, and some of them are elegant. A magnificent new state-house, of which the foundation stone was laid in 1795, has

been built apon the south side of Beacon Hill. .The lower part is constructed in a plain and simple style of architecture, with red brick. The extent of the front is 1 73 feet, and over the centre rises a spacious dome, terminated by a circular lantern, 100 feet above the foundation. The prospect from this is magnificent, surpassing everything else of the kind perhaps in the United States. The town, with its numerous buildings, the harbour, islands, shipping, a fine country in- terspersed with villas, and about twenty flourish- ing towns, are to be seen here- Other important improvements have also been executed. On the south side of State Street, stands a very lofty and extensive hotel, under the direction of one of the principal merchants in the town. The house is seven stories high, and occupies a large extent of ground.

An extensive range of lofty warehouses has been erected upon India wharf: they are built of red brick, with much neatness and uniformity. Offices for the merchants are below, and the upper part of the building is appropriated to the reception of

BOSTON, WEST, contains the dwelling houses of the principal merchants. A number of elegant buildings have been erected here within these few years, and wide spacious streets, consisting of handsome private houses, are still forming throughout that end of the town. Boston is well paved, and has excellent foot-paths of flag- stones. The markets are situated near each other, close to the water side, and are supplied with every description of provisions in the greatest plenty. Besides its connexion with Charlestown, it is also united by a bridge 3,840 feet long, with the town of Cambridge ; both bridges are kept in good order by the produce of a cent. toll. The population, in 1800, was 24,937 ; in 1820, 43,000. It is 252 miles north-fast of New York ; 347 north-east of Philadel- phia, and 500 north-east of Washington

BOSTON (Thomas), a pious divine of the church of Scotland, who flourished about the end of the seventeenth century. He wrote many books on divinity, which were long extremely popular. Among these, his

illustration of the Assembly's Catechism, his Treatise on the Covenant, his Human Nature in its fourfold State, and his Crook in the Lot, have gone through a vast number of editions.

BOSTRICHUS, in entomology, a genus of coleopterous insects, whose distinguishing cha-

racters are the antenna clavated, the club solid ; thorax convex, with a slight margin; head in- flected, and concealed under the thorax.

BOSWELL (James, Esq.) of Auchinleck, the son of the Hon Alexander Boswell, lord Auchin- leck, was born at Auchinleck in 1740, and studied the civil law at Edinburgh. In 1760 he visited London, for which place he ever retained a par- tiality ; and was desirous, at this period, of a commission in the guards ; but was withheld by parental authority. In 1763 he went to Utrecht, and proceeded through Switzerland to Italy, where he contracted an intimacy with Paoli of Corsica. He returned to Scotland in 1766, and, being admitted an advocate, was employed in the celebrated Douglas cause, the particulars of which he published in a pamphlet. In 1768 he printed An Account of Corsica, of which Dr. Johnson spoke in high terms. The year following he married Miss Mary Montgomery, his cousin, who, at her death in 1790, left him two sons and three daughters. In 1782 he lost his father, on which he removed to London, with a view to profes- sional practice, but never succeeded; the only appointment he obtained was that of recorder of Carlisle. In 1785 he published A Journal of a Tour to the Hebrides, which met with a favorable reception ; as likewise did his more important work, The Life of Samuel Johnson, LL. D. which appeared in 1790, in 2 vols. 4to, and forms one of the most exquisite and amusing de- lineations of character in our language. Mr. Boswell was also the author of Two Letters to the People of Scotland, printed in 1783 ; the Hypochondriac, a series of papers in the London Magazine, and several Miscellaneous Pieces in various periodical publications. He died in London in 1795.

BOSWORTH, a market town of Leicester- shire, on a high hill, memorable for the decisive battle fought near it between Richard III. and the earl of Richmond, afterwards Henry VII. The church is spacious, with a very beautiful spire. Various fragments of sundry lances, &c. are shown as having been ploughed up at Red- more or Bosworth Field. It has a market on Wednesday, and fairs May 8th, and June 10th. It is 13 miles north-east of Leicester, and 106 N.N.W. of London. Long. 1Ā° 18′ W., lat. 52′ 40Ā° N.

BOTAGIUM, in middle age writers, a fee paid for wine sold in butts.

BOTALE FORAMEN, in anatomy, an aperture in the heart of a foetus, whereby the blood cir- culates, without going into the lungs, or the left ventricle of the heart.

BOTALLUS (Leonard), physician to the duke of Alencon, and to Henry III. was born at Asti in Piedmont. He introduced at Paris the prac- tice of blood-letting, which was condemned by the faculty ; though soon after his death it came into rather too general practice. He wrote, 1. De Curandis Vulneribus Sclopetorum, 1560, 8vo 2. Commentarioli duo, alter de Medici, alter de /Egroti, Munere, 8vo. 3. De Curatione per Sanguinis Missione, 1583, 8vo. His works were collected and published at Leyden in the year

1660.

BOTANY, \ Gr. /Jorovij, a herb, herb

BOT'ANIST, / age ; relating to herbs ; skilled

BOTAN'ICAL, Vin herbs; a part of natural

BOTAN'ICK, i history which relates to vege-

BOTANOL'OGY. J tables ; the science of plants.

Botanist, one who studies the various species of

plants. Botanology, an oration or discourse

upon plants.

Some botanical criticks tell us, the poets have not rightly followed the traditions of antiquity, in meta- morphosing the sisters of Phaeton into poplars.

Addison,

The uliginous lacteous matter, taken notice of by that diligent botanist, was only a collection of corals.

Woodward.

Then spring the living herbs, beyond the power Of botanist to number up their tribes. Thornton.

While botanistt, all cold to smiles and dimpling, Forsake the fair, and patiently ā go simpling.

Goldsmith.

1. BOTANY, considered in its details, treats of the elements, of the immediate principles, of the internal and external structure, of the functions, of the organs, and of the similitudes and dissi- militudes of the almost infinite multitude of beings of which the vegetable world is com- posed.

2. Chemistry explains the constituent elements and the immediate principles of vegetables ; anatomy and physiology indicate the structure of their system and the uses of their parts ; bo- tany, properly so called, teaches us to compare, to describe, and to name plants, and to class them according to the mutual affinities which are indicated by their external characters.

3. In this article it is not proposed to enter into any investigation of chemical botany, which has no practical relation to the study of the science, and which more properly forms a part of the science of chemistry. The heads into which the following remarks will be divided are, 1 . The analogy of the science ; or of the differences which exist between vegetables and other ani- mated beings, and of their resemblances. 2. The history of the science. 3. The anatomy and physiology of plants. 4. Pure botany, comprehending the theory and principles of the science, its terminology, and its classifications.

I. OF THE ANALOGY OF THE SCIENCE.

4. Among the multitude of beings which cover the surface of our planet, man only is possessed of the intellect which raises him above other animals. The latter are the mere slaves of their feelings, or of instinct; but man, whose only laws act upon his own free will, by the operations of the mind, is divested of the mere sense of necessity or of want, and directs his intelligence to the examination and knowledge of the other beings which constitute that glorious nature which has been formed for his advantage. The infinite variety of forms, and the imposing appearance of those objects which surround him, not only offer him matter for admiration, but carry him yet further; he is induced to study the laws

by which they act or live, the qualities, whether useful or injurious, which they possess, and the affinities which they bear to himself and to each other. God, mind, and matter, are the subjects of the meditation of man. But if he would devote himself to all the departments of know- ledge, which are included under these three great names, his natural weakness would compel his mind to sink under the exertion.

5. Hence the origin of sciences, into which all nature is divided by certain limits. By the aid of analysis, the fruit of intellectual ob- servation, all knowledge is separated into different branches; and though the boundaries of the sciences are confined in appearance, that limi- tation has been the means by which each has been brought to its present .state of perfection, and by which the knowledge of one science has been made to bear upon that of another.

6. On the one hand, intellect has given rise to what are called the intellectual or moral sciences ; on the other hand, observation has created the natural or physical sciences ; and these are di- visible under three heads, that is to say, PHYSICS, medically considered, CHEMISTRY, and NATURAL HISTORY. The physician directs his attention to the properties and maladies of matter in ge- neral ; the chemist considers the action of its elements ; and the naturalist studies the phenor mena of particular parts.

7. The district of the naturalist is confined to what are called the three kingdoms of nature ; and no limits can appear more certain or decided than those within which these kingdoms are confined. The mineral kingdom is composed of brute matter, and is only susceptible of in- crease, by the juxta-position of the substances which combine in its formation. Vegetables are furnished with organs, by means of which they assimilate and adapt to their purposes the elements which surround them ; but, fixed by the hand of nature to one spot, they are incapable of other movements than those

which are peculiar to their organisation, or than those which are communicated by neighbouring bodies. But animals which are endued with similar properties in many respects, and which are propagated in like manner by peculiar organs, are also furnished with instinct, which teaches them how to distinguish their aliment, and to move from place to place. But do these limits absolutely exist in nature, or are they the imperfect creatures of the mind of man ? And is not all nature connected by an inconceivable and inextricable multitude of affi- nities, crossing and interlacing each other in all directions, in such a manner as to render it im- possible for us to circumscribe any one of her works within bounds so absolute that she will not be found overleaping them in some corner or another ? It will probably be found that the affirmative is the answer to these suggestions, and that the deeper becomes our knowledge of the productions which occupy our minds, the more numerous the exceptions will be found to every law by which man in hi? ingenuity has

fancied that he has fettered those operations of nature from which his own existence has been derived.

8. What, for example, is a vegetable? This word is in every body's mouth, and yet no one has hitherto been able to define it in so exact a way as to fix the certain line by which the ve- getable is to be distinguished from the animal. In this respect men of yscience are not to be separated from the multitude, except that they have acquired the habit of doubting, to which they have been conducted by study and medi- tation.

9. The division of minerals, vegetables, and animals, already spoken of, has been long ad- mitted ; and if we judge only by our first im- pressions, the distinction is not to be shaken. There is certainly something imposing in that simple manner of regarding the works of the creation; but, if we think upon it scrupulously, we shall be at no loss to perceive that it cannot be applied with precision, as we have no means of ascertaining at what particular point either sensation or sensibility cease to exist.

10. For this reason many modern philosophers reject the division of the three kingdoms, and admit only two great classes, of organic and in- orfanic substances. The latter class embraces all brute matter ; fluids, gas, minerals. The moleculse of which these are composed are subject to the laws of chemistry, physics, and mechanics. The other class includes animals and vegetables ; their constituent nioleculse are in a perpetual state of motion. The organised particles of which these moleculac are constituted

are irritable, that is to say, susceptible of contraction, upon the application of particular stimulants ; a wonderful power, the effects of which we are daily called upon to admire, but the first cause of which, like all other first causes, is beyond the perception of the human mind, and is designated by the appel- lation of the vital principle.

11. Endowed with this power, an organic body is able to offer resistance to such external causes as are prejudicial to it, to reject such substances as are useless or hurtful, to select those which are best adapted to its nature, to associate and dispose them according to the laws of its peculiar organisation, to communicate to them the motion which animates its moleculae, to increase in volume, and finally to reproduce other beings of the same nature as itself. Jn the opinion of an ingenious Frenchman, the process of generation and nutrition, rightly con- sidered, are two modifications of one and the same phenomenon. It is, therefore, irritability which distinguishes to our perception animals and vegetables from brute matter. But if irri- tability is absent, no fixed line of demarcation can be assigned.

12. Brute matter is formed by the attractive power of its elements. Organic bodies owe their existence to beings of their own kind. The first ceases to exist whenever the powers of chemistry or mechanics become greater than those by which the aggregation of the moleculae of matter is maintained. The second perish when the organs accessary to their existence lose their irri- tability.

13. The limits of organic and inorganic bodies may, therefore, be considered to be ascertained with tolerable, if not with rigid, precision. The differences between vegetables and animals must now occupy our attention. A glance at the pe- culiarities of each will show in what these dif- ferences consist.

14. If we cast our eyes only upon the higher orders of plants and animals, in which organi- sation is in its highest state of perfection and development, no difficulty will be found in per- ceiving how wide a difference reigns between them. But in the lower orders of each, these differences vanish away. We will consider the connexion of animals and vegetables, both in their most perfect and most imperfect state.

15. And, firstly, their most perfect state of organisation. Carbon, oxygen, hydrogen, and occasionally azote, constitute the basis of vege- tables. Occasionally metallic oxides, and some alkalies and earths are found also, but they exist in very minute quantities, and cannot be said to form any part of the peculiar character of vege- tables. Animal matter offers the same compound ; but differs remarkably in this, that while carbon is in

excess in vegetables, azote is in excess in animals. A vegetable is wholly composed of an homogeneous, transparent, flexible, colorless substance, forming a mass, in which, by the aid of powerful microscopes, we are able to detect no other organisation than what is caused by the cohesion of an infinite multitude of tubes or cells, of various conformation. In animals, the struc- ture is far more complex. Three organic ele- ments enter into their composition. The first is the cellular tissue, which is a mass of mem- branous and continuous cellules, the cavities of which communicate with each other through pits or perforations in their sides ; the second is the irritable fibre, consisting of long filaments, evi- dently possessing a power of contraction, com- posing the muscles by their union, and lining the arterial tubes and the intestinal canal ; the third is the medullary substance; an homogeneous pulp, which presents to the eye, when examined through a microscope, a conglomeration of minute globules. The brain, the spinal marrow, and the nerves, are composed of this substance. Animals are furnished with an intestinal canal, usually open at each extremity. One orifice is for receiving aliment, the other for voiding that part of the food which is useless for nutrition. The intestinal canal is furnished, for a part of its length, with pores, which absorb the nutritive moleculee, and throw them into ‘ the torrent of circulation.’ Plants have no intestinal canal, and their absorbent pores are diffused over all parts of their surface. For this reason. Aristotle and Boerhaave designated plants by the title of animals turned inside out.

16. But, if we consider the distinctions between those animals and vegetable substances which are imperfect in the greatest degree, wfe shall find that nearly all these discrepancies art non-existent. The infusorial animalculae are. fo the most part, formed with nothing more tha Ā» ar. intestinal canal, with two foramina; or, as a well- known writer has observed, they are all stomach. Among plants, the genera Palmella, Echimeila,

Protococcus, and many others, possess the same simplicity of anatomical structure. The power of motion, which is believed to be the peculiar attribute of animals, equally exists in the genus Oscillatoria of vegetables. The propagation of the polype, by separation into many parts, is precisely the mode of increase which takes place in many Confervae. As to the distinction of irri- tability in animals, and non-irritability in vege- table bodies, it is one of those problems which, perhaps, will never be solved. That the presence of nervous and muscular fibre is not essential to even animal irritability, as some have supposed, is obvious from the infusoria, in

which neither muscle nor nerve exist, and which are, notwith- standing, endued with irritability. It is probable that every organic body, which possesses the capability of development, is, from that circum- stance alone, irritable, although the power of contraction may not be always manifest ; for nutrition, or the power of assimilating foreign substances, and incorporating new moleculae with themselves, which living beings possess, and of subjecting them to the laws of organisation, of necessity supposes a force of suction which attracts the nutritious juices. But how is suction to take place otherwise than by the alternate con- traction and expansion of the absorbent vessels ? The phenomena of nutrition are, therefore, a proof of irritability ; and since plants increase, it is clear that they possess powers of nutrition, and consequently are irritable. Besides which, many exhibit motions, as in the Oscillatoria, above alluded to, and in the commen sensitive plant, which cannot be explained upon the or- dinary laws of physics, and which may be sup- posed to result from a power of contraction, of what may be called the muscular fibre.

1 7. Plants are operated upon in the same way as animals, by the application of poisonous or corrosive substances.

18. M. F. Marcet, of Geneva, has lately pub- lished the result of some curious experiments respecting the effect of both mineral and vege- table poisons upon the system of vegetables. His observations were chiefly made upon the common kidney bean (Phaseolus vulgaris), and a comparison was always made with a plant watered with spring water. ‘ Until now,’ the author observes, ‘ plants have been supposed to be distinguished from animals by the absence of organs corresponding to the nerves of the latter class ; but the results of my experiments tend to prove that they are capable of being affected by such poisons, in a manner analogous to that in which animals are affected by them.’ His ex- periments may be divided into those in which metallic poisons were employed, and those in which vegetable poisons were the agents. Me- tallic poisons. ā A vessel, containing two or three bean plants, each with five or six leaves, was wa- tered with two ounces of water, containing twelve grains of oxide of arsenic in solution. At the end of from twenty-four to thirty-six hours, the plants had faded, the leaves drooped, and had even begun to turn yellow. Attempts were afterwards made to recover the plants, but without success. A branch of a rose tree was placed in a solution of arsenic, and in twenty-four hours, ten grains

of water, and 0‘12 of a grain of arsenic had been absorbed. The branch exhibited all the symptoms of unnatural decay. In six weeks a. lilac tree was killed, in consequence of fifteen or twenty grains of moistened oxide of arsenic having been introduced into a slit in one of the branches. Mercury, under the form of corrosive sublimate, was found to produce effects similar

to those of arsenic. But no effect was produced upon a cherry tree, by boring a hole in its stem, and in- troducing a few globules of liquid mercury. Tin, copper, lead, muriate of barytes, a solution of sulphuric acid, and a solution of potash were, found to be all equally destructive of vegetable life. But it was ascertained, by means of sulphate of magnesia, that those mineral sub- stances which are innocuous to animals, are harmless to vegetables also. Vegetable poisons. In the experiments with vegetable poisons, the bean plants were carefully taken from the earth, and their roots were immersed in the solutions used. It had been previously ascertained, that a plant so transplanted and placed in water, under ordinary circumstances, would remain in excellent health for six or eight days, and con- tinue to vegetate as if in earth. A plant was put into a solution of nux vomica, at nine in the morning. At ten o'clock the plant seemed unhealthy, at one the petioles were all bent in the middle, and in the evening the plant was dead. Ten grains of an extract of Cocculus menispermum, dissolved in two ounces of water, de- stroyed a bean plant in twenty-four hours. Prussic acid produced death in eighteen hours; laurel water in six or seven hours ; a solution of Bella- donna in four days ; alcohol in twelve hours. From the whole of this experiment, M. 'Marcet concludes, 1st. That metallic poisons act upon vegetables nearly as they do upon animals. They appear to be absorbed and carried into different parts of the plant, altering and destroy- ing the vessels by their corrosive powers. 2nd. That vegetable poisons, especially those which have been proved to destroy animals by their action upon their nervous system, also cause the death of plants. Whence he infers that there exists in the latter a system of organs which is affected by poisons nearly as the nervous system of animals.

19. From these experiments it is impossible not to perceive that the fibrous tissue of plants and of animals, as well as their absorbent vessels, are acted upon in the same way by the applica- tion of injurious matter, whence it must be con- cluded, that a strict similarity exists between the two kingdoms in that particular.

20. In sensibility, as distinguished from irri- tability, or in the possession of a nervous system, there is now scarcely room for doubting that plants agree with animals. The discoveries of Dutrochet show that in the, system of vegetables a matter exists which is altogther analogous to the nerves of animals. The latter are composed of an agglomeration of an infinite number of minute globular particles, which are concrescible by the action of acids, and resoluble by the ap- plication of alkalies. In the sensitive plant, Dutrochet has ascertained that sensibility de- pends upon the presence of a vast number of

particles, which are affected by chemical agents in the same way as the nerves of animals. They line the cellular tissue, and are plentifully distributed over the tubular and spiral vessels, or tracheae.

21. Neither can the power of perception be denied to exist in some plants, in as distinct a state as in many animals. We see that the former move, that they seize little insects, that they retreat from the approach of danger, and that they appear to possess a faculty of selecting that nourishment which is best adapted to the peculiarities of' their structure. Can any one attribute the power of sense to zoophytes, to corallines, and deny its existence in the Dionaea, or the sensitive plant ? is it possible to ascribe it to the Infusoria, and to refuse >t to Oscillatorias ? surely, no argument can be employed in justifi- cation of such an opinion, except such as may be deduced from analogy. And let us see to what such an argument may be imagined to amount.

22. On one hand, considering that zoophytes perform motions precisely similar to those which are peculiar to animals visibly provided with nerves and muscles, we should conclude that the motions of zoophytes have a similar ˆrigin ; and on the other hand, bearing in mind that the small number of plants which perform what appear to be voluntary motions are, in all ap- parent respects, organised in just the same way as other plants which have no such motion, we are equally justified in inferring that those plants in which no motion is observable have the same power of contraction as the others, but in an insensible degree.

23. In their different modes of generation, animals and plants are remarkably similar. Envelopes more or less hard and numerous ; an embryo concealed within these envelopes ; a small quantity of nutrition ready prepared for the early use of the young being ; these are common both to the seed and the egg. A double foramen exists in the ova of many of the lower animals, as in frogs ; it is equally present in the seed, or ovula, of nearly all plants. If almost all animals have eggs, so have almost all plants seeds.

24. Many vegetables have no seed ; many animals have no eggs. Both are multiplied by the extension and natural separation of their peculiar substance. On the surface of many polypes are found littlei tubercles, which gener- ally enlarge, become detached, and form, at a greater or shorter distance from the parent stock, other polypes, which soon become capable of increasing by the same means. Conferva; are known, in several cases, to increase in precisely the same way. Of what degree of precision then is the most perfect of the following defini- tions of a plant ; proposed by observers

who are placed at the head of their science ? Stones grow ; vegetables grow and live; animals grow, live, and have perception. Linruzus. A plant is a compound organic body, deriving nourishment from the soil in which it grows. Link.

II. HISTORY OF THE SCIENCE.

25. The physical sciences are generally sup- posed to depend almost entirely upon the powers of human observation for their perfection and

final development; and it was formerly ad mitted as an incontrovertible axiom, that philo- sophical induction, or metaphysical classifica- tion, had little or no effect upon the actual amount of ascertained facts ; or, which is the same thing, upon the elements of science. It has been a common belief, that the classification of natural objects, has no other end than that of forming a sort of index to the science of natural history, and that systems bear the same relation to sciences as alphabets to languages. With regard to botany, the description of a plant, with a detail of its qualities in medicine or art, actual or supposed, was the utmost which was formerly attempted by the most celebrated wri- ters ; and it certainly was never by such persons for a moment supposed, that an acquaintance with the mutual relations and affinities of the vegetable kingdom, would in any degree influ- ence the discovery of new objects. But the ex- perience of modern times has shown, that di- rectly the reverse of this opinion is consonant with facts, and that so long as the mind re- mained occupied in no other manner than in the acquisition of new plants, without knowing in what way to appreciate their respective pecu- liarities, discoveries continued to be made slowly, and to be of little value when made. As soon, however, as botanists arrived at the art of ar- ranging, upon philosophical principles, the materials which they possessed, their attention was strongly directed towards supporting their respective systems by the addition of new ob- jects and new facts. Their minds were excited by the hope of undiscovered forms enabling them to fill up chasms, which, they could not fail to perceive, existed in the most perfect me- thods known to them ; and the strenuous in- vestigations instituted on this account, naturally brought them acquainted with an abundance of subjects, the existence of which the imperfection of their previous knowledge could not have led them to suspect. Thus we perceive, that during the space of more than 5500 years, from the creation of the world to the time of Caesalpinus, a period during the greater part of which botany was an humble art, necessarily, from its intimate connexion with the wants of mankind, the study of physicians, the whole number of recorded plants of all descriptions scarcely equalled the quantity now produced, under the auspices of science, by the investigations of a twelvemonth. 26. In the east, at first the only seat of erudition, the greatest care was taken to acquire a know- ledge of the beneficial or noxious

qualities of different natural productions. The Chaldeans communicated their knowledge to the Egyptians, and these to the Greeks. In Greece, where, indeed, real science first originated, ˆEsculapius attempted, by means derived from the vegetable kingdom, to cure some diseases. Medicine soon became intimately connected with religion. In the temples dedicated to the worship of the gods, the prescriptions of ˆEsculapius were publicly hung up, and the priest alone undertook the examination and the search of officinal plants, and the treatment of different diseases. They were, as followers of TEsculapius, called /Lscle- piades.

27. The father of medicine, Hippocrates, added to the observations of / Esculapius a great many of his own, and first published several works on medicine. In his writings, the diseased and healthy state of man are fully treated of, and in speaking of the methods of cure, he has men- tioned about 234 plants. But these are only names. Hippocrates was born about 459 years before Christ, at the Island of Cos. He lived to a very old age, though on that point authors differ, some saying he lived to be 89 years old, some 90, others 104, and a few indeed 109. The plants he mentions can scarcely be guessed at; for though great natural philosophers and linguists have attempted, long ago to fix them properly, notwithstanding all their endeavours fhey still remain very doubtful.*

28. Among the ancients, Thales, the Milesian, holds the earliest station as a philosopher. He perceived in the whole range of natural bodies nothing but mind, daemons, and a divine nature. As the ocean was the parent of his gods and goddesses, so was water the primi- tive origin of all created things. Aristotle con- ceives that the humid state of all nutriments, and the aqueous nature of all seeds in the beginning, gives a plausibility to this hypothesis. Metaph. i. 3.

29. Pliny testifies to the deep knowledge of Orpheus in the properties of plants, but Pytha- goras the Samian is the first who is known to have written any treatise upon botany. This philosopher procured his information from the Egyptian Magi. He first taught the miraculous uses of the Scilla maritima, in prolonging life ; the bulb pickled in vinegar was affirmed to gift the vinegar with the power of extending the period of human existence to the hundred and seventeenth year. He declared|the virtues of Anise against the bite of scorpions, the power of Brassica, and of Sinapis.

30. Empedocles, of Agrigentum, one of the disciples of Pythagoras, wrote a

poem on the agency of the four elements. He conceived that plants were formed from the united agency of fire and earth, that they grew upwards through the influence of the former element, and down- wards by the action of the latter, that air was diffused- through their branches, earth through their roots.

31. This opinion may, however, be rather considered as part of the doctrines of the exoteric philosophers, who adopted the notions of the poets about the origin of things, and supported them by the subtlety of materialism. That plants are animated beings they held to be proved by the motions of which they are susceptible, and by the elasticity of their branches, which, when bent, resume their natural position, as soon as the external power is removed. They believed that plants were all subject to a metamorphosis into animals, or the contrary ; and that no man could be sure that he had not, at some period of his existence, been a plant, a bird, or a fish. For this reason the laurel was held to be the noblest of trees, as being that into which man is translated after death. They admitted that the sexes were united in plants : but they supposed that they became separated upon the change into animals.

They were moreover believers in the presence of a soul in plants; of a peculiar nature, indeed, but endued with intelligence and yvwoic, appetites and sensations. Even reason was ascribed to them by Sextus Empiricus. He declared that they were propagated by eggs, in the way of animals, and that their leaves were analogous to the hairs of animals, and the scales of fishes, that their root performed the functions of head and mouth, because it was through it that nutriment was introduced into the system.

32. Similar opinions were held by Anaxa- goras, of Clazomene, who also thought that earth was the mother and the sun the father of vege- tation. That their spiritus, or soul, was absorbed from the air by their leaves, and exhaled by the same organs.

33. Democritus the Abderite, who spent his early life in travelling through Persia and Egypt, adopted the notions of the Magi respecting the supernatural powers of herbs. He is said to have composed a work upon their hidden and miracu- lous virtues.

34. These and a few more are those who are supposed to have existed previously to the time of Aristotle. Among their opinions it is curious to observe how much of truth, even in their abstract speculations, is mixed with the fables of their poets. It is evident that they were acquainted with the sexes of plants, and with the principle that all vegetables proceed from ova. Some light was also possessed upon the functions of leaves.

35. But it was with Aristotle that the real origin of natural science must be said to have arisen. That extraordinary man embraced in his observations the whole circle of nature, from the structuie and generation of the Sepia, the Nautilus, and other similar animals, to the elephant and to bipeds. That he paid extensive at- tention to plants is to be inferred from his own statement, that he had written two entire books upon the subject. He calls these books a Theory of Vegetation, and, in another place, he promises that he will enter at large upon the nature of vegetables. These books are even cited by Diogenes Laertius, v. 25, Athenaeus, xiv. xviii. p. 652, and by the scholiast Nicander, v. 645, p. 42. The books which have come down to our time are, however, believed to be forgeries They correspond neither with the gravity, the dignity, nor the erudition of Aristotle. But much may be gathered from the genuine writings of this classic, as to the nature of the opinions which he held respecting plants, as forming a particular portion of animated nature ; and most especially as to his ideas of their analogies with animals. He appears to have applied himself, with incredible industry, and most remarkable ingenuity, to the discovery of their relative degrees of organisation, and of those functions and pheno- mena which bore upon his own philosophical system. He was the first to conceive the specu- lative notion of a continuous chain of organisation, in which the most perfect beings gradually de- generate into an imperfect state. ‘ Nature,’ he declares, ‘ is continually progressing from in- animate objects to animals, and this through beings which are animated, indeed, but which

are not animals ; so small is the difference which exists in nature between proximate beings. As among marine animals many may be found whose dissevered limbs maintain a separate life, so among plants morsels of the epipetron (Sedum acre,) suspended from a nail, will nevertheless retain their vitality for a long period .’ In another place, he repeats the same remarks, and adds a comparison between plants and his ostracoder- mata or shell-fish. He believes that the latter are, in fact, plants, if considered with respect to the gradations of other animals, for most marine animals manifest a power of sensation very ob- scurely, and others in no degree whatever. In a third place, he pronounces plants to be a sort of terrestrial ostracodermata, and the latter to be marine plants. In the same proportion as water is more prolific of life than land, in the same degree are ostracodermata more vivacious than plants. He conceives that the main differ- ence between plants and animals consists in the absence of excrementitious matter from the for- mer ; whence the roots, which absorb only such nutriment, as is already prepared, may be said to make use of the earth and of its heat, as a sto- mach and intestine. The minute quantity

of excrementitious matter which is parted with by plants has an agreeable odor, whilst that of animals is almost always the reverse. He be- lieved with Anaxagoras, that the nature of plants was hot and dry, and that earth was the mother and the sun the father of vegetation. Whence he thought might be explained the greater richness and fragrance of fruits and flowers growing on a hot soil under a burning sun. Aristotle admit- ted only one end in vegetation, which was the generation of fruits. Whence, the more imperfect were animals, the more similar they became to plants in this respect. All the nutrition and in- crease of plants appeared to him to tend to this object. lie thought that the power of absorbing nutriment, and' the mere circumstance of food being necessary to plants, rendered it impossible to deny their sensation, and hence a vital princi- ple. He denied the separation of sexes in plants by which he gained an additional argument as to their ? fnnity with the imperfect animals, in which the union of sexes in the same individual had been observed. The mixture of sexes, which had been assumed by Empedocles, was received as an axiom by Aristotle. Gener. Anim. iii. 10. Aristotle was not, however, free from the errors of his age, or from the love of wonders and mi- racles. He asserted that the Ruta nourished best when grafted on the fig-tree.

36. This philosopher was succeeded by various writers, whose works are now almost wholly un- known, but who do not seem to have thrown any new light upon the philosophy of botany, but to have confined their observations to the proper- ties of herbs and roots. They are now known only by the quotations of their works in the books of later botanists. Here it will be sufficient to enumerate their names. They are Thrasyas and his disciple, Alexius, whom Theophrastus judges to have been more skilful than his master. Eudemus, Aristophilus, Cleidemus, Menestor, who entertained the remarkable notion that aquatic plants are naturally warmer than ter-

restrial, because they are not killed by the winter's frost ; Hippon, Diogenes, who taught that plants are the consequence of a mixture of earth and putrid water, Leophanes, and Androtion. Be- sides these, Eumachus, Anacreon, and Micton, are thought to have lived before the time of Theophrastus, but this is uncertain.

37. If Aristotle is to be considered the foun- der of the philosophy of botany, the adaptation of his opinions to practice is, as far as we now know, to be ascribed to his friend and disciple Theophrastus, born in the year 370 B. C. Such was the fame of this philosopher that, when his master retreated to Chalcis, he succeeded to his school, whither no less than 2000 disciples re- paired. In his Historia Plantarum, he described all the plants which were known in his day, either by description or actual observation.

*The text of that part of his work which has des- cended to our days is remarkably corrupt, but much light has been thrown on it by the critical acumen of the learned Sprengel. No order is pursued in arranging his descriptions, the same name is often applied to extremely different plants, and his opinions upon abstract matters do not seem to have been different from those of Aristotle. He was a believer in the transmutation of species, and even genera, and treats at large upon the subject. His nomenclature of the parts of plants is the first upon record in which an at- tempt was made to attach precise ideas to parti- cular terms ; and in this he succeeded remarkably well. The physiology, or ' the physick' of trees was understood by him in a manner which neces- sarily gives us a high opinion of th? state of philosophical knowledge at his day. . *e distin- guished between the structure of the trunks of palms and other trees, or, in modern terms, be- tween monocotyledones and dicotyledones. He discovered that nutrition was conveyed to plants through their leaves, but he attributed this power to both surfaces alike. The sexes of plants were not unknown to him, but his ideas on the subject were incorrect. In short, that part of his history which appertains to vegetable physiology offers a mass of observation and reasoning, which is well worth consideration even at the present day*

38. Liule is known of the Alexandrian school, which succeded Theophrastus. Diphilus, who lived in the time of Lysimachus, first discovered the use of asparagus as a pot herb ; and described for the first time the Persica coccumela or pea- ches. A manuscript of the works of Crataevas is preserved in the library at Venice, but it contains no information of importance.

39. When the Romans became masters of Greece, they adopted the writings and opinions of the latter country so completely, that there is in natural history scarcely any additional information in the writings of all their naturalists. Some incon- siderable additions were made to the list of plants, but very little change took place in the opinions held of the nature and properties of beings.

40. To pass by the agricultural writers, Cato, Varro, Diophanes, Virgil, Columella, and others, who are by some moderns ranked in the list of Roman botanists, the first author whose writings are of present value is Pedacius Dioscorides, who nourished in the time of Nero. Attached

to the Roman army, he traversed Greece, Italy, and Asia Minor, in which countries he collected many new plants. But, in his history, he des- cribed by far the greater part of those he mentions, upon the authority of others. He was acquainted with no method of arrauging his plants, which were frequently classed from some similarity in their names, rather than in their nature. His descriptions are so imperfect, that the name only is given of many plants. His catalogue, however, of the plants of Greece and Italy, was by far the most complete which had been compiled in his day.

41. He was followed by Caius Plinius Secun- dus, who was born in the twenty-third year of our era, under Tiberius Caesar. The fame of this remarkable man has reached to all the cor- ners of the civilised earth, and he is on all hands pronounced to have been the father of natural history. He was a person of great learning, considerable acuteness, and unwearied industry. His reading was more extensive than that of any of his predecessors or contemporaries, and his writings are reported to have been scarcely less voluminous. Judging from the books upon natural history, which have come down to our time, his high reputation may be stated to have been very little deserved, except on the score of industry. They chiefly consist of almost literal compilations from the works of his predecessors, especially of Dioscorides. The arrangement of the matter is uncertain and empirical ; the des- criptions of his subjects meagre, vague, and unsa- tisfactory ; the qualities assigned to them fanciful, childish, and unphilosophical. The advantages he possessed of having visited the most remote of the Roman provinces, in the capacity of a general officer, were turned to small account by him in discovering new objects of natural history. In a word he must be pronounced to have been a mere compiler without observation, experience, or judgment.

42. Galen succeeded Pliny, and turned the great powers of his mind to the subject of botany, but in a medical view only. So that a few new plants were all which natural science derived from his labors.

43. Thus much has been said upon the state of botanical knowledge up to the time of Galen, in order to make it appear what was the actual amount of discoveries during the first ˆepoch of natural science. It is worthy of remark, that the period was fraught with fanciful conjectures, and often ingenious hypotheses ; but that philosophy was unaided by experience, and that metaphy- sical speculations usurped the place of accurate observations.

44. In the early ages of the world, the science therefore, which is now called botany, consisted of a collection of names, and exceedingly imper- fect descriptions of plants; either entirely un- arranged, or combined according to their supposed qualities in medicine, or in human economy.

45. The race of botanists who succeeded the classics, were physicians or mere simplers, who cared for no classification beyond that which enabled them to arrive at an imaginary knowledge of the powers and effects of the few herbs which

were imported for pharmacy, or which grew in their vicinity. Even after the revival of learning in Europe, the same ideas were entertained, and a proportional progress was made in the acqui- sition of knowledge. The second race of botanists, or those who existed after the dark ages of Europe had passed away, were the com- mentators upon the writings of the first race ; men of some learning, indeed, but in the deepest ignorance of the subject they undertook to illus- trate ; monks, whose practical knowledge exten- ded not beyond the walls of their monastery, and who depended for all the information they found necessary to their purposes, upon the assistance they could derive from the few copies of the Arabian physicians, which their own or their monastic libraries might chance to possess. Science in the hands of such men, would, it may be easily believed, retrograde rather than make advances towards improvement. So that, up to the time of Vincentius Bellovacensis, who has been called the Pliny of the middle ages, and whose Speculum Quadripartitum was published in 1494, the second volume of which is devoted to the subject of natural history, it may be safely affirmed, that no progress whatever, in modern times, had been made in botany ; the whole of this author's materials having been borrowed from Aristotle, Dioscorides, Isidorus Macer, Pliny, Avicenna, Platearius Actor, and Cassius Felix, an obscure writer, whose works are lost. But the prac- tical ignorance of the monks was not the only evil which impeded the advance of physical know- ledge. They were in many instances deplorably unlearned in the languages from which they borrowed their opinions. With Arabic, the only source to them of new ideas, they were in most instances imperfectly acquainted : and the degree of knowledge which they possessed, even in the Greek language, was so low, that they were led into the commission of continual errors, in translating the fables of classical writers into the dreams of themselves. Another and a more serious consequence than the decline of science, was the result of this deplorable state of botanical learning, which, as a modern writer has justly observed, was so desperate that it is not more sur- prising that it should have arrived at it, than that it should ever have been extricated from it. By a frequent misinterpretation of the Arabic wri- ters, it not unfrequently came to pass, that pro- perties were ascribed to plants which were directly the reverse of those which the original authors attributed to them ; a curious instance of which occurred with respect to the cinnamon. This was for a long time considered a deadly poison, in consequence of Nicolaus Myrepsicus, a Greek physician, who flourished in the thirteenth century, having translated dar-sini the name given to the cinnamon by the Arabians, by the word

apokvutov.

46. The time, however, arrived, when some truly learned men undertook the exposition, not only of the blunders of their contemporaries, but of the ignorance or corrupt text of those original authors in whom a blind confidence had for so many ages been reposed. The bold attack of Hermolaus Barbarus upon Pliny, and of Ni- colaus Leonicenus upon Serapio, and the Arabian

writers, the one published at the end of the fifteenth century, the latter at the commencement of the sixteenth, put an end to the delusion under which the world had labored for so long a time. These men fearlessly tore the mask from before the face of the impostors of their day, and boldly succeeded in convincing the world that the ignorance of antiquity had been mistaken for the experience of ages ; and a new impulse was given to the pursuits of naturalists, not only by these writers, but also by the declaration of Collenuti, an earnest defender, indeed, of the originality of Pliny, that ‘ non satis esse ad her- bariam perdiscendam tradendamque, herbarios scriptores legere, plantarum videre picturas, Graeca vocabula inspicere, magistri unius verbis addictum esse, sed rusticosmontanosque homines interrogare oportere.’

*47. To particularise all the obscure writers, who existed up to this period, would be an un- profitable waste of space and attention. All kinds of learning had been brought to so low a state of degradation, by the insane and stupid madness of the worthless men who sanctified their acts under the cloak of religion, and who, in their pretended zeal against paganism, de- stroyed all the fountains of knowledge, that there ā¢was scarcely an author upon botanical matters, during this long period, who deserves to be handed down to posterity. Between the first and the-early part of the sixteenth century, na- tural history may be considered a blank, during which that description of learning was buried in a deep trance. In the strong language of one of the earliest revivers of botanical science : * Those writers who did occupy themselves with the subject, especially Matthseus Sylvaticus, and Simon Januensis, deserve the execration of all posterity, for their worthless compilations and treacherous translations of the ancients.’*

48. The second period presents us with more promising views. All science began to revive, and monasteries were no longer the exclusive seat of human knowledge. Brunfelsius, Gesner, Fuchsius, Dodonaeus, the ever memorable Clusius, and the great Bauhin, opened the path to the present

state of botanical science.

49. Otto Brunfelsius, son of a cooper, was born at Maynz, at the end of the fifteenth cen- tury. He was first a Carthusian friar, and be- came, soon after, cantor (precentor) in Strasburg. In his work he has given the first figures of plants, and he was also the first botanist in Ger- many. The drawings are not very good, and do not in the least correspond with his own de- scriptions.

50. Hieronymus Bock, was born at Heides- bach, in Deux Fonts, 1498. He died in the fifty-sixth year of his age, the 21st of June, 1554. He changed his name, according to the fashion of his age, to the Greek name Tragus. In three books of his work he treated pretty accurately of those plants which grow in Germany, and represented the described plants in 567 figures, which are not bad. It is an objection made to him, that he neglected the virtues of the plants, though he knew them perfectly well, and that he used the writings of the ancients too little. He wrotfi a history of plants, of which many

editions have appeared in German, French, and Latin. lie likewise wrote notes to Dioscoridcs, Galen, and Hippocrates, on which account he entered into a long dispute with the famous physician and philologist, John Heynbut or Hagenbut, who likewise called himself Corrmrus. Cornarus published a treatise against him, en- titled Vulpecula Excoriata. The botanist, Fuch- sius, answered in another, with the title, Cornarus Furiens ; after which Cornarus finished the dis- pute with the publication of a work, which he termed Mitra, S. Brabyla pro Vulpecula Exco- riata Asservanda.

51. Peter Andreas Matthiolus, a physician at Sienna, was born in the year 1500, and died at Trent, in 1577, of the plague. He had carefully studied the works of the ancients, especially of Dioscorides. His Kraeuterbuch (work on plants) was written originally in Italian, but wĀ« have French and German translations of it.

52. Matthias de Lobel, physician to king James I. of Great Britain, was born at Brussels, in Flanders, in 1538, and died in London, 1616. Together with Peter Pona, a physician in Pro- vence, he wrote the Adversaria, part of his greater work. He says that this physician sent him many rare plants. Some assure us that he has in his works given many ideal figures of plants ; and he has described several as grow- ing wild in Britain, which after him nobody could ever find.

53. Charles Clusius, or Charles de 1'Ecluse, was born at Arras, in the Netherlands, 1526. His parents wished him to become a lawyer, and he went with this design to Louvain. But he presently changed his mind, and,

from his gnat love of botany, soon undertook the most tedious and troublesome journeys through Spain, Por- tugal, France, Great Britain, the Netherlands, Germany, and Hungary. In his twenty-fourth year he became dropsical, of which, however, he was cured by the use of succory, recommended to him by the famous physician, Rondeletius. In his thirty-ninth year, in Spain, he fractured his right arm close above the elbow, falling with his horse, and soon after he broke his right thigh. In his fifty-fifth year, at Vienna, he sprained his left foot, and eight years afterwards dislocated his hip. This last dislocation was neglected by his physician, and he had the misfortune to walk for the remainder of his life on crutches. The great pain and difficulty he had thus to suffer when walking, prevented him from taking the necessary exercise, in consequence of which he was af- fected with hernia, obstructions in his abdomen, and calculous complaints. Thus miserable and unhealthy, tired of the court of the emperor, where he had resided for fourteen years, and finding, besides, the superintendence over the gardens there too great a burden, he accepted, in the year 1593, an invitation as professor at Leyden, where he died, April 6th 1609. Clusius was the greatest genius of his age, and prosecuted the study of botany with an enthusiastic zeal, and a perseverance which was not equalled by any preceding philosophers, or by that of any of his followers. His works exhibit a great botanist, and they will always remain valuable and iridis- pemal'iy necessary. The %ures annexed

them are neat, th(drawings correct, and his de- scriptions masterly. It was a pity that a man of such great merit should have suffered so much, and even become the first martyr to botany.

54. Andreas Caesalpinus came from Arezzo, in Tuscany. He was called to Rome, as physi- cian to Clement VIII., where he died, the 25th of June, 1602. Before him plants had been described without the least order, and nobody thought, by attending to the similarity of different parts, to render the study of botany more easy. His system will render him ever memorable. The writings of this botanist are so rare, that .scarcely more than their titles are now known ; but they are among the most valuable in the world.

55. Jacob Dalechamp, born at Caen, in Nor- mandy, in the year 1513, spent most part of his life at Lyons, and died there in 1588, or according to some, 1597. He was the first who intended to write a general history of all known plants ; but, by other occupations, he was prevented from continuing it. An accomplished physician at Xiyons, of the name of John Molinaeus, com- pleted it, at the desire of the bookseller Rovilli.

56. Joachim Camerarius (son of the celebrated commentator), was born at Nuremberg, the sixth of November, 1534, and died October llth 1598. He lived with Melancthon, at Wittemberg, when a boy, and afterwards studied medicine at Leipzig. Camerarius wrote several treatises on economical botany, and on the plants of the ancients. His principal work contains forty- seven figures, from Gesner's collection. For he purchased Gesner's whole collection of cuts, which amounted to about '2500. He made great use of them in his edition of Matthiolus, and in another work, still of great value.

57. Jacob Theodore Tabernaernontanus, a pupil of Tragus, took his name from his native place, Bergzabern, a small village in Deux Fonts. He was first an apothecary at Kronweissenburg, ne went afterwards to France, returned as doctor of medicine, and at last died as physician to the elector palatine, at Heidelburg, 1590. He was generally esteemed for his great skill. His work was not finished by himself. The second and third volumes were written by another, and are inferior to the first.

58. Leonard Rauwolff, a German, undertook a troublesome journey throughout the Levant. He travelled in the years 1573 ā 1575 through Syria, Arabia, Mesopotamia, Babylon, Assyria, and Armenia. After his return he settled as phy- sician at Augsburg. On account of his religious profession he was obliged to leave his native place, and died, 1596, as physician to the em- peror's army. He has published a very complete account of his journey.

59. Prosper Alpinus, from Marostica near Venice, went, on account of his love for botany, to Egypt. After his return, he practised as phy- sician in Venice, and then in Genoa ; he went at last as professor to Padua, where he died, in 1617. He was universally regarded as a very able man. Botany is indebted to him for a few curious little works.

60. John Bauhin, was born at Lyons, in 1541. He was a pupil of l-'uchsiur : and left his native

country, and remained for some time in Yverdon. a town in the canton of Bern. He then went to Muempelgard, where he died, as physician to the duke of Wirtemberg, in 1613. He travelled through the greatest part of Switzerland and Italy. When a youth he commenced his great work, which he only finished fifty-two years after. In this extraordinary performance, a history, ex- tremely well arranged for the time, and admirably compiled, was given of all the plants which had up to that time been published. It was illus- trated by a vast multitude of wood blocks, and is the first work of the nature of what are now called Species plantarum. The works of Bauhin will always stand as landmarks in science for the benefit of all succeeding ages.

His younger bro- ther, Gaspard Bauhin, who died at Basle, in 1624, trod closely in his footsteps, and de- servedly ranks high among the botanists of that age.

61. From this memorable period of improve- ment, in which the Herculean labors of John Bauhin and his brother, as well as the arrange- ment of Caesalpinus, had not only advanced the study of vegetables to an unprecedented height, but seemed also to have ensured its continued and unremitted progress ; botany, as represented by botanical historians, appears notwithstanding to have languished for a period of nearly half a century ; which might perhaps have been owing to the impossibility of outdoing the Bauhins in their own line of investigation, and upon their own principles. But if the progress of the study of vegetables was thus suspended, inasmuch as relates to the collecting, describing, and figuring of plants, there is at least one view of the subject in which it was most essentially advanced ; and that is in the revival, if one may not absolutely say original introduction, of phytological investi gation, which had been attempted by Theo- phrastus, and consigned to the most culpable neglect by succeeding botanists, for a period of nearly 2000 years.

62. The revival of this study was probably owing to the new impulse and new direction communicated to the spirit of philosophical en- quiry by that great and illustrious luminary of science, Francis Bacon, Lord Verulam, who, having explored and developed the true founda- tions of human knowledge with a sagacity and penetration unparalleled in the history of mankind , and having dared to disengage himself from the fetters of academical authority, denounced as vain and idle the visionary speculations of the schools, and boldly pointed out the necessity of a complete and thorough revolution in all pre- established methods of study; recommending the more tedious, but yet more successful, method of analytical and inductive investigation, and proclaiming truth to be but the image of nature. But to whatever cause it may be attributed, the fact is, that two different sets of phytological ex- periments modelled upon the principles and methods pointed out by Bacon, and with a view to elucidate the phenomena of vegetation, were instituted about nearly the same time, by two celebrated anatomists, and accurate observers of nature, residing in different countries, and having no communication with one another. These

naturalists were Grew and Malpighi ; the latter an Italian, the former an English physician. For as Gesner and Casalpinus had been led, as it were, instinctively to the study of methodical arrangement without any mutual

intercourse, so were Grew and Malpighi to the pursuit of phy- tological enquiry ; a circumstance likely to happen, at a time when the spirit of true philo- sophy had begun to diffuse itself among men of speculative habits, of whom many, no doubt, would be led to view the same subject in the same light.

63 The result of the investigation of these illustrious phytologists was first communicated to the public towards the end of the seventeenth century ; and it must be confessed that the suc- cess of their labors made amends, in a great measure, for the long neglect of preceding na- turalists ; for though they had no track to direct them in this obscure and intricate investigation, yet by joining patience to penetration, and ex- perience to philosophy, and by adopting the only sure means of detecting the secrets of na- ture, the experimental mode of enquiry ; ex- ploring most scrupulously the internal and recondite structure of plants, and watching with unwearied application the functions of the different organs, they succeeded in removing much of that veil which had enveloped the phenomena of vegetation ; and in opening up to the observation of man a new view of the works of God.

64. But the principles of the philosophy of Bacon, which were thus so successfully applied to phytology, were extended also to botany ; particularly on the subject of arrangement, and ground of generic distinction ā the necessity of which was now more than ever indispensable, for the purpose of reducing to order the immense mass of particular specimens, collected and de- scribed by the increasing multitude of adven- turers in the field of botanical discovery. Ac- cordingly, in pursuit of this important object, the talents and industry of the learned were now also more than ever exerted, and a variety of systems introduced, adopted, and abandoned, in cneir turns.

65. Of these the principal were the methods of Morison, Ray, Tournefort, Rivinus, Boer- haave, Herman, and Magnol, which appeared about the end of the seventeenth or the begin- ning of the eighteenth century ; and which, whatever might have been their defects, had at least the merit of exhibiting botany under a new and systematic form. But the most celebrated as well as the most beautiful of them all was that of Tournefort, which was adopted in France with a kind of epidemic enthusiasm characteristic of the nation, and which has been udmired by botanists of all countries. It had, indeed, much merit, at least as exhibiting the firˆt model of generic discrimination, founded on principles truly philosophical. But it had also its defects; for, extremely beautiful in speculation, it was yet clogged with insurmountable difficulties in the practice.

66. No method of arrangement, therefore, had yet been discovered sufficiently suited to the ex- igency of the case ; and a method founded on

principles more easily reduced to practice, was still the grand desideratum of botany.

67. In this peculiar crisis of botanical per- plexity, when specimens were every day multi- plying in the hands of collectors, when herbariums were devoid of arrangement, and the science was in danger of relapsing again into an absolute chaos ; a great and elevated genius arose, destineu to restore order, who surveying the immense maˆs of materials with a sagacity and penetration un- paralleled in botanical research, and seizing, as if by intuition, the grand traits of character calcu- lated to form the groundwork of a philosophical division, detected the clue by which he was to extricate himself from the intricacies of the laby- rinth, and rear the superstructure of a legitimate method. This great and illustrious naturalist was the celebrated Linnaeus, who deducing his rules of method from the most incontrovertible of all principles, and establishing the laws of generic and specific distinction, and even rules of legitimate definition, introduced into the study of botany a simplicity of system, a perspicuity of arrangement, and a precision of language, which have elevated it to the high rank it now holds in the scale of human knowledge, as well as allured to the study of the science men of the most distinguished abilities, and excited that ardor for botanical investigation which cha- racterises the present age.

68. Now let us trace the progress by which this stock of knowledge was acquired. In the Holy Bible it has been ascertained, from the in- vestigations of Sprengel, that there are seventy- one plants noticed by name ; which, generally, are such only as were applicable to the purposes of man; and, viewed in this light, the number, as compared with those known to the early hea- then writers, is far from inconsiderable. The Homeric Flora amounts to less than thirty spe- cies ; that of Hippocrates, in the year of the world 3630, to 274 species ; and of Theophrastus, who is supposed to have flourished about the same time, to something like 500 species. Di- oscorides, who, it is most probable, lived in the time of Cleopatra, more than 300 years later than Theophrastus, notices 600 plants ; and finally, Pliny, in the seventy-fourth year of the Christian era, compiled, from an examination of more than 2000 volumes of Greek and Roman writers, an account of nearly 1000 species, the result of the investigations of more than forty centuries. In the succeeding 1400 years, we have already seen that the progress of botany was so slow, that if an increase of 500 species is allowed to have taken place during that long period, it is as many as can possibly be made out to have been discovered. But the two next centuries, when the knowledge of plants was assuming a scientific form, produced, after making every allowance for repetitions and spu- rious species, upwards of 4500 new plants ; a number more than three times greater than had been ascertained in all the ages of the world before.

69. But if we find the opinion expressed at the commencement of this chapter confirmed by the experience of tie ages anterior to Tourne- fort, how much more strongly is it supported by

the evidence of modern times. In the first edition of the Species Plantaram, published fifty-three years later than the first edition of Tournefort's Institutes, the number of ' species amounts to 7300; but so extraordinary was the advance of botany under the auspices of philo- sophical classification and of Linnaeus, that in a few years more it was found that 1500 plants could be added to the list. Pulteney, indeed, makes only 7800 in all ; but in this he must be mistaken.

*70. The number, however, of species described by Linnaeus, even in his latest work, is by no means to be taken as the standard by which the actual state of knowledge at his time is to be measured. It is well known, that his notions respecting species were peculiar to himself, and it must also be supposed that the difficulty of adapting the half described species o1 his pre- decessors to his system, operated with him in some degree in inducing him to neglect their labors, in cases in which his own knowledge did not chance to be such as confirmed iht j opinions and descriptions. For this reasc-d ne often omitted the discoveries of Tournefor whom he also viewed, and with justice, as his most powerful rival. But the most remarkable instance of his oversight is to be found in the lower orders of vegetables ; an obvious example of which is afforded by fungi, of which he notices in the most perfect of his works only ninety-three species, at a time when Micheli had described nearly 800 species of Agaricus, or at least of pileate fungi, peculiar *** Italy alone. Hence it follows, that a just criterion o*" the number of plants known in the days of Linnaeus can by no means be formed from consulting that writer's works alone ; if, on the contrary, we take into account his omissions, and deduct from the In- stitutes of Tournefort one third for garden va- rieties, which are improperly ranked as species in that work, we shall be justified in fixing the number of species actually described in works of uotany at the time of Linnaeus's death, in the year t / 78, at the following numbers :*

Species.

Described in the second edition of the

Species Plantarum,and the Mantissas 8800

Described in the Institutes of Tournefort

(not noticed by Linnaeus) ā¢ 1000

Described in Micheli, and other authors upon cryptogamous plants (not noticed by Linnaeus) 1000

Described in the works of Hernandez, Piso, Morison, Ray, Bauhin, &c. being either not taken up, or confounded with others by Linnaeus 800

making the whole number of plants of all kinds,

actually described at that time, amount to

1 1,600, or, in round numbers, to 12,000 species.

71. Notwithstanding the undoubted excellence of the principles and system of Linnaeus, it is not to be denied that, had he lived at a less cor- rupt period, or had he not possessed the singular power of precise language, at a time when he was surrounded by confusion and vague de- scriptions, his botanical system would have been as unsuccessful as those of his predecessors had be-ˆo, in establishing itself in the good opinion

ef the public. The errors of Linnaeus have been so glozed over in this country, that it is quite necessary, in a work intended for public benefit, to open the eyes of the public to the nature of his faults, which may be considered under two heads ; the errors of his principles and the faults of his system.

72. Nothing could be more improper and in- judicious than the arbitrary manner in which he rejected or altered, when unnecessary, the names given by individuals who preceded him ; a practice by which the difficulty of bearing in mind the identity of Linnaean plants with those of antecedent authors has been increased to a most inconvenient degree. He was also in the practice of applying the names used by classical writers to modern plants, without any consi- deration, and often to such as were wholly dissi- milar from those of the classics. His rules of nomenclature, as promulgated by himself, how- ever excellent they may be in some parts, are to the last degree gratuitous, and inconvenient in others. He likewise had the glaring fault of not attaching precise ideas to the names of the organs of plants, but under a single name confounded entirely dissimilar parts ; as, for example, in the case of his nectarium, which means almost any and all parts of the flower; this circum- stance is very remarkable in a man who certainly possessed a very logical mind. His definitions, usually not accompanied by descriptions, are so imperfect and vague, that it would have been impossible to have determined his plants without the aid of his herbarium ; a fault which ought to be considered as most grave ; and yet his ad- mirers bepraise him for these very definitions. His patience in overcoming the

difficulties of condensing the information of his predecessors, and the novel and elegant manner in which he effected this, are however so striking, that one might almost allow that he merited his high fame upon these grounds alone. Nor would it have been requisite to point out faults, such as have been here noticed, had not the indiscriminate ad- miration of his friends attempted to make it appear that this certainly great man was some- thing superhuman in all his works, while they are as much open to criticism as those of other authors.

73. The famous system of arrangement which was founded by Linnaeus, under the name of the sexual system, and which for more than half a century was exclusively employed by a large proportion of the most learned botanists, and which Is even now made use of by some of the more venerable existing writers, may be said to have owed its celebrity more to its being the groundwork of the important labors of its inventor, than for any extraordinary inherent merits. A great recommendation with the world has also been its apparent facility and simplicity. The principles upon which this system was founded will be explained hereafter ; its appli- cation and merits are all that demand attention in this place. As it is entirely and essentially artificial, it must be considered in that point of view only ; for which reason all the inventions of modern botanists, which tend chiefly to render it less artificial, will be passed by, as well as be-

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cause the innovations of his successors are not attributable to Linnaeus.

74. It is obvious that the only merits which an artificial system of arrangement can possess, must be extreme facility and precision of appli- cation ; and that it will be found defective in exactly the degree in which these qualities are absent. Now, notwithstanding the simplicity of the organs upon which the Linnaean arrange- ment depends, it is notorious, that it is continually necessary to leave them out of consideration in determining the locality of plants. The species, for example, of a genus vary or differ in the number of their stamens ; that genus therefore ought to be found in as many different classes as there is variation or difference of this kind ; the species differ or vary in the number of their styles; such a genus would be referrible to_as many different orders as there are variations of that nature. These differences exist, not only among species of the same genus, but even in flowers of the same individual ; whence cases might be found of particular plants, which belong at the same time to several classes and orders of the system. Can any thing be more objectionable to its use than this fact ? and instances of such difficulties are neither few nor

uncommon. Another objection to the sexual system is, that no information is gained by its use, and that after employing it for the whole of a life, not a single idea is acquired beydnd the half dozen with which it was necessary to set out ; the consequence of which has been a miscon- ception of the nature and analogies of the organs of plants, and a general ignorance of the affinities by which individuals are related, a thorough knowledge of which is absolutely in- dispensable to any systematic writer. That this is the fact may be sufficiently shown, by an ap- peal to the writings of the very best of the exclusively Linnaean botanists. These points are abundantly sufficient to show the inferiority of Linnaeus's celebrated system to the praises of his admirers, and to explain the cause of its almost universal disuse at the present day. As an artificial system, it is unquestionably inferior for ready use, and precision, to the artificial system of the French school. Any ingenious botanist, indeed, would contrive a better, if it were either necessary or useful.

75. The natural method, as it is called, has now, however, so entirely superseded the sexual system, and has become so much more facile than it formerly was, that the utility of any artificial system whatever may now be doubted. This celebrated system is generally said to have taken its rise in France, with Bernard de Jussieu, who in the year 1758 arranged the plants in the Royal Garden of Trianon upon a plan which may be considered the basis of the system in its present state. It is not here, however, an object to enter upon the history of the subject, nor to point out the improvements the method has suc- cessively received at the hands of Antoine Laurent de Jussieu, Ventenat, Brown, Mirbel, Richard, and De Candolle. It will be preferable to give a rapid glance at its actual state, prin- ciples, and objects.

76. The great principles upon which the na-

tural system depends, are, that plants ought to be considered with reference to all their organs, forms, and peculiarities, and not with reference to an arbitrary selection of any one of these ; that a bond of union exists in all nature, by which individuals approximate to individuals by insensible gradations ; and that the true mode of arriving at a knowledge of the real nature and station of a given object is, by considering it with reference to the points in which it most nearly resembles other objects, which points are called affinities. By this mode of looking at the science, while it becomes necessary to acquire a knowledge of a considerable number of in- dividuals, in order to understand the nature of any single individual, it also follows that the acquisition of this knowledge facilitates in an obvious manner the subsequent investigation of any new subject. For example, a student who is entirely unacquainted with the science, takes up, for the first time in his life, a grass ; he examines it, and discovers that it possesses the characters of the extensive natural assemblage called gramineae, or

grasses, and that it belongs to the section of that assemblage called the genus poa. From that time forward he will, from the investigation he must of necessity have instituted, possess an accurate notion of the properties and peculiarities of gramineae, and, whenever he again meets with a grass, he will know that it is one, and where in the system at once to refer for in- formation respecting it. The same is consequent upon his studies to the end of his career; each new discovery necessarily increasing his know- ledge in various directions, and facilitating the making of discoveries to come.

77. The modes of arrangement, and of analysis, of the natural method are these.

78. The vegetable kingdom is first divided into three portions, according to the structure of the embryo, and of vegetation, viz. 1. Acotyle- dones, which have no cotyledons, as other plants, but whose seeds or sporules germinate from any indifferent point of their surface, and whose vegetation is constructed entirely of cel- lular tissue, without the intermixture of tubular or spiral vessels. 2. Monocotyledones, whose embryo has one cotyledon, rarely none, and which in that case germinates from a determinate point, and whose vegetation is formed by increase taking place at their centre, not at their circum- ference. 3. Dicotyledones, which are formed with two cotyledones, and whose vegetation is produced by the gradual superposition of in- ternal layers beneath the bark. This order of arrangement of the three primary groups was used by Jussieu ; il is now more frequently in- verted, the Acotyledones terminating instead of beginning the series.

79. Dicotyledones constitute the most extensive part of the vegetable kingdom, and are consi- dered to be in a more perfect state of develop- ment than the two others. They are subdivided, 1 . According to the number or absence of their petals, into polypetalous, monopetalous, and apetalous. 2. According to the insertion of their stamens, which is hypogynous or perigy- nous. 3. According to the adhesion or non- adhesion of their calyx with the ovarium, which

is either superior or inferior. 4. According to the position of the stamens with respect to the petals. 5. According to the structure of the fruit. 6. According to the structure of the seed. And 7. According to the modifications of their vegetation, as far as they indicate a corresponding peculiarity in the parts ,of fructification, which is often the case, and which wonderfully facilitates the acquisition of a knowledge of the natural orders of plants. Thus all Rubiaceae have op- posite entire leaves with intervening stipulae ; all Labiatae have opposite resinous leaves, without stipulae ; all

Leguminosae have alternate leaves, with stipulae, and leaflets always jointed with the petiole, and, when compound, furnished with stipulae at the base of each pair of leaflets.

80. Monocotyledones are also subdivided ac- cording to the above principles, as far as they are applicable to them, but as this group is much more si.nplc in its structure, and less extensive than dicotyledones, the mode of its division is necessarily different. Its principal section is that of cryptogamice, which is characterised by the absence of apparent flowers.

81. Acotyledones, which contain the plants of the simplest structure, have no sexes, but re- produce themselves by what are called sporules, that is to say seedlike bodies, which differ from seeds in germinating indifferently from any point of their surface, and in not being the result of sexual contact. This group answers to the Lin- nzean cryptogamia, excluding filices.

82. From this statement of the principles upon which the natural system of plants has been contrived, it must be obvious that the d'fficulties which the advocates of the Linnaean method pretend that it offers to the student do not exist, and that, in fact, the difficulties in the application of the Linnaean method are much greater, as far as the mere student is concerned. In the Linnaean system nothing is learned in the investigation of the name of a plant, except the simple and often very unimportant fact, that its stamens or styles exist in a certain quantity or position ; in the natural method, on the contrary, the same process brings the student acquainted, not only with all the characters of that plant which is under his consideration, but also with a compa- rative knowledge of those plants to which it is allied by nature. In the Linnaean system no step can be advanced till the flower is examined ; in the natural method almost any other part of the fructification, and often the foliage or habit of the plant only, will suffice. The Linnaean system produces empirical botany, the natural method scientific botany.

83. It will be seen that, except with reference to the two modern systems of botany, the history of the science, since the time of Linnaeus, is here scarcely noticed. The facts and actors since

hat period are too recent to require explanation, Ā«ind too much connected with living writers to make a task requisite which would necessarily be ungrateful. After the decease of that great man, a long interval elapsed, which has reached even to our own tirajs, during which but little improvement in the science took place among /(is followers. They have added, indeed, to the number of recorded plants, by describing and

defining according to the principles of their master ; but it is to France, and to the disciples of the French school elsewhere, that we must look for the progress of scientific botany.

84. By the united endeavours of the followers of the two systems, the advance of botany, since the days of Linnaeus, has been most extraordinary . The number of plants of all denominations now recorded, cannot fall short of 100,000. The elegance and the classical form bestowed upon the science by the labors of the learned Swede, and the attractions offered by the more philo- sophical principles of Jussieu, and of the French school of botany, have given to the study of the vegetable world that rank among the sciences which its actual importance demands. Princes and potentates have become its patrons, and nobles its professors ; vast sums have been ex- pended in its support by the governments of Spain, of France, of the various German states, of Denmark, and of Russia ; and in Great Britain the private munificence of individuals has amply compensated for the indifference of the government. The advantages arising from such powerful aid have not disappointed the ex- pectations entertained from them ; and the rapid progress of the science towards perfection has amply justified the patronage it has received.

85. But great as the progress of modern systematic botany has undoubtedly been, the progress of modern physiological botany is per- haps still greater. For to give an idea of the mass of talent that has been directed to the elu- cidation of this difficult department of the study of vegetables, since the period of the investi- gations of Grew and Malpighi, it will be sufficient to mention, in addition to the name of Linnaeus, that of Hales, Bonnet, Du Hamel, Hedwig, Spallanzani, each of whom has peculiarly dis- tinguished himself in the field of phytological investigation, and eminently contributed to the advancement of the science. But Dr. Priestley deserves to be particularised, as being the first who introduced into the study of phytology the aid of pneumatic chemistry, which, under the happy auspices of Ingenhouz, Sennebicr, Saus- sure, and others, has done more to elucidate the phenomena of vegetation, than all other means of investigation put together ; so that our know- ledge of the physiology of vegetables may now be regarded as resting upon the foundation of a body of the most incontrovertible facts, and as- suming a degree of importance inferior only to that of the physiology of animals.

86. But although the labors of phytologists have been directed with success to the explication of a variety of the most important phenomena of vegetation, and although we have been already favored with a condensed and systematic view of the result of their investigations by writers of the highest celebrity, yet there seems to be still wanting some work that shall exhibit them more in detail, and serve the purpose not merely of a brief

and rapid sketch, to assist the recol- lection of the adept, but of a clear and copious introduction, to facilitate th> studies of the novice, by presenting to him : first, such an ele- mentary view of the vegetable kingdom, in general, as shall be directly preparatcry to phy-*

Biological research ; and secondly, such a view of the process of vegetation as shall rpnder the rationale of the preceding phenomena prepa- ratory to that of the following, and shall not necessarily suppose any previous knowledge of the subject.

III. THE ANATOMY AND PHYSIOLOGY OF PLANTS.

87. Without entering, in this division of the subject, into all the differences of opinion with which botanists have occupied the world during the slow journey by which we have arrived at the present state of our knowledge, it will be enough to explain, in a clear and sufficient man- ner, those principles of vegetation, and laws of vegetable increase, which are now believed to be correctly ascertained. In this department, the writings of Aubert du Petit Thouars, a dis- tinguished French philosopher, are considered as those which contain the most correct views of the progress of nature.

88. Not to occupy ourselves with the immense variety of forms which cover the whole face of the globe, it will be more convenient, and equally useful, to confine our attention to a single species. For this the commonest weed will answer the same purpose as the stateliest tree of the tropics.

89. After considering its external organs, let us examine its interior, and seek to discover the manner in which they contribute to its existence. By comparing it with other plants, we shall be enabled to determine what it has in common with them, and what are its peculiarities ; thus we shall at once acquire an idea of its es- sential characteristics, and of its differences. By enlarging a little upon the functions of all the organs of a plant, under this part of our article, it will be only necessary under the head of Pure Botany to enter into the modifications of organs, without further reference to their nature and purposes.

90. Take a plant at hazard, the first you meet with by the path ; it will be found to possess a root, which fixes it to the ground, and which buries itself in the earth ; and a trunk, or stem, which elevates itself in the air. The latter is furnished, at intervals, with leaves which are remarkable for their thinness, and their green color. Near the point where they leave the trunk,

is placed a body which is protruded from it also. Without any determinate figure at first, it gradually developes, and produces new leave? similar to those from which it proceeded ; and, gradually separating the leaves from each other, it stops by forming a second stem. This stem is a branch. Each new leaf being supplied with a similar body, or bud, is capable of producing a new branch, unless prevented by injury or accident. This, therefore, is the plan upon which the plant we are examining increases in size; but trie changes of this nature which it undergoes have little effect upon its peculiar characteristics, they only render it of greater or smaller size. But a more remarkable epocha presently arrives. Buds make their appearance of a very different nature from those which for- merly produced branches ; they insensibly in-

crease in size, and at a fitting hour, when they have arrived at their greatest growth, the delicate parts which they contain, burst through the scales which envelope them, and expand them- selves ; these are the flowers. They are no longer of a monotonous uniform green color, but they assume the most lively hues, they exhale the most delicious fragrance, and they surprise us by the complex mechanism which they con- tain. But their duration is brief. Of all the parts of which they were composed, one only remains, which is the pistillum and which fills the centre. When all the rest are withered, this alone assumes a new life, and, after a gradual increase in size arrives at maturity, and becomes the fruit. The latter encloses bodies which separate from it at the period of maturity, and which are the seeds.

91. Each of these seeds placed in the earth, and submitted to the effects of time and circum- stances, undergoes the process of germination ; that is to say, absorbing, or, as some have it. pumping up humidity, througn Cuannels which are invisible to our senses, it swells until it bursts through the coverings in which it is en- cased. Then a new body makes its appearance. This is the embryo or rudiment of a new plant ; it is formed of two portions; the one a cylindri- cal or conical oblong body, and the other two leaf-like processes applied closely upon each other. The cylindrical body lengthens, and endeavours to bury itself in the earth ; whatever may be the position in which the seed is placed, it finally attains this purpose, and, penetrating the soil, becomes a real root ; whence the name of radicle, which is applied to this organ when in a state of rest. The two leaf-like processes sepa- rate, and assume a horizontal direction ; they are the cotyledons. In their centre is to be seen a sort of little bud, which is called the plumule, and which is the parent of subsequent leaves ; those which it first developes are rather different from those of the plant which produced itself; but in the end they become identical, and a new plant is produced, in all respects the same as that by which the seed was originally borne.

92. Having now examined the exterior of a

?lant, it is time to consider its internal structure, ‘or this purpose it is as well to continue our observations on the little plant which has just emerged from the seed. In its state of infancy and seclusion, the radicle, when cut across, offers nothing more than a succulent homogeneous substance. As soon as it has advanced, and touched the earth, and pushed forth some young roots, if it is broken across it will be seen that it is then divided into two distinct parts ; namely, a cylinder covered over with a sheatn, which ap- pears capable of being separated from it in all points. If the plant has also produced young branches, they too, when cut across, exhibit a similar appearance ; that is to say, upon their first coming forth they will be found solid and homogeneous, and presently afterwards they will be seen to consist of a solid cylinder, and of an external case. After all these parts have arrived at a further period of their growth, another dif- ference will be observable. A transverse s..c ton then exhibits two concentric circles; .. .e

inner enclosing a spongy and rather dry cylinder, the exterior a sheath, which is firmer and of a whitish color ; besides which will be seen the separate case which was distinguishable from the earliest development of the plant, and which has now become whitish in the inside, but which retains externally its succulent texture and green color. The rest, however, continues to mani- fest its two original divisions only, which are always white or some other color, but never green.

93. Here then we have three distinct parts, that in the centre is the pith, the case which sur- rounds it is the ligneous substance, or the wood ; and the external covering is the bark. In the root the pith is absent. But are these parts actually as distinct as they appear to be to the naked eye ? In the infancy of the plant we have seen that they were not separate. By what means then have they become so ?

94. At the period when they appear most distinct let us examine the pith with a pocket lens. We shall perceive that it consists of a mass of little bladders, or cells, the section of which ex- hibits a figure more or less hexagonal, and which constitute polyhedral figures, the sides of each of which appear to be common to two cells. They are not so, however, in fact ; each polyhe- dral cell being, as is now known, distinct and separable from those next it, with which it is only in a state of cohesion. Following the direction of these cells with care, it will be seen, that some of them pass horizontally through the ligneous substance, and lose themselves in the bark ; if no trace of these appears on the sur- face of the wood when the bark is stripped off, that will be attributable only to the extreme tenuity of the

traversing cells, which snapping asunder upon the slightest violence, leave no per- ceptible vestige, and offer no sensible resistance. If they are traced in the bark itself, it will be found that they maintain a connexion with the external part of it, where they form a continuous layer, which is what preserves that green color which is always obvious on the outside.

95. The only difference which exists between these parts is, that the centre has expended all its juices, and that the outside of the bark preserves them. In this state the latter receives the name of parenchyma. But with the feeble nature, and slight texture which it possesses, in what manner can it be conceived that the pith pene- trates the woody substance which seems to be so solid? The first glance is sufficient to ex- plain this phenomenon. There is no sort of dif- ficulty in seeing that the wood is composed of parallel fibres, which interlace each other, and form a kind of net-work, through the meshes of which the parenchyma, or the medullary elonga- tion, finds its way to the bark. There it meets with a net-work of matter far more flexible than that nearest the pith, and composing all the in- terior of the bark ; this latter is named the liber.

96. There is still an essential part of the bark to notice, which is the epidermis. This is easily discovered. All the interior parts of a plant seem both to the eye and the touch saturated with glutinous juices, while the external part is wholly dry. This state of dryness arises with the epi-

dermis, which consists cf ai. exterior mem- brane, enclosing and holding together all the solid and fluid parts. It originally existed in the embryo, and it continues to cover, without inter ruption, all the parts subsequently developed. Even the leaves themselves, so delicate and attenuated, are covered over both surfaces with two united skins of this epidermis. The expan- sion or dilatation to which they are subject proves this fact,and makes them excellent evidences of it.

97. The part by which the leaf is attached to the stem, and which is named the petiole, ap- pears to be composed of a bundle of fibres. The petiole extends from one end to the other of the leaf, and separates it into two nearly equal parts. It diminishes in diameter as it ap- proaches the end of the leaf, because it from time to time sends off young branches from each side, which themselves become subdivided, and, by crossing each other in various directions, form a kind of continuous net-work.

98. Accident, insects, or a very sharp instru- ment, will separate the epidermis. It then ap- pears in the form of an extremely thin and perfectly transparent membrane. The green color which it exhibits in its natural state, is not proper to itself, but is caused by the succu- lent substance which is interposed between the meshes of net- work. In the latter there is

no difficulty in recognising the parenchyma in a state of vegetation; for it is certain that the green color is the constant attendant of that state, and that by its means the parenchyma may be discovered wherever it exists.

99. The fibres which form this net-work pro- ceed from the petiole ; but whence does the petiole itself derive its origin ? It appears to spring from the bark ; in that case would it be any thing more than the meshwork of the liber in a state of de- velopment ? Such has been the opinioa of some writers ; but, if its origin be carefully traced, it will be found to arise within the woody substance itself; and to be in fact a detached portion of the wood.

100. The phenomena which took place at the period of germination are renewed by every leaf which successively unfolds itself. The cotyle- dons were the source of the fibres which were sent down into the earth through the root; in like manner every leaf is enabled to maintain a com- munication between itself and the soil by the means of fibres. Hence arises another kind of increase, of which no notice has yet been taken ; the increase in thickness. A stem which at the hour of its birth was no thicker than a pin, in a few months acquires the diameter of an inch or more. This arises from the successive super- position of the bundles of fibres, which are created upon the development of each leaf, and of every leaf-bud. The latter makes its first ap- pearance under the form of a green point, which originates from the inner layers of the ligneous body, which it traverses, and penetrates into the bark. A short time after its first appearance, it may be perceived that the bud is surrounded by a portion of woody fibre, which passes down- wards, covers over the wood previously formed, and thus forms a new layer. The existence o,

this is easy to demonstrate ; for the fibres of the leaves separate easily from the wood, but the leaf-buds when broken off evidently arise from the interior of the wood. All the new parts formed by the leaf-bud soon become so completely identified with the old wood, that, after a short period, no marks of separation remain.

101. We have now followed the plant through all its stages of increase. We have next to consider what the source is from which it has obtained the substances it has assimilated. There can be no doubt that the roots, which penetrate into the earth, contribute much to this purpose ; for a long time, indeed, it was believed that plants were capable of absorbing even earth itself. But more accurate observation has shown that nothing but humidity

can be carried up into the plant through its roots. Mere humidity, however, is insufficient to maintain life and health in a plant. Experiments have been tried to induce plants to exist with their roots plunged into water only : they all proved abortive, although in some cases life was. maintained in the subjects of the exper- iments for several years. Various substances or agents, in combination .with humidity, doubt- less afford the nutriment upon which vegetables live. But by what curious mechanism is the requisite humidity conveyed to the parts which require it?

102. In the rapid coup d'ceil which has been cast upon the internal structure of plants, we have perceived nothing more in the ligneous body and the liber of the bark, than elongated fibres, which cross each other and form a net-work. Of this we may be convinced with little trouble, by examining against the light, with a pocket lens, a very thin transverse section of a branch. It will be seen to be pierced full of holes, of different forms and sizes ; these are the ex- tremities of as many continuous tubes. The true structure of these tubes is much a matter of con- jecture and dispute ; some observers discover an infinite variation of figure and organisation; others reduce them all to the woody fibre and the spiral vessels or tracheae. \While one micro- scopic botanist sees pores and holes in the sides of these tubes, simple tubes, mixed tubes, and many more ; others declare that the pores are imaginary, the difference nonexistent, and that all the tubes are essentially the same. In this war of observation, which, however curious as a matter of speculation, bears very little upon the most important part of vegetable physiology, or upon the functions of parts, we shall at present con tent ourselves with one kind only, which is easy to observe. Twist a young shoot so as to break it with as little violence as possible, and the two separated parts will be found to be held together by extremely delicate threads. If you consider them with care you will find that they are each one a simple thread, rolled up in an admirable manner in the way of a corkscrew. The spires of this screw being closely applied to each other, it forms a continuous tube; vessels of this kind are called spiral vessels and are found in the nerves of the leaves, or in the bundles of vessels in communication with the leaves. It was long thought that in these parts a striking analogy was perceptible between animals and plants ; and

a comparison was drawn, apparently with reason, between the spiral vessels of plants, and the tracheae of animals, especially of insects which are constructed in a very similar manner. It was, therefore, inferred, that these were the res- piratory passages of plants, but experience has not confirmed this notion. Nevertheless, it is certain, that air acts a great part in the economy of vegetation, and that it is by the leaves that its influence is manifested. They have a direct communication with the roots, whither all their intermediate tubes extend ; and the pores which terminate them may be seen with different degrees of facility acording to circumstances. By their

agency, the humidity which is sucked from the earth is raised and forms what is called sap, which deposits successively all that is necessary for the supply of the different parts through which it passes. Having arrived at the leaves, a por- tion escapes by perspiration, a portion is de- posited, and the remainder descends, charged with new principles, which , the leaves have ab- sorbed from the surrounding atmosphere. The leaves therefore contribute to the increase of the plant. When this motion of the sap is once established it continues to increase ; and it is supposed that the superfluous power which it has acquired occasions the production of new bran- ches, and of flowers.

103. But what is the cause of this motion? The most obvious is heat, which, by dilating those upper points, which are most subject to its action, occasions a void in them ; the juices which are below them ascend to replace the void, and the continual recurrence of this ope- ration occasions what we call the circulation or motion of the sap. This mechanical action will be a sufficient explanation for those who are con- tented with looking only at the surface of things ; but it will not explain all the difficulties con- nected with the motion of the sap , and, especially will it not account for the first tendency of the radicle to the earth, on which tendency all sub- sequent phenomena necessarily depend; of such a tendency, gravitation and a thousand other laws have been offered as an explanation, each being more unsatisfactory than the other. Surely it is wiser at once to admit thatĀ«it depends upon that inherent principle of life which is peculiar to organic matter, which accompanies the vege- table through all stages of its existence; and which is infused into those new individuals which the parent produces. It is a first impulse received in the beginning of its existence, which has extended into every part, and which finally passes into the seeds. It is that first creatric impression to which it owes the faculty of assi- milating the various moleculae of matter, and of applying them ; by whose influence the roots are directed towards the side where the most fitting nourishment is to be found ; which compels the leaves to present their upper surface always to the light ; which induces many to assume that peculiar position during the night which has been compared to the sleep of animals; and finally which gives rise to those various phenomena of vegetation which seem to distinguish plants from the general laws of physics.

104. This, perhaps, would be the proper place

to consider the relation which is borne by this vital principle of plants, to that life which we ourselves enjoy, and which we see descending in the

scale of creation, growing weaker and weaker as it approaches the inferior animals, of which in general it appears to be the attribute. But, as we can be guided in this labyrinth by force of reasoning only, this question belongs less to the department of natural history than to that of metaphysics.

105. There are many other instructive ideas wnich may be obtained from the consideration of a single plant ; but they perhaps, will be best understood by a comparison with other plants ; and by ascertaining by that means, whether all are formed upon the same plan, composed of the same parts, and subject to the same changes.

106. One of the most obvious contrasts pre- sented by the vegetable kingdom, is between the tribes which rapidly expand their foliage, and push up their flower-bearing stems, and by bringing their fruit to perfection fulfil the purpose of their creation in the space of a few months, or even weeks, and those monarchs of the forest which bear aloft their majestic branches in the air, and see centuries passing by them, while generation after generation of herbs, and even men, are perishing at their feet. One would think that if anything could indicate a difference of organi- sation it would be peculiarities like these. In fact, if we examine one of these vegetable colossi, which storms or other accidents have levelled with the earth that was so long overshadowed by its branches, we perceive that its interior consists of a solid, compact, homogeneous sub- stance, which seems to be analogous to nothing in the annual plant ; we also see, however, that a section of this substance is marked by concen- tric circles. In order to ascertain the origin of these circles, it is necessary to revert to the seeds, which such a tree produces in vast abundance. There we discover the same parts as in the an- nual plant ; two cotyledones ; a cylinder, which attempts to fix itself in the earth by the produc- tion of roots ; and an intermediate bud. The impulse once given to its developement, this seed, with its apparently feeble resources, will be- come in the lapse of years and ages similar to that giant which produced it. In the leaves and buds consist the sources of its magnitude. The for- mer being under the necessity, on the one hand of coming into contact with air, and on the other of establishing a communication with the soil, establish the action of vegetation. The first year passes on as in the annual plant, except that the parts of the tree are unfolded with less rapidity and that the buds present neither flowers nor fruit, but a tree covered with scales. Upon the arrival of winter, the annual perishes, the tree loses only its leaves. As soon as the season again becomes milder, vegetation, which had been suspended, is renewed ; the buds insensibly expand, and the unfolding of new leaves gives a new life to the plant ; each of these leaves is accompanied by its bud. Thus each successive season, producing a mass of foliage, which in- creases by a rapid geometrical progression, and an equal number of new buds, occasions the for- mation of a new body of ligneous substance, which

overlays the old body, and thus forms the whole tree into a kind of cone.

107. The whole mass of the wood is thus composed of thin successive cones. They are easily perceived in many trees, and it is they which form those concentric circles observable in a trunk cut across. Each circle, depending wholly upon the increase caused by the return of successive seasons, becomes a sure testimony of the age of the tree.*

108. The principal part of our trees exhibits these laws of development. The buds may be more or less apparent ; and the scales which enclose them may be more or less numerous, being increased in number in proportion to the greater sensibility of the organs they enclose. For a more sure protection, the scales are often covered with glutinous or resinous exudations. But even with this safeguard, the fostering hand of nature does not rest. Thick furs are frequently interposed during the winter among the buds, and are thrown over the tender shoots.

109. By this means the buds remain safely upon the tree. We generally remark one which is a termination of the branch, and which will the following year prolong the branch in its original direction ; all the others are seated at the axillae of the leaves.

110. Trees present many peculiarities, which depend upon their woody state. The pith, which occupies the centre of young plants, disappears in trees. It is probable that, besides the increase in diameter which takes place externally, some peculiar operation goes forward in the inside, and that the solid layers of wood compress the pith in such a way as to leave scarcely any traces behind. Around it vegetation is evidently main- tained for a long time, as is shown by the green tinge which surrounds it. Larger and more obvious vessels are placed about it than elsewhere, and constitute what is called the etui medullaire by the French, which there is reason to think is one of the most important accessories of vege- tation.

I'll. The wood does not at once arrive at that solidity which it subsequently possesses, but ac- quires it by slow degrees, from the centre to the circumference. For this reason the external layers are much less compact, and paler than the internal; they are called the alburnum. Dutrochet accounts for this difference in the old and new layers of wood with his usual sagacity. He is of opinion that a portion of the sap, ela- borated and sent downwards by the leaves under the state of proper juice, is absorbed laterally by means of the radiating vessels, or silver grain, and is gradually deposited in the originally empty vessels of the wood ; that the compactness and weight of wood depends upon these juices so deposited, and not upon any constitutional difference in the wood itself, and that in certain trees, which are remarkably light, as the poplar, no deposit, or scarcely any,

takes place.

112. The bark also undergoes material changes in the course of time. The first branches which are produced are green, like the leaves; their color being occasioned by the transparency of the epidermis, which allows the cellular tissue, or the parenchyma, to show through. By slow de-

greesthe epidermis thicicens,and assumes aĀ»deeper color, under which appearance it is seen in the winter season. If it is raised up, the green color of the parenchyma is still manifest enough beneath it. The epidermis necessarily gives way gradually to the growth of the tree, and splittin

of several lives ; and that the greater proportion of its parts consists of an intermediate system, which only serves to maintain a communication between the extreme points of the vegetable. If a tree is destroyed by the ravages of time, its death can be only occasioned by the destruction

in various directions is replaced by another ; of 'the intermediate portions of its fabric by

and by slow degrees new layers are formed, and burst in various directions. According to the nature of the plant the epidermis also takes a variety of forms, sometimes forming the mis- shapen knotty crust which is usually called bark, sometimes peeling off in thin layers, and occasionally falling from the parent tree in hard flakes.

113. It is probable that the bark performs the

which the channel of continuous communication is effectually interrupted. After such interruption has taken place, the still surviving portions of the tree are capable of furnishing layers or cuttings, which will renew the operation of ve- getation with unabated vigor.

118. The resources of nature are far from being exhausted by these apparent buds ; there exists throughout the vegetable system a creative

same functions as the leaves, in the early state and expansive power, which, according to cir- of the buds, and occasionally in all states, cumstances, is able to operate in the develop- Otherwise it would not be easy to account for ment of new buds, where none had been visible the growth of cacti, euphorbias, some apocineous before. In fact, there is always an abundance plants, &c. which are all destitute of leaves. In of

rudimentary buds dispersed among the sub- fine, the bark may be compared to a universal stance of a tree, which are only called into

action when the ordinary resources of nature begin to fail. They are frequently excited very nature adopts to screen the buds from the rigor long after the period which had been originally

leaf, with one surface only.

114. We have seen what ingenious methods

of winter ; but in countries where there is no winter no defence is requisite. These protecting scales diminish therefore, by degrees, as we ap- pioach the equator. In the trees which cover

assigned for their appearance ; and even in places where no traces of them could have been ex- pected to exist. Thus in all vegetables there appears to be as obvious a line of demarcation in

countries in such a latitude, the buds break forth the system, at that point which is called the at once into leaves and branches, without re- collar, whence the first ascending fibres direct garding the order of seasons. By this circum- their course upwards, and the descending down- wards. Buds are only produced by the former, and form no part of the economy of the latter. Yet it not unfrequently happens, that roots ex- posed in a proper degree to the influence of the

stance the apparent difference between trees and herbs is removed.

115. In like manner, insensible gradations unite the herbs which creep or trail along the

ground, and those which carry their heads aloft air, will form buds, and throw up shoots, in the in the air : the perennial and the annual vege- dame way as the branches. Even the leaves table. Some exist for two years. The stems of have, in a few cases, a similar power of pro- others perish every year, but their roots survive. Some under shrubs scarcely elevate themselves {V>m the soil, yet their slender stems are formed of a firm and woody substance. Next come the shrubs whose branched and entangled stems form bushes. Lastly are perfected the trees which from possessing a stem scarcely loftier than the stature of a man, finally dilate them- selves till they become the giants of the forest.

116. We have assigned, as the cause of in- circulation of the sap.

ducing buds, and consequently young plants.

119. We have now seen that the growth of plants, and their increase in size, depends upon a peculiar internal movement, acting between the leaves and the roots. But in what way does it operate ? This is a problem which has exercised the ingenuity of all students of vegetable phy- siology, who have contrived theories innumerable to explain the phenomenon, which is called the

crease in the bulk of trees, the communication which is established in their system between the leaves and roots. The reciprocity of disposition

120. The great and almost impenetrable ob- scurity in which this subject is unavoidably involved, has occasioned much diversity of

of these two organs is so strong, that if a bit of opinion among phytologists. Grew states two

a branch of any tree which is robust enough to hypotheses, which he seems to have entertained

bear the operation, be placed in the earth it im- at different periods, though it is not quite certain

mediately makes good the loss it has sustained

by being dissevered. It presently produces fresh

root, and a new plant is formed. The advantage*

“which is taken of this peculiarity of plants, to

propagate them by cuttings or layers is well

known. But this is not all ; a bud separated

from its parent, and inserted between the bark

to which of them he finally gave the preference. In one of them he attributes the ascent of the sap to its volatile and magnetic nature, aided by the agency of fermentation ; but this hypothesis is by much too fanciful to bear the test of serious investigation. In the other he at- tributes the entrance and first stage of the sap’s

and the wood of another tree, soon establishes ascent to the agency of capillary attraction, and

the requisite communication! between itself and the earth, and renders the tree which bears it similar in nature to the kind artificially inserted. Hence

the origin of budding and grafting in horticulture.

117 From these observations it has become evident, that the life of a plant is a succession

accounts for its progress as follows : the portion of the tube that is now swelled with sap, being surrounded with the vesiculae of the parenchyma, swelled also with sap which they have taken up by suction or filtration, is consequently so com- pressed, that the sap therein is forced upwards a second sta

summit of the plants. But, if the vesiculae of the parenchyma receive their moisture only by suction or filtration, it is plain that there is a stage of ascent beyond which they cannot be thus moistened, and cannot, consequently, act any longer upon the longitudinal tubes. The supposed cause, therefore, is inadequate to the production of the effect.

121. Malpighi was of opinion that the sap ascends by njeans of the contraction and dila- tation of the air contained in the air-vessels. This supposition is perhaps somewhat more plausible than either of Grew's ; but, in order to render the cause efficient, it was necessary that the tubes should be furnished with valves, which were accordingly supposed ; but of which the existence has been totally disproved by succeeding phytologists. If the stem or branch of a plant is cut transversely, in the bleeding season, it will bleed a little from above as well as from below : and if the stem of any species of spurge is cut in two, a milky juice will exude from both sections in almost any season of the year. Also if a plant is inverted, the stem will become a root, and the root a stem and branches, the sap ascending equally well in a contrary direction through the same vessels; as may readily be proved by planting a willow twig in an inverted position. But these facts are totally incom- patible with the existence of valves ; and the opinion of Malpighi is consequently proved to be groundless.

122. The next hypothesis is that of M. De la Hire, who seems to have attempted to account for the phenomenon by combining together the theories of Grew and Malpighi. Believing that the absorption of the sap was occasioned by the spongy parenchyma, which envelopes the longitudinal tubes, he tried to illustrate the subject by means of the experiment of making water to ascend in coarse paper, which it did readily to the height of six inches, and by par- ticular management even to the height of eighteen inches. But, in order to complete the theory, valves were also

found to be necessary, and were accordingly summoned to its aid. The sap which was thus absorbed by the roor, was sup- posed to ascend through the woody fibre, by the force of suction, to a certain height ; that is, till it got above the first set of valves, which prevented its return backwards ; when it was again sup- posed to be attracted as before, till it got to the second set of valves, and so on till it got to the top of the plant.

123. This theory was afterwards adopted by Borelli, who endeavoured to render it more perfect, by bringing to its aid the influence of the condensation and rarefaction of the air and juices of the plant, as a cause of the sap's ascent. And on this principle he endeavoured also to account for the greater force of vegetation in the spring and autumn ; because the changes of the atmosphere are then the most frequent under a moderate temperature ; while in the summer and winter the changes of the atmosphere are but few, and the air and juices either too much rarefied, or too much condensed, so that the movement of the sap is thus at least pre- judicially retarded, if not perhaps wholly sus-

pended. But as this theory, with all its additional modifications, is still but a combination of the theories of Grew and Malpighi, it cannot be re- garded as affording a satisfactory solution of the phenomenon of the sap's ascent.

124. With this impression upon his mind, and with the best qualifications for the undertaking, Du Hamel directed his efforts to the solution of the difficulty, by endeavouring to account for the phenomenon from the agencyjof heat, and chiefly on the following grounds : because the sap begins to flow more copiously as the warmth of spring returns ; because the sap is sometimes found to flow on the south side of a tree before it flows on the north side; that is, on the side exposed to the influence of the sun's heat sooner than on the side deprived of it ; because plants may be made to vegetate even in winter, by means of forcing them in a hot-house ; and because plants raised in a hot-house produce their fruit earlier than such as vegetate in the open air.

125. On this intricate but important subject, Linnaeus appears to have embraced the opinion of Du Hamel, or an opinion very nearly allied to it, but does not seem to have strengthened it by any new accession of argument, so that none of the hitherto alleged causes can be regarded as adequate to the production of the effect.

126. According to Saussure, the cause of the sap's ascent is to be found in a peculiar species of irritability, inherent in the sap vessels them- selves, and dependent upon vegetable life ; in consequence of which they are rendered capable of a certain degree of contraction, according as the

internal surface is affected by the application of stimuli, as well as of subsequent dilatation, according as the action of the stimulus subsides : thus admitting and propelling the sap by, al- ternate dilatation and contraction. In order to give elucidation to the subject, let the tube be supposed to consist of an indefinite number of hollow cylinders, united one to another, and let the sap be supposed to enter the first cylinder by suction, or by capillary attraction, or by any other adequate means ; then the first cylinder, being excited by the stimulus of the sap, begins gradually to contract, and to propel the contained fluid into the cylinder immediately above it. But the cylinder immediately above it, when acted on in the same manner, is affected in the same manner; and thus the fluid is propelled from cylinder to cylinder, till it reaches the summit of the plant. So also, when the first cylinder has discharged its contents into the second, and is no longer acted upon by the sti- mulus of the sap, it begins again to be dilated to its original capacity, and prepared for the intro-susception of a new portion of fluid. Thus a supply is constantly kept up, and the sap con- tinues to flow.

127. But Mr. Knight has presented us with another, which, whatever may be its real value, merits at least our particular notice, as coming from an author who stands deservedly high in the list of phytological writers. This theory rests upon the principle of the contraction and dilatation, not of the sap vessels themselves, as in the theory of Saussure, but of what Mr. Knight denominates the silver grain, assisted

perhaps by heat and humidity, expanding or condensing the fluids. On the transverse section of the trunk of woody plants, particularly the oak, they appear in the form of the radii of a circle, extending from the pith to the bark ; and on the longitudinal cleft or fissure of the trunk of most trees, but particularly the elm, they appear in the form of fragments of thin and vertical laminae, or plates, interlacing the as- cending tubes in a transverse direction, and touching them at short intervals, so as to form with them a sort of irregular wicker-work, or to exhibit the resemblance of a sort of web. Such, then, being the close and complicated union of the plates and longitudinal tubes, the propulsion of the sap in the latter may be easily accounted for, as it is thought, by means of the alternate contraction and dilatation of the former, if we will but allow them to be susceptible to change of temperature ; which susceptibility is proved, as it is also thought, from the following facts : on the surface of an oaken plant that was exposed to the influence of the sun's rays, the transverse layers were observed to be so considerably affected by change of temperature as to

suggest a belief that organs which were still so restless, now that the tree was dead, could not have been formed to be altogether idle while it was alive. Accordingly, on the surface of the trunk of an oak deprived of part of its bark, the longitudinal clefts and fissures, which were perceptible during the day, were found to close during the night. But in the act of dilating they must press un- avoidably on the longitudinal tubes, and con- sequently propel the sap ; while in the act of contracting they again allow the tubes to expand and take in a new supply. This is the substance of the theory.

128. But, in drawing this grand and sweeping conclusion, Keith has well remarked, that it should have been recollected, that change of tem- perature cannot act upon the transverse layers of a tree that is covered with its bark, in the same manner as it acts upon those of a tree that is stripped of its bark, or upon those of a plank ; and if it were even found to act equally upon both, still its action would be but of little avail. For, according to what law is the machinery of the plates to be contracted and dilated, so as to give impulse to the sap ? According to the al- ternate succession of heat and humidity ? But this is by much too precarious an alternation to account for the constant, and often rapid, pro- pulsion of the sap, especially at the season of bleeding. For there may be too long a con- tinuance of heat, or there may be too long a continuance of humidity ; and what is to become of the plant during this interval of alternation ? If we are to regard it as happening only once in the space of twenty-four hours, as in the case of the oak, it can never be of much efficacy in aiding the propulsion of the sap. But if we should even grant more, and admit the alternate contraction and dilatation of the vessels to be as frequent as you please, still their effect would be extremely doubtful, owing to a want of unity or co-operation in the action of different plates, or of different [portions of the same plate. If heat, like humidity, entered the plant by the

root, and proceeded gradually upwards, like the ascending sap, perhaps it might be somewhat efficacious in carrying a portion of sap along with it ; but as this is not the case, and as the roots of plants are but little affected by change of temperature, while the trunk and upper parts may be affected considerably, it can scarcely be supposed that the action of the plates will be uniform throughout the whole plant ; or rather, it must be supposed, that it will often be directly in opposition to that which is necessary to the propulsion of the sap. But, admitting that the sap is propelled by the agency of the plates in question, and admitting that it has been thus raised to- the extremity of the woody part of the plant, how are we to account for its ascent in such parts as are yet higher ; the leaf-stalk and leaf, the flower- stalk and flower ; as well as in the herb also, and in the lofty palm, in which no such plates exist ? Here it will be necessary to introduce the agency of a new cause, to com- plete the work that has been thus begun, and of a new set of machinery to supply the deficiency or absence of the

machinery that has been already invented.

129. How unsatisfactory the best of these theories is, must be self-evident, even to persons unacquainted with the structure of vegetables. Du Petit Thouars has, therefore, with his accus- tomed ingenuity, proposed a new hypothesis, which to us seems by far the least objectionable which has yet been contrived. He dismisses the question of the mechanical action by which the motion of the sap is maintained ; thinking, with much justice, that no principle of physics, with which we are acquainted, is sufficient to explain it; and he therefore attributes the mere motion to an inherent power, with which nature has been pleased to endow vegetables. But the cause of the renewal of its motion in the spring, after remaining in a quiescent state for several months, he ascribes to the necessity of maintaining a perfect equilibrium in the system of a plant. So that, if a consumption of sap is produced at any given point, the necessity of making good the space so occasioned, consequently throws all the particles of sap into motion, and the same effect will continue to operate as long as any consumption of sap takes place. The first cause of this consumption of sap he declares to be the development of the buds, and already formed young leaves, by the stimulating action of light and heat, but particularly of the latter. As soon as this development occurs, an assimilation and absorption of sap is occasioned, for the support of the young leaves ; a vacancy in the immediate vicinity of the leaves is produced, and motion immediately takes place.

130. We will not occupy ourselves with an explanation of the cause of the descent of the sap : gravitation will serve the purpose, in the room of a more plausible conjecture.

131. But, notwithstanding all the differences which exist among trees, they approach each other by insensible degrees ; and yet they indi- vidually retain a peculiar set of characters, and a physiognomy, which botanists call habit, that renders it easy to distinguish them at great dis- tances ; and more easy to eyes habituated to the

sight of them, by practice and long familiarity, than by the aid of theory.

132. Hot countries are beautified, however, by a description of tree, the differences of which are exhibited in an unusual degree. In these regions exist the palms, that patrician order of plants, as Linnaeus termed it, which supports an umbrageous undulating tuft of huge leaves, seated on the

summit of a lofty columnar trunk. Here you have no longer an infinite division of branches, as in our trees of Europe, but a trunk of the greatest possible simplicity, covered with rigid scales, or marked by distant circles. If an ob- server notices a considerable number together, of different ages and sizes, he will perceive that the smallest and the youngest are entirely the same as the largest, except in dimensions. They possess an equal quantity of leaves, their trunks are of equal diameter, and they differ only in stature. Carrying observation yet farther, it will be found that the trunk is not formed, as in European trees, of concentric circles of wood, bat that it is formed by the assembly of a vast number of parallel fibres, which extend from the roots to the summit, and every one of which has its com- munication with a leaf. No trace of pith is dis- coverable in the centre, nor of liber or bark in the circumference ; but the whole body of utricu- lar or parenchymatous matter exists dispersed among the fibres.

133. To understand this peculiar manner of growth, recourse must again.be had to the seed, and to its germination. This is easily examined, the seed of the palm-trees being often among the largest in nature. The part, however, by which reproduction takes place, is wonderfully small for the size of the seed ; and lies hidden in a peculiar substance of great dimensions, which is called the albumen.

134. This embryo is oblong, and manifests no trace of division, or of separation, at either ex- tremity. As soon as the period of germination arrives, the exterior extremity elongates and opens, producing a kind of sheath, from the base of which descends a root, and the other extremity of which is always retained in the albumen. This sheath encloses a second, which is rather longer; a third appears, becoming yet longer and longer ; from one of the sides of the next is unfolded a kind of plaited leaf. Following each other in succession, the one from the bosom of the other, they at length assume the appearance of the adult leaves, differing from them only in dimensions. The parts of the leaves, continually dilating, expand, and throw off the scales which first appeared; and this centrifugal dilatation goes on till a sort of foundation is laid, which is incapable of growing in any direction except in breadth. Roots go on increasing under ground. Finally, a kind of base is formed, of a far more considerable diameter than the future trunk, or stipes; which then shoots upwards, and increases regularly in dimensions, by the successive de- velopment of leaves. These are enclosed, one within the other, in a peculiar manner, and con- stitute a bud of a particular description. Each has a tendency to rise to a fixed height above that which contained it ; the old leaves, as they complete thoir functions, either fall off wholly,

leaving only a scar behind, or partially, still con- tinuing to clothe the stem with their remains. As soon as this stipes, or trunk, has acquired a certain

elevation, bunches of flowers make their appearance in the axillas. Sometimes they ex- pand among the leaves, as in the date and cocoa nut ; sometimes they appear from the stem; as in the areca nut. Although they do not appear till the trees have acquired maturity, they are formed long before. Traces of them may be discovered among the first leaves which are developed ; but vegetation, powerfully attracted upwards by the summit, gives them no leisure to unfold them- selves, till some check is given to the increase of the tree.

135. We have seen that a section of a dicoty- ledonous tree presents a series of concentric cir- cles, which are, in fact, the register of its life. The scars or the scales of palms offer a similar, and not less certain, chronology of their past existence ; and if you search the interior of their bud, or, as it is often named, their cabbage, which is one of the most delicate of foods, you will find that it is equally easy to read its future history. You will there find, without the aid of glasses, flowers and leaves already formed, which will not be finally produced till several years subsequently.

136. For example, in a species of euterpe, found on the Island of Bourbon, the flowers are visible eight years before they are expanded. The summit is formed of twelve leaves, each sup- plied with a bunch of flowers in its axilla. These leaves only expand each year, so that four years will have elapsed between the expansion of the first flowers and of the last, although even the former were discoverable four, and the latter eight, years previously.

137. Here, then, we have a mode of germination and development very different from those of European plants. It is not, however, peculiar to palms ; but is found, at least in an analogous manner, in a great number of the herbs which are natives of our latitudes. Only hot countries produce other trees with a similar peculiarity of organisation. These differences have given rise to the establishment of two great divisions in the vegetable kingdom. Those plants of which we first treated are called dicotyledons, on account of the two lobes or cotyledons of their embryo ; those which have been last under discussion are named monocotyledones, their embryo being pro- vided with one cotyledon only.

138. If it were necessary to have recourse to an examination of the seed, whenever it was necessary to ascertain to which of these two great divisions a given plant belonged, few persons would be found who possess either the patience or opportunity required for ascertaining what is often a very minute point. But, fortunately, this division, which is founded in nature, possesses many external characters, which are quite as available as those of the seed. Before explain- ing them precisely, we will place two common plants under examination.

139. The first is the common onion. The seed of this plant, like the palm, but of much smaller dimensions, consists of an elongated sim- ple embryo, placed in the midst of albumen.

Its extremity, which is protruded by germination, becomes longer. One end becomes thickened, and buries itself in the soil, whence proceeds the root; the other end is elevated, and bears the seed, like a little cap. Presently a green color pervades it, and we can no longer doubt that it is a genuine leaf. A little above the root is 3 small lateral slit ; from this a second leaf is pro- duced, a third follows, and so on. Each is en- closed within the other, as in the palm ; and, like it, they all direct their efforts to produce a kind of base ; by these means the dilatation of the root takes place; and, the centre constantly forcing the interior outwards, a true onion is at last the consequence. The leaves, withering up as soon as they have performed their functions, perish, and leave behind them nothing but their fleshy sheaths, the most exterior of which wither and perish also ; the interior retain their fleshy and swollen habit. As soon as the period of fructification has arrived, a simple leafless stipes is elevated from the centre of the root, and puts an end to the existence of the individual, except when buds exist among the leaves and give birth to what are called off-sets.

140. The second example, which is equally familiar, shall be that of wheat. The valuable seed which is borne by this herb is, like that of the onion and the palm, formed of albumen, which is what we know under the name of flour, and of an em- bryo, which reposes at its base. The latter is a little different in figure from the two others ; but, like them, it gives rise to a sheath, out of which in succession scales and then leaves arise. At the base of each sheath or leaf, in the inside, is found a bud, which is speedily developed, and contributes to form the tuft of herbage, under which appearance the plant is seen in its earlier stages. But, as soon as the flowering season arrives, a stem of a particular description is pro- duced. Each leaf becomes separated from that which is next it by a considerable space ; these spaces are hollow, and partitioned off by a par- ticular kind of division. This kind of stem is called a culm. It is now obvious that there is something peculiar in the manner of growth of the monocotyledons, which distinguishes them from dicotyledons. The leaves, however, offer marks of a more decisive kind. We have al- ready seen that, in

dicotyledonous plants, the nerves of the leaf resemble a sort of net-work, but in monocotyledons they have a parallel and rectilinear direction, passing without interrup- tion from one end to the other ; that is to say, those fibres which are nearest the principal rim run alongside it as far as the tip, where they are lost in the margin ; and all the fibres affect the same direction. Hence the almost constant elongated form of their leaves, which are in some sorts comparable to the blade of a sword, being broadest at the base, and terminating in a point. You rarely can perceive the crenatures, or den- ticulations, or lobes, which are so common in the leaves of dicotyledons.

141. The flowers also offer some aid in dis- tinguishing these two great classes from each other. The number of parts, which is so va- riable in most plants, appears almost fixed in monocotyledons. Every organ of fructification

is arranged in a ternary mode, simple or double, or multiple. Dicotyledonous plants are much less constant ; nevertheless, the number five, sim- ple or multiple, is more commonly peculiar to them than any other number. It is extremely difficult to assign a cause for this peculiarity ; perhaps it is to be sought in the manner in which, the fibres first proceed from the parent embryo.

142. Haying thus examined the progress of development in the internal parts of a plant, and considered them with relation to their func- tions, we will conclude the subject of Vegetable Physiology by some remarks upon their varia- tions. We have already seen, that the constitu- ent parts of plants are, cellular tissue, woody fibre, and spiral vessels.

143. The Cellular Tissue consists of fine and membranous utricles. Individually, they re- semble oblong bladders inflated in the middle, as in the case of some plants ; or circular or hex- agonal cells, as in the case of others. Collec- tively, they have been compared to an assemblage of threads of contiguous bladders or vesicles, or to the bubbles that are found on the surface of liquor in a state of fermentation.

144. But this description is applicable to them only as they occur in herbaceous plants; though in either case they are not always of the same figure, in all the different parts of the same plant. In the leaf-stalk of the artichoke, for example, their diversity of figure is very conspicuous, pre- senting, in their free and uncompressed state, whether on a horizontal or longitudinal slice, a beautiful assemblage of hexagonal cells , but in their crowded and condensed state, as they ap proximate the longitudinal fibres,

an assemblage of tubular threads, successively inflated and contracted. In woody plants their diversity of figure is still greater, as must appear evident if it is but recollected that they constitute not only the bags or bladders of the cellular integument and pith, and of the pulp of the leaf and fruit, but also the very fabric of the divergent layers themselves; assuming a peculiarity of aspect, according to the degree of compression they sus tain from other parts; or according to the degree of induration they may have undergone, ascend- ing progressively, from the succulent texture ot the pulp and pith to that of the firm and perfect wood.

145. The structure ot the utricles of the tree is also said to be different from that of the utricles of the herb ; the former being composed of a single membrane, and the latter of a double membrane.. Senebier is, however, of opinion, that they Consist of a double membrane in both cases, though not so conspicuous in the one case as in the other, owing to the more compact and condensed texture of the wood. However, they are all mutually connected with one another, and also with the other vessels of the plant ; which dquble union is rendered evident by means of colored injections, or rather by means of the ab sorption of colored infusions, from which the utricles, as well as the longitudinal tubes, always receive a tinge. But in the petals, stamens and pistils, they do not seem to be connected with the longitudinal vessels, as in the other parts ot the plant ; and perhaps they are also somewhat

peculiar in their organisation, as maybe inferred from the following fact, namely, that the white and milky juice with which they are filled in the stem and branch of the fig does not ascend above the peduncle. In the pith they are generally larger than in any of the other parts of the plant; and in plants from which part of the trunk has been cut off, it has been remarked that they become altogether larger and more inflated than in plants of the same species that have not been so treated ; which enlargement is perhaps to be accounted for from the superabundance of sap that now pervades them, in consequence of the diminished bulk of the vegetable. Senebier speaks of other utricles, distinct from those of the parenchyma, by which he means the pulp or pith, but without saying anything explicit on the subject, and without representing them as differ- ent in form.

146. The woody fibre is made up of tubes of two kinds, which have been distributed into large tubes and small tubes. The large tubes are

distinguishable by the superior width of the diameter which they present, on the horizontal section of the several parts of the plant.

147. In herbaceous plants they are repre"sen- ted, by M. Mirbel, as being always found in the centre of the longitudinal fibres; while in woody plants, they are often dispersed at random ; though they occasionally form regular groups, which are sometimes concentric circles, constituting the principal mass of the ligneous layers. They are generally to be found in great abundance surrounding the medullary canal. They are found also in the bark, and are capable of being traced from their origin in the extreme fibres of the root, to their termination in the ex- treme summit of the plant ; uniting in the body of the root, traversing the collar, penetrating and ascending the stem in a parallel direction, sepa- rating and entering the branches, buds, and foot- stalks; separating again, and distributing them- selves in smaller bundles, so as to form the nerves and veins of the leaves and petals, the slender fibres of the stamens and pistils, and the firm and woody fibres of the fruit. In the lichens, fuci, and fungi, no large tubes are discoverable, even with the aid of the microscope ; though in the transverse section of most other plants they are visible without a microscope.

148. The simple tubes, which are the largest of all the large tubes, are formed of a thin and entire membrane, without any perceptible des- cription of continuity, and are found chiefly in the bark, though not confined to it, as they are to be met with also both in the alburnum and matured wood, as well as in the fibres of herba- ceous plants. But they are particularly con- spicuous in the stem and other parts of the different species of euphorbia and periploca ; and in all plants, in general, containing thick and resinous juices, known by the name of the proper juices, to the ready passage of which their great width of diameter is well adapted. Some- times they are distinguishable by their color, which is that of the juices contained in them, being white as in euphorbia ; or yellow, as in celandine ; or scarlet as in piscidia erythrina. In this plant they are united in bundles, but are

detachable from one another by means of being steeped for a few days in spirit of turpentine, when they become altogether colorless and transparent, because the resinous matter which they contained has been dissolved. Senebier says they retain their cylindrical form even in their detached state ; and if so, the membrane of which they are composed must be very strong. The porous tubes resemble the simple tubes in their general aspect; but differ from them in being pierced with small holes, or pores, which are often distributed in regular and parallel rows. They are found in most abundance in woody plants, and particularly in wood that is firm and compact, like that of the oak ; but they do not, like the simple tubes, seem destined to contain any oily or resinous juice.

149. The spiral vessels are fine transparent and thread-like substances, occasionally interspersed with other tubes of the plant ; but distinguished from them by being twisted from right to left, or from left to right, in the form of a cork-screw. They occur in most abundance in herbaceous plants, particularly in aquatics ; but they are also to be met with in woody plants, whether shrubs or trees. If the stalk of a plant of the liliaceous tribe, or a tender shoot of the elder, is taken and partly cut across, and then gently broken or twisted asunder, the spiral tubes may be seen with the naked eye, uncoiled somewhat, but remaining still entire, even after all the other parts have given way ; and, if the inferior portion of the stalk is not very large, it may be kept sus- pended for some considerable time merely by the strength of the tubes, which though now almost entirely uncoiled, by means of the weight they support, will, when they finally break, suddenly wind up at each extremity, and again resume their spiral form.

150. Grew and Malpighi, who first discovered and described them, represented them as resem- bling in their appearance the trachea, or wind-pipe of animals, and designated them by the same term; an appellation by which they are still very generally known. Du Hamel en- deavoured to convey an idea of their form, by comparing it to that of a piece of riband rolled round a small cylinder, and then gently pulled off in the direction of its longitudinal axis. The figure of the riband becomes thus loosely spiral. This is a very good illustration of the figure of the spiral tubes in their uncoiled state, but it does not repre- sent them very correctly as they exist in the plant. But the best illustration of this kind is perhaps that of Dr. Thomson's. Take a small cylinder of wood, and wrap round it a piece of fine and slender wire, so as that the successive rings may touch one another, and then pull out the cylinder. The wire, as it now stands, will represent the spiral tubes as they exist in the plant. And if it is stretched, by pulling out the two extremities, it will represent them in their uncoiled state also. But, although the spiral tubes are to be met with in almost all plants, they are not yet to be met with in all the different organs of the plant; or, at least, there are organs in which they occur but rarely, or in very small numbers.

They do not seem to occur often in the root, or at least they are not easily detected in it.

Grew and Malpighi do indeed represent them as occurring often in the root, the former refer- ing for examples to the roots of plants in general, and the latter to those of the asparagus, poplar, convolvulus, elm tree, and reed ;

all of which, Keith says, ‘ I have examined with great care, without being able to discover any spiral tubes. Senebier says he found them in the root of the balsams and thorn-apple ; in examining which I was equally unsuccessful as in examining the former. I cannot, however, doubt the accuracy of the observations of the above phytologists, and can only set down my own want of success in discovery to the score of some defect, either in the specimens examined, or in my mode of examination. Indeed, the only root in which I have ever found them, after examining a very considerable number, is that of the common garden lettuce, known by the name of cos lettuce. Having taken the root of a plant that was just putting out its flowers, and stripped it of its bark, I then cut it partly across, about the middle of its length, and broke the remainder of it gently asunder. On examining the surface of the fracture with the microscope, fragments of spiral tubes were seen projecting from it near the centre. They did not seem very tenacious oi their spiral form ; and when once uncoiled did not readily resume it.’

151. The spiral threads are to be found also in the stem and branch ; but not in all parts of them ; or at least not in all periods of their growth. It seems very doubtful, whether they exist at all in the bark. Daubenton professes, indeed, to have seen them in it ; but no one else ever has ; so that we are, perhaps, suf- ficiently well warranted in entertaining our doubts. It seems also very doubtful, whether they exist in that part of the stem which consists of matured wood, though Daubenton professes to have seen them in the wood of cedrela; in which case he does not altogether stand alone ; as they are represented both by Grew and Iledwig, as visible also in the wood. But they have not been found in the matured wood by any other vegetable anatomists. Du Hamel never met with them in any of the woody parts of woody plants, except in the young and herba- ceous branches. Mirbel expresses himself to the same effect. And Mr. Knight, who has examined the subject perhaps still more recently, could not detect them in any of the permanent parts of such plants, except in the annual shoot. Aeith’s observations on this subject have had nearly a similar result. Among many subjects of examination he mentions only the elder, wil- low, hawthorn, cherry, and elm tree. In the three former, he found them only in the annual shoot, situated immediately without the pith, or rather imbedded in the alburnum ; though in the elder some of them seemed to be imbedded even in the pith itself. In the cherry he found also a very few, similarly situated, in the branch of two years old ; but none in wood older than that. And in the elm tree he has thought he had discovered them even in the matured wood. Having placed under the microscope a very thin slice, taken from a piece of the trunk of an elm tree, that had been felled at least six or seven

years, he thought he was able to trace the re- mains of the spiral tubes. The slice was taken from the surface of a longitudinal section passing through

the centre of the trunk, and clear of di- vergent layers ; and the tubes seemed to appear most distinct when the slice was so placed as to present their longitudinal dimensions to the light. They seem to resemble ribands wrapped spirally round a cylinder, rather than to form, se- parate vessels, which corresponds very well to their appearance, even in the succulent parts of many plants, as described by Knight. Some of them seemed even separate and entire. And yet, upon repeated observation, he has not been able to satisfy himself entirely on this point ; but he has stated the case circumstantially, as being the probable means of inducing some one to take up the subject, who may be more felicitous in his in- vestigations. It cannot be said to be a vain or fruitless enquiry. For as they are known to have existed at least in the tender shoot, it will follow that they must exist, in one shape or other, in the matured wood also. And if their spiral form is there obliterated, under what other aspect do they now appear ? It seems certain, from the observations of Hedwig, that they as- sume a different figure in different stages of the plant's growth. In the peduncle of the colchicum autumnale, the rings of the tubes are closer when it begins to appear above ground, than at the time of flowering, from which he concludes that they are at length entirely obliterated, and the tubes converted into woody fibre. But some- times it is difficult to detect them, even in the young shoot ; though they are generally to be ob- served by breaking it gently asunder, and then examining the surface of the fracture with a mi- croscope. In this case they appear in small fragments, projecting from the surface, and some- what uncoiled ; but if the shoot is split longitu- dinally, a portion of them will sometimes be found extended longitudinally on the surface of the fissure in an uncoiled state.

152. In the stem and branches of herbaceous plants, they are generally discoverable, without much difficulty, accompanying the longitudinal fibres, and forming part of the bundles. Keith has found them in the stem and branches of the burdock, even in winter, when the fragments of the mature plant had become quite indurated by means of their exposure to the weather.

153. They are also very easily detected in the foot-stalk, both of the leaf and flower, accompa- nying, or rather seeming almost entirely to com- pose, the bundles of longitudinal fibres. This may be well exemplified in the leaf-stalk of the artichoke, when young and fresh, in the fibres of which they are not only remarkably large and distinct, but also remarkably beautiful ; some of them exhibiting in their natural position the ap- pearance of spiral coats, investing interior fibres, rather than forming a distinct tube, and seeming when uncoiled to be themselves formed of a sort of net-like membrane.

154. They are discoverable also in the leaf, though not quite so easily

detected as in the leaf- stalk! But if a leaf is taken, and gently torn asunder in a transverse direction, fragments of the spiral tubes will be seen projecting from the

torn edges, and generally accompanying the nerves.

1 55. They are also to be found both in the calyx and corolla, but not so generally as in the leaf on which account some botanists have decided rather too hastily with regard to their non-exist- ence in theje parts of the flower. Mirbel says, no tracheae are to be found in the calyx nor in the corolla, except in the claw. But Keith has found them most unequivocally in the calyx cf scabiosa arvensis, likewise in the expansion of tne corolla of the same plant, as also in the calyx, both proper and common, of dipsacus sylvestris, and in the corolla of the honey- suckle, in which they appear to be placed within the nerves, or at least to be closely united to them.

156. In the other parts they do not seem to occur frequently, or at least it is difficult to detect them. Malpighi represents them, indeed, as occurring in the stamens, but Keith was not for- tunate enough to meet with them in the stamens of any flower he examined, lie looked for them also in the style of many flowers, and found them in that of the honey-suckle only.

157. According to the observations of Grew and Malpighi, they are to be met with both in fruits and seeds ; though Hedwig says, they are not to be seen in the cotyledons, except during the process of germination, and that only by means of their being moistened with some colored infusion. But Grertner says, they are conspicu- ous in the thinner cotyledons, even before ger- mination takes place ; and Reishel is said to have detected them even in the plumelet and ra- dicle.

158. But, in whatever part of the plant they are found to exist, they are always endowed with a considerable degree of elasticity, as has been already noticed. For though they are forcibly extended, so as wholly to undo the spires, they will again contract, and resume their former figure, when the extending cause is withdrawn ; and if they are even stretched till they break, the fragments will again coil themselves up as be- fore. It has been said, however, that those of the butomus umbellatus, if once uncoiled, will contract again no more. But this is true only when they are stretched to a great length. For when they are stretched gently and moderately, they will again contract, as has been proved by experiment.

159. Malpighi, in the course of some obser- vations on the spiral tubes during the winter season, fancied he had perceived a sort of vermi- cular and spontaneous movement in them. But he thought he saw this movement only once, and as it has never since been seen by any subse- quent observer, it appears that we must be con- tent to set it down to the score of microscopical deception, or to the effect of the atmosphere upon the tubes when exposed to its action.

160. We have now run over the differences of the most important kind, by which the functions of what Darwin not inaptly called the viviparous system of vegetation are affected. Let us now proceed to consider the nature and destination of the oviparous system, or of the parts of repro- duction by seed. As the former depend upon

internal organisation, so do the latter upon exter- nal peculiarities.

161. Hitherto we hare scarcely spoken of the flower ; that brilliant ornament of plants, which attracts admiration by the splendor of its colors, and the delicacy of its texture, by the delicious perfume which it exhales, and by the wonderful mechanism with which it is constructed. Its base, which acts as an external envelope, is ordi- narily of a green color, and is called the calyx- The next envelope, which is the most striking, as it is in it that the beauty of the flower resides, is the corolla. Then succeed the stamens, which are generally delicate threads, terminated by a dilatation of a particular nature ; and the pistil- lum, consisting of ovariurn and stigma, which in time becomes the fruit. These parts generally exist all in a single flower, which is then termed complete ; if a part of the members is absent, the flower is termed incomplete. Each organ is susceptible of an infinite variety of combinations and modifications in form, in number, in station, in proportion, or in structure, which give rise to the smaller divisions of vegetables called genera. These will be noticed hereafter. The functions only of the organs are to occupy our attention while treating of Vegetable Physiology.

162. The most easy to observe is the corolla ; which is composed of one or more pieces called petals ; in the former state it is monopetalous, in the latter polypetalous. The petals are either equal or unequal in their form or insertion, whence corollas are either regular or irregular.

The stamens appear, from their position, to bear a direct relation to the corolla ; thus, in almost all monopetalous flowers, they origin- ate from the corolla itself; but in polypetalous flowers this more rarely happens ; then, however, they maintain so many relations with the petals, being alternate or opposite to them, and equal or double or multiple in number, that it is im- possible to doubt of the strict alliance by which they are connected. The

calyx has a yet more strict analogy with the corolla, the divisions of which are almost always equal in number to those of the calyx, and alternate in insertion, especially when the corolla arises immediately from the calyx. It often happens that it arises from a particular place which is called the recep- tacle. These three parts, then, have a great analogy with each other ; so that one does not vary in the number of its divisions, without affecting the two others by the change. They are themselves, however, subordinate to the pistillum.

ā¢ 163. There is generally only one pistillum in flowers; occasionally two or more: but these va- riations in number are independent of the other organs. The ovarium has then a more obvious relation : it is seated in the centre of the flower, at the bottom of the calyx, to which it is attached by its base ; sometimes a cohesion takes place between the sides of the calyx and ovarium, which latter then appears to support the flower like a footstalk. From these two modifications arise those two important distinctions among plants, of ovarium superius, or separate from the calyx, and ovarium inferius, or adhering to the calyx ; differences which are of extreme importance in

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characterising many of tlie most natural of the systematic combinations of modern botanists.

164. In some flowers the corolla disappears, or is not developed ; in others the calyx seem to be wanting’. A disquisition has arisen, touching ‘his fact, which seems to have no end, as to what name ought to be applied to the envelope of a flower when one envelope only is present. By whatever name this single envelope may be called, it bears the same relation to the other parts as the calyx and corolla when both are present ; it is in some cases itself almost obliterated, and there are some flowers which consist only of stamens without corolla, and which are then called naked.

165. When both calyx and corolla exist toge- ther or one of them only, another set of organs occasionally disappears, namely the stamens, and then the pistillum is found alone in the centre ; but in this case it always happens, that, either upon the same plant or upon a different indivi- dual, flowers exist which contain stamens only, and no pistillum. Sometimes both organs are developed without covering, and separate from each other. However these two parts may be separated from each other, they always appear at the same period of time, and, ever since the study of plants has been an object of philosophical re- search, no instance has been found of a perfect plant in which both organs did not co-exist.

166. It appears therefore, from this example, and from many others which could be brought forward, that the stamens and the pistil are the only essential parts of a flower ; a fact which is not surprising as far as the pistil is concerned, because we have seen that it contains the rudi- ments of the future progeny. But what manner of influence is exercised by the stamens? If we examine them in every flower within our reach, we shall find that they have a similar structure : we shall see that they consist of two parts, the upper resembling a little bag, generally yel- low, and always divided into one or two cells, which contain a kind of powder, and the lower resembling a thread-like stalk to the former. The former is called the

anther,

167. From the combination of these observa- tions, we come to an important discovery ; we perceive that the petals, with the brilliant tints of every color of the rainbow, are in fact the cur- tains of the nuptial bed of Flora, within the pro- tection of which the mysteries of generation are accomplished. We have, therefore, sexes in plants ; these, indeed, appear almost indispensa- ble. In most animals they are separated ; but in vermes we see them confounded, and at length disappear entirely. The want of the power of motion in vegetables renders their union in one individual of great importance. But, as if the resources of nature were illimitable, they are in

some cases separated upon the same tree, or upon different trees, and the agency of the wiml or of insects is requisite to enable them to ac- complish their destiny.

168. The relation, therefore, of the stamens to the pistillum, gives rise to some further conside- rations. When they are united in one flower, the flower in that case is called hermaphrodite ; if they are in separate flowers, it is declinous ; it is monoacious when the male and female are pre- sent in different flowers of the same individual ; dioecious if in flowers of different individuals. Some plants have male and female flowers mixed with such as are hermaphrodites; then they are called polygamous.

169. The pistillum offers a multitude of most important characters. Its ovary is terminated by one or several styles, and each of the latter has one or more stigmata. The ovarium either con- tains only one rudiment of a seed, called an ovulnm, or several, and is divided internally into one cell or many.

170. The fruit, which is the necessary conse- quence of the ovarium, is generally like it in the number of its parts ; the occasional abortion of some one of the latter, is the only way in which the number of parts is smaller in the fruit than in the ovarium. The form, the texture, and the volume of fruit give rise to an infinity of diffe- rences. Thus one sees, on the one hand, soft pulpy fruit, and, on the other hand, nuts, the shell of which is hard as wood itself. The man- ner in which the seeds are attached is also sub- ject to variation, for they either proceed from a central receptacle, or from the paries of the fruit. The point from which they proceed is, in all cases, called the placenta. This organ is of great importance ; for it is not only the medium through which the fecundating effluvia of the pollen is communicated to the ovula, but also through which the juices are elaborated, which are required for the development of the embryo. It may be compared to the placenta of animals.

171. The position of the embryo, with relation to the fruit, is also a point of importance. Thus the axis of the seed may be parallel with the axis of the fruit, and fixed by the basis, which is the most natural position ; then the seed is call- ed erect. It may become horizontal ; or being affixed to the summit of the cell it may become inverted ; it is in the latter case said to be pen- dulous. For various modifications of the posi- tion of the seed, see SEED, under PURE BOTANY.

172. Each seed may be considered as an iso- lated individual ; for nature has prepared them for separation from their parent without incon- venience. Their interior consists of a substance of various degrees of texture, which is called the albumen, and of the fleshy body already men- tioned as the seminal embryo. The albumen may be absent, the embryo must be present. The coat of the seed consists of two layers, the in- terior of which is much more membranous than the exterior.

ā¢ 173. But now arises a problem in vegetation which it is very important to resolve. Whence is the origin of the flower ? Linnseus has offered an explanation, which he considered capable of of meetirig every difficulty, and which he bor-

rowed from Caesalpinus, whose knowledge ran far beyond that of his age. According to these two authors the flower is only a manifestation of the interior of a plant. The epidermis and cuticle give rise to the calyx, the fibre to the co- rolla, the woody fibre to the stamen, and the pith to the pistillum ; this last part is the most essen- tial, and the centre of vegetation ; the others are only accessory.

174. But this ingenious notion, like many other brilliant hypotheses, will not bear a strict scrutiny. The nature of the pith is now better understood, and instead of being a creating organ, it is itself, in fact, a body in a state of disorgani- sation. A single fact has overthrown the whole theory : this is the more intimate knowledge of the interior of palms, and other monocotyledo- nous trees. According to the arrangement of their interior, and the mixture of the pith and woody fibre, it would happen, if Linnaeus's theory were true, that the flowers of the palm would have quite another arrangement from that of other plants, and that the parts would neither be arranged round a centre, nor be placed in the same relation to each other.

175. It appears certain, that, notwithstanding the striking differences which all parts of a flower exhibit, they have all the same origin ; which is

indicated by the propensity they all have, under certain circumstances, of changing into each other from circumference to centre, or of reverting to one common appearance ; which is that of the leaf. . Upon this subject Mr. Lind- ley remarks, ‘ that it is well understood that the universal principle upon which perfect vegeta- bles are formed is by the continual addition of parts one above the other, round a common axis, which is produced by their accretion. This law is not confined to the production of foliage, or branches only, but must be considered to extend to the ultimate point of vegetable development in the ovarium ; and seems to indicate that the pro- gress of nature is continually onwards. Unless, therefore, it should be shown that in monstrous formations the order of alteration in the struc- ture of organs so produced is reversed, it would be a reasonable inference that nature follows her usual course in transformation, as well as in original production ; and that the changes which particular portions of a flower may undergo, always have the character of that series which is placed next them in the inside, and not of that on the outside. The consequence of the preva- lence of such a law would therefore be this, with respect to the formation of double flowers, that bracteae, if present, would change into calyx, calyx into petals, petals into stamens, and sta- mens into ovaries ; and that the reverse of that order could not take place.’

176. It may thence be concluded that a flower is a leaf-bud in a particular state of alteration ; that the calycine lobes, the petals, the stamens, the pistillum, are all leaves in an altered form, and that ,they have all a tendency, which may now and then manifest itself, of assuming their primitive habit and structure. Whence they arise, or in what way this extraordinary meta- morphosis takes place, we are as yet unable to determine.

177. The pistillum, which is the terminating point of the line of vegetation, is now ascertained to be, not, as was formerly supposed, an anoma- lous organ, wiiich was referrible to none of ths simple types upon which the other parts of fructification are modelled, but a leaf or leaves also in a state of greater affinity to their type than any other organ. The style is an alteration of the middle nerve, the stigma a secreting surface proceeding from the tip of the same part, the sides of the ovarium the two halves of the leaf, and the placenta the edges of the leaf. This is tolerably obvious in a strictly simple unilocular ovarium, such as one segment of a Paeony fruit. But in a many-celled pistil it is not so apparent. Mr. Robert Brown, however, has demonstrated, that all multilocular compound ovaria are merely an aggregation of a number of simple ovaria round a common axis ; that the cells are occasioned by the interposition and cohesion of the sides of simple ovaria, which in that slate are called dissepiments.

178. Besides the plants which are furnished with a flower, there are others

in which no apparent flowers exist, which are constructed differently from either monocotyledonous or dico- tyledonous plants, and whose methods of repro- duction are quite of another nature. These plants are called cryptogamous, and consist of ferns, mosses, hepaticae, lichens, algae, and fungi. They are all supposed to be destitute of cotyledons, whence they are also named acotyledonous.

179. In ferns, which are by some authors referred to monocotyledons, the mode of growth resembles in some measure such plants. The grain from which they are reproduced, and which is called a sporule, in germination dilates into a very small leaf of a particular kind, which successively gives rise to others, which .finally acquire the stature and the form of adult leaves. A species of trunk or stipes, similar to that of the palm, creeps along the surface of the earth, or elevates itself above it. Its internal structure separates it as far from monocotyledons as from dicotyledons. It has, however, at the first sight, the greatest resemblance to the former ; a section of it offers, as in monocotyledons, certain scat- tered points, among a mass of parenchyma. These points, which vary in almost every differ- ent species, are a section of a peculiar substance, which is divided at the base, and united at the summit, and which may be compared in texture to the liber of dicotyledons. It is surrounded by a fur, which is more or less apparent, and more or less deeply colored, and which seems analogous to the woody texture, especially as in arborescent ferns it is it which forms the solid substance. Both these substances are distribu- ted among the nerves of the leaves, which are simple, ramified, or verticillated, according to the species. In the opinion of a celebrated modern physiologist, a fern may be considered as a plant turned inside out.

180. The remaining classes of cryptogamia consist entirely of cellular tissue, amassed in different proportions, and under various forms. They are destitute of woody vessels or of tracneae, and have no distinction between bark, wood, and epidermis ; they may perhaps be considered

to consist wholly of the latter and former con- founded.

IV.ā PURE BOTANY.

181. We have thus considered botany with respect to its analogies, its history, and its physiology. It now remains for us to explain its practical details, as applied to what is called SYSTEMATIC BOTANY, or the science of arranging the natural objects of which it consists.

182. The materials of this branch of the science are the modifications of

parts ; from a just appli- cation of these materials result classifications. We shall first attend to modifications.

183. All perfect plants consist, as has been already seen, of the following organs. 1. The ROOT ; 2. the STEM ; 3. the FOLIAGE ; 4. the INFLORESCENCE ; 5. the FLOWER : 6. the FRUIT. Each of these organs must be considered sepa- rately. But, before entering upon an explana- tion of the peculiarities of each of them, it will be proper to notice the terms used in speaking of their size, surface, and color; these terms being applicable to each of the six parts into which a plant is divisible.

184. There are eleven terms which are em- ployed to designate the size or measurement of a plant or its parts, viz. :

1. A hair breadth (capillus), the measure of a hair, or the twelfth part of a line.

2. A line (linea), the length of the white crescent at the root of the nail of the middle finger, or the twelfth part of an inch.

3. A nail length (unguis), the length of the nail of the middle finger, or half an inch.

4. An inch (pollex, uncia), the length of the first joint of the thumb, the twelfth Dart of a foot.

5. A hand breadth (palmus), the breadth of the four fingers of the hand, or three inches.

. 6. A span (dodrans), as far as one can span with the thumb and the little finger, or nine inches.

7. A small span (spithama), as far as one can span with the thumb and fore finger, or seven inches.

8. A foot (pes), the length from the elbow to the wrist, or twelve inches.

9. A cubit (cubitus), from the elbow to the point of the middle finger, or seventeen inches.

10. An ell (ulnaˆ brachium), the length of the whole arm, or four and twenty inches.

11. A fathom or toise (orgya), the length of the arms stretched out from the tip of one middle finger to that of the other, or six feet.

For these the following have been substituted by some French botanists : ā –

The millimetre rr: ā¢?$$ of a line. The centimetre ā 4 lines -ˆs. The decimetre ~ 3 inches 8 lines $&. The metre Ā«: 3 feet 11 lines fgjfc.

185. The surface of plants is of great import- ance in distinguishing the species and varieties, but it is not of value in generic discrimination. The terms which follow are, or ought to be, used precisely in the sense here ascribed to them ; they are extremely well defined by Will- denow, who limits them thqs : ā

1. Shining (nitidus), when the surface is so

smooth that it reflects the rays of light, and has a shining or glancing appearance, as in the leaves of the holly, Ilex aquifolium.

2. Dull (opacus), when the surface does riot reflect the rays, and is entirely void of lustre.

3. Even (laevis), without strice, furrows, or raised dots. It is the opposite of Nos. 6, 7, 23, 24, 25, 28, and 29.

4. Smooth (glaber), when there are no visible hairs, bristles or thorns. It is the opposite of Nos. 8, 22, 26 and 27.

5. Dotted (punctatus), when small fine dots are perceived by the eye but not by the touch. Thymus vulgaris.

6. Scabrous (scaber), when small raised dots are felt but not seen; as in Carex acuta.

7. Rough (asper), when these dots are both felt and seen. Pulmonaria officinalis.

8. Hispid (hispidus), beset with very short stiff hairs. Myosotis arvensis.

9. Hirsute (hirtus), when the hairs are mode- rately long but very stiff. Echium vulgare.

10. Hairy (pilosus), beset with long single hairs, somewhat bent. Hieraciura pilosella.

11. Villous (villosus), when the hairs are long, soft, and white. Stachys Germanica.

12. Pubescent (pubescens), overgrown with short fine white hairs. Oenothera mollissima.

13. Silky (sericus), when the surface is white and shining, by means of

thick and almost in- visible hairs. Potentilla anserina.

1 4. Woolly (lanatus), when the surface is beset with long thick white hairs, easily distinguished. Stachys lanata.

15. Tomentose (tomentosus), when fine hairs are so matted together that the particular hairs cannot be distinguished. In this case the sur- face generally appears white, as in Verbascum ; or of a rust color, as in Ledum.*

16. Bearded (barbatus), when the hairs are in tufts. Mesembryanthemum barbatum.

17. Strigose (strigosus), when the surface is armed with small, close-lying bristles, which are thickest below. Lithospermum officinale.

18. Stinging (urens), when a painful burning sensation is caused by small hairs. Urtica. Such hairs are called stimuli.

19. Fringed (ciliatus), when on the margin of a leaf, or the surface of a stalk, there is a row of hairs of equal length.

20. Warty (papillosus), when small fleshy warts appear. Aloe margaritifera.

21. Pustular (papulosus), when there are small hollow bladders. Mesembryanthemum hispidum.

22. Muricated (muricatus), armed with small short herbaceous spines. Asperugo procumbens.

23. Scaly (lepidotus), when the surface is covered with small scales closely placed, by which means the color is changed, as in Elaagnus angustifolia.

24. Mealy (farinosus), when the surface is thickly covered with a white powder, as in Pri- mula farinosa.

25. Hoary (pruinosus), when the surface is strewed with a very fine white dust, like the fruit of some plumbs. Prunus domestica.

26. Glutinous (glutinosus), when the surface is covered with an adhesive matter, which is soluble iu water. Primula glutinosa.

27. Viscid (viscidus), when the surface is covered with a viscid juice, which is resinous or greasy. Cerastium viscosura.

28. Striated (striatus), when the surface is finely streaked. Aira caespitosa.

29. Furrowed (sulcatus), when the streaks form small furrows. Umbellee.

186. The following are the principal colors, which are distinguished by name : this part of the subject is extremely imperfect ; and perhaps from its nature will always, like all distinctions de- pending upon so uncertain a power as that of dis- criminating between the delicate gradations of so unmanageable an agent as of light, remain in an imperfect state. The Latin names are ne- cessarily employed from the want of equivalent expressions in the English language

1 . Cyaneus ; dark blue, like Prussian blue.

2. Cseruleus; sky blue, like the flowers of Veronica Chamsedrys.

3. Azureus; nearly the same as No. 2, but bright like ultramarine.

4. Cafsius ; pale blue, verging towards gray.

5. Atrovirens ; dark green, bordering upon dark blue.

6. /Eruginosus ; light bluish green, like ver- digris.

7. Prasinus, saturate virens, smaragdinus; grass green, without any tinge of yellow or blue.

8. Flavo- virens ; green bordering upon yellow.

9. Glaucus; green, bordering upon gray.

10. Aureus; golden yellow, without any fo- reign mixture.

11. Ochraceus; yellow, with a slight tinge of biown.

12. Pallide flavens; pale or whitish yellow.

13. Sulphureus; bright yellow, like the flowers of the Hieracium Pilosella.

14. Vitellinus; yellow, with a slight tinge of red.

15. Ferrugineus; brown, verging towards yellow.

16. Brunneus; the darkest pure brown.

17. Fuscus; brown, running into gray.

18. Badius; Hepaticus; chestnut or liver brown, bordering on dark red.

19. Aurantiacus; orange, or a mixture of yel- low and red.

20. Miniatus, or Cinnabarinus; deep red, like red lead.

21. Lateritius; brick color, like the former, Out duller and verging towards yellow.

22. Coccineus, or Phctniceusˆ cinnabar co- lor, with a slight tinge of blue.

23. Carneus; flesh color, something between white and red.

24. Croceus; saffron color, dark orange.

25. Puniceus ; fine bright red, like carmine.

26. Sanguineus, or purpureus ; pure red, but duller than the foregoing.

27. Roseus; rose color, a pale blood red.

28. Atropurpureus; very dark red, almost ap- proaching to black.

29. Violaceus; violet color, a mixture of blue and red.

30. Lilacinus ; lilac, the former color ; but fluller, and verging towards red.

31. Ater; the purest and deepest black. 8

33. Cinereus; ash color, blackish gray.

34. Griseus; lively light gray.

35. Canus; hoary, with more white than gray.

36. Lividus; dark gray, running into violet.

37. Lacteus, or Candidus ; shining white.

38. Albus; dull white.

39. Albidus ; dirty dull white.

40. Ilyalinus; transparent, like pure glass. 187. The ROOT is divided by botanists into

four principal forms, viz. the Rhizoma, or Roststock, by which is meant the thick fleshy part of a biennial or perennial root ; the Fibre, or those parts of the root which have the appear- ance of threads; the Tuber, which is a solid fleshy root, furnished with buds on its surface, and being in fact a thickened subterraneous stem ; and the Bulb, which consists only of fleshy imbricated scales, as in the onion. Each of these is subject to a great variety of appear- ances.

1 . The Rhizoma is,

1. Woody (lignosum), composed of a woody substance and numerous woody fibres ; such as that of trees and shrubs.

2. Fleshy (carnosum), consisting of a fleshy substance more or less firm ; as Daucus Carota, Pastinaca Sativa.

3. Hollow (cavum), that is always hollow in the middle, as Fumaria Bulbosa.

4. Partitioned (loculosum), an oblong root, internally furnished with separated cavities; as Cicuta Vircsa.

5. Entire (integrum), never naturally inter- nally hollow, and thus the opposite of the two last mentioned.

6. Cylindrical (cylindraceum), that comes nearest to a cylindrical figure, and is thick ; as Dictamnus albus.

Ā» 7. Spindle-shaped (fusiforme), cylindrical above, and tapering to a point as it descends ; as in Daucus carota, Pastinaca sativa.

8. Bitten (praemorsum), where the principal root seems as if it were bitten off, as Scabiosa succisa, Plantago major.

9. Worm-like (vermicularis), thick and almost cylindrical, but bent in different places; Poly- gonum Bistorta.

10. Turnip shaped (napiforme), bellying out above, but below ending in a long taper point, Brassica Napa.

11. Roundish (subrotundum, or globosum), that is almost spherical, as Raphanus sativus, Bunium Bulbocastanum.

12. Flat (placentiforme), a thick round root, which above and below is compressed, so that it almost resembles a plate ; Cyclamen.

13. Jointed (geniculatum), divided into mem- bers, from which the root-

fibres proceed; Gratiola officinalis.

14. Scaly (sq'iamosum), covered with more or fewer fleshy scales; Lathrsea squamaria.

15. Toothed (dentatus), a fleshy branched root, having teeth-like prolongations ; Corallorr hiza innata.

16. Tufted (comosum), having as it were tufts of hair at its points, which are the fragments of the petioles, divided like fibres ; Aethusa Meum.

17. Many headed (multiceps), divided -

into numerous branches, from which new shoots spring ; as Astragalus, Geranium macrorhizon.

18. Simple (simplex), having no branches.

19. Branching (ramosum), dividing into branches, as all trees, shrubs, and many plants.

20. Perpendicular (perpendicularis), going straight down into the earth ; Capsella bursa pastoris.

21. Horizontal (horizontale), running hori- zontally under ground into the earth, but ob- liquely, as Aethusa meum.

22. Oblique (obliquum), going neither per- pendicularly nor horizontally into the earth, but obliquely ; as Aethusa meum.

23. Creeping (repens), lying horizontally un- der the earth, and extending itself in that direc- tion by means of side-branches ; as Rumex Acetosella.

24. Ringed (annulatum), furnished on its upper surface with alternately raised and de- pressed bands.

25. Knobbed (tuberculatum), furnished on its upper surface with protuberances; as Aethusa meum, Bunium bulbocastanum.

26. Scarred (cicatrisatum), which, upon the perishing of the stem, has depressions or chinks on its upper surface ; as Polypodium vulgare.

27. Chaffy (paleaceum), covered with mem- branaceous scales ; as many

of the filices.

28. Even (laeve), marked on its surface nei- ther with elevations nor depressions.

2. The Fibre is,

29. Thread-like (filiformis), consisting of a single fibre.

30. Fibrous (fibrosa), consisting of many fi- brous roots ; as Poa annua.

31 . Hair-like (capillaris), consisting of numer- ous very fine fibres ; as Scirpus acicularis.

32. Velvet-like (velutma), composed of very tender and hardly visble fibres ; as in the Musci frondosi.

33. Cleft (fissa), very short, and at the point dividing into two or three points ; Peltidea ca- nina.

3. The Tuber zs,

34. Knobbed (granulatum), the knobs formed like small grains of corn; as Saxifraga granu- lata.

35. Testiculated (testiculatum), when two, rarely three, longish depressed knobs hang from the point from which a shoot rises ; as in Orchis.

36. Palmated (palmatum), when two, rarely three, longish depressed knobs, which are di- vided at the point, hang together ; as in the last, Orchis.

37. Fingered (digitatum), when a single fleshy knob is compressed and divided at the point like fingers ; Dioscorea alternifolia.

38. Bundled (fasciculatum), when many cy- lindrical or longish roots hang together from the point, so as to resemble a bundle ; Ranunculus Ficaria, Epipactis Nidus avis.

39. Globulated (conglobatum), when several round knobs sit upon one another; as Helianthus tuberosus.

40. Depending (pendulum), when several knobs hang together from fibrous roots ; as Sola- num tuberosum, Spiraea Filipendula.

41. Articulated (articulatum), when one knob grows out of another, so that the whole seems to consist of connected members.

42. Necklace-like (moniliforme), when many knobs hang together by a fibrous root, in rows as if they were strung on ; as Pelargonium triste.

4. The bulb is,

43. Imbricated (imbricatus, squamosus), when the bulb consists of leaves lying over one ano-, ther, like the tiles of a house ; as Lilium bulbi- ferum.

44. Coated (tunicatus), when the bulb is com- posed of concentric layers; as in Allium.

45. Net-like (reticulatus), when the bulb is entirely composed of reticulated membranes ; as Allium Victorialis.

46. Half-net-like (semireticulatus), when the bulb consists of a firm mass, but the outer mem- brane is net-like ; as Gladiolus communis.

47. Solid (solidus), when the bulk consists of a firm substance throughout; as Colchicuir; autumnale.

48. Nestling (nidulans), when small bulbs ap- pear under the external membrane, and the bulb seems to be entirely composed of them; as in Ornithogalum spathaceum.

49. Aggregated (com positus,aggregatus), when several bulbs stand close together, having a con, uexion at the base.

50. Two-fold (geminatus), when two bulbs are connected by their base ; as Fritillaria pyre- naica, Erythronium dens canis.

51. Doubled (duplicatus), when one bulb stands above another, and grows out of it ; as Allium sphaerocephalon.

52. Supported (suffultus), when the body of the root stands at a distance, equalling it in size, and distinctly separated from it ; as Ixia punicea, erecta.

53. Single (solitarius), when neither from the side nor from the base proceeds another bulb.

54. Central (centralis), when the shoot pro- ceeds from the middle, as Galanthus nivalis.

55. Lateral (lateralis), when the shoot issues from the side ; as in Ixia virgata.

Besides the above there are a few roots which being referrible to none of

the foregoing, are called nothous, or

Anomalous.

56. Divided (divisa), that branches out above stones or other bodies, but does not penetrate into the earth; as Fucus digitatus.

57. Bysus-like (byssacea), that is divided like wool, and has the appearance of a filamentary byssus ; as many species of Agaricus.

58. Warty (papillosa), consisting of short wart-like small dots, by which the plant attaches itself to wood or stones ; as Lichen.

59. Shield-like (scutiformis), when the base of the ascending stem spreads itself into a thin surface, by which the plant is attached to wood or stones ; as Usnea florida, Ceramium filum.

60. Fading (evanescens), when the descending stem penetrates into wood and therein gradually disappears ; as Viscum album.

188. The STEM is the prolongation of the plant above the soil, or above the part which serves for its support. It is subject to grtat

diversity of forms, and the number of terms used to distinguish their varieties are numerous.

The stock (cormus) is that part of the plant which serves for the support of the whole, and bears the inflorescence, the leaves, the frond, the flowers and fruit, from it are evolved in most cases all these parts. The following kinds have been distinguished : viz. the stem (caudex), the trunk (truncus), the stalk (caulis), the straw (culmus), the scape (scapus), the stipe (stipes), the shoot (surculus), the sarment (sarmentum), and the sucker (stolo).

189. The stem (caudex) is a simple peren- nial shoot, with leaves at its extremity, and is peculiar only to the palms and arboreous filices, having no bark, but set round with the remains of the leaf-stalks. Of this there are the follow- ing kinds : ā

1. Binged (annulatus), when the remains of the leaves at regular distances resemble annular' elevations ; as Corypha rotundifolia.

2. Scaly (squamosus), when the remains of the leaves surround the stem irregularly ; as in Phoenix dactylifera, Chamaerops humilis.

3. Tessellated (tessellatus), when the leaf or the base of the stipe does not remain behind, but leaves a scar, by which the stem puts on a tessellated appearance ; as Polypodium ar- boreum.

4. Aculeated (aculeatus), when the remains of the leaf are set with prickles ; as in Cocos acu- leatus, Polypodium asperum.

5. Smooth (inermis), the opposite of the last, when the remains of the leaf leave no prickles, as Phoenix dactylifera, Polypodium arboreum.

190. The trunk (truncus) is peculiar to trees and shrubs, and is perennial. The. principal stem in these plants has obtained the following denominations : its principal divisions are called branches (rami), and its subdivisions twigs (ramuli).

1. Tree-like (arboreus); this is simple, and forms at top a crowd or crown of branches (cacumen) ; it is peculiar to trees.

2. Shrubby (fruticosus), divided below into a number of branches, like all shrubs.

191. The stalk (caulis) is herbaceous, sel- dom woody, and lasts but one or two years; hence it is proper only to herbaceous plants, however, the term is sometimes applied both to trees and shrubs. The divisions of this are also called branches (rami). The kinds are,

In respect of division.

1 . Very simple (simplicissimus), that has no branches, nor is its flower-stalk divided, conse- quently it can have but one flower or spike, and no flowers in the axillae of the branches.

2. Simple (simplex), having no branches, but whose flower-stalk may be divided.

3. Somewhat branched (subramosus), some- times without branches, sometimes with one or two.

4. Branched (ramosus), which is always fur- nished with branches.

5. Much branched (ramosissimus), where all the branches are not only divided but subdivided.

6. Disappearing (deliquescens), branched, but sc divided that the principal stem is no longer to be observed, but is lost in the ramification.

7. Entire (integer), which is branched, but where the principal stem can be

traced to the point.

8. Verticillated (verticillatus), when a number of branches are formed at the extremity, from the centre of which the principal stem proceeds, so that the branches, at certain distances, sur- round the stem in a circular manner; as in Pinus sylvestris.

9. Proliferous (prolifer), when the stem is di- vided into a number of branches, and these again likewise divide, but the principal stem does not proceed from the centre of them ; as Ledum palustre.

10. Dichotomous (dichotomus), when the stem, even to the smallest branches, divides itself, into two ; as Viscum album.

In respect of the branches.

11. Alternate branches (rami alterni), the branches are so placed that between two on the one side there rises but one on the opposite side.

12. Opposite^ branches (rami oppositi), when one branch stands on the opposite side to ano- ther, and the bases of each nearly meet together.

13. Distichous (distichus), when the branches, being opposite to each other, stand on the same plane.

14. Scattered (sparsus), when the branches stand without order on the stem.

15. Close (confertus), when the branches stand so thick and without order that no space remains between them.

16. Brachiate (brachiatus) when opposite branches stand at right angles to each other, or cross-ways.

17. Rod-like (virgatus), when the branches are very long, weak, and thin.

18. Panicled (paniculatus), when a stem at its point is divided into numerous leaves and flower-bearing branches ; as Rumex acetosella.

19. Fastigiate (fastigiatus), when all the branches from bottom to top are of such dif- ferent lengths that they are of equal height.

20. Compact (coarctatus), when the tips of the brunches are bent inwards towards the stem.

21. Spreading (patens), when the branches stand nearly at right angles with the stem.

22. Diverging (divergens), when the branches form a right angle.

23. Divaricated (divaricatus), when the branches are so situated that they form an ob- tuse angle above, and an acute angle below.

24. Deflected (deflexus), the branches hang down forming an arch.

25. Reflected (reflexus), when the branches hang so much down that they almost run pa- rallel with the stem.

26. Retroflected (retroflexus), when the branches are bent towards every side.

In respect of strength.

27. Stiff (rigidus), that will not bend without breaking.

28. Brittle (fragilis), that breaks with the smallest force.

29. Flexible (flexilis), that can be bent in any direction without breaking.

30. Tough (tenax) that can be bent without breaking, and can be with difficulty torn.

31. Lax (laxus), that is firm, but moves with Jie smallest breath of wind.

32. Parasitical (parasiticus), that fixes itself by its root on the root or wood of other plants ; as Viscum, Monotropa.

33. Erect (erectus), when the stem stands nearly perpendicular.

34. Straight (strictus), where the stem is per- pendicular, and quite straight.

35. Weak (debilis), when the stem is too slender to maintain itself perfectly upright.

36. Bent upwards (adscendens), when the stem lies on the ground, but the extremity of it stands erect.

37. Bent downwards (declinatus), when the stem is so bent downwards to the earth that it forms an arch.

38. Supported (fulcratus), that from above sends roots down into the earth,

which after- wards change into real stems ; as in the Rhizo- phora-

39. Stooping (cernuus), when the point in an upright stem takes a horizontal direction.

40. Nodding (nutans), when the point is bent down towards the' horizon.

41. Pendulous (pendulus), when a parasitical plant (No. 32) has its base turned towards the zenith, and its top towards the earth.

42. Procumbent (procumbens, prostratns, hu- mifusus), when the stem lies flat on the ground.

43. Decumbent (decumbens), when the stem is upright below, but above is bent down to- wards the ground, so that the greater part of it is bent.

44. Creeping (repens), when the stem lies along, and sends out roots from below.

45. Sarmentose (sarmentosus), when the stem lies along, but sends out roots only at certain in- tervals.

46. Rooting (radicans), when the stem stands upright and climbs, everywhere sending forth small roots, by which it holds itself fast ; as in the ivy. Hedera Helix.

47. Swimming (natans), lying on the surface of water; as Polygonum amphibium.

48. Sunk (demersum), that lies below .the sur- face ; as Ceratophyllum demersum, Utricularia.

49. Flexuose (flexuosus), when the upright stem bends itself in a zig-zag manner, so as to form a number of obtuse angles.

50. Climbing (scandens), a weak stem that fastens itself to some other body for support ; as the passion-flower, Passiflora caerulea.

51 . Twining (volubilis), a weak stem that twines in a serpentine form round other plants ; it is of two kinds.

a. Turning from the right (dextrorsum), when the stem twines from the right to the left round a supporting body ; as in the bind-weed, Con- volvulus.

If. Twining from the left (sinistrorsum), when the stem twines from the left to the right round a supporting body ; as in the hop, Humulus Lu- pulus.

In respect of clothing.

52. Naked (nudus), having no leaves, scales, or the like.

53. Leafless (aphyllous), without leaves only.

54. Scaly (squamosus), covered with scales.

55. Ramentaceous (ramentaceus), that is co- vered with dry membranous scales; as Erica ramentacea.

56. Stipulate (stipulatus), furnished with sti- pulae in the axillae of the leaves; as Vicia sativa.

57. Exstipulate (exstipulatus), without sti- pulag.

58 Leafy (foliosus), having leaves.

59. -Perfoliate (perfoliatus), when the stem goes through a leaf; as Bupleurum.

60. Winged (alatus), when a leaf-like mem- brane runs along the stem.

61. Bulb-bearing (bulbifer), having bulbs or tubercles in the axilla of the leaves; as Lilium bulbiferum, Dentaria bulbifera.

62. Prickly (aculeatus), when along the stem there are pointed protuberances coming off with the rind.

63. Spiny (spinosus), when there are pointed protuberances on the stem which do not come ofT with the rind

64. Smooth (inermis), having neither prickles nor spines.

65. Barren (sterilis), bearing no flowers.

66. Fruitful (fructificans), bearing flowers or fruit.

In respect offgure.

67. Round (teres), that is, quite cylindrical.

68. Half-round (semiteresj, that is, round on the one side and flat on the other.

69. Compressed (compressus), when the stem is flat on both sides.

70. Two-edged (anceps), when a compressed stem is sharp on both edges.

71. Angled (angulatus), when a stem has several angles, but the sides are grooved. Of this there are several kinds, viz.

a. Obtuse-angled (obtuse angulatus). /3. Acute-angled (acute angulatus). ā ¢y. Three-angled (triangularis). S. Four-angled (quadrangularis, &cˆ (. Many-angled (multangularis).

72. Three-sided (triqueter), when there are three sharp corners, and the sides quite flat.

73. Three-cornered (trigonus), when there are three round or obtuse edges, but the sides appear flat. Of this too there are several kinds :

a- Four-cornered (tetragonus). /3. Five-cornered (pentagonus). ā¢y. Six-cornered (hexagonus). S. Many-cornered (polygonus).

74. Membranaceous (membranaceus), when the stem is compressed and thin like a leaf.

75. Knotted (nodosus), when the stem is di- vided by knobs.

76. Knotless (enodis), when it has neither knobs nor joints.

77. Articulated (articulatus), when the stem has regular knobs at the joints ; as in Cactus.

78. Jointed (geniculatus), when a stem has regular knobs, not seated on the joints.

In respect of substance.

79. Woody (lignosus), that consists of firm wood.

80. Fibrous (fibrosus), that consists of woody fibres, that can be easily separated.

81. Herbaceous (herbaceus), that is weak and can be easily cut.

82. Fleshy (carnosus), that is nearly as juicy and soft as the flesh of an apple.

83. Firm (solidus), internally hard.

84. Empty (inanis), filled internally with a soft pith.

85. Hollow (fistulosus), without any pith within and quite hollow.

86. With separations (septatus), where either 4he pith or the hollow space is divided by thin partitions.

87. Cork-like (suberosus), when the outer rind is soft and spongy : as in the Ulmis sube- rosa.

88. Rifted (rimosus), when there are in the rind thin clefts or chinks.

89. Scarred (cicatrizatus), having scars formed by the falling off of the leaves.

192. The straw (culmus)is proper only to the grasses. The kinds of it are nearly the same with those of the stem. The following, how- ever, may be distinguished in addition.

1. Knotted (nodosus), furnished with enlarged joints, as most of the grasses.

2. Knotless (enodis), without any such en- larged joints. Juncus, Carex, Scirpus..

3. Simple (simplex), having no branches.

4. Branched (ramosus), furnished with branches.

5. Leafy (frondosus), furnished with irregular branches, and particularly with small leaves ; as Restio.

6. Sheathed (vaginatus), that is covered with a foliaceous vagina.

7. Naked (nudus), having neither a foliaceous vagina nor any leaves.

8. Erect (erectus), standing quite upright.

9. Geniculated (geniculatus or infractus), when the first and undermost joint lies prostrate, and the rest stand upright, so that by this flexure nearly a right angle is formed ; as in Alopecurus geniculatus.

10. Oblique (obliquus), having such a di- rection as to be intermediate between perpen- dicular and horizontal ; as Poa annua.

193. The scape (scapus) is an herbaceous stem that bears flowers, but not leaves, and proceeds from the descending, or intermediate, but never from

the ascending stem.

It is proper to the lilies, and is sometimes found in other plants ; but in this last case it ought to bear more than one flower, for had it but one flower it would be called pedunculus radicalis. It is only when this single flower sits on a flower- stalk proceeding immediately from the ground that it is called scape.

194. The stipe (stipes). This term is applied only to Filices, Fungi, and Palms. The fol- lowing are the kinds of it : ā

In Filices.

1. Chaffy (paleaceus), when it is covered with dry membranaceous scales.

2. Scaly (squamosus), when it is covered with foliaceous scales.

3. Naked (nudus), without any covering.

4. Prickly (aculeatus), having prickles.

5. Smooth (inermis), without prickles.

In Fungi.

6. Fleshy (carnosus), of a fleshy substance.

7. Leathery (coriace us), consisting of a tough leather-like substance, as Boletus perennis.

8. Firm (solidus), consisting within of a solid mass.

9. Hollow (fistulosus), forming throughout a hollow cylinder.

10. Pitted (lacunosus), having depressions on the outside ; as Helvetia sulcata.

11 Scaly (squamosus), covered with firmly attached scales.

1 2. Squarrose (squarrosus), covered with scales which are turned back at the points.

13. Raised (peronatus), that from the bottom to the middle is laid thick over with a woolly substance ending in a sort of meal.

14. Bellying (ventricosus), thicker in the mid- dle than at either end.

15. Bulb-like (bulbosus), that is thick im- mediately above the root.

195. The shoot (surculus), is a term applied to the stem which bears the leaves of the mosses. Of this there are the following varieties : ā

1. Simple (simplex), having no branches; as in the Polytrichum commune.

2. Branched (ramosus), dividing into branches ; as in Mnium androgynum.

3. With hanging branches (ramis deflexis), when the stem is branched but all the branches hang down ; as in Sphagnum palustre.

4. Irregular (vagus), branched, but the branches set on without order.

5. [ntricate (intricatus), branched, and the numerous protuberant branches running into one another.

6. Tree-like (dendroides), standing erect, and at the point a crowd of thick branches like the top of a tree.

7. Pinnated (pinnatus) having at two opposite sides simple branches, of nearly the same length, at equal angles with the stalk.

8. Doubly pinnated (bipinnatus), having the habit of the last, only that its branches are again divided like those of the principal stem; as Hyp- num parietinum.

9. Trebly-pinnated (triplicatio pinnatus), like the last, but the secondary branches are also pin- nated; as Hypnum recognitum.

10. Proliferous (prolifer), when, in either of the two last kinds, there shoots forth a new stem out of the old ; as in Hypnum proliferum.

11. Erect (‘erectus), which rises perpendi- cularly ; as in Polytrichem commune.

12. Prostrate (procumbens), lying along.

13. Creeping (repens), the same with the last, but the branches constantly lengthening and putting forth small roots.

14. Floating (fluctuans), swimming under water in a perpendicular direction, and attached to some fixed body ; as Fontinalis antipyretica.

196. The sarment or runner (sarmentum) is a filiform stem, springing from the root and shooting from the point, so sending forth roots and producing a new plant of the same kind ; as Saxifraga sarmentosa, Fragaria.

197. The sucker (stolo) is a foliaceous creeping stem, springing from the root, covered on iu under surface with small roots, but at the point

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bearing a number ofleaves from which comes a new plant; as Ajuga reptans, Hieracium pilosella.

*198. The FOLIAGE consists of the leaves, and their several parts, with the tendrils or other ap- pendages connected therewith. The leaves are the organs in which the juices of the plant are elaborated, and rendered fit for being returned into the system, through the descending vessels of the bark, and the radiating vessels of the *.'ood. They begin where the primordial scales at the base of the plant, if any, terminate ; and they cease to be considered leaves as soon as the inflorescence (inflorescentia) commences ; if situated among the inflorescence they are denominated bracteae.*

199. The leaf is divided into three distinct parts : the stipule, the petiole, the lamina.

'200. The stipuliE are minute scale-like ap- pendages, seated at the base of the common or partial petiole; occasionally they are foliaceous; their position is liable to slight variation, being sometimes at the base of the petiole, sometimes adnate with its margin, and occasionally placed on the side of tiie stem opposite to the petiole. The stipulae are to the leaf what the bracteje are to the flowers.

201. The petiole is the foot-stalk of the leaf, and is subject to nearly the same variations in form as the stem; the terms applied to which are equally applicable to the petiole.

202. The lamina is a term used to express the leaf itself, considered without reference to the petiole or stipulre.

Leaves are said to be simple when they consist of one lamina only ; and to be compound, when they are formed by the union of more laruin

A. SIMPLE LEAVES. In respect of the apex. A leaf is said to be :

1. Acute (acutum), when the leaf ends in a point.

2. Acuminated (acuminatum), when the point is' lengthened out.

3. Pointed (cuspidatum), when the lengthened- out point ends in a small bristle.

4. Obtuse (obtusum), when the end of the leaf is blunt or round.

5. Mucronate (mucronatum), when there is a bristle-shaped aculeus, situated on the round end of a leaf; as in the Amaranthus blitum.

6. Bitten (prsemorsum), when the leaf is as it were bitten off at the point, forming a curved line ; as in the Pavonia proemorsa.

7. Truncated (truncatum), when the point of the leaf is cut across by a straight line; as in the Liriodendron tulipifera.

8. Wedge-shaped (cuneiforme), when a trun- cated leaf is pointed on both sides at the base.

9. Dedaleous (dcedaleum), when the point has a large circuit, but is truncated and ragged.

10. Emarginated (emarginatum), when an obtuse pointed leaf has a part as it were taken out of the apex.

11. Retuse (retusum), when an obtuse leaf is somewhat emaujinated, but in a small degree.

12. Cleft (fissum), when there is a cleft at the point, extending half way down the leaf. When there is but one cleft at the point, the leaf is called bifid (folium bifidum); if thpre are two clefts, it is called trifid (trifidum) ; if there are more clefts, the leaf is called quadrifidum, quinquefidum, &c. multifidum, with many clefts.

13. Fan-shaped (flabelliforme), when a trun- cated cuneiform leaf is at the point once or oftener cleft.

1 4. Tridentated (tridentatum), when the point is truncated, and has three indentations.

In respect of the base.

15. Heart-shaped (cordatum), when the base is divided into two round

lobes, the anterior part of the leaf being ovate.

16. Kidney-shaped (reniforme), when the base is divided into two round separate lobes, and the anterior part of the leaf is round.

17. Moon-shaped (lunatum), when both lobes at the base have either a straight or somewhat arched line, and the anterior part of the leaf is round.

18. Unequal (insequale), when one side of the leaf is more produced than the other.

19. Arrow-shaped (sagittatum), when the base is divided into two projected pointed lobes, and the anterior part of the leaf is likewise pointed.

20. Spear-shaped (hastatum), when the two pointed lobes of the base are bent outwards.

21. Ear-shaped (auriculatum), when there are at the base two small round lobes bent outwards. It is nearly the hastate leaf, only the lobes are smaller and round.

In respect of circumference.

22. Orbicular (orbiculatum), when the diameter of the leaf on all sides is equal.

23. Roundish (subrotundum), differs little from the foregoing, only that the diameter is longer, either from the base to the apex, or from side to side.

24. Ovate (ovatum), a leaf which is longer than it is broad ; the base is round and broadest, the apex narrowest.

25. Oval or elliptical (ovale or ellipticum) a leaf whose length is greater than its breadth, but round both at base and apex.

26. Oblong (oblongrum), when the breadth to the length is as one to three, or the breadth always least ; but the apex and base vary, that is, they are sometimes obtuse, sometimes pointed.

27. Parabolic (parabolicum), a leaf is so called which is round at the base, then forms a small bend, and grows less towards the point.

28. Spatulate (spatulatum), when the fore part of a leaf is circular, growing smaller toward the base, as in theCucubalus otites.

29. Rhombic (rhombeum), when the sides of the leaf run out into an angle, so that the leaf represents a square.

30. Oblique (subdimidiatum) is that leaf which has one side broader than the other.

Of this leaf there are several varieties : as Ā«. Heart-shaped oblique (sub-dimidiatio-cor-

datum) a heart-shaped leaf, which is at the same time oblique, as in the Begonia nitida.

6. Trapeziform (trapeziforme), a rhombic leaf, with one side smaller than the other, &c.

31. Panduraeform (panduraeforme), when an oblong leaf has a deep curve on both sides.

32. Sword-shaped (ensiforme), an oblong leaf, growing gradually narrower towards the apex, which is pointed, the sides are flat, and have more or less of an arch-like form; as in the sword flag, Iris.

33. Lanceolate (lanceolatum), an oblong leaf which grows gradually narrower from the base to the point.

34. Linear (lineare), when both sides of a leaf run parallel to each other, so that it is equally broad at the base and the apex.

35. Capillary (capillare), when a Ā»leaf has scarcely any breadth, and is as fine as a thread or hair.

36. Awl-shaped (subulatum), a linear leaf, which is sharply pointed.

37. Needle-shaped (acerosum), a linear leaf that is rigid, and generally endures through the winter ; as in the pine tribe, Pinus.

38. Triangular (triangulare), when the circum- ference represents a triangle, the apex of which makes the point of the leaf; as in the birch, Betula alba.

39. Quadrangular, quinquangular (quadrangu- lare, quinquangulare), when the circumference of the leaf has four or five angles ; as in the Menis-permum Canadense.

40. Entire (integrum, indivisum), which is not at all cleft or divided.

41. Lobed (lobatum), when a leaf is deeply divided, nearly half its length, into lobes Ac- coidirig to the number of lobes it is denominated bi-lobed (bi-lobum), as in Bauhinia ; tri-lobed (tri-lobum),quinquelobed (quinquelobum), as in the hop, Humulus lupulus, &c.

42. Palmated (palmatum), when there are five or seven very long lobes, that is, when the seg- ments are more than half way divided.

43. Divided (partitum), when in a roundish leaf the division extends to the base ; Ranunculus aquatilis.

44. Two-ranked (dichotomum), the last leaf, whose linear sections are divided or subdivided into twos.

45. Torn (laciniatum), when an oblong leaf has several irregular clefts.

46. Sinuated (sinuatum), when on the sides of an oblong leaf there are round incisures, as in the oak, Quercus robur.

47. Pinnatifid (pinnatifidum), when there are regular incisures, to go almost to the middle rib.

48. Lyre-shaped (lyratum), nearly the fore- going leaf, whose outer segment is very large and round.

49. Runcinate (nmcinatum), when the incis- ures of a pinnatifid leaf are pointed, and form a curve behind, as in the dandelion, Leontodon taraxacum.

50. Squarroso-laciniate (squarroso-laciniatum), when the leaf is cut almost into thp middle rib, and the incisures run in every direction ; as in the thistle, Carduus lanceolatus. N. B.the contour of the leaves from No. 41 to 43 is round. From 44 to 49 it is oblong.

In respect of the margin.

51. Quite entire (integerrimum), when the margin is without either notch or indentation.

N. B. this No. 50 and No. 40, are often confound- ed. An entire leaf is merely the opposite of the numbers from 40 and 41 to 49. It may often be either dentated or serrated. A quite entire leaf may, indeed, be formed like numbers from 41 to 47, but it can have no indentations or ser- ratures, as in the following leaves :

52. Cartilagineous (cartilagineum), when the margin consists of a border of

a harder substance than the disk.

53. Undulated (undulatum), when the margin is alternately bent in and out.

54. Crenated (crenatum), when the margin is set with small and round notches, having at the same time a perpendicular position.

55. Repand (repandum), when there are on the margin small sinuses, and between them seg- ments of a small circle.

56. Toothed (dentatum), when tlie margin is set round with small pointed and distinctly sepa- rated teeth.

57. Duplicato-dentate (duplicato-dentatum), when each small tooth of the margin is again dentated ; as in the elm, Ulmus campestris.

58. Dentato-crenate (dentato-crenatum), when each tooth is set with small and round denticuli.

59. Serrated (serratum), when the teeth on the margin are very sharp pointed, and stand so close that one seems to lie on the back of another.

60. Gnawed (erosum), when the margin is unequally sinuated, as if it had been gnawed; as in some species of sage, Salvia.

61. Spiny (spinosum), when the margin is set with spines ; as in the thistle, Carduus.

62. Fringed (ciliatum), when the margin is set round with strong hairs, of equal length, and at a considerable distance from one another.

In respect of the surface.

03. Aculeated (aculeatum), when the surface is covered with spines.

64. Hollow (concavum), when there is a hol- low in the middle of the leaf.

65. Channelled (canaliculatum), when the mid- dle rib of a long and narrow leaf is furrowed.

66. Wrinkled (rugosum), when the surface is raised between the veins of the leaf, and thus forms wrinkles; as in sage, Salvia.

67. Bullate (bullatura), when the parts raised between the veins on the surface appear like blisters.

68. Pitted (lacunosum), when the raised places between the veins are on the under sur- face, so that the upper surface appears pitted.

69. Curled (crispum), when the leaf is fuller on the margin than in the middle, so that it must lie in regular folds.

70. Folded (plicatum), when the leaf lies in regular straight folds from the base.

71. Veined (venosum), when the vessels of a leaf rise out of the middle rib. This is the case in most plants.

72. Netwise-veined (reticulato-venosum), when the veins which rise from the middle rib a2,ain subdivide into branches, that form a sort of net-work.

73. Ribbed (costatum), when the veins arise out of the middle, and proceed in a straight line towards the margin in considerable numbers, and close together ; as in the Calophyllum inophyl- lum, Canna, Musa, &c.

74. Nerved (nervosum), when the vessels rising out of the petiolus run from the base to the apex.

75. Three-nerved (trinervium), when three nerves take their origin from the base. Thus we likewise say, quinquenervium, septemnervi- um, &c.

76. Triple-nerved (triplinervium), when out of the side of the middle rib, above the base, there arises a nerve running towards the point ; as in Laurus, Cinnamomum, and Camphora.

77. Quintuple-nerved (quintuplinervium), when out of the middle rib, above the base, there arise on each side two nerves running towards the point.

78. Septuple-nerved (septuplinervium), when on each side of the middle rib, above the base, three nerves arise, and proceed to the apex.

79. Venose-nerved (venoso-nervosum), when, in a leaf having nerves, the vessels run into Dranches, or in a veined leaf; as in the Indian cress, Tropseolum majus.

80. Streaked (lineatum), when the whole leaf is full of smooth parallel vessels, that run from the base to the apex.

81. Nerveless (enervium), when no nerves rise from the base.

82. Veinless (avenium),where there are no veins.

83. Dotted (punctatum), when, instead of ribs and veins, there are dots or points; as in the Vaccinium vitis idaea.

84. Colored (coloratura), a leaf of some other color than green.

85. Cowled (cucullatum), when in a heart- shaped leaf the lobes are bent towards each other, so as to have the appearance of a cowl.

86. Convex (convexum), when the middle of the leaf is thicker than the rim, raised on the upper surface and hollowed on the under.

87. Keel-shaped (carinatum), when on the under surface of a linear-lanceolate, or oblong leaf, the place of the middle rib is formed like the keel of a ship.

88. Quaflruply-keeled (quadricarinatum), when the middle rib, by means of a thin leaf above and below, projects, and the margin is incrassated, so that a horizontal section has the appearance of a cross ; as Ixia cruciata.

B. Compound Leaves.

89. Compound (compositum), when several leaves are supported by one foot-stalk To this term belong Nos. 89, 92, 95, 96, 97. But when the leaf agrees with the above definition, although it should not come under any of the following kinds, it is still to be considered a compound leaf.

90. Fingered (digitatum) when the base of several leaves rests on the point of one foot-stalk ; as in the horse-chestnut, Aesculus Hippocastanum.

91. Binate (biuatum), when two leaves stand by their base on the top of one foot-stalk ; but if the two foliola of a binate leaf bend back in a horizontal direction, it is called a conjugate leaf, folium conjugatum.

92. Bigeminate (bigeminatum, bigeminum). when a divided leaf-stalk at each point bears two leaves ; as in some species of Mimosa.

93. Trigeminate (trigeminatum or tenyemi- num), when a divided leaf-stalk on each point bears two leaves, and on the principal stalk, where it divides, there is a leaf at each side ; as in the Mimosa tergemina.

94. Ternate (ternatum), when three leaves are supported by one foot-stalk ; as in the clover, Trifolium pratense. Strawberry, fragaria vesca.

95. Biternate (biternatum, or duplicato-terna- tum), when a foot-stalk, which separates into three, at each point bears three leaves.

96. Triternate (triternatum, or triplicate- ter- natum), when a foot-stalk, which separates into three, is again divided at each point into three, and on each of these nine points bears three leaves.

97. Quadrinate (quadrinatum), when four leaves stand on the point of a leaf-stalk ; as He- dysarum tetraphylium. '

98. Quinate (quinatum), when five leaves are supported by one foot-stalk : this, it is true, has some affinity with No. 89, but varies on account of the number five, as in the other there are ge- nerally more leaves.

99. Umbellate (umbellatum), when at the point of a leaf-stalk there stand a number of leaves, closely set, and forming the figure of s. parasol ; as Aralia sciodaphyllum, Panax chry- sophyllum.

100. Pedate (pedatum, ramosum), when a leaf-stalk is divided, and in the middle, where it divides, there is a leafet, at both ends there is likewise a leafet, and on each side, between the one in the middle and that at the end, anothe.1 or two, or even three leaves. Such a leaf there- fore consists of five, seven, or nine leafets, that'; are all inserted on one side ; as in the Helleborui viridis, foetidus, and niger.

101. Pinnated (pinnatum), when on an undi- vided leaf-stalk there is a series of leafets on each side, and on the same plane ; of this there arc the following kinds : a. Abruptly-pinnated (pari pinnatum, or abrupte pinnatum), when at the apex of a pinnated leaf there is no leafet.

/?. Pinnate with an odd one (impari-pinnatum, or pinnatum cum impari), when at the apex of a pinnated leaf there is a leafet.

y. Oppositely pinnate (opposite pinnatum), when the leafets on a pinnated leaf stand oppo- site to one another.

S. Alternately pinnate (alternating pinnatum), when the leafets on a pinnated leaf stand alter- nately.

e. Interruptedly pinnate (interrupte pinna- tum), when in a pinnated leaf each pair of altei- nate leafets is smaller.

Ā£. Jointedly pinnate (articulate pinnatum), when between each pair of opposite pinnae, or leafets, the stem is furnished with a jointed edge.

77. Decursively pinnate (decursive pinnatum), when from each particular

pinnula a foliaceous appendage runs down to the following one.

5. Decreasingly pinnule (pinnatum foliolis de- crescentibus), when the successive foliola on a pinnated leaf grow gradually smaller to the point; as in the Vicia sepium

102. Conjugately pinnated (conjugato-piu-

natum), when a leaf-stalk divides, and each part makes a pinnated leaf.

103. Ternato-pinnate (ternato-pinnatum) when at the point of a principal leaf-stalk there stand three pinnated leaves; as Hoffmanseggia.

104. Digitato-pinnate (digitato-pinnatum), ā¢when several simply pinnated leaves, from four to five, stand on the point of one stalk; as in Mimosa pudica.

105. Doubly pinnate (bipinnatum, duplicato- pinnatum), when a leaf-stalk bears, on one plane on both sides, a number of leaf-stalks, of which each is a pinnated leaf.

106. Trebly pinnate (triplicato-pinnatum, or tripinnatum), when several doubly pinnated leaves are attached to the sides of a foot-stalk on one plane.

107. Doubly compound (decompositum) when a divided leaf-stalk connects several leaves; of this kind are Nos. 90, 91, 93, 98, 99, 100. But Ā«he term decompositum is only used when the division of the leaf-stalk of the pinnulae is ir-

egular.

108. Super-decompound (supra-decomposi- tum), when a leaf-stalk, which is often divided, sustains several leaves ; to this belong Nos. 94, 101. But then the term is used only when the divisions of the leafets are either more numerous or not so regular.

In respect of the place.

109. Radical (radicale), when a leaf springs from the root, as in the violet, Viola odorata. Sagittaria sagittifolia.

110. Seminal (seminale), when a leaf grows out of the parts of the seed, as

in the hemp ; where, as soon as it springs, there appear two white bodies, which are the two halves of the seed that change into leaves.

111. Cauline (caulinum), which is attached to the principal stem. The root leaves and stem leaves of a plant arc often very different

112. Rameous (rameum), when a leaf rises /rom the branches.

113. Axillary (axillare or subalare), which stands at the origin of the branch.

114. Floral (florale), which stands close by the flower.

In respect of substance.

115. Membranaceous (membranaceum), when both membranes of a leaf lie close upon one another, without any pulpy substance between them ; as in the leaves of most trees and plants.

116. Fleshy (carnosum), when between the membranes there is much soft and pulpy sub- stance ; as in houseleek, Sempervivum tectorum.

117. Hollow (tubulosum), when a somewhat fleshy and long leaf, as in the onion, Allium Cepa.

118. Bilocular (biloculare), when in a linear leaf, internally hollow, the cavity is divided by a longitudinal partition into two. Lobelia dortmanna.

119. Articulate (articulatum, or loculosum), when a cylindrical hollow leaf has its cavities divided by horizontal partitions ; as Juncusarticu- latus.

120. Cylindrical (teres), when it is formed like a cylinder.

121. Compressed (compressum), when a thick leaf is flat on both sides.

122. Two-edged (anceps), when a compressed leaf is sharp on both edges.

123. Depressed (depressum), when the upper surface of a fleshy leaf is pressed down, or, as it were, hollowed out.

124 Flat (planum), when the upper surface of a thick leaf forms an even plane.

125. Gibbous (gibbosum, or gibbum), when both surfaces are convex.

126. Scimitar-shaped (acinaciforme) ; a two- edged thick leaf, on one side sharp and arched, on the other straight and broad.

127. Axe-shaped (dolabriforme), when a fleshy leaf is compressed, circular on the upper part, Ā°cnvex on the one side, sharp edged on tlie other, and cylindrical ‘at the base.

128. Tongue-shaped (linguiforme), when a long compressed leaf ends in a round point.

129. Three-sided (triquetrum), when the leaf is bounded by three narrow sides, and is at the same time long.

130. Deltoid (deltoideum), when a thick leaf is bounded by three broad surfaces, and is at the same time short.

131. Four-cornered (tetragonum), when a leaf, long in proportion, is bounded by four narrow surfaces ; as in the Pinus nigra.

132. Warty (verrucosum), when short fleshy leaves are truncated, and stand in thick heaps; as in some Euphorbias.

133. Hook-shaped (uncinatum), when a fleshy leaf is flat above, compressed at the sides, and bent back at the point.

In respect of situation and position.

134. Opposite (folia opposita), when the bases of the leaves are next each other, on opposite sides of a stem.

135. Dissimilar (disparia), when of two leaves, placed opposite, the one is quite differently formed from the other; as some species of Me- lastoma.

136. Alternate (alterna), see No. 11.

137. Scattered (sparsa), when the leaves stand thick on the stem, without any order.

138. Crowded (conferta, or approximata), wlwn the leaves stand so close together that the stem cannot be seen.

139. Remote (remota), when the leaves are separated on the stem by certain interstices.

140. Three-together (terna), when three leaves stand round the stem : there arc sometimes four, five, six, seven, eight, &c., quaterna, cuma, sena, septena, octona, &c.

141. Star-like (stellata, or verticillata), when several leaves stand round the stem at certain distances ; as in ladies-beds traw, Galium, &c.

142. Tufted (fasciculata), when a number of leaves stand on one point; as in the larch, Pinus larix, Celastrus buxifolius.

143. Two-rowed (disticha), when leaves are so placed on the stem that they stand on one plane ; as in the pitch fir, Pinus picea, Louicera symphoricarpus.

144. Decussated (decussata), when the stem, in its whole length, is set round with four rows of leaves at each branch, and when one looks per- pendicularly down upon it, the leaves seem to ibrm a cross ; as in Veronica decussata.

145. Imbricated (imbricata), when one leaf lies over another, as the tiles upon a roof. Of this there are the following kinds :

a. Bifariously imbricated (bifariam imbricata), when the leaves are so laid upon one another that they form but two rows longitudinally on the stem.

/3. Trifanam imbricata, three rows.

y. Quadrifariam imbricata, See. four rows, &c.

In respect of insertion.

146. Petiolated (petiolatum), when a leaf is furnished with a foot-stalk.

147. Palaceous (palaceum), when the foot- stalk is attached to the margin.

1 48. Peltated (peltatum), when the foot-stalk is inserted into the middle of the leaf.

149. Sessile (sessile), when the leaf is attached to the stem without any foot-stalk.

150. Loose (solutum, or basi solutum), a suc- culent cylindrical or subulate leaf, which seems to have no connexion with the stalk on which it rests, but seems to hang the more loosely ; as Sedum album.

151. Riding (equitans), a sword-shaped or linear leaf, that forms at its base a sharp and deep furrow, whose surfaces lie on one another, and embrace the stalk; Dracaena ensifolia, Sisy- rinchium striatum, &c.

152. Decurrent (decurrens), when the foliace- ous substance of a sessile

leaf runs down along the stem.

153. Embracing (amplexicaule), when a ses- sile leaf is heart-shaped at the base, and with both lobes embraces the stem.

154. Connate (connatum), when opposite and sessile leaves are joined at their base.

N. B. A perfoliated leaf (folium perfoliatum), is already described in No. 59.

In respect of direction.

155. Appressed (adpressum), when the leaf turns up, and lays its upper surface to the stem.

156. Erect (erectum, or semiverticale), when the leaf is directed upwards, and makes with the stem a very acute angle.

157. Vertical (verticale), which stands quite upright, and thus makes with the horizon a right angle.

158. Bent sideways (adversum), when the margin of a vertical leaf is turned towards the stem.

159. Spreading (patens), which goes off from the stem in an acute angle.

160. Bent in (inflexum, or incurvum), when an upright leaf is bent in at its point towards the stem.

161. Oblique (obliquum), when the base of the leaf stands upwards, and the point is turned towards the ground.

162. Horizontal (horizontale), when the upper surface of the leaf makes with the stem a right angle.

163. Bent down (reclinatum, or reflexum), when the leaf stands with its point bent towards the earth

164. Bent back (revolutum), when the leaf is bent outwards, and its point from the stem.

165. Hanging down (dependens), when the base is turned to the zenith, and the point towards the ground.

166. Rooting (radicans), when the leaf strikes root.

167. Swimming (natans), when the leaf swims on the surface of water ; as in Nymphaea alba.

168. Immersed (demersum), when the leaves are found under water.

169. Emerging (emersum), when the leaf of an aquatic plant raises itself out of the water.

203. Besides the petiole, the stipulae, and the lamina, which have now been described, there are two appendages which properly belong to the foliage, and still remain to be noticed ; these are the ramentum, and the cirrhus or tendril.

204. The rament (ramentum) is a small, often bristle-shaped, leafet, that is oblong, thin, and more or less of a brown color ; sometimes placed, like the stipulae, in the angles of the pe- tiole ; but sometimes, likewise, without any order on the stem. It appears on all trees when their buds open, and falls soon after. On the oak it stands like the stipulae, on the Scotch fir, Pinus sylvestris, it is soon dispersed.

When the stem of a plant is covered with fine diy scates, that have the appearance of the Ra- mentum, it is properly called a ramentaceous stem, caulis ramentaceus.

205. The tendril (cirrhus), is a filiform body, which serves for attaching plants to some support. It is always an alteration of some other part of the plant ; for instance, in the vine, of a leaf, and in the Artabotrys of a part of the inflores- cence. Climbing plants are furnished with ten- drils. They are in general spiral. The species are as follows :

1. Axillary (axillaris), when rising from the axillae of the leaves.

2. Foliar (foliaris), when springing from the points of the leaves.

3. Petiolar (petiolaris), when standing on the point of the common foot-stalk of a compound leaf.

4. Peduncular (peduncularis), when rising from the foot-stalk of a flower.

5. Simple (simplex), when not divided.

6. Convolute (convolutus), when winding re- gularly round a prop.

7. Revolute (revolutus), when winding irre- gularly, sometimes to this side, sometimes to that.

206. To the INFLORESCENCE are to be referred all those parts which are placed above the articulation which unites the flower with the plant; strictly speaking, the term denotes the mode in which the flowers are arranged upon their stalk or rachis. We will first describe the different manners in which this is effected, and then explain the nature and modifications of the accessory leaves.

207. The inflorescence in many plants is an important character, and the following kinds have been described, viz. : The wh irl (verticillus), the head (capitulum), the ear (spicula), the spike (spica), the raceme (racemus), the fascicle (fasci- culus), the umbel (umbella), the cyme (cyma), the corymb (corymbus), the panicle (panicula), the thyrse (thyrsus), the spadix (spadix), and, finally, the catkin (amentum).

208. A whirl (verticillus), consists of several fiowers that encircle the stem, and stand un-

covered at intervals upon it. Of this there are the following kinds :

1. Sitting (sessilis), when all the flowers sit close to the stem, without foot-stalk, as in the field mint. Mentha arvensis.

2. With a foot-stalk (pedunculatus), when the flowers are furnished with short foot-stalks.

3. Headed (capitatus), when the flowers stand so thick that they take the figure of a half sphere as ; Phlomis tuberosa.

4. Half (dimidiatus), when the flowers sur- round only the half of the stalk ; as in balm, Melissa officinalis.

5. Close (confertus), when one whirl stands close above another.

6. Distant (distans), when the whirls stand at a distance one from another.

7. Leafy (foliosus), when there are leaves at the base of the whirl.

8. Leafless (aphyllus), when there are no leaves above the whirl.

9. Bracteate (bracteatus), when there are floral leaves, or bracteae, at the whirl.

10. Ebracteate (ebracteatus), when there are no bracteae at the whirl.

11. Naked (nudus), when no leaves or brac- teaf stand near the whirl.

12. Six, eight, ten, or many flowered (sex, octo, decem, or multiflorus), when the whirl consists of many flowers.

209. The head (capitulum), is a number of flowers standing thick upon one stalk, so as to form a round head. The flowers have either foot- stalks, or sit close. The following are varieties of this : ā

1. Spherical (globosum, or sphaericum), when the flowers have a perfectly round form ; as in the Gomphrena globosa.

2. Roundish (subglobosum), when the head of flowers is nearly round, but where the length exceeds the breadth ; as in clover ; Gomphrena globosa.

3. Conical (conicum\ when the head is long, drawing towards a point ; as in Trifolium mon- tanum.

4. Hemispherical (dimidiatum, or hemisphe- ricum), when the head is round on one side and flat on the other.

5. Leafy (foliosum), when the head is sur- rounded with leaves.

6. Tufted (comosum), having leaves at the point ; as Bromelia ananas.

7. Naked (nudum), when it is devoid of leaves.

8. Standing on the point (terminale), when it stands on the top of the stem.

9. Axillary (axillare), standing on the angles of the leaves, that is, where the base of the leaf, or of the leaf-stalk, is placed.

10. Alar (alaris), sitting on the axillae of the branches.

210. The ear (spicula or locusta) is either named from the flowers of the grasses enclosed in the glume ; or we understand by it also, the flowers of the gramineous plants, such as cyperus, scirpus sylvaticus, &c., which stand closely pressed together on a filiform flower-stalk. It is denominated according to the number of the Sowers and their figures. ā The following are the

ds of it :ā

1. One-flowered (uniflora), that contains but one flower ; as Agrostis.

2. Two (lowered (biflora), having two flowers ; as in Aira.

3. Three-flowered (triflora), &c.

4. Many-flowered (multiflora), that contains many flowers.

5. Round (teres), when the flowers in the spi- cula are so placed that their horizontal section is round ; as Glyceria fluitans, &c.

6. Two-ranked (disticha), when the flowers in the spicula are placed in two opposite rows on the same level ; as in Cyperus.

7. Ovate (ovata), when the outline of the spi- cula resembles the figure of an egg ; as Bromus secalinus.

8. Oblong (oblonga), when the outline of the spicula exhibits an ellipsis more or less perfect.

9. Linear (linearis), when the spicula is long and small, but of equal breadth throughout.

211. The spike (spica) is that sort of inflores- cence when many flowers, without any foot-stalk, sit on a simple filiform principal flower-stalk. If there be a foot-stalk, it must be much shorter than the flower. The kinds are,

1. Glomerate (glomerata), when the spike consists of a spherical selection of flowers.

2. Interrupted (interrupta), when the flowers upon the spike are interrupted by naked inter- stices.

3. Verticillated (verticillata), when the flowers, leaving naked interstices on the spike, appear on that account to be placed in whirls.

4. Imbricated (imbiicata), when the flowers stand so thick together that ope lies upon another.

5. Distichous (disticha), when the flowers are arranged on the spike in two rows.

6. One-rowed (secunda), when the flowers are all arranged on one side of the spike, so that the other side is naked.

7. Cylindrical (cylindrica), when the spike is equally covered with flowers both above and be- low.

8. Linear (linearis), that is very slender, and of equal thickness.

9. Ovate (ovata), that is thick above, more slender below, and appears of an oval form.

10. Ventricose (ventricosa), thick in the middle, and slender at both extremities.

11. Leafy (foliosa), having leaves between the flowers.

12. Comose (comosa), having leaves at the apex .

13. Fringed (ciliata), having hairs between the flowers.

14. Simple (simplex), without branches.

15. Branched 01 compound (ramosa, or com- posita), when several spikes stand on one branched or divided stalk.

16. Conjugate (conjugata), when two spikes standing on one stalk unite at the base.

17. Bundled (fasciculata), when several spikes standing on one foot-stalk unite at the base.

18. Terminal (terminalis), standing on the apex of the stalk or branch.

19. Axillary (axillaris), standing in the angles at the origin of the leaves.

20. Lateral (lateralis), standing on the wood

of lite former year, that is, on the place now des- titute of leaves.

212. The Raceme (racemus) is that sort of inflorescence to which several pedunculated flowers are longitudinally attached, nearly of equal length, or at least where the lowest flower- stalks are little longer than the upper. Here fol- low the different kinds of Raceme : ā

I. One-sided (unilateralis), when only one side of the stem is set with flowers.

2. One-rowed (secundus) when the flower-stalks are situated round the principal stem, but the flowers themselves are directed only to one side.

3. Limber (laxus), when the raceme is very pliant and flexible.

4. Stiff (strictus) when the raceme does not bend.

5. Simple (simplex), when it is unbranched.

6. Compound (compositus), when several single racemes unite on one stem.

7. Conjugate (conjugatus), when two racemes, standing on one stem, unite at the base.

8. Naked (nudus), without leaves or bracteae.

9. Foliate (foliatus), set with leaves or bracteae.

10. Bracteate (bracteatus), when there are bractese at the flowers.

II. Ebracteate (ebracteatus) having no bracteae.

12. Erect (erectus), standing upright.

13. Straight (rectus), straight without bending.

14. Cernuous (cernuus), when the apex of the raceme is bent downwards.

15. Nodding (nutans), when the half of the raceme is bent downwards.

16. Hanging (pendulus), when the raceme hangs down perpendicularly.

213. The Fascicle or bundle (fasciculus) is a number of simple foot-stalks, of equal height, which arise at the point of the stem, not from one point, but from several. As an example of the fasciculus may be quoted Dianthus carthusian- orum.

214. The umbel (umbella) consists of a num- ber of flower-stalks, of equal length, that rise from the point. In an umbel the flower-stalks are called rays (radii). There are the following varieties of the umbel: ā

1 . Simple (simplex), when the rays bear but one flower.

2. Compound (composita), when each ray of the umbel supports a simple umbel. The rays which support the simple umbels are called the universal or general umbel, umbella universalis. The simple umbels are called the particular or partial umbels, umbella partialis or umbellula.

3. Sitting (sessilis), when the umbel has no stalk.

4. Pedunculated (pedunculata), when it is furnished with a stalk.

5. Close (conferta), when the rays of the um- bel stand so near one to another that the whole umbel becomes very thick and close.

6. Distant (rara), when the rays stand wide.

7. Poor (depauperata), when the umbel has but few flowers.

8. Convex (convexa), when the middle rays are high but stand thick, so that the whole form a globular figure.

9. Flat (plana), when the rays being of equal length, the flowers form a flat surface.

215. The cyme (cyma) is that species of in- florescence where the whole at first view lias the appearance of a compound umbel, only the principal flower-stalk and those which support the particular florets do not rise 1'rom the same point. The flower-stalks rise close above one another and are divided into irregular branches. Examples of the cyme are found in Sambucus nigra, and Viburnum opulus

216. The corymb (corymbus) is properly speaking an erect racemus, the lower flower- stalks of which are either branched or simple, but always so much produced as to be of equal height with the uppermost.

217. The panicle (panicula) consists of a number of simple flowers that stand on unequally divided branches, and on a long peduncle. The kinds are,

1. Simple (simplex), that has only undivided side branches.

2. Branched (ramosa), when the branches are again branched.

3. Much branched (ramosissima), when the side branches are much divided.

4. Disappearing (deliquescens), when the foot-stalk so loses in branching that it cannot be traced to the end.

5. Spreading (patentissima), when the branches stand wide from one another, and spread out on all sides.

6. Crowded (coarctata), when the branches stand very close together.

7. One-rowed (secunda), when the branches incline all to one side.

218. The Thyrse (thyrsus) is a condensed panicle, whose branches are so thick that the whole has an oval form ; as in the flower of the privet, Ligustrum vulgare, Tu?silago petasites.

219. The Spadix is peculiar to the palms, and some plants allied to the genus Arum. All flower-stalks that are contained in a vagina, are called Spadix. This organ is sometimes found like a spike, racemus, or panicle, and from these it takes its name.

The terms appropriated to it are the following :

1. Spiked (spicatus), having the appearance of a spike.

2. Raceme-like (racemosusj, forming a ra- ceme.

3. Paniculated (paniculata), having the form of a panicle.

220. The Catkin (amentum, or julus,) is a long and always simple stem, which is thickly covered with scales, under which are the flowers, or their essential parts.

Examples of this are found in the willows (sa- lices), hazle (Corylus avellana), hornbeam (car- pinus), &c.

1. Cylindrical (cylindricum), which is equally thick above and below.

2. Attenuated (attenuatum), which grows thinner and thinner to the point.

3. Slender (gracile), which is long but has few scales, and also is slender in proportion to its length.

4. Ovate (ovatum) which is thick below and around, but grows gradually more slender to the point.

221. The accessory leaves of the inflorescence

are the bracteae, of which the spatha, and the involucrum are varieties.

222. The bracteae are small leaves, placed above the articulation of the inflorescence, near or between the flowers, and in general are of a different shape and color from the other leaves. They are subject to many variations

of figure, duration, &,c. ; the terms to express which are the same as are applied to leaves under similar circumstances.

223. The spatha and the involucrum differ from bractese in being situated immediately below the articulation of the inflorescence with the plant. They are both subject to several varia- tions of form, which are designated by particular names.

224. The spatha is,

1. Univalve (univalvis) when it consists but of one leaf; as in Arum maculatum.

2. Bivalve (bivalvis) when two leaves stand opposite each other, as in Stratiotes.

3. Halved (dimidiata) when the flowers are covered on one side only.

4. Permanent (persistens) when it remains unchanged till the fruit appears.

225. The involucrum consists of several leaves, surrounding one or several flowers. It is chiefly known in umbelliferous plants, and in compound flowers. In the former the terms employed do not differ from those used for other parts of a plant ; in the latter it is altogether of another kind, and requires a particular description.

226. The common calyx, common perian- thium, or anthodium, as it is sometimes called, is an involucrum, which contains a great number of flowers, in such a manner as that these flowers appear to form but one; as in the dandelion (Leontodon taraxacum), blue bottle (Centaurea eyanus), sun flower (Helianthus annuus), &c. The kinds are,

1. One leaved (monophyllum), that consists but of one leaf, united at the base, but divided at top.

2. Many leaved (polyphyllum), that is com- pounded of several leaves.

3. Simple (simplex), when the flowers are sur- rounded with a single row of leaves.

4. Equal (aequale), when in a simple perianth the leaves are of equal length.

5. Scaly or imbricated (squamosum or imbri- catum), when the common perianth consists of closely imbricated foliola.

6. Squamose (squamosum), when the foliola are bent back at the point.

7. Scariose (scariosum), when the foliola are hard and dry ; this is found in Centaurea glasti- folia.

8. Fringed (ciliatum), when the margins of the foliola are beset with short bristles of equal length.

9. Muricated (muricatum), when the mar- gins of the foliola are set with short stiff prickles.

10. Thorny (spinosum), when each leafet is provided with a thorn : these are either simple thorns (spinae simplices), or branched (ramosae).

11. Turbinated (turbinatum), when the peri- anth has quite the figure of a top.

12. Spherical (globosum), when it has the form of a perfect sphere.

13. Hemispherical (hemisphaericum), when it is round below and flat above.

14. Cylindrical (cylindricum), when the pe- rianth is round and long, as thick above as below.

15. Flat (planum), when the foliola of the perianth are spread out quite flat.

16. Doubled or calyculated (auctum or caly- culatum), when at the base of the common perianth there is another row of foliola that appear to form another involucrum ; as in dan- delion, Leontodon taraxacum.

227. The FLOWER is the part immediately terminating the twigs or' branches of the inflo- rescence, and containing the commencement of the fruit. Its parts are the calyx, the corolla, the stamens, and the pistillum ; besides which must be noticed the discus.

228. When the calyx and corolla are so con- founded as not to be capable of being distin- guished they are called the perianthium; as in Butomus.

229. The calyx immediately encloses the flower. It is,

1. Abiding (persistens), remaining after the flower falls off; as in the henbane, Hyoscya- mus niger.

2. Deciduous (deciduus\ that falls off at the same time with the flower; as in the lime tree, Tilia Europaea.

3. Withering (marcescens), that withers after the flower, but still remains

for some time, and at last drops off; as in the apricot, Prunus Ar- meniaca.

4. Caducous (caducus), that falls off before the flower ; as in the poppy, Papaver somni- ferum.

5. Simple (simplex).

6. Double (duplex), when a double calyx encloses the flower ; as the strawberry, Fragaria vesca ; mallow, Malva rotundifolia.

7. One leafed (monophyllus), when the calyx consists of one leaf, that is, it may be divided into equal or unequal laciniae, but all of them are connected at the base.

8. Two, three, four, fivt -leaved, di-tri-tetra- penta-&c. phyllus, many leaved (polyphyllus), when it consists of two or more foliola.

9. Dentated (dentatus), when it has at the Margin short segments or indentations, but which are not deeper at most than the fourth part of the whole calyx. According to the number of these segments the calyx is, bi, tri, quadri, quinque, &c. or multidentatus, with two, three, four, five, or many segments.

10. Cleft (fissus), when the calyx is divided into laciniae, but which reach only to the middle. It is often bi-tri-quadri-multifidus.

11. Parted (partitus), when it is divided down to the base. These divisions are also named ac cording to their number, as bi-tri-quadri-&c. multipartitus.

12. Labiated or bilabiated (labiatus or bila- biatus), when it is deeply divided into two laci- nios, both of which are dentated ; as in garden sage, Salvia officinalis.

13. Entire (integer), when a monophyllus ca-

lyx is short, round at the base, and entire on the margin.

14. Urceolated (urceolatus), when a mono- phyllous calyx is short, round at the base, and entire on the margin.

15. Shut (clausus), when a polyphyllous, or divided calyx, applies itself closely to the co- rolla.

16. Tubular (tubulosus'), when a divided, cleft, or indented calyx, at its origin is cylindri- cal, and forms a tube.

17. Spreading (patens;, when, in a mono- phyllous or polyphyllous calyx, the foliola or laciniae, stand quite open.

18. Reflected (reflexus), when either the seg- ments, or laciniae in monophyllous calyxes, or the foliola in polyphyllous, are bent back. .

19. Inflated (inflatus), when the calyx is hollow, and bellies out.

20. Abbreviated (abbreviatus), when the calyx is much shorter than the corolla.

21. Colored (coloratus), when the calyx is of another color than green.

230. The corolla is the envelope, or small leaves enclosed by the calyx, surrounding the interior parts of the flower, of a more delicate structure than the calyx, and of another color than green. It consists either of one piece or of several ; the first called a monopetalous corolla (corolla monopetala), the last polypetalous (cor- olla polypetala). The pieces it consists of are called petals (petala).

231. The monopetalous corolla is that which consists but of one piece, which, however, may be divided into segments, but which must always be entire at the base. The following are vari- eties of this corolla : ā

1 . Tubular (lubulosa), that consists of a single piece, hollow and of equal thickness. The small corolla or floret, which is found included in a common perianthium, is also called tubular, although it sometimes departs from this form.

2. Club-shaped (clavata), which forms a tube, growing gradually wider upwards, and narrower at the aperture.

3. Spherical (globosa), which is narrow above and below, and wide in the middle.

4. Bell-shaped (campanulata), that grows gra- dually wider to the mouth, so that it has nearly the appearance of a bell.

5. Cup-shaped (cyathiformis), when a cylin- drical tube grows gradually wider from below upwards, but the margin is upright, and not bent back or contracted.

6. Urceolated (urceolata), when a short cylin- drical tube extends itself

into a wide surface, the margin of which is erect.

7. Funnel-shaped (infundibuliformis), when the tube of the corolla grows gradually wide, above that is obversely conical, but the rim pretty flat and turned outwards.

8. Salver-shaped (hypocrateriformis), when the tube of the corolla is perfectly cylindrical, but very long, and the rim forms a broad expansion; as in Phlox.

9. Wheel-shaped (rotata), when a cylindrical tube is very short, nearly shorter than the calyx, sometimes hardly perceptible, and its margin is quite flat. It is almost the same with the fore-

going, only the tube is very short; as in shep- herd's club, Verbascum.

10. Tongue-shaped (ligulata), when the tube is not long, suddenly ceases, and ends in an ob- long expansion ; as in the Aristolochia clematitis, and in some flowers that are contained in a com- mon perianthium.

1 1 . Difform (diffbrmis), when the tube gra- dually becomes wider above, and is divided into unequal lobes; as in some corollas that are included in a common perianthium, e. g. the blue bottle, Centaurea cyanus.

12. Ringent (ringens), when the margin of a tubular corolla is divided into two parts, of which the upper part is arched, the under oblong, and has some resemblance to the open mouth of an animal ; as in sage, Salvia officinalis.

13. Masked (personata), when both segments of the ringent flower are closely pressed together ; as in snap-dragon, Antirrhinum majus.

14. Bilabiate (bilabiata), when the corolla has two segments or lips, which lie over against each other, and which are themselves often laciniated or cleft.

1 5. One-lipped (unilabiata), when in a ringent, personate, &c. corolla, the upper or under lip is wanting, as in Teucrium.

232. The kinds of the many-petalled corolla (corolla polypetala) are,

1. Rose-like (rosacea), when petals which are pretty round, and at their base have no unguis, form a corolla.

2. Mallow-like (malvacea), when five petals, which at the base are considerably attenuated, so unite below that they appear to be

monopetalous.

3. Cross-like (cruciata), when four petals, which are very much produced at their base, stand opposite to one another; as in Sinapis alba, Brassica oleracea, viridis, &c.

4. Pink (caryophyllacea), when five petals at their base are much elongated, and stand in a monophyllous calyx; as in Dianthus caryophyllus, &c.

5. Lily-like (liliacea), when there are six petals, but no calyx. In some there are only three, in others they form a tube at the bottom. This makes the idea somewhat indefinite, but it ought to be remarked that this kind of corolla never has a calyx, and that it is only proper to the lilies.

6. Two, three, four, five, many petalled (di- tri-tetra-penta-&cc. polypetala), thus the corolla is denominated, according to the number of the petals.

7. Papilionaceous (papilionacea), when foui petals differing in figure stand together; to these petals the following names have been given (for instances, examine the flowers of the common pea, pisum sativum, or vetch, vicia saliva) :

a. The standard (vexillum) is the uppermost petal, which is commonly the largest, and is somewhat concave.

b. The two wings (alas) are the two petals, which stand under the vexillum, and opposite to each other on each side.

c. The keel (carina) is the undermost petal ; it is hollow, and stands under the vexillum, and opposite to it, and contains the ovary, with the stamina and pistillum.

8. Orchideous (orchidea) is a corolla com- posed of five petals, of which the undermost is long, and sometimes cleft; the other four are arched, and bent towards one another.

9. Irregular (irregularis), consisting of four or more petals, which are of different lengths and inclination, so that they do not come under the description of the other kinds.

233. A single division of the corolla, as we have observed, is called a petal (petalum); when this is plain the upper part is called lamina, the under part unguis.

234. The particular parts of the corolla have besides appropriate names. The following are those of the monopetalous corolla : ā

1 . The tube (tubus) of a monopetalous corolla is the under part, which is hollow, and in gene- ral of equal thickness. All flowers with this kind of corolla have a tube, except the bell- shaped, and sometimes the wheel-shaped.

2. The border (limbus) is the opening of the corolla, especially when it is bent back. The limbus is often dentated or deeply divided, and the divisions are called

3. Segments or lobes (lacinise or lobi), and they are denominated according to their figure, number, and situation.

4. The helmet (galea) is the upper arched lacinia of a ringent or masked corolla, which is further denominated according to its situation, figure, and segments or lacinise.

5. The gape (rictus) is, in ringent flowers, the space between the two extremities of the helmet and the under lip.

6. The throat (faux), in a monopetalous and ringent corolla, is the opening of the tube.

7. The palate (palatum), in a personate co- rolla, is the arch of the under lip, which is so elevated as to close the faux.

8. The labellum is the under lip of a ringent and personate corolla.

9. The lips (labia), in the bilabiate and uni- labiate flowers, are two divisions, the one called the upper lip (labium superius), and the other the under lip_ (labium inferius). The galea. and labellum are likewise by some botan- ists called lips.

235. The stamens are the male organs of the plant, and are seated between the corolla and the ovarium. Their parts are three ; the filament, tiie anther, and ihe pollen.

236. The filament (filamentum) is a longish body, that is destined for the support and ele- vation of the anther. In its figure it is very various.

1. Capillary (capillare), that is all of equal thickness, and as fine as a hair.

2. Filiform (filiforme), like the former, only thicker.

3. Awl-shaped (subulatum), which is thicker below than above.

4. Dilated (dilatatum), that is so compressed on the sides as to appear broad and leaf-like.

5. Heart-shaped (cordatum), the same with the foregoing, but with a margin above and pointed below; as in Mahernia.

6. Wedge-shaped (cuneiforme), a dilated fila- ment, that is pointed below, but cleft above ; as in Lotus tetragonulobus.

7. Loose (liberum), that is not attached to any other filament.

8. Connate (connatural, when several grow together, forming a cylinder; as in the mallow, Malva.

9. Bifid (bifidum), when a filament is divided into two parts.

10. Multifid, or branched (multifidum or ram- osum), when it is divided into many branches ; as in Carolinea princeps.

1 1 . Jointed (articulatum), when the filament has amoveable joint; as in sage, Sal via officinalis.'

12. Connivent (connivens), when several filaments bend towards one another at their points.

13. Incurved (incurvum), that has a bend like a bow.

14. Declined (declinatum), when several fila- ments do not stand erect, but by degrees, without describing a large curve, bend towards the upper or under part of the flower ; as in Pyrola.

15. Hairy (pilosum), set with fine hairs.

16. Equal (aequale), that are all of equal length.

17. Unequal (insequale), when some are long and some short.

237. The anther (anthera) is a hollow cellu- lar body, that contains a quantity of pollen. Its kinds are the following : ā

1. Oblong (oblonga), which is long and point- ed at both ends.

2. Linear (linearis), that is long and flat, but all of equal breadth.

3. Spherical (globosa), when perfectly round.

4. Kidney-shaped (reniformis), that is spheri- cal on one side, but concave on the other; as in ground ivy,Glechoma hederacea, fox-glove, Digi- talis purpurea, &c.

5. Doubled (didyma), when two seem to be joined together.

6. Arrow-shaped (sagittata), that has a long point, and is cleft at the base into two parts.

7. Bifid (bifida), that is linear, but cleft above and below, as in the grasses.

8. Peltated (peltata), that is circular, flat on both sides, and attached by the middle to the filament ; as in the yew, Taxus baccata.

9. Dentated (dentata), that on the margin has dents or indentations; as in the yew, Taxus bac- cata.

10. Hairy (pilosa), that is covered with hair; as in the dead nettle, Lamium album.

11. Two-horned (bicornis), which has at its apex two subulate prolongations, as in Pyrola, Arbutus, Erica, &c.

12. Awned (aristata), that at the base has two bristle-shaped appendages, as in Erica.

1 3. Crested (cristata), when two cartilaginous points are set on the sides or on the base ; as in some heaths, Ericas.

14. Awnless (mutica), when it has neither awn nor crest. It is the opposite of No. 12, 13.

15. Angulated (angulata), that has several deep furrows that form four or more angles.

16. Bilocular (bilocularis), when the anther is divided by a partition into two parts or cells.

17. Unilocular (unilocularis), when there i but one cell or cavity in the anther.

18. Bursting at the side (latere dehiscens.)

19. Bursting at the point (apice dehiscens.)

20. Free (libera), that is not attached to another anther.

21. Connate (cotmata), when several grow together, forming a tube.

22. Erect (erecta), standing with its base straight on the point of the filament.

23. Incumbent (incumbens), that is perpen- dicularly, or even obliquely, attached to the fila- ment.

24. Lateral (lateralis), that is attached, by its side, to the point of the filament.

25. Moveable (versatilis), when Nos. 23 and 24 are so slightly attached to the filament that the least motion agitates the anther.

26. Adnate (adnata), when the anther is closely attached to both sides of the point of the fila- ment.

27. Sitting (sessilis), that has no filament.

238. The pollen is a powder, that appears in the form of the finest dust. In the microscope its figure is various, being hollow, and filled with a fertilising moisture.

239. The Pistillum is the organ which occupies the centre of the flower, and which finally termi- nates the development of the inflorescence, just as a bud terminates the progress .of the foliage. Hence it has been philosophically considered as a bud in a particular state. It consists of three parts ; the ovarium, the style, and the stigma.

240. The Ovarium is the undermost part of the pistillum, and is the rudiment of the future fruit. The number of ovaria is very various ; they are reckoned from six to eight, after which they are said to be several or many ovaria. The figure is also very different. The principal kinds are : ā

1. Sitting (sessile), that has no foot-stalk.

2. Pedicelled (pedicellatum), furnished with a foot-stalk.

3. Superior (superum), when the germen is encircled by the calyx, or, when

this is wanting, by the other parts of the flower.

4. Inferior (inferum), when the ovary is situated under the calyx, or, when this is want- ing, under the corolla.

241. The style (stylus) is seated upon the germen, and resembles a small column or stalk. The kinds of it are the following : ā

1. Hair-like (capillaris), that is very slender, and of equal thickness.

2. Bristle-like (setaceus), as slender as the former, but somewhat thicker at the base.

3. Thread-like (filiformis), which is long and round.

4. Awl-shaped (subulatus), thick below, above sharp pointed.

5. Gross (crassus), that is very thick and short.

6. Club-shaped (clavatus), thicker above than below.

7. Two, three, four, &c. multifid (bi-tri-qua- dri-&c., multifidus), cleft in a determined manner.

8. Dichotomous (dichotomus), divided into two parts, which are again divided at the points.

9. Terminal (terminalis), which stands on the top of the germen.

10. Lateral (lateralis), attached to the inside of the germen.

11. Erect (rectus), which stands straight up.

12. Declined (declinatus), that inclines towards the side.

13. Abiding (persistens), that does not fall off

14. Withering (marcescens), that withers and afterwards falls off".

15. Deciduous (deciduus), that falls off im- mediately after impregnation.

The number of the styles must likewise be ac- curately counted ; for there is often more than one style to one germen, and this must be par- ticularly observed. The length of the style, whether longer or shorter than the stamina, is also to be mentioned.

242. The stigma means the top of the style. The kinds of it are as follows :

ā

1. Pointed (acuttim), when it has a sharp point.

2. Blunt (obtusum), when it forms a blunt point.

3. Oblong (oblongum), when it is thick and elongated.

4. Club-shaped (clavatum), resembling a small club.

5. Spherical (globosum), forming a perfectly round globe.

6. Capitate (capitatum), a hemisphere, the under side flat.

7. Emarginated (emarginatum), when the last- mentioned kind has a notch in it.

8. Peltated (peltatum), that is formed like a shield.

9. Uncinated (uncinatum), hooked at the point.

10. Angular (angulosum), when it is furnished with close and deep furrows, which occasion pro- jecting angles.

11. Three-lobed (trilobum), which consists of three round bodies, somewhat pressed flat.

12. Dentated (dentatum), when it is set with fine teeth.

13. Cruciform (cruciforme), whon it is divided into four parts, of which two arc always opposito to each other.

14. Pencil-like (pencilliforme), consisting of a number of short, thick, close, fleshy fibres, in form of a pencil.

15. Hollow (concavum), when it is of a glo- bular or longish form, but quite hollow, as in the violet.

16. Petal-like (petaloideum), when it has the appearance of a petal; as in Iris.

17. Two, three, and multifid (bi, tri, &c. mul- tifidum).

1 8. Bent-back (revolutum), when the points of a bifid or multifid stigma are rolled back outwards.

19. Bent in (convolutum), when the points of a divided stigma are rolled

inwards.

20. Spiral (spirale), when a multifid stigma is rolled up like the spring of a watch.

21. Plumose (plumosum), when the stigma ii set with fine hairs on both sides, so as to have the appearance of a feather ; as in the grasses.

22. Hairy (pubescens), that is set with short white hairs.

23. Lateral (laterale), which is situated on the side of the stylus or of the germen.

24. Sitting (sessile), which, when there is no style, rests on the germen.

The stigma, properly speaking, consists of a number of inhaling tubercles, which are not always visible without a magnifier. In the Mirabilis jalapa they are to be seen most dis- tinctly.

243. The discus is a fleshy ring, surrounding the pistillum at its base ; and is one- of the various things which Linnaeus indiscriminately named nectary. It generally exists in the form of a ring, or annulus, into which the stamens are inserted, or not, as the case may be. Occasion- ally it is so much enlarged as to enclose the pistillum in part, as in Paeon;A Moutan, or en tirely, as in Nelumbium, when it constitutes the principal part of the fruit.

244. The FRUIT is the perfection of vegeta- tion. It is by this part that all plants are per- petuated ; and with this, in many plants, existence terminates, In common language, the term is applied to such as are fleshy and eatable ; but, in scientific language, it signifies the fecundated ovarium in a ripe state; and, in a more extended sense, the aggregation of several ripe ovaria, even belonging to different flowers.

245. The essential parts of a fruit are the pericarp and the seed.

246. The pericarp is the covering of the seed, and the most external part of the fruit. It is terminated at the one end by the vestiges of the style, and at the other by the receptacle or pe- duncle. It consists of three parts : 1. the epi- carp, which is the skin or outer coat ; 2. the sarcocarp, which constitutes the flesh in fleshy fruits, and is the substance immediately covered by the epicarp ; 3. the endocarp, which is the inner lining of the

fruit, and the same as Gaertner has called putamen.

247. The pericarp is always present in the ovarium, but sometimes is obliterated in the fruit. It is sometimes internally divided by partitions, which are called dissepiments, and which bear on some part of their surface, gene- rally at the inner angle, a fleshy or spongy mass, which is called the placenta, and on which the seeds are placed.

248. The pericarp varies in the mode of de- hiscence, in degree of combination, in texture, and in relation to the perianthium. From varia- tions in these modifications, fruits may be di- vided into five classes, and thirty-nine genera, dis- posed in the following manner : ā

CLASS I. ā UNILOCULAR, OR SIMPLE.

Dehiscent.

Superior.

1. Utriculus.

2. Achenium.

3. Cariopsis.

4. Catoclesium.

5. Scleranthflm.

6. Samara.

7. Glans.

8. Nux.

9. Drupa.

10. Lomentum.

Indehiscent.

Inferior.

11. Stephanasum.

12. Arcesthida.

Superior.

13. Legumen.

14. Folliculus.

Inferior.

CLASS II. ā PLURILOCULAR, OR COMPOUND Indehiscent.

20. Polyachenium.

21. Pomum.

22. Pepo.

23. Acrosarcum.

24. Balausta.

Dehiscent.

30. Diplostegia.

15. Nuculanium.

16. Bacca.

17. Hesperidium.

18. Carcerulus.

19. Sterigmum. ,

25. Siliqua.

26. Silicula.

27. Pyxidium.

28. Capsula.

29. Regmatus.

CLASS III. ā GYNOBASIC.

31. Microbasis.

32. Sarcobasis.

CLASS IV. ā MULTIPLEX.

33. Acinos.

34. Etaerio.

35. Amalthea.

36. Asimina.

CLASS V. ā AGGREGATE.

37. Sorosus.

38. Strobilus.

39. Ananassa.

249. The foregoing are distinguished among themselves by the following additional charac- ters : ā

1. Utriculus. Pericarp bladdery, monosper- mous, not adhering to the seed. Eleusine.

2. Achenium. Pericarp coriaceous, monos- permous or oligospermous, not adhering to the seed. Rosa. Thecidium of Mirbel is a variety.

3. Cariopsis. Pericarp usually thin, monos- permous, always adhering closely to the seed and inseparable from it. Grasses. Also called Cerio.

4. Cataclesium. Pericarp coriaceous, monos- permous, covered by the calyx, which does not adhere to it, but which is much enlarged. Sal sola. To this must be referred Sacellus and Sphalerocarpium.

5. Scleranthum. Pericarp thin, monosperm- ous, covered by the indurated base of the calyx or perianthium. Mirabilis.. Also called Dycle- sium.

C. Samara. Pericarp coriaceous, oligosperm- ous, with a long wing at its back. Acer. This fruit is either compound or simple, but always unilocular in its divisions.

7. Glans. Pericarp coriaceous, mono-dis- permous, covered at the base by an indurated involucre, which takes the name of cup. Quer- cus, Laurus. Also called Calybio.

8. Nux. Pericarp woody, mono-dispermous covered at the base by a foliaceous involucre. Peculiar to Corylus. The term is applied by many

authors to nearly all the hard fruits, which

Lave only one or two seeds. Called also Nucula by Desvaux ; but that term is employed by some botanists for the Achenium.

9. Drupa. Sarcocarp fleshy ; endocarp bony and separable, mono- dispermous. Amygdalus. From this Tryma is not distinguishable.

10. Lomentum. Pericarp polyspermous, con- tracted at the interval between each seed, and separating there into joints. A form of the Le- gumen. Hedysarum.

11. StepharuEum. Pericarp inseparable from the calyx, and of variable consistence, monos- permous. Compositae. Also called Cypsela.

12. Arcesthida. Spherical monospermous, formed by the cohesion of several fleshy scales. Juniperus.

13. Legumen. Polyspermous, two-valved, one-celled. Vicia.

14. Folliculus. Polyspermous, one-valved, often spuriously two-celled. Pjeonia.

15. Nuculanium. Sarcocarp fleshy, endo- carp bony, often confluent. Verbenaceae. Differs from drupa in being compound. Also called Pyrena and Nucula.

16. Bacca. Pericarp pulpy, the cells ob- literated, the seeds nidulant in the pulp, and having no distinct mode of connexion with the pericarp when ripe. Jasminum. This term is often applied very vaguely.

17. Hesperidium. Sarcocarp coriaceous, en- docarp and placentas fleshy or pulpy, seeds ni- dulant, cells distinct. Citrus. Also called Aurantium.

18. Carcerulus. Pericarp dry, cells not more than five, within confluent or distinct. Tilia.

19. Sterigmum. Pericarp dry, cells very nu- merous, more than five, occasionally dehiscent slightly. This is hardly different from the last. Malva.

20. Polyachenium. Pericarp and calyx inse- parable, dry, cells opposite, separating from the top of the common axis. Umbelliferae. Called

Carpodelium when the cells exceed two, and the pericarp is slightly fleshy ; as in Aralia.

21. Pomum. Pericarp and calyx inseparable, forming a fleshy mass, endocarp variable in tex- ture, never pulpy. Pyrus.

22. Pepo. Pericarp and calyx inseparable, fleshy, endocarp pulpy, seeds parietal, when ripe nidulant in pulp. Cucumis. Also named Peponida.

23. Acrosarcum. The same as bacca, but the calyx adheres to the pericarpium. An inferior berry. Ribes.

24. Balausta. Pericarp coriaceous, enclosing a number of irregular cells, containing seeds with a pulpy testa. Punica. An inferior Hes- peridium.

25. Slliqua. Pericarp linear, polyspermous, two-valved, valves separating from the face of the dissepiment. Brassica.

26. Silicula. Pericarp round or oblong, oli- gospermous, two-valved, valves separating from the face of the dissepiment. Draba.

27. Pyxidium. Pericarp polyspermous, se- parating into two halves by a circular horizontal separation, so that the valves resemble two he- mispheres. Anagallis. The lower valve is cal- led amphora, the upper operculum.

28. Capsma. Pericarp polyspermous, sepa- rating vertically into valves. Silene.

29. Regmalus. Pericarp separating with elasticity into mono or dispermous cells (cocci), which are pendulous from the apex of a com- mon axis, and are more or less dehiscent. Eu- phorbia. Scarcely distinct from polyachenium. Also called Cremocarpium.

30. Diplostegia. Pericarp polyspermous, variable in consistence, inseparable from the calyx, dehiscing in various manners. May be considered an inferior capsule. Hydrangea.

31. Microbasis. Pericarpia several, monos- permous, indehiscent, dry, attached by the base to a common style, and seated on a receptacle . called the gynobase. Labiatae. The naked seeds of Linnaeus;

32. Sarcobasis. A mere variety of the last, from which it scarcely differs, except in having fleshy pericarpia upon an enlarged fleshy gyno- base. Ochna.

33. Acinus. Drupes very small and numerous, arranged on an elongated receptacle, and when becoming confluent when ripe, having a membraneous covering. Fragaria. This is the Syncarpa of Richard, but not of others. Poly- secus seems to be not distinguishable from this.

34. Etterio. Pericarpia several, formed from distinct ovaries, and arranged around an ima- ginary centre, generally polyspermous and de- hiscent. Sempervivum. This is also the Plo- pocarpium of Desvaux.

36. Amalthea. Composed of several achenia, enclosed within the cavity of a coriaceous calyx. Rosa. Also called Cynarrhodon.

37. Asimina. Ovaries numerous, bacciform, one-celled, produced from a single flower, and united in a solid fleshy fruit. Anona. Very near the acinus, from which it differs chiefly in size, and in having its outer coat coriaceous, not membranous.

38. Sorosus. Pericarpia very numerous, dry, generally achenia, arranged upon a fleshy recep- tacle, which is urceolate, and enclosed at its mouth. Ficus. Also called Syconus.

39. Slrobilus. Pericarpia many, indehiscent, unilocular, monospermous, each enclosed in an indurated scale. Scales imbricated, forming by their cohesion a hard irregular cone. Pinus. Of this Galbalus is a mere variety.

40. Ananassa. Pericarpia many, indehiscent, polyspermous, cohering with the calyx, and seated each in the axilla of a fleshy scale, which coheres with them, and in maturity forms a solid fleshy mass. Bromelia.

250. The SEED is that part of the fruit which is enclosed in the pericarp, and which contains the rudiments of the future plant. It consists of three distinct parts, the testa, the albumen, and the embryo.

251. The testa is the external covering or coat of the seed. Some writers distinguish it into three parts; calling the external skin the testa, the intermediate substance the sarco- dermis, and the interior pellicle the endopleura.

252. The scar upon the testa, which indicates the point by which the seed was attached to the placenta, is called the hilum. On this spacn two distinct points are observable, viz. the omphalo-

dmm, a protuberant point, situated for the most part in the middle of the hilum, and indi- cating the point by which the nourishing vessels have passed ; and the micropyle or foramen, which is a point situated by the side of the um- bilicus, and is supposed by some authors to mark the spot by which the fecundating vessels have terminated ; but is declared by Mr. Brown to indicate a perforation existing in the ovuluin, through which a fecundating aura is com- municated to the embryo, and which never has any vascular connexion with the pericarpium.

253. Chalaza is a point marked upon the endopleura, and indicates the place where the umbilical cord pierces it. This point is ordinarily under the hilum ; sometimes it is at a distance from it, in which case it is connected with the hilum by a bundle of vessels called the raphe.

254. Strophiolce are callous or fungous lumps, generally found about the hilum of certain seeds; sometimes they are otherwise stationed.

255. The kernel is the name given to all the parts of the seed included under the testa.

256. The albumen is that part of the kernel which surrounds the embryo, which never ad- heres to it, which possesses no vascular organi- sation, and which is of various degrees of texture, being either fleshy, or corneous, or ligneous, or feculent or granular, &c.

257. The embryo is that part of the kernel which exists in all fecundated seeds, and which is destined to reproduce the plant which bore it. It is divided into three parts, viz. the radicle, the plumula, and the cotyledons.

258. The radicle is that part of the embryo which becomes the root, and which, in the ripe seed, is always directed away from the chalaza.

.259. The plumula is the part which is des- tined to be the stem, and which is situated at the base of the cotyledons.

260. The cotyledons are the organs which ad- here to the plumula, and which become the first leaves of the plant. Their purpose is to supply nourishment to the young plant, until it shall be in a condition to elaborate food for itself.

261. The merits and objects of the artificial and natural systems of botany having been already discussed, it now only remains to explain the peculiar details of each, for which purpose, that of Linnaeus as it was left by him and that of Jussieu, as at present received, will suffice.

LINNJEAN SYSTEM

262. The classes of this system depend either upon the number, proportion, or insertion, of the stamens or male organs, as explained in the fol- lowing table :

TABLE OF THE CLASSES.

“Either PUBLICLY, i. e. have visible flowers :

MONOCLINIA, males and females in the same bud : i. e. The flowers are all hermaphrodite : ‘DIFFINITAS, the males or stamina unconnected with each other :

Indifferentissima, i. e. the males have no fixed proportion as to length ;

1. MONANDRIA, i. e. one male or stamen in a hermaphrodite flower.

2. DIANPRIA, . two males or stamina.

3. TRIANDRIA, . three males.

4. TETRANDRIA, . four males.

5. PENTANDRIA, . five males.

6. HEXANDRIA, . six males.

7. HEPTANDRIA, . seven males.

8. OCTANDRIA, . eight males.

9. ENNEANDRIA, nine males.

10. DECANDRIA, . ten males.

11. DODECANDRIA, twelve males.

12. ICOSANDRIA, . twenty, or more males inserted into the calyx.

13. POLYANDRIA, all above twenty males inserted into the receptacle. Or Subord’matu. two of the males are uniformly shorter than the rest.

14. DIDYNAMIA, . four males, two long and two short. ˆ 15. TETRADYNAMIA, six males, four long and two short.

Or AFFINITAS, the stamina either connected to each other, or to the pistillum.

16. MONADELPIIIA, the stamina united into one body by the filaments.

17. DIADELPHIA, the stamina united into two bodies by the filaments.

18. PoLYADELPHiA,the stamina united into three or more bodies by the filaments.

19. SYNGENESIA, the stamina united into a cylindrical form by the antherae.

20. GYNANDRIA, the stamina inserted into the pistillum.

Or DICLINIA, males and female's in separate buds : i. e. plants that have stamina and pis- tilla in different flowers in the same species.

21. MONOICIA, male and female flowers distinct in the same plant.

22. DICECIA, males and females in different plants of the same species.

23. POLYGAMIA, male, female, and hermaphrodite flowers in the same or dif- ˆ ferent plants.

O- CLANDESTINELY, i. e. have their parts of fructification either invisible or not distinct.

24. CRYPTOGAMIA, the flowers invisible, so that they cannot be ranked ac-

cording to the parts of fructification, or distinctly described.

.LINNEAN SYSTEM. Cl asses .

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The orders of the first thirteen classes are dis- tinguished by the number of the styles ; of the fourteenth by the nature of the fruit, which is what the

Linnaean botanists call ‘ naked seeds’ in the first, and ‘ covered’ in the second ; of the fifteenth by the length of the pericarpium; of the sixteenth, seventeenth, eighteenth, twentieth,

twenty-first, and twenty-second, by the number or situation of the stamens ; of the nineteenth by the relative sexes of the florets of the disk, and ray of the capituli ; of the twenty-third by the sex of the flowers ; and of the twenty-fourth by such general characters as are used in discriminating genera. The following is a

CLASSES. 1

1.

MoNANDRIA

2.

DlANDRIA

3.

TRIANDRIA

4.

TETRANDRIA

5.

PENTANDRIA

6.

HEXANDRIA

7.

HEPTANDRIA

8.

OCTANDRIA

9.

ENNEANDRIA

10.

DECANDRIA

11.

DODECANDRIA

12.

ICOSANDRIA

13.

POLYANDRIA

14.

DlDYNAMIA

15.

TETRADYNAMIA

16.

MONADELPHIA

17.

DlADELPHIA

18.

POLYADELPHIA

19,

SYNGENESIA

20.

GYNANIIRIA

21.

MONOICIA

22. DIOICIA

23. 24.

POLYGAMIA

CRYPTOGAMIA

TABLE OF THE .ORDERS.

NUMBER and NAMES of the ORDERS.

2 Monogynia, Digynia.

3 Monogynia, Digynia, Trigynia. 3 Monogynia, Digynia, Trigynia.

3 Monogynia, Digynia, Tetragynia.

6 Monogynia, Digynia, Trigynia, Tetragynia, Pentagynia, Polygynia. 5 Monogynia, Digynia, Trigynia, Tetragynia, Polygynia.

4 Monogynia, Digynia, Tetragynia, Heptagynia.

4 Monogynia, Digynia, Trigynia, Tetragynia.

3 Monogynia, Trigynia, Hexagynia.

5 Monogynia, Digynia, Trigynia, Pentagynia, Decagynia.

5 Monogynia, Digynia, Trigynia, Pentagynia, Dodecagynia

5 Monogynia, Digynia, Trigynia, Pentagynia, Polygynia.

_ $ Monogynia, Digynia, Trigynia, Tetragynia, Pentagynia, Hexagyni.'.,

(Polygynia.

2 Gymnospermia, Angiospermia. 2 Siliculosa, Siliquosa.

S Triandria, Pentandria, Octandria, Enneandria, Decandria, Endecandria,

^ Dodecandria, Polyandria.

4 Pentandria, Hexandria, Octandria, Decandria.

4 Pentandria, Dodecandria, Icosandria, Polyandria.

fi { Poly gam ia aequalis, Polygamia superflua, Polygamia frustranea,

Poly- (gamia necessaria, Polygamia segregata, Monogamia.

2 Monandria, Diandria.

{ Monandria, Diandria, Triandria, Tetrandria, Pentandria, Hexandria,) Heptandria, Polyandria, Monadelphia, Syngenesia, Gynandria. f Monandria, Diandria, Triandria, Tetrandria, Pentandria, Hexandria, Octandria, Enneandria, Decandria, Dodecandria, Iccsandria, Poly- C andria, Monadelphia, Syngenesia, Gynandria.

3 MonoBcia, Dicecia, Tricecia.

4 Filices, Musci, Algae, Fungi.

15

NATURAL SYSTEM.

263. The following is the atrangetnent of the natural orders of plants adopted by the most mo- dern botanists of reputation. The basis of it is the system of B. Jussieu, published, in 1789, by his nephew Anthony Jussieu; but so many alterations and additions have been consequent upon the progress of modern science, that it has at present only a distant resemblance to its original. The best works to be consulted upon the natural system are, for British plants, Hooker's Flora Scotica; for general botany, the Regni Vegetabilis Systema Naturale of De Candolle, the Prodromus Systematis Naturalis Regni Veˆe- tabilis of the same author, the Nouveaux Elemens de la Botanique of Richard, the Theorie Ele mentaire de la Botanique of De Candolle, &c. There .is at present (June, 1826) no English work upon the subject of the natural arrange- ment of plants which deserves to be consulted.

TABLE OF THE NATURAL ORDERS OF PLANTS, ARRANGED IN A LINEAR SERIES.

I. VASCULAR or COTYLEDONOUS. (System fur- nished with cellular tissue, and tubular vessels. Reproductive organs spermaceous.)

DlCOTYLEDONEOUS, OF EXOGENOUS. (Vessels

arranged in concentric layers, of which the youngest are exterior. Cotyledons opposite or whorled.)

COMPLETE. Calyx and corolla, both present.

1. POLYPETALOUS.

Ā§ Petals hypogynous. a. Carpella numerous, or stamens opposite the petals. i. Ranunculacea?.

1. Clematideae.

2. Anemoneae.

3. Ranunculeae.

4. Helleboreae.

5. Paeoniaceae. ii. Dilleniaceae.

1. Delimeae.

2. Dillenese. iii. Magnoliaceae.

1. Illicieze.

2. Magnolieae. iv. Anonaceae.

v. Menispermaceas.

1. Lardizabaleae.

2. Menispermeae.

3. Schizandroee. vi. Berberideae.

vi i. Podophyllaceae.

1. Podophylleae.

2. Hydropeltideae. vi ii. Nymphaeaceae.

1. Nelumboneae.

2. Nymphaeeae.

& Carfitlla tolitary or consolidated; Placentas parietal.

ix. Papaveraceae. x. Fumariaceae. xi. Cruciferae.

1. Arabideae.

2. Alyssineae.

3. Thlaspideae.

4. Euclidieae.

5. Anastaticeae.

6. Cakilineas.

7. Sisymbrese.

8. Caraelineae

9. Lepidineae.

10. Isatideae.

11. Archonieae.

12. Brassiceae.

13. Velleae.

14. Psychineae.

15. Zilleae.

16. Raphaneae.

17. Buniadeae.

18. Erucarieae.

19. Heliophileae.

20. Subularieae.

21. Brachycarpeac. xii. Capparideae.

1. Cleomeae.

2. Cappareae. xiii. Rcsedaceae.

xiv. Flacourtianeae.

1. Patrisieae.

2. Flacourtiese.

3. Kiggelarieae.

4. Erythrospermeae. xv. Bixineae.

xvi. Cistineae. xvii. Violarieae

1. Violeae.

2. Alsodineae.

3. Sauvageae. xviii. Droseraceae.

xix. Polygaleae. xx. Tremandreae. xxi. Pittosporaee. xxii. Frankeniaceic.

y. Ovary solitary. Placenta central.

Xxiii. Caryophyllese.

1. Sileneae.

2. Alsineae. xxiv. Lineae.

xxv. Malvaceae, xxvi. Byttneriaceae.

1. Sterculieae.

2. Byttnerieae.

3. Lasiopetaleae

4. Hermanniex.

5. Dombeyaceze.

6. Wallichieae. xxvn. liliaceae.

xxviii. Elaeocarpece. xxix. Chlenaceae.

xxx. Ternstromiacea?.

1. Terastromieae.

2. Frezierieae.

3. Sauraveae.

4. Laplaceae.

5. Gordonieae. xxxi. Camelliece.

xxxii. Olacineae. xxxiii. Aurantiacece xxxiv. Hypericineae

1. Vismies:.

2. Hypericeae. xxxv. Guttiferas.

1. Clusieae.

2. Garcinieae.

3. Calophylleae.

4. Symphonieae. xxxvi. Marcgraaveaceae.

1. Marcgraavieae.

2. Noi-anteae. xxxvii. Hippocrateaceas.

xxxviii. Erythroxyle33. xxxix. Malpighiaceae.

1. Malpighieae.

2. Hiptageae.

3. Banisteri6ae. x.. Acerineae.

xli. Hippocastaneae. xlii. Rhizoboleae. xliii. Sapindaceae.

1. Paullinieae.

2. Sapindeae.

3. Dodonceaceae. xliv. Meliaceae.

1. Melieee.

2. Trichilieae.

3. Cedreleae. xlv. Ampelideas.

1. Viniferae.

2. Leeaceae. xlvi. Geraniaceae. xlvii. Tropneoleae.

xlviii. Balsamineae. xlix. Oxalideae. 1. Zygophyllevxi li. Rutaceac.

1. Diosmeae.

2. Cusparieae. lii. Coriarieae.

5. Fruit gynobasic .

liii. Simarubeae. liv. Dchnaceae.

Ā§Ā§. Petals either separated or united, perigynous.

Iv. Celastrineae.

1. Staphylaeceae.

2. Euonymeae.

3. Aquifoliaceae. Ivi. Rhamneffi.

Ivii. Bruniaceae. Iviii. Samydeae. lix. Homalineae. Ix. Chailletiaceae. Ixi. Aquilarineae. Ixii. Terebintaceae.

1. Cassuvieae.

2. Sumachineae.

3. Spondiaces

BOTANY.

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4. Burseracea?.

5. Amyrideir.

6. Pteleaceae.

7. Connaraceae. Ixiii. Leguminosae

1. Sophoreae.

2. Loteae.

3. Hedysareas.

4. Viciete.

5. Phaseoleae.

6. Dalberg'ecc.

7. Swartziece.

8. Mimoseae.

9. Geoffrey.

10. Cassiese.

11. Detariex. Ixiv. Rosaceas.

1. Chrysobalane

2. Amygdaleae.

3. Spiraeaceae.

4. Neuradeas.

5. Dryadese.

6. Roseae.

7. Pomaceae. Ixv. Salicarieae.

lllvi. Tamariscinae. Ixvii. Melastomaceae. Ixviii. Myrtaceae. Ixix. Combretaceas. Ixx. Cucurbitaceae. Ixxi. Passifloreae. Ixxii. Leases. Ixxiii. Onagrariae. Ixxiv. Ficoideaa. Ixxv. Paronychiae. ixxvi. Portulaceae. Ixxvii. Cacteae. ixxviii. Grossulacese. Ixxix. Crassulaceas. Ixxx. Saxifragese. Ixxxi. Cunoniaceae. ixxxii. Umbelliferae.

1. Hydrocotylineae.

2. Bupleurineae.

3. Pimpinelleae.

4. Smyrnieae.

5. Caucalineae.

6. Scandicinese.

7. Ammineae.

8. Selineae. Ixxxiii. Araliaceee. Ixxxi v. Caprifoliaceae.

Ixxxv. Loranthese. Ixxxvi. Hamamelideae. Ixxxvii. Rubiaceae. Ixxxviii. Opercularіae. Ixxxix. Valerianeae. xc. Dipsaceae. xci. Calycereae. xcii. Composite.

1. Lactucea.

2. Carlineae.

3. Centaurieae.

4. Carduinea2.

5. Echinopseae.

6. Arctotideae.

7. Calenduleae.

8. Tagetineas.

9. Heliaiitheae.

10. Ambrosieae.

11. Anthemidese.

12. Inuleae.

13. Astereas.

14. Senecionese.

15. Nassauvieae.

16. Mutisieae.

17. Tussilagineae.

18. Adenostylese.

19. Eupatorieae.

20. Vernonieae. xciii. Campanulaceas. xciv. Lobeliaceee.

xcv. Gesnerieae. xcvi. Vaccinieas, xcvii. Ericege. xcviii. Monotropess.

Ā§ Ā§ Ā§ Petals combined in an hypogynous coroUa, xcix. Myrsinese. c. Sapoteae. ci. Ebenaceas. cii. Oleineae. ciii. Jasmineae. civ. Strychneag. cv. Apocynese. cvi. Gentianeae. cvii. Bignoniaceae. cviii. Sesameae. cix. Poleraoniaceae. ex. Convolvulaceae. cxi. Boraginese. cxii. Hydrophyllea?. cxiii. Cordiaceae. cxiv. Solaneae. cxv. Scrophularineas.

1. Antirrhinea;.

2. Rhinanthaceas.

3. Melampyraceae. cxvi. Myoporineae.

cxvii. Pedalineae. cxviii. Labiatae. cxix. Verbenaceae. cxx. Acanthaceas. cxxi. Lentibulariae. cxxii. Primulaceae. cxxiii. Globularineae.

f j INCOMPLETE. ā Calyx and corolla con- founded.

cxxiv. Plumbagineae. cxxv. Plantaginea,. cxxvi. Nyctaginete. cxxvii. Amarantaceaa. cxxviii. Chenopodeae. cxxix. Begoniaceag. cxxx. Polygoneae. cxxxi. Laurineae. cxxxii. Myristiceas. cxxxiii. Proteaceas. cxxxiv. Penasaceas. cxxxv. Thymelaeae. cxxxvi. Santalaceae. cxxxvii. Elseagneas. cxxxviii. Aristolochias. cxxxix. Euphorbiaceac. cxl. Calycantheas. cxli. Monimieas. cxlii. Urticeae. cxliii. Piperaceae

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cxliv. Chlorantheas. cxlv. Amentaceae.

1. Ulmaceas.

2. Salicineas. cxlvi. Casuarineae.

cxlvii. Conifene.

- *MONOCOTYLEDOXOUS. Or ENDOGENOUS.*

(Vessels disposed in parcels, of which the youngest are in the centre. Cotyledons soli- tary, or alternate, or absent).

f PH.ENOGAMOUS. Fructification visible or

regular.

cxlviii. Cycadeae. cxlix. Hydrocharideae. cl. Alismaceae. cli. Orchideae.

1. Neottieac.

2. Arethuseae.

3. Gastrodieae.

4. Ophrydeae.

5. Vandeae.

6. Epidendreae.

7. Malaxideae.

8. Cypripedieae. clii. Scitamineae.

cliii. Maranteae. cliv. Bromeliae. civ. Irideae. clvi. Hypoxideae. clvii. Haemodoraceae. clviii. Amaryllideae. clix. HemerocallideaD. clx. Liliaceae. clxi. Melanthaceae. clxii. Dioscoreae. clxiii. Smilacese. clxiv. Asphodelese. clxv. Junceae. clxvi. Butomeae. clxvii. Restiacese. clxviii. Eriocauleae. clxix. Commelineae. clxx. Pontedereae. clxxi. Palmae. clxxii. Pandaneae. clxxiii. Aroideas. clxxiv. Typhineae. clxxv. Fluviales. clxxvi. Juncagineae. clxxvii. Pistiaceae. clxxviii. Cyperaceae.

1. Cypereae.

2. Scirpeae.

3. Sclerineae.

4. Caricineae. clxxix. Gramineae.

1. Paniceae.

2. Stipaceae.

3. Agrostidese.

4. Bromeae.

5. Chlorideae.

6. Cereales.

7. Saccharineae.

8. Oryzeas.

9. Bambusaceae.

BOTANY

ff CRYPTOGAMOUS. Fructification unknown

or irregular. . clxxx. Filices.

1. Polypodiaceae

2. Osmundaceas.

3. Ophioglosseae. clxxxi. Equisetaceae.

clxxxii. Lycopodineae, %

clxxxiii. Marsileaceae.

II. CELLULAR, or ACOTYLEDONOUS. (System composed of cellular tissue without tubular ves- sels. Reproductive organs gemmaceous. clxxxiv. Musci. clxxxv. Ilepaticae. clxxxvi. Algae.

1. Diatomese.

2. Nostochinse

3. Confervoidea

4. Ulvaceae.

5. Florideae.

6. Fucoideae. clxxxvii. Lichens.

1. Idiothalami.

2. Cffinothalami.

3. Homothalami.

4. Athalami.

5. Pseudo-lichenes. clxxxviii. Fungi.

*1. Hymenomycetes. *2. Gasteromycetes.*

3. Hyphomycetes.

4. C'oniomycetes. 264. ABBREVIATIONS.

g A hermaphrodite flower.

Ā£ A male flower.

$ A female flower.

$ ā 9 Male and female flowers upon one stem (flores monoici).

$: $ Male and female flowers on different stems (flores dioici).

f? Neuter flowers (flores neutri).

Ā§ | 9 Hermaphrodite and female flowers in one compound flower (flores hermaphroditi et feminei) ; as in the class syngenesia.

Ā§ | ˆ Hermaphrodite and neuter flowers in one compound flower (flores hermaphroditi et neutri), in the same class.

5 ā $ Hermaphrodite and male flowers on one stem (flores polygami.)

g ā $ Hermaphrodite and female flowers on one stem (flowers polygami).

0 Annual, -

$ Biennial, / j rf – f h habits of

TL Herbaceous, > ,

Ā£ Shrubby, t Plant8′

w Climbing, J

! Affixed to the citation of an author shows that an authentic specimen has been examined.

ā¢if. Affixed in like manner shows that the work quoted contains a good description of the subject.

ā¢j- Indicates something doubtful.

v. v. Seen alive.

v. s. dried.

$p. in a wild state.

c. in a cultivated state.

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BOT

BOTANY BAY, a bay on the south-east coast of New Holland, so called by captain Cook, who anchored there en the 20th April 1770, from the number of plants found in its vicinity. Captain Cook carefully examined this coast, and took possession of it in the name of the king of Great Britain. In 1781 it was converted into a settlement for the reception of exiled criminals. The climate was found to be salu- brious, and the soil fertile; but in consequence of the great scarcity of water, and other unex- pected disadvantages, the colony was afterwards transferred to Port Jackson, an inlet about twelve miles farther north. See WALES, NEW SOUTH.

BOTANY BAY RESIX, a gum which exudes spontaneously from the trunk, or wounded bark, of the acarois resinifera of New Holland. It is produced in such quantity that a man may col- lect thirty or forty pounds in a few hours. It pulverises without caking; and has a slightly sweet astringent taste. It melts at a moderate heat, and when kindled emits a white fragrant smoke. It imparts to water the flavor of storax. Out of nine parts six are soluble in water, and astringent to the taste ; and two are woody fibre. In cases depending on a sluggishness, a debility, or flaccidity of the system, this medicine, as- sisted by proper exercise and diet, has, by re- moving the symptoms of dyspepsia, and by restoring the tone and action of the muscular fibres, been found very serviceable.

BOTARGO, in the culinary art, is a kind of sausage made of the milts and roes of the mullet- fish. The best kind comes from Tunis in Bar- bary : it must be chosen dry and reddish. The inhabitants of Provence use a great deal of it. There is also a great consumption of it through- >ut the Levant. The common way of eating it is with olive oil and lemon juice. BOTCH, u.a.&n.s.~\ Ital. bozza, pronounced BOTCH'ER, n. s. (botza; or from Dutch BOTCH'Y, adj. iboetzen, to bodge or

BOTCH'EDLY, adv. 3 botch. To patch to- gether clumsily, unsuitably, or unskilfully ; to mend any thing awkwardly with pieces of a dif- ferent quality or color : irregularities in the skin, disfiguring spots, tumors, or eruptions, have received the appellation of botches ; any adventitious parts, clumsily added, whether sen- tences or words in composition, aberrations from nature, or bungling attempts of art; what- ever is unsightly or an offence to the eye is a botch : a botcher is a mender of old clothes ; a bungler : the adjective and adverb corresponding

Go with me to my bouse,

And hear thou there how many fruitless pranks This ruffian hath botched up, that thou thereby May smile at this. Shakspeare.

Her speech is nothing, Yet the unshaped use of it dotb move The hearers to collection ; they aim at it, And botch the words up fit to their own thoughts.

Id.

And those biles did run ā say so ā Did not the general run ? Were not that a botchy sore ? Id.

He was a botcher' prentice in Paris, from whence he was whipt for getting the sheriff's fool with child.*

Id. VOL. IV.

Botches and blaias must all his flesh imboss, And all his people. – Stilton.

Tq botch up what they bad torn and rent. Religion and the government. Hudibra$.

Botchers left old cloaths in the lurch, And fell to turn and patch the church. Id.

If both those words are not notorious botches, I am deceived, though the French translators think other- wise. . Dryden.

Their coats, from botching newly brought, are torn.

Id.

For treason botched in rhime will be thy bane ;

Rhime is the rock on which thou art to wreck. Id.

A comma ne'er could claim

A place in any British name ;

Yet, making here a perfect botch,

Thrusts your poor vowel from his notch. Swift.

Young Hylas, botched with stains too foul to name, In cradle here renews his youthful frame. Garth.

It proves far more incommodious, which, if it were propelled in boils,

botches, or ulcers, as in the scurvy, would rather conduce to health. Harvey.

BOTEREIUS (Rodolph), advocate in the grand council of Paris, was author of the His- tory of Henry IV. in Latin, from 1594 to 1610, in 3 vols.

BOTETOURT, a large mountainous county in Virginia, bounded on the north by the Flu- vanna, which separates it from Rock and Bath counties ; on the north-west by Green-briar ; on the east by Bedford ; south by Franklin ; and south-west by Montgomery. Fincastle is the chief town. It abounds with chalk, and is forty- four miles long and forty broad.

BOTH, adj. & conj. Sax. barua, barpa. The two ; as well the one as the other. Fr. Et 1'un et 1'autre. It is used only of two. The con- junction means, as well ; likewise : it has the con- junction and to correspond with it.

A great multitude both of the Jews and also of the Greeks believed. Actt.

The sominer passeth ; and the nightes long Encreasen, double wise, the peines strong, Both of the lover [rover] and of the prisoner ; I n'ot which hath the wofuller mintere.

Chaucer's Canterbury Tales.

*Which of them shall I take ? *' Both 1 one 1 or neither ! Neither can be enjoyed, If both remain alive. Shakspeare.*

Among the French, the odes of Jean Baptiste Rousseau have been much and justly celebrated. They possess great beauty both of sentiment and ex- pression. Blair's Lectures.

The general construction of the Hebrew poetry is of a singular nature, and peculiar to itself. It con- sists in dividing every period into correspondent, fot the most part into equal, members, which answer tĀ« one another, both in sense and sound. Id.

BOTH (Andrew and John), Flemish painters, pupils of Bloemart. The union of these brothers was very singular : they were inseparable in their studies, travels, and paintings. John painted landscapes in the manner of Lorrain, and Andrew figures and animals in the style of Bamboccio. John was drowned in 1650, and Andrew died in 1656.

BOTHAGIUM, boothage, in law, customary dues to the lord of the market, for the liberty of pitching booths or tents.

BOTH'ER, v. n. & v. a. Perhaps the same as

pother, both ear. To make a din ; to confuse by noise ; to assail at both ears. Skinner says to pother is to make a pudder, or rather a puther, q. d. a pouder ; to raise a dust, as a horse run- ning with speed ; to perplex ; to puzzle ; to con- found.

With the din of which tube my heaa you so bother, That I scarce can distinguish my right ear from t'other.

Swift.

BOTHNIA, an extensive province of northern Europe, part of the ancient Scandinavia, and divided by the gulf of that name into East and West Bothnia. East Bothnia has the gulf on the west, and the range of mountains which se- parates it from the governments of Archangel and Olonetz on the east. It is bounded by Finland on the south and Lapland on the north, and was in the year 1809 ceded by Sweden to Russia. It is included in the government of Finland. Its ex- treme length is about 300 miles ; its breadth varies from sixty to upwards of 200 miles. The popu- lation is estimated at 70,000. Near the western shore it is low and marshy, but good pasturage is found inland, and in favorable seasons the pro- gress of vegetation is rapid ; at other times it is often wholly destroyed by the frost. Eastward forests of excellent timber are found, and the lakes and rivers yield a copious supply of salmon. The inhabitants are chiefly Finns, who are oc- cupied in fishing, hunting, and attending their cattle. The timber and some few mineral pro- ductions are the only articles of commerce. The principal rivers, most of which are near the coast, are Utea, Cafana, Brahestad, Carleby, Jacob- stadt, Mana, and Wasa.

West Bothnia, extending from the borders of Angermanland to the river Tornea, about 400 miles in length, and 100 in breadth, still belongs to the crown of Sweden. It forms part of the pro- vince of Nordland.i> The population is estimated at about 50,000. It abounds with forests of pine, mingled with juniper and birch trees. Von Buch says, that, in the vicinity of Tornea, the last rise above the Spanish and Scotch firs. West Bothnia is subdivided into the districts of Umea, Pitea, Lulea, and Tornea, having each a chief town of its own name. Umea is the capi- tal of the \hole. Corn and good pasturage are yielded here, sufficient for the consumption of the inhabitants ; who in their occupations and manners resemble the East

Bothnians. They carry on a small trade in pitch, tar, timber, fish, and skins. Dr. Clarke bears the following high testimony to their character : ‘ The natives of Westro-Bothnia, beyond all their countrymen, rank the foremost in pious and loyal disposition, and in simplicity and honesty. A foreigner who leaves his open truck in their inn-yards and sta- bles, amidst all the haste and confusion which must sometimes take place in travelling day and night, and amidst the inability to attend to them, occasioned by pain or sickness, or weariness and want of rest, will have nothing with which to re- proach the inhabitants.’ Here, also, are some few iron and copper mines.

BOTHNIA, GULF OF, is that northern part of the Baltic which separates Sweden from Finland, and takes its name from the above province. It

is generally regarded as beginning at the island of Aland, and extending 360 miles in length, and 135 in extreme breadth, to Tornea, between lat. 60Ā° 20′ and 65Ā° 50′ N. It is often so completely frozen as to afford a safe and short passage be- tween the countries. In common with the rest of the Baltic, its water, from the small evaporation, possesses a peculiar degree of freshness, and con- tains only one-third of the proportion of salt found in other sea water. It abounds in seals, from whose flesh the inhabitants of the shores obtain great quantities of train oil, and in sal- mon. The waters are said to be rapidly dimi- nishing.

BOTHRIAS, or BOTHRION, /3o0pioĀ»>, in sur- gery; 1. The alveolus or socket of a tooth ; 2, a small, narrow, but deepish, ulcer of the cornea of the eye, resembling a round puncture.

BOTHWELL (James Hepburn, Earl), a no- bleman memorable in the Scottish history, as the husband of Mary Queen of Scots. After the murder of Darnley he seized upon her person, and carried her prisoner to Dunbar, where he prevailed on her to marry him ; but a powerful confederacy having been formed against him, he was obliged to flee to the Orkneys, where he died in 1547.

BOTHWELL BRIDGE, an ancient bridge of four arches over the Clyde, in Bothwell parish, La- nark, Scotland, memorable for an engagement fought on the south side of it in 1679, between the royalists under Monmouth and the Whigs, wherein the latter were defeated with the loss of 400 slain and 1200 taken prisoners.

BOTHWELL CASTLE, an ancient and magnifi- cent structure, now in ruins, adjacent to Both- well, originally built of polished stones of a red color. The

ruins lately occupied a space of 234 feet by 99 ; and one of the towers was an im- mense height above the Clyde. Bothwell castle once made a figure in Scottish history.

BOTOL TABACOSIMA, or BOTEL TOBAGOXIMA, an island in the Chinese Sea, south of Formosa, and north of the Bashee islands. It is of such a height, that in clear weather it is visible at the distance of fifteen leagues ; but being enveloped in fogs, it generally appears to be of much smaller size. The summit seems crowned with large trees. Some fruits also appear to be cultivated, and villages may be seen here at intervals, but no navigator has described the interior. About a mile off is an uninhabited rocky islet. Long. 117Ā° 12′ E., lat. 21Ā° 57′ N.

BOTOTOE, in natural history, a name giver, by the people of the Philippine islands to a very beautiful bird of the parrot kind. It is somewhat smaller than the common parrot, and all over of a fine deep blue color.

*BOTRIA, in botany, a genus of plants. Class, pentandria monogynia. General character : CAI,. bell-shaped perianth, five-toothed : COR. petals, fleshy, recurved at the point : STAM. filaments, five : FIST. germ, superior : STIG. concave: PER. a berry, with one seed. Species, only one ; climb- ing shrub, with heart-shaped, villose leaves; and small reddish flowers on axillary peduncles. A native of Africa. **

BOTR YC HIUM, in botany,a genus of the class cryptogamia, order filices. Capsules globular,

EOT

clustered in a racemelike spike, one-celled, open- ing from the top to the base. Species, five ; B. lunaria is a native of our own country.

BOTRYITES, in natural history, the grapfe- stone, from fiorpve, a grape, a stone of the gem kind, resembling a branch of young grapes.

BOTRYITES, or BOTRITES, a sort of burnt cad- mia, found somewhat in the form of a bunch of grapes adhering to the upper parts of furnaces, where the grapestone is Cdlcined. It differs from the placites, which is gathered on the lower part of the furnace; though Schroeder gives a diffe- rent distinction, viz. into botrites, found in the middle of the furnace, placites in the upper, and ostracites in the lowest part.

BOTRYLLUS, in zoology, a name of a ge- nus of the class ascidise, order tethydes, family tethyae, well described bySavigny. The family includes two divisions, simplices and compositae ; to the second of which this genus belongs. Ge- neric character : the common substance gelatin- ous or

cartilaginous, encrusting other bodies, and composed of systems round or elliptical, raised above the common surface, and annular. Ani- mals disposed either in a single series, or in several which are regular and concentratic. Branchial orifice simply circular, and without rays ; intestinal orifice small, elongated to a point, and inveloped in the border of the central cavity of the system. Several species found on our coasts, of which B. conglomerate, is alcyo- nium conglomeratum of the Syst. Nat.

BOTRYOCEPHALUS, in zoology, a genus of intestinal worms. The body is soft, elongated, flat, jointed ; the suckers consisting of two lon- gitudinal depressions opposite to each other.

BOT'RYOID, adj. ˆorpvostˆc, having the form of a bunch of grapes.

The outside is thick set with botryoid efflorescencies, or small knobs, yellow, bluish, and purple ; all of a shining metallick hue. Woodward.

BOTRYOLITE, a brittle and moderately hard mineral, which occurs in maxillary concre- tions. Color, pearly or grayish yellow. It is composed of 36 silica, 39'5 boracic acid, 13-5 lime, 1 oxide of iron, 6-5 water. It fuses before the blow-pipe into a white glass. It is found in Norway.

BOTRYS, BOTRUS, or BOSTEA, in ancient geography, a town of Phoenicia, on the Mediter- ranean, built by Saturn, twelve miles north of Byblus, and twenty south of Tripolis. It is now almost in ruins, and called Boteron or Bo- tern.

BOTS. See BOTTS.

BOTT ,) Ang.Sax. bitan, to bite ; a spe

BOTTS'. J cies of small worms in the entrails of horses ; answering, perhaps, to the ascarides in human bodies.

Pease and beans are as dank here as a dog, and that is the next way to give poor jades the botts.

Shakspeare.

BOTT, among bone-lace weavers, a round cushion of light matter placed on the knee, whereon they weave their lace with bobbins, &c.

BOTT (Thomas), a learned divine born at Derby in 1688. His grandfather was a major during the republic, and Thomas was educated

among the dissenters ; but he took orders in the church of England in 1725 ; and was successively presented to the rectories of lleymerston, Spix- worth and Edgefield, in Norfolk. He died at Norwich in 1 754, aged sixty-six. He wrote, 1. The Peace and Happiness of this World the Immediate Design of Christianity ; 2. A Defence of this ; 3. A Refutation of the Religion of Nature Delineated ; An Answer to Vol. I. of Warbur- ton's Divine Legation of Moses; and several sermons.

BOTTARI (John), a celebrated cardinal, was born at Florence in 1689. He was the patron of learning, and himself contributed to her stores, 1. Vita di Francesco Sacchetti, 8vo. 2. Sculture et Pitture sacre estratte, &c. 3 vols. fol. 3. Vo- cabularia della Crusca, 6 TO!S. 4. De Museo Capitolino, 3 vols. fol. 5. Dialoghi sopra tre Arti del Disegno, 4to. He died in 1775.

BOTTICELLI (Alexander) was born at Flo- rence in 1437, and learned the rudiments of painting under Philip Lippi. He executed se- veral pictures for pope Sixtus IV. and the city of Florence; for which he received large sums ; yet died at last in great distress, aged seventy-eight. He was a man of letters. The famous edition of Dante's poem of Hell, printed at Florence by Magna, A. D. 1481, and to which Botticelli un- dertook to write notf;s, was intended to have been ornamented with prints, one lor each canto ; a few of which were designed, if not engraved, by Botticelli. The first two plates were printed upon the leaves of the book, and, for want of a Mank space at the head of the first canto, the plate belonging to it is placed at the bottom of the page. Blank spaces are left for all the rest, that as many of them as were finished might be pasted on.

BOTTLE, n. s. & v. a. \ Fr. bouteille ; It. BOT'TLED, adj. I botiglia ; Span. 60

BOT'TLING, part. > tija. Vossius and

BoT'TLE-coMPANiON,n.s. i Menage derive this BOT'TLE-SCREW, J word from the Gr.

Bsrne; Lye and Serenius from the Ang.Sax. bytta, a butt or cask. A small vessel of leather, glass, or other substance, with a narrow mouth, to contain liquor ; sometimes used for the liquor itself : to bottle is to enclose, or put up, in bot tles : the derivatives seem to require no explana- tion.

And when this riotour with sory grace Hath filled with win his grete botelles three, To his felawes, agen, repaireth he. Chaucer.

Here, in this bottle, sayd the sory mayd, I put the tears of my contrition, Till to the brim I have it full defrayd : And in this bag, which I behind me don, I put. repentauncc for things past and gon. Yet is the bottle leake, and

bag so torne, That all which I put in fals out anon, And is behinde me trodcn down of Scorne. Who mocketh all my paine, and laughs the more I mourn. Speruer.

The shepherd's homely curds, His cold thin drink out of his leather bottle, Is far beyond a prince's delicates. Shakspeare,

Methinks I have a great desire to a bottle of hay; good hay, sweet hay, hath no fellow. Id.

Sir, you shall stay, and lake the other bottle.

Spectator. 2 E 2

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EOT

When wine is to be bottled off, wash your bottles

Immediately before you begin ; but be sure not to

dram them . Swift.

A good butler always breaks off the point of his

bottlescrew in two days, by trying which is hardest,

the point of the screw, or the neck of the bottle. Id.

Sam, who is a very good bottle-companion, has been

the diversion of his friends. Additon.

Then if thy ale in glass thou wouldst confine,

Let thy clean bottle be entirely dry. King.

He threw into the enemy's ships earthen bottles

filled with serpents, which put the crew into disorder.

Arbuthnot on Going.

In the bottle discontent seeks for comfort, cowardice for courage, and bashfulness for confidence. Johnson. BOTTLES, among the anciefit Jews,

were cags made of goats or other wild beasts' skin, with the hair on the inside, well sewed and pitched together ; an aperture in one of the animal's paws serving for the mouth of the vessel.

BOTTLES are now chiefly made of thick coarse glass : though there are likewise bottles of boiled leather made and sold by the case-makers. Fine glass bottles covered with straw or wicker, are called flasks or bettees. The quality of the glass has been found to affect the liquor in the bott'le. Glass bottles are better for cyder than those of stone. Foul glass bottles are cleansed by sand or small shot ; musty bottles, by boiling them. See GLASS. Dr. Perceval cautions against the practice of cleansing wine bottles with leaden shot. It frequently happens, he thinks, through inattention, that some of the little pellets are left behind ; and when wine or beer is again poured into the bottles, this mineral poison dissolves, and impregnates those liquors with its deleterious qualities. The sweetness which is sometimes perceived in red port wine may arise from this cause, when such an adulteration is neither de- signed nor suspected. Potash is recommended for cleansing bottles ; a small quantity in the water will clean two gross.

BOTTLING, the operation of putting up liquors in corked bottles, to keep, ripen, and improve. The writers on economy give rules concerning the bottling of beer, cyder, &c. Mineral waters are sometimes taken to distant places, well bottled and corked, otherwise they lose both their taste and smell. To preserve them, it is necessary that the bottles be filled up to the mouth, to ex- clude the air. The cork is also further secured by a cement. Some endeavour to improve their bottled beer, by putting crystals of tartar and wine, or malt spirits ; and others, by putting sugar, boiled up with the essence of some herb, and cloves, into each bottle. Cyder requires special precautions in the bottling; being more apt to fly and burst the bottle, than other liquors. The best way is to have the liquor tho- roughly fine before it be bottled. For want of this some leave the bottles open a while, or open them after two or three days bottling, to give them vent. If one bottle break through fermen- tation, it is best to give them all vent, and cork them up again. Mean cyder is apter to break the bot' les than rich. Some soak the corks in scalding water, to render them more pliant and serviceable. Another particular to be observed is, to lay the bottles so as that the liquor may always keep the cork wet and swelled. Something also

depends on the place where the bottles are set, ā¢which ought be such as exposes them as little as possible to the alterations and impressions of the air : the ground is better for this purpose than a frame ; sand better than the bare ground, and a running water, or a spring often "handed, best of all. To hasten the ripening of bottled liquors they are sometimes set in a warm place, or even exposed to the sun, when a few days will bring them to maturity. A machine has recently been invented for corking bottles, by

which much la- bor is abridged, ana time savea.

BOTTOM, n. s. &v.a.\ Germ. botenĀ ± Dut. BOT'TOMED, part. adj. fbodem; Swed. botn. BOT'TOMLESS, adj. j The lowest part of

any thing; the ground under the water ; the foun- dation; the groundwork; a dale; a valley; a low ground ; the part most remote from the view ; the deepest part; bound; limit; sometimes used for a ship; metaphorically, the extent of ca- pacity : to bottom is to rest, place, or stand upon ; to fix, found, or establish : to venture on the same bottom is fo run the same risk as those who have ventured to embark themselves or property in the same ship's bottom : bottomed is having a bottom ; founded : bottomless, with- out bottom ; unfathomable.

With that water that ran so clere, My face I washe ; tho saw I wele The botome ipaved everidele "VJfcth gravell, full of stones shene. Chauoer.

For if a man would in a bote (Whiche is without botome) rowe. He must nedes overthrowe. Gower.

From Holland, Zealand, and from Flanders won, By weekly pay, three score twelve bottoms came From fifty upward to five hundred ton, For every use a mariner could name. Drayton.

In the purlieus stands a sheep-cote, West of this place ; down in the neighbour bottom.

Shakspear.

Is not my sorrow deep, having no bottom?

Then be my passions bottomless with them. Id.

I will fetch off these justices : I do see the bottom

of Justice Shallow : how subject we old men are to

lying ! Id.

Therefore, as you unwind your love for him,

Lest it should ravel, and be good to none,

You must provide to bottom it on me. Id.

There being prepared a number of flat-bottomed

boats to transport the land-forces, under the wing and

protection of the great navy. Bacon.

Wickedness may well be compared to a bottomlest

pit, into which it is easier to keep one's self from

falling, than being fallen, to give one's self any stay

from falling infinitely. Sidney.

On a sudden open fly, With impetuous recoil and jarring sound, The infernal doors, and on their hinges grate Harsh thunder, that the lowest bottom shook Of Erebus. Milton.*

Him the Almighty Power Hurled headlong flaming from the etherial sky To bottomless perdition. Id.

He puts to sea upon his own bottom ; holds the stern himself ; and now, if ever, we may expect new discoveries. Kurr'u.

He spreads his canvas, with his pole he, steers, The freights of flitting ghosts iu his tLin bottom l.< ars.

Dryden.

Shallow brobks that Cowed so clear, The bottom did the top appear. Id.

BOT

They may have something of obscurity, us being bottomed upon, and fetched from, the true nature of the things. Hale.

Pride has a very strong foundation in the mind ; it is bottomed upon self love. Collier.

The grounds upon which we bottom our reasoning, are but a part ; something is left out, which should go into the reckoning. Locke.

His proposals and arguments should with freedom be examined to the bottom, that, if there be any mis- take in them, nobody may be misled by his reputa- tion. Id.

Action is supposed to be bottomed upon principle.

Atterbury.

On this supposition my reasonings proceed, and cannot be affected by objections which are far from being built on the same bottom. Id.

He wrote many things which are not published in his name ; and was at the bottom of many excellent counsels, in which he did not appear. Addison,

On both the shores of that fruitful bottom are still to be seen the marks of ancient edifices. Id. on Italy.

Aye ā when the red swollen stream comes roaring

down ā

Full many a glorious flower and stately tree Floats on the ruthless tide, whose unfelt sway Moves not the mire that stagnates at the bottom.

Maturin's Bertram.

BOTTOMRY, bottomree, fsenus nauticum, in law and commerce, is generally where a person lends money to a merchant, who wants it to traffic, and is to be paid a greater sum at the re- turn of a certain ship, standing to the hazard of the voyage ; in this case, though the interest be greater than that allowed by law, it is a species of insurance and not usury.

BOTTONY. A cross bottony, in heraldry, terminates at each end in three buds, knots, or buttons, resem- bling, in some measure, the three-leaved grass ; on which account Segoin, in his Tresor Heraldique, terms it croix treffle. It is the badge of the order of St. Maurice.

BOTTRIGARI (Hercules), a person emi- nently skilled in music, though not a musician, was a man of rank in Bologna, and had the title of Count. He published several controversial pieces on music. He entertained strong preju- dices in lavor of the ancient music; and at- tempted to introduce the chromatic genus into practice, but with no better success than Vincen- tius arid others had done. He corrected Gogavi- no's Latin version of Ptolemy in many instances, to so good purpose, that Ur. Wallis has in general conformed to him, in his translation of it. He also translated into Italian Boetius de Musica, with as much of Plutarch and Macrobius as re- Jates to music ; and made annotations upon Aristoxenus, Franchinus, Spataro, Vicentino, Zarlino, Galilei, and almost every musical trea- tise he could lay his hands on ; as appears by the copies which were once his, and are now depo- sited in many libraries in Italy. His works con- tain greater proofs of his learning and skill in music, than of his abilities as a writer, his style being remarkably inelegant ; nevertheless, he af- fected the character of a poet : and there is ex- tant a collection of poems by him, in 8vo. printed in 1577. He died in 1609.

BOTTS, or BOTS, in zoology, a species of short worms, said to be produced and nourished only in the intestines of the horse, the larvae of the oestrus. See OESTRUS and FARRIERY.

BOTZEN, a town and district of Austria in the Tyrol, situate on the Eisach, at the influx of the Talfer. It is noted for its wines, and the beauty of its environs. Here are four great fairs, much fre- quented by Germans and Swiss, a castle, a court of justice, and considerable silk manufactures. The town is the residence of the Austrian go- vernor of the Etschland, or Adige district. The quarter, of which it is the capital, contains 462 square miles, and 27,800 inhabitants. The town itself about 8000. Eighteen miles south-west of Brixen, and twenty-seven north of Trent. Botzen was taken by the French under Buona- parte in March 1797, and retaken in April by the Austrians under general Laudon.

BOTZENBURG, a town of Germany, in the duchy of Mecklenburg. It had a castle, which was destroyed by the Danes in 1202. It is seated on the Elbe, and the vessels that pass by are obliged to pay a considerable toll,

BOVA,a considerable town of Calabria Ultra, Italy, situated at the southern extremity of the Appennines, and near the sea. It is said to have been founded by the emigrant Albanians, who quitted their country on the death of George Ca- striotti, generally known by the name of Scan- derbeg. Their descendants in this part of Italy still amount to the number of 100,000, and speak the Albanian language. Bova has the title of a county, and a population of about 2300 indi- viduals. It is the see of a bishop, who is suffra- gan of the archbishop of Reggio, from which it is distant south-east about twenty miles.

BOU ATI, in botany, a genus of plants, class hexandria, order digynia. Its generic characters are, CAL. small three parted perianth : COR. three, pointed, concave petals, longer than the calyx : STAM. six : FIST, germ superior, compressed, dimpled at its summit : STIG. two, sessile : PER, capsule, heart-shaped, sharp edged, dimpled at its summit, bilocular : SEED, one in each cell. It is a small tree, a native of the East Indies.

BOVATA TERRJE, in ancient law writers sig- nifies an oxgate of land, or so much as may be ploughed in a year with one ox ; by some reckoned at twenty-five acres, by others at eighteen or twenty ; and valued from 13s. to 20s. yearly rent.

BOUCIIAIN, a fortified town of France, in the department of the North, and ci-devant pro- vince of Hainault. It is divided into two parts by the

river Scheldt. It was taken by the French in 1676: and by the allies under the duke of Marlborough in 1711, which was the last mili- tary achievement of that great general ; but the following year it was retaken by the French. It had also its share of suffering in the late war, being only nine miles west of Valenciennes.

BOUCHARDON (Edme),an eminent French sculptor, was born in 1698 at Chaumont. His father was a sculptor and architect, and design- ing that his son should follow the same profession, sent him to Paris to the school of Coustou the younger. Here he made such progress that he was elected king's pensioner, and sent to Rome

for the further prosecution of his studies. In Rome, his assiduity and consequent improvement were conspicuous. He examined minutely, and copied carefully, the remains of ancient sculp- ture, and the master-pieces of modern painting. He returned to Paris, and, in the works he was employed to execute in that metropolis, displayed the proficiency he had made by the powers of his own fancy, and the opportunities he had had of forming his taste upon the. models of excellence left by his predecessors. In 1736 he was ap- pointed designer to the academy of Belles Lettres ; in 1744 he was admitted into the academy of painting ; and in two years afterwards he was made professor. He died in 1762, possessed of a considerable fortune, and enjoying a character highly respectable. His works for the decoration Df Paris were, the Fountain in the Rue de Cre- nelle, Fauxbourg St. Germaine, and the equestrian statue of Louis XV.

BOUCHE OF COURT, the privilege of having meat and drink at court scot-free. The word is also written bowge, bouge, and budge. The French long used the phrase, avoir bouche a la cour ; that is, to have table or diet at court. This privilege was sometimes only extended to bread, beer, and wine : and was anciently used in the houses of noblemen, as well as in the king's court. Thomas earl of Lancaster retained Sir John de Ewre, to serve him with ten men at arms in time of war, allowing them bouge of court, with livery of hay and oats, horse shoes and nails.

BOUCHET (John), a French poet and histo- rian who flourished in the sixteenth century. The best of his writings are his Annals of Aquitaine, and his Chaplet des Princes. He died in 1555.

BOVEY COAL, an inflammable fossil found in England, France, Italy, Switzerland, Ger- many, Ireland, &c. Its color is brown or brownish-black,

and of a laminar structure. It is composed of wood, penetrated by bitumen ; and frequently contains pyrites, alum, and vitriol. By distillation it yields an ill-smelling liquor, mixed with volatile alkali and oil, part of which ts soluble in alcohol, and part insoluble, being of a mineral nature.

BOUFFLERS (Louis Francis), duke of Bouffiers, a peer and marshal of France, was born in 1644. He distinguished himself by his valor and conduct in several sieges and battles, and had the command of the right wing when the French were defeated at the bloody battle of Malplaquet. He also gained extraordinary honor by the defence of Lille in 1708. The siege lasted four months, and when at length obliged to submit, prince Eugene observed to Boufflers : ' I am very vain in having taken Lille, but I should still prefer the glory of hav- ing defended it like you.' The king of France rewarded him for this service, by creating him a peer of France, and giving him the reversion of the government of Flanders to his son. He was iis distinguished for nobleness of character and munificence as for bravery and military skill, and not only rejected with indignation a proposal to assassinate pnnce Eugene during the siege of Lille, but threatened to confine the person who had ventured to make the observation. It is re- lated in the continuation of the History of Eng-

*land, by Rapin, that when king William took Namur in 1695, he made B ufflers prisoner, in violation of the articles of capitulation. On his remonstrance against this conduct, he was an- swered that it was in the way of reprisal, because of the French having detained the garrisons of Dix – mude and Deinse in the same manner. ' In that case,' replied the marshal, ' my garrison ought to be arrested, and not I.' * Sir/ he was answered, ' you are valued at more than 10,000 men.' He died at Fontainebleau in 1711.*

BOUFFLERS (Marshal), the son of the duke, is famous for having been the deliverer of Genoa, where he died.

BOUGAINVILLE (Louis Antony de), was born at Paris on the llth of November, 1729, He was the son of a notary, and descended from an ancient family in Picardy. While at college he was distinguished by an ardent desire for knowledge. A professor one day explaining the phases of the moon, and its various positions, quoted two Latin verses respecting them. Young Bougainville was bold enough to consider them as of an inferior kind ; and being challenged to make better, he answered almost instantly, it is said, by four verses far more accurate, and more instructive. On leaving college he was admitted an advocate in the parliament, and en- rolled himself in the musqueteers. Chance made him a neighbour to Clairaut and d'Alembert, and he attached himself warmly to these two geome- tricians ; he visited them often ; and at the age of twenty-five

produced the first part of his Integral Calculus, to serve as a continuation of De 1'Ho- pital's Infinitesimals. W'ith that candor which was always one of the most striking traits in his character, he declared in his preface, that nothing in the whole work was his own but the arrange- ment. The committee of the Academy, however, observed, that by clearly explaining the methods of the various geometricians, he had made them his own. In 1755 he was made a major, and visiting London as secretary to the French em- bassy, was elected a fellow of the Royal Society. Next year he accompanied general Montcalm to Canada, with the title of captain of dragoons. Before he embarked he put to press the second part of his Integral Calculus, having requested his friend Bezout to read the proof sheets. Im- mediately on his arrival in America he marched at the head of a detachment amidst ice and snow, and through almost impenetrable forests, to the extremity of lake Sacrament, where he burnt an English flotilla under the guns of the fort which protected it. In 1758 a detachment of 5000 French troops was pursued several days by an army of 20,000 English. Bougainville inspired his fellow-soldiers with resolution to wait for the enemy ; they fortified their position in less than twenty-four hours, and compelled the English to fall back with a loss of 6000 men. Bougainville was wounded on this occasion in the head by a musket ball. The French governor despairing, however, of saving the colony, if he did not re- ceive reinforcements, our hero was sent to France to solicit them, and returned with the rank of colonel and the cross of St. Louis. Montcalm placed him at the head of the grenadiers and volunteers,, to cover the retreat of the army,

which was forced to fall back on Quebec. He performed this important service with his usual intrepidity and skill. But the death of the gene- ral hastened the loss of the colony ; and Bou- gainville returned to France.

He now followed M. Choiseul de Stainville into Germany, where he again signalised himself, and his bravery was rewarded with the gift of two pieces of brass cannon. During the peace that ensued, the favorable situation of the Falk- land Islands gave rise to the idea of forming an establishment there, and the French court patro- nising the undertaking in 1763, Bougainville offered to commence it at his own expense. In concert with two of his relatives he fitted out two ships at St. Maloes, and embarked some families, with whom he reached the islands called the Malouines on April 3d, 1764. They were inhabi- ā¢ ted ; but no violence or injustice attended his occupation of them. An abundant pasturage, fishery, and birds, which at first permitted them- selves to be taken with the hand, secured the means of subsistence ; but no wood for fuel or erecting houses

was to be procured. The foun- dations of a fort however were laid ; and in the centre an obelisk erected, with the hemistich, ‘ Tibi serviat ultima Thule,’ inscribed under a portrait of the French king : another inscription exhibited the line in Horace, ‘ Conamur tenues grandia.’ When these first labors were over, Bougainville returned to France, leaving the government of the colony to one of his relations. Next year he returned with a supply of provi- sions, and new inhabitants. An excursion to the straits of Magellan procured him wood for the purposes of building, and 10,000 young forest and fruit trees. An alliance was concluded with the Patagonians ; most kinds of the grain cultivated in Europe were naturalised, and cul- tivated with success ; the multiplication of the cattle was a matter of certainty, and the number of the inhabitants rapidly increased from 80 to 150. But though these acquisitions did not satisfy the active mind of the founder, they had alarmed the Spaniards, and complaints had been made by them to the French government. Bou- gainville was therefore ordered to deliver up his possession, and the court of Spain agreed to pay him for his works, and to refund his expenditure. As a farther consolation, the court of France appointed him to make a voyage round the world. The command of the frigate la Boudeuse, and a store-ship, the Etoile, was given him, and Com- mercon, the naturalist, and Veron, as astronomer, embarked with him, at his request, to examine the new methods of finding the longitude. This expedition justly places Bougainville in the fore- most rank of enterprising seamen. The dreadful weather he encountered rendered all his astro- nomical attempts useless. Upon his return France was at peace. A wandering and agitated life had now blunted his taste for the mathema- tics, and for a time he gave himself up to en- joyments which the bustle of his early life had not permitted him to share : but his active mind was soon again employed in the service of his coun- try, and when France declared for America, he successively commanded the French ships Bien- simˆ, Languedoc, Guerrier, and Auguste, under

admirals Piquet, D’Estaing, and De Grasse. At the request of D’Estaing he was appointed chef d’escadre, and the same year received the rank of field-marshal. He commanded the van at the memorable battle of the Chesapeake in 1781, and beat off the English van, obtaining the honorable testimony of count de Grasse to his having contributed more than any other person to the victory. On the disastrous 1 2th of April, when the commander-in-chief was reproached with being more occupied with the safety of his own ship than with that of the squadron, and the squadron with not supporting their commander- in-chief, Bougainville, who commanded the rear- guard, did all that could be expected of him : by a bold manoeuvre he saved the Northumberland ; and although the Auguste, which he commanded, was one of the most roughly handled of the whole fleet, he collected and conducted to St. Eustatia the remains of the

shattered squadron. The peace which secured the independence of America, again restored M. de Bougainville to the pursuit of the sciences. The Academy con- ferred upon him the title of honorary member. Lagrange, on giving his vote, observed ‘ To you I was indebted for being received into the Aca- demy, since your works opened to me the career which I pursued.’ About this period he con- ceived the project of tracing the icy regions of the north, and penetrating to the pole. A dis- tinguished astronomer offered to accompany him, and the route was sketched. The French minis- try, however, did not accede to his terms, and the Royal Society of London solicited the use of his plans. He transmitted them imme- diately, pointing out the route which he would take. Captain Phipps, afterwards Lord Mul- grave, preferred another (one also of Bougain- ville’s suggesting), but could not proceed further than eighty degrees. When a spirit of insubor- dination broke out in the French navy, and in the Brest fleet in particular, M.de Bougainville, by his reputation, his courage, and his firmness, mixed with the most amiable qualities, seemed to be the only man capable of recalling the sea- men to their duty. But his exertions wore una- vailing ; the flames of Jacobinism had spread too far, and he retired from the service in disgust. In 1791 his name was put upon the list of vice- admirals. This distinction redoubled his attach- ment to his prince, now almost totally abandon- ed. From the massacres of 1792 he escaped as if by a miracle, and took refuge on his cslate in Normandy, where he found his two pieces of cannon, the only recompense which he had re- ceived for forty years’ service. On the restora- tion of order he was appointed to the Board of Longitude ; but whether he did not think mat- ters sufficiently settled, or the care which it was necessary to take of his fortune prohibited him from leaving his estate, he sent in his resignation, and was succeeded by count Fleurieu. When the Institute was formed, M. de Bougainville was nominated to a seat at the Board of Naviga tion and Geography. As president of the Class of Sciences, it was his duty to deliver to Napoleon the reports of that department, and he acquitted himself with great dignity. As a senator, his pecuniary circumstances were made perfectly

easy ; and although old age was coming on, he possessed all the fire and vivacity of youth. He was still desirous of partaking in some hazardous maritime enterprise ; and when his friends men- tioned his age, he replied, that Nestor was not altogether useless in an army which boasted such heroes as Achilles, Ajax, and Diomed. Although his temperance and sobriety were great, and strong hopes were entertained of prolonged ex-

istence, he died on the 31st of August, 1811, after an illness of ten days.

BOUGAINVILLE'S ISLAND, an island of the South Pacific Ocean, in the sixth degree of south latitude, and 156th of east longitude. A narrow strait separates it on the north from the island of Bouka, and on this side it is very low ; other parts contain mountains separated by consider- able plains, and covered with wood. The western coast is rocky and dangerous, and the island thinly inhabited.

BOUGE , to bilge or bulge. See BILGE. To swell out.

Which ancor cast, we soone the same forsooke, And cut it off, for feare lest thereupon Our shippe should bowge. Gascoigne.

BOUGEANT (William Hyacinth), a famous Jesuit, who first taught the learned languages at Caen and Nevers, and afterwards settled at the college of Paris, where he employed himself in writing several works, particularly, 1. Curious Observations on all parts of Natural Philosophy, extracted from the best authors; 2. An History of the Wars and Negociations which preceded the Treaty of Westphalia, &c. He died in 1743.

BOUGH , or) Ang.-Sax. bug-an, to bow.

Bow, n. s. S The branch of a tree, so called because it bows or bends from the trunk or stem.

There might men does and roes ysee And of sqirels full great plentie, From bow to bow alway leping,

Chaucer. Romaunt of the Rose. The boisterous winds oft theire high bowes do blast.

Wyat.

But now the gray moss marred his rine, His bared boughes were beaten with stormes; His toppe was bald and wasted with wormes, His honour decayed ; his branches sere. Spenser.

Like as the culver, on the bared bough, Sits mourning for the absence of her mate ; And, in her songs sends many a wishful vow For his returne that seems to linger late : So 1 alone, now left disconsolate, Mourn to myselfe the absence of my love ; And wandering here and there, all desolate, Seek with my playnts to match that mournful dove.

Id.

Their lord and patron loud did him proclaim, And at his feet their laurel boughs did throw.

Faerie Queene.

A vine-labourer finding a bough broken, took a branch of the same bough, and tied it about the place broken. Sidney.

From the bough She gave him of that fair enticing fruit. Milton.

As the dove's flight did guide ./Eneas, now May thine conduct me to the golden bough. Denham.

Under some favourite myrtle's shady boughs, They speak their passions in repeated vows.

Roscommon.

See how, on every bough, the birds express, In their sweet notes, their happiness. Dryden.

Twas all her joy the ripening fruits to tend, And see the boughs with happy burdens bend. Pope.

All abandoned to despair, she sings Her sorrows through the night ; and on the bouyh Sole sitting. Thomson's Seasons.

Speak to me !

For I have called on thee in the still night , Startled the slumbering birds from the hush'd bougla And woke the mountain wolves, and made the caves' Acquainted with thy vainly echoed name Which answered me ā many things answered me ā Spirits and men ā but thou wert silent all.

Byron's Mi.nfred,

BOUGHS, GREEN, anciently made a part of the decoration of altars and temples, especially on festival occasions. Oaken boughs were offered to Jupiter ; those of laurel to Apollo ; of olive to Minerva ; myrtle to Venus ; ivy to Bacchus ; pine to Pan ; and cypress to Pluto. Our coun- try youth commemorate the preservation of Charles II. in an oak, after the battle of Wor- cester, by wearing oak boughs, gildiag the apples, &.c.

BOUGHT, or) From the Anglo-Saxon, BOUT, n. s. J bugan, to bow, to bend, to turn. Folds or involutions are bouts ; a twist ; a link ; a knot ; a curve ; a flexure.

His huge long tail wound up in hundred folds, Whose wreathed boughts whenever he unfolds, And thick entangled knots adown does slack.

Faerie Queene,

The flexure of the joints is not the same in ele- phants as in other quadrupeds, but nearer unto those of a man ; the bought of the fore-legs not directly backward, but laterally, and somewhat inward.

Broume't Vulgar Errour. Immortal verse,*

Such as the melting soul may pierce, In notes, with many a winding bought Of linked sweetness, long drawn out. Milton.

BOUGHT, the past tense and past participle of the verb to buy.

Great riches have sold more men than they have bought. Bacon.

The chief were those who not for empire fought, But with their blood their country's safety bought,

Pope.

BOUGIE ; Fr. a wax candle ; an instrument that is introduced into the urethra for removing obstructions. Different compositions are used. The old method of making them up was as fol- lows : having spread any quantity of the linen rag with the composition that is chosen for the purpose, cut it into slips from six to ten inches long, and from half an inch to an inch broad ; then roll them on a glazed tile or marble into the form of a wax candle ; and as the end of the bougie that is to be entered first into the urethra should be somewhat smaller than the rest, cut the slips a little tapering. When the bougies are rolled up, that side must be outward on which the plaster is spread. Bougies are like- wise formed of catgut, which are well calculated to pass through an aperture which takes a wind- ing sort of direction, a case in which the com- mon bougie very frequently fails. M. Daran and others attributed the action of the bougies to the composition they made use of in forming them, but, apparently, as much of their efficacy is owing to the compression they make on the affected part as to any other principle ; and, as

bougies of very different compositions succeed equally well, in curing the same disorders in the urethra, it is plain that they do not act by means of apy peculiar qualities in their composition. Catgut involved in elastic gum makes the best bou- gie ', the gum defends the catgut from the moisture of the urethra, and renders the bougie pliant in all its parts, whilst a very suitable degree of firm- ness results from the intermixture of the catgut. The caustic bougie differs from the ordinary one in having a thin roll of caustic in its middle, which destroys the stricture, or any part it comes in contact with. The practice of keeping the bougie in for several hours together has been re- linquished of late years, on account of the injury supposed to be done by it to the musculi accele- ratores. It is now the practice to wear a bougie only for a few minutes at a time.

BOUGUER (John), a good French mathema- tician, and professor royal of hydrography, was author of a Complete Treatise on Navigation. He died in 1713.

BOUGUER (Peter), a celebrated French mathe- matician born at Croisic in 1698, was the son of the professor. He learned mathematics from his father, and became a proficient in the science while he was yet a child. Being sent early to the Jesuits' college at Vannes, he instructed the regent in mathematics, at eleven years of age. At thirteen he had a public contest with a pro- fessor of mathematics, upon an erroneous propo- sition he had advanced, and gained so complete a victory over him that he left the country. At fifteen, upon his father's death, he was, after a public examination, appointed to succeed him in his professorship. In 1727 he obtained the prize given by the Academy of Sciences for the best way of masting ships; in 1729 another for the best manner of observing at sea the height of the stars; and in 1731 a third prize for the most advantageous way of observing the declination of the magnetic needle. In 1730 he was removed to Havre. In 1731 he was appointed geome- trician to the Academy, and in 1735 pensioner- astronomer : when he was also sent along with Messrs. Godin, Condamine, and Jussieu, on the commission to South America, to determine the measure of the degrees of the meridian and the figure of the earth. In this laborious business, of ten years' duration, chiefly among the lofty- Cordillera mountains, he determined several other new points, besides the rnain object; par- ticularly respecting, 1. the expansion and con- traction of metals, &c. by heat and cold ; 2. the refraction of the atmosphere by the tops of the mountains ; 3. the density of the air at different heights ; 4. the effect of the mountains upon the plummet; 5. a method of rectifying the errors committed by navigators in determining their route; and 6. a new construction of the log for measuring a ship's way, &c. He died 15th August, 1758, aged sixty. His chief works are,

1. The Figure of the Earth, determined by the Observations made in South America, 1749, 4to.

2. Treatise on Navigation and Pilotage, 1752, 4to. abridged by La Caille, in one vol. 8vo. 1768.

3. Treatise on Ships, 4to. 1756 ; and 4. On the Gradation of Light, 1729 and 1760, 4to. He wrote also a vast number of important papers,

inserted in the Memoirs of the Academy, of which Dr. Hutton gives a complete list in his Mathematical and Philosophical Dictionary, pp.

219, 220.

BOUHOURS (Dominic), a celebrated French critic, born at Paris 1628. He was entered into the society of Jesuits at the age of sixteen ; and was appointed to read lectures upon po-lite lite- rature in the college of Clermont at Paris, where he bad studied : but was so incessantly attacked with the head-ache, that he could rot pursue the destined task. He afterwards undertook the education of two sons of the duke of Longue-ville, which he discharged with great applause. The duke had such a regard for Bouhours, that he wished to die in his arms ; and the Account of the pious Christian death of this great personage was the first work which Bouhours gave to the public. He was sent to Dunkirk to the popish refugees from England ; and in the midst of his missionary occupations found means to compose and publish books. Among these were Entre- tiens d'Ariste et d'Eugene, Dialogues between Aristus and Eugenius ; a critical work concern- ing the French language. It was printed five times at Paris, twice at Grenoble, at Lyons, Brussels, Amsterdam, Leydcn, &c. and embroil- ed him in quarrels with a great many censors ; with Menage in particular, who however lived in friendship with him both before and after. This piece recommended Bouhours so effectually to the celebrated minister, Colbert, that he trusted him with the education of his son, the marquis of Seignelai. He wrote afterwards several other works, the chief of which are, 1. Remarks and Doubts upon the French Language : 2. Dia- logues upon the Art of thinking well in Works of Genius ; 3. The Life of St. Ignatius ; 4. The Art of Pleasing in Conversation ; 5. The Life of St. Francis Xavier, Apostle of the Indies and of Japan. This last work was translated from the French into English by Mr. Dryden, and pub- lished at London in 1688, with a dedication pre- fixed to the queen of James II.

BOVILLy'E ; from bos, an ox, because cattle were supposed subject to it ; the scientific name for the measles.

BOUILLE (Marquis de) was a lieutenant- general in the army of Louis XVI. and knight of the order of St. Esprit. He was born in Au- vergne, and connected by birth with the family of La Fayette. During the American war he commanded in the French Windward Islands, and returning to Europe, was made governor of Mentz at about the breaking out of the Revolution. Here he first distinguished himself as a staunch royalist, and drew on himself in consequence the marked displeasure of the Jacobins. On the king's unfortunate flight to Varennes, Bouille" advanced with a strong force to receive him, but from some mismanagement was too late : upon finding that the royal party was captured, he addressed a letter to the National Assembly from Luxem- bourg, menacing them with summary vengeance should any attempt be made on the life of the king. This threat however, only served to acce- lerate the event, and Bouille" himself was sen- tenced to death par contumace. Bouille, on the- death of his unhappy prince, proceeded fa

Vienna, and afterwards to Sweden ; he also served for a while iu the emigrant army under the prince of CondĀ£, but on the final failure of the royal cause retired to England, where in 1 797 he published his Memoirs of the Revolu- tion, 8vo. He died in London, Nov. 14th, 1824.

BOUILLON, a duchy of the Netherlands, si- tuated between the grand duchy of Luxembourg and the principality of Liege. It lies in the woody and mountainous tract called the Ar- dennes, to the department of which name it for the most part belonged while in the French em- pire; it is about eighteen miles long, and nine broad, and comprises the towns and villages of Bouillon, Miruart, St. Hubert, Rochefort, Logne, and Hiergues. Though so small a state it has been at different times the subject of much liti- gation. Godfrey, general of the first crusade, and king of Jerusalem, mortgaged it when a principality, to the bishopric of Liege, in the year 1096, for the sum of 1500 silver marks, on condition that, if he returned, the estate was to be restored ; otherwise to remain attached to the diocese. He died in the Holy Land without issue, so that his estate remained in the posses- sion of the see of Liege until 1483, when it was ceded to the count of Mark. Charles V., how- ever, restored it to its former owners. The

French family of La Tour d'Auvergne, descend- ants of the count of Mark, brought forward at different periods pretensions to the duchy, which they relinquished in 1641, on receiving an in- demnity of Ā£15,000 sterling. But the bishop of Liege having taken part against France in the war of 1672, Louis XIV. put the family of La Tour d'Auvergne in possession. The title of prince of Bouillon was therefore assumed in 1792, with the consent of his Majesty, by Philip d'Auvergne, captain in the British navy, and he continued to bear it till his death, which hap- pened in 1816. The congress, which met at Vienna in 1815, appointed commissioners to in- vestigate the comparative claims of this noble- man and prince Charles of Rohan. They de- cided in favor of the latter, who now possesses it.

BoriLLON, the chief town in the duchy, is situated in a hilly district, near the junction of the Semois with the Maese. It contains a popu- lation of about 2000 individuals, and has a castle standing upon a high rock. The French took it so long ago as 1676. In 1794 the Austrian general Beaulieu took the town after an obsti- nate resistance, and compelled a party of French troops to take refuge in the castle : but on the approach of a French army, he was obliged to retreat in the direction of Namur. Bouillon is distant from Namur about fifty miles towards the south-east.

BOUILLON, in the mai.ege, a lump or excres- cence of flesh, that grows either upon or just by the frush, insomuch that the frush shoots out like a lump of flesh, and makes the horse halt ; and this is called the flesh blowing upon the frush.

BO [JIN, an island of France, off the coast of Brittany, in a bay formed by the shores of that province and those of Poitou. It is separated from the coast of Brittany by a narrow channel, and included in the department of Vendee. The inhabitant) are chiefly employed in fishing and

making salt. It contains a small town of thĀ» same name.

BOVIUM, in ancient geography, a town of the Silures, in Britain, fifteen miles south of Isca Silurum, or Caer-leon, in Monmouthshire, now called Cowbridge, or according to Baudiand, Bangor in Caernarvonshire.

BOVIUS (Thomas), one of those empirics that rose in Italy about the middle of the sixteenth century, when the proper rules of philosophising were unknown, when the boundaries of science and quackery were undefined, and when men, instead of consulting nature, and learning her secrets from experiment, pretended to derive their knowledge from the efficacy of a charm, or the intercourse of a familiar spirit. He had a tutelar genius which he called Zephyriel. He contrived a preparation of mercury and gold dissolved in aqua regia, that he called Hercules ; and this

Hercules was an overmatch for plague, pestilence, and many other giant distempers. He cured epilepsy with antimony, and suppressed menses with hellebore. He performed an ex- ploit upon a patient as great as any of the twelve labors, expelling a tape-worm from his body that measured fifty yards in length. He pre- pared aurum potabile, with which among other nostrums he restored to health no less than 7000 patients. He entertained a great contempt for all regular physicians, as probably unable to use so quick despatch as himself; and, like Dr. San- grado, took every opportunity of reprobating their practice and extolling his own. He was, however, more scrupulous in the period and method of bleeding than the aforesaid eminent practitioner, as he believed that a knowledge of astrology was necessary for performing this ope- ration, and that it could be resorted to with suc- cess only in certain aspects of the planets. As his life was a struggle against what he thought the ignorance and obstinacy of the professors of the medical art, so his works are filled with satire and abuse. The titles they bear, which are the following, are a sufficient indication of the nature of their contents : Flagello contra de Medici corn- muni detti Razionali; Fulmine contro de Medici putatitii Razionali; Confusione de Medici sosisti e de Claudio Gelli. This ‘ whip and thunder- bolt’ for the doctors have now lost their terrors, and our quacks in the present day are more dreadful to their patients than their opponents.

BOVIS, in entomology, a species of pedicu- lus, with which cattle are infested. Eight trans- verse ferruginous lines on the abdomen. Also a species of oestrus, the wings of which are brown, the abdomen black, white at the base, and ful- vous at the tip.

BOUJEIAH, or BUGIA, a considerable forti- fied sea-port in the eastern part of Algiers, situ- ated on the declivity of a mountain, and upon the ruins of a large city, probably the ancient Saldo. A castle, on the summit of a hill, com- mands the town and harbour, besides which there are two others built at the lower part of the hill. Breaches yet appear in the walls, which were made by Sir Edward Spragg, in 1671, when he destroyed seven vessels in this harbour. Here is a small iron manufactory, and an export trade in oil and wax. Eighty miles east from Algiers.

BOUKA, or Lord Anson’s Island, an island in the South Pacific Ocean, separated from Bou- gainville’s Island by a narrow strait. It rises inland to a considerable altitude, and is covered with wood ; but has near the sea

extensive plan- tations of cocoa trees. The expedition in search of La Perouse visited this island, and the natives are described as being of a middle stature, strong and active ; their color nearly black ; the hair on their heads thick and curled, but carefully re- moved from every other part of the body. Their heads large ; forehead, face, and nose, flat, and chin prominent. Their ears were loaded and greatly extended with large rings made of shells. Some had their bodies streaked, and all had a cord or bandage tied round the waist several times. Bracelets formed of the fibres of the cocoa-nut were common. But little clothing was seen on any of them. They were very fond of brisk and noisy music. Their canoes were in- geniously formed, and capable of carrying forty or fifty men each, and they were armed with bows and arrows, which they used with great skill. They also seemed well acquainted with barter, and most valued nails and scarlet cloth. The northern point of this island is situated in about five degrees of south latitude, and in the 155th degree of east longitude.

BOULAINVILLIERS (Henry de), Lord of St. Saire, and an eminent French writer, was de- scended from a very ancient and noble family, and born at St. Saire in 1658. His education was among the fathers of the oratory ; where he manifested from his infancy those uncommon abilities for which he was afterwards distin- guished. He applied himself principally to his- tory ; in which his performances are numerous and considerable. He was author of a History of the Arabians ; Fourteen Letters upon the An- cient Parliaments of France ; a History of France to the Reign of Charles VIII. ; the State of France, with Historical Memoirs concerning the Ancient Government of that Monarchy to the time of Hugh Capet ; ‘ written,’ says M. Mon- tesquieu, ‘ with a simplicity and honest freedom worthy of that ancient family from which their author was descended.’ He died at Paris in 1722 ; and after his death was published his Life of Mahomet.

BOULANGER (John), a French engraver, who flourished towards the end of the seventeenth century. He adopted a manner which, though not original, he greatly improved : He finished the faces, hands, and all the naked parts of his figures, very neatly with dots instead of strokes, or strokes and dots. The effect is by no means unpleasing. This style of engraving has been since carried to its greatest perfection in England. His draperies are heavy, arid the folds not well marked. However, his best prints possess much merit, and are deservedly held in esteem.

BOULANGER (Nicholas Anthony), a very singular Frenchman, was born at Paris in 1722, and died there in 1759, aged only thirty-seven. He is said to have come out of the college of Beauvais almost as ignorant as he had entered into it ; but strug- gling hard against his unaptness to learn, he at last overcame it. At seventeen he began to study mathematics and architecture ; and, in three or

four years, made such progress as to accompany the baron of Thiers to the army in quality of en- gineer. Afterwards he had the supervision of the highways and bridges; and he executed several public works in Champagne, Burgundy, and Lorraine. His works are: 1. Recherches sur L'origine du Despotisme Oriental, 2 vols. 12mo. ; a very bold work ; but not so bold and licentious as, 2., L'Antiquite" devoilee, 3 vols. 12mo. This was posthumous. 3. He furnished to the Encyclopaedia the articles Deluge, Corvee, Societe", and Guebres, Hebrew Language, and Political Economy.

BOULAY, or BUL.SUS (Caesar Egasse du), was born at St. Ellier in France, and became professor of humanity at the college of Navarre, rector, and historiographer of the University of Paris. He died in 1768, after having published several works. The principal of them are : A History of the University of Paris, in Latin, 6 vols. folio ; and the Treasure of Roman Antiqui- ties, in 1 vol. folio.

BOULETTE, in the menage, an epithet of a horse, when the fetlock bends forward out of its natural position, through violent riding, or by being too short jointed.

BOULLONGNE (Bon de), a painter of emi- nence, born at Paris in 1649. From his father he learned the first principles of the art ; but went to Rome to perfect himself from the works of the best masters. He abode in Italy five years. He excelled in history and portrait. His talents for copying the pictures of the great Italian painters were very extraordinary, so that he fre- quently deceived the best judges. He died at Paris in 1717, aged sixty-eight.

BOULLONGNE (Louis de), was born at Paris in 1654, was the younger brother of Bon, and, like him, learned from his father the first princi- ples of painting, and afterwards went to Rome to complete his studies. His works, on his return, were so much esteemed, that Louis XIV. made him knight of St. Michael, appointed him his principal painter, allowed him several pensions, and raised him to the rank of nobility. He em- bellished the church of the Invalids, the chapel of Versailles, &c. He chiefly excelled in history and allegory. He died at Paris in 1734, aged eighty.

BOULOGNE, a sea-port of France, in the de- partment of the Pas de Calais, Picardy. It was the capital of the ci-devant government of Boulou- nais, and is divided into two parts, the Upper and Lower; the latter being frequently called Boulogne-sur-Mer, as lying near the shore. The former is situated on an eminence. The Lower town is the larger and more populous ; but the harbour has been of late nearly choked up with sand ; and, though considerable exertions have been made to improve it, only small vessels can enter. Ships of war either anchor in the road, or off the port of St. Jean, a

few miles further north. The trade, however, is considerable in fresh and salt fish, especially herrings and mackerel ; also in coal, salt, fresh and salted butter, soap, and earthenware ; as well as in linen and woollen stuffs manufactured in the town. Great part of the Champagne and Burgundy sent to England passes through this port. Boulogne was the see

of a bishop before the revolution, including 277 parishes ; but has since been joined to that of Arras. 'A late French account states the number of inhabitants at 12,700 ; among which it is esti- mated that about 3000 English are included. It is about 154 miles from Paris, thirty from New Romney in Kent, and twenty-two south of Calais. It is generally preferred to the former port, for the return passage across the channel to Dover. In the neighbourhood is a chalybeate spring called the Fontaine de Fer.

BOULTER (Hugh), D.D., was born in or near London, of reputable and wealthy parents. Before the Revolution he was admitted a com- moner of Christ Church in Oxford. Some time after he was chosen a demy of Magdalen college^ at the same election with Mr. Addison and Dr. VVilcox. From the merit and learning of the persons elected, this was commonly called by Dr. Hough, president of the college, the golden election. He was invited to London by Sir Charles Hodges, principal secretary of state in 1700, who made him his chaplain, and recom- mended him to Dr. Tenison, archbishop of Can- terbury. By the influence of the earl of Sunder- land he was promoted to the parsonage of St. Olave in Southwark, and the archdeaconry of Surrey ; where he continued discharging faith- fully his pastoral office, till he was recommended to attend king George I. as his chaplain, when lie went to Hanover in 1719. He taught prince Frederick the English language, and by his con- duct so won the king's favor that he promoted him to be dean of Christ Church, and bishop of Bristol. Five years afterwards he received a letter from the secretary of state, acquainting him that the king had nominated him archbishop of Armagh and primate of Ireland. This honor he would gladly have declined ; and desired the secretary to use his good offices with his majesty to excuse him from accepting it. Ireland hap- pened to be at this juncture in a great flame, oc- casioned by Wood's ruinous project; and the ministry thought that the bishop would greatly contribute to quench it by his judgment, modera- tion, and address. The king therefore laid his absolute commands upon him ; to which he at last submitted. When he had taken possession of the primacy, he began to consider that coun- try, in which his lot was cast for life, as his

own; and to promote its true interest with the greatest zeal and assiduity. Accordingly, in innumerable instances, he exerted himself in the noblest acts of beneficence and public spirit. In seasons of the greatest scarcity he was more than once in- strumental in preventing a famine. On one of these occasions he distributed vast quantities of corn throughout the kingdom, for which the House of Commons passed a vote of public thanks ; and at another time 2500 persons were fed at the poor-house in Dublin every morning, and as many every evening, for a considerable time together, mostly at the primate's expense. When schemes were proposed for the advantage of the country, he encouraged and promoted them not only with his counsel but his purse. He had great compassion for the poor clergy of his diocese, who -.vere disabled from giving tjheir . children a proper Jucation ; and he maintained

several of the children of such hi the university. He erected four houses at Drogheda for the re- ception of clergymen's widows, and purchased an estate for the endowment of them His chari- ties for augmenting small livings and buying glebes amounted to upwards of Ā£30,000, besides what he devised by will for the like purposes in England. In short, the instances he gave of his generosity, benevolence, virtue, piety, and wis- dom, are almost innumerable ; and the history of his life is his noblest panegyric. This excellent prelate died at London, on the 2d of June 1742, and was interred in Westminster Abbey, where a beautiful monument is erected to his memory.

BOULTINE, in architecture, a convex mould- ing, of one fourth of a circle ; placed below the plinth in the Tuscan and Doric capitals.

BOULTON (Matthew), the celebrated manu- facturer and engineer of Soho, near Birmingham, was born at the latter place the 1 4th of Septem- ber 1728, and educated at the neighbouring grammar school of Deritend. He was early called into life upon the death of his father, which took place in 1745. Inheriting an ample fortune, be devoted it throughout his career of business t the most liberal and scientific modes of accom- plishing the various manufactures in which he engaged. He first attempted a new mode of in- laying steel ; and soon obtained such a demand for the products of his manufactory, which were principally exported, that his articles of this kind were not uncommonly re-imported for do- mestic use.*

In 1762 he purchased the then barren heath of Soho, and transferred thither his establishment at an expense of Ā£10,000. At about the same time he engaged in a new method of copying oil paintings, and accomplished them with such great accuracy, by means of a mechanical process ā¢ invented by a Mr. Egginton, that connoisseurs would frequently mistake the copy for an origi- nal. He was also now employed in the imita-

tion of ormoulu. In 1762 he first erected a steam-engine, upon the imperfect construction of Savary ; but quickly requiring a more power- ful first mover, gladly adopted the improvements of Mr. Watt of Glasgow, who had obtained a patent for them in 1769, the privileges of which were extended in 1775, by an act of parliament, to a term of twenty-five years. Mr. Boulton soon induced that gentleman to remove to Bir- mingham, and commenced a partnership with him in business, for the manufactory of steam- engines. Their execution of them, it is well known, kept pace so well with the advances of science, and the public demand, that the Soho engines were in full request after the expiration of the term of the legal privilege. Principally for the purpose of carrying on this manufactory with greater convenience, the proprietors established an iron-foundry of their own at Smethwick.

Mr. Boulton, in 1785, was made a I'ellow of the Royal Society. Three years after, he turned his attention to the improvement of our public coinage, and erected very extensive and com- plete machinery for the purpose : the coins, it is said, could not be imitated by any single artist for their nominal value; each of the stamps coining, with the attendance of a little boy only

about eighty pieces in a minute. The prepara- tory operation of laminating and cutting out the metal, was performed in an adjoining room ; and all personal communication between the work- men employed rendered unnecessary, by the con- veyance of the work by machinery, from one part of the establishment to another. At this mint, a coinage of silver was executed for the Sierra Leone Company, and another of copper for the East Indies, besides the pence and halfpence at pre- sent in circulation throughout England, together with a large quantity of money of all kinds for Russia. The emperor Paul, in acknowledgment of his skill with regard to the last of these under- takings, presented him with a valuable collection of medals and minerals.

In 1797 Mr. Boulton made some ingenious improvement: in the application of what has been called Montgolfier's hydraulic ram. Da- niel Bernoulli! had demonstrated, in the beginning of the last century, that water flowing through a pipe, and arriving at a part in which the pipe is suddenly contracted, would have its velocity at first very greatly increased ; and Mr. Whitehurst, in 1792, had set up at Oulton, in Cheshire, an air-vesspl, communicating with a waterpipe by a valve which was forced open by the pressure or rather impulse of the water, its passage through the pipe being suddenly stopped by turning a cock, as in the ordinary course of domestic eco nomy ; and although the pipe through which the water was*

forced up, was of moderate height, the air-vessel, which was at first made of lead, was soon burst by the momentous force. Boulton now added to it a number of modifications, which the reader will find in the ninth volume of the Repertory of Arts, p. 145.

This ingenious and worthy man having long been at the head of that important class of scientific manufacturers among whom he was born, died, after a protracted illness, at Hands- worth, near Soho, 24th August, 1809, and was attended to his grave by 600 workmen, each of whom had a silver medal presented to him on the mournful occasion. He left an only son as his successor.

BOULUKE, in the military orders of the Turks, a body of the janissaries, with an officer in the place of a colonel at their head, sent upon some particular enterprise. They are se- lected out of the body, and, as soon as the busi- ness is over, are received again into their for- mer companies.

BOUM, in ancient geography, a town in Ethiopia, beyond Egypt, on the west side of the Nile.

BOUM SOLIS STABULA, in ancient geography, the territory of Myla?, a peninsula on the east coast of Sicily, north of Syracuse ; remarkable for its fertility and rich pastures : whence arose the fable of the oxen of the sun feeding there. Pliny and Seneca say, that something like dung is thrown out on the coast of Mylae and Messina, which gave rise to the fable of the oxen of the sun being stalled there ; and the inhabitants still affirm the same thing.

BOUNCE ,re.& v. ˆ A word formed from the

BOUNC'ING, V sound, says Skinner. Per-

BOUNC'ER. 3 haps from bound, to fly

BOU

back, to be struck back, as a ball. A quick sound; a rapid motion, witli noise returning like an echo upon the ear: to fly against any thing with great force so as to rebound ; to make a sudden leap or explosion ; to be bold ; to boast, to bully. A bouncer is a boaster beyond the truth.

They snuf, they snort, they bounce, they rage, they

rore,

That all the sea, disturbed with their traine, Doth fric with fome above the

surges hore ; Such was between these two the troublesome uprore.

Spenser.

Yet still he bet and bounet upon the dore, And thundred strokes thereon so hideouslie, That all the peece he shaked from the flore ; And filled all the house with feare and great uprore.

Id.

What cannoneer begot this lusty blood 1 He speaks plain cannon fire, and smoke, and bounce ; He gives the bastinado with his tongue. Shakspeare.

The fright awakened Arcite with a start, Against his bosom bounced his heaving heart.. Dryden.

High nonsense is like beer in a bottle, which has, in reality, no strength and spirit, but frets and flies, and bounces, and imitates the passions of a much nobler liquor. Addison.

Just as I was putting out my light, another bounces as hard as he can knock. Swift.

Two hazel-nuts I threw into the flame, And to each nut I gave a sweetheart's name j This with the loudest bounce me sore amazed, That in a flame of brightest color blazed. Gay.

BOUND, v. n. ˆ From the Fr. ban-

BOCND'IXG STONS, n.s.] dir. To be struck back; to bound; to rebound; to leap; jump; to rise suddenly and swiftly upwards; to rise by concussion; repercussion: bounding stone, or boundstone, a stone to play with; a land-mark.

Mark then a bounding valour in our English, That being dead, like to the bullets grazing, Breaks out into a second course of mischief.

Shakspeare.

Due entrance-he disdained, and in contempt At one slight bound high overleaped all bound Of hill or highest wall, and sheer within Lights on his feet. Milton's Paradise Lost,

The horses started with a sudden bound. Addison. I am past a boy ;

A sceptre is but a plaything ā and a globe

A bigger founding-stone. Dryden.

Torrismond appeared,

Gave me his hand, and led me lightly o'er, Leaping and bounding on the billows' heads. Id.

These inward disgusts are but the first bound of this ball of contention. Decay of Piety.

Before his lord the ready spaniel bounds ; Panting with hope, he tries the furrowed grounds.

Pope.

Warbling to the varied strain, advance Two sprightly youths, to form the bounding dance. Id.

When sudden through the woods a bounding stag Rushed headlong down, and plunged amidst the river. Rowe.

The horses started with a sudden bound, And ftung the reins and chariot to the ground.

Adaison.

Dexterous he 'scapes the coach with nimble bounds, Whilst every honest tongue ā Stop thief resounds. Gay.

Thick around

Thunders the sport of those who with a gun And dog, impatient bounding at the shot, Worse than the season, desolate the fields. Thornton

BOU

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BOU

All, all, the storm

Devoured ; and now o'er his late envied fortune The dolphins bound, and watery mountains roar Triumphant in his ruin. Young's Revenge.

BOUND, v. a. & n. s. -\ To limit ; restrict ;

BOUND'ARY, n. s. I circumscribe ; termi-

BOUND'ER, > nate : bound and

Bou ND' LESS, adj. i boundary mean that

BOUND' LESSNESS, n. s.J by which any thing is terminated ; a limit : the other derivatires cor- respond.

And as these heavens still by degrees arise Until they come to their first mover's bound, That in his mightie compasse doth comprize And carrie all the rest with him around. Spenser.

Take but degree away, The bounded waters

Would lift their bosoms higher than the shores, And make a sop of all this solid globe. Shakspeare.

Illimitable ocean ! without bound, Without dimension ; where length, breadth, and

height, And time, and place, are lost. Milton.

Stronger and fiercer by restraint he roars, And knows no bound', but makes his power his shores.

Denham.

Sensation and refiĀ«ction are the boundaries of our thoughts ; beyond which the mind, whatever efforts it would make, is not able to advance. Locke.

God has corrected the boundlessness of his voluptuous desires, by stinting his capacities. South.

Though we make duration boundless as it is, we cannot extend it beyond all being. God fills eternity, and it is hard to find a reason why any one should doubt that he fills immensity. Locke.

Some guide the course of wandering orbs on high, Or roll the planets through the boundless sky. Pope.

Majestic woods of every vigorous green, Stage above stage, high waving o'er the hills, Or to the far horizon wide diffused A boundless deep immensity of shade. Thomson.

Hail social life ! into thy pleasing bounds Again I come to pay the common

stock, My share of service, and in glad return To taste the comforts and protected joys. Id.

Within these woods I reign alone, The boundless forest is my own. Gay.

EovvD,pret., part. pass.,&c adj.) Fastened to-

BOUND'EN, part. pass. & adj. > gether ; laid under obligation : as an adjective, destined ; going to : bounden is obliged to ; as an adjective, required ; necessary.

And with his wif he maketh feste and chere. And telleth hire that chaffare is so dere, That nedes must he make a chevisance, For that he was bonde in a recognizance ; To payen twenty thousand sheldes, anon, For which this marchant is to Paris gone To borwe, of certain frendes that-he hadde, A certain frankes, and some with him he ladde.

Chaucer. Canterbury Tales.

Three hundred foxes toke Sampson, for ire, And all hir tayles he togeder bond, And set the foxes tayles all on fire ; For he in every tayle had knit a brond. Chaucer.

His be that care, whom most it doth concern, Said he ; but whither with such hasty flight Art thou now bound? for well might I discern Great cause, that carries thee so swift and light.

Spenser. Faerie Queene.

Hereafter, in a better world than this,

I shall desire more love and knowledge of you.ā I rest much bounden to you : fare you well. Shake}).

We also most humbly besought him to accept of us as his true servants, by as just a right as ever men on earth were bounden. Bacon.

Princes are not bound to communicate all matters with all counsellors, but may extract and select. Id.

A man may plead not guilty, and yet tell no lie ; for by the law no man is bound to accuse himself.

Selden.

They summoned the governor to deliver it to them, or else they would not leave one stone upon another. To which the governor made no other reply,

than that he was not bound to repair it -, but, however, he would, by God's help, keep the ground afterwards.

Clarendon.

Kings and priests are in a manner bound For reverence sake to be close hypocrites. Dryden.

BOUNTY, 7i. s. } Fr. bonti ; Ital. bon

BOUN'TEOUS, adj. ta ; Span, bondad ;

BOUN'TEOI SLY, adv. Lat. bonitas. Gene-

BOUN'TEOUSNESS, n. s. [rosily; liberality; mu-

BOUN'TIFUL, adj. j nificence ; goodness ;

BOUN'TIFULLY, adv. I gift : it seems distin-

BOUN'TIFULNESS,W. s. | guished from charity,

BOUN'TIHEAD. J as a present from an

alms : bounteous and bountiful mean liberal ; generous : bounteously and bountifully, plenti- fully; largely; in a liberal manner: bounteous- ness and bountifulness are synonymous with bounty: bountihead, or bountihood, goodness; virtue (obsolete).

Bountie cometh all of God, not of the stren Of which they ben ygendred and ybore. I trust in Goddes bountee ; and therefore My marriage, and min estate, and rest, I him betake ; he may don as him lest. Chaucer,

There thou them placest in a paradize Of all delight and joyous happy rest, Where they doe feede on nectar heavenly-wize, With Hercules and Hebe, and the rest Of Venus' darlings through her bountie blest. Spenser.

This goodly frame of temperance, Formerly grounded, and fast settled On firm foundation of true bountihead. Id.

How shall frail pen, with fear disparaged, Conceive such sovereign glory, and great bwmtihor.dJ

Id.

And now tny alms is given, And thy poor starveling bountifully fed. Donne.

It is affirmed that it never raineth in Egypt ; the river bountifully requiting it in its inundation.

Browne's Vulgar Errovrs.

We do not so far magnify her exceeding bounty, as to affirm that she bringeth into the world the sons of men, adorned with gorgeous attire. Hooker

If you knew to whom you show this honor, I know you would.be prouder of the work, Than customary bounty can enforce you. Shakspeare.

Such moderation with thy bounty join, That thou mayest nothing give that is not thine.

Denham.

Though from off the boughs each morn We brush mellifluous dews, and find the ground Covered with pearly grain ; yet God hath here Varied his bounty so with new delights, As may compare with hea"en. Milton.

If you will be rich, you must live frugal ; if you wil be popular, you must be bountiful. Taylor.

Those godlike men, to wanting virtue kind, Bounty well placed, preferred, and well designed, To all their titlea. Dryden.

BOURBON.

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He bounteously bestowed uncn/ied good On me. Id.

Think not the good,

The gentle deeds of mercy thou hast done, Shall die forgotten all ; the poor, the prisoner, The fatherless, the friendless, and the widow, Who daily own the bounty of thy hand, Shall cry to Heaven, and pull a blessing on thee.

Rowe's Jane Shore.

The gods in bounty work up storms about us, That give mankind occasion to exert Their hidden strength, and throw out into practice Virtues that shun the day, and lie concealed In the smooth seasons, and the calms of life.

Addison's Cato.

Hence ! from the bounteous walks Of flowery spring, ye sordid sons of earth, Hard and unfeeling of another's woe, Or only lavish to yourselves. Thomson.

The generous pride of virtue Disdains to weigh too nicely the returns Her bounty meets with ; ā like the liberal gods, From her own gracious nature she bestows Nor stoops to ask reward. Id. Coriolanus.

Whence can such wondrous bounty spring To surh a vain and worthless thing. Rowe,

BOUNTY, in commerce, a premium paid by government to the exporters of certain commodi- ties, as sail cloth, gold and silver lace, silk stock- ings, fish, corn, &c., on their taking oath, or giving bond, not to reland the same in England. BOUNTY OF QUEEN ANNE, for augmenting poor livings under Ā£50 per annum, consists of the produce of the first fruits and tenths, after the charges and pensions payable out of the same are defrayed. A corporation for management of the same was settled, &c., in 1 704. See AUG- MENTATION OF LIVINGS.

BOURBON (Nicholas), a famous Latin poet in the sixteenth century, was a native of Van- deure near Langres, and the son of a wealthy smith. Margaret de Valois appointed him pre- ceptor to her daughter Jane d'Albert of Navarre, the mother of king Henry IV. At length he retired to Conde, where he had a benefice, and died about 1550. He wrote eight books of Epigrams ; and a poem on the forge, entitled Ferraria. He had great knowledge of antiquity and of the Greek language. Erasmus praises his epigrams.

BOURBON (Nicholas), a celebrated Greek and Latin poet, was nephew of the preceding. He taught rhetoric in several colleges of Paris ; and cardinal Perron got him appointed professor of Eloquence in the Royal College : he was also canon of Langres, and one of the forty of the French Academy. He died in 1644, aged seventy. He is esteemed one of the greatest Latin poets France has produced. His poems were printed at Paris in 1651.

BOURBON, a small county of the United States, in Kentucky, oounded on the south-east by Clarke county ; on the south-west by Fayette ; north by Harrison, and north-west by Scott county. Bourbon-town is the chief town.

BOURBON, a river of North America, in La- brador, which issues from Lake Christianaux, passes through Lake Assinipolis, and falls into Hudson's Bay at York factory.

BOURBON, an island in the Indian Ocean about forty-eight miles long, and thirty-six broad,

about 400 miles east of Madagascar. It was discovered by the Portuguese in 1545, and at first called Mascarenhas. The French, however, first settled upon it, in 1642. For some years it was used as a place of banishment for of- fenders ; but in 1649 M. de Flacourt, governor of Madagascar, formed an establishment on a large scale, and gave it the name of Bourbon, in honor of the French royal family. During the revolution it was called Reunion.

The island is composed of two volcanic moun- tains; in the smallest 'of which one considerable crater throws up continually, with terrific noise, flame, smoke, and ashes ; and it makes lateral openings, through which the lava rolls down the sides of the mountain in a sort of fiery cas- cade. The light is seen far out at sea, and serves as a species of pharos. The present crater is said to have been formed during an eruption of the volcano in 1791. A burning vapor ap- peared rising from the summit in the beginning of June; then the side of the mountain opened, and a vast torrent of lava rushed into the sea. On the seventeenth of the following month a subterranean noise, like the discharge of cannon, was heard throughout the island; after which there rose from the top of the mountain an enor- mous column of deep black smoke, interspersed with white spots. Soon after the column fell down, and formed a species of arch over the volcano. The falling in of the interior, under- mined by the previous discharge, is supposed to have been the cause of the tremendous sound, and of the opening of the crater at this time. This is said to be the most active volcano known in history. TEtna, since the Christian era, has counted but twenty-seven eruptions; and Ve- suvius twenty four. A resident at Bourbon told M. Bory, that from 1785 to 1802, the mountain had vomited flames at least twice every year, and eight of the streams had entered the sea. In the northern mountain, though no eruptions have been observed, the rapid rivers, bordered by perpendicular walls, hillocks thrown into the valleys and obstructing the bed of the torrents, and basaltic prisms disposed in regular colon nades, attest the ancient and terrible revolutions that have taken place. The soil around is a deep black, hard and brittle, and full of holes and crevices. In other parts the island is fertile, the air pure, and the climate delicious. The violence, however, of the mountain torrents during the rainy season, has in many places washed away the earth, and reduced the fields to sterility. A line of about four miles parallel to the coast is the only part cleared. Coffee has long been the staple product. The plants were first brought from Mocha in 1718, and throve to such a de- gree, that the coffee of Bourbon was long con- sidered as only second to that of Arabia. But during the revolution the demand became ir- regular, and attention being no longer paid to its culture, the quality deteriorated. The tobacco is of good quality. Iron is found in the moun- tains and the forests, with which a great part of the island is covered, containing wood fit for ship-

building; also aloes, ebony, palm, with a variety of odoriferous gum-trees, particularly benzoin. It produces corn, rice, and maize, more than suf-

ficient for its own consumption, exporting the surplus to Mauritius. The sugar-cane has been cultivated with some success, and a species of fermented liquor extracted from its juice. Horned cattle, hogs and goats, are also abundant. The coasts and rivers are well stocked with fine turtle, and ambergris, coral, and very beautiful shells, are found on the shores. The only noxious animals are rats and mice ; and the chief incon- venience, the very violent hurricanes that occur. They take place from the middle of December to the beginning of April. '

The following is a recent account of the total produce of the island on an average of several years :

Coffee 73,200 cwt. Value 732,000 piastres.

Cloves 180,000 Ibs. ā¢ 540,000

Cotton 240,000 60,000

Grain 185,000 57,000

Maize 2,500,000 21,000

Peas 200,000 4,000

Potatoes 280,000 . 2,800

1,416,800 piastres.

The population of Bourbon has been taken so high as 65,000 ; but Bory St. Vincent, a recent traveller, assures us he found it to contain only 400 white inhabitants and 15,000 slaves. The darker and fairer complexions of mankind are sometimes singularly mixed here. A French writer assures us that he saw in a church one family, consisting of six generations, of all com- plexions. The eldest was a female, 108 years of age, of brown black, like the Indians of Mada- gascar; her daughter a mulatto; her grand-daughter, a mestizo ; her great grand-daughter, of a dusky yellow ; her daughter, again, of an olive color ; and the daughter of this last, as fair as any English girl of the same age. It has nine parishes but not a single good

harbour, and along the whole coast sunken rocks abound.

BOURBON LANCY, a town of France, in the department of the Saone and Loire, and late pro- vince of Burgundy. It is remarkable for its castle and hot mineral waters ; and has a large marble pavement, called the Great Bath, which is a work of the Romans. It is thirty-five miles south-east of Autun, and contains 2300 inha- bitants.

BOURBON L'ARCHAMBAUD, a town of France, in the department of the Allier, and late province of Bourbonnois. It is situated in a valley, near the river, and is remarkable for its hot baths, and for giving name to the family of the late un- fortunate king of France. It is fourteen miles west of Moulins, and 362 south of Paris. Popu- lation about 2800.

BOURBON VENDEE, a small town of France, in Lower Poitou, and the department of Vendee, of which it is the capital. It was called Na- poleon during the reign of Buonaparte. In the vicinity of this town the royalists experienced a signal defeat, on the 28th of December, 1795. In 1807 the inhabitants were under 1000 in number, but have since increased considerably. BOURBONNE-LES-BAINS, a town of France, in the department of the Upper Marne, and late province of Champagne, famous for its hot baths.

It is twenty miles east of Langres, and has a population of about 3000.

BOURBONNOIS, a province and govern- ment of Old France,, bounded on the north by Nivernois and Berry ; on the west by Berry and part of Marche ; on the south by Auvergne ; and on the east by Burgundy and Forez. It is watered by the Loire, the Allier, and the Cher ; and abounds in corn, fruit, pasture, wood, game, and wine. It now forms the greater part of the department of the ALLIER, which see.

BOURBONTOWN, a post town of Kentucky, and capital of the county of Bourbon, seated on the west side of the river Stony-fork. It is a flourishing town, and has several valuable mills adjacent to it. It lies twenty miles north-east of .Lexington, sixty east of Frankfort, and 754 from Philadelphia.

BOURBOURG, a town of France, in the de- partment of the North, seated on a canal that goes to Dunkirk.

BOURCHIER (John), lord Berners, grand- son and heir of a lord of the same name, was created a knight of the Bath, at the marriage of the duke of York, second son of Edward IV. and was first known by quelling an insurrection in Cornwall and Devonshire, raised by Michael Joseph, a blacksmith, in 1495, which recom- mended him to the favor of Henry VII.

He was captain of the pioneers at the siege of The- rounue, under Henry VIII. by whom he was made chancellor of the exchequer for life, lieutenant of Calais and Marches, appointed to conduct the lady Mary, the king's sister, into France, on her marriage with Louis XII. and had the ex- traordinary good fortune to continue in favor with that fickle tyrant for eighteen years. He died at Calais in 1532, aged sixty-three. He translated Froissart's Chronicle, printed in 1513, by Richard Pinson, the fifth on the list of English printers. His other works were a whimsical medley of translations, from French, Spanish, and Italian novels ; viz. the Life of Sir Arthur, an Armorican Knight; the Famous Exploits of Sir Hugh of Bourdeaux ; Marcus Aurelius ; and the Castle of Love. He wrote also a book of the duties of the inhabitants of Calais ; and a comedy, entitled Ite in Vineam, which is men- tioned in none of our catalogues of English plays. Wood says it was usually acted at Calais after Vespers.

BOURCHIER, BOWSCHYRE, or BOWCER (Thomas), archbishop of Canterbury, in thĀ» successive reigns of Henry VI., Edward IV., Richard III., and Henry VII., son of William Bourchier, earl of Eure, in Normandy. He was made chancellor of Oxford in 1433, and at the same time promoted to the see of Worcester. In 1443 he was translated to the bishopric of Ely, and in 1454 was elected archbishop of Can- terbury. He was the principal promoter of the introduction of printing to this country.

BOURDALOUE (Louis), a celebrated preacher among the Jesuits, and one of the greatest orators France has produced, was born at Bourges, on the 20th of August, 1632. After having preached at Provence, he, in 1669, went to Paris; and there met with such applause, that the king re- solved to hear him ; on which he was sent for to

rourt, and frequently preached before Louis XIV. He assisted the sick, visited the prisoners and hospitals, and was liberal in giving alms. He died at Paris on the 13th of May, 1704. The first edition of his sermons, in 16 vols., is the best.*

BOURDEAUX, an ancient and large com- mercial town of France, in the department of the Gironde, and ci-devant province of Guienne. It has a university founded in 1441 ; and an aca- demy of arts and sciences, established in 1712, to which belongs a valuable library. Before the revolution it was the capital of the Bordelois, and of the whole of Guienne. It is built in the form of a bow, of which the Garonne is the string. This river is bordered by a noble quay, and, the water rising four yards at full tide, the largest vessels can come up to it very readily. A castle, called the Trumpet, improved by Vauban, was seated at the entrance of the quay, and

the river went round its walls, but it has been long destroyed. Most of the great streets lead to the quay. The town has twelve gates, opening towards the river; and near another castle are beautiful walks. Though considerable in point of size, it was anciently ill built, badly paved, and without police. But it is said to have entirely changed its appearance within the last forty years. The remarkable public edifices are the exchange, the palace, founded by Buonaparte in 1810, an old palace of the dukes of Guienne, and an elegant theatre. The cathedral and some other churches are also admired. The streets newly built are regular and handsome. The beauty of the Garonne, and the fertility of the adjoining country, were probably the causes which induced the Romans to lay the foundation of this city. It was called by them Burdigala. The ruins of a large amphitheatre remain, which was constructed under the emperor Gallienus. During the irruptions of the barbarous nations, Bourdeaux was ravaged, burnt, and almost en- tirely destroyed. It only began to recover itself under our Henry II. who having united it to the English crown, by his marriage with Eleanor of Aquitaine, rebuilt the city, and endeavoured to restore it to its ancient lustre. Edward Fthe Black Prince received Guienne, Gascony, and many inferior provinces, in full sovereignty from his father, Edward III. In 1356 he brought his royal captive, John, king of France, to this city, after the battle of Poictiers ; and held his court and residence here during eleven years. His exalted character, his uninterrupted series of good fortune, his modesty, his affability, and his munificence, drew strangers to Bourdeaux from every part of Europe. His son, Richard II. was born in it. In 1453 Charles VII. king of France, re-entered the city, and subdued the whole province of Guienne, which had been near three centuries under the English govern- ment. Conscious of the importance of such a conquest, he ordered the Chateau Trompette to be built to defend the passage of the river. In 1548 an insurrection arose on account of an op- pressive salt-tax, and among the excesses com- mitted, was the murder of De Morems, the governor. For this the town was severely punished by the constable Montmorency. Bour- VOL IV.

deaux contains upwards of 100,000 inhabitants, and has a flourishing trade in wine and brandy; lOOjOOO pipes of the former are sometimes ex- ported in a year. There are fourteen sugar refineries, glass-houses, and manufactures of woollen stuffs, earthenware, and lace. The rivers Garonne and Dordogne give it access to a vast range of country, and the maritime com- merce of the city is only second to that of Marseilles. Its prosperity has great influence on the whole south-west of France. Raisins, vinegar, plums, chestnuts, walnuts, wood, tur- pentine, cork, honey, and hams, are other . objects of exportation. The principal imports are ; from England, woollen stuff" tin, lead, coal, herrings, salted flesh, leather, uye stuffs, and

different kinds of provisions ; from Holland, Denmark, and Sweden, staves, deals, timber for ship-building, hemp, pitch, copper and cheese. The Bourdeaux merchants take a part in the whale and cod fisheries, through the medium of the ports of Bayonne, St. Jean de Luz, and St. Malo. The intercourse with the United States is greatly on the increase. The course of" ex- change comprises London, Antwerp, Amsterdam, Hamburgh and Paris, besides the principal trading towns in France. Two yearly markets, for the wine trade, a fortnight each, are held in March and October. Bourdeaux, during the late revolution, having attached itself to the Girondists, became the open enemy of the con- vention, and received a treatment similar to that of Lyons and Marseilles. The most opulent and respectable inhabitants were banished or guillotined, and their property confiscated. After the re-establishment of order under Buonaparte, the town was beginning to recover from its sufferings, when the war of 1803 broke out, and dissipated for a time its fair prospects of ex- tensive trade with England. In 1814 Bour- deaux was the first place which declared for the Bourbons.

The Bordelois, or district of Bourdeaux, is twenty-eight miles long and ten broad. The soil is well cultivated, and produces great quan- tities of the wine so well known as the vin de Bourdeaux, or claret. It now forms the greater part of the arrondissement. Fifty-five miles south of Saintes, ninety south of La Rochelle, 280 W. S. W. of Lyons, and 325 south-west of Paris.

BOURDELOT (John), a learned French critic, who lived at the close of the sixteenth and beginning of the seventeenth centuries. He distinguished himself by writing notes on Lucian, Petronius, and Heliodorus ; by a Uni- versal History ; Commentaries on Juvenal; and a Treatise on the Etymology of French words. He also wrote many other works which have never been published.

BOURDELOT (Peter) was sister's son to John, to oblige whom, he changed his name from Michon. He had the title of Abbe, and was a celebrated physician at Paris, and gained great reputation by a Treatise on the Viper, and other works. He died in 1635.

BOURDIN, a name given by Bellonius to a genus of univalve shell-fish, commonly known among authors by the name of auris marina.

BOURDON (Sabastian), a famous painter,

born at Montpellierin 1616. He studied seven years at Rome, and acquired such reputation, that at his return to France he was made rector of the academy of painting at Paris. He suc- ceeded better in landscapes than in history painting. The most esteemed of all his per- formances is the martyrdom of St. Peter, drawn for the church of Notre Dame : it is kept as one of the choicest rarities of that cathedral. In 1652 Bourdon went to Stockholm, where queen Christina appointed him her first painter. After continuing in Sweden some time, he returned to France, and obtained abundant employment. Among his best performances at this period, were a Dead Christ, and the Woman taken in Adultery. There are also a great number of his etchings, which are executed in a bold masterly style, and are justly held in the highest estimation by the generality of collectors. He died in 1673, aged sixty-four.

BOURG EN BRESSE, a town of France, in the departmentof the Ain,, and ci-devant province of Bresse. Near this place was the magnificent church and monastery of the late Augustines, the mausoleum of Margaret of Austria, aunt of Charles V. It was the birth-place of the cele- brated astronomer, La Lande. It stands on the river Reyssouse and carries on a trade in grain, cattle, and hides ; it has likewise manufactures of coarse stuffs and combs. Twenty miles east of Macon, forty-two west of Gex, and 260 south- east of Paris.

BOURGEOIS (Francis), born in London, of Swiss parents, in 1756. His early destination was the army ; but, evincing a taste for painting, he was placed under Loutherbourg, whose style he adopted. In 1776 he went to Italy, and on his return exhibited several specimens of his talent at Somerset-house. In 1791 he was ap- pointed painter to the king of Poland, who con- ferred on him the honor of knighthood. Three years afterwards his late majesty George III. nominated him his landscape painter ; and he was admitted a member of the Royal Academy. Some time before his death he became possessed, by the bequest of Mr. Noel Desenfans, of a noble collection of pictures, which he left to Dulwich college, together with Ā £10,000 to keep them in preservation ; Ā£2000 for the repair of the gallery, and Ā£1000 to the master and fellows of that foundation. Sir Francis died the 8th of January, 1811.

BOUR'GEON, v. Ā«., of uncertain origin. Fr. bourgeonner. To operate; to shoot into branches ; to put forth buds.

Long may the dew of heaven distil upon them, to make them bourgeon and propagate among themselves.

Howel.

O that I had the fruitful heads of Hydra, That one might bourgeon where another fell ! Still would I give thee work. Dryden.

BOURGES, an ancient town of France, in the department of the Cher, and forming the capital of the province of Berry. It has a uni- versity, founded or restored by Louis XI. who was born here. Although in extent it is one of the largest cities in France, the inhabitants hardly amount to more than 18,000, and their trade is in- considerable. Bourges was also the birth-place of

the celebrated preacher Bourdaloue, The nobility, clergy, and students, who reside here, are the chief supports of the town, but there are manu- factures of silk, woollen, and cotton stuffs, as well as of stockings, caps, a.id other articles of clothing. The chief objects of trade are corn, wine, cattle, wool, hemp, and cloth.

This city was the Avaricum of the ancients, so called from the river Avara, now the Yevre. Caesar took it by storm after a protracted siege, and regarded it as one of the best fortified towns in Gaul. Besides being the capital of the de- partment of the Cher, Bourges is the head- quarters of the commandant of the twenty-second military division, the seat of a royal court for the departments of the Cherf the Indre, and thp Nievre, and the head of an arrondissement, which contains ten cantons. Thirty-six miles north- west of Nevers, sixty-one south-east of Orleans, eighty-four east by south of Tours, and 155 south of Paris.

BOURGET (Dominic John), an ingenious French antiquary, was born at the village of Beaumains, near Falaise, in the diocese of Seezr in 1724. He was educated at Caen, and pursued his studies with great diligence and success till 1745, when he became a Benedictine monk of the abbey of St. Martin de Seez. Some time after, he was appointed prior, and went through several successive promotions till at last he was removed to the abbey of Bee, where he resided till 1764. He was elected an honorary member of the Society of Antiquaries of London, Ja- nuary 10th, 1765; in which year he returned to the abbey of St. ˆStephen, at Caen, where, he continued to the time of his death. These honorable offices, to which he was promoted on account of his great abilities, enabled him not only to pursue his favorite study of the history and antiquities of some of the principal Bene- dictine abbeys in Normandy, but likewise gave him access to all their charters, deeds, registers, books, &c. These he examined with great care, and left behind him in MS. large and accurate accounts of the abbeys of St. Peter de Jumieges, St. Stephen, and the Holy Trinity, at Caen, founded by William the Conqueror and his queen Matilda, and a very particular history of the abbey of Bee. These were all written in French. The History of the Royal Abbey of Bee, which he presented to Dr. Ducarel in 1 764, is

only an abstract of his larger work. This ancient abbey, which has produced several archbishops of Canterbury, and other illustrious prelates of this kingdom, is frequently mentioned by our old historians. He died 1st of January, 1776, much regretted.

. BOURGOGNE, or BURGUNDY, a ci-devant province of France, bounded on the east by Franche Comte, on the west by Bourbonnois and Nivernois, on the south by Lyonnois, and on the north by Champagne. It is fertile in corn, fruits, and excellent wines. It is 112 miles in length, and seventy-five in breadth ; and is now formed into the four departments of Cote d'Or, Saone and Loire, Yonne, and Ain. It is watered by the rivers Seine, Ain, Dehune, Bre- bince, Armancon, Ouche, Suzon, Tille, and Saone. Dijon was the capital.

BOURGOING, a traveller, was born of a good family, at Nevers, November 20th, 1748. He was brought up in the military school at Paris; and at the age of seventeen sent to Strasburg, where he studied the law. He received a commission, at the end of three years, in the regiment of Auvergne ; and, when scarcely twenty } he was appointed secretary of legation at the Diet of Ratisbon. In 1777 he went as first secretary to M. de Montmorin, in the embassy in Spain ; and eight years afterwards became charge d'affaires at Madrid. In 1787 he was sent as minister plenipotentiary to Ham- burgh; and in 1791 revisited Spain in the same capacity. Here he remained until 1793. In 1801 he was appointed by Buonaparte, then first consul, on a mission to the court of Denmark, and afterwards to Stockholm. In 1808 he went as minister plenipotentiary to the court of Dresden, where he contracted a disorder which terminated his life at Carlsbad, July 29th, 1811. His works are : 1. Nouveau Voyage en Espagne, ou Tableau de 1'Etat actuel de cette Monarchic, 3 vols 8vo. 1789, but afterwards republished with the title of Tableau de 1'Espagne Moderne. 2. Memoires Historiqnes et Philosophiques, sur Pie VI. et sur son Pontificat, 2 vols. 8vo. 1798. 3. Histoire des Flibustiers, traduite de I'Allemand de M. d'Archenholz, 8vo. 1804. 4. Histoire de 1'Empereur Charlemagne, traduction libre de FAIlemand du Prof. Hegewisch, 8vo. 1805. 5. Correspondence d'un jeune Militaire, ou Memoires du Marquis de Lusigny et d'Hor- tense de St. Just, 2 vols. 12mo. 1808. He was also the editor of Voltaire's Correspondence with Bernis, and some other books.

BOURGUIGNONS, or BURGUNDIANS, one of the northern nations who

over-ran the Roman empire, and settled in Gaul. They were of a great stature, and very warlike ; for which reason the emperor Valentinian the Great engaged them in his service against the Germans. They lived in tents close to each other, that they might the more readily unite on any unforeseen attack. These conjunctions of tents were called burgts ; and they served them for towns. Sidonius Apollinaris tells us, that they wore long hair, took great pleasure in singing, and were fond of praise for their vocal talents. He adds, that they ate great quantities; and anointed their hair with butter, deeming that unction very or- namental. Their crown was at first elective, and the authority of their kings depended on their success. They were not only accountable for their own misconduct, but likewise for the calamities of nature and fortune. They were deposed if they lost a battle ; if they succeeded ill in any enterprise ; or if, in short, any great event had not corresponded with the hopes of the people. They were not more favorably treated in case of a bad harvest or vintage, or if any epidemical distemper ravaged the state. At first they were governed by many kings, and Ilendin was the title of the royal dignity. But in later times they were subjected to one sovereign ; and on the introduction of Christianity, they grew humane and civilised. Before that epoch, their religion was much the same with mat of the other northern nations. They had many

Eiests, the chief of whom was entitled sinistus. e was perpetual, and they paid him great respecl.

BOURlGNON (Antoinetta), a famous enthu- siastic preacher, and pretended prophetess, bora at Lille, in 1616. At her birth she was so de- formed, that it was debated some days in the family whether it was not proper to stifle her as a monster; but her deformity diminished, and she was spared ; and afterwards obtained such a degree of {beauty, that she had her admirers. From her childhood to her old age, she had an extraordinary turn of mind. She set up for a reformer, and published a great number of books filled with very singular notions; the principal of which are entitled, The Light of the World ; The Testimony of Truth ; and The Renovation of the Gospel Spirit. She was an enemy to reason, which she maintained ought to give place to the illumination of divine faith ; and asserted, that whenever any one was born again by embracing her doctrine, she felt the pains and throes of a woman in labor. With regard to the jarring doctrines of predestination and free-will, which philosophers, divines, and metaphysicians, in all ages, have puzzled them- selves in vain to reconcile, she cut the Gordiau knot at once ; by asserting, that although God can foresee every future event, yet his power being equal to his wisdom, he withholds from himself the foreknowledge of the actions of those to whom he has given free-will, and thus leaves them entirely free to act as they please ; without which, she affirms, he could not be just in pu-

nishing their sins. She dressed like a hermit, and travelled to France, Holland, England, and Scotland. In the last she made a strong party, and some thousand converts, and died at Franeker, in Friesland, October 30th, 168C Her works have been printed in eighteen vols>. 8vo. An Apology for her life and opinions was written by professor Garden, of Aberdeen.

BOURIGNONISTS, a name given to the followers of Antoinette Boungnon, who set up a kind of quietism, pretending to be guided by immediate revelation.

BOURN, n.s. Ang.-Sax. byrna, burn; Dutch born; Germ, born, brunn; Swed. brunna ; from rinnan, berinnan, brinnan, to run. A brook ; a torrent: hence many towns seated near brooks have names ending in bourn.

Diverse Bournes sodainly brake out of the hollowe places of the earth, and overflowed a great part of Canterbury cittie, the streame whereof run so swift and violent that it bare down buildings and houses, and drowned manie people. Stow. Ann. 1271.

Ne swelling Neptune, ne loud thundering Jove, Can change my cheer, or make me ever mourn ; My little boat can safely pass this perilous bourn.

Spenser.

BOURN, n. s. Fr. borne. A bound ; a limit ; the end or furthest compass of a thing.

Bourn, bound of land, tilth, vineyard, none.

Shakspeare.

That undiscovered country, from whose bourn No traveller returns. Id.

False,

As dice are to be wished by one that fixes No bourn 'twixt his and mine Id,

BOURN, an ancient market town of Lincoln- shire, seated on a rivulet. It was the birth-

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place of the great Lord Burleigh and the unfor- tunate Dr. Dodd. King Edmund was crowned in it. It has a good corn market, and three fairs. It is seventeen miles north of Peter- borough, thirty-five south of Lincoln, and ninety-seven north of London.

BOURNE (Vincent), a modern Latin poet, was educated at Westminster school, whence he removed to Trinity College, Cambridge, and took the degree of M.A. in 1721. He after- wards occupied for some years the situation of under-master at Westminster, and died in this situation in 1 747. His character was respectable, but his habits and manners so contrary to those of common life, as to expose him frequently to the pleasantry of his pupils. His poems, consisting of originals and translations, have been often printed. ā ‘ I love the memory of Vinny Bourne,’ savs the amiable Cow per to his friend Unwin. 1 think him a better Latin poet than Tibullus, Propertius, Ausonius, or any of the writers in nis way, except Ovid, and not at all inferior to him. It is not common to meet with an author who is always entertaining and yet always harmless, and who though always elegant and classical, to a degree not always found in the classics them- selves, charms more by the simplicity and play- fulness of his ideas, than by the neatness and purity of his verse. Yet such was poor Vinny.’ Vide Hayley’s Life of Cowper.

BOURNONIT E, in mineralogy, an ore found in Cornwall containing copper, lead, and anti- mony, mineralised by sulphur, it is named after its discoverer the Comte de Bournon.

BOURO, one of the Molucca Islands in the East Indian ocean, the largest next to Ceram. It is well cultivated, and subject to the Dutch, who have built a fortress in it, near the only town of the Island, called Cayeli. It is about seventy-five miles in length by forty broad. Some of its mountains are exceedingly high, and the sea on each side is uncommonly deep. Here is also an internal lake, said to increase periodi- cally; and to have an island in the middle which appears and disappears at particular seasons. The inhabitants consist of two races, besides the Dutch settlers; the aborigines, or Alforese, and, the Moors, or Mahommedans. The former are a savage pagan tribe, of whom, living in the in- terior, little is known, they seem to be under some imperfect control from their chiefs, and are apparently of the same race that formerly inhabited Amboyna and Borneo. The Moors acknowledge the authority of the Dutch, and have also chiefs who are generally at the seat of the Dutch government. They are not a warlike race, and are in great dread of the Papuas : are said to be ignorant of the value of money ; and readily exchange provisions and cayooputi oil, for red and white China handkerchiefs, Cayeli Koad is on the north-east coast, a spacious secure harbour, much frequented by English whalers. Here is a river called by the natives Aer-Bessar, or the Great Water; the Dutch fort;

and a small garrison. Rice and Sago flour are produced here in large quantities ; as are also oranges, lemons, citrons, and pepper. The cayooputi tree, or melaleuca latifolia, is very plentiful : the natives obtain much cayooputi oil by distilling the leaves.

Fine hard timber also, including many kinds of beautiful wood for inlaying, is also found, and is in great request among the Chinese ; besides black and white ebony, teak, Sec. Fish is not plentiful, but turtle may be obtained, and the shores are covered with beautiful shells. Wild boars, snakes of all sizes, goats, and deer, inhabit the woods, among the latter is the babirusa, or true hog deer. Buffaloes are kept by the Dutch. The river Abbo likewise affords shelter to im- mense alligators, which are said in some cases to attack people in boats. Bouro was once subject to the king of Ternati ; but the Dutch influence has been long predominant; they principally value it as yielding rice and sago for Amboyna, from which it is distant fifty-five miles west. Their fort stands in long. 12Ā° 4′ E., lat. 3Ā° 24′ S.

BOURTANG, a town and fortress of Gronin- gen, in the Netherlands, surrounded by an exten- sive morass of the same name, which extends to Lower Munster. It was taken by the Spaniards in 1593 ; besieged unsuccessfully by the bishop of Munster in 1672, and taken by the French in 1795. It is twelve miles S. S. W. of Winschoten.

BOUSE, v. n.) Dutch buysen. According

Bou'sv, adj. $ to Kilian,. the buyse is a cup with two handles, which, on account of its size, is taken up and set down with both hands : hence to drink lavishly ; to tope : bousy is a little in liquor; drunken.

As he rode, he somewhat still did eat, And in his hand did bear a bousing can, Of which he sipt. Spenser.

With a long legend of romantick things, Which in his cups the bousy poet sings. Dryden.

The guests upon the day appointed came, Each bousy farmer with his simpering dame. King.

BOUSTROPHEDON, in literature, an an- cient method of writing among the Greeks, wherein the lines were continued forwards and backwards, like the forrows in ploughing. Pau- sanias mentions several ancient inscriptions written in this manner : the laws of Solon are also said to have been thus written. The second line is turned on the contrary side, beginning at the end of the former, thus : ā EK AIDS AP-

BOUT, n. s. See BOUGHT. Ital. lotto, a turn ; as much of an action as is

performed at one time, without interruption; a single part of any action carried on by succesive intervals.

The play began : Pas durst not Cosma chase ; But did intend next bout with her to meet. Sidney.

Ladies, that have your feet Unplagued with corns, we'll have a bout. Shakapeare.

When in your motion you are hot, As make your bouts more violent to that end, He calls for drink. Id.

If he chance to 'scape this dismal bout, The former legatees are blotted out. Dryden.

A weasel seized a bat ; the bat begged for life : says the weasel, I give no quarter to birds : says the bat, I am a mouse ; look on my body : so she got of! for that bout. L' Estrange.

We'll see when 'tis enough, Or if it want the nice concluding bout. King.

BOUTADE, in music, an irregular flight or movement, without art or study.

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BOUTAEL, in ichthyology, the name of an East Indian fish, of the lamprey kind, called also neegen oogen, and by Mr. Ray, lampetra Indica. It is caught intakes, ponds, and other standing waters, and is a very wholesome and well tasted fish. From its general description, it seems to be rather of the mustela than the lampetra kind ; but if, as its name expresses, it has several apertures for the gills, its Dutch name signifying nine eyes, it is absolutely a new genus.

BOUTANT, or ARCH-BOUTANT, in architec- ture, an arch, or part of an arch, abutting against thegroinsof a vault to prevent its giving way.

BOUTANT PILLAR, a large chain or pile of stone, made to support a wall, terrace, or vault.

BOUTE, in the manege, an epithet for ahorse, when his legs are in a straight line from the knee to the coronet : short-jointed horses are apt to boute, but not long-jointed ones.

BOUTON, an island near the south-east coast of Celebes, about eighty-five miles in length, by twenty to thirty in breadth. It is high and woody, abounding in fruits and vegetables, and on the whole not ill cultivated.

Buffaloes are found wild in large herds ; and in the woods there are deer and wild boars. The inhabitants are of tawny complexion, short stature, and very ugly. On the coast they speak the Malay language, and are Mahommedans. The Island is well peopled, but little known internally ; its peace is constantly -disturbed by the invasion of pirates ; who however are frequently captured by the natives, and sold as slaves. It is said to be governed by a sultan, whose dominion extends over the neighbouring island Pahgesana, and some others. His residence is at the town of Bouton, in a stone fort. This town is at the top of a steep declivity near the entrance of the straits, on the north -west coast, and is surrounded with thick walls. The streets are straight and narrow ; and the houses built of bamboo, covered with palm leaves, consist but of one story. The inhabitants manufacture a quantity of cotton cloth ; of very fine texture, and bearing a good price. They barter for hardware and cutlery, but prefer money. The Dutch formerly had a factory, together with a detachment and an officer, here ; but after these had been massacred, about a century ago, they were not replaced. Forts are built throughout the country, on the most inaccessible heights. The town of Bouton is in long. 123Ā° 30′ E., lat. 5Ā° 28′ S.

BOUTONNE, a river of France in the depart- ment of the Lower Charente, which rises in the ci- devant province of Poitou, becomes navigable at St. Jean D'Angely, and falls into the Charente. BOW, v. a.,v. n. Sen. s. ~] {Saxon bujen.

BOW'YER, n. s.

BOW'BEARER,

BOW'BENT, adj. BOW'HAND, n. s. BOW'LEGGED, adj. BOW'MAN, n. s. BOW'SHOT,

Bow'STRIXG.

how) is an act of reverence, or submission, by bend- ing the body ; a bow, pronounced like know, is an instrument of war ; a rainbow ; an instrument with which tlie violin, See., is struck ; the doubling

To bend ; curve ;

incline ; depress :

to suffer flexure ; ˆā¢make obeisance ; I stoop; sink under

pressure; a bow | (pronounced, as is J also the verb, like

of a string in a slip-knot. In every application of this word, however its modes of signification may be affected by its connexion, it always re- tains the meaning of bend, or curve. The deri- vatives require no explanation.

I do set my bow in the cloud, and it shall be for a token of a covenant between me and the earth.

Genesis, ix. 13. He saw beforn him ride A gay yemau under a forest side ; A bow he bore, and arwe bright and kene. He had upon a courtepy of grcne, An hat upon his hed with fringes hlakc, Sire, quod the Sompnour, haile, and wel atake. Id.

She sees her son, her God, Bow with a load Of borrowed sins ; and swim In woes that were not made for him.

Crculiaw's Sancta Maria Dolorum. Ye gods of love that pitie lovers painc, (If any gods the paine of lovers pitie), Looke from above, where you in joys remaine, And bow your cares unto my doleful dittie. Spenser.

Perdie with love thou diddest fight ; I know him by a token. For once I heard my father say, How he him caught upon a day, ā¢(Whereof he will be wroken,) Entangled in a fowling net, Which he for carrion crows had set, That in our pear-tree haunted ; He said he was a winged lad, But bowe and shaftes as then none had, Els had he sore been daunted. Id,

Cupid and my Campaspe played At cards for kisses, Cupid paid ; He stakes his quiver, bow, and arrows, 4Iis mother's doves, and team of sparrows j Loses them too, then down he throws The coral of his lip, the rose Growing on's cheek (but none knows how), With these the crystal of his brow, And then the dimple of his chin, All these did my Campaspe win. At last he set her both his eyes, She won, and Cupid blind did rise. O Love has she done this to thee, What shall, alas ! become of me !

Lyly's Alexander and Campatpe. As the ox hath his bow, Sir, the horse his curb, and the faulcon his bells, so man hath his desire. Shahspeare.

A threepence bowed would hire me, Old as I am, to queen it. Id.

Orpheus, with his lute, made trees, And the mountain tops that freeze, Bow themselves when he did sing. Id.

Rather let my head

Stoop to the block, than these knees bow to any, Save to the God of

heaven, and to my king. Id. Surely he shoots wide on the bow-hand, and very far from the mark. Spenser's Ireland,

This is the great idol to which the world bowi ; to this we pay our devoutest homage. Decay of Piety.

The white faith of history cannot show That e'er the musket yet could beat the bow.

Alleyne'i Henry VII. 'A sybil old, bow-bent with crooked age, That far events full wisely could presage. Milton.

To bow and sue for grace, With suppliant knee, and deify his power, Who from the terror of this arm so late Doubted his empire ; that were low indeed ; That were an ignominy and shame beneath This downfall. Milton's Paradise Lott.

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Their instruments were various in their kind ; Some for the bow, and some for breathing wind : The sawtry, pipe, and hautboy's noisy band, And the soft lute trembling beneath the touching hand. Dry den's Fables.

A warped bow, though strung with silken threads, And crooked arrowes, tipt with golden heads. Delight not archers, yet such uselesse toyes Be fit enough for buglers and for boyes.

George Wither.

Good folks take heed ; for here's a wanton wagge, Who, having bowes and arrowes, makes his bragg ā¢ That he hath some unhappy trick to play ; And vows to shoot at all he meets to-day. Pray be not carelesse ; for the boy is blinde, And sometimes strikes where most he seemeth kinJe: This rambling archer spares nor one, nor other ; Yea otherwhile the monkey shoots his mother. Id.

Curse on this love, this little scare-crow love That frights fools with his painted bow of lath Out of their feeble senses. Otway's Orphan.

Though he were not then a bow-shot off, and made haste ; yet, by that time he was come, the thing was no longer to be seen. Boyle.

Some clergy too she would allow, Nor quarrelled at their awkward bow.

Swift. They smile and bow, and hug and shake the hand, Even while they whisper to the next assistant Some cursed plot to blast its owner's head

Heller's Injured Innocence.

Now wasting years my former strength confound, And added woes may bow me to the ground. Pope.

Yet still a lover's warmth he shows, And makes his visits and his bows. Someroille.

There the sycophant, and he That with bare-headed and obsequious bows Begs a warm office, doomed to a cold jail And groat per diem, if his patron frown.

Cowper's Task.

Meantime refracted from yon eastern clouds, Bestriding earth, the grand ethereal bow Shoots up immense, and every hue unfolds In fair proportion, running from the red To where the violet fades into the sky. Thomson. Perchance she died in youth : it may be, bowed With woes far heavier than the ponderous tomb That weighed upon her gentle dust ; a cloud Might gather o'er her beauty, and a gloom In her dark eye, prophetic of the doom Heaven gives its favorites ā early death. Byron.

Or view the Lord of the unerring bow, The God of life, and poesy, and light, The sun in human limbs arrayed, and brow All radiant from his triumph in the fight ; The shaft hath just been shot, the arrow bright With an immortal's vengeance ; in his eye And nostril beautiful disdain, and might, And majesty, fiash their full lightnings by. Id.

Bow, an elastic instrument, bent in form of an arc by means of a string fastened to its two ends, used to shoot, or throw out, pointed weapons called arrows. It is the most ancient, and the most universal of weapons. It has been found to obtain among people who had little or no communication with the rest of mankind. Bar- barous nations often excel in the fabric of the particular things for which they have the greatest necessity in the common offices of life. Hence the Laplanders, who support themselves almost entirely by hunting, have an art of making bows, which we, in these improved parts of the world,

have never arrived at. Their bow is made of two pieces of tough and strong wood, shaved down to the same size and flatted on each side ; the two flat sides of the pieces are brought closely and evenly together, and then joined by means of a glue made of the skins of perch, which they have in great plenty, and of which they make a glue superior in strength to any which we

have. The two pieces, when once united in this manner, will never separate, and the bow is of much more force to expel the arrow, than it could possibly have been under the same di- mensions if made of only one piece. Among the ancients, the bow-string, called aoi\waiq , was made of horse hair, and hence also called nrvua ; though we find Homer's bow-strings frequently- made of hides cut into small thongs ; whence To%a /3oĀ«a. The uppermost part of the bow, to which the string was fastened, was called Kopwvn, being commonly made of gold, and the last thing towards finishing the bow. The Gre- cian bows were frequently beautified with gold or silver; whence we have mention of aureus arcus ; and Apollo is called ApyuporoĀ£oc. But the matter of which they were ordinarily composed seems to have been wood ; though they were anciently, Scythian-like, made of horn, as appears from that of Pandarus in Homer's Iliad. S. v. 105. The invention of the bow is usually ascribed to Apollo, by whom it was communicated to the primitive inhabitants of Crete, who are said to have been the first people who understood the use of bows and arrows. And hence, even in later ages, the Cretan bows were famous, and preferred by the Greeks to all others. Some, however, rather choose to honour Perses, the son of Perseus, with the invention of the bow ; while others as- cribe it to Scythes, son of Jupiter, and progenitor of the Scythians, who were excellent at this art, and by many reputed the first masters of it. From them it was derived to the Grecians, some of whose ancient nobility were instructed by the Scythians in the use of the bow, which in those days passed for a most princely education. It was first introduced into the Roman army in the second Punic war. The Scythian bow was famojus for its incurvation, which distin- guished it from the bow of Greece and other nations ; being so great as to form a half moon or semicircle : whence the shepherd in Athenaeus, in describing the letters in Theseus's name, and expressing each of them by some apposite resem- blance, compares the third to the Scythian bow ; meaning not the more modern character 2, but the ancient C, which is semicircular, and has the third and sixth place in 0HCEYC. The Indians still retain the bow. In the repository of the Royal Society there is a West Indian bow two yards long. The use of the bow and arrow was first abolished in France under Louis XL in 1481, and in their place was introduced the Swiss arms ; viz. the halberd, pike, and broad sword.

The long bow was formerly in great vogue in England ; most of our victories in France were acquired by it ; and many laws were made to regulate and encourage its use. The parlia- ment under Henry VIII. complain of the dis- use of the long bow, ' heretofore the safeguard

and defence of this kingdom, and the dread and terror of its enemies.' 33. Hen. VIII. cap. 6.

The cross bow, or arbalest, consists of a steel bow set in a shaft of wood. It serves to throw bullets, large arrows, darts, &c., and is discharg- ed by means of a catch or trigger. The ancients had large machines for throwing many arrows at once, which were called balistae. See ARTIL- LERY, Sect. I. The art of using bows is called archery, and those practised therein archers, or bowmen. See ARCHERY. The strength of a bow may be calculated on this principle, that its spring, i. e. the power whereby it restores itself to its natural position, is always pro- portionate to the distance of space it is re- moved from it.

Bow, in music, a small machine, which, being drawn t)ver the strings of a musical instrument, makes it resound. It is composed of a small stick, to which are fastened eighty or a hundred horse-hairs, and a nut which serves to give these hairs a proper tension. In order that the bow may touch the strings briskly, it is usual to rub the hairs with resin. The ancients do not ap- pear to have been acquainted with bows of hair, but struck their intruments with a plectrum; our bows however possess great advantage, for giving long and short sounds, and other modifications which a plectrum cannot produce.

Bow, in navigation, an arch of the horizon comprehended between some distant object and that point of the compass which is right a-head, or to which the ship's stern is directed. The phrase 'on the bow' is equally applicable whe- ther the object is beheld from the ship, or disco- vered by trigonometrical calculation ; As, we saw a fleet at day-break bearing three points on tne star-board-bow ; that is, three points from that part of the horizon which is right a-head, towards the right-hand. See BEARING.

Bow, for taking the sun's altitude, consisted of a large arch of 90Ā° graduated, a shank or staff, a side vane, a sight vane, and an horizon vane. It is now out of use.

Bow, in ship-building, the rounding part of a ship's side forward, beginning at the place where the planks arch inwards, and terminating where they close, at the stem or prow. It is proved by a variety of experiments that a ship with a narrow bow is much better calculated for sailing swiftly titan one with a broad bow ; but is not so well fitted for a high sea, into which she always pitches or plunges her fore-part very deep, for want of sufficient breadth to repel the volume of water which she so easily divides in her fall. The former of these is called by seamen a lean, arid the other a bluff bow.

‘The bow which meets with the least resistance in a direct course, not only meets with least resistance in oblique courses, but has the additional property of driving the least to leeward ; which is a double advantage gained by forming the bow so as to give it that figure which will be least resisted in moving through any medium.’ Bougutr Traite de Navire.

Bow, or DRILL Bow, among artificers, an instrument so called from its figure; used by goldsmiths, gunsmiths, locksmiths, watchmakers, &c., for making a drill go. Among turners it is

the name of a pole fixed to the ceiling, to which they fasten the cord that whirls round the piece to be turned.

Bow OF A SADDLE. The fore bow, which sus- tains the pommel, is composed of the withers, the breasts, the points or toes, and the corking. The hind bow bears the trosequin or quilted roll. The bows are covered with sinews to make them strong, and strengthened with bands of iron to keep them tight; and on .the lower side are nailed the saddle straps, with which they make fast the girths.

Bow DYE, a kind of scarlet red, superior to madder; but inferior to the true scarlet grain for fixedness and duration. It was brought into England, and first used at the village of Bow, near London, by Kephler, a dutchman, in

1643.

BOWDICH (Thomas Edward), an enter- prising modern traveller, was born at Bristol in 1793, and received his education partly in his native city and partly at Corsham, in Wilts. He went for a short time to Oxford, and was soon matriculated ; and, marrying early, com- menced business at Bristol. In 1814 he went to Cape Coast Castle, as a writer in the service of the African Company, the governor of that place being his uncle. The following year he was appointed second in an embassy to the king of Aahantee, which trust he discharged so sa- tisfactorily as to be promoted to the head of the mission. Returning to England, in 1816, he prepared an Account of the Ashantees, and a detail of the mission, in one quarto volume, embellished with curious plates. After the pub- lication of this work, in 1819, Mr. Bowdich went to France, where he translated a Treatise on Taxi- dermy, and Mollien’s Travels to the sources of the Senegal and Gambia. He also wrote An Essay on the Geography of North-west Africa, accompanied by a map of his own drawing. To this performance succeeded An Essay on the Superstitions, Customs, and Arts, common to the ancient Egyptians, Abyssinians, and Ashantees ; and a piece entiled The Contradictions in Park’s Last Journal Explained. This was followed by A Mathematical Investigation, with Original For- mulae for Ascertaining the

Longitude at Sea by Eclipses of the Moon. Mr. Bowdich sailed for Lisbon, in August 1822, accompanied by his wife, where he collected information respecting the Portuguese discoveries in Angola and Mozam- bique, the result of which has been since pub- lished. His destination was for the river Gambia, where he undertook a survey of its course, in the execution of which he caught a fever, and died Jan. 10th, 1824. Mrs. Bowdich, since his death, has prepared for the press, A Description of the Island of Madeira, with a Narrative of her hus- band's last Voyage, RemarKs on the Cape de Verd Islands, and a Description of the English Settlements on the Gambia. Mr. Bowdich is said to have been a good classic, and to have been sufficiently versed in the physical and mathemat- ical sciences to have rendered him a traveller of great eminence.

BOWDLER (John and Thomas) were the sons of a banker in London : the former was born March 18th, 1746. He was placed, at an early

age, under the tuition of Mr. Graves, of Cla- verton, near Bath, the well knpwn author of the Spiritual Quixote. Thence he was removed to a school at Brompton, and finally, to the aca- demy of the Rev. Mr. Brett, at Spring Grove, with whom he continued till his entrance at the Temple in 1765; but, being of a feeble consti- tution, and possessing a good fortune, he never followed the law as a profession. In 1778 he married the daughter of Mr. Hanbury, vice consul of the English factory at Hamburgh, by whom he had a numerous family. In this lady he had the happiness to find a woman of unusually strong judgment, enriched with know- ledge ; yet adorned with a meek and quiet spirit. The family was prolific in talent. Mr. Bowdler's eldest sister had a peculiar facility in acquiring languages; and her ardent piety, and genius are exhibited in a volume of poems and essays, pub- lished after her death, in 1784, for the benefit of the Bath hospital. The following year Mr. Bowdler's father died, on which he removed to Seven Oaks, in Kent, next to Hayes, and after- wards to Eltham; where he exerted himself in a variety of good works. Here he published Reform or Ruin, Take Your Choice ; a tract on Religious Education; and some other useful works. He died June 29th 1823.

Thomas Bowdler, Esq. F.R.S. and S.A. died at Rhyddings in the parish of Swansea, in 1824, at the age of seventy, and published The Family Shakspeare; in which the offensive passages of the poet have been removed with considerable taste and judgment. He performed the same work of

expurgation on Gibbon's Decline and Fall of the Roman Empire. He was, also, the author of a volume of travels; a memoir of Lieutenant General Vilettes; and other works.

BOWEL, or \ Fr. ooyau, boyaux. Ju

BOW'ELS, n. s. { nius thinks that the Eng-

BOW'ELLESS, adj. f i lish word is taken from

BOW'ELPRIER, n. s. J bow (to bend, to wind,

to twist), on account of the folds and convolutions

of the bowels within us. Intestine; the vessels

and organs within the body ; the inner part of any

thing; tenderness; compassion; the seat of pity

or kindness : seldom used in the singular, except

by writers on anatomy : the adjective means

cruel; merciless; unfeeling: bowelprier is one

who searches the intestines.

And the bowel-prying soothsayer (as it is reported) shewed to Decius the head of the liver on the inner side wounded (as it were) and cut off.

Holland. Livins. His stalking steps stayde Upon a shaggy oke which he had torne Out of his mother's bowelles, and it made His mortal mace, wherewith his foeman he dismayde.

Speruer.

Had we no quarrel else to Rome, but that Thou art thence banished, we would muster all From twelve to seventy ; and pouring war Into the bowels of ungrateful Rome, Like a bold flood appear. Shaktpeare.

His soldiers spying his undaunted spirit, A Talbot ! Talbot ! cried out amain, And rushed into the bowels of the battle. Id,

Hector gave Ajax a sword, which so long as he fought against enemies, served for his help and de-

fence ; but after he began tu hurt harmless creatures with it, turned to his own hurtless boweh.

Burton. Anat. of Mel.

He had no other consideration of money, than for the support of his lustre ; and whilst he could do that, he cared not for money ; having no bowels in the point of running in debt, or borrowing all he could.

Clarendon.

Miserable men commiserate not themselves ; bowel- less unto others, and merciless unto their own bowels.

Browne.

Nay you, yourselves, do sometimes find the paines Of sicknesse in your bowels and your veines ; The harbingers of death, sometime begin To take up your whole bodie for their inne.

George Witlter.

As he saw drops of water distilling from the rock, by following the veins, he has made himself two or three fountains in the bowels of the mountain.
Addiwn. Behold at hand,

With three months training on his head,

An instrument whom I have bred,

Bom of these bowels far from sight

Of virtue's false but glaring light ;

My youngest born, my dearest joy.

Most like myself, my darling boy.

Churchill's Duellist.

They threw him [Edward II.] on a bed ; held him down violently with a table, which they flung over him ; thrust into his fundament a red-hot iron, which they inserted through a horn; and though the out- ward marks of violence upon his person were pre- vented by this expedient, the horrid deed was disco- vered to all the guards and attendants by the screams with which the agonizing king filled the castle whila his bowels were consuming. This horrid murder was perpetrated 21st of September, 1327.

Hume. Hist. England.

BOWELS. See ANATOMY.

BOWER (Archibald), a writer of some celebrity, but principally remarkable for his religious vac- illations was born near Dundee, of Catholic parents, in 1686. He received his education at the Scots College in Douay, after which he went to Rome, and became a member of the order of the Jesuits. In 1723 he settled at Macerata, where he enjoyed, as he states, the place of counsellor to the Inquisition, b\it quitted it in 1726, and fled to England, professing himself a convert to Protestantism. Here he was engaged as a tutor in a nobleman's family, and, for a while, con- ducted the Historia Literaria, a monthly review of books. He also wrote part of the Universal History, in sixty vols. 8vo. He is now said to have given, or lent, money to the society of the Jesuits, and to have purchased his re-admission among them about the year 1744. In 1748 he pub- lished, by subscription, the first volume of a His- tory of the Popes, and the same year, through the interest of the honorable George Ly ttleton, was ap- pointed keeper of the queen's library. His his- tory displayed such violent zeal against popery, as exposed him to the animadversions of Mr. Al- ban Butler, a learned Catholic; while its literary merits were at the same time severely canvassed by Dr. Douglas, afterwards bishop of Salisbury. His money transactions with the Jesuits coming, also, to light, he was now generally believed to oe destitute of all moral or religious principle, and died, almost friendless, in 1766. Lord Lyttleton is said, however, always to have been his patron.

BOW'ER, n. s. & v. a. \ Bower, in the pre BOW'ER-ANCHOR, n. s. Ssent acceptation of the BOW'ERY, adj. J word, signifies a seat

shaded with boughs; an arbour; Danish buur, signifying a cage ; Goth, and Swed. bur; Sax. bur; Teut. bauer, a dwelling, an apartment, from Gcih. bua. Junius thinks bower is so called because formed of the boughs of trees : to bower, to embower ; enclose (obsolete): bower-anchor, with us, appeals to be named from the bow of the ship, but in Belgic from having a buoy attached to it; bowery is shady; full of bowers.

What Alison ! heres them not Absolon, That chanteth thus under our boures wal

Chaucer's Canterbury Tales. Full sooty was her boures, and eke her halle ; In which she etc many a slender mele ; Of poignant sauce ne knew she never a dele. Id.

Full many a maide, bright in hour, They mourned for him, par amour, Whan hem were bet to slepe, But he was chaste and no lechour, And swete as is the bramble flour, That beareth the red hepe.

Id. Rime of Sire T/wpms.

And though they faulty were, yet well he wayde, That God to us forgiveth every howre Much more than that why they in bands were layd j And he that harrowed hell with heavy stowre, The faulty soules from thence brought to his heavenly bowre. Spenser.

From a close bower this dainty musique flowed ā A bower apparel'd round with divers roses, Both red and white, which by their liveries showed Their mistris faire, that there herselfe reposes ; Seemed that would strive with those rare musique

closes,

By spreading their faire bosomes to the light, Which the distracted sense should most delight ; That raps the melted eare, this both the smel and sight. Id. Brittains Ida.

Thou didst bower the spirit In mortal Paradise of suck sweet flesh. Shakspeare.

Alone they passed

On to tbeir blissful bower, ā it was a place Chosen by the sovran planter, when he framed All things to man's delightful use ; the roof, Of thickest covert, was inwoven shade, Laurel and myrtle, and what higher grew Of firm and fragrant leaf ; on either side Acanthus and each odorous bushy shrub Fenced up the verdant wall ; each beauteous flower, Iris, all hues, roses and jessamin Reared high their flourished heads between and

ā¢wrought

Mosaic ; underfoot the violet, \Jrocus, and hyacinth, with rich inlay Broidered the ground, more coloured than with store t Of costliest emblem. Milton.

But O, sad virgin, that thy power Might raise Musaus from his bower. Id.

The gods appealing, when I reach their bowers With loud complaints, they answer me in showers.

Waller.

Prophet, take notice, I disclaim thy paradise, Thy fragrant boweri and everlasting shades ; Thou hast placed woman there ā and all thy joys Are tainted. Rowe'i Tamerlane.

Refreshed, they wait them to the bower of state, Where, circled with his peers, Atridcs sat. Pope.

Landslips how gay the bowery grotto yields, Which thought creates, and lavish faucy builds !

Ticket!. Snatched through the verdant maze, the hurried

eye

Distracted wanders ; now the bowery walk Of covert close, where scarce a speck of day Falls on the lengthened gloom, protracted sweeps.

Thornton.

Let not the fervent tongue, Prompt to deceive, with adulation smooth, Gain on your purposed will : nor in the bower, Where woodbines flaunt and roses weave a couch, While Evening draws her crimson curtains round, Trust your soft minutes to betraying man. Id. Spring.

Dear lovely bowers of innocence and ease, Seats of my youth, where every sport could please ; How often have I loitered o'er thy green, Where humble happiness endeared each scene.

Goldsmith's Deserted Village

And, as in beauty's bower he pensive sate, Poured forth this unpremeditated lay, To charms as fair as those that soothed his happier day. Byron's Childe Harolde.

BOWER, in gardening, differing only from an arbor, as being round or square, and made with a kind of dome or ceiling at top; whereas the arbor is always built long and arched. This, as well as the arbor, is generally formed of tim- ber lattice work, sometimes of woven rods, or wicker work, and occasionally of wire. It may be shaded with fruit trees, or with climbing or herbaceous shrubs.

BOWERS, in the sea language, are generally two, called first and second, great and little, or best and small bowers. See ANCHOR.

Bow ISLAND, an island in the South Pacific Ocean, near the eastern extremity of the So- ciety Isles. It was discovered by captain Cook on the

5th of April 1769, during his first voyage. It is about ten or twelve leagues in compass, lies low, and is of a very extraordinary figure, being shaped like a bow. The arch and cord are land, the space betwen them water. The cord is a flat beach, three or four leagues long, but not above 200 yards broad to appearance. It is entirely destitute of vegetation, exhibiting nothing but heaps of sea-weed, lying in ridges, as they are left by the tide, but most of the arch was seen covered by trees of different heights, and smoke was seen rising from different parts of the island. No bottom was found half-way along the beach, with a line of 130 fathoms. Long. 1413 12′ W., lat. 18Ã° 23′ S.

BOWL, n. s. Welsh buelin. A vessel to hold liquids ; the hollow part of such vessel ; a basin ; a fountain.

Bring, eke, with you a bolle, or elles a panne, Ful of water : and ye shul.wel see, thanne, How that our business shal thrive and preve. Chaucer.

And who can counsell a thirstie soule With patience to forbeare the offered bowle. Spenser.

But the main matter is so to convey the water, as it never stay either in the bowl or in the cistern.

Bacon.

Give me a bowl of wine ; I have not that alacrity of spirit, Xor cheer of mind, that I was wont to have.

SlMkapeate ,

BOW

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BOW

If a piece of iron be fastened on the side of a bowl of water, a loadstone, in a boat of cork, will make unto it. Browne.

With flowing botvls from life’s eternal spring, And heavenly fruits, refresh my fainting soul. Rowe.

Meantime the vigorous dancers beat the ground, And songs were sung, and flowing bowls went round.

Pope.

Did not the painted kings of India greet Our queen, and lay their sceptres at her feet : Chiefs who full bowls of hostile blood had quafft, Famed for the javelin and envenomed shaft, Whose haughty brows made savages adore, Nor bowed to less than stars or suns before. Tickell.

Death leads the dance, or stamps the deadly die, Nor ever fails the midnight bowl to crown. Young.

BOWL, n. s. &cv.a. } Sax. bolla; Arm. beol ,- BOWL'ER, n. s. > Fr. boule. A wooden ball ; BOWL'ING-GREEN. J a round mass. Goth, dan signified rotundity, either concave or convex : to bowl is to play with bowls ; to roll any thing along : bowler, one that plays at bowls : bowling- green, a smooth shaven sward prepared as the place for playing at bowls.

Like to a bowl upon a subtle ground, I've tumbled past the throw. Shakspeare.

How finely dost thou times and seasons spin ! And make a twist checkered with night and day !

Which, as it lengthens, winds, and winds us in, As bowls go on, but turning all the way. Herbert.

A bowl equally poised, and thrown upon a plain bowling-green, will run necessarily in a direct line.

Bentley.

Like him, who would lodge a bowl upon a preci- pice, either my praise falls back, or stays not on the top, but rolls over. Dryden.

Men may make a game at bowls in the summer, and a game al whist in the winter. Dennis's Let.

Though that piece of wood, which is now a bowl, may be made square, yet, if roundness be taken away, il is no longer a bowl. Watts's Logick.

~ BOW-LEGGED, or BANDY-LEGGED. Some children are bow-legged from their birth; others oecome so from setting them on their feet too early. The tibia of some is crooked ; the knees of others are distorted; from a fault in the ankle, the feet of some are turned inwards. These are called vari ; and in others, who are called valgi, they are turned outwards. The best method of preventing these disorders in weakly children is to exercise them duly, but not violently, by toss- ing them about in one's arms; and not setting them much upon their feet, at least not without properly supporting them ; if the disorder attends at the birth, or increases after it is begun,

apply emollients, then boots of strong leather, wood, &c. so as gradually to dispose the crooked legs to a proper form. Other instruments may be used instead of boots, which, when not too costly, are usually to be preferred. Slighter instances of these disorders yield to careful nursing, with- out instruments. The cold bath has been recom- mended, and may often be of service ; but if the child be very weak, it will do more hurt than good. A strengthening diet will always be of service.

BOWLINE, s. a cord fastening the sails of a ship. Swed. boglina, bolin; Belg.boelyn; Fr. boline. From bunt, swelling with the wind ; and line, a slender string.

BOW-LINES are used only when the wind is so unfavorable that the sails must be all braced side- ways, or close hauled to the wind. In this situ- ation the bow-lines are employed to keep the weather or windward edges of the principal sails tight, forward, and steady, without which they would always be shivering, and rendered incapa- ble of service. To check the bow-line is to slacken it, when the force of the wind requires it.

BOWLING, the art of playing at bowls. This game is practised either in open places, as bares and bowling-greens, or in close bowling- alleys. The sides being selected, each player has two bowls, which have numerical figures, to ascer- tain to whom they belong. The leader sends.off a smaller bowl, called the jack, to what distance he pleases, it being by the toss his privilege so to do : this he follows with his first bowl, getting as near the jack as possible : he is then followed by one of the adverse party, the partner of the first following, and so in rotation till all the bowls are played ; as many of the bowls, on either side, as are nearer to the jack than the nearest on the opposite side, so many do the successful party score that time towards the game, and so on in succession, till one side or the other have won the match. Sometimes, a ball lying very near the jack, is removed to a distance by the hit of an adversary's bowl, which remains nearer the jack than the bowl it has driven away : this is called a rub. Strutt gives a plate from a manu- script preserved in the Royal Library, 20 Ed. IV., which represents bowling, as early as the thirteenth century. It was, at one time, a game in great repute in the higher ranks of society. Charles I. was fond of it, and it formed, accord- ing to conite de Grammont, a daily share in the diversions of the court of Charles II. at Tun- bridge.

BOW-NET, or Bow- WHEEL, an engine for catching fish, chiefly lobsters and craw-fish, made of two round wicker baskets, pointed at the end, one of which is thrust into the other; at the mouth is a little rim, four or five inches broad, somewhat bent inwards. It is also used for catching sparrows.

*BOWSPRIT, *. The mast projecting from the bow of a ship. From bow and*

sprit ; sprit signifies to shoot, spurt, spout. Goth, sprida, sprita ; Swed. spruta, to eject ; Belg. spriet ; the spar in a ship called the bowsprit. Sometimes I'd divide,

And burn in many places ; on the topmast,

The yards, and boltsprits, would I flame distinctly.

Shakspeare. Then on the leeward sheet the seamen bend,

And haul the bowline to the bowsprit end.

Falconer't Shipwreck.

BOWSPRIT, a large boom or mast, which pro- jects over the stem, to carry sail forward, in order to govern the fore part of a ship, and counteract the force of the after-sails. It is other- wise of great use, as being the principal support of the fore-mast, by confining the stays whereby it is secured. See STAY. The rule for the rise of the bowsprit is an angle of nearly thirty-six degrees above the horizon.

The bowsprit should be two-thirds the length of the main-mast, and its thickness enual to thĀ«

mizen-mast : when it is twelve fathoms five feet long, its yards must be eight fathoms two feet long, and' the topmast of the bowsprit three fathoms and one foot.

A BOWYER, or BOWMAKER, was anciently a distinct business from a fletcher, or arrow-maker. The company of bowyers was incorporated so late as 1620, and consists of a master, two wardens, twelve assistants, and thirty on the livery.

BOWYER (William), the most learned printer of his age, was born at Whito Friars, London, Dec. 17th, 1699. His father, whose name also was William, had been eminent in the same pro- fession; and his maternal grandfather, Ichabod Dawks, was employed in printing bishop Wal- ton's celebrated Polyglott Bible. Having ac- quired a grammatical education, under Mr. Am- brose Bonwicke, he made great advances in lite- rature, and a firm attachment commenced betwixt him and his master. On the 30th Jan. 1713, his father's whole property being destroyed by fire, Mr. Bonwicke generously undertook the education of his pupil for another year.

In 1716 young Bowyer was admitted a sizar at St. John's College, Cambridge, where he continued under Dr. Newcombe till June, 1722. Soon after this he had an opportunity of repaying Mr. Bon- wicke's kindness, by officiating, some time after his death, as a schoolmaster for the benefit of his family. He next entered into the printing business along with his father. One of the first books which received the benefit of his correction was the complete edition of Selden in 3 vols. fol. by Dr. David Wilkins. It was begun in 1722, and finished in 1726; and Mr. Bowyer's great attention to it appeared in his drawing up an epitome of Selden de Synedriis, as he read the proof sheets. In 1727 he drew up an excellent sketch of W. Baxter's Glossary of the Roman Antiquities ; called A View of a Book Entitled Reliquiae Baxterianse: in a letter to a friend; one sheet 8vo. By this first public proof of his abili- ties, Dr. Wotton and Mr. Clarke were highly pleased; but as it was never published, and very few copies printed, it is very seldom found with the glossary. In Oct. 1728 he married Miss Ann Prudom, his cousin, a very accom- plished lady, by whom he had two sons; of whom William survived him. In 1729 he published a curious treatise, entitled, A Pattern for Young Students in the University; set forth in the life of Ambrose Bonwicke, some time scholar of St. John's College, Cambridge ; which was generally ascribed to Mr. Bowyer, though it was in reality written by Mr. Bonwicke the elder. About this time Mr. Bowyer had written a pamphlet against the Separatists, though neither the title nor the occasion of it are now remembered. The same year, through the friend- ship of the R. H. Arthur Onslow, he was ap- pointed printer of the votes of the House of Common ; which office he held for nearly fifty years. In 1731 he published, and, it is believed, translated Voltaire's Life of Charles XII. This year also his wife dying, he remained a widower till 1747, when he married Mrs. Elizabeth Bill, by whom he had no children. In 1733 he pub- lished, in two sheets 4to, The Beau and the Academic, being a translation from a Latin poem*

recited that year at the Sheldonian theatre ; and, in 1736, he was admitted into the Society of An- tiquaries, where he became a useful member. In 1742 he published a translation of Trapp's Latin Lectures on Poetry, in which he was as- sisted by Mr. Clarke. In 1750 he annexed a prefatory critical dissertation, and some notes, to Kuster's Treatise De Usu Verborum Mediorum ; a new edition of which, with farther improve- ments, appeared in 1773. He wrote likewise, about the same time, a Latin preface to Lecdes's Veteres Poetae Citati, &c. Being soon after em- ployed to print an edition of Col. Bladen's trans- lation of Caesar's Commentaries, that work re- ceived considerable improvements from Mr. Bowyer's hands, with the addition of such notes in it as are signed Typogr. In 1751 he wrote a preface to Montesquieu's Reflections on the Rise and fall of the Roman Empire; translated the Dialogue between Sylla and Socrates; made several

corrections to the work from the Baron's Spirit of Laws, and improved it with his own notes. A new edition, with many new notes, was printed in 1759. In 1751 he published the first translation that ever was made of Rousseau's paradoxical Oration, which gained the prize at the academy of Dijon in 1750; and which first announced that singular genius to the attention and admiration of Europe. On the publication of the third edition of Lord Orrery's Remarks on the Life and Writings of Dr. Swift, in 1752, Mr. Bowyer wrote and printed, but never published, Two Letters from Dr. Bentley in the Shades be- low, to Lord Orrery in a Land of Thick Darkness. The notes signed B, in the ninth 4to. vol. of Swift's works, are extracted from these letters. In 1753 he endeavoured to allay the ferment oc- casioned by the Jew bill ; with which view he published, in4to., Remarks on the Speech made in Common Council, on the Bill for permitting Persons professing the Jewish Religion to be Naturalised, so far as Prophecies are supposed to be affected by it. This little tract was written with spirit, and well received by all who were superior to narrow prejudices. Its design was to show that Christianity was in no danger of being prejudiced by the intended protection promised to the Jews. The same year some of Mr. Bowyer's notes were annexed to Bishop Clay- ton's Translation of A Journey from Grand Cairo to Mount Sinai and back again. In 1761 Mr. Bowyer was appointed printer to the Royal So- ciety, through the interest of the earl of Maccles- field; and enjoyed that office till his death. In 1763 Mr. Bowyer published an excellent edition of the Greek Testament, in two vols. 12mo., which sold with great rapidity : the Conjectural Emen- dations were well received by the learned, and are thought valuable. The president and fellows of Havard College, in Cambridge, expressed their approbation of this edition in very high terms ; and reckoned it of more value than many large volumes of the commentators. A second edition of the Conjectures on the Kew Testament, with enlargements, was published in one vol. 8vo. in 1772. Dr. Warburton's Divine Legation re- ceived very considerable advantage from Mr. Bowyer's corrections ; and this even in an edition which was necessarily given to another press. In

i762 he printed his Doctrine of Grace. In 1765, at the request of Thomas HolUs, Esq., Mr. Bow- yer wrote a short Latin preface to Dr. Wallis's Grammatica Linguae Anglicanae. He wrote also a large English preface for it, which, however, still remains unprinted. In 1766 he wrote an excellent Latin preface to Joannis Harduini. Jesuitic, ad Censuram Scriptorum veterum Pro- legomena. Juxta Autographum. In 1767 he was appointed to

print the Journals of the House of Lords, and the Rolls of Parliament. This year he printed Mr. Clarke's learned work on The Connexion of the Roman, Saxon, and English Coins ; and wrote some notes upon it, which are interspersed with those of the author. Part of the Dissertation on the Roman Sesterce was likewise Mr. Bowyer's ; and the index, which is an uncommonly good one, was drawn up by him entirely. In 1771 he printed a small pamphlet, entitled Remarks, occasioned by a late Dissertation on the Greek and Roman Money. In 1773 he published three tracts, entitled Select Discourses. 1. Of the correspondence of the Hebrew months with the Julian, from the Latin of Professor Michaelis. 2. Of the Sabbatical years, from the same. 3. Of the years of jubilee, from an anonymous writer in Masson's Histoire Critique de la Republique des Lettres. In 1774 he corrected a new edition of Schrevelius's Greek Lexicon; to which he added a number of words (distinguished by an asterisk) which he had col- lected in the course of his studies. Considerable additions, still in MS., were made by him to the lexicons of Hederic and Buxtorf, the Latin ones of Faberand Littleton, and the English Dictionary of Bailey ; and he left behind him many other proofs of his critical skill in the learned languages. In 1774 was published The Origin of Printing, in two essays. 1. The substance of Dr. Middle- ton's Dissertation on the Origin of Printing in England. 2. Mr. Meerman's Account of the Invention of the Art at Haerlem, and its Progress to Mentz, with Occasional Remarks, and an Ap- pendix. The original idea of this valuable tract was Mr. Bowyer's ; but it was completed by Mr. Nichols. During the last ten years of his life he was afflicted with the palsy and stone ; yet he not only preserved a remarkable cheerfulness of tem- per, but was enabled to support the labor of al- most incessant reading ; and he regularly cor- rected the learned works, especially the Greek books, which came from his press. This he con- tinued to do till near his death, which happened in November 1777, in his seventy-eighth year. For more than half a century Mr. Bowyer was unrivalled as a learned printer; and many of the most masterly productions of this kingdom have come from his press. To his literary and pro- fessional abilities he added an excellent moral character ; and he was particularly distinguished by his inflexible probity, and an uncommon alacrity in relieving the necessitous. His life and character have been much illustrated by Mr. Nichols' Anecdotes, 1782.

BOX, A'. Sax. box; bums Latin, a shrub. The leaves are pennated and evergreen ; it hath male flowers, that are produced at remote distances from the fruit, on the same tree; the fruit is shaped like a porridge-pot inverted, and

is divided into three cells, containing two sett's in each, which, when ripe, are cast forth by the elasticity of the vessels. The wood is very useful for engravers and mathematical instrument makers ; being so hard, close, and ponderous, as to sink in water. ā Miller.

There are two sorts ; the dwarf box, and a taller sort. The dwarf box is good for borders, and is easily kept in order, with one clipping in the year. It will increase of slips set in March, or about Bartholomew tide ; and will prosper on cold barren hills, where nothing else will grow. Mortimer.

Box, n. s. Scv.a. J Sax. box, ootg ; Belgic BOX'EN, adj. J bus; Teut. buchse; Arm. boest; Fr. boete. These all signify a box or tube, and are supposed to be from buxus, Lat. ; Russ. and Scot, boss means hollow; void. A case; a small chest made of wood or other matter: an enclosed spot; a snug dwelling: to box is to enclose in a box : boxen, made of box ; resembling box.

This cursed man hath, in his bond, yhent, This poison iu a box. Chaucer.

This messager drank sadly ale and wine, And stolen were his lettres prively Out of his box, while he slept as a swine. Id. A magnet, though put in an ivory box, will, through the box, send forth his embracing virtue to a beloved needle. Sidney.

Prince Arthur gave a boxe of diamond sure, Embowed with gold and gorgeous ornament, Wherein were closed few drops of liquor pure, Of wondrous worth, and vertue excellent, That any wound could heale incontinent. Spenser.

He was, to weete, a stout and sturdy thicfe, Wont to rob churches of their ornaments, And poore men's box? of their due reliefe. Id.*

About his shelves

A beggarly account of empty boxes. Shakspeare. Upon bis belt (fastened with leather laces) Black boxes hung, sheaths of his paper ā swords Filled up with writs, subpoenas, trial cases.

Fletcher's Purple Island. Is it a box of pills To cure the duke's ills ? He is too far gone to begin it ! Or does your fine show In procession go

With the pix and the host within it. Maroell.

The young gentlemen learned, before all other

things, to design upou tablets of boxen wood. Dryden.

Her faded cheeks are changed to boxen hue, And in her eyes the tears are ever new. Id.

'Tis left to you ; the boxes and the pit Are sovereign judges of this sort of

wit. Id.

ShĀ« glares in balls, front boxes, and the ring ; A vain, unquiet, glittering, wretched thing. Pope.

This casket India's glowing gems unlocks, And all Arabia breathes from yonder box. Id.

'Twas this the morning omens seemed to tell ; Thrice from my hand the trembling patch-four fell.

Id. Rape of the Lock. Box'd in a chair, the beau impatient sits, While spouts run clattering o'er the roof by fits.

Stoift.

One who makes himself talked of, though it be for the particular cock of his hat, or for prating aloud in the boxes at a play, is in a fair way of being a favor- ite. Spectator.

As lads and lasses stood around, To hear my boxen hautboy sound. Gay.

Sir Traffic's name, so well applied, Awaked his brother-merchant's pride ; And Thrifty, who had all his life Paid utmost deference to his wife, Confessed her arguments had reason ; And by the approaching summer season Draws a few hundreds from the stocks, And purchases his country box. Lloyd.

Box, n. s., v. n. & v. a. Welsh bock, a cheek ; Swed. bocka, Teut. bocken, Belgic, beuken, sig- nify to strike, or probably to butt like a buck goat : and it is possible that this may have been the origin of our word ; for in America butting was more used than what is now called boxing: Gr. 7Tt;5, Lat. pitgnus, Ro-maunce pois, how- ever, signify the fist. A blow given with the hand : to fight with the fists; to strike with the fists.

If one should take my hand perforce, and give another a box on the ear with it, the law punisheth the other. Bramfiall.

There may happen concussions of the brain from a box on the ear. Wiseman's Surgery.

Olphis, the fisherman, received a box on the ear from Thestylis. Addison's Spectator.

The fighting with a man's shadow consists in bran- dishing two sticks loaded with plugs of lead ; this gives a man all the pleasure of boxing, without the blows. Id.

He hath had six duels, and four-and-twenty boxing matches in defence of his majesty's title. Id.

The ass very fairly looked on, till they had boxed themselves a-weary, and then left them fairly in the lurch. L'Estrange.

A leopard is like a cat ; he bores with his fore-feet as a cat doth her kitlins. Grew.

Box is also used for an uncertain quantity or measure ; thus a box of quicksilver contains from 100 to 200 Ibs. ; a box of prunellas only 14 Ibs. ; a box of rings for keys, two gross, &c. See also DICE Box, and similar compounds of Box, in their order.

Box, in botany. See Buxus.

BOXERS, among the Romans, were called pugiles. The ancient boxers - battled with great force and fury, insomuch as to dash out each others' teeth, break bones, and often kill each other. The strange disfigurements these boxers underwent were such that they frequently could not be known, and rendered them the subject of many railleries. In the Greek anthology there are four epigrams of Lucilius, and one of Lucian, wherein their disfigurements are pleasantly enough exposed.

BOX-HAULING, in sea language, a particu- lar method of veering a ship, when the swell renders tacking impracticable ; performed by keeping the helm hard-a-lee, and hauling off all; bracing about the head as well as the after-sails, hauling close forward the lee, fore and fore-top- bowlines, and up mizen and down after-stay-sails at the same time ; the wind will then act upon the sails thus aback, and the water upon the lee- side of the rudder, by her btern way, will box the ship short round upon her keel, with her stern up to the wind, far enough aft for the after- sails to draw full the right way to act with the helm, which must he shifted hard-a- weather, when the stern-way ceases, so that the head-way with the wind so far aft will readily bring the ship round on the other tack. The main and fore-

tacks are easily got down when the wind is upon the quarter, and shivers the sails ; the main-sheet is easily hauled aft, and the after-sails braced up and trimmed sharp, as the ship brings the wind more aft, which helps her

round the faster, till the wind comes on the other quarter, that the mizen and mizen-stay-sail may be set to take the right way to bring her to the wind, while you tend and trim the head-sails as she comes home.

BOXHORNIUS (Marc Zuerius), a learned critic, born at Bergen-op-Zoom in 1612, was professor of eloquence at Leyden, and at length of politics and history in the room of Heinsius. He published, 1. Theatrum Urbium Hollandiae. 2. Scriptores Historic Augustae, cum Notis. 3. Poetae Satyrici Minores, cum Comment. 4. Notes on Justin, Tacitus, and a great number of other works. He died in 1653, aged forty-one.

BOXING, the exercise of fighting with the fists, either naked or with a stone or leaden ball grasped in them. It coincides with the pugilatus of the Romans. When the champions had fftyaipai, or balls, whether of lead or stone, it was properly denominated sphaeromachia. The ancient boxing differed from the pugna caestum, in which the combatants had leathern thongs in their hands, and balls to assault their antagonists ; though this distinction is frequently overlooked, and fighting with the caestus ranked as a part of the business of pugiles. There were three species of boxing, viz. 1. both the head and hands naked ; 2. the hands armed, and the head naked ; and, 3. the head covered with a kind of cap called amphotides, and the hands also furnished with the crestus. Boxing is an ancient exercise, having been in use in the heroic ages. Those who prepared themselves for it, used all the means that could be contrived to render themselves fat and fleshy, that they might the better endure blows : whence corpulent men or women were called pugiles. In modern times this art has been in a manner appropriated by the English. A century ago, it formed a regular exhibition, encouraged by the first ranks of the nobility, and tolerated by the magistrates. A booth was erected at Tottenham Court, in which the proprietor, Mr. George Taylor, invited the professors of the art to display their skill, and the public to be present at their exhibition. The bruisers then had the re- ward due to their prowess, in a division of the entrance-money, which was sometimes Ā£100 or Ā£150. The general mode of sharing was for two-thirds to go to the winning champion, while the remaining third was the right of the loser; though sometimes by an express agreement of the parties, the conqueror and the vanquished shared alike. The nobility and gentry having complained of the inconveniences sustained at Taylor's Booth, prevailed on Mr. Broughton, who was then rising into note as the first bruiser in London, to build a place better adapted for such exhibitions. This was accordingly done in 1742, principally by subscription, behind Oxford road. The building was called Broughton's New Amphitheatre ; and, besides the stage for the combatants, had seats corresponding to the boxes, pit, and galleries. After a course ot years, however, these exhibitions became gradually less

patronised and frequented. Once, indeed, they seemed to be reviving, and for some time con- siderably engaged the attention of the public : but a fatal issue which attended one of them, brought the practice again into disrepute. One of the combatants was killed on the spot. The Prince of Wales was present, and declared he would have some settlement made on the nearest relation of the .deceased, but that on account of the dreadful example he had then witnessed, he would never either see or patronise another stage fight.

BOXING, among sailors, is used to denote the rehearsing the several points of the compass in their proper order,

BOXING is also used for the tapping of a tree to make it yield its juice. The boxing of maple is performed by making a hole with an axe or chissel into the side of the tree about a foot from the ground ; out of it flows a liquor of which sugar is made.

BOXTEL, a market town of the Netherlands, ia Dutch Brabant, situated on the Dommel. It contains about 3000 individuals, and is provided with several sluices. Near this town an engage- ment took place, on the 14th of August, 1794, between the French army and allied British and Dutch troops, under the command of his Royal Highness the Duke of York, which ended in the defeat of the latter, and obliged him to retire behind the Maese. It is about five miles south of Bois le-Duc.

BOY, n. s. & v. n.^\ Pers. buck ; Goth, buog, BOY'ISH, adj. I buick, puick ; Dan. pog ;

BOY'ISHLY, adv. Swed. bagge ; Irish buai: BOY'ISHNESS, n. s. \ the root of this word BOY'ISM, J>seems to be Goth, tig;

BOY'ERY, j Irish og, young; Arm.

BOY'HOOD, buchel, and Fr. puceau,

BOY'SHIP, are from Lat. pueilus. A

BOY'BIJND, adj. J male child ; a lad : to boy is to treat as a boy (used contemptuously, as is sometimes the noun): boyish, childish; like a boy : the adverb corresponding : boyishness, boy- ism, and boyery, mean

childishness ; puerility: the other derivatives require no explanation.

Is this to you a thing that is honest, That swiche a boy shal walken as him leste. Chaucer. One day il chanced, thrice happy day and chance ! While Loves were with the Graces sweetly sporting, And to frpĀ»h musique sounding, play, and dance, And Cupid's selfe, with shepheards' boys consorting. Laughed at their pritty sport and simple courting, Faire Venus seats the fearful! boy close by her, Where never Phoebus' jealous lookes might eye her, And bids the boy his mistress and her name descry ner- Spenser' Britain's Ida.*

Anthony

Shall be brought drunken forth, and I shall see Some squeaking Cleopatra boy my greatness, I' th' posture of a whore. Shafapeare.

Where is this Hector ?

Come, come thoti 6oˆ-queller, show thy face j Know what it is to meet Achilles angry. Id.

Speak thou, boy,

Perhaps thy childishness will move him more Than can our reasons. Id. Coriolanus.

They called the children that were past infancy two years, irene ; and the greatest boyes, melirenes ;

as who would say, ready to go out of boyery. This bny, who was made overseer of them, was commonly twenty years of age. North. Plutarch.

Or must his boyship prey On all our seniorities. Beaumont.

A lytle boy among them asked, What meaneth that gallow-tree ? They sayde, to hang a good yeaman, Culled Wyllyame of Cloudesle.

Old Ballad ufAilam Bill, &c. But can he be so boyblind and foolish.

Beaumont and Fletcher. So lost his treasure, getting nought in lieu, But ostentation of a foolish pride, While women fond, and boys stood gaping wide; But wise men all his waste, and needless cost deride. Fletcher's Purple Island.

Thus night, oft see me in thy pale career, Till civil-suited morn appear, Not trickt and frounced as she was wont With the attic boy to hunt, But kercheft in a comely cloud, While rocking winds are piping loud.

Milton. II Penseroio.

If you should look at him in his boyhood through the magnifying end of a perspective, and in his man- hood through the other, it would be impossible to spy any difference : the same air, the same strut. Swift. He had complained he was farther off, by being so near, and a thousand such boyisms, which Chaucer rejected as below the subject. Dryden.

Thanks to the gods, my boy has done his duty ! ā Portius, when I am dead, be sure you place His urn near mine. Addiaan's Catj.

A wife he takes ; and now for heirs, Again he worries heaven with prayers. Jove nods assent : two hopeful boys And a fine girl reward hi joys. Gay't Fables. Two boys, whose birth, beyond all question, springs From great and glorious, though forgotten kings, Shepherds of Scottish lineage, born and bred On the same bleak and barren mountain's head.*

Churchill's Prophecy of Famine. And I have loved thee, ocean ! and my joy Of youthful sports was on thy breast to be Borne, like thy bubbles, onward : from a boy I wantoned with thy breakers ā they to me Were a delight ; and if the freshening sea Made them a terror ā 'twas a pleasing fear ; For I was as it were a child of thee, And trusted to thy billows far and near, And laid my hand upon thy mane ā as I do here.

Byron's Childe Harolde. The little shepherd in his white capote Doth lean his boyish form along the rock, Or in his cave awaits the tempest shock. ' Id.

BOYAU, in fortification, a ditch covered with a parapet, which serves as a communication be- tween two trenches. It runs parallel to the works of the body of the place ; and serves as a line of contravallation, not only to hinder the sallies of the besieged, but also to secure the mines. But when it is a particular cut that rnns from the trenches to cover some spot of ground, it is drawn so as not to be enfiladed or scoured by the shot from the town.

BOYCE (William), Mus. D., was a native of London, and pupil of Dr. Maurice Greene, organist of St. Paul's, who bequeathed him a valuable collection of church music. Though afflicted with deafness, which finally increased to such a degree as to render him almost insensi- ble of sound, he acquired an uncommon pro-

ficiency in music, and in 1736 was chosen organist to the church of St. Michael, Cornhill ; and organist and composer to the Chapel Royal. In 1749 he was honored with the degree of doctor of music, and succeeded Dr. Greene in 1757, as master of the king's band. His fame chiefly rests on his sacred compositions. Dr. Burney says that ' there is an original and ster- ling merit in his productions, founded as much upon the study of our own old masters as on the best models of other countries, that gives to all his works a peculiar stamp and character, for strength, clearness and facility, without any mixture of styles or extraneous ornaments.' He died of the gout in 1779, at the age of sixty- eight, and was buried in St. Paul's cathedral.

BOYD (Mark Alexander), an extraordinary genius, was son of Robert Boyd of Pinkhill. He was born at Galloway in 1562, and came into the world with teeth. The rudiments of Latin and Greek were taught him at Glasgow ; but he was of so high and untractable a spirit, that his tutors despaired of ever making him a scholar. Having quarrelled with them, and burnt his books, he forswore learning, and went into the French army. Having dissipated his little fortune, he became roused by that emulation which is natural to great minds, and applied himself to letters with unremitted ardor, till he rose to be one of the most consummate scholars of his age. He is said to have translated Caesar's Commentaries into Greek, in the style of Hero- dotus, and to have written many Latin poems, little inferior to the productions of the Augustan age. He also left several MSS. on philological, political, and historical subjects, in the Latin and French languages. He could with facility dictate to three amanuenses at the same time, in different languages, and on different subjects. He was also one of the best Scottish poets of the age. And his personal beauty and accomplish- ments were equal to his mental superiority. He died at Pinkhill, in 1601. The following works of his, which are all that have been printed, were published in Deliciae Poetarum Scotorum ; Amster 1637, 12mo. 1. Epigrammata, lib. ii. 2. Heroidem Epistolas XIV. lib. i. 3. Hymni XIV.

BOYD (Hugh Macauley). was educated at Trinity College, Dublin, and intended for the bar ; but coming to London he dissipated his fortune, and then went to Madras as secretary to Lord Macartney, and died there in 1794. He was once honored with being thought the author of the Letters of Junius, but the publication of his political tracts, in two vols. 8vo. sufficiently refuted this extravagant claim.

BOYDEL (John), Alderman of London, and Lord Mayor in 1790; was born in Staffordshire in 1719, and intended for a land surveyor, which was his father's occupation ; but accidentally meeting with Baddeley's Views of d

ifferent Country seats, he conceived a strong inclination for en- graving, and when about twenty, bound himself apprentice for seven years to a Mr. Toms, a London artist. In 1745 he published some small landscapes, and afterwards a volume of Views near London. With the profits of these works he commenced business as a printseller,

and soon established for himself a high reputa- tion as the patron of ingenious artists. He em- ployed Woollet to engrave the celebrated pictures of Niobe and Phaeton, and gradually esta- blished an extensive export trade in English prints. Having established an English school of engraving, with which his name will long be con- nected, he engaged the first artists of the day to furnish a collection of pictures, known as the Shakspeare Gallery. The funds of his busi- ness falling short during the war, he was induced in 1804 to obtain an act of Parliament to per- mit him to dispose of his gallery and paintings by lottery, but he died before his lottery was drawn on the llth of December, 1804.

BOYDEL (Joseph), nephew to the preceding, succeeded to his uncle's civic gown in 1805, and died March 27,1817. He was author of a popular tract, entitled Suggestions towards forming a Plan for the improvement of the Arts and Sciences.

BOYER (Abel), an eminent historiographer, born at Castres in France, in 1664. He went first to Geneva on the revocation of the edict of Nantz, then to Franeker, and finally to England, where he applied himself so closely to the study of the language, that he became an author of considerable note, and was employed in several periodical and political works. He, for many years, had the principal management of a news- paper called the Post-boy. He likewise pub- lished monthly, a work, entitled, the Political state of Great Britain, and he wrote a life of Queen Anne in folio, which is esteemed a very good chronicle of that period; but he is most celebrated for his Dictionary and Grammar of the French language, which are still in use. He also wrote, or rather translated from the French of Racine, the tragedy of Iphigenia, which he published under the title of The Victim. It was performed with success at the theatre of Drury Lane, and affords a strong proof of the abilities of its author. He died in

1729.

BOYER, in navigation, a kind of Flemish sloop, or small vessel of burden, having a bolt- sprit, a castle at each end, and a tall mast: chiefly fit for the navigation of rivers, and in many of its parts resembling a smack.

BOYLE (Charles), earl of Orrery, and bar- on Marston, the second son of earl Roger, was born in August 1679. He was educated at Christ-church in

Oxford, and became distin- guished as an author, a soldier, and a statesman. He translated the life of Lysander from the Greek of Plutarch ; and published a new edition of the epistles of Phalaris, which engaged him in a literary dispute, respecting the genuineness of these epistles against Dr. Bentley. See BENTLEY. He was three times member for Huntingdon ; but his elder brother, Lionel earl of Orrery, dying on the 23d of August 1703, without issue, he succeeded to that title : and, entering into the queen's service, had aregimsnt given him. In 1709 he was raised to the rank of major-general, and sworn one of her majesty's privy council. Shortly after he was appointed the queen's envoy to Brabant and Flanders ; and having honorably discharged the trust, created a British Peer, by the titles of lord Boyle, and

baron Marston. lie enjoyed several other ad- ditional honors in the reign of king George I. ; but falling under the suspicion of being con- cerned in laying a plot, he was committed to the tower for six months. He died August 22nd, 1731. His title was given as a name to a cele- brated astronomical instrument, invented by a Mr. G. Graham whom he patronised. He also published a comedy called As you find it ; a copy of verses to Dr. Garth upon his Dispen- sary ; and a prologue to Southerne's play of the siege of Capua.

BOYLE (John), earl of Cork and Orrery, a nobleman distinguished by his learning and genius, was the only son of earl Charles, and was born on the 2d of January 1707. He was educated at Westminster, and at Christ-church College, Oxford. His works were, 1. The Letters of Pliny the Younger, with Observa- tions, Sec. 2 vols. 4to. 2. Remarks on the Life and Writings of Dr. Swift, Dean of St. Patrick's, Dublin. 3. Memoirs of the Life of Robert Gary, earl of Monmouth. 4. The Discourse upon the Theatre of the Greeks. 5. The Original of Tragedy. 6. The Parallel of the Theatres. 7. Letters from Italy, a posthumous work. He died in 1762.

BOYLE, (Richard), a statesman of the seven- teenth century, sometimes styled the great earl of Cork, was the youngest son of Mr. Roger Boyle, of Herefordshire, and born at Canterbury, October 3rd 1566. He studied at Bennet college, Cam- bridge ; and afterwards became a student in the Middle Temple. Unable to support himself in the prosecution of his studies, he became clerk to Sir Richard Man wood, chief baron of the ex- chequer; but finding his employment far from lucrative, he went to Ireland in 1588, and was employed by several members of the Irish go- vernment, in drawing up memorials, cases, &c. In 1595 he married Joan the daughter of

Wil- liam Ansley, of Pulborough, Esq. who dying in labor of her first child, left him an estate of Ā£500 a-year in land. Some time after, he was accused by Sir H. Wallop and others, of being a spy in the pay of the king of Spain. Upon this, he was taken up and his papers searched ; but having fully vindicated himself in presence of queen Elizabeth, and laid open the villainy of Wallop, she not only liberated him, but ap- pointed him clerk of the council of Munster and recommended him to Sir G. Carew. the president. In 1603 he married Mrs. Catherine ic'enton, daughter of Sir George Fenton, secre- tary of state. By his various services, and the great abilities he displayed, he gradually rose to the highest offices, and was at last raised by James I. to the peerage of Ireland, by the title of baron Youghall. In 1620 he was created viscount Dungarvan and earl of Cork; and in 1631 lord treasurer of Ireland, an office that was made hereditary to his family. He after- wards distinguished himself by the noble stand he made for king Charles I. He turned the castle of Lismore, his capital seat, into a fortress ; armed and disciplined his servants and protes- tant tenants ; and by their assistance, and a small army raised and maintained at his own expense, which he put under the command of his four

sons, he defended the entire province of Mun- ster, and in the space of a year took sereri strong castles, and killed upwards of 3000 of the enemy, paying his forces all the time re gularly ; and when all his money was gone, he con- verted his plate into coin. This great man died in 1644, aged seventy-eight.

BOYLE (Robert), one of the greatest philo- sophers, as well as best of men, that any nation has ever produced, the seventh son and four- teenth child of Richard, earl of Cork, was born at Lismore, January 25th 1626-7. In 1635 his father sent him to Eton, under Sir Henry Wot- ton, who was the earl of Cork's old friend and acquaintance. Here he soon discovered a sur- prising force of understanding, and a disposition to cultivate and improve it to the utmost. In 1638 he attended his father in London ; and re- mained with him at the Savoy, till in October he was sent abroad with his brother Mr. Francis Boyle, under the care of Mr. Marcombes. During his stay at Geneva, Mr. Boyle resumed his ac- quaintance with the mathematics. In September 1641 he quitted Geneva, and spent the winter at Florence. Here he devoted himself to reading modern history in Italian, and the works of the celebrated astronomer Galileo, who died in a neighbouring village during Mr. Boyle's resi- dence. About the end of March, 1642, he quitted Florence for Rome, and had the fortune he tells us, to see Pope Urban VIII. at chapel, with the cardinals, who severally appearing mighty princes, in that assembly looked like a company of common friars. He returned to Florence ; from thence to Leghorn ; and so by sea to Genoa : then passing through Nice, he crossed the sea to Antibes, where he exposed himself to some danger for refusing to honor the crucifix: from thence he went to

Marseilles .by land. He was in that city in May 1642, when he received his father's letters, which informed him of the rebellion which had broken out in Ireland, and with what difficulty he had procured the money then remitted to him. This money, Ā£250, was never received, and the brothers were obliged to return to Geneva. Here they con- tinued a considerable time, without either advices or supplies, but contrived at last to reach their native country in 1644. On their arrival, Mr. Boyle found his father dead ; and though the earl had made ample provision for him in the manor of Stalbridge in England, as well as other considerable estates in Ireland, it was some time before he could receive any money. In March 1645 he retired to Stalbridge, where he resided till May 1650, and applied himself with in- credible industry to various studies. He was one of the first members of that small but learned body of men, styled the philosophic college, which, when all academical studies were inter- rupted by the civil wars, secreted themselves about the year 1645 ; and held private meetings, first in London, afterwards at Oxford, for the sake of canvassing subjects of natural knowledge, upon the plan of experiment recommended by Lord Bacon. After the Restoration, they were incorporated and distinguished by the name of the Royal Society. In the summer of 1654 he put in execution a design he had formed for some time

cf residing at Oxford. It \vas during his re- sidence here that he made his improvements on that important engine the air-pump. But phi- losophy, and enquiries into nature, though they engaged his attention deeply, did not occupy it entirely. He continued to pursue his critical arid theological studies. In these he had the assistance of Dr. Edward Pocock, Mr. Thomas Hyde, and Mr. Samuel Clarke. He was also intimate with Barlow, afterwards bishop of Lin- coln, a man of various and extensive learning. In 1659 Mr. Boyle being acquainted with the unhappy circumstances of the learned Sanderson, afterwards bishop of Lincoln, who had lost all his preferments on account of his attachment to the royal party, conferred upon him an honorary stipend of Ā£.50 a year. Mr. Boyle, upon the Restoration, was treated with great civility and respect by the king, as well as by lord treasurer Southampton and lord Clarendon. By the latter he was solicited to enter into orders, but he con- sidered, that as a layman, whatever he wrote respecting religion would have much greater weight. He continued, therefore, to pursue his philosophical studies, and began to communicate to the world the fruit of them in, 1. New Experiments, Physicomechanical, touching the Spring of the Air and its Effects, 8vo. 2. Se- raphic Love; or some Motives and Incentives to the love of God, pathetically discoursed of in a letter to a friend. 3. Physiological Essays

and other Tracts, 1661, 4to. 4. Sceptical Chemist, 1662, 8vo.; reprinted 1679, 8vo. with the addi- tion of experiments and notes about the producibleness of chemical principles. In 1663, the Royal Society being incorporated by king Charles II. Mr. Boyle was appointed one of the council ; and as he might be justly reckoned among the founders of that learned body, so he continued one of the most useful and industrious of its members during the whole of his future life. In June, 1663, he published, 5. Considerations touching the usefulness of Experimental Natural Philosophy, 4to. 6. Experiments and Consider- ations upon Colors ; to which was added a Letter, containing Observations on a Diamond that shines in the dark, 1663, 8vo. 7. Consider- ations on the style of the Holy Scriptures, 1663, 8vo. In 1664, he was elected into the company of the royal marines ; and the following year he published 8. Occasional Reflections, upon several subjects, 8vo. ; which exposed him to the ridicule of Dean Swift, who wrote A Pious Meditation upon a Broomstick, in the style of the honorable Mr. Boyle. The same year he published an important work, entitled, 9. New Experiments and Observations upon Cold, 1665, 8vo. In 1666 10. Hydrostatical Paradoxes, made out by new experiments, for the most part physical and easy, in 8vo. 11. The Origin of Forms and Qualities, according to the corpuscu- lar philosophy, illustrated by considerations and experiments. At this time he also communicated to his friend Mr. Oldenburgh, secretary to the Royal Society, several excellent short treatises, which are printed and preserved in the Philoso- phical Transactions. In 1668 Mr. Boyle re- solved to remove to London, to the house of his sister, lady Ranelagh, in Pali-Mall. He pub- VOL. IV

lished, in 1669, 12. A Continuation of his Ex- periments touching the Weight and Spring of the Air ; and, 13. Tracts about the Cosmical Qualities of Things. In 1671, 14. Considerations on the usefulness of Experimental and Natural Phi- losophy : part 2d, 4to. 15. A Collection of Tracts, upon several useful and important points of Practical Philosophy, 4to. 16. An Essay about the Origin and Virtues of Gems, 1672, 8vo. 17. A Collection of Tracts upon the rela- tion between Flame and Air ; and several other useful and curious subjects : besides furnishing, in this and the former year, a great number of short dissertations, upon a vast variety of topics, addressed to the Royal Society, and inserted in their Transactions. 18. Essays on the Strange Subtility, Great Efficacy, and Determinate Nature of Effluvia ; to which were added, a variety of experiments on other subjects, 1673, 8vo. 19. A Collection of Tracts upon the saltness of the Sea, the moisture of the Air, the natural and preternatural state of Bodies : to which is pre- fixed, a Dialogue concerning Cold, 1674, 8vo. 20. The Excellency of Theology compared with Philosophy, 1674, 8vo. This was written in 1665, while Mr. Boyle, to avoid the great plague which then raged in London, was forced to go from place to place in the country, and

had little or no opportunity of consulting his books. It contains a great number of curious and useful, as well as just and natural, observations. 21. A Collection of Tracts, containing suspicions about hidden qualities of the Air ; with an Appendix touching celestial Magnets; Animadversions upon Mr. Hobbes's Problem about a Vacuum ; a Discount of the cause of Attraction and Suction, 1674, 8vo. 22. Some Considerations about the reconcileableness of Reason and Religion ; by T. E. a layman. To which is annexed, a Dis- course about the possibility of the Resurrection ; by Mr. Boyle, 1675, 8vo, In 1676 he pub- lished, 23. Experiments and notes about the Me- chanical Origin or Production of particular Qua- lities, in several discourses on a great variety of subjects, and among the rest on electricity. In 1678 he communicated to Mr. Hook a short me- morial of some observations upon an artificial substance that shines without any preceding illustration ; which that gentleman thought fit to publish in his Lectiones Cutlerianae. 24. Historical Account of a degradation of Gold made by an anti-elixir. This made a great noise both at home and abroad, and is looked upon as one of the most remarkable pieces that ever fell from his pen; since the facts contained in it would have been esteemed in- credible, if they had been related by a man of less integrity and piety than Mr. Boyle. The regard which the great Newton had for Mr. Boyle appears from a very curious letter, which the former wrote to him at the end of this year, to be found in Dr. Birch's Life of Mr. Boyle. In 1680 he published, 25. The Aerial Noctiluca ; or some new Phenomena, and a Process of a Fac- titious Self-shining Substance, 8vo. This year the Royal Society, as a proof of the just sense of his great worth, and of the constant and particu- lar services which through a course of many years he had done them, made choice of him for

their president; but he scrupled to take the oaths required, and declined the honor. We need not particularise the other tracts of this great philosopher. In the year 1690 he gave to Jhe world The Christian Virtuoso ; showing, that by being addicted to Experimental Philosophy, a man is rather assisted than indisposed to be a good Christian. To which are subjoined, 1. A Discourse about the distinction that represents some things as above reason, but not contrary to reason. 2. The first chapters of a Discourse entitled Greatness of Mind promoted by Chris- tianity. The last work which he published him- self was in the spring of 1691, and is entitled, experimenta et Observationes Physicac ; wherein are briefly treated several subjects relating to na- tural philosophy in an experimental way, 8vo. On the 18th

of July, 1691, he signed and sealed his last will, and died on the 31st of December, aged sixty-five. He was buried at Westminster on the 7th of January, his funeral sermon being preached by Bishop Burnet, from Ecclcs. xi. 26, ‘ For God giveth to a man that is good in his sight, wisdom, knowledge, and joy ;’ in which that prelate mentions his being at the sole charge of a translation and impression of the New Tes- tament into the Malay language, which he sent over all the East Indies ; that he nobly rewarded the translator of Grotius’s incomparable book Of the Truth of the Christian Religion, into Arabic ; and was at the expense of an entire impression. He also promoted the translation of the New Testament into the Turkish language ; spent Ā£700 on an edition of the Irish Bible, and contributed largely to an impression of the Welsh Bible. During his life, he gave Ā£300 to ad- vance the propagation of the Christian religion in America ; and as soon as he heard that the East India Company were entertaining propositions for the same design in the East, he sent them Ā £100. In other respects his charities amounted to upwards of Ā£1000 a-year. The celebrated Boerhaave says of him, ‘ Mr Boyle, the orna- ment of his age and country, succeeded to the genius and enquiries of the great chancellor Ve- rulam. Which of all Mr. Boyle’s writings shall I recommend? All of them. To him we owe the secrets of fire, air, water, animals, vegetables, fossils: so that from his works may be deduced the whole system of natural knowledge.’ Mr. Boyle was never married; but Evelyn was as- sured, that he courted the beautiful and inge- nious daughter of Cary, earl of Monmouth, and that to this passion was owing his Seraphic Love. His posthumous works are, 1. The general His- tory of the Air designed and begun. 2. Ge- neral Heads for the Natural History of a Coun- try, great or small ; drawn out for the use of Travellers and Navigators. 3. A Paper of the Honorable llohert Boyle’s, deposited with the secretaries of the Royal Society, October 14th, 1680, and opened since his death; being an ac- count of his making the phosphorus, September 30th, 1680. Printed in the Philosophical Trans- actions. 4. An Account of a Way of examin- ing Waters, as to freshness or saltness. 5. A free Discourse against customary Swearing, and a Dissuasive from Cursing, 1695, 8vo. 6. Me- dicinal Experiments ; or a Collection of Choice

Remedies, chiefly simple and easily prepared, useful in families, and fit for the service of the country people. The third and last volume, pub- lished from the author’s original MS. whereunto is added several useful notes explicatory of the same, 1698, 12mo. Beautiful editions of all his works have been printed at London in five vols. folio, and six vols. 4to. He bequeathed by will Ā£50 a year, for the endowment of a lecture in defence of Christianity, ‘ without descending to any controversies among Christians ;’ an appoint- ment to which we are indebted for many able treatises.

BOYLE (Roger), earl of Orrery, the fifth son of earl Richard, was born in

1621 ; and by the credit of his father with the lord deputy Falk- land, raised to the dignity of baron Broghill, when only seven years old. He was educated at Dublin, where he soon distinguished himself. He afterwards made the tour of France and Italy; and at his return assisted his father in opposing the rebellious Irish ; in which he behaved with all the spirit of a young, and the discretion of an old, officer. Upon the death of the king, he re- tired to Marston, in Somersetshire ; but at length resolved to attempt something in favor of Charles IF. ; and under the pretence of going to Spa for his health, to apply to that prince for a com- mission to raise what forces he could in Ire- land. Having raised a considerable sum of mo- ney, he came up to London to prosecute his voyage : but had not been long in town when he received a message from Cromwell, who was then general of the parliamentary forces, that he intended to wait upon him. Lord Broghill was surprised at this message, having never had the least acquaintance with Cromwell ; and desired the gentleman to let the general know, that he would wait upon his excellency. But while he was waiting the return of the messenger, Crom- well entered the room ; and after mutual civilities, told him, that the committee of the state were ap- prised of his design of applying to Charles Stuart for a commission to raise forces in Ireland, and had determined to make an example of him. Lord Broghill assured him, that the intelligence which the committee had received was false, and that he neither was in a capacity, nor had any inclination, to raise disturbances in Ireland : but Cromwell, instead of making any reply, drew out of his pocket copies of several letters, which his lordship had sent to those in whom he most confided, and put them into his hands. Brog- hill, upon the perusal of these papers, finding it to no purpose to dissemble, asked his excellen- cy's pardon for what he had said, returned him thanks for his protection against the committee, and intreated his 'direction how to behave in s>uch a delicate conjuncture. Cromwell told him, that though till this time he had been a stranger to his person, he was not so to his merit and character ; he had heard how gallantly his lord- ship had behaved in the Irish wars ; and there- fore, since he was named lord lieutenant of Ire- land, and the reducing that kingdom was now become his province, he had obtained leave of the committee to offer his lordship the commis- sion of a general officer, if he would serve in the war; and he should have no oaths or engage-

merits imposed upon him, nor be obliged to draw his sword against any but the Irish rebels. Broghill was infinitely surprised at so generous and unexpected an offer. He saw himself at liberty, by all the rules of honor, to serve against the Irish, whose rebellion and barbarities were equally

detested by the royal party and the parliament. He desired, however, some time to consider of what had been proposed to him. But Cromwell briskly told him, that he must come to some resolution that very instant : that he him- self was returning to the committee, who were still sitting ; and if his lordship rejected their offer, they had determined to send him to the tower. Upon this, lord Broghill, finding that his liberty and life were in the utmost danger, gave his word and honor that he would faith- fully serve the parliament against the Irish rebels ; on which Cromwell once mere assured him, that the conditions which he had made with him would be punctually observed ; and then ordered him to repair to Bristol, adding, that he himself would soon follow him into Ireland. Lord Brog- hill, therefore, went over into that country ; where, hy his conduct and intrepidity, he performed many important services, and fully justified the opinion Cromwell had conceived of him. By his own interest he now raised a troop of horse, consisting chiefly of gentlemen attached to him by personal friendship ; a corps which was soon increased to a complete regiment of 1500 men. These he led into the field against the Irish re- bels; and was speedily joined by Cromwell, who placed the highest confidence in his new ally, and found him of the greatest consequence to the interest of the commonwealth. When Cromwell became protector, he sent for lord Broghill, merely to take his advice occasionally. And we are told, that, not long after his coming to Eng- land, he formed a project for engaging Crom- well to restore the old constitution. The basis of the scheme was to be a match between the king (Charles II.) and the protector's daughter. As his lordship maintained a secret correspon- dence with the exiled monarch and his friends, it was imagined that he was beforehand pretty sure that Charles was not averse to the scheme, or he would not have ventured to propose it se- riously to Cromwell; who at first seemed to think it not unfeasible. He soon changed his mind, however, and told Broghill that he thought his project was impracticable : ' For,' said he, ' Charles can never forgive me the death of his father.' In fine, the business came to nothing, although his lordship had engaged Cromwell's wife and daughter in the scheme. On the death of the protector, lord Broghill continued attached to his son Richard, until he saw the dark clouds of anarchy hovering over the nation ; when he deemed it prudent to retire to his command in Ireland, and became not a little instrumental in the king's restoration. In consideration of his eminent services in this respect, Charles created him earl of Orrery by letters patent bearing date September 5th, 1660. He was soon after made one of the lords justices of Ireland. But his lordship's active life at length induced a fever, which fell into his feet, and joined to the gout, with which lie was often afflicted, abated much

of his vigor. Notwithstanding his infirmities, on the king's desiring to see him in England, he came over in 1665, and was the means of recon- ciling

the duke of York and Charles II. On his return, he found himself called to a new scene of action. The duke de Beaufort had formed a scheme for a descent upon Ireland ; but this was rendered abortive by the extraordinary diligence, military skill, and prudent measures, of lord Or- rery. In the midst of his labors, however, a dispute arose between him and his old friend the duke of Ormond, then lord lieutenant ; the bad effects of which were soon felt by both dispu- tants, who resorted to England to defend their respective interests and pretensions, both having been attacked by secret enemies who suggested many things to their prejudice. This quarrel, though private, at last became so public as to produce an attempt to frame an impeachment against the duke of Ormond, and an actual im- peachment ultimately against the earl of Orrery. He defended himself, however, so well, that tha prosecution came to nothing. He nevertheless lost his public employments ; but not the king's favor : he still came frequently to court, and sometimes to council. After this he made several voyages to and from Ireland ; was often con- sulted on affairs of the utmost consequence ; and on all occasions gave his opinion and advice with the freedom of an honest plain-dealing man. In 1678, being attacked more cruelly than ever by his old enemy the gout, he gave the strongest proofs of Christian patience and rational forti- tude, and breathed his last on the 16th of Octo- ber, 1679, in the fifty-ninth year of his age. He wrote, 1. The Art of War. '2. Parthenissa, a romance, in one volume folio. 3. Several Poems. 4. Dramatic Pieces, in two volumes. 5. State Tracts, in one volume folio, &c. Walpole says, he never made a bad figure but as a poet.

BOYLE (Richard) third earl of Burlington and fourth earl of Cork, was born in 1695, and mar- ried in 1721 one of the coheirs of Savile, mar- quis of Halifax. In 1730 he was installed knight of the garter, but though a prosperous courtier, he retired in 1731 to his beautiful seat at Chis- wick, the plan of which, borrowed from a well- known villa of Palladio, he now improved, and new fronted Burlington-house. His enthusiasm for architecture was so great, that he even contri- buted his own money to repair St. Paul's church, Covent-garden, because it was the work of Inigo Jones. His house at Chiswick went to the De- vonshire family by the marriage of his only daugh- ter to the then duke. Pope dedicated to Lord Burlington his fourth epistle, and he is said to have been the first patron of bishop Berkeley. He died in 1753, when the Burlington title be- came extinct.

BOYI.E, a market town of Ireland, in the county of Rcsconimon, situated on a river of the same name, which is crossed by two noble bridges on one of which is a statue of king Wil- liam III. The linen manufacture flourishes in the neighbourhood, and the town is now popu- lous. Before the union it sent two members to the Irish parliament. Here there are barracks for a troop of horse. Here are also the remains of a round tower, and of an

abbey, the latter of which was plundered when taken by the English in 1225. These stand near Lough Key. Distant eighteen miles south of Sligo, twenty-three N. N. W. of Longford, and eighty-four from Dublin.

BOYNE, a river in Ireland, which rises in Queen's county, near the source of the Barrow, and running, north-east by Trim and Cavan, falls at last into the Irish channel, a little below Drogheda. It will admit vessels of 150 tons burden up to that town, and has excellent internal communications with other parts of Ireland by means of canals. About two miles from Drogheda, was fought, in June 1690, the celebrated battle which bears in history the name of the river, and which, as deciding the final retreat of James II. from the British throne, may claim to be shortly sketched in this place. James II. .having received a reinforcement of 0000 infantry from France, had been in no small degree sur- prised to learn at Dublin on the 20th., that his son-in-law had been in Ireland at the head of 36,000 men for six days. His own army amounted to about this number, exclusive of his troops in garrison. He now therefore left Dub- lin under escort of Luttrel's militia, and, occu- pying a very advantageous post on the banks of the Boyne, resolved to hazard a battle with the English army. His ally Louis XIV. had promis- ed to equip a fleet to destroy William's transports, on the return of his convoy, which was now seen sailing along the coasts, and a council of war advised James to wait the issue of the naval operations. But he was determined to have, as he said, 'one good blow' for his crown. The river in front of his position was deep, and skirted by a morass and a rising ground : so that a superior force could here be easily repulsed ; and, with all his own personal bravery, he seems to have taken it for granted that his rival would attack him.

William III. arrived at the opposite bank of the Boyne on the evening preceding the battle, and being observed, as he was reconnoitring the position of the enemy, received a wound from a field-piece. A man and two horses were killed at his side, and a ball rebounding from the earth grazed his right shoulder, and produced some confusion among his attendants. The adherents of James perceiving this, shouted that he was killed ; the rumor spread through the Irish camp, and was conveyed to Dublin, and thence to Fiance ; where bonfires and illuminations were ordered in token of the great monarch's joy. In the meantime William rode through his own line,

little affected by the accident, held a council of war at night, and resolved, against the advice of the duke of Schomberg, to pass the river with his army, and advance upon the enemy in three di visions in the morning.

At six o'clock, lieutenant-general Douglas led on the right wing of the English infantry towards Slanebridge, and passed it without much opposition ; but soon perceived the enemy in consi- derable force on the other side of the morass, where he waited for reinforcements ; and then charged through this disadvantageous ground with his infantry, while the young count Schomberg lode round it with the cavalry, and attacked the Irish in flank. They instantly fled in all direc-

tions. King James however directed a reinforce- ment to be sent to this quarter from the centre, and was successfully holding the English forces in check, when William's main body passed the river, breast high, under protection of his artillery James's cannon had been most unthinkingly removed from the opposite side, where only a body o musketeers opposed a feeble fire to the impetuo- sity of the assailing battalions. Before thej could form, however, general Hamilton brough up a considerable body of infantry and cavalry who for a while produced some confusion among king William's troops. At this moment, the old duke Schomberg passed the Boyne at the head of the French Protestants, and so impetuously mingled himself and his men among the enemy that he received a fatal shot as it was supposes from his own supporters. The infantry of Jaroe now rallied ; but William passing the river in person with his left wing, attacked them so vigor- ously, that they appeared struck with a sudden panic ; halted, and commenced their retreat to the village of Dunore. Here an intrepid stand was made on behalf of James ; and his valiant rival, at the head of his choicest troops, was com- pelled for a short time to give way. The whole wing would have been routed, it is said, but for the timely arrival of the dragoon regiments of Cunningham and Levison, who dismounted and raked the enemy with a murderous fire through the hedges. William had thus time to re-form his cavalry, and the Irish abandoned the field. During the whole action, king James had posted himself on the hill of Dunore, surrounded with a small body of horse, and seeing the victory decidedly incline towards his opponent, rode off for Dublin, where he arrived that evening.

In this battle, lords Dongan and Carlingford, the marquis of Hocquincourt,and SirNeileO'Neile fell in his service. On the other side, the brave and experienced duke Schomberg ; Caillemotte, a French Protestant general of great valor and talent ; and Walker, the clergyman of Londonderry, who had been so conspicuous in the siege of that place. King William displayed the great- est personal courage while he fought upon the worse military theory ; James was evidently careful of his person, until in a fair pitched battle, with considerable advantages on his side, he lost his

confidence and his crown.

BOYS, BOYSE, or Bois (John), one of the translators of the Bible in the reign of James I. was the son of William Bois, rector of West Stowe, and born at Nettlestead in Suffolk, in 1560. The rudiments of learning were taught him by his father, and his capacity was such, that at five years of age he read the Bible in Hebrew. At fourteen he was admitted of St. John's College Cambridge, where he distinguished himself by his skill in Greek. Happening to have the small- pox when he was elected fellow, he, to preserve his seniority, caused himself to be carried in blankets to be admitted. He for some time studied medicine, and was ten years chief Greek lecturer in his college, and read every day. For some years he voluntarily read a Greek lecture at four in the morning, in his own chamber. On the death of his father, he succeeded him in the rectory. At the age of thirty-six, he married

the daughter of Mr. Holt, rector of Boxworth, whom he succeeded in that living, Oct. 13th 1596. Here his young wife proving a bad economist, and he himself being wholly addicted to his studies, he soon became so much involved in debt, that he was obliged to sell his choice collection of books, consisting of almost every Greek author then extant. When a new translation of the Bible was by king James I. directed tobe made,Mr. Boys was elected one of the Cambridge contribu- tors. He performed not only his own, but also the part assigned to another, with great reputation ; though with no profit, for he had no allowance but his commons. He was also one of the six who met at Stationers' Hall to revise the whole. He afterwards assisted Sir Henry Saville in pub- lishing the works of St. Chrysostom. In 1615 Dr. Lancelot Andrews, bishop of Ely, bestowed on him, unasked, a prebend in his church. He died 14th Jan. 1643, aged eighty-four. He left many MSS. particularly a commentary on almost all the New Testament. ā When a young student at Cambridge, he is said to have received from the learned Dr. Whitaker three rules for avoid- ing those distempers which usually attend a sedentary life ; to which he adhered with equal constancy and success. The first was, to study always standing ; the second, never to study in a window ; and the third, never to go to bed with his feet cold.

BOYSE (Samuel), a poet of the last century, was a man remarkable for the fineness of his ge- nius, the lowness of his manners, and the wretch- edness of his life. He was born in 1708, and received the rudiments of his

education in Dub- lin. When he was eighteen years old, his father, a dissenting minister, sent him to the University of Glasgow, to finish his education. He had not been a year there, when he fell in love with a daughter of a tradesman of that city, and ter- minated his education by marrying her before he had entered his twentieth year. His extrava- gance soon exposed him to want, and obliged him to go over with his wife and sister to Dublin. The whole three it is said were notorious libertines. An estate his father possessed in Yorkshire was sold to discharge his debts. Soon after his father's death, we find Mr. Boyse at Edinburgh, where his poetical genius raised him many friends, and some patrons of eminence. He published a volume of poems in 1731, to which he sub- joined The Tablature of Cebes, and a Letter on Liberty, inserted in the Dublin Journal, 1726; addressed to the countess of Eglinton. On the death of viscountess Stormont, Boyse wrote an elegy, entitled The Tears of the Muses, which was much applauded by her ladyship's relations. Lord Stormont on this occasion ordered a hand- some present to be given to Boyse by his attor- ney. The duchess of Gordon now employed her interest in procuring a place for him, and gave him a letter which he was to deliver to one of the commissioners of the customs at Edin- burgh, but it happened that the morning on which he was to have rode to town with her grace's let- ter proved to be rainy, he delayed going to town with it, and, while he let slip the opportunity, the place was bestowed upon another. He now quitted the Scottish for the English metropolis,

and the duchess having still a high opinion of his abilities, gave him a letter of recommendation to Mr. Pope, and obtained another for him to Sir Peter King, the lord chancellor of England. These, however, on his arrival he was wholly careless in delivering, and entered only into acquaintance of the lowest cast. He had no taste for any thing elegant, and yet was to the last degsee expensive. Often when he had re- ceived a guinea in consequence of a supplicating letter, he would go into a tavern, order a supper to be prepared, drink of the richest wines, and spend all the money that had just been given him in charity, while his wife and child were starving at home ! About 1740 Boyse was re- duced to the last extremity of human wretched- ness; he had not a shirt, a coat, or any kind of apparel to put on ; the sheets on which he lay were carried to the pawn-brokers, and he was obliged to be confined to his bed with no other covering than a blanket. He sat up in bed, we are told, with the blanket wrapt round him, through which he cut a hole large enough to admit his arm, and placing the paper on his knee, scribbled in the best manner he could the verses he was obliged to make : and whatever he got by these or his begging letters, was but just suffi- cient for the preservation of life. About the year 1745 his wife died, and he pretended much con- cern at the event. He was then at Reading, compiling a review of the most material trans- actions at home and abroad

during the war ; in which he included a short account of the rebellion. On his return to town, his behaviour was more decent than it had ever been. He was employed by a bookseller to translate Fenelon on the Exis- tence of God ; during which time he married a second wife, a woman in low circumstances, but well enough adapted to his taste. He now began to live with more regard to his character, and supported a better appearance than usual ; but while his circumstances were mending, and his irregular appetites losing ground, his health de- clined. At this time he had the satisfaction to observe a poem of his, entitled The Deity, re- commended by two eminent writers, the ingeni- ous Fielding, and Hervey, author of the Medita- tions. A beautiful poem called The Recantation was the last of his productions. His genius was not confined to poetry : he had also a taste for tainting, music, and heraldry; but never were aistinguished abilities given to less purpose. He died in obscure lodgings in Shoe-lane, May 1747, and was buried by the parish. His poetical pieces, if collected, would, it is said, make six moderate volumes. Many of them are scattered in The Gentleman's Magazine, marked with the letter A, and Alceus. Two volumes were published in London. An ode in the manner of Spenser, entitled The Olive was addressed to Sir Robert Walpole, which urocured him a present of ten guineas.

BOZRAH, BEZER, or BOSTRA, a city of Ju- dea, seated on a plain, about the south-east bor- der of the land of Reuben, near the source of the Arnon. It was a city of refuge (Josh. xx. 8.), and was taken by the Moabites during the de- clension of the kingdom of Israel. It was after- wards ravaged by the Chaldeans. It was rebuilt

however, and a Christian church early planted in it, which continued till the Arabians took it under Mahomet's successors. The emperor Trajan favored it, and called it Philippopolis.

BOZRAH, the capital of Edom, situated about 150 miles from the above. It was very ancient, and was the birth place of Jobab, king of Edom. It was ravaged by the Assyrians ; afterwards by the Chaldeans, and at last by Judas Maccabeus. It is mentioned in that remarkable prophecy, in Isa. Ixiii. 1. Not a vestige of it now remains.

BOZRAH, a town of America, in New-London county, and state of Connecticut; thirty-six miles east from Norwich,

B QUADRO, QUADRATO, or Durale, in music, called by the French B Quarre, from its square figure. This is what we call B natural or sharp, in distinction from B mol or flat. If the flat be placed before a note in the thorough bass, it intimates that its third is to be minor ; and, if placed with any cypher over a note in the bass, it denotes that the fifth or sixth thereof are to be flat. But if the quadro be placed over any note, or with a cypher, in the thorough bass, it has the contrary effect; for thereby the note or interval thereto is raised to its natural order. See Music.

BRABANT, DUCIIY OF, an important central province of the kingdom of the Netherlands. It is bounded on the west by Flanders and Zea- land ; on the north by Holland and Guelderland ; on the east by Liege and Limburg, and on the soufh by Hainault and Namur. It is divided into North and South Brabant, which are se- parated by the province of Antwerp, once a part of the duchy.

The soil of these provinces is for the most part fertile, yielding excellent pasturage, and large quantities of wheat, hops, and flax. In the north division, however, there are large tracts of heath, moss, and wood. In both, manufactures of linen cloth and lace are carried on to a con- siderable extent. Its chief rivers are the Dom- mel, Demer, Dyle, and Nethe, assisted by several canals. In North Brabant the inhabitants are chiefly Protestants ; in the south, before the French revolution, the majority were Roman Catholics of the lowest grade, ignorant, super- stitious, and wretched. By Philip and Alva, these provinces were deluged with blood ; the horrors of war brought them first into notice, and they have generally sunk into insignificance, ex- cept when they have been made the theatre of conflict, or when, like absolute property, they have been transferred from one princely family to another. As early as the ninth century, we find Brabant, north and south, erected inta a duchy, belonging to the monarchy of .the Franks. It afterwards became an important fief of the German empire, under the successors of Char- lemagne. Otto, the last duke of Brabant, of this line, died in 1005, when the duchy devolved upon Lambert I., count of Louvain, who had married his sister. Thence it descended to Philip II., duke of Burgundy, and from him, by regular succession, to tfye emperor Charles V. In the seventeenth century these provinces were held by the Republic of Holland and the house Austria. The northern division appertained to

the former under the name of Dutch Brabant ; the southern part was obtained by the latter, a small district of which was called Walloon Brabant.

This duchy is sometimes described as divided into the quarters of Louvain, Brussels, Antwerp, and Bois-le-duc, comprising about twenty-eight fortified towns, and nearly 700 village?. The Austrian division was seized by the

French in 1746, but was restored by the peace of Aix-la- Chapelle ; it was, however, taken possession of in 1794 by the French Republic, and confirmed to them by the treaties of Campo Formio and Luneville. By subsequent arrangements, the northern province formed the department of the Deux Nethes, and the southern that of the Dyle. In 1810 Dutch Brabant was, with part of Guel- derland, united to the Empire, and formed into the department of the mouths of the Rhine. Austrian Brabant was once highly privileged ā it had its own states, consisting of two bishops and eleven abbots, with the barons and seven deputies chosen by the magistrates of Brussels, Louvain, and Antwerp ; ā these distinctions no longer exist. North Brabant contains a popula- tion of about 250,000 persons, and sends seven members to the Representative Assembly of the kingdom ; Antwerp likewise sends five ; South Brabant sends eight, which together make twenty for the whole of the former duchy, containing about 366,000 souls. In the south a corrupted French is the language of the common people; in the north the Flemish is spoken, but the higher classes of both parts speak good French. The principal places, exclusive of the four chief towns of the quarters, are Tir- lemont, Arschott, Diest, Gemblours, Juoigne, Nivelles, Breda, Bergen-op-Zoom, and Eynd- hoven.

BRAB'BLE,u.n. &n.s.-

BRAB'BLER, n. s. BRAB'BLING, part. BRAB'BLINGLY, adv. BRAB'BLEMENT, n. s.

Goth, ropa; to call out ; Belgic beroep, altercation, and its frequentative brab- bel. To clamor ; to

brawl; to squabble; to confound; to trouble; to rail; to broil; to contest noisily: a brabble is a clamorous contest : brabbler, a clamorous or quar- relsome person: the other derivatives correspond.

Away, I say.

Now by the gods that warlike Goths adore, This petty brabble will undo us all. Sltakspeare.

BRABEJUM, the African almond, in botany a genus of the monoecia order, and polygamia class of plants. Male : COR. four-parted : STAM. four, inverted in the throat : STYLE, bifid and abortive. Female: COR. four- parted, revoluted upwards : STAM. four : FIST, one : STIG. two ; the fruit is a roundish drupa, with a globular seed. Of this genus there is but one species, viz. : B. stellulifoliunv the star-leaved African almond, a native of the Cape of Good Hope. It rises with an upright stem, covered with brown bark : the leaves are indented at their edges, standing on very short foot-

stalks. The flowers are produced towards the 'end of their shoots, which are of a pale color, inclining to white

BRABEUT/Ā£,orBRABEUTEs; from fipafieiov, a prize; in antiquity, officers among the Greeks, who presided at the public games, and decided controversies that happened among the antago- nists in the gymnastical exercises. The number of brabeutre was not fixed ; sometimes there was only one, but more commonly they amounted to nine or ten. Some authors confound them with the Agonothetse, but they were different. See AGONOTHETA.

BRACCATA, in entomology, a species of vespa, color black ; base of the antennae and the fore legs yellow ; thighs black above. Inhabit- ing Europe.

BRACCATA, a species of tenthredo, color black; thighs rufous ; base of the four posterior shanks and part of the antennse white. Inhabiting Europe.

BRACCATUS, a species of ichneumon, color black ; mouth and antennae yellow ; abdomen fer- ruginous ; four anterior legs yellow. Inhabiting Europe.

BRACCIOLINI (Francis), an Italian poet, a native of Pistoia, and the friend of pope Urban VIII. He wrote : 1. An epic poem, entitled, The Cross Reconquered, under the emperor He- raclius. 2. The Mockery of the Pagan Gods : a heroic poem. 3. The Election of Pope Urban VIII. in twenty-three books. He died about 1644, aged eighty.

BRACE , v. & n.~\ Armoric,6reecA; Welch, BRACE'LET, f braich ; Ital. braccio; Fr.

BRA'CER, [bras; from Lat. brachium;

BRA'CING. J the arm; strength; a sup-

port ; stay ; energy ; a cincture ; a bandage. To hold, bind, or tie together; to tighten; to strength- en ; to fasten; to confine ; to restrain. A brace of dogs is a couple of dogs braced or tied together, and from usage restricted in number to two, hence the general application in this sense. The substantive brace and bracelet are applied particularly to armour, or ornaments, bracing or binding the arm ; brace, to a certain part of the

rigging of a ship ; to certain timbers which are to brace or hold together ; to whatever is con- stringent.ā Encyclo. Met. Johnson. Thomson's Etymons.

Upon his arme he bore a gaie bracer, And by his side a swerde and a bokeler.

Chaucer's Canterbury Tales. As it more concerns the Turk than Rhodes, So may he with more facile question bear it j For that it stands not in such warlike brace, But altogether lacks the abilities That Rhodes is dressed in. Shakspeare.

But you, my brace of lords, were I so minded, I here could pluck his highness' frown upon you.

Id.

Why do they crown themselves with gold and sil- ver, use coronets, and tires of several fashions ; deck themselves with pendants, bracelets, ear-rings, chains, girdles, rings, pins, spangles, embroideries, shadows, rebatoes, versicolor ribbands. Burton's Anat. Mel.

Tie about our tawny wrists, Bracelets of the fairy twists. Ben Jonson. Down from a hill the beasts that reign in woods, First hunter then, pursued a gentle brace, Goodliest of all the forest, hart and hind. Par. Lost.

Ten brace and more of greyhounds, snowy fair, And tall as stags, ran loose, and coursed around his chair. Dryden's Fables.

The tympanum is not capable of tension that way, in such a manner as a drum is braced. Holder.

The diminution of the force of the pressure of the external air, in bracing the fibres, must create a de- bility in muscular motion. Arbuthnot on Air. The women of China, by bracing and binding them from their infancy, have very little feet. Locke.

Frank, with his cargo in his hand, Leaped joyful on the golden strand, Opened his toyshop in the port, Trinkets of various size and sort, Bracelets and combs, bodkins and tweezers, Bath metal rings, and knives and scissars. Somer.

The fore-sail braced obliquely to the wind, They near the prow, the' extended tack confined.

Falconer's Shipwreck.

BRACE, in architecture, a piece of timber framed in with bevel-joints to keep the building from swerving either way. When the brace is framed into

the king-pieces, or principal rafters, it is by some called a strut.

BRACE, in sea language, is the name given to certain ropes which serve to square and traverse the yards. To brace the yard is to bring it to either side. All braces come aftward on ; as, the main brace comes to the poop; the main- top-sail brace comes to the mizen top, and thence to the main shrouds; the fore and fore-top-sail braces come down by the main and main-top-sail stay, and so of the rest. But the mizen bowline serves to brace to the yard, and the cross-jack braces are brought forwards to the main shrouds, rfhen the ship sails close by a wind.

BRACE, or BRASSE, a foreign measure, an- swering to our fathom.

BRACELET, an ornament for the arms. The bracelets of the ancients were often ornamented with the richest gems, sculptured in the finest manner. Those of the Grecian females were mostly representations of serpents, such as are on the wrists of a pretended statue of Cleopatra, in the Vatican ; but which is now more properly called Ariadne asleep. The Roman generals distributed bracelets called armillse, as marks of valor to the bravest of their soldiers.

BRACER, a smooth piece of leather fastened on the outside of the archer's left arm, which serves to defend his arm from the stripe of the string.

BRACK. Goth, brakk; Teut. brak; Fr. braque ; Ital. bracco ; apparently the same with rack, but supposed to be from rauck, smell. Specifically a kind of short-tailed setting-dog ; generally a dog that scents out, or traces out by the scent; from Anglo-Sax, raecc ; from recan, to reek, to send forth a fume or scent ; to trace by the scent or odor ; a bitch hound, says Johnson.

Truth is a dog must to kennel ; he must be whip- ped out, when the lady brack may stand by the fire, and stink. Shakspeare.

Lye still ye thief, and hear the lady sing in

Welsh.

HOTS. I had rather hear (lady) my brack howl in

Irish. Id-

BRACHIAL ARTERY, arteria brachialis, the

axillary artery, as it passes behind the tendon of

the pectoralis major, receives the name of bra-

chial. It runs down on the inside of the arm,

over the musculus coracobrachialis, and ancon-

a:us internus, and along the inner edge of the

biceps, behind the vena basilica. Below the bend of the arm it divides into the cubitalis and radialis.

BRACHIAL NERVES, the nerves of the arm. See ANATOMY.

BRACHIO CUBITAL LIGAMENT ; ligamentum brachio-cubitale. The expansion of the lateral ligament, which is fixed in the inner condyle of the os humeri, runs over the capsular, to which it closely adheres, and is inserted like radii on the side of the great sigmoid cavity of the ulna.

*BRACHIO RADIAL LIGAMENT; ligamentum brachio radiale. The expansion of the lateral ligament, which runs over the external condyle of the os humeri, is inserted round the coronary ligament. **

BRACHLALIS MUSCULUS. See ANATOMY.

BRACHINUS, in entomology, a genus of in- sects of the order coleoptera, family carabici. Its generic character is : external maxillary and labial palpi filiform ; the last joint attenuated at the base; antennae filiform, longer than the thorax ; lower lip entire, produced, subquadrate; the angles of its apex acute ; body oblong, obo- vate ; glands at the anus emitting a caustic va- por. The species are : . B. crepitans, a com- mon insect in this country : when pursued by the calosoma inquisitor, its enemy, it emits with a considerable explosion a quantity of blue vapor from the anus, accompanied with a most nause- ous smell, and this immediately stops its assail- ant. 2. B. displosor, with a similar mode of de- fence : so many of the family of carabici possess it, that one division has acquired the name of bombardiers. Latr. Hist. Nat. torn. via. p. 243. Kirby and Spcnce, vol. ii.

BRACHIONUS, in entomology, a genus of animalcules of the class of arthrodia, compre- hending all the vorticellae, or wheel species.

BRACHMANS, or BRACHMINS. See BRAH- MINS.

BRACHURUS, in zoology, a name given by Dr. Hill to a genus of

animalcules of a roundish figure, with tails shorter than their bodies ; their skin is perfectly smooth, thin, and colorless. They are frequent in water-ponds, in pepper- water, and other infusions of vegetable sub- stances. See ANIMALCULES.

BRACHYACANTHUS, in entomology, a species of ichneumon ; color black, with spotted head and thorax ; a small line on the scutel, and tip of the abdomen white ; sting very short. A native of Europe. Also another species of ich- neumon ; color black ; antennae fuscous ; abdo- men and legs yellow ; sting very short. Inhabit- ing Europe.

BRACHYCATALECTION, in poetry ; from /3paY,Ā«c> short, and Ā»caraXjjyio, to end ; a verse wanting a syllable at the end.

BRACHYCERUS, in entomology, a genus of insects, of the order coleoptera, family curculio- nites, Latr. Its generic character is antennae short, straight, with nine articulations ; the last forming a truncated club ; rostrum rather short, thick, broad, bent downwards ; body ovate, tur- gid, rough ; elytra connate ; no scutellum ; all the joints of the tarsi undivided. It is the cur-

culio apterus of Linnaeus. The species are in- habitants of hot climates.

BRACHYCOLON , from |8paXvc, and KOXov, a member ; a period wherein one member is shorter than another.

BRACIIYGLOTTIS, in botany, a genus of plants; class syngenesia, order polygamia su- perflua. Ess. Char, flowers radiate: COR. of the ray few, recurved, and three-toothed : CAL polyphyllous, connivent, cylindric, equal. Down plumose. Species, two, B. repanda. Leaves ovate, repando-sinuate. B. rotundifolia. Leaves nearly round.

BRACHY'GRAPHY, n. & s. /Spayvc, short, and ypa

All the certainty of those high pretenders, hating ā¢what they have of the first principles, and the word of God, may be circumscribed by as small a circle as the creed, when brachygraphy has confined it within the compass of a penny. Glamrillt

BRACHYGRAPHY. See STENOGRAPHY.

BRACHYLOGY; from ˆpoxĀ«c, and Xoyoc, expression ; in rhetoric, the expressing any thing in the most concise manner. This, so far as is consistent with perspicuity, is a beauty; but if obscurity be the consequence, which is o&en the case, it becomes an inexcusable defect. Quin tUian gives an instance of brachylogy from Sal- lust : Mithridates corpore ingenti

perinde arma- tus ; ‘ Mithridates, as it were, armed with the hugeness of his stature.’

BRACHYOTOS, in ornithology, a horned species of strix, having the tuft very short ; the body fuscous above ; pale yellow, longitudinally streaked beneath. This is the short-eared owl of Latham, and the grande cheveche of Buffon. It is found both in America and Europe.

BRACHYPNCEA, in medicine; from /3paYvc, short, and TTJ/EW, I breathe ; shortness and dif- ficulty of breathing.

BRACHYPTERA, a term used by Willough- by to denote those hawks which have their wings so short as not t7 reach to the end of the tail. Of this kind are the goss-hawk, sparrow- hawk, &c.

BRACHYPTERA, in entomology, a species of mantis. Color cinereous ; thorax dentated ; wings half the length of the abdomen. Found in the sandy deserts of the south of Russia.

BRACHYPTERUS, a species of cimex;. color pale ; body linear ; wing-cases a third part the length of the abdomen. Inhabiting Europe. Also a species of gryllus.

BRACHYPYRENIA ; from foaxvc, and irvptjv, a nucleus ; in the natural history of fos- sils, a genus of septariae, with a roundish nuc- leus. See SEPTARIJE.

BRACHYTELOSTYLA, in natural history ; from /3paY.uc, short, rtXetoc, perfect ; and

BRACHYURA, in ornithology, an Italian species of fringilla, entirely yellow : the short- tailed Italian sparrow of English writers, and passerculus bononiensis of Brisson.

BRACHYURUS, in entomology, a species of ichneumon, inhabiting Germany. Color fulvous ; thorax, eyes, and abdomen black ; legs yellow.

BRACHYURUS, in ornithology, a species of lanius, the short-tailed shrike of Latham ; color, the head ferruginous gray above ; eye-brows whitish ; body grayish above ; yellowish white beneath ; tail rounded. Found only in

Hun- gary. Also a species of corvus, of a green color ; tawny beneath, and on the head, with a white spot on the wings. This bird inhabits the islands of the Indian ocean.

BRACK'. A.ng-Sax. braeccan. To break, see break. A breach ; a broken part.

The place was but weak, and the bracks fair ; but the defendants, by resolution, supplied all the defects.

Haytcard.

Let them compare my work with what is taught in the schools, and if they find in theirs many bracks and short ends, which cannot be spun into an even piece ; and, in mine, a fair coherence throughout; I shall promise myself an acquiescence. Digby.

BRACK, -\ Goth, bar, a tide; Arab.

BRACK'JSH, f bara, the sea ; Dutch, brack,

BRACK'ISHNESS, Ā£salt. Brackish is saltish;

BRACK'Y.) expressing the disagreeable

taste of sea water, or of waters approximating to the sea, not perfectly saline nor entirely fresh ; the intermediate state of water that belongs not strictly either to oceans or rivers.

Pits upon the sea shore turn into fresh water, by percolation of the salt through the sand : but it is far- ther noted, after a time, the water in such pits will become brackish again. Bacon.

When I had gained the brow and top, A lake of brackish waters on the ground Was all I found. Herbert.

All the artificial strainings hitherto leave a brack- ithness in salt water, that makes it unfit for animal uses. Cheyne.

The wise contriver, on his end intent,

Mixed them with salt, and seasoned all the sea,

What other cause could this effect produce ?

The brackish tincture through the main diffuse.

Blackmore.

BRACK'ET. Ital. bradetto. See brace, a cramp or stay; a piece of wood fixed for the support of something.

Let your shelves be laid upon brackets, being about two feet wide, and edged with a small lath. Mortimer.

In printing, a bracket or brace is a certain mark, bracing or confining words or lines to- gether, as in a triplet thus : ā

Charge Venus to command her son, Wherever else she lets him rove, }

To shun my house, and field, and grove ;> Peace cannot dwell with hate or love. ā¢ } Prior. Or thus [ ].

At the head of each article I have referred, by figures included in brackets, to the page of Dr. Lard- ner's volume, where the section from which the abridgement is made begins.

Paley's Evidences, part ii. chap. 6.

BRACKET, in architecture, a small support

against a wall for a figure, lamp, clock, &c.

which is susceptible of considerable elegance of

design and decoration.

BRACKETS, in gunnery, the cheeks of the car- -iage of a mortar. They are made of strong planks of wood, of almost a semicircular figure, and bound round with thin iron plates; they are

fixed to the beds by four bolts, which are calleĀ» bed bolts ; they rise up on each side of the mor- tar, and serve to keep it at any elevation, hĀ» means of some strong iron bolts, called bracket bolts, which go through these cheeks or brackets. BRACKETS, in ships, the small knees, serving to support the galleriesˆ and commonly carved. Also the timbers that support the gratings in the head.

BRACKLAU, or BRACKLAW, a palatinate in the eastern part of Podolia; it is also called Lower Podolia, and is of greater extent than Upper Podolia, but is more desolate, on account of the neighbourhood of the Tartars.

BRACKLAW, a strong town in Poland, capital of the palatinate. The houses are built of wood. It was taken by the Turks in 1672, but retaken

three years afterwards. It is seated on the river Bog.

BRACKLEY, an ancient borough town of Northamptonshire, seated near Buckinghamshire, on a branch of the river Ouse. It contains two parish churches; is governed by a mayor and aldermen, and formerly sent two members to parliament ; but has been disfranchised by the reform bill. It once had a college, which is turned into a free school; and contains many vestiges of former greatness. In the neighbour- hood is Bayard's Green, formerly celebrated for its tilts and tournaments. The town had once a great trade in wool. It is 64 miles N. W. of London, and 7 distant from Buckingham.

BRACT EA, in natural history, a plate, spangle or thin flake of any substance.

BRACTEA, in botany, a thin leaf of any folium florale. See BOTANY.

BRACTEARIA, in natural history, a genus of talcs, composed of small plates in form of spangles, each plate either being very thin or fissile into very thin ones. Of this genus there are a great many species, called, from their dif- ferent colors, mica aurea, or gold-glimmer ; and mica argentea, silver-glimmer, or cat's-silver, &c. BRACTEATA, in entomology, a small spe- cies of cicada, inhabiting Cayenne, with a green thorax, without spots.

BRACTEATED COINS, or BRACTEATI NUM- MI, among antiquaries, coins or medals covered over with a thin plate, or leaf, of some richer metal. They are usually made of iron, copper, or brass, plated over, and edged with gold or silver leaf. Medalists find some bracteated pieces even among the truly ancient coins. The French call them fourrees.

BRACTON (Henry), lord chief justice of England in the reign of Henry III. was educated at Oxford, where he took the degree of LL.D. and was made one of the itinerant judges about 1244. Ten years after, he became chief justice, and had the earl of Derby's house in London assigned him for his town residence, during the minority of that nobleman. He filled this im- portant office with singular reputation for twenty years. He wrote De Legibus et Consuetudini- bus Angliae, which is one of the most ancient and most methodical books on our laws. His me- thod is copied from Justinian. It was printed at London in 1569, folio, and in 1640, 4to. The first is very incorrect.

BRAD, being an initial, signifies broad

spacious, from the Saxon briaˆ, and the Gothic, braid.

BRAD. Goth brodde; S wed. and Dan. brad; Welsh, brwyd. A point ; a nail without a head. A sort of nail to floor rooms with, They are about the size of a tenpenny nail, but have not their heads made with a shoulder over their shank, as other nails, but are made pretty thick towardsˆhe upper end, that the very top maybe driven into, and buried in, the board they nail down ; so that the tops of these brads will not catch the thrums of the mops, when the floor is washing.

BRADS are distinguished by iron-mongers by different names; as joiners' brads, flooring brads, batten brads, bill brads, or quarter heads, &c. Joiners' brads are for hard wainscot ; batten brads are for soft wainscot ; bill brads are used when a floor is laid in haste, or for shallow joists subject to warp.

BRADBURY (Thomas), a dissenting minis- ter, was a native of Wakefield in Yorkshire, and educated at Mr. Jollie's academy at Attercliffe, where he distinguished himself by a species of low wit and eccentricity. He left that seminary at the age of eighteen, and became a preacher in London, and the successor of the celebrated Daniel Burgess. He engaged in a controversy with Dr. Watts on the subject of the Trinity, and was a warm, but not very liberal advocate of the orthodox opinions. He published also two volumes of sermons, which are esteemed. In private life he is said to have been of a very cheerful disposition, and would occasionally carry his hilarity so far as to sing ' O the roast beef of Old England ! ' at a public dinner. It is but fair, however, to add that his general conduct was irreproachable, and that he was much respected by bishop Burnet, and many of the episcopal clergy. He died in 1759.

BRADFORD (John), an eminent divine, and martyr of the Reformation, was born in the be- ginning of the reign of Henry VIII. at Man- chester. He was at first secretary to Sir John Harrington, who was several times employed by king Henry, and his successor Edward VI. as paymaster to the troops abroad. Bradford at this time was a gay man, and to support his extravagance made free with the king's money; but conscience checking him, he determined to make restitution, and actually repaid the money. Quitting his employment of secretary about A. D.

1547, he took chambers in the inner temple, and for some time studied the law ; but, finding an inclination to preach the gospel, he removed, in

1548, to Catharine Hall, Cambridge, and there applied with such

uncommon assiduity to the study of divinity, that in a much shorter time than usual he was admitted to the degree of M. A. Bishop Ridley, who, in 1550, was trans- lated to the see of London, charmed with Brad- ford's application and zeal, now sent for him to the metropolis, ordained and appointed him his chaplain. In 1553 he was also made chaplain to Edward VI. during which time he became one of the most popular preachers in the king- dom. Ma'ry was hardly in possession of the crown, before Bradford's persecutions began. He was first confined in the tower for sedition,

where he continued a year and a half; during which time he wrote several epistles that were dispersed in various parts of the kingdom. He was afterwards removed to other prisons, and at last brought to his trial before bishop Gardiner, where he defended his principles to the last, and was condemned to the flames. He was accord- ingly burnt alive in Smithfield, where he behaved with uncommon heroism, on July 1st, 1555. His works are, 1. Seventy-two Letters, written to Various People, whilst the Author was in Prison; printed in Coverdale's Collection. 2. Ten Letters, printed in Fox's Acts and Monu- ments. 3. Complaint of Verity, 1559, 8vo. 4. Three Examinations before the Commissioners, and his Private Talk with the Priests, with the Original of his Life; 1561, 8vo. 5. Two Nota ble Sermons; 1574, 8vo, 1631. 6. Godly Me- ditation and Prayers; 1614, 24mo. 7. Treatise of Repentance, 1622. With several translations and other pieces.

BRADFORD (William, Esq.), an American author, printer, and soldier. During the Ame- rican war he wrote, printed, and fought for his country. Both his father and grandfather had been printers. In the army he had the rank of colonel. Dr. Franklin said of him that his writings were spirited, his press correct, and his sword active. He died at Philadelphia, in 1791.

BRADFORD, a market town of Wiltshire, the centre of the great fabric of superfine cloths, for which it is famous: 10,000 or 12,000 pieces of twenty yards are made here annually ; but the water, while excellent for dyeing, has been said to subject the manufacturers in a remarkable de- gree to scrofula. The Rennet and Avon canal has much increased the trade. Distant seven miles south-east from Bath, and 100 west from London. Market on Monday.

BRADFORD, or BRADFORTH, a market town of Yorkshire, in the \Vest Riding, standing on one of the tributary streams of the Aire. It is noted for its manufactures of worsted stuffs, which are exposed for sale on the market day, in a large hall, built for the purpose. The parish is large, and has an endowed free grammar school, founded in the reign of Edward VI. and incorporated by Charles II. in the fourteenth year of his reign. Besides the parish church, a large and noble edi- fice, there is a new church, lately built by sub- scription here, and five meeting-houses for dis- senters. Near

the town are large iron works, where malleable iron is made, celebrated for its great strength. Coal is here very plentiful and cheap, and great quantities are sent off by the canals. In the vicinity, also, are flags and slate, of excellent quality. The rise of the canal, from the Leeds and Liverpool canal, which it joins near Windhill, is eighty-one feet, by eight locks. By means of this canal Bradford has most exten- sive navigable communications. The market is on Thursday, but the increase of the population has made a second market on Saturday to be much frequented. By the provisions of the re- form bill passed in 1832, this town is joined with Maningham, Bowling, and Horton, in returning two members to parliament.

BRADLEIA, in botany, a genus of class mo- noecia, order monadelphia. Male; COR. petals

six, filaments three, anthers three. Female; COR. six-parted ; three parts interior : STIG. six to eight : CAP. six-valved, six-celled : SEEDS soli- tary. Speciesone, B. sini, a shrub, nativeof China. BRADLEY (Dr. James), a celebrated English astronomer, was born at Sherborne, in Glouces- tershire, in 1692. He was fitted for the univer- sity at North Leach, and was sent thence to Ox- ford, and admitted a commoner of Baliol College, March 15th, 1710; where he took the degree of B. A. in 1714, and of M. A. in 1716. His friends intending him for the church, his studies were regulated with that view, and the bishop of Hereford, who had conceived a great esteem for him, gave him the living of Bridstow, and soon after that of Landewy Welfry in Pembrokeshire. All the time that he could spare from the duties of his function he passed with his uncle, Mr. Pound of Wanstead, a gentleman of considerable mathematical acquirements. At this period he made such observations, as laid the foundation of those discoveries which afterwards distinguished him as one of the greatest astronomers of his age. These observations gained him the notice and friendship of the lord chancellor Maccles- field, Mr. afterwards Sir Isaac Newton, Mr. Hal- ley, and many other members of the Royal So- ciety, of which he was elected a member. Not long after, the chair of Savilian professor of as- tronomy at Oxford becoming vacant, by the death of the celebrated Dr. Keil, Mr. Bradley was elected to succeed him, October 31st, 1721, at twenty-nine years of age ; his colleague being Mr. Ilalley, was professor of geometry on the same foundation. Upon this appointment Mr. Bradley resigned his church livings, and applied himself wholly to the study of his favorite science. In the course of his observations, which were in- numerable, he discovered and settled the laws of the alterations, or aberration, of the

fixed stars, from the progressive motion of light, combined with the earth's annual motion about the sun, and the nutation of the earth's axis arising from the unequal attraction of the sun and moon on the different parts of the earth.1 The theory of the former he published in 1727; and that of the latter in 1737 : so that in the space of about ten years, he communicated to the world two of the finest discoveries in modern astronomy. See ABERRATION, NUTATION, and ASTRONOMY. In 1730 Mr. Bradley succeeded Mr. Whiteside,as lecturer in astronomy and experimental philo sophy in the Museum at Oxford, which was a considerable emolument to him, and which he held till within a year or two of his death ; when the ill state of his health induced him to resign it. He always preserved the esteem and friend- ship of Dr. Ilalley ; who, being worn out by age and infirmities, thought he could not do better for the service of astronomy, than procure for Mr. Bradley the place of regius professor at Greenwich, which he himself had many years possessed with the greatest reputation. He even offered to resign it in his favor, but died before he could accomplish this kind object. Mr. Brad- ley, however, obtained the place, by the interest of Lord Macclesfield, who was afterwards presi- dent of the Royal Society; and upon this ap- pointment the University of Oxford sent him a

diploma creating him D. D. The appointment of astronomer royal at Greenwich, which was dated February 3rd, 1741-2, placed Dr. Bradley in his proper element ; and he pursued his ob- servations with unwearied diligence. Numerous as the collection of astronomical instruments at that observatory was, he endeavoured to increase them; and, in 1748, induced the Royal Society to make application to the king on the subject, who ordered Ā£1000 to be expended on this ob- ject. Dr. Bradley thus furnished, pursued his observations with great assiduity during the rest of his life ; an immense number of which were found after his death, in thirteen folio volumes, and were presented to the university of Oxford in 1779, on condition of their printing and pub- lishing them ; which, however, has never yet been done. During Dr. Bradley's residence at the Royal Observatory, he was offered the living of the church at Greenwich ; but he refused to accept it, from a conscientious scruple, ' that the duty of a pastor was incompatible with his other studies and necessary engagements.' King George II. hearing of this, granted him a pen- sion of Ā£250 over and abovĀ«j the astronomer's original salary from the Board of Ordnance ; a pension which has been regularly continued to the astronomers royal ever since. Dr. Bradley was elected a member of the Academy of Sciences at Berlin, in 1747; of that of Paris, in 1748; of that of Petersburgn, in 1754 ; mid of that of Bo- logna, in 1757. He married Miss Susanna Peach, in 1744, but never had more than one child, a daughter. He died the 13th July, 1763, at Chalfont ; and was interred at Minchinhamp- ton, in Gloucestershire. His papers, which have been inserted in the Philosophical

Transactions, are, 1. Observations on the Comet of 1703: 2. The Longitude of Lisbon and of the fort of New York from Wanstead and London, determined by the Eclipse of the first satellite of Jupiter: 3. An Account of a New Discovered Motion of the Fixed Stars : 4. On the Going of Clocks, with Isochronal Pendulums : 5. Observations on the Comet of 1736-7: 6. On the Apparent Motion of the Fixed Stars : 7. On the Occultation of Venus by the Moon; April 15th, 1751 : 8. On the Comet of 1757 : and 9. Directions for Using the Common Micrometer.

BRADLEY (Richard), F. R. S., a writer on gar- dening and agriculture, was also chosen professor of botany at Cambridge, but led a dissipated life, and measures were taking to deprive him of the situation, when he died in 1732. His works are, 1. A New Improvement of Planting and Garden- ing, 8vo. 1717. 2. Philosophical Account of the Works of Nature, 4to. 1721. 3. The Gentle- man's and Gardener's Kalendar, 8vo. 4. A Ge- neral Treatise of Husbandry and Gardening, 2 vols. 8vo. 5. Practical Discourses concerning the four Elements, as they relate to the Growth of Plants, 8vo. 6. Dictionarium Botanicum, 8vo. 7. Historia Plantarum Succulentarum, 4to. Be- sides these publications his name was prefixed to a translation of Xenophon's (Economics, 8vo. In one of his works he describes an instrument somewhat similar to that which Dr. Brewster has since called the Kaleidoscope, but never seems to have used it.

BRADSHAW (John), president of the high court of justice which tried and condemned Charles I. He was born, according to some writers, in Derbyshire, and, according to others, in Cheshire, but is first known in history as a student in Gray's Inn. Being admitted to the bar, he obtained much chamber practice from the partisans of the parliament, to which he was zealously devoted. He was made joint com- missioner of the great seal for six months, in 1646 ; and in the February following, both houses voted him chief justice of Chester. The trial of the king being determined upon, Brad- shaw was selected for president, and after a slight hesitation accepted the office. ' Even ac- cording to those principles,' says Mr. Hume, ' which in his present situation he was perhaps obliged to adopt, his behaviour in general will appear not a little harsh and barbarous; but when we consider him as a subject, and one too of no high character, addressing himself to his unfortunate sovereign, his style will be esteemed to the last degree audacious and insolent.' His rewards were certainly ample, amounting, it is said, to not less than Ā£4000 a year. He, how- ever, was

finally no favorite with Cromwell, on whose appointment to the protectorate he re- signed the chief justiceship of Chester. On the death of Cromwell, and the restoration of the long parliament, he obtained a seat in the coun- cil, was elected president, and would have been appointed commissioner of the great seal had his health permitted. He died in November, 1659, and on his death-bed is said to have declared that he felt no remorse for having presided at the trial of the king. At the Restoration, his body was disinterred ; and being exhibited on a gal- lows, was buried under it, at Tyburn.

BRADWARDEN (Thomas), archbishop 6f Canterbury, was born at Hartfield in Sussex about the close of the thirteenth century. He was educated at Merton College, Oxford, where he took the degree of D. D. and was esteemed a profound scholar, a skilful mathematician, and consummate divine. Pitt says he was a professor of divinity at Oxford. From being chancellor of the diocese of London, he be- came a courtier and confessor to Edward III. whom he constantly attended during his wai with France, assisting that victorious prince with his advice, animating the troops, and fervently praying for their success. After his return he was made prebendary of Lincoln, and archbishop of Canterbury. He died at Lambeth in 1349, forty days after his, consecration. His works are, 1. De Causa Dei, printed in London, 1618, published by J. H. Savil ; 2. De Geometria Spe- culativa, &c. Paris, 1495,1512,1530; 3. De Arithmetica Practica, Paris, 1502, 1512 ; 4. De Proportion ibus, Paris, 1495, Venice, 1505, folio; 5. De Quadratura Circuli, Paris, 1495, folio.

BRADY (Nicholas), a divine and poet, born Bandon, in Cork, in 1659. He studied at ˆVestminster, and afterwards at Oxford and Dublin. He was a zealous promoter of the Re- ˆolution; and in J 690, when the troubles broke >ut in Ireland, by his interest with M'Carty,

ing James's general, he thrice prevented the ā¢ Timing of the town of Bandon. Having quitted

several preferments in Ireland, he settled m London, where he was successively promoted t(? several livings ; and at the time of his death wa? rector of Clapham, minister of Richmond, ans! chaplain to the duke of Ormond's troop a horse guards. He composed part of the new version of Psalms, still sung in many churches ot England and Ireland ; the JEneid of Virgil, in 4 vols. ; and 3 vols of sermons. He died May 20th, 1726.

BRADY (Robert), born in Norfolk in 1643, was master of Caius College, Cambridge, regius professor, and twice representative of that uni- versity in parliament. In 1689 he was made keeper of the records in the Tower, and physi- cian in ordinary to James II. He wrote, An Introduction to the Old

English History ; An History of England, from the time of the Romans to the end of the reign of Richard II. ; and A Treatise on English Boroughs. He died in

1700.

BRADYPEPSIA, from /3pa5vS, slow, and irtˆic, digestion, weak -digestion.

BRADYPUS, the sloth, a species of quadru- peds, belonging to Ine order of bruta. The cha- racters are these : they have no fore teeth in their jaw ; the dog teeth are blunt, solitary, and longer than the grinders; they have six grinders in each jaw. The body is covered with hair. There are three species, viz. 1. B. didactylus has only two toes on each fore foot, and no tail ; the head is round; the ears are large; and it has no mam- mjE on the breast. The body is covered with ash-colored hair. It is a native of Ceylon. 2. B. trydactylus, or American sloth, has a short tail, and three toes on each foot. It is about the size of a fox. The body is covered over with hair of a gray color ; the face is naked ; the throat yellowish ; the fore feet are longer than the hind feet; the claws are compressed, and very strong. It has no mammae on the breast ; nor any external ears, but only two winding holes. In this and the last species there is only one common excreting canal as in birds. Its food is fruit, or the leaves of trees. It lives ge- nerally in the branches of trees ; and it is worthy of remark, that it always prefers to move along the underside of the boughs, its strong fore feet enabling it to clasp them in such a manner as to secure its safety; thus passing, as has been wit- tily observed, the greater part of his life like a young clergyman nearly related to a bishop, in a state of suspense. When it wishes to descend it rolls itself in a ball and drops from the branch, preferring that 'short road' to the ground, to the labor of creeping down the trunk. Nature has guarded this animal against its enemies, by giving it such strength in its feet, that whatever it seizes it holds so fast that it never can be freed from its claws, but must there die of hunger. A dog who has been set upon the animal has thus been known to be retained in its grasp until it was starved. It walks painfully and slowly, dragging itself forward by the strength of its fore- feet; turns its head as if astonished; its note an ascending hexachord; cry miserable. 3. B. pentadactylus : five toes on all the feet ; tail short. A heavy, clumsy, animal, of a mixed re- semblance between the sloth and hog ; when irri-

tated gives a short harsh cry; catches what is thrown to it with its paws; eats bread, fruit, and eggs, but not roots.

BRAE-MAR, or BRAE-MARR, a mountainous district of Scotland, in Aberdeenshire, situated in the middle of the Grampian hills, about fifty miles west of Aberdeen, and one of the three di- visions of that extensive territory called Marr. The mountains are the highest in Great Britain, Ben-Nevis excepted. Macduie, Cairn toul, and Breirarch, rising 4300 and 4220 feet above the level of the sea. Here are various colored crys- tals of considerable value ; several forests, and numerous lakes and rivulets. The inhabitants are computed at about only fifteen to a square mile.; and in the mountainous parts they do not ~eside permanently.

BRAG, v. n., n. s. Sc adj.~\ Gothic braga, Rniˆ Wv Ā« <ā¢ braha (from which

we have our word brave); Isl. brag ; ! Swed. brage, a hero ; bragner, an extoller, a heroic poet, a bard; Dan. bragska ; Arm. bra- J ga ; Fr. braquer, to

n. s.

BRAG'GERY, adj. BRAG'GING, part . adj. BRAG'GINGLY, adv. BRAG'LESS, adj. BRAG'LY,

BRAG'GART, n- s. & adj. BRAG'GARDISM, n. s. BRAGG ADO'CIO.

extol. Junius observes that brag in Scotch is terror, fear ; and he quotes several instances from Douglas of the word so used ; and hence he infers was deduced the English application of the word, to those who endeavour to strike terror into their op- ponents by the noisiness of their threats. Skin- ner believes that the word is derived from the Ang.-Sax. braec-an, to break ; hence to break or burst out in noisy threats or boastings. Thus we may collect the various meanings of the word ā to brag is distinguished from the just celebration of our own or another's merit. It implies ex- aggerationā a person attempting to appear, by his own noisy boasting, either greater, braver, or better than he is. A brag is a coward, vaunting his bravery ; the ass in a lion's skin, trying to roar when he can only bray. A braggadocio is a puffing, swelling, boasting fellow, one who makes clamorous professions.

An home blew with many boustous bragge, Which all this world with war hath made to wagge.

Chaucer.

Hard by his side grewe a bragging brere, Which proudly thrust into the

element, And seemed to threat the firmament.

Spencer's Shepheard's Calendar. But it was scornefull braggadochio, That with his servant Trompart hovered there. Id.

Seest riot thilk hawthorn stud, How bragly it begins to hud, And utter his tender head ? Flora now calleth forth each flower, And bids him make ready Maia's bower.

Shakespeare. The bruit is, Hector's slain, and by Achilles. ā

If it is so, bragless let it be, V/eat Hector was as good a man as he. Id.

Thou coward ! art thou bragging to the stars, Telling the bushes that thou lookest for wars, And wilt not come ? Id.

Mark me, with what violence she first loved the

door, but for braqninq, and telling her fantastical ' yj w e >

lies . III.

*Verona Irtags of him, To be a virtuous and well-governed youth. Id**

A kind of conquest

C;esar made here ; but made not here his brag Of came, and saw, and overcame. Id.

Who knows himself a braggart, Let him fear this ; for it will come to pass, That every braggart shall be found an ass. Id. Knowledge being the only thing whereof we poor old men can brag, we cannot make it known but by utterance. Sidney.

It was such a new thing for the Spaniards to re- ceive so little hurt, upon dealing with the English, as Avellaneda made great brags of it, for no greater matter than the waiting upon the English afar off.

Bacon.

His steward was his kinsman, Vain Eypence, Who proudly strove, in matters light, to show Heroic mind in braggart affluence

Fletclter's Purple Island. With him such self-admiring arrogance And brag } his deeds without a helper praising.

Id.

Beauty is nature's brag, and must be shown

In courts, at feasts, and high solemnities,

Where most may wonder. Milton.

Such as have had opportunity to sound these brag-

gers throughly, by having sometimes endured the

penance of their sottish company, have found them

in converse, empty and insipid. South.

In bragging out some of their private tenets, as if

they were the established doctrines of the church of

England. Sanderson.

The rebels were grown so strong there, that they

intended then, as they already bragged, to come over

and make this the seat of war. Clarendon.

Mrs. Bull's condition was looked upon as desperate

by all the men of art ; but there were those that

bragged they had an infallible ointment. Arb.

The world abounds in terrible fanfarons, in the

masque of men of honor ; but these braggadocios are

easy to be detected. L' Estrange.

By the plot, you may guess much of the characters

of the persons ; a braggadocio captain, a parasite, and

a lady of pleasure. Dry den.

Every busy Iktle scribbler now Swells with the praises which he gives himself, And taking sanctuary in the crowd, Brags of his impudence, and scorns to mend. Rose.

Yet lo ! in me what authors have to brag on, Reduced at last to hiss in my own dragon. Pope.

A s yet, notwithstanding the strutting and lying in- dependence of a braggart philosophy, nature maintains her rights, and great names have great prevalence.

Burke's Appeal to the Old Whigs.

BRAG, a game at cards, wherein as many may partake as the cards will supply ; the eldest hand dealing three to each person at one time, and turning up the last card all round. This done, each gamester puts down three stakes, one for each card. The first stake is won by the best card turned up in the dealing round; beginning from the ace, king, queen, knave, and so downwards. When cards of the same value are turned up to two or more of the gamesters, the eldest hand gains ; but the ace of diamonds wins, to what- ever hand it be turned up. The second stake is won by what is called the brag, which consists in one of the gamesters challenging the rest to pro- duce cards equal to his. A pair of aces is the best brag, a pair of kings the next, and so on ; and a pair of any sort wins the stake from the most valuable single card. In this part [consists the great diversion of the game ; for, by the artful management of the looks, gesture, and voice, It

frequently happens that a pair of fives, treys, or even deuces, out-brags a much higher pair, and even some pairs royal, to the no small merriment of the company. The knave of clubs is a prin- cipal favorite, making a pair with any other card in hand, and with any other two cards, a pair royal. The third stake is won by the person who first makes up the cards in his hand thirty-one ; each dignified card going for ten, and drawing from the pack, as usual in this game.

BRAGA, an intoxicating liquor in Russia, brewed from wheat.

BRAGA, a considerable city of Portugal, whose archbishop is the primate of that kingdom. It consists of five parishes, is neatly built, and si- tuated in a broad and cultivated vale, in a pleasant part of the province of Entre Douro- e-Minho, on the Este. Its manufacture of hats supplies a great part of Portugal. This city, which contains about 13,000 inhabitants, is about ti.irty miles nearly north-east of Oporto : a district of tlie same name encompasses it, contain- ing thirteen cantons.

BRAGANT1 A, in botany, a genus of plants : class gynandria, order hexandria. Its generic characters are, CAL. none : COR. petal one ; tube globulir ; border divided into three ; recurved segments : STAM. anthers six, adhering to the middle of the style : PIST. style thick ; STIG. con- cave : PER. four-celled and four-valved : SEEDS many : Species only one, a shrub growing on the mountains of Cochin China.

BRAGANZA, a duchy of Portugal. Bra- ganza, the capital, is seated on an eminence near the rivulet Fervenza; and divided into the old city and the new. The former is upon an emi- nence, and fortified with a double wall ; the cita- del is on the opposite side joined to a wall. The new town is in a plain, near the river Sabor, on the frontiers of Galicia ; fifty-five miles north- east of Villa Real ; and carries on a silk manu- facture. The district of Braganza includes ten adjacent villages.

BRAHE (Tycho), a celebrated astronomer, descended of an illustrious family originally of Sweden, but settled in Denmark, was born De- cember 14th, 1546, at Knudstorp in Schonen. He was taught Latin when seven years old, and studied five years under private tutors. His father dying, his uncle sent him in April 1559 to finish his education at Copenhagen. The great eclipse of the sun on the 21st of August, 1560, happen- ing at the precise time that had been foretold, he began to look upon astronomy as something divine; and purchasing the tables of Stadius, gained some notion of the theory of the planets. In 1 562 he was sent by his uncle to Leipsic, to study law; but astronomy engrossed all his thoughts, and in purchasing books on that science he employed all his pocket money. Having pro- cured a small celestial globe, he would wait till his tutor was gone to bed, in order to examine the constellations and learn their names ; and when the sky was clear spent whole nights in ob- serving the stars. In 1565 Brahe having quar- relled with a Danish nobleman, they fought and he had part of his nose cut off ; which defect he so artfully supplied with one made of gold and silver, that it was not perceivable. About this time he began to apply to chemistry, purposing

nothing less than to obtain the philosopher's stone. In 1571 he returned to Denmark, and" was favored by his mother's brother, Steno Billes, a lover of learning, with a convenient place at his castle of Herritzvold near Knudstorp, for making his observations and building a labora- tory. But marrying a country girl beneath his rank, a violent quarrel ensued between him and his relations, and Frederick II. king of Den- mark was obliged to interpose to reconcile them. In 1574 he read lectures upon the theory of co- mets at Copenhagen. In 1575 he began his tra- vels through Germany, and proceeded as far as Venice: he then resolved to remove his family, and settle at Basil ; but the king being informed of his design, and unwilling to lose such an ornament to his country, promised, to enable him to pursue his

studies, to bestow upon him for life the island of Huen in the Sound, to erect an observatory ai.d laboratory there, and to defray all the expences necessary for carrying on his designs. Our astronomer readily em- braced this proposal ; and accordingly the first stone of the observatory was laid Aug. 8th, 1576. The king also gave him a pension of 2000 crowns out of his treasury, a, see in Norway, and a ca- nonry of Roschild, which brought him 1000 more. James VI. of Scotland, going to Denmark to marry the princess Anne, paid him a visit at Ura- nibourg, made him several presents, and with his own hand wrote a copy of verses in his praise. After the death of King Frederick, in 1588, he was deprived of his pension, see, and canonry ; upon which, finding himself incapable of bearing the expences of his observatory, he went to Copen- hagen, whither he brought some of his instruments, and continued his astronomical observations till Valkendorf, chamberlain to Christian IV. com- manded him, by the king's order, to discontinue them. He then removed his family to Rostock, and afterwards to Holstein, to solicit Henry Rantzau to introduce him to the emperor Rodol- phus ; and that gentleman complying, he was received by the emperor at Prague with the ut- most respect. That prince gave him a magni- ficent house, till he could procure one more fit for astronomical observations ; assigned him a pension of 300 crowns; and promised, upon the first opportunity, a fief for him and his descend- ants: but he did not long enjoy this happy situa- tion'; for, on the 24th October, 1601, he died of a retention of urine, in the fifty-fifth year of his age. He was interred very magnificently, in the principal church at Prague, and a noble monu- ment was erected to his memory. His skill in astronomy is universally known, and he is famed for being the inventor of anew system, which ht endeavoured, though without success, to establish instead of the Copernican. He was of a bad temper, we must add, and very observant of as- trological and other omens. His principal works are; 1. De Mundi ,/ Etherei Recentioribus Phze- nomenis ; 2. Astronomia Instaurata Mechanica, fol. 3. Tabulse Ilodolphinse, revised and pu- blished by Kepler, at Tycho's desire, fol. 4. Stellarum Octavi Orbis Inerrantium Accurata Restitutio, &c. 5. Historiae Ccelestis, Partes DUEE, &c. 2 vols. fol.

BRAHILOW, a considerable trading town of European Turkey, in Wallachia, the capital of a

district of that name. It stands on the Danube, a branch of which forms a harbour here, and by which it carries on a considerable corn trade. The district is governed by a pacha of three tails, who has his seat in the town. It was formerly the see of a bishop of the Greek church. This town was

twice visited in the year 1770 by the Russians, and nearly burned to the gound. '130 miles S. S.W. of Bender.

BRAHMA, BRAMA, or BRIMHA, in the Hin- doo religion, the celebrated deity of Ilindostan, from whose person, in various ascending degrees of honor, the four great tribes, or castes, of the Hindoos are said to have proceeded. These castes, from the remotest antiquity, have neither intermarried, taken food, drank, or as- sociated with each other, except when they wor- ship at the great temple of Juggernaut in Orissa, where it would be a crime to make any distinc- tion. From the feet of Brahma were produced the lowest of the castes, viz. that of the Soodra, who generally fill degraded situations and at- tend to the menial occupations of life. The next caste in this scale is that of the Byse,Wyse, or Banians, proceeding from the thigh of Brahma,, and cousisting of merchants, bankers, and shop- keepers. Early writers on Indian affairs have sometimes erroneously ranked all who professed the Hindoo religion under this division. See BANIAKS. Sometimes the Byse are said to have been produced from the belly of Brahma, in al- lusion to the nourishment and provision which commerce diffuses through the state. The next in order of precedence is the Ketri, or Cutlery tribe, or. military ; called also the royal caste, pro- duced from the heart of Brahma. All their kings and rulers should belong to it ; its supposed origin indicating the prudence and courage which should distinguish soldiers and rulers. The highest of all the class is that of the Brahmins, or sacerdotal caste, said to have been produced from the head of Brahma, to establish their supe- riority over all the rest.

A holy obscurity is attached to the mode of Brahma's existence, and various subordinate agents are employed to conduct his government of the world. The two principal of these are Vishnu, the preserver ; and Siva, the destroyer ; who are s'aid to have been many times avatar, or incarnate ; and hence the imagination of the Hindoos has clothed them with a variety of visi- ble forms, each of which has become a distinct deity, to whom worship is daily addressed. Without supernatural intervention, therefore, no- thing is done in earth, air, or sea ; in conse- quence of which the winds, the sea, the heavens, the earth, the elements, the sun, the stars, fountains, and streams, are either converted into deities, or each placed under the immediate guardianship of one of this train of gods who crowd the Brah- minical heaven. The assemblage is still farther swelled by myriads of demi- gods, many of whom are deifications of the most disgraceful passions and propensities of our nature. Among the an.i- mals which have become objects of adoration, the cow is the most sacred in many parts of India. She is frequently called the mother of the gcds ; and many are kept by the rich for the purpose of being worshipped.

BRAHMINS, BRACHMANS, or BRAMINS, call- ed Ppaxpavia, Gr. the first

of the Hindoo castes, proceed, we are told (see preceding article), from the head of Brahma, and are the only caste that can officiate in the priesthood. The Ketri, the next most honorable tribe in the descending scale of castes, and comprehending all the higher orders of civil society, have the distinguished ho- nor of hearing, for they must not read, the Vedas, or sacred books : this is the exclusive honor of the Brahmins. If a Soodra were con- victed of so much as hearing a passage from the Vedas, or Shasters, boiling lead is directed by their oracles to be poured into his ears for his presumption. One could almost imagine some of this favored tribe had been consulted by the western priesthood, in times not very remote from the pre- sent, on the policy of giving the Bible to the com- mon people. It is certain, however, that they have not had the courage to adopt any punishment, either so characteristic or so effectual as the Hindoo one. The Hindoo regards the person of a Brahmin as sacred above all things : it is the greatest impiety to fail in the prescribed rules of respect and reverence; and to cause his death, or violate his wife, is a crime without pardon. Of course the boundless influence and inviolability of the order has been subject to the most shock- ing abuses. A Brahmin, supposing himself ag- grieved, has been known to take his mother or his child, and going into the presence of the person who has injured him,, to demand satisfac- tion or threaten to stab them to the heart ; and the shameful deed has been, on refusal of such satisfaction, often perpetrated. The person sup- posed to have driven him to this extremity is henceforth considered as profane, and viewed by the multitude with the most extreme horror. The Brahmin will sometimes sit in dudgeon or dhurna, as it is called, before the door of his enemy, and threaten to take away his own life if he offers to come out of his house before he has given satisfaction : and, as a Brahmin never avows such a design without a determina- tion to carry it into effect, the object of his wrath must either submit to his will, whatever it may be, or incur the odium of having occasioned a Brahmin's death ; almost equal to the unpardon- able sin of having inflicted it. Our government has endeavoured to check this practice; and or- dered every Brahmin discovered sitting in dhurna to be apprehended.

Other customs connected with the inviolability of this order are not cognizable by law, and are inveterate habits of the Hindoos. The slaughter of a Brahmin's cow demands the offering of ten cows and a bull in reparation, and a certain penance to be performed thirty days ; in which the head of the offender is shorn, he is clothed in a cow's hide, eats barley mixed with cow's urine, bathes in that fluid for two months, &c.

The whole learning of India has been for ages in the hands of the Brahmins. Many of the Grecian sages, we know, travelled into India to become their pupils, and speak of them under the name of Brachmans, as holding the doctrine of the immortality of the soul, and a state of future

rewards and punishments. To this species of knowledge the Brachmins added an infinite num-

oer of religious observances, adopted by Pytha- goras ; such as fasting, prayer, silence, and con- templation. They were looked upon as the friends of the gods, because they affected to pay them so much regard ; and as the protectors and benefactors of mankind. ,No bounds were, there- fore, set, at this remote period, to the respect that was shown them : princes did not scruple to consult them upon any critical conjuncture, from a supposition that they were inspired, and all classes venerated them as absorbed in the pure delight of science. But we must not look for the knowledge of the ancient Gymnosophists among the modern Brahmins : their scientific at- tainments are perfectly despicable, and those an- oient records extant among them, to which some writers would attribute an unparalleled antiquity, are, in fact, a tissue of absurd allegories, or ex- travagant and cbscene fables, which common decency forbids to be expounded, quite as jea- lously as the interests of this artful priesthood.

If Eusebius is correct in stating that the Brah- mins of his day worshipped no images (see Pne- par. Evangelica, lib. vi. c. 10), the modern sect is in this respect also wretchedly degenerated. True it is, that the Vedas and Shasters assert the unity of God, and illustrate it in sublime and beautiful language ; but they introduce also such a complicated machinery of providential and na- tural agents, that polytheism is the doctrine of the Vedas to a simple mind. The subordinate deities accordingly, although employed by the supreme Brahma, and dependent on him in the government of the universe, attract far more no- tice ; mankind are more closely connected with them. Thus the worship of the Virgin and the saints in the Romish church has at times al- most superseded that of the Most High ; and in the Indian mythology, it is remarkable that Brahma himself has not a temple devoted to his service, while thousands of pagodas are erected in honor of the inferior deities. The Brahminical priesthood maintains its high honors in one re- spect in a manner peculiar to itself. It abso- lutely places, as we have seen, the holders of sceptres and thrones in an acknowledgedly in- ferior caste ; a circumstance that clearly indicates the high antiquity of the order. In the earliest ages only had the priestly office such influence as to be able to mould the government and manners of a state ; then it united, in the same person, the priest and the king. The Brahmini- cal system is evidently an improvement on this. They have devolved the business of civil go- vernment on an inferior order, which must act in all respects under their directions.

‘ A priest/ say the institutes of Menu,’ who well knows the law, needs not complain to the king of any injury, since, even by his own power, he may chastise those who injure him; his own power is mightier than the royal power; by his own might, therefore, may a Brahmin coerce his foes. He may use without hesitation the powerful charms revealed to Athawan and Angiras ; for ā¢peech is the weapon of a Brahmin ; with that he may destroy his oppressors. Let not the king, although in the greatest distress, provoke Brah- ‘nins to anger, for they, once enraged, could ā¢nmediately destroy him with his troops, ele-

phants, horses, and cars. Who without perish- ing could provoke those holy men, by whom the all devouring flame was created, the sea with waters not drinkable, and the moon with its wane and increase ? What prince could gain wealth by oppressing those who, if angry, could frame other worlds and regents of worlds, could give being to other gods and mortals ? What man desirous of life would injure those by the aid of whom worlds and gods perpetually subsist, those who are rich in the knowledge of the Veda? A Brahmin, whether learned or ignorant, is a powerful divinity ; even as fire is a powerful di- vinity, whether consecrated or popular. Thus, though Brahmins employ themselves in all sorts of mean occupations, they must invariably be honored; for they are sometimes transcendantly divine. ‘

The morality of this system has been also a subject of eulogy; and many excellent precepts are unquestionably to be extracted from the Vedas ; but nothing can be more vile or wretched than the general practice. European writers, who contend earnestly for the antiquity and high moral pretensions of the system, do not scruple to admit that some ignorant or intriguing Brahmin is generally connected with all the rob- beries and murders of the country. M. Dubois says, that one of their own number defined a Brahmin as ‘ an ant’s nest of lies and impos- tures.’ This same writer adds, that there is no- thing in which the Brahmins so far excel the other Hindoos as in the art of lying. ‘ It has taken so deep root among them, that so far from blushing when detected in it, many of them make it their boast.’ Captain Wilford states that a learned pundit of Benares, who had been em- ployed by him to translate one of the puranas, interpolated the memorable story of Satyavatra and his three sons, corresponding exactly with that of Noah, in our Bibles. When captain Wilford discovered this trick, he sent for the pun- dit to upbraid him ; but he swore by every thing sacred there was no imposition; and brought, in corroboration of his testimony, ten of the most celebrated pundits of Benares, who were ready to depose to the same falsehood ‘ Brahmins, by the subdivision of their order, are allowed, as we shall see, to engage in all the affairs of civil life ; nothing appears unsuited to their habits that can promote their aggrandisement. The-Mah- ratta Paishwa was lately a Brahmin ; his troops are generally composed of Brahmins ; and it is well known that, excepting a cow and a Bralv min,

nothing, throughout his vast dominions, is secure from rapine.

The puerility of their superstitions, the multi- plicity of their self-inflicted atonements, as they are thought, for crimes, and the affected mystery of their devotions, tend doubtless to perpetuate this system. Every religion abundant in human ceremonies has been propdrtionably deficient in its moral influence. The cow is sacred ā absti- nence from animal food the most important of religious or moral requirements. To touch the flesh of the cow in the way of food is regarded as the highest pollution, and involves a forfeiture of caste, even in the case of those who have been involuntarily guilty. Tippoo Saib is therefore

said to have forcibly converted a great many of his Hindoo Subjects to the Mussulman religion, by sprinkling them with cow broth ; by which means they were for ever rendered unclean in the eyes of their countrymen, and were glad to seek an asylum from reproach, by embracing the reli- gion of that tyrant. It may be matter of conjec- ture whether the Indian has borrowed this vene- ration of the cow from the ancient Egyptian system, or the Egyptian from the Indian ; but the similarity between them will be instantly perceived, and some Indian festivals to this animal are said strikingly to accord with the rites of Apis, as described by historians.

Their self-inflicted penances also at once en- courage bad morals and false religion, while they, in particular cases, heap up the sum of hu- man misery and wretchedness to an intolerable degree. We have seen how the Brahmin will expose, and even give up his own life, in the pur- suit of vengeance, or the accomplishment of some favorite scheme. This prodigality of life and suffering has always distinguished their devotions, being considered not only as meritorious, but as capable of procuring a supernatural power for the deluded devotees. Suicide is also in various instances regarded as laudable. The immolation of widows on the funeral pile of their husbands, and the wretched victims of the car of Jugger- naut, are well-known examples. A modern poet has well said of

The Brahmin, kindling on his own bare head

The sacred fire.

If sufferings Scripture no where recommends, Devised by self to answer selfish ends, Give saintship, then all Europe must agree, Ten starveling hermits sufl'er less than he.

The Brahmins formerly made a greater mys- tery of their doctrines than is now attempted. In all their intercourse with strangers, there was nothing they shunned so much as communicating their tenets in philosophy and religion. When, therefore, the celebrated Ackber, the wisest of all the princes of the Mahommedan dynasty in India, was anxious to become acquainted with their doctrines, he found all his efforts unavail- ing, until, as the abbe Raynal tells us, he at last adopted the expedient of imposing on a cele- brated Brahmin at Benares a youth of the name of Feizi, by persuading the Brahmin that Feizi belonged to the Brahminical cast. The youth was joyfully received, and instructed in all the mysteries of Sanscrit literature ; when the time, however, approached that he should depart, arid communicate to Ackber the secrets which he had gained, he felt himself detained by a violent at- tachment to the Bialimin's daughter: the ancient sage threw no obstructions in the way of their mutual passion ; he even offered his daughter in marriage to Feizi. The young man, thinking it ungenerous any longer to deceive his benefactor and instructor, now fell down on his knees, and confessed the imposture which had been prac- tised. The Brahmin, without uttering a word of reproach, drew a dagger, and was on the point of plunging it into his own breast, when Feizi prevented him, protesting that he would do what- ever he required of him ; upon this, the Brahmin VOL. IV.

imposed a solemn oath, that he should never translate the vedas, nor divulge the infofmation which he had obtained.

Of late, it has been found impracticable to preserve the vedas or sacred books from Euro- pean inquisitiveness and research; yet to peruse, and to make them intelligible to others, have been, found very different tasks.

Some considerable attainments in the exact sciences, and in poetry, must not be denied to the nncient Brahmins. The origin of our modern sys- tem of arithmetrical notation has been shown to be Sanscrit, and the translations lately made from the BejaGranita, and Lilavati, prove that algebra was early and extensively cultivated by the Hindoos. These works contain specimens of indetermi- nate analysis, in which the subjecrs are treated in a manner enrirely different from those iu the early Greek treatise of Diophantus. It cannot therefore be doubted, that the entire pro- cess was of eastern invention. In their poetry the imagination luxuriates in all the flowers, and fruits, and balmy breezes, of oriental scenery. It is scenery, however, not human feeling that is described ; the passions and senses, and not the heart, that are addressed. ā¢ Sir William Jones has given a specimen of these amatory poems in his translation of the songs of the Jayadeva, which relate to the two brightest lights of love in the heaven of India. These dramatic compositions and fables have always formed principal branches of oriental liteiature. In the whole compass of that

literature nothing can be found that deserves the name of history, or even of geographical knowledge. It has long been remarked, says a sensible modern writer, that science and litera- ture are in a progressive state of decay among the natives of India, the number of learned men being not only diminished, but the circle of learning, even among those who devote themselves to it, greatly contracted. The abstract sciences are abandoned, polite literature neglected, and no branch of learning cultivated but what is con- nected with peculiar religious sects and doctrines, or with the astrology of the people. The imme- diate consequence of this state of things is the disuse, and even actual loss, of many valuable books ; and it has been feared by many, that unless government interfered with a fostering hand, the revival of letters among the natives would become hopeless, from want of books, and of persons qualified to explain them.

Modern researches into their sacred books and institutions have exhibited the occupations and duties of the Brahmins as divisible into these seven; 1. The study and illustration of the Vedas ; 2. Of the other Sastras, or every secular branch of science ; 3. The general instruction of others ; 4. The performance of the yajirya, or jag, a pe- culiarly holy sacrifice ; 5. The puja, or ordi- nary worship of the gods ; 6. The giving of dana, or alms ; and 7. receiving them either personally, or on the behalf of particular deities. Four of these duties being according to the D'herma Sastra, or moral code, religious, and three civil, or connected with the subsistence of this tribe. Ten other ancient subdivisions of the class have been specified; viz. 1. The Devas, who sacrificed for themselves, and were learners

of religion ; 2. M mis, who were teachers, but did not perform sacrifices ; 3. Devoijas, both active and passive agents in all Brahmanical duties ; 4. Rajas ; 5. Vaisyas ; 6. Sudras, performing the duties required from the caste, whose names they respectively bore ; 7. Bidala- cas or mendicants; 8. Pashus or reprobates, neglecting all rules; 9. Mlech'has or infidels adopting foreign customs; and 10. Chandalas or outcasts who eat any thing. A further division of this last class was derived from the countries whence they originally sprung. All these dis- tinctions seem now to be lost, and the whole of the Brahmins in Bengal are supposed to be de- rived from five priests, invited from Canyacubja by Adisura, king of Gaur, who reigned about three centuries before Christ. Ballala Sena, who reigned in the twelfth century, settled the ques- tion of precedence between the 156 families which had at that period sprung from these colonists, and the

distinctions then fixed, remain to this day.

The Sastras present four states or degrees, called asrama, through which every brahmin should pass, and which are designed to occupy him during the four distinct periods of youth, manhood, age, and final infirmity. These are named Brahmacharya or Brahmacharyon, Gri- hast'ha, Vanaprast'ha and Brahmajuyani. The first a sort of noviciate, continues till marriage ; the second terminates at the age of fifty ; the third is devoted to the strictest religious contem- plation ; and the last is considered as the highest pitch of perfection, attainable by man ; consisting in a complete abstraction from human passions, and absorption in divine meditation. The forms and duties of these states are pointed out in the Institutes of Menu, and the sacred books. From these we learn, that when the father of a family perceives the symptoms of age coming fast upon him, and sees the child of his child, he is to abandon human society, and the food to which he had been accustomed, to retire either alone, or accompanied by his wife, to a lonely wood, where hĀ« is to light his consecrated fire, to make his oblations, to gain a complete ascen- dancy over his organs of sense and action, to live on that food only which holy sages are ac- customed to eat ā green herbs, roots, and fruit: to perform the five great sacraments, introducing them with prescribed and appropriate ceremonies. Here he is also to wear a black antelope's hide, or a vesture of bark, to bathe evening and morn- ing, to suffer the hairs of his head, his beard, and his nails to grow, without the unhallowed intrusion of a barber or his razor, or nail-knippers, the abomination of abominations. By abstinence, he is to take care that he has a surplus even of his simple fare, to make offerings, and give alms to those that visit his hermitage. He is to be patient under sufferings, universally benevolent, with a mind devoutly fixed on the Supreme Being ; and, above all, he must be constantly en- gaged in reading the Vedas ; to be a perpetual giver, but no receiver, of gifts ; and to be es- pecially tender and affectionate towards all the forms of animated nature, however disgusting and filthy. It is also peculiarly enjoined upon him,

as the very perfection of saintly virtue, to slida backwards and forwards on the ground ; to stand a whole day on tiptoe ; to continue in perpetual motion, rising and sliding alternately ; and at sunrise, at noon, and sunset, to visit the waters and bathe. In the hot season he is to expose Mmself to five fires, four blazing around him, and the sun above him. In the rain he is to stand uncovered, without even a mantle, and where the clouds pour their heaviest torrents, there he is patiently to bear all their fury ; in the coldest season he is to immerse his clothes, that they may be always wet and comfortless ; and with all this he is to increase, by degrees, the austerity of his devotion. A number of other and similar cruel absurdities complete the tragedy of Hindoo piety ; and the Brahmin, who has been able thus heroically to shake off his body, that is, by a series of inflictions, every one

of which bears the. character of suicide, to terminate his life, rise-? to exaltation in the Divine presence.

Whether the extent of Hindostan, and its remoteness from the scene of European politics and frequent conquest, have favored the perma- nency of this system, or, whatever may be the causes, the fact is clear that altogether the same and singularly unchangeable it has remained for several thousands of years. India, in fact, was entirely undisturbed by the inroads of conquerors till the period of the Mahommedan invasion. We say nothing of the fabulous ex- ploits of Bacchus ; and Alexander the Great scarcely made any impression upon it. The shock which it received from the Mussulman invaders was certainly considerable : they swayed the sceptre, which in their hands was a rod of iron, over the greatest part of Hindostan, and left no art unemployed, which the most bigotted and cruel policy could devise, to establish Islamiam on the ruins of the Brahminical institutions. Thus, doubtless, were those institutions in some measure affected, and they have since been con- siderably modified by European intercourse. Yet is there a character of indomitable tyranny and permanency about this system as a whole, which no human power or influence has materially shaken. Conquest, to the degree it has operated on other countries, and changed the customs and manners of the subdued into those of the subju- gating power, has never permanently triumphed here. Other religions have never finally displaced the dark and cruel sway of this ; it remains, we trust, for the happier intercourse of Great Britain with those regions, when her dreams of conquest shall disturb her or them no more, and when her only immortal system of religion shall have fully developed itself in her own character, to be the final means of overthrowing this gigan- tic mass of superstition and folly.

BRAID, v. n. & adj. Goth, brad; Swed. bragd, from Goth, and Swed. bregda, to change, atiga bragd, a turn of the eye. A sudden move- ment ; a strait and rapid turn ; a nod, a wink, or the habit of winking. Shakspeare uses the adjective in the sense of violence as well as cele- rity. The Ency. Met. gives it a far more ex- tended meaning ; according to that work, to braid is to break, pull, or tear ; to leap or spring ;

to make an irruption, sally, assault, onset, insur- rection, revolt. But the illustrations adduced do not bear out the applications.

For veray wo, out of his wit, he kraide, He n'iste not what he spake. Chau. Cant. Tales.

And whan he saw how stille that I lay, He was agast and wold have fled away, Til at the last out of my swough I brayde. Id.

Wher is this false tyrant, this Neroun ? For fere, almost out of his wit he brayde, And to his goddess pitously he preide For succour. Id.

But when, as I did out of sleep abray, I found her not where I her left whyleare, But thought she wandered was, or gone astray.

Spenser.

BRAID, or \ Islan. l>rcĀ»da ; Anˆ..'Sax. BREID, v. & n. 5 bredun; Teut. briden ; from BRAID'ED, adj. } Goth, bry, a point, a knit ting-needle. To knit; to plait; to' wreathe: a knot, or complication of something woven to-gether : the adjective corresponding.

The single t

As cables brayded threl'ould may, together wrethed

sure. Surrey.

Listen where thou art sitting, Under the glossy, cool, translucent wave, lu twisted braids of lillies knitting The loose train of thy amber-dropping hair.

Milton.

Close the serpent sly, Insinuating, wove with gordian twine His braided train, and of his fatal guile Gave proof unheeded. Id.

Osier wands, lying loosely, may each of them be easily dissociated from the rest; but, when braided into a basket, they cohere strongly. Boyle.

A ribband did the braided tresses bind, The rest was loose, and wantoned in the wind.

Dryden.

Xo longer shall thy comely tresses break In flowing ringlets on thy snowy neck, Or sit behind thy head, an ample round, In graceful braids, with various ribbon bound.

Prior.

Since in braided gold her foot is bound, And a long trailing manteau sweeps the ground, Her shoe disdains the street. Gay.

All the shadowy tribes of mind, la braided dance their numbers joined, And all the bright uncounted powers, Who feed on heaven's ambrosial flowers.

Collins' Ode on the Poetical Character. Who late so free as Spanish girls were seen (Ere war uprose in his volcanic rage), With braided tresses bounding o'er the green, While on the gay dance shone night's lover-loving queen ? Byron.

BRAIDWOOD (Thomas), a native of Edin- burgh, is said to have been the first of our coun- trymen who attempted the task of giving general instruction to the deaf and dumb. This, how- ever, had been previously practised in a partial way by Dr. John Wallis, Henry Baker, and others. In 1764 Mr. Braid.wood first commenced his great undertaking, and removed, in 1783, from Edinburgh to Hackney, where, in conjunction ā ¢with his son-in-law, he continued for many years to pursue his profession. He died in 1806. See

Dl'Ml'.ISESS.

BRAIL, f. & n. Fr. bresle, brcle, breuiller, to reef; a brace line in a ship. Brails are small ropes, reeved through blocks, which are seized on either side the ties, a little off upon the yard; so that they come down before the sails of a ship, and are fastened at the skirt of a sail to the cten- gles. Their use is, when the sail is furled across, to haul up its bunt, that it may the more readily be taken up or let fall. The operation of drawing the sails together, by means of these ropes, is called brailing them up, or hauling them up in the brails.

The main-sail, by the squall so lately rent, la streaming pendants flying is unbent ; With brails refixed, another soon prepared, Ascending spreads along beneath the yard.

Falconer's Shipwreck, Can. ;i. With ruin pregnant BOW the clouds impend, And storm and cataract tumultous blend. Deep on her side the reeling vessel lies ; Brail up the mizen quick ! the master cries.

Id. Can. ii.

BRAIN,ra.s.&t'.a."| Gotii.huarn; Swedish BRAIN'JSH, adj. hierna; Old Eng. harne ;

BRAIN'LESS. | Belgic, brein; Ang.-Sax.

BRAIN'PAX, n. s. \bragin ; Teut. pregin ; BRAIN'SICK, adj. (corresponding with nĀ«pi-

BRAIN'SICKLY, adv. BRAIN'SICKNESS, n. BRAIN'WORM,

Koaviov. The soft sub- stance within the skull ;

) that collection of vessels and organs in the head from which sense and motion arise; the part in which the understand- ing is placed; therefore metonymically taken for the understanding: to biain is to take out the brains; to kill by beating out the brains: brainish is, hot-headed ; furious, answering to cerebrosus in Latin : brainless signifies men- tal imbecility: and brainsick is diseased in the understanding; adldeheaded; giddy; thought- less : the other derivatives require no explana- tion.

O Thought ! that wrote al that I me And in the tresorie it set*

Of my braine; nowe shal men yse.

If any vertue in the be. Cfxiucer.

The f. ar whereof oh how doth it torment His troubled mind with more than hellish painc ! And to his feigning fansie represent Sights never sen-?, and thousand shadowes vaine. To breake his sleepe, and waste his ydle braine : Thou that hast never loved cannot beleeve Least part of the evils which poorc lovers grieve.

Spenser's Hymn. In his lawless fit,*

Behind the arras hearing something stir, He whips his rapier out, and cries, a rat ! And, in his brainish apprehension, kills The unseen good old man. Shakspeare.

Nor once deject the courage of our minds, Because Cassandra's mad ; her brainsick raptures Cannot distaste the goodness of a quarrel. Id.

Why, worthy Thane,

You do unbend your noble strength to think So brainsickly of things. '"ā¢

Why, as I told thee, 'tis a custom with him in tho afternoon to sleep ; there thou mayest brain him. Id.

If the dull brainkss Ajax come safe off, Well dress him up in voices. H.

*My son Edgar! had he a hand to v.-rite this, a heart and brain to breed it in ? *?ā¢*

B R A I N.

If I he served such another trick, I'll have my brains taken (Hit, and buttered, and give them to a dog for a new year's gift. Id. Merry Wivet of Windsor.

Some brainless men have, by great travel and labour, brought to pass, that the church is now ashamed of nothing more than of saints Hooker.

In the upper region serving the animal faculties, the chief organ is the brain, which is a soft, marrow- ish, and white substance, ingendered of the purest part of seed and spirits, included by many skins, and seated within the skull or brain-pan, and it is the most noble organ under heaven, the dwelling-house and seat of the soul ; the habitation of wisdom, memory, judgment, reason, and in which man is most like unto God ; and therefore nature hath covered it with a skull of hard bone, and two skins or membranes, ā¢whereof the one is called dura mater, or meninx ; the other pia mater. Burton's Anat. Mel.

That man proportionally hath the largest brain, I did, I confess, somewhat doubt, and conceived it might have failed in birds, especially such as having little bodies, have yet large cranies, and seem to con- tain much brain, as snipes and woodcocks j but, upon trial, I find it very true. Brown's Vulgar Errours.

The brain is divided into cerebrum and cerebellum. Cerebrum is that part of the brain which possesses all the upper and forepart of the cranium, being separated from the cerebellum by the second process of the dura mater, under which the cerebellum is situated. The substance of the brain is distinguished into outer and inner ; the former is called corticalis, cinerea, or glandulosa; the latter, medullaris, alba, or nervea.

Cheselden,

This brainworm, against all the laws of dispute, will needs deal with them here. Milton's Colasterion.

A man is first a geometrician in his brain before he be such in his hand. Hale.

With those huge bellows in his hands, he blows New fire into my head ; my brainpan glows. Dry den.

Outlaws of nature,

Fit to be shot and brained, without a process, To stop infection ; that's their proper death. Id.

In a gushing stream

The tears rushed forth from her o'erclouded brain, Like mountain mists at length dissolved in rain.

Byron.

BRAIN In the article ANATOMY both a gene- ral and particular description will be found of this organ, its investments, and its connexion with the whole sentient system; and, under the word PHRENOLOGY, the functions of the brain and nerves will be more largely dwelt upon; it is our design in the present case to trace more mi- nutely than is done in the article anatomy the gradual development of the brain, to give the chemical analysis of the matter by which it is formed, to remark on the difference in size and complication that obtains between the human brain and the brain of inferior animals, and to advert to some hypotheses that have been offered to solve the very difficult problem of sentient, perceptive, and motive agency.

Until within the few past years, the brain has generally been regarded as the origin and source of the spinal marrow and nerves ; but were this the case, say some of our more modern physiolo- gists, the brain itself, or, as some term it dis- tinctively, the cranial brain, would be found the first formed in the foetus, which it is not ; and it is very important, they say, to observe that the spinal marrow, or, more properly speaking, the spinal chord, is very large in the inferior classes

of animals, while the brain is comparatively much smaller. It would appear, indeed, according to the observations of those physiologists who have given this subject their minutest attention, that ' the spinal chord is itself produced from the ramifications of the sympathetic ganglia ; that the semilunar ganglion is the first part of the nervous system to assume an organised state ; and that the subordinate ganglia, the spinal marrow, and, lastly, the brain, come successively into existence, and gradually arrive at their full development.'

The mode in which this gradual increment comes to be effected is exceedingly curious and interesting; it would appear that a mere gelatino membranous substance constitutes the first germ of both nervous and encephalic formation, and that successive deposits are made of those ma- terials which in the event come to be true cerebral substance, in a mode somewhat allied to the gradual formation of bony substance (see BONE)

upon the membranous and cartilaginous matrix, which always precedes true bone. The vegeta- ble fibres, originating from a certain quantity of grayish substance deposited in the sap of plants, are likewise a formation of a somewhat similar kind ; but on this subject we shall have to enlarge, when treating on the nervous system, more par- ticularly. See Dr. Copland's Notes to his edition of Richerand's Physiology,

About the third or fourth week from concep- tion, a grayish-white fluid may be detected in the cavities of the head and spine, and there is a gradual development both upwards and down- wards of the spinal chord; and the brain evidently, we are told, results from its prolongation upward and forwards, so as to form the two eminences, at the base of the brain, called olivary and pyra- midal. Tiedeman, from whom we now quote, states that all the superior part of the spinal mar- row is at this time open, or, more properly speaking, forms a broad gutter, which at once comprehends the third ventricle, the aqueductus sylvii, the fourth ventricle, and the calamus scriptorius. This gutter is uninterruptedly con- tinuous with the canal which traverses the whole length of the marrow.

The cerebellum, according to this author, evi- dently originates from the spinal marrow; from the lateral parts of which arises on each side a small flattened chord. These two, at first so dis- tinct and separate that they may be readily parted without laceration, afterwards unite so as to form the root of the fourth ventricle. Then, only, the brain, viewed from above, ceases to represent a gutter; and the laminae and branches of the cerebellum are formed at a much later period.

The mass which supports the tubercula quad- rigemina equally shows itself, in its origin, under the form of two small thin membranes, which arise from the olivary chords of the spinal mar- row ; and which, when they cease to be distinct, represent a vault covering a large ventricle, whose successive contraction gives rise to the aqueductus sylvii.

The pyramidal chords of the spinal marrow- take a direction from below upward, and from behind forward ; after having- produced two swell- ings or ganglia, the optic thalami and corpora striata, each terminates by a lamina, which, bent

from before backward, and from the side towards the superior and internal part, forms the com- mencement of the hemisphere of the brain. These membranes, and their hemispheres, are so small at the second month that

they scarcely rover the corpora striata. In proportion as they increase they extend backward, and cover at the third month the optic thalami ; at the fourth the tubercula quadrigemina ; and, at the sixth or seventh, the cerebellum. The lateral ventricles result from their inversion.

The medullary fibres of the pyramidal chords, previously to the formation of the tuber annulare, are immediately continuous with those of the crura cerebri ; whence the eye may readily trace them in the optic thalami, and corpora striata, and see them afterwards spreading and radiating in the hemispheres.

The parietes of the hemispheres gradually in- crease in thickness in proportion as new strata of cerebral substance are deposited on their surface ; and convolutions are not decidedly seen till towards the close of pregnancy.

All these combined facts clearly demonstrate, in the opinion of many physiologists of the present day, that the brain and cerebellum pro- ceed from the spinal marrow ; or that, to employ a modern expression, they are an efflorescence of it. In running through the scale of animals, ample confirmation, it is said, may be found of the assertions here advanced. The structure of the encephalon and spinal marrow becomes com- plicated in proportion as we ascend from fishes to reptiles, birds, and mammalia ; as we ascend through these four classes we find the brain gradually to increase in volume and complica- tion, until it arrives at its largest and most com- plicated structure in the human species ; ā that is, largest, in proportion to the spinal chord from which, according to the above view, it proceeds : ā and it is necessary to recollect this relative or proportionate circumstance to which we now al- lude, inasmuch as that position is not absolutely true which states man to have the largest brain of any animal, in proportion to the size of his body. We shall here avail ourselves of the labors of Mr. Lawrence, who has been at great pains to collect information on this interesting point.

‘ It has been asserted,’ says Mr. L. ‘ from re- mote times, that the brain of man is larger than that of any animal ; and I know of no exception to this assertion of Aristotle and Pliny, besides the elephant, unless the larger cetacea should be as well supplied with brain, in proportion to their size, as the smaller. Certainly all the larger animals, with which we are more com- monly acquainted, have brains absolutely smaller, and considerably so, than that of man. This, in- deed, may easily be shown by a comparison of skulls ; by contrasting the compressed, narrow, elongated, crania of brutes, hidden behind their enormous jaws and face, with the length, breadth, and ample vault of the human ‘ cerebri taber- naculum.’ whose capacious globular expanse sur- mounts and covers the inconsiderable receptacles of

the senses and alimentary apparatus.'

In later times the subject has been investigated in a different way ; by comparing the proportion which the mass of the brain bears to the whole

body. The result of this comparison in the more common and domestic animals was deemed so satisfactory, that, without prosecuting the enquiry further, a general proposition was laid down", that man has the largest brain in proportion to his body. More modern physiologists, however, in following up this comparative view in a great number of animals, have been considerably per- plexed at discovering many exceptions to the general position. They found that several mam- malia, as the dolphin, seals, some quadrumana, and some animals of the mouse kind, equal the human subject, and that some small birds even exceed him, in this respect.

As these latter observations entirely overturned the conclusions which had been before generally admitted, Soemmering has furnished us with another point of comparison, viz. that of the ratio which the mass of brain bears to the bulk of the nerves. He divides ttie brain into two parts; first, that which is immediately connected with the sensorial extremities of the nerves, which re- ceives their impressions, and is therefore devoted to those common wants and purposes which we partake with animals: the second division in- cludes the rest of the brain, which may be con- sidered as the seat of the mental phenomena.

In proportion, then, as any animal possesses a larger share of the latter and more noble part, that is, in proportion as the organ of reflection exceeds that of the external senses, may we ex- pect to find the powers of the mind more diver- sified and more fully developed. In this point of view man is decidedly pre-eminent; although iu his senses and common animal properties he holds only a middle rank, here he surpasses all other animals that have been hitherto investi- gated : he is the first of living beings. ' All the simiae (says Soemmering) come after him ; for although the proportion of their brain to the body, particularly in the small species with prehensile tails, is equal to that of man, their very large eyes, ears, tongue, and jaws, require a much larger mass of brain than the corresponding parts in the human subject ; and if you remove this, the ratio of the brain to the body is much dimin- ished.'

'Animals of various kinds seem to me, 'con- tinues this able physiologist', to possess a larger or smaller quantity of this superabundant portion of brain, according to the degree of their sagacity and docility. The largest brain of a horse which I possess weighs one pound seven ounces ; the smallest human brain that I have met with in an adult, two pounds five ounces and a quarter But the nerves in the basis of the horse's brain are ten times larger

than in the other instance, although the brain itself weighs less by fourteen ounces and a quarter.

‘ But we are not hastily to conclude that the human species have smaller nerves than any other animals. In order that my ideas may be better understood, I shall state the following imaginary case. Suppose the ball of the eye to require 600 nervous fibrils in one instance, and in another, half the size, 300 ; further, that the animal with 600 fibrils possesses a brain of seven, and that with 300 a brain of only five drams. To the latter we ought to ascribe the larger brain, and a more ample capacity of registering the impres-

sions made on the organ of vision. For, allow- ing one dram of encephalon to 100 fibrils, the brain which is absolutely the least will have an overplus of two drams, while the larger has only one. That the eye which is supplied with a double quantity of fibrils may be a more perfect organ of sense, will be readily admitted; but that point is not connected with the present question.’ From what has been above intimated, it will be inferred that the human brain greatly differs from that of other animals, not merely in relative magnitude, but in its degree of complication ; it is a remarkable fact, that no parts are found in the brain of animals which man does not pos- sess ; while many of those found in the human subject are either less in the inferior animals, or entirely wanting ; but the most striking character of the human brain, as justly remarked by Law- rence, is the prodigious development of the cerebral hemispheres, to which no animal, what- ever ratio its whole encephalon may bear to its body, affords any parallel. It approaches most nearly to the spherical figure, has more numerous and deeper convolutions, and the medullary is in greater proportion to the cortical substance. The sandy or earthy matter of the pineal gland in the adult brain is almost confined to the hu- man subject ; its absence being an anomaly in structure with us, its presence being perhaps equally anomalous in the brute creation. A curious exception, however, to that relative mag- nitude of the cerebrum compared with the spinal marrow which is generally found in man, is ob- served in the dolphin ; this last animal has a brain of a breadth of twice its length ; a propor- tion of which there is no other instance in the animal kingdom.

The following table has been constructed for representing the weight of the brain, compared with the body, in different animals : ā

& to 3‘3 pan.

ā¢ ā¢ A

ā¢ 353

ā¢ 25

In man from Several Simite . Dog .... Elephant . . Sparrow . . Canary-bird

GĀ°ose jfo

Turtle (smallest) . . ˆ

The chemical composition of the brain seems quite peculiar. It is composed, according to the experiments of Vauquelin, who has given the subject much attention, of first, two fatty matters; secondly, albumen; thirdly, osmazome, a sub- stance first so named by Thenard, being a pecu- liar animal principle obtained from raw muscular fibre; fourthly, several saline ingredients; fifthly, phosphorus ; sixthly, sulphur.

The following are the proportions given by VauqueLn : ā

Water 80-00

White fatty matter . 4-53

Red fatty matter . . 0-70

Albumen 7-QO

Osmazome 1-12

Phosphorus ... 1-50

Acids, salts, and sulphur 5‘15

100-

The above is the result of trials made on the cerebrum, or hemispheres of the brain ; the humau cerebellum gave the same results. In the medulla oblongata and spinal chord the same constituent principles are found, but the proportions are somewhat different ; the fatty matter being here in greater abundance, and there being less albu- men, osmazome, and water.

The gray substance of a calf s brain was found to contain albumen insoluble in water 10-0, an unctuous incrystallisable fat, osmazome, phos- phate of soda, phosphate of lime, phosphate of magnesia, hydrochlorate of soda, and traces of iron 15-0 to 10-0; water 75 to 80.

The white substance of the brain, from the same animal, was found to contain more fatty matter than the gray; it presented traces of silica. The cerebellum of the calf gave the same products as the cineretious substance.

The brain of a bullock contained also phos- phate of ammonia, a more solid albumen, a reddish colored fat, and a crystallisable fat. The composition of the brain of the stag was similar.

We have spoken of the medulla of the brain and spine, in accommodation to the terminology which still continues to be employed in physiolo- gical science, but it is the opinion of many, espe- cially among the moderns, that the encephalic mass is altogether of a fibrous structure ; and we have already adduced suggestions with respect to the modus generandi of this fibrous tissue. Mr. Bauer has made some very minute microscopic experiments on the texture of the brain ; and he finds ‘ abundance of fibres in every part of it ; indeed, it appears that the whole mass is a tissue of fibres which seem to consist entirely of an ac- cumulation of globules, whose union is of so delicate a nature that the slightest touch, even the mere suction in water, deranges and reduces them to that mass of globules of which the brain appears to be composed when examined with less accuracy, or under less favorable circum- stances.’

It remains for us now briefly to notice the principal theories which have been broached on the mode in which is manifested those various kinds of power, that are clearly connected in their full display with the integrity of either a part or the whole of the encephalic mass. We say, briefly notice ; for the full discussion of these topics, the interest of which is almost daily in- creasing, would be quite inconsistent with the limits we have prescribed to the present ar- ticle. For more ample information we refer tlie reader to our articles on PHYSIOLOGY and PHRENOLOGY.

In order to appreciate properly the views which have been taken by different speculatists on the nature of encephalic power, it will be right for the reader to revert to what has been advanced on the origin and gradual development of the sentient organisation : it would appear, as we have above intimated, that the primordial germ of both nerve and brain is a membranous matrix, upon which is gradually deposited the material that eventually constitutes the true ner- vous substance ; it would appear, further, that in all kinds and grades of animate existence the process from the first is of a similar nature; but

ihat this process stops at certain points., accord- ing to the formative energy of the animal : thus, where only percipient excitability .s requi red, the mere ganglionic system of nervous structure is perfected ; where strength and volition are about to be manifested, a more complete development of nerve is effected ; while in the vertebral ani- mals, and in the mammalia, the spinal chord be- comes formed, and expands itself out into cranial brain, of a greater or less complicated formation,, until the point or acme is gained, and man starts out from among other animals, allied to them in one sense, but opposed in others ; since, with cer- tain kinds of perceptions inferior vastly to some of the brute creation, he is, on the other hand, not only superior, but actually and widely different from all, in the superinduction of reflective in- telligence and the endowment of moral faculties : at this point, indeed, physiology stops, and resigns the power and propriety of further research into the hands of the metaphysician, the moralist, and the theologian.

Bichat, carrying his views into the gradations and distinctions now assumed, suggested that the nervous system involves two leading points, and that the functions of the living frame are divisi- ble into animal and organic life; the first being exercised mainly through the medium of the brain, properly so called, and its appendages ; the second having to do with the ganglia of the great sympathetic nerve ; See ANATOMY, PHY- SIOLOGY, and NERVE . Neither of these functions, however, is absolutely exclusive in the opinion of our physiologist ; since there is a connexion of the nerves from the brain, with the sympathe- tic or ganglionic systemˆ and, of course, of the latter with the former. But, in the main, the ganglionic system is supposed to influence the more organic and involuntary functions ā the encephalic the voluntary and intellectual. There is this further difference, in Bichat's opinion, be- tween the manifestations of the one and the other, that animal life has a centre and source which is the brain, while the organic system is so con- structed as that each ganglion has a separate and somewhat independent power.

Thus those animated existences which are so low in the scale of being as to be without brain, which have only ganglia, possess in a manner no totality of existence, no uniting bond of the whole system ; and it is furthijr urged in favor of this division between organic and animal vitality, that in proportion to the possession of intellect is the development of the brain, and diminution of the ganglionic order of nerves. It has even been said, that ideots among the human species, are found with the visceral ganglia of the sym- pathetic nerve more than usually conspicuous.

Dr. Wilson Philip has propounded principles somewhat similar to those of Bichat. Dr. Philip, however, does not so decidedly separate the two systems ; but states the difference between vo- luntary and involuntary power to

consist in this, that the former is transmitted immediately from a particular portion of the brain to the moving organ, while the latter originates from every part of the encephalon, and that here the nervous in- fluence traverses the great chain of the sympa- thetic ganglions.

Le Gallois, too, differs from Bichat, in respect to the nature and extent of influence exercisjed by the brain over organic life. So far from the sympathetic system being independent of the brain and spinal chord, he conceives that it re- ceives from them the most powerful influence. Respiration, however, with its dependent func- tions, does not, according to Le Gallois, proceed from the brain, but from a circumscribed part of the medulla oblongata, near the occipital open- ing, towards the origin of the eighth pair of nerves.

From the experiments of Flourens, it has been inferred, that the sensation of sight and sound, or the power of calling them into action, resides in the cerebral lobes, and that these are the organs and parts for the concentration and distinctness of all other sensations. Volition too is conceived to have especial connexion with these parts of the encephalon, as far as the act of the will is excited by memory, or regulated by judgment. For loco motion, the integrity of the cerebellum is requisite ; for, let the brain remain, the animal will see, hear, and indicate volition ; but, if the cerebellum be removed, he will never find the balance necessary for loco motion ; the cerebel- lum seems therefore to regulate these move- ments ; and while it does so, the spinal chord combines the muscular contraction, so as to be the agent of producing motion in the joints. The mandates of the will are supposed to be imme- diately issued from the very top of the medulla oblongata, at the point where the tubercula qua- drigemina joins it. It is concluded upon the whole, that the cerebral mass contains distinct or- gans for the senses, for the sensations, and for the movements ; but that the power of feeling, willing, and perceiving, constitutes but one faculty, resid- ing but in one organ. –

We have now to notice a theory which goes upon the presumption of a plurality of faculties and organs, and which conceives the cerebral lobes to be the residence as it were of separate and distinct faculties. As the inferences to which we have hitherto referred have been deduced principally from experiments on animals, so the conclusions of those individuals to whose specu- lations we now allude are derived, according to their own showing, from anatomical and physio- logical investigation on the peculiarities and mode of increment in the cerebral organisation ; and from actual observation on the form both of the brain and the cranium. The division of the nervous system in this theory is in some measure similar to that proposed by Bichat, as it divides the whole mass into two great classes, viz., vege- table or organic, and phrenic or mental ; and Dr.

Spurzheim, who is one of the founders of the theory, and who has published a detailed ex- position of it, expressly states, that he considers the nerves of mere organic existence, to be inde- pendent on those of phrenic life ; but that they communicate with each other so as to constitute a totality of existence in all classes of beings in which these two orders of nervous masses are simultaneously existent.

But the great peculiarity of the system of Gall and Spurzheim is this; that it assumes in the gradual evolution of the cerebral organisation :i

termination, not into an organ of percep- tion, volition, judgment, &c. merely, but into u compound of many distinct apparatuses, ‘ each of which has particular functions, which being taken together constitute phrenic life;’ that this encephalic succession and increment, being syn- chronous with the process of ossification in the cranium, the form and magnitude of the latter is greatly regulated by the directions into which the formative power of the individual directs the development of the cerebral masses ; and that consequently the shape and size of the head will indicate, not only the general measure of mental faculty with which such individual is endowed ; but that its forms and varieties in infancy may be taken as indices of the particular faculties, and functions, and powers, and propensities, about to be manifested. A double claim is thus preferred by the physiologists in question ; they contend that their physiological tenets are substantiate by cranioscopical investigation ; and that he ā¢who runs may read the truth of their positions.

It was not to be expected in the nature ot things, that doctrines like these, which interfere materially with the notions hitherto generally re- ceived on the nature of intellectual power; should be given to the world without exciting much and varied opposition ; and accordingly we have found that the assumptions of Gall and Spurzheim have been assailed in every possible shape both of serious argument and contemptuous ridicule ; but it is the duty of encyclopajdiasts at least, to state the pros and cons of disputed points, unin- fluenced by a priori feelings : and to this duty, on this point, we should now proceed, but that the investigation would lead us far beyond our proposed limits. We refer, then, to the word PHRENOLOGY for the amplification and discussion of the organological tenets, using the freedom, however, of objecting to the term, inasmuch as it seems both too presumptive and too restrictive ā¢ ā too presumptive in implying or taking

for granted that this is the true science of mind ; and too restrictive, because the phrenic or mental part of the argument does not comprehend its whole scope and bearing. The system of Gall and Spurzheim, when taken in its full stretch of lati- tude, constitutes in some sort a new system of neurology in general ; and it is partly, indeed, on this account, that we think the present not the proper place for discussing its merits.

We conclude by saying, that, whatever truth may be found in any of the views above adverted to, none of them have given us ‘ the whole truth.’ There is still much that is mysterious, and at present totally inexplicable, in the com- plicated organisation of the encephalon and its appendages ; and, indeed, some of these pecu- liarities, as we shall afterwards have occasion to show, are not only unexplained by, but are seem- ingly at variance with, the inferences that have been deduced by the experimenter, and the doc- trines that have been propounded by the sys- tematist.

BRA1NTREE, a market town of Essex, near Bocking, called Rains, in Doomsday book. It carries on a manufacture of baize and straw plaiting. It lies eleven miles north-east of Chelmsford, and forty north-east of London.

BRAIXTREE, a town of the United States of America, in Massachusetts. Great quantities of granite stones are sent to Boston from this town for sale. It stands at the bottom of a shallow bay, eight miles east by south from Boston.

BRAIT , adj. Fr. brute ; Lat. nidus ; unpo- lished ; rude.

BRAITHWAITE (John), an enterprising mechanic, who employed the diving-bell most successfully in recovering shipwrecked property. In 1783 he descended into the Royal George, sunk off Spithead, and brought up the sheet- anchor and many of her guns. From the Hart- well East Indiaman, lost near one of the Cape de Verd islands, he obtained, in 1788, dollars to the value of Ā£38,000, 7000 pigs of lead, and 360 boxes of tin ; and from the wreck of the Aberga- venny East Indiaman, off the isle of Portland, property estimated at Ā£105,000. Hediedin 1818.

BRAKE. Swed. brack; Teut. breche ; Bel- gic, broecke ; Ang.Sax. breac. That which crushes, as a machine to crush flax ; that which restrains, holds in, curbs or tames ; like a bit for young horses. It is used for the handle of a pump, Lat. brachium, because it is an instru ment to force or compel.

Iu her right hand (which to and fro did shake), She bore a skourge, with many a knottie string, And in her left a snaffle bit, or brake, Bebost with gold, aiid many a gingling ring.

Gaxoigne. The Steel Glass.

Like as the brake within the rider's hand Doth strain the horse, nye wood with grief of paine, Not used before to come in such a band.

*Earl of Surrey**

BRAKE, preterite of BREAK, which see.

He thought it sufficient to correct the multitude with sharp words, and brake out into this cholerick speech. Knollet.

BRAKE, n. s. \ Dan. bregne ; Scot, bracken;

BRAK'Y, adj. I Ann. bruhag; Swed. braecka, signifies to burn or heat ; for which purpose fern is still used. Dan. brtek; Belgic, brnig. Swed. brack, from the verb to break. A thicket of brambles or fern ; brushwood. Braky is thorny ; prickly ; rough.

The buck in brake his winter c oak he flings.

Earl of Surrey.

Of all the seede, that in my youth was sowne, Was none but brakes and brambles to be inowne.

Spenser.

If I'm traduced by tongues, which neither know My faculties nor person ; let me say 'Tis but the fate of place, and the rough brake That virtue must go through. Shaksp.

Redeem arts from their rough and braky seats, vrhere they lie hid and overgrown with thorns, to a pure open light, where they may take the eye, and may be taken by the hand. Ben Jonton.

But further way found none, so thick entwined, As one continued brake, the undergrowth Of shrubs and tangling bushes had perplexed All path of man or beast that passed that way.

Milton.

In every bush and brake, where hap may find The serpent sleeping. Id.

Full little thought of him the gentle knight, Who, flying death, had there concealed his flight ; In brakes and brambles hid, and shunning mortal

sight. Dryden't Fublet.

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A dog of this town used daily to fetch meat, and to carry the same unto a blind mastiff, that lay in a brake without the town. Carew.

See how they thread The brakes and up yon furrow drive along.

Sumerville's Chase.

Thus, at the shut of even, the weary bird Leaves the wide air, and in some lonely brake Cowers down and dozes till the dawn of day. Then claps her well-fledged wings and bears away,

Blair's Grave.

BRAMA. See BRAHMA. BRAMA, in ichthyology, the trivial name of a species of cyprinus

BRA M AH (Joseph), a most superior and ingenious mechanic, was born, in 1749, at Stainborough, in Yorkshire. He was employed in early life in agriculture, and received a very com- mon education; but a lameness in one of his legs compelling him to relinquish that pursuit, he was bound apprentice to a carpenter. Previously to this he had made himself two violincellos of tole- rable execution, and a violin out of a solid block of wood. On the expiration of his apprenticeship he was employed in London as a cabinet-maker, and soon enabled to set up for himself; but the improvements which he made in the construction of water-closets proved the foundation of his fortune. He afterwards undertook the manufac- ture of pumps and pipes, on new principles; but obtained still more decided notice by the fabrication of locks, which yet bear his name. He next directed his attention co hydraulic machines, and, by varying the form of the piston and cylinder, produced a rotative motion, for which he procured a patent. His next object was the application of the hydrostatic paradox, or the uniform pressure of fluids in every direc- tion, as a mechanical agent. For this he took out a patent in 1796, and tore up 300 trees in Holt forest by it without any other means. In 1807 the bank of England engaged Mr. Bramah to construct a machine for more expeditiously printing the numbers and date lines on their notes, an object which he accomplished in a month, and his practice has ever since been acted upon. See HYDROSTATICS. For some time prior to his death, he was employed in the

erection of machinery on the side of the Thames, for sawing stones and deals, upon the principle of his hydro- mechanical invention. He was taken off by a severe cold, occasioned by over-exertion, in 1815. He published 1. A Dissertation on the Construc- tion of Locks, 8 vo ; 2. Letter on the Subject of the Cause of Boulton and Watt against Hornblower and Maberley, for an Infringement of a Patent.

BRAMBANAN, or PRAMBANAN, a village of Java, at the base of a range of mountains in the district of Mataram, celebrated for its many remains of Hindoo antiquities. Temples, images, and inscriptions, are here scattered over a surface extending several miles each way. The most remarkable of these is called the Thoi/sand Temples, and consists of a square group of build- ings, measuring, each side, about 250 paces. In the centre formerly stood one large temple, sur- rounded by smaller ones. These, with various ether structures, consist of hewn basalt or trap, without mortar, the stones being retained in their places by projecting grooves. They were pro-

bably buil about the tatter end of the thirteenth century, by the Hindoos of the Coromandel Coast. Those who have examined these and similar structures on that island, consider them to have been dedicated to the worship of Buddha, a reformation of the bloodier rites of Rahadema and Durga.

BRAMBAS, a name given by the natives of Guinea, and some other parts of Africa, to a pe- culiar species of lemon tree. The leaves are of a deep green, and vˆery fragrant when rubbed between the hands. The fruit is very small, and has a remarkably thin skin. Phil. Trans. No. 108.

BRAMBER, a borough town, or rather vil- lage, in the county of Sussex, giving its name to the rape in which it is situated. It adjoins the borough of Steyning. A small stream flows near the town, and the ruins of a strong and exten- sive castle are still perceptible.

BRAM'BLE, n. s.) Goth, bramber; Swed.

BRAM'BLEBERRIES. $ brombar;'l'eat.brombeer;

Ang.-Sax. brambel, brier berry ; Teut. bram, a

prickle. The blakcberry bush: bramveberrks,

the fruit of the bramble.

Forth was I ledde, not as I wont afore, When choise I had to choose my wandering way, But whether luck and love's unbridled lore Would lead me forth on Fancie's bitte to play : Ā« The bush my bed, the bramble was my

bowre, ‘ The woods can witnesse many a wofull stowre. ‘

Spenser,

The bramble bush, where byrdes of every kinde To the waters’ fall their tunes attemper right Id.

There is a man haunts the forest, that abuses our young plants with carving Rosalind on their barks ; hangs odes upon hawthorns, and elegies on brambles ā¢ all, forsooth, deifying the name of Rosalind.

Shakspeare. Content with food which nature freely bred,

On wildings and on strawberries they fed :

Cornels and brambleberries gave the rest,

And falling acorns furnished out a feast. Dryden. Thy younglings, Cuddy, are but just awake,

No thrustles shrill the bramble bush forsake. Gay.

The flowering thorn, self-taught to wind, The hazel’s stubborn stem entwined, And bramble twigs were wreathed around, And rough furze crept along the ground. Beattie.

BRAMBLE-NET, or HALLIER, is a net for catching birds of several sizes : the great meshes must be four inches square ; those of the least size are three inches square, and those of the big- gest five. In the depth they should not be above three or four inches ; but in length they may be enlarged at pleasure. The shortest are eighteen feet long.

BRAMER (Leonard), history painter, born at Delft, in 1598, learned painting under Rembrandt, and imitated the manner of his master in small. Jn 1614 he went to Rome for improvement, but could never divest himself of the Flemish gout. Yet he had a fine taste for design; his expression is generally good, and in some of his composi- tions truly noble. His coloring is very peculiar in the tints, being remarkably thin in many parts, so as barely to cover the pannel ; yet, by his skilful management of the chiaro-scuro, it ap- pears bright, bold, and full of lustre; particularly in the vase?, which have a rich and fine relievo.

He had accustomed himself to paint with a very thin body of color, to give his pictures a greater transparence. His works are rarely to be met with out of Italy, where he painted most; but they draw considerable prices, when entire. Three of his most capital pictures are, the Rais- ing of Lazarus, the Denial of St. Peter; both preserved at Rome; and a small picture on cop- per, representing the story of Pyramus and Thisbe.

BRAMHALL (Dr. John), archbishop of Armagh, was born of an ancient family at Pon- tefract, about A. D. 1593. He was invited over to Ireland by the lord-deputy Wentworth ; and soon after obtained the archdeaconry of Meath. In 1634 he was made bishop of Londonderry, which see he improved very much; and obtained several acts to be passed for abolishing fee farms, recovering impropriations, &c. by which he regained to the church Ā£30,000 or Ā£40,000 a year. In the convocation he prevailed upon the church of Ireland to unite with that of England, by adopting the thirty-nine articles ; but could only prevail on them to accept of some of the canons. Articles of treason were exhibited against him in the Irish parliament ; and at the treaty of Uxbridge, in 1644, the English parlia- ment made it a preliminary article, that bishop Bramhall, with archbishop Laud, &c. should be excepted from the general pardon. He went abroad ; but, on the Restoration, was appointed archbishop of Armagh, primate of Ireland, &c. and was chosen speaker of the Irish house of Lords. He died in 1663; and was the author of several works, which have been collected in one volume, folio.

BRAMIA, in botany; class didynamia; order angiospermia. Their generic characters are, CAL. five-leaved; STAM- four, two long.; PIST. style iiliform; STIG. simple; PERICARP, capsule coni- cal, one-celled ; SEEDS, numerous. Species, only one. A native of the East Indies.

BRAMICIDE, the crime of killing a Brahmin, reputed, in the East Indies, one of the five most heinous sins.

BRAMINS, see BRAHMINS.

BRAMPOUR, or BURHAMPORE. See BUR-

HAMPOUB.

BRAMPTON, a market town of Cumber- land, nine miles north-east from Carlisle, and 311 north from London. It is a very ancient town, and in the second and third centuries was a Roman station of considerable note. A ruined fortification is near it, which Camden thinks is on the site of the ancient Bremetuna- cam. It stands on the Irthing, and is still the capital of the barony of Gillsland, belonging to the earl of Carlisle ; the town courts

are held here twice a-year. Two miles distant is Naworth Castle, the seat of the carls of Carlisle, built in the reign of Henry III. It has a good market on Tuesday, and two fairs, on the second Wed- nesday after Whitsunday, and the second Wednesday in September, noted for the sale of black cattle and sheep.

BRAN, n. s. ˆ Fr. bran; Ital. brano; Arm.

BRAX'NY, adj. S and Welsh, brann. Ang.-Sax. brim, brown. ā Somner. Bray, to pound, to grind. ā Thompson. The husks of ground corn: branny is having the appearance of bran.

But I ne cannot boult it to the bren.

Chaucer's Canterbury Tales.

From me do back receive the flower of all,

And leave me but the bran. Shakspeare.

The citizens were driven to great distress for want

of victuals ; bread they made of the coarsest bran,

moulded in cloths ; for otherwise it would not cleave

together. Hayward.

Then water him, and drinking what he can, Encourage him to thirst again with bran. Dryden.

BRAN contains a portion of the farinaceous matter of wheat. It is less glutinous than the finer flour, and is supposed to have a detergent quality. Infusions of bran are employed with this intention externally, and sometimes likewise taken inwardly. Among the ancients, bran was used as an erotic. Bran boiled, purges scurf, dandriff, and cleanses the hands in lieu of soap. The dyers reckon it among the not-coloring drugs; and use it for making what they call the sour waters, with which they prepare their several dyes. Bran is also used as a medicine for horses.

BRANCAS LAURAGUAIS (duke de), member of the Academy of Sciences at Paris, was distin- gu ished for his skill in chemistry, and became the associate of Lavoisier, Berthollet, Chaptal, &c. We owe to this nobleman the discovery 6f the composition of the diamond, and some very im- portant improvements in the manufacture of porcelain. He died in October 1824, aged ninety-one.

BRANCH', v. & n.-

BRANCH'ER,

BRANCH'ING,

BRANCH'LESS,

BRA.VCH'Y.

to reach. From the German, ragen, says Wach ter, to project. To branch is to extend ; tc spread out, as from the trunk of a tree ; to sepa- rate or diverge. Branch is a limb of a tree ; an arm of the sea; the adjunct of a subject; that which springs out of it; either a collateral or a constituent part of it; any member or part of the whole ; any distinct article ; any section or subdivision.

In which were okes great, streight as a line,

Under the which the gras so freshe of hew

Was newly sprong ; and an eight fote, or nine,

Every tre well fro his fellow grew,

With bruunches brode, laden with leves new

That sprongen out agen the sonne shene, ā

Some very rede, and some a glad light grene.

Chaucer. The Floure and the Leafc.

Whence is it, that the floweret of the field doth fade, And lyeth buried long in winter's bale ; Yet soone as spring his mantle hath displayde. It flowereth fresh as it would never fayle. But. thing of earth that is of most availe, As vertue's branch and beautie's bud, Reliven not for any good.

O heavie herse ! The branch once dead, the bud eke needes must quaile.

O carefull verse ! Spenser's Shepheard's Calender.

They were trained together in their child hoods, and there ?ootcd betwixt them such an affection, which cannot choose but branch now. Shakspeare.

Why grow the branches, when the root is gone ? Why wither not the leaves t4iat want their sap I Id.

If I. lose mine honour, 1 lose myself; better I were not your's, Than yours so branchless. I& ā¢

Fr. branche; Annoric,

1 brank; Gr.Bpaxwfv; Lat.

ā¢ brachium. Fromranken,

recken (Ang.-Sax. KB

1 can, gerascan) to extend

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Great Anthony '. Spain's well beseeming pride, Thar mighty branch of emperours and k'ngs ! Crashaw.

His blood, which disperseth itself by the branches of veins, may be resembled to waters carried by brooks.

Raleigh.

If, from a main river, any branch bo separated and divided, then, where that branch doth first bound itself with new banks, there is that part of the river, where the branch forsaketh the main stream, called the head of the river. Id.

The swift stag from under ground

Bore up his branching head. Milton.

In robe of lily white she was arrayed,

That from her shoulder to her heel down raught,

The train whereof loose far behind her strayed,

Branched with gold and pearl, most richly wrought.

Spenser.

The spirits of things animate are all continued within themselves, and are branched into canals, as blood is ; and the spirits have not only branches,

but certain cells or seats, where the principal spirits do reside. Bacon.

Straight as a line ill beauteous order stood

Of oaks unshorn a venerable wood ;

Fresh was the grass beneath, and every tree

At distance planted, in a due degree,

Their branching arms in air, with equal space,

Stretched to their neighbours with a long embrace.

Dryden.

In the several branches of justice and charity, com- prehended in those general rules of loving our neigh- bour as ourselves, and of doing to others as we would have them do to us, there is nothing but what is most fit and reasonable. Tillotson.

The Alps at the one end, and the long range of Appenines that passes through the body of it, branch out on all sides, into several different divisions.

Addison.

What carriage can bear away all the various, rude, and unwieldy loppings of a branchy tree at once ?

Watts.

If their child be not such a speedy spreader and brancher, like the vine, yet he may yield, with a little longer expectation, as useful, and more sober, fruit than the other. Wotton.

And all in sight doth rise a birchen tree, Which learning near her little dome did strow, Whilom a twig of small rrgard to see, Tho' now so wide its waving brandies flow.

Shenstone's School- Mistress.

Gray-haired with anguish like these blasted pines, Wrocks of a single winter, barkless, branchless, A blighted trunk upon a cursed root.

Byron's Manfred.

BRANCH, in botany, an arm of a tree, or a part which, sprouting out from the trunk, helps to form the head or crown thereof. Branches do not spring out of the mere surface of the trunk, but are deeply rooted therein, so as not only to penetrate the cuticle, but also the woody sub- stance, and even the pith. The constituent parts therefore of a branch are the same as of the trunk, viz. skin, bark, wood, and pith. See BOTANY.

BRANCHAS (Nicholas), an ingenious Italian,, who first suggested the use of high pressure steam as a motive force. His apparatus was exceedingly simple, consisting merely of a copper cauldron furnished with a pipe, from which the steam rushed, and drove round a float wheel.

BLIANCH./E, in medicine, glandular tumors

in the fauces, secreting saliva, resembling two almonds.

BRANCHERY, in the anatomy of vegetables, the vascular parts of divers fruits, as apples, pears, plums, and berries.

BRANCHLE, Bpayv/a ; in the anatomy of fishes, the gills, or parts corresponding to the lungs of land animals. All fishes, except the cetaceous ones, and the pteromyzum, which have lungs, are furnished with those organs of respiration.

BRANCHID/E, in antiquity, priests of the temple of Apollo, at Didymus in Ionia. They opened the temple to Xerxes, who plundered it of its riches ; after which, thinking themselves not safe in Greece, they fled to Sogdiana, on the other side of the Caspian Sea, where they built a city. Alexander the Great having conquered Darius king of Persia, and being informed of their treachery, put them all to the sword, and razed their city ; thus punishing posterity for the impiety of their fathers.

BRANCHIOSTEGI, in ichthyology, one of the general classes of fishes ; the characters of which are, that the rays of the fins are of a bony substance, and no bones or ossicula at the bran- chiae. This class includes the following genera : mormyrus, ostracion, tetrodon; syngnathus, pegasus ; centriscus, balistes, cyclopterus, and lophius.

BRAND (John), an English antiquary of some eminence, was born at Newcastle-on-Tyne in 1743, of mean parentage. After serving an apprenticeship to a shoemaker, he obtained, however, the means of prosecuting his studies at Oxford ; entered into orders, and was pre- sented to the curacy of Cramlington. He con- tinued here till 1784, when the duke of Northum- berland gave him the rectory of St. Mary at Hill, London ; and he was chosen the same year se- cretary of the Antiquarian Society. He died in 1806 at Somerset-house. His publications are, Observations on

Popular Antiquities, including Bourne's Antiquitates Vulgares, with copious Additions, 1777, an enlarged edition of which curious work was published after his death, in 2 vols. 4to. ; and The History and Antiquities of the Town and County of Newcastle, 1789, 2 vols. 4to. A curious and valuable library of his, of which there is a catalogue published in two parts, was sold by auction in 1807 and 1808.

BRAND', v., & n. } Goth. Swed. Ang.-

BRAND-NEW. $ Sax. Dan. Teut. Belgic,

brand ; from Goth, brcna. Brand-new, from Goth. bruna. All from burn, which see. A thunder- bolt, a burning coal, lighted stick, mark of burn- ing, a burnished sword. ā Met. Infamy.

Eftsoones he perced through his chaufed chest With thrilling point of deadly yron brand, And launcht his lordly hart : with death opprest He roared aloud, whiles life forsooke his stubborne brest. Spenser.

Then the aire still flitting, but yet firmcly bounded On everie side with pyles of flaming brands, Never consumed nor quencht with mortal hands. Id.

Have I caught thee ?

He that parts us shall bring a brand from heaven, And fire us hence. Shakspeare.

Have I lived thus long a wife, a true one, Never yet In indcd with suspicion? Id.

The king was after branded, by Perkin's proclama- tion, for an execrable breaker of the rights of holy church. Bacon,

Clerks convict should be burned in the hand, both because they might taste of some corporal punish- ment, and that they might carry a brand of infamy.

Id.

They looking back, all the eastern side beheld Of paradise, so late their happy seat, Waved over by that flaming brand; the .gate M'ith dreadful

faces thronged, and fiery arms.

Milton.

My loss of honour's great enough, Thou needst not brand it with a scoff.

Butler's Hudibras.

Where did his wit on learning fix a brand, And rail at arts he did not understand ? Dryden.

Brand not their actions with so foul a name ; Pity, at least, wHat we are forced to blame. Id.

The sire omnipotent prepares the brand, By Vulcan wrought, and arms his potent hand.

Granville. Our Punick faith Is infamous, and branded to a proverb. Addison.

The memory of Licinius was branded with infamy, his statues thrown down, and by a hasty edict, of such mischievous tendency that it was almost imme- diately corrected, all his laws, and all the judicial proceedings of his reign, were at once abolished.

Gibbon.

I'm naked, famished, faint, my brand is broken.

Maturin's Bertram. And now the matadores around him play,

Shake the red cloak and poise the ready brand.

Byron.

BRANDARIS, in conchology, a species of murex, common in the Mediterranean, some- what ovate, and surrounded with spines ; beak moderately subulate and straight.

BRANDENBURG, MARK, or MARQUISATE OF, an important State in Prussia, and may be considered the foundation of the monarchy, as it is at present constituted. It is bounded on the north by Mecklenburg and Pomerania, a part of Saxony, Anhalt and Magdeburg on the south, on the east by the grand duchy of Posen, and on the west by Brunswick and Hanover. Its extent from east to west is computed at 200 miles ; and from south to north upwards of 100. It is computed to contain 17,198 English square miles, and its population about a million and a quarter. It is divided

into the Electoral and the New Mark; to each of which several smaller territories have at several times been annexed, arising principally by the articles of peace at the conclusion of various wars with neighbouring or more distant nations.

The Suevi were the aboriginal inhabitants of Brandenburg, and were succeeded by the Sclavo- nians, with whom Charlemagne and his successors were frequently at war. Henry I. having subdued them in the early part of the tenth century, in- troduced Christianity here, we are told, and erected the Margraviate. It was conferred on a Saxon count, with the title of Lord Warden of the Marshes or Borders, and first became here- ditary in the family of Albert, count of Ascania, about the year 1100. Charles IV. on the ex- tinction of this race, assigned the electorate to Viis second son Sigismund, who ascended the im- oerial throne of Germany in 1415, and sold it

to Frederic, Burgrave of Nuremberg, the ?>ces- tor of the present reigning family. Minor di- visions of the territory afterwards *ook place among his grandsons, until Frederick William, surnamed the Great, compelled the king of Po- land, in 1656, to acknowledge Prussia indepen- dent ; and made large accessions to the ancient domains of his house. It now became identi fied with the history of Prussia. A part of this ancient province, however, was once more divided from the rest, when the Old Mark was ceded to Buonaparte in 1807, and incorporated with the department of the Elbe, in the kingdom of West- phalia, created for his brother Jerome. It was of course restored at the general peace of 1814.*

The principal rivers of Brandenburg are the Elbe and the Oder; in addition to which there are several smaller, ā the Havel, the Spree, the Wartha, &c., with several canals to unite their streams. Few countries are better supplied with water, both for the purposes of irrigation, and the transfer of goods : conveniences which are extended over the whole surface of this extensive country.

There are many mountains and sandy tracts, but it is on the whole a productive country in corn, flax, hemp, hops, and tobacco ; it is also rich in wood, wool, and iron. Buck wheat and rye are the chief crops. The forests furnish the important article of fuel, both for domestic use, and for the glass and iron works ; together with large quantities of timber for house and ship building. The principal minerals are, iron ore, a useful kind of clay, porcelain earth, alum, salt- petre, and amber. The culture of silk is carried on with success, and is in a state of increase. The rearing of cattle and sheep forms an impor- tant branch of employment, improved breeds of both having been lately introduced. The horses are small ; but the black cattle are excellent in some districts.

The manufactures are those of cotton, linen, woollen, salt, leather, porcelain, and iron ; jew- ellery, and various metallic articles ; paper and hats. The chief towns are Berlin, Potsdam, Brandenburg, Frankfort on the Oder, Stendal, Prenzlau, Custrin, and Perleberg. The inhabi- tants are principally Lutherans, the remainder Calvinists. Of the latter rumber are the French settlers, who fled hither in great numbers after the revocation of the edict of Nantes, and by their skill and industry greatly promoted the manufactures of the country. The number of the families of these colonists, about the middle , of the last century, was in the Electoral Mark , 7500, and in the New Mark 2600. The arts and sciences are more cultivated here than in any other part of the monarchy. The total popu- lation of Brandenburg amounted, in 1783, to 987,224 without the military, and, 1801, in- cluding the military, to 1,100,000.

BRANDENBURG, the capital of the preceding electorate or province, is situated in the Middle Mark, on the banks of the river Havel, which divides it into the old and new towns. The banks of the river are lined with houses built upon piles. The town contains one broad hand- some street, a cathedral, and seven other churches, with 12,000 or 13,000 inhabitants. Frederick II. demolished the castle, and carried away all tint

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was characteristic of the former residence of his family to Potsdam. Here are manufactories of linen, woollen, and cotton, and several noted flour mills, which supply Berlin with flour. It stands about thirty miles west of that city. There are also about 300 acres of vineyards in this neighbourhood.

BRANDENBURG, CONFESSION OF. A formulary or confession of faith, drawn up in the city of Brandenburg, by order of the elector, with a view to reconcile the tenets of Luther with those of Calvin, and to put an end to the disputes occa- sioned by the confession of Augsburg.

BRANDING, in old law, in the face or hand, a punishment inflicted by law on various offences, by burning with a hot iron, after the offender has been once admitted to benefit of clergy.

BRANDISH, v. & n. Span, blandir ; Ital. brandire ; Fr. brandir, brandiller. See brand. To flourish or wave like a sword. Junius thinks that brandish was first applied to the motion of a brand ; and then generally to denote, to wave ; to shake; to flourish ; hence to make a show. Brander, to shine or glisten with a vibrating trembling, or soft motion. ā Cotgrave, as quoted in the Ency. Met.

Brave Macbeth,

Disdaining fortune, with his brandished steel, Like valour's minion, carved out his passage.

Shaktpeare.

She brandished o'er her head his sword, And vowed they should not break her word, She had given him quarter, and her blood Or theirs should make that quarter good j For she was bound by law of arms To see him safe from further harms.

Butler's Hvdihras.

He said, and brandishing at once his blade, With eager pace pursued die flaming shade.

Dryden.

He who shall employ all the force of his reason only in brandishing of syllogisms, will discover very little. Locke.

Let me march their leader, not their prince, And at the head of your renowned Cydonians Brandish this sword. Smith.

Two shining spears are brandished in his hands, Thus armed he animates his drooping bands ā Revives their ardour, turns their steps from flight, And wakes anew the dying flames of fight.

Pope's Iliad.

BRAND'LING, a worm so named from its brindled color.

The .dew- worm, which some also call the lob-worm, and the brandling, are the chief. Walton.

BRANDOLINUS (Aurelius), surnamed Lip- pus, from his being blear-eyed, was born at Florence in the fifteenth century, and esteemed a great orator, poet, and musician. Matthias Corvinus, king of Hungary, invited" him to teach oratory in his dominions, which he did many years at Buda and Strigonia, with great success. On his return to Florence he took orders, and preached to the most crowded audiences. He died at Rome of the plague, in 1498. He wrote several works which were esteemed, particularly, 1. A Commentary on St. Paul's Epistles. 2. A Treatise de Lege. 3. Two Books of Christian Paradoxes. 4. Three books De Ilatione Scri-

bendi. 5. A Dialogue de humanae vitae con- ditione, et tollenda corporum aegritudine ; dedi- cated to king Matthias. Aid 6. The Scripture Histories in Heroic Verse.

BRANDON, a market town of Suffolk, five miles north-west from Thetford, and seventy-eight N. N. E. from London. It is pleasantly situate on the Little Ouse, and has a good harbour. The river, over which there is a bridge, is navi- gable from Lynn to Thetford ; and, a mile below, is a ferry for conveying goods to and from the Isle of Ely. The Fens commence near this town, which formerly gave title to the dukes of Suffolk, and now gives the title of duke to the family of Hamilton, in Scotland. The church is handsome, and the town has a considerable trade in malt, corn, coals, timber, iron, bricks, gun-flints, &c. In the neighbourhood are extensive rabbit- warreus.

BRAND SUKDAY, Dimanche des Brandons, in French ecclesiastical writers, denotes the first Sunday in Lent; so called on account of an an- cient practice in the Lyonnois, where the pea- sants, on the night of this day, walked about their orchards, gardens, Sec. with lighted torches, or fire-brands in their hands; in which plight they visited every tree, and, addressing themselves to them one after another, threatened that if they did not bear fruit well the ensuing season, they should he cut down to the ground and burnt. This is evidently a relict of Paganism ; the same custom having been practised by the ancient Romans in February.

BRANDT (Gerard), a learned protestant divine, born at Amsterdam in 1626, was succes- sively minister in several places of the Nether- lands. He wrote several works, which are much esteemed ; particularly, The History of the Re- formation of the Netherlands, 4 vols. 4to ; and the Life of Admiral Ruyter ; he died at Rotter— dam in 1685.

BRANDY. Teut. brande wem ; Dut. brande- wyn ; Swedish braen-win ; Ger. brand-wein. Brand burned, and wine, corrupted into y, in English, says the Ency. Met. literally burnt wine ; a spirit distilled from wine.

Buy any brand-wine, buy any brand-wine.

Beaumont and Fletcher.

The Dutch their wine, and all their brandy lose.

Waller.

Restored the fainting high and mighty With brandy-wine and aqua-vita; : And made them stoutly overcome With bacrack, hoccamore, and mum.

Butler's Hudibras.

If your master lodgeth at inns, every dram of brandy extraordinary that you drink, raiseth his cha- racter. Swift's Foo!man..

It has been a common saying, A hair of the same dog ; and thought that brandy-wine is a common re- lief to such. Wiseman,

BRANDY is extracted from other liquors, as well as wine, by distillation. It has even been distilled with considerable success, of late from potatoes. French brandy is esteemed the best in Europe. It is made wherevec wine is made ; and the strong heavy wines are preferred for the still. The best French brandies exported are those of Bour-

BRA

deaux, Rochelle, Cogniac, Charenton, Nantz, the isle of Rhe, Orleans, and the ci-devant pro- vinces of Poitou, Touraine, Anjou, Burgundy, and Champagne. See also ALCOHOL.

BRANDYWINE, a township of Chester county, Pennsylvania, United States.

BRANDYVVINE CREEK, a creek of North Ame- rica, which falls into Christiana creek from the northward, at Wilmington, in the state of Dela- ware, about twenty-five miles from its north and north-west sources in

Chester county, Pennsyl- vania. This creek is famous for a battle, fought on the llth of September, 1777, between the British and the Americans, in which the latter were defeated. Philadelphia was taken posses- sion of in consequence, by general Howe, on the 26th.

B&ANFORD, a town of the United States, in New-Haven county, Connecticut ; seated on a small stream that runs into Long-island sound. It is about eight miles south-east by east from New-Haven, and 191 from Philadelphia.

BRAN'GLE, N From bewrangle. Wran . BRAN'GLER, ˆgle was originally wrangle,

BRAS'GLIXG, i a diminutive of ivrong, the

BRAN'GLEMENT. J past participle of wring, to twist, to distort, to misrepresent. Bewrangle, berangle, brangle, presents a common course of corruption. ā Ency. Met. To brangle is to squabble. A brangler is one prone to litigious contests, to brawls and quarrels.

This is ' durus sermo,' says some brangling pa- rishioner, that fetches up his poor minister every term for trifles. Bp. Hall.

When polite conversing shall be improved, com- pany will be no longer pestered with dull story-tellers, nor brangling disputers. Swift.

The payment of tithes is subject to many frauds, brangles, and other difficulties, not only from papists and dissenters, but even from those who profess them- selves Protestants. Id.

BRANK . Armoric, brank, brae, barac, said anciently to have been the general Celtic name for grain. It now signifies buck wheat.

BRANK', probably from branca, a barbarous Latin word of the middle ages, corrupted from brachium ; it signifies a foot or paw.

BRAXK, an instrument used in Staffordshire, for correcting scolding women. It is a sort of head-piece, which opens and encloses the head, while an iron, sharp as a chissel, enters the mouth, and subdues the more dreadful weapon within. Thus harnessed, the offender is led in triumph through the streets. Dr. Plott, in his history of Staffordshire, gives a minute descrip- tion and figure of the instrument, which is there called a scolding bridle ; and tells us, lie looks upon it ' as much to be preferred to the ducking- stool, which not only endangers the health of the party, but also gives the tongue liberty be- twixt every dip ; to neither of which this "is at all liable ' The Dr. illustrated the margin of a copy of his own work, now in

the British Mu- seum with the following quotation from Chaucer: But .is for my daughter Julian I would she were well bolted with a bridle, That leaves her work to play the clack, And lets her wheel stand idle.

For it serves not for she ministers. Farriers nor furriers, Coblers nor button makers To descant on the Bible.

BRANKER, or BRANCKER (Thomas),an emi- nent mathematician of the seventeenth century,was born in Devonshire, in 1636, and studied at Oxford, where he took his degree of M.A. in 1658. His skill in mathematics and chemistry recom- mended him to Lord Brereton, who gave him the rectory of Tilston. He was afterwards ap- pointed master of the well-endowed school of Macclesfield ; where he died in 1676, aged forty. He wrote a Latin work De Sphaera; Oxford, 1662; and a translation of Rhonius's Algebra: London 4to. 1668.

BRANKSEA, or BROWNSEA, an island about three miles in circumference, in Pool harbour ; and situate amongst strong currents. Queen Elizabeth erected a fort here. Long. 1Ā° 57′ \V., lat. 50Ā° 41′ N.

BRAN'SEL. Fr. branler, or bransler, a brawl or dance.

Branslei, ballads, virelayes, and verses vain.

Spenser.

BRANTETH WELL, a mineral spring in Dumfriesshire, which, though situated several yards deep in an extensive moss, contains a very strong sulphureous water, more powerful than that of Moffat, and used with success in scor- butic and scrophulous cases.

BRASAVOLUS (Antonius Musa), M.D. and professor of natural philosophy at Ferrara, nou- rished in the middle of the sixteenth century. He wrote, 1. Commentaries on Hippocrates' Aphorisms : 2. Examen omnium simplicium, quorum usus est in publicis officinis : printed at Rome, 1536, and Lyons, 1544, 8vo. A treatise on Venereal Disease ; and several other medical works. He used the form of a dialogue, be- tween himself and the apothecary. His style is clear and s;mple.

BRASAVOLUS (Jerom), the son of Antonius Musa, was also a physician and medical author. He wrote, An Exposition of the first Book of Hippocrates; Ferrara, 4to, 1595: and a treatise De officiis Medicis.

BRASENIA, in botany, a genus of plants; class, polyandria decagynia: CAL. perianth one-leaved, six-parted : COR. none : STAM. filaments from eighteen to twenty-five, erect, attached to the receptacle, shorter than the calyx : ANTH. erect : PIST. styles erect, bent inwards towards the top : STIG. obtuse : PE- RICARP, oblong, the outer side flat, the inne" gibbous, fleshy, one-celled, without valves : SEEDS two or three, oval.

BRASIDAS, a celebrated general of the La- cedemonians, who flourished A. A. C. 424. He defeated the Athenians by land and sea, took many places, and rendered his country formi- dable to all the neighbouring states. He con- quered the Athenians on their attempting to surprise Amphipolis, but died of the wounds re- ceived in that battle. He is celebrated for the heroic declaration : ‘ Whatever the honor of the state requires, I will perform or die;’ and he fulfilled his promise. Plutarch (Apothegm), re- cords, that having caught a mouse among some

figs, he let it go after-having bitten his fingers, ob- serving to those who attended on the occasion ; ‘ That there is no creature so contemptible as not to be able to free itself from a foe, if it exerts all the power it possesses.’ Public honors were . decreed to his mother for the speech uttered by her on the occasion of his death ; and a monu- ment was erected to Brasidas at the expense of the public.

BRASIER, from brass, in domestic architec- ture A metal pan for burning charcoal, &c. ; the Greeks and Romans having no chimneys in their apartments, they used pans, in which they placed lighted coals for the purpose of warming them. These were made of different metals, but most commonly of brass, and are, therefore, called brasiers. Caylus has published some ancient brasiers, which are supported by a tripod. A number of them were found in the ruins of Ilerculaneum and Pompeii, of which the greatest part have been engraved in the third volume of the Bronzes found at Herculaneum. In 1761 a square pan, or bronze grate, was dis- covered, in a temple of Herculaneum, like those used in Italy for heating the large apartments. It is as large as a middling sized table, and placed upon lion’s paws. The borders are in- laid with foliage worked in copper, bronze, and silver. At the bottom was an iron grating, very thick, supported or walled up with bricks above and below, that the coals might not touch the under part of the grating, nor fall through at the bottom. This fine example was taken out in pieces. They use no other manner in Italy at present to heat the apartments, than by the means of pans, which are proportioned to the size of the rooms, and ornamented according to the opulence of the proprietors. In most palaces they are of silver : the greatest number are of copper, and the most common form is a basin, supported by a border of wood, plated with copper, which rises from three to four feet. In ancient churches they used a pan mounted on wheels to warm the priests and assistants.

BRASIL, an immense territory on the east of South America, including,

with Guiana, all the Portuguese dominions in America. Though original'y confined to a small line of coast south of the Amazons, it now comprehends all the country between 4Ā° of north and 34Ā° of south latitude, and from the 35th to the 72d degree of west longitude ; being bounded on the north by Colombia, French Guiana, and the Atlantic Ocean ; on the east and south-east by the At- lantic ; and on the west by Peru, Colombia, and the United Provinces. The mean length of Brasil is 1800 miles, and its medium breadth, from east to west, 1700. Its greatest breadth is towards the north ; on approaching the southern extremity, the ocean and the western boundary closely approximate. The area of Brasil is stated at 3,060,000 square miles, or 19,584,000,000 acres; and the whole population at not above 3,000,000, or one person for every square mile. But then it must be remembered, that by far the greater part of the country is occupied with vast deserts or impenetrable woods.

In our article SOUTH AMERICA, par. 125 ā 142 inclusive, the reader will find the leading features

of this country, geographical, commercial, and political, described, with a sketch of its history since its first discovery in the fifteenth century. We shall here, therefore, add only an enlarged description of the aboriginal tribes, and some topographical particulars supplied by recent tra- vellers.

Brasil, when first visited from the western world, was still more a desert than at present. Its vast plains were entirely covered with woods ; and its subterraneous treasures known only by the grains of gold dust, occasionally washed down the rivers. A multitude of scattered tribes wandered over its wide extent, without agricul- ture, arts, or government, and exhibiting man in almost the rudest state of social life in which he ever has been found.

The physical constitution of the natives is re- presented as having been at this time robust, and their general health excellent. Air, continual moderate exercise, and a simple diet, preserved them from most of the diseases to which Euro- ' peans were subject; and the color of their skin was not darker than that of the southern Euro- pean nations. Persons with any bodily defect were rarely seen among them ; their rapid mi- gration and its consequent hardships quickly disposed of those when they did appear, and those only whose constitution was originally sound and entire were enabled to arrive to man- hood. In one respect, they are described as the rudest of all the American tribes. They had no clothing whatever, even on those parts of the body which modesty most forbids to be exposed. They also removed all hairs from their body, even those of the eye-brow and eye-lid, the women only retaining a portion of that which grows on the head. All the early efforts of Europeans could not persuade them to make use of clothes. Even those who had been taken prisoners and enslaved, if compelled by

severe chastisement to put on some articles of European dress, would, as soon as they were set at liberty for the night, throw them off as a burden. Still were they very attentive to the adornment of their persons in their own way. They painted them with various colors, and often entirely covered them with ornaments of feathers, bones, and shells. The men generally painted all their bodies, except the face, black, at least for a ground color ; and drew upon this layers of various ornamental stripes. Necklaces and bracelets, of bone or polished wood, hung round the shoulders and breasts of both sexes ; and in war, or at their feasts, they arrayed themselves in their best. Of the two sexes, it is said the males were by far the most vain in their attire, and mono- polised all the plumes. The women were treated as inferior beings, and most of the labor devolved on them. They used the same species of orna- ments, when they could obtain them, as the men, and showed a great avidity for every material of which necklaces could be formed.

The whole country was at this time divided into small communities, perpetually engaged in the most ferocious warfare. Neither plunder nor increase of territory seemed to be the object of these conflicts, but a sort of implacable hatred, which nothing but the torture or destruction of.

their enemies could appease ; and each instance of savage cruelty was indelibly recorded in the minds of whole tribes. The lore of military glory seemed to enter largely into their motives to war, but this was subordinate to the thirst of vengeance, and the desire of doing execution. To accomplish this in all its gratifying details, they avoided to meet their enemies in the field, and never courted single combats, but princi- pally conducted their wars by surprise and am- nuscade ; chose the dead hour of midnight to fall upon their enemies; and sought every mode of destroying them, without exposing themselves. Still when the most formidable perils met them, they faced them with intrepidity, and endured with the greatest constancy the horrors to which these savage wars exposed them. ‘ When one of their expeditions was determined upon, the old men arranged the time and mode of procedure ; they gave the signal for setting out, and were followed by the rest, with the most rapturous accla- mations. Having laid up provision sufficient to last for a considerable time, they proceeded by the most unfrequented paths, in profound silence, till they arrived at the hostile frontiers. There they left the women, children, and all those who were unfit for service ; and the chosen warriors of the nation proceeded to the scene of action. When they approached the village on which the attack was to be made, they concealed themselves more carefully than ever. Taking their

station in the thickest woods, they watched the oppor- tunity of finding the enemy completely unpre- pared. The time favorable for this purpose was of course the night, when the enemy were buried in sleep, and unconscious of impending danger. Notwithstanding dreadful and continually repeat- ed examples, these nations had never adopted the obvious precaution of stationing a sentinel to warn them of an approaching enemy. The attack, therefore, proved generally successful ; the in- habitants were roused from profound slumber by the yells of their destroying foe. A scene then ensued, the horrors of which no pen can describe. The victims, unprepared, unarmed, defenceless, fell unresisting into the hands of their enraged and unrelenting enemies. In vain did their cries rise to heaven ; vain was all supplication ; neither age nor sex afforded shelter from the utmost ex- cesses of cruelty ; and the victors exhausted themselves in inventing new forms of inhuman- ity ; they devour in their fury portions of the rrangled victims, while they reserve the survi- vors for a more lingering fate. The number of prisoners taken was, indeed, the criterion by which their warlike exploits were chiefly valued. The arrival of a numerous band doomed to de- struction, secures them a joyful reception from that part of the community who had been left at home, and who were eagerly waiting their return. These unhappy men were reserved for a festival, the most horrible and the most disgraceful to human nature. To devour the flesh of their enemies, amid savage pomp and acclamation, was considered as the utmost height of human triumph. They did not, however, proceed im- mediately ; nor did they, unless to a small extent, in the first frenzy of battle, feed on the bodies of enemies slain on the field. They reserved the

living captives for an ausust solemnity, at which the whole nation was called to assist. Previous to this awful day, the prisoner was treated with every mark of kindness and favor. His wants were liberally supplied ; he was allowed to accompany them in the exercises of hunting and fishing; and the person to whom he belonged hesitated not to give him one of his own nearest relations as a wife, during the short period that he had yet to live. All this previous kindness, how- ever, seemed to be bestowed only to render his fate, when it arrived, more dreadful. Immediately previous even to the fatal moment, several days were devoted to feasting and profuse convivial- ity, in which the captive was permitted to share. All his study, then, was to show the most entire indifference to his approaching fate, and the proudest defiance to the enemies among whom he was seated. He was the gayest of the com- pany ; he boisted aloud of his warlike exploits, and particularly of such as had been performed against those by whom he was surrounded. He was then fixed on a scaffold, and, by a whimsi- cal indulgence, a number of stones were placed beside him, with which he was allowed to do all the mischief in his power. Then the person who was to execute his doom stept forth. This office was considered as peculiarly

honorable, and was assigned to the most distinguished character in the nation. This person comes in his most splen- did war dress, waving with varied colored plumes, and with a large club in his hand. He then addresses the captive: 'Here am I, that have killed many of thy nation, and will kill thee ;' to which the other replies, ' You do well, I have slain a multitude of your countrymen, and have devoured them ; you do well, but my death will be revenged.' After this mutual defi- ance, the fatal blow is instantly struck ; and after the necessary preparations, the inhuman feast begins, amid universal delight and triumph. The bones are carefully preserved, and are fashioned into various ornaments of necklaces, bracelets, and musical instruments. The heads are also preserved, and piled up in a corner, to be shown to every stranger, as testimonies of their prowess and success.

Their ignorance of iron left them very imper- fect manufacturers of arms, yet considerable ingenuity was displayed in a sort of club called taeape, formed of Brasil wood, a species of black ebony, very weighty, round at the extre- mity, and sharp at the sides. It was six feet long, and about an inch thick. They had also ingenious shields made of skins, broad, flat, ana round. For missile weapons, they had arrows, composed of the same kind of wood with their clubs. The strings were made of a paiticular species of grass, and twisted so strongly, that a traveller declares, a horse might draw by them. Their arrows were six feet long ; the head and point formed of black wood, the middle of com- mon wood, and these different pieces were very neatly joined with thin bark of trees. They had two pennons, each a foot long, neatly tied with cotton thread. These were pointed, either with bone, with hard and dried canes in the form of a lancet, or with the tail of the ray fish, which has a strongly poisonous quality. They had also i

certain species of military ensigns, and drew a warlike music from flutes made of their enemies uones !

One account of a battle in an open field has come down to us through a French traveller, who was an eye witness of it, and has given the fol- lowing curious and lively description of the s?ene : ' Having been myself a spectator,' says M. Lery, ' I can speak with truth. Another Frenchman and I, though in danger, had we been taken or killed, of being eaten by the Margajas, had once the curiosity to accompany our savages, then about 4000 in number, in a skirmish which happened on the sea coast ; and we saw these barbarians combating with such fury, that people mad or out of their senses could not do worse. First, when our people had perceived the enemy at about half a quarter of a league's distance, they took to howling

in such a manner, that though it had thundered in heaven we should not have heard it. According as they approach- ed, redoubling their cries, sounding their drums, stretching their arms, throwing out dreadful threats, and showing to each other the bones of the prisoners whom they had eaten, and even their teeth strung together hung round their neck : it was horrible to see their countenance ; but it was much worse when they came near each other; for, when at the distance of two or three hundred paces, they saluted each other with great showers of arrows ; and by the first discharge, you would have seen the air entirely loaded with them. Those whom they struck, tore them from their body with wonderful cour- age, broke them, bit them with their teeth, and failed not to make head in spite of their wounds ; upon which, we must observe, that these In- dians are so furious in their wars, that so long as they can stir legs or arms, they cease not to combat, without retreating or turning their backs. When they were joined in battle, you might then see them wielding, in their two hands, wooden clubs, and charging so furiously, that he who met the head of his enemy, not only threw him on the ground, but felled him as butchers do oxen. You will ask what my companion and I did during this rough skirmish? To conceal nothing, I answer, that satisfied with our first folly, which was to risk ourselves with these barbarians, and keeping in the rear, we were only occupied in viewing the blows. But though I had seen men at arms in France, both on foot and horseback, I must say, that the polished movements, and glittering armour of our Frenchmen, never gave me so much pleasure as I had then in seeing the savages combat. Besides their leaps, their hiss- ings, and their skilful thrusts, it was a wonder- ful spectacle to see flying in the air so many arrows, with their great pennons of plumes, red, blue, green, carnation, and other colors, amid the rays of the sun, which made them glitter, and to see also so many helmets, bracelets, and other ornaments, made of these natural plumes, with which the combatants are covered.

‘ After the combat had lasted about three hours, and that there had been a good number killed and wounded on both sides, our Topinam- boux having at last gained the victory, made prisoners of more than thirty Margajas, men and VOL. IV.

women, whom they carried away into their country : and although we two Frenchmen had done nothing but hold our naked swords in our hands, and fire some pistol shots in the air to encourage our men, we saw that it was impossi- ble to do them a greater pleasure than to go to war with them ; for they esteemed us so much afterwards, that in the villages which we fre- quented the old men always testified more friendship for us.

‘The prisoners having been placed in the middle of the victorious band, bound, in order to secure them the better, we returned to our river of

Janeiro, in the neighbourhood of which these savages inhabited. As we had gone twelve or fifteen leagues, ask not, if, in passing through the villages of our allies, they came not out to meet us, dancing, leaping, and clapping their hands to applaud and caress us. The poor pri- soners were obliged, according to their custom, when they were near the houses, to sing and say to the women, ‘ here is the food which you love so much coming to you.’ To conclude, when we were arrived before our isle, my companion and I went into a bark, and the savages went away, each to their residence.’

The Brasilians had an original mode of forti- fying their villages. Before an interior enclosure, composed of a strong pallisade, was thrown up a wall of loose stones, and the houses were pierced with holes, through which arrows could pass. A Portuguese force which attacked one of these forts, found its reduction extremely difficult; they were obliged to entrench themselves, in consequence of the furious sallies of the Indians, and wait the arrival of succours from the metro- polis. And it was not until they had covered themselves with hurdles of canes, which secured them against arrows, that they at last forced the walls, and subdued the town.

Their rude agriculture was, from the extreme fertility of the soil, sufficient to maintain them in abundance. A day’s work, it is said, often pro- duced as much as would supply a native with food during the year. The principal objects of culti- vation were the manioc, and other roots resem- bling it, which, after being dried and reduced to powder, were boiled into a thick substance that bore a considerable resemblance to bread. In war, or on a hunting excursion, they boiled it till it became hard, and it could thus be kept for a considerable time. These people had also a fer- mented liquor, in which they indulged with great avidity. The preparation was made in a manner truly savage. The roots having been softened by fire, the women seated themselves round the vessel containing them, put the dif- ferent pieces successively into their mouth, and applying to the malt-mill of nature, their teeth, chewed, and then spit them into another vessel. This delicious pulp was afterwards boiled second time, and being poured into earthea vessels, speedily fermented, and produced tha. liquor, which formed their favorite beverage.

The Brasiliaus have been said to have no idea of a Divinity, no expectation of a future state 01 rewards or punishments, nor a single tradition respecting the origin of the human race; a;| opinion which seems to have arisen solely fron

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their having no temples or sacrifices, and none of the ordinary pageantry of religious belief. It appears that they were always impressed with the belief of beings and powers superior to man. A traveller (M. Lery), who represents them as entirely devoid of religious ideas, mentions in one place his having heard their songs, in which, after lamenting the death of their ancestors, they console themselves with the hope of a future and joyful meeting beyond the lofty mountains. Others, on the contrary, they say, are shut up in gloomy abodes, where the Aignans, or evil spirits, torment them without intermission. They were not even entirely destitute of a priesthood ; some offices of which were performed by their jugglers or conjurors, who are supposed to possess super- human powers, and to hold intercourse with in- visible beings. At their dances, which were considered as religious ceremonies, several of these jugglers always presided, and, during the intervals of dancing, carried about wooden poles stuck round with fruits, and having a hollow filled with tobacco, which being set fire to, the juggler breathed upon all present, pretending that through this medium the spirit infused into them force and vigor. These conjurors were also believed to have the power of foreseeing, and even of producing future events. In cases of disease, their aid was, therefore, particularly sought, and they were courted and caressed by all who labored under any distress. When the event did not correspond with the expectation of the votary, the failure, it is said, was attributed to the conjuror, and he suffered often severe vengeance. The great agencies of nature were also habitually worshipped. Thunder, whose effects are peculiarly striking in this climate, had attracted, in a remarkable degree, their adora- tion. They endowed it with mind, and viewed it, not only like other nations, as a formidable, but also as a beneficent power. To it they con- sidered themselves as indebted for whatever they knew of the science of agriculture. The sun and moon had also attracted their attention. At cer- tain periods, they raised their hands to them in a suppliant manner, with gestures and cries ex- pressive of the profoundest veneration. By the race of evil beings, called Aignans, they often fancied themselves to be beaten and scourged with the utmost severity. Mr. Henderson re- presents them as believing in a creator of all, whom they denominated Tupan, and an evil spirit, called Anhanga, together with the immor- tality of the soul.

*‘ They consist,’ he adds, * of a vast number of nations, more or less numerous, and generally divided into tribes or hordes, wandering about in ja state of nudity. The principal part of their time is employed in hunting, gathering honey, and such fruits as nature spontaneously produces. No state of government is found amongst them ; each tribe has its elective captain, who directs them only on occasion of assaults, and in forming ambuscades against an enemy. Each nation has its peculiar idiom ; but*

there is one called the general lingua existing among them, which is the Tupinamba. At this day many tribes retain their ancient custom of perforating their faces, and using pieces of wood as ornaments. In con-

tracting marriages, the degree of relationship is not respected. Polygamy is admitted amongst particular individuals only, in a very few na- tions. Divorcements are generally very rare among them. They are acquainted with no liberal art, and have a great antipathy to civilisa- tion. Thousands of instances have occurred, in which they have preferred fleeing from it back again into the woods, in pursuit of their former rude habits. Their inherent indolence is con- spicuous, and they have but little consideration in life beyond the acquirement of their daily sus- tenance. Such as live upon the banks of auri- ferous rivers or lands, and come in contact with the Portuguese, will give pieces of gold for tri- fling articles of European manufacture, particu- larly knives. Few Indians are seen in any of the sea-port towns of the Brasil. Some are em- ployed in the bay of Rio de Janeiro, rowing boats in the service of the government. They appear to keep themselves quite distinct, and do not mix with any other class of people. They are not tall, but their early occupation of hunting has given to their limbs much strength and agility. A fine proportion of form is their general charac- teristic, and they possess great muscular power. Their features are regular, and there is an uni- versal resemblance between them and the various tribes. They are of a copper color, with strong, lank, black hair, which is permitted to hang over their ears, necks, and foreheads, adding something to the sombre aspect of their countenances, which are sad even to an extreme. There is nothing ferocious in their physiognomy ; on the Contrary, they seem very inoffensive. I never saw them indulge in any gaiety, rarely laughing, and speak- ing seldom. They are expert rowers ; and, on a transient cessation from their labor, exhibit no disposition to hold converse with each other, nor curiosity or interest in the objects and bustle around them.' We may add to this sketch, that of a late traveller in Brasil, M. Koster, which was principally drawn from information collected in the northern parts of the country. It principally relates, we should remark, to such as have in part renounced their roving habits, and are become in some measure domiciliated with the European conau'erors of their coasts.

The Indians are in general a quiet and in- offensive people ; they have not much fidelity ; but although they desert, they will not injure those whom they have served. Their lives are certainly not passed in a pleasant manner under the eye of a director, by whom they are im- periously treated, consequently it is not sur- prising that they should do all in their power to leave their villages and be free from an immediate superior ; but even when they have escaped from the irksome dominion of the director, they never settle in one place. The Indian scarcely ever plants for himself, or, if he

does, rarely waits the crop : he sells his maize, or mandioc, for half its value before it is fit to be gathered, and removes to some other district. His favorite pursuits are fishing and hunting ; a lake or rivulet will alone induce him to be stationary for any length of time. He has a sort of independent feeling which makes him spurn at any thing like a wish to deprive him of his own free agency ; to the

director he submits because it is out of liis power to resist. An Indian can never be persuaded to address the master to whom he may have hired himself by the term of Senhor, though it is made use of by the whites in speaking to each other, and by all other free people in the country ; but the negroes also use it in speaking to their mas- ters, therefore the Indian will not ; he addresses his temporary master by the term of amo or patram, protector or patron. The reluctance to use the term of senhor may perhaps have commenced with the immediate descendants of those who were in slavery, and thus the objection may have become traditionary. They may refuse to give by courtesy what was once required from them by law ; however, if it began in this manner, it is not now continued for the same reason, as none of those with whom I conversed, and they were very many, appeared to know that their ancestors had been obliged to work as slaves.

‘ The instances of murder committed by In- dians are rare. They are pilferers rather than thieves. When they can they eat immoderately; but if it is necessary they can live upon a very trifling quantity of food, to which their idleness often reduces them. They are much addicted to liquor, and will dance in a ring, singing some of the monotonous ditties of their own language, and drink for nights and days without ceasing. Their dances are not indecent, as those of Africa. The Mulattoes consider themselves superior to the Indians, and even the Creole blacks look down upon them : ‘ He is as paltry as an Indian,’ is a common expression among the lower orders in Brasil. They are vilely indifferent regarding the conduct of their wives and daughters : lying, and other vices attached to savage life, belong to them. Affection seems to have little hold upon them ; they appear to be less anxious for tlie life and welfare of their children than any other cast of men who inhabit that country. The women, however, do not, among these semi-barbarians, perform the principal drudgery ; if the husband is at home he fetches water from the rivulet, and fuel from the wood ; lie builds the hut whilst his wife takes shelter in some neighbour’s shed : but, if they travel, she has her young children to carry, besides the pots, the baskets, and the excavated gourds; whilst the husband takes his wallet of goat-skin and his hammock rolled up upon his back, his fishing net, and his arms,

and walks in the rear. The children are washed on the day of their birth in the nearest brook or pool of water. Both the men and women are cleanly in many of their habits, and particularly in those relating to their persons ; but in some other matters their customs are extremely disgusting; the same knife is used for all purposes, and with little prepara- tory cleaning is employed in services of descrip- tions widely opposite. They do not reject any kind of food, and devour it almost without being cooked ; rats, and other small vermin, snakes and alligators, are all acceptable.

‘ The instinct, for I know not what else to call it, which the Indians possess above other men, in rinding their way across a wood to a certain spot on the opposite side, without path or apparent mark, is most surprising; they trace footsteps over the dry leaves which lie scattered under the trees. The letter-carriers from one province to

another are mostly Indians ; for from tiabit they endure great fatigue, and will walk day after day, with ‘ittle rest, for months together. I have met them with their wallets, made of goat skin, upon their shoulders, walking at a regular pace, which is not altered by rough or smooth. Though a horse may outstrip one of these men for the first few days, still, if the journey continue long, the Indian will in the end arrive before him. If a criminal has eluded the diligence of the police- officers, Indians are sent in pursuit of him as a last resource. It is well known that they will not take him alive ; each man who sees the offender fires, for they do not wish to have any contention. Nor is it possible for the magistrate to fix upon the individual of the party who shot the criminal ; for if any of them are asked who killed him, the answer invariably is, ‘ os homens,’ the men.

‘ It is usually said that a party of Indians will fight tolerably well, but that two or three will take to their heels at the first alarm. Some of them, however, are resolute, and sufficiently courageous ; but the general character is usually supposed to be cowardly, inconstant, devoid of acute feelings, as forgetful of favors as of injuries, obstinate in trifles, regardless of matters of im- portance. The character of the negro is more decided ; it is worse, but it is also better. From the black race the worst of men may be formed ; but they are capable likewise of great arid good actions. The Indians seem to be without energy or exertion ; devoid of great good or great evil. Much may, at the same time, be said in their favor ; they have been unjustly dealt with, they have been trampled upon, and afterwards treated as children; they have been always subjected to those who consider themselves their superiors, and this desire to govern them has even been carried to the direction of their domestic arrange- ments. But no, ā if they were a race of acute beings capable of energy, of being deeply in- terested upon any subject, they would do more than they have done. The priesthood is open to them, but they do not take advantage of it. I never saw an Indian

mechanic in any of the towns ; there is no instance of a wealthy Indian ; rich mulattoes and negroes are by no means rare I have had many dealings with them as guides and carriers, and subsequently as laborers, and have no reason to complain, for I was never injured by any of them ; but neither did I receive any particular good service, excepting in the in- stance of Julie For guides and carriers they are well adapted, as their usual habits lead them to the rambling life which these employments en- courage. As laborers, I found that they had usually a great inclination to overreach ; but their schemes were badly made, and, consequently, easily discovered. I never could depend upon them for any length of time, and to advance money or clothing to them is a certain loss. If I had any labor which was to be performed by a given time, the overseer would always reckon upon his mulatto and negro free people ; but did not mention in the list of persons who were to work, any of the Indians whom I was then em- ploying; and, on my speaking of them, he answered, ' An Indian is only to be mentioned for the present day ;' meaning, that no reliance is to be placed upon them.

B R A S I L.

'Like most of the aboriginal inhabitants of the western hemisphere, these people are of a copper color. They are short, and stoutly made ; but their limbs, though large, have not the appearance of possessing great strength, they have no show of muscle. The face is disproportionately broad, the nose flat, the mouth wide, the eye deep and small, the hair black, coarse, and lank ; none of the men have whiskers, and their beards are not thick. The women, when they are young, have ā¢by no means an unpleasant appearance ; but they soon fall off, and become ugly ; their figures are seldom well shaped. Deformity is rare among the Indians ; I do not recollect to have seen an individual of this race who had been born defec- tive ; and the well-informed persons with whom I conversed were of opinion that the Indians are more fortunate in this respect than any other race with whom they were acquainted.'

The author of the Etat Present du Portugal says, there are twelve cities in Brasil, sixty-six towns, many villages; one archbishop, four bishops, and about 430,000 inhabitants, more than one-sixth of whom are Portuguese. So va- rious are the accounts of its population.

Mr. Lindley, a recent traveller in Brasil, has given the following table of latitude and longi- tude, which he states himself to have obtained from Portuguese manuscript charts made after a new survey.

Latitude. Longitude.

CityofBelem . 1 30

. . . 48 30

Maranon ... 2 32

. . . 43 40

Ciara 3 31

. . . 38 23

Cape San Roque . 5 7

. . . 36 15

Rio Grande . . 517

... 36 5

Paraiba 6 40

. . . 35 30

Olinda 8 2

. . . 35 15

Cape San Augustine 8 26

. . . 35 15

Rio San Francisco 10 58

. . .37

Bahia,or StSalvadorlS

. . . 39 25

Dosllheos . . 14 45

... 40 7

Porto Seguro . 16 40

. . . 40 12

Rio Carevellos . 18

. . . 40 22

Banks of Abrolhos 18

. . . 38 5P

Spiritu Santo . . 20 13

. . . 40 30

Cape Frio . . 22 54

. . . 41 35

Rio Janeiro . . 22 54

10 . . . 42 39 45

Santos 24

. . . 45 16

Island St Catherine 27 40

< N. Pt. 47 36 1 S. Pt. 47 43

Immediate north point of the ri-

vei Plata, or 34 57 30 ‘ ‘ ‘ 54 43 30 Puntade Este

Mr. Henderson in his late Topographical Ac- jcount of Brasil, represents it as divided into the following twenty-two provinces, including those on the north bank of the river Maranon.

Maritime Provinces.

1. Guiana. 9. Bahia.

2. Para. 10. Porto Seguro.

3. Maranham. 11. Espirito Santo.

4. Seara. 12. Rio de Janeiro.

5. Rio Grande, North. 13. St. Paulo.

6. Paraiba. 14. St. Catherina.

7. Pernambuco. 15. Rio Grande, South.

8. Seregiped'ElRey.

Interior Provinces.

16. Matto Grosso. 20. Piauhy.

17. Parana. 21. Minas Geraes.

18. Uraguay. 22. Goyaz.

19. Solimoes

The actual government of the country, how- ever, appears to be conducted on a more general division. Portuguese Guiana is on the north side of the Maranon, and the rest of this terri- tory is divided into the twelve governments we have specified in our article AMERICA, SOUTH, which are sometimes also called Capitanias, though to one or two only is the term govern- ment applied.*

In the latter part of the seventeenth century opened a brilliant era for Brasil, in the discovery of her gold mines. The home government be- ing at this time engaged in war for the security of her own independence, at first neglected them, but in 1699 this was compensated by the activity of some enterprising individuals, who discovered and began to work several mines in the back settlements. The gold was abundant, and of easy extraction; and it soon appeared, that a vast source of treasure had been opened to the nation. The court of Lisbon now therefore re- solved to take cognisance of the operations which were going on. It ordained, that, on the disco- very of a mine, immediate notice should be given to the government ; and that a fifth part of the produce should always be paid into the treasury. Other mines were now soon discovered ; and the produce was so copious that the king's fifth amounted to Ā£480,000, and consequently the whole produce to more than two millions. At this rate it continued from 1728 to 1734. It then began gradually to diminish, till the whole produce sunk so low that the royal fifth did not amount to more than Ā£257,400. The government, besides this original tax, imposed a duty of 2 per cent, on its conveyance to Europe, which yielded nearly Ā£l 6,000, to which might be added the seignorage on the coinage of gold, amount- ing to nearly Ā£80,000 ; which raised the whole revenue derived from this source to Ā£353,400.

Thirty years after, this discovery was followed by another still more unexpected. The miners often met with little shining stones, which they

threw away as useless with the sand and gravel. An overseer suspecting that these might be of some value, transmitted a specimen to the go- vernor. They were immediately sent to Lisbon ; and that court directed its ambassador in Hol- land to have them examined by the lapidaries of that country, then reputed the most skillful in Europe. On repeated examinations, they were pronounced to be genuine and valuable dia- monds. When this important intelligence reached Brasil, the stones were collected and sent over to Europe in such quantities as greatly to diminish their value. The court of Lisbon, on this, adopted a system of the most rigorous monopoly. They vested the trade in an exclusive company, and even this body was restricted from employ- ing more than 600 slaves ; a restriction which was afterwards taken off, and its place supplied by a moderate tax on every slave employed. At length the government, envying the profits of Ihe company, took the trade into its own hand :

all restrictions upon the collection of the dia- monds were now removed ; but it was enacted, that every person who found one should deliver it to one of the crown agents at a fixed price ; out of which was deducted, as in the case of gold, the tax of a fifth. A series of the most ri-_ gorous precautions were employed, to prevent unlawful trade and embezzlement, both in the colonists employed in collecting the diamonds, and in the officers of the crown. The whole average sum produced to the government at a re- cent period by the mines of Brasil was Ā£148,500 per annum. They are purchased by British and Dutch lapidaries, who cut ā¢ and bring them into a proper state for the market. The gold is found in deep valleys or the channels of rivers. Frequent excavations occur, made by the gold washers, some of them fifty or a hundred feet wide, and eighteen or twenty feet deep. At other times the gold appears at little greater depth than the roots of the grass. For the most part it is found in a stratum of rounded pebbles and gravel, called cascalhao, which generally rests upon the solid rock. This stratum is covered with soil of different depths, and is very thin and uneven. At the gold washings of Santa Rita, visited by Mr. Mawe, it was nowhere more than two feet thick, and in many parts not more than seven or eight inches. The incumbent soil is removed at great labor and expense, being dug out and carried away in bowls, and the stratum of cas- calhao, in which is contained the gold, is re- moved to a convenient place where there is water for washing it. The process by which the ore is separated from the earth in which it is em- bedded is different, according as water can be more or less easily procured. It is in general extremely simple, and is minutely described by Mr. Mawe, who was allowed to inspect the dif- ferent gold washings established throughout the country. ‘ Where

water,' he says, ' of sufficiently high level can be commanded, the ground is cut in steps, each twenty or thirty feet wide, two or three broad, and about one deep. Near the bottom a trench is cut to the depth of two or three feet. On each step stand six or eight ne- groes, who, as the water flows gently from above, keep the earth continually in motion with shovels, until the whole is reduced to liquid mud, and washed below. The particles of gold contained in this earth descend to the trench, where, by reason of their specific gravity, they quickly pre- cipitate. Workmen are continually employed at the trench to remove the stones and clear away the surface, which operation is much assisted by the current of water which falls into it. After five days washing, the precipitation in the trench is carried to some convenient stream, to un- dergo a second clearance. For this purpose wooden bowls are provided, of a funnel shape, about two feet wide at the mouth, and five or six inches deep, called gamellas. Each workman, standing in the stream, takes into his bowl five or six pounds weight of the sediment, which ge- nerally consists of heavy matter, such as oxide of iron, pyrites, ferruginous quartz, &c. of a dark carbonaceous hue. They admit certain quanti- ties of water into the bowls, which they move about so dexterously, that the precious metal,

separating from the inferior and lighter sub- stances, settles to the bottom and sides of the vessel. They then rinse their bowl in a larger vessel of clean water, leaving the gold in it, and begin again. The washing of each bowlful occu- pies from five to eight or nine minutes ; the gold produced is extremely variable in quantity, and in the size of its particles ; some of which are so minute that they float, while others are found as large as peas, and not unfrequently much larger. This operation is superintended by overseers, as the result is of considerable importance.

At Villa Rica, which was also visited by Mr. Mawe, he found the bed of cascalhao on the mar- gin of the river, and workmen employed in cut- ting away the bank to the depth of about ten feet, before they could reach the vein containing the metal which was incumbent on the rock. The substance they had to cut through was a stiff clay, so strong, that though falls of water were let down upon it, and negroes were constantly employed in working it with hoes of various kinds, it was with difficulty removed. Nor was this the only impediment they had to strug- gle with ; for, by the constant precipitation of mud from higher grounds, the cascalhao was five feet below the bed of the river; in consequence of which, all the pits which were sunk were im- mediately filled with water, which had to be drained away by means of machinery. The mode adopted at this place for washing the earth from the ore is thus described : ' Two planks, about ten or twelve inches broad, and about twelve or fifteen feet in length, are laid in thĀ« ground, forming an inclined plane, sloping on(inch in twelve ; two other planks of similar di- mensions, are fixed in the samo direction at the lower

end, forming a second inclined plane, with a fall of six inches from the former. On their sides are boards placed edgeways, and staked down to the ground, so as to form long shallow troughs, the bottoms of which are covered with hides tanned with the hair on, having the hairy side outwards, or, in defect of these, with rough baise. Down these troughs is conveyed the water containing the oxide of iron and the lighter particle of gold ; the latter substance precipitating in its course is enr- tangled by the hair. Every half hour the hides are taken up, and carried to a tank near at hand, formed of four walls, say five feet tong, four broad, and four deep, and containing about two feet depth of water. The hides are stretched over this tank and well beaten, then dipped and beaten repeatedly, until all the gold is disen- tangled, after which they are carried back and replaced in the trough. The tanks are locked up at night and well secured. The sediment taken from them being light, is easily washed away by the hand, in the manner before de- scribed, leaving only the black oxide of iron, called esmeril, and the gold, which is so fine that mercury is used to separate it.*

There is a great want of machinery and con- trivance in these establishments, for expediting the various operations. Not even a cart or a wheelbarrow is in use. Every thing to be re- moved is carried on the heads of the poor negroes, in gamellas or bowls, who have in many instances to climb up steep ascents with their burdena

where inclined planes might be used with great advantage, and might be formed with little trou- ble. Pumps, also, which would materially abridge the trouble of certain operations, could be erected with great advantage here, and the tedious pro- cess of washing the gold in bowls might be shortened by the use of the most simple hydrau- lical machines. In breaking down the substances which contain gold, mills might be constructed, by which all the metal contained in the ore could be more certainly extracted, and at far less labor and expense. There is even a deficiency of proper iron implements for the poor miners, and the impolitic tax of nearly 100 percent. im- posed on this necessary article, discourages both its importation and its production.

After the gold dust is separated from the sub- stances with which it is combined, it is brought to the nearest mint, where it first pays a tax of one-fifth to the prince. It is afterwards subjected to the process of amalgamation with mercury, which being finished, the metal is sent to the assay-master, who, being satisfied of its weight and fineness, affixes to it the authority of public stamp, as a certificate of its worth, after which it is delivered to the

owner for circulation. Those who bring gold dust to the mint experience very little delay before it is returned to them in the form of ingots. The gold is of different degrees of fineness. Mr. Mawe mentions that he has seen some of the bars so low as sixteen carats, and others as fine as twenty-three and a half carats, which is within half a carat of what is de- nominated pure gold. The standard is twenty- two, and, in whatever proportion the gold ex- ceeds this, it receives a premium according to its fineness.

The district of Cerro do Frio, or of the Cold Mountains, in which the diamond works are established, consists of a range of rugged moun- tains, that have a northerly and southerly direc- tion, and are generally allowed to be among the highest in Brasil. In these mountains, at the distance of about 300 miles in the interior, Mr. Mawe found the thermometer in the morning at 62Ā°, and in the course of the day it rose to 70Ā° and 74Ā°, so that judging by the temperature, these mountains, which are situated about 18Ā° south latitude, cannot be above the height of 4000 or 5000 feet above the level of the sea. The tract of country termed the diamond ground extends about fifty miles from north to south, and about twenty-five from east to west. Nearly in the middle of it, in a barren country, stands the town of Tejuco, which contains about 6000 inhabitants. The diamond works, by which the town is chiefly supported, are in the neighbour- hood. The principal establishment is situated on the river Jijitonhonha, which falls into the Rio Grande; there are others situated on the Rio Velho, a branch of the Francisco, and on the Rio Pardo, as well as on various other small streams, which have their rise in this elevatec country. The Rio Pardo though small and in- significant in its appearance, has produced as large a quantity of the most precious gems as any river in the district. The river Jijitonhonha, which is formed by the junction of several streams, is about as wide as the Thames at

Windsor, and is in general from nine to ten feet deep. When Mr. Mawe visited these works, they were working at a curve of the river, from which the stream was diverted by a canal cut across the tongue of land round which it winded, the former course of the river being stopped just below the head of the canal, by an embankment across its channel, formed of several thousand bags of sand. This is an undertaking of consi- derable magnitude; for the river being both wide and deep, and occasionally subject to over-flows, the embankment must be made so strong as to resist the pressure of the water, admitting it to rise to the height of four or five feet. After this operation, the water is drained away from all the deeper parts of the channel by means of large caissons or chain-pumps, which are worked by a water-wheel. The channel being in this manner laid dry, the mud is carried away, and the cascalhao is dug up and removed to a convenient place for washing. So little skill was displayed by the superintendents of the works in

the contrivance of useful machinery, that until lately the task of removing the cascalhao was performed by the unassisted labor of negroes. Two inclined planes are now in use, about 200 yards in length, along which two carts are drawn by means of a large water-wheel, so contrived, that by the same operation one of these descends empty on one inclined plane, while the other loaded with cascalhao is drawn to the top of the other inclined plane, where having emptied itself, it descends in its turn. A mile higher up the river the cascalhao is removed by other engines, similar to those which are used in the mining county of Derbyshire, and there are also railways con- structed over some parts of the uneven ground. The want of timber is an obstacle to the general introduction of machinery, as also the prejudices of the workmen, who are afraid that the use of these engines is part of a plan for entirely superseding manual labor. The cascalhao, after it is removed from the river, out of the channel of which it is dug, is laid down in heaps, containing apparently from five to fifteen tons each, and they generally calculate on being able to dig up as much cas- calhao during the dry season as will afford full employment to the workmen during the rainy months. The stratum which contains the dia- monds consists of the same materials as that which contains the gold. On many parts of the margin of the river large masses of rounded pebbles are found cemented by oxide of iron, which sometimes envelope both gold and dia- monds. In all establishments of this nature an abundant supply of water is indispensable, and this necessary article is accordingly distributed through every part of the works by means of acqueducts constructed with great ingenuity and skill. Mr. Mawe gives the following account of the method of working for diamonds. ‘ A shed is erected,’ he says, ‘ in the form of a paral- lelogram, twenty-five or thirty yards long, and about fifteen wide, consisting of upright posts, which support a roof thatched with long grass. Down the middle of the area of this shed a current of water is conveyed through a canal, covered with strong planks, on which the cascal- hao is laid two or three feet thick. On the other

side of the area is a flooring of planks, from four to five yards long, embedded in clay, extending the whole length of the shed, and having a slope from the canal of three or four inches to a yard. This flooring is divided into about twenty com- partments or troughs, each about three feet wide, by means of planks placed upon their edge. The upper ends of all these troughs (here called canoes) communicate with the canal, and are so formed that water is admitted into them between two planks that are about an inch separate. Through this opening the current falls about six inches into the trough, and may be directed to any part of it, or stopped at

pleasure by means of a small quantity of clay. For instance, some- times water is required only from one corner of the aperture, then the remaining part is stopped ; sometimes it is wanted from the centre, then the extremes are stopped ; and sometimes only a gentle rill is wanted, then the clay is applied accordingly. Along the lower ends of the trough, a small channel is dug to carry off the water.

On the heap of cascalhao, at equal distances, are placed three high chairs for the officers or overseers. After they are seated, the negroe enter the troughs, each provided with a rake of a peculiar form and short handle, with which he rakes into the trough about fifty or eighty Ibs. weight of cascalhao. The water being then let in upon it, the cascalhao is spread abroad, and continually raked up to the head of the trough, so as to be kept in constant motion. This opera- tion is performed for the space of a quarter of an hour ; the water then begins to run clearer, hav- ing washed the earthy particles away, the gravel- like matter is raked up to the end of the trough : after the current flows away quite clear the largest stones are thrown out, and afterwards those of inferior size, then the whole is examined with great care for diamonds. When a negro finds one, he immediately stands upright and claps his hands, then extends them, holding the gem between his fore-finger and thumb; an overseer receives it from him, and deposits it in a gamella or bowl, suspended from the centre of the structure half full of water. In this vessel all the diamonds found in the course of the day are placed, and at the close of work are taken out and delivered to the principal officer, who, after they have been weighed, registers the particulars in a book kept for that purpose.*

When a negro is so fortunate as to find a dia- mond of the weight of an octavo (seventeen carats and a half), much ceremony takes place ; he is crowned with a wreath of flowers, and carried in .procession to the administrator, who gives him his freedom, by paying his owner for it. He also receives a present of new clothes, and is per- mitted to work on his own account. When a stone of eight or ten carats is found, the negro receives two new shirts, a complete new suit, with a hat and a handsome knife. For smaller stones of trivial amount, proportionate premiums are given. During my stay at Tejuco, a stone of sixteen carats and a half was found ; it 'was pleasing to see the anxious desire manifested by the officers that it might prove heavy enough to entitle the poor negro to his freedom, and when, on being delivered and weighed, it proved only a

carat short ot the requisite weight, all seemed to sympathise in his disappointment.

Precautions are adopted to prevent the negroes from embezzling diamonds. Although they work in a bent position, and cannot therefore observe

whether they are watched by the overseers, they may nevertheless omit gathering some of the dia- monds which they may see, and placing them in a corner of the trough, afterwards contrive to secrete them. To prevent this, they are fre- quently changed while the operations are going on, and at the word of command given by the overseers, they must instantly move into each other's troughs, so as to prevent the possibility of collusion. If a negro be suspected of swallow- ing a diamond, he is confined within the bare walls of a strong room, where strong purgative doses are administered to him, in order to ascer- tain the fact. If he proves guilty, he is liable to personal chastisement, or to imprisonment, a much lighter punishment than would be inflicted on any white man for the same offence. The officers of the establishment are liberally paid, and they live in a style of elegance which no one would expect to find in so remote a place.

*The diamonds are generally found in the flat pieces of ground on the margin of the rivers, and these generally prove equally rich throughout their whole extent ; so that the superintendents of the works are enabled to estimate, with the utmost accuracy, the value of an unwashed place, from the produce which they have derived from the adjoining ground. The intendant frequently made such an observation as the following : ā * That piece of ground (speaking of an unworked flat by the side of the river) will yield me 10,000 carats of diamonds whenever we shall be required to get them in the regular course of working, or when, on any particular occasion, an order from government arrives, demanding an extraordinary and immediate supply.'*

The surest indications of diamonds are bright bean-like iron ore, a slaty flint-like substance, approaching Lydian stone, of fine texture, black oxide of iron in great quantities, rounded bits of blue quartz, yellow crystal, and other materials, entirely different from any thing known to be produced in the adjacent mountains. On the banks of the Rio Pardo, the accompanying sub- stances are somewhat different. No bean-like iron ore is found with diamonds ; but a consider- able quantity of flinty slate-like Lydian stone, in various shapes and sizes, and a very small black oxide of iron. The earthy matter is also much finer.

The washings on the river Jijitonhonha, and on the other rivers, have been established for many years, and great quantities of diamonds have been procured, some of them of the finest quality. They vary in size. Some are so small that four or five are required to weigh one grain, and sixteen or twenty are consequently necessary to make a carat. It is seldom that, in the course of a year, more than two or three stones of from seventeen to twenty carats are found, and not once in two years do the whole washings pro- duce a stone of thirty carats. During the five days in which Mr. Mawe remained at the works, the whole quantity found amounted to only forty

*carats ; the largest of which was only four carats, and of a light green color. The diamond works in this district have been established for nearly forty years, and in time they must be completely explored. In this event, however, it is calculated that the country in the neighbourhood, and many parts also of that inhabited by the Indians will be found to yield this precious produce in equal abundance. Mr. Mawe estimated the average produce of the diamond district at 20,000 to 25,000 carats annually. * The expenses of these works,' he says, ' during a period of five years, from 1801 to 1806 inclusive, amounted to Ā£204,000, and the diamonds sent to the treasury of Rio Janeiro, during the same period, weighed 115,675 carats. The value of the gold found in the same time amounted to Ā £17,300 sterling; from which it appears that the diamonds actually cost government 33s. 9d. per carat. These years were esteemed singularly productive. The mines in general do not yield to government more than 20,000 carats annually.'*

The brilliant accounts of the gold and diamonds of Brasil, would naturally induce us to expect that the appearance and comforts of the people must correspond. Those who reside in the min- ing districts are said also to maintain this delu- sion, by assuming all possible state when they visit Rio de Janeiro. Viewed however at home, and in the centre of their riches, society assumes a different aspect. Their.property consists simply of slaves, and the rude instruments necessary for working the mines. Mr. Mawe gives us a faith- ful transcript of the impressions made upon his mind in these scenes. Their dwellings he de- scribes as scarcely deserving the name of houses, for they are, in fact, the roost wretched wicker and mud hovels that can be conceived, consist- ing of a few apartments joined together without regularity. A hole left for a frame, or a miser- able door, serves for a window. The cracks in the walls are frequent, and rarely or never re- paired. The floors, composed of clay, are ren- dered filthy by the habits of the inhabitants, with whom the pigs not unfrequently divide the right of possession. Some of their dwellings built upon posts, have stables underneath. These are superior to the former, but the disagreeable effects produced by the want of cleanliness are, in this case, increased by the effluvia of the ani- mals, which Mr. M. says he has frequently found to be intolerable.

Their furniture corresponds with their houses. The beds are merely coarse cotton cases filled with dry grass, or the leaves of Indian corn ; there are seldom more than two in a house ; many of the family sleeping on mats or hides laid on the floor. One or two tables, with a couple of chairs, and a

few stools or benches, supply the place of all other furniture , add to these a few coffee- cups, a coffee-pot, and a drinking-cup (generally of silver), and in some instances a wash-hand basin of the same materials, and you have a catalogue of the household goods. Nothing can be more frugal than the whole economy of their tables, and their dress. The children generally go naked, and the youths have merely a jacket and cotton trowsers. The men, when at home, wear a capote or mantle wrapped about them,

and wooden clogs; but when they go abroad they appear in all their splendor, which forms as great a contrast to their domestic attire as the gaudy butterfly to the chrysalis from which it springs. Nor is more attention paid to the dress of the females. ‘ In short,’ says Mr. Mawe, ‘ in all those departments of domestic economy which to the middle classes of other civilised nations are objects of expense, the Brasilians exercise the most rigid parsimony. At first I was inclined to attribute this disposition to a love of money, which prompted them to avoid all extravagance; but, on closer observation, I was surprised to find that it originated in necessity. They gene- rally run in debt for the few articles they have to purchase, and thus find it difficult to maintain their negroes. If they purchase a mule, it is at one or two year’s credit, and, of course, at double its ordinary price.

Few of the numerous miners, it seems, are wealthy, or even comfortable, and a still greater number are wretchedly poor. Many of the mer- cantile classes enjoy superior comforts ; but the indolence of the farmers, and the wretched state of cultivation, render the condition of most of those who spend their time in that pursuit equally miserable with that of the miners.

Of the inhabitants of what are called fazendas, or cattle estates, M. Roster observes, ‘ Unlike the Peones of the country in the vicinity of the River Plate, the Sertanejo has about him his wife and family, and lives in comparative com- fort. The cottages are small, and built of mud, but afford quite sufficient shelter in so fine a climate ; they are covered with tiles, where these are to be had, or, as is more general, with the leaves of the canarba. Hammocks usually sup- ply the place of beds, and are by far more com- fortable, and these are likewise frequently used as chairs. Most of the better sort of cottages contain a table, but the usual practice is for the family to squat down upon a mat in a circle, with the bowls, dishes, or gourds in the centre, thus to eat their meals on the floor. Knives and forks are not much known, and are not at all made use of by the lower orders. It is the cus- tom in every house, from the highest to the lowest, as in former times; and, indeed, the same practice prevailed over all the parts of the country which I visited ; for a silver basin, or one of earthenware, or a cuia, and a fringed cam- bric towel, or one that is made of the coarse cot- to cloth of the country, to be handed round, that all who are going to sit down to eat may wash their hands ; and the same ceremony, or rather

necessary piece of cleanliness, takes place after the meal is finished. Of the gourds, great use is made in domestic arrangements ; they are cut in two, and the pulp is scooped out, then the rind is dried, and these rude vessels serve almost every purpose of earthenware ; water is carried in them, &c. and they are likewise used as mea sures. They vary from six inches in circum- ference to about three feet, and are usually rather of an oval shape. The gourd, when whole, is called cubafa, and the half of the rind is called cuia. It is a creeping plant, and grows spou- taneously in many parts, but in others the people plant it among the mandioc.

c The conversation of the Sertanejos usually turns upon the state of their cattle, or of women, and occasionally accounts of adventures which took place at Recife, or some other town. The dress of the men, when at home, is only a shirt and drawers. The women have a more slovenly look, as their only dress is a shift and petticoat, no stockings, and oftentimes no shoes ; but when they leave home, which is very seldom, an addi- tion is made of a large piece of white cloth, either of their own, or of European manufacture, and this is thrown over the head and shoulders ; a pair of shoes are then likewise put on. They are good horsewomen, and the high Portuguese saddle serves the purpose of a side-saddle very completely. Their employment consists in household arrangements entirely, for the men even milk the cows and goats, the women spin and work with the needle. No females of free- birth are ever seen employed in any kind of labor in the open air, excepting in that of occasionally fetching wood or water, if the men are not at home. The children generally run about naked till a certain age, but this is often seen even in Recife ; to the age of six or seven years, boys are allowed to run about without any clothing.'

Mr. Henderson thus describes the devotions of the people within a few miles of Rio de Janeiro. ' It was Sunday, and the tocsin had already sounded the signal for mass, and was gradually assembling its votaries. Many of the females, as in Scotland, walked without shoes and stockings. A spring amongst some rocks served as a puri- fying fountain, whence they issued in silk stockings and embroidered shoes, ascending the hill into the veranda, sat down on the floor, beat their bosoms, and with other brief ceremo- nies concluded the devotional exercise. The padre sat down to gamble at cards, and some of the females danced not ungracefully with their castanets.'

In all parts of the country which Mr. Mawe visited he observed the same indolent slovenly habits. The people seemed to feel no confidence in any thing they possessed, and to be always on the ' make-shift.'

To counteract the irresistible temptation to smuggling, held out in the mining and diamond districts, the most severe laws are enacted, and the whole country, from the gold washings to the coast, and throughout the diamond district, is subjected to a vexatious military police. On all the roads there are stations at which an officer is placed with twenty horse soldiers under him, who are continually patrolling : and whenever they observe a stray passenger, instantly ride up to him, questioning him strictly as to his business and the purposes of his journey ; and to all their questions he must give satisfactory answers before he is allowed to pass. They are authorised to detain all travellers, without distinction, and to subject them to the strictest search, provided they suspect them of concealing gold or dia- monds. Travellers, on the other hand, with their mules, are required to stop at all the mili- tary posts, or registers, which are established on the different roads, to deliver their passports to a soldier for the inspection of the commander, who, if lie judge the account given of the pro-

perty to be correct, suffers them to proceed ; but if any ground of suspicion occur, the mules are unloaded, and the contents of all the parcels are scrutinised with the utmost rigor. If diamonds or gold are found among the goods, the travellers, with all their mules, are instantly detained in ā¢ some of the strong cells with which the registers are provided, until they can be remanded to the proper tribunals, where they are either condemned to perpetual banishment to the African colonies, or to hopeless captivity at home. There is no doubt, however, that a contraband trade is car- ried on both in gold and diamonds to a great extent ; it is impossible on any other principle to account for the eagerness displayed by the in- habitants of Tejuco to hire out their negroes to serve in the diamond works.

The roads in the interior are frequently bad ; although there are some which have been made at great expense, and which are tolerably good. The road from the coast to St. Paul's, which passes over lofty mountains, is carried through deep and impassable woods, and frequently a path is cut through the solid rock. Mr. Mawe, who travelled this route, commends the public spirit of those who planned such an undertaking, which must have been executed at vast expence, and in opposition to many difficulties. The usual mode of travelling is by mules, by whom the coffee, sugar, cotton and grain of the country are transported to the coast, in exchange for salt, iron, woollens, cottons, common and finer earthen- ware, and glass. By this means also in the houses of the interior all sorts of English manu- facture are to be found.

The islands off the coast of Brasil are of small importance. The chief is St. Catherine's, sepa- rated from the province of that name by a chan- nel, in some places not above a league in width. The sea breeze, blowing regularly

here every af- ternoon, renders the climate of the island very agreeable. It is mountainous, the hills being separated by pleasant valleys, which are better cultivated than most parts of Brasil, and the oranges grown here are thought superior to any in America. The chief town is Desterro, situated on a small bay on the west coast. St. Francisco, with a town of the same name, is farther north, about six leagues in length, and merely sepa- rated from the continent by a narrow channel. St. Vincente, another small island, situated in a bay opposite the city of St. Paul's, is five or six leagues long, and contains the town and port of Santos, which may be considered as the port of St. Paul's.

BRASIL WOOD. See CJESALPINIA.

BRASILETTO, the same with Brasil wood.

BRASILIANS, the inhabitants of Brasil. See BRASIL.

BRASILIAN STONE, a species of stone found in Brasil, which is flexible. ' No quality,' says Dr. Hutton, in his description of one of these stones, ' is more inconsistent with the character of a stone than flexibility. A flexible stone, there- fore, presents an idea which naturally strikes us with surprise. For though, among mineral bo- dies, we find flexible substances of the stony kind, such as mica, mountain leather, and ami- anthus, these minerals owe their flexibility either

to their thinness, or to the fibrous structure of their parts. Therefore, when a stone of any con- siderable thickness is said to have flexibility, we are led to think it something very extraordi- nary. Such, however, is the stone from Brasil, of which the Baron de Dietrich read a descrip- tion in the Royal Academy of Sciences, in Jan. 1784. There is a specimen of a stone which cor- responds with that description, inserted in the Journal de Physique for 1784, which belonged to the late Lord Gardenstone. The length of the stone, which I have examined, is twelve inches, the breadth about five, and the thickness half an inch. When this is supported by the two ends, in a horizontal position, the middle part bends by its own weight, more than a quarter of an inch from the straight line. The Doctor adds, that the stone ' has a certain flexibility to which neither the terms ductile nor elastic will properly apply. The flexibility of this stone is so easy, compared with the rigidity of its substance, and its elasticity so small compared with its flexibility, that there must be in this body some mechanical structure by

which this unnatural degree of flexi- bility is produced, i. e. a flexibility which is not inherent in the general substance of the body. Now the substance of this stone being chiefly quartz, the most rigid and inflexible of all ma- terials, and the stone, at the same time, bending in such an easy manner, there is reason to con- clude that this rises from no principle of flexibility in the general substance of the stone, but from some species of articulation in the structure of it, or among its constituent parts, which, while it preserves the component particles in one entire mass, suffers the parts to move a certain space in relation to each other.' Dr. Hutton then gives an account of different examinations he made by the microscope, by splitting, and by the blow- pipe ; from which he concludes that the ' particles of quartz, which have little cohesion, are bound together by thin plates of transparent mica ; and these connecting plates being flexible, this allows a certain motion of the rigid particles among themselves, without the fracture or general sepa- ration of the stone.'

BRASILIANUS, in entomology, a species of cerambyx : thorax ferruginous: wing-cases pointed, testaceous, with three little glabrous yellow lines. Inhabiting Brasil. Also a species of scarabaeus, found in dung in Brasil. Color deep black: shield of the head emarginate : wing-cases striated.

BRASILIANUS, in ornithology, a species of caprimulgus : color blackish, with small white and yellow spots : varied beneath with black and white. This is the Brasilian goat-sucker of Latham.

BRASILIENSIS, in entomology, a species of cicada, with two horns on the thorax. Inhabiting Brasil. Also a sort of gryllus, inhabiting Europe.

BRASILIENSIS, in zoology, a species of rana, of a yellowish ash-color, with waved red spots : glabrous beneath. Inhabiting Brasil.

BRASLAV, or BRAˆLAW, a town of Russia in Europe, in the government of Wilna, situated on the borders of a large lake in Courland. Previous to 1795 it belonged to the palatinate of Wilna. Seventy-six miles N.N.E. of Wilna, and 296 north-east of Warsaw.

BRASMA, a name given by Dioscorides, and other ancient botanists, to a decayed or light kind of black pepper. This was no peculiar species of pepper, but, as John Bauhine has well observed, it was the same with the pepper we now fre- quently meet with, which has decayed upon the plant.

BRASS, n. s. ~\ Persian braj, burinj ;

BRASS'T, adj. I Anglo-Saxon, brats :

BRA'SIER, n. s. [Swed. brent tes; GotL

BRASS'KMBOSSED, ad), ("brats ; Fr brasier; Sp BRASS'FOUNDER, n. s. brasero; from Goth. BRASS'VISAGED, adj J and Swed. brasa, Gr. w, to burn. A hard yellow metal ; purified copper : brassy is mingled with brass ; like brass ; hard ; impudent : brasier, a worker in brass ; also (probably from Fr. embraser) a pan to hold coals (see BRASIER) : brassembossed is ornamented with brass : brass founder, one who forms figures by casting melted brass into moulds : brassvisaged, having a shameless coun- tenance; impudent.

More Srme and durable than steele or brasse, Or the hard diamond, which them both doth passe.

Spenser.

All which, not if an hundred tongues to tell, And hundred mouthes, and voice of brasse I had, And endlesse memorie that mote excell , In order as they came could I recount them well, i-.-

Losses

Enough to press a royal merchant down, And pluck commiseration of his state From brassy bosoms, and rough hearts of flint.

Shakspeare.

There is a fellow somewhat near the door, he should be a brasier by his face. Id.

Men's evil manners live in brass ; their virtues Men write in water. Id.

Brass is made of copper and calaminaris. Bacon.

Let others mould the running mass Of metals, and inform the breathing brass.

D yden.

It is thought they had no chimneys, but were warmed with coals on brasiert. Arbuthnot.

Yet he was fierce as a forest boar, Whose spoils upon his back he wore, As thick as .A jax' seven-fold shield, Which o'er his brazen arms he held : But brasi was feeble to resist The fury of his armed fist ; Nor could the hardest iron hold out Against his blows but they would through't.

Hudibra.'.

His front with tenfold plates of brats, Secured, shame never yet could pass, Nor on the surface of his skin Blush for that guilt which dwells within.

Churchill.

At eve, within yon studious nook

I ope my brassemboued book,

Portrayed with many a holy deed

Of martyrs crowned with heavenly meed.

Warton.

But I do hate him, as I hate the devil, Or that brass-visaged monster barbarism.

Ben Jomvn.

BRASS.

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ā¢ A foundry was established at Adrianople ;

the metal was prepared ; and, at the end of three months, Urban produced a piece of brass ordnanco of stupenduous and almost incredible magnitude ; a measure of twelve palms is assigned to the bore ; and the stone bullet weighed above six hundred pounds.

Gibbon.

BRASS, or, as the French call it, yellow cop- per, is made of copper and zinc, as well as cop- per and tin. See METALLURGY. The first forma- tion of brass, as we are assured oy Scripture, was prior to the flood, and discovered in the seventh generation from Adam. (Gen. iv.) But the use of it was not, as is generally believed, and the Arundelian marbles assert, previous to the know- ledge of iron. They were both first known in the same generation, and probably wrought by the same discoverer. The knowledge of them must have been equally carried over the world afterwards, with the spreading of the colonies of the Noachidae. An acquaintance with the one of them was absolutely necessary to the colonists, in clearing away the wood, and erecting houses for their habitations. The ancient Britons, though acquainted from the remotest periods with the use of both these metals, remained long ignorant that they were to be obtained in the island. Be- fore this discovery they imported all their iron and brass. And when

they had at length de- tected the former in their own hills, they con- tinued to import the latter. In the earliest ages the weapons of warriors weie invariably framed of this factitious metal ; and the Arundelian marbles, for that reason, mistakenly date the first discovery of iron two centuries below the Trojan war. Every military nation is studious of brightness in its arms ; and the Britons, particu- larly, gloried in that of theirs. For this reason the nations still fabricated their arms of brass, even long after the Arundelian era for the dis- covery of iron ; and the Britons continued to im- port it, though they had found iron to be a native of the country, and could have supplied them- selves with a sufficient quantity. Mr. Whitaker, in his History of Manchester, supposes, that when the Britons derived their iron and brass from the continent, they purchased the latter at an easier expense than the former. The Gauls had many large brass works in Britain, but seem to have had very few iron forges. And this would naturally induce the Belgje to be less dili- gent in their enquiry after the veins of copper and calamine at home, than for the strata of iron ore ; though the one was equally discover- able in the island as the other, and lay equally within the Belgic regions of it. Brass being thus cheaper than iron, they necessarily formed with it some domestic as well as military implements. Such were common among the Gauls; and were familiar to the Britons, either imported, as some actually were, or manufactured at home, as others assuredly were. The Britons had certain brass foundries, and minted money, and fabri- cated weapons of brass. In this condition of the works the Romans entered the Island. And seeing so great a demand among the natives for this article, they would speedily instruct them to discover the materials of it among themselves.

This must unavoidably have resulted from the conquest of the Romans. The power of surpris- ing their new subjects with so unexpected a dis- covery would naturally stimulate the pride of the Roman intellect ; and the desire of obliging them- selves with so cheap a supply of thjit useful metal, stationary as they were in that kingdom, would also equally actuate their selfishness. The veins of copper and calamine would be easily found out by an experienced enquirer after them ; and the former metal is therefore distinguished among the Welsh only by the Roman appellation of cyprium, koppr, or copper. Many new foundries of brass appear now to have been established,. Two have been discovered in the county of Es- sex, and within a narrow portion of it, at Fifield and Danbury. And a third was placed upon Easterly Moor in Yorkshire, twelve miles to the north-west of York, and in the neighbourhood of Isurium or Aldborough.

The brass of the ancients was generally an alloy of copper and tin ; a small portion of the latter gives to copper great hardness, and makes it capable of much greater resistance ; but tin in larger quantities produces an increased brittle- ness : its elasticity is however now very great, and it is called bell-

metal. A still greater pro- portion of tin forms it into an alloy for the mirrors of telescopes. The alloy of copper with zinc is distinguished by the beautiful color it affords. Pinchbeck has but a small proportion of zinc : common brass has more and prince's metal, as it is called, a still greater proportion of zinc. Copper mixed with a very large pro- portion of zinc is used for white metal but- tons, &c.*

If we take the weight of an atom of copper at 8, tin 7-35, and zinc 4; the following Table will exhibit the proportions of the alloys, ex- pressed in atoms, and their proportions by weight, the third column pointing out the color and character of the resulting compound. C Z and T represent the atoms of the metals respec- tively.

COMPOUNDS OF ZINC WITH COPPER.

Atoms	*Proportions by Weight.*	*Character and Color of the Compounds.*
C-f-Z	*1 to 2*	*The best proportions for common brass.*
C+2Z	*1 to 1*	*The alloy called prince's metal, of a beautiful gold color.*
C + 3Z	*2 to 3*	*Of a paler yellow, very little malleable.*

C + 4Z

1 to 2

Still of a lighter color.

and not malleable.

C + 5Z

2 to 5

Yellowish white &brittle.

C + 6Z

1'to 3

Very brittle,nearly white.

2C + Z

4 to 1

A very malleable brass

used in watch- work.

3C + Z

6 to 1

An alloy much harder

than copper and in-

clining to its color.

COMPOUNDS OF TIN WITH COPPER.

Atoms.

Proportions by Weight.

Character and Color of the Compounds.

T j-C

11 to 12

A very brittle and rather

white alloy.

2T+C

11 to 6

Still more brittle and

more white.

3T+C

11 to 4

Very white, used for spe-

culums.

4T+C

11 to 3

Coarse-grained and too

brittle for any purpose.

T+2C

11 to 24

A. yellowish alloy, very

hard and sonorous.

T+3C

11 to 36

Bell metal.

T+4C

11 to 48

A very hard alloy used

for some culinary ves-

sels.

T+5C

11 to 60

Softer but not malleable.

T+6C

11 to 72

Still increases in softness

and of a yellower co-

lor.

T+7C

11 to 84

Used for some purposes

in machinery.

T+8C

11 to 96

An alloy used for cannon .

T+9C

11 to 108

More common for can-

non and machinery,

and used for bronze

statues.

Brass is made nowhere more extensively or better than in England, where the materials are found of the first quality, and in great abun- dance. The operation is very simple : after the short process of calcination, the native cala- mine is ground in a mill, and mixed at the same time with about a fourth part of char- coal. The whole is now put into large cylindri- cal crucibles, with alternate layers of copper, cut. in small pieces, or in the form of shot. Powdered charcoal is then thrown over the mix- ture, when the crucibles are covered and luted up. The furnace has the form of a cone, with the base downwards, and the apex cut off hori- zontally. The crucibles are placed upon a per- forated iron plate, at the bottom, with a sufficient quantity of fuel thrown round them, and a per- forated cover, made of bricks or clay, is fitted to the mouth, which serves as a register to regulate the heat. After about ten or fifteen hours, the copper is supposed to be sufficiently penetrated with the zinc, and the heat is increased in order to fuse the whole down into one mass, when the crucibles are removed, and the melted brass poured into moulds, and manufactured in the same way as copper plate. If the materials are good, a single fusion is sufficient to make good malleable brass ; but the finest sorts undergo a second operation with fresh calamine and char- coal. Though the process in all places is nearly the same, there are considerable variations in the proportion and choice of the ingredients, m Great Britain, the proportions in weight are about forty parts of copper, and sixty of cala- mine, with a sufficient quantity of charcoal; in

France, thirty-fire of copper, thirty-five of old brass, forty of calamine, and from twenty to twenty-five of charcoal ; in Sweden, forty of copper, thirty of old brass, and sixty of calamine. In Saxony, the cadmia, or sublimed oxide of zinc, is used instead of the native calamine ; and the proportions are thirty parts of copper, from forty to forty-five of cadmia, with double the quantity of charcoal.

BRASS, or BRAZEN. See BRAZEN.

BRASS COLOR, a color prepared by the bra- ziers and colormen to imitate brass. There are two sorts of it ; the red brass or bronze, and the yellow or gilt brass ; the latter is made only of the very smallest and brightest copper filings ; with the former they mix some red ochre, finely pul- verised ; they are both used with varnish. To make a fine brass that will not take any rust or verdigris, it must be dried with a chafing dish of coals as soon as it is applied. The finest brass color is made with brass powder imported from Germany, diluted into a varnish, made and used after the following

manner : the varnish is composed of 1 Ib. 4 oz. of spirit of wine, 2 oz. of gum lac, and 2 oz. of sandarac ; these two last drugs are pulverised separately, and afterwards put to dissolve in spirit of wine, taking care to fill the bottle but half full. The varnish being made, mix the quantity to be used with the pul- verised brass, and apply it with a small brush to what is to be colored. But too much must not be mixed at once, because the varnish being very apt to dry, there would not be time to employ it all soon enough ; it is therefore better to make the mixture at several times. In this manner figures of plaster are colored, and look as well as if they were of cast brass.

BRASS, CORINTHIAN, famous in antiquity, is a mixture of gold, silver, and copper. L. Mura- mius having sacked and burnt the city of Corinth, A.A.C. 146, it is said this metal was formed from the immense quantities of gold, silver, and copper, wherewith that city abounded, thus melted and run together by the violence of the conflagration. Very little is known, however, of this metal. Its era of being in use must have been very short, as we are told by Pliny that the art of making it had been utterly lost in his time.

BRASS LEAF is made of copper, beaten out into very thin plates, and afterwards rendered yellow. The German artists, particularly those of Nuremberg and Augsburg, are said to possess the best method of giving to these thin plates of copper a fine golden color, by simply exposing them to the fumes of zinc, without any real mix- ture of it with the metal. These plates are cut into little pieces, and then beaten out fine like leaves of gold; after which they are put into books of coarse paper, and sold at a low price for the vulgar kinds of gilding. The parings or shreds of these very thin yellow leaves being well ground on a marble plate, are reduced to a pow- der similar to gold; which serves to cover, by means of gum water or some other glutinous fluid, the surface of various mouldings or pieces of curious workmanship, giving them the appear- ance of real bronze, and even of fine gold, at a very trifling expense, because the gold color of this metallic powder may be easily raised and

improved by stirring it on a wide earthen basin over a slow fire.

BRASS LUMPS, a common name given by miners to the globular pyrites. .

BBASS THRICE CALCINED, in the glass trade, is a preparation which serves the glassmen to give many very beautiful colors to their metal. To prepare it, place thin plates of brass on tiles at the feet of the furnace near the occhis ; let it stand to be calcined there for four days, and it will become a black powder sticking together in lumps. Powder this, sift it fine,

and recalcine it four or five days more ; it will not then stick together, but remain a loose powder, of a russet color. This is to be calcined a third time in the same manner ; but great care must be taken in the third calcination, that it be not overdone nor underdone ; the way to be certain when it is right is, to try it several times in glass while melting. If it makes it, when well purified, to swell, boil, and rise, it is properly calcined ; if not, it requires longer time. This makes, ac- cording to the different proportions in which it is used, a sea-green, an emerald green, or a tur- quoise color. Brass, by long calcination alone, and without any mixture, affords a fine blue or green color for glass ; but there is a method of calcining it also with powdered brimstone, so as to make it afford a red, a yellow, or a chalcedony color, according to the quantity and other varia- tions in using it. The method of making the calcination is this : cut thin plates of brass into small pieces with shears, and lay them stratum super stratum, with alternate beds of powdered sulphur, in a crucible; calcine this for twenty-four hours in a strong fire; then powder and sift the whole ; and finally expose the powder upon tiles for twelve days to a reverberating furnace; at the end of this time, powder it fine, and keep it for use. The glass-makers have also a method of procuring a red powder from brass, by a more simple calcination, which serves them for many colors. The method is this : they put small and thin plates of brass into the arches of the glass furnaces, and leave them there until they are sufficiently calcined, which the heat in that place, not being enough to melt them, does in great perfection. The calcined matter powdered is of a dusky red, and requires no farther preparation.

BRASSA, one of the Shetland isles, lying in the sound of that name. Long. 0Ā°. 50'. W., lat. 60Ā°. 20'. N.

BRASSA SOUND, an extensive sound, on the coast of Shetland, in which 1000 vessels might be commodiously moored. It abounds with herrings. The Dutch have sometimes had 2000 busses in it in one summer.

BRASSE, in ichthyology, a species of perca.

BRASSICA, cabbage : a genus of the sili- quosa order, and tetradynamia class of plants ; ranking under the siliquosae, in the natural me- thod. The calyx is erect and converging ; the seeds are globular ; the gland between the shorter stamina and the pistillum, and between the longer ones and the calyx. There are twelve principal species, viz. 1. B. alpina, with the radical leaves egg-shaped, and erect petals. 2. B. arvensis, with scolloped leaves embracing the stem ; the highest heart-shaped; and most entire. 3. B

campestris, with a slender root ana stem, leaves uniform, heart-shaped, ar.d sessile. 4. B. Chi- nensis, with very entire oval leaves ; the flora leaves

lanceolated, and embracing the stem ; the calyxes longer than the claw of the petals. 5. B. eruca, with lyrated leaves, shaggy stem, and smooth capsules. 6. B. erucastrum, with run- cinate leaves, a hispid stem, and polished cap- sules. In these two species, and the vesicaria, the style is ensiform : in all the rest it is obtuse.

7. B. napus, with the root stem spindle-shaped.

8. B. oleracea, with the radical stem growing columnar and fleshy. 9. B. orientalis, with heart-shaped smooth leaves, embracing the stem, and four cornered capsules. 10. B. rapa, with the radical stem growing orbicular, depressed, and fleshy. 11. B. vesicaria, with runcinate leaves, and hispid capsules covered with a tumid calyx. 12. B. violacea, with lanceolated, egg-shaped, smooth, undivided, and dentated leaves.

The campestris never varies. It grows natu- rally on the sea-shore, in the south of England, &c. It has a perennial branching stalk, in which it differs from all the other species. In very severe winters, when the other sorts are destroy- ed, this is a necessary plant, for the most severe frosts do not injure it. The flower-stalks grow from the end of the branches, and spread hori- zontally ; but those arising from the centre of the plants grow erect, and seldom put out branches. The cauliflower has been much more improved in Britain than in any other part of Europe. In France they rarely have cauliflowers till Michael- mas, and Holland is generally supplied with them from Britain. In many parts of Germany there were none of them cultivated till within a few years past, and most parts of Europe are supplied with seeds from Britain. The Chinensis, which is generally known by the title of rape or cole seed, is much cultivated in the Isle of Ely, and some other parts of England, for its seed, from which rape oil is drawn ; and it has also been cultivated of late years in other places for feeding cattle, to great advantage. The cole- seed, when cultivated for feeding cattle, should be sown about the middle of June. The ground should be prepared as for turnips. The quantity of seeds for an acre is from six to eight pounds, and as the price is not great, so it is better to allow eight pounds; for if the plants are too close in any part, they may be easily thinned in hoeing, which must be performed as for turnips , with this difference only, of leaving these much nearer together; for as they have fibrous roots and slender stalks, so they do not require near so much room. These plants should have a second hoeing about five or six weeks after the first, which, if well performed in dry weather, will entirely destroy the weeds, so they will re- quire no farther culture. Where there is not an immediate want of food, these plants had better be kept as a reserve for hard weather, or spring-feed, when there may be a scarcity of other green food. If the heads are cut off, and the stalks left in the ground, they will shoot again early in the spring, and produce a good second crop in April ;

which may be either fed off, or permitted to run to seed, as is the prac- tice where this is cultivated for the seeds; but if

rhe first is fed down, there should be care taken that the cattle do not destroy their stems, or pull them out of the ground. As this plant is so hardy as not to be destroyed by frost, so it is of great service in hard weather for feeding ewes ; for when the ground is so hard frozen that turnips cannot be taken up, these plants may be cut off for a constant supply. This will afford late food after the turnips are run to seed ; and if it is afterwards permitted to stand for seed, one acre will produce as much as, at a mode- rate computation, will sell for Ā£5 clear of all charges. Partridges, pheasants, turkeys, and most other fowls, are very fond of this plamt ; so that wherever it is cultivated, if there are any birds in the neighbourhood, they will constantly lie among these plants. The seeds are sown in gardens for winter and spring salads, this being one of the small salad herbs.

The common white, red, flat, and long-sided cabbages, are chiefly cultivated for autumn and winter use ; the seeds must be sown the beginning or middle of April, in beds of good fresh earth ; and when the young plants have about eight leaves, they should be pricked out into shady borders, about three or four inches square, that they may acquire strength, and not grow long-shanked. About the middle of June they Joust be transplanted, where they are to remain. If they are planted for a full crop in a clear spot of ground, the distance from row to row should be three feet and a half, and in the rows two feet and a half asunder : if the season should prove dry when they are transplanted, they must be watered every other evening until they have taken fresh root. Afterwards, as the plants ad- vance in height, the earth should be drawn about the stems with a hoe, which will keep it moist about their roots, and greatly strengthen the plants. These cabbages will some of them be fit for use soon after Michaelmas, and will continue until the end of February, if they are not destroyed by bad weather : to prevent which the gardeners near London pull up their cabbages in November, and trench their ground up in ridges, laying their cabbages against the ridges as close as possible on one side, burying their stems in the ground : in this manner they let them remain till after Christmas, when they cut them for the market; and although the outer part be decayed (as is often the case in very wet or hard winters), yet if the cabbages were large and hard when laid, the inside will remain sound.

The Russian cabbage was formerly in much greater esteem than at present,

it being now only to be found in particular gentlemen's gar- dens, who cultivate it fcr their own use. I must be sown late in the spring, and managed as the common cabbage, except that it must be sooner planted out, must have an open clear spot of ground, and requires much less distance every way, as it is but a very small hard cab- bage. It will not continue long before it will break and run up to seed. The early and sugar-loaf cabbages are usually sown for sum- mer use, Und are what the gardeners about London commonly call Michaelmas cabbages The season for sowing these is about the end*

of July, or beginning of August, in an open spot of ground ; and when the plants have got eight leaves, they must be put into beds at about three or four inches distant every way, that they may grow strong and short-shanked ; and towards the end of October they should be planted out ; the distance that these require is three feet row from row, and two and a half asunder in the rows. The ground must be kept clean from weeds, and the earth drawn up about the plants. If they are of the early kind, they will turn in their leaves in May; ˆyhen the gardeners near Lon- don, to obtain them a little sooner, tie in their leaves close with a slender osier twig to blanch their middle ; by which msans they have them at least a fortnight sooner than they could have if they were left untied.

The early cabbage being the first, we should plant the fewer of them, and a greater quantit} of the sugar-loaf kind, which comes after them ; for the early kind will not supply the kitchen long, generally cabbaging apace, and soon grow- ing hard and bursting open ; but the sugar-loaf kind is slow in cabbaging ; and being hollow, continues long. It may be planted out in Fe-bruary, and will succeed as well as if planted earlier ; with this difference only, that they will be later before they cabbage. Some plants of the early kind should be reserved in a well sheltered spot of ground to supply a defect ; for in mild winters many of the plants are apt to run to seed, especially when they are sown too early, and in severe winters they are often destroyed. The Savoy cabbages are propagated for winter use, being generally esteemed the better when pinch- ed by the frost. They must be sown about the end of April, and treated after the manner of the common white cabbage; only they may be planted closer ; two feet and a half square will be sufficient. These are always much better in an open situation, clear from trees and hedges ; for in those places they are apt to be eaten by caterpillars, &c. especially if the autumn prove dry.

The broccoli may also be treated in the same manner, but need not be planted above one foot asunder in rows of two feet wide ; these are never eaten till the frost has rendered them ten- der, being otherwise tough and bitter. The seeds of the broccoli, of which there are several varieties, viz. the Roman or purple, the Neapo- litan or white, and the black broccoli,

with some others (but the Roman is preferred to them all), should be sown about the end of May or begin- ning of June ; and when the plants are grown to have eight leaves, transplant them into beds like the common cabbage ; and towards the end of July they will be fit to plant out ; which should be done into some well-sheltered spot of ground, but not under the drip of trees ; about a foot and a half distant, in rows of two feet wide. The soil ought to be rather light than heavy : if they succeed well (as they will unless the winter prove extremely hard), they will begin to show small heads of a purple color about the end of December, and will continue eatable till mid- April. The brown or black broccoli is by many persons greatly esteemed, though it does not de- serve a place where the Roman broccoli can be

obtained, which is much sweeter, and will con- tinue longer in season. But the brown sort is much hardier, so that it will thrive in the coldest situations, where the Roman broccoli is some- times destroyed. The brown sort should be sown in the middle of May, and managed like the common cabbage, and should be planted about two feet and a half asunder. As they grow very tall, they should have the earth drawn up to their stems as they advance in height. They do not form heads so perfect as the Roman broccoli ; the stems and hearts of the plants are the parts which are eaten. The Roman broccoli, if well managed, will have large heads, which appear in the centre of the plants like clusters of buds. These heads should be cut before they run up to seed, with about four or five inches of the stem; the skin of these stems should be stripped off before they are boiled. After the first heads are cut off, there will be a great num- ber of side shoots produced from the stems, which will have small heads to them, but are full as well-flavored as the large. The Naples broccoli has white heads very like those of the cauliflower, and eats so like it as not to be dis- tinguished from it. Besides this first crop of broccoli, which is usually sown in the end of May, it will be proper to sow another crop the beginning of July, which will come in to supply the table the latter end of March, and the begin- ning of April ; and being veiy young, will be ex- tremely tender and sweet. To preserve good seeds of this kind of broccoli, a few of the largest heads of the first crop should be let remain to run up to seed, and all the under shoots should be constantly stripped off, leaving only the main stem to flower and seed. If this be duly observed, and no other sort of cabbage permitted to seed near them, the seads will be as good as those procured from abroad, and the sort may be preserved in perfection many years.

The curled colewort, or Siberian broccoli, is now generally esteemed, being

extremely hardy, and always sweeter in severe winters than in mild seasons. This may be propagated by sow- ing the seeds in the beginning of July; and when the plants are strong enough they should be planted in rows about a foot and a half asunder, and ten inches distance in the rows. These will be fit for use after Christmas, and continue good until April. The musk cabbage may be propa- gated in the same manner as the common cab- bage, and should be allowed the same distance : it will be fit for use in October, November, and December; but if the winter prove hard, they will be destroyed much sooner than the common sort. The common colewort, or Dorsetshire kale, is now almost lost near London, where the markets are usually supplied with cabbage plants instead of them. The best method to cul- tivate this plant in the fields is, to sow the seeds about the beginning of July, choosing a moist season, which will bring up the plants in about ten days or a fortnight ; the quantity of seed for an acre of land is 9lbs ; when the plants have five or six leaves they should be hoed, as for turnips, cutting down all the weeds, and also thinning the plants where they are too thick : but they should be kept thicker than turnips, because they are

more in danger of being destroyed by the fly : this work should be performed in dry weather, that the weeds may be killed. About six weeks after, the plants should have a second hoeing, which, if carefully performed in dry weather, will entirely destroy the weeds, and make the ground clean, so that they will require no farther culture. In spring they may be either drawn up and carried out to feed the cattle, or the cattle may be turned in to feed upon them : but the former method is to be preferred, because there will be little waste ; whereas when the cattle are turned in amongst the plants, they will tread down and destroy more than they eat, especially if they are not fenced off by hurdles. The two last sorts are varieties fit only for a botanic gar- den, being of no use. They are annual plants, and perish when they have perfected their seeds. The best method to save the seeds of all the sorts of cabbages is, about the end of November, to pull up some of the best cabbages, and carry them to some shed, where they should be hung up three days by their stalks, that the water may drain from between their leaves. Then plant them in some border near a hedge or pale, quite down to the middle of the cabbage, leaving only the upper part of the cabbage above ground, ob- serving to raise the earth above it, so that it may stand a little above the level of the ground : es- pecially if the ground is wet, they will require to be raised pretty much above the surface. If the winter should prove very hard, lay a little straw lightly upon them, to secure them from the frost, taking it off as often as the weather proves mild, lest by keeping them too close they should rot. In spring they will shoot out strongly and divide into a great number of small branches. There- fore support their stems, to prevent their being broken off' by the wind : and if the weather should be very hot and dry when they are in flower, refresh them with

water once a-week all over the branches, which will greatly promote their seeding, and preserve them from mildew. When the pods begin to turn brown, cut off the extreme part of every shoot with the pods, which will strengthen the seeds ; for these seeds which grow near the top of the shoots, are very subject to run to seed before they cabbage. When the seeds begin to ripen, be particularly careful that the birds do not destroy it. The best method to prevent this is to get a quantity of birdlime, and daub over a parcel of slender twigs, which should be fastened at each end to stronger sticks, and placed near the upper part of the seed in different places, so that the birds may alight upon them, and be fastened thereto ; where they should be allowed to remain, to terrify the rest. When the seed is fully ripe, cut it off; and after drying, thresh it out, and preserve it in bags for use. In planting cabbages for seed, never plant more than one sort in a place, or near one another : for example, never plant red and white cabbages near each other, nor savoy with white or red cabbages ; for they will, by the commixture of their farina, produce a mixture of kinds. It is owing to this neglect that the gardeners rarely save any good red cabbage seed in Britain, but are obliged to procure fresh seeds from abroad ; whereas if they would plant red

cabbages by themselves for seed, and not suffer any other to be near them, they might continue the kind as good in Britain as in any other part of the world.

BRASSICiE, in entomology, a species of chrysomela, found on the cabbage in Germany. Color deep black, wing-cases pale and testaceous, with a black band and margin of the same color. Also a species of staphylinus, a native of Europe. Color ferruginous, head and body black, wing- cases punctated, antennae hairy. Also a species of phalaena and aphis, the pediculus of Frisch.

BRASSICARIA, a species of phalaena noctua, inhabiting South America, the wings of which are indented and marked with a gold spot, pos- terior pair white. Also a species of the musca genus, the musca cylindrica of Degeer.

BRASSICAVIT, BRASSICOURT, or BRACHI- CAyix, in the manege, is a horse whose fore legs are naturally bended arch-wise : so called by way of distinction from an arched horse whose legs are bowed by hard labor.

BRASSOS, a river of Mexico, which, rising in the province of Cohahuila, in 34Ā° N. lat. and 105Ā° W. long., enters the province of Texas, and discharges itself into the gulf of Mexico, in 28Ā° 40′ N. lat. after a course of 700 miles. Where the road crosses it, it is 300 yards wide, and navigable for large keels. It rises and falls 100 feet. Like those of most of the rivers of Mexico, its waters are red ; its banks are well timbered, and the soil around is rich.

BRAST. v. n. kpart. aaj. Anglo-Sax, burstar. (from burst). To burst; to break out: burs;;: broken.

A col fox, full of sleigh iniquitee, That in the grove had wonned yeres three, By high imagination forecast, ā The same night, thurghout the hegges brast Into the yerd ther Chaunteclere the faire Was wont, and eke his wives, to repaire.

Chaucer's Canterbury Tales. She loveth Arcite so,

That when that he was absent any throwe, Anone hire thought hire herte brast a two.

Chaucer's Annelinda and False Arcite. There creature never past, That back returned without heavenly grace, But dreadful furies which their chains have brasi, And damned sprights sent forth to make ill men agast. Spenser.

Foiled, bleeding, breathless, furious to the last, Full in the centre stands the bull at bay, Mid wounds, and clinging darts, and lances brast, And foes disabled in the brutal fray. ,

Byron's Childe Harold.

BRAT', n. s. its etymology is uncertain ; bnatr, in Saxon, signifies a blanket ; Goth, berat, or brat, one signifies a child, the other a rag or frag- ment. The Metropolitana says, ' it is the past par- ticiple of the Ang.-Sax. bred-an ; anything nou- rished, cherished, fostered ; ' warmed as in a blanket : hence its application to very young children. A brat is a term of contempt also for a child. The Saxon bratt corresponds with our words shift and sham. It signifies also a cover- ing. Brat, in Welch, is a clout, or rag.

For ne had they but a shete

Which that they may wrappen hem in a-night And a bratt to walken in by day-light, ā

They wold hem sell, and spend it on this craft, They cannot stinten, till no

thing be laft.

Chaucer's Canterbury Tales. He leads them like a thing Made by some other deity than nature, That shapes man better ; and they follow him, Against us brats, with no less confidence, Than boys pursuing summer butterflies.

Shakspeare.

This brat is none of mine : Hence with it, and, together with the dam, Commit them to the lire. Id.

The friends that got the bratt were poisoned too ; In this sad case what could our vermin do ?

Roicommon.

Jupiter summoned all the birds and beasts before him, with their brats and little ones, to see which of them had the prettiest children. L' Estrange.

The two late conspiracies were the brats and off- spring of two contrary factions. South. I shall live to see the invisible lady, to whom I was obliged, and whom I never beheld since she was a brat in hanging sleeves. Swift.

I give command to kill or save, Can grant ten thousand pounds a year, And make a beggar's brat a peer. Id.

BRATHYS, in botany, a genus of plants, class polyandria, order monogynia. Gen. char. CAL. perianth five-leaved : COR. petals five : STAM. filaments many ; anthers twin : PIST. styles five ; stigmas capitate : PER. capsule ovate : SEEDS very many. There are several species, all of which are thick shrubs.

BRATHWAYTE (Richard), an English poet, was bora in 1588, at Warcop near Appleby. He became, at sixteen, a commoner of Oriel Col- lege, Oxford, whence he removed to Cambridge. He was afterwards deputy-lieutenant for West- moreland, captain of a company, and justice of the peace. He died at Appleton in Yorkshire, in 1673. His works are, The Golden Fleece, with other Poems, 8vo ; Essays on the Five Senses, 8vo; The Poet's Willow, or the Pas- sionate Shepherd, 8vo ; Nature's Embassy, or the Wild Man's Measures, 8vo ; The Prodigal's Tears, 8vo ; Time's Curtain Drawn, divers Poems, 8vo ; The English Gentleman, 4to ; The English Gentlewoman, 4to ; The Arcadian Prin- cess, 8vo; Discourse of Detraction, 12mo; Iti- nerarium Barnabii, or Drunken Barnaby's Jour- ney ; Time's Treasury, 4to ; Poem to Charles II. on his Restoration, 4to ; Regicidium, a tragi- comedy, 8vo ; Survey of History, or a Nursery for Gentry, 4to; A

Curtain Lecture, 12mo; Spiritual Spicery, or Tracts of Devotion, &c. &c. BRATTLEBOROUGH, a post town of the United States, in Windham county, Vermont, agreeably situated on the south-west side of West river; about five miles above its con- fluence with the Connecticut. It is thirty-seven miles east of Bennington, and 312 from Phila- delphia.

BRAVE', v., 7i. & adj.} Goth, brage ; ex BRAV'ING, n. cellent ; Isl. brage,

BRAVE'LY, a hero ; Goth, brake ;

BRAVE'NESS, J>Swed. braf; Belgic

BRA'VERY, braaf ; Dan. and

BRAVA'DO, Teut. brav; French

BRA'VO. } brave ; It. Sp. Port.

bravo ; Arm. brao ; Irish bra ; Scot. braw. Gal-

lant, courageous, excellent, fine, adorned, and courageous in the same sense that probus pro- duces prowess. Bravado, Ital. bravado ; bra- vazzo, a pretender to bravery ; affected courage. Brave, bravery, and bravado, are used indiscrimi- nately and in many instances to express osten- tatious bragging; a bragging, boastful, ostentati- ous display of finery, of dress, of pride, of power, of courage, of daring. A brave, and to brave, are still so used ; while brave the adjective, and bravery the noun, are employed to express sim- ply courage. ā Ency. Met.

What brave exploit, what psrill hardly wrought, What puissant conquest, what adventurous paine, May please her best, and grace unto him gaine.

Spenser.

Straight forth issewed a knight all armed to proofe, And bravely mounted to his most mishap : V/ho staying nought to question from aloofe, Ran rierce at me, that fire glaunst from his horse's iioofe. Id.

Where all the bravery that eye may see, And all the happiness that heart desire, Is to be found. Id.

Sweet rose ! whose hue angry and brave Bids the rash gazer wipe his eye ; Thy root is ever in its grave,

And thou must die.

Herbert. Let not old age disgrace my high desire,

O heavenly soul in human shape contained ! O[image] wood inflamed doth yield the bravest fire, When younger doth in smoke his virtue spend.

Sidney.

“Never could man, with more unmanlike bravery, use his tongue to her disgrace, which lately had sung sunnets of her praises. Id.

Rings put upon his fingers,

And brave attendants near him, when he wakes ;

Would not the beggar then forget himself ?

Shakspeare.

He upbraids lago, that he made him Brave me upon the watch. Id.

My nobles leave me, and my state is braved, Even at my gates, with ranks of foreign powers.

Shaksjieare.

What dost thou gape and wonder at? Admire him for his brave apparell, horses, dogs, fine houses, ma- nors, orchards, gardens, walks ! Why ? a fool may be possessed of this as well as he ; and he that ac- counts him a better man, a nobleman for having of it, is a fool himself. Burton’s Anat. Mel.

For a bravery upon this occasion of power, they crowned their new king in the cathedral church of Dublin. Bacon.

An Egyptian sootb”vyer made Antonius believe, that his genius, whir! otherwayp was brave and con- fident, was, in the presence of Octavius Caesar, poor and cowardly. Id.

Let princes choose ministers more sensible of duty

than of rising, and such as love business raider upon

conscience than upon bravery. Id.

If there be iron ore, and mills, iron is a brwe

commodity where wood aboundcth. Id.

There are .those that ma!;e it a poini of lirarery to

bid defiance to the oracles of divine revelation.

L'Ettranye.

But who is this, what thing of sea or land ? , Female of sex it seems,

That so bedecked, ornate and gay,

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Comes this way sailing Like a stately ship

Of Tarsus bound for the isles

Of Javan or Gadire,

With all her bravery on, and tackle trim, Sails filled and streamers weaving, Courted by all the winds that hold her play.

Milton's Samson Aganiittf,

With all his force,

He bravely charged, and for a while Forced their whole body to recoil.

Butler's Hudibras.

No fire, nor foe, nor fate, nor night, The Trojan nero did affright, Who bravely twice renewed the fight. Denham.

The ills of love, not those of fate, I fear ; These 1 can brave, but thost I cannot bear.

U.

Like a rock unmoved, a rock that braves The raging tempest, and the rising waves. Id. Ye Greeks ! be men ! the charge of battle bear ; Your brave associates, and yourselves revere ! Let glorious acts more glorious acts inspire, And catch from breast to breast the noble fire ! On valour's side the odds of combat lie, The brnve live glorious, or lamented die ; ' 'I he wretch who trembles in the field of fame, Meets death, and worse than death ā eternal sham? '.

Pope's Iliad.

The brave do never shun the light, Just are their thoughts, and open are their tempers j Freely without disguise they love or hate.

Rowe's Fair Penitent.

For boldness, like the bravoes and banditti, is sel- dom employed, but upon desperate services.

Government of the Tongue. No bravoes here profess the bloody trade, Nor is the church the murderer's refuge made.

Gay.

Cowards are cruel, but the brave Love mercy, and delight to save. Id.

*Spain, *o make good the bravado.*

Names it the invincible Armado. Anonymous.

It denotes no great bravery of mind, to do that out

of a desire of fame, which we could not be prompted

to by a generous passion for the glory of him that

made us. Spectator.

Juba, to all the bravery of a hero, Adds softest love, and more than female sweetness.

Addison.

Unmoved he hears the general call, And bravely tramples on them all.

Churchill's Duellist. By nature cautious as he's brave. To honour only he's a slave. Id.

The brave unfortunate are our best acquaintance, They show us virtues may be much distressed, And give us their example how to suffer.

Frartcis's Eugenia.

B HAULS, in commerce, Indian cloths with blue and white stripes. They are otherwise called turban because they serve to cover those ornaments of the head, particularly on the coast of Africa.

BRADNA, BRAUNAU, BRAUKAW, or BRA- NAU, a town of Germany, in

Bavaria, seated on the river Inn. It has a strong fortress : notwith- standing which, it was taken by the Austrians in

1743.

*BRAVO, one of the Cape de Verd islands, on the coast of Africa, settled by Portuguese, remarkable for its excel'eni wines. The land Ā»**

very high, and consists of mountains which look like pyramids. It abounds in Indian corn, gourds, water melons, potatoes, horses, and hogs. There is also plenty of fish on the coast, and the island produces salt-petre.

BRAURON, a tj\fi of Attica, where Diana had a temple. The goddess had three festivals called Brauronia, celebrated once every fifth year by ten men, who were called ttpoTroiot. They sacrificed a goat to the goddess, and it was usual to sing one of the books of Homer's Iliad. The most remarkable attendants were young vir- gins in yellow gowns, consecrated to Diana. They were about ten years of age, and not under five, and therefore their consecration was called SiKartviiv, from Stica, decent ; and sometimes apKTtvtiv, as the virgins thercsalves bore the name of apicrot, bears, from the circumstance. There was a bear in one of the villages of Attica, so tame, that he ate with the inhabitants, and played harmlessly with them. This familiarity lasted long, till a young virgin treated the animal too roughly, and was killed by it. The virgin's brother killed the bear, and the country was soon after visited by a pestilence. The oracle was consulted, and the plague removed by conse- crating virgins to the service of Diana. This was so faithfully observed, that no woman in Athens was ever married before a previous con- secration to the goddess. The statue of Diana of Taurus, which had been brought into Greece by Iphigenia, was preserved in the town of Brau- ron. Xerxes carried it away when he invaded Greece.

BRAWL, v. n. & n. s. BRAWL'ER, n. s.

") Fr. braillier ; > Bel. brullen ; to t. j roar. It is con- tracted, says the Metropolitana, from brabble. To riot; to bully; to affect bravery; to wrangle; to rail, in a loud and noisy manner : a brawl is a quarrel; a great noise; scurrility: brawler, a wrangler; a quarrelsome person : brawling, as a

noun, signifies a noisy quarrel (see the extract from Sidney) : as an adjective, noisy : as a par- ticiple, making a great noise; quarrelling.

He findeth that controversies thereby are made but brawls; and therefore wisheth that, in some lawful assembly of churches, all these strifes may be decided.

Hooker.

She troubled was, alas! that it might be, With tedious brawlings of her parents dear. Sidney.

Never since that middle summer's spring Met we ou hill, in dale, forest, or mead, But with thy brawls thou hast disturbed our sport.

Siiakspeare.

His divisions, as the times do brawl, Are in three heads; one power against the French, And one against Glendower. Id.

Here comes a man of comfort, whose advice Hath often stilled my brawling discontent. /ā¢/.

How now ! Sir John ! what, are you brawling here ? Does this become your place, your time, your business ?

Id.

Their battering cannon charged to the mouths, Till their soul-fearing clamours have brawled down The flinty ribs of this contemptuous city. /

That bonum is an animal. Made good with stout polemic brawl. Hudibrat.

In council she gives licence to her tongue, Loquacious, brawling, ever in the wrong. Dryden. Lc-eve all noisy congests, all immodest clamours, brawling language, and especially all personal scan- dal and scurrility, to the meanest part of the vulgar world. Watts.

BRAWL. Fr. braule; Span, brando; It. bran- do, branla; Scot, brangel, from Lat. vibrando. A kind of dance.

And thence did Venus learn to lead The Idalian brawles and so to tread As if the wind, not she, did walke ; Nor prest a flower, nor bowed a stalke.

Ben Jonsm. The Vision of Delight. Master, ā¢will you win your love with a French brawl.

Old Piay.

Tis a French brawl, an apish imitation, Of what you really perform in battle.

Massing. Picture,

My grave lord-keeper led the brawls The seal and maces danced before him.

Gray. A long Story.

*BRAWN, n.s. *\ Latin, aprugna; Teutonic' BRAWN'ER,W. s. tebern; see BOAR. fipaxiuv; BRAWN'INESS, I Lat. brachium. Boars' flesh; BRAWN'Y, adj. J the fleshy or muscular part of the body; the arm (see the two examples from Shakspeare); hence muscular strength : brawner, a boar killed for the table : brawniness is strength ; hardness: brawny, muscular; nervous; fleshy; strong.*

His limmes gret, his braunes hard and stronge, His shoulders broad, his armes round and longe.

Chaucer.

I'll hide my silver beard in a gold beaver, And in my vantbrace put this withered brawn.

Shakspeare. I had purpose

Once more to hew thy target from thy brawn. Id. Her wonted joys thenceforth and court she shuns. And still within her mind the footman runs, His brazen calves, his brawny thighs (the face She slights), his feet shaped for a smoother race.

Maroett.

The brawny fool, who did his figure boast, In that presuming confidence was lost. Dryden.

The native energy

Turns all into the substance of the tree, Starves and destroys the fruit, is only made For brawny bulk, and for a barren shade. Id. But most their looks on the black monarch bend, His rising muscles and his brawn commend ; His double biting ax, and beamy spear, Each asking a gigantic force to rear. Id.

The boisterous hands are then of use, when I With this directing head, those hands apply ; Brawn without brain is thine. Id.

At Christmas time be careful of your fame, See the old tenants' table be the same ; Then if you would send up the brawner head, Sweet rosemary and bays around it spread. King. This brawnineu. . and insensibility of mind, is the best armour against the common evils and accidents of life. Locke.

So Teamed Taliacotius from The brawny part of porter's bum Cut supplemental noses, which . Would last as long as parent breech. Butler.

BRAWN is applied to the flesh of a boar when souced or pickled ; for which end the boar should be old ; because the older he is, the more horny will the brawn be. The method of pre- paring brawn is as follows : the boar being killed,

it is the flichcs only, without the legs, that are made brawn ; the bones of which are to be taken out, and then the flesh sprinkled with salt, and laid in a tray, that the blood may drain off: then it is to be salted a little, and rolled up as hard as possible. The length of the collar of brawn should be as much as one side ot the boar will bear, so that when rolled up it will be nine or ten inches diameter. The collar thus rolled up, is boiled in a copper, or large kettle, till it is so tender, that a straw can be run through it; then it is set aside, till it is thoroughly cold, and put into the following pickle : to every gallon of water put a handful or two of salt, and as much wheat-bran : boil them together, then drain the bran as clear as you can from the liquor ; and when the liquor is quite cold, put the brawn into it.

BRAXY, or BRACKS, a disease incident to sheep, supposed to arise from excess of blood. It attacks them in autumn, and the most lusty and vigorous of the flock fall a prey to it. It kills in two hours from the time it is first ob- served. It is computed that one-fourth die of it. Dr. Anderson's prescription, tobacco oil, has been applied with success as a remedy ; and bleeding in summer has been found an effectual preventive.

BRAY , s. From Fr. braye, in fortification called also has enceinte.

BRAY, v. a. Fr. broycr ; Arm. brewr ; W. briwaw. See To BREAK. To beat in a mortar, to pound, to grind.

I'll burst him ; I will bray His bones as in a mortar. Chapman.

Except you -would bray Christendom in a mortar, and mould it into a new paste, there is no possibility of a holy war. Bacon.

BRAY, v. n. & n. s. "^ Goth, braca, Swed.

BRAY'ER, n. s. Ā£ br

*BRAY'iNG,parĀ£. adj. j (3pax< *>', but Span, borri- care, Fr. braire, are from borrico, a jack ass. To roar; to cry like an ass: the noun is applied to any sudden or violent action or motion; to an uproar ; hence to any noise or clamor : the deriva- tives correspond.*

And Christe's peple proudly curse

With brode boke and braying bell,

And put pennies in their purse,

Thei wol sell bothe heven and hell. Chaucer.

Then doe the salvage beasts begin to plav

Their pleasant friskes, and loath their wonted food.

The lyons rore, the tygers loudly bray;

The raging buls re-beliow through the woods.

S/'ettser. The whiles a most delitious harmony,

In full strange notes, was sweetly heard to sound,

That the rare sweetnesse of the melody

The feeble senses wholly did confound,

And the frayle soule in deepe delight nigh drowned ;

And when they ceast, shrill trompets loud did bray,

That their report did far away rebound ;

And when they ceast, it gan againe to play ; The whiles the maskers inarched forth in trim array.

/ā¢/. Boisterous untuned drums,

And harsh resounding trumpets dreadful hray.

Sttaiispeare.

What, shall our feasts be kept with slaughtered men ?

hhall braying trumpets, and loud churlish drums,

Clamours of ht.ll, be measures to our pomp ? Id

Arms on armour clashing, brayed Horrible discord. jfillon.

Laugh, and they

Return it louder than an ass can bray, llryden. 'Egad if he should hear the lion roar, he'd cudgel him into an ass, and to his primitive braying.

Cony r eve.

Hold ! cried the queen ; a cat-call each shall win j Equal your merits, equal is your din ! But that this well-disputed game may end , Sound forth, my brayers ! and the welkin rend.

Pope.

But at each word what shouts of praise ! Good gods ! how natural he brays. Gay's Fables.

BRAY', Welch bre ; Gael, brigh ; from the Celtic briga, a mountain or high place, probably, says Todd, from broco, the upper part of a hill being in some places, called broo and brae. Ground raised as a fortification ; a bank of earth.

Order was given that bulwarks, brays, and walls, should be raised in his castles, and strong holds on the sea side. Lord Herbert.

But when to climb the other hill they gan, Old Aladine came fiercely to their aid ; On that steep bray Lord Guelpho would not then Hazard his folk, but there his soldiers staid.

Fairf. Tasso.

BRAY, a port town of Ireland, in the county of W icklow, and province of Leinster, seated on St. George's channel, ten miles south of Dublin, and thirteen north of Wicklow.

BRAY, a town in Berkshire, on the Thames, a mile from Maidenhead ;

famous in song for its changeable vicar, who, having been twice a pa- pist and twice a protestant, in the reigns of Henry VIII. Edward VI. Mary, and Elizabeth, was ac- cused of being a turn-coat ; but replied that ho always stuck fast to his principle, which was, to live and die vicar of Bray. ‘ He had seen,’ says the quaint Fuller, ‘ some martyrs burned, two miles off, at Windsor, and found the fire too hot for his tender temper.’

BRAY (Sir Reginald), a celebrated architect and politician, was the second son of Sir Richard Bray, one of the privy council to king Henry VI. Sir Reginald was instrumental in the advance- ment of king Henry VII. to the throne of Eng- land ; and was greatly in favor with him. His skill in architecture appears from Henry VII’s chapel at Westminster, and the chapel of St. George at Windsor, as he had a principal con- cern in building the former, and finishing the latter, to which he was also a liberal benefactor. In the middle of the south aisle is a spacious chapel built by him, and still called by his name. He died in 1501 ; and was interred in this cha- pel, probably under the stone where Dr. Water- land lies; for on opening the vault of that gen- tleman, who died in 1740, a leaden coffin of ancient form was found, which, by other appear- ances, was judged to be that of Sir Reginald, and was, by order of the dean, immediately arched over.

BRAY (Thomas), D. D., a learned divine, was born at Alarlon, in Shropshire, in 1656, and educated at Oxford. He was vicar of Over-Whitacre in Warwickshire : and in 1690 rector of Sheldon, where he composed his Catechetical Lectures ; which procured him such reputation, that Dr. Compton, bishop of London, pitched

upon him as a proper person to model ‘he in- fant church of Maryland ; and for that purpose he was invested with the office of commissary. He now engaged in several noble undertakings. He procured sums to be raised for purchasing small libraries for the use of the poor ministers in several parts of the plantations ; and to promote this design publised Bibliotheca Parocliialis, or a scheme of such theological and other heads as seern requisite to be perused by the clergy, &c. and Apostolical Charity, its Nature and Excel- lency considered. He endeavoured to get a fund established for the propagation of the gos- pel, especially among the Indians ; and by his means a patent was obtained for erecting the corporation called The Society for Propagating the Gospel. He also wrote, 1.

Martyrology, or Papal Usurpation, in 1 vol. tbl. ; 2. Directorium Missionarium ; and other works. He died in

1730.

“v See BRASS. To burn ; to give a burnt or brown color. To braze is also to work ‘in brass ; to solder with brass. Brazen is poetically applied to

BRAZE, v. a. BRA’ZEN, adj. BRA’ZEN-BROWED, BRA’ZENFACE,TZ.S. BRA’ZENFACED, tff//’. BRA’ZENLY, adv.

13llA ZENNESS, Tl. S. jjucnv-anjr aj-/jyin>t-i LVJ

BRA’zEN-VAULTED,a

Trumpeters,

With brazen din blast you the city’s ear, Make mingle with your rattling tambourines.

Shakspeare.

If damned custom hath not braised it so, That it is proof and bulwark against sense. Id. You do, if you suspect me in any dishonesty ā Well said, brazen/ace; hold it out. Id.

What a brazenfaced varlet art thou, to deny tnou knowest me ? Is it two days ago, since I tript -up thy heels, and beat thee before the king. Id. King Lear.

I have so often blushed to acknowledge him, that now I’m brazed to it. Id.

; nor unknown

The serpent, subtlest beast of all the field ; Of huge extent sometimes, with brazen eyes And hairy mane terrific, though to thee Not noxious, but obedient to thy call. Milton.

Quick-witted, brazenfaced, with fluent tongues, Patient of labours, and dissembling wrongs. Dryden.

A bough his brazen helmet did sustain ; His heavier arms lay scattered on the plain. Id

If the nut be not to be cast in brass, but only hath a worm brazed into it, this niceness is not so abso- lutely necessary, because that worm is first turned up, and bowed into the grooves of the spindle ; and you may try

that before it is brazed in the nut. Moxon.

When I reprimanded him for his tricks, he would talk saucily, lie, and brazen it out, as if he had done nothing amiss. Arbuthnotˆ

Pert Infidelity is Wit's cockade, To grace the brazen brow that braves the skies, ā¢ By loss of being dreadfully secure.

Young's Infidel Reclaimed.

Much yet remains unsung. The rage intense Of brazen-vaulted skies, of iron fields, Where drought arid famine starve the blasted year.

Thomson.

Would honest Tom G ā get rid of a scold. The torture, the plague of his life :

Pray tell him to take down his lion of gold, And hang up his brazenfaced wife.

Cunningham, to the Landlord of the Golden Lion

BRAZEN DISH, among miners, is the standard by which the other dishes are gauged, and is kept in the king's hall.

BRAZEN SEA, in Jewish antiquity, one of the sacred utensils in the temple of Solomon. See JERUSALEM, TEMPLE OF.

BRAZIER, an artificer who makes and deals in all kinds of brass ware. This trade, as exercised in Britain, may be reckoned a branch of the smithery, though the braziers seldom keep forges, except for brazing or soldering, and turning the insides of their vessels, which they work up out of copper and brass prepared rough to their hands. Many carry on the sale trade to a great extent, dealing in all sorts of iron and steel, as well as in copper and brass goods. They have also dealt much in what is called French plate, a sort of white metal, silvered and polished to such a degree that it is not easily distinguished from real silver.

BRAZIL. See BRASIL.

BRAZIL, an American wood commonly sup- posed to have been thus denominated, because first brought from Brasil : though Huet shows it had been known by that name many years before the discovery of that country : and the best sort comes from Fernambuc. It is used by turners, and takes a polish ; but chiefly in dyeing, though it gives but a spurious red. ā

Chambers.

He loketh as a sparhawk with his even, Him nedeth not his color for to dien With brazil, ne with grain of Portugall.

Chaucer's Canterbury Talei BRAZING, the soldering two pieces of metal by the aid of spelter, or thin laminae of brass. To ensure the requisite adhesion, pounded borax or sal ammonia is blended with the solder, before it is placed in the fire.

There is a process somewhat similar to this, called welding. It is employed by the smiths to unite iron and steel, or two pieces of iron, together; and consists in placing the metals one upon the other and hammering them when in a heated state. They are not calculated for welding till they attain a 'white heat;' and their union is rendered more certain by sprinkling a small quantity of sand on their external surface.

BRAZZA, a large island of the Adriatic, be- longing to Austria, opposite to the town of Spa- latro in Dalmatia. It is about thirty miles long, and from six to nine broad, containing twenty small towns and villages, with 15,000 inhabi- tants. Large rocky tracts occupy the more elevated parts, and great labor and expense are necessary to bring any part of the ground into tillage; yet the inhabitants are constantly in- creasing their cultivated land, and their vintage, and diminishing the woods. The wine is ac- counted the best in Dalmatia ; other vegetable productions are figs, oil, saffron, and almonds. Their corn is principally imported. Brazza has long been famous for its kids and lambs, which acquire a superior delicacy of taste ; but the island is subject to drought, and fresh water u

generally scarce. The cheese of Brazza is in great repute. Bees and silk are also cultivated with success ; and from the berries of .the lentisk the poor peasants make a coarse oil. It belonged formerly to the republic of Venice, but was ceded by the peace of Campo Formio to Austria.

BREACH. Goth, brican ; Ang.Sax. brecan, braecan, to break. See To BREAK. Fr. breche. A gap; a rupture; a fracas; violation of contract, engagement, duty ; dissention, separation, in fringement, infraction, injury.

But the heedful boatman strongly forth did stretch His brawny arms, and all his body strain ;

That the'utmost sandy breach they shortly fetch, While the dread danger

does behind remain.

Spenser,

That oath would sure contain them greatly, or the breach of it bring them to shorter vengeance. Id.

This tempest

Dashing the garment of this peace, aboded The sudden breach on't. Shakspeare.

O you kind gods !

Cure this great breach in his abused nature. Id. What are those breaches of the law of nature and nations, which do forfeit all right in a nation to go- vern 1 Bacon.

Some to the breach against their foes Their wooden saints in vain oppose. Marvell.

He was the first that e'er did teach To make, and how to stop a breach, Butler.

Breach of duty towards our neighbours, still in- volves in it a breach of duty towards God. South. The laws of the gospel are the only standing rules of morality ; and the penalties affixed by God to the breach of those laws, the only guards that can effec- tually restrain men within the true bounds of decency and virtue. Rogers. It would have been long before the jealousies and breaches between the armies would have been com- posed. Clarendon. This breach upon kingly power was without prece- dent. Id.

Till mad with rage upon the breach he fired, Slew friends aud foes, and in the smoke retired.

Dryden.

The wall was blown up in two places ; by which breach the Turks seeking to have entered, made bloody fight. Knolles.

But they were strictly enjoined not to commit the first hostilities, which might be understood as a breach of a treaty ; and such was the implicit obedience of the Roman general, that they retreated, with exemplary patience, under a shower of Persian arrows, till they had clearly acquired a just title to an honourable and legitimate victory. Gibbon.

BREACH, in fortification, is made by the can- non or mines of the

besiegers, in order to make an attack upon the place. To make the attack more difficult, the besieged sow the breach with crow-feet, or stop it with chevaux de frize. A practicable breach is that where the men may mount and make a lodgment, and ought to be fifteen or twenty fathoms wide. The besiegers make their way to it by covering themselves with gabions, earth-bags, &c.

BREAD, -\ Islandic brand; Swed.

BREADEN, 9 brod; Ang.-Sax. breod,

BREAD-CHIPPER, fbrod; Dan. brad; Teut.

BREAD-CORN. J brod, brot ; Belg. brood; Heb. barout ; /3pwroc; Heb. Syr. Sansc. Pers,

bar ; Teut. be re ; Ann. bara; Welch bara; Irish bar; appear to have the same origin with our bear, to bring forth, and signify, like the Latin fruges, edible produce. Thus also Lat./ar is from fero ; Sax. pic brod, pigs' bread, was an acorn ; and Teut. sowbread denotes, as with us, the root of the cyclamen. Goth, baigga was a modification of the verb to bear; and brae, barac, is said to have been anciently the ge- neral name among Europeans for corn. Tooke, however, sets aside all this learned labor and conjecture. Bread, he affirms, is brayed grain ; bread being the past participle of bray, Fr. braier, to pound or beat to pieces. Mr. Todd remarks, ' It is full as probable, I thwik, that the Saxon breod, whence our bread, is from the verb bredan, to nourish. Who is right ? It is sometimes easier to tell what a thing is, than whence it is.' By bread we are to understand food in general ; victuals ; but particularly now what is made of brayed or ground corn : breaden, made of bread : bread-chipper, a baker's servant; an under butler : bread-corn, the corn of which bread is made.

Men loven of propre kind newefangelnesse, As briddes don, that men in cages breed, For though thou night and day take of him hede, And strew his cage faire and soft as silke, And give hem suger, hony, bred and milke, Yet, right anon as that is dore is up, He with his feet wol spurnen down his cup, ' And to the wood he wol, and wormes etc, So newefangel ben they of hire mete.

Chaucer's Canterbury Talet. Ne doth she give them other thing to eat But bread and water, or like feeble tiding.

Spenser.

No abuse, Hal, on my honour ; no abuse. Not

to dispraise me, and call me pantler, and bread- chipper, and I know not what 1 Shakspeare. God is pleased to try our patience by the ingrati- tude of those who, having eaten of our bread, have lift up themselves against us.

4 *King Charles, Johnson says, but he knew better. Was Charles the author of the Eikon ?*

[n the sweat Ā»f thy face shalt thou eat bread Till thou return unto the ground ; for thou Out of the ground wast taken ; know thy birth, For dust thou art, and shalt to dust return.

Milton.

He consulted with the oracle of his breaden god, which because it answered not, he cast it into the fire.

Hall.

Shall they pretend to say that bread is bread, If we affirm it is a God indeed ? Or there's no purgatory for the dead ? Marvell. If pretenders were not supported by the simplicity of the inquisitive fools, the trade would not find them bread. L'Estranye.

This dowager, on whom my tale I found, A simple sober life in patience led, And had but just enough to buy her bread.

Dryden.

How few

Like thee reserve their raiment for the naked, Reach out their bread to feed the crying orphan, Or mix the pitying tears with those that weep.

' ane $/tors

When I submit to such indignities, Make me a citizen, a senator of Rome ; To sell my country, with my voice, for bread.

Philips.

I neither have been bred a scholar, a soldier, nor to any kind of business ; this creates uneasiness ia my mind, fearing I shall in time want bread.

Spectator.

Mankind have found the means to make grain into

bread, the lightest and properest aliment for human

bodies. Arbuthnot.

Bread, that decaying man with strength supplies ;

And generous wine, which thoughtful sorrow fiies.

Pope.

There was not one drop of beer in the town ; the bread and bread-corn sufficed not for six days.

Hayward.

When it is ripe, they gather it, and, bruifing it among bread-corn, they put it up into a vessel, and keep it as food for their slaves. Broome.

At my request mortality is fed From heaven's high storehouse with celestial bread.

Elizabeth Rowe.

The same care and toil that raise a dish of peas at Christmas, would give bread to a family during six months. Hume.

BREAD. The manufacture of bread in this coun- try has attained a high degree of perfection, especially in that part of the process which de- pends on manual labor; but we are still far behind our continental neighbours in the chemi- cal manipulations ; and, what is somewhat sin- gular, the bakers who pursue their useful avocations in the north of England, appear better acquainted with the art than the trades- men of our own metropolis. We need hardly add, that there is no subject of more home im- portance in domestic economy, than the prepa- ration of farinaceous food for this purpose.

Prior to any very particular examination of the mode of making bread, it may, however, be advisable to notice the chemical constituents of which it is formed. Wheat grown in this coun- try contains from 18 to 24 per cent, of gluten, the remainder being principally starch. The wheat of the south of Europe generally contains a larger quantity of gluten, and is, therefore, more excellent for the manufacture of macaroni, vermicelli, and other preparations requiring a glutinous paste. The excess of gluten in wheat-flour compared with other grain, renders it pecu- liarly fit for making bread ; for the carbonic acid, extricated during the fermentation of the paste, is retained in consequence of its adhesiveness, and forms a spongy and light loaf.

100 parts of barley contain upon an average 80 parts of starch, 6 of gluten, and 7 of sugar, the remaining 7 parts being husk.

From 100 parts of rye Sir Humphery Davy, obtained 61 parts of starch, and 5 of gluten.

From 100 parts of oats he procured 59 of starch, 6 of gluten, and 2 of sugar.

100 parts of peas afford about 50 of starch, 3 of sugar, 4 of gluten, and a

small portion of extractive matter.

100 parts of potatoes yield, upon an average, 20 parts of starch ; they may be considered, in general, as containing from one-fourth to one- fifth their weight of nutritive matter.

As to the proportion ol these three constituents,

they differ so much in different kinds of wheat flour, that nothing precise on the subject can be determined. The greater the proportion of glu- ten, the better in all cases is the flour. When the wheat has not fully ripened, or when it has been exposed to rain, while lying on the field, the gluten cannot easily be separated from the starch by the process above described ; nor does it form an elastic adhesive mass ; but a friable substance, distantly resembling, the fibrous matter of potatoes. Hence the goodness of the flour may be determined by the state of the gluten.

Flour owes its property of making dough with water to gluten. Dough, in fact, is only a viscous and elastic tissue of gluten, the small cavities of which are filled with starch, albumen, and sugar. Hence it may be conceived that it is also to the gluten that dough is indebted for the property of rising by its mixture with barm or leaven. The yeast, by acting on the sugar of the flour, gives rise successively to the spirituous and the acid fermentations, and consequently to alcohol, acetic acid, and carbonic acid gas. This gas has a tendency to fly off, which is opposed by the gluten ; but the latter giving way, becomes ex- tended like a membrane, and forms numberless small cavities, which impart to the bread light- ness and a white color, and prevent it from being close or heavy. Hence it follows, first, that in panifaction, too much care cannot be taken to mix the barm well with the paste ; for whenever they are not intimately mixed, the bread will be necessarily heavy : Secondly, that the dough will be so much the longer in rising, and be more capable of ribing, and the bread will be so much the whiter and lighter, as the flour'contains more gluten ; bakers are well aware of this, and therefore, when they would judge whether flour is good or bad, they make it into dough, which they extend by pulling it in con- trary directions, and the longer it can be drawn, the better the flour is ; it is for this reason that wheaten flour, independently of its being more nutritive, is preferred to the flour of the other edible grains : Thirdly, that by kneading either pure starch, or starch that is mixed with paren- chyma, such as the flour of manioc (anAmerican shrub, from the root of which a kind of bread is made called cassavi), a mass will result which will never rise, even by the addition of matters fit for developing fermentation, and which will make only a very close heavy bread.

We may now notice the mode of preparing bread as practised by the

London bakers. A sack of flour being sifted into the kneading trough, to make it lie loose ; six pounds of salt, and two pounds of alum, are separately dissolved in hot water, and the whole (in the quantity of a pail-full), being cooled to about 90Ā°Fahrenheit, is mixed with two quarts of yeast. When this mixture has been well stirred, it is strained through a cloth or sieve, and is then poured into a cavity made in the flour. The whole is now mixed up into a dough, and a small quantity of flour being sprinkled over it, it is covered up with cloths, and the trough-lid is shut down, the better to retain the heat. The fermentation now goes on, and the mass becomes enlarged in bulk. In the course of two or three hours, another pail-

lul. of warm water is well mixed with the sponge, and it is again covered up for about four hours. At the end of this time, it is to be kneaded for more than an hour, with three pails full of warm water. It is now returned to the trough in pieces, sprinkled with dry flour, and at the end of four hours more, it is again kneaded for half an hour, and divided into loaves.

The most wholesome bread that has yet been made is decidedly the most economical. It is made of wheat-flour, mealy potatoes, the common culinary salt, and water. The component parts of the culinary salt are used separately, viz. soda and muriatic acid, in the following manner : first rub four drachms of carbonate of soda, reduced to a fine powder, with six pounds of flour, then, with six pounds of the pulp of steamed or boiled potatoes, mix three drachms of muriatic acid, diluted with a pint of water : when well blended add the flour with the carbonate of soda, and as much water as may be necessary to form it into

! a proper consistence ; then knead it for about three minutes, form it into a loaf, and put it

I within the heat of the fire, covered with a wet cloth, for an hour, when it will be fit to put into

| theĀ»overi. The acid and soda, uniting in the mass, form the culinary salt, and during the union a considerable quantity of fixed air is disengaged, producing the good effects of fermentation with- out any of its bad. This process continues during the time the mass is before the fire; and, in order to prevent the surface from becoming so dry as to prevent the expansion of the loaf, it is necessary to cover it with a wet cloth. A greater quantity of the carbonate of soda being employed than is necessary to neutralise the acid, the bread may be considered much more wholesome

than if common salt had been em- ployed ; the excess of the carbonate of soda act? by correcting acid matter in the stomach, and thus promoting digestion. For invalids whose sto- , machs do not properly digest the food they take, i and for weakly children, this is of great impor- – tance. If, however, any person should object to an excess of soda, which certainly renders the bread darker, the same quantity of muriatic acid may be employed.

The bread thus made, notwithstanding the great proportion of potatoes, is more nutritious than the fermented bread of bakers, on account of the saccharine matter, and the whole of the gelatine of the flour, being preserved. This is proved by the strong jelly it affords on boiling it in water. Bread prepared in this manner has been kept perfectly sweet and good a fortnight, and will, no doubt, keep good many months.

French bread is usually considered as a desi- deratum at the tables of the opulent, and as some part of the process pursued by our Gallic neigh- bours might with advantage be adopted by the English baker, we furnish our readers with the most approved mode of bread-making in Paris. The ingredients of their best bread are wheaten flour, water, yeast, and salt. 150 Ibs. of flour require about eighty-five pints of water, three pints of yeast, and a proportion of salt which varies considerably according to the fancy of the baker, and the degree of dryness which is to be given to the bread in the oven. The manufacture

commences by diluting the yeast with about an equal quantity of warm water, and then stirring in one pound of flour for every pint of liquor. The whole being well incorporated, it is put into a wooden bowl, and set in a warm place for about seven hours, in order to ferment. At the end of this period, the mass (our English.bakers call it sponge) is put into a large wooden trough, and mixed with one-seventh of the whole quantity of flour, the whole of .the salt, and with water in the proportion of one pint to two pounds of flour. The dough is now brought into a warm situation, and allowed to remain quiet for four hours, that the fermentation may be established throughout the whole. The salt somewhat retards the pro- gress of this action, but at the same time has the advantage of rendering it more gentle and uniform. The next step is to mingle two- sevenths of the flour, and three-fourths of its weight of water, with the dough, in the same manner as before ; after which it is to be allowed two hours to ferment. Now commences the kneading and hard manual labor of the process, during which the remaining four-sevenths of the flour, and half as many pints of water as there are pounds of flour, are to be thoroughly min- gled with the fermented dough. At first the mass is very adhesive and clings to the fingers, but it becomes less so the longer the kneading is continued ; and when the hand on being withdrawn leaves its perfect impression in the

dough, none of it adhering to the fingers, this laborious part of the business is completed. The dough is now immediately divided by weight intc loaf-pieces, each of which is once more separately kneaded, and then made up into the proper form. The loaves as they are made are placed on a wooden table, and piled on each other two tiers high, and covered with a blanket to promote the last rising or fermentation, which soon commences, and is judged to have proceeded sufficiently far when a somewhat penetrating acidulous odor of carbonic acid is perceived. The' oven is in the meantime heated, and when the temperature is such that a little flour spread at its mouth is browned, but not burnt, the loaves are deposited within, the mouth is closed up with an iron door, and at the proper time (varying according to the size of the loaves) the bread is withdrawnˆ is replaced on the table, and again covered with a blanket, in order to cool as slowly as possible; the ashes and adhering flour are then removed ā¢with a brush, and the bread is ready for sale.

Rice will serve the purpose of making very good bread, and the method practised in Carolina is as follows : ā the grain is first washed by put- ting it in a vessel and pouring water upon it, then stirring it, and changing the water until it is sufficiently cleansed. The water is then poured off, and the rice placed in an inclined position to drain. After being sufficiently drained, it is put, while damp, for the greater facility of pul- verisation, into a mortar, and beaten to powder. It is then completely dried, and passed through a common kitchen hair-sieve. The rice flour, thus obtained, is kneaded with a small proportion of Indian corn-meal, and boiled into a thickbh consistence; or it is sometimes mixed with boiled potatoes, and a small quantity of leaverf

and salt is added to the mass. When the fer- mentation has been sufficiently excited, the dough is put into pans and placed in an oven to be baked. By this process, a light wholesome bread is made, which is not only pleasing to the eye, but agreeable to the taste.

M. Parmentier obtained well fermented bread, of a good color and taste, from a mixture of raw potatoe pulp, with mealy wheat, or potatoe-meal, with the addition of yeast and salt. Upon the whole he recommends, after various trials, the mixture of potatoes, in times of scarcity, with the flour of wheat, instead of employing rye, barley, or oats, which has frequently been done. When grain is altogether wanting, he recommends the use of bread made from a mixture of the viscid powder of potatoes and their pulp, fer- mented with leaven or honey. The meal of this root, diluted with hot water,

acquires a tenacious and gluey consistence. This meal, however, gives a gray color to bread made by mixing it with the flour of wheat ; but a mixture of the pulp of potatoes with the flour of wheat, does not produce brown-colored bread. M. Parraen- tier made bread very much resembling that of wheat, by mixing four ounces of amylaceous powder of potatoes, one dram of mucilage ex- tracted from barley, one dram of the bran of rye, 1Ā£ dram of glutinous matter dried and powdered. M. Parmentier also recommends the use of the horse-chestnut for the purpose of making whole- some bread. With this view he advises taking off the skin, and pressing out the juice, and re- ducing the fruit into a paste, which being diluted with water, and strained through a sieve, will yield a milky-colored liquor, that, on being left to stand, deposits a fine powder. This powder, when dried, has neither smell nor taste, and is very fit for aliment ; the mass from which it is procured retaining the bitterness of the fruit. The roots of the briony, he says, treated in the same manner, yield a similar white powder. By the same treatment, fine, white, insipid, inodo- rous powder may be procured from the roots of the iris, gladiolus, ranunculus, arum, dracunculus, mandragora, colchicum, filipendula, and hellebo- rus, plants which grow spontaneously, and in great abundance.

To preserve yeast through the winter, it may be beat up with a whisk until it appears thin and even ; then spread it in thin coats upon plates, coating each over again as they dry, until half an inch in thickness, when they may be taken off the plates, broken into small pieces, and kept for use in bottles, closely stopped.

If there be a cheese-press or screw-press at hand, the yeast may be preserved by a simpler method. Fill a canvas bag with the yeast, and submit it to the action of the press, which will squeeze out all the moisture, when the residue may be well packed in paper, so as to keep it from the air, and from moisture. The following mode of making yeast is both easy and expedi- tious : ā Boil one pound of good flour, a quarter of a pound of brown sugar, and a little salt, in two gallons of water for an hour. When milk- warm, bottle it, and cork it close. It will be fit for use in twenty-four hours. One pint of this will make eighteen pounds of bread.

There is one circumstance connected with the process of panary fermentation which must on no account be omitted. We allude to the ten- dency to acidity, which frequently occurs even in the best manufactured dough. Against this mischief, the utmost skill or precaution, in the pre- sent state of the art, seems scarcely sufficient to guard. For if the flour has been originally of bad quality, if the yeast employed be of a weak or indifferent sort, if the water be added at too high or too low a temperature, or perhaps if the state of the atmosphere be not favorable, the dough will speedily become acescent. In short, when- ever the second process of decomposition

com- mences within dough, before the vinous fermen- tation of the saccharine ingredient has proceeded far enough to evolve the required quantity of carbonic acid gas, then the bread cannot, by any means at present used, be made to possess the qualities of lightness and sweetness con- joined. The one of these can be obtained only at the expense of sacrificing the other ; for the baker must either, as soon as the incipient acescence appears, send his dough to the oven, and obtain in return a bad and ill raised loaf; or if he prefers, as is generally done, to have it light and well raised, and therefore allows due scope to the fermentative process, the bread will certainly be sour. There is, however, a very simple and a very complete cure for this evil ; a method by which, even after acescence shall have decidedly commenced, the baker may nevertheless be enabled to remove it entirely, without sacrificing the vesicularity of his loaf. The remedy to be supplied in order to neutralise an acid, as will at once suggest itself to every chemist, is the due exhibition of an alkali. And it is a striking proof how much the mechanic has been accus- tomed to plod, unenquiring and uninstructed, over the same ground, that a relief so obvious and so simple, from inconveniences so excessive, should at this moment remain unknown to the greater part, if not to all, of the bread makers in the country. The use of a little carbonate of soda, or of magnesia, is all that is required to secure to the baker a dough which he may always have sweet and pleasant during the entire progress of fermentation ; and, even in case he may have allowed acidity to supervene to no inconsiderable extent, the same alkalies may be successfully and innocently employed in restoring dough to its original freshness. In order to bring the matter fairly to the test, and try the effects of the practice here recommended, a quantity of or- dinary loaf-dough was taken, when just fit for the oven, and set aside in a warm situation, where of course the fermentation briskly proceeded. To the simple saccharine decomposition was soon added the secondary process of acescent fermen- tation, and the dough became gradually sour. At the expiration of twenty-four hours, upon opening up the dough, which was still in a state of strong fermentation, a very acid odor was plainly perceptible. The taste was also distinctly, though weakly aciJ ; after taking two pieces, weighing five ounces each, from the general mass, it was once roo-t set aside : into one of the portions thus chosen were kneaded ten grains of the common carbonate of magne-

sia, and then both were baked in the oven after the usual manner. The difference between the two loaves, when baked, was most striking. The bread which had been made of sour dough alone had a slightly acid taste, and a smell so sour as must have rendered it almost unsaleable ; while that containing the magnesia presented not the slightest indications of any kind of sour- ness, and appeared in all respects an excellent loaf.

The mode of ascertaining the temperature of the oven, prior to the introduction of the dough, is merely to observe whether the soot burns from the side of the oven most distant from the fire, and, when that is the case, the bread will be baked in the most advantageous way.

When bread is newly taken out of the oven it has a peculiar, and rather pleasant smell, which it loses by keeping, as it does also the peculiar taste by which new bread is distinguished, unless its moisture be preserved by wrapping it round with a wet cloth. This shows us that the bread undergoes chemical changes ; but what these changes are, or what the peculiar sub- stance is to which the odor of bread is owing, is not known.

The laws which relate to the manufacture of bread underwent an entire alteration in tha year 1822, and, by an act passed 3 George IV., bakers are allowed to sell bread by weight in loaves of any given number of pounds avoirdupois, without reference, as heretofore, to the quartern or half " quartern. They are, however, to be furnished with weights and scales, placed in such a situa- tion that the purchaser may ascertain for him- self the weight of the loaf purchased. A loaf of four pounds if kept for a week loses '3125 of a pound, or nearly ˆ of its natural weight.

BREAD, EARTH. In the German Ephemerides for 1764 we have the following account of a kind of bread made of earth : In the lordship of Mos- caw, in the Upper Lusatia, a sort of white earth is found, of which the poor, urged by the calami- ties of the wars which raged in those parts, made bread. It is taken out of a hill where they for- merly worked salt- petre. When the sun has somewhat warmed this earth, it cracks, and small white globules proceed from it as meal; it does not ferment alone, but only when mixed with meal. Mr. Sarlitz, a Saxon gentleman, informed us that'he had seen persons who in a great mea- sure lived upon it for some time. He assured us that he procured bread to be made of this earth alone, and of different mixtures of earth and meals; and that he even kept some of this bread by him upwards of six years: he further says, a Spaniard told him that this earth is also found near Girona in Catalonia.

BREAD FRUIT. See ARTOCARPUS. BREADTH, n. s. f Ang.-Sax. brad, brad, BREADTH'LESS. adj. \ broad, from Jhe Goth. breads. Formerly breadth was written brode. Wickliffe writes it breed, from the verb bradan, to broaden, to expand, to dilate. The metsi.re of any plain superficies from side to sue: br.adthless, wanting breadth.

And whan this Troilus

It sawe, he gan to taken of it hedc,

Avwiny of tho length and brede. . Chmictr,

Within the temple of mighty Mars the Rede. All peinted was the wall, in length and brede, Like to the estres of the grisly place That highte the gret temple of Mars in Trace, In thilke colde and frosty region, Ther as Mars hath his sovereine mansion.

Cfiaucer's Canterbury Tales,

There is, in Ticinum, a church that hath windows only from above ; it is in length an hundred feet, in breadth twenty, and in height near fifty j having a door in the midst. Bacon.

The river Ganges, according unto latter relation, rf not in length, yet in breadth and depth, may excel it.

Brown.

Then all approach the slain with vast surprise, Admire on what a breadth of earth he lies. Dryden. In our Gothic cathedrals, the narrowness of the arch makes it rise in height ; the lowness opens it ia breadth. Addison.

From Cyrene to the ocean, the coast of Africa ex- tends above fifteen hundred miles ; yet so closely is it pressed between the Mediterranean and the Sahara, or Sandy Desert, that its breadth seldom exceeds four- score or an hundred miles. Gibbon. The term of latitude is breadthleu line.

More's SonĀ£ of the Soul.

BREAK', v. & n. \ The three princi BREAK'ER, / pal significations at-

BREAK'ING, vtached to this word,

BREAK'FAST, v. & n. i are distinctly marked BREAK'NECK, n. & adj. ./by the synonymous terms in other languages, from which it may have been derived. These significations are, To frac- ture, to change, and to manage. Thus, to part by force, to rive, split, or burst asunder, to crush, to ruin; we refer to the Goth, breka, Heb. berek, Arabic and Persian bruga, Eolian /3pj)yvw, Teut. brechen, Belgic breeken, Ang.Sax. brecan, Swed. braka, Isl. braka, Irish bracam, Welsh brigu, Arm. brica,frica, I&t.frago,frango. The class of words which illustrate the second mean ing; namely to change, to assume a different form or appearance, to falsify, is the following : Goth, brega, bregda ; Ang.Sax. braegdan, Swed. bregda tru, to break faith ; Scot, break, to de ceive; Isl. bregda bit, to change color or coun- tenance. The third sense ; namely, to accus- tom, to habituate, to tame, is marked by the Goth, braka, Ang.-Sax. brucan, Teut. brancha, brechen.

The Encyclopaedia Metropolitan, has happily distinguished many of the shades of metaphorical and literal application of which this word is susceptible ; concluding that it is of ‘ most univer- sal application to any separation, particularly when made with suddenness, violence or injury.’ The following is the catalogue of meanings an- nexed to a somewhat meagre exhibition of ety- monical lore :

To make or cause a rupture or breach ; a dis- ruption, or breaking apart; an eruption or break- ing out ; an irruption or breaking in.

To separate, (Met.), to disjoin, to dispart, to force apart; to dissever, to interrupt, to inter- cept.

To break down ; to suppress, to subdue, to subject, to crush, to tame, to overpower, to bring or reduce to obedience, to poverty, to decay.

To break, or infringe, to violate; implying deceit. Adultery in old writers is called spouse- breach.

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BRE

To break one’s mind, is to break it open ; to open it, to disclose it.

To break the fast, or to breakfast : is to se- parate the times of fasting; to break in upon fasting, interrupting its progress by a termina- tion.

To break is to effect a change, either by vio- lence, or insinuation, by a single act, or by a series of acts, by power or by subtlety; and the change may be simple difference, or complete destruction.

Right as the hunter, in the regne of Trace, That standeth at a gappe with a spere, Whan hunted is the lion or the here, And hereth him come, rushing in the greves, And breking bothe the boughes and the leves, And thinketh, there cometh my mortal enemy ; Withouten faile, he must be dedd or I ; For eyther I mote sleu him at the gappe, Or he mote sleu me, if that me mishappe.

Chaucer’s Canterbury Tales. To all which cruell tyranny, they say, He is provokt, and stird up, day and night By his bad wife that hight Adicie, Who counsels him, through confidence of might, To breake all bonds of law anr! rules of right.

Spenser.

What boots it to break a colt, and to let him straight run loose at random 1 Id.

Why then thou can'st not break her to the lute. Why, no ; for she hath broke the lute to me.

Shakespeare. Lovers break not hours,

Unless it be to come before their time. Id.

Pardon this fault, and by my soul I swear,

I never more will break an oath with thee. Id.

Break their talk, mistress Quickly ; my kinsman

shall speak for himself. Id.

O father abbot !

An old man broken with the storms of state, Is come to lay his weary bones among ye j Give him a little earth for charity. Id.

I must

Forsake the court ; to do't, or no, is certain To me a breakneck. Id.

So fed before he's broke, hell bear Too great a stomach patiently to feel The lashing whip, or chew the curbing steel.

May.

Did not our worthies of the house, Before they broke the peace, break vows ?

Hudibras.

When any new thing shall be propounded, no coun- sellor should suddenly deliver any positive opinion, but only hear it, and, at the most, but to break it, at first, that it may be the better understood at the next meeting. Bacon.

Upon the breaking and shivering of a great state, you may be sure to have wars. . Id.

The breaking of that parliament, Broke him ; as that dishonest victory, At

Chseronea, fatal to liberty, Killed with report that old man eloquent.

Milton.

As when a scout

Through dark and desert ways with peril gone All night, at last, by break of cheerful dawn, Obtains the brow of some high-climbing hill, Which to his eye discovers unaware The goodly prospect of some foreign land,. lit.

Your only way with me to break Your mind is breaking of your neck. For as when merchants break, o'erthrown, Like nine-pins they strike others down, So that would break my heart, which done My tempting fortune is your own.

Butler's Hudibras.

Unhappy man ! to break the pious laws Of nature, pleading in his children's cause.

Dryden.

I, who much desired to know Of whence she was, yet fearful how to break, My mind, adventured humbly thus to speak. Id.

Think, not my sense of virtue is so small ; 111 rather leap down first, and break your fall. Id.

She held my hand, the destined blow to break, Then from her rosy lips began to speak. Id.

As soon as Phoebus' rays inspect us, First, Sir, I read, and then I breakfast. Prior.

Ill brave her to her face ; 111 give my anger its free course against her : Thou shall see, Phoenix, how I'll break her pride.

Philip.*

And now, as near approaching as the sound Of human voice the listening ear may wound, Amidst the rocks he hears a hollow roar, Of murmuring surges breaking on the shore.

Pope's Odyssey.

Laws are like cobwebs, which may catch small flies, but let wasps and hornets break through. Swift.

Adieu, adieu ! my native shore Fades o'er the waters blue ; The night- wind s sigh, the breakers roar, And shrieks the wild seame,v. Yon sun that sets upon the sea, We follow in his flight ; Farewell a while to him and thee, My native land ā good night '. Byrtm.*

BREAKERS, in maritime affairs, are distinguished both by their appearance and sound, as they cover that part of the sea with a perpetual foam, and produce a hoarse and terrible roaring, very different from what the waves usually have m a deeper bottom. When a ship is unhappily driven among breakers, it is hardly possible to save her, as every billow that heaves her upward serves to dash her down with additional force when it breaks over the rocks or sands beneath it.

BREAKING OF HORSES. See MENAGE.

BREAK-WATER, see CHERBOURG and PLY- MOUTH.

BREAM', n. s. Swed. bressem, Belgic braes- sem, Teut. brachsem, bresm, Fr. breme, barba- rous Latin, brama, abramis. Bright or .brightsome seems to have been the meaning of the Gothic. A fish of the carp kind.

A broad bream, to please some curious taste,

While yet alive in boiling water cast,

Vexed with unwonted heat, boils, flings about.

Waller.

BREAM, in ichthyology, the cyprinus brama of Linnaeus. See CYPRINUS.

BREAM, to burn off the filth, such as grass, ooze, shells, or sea-weed, from a ship's bottom, that has gathered to it in a voyage, or by lying long in a harbour. It is performed by holding kindled furze, faggots, or the like, to the bottom, so that the flame incorporating with the pitch, sulphur, &c. that had formerly covered it, imme diately loosens and throws off whatever filth may have adhered to the planks. After this, the bot- tom is covered anew with a composition of sul-

phur, tallow, Sec. which not only makes it smooth and slippery, so as to divide the fluid more rea- dily, but also poisons and destroys those worms

which eat through the planks in the course of a voyage. Breaming may be performed either when the ship lies a-ground after the tide has ebbed from her, or by docking, or by careening.

BREAST, n.s.tk.v. a. ~} Gothic briost, Swed

BREAST'BONE, n. s. j 6rosĀ£,Teut. bruste, Bel.

BREAST'KNOT, [borst, Ang.-Sax. breost,

LREAST'PLATE, ' Per. bar. The thorax;

BREAST'WORK, the heart; another term

BREAST'HIGH, adj. J for bosom, especially

that of the female yielding nourishment to her

offspring. It is metaphorically applied to the

mind ; to the heart and conscience ; to the seat

of the passions. To breast is to oppose the

breast to any thing: breastbone, the sternum:

brcastknot, a bunch of ribands worn by women

on the breast : breastplate, armour for the breast :

breastwork, a parapet; a work thrown up as

high as the breast : breasthigh, up to the breast.

They pluck the fatherless from the breast.

Job, xxiv. 9.

For though thin husband armed be in maillc, The arwes of thy crabbed eloquence Shall perce his brest, and eke his aventaille : In jalousie, I rede eke, tbou him binde, And thou shall make him crouch as doth a quaile

Chaucer.

Hire gilded beres with a goldin chredc Ibounden were, untressid as she laie : And nakid from the brest unto the hede Men might her see. Id. Assemblie of Foules. By which she well perceiving what was done, Gan teare her hayre, and all her garments rent, And beat her breast, and piteously herself

torment.

Spenser.

The river itself gave way unto her, so that she was straight breast-high. Sidney.

What stronger breastplate than a heart untainted ? Thrice is he armed, that hath bis quarrel just.

Shakspeare. . The tbreaden sails

Draw the huge bottoms through the furrowed sea, Breasting the lofty surge. Id. Henry V.

'Gainst shield, helm, breastplate, and, instead of

those,

Five sharp smooth stones from the next brook he cbose. Cowley.

Margarita first possessed, If I remember well, my breast. Id.

Sir John Astley cast up breastworks, and made a redoubt for the defence of his men. Clarendon.

I, not by wants, or fears, or age opprest, Stem the wild torrent with a dauntless breast.

Dryden.

Needless was written law, where, none opprest, The law of man was written in bis breast. Id. Ovid.

Lay madam Partlet basking in the sun, Breasthigh in sand. Id. Fables.

No traitress '. angry Love replies, She's hid somewhere about thy breast;

A place nor God nor man denies For Venus' dove the proper nest. Prior .

Soft on her fragrant breast the babe she laid Hushed to repose, and with a smile surveyed.

Pope's Iliad.

The belly shall be eminent, by shadowing tl:i flank, and under the breastbone. Peacham.

This venerable champion will come into the field, armed only with a pocket-pistol, before his old rusty breastplate could be scoured, and his cracked head- piece mended. Swift.

Our ladies have still faces, and our men hearts ; wby may we not hope for the same achievements from the influence of this breastknot? Addison's Freeh.

The charmer's opening eye kind hope reveals, Kind hope her consort's breast enlivening feels.

Savage.

Flame from one breast, and thence on Britain shine, What love, what praise, O Walpole ! then is thine.

Id. Epistles. The hardy Swiss

Breasts the keen air, and carols as he goes

(Joldsmitlt.

His understanding 'scaprs the common cloud Of fumes arising from a boiling breast.

Young's Virtue's Apology. Thou bitter pledge ! thou mournful token !

Though painful, welcome to my breast! Still, still, preserve that love unbroken,

Or break the heart to which thou'rt prest ! Byron.

BREASTS, MAMM.S, in anatomy. See ASA- TOMY, Index.

BREAST, SMITING THE, is an expression of. penitence. In the Romish church, the priest beats his breast in rehearsing the general confes- sion at the beginning of the mass.

BREAST-HOOKS, in ship building, are thick pieces of timber incurvated into the form of knees. They are placed at different heights directly across the stem, so as to unite it with the bows on each side. The breast-hooks are strongly connected to the stem and hawse-pieces by tree-nails, and by bolts driven from without through the planks and hawse-pieces, and the whole thickness of the breast-hooks, upon whose inside those bolts are forelocked or clinched upon rings. They are usually about one third thicker, and twice as long, as the knees of the decks they support.

*BREAST-PAIN, in the manege, called by the Italians grandezzo di petto, is a distemper in horses proceeding from superfluity of blood and other gross humors, which, being dissolved by some extreme and disorderly heat, resort downward to the breast, and pain them extremely. The signs of the breast-pain are, a stiff, stagger- ing, and weak going with his fore legs, besides, that he can hardly, if at all, bow his head to the ground**

BREAST-PLATE, in Jewish antiquity, a part of the sacerdotal vestments anciently worn by the high priest. It was a folded piece of the same rich embroidered stuff of which the ephod was made, set with twelve precious stones, on each of which was engraven the name of one of the tribes. They were set in four rows, three in each row ; and were divided from each other by the little golden squares or partitions in which they were set. This breast-plate was fastened at the four corners; those on the top to each shoulder by a golden hook or ring at the end of a wreathed chain; and those below to the girdle of the ephod, by two strings or ribbons, which had, likewise, two rings and hooks, This orna- ment was never to be severed from the priestly garment; and it was called the memorial, to put

the hiˆ.i-priest in mind how dear those tribes ought to be to him, whose names he wore on his breast. It is also called the breast-plate of judg- ment, because it had the divine oracle of Urim and Thummim annexed to it. See URIM and THUMMIM.

BREAST, PLATE, in the m nage, the strap of leather that runs from one side of the saddle to the other, over the horse's breast, in order to keep the saddle tight, and hinder it from sliding backwards.

BREAST PLATES, for armour, are sa;d to have been originally made of hides, or hemp twisted into small cords, but afterwards of brass, iron, or other metals; which were sometimes so exqui- sitely hardened, as to be proof against the great- est force. See ARMOUR.

BREAST-WORK OF A SHIP, a sort of ballus- trade or fence, composed of rails or mouldings, and often decorated widi sculpture; it terminates the quarter-deck and poop at the fore-ends, and encloses the fore-castle both before and behind.

BRE'ATHE, v. ˆ Ag0; Goth, and Teut.

BREATH, n. athem ; Ang.-Sax. orath,

BRE'ATHER, braeth ; stthian, braethian ;

BRE'ATHIXG, (air of life; air drawn in

BREATH'FOL, f and thrown out of the

BREATH' LESS, lungs; to draw breath;

BREATH'LESSNESS, to rest. Goth, brydda;

BRE'ATHINGTIME. J Swed. brada; Welch brathu; to puncture; to pierce; to open a vein; to give vent. To breathe, then, is to inspire or inhale; to expire or exhale; to take breath; to give breath : to send forth ; to emit ; to eject : to utter privately : an odor ; a perfume ; a vow ; a prayer; relaxation.

and eke, hire breth I trowe

Surmounteth all odours that er I founde

In swetenesse. Chaucer's Court of Love.

She colde was ; and withouten sentement, For ought he wote, for brethe yet felt he none, And this was him a preignant argument That she was forth out of this world agone.

Id, Troilus and Creseide.

The breath came slowly thence, unwilling leaving So sweet a lodge ; but when she once intended To feast the aire with words, the heart deceiving, More fast it thronged so to be expended ; And at each word a hundred loves attended. Playing i' th' breath, more sweete than is that firing, Where that Arabian onely bird, expiring Lives by her death, by losse of breath more fresh respiring. Spenser.

At other times he casts to sue the chace Of swift wild beasts, or run on foot a race, To' enlarge his breath, large breath in arms most

needful, Or else by wrestling, to wax strong and heedful. Id.

He presently followed the victory so hot upon the Scots, that he suffered them not to breathe, or gather themselves together again. Id. State of Ireland.

Thy greyhounds are as swift as breathed stags.

Shakxpeare.

I remember when tlie fight was done, W) en I was dry with rage and extreme toil, Breathless, and faint, leaning upon my sword, Came there a certain lord. Id. Henry IV.

Let him breathe, between the heavens and eartl;. A private man in Athens. Id. Antony and Cleopatra

She shows a body rather than a life, A statue rather than a breather. Id. ib.

Kneeling before this ruin of sweet life, And breathing to this breathless excellence The incense of a vow, a holy vow. Id. King John. Give me some breath, some little pause, dear lord, Before I positively speak. Id. Richard III.

As bodily respiration without intermission or im- pediment doth concur with all our actions, so may that breathing of soul which preserveth our spiritual lite, and ventilateth that holy frame within us, well conspire with all other occupations. Barrow.

Rest, that gives all men life, gave him his death, And too much breathing put him out of breath.

Milton.

His altar breathet Ambrosial odours, and ambrosial flowers.

Id. Paradise Lost.

Me thinks I heare the soldiers and busie officers when they were rolling that other weighty stone (for such we probably conceive) to the mouth of the vault with much toyle and sweat, and breathlesnesse, how they bragged of the surenesse of the place, and unremovcablenesse of that load.

Hall. On the Resurrection. I would be young, be handsome, be beloved. Could I but breathe myself into Adrastus. Dryden.

You menace me, and court me, in a breath ; Your Cupid looks as dreadfully as death. Id.

Spaniard, take breath, some respite I'll afford ; My cause is more advantage than your sword. M.

No man has more contempt than I of breath, But whence hast thou the power to give me death ?

M.

The ready cure to cool the raging pain, Is underneath the foot to breatlie a vein.

Id. Virgil.

While to high, heaven his pious breathings turnsii, Weeping he hoped, and sacrificing mourned. Prior..

The artful youth proceed to form the quire ; They breatlte the flute, or strike the vocal wire. id. Where he vital breathes there must be joy.

Th irMiin.

Delightful task ! to rear the tender thought. To teach the young idea how to shoot ; To pour the fresh instruction o'er the mind ; To breathe the' enlivening spirit, and to fix The generous purpose in the glowing breast. Id.

Here, by the stream, if I the night outwear, Thus spent already, how shall nature bear The dews descending, and nocturnal air; Or chilly vapours, breathing from tbe flood When morning rises. Pope's Odyssey.

Formed to make pleaders laugh, his nonsec&c

thunders, And on low juries breathes contagious blunders.

Savage's Miscellanies. Nature is dumb on this important point, Or Hope precarious in low whisper breathes.

Young's Christian's Triumph.

He ought, says this great political doctor (Machia- vel), to consider peace only as a breathing-time, which gives him leisure to contrive, and furnishes ability to execute military plans. Burke.

The fourth day came, but not a breath of air, And ocean slumbered like an unweaned child.

Byron,

But still her lips refused to send ā ' Farewell !' For in that word ā that fatal word ā howe'er We promise ā hope ā believe ā there breathes despair.

Id. Corsair.

BRE

BREBEUF (William do), a French poet, born at Thorigny, in 1618. He was chiefly dis- tinguished by a translation of Lucan, which, though abounding in bombast and false bril- liances, was long admired; and procured great promises of advancement to the author, from cardinal Mazarine, who died, however, without fulfilling them. But the best of his works is the First Book of Lucan Travestied, which is an ingenious satire upon the great, and upon the meanness and servility of those who submit to flatter them. He is said to have had a fever that lasted above twenty years. He died in 1661, aged forty-three.

BRECCIA, in mineralogy, an Italian term, used to denote such compound stones as are composed of agglutinated fragments of consider- able size.

BRECHIN, a town and royal burgh in the county of Forfar, Scotland, situated on the decli- vity of a hill, which rises from the north bank of the Esk, about eighty-four miles north of Edin- burgh. It unites with Aberdeen, Montrose, Aberbrothick, and Inverbervie, in sending one member to the parliament of Great Britain. It has a small manufacture of linen and sail-cloth, a large brewery, and about 6000 inhabitants. It is principally noted in history in connexion with a convent of Culdees. A bishop's see was founded here about the middle of the twelfth century, and endowed by David I. Some remains of the cathedral still appear, and the west end is occu- pied as a parish church. At a small distance stands one of those singular round towers whose use has so long baffled the conjectures of anti-quaries. The towers appear to have been pecu- liar to North Britain and Ireland: in the latter they are common : in the former but two, we believe, now exist. That at Brechin stood ori- ginally detached from other buildings. It is at present joined near the bottom by a low addi- tional aisle to the church, which takes in about a sixth of its circumference. From this aisle there is an entrance into it of modern date, approach- able by a few steps, for the use of the ringers; two handsome bells were formerly placed in it, which were approached by means of six ladders placed on wooden semicircular floors; but the bells have lately given place to an excellent town clock. The height from the ground to the roof is eighty feet; the inner diameter, within a few feet of the bottom, is eight feet; the thickness of the wall at that part, seven feet two inches ; so that the whole diameter is fifteen feet two inches; the circumference very near forty-eight feet ; the inner diameter at top is eight feet seven inches; the thickness of the walls four feet six inches ; the circumference thirty-eight feet eight inches; which proportion gives the building an elegant appearance; the top is roofed with an octagonal spire twenty-three feet high, which makes the whole 103. The

castle of Brechin was built on an eminence, a little south of this town ; it under- went a long siege in 1303; and was gallantly defended against tne English under Edward III.'; and, notwithstanding au the efforts of that potent prince, the crave governor, Sir Thomas Maule, ancestor of the present Maule family, of Pan- mure, held cut this small fortress for twenty days,

till he was slain by a stone from an engine on the 20th of August, when the place was instantly surrendered. Brechin is also remarkable for a battle fought near it, in the rebellion of 1452, on account of the murder of the earl of Douglas. The victory fell to the royalists under the earl of Huntly.

BRECKNOCK, the county town and capital of the county of Brecknock (Aber-Hondey, Welch,) seated at the confluence of the rivers Hondey and Uske, over which there are four bridges. This place consists of three principal irregular streets, in the most spacious of which are the town-hall and the market-place. The collegiate church, founded on the ruins of a Dominican priory, is now falling into decay. Here are three parish churches, four places of worship for dissenters, and some manufactories of cloth, hats, and cotton-stockings. The castle is said to have been built by Bernard de Newmarsh, a favorite of William Rufus, who also encircled the town with walls. It was nearly destroyed in Oliver Cromwell's time. The aisenal, a hand- some brick building, stands in that part of the town called the Walton, on the road side, being ninety-nine feet long, thirty-five broad, and two stories high. The tower contains an armoury for 15,000 stands of arms, and 1500 swords, ar- ranged in the manner of the arms at the tower of London. The priory walk is very pleasant. To the east of the town is a lake well stored with fish, called Brecknock Mere. It sends one member to parliament, and is governed by two bailiffs, fifteen aldermen, two chamberlains, two constables, a town-clerk, and other officers. Market days, Wednesday, Friday, and Saturday. It is 171 miles W.N. W. from London. There are several traces of Roman camps in the neigh- bourhood.

BRECKNOCK, a county of South Wales, ia bounded by Radnor on the north, Cardigan and Carmarthen on the west, Hereford and Mon- mouth on the east, and by Monmouth and Gla- morgan on the south. It is about thirty-five miles long, thirty broad, and about 100 in cir- cumference, containing nearly 512,000 acres of land, of which 232,000 acres are in a state of cultivation, and 185,600 acres are waste, unfit for culture. It contains six hundreds, viz. Builth, Crickhowel, Devynnock, Merthyr, Penkelly, and Taiga rth ; has four market-towns, Brecon, Builth, Crickhowel, and Hay; and sixty-two parishes. This is one of the most mountainous counties of Wales, containing the Vann, or Brecknock-Beacon, reckoned the loftiest mountain in South- Wales. The air in the valleys is always tem- perate ; the soil on the hills stony ; but the streams

descending thence into the vales, render them fruitful. Its principal rivers are the Wye, which separates it from Radnor, and the Uske, which rises from the Black Mountain on the border of Carmarthenshire, and, flowing through a beautiful valley to the south-east angle, passes the town of Brecon. Its chief productions are copper, lead, iron, corn, cattle, fish, and otter's fur, and manufactories of cloth and stockings The whole county, indeed, is replete with every article of subsistence, with which the different markets an-J fairs are well supplied. A caunl

from Brecon to Llanelly, eighteen miles long, and ninefeetwide,wasopenedin 1800,and is navigable for barges of twenty-five tons burden. Coal and lime stone are found in large quantities. At Llanelly, and near the borders of Glamorgan, there have been lately established several extensive iron works. The exports are a species of woollen cloth (which is carried to be milled and dyed in England), wool, worsted stockings, timber, iron, cattle, sheep, pigs, butter and cheese. It returns two members to parliament ; one for the county, and one for Brecknock, the county-town.

BREDA, a strong fortified town of the Ne- therlands, the capital of a lordship of that name in Dutch Brabant. It is of a triangular shape, having a gate at each angle. It lies on the river Merck, near the influx of the Aa, and thus has a good communication with the sea. Its position, in the midst of a marsh, contributes so much to its defence, that the adjoining country can be laid under water by means of sluices which com- municate with the river. It has also a castle, constructed by William, prince of Orange, after- wards king of England ; the ramparts are lined with trees. The great church is remarkable for its tower, which was burnt down in 1696, but since rebuilt ; the height of the spire is 362 feet. The interior contains several monuments of the ancient lords of Breda. The town-house is a noble building. This was formerly a place of considerable commerce, and had extensive cloth manufactories ; but there now only remain a few manufactures of carpets, stockings, and hats. There are also several breweries.

Breda suffered severely in the wars of the six- teenth century, between Spain and the Dutch. Before the breaking out of these commotions, the lordship belonged to the family of Nassau- Orange ; but in 1567 they were seized by the duke of Alva. The garrison delivered up the town to the states-general in 1577, but it was wrested from them in 1581. Here, in

May 1590, prince Maurice of Nassau began that series of operations which ended in the liberation of Hol- land. . He sent into Breda a party of chosen men, concealed in a boat loaded with turf, who admitted the other besiegers, and the town was given up. It was retaken by the Spaniards, under Spinola in 1625, after a close blockade, and a siege of six months. They kept pos- session of it till 1637, when it was finally retaken by the Dutch. Our Charles II. resided here when invited to the throne of his father, in 1660, and issued a celebrated declaration, to which he adhered as it accorded with his convenience. In 1667 was held at Breda a celebrated congress, which ended in treaties of peace between Charles II. of England on the one side, and Louis XIV. of France, Frederick III. of Denmark, and the states-general on the other. A second congress was summoned here in 1747, but never took place, the negociations having been removed to Aix-la-Chapelle. In February 1793 the French became masters of the town and fortress, after five days blockade and a slight bombardment, but gave it up on the 4th April of the same year. In September 1794 they made preparations fora second attack, but the place held out till the entire conquest of Holland. In December 1813,

when the prince of Orange had been recalled to Holland, general Bechendorffs corps, of the Russian army, marched in the direction of Breda, and, on the tenth, the French garrison sallied out to make an attack on that force ; upon which the loyal burgesses rose en masse, shut the gates, and prevented them again entering the place. It is twenty-two miles S. S. E. of Rotterdam, and forty-eight south of Amsterdam.

BREDA (Alexander Van), an eminent painter of Antwerp, much esteemed for his landscapes, fairs, views of particular scenes in Italy, and varieties of animals and figures.

BREDA (John Van), the son of Alexander, was born at Antwerp in 1683. Having the ad- vantage of the example and directions of his father, he continued with him till he was eighteen years of age. Among the various capital paint- ings then in the possession of John De Wit, at Antwerp, Breda fixed upon those of Velvet Brueghel, which he copied with extraordinary success ; and was employed for nine years in copying the pictures of several other great masters. After this he came to London with Rysbrach, the sculptor, where he rose into great esteem. After residing some years in England, he returned to Antwerp, loaded with riches, the honorable testimonies of English liberality, as well as of his own merit. In 1746 Louis XV. arriving in that city, purchased four of his pic- tures. He had as much fire in his composition, and perhaps more genius than Brueghel ; his figures are generally well placed, his ground skilfully broken ; every small figure has its par- ticular character, and occupies its proper place. In short, he is a painter of such a rank, that the value of his works

must always increase. He died in 1750.

BREDE. See BRAID. BREDEMEYERA, in botany, a genus of plants: class diadelphia, order octandria : CAI. three-leaved : COR. papilionaceous ; drupe, nut two-celled. One species, B. floribunda, a s>hrub with small, white, panicled flower, native of the Caraccas.

BREECH, n.s.&u. a. } Goth, brek ; adixi- BREECH'ES, n. s. f-sion, a fork ; Swedish

BREECH'ING. jbreek; Teut. bruche ;

AiiĀ£.Sax. braec ; Welsh breg ; Irish bristig. The division of the legs ; the backside ; the hinder part ; the part broken in two, or divided, as the thighs from the body. Breech is the part, and breeches that which covers it. Goth bro ken, brakes ; Ang.-Sax. broc, braec, braeccae ; Armoric braghis ; Irish brigis ; Scot, breek ; Welsh bryccan; Ital. brace ee ; Lat. braces; Fr. brayes. To breech is to put on the breeches ; to furnish a tight or close covering for the hinder or lower part of any thing. Breeched is applied to daggers by Shakspeare; and Dr. Farmer has quoted a passage which proves that the handles of these instruments were so termed. Macbeth speaks of their being breeched with gore, which obviously meant that their breech, or hilt, was covered with blood.

Then the eyes of them both were opened, and they knew that they were naked, and they sewed figge-trce leaves together, and made thorn breeches.

Bible (Geneva), Gen. iii.

BRE

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Next, bis white lere

Of cloth of lake tin and clere,

A breche and eke a sherte ;

And next his sherte an haketon ;

Chaucer's Canterbury Tales. Thou woldest have me kissc thine old brech, And swere it were a relike of a stint. Id.

Petruchio is coming in a new hat, and an old jerkin, Ā»ad a pair of old

breeches thrice turned.

Shakspeare's Taming of the Shrew.

Ah ! that thy father had been so resolved ! ā

āThat thou might'st still have worn the petticoat,

And ne'er had stolen the breech from Lancaster. Id.

When the king's pardon was offered by a herauld,

a lewd boy turned towards him his naked breech, and

used words suitable to that gesture. Hayward.

The storks devour snakes and other serpents ; which,

when they begin to creep out at their breeches, they

ā¢will presently clap them close to a wall, to keep them

in. Grew's Museum.

The wife of Xanthus was domineering, as if her

fortune an4 her extraction had entitled her to the

breeches. L'Estrange.

If the Delphick Sibyls or oracular speeches (As learned men say), came out of their breeches, Why might not our horses since words are but wind, Have the spirit of prophecy likewise behind.

Manell.

But Hudibras gave him a twitch As quick as lightning in the breech, Just in the place where honour's lodged, As wise philosophers have judged ; Because a kick in that place more Hurts honour than deep wounds before.

Butler's Hudibras.

His breeches were of rugged woollen, And had been at the siege of Bullen. Butler. So cannons, when they mount vast pitches, Are tumbled back upon their breeches. Anonymous. Rough satires, sly remarks, ill-natured speeches, Are always aimed at poets that wear breeches.

Prior.

Give him a single coat to make, he'd do't ; A vest or breeches, singly ; but the brute Could ne'er contrive all three to make a suit. King. BREECHES, a garment reaching from the waist to the knees. The Greeks wore their knees and legs bare, but the more barbarous nations of an- tiquity covered them with vestments, which were called avaZvpiStf;. These vestments were also worn by the Scythians, the Aramaspi, the Amazons, the Phrygians, Syrians, &c. Among the Greeks this garment indicated slavery, and thence foreigners, or slaves brought from other countries, were always represented so clothed by their artists. The nations of the north, as the Dacians, the Parthians, the Sarmatians, &,c. usually wore them, as may be seen by the sculptures on the Trajan column. They were also worn by the Gauls ; and that part which was under the Roman dominion was called Gallia Braccata from this circumstance. We find mention made of breeches among the ancient Getse, Sarmatse, Gauls, Germans, and Britons. They afterwards got footing in Italy ; some pretend as early as the time of Augustus ; but that emperor's breeches, mentioned by Sue- tonius, were only swaths tied over his thighs. Breeches, however, were at last received into Italy, and grew so highly in fashion, that it was thought necessary, under Honorius and Area-

dins, to restrain them by law, and expel the brac- cari, or breeches-makers, out of the city, it being thought unworthy of a nation that commanded the world to wear the apparel of barbarians.

BREECUINGS, in sea language, ropes with which the great guns are lashed to the ship's side, so called beeause made to pass round 'the breech of the gun.

BREED,?;. a.&n.s.-\ Ang.-Sax. brytian, BiijjKD'ER, n. s. f bredan ; Teut. buerert, BKEED'ING, /from Goth. bera. See

BREED'BATE. 3 BEAR, BRING, BROOD,

and BRAT. To occasion; cause; produce; gene- rate ; bring forth ; increase ; cherish ; bring up ; educate : a breed is a cast ; a kind ; a subdivision of species ; a family ; a generation ; a hatch ; a number produced at once ; progeny ; offspring : a breeder is that which produces any thing; a prolific female ; one that takes care to raise a pe- culiar species of any thing: breeding is ellipti- cally used for good-breeding; hence a man of breeding is one who has been well-bred, or trained in good society : breedbate, one of those incen- diaries in social life that makes or seizes occasions for quarrelling.

Ah, noble knight ! what ā¢worthy meede

Can wretched lady, quitt, from woful state, Yield you in lieu of this your

gracious deed ? Your vertue selfe her own reward shall breed, Even immortal prayse and glory wyde, Which I your vassall, by your prowesse freed, Shall through the world make to be notifyde.

Spenser.

Thereat he roared for exceeding pain. That to have heard, great horrour would have bred.

Fairie Queene.

What hurt ill company, and overmuch liberty, breedeth in youth. Ascham't Schoolmaster.

It was wisely observed by Quintillian, who was an excellent tutor for young gentlemen, that we our- selves, with ill breeding our children, are the authors of their. evil nature. Jer. Taylor.

Mr. Harding, and the worthiest divine Christen dom hath bred for the space of some hundreds of years, were brought up together in the same univer- sity. Hooker. Time is the nurse and breeder of all good. Ofiaksp.

I bring you witnesses,

Twice fifteen thousand hearts of England's breed. Id, I am a gentleman of blood and breeding.

Shakspeare's King Lear. If thou wilt lend this money, lend it not As to thy friend ; for when did friendship take A breed of barren metal of his friend ?

Shakspeare's Merchant of Venice.

Get thee to a nunnery ; why would 'st thou be at

breeder of sinners ? Id. Hamlet.

Here is the babe, as loathsome as a toad, Amongst the fairest breeders of our time.

Id. Titus Andronictis.

My son Edgar ! had he a hand to write this ? a

heart and brain to breed it in ? Id. King Lear.

An honest, -willing, kind fellow, as ever servant

shall come in house withal ; and, I warrant you, no

telltale, nor no breedbate.

Id. Merry Wives of Windsor.

Where they most breed and haunt, I have observed. The air is delicate. Jd. Macbe!h.

But could youth last, and love still breed ; Had joys no date, and age no need ; Then these delights my mind might move To live with thee, and be thy love. Iialtia

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Hail, foreign wonder !

Whom certain these rough shades did never breed.

Milton.

Why was my breeding ordered and prescribed, As of a person separate to God, Designed for great exploits 1 Id. Agonistes.

Whoe'er thou art, whose forward ears are bout On state affairs, to guide the government ; Hear first what Socrates of old hath said To the loved youth whom he at Athens bred.

Dryden.

Rode fair Ascanius on a fiery steed, Queen Dido's gift, and of the Tyrian breed. Id.

Ah wretched me ! by fates averse decreed To bring thee forth with pain, with care to breed. Id.

None fiercer in Numidia bred, With Carthage were in triumph led. Roscommon.

Infectious streams of crowding sins began,

And through the spurious breed and guilty nation

ran. Id.

She lays them in the sand, where they lie till they

are hatched ; sometimes above an hundred at a breed.

Grew.

A cousin of his last wife's was proposed ; but John would have no more of her breed.

Arbuthnot's History of J. Bull. Yet, if a friend a night or two should need her, He'd recommend her as a special breeder. Pope.

As men of breeding, sometimes men of wit, To avoid great errors, must the less commit. Id.

In the choice of swine, choose such to breed of as are of long large bodies. Mortimer.

Bred up in grief, can pleasure be our theme? Our endless anguish does not nature claim ? Reason and sorrow are to us the same. Prior.

Lucina, it seems, was breeding, as she did nothing but entertain the company with a discourse upon the difficulty of reckoning to a day. Spectator.

How plain I ken whence love his rise begun, Sure he was bom some bloody butcher's son, Bred up in shambles ; where our younglings slain, Erst taught him mischief and to sport with pain.

Gay.

BREEDING, in a moral sense, denotes a per- son's behaviour in the external offices of social life. In this sense we say well-bred, ill-bred, a man of breeding, &c. Good breeding is hard to define ; none can understand the theory but those who have the practice. Good breeding amounts to much the same with what is other- wise called politeness, amongst the ancient Ro- mans urbanity. It is so nearly allied to virtue, that it will often lead a man into it; although, it must be owned, there are too many instances of its failing to produce this happy effect. Ches- terfield, with all his good breeding, was a very bad moralist. Shaftesbury compares the well- bred man with the real philosopher : both characters aim at what is excellent, aspire to a just taste, and keep in view the model of what is beautiful and becoming. Horace seems to have united both characters :

Quid verum atque decens euro et rogo, et omnis in hoc sum.

BREEDING OF FISH. See POND.

BREED OF HORSE. See HORSE.

BREEDING STONE, in mineralogy, a sert of mass of pebbles, joined by a sparry cement; frequent in divers parts of Hertfordshire.

BREEF CARDS, a kind of false cards, either a little longer or broader than the rest, whereby they may be felt and distinguished.

BREENBERG (Bartholomew), an excellent painter, born at Utrecht in 1620; and bejt known by his Christian name Italised, Barto- lomeo, he having spent the early part of his life in Rome. His pictures were held in the highest estimation. He excelled in landscapes, which he enriched with historical subjects. The figures and animals were drawn in a masterly manner. He also etched from his own designs a set of twenty-four Views and Landscapes, ornamented with Ruins. He died in 1660, aged forty.

BREEZE', ˆ Ang.-Sax. briose; Belgic,

BREE', > brents ; Ital. bribsio ; Welsh,

BRIZE. jbruth; from Goth, bry, Irodde, a point or sting. The gad-fly.

Till that a brine a scorned little creature, Through his fairie hide his angrie sting did threaten And vent so sore, that all his goodly feature, And all his plenteous pasture nought him pleased.

Spenser. Cleopatra,

The breeze upon her like a cow in June, Hoists sail, and flies.

*Shakspeare * Antony and Cleopatra. The learned write, the insect breese Is but the mongrel prince of bees. Hudibras.*

A fierce loud buzzing breese, their stings draw blood, And drive the cattle gadding through the wood.

Dryden.

BREEZE', “) Goth, byr ; Dan. bar ; Belg.

BREEZ'Y, > breeze; Fr. brise ; Ital. brezza ;

BREEZE'LESS. j Port, brizo. A gentle gale; a light wind ; a wafting air,

from the verb to bear.

Our generall prepared to be in readiness, to take

the first advantage of the coming of a brise of winde.

Sir Francis Drahti. The World Encompassed.

We find that these hottest region-s of the world, seated under the equinoctial line, or near it, are so refreshed with a daily gale of easterly wind, which the Spaniards call breese, that doth ever mo-e blow stronger in the heat of the day. Raleigh.

The torrid zone was by our predecessors held to be uninhabitable, but by our modern travellers found to be most temperate, bedewed with frequent rains, and moistening showers, the brise and cooling blasts iu some parts, as Acosta describes, most pleasant and fertile. Burton's Anat. Mel.

From land a gentle breese arose by night,

Serenely shone the stars, the moon was bright.

And the sea trembled with her silver light.

The seer, while zephyrs curl the swelling deep, Basks on the breexy shore, in grateful sleep, His oozy limbs. Pope.

Gradual sinks the breese Into a perfect calm ; that not a breath Is heard to quiver through the closing wood.

Thomson.

The breesy call of incense-breathing morn, The swallow twittering from the straw-built shed, The cock's shrill clarion, or th<: echoing horn, No more shall rouse them from their lowly bed.

Gray's Eleyg. The billows on the ocean,

The breeses idly roaming, The cloads uncertain motion,

They are but types of \voman. Burns, Embarked, the sail unfurled, the light breese We ā How much had Conrad's memory to review.*

Byron's Corsair.

BRE

BREEZE, n. s. Fr. braise; Ital. bragia. Cin- ders ; burnt coals.

BREEZE, in brick-making, small ashes and cinders sometimes made use of instead of coals for the burning of bricks. As this does not so well answer the end, the use of it was prohibited by 12 Geo. I. c. 35, but allowed by 3 Geo. II. c. 22, and 10 Geo. III. c. 49.

BREEZE, a shifting wind that blows from sea or land for certain hours in the day or night, common in Africa and some parts of the East and West Indies. Breezes differ from etesiae, or trade winds, as the former are diurnal, or have their periods each day, and are perceived onlynear the shore or coast ; while the latter are annual, and blow at a distance from land. The sea breezes rule by day, and the land breezes by night, being constant as the season of the year, or course of the sun, on which they seem to depend : not but that they appear sooner or later, stronger or weaker, in some places than in others ; and vary the alternative according to the several lati- tudes, situations, soils, mountains, valleys, woods, and other circumstances of the countries where they are found.

BREGENTZ, or BERGENTZ, a district and town of Suabia, in Germany, situated at the east end of the lake of Constance, six miles soutli of Lindau. The whole tract, according to M. Hassel, contains 84,000 inhabitants, ex- porting a considerable quantity of timber and cattle. To the south is a noted pass into Italy, called Bregentz-Clans. It is also the name of the river on which the town stands. It was taken possession of by a column of the French army, under General Kellerman, in July 1796.

BREGMA, in anatomy, the same with sin- ciput, or the forehead. The bregma consists chiefly of two bones, hence also called bregmatis ossa, or ossa parietalia. It properly denotes the middle and fore part of the head, situated over the forehead, and extending on both sides to the temples. The origin of the word is obscure, and has been much controverted.

BREHAR, one of the Scilly islands, lying thirty miles almost directly west of the Land's End in Cornwall. It is the roughest and most mountainous of them all, and not many years ago there were only two families in it. There are several barrows edged with stone, in which they buried considerable persons in ancient times ; besides many monuments of the Druids. Some are of opinion that this with the rest made but one island, which is the reason why so many antiquities are now found in most of them.

BREHO1NS were the provincial judges among the ancient Irish, by whom

justice was admi- nistered, and controversies decided. These sages are by some writers said to have been a distinct tribe, having competent lands allowed them in inheritance ; by others to have been hereditary magistrates, attached to various tribes. Their decisions were generally made in the open air, on the tops of hills ; where particular spots are frequently called to this day Brehon chairs. In criminal cases the Brehon had the eleventh part of all the fines ; which could not but be con- siderable at a time when murders, rapes, rub- VOL. IV.

beries, and the like offences, were only subject to pecuniary commutations. Brehonicaj le"es, or Brehon laws, were the general rules of law observed by the Brehons. Several fragments of the leges Brehonicaes are still extant in public and private libraries. The most complete col lection is that now or lately belonging to the duke of Chandos ; containing twenty-two sheets and a half closely written, full of abbreviated words, and not very legible. By the statute of Kilkenny, made under Edward III., it is enacted that no English subject shall submit to a trial by the Brehou law. Notwithstanding which, many were still under a necessity of submittino- to various modifications of it, until the whole kingdom was settled by king James I. Why Spenser and some modern writers should stig- matise these laws as most wicked, because murder was compounded by bribery, we are at a loss to conceive. The principle of pecuniary compensation for all crimes pervading equally the Anglo-Saxon laws, and those of all the German nations : not to mention that at this time enlightened England awards a man only pe- cuniary damages for the greatest moral injury that can be inflicted on his family.

BREIRACH, a mountain of Aberdeenshire, Scotland, at the south-west extremity of the county, having six springs, called the Wells of Dee, 4000 feet above the level of the ocean ; they form themselves into a copious stream, which falls over a precipice ; and are thus the sources of the river DF.E, which see. Its whole height is about 4220 feet.

BREME, adj. Golh. brim; Ang.Sax. brem, to rage or fume. Cruel; sharp; severe; furi ous; fierce; stormy.

And anon,

He was ware of Arcite and Palamon,

That foughten breme. Chaucer's Cant. Tales.

And when the shining sun laugheth once, You deemen the spring come at once : But eft, when you count you freed from fear, Comes the breme winter, with chamfred brows, Full of wrinkles and frosty furrows. Spetuer.

BREMEN, a duchy of Germany, in the kingdom of Hanover, lying between the Weser and the Elbe ; of which the former separates it from the duchy of Oldenburg, and the latter from that of Holstein. The air is cold ; and the whole country low and flat, but the soil, like that of many of our fenny districts, very rich and productive in corn, hemp, flax, and pas- turage. Excellent buck-wheat and sheep-walks are found on the Geestland, or central part of the duchy, which is accounted the least fertile. The manufactures are ropes, linen, and sail-cloth ; and there are also a few ship-building yards. It formerly belonged to Sweden, but was after- wards conquered by Denmark, who sold it to the king of Great Britain, as elector of Hanover, in 1716. In winter it is subject to inundations. At Christmas, 1617, some thousands of cattle were lost, and several hundred people ; and the country was so covered with water, that it cost immense sums to repair the dykes. The so- vereignty is said to have cost the electorate 800,000 rix-dollars.

*BREMEN, a large, populous, and strong town, the capital of the preceding duchy, with an archbishop's see. The whole territory belonging to it contains seventy-five square miles, and a population of 48,500 individuals. The river Weser runs through it, and divides it into the old and new *own. The harbour is six miles nearer the sea, at a place called Elsfliet. On an average, 200 Bremen ships pass through the Sound yearly, and about 900 great and small enter the port from all quarters, yet the annual revenue is not above 100,000 dollars, it is said, or Ā£17,000 sterling. Only boats can approach the town, which is in general well built. The town-house, the exchange, and the cathedral, are the buildings principally worth notice. There is also an academy here, founded in 1529. In September 1739, while the inhabitants were asleep, the powder magazine was fired by light- ning ; and all the houses were shaken, as if there had been a violent earthquake. This town is governed by its own magistrates, and is divided into quarters, each of which has a burgo-master. The religion is partly Lutheran, and partly Cal- vinistic, the latter predominating. It has a considerable trade in its own manufacture of cotton and woollen stuffs, sugar, dye-stuffs, &c. with France, England, Spain, and Portugal ; and in return imports provisions, with which it supplies Westphalia, and the countries about Hanover. It has also some profitable fisheries, and a trade in blubber. The French took pos- session of Bremen in 1806, and annexed it to the empire,*

as the head of the department of the mouths of the Weser, in 1810. It recovered its independence in 1813. It is fifty-four miles south-west of Hamburgh, and ninety-five north- west of Brunswick.

BREN', -N

BRENT', f From Sax. briennen, to

BREN'NING, Ā£burn. Burnt. ā Obsolete.

BREN'NIXGLY. J

The fires brerme upon the auter clere, While Emelie was thus in her praiere.

Chaucer's Canterbury Tales. And after all this ā to sleu me utterly, Love hath his fiery dart so brenningly Ystiked thurgh my trewe, careful hert, That shapen was my deth erst than my sliert.

Id.

What flames, quod he, when I thee present see In danger rather to be dant then brent. Spenser.

BRENNAGE, BRENNAGIUM, or BRENNATI- CUM, in authors of the middle age, a kind of tribute paid in lieu of bran, or bran itself, which the tenants were obliged to furnish for the support of the lord's hounds.

BRENNER (Henry) was born at Kronoby, in West Bothnia, in 1669, and received his education at Upsal. In 1687, being appointed to attend the Swedish envoy to the court of Persia, he acquired the language of that country, so that Sarug Khan, the Persian ambassador, when about to depart for Stockholm, took him into his suite as an interpreter. War however having broken out between Charles XII. and the czar, the latter caused Brenner to be arrested on the road at Moscow in 1700, and kept him in confinement till the peace of Nystadt. In 1722

he returned to Stockholm, and was appointed royal librarian, a situation which he enjoyed till his death in 1732. He translated from the Ar- menian the history of that country, by Moses Armenus Choronensis, a work he printed at Stockholm, on his return in 1723. His other works are : Observations on the Expedition of the Czar Peter the Great against the Persians, and an Accurate Chart of the Caspian Sea, the River Daxia (supposed to be the ancient laxartes), &c. This chart was inserted, without acknow- ledgment, in the Memorabilia Orientalis Partis Asiae.

BRENNUS, a celebrated captain among the Gauls, who, about A.A.C. 388, entered Italy with a powerful army; made great conquests there ; defeated the Romans : and sacked Rome. The capitol alone was defended ; and Camillus, coming to its relief, drove the Gauls not only out of Rome, but out of all Italy. See ROME.

BRENT Sir Nathaniel, LL.D. was born at Little Woolford, Warwickshire, in 1573 ; and educated at Oxford, where he took his degrees. In 1613 he travelled abroad, and on his return married the daughter and heiress of Dr. Abbot, bishop of Salisbury, and niece of archbishop Abbot; who sent him to Venice in 1617, to pro- cure a copy of the history of the Council of Trent, from the joint authors, fathers Paul and Fulgentio ; which he translated from Italian into English. He received several promotions from the archbishop, and was knighted by king Charles I. In 1646, when Oxford surrendered to the parliament, he was restored to his warden-ship of Merton College, and appointed chief visitor of that university. He died at London in 1652, aged seventy-nine.

*BRENTA, in ornithology, the Brent goose, a species of anas, with a black neck and a white collar round it. * It has been usually confounded with the barnacle, and supposed to differ from it only in sex ; but this is erroneous. It is some- what larger than the barnacle, and is longer bodied.*

BRENTFORD, a town of Middlesex, on the Thames, seven miles from London, on the great road to the west. It is divided into the old and new town, in which last are the church, and the market-house where the county elections are held. It consists almost entirely of a single long street, well stocked with public houses, and has a weekly corn market. Here are also one of the largest and most respectable distilleries in tbe kingdom and several making-houses. The little river Brent is here joined by the Grand Junction Canal. At Brentford, Edmund Ironside, in the year 1016, attacked and defeated the Danes under Canute, in 1642 Charles I. after the battle of Edgehill, drove two regiments of the parlia- mentary forces from hence, with the loss of 500 men. Half a mile onwards to the west is Sion House, a nunnery founded in 1414, by Henry V. After the suppression of religious houses, it was granted by Edward VI. to the duke of Soirerset, who built a magnificent edifice on the site, now the property of the duke of Northumberland. Here Lady Jane Grey .resided, when she ac- cepted the offer of the crown.

BRENTUS, in zoology, a genus of insects ;

order coleoptera. Antennae moniliform, inserted beyond the middle of the snout; head projecting; snout cylindrical and long. Species eleven; found on the shores of the Atlantic.

BREQUIGNY (Lewis-George Oudard de Feudrix) was born in the country of Caux in 1715, and died in 1795. He became a member of the French Academy, and of that of inscriptions, and was sent to England to collect materials res- pecting the French history. Access was given him to the Tower records, and the British Museum, by which he was enabled to throw considerable light upon many important historical points. His principal works are ā 1 . A History of the Revolutions of Genoa, 3 vols. 12mo. 2. An edition of Strabo. 3. Lives of the Ancient Greek Orators, with a translation of several of their Discourses, 2 vols. 12mo. 4. Diplomata, Charts ad res Franciscas Spectantia, 4to. 5. Chronolo- gical Tables, Sec. 5 vols. folio. 6. Ordonnances des Rois de France de la Troisieme Race, 6 vols.

BREREWOOD (Edward), a very learned English mathematician and antiquary, the son of Robert Brerewood a tradesman, who was thrice mayor of Chester; was born in that city in 1565. He was educated in Chester ; and admitted, in 1581, of Brazen-nose College, Oxford. In 1596 he became the first professor of astronomy in Gresham College in London, where he led a very retired life. He died there of a fever, Nov. 4th 1613. He never published any tiling during his life, but after his death came out the following works. 1. De Ponderibus et Pretiis Veterum Nummorum. 2. Enquiries Touching the Diversi- ties of Languages and Religion through the chief parts of the World. 3. Elementa Logicse in Gratiam Studiosze Juventutis in Acad. Oxon. 4. Tractatus Quidam Logici. 5, 6. Two Treatises on the Sabbath. 7. Tractatus duo, Quorum Pri- mus est de Meteoris, Secundus de Oculo. 8. Commentarii in Ethica Aristotelis. 9. Patriarchal Government of the Ancient Church.

BRESCIA, the capital of the district Bres- ciano, an ancient and large city of Italy with a bishop's see and a good citadel. The cathedral is also a noble edifice of white stone. Brescia is seated on an agreeable plain on the river Garza, which runs through it. Its walls are also washed by the Mella on the west, and the Navilio on the east. It contains about 50,000 inhabitants. They manufacture silk, linen, and hardwares, and make oil from linseed. During the French domination in Italy, it formed the chief town of the department of the Mella. It has been re- markable for its calamities. It was burnt by the Goths in the year 412, and not long after was entirely ruined by Attila. Its re-construction did not take place till after the year 452. It passed subsequently under the dominion ,of the Lombards and the Emperors, and in A. D. 936 Otto I. declared it a free city of the empire. It soon after became a prey to the factions of the Guelphs and Gibellines. In 1478 and 1524 it was visited by a destructive pestilence ; in

1550 by the small-pox, which carried off 12,000 persons in the space of five months; in 1577 and 1630 by destructive epidemics; and on 18th August 1769 a dreadful explosion of gunpowder took

place, occasioned by the lightning falling on a magazine in the neighbourhood of the gate of St. Nazarro, which levelled several churches, and nearly eighty houses. It lies thirty miles south- east of Bergamo and 106 west of Venice.

BRESCIANO, a province of Italy formerly in the territory of Venice, now part of the Lom- bardo-Venetian Kingdom ; bounded on the north by the Grisons and the bishopric of Trent, on the east by the lake Garda, the Veronese, and the duchy of Mantua, on the south by Mantua and the Cremonese, and on the west by the Cre- masco, the Bergamasco, and the Valteline. It is watered by several rivers, which render it very fertile ; is full of towns and villages, and has not' less perhaps than 500,000 inhabitants. The townt of most note are Brescia, Breno, Chiari, Salo, and Verola-Alghise. The Brescian dialect of the Italian is considerably intermixed with French. Northward the country is mountainous, but in the south it is spread out in fertile plains, producing sometimes in one season, grain, flax, and millet. The great fertility has been attributed to the extent of irrigation, the rivers Chiese, Oglio, Mella, and Susa, intersecting the country in a variety of direc- tions, and branching out into canals. The inhabi- tants have also the character of being very indus- trious. The most celebrated production is the wine called the vino di santo, or vino santo, which, after the lapse of some years, becomes of a beau- tiful golden color, and acquires an exquisite taste. Here also are manufactures of earthen- ware, paper, iron, copper, and fire-arms, and considerable quantities of silk are procured. At Gardona, about ten miles from Brescia, is a can- non foundry, and fishing is here an important occupation. The sands of the Adda and Oglio are said to yield particles of gold. Near the lake of Iseo are found topazes and garnets, and at Trompia, in the same valley, extensive iron mines ; this part of the country likewise contains jasper, copper, alabaster, &c.

BRESILIA, in ornithology, a species of tana- gra, in the order of passeres.

BRESLAU, or BRESLAW, a small duchy of lower Silesia, in Germany, lying between those of Wohlaw, Oels, Brieg, Schwiednitz, and Lieg- nitz. It is every where level and flat ; is an excellent corn and pasture country, abounding with herds of cattle and flocks of sheep ; but destitute of wood, except in one district. Both the property and jurisdiction belong to the king of Prussia. It contains 950 square miles, and 178,000 inhabitants; being divided into the circles of Breslau, Namslau, and Neumarket.

BRESLAU, or BRESLAW, the chief town of the duchy, and of all Silesia, is

situated at the conflux of the Oder and Ohlau. It is divided into the new and old town ; and including the suburbs, is of great extent. It is a bishop's see, having many large re- gular squares, broad streets, and stately public and private edifices ; surrounded with walls and other fortifications, having six gates. There are twenty- six churches, besides convents belonging to the Catholics ; eight of the Lutheran, and one of the Calvinist persuasion. The cathedral church of St. John, containing seventeen chapels, is built on an island, outside of the town. The Jews have likewise two synagogues and a school, the bishop

a stately palace, and the Lutherans two gym- nasiums. The catholic university is a noble structure, and the exchange magnificent; the former was instituted by the emperor Leopold in 1702, and contains sometimes 400 students. This city is the next in rank to Berlin and Konigs- berg, and it much resembles the latter. Its trade and manufactures are very considerable. The staple article is linen ; but Turkish yarn, silk, printed cottons, calicoes, chintz, and woollen stuffs, are also largely dealt in. It was taken by Prussia in 1741, and retaken by the Austrians in 1757; but the king of Prussia recovered it again the same year, and gained a signal victory over the Auslrians at Leuthen, a village not far from the capital. It was again invested by the Austrians in 1760, and endured a three days bombardment. In December, 1806, it underwent another siege and bombardment by the Bavarians and their allies ; to whom, after the destruction of the entire suburbs, it was surrendered and capitulated on the 7th of the ensuing January. Breslaw is 130 miles east of Dresden, and 165 north of Vienna.

BRESSAY, or BRASSA, one of the Shetland islands about four miles long and two broad, lying to the east of the coast of Shetland. It consists of 366 merks of land, and has a good harbour in Brassy Sound, where Greenland whale ships and Dutch herring vessels rendezvous. On the north is a deep bay, called Aith's Voe: The island is appropriated to pasture, and the inha- bitants, who amount to several hundreds, are devoted to fishing and agriculture. Here are the remains of several chapels, and ancient forts. At the north entrance of the sound is a sunken rock, called the Unicorn, from a ship of that name, wrecked on it "about the year 1568.

BREST', n. s. in architecture. That member of a column, called also the torus, or tore.

BREST SUMMERS. The pieces in the outward parts of any timber building, and in the middle floors, into which the girders are framed.

BREST, a maritime town of France, in the department of Cape Finisterre, and ci-devant province of Brittany, seated on the declivity of a hill, on the side of its port, which is one of the best in Europe. One of its chief advantages is that vessels can leave it with almost any wind. It contains a noble naval arsenal and dock-yard, ā¢which the authorities are very jealous of exhibit- ing to strangers. The craggy and narrow entrance, into the port, called the Goulet, is guarded by a strong castle seated on a rock, which cannot be at- tempted on the sea side ; and is defended on the land side by a ditch and other fortifications. There are several sunken rocks near the entrance ; on the most dangerous of which, the Mingan, the Republican, a French ship of the line, was wrecked in 1794: foreign vessels, indeed, always require a pilot here. The streets of the town are narrow and ill-contrived, and the in- land trade is small. An attempt was made to seize Brest, in 1694, by a British fleet and army, under lord Berkley, who were repulsed after a desperate conflict, with the loss of 400 seamen, 200 soldiers, and the gallant general Talmache. But he more successfully managed to blockade tnis port during the greater part of that war. It is 48 leagues west of Rennes, and 41 west of Paris.

BRET, n. s. A fish of the turbot kind, also burt or brut.

BRET is a name given on the coasts of Lin- colnshire to the turbot, a fish extremely plentiful there, and taken in vast numbers. They are caught in a net, trailed by two horses, the one going up to the middle of his body in water, the other on shore.

BRETACHIˆ,, in writers of the middle ager denote wooden towers or castles, wherewith towns or camps were defended.

BRETAGNE, a ci-devant province of France, now formed into five departments, viz. North Coast, Finisterre, Hie and Vilaine, Lower Loire,, and Morbihan. See BRITTANY.

BRETESSE, in heraldry, denotes a line em- battled on both sides.

BRETEUIL, a town of France, in the depart- ment of the Lower Seine, seated on the river Iton, fifteen miles south-west of Evreux. Long. 1Ā° 0 E., lat. 48Ā° 56′ N.

BRETHREN, n. s. The plural of brother. See BROTHER.

All these sects are brethren to each other in faction, ignorance, iniquity, perverseness, pride. Swift.

BRETHREN AND CLERKS OF THE COMMON LIFE, a denomination assumed by a religious fra- ternity towards the end of the fifteenth century. They lived under the rule of St. Augustin, and were eminently useful in promoting the cause of religion and learning. Their society was first formed in the fourteenth century, by Gerard de Groote, a native of Deveuter ; but did not flourish till it obtained the approbation of the council of Constance. It became very respectable in Hoi land, the Lower Germany, and the adjacent pro- vinces. It was divided into two classes; the lettered brethren or clerks, and the illiterate: they lived in separate habitations, but maintained the closest fraternal union. The former applied to the study of polite literature, and the educa- tion of youth; whilst the latter were employed in manual labor, and the mechanic arts. They are frequently called Beghards and Lollards, by way of reproach.

BRETHREN AND SISTERS or THE FREE SPIRIT, in ecclesiastical history, an appellation assumed by a sect which sprang up towards the close of the thirteenth century, and gained many adhe- rents in Italy, France, and Germany. They took their denomination from the words of St. Paul, Rom. viii. 2, 14, and maintained that the true children of God were invested with perfect free- dom from the jurisdiction of the law. They were enthusiasts to a degree of distraction, both in their principles and practice. In their aspect, apparel, and manner of living, they resembled the Beghards, and were sometimes called after them. Some of their professed principles resem- bled those of the Pantheists ; for they held that all things flowed by emanation from God ; that rational souls were portions of the Deity ; that the universe was God ; and that, by the power of contemplation, they were united to the Deity, and acquired, hereby, a glorious and sublime liberty, both from the sinful lusts and the com- mon instincts of nature : hence they concluded, that the person, who was thus absorbed in the abyss of the Deity, became a part of the God-

Jiead, and was the son of God, in the same sense and manner that Christ was, and freed from the obligation of all laws human and divine. They treated with contempt Christian ordinances, and all external acts of religion, as unsuitable to the state of perfection at which they were arrived. Some of them were honest but deluded enthusi- asts; and endured the torments inflicted on them by the inquisitors with astonishing heroism and triumph. Others proceeded to the most extra- vagant licentiousness of

conduct, maintaining that the divine man, or believer, could not sin, let his conduct be ever so atrocious. Many edicts were published against them ; but, notwith- standing the severities they suffered, they con- tinued till about the middle of the fifteenth cen- tury. They were called by several names, such as Schwestriones, Picards, Adamites, and Tur- lupins.

BRETHREN, WHITE, fratres albati, were the followers of a priest from the Alps, about the beginning of the fourteenth century, who was ar- rayed in a white garment; and, as they were also clothed in white linen, they were distinguished by this title. Their leader carried about a cross, like a standard, and his apparent sanctity and devotion drew together a number of followers. This enthusiast practised many acts of mortifica- tion and penance, endeavoured to persuade the European nations to renew the holy war, and pretended that he was favored with divine vi- sions. Boniface IX. ordered him to be appre- hended and committed to the flames, upon which nis followers dispersed.

BRETON, CAPE, an island in the Atlantic Ocean, near the eastern continent of North America. It is separated from Nova Scotia by a narrow strait called Canso, and is about 100 miles in length, and fifty in average breadth. It is surrounded with little sharp- pointed rocks, separated from each other by the waves, above which some of their tops are visi- ble. All its harbours are open to the east turn- ing towards the south. On the other parts of the coast there are but a few anchoring places for small vessels, in creeks, or between islets. Except in the hill parts, the surface of the coun- try has but little solidity, being everywhere covered with a light moss and water. The dampness of the soil is exhaled in fogs, without rendering the air unwholesome. In other res- pects the climate is cold; owing either to the prodigious quantity of lakes, which cover above half the island, and remain long frozen, or to the number of forests, that totally intercept the rays of the sun ; which are also obscured by perpe- tual clouds.

Though some fishermen had long resorted to this island every summer, not above twenty or thirty had ever fixed there. The French, who took possession of it in August 1713, were pro- perly the first inhabitants. They changed its name into that of Isle Royale, and fixed upon fort Dauphin for their principal settlement. This harbour was two leagues in circumference. The ships came to the very shore, and were sheltered from winds. Forests, affording oak sufficient to fortify and build a large city, were near at hand; the ground appeared less

barren than in other parts, and the fish were more plentiful. The harbour might have been rendered impregnable at a trifling expense ; but the difficulty of approaching it (a circumstance that had at first made a stronger impression than the advantages resulting [from it) occasioned it to

be abandoned, after great labor had been bestowed upon the undertaking. They then turned their views to Louisbourg, the access to which was easier ; and convenience was thus pre- ferred to security : the fortification of Louisbourg, however, was not begun till 1720. In 1714 some fishermen, who till then had lived in New- foundland, settled in this island. It was ex- pected that their number would soon have been increased by the Acadians, who were at liberty, from the treaties that had been granted them, to remove with all their effects, and even to dispose of their estates; but these hopes were dis- appointed. The Acadians chose rather to re- tain their possessions under the dominion of Bri- tain, than to give them up for any precarious advantage they might derive from their attach- ment to France. Their place was supplied by some distressed adventurers from Europe, who came over, from time to time, to Cape Breton, and the number of inhabitants gradually increased to 4000. They were settled at Louisbourg, Fort Dauphin, Port Toulouse, Nerucka, and on all the coasts where they found a proper beach for drying the cod. The inhabitants never ap- plied themselves to agriculture, the soil being unfit for it. They often sowed corn, but it sel- dom came to maturity ; and when it did thrive so much as to be worth reaping, it had degene- rated so considerably, that it was not fit for seed next spring. They have only continued to plant a few pot-herbs, that are tolerably well tasted, but must be renewed every year from abroad. The poorness and scarcity of pastures have like- wise prevented the increase of cattle. In a word the soil of Cape Breton seemed calculated to invite none but fishermen and soldiers. Though the island was entirely covered with forests before it was inhabited, its woods have scarcely ever been an object of trade. A great quantity, how- ever, of soft wood was found there fit for firing, and some that might be used for timber; but the oak has always been scarce, and the fir never yielded much resin. The peltry trade was a very inconsiderable object. It consisted only in the skins of a few lynxes, elks, musk rats, wild cats> bears, otters, and foxes, both of a red and silver-gray color. Some of these were procured from a colony of Indians, who had settled on the island with the French, and never could raise more than sixty men able to bear arms. The rest came from St. John's or the neighbouring con- tinent. Greater advantages might possibly have been derived from the coal mines which abound in the island. They lie in a horizontal direction ; and, being only six or eight feet below the surface, may be worked without digging deep, or drain- ing off the waters. Notwithstanding the prodi- gious demand for this coal from New Engla from 1745 to 1749, these mines would prot have been forsaken had not the ships which wen sent out to the French islands wanted ballast. In one of these mines a fire has been kindled,

ā¢which could never yet be extinguished. The people of Cape Breton did not send'all their fish to Europe. They sent part of it to the French southern islands, on board twenty or twenty-five ships from seventy to 140 tons bur- den. Besides the cod, which made at least half their cargo, they exported to the other colonies timber, planks, thin oak boards, salted salmon and mackarel, train oil, and sea coal. These were paid for in sugar, coffee, and particularly in rum and molasses. The island could not con- sume all these commodities. Canada took off but a small part of the overplus; it was chiefly brought to the people of New England, who gave in exchange fruits, vegetables, wood, brick, and cattle. This trade of exchanging was allowed : but a smuggling trade, in flour and salt fish, was added to it.

is island, the key of Canada, was attacked by the English, in 1 745 ; and the event is of so singular a nature, that it deserves a particular detail. The plan of this first invasion was laid at Boston, and New England bore the expense of it. A merchant named Pepperel, who had excited, encouraged, and directed the enterprize, was entrusted with the command of an army of 6000 men, which had been levied for this expe- dition. Though these forces, convoyed by a squadron from Jamaica, brought the first news to Cape Breton of the danger that threatened it, and the advantage of a surprise would have secured the landing without opposition, the suc- cess of the undertaking was still precarious. These inexperienced troops stood in need of the assistance of some fortunate incident, with which they were indeed favored in a singular manner. The construction and repairs of the fortifications had always been left to the care of the garrison of Louisbourg, and the soldiers we.re eager to be employed in these works, as the means of pro- curing them a comfortable subsistence. But, obtaining no pay, they had lived in open rebel- lion for six months, when the British appeared before the place. This was the time to. concili- ate both parties, and to unite in the common cause. The soldiers made the first advances; but their commanders mistrusted a generosity of which they themselves were incapable. They believed that the soldiers were only desirous of sallying out, that they might have an opportunity of deserting ; and their own officers kept them in a manner prisoners, till a defence so ill managed had reduced them to the necessity of capitulating. The whole island shared the fate of Louisbourg, its only bulwark. This valuable possession, Ā»estored to France by the treaty of Aix-la-Cha- pelle, was again attacked by the British in 1758. On the 2d of June, a fleet of twenty-three ships of the line and eighteen frigates carrying 16,000 well-disciplined troops, anchored in Gabarus bay, within half a league of Louisbourg. As it ā¢was evident it would be to no purpose to land at a great distance, because it would be impossi- ble to bring up the artillery and other necessaries for a considerable siege, it had been attempted to render the landing impracticable near the town. In the prudent precautions that had been

taken, ihe besiegers saw the dangers and difficulties they had to expect; but, far from being deterred

by them, they had recourse to stratagem, an! while by extending their line they threatened and commanded the whole coast, they landed by force of arms at the creek of Cormorant. This place was naturally weak. The French had fortified it with a good parapet planted with can- non. Behind this rampart they had posted 2000 excellent soldiers and some Indians. In front they had made a close hedge with branches of trees, which would have been very difficult to penetrate, even if it had not been defended. This pallisade, which concealed all the prepara- tions for defence, appeared at a distance to be nothing more than a verdant plain ; and would have preserved the colony, had the assailants been suffered to complete their landing, and to advance with the confidence that they had but few obstacles to surmount. Had this been the case, overpowered at once by the fire of the artil- lery and the small arms, they must infallibly have perished on the shore or in the hurry of re- embarking, especially as the sea was then very rough; which would have defeated the whole project. But all the prudent precautions that had been taken by the French, were rendered abortive by their own impetuosity. The English had scarcely begun to move towards the shore, when their enemies, by their brisk and hasty fire at their boats, and still more by the premature removal of the boughs that masked the forces, (which they ought to have concealed), led them to guess at the danger they were going to run into. They immediately turned back, and saw no other place to effect their landing but a rock, which had been always deemed inaccessible. General Wolfe, though much taken up in re-embarking his troops, and sending off the boats, gave the signal to major Scott to repair thither. That officer immediately removed to the spot with his men. His own boat coming up first, and sinking at the very instant he was stepping out, he climbed up the rock alone. He hoped to meet with 100 of his men, who had been sent thither some time before. He found only ten. With these few, however, he gained the summit of the rock. Ten Indians and sixty Frenchmen killed two of his men, and mortally wounded three. In spite of his weakness he stood his ground under cover of ,'a thicket, till his brave countrymen, regardless of the boisterous waves and the fire of the cannon, came up to him, and put him in full possession of that important post, the only one that could secure their landing. The French, as soon as they saw that the enemy had got a firm footing on land, betook themselves to the only remaining refuge, and shut themselves up in Louisbourg. The fortifications were in a bad condition, because the sea sand, which they had been obliged to iise, is by no means fit for works of masonry. The revetments of the several cur- tains were entirely crumbled away. There was only onecasement,and a small magazine,that were bomb-proof. The garrison which was to defend the place consisted only of 2900 men.

Notwith- standing all these disadvantages, the besieged determined to make an obstinate resistance. They were confirmed in their resolution by the courage of a woman. Madame de Drucourt was continually upon the ramparts, with her purse ic

her hand; and firing herself three guns every day, seemed to dispute with the governor, her husband, the glory of his office. The besieged were not dismayed at the ill success of their several sallies, or the masterly operations concerted by admiral Boscawen and general Amherst. It was but at the eve of an assault, which it was im- possible to sustain, that they talked of surrender- ing. They made an honorable capitulation; and the conqueror showed the respect due to his brave enemies, and did not sully his glory by any act of barbarity or avarice. The possession was confirmed to Great Britain by the peace in 1763; since which, the fortifications have been blown up and the town of Louisbourg dismantled.

Cape Breton was considered to belong to Nova Scotia, in respect to matters of government, till the year 1784, when it was erected into a separate government, by the name of Sidney. It contains about 1000 inhabitants, who have a lieutenant-governor, appointed by the king. It lies between 45Ā° 28′ and 47Ā° N. lat. and 59Ā° 44′ and 61Ā° 29′ W. long., and is 135 miles east of Halifax.

BREVE, in law, is any writ directed to the chancellor, judges, sheriffs, or other officers, whereby a person is summoned, or attached, to answer in the king's court, &c.

BREVE, n. s. in music. A note or cha- racter of time, equivalent to two measures or minims. It is in the form of a diamond or square, without any tail.

BREVE DE RECTO, is a writ of right or licence, for a person ejected, to sue for the possession of the estate detained from him.

BREVE PERQUIRERE, the purchasing of a writ or licence for trial in the kings courts ; whence comes the present use of paying 6s. Qd. fine to the king in suit, for money due on bond, where the debt is Ā£40, and 105. where it is Ā£100, &c.

BREVET, Fr., denoted the grant of some favor or donation from the king ;

partly answering to our warrant, and partly to letters patent. It was particularly applied to the commission of a subaltern officer, being only written on parch- ment, and without seal.

BREVET RANK is a rank in the army higher than that for which pay is received. Also a term used to express general promotion, by which a given number of officers are raised from the rank of captain, upwards, without any additional pay, until they reach the rank of major-general; when, by a late regulation, they become entitled to a quarterly allowance.

BRE' VIARY, n. s.-\ French breviare ; Latin

BRE'VIATE, tbrevis, brevio,breviarium,

BRE'VIATURE, tlrevitas. An abridgment ;

BREV'ITY. Jan epitome; breviate, a

short compendium; the substance of something larger: breviature, an abbreviation: brevity is conciseness; shortness; contraction into few words. The book containing the daily service of the church of Rome is called a breviary.

Cresconius, au African bishop, has given us an abridgment, or breviary thereof. Ayliffe.

It is obvious to the shallowest discourse!, that the ā¢ā¢hole counsel of God, as far as it is incumbent for man to know, is comprised in one breviat of evange- lical titth. Decay of Piety.

Virgil, studying brevity, and having the command of his own language, could bring those words into a narrow compass, which a translator cannot render without circumlocutions. Dryden.

This argument is stated by St. John with his usual elegant brevity and simplicity ; ' Beloved, if God so loved us, we ought to love one another.' Porteus.

BREVIARY, BREVIARIUM, in Roman antiquity a book first introduced by Augustus, containing an account of the application of the public money.

BREVIARY, in the Romish church, is com- posed of matins, lauds, first, third, sixth, and ninth vespers, and the compline or post com- munio. It is general, and may be useful in all places; but on its model various others have been built, appropriated to dioceses, and different orders of religious. The institution of the bre- viary is not very ancient; there have been in-

serted in it the lives of the saints, full of ridicu- lous stories, which gave occasion to several re- formations of it, by various councils, particular- ly those of Trent and Cologn ; and by the popes, Pius V., Clement VIII., and Urban VIII.; and also by several cardinals and bishops, each lopping off some extravagancies, and bring- ing it much nearer to the simplicity of the primi- tive offices. Originally, every body was obliged to recite the breviary every day ; but by degrees the obligation was reduced to the clergy only, who were enjoined under penalty of mortal sin and ecclesiastical censures, to recite it at home, when they cannot attend in public. In the four- teenth century, there was particular reserve granted in favor of bishops, who were allowed on extraordinary occasions, to pass three days without rehearsing the breviary. The office was originally called cursus, and afterwards brevia- rum; which imports that the old office was abridged ; or rather, that this collection is a kind of abridgment of all the prayers. The breviaries now in use are innumerable; the difference between them consists principally in the number and order of psalms, hymns, paternosters, ave- maries, creeds, magnificates, &c. &c.

BREVIARY of the Greeks is the same in almost all churches and monasteries that follow the Greek rites ; the Greeks divide the psalter into twenty parts. In general, the Greek breviary consists of two parts; the one containing the office for the evening, the other that for the morning, divided into matins, lauds, first, third, sixth, and ninth vespers, and the compline ; that is, of seven different hours, on account of that saying of David, Septies in die laudem dixi tibi.

BREVIATOR, an officer under the eastern empire, whose business it was to write and trans- late briefs. At Rome those are styled breviators, 01 abbreviators, who dictate and draw up the pope's briefs.

BREVIBUS A ROTULIS LIBERANDIS, a writ to a sheriff, to deliver to his successor the county, with the appurtenances, and the rolls, writs, and other things belonging to his office.

BREVICORNIS, in entomology, a species of cerambyx : thorax green ; wing-cases obscure ; antennae short, and black. Found in Sierra Leone. Also a species of necydalis : head and thorax fuscous ; the wing-cases very minute ; an-

tennae, short and thick ; inhabiting Guinea. Also a species of cimex, of a

dull cupreous color : an- tennas, very short and compressed : the anterior thighs dentated. Also a species of tipula, of a black glossy color. A native of Europe. Also a species of monoculus, that inhabits marshes overflown by the sea : hairs of the tail very short. The antennae in the male are hooked, in the fe- male forked at the tips.

BREVI'ER, n. s. A particular size of letter used in printing ; so called, probably, from being originally used in printing a breviary.

BREVITY is particularly used in speaking of style or composition. It is by some called bra Ā«:hylogia and breviloquence ; sometimes laconis- ˆaus. Tacitus and Persius are remarkable for ilie brevity of their style. There are two kinds of brevity, one arising from dryness, poverty, and narrowness of genius ; the other from judg- ment and reflection ; which latter alone is lau- dable. Brevity is so essential to a tale, a song, an epigram, and a public speech, that without it they become dull. Rhetoricians make brevity one of the principal marks or conditions of elo- quence ; but the rules they prescribe for attaining it are difficult to apply, so as still to keep the due medium between too much and too little. It is the selection of comprehensive words which Quintilian admires so much in Sallust; and the imitation of which, by other writers, has caused so much obscurity.

BREVIUM CUSTOS. SeeCusjos.

BREUSCH, a river of France in the depart- ment of the Lower Rhine, and ci-devant province of Alsace. It divides into two branches, one of which receives the Mosley, and by means of a canal, four miles long, made by Louis XIV. runs into the 111 above Strasburg; the other runs through Strasburg, and falls into the 111 below it.

BREW , v. & n.\ Goth, brigga ; Dan. brig- BREW'AGE, I ge ; Swed. brigga; Ang.-

BREW'ER, v.Sax. briwan; Teut. and

BREW'EKY, C Belgic brawen ; Russ. barw ;

BREW'ING, 1 Welsh braga. The word

*BREW'STER. * seems to be cognate with the Saxon brug; Scotch and Irish brochan ; Welsh brwchan ; a farinaceous mixture. Fr. brasser ; barbarous Lat. bracho, braxo, may be from brae, barac, grain. The idea is mixture and fermentation. To infuse grain into water ; but more principally for the purpose of making fermented liquor. It is applied chiefly to mak- ing of beer, our forefathers tell us, by the simple ingredients of malt, hops, and pure water : in modern times it is quite another thing : there is*

scour, dress meat, and make the beds, and do all

myself. S/Mktpeare.

Take away these chalices ; go, brew me a pottle of

sack finely. /j.

Here is neither bush nor shrub to bear off any weather at all, and another storm brewing. Id.

When brewers mar their malt with water. Id.

Go, brew a pottle of sack finely.

With eggs, sir? ā

ā Simple of itself : I'll no pullet-sperm in my

brewage. Id.

A brewing of new beer set by old beer, maketh it

work again. Bacon.

We have drinks also brewed with several herbs,

and roots, and spices. Id.

Trial would be made of the like brew with potatoe

roots, or burr roots, or the pith of artichokes, which

are nourishing meats. Id.

In our brewhouses, bakehouses, and kitchens, are

made divers drinks, breads, and meats. Id.

Mercy guard me !

Hence with thy brewed enchantments, foul deceive.*

Milton.

I found it to be the most malicious and frantick surmise, and the most contrary to his nature, that, I think, had ever been brewed from the beginning of the world, howsoever countenanced by a libellous pamphlet of

a fugitive physician, even in print.

Wotton.

Or brew fierce tempests on the watery main

Or o'er the globe distil the kindly rain. Pope.

Men every day eat and drink, though I think no

man can demonstrate out of Euclid, or Apollonius,

that his baker, or brewer, or cook, has not conveyed

poison into his meat or drink. Tillotson.

*Why dost thou glory in thy strength of beer, Firm-cork'd, and mellow'd till the twentieth year, Brew'd, or when Phoebus warms the fleecy sign, Or when his languid rays in Scorpio shine. Gay. O where is wisdom, when, by this o'erpower'd, The state is censured, and the maid deflowered ? And wilt thou still, O squire ! brew ale so strong ? Hear, then, the dictates of prophetic song. Id^*

BREWER (Antony), a dramatic poet, who flou- rished in the reign of king Charles I. and ap- pears to have been held in high estimation by the wits of that time, as may be gathered from an elegant compliment paid to him in a poem called Steps to Parnassus, wherein he is supposed to have a magic power to call the muses to his as- sistance, and is even set on an equality with the immortal Shakspeare. There are great disputes as to the number of his works. Those which have been ascribed to him with any certainty are, 1. The Country Girl, a comedy. 2. The Love- sick King. And, 3. Lingua : respecting which Winstanly records a remarkable anecdote. He

an animal can explain what we mean, a kind of tells us, that, when this play was acted at Cam- tolerated unlicensed poisoner, called a brewer's " " " druggist. The verb is metaphorically applied to preparing or exciting civil commotions and plots ; to the raising any heating, boiling, com- mixture of the passions. Pope uses it as de- scriptive of the operations of nature in producing storm and tempest.

In all the town, n'as brewhouse ne taverne, That he ne visited with his solas, Ther as that any gaillard topstere was.

Chaucer's Canterbury Talet. I keep his house, and wash, wring, brew, bake,

bridge, Oliver Cromwell, then a youth, acted a part in it, and entered

warmly into the ideal cha- racter. The substance of the piece is a contention among the senses for a crown, which Lingua had laid for them to find. The part allotted to young Cromwell, was that of Tactus or Touch ; who, having obtained the contested coronet, makes this spirited declamation:

Roses and bays, pack hence ; this crown and robe My brows and body circles and invests : How gallantly it fits me ! sure the slave Measured my head who wrought this coronet, ā

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*They *.ie, that say complexions cannot change ! My blood's ennobled, and I am transformed Unto the sacred temper of a king. Methinks I hear my noble parasites Styling me C*sar, or Great Alexander, Licking my feet, &c.*

It is ascribing too much, however, to such a trifling circumstance, to suppose, as some have done, that this speech first fired Cromwell's soul with ambition, and excited him from the posses- sion of an imaginary crown to stretch his views to that of a real one.

BREWERIA, in botany, a genus of plants : class pentandria, order monogynia. Natural order campanaceae, Linn. Convolvulaceas, Juss. Br. CAL. five deep segments : COR. funnel- shaped, plaited : STYL. deeply divided : STIG.

capitate: CAP. two cells, valvular: SEEDS two i.i each cell. These are diffuse herbs, not milky; their leaves undivided ; flowers axillary, mostly solitary. They are all natives of New Holland, and are described by Mr. Brown.

BREWERS. ā There are companies of brewers in most capital cities ; that of London was in- corporated in 1427 by Henry VI. and that of Paris was still older. The brewers of Edin- burgh are not a corporation.

BREWERS-HAVEN, a good harbour at the north eno. of the island of Chiloe, on the coast of Chili, in South America, lying on the South Sea. The Dutch landed forces here in 1643, designing to get possession of some part of Chili ; but they were driven from thence by the Spaniards and the natives. Long. 82Ā° 0′ W.; lat. 42Ā° 0′ S.

BREWING.

BREWING, as we have already shown (see our article ALE), has from a remote period, and in various countries, been practised as a domestic art ;

sometimes conducted by the male, and at other times by the female, portion of the house- hold. The honor of its invention, indeed, has been assigned to an Egyptian lady. And in its domestic application to the supplying an English Family with the beverage of our forefathers, good ale, it has, in the article adverted to, engaged a considerable portion of our attention. We there observed that the brewing of all kinds of malt liquor is conducted by the same general process: the only difference in the results arising, in the first instance, from the different kinds of malt employed, the quantity of that essential article used ā and, we may here add, the scale upon which the operations are conducted. That is, the extensive consumption of malt liquor in this country, by the middling and poorer classes, has rendered ‘ the brewery,’ as it is called, especially in and about London, the most opulent, perhaps, of all trades; enormous capitals have been de- voted to its cultivation and monopoly ; and while this system has its evils, of which we shall be free to speak presently, it has on the other hand been the means of encouraging the application of science to every part of this process, and a far better beverage is thus doubtless produced to the public than could be brewed on any small scale. We here allude particularly to the brewing of porter, which has never succeeded in small establishments : and which, as brewed by all the respectable London houses, has for many years past very steadily retained its nutritious character and peculiar flavor. We shall endeavour in this paper to state, 1. The commercial history of this art, and its present state ; 2. The different kinds of grain employed in brewing; 3. The process of brewing porter more particularly ; and give, lastly, a practical description of a London porter brewery.

1. Of the commercial history of brewing. ā In the barley-country of Egypt we have found the first private brewers ; the keepers of taverns and places of public refreshment were without doubt the first brewers of malt liquors for sale ; among

our Anglo-Saxon ancestors we find a law forbid- ding a priest to eat or drink at ceapealethelum, or places where ale was sold ; Tindal ‘speaks of the ‘ dutie of the bruer to serve his brethren faith- fully;’ and Stowe, 1414, of one William Murle, a rich maultman, or bruer of Dunstable, who had his two horses traped with golde following him, and a pair of gilt spurs in his bosome; but the ‘ common brewer’ of the metropolis, and our large towns and their neighbourhoods, is an in- dividual of comparatively modern times. He is a wholesale beer-merchant, restricted by law from dealing in it by retail : and he divides the brewing of all beer sold with the brewing pub- lican. The latter class of brewers, very few of whom are found in London, amounted a short time since to about 24,000, while the com- mon brewers (not retailers) amounted to 1400 only in number. Yet the quantity of business conducted by the latter is far greater : the Lon- don brewers alone, it is said, holding at this time nearly one-third of the entire

brewing busi- ness of the whole country. And it is remarkable how greatly this business in the metropolis has been drawn of late into the hands of eight or ten gigantic capitalists. Within the Bills of Mor- tality thirty years ago, there were from forty to fifty public breweries carrying on a trade of from 10,000 to 100,000 barrels annually, on capitals of from Ā£30,000 to Ā£50,000 and upwards : the proprietors being persons of the highest respecta- bility, and more generally than at present the owners or mortgagees of the leases of public houses. Sometimes the leases of victualling houses contained a positive stipulation that the porter or ale drank in the house should be sup- plied by particular brewers. ā Exam, of C. Bar- clay, Esq. before the Committee of tlie House of Commons on the Police of the Metropolis.

We have lately seen a list of eighty-six Lon- don brewers who sent out 4000 barrels and upwards from May, 1786, to May 1787. It was the custom at that time to publish an annual account of the business done by the firs, twelve houses, none of whom sent out less than 30,000 barrels. Three or four years ago Mr. Barclay presented to the House of*

Commons an account of the quantity of beer brewed by the largest houses in the porter trade (including some that sent out but 6000 and 9000 barrels), who in 1807 amounted to eighteen; in 1813 to fifteen; in 1816 to four- teen. Latterly there have been but ten of these great houses, of whom the annual account is published. Yet these accounts compared prove that an increase of one-seventh more of the bu- siness of 1807 was executed in 1816 by the smaller number of firms.

In the neighbourhood of London, and in the country, several causes have contributed, during this period, to throw the leases of public-houses into the hands of brewers. The better state of the roads and means of conveyance have pro- longed all the first stages out of town : magis- trates have thought it incumbent on them to lessen the number of public-houses ; and those im- provements in the style of building have taken place on every line of road which have a natural tendency to abolish the small public-house, or pot house. Hence while the small breweries in London have been absorbed in the larger ones, the smaller public houses in the neighbourhood have also been merging themselves in the larger, and have become desirable as a property sanc- tioned by the laws of the land, and in many instances a property far beyond the means of the parties who usually enter into the business of a publican. It would not therefore, be dif- ficult to find twenty names, in London and its vicinity, who divide amongst them more than

one-half of the whole brewing business of England.

Such a change has, of course, added enor- mously to the pecuniary consideration and in- fluence of the large brewers of the metropolis, and to the extension of the monopoly of serving public houses in one particular direction princi- pally ; or to the concentration of the far larger part of the trade in the hands of a few over- whelming capitalists. That particular direction which the monopoly in question has taken in London, of late years, is to purchase the publican, not the public-house; and by means of the 'weight' which, according to the language of the Police Report, these gigantic firms obtain ' with the magistracy,' to influence the discretion hitherto vested in magistrates with regard to the granting of public-house licences. The London brewers have unequivocally disavowed any at- tempt at bribing or remunerating magistrates for their conduct in this respect, and have, per- haps, successfully rebutted the charge of any de- terioration in the article they brew, as com- pared with that of former years. That they possess, however, the influence in question, a Committee of the House of Commons has af- firmed there can be ' no doubt : ' the range of each house is as well understood in the London trade, and can be as little interfered with prac- tically, as a gentleman's manor ; plans of ground newly laid out for building, are said to be dili- gently taken, and forwarded to head-quarters, that a new public house in the regular interest r>f the district, may be duly planted, and that no diversion of interest may take place : here then is to be found the nucleus of the monopoly

system. The licences annually obey the myste- rious influence of the great houses, and all that part of the trade which is worth purchasing is bound to them by loans to the publican. The members of these firms then may truly declare that they take no leases of premises as hereto- fore, and wholly abstain from binding the puoli- can by written stipulations for supplying him with beer ; but Mr. Barclay admits that at least one-half of the number of houses in his trade are confined houses, (three-eighths by loan of mo- ney). Messrs. Whitbread's have but three-se- venths of their trade stated to be free, i. e. three- sevenths of the number of their houses, bad and good, profitable, doubtful, and unprofitable cus- tomers, taken together. Messrs. Truman and Hanbury about the same proportion. One ma- terial fact, however, does not appear in the evidence that furnishes us with these calculations, i. e. the quantity of business that is free. The fair presumption of the case is that these gentle- men do not lend their assistance to the profligate and idle, or on the least productive houses ; but to the industrious and attentive to business, and with some hope of a suitable return. But the statement given in evidence before the police committee numbers one house with another ; that which disposes of twenty butts per month, and that which disposes of two or three ; that to which it is reckoned prudent to afford a loan of Ā£2000 or Ā£3000 with that which pos- sesses a beer

licence (and therefore receives only a few barrels annually) to sell gin ! It is quite clear, from this view of the subject, that nineteen-twentieths of the business of these houses may be restricted to certain brewers by the loan of essential capital, while the given proportions of their literal number are correctly stated to be free.

The evils of this system have been long felt ; undue influence in many cases of granting valuable licences, and direct bribery in some, have been demonstrated to exist. Beer is an article of as great importance to the common people as cheese or butter, and but little inferior to that of bread. ‘ Of all the drinks known to man, the most suitable to those who labor ap- pears to be that which proceeds from grain malted. At any rate, it has always been in use in England, to the climate of which it is pecu- liarly adapted ; a climate not so cold as to re- quire ardent spirits ; and not so hot as to ren- der it at all difficult to keep beer for almost any length of time. There is, too, this great convenience : that liquor of various degrees of strength is to be drawn from the same material. The quantities may be large or small, suited to the means and the wants of the party. In short, it is the drink of the country.’ On various grounds some remedy for the system is doubtlessly required, and government, we know, is heartily disposed to remedy it. A late experiment, in the retail brewery bill, has been tried ; but must on the whole, be regarded as a failure. Few respec- table persons have embarked in the new brew- eries ; the monopoly system flourishes as vigor- ously as ever ; public-house property, as it is called, is as valuable. The fact is, that nothing short of affording new licences for public-houses

‘under due restrictions) will fairly open this trade ; and it should be rendered imperative on magistrates to grant them. For, of course, ā¢while the present influence over these respect- able parties remains, they will use their ‘ discre- tion’ accordingly : they will discourage the multiplication of public-houses just where they are not brought into the trade of a certain great house ; they will evince, as heretofore, a per- fectly calculable willingness to grant a licence where the right firm is to supply the beer con- sumed : and we cannot but remark of late, how invariably among the new buildings on the out- skirts of London, the new public-house takes its stand in trim array. It is always ready first ; opening its accommodating doors in unformed and unpaved streets ; and exhibiting the gilded name, perhaps, of some honorable member of the legislature, whose agent is duly planted there, kindly to anticipate the wants of the poor. Mr. Grey Bennett, we believe, projected an alteration of the kind suggested, in 1822 ; but the influence of the London brewery first com- pelled him to introduce a

clause, exempting ‘ the cities of London and Westminster;’ and, for the benefit of the member representing the same, we suppose, ‘ the borough of Southwark ; and the eastern half hundred of Brixton, in the county of Surrey :’ the great country brewers then very properly remonstrated on being selected as the only victims of the change, and the measure was quashed. The magnitude of the London brewing trade will appear by the fact, that in the year ending 5th July, 1823, the twelve prin- cipal porter, and the first six ale, brewers in London, paid to the excise for duties on strong beer Ā£706,038. 17s. 8d. ; add to this the table- beer duty, and those of malt and hops con- sumed, which will amount to as much more, and these eighteen houses will be found to have paid nearly a million and a half of money into the exchequer in twelve months, a fact unparal- leled, we presume, in any other business in the world.

2. Of the different kinds of grain used in brewing. ā Brewing, as conducted in this country, where it has been cultivated with the greatest success, is an art superinduced upon another, i.e. upon that of malting, and ordinarily means the conver- sion of malted barley into beer of some kind. But other grain has been used, malting and brewing are both subservient to the important operations of the distillery, and from grain un- malted (particularly barley) good beer has been brewed. We must refer to the articles DISTIL- LATION and MALTING for what is peculiar to those processes.

Unmalted barley was recommended as an in- gredient in the vinous fermentation, or to be used mixed with malt, by Dr. Irvine, so far back as 1785 : and Dr. Thomson of Edinburgh, perhaps the most philosophical writer on this subject, has lately adopted the general reasoning of Dr. Irvine. The latter observes, that not only is saccharine matter susceptible of fermen- tation, but the farinaceous and mucilaginous parts of vegetables also contribute in producing this effect. In their pure state they can neither be changed into vinous liquors nor into vinegar ;

but, when combined with a small portion of sweet matter, they all ferment together, and may either change wholly into vinous liquor, or wholly into vinegar, according to the proportion of saccharine matter combined with them. If the latter greatly predominates, the farinaceous parts are entirely changed into the same vinous fluid with the sweet part ; if the quantity is very small, the whole becomes vinegar, and has little appearance of ever having been in the vinous state. Thus a quantity of meal from wheat, barley, or oats, whose greatest part is farinace ous, when mixed with a portion of saccharine matter, falls into the vinous fermentation, and the quantity of inebriating spirit produced is much greater than the saccharine matter alone would have afforded. Certainly, however, con- tinues he, the powers of vegetable life are no way concerned, or necessary to it. It is not

during the growth only of the seed that this change can be effected ; but a quantity of the sweet matter produced by the growth of the seed, mixed with a quantity of the same seed ground into powder, and the whole mixed with a proper quantity of water, will all become sweet, and fall afterwards into the vinous fer- mentation, and be changed into spirit in the same manner as if the whole had been previously altered by the vegetation of the seed. Were it not for this property of the farina, great loss would be frequently sustained by the farmers in unfavorable seasons ; grain that has once begun to grow, and whose vegetation has been stop- ped, can never be made to grow again. Such grain can never undergo any farther malting ; when grain has been made to grow in this im- proper manner, it can hardly be supposed that the change into saccharine matter is perfect or complete. It therefore would be less proper for the vinous fermentation, and would furnish a smaller quantity of spirit than grain which had been perfectly malted. This grain, however, when mixed with a quantity of perfect malt, and fermented, furnishes as much spirit as if the whole had been in the state of malt. The per- sons in this trade even prefer it to an equal quantity of malt; for, in good seasons, when no such half malted or half spoiled grain can be got, they take good grain, reduce it to meal, and mix it with their malt, and are satisfied that they obtain more spirits in this way than from an equal quantity of good malt.

' The writer of this article,' says Dr. Thom- son, in the supplement to the Encyclopaedia Britannica, 'has several times tried the experi- ment of making ale from unmalted barley, and found it perfectly practicable. Several precau- tions, however, are necessary in order to succeed. The water let upon the ground barley in the mash-tun must be considerably below the boil- ing temperature. For barley meal is much more apt to set than malt, that is, to form a stiff paste, from which no wort will separate. The addi- tion of a portion of the chaff of oats serves very much to prevent this setting of the goods, and facilitates considerably the separation of the wort. Care must likewise be taken to prevent the heat from escaping during the mashing, and the mashing must be continued longer than usual

B R E W I N G.

For it is during the mashing that the starch of the barley is converted into a saccharine matter. This change seems to be owing mernly to the chemical combination of a portion of water with the starch of the barley ; just as happens when common starch is converted into sugar, by boil- ing it with very dilute sulphuric acid, or any other acid. This method of brewing from raw grain answers admirably for small beer. In our trials, he adds, the raw barley did not answer so well for making strong ale as for small beer. The ale was perfectly transparent, and we kept it for several years without its running into acidity. But it had a peculiar flavor by no means agree- able.

Probably a little practice might have en- abled us to get rid of this flavor, in which case, raw grain would answer, in every respect, as well for brewing as malt does.' He further states, that some years ago it was used to a considerable extent by several brewers of small beer in Edinburgh, and their beer was consider- ed as greatly preferable to small beer brewed in the usual manner. But the practice was stopped by a decision of the Court of Exchequer.

The malt distiller always adds to the malted grain, which he ferments, a certain quantity of unmalted corn, nearly ground to powder, and the proportion of unmalted corn has even been gradually so much increased, as to exceed con- siderably that of the malted grain. This mixture ground to meal is infused with water at a heat considerably lower than that of the water used by the brewers, and much more agitation is re- sorted to, to mix it completely. The wort is drawn off and cooled in the usual way, and fresh water poured on to exhaust the grain. When the wort is formed it is not so transparent as that from rnalt, but its taste is nearly as sweet. It would appear, therefore, as Dr. Irvine sup- poses, that the starch in the raw grain under- goes a certain change during the mashing, and is brought towards the state of saccharine matter gradually, but completely at last.

Far greater facility, however, certainly attends the using of malt alone : the old and rooted opinion is, that the complete germination of the barley in malting is indispensably necessary to fermentation ; and the legislature, we see, is de- terminately hostile to any mixture ot unmalted grain, as opening a door to fraud on the revenue. We therefore return to the consideration of the present practice, only observing that here, as in the numerous other restrictions upon the ma- nufactures connected with the excise laws, is another proof df the wretched policy of excessive taxation.

As well aj Barley, wheat, Indian corn, and oats, as we have intimated in a previous article, have been malted ; and it is remarkable that when the seeds of the zea mais, or Indian corn, are used for brewing in America, they prepare it by an actual burial in the earth, to revive the germination to a certain stage in the natural way : when it is dug up and kiln-dried after the man-

ner of malt. See Philosophical Transactions, XII. 1065.

The hordeum vulgare, or barley generally cul- tivated in England and the south of Scotland, has become, principally from its use in the brewery, the most valuable grain of the country, with the exception of wheat. The Scotch bar- ley (hordeum hexastichum), called bear and big, is evidently of the same species, but a more hardy plant, and less kindly for malting. While the grains of barley are much larger, the skin which covers them is thinner,

and this skin or cuticle is wholly unprofitable to the maltster and brewer. The thickness of it is said to vary ac- cording to the heat of the climate in which it is cultivated, being always thinner in the warmer climate. Thus the cuticle of the Isle of Thanet barley is thinner than that of Norfolk barley, and that of Norfolk barley thinner than that of Berwickshire and Scotland. But if Norfolk barley be sown in Scotland for several suc- cessive years, its cuticle is said to become thicker.

The specific gravity of barley has been found in 100 different trials, to vary from 1-333 to 1-250, and that of big from 1-265 to 1-227. The average weight of a Winchester bushel of barley is 50- 7 Ibs. avoirdupois, and the average weight of a bushel of big 46-383 Ibs. The heaviest weighing about 52-265 Ibs. per bushel, and the heaviest big 48-586 Ibs. The average weight of a grain of barley is 0-6688 grain, or very nearly two-thirds of a grain ; the average weight of a grain of big 0-5613 grain. The average length of a grain of barley, from many thousand mea- surements, 0-345 inch, and that of a grain of big 0-3245 inch. ' So that the average of both,' says an able contemporary, ' would give us very nearly the third of an inch, which it ought to do, according to the origin of our measures, as com- monly stated.'

The celebrated Einhoft having carefully ana- lysed the barley-kernel, found in 3840 parts

Of Volatile matter , . 430 Husk or cuticle . . 720 Meal 2690

3840

From 3840 parts of barley-meal, he obtained :

Volatile matter 360

Albumen 44

Saccharine matter 200

Mucilage 176

Phosphate of lime with mucilage, 9

Gluten 135

Husk, with some gluten and starch, 260 Starch, not quite free from gluten, 2580 Loss 76

3840

We are indebted to Dr. Thomson's own able investigations of this subject for_ the following table :

BREWING.

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PROPERTIES OF ENGLISH BARLEY AND SCOTCH BIG COMPARED.

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Dr. Thomson was, with Drs. Hope and Co- ventry, of Edinburgh, commissioned by govern- ment, a few years since, to investigate the relative qualities of the Scotch and English barley.

Having traced the brewing of ALE (see that article) through its different stages, we proceed here to treat

3. Oftheprocess of the London Porter Brewery. ā Porter brewing has its five successive stages of grinding, or bruising the malt, mashing, boiling, cooling, fermenting, and cleansing ; dif- fering in no respect from those of ale, except in the coloring matter employed, and the largeness of the scale on which it is generally conducted. The origin of this beverage, which has been pronounced by scientific men ‘ the most perfect of all malt liquors,’ is thus given by the editor of the Picture of London : ‘ Prior to the year 1722 the malt liquors in general use were ale, beer, and twopenny, and it was customary for the drinkers of malt liquor to call for a pint or tankard of half-and-half, i. e. half of ale and half of beer ; half of ale and half of twopenny ; or half of beer and half of twopenny. In course of time it also became the practice to call for a pint or tankard of three threads, meaning a third of ale, beer, and twopenny, and thus the publican had the trouble to go to three casks, and turn three cocks for a pint of liquor. To avoid this trouble and waste, a brewer of the iiame of Harwood, conceived the idea of making a liquor which should partake of the united flavors of ale, beer, and twopenny. He did so, and succeeded, calling it entire, or entire butt beer, meaning that it was drawn entirely from one cask or butt, and, being a hearty nourishing liquor, it was very suitable for porters and other working people. Hence it obtained its name of porter.’

At one time brown or highly-dried malt only was used in the porter brewery, for the sake of giving the liquor both color and flavor; but malt highly dried being found to contain, from that circumstance, less saccharine or fermentable matter, the paler malt of Hertfordshire has been of late years used, and a patent coloring made from malt and water, or a very dark patent rnalt, mashed in small quantities, has been added, to give

the porter hue. But the pro- portion of pale and brown malt used in different houses varies. One of the best brewers in London uses nearly two parts pale malt, and one part brown.

Mr. Combrune has thus exhibited the changes of color malt undergoes at different tempera- tures.

Degrees of heat, Fah.

124 Cream colored malt.

129 Light yellow do.

134 Amber color do.

138 High amber color.

1 43 Pale brown do.

152 High brown do.

157 Brown, inclining to black.

162 High brown, speckled with black.

167 Blackish brown.

171 Color of burnt coffee.

176 Black malt.

This table is perhaps not much to be depended on, as the experiments were made in an earthen- ware pan, placed over a charcoal fire, in which a thermometer was placed half way between the upper surface of the malt and the bottom of the pan; when it is clear that the bottom of the pan must have possessed a much higher tem- perature than that part of the malt where the thermometer was fixed, and by the stirring of the malt, the whole must have been gradually brought into contact with the heated pan. But Dr. Thomson astonishes us by the assertion, that he has ‘ taken malt dried at the temperature of 175Ā°, put it into a garden-pot filled with soil, and seen it vegetate apparently as well as raw grain placed in the same situation. It is quite clear that the grain in question was not malted perfectly ; the operation of the kiln being known to stop vegetation, which in good malt, as we understand the matter, was never yet renewed.

The first operation of the brewery upon a large scale is the proper grinding or rather splitting up of the malt ; for it is to be made into a coarse grit,

and not into a powder. This is effected by introducing the malt between mill- stones, in the manner in which corn is ground, but the stones are set to a greater distance so as not to crush the grain fine, while at the same time they do not permit the smaller grains to escape without being crushed. To prevent this, the ground malt is made to pass through a screen, which separates the uncut grains, and these are broken by being introduced between a pair of iron cylinders. Sometimes the malt is altogether crushed between cylinders, and in this case it is impossible that any grains can escape unbroken. The cuticle of the grain is thus rendered pervious to the water, and the pressure of the cylinder compresses the flour so as to prevent the water from acting on it readily in mashing.

Some breweries use a steel mill, similar to those used for coffee grinding ; a mill of this sort ten or twelve inches in diameter, performing 150 revolutions in a minute, will grind six or eight quarters of malt per hour. It cuts the grains in the same manner as the mill-stones ; but the malt passing very quickly through the steel mill, the divided parts of the corn are not rubbed to flour, as between the mill-stones. The malt being ground it is suffered to lie for some time in a bin, or cool room, to mellow, as it is called. Brown malt is suffered to mellow from three to four or five days, before it is used, but pale malt only one or two days. Grist thus exposed to the air, it is said, requires less mashing, and the strength of the raalt is more perfectly obtained.

Mashing in the large way, is performed in a circular wooden, or cast-iron vessel, called the mash tun, shallow in proportion to its extent, and furnished with a false bottom, perforated with holes. Between the real and false bottom are two side openings, which are generally a few inches asunder, to one is fixed a pipe, for the purpose of conveying hot water into the tun, and to the other another for drawing the liquor out of it. By this means the water rises up through the grist until a proper quantity is introduced,

when the mashing begins. This sometimes is performed by long oars, poles, or iron rakes, mingling the fluid with the farinaceous matter, until they are completely incorporated : but the scale on which the London breweries are con- ducted has long rendered obsolete all these ma- nipular contrivances, and introduced regular mashing machines. A strong iron screw fixed in the centre of the mash tun is furnished with radii (two or more), also of iron, and armed with vertical iron spikes or teeth, a few inches asunder, in the manner of a double comb. Horses, or a steam-engine, furnish the moving

power. The iron radii, which at first rest on the false bottom, are made slowly to revolve upon the central screw, in consequence of which, in proportion as they revolve, they also ascend through the contents of the tun to the surface ; then, in- verting the circular method, they descend again in the course of a few revolutions to the bottom, mingling in their alternate motions, the grist and the water. After mashing, the tun is generally covered to prevent the escape of heat, and the whole remains xintouched, until the insoluble parts separate from the liquor: the drawing- off-pipe is then opened, and the clear liquor runs away.

We need not occupy this part of our work with a repetition of the cautions given on the subject of mashing in the article already often adverted to, on ALE : but only rem ark here, that this liquor, or wort, as it is now called, of the first mashing, being always by far the richest in saccharine will require and reward the greatest care in obtaining it. To do justice to the malt, a second and even a third mashing is taken ; and in some breweries the water employed for the last is simply made to penetrate through the grist by means of a broad shute, of a triangular form, narrow under the cock of the copper, and spreading from ten to fifteen feet wide over the mash tun edge, so as to throw the water over the mash lightly. Thus the mashed grist is very little disturbed, and the water applied drives before it the infusion of the second mash, con- tained in the grist, through the mash, until, by occupying its space, it extracts a greater strength from the malt, than the ordinary mode of mashing would. The gravity of the worts must regulate, of course, the quantity of liquor employed (for technically all water is liquor in the brewhouse) so as to retain the average den- sity of the two or three worts taken together, ac- cording to the length or quantity of beer intended to be brewed. Mashing thus conducted by ma- chinery, generally is completed in about from thirty to forty-five minutes. The temperature and gravities in respectable establishments are care- fully noted at stated times in the brewing-book. Cloudy worts indicate a too high temperature. If the heat of the water is not above 185Ā°, there is nothing to fear ; in practice, however, it seldom exceeds 160Ā° or 170Ā°. At 198Ā° most worts are cloudy. See ALE. In regard to porter brewing, it may be observed, that the higher the color of the malt, the loss is its tendency to set, because high dried malt contains a less portion of unde- composed starch than pale or amber malt ; of course we may mash with water of ;\ higher tem-

perature. Though it has often been discussed, it seems practically of little consequence, whether rain, river, or spring water, be employed in the larger brewing operations. Mr. Accum analysed that used by Messrs. Truman and Co. and found it to possess all the characters of pump water ; the reader, as he says, need not be reminded that the beer brewed at that establishment is inferior to none.

For heating the water and boiling the wort, large establishments use a copper crowned with a hemispherical dome; surrounded by a pan which will contain a succeeding wort, or the water for a succeeding mash. The liquor is ge- nerally boiled by steam in the following way : ā From the centre of the dome rises a perpendi- cular pipe, and from the upper extremity of this pipe four inclined pipes descend, the lower ex- tremities of which terminate near the bottom of the pan, and consequently in the water or wort contained therein. By this contrivance, the steam which rises from the copper must bubble up through the fluid in the pan, and speedily heat it. The advantages of this contrivance are, that, the instant the copper is emptied, a fresh supply of fluid can be let in to cover the bottom of it, in order to prevent the intense heat of the fire in- juring the vessel; while the successive fluids are heated by one fire.

As to hopping, we need only here observe, that the quantity of hops is regulated by the strength of the wort, and the time the beer is in- tended to keep. Generally from 1Ā£ to Iflb. or even 2 Ibs. of hops are boiled with every bushel of malt ; but, for strong ale or porter, the quan- tity is sometimes higher. After the first boiling with hops, the liquor is let off, and the wort is conveyed into the jack or hop-back, furnished generally with a cast-iron floor full of holes, so as to drain the wort from the hops. Then those left in the jack-back are filled, by men, into tubs, which are drawn up by a tackle worked by the engine, and again boiled in the copper with the second and third worts. Sometimes an axis passes perpendicularly through the copper, fur- nished at the end with horizontal arms, from which chains are suspended in loops, and which stir up the hops at the bottom of the copper when the axis is made to revolve. This appa- ratus is called a rowser. The following table, extracted from Mr. Richardson's work on the use of the Saccharometer, exhibits the quantity of wort imbibed in boiling by different quantities of hops : ā

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Hops Wort

flops Wort

Hops Wort

used, imbib.

used, imbib.

used, imbib.

used, imbib.

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30 . 0-50

400 . 6‘66

2 . . 0-03

12 . . 0-19

40 . 0-66

500 . 8-33

3 . . 0-05

13 . . 0-21

50 . 0-83

600 . 10-00

4 . . 0-06

14 . . 0-22

60 . I’OO

700 . 11-66

5 . . 0-08

15 . . 0-24

70 . M6

800 . 13-33

6 . . O’lO

16 . . 0-26

80 . 1-33

900 . 15-00

7 . . 0-11

17 . . 0-27

90 . 1-50

1000 . 16-66

8 . . 0-13

18 . . 0-29

100 .1-66

2000 . 33-30

9 . . 0-15

19 . . 0-31

200 . 3-33

3000 . 50-00

10 . . 0-16

20 . . 0-33

300 . 5-00

4000 . 66-66

brown color.

Cooling, of course, is a process of great impor- tance, and must be conducted on a scale propor- tionate to our other operations. Nothing yet has been found to supersede the use of large shallow wooden troughs or floors, edged with a wooden ledge, and water-tight ; the most exposed situa- tion that the premises will afford being chosen, so that a free current of air may at all seasons be brought over them. To perform it expeditiously, so that the taint of foxing may not ensue in this process, the wort should only be laid at such a depth in the coolers, as will allow it to cool in about seven or eight hours to sixty degrees, which, generally speaking, is about

the average temperature for pitching or setting to work. To effect this, in summer, the wort should certainly not be laid at a greater depth than one, two, or three inches ; in winter, it may be as deep as five inches. The evaporation that results, on the liquor being conveyed into the coolers, is a great object of the scientific brewer's attention.

On the still more important point of fermenta- tion, we have little to add to our previous re- marks. In the brewing of porter, which is generally intended to be full bodied (hard), the fermentation must be suffered to proceed slowly, as far as it is consistent with the richness of the wort ; if the beer is intended to be rather brisk, the fermentation is the sooner stopped. Ordi- narily ale and porter, of which the specific gra- vity of the wort amounts to 17'25 Ibs. per barrel, or 18 Ibs. per barrel, requires the fermenting process to be stopped when the specific gravity is reduced to 7, 8, or 9 Ibs. per barrel: but scarcely any general rules can here be given. The diminution of the specific gravity is, in some breweries, suffered to proceed to a much greater extent than in others : observation must be directed to the head of the yeast. When the fermentation is brisk, it soon begins to turn of a compact brown color, and becomes rapidly more colored and dense, so that it would fall back into the beer ; at this period the fermentation is nearly finished.

' During the process of fermentation,' says an able chemist, ' a large quantity of carbonic acid gas is disengaged ; the noxious effect of this gas has been long known, it produces suffocation when taken in tne lungs. Being heavier than the air of the atmosphere, it floats on the surface of the fermenting fluid, and occupies, when it overflows the vessel, the lowest parts of the place in which fermentation is carried on. This gas appears to be the only product of fermentation to which we are indebted for all the remarkable changes by which the sweet or saccharine matter of the wort is converted into a vinous fluid. The superfluous carbon of the sweet substance, and a portion of the oxygen, combine to create it, while the balance of principles which remain, becomes capable of generating the ardent spirit, or alcohol. It is, therefore, a necessary conse- quence of the process, of fermentation, but it is not equally necessary that it should be disen- gaged and separated from the beer, for a large portion of it remains combined with it. It holds a portion of alcohol, in a state either of mixture or combination, of which the true chemical nature has not been well ascertained. This is a question of some difficulty, as well as of importance in a

chemical point of view, but as yet no experiments have been suggested capable of setting it at rest.' Dr. Thomson complains of the difficulty of ascertaining with accuracy the strength of the worts in the London brewery. In some breweries, as in that of Messrs. Barclay and Perkins, there are

three separate mash-tuns. In others, the custom is to mash one kind of malt the first day, another the second,and a third kind the third day. The first day's wort is put into the fermenting vessel, and mixed with yeast ; and the other two worts are added to it as they are formed successively. Their strength therefore, could only be ascertained by knowing the quantity of wort from each malt, and its spe- cific gravity when let into the fermenting vessel. After, in this way, examining the porter wort in the principal breweries in London, he says the average specific gravity of brown-stout wort is 1-0624. The wort of the best common porter is of the specific gravity 1-0535; that of the worst or weakest is as low as 1'0374. The average specific gravity deduced from twenty brewings, was 1-0500. Such wort contains about 46'4 Ibs. per barrel of saccharine matter. Judging from the taste of some of the worts, quassia, says Dr. T. seems to be employed in considerable quantity by some of the brewers, and much more sparingly, if at all, by others. The fermentation of porter is carried on with considerable rapidity, so that it is over in two or three days. The specific gravity of the porter is usually brought down to T013 or 1-017. That of the best brown-stout, after stand- ing some months in the bottle, is 1'0106.

We know of nothing that distinguishes the mode of cleansing porter from that of cleansing ale, except, perhaps, better mechanical contri- vances, according to the size of the breweries. In some breweries, the method of cleansing beer by means of large barrels or rounds, is practised throughout the year. Sometimes it is stored in casks, which are bunged up and removed into the storehouse, but daily examined, and occasionally allowed a little vent, especially in warm weather ; or the beer is pumped into a cistern, and from thence into the store-vats, which are from eight- teen to forty feet in diameter, and from eight- teen to twenty feet high ; they will frequently hold from 5,000 to 6,000 barrels. Large arched vaults, built of stone, and lined with stucco, have been, at some establishments, adopted for storing the beer. These contribute greatly to the ame- lioration of the beer by age, in consequence of the uniform temperature which fluids in such masses preserve. These vats are always placed in the coolest part of the establishment; are made air-tight, and furnished with safety valves, excellent piping, cocks, &c.

For the use of the saccharometer in brewing, see SACCHAROMETER ; and for finings, see ALE.

By 4 Geo. IV. persons are allowed to retail beer of a quality inferior to London porter but superior to that called table beer, thus enabling the poorer classes to purchase a nutritious beverage without exposing them to the dangerous attractions of a common ale-house. Entry must be made of the brewhouse in the excise books, that the officers may visit at stated periods ; and persons mixing deleterious drugs in the beverage they brew

are liable to a penalty of Ā£200. Those brewers who send out a quantity exceeding three gallons, are

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BREWING.

529

required to brand the strength and quantity on the cask, which affords an additional protection to tlie purchaser as well as to the excise.

Within the bills of mortality, every oarrel of beer is to contain thirty-six gallons, according to the new standard ale quart kept in the Exchequer ; and every barrel of ale thirty-two gallons. 12 Chas. II. c. 53 ; 1 Will. & Mary, ses. I.e. 24, &c.

Out of the said limits, every barrel of beer or ale, whether strong or small, is to contain thirty- four gallons, according to the aforementioned standard. 1 William and Mary, ses. 1. c. 24.

*The adulterating strong beer, porter, or ale, with small beer, is prohibited by law, since both the revenue and the public suffer by it. The revenue suffers, because a larger quantity of beer is sold as strong beer ; that is, at a price exceed- ing the price of table beer, without the strong beer duty being paid. In the next place, the brewer suffers, because the retailer gets table or mild beer, and retails it as strong beer. The fol- lowing are the words of the Act, prohibiting the brewers mixing table beer with strong beer : ā * if any common brewer shall mix, or suffer to be mixed, any strong beer, or strong worts with table beer or table worts, or with water in any guile or fermenting tun after the declaration of the quantity of such guile shall have been made ; or if he shall at any time mix, or suffer to be mixed, strong beer or strong worts with table beer worts or with water, in any vat, cask, tub, measures, or utensil, not being an entered guile or fermenting tun, he shall forfeit Ā£200.*

‘ If any common or other brewer, inn-keeper, victualler, or retailer of beer or ale shall mix, or suffer to be mixed, any strong beer, or ale worts, with table beer worts, or water, in any tub or measure, he shall forfeit Ā£50.’ The difference between strong and table beer, is thus settled by Parliament. ‘ All beer or ale above the price of eighteen shillings per barrel, exclusive of ale duties now payable (viz. ten shillings per barrel), or that may be hereafter payable in respect there- of, shall be deemed strong beer or ale ; and all beer of the price of eighteen shillings the barrel or under, exclusive

of the duty payable (viz. two , shillings por barrel) in respect thereof shall be deemed t: hie beer within the meaning of this and all other Acts now in force, or that may hereafter be passed in relation to beer or ale or any duties thereon.' 59 Geo. III. c. 53, sect. 25.

The gross annual receipt, in money, received by the Excise for beer brewed, and malt and hops, in the united kingdom for the year ending 5th Jan. 1820, amounted to Ā£5,997,216. 3s.

IX ENGLAND. Ā£ s.

The Excise for beer . . . 2,924,260 13

Ditto for malt 1,204,549 9

Ditto ditto temporary tax, 43

Geo. III. c. 81 . . . 967 15

Ditto ditto annual additional

duty, commenced Mar. 26 898,364 15 Ditto ditto old, commenced

June 24 512,076 8

Ditto ditto old, commenced

July 5 46,289 10

IN SCOTLAND.

The Excise for beer 82,471 3 4J

Ditto for malt 86,0 .“J 11 2J

Ditto ditto, terminating July 23,

1817 17,853 11 3|

Ditto ditto, Nov. 25, 1819 . 29,347 18 11

Ditto ditto, July 5, 1820 . . 3,403 7 5

Total

Ā£219,105 12 2J

VOL. IV.

Total

Ā£5,586,508 13

IN IRELAND.

The excise for malt . . . 191,601 18 6Ā£ We come now to give, lastly, A practical description of a London Brewery, ā In doing which, we shall suppose our reader again to travel with us through the principal operations. Fig. 1, 2, BREWING, plate I, is the elevation and bottom of the mash tun, formed of cast iron or vertical staves bound by iron hoops. It has a false bottom, a few inches above the real bottom, pierced, as we have described, with a number of small holes, to admit the liquor, but retain the malt. The liquor is brought by a pipe into the tun beneath the false bottom, and forces its way up through the goods. Fig. 1. Shows the elevation of it; as also the un- derback beneath ; one half of the tun being represented in section, to show the machine within it. A A, fig. 1, is the level of the stage or floor in which the mash tun is placed. BB B B is the tun, formed of a number of pannels of cast iron plates screwed together. The dis- position of these in the bottom is shown by the plans in fig. 2. The tun is supported upon eight cast-iron columns, D D, which are united at the upper ends by an iron framing E, which con- fines them in a vertical position, and connects them with a central column F, shown by dotted lines in fig. 1, at the upper end, This is cast hollow, to form the continuation of a pipe G, which brings the liquor into the tun from the copper. This pipe has also another branch, H, conveying the liquor up into the tun, beneath the false bottom I, which is the only part of this machine made of wood. In the centre of the tun a vertical axis, K, is set up and turned round by wheelwork communicating with the upper end of it. Upon this axis are two bevelled wheels, a and b, giving motion to the mashing engine. These wheels turn two horizontal axes L, M, extending from the centre to the circumference of the tun. The former has four wheels upon it, over which pass four endless chains, which also pass round wheels upon a horizontal axis, N, near" the bottom of the tun. Upon the endless chain, cross pieces of iron, d, are fixed ; and these have teeth in them, which, as the chains revolve by the action of the wheel b, raise up the malt from the bottom of the tun to the top of the mass of malt. That this stirring may be performed in all parts of the tun, the frame containing the axes L, M, N, has a progressive motion round the tun by the following means : On the kirb or upper edge of the tun is a ring of teeth () O, shown in the plan. These are engaged by cm endless screw, which is mounted in a frame P, and shown in perspective in fig. 3. This screw has a rotatory motion, given it by a wheel Q on the extreme end of the axis M, which turns

pinions d, e, on the ax;s of the screw. The wheel has two rings of cegs h and i upon its face, one about f ds the size of 'the other. Each engages its pinion d and e on the spindle of the screw ; neither of which are fixed to this spindle, but are at liberty to slip freely round it. Between the pinions is a circular plate, k, fitted upon the axis with a fillet, so that it must revolve with it. This plate has studs projecting from both sides, and the pinions have similar studs. Now when the plate k is thrust towards either of the pinions, by means of a lever /, it causes the axis and screw to revolve with the same velocity that the pinion has; and as the pinions have different velocities, from being turned by two different rings of teeth, it follows, that, by raising or de- pressing the end m of the lever I, the screw may be turned with either of these velocities at plea- sure, and thus cause the machine to make the circuit of the tun in a greater or less time. The extreme ends of the two axes L, N, are support- ed in an iron arm, fixed to the iron frame P of the screw, which runs upon the edge of the tun with four rollers. From this frame two rods p,p, fig. 1, extend to a frame which surrounds the cen- tral axis, and supports the central axis by a collar at its upper end, and the lower point of the axis is fitted into a socket made through the frame.

The underback, K, R, is placed between the eight iron columns, upon brickwork, supported upon bearing piles, is formed of cast iron plates, united by screws, in the same manner as the mash tun, and as is explained in the figures. The plates are flat on the inside, but have flaunches all round the outside, and ribs across to strength- en them. This is shown by representing part of the plates as removed. The wort is drawn off from the mash tun by eight cocks in the bottom, two of which are shown at S S, fig. 1. They allow the wort to flow into the underback, whence it is drawn by a pump, the suction tube for which is marked T.

Figs. 1, 2, 3, and 4, BREWING, plate II, are different sections of a close copper, which con- tains say 250 barrels. A A, in all the figures, denotes the external brickwork, which is a cylin- drical wall, built upon the arches. In the lower part of this is the ash pit B, and the fire-grate placed over it, being partly supported by iron pillars. CCC is the copper, hung in the brick- work by a projecting ring of a few inches, at the place where the hemispherical dome G joins npon it. The dome is surrounded by a copper from D D, to contain the water which is intended for the succeeding mash, or afterwards for the wort produced by the mash. This liquor is neated with the steam produced by the copper, which is conducted up a large tube E, rising from the centre of the dome. To the top of this four smaller pipes F F, figs. 2 and 3 are joined, turning down to the bottom of the pan, and open

at their lower extremities, by which means the steam is conducted beneath the liquor contained in the pan, and by bubbling up through it, soon communicates to it a considerable degree of heat. A recess is made at X, figs. 2 and 4, in the cop- per pan, to expose the dome G ; and in this place is the man hole for entering to the copper. Another of these man holes is provided in the top

*of the copper, at the upper end of a large tube H, figs. 2- and 4, rising from the dome. I is the chimney to the copper, situated over the fire door a, fig. 3, and the chimney has an arch in it, to give passage to the fire door. The course of the flues is shown in fig. 1, which is a horizon- tal section, taken a little above the level of the grate-bars, upon which the fire rests. On each side of this grate a jamb of brickwork K, K, is built. This supports the bottom of the copper, and compels the flame nd smoke to go back- wards, and surround the copper, by rising up in the dark space shown in figs. 3 and 4. It then turns round in the two semicircular passages over and behind the jambs KK, fig. 1, and en- ters the chimney by the opening at L, fig. 3. The chimney is double, having a partition up the centre, which divides it into passages, one of which is appropriated to each flue. The open- ing L is furnished with an iron door, which can be closed at pleasure; and the bottom of the chimneys are likewise shut by iron doors at d, fig. 3, which slide back horizontally when they are required to be open. By means of these doors the stoker, or fire-man, can at all times regulate the draught of the fire; ,for by throwing open the doors d, e, and at the same time open ā¢ ing the fire-door at a in front, the draught is nearly destroyed, as the cold air passes directly up the chimney without going through the fire ; and, by closing the door L, the draught is totally stopped, and the fire soon extinguished. In the centre of the copper a spindle M is fixed, pas- sing through a tight stuffing box. At the top of the tube E, and above this, it has a cog wheel e, by which the spindle is turned round. On the lower end of the spindle a cross bar is fixed, and secured by stays, and short pieces of chain are suspended from it, which drag the bottom of the copper when the spindle is turned round, and stir the hops so as to prevent their burniug, which they would do if suffered to rest on the bottom. This apparatus, which is called the rowser, is suspended by a swivel at the *^p jf the spindle, from a lever f, the opposite end of which is drawn down by a rack and pinion g. This raises the rowser from the bottom of the copper, when it is not in use, and at the same time disengages the wheel e from its pinion, which is kept in continual motion by the engine. Cast iron braces g, g, are fixed across the copper, to support the spindle of the rowser. In the top of the tube E is a safety valve, loaded with a weight h, to permit the escape of the steam if it should become so strong as to endanger the cop- per; and by the side of it is another, i, which opens, and admits air, if a condensation of the steam should produce a vacuum in the copper. The man-holes are*

closed by lids, which are quite steam tight, and can be quickly opened and shut. The door is of cast iron, and has a ring projecting from its under surface to drop into the ring to which the flat surface of the lid is fitted. The lid is hung by a joint, loosely fit- ted, and is kept down tight by the pressure of a strong screw. This screw is held over the cen- tre of it by a cross bar fixed to the ring by a joint pin at the end, while the other end slips xinder a kind of staple. When the central screw

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Fig. 6.

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BREWING.

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is slackened, the bar can be turned about upon its centre, to remove it from the lid, which can then be opened upon the joint. A balance weight is applied to take off the weight of the lid, as shown at Y, fig. 4 ; and within trie lid is a smaller one of brass, which is fitted in the same manner ; and which is removed to intro- duce the thermometer or a gau

It is said that the first pan was placed over the copper, for the purpose of heating one liquor by the other, by Mr. Goodwynne, about 1780; but the steam did not in this case pass through the water. About five years afterwards, Mr. Bramah erected a copper at Harford's brewery, with a dome and steam pipes, as in our plate, fig- 3, except that the pipes F were hung by joints from the great central pipe, so as to rise and fall simi- lar to an umbrella; and, a float being attached to the end of each pipe, the steam always passed out under the same pressure of water, whether the pan was fullt>r not, as the floats always kept the mouths of the pipes at the same depth be- neath the surface ; at the same time, this depth could be readily adjusted by altering the floats, so as to increase or diminish at pleasure the pres- sure of the steam in the copper ; a construction, which having been found to succeed, is now common.

In fig. 5, of plate II.., is a sluice-cock, where A A is a cast-iron frame having two pillars B rising from it, to support a frame C, which contains a pinion for raising the rack a, and drawing the slider D, which stops the bore of the pipe. A flat plate of cast iron is screwed against each side of the frame A, forming: a thin box, in which the slider rises and falls. Each of these plates has a short pipe projecting from it, to con- nect with the pipe, which the sluice is intended to shut up. One of these plates is ground flat, and the slider D is fitted and ground against it, so as to slide freely, but to fit perfectly water tight. On the opposite side of the slider two steel springs b b are bolted. The ends of these act against the other flat plate, in order to press the slider against its fitting, and k.ep U close. The slider D is connected with the rack by a smooth cylindrical iron rod attached to both, and passing through a stuffing box in the top of the frame A, which is fitted so closely round it with hemp, as to prevent the escape of any fluid by its sides. This kind of sluice-cock, of very general use in the brewery, is also the least ex- pensive ; ā an object worthy of attention, when

large brass cocks, such as are sometimes used for coppers, cost from thirty to forty pounds. A Mr. Rowntree has constructed some stop-cocks of the form shown, figs. 6 and 7, where A A are the flaunches for connecting the cock with the pipe, B a chamber, in the centre of which is a spindle a, passing through a stuffing box in the lid b, and having a handle c to turn it round. Upon this spindle a sector of brass, d, is fixed, ind when turned about, it either closes or opens at pleasure the opening of the pipe. A piece of brass is screwed into the chamber, for the sector to fit against, and they are ground together till they are perfectly tight, by which means the friction is inconsiderable.

Fig. 8 represents an effectual substitute for a cock in many parts of a brewery, particularly at the bottom of the coolers or backs. A is a brass valve seat, which has a conical valve a, exactly fitting the seat, and closing its aperture when shut. The seat is fixed down in the wooden bottom of the back by small screws ; and from the seat rises two iron bars, d, d, uniting at top, and supporting a screw, which is turned round by a handle, e. The shank b, of the valve a, has an opening through it, and above this the screw is tapped into it. This opening receives a cross bar of the frame d, which, at the same time that it sustains the lower pivot of the screw, prevents the valve shank, 6, from turning round with the screw, which will raise or lower the valve at pleasure.

Fig. 9 is another cock of Mr. Bramah's, called a taster; to be put in a store vat for tasting the beer. It is a brass tube, A, with a shoulder, a, which is the only projection on the outside of the vat, and is held in by a nut, b, screwed upon it on the inside of the stave, B, of the vat. In the end of the tube is a plug, c, ground and fitted in, and having a hole in one side. The

key, D, of the cock, which is bored through the shank, and also through one of the ends of the cross handle, being introduced into the cock, fits upon a square, a- triangle, a circle, or any other figure, at the end of the plug ; and when the key is turned round, so that the handle is upright, the cock is open, and the beer will flow through the handle as a spout. This cock cannot be opened without a key.

Fig. 10 is Mr. Bramah's vent-peg, to be put into the head of a cask when the liquor is drawn off, in order to admit the proper quantity of air, to allow the liquor to run. A A is a section of the head of the cask, in which a taper screw, B, is placed for fastening the apparatus. The upper end of the screw is of large dimensions, and turned out into a cup of a cylindrical form, with a stud or pin rising up in the middle. A hole is drilled through the centre of the peg, to commu- iiicate with the interior of the cask at 6. The cavity surrounding the stud being filled with water, the cap or thimble, C, must be inverted, and dropped into the rabbet, which is turned in the top of the peg. Small holes are drilled round in the cap at 1 and 2, to admit the air freely ; and as the lower edge of the cup is im- mersed in the water round the stud, nearly to the bottom of the cup, the ingress or egress of the air will be prevented, except when the pressure of the air is augmented by drawing the liquor out

of the cask. It is very useful to prevent the liquor in drawing becoming flat or vapid from exposure.

Fig. 1, plate III, is a representation of the beautiful and complete fermenting-house at the brewery of Messrs. Whitbread and Co. Chiswell-street. It was erected after the plan of Mr. Richardson, who in 1805 conducted the brewing department of that celebrated establishment. R is the pipe which leads from the different coolers to convey the wort to the great fermenting-vessels or squares M, of which there are two, one behind the other; ˆ/'represents a part of the great pipe which conveys all the water from the well up to the water cistern at the top of the works. This pipe is conducted up the wall of the fermenting- house, and has a cock in it, near R, to stop the passage. Just beneath this passage a branch- pipe, p, proceeds and enters a large pipe xx, ā¢which has the former pipe r, withinside of it. From the end of the pipe x, nearest to the squares M, another branch nn proceeds, and re- turns to the original pipe /, with a cock to regu- late it. The object of this arrangement is to make all, or any part of, the cold*

water flow through the pipe xx, so as to surround the wort- pipe r, which is only made of thin copper, and lower the temperature of the wort passing through the pipe r,- until, by the thermometer, it is found to have the exact temperature which is desirable, before it is put to ferment in the great square M. By means of the cocks at n and p, the quantity of cold water which shall pass in contact with the surface of the pipe R, can be regulated at plea- sure, so as to have a command of the heat of the wort when it enters into the square. When the first fermentation in the squares M is finished, the beer is drawn off from them by pipes marked v, and conducted by its branches, w, to the dif- ferent rows of fermenting tuns marked NN, which fill all the building. Between every two rows are placed large troughs, to contain the yeast which they throw off. The representation shows the small tuns all placed on a lower level than the bottom of the great vessels M, so that the beer will flow into them, and, by standing in them all, will fill them to the same level. When they are filled the communication-cock is shut; but, as the working off of the yeast diminishes the quantity of beer in each vessel, it is neces- sary to fill them up again. For this purpose, the two large vats O O are filled from the great vessels M, before any beer is drawn off into the small casks N, and this quantity of beer is re- served at the higher level for filling up. The two vessels O O are, in reality, placed between the two squares M, but we have been obliged to place them so that they can be seen. Near each filling-up tun o is a cistern t, with a pipe of communication from the tun O, and this pipe is closed by a float-valve. The small cisterns t have always a communication with the pipes, which lead to the small fermenting vessels N ; and therefore the surface of the beer in all the tuns and in the cisterns will always be at the same level; and, as this level subsides by the working off of the yeast from the tuns, the float sinks and opens the valve, so as to admit a suf- ficiency of beer from the filling up tuns o, to re-

store the surfaces of the beer in all the tuns, and also in the cistern t, to the original level. In order to curry off the yeast which is produced by the fermentation of the beer in the tuns O O, an iron dish or vessel is made to float upon the sur face of the beer which they contain ; and from the centre of this dish a pipe, o, descends, and passes through the bottom of the tun, being filled through a collar of leather, so as to be tight, at the same time that it is at liberty to slide down as the surface of the beer descends in the tun. Over the edge of this dish the yeast flows to a trough beneath, and is conveyed down the pipe.

Under tne fermenting-house are large arched vaults P, built of stone, and lined with stucco. Into these the beer is let down when sufficiently fermented, and is kept till wanted : being be- neath the surface of the earth they possess great equality of temperature.

Figs. 2, and 3, are malt-rollers, or machinery for bruising the malt. A is the hopper, into which the malt is let down from the malt-loft above ; and from this the malt is let out gradu- ally through a sluice or sliding-shuttle a, and falls between the rollers BD. These rollers are made of iron, truly cylindrical, and their pivots are received in pieces of brass let into iron frames, which are bolted down to the wooden frame of the machine. A screw, E, is lapped through the end of each of these iron frames, and by these screws the brasses can be forced forwards, and the rollers made to work closer to each other, so as to bruise the malt in a greater degree. G is the shaft by which one of the rollers is turned ; and the other receives its mo- tion by means of a pair of equal cog-wheels H, which are fixed upon the ends of the pivots, at the opposite ends of each of the rollers : d is a small lever, which bears upon the teeth of one of these cog-wheels, and is thereby lifted up every time a cog passes. This lever is fixed on the extremity of an axis, which passes across the wood frame ; and in the middle of it has a lever c, fig. 2, bearing up a trough b, which hangs under the opening of the hopper A. By this means the trough b is constantly jogged, and shakes down the malt regularly from the hopper A, and lets it fall between the rollers : e is a scraper of iron plate, which is always made to bear against the surface of the roller by a weight, to remove the grains which adhere to the roller. BREWIS, n.s. Ang.-Sax. briu ; Teut. brosain , Welsh brywes; Scot, brose. Bread soaked in fat pottage ; and also the pottage itself.

What an ocean of brewis do I swim in !

Beaumont and Fletcher.

BREYNIA, in botany, a genus of class po- lygamia, order trioecia : CAL. six-parted: COR. none: ANTH.five : STIG. five ; berry three-celled : SEEDS two. Species only one. B. disticha, a native of New South Wales.

BRIANCON, a noted town of France in trie department of the Upper Alps, and ci-devant province of Dauphine. It has a fine bridge over the Durance, 180 feet high, a strong castle on a steep rock, and other defences. It lies seventeen miles north-west of Embrun, and forty-five east ot' Grenoble

BRIANCONNOIS, a ci-devant territory of No bribery of courts, or cabals of factions, cr ad-

France, in Dauphine, which was bounded by

Grenoblois, Gapencois, Embrunois, Piedmont, foundations of honor and fidelity.

and Savoy.. It comprehends several valleys, How powerful are chaste vows

which lie among the mountains of the Alps: You bribed to combat on the English side.

and though it is extremely cold, yet it is fertile in corn and pastures. Briancon is the capital town. Manna is gathered near it, on the leaves and branches of a species of pine ; incisions in it yield large quantities. The chief road from France to Italy passes through it. It is now comprehended in the department of the Upper Alps.

BRIAREUS, in fabulous history, a giant, the son of /Ether, Titan, or Coelus and Terra. This was his name in heaven ; on earth he was called /Egeon. He was of singular service to Jupiter, when Juno, Pallas, Neptune, and the rest of the jods, endeavoured to bind him in chains and de-

vantages of fortune, can remove him from the solid

Id.

the wind and tide Id.

The secret pleasure of a genorous act, Is the great mind's great bribe. Id. Don Sebastian. Affection is still a briber of the judgment ; and it is hard for a man to admit a reason against the thing he loves ; or to confess the force of an argumen against an interest. South

The great, 'tis true, can still the' electing tribe ; The bard may supplicate, hut cannot bribe.

Prologue to Good-natured Man. The kingdom's farm he lets to them bids least, (Greater the bribe) and cheats at interest. Marvell,

BRIBE anciently imported as much as panis rnendicatus, which still keeps up the idea of the

throne him. Afterwards, however, he conspired ma"er whereof bribes anciently consisted. Hence

also the Spaniards use bribar and brivar for beg- ging; and brivia, brivoneria and brivonissimo, for beggary. In authors of the middle age, a

out fire." The fable says," that Jupiter, to punish bribe given ajudge is called quato litis, and the him, threw him under mount /Etna, which, as receiver, campi particeps, or cambi particeps ;

because the spoils of the field, i. e. the profits of the cause, were thus shared with the giver. BRIBERY, in law, is a high offence, where a

with the rest of his gigantic brethren to dethrone Jupiter. Virgil, on this occasion, describes him as having 100 hands, fifty heads, and breathing

often as he moves, belches out fire.

BRIBE, n.s.&v.a.ˆ BRIB'ER, n. s.

Goth, bry fa ; Saxon bred fa; that is, a pervert- person in a judicial place takes any fee, gift, re-

BRIB'ERV. 3 ing fee or gift, something ward, or brokage, for doing his office, but of the

added to the simple demands of justice, with a king only. It signifies also the receiving or view to influence its decisions; a boon to pre- offering any undue reward to or by any person

vent honesty, given to the worthless in high places; the sop, which when a man takes, the devil enters into him, and he is ready to betray his king, his country, or his God. See Minutes of Evidence before the House of Commons ā Ar- ticle IRISH MAGISTRACY. The Glossary to Chaucer thus explains this word, as used by the father of our tongue, or in his time: 'Briborie, ' says he, 'seems to signify a thief; briben,' he adds, 'may mean to decoy; while a bribe is probably what is given to a beggar; what is given to an extortioner or cheat. ' To bribe is to cor- rupt by gifts; to hire: a briber one that gives bribes: bribery, the crime of giving or taking re- wards for evil practices.

Who saveth a thefe when the rope is knet, With some false turne the bribour will him quite. Lydg. Tra. 152.

And, ā for ther n'is no thefe without a louke, That helpeth him to wasten, and to souke, Of that he briben can or borwe moy. Chaucer.

You have condemned and noted Lucius Pella, For taking bribes here of the Sardians. Shakspeare.

There was a law made by the Romans, against the bribery and extortion of the governors of provinces : before, says Cicero, the governours did bribe

and ex- tort as much as was sufficient for themselves ; but now they bribe and extort as much as may be enough not only for themselves, but for judges, jurors, and magistrates. Bacon.

Nor less may Jupiter to gold ascribe,

When he turned himself into a bribe.

Waller

concerned in the administration of public justice, whether judge, officer, &c. to act contrary to his duty ; and sometimes it signifies the taking or giving a reward for a public office. ā In the east it is the custom never to petition any superior for justice, not excepting their kings, without a present. The Roman law, though it contained many severe injunctions against bribery, as well for selling a man's vote in the senate or other public assembly, as for the bettering of common justice ; yet, by a strange indulgence, it tacitly encouraged this practice, in one case ; allowing magistrates to receive small presents, provided they did not on the whole exceed 100 crowns a-year ; not considering the insinuating nature and gigantic progress of this vice, when once ad- mitted. Plato, therefore, in his ideal republic, orders those who take presents for doing their duty to be punished in the severest manner ; and by the laws of Athens, he that offered a bribe was also prosecuted, as well as he that received a bribe. In England this offence is punished, in inferior officers, with fine and imprisonment; and in those that offer a bribe, though not taken, the same. But in judges, especially the supe- rior ones, it has always been looked upon as so heinous an offence, that the chief justice Thorpe was hanged for it in the reign of Edward III. By a statute, 11 Henry IV. all judges and officers of the king, convicted of bribery, shal forfeit treble the bribe, be punished at the king's will, and be discharged from his service for ever.

If a man be covetous, profits orWtomay put him And some notable examples have been mad tr the test. L' Estrange, parliament, of persons in the highest ˆsta ms,

There is joy when to wild will you laws prescribe, WheA you bid fortune carry back her bribe.

Dry den.

and otherwise very eminent and able, but con- taminated with this sordid vice.

BRIBERY IN ELECTIONS. See ELECTIONS

BRICIANI, a military order, instituted by St. Bridget, queen of Sweden, who gave them the constitutions of those of Malta and St. Au- gustine. It was approved by Pope Urban V. The Briciani were to fight for the burying of the dead, to relieve and assist widows, orphans, the lame, sick, &c.

BRICKjn.s.&v.a.ˆ Fr. brique; Armoric BRICK'ED, adj. brick; Ital. bruchto; ter-

BRICK'BAT, n. s. I ra abruchian, from Goth. BRICK'CLAY, | and Swed. braka, brasa;

BRICK'DUST, >-Ital. brvggio, to burn.

BRICK'EARTH, j A piece of burnt clay.

BRICK'KILN, | 'Brick is a mass of ar-

BRICK LAYER, I gillaceous earth, some-

BRICK'MAKER, j times mixed with coal ashes, chalk, and other substances, formed in cubical moulds, dried in the sun, and baked into a kind of artificial stone for the use of builders :' to brick is to work, build, or fortify with bricks: bricked, made of bricks; covered over with bricks: brickbat, a broken piece of brick: brick- clay, brickearth, the clay or earth of which bricks are made : brick-dust, the dust made by pounding bricks : brick-kiln, a kiln used for burn- ing bricks: bricklayer, a brick-mason; a man whose trade is to build with bricks : brickmaker, one who makes, or deals in bricks.

A stately pallace built of squared bricks. Spenser.

The elder of them being put to nurse, And ignorant of his birth and parentage, Became a bricklayer when he came to age. ShaJu.

If you had lived. Sir, Time enough to have been interpreter To Babel's bricklayers, sure the tower had stood.

Donne.

For whatsoever doth so alter a body, as it retum- eth not again to that it was, may be called alteratio major ; as coals made of wood, or bricla of earth.

Bacon.

Earthen bottles, filled -with hot water, do provoke in bed a sweat more daintily than hot brickbats. Id.

He with a crew, whom like ambition joins With him, or under him, to tyrannize, Marching from Eden towards the West, shall find The plain, wherein a black bituminous gurge Boils out from under ground, the mouth of hell j Of brick, and of that stuff they cast to build A city, and tower, whose top may reach to heaven.

Milton.

And hence like Pharaoh that Israel pressed To make mortar and brick yet allowed 'em no straw ; He cared not though Egypt's ten plagues us distressed, So he could but build to make policy law. Marvell.

Thus daily his gouty inventions him pained, And to save the expences of brickbat, That engine so fatal, which Denham had brained, And too much resembled his wife's chocolat. Id.

They are common in claypits ; but the brickmakers pick them out of the clay. Woodward.

I observed it in pits wrought for tile and brick-clay.

Id.

They grow very well both on the hazelly brick earthĀ», and on gravel. Mortimer.

Like the Israelites in the brick-kilns, they multi- plied the more for their oppression. Decay of Piety.

The sexton comes to kuow where he is to be laid, ana whether his grave is to be plain or bricked.

Swift.

This ingenious author, being thus sharp set, got together a convenient quantity of brickdust, and dis- posed of it into several papers. Spectator.

But spread, my sons, your glory thin or thick, On passive paper, or on solid brick. Pope

They generally gain enough by the rubbish ana bricks, which the present architects value much be- yond those of a modern make, to defray the

charges of their search. Addison.

BRICK, a fat reddish earth, formed into long squares, four inches broad, and eight or nine long, by a wooden mould, and then baked or burnt in a kiln, to serve the purposes of build- ing. Bricks are commonly red, though there are some of a white color.

BRICKS clearly existed in the very origin of human associations. It appears by the Sacred Writings that the tower of Babel was attempted to be raised with them. They seem to have been in common use while the Israelites were in Egypt, for their oppressive task was the making of brick without straw ; and in the book of Exo- dus we are informed that the Israelites built two Egyptian cities. Straw was clearly then one of the ingredients of these as of modern bricks, and as rain is almost unknown in Egypt, it is proba- ble that their bricks were merely baked in the sun, a mode of making them still practised in the East, where exist the ruins of a considerable tower near Bagdad, which some have considered as the tower in Babylon, described by Herodotus, (lib. i.e. 181.), formed wholly of this material. The Greeks chiefly used three kinds of bricks ; the first whereof was called focwpov, i. e. of two palms or six inches ; the second rtrpatfopov, of four palms, or twelve inches long ; the third irivTaSopov, of five palms, or fifteen inches. They had also bricks, just half the size of these, to render their brick-work more solid, and also more agreeable to the eye. The bricks chiefly used by the Romans, according to Pliny, were a foot and a half long, and a foot broad ; which measures nearly agree with those of several Ro- man bricks in England. That they excelled in the art of brick-making is clear, several of their structures of this material, as Trajan's pillar for instance, having come down to us unimpaired almost during the lapse of near 2000 years Pliny mentions a kind of brick used by the an- cients, so light as to swim in water. ' Pitanae in Asia, et in ulterioris Hispaniae civitatibus Maxilua et Calento, fiunt Lateres, qui ciccati non merguntur in aqua.' (Plinii Natur. Histor. lib. xxxv. c. 14). He does not state the part of the world in which they were manufactured, but only that the material employed was a kind of pumice stone. Until the year 1791 this was un- intelligible to the modern world ; then M. Fa- broni found a substance at Castel del Piano, not far from Santa Fiora (between Tuscany and the Papal dominions), which formed bricks capable of being floated on water. It is a white earthy matter, which constitutes a bed in that place, and was known in Italy by the name of Latte di Luna. In recent mineralogical works it is dis- tinguished as the farina fossilis (bergmehl). Hauy considers it as a variety of talc, and Bro- chant, as a variety of meerschaum. According to the analysis of K lap roth, it contains,

BRICKS.

Silica 79

Alumina 5

Oxide of iron . . 3

Water 12

Loss 1

100

From this analysis, we see it appears to be nei- ther a variety of talc nor of meerschaum, but rather a hydrate of silica. ‘ Sir Henry Wotton speaks of a sort of bricks at Venice, of which stately columns were built ; they were first formed in a circular mould, and cut, before they were burnt, into four or more quarters or sides ; after- wards, in laying, they were joined so close, and the points concentrated so exactly, that the pillars appeared one entire piece. In mo- dern times brick-making is nowhere carried to greater perfection than in Holland, where most of the floors of houses and often the streets are paved with excellent and very durable bricks.

Loam and marl are considered the best Eng- lish materials for bricks. The former is a natural mixture of sand and clay, which may be con- verted at once into this useful manufacture ; marl is a mixture of limestone and clay in various proportions. The best proportion for common bricks would be three parts of clay, and one part of limestone or chalk powdered. Such a mix- ture exposed to heat experiences an incipient fusion, and thereby is rendered much harder and denser ; it imbibes much less water than any other material, and is therefore much less liable to crack and fall to pieces in winter.

We cannot here enter into details respecting the chemical investigations of different periods as to the nature of clay. Suffice it to say, that during the last century the labors of Pott, Bau- me, and Margraaf, threw a sufficient light upon the subject to enable us to pronounce it a mix- ture of alumina and silica, in different propor- tions. It was shown at the same time that it also frequently contains sulphuric acid and pot- ash. More recent researches have likewise dis- covered in its composition mica, chalk, felspar, hornblende, bitumen, oxide of iron, and coal, which modify its qualities considerably, and adapt it for the various purposes of different manufactories.

The neighbourhood of London is remarkably adapted for the making of

bricks, the soil of the whole surrounding country being clay at a cer- tain depth, generally under a bed of gravel; and the bottom of the Thames yielding the sand which is used in this manufacture. Here, too, of course, is an uncommon consumption of them ; and although from the peculiar advan- tages of the spot an excellent yellow brick has long distinguished the manufacture of the metro- polis, great practical carelessness seems to per- vade the whole business as conducted here. We see no reason why our Dutch neighbours should so decidedly exctl us in this particular; except that the spirit of a short-sighted parsi- moniousness has crept into this as into many other of our calculations ; that is, houses are built in and about London, not to endure nor to sell, strictly, but to let, and that for comparatively short leases, frequently. Hence our ordinary

architects and takers of building leases have no part in the ambition of rearing an ‘ eternal city : ‘ whole streets may be seen ‘ in youth decrepid/ propped, and tottering, sometimes before te- nanted, and the greater number of bricks used are not above half kneaded and half burnt.

Brick-clay is generally dug out and exposed at the end of one season, for the operations of the next. It should always be laid open to the air and weather for a considerable time ; and if for two or three seasons, the bricks will be the better made. The stones of which the clay has been originally formed, thus become more com- pletely decomposed, and the clay itself better pulverised. The frosts of winter, too, temper and mellow it very beneficially. It should be often turned over, and afterwards ground by a mill to a complete powder; but ordinarily the clay is tempered by the treading of men or cattle ; the earth being thrown into shallow pits, where it is wrought and incorporated, until formed into a homogeneous paste. This is facilitated by occasionally adding small quantities of water ; but the less water that is used, the better for the substance of the clay, which will be more tough and gluey, and consequently the bricks will be smoother and more firm. This is the most laborious, and perhaps most essential, part of the process ; to the negligence of which we are to attribute almost all the bad qualities of modern bricks ; hence are they light, soapy, spongy, and full of cracks. Whereas, if the clay be properly tempered, they are hard, ponderous, and durable. M. Gallon having taken a quantity of brick-earth tempered in the usual way, let it remain exposed to the air for seven hours, and then caused it to be moistened and beaten for the space of half an hour ; the next morning the operation was repeated ; and in the afternoon the clay was again beaten for fifteen minutes more ; making the whole additional labor an hour and a quarter. The bricks made of this earth being dried in the air for thirteen days, and burned along with the rest without any parti- cular precautions, were found to be not only heavier than common bricks, but also very dif- ferent in strength ; for on placing their centre on a sharp edge, and loading both the ends, Mr. Gallon found, that

while it took a weight of 65 Ib. at each end to break them ; other bricks were broken by the weight of only 35 Ibs. The im- provement in the quality of the article thus far exceeding the additional labor.

A proper quantity of coarse sand is a fine annealer of brick-clay ; it answers best when the particles are of such a size as to be readily dis- tinguished by the eye. When as large as corian- der seeds, it has been found to vitrify better than when very fine.

London brick-makers add also about one-third part of ashes or small coal to their clay, tbe con- sequence of which is said to be that when the mixture is sufficiently heated afterwards, those fires burn of themselves, and are chiefly fed with the fuel supplied by the clay. Bricks, according to Mr. Malcolm, are made by the thousand, as the most satisfactory mode between master and man, and a handy man could mould in one day, viz. from five in the morning until eight at night,

5000. To assist liim in the preparation of the soil, &c. from the heap (which is usually dug after the season for brick-making is over, and laid up), there is generally a gang, consisting of six persons ; one man tempers and prepares the soil, which is> done with a hoe made long, in the shape of a mattock, a shovel, scoop, a thick plank or board, and a cuckhold ; with the hoe he pulls down the soil from the great heap, which is chopped backwards with the shovel, to turn it as often as may be necessary, to mix and thoroughly incorporate the ashes and soil to- gether, because it is to be understood, that at the time the soil is dug out, and made into this heap, a layer of coal ashes is alternately placed between a layer of soil, as often and in such quantities in each layer as the quality of the soil and other circumstances may make necessary. The scoop is used to throw water over this portion that is pulled down with the hoe, in order that it may become, more and more, in a tempering state, more soft and ductile ; and with the board he kneads it together, over which a certain quantity of sand is thrown, and it is then covered with pieces of sacking or matting, to keep the sun and air from it. A boy scoops or cuts off a slice, with an instrument or shovel having a short handle, and the blade of it made concave, called a cuckhold ; this he brings on his arms to the moulding table, which is placed under a move- able shed, upon which, another boy rolls out a lump somewhat bigger than will fit the mould, the table having been previously strewed with sand. The moulder, after dipping his mould into dry sand, placed at one corner of his table, throws the lump prepared into the mould, and with a flat smooth stick, about eight inches long, previously dipped in a

pan of water, strikes off the surplus soil ; he then immediately turns out the brick upon a stand, or board, of the same size with the brick; a boy takes it from thence, and places it on a light barrow, with a lattice- work frame fixed over the frame of the barrow, at about three feet high above the wheel, and reduced to about eighteen inches in height to- wards the handle, forming an inclined plane. The new made bricks are placed on this lattice frame, and over them sand is thrown in sufficient quantities to prevent their adhering to each other, as well as to prevent, in a certain degree, their cracking in drying whilo on the hacks. A boy wheels the barrow to the hacks, and places them with great regularity and despatch, one above the other, a little diagonally, in order to give a free passage to the air. Each hack is made wide enough for two bricks, to be placed edgeways across, with a passage between the heads of each brick; they are usually made eight bricks high ; the bottom bricks at the end of each hack are old ones.

Wheat or rye straw is, in showery weather, carefully laid over the hacks, at least near Lon- don, where the brick-makers do not, as in some placts distant from the metropolis, go to the ex- pense of roofed coverings, or sheds; their works being- too extensive. If the weather is tolerably fine, a few days is sufficient to make them dry enough to be turned, which is done by resetting them more open, and turning them ; and six or

eight days more are required before tht y are fit to be put into the clamp or kiln for burning. Bricks throughout the country are generally burnt in a kiln thirteen feet long, by about ten feet and a half wide, and twelve feet in height. It will hold about 20,000 bricks. The walls'are one foot two inches thick, carried up a little out of the perpendicular, inclining towards each other at the top. The bricks are placed on flat arches, having holes left in them resembling lattice work; the kiln is then covered with pieces of tiles or bricks, and some wood put in, to dry them with a gentle fire. This continues two or three days before they are ready for burning, which is known by the smoke turning from a darkish co- lor to transparent. The mouth or mouths of the kiln are now dammed up with a shinlog, or pieces of brick piled one upon another, and closed with wet brick earth, leaving above it just room sufficient to receive a faggot. The faggots are made cf furze, heath, brake, fern, &c. and the kiln is supplied with these until its arches look white, and the fire appears at the top ; upon which it is slackened for about an hour, and the kiln allowed gradually to cool. This heating and cooling is repeated until the bricks are thoroughly burnt, which is generally in forty-eight hours. Near London, when the bricks are suffi- ciently dried by the air, the clampmaker levels the ground, at one end of the range of hacks, making the foundation of the intended clamp somewhat higher than the surrounding ground ; and with place bricks, if they have any, or other- wise with the driest of those just made, makes a foundation of an oblong form, beginning with the flue, which is nearly a brick wide, and run- ning straight

through the clamp. In this flue dry bavins, coals, and cinders, vulgarly called breese, are laid and pressed in close, in order that the interstices between wood and coal may be pro- perly filled up. On the sides of the flue, the bricks are placed diagonally about one inch asun- der, and between each layer of bricks three or four inches of breese are strewed, and in this manner they build tier upon tier as high as the clamp is meant to be ; never omitting between each layer, as well as between each brick that is placed diagonally, to put a due portion of breese. When they have made the clamp about six feet long, another flue is made similar in every re- spect to the preceding, to the extent of the size of the intended clamp, provifled only that the bricks are meant to be burnt off quick, which they will be in about twenty-one or thirty days, accord- ing as the weather may suit. But if there is no immediate hurry for the bricks, the flues are placed about nine feet asunder, and the clamp left to burn off slowly. When the fire is set to the clamp, and it burns well, the ash-hole, being placed at the west end generally, the mouths are stopped with bricks, and clay laid against them ; the outsides of the clamps are plastered with clay if the weather is at all precarious, or the fire burns furiously ; and to the end against which addition is made to the clamp, skreens made of reeds worked into frames about six feet high, and sufficiently wide to be moved about with ease, are placed to keep off' the weather, and against any particular side where wet is

most prevalent. On the top of the clamp a thick layer of hreese is uniformly laid.

The excellency of bricks, says Mr. Malcolm, consists chiefly in the first and last operation ; for bricks made of good earth, and well tem- pered, become solid and ponderous, and there- fore will take up a longer time in drying and burning than our common bricks seem to require. It is also to be observed, that well drying of bricks, before they are burned, prevents cracking and crumbling in their burning; for when the bricks are too wet, the parts are prevented from adhering together. The best way of ordering the fire is, to make a gentle fire at first, and in- crease it by degrees, as the bricks grow harder. It has been said to give bricks additional strength if after burning they are steeped in water and burnt afresh.

The common computation is, that every acre of land will yield 1,000,000 of bricks for every foot in depth, including ashes, which are usually mixed with it. In general our fields are shallow, with a bottom of gravel, yet we think they will average nearly five feet, though, according to Mr. Malcolm's

information on this subject, there are none that will run as much as twelve feet in depth. Among modern im- provements, the patent bricks of Mr. Cartwright deserve some attention. These are formed with a groove down the middle, a little more than half the width of the side of the brick, leaving two shoulders, each of which will be nearly equal to one-half the groove. When they are laid in courses, the shoulders of the first course fit into the grooves of the second, and the shoulders of the second fall into the grooves of the first, thus forming an indented line of nearly equal divisions. The grooves, however, ought to be somewhat wider than the two adjoining shoulders, to allow for mortar, &c. The construction of these bricks is perfectly sim- ple; but the principle will be preserved, in whatever form of indenture they may be made to lock into, or cramp each other. Brick walls, constructed upon this principle, require no bond timber, one universal bond connecting the whole building, which can neither crack nor bulge out without breaking through the bricks themselves. This invention is also particularly useful in the construction of arches ; and when employed for this purpose, the shoulders of the bricks and the sides of the grooves should be radii of the circle, of which the intended arch is a segment. It is, however, recommended that if the arch be parti- cularly flat, or applied in situations which do not admit of end walls, to have the shoulders dove-tailed, to prevent the arch cracking across, or giving way edgeways. In forming an arch, the bricks must be coursed across the centre, and the grooved side of the bricks must face the work- men. The bricks may be either laid in mortar, or dry and the interstices filled up by pouring in lime putty, Paris plaster, or any other conve- nient material. The obvious advantages of arches constructed upon this principle, are, that the same centre, which, whatever be the breadth of the arch, may be in no case many feet wide, may r?e regularly shifted as the work proceeds ; and, as they have no lateral pressure, they require 110 abutments to prevent their expanding at the

*foot, nor any weigtit upon the crown to prevent their springing up. They may be laid upou * common perpendicular wall, and if used in trie construction of common buildings, they will not only preclude the necessity, and save the ex- pense of timber, but will also afford an absolute security against the possibility of fire.*

AM. Legressier has also lately announced an invention of the kind in the Archives des De- couvertes et des Inventions Nouvelles, pendant 1'annee 1809. The principle is Mr. Cartwright's followed out to a greater extent. M. Legres- sier merely proposes, that the bricks should be formed in seven different moulds, according as they are to be placed in the middle or outside of the walls; in the bottom or on the top; in the arches or in corners ; and, by the proper disposi- tion of these bricks in the building, every pres- sure, either longitudinally or laterally, is resisted, in proportion to the

strength of the indentures by which they are locked.

Fire-bricks are of different materials to com- mon bricks ; but made m the same way. The best clay for them is Stourbridge clay ; and, instead of sand, it is usual to mix the clay with a quantity of old fire-bricks, crucibles, or glass pots, reduced to powder. The kinds of bricks made in this country, are principally place- bricks, gray, and red stocks, marie facing bricks, and cutting bricks. The place bricks and stocks are used in common walling. The marles are made in the neighbourhood of London, and used in the outside of buildings ; they are of a beautiful yellow color, hard, and well burnt, and in every respect superior to the stocks. The finest kind of marie and red bricks, are called cutting bricks, and are used in the arches over windows and doors, being rubbed to a centre, and gauged to a height. There is also a fine kind of white bricks made near Ipswich, which are used for facing, and sometimes brought to London for that purpose. In Sweden it is said to be customary, at some of the iron foundries, to cast the scoriae into bricks, which they employ in constructing their furnaces. Any quantity of such bricks could then be produced by some of our large iron foundries ; ard it is surprising that a recommendation upon this subject, long since given, has never been acted upon by them.

As articles of taxation, and furnishing a con- siderable revenue to Government, the size of bricks has been regulated by act of parliament. They must not be less than eight inches and a half long, two and a half thick, and four inches wide. But for specific purposes, they are al- lowed to be made of different sizes.

BRICKING, among builders, the counter feiting of a brick wall on plaster. It is done by smearing it over with red ochre, and making the joints with an edged tool; these last are after- wards filled with a fine plaster.

The BRICKLAYERS in London are a regular com- pany, which was incorporated in 1568; and con- sists of a master, two wardens, twenty assistants, and seventy-eight on the livery.

BRICKLAYERS' TOOLS. These are 1. The trowel, for taking up and spreading the mortar, in order to cement the bricks together, and for cutting them to any shape required. 2. The hammer. 3. The plumb ruls, generally about four feet

long, and used with a plumb line, to carry the faces of walls perpendicularly. 4. The level from six to twelve feet long, used to try the

level of works as it proceeds, more particularly window cills and wall plates. 5. The large square, for trying and setting out the sides of buildings at right angles. 6. The rod, for measuring, either five or ten feet long, and divided by notches on the edge, into as many feet, the last foot of which is di- vided into inches. 7. The jointing rule, eight or ten feet long, for running the joints of brick- work. 8. The jointer is made of steel, and shaped like the letter S ; with this and the rule, the joints in brick-work are marked. 9. The compasses. They are used for traversing arches, , &c. 10. The raker, a piece of iron, bent like the letter Z, and pointed at both ends ; its use if to pick or scrape decayed mortar out of joints in old walls to be replaced by new. 11. The hod, which consists of two boards put together at right angles, with a handle or leg, somewhat re- sembling the letter Y, fastened to that part where the two sides meet; one end of the trough is open and the other closed ; its use is to carry mortar, bricks, stones, &c. up the ladders, on the shoulder, the handle serving to keep it steady while ascending, and to rest it upon when on the scaffolding. Some sand or dust is generally strewed over the inner surface when mortar is carried, to prevent its sticking. 12. The line- pins. They are two iron pins for fastening and stretching the line, for the purpose of laying the courses level. 13. The ranuner. When ground is of a loose kind this tool is used for com- pressing it, by beating on its surface. 14. The iron crow and pick-axe are used for the. purpose of breaking through walls ; the crow-bar is used alone for raising large stones, or any other heavy bodies. 15. The grinding-stone, which is used fcr sharpening any of the tools. 1C. The banker, a high bench of six to twelve feet long, two or three feet wide, and two feet eight inches high from the ground, and serves as a bench to rub bricks for arches or other work upon. 17. The camber-slip is a piece of wood of at least half an inch thick, with one of its edges curved, and rising about one inch in six feet ; its use is for drawing the soffit lines of straight arches. If the other edge is curved, it should rise one half as much ; this is used for drawing the upper side of straight arches, to allow for their settling. Some workmen prefer the upper side of the arch straight. When the lines are drawn the camber slip should be given to the carpenter to enable him to form the centre to the curve of the soffit. 18. The rubbing-stone, generally of a cylindric form, about twenty inches in diameter, fixed at one end of the banker. When the bricks are brought as near the shape as convenient, by the axe, they are by this rubbed smooth ; it is also used for rubbing headers and stretchers, called rubbed returns. 19. The bedding-stone, formed of a piece of marble, about eighteen inches long, and eight or ten inches wide, with one fair side ; its use being to try the rubbed sides of the brick, which must be first squared, in order to try whether the surface of the brick is straight, so as to fit upon the leading skew-back, or lead- ing end of the arch. 20. The small square, for trying the bedding of the bricks, and squaring

the soffits across the breadth of the bricks. 21. The bevel, for drawing the soffit line on the face of bricks. 22. The mould, used in giving form to the back aud face of the brick, that it mav have its thickness reduced to its proper taper, to which end one edge of the mould (which has a notch for every course of the arch), is brought close to the bed of the brick already squared.

23. The scribe, any piece of iron ground to a point, to mark by the edge of the rule or mould.

24. The tin-saw, fix cutting the lines upon the bricks about one-eiguth of an inch deep, that when the axe is used the edges may not spalter away. It is also used in cutting the soffit through its breadth, in the direction of the ta- pering lines, drawn on the face and back of the brick ; the cut being made deeper on the face and back than in the middle of its thick- ness, for the purpose of entering the axe. The saw is likewise useful in cutting false joints.

25. The brick axe is used for axing off the sof- fits of bricks to the scribes, and saw cuttings. The more care that is taken in axing, the less will be the labor of rubbing. 26. The tamplet is used in taking the length of the stretches and width of the header. ā The last ten articles relate to the cutting of gauged arches.

The chopping block is any convenient piece of wood, placed so as to be three inches from the ground, supported either on legs or piers, and used for axing bricks upon. Its length must be according to the number of men that are to work at it.

The^/Zoaf stone is used to rub the curved sur- face of the bricks smooth ; it is necessary to bring it as near as possible to the figure of the surface in- tended to be rubbed, before the operation is begun.

BRICK-LAYING, the art of framing edifices of bricks. This business in London includes tiling, walling, chimney-work, and paving with bricks and tilns. In the country it is very com- mon for the sarvj person to exercise masonry, brick-laying, and plastering.. In laying bricks in the winter season, they should be kept as dry as possible. In the summer, on the contrary, it will quit cost to employ boys to wet them ; for they will then unite with the mortar better than if dry, and will make the work stronger. Where it is thought too much trouble to dip all the bricks separately, water mny be thrown on each course after they are laid, as was done at the building of the Physician's College, by order of Dr. Hooke.

In working up a wall, it will be proper not to work more than four or five

feet at a time, for as all walls, immediately after building, shrink, the part which is first brought up will remain station- ary, and when the adjoining part is raised to the same height, a shrinking or settling will take place, and separate the former from the latter, causing a crack, which will become more and more evident as the work proceeds. In carrying up any particular part, each side should be sloped off, to receive the bond of the adjoining-work on the right and left. Nothing but absolute necessity can justify the work being carried higher, in any particular part, than one scaffold, for, wherever it is done, the workman is certainly answerable for all the evil which may arise from such palpable error.

BRICKS.

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There are two kinds of bond in brick-work, which differ materially from each other, and as the subject is of the highest importance to the bricklayer, we shall lay before our readers some remarks contained in a pamphlet, written on this subject, by Mr. G. Saunders, who has treated it with a degree of attention which its importance requires. ā ‘ Bricks laid lengthways in the direc- tion of the wall are called stretchers, and those laid in an opposite way crossing the direction of the wall, are called headers. Old English bond is a continuation of one kind throughout, in the same course or horizontal layer, and consists of alternate layers of headers and stretchers, the headers serving to bind the wall together, in a longitudinal direction, or lengthways ; the stretchers to prevent the wall splitting crossways, or in a transverse direction. Of these two evils, the former is by much the worst kind, and is therefore much dreaded by the bricklayer.’

Mr. Saunders is of opinion, that old English brick-work is the best security against these acci- dents, as work of this kind, wheresoever it is so much undermined as to cause a fracture, is not subject to either of the above evils, but separates by breaking through the solid brick, just as if the wall were composed of one entire piece. The brick-work of the Romans was of this kind of bond, but the specimens of their work, which remain, are of great thickness, and have three or sometimes more courses of brick laid at cer- tain intervals of the height, stretchers on stretch- ers, and headers on headers, opposite the return wall, and sometimes at certain distances in the length, forming piers, that bind the wall together in a transverse direction. The intervals between these piers were filled up, and formed pannels of rubble or reticulated work ; consequently great substance with strength was economically obtained.

Flemish bond, which is the second kind, con- sists in placing in the same

course alternate headers and stretchers, which disposition, accor- ding to our author, is decidedly inferior in every thing but in appearance, and even in this, the difference is so trifling, that few common obser- vers would be struck with any great superiority, that the former possesses over the latter. To ob- tain this, strength is sacrificed, and bricks of two qualities are fabricated for the purpose ; a firm brick often rubbed, and laid in what the workmen term a putty joint, for the exterior, and an infe- rior brick for the interior substance of the wall. As these did not correspond in thickness, the exterior and interior surface of the wall, would not be otherwise connected together, than by an outside heading brick that was here and there continued of its whole length. But as the work does not admit of this at all times, from the want of agreement in the exterior and interior courses these headers can only be introduced where such a correspondence takes place, which sometimes may not occur for a considerable space. Walls of this kind consist of two faces of four inch work, with very little to connect them together, and, what is still worse, the interior face often consists of brick, little better than rubbish. Notwithstanding this, the practice of Flemish bond has continued from the time of William and Wary, when it was introduced with many other

Dutch fashions ; and our workmen are so infatu- ated with this practice, that there is scarcely an instance to be seen of the old English bond.

To the Flemish bond alone must be attributed the frequent splitting of walls into two thick- nesses, and various schemes have been from time to time adopted for the prevention of this for- midable defect. Some have laid laths or slips of hoop iron, occasionally, in the horizontal joints between the two courses; others lay diagonal courses of bricks at certain heights from each other ; but the good effect of this last practice is much doubted, as in the diagonal course, by their not being continued to the outside, the bricks are much mangled where the strength is wanted. Many other practices are enumerated, to unite complete bond with Flemish facings, but with no better success.

For the walls of cottages and small buildings, the system of working walls hollow is attended with many advantages. Cottages in exposed situations in the country, which are built with a nine inch wall, solid, from the porous nature of the bricks, are damp and uncomfortable ; the rain passing from the external to the internal part of the wall. The plan of building walls hollow, as shown in fig. 1, consists in placing a course of alternate headers and stretchers on cage A, and the backing course is like it, leaving an in- terval between of the width Ā§f a half brick ; these are then covered with a heading course, B, laid flat, and the system is pursued until the whole height required be attained.

Pi. 2.*

Fig. 2 is a section of the wall, showing the intervals in the same, and describing the construction of it. It will be seen by inspection that these walls possess the desirable qua- lities of cheapness and du- rability, as, from the con- tinued dryness of them, the timbers of roofs, &c. which are laid in them, are not so liable to decay ; and the saving of bricks will be 1500 in a rod of reduced work ; and the quantity of mortar less by a third than in the usual way. This system may be well applied to garden walls (with piers about ten feet apart), as the walls retain the heat in summer ; and, from their being hollow, admit the air, so that they are always dry.

In the old English bond, the outside of the

last course points out how the next is to be laid, so that the workmen cannot easily err. See ARCHITECTURE.

BRICK-MAKING is mostly performed at some small distance from cities and towns ; and though some, through ignorance, look upon it as a very mean employment, because laborious, yet the masters about London, and other capital cities, are generally men of substance.

Mr. Mencke, of Park Place, Peckam, Surrey, has taken out patents for certain improvements in the preparation of the material for brick making, and also in the manufacture itself. His improved method of preparing the material con- sists in adding to the clay or brick-earth, after it has been mixed with chalk, a quantity of sul- phuric acid, for the purpose of producing a more intimate union of the materials, and causing them to dry more rapidly. His method of manufacturing consists in placing the brick-earth, when properly prepared and mixed with chalk, sulphuric acid, and other materials usually employed (see BRICKS), on a frame sub- divided into compartments the size of the re- quired ibricks, Jwhich is placed on the lower stage of a compound press, consisting of a frame and stages similar to the usual packing presses : the upper stage is attached to a powerful screen, with a fly-wheel, and the lower stage to the piston-rod of an hydraulic press. The lower sta^e being thus loaded, is raised by hydraulic pressure to an appropriate elevation, when blocks to fit into the divisions of the brick-frame attached to the upper stage of the press are brought down upon the brick-earth by the power of the fly and screw. The pressure is then re- moved from the bricks, by permitting a portion of the water to escape

from the press, and the bricks are carried to an arch-roofed building, furnished with a fire-place and flue, and properly ventilated, to accelerate their drying. The pro- cess is completed by burning them in a building precisely similar to that in which they are dried.

BRIDE, n. s. ˆ Goth, brud ; Swed.

BRI'DAL, n. s. &cadj.

and Dan. brud; Belgic

BRIDE'BED, n. s. bruid ; Teut. braut ;

BRIDE'CAKE, Ang.-Sax, bryd ; Arm.

BRIDE'CHAMBER, ˆ-bried ; Welsh priod ;

BRIDE'MAID, I from Goth, \reda, be-

BRIDE'GROOM, \reda ; Sax. beredian;

BRIDE'MAN, | Teut. beraten, to be-

BRIDE'STAKE, J trothe; to solemnise le-

gally. Goth, fad, Teut. beyrath, signified marriage ceremony ; and Sax. bryd was applied to any married woman. Tooke, however, is confident that bride is the past participle of the Ang.-Sax. bredan, to nourish, to cherish ; and that groom is the past participle of the Ang.Sax. verb gyman, to take care of; to girdle; to guard ; to attend. So that, according to him, the bride is any woman nourished, cherished ; and the bridegroom is the person by whom the nourished, cherished one is attended, served, protected. Bruder, in Runick, signifies a beautiful woman ; and all women at the time of their marriage are deemed by their lovers the fairest of their sex : hence the present appropriation of the term to a new married wo man : bridal, as a substantive, is a nuptial festi- val ; as an adjective, belonging to a wedding;

connubial : brideman ant] bridemaid, attendants on the bride and bridegroom : bridestake, a post stuck in the ground, like a maypole, to dance round at a wedding : the other derivatives re- quire no explanation.

When to my arms thou brought'st thy virgin love. Fair angels sung our bridal hymn above. Dryden.

Why, happy bridegroom !

Why dost thou steal away so soon to bed ? Id.

In Death's dark bowers our bridals we will keep, And his cold hand Shall draw the curtain when we go to sleep. Id.

The day approached, -when fortune should decide Th' important enterprise, and give the bride. Id,

The lovely Thais by his side, Sat like a blooming eastern bride, In flower of youth and beauty's pride. Id. The writer, resolved to try his fortune, fasted all day, and, that he might be sure of dreaming upon something at night, procured a handsome slice of bridecake, which he placed very conveniently under his pillow. Spectator.

Would David's son, religious, just, and brave, To the first bridebed of the world receive A foreigner, a heathen, and a slave ? Prior.

Full many an age old Hymen hath not spied So kind a bridegroom, and so bright a bride. Pope.

For her the spouse prepares the bridal ring, For her white virgins hymenaeals sing. Id.

With all the pomp of woe, and sorrow's pride ! Oh early lost ! oh fitter to be led In cheerful splendour to the bridal bed 1 Walsh.

Daughters of Salem, see the Hebrew king Crowned with the beauteous wreath his mother placed About his temples on that happy day, When bridal rites completed all his bliss. Howe.

BRIDE. See MARRIAGE.

BRIDEGROOM. SEE MARRIAGE.

BRIDE' WELL, n. s. A house of correction : so named from the palace built by St. Bride's or Bridget's well, which was turned into a workhouse.

He would contribute more to reformation than all the workhouses and bridewells in Europe. Spectator.

BRIDEWELL, near Fleet Street, is a foundation of a mixed and singular nature, partaking of the hospital, the prison, and the workhouse ; it was founded in 1553 by Edward VI., who gave the place, where king John formerly kept his court, and which had been repaired by Henry VIII., to the city of London, with 700 merks of land, bedding, and other furniture. Several youths are sent to the hospital as apprentices to manu- facturers who reside there. Having faithfully served for seven years, they have their freedom, and a donation of Ā£10 each, for carrying on their respective trades.

BRIDEWELL is also a workhouse for vagrants, strumpets, and other disorderly persons : who are made to work; being maintained with clothing and diet; and, when it seems good to their go- vernors, they are sent by passes to their native countries. While they remain in Bridewell, they are not only made to work, but, according to their crimes, receive once a fortnight such a number of stripes as the governor commands.

BRIDGE, n. s. & v. a. Goth, bro, brigg ; Swed. bryggia ; Teut. brucke ; Sax. bjiic ; Dan. bre ; Russ. brod, borod ; Pers. barah ; from the verb to bear. A platform or arch over water ;

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BRI 541

a ridge; what is raised for ornament, protection, or support; hence the bridge that secures a safe passage ; the bridge of a violin, &c. : to bridge is to raise a bridge; to provide with a bridge.

At Trompington, not fer fro Canterbrigge, Ther goth a brook, and over that a brigye, Upon the whiche brook ther stont a mille, And this is veray sothe I you telle.

Chaucer’s Canterbury Tula.

What need the bridge much broader than the flood ?

Shakspeare.

The raising gently the bridge of the nose, doth pre- vent the deformity of a saddle nose. Baam.

Came to the sea ; and over Hellespont Bridging his way, Europe with Asia joined.

Milton. And proud Araxes, whom no bridge could bind.

Dry den.

I stood in Venice, on the Bridge of Sighs j A palace and a prison on each hand : I saw from out the wave her structures rise, As from the stroke of the enchanter's wand.

Byron's Childe Harold.

BRIDGE, in architecture, is a work either of stone, timber, or iron, consisting of one or more arches built over a river, canal, or the like. See ARCHITECTURE, where the theory of their .con- struction, and some account of remarkable bridges is given. The bridges of London afford, perhaps, collectively, the greatest mass of scien- tific knowledge and practical ingenuity of any in the world. The very great breadth of the river to be traversed offered such obstacles to the [attempt, that, with the slender knowledge the early inhabitants of this island .had of the principles of hydraulic architecture, it could not be expected that much could be done. The first of these is Westminster bridge, begun in 1738, and finished in 1750, by M. Labelye, a Swiss architect. It has thirteen large and two smaller arches, all semi-circular, and springing at about two feet from low water mark : the centre one spans seventy-six feet, and the others decrease on each side equally four feet : the whole length is 1220 feet, and the breadth forty- four. Each pier opposes a salient right angle to either stream ; the two centre ones are each seventeen feet thick, and contain 3000 cubic feet of stone : the others decrease in proportion to the arches. Over each pier is a semi-octangular tower with a vaulted top, and so accurately are these constructed, both in themselves and with regard to the others, that a whisper di- rected to the wall of one of them is distinctly heard in the opposite one. The clear waterway is 870 feet.

*Blackfriar's bridge is the next in order of time : it was built by Mr. Mylne, between the years 1760 and 1770. The arches are nine in number, and of elliptical form : the centre arcii is 100 feet wide, and the others decrease in re- gular progression to ninety-eight, ninety-three, and eighty-three feet ; those adjoining the abut- ments on each side are seventy feet, leaving a waterway of 788 feet. The whole length is 995 feet ; the breadth of the carriage-way twenty-eight feet; and that of the raised foot-path on each side seven feet. The line of roadway is an arc of a very large circle forming an elegant figure. On each *iif r is a recess or balcony, supported*

by insulated Ionic columns, which stand on a circular projection of the pier above high water mark, and give a lightness of appearance to this edifice not possessed by any other of the kind with which we are acquainted. It is much to be regretted, however, that from the bad quality of the material these parts are already in a slate of decay. The expense of erecting this bridge was Ā£ 152,840.

Waterloo bridge, designed and erected by Mr. Rennie, over the Thames between Westmin- ster and Blackfriar's bridge, was begun in the year 1810, and opened with great ceremony in 1815, shortly after the important battle of Wa- terloo, from which it received its name. It con- sists of nine equal elliptical arches, each 120 feet span, and thirty-five feet rise, forming a level roadway 1260 feet by forty-two feet broad, beside several land arches on the Southward side, constructed for the purpose of making a level road from the bridge. The piers, which are twenty feet thick, are decorated with two columns of the Grecian Doric order on each, supporting an entablature which is carried along the whole length of the bridge. This bridge is wholly constructed of the best granite, and cost nearly Ā £750,000.

Southwark bridge is remarkable for the im- mense size of its arches of cast iron, of which there are but three in a breadth of about 700 feet : the centre one spanning. 240, and the others 210 feet each. It exhibits an excellent specimen of firm- ness of mutual abutment in the parts constituting the chief strength of the arch, but is considered to exceed too much the actual strength required : the abutment is of firm masonry, connected by dowels to prevent its sliding; and resting on gratings of timber supported by oblique piles.Ā°The piers (twenty-five feet thick) stand on foundations nine or ten feet below the present bed of the river, in order to provide against any alterations which may hereafter take place in its channel from the operation of various causes : and they are abun- dantly secured by a flooring of timber resting on a great number of piles. This bridge was likewise the work of Mr. Rennie: the iron work was furnished by Messrs. Walker. It was be- gun in 1814, and finished in less than eight years, at an expense of about Ā£800,000.

Vauxhall bridge consists of nine arches of cast iron, each seventy-eight feet span, and between eleven and twelve rise; the whole length, including the abutments, is about 950 feet. The breadth of the roadway is thirty-six feet clear. The architect was Mr. Walker.

The new London bridge, designed by Hie late Mr. Rennie, and finally completed by his sons, is 950 feet long, including the abutments, an.'/ fifty-

five feet broad from parapet to parapet, it has five elliptical arches, of which the centre 0114 is 150 feet span, with thirty-two feet rise ; the two adjacent arches, each 140 feet, with a rise of thirty feet; and those next to the abutments, 130 feet span, with a rise of twenty-five feet : the two central piers are each twenty-four feet thick ; the others twenty-two feet, and the abutments seventy-four feet. Perspective views of these splendid hydraulic edifices will be found in our plates of BRIDGES. See MCENAI BRIDGE.

BRIDGE, in gunnery, the two pieces of timber which go between the two transums of a gun- carriage, on which the bed rests.

BRlDGEND, a town of South Wales, in Gla- morganshire, seated on the Ogmore, which divides it into two parts, connected by a stone bridge. It is seven miles west by north of Cowbridge, twenty from Cardiff, and 181 west from London. It has a considerable market on Saturday for cattle and provisions : with two fairs on 1 7th November and Holy Thursday.

BRIDGENORTH, a borough and market town of Shropshire, seated on the Severn, which divides it into two parts, united by a handsome stone bridge of six arches, and called the Upper and Lower town. It is said to have been built by Ethelfleda, widow of Ethelred king of the Mercians, about A. D. 675. Robert de Belesme, son of Robert de Montgomery, built the castle, and maintained it against king Henry I., in con- sequence of which it was forfeited to the crown, and remained so till the reign of Richard III., who gave it to John Sutton lord Dudley. This town has undergone several sieges ; and in the civil war suffered much, the whole town being almost destroyed by fire, when Sir Lewis Kirke defended the citadel for the king. There are now no other remains of the castle than a small part of the towers, and a place of that name within its walls, within which also stands one of the churches, dedicated to St. Mary Magdalen, exempted from episcopal jurisdiction. The other church is at the north end of the town, on the highest part of the hill. Near this church-yard stood a college, which was burnt during the civil wars, together with the church, which has been since rebuilt. On the west bank of the river are the remains of a magnificent convent, under which are several remarkable vaults and caverns. Part of the Cow-gate-street is a rock, rising perpen- dicularly, in which are several houses and tene- ments that make a very grotesque appearance. In many other places there are also caves and dwellings for families in the rocks;

and, indeed, the whole town has a singular appearance. It is well supplied with water, not only by pipes from a plentiful spring, half a mile off, but also from the Severn ; it being thrown by a water engine to the top of Castle-hill, whence the houses are sup- plied. There is a curious walk made from the higher part of the town to the bridge, being a hollow way, hewn twenty feet through the depth of the rock. The town is governed by two bailiffs, elected out of twenty-four aldermen (who must have gone through all the offices of the town), a jury of fourteen, together with forty-eight common- council men, a recorder, town-clerk, &c. The corporation has many ancient privileges, as granted by various charters. It has sent two members to parliament ab origine. The right of election is in the burgesses and freemen, the num- ber of voters being about 700. Here are manu- factories of stockings, cloths, fire-arms, iron tools, &c. It has a free-school for the sons of the bur- gesses, and an hospital for ten poor widows. Its market, on Saturday, is well stocked with all kinds of provisions. Its fairs, on Thursday be- fore Shrove-Sunday, June 30th, August 2nd, and October 29th, for cattle, sheep, butter, cheese,

bacon, &c., are resorted to from most parts of the kingdom ; the last of these fairs continues three days. Both the churches are curacies. It is twenty miles west by north of Birmingham, and 139 north-west of London.

BRIDGET, or BRIG IT (St.), a Swedish lady of the fourteenth century, famous for her revela- tions, and for being the founder of the order of the Brigittines. Some represent her as a queen ; but Fabricius, on better grounds, says she was only a princess, and the daughter of king Bir- genes, of Upland.

BRIDGETINES. See BRIGITTIXS.

BRIDGETOWN, the capital of Barbadoes, situated in the inmost part of Carlisle Bay, which is capable of containing 500 ships, being four miles in length and three in breadth. This was originally a most unwholesome situation, and was chosen entirely for its convenience for trade; but is now deemed as healthy as any place in the island. Bridgetown is esteemed one of the finest cities in the West India islands, as it contains 1200 houses, built mostly of brick. The wharfs and quays are well defended from the sea, and very convenient. The harbour is secured from the north-east wind, which is the constant trade wind there ; and is well defended by numerous forts and castles from all attacks at sea. The citadel, which bears the name of St. Anne, cost about 180,000 dollars ; on the east side is a small fort mounted with eight pieces of cannon, where are preserved, under the care of a strong guard, the public magazines of ammunition and pro- vision. There are some good inns and houses of refreshment in this city. Its shops and magazines are well stored with all kinds of European pro- ductions.

The city has a garrison of 1200 men, and is the seat of the governor, the council, the assembly, and the court of chancery. Here is also a post-office, where the foreign mails are made up monthly. The church of St. Michael exceeds many English cathedrals in beauty, largeness, and convenience; and has a fine organ, bells, and clock. Here is a free-school for the instruction of poor boys, an hospital, and a col- lege. The latter was erected by the Society for propagating the Christian Religion, in pursuance of the will of Colonel Christopher Codrington, who left about Ā£2000 a-year for its endowment, for maintaining professors and scholars to study and practise divinity, surgery, and physic. Long. 58Ā° 38′ W., lat. 13Ā° 10′ N.

BRIDGETOWN, the capital of Cumberland county, in New-Jersey. It is situated on Co- hanzy creek, fifty miles south-east of Philadelphia. The county court is held here quarterly.

BRIDGEWATER, a borough of Somerset- shire, ten miles north-east from Taunton, and 139 west from London. It stands on the river Parrat, over which is an iron bridge, connecting the town with the suburb of Eastover. Here the tide rises, at high water, six fathoms ; and some- times the boar, as it is called, flows in with such impetuosity that it rises nearly two fathoms at a time, which often occasions damage to the ship- ping. This river is navigable to Bridgewater for vessels of 200 tons, and for barges up to Taunton and Langport. The church, which is a handsome and spacious structure, has the loftiest spire in the

county Near it is a free-school of stone ; and the town-hall is a large building, over which is a cistern, which, by means of machinery, supplies the inhabitants with water. Bridgewater was first incorporated by king John, who built a castle here, and was one of the first towns seized hy the barons under Henry III. It was consti- tuted a distinct county, and had other privileges granted it by Henry VIII., in consequence of winch the sheriff of Somerset cannot issue any process here. During the civil war it was first gar- risoned by the parliament, but soon taken by the royalists, who kept it till the extinction of their cause. The duke of Monmouth was proclaimed king here, and lodged some time in the castle. The corporation, consists of a mayor, recorder, two aldermen, twenty-four common-council men, a town-clerk, water-bailiff, and two sergeants at mace ; and sends two members to parliament, who are chosen by such of the inhabitants as re- side in that part called the borough, and pay scot and lot. The revenue

of the corporation is estimated at about Ā£5000 per annum. The free- men are free of all the ports of England and Ire- land, except those of their respective capitals. The inhabitants carry on an extensive trade to Wales, Ireland, Newfoundland and other parts of America, the West-Indies, and the Mediter- ranean. Here are held four sessions annually, for trying all crimes not capital ; and a court of record every Monday, which takes cognizance of debts ; the rules and practice being according to those of the court of common-pleas. The streets are irregular, but wide and well paved. Markets on Thursday and Saturday. Its fairs are 24th July, 2nd October, 27th December, and the first Monday in Lent, when great numbers of horses and horned cattle are sold. The assizes of the county are held here every other year. Bridge- water has a very good coasting trade, and a considerable number of coal vessels.

BRI'DLE, v. & n.~\ Goth, bridal, from bride, BRI'DLEHAND, fand ol, a strap or rein; BRI'DLER, (bitol, a bit rein ; Swed.

BUI'DLING. J bitul; Teut. Irittel; Belg.

brt/del; Fr. bride ; Ital. briglia. A bit with reins for governing a horse. The verb primarily sig- nifies to guide or manage the horse. Metapho- rically it is to rein up the head as a horse does when checked by the bridle, and to hold in ; to restrain ; to moderate ; to govern : and the noun is applied generally to signify a re- straint, a curb, or check.

And to the hors he goth him, faire and wel, And stripeth of the bridel, right anon.

C/taucer't Canterbury Tales. They hied so (they -would not abide The bridling her horse to ride), By five, by six, by two, by thre, There was not one abode with me ; The queene to mete everichone They went, and bode with me not one.

Chaucer '> Dream.

Thus while his stony heart with tender ruth Was toucht, and mighty courage mollifide, Dame Venus' sonne (that teacheth stubborn youth With yron bit, and maketh him abide, Till like a victor on his back he ride) Into his mouth his tnaystring bridle thew That made him stoupe, till he did him bestride j

Then gan he make him tread his steps anew,

And learne to love, by learning lovers paines to rew.

Speraer.

The disposition of things is committed to them, whom law may at all times bridle, and superiotir power controul. Hooker.

Jn the turning, one might perceive the bridlehand something gently stir ; but, indeed, so gently, as it did rather distil virtue than use violence. Sidney.

With a strong, and yet a gentle hand, You bridle faction, and our hearts command.

Waller.

Enough my dear brother, altho' we speak reason Yet, truth many times being punished for treason, We ought to be wary and bridle our tongue, Bold speaking hath done both men and beasts wrong.

Marvell.

The king resolved to put that place, which some mm fancied to be a bridle upon the city, into the hands of such a man as he might rely upon.

Clarendon. They seized at last His courser's bridle, and his feet embraced.

Dryden.

FTow hard soe'er it be to bridle wit, Yet memory oft no less requires the bit.

Stillingfleet .

The queen of beauty stopped her bridled doves ; Approved theMittle labour of the Loyes. Prior.

I bridle in my struggling muse with pain, That longs to launch into a bolder strain. Addison. A bright genius often betrays itself into many errours, without a continual bridle on the tongue.

Watts.

The heat of summer put his blood into a ferment, which affected his bridlehand with great pain.

Wiseman.

The wars are all over, Our swords are all idle, The steed bites the bridle, The casque's on the wall. Byron.

BRIDLE. The origin of the bridle is of the highest antiquity, and has been variously assigned. Pausanias attributes its invention to Minerva; Virgil (Georg. lib. iii. 115.) and Pliny, to the Lapitha Pelethronius. Many of the coins struck in the ancient towns of Thessaly represent a horse, sometimes with a rider, but often running loose with a long rein trailing on the ground, to show that the bridle was the invention of the Thes- salians. The first horsemen, not being acquainted with the art of governing horses with bridles, managed them only with a rope or a switch, and the accent of the voice. This was the practice of the Numidians, Getulians, Libyans, and Mas- silians. The Roman youth also learned the art of fighting without bridles, which was an exer- cise or lesson in the manege ; and hence it is, that,on theTrojan column, soldiers are represented riding at full speed without any bridles. The different parts of a modern bridle are, the bit or snaffle ; the head-stall, or leathers from the top of the head to the rings of the bit ; the fillet, over the fore-head, and under the fore-top; the throat-band, which buttons from the head-band under the throat ; the reins, or long thongs of leather that come from the rings of the bit, and being cait over the horse's head, the rider holds them in his hand ; the nose-band, going through loops of the back of the head-stall, and buckled under the

cheeks ; the trench, the cavesan, the martingal, and the chaff-halter.

BRIDLES, SCOLDINO. See BRAXR..

BRIDLE-ARM PROTECT, in the broad-sword exercise, a guard used by the cavalry, in which you raise the sword-hilt above the helmet; the blade crossing the back of the head, the point of the left shoulder, and the bridle-arm ; its ed?e directed to the left, and turned a little upwards in order to bring the mounting in a proper direc- tion to protect the hand.

BR II) PORT, a borough town of Dorset, situated in a valley between two small rivers or branches of the river Brit, which falls into the sea about a mile south of the town. Bridport sends one member to parliament : it was incor- porated by Henry III. The town is respectably built ; its principal manufactures are cordage, nets, and sail-cloth. In the centre of the town is a new and handsome market-cross, which has been completed at the cost of Ā£3000. Here also are a charity-school, three alms-houses, and other benevolent institutions. It is a very ancient corporation, having sent members to parliament ever since the 23d of Edw. I. In the reign of Henry

VIII. it was enacted, that all the cordage, &c. for the navy, for a limited time, should be made here, or within five miles, and nowhere else ; an Act which was renewed for nearly sixty years. It is noted for making ropes and cables for shipping; whence arises the proverb of a man that is hanged, that he is ‘ stabbed with a Brid- port dagger.’ It is twelve miles west of Dorchester, and 135 west by south of London. Long. 2Ā° 52′ W., lat. 50Ā° 42′ N.

BRIEF, Ā«< #ā¢&Ā«.Ā«ā¢ ~\ Latin brevis; FT. bref;

BRIEF’LY, adv. Vital, brieve ; also Gothic

BRILF’KESS, n. s. jbref; Teut. brief; Saxon brave; Fr. brevet; Ital. breve. The adjective generally signifies short; concise: the substantive is applied to a short extract ; a letter patent ; an abbreviated document ; the concise substance of something larger, or to be expanded. Brief is tech- nichally used as a verb by those very brief gen- tlemen, the lawyers. For instance, ‘to brief the pleadings.’ Briefly is concisely; in few words: briefness, conciseness ; shortness.

So after in brejf tyme, when it was purseyvyj, That she had done a woman’s dede, and had a child

conseyvyd,

The joy that she made ther may no tung tell. Cltauar. But how you must begin this enterprize,

I will your highness thus in brief advise. Spender.

A play, there is, my lord, some ten words long, Which is as brief as I have known a play ; But by ten words., my lord, it is too long, Which makes it tedious. Shakspeare.

I will be mild and gentle in my words. ā ā And brief, good mother, for I am in haste. Id.

I must begin with rudiments of art, To teach you gamut in a briefer sort, More pleasant, pretty, and effectual. Id.

The shrine of Venus, or straight pight Minerva, Postures beyond brief nature. Id.

There is a brief how many sports are ripe : Make choice of which your highness will see first. Id. They nothing doubt prevailing, and to make it brief wsu. Id. Coriolanus.*

The brief stile is that which exprcsseth much in little. Ben Joruon.

The apostolical letters are of a twofold kind ana difference ; viz. some are called briefs, because they are comprised in a short and compendious way of writing. Ayliffe.

I doubt not but I shall make it plain, as far as a sum or brief can make a cause plain. Bacort.

The harmony of science supporting each part ; the other is, and ought to be, the true and brief confuta- tion and suppression of all the smaller sort of objec- tions. Id.

I will speak in that manner which the subject re- quires ; that is, probably, and moderately, and briefly.

Id.

The brief of this transaction is, these springs that arise here are impregnated with vitriol. Woodward.

The modest queen awhile, with downcast eyes, Pondered the speech j then briefly thus replies.

Dryden.

If I had quoted more words, I had quoted more profaneness ; and therefore Mr. Congreve has reason to thank me for being brief. Collier.

They excel in grandity and gravity, in smoothness and propriety, in quickness and briefneti. Camden. The brief with weighty crimes was charged,

On which the pleader much enlarged. Swift.

Brief, brave, and glorious, was his young career, His mourners were two hosts, his friends and foes; And fitly may the stranger lingering here, Pray for his gallant spirit's bright repose.

Byron's Childe HarolUc.

BRIEF, in English law, an abridgment of the client's case, made out for the instruction of council on a trial at law ; wherein the case of the party, &,c. is to be briefly but fully stated : the proofs must be placed in due order, and proper answers made to whatever may be ob- jected to the client's cause by the opposite side ; and herein great care is requisite, that nothing be omitted, to endanger the cause.

BRIEF, in Scots law, a writ issued from the chancery, directed to any judge ordinary, com- manding and authorising that judge to call a jury to enquire into the case mentioned in the brief, and upon their verdict to pronounce sen- tence.

BRIEFS, APOSTOLICAL, letters which the pope despatches to princes, or other magistrates, re- lating to any public affair. These briefs are dis- tinguished from bulls, the latter being more am- ple, always written on parchment, and sealed with lead or green wax ; whereas briefs are very concise, written on paper, sealed with red wax, and with the seal of a fishermen, or St. Peter in a boat.

BRIEG, a principality of Lower Silesia, ad- joining the principalities of Oels, Bredau, and Oppeln. The extent of this tract, which is watered by the Oder, exceeds 1000 square miles. It is peopled by about 110,000 inhabitants, most of whom are Lutherans, and the remainder Roman Catholics. Good pasturage and fine crops of corn are yielded in that part which is cleared.

BRIEG, one of the circles in the above princi- pality, contains about 200 square miles, aad 30,000 inhabitants.

BRIEG, the chief town of the preceding prin- cipality, stands on the Oder, over which there is

a wooden bridge. The fortifications which once were considerable, have lately been demolished. But here is still a ducal castle worth the tra- veller's notice, and some few public buildings.

The Prussians, who besieged it in 1741, threw 2172 bombs into it, and 4714 cannon bullets, which reduced a great part of the town to ashes, so that it was obliged to surrender, after sus- taining a continual fire for seven days. When it was ceded to Prussia by the peace, Frederic augmented the fortifications, and built a new suburb. Since 1763 a manufacture of fine cloth has been established. It is twenty-four miles north-east of Breslaw. Inhabitants about 9000.

BRIEL, or BRILL, a maritime town of the Netherlands, and capital of the island of Voorn, is one of the cautionary towns which was de- livered into the hands of queen Elizabeth, and garrisoned by the English during her reign and part of the next. The Dutch took it from the Spaniards in 1572,

and laid here the foundation of their republic. It is seated at the mouth of the Meuse, thirteen miles south-west of Rot- terdam. The harbour is large and convenient, and the town well built. It was the birth place of the celebrated Van Tromp. In 1813 the in- habitants rose upon the French garrison, and drove them from the town. Here are some good fisheries, and the inhabitants are much engaged as pilots up the river.

BRIENNE, a town of Upper Champagne, France, the head of a canton in the department of the Aube. It has a considerable stocking manufacture, and stands about twenty-two miles east of Troyes. At the military school here Buonaparte received his education ; and here a desperate battle was fought in 1814. Population

3,191.

BRI'ER,) Goth, bry; Ang.-Sax. braer;

BRI'ERY. $ Irish, brier; Welsh, brath, A prickly bush ; a bramble ; a wild rose tree. Briery, rough, thorny ; full of briers or prickles.

Greatly aghast with this piteous plea, Him rested the good man on the lea, And bade the brere in his plaint proceede. Sjien. What subtle hole is this,

Whose mouth is covered with rude growing briers?

Shakspeare,

Then thrice under a brier doth creep, Which at both ends was rooted deep, And over it three times doth leap ; Her magick much availing. Drayton's Nymphid.

BRIET (Philip), a learned French geogra- pher, born at Abbeville in 1601. He became a Jesuit in 1619, and died librarian of their college at Paris in 1668. His Parallella Geographia Veteris et Novae, published in 3 vols. 4to. 1648-9, is a very exact work. He published also An- nales Mundi, in 7 vols. 12mo. from the creation to A.D. 1663: and Theatrum Geographicum, EuropzE Veteris, in 1653, fol. He was likewise concerned in a chronological work with Labbe.

BRIETKOPF (John Gottlieb Immanuel), an ingenious printer and letter-founder, was born ˆat Leipsic, in 17 12. Albert Durer's work in which the shape of the letters is deduced from mathematical principles, suggested to him some valuable im- provements in the art of casting types, and he became the first who cast musical types, now so VOL. IV.

common ; and applied the same method to maps and even portraits. He

proved still more for tunate in his endeavours to print the Chinese characters on movable types, and produced som specimens which are much admired. He also made improvements in the composition of type- metal, but these he concealed. His works are,

1. A Treatise upon the Origin of Printing, 1774.

2. An Attempt to illustrate the Origin of Playing Cards, and 3. A small treatise on Bibliography, published in 1793. He died in 1794.

BRIEUC, or BRIEUX (ST.), a town of France, the capital of the department the Cotes du Nord, stands on a bay, on the north coast of Upper Brittany, called Anse de St. Brieux. It is well built, and, at the village of Legne, has a small secure harbour. The inhabitants are en- gaged in fisheries, and a small trade in the pro- duce and manufactures of the country. Popu- lation 8090 ; distance west of Paris 200 miles.

BRIG, and possibly also brix, is derived from the Saxon brucj, a bridge ; which, to this day, in the northern counties, is called a brigj,, and not a bridge. Brig, a ship with two masts.

BRIG, or BRIGANTINE, a merchant ship with two masts. This term is not universally con- fined to vessels of a particular construction, or which are masted and rigged in a manner different from all others. It is variously ap- plied, by the mariners of different European nations, to a peculiar sort of vessel of their own marine. Amongst British seamen, this vessel is distinguished by having her main-sails set nearly in the plane of her keel ; whereas the main-sails of larger ships are hung athwart, or at right angles with the ship's length, and fastened to a yard which hangs parallel with the deck : but in a brig, the foremost edge of the main-sail is fastened in different places to hoops which en- circle the main-mast, and slide up and down it as the sail is hoisted or lowered. It is extended by a gaff above and a boom below.

BRI'GADE, v. & n. \ Fr. brigade ; Ital ,

BRIG'ADIER. i brigata ; Spa.n.brigada.

The idea is detached, broken away ; and is ap- plied to a party or division of soldiers separated from the main body. Cotgrave says, it means to troop or keep company together.

Or fronted brigades form. Milton.

Here the Bavarian duke his brigades leads,

Gallant in arms, and gaudy to behold. Philij)s.

BRIGADK, a division offerees; consisting o several squadrons of horse, or battalions of foot- A brigade of the army is either foot or dragoons, whose exact number is not fixed, but generally consists of three regiments, or six battalions : a brigade of horse may consist of eight, ten, or twelve squadrons ; and that of artillery, of five guns and one howitzer, with their appurtenances. The eldest brigade has the right of the first line, and the second the right of the second ; the two next take the left of the two lines, and the youngest stands in the centre.*

BRIGADE MAJOR. ā An officer appointed by the brigadier, to assist him in the management and ordering of his brigade. According to the regulations published by authority, a brigade- major is attached to the brigade, and not to any

particular brigadier-general, aithe aid-de-camp is.

BRIG'AND, n. s. -\ Fr. brigand, brigantine;

BRIG'ANDER, f Ital. brigante, brigantino.

BRIG'ANDINE, ' ˆAn associated robber; a

BRIG'ANTINE. 'freebooter; a smuggler: brigander and brigandine, armour worn by bri- gands: brigantine (by Spenser written brigan- dine), a vessel used by brigands and pirates. Like as a warlike brigandine, applied

To fight, lays forth her threatful pikes afore

The engines. Spenser.

There might be a rout of such barbarous thievish brigands in some rocks ; but it was a degeneration from the nature of man, a political creature. '_ Bramhall.

In your brigantine you sailed to see The Adriatick wedded. Otway.

Then put on all thy gorgeous arms, thy helmet And brigandine of brass, thy broad habergeon, Vantbrass, and greves. Milton.

BRIGANDINES were a kind of ancient defensive armour, consisting of thin jointed scales of plate, pliant and easy to the body.

BRIGANTES, an ancient people of Britain, who occupied the territory from sea to sea, the whole breadth of the island; now called York- shire, Lancashire, Durham, Westmorland, and Cumberland.

BRIGGS (Henry), one of the greatest mathe- maticians of the sixteenth century, was bom at Warley Wood, Yorkshire, in 1556. In 1592 he was made examiner and lecturer in mathe- matics, and soon after reader of the physical lecture founded by Dr. Linacre. When Gresham College was established, he was chosen the first professor of geometry there in 1596. In 1619 he was made Savilian professor of geometry at Oxford ; and resigned his professorship of Gre- sham College in July 1620. Soon after, going to Oxford, he was made M. A. in that university ; where he continued till his death, Jan. 26th, 1630. His principal works are, 1. Logarithmorum Chi- lius Prima. 2. Arithmetica Logarithmica. 3. Trigonometria Britannica. 4. A small tract on the north-west passage.

BRIGGS (William), an eminent physician in the latter end of the seventeenth century. He studied physic at Cambridge, and afterwards travelled into France, where he attended the lec- tures of the famous anatomist M. Vieussens of Montpelier. After his return, he published his Ophthalmographia, in 1676. In 1677 he was created M. D. at Cambridge: and soon after was made fellow of the College of Physicians, at London. In 1682 his Theory of Vision was published by Hooke. In 1683 he sent to the Royal Society a continuation of that discourse, which was published in their transactions ; and the same year he was appointed, by king Charles II., physician to St. Thomas's Hospital. In 1684 he communicated to the Royal Society two remarkable cases relating to vision, which were also printed in their transactions; and, in 1685, he published a Latin version of his Theory of Vision, at the desire of Mr., afterwards Sir Isaac, Newton, professor of mathematics at Cambridge, with a recommendatory epistle from him prefixed to it. He was afterwards made physician in ordinary to king William, and continued in great esteem for his skill in his profession till his death, which happened September 4th, 1704.

*BRIGHT, ii. *. BIUGHT'EN, v. a. & v. n.*

BRIGHT'LY, adv. BRIGHTNESS, M.S. BRIGHT'SOMENESS, BRIGHT'ARMED, adj. BRIGHT'BURNING, BRIGHT' EYED, BRIGHT'HAIRED.

Goth, biart, hart; Mod. Goth, bairt;

Sax. beort, breaht, bryht ; Teut. bert, ˆbrecht ; Welsh berth ; Swed. bar ; Goth. her, bart ; our bare, which signified not j only naked, but ma- nifest ; clear ; transparent ; illustrious : bright is also used to signify gay ; cheerful ; witty : to brighten is to make bright, both in the literal and metaphorical senses : as a verb neuter, to grow bright; to clear up: the derivatives are of obvious import.

The purp our sone with tendir bemys reid, In orient bricht as angell did appeir. Dunbar.

A sword, by long lying still, will contract a rust, which shall deface its brightness. South.

Bright brass, and brighter domes. Chapman.

Thy eyes are seen in diamonds bright. Gay,

If parts allure thee, think how Bacon shined, The wisest, brightest, meanest of mankind. Pope.

But let a lord once own the happy lines, How the stile brightens, how the sense refines. Id.

O Liberty, thou goddess heavenly bright, Profuse of bliss, and pregnant with delight ! Addison,

But still

Yon sunny sea heaves brightly, and remains Rolled o'er the peak of the far Rhztian hill As day and night contending were, until Nature reclaimed her order. Byron.

BRIGHTON (in the archives of the town Brighthelmston, and in Domesday Book Bris- tlemestin), a fashionable bathing place, sea- port, and market town, in the hundred of Whalebone, rape of Lewes, county of Sussex, eight miles south-west from Lewes, and fifty- two south from London. Its name is supposed to be derived from Brighthelm, a Saxon bishop, with the usual termination ton, or town, annexed. The first settlers were Flemish fishermen, who came hither soon after the Conquest to pursue their humble occupation. Here their descen- dants continued, without adding any distinction to their place of residence beyond that of an insignificant fishing town ; nor, till within the last fifty years, was it otherwise known than as having been plundered by French marauders in the reign of Henry VIII. ; as subsequently pro- tected by fortifications erected for the purpose of guarding it against future attacks; as the place where Charles II. embarked for France, after the fatal battle of Worcester, in 1665 ; and as having

been more than once visited by tre- mendous storms and inundations, which en- croached upon its territories, laid waste its fortifications, and threatened its destruction.

Brighton first attracted notice by the chaly- beate springs in its vicinity, the virtues of which were earnestly and successfully recommended by Dr. Russel, an eminent resident physician. The chalybeate, twenty years ago, was a plea- sant rural walk, with only a bench and a little room to mark the spot, and to afford a resting place and a shelter to the invalid : it is now in immediate contiguity with the town, and is en- closed by a neat building in the cottage style. For its present consequence, as a watering place, Brighton is chiefly indebted to the patronage of his majesty : from the year 1784, when

prince of Wales, he distinguished Brighton as his favorite abode ; when regent, he converted his marine cottage into a splendid palace, where he spent a great portion of every year, till the cares of royalty, and the infirmities of age, rendered its distance inconvenient. It would be incompatible with our limits, or general de- sign, to trace the local extension and improve- ments which have taken place here even within the last ten years ; the present is the moment when it seems to have reached the acme of its splendor. A new and perfectly unique village, denominated Kemp Town (projected by Thomas Read Kemp, esq., one of the lords of the manor, and whose wealth for many years was daily augmented by the increased value of the lands which were in constant requisition for building), forms the eastern boundary of Brighton ; while Brunswick Terrace, on the west, stretches into the neighbouring parish of Hove : a magnificent range of houses, intended, as it should seem, to rival the splendid structures of the metro- polis. Brighton occupies an eminence, de- clining on the south-east to a level called the Steyne, supposed to have been the site of the ancient Stayne, a street leading from Arundel to Dorking; hence another declivity extends a considerable distance along the western cliff; it is sheltered by a range of hills on the north and north-east, and on the west by the Downs. The form of the town, including its various modern additions and embellishments, is quad- rangular; the streets intersect each other at right angles. The older part, towards the north-east, is formed principally of houses of unequal and inelegant appearance; the more modern presents a continuous line, from east to west, two miles in extent. It covers also a very large space towards the Downs, and northwards reaches almost to Preston, a beautiful village on the London road. The three Steynes are enclosed spots of verdant green ; that to the north is planted

with shrubs and flowers. There are several squares of imposing appearance, among which Regency and Brunswick are the most magnificent. The old Steyne, and the continuous line already referred to, with the chain pier (a light and elegant structure 1200 feet in length and fourteen in breadth), form a delightful and healthy promenade ; the latter was designed and executed for a joint stock company, by captain Samuel Brown, R. N. The libraries are attrac- tive as an evening lounge, for reading the papers, musical and vocal entertainments, and, what is less innocent, the fascinating game of loo. The inns and hotels are of the best description, af- fording excellent accommodation to all who do not neglect the advice of lago: 'put money in thy purse.' The subscription houses, both on the Steyne, are always full, while those for lodging and boarding are too numerous to be recounted, and of every grade. Warm, cold, and vapor baths, on the most scientific princi- ples, and of the most elegant and conyenient construction, have been erected, and are under judicious superintendance. Those at the New Steyne Hotel are supplied with water raised Im- mediately from the sea, a height of 600 feet, and conveyed through a tunnel excavated in the rock. The park and the spa furnish, the one a

beautiful ride, and the other all the varieties of artificial, mineral, and medicinal waters. North- ward of the town is an extensive cricket ground, called the Royal Gardens; and races are annually held in July or August on the Downs. The theatre stands in the New Road, in a line with an edifice devoted, professedly at least, to another Deity ; but neither the house of prayer, nor the temple of Thespis, has proved attractive to the inhabitants or the visitors : a theatre seems out of place where amusements of another kind, and of a stronger zest, present themselves, and So- cinianism veils its mysteries from all but philoso- phers. The rapid and safe travelling, the easy distance, the salubrious air, and the quick ab- sorption of rain and humidity, afford to Brighton superior advantages to every other place of fashionable resort. A noble pedestrian statue of his majesty, by Chantrey, embellishes the north- ern division of the Steyne, and nearly opposite to this stands the Pavilion, as the royal residence is still called, though it by no means answers to this humble appellation. In its former state it was begun in 1784 and finished in 1787; in 1802 wings were added, which completed the propbr- tions of the fabric ; since which period it has arisen to the magnitude of a palace, and has undergone an entire transformation. In ap- pearance it is said to resemble what the Krem- lin at Moscow was, and to exhibit a style of oriental architecture hitherto unknown, ex- cept by description, in England. The stables, even the cognoscenti have not ventured to as- cribe to any order, either ancient or modern. Of this building we may truly say ' none but itself can be its parallel ;' from without the effect is imposing, but from within, and under, the rays of a meridian sun (for it has a dome of glass), it must be consuming. The

market, a commodious and elegant structure, is erecting in the Bartholo- mews, on the former site of the workhouse ; and it is in contemplation to build near the same spot a town hall to correspond with the importance of the place. The new work- house is situated near the summit of the Church Hill, and is a building of considerable extent, ad- mirably adapted to secure the health and comfort of its inmates. The poor are managed by directors and guardians, appointed by the local act of par- liament, and chosen annually by the commis- sioners constituted under the same act, who are elected periodically in case of vacancy by the inhabitants paying scot and lot. On these com- missioners likewise devolve the duties of watch- ing, lighting, cleansing the town, and adminis- tering a variety of its civil and local affairs. The provisions of this act do not contravene the authority of the court leet, or change its ancient regulations, according to which a high constable, with eight neadboroughs, are appointed annually. Brighton is subject to the county magistrates; nor was it till within the last fifteen years that justices resident in the town were called upon to act. There are two barracks in the town, and one for artillery and cavalry about a mile distant, on the road to Lewes. On the western cliff is a battery of heavy cannon, with a maga- zine. Numerous packets and steam vessels sail hence to Dieppe, as the shorter route from London U- Pans ; but. destitute of a harbour

Brighton has no maritime trade, though a few vessels occasionally discharge coals and light goods upon the beach. The market is held on Tuesday, Thursday, and Saturday ; that for fish is daily, but the greater part of the supply is bought up by the agents of the London dealers. The fairs are on Holy Thursday, and on September 4th. In 1818 the Brighton Gas Light and Coke Company was established by act of parliament ; the works are erected at Black Rock, about one mile east of the town.

Brighton consists only of one parish, and is a vicarage, to which the rectory of West Bletch- ington is annexed, both parishes comprising the whole hundred of Whalebone : it is in the arch- deaconry of Lewes, diocese of Chichester, and in the gift of the crown. The church stands on a rising ground to the north-west, and was for- merly at a small distance from the town, which has now almost entrenched upon its sacred en- closure. The architecture is Gothic ; the exter- nal is flint, very evidently the work of different periods. The chantry, or chapel, which has been added to the original church, is of the time of Henry VII. or VIII. ; the large window in

the chancel, under which formerly stood the high altar, appears to be of the time of Henry II., and is very beautiful ; the mullions rising to the spring of the arch, and there forming a rose : under the rood loft is a fine screen, executed in a different style from every other part of the church, the arches being formed from four centres, usually denominated ‘ the Tudor arch.’ The font is a curious specimen of ancient sculpture, representing the Last Supper, and various miracles of our Saviour. According to tradition, it was brought from Normandy in the reign of W’illiam the Conqueror Among the monuments is one to the memory of captain Nicholas Tattersell, who assisted Charles II. in his escape to France after the battle of Worces- ter. The new church, dedicated to St. Peter stands at the north entrance of the town ; its architecture is florid Gothic, and it is by far the noblest structure, and the most beautiful orna- ment, that Brighton has to boast. The Royal Chapel, a few years since the assembly room to the Castle Tavern, was annexed to the palace, and consecrated, Jan. 1st, 1822, by the bishop of Chichester, the late venerable Dr. Buckner: it will accommodate about 1000 persons. The Chapel Royal is situate in a recess in the Great North Street, called Prince’s Place, formerly the Grove : it was erected in 1793, is in the hands of individual shareholders, and is chiefly sup- ported by the theatrical expedient of demand- ing admission money at the doors. St. James’s Chapel was built in 1810, and is situate in St. James’s Street. Trinity Chapel, erected by Thomas Read Kemp, esq., the lay rector of Brighton, as a Dissenting meeting house, now belongs to the established church. These, vith four others, situate in the eastern and western divisions of the town, are the only places of worship belonging to the Hierarchy. Dissent, in all its various shades, has here its appropriate temples. The Wresleyan Metho- dists, who will continue members of a church by which they are disowned ; the countess of Huntingdon’s secession from the same church,

of which it retains the forms and ceremonies ; the nondescript seceders, who followed Mr. Kemp in his defection from the establishment, but who have not imitated him in his re- pentance and return ; the Presbyterians, who have merged into independency, and forgotten their connexion with the kirk; the Independents, proper; the Unitarians; Baptists supralapsarian, and Baptists Antinomian; the adherents of Huntington, the coal-heaver and prophet; the Friends, who once quaked, but who now quake no more; the Shakers, who choose to denominate themselves primitive Methodists; the Roman Catholics ; and the Jews ; all congregate in their various places of worship, under their separate and peculiar characters, while they live together as neighbours and townsmen in perfect harmony and good will. Most of them have their schools, and distinct benevolent and religious institutions. Of the hospital, a spacious building which stands on an eminence rising to the eastern Downs, special notice should be taken, if it

were only to re- cord the princely munificence of the earl of Egremont, to whose liberality and patronage it owes its existence, and to whom Brighton and Sussex are in so many ways under the highest obligations. Among the schools the following are the principal : ā the National ; the Union, for boys and girls, supported by the voluntary con- tributions of dissenters of various denomina- tions; and Swan Downer's: to which may be added the Infant School, recently established, and the Lancasterian School. On the road to Lewes, and about a mile from the town, six alms-houses were erected, in pursuance of the direction of Mrs. Dorothy and Mrs. Ann Piercy, for the reception of six poor widows of the church of England who have received no parochial relief. The Brighton Bank for Savings, and the United Fishermen's Society, have proved of immense benefit to the classes for which tliey were estab- lished. Brighton and Stow, in conjunction, were admitted, by the reform bill, to the privilege of returning two members to the imperial parliament.

White Hawk Hill, a short distance from the race ground, was formerly a Roman station, and some traces of encampments are still to be seen on its summit. On another hill, that of Ilol- lingsbury, about two miles north of Brighton, are also evident vestiges of castrametation, con- taining several tumuli, one of which was opened, to a great depth, by an inhabitant of Brighton, who, hav,ing dreamed that a vessel full of treasure lay hid there, was at a vast deal of pains and ex- pense to render himself, not rich, but ridiculous.

The Devils Dyke, about seven miles north- west of the town, is a fine elevation, commanding one of the most extensive and enchanting pros- pects over which the delighted eye can rove. Here also may be detected evident vestiges of a Danish or Saxon camp.

BRIGITTINS, or BRIDGETINS, a religious order, denominated from their founder St. Bridget. The Brigittins are sometimes also' called the Order of Our Saviour, it being pre- tended that Christ himself dictated their rules and constitutions to St. Bridget. In the main, the rule is that of St. Augustine; only with ad- ditions, pretended to have been revealed by Christ. The first Brigittin monastery was erected

by the foundress, A. D. 1344, in the diocese of Lincopen ; on the model of which all the rest were formed. The constitution of this order is very sin-

gular : though principally intended for nuns, who were to pay a special homage to the Holy Virgin, it admitted a number of friars, as spiritual assist- ants. Each monastery consisted of sixty nuns and thirteen friars, the latter answering to the number of the apostles, of whom St. Paul was deemed the thirteenth; to which were added four deacons to represent the four doctors of the church, St. Am- brose, St. Augustine, St. Gregory, and St. Je- rome ; and eight lay brothers ; making, together with the nuns, the total of seventy-two, the number of the primitive disciples. The order being instituted in honor of the Virgin, the direc- tion is committed to an abbess, who is superior both of the nuns and of the friars. Each house con- sists of two convents, or rather a convent and a mo- nastery, separately enclosed,but having one church in common; the nuns being placed above, and the friars on the ground. The Brigittins profess great mortification, poverty, and self-denial, as ā¢well as devotion ; and they are not to possess any thing they can call their own ; nor even to touch money on any account. This order spread much through Sweden, Germany, the Nether- lands, &c. In England we read of but one mo- nastery of Brigittins, built by Henry V. in 1415, opposite to Richmond, now called Sion House; the ancient inhabitants of which, after the disso- lution, settled at Lisbon. The revenues were reckoned at Ā£1495 per annum.

BRIGNOLLES, a town of France, in Lower Provence, department of the Var, celebrated for the excellent prunes raised in the neighbourhood, and so called from this town. It lies in an agreeable valley between the mountains which give rise to the Calamie. It was formerly noted for its numerous religious houses. Twenty miles north of Toulon, and thirty-three east of Aix.

BRIL (Matthew), a painter of some eminence, born at Antwerp in 1550, and educated at Rome. He was employed and pensioned by Gregory XIII., and obtained celebrity by his perform- ances in history and landscape in the galleries of the Vatican. He died in 1584.

BRIL (Paul), brother to Matthew, was born in 1554. He went to Rome, where he painted seve- ral works in conjunction with his brother, whom he succeeded in his employment and pension, and far excelled in the exercise of his art. He was much in favor with pope Sixtus V., and painted for his successor, Clement VIII., the .iamous piece about sixty -eight feet long, in which St. Clement is represented cast into the sea with an anchor about his neck. He died at Rome in 1626.

BllIL'LIANT, adj. &n. s.-v Fr. brillant; It.

BRIL'LIAKTLY, adv. (brillante ; Teut.

BRIL'LI ANTNESS, n. s. Ā£ and Dan. brille ; a

BRIL'LIANCY. } magnifying glass ;

supposed to be from beryl, which anciently was greatly esteemed and used in sorcery. Shining; sparkling; resplendent: a brilliant is a fine dia- mond : brilliantly, in a shining manner ; splendid- ly : brilliantness and brilliancy, lustre; splendor.

In deference to his virtues, I forbear To shew you what the rest in orders were ; This brilliant .is so spotless and so bright,

He needs not foil, but shines by his o\vu proper light

Dry den. Itsbrilliant hues with all their beams nnshom. Byron.

BRIM,n.s.,v.a., &v.n.~\ Goth, brim, brin ā¢

BRJM'FILL, v. a. | Germ, brimm ; Sax.

BRIM'FUL, adj. (brymm; Swed. brarn.

BRIM'LESS, ('The edge of any

BRIM'MER, n. s. thing; the upper

BRIM'MING, adj J edge; the top; the

bank of a fountain : to brim, or brimfill, is to fill to the brim : as a neuter verb, to be full to the top : brimful and brimming, full to the brim ; overcharged : brimless, wanting the brim : a brimmer is a full bowl.

A mantelet upon his shoulders hanging

Bret-ful of rubies red, as fire sparkling. Chaucer.

His hat being in the form of a turban, daintily made, the locks of his hair came down about the trims of it. Bacon.

Measure my case, how by thy beauty's filling \V ith seed of woes my heart brimful is charged. Sidney.

May thy brimmed waves, Their full tribute never miss,

From a thousand rills. Zlilton.

How my head in ointment swims !

How my cup o'erlooks her brims. Crashaw.

And twice besides her beestings never fail To store the dairy with a brimming pail. Dryden.

When healths go round, and kindly brimmers flow, Till the fresh garlands on their foreheads glow. Id.

Now horrid frays

Commence, the brimming glasses now arc hurled With dire intent. Philips.

When o'er the brim the sparkling bumpers reach.

Byron.

BRIM, v. a. & adj.) Goth, brima. To be-

BRIM'MING. > come salacious and in

heat : hot ; furious ; violent ; fierce. Obsolete.

BRIM'STONE.n. s. } Goth, brinna. To

BRIM'STONY, adj. S burn ; corrupted from bren, or brenstone ; that is, fiery stone Sulphur: brimstony is sulphureous. See SULPHUR.

From his infernal furnace forth he threw Huge flames, that dimmed all the heaven's light, Enrolled in duskish smoke and brimstone blue. Spens.

Brimstony, blue and fiery.' Ben Jonson.

BRIN'DED, adj. \ Frequentative of

BRIN'DLE, n.s. &u.a. > brand. Both the ad-

BRIN'DLED, adj. Jjectivesare used in the sense of streaky; tabby; marked with streaks: brindle, as a substantive, is the state of being brinded : to brindle is to variegate by fire ; to produce different shades of singed color.

Thrice the brinded cat hath mewed. Shakspeare.

She tamed the brinded lioness. Milton.

My brinded heifer to the stake I lay ; Two thriving calves she suckles twice-a-day. Dryd.

The boar, my sisters ! aim the fatal dart, And strike the brindled monster to

the heart. Addison.

A natural brindle. Clarissa.

BRINDISI, anciently Brundusium, a cele- brated town of Naples, in the Terra d'Otranto, and an archbishop's see. Its walls are still of great extent, but the inhabited houses do not fill above half the enclosure. The streets are crooked and rough, and the buildings poor and ruinous ; without any remarkable church or edifice. The cathedral, dedicated to St. Theodore, is a work of king Roger's, but not equal in point of archi- tecture to many churches founded "by that mo- narch. Almost the only remains of ancient Brun- dusium are innumerable broken pillars fixed at the

corners of streets to defend the houses from carts ; the column of the lighthouse; a large marble basin, into which the water runs from brazen heads of deer ; some inscriptions, ruins of aque- ducts, coins, and other small furniture for an antiquary's cabinet. Its castle, built by the em- peror Frederick II. and repaired by Charles V. to protect the northern branches of the harbour, is large and stately. The port is double, and the finest in the Adriatic ; the outer part being formed by two promontories, which stretch off gradually from each other as they advance into the sea, leaving a very narrow channel at the base of the angle. The island of St. Andrew, on which Alphonsus I. built a fortress, lies between the capes, and secures the whole road from the fury of the waves. In this triangular space large ships may ride at anchor. At the bottom of the bay the hills recede in a semi-circular shape, to leave room for the inner haven ; which as it were clasps the city in its arms, or rather encircles it in the figure of a stag's head and horns. This form is said to have given rise to the name of Brundusium, which in the old Messapian lan- guage signified the head of a deer. In ancient days the communication between the two havens was marked by lights, placed upon columns of the Corinthian order, standing on a rising ground in a direct line with the channel. Of these one remains entire upon its pedestal. From the ob- structions in the channel, which communicates with the two havens, arise the evils that afflict and desolate this unhappy town. The low grounds at each end of the harbour are over- flowed and converted into marshes, the vapors of which created every summer a real pestilence ; and in the course of very few years swept off, or drove away, the largest portion of the inhabitants. From the number of 18,000 they were reduced in 1766 to that of 5000 livid wretches, tormented with agues and malignant fevers, and in 1 755 above 1500 persons died during the autumn. This state of misery and destruction induced the re- maining

citizens to apply for relief to the king's ministers. The channel has been partly cleared, and has now two fathoms of water. It will admit large boats, a great step towards the re- vival of trade ; but what is of more immediate importance, it gives a free passage to the sea, which now rushes in with impetuosity, and runs out again at each tide ; so that the water of the inner port is set in motion, and once more ren- dered wholesome. The workmen, in cleaning the channel, found some medals and seals, and drew up many of the piles that were driven in by Csesar. They are small oak stripped of their bark, and still as fresh as if they had been cut only a month, though buried above eighteen centuries, seven feet under the sand. The soil about the town is light and good. It produces excellent cotton, with which the Brindisians manufacture gloves and stockings. In the year of Rome 509 the Romans first sent a colony hither. Pompey took refuge here; but finding his post untenable, made a precipitate retreat to Greece. In this city Octavianus first assumed the name of Caesar, and here he concluded a short-lived peace with Antony. Brundusium hud been already celebrated for giving birth to

the tragic poet Pacuvius, and about this time became remarkable for the death of Virgi1 The barbarians, who ravaged every corner of Italy, did not spare so rich a town ; and in 836 the Saracens at last gave a finishing blow to its for- tunes. The Greek emperors, sensible of the ne- cessity of having such a port as this in Italy, would have restored it to its ancient strength and splendor, had the Normans allowed them time and leisure. The Greeks struggled manfully to keep their ground ; but, after many varieties of success, were finally driven out of Brindisi by William I. The frenzy for expeditions to Pales- tine, though it drained other kingdoms of their wealth and subjects, contributed powerfully to the re-establishment of this city, one of the ports where pilgrims and warriors took shipping. It also benefitted by the residence of ths emperor Frederick, whose frequent armaments for the Holy Land required his presence at this place of rendezvous. The loss of Jerusalem, the fall of the Grecian empire, and the ruin of all the Levant trade after the Turks had conquered the East, reduced Brindisi to a state of inactivity and desolation, from which it has never been able to emerge. Long. 17Ā° 45′ E., lat. 40Ā° 25′ N. BRINDLEY (James), celebrated for his me- chanical invention, was born in 1716, at Tun- stead, in Derbyshire. Through the mismanage- ment of his father, who possessed some little property, his education was totally neglected ; and at seventeen he bound himself apprentice to a millwright, near Macclesfield, in Cheshire. He served his apprenticeship ; and, afterwards setting up for himself, effected various improve- ments in the millwright business. His fame as an ingenious mechanic spreading widely, he was employed in 1752 to erect a water-engine, at Clifton, in Lancashire, for the purpose of drain- ing coal-mines ; and in 1 755 to execute the larger wheels for a new silk-mill at Congleton,

in Cheshire. The potteries of Staffordshire were also, about this time, indebted to him for several valuable additions in the mills used by them for grinding flint stones. In 1756 he undertook to erect a steam-engine near Newcastle-under-Line, upon a new plan ; and it is believed would have brought this machine to a great degree of perfec- tion, if some interested engineers had not op- posed him. His attention, however, was soon afterwards called off to another object, which, in its consequences, has proved of still higher im- portance to the trade of his country, namely, in- land navigation. The duke of Bridgewater had, at Worsley,' about seven miles from Manchester, a large estate abounding with coal, which was hitherto useless, because the expense of land- carriage was too great to find a market for its consumption. The duke, wishing to work these mines, perceived the necessity of a canal from Worsley to Manchester; upon which occasion Brindley, now become famous, was consulted ; and declaring the scheme practicable, an act for this purpose was obtained in 1758 and 1759. It being, however, afterwards discovered that the navigation would be more beneficial if carried over the river Irwell to Manchester, another act was obtained to vary the course of the canal agreeable to the new plan, and to extend a side

bran :h to Longford bridge in Stretford. Brindley, in the meantime, had begun these great works, being the first of the kind ever attempted in England with navigable subterraneous tunnels and elevated aqueducts ; and as, in order to pre- serve the level of the water, it was necessary for it to be free from the usual obstructions of locks, he carried the canal over rivers, and many large and deep valleys. When it was completed as far as Barton, where the Irwell is navigable for large vessels, he proposed to carry it over that river by an aqueduct of thirty-nine feet above the surface of the water; and though this was treated as a wild and chimerical project, yet, supported by his noble patron, he began the works in September, 1760, and the first boat sailed over in July, the following year. The duke afterwards extended his ideas to Liverpool, and obtained, in 1762, an act for branching his canal to the tideway in the Mersey : this part of the canal is carried over the rivers Mersey and Bolland, and many wide and deep valleys. The success of the duke of Bridgewater's under- takings now encouraged a number of gentlemen and manufacturers in Staffordshire to revive the idea of a canal navigation through that country ; and Brindley was engaged to make a survey from the Trent to the Mersey. In 1766 this canal was begun, and conducted under his direc- tion as long as he lived. The proprietors called it, ' the canal from the Trent to the Mersey ; but the engineer, more emphatically, ' the Grand Trunk Navigation,' on account of

the numerous branches, which, as he justly supposed, would be extended every way from it. It is ninety- three miles in length ; and, besides a great num- ber of bridges over it, has seventy-six locks and five tunnels. The most remarkable of the latter is the subterraneous passage of Harecastle, being 2880 yards in length, and more than seventy yards below the surface of the earth . The scheme of this navigation had employed the thoughts of several ingenious men for upwards of twenty years before, and some surveys had been made ; but Harecastle hill, through which the tunnel is constructed, could neither be avoided nor over- come by any expedient the most able engineers could devise. It was for Brindley alone to sur- mount this difficulty and similar ones. Mr. Brindley was engaged in many other undertakings; and died in possession of well-earned fame, and a con- siderable fortune, at Turnhurst, in Staffordshire, September the 27th, 1772, in his fifty-sixth ye,ar. He is supposed to have shortened his days by too intense application to his profession. His habits were very peculiar : he never indulged or relaxed himself with the common diversions of life, not having the least relish for them : when once prevailed on to see a play in London, he declared he would on no account be present at another, for it so disturbed his ideas for several days as to render him unfit for business. With a most imperfect education, he never seems to have had the common recourse to pen and paper for his plans. If any extraordinary difficulty occurred in the execution of his works, he would retire to bed, and has been known to lie there one, two, or three days, in meditation, till he had surmounted it. lie would then rise, and

execute his design without any drawing or model. He could read and write, it is said, but very indif ferently ; and was, perhaps, as abnorais sapiens ā as ‘ wise without the schools,’ as any man that ever lived. ‘ As plain a looking man as one of the boors in the Peak, or one of his own carters,’ says a contemporary writer ; ‘ when he speaks, all ears listen, and every mind is filled with wonder at the things he pronounces to be practicable. Great in himself, he harbors no contracted notions, no jealousy of rivals ; he con- ceals not his methods of proceeding, nor asks patents to secure the sole use of the machines which he invents and exposes to public view; and, sensible that he must one day cease to live, he selects men of genius, teaches them the power of mechanics, and employs them in carrying on the various undertakings in which he is engaged. His powers shine most in the midst of diffi- culties; when rivers and mountains seem to thwart his designs then appears his vast capa- city, by which he makes them subservient to his will.’ Darwin thus beautifully characterises the works of this kindred genius : ā

So with strong arm immortal Brindley leads His long canals, and parts the velvet meads ; Winding, in lucid lines, the watery mass, Mines the firm rock, or loads the deep morass ; With rising locks a thousand hills alarms,

Flings o'er a thousand streams its silver arms, Feeds the long vale, the nodding woodland laves, And plenty, arts, and commerce freight the waves.

Botanic Garden, Canto iii.

BRINDONES, in natural history, the name of a fruit of the East Indies, called by John Bauhin, and some other botanical writers, In- dici fructus rubentes acidi. It is by many ac- counted delicious, notwithstanding its great sharpness ; and is used in dyeing, and in making vinegar.

BRINE', -\ Ang.-Sax. brein, bryn, brym;

BRI'NISH, (Goth. bara. The tide ; the sea ;

BIU'NY, I water impregnated with salt;

BRINE'PIT. J tears as they are salt: brinepits; a pit of salt water.

Nero would be tainted with remorse To hear and see her plaints, her brinish tears.

Shakspeare.

For now I stand as one upon a rock, Environed with a wilderness of sea, Who marks the raving tide grow wave by wave ; Expecting ever when some envious surge Will, in his brinish bowels, swallow him. Id.

Then I loved thee,

And shewed thee all the qualities o' the' isle, The fresh springs, brinepits, barren place, and fertile.

Id.

What a deal of brine Hath washed thy sallow cheeks for Rosaline ! Id.

All but mariners,

Plunged in the foaming brine, did quit the vessel, Then all afire with me. Id. Tempest.

The encreasing of the weight of water will encrease its power of bearing ; as we see brine, when it is salt enough, will bear an egg. Bacon's Natural History.

The air was calm, and on the level brine Sleek Panope, with all her sisters

played.

Mltoi.

Dissolve sheeps' dung in water, and add to it as much salt as will make a strong brine j in this liquor steep your corn. Mortimer.

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As when two adverse winds ' Engage with horrid shock, the ruffled brine Roars stormy. Philips.

So watery fowl, that seek their fishy food, With wings expanded o'er the foaming flood Now sailing smooth the level surface sweep, Now dip their pinions in the briny deep

there are a multitude of salt springs, which rise in the middle of the river Weare, for the space of about forty yards in length and ten in breadth ; but particularly one out of a rock, which is so strong that in a hot summer's day the surface is covered with a pure white salt. At Weston, in Staffordshire, there are brine-springs which

He, who first the passage tried, In hardened oak his heart did hide ; Or his, at least, in hollow wood, Who tempted first the briny flood. Dryden. Then, briny seas, and tasteful- springs, farewell, Where fountain nymphs, confused with Nereids dwell.

Addison.

A muriatick or briny taste seems to be produced hy

Pope's Odyssey, afford about a ninth part of very fine white salt.

There are others at Enson St. Thomas, and in the parish of Ingestre, but so weak that they are not wrought ; though it is believed that by boring stronger springs might be found in the neigh- bourhood. In Lancashire there are several salt springs, but (if we except those at Barton, which are as rich as the spring at Northwich,) by no means so famous as those of Cheshire, called in

a mixture of an acid and alkaline salt ; for spirit of general by the name of the Wiches. Nampt- salt, and salt of tartar, mixed, produce a salt like sea wich, on the river Weever, has a noble spring

not far from the river, which is so rich as to yield one-sixth part of pure .white salt. At Northwich, six miles distant, at the confluence of the Weever and the Dan, the brine is still richer;

sa]t. Arbuthnut.

With thee my bark I'll swiftly go

Athwart the foaming brine.' Byron.

BRINE, is either native, as the sea-water,

which by coction turns to salt; or factitious,

formed by dissolving salt in water. For a de-

for six ounces of salt are obtained from sixteen of water. The inhabitants of Wales, who, before

scription of the process of obtaining salt from that country was incorporated with England,

brine, see SALT-WORKS. were supplied chiefly, if not solely, with that

BRINE, taken out of brine-pits, or brine- necessary commodity from- these two towns,

pans, used by some for curing or pickling of called the former Hellath Wen, and the latter

HeUath Du, i. e. the white and black salt-pit. In 1670 a rock of salt was discovered at a small distance from Northwich, which has been

fish without boiling it into salt ; and rock-salt, without refining it into white salt, are prohibited by 1 Ann. cap. 21.

BRINE-PANS, the pits wherein the salt water wrought to a great depth, and to a vast extent, so is retained and suffered to stand to bear the as to be justly esteemed one of the greatest cu- action of the sun. There are divers sorts of riosities in England; and it is highly probable, salt-pans, as the water-pans, second-pans, sun- that there is an immense body of fossil salt in

pans ; the water being transferred only from one to another.

BRINE-PIT, in salt making, is the salt-spring whence the water to be boiled into salt is taken. There are of these springs in many

the bowels of the earth, under this whole country ; for, upon boring, brine-pits have been found in many places on both sides of the Weever. This is the more likely, since at Mid- dlewich, which stands at the confluence of the

places; that at Namptwich, in Cheshire, is alone Croke and the Dan, there are salt-sjprings with a sufficient, according to the account of the people fresh brook running between them. The brines of the place, to yield salt for the whole kingdom; from these pits are of unequal strength; but but it is under the government of certain regu- when mixed, they commonly obtain four ounces lators, who, that the market may not be over- of salt from a pound of brine. In these springs stocked, will not suffer more than a certain quan- the water is strongest nearest the bottom, richer tity of the salt to be made yearly.

BRINE-SPRINGS are fountains which flow with

salt water instead of fresh.

in dry weather than in wet, and when long drawn than when first wrought. But these are Of these there are a no rules in respect to other salt springs, for in good number in South Britain, but, though not those of Franche Comte the brine is strongest in peculiar to this island, they are far from being wet weather. There are several other bodies common on the continent. There is a remark- dissolved in these brines besides salt ; in some a able one at East Chennock, in Somersetshire, sulphureous substance, which sublimes as the about twenty miles from the sea. There is brine heats ; a sort of dirty ochre which dis- another at Leamington, in Warwickshire, very colors the brine, but, if suffered to stand, speedily

subsides; and in most brines a calcareous, or rather selenitic earth which settles to the bottom of the pan. See SALT.

BRING, “} Goth, brigga; Mod. Goth.

BRING’ER, sbriggan; Swed. bringa ; Dan.

BRING’ING. j brings; Sax. brytian, brycean,

near the river Learn ; which, however, is but

weak. A third runs into the river Cherwell, in

Oxfordshire; and there are several more in

Westmoreland and Yorkshire : but as they are

weak, and the fuel in most of those counties is

scarce and dear, no salt is prepared from them.

At Barrow-deal, near Grange, three miles from bringan ; Teut. baeren, bringen ; Belgic, brengen.

Keswick in Cumberland, a pretty strong spring In the preterperfect and perfect tenses it became,

rises in a level, near a moss, sixteen gallons of in different dialects, brigt, brigd, brid, brat, brot,

the water of which yield one of pure salt, which brogl, broht ; to bear, fetch, conduct, draw, lead,

is remarkable, as the same quantity of salt produce, breed. So many are the applications

cannot be obtained from less than twenty-two of this word, so various the senses in which it is

gallons of the water of the German ocean. At employed, that we must set them down distinctly

Salt-water Haugh, near Butterby, in Durham, with their illustrations from Dr. Johnson, for

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they cannot be condensed or abridged without injury.

To fetch from another place : distinguished from to carry, or convey, to another place.

I wol bewaile, in manere of tragedie, The harm of him that stode in high degree, And fellen so that ther n' as no remedie To bring him out of his adversitee.

Cliaucer's Canterbury Tales. Bring hither the pincke and purple cullambine,

With gelliflowers ; Bring coronations, and sop in wine, AVorne of paramoures.

Spenser's Shepheard's Calender, I was the chief that raised him to the crown, And I'll be chief to bring him down again.

Shakspeare.

And as she was going to fetch it, he called to her,

and said, Bring me, I pray thee, a morsel of bread

in thy hand. Kings.

A registry of lands may furnish easy securities of

money, that shall be brought over, by strangers.

Temple.

To convey in one's own hand ; not to send by another.

And if wished alliance please your king, Tell him he shonld not send the peace, but bring.

Dryden.

To produce ; to procure, as a cause. There is nothing will bring you more honour, and more ease, than to do what right in justice you may.

Bacon.

To reduce; torecal.

Bring back gently their wandering minds, by going

before them in the train they should pursue, without

any rebuke. Locke.

Nathan's fable had so good an effect, as to bring

the man after God's own heart to a right sense of his

guilt. Spectator.

To attract ; to draw along.

In distillation, the water ascends difficultly, and brings over with it some part of the oil of vitriol.

Newton's Opticks.

To put into any particular state or circum- stances; to make liable to any

thing.

Having got the way of reasoning, which that study necessarily brings the mind to, they might be able to transfer it to other parts of knowledge, as they shall have occasion. Locke.

The question for bringing the king to justice was immediately put, and carried without any opposition that I can find. Swift's Presbyterian Plea.

To lead by degrees.

A due consideration of the vanities of the world, will naturally bring us to the contempt of it ; and the contempt of the world will as certainly bring us home to ourselves. L' Estrange.

The understanding should be brought to the difficult and knotty parts of knowledge by insensible degrees.

Locke.

To recall ; to summons.

But those, and more than I to mind can bring, Mcnalcas has not yet forgot to sing. Dryden. : the gust of springs,

And fall of lofty fountains, and the bend

Of stirring branches, and the bud which brings

The swiftest thought of beauty, here extend, Mingling, and made by love, unto one mighty end.

Byron's Childe Harolde.

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To induce ; to prevail upon.

The nature of the things, contained in those words would not suffer him to think otherwise, how. o^ whensoever, he is brought to reflect on them. Locke

To bring about. See ABOUT. To bring to pass; to effect.

By Him that made water, fire, erthe, and aire ! The youngest man that is in all this route, Is besy now to bringen it aboute.

This turn of mind threw off the oppositions of envy and competition ; it enabled him to gain the most vain and impracticable into his designs, and to bring about several great events, for the advantage of the publick. Addison's Freeholder.

To bring forth. To give birth to; to produce.

The good queen,

For she is good, hath brought youfortha. daughter: Here 'tis ; commends it to your blessing.

Shakspeare. More -wonderful

Than that which, by creation, first brought forth Light out of darkness. Milton. Paradise Lott.

Bewail thy falsehood, and the pious works It hath brought forth, to make thee memorable Among illustrious women, faithful wives.

Id. Samson Agonistes

To bring forth. To bring to light.

The thing that is hid bringeth he forth to light.

Job xxxviii. 1 1

To bring in. To place in any condition.

He protests he loves you, And needs no other suitor, but his liking, To bring you in again. Shakspeare. Othello.

To bring in. To reduce.

Send over to that realm such a strong power of men, as should perforce bring in all that rebellious rout, and loose people. Spenser on Ireland.

To bring in. To afford gain.

The sole measure of all his courtesies is, what re- turn they will make him, and what revenue they will bring him in. South.

Trade brought us in plenty and riches. Locke.

To bring in. To introduce.

Entertain no long discourse with any ; out, if you can, bring in something to season it with religion.

Taylor.

There is but one God, who made heaven and earth, and sea and winds ; but the folly and madness of mankind brought in the images of gods. Stillingjleet.

The fruitfulness of Italy, and the like, are not brought in by force, but naturally rise out of the argu- ment. Addison,

To bring off. To clear ; to procure ; to be ac- quitted ; to cause to escape.

I trusted to my head, that has betrayed me. and I found fault with my legs, that would otherwise have brought me off. L' Estrange.

The best way to avoid this imputation, and to bring off the credit of our understanding, is to be truly re- ligious. Tillotson.

To bring on. To engage in action.

If there be any that would reign, and take up all the time, let him nnd means to take them on. and bring others on. Uoeon.

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To bring on. To produce as an occasional cause.

The fountains of the great deep being broke open, so as a general destruction and devastation was brought upon the earth, and all things in it. Burnet's Theory.

The great question, -which in all ages has disturbed mankind, and brought on them those mischiefs.

Locke.

To bring over. To convert; to draw to a new party.

This liberty should be made use of upon few occa- sions of small

importance, and only with a view of bringing over his own side, another time, to something of greater and more publick moment.

Swift's Church of England Man.

To bring out. To exhibit; to show. If I make not this cheat bring out another, and the shearers prove sheep, let me be unrolled.

Shakspeare. Winter's Tale

To bring under. To subdue ; to repress.

That sharp course which you have set down, for the bringing under of those rebels of Ulster, and preparing a way for their perpetual reformation. Spenser.

To bring up. To educate ; to instruct ; to form.

The well bringing up of the people, serves as a most sure bond to hold them. Sidney.

To bring up. To introduce to general prac- tice.

Seyeral obliging deferences, condescensions, and submissions, with many outward forms and ceremonies, were first of all brought up among the politer part_ of mankind, who lived in courts and cities. Spectator.

To bring up. To cause to advance.

Bring up your army ; but I thmk you'll find They 've not prepared for us. Shakspeare.

Bring retains, -in all its senses, the idea of an agent, or cause, producing a real or metaphorical motion of something towards something; for it is oft said, that he brought his companion out. The meaning is, that he was brought to something that was likewise without.

BRINING OF CORN, in husbandry, an ope- ration performed on the wheat seed, to prevent the smut. A liquor is to be prepared for this purpose, by putting seventy gallons of water into a tub (like a mash tub used for brewing), and a corn bushel of unslacked lime-stone. This is to be well stirred till the whole is dissolved and left to stand for thirty hours ; after which it is to be drained off into another tub, in the manner prac- tised for beer. In this way about a hogshead of strong lime-water will be obtained, to which must be added three pecks of salt. The wheat must be steeped in this pickle, by running it gently, and in small quantities, into & broad bottomed

basket of about twenty-four inches in diameter, and twenty inches deep, and stirring it. The light seed that floats must be strained off with a strainer, and must not be sown. When the basket has been drawn up, and drained of the pickle, the wheat will be fit for sowing in two hours after the brining.

BRINING OF HAY-RICKS, a practice common in America, of mixing salt with the hay as it is stacked.

BRINK'. Goth, bryn; Swed. brink; Teut.

and Dan. brink. See BROW and BRIM. The edge of any place, as of a precipice or a river.

And multiplying, evermo-ā j T^l that it be so far ygo

That it at bothe brinhet be. Cluiucer.

The amazed flames stand gathered in a heap, And from the precipice's brink retire, Afraid to venture on so large a leap. Dry den.

We stand therefore on the brinks and confines of those states at the day of doom. Atterbury.

So have I seen, from Severn's brink, A flock of geese jump down together ; Swim where the bird of Jove would sink, And, swimming, never wet a feather. Swift.

Dreadful post

Of observation ! ā darker every hour ! ā Less dread the day that drove me to the brink And pointed at eternity below. Young.

Friend ! have a care

Your next step may be fatal ! ā for the love Of him that made you, stand not on that brink.

Byron. Manfred.

BRINVILLIERS (Marguerite D' Aubrai, Marchioness of,) was born at Paris in 1651, being the daughter of D'Aubrai, lieutenant-civil of Paris, who married her to N. Gobelin, marquis of Brinvilliers. Possessed of considerable per- soual attractions, she was for some time much attached to her husband, but at length became madly in love with a Gascon, Goden St. Croix, who had been introduced by the marquis. Her father, informed of the affair, procured the im- prisonment of this adventurer in the Bastile,

a circumstance which seems to have inspired the marchioness with the most implacable hatred to her whole family. In the Bastile St. Croix learnt, from an Italian, the art of composing the most subtle mortal poisons, and on his release, after a year's confinement, the guilty pair coolly plotted the taking off by this means, her father, sister, and two brothers, all of whom it is said were poisoned by them in 1670. During this time the marchioness visited the hospitals, ap- parently as a devotee, but as was afterwards strongly suspected, in order to try on the patients the effect of her poisons. The discovery of these criminals was produced in a very extraordinary manner : while at work in distilling poison, St. Croix accidentally dropped a glass mask which he wore to prevent inhaling the deadly vapor, and the consequence was his own instant death. His effects falling into the hands of government, the marchioness had the imprudence to lay claim to a casket, and appeared so anxious to obtain it that the authorities ordered it to be opened, when it was found to be full of packets of poison, with ticketed descriptions of the effects which they would produce. Informed of this discovery the vile woman made her escape to England, and passed thence to Liege, but was there arrested and conducted to Paris. She was now convicted of the murder of her father, sister, and brothers, and condemned to be beheaded and burnt. At this dreadful crisis she evinced extraordinary courage, amounting almost to nonchalance. On entering the chamber in which she was to be put to the torture by swallowing water, she observed three buckets full prepared, and exclaimed, ' It is surely intended to drown me ; for it is absurd to suppose one of mv dimensions can swallow

all that.' She is said to have listened to her sentence without alarm, and showed no other emotion on her way to execution, than to request that she might be so placed as not to see the officer who apprehended her. This woman was even religious in her way ; she confessed regularly, and a form of prayer which she used was found after her death that alluded strongly to her wretched habits. Her husband was supposed to be spared only because of his perfect indifference to her, and her ways. She suffered in July 1676. See AQUA TOFANA.

BRIONI ISLES, are three small islands in the Adriatic, near the east coast of Istria, opposite to Pola, in the county of which name they are commonly reckoned. This name more properly belongs to the principal island, the two others being called Coseda and St. Girolamo. All have been long celebrated for their marble quarries, and, with the other islands on the east side of this gulf, belong to Austria : 4 miles west of Pola. Long. 13Ā° 53′ E., lat. 45Ā° 3′ N.

BRIOUDE, a town of Auvergne, France, in the department of the Upper

Loire. About a league to the south lies the smaller town of Vieille Brioude, where there is a singular Roman bridge of one arch, and extraordinary height and length, across the Allier. Brioude was the birth- place of the celebrated La Fayelte. It contains 5486 inhabitants. Twenty miles south by east of Issoire, and thirty-nine south-east of Clermont- Ferrand.

BRISACH, or OLD BRISACH, a town of Baden, once the capital of the Brisgau. It was twice in possession of the French ; but restored to the house of Austria in consequence of treaties of peace. It has been a strong place, but the for- tifications are demolished. It is now seated on die east, but, before the river changed its bed, was on the west bank of the Rhine, where there is a bridge of boats ; thirty-three miles south of Strasburg. The French took this town in 1795; but were driven from it by a party of Austrians, under Prince Charles, in 1796. A party of the republicans, however, under General St. Cyr, expelled the Austrians and again took pos- session of it on the 13th Oct. 1796.

BRISACH, NEW, atown of France, in the depart- ment of the upper Rhine, and ci-devant province of Alsace, built by order of Louis XIV. over against Old Brisach, and fortified by Vauban. It is thirty-three miles south of Strasburg, and one from the Rhine.

BRISEIS, or Hippodamia, the wife of Mynes king of Lyrnessa. After Achilles had taken the city, and killed her husband, she became his captive. The hero loved her tenderly; but Agamemnon taking her from him, she became the accidental cause of numberless disorders in the Grecian army. Achilles, enraged, retiied to his tent: and, till the death of Patroclus, lefused to fight against the Trojans. The resentment of this prince and its consequences are the subject of the Iliad.

BRISGAU, a district of Germany of large extent, and formely constituting the south-west part of Suabia. It is now almost entirely in- cluded in the grand duchy of Baden. Brisgau nas been long a peculiar district, subject to its

own laws, and claiming peculiar privileges. Its situation has rendered it the frequent scene of war. In the thirty-years' war, it was in possession of the Grand Duke of Baden, but came succes- sively into the hands of the duke of Saxe Weimar and the French, and was confirmed to the, latter power at the peace of Nimeguen, but restored to Austria by that of Ryswick. In 1801 it was assigned, by the peace of Luneville, to the duke of Modena, but was for some time afterwards occupied by the French. A small part, on the left bank of the Rhine, belongs now to Switzer- land, and the districts on the

north-east to the kingdom of Wirtemberg ; the whole of the rest of Brisgau was assigned to Baden in 1806 ; and in 1810 on the reorganisation of these states was included in the circles of the Wiesen, the Treisam, and the Kinzig. The soil is very various : some parts of the district being very fertile, others on the contrary as sterile, and some parts of the Black Forest seem utterly incapable of improve- ment.

BRISIACUS Moxs, in ancient geography, a town on the right or east side of the Rhine ; situa- ted on a round hill ; a fortified town of Suabia ; now called Old Brisac.

*BRISK', v.&ad.ˆ Goth, roesk ; Teut. risch, BRISK'LY, > *"$$Ā£; breisk; Dan. frisky*

BRISK'NESS. 3 Belgic fresch, brush; Fr. brusque; lively; gay; sprightly; vigorous. Power- ful; spirituous.

Why do you frown ?

Here dwell no frowns, nor anger; from these gates Sorrow flies far : see here be all the pleasures That fancy can beget on youthful thoughts, When the fresh blood grows lively, and returns Brisk as the April buds in primrose season.

Milton's Comus.

Some remains of corruption, though they do not conquer and extinguish, yet will slacken and allay, the vigour and briskness of the renewed principle.

South.

But the most distinguishing part of his character seems to me to be his briskness, his jollity, and his good -humour. Dryden.

Pr'ythee, die, and set me free, Or else be

Kind and brisk and gay, like me. Denham.

Our nature here is not unlike our wine : Some sorts, when old, continue 6mA and fine. Id.

Under ground, the rude Riphaean race Mimick brisk cyder, with the brake's produce wild, Sloes pounded, hips, and servis' harshest juice.

Philip.ˆ

It must needs be some exterior cause, and the brisk acting of some objects without me, whose efficacy I cannot resist. Locke.

We have seen the air in the bladder suddenly ex- pand itself so much, and so briskly, that it manifestly lifted up some light bodies that leaned upon it.

Boyle.

I could plainly perceive the creature to suck in many of the most minute anitnalcula, that were swim- ming briskly about in the water.

Ray on the Creation.

Why should all honour then be ta'en From lower parts to load the brain ; When other limbs we plainly see, Each in his way, as brisk as he ? Prior

Bill

First to the lively pipe, his hand addressed, But soon he saw the brisk awakening viol, Whose sweet entrancing voice he loved the best.

Collins.

BRIS'KET, n. s. Fr. brichet. The breast of an animal.

See that none of the wool be wanting, that their gums be red, teeth white and even, and the brisket skin red. Mortimer.

BRISSOIDES, in natural history, a genus of the echini marini. The distinguishing characters are, they are of an oval figure, and have their backs striated, not furrowed, and their rays smooth, not marked with ridges. Of this genus there are two known species.

BRISSON (Barnaby), an eminent French law- yer and president of the parliament of Paris, born at Fontenay le Comte about the middle of the sixteenth century. He was much esteemed and honored by Henry III. who boasted of him as the most learned man in Christendom. He employed him in various negociations, particularly as ambassador to England. Being atParis,when it was besieged by Henry IV. and remonstrating against the treasonable practices of the Leaguers, they fell upon him, dragged him to prison, and strangled him, Nov. 15th, 1591. :He wrote, 1. De Verborum Significatione : 2. De Formalis Solem- nibus Populi Romani Verbis : 3. De Regio Persarum Principatu; and some other works.

BRISSOT (Peter), one of the ablest physicians of the sixteenth century, was born at Fontenay le Comte in Poitou. He studied at Paris ; and having taken his degree of M.D. bent his thoughts to the reforming of physic, by restoring the precepts of Hippocrates and Galen, and ex- ploding the maxims of the Arabians. For this purpose he publicly explained Galen's works instead of those of Avicenna, Rhasis, and Mes- sue. He afterwards travelled to acquire the knowledge of plants ; and going to Portugal practised physic in Evora. His method of bleeding in pleurisies, on the side where the pleurisy existed, raised a kind of civil war among the Portuguese physicians ; it was brought to the university of Salamanca, who at last gave judgment, that the opinion ascribed to Brissot was the pure doctrine of Galen. The partisans of Denys, his opponent, appealed, in 1529 to the emperor, to prevent the practice, as being attended with destructive consequences ; but Charles III. duke of Savoy happening to die at this time of a pleurisy, after having been bled on the opposite side, the prosecution dropped. He wrote an apology for his practice ; but died before it was published, in 1552. Renatus Moreau procured a new edition of it at Paris, in 1622, and annexed to it a treatise, entitled De Missione Sanguinis in Pleuritide, together with the Life of Brissot.

BRISSOT (John Peter), was the son of an inn- keeper at the village of Ouarville, near Chartres. This name of Ouarville, he afterwards anglicised into Warville, and added to his own. His father, who was a man of property, gave him an excel- lent education, and intended him for the bar ; bat the young Brissot devoted himself to liter- ature. He was born in 1754. He met with little success in Paris as a literary man, and therefore

went to Geneva, and afterwards to London, where he published a periodical journal, which was not encouraged. Returning to Paris he was patro- nised by Orleans, and wrote several pamphlets in favor of liberty, which obliged him to fly to America. At the commencement of the revolu- tion he returned, and became the leader of a party which was destroyed by Roberspiere ; Brissot and twenty-one of the leaders being guillotined in 1723. He was the author of a theory of Criminal Law ; Travels in America ; and other works.

BRISSOTINES, a political party in France, during its revolutionary state, so denominated from Brissot, their chief leader. They were keen republicans, but wished to establish a fede- ral government in France like that of America.

BRISSUS, in natural history, a genus of the echini marini. The characters are, that they are of an oval figure, and have the aperture of the anus on one of the sides of the superficies ; their back is smooth and even, not furrowed ; but on the vertex they have several very elegant crenated and

dotted lines. Their base is as if cut off on the end nearest the mouth, and is not flat as in the spatangi, but raised in the manner of a cushion.

BRISTLE, n. s., v. a., & } Goth, byst, hoist ;

BRIST'IY, adj. [v.n. >Belgic boistel; Sax.

BRIS'TLELIKE.) brustle. Hair on

the back of swine : to bristle is to raise up the bristles ; to grow angry : as a neuter verb, to stand up, like quills upon the porcupine. Now for the bare pickt bone of majesty,

Doth dogged war bristle his angry crest,

And snarleth in the gentle eyes of peace. Shahs.

Which makes him plume himself, and bristle up The crest of youth against your dignity. Id.

I will not open my lips so wide as a bristle may enter. -M.

Thou durst not thus disparage glorious arms Which greatest heroes have in battle worn,

though all thy hairs

Were bristle, ranged like those that ridge the back Of chafed wild boars or ruffled porcupines. Milton.*

He is covered with hair, and not, as the boar, with bristles, which probably spend more upon the same matter, which, in other creatures, makes the horns ; for bristles seem to be nothing else but a horn split into a multitude of little ones. Grew.

Two boars whom love to battle draws, With rising bristles, and with frothy jaws, Their adverse breasts with tusks oblique they wound.

Dry den. Thy hair so bristles with unmanly fears,

As fields of corn that rise in bearded ears. Id.

The leaves of the black mulberry are somewhat bristly, which may help to preserve the dew. Bacon.

BRISTOL, a city and county of England, the Caer Brito of the Britons and Brightstow of the Saxous, stands on an elevated peninsula, formed by the

rivers Frcime and Avon, partly in Somerset and partly in Gloucestershire. In re- gard to wealth, population, and commerce, it is considered the second city of England. Besides the valley between the Frome and the Avon, which contains the old town, St. Michael's Hill and Kingsdown on the north, College Green on

the west, and Reilcliffe Hill on the south, are covered with handsome public and private buildings, the whole extending over a surface of full 1.500 acres of ground, and being about seven miles in circumference. The city contains 600 streets, lanes, squares, courts, ike., with eighteen churches, and thirty chapels or meeting-houses. Two-thirds of it are situated on the Gloucester- shire si.le of the river, the remainder on the side of Somerset. In the latest population return, the amount of the inhabitants of both portions, ex- ceeded 100,000 souls. In the old town the streets are close and irregular, and many of the houses built of wood and plaster. Improvements, how- ever, are daily making : many of the streets have been lately widened, particularly towards the river; and the suburbs, and external parts of the city, contain numerous elegant and spacious buildings, constructed entirely of brick and stone, all other materials being now prohibited here by act of parliament. These streets are well paved and attended to ; they are supplied with excellent water from pumps and conduits, and lighted with coal gas.

The quay of Bristol, above one mile in length, is one uninterrupted wharf of hewn stone, ex- tending along the inner shores of the Frome and Avon, from St. Giles to Bristol bridge. Before the late improvement of the harbour, large ves- sels lay a-ground in the mud, at low water, and often received considerable damage; but there is now sufficient depth of water for them to ride close to the walls, and discharge their cargoes.

The bed of the Avon and Frome has been dammed up as far as the hot wells, and a new channel cut for the river through Redcliffe meads ; while the navigation of the Avon in one level has been opened up as high as Keynsham. The harbour is therefore capable of accommo- dating 1000 vessels, which are not only kept afloat at the quays, but enabled to enter the locks, and go to sea at neap tides. Upon chang- ing the course of the Avon, two cast iron bridges were erected by Mr. Jessop over the new channel. The span of the iron work of each arch is 100 feet, and the rise twelve feet six inches, or one-eighth of the span. Bristol wet docks are very extensive, and the merchant floating dock is said to exceed in dimensions those at Portsmouth and Plymouth. Cranes are erected in proper situations for loading and un- loading vessels. These improvements of the harbour are

said to have cost Ā£600,000. An act of parliament for further improvements was passed in 1822.

The most remarkable public buildings of Bristol are, the cathedral, the church of St. Mary Redcliffe, the exchange, the theatre, com- mercial rooms, the Bristol institution for the advancement of science, literature, and the arts, the Bristol library, Baptist academy, library and museum, assembly rooms, the guildhall, council house, merchant's hall, mansion house, custom house, and arcades. The cathedral is part of the original church of the abbey of St. Augustine, the other part being demolished at the dissolu- tion of the monastery, when Bristol was erected into a bishop's see, and what remained of the church was converted into the cathedral. It is 173 fret long and 128 broad, having at the west

end a large square tower 130 feet hi,h,. orna- mented with battlements and four pinnacles. The establishment of the cathedral consists of a bishop, a dean, six prebendaries, and other in- ferior officers. The arch-deacon of Dorset has also a stall in the cathedral. Here are several noble monuments, particularly one to Mrs. Draper, the Eliza of Sterne. St. Mary Redcliffe is one of the most beautiful churches in the kingdom. It stands on Redcliffe Hill, and is said to have been founded by Simon de Burton in 1292, and finished in 1376. It was built in the form of a cross, with a tower and spire 250 feet high, and richly ornamented with carved work ; but in 1 445 part of the spire was destroyed, and the church damaged by lightning. The former has never since been rebuilt. The ex- change, in Corn Street, is a handsome structure in the Grecian style, built by Wood of Bath, at an expense of Ā£50,000. It is 110 feet in front and 148 deep ; the place for the merchants is a peristyle of the Corinthian order, ninety feet by eighty, capable of containing 1440 persons. The merchants, feeling the want of an accommoda- tion similar to Lloyd's in London, determined upon building a commercial coffee room to sup- ply the deficiency. A subscription was accord- ingly opened, and Ā£l 4,000 were raised in two days, Ā£25 being the amount of each share. The entrance is under an Ionic portico of four columns, supporting a grand pediment, on which are placed three beautiful colossal sta- tues, representing the City supported by Navi- gation and Commerce. Here is a grand room sixty feet long, forty wide, and twenty- five in height. The theatre, in King Street, which the late David Garrick pronounced to be one of the most complete in Europe of its dimensions, was erected in 1766. It was for many years very ably conducted by the late Mr. M'Cready, father of Mr. M'Cready of London, and is now under the management of Mr. Brunton of the Plymouth theatre. It is generally opened for dramatic representation from December to June. The principal hospitals are, 1. Queen Elizabeth's, in which 100 boys are educated, six of whom, when they go out, have Ā£lO each, and the others eight guineas, to bind them apprentices. 2. Colston's Hospital, in which 100 boys are edu- cated

and maintained for seven years, and then apprenticed. 3. An hospital founded by the same person, in 1691, for twelve men and twelve women, with an allowance of 3s. per week, and twenty-four sacks of coals in the year; for this the sum of Ā£25,000 was appropriated. 4. An hos- pital, partly founded by Mr. Colston and partly by the merchants, in which eighteen men on ac- count of the merchants, and twelve men and women on Mr. Colston's account, are maintained. 5. An infirmary, opened in 1786, for the sick, lame, and distressed, where persons who may accidentally be injured, of whatever nation, color, or dialect, are, on application, immediately ad- mitted without recommendation. And all per- sons, without any reference to their usual resi- dences, laboring under acute or chronic disorders, are admitted on Mondays and Fridays by a note from a subscriber. This charity is supported by annual subscriptions and donations. It is said to have been the first regular provincial infirmary

in England. It was enlarged by the addition of awestern wing, in pursuance of resolutions passed at a meeting of the subscribers convened in 1805, at an expense of Ā£10,600. Besides these are a bridewell, and several alms- houses and charity- schools. Here is also a guildhall for the ses- sions and assizes; a mayor and sheriff's court; a council-house, where the mayor and aldermen meet every day, except Sunday, to administer justice. On either side of St. John's Gate, the corporation have lately erected an arch for the accommodation of foot passengers.

Several glass houses are established here for the manufacture of black bottle and white flint glass. The Bristol white flint glass is acknow- ledged by competent judges to bf very superior in color, as well as in specific giavity, to any which is made on the continent. Here are also large soap houses, sugar, turpentine, sulphur, and vitriol houses, distilleries, and potteries equal to any in the kingdom for the fineness of their ware. On the north-west of the city is Brandon Hill, granted, it is said, to the city by queen Elizabeth, where freemen's wives dry their linen ; she also gave the city a charter, whereby every man who marries the daughter of a free burgess becomes free of Bristol, and has a vote for the members to parliament, provided she was born in the city, and after her father had taken up his freedom. The new Bristol gaol is situated near Bathurst Basin, the front being on the bank of the New River and the back near the floating harbour. It was built in 1820, at the expense of the citizens. The government of the city is in a mayor, twelve aldermen, who are justices of the peace ex officio, two sheriffs, twenty-eight com- mon-council, a town-clerk, chamberlain, vice- chamberlain, under-sheriff, Sec., besides a city

marshal and other inferior officers. The city is divided into twelve wards, having an alderman to preside over each. The mayor, &c., holds a quarterly session ; a court of requests is held every Monday for the recovery of debts under 40s., and the two sheriffs hold a pie-powder-court every year, inautumn,under the piazza in the old mar- ket. Bristol returns two members to parliament.

Close by the river, a mile below the city, is the Hot-well, the waters of which are recom- mended in diabetes, phthisical, scorbutic, and inflammatory disorders. It is a great resort during the summer, and has a pump-room, ball- room, coffee-house, taverns, and lodging-houses, .both below, on a level with the well, and above, in the delightful village of Clifton. The water is slightly acidulated, inodorous when fresh, perfectly limpid, and sparkling with numerous air bubbles. It is agreeable to the palate with- out any specific taste. Its specific gravity is 1-00077, approaching so near to that of distilled water that this circumstance alone would show that it contained but a very small admixture of foreign ingredients. The temperature, taking thn average of the most accurate observations, may be reckoned at 74Ā° ; and this does not very sensibly vary during winter or summer. The sensible effects, when drunk warm and fresh from tlĀ»e spring, are a gentle glow of the sto- mach, succeeded sometimes by a slight and transient degree of headache and giddiness. By u continued use, in most cases, it is diuretic,

keeps the skin moist and perspirable, and im- proves the appetite and health. Its .effects on the bowels are variable. On the whole, a ten- dency to costiveness seems to be the more gene- ral consequence of a long course of this medicinal spring, and therefore the use of a mild aperient is requisite. These effects, however, are appli- cable only to invalids ; for healthy persons, who taste the water at the fountain, seldom discover any thing in it but a degree of warmth, which distinguishes it from the common element. The water contains both solid and gaseous matter, and the distinction between the two requires to be attended to, as it is owing to the very small quantity of solid matter that it deserves the cha- racter of a fine natural spring ; and, for its me- dicinal properties, it seems to be principally indebted to an excess in gaseous contents. From the different investigations of chemists, it ap- pears that the principal component parts of the Hot-well water are a large proportion of carbonic acid gas, or fixed air, and a certain portion of magnesia and lime, in various combinations, with the muriatic, vitriolic, and carbonic acids. The high reputation of this spring is chiefly in the cure of pulmonary consumption. Whilst some have denied that there is any peculiar effi- cacy in this spring, on account of a few unsuc- cessful cases, many have borne testimony to its salutary effects. It is not easy however to de- termine how much may be owing to the favorable situation and temperate climate which Bristol enjoys ; but it cannot be

doubted that the Hot- well water, though by no means a cure for con- sumption, alleviates some of the most harassing symptoms of this formidable disease. 'It is par- ticularly efficacious,' says Dr. Hooper, l in mo- derating the thirst, the dry burning heat of the hands and feet, the partial night sweats, and the symptoms that are peculiarly hectical ; and thus, in the earlier stages of phthisis, it may materially contribute to a complete re-establishment of health, and, even in the later periods, mitigate the disease when the cure is doubtful, if not hopeless.' The season for the Hot-well is gene- rally from May to October; but, as the medicinal properties of the water continue the same throughout the year, the summer months are preferred on account of the concomitant benefits of air and exercise, as well as affording a better opportunity to survey the exquisite beauty and variety of the surrounding scenery. The pyre- nees themselves, perhaps, do not afford more dĀ»- lightful scenes than are disclosed on the banks of the Avon from the Hot-well House to the mouth of the Severn. The spring rises near the bottom of the cliff, above twenty-seven feet below high water-mark, and ten feet above low water, forcibly gushing from an aperture in the solid rock, and so copiously as to discharge sixty gallons in a minute. This water suddenly be- came red on the 1st of November, 1755, during the time of the dreadful earthquake at Lisbon.

Bristol is a large commercial city, and is said to trade with more independence on the port of London than any other British port. Its har- bours were filled at a very early period with ves- sels from Denmark, Prussia, and the Hanseatic towns : many vessels were fitted out at this port for the purpose of discovery; and its merchants

were among the first that entered into the West India trade, and in the cod fishery of Newfound- land. Since canal navigation has been so ex- tensively established, its internal trade has in some measure decreased, as the goods of Liver- pool and London now find their way into the country by other channels. Its foreign com- merce, however, is in a more flourishing state, the principal branch of which is with the \ est Indies. Its vessels carry out materials for build- ing, clothing, and provisions; and bring in re- turn the productions of the islands, such as cotton, rum, and sugar, &c. with which they supply all South Wales and the West of England. Large quantities of glass, particularly glass bot- tles, are exported to Ireland and America, nearly half of them being filled with cyder, beer, or Bristol water. This city has also an extensive trade with the Mediterranean, Africa, and New- foundland.

All persons are free to trade in this city, and its freedom can be purchased for a very mo- derate sum. It gives the title of earl to the fa- mily of Hervey. Here the unfortunate Thomas Chatterton was born, his father having been sexton of St. Mary Redcliffe, and in this church lies buried Sir William Penn, the father of the celebrated Quaker.

According to William of Worcester, Bristol was built by Brennus, a prince of the Britons, 380 years before the Christian era, and in allu- sion to this the two statues over St. John's gate are said to be emblematical of Brennus and Be- linus, who reigned conjointly. It is certain that Bristol was a place of importance at an early period : it is mentioned by Gildas among the fortified cities of Britain, as early as A. D. 430 ; and by Nennius in 620, in his enumeration of the twenty-eight cities of Britain. Robert, the illegitimate son of Henry I., first enclosed it with a wall, and in 1130 rebuilt and improved the castle, which was long considered a place of considerable strength. Excluding the outworks, it was 450 feet in length, and 300 in breadth. In 1655 Oliver Cromwell razed it to the ground, and some few vestiges of it which remain, are now incorporated with other buildings in Castle- street. Here is a considerable weekly cattle- market on Thursday ; and the markets on Wed- nesday and Saturday, for butchers' meat, poultry, fruits, and vegetables, are supplied in great plenty and variety. Fairs, 1st of March in Temple- street, and tl>e 1st of September in St. James's church-yard ; each of which continues ten days ; for horned cattle, horses, leather, &c.

BRISTOL, a maritime county of the United States, in Massachusetts ; bounded on the north by Norfolk, on the south-west by the State of Rhode Island, on the south and south-east by Buzzard's bay, and on the north-east by Ply- mouth county. It is forty-two miles in length, and thirty-two in breadth ; and is divided into fifteen townships, viz. Taunton, Norton, Easton, Mansfield, Attleborough, Swanzy, Somerset, Dighton, Raynham, Berkley, Freetown, Welt- port, Dartmouth, New Bedford, and Rehoboth, This county contains valuable mines of iron ore.

which are worked to a large amount. Copper ore has also been discovered here. The chief town is Taunton.

BRISTOL, a maritime county of the state of Rhode Island, seven miles in length, and three in breadth. It is bounded on the east by Mount Hope, or Bristol-bay, on the west by Warwick- bay, on the north by the state of Massachusetts, and on the south by part of Narraganset bay. It is divided into three townships, viz. Bristol,War- ren, and Barrington.

BRISTOL, a post town, and the capital of the preceding county, is situated on the main, twelve miles N. N. E. of Newport. This town was bom- barded

by captain Wallace, commanding a small British squadron, in October, 1775, and laid under contribution ; no lives were lost on the occasion, except the minister of the congrega- tional church, who left his house at the com- mencement of the bombardment, and perished in the fields. Several of the houses were de- stroyed ; but they have been since rebuilt. It is now flourishing, and carries on a considerable trade. It is four miles south of Warren, fourteen south-east by east of Providence, and 300 from Philadelphia.

BRISTOL, or BRISTOL, NEW, the capital of the county of Bucks, in Pennsylvania, is situated on the Delaware, about twenty miles north of Philadelphia. It is an agreeable handsome place ; and the resort of much company in summer. It was incorporated by Sir William Keith, in 1720; and governed by a burgess and common council men, until the revolution.

BRISTOL BAY, a considerable bay of the North Pacific Ocean, on the west coast of North America, discovered by Captain Cook. It is formed by the peninsula of Alaska on the south, and by Cape Newnham on the north. Long. 157Ā° 0′ W., lat. 58Ā° 20′ N.

BRISTOL CHANNEL is that arm of the Irish Sea which extends between the southern shore of Wales, and the western peninsula of England, terminating in the mouth of the river Severn. It stretches from east to west, therefore, about ninety miles ; from the north-west point of Devonshire to the south siiore of Pembroke, it is about fifty miles ; and from Somersetshire to Glamorgan- shire, about fifteen miles broad. It is remarkable for its high and often violent tides.

BRISTOL RIVER, a river which empties itself into Bristol bay. It appeared to Captain Cook to be about a mile broad at its mouth, and abounds with salmon. Long. 201Ā° 55′ E., lat. 58Ā° 27′ N.

BRISTOL STONES are found in St. Vincent's rock, above the hot well of Bristol : they are six- cornered, and very beautiful and transparent; but they are not so plentiful now as in Camden's days, when he says whole bushels might have been easily gathered.

BRIT', n. s. The name ofu fish.

The pilchards were wont to pursue the brit, upoa which they feed, into the havens. Carew.

BRIT, a river of England, which runs into the sea, two miles south of Bridport, in the county of Dorset.

R I T A I N.

BRITAIN, or GREAT BRITAIN, as it is now more commonly called, is the largest, and in every respect the most important of the Euro- pean islands. It extends from about 50Ā° to 58Ā°^ of N. lat., and from 2Ā° of E. to 6Ā° of W. long., being about 500 geographical miles in extreme length : its greatest breadth is 320 geogra- phical miles. In British miles we may take the length at 580, and the breadth at 370 miles. It is of very irregular shape : the North Sea washes its northern shore ; the German Ocean and English Channel its south and east ; and the Irish Sea, St. George's Channel, and the Atlantic Ocean its western sides. The circuit of the island, including its numerous indentations, is esti- mated at 1800, and the superficial area at 87,000 square miles, containing, in 1821, a po- pulation of 14,379,677, or 165 persons to each square mile. Comparatively with the other na- tions of Europe its population is greater for its surface than any except the Netherlands.

*The most ancient name of this island we are told by Pliny was Albion ; Agathemerus speaks of the situation of Albin, a British island. Both the above names are of uncertain etymology. Some derive Britain from a Brutus or Brito, said to be the fifth in descent from /Eneas ; Camden from the word brith, signifying painted ; others from a British word, hrydid, meaning rage, in allusion to the strong shores of the island. But Bochart, speaking of the colonies and language of the Phoenicians, offers a con- jecture, which has been most commonly adopted in modern times. The Phoenicians, according to that writer, called this island and some others near it *]3K~rTQ, that is the land or country of tin or lead, and more contractedly Bratannac ; which name, passing from the Phoenicians to the Greeks, and from these to the Romans, might bave been softened into those of Britannicae, and Britannia. That the Phoenicians first dis- covered these islands, which were afterwards by the Greeks called Cassiterides, and are proved by Camden to be our Scilly islands, appears both from Strabo and Pliny ; of which the former tells us that the Phoenicians first brought tin from the Cassiterides, which they sold to the Greeks, but kept the trade to themselves, and the place private ; and the latter, that Metiiocritus was the first who brought lead from the Cassite- rides ; where Bochart shows that we ought to read Melichartus, who is the Phoenician Hercules of Sanciioniatho, to whom that nation ascribe their first western discoveries. But, notwithstand- ing the care of the Phoenicians to conceal these islands, the Greeks at last discovered them, and gave them the name of Cassiterides, which in Greek signifies the same with barat anac in the Phoenician. The name was at first given it in addition to the islands of Scilly, but by degrees communicated to all the others lying in the same sea. Its general appearance to the intelli- gent traveller is that of great natural variety, and astonishingly minute cultivation. The eastern ;iml sou'-herc*

sides present the greatest extent of

level country ; the western and northern p.r more rugged and mountainous ; and, though the whole island contains no mountain more than about 4400 feet above the level of the sea, Wales, the north of England, and many of the northern parts of Scotland, are diversified with scenes of alpine magnificence.*

The most important civil division of Britain is into the three countries of England, Wales, and Scotland, occupying, respectively, its south- ern, western, and northern portions ; and each of them subdivided into counties, shires, and parishes. The relative proportions of these countries are, taking England, the seat of the ge- neral government, as an unit. 1-00 England ā ¢55 Scotland ā¢16 Wales.

The primitive rocks of Great Britain are gra- nite, gneiss, or schistose granite, micaceous schislus, and common slate. Scotland affords varieties of primitive limestone, or marble ; ser- pentine appears in Cornwall and at Portsoy, at the extremities of the island ; there are exten sive beds of syenite in Islay and on the western coasts of Ross-shire ; quartz rock composes the central range of the mountains in Islay and Jura, and porphyries of the primitive class are met with occasionally. Granite, the common rock in Cornwall, is occasionally found in some of the interior districts of England, and occupies the central part of some of the Scottish mountains. Gneiss, or schistose granite, is less frequent, but appears on the Grampians and in the Hebrides. Micaceous schistus is the prevailing lock on the sides of the mountains in some of the islands of Scotland, as well as in some of the central parts of the country ; and common slate abounds both in England, Scotland, and the whole of the Bri- tish islands. The secondary formations are all the varieties of sandstone, gypsum, rock-salt, and chalk ; the last of which, however, is said to be entirely unknown in Scotland. In England chalk hills commence at Flamborough-head in Yorkshire, and run in a westerly course for the distance of twenty miles ; two ridges traverse the middle counties, and approach nearly to the borders of Oxfordshire ; and on the south side of the Thames a ridge commences at the North and South Foreland, passes through Kent and Surrey, and terminates in Hampshire; another ridge begins near the lofty promontory of Beachy-head, and passes through Sussex and the south of Hampshire, into Dorsetshire. Britain has been celebrated for the production of tin, as we have seen, from the early dawn of history ; lead, iron, and copper, are also abundant ; and small quan- tities of nitric silver have been found in the lead mines ; immense fields of coal have been already worked for ages, and seem inexhaustible.

The soil is, in the southern parts, generally clay and strong loams, which

sometimes reach to a considerable elevation. Sand is abundant in the more open plains ; considerable tracts on the north-eastern shore are occupied with marshce

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and fenny ground ; while peat, calcareous earth, and rock, divide the upper lands of the country. In the south, midland, and eastern counties is the most productive soil. Above one-third of the whole soil of England and Wales has been supposed to be under tillage ; another third to be pasture and meadow ; and the remainder marshes, wood, water, or waste land. In Scotland and its islands not above one-fourth of the surface is cultivated. The great mountain ranges are a prominent fea- ture of Britain. In the south is what may be called the Devonian range, extending from the Land's-end through Cornwall, Devonshire, and part of Somersetshire : its greatest height is about 1800 feet above the level of the sea. A ridge of considerable height runs from the sea-coast of Dorsetshire, north-east into Suffolk, with two la- teral branches extending from the plain of Salis- bury ; the one into Sussex, where it forms the South Downs, and the other to the eastern shore of Kent. The Cambrian range traverses Wales from south to north, and contains Plinlimmon, ā¢whose altitude is 2463 feet; Cader Idris, in Me- rionethshire, 2914; and Snowdon, in Caernar- vonshire, 3571 feet. A midland range, some- times styled the Apennines of England, com- mences in Derbyshire, and terminates at Celts- dale forest in Cumberland, having a branch shooting off on the north of Westmoreland, towards the Irish sea. Of this range in West- moreland, Wharnside 2475 feet, Bonyfell 3084, and Ingleborough 2380 ; in Yorkshire, Crossfell 3390, Bowfell 3440, and Helvellin 3225 ; and in Cumberland, Grasmere 2865, Saddleback 3048, Skiddaw 3175, and Scafell 3240, are the prin- cipal elevations. Other hills and mountainous tracts of inferior note occur ; such as the Chiltern- hills, between Tring in Hertfordshire, and Hen- ley in Oxfordshire; the Malvern-hills in Glou- cester, Hereford, and Worcester shires; the Cotswold and Stroudwater hills in Gloucester- shire ; the Wrekin in Shropshire ; the Morelands of Staffordshire, Yorkshire. Lancashire, and Nor- thumberland. The border Cheviot, or Tiviot- hills run in a westerly direction, and form a con- tinuous chain with those in the south-west region of Scotland, many of them are of consi- derable elevation. In Roxburghshire, Cheviot- top is 2682, and Millenwood-fell 2000 feet ; in Dumfrieshire, Hartfell 3300, and Black Larg 2890 feet; and in Kirkcudbrightshire, Cairns- muir nearly 4000 feet. A long chain, com- mencing at Dumbarton, stretches in a north- easterly direction to the

neighbourhood of Brechin, and is broken by the Forth and the Tay into three divisions, denominated the Lennox, the Ochil, and the Sidlaw-hills. The Grampian range, including the Mons Grampius of Tacitus, extends from Loch-Lomond, in Dumbartonshire, to Stone-haven, in the county of Mearns, having a branch shooting off from it into the shires of Inverness and Banff. In this chain Ben-Lo- mond rises to the height of 3260 feet ; Ben-Ledi 3009; Ben-More 3903; Ben-Lawers 4015; Ben-Voirlich 3300 ; Bengloe 3725; Shechallien 3564 ; Loch-na-garaidh, and Binn-na-muich-duidh, constantly covered with snow, are not less than 4000 feet high. Some of the other most remarkable mountains of Scotland are Ben- VOL. IV.

*Cruachan, in Argyllshire, 3390 teet; B*n Wyves, in Rossshire, 3720 feet in height, and Ben-Nevis, in Invernessshire, the loftiest moun- tain in Great Britain, 4370 feet.*

The climate of Great Britain, though remark- ably changeable, is, in that circumstance, as well as some others, a common feature of the island. Its instability has been attributed to the manner in which its circumjacent seas affect the dry winds rushing from the continent, as the various winds of the ocean, its tides, &c. may occur. The larger mountain ranges, running from north to south, also affect the eastern and western sides of the island in a particular way. The latter being generally more humid and mild ; the former drier, but of lower temperature. From the east dense fogs and penetrating winds pre- vail at particular seasons ; but the most preva- lent winds throughout the island are from the west. In London the wind blows from that quarter, on an average, during the year, 215 days, and 116 from the east; from the south 18, and from the north 16 days. The extremes of heat and cold, experienced in parallel latitudes of Asia and America, are of rare occurrence here, and always of short duration ; a happy mediocrity, to be attributed not merely to the natural position, but to the complete cultivation of the country. July and August are, on an average, its warmest, and December and January its coldest months of the year.

Its rivers and canals are important general features of Great Britain. The most remarkable of the former are, in England, the Thames, Se- vern, Humber, Mersey, Trent, and Ouse. In Scotland, the Forth, Clyde, Tay, Tweed, Don, and Dee. To particularise its canals would ex- ceed the bounds of a general sketch ; they have been the work, we can only observe, of but little more than half a century ; the first that were constructed on any considerable scale being those of the duke of Bridgewater, planned in 1757: they now connect all the great towns and rivers of the empire, particularly in England ; here, passing over the valley in tiers of arches, there penetrating mountains and rocks, by tunnels that want a name in relation to the earth, for subter- ranean they are not in many cases ; and in

other instances climbing the outside of hills in inclined planes, raised by mechanical power. See CANAL NAVIGATION.

Great Britain is by nature pointed out as the head of those islands and dependencies which form her European empire ā and England as the head of Great Britain. Here, therefore, has long been the seat of government ; and its metropo- lis is the grand emporium of the internal and external commerce, as well as of the arts and literature, of the country. On a statistical view of Europe, Great Britain ranks but as the seventh power in superficial extent of country. Rus- sia, Sweden (including Norway), Austria, France, Turkey, and Spain, being all her su- periors in that respect. According to popu'a- tion she ranks as the fourth power, Russia, France and Austria being her only superiors. In respect to public revenue she ranks as the first of the powers, as well, of course, as in the con- tributive proportion of each individual to the

burdens of the state. In this last particular every individual contributes nearly double the sum, upon an average, that the inhabitants of any other nation does ā more than five times as much as the Swede, the Italian, and Turk, and about ten times as much as the inhabitants of Switzerland.

More particular statistics of this most inter- esting of all islands, we presume, to the reader, belong, as we conceive, to the respective coun- tries of which it is composed. To the articles ENGLAND, SCOTLAND, and WALES, therefore, we refer for them Ireland also, .hough now united under one sovereignty, and represented in one parliament, is still to be regarded as a distinct country, having, as well as the other great divi- sions of the empire, many geographical and civil peculiarities. See IRELAND.*

The civil and ecclesiastical history of this em- pire, we regard as divisible into two comprehen- sive periods, the history of Britain, and of Great Britain. The former comprehending that of the early Britons, and the general affairs of the is- land, until the settlement of its Saxon conquerors here under Egbert. Then the histories of Eng- land, England and Wales, and Scotland, as well as Ireland, are distinct; and we shall treat of them distinctly in their alphabetical places, until the union of the English and Scottish crowns under James I. Now begins the history of Great Britain, and from this period it will also be convenient to treat the entire general history of the empire, under that head to the present time. This article,

therefore, is devoted to the first of these periods.

HISTORY OF BRITAIN. 1. Of the early Bri- tons, or Britain before the Roman invasion. ā All history has its infancy of fables ; wholly to dis- regard which, is, perhaps, as unphilosophical as to slight every account of the infancy of cele- brated men, because such accounts also fre- quently abound in the marvellous. Milton traces, in the romantic details of British history, ‘ many footsteps and reliques of something here ;’ and Mr. Turner, one of our ablest modern his- torians, insists that sufficient attention has not been paid to them by his predecessors. Hume, we know, contends that they ought entirely to be disregarded. We shall advert to a few of the most interesting particulars, and leave the ques- tion of their credibility to the reader.

*The Argonautica of the Greeks, ascribed to their celebrated Orpheus, contains the earliest historical allusion to these islands. Who the *eal writer of this poem was, is a question equally obscure with the geographical details into which he enters ; but Suidas contends that he was an Orpheus the younger, called also Onomacritus, who lived 560 years before Christ. He describes a voyage undertaken by certain Thessalian heroes to Colchis, on the east of the Euxine, whence they pass to the Palus Mo>tis, or sea of Azoph, thence up the lands to the Northern Ocean ; and, circumnavigating Europe, return home.*

He mentions the island lernida, which is pre- sumed to be Ireland, and which the Argonauts pass with considerable fear in their voyage from ilĀ»e North Sea. Camden thinks that the island

next mentioned under the name of or Piceis Obsitam, was Britain, which some writers contend cannot be the fact, because, after they had left lernida, they were tossed by a furious tempest for twelve days before Lynceus discerned Hevicrjeaffav. We do not see the force of thir objection. It is perhaps extraordinary, but not impossible, that they should have touched on the shores of Ireland first; but by no means impossible that they should have been tossed about in the Irish or British Channels twelve days. It is remarkable, that, in opposition to the mythologists, the author makes this island in the Atlantic to have been the residence of Ceres, and the place from which Proserpine was carried off by Pluto. With equal peculiarity he makes another island in the same sea, which he calls XVKCUOV xfpffov Ā» an(i which Camden thought to be the same as the former, though three days sail from the habitation of Circe.

Herodotus, who flourished about 450 years before Christ, says, ‘ I have nothing certain to relate concerning the western boundaries of Europe. I know as little of the islands called Cassiterides, except from the tin which is

thence imported among us ; and though I have dili- gently enquired, yet have I never seen any man, who, by his own experience, could inform me of the nature of that sea which bounds the extremi- ties of Europe ; however, it is certain that amber and tin come from its remotest parts. Europe/ he adds, ‘ has not been fully discovered by any man; and we have no account whether it be bounded on the north and east side by the sea.’

The first classical writer who expressly men- tions the British isles, is the author of De Mundo, a work that has been ascribed to Aristotle. He professes to give a kind of physiological account of the universe, and a concise survey of the geo- graphy of the earth. If it was written by Aris- totle, which the Scaligers and other learned men dispute, it will show how confined was the geo- graphical knowledge of that age : if of later date, it will prove how slowly that knowledge ad- vanced. This writer speaks of a sea, that comes towards the Gallic Gulf, and thence to the columns of Hercules. ‘In this sea,’ ht says, ‘are two islands, called Bperavteat, A\/3iov icai lipvt) (Britannia, Albion, and lerne), larger than those we named above. They are directly above the Celts.’ He further describes the northern parts of Europe as inhabited by the Scythians, and the western by the Celts.

Polybius, who flourished about 200 years be- fore Christ, promises in his third book to write a treatise respecting the (BpsTavuuav vrjawv, the British islands, and the making of tin ; but this tract unfortunately, if ever written, is lost. Strabo, and other Greek writers, now constantly mention these islands ; and there can be no doubt that they are intended by the Cassiterides of the classical authors. The Phoenicians, ac- cording to Stiabo, were long accustomed to visit the Cassiterides from Spain, for the sake of a profitable traffic in tin, lead, and skins. So jealous were they, we are told, of that monopoly of this commerce which they at one time en joyed, that when the Romans followed a Phoe- nician ship bound hither, for the purpose of dis-

Covering the market, the master ran the vessel aground, and destroyed it, rather than let them trace his course ; and he was indemnified by his countrymen out of the public treasury. Through this channel, however, the Greeks generally, and finally the Romans, became well acquainted with the existence of Britain, and what was its then staple commodity ā tin. The period of the Roman invasion of the island, under Julius Caesar, unites it with the regular stream of an- cient history.

As Britons, however, we may be permitted to confess a lingering over its

earliest details. Much of them, as already admitted, is doubt- less fabulous ; but industry and erudition have, of late, elucidated many of the once rejected legends.: ancient British learning has been cul- tivated with patriotic zeal, ancient documents have been brought to light ; what is probable has been separated from what is hopelessly ob- scure; and having given, as above, the bald story of our early history that has come down to us through the Greek and Roman writers, we shall now for a brief space engage the reader's atten- tion to those contributions of our native histo- rians, that supply, as we presume, an equally authentic, and much more interesting narrative.

In the Welsh Triads, which have been re- cently published, we have a test of the accuracy of Geoffry of Monmouth's Chronicle, the only source of information, an early British history, to which the investigator could at one time apply. These write the word Britain, Prydyn or Pry- dain, a name which they state it to have derived from Prydyn, the son of Aedd, who ' brought it under rule.' The Cytnry, or Cimbri, are said to have been the first people who came over ; the Brython, Britons, or Britones, were the next considerable colony. Geoffry of Monmouth appears only to have translated the old Welsh Chronicle into Latin, with some embellishments. His name, among the Welsh, is Griffith ap Ar- thur; but there is evidence, certainly, that the main incidents contained in his book, have a foundation in truth. Two copies of this Chro- nicle, in Welsh, have been lately published from respectable manuscripts, collated with two more, by Mr. Owen ; which purport to be transcripts of the work as edited by Walter de Mapes, arch- deacon of Oxford, in the reign of Henry I. The ground-work of the narratives thus supplied is the same, and especially as it regards the origin of the British ; which is in them all attributed to one Brutus, a Trojan, and his companions. Bru- tus is said to be the son of Silvius, the son of Ascanius, the son of ./Eneas. These Trojans, after meeting with many reverses, and having passed through various scenes of adventure in Greece, Italy, and Gaul, which are very circum- stantially related, at length found their way to Britain; about the time that Samuel the prophet governed Israel.

Geofiry peoples the island at this time with giants : some original inhabitants there probably were ; but for whom, or what they were, as well as for the Trojan origin of this Brutus, we have crV the authority of Geoffry's imagination. It is remarkable, however, that, according to Am- mianus Marcellinus, some of the Gauls had a

tradition that they were descendants of the TroĀ« jans, which he thus relates : ' Aiunt quidam, paucos, post excidium Trojse, fugitantes Gracos undique disperses, loca haec occupasse tune vacua.' ā 'It is said, that a few (Trojans), after the destruction of Troy, in making their escape from those

Greeks who were dispersed abroad, took possession of these countries, which at that time were uninhabited.' Nennius says, that Brutus built a city in Gaul, which he called after the name of Turnus, one of his soldiers. Mr. Roberts, Early History of the Cymry, p. 57, thus comments on this circumstance. ' There can scarcely be a doubt but that Nennius had here the district of the Thrones, that is, Tou- raine, in view. Now, Touraine comprehends the confluence of the Liger, or Loire, from the vicinity whereof the colony of the Loegrians came to Britain. This tradition may, therefore, be safely considered as that of the Loegrians in particular ; though, in process of time, and from the ignorance of historians, who confounded it with the other, a confusion to which the simila- rity of the names, Hysichion and Prydain, to Ascanius and Brutus (if any such persons as the two last ever existed) would contribute, it came to be considered as the national tradition. The Loegrians then, having a tradition that they came originally from Phrygia, and the Cymry, that they came from Thrace : the expression of the Triad, that both were of the same original stock, was countenanced by the traditions of both.'

The Triads speak of three colonies, as coming over from the continent in some remote age : ' The first is the Cymry, or Cymbrians ; these came over the German Ocean, which they call Mor Tawch, or the hazy ocean, from the land of Hav, or Deffrobani, ' where Constantinople now stands:' a remark, probably, of some ancient copyist. These came under the command of Hu Gadarn, who is styled the pillar of his na- tion, for it was he who conducted the Cymry to Britain. It is said of him, that he aimed not at obtaining territory by war and contention, but in the way of equity and peace. The Cymry are styled one of the three benevolent tribes, of which the second was ; ' The Lloegrwys, the Loegrians, or Ligurois, who came from the land of Gwasgwyn, and were sprung from the pri- mordial race of the Cymry. The third was ' The Brython, or Britons, who came from the land of Llydaw (Letavia, Armorica, or Bas Bre- tagne), and were also sprung from the primordial race of the Cymry. These were denominated the three peaceable tribes, inasmuch as they came by mutual consent and permission ; and the three were of one language and of one speech.'

' Three tribes came under protection to the isle of Britain ; they settled, with the leave and by permission of the Cymry, without weapon or assault : the first, was the tribe of the Celyddon, or the Caledonians, in the north; the second, was that of the Gwydhyl, or Gwydhelians, and these are now in Alban ; that is, in the highlands of Scotland : the third, was that of the men of Galedin, who came in their boats (llongau moe- lion, or ships without sails), to the Isle of Wight,

when their country was overflowed, and were allowed a territory by the race of the Cymry : these had no privilege nor claim in the Isle of Britain, any more than a settlement in the land, afforded them under limitations; and these could not be entitled to the rights of natives until the ninth generation.

Three usurping tribes came into the Isle of Britain, and never departed out of it. The first of these was that of the Coraniaid, who came from the land of the Pwyl (or Poland, according to the etymology of the word, and according to the application of it to denote that country, by the modern Welsh) : the second was the Gwyd- delian Fichti, who came into Alban, over the sea of Llychlyn, or Lochlyn : the third was that of the Saxons. It is further stated in this Triad, that the territory which the Coraniaid occupied was on the banks of the Humber, and on the shores of the German Ocean ; and the Gwyd- delian Fichti are in Alban, on the shore of the sea of Lochlyn. The Coraniaid, on the coming over of the Saxons, united with them, and, incor- porating themselves with that people, they de- prived the Loegrians of their government, by wrong and oppression ; and then they deprived the race of the Cymry of the monarchial crown. All the Loegrians became one people with the Saxons ; those only excepted who are found in Cornwall, and in the Comot of Carnoban, in Deira and Bernicia. It is further added, that the nation of the Cymry kept their country and their language, although they lost the sovereignty of the Isle of Britain ; owing to the treachery of the protected, and the devastation of the three oppressive tribes. From another Triad it ap- pears, that until the time of Prydyn, the son of Aedd, there were no settled laws for the main- tenance of justice, and the defence of person and property ; nor any regular mode of government.

The coming over of the three friendly tribes, Mr. Hughes (Horse Britannicae) fixes at about 400 years, B. C. ; ‘ for, by the time of Caesar, not only Kent and Sussex, but Hants, Dorset, Wilts, Somerset, Devon, and Cornwall, were occupied by their descendants, and bore their names.’

There is great reason to suppose that the Phoenicians not only traded as we have seen to Britain, for tin, &c. but established a colony here at a remote period : they are probably included in some of the tribes already detailed. Certain it is that the date of the voyage of Hamilco, who was sent by the senate of Carthage, about the time of Darius Nothus, to discover the western shores acid parts of Europe, agrees almost precisely with the date of the coming over of the friendly tribes abovfi alluded to. Dr. Vincent, in his Treatise on tne Commerce and Navigation of the Ancients in the Indian Ocean, says ‘ that tin is mentioned as an import into Africa, Arabia,

Scindi, and the coast of Malabar. It has continued an article of commerce brought out of Britain in all ages ; conveyed to all the countries in the Mediterra- nean by the Phoenicians, Greeks, and Romans, and carried into the eastern ocean from the origin of commerce. Tin/ he continues, ‘ is enumerated by Arrian as exported to India, and if we find the produce of Britain conveyed to

Malabar i i the earliest period that history can reach, we find the spices of Malabar in Britain in an age when the course of the commerce with India was probably as little known as the exist- ence of America : the venerable Bede, who died in the year 735, was possessed of pepper, cin- namon, and frankincense. Did no one ever ask the question how, in that age, these luxuries had been conveyed to Britain, or were treasured in a cell at Wearmouth V

The Phoenicians, in fact, traded to all parts of the known world, perhaps from the time of Abraham. ‘ They enriched themselves by exchanging their manufactures, and the pro- ductions of the East, for the silver of Spain and the tin of Britain. . Spain was, to them, what America has been te us ; but Britain was so in- valuable to their trade that they uniformly en- deavoured to throw a veil of mystery over its si- tuation and its produce.’ At every station they visited on the Mediterranean these enterprising navigators established colonies : Strabo mentions their possessing not less than 300 on the shores of that sea. It cannot therefore be unreasonable to infer ‘ that they established similar settlements in more distant countries, and particularly in Britain, where, for such a length of time, they possessed the monopoly of an article which en- riched them, and was so much required by other nations.’

When Caesar arrived in Britain he describes the sea-coast as inhabited by rovers and pirates, the interior, to which he did not penetrate, by the aborigines of the island, whose numbers he heard of as prodigious; and their. buildings nu- merous, and like those of Gaul. Their cattle also were abundant, but they sowed little corn, and used iron rings for money. Their diet was simple and parsimonious; chiefly milk, butter, and cheese, and perhaps oatmeal. At their feasts they indulged themselves with animal food, cerevisia, or malt liquor, cyder, and metheglin. They had few fixed meals, but ate more or less frequently, according to their convenience ; and when they became rather more polished, two meals a day formed their seasons of repast. When Caesar met them in battle, their appear- ance was fierce, and their courage undaunted. They painted, or rather tattoed their bodies with woad, partly as a defence against the weather, and partly to terrify their enemies. Dion Cassius says, when pursued by an enemy too powerful, they betook themselves to boggy places, where they were able to endure all the inconvenience of such a miserable situation for whole days and nights,

without any other sustenance than a morsel no bigger than a bean. At this period their hills were covered with deer, so that their venison feasts were frequent, rewarding them for the toil of hunting : wolves and bears also abounded in the island. Their towns consisted of huts, with one rather of the superior kind for the chieftain. Their fortresses were rather na- tural than artificial defences ; but we have still the traces of their encampments, which antiqua – ries distinguish from those of the Romans. Some of our largest towns are upon the site of those built by the ancient Britons Their garments

were coarse woollen, and their covering by day ā¢was their only bedding at night. Their distin- guished chiefs wore a gold torch, or massy chain, appended to a collar. Queen Boadicea is de- scribed by the Roman historian as adorned with such a princely ornament ; while her yellow hair fell down her back over her long flowing robe. Caesar found them prone to civil wars and dis- putes : his pretext for his second invasion we know was grounded on the encroachment made by Cassivelaunus, prince of the Catti, and some other tribes, on the neighbouring territory of the Trinohantes, whose prince, Iinmanuentius, had been slain by that chieftain. He also states that ‘ ten or twelve of them have their wives in com- mon ; particularly brothers with brothers, and parents with their children. The children who were the fruit of such unlawful embraces, were considered as pertaining to those men who mar- ried the mothers when virgins.’ They imported brass, it seems from the same writer, and exhi- bited their greatest mechanical skill in the struc- ture of their war-chariots, to which they fastened those celebrated scythes and hooks which evince a considerable knowledge of the art of working iron. ‘ The chief mechanics of Britain,’ say one of the Triads, ‘ were Corvinor, the bard of Ceri Hir Lyngwyn, who first made a ship, sail, and helm, for the Cymry ; Morddal Gwr Gweilgi, mason to Ceraint ap Greidiawl, who first taught the Britons to work with stone and mortar, about the time that the emperor Alex- ander was subduing the world; Coel, son of Cyllin, and grandson of Caradoc, the son of Bran (or Caractacus), who first made a mill turned by a wheel : these three were bards.’ Another speaks of barley and wheat as intro- duced by foreigners ; and first of all successfully cultivated, the former in Pembrokeshire, and the latter in Monmouthshire. Hye, at the same time, was introduced into Carnarvonshire. In their books also we read of ‘ three celebrated astrono- mers of the Isle of Britain, Idris the chieftain, and Gwydion the son of Don, and Gwyn the son of Nudd ; and so great was their know- ledge of the stars, and their influences, that they could prognosticate whatever it was desirable to know.

Ancient commentators on the Itinerary of Richard of Cirencester attempt to distinguish some ancient British ways across the island from the roads constructed by the Romans, and it is considered that both the Skinner-street and the Watling-street of the latter were adopted and improved from the former. The Triads tell us that the nation of the Cymry claimed the supreme monarchy of the Isle of Britain : but of this prerogative they are said to have been de- prived by the Loegrians, or the people of the central region, now called England. In a time of common danger the chieftains, who were the reguli, or lords of distinct territories, formed a confederacy, and elected some eminent chieftain of an illustrious family to be their pendragon, or stadtholder, to lead them to battle. Such were Cassivelaunus, Caractacus,Vortigern, and Arthur. These works also mention laws enacted by the general suffrage of what were afterwards called uchelwyr, or noblemen ; and the gwyr da, men

of small estate, or such as we would call free- holders ; the common people, or the plebeians, being in a state of villenage, or slavery to the ejreat men. Nothing can be more satisfactory to the patriotic antiquarian than the following passage on the genius of their constitution. ‘ There is one supreme authority, in union with the arbitration or voice of the country and community, agreeable to the distribution of Prydain, the son of Aedd the Great. To the nation of the Cymry does the supreme authority pertain, according to the voice of the country and the nation, because of natural right and equity ; and subject to this constitution ought the sovereignty to be regulated in every territory of Britain; and every sovereignty is subject to the voice of the country : on that ground is the proverb founded, ‘ The country is greater than its lord.’ Another Triad says, ‘ The three pillars of the commonweal of the Isle of Britain ; the voice (or decision) of the country, the sovereignty, and the law, according to the distribution of Prydain, the son of Aedd the Great.’ They also celebrate the laws of Dunwal Moelmad, which were extant in the time of Gildas (that is, Gildas Nennius), were translated by him into Latin ; as were also those of Marcia, the wife of Cyhylin, the third from Dyvnwal ; and communicated to Alfred the Great by Aser. Their language, it is well known, had a close affinity with that still spoken in Wales. Their druidical magistracy and priest- hood are sufficiently important to claim our at- tention in a separate article. See DRUIDS.

The independent states or tribes, at the coming of the Romans, were about forty-five, whose names, somewhat altered by a foreign orthogra- phy, were as follow : ā

Cantii

Regni

Bibroces

Attrebates

Segontiaci

Silures

Dimetae

Trinovantes Iceni Coritani Cassii

Sistuntii Volantii

Ottadini Gadeni Selgovae

Ilorestii

Vecturones

Taixali

Caledoni

Cantos

Logi

Cornavii

Catirii

Belgae

Durotriges

Ilaedui

Damnonii

Carnabii

Ordovices

Dobuni Huiccii Ancalites Carnabii

Brigantes

Novantes Damnii

Vacomagi

Albani

Attacotti

Mertae

Carnonacte

Cerones

Creones

Epidii

The principal of which were thus distributed:

566

Tribes.

1. Damnonii . . .

2. Durotriges . . .

3. Belgae

4. Atrebattes . . .

5. Regni

6. Cantii .....

7. Trinovantes . .

8. Iceni

9. The Catti, or >

Catticuchlani J

10. Dobuni ....

11. Silures

12. Diraetae ....

13. Ordovices . . .

14. Cornavii ....

15. Coritani ....

16. Brigantes . . .

17. Ottadini . . .

B R I T A I Nu

Modern Counties. Cornwall and Devonshire. Dorsetshire.

Somersetshire, Wiltshire, and the northern part of Hampshire. Berkshire.

Surry, Sussex, and the south of Hampshire. Kent.

Middlesex and Essex, Suffolk, Norfolk, Cambridgeshire, and

Huntingdonshire.

Bedfordshire, Buckinghamshire, and Hertfordshire.

Oxfordshire and Gloucestershire.

{ Herefordshire, Radnorshire, Monmouthshire, Brecknockshire, Ā«d Glamor-

t ganshire. Caermarthenshire, Pembrokeshire, and Cardiganshire.

$ Flintshire, Denbighshire, Merionethshire, Montgomeryshire. Caernarvon-

(shire, and the Isle of Anglesea. Cheshire, Shropshire, Staffordshire, Warwickshire, and Worcestershire.

$ Lincolnshire, Nottinghamshire, Derbyshire, Leicestershire, Rutlandshire,

i and Northamptonshire.

Yorkshire, Lancashire, Westmoreland, Cumberland, and Durham. Northumberland.

Mr. Hughes supplies us with a list of the prin- cipal towns in ancient Britain; several of which were founded before the coming over cf the Romans.

Trenovant ā Londinium, Llandain, Llundain, or

London. Durovernum vel Cantiopolis ā Caer Gaint, or

Canterbury.

Camulodunum ā Colchester, or Maldon. Verolamium ā St. Alban's. Venta ā (Belgarum), Caer Wynt, Winchester. Isca ā (Damnoniorum), Caer Esk, Exeter. Isca ā (Silurum), Caerleon, Monmouthshire. Venta ā (Silurum), Caerwent. Glevum ā Caer Gloyw, Gloucester. Brannogenium ā Caer Wrangon, Worcester. Uriconium ā Wroxeter, in Shropshire. Deva ā Caerleon Gawr, Chester. Corinium ā Caer Ceri, or Cirencester. Durnomagus ā Caster, near Peterborough. Cataracton ā or Cutterick, Yorkshire. Victoria ā Perth.

Theodosia ā Caer Alcluyd,-or Dunbritton. Isurium ā Aldborough, Yorkshire. Eboracum ā Caer Evroc, or York. Coccium ā Blackrode. Luguballium ā Caerlisle. Cambodunum ā Slack, Lancashire. Segontium ā Caer Segont, near Caernarvon. Conovium ā Caer Hen, near Conway. Mediolanum ā Meivod, Montgomeryshire. Lindum ā Caer Luyt Coed, or

Lincoln. Ragae ā Caer Leir, or Leircester. Rutupis ā Richborough. Sorbiodunum ā Caer Sallog, or Salisbury. Aquae Solis ā Caer Baddon, or Bath. Avalonia ā Wells, or Glastonbury. Muridunum ā Caerfurdhin, or Caermajtnen. Mcnapia ā Mynyw, St. David's.

To which we may add ;ā ā¢

Regentium ā Chichester.

Calleva ā Silchester.

Gobanium ā Abergavenny.

Etocetumā Wall, near Litchfield.

Mancunium ā Manchester.

Rerigonium, or Rigodunum.ā Ribchester.

Lucophibia, or Candida Casa ā Whithern, in

Galloway.

Vanduarium ā Renfrew, or Paisley. Devana ā Old Aberdeen.

We now come to treat

II. Of Britain as a Roman province.

Julius Caesar having subdued most of the nations of Gaul, on the opposite side of the channel, began, about B. C. 56, to think of ex- tending his conquests by the reduction of Britain. The motive for this expedition, ascribed to him by Suetonius, was a desire of enriching himself by the British pearls, which were then much esteemed. The pretence, however, to justify his invasion, was, that the Britons had sent as- sistance to the Gauls during his wars with them. His first expedition was undertaken at the close of the summer (he landed August 26th), and he now therefore only purposed to view the island, and learn something of the manners and customs of the natives; after which, on his return, he could more easily ensure a permanent conquest. Having marched all his forces into the countiy of the Morini (Picardy), in Gaul, from whence was the shortest passage into Britain ; he ordered the vessels that lay in the neighbouring ports, and a fleet which he had built the year before, to attend him. The Britons, alarmed at his prepa rations, sent ambassadors with offers of sub- mission; but Csesar, though he received them with great kindness, did not abandon his intended scheme. He only waited till the return of C.

Volusenus, whom he had sent out with a single galley to make discoveries on the coast. His force consisted of two legions embarked on board eighty transports ; and he appointed eighteen more, which lay wind-bound about eight miles off, to convey over the cavalry ; but these last orders were too slowly executed, which occa- sioned some difficulty in his landing. The British chiefs at this time, although they had en- deavoured to conciliate, were far from prepared to submit to him. As soon as they perceived Ctcsar's fleet approaching, a number of cavalry and chariots were despatched to oppose his landing, while a considerable body of intantry hastened after. The Romans were chiefly, how-

ever, embarrassed in their attempt to land, by the largeness of their ships ; and the soldiers were obliged to leap into the sea while loaded with armour ; while at the same time they had to encounter the enemy, who were quite disen- gaged. Caesar perceiving this, and in order to drive the Britons from the water side with their tlings and arrows, ordered his galleys to advance, with their broadsides towards the shore. On vhis, the Britons, surprised by a sort of shipping they had never before seen, began to give ground. The battle, however, continued for some time, greatly to the disadvantage of the Romans ; till at last Ciesar, observing the distress of his men, caused several of his boats to be manned, and sent them to the assistance of those who were most exposed. The Romans now soon overcame the undisciplined native forpe, and made good their landing; but were unable to pursue the enemy for want of cavalry. The Britons, on the other hand, were so disheartened with their bad success, that they immediately sent ambas- sadors to sue for peace. This was granted, on condition of their delivering a certain number of hostages for their fidelity. Part of these they brought immediately; and promised to return in a few days with the rest, who they said, lived at some distance. But, in the mean time, the eighteen transports which carried Caesar's ca- valry, being driven back by a storm, and the fleet greatly damaged, the Britons broke their engagement, and fell unexpectedly on the seventh legion, while busied in foraging. Caesar hastened to their assistance with two cohorts, and at last repulsed the enemy. This, however, proved only a temporary deliverance ; for the Britons, thinking it would be possible to cut off all the Romans at once, drew together a great body of horse and foot, which boldly advanced to the Roman entrenchments. Csesar came out to meet them ; and the Britons were once more put to flight with great slaughter. Having burned several towns and villages, the victors returned to their camp, where they were soon followed by deputies from the natives, to whom the Roman commander, being in want of horse, and afraid lest another storrn should

destroy the remainder of his fleet, granted peace ; on condition of their sending him into Gaul, double the number of hostages which they had before promised. The same night he set sail, and soon arrived safe in Gaul.

No sooner did the Britons perceive the Romans depart, than they again determined to slight all their engagements. Of all the states who had promised to send hostages, only two performed their promises ; and this neglect so provoked Caesar, that he determined to return the year following with a far greater force. Having, therefore, caused his old vessels to be refitted, and several new ones to be built, he arrived off the coast of Britain with a fleet of 600 ships and twenty-eight galleys. The-Britons made no op- position to his landing ; but Caesar, getting in- telligence that an army was assembled at no great distance, marched in quest of them. He found them encamped on the banks of a river, supposed to be the Stour, twelve miles from the place where he had landed, They attempted to

oppose his passage ; but, being briskly attacked by the Roman cavalry, were obliged to retire in- to a wood, all the avenues of which were blocked up by trees cut down for that purpose. This fortification, however, proved insufficient to pro- tect them. The seventh legion having cast themselves into a testudo, and thrown up a mount against their work, drove them from their asylum ; but, as the day was far spent, a pursuit was not thought advisable. Next morning Caesar, with the greatest part of his army, which he di- vided into three bodies, marched out in quest of the enemy. But when he was within sight of their rear, he was informed, that his fleet had been greatly damaged by a storm. This put an end to the pursuit for that time; but Csesar having employed all the shipwrights he had with him, and sent for others from Gaul, to repair the damage, resolved to prevent misfortunes of this kind for the future. He therefore drew all his ships ashore, and enclosed them within the for- tifications of his camp. This arduous undertaking employed the army for ten days ; after which he again set out in quest of the enemy. The Britons had made the best use they could of the respite afforded them by the storm. They were headed by Cassibelan, king of the Trinobantes. He had formerly made war upon his neighbours ; and, having rendered himself terrible to them, was esteemed the most proper person for leading them against the common enemy ; and, as several states had now joined their forces, the British army was numerous. Their cavalry and chariots attacked the Romans on their march ; but were repulsed with loss, and driven into the woods. The Romans pursued them too eagerly, and thus lost some of their own men ; which encouraged the Britons to make another fierce attack ; but in this also they were finally unsuccessful, and obliged to retire. Next day the Britons suddenly- attacked the Roman legions as they were foraging ; but, meeting with a vigorous resistance, they soon betook themselves to flight. The Romans pur- sued them so closely, that, having neither time to rally nor get

down from their chariots, great numbers of them were cut in pieces : and this overthrow had such an effect upon the auxiliaries of Cassibelan, that they all abandoned him ; nor did the Britons ever after engage Caesar with united forces. The Roman general pursuing his victory, marched towards the Thames, with a design to enter the territories of the Triuobantes. The river was fordable only at one place, but when he came to it, he found the enemy's forces drawn up in a considerable body on the opposite bank, which was fortified with sharp stakes. They had likewise driven many stakes of the same kind into the bottom of the river, the tops of which were covered with water. Caesar was not dismayed at these difficulties, which he learnt from prisoners and deserters. He ordered the cavalry to enter first, and the foot to follow. The soldiers advanced with such resolution, that though the infantry were up to their chin iii water, the enemy abandoned the bank and fled, After this defeat, Cassibelan dismissed all his forces except about 4000 chariots, with which he watched the motions of the Romans, harassing them by cutting off straggling parties, &c. This.

however, was not sufficient t< keep up the spirits of his countrymen. On the contrary, they de- posed him and chose Mandubratius, whose father had been murdered by Cassibelan when he usurped the kingdom. The young prince had fled to Caesar, who gave him protection: and the Trinobantes now offered to submit to the con- queror, provided he woulc1 give them Mandu- bratius for their king. Caesar readily complied with their request, upon their sending him forty hostages : and the submission of the Trinobantes was soon followed by that of other states and tribes.

Caesar next marched to Verulamium, Cassi- belan's capital, of which he still kept possession ; but though the place was strongly fortified the Britons soon fled. Many were taken and many more cut in pieces. After this loss, Cassibelan, as his last resource, drew into confederacy with him four kings (as Caesar styles them), or rather chiefs of the Cantii. Their names were Cinge- torix, Corvilius, Taximagulus and Segonax. These, having raised what forces they could, at- tacked the camp where the ships were laid up : but the Romans, having made a sally, repulsed them with great slaughter, after which Cassibelan submitted. A peace was concluded on these terms, that the Britons should pay an annual tribute to the Romans, that Cassibelan should leave Mandubratius in peaceable possession of his dominions, and that he should deliver a cer- tain number of hostages. Caesar then set sail with his whole fleet from Britain, to which he never returned. Such is Caesar's own account of his two expeditions into Britain ; but Dio Cassius tells us, that the Britons utterly defeated the Roman

infantry, though they were at last put in disorder by their cavalry. Horace and Tibul- lus, in many parts of their works, speak of the Britons as a people not yet conquered. Tacitus says, that Caesar rather showed the Romans the way to Britain, than put them in possession of it ; and Lucan tells us plainly that Caesar turned his back to the Britons and fled. This, however, considering the consummate military genius of Caesar, is by no means probable. That he left .Britain during winter, was probably to prevent insurrections among the Gauls ; and his ambition would certainly be more gratified by being em- peror of Rome, than conqueror of Britain.

The departure of Julius Caesar, which hap- pened about A. A. C. 53, left the Britons without any fear of a foreign enemy. We are not, there- fore, to imagine, that they would regard their promises of paying tribute ; nor was it probably demanded for many years afterwards. Augustus had twice a design of invading Britain, and forcing the inhabitants to pay the tribute pro- mised to Julius Caesar. Both times, however, he was prevented by revolts in different provin- ces, so that the Britons still continued to enjoy their liberty. They, however, courted the favor of the Romans by pretended submissions ; but, in the reign of Claudius, the Romans set about reducing them to subjection in earnest. The occasion of this war is related by Dio Cassius as follows : ‘ Cunobelinus, the third in succession from Ca.Ā ˚sibelan, being dead, his two sons, Togo- dumnus and Caractacus succeeded to the throne;

but whether they reigned jointly or separately is not known. In their reign one Bericus, being exiled for sedition, fled with some of his par- tisans to Rome, and persuaded Claudius to make war on his countrymen. The Britons, on the other hand, resented the behaviour of Claudius in receiving these vagabonds, and therefore pro- hibited all intercourse with the Romans. A much smaller offence than this would have been sufficient to provoke that haughty nation to de- clare war. An army was therefore immediately ordered to Britain, under the command of Plau- tius, praetor in Gaul. The soldiers at first refused to embark, from a superstitious notion, that they were going to be sent beyond the compass of the world ; and this mutiny being reported to the Britons, they did not make the necessary preparations for their own defence. But the Roman soldiers were soon brought to a sense of their duty ; and act out from three different ports, in order to land in three different places of Britain at once. Being driven back by contrary winds, their fears began to return ; they resumed their courage, however, on the appearance of a meteor shooting from the east, which they imagined was sent from heaven to direct their course. They landed without opposition ; and the Britons, not having drawn together a sufficient army, kept in small bodies behind their marshes, and in woods, in order to protract the war till winter : which they imagined Plautius would, like Caesar, spend in Gaul. The Roman general marched first in quest of the

two kings Togodumnus and Carac- tacus ; both of whom he found, and defeated one after another. He then reduced part of the Dobuni, at that time subject to the Catticuchlani ; and, leaving a garrison to keep them in awe, he advanced to a river where the Britons lay care- lessly encamped, supposing that the Romans could not pass it without a bridge. But the Germans in the Roman army had been accustomed to swim across the strongest currents in their heavy armour. They therefore passed the river first ; and having fallen only upon the enemy's horses which drew their chariots, these formidable machines were rendered useless ; and the Britons were put to flight as soon as another part of the forces passed the river. They, however, engaged the Romans next day with great bravery. Vic- tory continued long doubtful; but at length thp Romans prevailed. This battle is thought to have been fought on the banks of the Severn. From thence the Britons fled to the mouth of the Thames. They were closely pursued, but the Romans, being unacquainted with the flats and shallows of the river, were often in great danger. Their German allies, however, crossed by swimming as before, and the rest by a bridge farther up the river ; so that the Britons were in a short time surrounded on all sides, and great numbers cut in pieces. Many of the Romans al- so, pursuing the fugitives with too great eagerness, were lost in the marshes. ā In one of these battles Togodumnus was killed ; but the Britons were so far from being disheartened, that they showed more eagerness than ever, in order to revenge his death. Plautius, therefore, did not think propei to penetrate farther into the country, but conte n-

ted nimself with putting garrisons in the places he had already conquered. He then wrote to the emperor himself: who no sooner received an account of his success, than he set out for Britain ; where he joined Plautius on the banks of the Thames. Soon after the arrival of Claudius, the Romans passed the Thames, attacked the British army, and totally defeated it. The consequence tvas the taking of Cunobeline's capital, and the submission of several neighbouring states. The emperor, however, did not make a long stay in the 'island, but left Plautius to pursue his con- quests. This he did with such success, that, on his return to Rome, he was met without the gates by the emperor, who, at his solemn entry, gave him the right hand. ā The Britons seem to have made a very obstinate resistance to the Roman arms about this time. Vespasian is said to have fought thirty battles with them ; and the exploits of his son Titus are also much celebrated by the Roman historians. In the ninth year of Claudius, P. Ostorius Scapula was sent into Britain. By far the greater part of the seventeen nations were at this time unconquered. Some of these had broken into the Roman

territories; but Ostorius falling unexpectedly upon them, put great numbers to the sword, and dispersed the rest. To prevent them for the future from making in- roads into the territories of the Romans or their allies, he built several forts on the Severn, the Avon, and the Nen, reducing the country south of these rivers to a Roman province. This so highly offended the Iceni, that, being joined by the neighbouring nations, they raised a considerable army, and encamped in an advan- tageous situation, in order to prevent the Romans from penetrating farther into the island. Ostorius, however, soon advanced against them. The Romans gained the victory, and the enemy were pursued with great slaughter. The Roman general then, having quelled an insurrection among the Brigantes, led his army against the Silures. They were headed by their king Caractacus, a renowned warrior. He showed his military talents by choosing a very advan- tageous place for engaging the enemy. Tacitus tells us, ‘ it was on the ridge of an exceeding steep mountain ; and, where the sides of it were inclining and accessible, he reared walls of stone for a rampart. At the foot of the mountain flowed a river dangerous to be forded, and an army of men guarded his entrenchments.’ This hill is thought to be Caer-Caradoc .(the camp of Caractacus) in Shropshire, situated near the conflux of the rivers Clun and Teme, where the remains of ancient entrenchments are still visible. On the approach of the enemy, Caractacus drew up his troops in order of battle, and according to Tacitus, told them, ‘ That from this day, and this battle, they must date their liberty rescued, or their slavery for ever established. He then invoked the shades of those heroes who had expelled Csesar the dictator ; those brave men by whose valor they still enjoyed freedom from Roman tribute and taxes, and by which their wives and children were as yet preserved from prostitution.’ The whole army then took a solemn oath either to conquer or die, and pre- pared foi the charge with the most terrible

shouts. Ostorius was somewhat dismayed when he considered the uncommon fierceness of the enemy, and the other difficulties which he had to encounter. He led on his men, however, to the charge; and the Romans were attended with their usual good fortune. The Britons were put to flight. Vast numbers fell on the field of battle, and many more were taken prisoners. Among the latter were the wife, the daughter, and the brothers of Caractacus. The unfortunate prince himself fled to Cartismandua, queen of the Bri- gantes, by whom he was delivered up to the Roman general, who sent him in chains to Rome. Caractacus bore his misfortunes with magnanimity ; and when he came before the emperor, addressed him in the following terms. ‘ If my moderation in prosperity, O Claudius ! had been as conspicuous as my birth and fortune, I should now have entered this city as a friend, and not as a prisoner ; nor would you have disdained the friendship of a prince descended from such illustrious ancestors, and

governing so many nations. My present condition, I own, is to you honorable, to me humiliating. I was lately possessed of subjects, horses, arms, and riches. Can you be surprised that I endeavoured to preserve them ? If you Romans have a desire to arrive at universal monarchy, must all nations, to gratify you, tamely submit to servitude ? If I had submitted without a struggle, how much would it have diminished the lustre of my fall, and of your victory ? And now, if you resolve to put me to death, my story will soon be buried in oblivion ; but if you think proper to preserve my life, I shall remain a lasting monument of your clemency.' ā This speech we are told had such an effect upon the emperor, that he immediately pardoned Caractacus and his whole family, and commanded them to be set at liberty.

The Silures, notwithstanding this terrible blow, continued the war with great vigor, and gained considerable advantages over the Romans; which so much affected Ostorius, that he died of gritf. He was succeeded by Aulus Didius, who restrain- ed the incursions of the Silures, but was not able to restore Cartismundua, queen of the Brigantes, who had been deposed by her subjects. Didius was succeeded by Veranius, and he by Suetonius Paulinus, who reduced the island of Anglesey. See ANGLESEY. But while Paulinus was em- ployed in the conquest of this island, he was alarmed by the news of an almost universal revolt among those nations which had submitted to the Romans. The Britons, though conquered, still panted after independence; and the Roman yoke became every day more insupportable, through the insolence and oppressions of the Roman soldiers. An event at length happened which kindled these discontents into an open flame. Prasutagus, king of the Iceni, a prince renowned for opulence and grandeur, had, by his last will, left the Roman emperor joint heir with his two daughters in hopes of obtaining his favor and protection for them. But the result was very different. No sooner was he dead, than his houses and possessions were all plun- dered by the JRomaa soldiers. The queen Boadicea rerronstrated against this injustice ; but, instead of obtaining any redress, she herself*

was publicly whipped, her daughters ravished, and all the relations of the late king reduced to slavery. The whole country also was plundered, and all the chiefs of the Iceni deprived of their possessions. Boadicea was a woman of too great a spirit tamely to bear such indignities. She easily persuaded the Iceni to take up arms, who, being joined by the Trinobantes, and some other nations, poured like a torrent on the Ro- man colonies. Everything was destroyed with fire and sword. The ninth legion, which had

been left under Petilius Cerealis, was defeated, the infantry totally cut in pieces, and the com- mander himself with the cavalry escaped with the utmost difficulty. Suetonius immediately left Anglesey, and marched to London. The in- habite nts were overjoyed at his arrival, and used their utmost endeavours to detain him for their defence. But he refused to stay, and in a short time left the place notwithstanding their intreaties. Suetonius was scarce gone, when Boadicea with her Britons entered, and put all they found in it to the sword. Many were tortured in the most cruel manner, and 70,000 persons are said to have perished on this occasion at London and other Roman colonies. The Britons, now elated with success, assembled from all quarters in great numbers, so that Boadicea's army soon amounted to 280,000 men. They despised the Romans ; and became so confident of victory, that they brought their wives and children in waggons, to be spectators of the destruction of their enemies. The event was suitable to such ill judged confidence. The Britons were over- thrown in a general engagement with most ter- rible slaughter, no fewer than 80,000 being killed in the battle and pursuit; while the Romans had not above 400 killed, and not many more woun- ded. Boadicea, not able to survive so great a calamity, is said to have poisoned herself. By this overthrow the Britons were intimidated from raising any more insurrections, and those who had not yet submitted to the Roman yoke, from making incursions into their dominions. Nothing remarkable therefore happened for some time.

In the reign of Vespasian, Petilius Cerealis, being appointed governor of Britain, attacked the Brisrantes, defeated them in several battles, and reduced great part of their country. He was succeeded by Julius Frontinus ; who not only maintained the conquests of his predecessor, but reduced entirely the warlike nation of the Silures. Frontinus was succeeded by the cele- brated Cneius Julius Agricola, who completed the conquest of all the southern Britons. Just before the arrival of Agricola, the Ordovices had cut in pieces a band of horse stationed on their confines, after which the whole nation had taken arms. The summer was pretty far spent, and the Roman army was quite separated and dis- persed, the soldiers having assured themselves of rest for the remaining part of the year. Agricola, however, was no sooner landed, than, having drawn together his legions, he marched against the enemy without delay. The Britons kept upon the ridges of the mountains, but Agricola led his troops in person up the ascents. The Romans were victorious ; and such a terrible slaughter was made of the Britons that almost

the whole of tie Ordovices were cut off. Without giving the enemy time to recover from the terror which this overthrow had occasioned, Agricola resolved upon the immediate reduction of An- glesey, which had been lost by the revolt of Boadicea. Being destitute of ships, he detached a chosen body of auxiliaries who knew the fords, and were accustomed to manage

their arms and horses in the water. The Britons, who had ex- pected a fleet and transports, were so terrified by the appearance of the Roman forces on their island, that they immediately submitted, and Anglesey was once more restored to the Romans. With the conquest of Anglesey ended the first campaign of Agricola ; and he employed the winter in reconciling the Britons to the Roman yoke. In this he met with such success, through his wise policy, that the Britons began to prefer a life of security and peace, to that independency which they had formerly enjoyed, and which continually exposed them to the tumults and ca- lamities of war. See AGRICOLA. His succeeding campaigns were attended with equal success ; he not only subdued the seventeen nations inha- biting England, but carried the Roman arms almost to the extremity of Scotland. He also caused his fleet to sail round the island, and discovered the Orcades, or Orkney Islands, which had before been unknown to the rest of the world. This expedition took him up about six years, and was completed A. D. 84.

Had Agricola been continued in Britain, it is probable that both Scotland and England would have been permanently subdued ; but he was recalled by Domitian in the year 85, and we are thence almost totally in the dark about the British affairs, till the reign of Adrian. During this interval the Caledonians had taken arms, and ravaged the territories of the Britons, who continued faithful to the Romans. Adrian abandoned to them the whole track lying between the Tyne and the Forth ; but to restrain them from making incursions into the Roman terri- tories, he built a wall eighty miles in length, from the river Eden in Cumberland to the Tyne in Northumberland. See ADRIAN. Under his successor, Antoninus Pius, the Brigantes revolted ; and the Caledonians, having in several places broken down Adrian's wall, began anew to ravage the Roman territories. Against them the emperor sent Lollius Urbicus, who reduced the Brigantes; and having defeated the northern nations, confined them within narrower bounds by a new wall, extending probably between the friths of Forth and Clyde. See ANTONINUS. From the time of Antoninus to that of Severus, the Roman dominions in Britain continued to be much infested by the inroads of the northern nations. That emperor divided Britain into two governments, the southern and northern ; but the governor of the northern division was so ha- rassed by the continual incursions of the Cale- donians, that he was at length obliged to purchase a peace with money. The Caledonians kept the treaty for fifteen years ; after which, breaking into the Roman territories anew, they committed terrible ravages. Virius Lupus, the governor, not being in a condition to withstand them, ac- quainted the emperor with his distress, intreatinij

him to send powerful and speedy supplies. Upon this Severus resolved to put an end to the per- petual incursions of the enemy, by making a complete conquest of their country ; for which purpose he set out for Britain, with his two sons, Caracalla and Geta, at the head of a numerous army. The Caledonians no sooner heard of his arrival, than they sent ambassadors offering to conclude a peace upon honorable terms. But these the emperor detained till he was ready to take the field, and then dismissed them without granting their request. As soon as the season was fit for action, Severus marched into Caledonia, where he put all to fire and sword. He advanced even to the most north- erly parts of the island ; and though no battle was fought, yet through the continual am- buscades of the enemy, and the inhospitable nature of the country, he is said to have lost 50,000 men. At last the Caledonians sued again for peace ; which was granted them on condition of their yielding part of their country, and delivering up their arms. After this the emperor returned to York, leaving Caracalla to command the army, and finish the new wall between the friths of Forth and Clyde. But the emperor being taken ill at York, the Caledonians again took up arms. This provoked Severus to such a degree, that he commanded Caracalla to enter their country anew with the whole army, and to put all he met to the sword. Before these orders, however, could be put in execution, his two sons, having concluded a shameful peace with the Caledonians, returned to Rome. A long chasm now takes place in the history of the Ro- man dominions in South Britain. In the begin- ning of Dioclesian's reign, Carausius, a native of Gaul, passing over into Britain, took upon him tiie title of emperor, and was acknowledged by all the troops quartered here. He was, however, killed in a battle with one of Constantius's of- ficers, after he had enjoyed the sovereignty for six or seven years. Constantine the Great began his reign in this island ; and returned soon after he had left it, probably with a design to put a stop to the daily incursions of the Caledonians. He altered the division of that pait of Britain subject to the Romans. Severus had divided it into two provinces, but Constantine increased the number to three, viz. Britannia Prima, Secunda, and Maxima Csesariensis ; and this last was after- wards divided into two, viz. Maxima Caesariensis and Flavia Csesariensis. The removal of the im- perial seat to Constantinople, gave the northern nations an opportunity of making frequent incur- sions into the Roman provinces; the emperor having carried with him, first into Gaul, and then into the east, not only most of the Roman troops, but likewise the flower of the British youth. About the end of the reign of Constantius II. the government of Britain and other western parts of the empire was committed to Julian, afterwards emperor. While he was in his winter quarters at Paris, he was informed that the Soots and Picts, (about this time first distinguished by these names), had broken into the Roman terri- tories and committed dreadful ravages. Against them Julian despatched a body of troops under

Uie command of Lupicinus. He embarked from

Boulogne in the depth in winter, but was no sooner arrived at London than ne was recalled ; the enemy having probably appeased Julian by sub- mission. Till the reign of Valentinian I. these nations still continued to infest the Roman ter- ritories in Britain, and had now reduced the country to a most deplorable condition by their continual ravages. Valentinian sent against them Theodosius, father of Theodosius the Great. That general, having divided his forces into several bodies, advanced against the Scots and Picts, who were obliged to yield to the superior dis- cipline of the Romans. Great numbers were cut in pieces; and the rest were forced to abandon all their booty, and retire beyond the friths of Forth and Clyde. Theodosius then entered Lon- don in triumph, and restored that city to all its former splendor. To restrain them from break- ing anew into the provinces, he built several forts between the two friths ; and, having thus recovered all the country between Adrian's wall and the friths, he formed of it a fifth province, which he called Valentia. Though Britain was now in a state of temporary tranquillity, yet, as the Roman empire was daily declining, sufficient care could not be taken to secure such a distant province. In the reign of Honorius, the provincial Britons were annoyed not only by the Scots and Picts, but also by the depredations of the Saxons, on the sea coasts. By the care, however, of Stili- cho, prime minister to Honorius, matters were once more settled, and a particular officer was appointed to guard the coast against the Saxons, with the title of Comes limitis Saxonici. But, not long after, the empire being over-run by bar- barians, most of the Roman troops in Britain were recalled, and the country left open to the attacks of the Scots and Picts. Upon this the provincials, expecting no more assistance from Honorius, resolved to set up an emperor of their own. Accordingly they invested with the impe- rial dignity one Marcus, an officer of great credit among them. Him they murdered in a few days, and placed on the throne Gratian, a native of Britain. After a reign of four months, Gratian underwent the fate of his predecessor, and was succeeded by Constantine, who was chosen mere- ly for the sake of his name. He seems, how ever, to have been a man of some experience in war. He drove the Scots and Picts beyond the limits of the Roman territories ; but, being elated with this success, he would now be satisfied with nothing less than the conquest of the whole Ro- man empire.

He now, therefore, passed over into Gaul, in 407, and took with him not only the few Roman forces that had been left, but such of the provin- cial Britons as were most accustomed to arms, leaving the rest entirely defenceless. Their ene- mies now broke into the country, and ravaged it with fire and sword; whereupon the Britons,having repeatedly implored assistance from Rome with- out receiving any, resolved to withdraw their allegiance from an empire which was no longer able to protect them.

Honorius himself ap- plauded their conduct, and advised them, by letters, to provide for their own safety. The provincial Britons now regained their liberty, but had lost the martial spirit which at first reii-

dered them so formidable to the Romans. They, however, met with some success in their first enterprises ; for Zosimus tells us, that they de- livered their cities from the insults of an haughty enemy. But, being at last overpowered, they again had recourse to the Roman emperor, to whom they promised a most perfect submission, provided they were delivered from their merciless enemies. Honorius, touched with compassion, sent a legion to their relief. The Roman forces landed in Britain unexpectedly, and having de- stroyed great numbers of the Scots and Picts, drove them beyond the friths of Forth and Clyde. After this they advised the natives to build a wall on the isthmus from sea to sea ; to re-assume their courage, and defend themselves by their own valor. The Romans then quitted the coun- try, being obliged to return, in order to repel those barbarians who had broken into other parts of the empire from all quarters. The Britons immediately set about building the wall with great alacrity. But, as it was constructed only of turf, the Scots and Picts soon broke it down in several places ; and, pouring in upon the effemi- nate provincials, committed more cruel ravages than ever. At last, after many grievous calami- ties, the Britons sent ambassadors once more to Rome. These appeared with their garments rent, and dust on their heads ; and at last pre- vailed on the emperor, by their earnest entreaties, to send another legion to their relief. The troops arrived in Britain before the enemy knew of their having set sail. They were therefore quite unprepared. The Romans made a terrible ha- voc among them, and drove the remainder into their own country. As Honorius had sent them, not with any ambitious view, but merely out of compassion to the unhappy provincials, the Romans told them they had now no farther assistance to expect from them. They informed them that the legion must immediately return to the continent, to protect the empire from the bar- barians, who had extended their ravages almost to every part of it ; and therefore, that they must now take their last farewell of Britain. After this declaration, Gallic, the commander of the Roman troops, exhorted the Britons to defend themselves, by fighting bravely for their country, wives, and children, ˆnd what ought to be dearer than life itselfā their liberty ; telling them, at the same time, that their enemies were no stronger than themselves, provided they would exert their ancient courage and resolution. That they might the better withstand them, he advised them to build a wall of stone, offering to assist them with his soldiers, and to direct them himself in the execution. To this task the Britons immediately

applied ; and, with the assistance of the Romans, finished it in a short time, though it was no less than eight feet thick, and twelve feet in height. It is thought to have been built on the same place where Severus's wall formerly stood. Towers were also built at convenient distances on the east coast, to prevent descents of the Saxons and other barbarians from Germany. Gallio employed the rest of his time in teaching the provincials the art of war. He left them patterns of the Roman weapons, which he also taught them to make ; and, after many encourag-

ing exhortations, took his last farewell of Britain, to which the Romans never returned. There is a great disagreement among chronologers, as to the year in which the Romans finally abandoned Britain; some placing it in 422 ; others in 423, or 426 ; and some in 431, 435, or 437.

*It was during their struggle with the Romans for the domination of Britain, that Christianity was first introduced among the inhabitants of this island ; not by the sword, not as the religion 01 the state, but by the peaceful preaching of that divine system in the midst of its early persecu- tions. Dr. Southey (Book of the Church, vol. i. p. 12), considers the most probable tradition on this subject to be, that which assigns to Bran the son of Lear, and father of Caractacus, the ho- nor of bringing over the glad tidings. This the Welsh triads expressly state. ' He was the person who first introduced the Christian religion among the nations of the Cymry, from Rome, where he had been detained for seven years as a hostage for his son Caradac (Caractacus) whom*the Romans made a captive through the treachery of Are- gweda Toeddawg,' i. e. Cartismandua, queen of the Brigantes.*

Bishop Stillingfleet, in his Origines Britannicae, says confidently, ' It is certain, that St. Paul did make considerable converts at his coming to Rome ; which is the reason of his mentioning the saints in Caesar's household. And it is not improbable that some of the British captives, carried over with Caractacus and his family, might be some of them, who would certainly promote the conversion of their country by St. Paul.' Now it is remarkable, as Mr. Hughes ob- serves, that the learned prelate should undesign- edly coincide with the statement of a British tradition, ' with which he was utterly unac- quainted ; and the world might have continued ignorant of so valuable a fragment of historical intelligence, had it not been for the liberality of an opulent London tradesman, a native of Wales (Owen Jones, Esq. a furrier of Thames-street,, who patronised the design of collecting materials for a Welsh Archaiology.'

The wife of Aulus Plautius, one of the most distinguished Roman generals, and governor of Britain, seems to have been another early con- vert to the Christian faith. Tacitus says, this lady was charged with having embraced a strange and foreign superstition, for which alleged crime her trial was

committed to her husband. He, agreeable to the laws and ancient forms of pro- ceeding in such cases, convened her family and friends together ; and, being in their presence tried for her life and fame, she was pronounced innocent.' He adds, ' that the lady lived long after this, but in perpetual sadness.'

There was no other foreign religion of which the Romans were at this time jealous ; to em- brace Christianity openly, would clearly therefore be viewed as a crime, especially ir> a person of quality, and the wife of a public officer. The trial of Plautius's lady occurred, according to Stillingfleet, when Nero and Calpurnius Piso were consuls, or A. D. 57, which being, accord- ing to him, after St. Paul's coming to Rome, he considers her to have been one of the apostle's converts. Another circumstance has been no-

ticed by bishop Goodwin, and archbishop Usher; it is that St. Paul, in his second epistle to Timothy, makes mention of Linus, and Pudens, and Claudia : Linus is supposed to be the same as the first bishop of Rome of that name. Pudens and Claudia are thought to be the same persons upon whose marriage the-poet Martial composed one of his epigrams. Martial's Claudia was undoubtedly a British lady, and married to Pu- dens, as appears by the poet's encomium : ā

Claudia coeruleis, cum sit Rufina Britannis Edita, cur Latias pectora plebis habet ?

Quale decus formae ! Romanam credere macres Italides possunt, Attides esse suas, &c.

- *Legends which act upon less credible grounds,' adds Southey, ' pretend that a British king, called Lucius, who was tributary to the Romans, was baptised with many of his subjects. The light of the world shone here, but we know not who kindled it.'*

We have noticed all that can be said with truth of the story of St. Alban, as given by Bede and the monkish writers. See ALBAN. But it seems well established that three British bishops at- tended the council of Aries, B. D. 314. The signatures were, according to Usher, from the Council. Galliae, edit. Paris, 1629:ā Eborius Episcopus, de Civitate Eboracensi, Provincia Brit. Restitutus Episcopus, de Civitate Londi- nensi, Provincia suprscr. Adelphus Episcopus, de Civitate Colonia Londinensium, exinde Sa- cerdos Presbyter. Arminius Diaconus.

St. Athanasius and the bishops assembled in the council of Antioch, A. D. 363, assure the emperor Jovian, that the bishops of Spain, Gaul, and Britain, continued to adhere to the faith of the council of Nice, of which they had been informed by letters from those bishops. Both St. Jerome and St. Chrysostom, speak often of the orthodoxy of the British church in their writings.

Here Pelagianism arose in the beginning of the fifth century ; and bishop Burgess contends strenuously that the British prelates of the se- venth century formally and steadily disclaimed all authority assumed over them by St. Austin, as the missionary of Rome.

Austin landed in Kent, says a valuable modern writer, prevailed on Ethelbert to profess Chris- tianity, and afford him his sanction; though Bertha the Queen, let it be observed, was pre- viously a Christian, and had always had her own religious establishment. This holy and devoted monk soon proved that his zeal to convert pagans was mingled with an ambition to convert the ancient British clergy from their independence. He summoned a synod, at which he required 'hem to conform to the ceremonies of the church of Rome, from which they differed in several things, especially on that cardinal point, the time for celebrating Easter! This may appear to our readers a trifling difference, but such was the importance attached to it in that age, that it give rise to the most violent dissensions, and required for its maintainance the greatest independence of principle. This synod was followed by another, at which seven British bishops were

present, who boldly and unanimously refused the conformity required, and told the arrogant monk, to his face, that they would not make him their archbishop. Thus it appears that Christi- anity was professed in Britain even before the popedom existed, and that, at the period when Gregory sent his emissaries hither, they were re- jected as the agents of a foreign hierarchy, and doomed, in the fervor of British zeal for Christian liberty, to the same indignant treatment as might- have been expected by ' a setter forth of strange gods.' Supposing the reverence for our ancestors a feeling of any value m this controversy, what must we think of those injudicious advocates of Popery, among whom the non-descript Cobbett Las taken his stand, who, addressing themselves to this reverence, throw the darkness of their mistakes over the past, and misrepresent the characters they invite us to imitate ? Instead of clinging to Popery as the most ancient religion of our fathers, those are only acting in their spirit, and treading in their steps, who oppose and re- nounce it. And when we discover the delusion which is attempted to be put upon us, in being called to follow the Anglo-Saxon converts of Austin amidst the superstitiojis of Rome, to the neglect of those British Christians whom these Saxons and this Austin opposed in their

attempts to preserve their own authority and customs; the generous ardor of men who feel the love of country and ancestry is roused into indignation, and if we moderate our censure on the Romish missionaries, in the hope that they were useful in some respects, we feel disgusted with the man who lauds them as the source of all the Chris- tianity which originally shone on our land. No fact is better authenticated than this, that when Austin attempted to establish the authority of the Bishop of Rome in Britain, he had the Chris- tianity of centuries to contend with.

‘ But above all others,’ says Usher, ‘ the British priests that dwelt in West Wales abhorred the communion of these dogmatists above all mea- sure: as Adhelme, abbot of Malmsbury, de- clareth at large, in his epistle sent to Geruntius, king of Cornwall, where among many other par- ticulars he showeth, that if any of the Catholics (for so he called those of his own side) did go to dwell among them, they would not vouchsafe to admit them into their company and society, be- fore they first put them to forty days penance, ā yea, even to this day (saith Bede, who wrote his History in the year 721) it is the manner of the Britains to hold the faith and religion of the English in no account at all, nor to communicate with them in anything more than with Pagans. Whereunto those verses of Taliessyn (honored by the Britains with the title of Ben Beirdh, that is, the chief of the bards, or wise men,) may be added: (which shows that he wrote after the coming of Austin into England, and not fifty or sixty years before, as others have imagined.)

Wo be to him that doth not keep

From Romish ā¢wolves, his sheep.

With staff and weapon strong.

Usher’s Discourse of the Religion of the Ancient Irish and British, 1687, p. 82.

3. Of Britain after its abandonment by the Romans, until the Saxon Conquest. ā The final departure of the Romans was no sooner known to the Scots and Picts, than they poured in upon the provincial Britons from all quarters, according to Gildas, like hungry wolves into a sheepfold. When the Scots approached the new built wall, they found it guarded by great numbers of armed men. But so little had the Britons profited by the military instructions of the Romans, that instead of placing proper guards, and relieving one another by turns, their whole number had staid several

days and nights upon the ramparts, without intermission. Being therefore quite benumbed and wearied out, they were able to make but little resistance. Many were pulled down with hooks from the battle ments, and dashed in pieces. The rest were driven from their stations with showers of darts and arrows. They betook themselves to flight ; but the Scots and Picts pursued them close, made a dreadful havoc among the fugitives, and took possession of the frontier towns, which were deserted by the inhabitants. As they now met with no more opposition, they over-ran the whole country. Their ravages soon occasioned a fam- ine ; and this was followed by a kind of civil war. The whole country at last became so incapable of supporting those who were left in it, that many fled into the woods, in order to subsist by hunt- ing. In this extremity of distress, they had once more recourse to the Romans ; and wrote in the most mournful style that can be imagined to Aetius then consul. Their letter was addressed : ' The groans of the Britons, to the consul Aetius.' The contents of this letter were answerable to the direction. ' The barbarians (say they) drive 115 to the sea ; and the sea drives us back to the barbarians; between which we have only the choice of two deaths, either to be swallowed up by the waves, or to be cruelly massacred by the enemy.' To this letter the Roman general gave no satisfactory answer, and the provincials were thereupon reduced to despair. Great numbers fled over to Armonca, where they settled along with others who had formerly gone over with an usurper called Maximus ; while others submitted to the Scots and Picts. Some, however, more resolute than the rest, had once more recourse to arms. They sallied out in parties, and, falling unexpectedly on the enemy, cut great numbers of them in pieces, and obliged the rest to retire. Hav- ing thus obtained some respite, they began again to cultivate their lands, which now produced all kinds of grain in the greatest plenty ; a plenty which, according to Gildas, occasioned the utmost corrup- tion of manners among all ranks. The clergy, says he, who should have reclaimed the laity by their ex- ample, proved the ringleaders in every vice ; be- ing addicted to drunkenness, contention, envy, &c. Nor is it probable that this description was exaggerated by Gildas, who was himself a monk. However this was, the Britons had not long en- joyed peace, when they were alarmed by a report that the Scots and Picts were about to return in far greater force. This threw them into the greatest consternation ; and. to add to their mis- fortunes, they were now visited by a dreadful plague which raged with such violence, that the living

were scarce sufficient to bury the dead. The contagion no sooner ceased than they were in- vaded by the Scots and Picts, who destroyed everything with fire and sword. Such is Gildas' narrative : Mr. Turner, however, here introduces a brilliant period of the history of Independent Britain. But he acknowledges it to have been very short. At this time Vortigern, Gurthr- gern, or Gwrtheyrn, is mentioned by various writers as thechief, if not the

only king of the southern division of Britain. He is said to have been a cruel debauched tyrant, re- gardless of the public welfare, and totally in- capable of promoting it. Being now roused from his insensibility, however, by a sense of his own danger, he summoned a council of the chief men of the nation, to consult about the proper means for delivering the country from its calamities. In this council the most pernicious measure was adopted that could possibly have been resolved on ; namely, to invite to their as- sistance the Saxons, a people famous for their piracies and cruelties, and justly dreaded by the Britons themselves. This disastrous and fatal expedient being agreed upon, ambassadors are said by some writers, to have been despatched into Germany ; who, according to Witichind, a Saxon historian of the ninth century, made a do- lorous speech before an assembly of that nation, and were very favorably received by the Saxons. The latter embraced their proposal with joy ; their soothsayers foretold that they should plun- der their British allies for 150 years, and reign over them for twice that time. Three ships were therefore fitted out, this account proceeds to say, under the conduct of Hengist and Horsa, two brothers much celebrated for their valor. They were sons of Witigisil, said to be great grandson to the Saxon god \y~oden ; a circum- stance which added much to their authority. Having embarked about 1600 men on board their three vessels, the two brothers arrived in the isle of Thanet, in 449, or 450. They were received by the inhabitants with the greatest demonstrations of joy; the isle in which they had landed was immediately appointed for their habitation ; and a league was concluded, in virtue of which the Saxons were to defend the provin- cial Britons against all foreign enemies; and the provincials were to allow the Saxors pay and maintenance, besides the place allotted them for their abode. Soon after their arrival, king Vor- tigern led them against the northern nations, who had lately broke into the kingdom, and advanced as far as Stamford, in Lincolnshire. Here a battle was fought, in which the Scots and Picts were xitterly defeated. Vortigern was so highly pleased with his new allies, that he bestowed large pos- sessions upon Hengist and Horsa. It is said, that, even at this time, Hengist was delighted with the wealth and fertility of the country ; and that, observing the inhabitants to be quite ener- vated with luxury, he began to entertain hopes of conquering part of it. He, therefore, with Vortigern's consent, invited over more of his countrymen, informing them of the fruitfulness of the country, the effeminacy of the inhabitants, and how easily a conquest might be effected. The Saxons readily complied, and in 452, as

many more arrived in seventeen vessels, as, with those already in Britain,

made up 5000 men. A.ong with these came over Rowena, the daughter of Hengist. Vortigern fell in love with this lady ; and to obtain her in marriage, divorced his queen. Hengist pretended to be averse to the match ; but Vortigern obtained his consent by investing him with the sovereignty of Kent. Vortigern had as yat continued in friendship with the Saxons, and even put more confidence in them than in his own subjects. For, not long after the arrival of this reinforcement, Hengist obtained leave to send for a second, in order, as was pretended, to defend the king from the attempts of his rebel- lious subjects. These embarked in forty ships, under the command of Octa and Ebusa, the son, or brother, or nephew of Hengist. They landed at the Orkney islands ; and having ravaged them, and all the northern coasts of Scotland, they conquered several places beyond the Frith, and at last obtained leave to settle in Northumber- land. The pretence for this settlement was, that the Saxons under Octa and Ebusa might defend the northern frontiers of the kingdom, as those under Hengist and Horsa did the southern parts. Many more Saxons were, under various pretences, invited over : till at last, their numbers being greatly increased, they began to quarrel with the natives. They demanded larger allowances of corn and other provisions ; threatening to lay waste the whole country if their demands were not complied with. The Britons, instead of com- plying, desired them to return home, since their numbers exceeded what they were able to main- tain. Upon this the Saxons concluded a peace with the Scots and Picts ; and, turning their arms against the unhappy Britons, over-ran the whole country, committing everywhere the greatest cruelties. All buildings, whether public or pri- vate, they levelled with the ground. The cities were pillaged and burnt ; and the people mas- sacred in such numbers, without distinction of sex or age, that the living scarce sufficed to bury the dead. Those who escaped took refuge among inaccessible rocks and mountains, where they either perished with hunger, or were forced to surrender as slaves to their enemies. Some crossed the sea and settled in Holland, and in Ar- morica in Gaul. Vortigern was so far from being reclaimed by these calamities, that he added incest to his other crimes, and married his own daughter. At last, his own subjects, pro- voked at his enormous wickedness, and the par- tiality he had shown to the Saxons, deposed him, and raised his son Vortimer to the throne. He was a young man of great valor, and willingly undertook the defence of his distressed country. He first fell upon the Saxons, and drove them into the isle of Thanet, where he besieged them, till, being reinforced by fresh supplies, they opened a way through the British troops. Vor- timer, however, engaged them, on the banks of the Darent, in Kent, where he obtained a "com- plete victory. Another battle was fought at Ailesford, in which Horsa the brother of Hengist was killed. A third battle was fought, in which the victory was uncertain, as is also the place where it happened. The fourth battle, however, according -v> Nennius, proved decisive in favor

of the Britons. Vortimer engaged his enemies, according to some, at Folkstone ; according to others, at Stonar, in the isle of Thanet. The Saxons were defeated with great slaughter, and driven back to their ships. So complete is the victory said to have been, that the Saxons quitted the island, without making any attempt on it for five years afterwards. These battles, however, rest entirely upon the credit of Nennius, and the historians who have followed him. They are taken notice of neither by Gildas nor Bede. The former, indeed, acquaints us that the Saxons retired. This, by most historians, is understood of their returning home ; though he might mean no more, than that they retired into Kent and Northumberland. Vortimer died after a reign of six years, and Hengist no sooner heard of his death, than he invaded Britain anew with a nu- merous body of Saxons. He was opposed by Vortigern, who had been restored on the death of his son. Several battles were fought, but at last the Britons being overthrown at a place called Crecanford, with the loss of 4000 men, were obliged to abandon Kent, and retire to London. This happened about A. D. 458 or

459.

From this time most historians date the erec- tion of the first Saxon kingdom in Britain, viz. that of Kent. Hengist assumed the title of king, and chose Esk his son for his colleague. The Britons under Vortigern still continued the war. Hengist finding himself unable to gain a decisive advantage over them in the field, had recourse to treachery- He pretended to be desirous of concluding a peace with the British monarch, and of renewing his ancient friendship with him ; and therefore required an interview. To this Vorti- gern readily consented, and accepted an enter- tainment prepared for him by Hengist. The king was attended by 300 nobility, all unarmed, but the Saxons had concealed daggers below their garments. The British nobility were all treacherously massacred in the height of their mirth ; Vortigern himself was taken and put in fetters; nor could his liberty be procured, but by ceding to the Saxons those provinces now called Essex, Sussex, and Middlesex. The Saxons thus obtained such a footing in Britain that they could never afterwards be expelled, Vortigern, after being set at liberty, is said to have retired to a vast wilderness near the fall of the Wye in Radnorshire, where he was some time after consumed by lightning, together with a city called Kaer Vourtigern, which he had built at that place. On the retreat of Vorti- gern, the command of the British forces de- volved upon Aurelius Ambrosius, who gained several victories over the Saxons. See AMBRO- SIUS. Notwithstanding this, they still continued to gain ground; and, in 491, the foundation of a second Saxon kingdom was laid in Britain. This at first comprehended only the county of Sussex, but soon after extended over most of the counties lying south of the Humber. It was called the kingdom of the South Saxons. The German nations being informed of the ruccess of the Saxons, in Britain,

new adventurers daily flocked over. They were chiefly of three nations, Saxons, Angles, and Jutes. All these passed under the

co nmon appellation sometimes of Saxons, some- times of Angles. They spoke the same language, and agreed very much in their customs, so that all of them naturally combined against the na- tives. The most active of these adventurers was Cerdic a Saxon, said to be the tenth in descent from Woden. He landed with his son Cenrit, and as many men as he could convey in five ships, at Yarmouth in Norfolk. The Britons immediately attacked him with great vigor ; but, after a short engagement, they were totally de- feated. Many other battles were fought, the event of which was always favorable to the Saxons, so that the Britons were forced to aban- don their coasts to them. In 497 Porta, another Saxon, with his two sons Bleda and Magla, and a fresh body of Saxons, arrived at Portsmouth, so named, it is said, from this chieftain. The Britons attempted to oppose their landing, but were defeated with great slaughter; after which Porta made himself master of all the neighbour- ing country. The progress of Cerdic, however, alarmed the Britons more than that of all the other Saxon princes. About the year 508, there- fore, Nazaleod, styled by Henry of Huntingdon, the greatest of all the British kings, assembled almost the whole strength of the South Britons to drive him out of the island. Cerdic, on the other hand took care to strengthen himself by procuring assistance from all the Saxons already in the island. He then advanced against the Britons, commanding the right wing himself, and his son Cenric the left. As the two armies drew near each other, Nazaleod perceived the enemy's right wing to be much stronger than the left. He therefore attacked it with the flower ot his army ; and after an obstinate resistance, obliged Cerdic to save himself by flight. But, being too eager in the pursuit, Cenric fell upon his rear ; and the British army was at last en- tirely defeated ; and 5000 men, among whom was Nazaleod himself, were left dead on the spot. Who succeeded Nazaleod is not known. The Welsh annals have an interregnum of about six years ; after which they place the beginning of the reign of Arthur, the most renowned of our ancient princes. His history is so much ob- scured by absurd, romantic, and ridiculous fables, that some have supposed, no such person ever existed. But a decisive proof of his existence is, that his tomb was discovered at Glastonbury in Somersetshire, and his coffin dug up, in the reign of Henry II. See ARTHUR. This renowned prince is said to have defeated the Saxons under Cerdic in twelve pitched batĀ»les. The last of them was fought on Badon hill (sup- posed to be Lausdown near Bath), in which the SaxonsVeceived such a terrible overthrow, that for many years they gave the Britons no further moles-

tation. As new supplies of them, however, were continually flocking over, a third and fourth king- dom of them were soon formed. The third kingdom comprehended the counties of Devon, Dorset, Somerset, Wiltshire, Hampshire, and Berkshire; to which was afterwards added Cornwall. This was called the kingdom of the West Saxons. The other kingdom, which was called the king- dom of foe East Saxons, comprehended Essex, Middlesex, and part of Hertfordshire. In 542

king Arthur was mortally wounded, fighting with his treacherous nephew, Mordred, whom he killed on the spot. Five years afterwards the Saxon kingdom of Northumberland was erected. It extended much farther than the present bounds of that county ; for it comprehended all York- shire, Lancashire, Durham, Cumberland, West- moreland, and Northumberland, with part of Scotland, as far as the frith of Forth. Between these Saxon kings frequent contentions now arose, by which means the Britons enjoyed an uninterrupted tranquillity for at least forty-four years. The sixth Saxon kingdom, called that of the East Angles, was founded in 575, and com- prehended the counties of Norfolk, Suffolk, Cam- bridge, and the Isle of Ely. The Saxons once more attacked the Britons, and overthrew them in many battles. The war was continued for ten years ; after which the seventh Saxon king- dom, called Mercia, was set up. It compre- hended seventeen counties, viz. Gloucester, He- reford, Worcester, Warwick, Leicester, Rutland, Northampton, Lincoln, Huntingdon, Bedford, Buckingham, Oxford, Stafford, Nottingham, Derby, Shropshire, Cheshire, and part of Hert- fordshire. The Britons were now confined within very narrow bounds. However, before they entirely gave up the best part of their country to their enemies, they once more resolved to try the event of a battle. At this time they were as- sisted by the Angles, who were jealous of the overgrown power of the West Saxons. The battle was fought in Wiltshire, at Woden's Bearth, a place near the ditch called Wansdike or Wodensdike : which runs through the middle of the county. The battle was very obstinate and bloody ; but at last the Saxons were entirely defeated, and almost their whole army cut off. The victory, however, proved of little service to the Britons : for being greatly inferior in number to the Saxons, and harassed by them on the one side, and by the Scots and Picts on the other, they were daily more and more confined; and at last obliged to take refuge among the craggy and mountainous places in the west of the island, where their enemies could not pursue them. At first they possessed all the country beyond the rivers Dee and Severn, which anciently di- vided Cambria or Wales from England ; the towns which stand on the eastern banks of these rivers having mostly been built to restrain the incursions of the Welsh. But the Anglo-Saxons, having passed the Severn, by degrees seized on the country lying between that river and the Wye. Nay, some parts even of Flintshire and Denbighshire were subject to the kings of

Mercia : for Uffa, the most powerful king of that country, caused a deep ditch to be drawn, and a high wall built as a barrier between his dominions and the territories of the Welsh, from the mouth of the river Dee, a little above Flint Castle, to the mouth of the Wye. This ditch is still to be seen in several places ; and is called by the Welsh Claudh Uffa, or the ditch of Uffa. The inhabitants of the towns on the east side of this ditch are called by the same people Guyr y Mers; that is, the men of Mercia. Thus, after a violeiit contest of near 150 years, the Saxons entirely subdued the Britons whom they had come to

defend, and eventually erected seven independent kingdoms, or the Saxon Heptarchy.

4. Of the Saxon Conquest and Heptarchy, until the union of the whole under the dominion of Egbert. ā South Britain, which now began to be called Anglia, or England, from the Angles, (See ANGLES), was soon reduced by its Saxon con- querors to a degree of barbarity, almost as great as it had been in, when first invaded by the Ro- mans. The provincial Britons, during their subjection to that people, had made considerable advances in civilisation. They had built twenty- eight considerable towns, besides a number of villages and country seats ; but these now were all levelled with the ground, the native inhabitants were reduced to the most abject slavery, and every art and science totally extin- guished among them. Before these fierce con- querors could be civilised in any degree, it was necessary that all their kingdoms should be re- duced under one head ; for, as long as they remained independent, their continual wars with each other still kept them in the same state of barbarity and ignorance. The history of ttiese kingdoms aflbrds few facts that are interesting, on any great scale. In consists only of a detail of their quarrels for the sovereignty. This was at last obtained by Egbert king of the West Saxons, in Wessex, in 827. Before his time, Christianity had been introduced into almost all the kingdoms of the heptarchy, and however much corrupted it might be by coming through the impure channel of the church of Rome, and misunderstood through die ignorance of those who received it, it had considerably softened the barbarous man- iers of the Saxons. It had also opened a com- munication between Britain and the more polite parts of Europe, so that there was now some hope of the introduction of arts and sciences into this country . Another effect was, that, by the ridiculous notion of encouraging chastity, the royal families of most of the kingdoms were totally extinct ; and the people, being in a state of anarchy, were ready to submit to the first who assumed any authority over them. All these

things contributed to the success of Egbert in uniting the heptarchy under his own dominion. He was of the royal family of Wessex ; and a nearer heir than Brithric, who had been raised to the kingdom in 784. As Egbert was a prince of great accomplishments, Brithric, knowing that he had a better title to the crown than him- self, began to look upon him with a very jealous eye. Young Egbert, sensible of his danger, privately withdrew to France ; where he was well received by Charlemagne, the reigning monarch. The French were reckoned at this period the most valiant and polite people in Europe ; so that this exile proved of great service to Egbert. He continued at the court of France Ull he was recalled by the nobility to take pos- session of the kingdom of Wessex. This recal was occasioned by the following accident. Brith- ric, the king of Wessex, had married Eadburga, natural daughter of Uffa king of Mercia ; a woman infamous for cruelty and incontinence. Having great influence over her husband, she often persuaded him to destroy such of the no- bility as were obnoxious to her ; and where this VOL. IV.

expedient failed, she herself had not scrupled to become their executioner. She had mixed a cup of poison for a young nobleman, who had acquired a great share of her husband's friend- ship: but, unfortunately, the king drank of the fatal potion along with his favorite, and soon after expired. By this and other- crimes Ead- burga became so odious to the people, that she was forced to fly into France, whence Egbert was at the same time recalled, as above-mentioned. Egbert ascended the throne of Wessex in 799. He was the sole descendant of those conquerors who first invaded Britain, and who pretended to derive their pedigree from the god Woden. But though this circumstance might have given him great advantages in attempting to subdue the neighbouring kingdoms, Egbert for some time gave them no disturbance ; but turned his arms against the Britons in Cornwall, whom he de- feated in several battles. He was recalled from his conquests in that country, by hearing that Bernulf, king of Mercia, had invaded his do- minions. Egbert quickly led his army against the invaders, whom he totally defeated at Ellen- dun in Wiltshire. He then entered their king- dom on the side of Oxfordshire with an army, and at the same time sent his eldest son Ethel wolf with another into Kent. The young prince expelled Baldred, the tributary king of Kent, and soon made himself master of the country. The kingdom of Essex was conquered with equal ease ; and the East Angles, who had been subjected by the Mercians, joyfully put them- selves under the protection of Egbert. Bernulf himself marched against them, but was defeated and killed ; and Ludecan his successor met with the same fate two years after. These events facilitated the reduction of Mercia. Egbert gained an easy victory over a dispirited and di- vided people ; but to engage them to submit with the less reluctance, he allowed Wiglif, their countryman, to retain the title of king, whilst he himself exercised the real power of a sove-

reign. Northumberland was in a state of anarchy ; and this tempted Egbert to carry his victorious arms into that kingdom also. The inhabitants, being desirous of living under a settled form of government, readily submitted, and owned Egbert for their sovereign, who thus became the first monarch of England, A. D. 827.

BRITAIN, NEW, North America. See LA- BRADOR.

BRITAIN, NEW, a considerable island in tne South Pacific Ocean, discovered by Dampier, and situated at the eastern extremity of Papua or New Guinea, from which it is separated by the straits of Dampier. New. Ireland is a long island, situated to the east of New Britain. The general aspect of the island is woody and mountainous, it is apparently well peopled, and enlivened with beautiful streams and fruit ful valle\s. Cocoa nuts, yams, ginger, ana other roots, are among its productions. Se- veral volcanoes, in this and in the circum- jacent islands, indicate their origin; but nonˆ of them have been accurately described. Th. Admiralty Islands are a group to the north-west. Lat. between 4Ā° and 6Ā° 50′ S. and long, between 148Ā° 20’, and 151Ā° 20′ E. SeeNsw Gt IN*

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BRITANNIA, in ancient geography, Great Britain and all the islands belonging to it.

BRITANNIA. MINOR, the ci-devant province of Brittany, or Bretagne, in France.

BRITANNIC PLAGUE, a name given by some writers to the Anglicanus sudor, or sweat- ing disease.

BRITANNICA, in the botany and materia medica of the ancients, the name of a plant de- scribed as having leaves of a dark color, very large, and in shape resembling those of the com- mon wild-dock, but somewhat hairy and of an astringent taste ; the root small and slender, and the stalk not large. This is the description of Dioscorides, who attributes to its inspissated juice great virtues as an astringent, and a re- medy for ulcers of the mouth and tonsils ; and Pliny acquaints us of its prodigious efficacy in a distemper attending the army of Germanicus, who, when they had crossed the Rhine, en- camped in a place where there was only one spring of water, the drinking of which affected them in a terriblr manner in their mouths, and made their teeth drop out ; and that the phy- sicians, who called the disease stomacace and scelotyrbe, were at length directed to the herb Britannica, as a remedy, by the Frisians who were in their camp. The

virtues attributed to this plant are observed, by later physicians, to agree with those of the hydrolopathum majus, or great water-dock, a plant produced very abun- dantly with us, but at present neglected in the practice of physic ; and Muntingius, who has written professedly of the Britannica of the an- cients, is persuaded that this is the genuine plant ; which appears extremely probable.

BRITANNICUS, son of the emperor Clau- dius by Messalina, was excluded from the em- pire after his father had married Agrippina; who put her son Nero on the throne, and caused Bri- tannicus to be poisoned, A. D. 55.

To BRITE, v. n.) Barley, wheat, or hops,

To BRIGHT. J are said to brite, when they grow over-ripe.

BRITOMARTIS, in mythology, a daugh- ter of Jupiter, who threw herself into the sea, to avoid the puruit of Minos.

BRITTANY, or BRETAGNE, a ci-devant pro- vince of France, 150 miles in length and 112 in breadth ; anciently called Armorica. It is a peninsula, surrounded, on all sides by the ocean except on the east, where it joined Anjou, Maine, Normandy, and Poitou. It was divided into the upper and lower. The natives carry on great trade, by the many harbours on its coast. It was united to the crown of France in 1532, and abounds in large forests. Some authors suppose that Great Britain was first peopled from Brittany. It is now divided into five de- partments. See BRETAGNE.

BRITTLE, > Goth, brita, Islan. briota,

BRIT'TLENESS. 5Swed. bryta, Sax. brytan. To break; to divide; frangible; easily broken.

On brolel ground they bilde ; and brotelnesse, They finden, whan they wenen sikernesse.

Chaucer't Canterbury Tales.

Neither precious stones, nor durefull brasse, Nor shining gold, nor mouldring clay it was ;

'8 BRI

But yet more rare and precious to esteeme, Pure in aspect, and like to chrystall glass, Yet glass was not, if one did rightly deeme ; But being fair and brittle likest glass did seeme.

Speiuer.

A wit quick without brightness, sharp without brit- tleness. Ascham's Schoolmaster.

The wood of vines is very durable ; though no tree hath the twigs, while they are green, so brittle, yet the wood dried is extremely tough. Bacon.

If the sfone is brittle, it will often crumble, and pass in the form of gravel. Arbuthnot.

From earth all came, to earth must all return, Frail as the cord, and brittle as the urn. Prior f

It is but life

In stronger thread of brighter colour spun, And spun for ever ; dipt by cruel fate In Stygian dye, how black, how brittle, here ! How short our correspondence with the sun !

Young's Infidel Reclaimed. For had you laid this brittle, ware On Dun, the old sure-footed mare. Gay.

She deemed the window-frames and shutters brittle, Against a daring house-breaker or sprite, And so she thought it prudent to contract her With a vice-husband, chiefly to protect her.

Byron. Beppo.

BRITTLENESS. Brittle bodies are extremely hard ; a very small percussion exerts a force on them equivalent to the greatest pressure. This effect is particularly remarkable in glass suddenly cooled, the brittleness of which is thereby much increased. Tin, though in itself tough, gives a brittleness to all the other metals when mixed therewith. The brittleness of glass has been said to arise from the heterogenity of the parts whereof it is composed, as salt and sand can never bind sufficiently together : but this cannot be the case; for the pure calces of metals, or any other simple substances when vitrified, be- come brittle also. In timbers, brittleness seems to be connected with durability; the more brittle any sort of wood is, the more durable it is found. Thus oak is of very long duration ; while beech and birch, being tough, presently rot, and are of little service in building.

BRITTON (Thomas), the famous musical small coal-man, was born at Higham Ferrers in Northamptonshire. He served his time in Lon- don, where he set up in a stable, next door to the little gate of St. John of Jerusalem, on Clerken- well-green, which he converted into a house.. Here

becoming acquainted with Dr. Garenciers, his neighbour, he became an excellent chemist, and constructed a movable laboratory which was much admired by all who saw it. His skill in n-usic was noways inferior to that in che- mistry, either in the theory or practice ; he had for many years a well frequented musical club, meeting at his own little cell ; and was well re- spected and known by persons of the first qua- lity; being, above all, a valuable man in his moral character. In Ward's account of clubs, we are told, that ' Britton's was first begun, or at least confirmed, by Sir Roger L' Estrange, a very musical gentleman.' This meeting was the first of the kind, and gave rise to some of the most celebrated concerts in London. Ward says, a concert was performed in his own house, which is thus described. ' On the ground floor

was a repository for small coal : over that was the concert room, which was very long and nar- row ; and had a ceiling so low, that a tall man could but just stand upright in it. The stairs to this room were on the outside of the house, and could scarcely be ascended without crawling. The house itself was very old and low built, and in every respect so mean as to be a fit habitation only for a very poor man.' This mansion, de- spicable as it may seem, attracted to it as polite an audience as ever the opera did. Here Dr. Pepusch, Handel, Bannister, Henry Needier, and other capital masters, were performers. At the first institution of the club, Britton would receive no gratuity whatever from his guests, and was offended whenever any was offered him. According to some, however, he departed from this ; and the rules were, that Britton should find the instruments, the subscription be 10s. 'a year, and the company have coffee at a penny a dish. The singularity of his character, the course of his studies, and the collections he made, in- duced suspicions that Britton was not the man he seemed to be. Among other groundless con- jectures, his musical assembly was thought by some to be only a cover for seditious meetings ; by others, for magical purposes; and Britton himself was taken for an atheist, a Jesuit, &c. The circumstances of his death are not less re- markable than those of his life. There lived near him one Samuel Honeyman, a blacksmith, who became famous as a ventriloquist, and Robe, an acquaintance of Britton's, was foolish enough to introduce this man to the latter, for the sole purpose of terrifying him. He suc- ceeded but too well : Honeyman, without moving his lips, or seeming to speak, announced, as from afar off, the death of Britton within a few hours, with an intimation that the only way to avert his doom was for him to fall on his knees imme-

diately, and say the Lord's prayer : the poor man not only did this, but went home, took to his bed, and in a few days died. This happened in September, 1714. Britton left behind him a large collection of books, music, and musical instruments. Of the former, Sir Hans Sloane was a considerable purchaser. His collection of music, mostly pricked by himself, sold for nearly Ā£100. In the British Museum there is a paint- ing of him taken from the life. A mezzotinto print was taken from this, for which Mr. Hughes (author of the siege of Damascus, and a frequent performer at Britton's concerts,) wrote the fol- lowing lines : ā ā¢

Tho' mean thy rank, yet in thy humble cell, Did gentle peace and arts unpurchased dwell ; Well pleased, Apollo thither led his train, And music - warbled in her sweetest strain. As fables tell, Cyllenius and Jove, Came thus as guests to poor Philemon's grove.

BRIVA ISARĀ£, in ancient geography, a town of Gallia Belgica on the river Isara or Oise; now called Pontoise.

BRI VAT ES, in ancient geography, a port if Gallia Celtica ; now called Brest.

BRIXELLUM, in ancient geography, a town of Gallia Cispadana; remarkable for being the

place where Otho killed himself after the battle of Bedriacum : now called Bresello.

BRIXEN (the Sublavio of the ancients), the capital of a district, formerly a bishopric, of the Tyrol, of the same name, situated to the south of the Brenner Mountains, in the midst of hills and vineyards, and at the confluence of the Ilientz and Eysach. This place is well built, and the houses, which are painted, are adorned with piazzas, and diversified by several spacious squares. The palace of the bishop is in appear- ance mean, though capacious and well built. In the cathedral there are several paintings by the first Tyrolese masters, and particularly by the Unterbergers. There are six other churches, of which the Benedictine church is the finest. The town is governed by its own magistrates, viz. two burgomasters, and two counsellors. The mine- ral waters in the neighbourhood are much fre- quented ; and at Klausen, about three leagues from Brixen, is a fine collection of paintings in the convent of Capuchins. The principal article of commerce is the red wine of the surrounding country. The district altogether contains about 375 square miles, and a population of 27,000 persons. It was ceded to Bavaria in 1806, and restored to Austria in 1815 with the rest of the Tyrol. It contains three towns and numerous villages.

BRIZA, in botany, quaking grass : a genus of the digynia order, and triandria class of plants. Natural order, fourth, gramina : CAL. two-valved and multiflorous ; the spicula bifarious : COR. two valved, the valves heart-shaped, blunt ; seeds growing to the corolla, depressed. Species seven, natives of Europe, and several of our own country ; especially 1. B. minor, with trian- gular seven-flowered spikelets. 2. B. media, with ovate seven-flowered spikelets, both found in our meadows and pastures.

BRIZE-VENTS, shelters used by gardeners who have not walls on the north side, to keep cold winds from damaging their beds of melons. They are enclosures about six or seven feet high, and an inch or more thick ; made of straw, supported by stakes fixed in the ground, and props across, both inside and outside, fastened either with willow twigs, or iron wire.

BROACH', v. & n. \ Goth, brodde, Swed.

BROACH'ER. J brodd, Welsh brwyd, Fr.

broche. A spit, a tap, a point, a breast or- nament. Hence, to spit, to pierce as with a spit, to tap a vessel, by piercing it in order to draw the liquor; to open any store; to let out, or utter any thing.

Were now the general of our gracious empress, As in good time he may, from Ireland coming:, Bringing rebellion broached upon his sword.

Shakspeare.

This errour, that Pison was Ganges, was first broached by Josephus. Raleigh.

There is much pride ana vanity in the affectation of being the first broacher of an heretical opinion.

L' Estrange.

Men have got a fashion now-a-days, that two or three busy bodys will take upon them the name of the world, and broach their owu conceits, as if they were a general opinion. Bacon.

He was taken into service to a base office in his

kitchen ; so that he turned a broach, that had worn a

crown. Id. Henry VII.

Whose offered entrails shall his crime reproach,

And drip their fatness from the hazle broach.

Dry den.

Those who were the chief instruments of raising the noise, made use of those very opinions themselves had broached, for arguments to prove that the change of ministers was dangerous. Swift' Exam.*

BROACH, BROCHA, BROCHE, or BROTCHE, in Scotland, is the name of a utensil, or rather ornament, which the Highlanders use, like the fibula of the Romans, to fasten their vests. They are usually made of silver ; of a round figure; with a tongue crossing its diameter, to fasten the folds of the garment, sometimes with two tongues, one on each side of a cross bar in the middle. There are preserved in several families, ancient broaches of very elegant workmanship, and richly ornamented. Some of them are inscribed with names, to which particular virtues used to be attributed ; others are furnished with recepta- cles for relics, supposed to preserve from harm. So that these broaches seem to have been worn not only for use and ornament, but for amulets. One or two of this sort are figured and described by Mr. Pennant, in his Tour in Scotland, i. 90. lii. 14., edit. 3.

BROACH, with hunters, the start of a young stag's horn.

BROACH, a district and town of Hindostan, in the province of Gujerat, situated between the twenty-first and twenty-third degrees of northern latitude, and bounded on the west by the gulf of Cambay. It is one of the best cultivated and most populous territories on the west coast of India, and celebrated for the production of cotton. It was (Ā«ded to the British by the Mahrattas in 1803, with the exception of three small districts, which are the private estate of the peishwa. The river Nerbuddah runs through the centre of it ; on an island in this river stands the largest tree in the world : 7000 persons it is said have stood under its shade.

BROACH, the capital of the above district, sup- posed to be the Barygaza of the ancients, is a place of considerable trade, and situated on the north bank of the Nerbuddah river, about twenty-five miles from the sea. It was twice taken by the British, viz. in 1772 and 1803, and remains still in our possession. Here is an hos- pital for criminals, supported by voluntary

contri- butions among the Hindoos.

BROAD',

BROAD'EN,

BRO/VD'ISH,

BROAD'LY,

BROAD'NESS,

BROAD'SIDE,

BKOAD'-AXE,

BROAD'-CLOTH,

BROAD'-EYED,

BROAD'-LEAVED,

BROAD'-SHOULDERED,

BROAD'-SWORD,

BROAD'-WISE.

Goth, braid, Swed. bred, Sax. brad, Teut. breit, Belg. breed, Per. burdur. Wide extend- ed, open. It is op- posed to narrow, dis- tinguished from long, and is applied to space in the sense of width ; to objects in the sense of bulk and dimen- sions; to any thing clear, open, uncon-

cealed. Figuratively, to what is gross, coarse, obscenic, unreserved, bold, and indelicate.

Gret was the prees that swarmed to and fro To gauren on this hora that stondeth so ; For it so high was and so brod and long, So wel proportioned for to be strong, Right as it were a stede of Lumbardie.

Chaucer's Canterbury Talei.

Who can speak broader than he that has no housa to put his head in ? Such may rail against great buildings. Shakspfxre.

In despite of broad-eyed watchful day, I would into thy bosom pour my thoughts : But, ah ! I will not. Id.

The weeds that his broad spreading leaves did

shelter

Are pulled up, root and all. Id,

The mobile are still for levelling ; that is to say,

for advancing themselves : for it is as broad as long,

whether they rise to others, or bring others down to

them. L'Estrange.

From vaster hopes than this he seemed to fall, That durst attempt the British admiral : From her broad sides a ruder flame is thrown, Than from the fiery chariot of the sun. Waller.

As chaste and modest as he is esteemed, it cannot be denied, but in some places he is broad and fulsome.

Dry den.

I have used the cleanest metaphor I could find, to palliate the broadness of the meaning. Id.

Of all your knowledge this vain fruit you have, To walk with eyes brand open to your grave. Id.

If open vice be what you drive at, A name so broad we'll ne'er connive at. Id. Narrow and broad-leaved Cyprus grass.

Woodward on Fossils.

He, in fighting a duel, was run through the thigh with a broad-sword. Wiseman.

It no longer seeks the shelter of night and dark- ness, but appears in the broadest light.

Decay of Piety.

The top may be justly said to grow broader, as the bottom narrower. Temple.

The broadest mirth, unfeeling folly wears,

Less pleasing far than virtue's very tears. Pope.

[f one should, with his hand, thrust a piece of iron

broadwise against a flat ceiling of his chamber, the

iron would not fall as long as the force of the hand

perseveres to press against it. Boyle.

i. am a tall, broad-shouldered, impudent, black fellow ;

and, as I thought, every way qualified for a rich

widow. Spectator.

Thus, a wise taylor is not pinching, But turns at every seam an inch in ; Or else, be sure, your broad-cloth breeches Will ne'er be smooth, nor hold their stitches.

Swift.

Low walks the sun, and broadens by de

BROAD PIECE, a denomination given to cer- tain gold pieces broader than a guinea, parti- cularly caroluses and jacobuses.

BROAD RIVER, a river or arm of the sea, on the east coast of -North America, which extends along the west and north-west sides of Beaufort or Port Royai island, on the coast of South Carolina, and receives the liver Coosa from the north west. This may likewise be called an arm of the sea; its waters extend north-westward, and meet those of Bread river round a small island at the mouth of Coosa llatchee river. The two embrace all the islands between Cpm- bahee river and Dawfuskee sound, with which also Broad river communicates. Channels be-

tween Broad river and Coosa form the islands. The entrance through Broad river to Beaufort liarbour, one of the best in the state, is between Hilton's Head and St. Philip's Point.

BROAD-STAIRS, a hamlet of St. Peter's, Isle of Thanei, Kent, distant from llamsgate two miles north, on the sea-shore, is seventy-five miles east from London. It is chiefly to be noticed as a fashionable and retired resort for

sea-bathing. Here are the remains of an ancient gateway, which appears to have been part of some fort of the coast. The bathing machines, and public rooms, are on the same construction as those at Ramsgate ; and on the cliff is a good library. It has a small pier, at which light vessels load and deliver their cargoes. The parish church of St. Peter is a handsome gothic structure, a mile distant ; the steeple is remarkable for a crack from the top to the bottom, occasioned by the shock of an earthquake, 1580.

BROAD-SWORD, a sword with a broad blade, chiefly designed for cutting ; not much used in the British service, except in some few regiments of cavalry and Highland infantry. Among the cavalry, this weapon has in general given place to the sabre.

BROCA'DE, > Fr. brocade, Ital. broccata,

BROCA'DED. 3 from brooch, see BROOCH; silk or stuff variegated with gold or silver embroi- dery.

I have the conveuiency of buying and importing rich brocades. Spectator.

Or stain her honour, or her new brocade ; Forget her prayers, or miss a masquerade. Pope.

Should you the rich brocaded suit unfold, Where rising flowers grow stiff with frosted gold.

Gay.

BROCADE, or BROCADO, a stuff of gold, sil- ver, or silk, raised and enriched with flowers, foliages, and other ornaments, according to the fancy of the merchants or manufacturers. For- merly the word signified only a stuff, wove all of gold, both in the warp and in the woof, or all of silver, or of both mixed together ; thence it passed to those of stuffs in which there was silk mixed, to raise and terminate the gold or silver flowers ; but at present all stuffs, even those of silk alone, whether they be grograms of Tours or of Naples, sattins, and even taffeties or lustrings, if they be but adorned and worked with some flowers or other figures, are called brocades.

In manufacturing brocades, the flatted gilt wire is spread on threads of yellow silk, approaching as near as may be to the color of gold itself. The wire, winding off from a bobbin, twists about the thread as it spins round ; and by means of curious machinery, too complex to be described here, a number of threads are thus twisted at once by turning one wheel. The principal art consists in so regulating the motion, that the several circumvolutions of the flatted wire on each side may just touch one

another, and form, as it were, one continued covering. It is said, that at Milan there is made a sort of flatted wire gilt only on one side, which is wound upon the thread, so that only the gilt side appears ; and that the preparation of this wire is kept a secret,

and has been attempted in other places with little success. There is also a gilt copper wire, made in the same manner as the gilt silver. Savary observes, that this kind of wire, called false gold, is prepared chiefly at Nuremberg; and that the ci-devant ordinances of France required it to be spun, for distinction from the gilt silver, on flaxen or hempen threads. One of our writers takes notice, that the Chinese, instead of flatted gilt wire, use slips of gilt paper, which they both interweave in their stuffs and twist upon silk threads : this practice he inconsiderately proposes as a hint to the British weaver. But, whatever be the beauty of stuffs of this kind of manufac- ture, it is obvious that they must want durability. The Chinese themselves, according to Du Halde's account, sensible of this imperfection, scarcely use them any otherwise than in tapestries, and such other ornaments as are not intended to be much worn, or exposed to moisture. The Vene- tians have carried on a large trade to the Levant, in a kind of brocade called domasquete, which, though it has only about half the quantity of gold or silver as that made among us, looks far more beautiful. The flatted wire is neither wound close together on the silk threads, nor the threads stuck close in the weaving ; yet by pas- sing the stuff betwixt rolls, the disposition and management of which is kept a secret, the tissue or flower is made to appear one entire brilliant plate of gold or silver. The French ministry, judging this manufacture worthy of public atten- tion, engaged the ingenious Mr. Vaucanson, to contrive the machinery ; a gentleman well known

This gentleman, in the memoirs of the Academy for 1757, gives an account of his success, and of the establishment of this manufacture at Lyons. The lower roll is made of wood, thirty-two inches in length" and fourteen in diameter ; the upper one of copper, thirty-six inches long and eight in diameter. This last is hollow, and open at one end, for introducing iron heaters. For making the roll cylindrical, he has a particular kind of lathes, wherein the cutting tool, which the most dexterous hand could not guide in a straight line through such a length as thirty-six inches, is made to slide by means of a screw, on two large steel rulers, perfectly straight, and capable of being moved at pleasure, nearer, and always exactly parallel to the axis of the roll. He first disposed the rolls nearly as in the com- mon flatting mill. In this disposition, ten men were scarcely sufficient for turning them with force enough to extend the gilding duly ; and the collars, in which the axis of the rolls turned at each end, wore so fast, that the pressure con- tinually diminished, insomuch that a piece of stuff of ten ells, had the gilding sensibly less extended on the last part than on the first. He

endeavoured to obviate this inconvenience by screwing the rolls closer and closer in proportion as the stuff passed through, or as the wearing of the collars occasioned more play between them but this method produced an imperfection in th stuff, every turn of the screw making a sensible bar across it. To lessen the attrition, each end of the axis, instead of a collar, was made to turn between three iron cylinders, called friction

wheels ; but even this did not answer fully, for now another source of unequal pressure was dis- covered. The wooden roll being compressible, had its diameter sensibly diminished : it likewise lost its roundness, so that the pressure varied in different points of its revolution. On trying different kinds both of European and Indian woods, all the hard ones split, the soft ones warped without splitting, and of more than twenty rolls, there was not one which continued round for twenty-four hours. These failures put him upon contriving another method of pressing the rolls together, so that the force should always nccommodate itself to whatever inequalities might happen. The axis of the copper roll being made to turn between friction-wheels as before, that of the wooden one is pressed upwards by a level at each end, furnished with a half collar for receiving the end of the axis. Each lever has the end of its short arm supported on the frame of the machine, and the long arm is drawn upwards by an iron rod communicating with the end of the short arm of another lever placed horizontally. To the long arm of this lever is hung a weight, and the levers are so proportioned, that a weight of 30 Ibs. presses the rolls together with a force equivalent to 17,536 Ibs. which was found to be the proper force for the sufficient extension of the gilding. ā¢. By this contrivance, four men can turn the rolls with more ease than ten can turn those which are kept together by screws ; and the same weight acting uniformly in every part, the pressure continues always equal, though the wooden roll should even become oval, and though the stuff be of unequal thickness. A piece of cloth, of about two ells, is sewed to the begin- ning and end of the stuff, to keep it out to its width when it enters and parts from the rolls, which could not be done by the hands for fear of burning or bruising them ; as it would take too much time to sew these cloths to every small piece of an ell or two, a number of these are sewed together. The stuff is rolled upon a cy- linder, which is placed behind the machine, and its axis pressed down by springs to keep the stuff tight as it comes off. Four iron bars, made red hot, are introduced into the copper roll, which in half an hour acquires the proper degree of heat or nearly such an one as is used for the ironing of linen ; the

wooden roll is then laid in its place, and the machine set to work. If more than thirty ells are to be passed at once, the wooden roll must be changed for another, for it will not bear a long continuance of the heat with- out danger of splitting ; and therefore the manu- facturer should be provided with several of these rolls, that when one is removed, another may be ready to supply its room ; as soon as taken off from the machine, it should be wrapt in a cloth, and laid in a moist place. The principal incon- venience attending the use of this machine, is, that the heat necessary for extending the gilding, though it improves the brightness of white and yellow silks, is injurious to some colors, as crim- son and green. A double pressure will not sup- ply the place of heat ; and the only method of preventing this injury, of rendering it as light as possible, appeared to be, to pass the stuff through with great celerity.

To clean brocades neither alkalies nor soap must be used ; because the former, while they clean the gold, corrode the silk, and change or discharge its color ; and the latter also alters the shade, and even the species, of certain colors. But spirit of wine may be used without any danger of its injuring either the color or quality of the subject; and in many cases proves as effectual for restoring . the lustre of the gold as the most corrosive detergents. A rich brocade, flowered with a variety of colors, after being disagreeably tarnished, had the lustre of the gold perfectly restored by washing it with a soft brush dipped in warm spirit of wine, and some of the colors of the silk which were likewise ‘ soiled, became at the same time remarkably bright and lively. Spirit of wine seems to be the only material adapted to this intention, and probably the boasted secret of certain artists is no other than this spirit disguised. Dr. Lewis says he does not know of any other that is of sufficient activity to discharge the foul matter, without being hurtful to the silk. As to powders, however fine, and however cautiously used, they scratch and wear the gold, which here is only superficial, and of extreme tenuity.

BROCARDICA, BROCARDICS, denote max- ims or principles in law ; such as those pub- lished by Azo, under the title of Brocardica Juris. Vossius derives the word from the Greek TTporapxia, q. d. first elements. Others, with more probability, from Burchard, or Brochard, bishop of Worms, who made a collection of canons, hence called Brocardica; and as this work abounded much in sentences and proverbs, the appellation was extended to similar works.

BROCATEL, or BROCADEL, a kind of coarse brocade ; chiefly used for tapestry.

BROCATELLO, a name given by lapidaries to the white and gold-veined red marble.

BROC'COLI, n. s. Ital. A species of cabbage.

Content with little, I can piddle here On broccoli and mutton round the year ; But ancient friends, tho' poor or out of pay, That touch my bell, I cannot turn away. Pope.

BROCCOLI. See BRASSICA.

To BRO'CHE. See To BROACH.

So Geoffry of Bouillon, at one draught of his bow, shooting against David's tower in Jerusalem, broached three feetless birds. Camden .

BROCHOS, in surgery, a name used by some writers for bandages in general : in some of the old writers, the same word is also used for a person who has a very prominent upper lip, or teeth, and a thick mouth.

BROCK', 3 Dan. brook, Sax. broc, Fr.

BROCK'ISH. 3 broc, Ital. burco, apparently from Goth, brtek, brok, a scream, a yell ; a badger. Skinner suggests from to break, because this animal breaks and bruises with most severe biting. Brackish seems to mean beastly, brutal.

Or with pretence of chasing thence the brock, Send in a cur to worry the whole flock. Jonson.

BROCKLESBY (Richard), M.D., was of an

Irish family, but born in 1722, at Minehead, in Somersetshire. He was educated at Ballytore, in tho north uf Ireland, under the sa:ne master

with Mr. Burke, though not a school-fellow of that statesman. He afterwards went to Edin- burgh, and thence to Leyden, where he took his degree of M. D. in 1745. Soon after, he settled in London, and in 1751 was admitted a licentiate of the College of Physicians. Having obtained a diploma from Cambridge, he became, in 1756, a fellow of the college ; and in 1758 was appointed physician to the army, in which capacity he served in Germany during the seven years' war. In October 1760 he was made phy- sician to the hospitals for the British forces, and returned home a little before the conclusion of the peace of 1763. He now acquired in the

metropolis an extensive practice, and a general acquaintance with the literary characters and statesmen of the age. Among others he was in terms of close intimacy with Dr. Johnson, and attended him in his last illness. Dr. Brocklesby is characterised in Boswell's Life of Johnson, as a man whose reading, knowledge of life, and good spirits, supplied him with a never-failing source of conversation ; and several letters, addressed to him from Dr. Johnson, are preserved in that work. One trait of his cha- racter is omitted, however, which does him great honor. Believing that Johnson wished, in the latter part of his life, to remove to the continent for his health, and knowing the benefits that might accrue to him from that measure, Dr. Brocklesby made him an offer of an annuity of Ā£100 during the remainder of his life ; and, when this was declined, pressed him to reside in his house, as more suited to his health than the one in which he then lived. In the same noble spirit he transmitted Ā£1000 to Burke, as a legacy he had intended leaving him, but which he thought would be of more use to him in his life time. Dr. Brocklesby died suddenly in 1797. His works are: I. Dissertatio de Saliva Sana et Morbosa, 4to. 2. Essay concerning the Mortality of Horned Cattle, 8vo. 3. Eulogium Medicum, sive Oratio Anniversaria Harveiana, 1760, 4to. 4. Economical and Medical Ob- servations tending to the improvement of Medical Hospitals, 2 vols. 8vo. 5. Account of a Poisonous Root found mixed with Gentian. Phil. Trans, n. 486. 6. Case of Diabetes, Med. Observ. 7. Experiments on Seltzer-water, ib. 8. Case of Encysted Tumor of the Eye, ib. 9. Dissertation on the Music of the Ancients.

BROD/EUS, or BRODEAU (John), a great critic, on whom Lipsius, Scaliger, and Grotius, have oestowed great encomiums, was descended from a noble family in France, and born at Tours in 1 500. He was liberally educated, and placed under Alciat to study the civil law ; but he gave himself up wholly to languages and the belles lettres. He travelled into Italy, where he became acquainted with Sadolet, Bembo, &c. and applied himself to the study of mathematics, philosophy, and the sacred languages, in which he made no email proficiency. Then, returning to his own country, he led a retired, but not an idle, life, as his many learned works abundantly testify. He was a man free from all ambition, and ostentation, and suffered his works to be published rather under the authority of others than under his own. 'His chief works are: 1.

A Commentary or. the Anthoiogia. 2. Ten Books of Miscellanies. 3. Notes on Oppian, Euripides, &c. He died in 1563.

BRODERA, a town of Hindostan, in the province of Gujerat, and district of Champoueer, the capital of a Mahratta chief's dominions, called the Guicowar, who is one of the British allies. His revenues are but moderate, and ge- nerally collected by an armed force. His territories adjoin Broach,

and he is principally supported by the British.

BRODIATORES, in the middle age, a kind of librarii, or copyists, who did not write the words and letters plain, but variously flourished and decorated, after the manner of embroidery.

BRODIUM, a term used by some writers in pharmacy, for a liquor in which any solid sub- stance has been boiled, is to be preserved, or with which a medicine too strong for use alone- is to be diluted.

BRODY, a town in the circle of Brody or Zloczow, Austrian Galicia, situated on the borders of the Russian government of Volhynia. It is a trading place of consequence, containing a castle, four parish churches, 2000 Christian inhabitants, and no less than 13,000 Jews. It carries on an extensive commerce with Moldavia, Walachia, the Crimea, and other parts of Turkey and Russia, receiving in return for Po- lish merchandise, the horses, black cattle, wax, honey, tallow, skins, fur, anise, and fruit, pro- duced in these and other countries. The Jews here are in the habit of frequenting the principal fairs of Germany ; and at Brody is a central synagogue.

BRO'GUE. Ital. brog, bruac, Wei. bro-aeg, from bro, country, and aegt speech. Thus it sig- nifies a country accent, particularly of the Irish. It is also applied to a shoe made of raw leather. Ir. bro given, a country shoe; Wei. gwintas, shoes.

His brogue will detect mine. Farquhar.

I thought he slept ; and put

My clouted brogues from off my feet, whose rudeness Answered my steps too loud. Shakspeare .

Sometimes it is given out, that we must either take these halfpence, or eat our brogue. Swift.*

But what vexed me most was that d d Scottish.

rogue

With his long-w. led speeches, his smiles, and his brogue. Goldsmith.

BROID', -\ Goth, broda; Dan. brode ;

BROID'ER, (Welsh, brodiaw ; Fr. brodir,

BROID'ERY, Ā£from Goth, brodde, a point.

BROID'ERERS. ' See BROCADE. To adorn with figures in needle-work ; flower-work ; ornaments wrought upon cloth ; to braid, knit, wreathe, or interweave.

A robe, and a broidered coat, and a girdle.

Exodut. Of rubies, saphires, and of perles white,

Were all his clothes broided up and down,

For he in gemmes gretly gan delight.

Chaucer's Canterbury Talcs. Infant Albion lay In mantles l+oidered o'er with gorgeous pride.

TichcU. The goldeu Broidery tender Milkah wove,

The breast to Kenna sacred, and to love,

Lie rent and mangled. /A

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BROKERS.

BROIL', v. &. n.-\ Fr. brouiller, brusler ; Ital.

BROIL'ER, f brustolare, from /3porĀ£oi;

BROIL'ING, ˆGoth. brasa, hrastu. See

BROIL'MAKER.) BREEZE. To roast on the fire ; to grill ; to be in a heat. Met. a tumult ; a quarrel.

Where have you been broiling 1

Among the crowd i' the' abbey, where a finger

Could not be wedged in more. Shakspeare.

Say to the king thy knowledge of the broil.

As thou didst leave it. Id.

Their broiling heads can bear no other sounds, Than fleets and armies, battels, blood, and wounds.

Maroell.

He has sent the sword both of civil broils, and public war, amongst us. Wake.

*Some strip the skin, some portion out the spoil, Some on the fire the reeking entrails broil. Dryden_*

BROKE', v. N. Of uncertain etymology. BRO'KAGE, J Skinner seems inclined to de- BRO'KER, f rive it from to break, because BRO'KERAGE, /"broken men turn factors or BRO'KERLY, \ brokers. Casaubon, from Trpar- BRO'KERY. J rtiv. Skinner thinks, again, that it may be contracted from procurer. Mr. Lye more probably deduces it from Sax. briuccan, to be busy. To transact business for others, or by others. Brokage, is the gain gotten by procuring bargains ; the hire given for any unlawful office ; dealing in old and second-hand goods ; transact- ing business by commission.

He woeth hire by menes and brocage, And sworen he wolde ben hire owen page.

Chaucer's Canterbury Talet. Yet sure his honesty

Got him small gaine, but shameless flattery, And filthy brocage, and unseemly shifts, And borrow base, and some good ladies gifts.

Spenser.

In chusing for yourself, you shewed your judgment ; Which being shallo_ar, you shall give me leave To play the broker jasmine own behalf. Skakspeare.

Redeem from broking pawn the blemiahed crown, Wipe off the dˆjst that hides our sceptre's gilt. Id.

ile does, indeed,

And brakes with all that can, in such a suit, Corrupt the tender honour of a maid. Id.

Court officers as used the next place took, And followed F ā x, but with disdainful look ; His birth, his youth, his brokage, all dispraise, In vain, for always he commands that pays.

Marsell.

Brokers, who, having no stock of their own, set up and trade with that of other men ; buying here and selling there, and commonly abusing both sides, to make out a little paltry gain. Temple.

Some South-sea broker, from the city, Will purchase me, the more's the pity j Lay all my fine plantations waste, To fit them to his vulgar taste. Swift.

So much as the quantity of money is lessened, so much must the share of every one that has a right to this money be the less ; whether he be landholder, for his goods ; or labourer, for his hire ; or merchant, for his brocage. Locke.

BRO'KEN "j The past tense and past

BRO'KEN LY, participle of the verb to

BRO'KENNESS, [break. Interrupted ; irre- BRO'KENHEARTED, fgular; disjointed; crush- BRO'KENMEAT, ed: fragments without any

BEO'KENWJNDED. J regular series.

He hath sent me to bind up the brokenhearted.

Isaiah. To other woundes, and to broken armes,

Some hadden salves, and some hadden charmes,

And farmacies of herbes.

C/iaucer's Canterbury Titles.

Preserve men's wits from being broken with the very bent of so long attention. Hooker.

Yet would not let their battell so be broken,

J?oth greedy fiers on other to be wroken. Spenser.

Sir Richard Hopkins hath done somewhat of this kind, but brokenly and glancingly ; intending chiefly a discourse of his own voyage. HahewilL

Get three or four chairwomen to attend you con- stantly in the kitchen, whom you pay at small charges ; only with the broken meat, a few coals, and all the cinders. Swift.

Had we never loved so kindly, Had we never laved so blindly, Never met, or never parted, We had ne'er been brokenhearted. Burnt.

BROKEN-BACKED, in sea language, denotes the state of a ship which is so impaired, and loosened in her frame, as to droop at each end ; a disorder to which the French ships are most exposed on account of their length, &c.

BROKERS, in common, are of three kinds; exchange-brokers, stock-brokers, and pawn- brokers :

EXCHANGE BROKERS, are a sort of negociators who contrive, make, and conclude bargains be- tween merchants and tradesmen, in matters o! money or merchandise, for which they have a fee or premium. These, in old English law- books, are called broggers, and in Scotland, broccarii, i. e. according to Skene, mediators or intercessors in any contract, &c. They make it their business to know the alteration of the course of exchange, to inform merchants of it, and to notify to those who have money to receive or pay abroad, who are proper persons for negociating the exchange with ; and when the matter is ac- complished, that is when the money is paid, they have a brokage per Ā£100 sterling. These by statute 8 and 9 William III. are to be licensed in London by the lord mayor, who gives them an oath, and takes bond for the faithful execution of their offices. If any person shall act as broker without being thus licensed and admitted, he shall forfeit the sum of Ā£500, and persons em- ploying him Ā£5 ; and brokers are to register con- tracts, &c. under the like penalty : also brokers shall not deal for themsel ves, on pain of forfeit- ing Ā£200. They are to carry about with them a silver medal, having the king's arms and the arms of the city, and pay forty-shillings per year to the chamber of the city.

In France, till the middle of the seventeenth century, their exchange brokers were called cour- tiers de change; by an arret of council in 1639, the name was changed for that more creditable one of agent de change, banque, et finance ; and in the beginning of the eighteenth century, to render the office still more honorable, the title of king's counsellor was added. At Grand Cairo, and several places of the Levant, the Arabs, who do the office of exchange brokers are called con- suls; the manner of whose negociating with the European merchants has something in it so very particular, that we refer it to a distinct article.

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See CONSUI,. The exchange brokers at Amster- dam, called makelders, are of two kinds; the one like the English, called sworn brokers, be- cause of the oath they take before the burgo- masters ; but the others negociate without any commission, and are called walking-brokers. The Jews, Armenians, and Banians, are the chief brokers throughout most parts of the Levant and the Indies. In Persia all affairs are transacted by a sort of brokers whom they call delal, i. e. great talkers ; and who, after they have launched out into long, and often impertinent discourse, in coming to a conclusion converse only with their fingers.

INSURANCE or POLICY BROKERS are agents who transact the business of insurance between the merchant or party insured and the under- writers or insurers. These insurance brokers, from the nature of their employment, ought to be, and indeed generally are, persons of respec- tability and honor, and in whom confidence may be safely reposed. To the broker the merchant looks for the regularity of the contract, and ‘ a proper selection of responsible underwriters ; and to him, also, the underwriters look for a fair and candid disclosure of all material circum- stances affecting the risk, and the payment of their premiums. There is usually an open ac- count between each broker, and every under- writer with whom he has much dealing. In this account the broker makes himself debtor to the underwriter for all premiums, and takes credit for all losses to which the underwriter is liable, and which the broker is authorised to receive. Indeed, it is generally understood, that, by the usage of trade in London, the underwriters gire credit only to the broker for their premiums, and can resort only to him for payment; and that he alone, and not the underwriters, can recover the premiums from the insured. This point, however, has never been settled by a judicial determina- tion. But though the underwriter thus looks to the broker for his premium, and though the broker in his account with the underwriter takes credit for the losses and returns of premiums, ā¢which he is authorised to receive from the under- writer, yet such losses are not to be regarded as a debt from the underwriter to the broker. In the case of the bankruptcy of a policy broker, the Court of King’s Bench (23 Geo. III.) held that though credit for the premiums must be given to the broker, because the underwriters know nothing of the principals; yet, that they could not set off the losses or returns of premium due to the principals, and which they only could sue for, against a debt due from the defendants to the bankrupt. In this case the defendants had no commission del credere. In a subsequent case, where the action was brought by the as- signees of an underwriter against the factor, it was ruled that no general authority in relation to a ship or goods, will make a man an agent for the purpose of insuring, on behalf of the parties interested. He must either have express direc- tions from the principal to cause the insurance to be made, or else it must be a duty evidently arising from the nature of his correspondence. However, though one man cannot, in general, compel another against his consent to become

an agent for procuring an insurance to be effect- ed for him, there are three cases in which an order to insure must be complied with: as first, where an agent has effects of his principal in his hands; secondly, where he has been in the prac- tice of making insurances, and has given no notice to discontinue; and thirdly, where he accepts bills of lading sent him on condition to insure.

If a merchant in this country accept an order from his correspondent

abroad to cause an insurance to be made, but limits the broker to too small a premium, in consequence of which no insurance can be effected, he is liable to make good the loss to his correspondent; for though it is his duty to get the insurance done at as low a pre- mium as possible, yet he has no right so to limit the premium, as to prevent the insurance from, being effected. And even a voluntary agent, who has no prospect of remuneration for his trouble, is liable, provided that he takes any step in the business.

In an action against an agent, or broker, whe- ther for negligence or unskilfulness in effecting an insurance, the plaintiff is entitled to recover to the same amount as he might have recovered against the underwriters, if the policy had been properly effected. But he can only recover what, in point of law, he might have recovered on the policy ; and not what the indulgence or liberality of the underwriters might probably have induced them to pay. In such an action the agent may avail himself of every defence, such as fraud, deviation, non-compliance with warranties, &c. which the underwriters might have set up in an action on the policy; but if the agent act in the usual manner it will be deemed sufficient.

There are many reasons why an agent or broker ought not to be an insurer. He becomes too much interested to settle with fairness the rate of premium, the amount of partial losses, &c.

If an agent or broker meaning to appropriate the premium to himself, and take the chance of a safe arrival, represent to his employer that an insurance has been effected agreeably to his in- structions, the principal may maintain trover for the policy against the agent or broker ; and, upon proof of a loss, he shall recover to the same amount as he would have been entitled tcv re- cover against the underwriters. See INSURANCE.

STOCK BROKERS are those who are employed to buy and sell shares in the joint stock of a company or corporation, or more particularly in the public funds. As the practice of stock-job- bing, and dealing in the stocks in various ways, has become very extensive, the legislature has thought fit to bring it within certain bounds, and under particular regulations. The negociations, &c. of these brokers are regulated by statute 6 Geo. I. cap. 18, and 7 and 10 Geo. II. cap. 8, which, among other things, enact that all pre- miums to deliver or receive stock, a.l contracts in the nature of wagers, &c. incur a pena.ty of Ā£500, and the sale of stock, of wtnch the seller is not possessed, a forfeit of Ā£100. No money shall be given to compound any difference for not delivering or transferring stock. Persons buying, on refusal or neglect of the seller to transfer at the day, may buy the like quantity of

stock, of any other person, and recover the damage of the first contractor. But this act not to hinder lending money on stocks, or contracts for re-delivering or transferring thereon, so as no premium be paid for the loan more than legal interest. Brokers shall keep a book, in which all contracts, with their dates, and the names of the parties concerned, shall be entered, on pain of Ā£50.

An agreement to invest or replace stock at a cer- tain time, in consideration of money actually paid or advanced equivalent to the value of the stock at the time of such payment or advance, is valid ; and not usurious, nor within the statute. 8 East's Rep. 304 : but all jobbing in omnium is. In an action on this statute, the contract laid in the de- claration was to deliver stock on the 27th of February : the contract proved was to deliver stock on the settling-day, which at the time was fixed for, and understood by the parties to mean, the 27th of February : Held, that the proof sup- ported the declaration. Wickes v. Gordon, Term Rep. K. B. till. 59 Geo. 3. 385. -It is notorious, however, that the most wholesome provisions of the law are daily evaded in a – certain house :' though men highly honorable in their conduct, and very useful to the public, are found there.

BROKERS, PAWN. See PAWNBROKERS.*

BROKERS OF FURNITURE, &c. See APPRAISERS.

BROMA, from /fywoxw, to eat; food of any kind that is masticated ; not drank.

BROMBERG, a government and town of the grand duchy of Posen, Prussia. The former contains about 4450 square miles, and 222,000 inhabitants, consisting of Poles, different Chris- tian Germans, and a few Jews. . The soil is but indifferent.

The town stands on the river Brahe, and by means of the canal, which joins the Brahe with the Netze, near this place, enjoys a small trade. The length of this canal, which is a work of great importance to this part of the country, is about twenty-eight miles. It is thirty miles north-west of Thorn, and contains 5000 inhabi- tants. A treaty of peace was concluded here in 1657, between the king of Poland and the elector of Brandenburgh.

BROME (Alexander), a poet and attorney, in the reign of Charles II., was the author of the greatest part of those songs and epigrams which were published in favor of the royalists, during the protectorate. These, together with his epistles and epigrams, translated from different authors, were all printed in one volume, octavo, after the Restoration. He also published a

ver- sion of Horace, by himself and others. He left behind him a comedy, entitled the Cunning Lovers ; and the world is indebted to him for two volumes of Richard Brome's plays, in 8vo. He died in 1666.

BROME (Richard), a dramatic writer who lived in the reign of Charles I., and was contem- porary with Decker, Ford, Shirley, &c. He was originally a servant to the celebrated Ben Jonson. He left fifteen comedies behind him, ten of which were collected together by ALEX- ANDER BROME, which see.

BROMELIA, in botany, the pine-apple ; a genus of the monogynia order, hexandria class

of plants, ranking, in the natural method, under the tenth order, coronariae, Linneeus enumerates seven species, of which the following are the most remarkable : ā

I. B. ananas, with leaves very like some sorts of aloes, but not so thick and succulent, which are strongly armed with black spines. From the centre cf the plant rises the flower-stalk, which is near three feet high; the lower part is gar- nished with entire leaves, placed alternately at every joint; the upper part with flowers set in a loose spike or thyrse quite round : these are suc- ceeded by oval seed-vessels, having a longitu- dinal partition, in the centre of which are fastened smooth cylindrical seeds. There are six varieties, viz. 1. B. ananas glaber, with small leaves. 2. B. ananas lucidus, with very smooth, shining, grass-green leaves. 3. B. ana- nas ovatus, the oval-shaped pine-apple. 4. B. ananas pyramidalis, the pyramidal cr sugar-loaf pine. 5. B. ananas serratinus, with a yellowish colored flesh. And 6. B. ananas viridis, the green pine-apple.

II. B. lingulata, with obtuse, sawed, and prickly leaves.

III. B. nudicaulis, with the lower leaves in- dented and prickly. The leaves of this species are shorter than those of the' ananas. They aie sharply sawed on their edges, and of a deep green color. The flower stem arises from the centre of the plant, which divides upward into several branches : the upper part of these are garnished with spikes of flowers, which come out alternately from the sides of the branches, each having a narrow entire leaf just below it, which are longer than the spike. The flowers are placed very close on the spikes ; and when they decay the empalement turns to an oval- pointed seed-vessel, enclosing seeds of the same shape with the other.

The bromelia ananas ovatus is the most com- mon in Europe; but the ananas pyramidalis is much preferable, the fruit being larger and better flavored ; the juice of this sort is not so astrin- gent as that of the first, so

that it may be eaten in greater quantity with less danger. It fre- quently produces suckers immediately under the fruit, whereby it may be increased mulch faster than the common sort. The ananas glaber is preserved by some curious persons for the sake of variety ; but the fruit is not worth anything. The ananas lucidus was raised from the seeds taken out of a rotten fruit which came from the West Indies to the late Henry Heathcote, Esq., from whom Mr. Miller received one plant, which produced large fruit : tin's is what the people of America call the king pine. The plants are propagated by planting the crowns which grow on the fruit, or the suckers which are produced either from the sides of the plants or under the fruit ; both which are found to be equally good ; although by some persons the crown is thought preferable to the suckers, as supposing it will produce fruit sooner than the suckers, which is certainly a mistake. The suckers and crowns must be laid to dry in a warm place for four or five days, or more (according to the moisture of the part which adhered to the old plant or fruit); for if they are immediately planted they will

rot. The certain rule of judging when they are fit to plant, is by observing if the bottom is healed over and become hard ; for if the suckers are drawn off carefully from the old plants they will have a hard skin over the lower part, and so need not lie so long as the crowns of those whose bottoms are moist. But whenever a crown is taken from the fruit, or suckers from old plants, they should be immediately divested of their bottom leaves, so high as to allow depth for their planting, so that they may be thoroughly dry and healed in every part, lest when they receive heat and moisture they should perish, which often happens when this method is not observed. If these suckers or crowns are taken off late in autumn, or during winter, or early in spring, they should be laid in a dry place in the stove for a fortnight or three weeks before they are planted; but in summer they will be fit for planting in a week at farthest. These should be planted in a rich good kitchen-garden mould, not too heavy so as to detain the moisture too long, nor over light and sandy ; but where this is wanting, some fresh earth should be procured from good pasture, which should be mixed with about a third part of rotten neats' dung, or the dung of an old melon or cucumber bed which is well consumed, six or eight months before they are used, but if it be a year it will be better; arid the mixture should be often turned that their parts may be the better united, and the clods well broken. The earth should not be sifted very fine ; for if it is only c'eared of the great stones it will be better for the plants than when it is made too fine. Always avoid mixing any sand with the earth, unless it be extremely stiff, and then it will be necessary to have it mixed at least six months or a year before it is used

; it must be frequently turned that the sand may be incorporated in the earth so as to divide its parts : but do not put more than a sixth of sand ; for too much sand is very injurious to the plants. In summer they must be frequently wa tered ; but not with large quantities at a time ; and the moisture should not be detained in the pots by the holes being stopped, for that will soon destroy the plants. If the season is warm they should be watered twice a- week, but in a cool season once a-week will be sufficient ; and in summer they should once a-week be watered gently all over the leaves; which will greatly promote their growth. Some frequently shift these plants, but unless the pots be filled with the roots by the time the plants begin to show their fruit, they commonly produce small fruit, which have generally large crowns; therefore the plants should not be new potted oftener than twice in a season. The first time should be about the end of April, when the suckers and crowns of the former year's fruit (which re- mained all the winter in these pots in which they were first planted), should be shifted into larger pots, i. e. those which were in half-penny or three farthing pots should be put into penny or at most three-half-penny pots, according to the size of the plants, for we must not over-pot them, nothing being more prejudicial. The se- cond time for shifting is in the beginning of August; when those which ;rc of a proper size

for fruiting the following spring should lae put into two-penny pots, which are full large e nough for any of these plants. At each time of shift- ing the bark-bed should be stirred up, and. some new bark added, to raise the bed up t:o the height it was at first made ; and, when th e pots are plunged again into the bark-bed, the plants should be watered gently all over the leaves, to wash off the filth, and to settle the earth to the roots of the plants. If the bark bed b quire to be watered oftener than once a- week, according as the earth in the pots seems t o dry. Plants beginning to show fruit should ne rer be shifted, for if they are removed after the frvdt ap- pears it stops the growth, and thereby caus es the fruit to be smaller, and retards its ripening; so that it will be October or November before the fruit is ripe; therefore the plants should l>e kept in a vigorous growing state from the first ap- pearance of the fruit, as upon this depends the goodness and the size of it, for if they nxeive a check after this the fruit is generally smal 1 and ill tasted. After cutting off the fruit from the plant intended to be propagated, the leaves should be trimmed, and the pots plunged again into a mode- rate hot-bed, observing to refresh them frequently with water, which will make them put out suckers in plenty; so that one may be saon sup- plied with plants enough of any of the kinds, who- will but observe to keep the plants in health. The most dangerous thing that can happen to these plants is their being attacked fey small white insects, which appear at first like a white mildew, but soon have the appearance of lice 'r these attack both root and leaves at once ; and,, if not soon destroyed, they will

spread over a whole stove in a short time, and in a few weeks/ entirely stop the growth of the plants by sucking out the nutritious juice, so that the leaves will appear yellow and sickly and have a number of yellow transparent spots all' over them. These insects, after they are fully grown, appear like- bugs, adhering so closely to the leaves as not ta be easily washed off, and seem to havĀ« no loco- motion. They were originally brought from America upon the plants imported thsnce ; and are probably the same insects which, have de- stroyed the sugar-canes in some of the Leeward Islands ; for, upon some sugar-canes which were sent from Barbadoes, great numbers of these insects were observed. Since they have been iiv England, they have spread greatly in stoves where there has not been extraordinary care taken to- destroy them. They have also attacked the orange-trees in many gardens near London, and have done them incredible damage ; but, as they do not endure the cold of our winter, they are never found on such plants as live in the open air. The only method yet discovered of destroy- ing them is, by frequently washing the leavesˆ branches, and stems, of such plants as they attack, with water in which there has been a strong in-*

ā¢fusion of tobacco stalks. But this method can- not be practised on the ananas plants, because the insects fasten themselves so low between the leaves, that it is impossible to come at them with a sponge to wash them off; so that, although they seem to be all cleared off, they are soon succeeded by a fresh supply from below, and the roots are also equally infected. The safest method therefore, whenever they appear, is to take the plants out of the pots, and clear the earth from the roots ; then put them into a tub, filled with water in which there has been a strong infusion of tobacco-stalks, and lay some sticks across to keep them immersed in the water, in ā¢which they should remain twenty-four hours ; then take them out, and with a sponge wash off all the insects from the leaves and roots, and wash the plants in a tub of fresh water. After this, you should put them in fresh earth ; and having stirred up the bark-bed, and added some new tan to give it a fresh heat, the pots should be plunged again, observing to water them all over the leaves, and this should be repeated once a-week during summer; for these insects always multiply much faster where the plants are kept whereby they were rendered the same as suckers at first, not excepting those that were in fruit, ā¢some of which were just in flower; dipped them into a liquor prepared by boiling two pounds of ā¢soft soap and flower of sulphur, with one pound of roll tobacco, and two ounces of nux vomica, in eight gallons of water to six ; put them into pots of six inches diameter, and plunged them to the brims ; kept up a fire heat to

about 75Ā°, gave them but little air, shading them in sun shine, and afterwards gave them plentiful water- ings over head with the same mixture, reduced to about half its former strength. He continued this treatment for two whole months ; at the end of which he again shook out their roots, and washed the whole plants in pure water, put them into fresh pots of eight inches diameter, and re- plunged them into a kindly heat in another nursing pit, treating them in all respects as any other plants. He never saw a vestige of the bug afterwards ; a few of those plants that were shown, however, died, but the others, he observed, produced such fruit as might be expected from plants of such sizes of any other kind.

As these insects are frequently brought over from America on the ananas plants, those who procure their plants from that country should look carefully over them when they receive them, to see they have none of these insects on them ; for jf they have they will soon be propagated over all the plants in the stove where they are placed ; therefore, whenever they are observed, the plants should be soaked before they are planted into pots.

Of late some considerable improvements have been made in the culture of the pine. Oak leaves have been substituted for the more expensive

bark ; and the pines are found to thrive as well, and to produce as good fruit as the others. The proper way of managing these leaves, for rearing exotic plants, will be found under the article OAK LEAVES. But the most considerable improvement is that mentioned in the sixty-seventh volume of the Philosophical Transactions, where the follow- ing method is shown by William Bastard, Esq., of Devonshire, of raising these fruits in water : ā ‘ Before I enter into the particulars of raising pine-apples in water, it will be necessary to tell you that my hot-house is covered with the best crown glass, which I apprehend gives more heat than the common sort of green glass generally used in hot-houses. In the front part of the house, and indeed anywhere in the lowest part of it, the pine-apple will not thrive well in water. The way in which I treat them is as follows : ā I place a shelf near the highest part of the back wall, that the pine plants may stand without ab- solutely touching the glass, but as near it as can be : on this shelf I place pans full of water, about seven or eight inches deep ; and in these pans I put the pine-apple plants, growing in the same pots of earth as they are generally planted in, to be plunged into the bark-bed in the common way, that is, I put the pot of earth, with the pine plant in it, in the pan full of water, and as the water decreases I constantly fill up the pan. I place either plants in fruit, or young plants as soon as they are well rooted, in these pans of water, and find they thrive equally well : the fruit reared this way is always much larger as well as better flavored than when ripened in the bark- bed. I have more than once put only the plants themselves without any earth, I mean after they had roots, into these pans

of water, with only water sufficient to keep the roots always covered, and found them flourish beyond expectation. ā In my house, the shelf I mention is supported by irons from the top, and there is an intervening space of about ten inches between the back wall and the shelf. A neighbour of mine has placed a leaden cistern upon the top of the back flue (in which, as it is in contact with the flue, the water is always warm wnen there is fire in the house,) and finds his fruit excellent and large. My shelf does not touch the back flue, but is about a foot above it; and consequently only warmed by the air in the house. Both these methods do well. The way I account for this success is, that the warm air always ascending to the part where this shelf is placed, as being the highest part of the house, keeps it much notter than in any other part. The temperature at that place is I believe seldom less than what is indicated by 73Ā° of Fahrenheit's thermometer, and when the sun shines is often above 100Ā° : the water the plants grow in seems to enable them to bear the great- est heat, if sufficient air be allowed ; and I often see the roots of the plants growing out of the holes in the bottom of the pot of earth, and shooting vigorously in the water. My hot-house (the dimensions of which it may be proper to know) is sixty feet long and eleven wide, the flues included, six feet high in the front and eleven feet at the back of the inside of the house. It is warmed by two fires. A leaden trough or cistern on the top of the back flue is preferable to

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my shelf, as in it the pine plants grow much faster in the winter, the water being always warmed by the flue ; of this I have seen the great benefit these two last months in my neighbourhood. It is not foreign to this purpose to mention, that, as a person was moving a large pine plant from the hot-bed in my house last summer, which plant was just showing fruit, by some accident he broke off the plant just above the earth in which it grew, and there was no root whatever left to it : by way of experiment I took the plant, and fixed it upright in a pan of water (without any earth whatever) on the shelf; it there soon threw out roots, and bore a pine-apple that weighed up- wards of two pounds.'

BROMLEY, a town of Kent, situated on the river Ravensbourn, ten miles from London, on the road to Tunbridge. It has an hospital for twenty clergymen's widows, with an allowance of Ā£30 a-year, and Ā£60 per annum to the chaplain. It has fairs Feb. 14th, and Aug. 5th, and a market on Thursday. Near the town is the palace of the bishops of Rochester, where there is a chalybeate spring, of a quality similar to that at

Tunbridge. T'he manor of this place was granted to the bishop by king Edgar, in the year 700. The church is a very old structure.

BROMUS, broom-grass, in botany : a genus of the dygynia order, and triandria class of plants; natural oVcler, fourth, gramina. The CAL. is bi-valved, having a partial spike, oblong and round, opposite grains, with an awu below the point of each outer valve. There are thirty-four species, of which seven are natives of Britain, viz. 1. B. arvensis, common broom-grass; 2. B. ciliatus, wall broom-grass; 3.B. giganteus, tall broom- grass; 4. B. pinnatus, spiked broom-grass; 5. B. ramosus, wood -broom-grass; 6. B. secalinus, field broom-grass; 7. B. sterilis, barren broom- grass.

BROMYARD, a market town of Hereford- shire, near the Frome, seated on a rising ground. It has five fairs : market on Monday. It is eighteen miles west of Worcester, and 125 W.N. W. of London.

BRONCHIAL ARTERIES. See ANATOMY.

BRONCHOCELE, DERBYSHIRE NECK. This disease is marked by a tumor on the forepart of the neck, and seated between the trachea and skin. In general it has been supposed princi- pally to occupy the thyroid gland. It is a very common disorder in Derbyshire, and amongst the inhabitants of the Alps, and other mountainous countries bordering thereon. The cause which gives rise to it, is by no means certain ; but it is commonly attributed to the water of the place. The swelling is generally without pain, or any evident fluctuation ; but when the disease is of long standing, and the swelling considerable, it is a very difficult matter to effect a cure by me- dicine, or any external application ; and it is dangerous to attempt its removal with a knife, on account of the enlarged state of its arteries.

Although relief has been occasionally obtained by blisters, mercurial plasters, 8tc. yet the best mode of cure is to exhibit internally burnt sponge, in the form of a lozenge; every night for three weeks, one of the troches should, when the patient is in bed, be put under the tongue,

suffered to dissolve gradually, and the solution swallowed. The disgust at first arising from this remedy soon wears off. Sulphuretted potassa dissolved in water, in the proportion of thirty grains to a quart daily, is a remedy which has been employed by Dr. Richter with success. The sodae subcarbonas, being the basis of burnt sponge, is now frequently employed instead of it, and, indeed, it is a more active medicine.

BRONCHOTOMY, in surgery, from /3perXoC and Ttpvw ; is the operation of cutting into the trachea or wind-pipe. This may be practised with greater or less chance of success, in cases where a patient is in danger of

suffocation, from an obstacle in the trachea, or a constriction of the glottis. Also where the trachea is compressed by a tumor externally, or where the tonsils and parts adjacent become so enlarged as to impede respiration. In short, should any mechanical cause be supposed to exist, of threatening suffo- cation and impending death, the surgeon's duly will be too plain and imperious to admit of hesi- tation : an incision must be made into the tra- chea without a moment's delay, unless some other obvious remedy can be suggested for the patient's restoration.

The following has been recommended as one of the best modes of performing it : ā The patient is placed upon a low stool, or in that posture irt which he finds it most easy to breathe ; his head is held upright, but by no means bent back- wards, and secured by an assistant. Opposite the third or fourth cartilaginous ring of the tra- chea, the skin is now duwn up into a high cross fold ; and it is cut through exactly at the mid- dle of the trachea, to such a depth, that when the fold is let go, the incision extends itself longitu- dinally from the first cartilaginous ring down to near the upper extremity of the sternum. By making the incision of a proper length, the opera- tion will be greatly facilitated, as its edges can then be drawn farther from each other.

As soon as the haemorrhage has been entirely stopped, that part of the trachea, where the in- cision is finally to be made, must be laid barer by dissecting away the cellular substance and muscular fibres situated about the membranous interstice between the third and fourth ring, and by either entirely removing them or pressing them sideways. The operator then places the nail of the fore-finger of his left hand upon this interstice ; and, applying the thumb and middle finger of the same hand to both sides of the tra chea, he pushes the point of his instrument, which must previously be dipped in some fresh oil of almonds, along the nail of his fore-finger, through the above-mentioned membranous interstice, be- tween the third and fourth cartilaginous ring, into the trachea. He then applies the fore- finger of his left hand to one or the other of the cartilaginous rings, close to the tube or canula, in order to hold it back whilst he withdraws the blade of his instrument. If we make use of Richter's curved instrument, we must move the hand upwards in pushing it in, in order that we may turn the point of the instrument down- wards, and prevent its touching the back part of the trachea.

But in order that we may prewent the tube

from slipping out of the wound, and also to pre- vent its n loving to and fro in the trachea, several dossils am introduced above and below into the wound, so as to keep the lips asunder. To the rings, on both sides of the external opening of the tube, two narrow slips of linen are applied, which prt ss the rings down upon the trachea ; and the w hole is covered and secured with ad- hesive pla ster. And that none of the fluids which are collect ed in the wound may make their way into the a inula and wind-pipe, the patient must lie or sit inclined on one side, and the wound must, fron i time to time, be wiped dry with a sponge. When the tube fills with mucus, it must be cleaned with a small feather; or two such tubes . may be employed, one enclosing the other, and either of them removed, when neces- sary, for tl le purpose of clearing it of mucus.

An imj movement upon the instruments em- ployed h; is been proposed by Mr. Benjamin Bell, or 01 le which has nearly the form of a flat straight trocar, and ought never to be less than two inche s in length. Before it is pushed be- tween the two cartilages, it must first be thrust through sā¬ veral linen compresses, which not only serve to ct >ver the pledgit of ointment intended to protect the wound, but also produces the ad- vantage tb at (by removing one or more of the compresse 3, which may be done by cutting them open at tt.e sides with a pair of scissars), we are able to iw .rease the length of the tube at plea- sure. In order to secure the tube in the situa- tion where : it is left after the operation, he passes it through an opening in a plate of polished steel, whif :h is curved so as to fit to the shape of the fore-part of the neck, and fastened behind with strap s and a buckle. To prevent any fo- reign subVtance from getting through the orifice of the cai mla into the trachea, it may be covered with a pkjce of fine gauze, which should pre- viously b e wetted, that the dust may not pene- trate thro ugh it, but stick to the outside. When the cause: which gave rise to the operation has been reitioved, and the patient can again breathe through his mouth, the tube is withdrawn, and the orifice healed up like any other wound of the wind-pipe ; in doing which great caution should be used, lest any thing should get into the trachea.

BRONCHUS, the trachea, or wind-pipe. See ANATOMY.

BRONKHORST (John Van), an eminent paintec of the seventeenth century, born at Utrecht. He studied under Cornelius Poelem- burg, -whose style he imitated with great success. He pai nted both history and landscapes ; and his pictures, which arf very highly finished, are held in great esteem.

BRONTES, in mythology, one of the cy- clops, who was employed by

Vulcan to make Jupiter's thunder-bolts.

BBONTES, in entomology, a small species of papilio. The wings are subcaudated and fus- ā¢cous, with a band on the first pair, and margin of the second snowy white. Found in Africa.

BRONTEUM, in Grecian antiquity, a place underneath the floor of the theatres, in which were kept brazen vessels full of stones and other materials, with which they imitated the noise of thwnder.

BRONTEUS, in mythology, an epithet of Jupiter ; applied also to Bacchus.

BRONTLE, or thunder stones, in natural history. See BEI.EMNITES.

BRONTOLOGY denotes an explanation of the causes, phenomena, 8cc. of thunder. See ELECTRICITY and THUNDER.

BRONZE, v. & n. Ital. bronzo ; Fr. bronze; Pers. burinj, perhaps from Goth, bruna ; Fr. bru- nir, to burnish; and Lat. as. See BRASS, COPPER COLOR.

Imbrowned with native bronse, lo ! Henley stands, Tuning his voice, and balancing his hands. Pope.

I view with anger and disdain, How little gives thee joy or pain ; A print, a bronze, a flower, a root, A shell, a butterfly cau do 't. Prior.

BRONZE, a compound of copper and tin, to which sometimes other metallic substances, par- ticularly zinc, are added. This metal is brittle, hard, and sonorous. It is employed for making bells, cannons, statues, &c. and the proportions of the metals are varied to suit the several pur- poses to which it is applied. This compound, like some others, is specifically heavier than either of the metals taken separately. A metallic mass, composed of four-fifths of copper and one-fifth of tin, weighs seven and one-tenth grains more than the same quantities of these two me- tals would together weigh if not alloyed. This proves, that in the union of copper and tin there is a penetration of parts, the one metal entering into the pores of the other ; and this is further confirmed by an observation of Mr. Tillet, mem- ber of the Royal Academy of Sciences. In his memoir concerning the ductility of metals, he takes notice, that when the mixture of copper and tin is made in the proportions above men- tioned, the color of the copper is entirely annulled and covered by that of the tin, although the quan- tity of the first be four times greater; and this singular effect cannot be understood without ad- mitting a total change in the size and disposition of the pores of the compound metal. Tin being less subject to rust than copper, bronze is also found to be less liable to be covered with verdi- gris than pure copper is ; and this is one rea- son why it is used for cannons, statues, and works

exposed to the air and weather. The greater fusibility of bronze than copper is also an advantageous property, and much facilitates the casting of large works. The operation of casting large works in bronze is a work of considerable difficulty, and requires much scientific know- ledge and great practice. Macquer directs a brick furnace to be erected, nearly in the shape of a baker's oven. The floor of this oven is con- cave, and consists of a composition of sand and clay ; on which the metals are placed. The fur- nace has four openings. The first is a lateral mouth, at which the flame of the fuel enters. The second is a chimney placed on the side opposite the mouth, by means of which the flame is drawn over the metal The third opening is a hole, which can be opened or !>hut at pleasure, to inspect the state of the contents of the furnace. When the metal ia in the required state, a fourth aperture is opened, communicating with the hol- low floor, through which the metal flows by

channels into the moulds prepared to receive it. Theee moulds are made on the model of the figure intended to be cast, with a mixture of one part of plaster of Pans, and two parts of brick- dust. The mould is then to be taken from the figure, and lined on the inside with a thin layer of clay, the thickness the bronze is intended to be ; the mould is then to be put together, and the cavity within the clay filled with a similar composition to the mould which forms the core, which, if large, must be previously supported by bars of iron. When this is done, the mould is to be taken off, the clay thoroughly cleaned out, and the mould and core completely dried ; the mould is then to be placed thereon, and the va- cuity formed by the removal of the clay is the channel for the metal, in a state of fusion, which must be properly conducted to it, and care taken that proper vents are left in the mould for the expansion of the air by the heat of the metal. The equestrian statue of Louis XIV7. in the Place de Vendome at Paris, is one of the largest pieces of bronze sculpture ever made. This colossal group contains upwards of 60,000 Ibs. weight of bronze. Many fine specimens of ancient bronze, as statues, penates, vessels, &c. are to be seen in the collection of the BRITISH MUSEUM, which see.

BRONZE also denotes a color prepared by the colormen of Paris, wherewith to imitate bronze. There are two sorts, the red bronze and the yel- _ow or golden. The latter is made solely of cop- per dust, the finest and brightest that can be got ; the former is made of the same, with the addition of a little red ochre well pulverised. They are both applied with varnish. To

pre- vent their turning greenish, the work must be dried over a chafing dish as soon as bronzed.

BRONZING, the art or act of imitating bronze, which is done by means of copper-dust or leaf, fastened on the outside, as gold leaves are in gilding

BRONZITE, a massive mineral of a pseudo- metallic lustre, frequently resembling bronze; structure lamellar, with joints parallel to the la- teral planes of a rhomboidal prism ; the fragments are streaked on the surface. It is opaque in mass, but transparent in thin plates. White streak ; somewhat hard, but easily broken. Specific gravity, 3- 2. It is composed of 60 si- lica, 27‘5 magnesia, 1045 oxide of iron, and 0-5 water. It is found in large masses in beds of serpentine, near Kranbat, in Upper Stiria ; and in a syenitic rock in Glen Tilt, in Perthshire.

BROOCH. See BROACH. A jewel; an or- nament of jewels.

A brocke she bare upon hire low colere.

Chaucer’s Canterbury Talcs. But, nathelcs, this markis hath do make Of gemmes sette in gold and in azure, Brookes and rings, for Grisildes sake. Id.

Ay, many, our chains and our jewels. ā Your brooches, pearl, and owches. Shakspeare.

Richly suited, but unseasonable; just like the brooch and the toothpick, which we wear not now. Id.

I know him well ; he is the brooch, indeed, And gem of all the nation. Id.

BROOD7, v. & n. > Lat. incubo ; Belgic, BUOOD’Y. J broedan; Swed. brodd, a

bud; Teut. brut ; Sax. brod, byrd. See BUD, BRUT,’ and BRING. To produce young ; to hatch ; to set on eggs ; to meditate. The noun whence it is derived, signifies the young of animals, par- ticularly of birds.

And therein sate a ladie passing faire And bright, that seemed borne of angels brood.

Spenser.

Something’s in his soul, O’er which his melancholy sits on brood ; And I doubt the hatch and the disclose Will be some danger. ‘ ‘ā¢ ‘ ‘ Shakspeare.

Such things become the hatch and brood of time.

Id.

.Elian discourses of storks, and their affection to ward their brood, whom they instruct to fly.

Browne's Vulgar Errours.

It was the opinion of Clinias, as if there were ever amongst nations a brooding of a war, and that there is no sure league but impuissance to do hurt. Bacon

Thou from the first

Wast present, and with mighty wings outspread, Dove-like sat'st brooding on the vast abyss, And madest it pregnant. Milton.

Meanwhile the tepid caves, and fens, and shores, Their brood as numerous hatch, from the' egg thai

soon

Bursting with kindly rapture forth disclosed Their callow young. Id.

Where brooding darkness spreads her jealous wings, And the night raven sings. Id.

Or any other of that heavenly brood, Let down in cloudy throne to do the world some good .

Id.

Here nature spreads her fruitful sweetness round, Breathes on the air, and broods upon the ground.

D'ryden.

Defraud their clients, and, to lucre sold,

Sit brooding on unprofitable gold. Id.

Of crowds afraid, yet anxious when alone,

You'll sit and brood your sorrows on a throne. Id.

I was wonderfully pleased to see the different

workings of instinct in a hen followed by a brood of

ducks. Spectator.

The common hen, all the while she is broody, sits,

and leads her chickens, and uses a voice which we

*call clocking. Ray**

Bears, wolves, and all the savage brood, Have dyed the regal den with blood. Gay.

BROOK, v. Goth, bruka ; Sax. brucan ; Teut. brauchen; Dan. bruge ; Belgic, bruiken. See To BREAK. To accustom, endure, habituate, use; to digest; to enjoy.

Eut, for men speke of singing, I wol sey, (So mote I brouken well mine eyen twey,) Save you, ne herd I never man so sing As did your fader in the morvening.

Chaucer's Canterbury Tales.

Even they, which brook it worst that men should tell them of their duties, when they are told the same by a law, think very well and reasonably of it.

Hooker.

He, in these wars, had flatly refused his aid ; be- cause he could not brook that the worthy prince Plangus was, by his chosen Tiridates, preferred be- fore him. Sidney.

A thousand more mischances than this one Have learned me to brook this patiently.

ShaJupecre.

Heaven, the seat of bliss, Brook not the works of violence and war.

Milton.

Restraint thou wilt not brook; but think it hard, Your prudence is not trusted as your guard. Dryden.

BROOK', 7i i Goth, broka; Sax. bruck; Bel-

BROO'KY. J gic, brock ; Pers. birku. A small stream; a rivulet.

And to the launde he rideth him ful right,

Ther was the hart ywont to have his flight ;

And over a brooke, an so ; forth on this wey.

Chaucer's Canterbury Tales. A substitute shines brightly as a king. Until a king be by ; and then his state Empties itself, as doth an inland brook Into the main of waters. Shakspeare.

Springs make little rivulets ; those united make brooks; and those coming together, make rivers, which empty themselves into the sea. Locke.

BROOKE (Henry), an Irish writer of some eminence, was born in Dublin, 1706, and edu- cated by Dr. Sheridan. Early in life he entered of the Temple, London, and numbered among his friends, Pope and Swift. On his return to Ire- land, he was entrusted with the guardianship of a female cousin, whom he married, and the young lady became a mother before she had attained the age of fourteen. He now returned to London, and wrote On Universal Beauty, a poem. After this he practised as a chamber council in Ire- land, and wrote his. Gustavus Vasa, which go- vernment would not allow the theatres to per- form ; thus rendering it so popular, that he obtained a large sum by its publication. He now attached himself to the opposition and the politics of Frederick, prince of Wales ; but, find- ing his means inadequate to his support, returned once more to a life of privacy in Ireland. Here he wrote The Earl of Westmoreland, a tragedy, followed by his Farmer's Letters, addressed to the people of Ireland, in reward for which the earl of Chesterfield, then lord-lieutenant, made him barrack-master. In 1747 he assisted in Moore's Fables for the Female Sex ; and produced his Earl of Essex, a tragedy, in 1749. In 1762 he wrote a prose vindication of his countrymen, entitled, The Trial of the Roman Catholics. But his most celebrated work was The Fool of Qua- lity, which appeared in 1766, and attracted, from the first, much attention. He, about this time, became embarassed, and under the necessity of selling his paternal lands. Shortly after, the loss of his wife, who died at Kildare, gave an irre- parable shock to his intellects. He followed her to the tomb in 1783. He wrote some minor pieces, which plainly indicated the approach of his last attack.

BROOKE (James), an ingenious writer, who succeeded the celebrated Wilkes in the publica- tion of the North Briton. He was a man of talent, intimate with Johnson, Garrick, Lloyd, Murphy, &c. and the author of a

great number of political pamphlets, prologues, epilogues, songs, &c. of temporary interest, but said to have been often very spirited and humorous. The fund of wit and anecdote which he had accumu- lated, made him a most agreeable companion. He diud after a short illness, at the age of eighty, in Rathbone Place, London, 1807.

BROOKE (Mrs. Frances), daughter of the Rev.

Mr. Moore, was a lady as remaikable foi her virtues, and her suavity of manners, as for her great literary accomplishments. Her first literary work was the Old Maid, a periodical paper, be- gun in 1755, and collected in one volume, 12mo. The next year she published Virginia, a tragedy ; and in 1763 came out Julia Mandeville, a work concerning which there were various opinions, but which was read with eagerness. The same year appeared Letters from Juliet, Lady Catesby, to Lady Campley, translated from the French. She soon afterwards went to Canada with her husband, who was chaplain to the garrison at Quebec ; and the romantic characters and scenes which she here found, gave birth to Emily Mon- tague, a work which has passed through several editions, and is now not easily met with. On her return to England, accident introduced her to Mrs. Yates, and an intimacy was contracted, which terminated only with the life of that lady. Mrs. Brooke, in consequence of this connexion, formed an acquaintance with Garrick, and wrote some pieces for the stage, which he rejected, ana thus incurred the resentment of the authoress, who revenged herself upon the manager in a novel, entitled The Excursion. Her next work was the Siege of Sinope, a tragedy, introduced by Mr. Harris, but it never became popular Her next and most popular production was Rosina, which she presented to Mr. Harris. Few mo- dern pieces have been equally successful. Her musical piece entitled Marian, was next intro- duced, and exhibited. Mrs. Brooke also trans- lated several books from the French. She was very intimate with Dr. Johnson, Miss Seward and most of the first characters of her time. She died in January, 1789, two days after her hus- band, who enjoyed the rectory of Colney in Nor folk, to which he had been preferred after his arrival from America.

BROOKE (Sir Robert), lord chief justice of the common pleas, was the son of Thomas Brooke, Esq. of Claverly, in Shropshire, and educated at Oxford ; whence he removed to the middle temple, and soon became a very eminent lawyer. In 1552 he was made serjeant at law; and in 1553, the first of queen Mary, lord chief justice of the common pleas ; about which time he was knighted. He was also appointed recorder of London, and speaker of the House of Commons. He died at Claverly in 1558, with the character of an upright judge. His works are : 1 . An Abridgment containing an Abstract of the Year- books till the time of queen Mary. 2. Certain cases adjudged in the reign of Henry VIII. Edward VI. and queen

Mary. 3. Reading on the Statute of Limitations, 32 Henry VIII. c. 2

BROOK/LIME, n. s. Lat. becabunga. A sort of water speedwell, very common in ditches.

BROOKLYN, a handsome town of Long- Island ; pleasantly situated in King's county, opposite New York city. It contains a Presby- terian, and a Dutch Reformed church.

BROOM' n. -\ Teut. broem ; Sax. brom ;

BROO'MY, I Belgic, brern; Goth, bry ;

BROOM'LAND, v Welch, her. A point, a

BROOM'STAFF, i prickle ; a shrub ; a species

BROOM'STICK. } of genista. It is applied to a besom, because made of twigs of broom.

They fell on ; I made good my place -, at length they came to the brooinstaff with me : I defied 'em BCJil. Shakspeare.

Not a mouse

Shall disturb this hallowed house ; I am sent with broom before, To sweep the dust behind the door. Id.

If they came into the best apartment, to set any thing in order, they were saluted with a broom.

Arbuthnot.

Even humble broom and osiers have their use, And shade for sheep, and food for flocks, produce.

Dryden. From the age

*The children tread this worldly stage, Broomstaff or poker they bestride. And round the parlour love to ride. Prior. Sir Roger pointed at something behind the door, which I found to be an old broomstuff. Spectator**

I have known sheep cured of the rot, when they have not been far gone with it, by being put into broomlands. Mortimer.

If land grow mossy or broomy, then break it up again. Id.

When I beheld this, I sighed, and said within my- self, ‘ Surely mortal man is a broomstick.’

Swift’s Meditation OH a Broomstick.

BROOM, in botany. See GENISTA.

BROOM, AFKICAN. See ASPALATHUS.

BROOM, BUTCHER’S, in botany. See Rus- cus.

BROOM, SPANISH, in botany. See SPAR- TITJM.

BROOM E (William), the coadjutor of Pope in translating the Odyssey, was born in Cheshire, of poor parents. He was educated at Eton, and was captain of the school a whole year, by which he might have obtained a scholarship at King’s College, had there been a vacancy. He was therefore sent to St. John’s College, by the Contribution of his friends, where he obtained a email exhibition. He appeared early in the world, as a translator of the Iliad into prose, in conjunction with Ozell and Oldisworth ; was in- troduced to Mr. Pope, when visiting Sir John Cotton at Madingley, near Cambridge ; and was employed by him to make extracts from Eustathius, for the notes to the translation of the Iliad. In the volumes of poetry published by Lintot, commonly called Pope’s Miscellanies, many of his early pieces were inserted. When the success of the Iliad gave encouragement to a version of the Odyssey, Pope, weary of the toil, called Fenton and Broome to his assistance ; and taking only half the work upon himself, divided the other half between his partners, giving four books to Fenton and eight to Broome. The price at which Pope purchased this assistance ā¢was Ā£300 paid to Fenton, and Ā£500 to Broome, with as many copies as he wanted for his friends, which amounted to Ā£100 more. A difference afterwards arose between Pope and Broome, which was carried so far, as to induce the former to give his old friend a place in the Dunciad. It has been said that they were afterwards re- conciled; but it was peace without friendship. He afterwards published a Miscellany of Poems, but never rose to any high dignity in the church. He was some time rector of Sturston in Suffolk, where he married a wealthy widow ; and after- Voi,. IV.

wards, when the king visited Cambridge, in 1728, became LL.D. He was, in 1733, pre- sented by the crown to the rectory of Pulham in Norfolk, which

he held with Oakley Magna, in Suffolk, given him by Lord Cornwallis, to whom he was chaplain, and who added the vicarage of Eye, in Suffolk. He amused himself with translating Odes of Anacreon, which he pub- lished in the Gentleman's Magazine, under the name of Chester. He died at Bath in 1745.

BROOM FLOWER, KNIGHTS OF THE, (Ordre de la Geneste) a ci-devant order of knights, in- stituted by St. Louis, of France, on occasion of his marriage. The motto was Exaltat humiles ; and the collar of the order made up of broom flowers and husks, enamelled and intermixed with fleur-de-lys of gold, set in open lozenges, enamelled white, chained together, and a cross florence of gold hung at it. Some speak of another order of the broom, established by Charles Martel, or rather Charles VI.

BROOM GALL, in natural history, a remarkable species of galls found on the common broom ; occasioned, like all other galls, by the puncture and eating of an insect. When opened they are found to contain a small oblong worm, of a red color, but whose size requires a glass to see it distinctly. See GALL.

BROOS, or BROS, a free town of Transylvania, well-built, containing a spacious casle, and about 3200 inhabitants. It is one of the seven royal towns of the Saxon settlers, has a seat and vote at the provincial diet, and is inhabited by Saxon Lutherans, and Hungarian Calvinists. There are besides churches for Catholics and Greek Christians; the Calvinists have an academy. The inhabitants rear corn, wine, and fruit. It lies south-west of Weissenburg, near the Ma- rosch.

BRORA, a lake of Scotland, in the county of Sutherland, four miles long and one broad. At two different places it is so much contracted, as to exhibit the appearance of three lakes. It is environed on both sides with lofty mountains, villages, and natural wood. In the middle of it is an island of an oblong square figure, which, tradition says, was artificially constructed on an immense collection of stones brought there on purpose. One half of it was appropriated for lodgings in time of war, and the other laid out for a garden. The walls are still pretty high, and ascend perpendicularly from the surface of the water, without a vestige of the island behind them ; and are only accessible by two stairs, which front the south and east, so that with plenty of stores, and the fishing of the loch, abounding with salmon, trout, and eel, the place was impregnable, when properly de- fended.

BROSCHI (C.), better known by the adopted name of Farinelli, was born in Naples in 1705, and suffered emasculation in consequence uf an accident. Obtaining great applause on the Italian theatres, he came to London, and

added considerably to his fame and fortune. He then, went to Madrid, and gained the favor of Philip V. and his successor, who conferred on him the order of Calatrava. He is said to have been a man of great probity and charity. On Uie deatU

ol his patron he retired to Bologna, where he died in 1782.

BROSIMUM, in botany, a genus of class dioecia: order monandria: amentum globular, dotted with orbicular peltate scales: COR. none : male, solitary filament, between the scales; female, cloven style, and one-seeded berry : species two : both Jamaica plants. B. spurium is propagated in our own gardens under the name of milk-wood.

BROSME, in ichthyology, a species of gadus, that inhabits the southern seas of Green- land. The mouth is bearded; tail oval, and pointed.

BROSSˆEA, in botany, a genus of plants ; order monogynia, of the class pentandria. The characters are these : CAL. one-leaved perian- thium, divided into five segments, each of which terminates in a long point, of the same length with the petals : COR. monopetalous, of the shape of a truncated cone, and undivided at the edge : the germen is divided into five parts : the style is pointed, not so long as the flower, and its stigma simple : PER. a roundish capsule, divided by five deep furrows into five cells ; it is covered with a large cup, which closes over its top ; it is succulent and fleshy ; and, opening at the sic'es, discharges a great number of seeds. Sp B. coccinea, Linn. Shrubby, with a scarlet flower and black fruit, Plum. A shrub three or four feet high. Root branched ; leaves alternate, petioled, sharply ovate, slightly toothed, smooth, pale green ; flowers in racemes at the end of the branches, alternate, peduncled, with two bractea about the middle of the peduncles.

BROSSARD (Sebastian de), an eminent French musician. In the former part of his life he had been prebendary and chapel master of the cathedral church at Strasburg; but after- wards became grand chaplain, and also maitre de chapelle, in the cathedral of Meaux. He pub- lished a work entitled Prodromus Musicalis ; and a very useful book entitled Dictionnaire de Musique, printed at Amsterdam, in folio, 1703. He died 1730, aged seventy.

BROSSETTE (Claude), a learned French advocate, born at Lyons in 1671. He was

after a consultation of physicians, ordered the father and daughter to be confined to Romo- rentin, under pain of corporal punishment. The priests, however, carried the business and the parties before the court of Rome ; but the pope, being forwarned by the court of Paris, did nothing contrary to the decision of the parliament. Some of the French priests lost their benefices by their villanous zeal ; and the pretended daemoniac and her father died in de- served contempt in an hospital at Rome.

BROTH', n. s. Sax. briofc. Liquor in which flesh is boiled ; but originally any liquid prepa- ration of sodden herbs or meal. See To BREW.

You may make the broth for two days, and take the one half every day. Bacon

Instead of light desserts and luscious froth,

Our author treats to-night with Spartan broth.

Southerns.

If a nurse, after being sucked dry, eats broth, the infant will suck the broth, almost unaltered.

A rbuthnot.

BROTH'EL, \ From bordell by trans BROTHEL'RY, (position of the letter r. BROTHEL'LING, ˆA house of lewd enter- BROTHEL'HOUSES. J tainment; a bawdy-house.

Perchance

I saw him enter such a house of sale, Videlicet, a brothel. Shakrpeare,

Then courts of kings were held in high renown, Ere made the common brothels of the town : Their virgins honourable vows received, But chaste as maids in monasteries lived. Dryden.

From its old ruins brothelhouses rise, Scenes of lewd loves and of polluted joys. Id.

The libertine retires to the stews and to the brothel.

Rogers.

BROTH'ER,

BRETH'REN,

BROTHER'HOOD,

BROTHER' LESS,

BROTHER'LIKE,

BROTHER'LOVE,

BROTH ER'LY, adj. &L adv.

BROTHER'BEAST,

BROTHER'FOE,

BROTHER'WRITER,

Goth, broder; Mod. Goth, brother; Teut. bruder ; Sax. brothur; Swed. bro- der; Dan. broder; "Belgicbroeder: Per- sian broder, birader ; Heb. berith; 0par-;p; Sclav. Russ. Bo- hem, bradr, brath;

Arm. braud ; Welsh brodor ; Irish bruther ; Lat.

keeper of the public library at Lyons ; and pub- frater. Ital Span Port.frate . Fr< frtre . 'Goth.

lished tht works of Boileau and Regnier, with historical illustrations. He wrote also L'Histoire Abregee de la Ville de Lyons ; an elegant and correct work. He corresponded with many eminent literati, particularly Voltaire and Rous- seau. He died at Lyons in 1746, aged seventy- three.

BROSSIER (Martha), a French woman, who, about the end of the sixteenth century, pretended to be possessed by the devil, and counterfeited convulsive fits. Her father was a weaver at Romorentin, but found he could gain more, in that credulous age, by exhibiting his daughter as a daemoniac, than by following his honest and useful profession. She was first detected at Orleans, in 1598 ; and afterwards at Angers. Notwithstanding which, the credulity of the public was such, and some of the priests ac- quired so much reputation by exorcising the evil spirit, that Henry IV. enjoined the parliament of Paris to take cognizance of the affair ; who,

bryd. byrd : Bpviw, a fuetus ; Welsh bru, the womb : Chal. Heb. Per. Syr. bar, a child, are all cog- nates of our verb to bear. See BRAT, BAIRN,

BIRTH. A male of children born of the same parents. In a theological sense it is used for the species, for men in general. More com- monly it is applied to persons closely united in one object, associated for any common purpose, engaged in similar pursuits and professions; bear- ing mental, moral, or social resemblance. The adjective expresses kindness ; the fondness of a brother.

He also that is slothful in his work, is brother to

him that is a great waster. Proverbt.

I will eat 'no meat while the world standeth, lest I

make my brother to offend. Corinthians.

In all this mene while, she ne stent This maide and eke her brother to commend With all hire herte, in ful benigne intent, So wel that no mail coud her priese amend.

Chaucer' Canterbury Tula.*

BRO

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BRO

And to those brethren sayd, Rise . rise! bylive! And unto batteil doe yourselves addresse ; For yonder comes the prowest knight alive, Prince Arthur, flower of grace and nobilesse.

Spenser.

We few, we happy few, we band of brothers}- For he to-day that sheds his blood with me, Shall be my brot/ier. Shakspeare.

I speak but brotherly of him ; but should I anato- mize hire to thee as he is, I must blush and weep.

Id.

Be sad, good brotJters ; Sorrow so royally in you appears, That I will deeply put the fashion on. Id. Whilst kin their kin, brother the brother foils, Like ensigns all against like ensigns bend. Daniel.

These two are brethren, Adam, and to come Out of thy loins. Milton.

Ah ! never could he hope once to repair So great a wane, should not that new-born son Adopt him both his brother and his heir.

Fletcher's Purple Island.

Those tents thou saw'st so pleasant, were the tents Of wickedness, wherein shall dwell his race Who slew his brother. Milton.

See how it weeps ! the tears do come, Sad, slowly, dropping like a gum; So weeps the wounded balsam ; so The holy frankincense doth flow. The brotherless Heliades Melt in such amber tears as these.

Marvell. Wounded Fawn.

The lamest cripples of the brotlters

Took oaths to run before all others. Hudibras.

He was a priest, and looked for a priest's reward ;

which was our brotherly love, and the good of our souls

and bodies. Bacon.

Though more our money than our cause Their brotherly assistance draws. Denham.

There was a fraternity of men at arms, called the brotherhood of St. George, erected by parliament, con- sisting of thirteen of the most noble and worthy per- Bˆns. Davies.

My father was to Giaffir all That Selim late was deemed to thee, That brother wrought a brother's fall, But spared ā at least, my infancy.

Byron. Bride of Abydos. BROTHER, a term of relationship applied to a male, among children sprung from the same father, or mother, or both. Scaliger and Vossius derive frater from 0porĀ»jp, for 0parwp, a person who draws water in the same well ; $pĀ£ap, in Greek, signifying a well, and ˆparpta, a company of people, who have a right to draw water out of the same well. The word, it is said, came originally from Argos, where there were only a few wells distributed in certain quarters of the city, to which those of the same family or neigh- bourhood alone repaired. Consistently with this derivation, the ancients applied the term brother to almost all who stood related in the collateral line, as uncles, nephews, cousins ger- man, &c. Cicero, in his Phillippics, says, ' An- tonia was both wife and sister of Mark Anthony ; because she was daughter of his brother

C. An- tonius :' and Tullus Hostilius, in Dionysius Halicarnasseus, calls the Horatii and Curiatii, brothers ; because they were sisters' children. The language of the Hebrews was similar, ' We are brethren,' says Abraham to Lot., Genesis xiii.

8, whereas Lot was only his nephew. So Jacon told Rachel that he was her father's brother, Genesis xxix. 12, whereas he was only her father's' nephew.

BROTHERS, fratres, in the civil law, sometime comprehend sisters : as Lucius and Titia. fratres; tres fratres, Titius, Msevius, and Seia. By the civil law, brothers and sisters stand in the second degree of consanguinity ; by the canon law they are in the first degree. ā By the Mosaic law the brother of a man who died without issue was obliged to marry the widow of the deceased. ā Deut. xxv. 7.*

BROTHER, FOSTER, those who suck the same nurse. The French call them freres du lait, or brothers of the milk.

BROTHERS or ARMS', an appellation given those who contract a kind of fraternity in war, obliging themselves to the mutual service and assistance of each other. In the military orders, the knights are also called brothers.

BROTHERS OF DEATH, those of the order of St. Paul, so named from the figure of a death's head which they always had about them.

BROTHERS OF ST. ALEXIS, in the Low Countries, were an order of persons who attended on those vvho lay dying, and took care of the burial of the dead.

BROTHERS, POOR, in the Chartreuse, or, as it is more commonly called the Charter House, a denomination given to decayed gentlemen, to the number of eighty, who are subsisted with diet, clothing, and lodging, on the establishment. The poor brothers are to be gentlemen of descent, come to poverty, or decayed merchants, soldiers, or officers of the king's household. The con- ditions of admission are, that they have no estate for life worth Ā £200, nor coming in, viis et modis, Ā£24 per annum ; and that they be fifty years old, unless they have been maimed in the public service ; in which case, the age of forty suffices. They wear a livery gown within doors.

BROTHERS, SERVING, fratres clientes, a class of knights in the order of Malta, consisting of such as cannot give proof of their nobility.

BROTHEUS, in mythology, a son of Vulcan, said to have been remarkably deformed ; and on that account to have thrown himself into the abyss of Mount /Etna.

B ROT I Ell (Gabriel), a learned classic, and French Jesuit, was born in 1723, at Tanay, a small town in the Nivernois. For several years he held the situation of librarian to the college of his order in Paris, and, on its dissolution, re- tired to the house of M. De la Tour, an eminent printer, where he passed the last twenty-six years of his life; dying at Paris, February 12th, 1789. His principal works are : Examen de 1'Apologie deM. L'Abbe de Prades, 8vo. 1753; Conclu- siones ex universa Theologia, 4to. 1754; a Treatise on the Ancient Hebrew, Greek, and Roman Coins, 4to. 1760; Prospectus of an Edition of Tacitus, in 5 vols. 4to. 1761 ; an im- proved edition of the works of that author, in 4 vols. 4to. printed in 1771, and a supplement to the seventh and tenth books of his annals, 8vo. 1775 ; Cl. viri de la Caille Vita, 4to. 1763 ; an edition of Pliny's Natural History, 6 vols. ,.2uio

1779; another of Rapin's Poems, On Gardens, to which he subjoined A History of Gardening, 8vo. 1778, and a very complete one of Phaedrus, with a comparison between the fables of that writer and those of La Fontaine, 12mo. 1785.

BROTIER (Andrew Charles), a nephew of the above, was also a man of some learning, especially in the science of botany, and published in 1790 a 12mo. volume of Memoirs, entitled Paroles Memorables recueiilies par Gabr. Brotier. He was for some time editor of L'Annee Litteraire, a journal during the revolution, but in 1797, becoming obnoxious to the party then in power, Avas arrested and banished to Cayenne, where he died in 1798.

BROUAGE, a maritime town of France, in the department of the Lower Charente, and ci- devant province of Saintonge. It is famous for its salt-works, which are some of the finest in the kingdom. It is fifteen miles S.S.E. of Ro- chelle, and 170 south-west of Paris. Long. 1Ā° 4′ W., lat. 45Ā° 52′ N.

BROUGH, a town in Westmoreland, seated under Stanmore Hill, seven miles from Appleby, and 261 from London. It was formerly a place of great note, being a Roman fortress ; but is now much decayed. It contains a neat church, a little distance from the town, in the hamlet of Church-Brough, the pulpit of which is cut out of one entire stone. Near the church are the ruins of an ancient castle, belonging to the Earl of Thanet ; part of the tower was standing till 1792, when the greater part fell down. On digging near the ruins, an urn, full of Roman silver coins, was found. On the left of the castle the prospect is closed by a range of craggy mountains, over the tops of which shrubs and trees are promiscuously scattered ; to the right is an extensive fertile plain; and behind, the lofty promontory of Wildbore Fell lifts its brow, and terminates the prospect. It is divided into two, the Upper and Lower, and has a market on Thursday, and a fair Thursday before Whit- sunday.

BROUGHT'. Participle passive of bring.

The Turks forsook the walls, and could not be brought again to the assault. Knolles.

The instances brought by our author are but slender proofs. Locke.

BROUGHTON (Thomas), a learned divine, and one of the original writers of the Biographia Britannica, was born at London July oth, 1704, in the parish of St. Andrew, Holborn ; of which his father was minister. At an early age he was sent to Eton school, where he soon distinguished himself by his acute genius, and studious dis- position. He removed about 1722 to the university of Cambridge, where he studied ma- thematics, under the famous professor Sanderson, and acquired a knowledge of the modern lan- guages. In 1727 he was made A.B. and ad- mitted to deacon's orders. In 1728 he was ordained priest, and took the degree of M.A. when he

removed to the curacy of Offley, in Hertfordshire. In 1739 he was instituted rector of Stepington, appointed chaplain to the duke ff Bedford, and soon after was chosen reader to die Temple, by which he became known to

bishop Sherlock, who conceivevl so high an opinion of his merit, that in 1744 he appointed him vicar of Bedminster, and not long after prebendary of Bedminster and Redcliffe. Upon receiving this preferment he removed from London to Bristol, where he married the daughter of Thomas Harris, clerk of that city, by whom he had seven children, six of whom survived him. He resided on his living till his death, December 21st, 1774, in the seventy-first year of his age. In the course of a long life he published: 1. Christianity Distinct from the Religion of Nature, 8vo. 2. Translation of the Mottoes of the Spectator, Tatler, and Guardian, 12mo. 3. The first and third Olynthiacs and four Phillippics of Demosthenes revised, 8vo. 4. The Bishops of London and Winchester on the Sacrament, compared, 8vo. 5. Hercules, a musical drama. 6. Bibliotheca Historico-sacra, or Dictionary of all Religions, 2 vols. folio. 7. A Defence of the commonly-received Doctrine of the Human Soul, 8vo. 8. A Prospect of Futurity, in four Dissertations, 8vo. 1768. He was a great lover of ancient music, which in- troduced him to the acquaintance of Mr. Handel, whom he furnished with the words for many of his compositions. In 1778 a posthumous volume of sermons, on select subjects, was published by his son, the Rev. Thomas Broughton, A.M. vicar of Twerton, near Bath.

BROUGHTON'S ARCIIIPELAGO, an extensive range of rocky islands, islets, and rocks, in an arm of the Pacific Ocean, on the north-west coast of America; so called from Mr. Broughton, commander of the Chatham, who discovered them in 1790, in company with Vancouver. Long. 232Ā° 56′ to 233Ā° 40′ E., lat. 50Ā° 33′ to 51Ā° N.

BROUGHTONIA, in botany, class and order, gynandria monandria; natural order, orchidea?. Essential characters: CAL. petals spreading: COR. attached at the base only to the stalked lip : ANTH. a movable lid : masses of pollen four, parallel, divided by complete permanent par- titions, and extending at the base into an elastic granulated thread. B. sanguinea, blood-red Broughtonia, a native of Jamaica, is the only known species.

BROUKHUSIUS (Jonas), or John BROEK- HUIZEN, a distinguished writer in Holland, was born November 20th, 1649, at Amsterdam, where his father was a clerk to the admiralty. He learned Latin under Hadrian Junius, but his father dying when he was vSry young, he was placed with an apothecary at Amsterdam, with whom he lived some years. Not liking this pro- fession, he went to the army, where his behaviour raised him to the rank of lieutenant-captain ; and, in 1674, he was sent with his regiment

to America, in the fleet under admiral de Ruyter, but returned to Holland the same year. In 1678 he was sent to the garrison at Utrecht, where he contracted a friendship with the cele- brated Graevius ; and here he had the misfortune to be so deeply engaged in a duel, that, according to the laws of Holland, his life was forfeited ; but Graevius obtained his pardon from the Stadt- holder. Not long after, he became captain of one cf the companies then at Amsterdam; which

p'.aoed him in an easy situation, and gave him leisure to pursue his studies. His company being disbanded in 1697, a pension was granted him ; upon which he retired to a country house near Amsterdam. He died December 15th, ,.707. As a classical editor, he is distinguished by his labors upon Propertius and Tibullus, published in 1702 and 1708. A volume of his poems was published at Utrecht, 1684, in 12mo, and an elegant edition of them was given by Van Hoogstraeten at Amsterdam, in 1711, in 4to, who also published his Dutch poems, in 1712, in 8vo. Broukhusius was also editor of the Latin works of Sannazarius and Palearius.

BROUNCKER (William), lord viscount of Castle Lyons, in Ireland, and the first president of the Royal Society, was the son of Sir William Brouncker, and born about 1620. He was dis- tinguished by his knowledge of the mathematics, and by the considerable posts he enjoyed after the Restoration ; being chancellor to the queen, and keeper of her great seal, and one of the com- missioners of the navy, &c. He wrote : 1. Ex- periments of the Recoiling of Guns. 2. Air Algebraical Paper upon the Square of the Hy- perbola ; and several letters to archbishop Usher. He died in 1684.

BROUSSON (Claude), an eminent French protestant martyr, born at Nismes, in 1647. He distinguished himself as an advocate at Castres and Toulouse. The deputies of the Protestants assembled at his house after their churches were demolished, and resolved to continue to meet there. The execution of this resolution, how- ever, as might have been expected, occasioned fresh persecutions and massacres. Brousson retired to Geneva, and afterwards to Lausanne; whence he travelled through the different pro- testant states, soliciting their assistance and compassion to their suffering brethren in France. Returning to France, he ventured to preach in the Cevennes, and in several provinces : in con- sequence of which, he was apprehended at Oleron in 1698, and, being convicted of having preached in defiance of the edicts, was broken upon the wheel. He was a man of great elo- quence and learning, and wrote many works in favor of the

Calviriists : particularly The State of the Reformed in France ; Letters to the Clergy of France ; Letters from the Protestants in France to all other Protestants ; and Remarks upon Amelot's Translation of the New Testament. The States of Holland gave him a pension of 400 florins ; and, upon his death, added 600 more, making 1000 in all, as a pension to his widow.

BROUSSONET (Pierre-Marie-Auguste), pro- fessor of botany at the medical school of Mont- pelier, ai- I also a member of the Institute, as well as an associate of the Royal Society of Lon- don &c. was born at Montpelier, February 28th, 1761. We subjoin the following account of him from the eulogium pronounced by the celebrated Cuvier, at the public session of the Institute of France. His father, Francois Broussonet, was a professor of medicine there, and his mother's maiden name was Elizabeth Senard-Paquier. From the earliest period of his life he exhibited the uromise of great talents ; for at eighteen years

of age he was nominated to a chair in the uni- versity of the city where he was bom ; at twenty- four he was unanimously elected a member of the Academy of Sciences, a circumstance which had not occurred from the origin of that body ; at a later period, he was chosen an associate of the Institute during his absence, and preserved on the list, notwithstanding his residence in the south of France. He was born in the bosom of a celebrated school ; he was the son of a man who exercised, in an honorable manner, the functions of his office. Thus the sciences may be said to have surrounded his cradle ; and it was their language which he was first taught to utter. With a view to withdraw his mind from the study of nature, to which he was fondly at- tached, young Broussonet was sent to a distance from his native home to learn the languages ; but on his return, with a view of studying medicine, he employed himself in culling plants during the day, and in dissecting at night. In fine, he en- cumbered his father's house with productions of every kind, while at the same time he made such a rapid progress in medicine, that he obtained the title of doctor of physic at eighteen years of age. The thesis which he chose on this occasion, had respiration for its object, and was entitled, Varia? positiones circa Respirationem. The excellence of this composition fully justified the premature honors he received, for it exhibits an admirable specimen of comparative anatomy and physiology ; while all the known facts are assembled and illustrated with great judgment. Having repaired soon after to Paris, for the ex- press purpose of obtaining the minister's leave to enter on his new professorship, he met with such opposition on account of his youth, that he resigned all ideas on that subject ; and, thinking that natural history presented him a field in which he could distinguish himself, he resolved to apply his time and talents to this subject. Although the eloquence of Buffon had inspired a general taste for the study of nature, it had at the same deterred the greater part of the scholars from the methods

most proper to guide them in respect to it : the zoologists and the mineralogists were not as yet familiarised with the commodious nomenclature and rigorous synonomy of Linnaeus. It appeared as if this great man had written for the botanists alone, and all these, becoming his disciples, con- stituted a separate class : the example of which then had but a feeble influence in respect to the study of the other kingdoms of Nature ; but M. Broussonet, incited by the example of the res- pectable M. Gouan, with an extraordinary zeal for the pure Linnaan doctrine, resolved to render it victorious in France, and accordingly attached his reputation to the fate of this enterprise. As it is in the distinctions of the species, that the methods adopted by the learned Swede exhibit their superiority, and the collection of Paris did not then afford a sufficient variety to serve as the basis of such important labors, Broussonet de- termined to visit such foreign cabinets as con- tained the finest specimens. He aoco'dingly directed his course towards England ; the universal commerce of which nation, its immense colonies, its grand maritime expeditions, togather with the taste of the king, and several f the

grandees, for natural history, had enabled it, at that period, to form the richest depositories of the productions of the two worlds. Sir Joseph Banks at this time enjoyed that extensive repu- tation which will render his name immortal in the history of the sciences ; and it was under his immediate protection that Broussonet published the firsbpart of his work on fishes, in 1782, under the title of Ichthyologise, decas 1. It contains the Latin description, classed after the Linnasan order, of ten rare kinds, one half of which were before unknown. They were accompanied with an equal number of plates ; and constituted, as it were, a fine frontispiece to an important work, which, it is to be greatly lamented, was never continued and completed. At length M. Brous- sonet returned from London, preceded by the reputation of his new work, decorated with the title of a member of the Royal Society, and reckoning among his friends, the son of Linnaeus, Solander, Sparman, Sibthorp, Scarpa, and several other naturalists of the same rank. His devotion to Linnseus would not, at that period, have operated as a recommendation to many who enjoyed great influence in the capital of France, and particularly to Daubenton, who then pos- sessed much credit, both at the Academy and with the ministry ; but the mild manners and modest conduct of Broussonet made his profession of faith be forgotten, and he found a most zealous protector in the very man who was considered as likely to be most vexed with his doctrines. Daubenton made him his deputy at the college of France, his assistant at the veterinary school, and also contributed, more than any other, to his re- ception at the Academy. Fie now gave notice of his intentions to publish his grand work on ichthy- ology, and actually presented the prospectus to the public. The

distribution was to be nearly on the same plan as that laid down by Linnaeus , but he was to describe 1200 species, while the Swede had only enumerated 460. Nearly at the same time, Broussonet read dissertations at the Academy, and gave a description of the dog-fish, of which he mentioned twenty-seven species ; one-third of which were unknown to other natu- ralists. He also treated of the annarhiscus lupus, as well as the silure trembleur, (scomber gladius), first discovered by Adanson to possess the powers of electricity. He next described the spermatic vessels of fishes, and demonstrated, that several possessed scales which were supposed to be destitute of them. But the most celebrated of all his discourses, was that ' on the comparison between the movements of plants and of animals.' It is to him we are indebted for the first complete description of that vegetable, to which we are moˆt tempted to attribute something voluntary in its oscillations ā the hedysarum gyrans, or that kind of grass produced in Bengal, the lateral leaves fof which rise and fall both day and night, withouˆany external provocation. He also insis- ted on tfie determinate volition of the parts of plants, notwithstanding all obstacles ; the pro- gress of the roots in search of humidity ; the in- flexions of the leaves in order to obtain light, &c. In a short time he aimed at still higher objects ; and his memoir on the respiration of fishes ap- pertains entirely to the philosophy of natural

history. He shows how much respiration dimi- nishes in respect to intensity, and the blood in regard to heat, from birds to quadrupeds, and from quadrupeds to reptiles ; he compares the size of the heart, and the quantity of blood, of different animals ; he explains why those who have small bronchial openings can live longer out of water than the others ; he mentions the experiments made to demonstrate the degree of heat which fishes are capable of supporting, &c. His paper on the teeth is of a similar nature : the difference between the teeth of flesh-eating and herbivorous animals ; the flakes of enamel which penetrate the substance of the latter, and which give them that inequality so necessary for the purpose of trituration ; the infinite variety of the number, of the figure, and of the position of the teeth of animated beings, &c. ; in short, all these facts, which are at present notorious to every one, were not then deficient either in novelty or interest. It is to be lamented, that Broussonet should have quitted a career in which he was destined to shine ; but, during the same year he Was received into the Academy, he happened also to be chosen secretary to the So- ciety of Agriculture ; and this first cause of dis- traction produced many others. Agricultural societies had been established in the different ge- neralities in 1761. Composed, for the most part, either of wealthy proprietors or simple farmers, they had hitherto displayed but little activity in respect to their operations, while that of the capital had only published a few instructions, during the space of twenty-four years.

Berthier de Sauvigny made it some- thing like a point of honor, to confer re- putation on this study, and thought that he could not confide this enterprise to any one more capable than M. Broussonet, whom he had known in England. In the exercise of his new functions, he displayed great flexibility of talents ; and, quitting by degrees that dry- rress of style which is the character of the school to which he had attached himself, he soon ac- quired the powers of composition, and at times displayed all the charms of the most captivating eloquence. The first of his eulogies, that of Burton, is perhaps still feeble for so great a name; but in those which succeeded, he sometimes makes us enamoured with the peaceable virtues of Blareau; while, at other times, he induces us to admire the frankness, probity, and devotion of Turgot, to whatsoever respected the public good. During those times, when the vows of all seemed to call for a popular revolution, he procured abundant applauses, by constantly and energetically declaring his wishes in behalf of the inhabitants of the country. M. Broussonet, on whom such discourses had conferred a po- pular reputation, could not fail of being chosen to supply some of those places which, at this period, were about to be conferred by the opinions of his fellow citizens; but the very first one obtained by him made him quickly regret the neglected sciences, and the peaceable occupations of the closet. Having been nomi- nated, in 1789, to the electoral body of Paris, and consequently chosen to supply the place of the suspended authorities, on the very Jay he

first entered the Hotel de Ville, it was but to behold the intendant, his friend and protector, butchered before his eyes ! Being afterwards appointed, along with Vauvilliers, to obtain the necessary quantity of provisions for the capital, he found himself more than twenty times menaced with the loss of his life by the people who were preserved by his solicitudes, while they permitted themselves to be misled by those very men whose interest it was to starve them. He afterwards sat in the Legislative Assembly ; at the dissolution of which he retired to his house near Montpelier, in order to enjoy that repose which had fled from him for ever, since the first moment that he had yielded to the at- tractions of ambition. After the revolution of the 31st of May, he was imprisoned in the citadel of the place of his nativity, and would have experienced the same fate as so many other illustrious men, had he not found means to escape to his brother, who at that period was employed as a physician in the army of the Pyrenees. Under pretence of botanising, he found his way into Spain, through the breche de Roland ; and, after being nearly frozen to death, at

length reached Madrid, without money, and without clothes, after nearly perishing with hunger, having in vain solicited several of the barber surgeons of those villages through which he passed, to employ him as their assistant, for his victuals alone.

MM. Cavanilles and Orteza received him with open arms, and Sir Joseph Banks interested himself in his behalf; but he was soon perse- cuted by the emigrants, and obliged to fly, first to Xeres, next to Cadiz, and then to Lisbon. Here again they discovered, and denounced him to the Inquisition, under pretence that he was a freemason ; they even accused the duke de la Foens, a prince of the blood, and president of the Academy of Sciences, who, at the request of Correa de Serra, a celebrated botanist, had hi- therto protected him, of jacobinism. In this extremity, M. Broussonet considered himself very fortunate, in being permitted to accompany, in quality of physician, the ambassador whom the states of America sent to the emperor of Morocco. His next step was to obtain his name to be expunged by the directory, from the list of emigrants; and he then employed all the interest of his friends to obtain for him the office of consul at Morocco. The plague having driven him from that country, he was nominated to the consulship of the Canaries ; there, as at Salee, Mogador, Lisbon, &c. he devoted himself to his ruling passion, employing all his leisure moments in studying plants, and making in- teresting observations, which he transmitted regularly to his native country. Still, however, it was evident, that such a man as Broussonet was destined for the chair of a university ; and he accordingly returned to Montpelier, under the protection of M. Chaptal, minister of the interior, and soon rendered the botanical garden the admiration of all botanists, both in respect to the regularity and number of the plants, while his lectures attracted a crowd of students from all parts. But the loss of his wife, and the dan- gerous state of his daughter's health produced

a slight degree of apoplexy, after which he could never either pronounce or write proper names or substances ; he was able to describe the figure of a man, or the color and form of a plant, without being able to utter the precise appellation of the one or the other. Notwithstanding this, Broussonet might have entirely recovered, had he not exposed himself to the heat of the sun, on the 21st of July, 1809, which produced all the agitations incident to a convulsive lethargy, and finally put an end to his life, at the end of six days.

BROUWER (Adrian), a famous Dutch painter, born in 1608, of poor parentage. Francis Hals, under whom he proved an inimitable artist, took him from begging in the streets. His sub- jects were copied from nature, but taken from low life ; such as droll conversations, drunken brawls, boors at cards, or surgeons dressing the wounded. Brouwer was apprehended at

Ant- werp as a spy; where, being discovered by Rubens, he procured his liberty, took him home, clothed him, and endeavoured to acquaint the public with his merit; but the levity of his temper made him quit his benefactor ; and he died in 1638, destroyed by a dissolute course of life, in his thirtieth year.

BROW, u. & n.ˆ Goth, bru, brim; Swed

BROW'LESS, 6ryw; Sax. braw; Teut. braw

BROW'BEAT, VBrowbeat, perhaps from

BROW'BOUND, I Goth, and Sax. brog ; Welsh

BROW'SICK. j braw. Terror; to depress;

bear down ; dismay. To make the countenance

fall. Brow literally is the edge of a place ; ap-

plred to the forehead, to the arch over the eye, to

the general air of the countenance. To brow

also is to bound, to limit, to be at the edge of.

With scalled browes blake, and pilled herd ; Of his visage children were sore aferd.

Chaucer's Canterbury Tales. Then call them to our presence, face to face, AnJ frowning brow to brow. Shakspeare.

She could have run, and waddled about; For even the day before she broke her brow. Id.

In that day's feats, He proved the best man i' the field ; and, for his

meed,

Was brow-bound with the oak. id,

The earl, nothing dismayed, came forwards that day unto a little village, called Stoke, and there en- camped that night, upon the brow or hanging of a hill.

Bacon

Them, with fire, and hostile arms, Fearless assault ; and to the brow of heaven Pursuing, drive them out from God and bliss.

Maim,

Tending my flocks hard by, i' the hilly crofts That brow this bottom glade. iW-

So we some antique hero's strength Learn by his launce's weight and length As these vast beams express the beast Whose shady browĀ» alive they drest. 'Waller 'Tis now the hour which all to rest allow, And sleep.sits heavy upon every brow. Dryden.

In thy fair brow there's such a legend writ Of chastity, as blinds the adulterous eye. Id

It is not for a magistrate to frown upon, and brow- beat, those who are hearty and exact in their ministry ; and, with a grave nod, to call a resolved zeal want of prudence. oottin.

coo

BROW N.

Buf yet a gracious influence from you May alter nature in our browsick crew. Sucklir.g. Yet oft-times on his maddest mirthful mood Strange pangs would flash along Childe Harold's brow, As if the memory of some deadly feud, Or disappointed passion, lurked below. Byron.

BROW, or EYE-BROWS. See ANATOMY. BROWALLIA, in botany, a genus of the angiospermia order, in the didynamia class of plants. Its generic characters are : CAL. one- leaved perianth : COR. petal one : STAM. fila- ments four ; antherse simple : PIST. an ovate germ; filiform style; and thick stigma: PER. ovate capsule ; receptacle compressed : SEEDS numerous. The species are annuals, and natives of America.

BROW-ANTLER, among sportsmen, the branch of a deer's horn next the tail.

BROWN', -\ Goth, brune; Swed. brun, BROWN'ISH, f braun ; Teut. brown ; Sax. brun ;, BROW'NY, {Bel. bruin; Fr. brun; Ital. BROWN'NESS. J bruno; from Gothic brina, to burn, corresponding with Trvpoov. A dark reddish color. That color, says Tooke, which things have that have been burned.

A burnette cote honge there withal, Yfurred with no menivere, But with a

furre rough of here, Of lambe skynnys hevy and blake.

Chaucer. Romaunt of Rose.

I like the new tire within excellently, if the hair

were a little browner. Shakspeare.

Brown, in high Dutch, is called braun; in the

Netherlands bruyan; in French coleur brune ; in Italian

bruno. Peacham.

A brownish grey iron-stone, lying in thin strata, is

poor, but runs freely. Woodward.

From whence high Ithaca o'erlooks the floods, Brown with o'erhanging shades and pendent woods.

Pope.

Long untravelled heaths, With desolation brown, he wanders waste. Tho,nson.

BROWN, among dyers, painters, &c. a dusky color inclining towards redness. Of this color there are various shades or degrees, distinguished by different appellations ; such as Spanish brown, a sad brown, a tawny brown, the London brown, a clove brown, &c. ā Spanish brown is a dark dull red, of a horse-flesh color. It is an earth ; and is of great use among painters, being gene- rally used as the first and priming color that they lay upon any kind of timber-work in house- painting. That which is of the deepest color, and freest from stones, is the best. Though this is of a dirty brown color, yet it is much used to shadow vermilion, or to lay upon any dark ground behind a picture, or to shadow yellow berries in the darkest places, when there is no lake, &c. It is best and brightest when burnt in the fire till it be red-hot.

BROWN (Edward), the son of Sir Thomas, physician to king Charles II. and president of the Royal College at London, was born in 1642, Ā«nd studied at Cambridge and Oxford. He then travelled; and at his return published a brief account of Hungary, Servia, Bulgaria, Macedonia, Thessaly, Austria, Styria, Carinthia, Carniola, Friulia, &c. He also published an account of travels through a great part of Ger-

many ; and joined his name to those of many other eminent men, in a

translation of Plutarch's lives. He was acquainted with Hebrew, was a critic in Greek, and no man of his age wrote better Latin. High Dutch, Italian, French, &c. he spoke and wrote with as much ease as bis mother tongue. King Charles said of him, that he was as learned as any of the college, and as well-bred as any at court. He died August 27th

1708.

BROWN (George), bishop of Dunkeld, flou- rished about the end of the fourteenth cenjtury. He studied grammar at Dundee, and philosophy at St. Andrews ; and was afterwards appointed chancellor of Aberdeen. Being sent to Rome by king James III. on some business relative to the see of Glasgow, he became acquainted with the college of cardinals, and particularly the vice-chancellor Roderick Borja, who, by his interest with Pope Sextus IV. got Brown raised to the see of Dunkeld. He was a man .of learning and public spirit, but has been accused of ambition and rapacity. He procured his diocese to be greatly enlarged; built Clunie castle, and began the stone bridge across the Tay at Dunkeld ; but only lived to see one arch completed. He died January 14th, 1514; and was succeeded in his bishopric by the celebrated Gavin Douglas, the translator of Virgil.

BROWN (John, D.D.), a clergyman of the church of England, and an ingenious writer, was born at Rothbury, in 1715. His father was a native of Scotland, of the Browns of Coalstown, near Haddington. Our author was sent in 1732 to Cambridge, and entered of St. John's College, under the tuition of Dr. Tunstall. After taking the degree of A. B. with great reputation (his name being at the head of the list of wranglers), he received both deacon's and priest's orders, and was appointed minor canon and lecturer of the cathedral church. In 1739 he went to Cambridge to take his degree of A.M. In 1745 he distinguished himself as a volunteer in the king's service, and behaved with great in- trepidity at the siege of Carlisle. Mr. Brown's attachment to the whig party procured him the friendship of Dr. Osbaldeston, who, when ad- vanced to the see of Carlisle, appointed Mr. Brown one of his chaplains. He wrote about this time a poem, entitled Honor, in- scribed to Lord Viscount Lonsdale. His next poetical production was his Essay on Satire; which was of considerable advantage to him, both in point of fame and fortune. It was addressed to Warburton ; to whom it was so accept- able, that he took Mr. Brown into his friend- ship, and introduced him to Ralph Allen, Esq, of Prior Park, near Bath. In 1751 Mr. Brown published his Essays on the Characteristics of lord Shaftesbury, &c. which was received with great applause. In 1754 he was promoted by the earl of Hardwicke to the living of Great Horkesley in Essex, and in 1755 took the degree of D.D. at Cambridge, and published his tragedy of Bar- barossa. A second tragedy named Athelstan, represented at Drury-Lane, was also well re- ceived by the public, in 1757 appeared his famous

of the Times. The reception which this work met with was very flattering ; no fewer than seven editions of it having been printed in little more than a year. Voltaire speaks of it in a way very honorable to Dr. Brown, lie afterwards wrote An Explanatory Defence of the Estimate of the Manners and Principles of the Times. In 1760 he published an Additional Dialogue of the Dead, between Pericles and Aristides ; being a sequel to a dialogue of lord Lyttelton's between Pericles and Cosmo. Dr. Brown's next publi- cation was The cure of Saul, a sacred ode; which was followed by A Dissertation on the Rise, Union, and Power, the Progressions, Se- parations, and Corruptions of Poetry and Music; both in 1763. In 1764 he published in 8vo. The History of the Rise and Progress of Poetry through its several Species ; which is merely the substance of the Dissertation. The same year he published a volume of sermons, dedicated to his patron bishop Osbaldeston. In the beginning of 1765 Thoughts on Civil Liberty, Licentious- ness, and Faction ; and the same year a sermon on the Female Character and Education, preached 16th May, 1765, before the guardians of the asylum for deserted female orphans. His last publication was in 1766, A Letter to the Rev. Dr. Lowth, occasioned by his late Letter to the Right Rev. Author of the Divine Legation of Moses. In 1765, while Dr. Dumaresq resided in Russia, to which he had been invited in 1764 to give his assistance for the regulating of several schools, which the empress intended to erect, he wrote to Dr. Brown for his advice, and the reply of the latter so pleased the empress that she im- mediately invited him to Russia. He accepted the invitation, and Ā£1000 being ordered for his expense, he actually received Ā£200. But when on the point of setting out, an attack of the gout and rheumatism, to which he had been long subject, so impaired his health, that his friends dissuaded him from the journey. The disap- pointment, however, concurring with the general state of his health, was followed by a dejection of spirits : in consequence of which he put an end to his life on the 23d of September 1766, in the fifty-first year of his age.

BROWN (John), M. D, author of the Bru- nonian system of medicine, was born A. D. 1735 in the parish of Bonkle in Berwickshire, in a village near Dunse. His father dying, while young, and his mother's second husband being a weaver, it was intended to bring him up to the same business, but young Brown having already given evidence of uncommon genius, as well as intense application, while attending the grammar school of Dunse, under the celebrated Mr. Cruickshanks, a lady in that neighbourhood took him under her patronage, and sent him to the University of Edinburgh to study

divinity. The pious intentions, however, of this benevolent lady were frustrated by a curious incident. He was summoned before the kirk session, for having heard a sermon in the established church, and un- willing to submit to the ecclesiastical censure, for this venial fault, he chose rather to leave his old friends, and join the establishment. He never went farther in divinity, than delivering one probationary sermon in the hall of the Uni-

versity. He returned to Dunse in 1758, and acted for a year as usher or assistant to his late teacher. In the end of 1759 he settled in Edinburgh, with the double view of teaching Latin and studying physic. He addressed a letter in Latin to each of the medical professors, all of whom being apprised of his merits as a classical scholar, presented him with tickets of admission to their lectures gratis. But none of them seemed to entertain a higher opinion of his classical powers, than the late celebrated Dr. Cullen, who not only employed him as a private instructor in his own family, but took every op- portunity of recommending him to others. In 1765 he married Miss Lamond, a young lady of a respectable family in Edinburgh, but without any fortune. Mrs. Brown not long after taking a boarding house, her husband's high repu- tation soon crowded it with boarders. But want of economy and several losses obliged Brown at last to stop payment, about 1770. About this time, too, that warmth of attachment which had hitherto subsisted between him and Dr. Cullen, began to cool. It was about this period also that he first promulgated his new system of medicine. See BRUNONIAN SYSTEM. Brown's income was by no means increased by his discovery. It was not to be expected, indeed, that a set of learned gentleman would be ready to acknowledge all the former theories of the science they professed to teach, to have been erroneous, and at once become converts to his new doctrine. His classes were therefore never attended by very great numbers of stu- dents, nor were his patients by any means so numerous as might have been expected from the surprising cures he performed upon some individuals, who applied to him in desperate cases, where the ordinary practice had failed. No physician, however, or public lecturer, was ever more beloved by his patients and pupils than Brown. Of their attachment to his person, we shall give one instance out of many. In the session of 1779-80, a few of them, unknown to Brown, collected money among themselves, to pay the usual fees of a diploma from the uni- versity of St. Andrews ; (where his merits, both as a medical teacher and linguist, were too well known, to render any examination necessary), and surprised him by presenting it to him. In the course of the year 1780 he published the first edition of his Elementa Medicines, in one vol. 12mo. dedicated to Sir John Eliot, M. D. and in 1784 he reprinted it (but without any dedi- cation), in 2 vols. 8vo. with considerable altera- tions and large additions. The doctor's affairs now hastened to a crisis. His income not being equal to his expenditure, he was obliged in spring 1785 to

take shelter from creditors in the Abbey of Holyrood house : and, though a settlement was soon obtained with most of them, yet one more rigorous than the rest incarcerated him in the Canongate jail, in January 1786. The late lord Gardenstone, having heard of his distress, generously enabled him to execute the plan he had long had in contemplation, of settling in London, by presenting him with 160 guineas. The Dr. accordingly went up in the end of 1786, after having published his Observations on the

New and Old Systems of Medicine : and having performed extraordinary cures upon some patients who were able to reward him liberally, he was enabled, within four months after his arrival, to send for his wife and family. But his income being uncertain, and his family expenses very great, he was sent to the King's Bench prison by his creditors, though he was not long confined. In 1788 he pulbished his Elements of Medicine in English. Dr. Brown did not long survive this labor ; after giving an introductory lecture on the 6th of October 1 788, and going to bed seemingly in ordinary health, he was found dead next morning, being then in his fifty-third year. He left a widow and eight children. Dr. Brown was twice elected president of the Royal Medical Society, in 1776 and 1780. He was also elected Latin Secretary to the Society of Scot's Anti- quaries ; and was the founder of a Lodge of Free Masons, stiled the Roman Eagle, instituted in 1784, in which Latin was the only language spoken.

BROWN (Robert), a schismatic divine, the founder of the Brownists, a numerous sect in the reign of queen Elizabeth. He was the son of Mr. Anthony Brown of Tolthrop in Rutlandshire ; whose father had obtained the singular privilege of wearing his cap in the king's presence, by a charter of Henry VIII. Robert was educated at Cambridge, and was afterwards schoolmaster in South wark. About 1580 he began to promul- gate his principles of dissent from the established church ; and the following year he preached at Norwich, where he soon accumulated a numerous congregation. He was violent in his abuse of the church of England ; pretended to divine in- spiration, and that he alone was the sure guide to heaven. His sect daily increasing, Dr. Freake bishop of Norwich, with other ecclesiastical commissioners, called him before them. He was insolent to the court, and they committed him to the custody of the sheriff's officer : but he was released at the intercession of Idrd treasurer Burleigh, to whom he was related. Brown then left the kingdom; and, with permission of the states, settled at Middleburg in Zealand ; where he formed a church after his own plan, and preached without molestation. In 1585 we find him again in England : for in that year he was cited to appear before

archbishop Whitgift ; and seeming to comply with the established church, was, by lord Burleigh, sent home to his father : but, relapsing into his former principles, he wandered about for some time and endured great hardships. At last he fixed at Northamp- ton ; where, laboring with too much indiscretion to increase his sect, he was cited by the bishop of Peterborough, and, refusing to appear, was excommunicated for contempt. He moved for absolution, which he obtained, and from that time became a dutiful member of the church of England. This happened about 1590; and, in a short time after, Brown was preferred to a rectory in Northamptonshire, where he kept a curate to do his duty, and where he might pro- bably have died in peace ; but having some dis- pute with the constable of his parish, he pro- ceeded to blows ; and was afterwards so insolent to the justice1 that he committed him to North-

ampton jail, where he died in 1630, aged eighty. Thus ended the life of the famous Robert Brown ; the greatest part of which was a series of oppo- sition and persecution. He boasted on his death- bed, that he had been confined in no less than thirty-two different prisons. He wrote A Trea- tise of Reformation without Tarry ing for Any, and of the Wickedness of those Teachers which will not Reform themselves and their Charge, &c. by me, Robert Brown; and two others, making to- gether a thin 4to. published at Middleburg, 1582. BROWN (Simon), a dissenting minister of un- common talents and singular misfortunes, born at Shepton-Mallet in Somersetshire, in 1680. Excelling in grammatical learning, he early be- came qualified for the ministry, and began to preach before he was twenty. He was first called to be a pastor at Portsmouth, and afterwards re- moved to the Old Jewry, where he remained for a number of years. But the de?th of his wife and only son, in 1725, affected him so as to de- prive him of his reason ; and he became from that time lost to himself to his family, and to the world. His congregation at the Old Jewry, in expectation of his recovery, delayed for some time to fill his post ; but at length, all hopes be- ing over, Mr. Chandler was appointed to suc- ceedhim,in 1725. This double misfortune affected him at first in a manner little different from dis- traction, but afterwards sunk him into a settled melancholy. He quitted the duties of his func- tion, and would not be persuaded to join in any act of worship, public or private. Being urged by his friends for a reason of this extraordinary change, at which they expressed the utmost as- tonishment, he told them that ‘ he had fallen un- der the sensible displeasure of God, who had caused his rational soul gradually to perish, and left him only an animal life in common with brutes ;’ that though he retained the human shape, and the faculty of speaking in a manner that appeared to others rational, he had all the while no more notion of what he said than a parrot ; that it was therefore profane in him to pray, and incongruous to be present at the prayers of others ; and, very consistently with this, he

considered himself no longer as a moral agent, or subject of either reward or punishment. In this way of thinking and talking he unalterably and obstinately persisted to the end of his life ; though he afterwards suffered, and even requested, prayers to be made for him. Some time after this, he retired to Shepton-Mallet, and though in his retirement he was perpetually contending, that his powers of reason and imagination were gone, yet he was as constantly exerting both with much activity and vigor. lie amused himself sometimes with translating parts of the ancient Greek and Latin poets into English verse ; he composed little pieces for the use of children ; An English Grammar and Spelling Book ; An Ab- stract of the Scripture History, and a Collection of Fables, both in metre ; and with much learn ing he brought together, into a short compass, all the Themata of the Greek and Latin tongues, and also compiled a Dictionary to each of those works, to render the learning of these languages more easy and compendious. Of these per- formances none have been made public. But

what, showed the strength and vigor of his un- derstanding, though he was bemoaning the loss of it, were two works coinposed during the two last years of his life, in defence of Christianity, against Woalston and Tindal. He wrote an an- swer to Woolston's fifth Discourse on the Mi- racles of our Saviour, entitled, A Fit Rebuke for a Ludicrous Infidel, with a Preface concern- ing the prosecution of such writers by the civil power. His book against Tindal was called, A De- fence of the Religion of Nature and the Christian Revelation, against the defective account of the one and the exceptions against the other, in a book entitled, Christianity as old as the Creation; and it is allowed to be one of the best that con- troversy produced. He intended to dedicate it to Queen Caroline ; but, as the unhappy state of his mind appeared in the dedication, his friends suppressed it. The following is a copy which was preserved as a curiosity : ' Madam, Of all the extraordinary things that have been ren- dered to your royal hands since your first happy arrival in Britain, it may be boldly said what, now bespeaks your majesty's acceptance is the chief. Not in itself indeed : it is a trifle un- worthy your exalted rank, and what will hardly prove an entertaining amusement to one of your majesty's deep penetration, exact judgment and fine taste ; but on account of the author, wJ. > is the first being of the kind, and yet without a name. He was once a man, and of some little name ; but of no worth, as his present unparal- leled case makes but too manifest ; for, by the immediate hand of an avenging God, his very- thinking substance has for more than seven years been continually wasting away, till it is wholly perished out of him, if it be not utterly come to nothing. None, no not the least remembrance of its very

ruins remains ; not the shadow of an idea is left ; nor any sense, so much as one single one, perfect or imperfect, whole or diminished, ever did appear to a mind within him, or was perceived by it. Such a present, sent from such a thing, however worthless in itself, may not be wholly unacceptable to your majesty, the author being such as history cannot parallel : and if the fact, which is real, and no fiction or wrong con- ceit, obtains credit, it must be recorded as the most memorable, and indeed astonishing, even in the reign of George II. that a tract, com- posed by such a thing, was presented to the il- lustrious Caroline ; his royal consort need not be added ; fame, if I am not misinformed, will tell that with pleasure to all succeeding times. He has been informed, that your majesty's piety is as genuine and eminent as your excellent qua- lities are great and conspicuous. This can indeed be truly known to the great Searcher of hearts only. He alone, who can look into them, can discern if they are sincere, and the main inten- tion corresponds with the appearance ; and your majesty cannot take it amiss if such an author hii>ts, that his secret approbation is of infinitely greater value than the commendation of men, who may be easily mistaken and are too apt to flatter their superiors. But if he has been told the truth, such a case as his will certainly strike your majesty with astonishment; and may raise that commiseration in your royal breast, which

he has in vain endeavoured to excite in those of his friends : who, by the most unreasonable and ill-founded conceit in the world, have ima- gined, that a thinking being could, for seven years together, be a stranger to his own powers, exercise, operations, and state ; and to what the great God has been doing in it and to it. If your majesty, in your most retired address to the King of Kings, should think of so singular a case, you may, perhaps, make it your devout request, that the reign of your beloved sovereign and con- sort may be renowned to all posterity by the re- covery of a soul now in the utmost ruin, the re- storation of one utterly lost, at present, amongst men. And should this case affect your royal breast, you will recommend it to the piety and prayers of all the truly devout who have the ho- nor to be known to your majesty : many such, doubtless, there are, though courts are not asually the places where the devout resort, or where devotion reigns. And it is not improba- ble, that multitudes of the pious throughout the land may take a case to heart, that under your majesty's patronage comes thus recommended. Could such a favor as this restoration be obtained from Heaven by the prayers of your majesty, with what transport of gratitude would the recovered being throw himself at your majesty's feet, and, adoring the divine power and grace, profess him- self, Madam, your majesty's most obliged and dutiful servant, SIMON BROWN." Mr. Brown survived the publication of this last work a very short time. A complication of distempers, con- tracted by his sedentary life, brought on a mor-

tification, which put a period to his labors and sorrows about the end of 1732. He was un- questionably a man of uncommon abilities and learning : his work against Woolston showed him to have also vivacity and wit; and, notwith- standing that strange conceit which possessed him, it is remarkable that he never appeared feeble or absurd, except upon the subject of his frenzy. Before he was ill, he published some single Sermons, with a Collection of Hymns and Spiritual Songs.

BROWN (Sir William), a noted physician, and multifarious writer, was settled originally at Lynn, in Norfolk, where he published a translation of Dr. Gregory's Elements of Catoptrics and Diop- trics ; to which he added, 1 . A method for finding the Foci of all Specula, as well as Lenses uni- versally ; as also magnifying or lessening a given object by a given Speculum or Lens, in any as- signed proportion ; 2. A Solution of those Pro- blems which Dr. Gregory has left undemonstrated ; 3. A Particular Account of Microscopes and Tele- scopes, from Mr. Huygens ; with the Discoveries made by Catoptrics and Dioptrics. Having ac- quired a competence by his profession, he re- moved to Queen's Square,Ormond Street,London, where he resided till his death. By his lady, who died in 1763, he had one daughter, grand- mother to Sir Martin Brown Folkes, bart. He wrote a great number of lively essays in prose and verse, which he printed and circulated among his friends. The active part taken by Sir William Brown in the contest with the licentiates, in 1768, occasioned his being introduced by Mr. Foote iu his Devil upon Two Sticks. Upon Foote's exact

representation of him with his identical wig and coat, tall figure, and glass stiffly applied to his eye, he sent him a card complimenting him on having so happily represented him; but as he had forgotten his muff, he had sent him his own. This good-natured method of resenting disarmed Foote. When he lived at Lynn, a pamphlet was written against him : he nailed it up against his own door. He died in 1774, aged eighty- two ; and by his will left two prize medals to be annually contended for by the Cambridge stu- dents. ā¢

BROWN (Thomas), ' of facetious memory,' as he is styled by Addison, was the son of a farmer in Shropshire; and entered in Christchurch College, Oxford, where he soon distinguished himself. But his irregularities not suffering him to continue long there, he went to London to seek his fortune ; his companions, however, being more delighted with his humor, than ready to relieve his necessities, he had recourse to the usual refuge of

scribbling for bread ; and pub- lished a great variety of poems, letters, dialogues, &c. full of humor and erudition, but often indelicate. Towards the end of Tom Brown's life, he was in favor with the earl of Dorset, who invited him to dinner on a Christ- inas day, with Mr. Dryden, and some other gen- tlemen celebrated for their ingenuity; when Mr. Brown, to his agreeable surprise, found a bank note of Ā£50. under his plate, and Mr. Dryden, at the same time, was presented with another of Ā£100. Mr. Bro.wn died in 1704; and was in- terred in the cloister of Westminster Abbey, near the remains of Mrs. Behn, with whom he was intimate. His works, consisting of Dialogues, Essays, Satires, &c. have been printed both in 8vo. and 12mo., making four volumes.

BROWN (Ulysses Maximilian), a celebrated general of the eighteenth century, was son of Ulysses, baron Brown and Camus, colonel of a regiment of cuirassiers in the emperor's service, and descended from one of the most ancient fa- milies in Ireland. He was born at Basil in 1705; and having finished his first studies at Limerick in Ireland, was, in 1715, sent for into Hungary, by count George Brown, his uncle, colonel of a regiment of infantry. He was present at the fa- mous battle of Belgrade, in 1717, being then but twelve years of age. Next year he followed his uncle into Italy, who made him continue his stu- dies in the Clementine College at Rome, till 1721, when he was sent to Prague to learn the civil law. At the end of 1723 he became cap- tain in his uncle's regiment, and in 1725 lieu- tenant-colonel. ā¢ In 1730 he went into Corsica with a battalion of his regiment ; and contributed greatly to the taking of Calansara, where he re- ceived a considerable wound in his thigh.' In 1732 the emperor made him chamberlain. He was raised to the. rank of colonel in 1734; and distinguished himself so much in the war of Italy, especially at the battles of Parma and Guastalla, and in burning, in the presence of the French army, the bridge which the marshal de Noailles had caused to be thrown over the Adige, that he was made general in 1736. In 1737 he assisted in the retreat of the army, after the unhappy battle of Banjaluca, in Bosnia, and saved all the

baggage. His admirable conduct upon this oc casion was rewarded by his obtaining a second regiment of infantry. At his return to Vienna, in 1739, the emperor Charles VI. raised him to the rank of general field-marshal-lieutenant, and made him counsellor in the aulic council of war. After the death of that prince, the king of Prussia entering Silesia, count Brown with a small body of troops, disputed the country with him inch by inch. He signalised himself on several other occasions; and, in 1743, the queen of Hungary made him a privy counsellor, at her coronation in Bohemia. He at length passed into Bavaria, where he commanded the van-guard of the Aus- trian army ; seized Deckendorf, with a great quantity of baggage, and obliged the French to abandon the banks of the Danube, which the Austrian

army passed in full security. The same year the queen of Hungary sent him to Worms, as her plenipotentiary to the monarch of Britain ; where he signed the treaty of alliance between the courts of Vienna, London, and Turin. la 1 744 he followed prince Lobkowitz into Italy j took Velletri, overthrew several regiments, and made many prisoners. The following year he was recalled into Bavaria, where he took Wil- shoffen by assault, and received a dangerous shot in the thigh. The same year he was made general of the artillery ; and in January, 1 746, marched for Italy at the head of a body of 18,000 men. He then drove the Spaniards out of the Milanese ; and, having joined the forces under prince de Lichtenstein, commanded the left wing of the Austrian army at the battle of Placentia, on the 15th of June, 1746, and defeated the right wing of the enemy's forces, commanded by mar- shal de Maillebois. After this victory he com- manded in chief the army against the Genoese ; seized the pass of Bochetta, though defended by above 4000 men ; and took the city of Genoa Count Brown at length joined the king of Sar- dinia's troops ; and took, in conjunction with him, Mont Alban, and the county of Nice. On the 30th of November he passed the Var ; en- tered Provence, and had taken the isles of St. Margaret and St. Honorat, when the revolution which happened in Genpa, and the advance of Marshal de Belleisle with his army, obliged him to make that retreat which, on account of the skilful manner in which he conducted it, procured him the admiration of all Europe. He employed the rest of the year 1747 in defending the Austrian states in Italy ; and, after the peace of 1748, he was sent to Nice to regulate there, in conjunction with the duke of Belleisle and the marquis de las Minas, the differences that had arisen with respect to the execution of some of the articles of the definitive treaty of Aix-la-Cha- pelle. The empress queen, to reward these signal services, made him governor of Transyl- vania, where he rendered himself generally ad- mired for his probity and disinterestedness. In 1752, he obtained the government of the city of Prague, with -the chief command of the troops in that kingdom; in 1753 the king of Poland, elector of Saxony, honored him with the collar of the order of the white eagle; and in 1754 he was declared field-marshal. The king of Prussia entering Saxony in 1756, and attacking Bohemia,

Brown repulsed him at the battle of Lowo- Mtz, 1st of October, though he had only 27,000 men, and the king of Prussia had at least 40,000. Seven days after this battle he undertook the fa- mous march into Saxony, to deliver the Saxon troops shut up between Pirna and Konigstein ; an action which, though unsuccessful, is worthy of the greatest captains ancient or modern. He at length obliged the Prussians to retire from Bohemia ; for

which he was made a knight of the golden fleece. Soon after, he hastily assem- bled an army in Bohemia, to oppose the king of Prussia, who had again penetrated into that kingdom at the head of all his forces ; and on the 6th of May fought the famous battle of Prague ; in which, while he was employed in giving orders i\r maintaining the advantages he had gained ove r the Prussians, he was so dange- rously wounded that he was obliged to be car- ried to Prague, where he died on the 26th of June, 1757, aged fifty-two.

BKOW.V (Thomas), M. D., late professor of moral philosophy at the university of Edinburgh, was the son of the Rev. S. Brown, minister of Kirkmabreck, and descended from a family which suffered considerably by persecution for their adherence to the covenant. He was born in January, 1778, and the youngest of thirteen chil- dren. His father dying while Dr. Brown was in his infancy, the care of his education devolved on his mother, who personally devoted herself to the task, until he had reached his seventh year. He was then taken to England, under the protection of a maternal uncle, Capt. Smith, of the thirty-seventh regiment, and placed at no less than four different schools successively, near London. It appears more surprising that he should thus acquire anything solid than that he should make several respectable friends. At Kensing- ton he became acquainted with the late earl Cowper and his brothers; at Chiswick with Sir John Copley, the present attorney-general ; -and at Kew Green, where his uncle lived, with the mother and sisters of Sir Robert Graham, now senior baron of the exchequer. These ladies were among the first to discover and stimulate his early taste for poetry ; nothing, in our language, is much more touching than his ‘ Recollections’ of their house at Kew Green, in after times ; where his

full bosom deemed, with eager glow,

The ready portal’s quickest opener slow : ā

Still sure within that cheerful room to find

Kind eyes, kind voices, and O ! hearts more kind.

His uncle dying, in 1792, he returned once more to his maternal roof, a tolerable proficient, we are told, in classical literature. He had certainly displayed from childhood a spirit of enquiry, united with a most amiable temper, and great strength of memory.

One of his masters, when speaking of him to a friend, mentioned an example of this. The punishment usually awarded for transgressing the bounds of the play-ground, was to commit to memory a passage of some

author. Dr. Brown incurred this penalty more frequently than any other boy in the school ; indeed it was the only offence with which he was ever charged; and the punishment, from, his great quickness, lie did not

regard. ‘ I was resolved, however,’ to use his teacher’s own words, ‘ to fix him for once, and gave him a task that I thought even he should not be able to get in a hurry; soon after, I was called out of the room, and, to my utter astonish- ment, when I returned, which was in a very few minutes, he came up and repeated it every word without making the slightest mistake.’ When the anecdote was mentioned to Dr. Brown, he recol- lected the circumstance, and added, that he was very impatient for his master’s return, as he was prepared for him some time before he made his appearance. He also mentioned, that the passage contained the beautiful description of Adam and Eve in Paradise, and that he was particularly struck with the effect of the following pause : ā

Enamoured.

hung over her

All his pocket money had at this period been expended in books, and he had to endure the total loss of this precious treasure as it was coming home to him by sea. Dr. Brown always mentioned the circumstance with considerable feeling, and as one of his greatest misfortunes. He never read without a pencil in his hand, to mark the best passages, and ultimately had no pleasure, says his biographer, in reading a book that was not his own. He also adopted Gib- bon’s practice of endeavouring to express his own ideas of a subject of importance, before sit- ting down to read anything upon it.

He entered the university of Edinburgh in his seventeenth year, and commenced with a course of logic under Dr. Finlayson. At Dr. Currie’s house in Liverpool, where he spent the vacation of 1 793, he first perused Mr. Stewart’s Elements of the Philosophy of the Mind ; and the next winter attended that distinguished professor’s lectures, with the greatest assiduity. He had the acuteness however to detect a want of analysis in his tutor’s productions, and, after much hesi- tation, submitted to him a criticism on one of his theories. Mr. Stewart heard him read his paper with great candor and urbanity ; and read to him in return, with a smile of wonder and admiration, a letter which he had previously received from the celebrated M. Prevost of Ge- neva, containing the very arguments of our young philosopher. At this period commenced a warm and steady friendship between Dr. Brown and Mr. Stewart, which was only terminated by the death of the former. Under professors Stewart, Robison, Playfair, and Black, and making such friends as Mr. Brougham, Mr. Homer, Mr. Ley-

den, Mr. Reddie, and Mr. Erskine, nothing could be more promising or delightful than Mr. Brown's college life.

' Many of his college acquaintance came and spent their evenings wkh him in his mother's house. He was always temperate in his habits. His favorite beverage was tea, and, over it, hour after hour was spent in discussing with his youth- ful companions

The wondrous wisdom tbat a day had won.

There was no subject in literature, or philoso- phy, that did not engage their attention. It was often morning before they parted ; and such was

the amicable spirit in which their discussions were carried on, that no one who happened to be present ever recollected the slightest appearance of irritation. In these peaceful and happy hours Dr. Brown distinguished himself by the boldness of his speculations, the acuteness of his reflec- tions, and the noonday clearness with which he invested every subject that was introduced.'

In lines to Mr. Reddie, prefixed to the War- Fiend, Mr. Brown has given a picture of this period, which we cannot refrain from copying :

And, 0 ! whate'er my studious toil may trace, Well irfay thy name there .nnd a votive place ; For who shall say, in grave or light design, IJow much of lightest, gravest, has been thine ? Still memory loves to linger mid the bowers That blessed our youthful academic hours ; When zeal to zeal the ready impulse spread, And Science followed but where Friendship led. Then in close heart, when mingling oft our lore, We marvelled much, but questioned, doubted, morej ā In the gay rural walks where; won or late, Still rose some never weary old debate ; ā Mixed in the flowing theme of truth and mirth, Thought sprung from thought, one equal mutual

birth ; ā

And each, perhaps, with changeful strife untired, Has warred with fancies which himself inspired.

In his nineteenth year he prepared Observa- tions on Dr. Darwin's Zoonomia. They relate chiefly to the first volume, and he conceives one remark to be applicable to the whole of that ingenious philosopher's system, viz. that it is in- consistent with the fundamental principle of the theory, by

which one faculty of the sensorium cannot increase or decrease without a corres- ponding decrease or increase of others. 'With singular ingenuousness he enclosed his papers, before their publication, to Dr. Darwin himself, and a correspondence ensued, in which neither were convinced ; and the senior philosopher did not exhibit the better temper. This work re- ceived on its publication a very respectable character from the Monthly Reviewers, who never suspected it to be the juvenile performance it was. It also introduced its author to the acquaintance and esteem of Lord Woodhouslee, Mr. Macken- zie, and several other writers of eminence.

He was introduced at about the same time into the Literary Society of the University, and the Academy of Physics, distinguished in addition to the names already mentioned among his friends by the assistance of Dr. Birkbeck, Mr. Logan, Mr. Jeffery, Lord Webb Seymour, Mr. Smyth, Mr. Gillespie, Sec. In their free and equal dis- cussions every branch of science and morals was occasionally brought forward. Mr. Welsh per- petuates, in his notes to Dr. Brown's life, some curious minutes of their proceedings, drawn up by various gentlemen, and containing the propo- sitions of Mr. Brougham, Mr. Horner, and several of the early writers in the Edinburgh Re- view. With regard to the freedom of some of their investigations, Dr. Brown remarks admi- rably in after life, 'To conceive that enquiry must lead to scepticism is itself a species of scepticism, as to the power and evidence of the principles to which we give our assent, more degrading, because more irrational, than that

open and consistent scepticism which it dreads.. We are, on the other hand, well reminded by his biographer (Life of Dr. Brown, 8vo. p. 76), that where there is a continual endeavour after the detection of fallacies, both our vanity and indo- lence are apt to lead us to rest satisfied with the detection of an error; without leading us to establish truth in its place.

The Academy of Physics will ever be me- morable in the history of English literature, as giving rise to the Edinburgh Review, to which the first contributors sent their papers, we are told, gratuitously; and of these Dr. Brown was the author of the review of the Philosophy of Kant, the leading article of the second number. But his connexion with it was terminated by some liberties being taken with a papei designed for the fourth number, and was never renewed. We should have observed that, until the year 1798, Dr. Brown had been studying with a view to the legal profession, but finding it impracticable o combine this with his adored literary and philosophical pursuits, he relinquished the study of the law this year, and devoted himself to that of medicine.

Dr. Gregory was much struck with his pro- ficiency, when in 1803 he

applied for his diplo- ma. His thesis was entitled De Somno, which, independent of its ingenuity as a theory, was much admired for the purity of its language ; indeed he expressed himself at this time in Latin with the greatest elegance, and as fast as he could speak in English. Afew months after receiving his degree, he published the first edition of his po- ems in two volumes, which, though neglected a good deal by the public, received the meed of warm applause wherever they came in contact with a refined taste or kindred genius. The next publication of Dr. Brown, though occasioned by a local and temporary dispute in the Univer- sity of Edinburgh, bears the deep impression of his strength of mind, and accuracy of judgment as a metaphysician. Mr. Leslie was opposed as a candidate for the mathematical chair, on account of the approbation with which he had mentioned Mr. Hume, or rather a particular argument of his on causation, in his Essay on Heat. The sub- ject of our memoir undertook to prove that the sentiments of Hume on this point were unobjec- tionable on any moral or religious ground, and in fact a valuable contribution to philosophical logic : while at the same time he ably convicted the unbeliever of false ideas on the origin of power. We can only refer to the essay in ques- tion ; and Mr. Welsh's own excellent notes H and I, in chapter IV. of his life of Dr. B., for a further elucidation of this interesting topic. Professor Playfair speaks of his argument as be- ing as clear and exact as could be expected iu the solution of an algebraic question.

In 1806 he became associated in partnership with Dr. Gregory, as a physician, and, during a course of the most flattering success in his profes- sion, was invited in 1808 on occasion of Mr. Stewart's ill health, to supply the place of that gentleman in the moral philosophy class of the university. In general, as Dr. Brown's biogra- pher remarks, it is easy enough for a professor to find a substitute. Nothing more is necessary

i this occasion, must depend wholly on compo- tions of his own. He acquitted himself,

than to transfer a MS. lecture to a tolerably patient and judicious friend. But Mr. Stewart's MS. lectures were mere notes, and Dr. Brown, it was well understood, if he undertook to lecture on

sitions

however, with such great credit on his first appearance, that the professor solicited the more serious service of his contributing his three lec- tures a-

week to his class during the succeeding winter. The enthusiastic admiration with which he was at this time received, says Mr. Welsh, was beyond any thing of the kind that I can recollect.

'The moral philosophy class presented a very striking aspect. It was not a crowd of youthful students led away in the ignorant enthusiasm of the moment; distinguished members of the bench, of the bar, and of the pulpit, were daily present to witness the powers of this living philosopher. Some of the most eminent of the professors were to be seen mixing with the students, and Mr. Playfair, in particular, was present at almost every lecture. The originality, and depth, and eloquence of the lectures, was the subject of general conversation, and had a very marked effect upon the young men attending the univer- sity, in leading them to metaphysical specula- tions.'

'Upon its being announced that Mr. Stewart was to resume his lectures, a meeting of the class was held, when it was resolved that a committee should be appointed to draw up an address, con- gratulating that illustrious philosopher upon the recovery of his health, and expressing at the same time the feelings of admiration that had been ex- cited by the labors of his substitute. The com- mittee was composed of individuals distinguished for their rank and talents, many of whom are well known to the public. Lord John Russel, who has since distinguished himself in political life, and by his literary productions secured for his name no humble place in the brief list of noble authors, was the chairman.'

This display of Dr. Brown's powers so irre- sistibly established his claims to the future chair, that when Mr. Stewart expressed his desire to receive a coadjutor in the professorship, the de- cision in favor of him was almost unanimous. Mr. Stewart himself exerted all his influence in the university in his favor ; and the most honor- able testimonials to his competence crowded the table of the town council of Edinburgh. In May, 1810, the late Mr. Horner thus congratulates him on his elevation : ā

To DR. BROWN. Lincoln's Inn. May 8th, 1810.

MY DEAR BROWN,

Lord Webb has done me the kindness to give me the news of your appointment as assistant and successor to Mr. Stewart. Upon any occa- sion of private advantage only to yourself, I need not assure you how sincerely I should rejoice at your good fortune and welfare. But in this event one has the pleasure to find every public as well as private wish gratified. I am made happy by it on Mr. Stewart's account, who fell

so natural an anxiety that the fate of his favorite science and the

reputation of his chair should be maintained by no unworthy successor. I am happy for your sake, that you are enabled to devote your life to the pursuits in which you have most pleasure, and in which you have a long course before you of fame and discovery and good to mankind. But what, you will allow me to say, gives me more pleasure than any other consideration, is to see the university, and through it the interests of philosophical opinion in Scot- land, rescued from the danger which seemed to threaten them with complete ruin, of the chair of moral philosophy being filled by one of those political priests who have already brought such- disgrace upon the university, and done so much injury to learning. In your hands, all those great interests are not only safe, but sure of ad vancement. Believe me, therefore, it is with no common feelings of satisfaction and exultation that I con- gratulate you on this appointment. I am ever, my dear Brown,

Most faithfully yours,

FRA. HORNER.

On Dr. Brown now devolved the entire labor of the professorship ; and though he retired for a few weeks into the country, to recruit himself in preparation for the ensuing winter's exertions, he had sufficient confidence in his own powers, it is said, to be assured that he could always prepare his lectures on the spur of the occasion. He seldom began to prepare any of them till the evening of the day before they were delivered. His labors commenced immediately after tea, and he continued at his desk till two, and often three, in the morning. After the repose of a few hours he resumed his pen, and often continued writing till he heard the hour of twelve, when he hurried off to the delivery of what he had com- posed. When the lecture was over, if the day were favorable, he would walk out, or employed his time in light reading, until his favorite beve- rage of the afternoon again restored him to the proper tone for renewed exertion. The first three volumes of his printed lectures were thus written during the first year of his professorship, and the whole of the remainder in the following season. He continued to read nearly the same lectures till the period of his lamented decease. The examination of his theory, and his many most valuable observations on the sciences, are necessarily referred to cur articles on the subject of METAPHYSICS ; and to MORAL PHILOSOPHY.

The further details of his personal history are few and mournful. We must not omit, however, a characteristic anecdote of their intercourse, preserved by Mr. Welsh.

'In speaking of a celebrated philosophical work, recently published, which I had been read- ing, I happened to express myself with consider- able

warmth of admiration. Dr. Brown, I ob- served, did not go along with me in my praises; and when I mentioned one particular chapter as very valuable, ‘ Why, really,’ said he, ‘ I am not quite sure that I recollect his doctrines upon that head ; will you state in a single sentence what his views are.’ This I found no little dif- ficulty in accomplishing. And I discovered that

he took this method of leading me to perceive that there was a want of precision in my favorite author, and that I had allowed my admiration of his eloquence to make me forget a vagueness in his ideas, and an obscurity in some of his state- ments. The critical doctrine implied in this short sentence of Dr. Brown was of so much ad- vantage to me at that period of my studies, that I have recorded it for the benefit of those who may be at a similar stage in their academical course, though, in other respects, of little interest. Connected with his views of philosophical dis- quisition, however, it is valuable. I may here put together the substance of his ideas upon this subject, which I heard him at different times ex- press.

‘ He conceived that every philosophical writing oughtvto resemble a system of pyramids, each part a whole in itself, portions of which are to be grouped into larger pyramidal forms, which ought all to be so arranged as to constitute one great pyramid. In every sentence there ought to be a principal idea complete in itself, but forming an element of all the ideas that are joined into one paragraph. The idea of the paragraph is still one, which is to be grouped with all the other paragraphs into a section; the sections in their turn form larger divisions, which altogether constitute one mighty whole. To have a distinct view of all the particulars, each in itself, and at the same time in their mutual references and in their united reference to the great whole, constitutes, as he conceived, an es- sential element of the philosophic genius. This was what Dr. Brown himself constantly aimed at, and the effect of his system is to be observed in all his works. It was chiefly for this reason that he made use of a method of short-hand, which he invented; the benefit of which he found to consist not merely in enabling him to put down his ideas rapidly, but also in the power thus given him by the extreme minuteness of the character of taking in the whole subject both with his eye and his mind at a single glance.’

He instanced the Latin as affording the best example of synthetic language, and considered it indispensibly necessary for every author who aimed at precision, to keep up a constant fami- liarity with the Latin classics, and to compose frequently in Latin. He also recommended his pupils frequently to

attempt the translation of English works of eminence in their own words. From a miscellaneous MS. work of his, entitled A Chaos, we must gratify the reader with the following extract on the subject of religion : ā

‘ To the use of religion, as one of the great parts of the complicated machinery employed in the production of general happiness, it is ob- jected, that the vindictive hatred of vice, so necessary to the preservation of virtue, is dimi- nished by the thought that the criminal is to be punished for the same fault by a judge more terrible in his wrath, and less bounded by time, than those”whose sentence extends only over a small portion of the criminal’s existence. The effect, however, will surely be contrary, if the justice of God, as well ashisoower and disposition to punish, be admitted by the pious believer; for the idea of deserved punishment being thus continually

associated with the idea of offence, all the dis- agreeable feelings which attend the idea of punishment will be suggested by that of guilt, and will thus render it doubly hateful, in the same manner as the idea of poverty becomes doubly hateful to those who could submit to the absolute physical privations which it causes, from suggesting the disagreeable feelings excited by that contempt which usually follows indi- gence. There is also another mode in which religion acts in the aggravation of moral guilt. It furnishes a new relation which is violated; and we hate the sinner not merely for injuring man whom we love, but for contemning likewise the adorable Being whom we revere. That man is frequently led by creeds and rituals to console himself in the mysterious pomp of complicated forms, for his neglect of the simple principles of useful activity, is a remark unfortunately veri- fied by experience. But this only tends to show still more clearly the influence of religious opinion if properly directed. It is a concurring force which adds equally to the momentum of bodies, whether the line in which they move be that of virtue or of vice. If the religion of Moloch could lead the half-unwilling mother in dreadful procession to the fire which was about to receive the infant that clung smiling round her neck, can we suppose that a religion of benevolence would be scorned, which, mixing the solemnity of divine command with the sweet eloquence of nature, should teach the parent that his purest worship was the protection of that helplessness which heaven had trusted to his love? Would desire be rendered less powerful by the addition of new motives, and virtue cease when it became devotion ? Is there so great a love of misery in man that he would submit to the feverish repose of a bed of spikes, that he would lacerate his limbs with daily penance, and consume his strength with the pangs of voluntary hunger, while, with the same motives of obedience to the awarder of eternity, he would be unwilling to partake of the luxury of tranquil life, and to praise with the thankfulness of enjoyment ! But the most important effect of religion is the reality which it gives to the idea of

obligation. The belief of the doctrine of necessity prepares the mind for the denial of any essential difference of morality ; and it is the advantage of piety, that it arrests scepticism in this most dangerous of its stages, by referring to the sanction of the divine will : we believe, and we cease to inquire. Let those who deny the utility of religion con- ceive a world without it, a world of Enquirers, of Necessarians, of Indifferentists. They will find comfort in reflecting, that it is not the scene around them, but a picture of imagination, and will allow the importance of that principle which, if it be false, preserves from the evils of truth, and checks enquiry only where enquiry is dangerous.'

In the summer of 1814 he finished his Para- dise of Coquettes, a publication on which his fame as a poet chiefly rests. A part of it had been written nearly six years : it was published anonymously in London. To this succeeded, in 1815, The Wanderer of Norway, and, in 1816, The Bower of Spring, as the works of The Author

of the Paradise of Coquettes. In the following year he lost his amiable and excellent mother, to commemorate whose virtues he composed his Agnes, published in 1818. A real mother's smile was never more beautifully described.

But age has still, all gentle and benign, Another form, ā and O! that form was thine;ā ā The smile, which youth, when gayer eyes are round, Oft turns to seek, ā more happy, when 'tis found ; The glance that bids but wrath or sorrow cease ; The peaceful voice, which but to hear is peace ; The temper, milder, as the years that part Loose many a ruffling care which galled the heart j And all the soul, to holiest wishes given, More pure, more heavenly, as still nearer heaven.

His poem Emily succeeded the above in 1819. His biographer admits that his fame as a philo- sopher suffered by this evident devotion to the Muses : but pleads in extenuation, the rapidity with which he arrived at the knowledge of all the abstruse questions of moral philosophy, and the weariness that the further investigation of them excited in his mind ! We must leave the facts and this singular plea with the reader, re- gretting still that in his important situation, and for a philosopher so gifted, such an apology should be necessary ā as also that we cannot here indulge ourselves with extracting some of those beautiful productions of his muse, which will prove his best defence at the bar of pos- terity.

In the summer of 1819 he began to print the first part of his Course of Lectures, and returned . to Edinburgh in the autumn, apparently in high health : but just before the Christmas vacation he became unwell, and confined himself during the holidays to his house. His only complaint at this time seemed to be an encreasing quick- ness of pulse when composing, and a feeling of weakness. When he again met his class the lecture unhappily was one of great moral interest. It is the thirty-fifth in the printed course. He was observed to repeat with unusual emphasis the extract from Beattie's Hermit ā concluding with ā

Nor yet for the ravage of winter I mourn, Kind nature the embryo blossom will save,

But when shall spring visit the mouldering urn O ! when shall it dawn on the night of the grave ?

and this was the last lecture he delivered. He was now compelled to find a substitute in Mr. John Stewart, tˆnd the regret he felt at being unable to attend his class is said to have rapidly increased his disorder. In the beginning of Fe- bruary he retired to the ccuntiy seat of his friend Dr. Charles Stewart ; and here a dreadful storm, succeeded by heavy falls of sucw, evidently shat- tered his declining frame. His biographer visited him here for the last time, and found him in bed. The very first look impressed him, he says, with the mournful presage that there was nothing to hope. His face was pale, his cheeks excessively sunk ; but, amidst the death of every other feature, his eye had all its former mild intelli- gence. He complained at this time that his friends pressed him to go abroad ; and consented ā ¢with reluctance shortly after to undertake a voyage to London At sea he felt relieved, es- VOL. IV.

pecially wncn tlie vessel was in rapid motion1 and revived a little at Brompton ; but soon gra- dually sunk into the most distressing weakness, and finally died in his drawing-room on the 2nd of April, 1820, suddenly, but without the least apparent pain.

The character of Dr. Brown as a philosopher is already too well estimated to require any fur- ther comment here. We are particularly pleased with the gentleness and swee.t domestic manners with which it was united in this distinguished person : and the eulogium of his man-servant surpasses that of many that ' mark the marble' of such tombs as his. ' My master always had a happy face, but it never looked so happy as when he was coming in at his own door.' To his mother and sister he read everything he wrote, often more than once ; and so enjoyed his family circle, that, after being called to the moral phi- losophy chair, he allowed himself only two days in the week to go abroad. So perfect, it is said, was his command over his

temper, that an angry word was hardly ever heard from him. Yet he never submitted to disrespectful treatment; a look of his would instantaneously produce the most perfect silence among his pupils. ā¢ ‘ In af- fection, as a son and brother,’ says his warm friend and biographer, Mr. Welsh, ‘ he was un- equalled. He was kind and considerate as a master, and his friendship was truly invaluable.’ As a poet, he is of the school of Pope, and has many claims to be ranked as ‘ a brother ā near the throne.’

BROWN (William), a late eminent engraver of gems, was in early life much patronised by the empress Catharine of Russia, in whose cabinet his best specimens are preserved. He was after- wards employed at Paris by Louis XVI., and, being driven by the revolution to England, pro- duced a beautiful set of portraits, now the prˆ- perty of his Majesty. He died in John-street, Fitzroy-square, July 20th, 1825, aged seventy-six.

BROWN’BILL, n. s. From brown and bill. The ancient weapon of the English foot ; why it is called brown I have not discovered ; but we now say brown musket from it.

And brownbillt, levied in the city, Made bills to pass the grand committee. Iludibras.

BROWNE (George), archbishop of Dublin, and the first prelate who embraced the doctrines of the reformation in Ireland, was originally an Austin-friar of London, and was educated near Halywell, Oxford. He afterwards became pro- vincial of his order, and having obtained his degree of D. D. abroad, was admitted to the same at Oxford and Cambridge, in 1534. After reading Luther’s writings he began to teach the people. This recommended him to Henry VIII. who, in 1535, promoted him to be archbishop of Dublin, and nominated him one of the commis- sioners for abolishing the papal supremacy in Ireland. In 1551 king Edward VI. gave him the additional honor of primate of all Ireland ; but in 1554 he was deposed by queen Mary, on pretence of his being married. He published a work against keeping the Scriptures in the Latin tongue, and against the worship of images. He died in 1556.

BROWNE (William), an English poet ot the se- venteenth century, born at Tavistock, in 1590. He was sent to Exeter College, Oxford, in the beginning of the reign of James I. and became tutor to Robert Dormer, afterwards earl of Car- narvon. After he had left college with his pupil, he was taken

into the family of William earl of Pembroke. His poetical works procured him great reputation. They are, 1. Britannia's Pas- torals. The first part was published at London, 1616, in folio; and ushered into the world with verses by his friends John Selden, Michael Dray- ton, Christopher Cook, &c. The second part was printed at London in 1616, and recommend- ed by verses written by John Glanville, (after- wards eminent in the law) and others. 2. The Shepherd's Pipe, in seven eclogues. Lond.1614, in 8vo. 3.' An Elegy on the never enough be- wailed death of prince Henry, eldest son of king James J.

BROWNE (Sir Thomas), M. D. now princi- pally known as the author of Vulgar Errours, was of respectable parentage, and was left an ample fortune by his father, who died young. He was educated at Winchester and Oxford, and was the first man of eminence, as Ward observes, who graduated at Pembroke College. He de- voted himself to the study of physic, and having taken his degree of A. M. practised for a short time in Oxfordshire. After this he visited his mother, who was then with her second husband, Sir Thomas Dutton, in Ireland, and travelled over a great part of that country with his father- in-law. He now went to France, and spent some time at Montpelier ; visited Padua ; and thence proceeded to Leyden, where he continued until he took his doctor's degree. This was about the year 1633. There is.no authentic account of his travels. ' To consider, therefore,' says Dr. Johnson, ' what pleasure or instruction might have been received from the remarks of a man so curious and diligent, would be voluntarily to indulge a painful reflection, and load the imagination with a wish, which, while it is formed, is known to be vain. It is, however, to be lamented, that those who are most capable of improving mankind, very frequently neglect to communicate their knowledge ; either because it is more pleasing to gather ideas than to impart them, or because to minds naturally great, few things appear of so much importance as to de- serve the notice of the public.

In 1764 was published, in London, his Reli- gio Medici, the MS. of which, as Browne alleged, was obtained surreptitiously, but Johnson regards this as a mere stratagem of authorship. On this Sir Kenelm Digby published observations, which are now generally bound up with it. The re- marks are acute and ingenious, but what seems most wonderful is, that it cost the writer only twenty-four hours in procuring, reading, and mak- ing annotations on the book. The Religio Me- dici, was soon after translated into Latin by Mr. Merryweather, a gentleman of Cambridge, and from his version it was again translated into Italian, German, Dutch, and French. An edi- tion of the Latin version was published at Stras- burg, with large notes by L. Nicolaus Moltfarius. The peculiarities of this book raised the author many admirers, and many enemies; it was only,

however, professedly answered by one writer, Alexander Ross, in a work entitled Medicus Medicatus, which was never much noticed. In 1637 he was incorporated M. D. in the university of Oxford, and then settled at Norwich as a phy- sician, where he obtained considerable practice. Shortly after, his reputation procured his admis- sion as an honorary member of the Royal College of Physicians, London. In 1641 he married Mrs. Dorothy Mileham, a lady of a good family in Norfolk, and of great personal as well as men- tal endowments; but the qualities of the lady did not protect him from the sarcasms of the wits, who remembered that he had described the taking a wife as ' the foolishest thing a wise man did.'

In 1646 appeared his Pseudoxia Epidemica, or Treatise on Vulgar Errours, a work received like the former, with great applause. Amongst these errors he ranks the Copernican system, and men- tions the idea of the earth's motion more than once with perfect contempt. ' He was not unwilling to pay labor for truth,' says Johnson, ' and combats with great learning and ingenuity, numerous no- tions or opinions on natural and otherobjects,which had obtained general credit, not only among the common people, but among physicians and other literary persons.' In the latter part of his life we apprehend, however, that a little labor might have brought him better acquainted with the brilliant discoveries of some of his contempo- raries. In 1658 he published Hydriotaphia, or Discourse on Urn-burial, together with the gar- den of Cyrus, or the Quincunxial Lozenge, or Net-work Plantation of the Ancients, &c. a work sufficient of itself to establish his claim to prodi- gious learning : was knighted in 1671 by Charles II. as he passed through Norwich; and died in that city, on his seventy-seventh birth-day, inl 682.

He left several tracts, says Whitefoot, in his closet, which he intended to publish; and two collections of them made their appearance, one edited by Dr. Jennison, the other in 1722 by an anonymous editor. Dr. Johnson's fine observa- tions on his style we cannot omit. ' It is not on the praises of others, but on his own writings, that he is to depend for the esteem of posterity of which, he will not easily be deprived, while learning shall have any reverence among men ; for there is no science in which he does not discover some skill, and scarcely any kind of knowledge, profane or sacred, abstruse or elegant, which he does not appear to have culti- vated with success. His style is vigorous, but rugged ; learned, but pedantic ; deep, but ob- scure; it strikes, but does not please. His tropes are harsh and his combinations Uncouth. In de- fence, however, of his uncommon words and ex- pressions, it should be considered, that his sen- timents were uncommon, and that he was not content to express in many words, that idea for which any language could supply a single term.' As Browne has been accused of infidelity, the following extract, from his Treatise on Urns, may do some justice to his sentiments on the subject of a future state ; and

will, at the same time, exhibit some characteristics of his style. 'With these hopes Socrates warmed his doubtful spirits against the cold potion ; and Cato, before he durst give the fatal stroke, spent part of the

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till

night in reading the immortality of Plato, thereby confirming his wavering hand unto the animosity of that attempt. ā It is the heaviest stone that melancholy can throw at a man to tell him he is at the end of his nature ; or that there is no further state to come, unto which this seems pro- gressional, and otherwise made in vain : without this accomplishment, the natural expectation and desire of such a state were but a fallacy in nature : unsatisfied considerators would quarrel at the justness of the constitution, and rest con- tent that Adam had fallen lower, whereby, by knowing no other original, and deeper ignorance of themselves, they might have enjoyed the hap- piness of inferior creatures ; who in tranquillity possess their constitutions, as having not the ap- prehension to deplore their own natures ; and being framed below the circumference of these hopes of cognition of better things, the wisdom of God hath necessitated their contentment.'

BROWNE (Isaac Hawkins), an ingenious English poet, born at Burton upon Trent, January 21st 1705-6 ; of which place his father was the minister. He received his grammatical instruction first at Litchfield, then at Westminster; whence, at sixteen years of age, he was removed to Trinity College, Cambridge. He remained there till he had taken the degree of M. A. and about 1727 settled in Lincoln's Inn, where he devoted more of his time to the muses than to the law. He wrote several poems, particularly one on Design and Beauty, which he addressed to Mr. High- more the painter, for whom he had a great friend- ship : and the Pipe of Tobacco ; in imitation of Cibber, Ambrose Philips, Thomson, Young, Pope, and Swift, who were then all living. This is reckoned one of the most pleasing and popular of his performances. In 1743-4 he married the daughter of Dr. Trimnell, archdeacon of Leices- ter. He was twice chosen to serve in parliament, in 1744 and 1748, for the borough of Wenlock in Shropshire ; near which place he had a con- siderable estate, left by his maternal grandfather, Isaac Hawkins, Esq. In 1754 he published what was deemed his principal work, De Animi Irnmortalitate, in two books ; in which, besides a most judicious choice of matter and arrange- ment, he is thought to have shown himself a happy imitator of Lucretius and Virgil. The great popularity of this poem produced several English translations of it; the best of which is that by Soame Jenyns, printed in his Miscella- nies. Mr. Browne intended to have added a third part, but left only a fragment. This ex-

cellent person died, after a lingering illness, in 1760, aged fifty-five. In 1768 his son Hawkins Browne, Esq. published an elegant edition of his father's poems, in large 8vo. to which is prefixed a, print of the author, from a painting of Mr. Highmore, engraved by Ravenet.

BROWNE (William G.), an English traveller, visited the kingdoms of Darfur and Bornou in the interior of Africa, and was the first who made those countries known to Europeans. Re- turning to England he published in 1799 'Tra- vels in Africa, Egypt, and Assyria, from 1792 to 1798,' 4to. He subsequently went to Asia, and in a journey through Persia, about 1814, lost his life under circumstances which have never been

fully understood He had staid some time at Constantinople, to perfect himself in the Turkish language ; and thinking it would facilitate his progress among the Asiatic tribes, he assumed the Turkish costume. Thus equipped he set off with an intention to penetrate through Khorasan, and then visit the Caspian and Astrachan. Dur- ing the early part of his journey he had a con- ference with Sir Gore Ouseley, the British am- bassador; and at Oujon was admitted to an audience of the king of Persia. Proceeding on his route, he reached the pass of Irak, where he stopped to take some refreshment. He now mounted his horse, and, leaving the servant to pack up and follow him, rode eently forward along the mountains ; but had scarcely gone for- ward half a mile, when two men on foot sud- denly coming behind him, one of them with a club struck him senseless from his horse. Se- veral others instantly made their appearance, and bound him hand and foot. As soon as he reco- vered the use of his faculties, he saw the banditti plundering his baggage, with which his servant had in the mean time come up. He was told by the wretches into whose hands he had fallen, that they intended to put an end to his life, though not in that place. Finding expostulation useless, and incapable of resistance, he merely entreated them to spare his servant, and allow him to depart with his papers, which could be of no use to them. This they agreed to; and what will appear more singular, the assassins, who might be supposed to consider arms as acquisi- tions of the utmost importance, made the man a present of his master's pistols and double- barrelled gun. They then suffered Mr. Browne to see his servant safe off, who immediately re- turned to Tabreez, and related what had occurred. Abbas Mirza, prince of Persia, now despatched several parties of horsemen to search the pass of the caravanserai and its neighbourhood, and in a valley on the opposite side of the mountain they found the corpse of the unfortunate traveller, which had been left naked and exposed to the beasts of the forest. It was by the prince's orders conveyed to Akhand, and interred. See Sir R. K. Porter's Travels in Georgia, Persia, $c. 4to.

BROWNEA, or BROWNIA, in botany, a genus of the endecandria order, in

the monadelphia class of plants: CAL. bifid; COR. double, the exterior quinquefid, and the interior pentapeta- lous ; legume unilocular. Species four ; all na- tives of South America, and magnificent plants; especially B. corcinea and B. rosa de monte with heads of red flowers as large as a cocoa-nut.

BROWNISTS, a religious sect, which sprung out of the Puritans, towards the close of the six- teenth century : so named from their leader, Robert BROWN, which see. They were also called Barrowists, from another of their preachers. To avoid the persecutions of the English bishops, Brown, with his congregation, left the kingdom, and settled at Middleburgh in Zealand ; where they obtained leave of the states to worship God in their own way, and form a church according to their own model ; which they had not long done before they began to differ among them- selves, and divide info so many parties, that

Brown, their pastor, grew weary of his office; and returned to England in 1589. This was attended with the dissolution of the church at Middleburgh ; but the seeds of Brownism, sown in England, were so far from being rooted out, that Sir Walter Raleigh in a speech, in 1592, computes no less than 20,000 Brownists. The occasion of their separation was not the faith, but only the discipline and form of govern- ment of the churches in England. They equally charged corruption on the episcopal and presby- terian forms; nor would they join with any other reformed church, because they were not assured of the sanctity and regeneration of the members that composed it ; on account of the toleration of sinners, with whom they maintained it an im- piety to communicate. They condemned the solemn celebration of marriages in the church ; maintaining, that matrimony being a political contract, the confirmation thereof ought to come from the civil magistrate ; an opinion in which they are not singular. They would not allow any children to be baptised of such as were not members of the church, or of such as did not take sufficient care of those baptised before. They rejected all forms of prayer ; and held that the Lord's prayer was not to be recited as a prayer, being only given for a rule or model whereon all our prayers are to be formed. Their form of church government was democratical. When a church was to be gathered, such as desired to be members made a confession of it, and signed a covenant, by which they

obliged themselves to walk together in the order of the gospel. The whole power of admitting and excluding members, with the decision of all controversies, was lodged in the brotherhood. Their church officers were chosen from among themselves, for preaching the word, and taking care of the poor, and separated to their several offices by fasting, prayer, and imposition of hands of some of the brethren. But they did not allow the priesthood to be any dis- tinct order. As the vote of the brotherhood made a man a minister, and gave him authority to preach and administer the sacraments among them, so the same power could discharge him from his office, and reduce him to a mere layman again. Ard, as they maintained the bounds of a church to be no greater than what could meet together in one place and join in one communior, so the power of these officers was prescribed within the same limits. The minister or pastor of one church could not administer the Lord's supper to another, nor baptise the children of any but those of his own society. Any lay brother was allowed the liberty of giving a word of exhortation to the people ; and it was usual for some of them, after sermon, to ask questions, and reason upon the doctrines that had been preached. In a word, every church on their model is a body corporate, having full power to do everything which the good of the society re- quires, without being accountable to any class, synod, convocation, or other jurisdiction what- ever. Most of their discipline has been adopted by the Independents, a party which afterwards arose from among the Brownists. The laws were executed with great severity on the Brownists ; their books were prohibited by queen Elizabeth, end their persons imprisoned, and many of them

were hanged. The ecclesiastical commission, and the star-chamber, distressed them to such a de- gree that they resolved to quit their country. Accordingly, many families retired and settled at Amsterdam, where they formed a church, and chose Mr. Johnson their pastor ; and after him Mr. Ainsworth, author of the learned commen- tary on the Pentateuch. Their church flourished near 100 years. See INDEPENDENTS.

BROWNSTUD'Y, n. s. From brown, and study. Gloomy meditations; study in which we direct our thoughts to no certain point.

They live retired, and then they doze away their time in drowsiness and brownttudies j or, if brisk and active, they lay themselves out wholly in making com- mon places. Norrit.

BROWNSVILLE, or Redstone Old Fort, a flourishing post town of Pennsylvania. It is situated in Fayette county, on the south-east bank of Monongahela river, between Dunlop and Redston creeks ; over the former a bridge has been erected, which connects Bridge-port, a small village on the opposite side of the creek, with Brownsville. It is 260 feet long, fourteen

broad, and thirty-six feet in height. The town is laid out in regular streets, crossing each other at right angles. Boats are built here for trade and emigration to Kentucky. It is thirty-five miles south by east of Pittsburg, twelve north-west of Union, twenty-five south-east by east of Washing- ton, and 310 west of Philadelphia.

BROWNY, a serviceable kind of sprite, who, according to a superstitious notion,formerly preva- lent in the Hebrides and Highlands of Scotland (as well as among the country people in England, where he had the name of Robin Goodfellow), was wont to clean the houses, help to churn, thresh the corn, and belabor all that pretended to make a jest of him. He was represented as stout and blooming, had fine long flowing hair, and went about with a wand in his hand. He was the very counter part of Milton's Lubber Fiend.

BROWSE', v. & n. 1 Ital. broscare ; Fr. brou-

BROWS'ING. \ ter ; from Lat. abrodo,

or /Spwfficw. See BRUSHWOOD. To feed on young shoots or branches of trees.

And being down, is trod in the dirt Of cattle, and brtnaed, and sorely hurt. Spenser.

Thy palate then did deign The roughest berry on the rudest hedge : Yea, like the stag, when snow the pasture sheets, The barks of trees thou brousedtt. Shakspeare.

They have scared away two of my best sheep ; if any where I have them, 'tis by the sea-side, browsing on ivy. Id.

The greedy lioness the wolf pursues, The wolf the kid, the wanton kid the browte. Dryden. Could eat the tender plant, and, by degrees,

Browse on the shrubs, and crop the budding trees.

Blackmore. On that cloud-piercing-hill,

Pliulimmon, from afar, the traveller kens,

Astonished, how the goats their shrubby browte

Gnaw pendent. Philipt.

But, peering down each precipice, the goat Browseth. Byron. Childe Harolde.

BROWTING; brouter; among the French gardeners, signifies breaking off the tips of the slender branches of trees, when too long in pro- portion to their strength.

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BRUCE (James), Esq. of Kinnaird, F. R. S., one of the most celebrated travellers known in history, was born at Kinnaird in Stirlingshire, December 14th, 1728. He was instructed in classical learning at Harrow. Returning to Scot- land, he intended to study the law ; but, from the barbarity of his step-mother, a daughter of the >ate Governor Glen, he resolved to push his for- tune in the East Indies. But, not procuring an appointment in the Company's service, he en- gaged in partnership with Mr. Allen, merchant, London, whose daughter he married, but lost within a year after. To dispel grief he travelled, but, his father dying in 1758, he returned to Britain to take possession of the inheritance of his ancestors. About this time Lord Chatham intended to employ Mr. Bruce upon a particular service, but his resignation soon after put it out of his power. Similar intentions were enter- tained by Lord Egremont, but his lordship's death prevented the fulfilment. It fell to the lot of the earl of Halifax to do more than fulfil the intentions of his predecessors, by pointing out a scene of action to Mr. Bruce, where his abilities have since been exerted with so much honor to himself and his country. To explore the coast of Barbary ; to investigate its natural history, ancient architecture, and other curiosities, hitherto little known or illustrated by former travellers ; and to make large additions to the royal collec- tion ; were the outlines of his lordship's plan. To discover the source of the Nile was also men- tioned, but rather as an object to be wished than hoped for, from so young a traveller. The resignation of the consul of Algiers at this time, and the death of his newly appointed successor, favored the earl's plan ; who pressed Mr. Bruce to accept of the consulship ; which he did the more cheerfully, that the transit of Venus was at hand, which he hoped to see from Algiers. Within a year after his arrival there he qualified himself, by the acquisition of the Arabic, to ap- pear without an interpreter. At Algiers he was detained longer than he expected, in consequence of a dispute with the Dey concerning Mediter- ranean passes. The business being adjusted, he proceeded to Mahon, and from Mahon to Car- thage. He afterwards visited Tunis and Tripoli, and travelled over the interior parts of those states. At Bengazi, a small town on the Medi- terranean, he suffered shipwreck, and with ex- treme difficulty saved his life, though with the loss of all his baggage. He afterwards sailed to the isles of Rhodes and Cyprus ; and, pro- ceeding to Asia Minor, travelled through a con- siderable part of Syria and Palestine, visiting Latakia, Aleppo, and Tripoli, near which last city he was again in

imminent danger of perish- ing in a river. The ruins of Palmyra and Baalbec were next carefully surveyed and sketched by him ; and his drawings of these places are de- posited in the king's library at Kew ; the most magnificent present, in that line, to use his own words, 'ever made by a subject to his sovereign.' Bruce now prepared for the grand expedition, the accomplishment of which had ever been nearest his heart, the discovery of the source of the Nile. In the prosecution of that great and dangerous object, he left Sidon on the loth of

June 1768, and arrived at Alexandria on the 20th of that month. He proceeded from thence to Cairo, where he continued till the 12th of De- cember, when he embarked on the Nile, and sailed up that river as far as Syene, visiting in the course of his voyage the ruins of Thebes. Leaving Kenne on the Nile, 16th of February 1760, he crossed the desert of the Thebaid to Cosseir on the Red Sea, and arrived at Jidda on the 3d of May. In Arabia Felix he remained, not without making several excursions, till the 3d of Septem- ber, when he sailed from Loheia, and arrived on the 19th at Masuah, where he was detained near two months by the treachery and avarice of the Naybe of that place. It was not till the 15th of November that he was allowed to quit Arkeeko- near Masuah ; and he arrived 15th of February 1770 at Gondar, the capital of Abyssinia, where he ingratiated himself with the most considerable persons of both sexes belonging to the court. Several months were employed in attendance on the king; and in an unsuccessful expedition round the lake of Dambea. Towards the end of October, Bruce set out for the source of the Nile, at which long desired spot he arrived on the 14th of November; and his feelings on the accom- plishment of his wishes cannot better be ex- pressed than in his own words : ' It is easier to guess than to describe the situation of my mind at that moment ; standing in that spot which had baffled the genius, industry, and enquiry of both ancients and moderns, for the course of nearly 3000 years. Kings had attempted this discovery at the head of armies, and each expedition was distinguished from the last, only by the difference of the numbers which had perished, and agreed alone in the disappointment which had uniformly and without exception followed them all. Fame, riches, and honor, had been held out for a series of ages to every individual of those myriads those princes commanded, without having produced one man capable of gratifying the curiosity of his sovereign, or wiping off the stain upon the enter- prise and abilities of mankind, or adding this desideratum for the encouragement of geography. Though a mere private Briton, I triumphed here in my own mind over kings and their armies ; and every comparison was leading nearer and nearer to the presumption, when the place itself where I stood, the object of my vain glory, sug- gested what depressed my short-lived triumphs. I was but a few minutes arrived at the source of the Nile, through numberless dangers and suffer- ings, the least of

*which would have overwhelmed me, but for the continual goodness and protec- tion of Providence ; I was, however, then but half through my journey, and all those dangers which I had already passed, awaited me again on my return. I found a despondency gaining ground fast upon me, and blasting the crown of laurels I had too rashly woven for myself.' He now bent his thoughts on his return to his native country, and arrived at Gondar 19th of Novem- ber 1770 ; but found, after repeated solicitations, that it was not an easy task to obtain permission to quit Abyssinia. A civil war in the mean time breaking out, no uncommon occurrence in that barbarous country, several engagements took place between the king's forces and the rebels**

particularly three actions at Serbraxos, in May 1771. In each of them Bruce acted a consider- able part ; and, for his valiant conduct in the second, received as a reward from the king a chain of gold of 184 links ; each link weighing 3-rj dwts., or somewhat more than 2J Ibs. troy, in all. At Gondar, after these engagements, he again earnestly entreated to be allowed to return home, which was long resisted : but his health at last giving way, from the anxiety of his mind, the king consented to his departure, on condition of his engaging by oath to return to him in the event of his recovery, with as many of his kindred as he could engage to accompany him. After a residence of nearly two years in that wretched country, he left Gondar, Dec. 16th, 1771, taking the dangerous way of the desert of Nubia, in place of the most easy road of Masuah, by which he entered Abyssinia. He was induced to take this route from his experience of the savage temper of the naybe of Masuah. Arriving at Teawa, 21st March 1772, he found the sheik Fidele, at Atbara, the counterpart of the naybe of Masuah in every bad quality. By his intre- pidity and prudence, however, and by making good use of his foreknowledge of an eclipse of the moon, which happened on the 17th of April, he was permitted to depart next day, and arrived at Senaar on the 20th. At this miserable and inhospitable place he was detained upwards of four months. This delay was occasioned by the "illany of those who had undertaken to supply him with money; but at last, by disposing of \ 78 links of his gold chain, the well-earned tro- phy of Serbraxos, he was enabled to make prepa- rations for his dangerous journey through the deserts of Nubia. He left Senaar on the 5th of September, and arrived on the third of October at Chendi, which he quitted on the 20th, and travelled through the desert of Gooz, to which village he came October 26th. On the 9th of November he left Gooz, and entered upon the most dreadful and dangerous part of his journey, the perils attending which he has related with a power of pencil not unworthy of the

greatest masters. All his camels having perished, he was under the necessity of abandoning his baggage in the desert, and with the greatest difficulty reached Assouan upon the Nile, November 29th. Aftei some days rest, having procured fresh camels, he returned into the desert and recovered ids bag- gage, among which was a quadrant, of three feel radius, supplied by Louis XV. from .he Military Academy at Marseilles, by means of which noble instrument, now deposited in the museum at Kinnaird, Mr. Bruce was enabled with pre- cision and accuracy to fix the relative situations of the several remote places he visited. On the 10th of January 1773, after more than four years absence, he arrived at Cairo, where, by his manly and generous behaviour, he so won the heart of Mahomet Bey that he obtained a firman, permit- ting the commanders of English vessels belonging to Bombay and Bengal, to bring their ships and merchandise to Suez, a place far preferable, in all respects, to Jidda, to which they were formerly confined. Of this permission, which no Euro- pean nation could ever before acquire, many English vessels have already availed themselves;

an 1 it has proved peculiarly useful both in pub ā¢ lie and private despatches. Such was the worthy conclusion of his memorable journey through the desert. ā a journey, which, after many hardships and dangers, terminated in obtaining this great national benefit. At Cairo, Mr. Bruce's earthly career had nearly been concluded by a disorder in his leg, occasioned by a worm in the flesh. This accident kept him five weeks in extreme agony, and his health was not re-established till a year afterwards, at the baths of Poretta in Italy. On his return to Europe, Mr. Bruce was received with all the admiration due to so exalted a cha- racter. After passing some time in France, par- ticularly at Montbard, with his friend the Comte de Buffon, by whom he was received with much hospitality, he at last revisited his native country from which he had been upwards of twelve years absent. On his return public curiosity was highly excited to sec a narrative of his travels ; but this was retarded by various circumstances

At last, however, he found leisure to put his materials in order ; and in 1 790 his long expected work appeared in five large quarto volumes, embellished with many plates, maps, and charts. The work has been criticised and the author ac- cused of vanity, and even of falsehood; some even asserted that he had never seen Abyssinia ; but later travellers have confirmed most of his statements, which they themselves had not be- lieved when first made by him. To one objec- tion, the account which he gives of his prediction of an eclipse ā the time of which, by some strange mistake, refers to Britain ā no answer we believe was ever made. The story, indeed, seems to be taken from a similar occurrence which happened to Columbus.

There never, perhaps, existed a man better qualified for the hazardous enterprize he under- took than Mr. Bruce. His person was of the largest

size, his height exceeding six feet, and his bulk and strength proportionally great. He ex- celled in all corporeal accomplishments, being a hardy, practised, and indefatigable swimmer, trained to exercise and fatigue of every kind, and his long residence among the Arabs had given him a more than ordinary facility iu ma- naging the horse. In the use of fire-arms he was unerring; and his dexterity in handling the spear and lance on horseback was also uncom- monly great. He was master of most languages, understanding the Greek perfectly ; and was so well skilled in Oriental literature, that he revised the New Testament in the Ethiopic, Samaritan, Hebrew, and Syriac, making many useful notes and remarks on difficult passages. He had ap- plied from early youth to mathematics, drawing, and astronomy : and had acquired some know- ledge of physic and surgery. His memory was astonishingly retentive, his judgment sound and vigorous. He was dexterous in negociation, a master of public business, animated with the warmest zeal for his king and country, a physi- cian in the camp or city, a soldier and horseman in the field, while at the same time his breast was a stranger to fear, though he took every pre- caution to avoid danger. Of his learning and sagacity, his delineation of the course of Solo- mon's fleet from Tarshish to Ophir, his account

of the cause of the inundations of the Nile, and his comprehensive view of the Abyssinian his- tory, afford ample proofs. He was preparing a second edition of his travels for the press, when he died, April 27th, 1794, in consequence of a fall dowr his own stairs, in the sixty-sixth year of his age.*

BRUCE (Robert), son of the earl of Carrick, being competitor with Baliol for the crown .of Scotland, lost it by the arbitration of Edward I. of England, for generously refusing to hold that crown as dependent on him, which his ancestors had left him independent. . BRUCE (Robert), grandson of the preceding, when Baliol broke his agreement with Edward, was easily persuaded to side with him against Baliol, upon promise that he would settle him on the throne. Having contributed much to the breaking of Baliol's party, he demanded the ac- complishment of king Edward's promise, who is said to have given him this answer : ' What ! have I nothing else to do but to conquer king- doms for you ?' He, however, recovered his crown, defeated the English in several battles, raised the glory of the Scots, and extended their dominions. See SCOTLAND.

BRUCEA, in botany, a genus of the tetran- dria order, belonging to the dioecia class of plants.

BRUCHHAUSEN, a county of Westphalia, lying on the Weser, in Hanover, near the terri- tory of Bremen. It is composed of the two towns of the Old and New Bruchhausen, each with a town and bailiwic. They are about four miles asunder, and between five and six miles west of the town of Hoya.

BRUCHSAL, the head of a district in the circle of the Pfinz and Enz, in the grand duchy of Baden, is situated on the Salza. It is well built, especially the suburbs of St. Peter and St. Paul, and has seven churches. The population is about 6000. The principal public buildings and institutions are the elegant castle, formerly the residence of the bishop, a Catholic academy, founded in 1803, the town-house, and hospital. It is eleven miles south-east of Spires, and fifteen south of Heidelberg.

BRUCIIUS, in zoology, a genus of insects belonging to the order of coleoptera. The spe- cific character of this insect is, body black ; an- tennae filiform, testaceous; feelers equal, fili- form ; lip pointed ; thighs unarmed ; head pro- minent ; thorax tapering before ; shells striate ; species twenty-seven ; scattered over the globe, of which the B. seminarius is the only one traced in our own country, and inhabiting our flower?. The other principal species are ; 1. B. bactris, with smooth elytra, a hoary body, and the hind part of the thighs oval. It frequents the palm- trees of Jamaica. 2. B. gleditsise, with striated elytra, of the same length with the belly, a pitch-colored body, and green feelers. It is a native of America. 3. B. granarius, has black elytra; thi? fore- feet are red, and the hind-feet are den- tated. It infests the seeds of plants in different parts of Europe. 4. B. pecticornis, with comb- shaped feelers longer than the body. It is a na- tive of Barbary and China. 5. B. pisi, has gray elytra, interspersed with white spots, and awhile

fundament with two black spots. It is a native of North America, and destroys whole fields of peas. It is now found rn several of the southern pˆirts of Europe, where it does great injury to the corn. 7. B. theobromae, with whitish elytra, interspersed with black points. It fre- quents the theobromse or chocolate-trees in the East Indies.

BRUCIA, or BRUCINE, a new vegetable al- kali, lately extracted from the bark of the false angustura, or brucia antidysenterica, by M.M. Pelletier and Caventou. Its taste is exceedingly bitter, acrid, and durable in the mouth. When administered in doses of a few grains, it is poisonous, acting on animals like strychnia, but much less violently. It is not affected by the air. The dry crystals fuse at a temperature a little above that of boiling water, and assume the appearance of wax. At a strong heat it is resolved

into carbon, hydrogen, and oxygen, without any trace of azote. It combines with the acids, and forms both neutral and super- salts.

BRUCKER (John James), a Lutheran cler- gyman, was born in 1696 at Augsburgh, and studied at Jena. In 1724 he became rector of Kaufbeueren, and was, in 1731, chosen a mem- ber of the Berlin academy of sciences. He was afterwards pastor of St. Ulric's, and senior mi- nister in his native city, where he died in 1770. He was the author of several works and tracts on philosophy, but his most important produc- tion is his Historia Critica Philosophise, four volumes, 4to. which appeared in 1744, and with great improvements, in six volumes, 4to^ 1767. This work acquired the general approba- tion of the learned, as the most copious and me- thodical history of philosophy ever written. ā A judicious abridgment of it was published by Dr. Enfield, in 1791, two volumes, 4to.

BRUCKNER (John), a literary divine of the Lutheran persuasion, settled at Norwich ; was born in the island of Cadsand in 1726, and re- ceived his education at Leyden and Franeker, after which he became pastor of the Walloon congregation at Norwich until his death, in 1804. He was author of ā 1. Theorie du Systeme Ani- male, which has been translated into English, under the title of a Philosophical Survey of the Animal Creation, 1768; in this work is some anticipation of the sentiments of Mr. Malthus' famous Essay on Population. 2. Criticism on the Diversions of Purley, in which he discovers great knowledge of the various Gothic and Hebrew dialects. 3. Thoughts on Public Wor- ship, in answer to Gilbert Wakefield. He also commenced a didactic poem in French verse on the principles of his Theorie.

BRUGES, a large and opulent city of the Nether- lands, the capital of West Flanders, and, during the domination of the French, the chief town of the department of the Lys. It is situated in a spacious plain, intersected by a great number of canals, about six miles from the sea. Before the French Revolution it formed, with its territory, a sepa- rate district. No river passes near it, but the canals leading to Sluys and Ostend bring up, at high water, vessels of from 200 to 300 tons. The trade and manufactures of Bruges were one?

far more flourishing than at present. In the fourteenth century, under the dukes of Bur- gundy, it was one of the greatest places of com- merce in

Europe, forming an important branch of the Hanseatic confederacy, and carrying on a lucrative intercourse with England, Venice, &c. Towards the end of the fifteenth century it began to decline, Antwerp becoming its rival, and after- wards its superior. On the decay of the latter, by the shutting up of the Scheldt, Bruges partly recovered its prosperity, and still carries on a considerable trade with Ostend, Sluys, Ghent, and the north of Europe. It takes an active part in the herring-fishery. The exchange here is one of the earliest establishments of the kind in Europe, and still a fine building. During the great fairs the merchants expose their goods here, and the retail trade is carried on to a great ex- tent. There is besides a chamber of commerce, a large insurance company, a dock-yard, and a navigation school. The population is about 45,000. The streets are in general wide and well-lighted, and the houses large. There are seven gates and six market-places. The princi- pal public buildings are the lycee, formerly the celebrated convent of the Downs, the town- house, the exchange, and the church of Notre Dame, having a lofty spire. The authorities are two burgomasters, twelve echevins, twelve coun- cillors, ten pensioners, and two treasurers. In 1559 Bruges was made a bishopric by Paul IV., and continued so until it was taken possession of by the French army in 1794. At that time it contained not fewer than twelve convents for the different orders of both sexes; all of which were forthwith abolished. During his consulate Buo- naparte annexed Bruges to the bishopric of Ghent, confiscated the revenues, and caused the cathedral church of St. Donatus to be demolished. It was for a long period the residence of a con- vent of English nuns, who, during the revolu- tion, fled to their native country, but have since returned, and enjoy their former revenues. In the church of Notre Dame the tombs of Charles the Brave and his daughter, Mary of Burgundy, are preserved. They are formed of a hard stone, and hsautifully gilt, and, though constructed in 1550, appear as perfect as if new. Bruges carries on a considerable trade in grain, par- ticularly when the ports of England are open ; likewise a good traffic in coarse lace, made by the female population, and some trade in linen. The manufactures of earthenware, &c., have dwindled to nothing. This city gave birth to John of Bruges, the inventor of painting in oil. The French entered it in the summer of 1794, and the town was soon after incorporated with the French empire, a part of which it remained till the fall of Buonaparte. In 1798 an English force, under general Coote, attempted to destroy the sluices between this place and Ostend : they succeeded in their object, but the greater part were made prisoners. Twelve miles east of Ostend, twenty-two north-east of Ghent, and thirty-three north-east of Dunkirk.

BRUGNATELLI (professor). This cele- brated chemist and experimental philosopher was born in Pavia in 1761. He was appointed professor of general chemistry, as opposed to the

arts, in 1796; and he filled this chair with equal honor to himself and advantage to his numerous students, till his death in 1818. The following list of his published works is taken from the Giornale, edited by his son : Elements of Chemis- try (besides numerous pirated editions of this work, four were corrected by the author) ; A General Pharmacopeia, Giornale Fisico Medico, 8vo., 20 vols. After this appeared, in conjunc- tion with the preceding, the Storia Naturale, from 1808 to 1818.

BRUIN (John de), professor of natural phi- losophy and mathematics at Utrecht, was born at Gorcum in 1620. He possessed great skill in dissecting animals, and also in astronomy. He published dissertations De Vi Altrice ; De Corporum Gravitate et Levitate : De Cognitione Dei Naturali ; De Lucis Causa et Origine, &c. He had a dispute with Isaac Vossius, to whom he wrote a letter, printed at Amsterdam, 1663; wherein he criticises Vossius's book De Natura et Proprietate Lucis ; and strenuously maintains the hypothesis of Descartes. He died in 1675, after he had been professor twenty-three years.

BRUISE, v. a. & n. s.) Ang. Sax. brysan ;

BRUIS'ER, n. s.) Teut. brisen; Belgic

bryzin ; Arm. brisa ; Fr. briser. To crush, beat, and mangle ; to press together so as to destroy the continuity of the parts : a bruise is a hurt with something blunt or heavy.

Fellows in arms, and my most loving friends, Bruised underneath the yoke of tyranny. Shahspeare.

And fix far deeper in his head their stings, Than temporal death shall bruise the victor's heel, Or theirs whom he redeems. Milton.

One armed with metal, the other with wood, This fit for bruise, and that for blood. Hudibrat.

I since have laboured To bind the bruises of a civil war, And stop the issues of their wasting blood, Dryden.

BRUISER, in mechanics, a concave tool used for grinding and polishing the specula of tele- scopes. It is made of brass, about a quarter of an inch thick, and hammered as near to the gage as possible. It is tinned on the convex side, and made equally broad at bottom and top. It serves to reduce the figures of the hones, when too convex, and to rub down any gritty matter that happens to be mixed with the putty, before the speculum is applied to the polisher.

BRUISING, in pharmacy, the operation of breaking or pounding a thing coarsely ; frequently practised on roots, woods, and other hard bodies, to make them yield their juice more freely than they would do whole.

BRUIT, v. a. & n. s. Arm. bruit ; Fr. bruit ; Span, ruido, see ROUT. To report; to spread a rumor; to make any thing known with noise and clamor: the report so spread. His death,

Being bruited once, took fire and heat away

From the best tempered courage in his troops.

Shakspeare. I am not

One that rejoices in the common wreck.

As common bruit doth put it. Id.

It was bruited that I meant nothing less than to go to Guiana. Raleigh,

A bruit ran from one to the other that the king wag slain. Sidney.

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BRUMAIRE, i.e. the foggy month, French, from brume, fog. the second month in the French revolutionary calendar. It began October 22d. and ended November 20th, consisting of thirty days.

BRU'MAL, adj. Lat. brumalis. Belonging to the winter.

About the brumal solstice, it Lath beeu observed, even unto a proverb, that the sea is calm, and the winds do cease, till the young ones are excluded, and forsake their nests. Brown.

BRUMALIS PLANTS, in botany, from bruma, winter ; plants which flower in our winter ; common about the Cape.

BRUMALIA, in Roman antiquity, festivals of Bacchus, celebrated twice a year ; the first on the 12th of the kalends of March, and the other on the 18th of the kalends of November. They were instituted by Romulus, who during these feasts used to entertain the senate. Among other heathen festivals which the primitive Christians were much inclined to observe, Tertullian mentions the hrumse or brumalia.

BRUMALIS, in ornithology, a species of emberiza, found in the north of Italy, the Brumal Bunting of Latham

BRUMOY (Peter), a learned Jesuit, born at Rouen, in 1668, distinguished by his talents for the belles lettres. His works are 1. A History of the Galilean Church, 6 vols ; 2. Morale Cbretienne, 12mo. ; 3. Examen du Poeme sur la Grace ; 4. La Vie de la Imperatrice Eleo- nora ; 5. Theatre des Grecs, Contenant des Tra- ductions et Analyses des Tragedies Grecques, des Discours et des Remarques Concernant la Theatre Grecque, 3 vols. 4to. This very valuable performance was translated into English by Mrs. Lenox, who received assistance from Dr. Johnson and other able writers ; 6. History of the Revo- lutions of Spain, 3 vols. 4to. He died at Paris in 1742

BRUN, BRAN, BROWN, BOURN, BURN, are all derived from the Saxon borin, bounn, bnunna, burma; all signifying a river or brook.

BRUN (Charles Le), was born in 1619, of a family of distinction in Scotland. His lather was a statuary by profession. He discovered such an early inclination for painting, that his father being employed in the gardens at Seguier, the chancellor placed him with Simon Vouet an eminent painter. He was afterwards sent to Fontainebleau, to copy some of Raphael's pieces. He sent him next to Italy, and sup- ported him there for six years. Le Bran, in his return, met with the celebrated Poussin, with whom he contracted a friendship which lasted as long as their lives. A painting of St. Stephen, which he finished in 1651, raised his reputation to the highest pitch. Soon after, the king made him his first painter, conferred on him the order of St. Michael, and spent two hours every day to see him work, while he was painting the family of Darius at Fontainebleau. About 1662 he began his five large pieces of the history of Alexander the Great, in which he is said to have set the actions of that famous conqueror in a more glorious light than Quintus Curtius has done in his history. He procured several ad- vantages for the royal academy of painting and

sculpture at Paris, and formed tne plan or another for the studmts of his own nation at Rome. The king gave him the direction of all his works, particularly of his royal manufactory at the Gobelins, where he had a handsome house with a large salary. He was the author of two treatises; 1. On Physiognomy, and 2. On the Different Characters of the Passions. The pieces that gained him the greatest reputation were those which he finished at Fontainebleau, the great staircase at Versailles, and especially the grand gallery, which is the last of his works, and is said to have taken him up fourteen years. He died at Paris in 1690.

BRUNCK (Richard Francis Philip), a modern classical scholar and critic of the greatest reputa- tion ; he was a native of Strasburg, and educated by

the Jesuits at Paris. He was made early in life a commissary at war and receiver of finances; but finally settled at Strasburg, and devoted all his leisure to the study of the Greek language. His Greek Anthology was first published at Strasburg in 1776, 3 vols. 8vo. ; and followed in 1 779 by Selections from the works of ./Eschylus, Sophocles, and Euripides, 2 vols. In 1780 ap- peared his edition of Apollonius Rhodius ; and his Aristophanes in 1783. In 1785 he published an edition of Virgil ; and in 1 786 appeared the whole works of Sophocles, 2 vols. 4to. Brunck was now partially disturbed in his pursuits by the storms of the French Revolution, and became one of the first members of the popular associations at Strasburg. He was imprisoned at Besan9on during the tyranny of Robespierre, on whose death he was liberated. In 1791 and 1801 our critic was under the necessity of selling portions of his fine library ; which affected his composure to such a degree as to compel him to give up his Greek studies. He still, however, proceeded with the Latin poets ; and in 1797 published a beautiful edition of Terence. He was preparing the works of Plautus for the press, when he died, June 1803.

BRUNDIS1UM, or BRUNDUSIUM, in ancient geography, a town of Calabria, with the best harbour in Italy. It was a very ancient town, and belonged originally to the Salentines ; but was taken by the Romans about A. A. C. 256. It is now called BRINDISI ; which see

BRUNETF, n. s. Fi. orunette. A womar with a brown complexion.

Your fair women therefore thought of this fashion, to insult the olives and the brunettes. JLddison.

BRUNIA, in botany, a genus of the mono- gynia order, and pentandria class of plants. The flowers are aggregate or clustered ; the fila- ments inserted into the heels of the petals ; the stigma is bifid ; the seeds are solitary, and the capsule is bilocular. There are eight species, all Cape plants.

BRUTUON, n. s. Fr. brugnon. A sort of fruit between a plum and a peach.

BRUNN, a circle and town of Moravia ; the former, bounded by Bohemia on the north, and Austria on the south, contains about 1860 square miles, and a population of 299,960 individuals. Corn, flax, and large herds of cattle, are the chief produce. It also contains mines, medicinal springs, marble quarries, forges, alum-works and

glass-houses. Brunn is considered the capital of the kingdom, and has, besides the government offices, several large manufactures of fine woollen cloths and kerseymeres. It is well supplied with coals, water, and other requisites for these works, and was once fortified ; but the trenches are now well filled with tanneries, rope-yards, dye-houses, &c. The principal buildings are the church, with an elegant spire covered with copper, the state-house, the town-house, and the palace of prince Lichtenstein. Near it, on the top of a hill, stands the fortress of Spielberg, now used as a state-prison. The town and suburbs contain ubout 24,000 inhabitants. Here are very large fairs for general commerce, held quarterly. Brnnn is 100 miles south-east of Prague.

BRUNN EUS, in entomology, a species of pmus, and also the name of a species of cur- culio, cimex, cryptocephalus, coluber, asilus, and elater.

BRUNNICHIA, in botany, a genus of plants, class decandria, order tryginia : CAL. five-cleft : COR. none: CAPSULE one-celled, many-seeded. Species one, a Bahama plant.

BRUNO, i. e. Brown, Ital. the Latin name assumed by the late Dr. Brown, in his Elementa Medicinae ; whence the epithet Brimonian.

BRUNO, Giordano, a dominican, born at Nolo, in Naples. About A. D. 1582 he began to call in question some of the tenets of the Romish church, which obliged him to retire to Geneva : but after two years stay there, he expressed his aversion to Calvinism in such a manner that he was expelled the city. After having staid some time at Lyons, Toulouse, and Paris, he came to London, and continued two years in the house of M. Castleneau the French ambassador. He was very well received by queen Elizabeth and the politer part of the court. His principal friends were Sir Philip Sidney and Sir Fulk Gre- ville. With these, and some others of their club, Bruno held assemblies ; and, at Sir Philip's request, he composed his Spaccio della Bestia Trionfante, which was printed in 8vo. 1584 and dedicated to that gentleman. This work, which is re- markable for nothing but its impiety, we are told in the Spectator, No. 389, sold at an auction in London for Ā£30. From England he went to Wirtemberg, and thence to Prague, where he printed some tracts, in which he openly dis- covered his atheistical principles. After visiting some other towns in Germany, he made a tour to Padua ; where he was apprehended by the inquisition, tried, condemned, and, refusing to retract, was burnt at the stake in Rome, February 9th, 1600.

BRUNONIAN SYSTEM, a system of medicine, discovered by the late Dr. Brown, and explained at large in his Elements of Medicine. It differs so widely from all former systems of that science, and made so extensive an

impression on the medical world at the time of its appearance, that we think it consistent with propriety to de- lineate it under its own title. The following will give a sufficient view of its outlines, to such as are unacquainted with it : and for its minute we must refer to the Dr's own works, and those of Dr. Beddoes, Dr. Jones, &c.

The human body, particularly the system of solids it consists of, is a form of living matter,

whose characteristics are sensation and motion. The capability of being affected by external powers is termed excitability; the agents, sti- muli, or exciting powers ; the result excitement. Without this property (excitability), the body would be dead inert matter : By this property, it becomes living matter ; by this property, called into action by the exciting powers, it be- comes a living system. While the stimuli act on the excitability with a sufficient degree of power, then is the pleasant sensation of health ; when they raise the excitement above this point, or depress it below it, disease takes place : when the stimuli cease to act, or the system to feel their power, death ensues. Excitability is a property of living matter, peculiar and inherent, but it is a property which Dr. Brown did not pretend to explain. He left it as Sir Isaac Newton did his Attraction, as a property not to be investigated. Of this energy or power, there is assigned to every living system, at the com- mencement of life, a certain quantity or pro- portion ; but its quantity differs in each, and in the same body it is 'found to change, for the excitability, according to circumstances, may be abundant, increased, accumulated, su- perfluous, exhausted, consumed, &c. The sti- muli, or exciting powers, are of two classes : external and internal. The external stimuli are heat, light, sound, air, and motion ; food, drink, medicines, and whatever else is taken into the body, not excepting poisons and contagions. The internal are the functions of the body, the blood, the secretions, muscular exertion, and finally the powers of the mind, as sensation, passion and thought. Dr. Beddoes, we know not for what reason, ranks ' the blood and se- creted fluids' among the external stimuli. Ex- citement is Life ; the natural movements of the machine, and the functions resulting from these, as sensation, reflection, and voluntary motion ; which, as they immediately flow from the exciting powers, are vigorous when they are strong, lan- guid when they are weak, and cease when they are taken away entirely. Thus our body is continually moved by external agents, and life is a forced state. The frame has an unceasing tendency to dissolution, which is opposed only by the incessant application of exciting powers ; which are the sources of life, and which being partially or completely withdrawn are imme- diately followed by disease or death. It is also a principle of this doctrine, that 'all stimuli by acting on the excitability exhaust it.' On awaking we feel a new power of excitement in every object around us; we are refreshed in the morning, and languid at night, and our

whole life is an alternation of motion and rest, of action and sleep, of apathy and pleasure, of wasting our excitability by day in labor or enjoyment, and of recruiting it by night by the abstraction of all stimulant powers. The same philosophy extends to the duration of life : in childhood, excitability is abundant in quantity, as being little exhausted ; but it is low in power, because the tender stamina, and ac- cumulated excitability of children, can neither suffer nor support high excitement. Their ex- citability is so abundant, that they arc easily supported by weak diet and low exciting powers, and therefore most of their diseases are diseases of

v/eaknesa. In youth and manhood the excitability :.s yet entire, the stamina are strong : the powerful aimuli are applied, and high passions prevail : these are the periods of vigor, and the sera of inflammatory disease. In old age the stamina are worn, the excitability is exhausted, the com- mon stimuli have lost their power, and the system begins to decline ; we have weakness of body, imbecility of mind, and asthenic diseases. We may, last of all, have recourse to more generous diot, and raise the stimulant powers by substituting wine to water, or brandy to wine ; thus perhaps excitement may be a while sup- ported, and life prolonged ; but in a few years, these also fail. This doctrine farther teaches, that the body is never moved but by exciting powers. None but stimuli affect our system. Health is the due operation of stimuli on a well regulated excitability, producing a moderate ex- citement, and a pleasant sensation ; moving the whole system with a just degree of power, and giving all the functions their due energy and tone. Asthenic disease, disease of debility or of weakness, is the result of stimuli applied in a low degree, or of the system less easily excited. Sthenic disease, or disease of strength, is the result of stimuli applied in too great a degree, or of a system too susceptible of excitement. The first is depression of excitement below the healthy state : it produces languid motions and functions ; and requires excitement for its cure. The second is a strong state of the system, wound Tip to too high a pitch of excitement. It is an exuberance of health and strength. It is marked by violent movements, and is cured by abstrac- tion of stimuli. Thus are all our maladies either diseases of weakness or of excessive strength, and this is the foundation of the Brunonian scale, which has for its middle point health ; below that are arranged the diseases of weakness ; above it the diseases of excessive strength : and, in both divisions of the scale, diseases are so ar- ranged, that the worst forms are set off at the greatest distance from the middle point, to mark them as the widest deviations from the healthy state.

‘ The Brunonian system,’ says Dr. Beddoes, ‘ has been frequently charged with promoting intemperance ; the objection is serious, but the view given of its principles shows it to be groundless. No writer has insisted so much upon the dependence of life upon external causes, or so strongly stated the inevitable consequences of excess : and there are no means of promoting morality upon which we can rely, except the knowledge of the true relations between man and other beings or bodies. For by this knowledge we are directly led to shun what is hurtful, and pursue what is salutary. It may be said that the author’s life disproves the justness of this representation. His life, however, only shows the superior power of other causes, and of bad habits in particular; and I acknowledge the little efficacy of instruction when bad habits are formed. Its great use consists in preventing their formation, for which reason, popular instruc- tion in medicine would contribute to the happi- ness of the human species. But though the princi- ples of the system did not correct the propensities

of its inventor, it does not follow that they tend to produce the same propensities in others.’

Dr. Beddoes has, with great candor as well as judgment, pointed out a few of the imperfections of this doctrine. 1. He observes, that, as Dr. Brown ‘ assumes, that a certain portion of exci- tability is originally assigned to every living sys- tem, by his very assumption, he denies its continual production, subsequent diffusion, and expenditure.’ Dr. Beddoes thinks that the brain is destined to secrete a successive supply of this principle. 2. He next objects against the Dr’s ‘ uniformity of operation in stimulants.’ ā ‘ Heat and wine (he justly observes) can never act in the same manner, for no person is intoxicated by heat.’ He adds, ‘ had it been once allowed by Brown, that the different constituent parts of the body bear a different relation to the same agents, he must have admitted the operation of specific stimulants to an unlimited extent.’ On the subject of Predisposition to Disease, he ob- serves that ‘ though facts have been noted, the principle lies involved in total obscurity. Brown does not purposely elude the difficulty, but his principles lead him beside it ; and we may doubt whether the term predisposition ought in strict propriety to have appeared in his Elements ; for predisposition is with him a slight disease, dif- fering only in degree from that into wlu’ch the person predisposed falls.’ 4. ‘ There are several other opinions,’ he adds, ‘ which, in a complete revisal of the Brunonian system, would require particular examination, such as his doctrine con- cerning hereditary diseases,’ which Brown denies the existence of, ‘ the peculiar state of sthenic inflamation, and the nature of the passions.’ 5. And in a note upon Brown’s preface, he styles the Dr’s opinion, that ‘ nearly all the diseases of children depend on debility,’ ā ‘ a gross and dangerous error,’ though he admits that ‘ thou- sands of them are cut off at an early period of life, and tens of thousands kept languishing in misery, by

asthenic diseases, for want of 'he necessaries of life.' This admission of Dr. Bed- does might have superseded his criticism. Dr. Brown did not say all diseases of children were asthenic. But if thousands and tens of thousands are, they may be surely said to be nearly all such. Neither Dr. Brown nor any man in his senses would prescribe stimulants in croup, peripneu- mony, or the first stage of hooping cough ; though we have known the most speedy and effectual cures performed by opium in this last disease, after the sthenic diathesis was gone.

Some have asserted that Dr. Brown borrowed the first idea of his doctrine from some hints thrown out by his then intimate friend Dr. Cul- len ; but Dr. Beddoes, after quoting the passage from Cullen's Institutions (parag. cxxx.), where excitement is mentioned, shows plainly that when Dr. Cullen wrote it, ' his thoughts were turned from a living body to an electrical machine,' and that ' his idea of excitement has therefore nothing in common with that of Brown.' ā Others have affirmed, that Dr. Brown only revived the old doctrine of the Methodic sect, and that Themison was the discoverer, and Thessalus and Soranus the improvers, of the doctrine now called Bruno- nian. But nothing can be more distant from the

truth than this. The methodic doctrine of stric- ture and relaxation hears no analagy to Brown's definitions of sthenic and asthenic diseases ; and the doctrine of spasm itself is not more opposite to the Brunonian system, than Themison's notion of a third class of diseases, which partook of both stricture and relaxation. The truth is incontrovertible, that the discovery, such as it is, is wholly Brown's own. Dr. Darwin suggested an ingenious modification of this system ; but the system itself has, of late, been almost entirely abandoned by medical men.

BRUNSFELSIA, in botany, a genus of the monogynia order, and pentandria class of plants. CAL. five-toothed, angular; COR. a long tube: CAPS, berried, one-celled, many-seeded. Two species, both natives of the West-Indies.

BRUNSV1GIA, in botany, a genus of plants class hexandria, order monogynia, natural order narcissi ; essential characters, COR. superior, having six deep segments : CAPS, turbinate,

Districts. Extent in Eng. Sq. miles.

Wolfenbuttle .... 456 ....

, Schoningen 296 ....

Hartz 209 ....

The Leine 95 ....

Weser 252 . . . .

Blankeuburg .... 144 . . . .

1452

Brunswick and Wolfenbuttle are cities, ranking as distinct districts, the former containing a population of 29,050, and the latter 6,800 inhabitants. A late survey gives the following dis- tribution of the surface of this duchy.

Eng. Acres.

Under the plough 291,575

Under garden culture 16,752

In meadows 42,049

Pasture land 207,751

Woods and plantations 284,423

Fish-ponds and lakes 2,217

The most valuable are the mineral productions of the duchy, particularly its iron, the mines of which, with the marble and timber, are the chief basis of its revenue. The northern part is flat, but the southern district a mountainous region, forming the thickest part of the Hartz, and large- ly covered with forests. The lower tracts, besides abundance of timber, and metals, produce various kinds of grain. The rivers are the Weser, the Ocker, the Innerste, and the Leine. The principal exports, ā rye, wheat, wool, linen, rape-seed, hops, vitriol, sulphur, zinc, and a few other articles, amount to two millions and a half of Rix-dollars annually. The imports are wine, sugar, tea, and coffee. The inhabitants are principally Lutherans ; the whole of the Catholics and Calvinists being only estimated at between 3000 and 4000. About 3000 men includes the whole military establishment. The annual revenue arising from taxation is about Ā£170,000 a year, but, in addition to this, the prince has a yearly income of about Ā£210,000, from his patrimonial domains.

The illustrious house of Brunswick has been one of the most distinguished in history, and traces

with three membranous wings : SEED, numerous and pointed. The species are, 1. B. multiflora, broad-leaved brunsvigia. 2. B. marginata, red edged

brunsvigia. 3. B. radula, rasp-leaved brunsvigia. 4. B. striata, striated brunsvigia. These are all natives of the Cape of Good Hope.

BRUNSWICK, a duchy of Germany, in the former circle of Lower Saxony, and having for its boundaries Luneburg on the north, Westphalia on the west, the duchy of Hesse on the south, and Magdeberg, Anhalt, and Halberstadt, on the east. It is sometimes considered in two dis- tinct parts : the principality of Wolfenbuttle, and the county of Blankenburg, containing altogether about 1452 square miles, and a population of 208,700 persons, or nearly 144 persons to each square mile, and is, in its civil government divi- ded into two cities and six districts, which, with their extent, population, and chief towns, have been thus exhibited ; ā

Population.

. 56,593 .

. 32,880 .

. 19,841 .

. 15,748 .

. 31,468 ,

. 16,317 .

Chief Towns.

Wolfenbuttle

Helmstadt .

Langelsheim

Gandersheim

Stadtoldendorf

Blankenburg

208,697

its descent from Azo I., marquis of Este, in Italy, who died in 964. It consists of two branches, the Brunswick Luneburg, and that of Brunswick Wolfenbuttle ; the head of the former being the king of Great Britain and Hanover, and of the latter the duke of Brunswick Wolfenbuttle, the ruling

prince of Brunswick, who holds the twelfth place in rank among the princes of the empire. In the modern arrangement of the German states it has its place in the third class. Brunswick, the capital, is composed of five towns, viz. the Old Town, the New, the Hagan or Burg, the Old Wieck, and the Sack, which make it a large place, but the houses are almost all built of wood. There are several churches, one of which is an ancient Gothic building, but the appearance of its antiquity is almost absorbed by modern repairs. It is a fortified place, but not of much strength. The inhabitants carry on a considerable trade with Bohemia. Bruns- wick mum is well known in England ; a small sort of which is the common drink of the inhabi- tants of the city. Here spinning-wheels are said to have been invented. The buildings most de- serving of notice here, are the cathedral of St. Blasius, with the tombs of deceased members of the royal family ; the Graue-Hof, the resi- dence of the duke, originally a monastery, the public wine cellars, the exchequer, the meeting- house of the diet, the mint, the opera-house, the new town-house, and the arsenal. The Collegium Carolinum was founded in 1745, and affords in- struction in the languages, arts, sciences, and polite exercises. Here are also two other acade- mies. The manufactures beside mum, are wool, yarn, linen, porcelain, pasteboard, and paper- hangings The great Brunswick fairs rank next

to those of Leipsic and Frankfort. Between 1807 and 1814, Brunswick was the capital of the department of the Ocker, in the kingdom of Westphalia. It is seven miles north of Wolfen- buttle, and forty-seven W.N.W of Magdeburg.

BRUNSWICK, a maritime county of North Ca- rolina, America.

BRUNSWICK, formerly the best built town in the above county, and one that carried on the most extensive trade ; but having been burnt down in the year 1780, by the British, it has never since recovered.

BRUNSWICK, a town of New Jersey, United States of America, is situated on the south-west bank of the Rariton river. It contains about 2500 inhabitants, most of whom are Dutch. The commodious wooden bridge across the Rariton river, is about 200 paces long, and the only object worth notice. The part over the channel is con- trived to draw up, and on each side is a footway, with rails and lamps. It carries on a considerable trade,

and is eighteen miles north-east of Prince- town, sixty north-east from Philadelphia, and thirty-five south-west from New York.

BRUNSWICK, a town of the United States, in Cumberland county, district of Maine, contains about 1400 inhabitants, and lies thirty miles north-east of Portland, and 151 north-east of Boston.

BRUNSWICK, a town of the United States, the chief town of Glynn county, Georgia, is situated at the mouth of Turtle river, in Simon's sound. It has a safe and capacious harbour. From its advantageous situation, and the fertility of the back country, it promises to be a most commer- cial and flourishing place. It is sixty miles S.S.W from Savannah, and 110 south-east from Louis- ville.

BRUNSWICK NEW, one of the four British provinces in North America, bounded on the south by the bay of Fundy, on the west by the United States, and part of Lower Canada, on the north by Chaleur bay, and on the east by the gulf of St. Lawrence. Its chief towns are St. John's the capital, Fredericktown, St. Andrews, and St. Ann, the present seat of government. The rivers, St. John's, Magegadavick, or eastern river, Dicwasset, St. Croix, Merrimichi, Petit- codiac, Memramcook ; all, the three lastexcepted, falling into Passamaquoddy bay. St. John's river opens a vast extent of fine woody country, the pines of which are said to be the best yielded in America. The Passamaquoddy is surrounded with noble meadows. See AMERICA, BRITISH.

BRUNSWICK GREEN. This is an ammoniaco- muriate of copper, much used for paper-hang- ings, and on the continent in oil-painting. See COPPER.

BRUNSWICK (Ferdinand, duke of), a cele- brated general of the last century, was born in 1721, and travelled in Holland, France, and Italy. Returning home in 1740, he entered the service of the king of Prussia, and soon distin- guished himself in Silesia. After the rupture of the convention of Closterseven, he was employed by George II. in the command of the English and Hanoverian forces destined to act against the French. He now drove the enemy beyond the Rhine, and won, by a daring manoeuvre, the

battle of Crevelt. Shortly after followed the famous victory of Minden, in which Lord George Sackville, who commanded the British and Han- overian cavalry, was accused of standing aloof in the action. In 1762 Ferdinand drove the French out of the territory of Hesse : the peace of the following year terminated his career as a general, and he retired to Brunswick, where his death took place July 3rd, 1792.

BRUNSWICK LUNENBURG (Charles William Ferdinand, duke of), nephew of the preceding, and born at Brunswick in 1735, studied the art of war under his uncle and Frederic the Great of Prussia. When only twenty-two, he distin- guished himself at the battle of Hastenbeck, and afterwards served with reputation. The king of Prussia employed him in a military capacity in 1770 and 1771 ; and in 1778 the war concerning the succession of Bavaria gave him an opportu- nity of establishing his fame. He succeeded to the duchy on the death of his father in 1780. In 1787 he conducted his memorable campaign in Holland, quieted its disturbances, and esta- blished for a time the preponderance of Prussia. The revolution now rising in France furnished him with fresh employment: in 1792 he was appointed to the command of the allied forces destined to act against France, with a view to liberate Louis XVI. Nothing could be more unfortunate than the result of this expedition ; the duke resigned his command in the beginning of 1794. He once more took up arms against France in 1806, and received a wound, while in command of the Prussians at the battle of Aaer- stadt, of which he died at Altona, November 10th, 1806. In 1764 this prince roamed the princess Augusta of England, by whom he had three sons and four daughters. His eldest son and successor fell m the midst of his brave Brunswickers early in the battle, fought in 1815, near Waterloo. For a sketch of the life of his not less brave but unhappy daughter, Caroline, see CAROLINE.

BRUNSWICK-OELS (Frederick Augustus, duke of), younger brother of the preceding, was born in 1741 at Brunswick. Destined, from his sta- tion, to a military life, he had yet a strong pre- dilection for the belles lettres ; and, while acting as a general officer in the service of Prussia, dis- tinguished himself by his literary acquirements. His productions, printed and circulated among his friends, but never published, were Critical Remarks on the Character and Actions of Alex- ander the Great ; a Treatise on Great Men ; The Thoughts of a Cosmopolite on Air Balloons; Military Instructions ; A Discourse on Taking the Oath ; Considerations on the Grandeur, &c. of Ancient Rome ; An amusing Historical, Po- litical, and Literary Journal ; all in 8vo. : and a History of the Military Life of Prince Frede- rick Augustus of Brunswick Lunenburg, 4to. His highness was an honorary member of the Berlin Academy of Sciences. In 1792 he suc- ceeded to the principality of Brunswick Dels, and died in 1805 at Weimar.

William Adolphus, another brother, belonged to the Academy at Berlin, and published a Trans- lation of Sallust. a Discourse on War, and a Poem on the Conquest of Mexico, in French.

He served in the armies of the king of Prussia, and died of a fever in 1771 whon about to join Ā»lĀ»e Russian army.

BRUNT'. Swed. branad, Belg. brand, from (Joth. brenna. To burn; ardor; vehemence; shock ; violence ; blow ; stroke.

Erona chose rather to bide the brunt of war, than euture him. Sidney.

A wicked ambush, which lay hidden long I u the close covert of her guileful eyen, Thence breaking forth, did thick about me throng, 1 oo feeble I to' abide the brunt so strong. Spenser.

The friendly rug preserved the ground, And headlong knight, from bruise or wound, Like feather-bed betwixt a wall, Or heavy brunt of cannon-ball. Hudibrat.

God, who caused a fountain, at thy prayer, From the dry ground to spring, thy thirst to' allay After the brunt of battle. Milton.

BRUNTON (Mary), an authoress of some repute, was the daughter of Colonel Thomas Balfour, and born in the island of Barra, Ork- ney, in 1778. She married, in her twentieth year, Dr. Alexander Brunton, minister of Bolton, near Haddington, and afterwards of Edinburgh. She wrote Discipline, and Self-Control, two very successful novels of the religious class, and died in 1818, leaving Emmeline, a tale, and other pieces, which have been published by Dr. B. with a sketch of her life.

BRUNY'S ISLE, an island on the south-east coast of Van Diemen's land, of an irregular figure, and about thirty miles in length. On the east it is penetrated by Adventure Bay, and by Isthmus Bay on the west ; the tides nearly meet on each side of the narrow intervening lands. From the mainland this island is separated by D' Entrecasteaux's channel, and has a beautiful sandy beach, of which the interior is covered with lofty trees, many of which seem peculiar to the island. Enormous rays are found here, weighing 300 or 400 pounds. Mosquitoes are numerous, and a species of large black ant, which inflicts a very painful bite. Eagles, hawks, par- roquets, and several kinds of crows, frequent the shore, where numbers of aquatic birds are taken. Kangaroos are also found here, and a singular species of the duck-billed ant eater. It is seven- teen inches long, two inches high when walking, and covered by spines, just projecting above the skin. It is a sort of connecting link between birds and quadrupeds. The few inhabitants here are of similar tribes to those of Van Die- men's land, dark, and tattooed with fanciful ele- vated punctures. Both sexes go naked, and are very barbarous and treacherous. Long. 147Ā° 29′ E., lat. 43Ā° 21′ S.

BRUSCHIUS (Gasper), a Latin histonan and poet, born at Egra, in Bohemia, in 1518. He was devoted to literature from his childhood, and especially to poetry, in which he gained so much reputation, that he attained to the poetical crown, to the dignity of poet laureat, and of count pala- tine. He wrote with prodigious facility; and his verses are easy, and natural. He published Latin poems on various subjects ; the History of the Bishops and Bishoprics of Germany ; of Ger- man M^^s^-iss; and many other works, of

*which a catalogue is given in Gesncr's Biblio- theque. He was very poor, subsisting almost entirely by the benefactions of his poetical pa- trons, and by presents from the abbots whose monasteries he described. The liberality of some abbots at Basil enabled him to buy a new suit of clothes ; but when he found that appearing well dressed in the streets procured him respect from the vulgar, he tore his new finery to pieces, * as slaves that had usurped their master's honors.' He was murdered in the forest of Schlingenbach between Rottemberg and Winsheim, by some gentlemen (it was supposed) against whom he was about to write something.*

BRUSH', v. & n. ^ Swed. borst, Dan. bteerst, BRUSH'ER, SFr. brosse. This in the

BRUSH'Y. j sense of an instrument

made with bristles of hair : but Goth, brask, brad- ska, Swed. br&dska, Scot, brash, Bel. brush, Fr. brusque, Ital. brusco. In this it signifies a sud- den effort, a strenuous act, an assault. To brush, is with a brush either to clean, rub, or paint any- thing; to strike with quickness, to move with rapidity, or to fly over, to skim lightly. The adjective is used in the sense of rough or shaggy. A fox's tail is on this account called a brush.

The wrathful beast about him turned light, And him so rudely passing by, did brush With his long tail, that horse and man to ground did rush. Faerie Qiieene.

If he be not in love with some woman, there is no believing old signs : he brushes his hat o' morning ; what should that bode ? Shakspeare.

Let grow thy sinews till their knots be strong, And tempt not yet the brushes of the war. Id.

. Sir Henry Wotton used to say, that criticks were like brushers of noblemen's cloathes. Bacon.

Another bolder stands at push With their old holy-water brush. Marvell.

And from the boughs brush off the evil dew, And heal the harms of thwarting thunder blue.

, Milton.

Has Somnus brush'd thy eyelids with his rod ?

Dry den,

His son Cupavo brushed the briny flood, Upon his stern a brawny centaur stood. Id.

Nor wept his fate, nor cast a pitying eye, Nor took him down, but brushed regardless by. Id.

High o'er the billows flew the massy load, And near the ship came thundering on the flood, It almost brushed the helm. Pope.

You have commissioned me to paint your shop, and I have done my best to brush you up like your neigh- bours. Id.

The French had gathered all their force, And William met them in their way ; Yet off they brushed, both foot and horse.

Prior.

With a small brush you must smear the glue well upon the joint of each piece. Moxon.

Whence comes all this rage of wit ? this arming all the pencils and brushes of the town against me ?

StMingfleet.

As on a time the fox held forth, On conscience, honesty, and worth, Sudden he stopped ; he cocked his ear j Low dropt his brushy tail with fear.

Gay's Falles.

Alike the busy and the gay But nutter through life's little day, In fortune's varying colours drest, Brushed by the hand of rough mischance. Grayt

BRUSSELS.

623

, in electricity, denotes the luminous appearance of the electric matter

issuing in a parcel of diverging rays from a point. Beccarin ascribes this appearance to the force with which the electric fluid, going out of a point, divides the contiguous air, and passes through it to that which is more remote.

BRUSH MAKING. This is done by folding the hair or bristle in two ; and bringing it by means of a packthread, which is engaged in the fold, through the holes with which the wood is pierced all over, being afterwards fastened therein with glue. When the holes are thus filled, the ends of the hair are cut to make the surface even. The Chinese painter's brush consists of the stalk of a plant ; whose fibres being fretted at both ends, and tied again, serve for a brush.

BRUSH, SHEARMEN'S, is made of wild boar's bristles ; and serves to lay the wool or nap of cloth, after shearing it for the last time.

BRUSH, WIRE, is made of brass or iron wires instead of hair. These are used by silver-smiths and gilders, for scrubbing silver, copper, or brass, previous to gilding them.

BRUSH OF A Fox, among sportsmen, signifies his drag or tail.

BRUSH'WOOD. Teut. brusch, Fr. brusc, brosse, brossailles, Ital. brusca. Young trees, or branches that are stunted by cattle. See BROWSE and RISEWOOD.

It smokes, and then with trembling breath she

blows, Till in a cheerful blaze the flames arose.

With brushtowd, and with chips, she strengthens

these. And adds at last the boughs of rotten trees. Dryden.

BRUSSELS, the capital of the southern pro- vinces, and second town of the kingdom of the Netherlands, is a handsome city of South Bra- bant, situated partly on a gentle eminence, and partly on a plain watered by the Senne. It is stated to be seven English miles in circum- ference, and was formerly surrounded by a wall, ditch, and other fortifications ; but these were demolished by Joseph II. and the ramparts are laid out in public walks. No town in Europe has finer walks. That part of the city on the hill has a very imposing appearance. The park is an immense square, laid out in regular walks, shaded with trees, and surrounded by the pa- laces, public offices, and houses of the great. In one of these walks, there is a fountain into which the czar Peter, when on a visit to this city, fell one evening after dinner, while strolling through the park ; an event recorded on a marble

tablet. In the lower town are many narrow streets of the character of all bustling towns ; but the great market-place here is beautiful; and the public buildings are good specimens of the florid Gothic. The Hotel de Ville is a magnificent structure of this kind, with a spire of curious architecture, 364 feet high, and surmounted by a statue of St. Michael with the dragon, in gilt copper. The internal decorations of this edifice correspond with its external appearance. Some of the apartments are adorned with beautiful specimens of tapestry, representing the resignation of Charles V. Many of the churches and palaces

of the nobility are also elegant structures, mostly decorated with the finest paintings of the Flemish school. Of twenty public fountains which sup- ply the city with water, some are elegantly exe- cuted and ornamented. The church of the Ca- puchins is one of the finest they possessed in Europe. Brussels has also a public library, con- taining 100,000 volumes ; an academy of sciences, instituted in 1772, which holds its meetings in the library ; a botanic garden, with more than 4000 exotics ; a cabinet of curiosities ; collection of paintings ; &c. Besides, being the perma- nent abode of the hereditary prince, and the usual residence of the court of the Netherlands, the states-general of the kingdom meet here and at the Hague alternately. The magistracy is composed of a superior officer, a burgomaster, seven echevins, two treasurers, and a pensionary, besides nine councillors and three receivers.

Brussels has long been celebrated for its lace and caipets, of a superior manufacture. The former alone employs about 10,000 people. Silks and earthenware are also wrought, woollen and cotton stuffs of various kinds, and potash. Since the peace of 1814, its population has in- creased from 60,000 to 80,000, which includes a great number of English families. Brussels has also a respectable foreign trade, by means of the Scheldt, with which it is connected by a canal.

The environs of Brussels are well cultivated, and, striking along the whole southern line, stretches the large forest of Soignies. The city was the head-quarters of the British troops on the eve of the memorable battle of Waterloo ; and, both before and after that glorious victory, was a scene of the deepest interest to every nation and country of Europe. The numerous tours, sentimental, descriptive, or of a mixed character, which the vanity or industry of its visitants has given the public, must have ren- dered the city and its scenery familiar to most of our readers.

Brussels was founded by St. Gery, bishop of Cambray, about the beginning of the seventh century, who commenced with a small chapel, built on an island formed by the Senne. The labors of the bishop, it is said, and the pleasant- ness of the situation, soon surrounded him with a considerable

village ; and in the year 900 both a market and a castle are found here. It re- ceived its walls and towers when, about the middle of the eleventh century, it became the residence of the dukes of Brabant. Subsequently the Austrian governors of the Netherlands resided here. In 1555 Charles V. here resigned his do- minions to his son Philip; the chair of state which he used is still preserved. In 1695 Mar- shal Villeroy bombarded it for sixteen hours, when fourteen churches and 4000 houses became a prey to the flames. After the battle of Ramil- lies, the keys were resigned to the duke of Marl- borough. The Elector of Bavaria made an un- successful attack upon this city in 1708; but it was taken by the French in 1746, and restored at the peace of Aix-la-Chapelle. It was first entered by the French revolutionary troops in 1792, about ten days after the battle of Jemappe; was afterwards evacuated, but again taken on the 10th of July, 1794, and kept till the general

peace , During these years it was the chief town in the department of the Dyle, the seat of a prefect and receiver-general, a court of criminal and special justice, a chamber and tribunal of com- merce, and a court of appeal for five depart- ments. Lat. 50Ā° 51′ N., long. 4Ā° 22′ E.

BRUT A, in zoology, the second order of ani- mals of the class mammalia, comprehending those animals which have no fore teeth in either jaw; feet with strong hoof-like nails. The ge- nera included in this order are, ā the rhino- oceros, having a horn in the middle of its fore- head; bradypus, sloth; myrmecophaga, ant- eater ; platypus ; manis ; sypus, armadillo ; sukotyro, double-horned rhinoceros ; elephas, elephant ; trichechus, morse.

BRUS'TLE. Sax. brastlian, Teut. brasteln, from Goth, brasa, Swed. brasta, to burn. To crackle like the burning of sticks ; to raise the bristles like a boar or hedgehog. See BRISTLE. To make a noise like the rubbing of silk. See RUSTLE.

Lat. bnitus, Fr. bnftc, Ital. bruto. Brute is an irrational animal ; a crea- ture without reason; a savage. The adjective is ˆapplied to that which has the distinguishing characteristic qualities of a brute. Stupid, savage, cruel, inhuman. Rough,

BRUTE, n. & BRU'TAL,'

BRUTAL'ITY, BRU'TALIZE, BRU'TALLY, BRUTE'NESS, BRU'TIFY,

BRU'TISH, BRU'TISHLY, BRU'TISHNESS. gross, ferocious, uncivilised, ignorant.

In such a salvage wight, of brutish kynd, Amongst wild beastes in desart forrests bred, It is most strange and wonderful to fynd, So mild humanity and perfect gentle mynd.

Spenser.

Thou dotard vile, That with thy bruteness shend'st thy comely age. Id,

They were not so brutish, that they could be igno- rant to call upon the name of God. Hooker. There is no opposing brutal force to the stratagems of human reason. L' Estrange. What may this mean ? Language of man pronounced By tongue of brute, and human sense expressed !

Milton,

Osiris, Isis, Orus, and their train, With monstrous shapes and sorceries abused Fanatick Egypt, and her priests, to seek Their wandering gods disguised in brutish forms.

Id.

Then to subdue, and quell through all the earth, Brute violence, and proud tyrannick power. Id.

To these three present impulses, of sense, memory, and instinct, most, if not all, the sagacities of brutes may be reduced. Hale,

For a man to found a confident practice upon a dis- putable principle, is brutishly to outrun his reason.

South.

After he has slept himself into some use of himself, by much ado he staggers to his table again, and there acts over the same brutish scene. Id.

The brutal business of the war Is managed by thy dreadful servants' care.

Dryden.

O thou fallacious woman ! am I then brutified ? ā Ay ; I feel it here ; t sprout, I bud, I am ripe horn

Congrcve.

All other courage, besides that, is not true valour, but brutishness. Spratt.

Courage, in an ill-bred man, has the air, and es- capes not the opinion, of brutality. Locke.

Brutes may be considered as either aerial, terres- trial, aquatick, or amphibious. I call those aerial which have wings, wherewith they can support them- selves in the air ; terrestrial are those whose only place of rest is upon the earth ; aquatick are those, whose constant abode is upon the water. Id.

Upon being carried to the Cape of Good Hope, he mixed, in a kind of transport, with his countrymen, brutalized with them in their habit and manners, and would never again return to his foreign acquaintance.

Addison.

Mrs. Bull aimed a knife at John, though John threw a bottle at her head, very brutally indeed.

Arbuthnot.

O how infallible the thoughtless brute ! 'Twere well his holiness were half as sure.

Savage.

Why starved, on earth, our angel appetites, While brutal are indulged their fulsome fill ? Young.

Patience ! Hence ā that word was made ' For brutes of burthen, not for birds of prey ; Preach it to mortals of a dust like thine ā I am not of thine order. Byron's Manfred.

BRUTIA, in the medical writings of the ancients, the fattest and most resinous kind of pitch, such as was properest for making the oil of pitch, called oleum picinum.

BRUTTII, in ancient geography, one of the two peninsulas of Italy, the ancient Calabria being the other; stretching south towards Sicily ; bounded by the sea on every side except by the isthmus, between the river Laus and the Thurii, where it is terminated by Lucania ; inhabited by the Bruttii, for whose country the ancient Ro- mans had no peculiar name, calling both the people and the country indiscriminately Bruttii. This and a part of Lucania formed the ancient Italia. It was called Bpsrrta, which in Greek signifies pitch, from the great quantity of it pro- duced there. It is divided into two

coasts by the Apennine ; that on the Tuscan, and that on the Ionian sea ; and is now called Calabria Ul- tra. It now differs from the ancient Calabria or Messapia, on the east, on the Adriatic sea, which formed the other peninsula or heel of the leg, now called Calabria Citra, the Bruttii forming the foot.

BRUTUS (Lucius Junius), the avenger of the rape of Lucretia, and founder of the Roman re- public, flourished about A. A. C. 509. See ROME, HISTORY OF.*

BRUTUS (Marcus), the passionate lover of his country, and chief conspirator against Csesar,3lew himself on losing the battle of Philippi, A. A. C. 43. See ROME, HISTORY OF.

BRUTUS (Decimus JuniusX one of the conspi- rators against Caesar. He was slain by Marc Antony.

BRUTUS (John Michael), a man of learning in the sixteenth century. He was born in Venice ; and, having studied at Padua, spent great part of his life in travelling, and became historiographer to the emperor. He wrote, 1. A History of Hungary. 2. A History of Florence. 3. Notes on Horace, Cxsar, Cicero, &c. and other works.

BauTUS, or BRUTE, according to the ancient fabulous history of this island, by Geoffrey ol

Monmouth, was the first king of Britain. He is said to have .been the son of Sylvius, and grand- son of Ascanius, the son of ˆneas, and born in Italy. Having accidentally killed his father, he fled into "Greece, where he took king Pandrasus prisoner, who kept the Trojans in slavery, whom he released on condition of providing ships, &c. for the Trojans to emigrate with them. Being advised by the oracle to sail west beyond Gaul, he, after some adventures, landed at Totness in Devonshire. Albion was then inhabited by a remnant of giants, whom Brutus destroyed ; and called the island after his own name Britain. He built a city called Troja Nova, or Troynovant, now London ; and, having reigned twenty-four years, at his death divided the island among his three sons : Locrine had the middle, called Lo- Ā«gria, now England ; "Camber had Cambria, now Wales ; and Albanact, Albania, now Scotland.

BRUTUS, in entomology, a species of papilio inhabiting Africa.

BRUYERE (John de la), a French writer of repute, was born in 1640, at a village of the Isle of France. When treasurer at Caen, by pur- chase, he was noticed by Bossuejt, and placed about the person of the duke of Burgunfly, whom he instructed in history, for which he was remu- nerated with a pension of one thousand crowns per annum. The rest of his life he passed as a courtier and a man of letters, admired equally for his urbanity and his philosophical mind. la 1693 he was elected one of the members of the French Academy, and died in 1696, by an apo- plectic fit. Few works have been more popular than his Characters of Theophrastus,, translated from the Greek, with the Manners of the present Age. He left behind him Dialogues on Quiet- ism, which were edited and published by Dupin in 1699. The best editions of his Characters are those of Amsterdam and Paris, 1741, two volumes, 12mo , and that of 1765, one volume, 4to

BRYAN (Michael), an author and connois- sieur in the fine arts, was at one time a picture- dealer, in which profession he failed. But he was of most respectable character and connexions, having married a sister of the earl of Shrewsbury. He afterwards engaged in the composition of a Biographical and Critical Dictionary of Painters and Engravers, which was commenced in 1813, and published in 1816, in two volumes, quarto. Many of the sketches are original, and do him much credit. He died March 21st, 1821, at the age of sixty-four.

BRYANT (Sir Francis), a soldier, statesman, and poet, was born of a genteel family, and edu- cated at Oxford. In 1.522, the fourteenth of Henry VIII., he attended the earl of Surrey to the coast of Brittany; and commanded the troops in the attack of Morlaix, which he took and burnt. 1'or this service he was knighted on the spot by the earl. In 1529 he was sent ambas- sador to France; and, in 1530 to Rome, on the subject of the king's divorce. lie was gentleman of the privy chamber to Henry VIII., and to Edward VI., in the beginning of whose reign he marched with the protector against the Scots ; and, after the battle of Musselburgh, was made banneret. In 1548 he was appointed chief VOL. TV

governor of Ireland, where he married the coun- tess of Ormond. He died soon after, and was buried at Waterford. His works are, 1. Songs and Sonnets ; some of which were printed with those of the earl of Surrey and Sir Thomas Wyat. London, 1565. 2. Letters written from Rome concerning the king's divorce ; MS. 3. A Dis- – praise of the Life of a Courtier, &c. London, 1548, 8vo. from the French of Alaygri, who translated it from the Castilian, in which it was originally written by Guevara.

BRYANT (Jacob), a writer distinguished for great extent of learning and

depth of research, was born in 1715 at Plymouth, where his father held an appointment in 'the customs. Entered at Eton, he very soon distinguished himself by the rapidity of his classical attainments ; and at King's College, Cambridge, he continued to prosecute his studies with remarkable assiduity and success. His reputation having reached the ears of the duke of Marlborough, he was first appointed private secretary to that celebrated nobleman, and afterwards accompanied his son to Eton, in the capacity of private tutor. The first work that Bryant gave to the world, bore for its title, Observations and Enquiries relating to various parts of Ancient History, containing Dissertations on the wind Euroclydon, and the Island Melite ; together with an account of Egypt in its most early state, and of the Shepherd Kings, 1767. The New System, or Analysis of Ancient Mythology, came out in 1774 ; a work of uncommon industry, and evincing the most profound acquaintance with the language and customs of antiquity. His Dissertation on the Apamean Medal was severely attacked in the Gentleman's Magazine ; which attack he success- fully repelled in a separate publication, inserted, we believe, in the last edition of his works. This medal is certainly a very remarkable relic of antiquity ; and it deserves to be mentioned that professor Eckhel, the first medalist of his age, gave a decision on the controversy in favor of Mr. Bryant. Some time after, Bryant published a pamphlet, entitled Vindicix Flavians : the object of which was to remove certain difficulties attending the testimony which Josephus bears to Christ. This tract made little impression at first, and was in fact called in by its author, who contented himself with distributing copies among his particular friends ; and it was not until Dr. Priestley had declared himself convinced by the reasoning which it contains, that Bryant ventured to send it forth again with his name. Bryant's attention seems to have been drawn about this period to the poems attributed to Rowley. From the communication of his friend Dr. Glynn, and his enquiries at Bristol, he received such infor- mation as convinced him, that these poems were not entirely of Chatterton's fabrication, and he accordingly took upon him the arduous task of proving their genuineness. In 1794 he produced a large volume, entitled Observations upon the Plagues inflicted upon the Egyptians, in which is shown the peculiarity of those judgments, and their correspondence with the rites and idolatry of that people ; with a prefatory discourse con- cerning the Grecian colonies from Egypt. M. le Chevalier's Description of the Plain of Troy

having been published, Bryant, who several years before had written his sentiments pn the Trojan war, now first set forth some observations on M. le Chevalier's treatise, and afterwards a dissertation on the Expedition of the Greeks, as it is given by Homer, with the intention of show- ing that no such expedition had ever taken place, and that no such city as Troy ever existed. In this notion be stood almost alone, though he was not without plausible arguments to support his opinion. Everything associated with the idea of Troy has been, for so many generations, con- secrated in the minds of men by the powers of Homer's verse, and by an undefined veneration for the suffrages of antiquity, that it was held as a kind of sacrilege on the part of any scholar to call in question the events which accompanied the downfal of that celebrated city. In the fol lowing year Mr. Bryant submitted to the public a work of a different kind and character, under the title of The Sentiments of Philo-Judaeus concerning the AOFOS, or word. But learned and curious as this treatise unquestionably is, it appears to have excited less interest among general readers than perhaps any of his other productions. He closed his literary labors with a quarto volume of Dissertations on the Prophecy of Balaam ; the standing still of the Sun in the time of Joshua ; the Jaw-bone of the Ass with which Samson slew the Philistines ; and the His- tory of Jonah and the Whale; subjects in them- selves exceedingly curious, and which he treated with great talents and ingenuity. Mr. Bryant was remarkably temperate in his habits, and his conversation was animated and sprightly when among particular friends. His liberality was not confined within narrow limits, and the spirit of religion diffused itself through all his works. He died at Cypenham near Windsor on the 14th of November, 1804, of a mortification in his leg, brought on by a hurt from the tilting of a chair, in reaching down a book from its shelf.

BRYDONE (Patrick), a recent traveller of some eminence, was born in Scotland in 1741, and was early in life engaged as travelling tutor to Mr. Beckford and some other gentlemen. On his return he published his celebrated Travels in Sicily and Malta, of which work a second edition in two volumes, octavo, was pxiblished in 1790. A flowing style, the vivacity of his re- marks, and the general accuracy of his descrip- tions, rendered this production very popular, and procured him admission into the Royal Society. On the subject of the eruptions of Etna, he attacks, as he conceives, the Mosaic account of the creation, and appears to have been an un- believer in mere ignorance of what Revelation contains. See the close of our article ˆ.TNA. Mr. Brydone received the appointment of comptroller of the stamp-office, which he held to his death in 1819. Besides his Tour, he was the author of several papers in the Philosophical Transactions.

BRYE (John Theodore de), an excellent en- graver, a native of Liege, who resided chiefly at Frankfort. He acquired a neat, free style of engraving,

excellently adapted to small subjects, with many figures, as processions, &c. His heads in general are spirited, and his back

grounds are touched with a masterly hand. HĀ» died in 1598. The two first parts of Boissard'a collection of portraits were engraved by him, assisted by his sons, who afterwards continued it.

BRYENNIUS (Manuel), a Greek writer on music, is supposed to have flourished under the elder Palseologus, about the year 1320. He wrote three books on Harmonics ; the first is a kind of commentary on Euclid ; the second and third on Ptolemy. Meibomius had given the public expectations of a translation of this work, but not living to complete it, Dr. Wallis under- took it : and it now makes a part of the third volume of his works, published at Oxford, in 3 vols. folio, 1699.

BRYENNIUS (Nicephorus), a prince distin- guished by his courage, probity, and learning, was born at Orestia in Macedonia, where his father by rebellion provoked the emperor to send his general Alexis Comnenus against him, who ordered his eyes to be put out; but, being charmed with his son Nicephorus, he married him to his own daughter, the celebrated Anna Comnena. When Alexis came to the throne, he gave Bryennius the title of Caesar ; but would not declare him his successor, though solicited by the empress Irene : and was therefore suc- ceeded by his son John Comnenus, to whom Bryennius behaved with the utmost fidelity. Being sent, about A. D. 1137, to besiege Anti- och, he fell sick, and returning, died at Constan- tinople. This prince wrote the History of the Reigns of Isaac Comnenus and his three Suc- cessors, which was published with a Latin ver- sion at Paris in 1661.

BRYGMOS, or BRYGMUS, in medicine, t. grating noise made by the gnashing of the teeth.

BRYONIA, BRYONY, a genus of the synge- nesia order, and monoecia class of plants ; in the natural method ranking under the thirty-fourth order, cucurbitaceae. The calyx of the male is five-toothed, with a quinquefid corolla, and three filaments. In the female the calyx is dentated, tne corolla quinqufied, the style trifid, with a roundish many-seeded berry There are nineteen species, the chief of which are, 1. B. alba, rough or white bryony with red flowers, a native, of dry banks under hedges, in many parts 01 Britain. The roots of this plant have by impos- tors been brought into a human shape, and shown for mandrakes. The roots of this species are used in medicine. These are very large, some- times as thick as a man's thigh; their smell, when fresh, is strong arid disagreeable ; the taste nauseously bitter, acridj and biting ; the juice is so sharp, as in a little time to excoriate the skin ; in drying, they lose great part of their acrimony, and

almost their whole scent. Bryony root is a strong irritating cathartic ; and as such has some- times been successfully exhibited in maniacal cases, in some kinds of dropsies, and in several chronical disorders, where a quick solution of viscid juices, and a sudden stimulus on the solids, were required. An extract prepared by water acts more mildly, and with greater safety than the root in substance : given from half a dram tc a dram, it is said to prove a gentle purgative, and likewise to operate powerfully by urine. Bryony root, applied externally, is said to be a

powerful discutient. 2. B. bonariensis, bryony with hairy palmated leaves, divided into five parts, and obtuse segments. It is a native of warm countries ; but merits cultivation on account of the pretty appearance it makes when full of fruit. 3. B. racemosa, bryony with a red olive-shaped fruit. It is a native of warm cli- mates, and perennial; but the branches decay every winter. They flower in July, and in warm summers will perfect their seeds in Britain.

BRYONIA, in conchology, a species of strom- bus, color fuscous, variegated with white and blue in clouds. This shell is of a conic form, with a mucronate, eight-dentated lip, and knotty spire. This shell is extremely rare, and its native place is unknown.

BRYONIOIDES, a name given by some botanists to the single-seeded cucumber. See SICYOS.

BRYTIA, among ancient naturalists, the must of grapes, which remains after expressing the juice.

BRYUM, in botany, a genus of the class cryp- togamia, order musci. The anthera is opercu- lated or covered with a lid, the calyptra polished; and there is a filament arising from the terminal tubercle. There are forty- seven species, most of them natives of Britain.

BRZESC, or BRSESTZ, the chief town of a circle in the province of Grodno, Russia, for- merly the capital of a palatinate in Lithuania, stands on the river Bug, about 100 miles east of Warsaw. It is said to contain the largest Jewish synagogue in Europe, and a seminary, to which young Rabbies from all parts of Europe resort. Near this town an engagement took place be- tween the Russians and Poles in 1794, which lasted eight hours. Population about 4000. Lat. 52Ā° 5′ N., long. 23Ā° 30′ E.

BUA, an island of the gulph of Venice, on the coast of Dalmatia, near Trau ; called also the Partridge Island, because frequented by those birds. It is called Bubus by Pliny. During the decline of the empire it was called Boas ; and several illustrious men who fell under dis- grace at court, were banished to it, particularly Florentius, master of the offices under Julian, Immentius de Valenti, and the heretic Jovinian. The emperors of Constantinople either were not acquainted with it, or were willing to treat the banished with great clemency. The climate is exceedingly mild; the air good; the oil, grapes, and fruit excellent ; the sea around it abounds in fish, and the port is large and secure. It is ten miles in length, and twenty-five in circuit ; but rather high and mountainous.

BUAT-NANCAY (Louis Gabriel, Counv du), was born in Normandy, of a respectable family, in March, 1732. At an early age he entered into the Order of Malta ; and became acquaint- ed with the Chevalier Folard, author of the Commentaries on Polybius, who received him into his house, and watched over his education. Buat became successively Minister for France at Ratisbon and Dresden ; retired from public life in the year 1776, and died at Nanfay, in Berry, on the 18th of September, 1787. He was a man of considerable talent and learning, writing with great facility; but h's style is unequal. His

works are : 1. Tableau du Gouvernement actuel de 1′ Empire d' Allemagne, translated from the German of Schmauss, with notes historical and critical. Paris, 1755, 12mo. <2. Les Origines, ou 1'Ancien Gouvernement de la France, de 1′ Italic, et de 1′ Allemagne, published at the Hague, 1757,4 vols. 12mo. 3. Histoire Ancien- ne des Peuples de 1′ Europe, Paris, 177(2, 12 vols. 12mo. This is the largest, and perhaps the best work of Buat. 4. Les Elemens de la Politique, ou Recherches sur la vrais Prin- cipes de 1′ Economic Sociale, 1773, 6 vols. 8vo. 5. Les Maximes du Gouvernement Mo- narchique, pour servir de suite aux Elemens, 4 vols. 8vo. There is also ascribed to Buat a work entitled Remarques d' un Francais, ou Examen impartial du livre de M. Necker sur les Finances, Geneva, 1785, 8vo. In his youth he composed a tragedy, entitled Charle- magne, ou le Triumphe des Lois, published at Vienna, 1764, 8vo. He also contributed seve- ral articles to the scientific and other journals, on points of literature, history, and political econo- my ; in particular, some excellent observations on the character of Xenophon, See. in the fourth volume of the Varietes Litteraires.

BUB', v. & n. Dut. bobbelen. Strong, foam- ing, bubbling liquor. Johnson says strong malt liquor.

Or if it be his fate to meet With folks who have more wealth than wit, He loves cheap port, and double bub, And settles in the humdrum club. Prior.

BUBALUS, in zoology, the trivial name of the buffalo See Bos.

BUBASTIS, a name of Isis, or the moon. The Egyptians bestowed different names on the sun and moon, to characterise their effects and relations with respect to the earth. Theology, having personified Bubastis, formed a divinity, of whom a cat was the symbol. The priests fed it with sacred food; and when it died they em- balmed its body, and carried it in pomp to the tomb prepared for it. The ancients have ex- plained this worship variously. The Greeks pretended that, when Typhon declared war against the gods, Apollo transformed himself into a vul- ture, Mercury into an ibis, and Bubastis into a cat, and that the veneration of the people for cats took rise from that fable; but they ascribe their own ideas to the Egyptians, who thought very differently. The Greeks, who worshipped the moon by the name of Diana, bestowed it also ou this Egyptian divinity. The Egyptians attri- bxited to her the virtue of assisting pregnant women, as the Greeks and Latins did to Diana. A perfect resemblance, however, does not exist between the two deities. The Greeks constituted Diana goddess of the chase, an attribute the Egyptians did ndt acknowledge in Bubastis. Diana was the daughter of Jupiter and Latona, but Bubastis of Osiris and Isis. A question naturally arises here : how could Bubastis be called the daughter of Isis since she also was a symbol of the moon? The Egyptian theology easily explains this. Isis was the general appel- lation of the moon, Bubastis a particular attribute. The sun, in conjunction with the star of the night, formed the celestial marriage of Osiris and

Tsis ; the crescen, which appears three days after, ā¢was allegorically called their daughter. Accord- ingly, in the city of Ilithya, where Bubastis was adored under that title, the third day of the lunar month was consecrated by a particular worship ; because, three days after the conjunction, the moon, disengaged from the rays of the sun, ap- pears as a crescent, and is visible. The Egyp- tians, therefore, celebrated a solemnity in honor of Bubastis, which in their tongue signified new moon.*

BUBASTIS, in ancient geography, a city of Egypt built in honor of the goddess, and where, accordeng to Herodotus, the people annually as- sembled from all parts of Egypt, to celebrate her festival. .

BUB'BLE, v. & n.~\ Lat. bullabula, Span. BUB'BLIXG, I burbuj, Swed.

bublu,

BUB'BLY, \ Belg. bobble, Sans, bool-

BUB'BLE-GLASS, V boola. A small bladder BUB'BLE-BLOWING. J of air in water. Bubble is applied to that which will burst as easily as a bubble ; to anything which wants solidity and firmness; to a puff, and thus to a cheat, a de- lusion, a fraud, and hence to bubble is to cheat, to cozen, to delude, to defraud.

For younth is a bubble blowne up with breath, Whose witte is weakeuesse, whose wage is death Whose way is wildernesse, whose ynne penaunce And stoope gallaunt age the host of Greevaunce.

Spenser.

AJas ! a crimson river of warm blood, Like to a bubbling fountain stirred with wind, Doth rise and fall. Shakspeare,

Then a soldier, Seeking the bubble reputation, Even in the cannon's mouth. Id.

War, he sung, is toil and trouble, Honour but an empty bubble, Fighting still, and still destroying. Dryden. Still bubble on, and pour forth blood and tears. Id. He tells me, with great passion, that she has bubbled him out of his youth ; and has drilled him on to five and fifty. Addison.

He has been my bubble these twenty years, and, to n>y certain knowledge, understands no more of his own affairs, than a child in swaddling clothes.

Arluthnot.

Cease, dearest mother, cease to chide ; Gany's a cheat, and I'm a bubble: Yet why this great excess of trouble ? Prior.

The nation then too late will find, Directors' promises but wind, South-sea at best a mighty bubble. Swift.

Not bubbling fountains to the thirsty swain, T$ot showers to larks, or sunshine to the bee, Are half so charming as thy sight to me. Pope. What words can suffice to express, how infinitely I esteem you, above all the great ones in this part of the world ; above all the Jews, jobbers, and bubblers !

Digby to Pope.

Who sees with equal eye, as God of all, A hero perish, or a sparrow fall ;

Atoms or systems into ruin hurled ; And now a bubble burst, and now a world.

Pope's Essay on Man.

How fair, how young, how soft, so 'er he seem, Full from the fount of Joy's delicious springs, Some bitter o'er the flowers its bubbling venom flings

Byron.

BUBBLE, in commerce, a cant term given to a project for raising money on imaginary grounds. For examples, we may refer to France and Eng- land in 1719, 1720, and 1721, and to the latter country in 1825.

BUBBLE, in natural philosophy, a small drop or vesicle of any fluid filled with air, and formed either on its surface by an addition of more of the fluid, as in raining, &c. ; or in its substance by an intestine motion of its component particles. Bubbles are dilatable or compressible, i. e. they take up more or less room as the included air is. more or less heated, or more or less pressed from without ; and are round because the included air acts equally from within all around.

BUBIL, in ornithology, a species of turdus i color brown, with a black longitudinal band be- hind the eye.

BL/B'BY. Ital. poppa, boppa. See PAP. A woman's breast.

Fob ! say they, to see a handsome, brisk, genteel young fellow, so much governed by a doating old woman, why don't you go and suck the bobby ?

Arbuthnot.

BU'BO, n. s. Lat. from /3Ā«j3wv, the groin. That part of the groin from the bending of the thigh to the scrotum ; and therefore all tumors in that part are called buboes.

I suppurated it after the manner of a bubo, opened it, and endeavoured detersion. Wiseman.

BUBO, in medicine, a tumor which rises with inflammation, more particularly in the lympha- tic glands of the groin and axilla. This disease may arise either from the irritation of local dis- order, from the absorption of venereal poison, or from constitutional causes, as is the case in the plague, and in scrophulous swellings of the in- guinal and axillary glands.

BUBON, Macedonian parsley : a genus of the digynia order, belonging to

the pentandria class of plants; and in the natural method ranking under the forty-sixth order, umbellatae. The fruit is ovate, striated, and villous. There are five species, which are propagated by seeds, and re- quire the common culture of other exotic vege- tables.

1 . B. galbanum, or African ferula, rises with an upright stalk to the height of eight or ten feet, which at bottom is woody, having a,purplish bark, covered with a whitish powder that comes off when handled. The top of the stalk is terminated by an umbel of yellow flowers ; which are succeeded by oblong channelled seeds, having a thin mem- brane or wing on their border. When any part of the plant is broken, there issues out a little thin milk of a cream color, from which the galbanum of the Materia Medica is made. See GALBA- NUM.

2. B. gummiferum, with a mock chervil leaf, rises with a ligneous stalk about the same height; but the small leaves or lobes are narrow and in- dented like those of bastard hemlock. The gal- banum of the shops is supposed to be procured from these two species.

3. B. Macedonicum, sends out many leaves from the root ; the lowest grow almost horizon- tally, spreading near the surface of the ground. In the centre of the plant arises the flower-stem, which is little more than a foot high, dividing into

many branches, each terminated by an umbel of white flowers, which are succeeded by oblong hairy seeds. The seeds of this plant enter into the celebrated compounds mithridate and theraca.

4. B. rigidum, hard or rigid ferula, is a native of Sicily. It is a low perennial plant, with short, stiff, and very narrow leaves. The foot stalk rises a foot in height, and is crowned with an umbel of small white flowers, to which succeed small, oblong, channelled seeds.

5. B. levigatum, a native of the Cape. Mr. Masson introduced this species into England in

1774.

BUBONA, in ancient mythology, the tutelar goddess of the larger cattle.

BUBONIUM, a name given by some botan- ists to the aster atticus, or golden star-wort, be- cause it was supposed to be efficacious in mala- dies

of the groin.

BUBONIUS LAPIS, a figured stone, in shape resembling an owl's head, of a flinty substance, black within, and cineritious without ; thus deno- minated by Dr. Plott.

BUBONOCE'LE, n. s. Lat. from /3Ā«0wv the groin, and KJJ\Ā»J, a rupture. A particular kind of rupture, when the intestines break down into the groin. See HERNIA INGUIRALIS.

When the intestine, or omentum, falls through the rings of the abdominal muscles into the groin, it is called hernia inguinalis, or if into the scrotum, scro- talis : these two, though the first only is properly so called, are known by the name of bubonocele. Sharp.

BUBROMA, in botany, a genus of the dode- candria order, and polyadelphia class of plants : CAL. perianth three-leaved; leaves ovate, con- cave, acute, reflected, deciduous : COR. petals five, concave, inserted into the nectary at the base : STAM. filaments five, filiform, upright, bent out- wards at the tip ; antherse three on each filament ; the cells marginated : PIST. germ superior, round- ish, hispid ; style filiform ; stigma simple : PERI- CARP, capsule, subglobular, woody, muricated all round with clubshaped tubercles, five-celled; cells lined with a thin membrane : SEEDS nu- merous, angular, almost reniform. B. guazuma, bastard cedar, grows from forty to fifty feet in height ; trunk nearly the size of a man's body, covered with a dark-brown, furrowed, bark ; branches horizontal; leaves alternate; racemes corymbose ; flowers small. A native of the East and West Indies. A decoction of the inner bark is very glutinous, and is said to be excellent in the elephantiasis, a disorder common among the negroes.

BU'BUKLE, n. s. A red pimple.

His face is all bubukles, and whelks, and knobs, and flames of fire. Shaktpearer

BUBULCA, in ichthyology, a small fresh- water fish, called by some bouviera and petense. It is small, flat, and very short, approaching to a round rather than a long shape, and of a fine silvery whiteness, seldom above two inches in length.

BUBULCUS, BUBULUS, names of the con- stellation Bootes.

BUG (George), a learned English antiquary,

who flourished in the beginning of the seven- teenth century. In the reign of king James I. he was made one of the gentlemen of the privy chamber,

knighted, and constituted master of the revels. He wrote, 1 . The History of the Reign of Richard III. in which he takes great pains to wipe off the bloody stains that have blotted his character, and represents the person and actions of that prince in a much less odiou? light, than other historians have done : 2. A Treatise of the Art of Revels; and 3. A work entitled the Third Uhiversitie of England.

BUCARDIA, or BUCARDITES, in natural history, a name given by many authors to a stone, in some degree resembling the figure of an ox's heart. It is usually of the substance of the coarser stones, and is no other than a quantity of the matter of such stone, received while moist into the cavity of a large cockle, and thence, as- suming the figure of the inside of that shell, the depression of the head of the cockle, where the cardo or hinge of this shell is, makes a long and large dent in the formed mass, which gives it a heart-like shape. Plott mentions a bucar- dites, which he found at Stretford in Stafford- shire, which weighed twenty pounds, though, broken half away, curiously reticulated, with a.- white-spar colored stone.

BUCARDIUM, in natural history, a name given by authors to a kind of heart shell, re- sembling an ox's heart in shape; it is of the genus of the cordiformes, or heart-shells, and differs from the other kinds, in being of a more globular figure.

BUCCA, in anatomy, the cheek.

Bucc MUSCULUS, in anatomy, a name given by some to the muscle more usually called the buccinator, and contrahens labiorem.*

BUCCA FERREA, in botany, a name given by Michaeli to a genus of plants, since called rappia by Linnseus.

BUCCALES GLANDULE are small glands dispersed over the inner side of the cheeks and lips.

BUCCAN, the place where the Bucca- niers smoke and dry their meat. The name is also applied to the grate or hurdle, made of Brasil wood, upon which the meat is hung above the fire.

BUCCANIERS', n. s. A name assumed by pirates on the coast of America, from boucan, a kind of wooden frame used by the savages of Cayenne for drying flesh or fish.

BUCCANIER, or BUCANIER, one who dries and smokes flesh or fish after the manner of the Indians. The name was particularly given to the first French settlers on the island of St. Do- mingo, whose sole employment consisted in hunting wild bulls or boars, in order to sell their hides and

flesh. It has also been applied to those famous piratical adventurers, chiefly English and French, who joined together to make depredations on the Spaniards of America. The latter had not been long in possession of the West Indies and tbe continent of America, when other nations, especially the English and French, began to follow them. But though the Spaniards were unable to people such extensive countries.

themselves, they were resolved that no other nation should join with them in it ; and therefore made war on all those who attempted to settle in any of the Antilles or Carribee islands. The French, however, were at last fortunate enough to acquire some footing in the island of St. Chris- topher ; but, by the time they began to form a regular government, the Spaniards found means to dislodge them. Upon this the fugitives, con- sidering at how great a distance they were from their mother country, and how near to the island of Hispaniola or St. Domingo, the northern parts of which were then uninhabited and full of swine and black cattle, immediately resolved to take possession of that country, in conjunction with some adventurers from Great Britain. The Dutch had promised to supply them plentifully with all kinds of necessaries they might require, in exchange for the hides and tallow they should procure by hunting. These new settlers obtained the name of buccaniers, from their custom of buccaning their beef and pork to preserve it for consumption. And upon some of them growing tired of this new way of life, and commencing planters, many more chose to turn open pirates, trusting to find among those who remained on shore a quick sale for all the plunder they could make at sea. The new body of adventurers were called free-booters, from their making free booty of whatever came in their way. Numbers of emigrants from France, soon joined the settlers in quality of indented servants, though they toiled like slaves during the three years for which they generally bound themselves. Thus the colony consisted of four classes : buccaniers ; free-booters ; planters ; and indented servants ; who began to call themselves the body of ad- venturers. They lived together in perfect har- mony, under a kind of democracy ; every freeman had a despotic authority over his own family ; and every captain was sovereign in his own ship, though liable to be discarded at the discretion of the crew. The planters settled chiefly in the little island of Tortuga, on the northern coast of Hispaniola ; but on some of them going to the great island, to hunt with the buccaniers, the rest were surprised by the Spaniards ; and all, even those who had surrendered at discretion, were put to the sword or hanged. The Spaniards now resolving to rid the great island of the buc- caniers, assembled a body of 500 lance men, who, by their seldom going fewer than fifty in a company, obtained the name of the

fifties from their enemies. At first they met with great suc- cess ; for the buccaniers hunting separately, every one attended by his servants, they were easily surprised. Hence the Spaniards killed numbers, and took many more, whom they con- demned to a most cruel slavery. But whenever the buccaniers had time to put themselves into a state of defence, they fought like lions : there are many instances of single men fighting their way through numbers. These dangers, however, and the success of the Spaniards in discovering their boucans, where they used to surprise and cut the throats of them and their servants in their sleep, engaged them to assemble in great numbers, and even to act offensively, in hopes that by so doing they might at last induce the

Spaniards to let them live in peace. But their enemies were intent on their destruction: and the island was turned into a slaughter house. At length the Spaniards had recourse to their old method of surprise, which against enemies of more courage than vigilance was likely to succeed better. This put the buccaniers under a necessity of never hunting but in large parties, and fixing their boucans in the little islands on the coast, whither they retired every evening. The expedient succeeded : and the boucans, by being more fixed, soon acquired the air of small towns. Each boucan ordered scouts every morning to the highest part of the island, in order to reconnoitre the coast, and see if any Spanish parties were abroad. If no enemy ap- peared, they appointed a place and hour of ren- dezvous in the evening, and were never absent if not killed or prisoners. When therefore any one of the company was missing, it was not lawful for the rest to hunt again till they had got intelligence of him if taken, or avenged his death if killed. Things continued long in this situation till the Spaniards destroyed all their game, and put the buccaniers under a necessity of betaking themselves to another course of life, and some of them turned planters ; and thereby increased some of the French settlements on the coast ; others entered among the free-booters. France, who had hitherto disclaimed for her sub- jects these ruffians, whose successes were only temporary, acknowledged them, as soon as they formed themselves into settlements ; and took measure for their government and defence. The hides, and boar-meat, in packs, were long con- siderable articles of trade in the neighbouring islands. See DOMINGO, St.

The habits of these people were in many res- pects singular. Their towns, as we have seen, were called boucans ; their huts they termed Ajoupas, a word which they borrowed from the Spaniards, and the Spaniards from the natives. These ajoupas lay open on all sides, which was very agreeable to the hardy inhabitants, in a climate where wind and air are so very desirable. Having neither wives nor children, the buccaniers associ- ated by pairs, and mutually rendered each other all the services a master could reasonably expect from a servant, living together in so perfect a

community, that the survivor always succeeded his deceased partner. This kind of union or fellowship they called s'emateloter, insailoring, and each other, matelot, or sailor, whence was derived the custom of giving, in some parts of the French Antilles, the name matelotage, sailorage, to any kind of society formed by private persons for their mu- tual advantage. They behaved to each other with the greatest justice and openness, we are told ; it would have been a crime to keep any thing under lock and key; but on the other hand, the least pilfering was unpardonable, and punished with expulsion from the community. Indeed there could be no great temptation to steal, when it was reckoned a point of honor never to refuse a neighbour what he wanted; and where there was so little property, it was impossible there should be many disputes. If any happened, the common friends of the par- ties at variance interposed, and soon put an end

to the difference. As to laws, the buccaniers acknowledged none but some rules drawn up in conventions among themselves. They silenced all objections from strangers, by coolly answering that it was not the custom of the coast ; and grounded their right of acting in this manner, on their baptism under the tropic, which freed them, in their opinion, from all obligations antecedent to that marine ceremony. The governor of Tor- tuga, when that island was again settled, though appointed by the French court, had very little authority over them ; they contented themselves with rendering him from time to time some slight homage. They had in a manner shaken off religion. They even laid aside their surnames, and assumed martial names, which long con- tinued in their families. On their marrying, which seldom happened till they turned planters ; they took care to have their surnames inserted in the marriage contract ; and this practice gave occasion to a proverb in the French Antilles, a man is not to be known till he takes a wife. Their dress consisted of a filthy shirt, dyed with the blood of animals they had killed; a pair of trousers of the same complexion, a thong of leather by way of belt, to which they hung a case containing some Dutch knives, and a kind of short sabre called manchette ; a hat without any brim, except a little flap on the front ; and shoes of hog skins. Their guns weie two feet and a half in the barrel, and of a bore to carry balls of an ounce. Every man had his contract servants, more or fewer according to his abilities ; besides a pack of twenty or thirty dogs, among which there was a couple of beagles. Their chief em- ployment at first was ox-hunting ; and, if at any time they chased a wild hog, it was rather for pastime, or to make provision for a feast, than for any other advantage. But, in process of time, some of them betook themselves entirely to hunting of hogs, whose flesh they buccanedĀ»in the following manner : First, they cut the flesh into

very long pieces, an inch and an half thick, and sprinkled them with salt, which they rubbed off after twenty-four hours. Then they dried these pieces in stoves over the fire, made of the skin and bones of the beast, till they grew as hard as a board, and assumed a deep brown color. Pork prepared in this manner will keep in casks above a year ; and, when steeped but a little while in lukewarm water, becomes plump and yields a most grateful smell. In . hunting they continued the chase till they had killed as many beasts as there were heads in the company. The master was the last to return to the boucan, loaded like the rest with a skin and a piece of meat. Here the buccaniers found their tables ready : for every one had his separate table ; which was the first thing, any way fit for the purpcse, that came in their way, a stone, the trunk of a tree, and the like. No table-cloth, no napkin, no bread or wine, graced their board ; not even potatoes or bananas, unless they found them ready to their hands. When this did not happen, the fat and lean of the game, taken al- ternately, served to supply the place. A little pimento, and the juice of an orange, was their only sauce ; contentment, a good appetite, and abundance of mirth, made every thing agreeable.

Thus they lived till they had completed the number of hides, for which they had agreed with the merchants ; when they carried them to Tor- tuga, or some port of the great island. As the buccaniers used much exercise, and fed only on flesh, they generally enjoyed a good state of health. They were indeed subject to fevers, but this they wtfolly slighted. The most considerate among them, however, after they had obtained money, turned planters. In their piratical ex- peditions the buccaneers formed themselves into small companies, consisting of 50, 100, or 150 men each. A boat, of a greater or smaller size, was their only armament. Here they were ex- posed night and day to all the inclemencies of the weather, having scarce room enough to lie down. A love of absolute independence, the greatest blessing to those who are not proprietors of land, rendered them averse from those mutual restraints which the members of society impose upon themselves for the common good. As the authority they had conferred on their captain, was confined to his giving orders in battle, they lived in the greatest confusion. Like savages, having no apprehension of want, nor any anxiety to preserve the necessaries of life, they were constantly exposed to the severest extremities of hunger and thirst. But deriving, even from their very distresses, a courage superior to every danger, the sight of a ship transported them to a degree of frenzy. They never deliberated on the attack, but it was their custom to board as quickly as possible. The smallness of their vessels, and the skill they showed in the manage- ment of them, screened them from the fire of the greater ships ; they presented only the fore part of their vessels filled with fusileers ; who fired at the port holes with so much exactness, that it enterely confounded the most experienced

gun- ners. As soon as they threw out the grappling, the largest vessels seldom escaped them. In cases of necessity, they attacked the people of every nation, but fell upon the Spaniards at all times. Whenever they embarked on any ex- pedition, they used to pray to Heaven for the success of it ; and never came back from the plunder, it is said, but they constantly returned thanks to God for their victory ! The ships that sailed from Europe to America seldom tempted their avidity ; but they waited for their return, laden with gold, silver, and jewels; when they met a single ship, they were sure to attack her. The Spaniards, who trembled at the approach of the buccaniers, whom they called devils, immediately surrendered. Quarter was granted, if the cargo proved to be a rich one ; if not, all the prisoners were thrown into the sea. At first the buccaniers, when they had got a considerable booty, held their rendezvous at the island of Tortuga, to divide the spoil ; but afterwards the French went to St. Domingo, and the English to Jamaica. Each person, holding up his hand, solemnly protested, that he had secreted nothing of what had been taken. If any one was convicted of perjury, a case that seldom hap- pened, he was left, as soon as an opportunity offered, upon some desert island, as a traitor unworthy to live in society. Such as had been maimed in any of their expeditions, were first

provided for. If they had lost a hand, an arm, a leg, or a foot, they received Ā£26. An eye, finger, or toe, lost in fight, was valued at only half the sum. The wounded were allowed two shillings and sixpence a day for two months, to enable them to have their wounds taken care of. If they had not money enough to answer these Demands, the company engaged in some fresh ex- pedition, till they had acquired a sufficient stock. After this the remainder of the booty was equally divided ; the commander only claiming a single share. Every share was determined by lot. If a person had been killed, his part was sent to his relations or friends when known, and when there were no friends or relations to claim it, it was distributed in charity to the poor, and to churches. These duties having been performed, the victors indulged themselves in gaming, wine, women, and every species of debauchery. The Spanish colonies, reduced almost to despair in finding themselves a perpetual prey to these ruffians, grew weary of navigation, and formed themselves into many distinct and separate states. They were sensible of the inconveniences arising from such conduct, but the dread of falling into the hands of these rapacious monsters, had greater influence over them than the dictates of honor, interest, and policy ; and gave rise to a spirit of total inactivity. This despondency increased the boldness of the buccaniers. As yet they had only appeared in the Spanish settlements to carry off some provisions when they were in want of them. They no sooner

found their captures begin to diminish, than they determined to re- cover by land what they lost at sea. The richest and most populous countries of the continent were plundered and laid waste. The culture of lands was equally neglected with navigation; and the Spaniards dared neither appear in their public roads, nor sail in the latitudes which be- longed to them.

Among those who signalised themselves in this new species of excursion, was Montbar, a gen- tleman of Languedoc. Having, in his infancy, met with a circumstantial account of the cruelties practised by the Spaniards, in the conquest of the New World, he conceived an aversion which he carried to a degree of frenzy against that na- tion ; and having heard that the buccaniers were the most inveterate enemies to the Spanish name, he embarked on board a ship to join them. In his passage he met with a Spanish vessel ; at- tacked, and immediately boarded it. Hurrying twice from one end of the ship to the other, he levelled everything that opposed him. When he had compelled them to- surrender, leaving to his companions the dividing of a rich booty, he contented himself with the savage pleasure of contemplating the dead bodies of the Spaniards, lying in heaps together. Fresh opportunities soon occurred that enabled him to glut his inve- terate hatred. The ship arriving on the coast of St. Domingo, the buccaniers there informed him that their enemies had overrun the country, laid waste their settlements, and carried off all they could. Montbar immediately offered to join an expedition then preparing, ‘ not as commander,’ said he, ‘ but as the foremost to expose myself to danger.’ The buccaniers perceiving that he

was such a man as they wanted, cheerfully ac cepted his offer. The same day they overtook the enemy, and Montbar attacked them with an impetuosity that astonished the bravest. Scarce one Spaniard escaped the effects of his fury. The remaining part of his life was equally distin- guished. The Spaniards suffered so much from him, both by land and at sea, that he acquired the name of the Exterminator.

Their associations now became more nume- rous. The first that was considerable was form- ed by Lolonois, who, from the abject state of a bondsman, had gradually raised himself to the command of two canoes, with twenty-two men. With these he took a Spanish frigate on the coast of Cuba. He then repaired to Port-au-Prince, in which were four ships, fitted out purposely to pursue him. He took them, and threw all the crews into the sea, except one man, whom he saved, in order to send him with a letter to the governor of the Havannah, acquainting him with what he had done, and assuring him that he would treat in the same manner all th’e Spaniards that should fall into his hands, not excepting the governor himself, if he should be so fortunate as to take him. After this he ran his canoes and prize ships aground, and sailed with his frigate only to Tortuga. Here he met with Michael de Basco, who had distinguished himself by having taken,

even under the cannon of Porto Bello, a Spanish ship, estimated at Ā £218,500, and by other actions equally brave and daring. These two soon collected together 440 men. This body, the most numerous the buccaniers had yet been able to muster, sailed to the bay of Vene- zuela, which runs up into the country fifty leagues. The fort that was built at its entrance was taken ; the cannon spiked ; and the whole garrison, consisting of 250 men, put to death. They then re-embarked, and went to Maracaybo, built on the western coast of the lake, at the dis- tance of ten leagues from its mouth. This city, which had become rich by its trade in skins, to- bacco, and cocoa, was deserted, but the inhabi- tants had retired with their effects to the other side of the bay. Exasperated at this, they set fire to Gibraltar. Maracaybo would have shared the same fate, had it not been ransomed. Be- sides the sum they thus received, they also carried off with them all the crosses, pictures, and bells, of the churches ; intending, as they said, to build a chapel in the island of Tortuga, and consecrate this part of their spoils to sacred purposes.

About the same time Morgan, the most re- nowned of the English buccaniers, sailed from Jamaica to attack Porto Bello. His plan of operations was so well contrived, that he sur- prised the city and took it without opposition. The conquest of Panama was an object of much greater importance. To secure this, Morgan thought it necessary to sail in the latitude of Costa Rica; and procure some guides in the island of St. Catharine's, where the Spaniards confined their malefactors. This place was strongly fortified, and ought to have held out for ten years against a considerable army. Not- withstanding this, the governor, on the first ap- pearance of the pirates, sent privately to concert measures how he might surrender himself with-

out incurring the imputation of cowardice. The result of this was, that Morgan in the night at- tacked a fort at some distance, and the governor sallying out of the citadel to defend the post, the assailants attacked him in the rear, and took him prisoner, which led to a surrender of the place. The buccaniers, after haying totally demolished the fortifications, and put on board their vessels a prodigious quantity of ammunition which they found at St. Catharine's, steered their course to- wards the Chagre. At the entrance of this con- siderable river, a fort was built upon a steep rock, and this bulwark, very difficult of access, was defended by an officer whose abilities were equal to his courage. The buccaniers, for the first time, here met with a determined resist- ance ; but while it was doubtful whether they would succeed, or be obliged to raise the siege, the commander was killed,

and the fort took fire. They now therefore made themselves masters of the place, where Morgan left his vessels at an- chor, and sailed up the river in sloops, till he came to Cruces, where it ceases to be navigable. He then proceeded by land to Panama, five leagues distant; though he met with a conside- rable body of troops in the neighbourhood, he put them to flight with the greatest ease, and en- tered the city, now abandoned. Here were found prodigious treasures, and several rich deposits in the neighbouring forests. Having burnt the city, they set sail with a great number of prisoners, who were ransomed in a few days ; and came to the mouth of the Chagre with a prodigious booty.

In 1603 an expedition of the greatest conse- quence was formed by Van Horn, a native of Ostend, but who had served all his life among the French. His intrepidity would never let him suffer the least signs of cowardice among those who associated with him. In the heat of an engagement he went about his ship ; observed his men ; and immediately killed those who shrank at the sudden report of a pistol, gun, or cannon. This extraordinary discipline had made him become the terror of the coward, and the idol of the brave. He readily shared with the men of spirit and bravery the immense riches that were acquired by so truly warlike and dia- bolical a disposition, and he generally sailed in a frigate which was his own property. New ex- peditions requiring greater numbers to carry them into execution, he took to his assistance Gramont, Godfrey, and Jonque, three French- men, distinguished by their exploits ; and Law- rence de Graff, a Dutchman. These famous commanders were joined by 1200 buccaniers, and sailed in six vessels for Vera Cruz. The darkness of the iiight favored their landing, which was effected at three leagues from the place, where they arrived without being dis- covered. The governor, the fort, the barracks, and the posts of the greatest consequence, were all taken by the break of day. All the citizens, men, women, and children, were shut up in the churches, whither they had fled for shelter. At *he door of each church were placed ban els of gunpowder to blow up the building. A bucca- nier with a lighted match was to set fire to it upon the least appearance of an insurrection. While the city was kept in such terror, it was*

easily pillaged ; and after the buccaniers had carried off what was most valuable, they made a. proposal to the citizens in the churches, to ran- som their lives and liberties at a contribution of Ā£437,500. The unfortunate people, who had neither ate nor drank for three days, readily ac- cepted the terms that were offered them. Half of the money was paid the same day ; the other part was expected from the internal parts of the country ; when there appeared on an eminence a considerable body of troops advancing, and near the port a fleet of seventeen ships from Europe. At the sight of this armament the buccaniers, without any marks of surprise, retreated quietly with 150Q slaves as hostages for the rest of the money. Their retreat was

equally daring. They boldly sailed through the midst of the Spanish fleet ; which let them pass without firing a single gun, and were in fact rather afraid of being attacked and beaten. The Spaniards would not probably have escaped so easily, if the vessels of the pirates had not been laden with silver, or if the Spanish fleet had been freighted with any other effects but such merchandise as was little valued by the buccaniers.

A year had scarce elapsed since their return from Mexico, when they were seized with the rage of plundering Peru. It is somewhat re- markable, that both the English and French asso- ciations had projected this plan at the same time, without any communication, or intercourse. About 4000 men were employed in this expe- dition. Some of them came by Terra Firma, others by the Straits of Magellan, to the place that was the object of their wishes. If the in- trepidity of these barbarians had been directed by a skilful commander, they would doubtless have deprived the Spaniards of this important colony. But their character was an invincible obstacle to such an union : they always formed themselves into several distinct bodies, some- times even so few in number as ten or twelve, who acted together, or separated, as caprice di- rected. Grognier, Lecuyer, Picard, and Le Sage, were the most distinguished officers among the French : David, Samms, Peter, Wilner, and Towley, among the English. Such of those ad- venturers as had come into the South Sea by the Straits of Darien, seized upon the first vessel they found upon the coast. Their associates, who had sailed in their own vessels, were not much better provided. Weak however as they were, they beat several times the squadrons that were fitted out against them. When there were no more ships to be taken, they made descents upon the coast for provisions, or went by land to plun- der those cities where the booty was secured. They successively attacked Seppa, Puebla-Nuevo, Leon, Realejo, Puebla-Viejo, Chiriquita, Les- parso, Granada, Villa-Nicoya, Tecoanteca, Mucmeluna, Chiloteca, New Segovia, and Guay-aquil, the most considerable of all these places Many of the towns were taken by surprise ; ana most of them deserted by their inhabitants, who fled at the sight of the enemy. As soon as the pirates took a town it was set on fire, unless a sum proportionate to its value was given to save it, and the prisoners were massacred without mercy, if not quickly ransomed. Silver being

too common, and too weighty for its current value, was often rejected.

While these piracies were committed in the southern ocean, the northern was overrun in a similar manner by Gramont, a native of Paris, who had distinguished himself in a military ca- pacity in Europe ; but his passion for wine, gaming, and women, had dissipated his fortune, and obliged him to join the pirates. He was polite, generous, and eloquent ; had a sound judgment, and soon rose to be considered as the chief of the French buccaniers. Under his com- mand they embarked in 1685 to attack Cam- peachy. They landed without opposition. But at some distance from the coast they were at- tacked by 800 Spaniards, who were beaten and pursued to the town ; which both parties entered at the same time. The cannon found was im- mediately levelled against the citadel. As it had very little effect, they were contriving some stra- tagem to enable them to become masters of the place, when intelligence was brought that it was abandoned. There remained in it only a gunner, an Englishman and an officer of courage, who chose rather to expose himself to the greatest ex- tremities, than basely fly. On the fall of the place the commander of the buccaniers received him with distinction, and gave him his liberty and effects, with some valuable presents. The conquerors of Campeachy spent two months in plundering the environs of the city, from twelve to fifteen leagues round. When all the treasure they had collected was deposited in the ships, a proposal was made to the governor of the province, who still kept the field with 900 men, to ransom his capital. His refusal determined them to burn it, and demolish' the citadel. In 1697 bucca- niers, to the number of 1200, were induced to join a squadron of seven ships that sailed from Europe under the command of Pointis, to attack the famous city of Carthagena. This was cer- tainly one of the most difficult enterprises that could be attempted in the New World. The situation of the port, the strength of the place, the badness of the climate, were obstacles that seemed insurmountable to any but buccaniers. But every obstacle yielded to their valor ; the city was taken, and booty gained to the amount of Ā £1,750,000. Their rapacious commander, however, as soon as they set sail, offered Ā£5,250 for the share of those who had been the chief instruments in procuring so considerable a spoil. The buccaniers, exasperated at this treatment, resolved immediately to board his vessel, the Sceptre, which was at that time too far distant from the rest of the ships to expect assistance, and he was upon the point of being massacred, when one of the malcontents proposed to return to Carthagena, and there obtain a further booty. The proposal was received with general applause, and without further deliberation all the ships sailed towards the city. They entered without resistance, and, having shut up the men in the great church, exacted payment of Ā£210,750, the amount of the booty in dispute, promising to re- treat immediately upon their compliance, but threatening the most dreadful vengeance if they refused. Upon this a priest of the city mounted the pulpit, and persuaded the people to yield up

all their gold, silver, and jewels. The collection however, not furnishing the sum required, the city was ordered to be plundered. After amass- ing all they could, these adventurers again set sail ; when they were met by a fleet of Dutch and English vessels. Both nations were now in alliance with Spain, and several of the pirates were taken and sunk; the rest escaped to St. Domingo. Such was the last memorable event in the history of the buccaniers. The separation of the English and French interests in the war that ensued on account of the prince of Orange ; the successful means they both, made use of to promote the cultivation of land in their colonies, by the assistance of some of these men ; and the prudence they showed in entrusting the most distinguished of them with civil and military employments, together with the protection they were both under a necessity of affording to the Spanish settlements, which till then had been a general object of plunder; these circumstances, and various others, beside the impossibility there was of supplying the place of those leaders, who were continually dropping off, concurred to put an end to a society as extraordinary as ever ex- isted. Without any regular system, without laws, without subordination, and even without any fixed revenue, they became the astonishment of the age in which they lived.

BUCCATA, in entomology, a species of conops. Color ferruginous; abdomen hooked and gray ; face white ; wings clouded ; inhabit- ing Europe.

BUCCATUS, a species of oestrus, color gri- seous ; face white, and dotted with black ; found in South Carolina.

BUCCELLARII, an order of soldiery under the Greek emperors, appointed to guard and distribute the ammunition bread. Authors differ however as to their office and quality. Some give the denomination to parasites in the courts of princes, some make them the body guards of emperors, and some fancy they were only such as emperors employed in putting persons to death privately.

BUCCELLATIO, in surgery, a term used by some for stopping the bleeding of an artery or vein, by lint.

BUCCELLA'TION, n. s. From Lat. buc- cella, a mouthful. In some chemical authors, signifies a dividing into large pieces.

BUCCELLATUM, in ancient military affairs, camp bread, or biscuit baked hard and dry, for lightness and keeping. Soldiers always carried with them enough for a fortnight, and sometimes much longer, during the time that military dis- cipline was kept up. See BAGGAGE.

BUCCINA, an ancient musical and military instrument, usually taken for a kind of trumpet. Festus defines it a crooked horn, played on like a trumpet. Vegetius observes, that the buccina was bent in a semicircle, in which respect it dif- fered from the tuba or trumpet. It is hard to distinguish it from the cornu, or horn, unless it was something less, and not quite so crooked. It certainly was different, as we never read of the cornu used by the watch. Besides, the sound of the buccina was sharper, and to be heard much farther than either the cornu or the tuba. In

Scripture a similar instrument, used both in war and in the temple, was called kiren-jobel, rams' horn, &c. It was used among the Jews to pro- claim their feast-days, new moons, jubilees, sab- batic years, and the like. At Lacedemon, notice was given by the buccina, when it was supper time ; and the like was done at Home, where the grandees had a buccina blown both before and after they sat down to table.

BUCCINA AURIS, in middle age writers, the drum of the ear.

BUCCINATOR, in anatomy, a muscle on each side of the face, common to the lips and cheeks, and making the inner substance of the latter.

BUCCINATOR NOMINUM, a slave, among the ancient Romans, who attended the public crier.

BUCCINUM, in conchology, the whelk, a genus of shell fish belonging to the order of ver- mes testaceae. This .animal is one of the snail kind. The shell is univalve, spiral, and gibbous. The aperture is oval, ending in a small strait canal, with a retuse beak or projection ; pillar- lip expanded. Ahundredand ninety species are scattered over the shores of the different parts of the globe. They are thus divided by Gmelin. Ampullacea inflated, rounded, thin, subdiapho nous, and brittle. Cassidea caudata, with a short, exserted, reflected beak ; lip unarmed out- wardly. Cassidea unguiculata, lip prickly out- wards on the hind part ; in other respects resem- bling the last division. Callosa, pillar-lip dilated and thickened. Delrita, pillar-lip appearing as if worn flat. Laevigata, smooth ; and not enu- merated in the former divisions. Angulata, angular; and not included in the former divi- sions. Turrita, subulate and smooth. The six following species are found in the British seas : 1. B. lapillus, or massy whelk, one of the British shells that produce the purple dye analogous to the purpura of the ancients. See MUREX. 2. B. minutum, or small whelk, with five spires, striated spirally,

ribbed transversely ; is less than a pea, and is found in Norway. 3. B. pullus, or brown whelk, with five spires, striated^ waved, and tuberculated; aperture wrinkled; upper part re- plicated; and in length five-eighths of an inch. 4. B. reticulatum, with spires scarcely raised, and strongly reticulated, is of a deep brown co- lor, and of an oblong form, and of the size of a hazel nut. The aperture is white, glossy, and denticulated. 5. B. striatum, has eight spires, with elevated striae, undulated near the apex. It is nearly four inches long. 6. B. undatum, the waved whelk, with seven spires, spirally striated and deeply and transversely undulated. It is three inches long, and inhabits deep water.

BUCCLEUGH, a village of Scotland, in the county of Selkirk, from which the noble family of Scott have the title of Duke.

BUCCO, the barbet, in ornithology, a genus belonging to the order of picae. The beak is cul- trated, turned inwards, compressed on the sides, and emarginated on each side at the apex ; and tiiere is a long slit below the eyes. The nostrils are covered with feathers. The feet have four toes, two before and two behind. Ornithologists enumerate nineteen species, all found in Asia, Africa, or the southern parts of America.

BUCCULA, in anatomy, the fleshy part un- der the chin.

BUCCULA, in antiquity, the umbo or promi- nent part in the middle of a shield ; thus called because usually made in the form of a mouth or face.

BUCENTAUR, a galeas, or large galley, of the doge of Venice, adorned with pillars on both sides, and a purple silk awning, and gilt over from the prow to the stern. In it the doge re- ceived the great lords and persons of quality that went to Venice, accompanied with the ambassa- dors, counsellors of state, &c. It served also in the magnificent ceremony of ascension day, on which the doge threw a ring into the sea to espouse it, and to denote his dominion over the gulph of Venice. Some ascribe the name to its being or- namented with the figure of a centaur ; and trace its origin to the year 1177.

BUCEPHALA, or BUCEPHALOS, in ancient geography, a town built by Alexander, on the west side of the Hydaspis, a river of the Hither India, in memory of his horse.

BUCEPHALA, in ornithology, a species of anas found in North America. Color whitish ; back and wings black; the head large, silky, and shining. This is the petit canard, a grosse tete, of Buffon.

BUCEPHALIA, in entomology, a species of bombyx commonly called the buff-top moth, found feeding on the oak, lime, and willow trees.

BUCEPHALON, in botany. See TROPHIS.

BUCEPHALUS, the horse of Alexander the Great, which was killed in the action with Porus, after crossing that river. Others say, this horse died of age, thirty years old ; and not in the battle, but some time after. Hesychius says, his being marked on the buttock with the head of an ox, gave rise to his name. This animal, who had so long shared the toils and dangers of his master had formerly received signal marks of royal re- gard. Having disappeared in the country of the Uxii, Alexander issued a proclamation, comĀ«- rnanding his horse to be restored, otherwise he would ravage the whole country with fire and sword. This command was immediately obeyed. ‘ So dear,’ says Arrian, ‘ was Bucephalus to Alexander, and so terrible was Alexander to the Barbarians!’

BUCEPHALUS, in entomology, a species of cryptocephalus. Color cyaneous; the mouth, margin of the thorax, and the legs, red.

BUCER (Martin), one of the first reformers at Strasburg, was born in 1491, in Alsace; and took the religious habit of St. Dominic at seven years of age : but meeting with the writings of Martin Luther, and comparing them with the Scriptures, he began to entertain doubts of the Romish religion. After some conferences with Luther at Heidelburg, in 1521, he adopted most of his sentiments ; but in 1532 gave the prefer- ence to those of Zuinglius. He assisted in many conferences; and in 1548 was called to Augsburg to sign the agreement between the Papists and Protestants, called the Interim. His warm op- position to this project exposed him to many difficulties and hardships; the news of which reaching England, where his fame had already arrived, Cranmer, archbishop of Canterbury

gave him an invitation to come over, which he readily accepted. In 1549 an handsome apart- ment was assigned him in the university of Cam- bridge, and a salary to teach theology. King Edward VI. had the greatest regard for him. Being told that he was very sensible of the cold of the climate, and suffered much for want of a German stove, he sent him 100 crowns to pur- chase one. He died in 1551, and wa- buried at Cambridge with great funeral pomp. In the reign of Mary, five years after he was buried, his body was dug up and publicly burnt, and his tomb demolished ; but it was afterwards re-built by order of queen Elizabeth. He composed many works, among which are Commentaries on the Evangelists and Gospels.

BUCERAS, in botany, fenugreek. See Tm-

BUG EROS, in ornithology, a genus belong- ing to the order of picse. The beak is convex, cnltrated, very large, and serrated outwards: the forehead is naked, with a bony gibbosity. The nostrils are behind the base of the beak. The tongue is sharp and short. The feet of the gres- sarii kind, i. e. the toes are distinct from each other. The species belonging to this genus are, Bicornis, Abyssinicus, Africanus, Malabaricus, hydrocorax, rhinoceros, galeatus, panayensis, manillensis, nasutus, albus, and obscurus. The principal are : 1 . B. bicornis, with a flat bony forehead, and two horns before. The body is black, and about the size of a hen ; but the breast, belly, and thighs, are white. There is a white spot on the wing ; the tail is long, with ten black prime feathers, and the four outermost on each are white. The feet are greenish, with three toes before and one behind. It is a native of China, and called Calao by Willoughby and other au- thors. The pied horn-bill, described by La- tham from a living specimen which came from the East Indies, the author supposes to be the same species, differing merely in sex or age. The manners of this bird were peculiar : it would leap forwards or sideways with both legs at once, like a magpie : when at rest it folded its head back between the wings : the general air and ap- pearance was rather stupid and dull, though it would sometimes put on a fierce look when sur- prised : it would eat lettuce, after bruising it with its bill, and swallow raw flesh ; as well as devour rats, mice, and small birds : it had different tones of voice ; sometimes a hoarse sound in the throat, most like ofick, ouck; at other times veryhoarse and weak, not unlike the clucking of a Turkey hen. This bird used to display its wings and enjoy itself in a warm sun, but shivered in the cold; and, as the winter approached, died, un- able to bear the severity of the climate, so diffe- rent to its nature. Another variety, the calao, is about the size of a hen. It inhabits the Philip- pine islands, and has a cry more like that of a hog or a calf than of a bird. The Gentoos rank it among their gods, and worship it. It lives alto- gether in woods, feeding on fruits, such as the Indian fig, pistachios, 8tc. which it swallows whole ; and after the external parts have been digested, it brings up the nuts again whole, with the kernels fit for vegetation. 2. B. hydrocorax, the Indian crow of Ray, has a plain bony fore-

head without any horns. The body is yellowish above, and black below. It inhabits the Mo- lucca isles. Willoughby observes, that it resem- bles our raven in the bill, but is red on the temples like some kinds of turkies ; has wide nostrils and ill-fevored eyes ; and that it feeds chiefly on nutmegs, whence its flesh has a fine aromatic relish. .In its native place it is fre- quently tamed, and is useful in destroying rats and mice in houses. 3. B. nasutus, has a smooth forehead, is about the size of a magpie, and is a

native of Senegal. These birds are very common at Senegal, and other warm parts of the old continent, where they are called tock. When taken young they immediately become familiar. In their wild state they feed on fruits, but when domesticated eat bread, and almost any thing that is offered to them. 5. B. rhinoceros has a crooked horn in the forehead joined to the upper mandible. It is a native of India. It is said to feed on flesh and carrion ; and to follow the hunters for the purpose of feeding on the entrails of the beasts which they kill. They chase rats and mice, and after pres- sing them flat with the bill in a peculiar manner, and tossing them up into the air, swallow them whole immediately on their descent.

BUCHAN, a district on the east coast of Scotland, lying partly in the county of Aberdeen and partly in that of Banff. The latter district extends northwards from the Ugie to the sea, and westward as far as the Deveron, compre- hending a tract of twenty miles in length, and nine in breadth, and is more free from hills and moun- tains than any other county of the same extent in Scotland. That part which lies in Aberdeen- shire, extends south to the river Ythan. It is inhabited chiefly by Lowlanders, and gives the title of earl to the family of Erskine ; of which family, however, Erskine of Mar is the chief.

*BUCHANAN, a parish of Scotland, in Stir- lingshire, anciently called Inch-cailloch, about twenty-seven miles long and nine broad. A long tract of it lies on the north side of Loch- Lomond, and the Grampian hills stretch through it, from south-west to north-east. The river Forth has its rise in the upper end of the parish; and the Endrick runs through it. Some of the islands in Loch -Lomond belong to this parish, on. one of which, Inch-cailloch, lately stood the parish church. There are besides three small lakes, and some very extensive oak-woods. In Craig- rostan are several caves, one of which afforded shelter to king Robert Bruce, and is known by the name of king Robert's cave. A good lime- stone quarry has lately been opened. Oa the side of Loch-Lomond stands the seat of the o*uke of Montrose. At Inversnaid is a small fort, on which a guard is mounted by a detachment from Dumbarton castle.*

BUCHANAN (George), a celebrated Latin poet, was born in February 1506. A small farm called the Moss, two miles from the village of Killearn, in Stirlingshire, was the property of his father, and the place of his nativity. George, however, might have been confined to toil at the lowest employments of life, if the generosity of his uncle, George Heriot, had not assisted him in hi; education, and enabled him to pursue for

two years his studies at Paris, after his father's death. But that short space had scarcely elapsed, when the death of his benefactor obliged him to return to his country, and forsake for a time the paths of science. He was yet under his twen- tieth year, and, in this extremity, he enlisted as a common soldier, under John duke of Albany, who commanded the troops which France had sent to assist Scotland in the war against England. But he was disgusted with the fatigues of one campaign ; and fortunately, John Major, then professor of philosophy at St. Andrew's, hearing of his necessity and his merit, afforded him a temporary relief. He now became the pupil of Maiz, a celebrated teacher in that university, under whom he studied logic ; and followed his tutor to Paris, where he was invited to teach grammar in the college of St. Barbe. In this occupation he was found by the earl of Cassilis, with whom, having remained five years at Paris, he returned to Scotland. He next acted as pre- ceptor to the famous earl of Murray, the natural son of James V. While thus occupied, he sud- denly found his life was in danger from his ene- mies, the Franciscan monks, who, enraged at the poignant satires he had written against them, branded him with the appellation of atheist. Cardinal Beaton gave orders to apprehend him, and king James V. was bribed with a conside- rable sum to permit his execution. He was seized accordingly ; but escaping the vigilance of his guards, he fled into England. Henry VQI. at all times the slave of caprice and passion, was then burning at the same stake the Lutheran and the Papist. His court did not suit a philo- sopher or a satyrist. After a short stay, Bucha- nan crossed the sea to France ; and, to his extreme disappointment, found at Paris, cardinal Beaton, as ambassador from Scotland. On this, he retired privately to Bourdeaux, and met with Andrew Govea, a Portuguese of great learning and worth, with whom he had formerly been acquainted, and who was employed in teaching a public school. He acted for some time as the assistant of his friend ; and, during the three years he resided at this place, he composed the tragedies which do him so much honor. It was here also that he wrote some of the most beautiful of those poems, in which he rallied the Muses, and threatened to forsake them, as not being able to maintain their votary. About this time also, he presented a copy of verses to the emperor Charles V. who happened to pass through Bour- deaux. His enemies, meantime, were not in- active. Cardinal Beaton wrote to the archbishop of Bourdeaux, inviting him to punish this most pestilent of all heretics. The archbishop, how- ever, on enquiry, declined molesting him. Mean- time Govea being called upon by the king of Portugal, to establish an academy at Coimbra, entreated Buchanan to accompany him. He con- sented, but had not been a year in Portugal, when Govea died, and left him exposed to the malice of his inveterate enemies the monks. They loudly objected to him that he was a Lu- theran ; that he had written poems against the Francisans : and had been guilty of the abomi- nable crime of eating flesh in lent. He was

confined to a monastery, till he should learn what

these men fancied to be religion ; and they en ā¢ joined him to translate the Psalms into Latin verse ; a task which every man of taste knows with what admirable skill and genius he per- formed. On obtaining his liberty, he had the promise of a speedy promotion from the king of Portugal ; the issue of which, his aversion to the clergy did not allow him to wait. He hastened to England ; but the perturbed state of affairs during the minority of Edward VI. not giving him the prospect of any security, he again set out for France. He had not been long there, when he published his Jephthes, which he dedi- cated to the marshal de Brissac. This patron did not want generosity, and sent him to Pied- mont, as preceptor to his son Timoleon de Cossi, an errployment in which he continued several years ; and, during the leisure it afforded him, he fully examined the controversies which now agi- tated Europe, and finished many of his smaller poems. After this, he returned to Scotland, and made an open profession of the reformed faith : but soon once more quitted his native country for France. Queen Mary, however, having de- termined that he should have the charge of educating her son, recalled him ; and, till the prince should arrive at a proper age, he was no- minated principal of St. Andrew's. His suc- cess as James's preceptor is well known. When it was observed to him that he had made his majesty a pedant : ' it is a wonder,' replied he, ' that I have made so much of him.' During the misfortunes that befel the amiable but imprudent Mary, he joined the party of the earl of Murray, and, at his earnest desire, wrote the Detection, a work which his greatest admirers have read with regret. Having been sent with other commis- sioners to England, against his mistress, he was, on his return, rewarded with the abbacy of Cross Reguel ; made director of the chancery ; and some time after a lord of the privy council and privy seal. He was likewise rewarded by queen Elizabeth with a pension of Ā£100 a-year. The last twelve years of his life he employed in com- posing the history of Scotland. After having vied with the most eminent of the Latin poets, he contested with Livy and Sallust the palm of eloquence and political sagacity : but, like the former of these historians, he was not always careful to preserve himself from the charge of partiality. He died at Edinburgh in 1582, aged seventy-six. Authors speak of him very diffe- rently, according to their religious and political principles. As a Latin writer, however, in prose as well as poetry, he has hardly been equalled since the reign of Augustus ; nor is he less de- serving of remembrance as a friend to the natu- ral liberties of mankind, in opposition to usurpa- tion and tyranny. ' The happy genius of Buchanan,' says Doctor Robinson, ' equally formed to excel in prose and in verse, more various, more original, and more elegant, than that of almost any other modern who writes in Latin, re- flects, with regard to this particular, the greatest lustre on his country.' The following is a list of his works: 1. Rerum Scoticarum

Historia, &c. 2. Psalmorum Davidis Paraphrasis Poetica. 3. De Jure Regni Apud Scotos Dialogus. 4. Psalmus civ. Cum Judicio Barclaii, &c. 5.

Psalmus cxx. Cum Analysi Organica Beuzeri. 6. Baptistes, sive Calurania. 7. Jephthes, sive Votum, Tragoedia. 8. Euripidis Medea et Al- caestis, Tragcediae. 9. De Caleto Recepto Car- men. 10. Franciscanus etFratres. 11. Elegise, Silvae, &c. 12. De Sphaera. 13. Poemata Miscellanea. 14. Satyra in Cardinalem Lotha- ringium. 15. Rudimenta Grammatices, Thomae Linacri ex Anglico Sermone in Latinum Versa. 16. An Admonition to the True Lords. 17. De Prosodi. 18. Chamasleon, 1572. 19. Ad Viros sui Seculi Epistolae. 20. Literae Reginae Scoticae ad com. Bothweliae. 21. A Detection of the Doings of Mary Queen of Scots, and of James Earl of Bothwell, against Henry Lord Darnly. 22. _Hendecasyllabi, et Tambi. 23. Fratres Fraterrimi. 24. Epigrammata. 25. Vita ab Ipso Scripta Biennio Ante Mortem. 26. Life of Mary Queen of Scots. These have been severally printed often, and in various countries. An edition of his whole works was printed at Edinburgh, in 1704, in two volumes folio. An elegant monument was erected to his memory in 1788, at Killearn.

BUCHANAN (Claudius), D. D., was born at Cambuslang, near Glasgow, in 1 766, and entered the university of that city. In 1 787 he came to London, and was articled as clerk to an attorney. But, through the recommendation of the Rev. John Newton, was sent by Mr. Thornton, of Clapham, to Queen's college, Cambridge. Being appointed, in 1798, chaplain to the East India Company at Bengal, he was chosen vice-provost and classical professor of the college founded by the Marquis of Wellesley at Fort William. In 1806 he returned to England, and was honored with a diploma by the Glasgow university, as also by that of Cambridge, to which he pre- sented some valuable manuscripts. He died in 1815, while employed in preparing an edition of the Syriac Testament. His works are: 1. Christian Researches in Asia. 2. The First Four Years of the College at Fort William. 3. Me- moir on the Expediency of an Ecclesiastical Establishment in India. 4. The Three Eras of Light, two discourses at Cambridge. 5. A brief View of the state of the Colonies of Great Britain and her Asiatic Empire, in respect to Religious Instruction. 6. Sermons on Interesting Subjects. 7. A Letter to the East India Com- pany, in reply'to the Statements of Mr. Buller, concerning the idol Juggernaut. 8. Address delivered at a special Meeting of the Church Missionary Society to four Ministers destined for Ceylon and Tranquebar.

BUCHAN-NESS, a promontory of Scotland, of which it is the farthest point, and the most eastern of all Scotland. It is near Peterhead.

BUCHNERA, in botany, a genus of the an- giospermia order, in the didynamia class of plants : CAL. obsoletely five-toothed : COR. with a five-cleft border, equal ; the lobes heart-shaped. The fruit is a capsule of an oblong oval figure, pointed at the end, containing two cells, and opening at the top into two parts. The seeds are numerous, and of an angular figure. There are fourteen species, natives of the Cape and

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India. BUCHOREST, or BUCHAREST, a pretty large

town of Turkey in Europe, in Wallachia, and the ordinary residence of a hospodar. The houses are mean and very ill built, except a few that belong to the principal persons. In 1716 a party of Germans from Transylvania entered this town, and took the prince prisoner with all his court, and carried them off. Tl prince to regain his liberty, gave up that part of Wal- lachia, which lies between the rive/ Aluth and Transylvania, to the emperor, iˆĀ» 1718. But after the fatal battle of Crotzka, in 1737, the emperor was obliged to restore this part of Wallachia to the hospodar by the treaty of Bel- grade.

BUCIDA, in botany, a genus of the order monogynia, in the decandria class of plants; natural order twelfth, holoraceae: CAL. is in- dented in five segments : COR. none ; and the fruit is a single-seeded berry. There are two species: 1. B. capitata; a native of Montserrat ; with flowers in headed spikes ; wedge-form leaves, with a villous ciliate margin. 2. B. bucera mangle ; with elongated spikes ; leaves wedge-form, with a villous ciliate margin. A native of Jamaica.

BUCK', n. s. } Goth. S wed. Teut. and Belg. BUCKE'STALL, > bock ; Sax. bucc; Sans, bok, BUCK'ING. j Per. svoz. /3jjĀ«Ā»/ ; Welsh, broch ; Arm. bouc; Fr. bouc ; Ital. becco. An animal, striking or butting with the horns ; the male of deer and goats, of rabbits, and some other ani mals.

And many an hart and many an hindc, Was both before me and behinde ; Of fawnes, sowers, buckes, does, Was ful the wodde j and many roes.

Chaucer's Bohe of the Duchesse.

Bucks, goats, and the like, are said to be tripping

or salient, that is, going or leaping. Peacham.

The chief time of setting traps, is in their bucking

time. Mortimer,

BUCK', v. & n. -\ Goth, baick; Sax. buc ;

BUCK'ET, (,Belg. lac; Teut. bauch,

BUCK'BASKET, (lauch, laug; which seem to

BUCK'WASHING. 3 be formed from ach, atich,

aug, water ; verb Teut. bauchen ; Swed. byke ;

Fr. buquen; Arm. buga, Ital. bucato ; Span, bu-

godo. A tub or cask; a lie for washing; urine:

to wash with lie. The noun is applied both to

things washed, and the liquor in which they are

washed. Bucket is the diminutive of buck.

Now up, now down, as boket in a well. Chaucer.

Here is a basket j he may creep in here, and

throw foul linen upon him, as if it were going to

bucking. Shakspeare.

They conveyed me into a buckbasket; rammed me

in with foul shirts, foul stockings, and greasy napkins.

Id.

Buck ! I would I could wash myself of the buck :

I warrant you, buck, and of the season too it shall

appear. Id,

Of late, not able to travel with her furred pack, she

washes bucks here at home. Id.

Now is this golden crown like a deep well, That owes two buckets, filling one another j The emptier ever dancing in the air, The other down unseen, and full of water. Id. BUCK, the male of the fallow deer ; and also of rabbits and other animals. A buck the first year is called a fawn, the second a pricket, the ‘

third a sorel, the fourth a sore, the fifth a buck of the first head, and the sixth a great buck. See DEER and HUNTING.

BUCKINGHAM, a county of the United States, in Virginia, bounded on the north by James river, which separates it from Fluvanna ; on the south-east by Cumberland ; on the south- west by Campbell ; and on the south by the Appamattox, which divides it from Prince Ed- ward County. It is sixty-five miles long and thirty broad.

BUCKINGHAMSHIRE, or BUCKS, is an inland county of England, bounded on the north by Bedfordshire and Northamptonshire ; on the east by Bedfordshire, Hertfordshire, and Middlesex ; on the west by Oxfordshire and Northampton- shire; and on the south by Berkshire, from which it is separated by the Thames.

Its figure is that of a crescent, with a jagged outline ; its greatest length from north to south about forty-five miles, its breadth about eighteen, and its circumference 138 miles, containing 518,400 statute acres, according to the report of the Board of Agriculture, but only 478,720, ac- cording to the parliamentary returns of the poor’s rate. It has fifteen market towns, and returns eleven members to the imperial parlia- ment by the arrangements of the reform bill, viz. three for the county; two for Buckingham ; two for Aylesbury ; two for Wycombe ; and two for Marlow. There are seven deaneries in it. Though in the diocese of Lincoln, four parisnes are in the peculiar jurisdiction of the archbishop of Canterbury, and four others are in the diocese of London, and in the jurisdiction of the arch- deacon of St. Albans. The gieat tithes of ninety-two parishes are in lay hands, and most of the remainder are held by lay leases. The Summer assizes are held at Buckingham, the Lent assizes at Aylesbury. The quarter-sessions are always held at Aylesbury. Buckinghamshire contains many magnificent seats ; among which the most celebrated are Stowe, the seat of the marquis of Buckingham; Bulstrode, formerly belonging to the Rutland family ; Dropmore, the seat of lord Grenville, Taploe house, and Wy combe abbey.

Its principal rivers are the Thames, the Ouse, and the Colne. The Colne

forms a part of its eastern boundary, separating it from Middlesex ; it passes near Denham and Iver, through Coin- brook, to which it gives its name, and nearHor- ton and Wyradesbury, and falls into the Thames between Ankerwyke and Staines.

The Ouse slow winding through a level plain

Of spacious meads, with cattle sprinkled o'er, enters the west side of the county, and passing Water Stratford, pursues an irregular course to Buckingham, whence it winds through a fertile meadow tract, in the neighbourhood of Stony Stratford, Newport Pagnell, and Olney, and then turning to the east, leaves the county near Snelson, in the parish of Lavendon. Old father Thames forms part of the boundary, and is the chief ornament of the southern part of the county, dividing it from Berkshire, during a course of about thirty miles. In its progress it passes Medmenham, Great Marlow, Iledsor, Taplow, Boveney, Eton, and Datchet, and is

navigable throughout. The Grand Junction Canal enters the county near Wolverton, where it is carried across the valley, over the river Ouse, by a magnificent aqueduct, of about three quarters of a mile in length ; thence flowing to the south, it passes Fenny Stratford, Stoke- Hammond, Cinslade, and Ivinghoe, into Hert- fordshire. From a branch of the canal at Old Stratford, a cut has been made to Buckingham ; and another from Bulbourne to Wendover.

The southern part of this county, beyond the Thames, is principally occupied by the Chiltern Hills, having a chalk soil, intermixed with flints. They stretch across the country from Bedford- shire to Oxfordshire, forming a part of that great chain which extends from Norfolk to Dorset. On the west side of Buckinghamshire, adjoining Oxfordshire, is a range of hills of calcareous stone. In that part of the county which borders on Bedfordshire, about Wavenden, Broughton, and the Brickhills, the soil is a deep sand. The fertile vale of Aylesbury lies under the Chiltern Hills, occupying the middle of the county, and is formed of a rich black loam, on a calcareous subsoil. In the northern parts the soil is chiefly clay ; but on the Bedfordshire border the surface rises into gentle sand-hills. The Chiltern dis- trict is said to have been once a forest; the western part, occupied by that of Bernwood, was disforested in the reign of James I. At present, the chief woodlands lie to the south of the Chiltern Hills. On a tract of land, extending across Little Kimble parish into that of Great Kimble, there are about 100 acres of box-wood, apparently the growth of the soil. The black cherry abounds in the neighbourhood of Chesham.

The prevailing timber in the southern part of the county is beech ; one wood of which, in the parish of Wycombe, is said to contain 700 acres ;

nearly one-sixth part of the land between the road to Oxford and the Thames is supposed to be covered with this wood. Some antiquarians have derived its name from Buccan, A.S. beech. Whaddon Chase is the principal woodland in the northern part of the county, containing 2200 acres of coppices.

At Newport Pagnell is a good quarry of marble, at a considerable depth. At Wavenden are the celebrated fullers' earth pits, one of which only is now occasionally worked. Pennant thus describes the strata: 'The beds over the marl are, first, several layers of reddish sand to the thickness of six yards ; then succeeds a stratum of sandstone, of the same color, beneath which, for seven or eight" yards more, the sand is again continued to the fullers' earth, the upper part of which being impure, or mixed with sand, is flung aside ; the rest taken up for use. The earth lies in layers, under which is a bed of rough white freestone, and under that sand, be- yond which the laborers have never penetrated.' The only rare plant known to botanists as in- digenous to this county, is the dentaria bulbifera, which grows abundantly in its south-east corner. The great snail, or pomatia, Mr. Pennant was informed, is found in the woods near Gothurst; and he regards this as its most southern residence in England.

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BUCKINGHAMSHIRE.

This county has long been remarkable for its corn and cattle. ' Buckinghamshire bread and beef,' was an old proverb. As far back as the time of Camden, fine flocks of sheep were fed in the vale of Aylesbury, which yielded great profit from their wool ; see AYLESBURY. At present this vale feeds oxen for the London market, to which it also sends weekly immense supplies of butter. There is a small proportion of arable land in the northern division of the county ; and not much in any other part, except the Chiltern districts, which are usually culti- vated with wheat, barley, oats, beans, and sain- foin. In the neighbourhood of Aylesbury, ducks are reared very early in the spring, and some- times at Christmas, which, being sent to London, sell at a high price. The ducks are prevented from laying, by artificial means, till October or November. A few weeks before they lay, they are fed highly ; the eggs are hatched by hens, which are frequently exhausted to death, by sitting on three broods successively. As soon as the ducklings break the shell, they are nursed with care at the fire side.

It has long been an old proverb in Bucks, ' more live by the lands than the hands :' the only manufactures of consequence here are those of bone-lace and paper. The former is carried on at Olney, Newport Pagnell, and

Hanslope, a viHage about five miles north-west from New- port Pagnell. Here, in the year 1801, 800, out of a population of 1275, were employed in this manufacture. The lace sells from sixpence to two guineas a yard. But, since it has been made on the frame at Nottingham, Loughborough, and other places, this manufacture of Bucking- hamshire has been on the decline. In the neighbourhood of Wycombe the manufacture of paper has been carri-ed on for more than a century. On a part of the small river Wyke, which passes through this parish, there are fifteen corn and paper-mills. At Amersham there is a manufacture of sacking, and white cotton goods. Manufactures of paper and black silk lace are found at Marlow ; large works of copper, brass, and brass-wire, and mills for making thimbles, and pressing rape and linseed. The principal markets in the county are those of Aylesbury, Buckingham, and Wycombe. Marlow fair is much celebrated for its horses.

Roman roads penetrate this county, and there are some remains of the military stations of that nation. A considerable monnd, called Grimes- dike, which seems a common appellation for an ancient rampart, traverses part of it in a direction from east to west. The remains of a circular camp, with a double vallum and ditch, appear on the top of the hill at West Wrycombe, and those of another at High Wycombe. A cross, on the side of a hill near the hamlet of White- leaf, is supposed to be intended to commemorate a battle fought by Edward the Elder against the Danes. In the churches at Chetwode, Chesham Bois, Hilcham, and Hillesden, are some of the earliest and most elegant specimens of stained glass in the kingdom ; and the church of Stukeley is deserving of notice, as affording one of the roost complete specimens of Saxon ar- chitecture now remaining. Happily no part of

it, externally or internally, has been much altered or defaced ; nor have any additions been made to it, except the porch on the south side, and the pinnacles of the tower. The date of 1106 is said to have been observed on a stone by some workmen who were repairing the roof of the chancel. The chancel of the church of Chetwode, supposed to have been founded in the year 1244, has lancet-shaped windows, with slender pillars, the capitals of several of which are highly enriched with foliage and figures of animals. Hillesden church, which was rebuilt about the year 1493, affords a rich specimen of the later Gothic. Some of the most ancient and elegant specimens of stained glass in the kingdom, remain in the chancel of Chetwode church ; as there is little doubt that this glass was coeval with the erection of the church, in 1244, it may be considered as one of (he oldest specimens of the kind in England.

BUCKINGHAM, the county town, is sixteen miles and a half north from Aylesbury, and fifty- five from London, by Uxbridge ; seated on the Ouse,

over which it has three stone bridges. It is a very ancient town, and fortified with a ram- part and turret, by Edward the Elder, in the year 918. Formerly it had a castle on a hill which divides the town, on the site of which a handsome new church, with a tower and spire 150 feet high, has been lately built ; but the burying-ground is continued at the former church-yard. The inside of the church is fitted up in an elegant style ; the altar-piece, repre- senting the transfiguration of Christ, after Ra- phael, was presented to the parish by the marquis of Buckingham. The town consists of one long irregular street, the houses in which are meanly built, and some of them thatched. The manu- facture, which is lace-making, and the trade of the town generally, is but small. In the reign of Edward III. one of the staples for wool wasr fixed here ; and there still remains an old house called the wool-hall. On the banks of the river are several corn and paper-mills. It sends two members to parliament. Queen Mary incor- porated it with a bailiff and twelve burgesses, who are the sole electors of its members. All the county business was formerly transacted at Aylesbury, but, by a late act of parliament, the su mmer assizes are held at Buckingham. Sessions also are held here twice a year, in the town-hall, and it has a court for the recovery of small debts. Here are a grammar-school, several places of worship for dissenters, and various excellent charitable institutions. The town has given the title of duke to several illustrious fa- milies. In the neighbourhood is Stowe, the celebrated seat of the marquis of Buckingham. This place suffered greatly by fire, in March, 1725, by which 138 families lost nearly Ā£38,000. It is a great thoroughfare to Chester, Ireland, &c. The market on Saturday is well attended, and here are several fairs.

BUCK'LE, v. &Ā«.} Goth, bang; Teut.

BUCK'LING, >auglein; Swed. bukkel,

BUCK'LER, v. & n. J buckla; Welsh and Arm. bond ; Irish, bucla ; Fr. boucle ; from Goth, boga, to bow, or curve, whence Fr. bogue. Buckler is supposed to be cognate with buckle in the sensrc

of circular, as Goth, round was a shield ; but Goth, bog, and Swed. bog, signified the shoulder ; and ledcr, a skin, leather, was contracted into ler ; bel leer. See Bow. To buckle is to bend, to yield to pressure ; to fasten or close ; to ad- here to; to keep closely engaged in. A buckle is a fastening ; a

buckler is a shield or protection fastened with leather from the shoulder; to buckler, is to cover with a buckler ; to guard or defend.

Richesse a girdle had upon ; The bokitt of it was of stem, Of virtue grete and mekil might For who so bore the stone so bright, Of venim durst him nothing doubt, While he the stone had him about.

Chaucer's Romaunt of the Rote. Knightes of retenue, and eke 'squieres, Nailing the spores, and helmes bokeling.

Id. Canterbury Tales. The Saracen, this hearing, rose amain, And catching up in haste his three-square shield, And shining helmet, soon him buckled to the field.

Spenser,

Like paphire, pearl, in rich embroidery, Buckled below fair knighthood's bending knee.

Shakspeare.

Fair lined slippers for the cold, With buckles of the purest gold, Id.

The wretch, whose fever-weakened joints, Like strengthless hinges, buckle under life, Impatient of his fit, breaks like a fire Out of his keeper's arms. Id,

Fear not, sweet wench, they shall not touch thee,

Kate; I'll buckler thce against a million. Id.

Now a covetous old crafty knave, At dead of night, shall raise his son, and cry Turn out, you rogue, how like a beast you lie ! Go, buckle to the law. Dryden.

He took my arms, and while I forced my way Through troops of foes, which did our passage stay ; My buckler o'er my aged father cast, Still fighting, still defending, as I past. Id.

Three seal-rings ; which after, melted down. Formed a vast buckle for his widow's gown. Pope. The chlamys was a sort of short cloak tied with a buckle, commonly to the right shoulder. Arbuthnot. The greatest beau was dressed in a flaxeu periwig ; the wearer of it goes in his own hair at home, and lets his wig lie in buckle for a whole half year.

Spectator.

Thus ever, when I buckle on my helmet, Thy fears afflict thee. Philips.

BUCKLE, in heraldry, is considered as a token of the surety, faith, and service of the bearer : it is an ancient and honor- able bearing. It is necessary to describe the shape of the buckle, whether it be round, oval, square, &c. as, ‘ He beareth sable a chevron between three oval buckles argent, by the name of Mallet.’

BUCKLERS were composed of wickers woven together, or wood of the lightest sort, covered with hides, and fortified with plates of brass or other metal. The figure was sometimes round, sometimes oval, and sometimes almost square. VOL. IV.

Most bucklers were adorned with figures cr birds, beasts, gods, celestial bodies, &c. ; a custom derived from the heroic times, and from them communicated to the Grecians, Romans, an

BUCKLER-THORN, n. s. Christ’s thorn.

BUCK-MAST, n. s. The fruit or mast of the beech tree.

BUCK’RAM, n. & adj. Fr. lourgrain, Ital. bugrane, Dut. bockerael. A kind of cloth stiffened with gum : but formerly called trellis, from its lattice-like texture.

I have peppered two of them ; two, I am sure, I have paid, two rogues in buckram suits. Shakspeare.

BUCKRAM is more generally, if not always, stiffened with glue, and used in the making of garments to keep them in the form intended. It is used in the bodies of women’s gowns ; to make wrappers to cover cloths, serges, and other merchandise, &c. to preserve them, and keep them from the dust. Buckrams are sold whole- sale by the dozen of small pieces or remnants, each about four ells long, and broad according to the piece from which they are cut. Some- times new pieces of linen cloth are used to make buckrams, but most commonly old sheets and old pieces of sails.

BUCK’RAMS, n. s. The same with wild garlick.

BUCKS, a populous and well-cultivated county of the United States, in Pennsylvania ; bounded on the north-east, east, and south-east, by the Delaware ; which separates it from Hun- terdon County; on the south-west by Phila- delphia and Montgomery Counties, and on the north-west by Northampton. Its greatest length is forty-one miles, and breadth twenty-one. On the south it is fertile, but the land on the north is rather poor: but it abounds in lime-stone. Lead and iron ores have also been discovered in

it. Newton is the chief town.

BUCKS. See BUCKINGHAM.

BUCK'SHORN PLANTAIW, in botany, Lat. coronopus, from the form of the kaf. A plant. See PLANTAGO.

BUCKS-HORN, WARTED. See COCHLEARIA.

BUCK-STALL, a toil to take deer, which must not be kept by any person who has not a park of his own, under penalties.

BUCKTHORN, n. s. in botany, Lat. rham- nus, supposed to be so called from the Saxon bucc, the belly. A tree that bears a purging berry. See RHAMNUS.

BUCK-THORN, SEA. See HIPPOPHAE.

BUCK'WHEAT, re. s. in botany, Germ, buck- weitz, Lat. fagopyrum. A plant. See POLY-

CONUM.

BUCOLICA, tne art of managing cattle.

BU'COLICK adj. BowKoXuca, from /SovicoXof, a cowherd. Pastoral.

BUCOLICS, in ancient poetry, poems relating to shepherds and country affairs, which, accord- ing to the most generally received opinion, ori- ginated in Sicily. Bucolics, says Vossius, have some conformity with comedy. Like it, they are pictures and imitations of ordinary life ; with this difference, that comedy represents the man- ners of the inhabitants of cities, and bucolics the occupations of country people. Sometimes, this last poem is in form of a monologue, and some- times of a dialogue. Sometimes there is action in it, and sometimes only narration ; and some- times it is composed both of action and narra- tion. The hexameter verse is the most proper for bucolics in the Greek and Latin tongues. Moschus, Bion, Theocritus, and Virgil, are the most renowned of the ancient bucolic poets.

BUCTON, in anatomy, a word used by Seve- rinus and others for the hymen.

BUD', v. & n. Sax. buta, Teut. butz, BelĀ« bot, Wei. hot, Fr. bouton. Verb Belg. bottent Teut. baussen, Fr. boutonner. The first shoot of a plant ; a germ. To put forth the germ of leaves ; to put forth young shoots or germs. To rise as a germ from the stalk ; to be in the bloom or growing. To innoculate ; to graft, by inserting a bud into the rind of another tree.

Bud forth as a rose growing by the brook of the field. Eccl.

Seest not thilke same hawthorne studde, How bragley it begins to budde, And utter his tender head.

Spenter't Shepliearagain't Calendar.

All so my lustfull leafe is dry and sere ; My timely buds with wayling all are wasted. Id.

Young budding virgin, fair and fresh and sweet, Whither away, or where is thy abode ? Shakspeare.

Be as thou was wont to be, See as thou was wont to see : Dian's bud o'er Cupid's flower Hath such force and blessed power. Id.

Writers say, as the most forward bud Is eaten by the canker ere it blow, Even s>o by love the young and tender wit Is turned to folly, blasting in the bud, Losing his verdure even in the prime. Id.

Heaven gave him all at once, then snatch'd away, Ere mortals all his beauties could survey j Just like that flower that buds, and wither in a day.*

Dryden.

Though laboring yokes on their own necks they

feared,

And felt for budding horns on their smooth foreheads reared. Id. Silenut,

Of apricots, the largest is much improved by bud- ding upon a peach stock. Temple. Insects wound the tender buds, with a long hollow trunk, and deposit an egg in the hole, with a sharp corroding liquor that causeth a swelling in the leaf, and closeth the orifice. Bentley.

The hawthorn whitens, and the juicy groves Put forth their buds, unfolding

by degrees, Till the whole leafy-forest stands displayed In full luxuriance to the sighing gales. Thornton.

BUD. See BOTANY, Index.

BUDA, or OFFEN BUDA, a city of Hungary, in the county of Pillisch, is situated on the west bank of the Danube, and is the capital of Lower Hungary. Sometimes it is regarded, in conjunc- tion with Pesth, firrn which it is separated only by a bridge of boats, as the metropolis of the kingdom. The length of this bridge, which con- sists of forty-seven large boats, connected with chains, is about 300 yards. Buda is the resi- dence of the Palatine, and contains 30,000 in- habitants. Its situation is on the right bank of the Danube, and is commanding and majestic. The fortress, which occupies a high rock, con- tains the palaces of the palatine, and of the no- bles, the public arsenal and theatre, with many churches and streets. At the foot of this emi- nence, and along the side of the river, runs a street, while others, with gardens, surround iĀ» in different directions : a second rocky eminence, called the Blocksberg, hangs over the river at a short distance to the south, on which a new observatory is constructed. The Danube is no- where seen to more advantage ; and the town has been considerably improved since a recent fire, which consumed the greater part of the lower division. Buda was the residence of the Hun- garian n.onarchs, till the Turks took it in 1526, and destroyed a celebrated library, founded by Matthias I.. Ferdinand, archduke of Austria, recovered it in 1527, but in 1529 the Turks took it again. In 1684 the Christians laid siege to it, but were obliged to raise it soon after, though they had an army of 80,000 men: In 1686, however, they took it by assault, in the sight of a very numerous army. The booty that they found it it was almost'incredible, the Turks hav- ing lodged their treasures in it as a place of safety. After this they augmented its fortifications, to which the pope contributed 100,000 crowns, Buda being considered as the key of Christen- dom. In the neighbourhood excellent wine is made, and the town itself contains numerous baths, which are resorted to in paralytic com- plaints. It is 125 miles E. S. E. of Vienna, and 150 N. N. W. of Belgrade.

BUD.&US (William), a learned critic of France, in the fifteenth century, was born at Paris in 1467. His parents sent him to the university of Orleans to study law ; where he passed three years in dissipation. His parents sending for him back to Paris, found his former reluctance to study and love of gaming much increased. But the fire of youth beginning to cool, he was at length seized with an irresistible passion for learning. He immediately disposed of his hunting

equipage, and abstracted himself from all busi- ness, to apply to study; in which he made, with- out any assistance, a very rapid and amazing progress, particularly in the Latin and Greek languages. The work which gained him greatest reputation was his Treatise de Asse. He after- wards became librarian to the French king, Francis I., who at his persuasion, and that of Du Bellay, founded the Royal College of France, for teaching the languages and sciences. The king sent him to Rome, as his ambassador to Leo X. and in 1552 made him master of requests. The same year he was chosen provost of the merchants. He died at Paris in 1540. His principal works are, 1. De Asse, 4to. ; 2. Notes on the Pan- dects ; 3. Commentarii Graecse Linguae, fol.

BUDD7EUS (John Francis), a celebrated Lu- theran divine, was born in 1667, at Anclam in Pomerania. At the age of eighteen he was sent to the university of Wittemberg, where he took his master's degree in 1687; and two years after- wards became assistant professor of philosophy. He removed from thence to Jena, next to Copen- hagen, and afterwards to Halle, but returned to Jena to take the chair of theology in 1705. He died in 1729. His principal works are, 1. A large Historical German Dictionary ; 2. Historia Ecclesiastica Veteris Testament!, 2 vols. 4to. ; 3. Elementa Philosophies Practicae, Instrumentalis, et Theoretics, 3 vols. 8vo. In most universities of Germany the professors take this work for their text book. 4. Selecta Juris Naturas et Gentium. 5. Miscellanea Sacra, 3 vols. 4to. 6. Isagoge Historico-Theologica ad Theologiam Universans, Singulasque ejus Partes, 2 vols. 4to. 7. A Trea- tise on Atheism and Superstition.

BUDDLE, in mineralogy, a large square frame of boards used in washing the tin-ore.

BUDDLEIA, in botany, a genus of the mo- nogynia order, in the tetandria class of plants. The calyx and corolla are quadrifid; the stamina placed at the incisures of the corolla. The cap- sule is bisulcated, bilocular, and polyspermous. There are eleven species, mostly from the Cape and the East and West Indies. The most beau- tiful are, B. Americana, a native of Jamaica and most of the other American islands. It rises to the height of ten or twelve feet, with a thick woody stem covered with gray bark ; and sends out many branches towards the top, which come out : opposite, at the ends of the branches, the flowers are produced in long close spikes branch- ing out in clusters, which are yellow, consisting of one leaf cut into four segments: these are suc- ceeded by oblong capsules filled with small seeds. B. occidentalis, a native of Carthagena. It rises much higher than the other.

BUDDLING-DISH, a small, shallow vessel, like the basin of a pair of scales, for washing ores of metals by the hand.

BUDDLING OF CALAMiNE, the operation of cleansing it from fmh, by washing and picking it, preparatory to the baking of it in the oven.
BUDGE', v., n. $., & adj.) Goth, buga, Sax. BUD'GER. J bugan, Swedish

botja, Dan. boge, Fr. bouger. From Goth, balg, Sax. bg/g, bo/g, Wei. balcft, puffed up, angry, arrogant. Thus to budge is to stir, to move off slowly and doggedly ; surly, stiff, formal.

The mouse ne'er shunne-i the cut, as they did btatn From rascals worse than they. Stiakspeare.

Let the first budget die the other's slave, And the gods doom him after. /Ā£

I thought th' hadst scorned to budge For fear- Hudibras.

O foolishness of men ! that lend tneir ears To those budge doctors of the stoick fur. Milton.

BUDGE BACHELORS, a company clothed in long gowns, who attend the lord mayor of Lon- don during his inauguration.

BUDGE BARRELS, among engineers, small bar- rels well hooped, with only one head ; on the other end is nailed a piece of leather, to draw together upon strings like a purse. Their use is for carrying powder along with a gun or mortar ; being less dangerous and easier carried than whole barrels. They are likewise used upon a battery of mortars for holding meal powder.

BUDGELL (Eustace), Esq. the son of Gilbert Budgell, D.D. was born near Exeter about 1685. He was educated at Christ Church College, Ox- fotd; from which he removed to the Inner Tem- ple, London : but instead of studying the law, for which his father intended him, he applied to literature, and contracted an intimacy with Mr. Addison, who was first cousin to his mother, and who, on being made secretary to the lord-lieute- nant of Ireland, took him with him as one of the clerks of his office. Mr. Budgell, who was then about twenty years of age, and had read the classics, and the works of the best English, French, and Italian authors, now became con- nected with Sir Richard Steele and Addison in the production of the Tatler, as he had, soon after, in that of the Spectator, in which all pa- pers written by him are marked X. He was likewise a contributor to the Guardian, where his performances are marked with an asterisk. He was afterwards made under-secretary to Mr. Addison, chief secretary to the lord justice of Ireland, and deputy-clerk of the council. Soon after, he was chosen a member of the Irish par liament; and in 1717,

*Addison having become principal secretary of state in England, procured him the place of accountant and comptroller ge- neral of the Irish revenue. But next year, the duke of Bolton being appointed lord-lieutenant, Mr. Budgell lampooned both the duke and his secretary, and was in consequence removed from his post : upon which, returning to England, he published his case in a pamphlet, entitled A Letter to the Lord * * *, from Eustace Budgell, Esq. accountant-general, &c. His attempts to gain the favor of the English court were con- stantly repressed by the duke of Bolton. la 1720 he lost Ā£20,000 by the South Sea scheme and afterwards spent Ā£5000 more in unsuccess- ful attempts to get into parliament. This com- pleted his ruin. He at length employed himsel in writing pamphlets against the ministry, seve- ral papers in the Craftsman, &c. In 1733 he began a weekly pamphlet, called The Bee; which he continued for above 100 numbers, or eight volumes, 8vo. During its progress Dr. Tiuclal died, and a will, 'of BudgelPs making, contained a bequest of Ā£2000 to the maker ; but it was con- tested and ultimately set aside. This ruined his reputation. It was thought also that he assisted*

Tindal in the composition of Christianity as old as the Creation. He now produced a translation of Theophrastus's characters. Becoming again em- barrassed, after the cessation of the Bee,and having been called to the bar, he attended for some time in the courts of law, but finding himself unable to obtain practice, he resolved on suicide. Ac- cordingly in 1736, after filling his pockets with stones, he took a boat at Somerset-stairs, and threw himself into the river under the bridge. Upon his bureau was found a slip of paper, on which were these words : ā

What Cato did, and Addison approved, Cannot be wrong.

BUD'GET. Fr. bougette, Dan. buget, from Goth, bodg, Teut. balg, barb. Lat. bulga, Ital. bolgia, volgia, bolgetta. A wallet, a sack. It is used for a store or stock.

If tinkers may have leave to live,

And bear the sowskin budget ; Then my account I well may give,

And in the stocks avouch it. Shakspeare.

'Sir Robert Clifford, in whose bosom, or budget, most

ā¢of Perkin's secrets were laid up, was come into Eng-

ā¢land. Bacon.

It was nature in fine, that brought off the cat, when

the fox's whole budget of inventions failed him.

L' 'Estrange.

Nor did I ever winch or grudge it, For thy dear sake ! Quoth she, mum budget. Think'st thou 'twill not be laid i' the dish Thou turn'dst thy back? Quoth Echo, Pish.

Hudibrat,

ITis budget with corruptions crammed, The contributions of the damned. Sicift.

BUDGET, in parliamentary language, means the minister's proposed plan of taxation for the sub- sequent year; and comprehends not only the new taxes and an estimate of their probable amount, but a general view of the national debt, income and expenditure, ways and means of raising supplies, &c. with the real product of the last budget.

BUDHURS, in ichthyology, a name given by the Irish to a large species of trout, resembling the red gillaroo.

BUDINGEN, a town of Germany in the grand duchy of Hesse, the capital of the county of Upper Isenburg, ten miles north-east of Frank- fort.

BUDINUS, in ancient geography, a mountain of Sarmatia Europaea, from which the northern spring of the Borysthenes is said to take its rise, according to Ptolemy. But this is contradicted 'by later accounts. It is now called Podolia.

BUDLEY, a sea-bathing town of Devonshire, near the mouth of the Otter. It had once a market on Monday, and is now recovering its former respectability ; distant three miles from Exmouth.

BUDN7EANS, in ecclesiastical history, a sect of the sixteenth century, who not only denied all kind of religious worship to Jesus Christ, but asserted that he was begotten like other men, and in the natural way.

BUDNˆUS (Simon), the founder of the above-mentioned sect, was a clergyman, deposed from his ministerial functions in the year 1584, and publicly excommunicated, with all his dis- but afterwards, abandoning

some of his

peculiar sentiments, he was admitted to the com- munion of the Socinians.

BUDOA, a small maritime town of the Aus- trian empire in Dalmatia. It is seated between the gulf of Cattaro, and the city of Dulcigno, on the coast of Albania ; and was once an important fortress, where the Venetians kept a strong gar- rison. In 1665 it suffered greatly by an earth- quake; and in 1686 was besieged by Soliman, basha of Scutari : but Cornaro obliged him to raise the siege.

BUDUN, one of the Ceylonese gods, who is fabled to have arrived at supremacy, after succes- sive transmigrations from the lowest state of an insect, through the various species of living ani- mals. There are three deities of this name, each of whom is said to reign till a bird shall have removed a hill of sand, half a mile high and six miles round, by carrying off a single grain once in 1000 years. See CEYLON.

BUDUKSHAUN, a range of mountains in Asia, extending northwards from the great ridge of Hindoo Coosh to the source of the Oxus. It thus forms the western boundary of the territory of Kaushkaur ; and is covered with snow during the greater part of the year ; but there is only one point of perpetual snow, being that from which the Oxus and Kama take their rise. The neighbourhood is watered also by a considerable river, called the Koocha, which falls into the Oxus. These mountains contain valuable mines of silver, iron, antimony, and lapis lazuli. Bu- dukshaun has also been celebrated for its rubies, situated on the lower hills, near the Oxus ; but they are no longer wrought. From its inaccessi- ble situation, this country has generally main- tained its independence. The present chief, Sultaun Mahommed, is said to be absolute over his own subjects, and has a revenue of about Ā£60,000. The capital is Fyzabad, a considera- ble place.

BUDWEIS, a circle and mining town of Bo- hemia, containing nine towns, twenty-six market boroughs, twenty-seven lordships, 860 villages, and 170,000 inhabitants. Here are the sources of the Moldau, and very extensive forests and sheep- walks. The town is large and well built, sur- rounded with walls, and partially fortified. It was taken by the king of Prussia in 1744, but he did not keep it long. Here are manufactures of salt- petre and cloth. Population 4600. Dis- tant sixty-six miles south of Prague.

BUDZIAC TARTARY. See BESSARABIA. BUENAVENTURA, a Spanish settlement and mission on the coast of New California, visited by Vancouver in 1793. He says that the build- ings of the mission, the arrangement of the gar- dens, and the cultivation of the land in the imme- diate vicinity, is in a style superior to that of any of the settlements to the

north. It was founded in 1788, and contains about 1000 inha- bitants. Long. 241Ā° 2′ E., lat. 34Ā° 16′ N.

BUENOS AYRES, an independent state of South America, and one of the United Provinces of the southern hemisphere, was, until the late revolution, a vice-royalty of the dominions of , Spain, and sometimes called the vice-royalty of La Plata. At that period it was described as ex- tending from the Rio Desaguadero to the most

northern settlements on the Paraguay, upwards of 1600 miles in length ; and, from the mouth of the Rio de la Plata to Chili, nearly 1000 in breadth ; forming the most important part of the Spanish possessions in the New World. It was erected into a distinct vice-royalty so late as the year 1778, and consisted of five provinces, viz. Buenos Ayres, or Rio de la Plata, Paraguay, Tucuman, Los Charcas, or Potosi, and Cuyo. We can feel no such apprehensions for the cause of liberty, as to imagine that these provinces will ever again fall under the dominion of the mother country (if, indeed, it be not a sort of profana- tion to apply such a term to Spain) ; but having sketched (see our article SOUTH AMERICA) the general features of this important portion of the new continent, and the union of these provinces being, at present, far from settled, we devote this article to a description of Buenos Ayres Proper, always the chief of them, and the channel through which their principal productions have reached Europe.

The province or state of Buenos Ayres, then, is now bounded on the east by the river Parama, and its continuance the La Plata ; on the north by the stream Arroyo de en Medio, which divides it from Santa F<Ā§ ; and on the south and west by the Solado, which empties itself into the bay of Somborombon. The extravagant claims of the Spanish government included the territory south- ward, nearly to 47Ā° of latitude, and attempts have been lately made to extend the actual boundaries farther in that direction. In fact, at different periods, the grazing grounds of the pro- vince have stretched as far as 37Ā° south latitude ; but it seems more than doubtful whether the Indians, who have become alarmed at this ad- vance, and who frequently penetrate to the neighbourhood of the capital, will sanction it by any treaty. In the year 1740, a line was run across the continent, in latitude 35Ā°, to the south- ward of which it was understood the various hordes of Indians were to confine themselves. On the sea-coast the Europeans have had much less difficulty in extending the limits of their possessions, than more in the centre of the coun- try. It is calculated that this territory contains about 1520 square leagues.

The mighty La Plata, formed of the united streams of the Pilcomayo, Paraguay, Parama, and Uruguay, is the chief geographical feature of this province, and the great outlet, or central basin, of this part of South America. The waters of the western side of the mountains of Brasil, and those of the eastern side of the Andes, as well as those of the intermediate ranges of Cor- dova and Tucuman, have no estuary but in this direction.

The geological foimations on each side of this great stream are interesting, as it appears to se- parate the primitive from the newest secondary formations in a remarkable manner. On the north, or Montevideo side, the rocks are granite, gneiss, clayslate, and primitive trap (green- stone); while on the south side, a new stalacti- form limestone, of a brownish white color, is found lying upon beds of a stiff clay. These clay beds extend a considerable distance into Patagonia: and little farther is known of the

geology of that country. Round Buenos Ayres the upper soil is chiefly of a light nature, ap- proaching to marl, covering a stiff clay subsoil which the natives call fosca.

Immense advantages in the way of trade are already connected with, and still more are promised by, this stream. In fifteen days vessels can pro- ceed up the Parana and Paraguay as far as Asumpcion, where the river is a mile and a halt in breadth. The back voyage nearly occupies as much time, as, for several degrees of latitude, the fall in the river does not exceed one foot in a thousand. The course of the river Uruguay is also very extended, but, on account of numerous falls, it would not afford the same facilities to navigation as the Paraguay. A branch of it, the Rio Negro, may be navigated about forty miles from its junction.

The Tercero, which runs into the Parana under the name of the Carcaranal, might be ren- dered navigable at a moderate expense, and would furnish an outlet from Cordova, San Jago, and the provinces of Mendoza and San Juan. It rises in the mountains to the west of Cordova, and pursues an easterly course, leaving that city about thirty leagues to the north. It was surveyed as far back as the year 1811, with a view to this object, and the report was favor- able. It is remarkable, that not one of the many- streams which descend from the Cordillera, west of Buenos Ayres, reaches the sea. They spread over so large a surface of flat country, that they either become evaporated by heat, or formlakes of small dimensions. In the Pampas, the want of water is often severely felt. This flatness of the country also precludes the probability of springs ; the wells of Buenos Ayres are obliged to be dug of great depth, and perforate the clay bed.

The climate is remarkably fine and healthy During the summer months, the general range of the thermometer is from 75Ā° to 84Ā° of Fah. On the 21st

of February, 1821, the mercury stood for many hours at 91Ā° in the shade. The mean temperature of the three summer months of 1822, was 71Ā° 9'. In winter the thermometer varies from 55Ā° to 60Ā°. Blasts from the Cordil- leras will sometimes sweep over the country, and cause the mercury to fall in an extraordinary- way. These blasts will strike the arm, or any other exposed part of the body, and produce a numbness, which sometimes remains for several days. Heavy rains fall in July, August, and September. The rains during the summer are extremely irregular, they have the character of thunder-showers; hail-storms at this period of the year are common. These storms are fre- quently attended with the most fatal conse- quences. In one of them, which happened in the year 1793, the lightning struck the town of Buenos Ayres in thirty-seven different places, and killed nineteen persons.

The most common disease in the capital and its neighbourhood is consumption (arising it is supposed from the chilling gusts already named), bowel complaint, and gout ; but the latter is not very frequent. In the country, disease, even in the swampy districts, is hardly known. The small pox has appeared in the four provinces, but vaccination has almost exterminated it. The

ā¢white inhabitants generally reach a good old age, more particularly the females, who seem to pos- sess strong constitutions in very advanced years.

The Pampas are covered with immense efflo- rescences of salt, and formerly a considerable party of salt-collectors used to leave the capital about the month of September, with much cere- mony, to obtain that article after the waters had subsided and deposited it on the surface. It was very impure, and even found unfit for the preservation of jerked beef, making it hard and of bad flavor. A small traffic in bags of salt is still carried on with the Indians, but this is said to be collected from the lakes, being regularly crystallised in cubes. The domestic consump- tion of salt is very limited.

The former vice-royalty of Buenos Ayres was rich in the silver mines of Potosi, La Paz, and others long celebrated in Europe. Previous to the separation of the provinces, the mine of Fa- matina in the valley of the same name, to the north of San Juan, was also within the jurisdic- tion of Buenos Ayres. It was singularly rich : the silver being, according to the Spanish phrase, chiselled out of the gangue, which was a carbo- nate of lime. And, in 1814, some English mer- chants entertained an idea of

renting it; but upon mature reflection, considering the country in too unsettled a state, they prudently relin- quished their plan. The province, at present, is singularly deficient in mineral productions.

It is also almost entirely destitute of timber. One of the few indigenous trees is the umbu, but this is only found in the neighbourhood of the capital ; wm'e some species of cactus, the cardon or thistle with blue flowers, and a few mpre, con- stitute the native vegetable productions. The Spaniards introduced the olive and the hard peach with some success ; they grow quickly, particularly where a little shelter is afforded by the taller trees from the bleak winds that sweep the surface of the country; the cherry tree is also common, but has never been known to produce any fruit, the blossoms being cut off by the wind. The sauce, or willow, is met with on the banks of the Canada. Grasses thrive ; and the apple and melon are abundant, but not fine. Most of the vegetables of Europe have been cultivated with success, but their use is confined to Europeans ; for the Gauchos, or people of color, view them with eyes of ridicule, and consider a man who would eat them as little superior to the beasts. Gourds are the only edible plants with them. The government has lately turned its attention to the formation of public forest-plantations, which furnish young plants to cultivators at a moderate price; in a few years it is expected they will become a source of considerable wealth to the state. The islands in the Parana abound in indigenous vegetation : and with the trefoil and cardon of the immense plains of Buenos Ayres, its stormy breezes evidently agree.

The species of quadrupeds are not numerous, nor peculiar : the quantity of cattle it is well known is immense, though since the revolution it has been much diminished. Horses also are bred by thousands. In the neighbourhood of the capital, a curious little animal is also found in great numbers, the biscachia, lepus biscaa. It

is not unlike our rabbit in shape and size, it bur- rows and surrounds its hole with abundance of bones : an owl is said generally to be hovering near. The armadillo is common in the Pampas, a small species of unpleasant smelling deer, and the ounce.

The nandu, (South American ostrich) ana swan, are also found in considerable numbers. The former is about half the size of the African species, it runs very fast, and is taken by the Gauchos with balls of stone attached to a leather thong, which they generally throw round its neck. Several females, it is said, lay their eggs in one nest, and the male hatches them. The swan is a most majestic and beautifully shaped bird ; the body is perfectly white, and the head and part of the neck black. A considerable trade is carried on in its plumage and skin. It is taken by being followed into the water and entangled by a leather thong, in the same manner as the

ostrich. There are two kinds of partridges here; the one small, and similar to the quail of Europe, and the other considerably larger. They are taken in various ways. The more usual method is. that of galloping round the covey, continually fixing the eyes on them, and, by closing the circle, they at last allow themselves to be taker up by a noose at the end of a stick. It is said that they subsist on animal food. On the banks of the rivers great variety of water-fowl subsist on the fish. In the city the mosquito is com- mon, but not so troublesome as in some other parts of South America. Fleas abound ; and seem, as Dobrizhoffer says, to live in the grass, for on lying down in some places, the body be- comes covered with them. Reptiles are not common.

Bones of the Megatherium have been found here, and an almost entire skeleton was sent home by the viceroy in 1789. It was found on the shores of the Lugan, about fifteen leagues from Buenos Ayres. In the same direction, a soldier found a tooth within the last few years.

The larger farms are chiefly occupied with cattle and horses : of the latter 6000 head have been sometimes owned by' one breeder, besides a due proportion of horned cattle. The grazing grounds are many miles in circumference, and the cattle in excellent condition. Horses cannot now be said to be found absolutely wild ; but, prior to the revolution, public officers went annually round the country and seized all un- marked cattle for the king : it has therefore been the custom to mark them early, and for a pur- chaser to countermark them, or they may be at any time reclaimed. Such is the abundance of these animals that the greater part are reared only for their hides. In Buenos Ayres, a superior horse will sometimes sell for eighteen or twenty dollars ; but if purchased in the country, at a distance from a market, not above four or five. In 1821 the government paid, for the army, at the rate of three dollars per horse. Mules are little attended to in this province, though in the neigh- bourhood, at Cordova and Mendoza, they are a chief object of commerce. The horned cattle are so numerous, and meat so cheap, that a whole ox may be purchased for three or four dollars at any time ; the hide alone being worth three and

a-half. So abundant is flesh meat, that the domestic poultry are said to be fed with it. But the late civil troubles have affected no feature of the country more than this. Their numbers, according to Mr. Caldcleufh are diminished since the revolution full one-half. M. Rivadavia, one of the ablest ministers of this republican government, observing this, has recently caused a decree to pass the house of representatives, pro- hibiting any cows

to be slaughtered, excepting in those districts which approached the Indian frontier, and where, in case of sudden irruption, it would be found impossible to drive them off. ‘ Should the country,’ says our traveller, ‘ remain quiet for any length of time, and recover from the effects of devastation committed by the various chiefs and by the Indians, there can be no doubt, with such rich pasture, the number of cattle will reach its former extraordinary limits.’

Wheat, which was formerly obliged to be im- ported, now flourishes here best of any grain ; but a good deal of barley is grown. The former is exported in considerable quantities up the Pa- rana and to Brasil. It has a small bearded grain, and is full of flour. There are two crops annually, in September and February. A temporary enclo- sure being made, the earth is raised with a rude plough, or the bone of an ox, and thinly sprinkled with seed. Threshing is performed by placing the wheat in an enclosure, and forcing a number of horses to gallop over it. Indian corn is cul- tivated in two varieties, the one with the grain perfectly white and tender ; the other of a deep yellow, and much harder. The system of agri- culture is on the whole wretched, and in nothing may the advantages of peace and closer inter- course with enlightened nations be expected to make a more rapid improvement. Insects and heavy rains often destroy immense crops.

The poncho, an oblong piece of cloth, with a hole in the middle, for the head, is the common dress of the lower classes, and a principal article of manufacture throughout the province. To this if we add a few Indian articles, made from hides and ostrich feathers, some coarse woollen cloths, and cotton goods, we shall have enume- rated the only manufactures worth naming. But the poncho is a superior article in point of texture. The chief articles of export are hides, tallow, horns, hair, jerked beef, wool, Vicuna wool (for hat making), Chinchilli and Neutre skins. 957,600 horse and cow hides, arrived in England alone in the year 1822. Until 1816 the chief article of internal trade, was the Paraguay yerba, or tea, of which in 1814, 20,000 bales, worth at least a million sterling, came down the river. It is as universally drunk here as tea in England ; but of late the dictator of Paraguay has prohi- bited its leaving that country. The method of preparing it is to put a small quantity of the leaves into a gourd, or cup, in which is placed a reed, or silver tube, called bombilla; hot water is then poured on it, and the infusion is sucked through the tube. Sugar is generally mixed with it, and it possesses excellent stomachic qualities. On leaving the country, travellers miss it exceed- ingly An inferior kind called the palo, or Por- tuguese yerba is also used. Little attention has

as yet been paid to the state of the roads, which extend but a short distance in any regular way into the interior. They are traversed either by single mules or waggons ; the wheels of which, in order to pass through the

pantanos, or sloughs, are of immense dimensions. They travel toge- ther in numbers, with one for a conductor, and his family, and traverse the plains to the shores of the Pacific.

The commerce of this country has fluctuated a good deal since the revolution. In the year ending the fifth of January, 1817, the English merchants shipped to Buenos Ayres, goods to the value of Ā£388,487 ; while in the year ending January the 5th, 1823, their value wasĀ£l, 164,745, showing an unprecedented increase. During the year 1822, 167 English vessels sailed from various ports for Buenos Ayres, carrying thither every description of manufactured goods, beer, &c. In 1814 there were 20,000 tons of shipping employed by Buenos Ayres ; but such was the distressed state of the country during the years 1819 and 1820, that the amount sunk again as low as 8,000 tons. From that period the increase has been steady. It should be observed that our commerce with Buenos Ayres far exceeds that of any other nation.

The following exhibits a picture of the trade of the port of Buenos Ayres at a very recent period : ā

I. An Account of Vessels which have arrived in the Port of Buenos Ayres.

1823. Number. Nations. Tons.

9 Belonging to the Province . 424

10 English 1574

5 North Americans 984

4 Brasilians 463

2 French 343

3 ˆ 2 Dutch 350

1 Dane 204

1 Swede 254

34 ships. 4596

f 9 Belonging to the Province . 446

13 English 2669

13 North Americans 2605

*> > I 12 Brasilians * . 1100*

| I 2 Swedes 550

ˆ 3 French 424

3 Sardinian 352

1 Dane 208

56 ships. 8354

C 11 Belonging to the Province . 571

6 English H02

5 North Americans .... 1286 . | 15 Brasilians H50

ā¢f J 2 French 448

1 Sardinian 156

1 Dutch ...-.-ā¢ 102

1 Dane . 60

_ 42 ships. Total 132 vessels.

4875

17,825

643

BUENOS AYRES.

IL An Account of Vessels which have cleared

outwards.

1823. Number. Nation. Tons.

7 Belonging to the Province . 424

21 English 3764

9 North Americans 2003

7 Brasilians 554

3 French 771

L 47 vessels.

7516

> 1

-

L 20

3 Belonging to the Province . 114

6 English 1027

2 North Americans 380

4 French 709

4 Brasilians 369

Swede 284

20 vessels.

2883

i

Total

r 10 Belonging to the Province

. 676 835

5 North Americans . . . 9 BrasiHans . . . , .

. 840 810

1 Dane

204

1 Dutch . . . .

150

ˆ31 vessels.

3515

13,914

98 vessels.

The government is republican and representa- tive. It may be said, after many changes, to have taken its present form in August, 1821. At this period the chamber of representatives was declared extraordinary and constituent, and made the following regulations : ā It was decreed that the number of representatives for the city and the country should be doubled, and that one should be added for Patagonia, thus making the number forty-seven. Secondly, That at the com- mencement of each session, half of the members should go out, and fresh elections take place. Thirdly, That no members should receive pay from government. And lastly, That a president and vice-president should be chosen in turn an- nually. At first the distinction of deputy was not an honor much sought for : it was an eleva- tion to what appeared a dangerous height, and from which men might be precipitated, they knew not how soon : such little confidence could then be put in the stability of the government. At the last election this feeling had considerably worn away, and the electors and candidates seemed aware of that distinction which, in all countries, where a proper feeling exists, is viewed with eager eyes. The sessions of the chamber commence about May or June, and last until December, when it is prorogued on account of the summer heats. The style of the chief exe- cutive officer of the state now is, Governor and Captain General of the Province of Buenos Ay res.

All the comforts of the common people here are concentrated in their abundant animal food, and their yerba matte : drink has very little of their attention. The poncho before mentioned covers the shoulders, and the skin of the hind leg of a horse produces for the man an ekgant natural

boot : the addition of immense spurs, and a large knife at the girdle, completes his dress. On parti- cular occasions his drawers are ornamented about the knees. The better classes adopt the Spanish cloak ; and the ladies the French or English cos- tume. The bull fights, once so frequent, have been discouraged by the new authorities ; a li- cense must be procured for every exhibition, and the animal, for we know not what reason, be de- prived previously of his horns.

Horses are the great delight and common pos- session of all classes. On the trappings of his steed the Buenos Ayrean spends what the beaux of other

countries bestow on their own dress. He is ever on horseback, and could not think of crossing a street on foot : in the river the nets are drawn from the saddle ; the common bather plunges from his horse, and swims round it; and the beggar at the corner of the street stoops mounted from his horse, and asks your charity !

The greatest general defect of character here is indolence, which pervades all ranks. To sit in a pulperia, or spirit shop, and play at some game which requires no personal exertion ā to drink as fortune becomes unfavorable ā and, in a fit of passion, to stab the more fortunate ā is no uncommon way of spending the day among the lowest of the inhabitants. Crosses about the doors of these places, and in various other situa- tions, attest the fatal quarrels which have thus taken place. ‘ The poncho at the moment of ir- ritation is wrapped round the left arm, and the knife flourishes in the right. No people are more dexterous with this weapon, and though fortunately few of these disputes, in comparison with their number, end fatally, when they mean to kill they almost uniformly pierce the heart. To the credit of the new legislators, knives, swords, and other weapons of the kind (armas blancas), are of late forbidden to be carried about the person ; and heavy licences are imposed to de- crease the number of pulperias.

‘ Deliberate murder, however,’ says Mr. Cal- decleugh, ‘ rarely occurs. The disposition of the people is decidedly good, and their honesty has never been called in question. Industry is all that is wanting. The man attends to the horse, and will take charge of nothing else. The wife is the slave, and has to exercise her reflecting faculties as well as her hands for the husband. The cow is placed under her care ; she milks what is required for the family and no more, butter and cheese she is little acquainted with. On entering their huts the woman puts the stool or the head of an ox for a seat, but the husband never rises : he is pleased with the visit of the stranger, but would cease to en- joy it if it cost him the least bodily exertion. The visitor may proceed to the hearth and use the small copper vessel in which the water in boiled for the matte’s ; he may even take the meat off the wooden spit ā but he must do all this himself; to ask the gaucho for any exertion would be to run the risk of displeasure, and he would after all only call to his wife, without turning his head. Nothing excites their sur- prise more than to see a foreigner bustling about his own baggage, and looking after every thing

himself. Pity seems the prevailing feeling. This is the character of the gaucho round Buenos Ayres, which few foreigners had a better opportunity of witnessing than myself, considering the shortness of my residence in the

country. Most of their faults must be deduced from their mode of life. They are probably in the employ of men who own large estancias, or grazing farms, who allow them their subsistence, and little more, and whose service they leave, and move to another part of the country without difficulty or even notice. They consequently acquire wandering and frequently predatory ha- bits ; and it is not easy in the pampas to exercise the law with vigor. The various commotions in the country have tended much to give the lower classes a distaste to a regular life and industrious habits. Still the demoralisation is not nearly to that extent which all these causes might hare produced ; and upon the whole I cannot help thinking favorably of the Buenos Ayrean. He is free from deceit ā would be most obliging were it not for his indolence ā and most amiable if he had the slightest command over his passions.'

In 1821 the attention of the new government was first directed to its present plan of finance, principally by a Mr. Wylde, an Englishman, who drew up several papers and projects for the re- modelling of the custom-house. After this the new tariff made its appearance. It is dated 21st August, and enjoins, that quicksilver, machines of every description, agricultural implements, scientific instruments, prints, statues, wool, skins, watches, trinkets, woods and articles for manu- factures, shall pay five per cent, of custom-house duties : that arms, powder, silk rough and ma- nufactured, shall pay ten per cent. : all other ar- ticles not included in the above, fifteen per cent. ; excepting sugar (Chinese), coffee, cocoa, and yerba matte, which are to pay twenty per cent. ; and carriages, furniture, saddles, wines and liquors of all sorts, which are to pay twenty-five per cent. The export duties are as follow : one real on each ox hide, half a real on horse or mule hides, one per cent, on gold in coin, two per cent, if worked ; three per cent, on silver in coin, and four per cent, if worked or in pina ; productions of the country four per cent. ; grain and flour if exported in national vessels, and all manufactures of the country, and hair, free from duty ; yerba matte imported by land to pay ten per cent. The new tariff at once and decidedly improved the revenue. Previous to this the taxes levied were as numerous and oppressive as the mode of gathering them was irregular and capricious. The alcabala, a duty of three, four, or five per cent, on all sale and resale, was one that created most discontent, and which has been abolished by all the new governments, except that of Paraguay. But the tonnage dues, sales of papal bulls, tithes, and the royal fifths on gold and silver, were all severely felt.

In 1812 the tithes were abolished, and the existing regulations for the church published ; the dignitaries of which are composed of a dean, with a salary of 2000 dollars, and four presby- ters, with 1600 dollars of salary. The cloistered clergy have been diminished by law, and no one is permitted to take the vows until he is twenty-

five years of age; even then an express licenĀ«Ā» from government was required. The pope, we are sorry to add, being solicited in 1815, finally to arrange the ecclesiastical affairs of the province, declined the task. The attendance on the forms of religion is considerable, but rather on the decrease : heretics are by no means underrated in return for the lessons of civil liberty which they have taught here ; and a great and uniform spirit of toleration is abroad.

The inhabitants of this province, who do not exceed 170,000, are divided into the Old Spaniards and European residents, the Creole and mixed races, the native tribes and slaves. A census, taken in 1821, was, for some reason not ascertained, never published. The popula- tion has certainly decreased of late years, and this may have furnished one motive for suppressing the authorised account. The Pampa Indians are said to be on the increase : they are a very bold and acute race. Of late their hostile attacks on Buenos Ayres have been frequent ; and, in 1822, they came so often close up to the city, that the governor sallied forth and drove them back ; such, however, is the nature of the country, that a few hours place an enemy that has fled, close on the heels of a retiring conqueror. The eyesight of these tribes is described as being pe- culiarly strong. On the borders of their terri- tories, they are said to have a platform ele- vated about twenty feet, on which a lad con- stantly stands and examines the horizon with his eye ; and by this means, time is given them either to escape or, prepare the means of de- fence. A line of forts has been lately drawn to the south-east of Buenos Ayres, from a spot called Tandil, to the Sierra de Ventana, to sup- press these incursions.

Formerly, when the native tribes were supposed to be diminishing in their numbers, an importa- tion of negroes was commenced by the English, French, and Dutch, who had settlements on the coast of Africa. The number imported was never great, being but just sufficient to supply the city. Buenos Ayres and the neighbouring states are now enjoying the advantages of this ; and by it alone have a decided superiority over the Brasilians. During the first years of the revolution, when a great deficiency of men for the armies was felt, the state purchased several thousands of negroes from their owners : these purchases were continued until 1822, when it was determined that no more public money should be thus spent. And it was nobly decreed at the meeting of the National Congress, in January, 1813, that all children of slaves born after that day should be free. The feelings of the people, we are happy to add, are averse from any recommencement of the vile traffic in slaves.

BUENOS AYRES, the capital of the foregoing province, stands in south latitude 34Ā° 36′ 28”, about 200 miles from the mouth of the La Plata, and where it is about thirty miles wide. It was founded in the year 1535.

Its general appear- ance is neat, though not imposing. It is very regularly built, on a bank considerably elevated above the level of the water, as you approach it from the sea, and occupies a large space of ground. The steeples of the various churches

BUENOS AYRES.

and convents, as they rise successively to view, add much to its appearance. The fort occupies the centre of the side next the river, command- ing on one side the landing, and the parade or great square, on the other. The port is subject to much inconvenience from the difficult naviga- tion of the La Plata, and the want of a commo- dious harbour near the town. No vessels of large burden can approach nearer than the bay of Barra- gan, which is seven leagues distant. But, while the northern states send down here their tobacco and cotton, and San Juan and Mendoza their wines and brandies, which, together, form an important trade with Great Britain, although the Paraguay yerba should still be withheld, and dis- sension suspend the intercourse with the rich mineral district of Peru, Buenos Ayres will ever take the lead among her neighbours as a com- mercial port of deposit.

The public buildings are few, and scarcely worth distinguishing. The unfinished cathedral, the Dominican church, the Franciscan, and that of St. Nicholas, together with the new theatre and the state-house, are the most remarkable. The streets are wide, paved at the side, and tolerably clean. The houses are covered with a flat roof, called azotea, and have no upper stories; but almost all of them have gardens, and are sur- rounded with balconies of lattice-work, contain- ing shrubs and flowers. All the older ones are of mud, but, at a comparatively modem date, brick and lime were brought into use here by the Jesuits. In the centre of most houses is a court, containing a tank for water, that from the river being considered prejudicial to health. Game, fish, and all other provisions, are plentiful in the market; but fowls are exceedingly scarce and dear. The population is taken at about 50,000.

Household furniture here is rarely handsome, or even what an Englishman would call com- fortable ; but the inhabitants are of a very domes- tic and contented disposition. Families of re- spectability have night after night their tertulia, or evening party, which includes a certain num- ber of persons in the habit of frequenting the house ; and at which strangers are received with great kindness and urbanity. It is not only wholly under the direct "on of the female part of the family, but the gen1 emen of the house ge- nerally form part of another tertulia, or are in the coffee-houses talking politics. The amuse- ments are Spanish country dances of a superior kind ; waltzing, minuets, and a dance accom- panied with words, in which the

lady first ad- vances, and sings, ‘ cielito, mi cielito,’ thence termed cielito, or little heaven. Refreshments of all kinds are offered ; music also is introduced, and many of the ladies are superior performers. The party breaks up about eleven o’clock.

Music is, throughout the province, cultivated with some success, and it is the only one of the fine arts of which the remark can be made. In 1778 orders came out from the home govern- ment for the establishment of an university here, on the plan of that of Lima : but until 1819 the project remained dormant ; it was then partially agitated, but the public disturbances in that year, and in 1820, put a stop to the plan. On the 9th August, 1821, however, a decree came .out

for the formation of an university, with liberal provision for the payment of professors, &c. The Spanish spoken in Buenos Ayres is colonial, or rather provincial ; many of the words in com- mon use being vilely altered from their true pronunciation.

The public library, which originally consisted of about 12,000 volumes, and was founded prin- cipally by English merchants, has been much encouraged and increased by the government. It is under very good regulations, and by the printed returns, it appears that between the 21st March, and 31st December, 1822, it was visited by 2,260 persons, of whom 369 were foreigners. Books are exempted from all port dues and duties. There are, besides the Registro Official, several other gazettes published ; such as the Argos and the Centinela, and all are well con- ducted.

The various courts of justice of late have been entirely remodelled, the salaries of the judges raised ; and monthly lists of all the cases de- cided, or in progress, have been regularly pub- lished. The establishment at present consists of four counsellors of justice, at a salary of 2,000 dollars. The consulado takes cognizance of questions purely commercial, and of the enforce- ment of debts : juries are not as yet introduced, but the constitution has provided for this being in due time effected. The cabildo, or municipal body, has a charge over the city ; and one of the alcaldes of it is termed ‘ the defender of the poor.’ Each party to a civil action pays his own costs. The crimes that are punished with death are high treason, murder and robbery ; and of late the military have been rendered amenable to the civil law.

We have traced the events of the revolution in the article SOUTH AMERICA. At present there seems to be great and unhappy jealousies be- tween the original parties to the confederation, entitled the United Provinces ; and since 1822 they have only, in reality, connected Santa F6”,

Entre Rios, Corrientes, and Buenos Ayres, who are conjoined by a treaty, offensive and defen- sive, signed on the 8th February of the same year. And, although in the July preceeding, the court of Rio de Janeiro thought proper to re- cognise the state of Buenos Ayres ; as at that period the incorporation of Montevideo and the Banda Oriental with the Brasil empire took place, the act was considered as proceeding rather from a desire to stifle the complaints of this republic, than from any feeling of kindness or liberality towards it. War, long threatened, has recently broken out between Brasil and Buenos Ayres. The recognition of Buenos Ayres by the government of the United States of North Ame- rica, and by Great Britain, was viewed in a dif- ferent manner, and hailed with the greatest en- thusiasm.

We hope to have to record, under the article UNITED PROVINCES OF SOUTH AMERICA, the more entire final union of these rising and most interesting states

BUEREN, a town of Holland, on the south of the Rhine, which was the general rendezvous of the British troops in December 1794 and Ja- nuary 1795. It is situated north-east from Lee rdam.

BUET, a mountain in the department of Mont Blanc, 10,106 feet high.

BUFALMACCO, or BONAMICO, an Italian painter ; the first who put labels to the mouths of his figures, with sentences ; since followed by many bad masters, but most frequently and suc- cessfully in caricatura engravings. When a boy he was a scholar of Andrew Tasi, who was ac- customed to rise before light to his painting ; but early rising having no charms for Bufalmacco, he resolved to put in practice the following ex- pedient, to detain his master in bed till daylight. Having provided twenty or thirty black-beetles, he fastened small pieces of lighted wax taper on their backs, and sent them thus equipped into his master's room through a small hole under the door. This mysterious procession of moving light so alarmed the old man that he prayed and recommended his soul to mercy, and hid his face under the bed clothes. In the morning he told Bufalmacco he had seen ten thousand devils, and that his thoughts were so disturbed he could not rise to pursue his profession. On the succeeding night Bufalmacco diminished the number of the beetles; but the repetition produced the same effect ; and for the future Tasi always remained in bed till daylight. Being

engaged to paint a pic- ture of a Madonna and child, for a citizen of Florence, when the painting was finished his em- ployer disputed the payment, on which Bufal- macco went away and prepared some water-colors, with which, early the next morning, he effaced the child, and painted a young bear in its stead, on the lap of the virgin ; which excited so much ridicule against the employer, that he supplicated earnestly to have the work restored to its original condition ; and, when he had paid the stipulated sum, Bufalmacco washed away the additional bear with a wet sponge. He died in

1340.

BUFF', v. & n. ~\ Swed. boff, Bel. boff,

BUF'FET, v. & n. Dan./w", Fr. bouffe, barb.

BUF'FETER, i Lat. buffo, Tratoi, Lat. pavio,

BCF'FETING. J a blow or stroke. The verb

is derived from the noun, to beat, to cuff, to box

on the ear. Puff is a sound as well as a blow ;

and Chaucer has buf, an extra part of speech, in

which he attempts to spell the inarticulate noise

which escapes in eructation.

of the foule spitting that met spittcn in his

face, of the buffetes that men gave him.

Chaucer. The Persona Tale.

My feeble vessel], crazed and crackt, Through thy strong buffets and outrageous blowes, Cannot endure, but needs it must be wrackt On the rough rocks or on the sandy shallowes.

Spenser.

If I might buffet for my love, I could lay on like a butcher. Shakspeare. Henry V.

Our ears are cudgelled ; not a word of his But buffets better than a fist of France. Id.

The torrent roared, and we did buffet it With lusty sinews j throwing it aside. Id.

O, I could divide myself, and go to buffets, for moving such a dish of skimmed milk with so honour- able an action. Id.

Go, baffled coward, lest I run upon thee, And with one buffet lay thy structure low. Milton.

There was a shock, To have buff'd out the blood From aught but a block, lien Jonson

Disguised in all the masks of ni ;ht, We left our champion on his flight, At blindman's buff, to grope his way, In equal fear of night and day.

Butler's Hudibra. Instantly I plunged into the sea, And buffeting the billows to her rescue, Redeemed her life with half the loss of mine.*

Otway.

BUFF', 7i. From be off, as doff, for do off. A put off; a refusal. He would neither buff nor stay; he was undecided.

*BUFF', n.&adj. *v Lat. bubulus, Ital. buf- BUF'FALO, I falo, Fr. boffle, /3d/3aXoc,*

BUF'FLE, \ Buffalo is a kind of wild

BUF'FLING. i bull ; buff is leather made

BUF'FLE-HEADED. J of the skin of that animal ; buffle is applied to a human animal, dull, thick- headed, and stupid. Buff is used by some writers in the sense of naked ; stripped to the skin.

A fiend, a fairy, pityless and rough, A wolf, nay worse, a fellow all in buff.

Shakspeare.

Become the unworthy browse Of buffaloes, salt goats, and hungry cows.

Dry den.

A ropy chain of rheums, a visage rough, Deformed, unfeatured, and a skin of buff. Id.

Thy soul which, through thy hide of buff, Scarce glimmers like a dying snuff. Swift.

This was the utter ruin of that poor, angry, buffling, well-meaning mortal, Pistorides, who lies equally un- der the contempt of both parties. Id.

Were I to taunt a buffalo with this Cloven foot of thine, or the swift dromedary With thy sublime humps, the animals Would revel in the compliment.

Byron's Deformed Transformed.

. BUFF, in anatomy, signifies that sizy, viscid, tough mass, which forms on the upper surface of the blood ; and which physicians call the coa- gulable lymph. See BLOOD.

BUFFET, n. s. Fr. buffet. A kind of cupboard ; or set of shelves, where plate is set out to show, in a room of entertainment.

The rich buffet well-coloured serpents grace,

And gaping Tritons spew to wash your face. Pope.

BUFFET was anciently a little apartment, sepa- rated from the rest of the room by slender wooden columns, for the disposing of china, glass ware, &c. It now properly implies a large table in a dining-room, called also a side-board, for the plate, glasses, bottles, basins, &c. to be placed on, as well for the service of the table as for mag- nificence. In houses of citizens of distinction in France, the buffet is a detached room, decorated with pictures relative to the subject, with foun- tains, cisterns, and vases. It is commonly faced with marble or bronze.*

BUFFIER (Claude), a French writer, who was born in 1661, became a Jesuit in 1679, and died at Paris in 1737. He wrote many works, which show deep penetration and accurate judg- ment. The principal is, Un Cours des Sciences, &c. A Course of Sciences, upon principles nevr and simple, in order to form the Language, the Understanding, and the Heart, 1732, folio.

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B U F F O N.

BUFFON (George Lewis le Clerc, Count de), the celebrated naturalist, was born at Mont- iiard, in Burgundy, the 7th of September, 1707 : frs father was a counsellor of the parliament of Dijon, who lived to the age of ninety-three; and his family were remarkable for longevity. His mother's maiden name was Merlin. Buffon studied the law at Dijon; and his robust constitution, his eager activity, his acuteness and his penetration, gave early promise of success in whatever should be finally the pur- suit of his

choice. His early passion was for the mathematics, and he was never without Euclid in his pocket. At the age of twenty he is said to have discovered the binomial theorem, without knowing that he had been anticipated by Newton ; and when at a future period of his life he was asked by M. Herault de Sechelle why he had never published this fact, he replied, ‘ be- cause nobody was obliged to believe it.’ At the same period the young lord Kingston coming to Dijon, Buffon accompanied him and his tutor into Italy, where, amidst the choicest remains of art, and the most interesting monuments of anti- quity, he was attracted only by those charms of nature which he was destined hereafter to pour- tray. He lingered in the valleys, and would pass whole hours contemplating the beauties of the evening sky of this delightful region ; or be the leader of a mountain expedition, and industri- ously explore the torrents of lava, ancient and modern, or the bowels of a mine ; but statues and paintings had no attractions for him ; the most exquisite works of human skill, nor the most celebrated memorials of Roman greatness. ā Natural history was the constant subject of his meditation and speculations ā the cherished idol of his heart.

In his twenty-second year he succeeded, through his mother, to an ample fortune, and, returning to France, settled for a short time at Angers ; but having here quarrelled with an English gentleman, and wounded him in a duel, he returned to Paris, and passed from thence to England. He stayed in this country but three months, and immediately on his return home entered upon that remarkable career of close and unwearied study of which, in his rank of life and with his relish for society, we have scarcely another example. His first published work was a translation of Hales’ Vegetable Statics, which appeared in 1735, and was fol- lowed in 1740 by a translation, from the Latin, of Newton’s Fluxions. The prefaces to these translations were written in the same polished and noble style that distinguishes all his subse- quent publications. The strength of timber was a subject that now engaged his attention ; and he recommends that, for securing the consistency of the alburnum, the bark of a tree should be stripped from the feet at the time of the sap, when it should be allowed to dry and wither. He also investigated the ancient account of the burning mirrors of Archimedes, and endeavoured to construct an instrument approaching in its efficacy to the celebrated inventions of the Syra- cusan sage. He proposed, in the year 1748, a lamp & echelons, which was executed about

thirty years afterwards by the abbe Rochon, and of which the reader will find a description in our article BURNING GLASSES.*

In 1739 he obtained the appointment of in- tendant of the royal garden and cabinet at Paris, the treasures of which were considerably aug- mented

under his management, while the situa- tion afforded him great facilities for the prosecu- tion of his researches into every department of natural history. He now, therefore, arranged the materials and commenced the composition of his great work Histoire Naturelle, ge'ne'rale et particuliere. The first portion, containing the Theory of the Earth, and the History of Man and Quadrupeds, in 15 vols. 4to. was begun in 1749 and completed in 1767. This was followed by seven supplemental volumes ; after which ap- peared the History of Birds, 9 vols., the His- tory of Minerals, 5 vols., the History of Ovipa- rous Animals and Serpents, 2 vols., which, with an Atlas, 1 vol. completes the splendid original edition. In the anatomical details he was as- sisted by M. Daubenton, and in the history of birds, it is said, by M. Gueneau de Montbeillard ; the rest is a monument of his own genius and industry. During its progress, the author (in 1743) was admitted a member of the French Academy, and delivered on this occasion a dis- course, entitled, Philosophical Remarks upon Style, which is regarded as one of the most elo gant of his compositions. In 1752 he married Mademoiselle de Saint Belin, by whom he had a son, who afterwards fell in the revolution. This young man delighted his father by the erection of a column to his honor in the gardens of Montbard, having this inscription : ā

Excelsae turri humilis columna

Parent! suo filii Buffon, 1785.

Buffon burst into tears on seeing it, and saidā ' Son, this will do you honor.' When this un- fortunate gentleman was led to the scaffold by the minions of the revolutionary tribunal, he ex- claimed with great dignity and composure ' My name is Buffon.' On the publication of his Na- tural History, the freedom, or rather absence, of religious sentiments, which appears in his works, having excited the indignation of the Sorbonne, he had the good sense to endeavour to dissipate their fears, by an explanation with which they were completely satisfied. France has done ample justice to this great work in her numerous and splendid editions of it; and into every considerable language of Europe it has been repeatedly translated. Louis XIV. to mark his sense of its merits, erected the estate of Buffon into a comte, and granted him the smaller customs ; he even expressed a desire for his per- sonal acquaintance, invited him to Fontainebleau, where he frequently consulted him respecting the cultivation of wood, and offered him the ad- ministration of all the forests in his dominions, a situation which Buffon declined. Buffon's ap- plication to study is said to have been so great in early life, that when he frequented the evening parties of Paris, and did not return to Montbard till two in the morning, he would be called at five, and ordered his servant to drag him out upon the floor if he showed the least unwilling-

ness to rise. When dressed, he dictated letters, and regulated his domestic affairs; and at six o'clock entered upon his studies at the pavilion, called the tower of St. Louis. This was situated at a remote part of his garden, about a furlong from the house ; the only furniture which it con- tained being a large wooden secretary and a single arm-chair. Neither books nor pictures relieved the naked appearance of the apartment. Its en- trance was secured by green folding doors, the walls were painted green, and the interior, from the elevation of the roof, had the appearance of a chapel. Within was another cabinet, where Buffon resided the greater part of the year, on account of the coldness of the outer apartment, and here he composed the greater part of his works. It was a small square building, situated on the side of a terrace, and ornamented with drawings of birds and beasts. Prince Henry of Prussia called it the cradle of natural history ; and Rousseau, before he entered it, was accus tomed, it is said, to fall on his knees and kiss the ihreshold. At nine o'clock Buffon usually paused for an hour ; and his breakfast, which consisted of a piece of bread and two glasses of wine, was brought to the pavilion. Having passed two hours after breakfast in study he returned to his house. To his dinner he devoted a consi- derable time, and indulged in all the usual gaieties of the table. After dinner he slept an hour, then took a solitary walk, and during the rest of the evening either conversed with his family or guests, or sat at his desk examining papers. At nine he went to bed : and in this uniform manner spent not less than fifty years of his life. His labors were even continued to within a few hours of his decease, which took place 16th April, 1788, in the eighty-first year of his age.

The eulogies that have been pronounced upon the count de Buffon are numerous ; and warm enough to have satisfied even his own vanity. The sustained dignity of his style, and the ge- neral accuracy and brilliancy of his descriptions, have been universally admitted : as a minister of the temple of nature he is always instructive and engaging ; as a philosopher often profound. But his great work is throughout deficient in what the Greeks called [iiOodoc ā scientific method. He arranges nothing upon principle : he has no principle. He groups, and accumulates, and notes marks of likeness ; but he does not distin- guish, nor analyse, nor observe the unity of na- ture. Nor are the shining qualities of his style, considering it a work for the perusal of young people, a sufficient recompense for its occasional licentiousness and needless indelicacies. This work is a singular epitome of his whole character. Here, too, was dignity, gaiety, and

cleverness pervading all he said and did ; and in his conver- sation he was brilliant, and often profound in his remarks. But the want of all moral principle was as obvious in his life as that of philosophic method in his writings : and we do not consider that the interests of philosophy are served by disguising this. He condescended to be a hy- pocrite in a diligent attention upon the external forms of that religion which in heart he detested, and against which his biographers record him to

have uttered many bitter sayings to his confiden- tial friends : and to his wife, as to his God, he was for a series of years a constant infidel ā ā¢ ‘ violating all the principles of morality,’ as no illiberal modern writer characterises him, ‘ espe- cially in his commerce with women.’ His vanity, we are told, was great enough to allow him to say, ‘ The writings of eminent geniuses are few ; they are only those of Newton, Bacon, Leibnitz, Montesquieu, and my own.’

BUFFONI, in ornithology, a species of falco, the Cayenne ringtail of Latham, ˆolor, cere blue ; legs yellow ; body dark brown above, red buff beneath ; tail variegated with pale and dark brown. Found at Cayenne.

BUFFONIA, in botany, a genus of plants, class tetrandia, order digynia : CAL. four-leaved : COR. petals four: PERICARP, capsule, containing two seeds in one cell. There is but one species; a native of England.

BUFFOON’, v. & n. -\ Ital. buffone, Fr.

BUFFOON’ERY, tboujfon, Ital. boffa,

BUFFOON’ING, tˆemi,seemtobeTeut.

BUFFOON’LY. J ajfen, beaffen, to ape,

to mimic ; but Span. momo,fofo, gofo, bofo, are all perhaps from MWˆOC; Eolian fiouoc, which signified, indecency, scandal, obloquy, obscenity, and all such mirth as delighted the gods of the Greeks. In Lombardy, however, bufo, from Lat. bucca, signified the mouth, and was applied to those who made comic grimaces to excite laughter. The Italians believe it to be from the Lat. bufo, a toad, which in anger is said to puff and swell. A buffoon, Junius says, is a shrewd and crafty court-fool, a fool of pleasure, such as kings and great men love to entertain. The calling, however, is disreputable, and, like that of players in general, subjects its professors to the imputation of being rogues and vagabonds.

It is the nature of drolls and buffoons, to be insolent to those that will bear it, and slavish to others.

L'Estrange.

Where publick ministers encourage buffoonery, it is no wonder if buffoons set up for publick ministers. Id.

As Killigrew buffoon Vis master, they Droll on their god, but a much duller way.*

Maroell.

I'll wholly abandon all publick affairs, And pass all my time with buffoons and players, And saunter to Nelly when I should be at prayers.

Id.

A colony of French possess tae court, Pimps, piicsts, buffoons, in privy-chamber sport. Id. And whilst it lasts, let buffoonery succeed,

To make us laugh ; for never was more need.

Dryden.

Bombastry and buffoonery, by nature lofty and light, soar highest of all, and would be lost in the roof [of the theatre], if the prudent architect had not with much more foresight contrived for then^a fourth place, called the twelvepenny gallery, and there planted a suitable colony, who greedily intercept them on their passage. Swift.

Courage, in an ill-bred man, has the air, and es- capes not the opinion, of brutality j learning becomes pedantry, and wit buffoonery. Locke.

The bold buffoon, whene'er they tread the green, Their motion mimicks, but with jest obscene. Garth

BUFFOON is derived by Menage, after Sal- masius, from Buffo ; a name given to those who appeared on the Roman theatre with their cheeks

up; that, receiving blows thereon, they might make the greater noise, and set the people laughing. Rhodiginus and others make the origin of buffoonery more venerable ; deriving it from a feast instituted in Attica by king Erechtheus, called buphonia. Buffoons are also denominated scurrae,

gelasiani, mimilogi, ministelli, goliardi, joculatores, &c. Their chief scenes were at the tables of great men. Gallienus never sat down to meat without a second table of buffoons by him ; Tillemont also renders pantomimes by buf- foons ; in which sense he observes, the shows of the buffoons were taken away by Domitian, restored by Nerva, and finally abolished by Trajan.

BUFO, in entomology, a species of bombyx, found in Germany. Trie wings are yellow, with a broad brown band, and yellow spots. ā Also a species of curculio, inhabiting Siberia. Color fuscous ; wing-cases slightly reticulated, witli a white stripe in the middle.

BUFO, in zoology, the specific name of a species of rana, commonly called, in English, the toad. The body is lurid and fuscous ; back marked with tubercles; eyes red. The eye of the toad has always been noticed for its beauty. Toads have been often remarked by physiologists, as possessed of a capability of living for a long time without air or aliment. Of this the most astonishing in- stances are given by different authors. ‘ In the foot of an elm, of the bigness of a pretty corpu- lent man, three or four feet above the root, and exactly in the centre, has been found a live toad, middle-sized, but lean, and filling up the whole vacant space : no sooner was a passage opened, by splitting the wood, than it scuttled awawery hastily : a more firm and sound elm never ˆrew ; so that the toad cannot be supposed to have got into it. The egg whence it was formed must, by some very singular accident, have been lodged in the tree at its first growth. There the creature had lived without air, feeding on the substance of the tree, and growing only as the tree grew.’ This is attested by M. Hubert, professor of phi- losophy at Caen. Ambrose Pare”, chief surgeon to Henry III. king of France, a sensible writer, relates the following fact, of which he was an eye-witness : ā ‘ Being,’ says he, ‘ at my seat, near the village Meudon, and over-looking a quarry- man, whom I had set to break some very large and hard stones, in the middle of one we found a huge toad, full of life, and without any visible aperture by which it could get there.’ In the ac- count of the proceedings of the Academy of Sciences at Paris, there are two or three accounts of the discovery of toads in the centres of elms, oaks, &c. which have been since repeatedly con- firmed by observation. Observations of living toads, found in very hard and entire stones, oc- cur in several authors, particularly Baptist Ful- gosa, Doge of Genoa; the famous physicians, Agricola and Horstius, and Lord Verulam. An instance similar to these, of the truth of which we have no reason to doubt, was observed in this country in 1773 ; when a large toad was found in the middle of a piece of coal, having not the least visible crack or fissure. The toad appears to be confined exclusively to the European conti- nent. It inhabits woods, gardens, fields, and

damp shady places, and frequently makes ill way into cellars. In the early part of spring it retires to the waters, where it continues during the breeding season, and deposits its ova or spawn in the form of double necklace-iike chains or strings of beautifully transparent gluten3 and of the length of three or four feet, in each of which are disposed the ova in a continued double series throughout the whole length, having the appear- ance of so many small jet-black globules or beads. These globules are, in reality, no other than the tadpoles, and waiting for the period of their evo- lution, or hatching, which takes place in the space of about fourteen or fifteen days, when they break from the surrounding gluten, swim about in the water, and are nourished by various ani- malcules, gluten, leaves of aquatic plants, &c. When these have arrived at their full growth, the legs are formed, the tail gradually becomes obliterated, and the animals leave the water, and betake themselves to the surface of the ground. This generally happens early in the autumn. The notion of its being a poisonous animal has been opposed by Mr. Pennant, but it is a fact too generally known to admit of any question. Dogs, on seizing a toad, and carrying it for some little time in their mouth, will appear to be af- fected with a very slight swelling of the lips, ac- companied by an increased evacuation of saliva; the mere effect of the slightly acrimonious fluid which the toad, on irritation, exudes from its skin, and which seems at least to be productive of no dangerous symptoms in such animals as happen to taste or swallow it. For a further ac- count of this creature see the articles TOAD, and RANA.

BUFONITA, in natural history, the toad-stone. This has been received not only among the list of native stones by the generality of authors, but even has held a place among the gems, ami is still worn in rings by some people ; though un- doubtedly it is an extraneous fossil. It was anciently believed that it was found in the head of an old toad ; and that this animal voided it at the mouth on being put upon a red cloth. The general color of the bufonitae is a deep dusky brown ; hut it varies greatly in this respect in several specimens, some of which are quite black, others of an extremely pale simple brown, a chestnut color, liver color, black gray, or whitish. The bufonitae are usually found immersed in beds of stone, and there is now no doubt that they have originally been the petrified teeth of the lupus piscis, or wolf-fish, part of the jaw of the fish being sometimes found with the teeth petrified in it. The bufonitae are said to be cordial and astringent: many other fanciful virtues are ascribed to them, which the present practice has rejected.

BUG', ā¢) Ital. bozza, pozza, Arm. pug,

BUG'GY, > Fr. punaixe, from Lat. puteo. A Buo'ciNtss. j stinking insect. In the follow- ing passage wings are erroneously ascribed to it.

Yet let me fiap this bug with gilded wings, This painted child of dirt, which stinks and stings.

Pope.

BUG' , ~) Bug signifies primarily big, and BUG'BEAR, >is applied to any ugly, monstrous BUG'ABO. j obje'ct, that affrights children, both

of small and larger growth. In Gothic it is bugg, from wgˆ, in Saxon oga, terror. In Swedish puke means the devil, and in Icelandic it signifies demon ; so that the general acceptation of the ā¢word bug is fear, terror, fright. Bugbear is a frightful object ; from bug, terror, and be ogre, a frightener ; a walking spectre, imagined to be seen : generally now used for a false terror to frighten babes.

Each trembling leaf and whistling wind they hear, As ghastly bug their hair on end does rear, Yet both do strive their fearfulness to feign.

Faerie Queene. Sir, spare your threats The bug which you would fright me with, I seek.

Shakspeare.

Hast not slept to-night? would he not, naughty man, let it sleep? a bugbear take him. Id.

Who would believe what strange bugbears Mankind creates itself, of fears That spring like fern, that insect weed, Equivocally without seed. Butler's Hudilras.

Such bugbear thoughts, once got into the tender minds of children, sink deep, so as not easily, if ever, to be got out again. Locke.

*To the world, no bugbear is so great, As want of figure, and a small estate. Pope. BUG, in entomology. See CIMEX. For the destruction of the house-bug, or cimex lectuarius, several methods have been tried, and several remedies proposed as perfect. The following recipe is the best with which we are acquainted: * Mix one ounce of arsenic and one ounce of com- mon smelling salts with one gallon of human urine, and diligently wash floors, bedsteads, &c. in it, until they disappear. Early in spring, even in February,*

the larvae of these creatures begin to burst from the eggs ; and it is at this season that attention is chiefly requisite. The bed ought to be stripped of all its furniture ; which should be washed, and even boiled, if linen ; if woollen, it should be hot-pressed. The bedstead should be taken to pieces, dusted, and washed with this mixture in the joints ; for in those parts the fe- males lay their eggs. Corrosive sublimate (hydrargyrus muriatus) and lard, has also been found efficacious, in the proportion of half an ounce of the former to six ounces of the latter. The sublimate should be first rubbed extremely fine in a marble mortar, adding a few drops of common oil, till its particles are minutely divided. The lard should then be added by little and little, till the whole is well mixed ; and, lastly, as much more oil as will make the mixture of the con- sistence of a very thick paint.

BUGA MARBLE, in natural history, a name given by the Spaniards to a species of black mar- ble, called by our artificers the Namur marble, and known among the ancient Romans by the name of marmor Luculleum. It is common in many parts of Europe, and is used by the Spaniards in medicine as well as in building; the powder of it being said to be an excellent styptic applied to fresh wounds.

BUGBANE, in botany. See MENYANTHES. BUGEE, in zoology, a species of Indian mon- key, very rare even in the Indies. It is about the size and color of a beaver, but its tail and claws are wholly of the monkey kind.

BUGELUGEY, in zoology, a large species of lizard, called by Clusius, and some others, la- certus Indicus. It grows to four feet long, and nine inches round ; the tail is very long, and ends in an extremely slender point.

BUGEY, a ci-devant province of France, bounded on the east by Savoy, on the west by Bresse, on the south by Dauphine, and on the north by Gex and Tranche Comte. It was about forty miles long and twenty-five broad. It has many hills and rivers, which abound with tiout and all sorts of game. Belley was the capital. It is now comprehended chiefly in the depart- ments of the Am and Cher.

BUGGASINES, buckrams made of calico.

BUGGE (Thomas Chevalier), a learned Danish astronomer, distinguished himself in a trigono- metrical survey of the island of Zealand, under- taken in the middle of the last century, and in 1761 was sent to Drontheim to observe the transit oi Venus, in conjunction with Maupertius and others who went to Lapland. In 1780 he super- intended the re-erection of the royal observatory at Copenhagen ; and shortly after went to France to assist the French philosophers in their new system of weights and measures. He published in 1800 an account of this journey. His work was translated

into English, and published in one volume 12mo. He also wrote a Treatise on Ma- thematics, of which there is a German translation extant, and died at Copenhagen, January 1815, aged seventy-four.

BUGGENHAGII, in ichthyology, a species of cyprinus, having nineteen rays in the anal fin. The body is blackish above ; compressed on the sides, with large silvery scales ; white flesh. Found in the lakes of Sweden and Germany.

BUGGERS, BULGARII, anciently signified a kind of heretics, otherwise called Paterini, Cathari, &c. The word is formed of the French Bougres, and that from Bougria or Bulgaria, the country where they chiefly appeared. Among other opinions, they held that men ought to be- lieve no Scripture hut the New Testament ; that baptism was not necessary to infants ; that hus- bands who conversed with their wives could not be saved ; and that an oath was absolutely un- lawful. They were strenuously refuted by Fr. Robert, a Dominican, surnamed the Bugger, as having formerly made profession of this heresy. They are mentioned by Matthew Paris, in the reign of Henry III.

BUGGERY, or Sodomy, is a sin against God and nature, first brought into England by the Lombards. As to its punishment, the voice of nature and of reason, and the express law of God (Levit. xx. 13, 14,) determines it to be capital. Our ancient law commanded such miscreants to be burnt to death ; .though Fleta says, they should be buried alive; either of which punishments was indifferently used for the crime among the ancient Goths. But now the general punish- ment of all felonies is the same, viz. hanging ; and this offence, being in the times of popery only subject to ecclesiastical censures, was made felony without benefit of clergy, by stat. 25 Hen VIII. c. 6, revived and confirmed by 5 Eliz. c. 17. The law is, that, if both parties are arrived at the years of discretion, agentes et consentientej

pari pajna plectantur, 'both are liable to the sama punishment.'

BUGIA, a sea-port town in the province of Constantina, kingdom of Algiers, Africa. It is sup- posed to occupy the site of the ancient Saldoa of Strabo, and to have been built from the ruins of hat once known city. The harbour is protected by forts erected on either side of the entrance, and a noble castle occupying the apex of a lofty rock, completely overlooks the city, and com- mands the harbour. This citadel was erected by the Romans.

The place is usually occupied by a strong garrison, to check the Kalybs, a trou- blesome people who inhabit the adjoining country, and who are in the frequent habit of dis- turbing the town-people, upon market days par- ticularly. The Huet el Quibir, or great river, flows through the town, and discharges itself into the sea in the Sarda or harbour. This latter is sheltered by a peninsula, that stretches a con- siderable distance into the sea, a part of which was anciently faced with cut stone. There exists here a brisk trade; the inhabitants are chiefly employed in the manufacture of plough shares, and all sorts of agricultural implements. Oil, wax, and dried figs, are exported to the Levant and elsewhere, in large quantities, and soap and timber are also to be added to the list of natural and artificial productions presented here for sale.

BUGIE, a town of Egypt, situated on the west shore of the Red Sea, almost opposite to Ziden, the port town of Mecca, and about 110 miles west of it.

BUGIN VILL/EA, in botany ,a genus of plants ; class octandria, order monogynia. Gen. char. CAL. none : COE. tubular, permaneut,four-toothed; eight filaments, inserted on the receptacle : GERM. superior, oblong: PERICARP one-seeded. Spe- cies, 1 B. spectabilis, a fine evergreen shrub growing in Brasil.

BUG'GY. Goth, and Dan. bugge; a cradle; a large basket ; a small wheeled carriage.

BU'GLE, n. s. > From bujen, Sax. to bend,

BUCLE'HORN, J Skinner ; from bucula, Lat. a heifer, Junius ; from bugle, the bonasus, Lye. A hunting horn. Chaucer uses it in the sense of a drinking vessel. Gloss. Urry derives it from bucula cornu ; Gloss., to Anc. Scott. Po, explains bowgle to mean a buffalo. I have been told that now, in some parts of the north, a bull is called a boogie.

BU'GLE, n. s. A shining bead of black glass, longer than the common bead, and now chiefly used for trimmings.

BU'GLE, n. s. In botany, from bugula, Lat. A plant. See-AjuGA.

BU'CT-E, n. s. A sort of wild ox.

BU'GLOSS, n. s. in botany, from buglossum, Lat. The herb ox-tongue. See ANCHUSA.

BUGLOSS, in botany.

BUGLOSS, SMALL WILD. SeeAspERCGO.

BUGLOSS, VIPER'S. See ECHIUM.

BUGLOSSUS, in ichthyology, a name used by many authors for the soal fish.

BUHL, a small fortress of Suabia, on the lines of Stolhoffen, seventeen miles north-east of Stras- burg.

UILD', v. \ Goth, bua, bulada ; Swed. UILD'ER, n. (bua, bylja, to construct an edi UILD'ING, Ā£fice; Sax. bolt, an edifice, UILT'. J byscan ; Ang.-Sax. to build. To

BUILD', v. ˆ Goth, bua, bulada ; Swed. BUILD' BUILD'ING, BUILT.*

raise from the ground ; to make a fabric or an edi- fice ; to raise in any labored form ; to raise any thing on a support or foundation ; to play tbe architect (Met.) ; to depend ; to rest on.

Thou shalt not build an house unto my name.

i'hnnicles.

But they ran doublen hir rentall, To bigge hem castles. Chaucer's Plownman's Tale. Thomas ! nought of your treson I desire As for myself ; but that all our covent To pray for you is, ay, so diligent ; And for to bilden Cristes owen chirche. Thomas, if ye wal lernen for to wirche, ā Of bilding up of chirches, may ye finde If it be good in Thomas lif of Inde.

Id. Canterbury Tola.

Deepe in the bottome of the sea, her boure Is built of hollow billowes heaped hye, Like to thick clouds that threat a stormy showre, And vauted all within like to the skye. In which the gods doe dwell eternally. Spenser.

Thou findest fault where nys to be found, And buildest strong worke upon a weake ground. Id When usurers tell their gold in the field,*

And whores and bawds do churches build.

Shakspeare.

By a man's authority, we here understand the force which his word hath for the assurance of another's, mind, that buildeth upon it. . Hooker.

But fore-accounting oft makes builder miss ; They found, he felt, they had no lease of bliss.*

Sidney,

Some build rather upon the abusing of others, and- putting tricks upon them, than upon soundness of their own proceedings. Bacon.

I would endeavour to destroy those curious, but groundless structures, that men have built up of opinions alone. Boyle.

Forts, lines, and sconces, all the bay along, They build and act all that can make them strong.

Marudl.

As is the built, so different is the fight ; Their mountain shot is on our sails designed ; Deep in their hulls our deadly bullets light, And through the yielding planks a passage find.

Dryden.

Even those who had not tasted of your favours, yet built so much on the fame of your beneficence, that they bemoaned the loss of their expectations. Id. When the head-dress was built up in a couple of cones and spires, which stood so excessively high on the side of the head, that a woman, who was but a. pigmy without her head-dress, appeared like a Colos- sus upon putting it on. Spectator.

Warburton took it in his noddle This building was designed a model. Or of a pigeon-house or oven, To bake one loaf or keep one dove in. Swift. There is hardly any country which has so little ship- ping as Ireland ; the reason must be the scarcity of timber proper for this built. Temple.

Her wings with lengthened honour let her spread, And, by her greatness, shew her builder's fame.

Prior,

To build, to plant, whatever you intend, To rear the column, or the arch to bend. Pope.

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Turn to the mole which Hadrian reared on liis;h, Imperial mimick of old Egypt's piles, t.'olossal copyist of deformity, Whose travelled phantasy, from the far Nile's Enormous model, doomed the artist's toils To build for giants. Byron's Childe Harold.

BUILDING is also used for the art of construct- ing and raising an edifice. See ARCHITECTURE. The principal statutes relating to building are, 19 Car. II. c. 3; 22 Car. II. c. 11; 5 Eliz. c.4; 35 Eliz. c. 6; 6 Ann. c. 31 ; 7 Ann. c. 17; 33 Geo. II. c. 30 ; and 6 Geo. III. c. 37. Those for regulating all buildings in the cities of Lon- don and Westminster, aud other parishes and places in the weekly bills of mortality, the pa- rishes of St. Mary-le-bone, and Paddington, St. Pancras, and St. Luke at Chelsea, for pre- venting mischiefs by fire, are reduced into one act by statute 44 Geo. III. c. 78. The regulations of this law are very minute and technical.

BUILDING OF SHIPS. See SHIP-BUILDING. i BUILTH. See BEALT.

BUIS, a ci-devant territory of France in Dau- phine". It is mountainous, but tolerably fertile. BUIS, a town of France, HI the department of the Drome, and ci-devant teiritory of Buis, eight miles south-east of Nions-

BUKHARIA, BOKHARIA, or BUCHARIAV (Great and Little) is the name of two considerable divisions of Independent Tartary, originally in- troduced into our maps from Russia. As it is generally applied, it describes rather a race or races of eastern merchants, who have called themselves Bogars, i. e. Bukharis, in the neigh- bourhood, and stated that they came from BALKH (which see), Casbghar, Yarkind, &c. than any specific countries or states. For no one country, but what we shall have hereafter to de- scribe as Bukhara or Bucharia Proper (and which is distinct from both of those districts which modern geographers have called Great and Little Bukharia) ever bore this name. Europeans who have received these statements of the traders, respecting their country, have transferred to the regions in question the name of Bukharia, as inhabited by the Bukharis.

Thus understood, Great Bukharia is said to extend between the 35Ā° and 44Ā° of north lat., and from the 59Ā° to the 73Ā° of east long, being bounded on the north by the river Sirr, Sihon, or Saihun, and on the south by the Amu or Jaihun, known also as the Jaxartes and as the Oxus of the ancients, and a chain of mountains on the frontiers of Persia and Hindostan. On the east is Little Bukharia. Great Bukharia com- prehends the three states of Balkh, Samarcand, and Bukharia Proper ; and includes the Sog- diana and Bactria of the ancients. There is an agreable variety in its geographical features : the climate is said to be temperate and healthy ; and the soil the most productive of any part of Nor- thern Asia, especially in the plains near the Sirr and the Amu. Rice and corn are cultivated here ; but the country is principally laid out in pasturage, which rears so large a breed of sheep and horses, that of the latter 60,000, and of the former 10,000, have been sent annually into Russia. The mountains are rich in mineral pro- ductions, particularly in the state of BALKH, to VOL IV.

which we refer ; in Fergana, a northern province, gold, quicksilver, iron, copper, and vitriol, are found . The inhabitants, however, generally content themselves with gathering the grains of gold and precious stones, as they are washed down by the torrents, when the snow begins to melt; and appear to have no inclination to any further improvement of their advantages. So irregularly has this region been described, under its present name, that sometimes we find a country lying northward, and called Maweralnahr (or the land beyond the river) and corresponding with the ancient Transoxana, though extending far be- yond the Sirr, included in it ; as Balkh, on the other hand, certainly lies to the south of the Amu or Oxus. Both the province and town of Balkh, we have described. Samarcand, once considered the capital of Great Bukharia, stands in a fertile valley, on the banks of the river Sogd, which afterwards joins the Oxus or Amu. Here Tamerlane resided, and made it one of the most renowned cities tff the east. It was famed for its learning, and contained one of the most celebrated of the Mahommedan universities, while it surpassed most other places of the east, at the middle of the seventh century, in the manufacture of silk and paper ; but its days of splendor are gone by. Some of the houses are built of stone, others of an inferior brick ; but the whole place is environed with ramparts, which are said, in the fifteenth century, to have included a population of 150,000 persons. See SAMARCAND. It still conducts a brisk trade in the fruits of the district, and under Shah Murad Bay, who took it from the Tartar tribe of Yuz, has recovered some of its former greatness. The inhabitants may be said to consist of three distinct tribes, the native race of Buchars, the Moguls, and the VJsbect Tartars. The first, or the liuchars, who inhabit the towns and villages, are quiet and inoffensive in their manners : they are devoted to trade and commerce ; and are said never to carry a weapon ; both the other tribes are of violent and warlike character, delighting in martial exercises ; and constantly engaged in quarrels and hostilities with the Persians or Hindoos. The Usbeck Tartars are the rulers of the country, which is governed by khans, to whom the inhabitants pay a tribute, gathered yearly. The original race carry on most extensive commercial intercourse with Russia, China, and Tibet ; some have con- jectured their origin to be Jewish, and connected with the obscure history of the lost ten tribes, others that they are of Persian or Scythian origin. Be this as it may, they are diffused throughout all the east, and have a great general resemblance ; are of fair complexion, with black, expressive eyes, a Roman nose, fine general features, and a profusion of black hair and beard. Their women are remarkably beautiful. The Us- becks are for the most part short and stout ; their complexion is clear and ruddy, the hair black, and the beard thin. They have a broad fore- head, high cheek bones, and small eyes. The men dress in a cotton shirt and trowsers, over which is a coat or tunic of silk or woollen cloth, bound by a girdle, and a gown of felt or woollen. The national head dress

is a large white turban overakalpacor pointed silken cap. Boots are worn,

by all classes and by botn males and females, and bandages round the leg, instead of stockings. The general dress of the latter differs little from that of the men, except that it is longer. Gold and silver ornaments are also used in profusion by both sexes. The Usbecks are said to prefer horse-flesh to beef, and to fatten a number of horses annually for food ; but, as this is expensive, they are forced to content themselves with beef on common occasions. These people pride themselves on being the bravest, most robust, and most hardy of the Tartar race. They make ex- cellent light cavalry, and advance with shouts, drawn up in three lines; till the third has given way, they never consider themselves defeated. The rapidity of their movements is only equalled by their patience of thirst, hunger, and fatigue. Their laws of war are those of unqualified bar- barians : infidel captives are sold as slaves ; and, this treatment being unlawful in regard to enemies of their own faith, they suffer a more cruel fate, and are butchered without mercy. Yet in private intercourse they are said to be open, hospitable* and sincere ; quarrels are rare, and a murder is scarcely known among them. Mr. Elphinstone considers Bukharia as that country of Asia through which a traveller may pass most securely of any, and he mentions some instances of robbers who when taken received the most ex- emplary punishment. When Persia was overrun by the Mahomedans, in the seventh century, it attracted the notice of historians, and we find it conquered and reconquered several times in the course of the ninth, tenth, and eleventh centuries. A regular succession of khans may be traced until 1494, when sultan Baher, a descendant of Tamerlane, was expelled from Bukharia, and, proceeding to Hindostan, founded the great empire of the Moguls. About the beginning of the sixteenth century, the descendants of Timur were finally driven from this territory by the Usbecks, who, crossing the Jaxartes, carried every thing before them, till stopt by the central barrier of mountains. They thus established themselves here in small sovereignties, and have ever since remained the rulers of Bukharia, Balkh, Fergannah, &c. The other principal places, be- sides those we have mentioned, are, Badakshan, Osrushna, Kotlan, Termed, Anderab, and Gaur. See Peuchet Dictionnaire, &c. Recueii de Voyages au Nord, torn, x.- p. 127; Gibbon's Roman Empire, vols. iv. xi. xii; Elphinstone's Cabul, Ā§c.*

BUKHARIA, LITTLE, was formerly known as the kingdom of Cashgar, and is supposed to include part of ancient Scythia. It is not in- ferior in extent to the former, reaching from 73Ā° to 100Ā° of E. long., and from 36Ā° to 44Ā° N. lat., but is so in the nature of its soil, climate, popu- lation, and

the number of its towns. The Great Altaic chain forms its boundary on the north, China on the east, and a chain of mountains, the frontier of Tibet, on the south. It is about 1000 miles in length, and nearly 500 in its greatest breadth ; almost surrounded and occupied with lofty mountains and sandy deserts. In some of the vali-fs, however, cotton, flax, hemp, vines, anu tiit oriental fiuits, are abundant. The chief t wit is with iJ/uiia, I-ersia,and the northern part*

of Asia. This was that part of ancient Scythia which extended beyond the Imaus. Its rivers are, Yarkand, which is represented as issuing from Lochnor Lake, and passing through im mense daserts, in a line of not less than 500 English miles, supplies the Koten, Orankash, Ktc.; the Chaidu, which proceeds from the same lake ; and the Karia, which has its origin in a lake in the desert of Sultus. The manners, dress, and appearance, of the inhabitants are nearly the same as in Great Bukharia ; but the women wear a greater profusion of ornaments, and dye their nails with henna; and the whole are a darker race. The principal towns of Little Bukharia are, Cashgar, Yarkand, Koten, Karia, Chialish, and Turfan. The Calmucks, on their conquest of Great Bukharia, had obtained quiet possession of this country also, until the begin- ning of the eighteenth century, when the disco- very of a gold mine, in these mountains, brought on them an army of Mongales and Chinese, who completely defeated the Calmuck forces and pur- sued them into the deserts. The emperor of China now sent a powerful reinforcement hither, well furnished with artillery, under the command of his son, and attended by a Jesuit of Pekin. This prince boldly passed the deserts, by the route which the Calmucks had taken, and entered the extensive plains of Turfan and Hami ; but, being unwilling to risk his army in an engage- ment, contented himself with erecting a chain of forts here, under the protection of which forts, the Chinese kept possession of these provinces, until the Calmucks, unable to drive them out without the aid of cannon, had recourse to the assistance of Russia. In 1720 they offered to pay an annual tribute to that power, upon con- dition that it would supply an army of 10,000 regular troops, well equipped with cannon, to enable them to meet the Mongales and Chinese : but Peter the Great, who was at that time at war with Sweden, did not listen to their proposals ; consequently the Chinese remained masters ot these provinces, which Kien Long in 1759 brought into final subjection, and they remain tributary to the Chinese empire.

BUKHARIA PROPER, or the state of Bukhara, is the most westerly of the three states which form the province of Great Bukharia, and is bounded on the north by a chain of low barren hills, called Su-sez-kara, on the east by Samar- cand, on the south by the Amu or Oxus, and on the west by Khwarizm. It was in a very flou- rishing state in the fourteenth and fifteenth cen- turies, well known for the excellence of the climate and

productions, and for the philosophers, poets, and historians, who here enjoyed the pa- tronage of the descendants of Timur. Its pre- sent condition is just the reverse of this ; at least politically considered. Hardly any part of Asia is less known to Europeans, or has undergone a more complete change.

The whole productive territory may perhaps, according to the recent accounts of Dr Evers- mannj a German traveller, be estimated at 50,000 square miles. It commences at a small distance north of Samarcand, where low hills, the out- works of the Imaus, stretch from north to south, and separate the fertile oaˆts of the couutry from

the deserts. The country is watered by the it is distant about fifty miles, and from Samar- bihron on the north, and by the Oxus on the cand about 100 miles. It occupies a rising south, with a lake called Taran in the centre, ground, and, in the year 1741, was surrounded The water, however, of each is said to be by an earthen wall and a dry ditch. It is situ- brackish ; and a considerable portion of the ated in an agreeable climate, but is infested by country has a flat and sandy surface. There are serpents and scorpions, the sting of which oc- casionally proves fatal. The

several chains of mountains, from which torrents descend to join the larger rivers during the melting of the snows ; at the bottom of which gold is occasionally found.

The inhabitants of Bukharia consist of two classes: the Tanjiks, or citizens; and the Us- becks, a tribe of Tartars. The descendants of the latter race are much darker than the Tanjiks, which has been accounted for by a reference to their wandering life. In Bukharia all persons pursue some occupations ; some employing themselves in mechanical trades, others in foreign commerce. The tribe of the Usbecks, though usually esteemed the most civilisiul of the Tartars, are more fond of warfare and predatory habits than agriculture or the arts. We must not how- ever omit to notice their celebrated manufactory for steel at Curdiok. Here cimeters and poni- ards were produced equal to the famous blades of Damascus. Some of the steel imported into Britain has been manufactured into articles of delicate cutlery with the greatest success. They have also the secret of dyeing morocco leather of a vivid red color, which is said to have been preserved as the peculiar property of particular tribes. The inhabitants of Bukharia are said to be of a literary character, and our own presses in the east furnish some specimens of their poetical compositions, but it is no less trup

that the art of writing is known but to few, and tiieir records are purely of an oral character.

The Tartar Usbecks established a powerful monarchy here, under Shah Bakt, whose suc- cessor was defeated by Ismael in 1529. His posterity continued for 200 years. In 1747 Eaheem Bey usurped the government of Buk- haria. At the close of the eighteenth century, a chief, named Ameer Daniel, possessed the post of authority. At his death he divided his immense wealth among his offspring, and nominated his son, Beˆge Jan, to the supreme dignity. This man, who in early life was excessively dissipated, converted himself all at once into an ascetic ; and from the air of sanctity which he assumed, and the austerities which he practised, attracted the multitude to him from all quarters, whose devotion to him supplied the place of a legal title to the crown. Affecting great mode- ration, he divested his government of all its splendor ; and himself presided over the delibe- rations of justice. Though commanding an army of 60,000 soldiers, he rode on a poney, fed on the meanest provisions, and was clad like one of the poorest classes. Thur, furnished he invaded Khorassan, and conquered all the countries between the Oxus and Jaxartes. After his death, occurring about the beginning of the nineteenth century, his eldest son, Hyder Furrals, ascended the throne of Bukharia, and assumed the name and dignity of sovereign over the empire.

BUKHARIA, BOKHARA, or BOGAR, a city of Asia, the capital of Great Bukharia, situated on a river, flowing into the Oxus, from which latter

. . houses are low,

and for the most part built of mud; but the mosques and caravanseras are built of stone. There are colleges here which are capable of containing from 60 to 600 students each ; and in that of Kohul Kaush in particular, a fine edifice for the education of Mahomedan priests, there are apart- ments for the accommodation of 300 students. Bukharia has always been celebrated for the study of Mahomedan theology and law; and the inhabitants have been reckoned superior to those of the neighbouring districts in civilisation. They are engaged in manufactures of cotton yarn, calicoes, and soap, which are ex- ported to Persia, while from that country they receive velvet, silk sashes, shalloons, indigo, cochineal, and coral. Rhubarb, musk, and castor, are obtained from Taschkand, and precious stones and lapis lazuli from Badakshan. The trade of Bukharia has latterly declined. A portion of European manufactures is consumed, which gave rise to a plan, so long ago as 1557, and repeated in 1741, for supplying the city with English commodities. On each occasion Englfsh merchants travelled to this spot, and were hospi- tably received ; but it was thought that the price to be expected for their goods was not sufficient to warrant the hazard of

bringing them. Mer- chants of all kinds now meet with encourage- ment, and all religions are tolerated. The popu- lation is supposed to exceed 100,000.

BUL, in the ancient Hebrew chronology, the eighteenth month of the ecclesiastical, and second of the civil year : since called Marshevan. It an- swers to our October, and has twenty-nine days. BUL, in ichthyology, the flounder. BULAC, a town of Egypt, situated on the east shore of the Nile, about two miles west of Grand-Cairo, of which it is the port town. It is a place of trade, as all the vessels going up and down the Nile make some stay in it. The baths here are excellent.

BULˆUS (Ciesar). See BOULAY BULAFO, a musical instrument, used by the negroes of Guinea, consisting of several pipe? of wood tied together with thongs of leather, so as to form a small interstice between each pipe. BULAMA, BULAM, or BULLAM, is the best known of the Bissagos islands.on the western coast of Africa, between the Gambia and Sierra Leone at the mouth of the Rio Grande. It is directly opposite the entrance of that river ; about nine leagues long east and west, and five broad. From the shore it rises gradually to some hills in the middle, which are covered with wood, and from which descend numerous streams. Horses, horned cattle, buffaloes, and goats, are found wild on it, as well as elephants, hyenas, deer, and wild dogs. In the vicinity of many navigable rivers, which extend far into the continent, and would greatly facilitate a trade with the internal parts of Africa; and possessing a deep and luxu- riant soil, adapted to every species of cultiva.

tion, it seems to offer a most desirable settlement to any European nation. Cotton, indigo, and rice, are its spontaneous productions ; and pine- apples, limes, oranges, grapes, plums, cassada, guava, India wheat, melons, pumpkins, tama- rinds, bananas, and many delicious fruits, grow here, it is said, in great abundance. Sugar and tobacco, and indeed all the other productions of our West India islands, may also be cultivated in equal perfection ; and, considering the rich- ness of the soil, to much greater advantage. When the English attempted an establish- ment on this island in 1792, the inhabitants of the neighbouring islands cultivated rice and millet heie. West of Bulam is Gallina island, so named from abounding in Guinea fowls, inhabited, fertile, and well cultivated. Areas, or Bow Island, north of Bulam, has no fresh water. Mantere Island, south of Bulam, forms the

south point of the entrance to the Rio Grande, and is only separated from the main land by a narrow channel or creek.

The Bulama, or Sierra Leone Association, in 1792, was composed of gentlemen who, anxious for the final termination of the slave trade, and the civilisation of this quarter of Africa, deter- mined to attempt the formation of a settlement on this island, as a means of promoting both objects. The plan failed, but the efforts made brought us better acquainted with the Archipelago ; and from the narrative of captain Beaver, who finally commanded the expedition, we shall transcribe a few details : ā ā¢

The expedition, entrusted to the command of captain Dalrymple, and a council of twelve gen- tlemen, consisted of three vessels, the Calypso, Ilankey, arid Beggar's Benison, with the colonists on board, consisting of about 280 souls, men, wo- men, and children. It sailed from the Downs 6th of April, 1792. On the 25th of May, the Calypso, parting from her consorts, anchored off Bulama. Unaccustomed to the confinement of a sea-voyage, the colonists were here not only eager to get on shore ; but instead of calmly endea- vouring to conciliate the Bijugas, or natives of the island, they landed without order or precaution; some erected huts, others wandered through the woods in search of game and fruit, and returned to the ship or not as they thought proper at night. During the first night, their tents, and whatever they had left on shore, were carried off. At mid-day on Sunday the 3d of June,while some of the colonists were asleep, and others hunting and fishing, they were attacked by the former inhabitants, who fired a volley into the hut which contained the arms of the new colony. Those within, being roused from their sleep, rushed out and were immediately shot. The rest, unpre- pared and unarmed, uj > on hearing the firing, hid themselves among the rocks, or attempted to gain the beach ; by which the greater number escaped, while others were intercepted and taken prisoners. The English in this affair had five men and one woman killed, four men wounded, and four wo- men and three children taken prisoners ; and the savages retired with a rich booty of sixty stand of arms, and a quantity of ammunition, besides kitchen utensils, wearing apparel, 8cc. After landing a party of armed men (under a discharge

of cannon from the ship) to bring off their water- casks, the Calypso, early the following morning got under weigh for Bissao. where she was joined by the Hankey and Beggar's Benison. Irritation and reproaches now broke out between the co- lonists and the members of the council, and each attributed their misfortunes to the other. These complaints, and the fever which appeared in the Calypso, and had been communicated to the Hankey, reduced the majority to despondency ; but ashamed of relinquishing their design without another attempt, they returned to Bulama, and having redeemed their captives, purchased tlie island from the kings of Carnabol

for the value of 473 bars in goods, about Ā£79 sterling. No sooner, however, was this transaction concluded, than, instead of availing themselves of the right which they had acquired, the council determined to abandon the enterprise as at present impracti- cable, and communicated their determination to the colonists in the following resolution : ‘ That seeing the rainy season has already commenced, and it appearing, from every information we can collect, that we cannot land because of tht rains and fogs at least for four months, and that with every precaution there will probably be a consi- derable mortality among the settlers during that time, and considering withal, that a great pro- portion of the adventurers in each ship are solici- tous to return to Europe, it is the opinion of the council, that the two ships and the sloop should be removed to Sierra Leone to water, and there the expediency of proceeding to England, or of returning hither after the rains, shall be taken into consideration.’ Against this captain Beaver entered his protest ; and declared to the council that he was determined to remain on the island, with his servant, though every one else should leave it; and in this determination he was joined by one of the council, and between eighty and ninety of the colonists. It was then agreed that the Ilankey and Beggar’s Benison should remain at Bulama, and that the Calypso should proceed to Sierra Leone, with those who wished to re- turn to England. The settlers were thus reduced to a third of their number, and when mustered by captain Beaver, who was unanimously chosen their president, were found to consist of forty- eight men, thirteen women, and twenty-five children. Having adopted proper regulations for maintaining subordination, sobriety and dis- cipline, in the colony, and established a friendly communication between Bulama and the Portu- guese settlement on the island of Bissao, the first care of the colonists was to protect them- selves from the heat of the sun, and the violence of the rains, by covering the ship with a wooden roof. They then set about clearing a piece of ground for a garden, and built a block-house, which was to serve as a habitation, magazine, and citadel. Both tropical and European planto and seeds succeeded beyond their expectations ; and all vegetable productions quickly arrived at maturity. Several free negroes had been hired; who, being well treated, and allowed to leave the island, whenever dissatisfied, worked well. During the residence of the English at Bulama, 196 of these Africans had been employed on the island. Many of the surrounding tribes also

visited the colony, with a view to trade. The colonists, in all their dealings with the negroes, observing the strictest integrity ; and rigorously adhering to their determination of never being concerned in the purchase of slaves ; soon gained the good-will and confidence of the neighbour- hood. Sickness and disaffection, however, at length spread among the settlers, and their numbers were daily diminished by desertion or disease. To such a state

were they sometimes reduced, that there was scarcely an European fit for work, or to give directions; and out of the eighty-six which staid, after the sailing of the Calypso, within nine months ten only were left. These, when at last reduced to nine, became so dispirited, that the whole affairs and business of the colony rested with captain Beaver ; and whatever the energy and perseverance of one man could perform, was now done. He encouraged his countrymen to exertion by his exam- ple, supplied their wants, and soothed their dis- tresses. Fear, however, and despondency had completely prostrated their minds. They saw only certain death before them if they remained ; and after strong solicitations to return to Eng- land, and frequent threatenings to abandon him, captain B. was compelled at last to accede to their request, and quitted the island, 29th No- vember, 1793. Thus terminated this laudable, but ill-concerted scheme; and others of a simi- lar character, we fear, must yield to the torrid climate of the neighbourhood.

BULAPATHUM, in botany, the dock. See

BULARCHUS, a Greek painter, who first introduced (among the Greeks at least) different colors in the same picture. He flourished about A.A.C. 770.

BULATMAI, in ichthyology, a species of cyprinus, the anal fin of which contains eight rays ; the second dorsal fin is large and not ser- rated ; cirri four. It is a rare fish, of the size of the carp. Color steel blue, gold above, and silvery, with a golden hue beneath : the scales are of the middle size, and imbricated ; flesh white and good. It is found in the Caspian Sea.

BULATWˆELA, in botany, a name by which some authors have called the betel.

BULB', n. } Lat. bulbus, bulbaceus.

BULBA'CEOUS, adj. >A round body, or root.

BUL'BOUS, adj. } Bulbous, having round, or roundish knobs.

There are of roots, bulbous roots, fibrous roots, and hirsute roots. And I take it, in the bulbous, the sap hastcneth most to the air and sun. Bacon.

Set up your traps for vermin, especially amongst your bulbous roots. Evelyn's Kalendar.

Take up your early autumnal tulips and bulbs, if you \viil remove them. Id.

If we consider the bulb or ball of the eye, the ex- teriour membrane, or coat thereof, is made thick, tough, or strong, that it is a very hard matter to

make a rupture in it. -Ray.

BULP, in the anatomy of plants, is defined by Linnteus to be a species of hybernaculum, pro- duced upon the descending caudex or root; con- sisting of stipulae, petioli, the rudiments of the former leaves, and scales or bark. To elucidate ll.is definition it is proper to remark, that every

bud contains, in embryo, a plant in every respect similar to the parent plant upon which it is seated. Plants, therefore, are perpetuated in the buds, as well as in the seeds ; and the species may be renewed with equal efficacy in either way. The tender rudiments of the future vege- table, of which the bud is composed, are enclosed, and during winter defended from cold and ex- ternal injuries, by a hard rind, which generally consists of a number of scales placed over each other like tiles, and fastened together by means of a tenacious, resinous, and frequently odori- ferous, substance. Thus defended, the buds remain upon different parts of the mother plant till spring ; and are therefore, with propriety, denominated by Linnaeus the hybernaculum, or winter quarters, of the future vegetable. Buds are situated either upon the stem and branches, or upon the roots : the former are styled gemmae, or buds properly so called ; but, as they subsist several years by their roots, may be furnished with the other species

put forth ; which, descending themselves directly into the ground, serve like so many ropes for pulling the trunk after them. Hence the tuberous roots of iris are sometimes observed to re-ascend a little upon the rotting or fading away of the string-roots which hang at them. In bulbous roots where the stalk and former leaves of the plant are sunk below, and formed into what is called the bulb, or wintering of the future vege- table, the radicles or small fibres that hang from the bulb, are to be consio'ered as the root ; that is, the part which furnishes nourishment to the plant : the several rinds and shells, of which the bulb chiefly consists, successively perish, and shrink up into so many dry skins, betwixt which, and in their centre, are formed other leaves and shells, and thus the bulb is perpetuated. What has been said of the descent of roots by the sinking of the stalk, is further confirmed by the appearance of. certain roots ; as of valerian, plantago major and devil's bit, in which the lower part appears bitten or chopped off. In these the lower part rotting off as the upper descends, the living remainder

becomes stumped, or seems bitten. All bulbous roots, says Dr. Grew, in his anatomy of plants, may be considered as hermaphrodite roots, or root and trunk both together : for the radicles only are absolute roots ; the bulb actually con- taining those parts which springing up make the body or leaves of the plant ; so that it may be regarded as a large bud under ground. Bulbous roots are said to be solid, when composed of one uniform lump of mattei ; tunicated, when formed of multitudes of coats surrounding one another; squamose, when composed of, or co- vered with, lesser flakes ; duplicate, when there are only two to each plant; and aggregate, when there is a congeries of such roots to each plant.

BULBINE, a synonyme of the anthericum.

BULBOCASTANUM. See BUNIUM.

BULBOCODIUM, mountain saffron, a genus of the monogynia order, and hexandria class of plants ; natural order ninth ; spathacese : COR. funnel-shaped, and hexapetalous, with the heels narrow, supporting the stamina. There is but one species, which grows naturally. It has a small bulbous root, which sends forth a few long narrow leaves, something like those of saf- fron, but narrower.

BULBOSUS, from bulba, a bulb, bulbous ; applied in anatomy to soft parts which are natur- ally enlarged, as the bulbous part of the urethra.

BULBUS VOMJTORIUS, in the materia me- dica, the name used for the root of the muscari.

BULCARD, an English name for the galcet- ta, or alauda non cristata, of Rondeletius; a small sea-fish caught among the rocks on the Cornish and other shores.

BULEF, in botany, a name for the willow.

BULEPHORUS, an officer in the court of the eastern emperors, called also summse rei rationalis.

BULEUTJE, in Grecian antiquity, were ma- gistrates answering to the decuriones among the Romans. See DECURIO.

BULLFINCH, in ornithology. See LOXIA.

BULGA, in old records, a budget ; a mail.

BULGAR, a mountain of Natolia, on the coast of C'ararnania.

BULGARIA, a small province of Turkey, in Europe, bounded on the north by Walachia, on the east by the Black Sea, on the south by Ro- mania or Rum-ili, and on the west by Servia. It is very narrow, but 325 miles long on the side of the Danube, from Servia till it falls into the Black Sea. It is divided into four sanjaks ; Byden, or Vidin, Sophia, Nicopolis, and Silis- tria. The chief towns are of the same names. The Bulgarians anciently inhabited the plains of Sarmatia that extended along the banks of the Volga. Thence they migrated, about the mid- dle of the seventh century, in quest of new set- tlements. A large body of them passed the Da- nube, and took possession of the country ad- jacent to the western coast of the Euxine Sea. Several attempts were made by the Romans to dispossess and extirpate them ; but they defended themselves with equal resolution and success. Constantine III. being defeated and intimidated, concluded an ignominious peace with them, A.D. 678, and purchased their friendship by the payment of an annual tribute. Justinian II. re- fused to comply with these dishonorable terms, and invaded their territories, A. D. 687 ; but he was defeated, and constrained to renew the treaty. War was carried on, almost without in- terruption, between them and the eastern em- perors, for several centuries. After a long and doubtful struggle, the Romans prevailed; and the emperor Basil III. reduced Bulgaria to the form of a province, A.D. 1019. From this time the Bulgarians remained in subjection, and were governed by Roman dukes, until the reign of Isaac Angelus, when they revolted, A.D. 1186. Some time after, Stephen IV. king of Hungary, having defeated the Bulgarians, obliged them to acknowledge him as their sovereign. His suc- cessors were styled kings of Hungary and Bul- garia; and this title was transmitted, with the kingdom of Hungary, to the house of Austria. By the aid of the eastern emperors they threw off the Hungarian yoke ; and, in return, they assisted their ally in an attempt to recover Adrianople, A.D. 1369. Provoked by this combination, Amurath invaded their country ; and Bajazet, his successor, completed the conquest of it, A.D. 1396. Bulgaria still remains a province of the Ottoman empire. The inhabitants are Christians, but so extremely ignorant, that they seem to know nothing of Christianity, but bap tism and fasting.

BULGARIAN LANGUAGE, the same with the SCLAVONIC, which see.

BULGE', v. Goth, bulga; Swed. bulgja; Sax. bihs, a bladder. It was originally written bilge ; bilge was the lower part of the ship, where it swelled out. To bulge is to jut out, to swell out, to burst from inward pressure, as a bladder ; applied to the cause of a ships foundering at sea, from being over-filled with water; to leak from outward fracture.

Thrice round the ship was tost,

Then bulged at once, and in the deep was lost.

Dry den ,

The side, or part of the side of a wall, or any tim- ber that bulges from its bottom or foundation, is said to batter, or hang over the foundation.

Moxon's Mechanical Exercises.

BUL

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BU'LIMY, n. s. BaXi/iia, from /3Ā«c an ox, and Xipoc hunger. An enormous appetite, at- tended with fainting and coldness of the extremi- ties.

BULIMY is also called fames canina, canine appetite. See MEDICINE, Index.

BULITHOS, or BULITHUS, a stone found m the gall-bladder, kidneys, or urinary bladder of an ox. See BEZOAR.

BULK', n. -\ Goth, bulke; Swed. bolk;

BULK'HEAD, n. fBelg. bulke, buike ; Span.

BULK'INESS, n. Ā£ buque, from Goth. hot. Large, .

BUL'KY, adj. J massive ; magnitude, quan-

James II. preached very strenuously against the errors of popery. He wrote, 1. A Defence of the Nicene Faith. 2. Apostolical Harmony, 3. Primitive Apostolical Tradition ; and other works. He died in 1709.

BULL (John), a celebrated musician and com- poser, was born in Somersetshire about A.D. 1563, and was of the Somerset family. He was educated under Blitheman. In 1586 he was admitted at Oxford bachelor of music, having practised in that faculty fourteen years ; and in 1592 was created doctor in the university of Cambridge. In 1591 he was appointed organist

tity ; the gross, the majority ; the main fabric ; of of the queen's chapel. Dr. Bull was the first

Gresham professor of music, and was recom- mended to that station by queen Elizabeth. But however skilful he was in his profession, he was not

able to read his lectures in Latin ; and there- fore, by a special provision, made A.D. 1597, his lectures were permitted to be in English. In 1601 he went abroad for the recovery of his health. Dr. Ward, in his lives of the Gresham professors, states that, upon the death of Eliza- beth, he became chief organist to king James ; and in 1613 quitted England to reside in the Netherlands, where he was admitted into the service of the archduke. Wood says, that Dr. Bull died at Hamburg; others say at Lubeck. The only works of Bull in print, are lessons in the Parthenia, or the Maidenhead of the first Music that ever was printed for the Virginals. An anthem of his is to be found in Bernard's Collection of Church Music. Dr. Ward has given a long list of compositions of Dr. Bull in M S. in the collection of the late Dr. Pepusch, by which it appears that he was equally excellent in vocal and instrumental harmony. He also possessed great power of execution on the harp- sichord. His lessons, in the estimation of Dr.

great size. Bulkhead is a partition made across a ship with boards, whereby one part is divided from another.

The sweet and quiet sleep that wearied limbs op- press, Beguile the night in diet thin, and feasts of none

excess :

But waker lie the rich ; whose lively heat with rest Their charged bulks with change of meats cannot so soon digest. Earl of Surrey.

He raised a sigh so piteous and profound, That it did seem to shatter all his bulk, And end his being. Shakspeare.

Here stand behind this bulk. Straight will he

come :

Wear thy good rapier bare, and put it home. Id.

The Spaniards and Portuguese have ships of great

bulk ; but fitter for the merchant than the man of war,

for burden than for battle. Raleigh.

There our sick ships, unrigged, in summer lay, Like moulting fowl a weak and easy prey ; For whose strong bulk earth scarce could timber find, The ocean water, or the heavens wind. Marvell.

But crowded on with so much haste, Until they had blocked the passage

fast, And barricadoed it with haunches Of outward men, and bulks and paunches.

Butler't Hudibras.

Pepusch, were superior, not only for harmony and contrivance, but for air and modulation, to Things, or objects, cannot enter into the mind as those of Couperin, Scarlatti, and other modern they subsist in themselves, and by their own natural composers.

ass into the apprehension ; but they are taken m fi ˆ CQ ition> generally notes the

'

Dryden. syllable, without much reference to its original Wheat, or any other grain, cannot serve instead of signification.

And, Falstaff, you carried your guts away as nimbly and roared for mercy, and still ran and roared, as ever I heard a bull-calf. Shakspeare.

There is in Northumberland a trout, called a bull- trout, of a much greater length and bigness than any in these southern parts. Walton.

These fulminations from the Vatican were turned into ridicule ; and, as they were called bull-beggart, they were used as words of scorn and contempt.

Ayliffe.

BULL', \ Lat. bulla; Ital. bolla; Fr. BULL'ARY, / bulle, signify ing originally a seal; BULL'ISH, >but, when applied to a mandate BULL'IST, I of the pope, supposed to be BUL'LETIN .} fo\r], counsel. Bulletin is a di

money, because of its bulkiness, and change of its quantity. Locke.

Change in property, through the bulk of a nation, makes slow marches, and its due power always at- tends it. Swift.

Four steeds that spurn the rein, as swift as shy, Hurl the dark bulk along, scarce seen in dashing by.

Byron.

BULK OF A SHIP, the whole content in the hold for the stowage of goods.

BULKH. See BALKH.

BULKHEAD AFORE, the partition between the forecastle and the gratings in the head.

BULL (George), bishop of St. David's, was born at Wells in 1634, and educated at Exeter College, Oxford. His first benefice was that of St. George's, near Bristol ; whence he rose suc- cessively to be rector of Suddington in Glouces- tershire, prebendary of Gloucester, archdeacon of Llandaff, and, in 1705, bishop of St. David's. In the time of Cromwell he adhered steadily to the church of England ; and in the reign of

minutive of bull.

Min holy pardon may you all wĀ«cxĀ». So that ye offre nobles or starlmpes.

Or elles silver broches. spones. <ā¢"— gĀ«Ā« Eoweth your hcd under this iioly ou,it,

C'lauccr,

BUL

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BUL

Bulles of popes, and of cardinales, Of patriarkes, and bishopes, I shewe, And in Latin I speke a wordes fewe.

Id. Canterbury Tales.

A butt is letters called apostolick by the canonists, strengthened with a leaden seal, and containing in them the decrees and commandments of the pope or bishop of Rome. Ayliffe.

It was not till after a fresh bull of Leo's had declared Low inflexible the court of Rome was in the point of abuses. Atterbury.

BULL', Irish bul; phrase or fashion, maybe cognate with Welsh brau ; peculiar. An equivo- cal expression, a blunder, a contradiction.

I confess it is what the English call a bull, in the expression, though the sense be manifest enough.

Pope's Letters.

BULL', n. ~\ Sans, bual ; Hind, buel ;

BULL'BAITING, f Per. bahai ; Ara. bu, bukal,

BULL'BEEF, Ā£ bakar ; Bs : Lat. bubalus ;

BUL'LOCK. J Sax. and Belg. bull ; Welsh

bual; Goth, bu, bgl; Swed. bal, signified properly

farming cattle, including oxen. Properly the

male of black cattle ; the husband of the cow.

Met. a fierce, violent, and powerful enemy. One

of the twelve signs of the zodiac.

Many bulls have compassed me : strong bulls of Bashan have beset me round. Psalms.

Whan that Phoebus doth his bright bemies spred Right in the white Me ; right so it betidde, As I shall singe, on Mayes day the thridde.

Chaucer's Troilus and Creseide.

A gentlewoman, Sir, and a kinswoman of my mas- ter's.ā Even such kin as the parish heifers are to the town bull. Sliahspeare.

Why, that's spoken like an honest drover : so they sell bullocks. Id.

They want their porridge and their fat bull-beeves.

Id.

Bulls are more crisp upon the forehead than cows.

Bacon.

ā that when they see

Law, can discover sin, but not remove,

Save by those shadowy expiations weak,

The blood of bulls and goats, they may conclude

Some blooo. more precious must be paid for man.

Milton.

Who made the balance, or whence came The bull, the lion, and the ram? Butler's Hudibrai. What am I the wiser for knowing that Trajan was in the fifth year of his tribuneship, when he enter- tained the people with a horse-race or bull-baiting?

Addison.

Drops follow drops, the clouds on clouds arise, And carnage clogs their

hands, and darkness fills their

eyes.

As when a slaughtered bull's yet reeking hide Strained with full force, and tugged from side to side, The brawny curriers stretch. Pope's Homer's Iliad.

At last from Aries rolls the bounteous sun, And the bright Bull receives him. Thomson.

The dew-lapped bull now chafes along the plain, While burning love ferments in every vein ; His well-armed front against his rival aims, And by the dint of war his mistress claims. Gay.

On foams the bull, but not unscathed he goes, Streams from his flank the crimson torrent clear; He flies, he wheels, distracted with his throes ; Part follows dart ; lance, lance, loud bellowings speak his woes. Byrun.

in zoology. See Bos.

BULL AND BOAR. By the custom of some places, the parson is obliged to keep a bull and a boar for the use of his parishioners, in considera- tion of his having tithes of calves and pigs, &c.

BULL, signifying a letter, is applied to the letters of princes as well as of the popes. The bull, however, properly speaking, signifies the seal appended to the letter, and which has been made of gold, silver, and lead, as well as of wax. Thus:

BULL, GOLDEN, an edict, or imperial con- stitution, made by the emperor Charles IV. re- puted to be the magna charta, or the fundamen- tal law of the German empire. It is called golden, because it has a golden seal, tied with yellow and red cords of silk : upon one side is the emperor, represented sitting on his throne, and on the other the capitol of Rome. It is also called Caroline, from Charles IV. Till the pub- lication of the golden bull, the form and cere- mony of the election of an emperor were dubious and undetermined, and the number of electors not fixed. This edict regulated the functions, rights, privileges, and pre-eminences, of the electors. The original, which is in Latin, on vellum, is preserved at Frankfort. This ordon- nance, containing thirty articles, was approved of by all the princes of the empire.

BULLS, LEADEN, were sent by the emperors of Constantinople to despots, patriarchs, and prin- ces ; and were also used by the grandees of the im- perial court, as well as by the kings of France, Sicily, &c. and by bishops, patriarchs, and popes ; and on one side had the name of the pope or bishop

inscribed. Polydore Virgil makes pope Stephen III. the first who used leaden bulls, about 772. The latter popes, besides their own names, strike the figures of St. Peter and St. Paul on their bulls ; a practice first introduced by pope Pas- chal II.

BULLS OF THE POPE are despatched by order of his holiness, from the Roman chancery, and sealed with lead, being written on parchment, by which they are partly distinguished from briefs. See BRIEF. The pope's bull is a kind of apo- stolical rescript, or edict ; and is chiefly used in matters of justice or grace. If the former be the intention of the bull, the lead is hung by a hem- pen, if the latter, by a silken thread. This lead is impressed on one side with the heads of St. Peter and St. Paul ; and on the other with the name of the pope, and the year of his pontificate. The bull is written in a round Gothic letter. These instruments, besides the lead hanging to them, have generally a cross, with some text of Scripture, or religious motto, about it. They are granted for the consecration of bishops, the promotion to benefices, and the celebration of jubilees, &c. Bull in csena Domini, is a parti- cular bull read every year, on the day of the Lord's supper, or Maunday Thursday, in the pope's presence, containing excommunications and anathemas against heretics, and all who dis- turb or oppose the jurisdiction of the holy see. After the reading of the bull, the pope throws, down a burning torch, to denote the thunder of this anathema.

BULLS, SILVER, were not in so frequent useĀ» though instances of them might be produced.

BULLS, WAXEN, are said to have been first brought into England by the Normans. They were in frequent use among the Greek emperors, who thus sealed letters to their wives, mothers, and sons. Of these there were two sorts, viz. red and green.

BULLA, in antiquity, a kind of ornament much in use among the ancient Romans. Whit- aker is of opinion, that the bulloe were originally formed of leather among all ranks of people; and it is certain that they continued so to the last among the commonality. He also imagines that at first the bulla was intended as an amulet, rather than an ornament ; as a proof of which, he tells us, that the bullse were frequently im- pressed with the figure of the sexual parts. It is universally asserted by the critics, that the bullae were made hollow for the reception of an amulet; but this Whitaker contradicts,

from the figure of a golden one found at Manchester, which had no aperture whereby an amulet could have been introduced. Pliny refers the original of the bullse to the elder Tarquin, who gave one with the pratexta to his son, because, at the age of fourteen, he had, with his own hand, killed an enemy ; and in imitation of him it was afterwards assumed by other patricians. Others affirm that the bulla was given by that king to the sons of all the patricians who had borne civil offices. Lastly, others allege that Romulus first introduced the bulla, and gave it to Tullus Hostilius, the first child born of the rape of the Sabines. As to the form of the bullse, they were originally made in the shape of hearts, though they did not always retain that form. As the wealth of the state and the riches of individuals increased, the young patrician distinguished himself by a bulla of gold, while the plebeians wore the amulets of their ancestors. The figure of the heart then be- came so generally round, some even have the impression of an heart upon them, that there are not many of the original form to be found in the cabinets of the curious. The form is naturally varied from a complete circle to that of a seg- ment ; and this was the shape of the above-men- tioned bulla found at Manchester. When the youths arrived at fifteen years of age, they hung up their bulla about the necks of their gods lares. The bulloe were also not only hung about the necks of young men, but even of horses. They were likewise sometimes hung upon statues, whence the phrase ' stature bullatae.' Bulla was also the denomination given to divers other metalline ornaments made after the same form ; and in this sense bulls seems to include all gold and silver ornaments of a roundish form, whether worn on the habits of men, the trappings of horses, or the like. Such were those decora- tions used by the ancients on their door and belts. The bullae of doors were a kind of large headed nails fastened on the doors of the rich, and kept bright with great care. The doors of temples were sometimes adorned with golden bullae. Mr. Baudelot takes the bullae worn by soldiers on their belts to be something more than mere ornaments. They seem to have been considered as preserva- tives trom dangers and diseases, and even means of acquiring glory, and other advantages. The like rnay perhaps be extended to the bulls on

doors, which were probably placed there as a security to them from being broken or violated.

BULLA denoted also a table hung up in the public courts to distinguish which days were fasti, and which nefasti; answering in some measure to our calendar.

BULLA, or Dipper, in conchology, a genus belonging to the order of vermes testaceae. It is an animal of the snail kind : the shell consists of one valve, convoluted, and without any prickles; the aperture is narrowish, oblong, longitudinal, and entire at the base ; the colomella is smooth and oblique.

The species of this genus are, volva, ovum, spelta, birostris, gibbosa, verrucosa, aperta, naucum, ampulla, hydatis, physis, lignaria, ficus, amplustra, canaliculata, rapa, fon- tinalis, conoidea, turrita, hypnorum, terebellum, gelatinosa, virginea, cypraea, strigata, fasciata, exarata, striatula, ambigua, bifasciata, achatina, zebra, ovata, hyalina, velum, ferruginosa, cylin- drica, vesica, voluta, oliva, purpurea, domini- censis, solida, spreta, scabra, stercuspulicum, soluta, akera, carnea, and truncata.

BULLA, in medicine, a clear vesicle or blister, which arises from burns or scalds; or other causes.

BUL'LACE, n. s. A wild sour plum.

Medlers, plommes, peres, chesteines, Chi rise of which many one faine is Notes, and aleis, and bolas.

Chaucer's Romaunt of the Rote.

In October, and the beginning of November, come services, medlars, bullaces; roses cut or removed, to come late ; holyoaks, and such like. Bacon.

BULLACE, in botany. See CHRYSOPHYLLUIC and PRINUS.

BULLARY, bullarium, a collection of papal bulls. A general bullary of all the papal consti- tutions, from Gregory VII. to Sixtus V., was compiled by order of pope Sixtus V. in 1586 ; since which has been published a great bullary by Laert. Cherubin, containing the bulls of all the popes from Leo in 440, to Paul V. in 1559; since continued by Ang. Cherubin to 1644, and byAng. a Lantusca, and Jo. Paulus to 1676; and lastly, by an anonymous editor, to the time of Benedict XIII., under the title of Bullarium Magnum Romanum. We have the same digest- ed in a new method by Bouchardus : a commen- tary on it begun by Vine. Petra, and a summary of it by Novarius.

BULLATA, in conchology, a species of vo- luta ; shape cylindrical, reddish, with somewhat livid belts ; spire obtuse ; pillar-lip with four plaits within ; aperture effuse. Found in the Indian seas.

BULLATED, bubbling ; boiling.

BULLATUS, a species of solen ; shape ro- tund, and striated slightly ; anterior part of the shell retained open by the crenatures with which it is beset. This sort inhabits the American seas. Also a species of conus, the shell of which is yellow, clouded with white.

BULL-BAITING, the inhuman and unmanly sport of setting bull-dogs on a bull, who is tied to a stake, with the points of his horns muffled ; thus depriving him of the use of his natural weapons of defence, and then exposing him to be torn to death for the mere amusement of those

who take a delight only in cruelty. The first bull-bait in this country is said to have taken place at Stamford in 1209. The introduction of it was as follows : ā ‘ William, earl Warren, lord of this town, standing upon the walls of the cas- tle, saw two bulls fighting for a cow in the castle meadow, till all the butchers’ dogs pursued one of the bulls, madded with noise and multitude, clean through the town. This sight so pleased the earl, that he gave the castle meadow, where the bull’s duel began, for a common to the butchers of the town, after the first grass was mowed, on condition that they should find a mad bull, the day six weeks before Christmas- day, for the continuance of that sport for ever.’

BULL’DOG, n. s. From bull and dog. A dog of a particular form, remarkable for his courage, and the savage pertinacy with which he provokes and continues the fight. When he has once fastened his bite on his antagonist, he cannot be taken off without much difficulty. He is a species of mastiff, on a smaller scale, with a somewhat flatter snout, a more ferocious aspect, pendulous lips, and a short thick neck. He is used in baiting the bull ; and this species is so peculiar to Britain, that they are said to degenerate when they are carried to other coun tries.

All the harmless part of him is that of a bull-dog ; they are tame no longer than they are not offended.

Addison.

BULLEN (Anne). See BOLEYN.

BULLENGER, in old statutes, a boat or a small ship.

BULLERS BUCHAN, THE POT OF, or the BOILERS OF BUCHAN, a large oval cavity in the rocks on the coast of Aberdeenshire, 150 feet deep, round which there is a foot-path. Boats sail into it from the sea, under a natural arch, resembling a large Gothic window. Near this, there is a vast insulated rock, divided by a nar- row and very deep chasm from the land. About the middle of this rock, many feet above the level of the water, there

is a large triangular aperture, through which the waves, when agi- tated, rush with tremendous noise.

BUL'LET, n. s. Fr. boulte ; Goth, boll; Arm. bolot. See BALL and BOWL. A round ball of metal, usually shot out of guns.

As when the devilish iron engine, wrought In deepest hell, and framed by furies skill, With windy nitre and quick sulphur fraught, And rammed with bullet round, ordained to kill.

Spenser.

Giaffer, their leader, desperately fighting amongst the foremost of the janizaries, was at once shot with t-,vo bullets, and slain. Knolles.

And as the built, so different is the fight ; Their mounting shot is on our sails designed ; Deep in their hulls our deadly bullets light, And through the yielding planks a passage find.

Drydcn.

Not even

A guard io sight ; they wisely keep below, Shelter d t-v the grey parapet, from some Stray bullet of our lansquenets, who might Pract?3t .a the cooi1 twilight.*

Jtyron. Deformed Transformed.

BULLET-BORE is a steel shank, having a globe at one end, wherewith to bore the inside of a bullet-mould clean, of the size intended.

BULLET IRON, a denomination given by some to Spanish or Swedish bars of iron.

BULLET-MOULDS, iron moulds for casting bul- lets. They consist of two concave hemispheres, with a handle whereby to hold them ; and be- tween them is a hole, called the gate, to pour in the melted metal. The chaps or hemispheres of bullet-moulds are first punched, being blood-red hot, with a round ended punch, of the shape and nearly of the size of the intended bullets. To cleanse the insides a bullet-bore is used.

BULLEYN (William), a learned physician and botanist, born in the Isle of Ely, in the for- mer part of the reign of Henry Vlir., and edu- cated at Cambridge. He travelled through various parts of England, Scotland, and Ger- many, chiefly with an intention to improve his knowledge in botany.

In the reign of Edward VI., or queen Mary, Mr. Bulleyn appears, from his remarks on the natural productions of that country, to have resided at Norwich, or near it, and to have spent some time at Bloxhall in Suf- folk : but he afterwards removed into the north, and sr.ltled at Durham, where he practised physic with reputation. His great patron was Sir Thomas Hilton, knight baron of Hilton, who was governor of Teignmouth castle in the reign of Philip and Mary. In 1560 he came to London, and, soon after his arrival, was accused by \il- liam Hilton of Bidick, of having murdered his brother Sir Thomas, our author's friend and pa- tron. He was arraigned before the duke of Nor- folk, and honorably acquitted. This Hilton after- wards hired some villains to assassinate the doctor ; but the attempt proving ineffectual, he had him arrested on an action for debt, and he remained for a long time in prison. During this confine- ment, Dr. Bulleyn composed seveial of those works which raised his reputation as a medical writer. He died in January, 1576, and was buried in St. Giles's, Cripplegate, in the same grave with his brother the divine, who died thir- teen years before, and in which John Fox, the martyrologist, was interred eleven years after. Dr. Bulleyn appears from his writings to have been well acquainted with the works of the ancient Greek, Roman, and Arabian physicians. He was a man of genius and fertile imagination, and his works are by no means barren of enter- tainment, though his practice is obsolete. He wrote, 1, The Government of Health, 1559, 8vo. 2. A Regimen against the Pleurisy, 8vo. Lon- don, 1562, &c.

BULL-FEAST. See BULL-FIGHTING.

BULL-FIGHTING, a sport or exercise much in use among the Spaniards and Portuguese, consisting in a kind of combat of a cavalier or torreadore against a wild bull, either on foot or on horseback, by riding at him with a lance. The Spaniards have bull-fights in honor of St. John, the Virgin Mary, &c. This sport the Spaniards received from the Moors, among whom it was celebrated with great eclat. The practice was prohibited by pope Pius V., under pain of excommunication incurred ipso facto. But succeeding popes have granted several miti-

pratiotis in behalf of the torreadores. The follow- in"; account of a bull-feast in the Coliseum at Kome, in 1332, extracted from Muratori by Mr. Gibbon, may give some idea of the early pomp, ceremonies, and danger, which attended these exhibitions : ā ' A general proclamation, as far as Rimini and Ravenna, invited the nobles to exer- cise their skill and courage in this perilous adventure. The Roman ladies were marshalled in three

*squadrons, and seated in three balconies, which on this day (the 3d Sept.) were lined with scarlet cloth. The fair Jacova di Rovere led the matrons from beyond the Tiber, a pure and native race, who still represent the features and character of antiquity. The remainder of the city was divided between the Colonna and Ursini families : the tw6 factions were proud of the number and beauty of their female bands : the charms of Savella Ursini are mentioned with praise ; and the Colonna regretted the absence of the youngest of their house, who had sprained her ancle in the garden of Nero's tower. The lots of the champions were drawn by a res- pectable citizen ; and they descended into the arena or pit, to encounter the wild bulls, on foot, as it should seem, with a single spear. Amidst the crowd, our annalist has selected the names, colors, and devices, of twenty of the most con- spicuous knights. . Several of the names are the most illustrious of Rome and the ecclesiastical state ; Malatesta, Polenta, della Valle, Cafarello, Savelli, Cappoccio, Conti, Annibaldi, Altieri, Corsi. The colors were adapted to their taste and situation ; and the devices, expressive of nope or despair, breathed the spirit of gallantry and arms. ' I am alone, like the youngest of the Horatii,' the confidence of an intrepid stranger : * I live disconsolate,' a weeping widower : ' I burn under the ashes,' a discreet lover : ' I adore Lavinia or Lucretia,' the ambiguous declaration of a modern passion : ' My faith is as pure/ the motto of a white livery : ' Who is stronger than myself?' of a lion's hide : ' If I am drowned in blood, what a pleasant death !' the wish of fero- cious courage. The pride or prudence of the Ursini restrained them from the field, which was occupied by three of their hereditary rivals, whose inscriptions denoted the lofty greatness of the Colonna name : ' Though sad, I am strong :' Ā« Strong as I am great :' ' If I fall (addressing himself to the spectators) you fall with me :' ā intimating (says the writer), that while the other families were the subjects of the Vatican, they alone were the supporters of the Capitol. The combats of the amphitheatre were very danger- ous and bloody. Every champion successively encountered a wild bull ; and the victory may be ascribed to the quadrupeds, since no more than eleven were left on the field, with the loss of nine wounded and eighteen killed on the side of their adversaries. Some of the noblest fami- lies might mourn ; but the pomp of the funerals, in the churches of St. John Lateran, and St. Maria Maˆgiore, afforded a second holiday to the people. It was not in such conflicts that the blood of the Romans should have been shed ; yet, in blaming their rashness, we are compelled to applaud their gallantry ; and the volunteers, who display their magnificence, and risk their*

lives under the balconies of the fair, excite a more generous sympathy than the thousands of captives and malefactors who were reluctantly dragged to the scene of slaughter.' We extract the description of a modern Spanish bull-fight, from the travels of a literary friend : ā

‘ In honor of Lord Wellington a bull-fight was exhibited at St. Mary’s, Cadiz, at which I attended. This diversion, peculiarly belonging to the Spanish nation, has fallen into disuse, and lately has been restricted by orders from the government, though under new regulations it is still sometimes permitted. The Plaza de Toros is a large amphitheatre, capable of holding 14,000 persons. On this occasion it was not full, and I suppose that not more than 10,000 people were present; The appearance of the assembly was striking, and a degree of interest was excited in every countenance, which, I should previously have thought, a much more important contest would scarcely have called forth. I entered the place at the moment when the first bull was killed, and horses, gayly de- corated, were dragging him from the circle, amid the sounds of music, and the applauding shouts of the people.

‘ Preparations were made for a fresh conflict : three men were posted behind each other, about ten yards asunder, mounted on small, but active horses, and armed with a spear about fifteen feet long ; and five or six men on foot, dressed in scarlet cloaks, were placed in other parts of the arena. The gates were thrown open, and the bull rushed in. He made towards the first horseman, who received him on the point of his spear, and wounded him between the shoulders ; this turned him, and he attacked the second horseman with great fury ; but from the want either of dexterity in the rider, or agility in the animal, the horse was dreadfully gored in the body, and his bowels fell on the ground. The combatants were soon disentangled, and the bull attacked the third horseman, who received him like the first, and wounded him severely. He now became furious, and galloped round the circle ; but either from the loss of blood, or the pain he endured, he was fearful of facing the horsemen ; the men on foot then began to irri- tate him, by sticking small darts in his body, and, whenever he made a push at them, threw the cloak over his eyes, and with great dexterity avoided his thrust.

1 This irritation was continued some time, till the animal, streaming with blood, became ex- hausted. The matador, or principal actor, then made his appearance, armed with a small sword and cloak : he advanced towards the bull, which ran and pushed at him, but the man received the thrust on his cloak, and step- ping nimbly aside, withheld his blow, because the animal did not present himself in the exact attitude which the matador required for des- patching him with grace ; he then made a second advance towards the animal, and, while he was in the act of pushing at him, plunged the sword up to the hilt between his shoulders ; the bull ran a few paces, staggered, and dropped dead. The trumpets sounded a flourish ; horses gal- lopped in, were fastened to the carcase, and

dragged it away, amid the applauding shouts of the spectators.

- *Six or seven other bulls were then in suc- cession despatched in a similar manner, with only such variations as were occasioned by the different degrees of courage which the animals possessed. When the last bull was fighting, the matador so contrived it that he gave him the coup de grace immediately under the box in which Lord Wellington and the English party were seated. Before this operation, he addressed himself to his Lordship, and said, with much dignity, that he should kill that bull to the health of King George the Third, which was quickly performed. His Lordship threw him some money, after which the entertainment closed.*

‘ This bull-fight was represented to me as a very inferior exhibition, owing to the coolness of the weather, the bulls having much more courage during the intense heat of summer than at the present season. It is certainly a cruel amuse- ment both to the bulls and to the horses, though attended with little danger to the men. One horse was destroyed, by having his belly lacer- ated : after he was wounded, and his bowels trailing on the ground, the rider continued the fight, and galloped round the circle, while the poor animal literally trampled on his own entrails at every step, a sight more disgusting than this can scarcely be conceived, and even the bull, though streaming with blood, had not nearly so repulsive an appearance. The men were secured from much danger by their own agility, by the dexterous application of their cloaks when the animal charged them, and by the barriers placed round the circle, behind which they retired when pressed by the bull.

‘ However repugnant this diversion may ap- pear to every delicate and feeling mind, it is more frequented and admired by the ladies than by the gentlemen ; they attend these exhibitions in their gayest dresses, applaud the address of the inhuman combatants, and feel the greatest solicitude at the different critical turns of the fight. Many of the young country gentlemen may trace their ruin to these spectacles, as de- cidedly as Englishmen of the same class may trace theirs to Newmarket. In fact, it is the great object which engages the atttention of that description of men distinguished by the term Majos.’

BULL’-FINCH, h. s. Rubicilla. A small bird that has neither song nor whistle of its own, yet is very apt to learn if taught by the mouth. ā See RUBICILLA.

The blackbird whistles from the thorny brake, The mellow bull-finch

answers from the groves.

Thomson.

BULL'-FLY, n. s.) A ā¢ ra BULL'-BEE. \ A species of fly.

BULL-FROG, in zoology. See RANA.

BULL'-HEAD, n. s. From bull and head. In ichthyology, the name of a fish, sometimes called the miller's thumb. See ANGLING, and COITUS.

BULLIALDUS (Ismael), an eminent astrono- mer, born at Houden in France in 1605. He travelled in his youth for improvement; and

afterwards published several works, among which are : De Natura Lucis ; Philolaus ; Astronomia Philolaica, Opus Novum in quo Motus Plane- tarum per Novum et Veram Hypothesin Demon- strantur; Astronomic Philolaicze Fundamenta Clarius Explicata et Asserta, Adversus Sethi Wardi Impugnationem ; Delineis Spiralitris, Opus Novum ad Arithmeticum Infinitorum, fol. &c. In 1661 he paid Hevelius a visit at Dant- zic, for the sake of seeing his optical and astro- nomical apparatus. Afterwards he became a priest at Paris, and died there in 1694.

BULLIMONG, or BULLIMONY, a mixture of several sorts of grain, as oats, peas, and vetches, called also maslin or mong corn.

BULLINGER (Henry), born at Bremgarten, in Switzerland, in 1504, was an eminent Zuing- lian minister, and a great supporter of the Reformation. He was educated first at Emme- ric, and afterwards at Cologne, where he applied to '.he study of divinity and the canon law. In 1528 he accompanied Zuinglius to the dispu- tation at Berne, and the following year was called to the ministry at his native place. The victory gained by the Romish cantons over the Protestants in 1531, obliged him to fly with his family to Zurich, where he was chosen pastor in the room of Zuinglius, who had fallen in that battle. He died in 1575. His works are nu- merous, and it is remarkable that his sermons were ordered to be read by the clergy of the church of England.

BULLION. Fr. billon ; Sp. billon ; Ital. bol- lone ; from Lat. bulla, signified every kind of metal ornament worn by the people, which was collected by agents for the use of the mint. Something of the same kind seems to have oc- curred in Spain, where it was called vellon.

But for to tell the sumptuous aray Of that great chamber, should be labour lost j For living wit I wene cannot display The roiall riches and exceeding cost Of every pilour and of every post, Which all of purest bullion framed

were, And with great perles and precious stones embost j That the bright glister of their beames cleare Did sparckle forth great light, and glorious did ap-

peare. Spentcr.

The balance of trade must of necessity be returned in coin or bullion. Bacon,

A second multitude,

With wondrous art, found out the massy ore, Severing each kind, and scummed the bullion dross.

Milton.

In every vessel there is stowage for immense trea- sures, when the cargo is pure bullion. A ddison.

BULLION. The term bullion is applied to the precious metals, either when smelted from the ore, and not perfectly refined, or when refined, and melted down in bars, or ingots ; or any un- wrought body of a certain degree of fineness. In order to render gold and silver fit for use, it is necessary to reduce and harden them by an alloy of some baser metal ; and the quantity of this alloy is ascertained by the legislative regu- lations of different countries, so that the pro- portion of the one to the other may constitute the standard silver of such countries. According

BULLION.

to the laws of England all sorts of wrought plate Ā«riould be made in conformity to the legal standard : and the prices of standard gold and silver regulate the value of the bullion, con- sisting of ingots, bars, dust, or foreign specie ; consequently, r.j order to ascertain the value of bullion, it is first assayed. See ASSAY, GOLD, and SILVER.

Silver as well as gold bullion is sometimes also denominated plate.

Silver and gold, whether coined or uncoined, though used for a common measure of other things, are no less in modern times a regular commodity of trade than wine, tobacco, or cloth; and may, in many cases, be exported to as much national advantage.

Bullion is alternately imported and exported, from this and every country of considerable com- merce, for the purposes of assisting foreign trade; and in the same manner as the national coin circu- lates in every particular

country, bullion may be considered as the money of the great mercantile republic.

Both are employed in facilitating exchanges, the one between different individuals of the same, the other between those of different nations, and bullion, by thus opening new and inexhaustible markets to all the commodities of Europe, gives occasion to new divisions of labor and improve- ments of art, which, in the narrow circle of the ancient commerce, must have remained for ages discovered or unknown.

According to Mr. Locke, gold and silver are the most solid and substantial part of the movable wealth of a nation ; and to multiply these metals should, he thinks, on that account, be the great object of its political economy. Countries that have political connexions with foreign nations, and are obliged occasionally to carry on foreign wars, and to maintain fleets and armies in distant countries, to subsidize foreign princes, 8cc. are under a necessity of sending money in some form or other abroad ; and therefore it has been said that in time of peace it should endeavour to accumulate gold and silver, that when occasion requires, it may possess the means of carrying on war. Upon these principles all the different nations of Europe formerly studied, though to little purpose, to accumulate gold and silver in their respective countries. Spain and Portugal, the proprietors of the principal mines which supplied Europe with those metals, either prohibited the exportation of them under the severest penalties, or subjected them to a considerable duty. The like prohibition seems anciently to have made a part of the policy of most other European nations. But, when those countries became commercial, the merchants found this extremely inconvenient, and remonstrated against it, as hurtful to trade.

The prohibition of exporting gold and silver was now therefore restricted in France and England to the coin of these respective coun- tries. The exportation of foreign coin and bullion was made free ; the first law for this purpose in England was passed 1663. In Holland, and in some other places the liberty was extended even to the coin of the country. A country that has no mines of its own, must

undoubtedly draw its gold and silver from foreign countries ; and, on account of their small bulk and great value, they are as easily transported as obtained. When the quantity of gold and silver imported into any country exceeds the effectual demand, no vigilance of government can prevent their exportation. But the sanguinary laws of Spain and Portugal are not sufficient for keeping their gold and silver at home. And as they are easily transported from places where they abound, to those where they are wanted, their price does not admit of the same fluctuation with that of many other commodities, that are not so con- veniently and speedily

removed. The changes which take place in their value are generally slow, gradual, and uniform.

Instead of accumulating gold and silver, with a view to the augumentation of the real wealdi of the country, Dr. Adam Smith (Wealth of Na- tions, vol. ii. p. 157,) recommends their being considered, under whatever form they exist, as utensils ; and increasing the use for them, by increasing the consumable commodities, which are to be circulated, managed, and prepared by means of them, as the most effectual and most certain method of increasing their quantity, which will ever keep pace with the use to which they are applied ; and beyond this no law he insists can ever prevent their being immediately sent out of the country. He adds, that it is not al- ways necessary to accumulate gold and silver, in order to enable a country to carry on foreign wars, and to maintain fleets and armies in distant countries. Fleets and armies are maintained, not with gold and silver, but with consumable goods ; and the nation which, from the annual produce of its domestic industry, from the annual revenue arising out of its lands, labor, and con- sumable stock, has wherewithal to purchase those consumable goods in distant countries, can maintain foreign wars there.

Such has been the doctrine with regard to bullion which has been expressed in modern times, and the subject has derived more importance of late from its obvious connexion with the great questions of our PAPER and GOLD CURRENCY.

No topic has been more elaborately discussed in parliament or has been the subject of greater consideration amongst both practical and speculative political economists and mer- chants. In February, 1810, Mr. Horner obtained what was called his Bullion Committee, or a Committee of the House of Commons to enquire into the cause of the high price of gold bullion, and to take into consideration the state of the circulating medium of exchanges. This com- mittee was named with considerable impartiality and was engaged during two months in the examination of evidence ; which consisted chiefly of the testimony of bullion dealers, merchants, bankers, and bank directors. The leading mem- bers in the committee, next to Mr. Horner. are understood to have been Mr. Huskisson, and Mr. Henry Thornton.

As complete a practical view as we can give of the important topics connected with these questions will arise out of an epitome of the Report that was now published.

It begins with a statement of the extraordinary

rise of bullion in our market, and of tne en- deavours of the committee to ascertain what cause, in the opinion of mercantile men, had led to this irregularity. To the notion entertained by several witnesses, that it was owing to a rise of gold on the continent, the committee could by no means subscribe. The sudden rise in our foreign exchange formed the next topic of en- quiry; and here, as in the other point, the committee differ from the opinions of practical men, the majority of whom attributed it to the foreign expenses of government, and to the excess of our imports in 1809 above our exports. Two merchants, however, if they did not go so far as the committee, in declaring a depreciation of our bank-notes, were of opinion, that their nonconvertiblity into cash had been materially instrumental in preventing a re-establishment of the rate of exchange. The committee, in ar- guing that a considerable part of the inequality of the exchange must be owing to a fall in our paper currency, enter into a very instructive ex- planation of the distinction between real and nominal exchange ; but they are less successful in an attempt to calculate the relative amount of our exports and imports for the year 1 809.

The third topic of investigation, the enquiry into the rules of the bank in respect to their issues, gave rise to some anxious answers. The bank directors appear to have become by this time suspicious of the intentions of the committee, and fought hard to ward off (Evidence, p. 79 and 89,) some of their probing questions. The point on which they were chiefly at variance, was, whether the amount of their issues ought or ought not to be regulated by a reference to the price of bullion, and the condition of the foreign exchange. The committee contend for the affirmative, while the bank assert, that the vali- dity of the bills presented to them for discount, should form almost the only subject of con- sideration. The bank also oppose the idea, that the irregular state of the exchange is owing, in any degree, to a degradation of their paper ; an allegation which leads the committee into a series of arguments to show that depreciation has been known to exist in cases where the currency was, like that of the Bank of England, of undoubted character as to ultimate solvency. The early part of the history of the bank of England itself, the case of the Scotch banks in 1763, and the more recent example of the bank of Ireland in 1809, are all adduced in support of this position. The committee then conclude this part of the Report, with a mixture of praise and censure on the bank directors. Their conduct, in not at- tending to the price of bullion and state of ex- change, is said to involve great practical errors ; while their moderation in limiting the amount of their issues, is declared to entitle them to a con- tinuance of the confidence so long reposed in them by the public. The

fourth and last division of the Bullion Report, regards the progressive increase of our paper currency. After exhibiting a list of the annual quantity of bank of England notes in circulation since 1798, and commenting on the bank advances to government, as well as to the mercantile body for discounts, the com- mittee are led into an enquiry into the circulation

of country banks. Here, from the scantiness of materials, the greatest caution was necessary; and from the want of it the committee came to various conclusions which have since proved fallacious. They sum up the Report by declaring the existence of an excess in our paper currency; by ascribing this excess to the absence of the salutary check of cash payments ; by lamenting the evils attendant on depreciated currency ; by dissuading the adoption of any indirect schemes to limit our paper circulation ; and by recom- mending an act of parliament to resume cash payments within the space of two years.

Such was the fruit of the wide researches and close investigation of the ablest of our states- men into this subject at a recent period. Strong efforts it is said were made by ministers, in the progress of the enquiry, to negative the propo- sition, that bank paper was understood to be de- preciated, but in vain ; the majority of the committee having made up their minds to an opposite conclusion: and the calamities that have since attended every branch of the paper system but too fully corroborate the truth of their opinion : but see CURRENCY.

BULLITIpN. Lat. bultire, e.bullire ; Fr. bouillir, to boil. See BOIL.

There is to be observed in these dissolutions, which will not easily incorporate, what the effects are, as the bullition, the precipitation to the bottom, the ejacula- tion towards the top, the suspension in the midst, and the like. Bacon.

BULLOCK. See Bos.

BULL'S EYE, in astronomy. See ALEE- BARAN.

BULL'S EYE, a sort of small pulley, in the form of a ring, having a rope spliced round the outer edge of it, and a large hole in the middle for another rope to slide in. It is seldom used by English seamen.

BULL'-WEED, ra. Ā«. in botany, the same with knap-weed. See CENTAUREA.

BULL'-WORT, or BISHOPS-WEED, n. s. Lat. ammi. A plant, of which there are two species, sison ammi, and ammi majus.

BULTERS, in fishing, strong lines used on the coast of Cornwall in the fishery of congers.

BUL'LY, v. & ra. ˆ Belg. bulLemun. See BULL

BULLY'BACK, > and BUG. Either from bull,

BULLY'ING, n. 3 the animal, fierce, savage, and bellowing; or from the pope's bull, which is arrogant, blustering, and authoritative. Bully is a noisy blustering fellow, one who endeavours to inspire others with fear. To bully is to threaten, to domineer, to bluster, to inspire terror by inso- lence and vulgar noise, by the appearance of a courage foreign to his heart.

Mine host of the garter ! ā What says my bully rock ? Speak scholarly and wisely. Shakspeare,

ā¢"Pis so ridiculous, but so true withal, A bully cannot sleep without a brawl. Dryden.

A scolding hero is, at the worst, a more tolerable character than a bully in petticoats. Addiaon.

The little man is a bully in his nature, but, wheii he grows cholerick, I confine him till his wrath is over.

Id.

But when the bully with assuming face Cocks his broad hat, edged round with Yield not the sway ; defy his sti And thrust him to the mudd

BUM

BULLY'-TREE, the English name of the achras sapota.

BUI/RUSH, the English name of the scirpus lacustris.

To make fine cages for the nightingale,

And baskets of bulrushes, was my wont. Spenser.

All my praises are but as a bulrush cast upon a stream ; they are born by the strength of the current.

Dryden.

BUL'WARK, v. 8c n. Goth, bolwerk; Swed. and Belg. bolwerk ; either from bol, great, or Goth, bol, the trunk of a tree ; Fr. boulevard ; Ital. bolvardo,

have Goth, ward, defence, instead of wark. To fortify, to secure. A bulwark is what is now called a bastion ; generally a fortifi- cation ; a skreen ; a shelter.

The other five, five sondry ways he sett, .Against the five great bulwarkfs of that pyle, And unto each a bulwarke did arret, T' assayle with open force or hidden guyle, In hope thereof to win victorious spoile. Spenser.

Some making the wars their bulwark, that have be- fore gored the gentle bosom bf peace with pillage and robbery. Shakspeure.

They oft repair

Their earthen bulwarks 'gainst the ocean fiood.

Fairfax.

And yet no bulwarked town, or distant coast, Preserves the beauteous youth from being seen.

Addison.

Our naval strength is a bulwark to the nation. Id.

Taking away needless bulwarks, divers were de- molished upon the sea coasts. Hayivard.

The unworthy successor of Julian shamefully sur- rendered to the barbarians the important city of Nisi- bis, the firmest bulwark of the provinces of the east.

Gibbon.

BUM, v. & n. ā¢) Belg. bom ; Per. Swed. BUM'BLE, f- Welsh, and Irish, bon ; Dutch BUMF'. j bommen, bombannen. Its pri-

mary meaning is a noise which some things make when fallen, or struck upon or against another ; it is also applied to the natural sounds made by the bittern and the bee. From sound its mean- ing has been transferred to bulk ; thus bump describes the swelling or bump which is pro- duced by a blow ; and bum the very ample sub- stance on which we sit, more plainly called the buttocks. It is probably contracted from bottom.

And as a bitore bumbleth in the rnire, She laid her mouth unto the water clown.

Chaucer's Canterbury Tales.

Troth, and your bum is the greatest thing about you,

so that in the beastliest sense you are Pompey the

great. Shakspeare.

It had upon its brow a bump as big as a young

cockrel's stone ; a perilous knock, and it cried bitterly.

Id.

The wisest aunt telling the saddest tale, Sometime for three-foot stool mistaketh me, Then slip I from her bum, down topples she. Id.

This said, he gently raised the knight. And set him on his 6am upright. Hudtbrat.

So learned Taliacotius, from The brawny part of porter's bum Cut supplemental noses, which Wou'd last as long as parent breech j But when the date of nock was out, Off dropt the sympathetic snout. Id.

Prom dusty shops neglected authors come, Vjrtyrs of pies and relicks of the bum. Dryden,

671 BUM

Then to the water's brink she laid her head, And as a bittour bumps within a reed,

To thee alone, O lake, she said Id.

Not though his teeth are beatei out, his eyes Hang by a string, in bumps his forehead rise. Id.

BUMALDA, in botany, a genus of the di- gynia order, and pcntandria class of plants : CAL. five parted : COR. five-petalled ; styles villous; capsule two celled, and two-beaked. One species only : a shrub of Japan.

BUMBATLIFF, n. s. This is a corruption of bound bailiff, pronounced by gradual corrup- tion boun, bun, bum bailiff. A bailiff' of the meanest kind ; one that is employed in arrests.

Go, Sir Andrew, scout me for him at the corner of the orchard, like a bumbailiff'. Shafupeareˆ

BUM'BARD, n. s. Wrong written for BOM- BARD, which see. A great gun ;

a black jack ; a leathern pitcher.

Yond same black cloud, yond huge one looks Like a foul bumbard, that would shed his liquor.

Sltakspeare.

BUM'BAST, n. s. Falsely written for bom- bast ; bombast and bombasine being mentioned, with great probability, by Junius, as coming from boom a tree, and sein silk ; the silk or cotton of a tree. Mr. Steevens, with much more probability, deduces them all from bombucinus. See BUM- BAST.

We have received your letters full of love,

And, in our maiden council, rated them

As courtship, pleasant jest, and courtesy, As bumbast, and as lining to the time.

SItakfpenre.

The usual bumbast of black bits sewed into ermine, our English women are made to think very fine.

Grew.

BUM ELI A, a bastard bully-tree, in bo- tany, a genus of the class pentandria, order monogynia: CAL. perianth, five-leaved: con. five-cleft ; nectary, five-leaved ; drupe, seed single. Twelve species, all shrubs and trees of South America, or the West Indies.

BUMICILLI, asectofMahommedansinEgypt and Barbary, who pretend to fight with devils, and commonly appear in a fright and covered with wounds and bruises. About the full moon they counterfeit a combat in the presence of all the people, which lasts for two or three hours, and is performed with assagaias, or javelins, till they fall down quite spent.

BUMKIN, or BOOMKIX, in sea language, is a short boom or bar of timber, projecting from each bow of a ship, to extend the lower edge of the fore-sail to windward. It is secured by a strong rope, which confines it to the ship's bow.

BUMM, a city of Persia, the capital, and formerly a frontier town, of the province of Kerman, situated in a plain in the vicinity of high mountains. It is regarded as one of the strongest towns in Persia, and has a very thick and high mud wall, with six large bastions on each face, exclusive of others

*more lofty at the corners. A dry ditch, very deep and broad, surrounds the walls. The only access to the town, which stands on an eminence, is between ˆthp. iwn centre bastions, on the southern fore. Trie cita- del, also fortified by its own walls aw tow*uĀ«, occupies the highest part of the eminence, anu*

contains the governor's palace. This city has formerly been much larger, but its fountains are still celebrated as the finest in Persia, and the bazaar is tolerably large, and well supplied with provisions. The gardens of the neighbourhood are famous for pomegranates. The Afghans, ā¢when they invaded Persia in 1719, are said to have first settled this place. Since this period it has undergone many revolutions. Hither Lootf AH Khan, the last of the Zund dynasty, fled from the city of Kerman, and was treacher- ously seized in the year 1794, while in the act of mounting his horse to escape. Being sent to Mahomed Aga Khan, the king of Persia, he, with his own hands, put out Lootf Ali's eyes, and afterwards ordered him to be strangled at Teheran. On the spot of his capture was raised a pyramid formed of 900 of the heads of his followers.

BUMP'ER, Belg. bovboord. Above the bor- der or edge- A glass filled to the brim. Any place or thing over-filled.

Places his delight

All day in playing bumpers, and at night Reels to the bawds. Dryden's Juvenal.

He cherished his friend, and he relished a bumper > Yet one fault he had, and that one was a thumper.

Goldsmith's Retaliation-

BUMP'KIN, | Perhaps from boobykin says

BUMP'KINLY. } Thomson. This word, says Johnson, is of uncertain etymology ; Henshaw derives it from pumpkin, a kind of worthless gourd, or melon. This seems harsh ; yet we use the word cabbage-head in the same sense. Bump is used amongst us for a knob, or lump : may not bumpkin be much the same with clodpate, log- gerhead, block, and blockhead ? An awkward heavy rustic ; a country lout.

The poor bumpkin, that had never heard of such delights before, blessed

herself at the change of her condition. L'Estrange.

A heavy bumpkin, ta'ught with daily care, Can never dance three steps with a becoming air.

Dry den.

In his white cloak, the magistrate appears ; The country bumpkin the same livery wears. Id.

It was a favor to admit them to breeding ; they might be ignorant bumpkins and clowns, if they pleased.

Locke.

Hs is a simple, blundering, and yet conceited fel- iow, who, aiming at description, and the rustick won- derful, gives an air of bumphinly romance to all he tells. Clarissa.

BUNCH', v. &n. } Goth, bunds; Dan. bundt;

BUN'CHY, > Swed. bunt; Swed. bunke,

BUNCH'BACKED. j from Isl. bunga, to swell. Thus, its first sense is a cluster, a knot tied together, a bundle ; its next meaning is a hump, or boss; a hard lump, or knob. To tie, to bind as in a cluster; to swell out, to grow out in pro- tuberances.

They will carry their treasures upon the lunches of camels, to a people that shall not profit them.

Isaiah, xxx. 6.

His locks, like faded leaves, fallen to ground, Knotted with blood in bvunc.hes rudely ran ; And his s-vete lips, on which before that stound The bud of youth to blossome faire began, Spoiled of their losy red, were woxen pale and wan.

Sptiuer.

Upon the top of all his loftie crest A bounch of heares discoloured diversely, With sprincled pearle and gold full richly drest, Did shake, and seemed to daunce for iollity. Id.

And on his arms a bunch of keys he bore.

Id. Faerie Queene.

The day shall come, that thou shall wish for me, To help thee curse this poisonous hunchbacked toid.

Shahspeare.

All ! I know not what ye call all ; but if I fought not with fifty of them, I am a bunch of raddish. lit, Vines, with clustering bunches growing. Id.

Titian said that he knew no better rule for the dis- tribution of the lights and shadows, than his observa- tions drawn from a bunch of grapes. Id.

For thee, large bunches load the bending vine, And the last blessings of the year are thine. Dryden.

Ancient Janus, with his double face And bunch of keys, the porter of the place. Id.

The mother's bunch of keys, or any thing they can- not hurt themselves with, serve to divert little chil- dren. Locke. He felt the ground, which he had wont to find even and soft, to be grown hard, with little round balls or bunches, like hard boiled eggs. Boyle. It has the resemblance of a champignon before it is opened, bunching out into a large round knob at one end. Woodward. He is more especially distinguished from other birds, by his bunchy tail, and the shortness of his legs.

Grew.

BUNCOMB, a county of the United States, in North Carolina, situated in Morgan district. It is the largest and most westerly county in that state ; and is bounded on the east by those of Rutherford and Burke ; on the south by South Carolina, and on the north and west by the New State of Tennessee. This county having been formed from those of Burke and Ruther- ford, since the general census was taken, its pre- sent population is not known. It is hilly, the Blue Mountains passing through it to South Carolina. Its principal rivers are the Catabaw, Pacolet, and Broad River.

BUNDELCUND, or BANDELKHAND, a Hin- dostan district in the' province of Allahabad, lying principally between 24Ā° and 26Ā° of north latitude, between the rivers Cane and Betwah, and occupying an extent of about 11,000 square miles. In general, this country is mountainous and badly cultivated ; the face of it being a heavy close jungle, abounding with tigers. The hills are covered with small coppice wood, there being few timber trees of a large size ; in the neighbourhood of Adjyghur, the whole of the Ghauts, and almost every hill is a table land, and the country one of the strongest in the world, the hills being from their great height and steepness, natural fortresses. The soil in some places is rich, and produces a

number of teak trees, which are, however, of stunted growth.

The diamond mines of Pannah are in this district; in the time of Acber they were valued at eight lacks of rupees, and produced Ā£100,000 per annum, but are not now so productive ; in 1750 they were not worth more than Ā £50,000 per annum : their value since has never been regularly ascertained. The chief towns besides Pannat, late the residence of an independent

BUNDELCUND.

rajah, are Chatterpoor, Teary, and Jyghtpoor, gush. About the middle of the last century Callinjer, Jhanse, Dulteen, and Bejaour. The during the government of the Rajah Chattersaul Pannah mines are situated in a range of hills this territory was invaded by the chief of Fur- called Bund-Ahill by the natives, extending ruckabad ; when the rajah, to aid him in repelling above twenty miles in length by between two the enemy, obtained the support of the Peshwa and three in breadth, and are said to be par- Sewai Bajerow, on the condition of adopting titioned into twenty-one divisions. Of these, him. Having driven off the invader, he par- the mines of Maharajepoor, Rajepoor, Kim- titioned Bundelcund between him and two of merah, and Guddaseah, contain the finest his own sons, allotting him a third of his do- diamonds; one dug from the last has been re- minions, the land revenue of which was estimat- puted the largest now known. ed at about Ā£1,300,000 sterling. He left also The inhabitants, called Bondelas, are proud, a numerous race of dependent children. Civil brave, and warlike, ever acting under the full wars soon ensued from this state of things, and impulse of those violent passions which sway the weakness of the chiefs afforded a temptation the inhabitants of the east. A catastrophe oc- for other invasions. Rajah Himmut Bahaudar, curred not long ago, when the fortress of who commanded a great body of cavalry, and Adjyghur was evacuated to the British, which was the spiritual head and military leader of a fully elucidates this : ā The removal of the numerous sect of devotees called Gosseins, family of the Zemindar, who had occasioned united with Ali Bahauder, an illegitimate grand- hostilities, having been directed, his father-in- son of ˆBajeroci, in 1786, in a project of this

law was desired to prepare the females for it. Instead of doing so, however, he murdered the whole family, and their children, eight in num- ber, and then put an end to his own existence.

kind. The actual invasion took place in 1789, when Ali Bahauder, acting in the name of the peshwa, conquered much of the district.

Several years elapsed before the establish-

What was still more extraordinary, the perpe- ment of the Mahratta authority ; and though an

tration of his horrible deed was apparently with the consent, and at any rate without any corn-

arrangement was made whereby the Peshwa was acknowledged lord paramount of all the

plaint on the part of the sufferers. The Bon- conquests effected in Bundelcund by Ali Bahau-

delas are either Bramins or Rajpoots.

der, and tribute assigned to him accordingly, the

Under the former chiefs the government was latter contrived to evade all the conditions ot

denominated the Hindupati of Bundelcund, the the treaty. He was succeeded in 1802 by his

rajahs being of the Bundela tribe of Rajpoots, eldest son, Shumshere Bahauder, then absent at

Their founder was Rajah Beer Singh, from whom Poonah, and a regent of Bundelcund was ap-

the family of the Oorcha chief is descended, pointed until his return.

Bundelcund was from a remote period divided A war now broke out between the British and

into several petty sovereignties. Rajahs of the Mahrattas, and Himmut Bahauder, a chief

Callinger are mentioned by Mahommedan wri- of great power here, endeavoured to accomplish

ters so early as the eleventh century, but it does the transference of this district to the former,

not appear to have been incorporated with Bun- Colonel Powell, in September 1823, accordingly

delcund for several centuries afterwards. In the crossed the Jumna for the purpose of entering

sixteenth century, a bondela, living in Benares, Bundelcund, and was joined by Himmut with a

removed, we are told, to a fort in the district of body of 13,000 or 14,000 men.

Ouncha, then governed by a rajah, whose conn- A proposal was at this juncture made by the

dence he obtained. This bondela had a daugh- Mahrattas, for the cession of a portion of the

ter of great beauty, of whom the rajah became enamoured, and demanded her in marriage. Consent being obtained, the rajah was invited

territory of Bundelcund to the British, in lieu of certain districts in the Deccan, which had been previously ceded. Troops were also stationed

to the house of her father, where the ceremony in Bundelcund for the protection of other parts,

was to be performed, and where a splendid en- and successive arrangements of a conciliatory

tertainment was prepared, of which he partook nature were made with Shumshere, and the rest

plentifully, but, poison having been treacherously of the chiefs, whereby the British authority soow

administered, when the victims became incapa- became established. It was thought expedient

ble of defence, the prince and his attendants however, in 1807, to bestow a considerable trac.

were all basely massacred. The bondela then of country on a descendant of the regent Chut

placed himself on the musnud of the rajah, tersal, on condition of his guarding the passes

which he enjoyed with undeserved peace until his death. He was succeeded by Ber Sing Deo, his son, whose descendant is the rajah of Ouncha,

accused of being a great plunderer, and he gained an accession of power by his services to the Soubahdar of Allahabad. His history is stained by the assassination of the celebrated Abul Fazel, prime minister of Ackbar, in which it is said he acted in compliance with the wishes of Jehangeer, the emperor's son, who was jealous of Abul Fazel's influence over his father, and who, on his accession to the throne of Delhi, entrusted Ber Sing Deo with the go- vernment of all Bundelcund, then called Dun- viz. VOL. IV.

arrangements were also made, conceding to the chief of Calpee, on the confines of Bundelcund, a portion of the interior, in lieu of the city and district of Calpee, and several villages on the Jumna. Meantime the fortress of Callinjer was besieged, and though . assaulted more than once in vain, finally carried : and Bundelcund was ultimately formed into a British district, subor dinate to the Benares court of circuit, and a civil establishment appointed for the administra- tion of justice, and collection of the revenue.

*In 1805 the estimated revenue derived bj the British from Bundelcund was as follow**

2 X

BUN

674

BUN

The several districts then actually possessed by government, inclu- ding Calpec, and part of Rypoor, on the banks of the Jumna . . 1,400,000

The territory of rajah Himmut Ba-

hauder 1533,184

The districts of Callinjer, Jeypoor, Huldei, and part of Cutolee, be- low the Ghauts, estimated at five lacks of rupees, but chargeable ā¢with Jaghires and provisions for the native leaders 500,000

The city and diamond mines of Pan- nah, with a portion of territory adjacent, the probable revenue being 200,000

Rupees 3,633,184

BUN'DLE, v. & n. Goth, bindel ; Swed. byn- del; Belg. bondel. See To BIND. Various things tied together, a package ; a roll, any thing rolled up.

To bundle, is to tie; to fasten to- gether ; to roll up ; vulgarly to take ones' self off. As to the bundles of petitions in parliament, they ā¢were, for the most part, petitions of private persons.

Hale.

Try lads, can you this bundle break j ā Then bids the youngest of the six Take up a well-bound heap of sticks. Swift.

See how the double nation lies. Like a rich coat with skirts of frize j As if a man, in making posies, Should bundle thistles up with roses. Id.

She carried a great bundle of Flanders lace under her arm ; but finding herself overloaden, she dropped the good man, and brought away the bundle.

Spectator.

BUNDLES, records of the chancery, lying in the office of the rolls; in which are contained the files of bills and answers; of Hab. Cor. cum causa; certiorari's ; attachments, &c. scire facias's; certificates of statute-staple; extents and liberates ; supersedeas's ; bails on special pardons ; bills from the Exchequer of the names of sheriffs ; privy seals for grants ; bills signed by the king ; warrants of escheators, &c. BUNG'u.&n. > Dan. bundt ; Fr. boudon. BUNG'HOLE. 5 See BUNCH. A bunch; a plug; a stopper. Bunghole is the hole in a cask to receive the bung ; but the vulgar bung is sup- posed to mean the aperture. Bung is by the common people frequently used as a verb; to bung up, in boxing, is to close up the eyes.

Why may not imagination trace the noblest dust of Alexander, till he find it stopping a bunghole ?

Shakspeare.

After three nights are expired, the next morning pull out the bung, stick, or plug. Mortimer.

BUNGALOW, an Indian term for a house with a thatched roof.

BUNGAY, a market town of Suffolk, in the hundred of Wangford, situated on the river Waveney. The town consists of two parishes, St. Mary's and the Holy Trinity, and is well built. The river Waveney enables the inhabi- tants to carry on a considerable trade in corn, malt, coals and lime Numbers of women are also

employed in knitting stockings. St. Mary's church is a handsome structure.

The church of the Holy Trinity was impropriated to the priory of Barlynch, in Somerset, but now belongs to the bishop of Ely. Here are the ruins of a castle, supposed to have been built by the Bygods, earls of Norfolk, which was formerly fortified. A fire which happened in 1683, consumed the whole town, with the exception of one street. Market on Thursday. Fairs, 14th May and 25th Sep- tember.

BUNGISHAT, a district of Afghaunistaun, in the province of Cabul, situated about the thirty- third degree of north latitude. It is bounded on the east by the river Indus, and intersected by the Cowmul, along the south side of which Scy- lax is conjectured to have built his vessels, and from thence to have sailed down the Indus. The principal towns are Gawhaut, Kohaut, and Bunnoo. The tribe of Bungish emigrated from Tirah.

BUN'GLE, v. & ra. ˆ Welsh bwnghr ; q. ban BUN'GLER, >y gttr, i. e. the last or

BUN'GLINGIY. 3 lowest of the profession. ā Davies. A bad workman ; a clumsy performer ; a man without skill. To make a botch; to manage clumsjly; to conduct awkwardly.

Other devils, that suggest by treasons, Do botch and bungle up damnation, With patches, colours, and with forms, being fetcht From glistering semblances of piety. Shakspeare

When men want light

They make but bungling work. Dryden,

Hard features every bungler can command ; To draw true beauty shews a master's hand. Id

To see the bungler thus distrest The very fishes sneer and jest, Even gudgeons join in ridicule To mortify the medding fool. Gay's Fables.

A bungler thus, wha scarce the nail can hit, With driving wrong ā¢will make the pannel split.

Swift.

Errours and bungles are committed, when the matter is inapt or contumacious. Ray on the Creation.

To denominate them monsters, they must have had some system of parts, compounded of solids and fluids, that executed, though but bunglingly, their peculiar functions. Bentley.

BUNCO, a district or kingdom of Japan, in the island of Ximo. The king was baptised by the name of Francis Civan, and sent an embassy to Pope Gregory XIII. in the year 1582. Its capital is Fumay. Long. 132Ã° E., lat. 32Ã° 40′ N.

BUNIAS, in botany, a genus of the order si- liquosa and tetradynamia class of plants : The siliqua is deciduous, four sided, muriated, or shagreened, with unequal pointed angles, without valve, two or four celled. There are eight spe- cies ; all annual plants, and natives of the north of Europe.

BUNIUM, PIG-NUT, or EARTH-NUT, in bota- ny, a genus of the digynia order, and the pen- tandria class of plants : natural order, forty-fifth umbellatas. COR. uniform, the umbel thick, and the fruit ovate. There are but four known spe- cies. B. bulbocastanum is the chief. It grows naturally in moist pastures is Britain, and has a tuberous solid root, which lies dead on the

ground. The roots of this sort are frequently dug up, and by some people eaten raw. They have much resemblance in taste to a chestnut, whence their specific name.

BUNKER'S HILL, a high ground in the state of Massachusetts, which over- looks the whole city of Boston ; rendered memorable by the redoubt erected upon it by the Americans, and consequent action fought, in the beginning of the American war. See AMERICA.

BUNN'. Ital. bugna; fr.bignet, Span, bu- nela; /3otn>was a honey cake offered to the gods; and Sax. beon, bread, honeycomb. French big- nets are little round loaves, or lumps, made of fine meal, oil, or butter, and raisins. In English bunn is a kind of sweet bread.

Thy songs are sweeter to mine ear, Than to the thirsty cattle rivers clear, Or winter porridge to the laboring youth, Or bunns and sugar to the damsel's tooth.

Gay's Pastorals.

BUNT',] Goth, bogt , Sax. bugunt ; Dan.

BUNT'ER.] bug, bugt ; Belg. bogt. See To BEND. Bunt is the middle part

of a sail when filled with the wind ; bending, swelling out. Bunt, says the Encyclopaedia Metropolitana, are perhaps bent or broken bits ; and he infers if this be correct, bunter may have been originally ap- plied to one who picks up bits of any thing about the streets or ways, and then to any low woman. But it is far more probable that this offensive term is from the Belgic voden hoer, from vod, a rag, a wad, that is, a ragged wench, a slut. The Saxon butan hure, signifies a hedge-whore, or outlier.

The wear is a frith, reaching slopewise through the ooze, from the land to low water mark, and having in it a bunt, or cod, with an eye-hook. Carew.

Having not flint evermore readie at hand to smite and kindle fire withall, they make shift for to rub and grate one wood against another, and by this attrition there flie out sparkles, which lighting upon some tin- der, made either of drie rotten touchwood or of bunts and withered leaves, very quickly catch fire, and burne not out. Holland's Plinie, vol. i. fol. 490.

See how she's dressed, as fine as hands and pins can make her, while her two marriageable daughters, like hunters in stuff gowns, are now taking sixpenny- ā¢worth of tea at the White Conduit-house.

Goldsmith. The Bee, No. 2. On Dress.

BUNT LINES, are small lines made fast to the bottom of the sails, in the middle part of the bolt rope, to a cringle, and are so reeved through a small block, seized to the yard. Their use is to trice up the bunt of the sail for the better furl- ing it up.

BUNT OF A SAIL, the middle part of it, formed designedly into a bag or cavity, that the sail may gather more wind. It is used mostly in top- sails, because coursers are generally cut square, or with but small allowance for bunt or compass. The bunt holds much to leeward wind ; that is, it hangs much to leeward.

BUNTING. Welsh bontinawg, fat rump, Belg. bunting, however signified speckled. Its first application is to a kind of lark ; the vulgar name of the emberiza miliaria. Its next refe- rence is to a kind of the open stuff used for ships' colors, corrupted from bolting cloth.

BUNTINGˆ in ornithology. See EMBERIZA,

BUNTINGFORD, a market town of Hert- fordshire, in the hundred of Edwintree, ten miles north fromWare, and thirty-one west from London . The church is situated about half a mile from the town ; and is a handsome ancient building. There is also an alms-house and a free-school. Market-day, Monday.

BUNTZLAU, a circle and town of Bohemia, , is bounded on the east by the circle of Konings- gratz, on the south by that of Kaurzim, on the west by Leutmeretz, and on the north by Silesia and Lusatia. The northern part is mountainous, and includes a portion of the Reisengebirg ; se- veral large forests, and many flourishing manu- factories of linen, glass, and wool. The rivers which flow from these mountains yield different kinds of precious stones. The level tracts are in general dry and gravselly, but yield noble crops of corn and flax, and an abundance of hops, wine, and fruits. The rivers also afford various precious ores. The whole circle contains 1880 square miles, thirty-eight lordships, thirty-one market boroughs, twelve towns, and 1 000 villages, with a population of 280,000 inhabitants. Buntz- lau, the capital, has some good manufactures of leather, cloth, iron, and soap, together with a re- spectable manufactory, and about 1000 inhabi- tants. It is twenty-eight miles N. N. E. of Prague, and fifty-eight north-east of Dresden. Old Buntzlau is a smaller place of the same circle.

BUNTZLAU, Silesia, is a town of Silesia, capi- tal of a circle in the province of Jauer. Here are manufactured linen, pottery ware, and woollen cloths. Population 3300. It is twenty-six miles north-west of Jauer, and forty-two west of Schweidnitz.

BUNWOOT, an island lying off the west coast of Mindanao in the Eastern seas, opposite to Mindanao river. It is about eighteen miles in circuit, and has on the north side a harbour called Ubal, almost circular, which is conjec- tured to have been the crater of a volcano. The island is remarkably healthy and fruitful, and nearly covered with tall timber. Here is a vine, the thickest part of which is about the size of a man's leg, and, being bruised with a hard mallet, it yields a kind of juice which is converted into a useful lee. Wild hogs, monkeys, lizards, and a brown spotted snake, about eighteen inches long, said to be poisonous, are found here. This iland was granted to the East India Company, by the sultan of Magindanao, in 1775.

BUNYAN (John), author of the well-known Pilgrim's Progress, was born at Elstow near Bedford, in 1628. He was the son of a tinker; and in the early part of his life a soldier in the parliamentary army. He for some years led a very dissolute life, but at length began to study the Scriptures, and about 1655 was admitted a member of a Baptist congregation at Bedford, of which he was soon after chosen pastor ; but, in 1660, being taken up for presuming to preach, was committed to jail, where he supported his

family by making tagged laces. In this unjust and cruel confinement he wrote his Pilgrmc's Progress, a religious allegory, which has passed through some hundreds of editions, and been translated into most of the languages of Europe.

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He was also the author of another work of a similar nature, entitled The Holy War. Here he was detained twelve years and a half, and dur- ing that time wrote many of his tracts ; but was at length discharged by the humane interposition of Barlow, bishop of Lincoln. When King James's declaration for liberty of conscience was published, he resumed his sacred duties. He at length died of a fever in London, 1688, aged sixty. His works have been collected together, and printed in 2 vols. fol.

BUONAPARTE (Napoleon). See NAPO- LEON.

BUOY', v. & n. ā¢) Bel. boei, Fr. boye, Ital.

BUOY'ANCY, > boya, Dan. bage, Belg. boei-

BUOY'ANT. Jjen, opboeijen. The noun is applied to a float set in the water; a kind of tub fastened to the anchor of a ship to mark where it lies. The verb signifies to float, to bear on high, to elevate, to sustain, as the float swims, upheld by the water. Buoyancy is lightness, elasticity, alacrity in swimming and keeping up.

The fishermen, that walk upon the beach, Appear like mice : and yon tall anchoring bark Diminished to her cock ; her cock a buoy, Almost too small for sight. Shakspeare. King Lear.

All art is used to sink episcopacy, and launch pres- bytery, in England ; which was lately buoyed up in Scotland, by the like artifice of a covenant.

King Charles.

All the winged tribes owe their flight and buoyancy to it. Derham's Physico-Theology.

The water which rises out of the abyss, for the sup- ply of springs and rivers, would not have stopped at i,he surface of the earth, but marched directly up into .he atmosphere, wherever there was heat enough in .fee air to continue its ascent, and bvoy it up.

Woodward's Nat. Hint. Like buoys that never sink into the flood,

On learning's surface we but lie and nod.

Pope's Dunciad. Rising merit will buoy up at last.

Id. Essay on Criticism. His once so vivid nerves, So full of buoyant spirit now no more Inspire the course. Thomson's Autumn.

BUOY, in sea affairs, a sort of close cask, or block of wood, fastened by a rope to the anchor, to determine the place where the anchor is situated, that the ship may not come too near it, to en- tangle her cable about the stock or flukes of it. Buoys are of various kinds ; as,

Cable buoys are common casks employed to buoy up the cables in different places from rocky ground. In the harbour of Alexandria in Egypt every ship is moored with at least three cables, and has three or four of these buoys on each ca- jle for this pupose.

Can or cone buoys, these are in the form of a cone ; and of this construction are all the buoys which are floated over dangerous banks and shallows, as a warning to passing ships, that they may avoid them. They are extremely large, that they may be seen at a distance ; and are fastened by long chains to the anchors which are sunk for that purpose at such places, See ibe diagram annexed

Nun buoys are shaped like the middle frustrum of two cones, abut- ting upon one common base, being casks, which are large in the middle, and tapering nearly to a point at each end. See the annexed diagram.

The following diagram of an anchor with its buoys and ropes complete will best show their use. A is the great cable buoy, B the buoy-rope with the buoy floating at the surface of the water, C the sustaining ball to prevent the buoy-rope from getting foul of the flukes, &c. of the anchor and cutting; but except on rocky shores this ball is seldom used.

Mr. Peache, of Lambeth, took out a patent for a floating buoy on a new construction in April, 1807. It is formed by pieces of wood longitudinally applied to each other, after the manner of staves ; but instead of making the joints to consist of flat surfaces, evenly or squarely applied to or against each other, they are rabbet- ted together, by making the half thickness of each piece to overlap the other. The faces are to be tarred, and applied to each other, and upon one of them is spread a covering of hair, &c. and upon this is applied, in a melted state, a coat of pitch and tar, after which the joints are put together, and secured by screws, pins, bolts, and by hoops enveloping the whole. The heads of the buoys are put in by rabbetting the saire in with the staves : the fitting is made good by several steps or successive faces in the joints, between which, pitch, tar, hair, &c. are

Applied, and, for greater security, there are sometimes two, or even more, additional heads, fixed within the external heads.

BUOY-ROPE, the rope which fastens the buoy to the anchor : it should be little more than equal in length to the depth of the water where the an- chor lies, as it is intended to float near, or im- mediately above, the bed of it, that the pilot may at all times know the situation. The buoy-rope is often extremely useful in drawing up the an-

chor when the cable is broke. It should always, therefore, be of sufficient strength for this pur- pose, or else the anchor may be lost through negligence.

BUOY, SLINGS OF THE, the ropes which are fastened about it, and by which it is hung : they are curiously spliced around it, something resem- bling the braces of a drum.

BUOY, To STREAM THE, is to let it fall fiom the ship's side into the water; which is always done before they let go the anchor, that it may not be retarded by the buoy-rope as it sinks to the bottom.

BUPALUS, a celebrated sculptor, a native of the island of Chios. lie had a brother, named Athenis, of the same profession. They flourished about the sixtieth Olympiad ; and were contem- temporary with Hipponax, a deformed poet. Our sculptors diverted themselves in represent- ing him under a ridiculous form, upon which Hipponax wrote so sharp a satire against them, that they hanged themselves. Pliny, however, says, that they made several fine statues after Hipponax had taken his revenge ; particularly a Diana at Chios, which was placed very high, and appeared with a frowning countenance to those that came in and with a pleasant one to those that went out. There were several statues at Rome made by them ; they worked only in the white marble of the Isle of Paros. Pausanias mentions Bupalus as a good architect as well as sculptor ; but says nothing of Athenis.

BUPARIA, in entomology, a winged species ofpimelia, the tenebrio buparius of Forster; color black, and glabrous; thorax lunated; jaws strong, toothed, and as long as the head. It in- habits Spain.

BUPHAGA, in ornithology, a genus belong- ing to the order of picae. The

beak is straight and quadrangular; the mandibles are gibbous, entire, and the gibbosity is greater on the out- side. The feet are of the ambulatory kind. The body is grayish above, and of a dirty yellow be- low ; the tail is shaped like a wedge. There is but one species, viz. B. Africana, the African beef-eater, a native of Senegal. It frequently perches upon oxen to pick out the larva of the oestri from their backs.

BUPHONIA, from /3Ā«e, ox, and 0wvĀ»j, slaughter ; in antiquity, an Athenian feast. We are told it was forbidden, by the laws of Attica, to kill an ox ; but it once happened, at the feast of the dipolia, that an ox ate the corn, others say the cakes, which had been dressed for the sacrifice. Thaulon the priest, enraged at this, immediately killed him, and fled for it. On which the Athenians, fearing the resentment of the gods, and feigning themselves ignorant as to who had committed the fact, brought the bloody axe before the judges, where it was solemnly ar- raigned, tried, found guilty, and condemned ! In memory of the event this feast was instituted, in which it was customary for the priest to fly, and judgment to be -given about the slaughter of the ox.

BUPHTHALMUM, ox-eye; a genus of the polygamia superflua order, and syngenesia class of plants ; natural order forty-ninth, composite, The receptacle is paleaceous ; the pappus an in-

different rim ; the seeds, especially those of the radius, emarginated on the sides ; the stigmata of the hermaphrodite florets undivided. There are twenty species ; the most remarkable are : B. ar- borescens, rising with several woody stems to the height of eight or ten feet, with pale yellow flowers. 2. B. helianthoides, a native of North America.

BUPHTHALMUS, in botany, a name given by some of the ancients to the great house-leek, or sedum majus, from the manner of its growing in clusters resembling the eyes of large animals.

BUPLEURUM, hare's ear, or thoroughwax : a genus of the digynia order, and pentandria class of plants ; natural order forty-fifth, umbel- latae. The involucra of the partial umbels are large in proportion, and pentaphillous ; the petals involuted, or rolled inwards ; the fruit roundish, compressed, and striated. The principal species is the B. fruticosumˆor shrubby Ethiopian hart- wort. It rises with a shrubby stem, dividing into numerous branches, forming a bushy head five or six feet high, adorned with oblong, oval, entire leaves, placed alternate, with yellow flowers in umbels at the ends of the branches, which appear in July and August, and are sometimes succeeded by ripe seeds. It may be propagated by cuttings. This plant was formerly celebrated for curing ruptures, mixed into a poultice with wine and oatmeal.

BUPRESTIS, in entomology, a genus of in- sects belonging to the order of coleoptera. The antenna are setaceous and serrated, and as long as the thorax: the head is half drawn back within the thorax : the mouth is armed with jaws, and furnished with palpi : the elytra are margi- nated, and cover the abdomen ; and the tarsi have five articulations : the feet are saltatorii. Linnaeus, Fabricius, and Gmelin, describe the following species : ā unidentata,bicolor, gigantea, vittata, fastuosa, punctatissima, corrusca, decora, berolinensis, bbscura, lurida, punctata, fasciata, striata, rauca, ritulans, octoguttata, ignita, lineata, aerosa, ocellata, maculosa, maculata, stricta, sternicornis, chrysis, violacea, aegypatica, mari- ana, farinosa, fulminans, cyanipes, modesta, blanda, aurata, elegans, tripunctata, chrysoslig- ma, dorsata, impressa, ornata, taeniata, Cayen- nensis, cylindrica, trochilus, scabra, decastigma, canaliculata, rustica, acuminata, plebeja, Tran- quebarica, lugubris, cariosa, undata, Austriaca, splendens, sibirica, fusca, tenebrionis, aurulenta, fascicularis, variolaris, onopordi, hirta, deaurata, rubi, nilidula, laeta, cyanea, salicis, discoidea, quadrimaculata, bimaculata, novem-maculata, tristis, aenea, cuprea, nobilis, barbarica, umbel- latarum, quadripunctata, cruciata, manca, pyg- maea, meditabund a, min uta, virid is, atra, biguttata, elata, ruficollis, linearis, festiva, granularis, depres- sa, calcarata, fuliginosa, haemorrhoidalis, quer- cus, hirsuta, 11 -maculata, sex-maculata, varicor- nis, acuta, na?via, picta, inaurata, tatarica, Vir- ginica, nana, marginata, nigra, rosacea, ungar- ica, nebulosa, bruttia, stephanelli, rugosa, and coccinea.

BUPRESTOIDES, in entomology, a species of attelabus ; color black ; shells nervous ; thorax globular. This is the buprestis ater of L,innatuĀ« Also a species of carabus ; color black ; antenna

and feelers ferruginous ; legs piceous. Inhabits the south of Europe.

BUR, BOUR, BOK, come from the Sax. bun, an inner chamber, or place of shade and retire- ment.

BUR', n. s. Lat. lappa, Fr. bourre, is down ; the bur being filled with a soft tomentum or down. A rough head of a plant, called a burdock, which sticks to the hair or clothes. Nothing teems

But hateful docks, rough thistles, kecksies, burs,

Losing both beauty and utility.

Shakspeare. Henry V.

Hang off, thou cat, thou bur ; vile thing, let loose ; Or I will shake thee from me like a serpent. Id.

Dependents and suitors are always the burs, and sometimes the briers, of favourites. Wotton.

And where the vales with violets once were crowned, Now knotty burs and thorns disgrace the ground.

Dryden.

A fellow stuck like a bur, that there was no shaking him off. Arbuthnot's Hist, of John Bull.

BUR, in chivalry, a broad ring of iron behind the place made for the hand on the spears used formerly in tilting ; which bur was brought to rest when the tilter charged his spear.

BURBER, an Egyptian piece of copper money ; thick and as broad as a sixpence ; twelve of them make a medine.

BUR'BOT, n. s. A fish full of prickles. It is the English name of the mustela feuviatilis, a fish common in the Trent and other rivers in England. It is also called the eel-pout and is the gadus lota of Linnaeus.

BURCA, among the Turks, the name of the rich covering of the door of the house at Mecca ; it is ten feet long and five wide ; and there are several figures and Arabic letters on it, very richly embroidered in gold, on a ground of red and green. It is carried about in their solemn processioas, and is often stopped that the people may touch it.

BURCKHARDT (J. Lewis), was the son of Jolonel Gideon Burckhardt, born at Lausanne in Switzerland, in 1784. He was educated at Leip- sic and Gottingen, and in 1806 visited England; where he offered his services to the African Asso- ciation. His proposals were accepted, and he went to Cambridge to study Arabic, and acquire other necessary knowledge. In March, 1809, he sailed for the Mediterranean and Aleppo, ā¢where he adopted the name of Ibrahim, and as- sumed the character of a Mussulman. He con- tinued two years and a half in Syria, and made himself familiar with all the spoken dialects of the country. He set off for Nubia in the begin- ning of 1813; crossed the Red Sea; and, after visiting Mecca and Medina, arrived at Cairo in June 1815. The following spring he

took his journey to mount Sinai, and, returning to Cairo, proposed to join one of the trading caravans to Timbuctoo ; but the caravan was delayed by the disturbed state of the country. When the opportunity at last arrived he was seized with dysentery, and died, after a short illness, at Cairo. His papers were sent to the African Association, who published, in 1819, his Travels in Nubia; and afterwards his Travels in Syria and the Holy Land.

BURDEGALA, or BURDIGALA, in ancient geography, a trading port town of Aquitania, the . birth place of Ausonius. It is now called Bour- deaux.

BUR'DELAIS, n. s. A sort of grape. BUR'DEN, v. & n. orˆ Per. burdon, Sax. BUR'THEN, 1 byrden, Goth, burd,

BUR'DEN ING, [Swed. borda, Sax.

BUR'DENER, f beart, from bear, to

BUR'DENOUS, 1 carry, as fopriov from

BUR'DENSOME. j tpw. Thus it signi-

fies a load, a weight that is borne. It has ano- ther sense, namely the purport or bearing of a song ; perhaps from Ital. bordone, Fr. bourdon, Welsh byrdon, the bass or drone in music, Goth. bijar dyn, the sound of bees- Burden is some- times used not only to signify what is borne, but the capacity to bear, as the capacity of a ship ; thus we say a ship of 100 tons burden. It is metaphorically descriptive of grief, oppression, weariness, and misery.

Burden not thyself above thy power.

Eccltis. xiii. 2.

I mean not that other men be eased, and you bur- dened. Corinthians viii. 13.

And thei would bind on folke alwaie (That ben to be begiled able), Burdons that ben importable.

Chaucer. Romaunt of the Rose. Long time ye both in armes shall beare great sway, Till thy wombes burden thee from them do call, And his last fate him from thee take away, Too rathe cut off by practice criminall Of secret foes, that him shall make in mischief e fall.

Spenser.

So on a morrow forth, unwist of any wight, I went to prove how well it

would my heavy burden

light,

And when I felt the air so pleasant round about, Lord ! to myself how glad I was that I had gotten out.

Earl of Surrey. Camels have their provender Only for bearing burdens, and sore blows For sinking under them. Shakspeare. Coriolanut. Make no jest of that which hath so earnestly pierced me through, nor let that be light to thee which to me is so burdenous. Sidney.

So once the cradle of that light, Whereof one rules the night, the other the day, Till sad Latona, flying Juno's spite, Her double burthen there did safely lay.

Fletcher's Purple Island.

It is of use in lading of ships, and may help to shew what burden, in the several kinds, they will bear.

Bacon's Physical Remains. Couldst thou support That burden, heavier than the earth to bear ?.

Milton.

His leisure told him that his time was come, And lack of load made his life burdensome. Id.

At every close she made, the attending throng Replied, and bore the burden of the song.

Dryden's Fables.

Assistances always attending us, upon the easy con- dition of our prayers, and by which the most burden- some duty will become light and easy. Rogers. None of the things that are to learn, should ever be made a burden to them, or imposed on them as a task. Locke.

Deaf, giddy, helpless, left alone, 1 o all my friends a burden grown. Sieift.

UERTIIA. That back of thine may bear its burthen,

‘ā¢is More liign, if not so broad as that of others.

ARNOLD. It bears its burthen; ā but my heart.’

will it Sustain that which you lay upon it, mother ?

BURE (William de), a Paris bookseller, and bibliographer of great reputation. His principal work, which is a standard performance, is Bibliographie Instructive ou Traite des Livres rares et singulieres, Paris, 1763, 7 vols. 8vo. He also Byres’ Deforn̂rTransformed. Published a Catalogue of the Library of M. de

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Typo- died respected in

BURDEN, or BURDOH, bourdon, French, in music, the drone or bass, and the pipe or string which plays it : hence the burden of a song. A chord which is to be divided to perform the in- tervals of music, when open and undivided, is also called the burden.

BURDEN OF A SHIP, is its contents, or the number of tons it will carry. It may be deter- mined thus : multiply the length of the keel, taken within board, by the breadth of the ship, within board, taken from the midship-beam, from plank to plank ; and multiply the product by the depth of the hold, taken from the plank below the keelson, to the under part of the upper deck plank; and divide the last product by ninety- four ; the quotient is the content of the tonnage required. See FREIGHT.

BURDEN, SHIPS OF, denote those of a larger and heavier sort, carrying 500 tons, or upwards.

BURDO, in physiology, a mongrel beast of rough, which apparently has the same root in burden, produced by a horse and she-ass, by Goth< be to defend < Burgage is a tenure which it is distinguished from the mule, which

BU’REAU, n. s. Fr. bureau. A chest of drawers with a writing-board. It is pronounced as if it were spelt buro.

For not the desk with silver nails,

Nor bureau of expense, Nor standish well japanned, avails,

To writing of good sense. Swift,

BURG',

BUR'GAGE,

BUR'GESS,

BURGH',

BURGH'ER,

BURGH'MOTE,

BURG'OMASTER,

BUR'GRAVE.

Arab, boorj, Chald. bur- gadh, Ilupyof, Swed. borg, Goth, berg, biarg, Sax. beorg, Goth, borg, Sax. Teut. Bel. burg, Arm. and Irish burg, Welsh bourg, Fr. lourg, lial. borgo. A tower, a mount, a hill, a

walled town; sometimes confounded with bo-

is that produced by a male ass of a mare.

BUR'DOCK, n. s. Persnoata. A plant. See ARCTIUM.

BURDON (William), was bom in 1764, at Newcastle-upon-Tyne, and educated at Emanuel College, Cambridge, where he took his degrees in arts, and obtained a fellowship, which, as he would not enter into orders, he resigned. He died in London in 1818. His works are: 1. Life and Character of Buonaparte. 2. Exami- nation of the Pursuits of Literature, 8vo. 3. Materials for Thinking, 2 vols. 8vo. 4. Three Letters to the Bishop of Llandaff. 5. Letters on the Affairs of Spain. 6. Thoughts on Po- litics, Morality, and Literature, 8vo. 7. A Vin- dication of Pope and Grattan. 8. Treatise on the Privileges of the House of Commons ; and several miscellaneous essays and papers in the periodical publications.

BURDWAN, a fertile district of Bengal, between the twenty-second and twenty-fourth degrees of north latitude, and on the west side of the Baggarutty or Hoogly river. It is about seventy-three miles long and forty-five broad. In the year 1790 this district yielded an annual revenue of Ā £400,000 sterling. The family of the present rajah have been in possession of the zemindary for about a century.

BURDWAN, the capital of the above district, was often taken and retaken during the contests between the Afghans and the Moguls for the possession of Bengal, and for several years, in the end of the seventh century, was the

residence of prince Azeem Oooshan, the grandson of Au- rungzebe, then governor of Bengal. He much improved the city, and built there a mosque. In this place is the tomb of Ibrahim Sukka, a celebrated Mahommedan saint. There was for- merly a citadel here of no great strength. It UICBC āā,,,,ā BC stands on the north bank of the Dummoodah river, sends Li .1 four.

proper to cities and towns, whereby men of cities or burrows hold their lands or tenements of the king, or other lord, for a certain yearly rent.' ā Cowell. A burgess and burgher, is a citizen ; a freeman of a city or corporate town, with the privilege of the elective franchise, a representa- tive of such a town. A burgomaster is one who governs or defends a fortified town or city.

It irks me, the poor dappled fools, Being native burghers of this desart city, Should in their own confines, with forked heads, Have their round haunches gored.

Shakspeare. As you Like it.

The gross of the borough is surveyed together in the beginning of the county ; but there are some other particular burgages thereof, mentioned under the titles of particular men's possessions.

Male's Origin of Mankind.

Four knights and a knave who were burgetses made, For selling their consciences were liberally paid.

Manell.

The portly burgess through the weather hot, Does for his corporation sweat and wot. Id.

Could this be,

Case why, their burghomaster of the sea Ram'd with gunpowder, flaming with brand wine, Should raging hold his linstock to the mine ? /rf.

The fish oft times the burgJter dispossessed, And sat not as a meat but as a guest. Id.

It is a republick itself, under the protection of the eight ancient cantons. There are in it an hundred burgeois, and about a thousand souls. Addisvn on Italy .

They choose their councils and burgomasters out of the burgeois, as in the other governments of Switzer- land. Additon.

Many towns in Cornwall, when they were first al- lowed to send burgetses to the parliament, bore ano- ther proportion to London than now ; for several of these burghs send two burgetses, whereas London itsoif

Grav>;i.

The Forester

Hunts not the wretched coney, but the boar, Or wolf, or lion, leaving paltry game To petty burghers, who leave once a year Their walls, to fill their household cauldrons with Such scullion prey.

Byron' Deformed Transformed.*

BUKGAGE, or TENURE IN BURGAGE, is only a kind of town soccage ; as common soccage, by which other lands are holden, is usually of a rural nature. A borough is distinguished from other towns by the right of sending members to parliament ; and, where the right of election is by burgage tenure, that alone is a proof of the antiquity of the borough. Tenure in burgage, therefore, or burgage tenure, is where houses or lands which were formerly the site of houses in an ancient borough, are held of some lord in common soccage, by a certain established rent. And they seem to have withstood the shock of the Norman encroachments, principally on account of their insignificancy, which made it not worth while to compel them to an alteration of tenure, as 100 of them together would scarce have amounted to a knight's fee. Besides, the owners, being chiefly artificers, and persons engaged in trade, could not with any propriety be put on such a military establishment as the tenure in chivalry was. The free soccage, therefore, in which these tenements are held, seems to be plainly a remnant of Saxon liberty ; which may also account for the great variety of customs af- fecting many of these tenements so held in ancient burgage ; the principal and most remarkable of which is that called Borough English. See BOROUGH ENGLISH.

BUR'GANET, or BUR'GONET, n. s. From Fr. burginote. ā¢ A kind of helmet.

Upon his head his glistering burganet,

The which was wrought by wondrous device,

And curiously engraven, he did fit.

Spenser's Muiopotmos. This day I'll wear aloft myburgonet,

Even to affright thee with the view thereof.

Shakspeare.

I was page to a footman, carrying after him his pike and burganet, Hahewill on Providence.

BURGAU, in natural history, the name of a large species of sea-snail, of the lunar or round- mouthed kind. It is very beautifully lined with a coat, of the nature of mother-of-pearl ; and the artificers take this out, to use under the name of mother-of-pearl, though some call it after the name of the shell they take it from, burgaudine.

BURGAU, an open town of Suabia, on the Mindel, formerly the chief town of the margra- viate of that name ; has a population of 2400 : it is nineteen miles north-west of Augsburg, and twenty E. N. E. of Ulm.

BURGAU, a margraviate of Suabia, on the Danube, between the Lech and the Iller, now oelonging to Bavaria, to whom it was ceded by Austria, at the peace of Presburg. It is about inirty-six miles square, and included in the Ba- varian circle of the Upper Danube. A small portion, however, belongs to the district of Urs- berriff, in the circle of the Iller.

BURGER (Godfred Augustus), a German

poet, principally known in this country as the author of Leonora, was born at Wolmerswende, in the principality of Halberstadt, in 1748. His father, a Lutheran minister, gave him a good education, but Burger was averse from study, and passed his early life in dissipation ; occa- sionally producing a few popular ballads. He also translated some of our old English ballads into German with considerable effect. In 1787 he lectured on the philosophy of Kant, and in 1789 was appointed professer of belles lettres in the university of Gottingen. He died in 1794. His Leonora has been several times translated into English; and Sir Walter Scott has executed an admirable version of his Wild Huntsman's Chase.

BURGESS signifies one who possesses a tene- ment in a borough. The word is also applied to the magistrates of some towns ; as the bai- liff and

burgesses of Leominster. Anciently, burgesses were held in great contempt ; being reputed servile, base, and unfit for war ; so that the gentry were not allowed to intermarry in their families, or fight with them ; but, in lieu thereofj were to appoint champions. A burgess's son was reputed of age when he could distinctly count money, measure cloth, &c.

BURGESSES, in the parliamentary sense, are supposed to represent the mercantile part, or trading interest of a nation. They were formerly allowed, by a rate established in the reign of Edward III. two shillings a-day as wages. It is to be regretted, that the members for boroughs, and, what is worse, decayed or rotten boroughs, bear above a quadruple proportion to those for counties. The right of election of burgesses depends on several local charters and customs : though, by 2 Geo. II. c. 24, the right for the future shall be allowed according to the last de- termination of the House of Commons concerning it; and by 3 Geo. III. c. 15, no freeman, except such as claim by birth, servitude, or marriage, shall be entitled to vote, unless he hath been admitted to his freedom twelve months before. This is called the Durham act, and it was occa- sioned by the corporation of Durham having, upon the eve of an election, in order to serve one of the candidates, admitted 215 honorary freemen. Some corporations have the power of admitting honorary freemen, viz. persons who, without any previous claim or pretension, are admitted to all the franchises of the corporation. The Durham act is confined to persons of that description solely. As every knight of a shire shall have a clear estate of freehold or copyhold, or mortgage, if the mortgagee has been seven years in possession, to the value of Ā£600 per annum, so every representative citizen and bur- gess must have a clear estate to the value of Ā£300 ; except the eldest sons of peers, and of persons qualified to be knights of shires, and except the members for the two universities. Stat. 9 Ann. c. 5 ; and of this qualification the member must make oath, and give in the par- ticulars in writing, at the time of his taking his seat. But this act does not extend to Scotland nor Ireland.

BURGH (James), an ingenious political writer, born at Maderty, in Perthshire, in 1714. He

studied at St. Andrews, with the intention of becoming a clergyman ; but bad health obliged him to turn to the linen trade ; which not proving successful, he went to England, and commenced corrector of the press to Mr. Bowyer, for whom he also made indexes. After this he removed to Great Marlow, as assistant at a school ; where, in 1746, he first

commenced author, by writing a pamphlet, entitled Britain's Remembrancer ; which went through five editions in two years ; was reprinted in England, Ireland, and America; "was ascribed to several bishops, and quoted by churchmen and dissenters from the pulpit. In 1 747 he opened an academy at Stoke-Newington, in Middlesex; and his scholars increasing ra- pidly, he removed, in 1750, to a large house at Newington Green, where he remained for nine- teen years. In 1751 he married Mrs. Harding, a widow lady, who concurred with him in his laudable undertakings. After a very laborious life, he retired to Islington in 1771, with the view of finishing a work he had long collected materials for, entitled Political Disquisitions, which came out in 1774 and 1775, in 3 vols. although he was then severely afflicted with the Stone. Of this complaint he died, August 26th, 1775, aged sixty-one. His other works were: 1. Thoughts on Education, 1747. 2. An Hymn to the Creator ; with an Idea of the Creator from his Works, in prose, 1750. 3. A Warning to Dram-Drinkers, 1751. 4. The Dignity of Hu- man Nature, 1754, 4to. and 1767, 2 vols. 8vo. 5. The Art of Speaking, 1762 (fifth edition in 1782); with other tracts too numerous for in- sertion.

BUEGH-BOTE signifies contribution towards the building or repairing of castles, or walls, for the defence of a borough or city. By the law of king Athelstan, the castles and walls of towns were to be repaired, and burgh-bote levied every year, within a fortnight after ro- gation days. No person whatever was exempted ; the king himself could not exempt a man from burgh-bote : yet, in after times, exemptions ap- pear to have been frequently granted.

BURGH-BRECHE, a fine imposed on the com- munity of a town, or burgh, for the breach of peace among them.

BURGHER SECEDERS, a numerous and respect- able class of dissenters from the church of Scot- land, who were originally connected with the associate presbytery; but some difference of sentiment arising about the lawfulness of taking the burgess oath, a separation ensued in 1739; in consequence of which, those who held for the affirmative, obtained the appellation of burgher, and their opponents that of antiburgher seceders. The antiburghers have, however, been recently re-united to the brethren. See SECEDERS.

BURGHMOTE, the court of a borough. By the laws of king Edgar, the burghmote was to be held thrice in the year : by those of Henry I. twelve times.

BUR'GLAR, -\ From burg a house, and

BUR'GLARY, {larron, a thief, or Goth, and

BUR'GLARER, {Sax. bur, a dwelling, and

BURG LA'RIOUS. ./ Goth, lecka, to break; but

Norm. Fr. lary, is from Lat. latrocinium, house-

Lieaking, or the robbing or plundering a house.

Disperse lampoons, the only wit That men like burglary commit.

Butler's Hudibrat. Love is a burglarer, a felon, That at the windore-eyes does steal in. Jrf.

In the natural signification, is nothing but the rob- bing of a house ; but, as it is a term of art, our com- mon lawyers restrain it to robbing a house by night, or breaking in with an intent to rob, or to do some other felony. The like offence, committed by day, they call house-robbing, by a peculiar name. Cowell.

What say you, father? Burglary is but a venial sin among soldiers. Dryden's Spanish Friar.

BURGLARY, burgo latrocinium, nocturnal housebreaking, by the ancient English law, was called hamesucken, a word still used in the law of Scotland, but in a sense somewhat different, has always been looked upon as a very heinous offence : not only because of the terror that ac- companies it, but also as it is a forcible invasion of that right of habitation, which every indi- vidual might acquire, even in a state of nature : an invasion which, in such a state, would be sure to be punished with death, unless the assailant were stronger. But, in civil society, the laws come in to the assistance of the weaker party : and, besides that they leave him this natural right of killing the aggressor, if he can, they also protect and avenge him in case the assailant is too powerful. And the law has so particular and tender a regard to the immunity of a man's house, that it styles it his castle, and will never suffer it to be violated with impunity ; agreeing herein with the sentiments of ancient Rome. For this reason no outward doors can in general be broken open to execute any civil process; though in criminal causes the public safety su- persedes the private. See ARREST. Hence also in part arises the animadversion of the law upon eaves-droppers, nuisances, and incendiaries : and to this principle it must be assigned, that a man may assemble people together lawfully (at least if they do not exceed eleven in number), without danger of raising a riot, rout, or unlawful as- sembly, in order to protect his house ; which he is not permitted to do in any other case.

Sir Edward Coke's definition of a burglar, is, ' he that by night breaketh and entereth into a mansion-house, with intent to commit a felony.' In this definition there are four things to be considered ; the time, the place, the manner, and the intent. 1. The time must be by night, and not by day ; for in the day-time there is no burglary ; i. e. if there be day-light or crepusculum enough, begun or left, to discern a man's face withal. But this does not extend to moon- light ; for then many midnight burglaries would^ go unpunished : and besides, the malignity of the offence does not consist so much in its being done in the dark, as at the dead of night ; when all the creation, except beasts of prey, are at rest ; when sleep has disarmed the owner, and rendered his castle defenceless. 2. As to the place, it must be, according to Sir Edward Coke's definition, in a mansion or dwelling- house : for no distant barn, warehouse, or the like, are under the same privileges, nor looked upon as a man's castle of defence; nor is a breaking open of houses wherein no man resides, and which for the time being are not mansion-

bouses, attended with the same circumstances of midnight terror. A house, however, wherein a man sometimes resides, and which the owner hath left only for a short season, animo revertendi, is the object of burglary, though no one be in it at the time of the fact committed. And if the barn, stable, or warehouse, be parcel of the man- sion-house, though not under the same roof or contiguous, a burglary may be committed therein; for the capital house protects and privileges all its branches and appurtenants, if within the cur- tilage or homestall. A chamber in a college, or an inn of a court, where each inhabitant hath a distinct property, is to all other purposes as well as this, the mansion-house of the owner. So also is a room or lodging in any private house, the mansion for the time being of the lodger ; if the owner doth not himself dwell in the house, or if he and the lodger enter by different outward doors. But if the owner himself lies in the house, and hath but one outward door at which he and his lodgers enter, such lodgers seem only to be inmates, and all their apartments to be parcel of the one dwelling-house of the owner.

If a man hath two houses, and resides, some- times in one of the houses, and sometimes in the other, if the house he doth not inhabit is broken in by any person in the night, it is burglary. Poph. 52.

Part of a house divided from the rest, having a door of its own to the street, is a mansion-house of him who hires it. To break and enter a shop, not parcel of the mansion-house, in which the shop-keeper never lodges, but

only works or trades there in the day-time, is not burglary, but only larceny ; but if he, or his servant, usually or often lodge in the shop at night, it is then a mansion-house, in which a burglary may be committed. 1 H. H. P. C. 557, 558. ā But see stat. 13 Geo.III. c. 38. respecting burglary in the work-shops of the plate-glass manufactory, which is made single felony, and punishable with transportation for seven years. ā If the shop- keeper sleep in any part of the building, however distinct.that part is from the shop, it may be alleged to be his mansion-house ; provided the owner does not sleep under the same roof also. Leach's Hawk. P. C. i. c. 38, sect. 16 in. ra.

A lodger .in an inn hath a special interest in his chamber, so that if he opens his chamber- door, and takes goods in the house, and goes away, it seems not to be burglary. And where A enters into the house of B, in the night, by the doors open, and breaks open a chest, and steals goods, without breaking an inner door, it is no burglary by the common law, because the chest is no part of the house ; though it is felony, ousted of clergy, by statute 3 W. & M. c. 9 ; and if one break open a counter or cupboard, fixed to a house, it is burglary. 1. Hole's Hist. P. C. 554.

All out-buildings, as barns, stables, ware- houses, &c. adjoining to a house, are looked upon as part thereof, and consequently burglary may be committed in them. And if the ware- house &c. be parcel of the mansion-house, and within the same, though not under the same roof, or contiguous, a burglary may be committed

therein. ā But an out-house occupied with, but separated from, the dwelling-house by an open passage eight feet wide, and not within or con-nected by any fence, enclosing both, is not within the curtilage or homestall.

It is certainly a dangerous, if not an incurable fault, to omit the word dwelling-house in an indictment for burglary in a house. But it seems not necessary or proper, in an indictment for burglary in a church, which, by all the ancient authorities, is taken as a distinct burglary. See 1 Hawk. P. C. c. 38, sect. 10, and the authorities there cited.

3. As to the manner of committing burglary there must be both a breaking and an entry to complete it. But they need not be both done at once ; for if a hole be broken one night, and the same, breakers enter the next night through the same they are burglars. There must be an ac- tual breaking ; as, at least, by breaking or taking out the glass of, or otherwise opening, a window ; picking a lock, or opening it with a key ; nay, by lifting up the latch of a door, or unloosing any other fastening which the owner has provi- ded. Where thieves had bored a hole through the door, with a centre-

bit, and part of the chips were found in the inside of the house, yet as they had neither got in themselves, nor introduced a hand or instrument for the purpose of taking the property, the entry was ruled in- complete. But if a person leave his doors or windows open, it is his own folly and negligence, and if a man enter therein, it is no burglary ; yet, if he afterwards unlock an inner or chamber door, it is so. But to come down a chimney is held a burglarious entry : for that is as much closed as the nature of things will permit. So also, to knock at a door, and, upon opening it, to rush in with a felonious intent ; or under pre- tence of taking lodgings, to fall upon the land- lord and rob him ; or to procure a constable to gain admittance in order to search for traitors, and then to bind the constable and rob the house ; all these entries have been adjudged burglarious, though there was no actual breaking, for the law will not suffer itself to be trifled with by such evasions, especially under the cloak of legal pro- cess. As for the entry, any the least degree of it, with any part of the body, or with an instru- ment held in the hand, is sufficient : as, to step over the threshold, to put a hand or hook in at a window to draw out goods, or a pistol to de- mand one's money, are all of them burglarious entries. The entry may be before the breaking, as well as after; for by statute 12 Ann. c. 7. if a person enters into the dwelling house of another, without breaking in either by day or by night, with an intent to commit any felony, or, being in such house, shall commit felony ; and shall in the night break out of the same ; this is declared to be burglary. When several come with a de- sign to commit burglary, and one does it while the rest watch near the house, here his act is, by interpretation, the act of all of them. And, upon a like ground, if a servant confederating with a rogue, let him in to rob a house, it has been de- termined by all the judges, upon a special verdict, that it is burglary both in the servant and the thief. Leach's Hawk. P. C. i. c. 38. sect. 9,

and 7j. 4. As to the intent ; it is clear that such oreaking and entry must be with a felonious intent, otherwise it is only a trespass. And it is the same, whether intention be actually carried into execution, or only demonstrated by some attempt or overt act, of which the jury is to judge. And therefore such breaking and entry, with intent to commit a robbery, a murder, a rape, or any other felony, is burglary. Nor does it make any difference, whether the offence were felony at common law, or only created so by statute. One of the servants of die house opened his lady's chamber-door, which was fastened with a brass bolt, with design to commit a rape ; and it

was ruled to be burglary, and the defendant was convicted and transported. Stran. 481. Kel. 67. A servant embezzled money intrusted to his care ; left ten guineas in his trunk ; quitted his master's service ; returned ; broke and en- tered the house in the night, and took away the ten guineas; and adjudged no burglar. Leach's Hawk. P. C. i. c. 38. sect. 18. n.

To encourage the prosecution of offenders it is enacted by stat. 10 8c 11. W. III. c. 23. that whoever shall convict a burglar shall be exempted from parish and ward offices where the offence was committed. To this, stats. 5 Ann. c. 31. and

6 Geo. I. c. 23. have superadded a reward of Ā£40. And if an accomplice, being out of prison, shall convict two or more offenders, he is en- titled also to a pardon of the felonies as enume- rated in the act. See stats. 25 Geo. II. c. 36. 27 Geo. III. c. 19. which provide, that the char- ges of prosecuting and convicting a burglar shall be paid by the treasurer of the county where the burglary was committed, to the prosecutor and poor witnesses. A certificate granted upon the conviction of an offender for burglary, exempts the party from serving the office of petty con- stable for a township within, but not co-extensive with the parish where the burglary was committed.

7 East's Rep. 174.

To remove one inducement to the frequent commission of burglaries, stat. 10 Geo. III. c. 48. provides that buyers or receivers of stolen jewels, gold, or silver plate, where the stealing shall have been accompanied by burglary, or robbery, may be tried and transported for fourteen years, before the conviction of the principal. And to check this offence in its progress, sta 23. Geo. III. c. 88. enacts, that any person apprehended, having upon him any pick-lock key, &c. or other implement with intent to commit a burglary, shall be deemed a rogue and vagabond, within stat. 17 Geo. II. c. 5.*

Burglary is a felony at common law, but within the benefit of clergy. Burglary in any house belonging to the plate-glass company, with intent to steal the stock or utensils, is by statute 13 Geo. III. c. 38. declared to be single felony, and punished with transportation for seven years.

BURGOMASTER, BURGIIERMASTER, BOURGER- MESTER, or BURGMESTER, is the chief magistrate of the great towns in Flanders, Holland, and Ger- many. The power and jurisdiction of the burgo- master is not the same in all places, every town having its particular customs and regulations : at Amsterdam, there are, (or at least were before

the revolution) four chosen by the voices of all those people in the senate who have either been burgomasters or echevins. They dispose of all under offices that fall in their time, keep the key of the bank, and enjoy a salary of only 500 guilders; all feasts and public entertainments, &c. being defrayed out of the common treasury.

BURGOO, or BUEGOOT, a sea-faring dish, made of grits boiled in water till they burst, and then mixed with butter. Burgoo, otherwise called loblolly, is held by Cockburn very proper to correct that thickness of humors and costive- ness to which the other diet of sailors much disposes them. Yet it is the least liked of all their provisions, because of the scanty allowance of butter to it.

BURGOS, a city of Spain, the capital of Old Castile, was erected into an archbishop's see in 1574. It was the residence of the counts and kings of Castile. It is surrounded with mountains, which render the air very cold nine months in the year, and during the other three months ex- cessively hot. It is seated on the declivity of a hill, on the top of which was a strong castle, now in ruins ; and the lower part of the town is watered by the Arlanfon. The principal avenue to the city is by a handsome bridge over this river, which leads to a beautiful gate, adorned with the statues of several kings and heroes of Spain. The town is built in the form of a crescent, and is large and populous; but the houses are ill built, and the streets narrow aud dirty, except some few, and especially that which leads to the cathedral. There are several squares, adorned with fountains and statues. The great square in the middle of the city is surrounded with excellent houses, with piazzas to each. Here are also a college, a school for the fine arts, and a physical institute. The cathedral church is a masterpiece of Gothic architecture, and one of the finest in all Spain. It was built at the beginning of the thirteenth century, by Ferdinand III., and is of such extent, that divine service can be performed in eight chapels at a time, without causing confusion. The church of the Augustines is also remarkable for its beautiful and rich chapel of the holy crucifix. There are several fine convents and nunneries; one of which is for nuns of noble extraction. Burgos, now containing about 9000 inhabitants, is said to have been very flourishing in former times. The only manufactures in existence are blankets, flannels, worsted stockings, and other woollen stuffs ; and the only branch of active commerce is the exportation of the wool of Old Castile, most of which passes through the city. The suburb Debega, on the other side of the river, and communicating with the town by three stone bridges, is more healthy and agreeable, and has a variety of beautiful gardens. Burgos was besieged unsuccessfully by the British in 1812, but surrendered to them without resistance the following year. It is 142 miles north of To- ledo, and 112 north of Madrid.

BURGOYNE (John), an English general, and dramatic writer, was the natural son of Lord Bingley, and entered early into the army. In 1 762 he commanded a force sent into Portugal, and distinguished himself in the American war

by the taking of Ticondercga, but was at last obliged to surrender to general Gates, at Sara- toga. Refusing to return to America pursuant to his convention, he was dismissed the British service. He was some time member of par- liament for Preston, and published several pam- phlets in defence of his public conduct ; but is more distinguished for his dramas of the Maid of the Oaks, the Heiress, and other pieces.

BURGUNDY, a district of France, a ci-devant province of government, but now divided into the departments of Cote d'Or, Saone and Loire, Ain and Yonne. It derived its name from the an- cient Burgunds, a German nation, by whom it was settled, about the commencement of the fifth century. In the progress of its history, it acquired great influence among the states of Europe ; and some of the dukes of Burgundy were raised to the throne of France. It is between forty and fifty leagues in length, and about thirty in breadth, traversed by a mountainous ridge, which extends from Dijon to Lyons. On the east of this ridge a wide and fertile plain is bounded by the moun- tains of Franche-Comte and Savoy; and on the west the country is hilly and less cultivated. The soil is various, but generally rich ; the Seine, the Yonne, the Ain, the Saone, the Rhone, and other large streams, all of which are navigable, are the principal rivers ; and the province, being traversed by canals, enjoys the advantage of ex- tended inland navigation. Grain, fruits, tobacco, hemp, and flax, are abundant here, the sheep reared in the more elevated parts afford excellent wool, great part of which is manufactured in the country; and the average produce of its wines (highly esteemed for their flavor) is stated at 100,000 hogsheads. The population is about 1,000,000, and the inhabitants are chiefly em- ployed in the woollen manufactures, and those of paper, and delft-ware ; in the working of coal mines ; and in the melting and manufacturing of iron. The chief towns are Dijon, Auxerre, and Autun.

BURGUNDY PITCH. See PINUS ATRIS.

BURHAMPOUR, a city of Hiudostan, the capital of the country or district of Candeish, is situated on the river Taptee, and is of large ex- tent, but a straggling place, occupying an uneven surface; the houses are mostly built of earth, and covered with varnished tiles. There is a strong castle here,

with lofty walls and battlements, strengthened by large towers. A large trade is carried on in different kinds of cotton goods. Distant 100 miles north of Aurungabad,and 452 south of Delhi.

BURIAL. The rights of burial have been looked upon in all countries, and at all times, as a debt so sacred, that such as neglected to dis- charge it were thought accursed : hence the Romans called them justa, and the Greeks vofiifia ciKaia, offia, words implying the inviola- ble obligations laid upon the living to take care of the obsequies of the dead. Nor can we won- der, that the ancient Greeks and Romans were anxious about the interment of their friends, since they were persuaded that their souls could not enter the Elysian fields till their bodies were committed to the earth ; and if they never ob- i4ined burial, they were excluded from those

happy mansions for 100 years. For this reason it was esteemed a duty incumbent upon all tra vellers who should meet with a dead body, to cast three handfuls of earth upon it ; and parti- cularly one upon the head. The ancients like- wise considered it as a great misfortune if they were not laid in the sepulchres of their fathers ; for which reason such as died in foreign countries had usually their ashes brought home, and in- terred with those of their ancestors. But there were some persons whom they thought unworthy of burial: such as, 1. Public or private enemies. 2. Such as betrayed or conspired against their country. 3. Tyrants, who were always looked upon as enemies to their country. 4. Villains guilty of sacrilege. 5. Such as died in debt, whose bodies belonged to their creditors. And 6. Some particular offenders, who suffered capi- tal punishment. Of those who were allowed the rites of burial, some were distinguished by parti- cular circumstances of disgrace attending their interment : thus persons killed by lightning were buried by themselves, being thought odious to the gods ; those who wasted their patrimony for- feited the right of being buried in the sepulchres of their fathers; and those who were guilty of self-murder were privately deposited in the ground, without the accustomed solemnities. Among the Jews, the privilege of burial was denied only to self-murderers, who were thrown out to rot upon the ground. The place of burial among them was never particularly determined. They had graves in the town and country, upon the highways, in gardens, and upon mountains. Among the Greeks, the temples were made repo- sitories for the dead in the primitive ages ; yet the general custom in latter ages, with them, as well as with the Romans and other heathen na- tions, was to bury their dead without their cities, and chiefly by the highways. The primitive Christians were not, like the heathens, so con- cerned for their bodies, as to think it any detri- ment to them, if either the barbarity of an enemy, or some other accident, deprived them of this privilege. The church denied the more so- lemn rites of burial only to unbaptised persons, self-murderers, and excommunicated persons, who continued obstinate and impenitent, in con- tempt of the

church's censures. Burying in cities was not allowed for the first 300 years, nor in churches for many ages after, the dead bodies being first deposited in the atrium or church-yard, and porches and porticoes of the churches; hereditary burying-places were for- bidden till the twelfth century. See farther on this subject under FUNERAL RITES.

Burying alive was the punishment of a vestal who had violated her vow of virginity. The un- happy priestess was let down into a deep pit, with bread, water, milk, oil, a lamp burning, and a bed to lie on. But the moment she was let down, they began to cast in the earth upon her till the pit was filled up. See VESTALS. Some middle age writers seem to make burying alive, (defossio), the punishment of a woman thief. This barbarous punishment has even been used in our own country under the feudal tyranny. Lord Bacon gives instances of the resurrection of persons who have been buried alive. The fa-

BURKE.

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mous Duns Scotus is of the number ; who, having hunger in such a situation, then (said he) the ass

been seized with a catalepsis, was thought dead, has free will, or is it possible that of two equal

and laid to sleep among his fathers, but raised weights, one should outweigh the other. These

again by his servant in whose absence he had two consequences appeared equally absurd ā¢ and

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oeen buried. The emperor Charles V. after his thus Buridan, by this sophism, became famous abdication, took it into his head to have his burial in the schools, celebrated in his lifetime, and assisted at it. See CHARLES V.

BURIALS, REGIMENTAL. The following or-

BURIS, a name given by Avicenna, and some other old authors, to a scirrhous hernia.

BURKE (Edmund), a distinguished writer,

ders for regimental burials are taken from the orator, and statesman, was born in the city of army regulations: ā The funeral of a field-mar- Dublin, on the 1st of January, 1730. His father, shal shall be saluted with three rounds of fifteen a protestant, exercised the profession of an attor- pieces of cannon, attended by six battalions, and ney, first at Limerick, and afterwards in Dublin. eight squadrons. ā Of a general, with three rounds Young Edmund received the rudiments of his of eleven pieces of cannon, four battalions, and classical education at Ballytore, in the county of six squadrons. ā Of a lieutenant-general, with Kildare, under the direction of Abraham Shackle- three rounds of nine pieces of cannon, three bat- ton, a quaker of considerable talents and repu- talions, and four squadrons. ā Of a major-gene- tation. Under his tuition, Burke devoted himself ral, with three rounds of seven pieces of cannon, to his studies with great ardour and perseve- two battalions, and three squadrons. ā Of a ranee, and laid the foundation of that extensive brigadier-general, three rounds of five pieces of and elegant scholarship, which was alone suf- cannon, one battalion, and two squadrons. ā Of ficient to have illustrated his name. Mr. Shackle- a colonel, by his own battalion, or an equal num- ton lived to see his favorite pupil attain a high ber by detachment, with three rounds of small degree of reputation ; and for near forty years arms. ā Of a lieutenant-colonel, by 300 men and that Burke paid an annual visit. to Ireland, he officers, with three rounds of small arms. ā Of a never failed to pass a few days at Ballytore. major, by 200 men and officers, with three rounds From this respectable seminary he was sent, at of small arms. ā Of a captain, by his own com- the age of sixteen, to the university of Dublin, pany, or seventy rank and file, with three rounds Here, however, he does not appear to have dis- of small arms. ā Of a lieutenant, by one lieute- tinguished himself either by application or nant, one serjeant, one drummer, one fifer, and talents. His character, as a student, was merely thirty-six rank and file, with three rounds. ā Of negative. He exhibited no symptoms of early an ensign, by an ensign, a serjeant, and drum- genius, obtained no palms in the academic race, mer, and twenty-seven rank and file, with three and departed even without a degree. During rounds. ā Of an adjutant, surgeon, and quarter- this period, however, he commenced author, master, the same party as an ensign. ā Of a ser- His first essays were of a political nature ; jeant, by a serjeant, and nine rank and file, with among them were essays in ridicule of the cele- three rounds of small arms. ā Of a corporal, brated demagogue, Dr. Lucas; but he soon musician, private man, drummer, and fife, by one afterwards directed his mind to other pursuits, serjeant, and thirteen rank and file, with three particularly logic and metaphysics ; and is said rounds of small arms. ā All officers, attending to have planned a refutation of the systems of the funerals of even their nearest relations, shall, Berkeley and Hume. While thus employed in notwithstanding wear their regimentals, and only treasuring up the means of attaining a species

oe have a black crape round their left arm. ā The celebrity, which far different avocations prevent- pall to be supported by officers of the same rank ed him afterwards from attaining, he was not with that of the deceased ; if the number cannot inattentive to the grand object of securing a be had, officers next in seniority are to supply suitable settlement in life ; for his family was not their place. ā The expense of a regimental burial opulent, and he already panted after indepen- is charged against the captains of the respective dence. He accordingly became a candidate for

troops.

the logical chair in the university of Glasgow.

BURIDAN (John), a native of Bethune, in The immediate reason of his failure is not known;

Artois, was one of the most celebrated philoso- but being disappointed he repaired to the metro-

phers of the fourteenth century. He was rector polis, and entered himself as a student of the

of the university of Paris, about A. D. 1320, and Inner Temple. It is evident from his speeches,

wrote commentaries on logic, morality, and Aris- his writings, and his conversation, that he studied

totle's metaphysics. Being expelled Paris by the grand outline of our municipal jurisprudence

the power of the Realists, he went into Germany, with particular attention ; but it may be doubted

where he established the university of Vienna, whether he ever entered into the minutiae. In-

From him came the proverb of the Ass of Buri- deed, the versatility cf his talents, and his

dan, so famous in the schools. Buridan sup- numerous avocations, were but little calculated

posed an hungry ass fixed at an exactly equal for that dull and plodding application which can

distance between two bushels of oats ; each of alone lead to an intimate

knowledge of our laws,

them acting equally on his senses, and desired to Besides, if he had been gifted with the necessary

know what the ass would do ? If he was an- application, both time and opportunity were

swered, that he would remain immovable, then wanting ; for it is well known, that at this period

he concluded he would die of hunger, with food of his life, the narrowness of his circumstances

in reach. This appeared absurd, and brought did not permit . him to dedicate his attention

the laughter on his side ; but if it was replied, solely to this, or indeed to any other single

that the ass would not be so stupid as to die of object. The limited and precarious state of his

finances called frequently for a speedy supply ; and instead of perusing the pages of Bracton, Fleta, Littleton, and Coke, he was obliged to write essays, letters, and paragraphs, for the pub- lications of the day. But if these pursuits diverted his attention from graver studies, they enabled him to acquire a facility of composition, and a command of style and of language, which proved eminently serviceable in the subsequent part of his life. His health, however, became at length impaired, and a nervous fever ensued. This circumstance induced him to call in the aid of Dr. Nugent, one of his own countrymen, a medical man of the most amiable manners, and benevolent heart, who had travelled on the con- tinent, and was himself an author. He at once dis- covered the source of his malady, and, by removing him from books and business to his own house, soon effected a cure. That event is also said to have been hastened, if not entirely completed, by a physician of another kind ; the accomplished daughter of his host. This lady was destined to become his wife; a circumstance particularly fortunate for him, as her disposition was mild and gentle, and she continued, through a long series of years, and many vicissitudes of fortune, to soothe and tranquillise passions always vio- lent, and often tumultuous.

Burke seems at length to have determined once more to endeavour to distinguish himself as an author ; and he accordingly took advantage of the death of lord Bolingbroke, to write a work after his manner; in which, by exaggerating his principles, he should be enabled to bring them into contempt. In 1756 he accordingly published, without his name, A Vindication of Natural So- ciety, which was so complete an imitation of the style of Bolingbroke, as for a time to impose upon the friends of that writer. Its sale, how- ever, was not extensive. His Essay on the Sub- lime and Beautiful was attended with different success, and secured for him at once a high degree of reputation, and the countenance of several powerful friends. In addition to the profits of the publication, he is said on this occasion to have received a present from his father of Ā£100. But his circumstances, notwith- standing, must have been greatly embarrassed, as he was obliged to sell his books. A periodical work on a new plan, first suggested in 1750, and by some attributed to the Dodsleys, and by others, to Mr. Burke, became, for some time, a considerable source of emolument to him. This was called the Annual Register ; a publication that rapidly obtained celebrity, and of which he had the superintendance for several years. In 1761 he accompanied to Ireland the gentleman well known by the name of single-speech Hamil- ton. Burke filled no public situation in his native country, but of both the speeches which his friend Hamilton pronounced, he was gene- rally, though erroneously, esteemed the author. On his return from Dublin with a pension of Ā£300, it was no longer necessary for him to write for booksellers. He, however, furnished occa- sional contributions to the Public Advertiserˆ the excellence of his writings in which introduced him to the notice-of the marquis of Rockingham, wuile Mrs. Woffington recommended him to the

duke of Newcastle. He accordingly very soon became secretary to the marquis ; and having obtained a seat in parliament for Wendover, through the interest of lord Verney, he com- menced his career as a leading and eloquent statesman. Nor did he spare any pains to fit himself for the situation which he was now called to fill. In point of talent and political know- ledge he was already sufficiently qualified ; but he was ignorant of the forms of business, and had still to acquire the habit of expressing with ease his sentiments before a public assembly. The first of these he attained by unremitting application to the study of usages and prece- dents ; and the facility of giving utterance to his conception was attained by frequenting the debating clubs of the day. Among other sources of improvement, we are told, he disdained not to study the writings of the fathers, to dive into the subtleties of the school divines, and to engage in the rhetorical combats of the Robin Hood Soci- ety. At the time when Burke entered on public life, the public mind was a good deal agitated by the measures of government relative to Wilkes, and by the growing discontents of America. Of the two

parties who were opposed to each other, Mr. Pitt's being the more inflexible, as to the necessity of diminishing the influence of court favorites and secret advisers, the duke of New- castle's, with the marquis of Rockingham as its ostensible leader, came into power : on this occasion Mr. Burke seceded from the interests and friendship of Hamilton, resigning the pen- sion which he owed to his patronage. The nature and extent of the favors he received from the marquis of Rockingham have been variously represented ; but it is believed that a consider- able portion, if not the whole, of the purchase- money for his villa at Beaconsfield, was ad- vanced, either as a loan or a gift by that noble- man. The first speech which Burke made in the house of commons was on the famous stamp act; and it was so eloquent and masterly as to attract the attention and command the applause of Mr. Pitt. Mr. Burke was principally consulted by the Rockingham administration in the affairs of America, and the moderate course which they followed was adopted in conformity to his advice. The weakness of the party, however, and the tame and feeble policy which they pursued, soon brought its administration to a close. On this occasion Mr. Burke produced his Short Account of a Short Administration. Mr. Pitt now came into power, having made, as he imagined, his own terms with the court ; but his views so little accorded with those of the executive, that he held the reins of government only a very short time. The Grafton administration succeeded, and Burke, being re-elected for Wendover, became the prin- cipal orator of opposition.

The period of lord North's premiership forms the most brilliant epoch of Mr. Burke's life. He was hostile to the expulsion of Mr. Wilkes ; an act which the house of commons afterwards rescinded from its records. About this period he published his Thoughts on the Present Discon- tents, in which his sentiments on the nature of the constitution are fully stated. On the appli- cation of the Dissenters for relief, he took up

tfie'r cause, and expressed his resentment, in very animated terms, against that misguided policy, which permits all those not within the pale of the establishment to enjoy liberty, less by right than by connivance. But perhaps the noblest part of his conduct consisted in his steady and uniform opposition to the American war, and his marked and declared hostility to the abettors of it. His speech against the Boston port bill was one of the most noble specimens of oratory that have ever been exhibited in the British senate. On the 19th of April, 1774, on a motion for the repeal of the tea duty, he also spoke admirably ; and when, in reply to a mem- ber who had observed, 'That the Americans were our children, and it was horrible for

them to revolt against their parent !' the orator uttered the following passage ā the whole house was elec- trified : ā ' They are our children, it is true ; but when children ask for bread, we are not to give them a stone. When those children of ours wish to assimilate with their parent, and to res- pect the beauteous countenance of British liberty, are we to turn to them the shameful parts of the constitution ? Are we to give them our weakness for their strength ; our opprobrium for their glory; and the slough of slavery, which we are not able to work off, to serve them for their free- dom ?' The people of Bristol, gratified by the exertions of Mr. Burke in behalf of civil and religious freedom, put him in nomination for their city, and sent into Yorkshire to request his immediate personal attendance. After consult- ing with his patron concerning an offer so flat- tering and unexpected, accompanied at the same time with assurances, most punctually fulfilled, that he should be put to no expense whatever, he immediately set out for the west of England, and found that no less than three candidates had started before him. The first was lord Clare, afterwards lord Nugent, one of the former repre- sentatives, whose unpopularity was such, that he soon discovered the necessity of resigning all his pretensions. The new candidate did not appear on the hustings until the afternoon of the sixth day's poll, on which occasion he addressed the electors in a very able speech ; and, on the con- clusion of the election in his favor, made the most brilliant address on the occasion that had ever been heard within the walls of a provincial city. Mr. Burke immediately returned from his new constituents to parliament with increased vigor, reputation, and zeal. The earl of Chat- ham having failed, notwithstanding his repu- tation for wisdom, in an attempt to adjust the troubles of the colonies, by means of a concili- atory bill introduced by him into the house of peers for that purpose, the obstinacy of the minis- try now became apparent to every one. This circumstance, which would have appalled an in- ferior man, did not, however, discourage the member for Bristol from a similar attempt in another place; and, accordingly, March 22d, 1775, he brought forward his thirteen celebrated propositions, which were intended to close the fatal breach, and heal all the differences between the mother country and her colonies. His plan, on this occasion, embraced not only an imme- diate conciliation, by a repeal of the late coercive

acts, but also the creation of an independent judicature, and the regulation of the courts of admiralty. The whole, however, was quashed by a large majority on the side of the minister, who moved the previous question. Parliament was dissolved in 1780, but Mr. Burke was not re-elected for Bristol, an event which is said to have made a deep impression on his mind. This must, however, have been obliterated by the im- portant events that speedily ensued, for the minister now tottered on the treasury bench, being abandoned by many of his staunchest sup- porters, and but little confident

in his own schemes, all of which had proved eminently un- successful. The opposition unceasingly assailed him, until on March 28th, 1782, lord North assured the house of commons that his adminis- tration was at an end. The day had now arrived when the ministry and opposition were to change places, and the former to be arrayed in the spoils of the latter. Of this rich booty, Mr. Burke, whose services had been so conspicuous in hunt- ing the enemy into the toils prepared for them, had his portion ; for he was made a privy coun- sellor, and invested with the lucrative appoint- ment of paymaster-general of the forces. He was now at length enabled to enforce his plan of political economy, tendered before in vain ; and the board of trade, the board of works, and the offices of the six clerks of the board of green cloth, third secretary of state, treasurer of the chamber, cofferer of the household, the lords of police in Scotland, the master of the harriers, the master of the stag hounds, and the paymaster of the pensions, were abolished. At length the reins of government were confined to the hands of the marquis of Lansdowne, then earl Shel- burne ; and this event gave such offence to those who wished to place the duke of Portland at the head of affairs, that Mr. Fox, lord John Caven- dish, and Mr. Burke, immediately resigned. In the mean time, the critical state of the English East India Company, which had long agitated the public mind, became occasionally a subject of discussion in parliament. The seizure, im- prisonment, and confinement of lord Pigot, by a faction in the council of Madras; the conduct of Mr. Hastings, in respect to several of the native powers ; the grand question of sovereignty, relative to the territorial possessions of the Com- pany in Asia, were subjects which had, at differ- ent times excited the attention of the nation. No sooner did Mr. Fox behold himself and his friends in possession of power, than he brought in a bill to remedy the various abuses in the government of British India. Of this bill Mr. Burke is well known to have been the principal penman ; and he certainly defended its princi- ples and provisions with all the zeal of a parent. In a speech of considerable length he exhibited an able retrospect of the system, both political and commercial, of the Company ; after which he proceeded to state the benefits likely to result from the plan under contemplation, which he considered as calculated to effect 'the rescue of the greatest number of the human race that ever were so grievously oppressed, from the greatest tyranny that ever was exercised.' In short, he contemplated it as a measure that would 'secme

the rice in his pot to every man in India.' ' I carry my m/nd,' (adds he), 'to all the people, and ail the names and descriptions that, relieved by this bill, will bless the labors of this parliament, and the confidence which the best

house of com- mons has given to him who best deserves it.' This celebrated bill, notwithstanding much oppo- sition both within- and without, was carried triumphantly through the house of commons ; but in the house of peers it experienced a far different fate, and with it fell the power and con- sequence of its authors, framers, and supporters.

In the course of the next year (February 28th, 1785,) Mr. Burke made an eloquent speech rela- tive to the nabob of Arcot's debts, and described one of his creditors, who had taken an active share in the late elections, ' as a criminal who long since ought to have fattened the region kites with his offal : the old betrayer, insulter, oppres- sor, and scourge of a country (Tanjore) which had for years been an object of an unremitted, but unhappily an unequal struggle, between the bounties of Providence to renovate, and the wickedness of mankind to destroy.' But there appeared to Mr. Burke to be a still greater de- linquent, on whom he was determined to inflict all the wounds of his eloquence, and sacrifice, if possible, the powerful offender himself at the shrine of national vengeance. This was Mr. Hastings; and, soon after the arrival of that gen- tleman in England, the orator gave notice of his intentions. On the 17th of Feb. 1785 he opened the accusation by a most eloquent speech ; in which he depicted the supposed crimes of the late governor-general, in the most glowing and animated colors. The result of this trial, how- ever, was far different from his hopes and expec- tations ; while the length of it failed not to involve both himself and his party in great reproach.

During the debate on the commercial treaty with France (January 23d, 1787,) Mr. Burke pointed his ridicule with no common success at Mr. Pitt, who, according to him, contemplated the subject with a narrowness peculiar to limited minds : ā ' He seems to consider it,' (adds he), 'as an affair of two little counting houses, and not of two great nations. He seems to consider it as a contention between the sign of the fleur-de-lis, and the sign of the old red lion, for which should obtain the best custom.' The next public event of importance in which we find Mr. Burke engaged, occurred in consequence of his majes- ty's indisposition. On this occasion he is sup- posed to have penned a letter for one, and a speech for another, branch of the royal family. When Mr. Pitt moved his declaratory resolu- tions relative to the provisional exercise of the royal authority, he attacked him with much asperity of language, and was particularly severe on the manner in which the royal assent was to be given to all future acts of parliament. The men who held most of the high places under the government were treated as 'jobbers, old hacks of the court, and the supporters and betrayers of all parties ; and it was a mock crown, a tinsel robe, and a sceptre from the theatre, lackered over and unreal,' which were about to be con- ferred on the prince of Wales.

But other scenes and connexions now awaited our orator. The opposition, though lessened by a few occasional desertions, had hitherto acted as a great public body, supposed to be united in general principles, for the common welfare and prosperity of the state ; but the French revolu- tion thinned their ranks, diminished their conse- quence, and, by sowing jealousy between the chiefs, spread consternation and dismay among their followers. It was on the 2d of March, 1790, when Mr. Fox moved for leave to bring in a bill to repeal the corporation and test-acts that this disunion became evident ; and soor after this Mr. Burke declared, 'that his honor- able friend and he were separated in their poli- tics for ever.' The ministry now seemed anxious to provide for their new associate ; and he, on his part, certainly appeared deserving of some remu- neration at their hands, for he had abandoned all his old friends, and, as his enemies maintained, not a few of his old principles. In addition to this, his Reflections on the Revolution in France had afforded some degree of countenance, and even popularity, to the measures of adminis- tration: and, not con tent with his own exertions, he had enlisted his son on the same side, and even sent him to Coblentz. Mr. Burke followed up this publication by a Letter to a Member of the National Assembly, in 1791 ; An Appeal from the New Whigs to the Old ; Letter to a Noble Lord on the Subject in Discussion with the Duke of Bedford ; Thoughts on a Regicide Peace ; and several private memorials ; all dis- playing his usual vigour of mind, connected occasionally with the infirmity of attempting to enforce truth by temper. In 1792 he published a Letter to Sir Hercules Langrishe, on the Pro- priety of admitting Roman Catholics to the Elective Franchise ; and in 1 794 withdrew from parliament. The royal munificence at length gratified his warmest wishes ; for by a warrant dated September 24th, 1795, and made to com- mence January 5th, 1793, he received a pension of Ā£1200 for his own life, and that of his wife, on the civil list; while two other pensions of Ā£2500 a-year for three lives, payable out of the four and a half per cent, fund, dated October 24th, 1795, were made to commence from July 24th, 1793. Honors as well as wealth seemed also now to await him, for he was about to be ennobled; but the untimely death of an only child put an end to all his dreams of ambition, and contributed not a little to hasten his own, which occurred at his house at Beaconsfield, July 8th, 1797, in the sixty-eighth year of his age.

We are not ourselves removed to a sufficient distance from the political whirlpool in which Burke was involved, to estimate his public cha- racter, perhaps, fairly. By one class of writers he has been eulogised extravagantly : and we are said to be indebted to his later writings for our very monarchy, and our political existence. To them every thing is clear, and oracular in his arguments ; every thing in his conduct patriotic and becoming. Others have represented him as at best but a splendid

declaimerand time-server; whose oratory was dazzling and delusive, never logical, never addressed to the judgment, and often wearisome to his warmest friends. His

published works will be the best resource of the reader to form his judgment on the latter point; and the whole of his political career will long form a useful study, and the best illustration of his character.

As a private individual, he was benevolent and humane. By his liberality and extensive influ- ence, a school was established in his neighbour- hood, for the education of those whose parents were unable to afford them useful tuition ; and he warmly encouraged, and frequently superin- tended, benefit clubs among the laborers and mechanics. He was a fond and attentive hus- band, an affectionate and indulgent father, a sincere, fervid, and active friend, a liberal and kind master. Throughout his whole life he was extremely temperate and studious, consecrating to the improvement of his faculties, and the ex- tension of his knowledge, the greater part of those hours which were not employed in public business. As a literary character, his dissertation on the Sublime and Beautiful will always rank him among the classical authorities of our language. His political tracts exhibit boundless reading, deep thought, and uncommon sagacity ; and there is hardly any species of composition which he has not attempted. His first and his last days, it is remarkable, were equally dedicated to literature. We cannot conclude this sketch of Burke, without inserting the well-known epitaph written for him by Goldsmith : ā

Here lies our good Edmund, whose genius was such,

We scarcely can praise it or blame it too much ;

Who, born for the universe, narrowed his mind,

And to party gave up what was meant for mankind.

Though fraught with all learning, yet straining his throat

To persuade Tommy Townshend to lend him a vote ;

Who, too deep for his hearers, still went on re- fining,

And thought of convincing while they thought of dining ;

Though equal to all things, for all things unfit,

Too nice for a statesman, too proud for a wit ;

For a patriot too cool ; for a drudge disobedient ;

And too foud of the right, to pursue the expedient.

In short, 'twas his fate, unemployed or in place, Sir,

To eat mutton cold, and cut blocks with a razor.

The entire works of this great man have been published by his executors in 5 vols. 4to., and 10 vols. 8vo.

BURKE, a mountainous county of North Ca- rolina, in the district of Morgan ; bounded on the north by Wilkes, on the east by Iredell, on the south by Rutherford, and on the west by Buncomb, counties. Morgantown is the chief town.

BURKITT (William), a celebrated commen- tator on the New Testament, was born at Hit- cham in Northamptonshire, July 25th 1650, and educated at Cambridge. He entered very early upon the ministry, at Milden in Suffolk, where he continued twenty-one years, first as curate, and afterwards as rector of that church. In 1692 he was appointed to the vicarage of Dedham, in Essex, where he continued till his death, Octo- ber 1 703. He made great collections for the French Protestants in the years 1687 &c. and procured a VOL. IV.

minister to go and settle in Carolina. Among other charities, by his last will he bequeathed the house wherein he lived, with the lands belonging to it, in perpetuity, to the lecturer at Dedham. Besides his Commentary, be wrote a work enti- tled, The Poor plan's Help, and Rich Man's Guide.

BURL',) Fr. bourrekr ; to raise the nap on BURL'ER. J cloth with a bur or thistle. John- son says to dress cloth, as fullers do.

BURLAMAQUI (John James), an illustrious civilian, born at Geneva, and professor of civil law there. Prince Frederick of Hesse-Cassel, being his pupil, took him with him in 1734, and detained him several years. On his return to Geneva, he was named counsellor of state, and died there in 1743. His Principles of Natural Law first raised his fame ; and are said to

contain the essence of Puffendorf, Grotius, and Barbeyrac. He wrote also The principles of Political Law. Both are written in French.

BURLESQUE', v., n. s., & adj.) Ital. bur- BURLET'TA. J lesco, Fren.

burlesque, from Ital. bur tare, Swed. borla, to jest to amuse. Ridicule, lampoonery ; tending to rau>Ā« laughter by unnatural or unsuitable language or images. Burletta, a theatrical amusement of a light kind.

When a man lays out a twelvemonth on the spots in the suii, however noble his speculations may be, they are very apt to fall into burlesque.

Addiion on Ancient Medali.

*Would Hornet apply the epithet divine to a modern pwineherd ? if not, it is an evidence that Eumeus was a man of consequence ; otherwise Hgmer would bur- lesque his own poetry. Broome's Notet on the Odyuey^*

*The new burletta 's now the thing ! Pray did you never hear me sing ? * Never indeed.' Cambridge. The Intruder.*

BURLESQUE, in composition, is distinguished into burlesque that excites laughter merely, and burlesque that excites derision or ridicule. A grave subject, in which there is no impropriety, may be brought down by a certain coloring to be risible, as in Virgil Travestie ; the author first laughs at every turn in order to make his readers laugh. The Lutrin is a burlesque poem of the other sort, laying hold of a low and trifling inci- dent to expose the luxury, indolence, and con- tentious spirit, of a set of monks. Boileau, the author, turns the subject into ridicule, by dressing it in the heroic style, and affecting to consider it as of the utmost dignity and importance. Though ridicule is the poet's aim, he always carries a grave face, and never once betrays a smile. The opposition between the subject and the manner of handling it, is what produces the ridicule ; and therefore, in a composition of t kind, no image professedly ludicrous ought t< be admitted, because such images destroy the contrast. Though the burlesque that aims at ridicule produces its effects by elevating the style far above the subject; yet the poet ought to confine himself to such images as are li rely, and readily apprehended. A strained elevation, soaring above the ordinary reach of fancy.makes

not a pleasant impression. The mind is dis- gusted by being kept long on the stretch.

BL'RLINGTON, or BRIDIINGTON, is a sea- port and bathing town of the east riding of Yorkshire. It is built on the shore of a bay, to ā¢which it gives name, which is found to be a safe harbour for vessels, when the wind is strong from the N. N. W. and north-east, being secured by two projecting piers of considerable extent, running out obliquely into the sea, and render- ing the entrance narrow. The principal trading vessels are colliers. Here was formerly a priory of black canons, founded in the reign of Henry I. by Walter de Gaunt. What remains of the church shows it to have been a noble structure ; but the choir, transepts, and steeple, have been entirely destroyed. A Mr. William Hustler was a considerable benefactor to the town ; and in the sixteenth of Charles II. Richard Boyle baron Clifford, received the title of earl from this town. In the eighth of William III., and first George I. acts of parliament were obtained to repair the piers, &c. of the harbour. Burlington quay, to which genteel company resort for bathing, con- stitutes of itself a small town, and has a brisk and handsome appearance. The houses are in general well built, and the principal street, that opens directly on the harbour, is remarkably broad. The northernmost pier has an agreeable platform, commanding a delightful view of l-'lamborough Head, which is often crowded with coasting vessels. The mineral springs here are reckoned efficacious for several diseases. There is a weekly market at Burlington on Saturday, at which a great deal of corn is sometimes sold. It lies at about ten milej south-west of Flambo- rough Head, forty east of York, and 206 north from London.

BURLINGTON, a large maritime county of the United States, in New Jersey, fifty-five miles in length from the mouth of Mullicus liver to Tren- ton, and twenty-eight in breadth. It is bounded on the north-east by Middlesex and Monmouth counties, north-west by Hunterdon, and Dela- ware river, which separates it from Pennsylva- nia, south-east, by the Atlantic, south and south- west by Gloucester county ; and is divided into ele- ven townships, viz., Chesterfield, Nottingham, Little Egg-harbour, Evesham, New-Hanover, Chester, Springfield, Northampton, Mansfield, Burlington, and Williamsborough. The north- east boundary of this county was the old divi- sional line of East and West Jersey. The inte- rior part of the county is one extensive forest of pine trees, and the whole is abundant in grain and provisions. It also carries on a considerable commerce in hides, oil, whalebone and fish.

BURLINGTON city, the capital of the preceding county. It is situated partly on an island so called, and partly on the south-east side of the Delaware, and extends, according to its charter, one mile back, and three miles along the river. The island, which is the most populous part of the town, is a mile

and a quarter in length, and three quarters of a mile in breadth. It communicates with the main land by four bridges and causeways, two of which, York and London bridges, are respectable structures. Few of the blacks are slaves : the main streets are regular

and spacious, and generally ornamented wit trees in the front of the houses. The Delaware, opposite the town, is nearly a mile wide, and under shelter of Muttinicunck, and Burlington island, affords a safe and convenient harbour. It is advantageously situated for trade, but is too near Philadelphia to admit of an extensive com- merce. The public buildings are the market- houses, a court-house, and jail, which is reckoned the strongest in the state ; besides several places of public worship. The Friends are numerous here. The academy is under the direction of seven trustees, and two preceptors.

The island of Burlington was laid out, and the first settlement established about the year 1677, five years after Muttinicanck or Free School island was given for the use of the island of Bur- lington. The city was a free port under the state government ; but has been established by Congress a port of entry, and a collector ap- pointed for it. However, carrying on little foreign trade, its principal intercourse is with Phi- ladelphia. It is twenty miles north-east of Phi- ladelphia by water, and seventeen by land.

BURLINGTON, the capital of Chitteudon county, Vermont, is beautifully situated ou Lake Cham- plain at the confluence of Onion river. A law was passed by the legislature of Vermont, the 2nd of November, 1791, for founding a univer- sity in this town. Large subscriptions and do- nations of land and other property, have been made by individuals, for the purpose of erecting convenient buildings, and establishing a fund. From the agreeableness of the situation, and the salubrity of the climate, there is little doubt but it will become an institution of much utility. It is 130 miles north of Benningtou, 320 north by east of New York, and 425 N. N. E. of Philadelphia.

BUR'LY, 7i. & adj.) Swed. orolig, be orolig,

BUR'LINESS. } the contrary of ro borof

repose, quietness. Big, rustic, rude. Properly bourly.

Thatme Jupiter right faire and amiable God of the sterres in the firmament,
And norice to all thing generable, Fro his father Saturne farre different
With burly face, and browes bright and brent.

Chaucer. The Testament of Creseide, fol. 195.

His burly brand that helped him oft in need, Right privily he hid it under that weed.

Henry the Minstrel, in Ellis.

Steel, if thou turn thine edge, or cut not out the burly boned clown in chines of beef, ere thou sleep in thy sheath, I beseech Jove, that thou mayest be turn- ed into hobnails. Shakspeare.

It was the orator's own burly way of nonsense.

Cowley.

Her husband being a very burly man, she thought it would be less trouble for her to bring away little Cupid. Addison.

And some ascribe the' invention to a priest, Burly and big, and studious of his ease.

Cowper. Task, bk. i.

BURMAN (Francis), a protestant minister, and professor of divinity at Utrecht, was born at Leydcn in 1628; and died on the 10th of No- vember, 1679, after having published a course of divinity, and several other works. His son Francis was also an author.

BLUM AN (Peter), son of the preceding, pro- fessor of history and eloquence, in the university

of Leyden, and rector magnificus of that univer- sity. He first began to study the law, and, after a year's application, took his degree of doctor in that faculty, on which occasion he published a dissertation De Transactionibus. In 1691 he was appointed collector of the tenths, and in 1696 was chosen professor of eloquence and his- tory at Utrecht, to which was afterwards added the Greek professorship. The university of Ley- den now invited him to the professorships of his- tory, eloquence, and Greek, vacant by the death of Perizonius, which he accepted. He filled the office of rector twice, and when the professorship of history of the United Provinces became vacant, it was conferred upon him, together with the post of chief librarian. He died in 1741. He was the author of several noted editions of the classics, the principal of which are ā 1. Phaedrus, 4to. 2. Quintilian, 2 vols. 4to. 3. Valerius

Flaccus, 12mo. 4. Ovid, 4 vols. 4to. 5. Poetre Latinae minores, 2 vols. 4to. 6. Velleius Pater- culus, 2 vols. &vo. 7. Virgil, 4 vols. 4to. 3. Suetonius, 2 vols. 4to. 9. Lucan, 4to. 10. Bu- chanani Opera, 2 vols. 4to.

BURMANNIA, in botany, a genus of the monogynia order, and hexandria class of plants; natural order, tenth, coronaria?. The flower i? small, and consists of three minute, ovated, ob- long petals, situated at the mouth of the cup ; the fruit is an involuted capsule, of a cylindraceo- trigonal figure, formed of three valves, wit! three cells, containing many small seeds. There are two species.

BURMANNIANA, in entomology, a species of phalasna, tortrix. The wings are pale, with four black spots on the anterior pair. Found in Surinam.

B U R M H A N EMPIRE.

THE BURMHAN, or Birman Empire, called also from its former capital, the kingdom of Ava, is an important modern state of India, be- yond the Ganges, lying between the ninth and twenty-sixth degrees of north latitude, and be- tween the 92d and 104th degree of east longi- tude. It is composed of the original territory of the Burmese, surrounded by the subjugated oro- vinces of Arracan on the west, Pegu, Martaban and Tenasserim on the south, part of Siam east and north, and Cassay on the north-west, the whole being bounded by the empire of China and British India north and west, by the Siam coast oncl the Indian Ocean south. It is described, by the most recent account, as about 1000 miles in length, and 700 in breadth, containing 194,000 square miles, and forming the most extensive native sovereignty of India.

On the frontiers of Chittagong, between the Nauf and the north end of the Negrais, are several excellent harbours, as well as in the Mergui archi- pelago: amongst these, Negrais and Rangoon are mentioned as the best. Its principal rivers are the Airavati, or Erawadi, the Lokiang, the Ken- dwen, the Pegue, and the Martaban; but it has many others of less note. Between the last two is a lake, whence two other streams proceed, one of which runs northward to Old Ava, and the other south to the ocean.

The Erawadi, or Airavati, the Elephantine River, so called from its noble sizej or the vast herds of elephants which crowd its banks, is the the Kiang- na, or Great Fish River, of China. It enters the Burmhan empire, receives a branch of the Brahma-putra, and proceeds to the south- east till it joins another stream from Chu-dzong, in about the twenty-sixth degree of north lati- tude. Below Ava it receives another accession of some magnitude, in the K'hyen-dwen, a stream which rises in the lower range of moun- tains on the confines of Assam. The Erawadi now flows west, and round to the

south, then in a south and easterly direction, till within 130 geographical miles from the' sea it forms a Delta of low lands, the basis of which, between Syriam

and the western mountains of Moden, is nearly 110 geographical miles. This stream is inferior only to the Ganges in importance. It is subject in the hot summer months to extraordinary in- undations ; the wise economy of Providence providing, in the melting of the snows of the mountains throughout this season, a fertilising and powerful current for the refreshment of those vast regions here which are rarely visited with rain. The Lokiang is a powerful stream, though far inferior to the Erawadi, to the north-west of which it rises, in the Chinese provinces, running through Pegu, and falling into the sea of Marta ban.

Exclusive of the Delta of the Erawadi there are few low lands in these dominions. A range of hills stretches on the western side from about thirteen degrees north, to nearly nineteen degrees north and south ; eastward another ridge, begin- ning on the Chinese limit, near the banks of the Erawadi, between Ava and B'hanrao, runs southward till it nearly reaches the sea. Dr. Buchanan speaks of this range as attaining an altitude of nearly 5000 feet, in the neighbour- hood of Amarapura, or Ummerapoor, the pre- sent capital of this empire. Tracts of hilly country also extend on each side of the Me- kong river; and another chain rises opposite to Old Ava, and traverses the country north ward, separating Cassay from Siam.

The climate is comparatively healthy and dry, and the seasons pretty regular. Just before the rains commence the heat is most intense Colonel Symes found the thermometer at 98J about noon at this season. There are occasion- ally rapid transitions from cold to heat, and, as in all warm countries, the air in the forests an I their vicinity is frequently charged with pestilen tial vapors.

The soil of the southern provinces is re markably fertile, producing as luxurious crops of rice as are to be found in any part of India ; but extensive plains are seen, on which the fee- ble traces of cultivation are contrasted with the deeper impressions of barbarous warfare, and the

ruinous haunts of wild beasts. In the more north- ern and mountainous parts of the empire, the teak and the fir tree abound ; the latter is valued

only for its turpentine, but the former, which is also found on the margin of all the great streams southward, is the monarch of the forest here, and for hardness, if for not durability, exceeding our English oak. The plains and valleys every where, but particularly near the rivers, are ex- ceedingly fruitful, and yield good wheat, and the various kinds of small grain and legumes of Hin- dostan. Sugar-canes, tobacco of superior qua- lity, indigo, cotton, and the different tropical fruits, are all indigenous. In a district named Palongmiou, to the north-east of Ummerapoor, the tea-leaf grows, but it is very inferior to that of China, and is seldom used but as a pickle.

This empire is abundant in minerals. Near the Chinese frontier, at Badouem or Bodwin, six days journey from Bamoo, are mines of gold and silver; and in the neighbourhood of Ummerapoor, in the Woobolootan mountain, are the largest ruby and sapphire mines, per- haps, in the world. Precious stones are found in every part of the empire, together with iron, copper, lead, tin, antimony, arsenic and sulphur. Gold is also sifted from the mountain streams ; and very fine amber, dug up in large quantities near the Erawadi. Quarries of the most beauti- ful marble, equal to the finest Italian specimens, are open within a few ndles of the seat of the government, which monopolises it as sacred, and the petroleum of the Yauangum wells, is an article of very extensive use and commerce.

These wells are situated in N. lat. 20Ā° 26', and E. long. 94Ā° 25'. 'The wells we saw,' says Cap- lain Cox, 'are scattered irregularly about the downs at no great distance from each other ; some, perhaps, not more than thirty or forty yards. At this particular place, we were in- formed, that there are 180 wells; and four or five miles to the north-east there aie 340 more. In making a well, the hill is cut down, so as to form a square table of fourteen or twenty feet for the crown of the well, and from this table a road is formed by scraping away an inclined plane for the drawers to descend, in raising the excavated earth from the well, and subsequently the oil. The shaft is sunk of a square form, and lined as the miner proceeds with squares of cassia wood staves ; these staves are about six feet long, six inches broad, and two thick, and Ā«ae rudely jointed and pinned at right angles to each other, forming a square franu? about four feet and a half in the clear for the uppermost ones, but more contracted below. When a miner nas pierced six or more feet of the shaft, a se- ries of these square frames are piled on each other, and regularly added to, at top ; the whole gradually sinking as he deepens the shaft, and securing him against the falling in of the sides. The soil or strata to be pierced is, first, a light sandy loam intermixed with fragments of quartz, silex, &c. Secondly, a friable sand-stone easily wrought, with thin horizontal strata of a concrete of martial ore, talc, and indurated argil, at from ten or fifteen feet from the surface, and also from each other, as there are several of these veins in the great body of free-stone. The talc

has this singularity; it is denticulated, its lamina being perpendicular to the horizontal lamina of the argil on which it is seated. Thirdly, at twenty cubits, more or less, from the surface, and immediately below the free-stone, a pale blue argillaceous earth (schista) appears, impregnated with the petroleum, and smelling strongly of it. This, they say, is very difficult to work, and grows harder as they get deeper, ending in schist and slate, such as is found covering veins of coal in Europe. Below this schist, at the depth of 130 cubits, is coal. I procured some, inter- mixed with sulphur and pyrites, which had been taken from a well deepened a few days before my arrival ; but deemed amongst them a rarity, as they are seldom obliged to proceed to such a depth. They were piercing a new well when I was there ; and had got to the depth of eighty cubits, and expected oil at ten or twenty cubits more.

‘ The machinery used in drawing up the rubbish, and afterwards the oil, from the well, is an axle crossing the centre of the well, resting on two rude forked stancheons, with a revolving barrel on its centre, like the nave of a wheel, in which is a score for receiving the draw-rope ; the bucket is of wicker work, covered with dammer ; and the labor of the drawers, consist-ing in general of three men, is facilitated by the descent of the inclined plane, as water is drawn from deep wells in Hindostan. To receive the oil one man is stationed at the brink of the well, who empties the bucket into a channel made on the surface of the earth leading to a sunken jar, from whence it is laded into smaller ones, and immediately carried down to the river, either by coolies or on hackeries, common carts. When a well grows dry, they deepen it. They say, none are abandoned for barrenness. Even the death of a miner from mephitic air does not deter others from persisting in deepening them when dry. Two days before my arrival, a man was suffocated in one of the wells ; yet they afterwards renewed their attempts without further accident. I re- commended trying the air with a candle, &c., with seemingly little effect. The oil is drawn pure from the wells in the liquid state, as used, without variation : possessing all the properties of coal tar, being in fact the self-same tiling ; the only difference is, that Nature elaborates, in the bowels of the earth, that for the Burmese, for which European nations are obliged to the in- genuity of Lord Dundonald.’

The average produce of each well, according to Captain Cox, appears to be 793 hogsheads, or 49,957 gallons per annum ; there are 520 wells registered by government : the gross amount therefore of the whole annual produce will be 412,360 hogsheads, worth, on the spot, 889,737 siccah rupees, or Ā£111,212.

In their agriculture, the Burmese are very careless and superficial ; but their draft cattle are remarkably good, and well attended to. Two are employed at plough, which turns up the earth but a few inches: in their large carts are

put four strong oxen, which the girls generally drive, and with considerable dexterity.

The commerce of the empire is very extensive. Between the capital and Yunan in China, a con-

ā¢'derable export trade is carried on in cotton, of which there are two kinds, one of a brown co- lor, of which nankeens are made, the other white, like the cotton of India. It is transported up the Erawadi in large boats, as far as a place called Bamoo, where it is bartered with the Chinese merchants, who convey it forward partly by land and partly by water. Amber, ivory, precious stones, betel nut, and the edible nuts, brought from the eastern archipelago, are also articles of commerce. In return the Burmese procure raw and wrought silks, gold leaf, pre- serves, paper, and hardware utensils. The in- land commerce is also brisk, particularly in pro- vision. Several thousand boats are employed in transporting rice and salt from the south, to sup- ply the capital and the northern districts. The Erawadi is the great channel of importation. Here arrive European broad cloth and hardware, coarse muslins and silk handkerchiefs, and china and glass from Bengal. Small quantities of silver, lac, and precious stones are also exported. The teak timber forms the most important article of commerce between Ava and the British do- minions. The quantity imported into Calcutta and Madras in 1795, according to Col. Symes, was valued at Ā£200,000. All the forests that yield this timber being the exclusive property of the royal family, the trade is monopolised, and the prices liable, consequently, to great fluctua- tions. The Shinbin teak planks, in 1812, were sold for three times the sum that had been previously demanded for them. Ships are built and sent out for sale at Negrais, Rangoon, &c. of this timber ; the Burmese possessing the whole of the eastern side of the bay of Bengal, as well as other convenient places for ship building. Col Symes saw several vessels on the stocks at Ran- goon of from 600 to 1000 tons burden. The tonnage of vessels annually built in the empire has been taken at 3000 tons.

The Burmese, like the Chinese, merchants have no coin : silver in bullion and lead being the current monies of the country. What fo reigners call a tackle, properly kiat, is the most general silver piece in circulation : it weighs ten pennyweights, ten grains and three-fourths. The subordinate currency is lead, in which all common market articles, such as fish, flesh, rice, greens, &c. are paid for. Lead and silver, being royal monopolies, are often raised in the markets far above their intrinsic value. It is necessary

for every merchant to have a banker to manage his money transactions, who is responsible for the quality of the metal, and charges a commis- sion of one per cent., but the currency fluctuates in value so much, that the utmost watchfulness cannot secure anything like a steady profit to the inexperienced foreign merchants.

A tenth of all produce is exacted as the autho- rised due of the government, and one-tenth is the amount of the king's duty on all foreign goods imported. The revenue, arising from customs on imports, is mostly taken in kind. A small part is converted into cash, the rest is distributed and received in lieu of salaries to the various departments of the court. Bullion, except on pressing occasions, is never disbursed from the royal coffers. To one man the fees of an office

are allowed ; to another, a station where certain imports are collected, and a third has land in proportion to the importance of his employment. They are all called the slaves of the king ; and, in their turn, have vassals denominated their slaves. Although it seems almost impossible, under such a system, to ascertain in any standard currency the amount of the royal revenue, yet the riches of the Burmhan sovereign are said to be immense, which is rendered probable by the cir- cumstance, that a very small portion of what enters his exchequer, ever again returns into circulation ā the hoarding of money being a fa- vorite maxim of oriental state policy.

The manufactures of this empire consist chiefly of cotton and silk goods, saltpetre, gunpowder, pottery, and the marble statues of their idols. Colonel Symes saw thirty or forty large yards in a village crowded with statuaries at work on images of Godama, various sizes, sitting cross- legged on a pedestal. The quarries from which they obtain the materials, were only a few miles distant. It was brought thither in blocks. The smallest exceeded the human stature, and the price was said to be 100 tackals, or about twelve or thirteen pounds sterling ; but some diminutive images \vere sold as low as two or three tackals. The workmen were very civil and communica- tive. Their tools were a chissel and a mallet, and they smooth the images with freestone and water. Many were beautifully polished, which is said to be done by rubbing the marble with three different kinds of stone; the first rough, the second finer, and the third such as hones are made of. The workmen afterwards use the palms of their hands in polishing, which gives the images a transparent clearness far surpassing the brightest European marble.

On the subject of vitrification, which is but partially known here, Colonel Symes mentions the following curious and interesting fact : ' The Burmhan monarch,' says he, ' who is a great ad- mirer of this manufacture, was particularly de- sirous to introduce it into his own dominions; and,

supposing that every Englishman must be versed in the knowledge of making whatever comes from his own country, he sent a message to request that I would furnish his artificers with such instructions as might enable them to fabri- cate glass of a quality equal to what was made in England. Unluckily none of us happened to be skilled in the mystery of a glass-house ; all, therefore, that we could do, was to explain the principles of the art, which Dr. Buchanan obligingly undertook ; and, in order to facilitate them in the acquirement, and guide them in the practice, I lent them the Encyclopaedia Britan- nica, and pointed out the article where the pro- cess is fully explained. Baba Sheen, the second in authority at the port of Rangoon, and the Armenian interpreter, translated it into the Burmhan tongue.'

The form of government is despotic ; but the emperor is accustomed to consult a council of nobles. No country of the east has a more splendid or well managed royal establishment; it is said to be magnificent without being waste- ful, and extensive without confusion. On the death of the possessor of any honor or employ-

ment, it reverts to the crown. The orders of nobility are distinguished by the number of strings which compose the chain which is their badge. No subject is ever honored with a higher degree than twelve, and the king alone wears twenty-four. He is further honored by being the only proprietor of elephants through- out the empire ; and none but an officer of the first rank is permitted to ride on one. He is addressed by the most sounding epithets, and approached with a degree of awe which is un- common even in the east. No part of his person is mentioned but with some allusion to the splendid metals, particularly gold. If it is meant to be said that the king has heard any thing, the expression is, ' It has reached the golden ears ;' the otto of roses is described as being grateful to the ' golden nose ;' and he who has been ad- mitted to the royal presence is said to have bowed at the ' golden feet.'

The Burmese may be said to be a nation of soldiers, every man in the kingdom being liable to be called upon for military service. Until a recent period, a few undisciplined native Chris- tians and renegadoes acting as artillery, a small body of cavalry, natives of the mountains, and oerhaps 2000 or 3000 ill disciplined infantry, were the entire standing force of the country. The usual armies were composed of levies raised on the occasion of a war breaking out, by the princes and great lords who hold all their lands by military tenure : 60,000 men of all arms was thought a very large

force. The infantry ire armed with muskets and sabres, the cavalry with a lance : their horses are small, but very active.

One of the most respectable parts of the Burm- han military force, is their war boats, carrying from fifty to sixty rowers, and used with short oars that work on a spindle. The prow is solid, and is a flat surface, on which, when they go to war, a piece of ordnance is mounted ; a six, a nine, or even, a twelve pounder, and several are frequently fixed on the stem. Each rower is provided with a sword and lance, which are placed by his side while he plies the oar. Be- sides the boatmen, there are usually thirty sol- diers on board, who are armed with muskets. Their attack is extremely impetuous ; they ad- vance with great rapidity, singing a war song, and beating time with the strokes of their oars. They generally endeavour to grapple, and when that is effected, the action becomes very severe. The largest of these war boats is from eighty to 100 feet long, and they draw about three feet of water.

The population of the Burmese empire it is very difficult to estimate. All the necessaries of life being easily acquired, and the facilities for emigration being also great, sudden fluctuations take place. Immense numbers of emigrants from these districts have passed the Bengal fron- tier within a few years ; and to the circumstance of an humane endeavour to provide for one body of them, which appeared in Chittagong under lord Teignmouth's government, we are indebted for Mr. Cox's account of this empire. Colonel Sym.es estimated the population of the wnole empire, in 1795, at 17,000,000 of souls; Cap-

tain Cox, a few years later, at less than half that number (8,000,000). A late resident at the court of Amarapura, captain Canning, considers even 3,000,000 as nearer the truth. The prin- cipal provinces have been named; the chief towns are, beside, Ava, the ancient, and Amara- pura, or Ummerapour, the capital ; Monchaboo, Pegu, Rangoon, Syriam, Prome, Negiais, Per- saim, and Chagaing.

The religion of the Burmese is Budd'hism, one of the most widely extended, and most re- fined modifications of the Hindoo creed. See HINDOO. Like other versions of that creed, it teaches the belief of a supreme deity, in whom the universe is comprehended, and its poly- theism is a deification of the planets and ele- ments ; but the creating, preserving, and destroy- ing powers of nature, are transformed to so many subordinate agents, who are real objects of wor- ship, so that the most degrading idolatry is the practical result of the system. Budd'ha himself, that incarnation of the deity with which the Burmhan faith is more directly connected, is represented in their temples by the figure of a young man of placid countenance, in the dress of a rahaan, or priest. His most common pos- ture is sitting cross-legged on a

throne ; his left hand resting on his legs and holding a book, while his right stretches over his knee. Dr. Buchanan mentions an immense block of pure alabaster thus modelled. He had no opportunity of measuring its size, but its fingers were about the length and thickness of a man's leg and thigh, and the other parts of the body in propor- tion. These images are of all sizes, and made of all kinds of materials.

The temples of Godama are generally of a pyramidal form, and supposed to contain some relics of the god, as a tooth, a bone, a hair, or a garment. The pyramids are often of immense size, constructed of solid brick-work, and sur- rounded by a group of smaller pyramids, plastered, and sometimes gilt, over the whole outside. At top the whole is crowned with a gilt umbrella of iron filagree, hung round with bells. Stones, bearing the impression of the foot of the god, are peculiarly objects of devotion ; particu- larly the Samanale Sri-pade (or Amala Sari-pad i, as it is named by the Burmese) on Adam's Peak, in the centre of Ceylon. The friends and attend- ants of Godama are also worshipped as deified beings; and their images are placed in the temples for adoration. The Brahmanical deities are considered as heroes, but receive no adoration. The offerings at these temples are of every kind of valuable produce of nature and art ; fruits of all kinds, rice, the cocoa-nut, betel, flowers, natural and artificial, gold and silver, generally wrought, and canes, pillows, umbrellas, and slippers, gilded profusely. One common way for a worshipper to express his devotion, is to gild a patch of the temple wall, in consequence of which many of them present a very motley appearance. The offerings of the king, according to Dr. Buchanan, are worth annually 86,805 Ibs. of silver. ' Private prayers, chaunted with the aid of rosaries, offerings in the temples, particu- larly on the changes of the moon, fasts continued from sun-rise to sun-set at a certain season of the

year, mirth and jollity at festivals, especially at the commencement and close cf their Lent, are among the many of their religious observances,' says a late writer, ' which bear a singular resem- blance to those of the Roman church.'

The most remarkable superstition of this em- pire, however, is that which teaches them to re- gard the white elephant as almost divine. One of these animals is lodged in a splendid palace at Ummerapoor. His apartment is shrouded from vulgar eyes by a black velvet curtain, richly embossed with gold, and his whole residence is as dazzling and sumptuous as gold and silver can make it. He is furnished with a rich crimson silk bed, adorned

with gold tapestry hangings, and jewellery, and has his gold betel boxes, spitting pots, Sec. This animal is actually con- sidered the second person in the state. Foreign ministers are introduced to his sacred presence, and he ranks before every member of the royal family, except the king. Captain Canning, how- ever, who saw him in 1810, represents him as a diminutive, sandy-colored beast, confined by gold and silver chains to the pillars of his apart- ments, disfigured by leprosy, and little gratified, apparently, by the services of his prostrate at- tendants.

The priests, and the morals professed to be taught, are alike creditable to the system, speak- ing of its comparison with mary others. There are no secular priests who officiate in the wor- ship ; all are what the Romish church would call regular clergy. They live together in con- vents, which are by far the best habitations in the empire, and are dressed in a long yellow cloak, like the Carmelites ; they go barefooted, and have their heads close shaven, on which they never wear a covering : they profess celibacy, and to abstain from every indulgence of the senses. If a rahaan, or priest, is detected in an act of incontinence, he is expelled from the society, and subjected to public disgrace. They never dress their own victuals, holding it an abuse to perform any of those common functions of life, which may divert them from contempla- tion. They receive the contributions of the laity ready dressed, and prefer cold food to hot. At the dawn of day they begin to perambulate the town, to collect their supplies, each convent sending forth a certain number of its members, who walk at a quick pace through the streets, and support with the right arm a blue lackered box for the donations. These consist generally of boiled rice, mixed with oil, dried and pickled fish, sweetmeats, fruit, &c. During their walk they never cast their eyes to the right or left, but keep them fixed on the ground ; never stopping

plaster the outside roofs of their habitations white, which is the royal color, the most distinguishing of all royal insignia, and common only to Go- dama and the king. Though so highly honored, he adds, they retain the greatest simplicity in their manners. In the various commotions of the empire, they have never taken any active part, or publicly interfered, in politics, or en- gaged in war ; and the Burmhans and Peguers, professing the same religion, whoever were con- querors, equally respected the ministers of their faith.

There were formerly nunneries of virgin priestesses, who, like the rahaans, wore yellow garments, cut off their hair, and devoted them- selves to chastity and religion ; but these so- cieties were long ago abolished, as being con- sidered injurious to population. At present there are a few respected old women, who shave their heads, wear a white dress, follow funerals, and carry water to convents. Some years ago a Catholic bishop, residing at Ava, asked the chief rahaan, called Zaradobeira, to give him some short

treatise which would ex- plain the doctrines of Godama. The priest, willing to satisfy the bishop, wrote for his use, it is said, a small treatise, the most important particulars of which are as follow : ‘ The gods who have appeared in the present world, and who have obtained the perfect state, Niebau (deliverance from all the evils of life), are four ; Chauchasam, Gonagom, Gaspa, and Godama. Of these the law of Godama ought at present to be followed. Q. Where is the god Godama? A. Godama, at the age of thirty-five years, having attained divinity, preached his law for forty-five years, and brought salvation to all living beings. At eighty years of age, he attained Niebau ; and this happened 2362 years ago. Then Godama said, ‘After I shall have departed from this earth, I will preserve my law and disciples for 5000 years ; and he commanded, that his images and relics should be worshipped, which has ac- cordingly been ever since done.’ Q. What is the doctrine and law which Godama delivered to be observed by all men ? A. It consists chiefly in observing the five commandments, and in ab- staining from the ten sins. Q. What are the five commandments ? A. 1. From the meanest insect, up to man, thou shall kill no animal whatsoever. 2. Thou shall not steal. 3. Thou shall not violate the wife or concubine of another. 4. Thou shall tell nolhing false. 5. Thou shall drink neither wine, nor any thing that will in- toxicate : Thou shall nol eat opium, nor other inebriating drug. Whoever keeps these five commandments, during all successive transmi-

to solicit, and seldom even looking at their do- grations, shall eilher be born a nobleman or nost, nors. They eat only once a day, at noon. and shall not be liable to poverty, m

Dr. Buchanan says, as far as he could observe, they are of very decent moral deportmenl, re- markably hospitable lo strangers, the most intel- ligent men in the country, and very highly respected by all classes. The road, on all occa- sions, is yielded up to them ; they are generally addressed by some honorable title, and in their convents are allowed the use of painting and gilding, which are prohibited to all other sub- jects. In some cases they are even permitted to

misfortunes and calamities.

‘ Q. What are ihe len sins. A. 1. The killing of animals. 2. Theft. 3. Adultery. 4. False- hood. 5. Discord. 6. Harsh and indignanl language. 7. Idle and superfluous lalk. 8. Tl coveting of your neighbour’s goods. 9. Envy, and Ihe desire of your neighbour’s death. 10. Embracing the doctrine of false gods.

One good work is called Dana, which consists in wing alms, particularly to the rahaans. A

second is called Bavana, which consists in thoughtfully pronouncing these three words, Aneizza, Docha, and Anatta. By the word Aneiza, is understood, that he who pronounces it recollects, that, by his particular situation, he is liable to vicissitudes ; by the word Docha is understood, that by the same situation he is liable to misfortune ; and by the word Anatta, that it is not in his power to exempt himself from being liable to changes and to misfortune. Whoever dies without having observed the Sila, Dana, and Bavana, will certainly pass into one of the in- fernal states, and will become a Nirea, a Prietta, or some animal.

' Revolving these things in your mind', con- tinues this curious document, ' O ye English, Dutch, Armenians, and others, adore Godama the true god ; adore also his law and his priests. Be solicitous in giving alms, in the observance of Sila, and in performing Bavana. But a true and legitimate priest of Godama is not to be found, except in this empire, or in the island of Ceylon ; and you, O Bishop, have obtained a great lot, who have been thought w orthy, although, born in one of the small islands depending on Zabudiba, to come hither and to hear the truth of the divine law. This book, which I now give you, is more estimable than gold or silver, than diamonds and precious stones ; and I exhort all English, Dutch, Armenians, and others, faithfully to transcribe its contents, and diligently to act according to the precepts therein contained.'

The Burmese are exceedingly tolerant of all other religions, we should add, and teachers of all of them are considered privileged persons.

Colonel Symes passes a warm encomium on the general principles of Burmhan law. It provides, he assures us, with great perspicuity against every kind of crime that can be committed, and adds an ample chapter of precedents and deci- sions, to guard the inexperienced in cases of doubt. The trial by ordeal, however, disgraces it in common with the legal system of all coun- tries where the Hindoo religion is professed. An instance of this mode of trial is related by the colonel. ' Two women having litigated a small property in a court of justice, and the judges finding it difficult to decide the question of right, it was agreed to refer the matter to the issue of an ordeal. The parties, attended by the officers of the court, the rahaans, and a multitude of people, repaired to a pond. After certain prayers and ceremonies, the two women entered the pond, accompanied by two or three men, one of whom placed them close to each other, and put a board on their heads, which he pressed down till they were both immersed at the same instant. After continuing out of sight for about a minute and a-half,

one of them being nearly suffocated, raised her head, whilst the other continued to sit on her hams at the bottom, but was immediately lifted up by the man ; after which, an officer of the court pronounced judgment in her favor ; and of the equity of the decision, none present seemed to entertain the smallest doubt.' This practice, however, and that of imprecation, are now losing ground, and have of late years been discountenanced by the judicial courts. In particular cases the criminal jurisprudence is lenient, but

rigorous in others. The first commission of theft does not incur the penalty of death unless the amount stolen is above 800 tackals, or about Ā£100 sterling, or is attended with some circumstances of atrocity, as murder, or mutilation. In the for- mer case, the culprit has a round mark imprinted on each cheek by gunpowder and puncturation, and on his breast the word thief, with the article stolen. For the second offence he is deprived of an arm ; for the third he inevitably suffers death, by decapitation, a mode of punishment in the performance of which the Burmhan execu- tioners are skilful. The administration of public affairs, was said at this time to be conducted with singular openness and publicity. The punish- ments which those who drink spirits, &c. meet with, are very frequent and severe. In 1808 the son of the viceroy of Rangoon was put to death for chewing opium ; for the same offence another was crucified and nailed up with red hot nails ; a third, for incorrigible drunkenness had boiling lead poured down his throat in small quantities. Various other cruel punishments disgrace their penal law.

Their common books, like those of the Hindoos, are composed of the palmyra leaf, on which the letters are engraved with a style ; but they are much superior to those of the Western continent, in the neatness of the execution, and in the orna- ments which decorate them. Books are also composed of thin stripes of bamboo, delicately plaited and varnished over in such a manner as to form a smooth and hard surface.

Their written language is the Pali or Bali, a dialect of the Sanscrit ; but the common dialect of the people is a mixture of monosyllabic and polysyllabic words, abounding in terms of honor and dignity. A grammar of this language was lately composed by a British officer, and pre- sented to the Asiatic Society of Calcutta. In their literature, while nothing profound in science or philosophy appears, great general intelligence pervades the body of the people ; and respectable compositions in ethics, law, history, and poetry, are read and recited by all ranks. They are also decidedly contrasted with their Hindoo neighbours in their liberality of sentiment towards other na- tions, and their toleration. The Royal Library of the capital, when visited by Colonel Symes, contained a surprising number of books, me- thodically arranged ; the contents of each chest being written on

it in letters of gold. The theo- logical department was very copious. The king, who sat on the throne when the British embassy was sent to this country, had caused the Insti- tutes of Menu to be translated from the English of Sir W. Jones. But their astronomical and geographical opinions are similar to those of the Hindoos. The figures of the constellations, given by Dr. Hamilton in the Asiatic Researches, vi. 196, are evidently derived from the Hindoo sys- tems of astronomy. Their year has twelve months, of twenty-nine and thirty days alternately, and is rectified by an intercalation every third year. Their calculation from the new to the full moon is progressive ; for the remainder of the month, retrogressive. Their week, like that of the Hin- doos, is divided into seven days, and the com- mencement of their era corresponds pretty nearly

with A. D. 638 ; it is consequently considerably more modern than those generally used in India. The eighth of the decreasing moon, and the last day of the moon, are set apart by the Burmese as sacred festivals. On these hebdominal holidays no public business is transacted, and mercantile engagements are suspended; and the strict ob- servers of them take no sustenance between the rising and the setting of the sun : but the latter instance of self denial is not very common, ex- cept in the metropolis. The passage of time is ascertained by a curious machine, resembling the hour-glass, and sometimes by a perforated pan placed in a tub of water. The day commences at noon, and is divided into eight portions, of about three hours each. They are announced by a stroke on an oblong drum, which is always placed near the dwelling of the chief magistrate of the town or village. It is commonly raised on a high bamboo stage, with a roof of mats to protect it from the weather. The edifice at the royal palace in the capital is of masonry, and is very lofty ; so that the sound is said to be dis- tinctly conveyed to the remotest parts of the city.

The Burmese have little of the indolence of their neighbours ; they are, on- the contrary, in- quisitive, energetic, and passionate, in a high de- gree. Their women are not secluded as in other parts of the east, but are nevertheless in the same state of general degradation and wretched slavery to the mere gratifications of man. They are fre- quently sold for prostitution, and are taken as a kind of chattel by a creditor. In the midst of all this they are industrious, and in that constantly useful employment which attaches to their hus- bands and produces a remarkable degree of fidelity. Colonel Symes mentions, that, on occasion of a formal visit to the mother of the present queen, they observed, in one of the galleries of his palace, three or four looms working by the dam- sels of his household.

Weaving, indeed, ic chiefly a female occupation, and most females make all the cotton and silk cloth that is neces- sary for domestic consumption. For these, amongst other reasons, we suppose, no women, nor even the female children of a casual inter- course with foreigners, are allowed to leave the country. So particular is the Burmhan law in this respect, that, before a ship receives her clearance at any port, she is searched with great care for this valuable commodity, by the custom- house officers, and should a vessel which has by fraud taken out a woman ever return to a Bur- mhan port, the master would be subject to fine and imprisonment, and the property confiscated.

In features, complexion, and general make, the Burmese approach to their Chinese neigh- bours ; like them they pluck out their beards, and blacken their teeth and eyelids like the Hin- doos. They also tattoe themselves on the arms and thighs. Coarse and uncleanly in their diet, notwithstanding the prohibitions of their law, they are veiy fond of animal food.

Houses here are generally raised three or four feet from the ground, and built of bamboos and mats : few are allowed by their laws to indulge in the luxury of lackering or gilding the pillars of their abode. They do not contract marriages

till the parties have attained the age of puberty ; and are restricted to one wife ; but concubinage is allowed. They burn their dead ; and tlieir widows are decently provided for.

The practice of their physicians is almost en- tirely empirical ; and, accordingly, they are not held in high estimation. Dr. Buchanan men- tions a curious custom respecting them. If a young woman appears to be dangerously ill, the physician and her parents frequently enter into an agreement, by which he undertakes to cure her. If the doctor is successful, he tˆkes her as his property ; but if she dies, he pays a certain sum for her to the parents. In surgery, the skill of the Burmese extends only to the dressing of wounds and setting of bones. But of late they have introduced from Arracan the art of inocula- tion. The practice, however, makes but slow progress, although a very great proportion of the people are marked with small pox. The Baptist missionary, Mr. Felix Carey, introduced in 1808 the vaccine inoculation into the city of Rangoon, and performed the operation on a considerable number of people ; among others, on the family of the governor.

The nobles dress in a superb robe of flowered satin or velvet, reaching to the ancles, with an open collar, and loose sleeves. Over this is a scarf, or flowing mantle, which hangs from their shoulders ; and on their heads they wear high caps of velvet, either plain, or of silk embroidered with flowers of

gold. Some persons of condition wear for ear-rings tubes of gold, about three inches long, and as thick as a large quill, which expand at one end like the mouth of a trumpet ; others wear a heavy mass of gold, beaten into a plate, and rolled up. This lump of metal drags down the lobe of the ear by its weight to the extent of two inches, and makes a considerable orifice in it. In their common dress, men of rank wear a tight coat, with long sleeves, made of muslin, or of very fine nankeen, and a silk wrapper that en- circles the waist. The working classes are usually naked to the middle ; but, in cold weather, they make use of a mantle or vest of European cloth. When women of quality go abroad, they wear a silk sash like a long shawl, which crosses their bosom, and is cast over the shoulder so as to flow down very gracefully. The poorer females often wear only a single garment, in the form of a sheet, wrapped round the body, and tucked under the arm ; it crosses their breasts, which it scarcely conceals, and descends to their ancles in such a manner that the legs protrude from under it when they attempt to walk. Rank is regarded with particular attention. No one dare assume in his house a mode of structure to which he is not legally entitled, under the penalty of a most severe punishment; and even in the do- mestic instruments, in the shape of the betel box, which is carried by an attendant before one of noble birth, as well as in his ear-rings, his cup of ceremony, the accoutrements of his horse, and even in the metal of which his spitting-box is made, the due subordination and station of a Burmhan appears. The sitting posture is, among the Burmese, the most respectful, so that strangers are very apt to attribute to pride, what, in their view, is a mark of deference.

Among their amusements are boxing-matches, processions, fire-works, public dances, and pup- pet-shows. They are particularly fond of dra- matic entertainments. At Pegue is a theatre, in an open court, often splendidly illuminated by lamps and torches. Indeed, at all festivals they have entertainments, consisting of music, dancing, and action, with a dialogue in recitation. The higher ranks are particularly fond of chess. The board which they use is exactly similar to ours, containing sixty-four squares, and the number of troops the same, sixteen on each side ; but the names, the power, and the disposal of them, dif- fer. On the last day of the year a curious custom prevails. Women are accustomed on this day to throw water on every man they meet, and the men have the privilege of retaliating, a licence which gives rise to a great deal of harmless mer- riment, particularly among the young women, who, armed with large syringes and flaggons, en- deavour to wet every man that passes the streets; and, in their turn, receive the same compliment. Dirty water is never

employed ; nor is a man al- lowed to lay hold of a woman, but he may cast as much water over her as he pleases, provided she has been the aggressor. If a woman warns a man that she does not mean to join in the di- version, it is considered as an avowal of preg- nancy, and she is exempt from attack.

This empire was founded by an obscure, but able and enterprising, village chieftain, in the middle of the last century. In the sixteenth cen- tury, Ava? with its dependent territory, was sub- ject to the king of Pegue ; but revolts frequently took place, until the Burmese, in 1752, were completely defeated ; and Ava, the capital of the empire, after a short seige, surrendered at discretion. At this time Dweepdee, the last of a long line of kings of Ava, and all his family, ex- cept two sons, were taken prisoners : the latter fled for protection to the court of Siam ; and the unhappy king was soon after cruelly murdered. In these contests the French freqxiently assisted the Peguese, while British gold, and British in- fluence, favored our oresent enemies the Bur- mese.

But a champion now arose in the person of Alompra, the first sovereign of the present dy- nasty, possessed of a spirit of enterprise equal to the most arduous undertakings, and of the greatest wisdom and coolness to adapt his mea- sures to the difficult circumstances of his country. He had been appointed by the Peguese con- queror to the command of a small district round Monchaboo, and had only in the first instance about 100 picked men devoted to his cause. With these, however, he overpowered the enemy in his immediate neighbourhood, and, advancing unexpectedly on Ava, compelled them to aban- don it. In 1754 an expedition was fitted out from Pegue to retake this important possession. About the same time the eldest son of the late king endeavoured to assert his right to the throne : but Alompra soon compelled the latter to retire finally to the Siamese territory, and defeated Beinga, the king of Pegue, in a pitched battle near Prome, with immense slaughter. Succes- sive armies of the Peguese, assisted by French olKcers, were subdued by the Burmhau chieftain,

who in 1756 obtained possession of Syriam bv surprise, and thus cut off all communication be- tween the enemy and the western countries of Dalla and Bassien, deprived them of the naviga- tion of the Rangoon river and the Erawady, and shut them out from all foreign aid. In January, 1757, he undertook the siege of the city of Pegue by circumvallation, a favorite practice among the^ Burmese, and a negociation was opened, which terminated in an agreement, that the king of Pegue should become tributary to the Burmhan monarch. His daughter was surrendered to the victor as a pledge of his allegiance. Notwith- standing these arrangements, however, Alompra still pressed the siege, and at last obtained pos- session of the town by famine, and abandoned it to indiscriminate slaughter. At this time

an en- voy being sent to him from the British factory at the Negrais, he was very lofty in his carriage, and displayed with great complacency the numerous captives of the royal forces of Pegue in his train. Alompra now proceeded to bring into subjection the countries to the eastward, includ- ing the fertile districts between Pegue and the three Pagodas : he also reduced Tavoy, and pro- ceeded to chastise the Siamese for the support and encouragement which they had afforded his different enemies. After various achievements, the victor advanced towards the capital of that kingdom ; but two days after the commencement of the siege, was taken ill of a disease which he foresaw would prove mortal, and therefore gave orders for an immediate retreat. Before, however, he reached the seat of his empire he died, May 15th, 1760, in the fiftieth year of his age, much regretted by his people ; and, whether viewed in the light of a soldier or apolitician, isundoubtedly entitled to considerable respect. He decidedly improved all the territory he subjugated, and studied the prosperity of his subjects. He se- verely restrained the use of spirituous liquors ; issued au edict against all gambling; and re- formed the courts of justice, prohibiting magis- trates to decide at their private houses on criminal causes, or with regard to property, when the amount exceeded a certain sum : every process of importance was to be decided in public, and every decree registered. He was succeeded by his eldest son Namdojee, who followed his plans for promot- ing the improvement of the country, and died, after suppressing some unimportant revolts, in 1764. He left an infant son named Momien, whom his uncle Shembuan deprived of the crown. The new monarch, on ascending the throne, declared war against the Siamese, and after various ren- counters, proceeded to invest Siam, theircapital. The king of Siam, finding resistance hopeless, secretly withdrew from the town, in order to avoid falling into the hands of the enemy : and eluding the Burmhan outposts, sought refuge among the hills, where he perished, but in what manner is not known. His generals, now deserted, agreed to capitulate ; the fortifications of the city were destroyed, and a governor was appointed, who took an oath of allegiance to the Burmhan mo- narchy, and engaged to pay an annual tribute. However, the conqueror had no sooner with- drawn, than one of the king's relations returned at the head of a numerous army, displaced the

new government, and abolished all the regula- tions that had been imposed on the Siamese. Shembuan now therefore despatched a new army to suppress the insurrection ; but, in the mean time, the Chinese had sent an army of 50,000 into one of his northern provinces. The troops of Shembuan advanced to meet them, and surrounding the enemy on all sides,

attacked them with such impetuosity, that after a conflict of three days, the latter entirely sunk under the pressure of superior numbers, and the carnage was dreadful. Not an individual of the Chinese army, it is said, returned home to relate the me- lancholy tale ; about 2500 prisoners were however preserved, and conducted in fetters to Ava, where they were encouraged to marry and settle. This second founder of the empire, after various other military exploits, died in 1776, and was succeeded by his sou Chenquza. He proved wholly unlike his father, and, being an abandoned debauchee, was deposed and put to death by his uncle Mind raj ee Praw, in 1782.

This person was the fourth son of the great Alompra, the founder of the dynasty. One of his first acts was to drown his nephew Momien (the son of Namdojee Praw, the second sovereign), by fixing him betwixt two jars, which were sunk in the stream, the usual Burmhan mode, we are told, of executing members of the royal family. He, however, was himself soon deprived both of his life and diadem, by a desperado, named Magoung, who, with about 100 confederates, attacked him and his guards in his own palace, where they all fell. Minderajee transferred the seat of empire from Ava to Ummerapoora. Of Ava, as he saw it, colonel Symes, says, ' The walls are mouldering into ruin, ivy clings to the sides, and bushes, suffered to grow at the bottom, undermine the foundation, and have already caused large chasms in the different faces of the forts. The materials of the houses, consisting chiefly of wood, had, on the first order for re- moving, been transported to the new city of Ummerapoora ; but the ground, unless when it is covered with bushes or rank grass, still retains traces of former buildings and streets. The lines of the royal palace, of the grand council hall, the apartments of the women, and the spot on which the peasath or imperial spire had stood, were pointed out to us by our guide. Clumps of bamboos, a few plantain trees, and tall thorns, occupy the greater part of the area of the lately flourishing capital. We observed two dwelling houses of mortar and brick, the roofs of which "had fallen in. These, our guides said, had be- longed to foreigners. On entering one, we found it inhabited only by bats, which flew in our faces, whilst our sense of smelling was affected by their filth, and by the noisome mildew that hung upon the walls. Numerous temples, on which the Burmese never lay sacrilegious hands, were dilapidating by time. It is impossible to draw a more striking picture of desolation and ruin.'

In the year 1783 the Burmese sent a fleet of boats against Arracan, which, after a slight resist- ance, was completely conquered, and Maha- sunuda, the rajah, and his family, made prisoners.

The surrender of Cheduba, Ramree, and the Broken Isles, followed. In 1785 they attacked the Siamese island of Junkseylon, with a fleet of boats

and an army ; but were ultimately com- pelled to retreat. The Burmhan monarch, whose pride was thus deeply mortified, resolved to re- pair the disgrace ; and, in 1786, invaded Siam with an army of 30,000 men, but was again de- feated, near the frontiers, by Pictick Single, the king of Siam ; his useless cannon taken, and himself escaping with great difficulty.

The Siamese, in the year 1790, obtained pos- session of Tavoy by treachery, which the Burm- ese, in 1791 regained by the same means ; and that year compelled the Siamese to raise the siege of Mergui. In 1793 peace was concluded with the latter, who ceded to the Burmese the western maritime towns as far south as Mergui, or the entire possession of the coast of Tenasse- rim, and the important sea ports of Mergui and Tavoy.

In 1795 commenced our first dispute with tms formidable native power. The Burmhan mo- narch learning that three noted banditti of Arra- can, had taken refuge in the British district of Chittagong, ordered a body of 5000 men to enter the Company's territories, with positive instruc- tions not to return unless he brought with him the delinquents dead or alive ; he afterwards supported this detachment with an army of 20,000 men, held in readiness in Arracan.

General Erskine was now therefore ordered to advance with a strong detachment of the Com- pany's troops from Calcutta, who were met by a battalion of Europeans by water, and the native sepoys. In the interim, the Chittagong magis- trates had apprehended the fugitives. On the approach of the British, Seree Nunda Kiazo, the Burmhan commander, sent a flag of truce, pro- posing terms, and stipulating for the surrender of the fugitives as the basis of them. The Bri- tish general replied, that no terras could be listened to while the Burmese continued on the Company's territories ; but that as soon as they should withdraw within their own frontier, he would enter on the subject of their complaints ; notifying also, that unless they evacuated their camp, which they had fortified, in a limited time, force would be used to compel them. The Burmese chief now personally waited on Gene- ral Erskine, and disclosed his instructions, the enormity of the offenders, the outrages they had committed, &c. The British commander, ou the other hand, repeated that it was impossible for him to retract : but assured his visitant that the Company's agents had no desire to protect offen- ders, and would quickly prow this on the retreat of the hostile force. This was at last agreed to, and conducted in the most orderly manner: not one act of violence having been committed dur- ing its continuance in Chittagong. The guilt of the refugees being established, they were imme- diately delivered over to tbe Burmhan authorities, and a good understanding was re-established. The origin of this last dispute, its fluctuating character, as well as its final termination, will be found detailed in the article INDIA, BRITISH

BURN', v. & n. \ Goth, brenna, brina, per polished to a dazzling brightness^ so that it shall BURN'ER, f haps from arin, fire, Per.

BURN'ING, i 6uryan,Teut. brennan, Sax.

*BURN ING-GLASS. * birnan, bernan, Lat. uro,*

seem to burn. Chaucer and Gowcr write to burn, in the sense of burnish.

And downward from an hill under a bent,

Heb. buur, from Chald. and Heb. ur, IIvp, Lat. Ther stood the temple of Mars armipotcnt pruina. To consume by fire, to be hot, to be on fire ; to be kindled ; to shine, to sparkle, Met Passion inflamed to a heating or burning excess, whether love, anger, jealousy, hate, or desire. Whep that the fire was gret and brent fast.

Chaucer

He [Nero] Rome bremefor his delicacie ; The senatours he slow upon a day, To hefeu how that men wolde wepe and crye ; And slew his brother and by his sister lay.

Id. Canterbury Tales. He causeth the' one to rage with golden burning

dart, And doth alay with leaden colde again the others

hart, Whote glemes of burning fire, and easy sparkes of

flame, In balance of unegal weight he pondereth by aime.

Surrey. Description of the Fickle Affections, &c. For with a beck you shall me call ; And if of one, that burns alway, Ye haue pitie, or ruth at all,

Aunswere him faire with yea or nay. Wyat. The Lady to answere directly with Yea or Nay.

His garment neither was of silke nor say, But paynted plumes in goodly order (.light, Like as the sun-burnt Indians do array Their tawny bodies in the proudest plight.

Spenser.

Tranio, I burn, I pine, I perish, Tranio, If I achieve not this young modest girl !

Shakspeare.

The appetite of her eye did seem to scorch me up like a burning-glass. Id.

Altar of Syrian mode, whereon to burn His odious offerings. Milton.

In liquid burnings, or on dry, to dwell, Is all the sad variety of hell. Dryden.

0, diadem, thou centre of ambition, Where all its different lines are reconciled, As if thou wert the burning-glass of glory ! Id.

While the vital fire

Rurns feebly, heap not the green fuel on, But prudently foment the wandering spark, With what the soonest feels its kindred touch ; Be frugal even of that. Armstrong.

Wrought all of burned stele, of which the' entree Was longe and streite, and gastly for to see.

Chaucer. The Knightes Tale, v. 1985. And Phebus died hath hire tresses grete, Like to the stremes of his burned hete.

Id. The Doctoures Tale, v 11972. And euermore, as it is tolde, An harnois as for a lustie knight, Whiche burned was as siluer brigh Of swerde, of plate, and eke of maile.

Gower. Conf. Am. bk. v.

And them amongst, some were of burnisht gold, So made by art to beautify the rest, Which did themselves amongst the leaves enfold, As lurking from the view of covetous guest. Spenser.

Make a plate of them, and burnish it as they do- iron. Bacon,

Mislike me not for my complexion, The shadowed livery of the burnished sun, To whom I am a neighbour and near bred.

Sliakspeare,

Like a glad lover the fierce flames he meets, And tries his first embraces in

their sheets, His shape exact which the bright flames enfold, Like the sun's statue stands of burnished gold.

MarvelL

He Trulla loved ; Trulla more bright, Than burnished armour of her knight ; A bold virago, stout and tall, As Joan of France, or English Moll.

Butler's- Hudibras,

The frame of burnished steel, that cast a glare – From far, and seemed to thaw the freezing air.

A . Dry den.

To shoot, and spread, and burnish into man. Id,

I've seen a snake in human form, All stained with infamy and vice, Leap from a dunghill in a trice, Burnish, and make a gaudy show, Become a general, peer, and beau. Swiff.

Bristling with spears, and bright with burnished

shields, The embattled legions stretch their long array.

Beattie.

BURN'. Goth, brun; Swec1. brunn; Teut.

*We see the phlegm of vitriol is a very effectual re- *""Ā»Ā» burn> ,frOm Goth; rinn(l > lslā¢'*

niedy against burns. Boyle.

Oh prince ! oh wherefore bum your eyes ? anc why Is your sweet temper turned to fury ?

She burns, she raves, she dies 'tis true, But burns, and raves, and dies, for you.

run ; a small stream of water or rivulet.

BURN, in medicine and surg-ery, a lesion of

Rowe. the animal body, occasioned by the application of heat. The life of the pait may be at once destroyed by these accidents, or mortification Add'uon. speedily follow the violent inflammation excited;, but when slight,

it usually produces an effusion of serum under the cuticle, like a blister. When

As Moses in the bush ? Young's Night Thoughts, the injury is extensive, considerable fever is apt

to supervene, sometimes a comatose state ; and a remarkable difficulty of breathing often precedes death. In the treatment of these accidents, two- very different methods have been pursued. The more ancient plan consists in antiphlogistic

Say, by what name I shall presume to call Him I see burning in these countless suns,

The mighty stream, which volumes high From their proud nostrils, bums the very air, And sparks of flame, like dancing fire-flies, wheel Around their manes, as common insects, swarm Round common steeds towards sunset.

BURN',

Byron's Deformed Transformed. means > givjng cooling purgatives, &C. and "even Goth, bruna, Swed. bry- taking blood, where the irritation is great ; em-

BURN'ISH, v. & n. J nea, Bel. brumas, Fr. tru- ploying at the same time cold applications, and

ner, brunisser, Port, bruinctr, Ital. brunire, to where the skin is destroyed, emollient dressings;

polish, to make bright; also to make brown, that opium was also recommended to relieve the pain,

is to impart a burning color. Metal may be notwithstanding stupor might attend. More re-

BURNET.

oently, a surgeon at Newcastle, of the name of Kentish, has deviated from the ancient practice ; applying first oil of turpentine, alcohol, &c. heated as much as the sound parts could bear, and gradually lessening the stimulus ; in the mean time supporting the patient by a cordial diet, aether, &cc. and giving opium largely to lessen the irritation. A considerable connexion with smelting furnaces, where accidents of this description are of very frequent occurrence, enables us confidently to state, that turpentine is one of the best possible applications. Where, however, the skin is torn, let lint, dipped

in sweet oil, be laid next the part, and turpentine on lint likewise be laid over it, and occasionally renewed, till the fire is entirely drawn out.

BURNET (Gilbert), bishop of Salisbury, in the latter end of the seventeenth century, was bom at Edinburgh, in 1643, of an ancient Aber- deenshire family. His father being bred to the law, was, at the Restoration, appointed one of the lords of session, with the title of lord Cramond. Our author, his youngest son, he himself in- structed in the Latin tongue ; and, at ten years of age, sent him to the university of Aberdeen, where he was admitted M. A. before he was fourteen. His own inclination led him to the study of the law ; and from this he stated him- self to derive more just notions concerning civil society and government, than those which many divines maintain. About a year after, to the great satisfaction of his father, he relinquished his legal pursuits, and began to apply to divinity. He was admitted preacher before he was eigh- teen ; and Sir Alexander Burnet, his cousin- german, offered him a benefice, which he refused. In 1663, about two years after the death of his father, he went into England ; and left his native land in 1664, to make the tour of Holland and France. At Amsterdam, by the help of a Jewish rabbi, he perfected himself in the Hebrew lan- guage ; and became acquainted with the leading men of the different persuasions tolerated in that country.; among all of whom, he says, he met with men of such unfeigned piety ;md virtue, that he became fixed in principles of universal charity, and an invincible abhorrence of all seve- rities on account of religious opinion. Upon his return from his travels, he was admitted minister of Salton ; aud performed the duties of his sta- tion five years in the most exemplary manner. At this period he memorialised the Scots bishops, on the errors of their administration. In 1669 he published his Modest and Free Conference between a Conformist and Non-Conformist ; and became acquainted with the duchess of Hamilton, who communicated to him all the papers be- longing to her father and her uncle ; upon which he drew up tlie Memoirs of the Dukes of Hamil- ton. The duke of Lauderdale now invited him to London, and introduced him to king Charles II. Returning to Scotland, he married the lady Margaret Kennedy, daughter of the earl of Cas- sillis ; a lady of great piety and knowledge, and highly esteemed by the presbyterians. The day before their marriage, our author voluntarily settled her whole fortune on this lady. The same year he published his Vindication of the Authority, Constitution, and Laws of the Church

and State of Scotland; which at that juncture was regarded as so great a public service, that he was offered a bishopric ; but did not accept of it, because he could not approve of the measures of the court. His intimacy with the dukes of Hamilton and Lauderdale occasioned him to be sent for frequently by the king and the duke of York, who had conversations with him in pri- vate. But Lauderdale conceiving a' jealousy of him, represented

at last to the king, that Dr. Burnet was engaged in an opposition to his measures. The duke of York, however, treated him with greater civility than ever, and dis- suaded him from going to Scotland. Upon this, he resigned his professorship at Glasgow, and staid in London. About this time the living of Cripplegate was offered him by the dean and chapter of St. Paul's ; but, as he had been in- formed of their first intention of conferring it on Dr. Fowler, he declined it. In \ 675, at the re- commendation of lord Hollis, whom he had known in France, he was, by Sir Harbottle Grimstone, appointed preacher of the Rolls chapel, notwithstanding the opposition of the court. He was soon after chosen a lecturer of St. Clement's, and became very popular. In 1679 he published his History of the Reforma- tion, for which he had the thanks of both houses of parliament. The first part of it was published in 1679, and the second in 1681. Next year he published an abridgment of these two parts. Dr. Burnet about this time happening to visit a woman in sickness, who had been engaged in an amour with the earl of Rochester, he became acquainted with that nobleman, and for a whole winter, he spent one evening in a week with him. The happy effect of these conferences occasioned the publication of his well-known account of the life and death of his lordship. In 1682, when the administration was changed in favor of the duke of York, being much resorted to by persons of all ranks and parties, in order to avoid re- turning visits, he built a laboratory, and went for a year through a course of chemical experi- ments. Not long after, he refused a living of Ā£300 a year, offered him by the earl of Essex, on the terms of his not residing there, but in Lon- don. The king now offered him the bishopric of Chichester, if he would engage in his inte- rests ; but he refused to accept it on these tenns. He preached at the Rolls till 1684, when he was dismissed by order of the court. About this time he published several pieces. On king James's accession, having obtained leave to go out of the kingdom, he first went to Paris, and lived in great retirement, till contracting an ac- quaintance with brigadier Stouppe, a Protestant gentleman iu the French service, he made a tour with him into Italy, and met with an agreeable reception at Rome. Pope Innocent XI. hearing of his arrival, sent the captain of the Swiss guards to acquaint him he would give him a private audience in bed, to avoid the ceremony of kiss- ing his holiness' slipper. But Dr. Burnet ex- cused himself. Some disputes which he had concerning religion were shortly after noticed, and, on an intimation from prince Borghese, he was obliged hastily to leave the city. He pur- sued his travels through Switzerland and Ger-*

many, and, in 1688, came to Utrecht, where he received an invitation from the prince and prin- cess of Orange (to whom their party in England had recommended him) to come to the Hague. Here he was at once made acquainted with the counsels of the prince, and advised the fitting out of a fleet in Holland to support his designs. This, and the Account of his Travels, which, with some papers, in single sheets, reflecting on the proceedings of England, were industriously dispersed throughout the country, alarmed king James, and occasioned him twice to insist, by his ambassador, on his being dismissed. This, after much importunity, was done, though he continued to be trusted and rmployed as before. To put an end to his frequent conferences with the Dutch ministers, a prosecution for high trea- son was set on foot against him both in England and Scotland. But Burnet receiving the news before it arrived at the States, he avoided the storm, by petitioning for, and obtaining, a bill of naturalisation, in order to an intended marriage with Mary Scot, a Dutch lady of considerable fortune. After his marriage, being legally under the protection of Holland, when he found king James plainly subverting the constitution, he omitted no method to promote the design the prince of Orange had formed of delivering Great Britain, and came over with him in quality of chaplain. He was soon advanced to the see of Salisbury, and declared for moderate measures with regard to the clergy, who scrupled to take, the oaths, as well as for the toleration of non- conformists. His Pastoral Letter, concerning the oaths of allegiance and supremacy to king William and queen Mary, 1689, happening to touch upon the right of conquest, gave such offence to both houses of parliament, that it was ordered to be burnt by the hands of the common executioner. In 1698 he lost his wife by the small-pox ; and, as he was almost immediately after appointed preceptor to the duke of Glou- cester, of whose education he took great care, this employment, and the tender age of his chil- dren, induced him the same year to supply her loss by a marriage with Mrs. Berkley, eldest daughter of Sir Richard Blake, knight. In 1699 he published his Exposition of the thirty- nine articles ; which occasioned a representation against him in the lower house of convocation, 1701 ; but he was vindicated in the upper house. His speech in the house of lords in 1704, against the bill to prevent occasional conformity, was severely attacked. He died in 1715, and was interred in the church of St. James, Clerkenwell, where he has a monument. He formed a scheme for augmenting the poor livings ; which he pressed forward with such success, that it ended in an act of parliament passed in the second year of queen Anne, 'for the augmentation of the livings of the poor clergy.'

BURNET (Thomas), a learned writer in the end of the seventeenth century, was born at Croft, in Yorkshire, in 1635, and educated at Cambridge under the tuition of Mr. Tillotson, afterwards archbishop of Canterbury. In

the beginning of 1685 he was made master of the Charter-House, after which he entered into holy orders. The vear following he distinguished himself greatly,

by refusing to admit Andrew Pophain, a Roman Catholic, as a pensioner of the Charter-House, though the man came with a letter from king James himself to the governors. In 1680 he published his Telluris Theoria Sacra, so univer- sally admired for the purity of the style and beauty of the sentiments, that king Charles gave encouragement to a translation of it into English ; and though, in point of philosophy, it is com- pletely exploded, the book will ever continue to charm the reader by the eloquence of its style, and the grandeur of its imagery. It was an- swered by Warren, Keill, and Whiston ; to all of whom Dr. Burnet replied. After the Revolu- tion he was made clerk of the closet to the king, of which place he was deprived in 1692, for pub- lishing some dangerous positions in his Archaeo- logia Philosophies. He died in 1715. Since his death have been published, his books, De Statu Mortuorum et Resurgentium, and De Fide et Officiis Christianorum.

BURNETT (James), lord Monboddo, a learned lawyer and polite writer, was born at the family-seat of Monboddo, in North Britain, in 1714. He was educated at Laurencekirk, Aber- deen, and Groningen, where he studied the civil law. In 1738, on his return to Scotland, he was admitted an advocate, and obtained considerable practice. On the death of his relation, lord Mil- ton, in 1767, he was promoted, by the title of lord Monboddo, to the bench ; and died at Edin- burgh of a paralytic stroke, in 1799. His lord- ship was deeply read in Greek literature, his love of which induced him to despise more modem learning. He indulged in some curious specu- lations; seriously advocating the existence of satyrs and mermaids, together with a supposed affinity between the human and the monkey tribes. His Origin and Progress of Language appeared in 1773 ; and the First Part of his An- cient Metaphysics in 1778. This last extended to six volumes.

BURNEY (Charles, Mus. D.), was a native of Shrewsbury, and born in 1726. Having re- ceived the rudiments of education, first at the grammar-school of his native town, and at Ches- ter, he returned home in 1741, and continued the study of music, for which he had early shown a strong taste. He was finally placed under Dr. Arne for three years, and in 1749 was elected organist to a church in Fenchurch-strect. His stay in London, however, was short ; after com- posing, in the winter of 1749, Robin Hood, Al- fred, and Queen Mab, for Drury-lane, he retired to Lynn Regis, where he commenced his great undertaking, the General History of Music, the first volume of which appeared in 1776, and the remaining three at intervals, till the whole was completed, in 1789. He returned, after nine

years' absence, to the metropolis, and produced at Drury-lane an English version of the Devin du Village of Rousseau. In 1769 he took an honorary degree of doctor of music at Oxford, where his probationary exercise was much ad- mired, and frequently performed. The year fol- lowing he went abroad, and on his return pub- lished his Musical Tour through France and Italy. In 1772 he again left England and made a tour through Germany and the Netherlands, an

account of which appeared in two volumes, oc- tavo. On his second return he became a fellow cf the Royal Society, and drew up for the Philo- sophical Transactions, An Account of Little Crotch the Infant Musician, the present Oxford musical professor. His other works are ā An Account of the Commemoration of Handel in 1785, with a Memoir of that celebrated man; a Life of Metastasio, in 3 vols. 8vo. 1796; an Essay on the History of Comets ; a Plan of a Public Music School ; and The Cunning Man ; besides numerous sonatas, duets, and concertos. Dr. Burney was for some time an inhabitant of a house in St. Martin's-street, near Leicester- square, which was once the habitation of Sir Isaac Newton ; but the last twenty-five years of his life were spent in his apartments in Chelsea College, to which he was organist. Several of his children, of whom he had eight, by two mar- riages, have also distinguished themselves in the literary world, especially his second son, and madame d' Arblay, authoress of Evelina, &c. His eldest son James was a companion of cap- tain Cook round the world. Dr. Burney died in 1814, aged eighty-eight.

BURNEY (Charles, D. D.), was the second son of the preceding, and born at Lynn, in Norfolk, in 1757. He was educated at the Charter-house, and Caius College, Cambridge, whence he re- moved to King's College, Aberdeen, where he took his master's degree, in 1781. Soon after we find him an assistant in an academy at High- gate ; and then, at Chiswick, in that of Dr. Rose. While here he wrote some criticisms in the Monthly Review, conducted in this neighbour- hood, particularly on the Monostrophies of Mr. Huntingford. About this time he married the daughter of Dr. Rose, and opened a school at Hammersmith, in 1786; from whence, in 1793, he removed to Greenwich. In 1792 he had ob- tained the degree of doctor of laws from Aber- deen and Glasgow. Late in life he took orders, on which occasion he was presented to the living of St. Paul, Deptford, the rectory of Cliffe, a prebend in Lincoln cathedral, the honorary de- gree of D. D. and made chaplain in ordinary to the king. He

died, December the 28th, 1817. His library was purchased by parliament, and presepted to the British Museum. His works are ā 1. Appendix ad Lexicon Grseco-Latinum a Joan. Scapulam, 1789. 2. Remarks on the Greek Verses of Milton, 1791. 3. Richardi Bentleii et Doctorurn Virorum Epistolae, 4to. 1807. 4. Tentamen de Metris ab ALschylo in Opericis Cantibus Adhibitis, 8vo. 1809. 5. Bishop Pearson's Exposition of the Creed, abridged, 12mo. 6. Philemonis Lexicon Graecb, 4to. 7. A Sermon at the Anniversary of the Sons of the Clergy at St. Paul's, 4to. 1813.

BURNING, considered philosophically, is the action of fire on some pabulum or fuel, by which the minute parts thereof are put into a violent motion, and some of them, assuming the nature of fire themselves, fly off in orbem, while the rest are dissipated in form of vapor, or reduced to ashes.

BURNING, in antiquity, was a method of dis- posing of the dead, much practised by the ancient Greeks and Romans, and still retained by several

nations in the East and West Indies. The anti- quity of this custom rises as high as the Theban war, where we are told of the solemnity accom- panying this ceremony at the pyre of Menaeceus and Archemorus, who were contemporary with Jair, the eighth judge of Israel. Homer abounds with descriptions of such funeral obsequies. In the inland regions of Asia, the practice was of very ancient date, and the continuance long : for we are told, that, in the reign of Julian, the king of Chionia burnt his son's body, and deposited the ashes in a silver urn. Coeval almost with the first instances of this kind in the East, was the practice in the western parts of the world. The Herulians, the Getes, and the Thracians, had all along observed it ; and its antiquity was as great with the Celtffi, Sarmatians, and other neighbouring nations. The origin of this custom seems to have been friendship to the deceased : . their ashes were preserved, as we preserve a lock of hair, a ring, or a seal, which had belonged to a deceased friend. Kings were burnt in cloth made of the asbestos, that their ashes might be preserved pure from any mixture with the fuel and other matters thrown on the funeral pile. The same method is still observed with the princes of Tartary. Among the Greeks, the body was

Ā§ laced on the top of a pile, on which were thrown ivers animals, and even slaves and captives, besides unguents and perfumes. In Homer's account of the funeral of Patroclus we find a number of sheep and oxen thrown in ; then horses followed by two dogs, and lastly by twelve Trojan prisoners. The same customs are mentioned by Virgil in the funeral of his Trojans; whore, be- sides oxen, swine, and all manner of cattle, we find eight youths condemned to the flames. The body was covered with the fat of the beasts, that it might consume the sooner; it being reckoned great felicity to be quickly reduced to ashes. We are assured by Plutarch and

Macrobius, that with every ten men it was customary to put in one woman. Soldiers usually had their arms burnt with them. The garments worn by the living were also thrown on the pile, with other orna- ments and presents; a piece of extravagance which the Athenians carried to so great a height, that some of the law-givers restrained them, by severe penalties, from defrauding the living by their liberality to the dead. In some cases, burn- ing was expressly forbidden among the Romans, and even looked upon as the highest impiety. Thus infants, who died before the breeding of teeth, were intombed unburnt in the ground, in a particular place set apart for this purpose, called suggrundarium. The same was practised with regard to those struck dead by lightning. Some say that burning was denied to suicides. The manner of burning among the Romans was not unlike that of the Greeks ; the corpse, being taken without the city, was carried directly to the place appointed ; which, if it joined to the sepulchre, was called bustum; if separate from it, ustrina ; and there laid on the rogus or pyra, a pile of wood prepared on which to burn it, built in shape of an altar, but of different height according to the quality of the deceased. Round the pile they set cypress trees, probably to hinder the noisome smell of the corpse. The body was

not placed on the bare pile, but on the couch or bed whereon it lay. This done, the next of blood performed the ceremony of lighting the pile; which they did with a torch, turning their faces all the while the other way, as if it were done with reluctance. During the ceremony, decur- sions and games were celebrated ; after which came the ossilegium, or gathering of the bones and ashes ; also washing and anointing them, and repositing them in urns.

BURNING, in medicine and surgery, denotes the application of an actual cautery See CAU- TERY.

BURNING, or BRENNING, in our old writings, denotes an infectious disease, got in the stews by conversing with lewd women, and supposed to be the same with what we now call the venereal disease.

BURNING ALIVE, among the Romans, was a punishment inflicted on deserters, betrayers of the public councils, incendiaries, and even Christians : It was called crematio. The Jews had two ways of burning ; the one called burning of the body, performed with wood and faggots; the other burning of the soul, combustio anima?, performed by pouring scalding hot lead down their throats. Incest in the ascending and descending degrees was thus punished by them. But philanthropy is shocked to reflect, for what trifling

crimes this horrid punishment has been inflicted among other nations. Even in our own country, till within these few years, burning alive was the punish- ment of women, convicted of coming or counter- feiting shillings ! Thus was the weaker sex pu- nished in the most barbarous manner, for a trifling felony, which could hardly wrong any individual above the value of a few pence.

BURNING INTERNAL. See COMBUSTION.

BURNING GLASSES are commonly made convex and spherical. The small space upon which the collected rays fall, is called the focus ; where wood, or any other combustible matter being put, will be set on fire. The term burning glass is also applied to those concave mirrors, whether composed of glass quick-silvered, or of metalline matters, which burn by reflection, condewsing the sun's rays into a focus similar to the former. The use of burning glasses appears to have been very ancient. Diodorus Siculus, Lucian, Dion, Zo- naras, Galen, Anthemius, Eustathius, Tzetzes, and others, attest, that by means of them Archi- medes set fire to the Roman fleet at the siege of Syracuse. Tzetzes is so particular in his account of this matter, that his description suggested to Kircher the method by which it was probably accomplished. According to that author, Ar- chimedes set fire to Marcellus's navy, by means of a burning glass composed of small square mirrors, moving every way upon hinges ; which, when placed in the suns rays, directed them upon the Roman fleet, so as to reduce it to ashes at the distance of a bow-shot. That the ancients were also acquainted with the use of catoptric or refracting burning glasses, appears from a passage in Aristophanes's comedy of the Clouds, which clearly treats of their effects. The author intro- duces Socrates as examining Strepsiades about the method he had discovered of getting clear of his debts. He replies, that ' he thought of mak-

ing use of a burning glass which he had hitherto used in kindling his fire ; for', says he, ' should, they bring a writ against me, I shall immediately place my glass in the sun at some little distance from it, and set it on fire.' Pliny and Lactantius have also spoken of glasses that burn by refrac- tion. The former calls them balls or globes of glass or crystal, which exposed to the sun, trans- mit a heat sufficient to set fire to cloth, or corrode the dead flesh of those patients who stand in need of caustics ; and the latter, after Clemens Alex andrinus, takes notice that fire may be kindled by interposing glasses filled with water between the sun and the object, so as to transmit the rays to it. It seems difficult to conceive how they should know such glasses would burn without knowing they would magnify, which it is granted they did not, till towards the close of the thir- teenth century. M. de la Hire accounts for this, by observing, that their burning glasses being spheres, either solid or full of water, their foci would be one-fourth of their

diameter distant from them. If then their diameter were supposed half a foot, which is the most we can allow, an object must be only at an inch and a half distance to perceive it magnified ; those at greater distances do not appear greater, but only more confused through the glass than out of it. Among the ancients, the burning mirrors of Archimedes and Proclus are famous. By the latter the navy of Vitellins besieging Byzantium, according to Zo- naras, was burnt to ashes. Among the moderns, the most remarkable burning mirrors are those of Settala, Vilette, Tschirnhausen, Buffon,Trudaine,. and Parker. Settala, canon of Padua, made a parabolic mirror, which, according to Schottus,, burnt pieces of wood at the distance of fifteen or sixteen paces. The following experiments are noted in the Acta Eruditorum. 1. Green wood takes fire instantaneously, so as a strong wind cannot extinguish it. 2. Water boils imme- diately ; and eggs in it are presently edible. 3. A mixture of tin and lead, three inches thick, drops, presently ; and iron and steel plate becomes red- hot presently, and a little after burns into holes. 4. Things not capable of melting, as stones, bricks. &c. become soon red-hot, like iron. 5. Slate be- comes first white, then a black glass. 6. Tiles are converted into a yellow glass : and shells into a blackish yellow one. 7. A pumice stone, emitted from a volcano, melts into white glass. 8. A piece of crucible also vitrifies in eight mi- nutes. 9. Bones are soon turned into an opaque glass, and earth into a black one. The breadth of this mirror is near three Leipsic ells, its focus two ells from it ; it is made of copper, and its substance is not above double the thickness of the back of a knife. Villette, a French artist of Lyons, made a large mirror, which was bought by Tavernier, and presented to the king of Per- sia ; a second, bought by the king of Denmark ; a third, presented by the French king to the Royal Academy ; a fourth, has been in England, where it was publicly exposed. The effects hereof, as found by Dr. Harris, and Dr. Desaguliers, are, that a silver sixpence is melted in seven seconds and a half, a halfpenny in sixteen, and runs with a hole in thirty-four. Tin melts in three seconds, cast iron in sixteen, slate in three ; a fossil shell

calcines in seven seconds ; a piece of Pompey's pillar at Alexandria vitrifies, the black part in fifty seconds, the white in fifty-four; copper ore in eight seconds ; bone calcines in four seconds, vitrifies in thirty-three. An emerald melts into a substance like a turquois stone ; a diamond weighing four grains loses seven-eighths of its weight ; the asbestos vitrifies ; as all other bodies will do, if kept long enough in the focus ; but when once vitrified, the mirror can go no farther with them. This mirror is forty-seven inches wide, and is ground to a sphere of seventy-six inches radius ; so that its focus is about thirty- eight inches from the vertex. Its substance is a

composition of tin, copper, and tin glass. Every lens, whether convex, plano-convex, or convexo- convex, collects the sun's rays, dispersed over its convexity, into a point by refraction : and is therefore a burning glass. The most consider- able of this kind is that made by M. de Tchirn- hausen : the diameters of his lenses are three and four feet, the focus at the distance of twelve feet, and its diameter an inch and a half. To make the focus the more vivid, it is collected a second time by a second lens parallel to the first, and placed in that point where the diameter of the cone of rays formed by the first lens is equal to the diameter of the second ; so that it receives them all ; and the focus, from an inch and a half, is contracted into the space of eight lines, and its force increased proportionably. This glass vitri- fies tiles, slates, pumice-stones, &c. in a moment. It melts sulphur, pitch, and all resins, under water ; the ashes of vegetables, woods, and other matters, are transmuted into glass ; and every thing applied to its focus is either melted, turned into a calx, or into smoke. Tschirnhausen ob- serves, that it succeeds best when the substance applied is laid on a hard charcoal well burnt. Sir Isaac Newton presented a burning glass to the Royal Society, consisting of seven concave glasses, so placed, as that all their foci join in one physical point. Each glass is about eleven inches and a half in diameter, : six of them are placed round the seventh, to which they are all conti- guous ; and they form a kind of segment of a sphere, whose subtense is about thirty-four inches and a half, and the central glass lies about an inch farther in than the rest. The common focus is about twenty-two inches and a half distant, and about an inch in diameter. This glass vitrifies brick or tile in one second, and melts gold in thirty. It appears that glass quicksilvered is a more proper material for burning glasses than metals ; for the effects of that speculum where- with Mr. Macquer melted the platina, seem to have been superior to those above mentioned, though the mirror itself was much smaller. The diameter of this glass was only twenty-two inches, and its focal distance twenty-eight. Black flint, when exposed to the focus, being powdered to prevent its crackling and flying about, and se- cured in a large piece of charcoal, bubbled up and ran into transparent glass in less than half a minute. Hessian crucibles, and glass-house pots, vitrified completely in three or four seconds,. Forged iron smoked, boiled, arid changed into a vitrescent scoria as soon as it was exposed to the focus. The gypsum of Montmartre, when the VOL. IV7.

flat sides of the plates or leaves, of which it is composed, were presented to the glass, did not show the least disposition to melt; but, on pre- senting a transverse section of it, or the edges of the plates, it melted in an instant, with a hissing noise, into a brownish yellow matter. Calcareous stones did not completely melt : but there was detached from them a circle more compact than the rest of the mass, and of the size of the focus ; the separation of which seemed to be occasioned by the shrinking of the matter

which had begun to enter into fusion. The white calx of antimony, commonly called diaphoretic antimony, melted better than the calcareous stones, and changed into an opaque pretty glossy substance, like white enamel. It was observed, that the whiteness of the calcareous stones and the antimonial calx was of great disadvantage to their fusion, by reason of their reflecting great part of the sun's rays ; so that the subject could not undergo the full acti- vity of the heat thrown upon it by the burning glass. The case was the same with metallic bo- dies, which melted so much the more difficultly as they were more white and polished ; and this difference was so remarkable, that in the focus of this mirror, so fusible a metal as silver, when its surface was polished, did not melt at all. M. Trudaine, a French gentleman, constructed a burning lens on a new principle. It was com- posed of two circular segments of glass spheres, each four feet in diameter, applied with their concave sides towards each other. The ca- vity was filled with spirit of wine, of which it contained forty pints. It was presented by the maker to the Royal Academy of Sciences, but was, not long after, broken by accident. The expense of constructing it amounted to about Ā£1000 sterling, and after all, it does not appear that the effects of this lens were very great. Mr. Magel- lan informs us, that it could only coagulate the particles of platina in twenty minutes, while Mr. Parker's lens entirely melted them in less than two

M. Buffon's burning mirror, which he sup- poses to be of the same nature with that of Ar- chimedes, consists of a number of small mirrors of glass quicksilvered, all of which are held toge- ther by an iron frame. Each of these small mirrors is also movable by a contrivance on the back part of the frame, that so their reflections may all coincide in one point. By this means they are capable of being accommodated to va- rious heights of the sun, and to different distances. The. adjusting them in this manner takes up a considerable time; but after they are so adjusted the focus will continue unaltered for an hour o. more. In 1747 he constructed a machine of this kind, with 140 plane mirrors ; each about four inches long, and three broad ; these were fixed about a quarter of an inch distant from each other, upon a large wooden frame, of about six feet square. The experiment was first tried with twenty-four mirrors, which readily set on fire a combustible matter, prepared of pitch and tow, and laid on a deal board, at the distance of sixty- six French feet. He then put together a kind of polyhedron, consisting of 168 pieces of plane looking glass, each being six inches square ; ami by means of this some boards of beech were set 2 Z*

on tire, at the distance of 150 feet, in the month within a chaced mortice in

which it move?, an

of March, and a silver plate was melted at the apparatus H, with the iron plate, I, fixed thereto ;

distance of sixty feet. This machine, besides and this part turning on a ball and socket, K ; a

other advantages, may be easily moved, so as to method is thereby obtained of placing the matter

burn downwards or horizontally; and it burns under experiment, so as to be acted upon by the

either in its distant focus, or in any nearer in- focal rays in the most direct and powerful man-

terval, which our common burning glasses cannot ner. LL, a strong mahogany frame, moving on

do, because their focus is wholly fixed. This castors, MM. Immediately under the table N,

machine, in the next stage of its improvement, are three friction wheels, by which the machine

contained 360 plane mirrors, each eight inches moves horizontally. O, a strong iron bow, in

long, and six broad, mounted on a frame eight which the lens and the cone hang. Section, fig,

feet high, and seven broad. With twelve of these 2. a, the great lens marked A, in the elevation,

mirrors, light combustible matters were kindled b, The frame whict contains the lens, c, The

at the distance of twenty feet; at the same dis- small lens marked B. d, The frame which con-

tance a large tin vessel was melted with forty- tains the small lens, e, The truncated cone,

five of them, and a thin piece of silver with 117. marked C. f, the bar on which the apparatus

When the whole machine was employed, all the marked F moves, g, The iron plate marked I.

metals and metallic minerals were melted at the h, The cone of rays formed by the refraction of

distance of twenty-five, and even of forty feet, the great lens a, and falling on the lens c. t,

Wood was kindled in a clear sky, at the distance The cone of rays formed by the refraction of the

of 210 feet. The focus, at the distance of fifty lens c. Front view. fig. 3, k, The great lens,

feet, is about seven inches broad ; and at the /, The frame containing it. m, The strong iron

distance of 240 feet, it becomes two feet in dia- bow in which it hangs. From a great number of

meter. Buffon afterwards constructed a machine experiments made with this lens, in the presence

which contained 400 mirrors, each half a foot of many scientific persons, the following are se-

square, with which he could melt lead and tin at lected as specimens of its powers : ā the distance of 140 feet. He observes, that in

large refracting lenses, which are most conve- Substances fused, with their Weight in Time in

nient for many purposes, the thickness of the ˆ eight and time of fusion. Grains. Seconds,

glass in the middle is so great, as very much to Gold, pure 20 4

diminish their force. For this reason he pro- Silver, ditto 20 3

poses to form a burning glass of concentric or Copper, ditto 33 20

circular pieces of glass, each resting upon the Platina, ditto 10 3

other. His method is to divide the convex arch Nickel 16 3

of the lens into three equal parts. Thus, sup- Bar iron, a cube 10 12

pose the’ diameter to be twenty-six inches, and Cast iron, a cube 10 3

the thickness in the middle to be three inches : by Steel, a cube 10 12

dividing the lens into three concentric circles, Scoria of wrought iron ... 12 2

and laying the one over the other, the thickness Kearsh 10 3

of the middle piece needs be only one inch ; at the Cauk, or terra ponderosa . . 10 7

same time that the lens will have the same con- A topaz, or chrysolite ... 3 45

vexity, and almost the same focal distance, as in An oriental emerald ... 2 25

the other cases ; while the effects of it must be Crystal pebble 7 6

much greater, on account of the greater thinness White agate 10

of the glass. Flint, oriental 10 30

Mr. Parker’s lens is three feet in diameter, Rough cornelian 10

made of flint-glass, and which, when fixed in its Jasper 10 . 25

frame, exposes a surface 2 feet 8 inches in the Onyx ....:... 10

clear. The elevation is represented on plate Garnet 10 17

XLV. fig. 1. A, is the lens of the diameter White Rhomboidal spar . . 10

mentioned: thickness in the centre, 3 J inches : Zeolites 10

weight 212 pounds: length of the focus, 6 feet Rotten-stone 10 80

8 inches; diameter of ditto, 1 inch. B, a second Common slate 10

lens, whose diameter in the frame is 16 inches, Asbestos 10 10

and shows in the clear 13 inches: thickness in Common lime-stone ... 10 55

the centre 1 1 inches : weight 21 pounds: length Pumice-stone 10 24

of focus 29 inches: diameter of ditto, Ā§ of an Lava 10

inch. When the two above^ lenses are com- Volcanic clay _ 10

pounded together the length of the focus is 5 Cornish moor-stone ... 10 60 feet 3 inches : diameter of ditto, half an inch.

C, a truncated cone, composed of 21 ribs of A subscription was attempted for the purpose wood: at the larger end is fixed the great lens of defraying the expense of this fine instrument, A, at the smaller extremity the lesser lens B : but it failed; and the instrument itself was pur- near the smaller end is also fixed a rack D, chased by captain Mackintosh, who accompanied passing .through the pillar L, movable by a lord Macartney in his embassy to China ; and is pinion turning in the said pillar, by means of now probably deposited among many ingenious the handle E, and thus "giving a vertical motion and valuable presents, the use of which is un ā¢ to the machine. F, a bar of wood, fixed between known to the Chinese. the two lowjsr ribs of the cone at G; having, BURNING PLANT> See EUPHORBIA,

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BINNING SPRINGS. Of these there are many in different parts of the world ; particularly one in France, in the department of the Isere, near Grenoble; another near Hermanstadt in Tran- sylvania ; a third at Chermay, a village near Swit- zerland; a fourth in the canton of Friburg; and a fifth not far from the city of Cracow, in Poland. There also is, or was, a famous spring of this kind at Wigan in Lancashire, which, upon the approach of a lighted candle, would take fire and burn like spirit of wine for a whole day. But the most remarkable one, or at least that of which we have the minutest description, was dis- covered in 1711, at Brosely, in Shropshire. ' The well, for four or five feet deep, is six or seven feet wide ; within that is another less hole of like depth dug in the clay, in the bottom whereof is placed a cylindric earthen vessel, of about four or five inches diameter at the mouth, having the bottom taken off, and the sides well fixed in the clay rammed close about it. Within the pot is a brown water, thick as puddle, continually forced up with a violent motion beyond that of boiling water, and a rumbling hollow noise, rising and falling, by fits, five or six inches ; but there was no appearance of any vapor rising, which, perhaps, might have been visible had not the sun shone so bright. Upon putting a candle down

at the end of a stick, at about a quarter of a yard distance, it took fire, darting and flashing after a very violent manner for about half a yard high, much in the manner of spirits in a lamp, but with great agitation. It was said, that a tea- kettle had been made to boil in about nine mi- nutes, and that it had been left burning for forty- eight hours without any sensible diminution. It was extinguished by putting a wet mop upon it; which must be kept there for a little time, other- wise it would not go out. Upon the removal of the mop there arises a sulphureous smoke, lasting about a minute, and yet the water is very cold to the touch.' In 1755 this well totally disap- peared by the sinking of a coal-pit in its neigh- bourhood. The cause of the inflammable pro- perty of such waters is, with great probability, supposed to be their mixture with petroleum, which is one of the most inflammable substances in nature, and has the property of burning on the surface of water.

BURNISHERS, for gold and silver, were for- merly made of the teeth of dogs or wolves, set in the end of iron or wooden handles ; but for a long time past agates have been introduced and are found preferable. In most cases polished steel answers equally well, as it gives a very good lustre. These are of different forms; straight, crooked, &c. The steel burnishers used by en- gravers in copper are formed to serve with one end to burnish, and with the other to scrape out errors or scratches.

BURNISHING, the art of smoothing or po- lishing a metalline body, by a brisk rubbing of it with a burnisher. Book-binders burnish the edges of their books by rubbing them with a dog's tooth.

BURNS (Robert), one of the most eminent of modern Scots poets, was born 25th of Ja- nuary, 1759, on a small farm near the town of Ayr. Of this extraordinary genius, Dr. Currie's account is substantially as follows : ā He was the

son of William Burnes, or Burns, a jmrdener and small farmer, and was brought up to rustic labor ; but his education was not neglected, a. he was at an early age instructed in the grammar of the English language by Mr. Murdoch (who died not long since in London), to which he added an acquaintance with the French language and practical mathematics. A passion for reading urging him to devote every momenthe could spare to the perusal of books, and meeting among them with the works of some of the best English poets, he was enabled to cultivate and improve a taste for poetry and fiction, which was perhaps first inspired by the chimney-corner tales of an old woman in his father's family. His first poetical effusions were prompted by love : having begun, he continued to make verses, which attracted the notice of his neighbours, and he was early es- teemed a gay companion. He engaged in bu- siness as a flax-dresser in the town of Irvine,

but his premises were destroyed by fire, and he was unable to sustain his credit. His father dying, he took a small farm in conjunction with his younger brother, and failed also in this scheme. In the mean time he had formed a connexion with a young woman, whom, on her becoming pregnant, he would have married, but his cir- cumstances induced her friends to object to it ; and he engaged himself to embark as overseer to a plantation "in Jamaica. He first, however, was induced to publish, by subscription, a volume of poems, which was printed at Kilmarnock, in 1786 ; and shortly after was shown a letter from Dr. Blacklock, recommending that he should visit Edinburgh, in order to take advantage of the ad- miration his poems had excited. This advice he eagerly adopted, and remaining more than a year in the metropolis of his country, admired, flattered, and caressed by various persons of eminence, he retired to the country with the sum of Ā£500, which he had realised by the second edition of his poems. With this sum he took a considerable farm near Dumfries. To his great credit, also, he now completed his matri- monial engagement with the female before al- luded to: but his convivial habits soon pre- vented him from paying a proper attention to his farm ; and, after a trial of three years and a half, he was obliged to resign his lease, and remove to the town of Dumfries, to follow the employment of an exciseman. Here he occasionally exercised his pen, particularly in the composition of a number of beautiful songs, and as a contributor to periodical works. Intemperance, however, had become his tyrant ; and how the honorable friends, who obtained for him the appointment of an exciseman, could imagine that such an office would really benefit his fortunes, we cannot divine. It was just the situation calculated to hurry him into the moral ruin that ensued, and which, finally bringing on inveterate habits of in- toxication, hurried him to a premature grave, July 21st, 1796. Mr. Coleridge, alluding wit! indignation to the circumstance of making this ill-fated son of genius ' a gauger of ale firkins, calls upon his friend Lamb to gather a wreath of ' henbane, nettles, and nightshade'

' To twine

*The illustrious brow of Scotch nobility.**

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Wt have little occasion to attempt a character of him as a poet : it has been often and fairly drawn. It was entirely in contrast with his cha- racter as a man. He attempted hardly any thing in civil life in which he succeeded ā

and scarcely any thing, as a poet, in which he did not succeed. Of the solemn and sublime, his poems entitled the Vision, Despondency, the Lament, Winter, a Dirge, and the Invocation to Ruin, afford strik- ing examples. Of the tender and the moral, many beautiful specimens are found in the elegaic verses, entitled Man was made to Mourn, in the Cotter's Saturday Night, the Stanzas to a Mouse, and those to a Mountain Daisy. There is scarcely an image more truly pastoral than that of the Lark, in the second stanza of the last named poem ; and nothing can exceed the beauty and simplicity of the simile ā

As bees flee hame wi' lades of treasure The minutes winged their way wi' pleasure.

While some few of his poems are immoral, and more of them equivocal in their tendency, it is but just to add that he was never known delibe- rately to descend to an act of meanness ; and the entire picture of his so-named indulgencies and agonies, pleasures and remorse, is by no means a tempting one. His picture is honestly drawn by his own pen, in a proposed epitaph for himself: ā

Is there a whim-inspired fool, Owre fast for thought, owre hot for rule, Owre blate to seek, owr proud to snoul ?

Let him draw near; And owre this grassy heap sing dool,

And drap a tear. Is there a bard of rustic song, Who, noteless, steals the crowds among, That weekly to this area throng ?

O pass not by ! But with a frater-feeling strong,

Here, heave a sigh. Is there a man whose judgment dear Can others teach the course to steer, Yet runs himself life's mad career,

Wild as the wave? Here pause ā and, through the starting tear,

Survey this grave. The poor inhabitant below Was quick to learn and wise to know, And keenly felt the friendly glow,

And softer flame ; But thoughtless follies laid him low,

And stain'd his name. Reader, attend. ā Whether thy soul Soars fancy's flight beyond the pole, Or darkling grubs this earthly hole,

In low pursuit ; Know, prudent, cautious, self-control,

Is wisdom's root.

We should not omit to state that Burns was a prose writer of pieces as extraordinary, for his situation, as any of his poetical performances. His letters exhibit a purity and facility of ex- p'ression which would be admired in any con- dition ; and they abound with those marks of elegance, variety, and vigor, which distinguish genius. With one of these, which may serve as a prose sketch of his own character, we con- clude ; ā ' Take a being of our kind, give him a

stronger imagination and more delicate sensibi- lity, which between them will ever engender a more ungovernable set of passions than are the usual lot of man ; implant in him an irresistible impulse to some idle vagary, such as arranging wild flowers in fantastic nosegays, tracing the grasshopper to his haunt by his chirping song, watching the frisks of the little minnows in the sunny pool, or hunting after the intrigues of but- terflies ; in short, send him adrift after some pur- suit which shall eternally mislead him from the paths of lucre, and yet curse him with a keener relish than any man living for the pleasures that lucre can bestow ; lastly, fill up the measure of his woes by bestowing on him a spurning sĀ«-nse of his own dignity; ā and you have created a wight nearly as miserable as the poet.'

BURNTISLAND, a royal burgh and sea-port town, of a parish of the same name. The town is finely situated on a peninsula of the Frith of Forth, surrounded by hills on the north, in the form of an amphitheatre, which afford an excel- lent shelter for ships. It consists of two streets, running parallel to each other. The principal street is broad and spacious, containing a num- ber of respectable buildings. It was formerly fortified, and part of the wall and east port still remain. It has the best harbour on the coast, formed by a rocky isle, with piers ; a large dock has also been constructed here, with seventeen feet and a half of water at spring tides. The church is square, with a steeple rising in the centre, and was built by the inhabitants, in 1592, at their own expense. This place held out against Cromwell, till he was obliged to enter into conditions with the inhabitants; part of which were, that he should repair the streets and harbour ; in consequence of which the quays, as they now stand, were built by him. In 1715 this town was surprised and possessed by the rebels, who formed the bold design of passing over a body of troops to the opposite shore ; which was in part executed under the command of brigadier Macintosh, notwithstanding all the efforts of the men of war. It joins with Kircaldy, Kinghorn, and Dysart, in sending a member to parliament. The government is vested in twenty- one persons, viz. fourteen guild counsellors, out of whom are chosen three bailies; and seven trades counsellors. A provost is also elected annually. There is here a sugar-house, belong- ing to a Glasgow company, and vitriol-works. Ship-building is also carried on by a few hands ; and about twelve or fifteen tons of kelp are an- nually made.

BURR', n. s. The lobe or lap of the ear.

BURR, among huntsmen, the round knob of a horn next a deer's head.

BURR' PUMP, in a ship, a pump by the side of a ship, into which a staff seven or eight feet long is put, having a burr or knob of wood at the end, which is drawn up by a rope fastened to the middle of it ; called also a bilge pjump.

BURRA, an island of Scotland, in the county of Shetland.

BURRAMAHAL. See BARRAMAHAL.

BURRAMPOOTER, or BRAHMAPOOTRA, a river of India, of considerable magnitude, of which the first account is given by J. Rennel;

Esq.; in the seventy-first volume of the Philo- sophical Transactions : the Burrampooter, says he, which has its source from the opposite side of the mountains that give rise to the Ganges, first takes its course eastward through the country of Thibet, where it is named Sanpoo or Zancu, which bears the same interpretation as the Ganga of Hindostan, namely the river. After winding with a rapid current through Thibet, it washes the border of the territory of Lassa, and then deviating from an east to a south-west course, it approaches within 220 miles of Yunan, the most westerly province of China. Here it appears as if undetermined whether to attempt a passage to the sea by the Gulf of Siam, or by that of Ben- gal : but it turns suddenly to the north-west, through Assam, and enters Bengal on the north-east. It now makes a circuit round the western point of the Garrow Mountains, and then al- tering its course to the south, in the Dacca pro- vince, is joined by the Megna, which, although not the tenth part of its size, receives and absorbs its name ; henceforward communicating its own to the great mass of waters, until they intermix with those of the Ganges, near the Bay of Bengal. The whole known course of this river, including its windings, may be estimated at 1650 miles; but it is the fate of the Brahmapootra to pene- trate a rude climate and stubborn soil, seldom approaching the habitation of civilised men; while the Ganges, on the contrary, waters a fer- tile territory, through rich and polished nations. The Brahmapootra, unknown in Europe as a ' capital river of India, until 1765, bears, during a course of 400 miles through Bengal, so inti- mate a resemblance to the Ganges, that one des- cription answers both, except

that, during the last sixty miles before their junction, under the name of Megna, it forms a stream, which is regularly from four to five miles wide, and, but for its freshness, might pass for an arm of the sea. The union of these two mighty rivers below Luckipoor now forms a gulf interspersed with large islands. The Bore, which is a sudden and abrupt influx of the tide into a river or narrow strait, prevails in the principal branches of the Ganges, and in the Megna; but the Hooghly river, and the passages between the islands and sands, situated in the gulf, formed by the confluence of the Brahmapootra and Ganges, are more subject to it than the rest of the rivers.

BUR'IIAS PIPE, with surgeons, an instrument or vessel used to keep corroding powders in, as vitriol, precipitate &c.

BUR'REL, n. $. A sort of pear, otherwise called the red butter pear, from its smooth, deli- cious, and soft pulp.

BCR'REL FLY, n. s. Fr. bourreler, to execute, to torture. An insect, called also oxfly, gadbee, or breeze.

BUR'REL SHOT. From bourreler, to execute, and shot, in gunnery, small bullets, nails, stones, pieces of old iron, &c. put into cases, to be discharged out of the ordnance ; a sort of case shot.

BUR'ROCK, n. s, A small wear or dam, where wheels are laid in a river for catchin of

BUR'ROW, v. & n. > Sax. beorgan, byr-an,

BUR'ROWY. $ to defend, to protect.

Properly borough, a corporation town. A hole in the ground; a den ; a concealment. TomakĀ» holes in the ground for concealment ; from the noun.

When they shall see his crest up again, and the man in blood, they will out of their burrows, like conies after rain, and revel all with him. Shakspeare. King of England shall thou be proclaimed

In every burrow, as we pass along. fj.

And through the palaces' foundations bore, Burrowing themselves, to hoard their guilty store.

MarcelL

Possession of land was the original right of elec- tion among the commons ; and burrowt were entitled to sit, as they were possessed of certain tracts.

Temple.

Sir, this vermin of court reporters, when they are forced into day upon one point, are sure to burrow in another; but they shall have no refuge ; I will make them bolt out of all their holes.

Burke's Speech on American Taxation.

Some strew sand among their corn, which, they say, prevents mice aud rats burrowing in it ; because of its falling into their ears. Mortimer,

Little sinuses would form, and burrow underneath.

Sharp.

BURROW (Sir James), master of the crowr office, was elected F. R. S. and F. A.S. 1751. On the death of Mr. West, in 1772, he was pre- vailed on to fill the president's chair at the Royal Society till the anniversary election, when he re- signed it to Sir John Pringle : and August 10th, 1773, when the society presented an address to the king, he was knighted. He published two volumes of Reports in 1766; two others in 1771 and 1776; and a volume of Decisions of the Court of King's Bench, upon settlement cases from 1732 to 1772 (to which was subjoined An Essay on Punctuation), in 3 parts, 4to. 1 768, 1 772, 1776. The Essay was also printed separately in 4to. 1773. He published, without Fiis name, A few Anecdotes and Observations relating to Oliver Cromwell and his family, serving to rectify several errors concerning him ; published by Nicol. Comn. Papadopoli, in his Historia Gym- nasii Patavina, 1763, 4to. He died in 1782.

BuRR-Pt'Mp, or BILGE-PUMP, differs from the common pump, in having a staff six, seven, or eight feet long, with a bar of wood, whereto the leather is nailed, and this serves instead of a box. Two men, standing over the pump, thrust down this staff, to the middle whereof is fastened a rope, for six, eight, or ten men to hale by, thus pulling it up and down.

BURR REED. . See SPARGANIUM.

BURSA, BURSE, originally signifies a purse. In writers of the middle age it is more particu- larly used for a little college, or hall in a uni- versity, for the residence of students, called bursates orbursarii. In some universities it still denotes a foundation for the maintenance of poor scholars in their studies. The nomination to burses is in the hands of the patrons and founders thereof. The burses of colleges are not bene- fices, but mere places

assigned to certain countries and persons. A burse becomes vacant by tiie bursar's being promoted to a cure.

BVRSA, or PRUSA, the capital of Bithyr.ia, in Asia Minor, si fcsifed in a fine fruitful plain, at the foot of mount Olympus, about seventy-five miles S. S. W. of Constantinople. It is one of the largest and finest cities of Asiatic Turkey, and contains 40,000 Turks, besides 300 families of Greeks, 400 of Jews, and 500 of Armenians. It was the capital of- the Turkish empire, before the taking of Constantinople. Part of it stands on several small hills, at the foot of Olympus. The plain is covered with mulberry and various other fruit trees. The mosques and caravanseras are elegant ; and so many springs proceed from Olympus that every house has its fountain. The bazaar contains all the commodities of the east. It also abounds in their own manufac- tures; the best workmen in Turkey residing in this town, and being excellent imitators of the French and Italian artists; particularly in ta- pestry.

BURSA, in zoology, a species of alcyonium, inhabiting the coasts of Europe, and commonly called the sea purse.

BURSA MUCOSA. A mucous bag, composed of membranes, containing a kind of mucous fat. The burses are of different sizes and firmness, and are connected by the cellular membrane with articular cavities, tendons, ligaments, or the periosteum. Their use is to secrete and contain a substance, to lubricate tendons, muscles, and bones, in order to render their motion easy. See MUSCLES, and Dr. Monro has published a de- tailed account of the bursae, to which the reader is also referred.

BURSARIA, the bursary, or exchequer of collegiate and conventual bodies ; or the place of receiving, paying, and accounting by the bursars.

BURSARIA, in botany. Class pentandria, order monogynia. Its generic characters are : CAL. deeply divided into five segments : COR. petals five, linear : PIST. short style ; stigma simple : CAPS, heart-shaped, one-celled, open- ing into two parts, each with two valves, and two horns : SEEDS two. There is but one species, viz. B. spinosa a shrub of New Holland.

BURSARIA, in entomology, a species of aphis, found in the hollow excrescences which it forms in the leaves of the black poplar.

BURSARIA, in zoology, a species of sertularia, an inhabitant of the British coasts. The denti- cles are opposite, branched, and dichotomous ; called in English the shepherd's purse co- ralline.

BURSE', -j Barb. Lit. bursarius ; Fr. BUR'SAR, > bourse, a purse; boursier,

BUR'SARSHIP. j a scholar pensioned at a col- lege ; Goth, biorgkus, an exchange house ; a place for money or mercantile transactions. The term bursar specifically means the treasurer of a college ; and a scholar who has a pension from it.

It has been considered as of so much importance, that a proper number of young people should be edu- cated for certain professions, that sometimes the pub- lic, and sometimes the piety of private founders, have established many pensions, scholarships, exhibitions, ttsraaries, Ā£c. for this purpose.

Smith's Wealth of Nations, b. i. c. x.

BURSE, Guicciardini assures us, was first ap- plied to a commercial edifice at Bruges, and took its rise from an hotel, built by a lord of the family de la Bourse, whose arms, which are three purses, are still found on the crowning over the portal of the house. The most considerable burse is that of Amsterdam, which is a large building, 230 feet long- and 130 broad, round which runs a peristyle twenty feet wide. The columns of the peristyle, which are forty-six, are numbered, for the conveniency of finding people. It will hold 4500 persons. The ancient Romans had public places for the meetings of merchant? in most of their trading cities; that built at Rome, A. U. C. 259, under the consulate of Ap- pius Claudius and Publius Servilius, was de- nominated the college of merchants ; some remains of it are still to be seen, and are known by the modern Romans under the name loggia. , The Hans towns, after the example of the Ro- mans, gave the name of colleges to their burses. BURSERA, in botany, a genus of the dice- cia order, belonging to the hexandria class of plants. The CAL. is triphyllous ; the COR. tripetalous ; the CAPS, carnous, trivalved, and monospermous. There is but one species ; viz. B. gummifera, or gum elemi. It is frequent in woods in most of the Bahama Islands, and grows speedily to a great height and thickness. The leaves are pinnate; the middle rib three or six inches long, with the pinnae set opposite, on foot-stalks half an inch long. It has yellow flowers, male and female on different trees. These are succeeded by purple-colored berries, bigger than large peas, hanging in clusters on a stalk of about five inches long, to which each berry is joined by a foot-stalk half an inch long. The seed is hard, white, and of a triangular figure, enclosed within a thin capsule, which divides in three parts, and discharges the seed. The fruit when cut discharges a clear balsam, esteemed a good vulnerary,

particularly for horses. On wounding the bark, a thick milky liquor is obtained, which soon concretes into a resin no way different from the gum elemi of the shops.

BURSERY, 1. A Privilege to attend a col- lege in Scotland, without paying fees : 2. A salary bestowed for that purpose at the disposal of some patron : 3. The treasury of a college or monastery.

BURST', v. & n. or BRUST'. Goth, brusta, borsta ; Swed. brista ; Belg. borsten ; Sax. bur- stan; Teut. bursten ; to break; fly open; rup- ture; to rush ; to gush forth. It is applied to ' the violent inflammation produced by the pas- sions, when we say of an individual he is ready to burst with rage ; to suffer a violent disruption; to break suddenly. Brust and brusta are terms employed to designate hernia of the uncom- pounded kind.

Sire ! I wol be your humble trewe wif,

Have here my trouth, till that myn herte burste.

Chaucer's Canterbury Tales.

With that she wept and wailed, as if her heart Would quite have burst through great abundance of her smart. Spenser.

My breast I'll bunt with straining of my courage, And from my shoulders crack my arms asunder, But. I will ibastise this high-minded strumpet.

BUR

He fastened on my neck, and bellowed out, As if he would burst heaven. Id,

Yet I am thankful ; if my heart were great, 'Twould burst at this. Id.

Down they came, and drew

The whole roof after them, with burst of thunder Upon the heads of all. Milton.

The egg, that soon

Bursting with kindly rupture, forth disclosed The callow young. Id,

She burst into tears, and wrung her hands.

Arbuthiiot. We lye examining ourselves, and are ready to

burst, Yet still are no wiser than we were at first. Swift.

Imprisoned fires, in the close dungeons pent ; Roar to get loose, and struggle for a vent ; Eating their way, and undermining all, Till with a mighty burst whole mountains fall.

Addison.

You burst, ah, cruel ! from my arms, And swiftly shoot along the Mall, Or softly glide by the canal. Pope.

But lust of power's a dropsy on the mind, Whose thirst increases, while we drink to quench it, Till swollen and stretched by the repeated draught, We burst and perish. Higgan's Generous Conqueror.

What then is unbelief ? 'tis an exploit : A strenuous enterprise : to gain it, man Must burst through every bar of common sense.

Young's Night Thoughts.

Then bursting broad the boundless shout to heaven From many a thousand hearts ecstatic sprung.

Thomson's Liberty. If the worlds

In worlds inclosed, should on his senses burst, He would abhorrent turn. Thomson.

Once more through all he bursts his thundering way.

Byron.

BURSLEM, a market town of Staffordshire, famous for its pottery, which stands on a rising ground near the Trent and Mersey canal, which, about a mile hence, passes by a tunnel under ground, the length of 1888 yards. The church has a square tower, and was formerly a chapel of ease to Stoke. It has a neat market-house, and markets on Monday and Saturday. Fairs 22d March, 28th June, and 17th October. Dis- tant three miles from Newcastle-under-Line, and 151 from London.

BURTON (Henry), a puritan divine, was born at Birsall, in Yorkshire, in 1579 ; educated at Cambridge, and took, his degrees of M.A. and B. D. there and at Oxford. He first was tutor to lord Carey's sons; afterwards clerk of the closet to the princes Henry and Charles; and next appointed to attend the latter into Spain, in 1623; but, from speaking too freely of the bishops, was set aside, after his goods were partly shipped. In 1625 he

presented a letter to king Charles, remonstrating against Drs. Laud and Neil, as being popishly affected ; for which he , was prohibited the court. About this time, how- ever, he obtained the rectory of St. Matthews, London, where he preached with such freedom, that iu 1636 he was summoned to answer for two sermons on the 5th of November preceding. He appealed to the king, but was suspended by the high commission court; whereupon he absconded, but published his sermons, with reasons for his appeal. He was soon after apprehended by

warrant from that state inquisition, tltestar-cliarn- ber ; incarcerated in Fleet prison along with the celebrated Prynne and Bastwick; and all his papers seized. They were charged with writing seditious, schismatical, and libellous books, against the church and government. They gave in answers, but the court expunged the greater part of them, and, to its eternal disgrace, sen- tenced them to pay a fine of Ā£5000 each ; and Burton besides to be degraded from his office and degrees, deprived of his benefice, set in the pillory, there to have his ears cut off, and to be afterwards imprisoned for life, denied the use of paper, pens, and ink, and debarred the access of all persons except the keeper, ā not even his wife being permitted to see him. After twelve weeks close confinement in Lancaster jail, he was re- moved in 1637 to Cornet castle, in Guernsey, where he was shut up for three years, till 1640, when the House of Commons reversed the sen- tence as illegal, annulled the fine, restored him to his degrees and benefice, and voted him Ā£6000 as a compensation for his imprisonment and the loss of his ears. From the confusion of the times, however, he never received this sum, though he was restored to his living. He died in January,

1648.

BURTON (John), D. D. a learned divine, born in 1696, at Wembworth, in Devonshire, and ā¢educated at Oxford. In 1725, being then pro- proctor, he spoke a Latin oration, entitled Heli ; or An Instance of a Magistrate's Erring through Unseasonable Lenity ; written and published with a view to encourage the salutary exertions of academical discipline ; and afterwards treated the same subject still more fully in four Latin sermons before the university, and published them with appendixes. He also introduced into the schools, Locke, and other eminent modern philo- sophers, as suitable companions to Aristotle ; and printed a double series of philosophical questions, for the use of the younger students ; from which Mr. Johnson, of Magdalene College, Cambridge,- took the hint of his larger work of the same kind. When the settling of Georgia was in agitation, in 1732, Dr.

Burton preached before the Society, and published his sermon, with an appendix on the state of that colony ; and he afterwards pub- lished an account of the designs of the associates of the late Dr. Bray, with an account of their procedings in that business. About the same time, on "the death of Dr. Edward Littleton, he was presented by Eton College to the vicarage of Maple-Derhum, in Oxfordshire, where he married the widow of his predecessor, who was without a home, and without a fortune. In 1760 he exchanged his vicarage of Maple-Derham for the rectory of Worplesdon in Surrey. In his advanced age, finding his eyes begin to fail, he collected and published, in one volume, all his scattered pieces, under the title of Opuscula Miscellanea; and soon after died, February the llth, 1771.

BURTON (Robert), known to the learned the name of Democrilus junior, was the son of Ralph Burton Esq. of Lindley, in Leicestershire, and born February 8th, 1576. He was educated at Sutton Colefield in Warwickshire; m 1 was sent to Oxford; and in 1599 was elected

student of Christ-Church. In 161G the vicarage of St. Thomas in Oxford was conferred upon.him by tae dean and canons of Christ-Church ; and this, with the rectory ofSegravein Leicestershire, given him some time after by George lord Berkeley, he held to his death, in January 1639. He was a man of general learning, and an exact mathematician ; extremely studious, and of a melancholy turn; yet an agreeable companion, it is said, and very humorous. The Anatomy of Melancholy was printed first in 4to, afterwards in folio, in 1624, 1632, 1638, and 1652, to the great emolument of the bookseller, fie left behind him a very choice collection of books : bequeathed many to the Bodleian library ; and Ā£100 to Christ-Church, the interest of which was to be laid out yearly in books for their library.

BURTON UPON TRENT, an ancient and respect- able market town of Staffordshire. It had for- merly a large abbey, and over the Trent it has a famous bridge of free stone, 1445 feet in lengthj supported by thirty-four arches. It consists chiefly of one long street, reaching from the place where the abbey stood to the bridge ; and has a good market for corn and provisions. Near the abbey stood the ancient parish church of St. Modwena, which was connected with the abbey by a cloister; but it was taken down, and the present church erected, in 1722 on a smaller scale. It is neat and convenient, with spacious galleries ; it has also an organ. The church is a perpetual curacy, exempt from episcopal juris- diction ; in the

patronage of the marquis of An- glesea, who is also impropriator of the tithes to a considerable amount. The marquis is also lord of the manor of Burton and its hamlets ; and the remains of the abbey are now his manor-house. He holds annually two court-leets, under the management of the perpetual bailiff and coroner; and also two probate-courts, for proving wills, &c. Here is also a court of request for the recovery of small debts : and the inhabitants are exempt from serving any county juries. This place is famous for the excellence of its ale and malt, which is sent down the river to Hull, and for- warded thence through the whole kingdom, and to the different ports on the continent. It has manufactures of hats, cotton, tammies, and one for the purpose of converting bloom and scrap iron inlo bars. In the market-place is a neat town- hall. In this the public business of the town is transacted, and it also serves as a concert and assembly-room. Here are a free-school, several Sunday-schools, and two-alms houses for poor women. The market on Thursday is well sup- plied with all kinds of meat, corn, poultry, &c. Fairs, Candlemas-day for cattle, &c. April 5th. Ascension-day, October 29th, and five following days, for cheese, horses, &c.

BURY', -v Goth, burja byrgia ;

BURY'ER, / Sax. burgian ; Teut. ber-

BURY'ING, ' >gĀ«Ā», to conceal; to inter;

BU'RIAL, i to put into the grave ;

BU'RIAL PLACI. J into a place of secrecy and safety.

BURY, a borough and market town, in the pa- rish of the same name, and hundreds of Salford and Blackburn, in the county palatine of Lan- caster, England. The town stands upon the banks of the river Irwell ; is a large populous

manufacturing place, the majority of its dense population being engaged in the extensive cotton factories, calico printing, and woollen manufac- tures, established here. The churches of St. Mary and St. John, with the several chapels of worship belonging to various dissenters, consti- tute the most prominent of the public buildings. A free grammar school, founded in 1726, and handsomely endowed by the Rev. Matthew Kay, confers education upon seventy-five boys, and enjoys the benefit of two exhibitions at each of the English universities. This place also boasts of several poor-schools for the gratuitous in- struction of the children engaged in the factories, and possesses alms houses for the shelter and maintenance of the aged and infirm. Bury is a place of high antiquity, though not anciently of

much importance. It is noticed by Leland as a mean market town in his time, and in the civil wars, the fine castle, one of the twelve baronial halls of Lancashire, was battered by the parlia- mentarians. In the reign of Henry II., this place was formed a part of the estates of John de Lacy, from whose descendants it passed to the Burys and Pilkingtons, and on the attainder of the latter, in the reign of Henry VII , fell into the possession of the Stanleys, who are still the proprietors. To the rapid growth of manu- factures, consequent upon improvements in ma- chinery, and probably not a little owing to the extensive calico and cotton manufactures con- ducted here so successfully for many years by the firm of Sir Robert Peel and Co. This place is indebted for its emancipation from that insig- nificance and obscurity to which it had been long consigned, and for its elevation to its pre- sent commercial prosperity by which it became entitled, on the principle of the great measure of reform, to return one member to the imperial parliament. The living is a rectory in the diocese of Chester. The Rt. Hon. Sir Robert Peel, the second baronet of the family, is a native of this parish.

BURY, ST. EDMUND'S, aborough, market, and county town of Suffolk, lies in a pleasant situa- tion, ten miles east of Newmarket, and seventy- one N. N. E. of London. It was so named frott St. Edmund, king of the East-Angles, who was crowned in it, and afterwards murdered by the Danes ; and being buried in it, an abbey was erected to his honor by Sigbert, king of the East- Angles. It was situated between the two churches, which are both large, handsome buildings, with elegant windows and fine roofs, and in one church-yard. The town was burnt by Sueno the Dane ; and Stow says it had the privilege of a mint, in the reign of king John. In 1636 it was infested with a dreadful plague. In 1772 some labourers, in digging among the ruins of the abbey, discovered a leaden coffin, which contained the body of Thomas Beaufort, son of John of Gaunt, duke of Lancaster; he was duke of Exeter, admiral and captain of Calais, and lord high chancellor of England. It sends two members to parliament, who are elected by the corporation ; which consists of a recorder and twelve burgesses, a coroner, and twenty-four common council. This place, from the healthi- ness of its situation, is sometimes called the Montpelier of England. It is divided into fivo

waids, and has thirty-five streets, which are well a polished or very accurate writer; b"t the paved and kept clean, most of them intersecting

science of modern geography is much indebted

each other at right angles. Including the suburbs, it is a mile from east to west, and nearly two miles from south to north. It has a spacious guildhall, and a beautiful cross, surrounded with

to his labors. The most celebrated of his works are, General Geography, 6 vols. 4to. An Intro- duction to the Descriptive Geography of the States of Europe. A Magazine of Modern His-

iron railings. It has likewise a handsome mar- tory and Geography, 22 vols. 4to. A Weekly ket place for fish and provisions ; built at the Account of New Maps, published periodically

Biography of Celebrated

expense of the earl of Bristol. Here is also a free grammar-school, founded by Edward VI. and various other charitable institutions. Large

from 1767 to 1783.

Men, 6 vols. 8vo. Character of Frederic II.

king of Prussia. Elements of Natural History.

quantities of wool are annually brought hither, Sketch of the History of Philosophy, 2 vols. 8vo. and exposed for sale in the wool-halls. The History and Theory of the Belles Lettres, 2 vols. county assises are held in this town. The county 8vo. Busching also wrote tracts on theology, gaol is a convenient and spacious building near and on general education, the town, and the bridewell was formerly a Jews' BUSH', -^ Swed. synagogue. Market-day, Saturday.

BUSBY (Dr. Richard), son of Richard Busby, Esq. of Westminster, was born at Lutton, in

-\ Swed. buske ; Bel. bosch ; BUSH'MENT, (^ Dan. buske , Teut. busch ; Ital BUSU'IXESS, i bosco ; Fr. bois ; a thick shrub; BUSH'Y. 3 a thicket ; a wood ; a whole

He passed through the wood : now applied to a low tree or shrub with

classes in Westminster, and completed his studies thick small boughs or roots, and to any thing si- at Oxford, where he took a Master's degree in milar, as bushy eyebrows; a bushy wig; many 1631. In 1640 he was appointed master of things that thicken by growth and combination.

Lincolnshire, in 1606.

Westminster school ; and by his skill and dili- gence in the discharge of this important and la- borious office for the space of fifty-five years, educated the greatest number of eminent men in church and state, that ever at one time adorned uny age or nation. He is said to have been ex- tremely severe with his pupils ; though rather from a love of discipline than from disposition,

For out of toune we list to gone, The sound of birddes for to here, That ou the bushes singen clere.

Chaucer's Romauntofthe Roti She darst the wilde bestes dennes seke, And rennen in the mountaignes all the night, A nd slepe under the bush.

Id. Canterbury Tatet. These blazing starres the Greeks call cometas, our

*" *'*

as he permitted, at times, the free exercise of their

juvenile witticisms against himself. This great RĀ°mancs Ā«initas : dreadfu11 to be seene> Wltl man, after a long and healthy life, the effect of temperance, died in 1695, aged eighty-nine ; and was buried in Westminster Abbey, where there is a fine monument erected to him. He com- posed several books for the use of the school.

BUSCH (John George), a native of Lunen- burg, and director of the Academy of Commerce at Hamburgh, was born in 1728, and wrote se-

Holland's Plinie, vol. i. fol. 15. Moreover a goodly broad busht tail they (the squir- rels) have, wherewith they cover their whole body.

Jd. vol. i. fol. 218.

The gentle shepherd sat beside a spring, All in the shadow of a bushy brier. Spenser.

Princes thought how they might discharge the

veral works in German, on commerce and poll- earth of W00(isĀ° briars, busbments, and waters, to

tical economy, as 1. The Theory of Commerce, make it more habitable and fertile. Raleigh.

3 vols. 8vo. 2. On Banks, 8vo. 3. On the If it be true that good wine neeQS

no bush, ‘tis true

Circulation of Money, 3 vols. 8vo. 4. Essays that a good play needs no epilogue. Shakspeare.

on Commerce, 2 vols. 8vo. 5. On Mathemati- cal Studies, as applicable to Civil Life, 8vo. 6. Encyclopedia of Mathematics, 8vo. 7. Expe- perience and Observations, 5 vols. 8vo. 8. An

The roses bushing round About her glowed, half stooping to support Each flower of tender stalk. ā¢ Hilton.

Generally the cutting away of boughs and suckers,

Account of the Commercial Academy of Ham- at the root “and body, doth make trees grow high ; and, burgh, 12mo. 9. The Merchant’s Library, a contrariwise, the polling and cutting of the top, make

periodical work. He died after 1800.

them spread and grow bushy.

Bacon.

BUSCHING (Anthony Frederic), an able The poller and exacter of fees, justifies the resem-

ā¢writer on history and geography, was a native of blance of the courts of justice to the bush, whereunto

Westphalia, and educated at the university of WDile the sheep flies for defence from the weather, he

Halle. He accompanied the family of count is sure to lose part of the fleece. Id. Essay.*

Lynar, as tutor, on an embassy from the Danish Her heart was that strange bush, whose sacred fire

court to Petersburgh, in 1749. In 1754 he was Religion did not consume, but inspire. Dunne.

appointed professor of philosophy, and subse- A gushing fountain broke

ā¢ – Ā»ā¢ ā¢ -. . ˆ> -ā¢ā¢ ā¢ā ā u:_u āĀ£[:āāā Around it, and above, for ever green,

quently of divinity at Gottingen, in which offices he was the advocate of very liberal opinions ; and he removed to Petersburgh, to become the minister of a Lutheran church in 1761, and founded there a very extensive seminary of edu- cation. Other disputes afterwards compelled him to remove to Altona ; and in 1 766 he accepted

The bushing alders formed a shady scene.

Pope's Odyssey.

Statues of this god, with a thick bushy beard, are still many of them extant in Rome. Addisa.*

BUSH, among huntsmen, a fox's tail. BUSH, BURNING, the bush wherein the Lord

says, ' That the angel of the Lord appeared unto him in a flame of fire, out of the middle of the bush ; ' but whether it was a created angel, speak- ing in the person of God, or God himself, or (as the most received opinion is), Christ the son of God, has been a matter of some controversy among the learned. See ANGEL. The emblem of the burning bush is used as the seal of the church of Scotland, with this motto : ' Though burning, never consumed.'

BUSHEL, a measure of capacity for things dry ; as grain, pulse, dry fruits, &c. containing eight gallons, or one-eighth of a quarter. Du" Cange derives the word from busellus, bustellus, or bi- sellus, a diminutive of buz, or buza, used in the corrupt Latin for the same thing; others derive it from bussulus, an urn wherein lots were cast ; which seems to be a corruption from buxulus. Bussellus appears to have been first used for a liquid measure of wine, equal to eight gallons. Octo librae faciunt galonen vini, et octo galones vini faciunt busselum London, quae est octava pars quarterii. It was soon after transferred to the dry measure of corn of the same quantity. See ARITHMETIC, where the contents of the new bushel are particularly specified. At Paris the bushel is divided into two half bushels ; the half bushel into two quarts ; the quart into two half quarts ; the half quart into two litrons ; and the litron into two half litrons. See MEASURE and WEIGHT.

BU'SHEL. Fr. boisseau; barb. Lat. bische- Jila, schefila, from oKcupr), a

modus, a measure of eight gallons.

And then, they found Of Floreins fine, of gold ycoined round, Wei nigh an eighte bushels as him thought.

Chaucer's Canterbury Tales,

His reasons are as two grains of wheat hid in two bushels of chaff ; you shall seek all day ere you find them ; and when you have them, they are not worth the search. Shakspeare.

The worthies of antiquity bought the rarest pictures ā¢with bushels of gold, without counting the weight or the number of pieces. Dryden.

BUSHIRE, or BUSHAVIR, a sea-port town of Persia, situated on the Persian Gulf, in the pro- vince of Fars. It occupies the southern extre- mity of a peninsula ; but in high tides and storms it has sometimes been completely insu- lated. The town is of a triangular form, and for- tified on the land side by a mud wall, mounting twelve pieces of cannon, and the streets are very narrow, and it is but a mean place. Provisions and fruits are cheap and excellent in Bushire, but the water must be brought from a distance of two miles, nor is it good nearer than sixteen miles. A considerable trade is carried on here in carpets, Shiraz wine, rose water, drugs; and the imports are Indian goods of different kinds, and English broad cloth. The English East In- dia Company have a factory at this place. Po- pulation 5000. Distant ten miles W. S. W. of Shiraz, and twenty south of Bender Rigkh.

BUSIRIS, in entomology, a species of papilio, with black oblong wings ; on the anterior pair are two yellow spots, and on the posterior ones a yellow disk. This is a native of Hindostan.

BUSIRIS, in ancient geography, a city of the Lower Egypt, south of Leontopolis, on the Bu- siriticus, built by Busiris. In this city there stood a great temple of Isis, which gave it the appellation of the city of Isis. It was destroyed on a revolt, by Dioclesian.

BUSIRIS, in fabulous history, a tyrant of Egypt, noted for his cruelty, and slain by Hercu- les. Strabo denies such a tyrant ever existed ; Isocrates has written his panegyric.

BUSIRTICIUS FLUVIUS, in ancient geogra- phy, that branch of the Nile which empties itself at the mouth called Ostium Pathmeticum, or Phatniticum ; also a part, according to an an- cient map, at the Ostium Mindesium ; this branch dividing at Diospolis into two branches, called Busiriticus, from the city of Busiris, which stood on its left, or west branch.

It is the second branch of the Nile, reckoning from the east.

BUSITIS, in ancient geography, a district of Arabia Deserta; the country of Elihu ; so called from Buz, Nahor's second son. It is called Buzites by the Septuagint.

BUSK', > ' Now written bush. See BOSKE. BUS'KET. 5 Busket, the diminutive of busk. ā¢ā. -For there is neither buske nor hay In Mey, that it nil shrouded bene And with the new leues wrene.

*Chaucer's Romaunt of the Rose, fol. 116. Youngthes folke now flocken in every where, To gather May-fru*Ae<Ā« and smelling brere.*

Spenser's Shepheard's Calender. BUSK', v. & n.~) Fr. buis, buisque ; thus the BUS'KET, >noun is applied to a slip

BUS'KY. J of boxwood, or of any thing

else that is a strengthener for women's stays. ā The verb is derived differently and ap- plied differently. Dr. Jamieson thinks it is from the German, butzen, bussen, to decorate and ornament. A well-dressed woman is butz frauw. Busk is so termed, perhaps, because it adds to the grace of the person ; and the verb may be applied to the general preparation and making ready, in which ladies are so very nice and par- ticular, before they appear in company. Thus, in the song, as quoted below, ' busk ye,' is make ready, prepare ' my bonny, bonny bride.' It is sometimes used in the sense of repair to ; to go ; to direct one's steps. It is, however, as a verb nearly obsolete, and modern fashion is getting rid of the noun. Busks were only known to our grandmothers : the substitutes are lighter and more elegant.

Busk ye, then busk, my bonny, bonny bride j Busk ye, busk ye, my winsome marrow ; Busk ye, and luve me on the banks of Tweed, And think nae mair on the braes of Yarrow.

W. Hamilton.

Her long slit sleeves, stiffe buske, puffe verdingall, Is all that makes her thus angelical. .

Marston. Scourge II.

Ye might haue busked you to huntly banks. Your pryde was pevysh to play such prankes.

Skelton's Ware the Haioke. The commons renyed their taxes to pay

Of them demaunded and asked by the kynge With one voice importune they plainly sayd nay, They buskt them ou a bushment themselfe in baile to bring, Id. p. 30t>,

BUS

No fowler that had wylie witte

But will forsee such hap, That birds will alway buske and bate And 'scapo the fowlers trap.

Turbercile. Of the diuers Passions, &c.

BUSK, a town in Austrian Galicia, situated on the Bug, which here first becomes navigable. It contains three Greek churches, and one Roman Catholic, and there is here a large tannery. In the neighbourhood are iron works, and the lakes afford good fishing. Twenty-five miles E. N. E. of Lemberg, and fifty north of Halicz.

BUS'KIN, > Ital. borzachino; Fr. brodequin,

BUS'KIXZD. \ from Lat. pero. Some derive it from the Greek fivpffa, a hide or skin ; a kind of half boot ; a shoe which comes to the mid leg. It is now confined to the stage, and is chiefly characteristic of tragedy.

She, having hong upon a bough on high Her bow and pointed quiver, had unlaste Her silver buskins from her nimble thigh. Spenser.

The foot was dressed in a short pair of velvet bus- kins ; in some places open, to shew the fairness of the skin. Sidney.

Or what, though rare, of later age, Ennobled hath the bushined stage ? Milton.

There is a kind of rusticity in all those pompous verses ; somewhat of a holiday shepherd strutting in his country buskins. Dryden.

Here, armed with silver bows, in early dawn, Her bushined virgins traced the dewy lawn. Pope.

But, O ! how altered was its sprightlier tone, When Cheerfulness, a nymph of healthiest hue, (Her bow across her shoulder flung, Her buskins gemmed with morning dew), Blew an inspiring air, that dale and thicket rung.

Collins' Ode. The Passioni.

BUSKINS anciently were adapted to either foot, and worn by either sex. This part of dress, co- vering both the foot and mid leg, was tied below the knee ; it was very rich, and principally used on the stage by actors in tragedy. It was of a quadrangular form ; and the sole was so thick, that by means thereof, men of ordinary stature might be raised to the elevation of the heroes they personated. The color was generally purple on the stage; herein it was distinguished from the sock worn in comedy, that being only a low common shoe. The buskin seems to have been worn not only by actors but by girls, to raise their height ; travellers and hunters also made use of it to defend themselves from the mire. In classic authors, we frequently find the buskin used for tragedy itself, as it was a mark of tragedy on the stage. It was also to be understood for a lofty strain or high style.

BUSS', v. & n. Per. bosu, from boos, poos, the lips; Lat. basium; Fr. baiser ; Ital. bacio, Span. buz, which approaches nearest to the English, but all these may have the same root with kiss, by the frequent intermutation of k and p. A kiss ; to kiss ; to salute with the lips. Yonder walls, that partly front your town, Yond towers, whose wanton tops do buss the clouds, Must kiss their feet Shahspeare.

Go to ttiem with this bonnet in thy hand, Thy knee bussing the stones ; for in such business, Action is eloquence. Id.

Thou dost give me flattering busses. ā By my troth, I kiss thec with a most constant heart. Id.

'15

BUS

Swecte busses not sharpe battels, then;

Did alter man and minde : Till he, as others, sorrowe in

Securitie did finde. W.trnrr.

And we by signs sent many a secret buss.

Drayton'i Barons' War Kissing and bussing differ both in this, We busse our wantons, but our wives we kiss.

Herrick.

Bess'. Goth, busa; Swed. buz; Bel. buis : Teut. busse ; a fishing boat, made like a box, with wide hull and broad prow.

Herfor kyng Richard wrathes him & sais, ‘ Dight vs bider ward our busses & galais, Mi sister I wille out wyn or I ferrer go.’

R. Brunne, p. 149.

Buss’. Used only in composition, as in blunderbuss, but common in. all Gothic dialects, as bos, bus, busche, a barrel, a tube, supposed to be from Lat. buxus.

Buss, is a small vessel, used by the English and Dutch in the herring fishery, commonly from forty-eight to sixty tons burden, and sometimes more : a buss has two small sheds or cabins, one at the prow and the other at the stern; that at the prow serves for a kitchen. Every buss has a master, an assistant, a mate, and seamen in proportion to the size of the ves- sel ; the master commands in chief, and without his express orders the nets cannot be cast nor taken up ; the assistant has the command after him ; and the mate next, whose business is to see the seamen manage their rigging in a proper manner, to mind those who draw in their nets, and those who kill, gut, and cure the herrings, as they are taken out of the sea: the seamen ge- nerally engage for a whole voyage in the lump. The provision which they take on board the busses, consists commonly in biscuit, oat meal, and dried or salt fish ; the crew being content for the rest with what fresh fish they catch. See FISHERIES.

BUSSA, a large sort of vessel of war, in use in the middle age, spoken of by antiquaries and historians under the denomination of bussa, bus- cia, burcia, buza, bucea, and bucia.

BUSSARA, or BASSORA. See BASSORA. BUSSELLUS. See BUSHEL. BUSSORES, from Bassora, whence they were originally brought, a name given by some to that species of pigeon called the carrier BUSSULUS. See BUSHEL. BUSSY (Roger Rabutin), count of. See RABUTIN.

BUST’. Ital. busto; Fr. buste ; Lat. bustum, ustum, from uro, bu.ro, to burn. It signifies a half statue usually placed over the ashes of the dead. It retains the name, though the cus- tom in which it originated, in Christian nations, has been long obsolete.

Agrippa, or Caligula, is a common com, but a very extraordinary bust; and a Tiberius a rare coin, but a common bust. Addison on Italy,

Ambition sighed : she found it vain to trust The faithless column, and the crumbling bust.

Poj.4.

This night, no bust or picture claims your praise ; Our claim's superior ā we his spirit raise !

Garrick's Prologue.*

BUS

What though no marble-piled bust

Adorn his desolated dust,

With speaking sculpture wrought !

Pity shall woo the weeping Nine

To build a visionary shrine,

Hung with unfading flowers, from fairy regions brought. Warton.

Stop ! ā for thy tread i on an empire's dust ! An earthquake's spoil is sepulchred below ! Is the spot marked with no colossal bust? Nor column trophied for triumphal show ? None : but the moral's truth tells simpler so ; As the ground was before, thus let it be ; ā How that red rain hath made the harvest grow '*

Byron's Childe Harold.

BUST, or BUSTO, in sculpture, denotes the figure or portrait of a person in relievo, showing only the head, shoulders, and stomach, the arms being lopped off; ordinarily placed on a pedes- tal or console. In speaking of an antique, we say the head is marble, and the bust porphyry, or bronze, that is, the stomach and shoulders. Felibieu observes, that though, in painting, one may say a figure appears in busto, yet it is not properly called a bust, that word being confined to things in relievo. The bust is the same with what the Latins called Herma, from the Greek Hermes, Mercury, the image of that god being frequently represented in this manner among the Athenians. Bust is also used, especially by the Italians, for the trunk of a human body, from the neck to the hips.

BUSTA GALLICA, was a place in ancient Rome wherein the bones of the Gauls, who first took the city, and were slain by Camillus, were deposited. It differed from

AJSTA GALLORUM, a place on the Appennines, so called from many thousands of Gauls being killed thereby Fabius.

BUS'TARD, a bird resembling a turkey. Barb. Lat. and Ital. tarda, avis,

tarda ; Ital. ava- tarda ; Fr. outarde ; the Lat. tarda does not apply to this bird, unless in the sense of late in taking wing.

His sacrifices were phcnicopters, peacocks, bustards, turkeys, pheasants ; and all these were daily offered.

Hakewill.

BUSTARD, in ornithology. See OTIS. BUSTARD BAY, a bay on the east coast of New Holland, where ships may lie in safety, and obtain fresh water. Lat. 24Ā° 4′ S., long. 208Ā° 18’. BUSTARI7E MOECH.E, in antiquity, accord- ing to some, women that were hired to accompa- ny the funeral and lament the loss of the de- ceased : but others are of opinion, that they were rather common prostitutes, who stood among the tombs, graves, and other such lonely places.

BUSTLE, v. & n. } Frequentative of busy ; BUS’TLER, > to hurry ; to stir ; to have

BUS’TLINGS. j much to do ; to be active ;

to be in tumult or confusion.

At length within the yvie todde, (There shrouded was the little god), I heard a busie bustling.

Spenser’s Shepheard’s Calendar. Come, bustle, bustle ā caparison my horse.

Shakspeare.

God take king Edward to his mercy, And leave the world for me to bustle in. Id.

16 BUS

Wisdom’s self,

Oft seeks to sweet retired solitude : She plumes her feathers, and lets grow her wings. That in the various bustle of resort Were all too ruffled. Uilton.

Engaged his legions in fierce buttles With perriwinkles, prawns, and muscles ; And led his troops with furious gallops, To charge whole regiments of scallops.

Butler’s Hudibras.

Sir Henry Vane was a busy and bustling man, who had credit enough to do his business in all places.

Clarendon.

A poor abject worm,

That crawled awhile upon a bustling world, And now am trampled to my dust again.

Southerns.

BUSTUARII, in Roman antiquity, gladiators who fought about the bustum or funeral pile of a person of distinction, that the blood which was spilt, might serve as a sacrifice to the infernal gods, and render them more propitious to the manes of the deceased. This custom was intro- duced in the room of the more inhuman one of sacrificing captives at the bustum, or on the tombs of warriors.

BUSTUM, in antiquity, denotes a pyramid or pile of wood, whereon were anciently placed the bodies of the deceased, in order to be burnt. The Romans borrowed from the Greeks the cus- tom of burning their dead. The deceased, crowned with flowers, and dressed in his richest habits, was laid on the bustum. Some authors say, it was only called bustum, after the burning, quasi bene ustum : before the burning it was more properly called pyra ; during it rogus ; and afterwards bustum. When the body was only burnt there, and buried elsewhere, the place was not properly called bustum, but ustrina, or ustrinum. Bustum was also figuratively applied to denote any tomb. Whence those phrases, fa- cere bustunt, violare bustum, &c.

BUSTUM, in the Campus Martius, was a struc- ture whereon the emperor Augustus first, and after him the bodies of his successors, were burnt. It was built of white stone, surrounded with an iron palisade, and planted withinside with alder trees.

*BU'SY, v. & adj. *\ Sax. bysig ; Bel. bizig ; BU'SILESS, / from Goth, bua, to arrange ;*

BU'SILY, > to prepare ; employed ;

BU'SINESS, i active; officious; med-

BU'SY BODY. } dling; industrious; trouble- some ; vexatiously intrusive and importunate ; a busy-body is a vain, meddling, fantastical per- son.

Full besy was Grisilde in every thing, That to the feste was appertinent ; Right naught was she abaist of hire clothing, Though it were rude, and somdele, eke to-rent ; But with glad chere to the yate is went, With other folk to grete the ruarkisesse ; And after that doeth forth hire besinesse.

Chaucer's Canterbury Tales. He in great passion all this while did dwell, Mere busying his quick eyes her face to view, Than his dull ears to hear what she did tell.

Faerie Qiieene.

Must business thee from hence remove ? Oh ! that's the worst disease of love. Dunne.

BUT

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BUT

Bestow

"Your needful counsel to onr businesses, Which crave the instant use. Shakspeare.

The sweet thoughts do even refresh my labour, Most busiless when I do it. Id.

After seventy years (as the Psalmist says), all is trouble and sorrow ; and common experience con- firms the truth of it in weak and old persons, espe- cially in such as have Kved in action all their lives, had great employments, much business, much com- mand, and many servants to oversee and leave oft ex abrupto ; as Charles the Fifth did, to king Philip, resign up all on a sudden.

Burton's Anatomy of Jlelanchu'y.

Bust/bodies and intermeddlers are a dangerous sort

of people to have to do withal. L' Estrange.

Affected despatch is one of the most dangerous

things to business that can be. fiucun.

The coming spring would first appear, And all this place with roses strow, If busy feet would let them grow. Waller.

The grand business of our Saviour, and his apostles after hi_i, was to teach, aud that chiefly in order to persuade. South' Sermons.*

At two afternoon for our Psyche in.juire, Her tea-kettle's on, and her smock at the fire ; So loitering, so active, so busy, so idle, Which hath she most need of, a spur or a bridle ?

Swift,

She is well acquainted with all the favourite ser- vants, busybodies, dependants, and poor relations, of all persons of condition in the whole town.

Spectator. Rumours strange,

And of unholy nature, are abroad, And busy with thy name. Byron's Manfred.

BUT. Per. budur ; Sax. bute ; Swed. but, utan, butan ; Bel. buitan, from Goth, ut, be ut, or be out. We shall insert all the various shades of application in which it is used, in the order preserved by Dr. Johnson. Each definition, and its appropriate illustration, will thus stand separate.

Except.

An emission of immateriate virtues we are little doubtful to propound, it is so prodigious : but that it is so constantly avouched by many. Bacon.

Who can it be, ye gods! but perjured Lycon? Who can inspire such storms of rage, but Lycou ? Where has my sword left one so black, but Lycon ?

Smith.

Except that ; unless ; had it not been that : in this sense we now write but that. See sense 11.

And but infirmity,

Which waits upon worn times, hath something seized His wished ability, he had himself The lands and waters measured. Shakspeare.

Yet; nevertheless. It sometimes only enforces yet.

Then let him speak, and any that shall stand with- out shall hear his voice plainly ; but yet made ex- treme sharp and exile, like the voice of puppets : and yet the articulate sounds of the words will not be confounded. Bacon.

Our wants are many, and grievous to be borne, but quite of another kind. Swift.

The particle which introduces the minor of a syllogism ; now.

God will one time or another make & difference be- tween the good and the evil. But there is little or

*no difference made in this world ; therefore th*r" must be another world, wherein this difference shaii be made. Wuttx's Logick.*

Only ; nothing more than.

If iny offence be of such mortal kind , That not my service past, or present sorrows, Can ransom me into his love again ; But to know so, must be my benefit. Sfmkspeare.

i repared I stand : he was but born to try "ITiR lot of man, to suffer and to die. Pope.

Though on his brow werˆ graven lines austere And tranquil sternness, which had taken place Of feelings fiercer far but less severe ; Joy was not always absent from his face, But o'er it in such scenes would steal with transient trace. Byron's Childe Harold.

Than.

The full moon was no sooner up and shining in all its brightness, but he opened the gate of Paradise.

Guardian. But that; without this consequence that.

Frosts that constrain the ground Do seldom their usurping power withdraw, But raging floods pursue their hasty hand.

Dryden.

Otherwise than that.

It cannot be but nature hath some director, of in- finite power, to guide her in all her ways. Hooker.

Who shall believe, But you misuse the reverence of your place ?

Shakspeare.

Not more than ; even.

A genius so elevated and unconfined as Mr. Cow-

ley's, was but necessary to make Pindar speak

English. Dryden.

It is evident, in the instance I gave but now, the

consciousness went along. Locke.

By any other means than.

Out of that will [cause those of Cyprus to mu- tiny : whose qualification; shall come into no true taste again, but by transplanting of Cassio.

Shahspearo.

If it were not for this ; that ; if it were not that. Obsolete.

I here do give thee that with all my heart, Which, but thou hast already, with all my heart I would keep from thee. Shakspeare.

However; howbeit ; a word of indeterminate connexion.

I do not doubt but I have been to blame ;

But, to pursue the end for which I came,

Unite your subjects first, then let us go

And pour their common rage upon the foe.

Dryden.

It is used after no doubt, no question, and such words, and signifies the same with that. It sometimes is joined with that.

They made no account, but that the navy should be absolutely master of the seas. Bacon.

That. This seems no proper sense in this place.

It is not therefore impossible but I may alter the complexion of my play, to restore myself into the good graces of my fair criticks. Dryden

Otherwise than. Obsolete.

I should sin To think but nobly of my grandmother.

Shakspeare.

A particle by which the meaning of the fore- going sentence is bounded or restrained ; only.

Thus fights Ulysses, thus his fame extends ; A formidable man, but to his friends. Dryden.

BUT

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BUT

A particle of objection ; yet it may be ob- jected : it has sometimes yet with it.

But yet, Madam

I do not like bttt yet ; it does allay The good precedence ; fie upon but yet ! But yet is as a jaylour, to bring forth Some monstrous malefactor. Shakspeare.

But for; without; had not this been.

Rash man, forbear! but for some unbelief, My joy had been as fatal as my

grief. Waller.

When the fair boy received the gift of right, And, but for mischief, you had died for spite.

Dry den.

BUT', n. s. Fr. bout, a boundary. But, if I ask you what I mean by that word, you will answer, I mean this or that thing, you cannot tell ā¢which ; but if I join it with the words in construc tion and sense, as, but I will not, a but of wine, but and boundary, the ram will but, shoot at but, the meaning of it will be as ready to you as any other word. Holder.

BUT', n. s. In sea language, the end of any plank which joins to another on the outside of a ship, under water.

BUT.' Thick, round, large. Goth, butt; Teut. butt ; Swed. butt ; Bel. hot. It seems to mean be out, extending ; and was applied to de- note several kinds of flat fish ; Bel. bot, a flounder.

BUT'-END, n. s. From but and end ; the blunt end of any thing; the end upon which it rests.

The reserve of foot galled their foot with several vollies, and then fell on them with the bat-ends of their muskets. Clarendon.

Some of the soldiers accordingly pushed them for- wards, with the hut-ends of their pikes, into my reach.

Swift.

BUTCHER, v. & n.-\ Barb. Lat. buczdor, Bu T'CHERING, / from Lat. boves cadere,

BUT'CHERLINESS, Vwas an ox killer; Fr. BL-T'CHERLY, Lboucher; but Ital. bec-

BUT'CHEEY. J euro seems to be from

becco, a goat, the flesh of which was probably most common in ancient times. A butcher now is one who kills animals to sell ; the verb, and sometimes the noun, is used in a far greater lati- tude of application. A butcher is one that is de- lighted with blood : to butcher is to kill, to murder ; the adjective expresses bloody, gross, clumsily, barbarous, brutal, cruel, savage. The lamb thinks not the butcher's knife Should then bereave him of his life.

Earl of Surrey. Teaching stern murder how to butcher thee.

Sliakspeare.

Uncharitably with me have you dealt, And shamefully by you my hopes are butchered. Id.

There is no place, this house is but a butchery ; Abhor it, fear it, do not enter it. Id.

There is a way which, brought into schools, would take away this butcherly fear in making of Latin.

Ascham.

The shepherd and the butcher both may look upon one sheep with pleasing conceits. Sidney.

Brentford fair,

Where sturdy butchers broke your noodle, And handled you like a fop-doodle. Hudibras. Can he a son to soft remorse incite, Whom gaols, and blood, and butcltery delight.

Dryden.

The poison and the dagger are at hand to butcher a hcro? when the poet wants brains to save him. Id.

Hence he learnt the butcher's guile, How to cut your '.hroat and smile j Like a butcher, doomed for life In his mouth to wear his knife. Sicift.

Yet this man, so ignorant in modern butchery, has cut up half an hundred heroes, and quartered five or six miserable lovers, in every tragedy he has written.

Pope. His eyes

Were with his heart, and that was far away ; He recked not of the life he lost, nor prize, But where his rude hut by the Danube lay, There were his young barbarians all at play ; There was their Dacian mother ā he, their sire, Butchered to make a Roman holiday ā All this rushed with his blood.

Byron's Childe Harold.

BUTCHERS, in antiquity. Among the ancient Romans there were three kinds of established butchers, whose office it was to furnish the city with

the necessary cattle, and to take care of preparing and vending their flesh. The suarii provided hogs; the pecuarii, or boarii, other cattle, especially oxen ; and under these was a subordinate class, whose office was to kill, called lanii and carnifices. Two classes of butchers are recognised in London ; carcase butchers, who slaughter animals in great numbers, and dispose of them to the retail butchers, who are dispersed in different places for the supply of their cus- tomers.

To exercise the office of butcher among the Jews with dexterity is difficult. So particular are they in this, that the stricter Jews will buy meat of none of the London butchers, unless he have a licence from the rabbis, and keep a Jew slaughterer. This person performs his work in a peculiar manner: he never knocks down a bullock, as is the usual custom, but invariably cuts the throat of every animal, the sheep or ox being placed on its back, with the legs tied and the head held back. He never makes but one cut, and if by any accident this should fail to kill the animal, or he should break or notch his knife in the attempt, he would pronounce the animal unfit for the food of his people. He is also the first to examine the intestines and lungs, and should they be found in the least degree injured, or diseased, he would refuse the animal. Should he be sound, and the stroke succeed, as is gene- rally the case, he proceeds to mark the bones of each separate joint with Hebrew characters, which are to the Jews the sign that the meat is clean and fit for food, and also convey the date when it was killed.

Butchers not selling meat at reasonable prices shall forfeit double the value, leviable by two justices of the peace. No butcher shall kill any flesh in his scalding-house, or within the walls of London, on pain to forfeit for every ox so killed 12d. and for every other beast 8d. to be divided between the king and the prosecutor.

The Butcher's Company, though very ancient, was not incorporated till the reign of James I. Their arms are, azure, two axes saltier- wise, argent, between three bulls' heads couped, attired, or; a boar's head, gules, betwixt two garbs, vert.

.BUTCHER-BIRD. See LANIUS.

BUTE, an island lying to the west of Scotland, being separated from Cowal,in Argyleshire, only by a narrow channel. It it about sixteen miles in length ; the broadest part from east to west is about five miles. Part of it is

rocky and barren ; but, from the middle southwards, the ground is cultivated, and produces peas, oats, and barley. Here is a quarry of red stone, which the natives have used in building a fort and chapel in the neighbourhood of Rothsay, which is a very ancient royal borough, head town of the shire of Bute and Arran ; but very thinly peopled, and maintained chiefly by the herring fishery. On the north side of Ilothsay are the ruins of an ancient castle, formerly belonging to the kings of Scot- land. It has likewise the remains of some Danish towers. The natives are healthy and industrious, speak the Erse and the dialect of the Lowlands indifferently, and profess the Protest- ant, religion. The island is divided into two parishes, Rothsay and Kingcastle, accommodated with four churches. It was from very early times part of the patrimony of the Stuarts : large possessions in it were granted to Sir John Stuart son of Robert II. by his beloved mistress Eliza- beth More ; and it has continued in that line to the present time. Bute gives title of marquis to a branch of the family of Stuart, and Rothsay that of duke to the heir apparent of the British throne. Mount-Stuart, a seat of lord Bute, and from which he takes his second title, is an ele- gant house, having a fine view of the Frith of Clyde. Ilothsay has of late become a fashionable watering-place.

BUTE, a shire of Scotland, comprehending the island, with those of Arran, the two Cumbrays, and Inchmarnock. This county and that of Caithness send a member to parliament alter- nately. The earl of Bute is admiral of the county, by commission from his majesty; and no way dependent on the lord high admiral of Scotland ; so that if any maritime case occurs within his jurisdiction (even crimes of as high a nature as murder, or piracy,) he is judge, by virtue of his powers as admiral, or he may delegate his authority to any deputies.

BUTE (John), earl of. See STEWART.

BUTEA, in botany, a genus of plants of the class diadelphia, order decandria: essential cha- racters, CAL. sub-bilabiate: COR. standard con- lanceolate ; legume compressed, with one seed at the summit. There are two species, viz. B. fron-

dosa, an evergreen tree, growing on the coast of the youngest son of Mrˆ Thomas Malabar to the height of fifteen feet. From this tree, according to Jussieu, the gum lac is pro- cured. See GUM LAC. An infusion of the flowers dye cotton cloth, previously impregnated witli alum, of a bright yellow. 2 B. superba, a native of the coast of Coromandel.

BUTEO, in ornithology, a species of falco, the common buzzard of Latham. The cere and legs of this bird are yellow; the body brown, and the belly pale, with brown spots. This spe- cif ā¢ā¢ is rather larger than a kite in the

body.

BUTEONIS, in zoology, a species of echi-

are found in the intestines of the common buz- zard.

BUTLER, n. \ Teut. beuteler, from beu BUT'LERAGE, n.f (en ; Swed. byla, to buy; BUT'LERSHIP, \beutel, a purse, signified a BUT'LERY, I purser. Its general appli- BUT'LERESS, J cation is a house steward, but Fr. b < ˆiteiller, is one that has the cbarge of the bottles or cellar.

BUTLER, (Charles'), an English barrister, born in Pall Mall, London, on the 15th of July, 1750; died at his house in Great Ormond Street, in the city of his birth, on the 2nd of June, 1832. From his earliest years this eminent man evinced an insatiable thirst of knowledge, and persevered in drinking at the fountain of learning until the latest moments of unimpaired faculties. His early efforts towards professional advancements ā¢were in some degree restricted by the penal laws, then in existence, afflicting persons of the Roman Catholic religion ; but as those who are deprived the use of one faculty generally acquire more perfect knowledge than others by means of those they retain, Mr. Butler being prohibited from pleading at the bar, directed the whole force of his comprehensive mind to the im- portant branch of ' conveyancing,' in which he succeeded so conspicuously, that his name is now enrolled amongst the ablest of English legal authorities. As a writer upon law, divinity, mathematics, and other subjects, ā as an assertor of the rights of his countrymen, few scholars in any country have ever exceeded him in industry and in the number of his published works. His annotations to Coke on Lyttleton, and to Fearne on Contingent Remainders, are held in very high esteem by the English bar. In the year 1832 the honors and promotions of the legal profession were at lenatli thrown open to him by the enact- ment of the Catholic Relief Bill, and he was ac- cordingly called within the bar and appointed a bencher of Lincoln's Inn ; but these empty honours, like lord Chesterfield's patronage of Johnson, 'were delayed until he was indifferent, and could not enjoy them.' He died a few months after.

BUTLER (Charles), was master of the grammar school at Basingstoke, and a native of Wycombe, in Bucks,andM.A. of Magdalen College, Oxford, presented in 1600 to the vicarage of Lawrence Wotton, in Hampshire, where he died in 1647.

BUTLER (Joseph), bishop of Durham, a pre- late distinguished by his piety and learning, was

putable shopkeeper at Wantage, in Berkshire where he was born in' 1692.

His father, whc was a prˆsbyterian, observing that he had \ strong inclination to learning, sent him to ai academy in Gloucestershire, to qualify him for a dissenting minister; and while there he wrote some remarks on Dr. Clarke's first sermon at Boyle's lecture. Afterwards, resolving to con- form to the established church, he studied at Oriel College. He was first appointed preacher at the Rolls, and rector of Haughton and Stan- hope, two rich benefices in the bishopric of Durham. He quitted the Rolls in 1726; and

norhynchus, color clear white; the vesicles of the ˆĀ«.Ā»āĀ«- "- n ----- .

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at Stanliope, in the regular discharge of the du- ties of his office, till 1733, when he was called to attend lord chancellor Talbot as his chaplain, who gave him a prebend in the church of Ro- chester. In 1736 he was appointed clerk of the closet to queen Caroline, whom he attended every day, from seven till nine in the evening. In 1738 lie was appointed bishop of Bristol; and not long afterwards dean of St. Paul's.' lie now resigned his living of Stanhope. In 1746 he was made clerk of the closet to the king; and in 1750 was translated to Durham. This rich pre ferment he enjoyed but a short time ; for he died at Bath, June 10th, 1752, and was interred in the cathedral at Bristol, where there is a monu- ment to his memory.

BUTLER (Samuel), a celebrated poet of the seventeenth century, was the son of a reputable Worcestershire farmer, and born in 1612. He passed some time at Cambridge, but was never matriculated. Returning to his native country, he lived some years as a clerk to a justice of peace ; devoting his leisure to the fine arts. Being recommended to Elizabeth countess of Kent, he enjoyed in her house, not only the use of all kinds of books, but the conversation of the great Mr. Selden, who often employed Butler to write letters, and translate for him. He also lived some time with Sir Samuel Luke, a gen- tleman of an ancient family in Bedfordshire, and a commander under Cromwell. Here he is supposed to have planned his celebrated Hudi- bras; and under that character to have ridiculed the old

knight. Thus, Hudibras in the first canto says ā

Tis sung, there is a valiant mamaluke

In foreign land yclpped

To ā¢whom we oft have been compared For person, parts, address, and beard.

After the Restoration, Mr. Butler was made secre- tary to the earl of Carbury, lord president of Wales, who appointed him steward of Ludlow castle, when the court was revived there. At this time he married a Mrs. Herbert, a lady of good family and some fortune, which he soon expended. The earl of Dorset brought his cele- brated poem into notice at court, and he had promises of a place from Clarendon, but they were never accomplished. He died in 1680, dis- appointed and poor, but without debt. Charles II. is said often to have quoted Hudibras in his con- versation : and, as Dr. Johnsonsays, it can perish only with the language. But of late years it has experienced a good deal of die fate of the author through life ; it has been neglected : its topics are less familiar to the public, and its lan- guage more so. Grainger calls it as great an effort in its kind, as Paradise Lost.

BUTLER (James), duke of Ormond, a cele- brated statesman in the reigns of Charles 1. and II., was the son of Thomas Butler, of London, and born at Newcastle-house, in Clerkenwell, in 1610. He succeeded to the earldom of Ormond on the death of his grandfather, Waltei Butler, in 1632. In 1641, at the breaking out of the Irish rebellion, he was appointed lieutenant- general of an army of 3,000 men, and succeeded AH wresting the progress of the insurgents, a ser-

vice for which he was created a marquis In 1643 he defeated the rebels under Prestor, ; and was shortly after appointed lord-lieutenant of Ireland. When the royal cause was altogether ruined, he went to France ; but after the death of Charles I. returned to Ireland. Here, however, his efforts to rouse the people were at this time unavailing ; and when Cromwell landed, the marquis re-embarked for France. At the Resto- ration he was raised to an Irish dukedom, and appointed lord-lieuten-ant of Ireland ; but, for his attachment to lord Clarendon, incurred the dis- pleasure of the court, and was deprived of his office. In 1670 the infamous colonel Blood, whom he had imprisoned in Ireland, attempted to seize his person, and hang him at Tyburn. He was for this purpose actually taken out of his carriage, gagged, and placed behind a powerful horseman ; but the duke, by his personal exer- tions, threw himself and the villain oft" the horse, and obtained assistance. At the desire of the king, he afterwards consented to forgive

Blood, saying, ‘ that if his majesty could pardon him for attempting to steal the crown, he might easily do so for an attempt upon his life.’ He was at length again appointed to the vice-royalty of Ireland, and in 1682 advanced to an English dukedom. He died at Kingston-hall, in Dorset-shire, in 1688, and was buried in Westminster- abbey.

BUTLER (Thomas), earl of Ossory, son of the above, was born in Kilkenny in 1634. He be- haved nobly in the rebellion, and in 1666 was summoned to the house of peers by the title of lord Butler, of Moore Park. He bore a gallant part in the great engagement with the Dutch fleet, and in 1673 was made full admiral. In 1677 he commanded the English troops in the service of the prince of Orange, at the battle of Mons, and died in 1680, when his father said, that ‘ he would not exchange his dead son for any living son in Christendom.’

BUTLER was the name anciently given to an officer in the court of France, similar to that of the ci-devant grand echanson, or great cup- bearer ; which was abolished with the other ap- pendages of royalty.

BUTLERS, buticulari, among the Normans, denote wine- tasters, appointed to examine liquors, and see that they be right and legal.

BUTLLRAGE is a duty of 2s. for every ton of wine imported by merchants strangers; being a composition in lieu of the liberties and freedoms granted to them by king John and Edward I., by a charter called charta mercatoria. Butlerage was originally the only custom that was payable upon the importation of wines, and was taken by virtue of the regal prerogative for the proper use of the crown. But for many years past, par- liament having granted subsidies to the kings of England, and the duty of butlerage not repealed, but confirmed, they have granted it away to some nobleman, who, by virtue of such grant, is to en- joy the full benefit thereof, and may cause it to be collected in the same manner that the kings themselves were formerly wont to do.

BUTMENTS of arches are the same with buttresses. They answer to what the Romans called sublicas; the French culees and butees

BUTMENTS, or abutments, of a bridge, denote the two massives at the end of a bridge, whereby the two extreme arches are sustained and joined with the shore on either side.

BUTOMUS, the flowering rush, or water gladiole ; a genus of the

hexagynia order, and enneandria class of plants ; natural order fifth, tripetaloidese : CAL. none; petals six, and as many monospermous capsules. There is but one species, viz. B. umbellatus ; of which there are two varieties, the one with a white, the other with a rose-colored, flower.

BUTRINTO, a port town of Epirus, in Tur- key in Europe, situated opposite to the island of Corfu, at the entrance of the gulph of Venice. Thirty miles south of Chimera.

BUTT, v. & n. Teut. buitten, to push out ; but Swed. t'ockta, is from Goth, bocka, to strike like a buck goat ; thus it signifies to push, to thrust, to strike with the head. Thus the noun is from botta; Ital. and Fr. botte ; which means a stroke or thrust in fencing. Thus likewise the mark for archers is now called a butt; and a person on whom others break their jests, or thrust the darts of their wit, is called a butt; so is likewise any object against which an attack is directed.

Be not afraid though you do see me weaponed ; Here is my journey's end, here is my butt, The very sea-mark of my journey's end. Shakspeare. The papists were the most common-place, and the butt against whom all the arrows were directed.

Clarendon.

' Virtue, and social love,' he said, And honour from the land were fled, The patriots now, like other folks, Were made the butt of vulgar jokes.'

E. Moore. The Trial of Selim. Nor wars are seen, Unless upon the green, Two harmless lambs are butting one the other.

Wotton.

A snow-white steer, before thy altar 'led, Butts with his threatening brows, and bellowing stands.

Dryden's JEneid.

A ram will butt with his head though he be brought

up tame, and never saw that manner of fighting. Hay.

I played a sentence or two at my butt, which I

thought very smart, when my ill genius suggested to

him such a reply as got all the laughter on his side.

Spectator.

And idly butting feigns

His rival gored in every knotty trunk. Thornton. BUTT', n.s. Sax. butt. A vessel ; a barrel containing one hundred and twenty-six gallons of wine ; a butt contains one hundred and eight gallons of beer ; and from fifteen to twenty-two hundred weight is a butt of currants.

I escaped upon a butt of sack, which the sailors heaved overboard. Shakspeare.

BUTTER, v. & TI.ˆI Bsrupov ; Lat. buty- BUT'TERLIKE, ā¢ rum ; Sax. buttere ; Bel.

BUT'TERMILK, batter; Teut. butler. An

BUT'TERY, oily substance procured

BUT'TERYBAR, from milk, properly of

BU/TERYHATCH, }- cows. To butter is to BUT'TERFLOWER, spread this substance over BUT'TERFLY, any thing, to make it pa

BLT'TERPRINT, lateable as food ; or to

BUT'TERQUEAN, lubricate and soften what BUT'TERWOMAN. J is dry and hard. Tobut- VOL. IV.

ter is metaphorically used to express hattery, on account of its softness and insinuating character. Butterfly is so called because of its buttery soft- ness, saysjunius; because of its comparative magnitude among the different species of winged insects, say I. Butter signifies large ; thus but- terfly is large fly. Johnson says it is so called because it first appears in the beginning of the season for butter.

And he took butter and milk, and the calf which he had dressed, and set before them. Genesis xviii. 8.

And so befell, that as he cast his eye Among the wortes on a hotter/lie, He was ware of this fox that lay full low.

Chaucer's Canterbury Tales. Emongst these leaves she made a butterftie, With excellent device and wondrous slight, Fluttering among the olives wantonly, That seemed to live, so like it was in sight ; The velvet nap which on his wings doth lie. The silken downe with which his backe is dight, His broad outstretched homes, his hayrie thies, ' His glorious colours, and his

glistering eies.

Spenser's Muiupotmos.

With an old buttery hatch, worn quite off the hooksĀ»

And an old kitchen that maintained half a dozen old

cooks. Old Song.

Tongue, I must put you into a buttcrwoman's mouth.

and buy myself another of Bajazet's mute, if you

prattle me into these perils. Shakspeare.

'Twas her brother, that, in pure kindness to his

horse, buttered his hay. Id.

Tell old tales and laugh At gilded butterflies ; and hear poor rogues Talk of court news, W-

Go, sirrah, take them to the buttery, And give them friendly welcome every one. Id.

Words butter no parsnips. L'Estrange.

That which seems to be a powder upon the wings of a butterfly, is an innumerable company of extreme small feathers, not to be discerned without a micro- scope. Grew. Milk, and all that comes of milk, as butter and cheese, curds, &c. increase melancholy (whey only excepted, which is most wholesome).

Burton's Anatomy of Melancholy. Nothing more convertible into hot cholerick hum- ours than its buttery parts. Harvey. A young man, fallen into an ulcerous consumption, devoted himself to buttermilk, by which sole diet he recovered.

A butterprint, in which were engraven figures of all sorts and sizes, applied to the lump of butter, left on it the figure. Locke.

Let weeds, instead of butterflowers, appear ; And meads, instead of daisies, hemlock bear. Gay.

And what's a butterfly ? at best He's but a caterpiller drest. Id. Fablet.

On life's gay stage, one inch above the grave, The proud run up and down in quest of eyes : The sensual, in pursuit of something worse , The grave of gold, the politic of power; And all, of other butterflies, as vain.

Young's Night Thmightt.

BUTTER, in chemistry, is a name given to se- veral preparations, on account of their consis ence resembling that of butter ; as butter of an- timony, &c.

BUTTER.ā Butter appears to have been 1< unknown to the ancient Greeks. ' ieir poe make no mention of it, though they frequently speak of milk swi cheese. The Romans used

o A

butter no otnerwise than as a medicine, never as food. The ancient Christians of Egypt burnt butter in their lamps instead of oil ; and in the Roman churches, it was anciently allowed, dur- ing Christmas time, to burn butter instead of oil, on account of the great consumption of it otherwise.

Butter is the fat, oily, and inflammable part of the milk ; a kind of oil is naturally distributed through all the substance of the milk in very small particles, which are interposed betwixt the caseous and serous parts, amongst which it is suspended by a slight adhesion, but without being dissolved. It is in the same state in which oil is in emulsions; hence the same whiteness of milk and emulsions; and hence, by rest, the oily parts separate from both these liquors to the surface, and form a cream. See EMULSION. When but- ter is in the state of cream, its proper oily parts are not yet sufficiently united together to form an homogeneous mass. They are still half sepa- rated by the interposition of a pretty large quan- tity of serous and caseous particles. The butter is completely formed by pressing out these hete- rogeneous parts by means of continued percus- sion. It then becomes a uniform mass.

Butter melts with a weak heat, and none of its principles are disengaged by the heat of boiling water, which, proves that the oily part is of the nature of the fat, fixed, and mild oils obtained from many vegetable substances by expression. See OILS. The half fluid consistence of butter, as of most other concrete oily matters, is thought to be owing to a considerable quantity of acid united with the oily part; which acid is so well' combined, that it is not perceptible while the butter is fresh and has undergone no change ; but

when it grows old, and undergoes some kind of fermentation, then the acid is disengaged more and more; and this is the cause that t utter, like oils of the same kind, becomes rancid by age.

In making butter, when the cream has been churned, open the churn, and with both hands gather it well together, take it out of the butter- milk, and lay it into a very clean bowl, or earthen pan; and if the butter be designed to be used sweet, fill the pan with clear water, and work the butter in it to and fro, till it is brought to a firm consistence of itself, without any mois- ture. When this has been done, it must be scotched and sliced over with the point of a knife, every way, as thick as possible, in order to fetch out the smallest hair, mote, bit of rag, strainer, or any other thing that may have hap- pened to fall into it. Then spread it thin in a bowl, and work it well together, with a proper quantity of salt, and make it up into dishes, pounds, half pounds, &c. The following direc- tions concerning the making and management of butter, including the Epping method, are ex- tracted from the third volume of the Bath So- ciety Papers. In general it is to be observed, that the greater the quantity made from a few cows, the greater will be the farmer's profit; therefore he should never keep any but what are esteemed good milkers. A bad cow will be equally expensive in keeping. When good ones are obtained, a careful servant should be em- ployed to milk them ; -\s, through the neglect

and mismanagement of servants, it frequently happens that the best cows are spoiled. A farme should himself often see that the cows are milked clean ; for if any milk is suffered to remain in the udder, the cow will daily give less, till at length she will become dry before the proper time, and the next season will scarcely give milk sufficient to pay for keeping her. It sometimes happens that some of a cow's teats may be scratched or wounded so as to produce foul' or ā¢ corrupted milk ; when this is the case, we should by no means mix it with the sweet milk, but give it to the pigs ; and that which is conveyed to the dairy-house should remain in the pail till it is nearly cool, before it be strained, that is, if the weather be warm ; but in frosty weather it should be immediately strained, and a small quantity of boiling water may be mixed with it, which will cause it to produce cream in abundance, and the more so if the pans or vats have a large surface. During the hot summer months, it is proper to rise with or before the sun, that the cream may be skimmed from the milk ere the dairy becomes warm ; nor should the milk at that season stand longer in the vats, &c. than twenty-four hours, nor be skimmed in the evening till after sun - set. In winter, milk may remain unskimmed for thirty-six or forty-eight hours ; the cream should be deposited in a deep pan, which should be kept during the summer in the coolest part of the dairy ; or in a eool cellar where a free air is ad- mitted, which is still better. Where people have not an opportunity of churning every other day, they should shift the cream

daily into clean pans, which will keep] it cool, but they should never fail to churn at least twice in the week in hot weather ; and this work should be done in a morning before the sun appears, taking care to fix the churn where there is a great draught of air. If a pump churn be to be used, it may be plunged a foot deep into a tub of cold water, and should remain there during the whole time of churning, which will very much harden the butter. A strong rancid flavor will be. given to butter, if we churn so near the fire as to heat the wood in winter. After the butter is churned, it should be immediately washed in many different waters till it is perfectly cleansed from the milk ; but here it must be remarked, that a warm hand will soften it, and make it appear greasy, so that it will be impossible to obtain the best price for it. The cheesemongers use two pieces of wood for their butter ; and if those who have a very hot hand were to have such, they might work the butter so as to make it more saleable. The Epping butter is made up into long rolls, weigh- ing; a pound each; in the county of Somerset they dish it in half pounds for sale ; but if they forget to rub salt round the inside of the dish, it will be difficult to work it so as to make it appear handsome. Butter will require and endure more working in winter than in summer; but it is remarked, that no person whose nand is warm by nature makes good butter. These who use a pump churn must endeavour to keep a regular stroke; nor should they admit any person to as- sist them, except they keep nearly the same stroke: for if they churn more slowly, the butter will in winter go back, as it is called ; and if the stroke

he more quick and violent in the summer, it will cause a fermentation, by which means the butter will imbibe a very disagreeable flavor. Where people keep many cows, a barrel churn is to be preferred; but if this be not ‘kept very clean, the bad effects will be discovered in the butter ; nor must we forget to shift the situation of the churn when we use it., as the seasons alter, so as to fix it in a warm place in winter, and where there is a free air in summer. In many parts of this kingdom, they color their butter in winter, but this adds nothing to its goodness ; and it rarely happens that the farmers in and near Epping use any color, but when they do it is very innocent. They procure some sound carrots, whose juice > they express through a sieve, and mix with the cream when it enters the churn, which makes it appear like May butter ; nor do they at any time use much salt, though a little is absolutely ne- cessary.ā As they make in that country very little cheese, so very little whey butter is made; nor indeed should any person make it, except for present use, as it will not keep more than two days ; and the whey will turn to better ac- count to fatten pigs with. The foregoing rules will suffice for making good butler in any coun- try ; but, as

some people are partial to the west country method, it shall also be described as briefly as possible. 1. They deposit their milk in earthen pans in their dairy-house, and (after they have stood twelve hours in the summer, and double that space in the winter) they remove them to stoves made for that purpose, which stoves are filled with hot embers ; on these they remain till bubbles rise, and the cream changes its color, it is then deemed heated enough, and this they call scalded cream ; it is afterwards re- moved steadily to the dairy, where it remains twelve hours more, and it is then skimmed from the milk and put into a tub or churn ; if it be put into a tub it is beat well with the hand, and thus they obtain butter; but a cleanlier way is to make use of a churn. Some scald it over the fire, but then the smoke is apt to affect it ; and in either case, if the pans touch the fire, they will crack or fly, and the milk and cream will be wasted.

The Cambridgeshire salt butter is held in high esteem, and is made nearly after the same method as the Epping ; and by washing and working the salt from it the cheesemongers in London often sell it at a high price for fresh butter. They deposit it, when made, into wooden tubs or fir- kins, which they expose to the air for two or three weeks, and often wash them ; but a readier way is to season them with unslacked lime, or a large quantity of salt and water well boiled: with this they must be scrubbed several times, and afterwards thrown into cold water, where they should remain three or four days, or till th-sy are wanted ; then they should be again scrubbed, and well rinsed with cold water; but, before they receive the butter, care must be taken to rub every part of the firkin with salt : then, if the butter be properly made, and perfectly sweet, it may be gently pressed into the firkin ; but it must be well salted when it is made up, and the salt should be equally distributed through the whole tnass, and a good handful of salt must be spread

on the top of the firkin before it is heated, after which the head should be immediately put on. They pursue nearly the same method in Suffolk and Yorkshire ; and the butter of these counties is often sold in London for that of Cambridge No people make more butter from their cows than the Yorkshire farmers do, which is certainly owing to the care they take of them in the winter: at that season they house them all, feed them with good hay, and never suffer them to go out, except to water, but when the weather is very ā¢serene; when the cows calve, they give them comfortable malt meshes for two or three days after. These cows never answer if they are removed to other counties, except the same care and attendance be given them, and then none answer better. Land, whereon cows feed, very often affects the butter. If wild garlic, charlock, or may-weed, be found in a pasture ground, cows should not feed therein till after they have been mown, when such pernicious plants will appear no more till the following spring; but those cows that give milk must not partake of the hay, as that,

also, will diffuse its bad qualities. Great part of the Epping butter is made from cows that feed during the summer months in Epping forest, where the leaves and shrubby plants contribute greatly to the flavor of the but- ter. The mountains of Wales, the highlands of Scotland, and the moors, commons, and heaths in England, produce excellent butter where it is properly managed; and though not equal in quantity, yet far superior in quality to that which is produced from the richest mead'ows : and the land is often blamed when the butter is bad through mismanagement, sluttishness, or inatten- tion. Turnips and rape affect milk and butter, but brewer's grains are sweet and wholesome food, and will make cows give abundance ot milk ; yet the cream thereon will be thin, except good hay be given at the same time, after every meal of grains. Coleworts and cabbages are also excellent food; and if these and savoys were cultivated for this purpose, the fanners, in gene- ral, would find their account in it.

Butter forming an important article of com- merce as well as food, the legislature has passed various statutes respecting its package, weight, and sale. The principal of these are the 36th and 38th of Geo. III.

Naturalists speak of showers and dews of a butyraceous substance. In 1675, there fell in Ireland, during the winter and following spring-, a thick yellow dew, which had the medicinal properties of butter.

BUTTER OF CACAO; an oily white matter, of a firmer consistence than suet, obtained from the cacao nut, of which chocolate is made. The method of separating it consists in bruising tlit cacao and boiling it in water. The oil contained in the nut is by this means liquefied, and rises to the surface, where it is left to corrgeal, that it may be the more easily taken off. It is generally mixed with small pieces of the nut, from which it may be purified, by keeping it in fusion with- out water in a pretty deep vessel, until the several matters have arranged themselves according to their specific gravities. By this treatment it becomes very pure and white It has no smell,

but. a very mild taste, when fresh : and in all its general properties it resembles fat oils, among which, it must, therefore, be classed. It is used as an ingredient in pomatums.

BUTTER-FLOWER, or BUTTER-CUP, is a species of crow-foot. See RANUNCULUS.

BUTTERFLY. See PAPILIO.

BUTTERFLY-FISH, a name given by some to the blennus, or blennius; from a spot in the fin, which resembles those in the wings of some but- terflies.

BUTTERFLY-SHELL, in natural history. See VOLUTA.

BUTTER-MILK is the milk which remains after the butter is obtained by churning. Butter-milk is esteemed an excellent food, in the spring espe- cially, and is particularly recommended in hectic fevers. Some make curds of butter milk, by pouring into it a quantity of new milk hot.

BUTTER OF ANTIMONY, &c. See ANTI- MONY, &c.

BUTTER OF STONE, a kind of mineral drug found on the highest mountains, and hardest rocks, of Siberia, being drawn by the heat of the sun, in transudation, from the dry substance of the stones themselves, and adhering to the sur- face thereof like a sort of calx, which, having received its full coction, is scraped off by the inhabitants under the name of kamine masta. The Russians ascribe many virtues to it. It is mucn used for the dysentery and venereal dis- eases ; but its operation is so violent, however corrected by other ingredients, that none but the Russians dare use it.

BUTTNERIA, or BYTTNERA, in botany, a genus of plants; class pentandria; order mono- gynia; essential character, CAL. five cleft; COR. petals fine, three lobed at the summit, the middle lobe prolonged into a filiform kind of awn : CAP. five grained, covered with prickles. There are eight species, all perennial shrubs; and, except B. herbacea, which is found in the East Indies, all natives of South America.

BUTTOCK, n. The thick of the hip, the rump; from but, thick, round; and hock, a joint.

This wenche thicke and we! ygrowen was, With carouse nose, and eyen grey as glas, With buttukes brode. Chaucer's Canterbury Tales. It is like a barber's chair, that fits all buttocks.

Shakspeare.

Such as were not able to stay themselves, should be holden up by others of more strength, riding be- hind them upon the buttocks of the horse. Knolles. The tail of a fox was never made for the buttocks of an ape. L'Estrange's Fables.

BUTTON, Ā».&Ā«.ā¢)

BUT'TONHOLE. ˆbouton. See Boss and

Ital. bottone ; Fr.

BUT'TONMAKER. 3 BUT. A knob ; a bud ; a stud used in dress. It is applied to a handle placed upon anything, and projecting or pro- truding from it, as a coat-button, a door-button. To button is to fasten by buttoning, or to put buttons upon a garment, &c.

A fayre russet coat the tanner had on,

Past buttoned under his chin,

And under him a good cow-hide,

And a mare of four stilling. Old Ballad.

Pray you, undo this button. Sliakspeare

The canker galls the infants of the spring, Too oft before their buttons be disclosed. Id.

One whose hard heart is buttoned up with steel. Id. Let me take you a buttonhole lower. Id

I'll please the maids of konour, if I can : Without black velvet breeches, what is man ? I will my skill in buttonholes display, And brag, how oft I shift me every day. Bramston. We fastened to the marble certain wires, and a button. Boyle.

I mention those ornaments, because of the simpli- city of the shape, want of ornaments, buttons, loops, gold and silver lace, they must have been cheaper than ours. Arbuthnot.

An Lonest man, close buttoned to the chin, Broad cloth without and a warm heart within. Cowper. In prologues, prefaces, be flat ! A silver button spoils your hat.

Garrich's Prologues.

BUTTON, in chemistry, signifies the metal which is collected in a roundish mass at the bot- tom of a crucible after fusion, or which remains in the cupels after cupellation; more generally called a bead.

BUTTONS, as an article -of dress, are not only important to an honest man in cold weather (in the extract from Cowper), but give employment, as a manufacture, to many thousands of the population of Sheffield, Birmingham, and other large towns. Attention has, of course, been directed to the improvement of this manufacture by machinery, 8cc. in modern

times.

Buttons are made of bone, horn, or wood, used plain, or covered with hair, cloth, thread, silk, &c.; but, of late, more commonly of metal polished, gilt, or plated. Bone or horn buttons sometimes are made with fixed shanks, and sometimes with holes, for the purpose of being sewed to the garment. The latter are called sailors' buttons, and the surface is concave in front, to preserve the thread by which they are sewed from wearing. They are made from cow- hoofs, by a process of pressing them into heated iron moulds. The hoofs, having been coiled in water till they are soft, are cut into parallel slips by a cutting knife, which is a blade, with a long handle at one end, and jointed to the bench by a hook and eye at the other. It then acts like a lever in cutting the horn placed beneath its edge. The slips being the width of the diameter of the intended button, are cross cut into small squares ; and the angles of these being cut off, octagonal pieces are left nearly the size of the intended buttons. They are dyed black, by dipping them into a cauldron of water of logwood and copperas mixed. Being dried they are pressed between moulds, or pincers, represented in our plate, BUTTON-MAKING, fig. 3. Each plate, a, a, has six, eight, or ten, small steel dies fastened to it, each containing the impression of the intended buttons embossed in it. When shut, these im- pressions correspond. The two claws, c, c, entei corresponding cavities in the opposite plate, and insure them coming accurately together. The presser, being provided with a great number of different moulds, arranges them in an oven or furnace, till they become heated somewhat above boiling water. A piece of horn is then placed

upon each impression in the mould, which is shut close, and the mould is placed in a small screw press fixed to the work bench, which holds the moulds shut together for a few minutes, till the horn is warmed and softened by being between them; and the business is finally com- pleted by means of a pressing vice : the fashes, or edges, being clipped off by shears, are then filed smooth and round in a lathe.

Sailor's buttons have the holes (generally four) drilled in them by means of a lathe, the upper part of which is represented in fig. 2. a, a, a, a, are four spindles, all turning together by a com- mon foot-wheel, like a grind-stone, by means of two straps, e,f, each of which turns two spindles. At the end of the spindles, is a hook, uniting them with four other spindles, b, b, which are supported by passing through holes in a metal standard, A; and their points projecting beyond this, are formed into small drills. The spindles, A,

are placed at some distance asunder, to admit the pulleys for the straps; but the hooks, acting as universal joints, allow the ends of the drills, fr, to come very near. The button is placed in a concave rest, B, and thrust against the drills by a piece of wood. The standard A can be changed for another with more distant holes, to suit larger buttons; and the rest, B, can be elevated or depressed for the same purpose. Ornaments are often formed on the surface of plain horn buttons by means of a thin brass plate, out of which the pattern is cut. The plate is applied to the sur- face of the button, and the uncovered parts of the surface, being rubbed with emery powder, pre- sent a rough appearance, while those which are protected by the brass have a fine black polish.

Large buttons are first made from pieces of bone, and the smaller ones cut, afterwards, from the spaces left between the first; so that the ma- terials are made to yield the utmost; and the remains are sold to farmers for manure, to the makers of hartshorn, cutlers, &c. Various hard woods are cut into large buttons in the same manner, and afterwards dyed black in an infu- sion of sulphate of iron and gall nuts. Oak, beech, or elder, are chiefly used in this country.

Buttons intended to be covered with cloth, silk, &c. are called also moulds. They are made from the refuse chips of bone, sawn into thin flakes, and perforated in the centre by two operations, illustrated in fig. 1. One end of the spindle D, has a tool 6, screwed into, and moving along ā¢vith it. The other end of the spindle is con- nected by a peculiar kind of joint, with a lever ef, whose fulcrum is e ; the other end f, being connected with a second lever and handle g, which the operator holds in his left hand. The right hand is employed in holding the flake of bone d opposite the tool b, against a piece of wood firmly fixed into the iron standard E by two screws ; then, by drawing the handle g for- wards, the tool b being at the same time in rapid motion by the foot wheel, with which c is con- nected ; its centre pin k, is pressed against the bone, and drills a hole through in the centre of the intended button ; while its t\vo other points describe a deep circle in the bone, about half through its thickness. The flat surface is cut smooth by the intermediate parts of the tool.

The piece is now moved a small distance, to cut out another button from a fresh part ; and when as many as the flake of bone will contain are thus cut half through, the other side is presented to the tool. The point A; is inserted into the hole made from the other side by the former operation. The other two teeth of the tool now cut another deep circle, exactly opposite the former, at the same time cutting the flat surface smooth. By this means the bone is cut through, and a button mould left sticking on the point of the tool. By drawing back the handle g, the tool recedes, and the button meeting a fixed piece of iron plate, is forced off the tool, and falls

into a small box F, completely finished. So rapid are these opera- tions, that a girl of ten or twelve years of age will cut out in one minute, twenty-five or thirty buttons. Moulds are chiefly used at present sewn up in a piece of the same cloth with the garment for which they are designed. They were formerly covered by women, See. with the most costly materials. Each had a large needle fixed in the table opposite the part where she was seated, and a bobin, containing the thread to cover the button. The mould was stuck by the hole in its centre upon the needle, and the end of a thread of silk, mohair, and sometimes gold thread, put through the centre at the same time, to fasten one end; the thread was then wound about the button mould to cover it, and give such an ornamental surface as fashion dic- tated. Some manufactured silk buttons are still used. These are not finished until the super- fluous hairs and hubs of silk are taken off, which is done in the following manner : a quantity are put into a kind of iron sieve, called by workmen a singeing box. Then a little spirit of wine being poured into a shallow iron dish, and set on fire, the workman moves and shakes the singeing box, containing the buttons, over the flame of the spirit, by which the superfluous hairs,, hubs of silk, &c. are burnt off, without damaging them. Great care, however, must be taken that the buttons in the singeing box be kept continually in motion ; for if they are suffered to rest over the flame, they will immediately burn. Whea all these loose hairs, &c. are burnt off by the flame of the spirit, the buttons are taken out of the singeing box, arid put, with a proper quantity of the crumbs of bread, into a leather bag, about three feet long, and of a conical shape : the mouth or smaller end of which being tied up, the workman takes one of the ends in one hand and the other in the other, and shakes the hand briskly with a particular jerk. This operation finally cleanses the buttons, and renders them very glossy.

The basis of metal buttons is genially an in- ferior kind of brass, pewter, or other compo- sition : the shanks made of brass or iron wire are a distinct manufacture ; but the buttons are cast round the shank in the following manner. The workmen have a metal pattern consisting of a great number, say from four to twelve dozen of buttons, connected in one plane by very small bars. An impression from this pattern being taken in sand, the shanks are pressed into it, each in the centre of one impression , the part which is to enter the butto : top being made to

project a little above the surface of the sand. The whole surface of it is now covered with the fused metal, to which sometimes a portion of zinc is added, for the purpose of making it flow freely, and producing a sharp

impression. The metal being cooled, the buttons are taken from the moulds, cleaned from the sand by brushing, and are ready for the lathe, where the edges are > filed round and smoothed. A person is then em- ployed in smoothing the back of the button and turning the projecting part of the shank. This operation is also performed in the lathe, as well as that of smoothing the face of the button.

The next operation, polishing, is generally performed by women. The shank of the button being secured, the face is rubbed on a board covered with leather, and spread with powder of rotten-stone ; in a second polishing a finer pow- der is employed ; and the last polish is given by holding the button lightly to a circular board, which is covered with soft leather spread over with still finer povwder of the same materials. The board is moved by the lathe.

The last operation is boiling or washing, for the purpose of communicating a purer white to the surface. This is performed by boiling a quantity of granulated tin in a solution of cream of tartar. A portion of the tin being dissolved, and the buttons arranged on a grating of wire, being immersed in the solution, their surface is covered with a thin layer or wash of the metal, which improves their whiteness without affecting the polish.

Plated buttons are cut by a fly-press, at the flatting-mill, out of copper plate, covered on one side with silver. The copper side is placed up- wards in stamping it out, and the die or hole through which they are stamped, is rather cham- ferred at its edge, to make the silver turn over the edge. These pieces are called blanks, and they are now introduced into a furnace to undergo the annealing process, which fits them for that of stamping. This is done by a machine very similar to the common pile-driver. The striking part, which is from one to two hundred weight, carries the die on its lower surface, and the plate or button is fixed beneath it. It is raised by means of a pulley and rope; which the workman moves partly with his hands and partly with one foot, placed in a stirrup. In this manner it is drawn up with a sudden dexterous jerk ; and, when it is sufficiently elevated, let go as sud- denly. When any impression is to be given to a plated button, after the shank has been at- tached, the latter is introduced into a cavity, formed by two pieces of steel, which, when united together, form a cone, and the top is con- vex, to correspond with the concave back of the button.

The soldering on of the shame is performed on each button separately by means of the flame of a lamp and a blow-pipe. Silver solder is ge- nerally employed. For plain plated buttons, the next operation is to smooth the edges with a file in the lathe. To clean the backs, the buttons are dipped in acid ; and to whiten them they are boiled in cream-of-tartar and silver. The backs are then brushed clean as they revolve in the luthe, when they are

ready for burnishing. This

is also performed in the lathe : the biood-stone or burnishing substance being an ore of jron. fixed in the handle ; and frequently dipped in water. To render the polish still more perfect, a stone of finer quality is afterwards employed, and this finishes the button.

Gilt buttons are stamped from copper, with sometimes an alloy of zinc, and laminated in the flatting mill and stamped, after the manner of the plated button. The stamping rendering the face slightly convex prevents the buttons from sticking together in gilding. But the soldering of the shanks is managed in a different manner from that of the plated buttons. Each blank is furnished with a small spring, like a pair of tweezers, which holds the shank down upon it in the proper place. A small portion of spelter and borax, mixed with water, is now placed round each shank, and ten or twelve dozen- of buttons being thus prepared, are placed on a flat iron plate, which is placed in an oven of temperature sufficient to fuse the solder ; when this is accomplished they are withdrawn, and while yet warm, are thrown into a liquor which is called the pickle, and is composed of water with, the addition of aqna-fortis, or weak nitric acid. The action of the acid makes the surface black, and the edges of the buttons are then filed and smoothed in a lathe. They are then dipped in a second pickle more diluted with water, by which the surface is cleaned, and, after being burnished in the lathe, are ready for the process of gilding.

Five grains of gold are fixed by act of parlia- ment as the legal quantity for gilding twelve dozen of buttons of one inch diameter. It is put into an iron ladle with a small quantity of quicksilver, and exposed to heat till the metals are united. The buttons are then placed with the amalgam of gold and mercury in an earthen pan, together with as much aqua-fortis as will moisten the whole, and the mixture is stirred with a brush until they are completely whitened: this is called the quicking of them, An opera- tion now succeeds called drying off, or separat- ing the mercury from the gold, and fixing the latter on the buttons. This is accomplished by shaking them over a fire in a flat iron pan until the mercury appears to melt. The buttons are now thrown into a felt cap, and stirred about with a brush, that the amalgam may be equally spread over their surface, and, while it is at that temperature which renders the mercury nearly vo- latile, the buttons are returned to the pan, the in- creased heat drives off the mercury in a state of vapor, and the gold begins to appear distinctly. This process is repeated, and, if any white spots should remain, the buttons are put into a cylin- drical copper box with a lid, and turned round on a charcoal fire to heat all the parts equally, until the remaining mercury is separated. The buttons now have only to be burnished by the same operation as has been described in respect to finishing plated buttons. In some cases they are double and

treble gilt.

Sometimes gilt buttons are milled on the edge like coin, and the machine employed is similar to that which is used for milling coin. The milling tool is a small steel roller, on the circumference

of which the pattern required is cut : the opera- tion is performed in the lathe, and the instrument is held in a side rest, that circles of the same diameter may be formed on all the buttons.

The process of gilding buttons, or the drying off, being, from the vapor of the mercury, ex- ceedingly dangerous to the operator, an appara- tus, fig. 4, has been employed with success, by Mr. Mark Sanders, an eminent button manufac- turer at Birmingham, for drying off buttons, and it the same time preserving the mercury evapo- rated in the process. It is thus described in the Philosophical Magazine, vol. ix. A hearth, or fire-place, of the usual height, is to be erected; in the middle of which, a place for the fire is to be made; but instead of admitting the smoke to ascend into the top A, made of sheet or cast iron, through which the mercury is volatilised, a flue for that purpose should be conducted backwards to the chimney B. An iron plate, thick enough to contain heat sufficient to volatilise the mer- cury, is to cover the fire-place at the top of the hearth C. There must be an ash-hole D under the fire-place. The dark square space E, seen in the fire-place, is the flue which serves to carry the smoke back under the hearth into the chim- ney B. The door of the fire-place and the ash- pit, may either be in front or at the end of the hearth at F, which will perhaps less incommode the work people. The space between A and the iron plate C, is covered up with a glass window, coming down so low as only to leave sufficient room for moving the pan backwards and forwards with facility. If the sides were also glass instead of brick-work it would be still better, as the work people would be able to have a full view of their work without being exposed to the fumes of the mercury, which when volatilised, by heat com- municated to the pan by the haated iron plate over the fire-place, ascends into the top A, ap- propriated for its reception, and descends into the tub G, covered at top, and filled pretty high with water. By this means the hearth would in fact become a distilling apparatus for condensing and recovering the volatilised mercury. In the tub G the principal part would be recovered ; for, of what may still pass on, a part would be condensed in ascending the tube H, and fall back, while the remainder would be tffectually caught in the tube or cask I, open at the top and partly filled with water. The latter tub should be on the outside of the building, and the de- scending branch of

the tube 11 should go down into it at least eighteen inches, but not into the water. The chimney or ash-pit should be fur- nished with a damper to regulate the heat of the fire. The water may be occasionally drawn out of the tube by a siphon ; and the mercury, clogged with heterogeneous maUer, may be triturated in a piece of flannel till it passes through, or placed in a pan of sheet iron, like a dripping-pan, in a sufficient degree of heat, and having such an in- clination that the mercury, as it gets warm, may run down and unite in the lower part of the pan. But the mercury will be most effectually recovered by exposing the residuum left in the flannel bag to distillation, in a retort made of iron or earthenware.

BCTTON-SHAKKS are generally made from

brass or iron wire bent, and are cut by thesa means : The wire being wound spirally round a piece of steel bar, A in the diagram. The coil B

thus formed is slipped off, and a wire- fork C put into into it. It is now laid upon an anvil, and by a punch the coil is beat down between the two branches of the fork C, so as to be in the state D. The punch has an edge which marks the middle d, and the coil being cut open by a pair of shears along this mark, each turn of the coil is divided into two perfect button shanks.

An ingenious improvement on this, however, is said to have been lately introduced at Birm- ingham. A machine is contrived that, merely by turning a winch, supplies itself with wire from a reel, and, after performing the different opera- tions of cutting and bending to the proper form, delivers the shank completely finished. One shank is formed at each turn of the winch, and the power required to set it in motion is so small, that the strength of a boy is sufficient. The in- ventor, however, employs a small steam-engine as his moving power, and in this way can pro- duce these articles at a very trifling advance upon the cost of the wire.

BUTTON, in fencing, signifies the tip of a foil, made roundish, and usually covered with leather, to prevent contusions or wounds.

BUTTON, in the menage, the button of the reins of a bridle, is a ring of leather, with the reins passed through it, which runs all along the length of the reins. To put a horse under the button, is when a horse is stopped without a rider upon his back, the reins being laid on his neck, and the button lowered so far down that the reins bring in the horse's head, and fix it to the true posture or carriage. Not only the horses managed in the hand must be put under the button ; but the same method must be taken with such horses as are bred between two pillars, before they are backed.

BUTTON-STONE, in natural history, a kind of figured stone, so denominated from its resem- bling the button of a garment. Dr. Hook gives the figure of three sorts of button-stones, which seem to have been no'thing else but the filling up of three sorts of shells. They are all very hard flints ; and have this in common, that they con- sist of two bodies, which seem to have been the filling up of two holes or vents in the shell. Dr. Plot describes a species finely striated from the top, after the manner of some hair-buttons. This name is also given to a peculiar species of slate found in the marquisate of Bareith, in a moun- tain called Fichtelberg; which is extremely dif- ferent from the common sorts of slate, in that it runs with great ease into glass in five or six hours, without the addition of any salt or othar foreign substance, to promote its vitrification. It contains in itself all the principles of ulas-, and really has mixed in its substance the things

necessary to be added to promote the fusion of other stony bodies. The Swedes and Germans make buttons of the glass produced from it, which is very black and shining, and it has hence its name button-stone. They make several other things, also, of this glass, as the handles of knives and the like, and send a large quantity of it un- wrought in rbund cakes, as it cools from the fusion, into Holland.

BUTTRESS, v.) Sax. butereis, from but,

BUT'TRESS, n. \ external, and Goth, reisa,

to raise ; prop, or support ; to buttress is,

therefore, to prop up a building, or any object,

that requires support, by external means.

No jutting frize

Buttress, nor coigne of vantage, but this bird Hath made his pendant bed, and procreant cradle.

S/takspeare,

But we inhabit a weak city here, Which buttresses and props but scarcely bear.

Dry den.

It will concern us to examine the force of this plea, which our adversaries are still setting up against us, as the ground pillar and buttress of the good old cause of nonconformity. South.

If ancient fabrics nod, and threat to fall, To patch their flaws, and buttress up the wall, Thus far 'tis duty : but here fix the mark, For all beyond it is to touch the ark. Roscommon. Then another question arises, whether this house stands firm upon its ancient foundations, and is not, by time and accidents, so declined from its perpen- dicular as to want the hand of the wise and expe- rienced architects of the day to set it upright again, and to prop and buttress it up for duration. Burke. Reform of Representation in the House of Commons.

BUTTRESS is a kind of butment built archways, or a mass of stone or brick, serving to prop or support the sides of a building, wall, &c. on the outside, where it is either very high, or has any considerable load to sustain on the other side, as a bank of earth, &c. Buttresses are used against the angles of steeples, and other buildings of stone, &c. on the outside, and along the walls of such buildings as have great and heavy roofs, ā¢which would be subject to thrust the walls out, unless very thick, if no buttresses were placed against them. They are also placed for a but- ment against the feet of some arches, that are turned across great halls in old palaces, abbeys, &c.

BUTUS, or BUTO, in ancient geography, a town of Lower Egypt, on the west side of the branch of the Nile, called Thermuthiacus : to- wards the mouth called Ostium Sebennyticum. In this town stood an oracle of Latona. Ptolemy places Butus in the Nomos Phthenotes. It had teniples of Apollo and Diana, but the largest was that of Latona, where the oracle stood.

BUTYRIC ACID. Chevreul states, that but- ter is composed of two fat bodies, analogous to those of hog's lard, of a coloring principle, and an odorous one, which gives it that distinguish- ing principle by which it differs from mere fats. To this principle he has given the name of buty- ric acid, which, like other acids, unites with earths and metals, and thus forms salts; 100 parts, we are told by Chevreul, neutralise a quantity of base, which contains about ten of oxygen ; but he does not mention the process by

which this acid is best separated from the other principles of butter.

BUTZBACH, a town of Germany, in the grand duchy of Hesse. It contains 3100 inha- bitants, a great number of whom are employed in the manufactory of linen and woollen stuffs, worsted stockings, and shoes.

Seven miles S.S. W. ofGiessen.

BUXAR, a town and fortress of Hindostan, province of Bahar ; situated on the south bank of the Ganges, and celebrated for the victory gained in its vicinity in 1764, by the British, over the united armies of the nabob Shuja ad Dowleh, and Cossim Aly Khan. Long. 83Ā° 58′ E., lat. 25Ā° 35′ N.

BUXBAUMIA, in botany, a genus of the order musci, and cryptogamia class of plants ; ovate capsule, gibbous on one side at the base ; fringe double; outer of sixteen short truncate , teeth ; inner a plated membrane. Species, two only ; one, B. foliosa, a native of our own country.

BUXENTUM, or PYXUS, a town of Lucania, first built by the people of Messana, but after- wards deserted. A Roman colony was sent thither, and when found still thin of inhabitants, a new colony was sent by a decree of the senate. Its name is from buxus, the box tree, growing plentifully there. Strabo says, the name Pyxus includes a promontory, port, and river, undtr one. It is now called Policastro.

BUX'OM, ā¢) Goth, bugsam; Sax. bug-

BUX'OMLY, Ā£sum; easily bended or bowed

BUX'OMN ESS. j to the will of another ; obe- dient, jolly, good hurnctfed, wanton-

my dear wif ! I thee boseke

As be to every wight buxom and meke ; And for to kepe our good be curiou?; And honestly governe wel our hous

Ufiaucer's Canterbury Tales. For many han unto mischiefe fall, And ben of ravenous wolves yrent, And for they would be buxome and bent.

Spenter.

It was ftom a cellar this archer did play, Where a buxom young damsel continually lay ; Her eyes shone so bright when she rose every day, That she shot the poor cobler quite over the way.

Old Song. I'm boru

Again a fresh child of the buxom morn, Heir of the sun's first beams. Crashaw.

Zephyr, with Aurora playing, As he met her once a maying, Fill'd her with thee, a daughter fair, So buxom, blithe, and debonnair. Sfilton.

He, with broad sails,

*Winnow ‘d the buxom air. Id**

Almighty Jove descends, and pours Into his buxom bride his fruitful showers. Dryden.

She feign ‘d the rights of Bacchus ! cryed aloud, And to the buxom god the virgin vowed. Id.

Lord ! cries a biutom widow, loud and strong, He’s quite a boy ! to play that part is wrong.

Garrick’s Prologues.

BUXTON, a town in the Peak of Derby, celebrated for its medicinal waters; from the resort to which, this place has grown into a con- siderable town. The houses are chiefly, or rather solely, built for the reception of invalids;

and many ˆof them are not only commodious, but inconsiderable portion of a purging salt, but no

iron can be discovered in it. This water taken inwardly is esteemed good in the diabetes,

elegant. The duke of Devonshire has erected a most magnificent building in the form of a cres- cent, with piazzas, under which the company bloody ‘urine, bilious cholic loss” of walk ,n wet or cold weather. It is dividedVo coldness of the stomach, ˆbtoSjS rlerent hotels, shops, &c. with a public coffee- phy, contractions of the vessels and limbs esoe- room, and a very elegant room for assemblies dally from age, cramps and convulsions’; dry and concerts ; and has twenty-nine windows in asthma without fever, and in barrenness In- length on each floor, besides five at each end. wardly and outwardly, it is said to be rood in There are stables on the back of this building, rheumatic and scorbutic complaints, the trout of an octagonal form on the outside, and circular inflammation of the liver and kidneys, consumpl within the yard, where there is a riding-house, tions of the lungs, old strains, hard callous tu- 1 he principal trade is the cotton manufacture, mors, withered and contracted limbs, the itch t lies in an open healthy country, twenty-three scabs, nodes, chalky swellings, ring worms, and miles

from Manchester, thirty-two north-west of similar complaints. Besides the hot water, there

Derby, and 160 N.N. W. of London.

is also a cold chalybeate water, with a rough

It is asserted by antiquaries, that the Romans irony taste : it resembles the Tunbridge water ia

were well acquainted with the wells of Buxton, virtues. For composing artificial Buxton water,

as there is a military way still visible, called the or impregnating the original water with a greater

Bath-gate, seven miles long, from Burgh to this quantity of its own or other gases, see WATERS

place. When,sabout a century ago, Sir Thomas MEDICINAL. Delves, of Cheshire, caused a monument to be erected in memory of a cure he received here,

the workmen in digging for the foundations,

BUXTON (Jedidiah), a prodigy of the last cen- tury, with respect to skill in numbers. His father, William Buxton, was schoolmaster of the

came to the remains of a solid and magnificent parish where he was bora, in 1704, yet Jedi-

Roman structure ; in other places of the neigh- diah's education was so much neglected that he

bourhood very capacious leaden vessels, and was never taught to write ; and, with respect to

other utensils, of Roman workmanship, have also any other knowledge but that of numbers, seem-

been discovered. These waters are mentioned ed always as ignorant as a boy of ten years of

by Leland as well known above 200 years ago. age. How he came first to know the relative

They were brought into great credit, by a Dr. proportions of numbers, and

their progressive

Jones, in 1572, and by George Earl of Shrews- denominations, he did not remember; but he ap-

bury, who erected a building over the bath, then composed of nine springs. The warm waters are the bath, consisting of nine springs, St. Ann's well, and St. Peter's or Bingham well. St. Ann's well rises at the distance of somewhat more than thirty-two yards north-east from the bath. It is chiefly supplied from a spring on the north side, out of a rock of black limestone, or bastard marble. It formerly rose into a stone basin, shut up within an ancient Roman brick wall, a yard square within, a yard high on three sides, and open on the fourth. But in 1709 Sir Thomas Delves erected an arch over it, twelve feet long and as many broad, set round with stone steps on the inside. In the midst of this dome the water springs up into a stone basin two feet square. St. Peter's or Bingham well rises about twenty yards south-east of St. Ann's. It is also called Leigh's well, from a memorable cure re- ceived from it by a gentleman of that name. It rises out of a black limestone, in a very dry ground ; and is not so warm as St. Ann's well. The hot water resembles that of Bristol. It has a sweet and pleasant taste. The principal pecu-

plied the whole force of his mind to them from an early age, and upon them his attention was constantly fixed : so that he frequently took no cognisance of external objects, and when he did, it was only with respect to their numbers. If any space of time was mentioned, he would soon after say it was so many minutes ; and if any distance of way, he would assign the number of hairs' breadths, without any question being ask- ed, or any calculation expected by the company. When he once understood a question, he began to work with amazing facility, after his own me- thod, without the use of a pen, pencil, or chalk, or even understanding the common rules of arith- metic as taught in the schools. He would stride over a piece of land or a field, and tell the con- tents of it almost as exact as if it had been mea- sured by the chain. In this manner he measured the whole lordship of Elmton, of some thousand acres, belonging to Sir John Rhodes, and brought him the contents, not only in acres, roods, and perches, but even in square inches. After this, for his own amusement, he reduced them into square hair breadths, computing forty-

liarity in the appearance is a large quantity of eight to each side of the inch. His memory was

elastic vapor, that rises and forms bubbles, which ***u-*** *~U:1 '- ~*;"" *">*

pass through the water, and break as soon as they reach the surface. The

air of these bubbles

so great, that while resolving a question, he could leave off, and resume the operation again, where he left off, the next morning, or at a week,

was ascertained by Dr. Pearson to consist of a month, or at several months, and proceed regu-

azotic gas, mixed with a small proportion of at- mospheric air. Buxton water is frequently ern-

larly till it was completed. His memory would doubtless have been equally retentive with res-

ployed both internally and externally : one of pect to other objects, if he had attended to other which methods often proves beneficial, when the objects with equal diligence; but his perpetual other would be injurious ; but, as a bath alone, application to figures prevented the smallest ac- ite virtues may not be superior to those of tepid quisition of any other knowledge. He was some- common water. It contains the calcareous earth, times asked, on his return from church, whether together with a small quantity of sea salt, and an he remembered the text, or any part of the ser-

mon, hut if never appeared that he brought away one sentence ; his mind, upon a closer examina- tion, being found to have been busied, even during divine service, in his favorite operation, either dividing some time, or some space, into the smallest known parts, or resolving some question that had been given him as a test of his abilities. As this extraordinary person lived in laborious poverty, his life was uniform and ob- scure. Time, with respect to him, changed nothing but his age ; nor did the seasons vary his employment, except that in winter he used a flail, and in summer a ling-hook. In 1754 he came to London, where he was introduced to the Royal Society, who, in order to prove his abili- ties, asked him several questions in arithmetic, and he gave them such satisfaction, that they dismissed him with a handsome gratuity. In this visit to the metropolis, the only object of his curiosity, except figures, was to see the king and royal family ; but they being at Kensington, Jedidiah was disappointed. During his resi- dence in London, he was taken to see King Richard III. performed at Drary-lane theatre ; and it was expected, either that the novelty and splendor of the show would have fixed him in astonishment, or kept his imagination in a

con- tinual hurry, or that his passions would, in some degree, have been touched by the power of ac- tion, if he had not perfectly understood the dia- logue. But Jedidiah's mind was employed in the theatre just as it was employed in every other place. During the dance he fixed his attention upon the number of steps ; he declared, after a fine piece of music, that the innumerable sounds produced by the instruments had perplexed him beyond measure ; and he attended even to Mr. Garrick, only to count the words that he uttered, in which the said he- perfectly succeeded. Jedidiah returned to the place of his birth, where, if his enjoyments were few, his wishes did not seem to be greater. He applied to his labor with cheer- fulness ; he regretted nothing that he left behind him in London ; and it continued to be his opi- nion, that a slice of rusty bacon afforded the most delicious repast.

BUXUS, the box-tree, a genus of the tetran- dria order, and moncecia class of plants ; natural order, thirty-eighth, tricoccae. Male CAL. try- phyllous ; COR. two-petalled ; the germ an em- bryo, or imperfect rudiment. Female CAL. is tetraphyllous ; COR. three-petalled ; the capsule is three-beaked and trilocular, with three seeds. There are three species ; viz. 1. B. angustifolia, the narrow-leaved box ; 2. B. arborescens, with oval leaves. These two species grow in great plenty upon Box-hill, near Dorking, in Surrey. Here were formerly large trees of that kind ; but now they are few in number. The arborescens, or large box-tree, is proper to intermix in clumps of evergreens, &c. where it adds to the variety of such plantations ; they are a very great ornament to cold and barren soils, where few other things will grow. The leaves possess a very strong nauseous bitter taste, and aperient virtues. They are occasionally exhibited, in form of decoction, amongst the lower orders of people, in cases of dropsy, asthma, and worms. As much as will lie upon a shilling, of the common dwarf box,

dried and powdered, may be given at bed-time, every night, to an infant. Boxwood is extremely hard and smooth, and therefore well adapted to the use of the turner. Combs, mathematical in- struments, knife-handles, and button moulds, are made of it. It is also used for wood engravings. It may properly enough be substituted in default of ebony, the yellow alburnum of which it per- fectly resembles. Decoction of boxwood has been recommended by some as a powerful sudo- rific, preferable even to guiacum ; but the taste readily discovers that it wants the qualities of that wood. Neither the wood nor the leaves of the box-tree at present are used for any other medicinal purpose than the distillation of an em- pyreumatic oil ; and an oil of nearly the same quality is obtained from almost every other wood. 3. B. suffruticosa, dwarf or Dutch box, com- monly used for bordering flower-beds. It is in- creased by parting the roots, or planting the slips but as it makes a great increase of itself, and easily parts, it is hardly worth while to plant the slips that have no roots. For borders to flower

plots, it far excels any other plant ; being subject to no injuries from cold or heat. It is of long duration ; is easily kept handsome ; and, by the firmness of its rooting, keeps the mould in the borders from washing into the gravel walks more effectually than any plant.

BUXTORF (John)", a learned philologist, and Hebrew scholar, born in 1564 at Camen, in Westphalia. He became Chaldee and Hebrew professor at Basil, where he died in 1629. His principal works, are 1. Lexicon Chaldaicum, Talmudicum, et Rabbinicum, fol. 2. A small Hebrew and Chaldaic Lexicon, 12mo. 3. The- saurus Lingua Hebraicae, 2 vols. 8vo. 4. A Hebrew Bible, with a Rabbinnical Commentary, 4 vols. fol. 5. Synagoga Judaica. 6. Institu- tio Epistolaris Hebraica; 7. Concordantise He- braicae, &c.

BUXTORF (John), son of the former, born at Basil in 1599. He succeeded to his father's pro- fessorship ; and published a book against Cap- pellus, entitled Tractatus de Punctorum Vocalium et Accentuum in Libris Veteris Testamenti He- braiciae Origine, Antiquitate, et Auctoritate, 1648. He also compiled a Chaldaic and Syriac Lexicon, and other works. He died in 1664.

BUY, v. ~\ Mod. Goth, buggan ; Sax. byg-

BUY'ING, >gan ; Swed. bygga ; byta; Teut.

BUY'ER, j beuten ; Per. biutan ; Old Fr. bi- gtier ; Sans., and Ara. biccu; Sax. bige, traffic. To purchase ; to procure by giving a price, either money, or an equivalent; opposed to gift, or theft.

The shepheards there robben one another,

And layen baytes to beguile hir brother ;

Or they will btiye his sheepe out of the cote,

Or they will carven the shepheardes throte.

Spenser' Shepheard's Calender.*

We loath the very light (some of us, as Seneca notes,) because it comes free ; and we are offended "with the sun's heat, and those cool blasts, because we buy them not. Burton Anat. Mel.

I have bought Golden opinions from all sorts of people. Shaktpeare.

Pent to linger

But with a grain a day, I would not buy Their mercy at the price of one fair word. l.i

B Y

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B Y

I will buy with you, soil with you, talk with you, Ang.Sax. Leon. This word can only be classi B with you, and so following. Id. fied according to the distinctions so judiciously

What pitiful things are power, rhetoric, or riches, marked out by Dr. Johnson. Change here would*

when they would terrify, dissuade, or buy off COD- not be improvement, but injury, science ! South.

In little trades, more cheats and lying Are used in selling than in buying ā¢ But in the great, unjuster dealing Is used in buying, than in selling. Butler.

Pleasure with praise and danger they would buy, And wish a foe that would not only fly. Denham.

Husbands, more covetous than sage, Condemn this China-buying rage. Gay.

It notes the agent.

The Moor is with child by you, Launcelot.

Shalupeare.

The grammar of a language is sometimes to be carefully studied by a grown man. Ljclte.

Death ‘s what the guilty fear, the pious crave, Sought by the wretch, and vanquished bj the brave.

Garth.

for me, but says he will buy them himself.

It notes the instrument, and is commonly He has ordered my master to buy no more books used after a verb neuter> where with WQuld be put

after an active ; as he killed her with a sword ;

Lat. musso, from ,mitsca ; and Fr. bourdon a drone bee. A humming noise, like that

BUZZ, v.&n. BUZ'ZIXG,

BUZ'ZER.

of bees; a whisper; a murmur; a continued uninterrupted monotonous sound.

And all the chamber filled was with flies Which busted all about, and made such sound, That they encumbered all men's ears and eyes, Like many swarms of bees assembled round. Spenser. Herewith arose a buxzing noise among them, as if it had been the rustling sound of the sea afar off.

Hayward.

There is such confusion in my powers, As, after some oration fairly spoke By a beloved prince, there doth appear Among the buxxing multitude. Shakspeare.

Where doth the world thrust forth a vanity, That is not quickly busa'd into his ears ? Id.

I will buxx abroad such prophecies, That Edward shall be fearful of his life. Id.

Did you not hear A bussing of a separation Between the king and Catharine ? Id.

Her brother is in secret come from France, And wants not buxxers to infest his ear With petulant speeches of his father's death. Id. The hive of a city or kingdom is in best condition when there is least noise or buxx in it. Bacon.

When every knight and citizen Kept legislative journeymen, To bring them in intelligence From all points of the rabble's sense. And fill the lobbies of both Houses With politic important buxses.

Butler's Hudibrai.

We join, like flies and wasps, in buxxing about wit.

Swift.

Where I found the whole outward room in a buxx of politicks. Addison.

And here the bugs of eager nations ran, In murmured pity, or loud-roared applause, As man was slaughtered by his fellow man.

Byron's Childe Harold.

BUZ'ZARD; Per. bus, baz; Fr. buzard ;

Steele. Spectator.

she died by a sword.

But by Pelides' arms when Hector fell, He chose ˆEneas, and he chose as well.

Dryden. It notes the cause of any effect.

I view, by no presumption led. Your revels of the night. Parnell.

By woe the soul to daring action steals, By woe in plaintless patience it excels. Savage.

It notes the means by which any thing is per- formed, or obtained.

You must think, if we give you any thing, we hop to gain by you. Sfiakspeart.*

Happier ! had it sufficed him to have known Good by itself, and evil not at all. Hilton.

It shows the manner of an action. I have not patience : she consumes the time In idle talk, and owns her false belief : Seize her by force, and bear her hence unheard.

Dryden.

By chance, within a neighbouring brook. He saw his branching horns, and altered look.

Additon,

It has a signification, noting the method in which any successive action is performed with regard to time or quantity.

The best for you, is to re-examine the causĀ«, and

try it even point by point, argument by argument, with

all the exactness you can. Hooker.

We are not to stay altogether, but to come by bin ,

ā¢where he stands, by ones, by twos, and by threes.

Shahtptare.

Others will soon take pattern and encouragement by your building ; and so house by house, street by street, there will at last be finished a magnificent city.

Spratt.

It notes tne quantity had at one time.

*Bullion will sell by the ounce for six shillings an*1 five pence undipped money. Lock*.*

What we take daily by pounds, is at least of a much importance as what we take seldom, and only by grains and spoonfuls. Arbuthnot.*

The north by myriads pours her mighty sons ;

Lat. buteo. A species of 'hawk,' Johnson says, Great nurse of Goths, of Alans, and of Hun.*

mean and degenerate. Hence it is metaphori- cally applied to a blockhead, or a dunce.

This have I heard oft in saying, ā That man ne maie for no daunting Make a sperhawk of a botarde.

Chaucer. Romaunt of the Rose.

BUZZARD, in ornithology, the name of several species of the hawk kind. See FALCO.

At, or in ; noting place : it is now perhaps only used before tlie words sea, or water, and land. This seems a remnant of a meaning now little known. By once expressed situation ; as by west, westward

We see the great effects of battles by sea ; the bat- tie of Actium decided the empire of the world. Bacon.

1 would have fought by land, where I was Ā«tronger; You hindered it ; yet, when I fought &t sea

BY'. The preposition. MoesoGoth.&i; Swed.

and Sax 6i ; Belg. by; Teut. bei ; Arab, and Forsook me fighting. Per. bi, ba. Tooke makes it the imperative of By land, by water, they renew liur charge.

B Y

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B Y

According to ; noting permission.

It is lawful, both by the laws of nature and na- tions, and by the law divine, which is the perfection of the other two. Bacon's Holy War.

According to ; noting proof.

The present, or like, system of the world cannot possibly have been eternal, by the first proposition j and without God it could not naturally, nor fortuit- ously, emerge out of chaos, by the third proposition.

Bentley.

The faculty, or desire, being infinite, by the preced- ing proposition, may contain or receive both these.

Cheyne.

After ; according to ; noting imitation or con- formity.

The gospel gives us such laws, as every man, that understands himself, would cause to live by.

Tillotem.

This ship, by good luck, fell into their hands at last, and served as a model to build others by.

Arbuthnot.

From ; noting ground of judgment, or com- parison.

Thus, by the musick, we may know, When noble wits a hunting go Through groves that on Parnassus grow. Waller.

By -what he has done, before the war in which he ā¢was engaged, we may expect what he will do after a peace. Drydcn.

It notes the sum of the difference between two things compared.

Meantime she stands provided of a Laius, More young and vigorous too by twenty springs.

Dry don.

Her brother Rivers, Ere this, lies shorter by the head at Pomfret.

Route. It notes co-operation.

By her he had two children at one birth.

Shaktpeare.

For: noting continuance of time. This sense is not in use.

Ferdinand and Isabella recovered the kingdom of Grenada from the Moors ; having been in possession thereof by the space of seven hundred years. Bacon. As soon as; not later than : noting time. By this, the sons of Constantine which fled, Ambrise and Uther, did ripe years attain.

Faerie Qticcite.

Hector, by the fifth hour of the sun, Will with a trumpet, 'twixt our tents and Troy, To-morrow morning call some knight to arms.

Shaktpeare. By this time the very foundation was removed.

Swift.

By the beginning of the fourth century from the building of Rome, the tribunes proceeded so far as to accuse and fine the consuls. Id.

Beside : noting passage.

Many beautiful places, standing along the seashore, make the town appear longer than it is to those that sail by it. Addison.

Beside ; near to ; in presence : noting proxi- mity of place.

So thou may'st say, the king lies by a beggar, if a beggar dwell near him ; or the church stands by thy labour, if thy tabour stand by the church. S/ iukspeare.

Before himself, herself, or themselves, it notes the absence of all others.

He will imagine, that the king and his ministers sat down and made (hem by themtelvei, and then sent them to their allies to sign. Swift.

More pleased to keep it till their friends could come, Than eat the sweetest by themselves at home, P&pu,

At hand.

He kept then some of the spirit by him, to verify what he believes. Boyle,

The merchant is not forced to keep so much money by him, as in other places, where they have not such a supply. Locke.

It is the solemn form of swearing.

His godhead I invoke, by him I swear. Dryden

It is used in forms of adjuring, or obtesting.

Which, O ! avert by yon etherial light, Which I have lost for this eternal night ; Or, if by dearer ties you may be won, By your dead sire, or by your living son.

Dryden.

Now by your joys on eartn, your hopes in heaven, O spire this great, tbis good, this aged king! ā¢ Id. It signifies specification and particularity. Upbraiding heaven, from whence his lineage came. And cruel calls the gods, and cruel thee, by name. Id. By proxy of: noting substitution. The gods were said to feast with Ethiopians ; that is, they were present with them by their statues.

Broome.

In the same direction with

They are also striated, or furrowed, by the length, and the sides curiously punched, or pricked. Grew. BY, adv. Near; at a small distance.

And in it lies the god of sleep j

And, snorting by

We may descry The monsters of the deep. Dryden

Beside ; passing.

*I did hear The galloping of horse. Who was *t came by ?*

Shakspeare , In presence.

The same words in my lady Philoclea's mouth, as from one woman to another, so, as there was no other body by, might have had a better grace. Sidney.

I'll not be by the while ; my liege, farewel : What will become hereof, there 's none can tell.

Shaktpeare,

BY AND BY. In a short time. He overtook Amphialus, who had been staid here, and by and by called him to fight with him. Sidney.

The noble knight alighted by and by From lofty steed, and bad the lady stay, To see -what end of fight should him befal that day.

Spenser.

In the temple, by and by with us, These couples shall eternally be knit. Shaktpeare. BY, n. s. From the preposition. Something not the direct and immediate object of regard.

In this instance, there is, upon the by, to be noted, the percolation of the verjuice through the wood.

Bacon.

So, while my loved revenge is full and high, I'll give you back your kingdom by the by. Dryden.

BY. In composition, implies something out of the direct way, and consequently some obscu- rity, as a by-road ; something irregular, as a by-end; or something collateral, as a by-con- cernment ; or private, as a by-law. This com- position is used at pleasure, and will be ui

BY 7

BY-COFFEEHOUSE, u. s. A coffee-house in an obscure place.

I afterwards entered a by -coffeehouse, that stood at

the upper end of a narrow lane, where I met with a

nonjuror. . Additon.

BY-CONCERNMEXT, n. s. An affair which is

not the main business.

Our plays, besides the main design, have under- plots, or by -concernments, or less considerable persons and intrigues, which are carried on with the motion of the main plot. Dryden.

BY-DEPENDENCE, n.s. An appendage; some- thing accidentally depending on another.

These,

And your three motives to the battle, with I know not how much moˆe, should be demanded ; And all the other by-dependenciei, From chance to chance. SJtakspeare.

BY-DESIGN, n. s. An incidental purpose. .

And if she miss the mouse-trap lines. They'll serve for other by-designs, And make an artist understand To copy out her seal or hand ; Or find void places in the paper, To steal in something to entrap her. Hudibrat. BY-END, n. s. Private interest ; secret ad- vantage.

All people that worship for fear, profit, or some other by-end, fall within the intendinent of this fable.

L' Estrange, BY-GONE, adj. A Scotch word. Past.

Tell him, you're sure All in Bohemia 's well : this satisfaction The by-gone day proclaimed. Shakspeare.

As we have a conceit of motion coming, as well as by-gone ; so have we of time, which dependeth there- upon. Grew. BY-INTEREST, n. s. Interest distinct from that of the public.

Various factions and parties, all aiming at by-in- terest, without any sincere regard to the public good.

After bury. BY-LAW, n. s.

By-laws are orders made in court-leets, or court- barons, by common assent, for the good of those that make them, farther than the public law binds. Cowell. There was also a law, to restrain the by-laws and ordinances of corporations. Bacon.

In the beginning of this record is inserted the law or institution ; to which are added two by-laws, as a comment upon the general law. Additon.

BY-MATTER, n. s. Something incidental. I knew one that, when he wrote a letter, would put that which was most material into the postscript, as if it had been a by-matter. Bacon.

BY-NAME, n. s. A nick-name ; name of re- proach, or accidental appellation.

Augustus, who was not altogether so good as be was wise, had some by-respects in the enacting ol uivĀ« law ; for to do any thing for nothing was not hiĀ« maxim. Dryden.

BY-ROAD, n. s. An obscure unfrequented path.

Through slippery by-roads, dark and deep,

They often climb, and often creep. Swift,

BY-ROOM, n. s. A private room within ano- ther.

I pr'ythee, do thou stand in some by-room, while I question my puny drawer to what end he gave the sugar. Shakspeare.

BY-SPEECH, n. s. An accidental or casual speech, not directly relating to the point.

When they come to allege what word and what law they meant, their common ordinary practice is to quote by-speeches, in some historical narration or other, and to use them as if they were written in most exact form of law. Hooker.

BY-STANDER, n. s. A looker on ; one uncon- cerned.

She broke her feathers, and, falling to the ground, was taken up by the by - slanders. L' Estrange.

The by-standers asked him, why he ran away, his bread being weight. Locke.

BY-STREET, n. s. An obscure street. The broker here his spacious beaver wears, Upon his brow sit jealousies and cares ; Bent on some mortgage, to avoid reproach, He seeks by-streets, and saves the expensive coach.*

Gay.

BY-VIEW, n. s. Private self-interested pur- pose.

No by-views of his own shall mislead him.

A tier bury.

BY-WALK, n.s. A private walk ; not the main road.

He moves afterwards in by-walks, or undcr-plots, as diversions to the main design, lest it should grow tedious-, though they are still naturally joined.

Dryden.

BY-WAY, n. s. A private and obscure way. Night stealths are commonly driven iu by-ways, and by blind fords, unused of any but Fuch like.

Spenser on Ireland. Other by-ways he himself betook, Where never foot of living wight did tread.

Spenter.

This is wonderfully diverting ; the understanding, thus to perceive a precept, as it were, through a by- way, and to apprehend an idea that draws a whole train after it. Addisott.

*BY-WEST, adv. Westward ; to the west of. Whereupon grew that by-word, used by the Iri*h,*

*JCLVll, Wl Ā«*V-V*VAV,UHl* WLĀ» L*\,IĀ»UV.X'II. ā¢ V ā¢ 1.1JIV I*

Robert, eldest son to the Conqueror, used short that they dwelt by-wot the law, which dwelt

hose, and thereupon was by-named court-hose, and the river of the Barrow, shewed first the use of them to the English. Camden.

BY -PAST, adj. Past ; a term of the Scotch dialect.

Wars, pestilences, and diseases, have not been

Davies on Ireland.

BY-WORD, n. s. A saying ; a proverb. Bashful Henry be deposed ; whose cowardice Hath made us by-words to our enemies. Shakspeare. BYBLIS, in fabulous history, the daughter of

fewer for these three hundred years by-past, than ever jyiJietuSj wno > falling in love with her brother

they had been since we have had records. Cheyne, BY-PATH, n. s. A private or obscure path.

Heaven knows, my son,

By what by-paths, and indirect crooked ways, I got this crown. Sfiahspeare

BY-RESPECT, n. s. Private end or view.

It may be that some, upon

find

Caunus, killed herself, and was metamorphosed into a fountain.

BYBLUS, in ancient geography, a town of Phreniica, situated between Berytus and Botrys ; it was the royal residence of Cinyras, and sacred to Adonis. Pompey delivered it from ˆ tyrant, whom he caused to be beheaded. It Stood

what friendly usaˆe in usance, at some of their hands, whom he caus(

Carew. the sea, on an eminence, and near it ran the

Adonis into the Mediterranean. It is now in ruins.

BYNG (George), lord viscount Torrington, the son of John Byng, Esq., was born in 1663. At the age of fifteen he went a volunteer to sea with the king's warrant. His early engagement in this course of life gave him little opportunity of acquiring learning, but by his abilities and activity as a naval commander he furnished abundant matter for the pens of others. After being several times advanced, he was, in 1702, raised to the command of trie Nassau, a third rate, and was at the taking and burning of the French fleet at Vigo ; and in 1703 he was made rear-admiral of the

red. In 1704 he served in the grand fleet sent to the Mediterranean under Sir Cloudesly Shovel ; and commanded the squadron that attacked, cannonaded, and re- duced Gibraltar. He was in the battle of Ma- laga, and was knighted by queen Anne for his gallant behaviour in that action. In 1705, within two months, he took twelve of the enemy's largest privateers, with the Thetis, a French man of war of forty-four guns ; and also several merchant ships, most of them richly laden. The prisoners taken on board were 2070, and 334 guns. In 1718 he was made ad- miral and commander in chief of the fleet ; and was sent with a squadron into the Mediterranean for the protection of Italy, against the Spaniards; who had surprised Sardinia, and landed an army in Sicily. In this expedition he despatched cap- tain Walton in the Canterbury, with five more ships, in pursuit of six Spanish men of war, with galleys, fire-ships, bomb-vessels, and store-ships, who separated from the main fleet, and stood in for the Sicilian shore. The captain's laconic epistle on this occasion, showed that fighting was his talent as well as his admiral's, and not writing. ' Sir, We have taken and destroyed all the Spanish ships and vessels which were upon the coast, as per margin. Canterbury, off Syracuse, I am, &c. G. Walton.' From the ac- count referred to, it appeared that he had taken four Spanish men of war, with a bomb-vessel and a ship laden with arms ; and burned four with a fire-ship and bomb-vessel. By his advice and assistance, the Germans retook the city of Messina in 1719, and destroyed the ships that lay in the basin ; which completed the ruin of the naval power of Spain. The Spaniards, being much distressed, offered to quit Sicily ; but the admiral declared, that the troops should never be suffered to quit the island till the king of Spain had acceded to the quadruple alliance. After performing many signal services, in token of which he received from the emperor his own picture set round with very valuable diamonds, he was made rear-admiral of England and trea- surer of the navy, one of the most honorable privy council, baron Byng of Southill in the county of Bedford, viscount Torrington, in De- vonshire, and one of the knights companions of the Bath. George II. on his accession to the crown, placed him at the head of the navy, as first lord of the Admiralty ; in which high sta- tion he died January the 15th, 1733, in the seventieth year of his age, and was buried at Southill in Bedfordshire.

BYNG (John, Esq.), the unfortunate son of the former, was bred to the sea, and rose to the rank of admiral of the blue. He gave many proofs of courage ; but was at last shot, upon a dubious sentence for neglect of duty, and to shield an incompetent ministry from popular indignation, in 1757. Shortly after his death, the following inscription was boldly placed by his family on his tomb, in the parish church of Southill :"ā

To the perpetual disgrace of

Public Justice, The Honorable John Byr.g, Vice Admiral of the Blue,

fell a Martyr to

Political Persecution,

on March the 14th, in the year 1757 :

when bravery and loyalty

were insufficient securities

for the Life and Honor

of a Naval Officer.

See GREAT BRITAIN. \>tf:io-$

BYNNI, in ichthyology, a species of cyprinus, having thirteen rays in the dorsal fin, the third of which is thick and horny ; tail linear, and bifid ; cirri, four. It is a fish of a silvery color, and oblong oval form, very common in the Nile.

BYROM (John), an ingenious poet of Man- chester, born in 1791. His first poetical essay appeared in the Spectator. He was admitted a member of the Royal Society in 1724. On taking his degree of master of arts, he went to Montpelier, where he became doctor in physic, and imbibed an extravagant love for the mystic theology of Mallebranche and Bourignon, to which he afterwards added that of Behmen. But reducing himself to narrow circumstances, by a precipitate marriage, he supported his fa- mily by teaching a new method of writing short- hand, of his own invention ; until an estate de- volved to him by the death of an elder brother. He was a man of lively wit, of which he gave many humorous specimens. He died in 1763; and a collection of his Miscellaneous Poems was printed at Manchester, in 2 vols. 8vo. 1773.

BYRON (John), commodore, and grandfather of the late lord Byron, was the second son of William, the fourth lord Byron. He was born at Newstead Abbey, in 1723, and, entering the navy early, held the rank of a midshipman in 1740, when Anson commanded an expedition against the Spaniards, in the South Seas. The vessel to which Byron belonged was wrecked on a desert island, from which, after enduring the greatest hardships, he reached Chiloe,and having been made prisoner by the Spaniards, did not return to England for five years. His narrative of his disasters has always been a popular book. In June, 1764, he again left England in com- mand of an expedition fitted out to make dis- coveries in

the South Sea ; and, having circum- navigated the globe, returned home in May, 1766. Many ports and islands were explored in this voyage, which were afterwards visited by Bougainville and Cooke ; and experiments were made to determine the accuracy of Harrison's time-keeper. Mr. Byron was subsequently made an admiral, and commanded in the West Indies during the American war. He died in 17G8.

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BYRON.

BYRON (George Gordon), afterwards George Gordon Noel, lord Byron, a late British peer and distinguished poet, was born in Holies Street, London, January 22d, 1788. His father was captain John Byron, of the guards, eldest son of admiral Byron, of whose history we have given a slight sketch ; and his mother, a Miss Gordon of Gight, in Scotland, descended according to Mr. Dallas, from the princess Jane Stuart, a daughter of James II., of Scotland, who married the marquis of Huntley. The peerage was given to the family by Charles I.

Lord Byron's immediate predecessor in the title was his father's uncleˆ William, lord Byron, who after a fatal duel with a relation and neigh- bour, Mr. Chaworth, felt the public opinion to be so much against his conduct, that he secluded himself at Newstead Abbey from all society, for many years previous to his death. The late lord Byron, who was somewhat prone to similar par- tialities, told captain Medwin that his uncle devoted kimself at this period to the feeding of crickets. 'He had made them so tame as to crawl over him, and used to whip them with a whisp of straw if too familiar. When he died, tradition says that they left the house in a body. I suppose I derive my superstition (added his lordship), from this branch of the family.' Lord Byron's father was also too remarkable for his eccentricities and dissipation for us to be charge- able with any indelicacy in alluding to them, or for a fair estimate of his lordship's character to be given without taking them into the account. He was notorious in. the circles of fashion as the 'mad Jack Byron', of handsome person, but of so abandoned a character, that to be known as his companion, was an exclusion from decent soci- ety. At the age of twenty-six he seduced lady Carmarthen, whom, after her divorce from the marquis, he married, having issue one daughter, Mrs. Leigh : he afterwards eloped with Miss Gordon, and, having nearly dissipated her for- tune, separated from her, and died at Valen- ciennes in 1791. Mrs. Byron had, a short time Before this event, retired to Mar Lodge, near Aberdeen, with her infant, the subject of our memoir.

Here she personally conducted his education until he was seven years of

age ; and the wild scenery of Morven, of Lach-na-Garr, and of the banks of the Dee, became, as he afterwards opined, ‘ the parents of his poetical vein.’ He is said to have remembered the later broils of his father and mother ; and to have imbibed an early horror of matrimony from that circumstance. Be this as it may, he became certainly worse than fatherkss, at an early age ; his passions and affections were not only, as a poetical divine phrases it, his ‘first governors,’ and ‘clearly pos- sessed themselves of his soul before his reasonˆ vas heard to speak,’ ā but an indulgent mother’ was their only director : and with a constitution not robust, and a malformation of one of his feet, he had peculiar claims on her solicitude. So that if generally (as the good bishop says), ‘ reason

speaks at first so little and so low, that the com- mon noises of fancy and company drown her voice,’ ā we cannot suppose this voice to have been much heard in lord Byron’s youth and childhood. If the honors of his birth afterwards increased his attractions as a poet, he clearly owed but little to it as a man.

In his eighth year he was placed at the gram- mar school of Aberdeen ; and, though little dis- tinguished for constant application, was found capable of considerable efforts of mind. He w

In 1798 he succeeded, on the death of his great-uncle, to the title and estates of the family, and was frnmediately removed, under the guard- ianship of lord Carlisle, brother-in-law of the late lord Byron, to Harrow. Here he confesses that he ill-brooked the discipline, he could not but approve ; and while he imbibed a lasting sense of the head master, Dr. Drury’s, kindness (which he commemorates in his Hours of Idle- ness), he submitted with great reluctance to the ordinaiy discipline of the school. His vacations were at this time spent at Newstead, where, in his thirteenth year he became enamoured of Miss Chaworth, the only daughter and heiress of the gentleman who fell by the hand of his predeces- sor. The future properties of the youthful paii adjoined ; and their meetings, though stolen ones, were frequent. The lady being his senior by some years, the affair soon terminated by her hand being bestowed on a more mature lover ; but the disappointment was always described by lord Byron as serious to himself. At Harrow, the duke of Dorset was his fag, and ‘ I was not,’ says he, ‘a very hard task master. There were times iri which if I had not considered it as a school, I should not have been unhappy at Har- row. There is one spot I should like to see again : I was particularly delighted with the view from the church yard, and used to sit for hours on the stile leading into the fields; even then I formed a wish to be buried there. Of all my schoolfellows, I know no one for whom I have retained so much friendship as for lord Clare ; I have been constantly corresponding with him ever since. I knew he was in Italy, and look forward to seeing him, and

talking over with him our old Harrow stories, with infinite delight.'

Such was one of his communications to cap- tain Medwin respecting his early life : and we may here observe, that while that gentleman's Journal of Conversations with lord Byron has not our absolute credence in all particulars; whatever we find elsewhere confirmed or ren- dered probable by other accounts, we adopt ā and many of the observations he records could not be otherwise than lord Byron's. He related,

in after life, two other striking recollections of Harrow, ā that he fought lord Calthorpe there for writing ' atheist' under his name ; and, in the best spirit of a young aristocrat, prevented the school-room from being burnt, during a rebellion of the boys, by pointing out to them the names of their fathers and grandfathers on the walls.

' Had I married Miss C ,' continued lord

Byron to captain Medwin, ' perhaps the whole tenor of my life would have been different. She jilted me, however; but her marriage proved any thing but a happy one. She was at length

separated from Mr. M , and proposed an

interview with me, but by the advice of my sister I declined it. I remember meeting her after my return from Greece, but pride had con- quered my love; and yet it was not with perfect indifference I saw her.' He has beautifully al- luded to these circumstances in his well-known Dream.

At the age of seventeen he was entered at Trinity College, Cambridge, and, as at Harrow, subjected himself to frequent rebukes for his vagaries : he ever entertained, he says, great contempt for academical honors, and, among other proofs of it, trained a bear at college, de- signing it, as he stated, to take a degree. In 1807 he was himself complimented with the honorary degree of M. A.

He quitted college the same year to take up his residence at Newstead, and printed, at Newark, in December, his first volume of poems. These were given to the world under the title of Hours of Idleness, and were criticised with memorable severity in the Edinburgh Review. They cer- tainly contain but few traces of the towering genius he afterwards exhibited ; but his critics have since made the amende honorable in all but direct terms : they inflicted on him the misery, the ' rage,' in which he was first stimulated, to

an effect worthy his muse ; and their bullying, as he says, far from deterring him from writing, made him but the more ‘ bent on falsifying their raven predictions, and determined’ him ‘ to show them, croak as they would, it was not the last time they should hear from him.’ He now, there- fore, set to work in good earnest, and in the course of the following year produced the Eng- lish Bards and Scotch Reviewers. Lord Byron, in our humble judgment, never composed lines to exceed, in strength and beauty, several that are found in this poem. We cannot multiply spe- cimens, but select the best criticism of the day on Little, alias Moore’s amorous poems, as ex- pressing all a friendly moralist must often have felt inclined to say to his lordship afterwards.

Grieved to condemn, the muse must still be just, Nor spare melodious advocates of lust. Pure is the flame which o’er her altar burns ; From grosser incense with disgust she turns : Yet Kind to youth, this expiation o’er,, She bids thee ‘ mend thy line and sin no more.’

And the apostrophe to Kirke White, alluding to his death being hastened by his devotion to study : ā

So the struck eagle stretch’d upon the plain, No more through rolling clouds to soar again,

Viewed his own feather on the fatal dart. And winged the shaft that quivered in his heart. Keen were his pangs, but keener far to feel- He nursed the pinion that impelled the steel ; While the same plumage that had warmed his nest Drank the last life drop from his bleeding breast.

Mr. Dallas gives us an anecdote or two of the passage of this poem through the press, which are worth preserving. The day on which he came of age lord Byron put it into the hands of that gen- tleman, in London, wishing him to gel it pub- lished anonymously. It was then entitled the British Bards, and the author added 110 lines during the printing of it. Among other altera- tions he inserted the entire panegyric on Crabbe, whose name was at first altogether omitted ; and the couplet respecting Congreve and Otway ; changed a censure of Mr. Smythe to the highest praise, and a strong commendation originally bestowed on lord Carlisle’s poetry into the elabo- rate condemnation of it which now stands in the poem. It was at first said, that among the peers,

On one alone Apollo deigns to smile,, And crowns a new Roscommon in Carlisleˆ

Now his poetry is ‘ paralytic feeling ;’ and ‘ no muse will smile upon it.’ The fact is, a violent family quarrel had taken place between the noble bards in

the interim. This satire, according to Mr. Dallas, was offered to the most extensive publishing house of the day, Messrs. Longman's, and refused, on the ground of its asperity : rather, we should apprehend, on account of their well- known connexion with the reviewers, so severely chastised. It is remarkable that the first number of that Review itself is also stated to have been thrown aside by another sapient publisher, then living in the Poultry, for a similar reason with that Mr. Dallas assigns.

This satire made a deep impression on the public in favor of its author, who was soon known. Just previous to its publication he re- solved upon taking his seat in the House of Peers, pro forma; and the two circumstances transpiring together, increased the general eclat which now attended his name. He had written, it seems, to his near relative, lord Carlisle, with the desire to procure his introduction to the House : but that nobleman, in a cold reply, merely in- formed him, technically, of the mode of proceed- ing : so that he was received in their lordship's anti-chamber by some of the official persons only ; and advanced to the table of the House, as Mr. Dallas informs us, with evident moitifica- tiou and subdued anger. Here, however, having taken the oaths, he was kindly greeted by the chancellor, who descended from his seat and offered him his hand. ' Lord Byron made a stiff bow, and gave his lordship the tips of his fingers,' says Mr. Dallas, ' in return.' ' If I had shaken hands heartily,' he afterwards said, ' he would have set me down for one of his party- but I will have nothing to do with any of them on either side : I have taken my seat, and now T. will go abroad.'

Unhappily, even at this period, lord Byron had indulged himself in a career of dissipation which seriously injured his fortune. He make. Don Juan describe, but too truly, his own case ;- –

BYRON.

I wish they knew the life of a young noble,

They are young, but know not youth : it is anticipated ; Handsome, but wasted ; rich without a sou ; Their vigour in a thousand arms is dissipated ; Their cash comes from, their wealth goes to, a Jew.

*And without a single friend in his own rank of life, an impaired constitution, and a joyless indif- ference to the world, he commenced his travels in June, 1809, in company with his fellow collegian J. C. Hobhouse, Esq. He, however, at this time 'ā¢esolved, and pledged himself to his mother, .*ever to part with Newstead.*

The travellers passed by Lisbon and the southern provinces of Spain up the Mediterra- nean; Mr. Hobhouse keeping a journal, but 'ord Byron reserving himself for his poetical pilgrimage.' This has celebrated his residence in Greece and Turkey too fully to render any further details necessary : but one of the prin- cipal incidents of the Giaour occurred at this time to himself. A meer accident enabled him to rescue one of the unhappy objects of his amours from the wretched death of being drowned in a sack ā for his sake. ' I was taking one of my usual evening rides by the sea-side,' says his lord- ship, ' when I observed a crowd of people moving down to the shore, and the arms of the soldiers glittering among them. They were not so far off but that I thought I could now and then distin- guish a faint and stifled shriek. My curiosity was forcibly excited, and I despatched one of my followers to enquire the cause of the procession. What was my horror to learn that they were carrying an unfortunate girl, sewn up in a sack, to be thrown into the sea ! I did not hesitate as to what was to be done. I knew I could depend upon my faithful Albanians, and rode up to the officer commanding the party, threatening, in case of his refusal to give up his prisoner, that I would adopt means to compel him. He did not like the business he was on, or perhaps the de- termined look of my body-guard, and consented to accompany me back to the city with the girl, whom I soon discovered to be my Turkish fa- vorite. Suffice it to say that my interference with the chief magistrate, backed by a heavy bribe, saved her ; but it was only on condition that I should break off all intercourse with her, and that she should immediately quit Athens, and be sent to her friends at Thebes. There she died a few days after her arrival of a fever : per- haps of love.'

Lord Byron always exhibited this kind of noble disinterestedness and courage : strange that the certain miseries he was preparing for himself and his companions for the future, should be the only enemies he was too

cowardly to deal with now.

Through the same channel, captain Medwm, we receive his lordship's account of one of the severest illnesses he ever had. It curiously il- lustrates the character of the Albanians. ' They,' he says, ' were devotedly attached to me, and watched me day and night. I am more indebted to a good constitution for having got over this attack than to the drugs of an ignorant Turk, who called himself a physician. He would have been glad to have disowned the name, and re- VOL. IV.

signed his profession too, if he could have escaped from the responsibility of attending me, for my Albanians came the grand seignior over him, and threatened that if I were not entirely recovered at a certain hour, on a certain day they would take his life ! They are not people to make idle threats, and would have carried them into execution, had any thing happened to me. You may imagine the fright the poor devil of a doctor was in, and I could not help smiling at the ludicrous way in which his fears showed themselves. I believe he was more pleased at my recovery, than either my faithful nurses or myself. I had no intention of dying at that time, but if I had died the same story would have been told of me that was related of colonel Shelbrooke, in America. On the very day my fever was at the highest, a friend of mine de- clared that he saw me in St. James's Street, and somebody put down my name in the book at the palace, as having enquired after the king's health.'

Lord Byron wrote home occasionally to his mother, during the whole of his absence from England, and gave these letters afterwards to Mr. Dallas, saying ' Some day or other they will be curiosities.' They formed a principal part of ā¢ the letters which, at the instance of Lord Byron's executors, the court of chancery restrained Mr. Dallas from publishing. This circumstance we cannot but regret, while the mercenary views of Mr. Dallas are but too obvious.

His lordship was in Albania at the height of the late Ali Pacha's prosperity, and was lodged at his palace. When introduced to that chief, the latter remarked that he had heard lord By- ron's family was a great one, and should have known him to be a man of rank from the small- ness of his ears, his curling hair, and his small white hands : that he begged to be considered as his father during his stay in Albania, and wished to be respectfully remembered to his mother. In going into a ship of war, provided for them by Ali, intending to sail for Patras, the travellers were very near being lost in a gale of wind. They were driven on the coast of Suli; and there experienced the most disinterested hospi- tality. After having been lodged and refreshed with his suite, consisting of his servant Fletcher, a Greek, two Athenians, a Greek priest, and Mr. Hobhouse, lord Byron

offered the chief of the Suliote village money ; but he refused any re- muneration, and only asked for a written ac- knowledgment that he had treated the strangers well. ‘ I wish you to love me,’ he said, ‘ not to pay no0.’ !tt was while his frigate was at anchor ji cue Dardanelles, that lord Byron swam from Sestos to Abydos : an exploit on which he much prided himself

He returned to England in July, 1811, having never heard but once from his man of business during his travels, and this was, it seems, to propose the sale of Newstead Abbey. Lord By- ron, however, sent home Fletcher, with his de- termination not to do this ; but rather to sacrifice his Rochdale or Yorkshire property. If New- stead remained, he said, he should come back to England, if not he never should. – On his return he had so far cooled in h’j re-

ā¢eminent toward the objects of his attack in the English Bards and Scotch Reviewers as to be fully prepared to withdraw that poem from cir- culation. It is singular that the principal part of them became afterwards his personal friends. Even from ‘ hoarse Fitzgerald/ he accepted com- plimentary verses. The piece passed rapidly through four editions, and was then suppressed, ‘ as far as in him lay.’ He brought home with him a second satire, however, which he called Hints from Horace, and from which Mr. Dallas, in his Recollections, gives a considerable extract. One remarkable couplet, like many parts of his poems, reflects singularly on himself.

Satiric rhymes first sprang from selfish spleen, You doubt ā see Dryden, Pope, St. Patrick’s dean.

In this piece also he renews the expressions of his marked contempt for the poet-laureat’s pro- ductions :

Whose Epic mountains never fail in mice.

But Mr. Dallas exercised a sound judgment in persuading him to publish, in preference to this poem, the first and second cantos of his Childe Harold, which he also had in great part prepared ; and to that gentleman must certainly be awarded the merit of having considerably assisted their final touching.

His lordship had imbibed at Cambridge a strong tendency to infidel, if not

to atheistical sentiments. This was checked, however, at that period, by the premature death of one of the boldest advocates for infidelity, his particular friend ; all intellect and energy, it would appear, like himself. It staggered him, he confessed, that such powers should be for ever lost ; that such a mind should be gathered into the cor- ruption, that so speedily awaited the body. And thus the good,

The lingering light unwilling to depart,

struggled with the bad and cheerless system of too many of his associates for years. Throughout his life, indeed, he seems to wish himself to be considered a desponding rather than a con- temptuous sceptic. Mr. Dallas induced him at this time to modify what he would not suppress of his sceptical opinions, and procured the sub- stitution of the beautiful stanza, beginning,

Yet if, as holiest men have deemed, there be A land of souls beyond that sable shore,

For this

Frown not upon me churlish priest ! that I Look not for life, where life may never be ; I am no sneerer at thy phantasy ; Thou pitiest me, ā alas ! I envy thee, Thou bold discoverer in an unknown sea, Of happy isles and happier tenants there j I ask thee not to prove a Sadducee, Still dream of Paradise, thou knowest not where, But lovest too well to bid thine erring brother share.

And, as an an apology for these sentiments ge- nerally, he had proposed to insert the following remarkable note : ‘ In this age of bigotry, when the puritan and priest have changed places, and the wretched Catholic is visited with the ‘ sins of his fathers,’ even unto generations far beyond the pale of the commandment, the cast of

opinion in these stanzas will doubtless meet with many a contemptuous anathema. But let it be remembered, that the spirit they breathe is de- sponding, not sneering, scepticism ; that he who has seen the Greek and Moslem superstitions contending for mastery over the former shrines of polytheism ; who has left in his own country Pharisees, thanking God that they are not like publicans and sinners, and Spaniards in theirs, abhorring the heretics, who have holpen them in their need ; will be not a little bewildered, and begin to think, that as only one of them can be right, they may most of them be wrong. With regard to morals, and the effect of religion on mankind, it appears, from all historical testimony, to have had less effect in making them love their neighbours, than inducing that cordial*

Christian abhorrence between sectaries and schismatics. The Turks and Quakers are the most tolerant ; if an infidel pays his heratch to the former, he may pray how, when, and where he pleases; and the mild tenets and devout demeanor of the latter, make their lives the truest commentary on the sermon of the mount.'

Mr. Dallas also induced him to suppress three additional stanzas of censure on the memorable convention of Cintra. One part of the de- scription of the arrival of the news of that treaty being signed we cannot omit. It is not ā¢ in his printed works, and we know no equal description of the principal personage.

Pens, tongues, feet, hands, combined in wild uproar j Mayor, aldermen, laid down the' uplifted fork ; The bench of bishops half forgot to snore ; Stem CoBBETT, who for one whole week forbore To question aught, once more with transport leap't And bit his devilish quill agen, and swore With foe such treaty never should be kept, Then burst the blatant beast, and roared, and raged, and ā slept ! ! !

However Lord Byron might shrink from his own image when drawn with such truth and force, the world has ever since considered him, in point of fact, the hero of the Childe Ha- rold. It supplies all the main points of his character, and that large portion of the actual events of his life which his own genius alone could have grouped in this way. On its publica- tion he was at once highly popular, his rela- tions became friends, his enemies friendly ; while the critics trembled and adored. None were more lavish of their commendations than those northern sages, who in the first instance had so unsparingly chastised the young poet. In the winter of 1812, he was the object of universal curiosity and attraction. Various eminent per- sons courted an introduction to him, some are said even to have volunteered their cards. He happened to go early into one fashionable party, into which the Prince Regent came shortly afterwards, and sent a gentleman to him to de- sire he would be presented. The presentation of course followed ; Lord Byron ever after spoke of it with pleasure : the prince did him the honor to say, that he hoped soon to see the author of Childe Harold at Carlfon house In consequence of this, Mr. Dallas tells us, he found his lordship on the next appointed levee day, in a full dress-suit, and just ready to start

for the court, when the levee was suddenly put off. ' It was the first and last time he was ever so dressed for a British court.' But his poem travelled all over the kingdom with the greatest rapidity ; its first impression being taken

off in three days. Among the abundant testimonies of applause and respect, he valued none more than a letter he now received from Dr. E. D. Clarke, the traveller, who declares, with all his character- istic ardor, and passionately fond as he had been of poetry from his youth, ‘ I was never so much affected by any poem before.’ The intended new Satire was now entirely suppressed; together with a similar production, the Curse of Minerva, written on some modern spoliations of Greece.

Newstead Abbey, after all, was brought to the hammer at Garraway’s, in the autumn of 1812. It was at first bought in, then sold to a Mr. Claugh- ton, for the sum of Ā£140,000, but the purchaser could not complete his bargain : it finally was disposed of some time in 1815.

After this, becoming satiated with the hollow praises and pleasures of a fashionable life, he applied himself once more to composition. Mr. Gifford had sent to him, we are told (Dallas’s Recollections, p. 386), calling upon him not to give up his time to light compositions, ‘ as he had genius to send him to the latest posterity with Milton and Spenser.’ Meanwhile he had written the Giaour, and the Bride of Abydos, which sold prodigiously. In December, Mr. D. found him composing the Corsair, which he presented to that gentleman on new year’s day, 1814: giving him the copy-right of this, as of all his previous poems. At the end was inserted the ‘ Stanzas to a Lady Weeping,’ which his lordship’s more intimate friends assert to have been composed long before his interview with the prince. However this may be, it is supposed to have given great personal offence in a certain high quarter.

In May he commenced his Lara, and finish- ed it 24th June. The Siege of Corinth made its appearance almost immediately after.

We should have noticed, perhaps earlier, his maiden speech in the House of Lords. This was delivered, February, 1812, against the Not- tingham frame-work bill. He took great pains in its composition, and is said to have delivered it with considerable energy : he once more ad- dressed the House in favor of Catholic emanci- pation, as it is termed, and a third and last time, when he presented a petition of Major Cartwright’s, on reform. But if he had nerve, he had not steadiness enough for a political life in England. He seems always to have felt it was not his forte, and says he could never have adhered to any party. The late Lord London- derry, he told Captain Medwin, however, was the only public character which he ever ‘ de- tested ‘

In January, 1815, he obtained the hand of Miss Anna Isabella Milbanke, daughter of Sir Ralph Milbanke Noel, Bart, having proposed himself as a suitor a year before, and been re- jected. The marriage was an unhappy one. Lord Byron with all his scepticism was super- stitious; he remarked to

Mr. Moore, on his first

introduction to the lady, that he stumbled going up stairs, and the omen was bad. The fortune he received with this lady was not, as it has been stated, very large, and his own having been at this time much reduced, his lavish expenditure could be sustained but for a few months. IJĀ« was soon beset by importunate creditors ; Oie bailiffs entered his house within the first year of their marriage, and lady Byron, after giving birth to a daughter, December 10th, returned to her father's. The baronet wrote at first to an- nounce her determination not to return: lord Byron refused, very properly, to credit this; the resolution, however, was shortly after avowed by her ladyship ; and a final separation took place. Its merits and demerits seem to have been a considerable topic in the suppressed ' Memoirs' of his lordship ; at least so he is reported to have told captain Medwin, and that he for- warded the narrative for lady Byron's sanction This she refused to give; and the public has been supplied with nothing further respecting this event. Lord Byron said ' I have pre- judices about women. I do not like to see them eat. Rousseau makes Julie un peu gourmande; but that is not at all according to my taste. I do not like to be interrupted when I am writing. Lady Byron did not attend to these whims of mine. The only harsh thing I ever remember saying to her, was one evening, shortly before our parting. I was standing before the fire, ruminating upon the embarrassment of my affairs, and other annoyances, when lady Byron came up to me, and said ' Byron, am I in your way ?' to which I replied ' damnably !' 1 was after- wards sorry, and reproached myself for the ex- pression ; but it escaped me unconsciously, in- voluntarily ; I hardly knew what I said.'

He now left England, expressing his resolu- tion not to return, and crossed over to France, through which he passed to Brussels, taking the field of Waterloo on his way. Hence he pro- ceeded to the banks of the Rhine, Switzerland, and the north of Italy ; and resided for some time at Venice, where Mr. Hobhouse joined him, and they together started for Rome, where he completed the third canto of Childe Harold. In 1816 appeared the Prisoner of Chillon, a Dream, and other poems; and in 1817 Manfred, a tragedy, and the Lament of Tasso. In his ex- cursions at this time from Italy, we find him taking up his abode for some time at Abydos ; whence he preceded to Tenedos and the island of Scio, where he staid three months, during which time he explored every classical scene, and all the celebrated islands. At length he reached Athens, where, in 18 18, he sketched the fourth and last canto of Childe Harold. In this year was also published the jeu d'esprit of Beppo, and in 1819 the romantic tale Maieppa.

This year also he forwarded to England the commencement of his Don Juan, to which Mr. Murray his bookseller, refused to put his name. The

performance as a whole is generally consi- dered as a degradation to lord Byron's genius; while unquestionable traces of it appear in vari- ous parts. Some of his friends attempt to defend it as an improvement on the looser Italian models which he professes to follow. He hira-

self dignified it when about half written with the name of an epic, and complained loudly of the conduct of his publisher. It assuredly is in this country the dead weight of his poetical fame. In 1820 he sent home Marino Faliero, Doge of Venice, a tragedy, having only as designed for the stage, the equivocal recommendation of a close attention to the dramatic unities. It was a fai- lure : lord Byron afterwards affirmed that it never was offered to the theatre with his appro- bation ; but was evidently mortified at its being considered that he could not succeed in this species of composition. Shortly after he addressed a letter to the Rev. W. L. Bowles, on the poetical character of Pope, which he considers to have been unfairly depreciated in that writer's Life of the Poet. In the same year, 1 820, appeared the Drama of Sardanapalus, the best of his tragic productions; The Two Foscari, a tragedy; and Cain, a Mystery. Lord Byron, on being much censured for the speeches given to Lucifer and Cain, in this piece, defended himself by the ex- ample of Milton, and asked how the first rebel and the first murderer ought to be made to speak ? It is a poem displaying great occasional energy ; but Mr. Hobhouse called it bombastical, and considered the publication of it disgraceful, we are told. (Medwin's Conversations, p. 187) Lord Byron characterised it as the finest thing he ever wrote. His gravest and best defence is addressed to his bookseller. ' If Cain be blas- phemous, Paradise Lost is blasphemous ; and the words of that Oxford gentleman, ' evil be thou my good,' are from that very poem, from the mouth of Satan, ā and is there any thing more in that of Lucifer, in the Mystery ? Cain is nothing more than a drama, not a piece of ar- gument. If Lucifer and Cain speak as the first rebel and the first murderer may be supposed to speak, nearly all the rest of the personages talk also according to their characters; and the stronger passions have been permitted to the drama. I have avoided introducing the Deity as in Scripture, though Milton does, and not very wisely either ; but have adopted his angel as sent to Cain instead, on purpose to avoid shocking the feelings on the subject, by falling short of what all uninspired men must fall short in, viz. giving an adequate notion of the effect of the presence of Jehovah. The old Mysteries intro- duced Him liberally enough, and all this I avoided in the new one.'

Lord Byron clearly forgets in all this that Milton's Satan is never suffered to make the worse appear at last the better cause : and that the whole weight of his own personal character and habits were well known to be (speaking chari- tably) not on the same side of the balance with those of the great poet of the commonwealth. Our poet quitted Venice for Pisa in 1821. What will our fair readers say to the following senti- ments imputed to him by Captain Medwin. ' I wrote little at Venice, and was forced into the search of pleasure, ā an employment I was soon jaded with the pursuit of. Women were there, as they have ever been fated to be, my bane ; like Napoleon, I have always had a great contempt for women ; and formed this opinion of them not hastily, but from my own fatal experience.

My writings, indeed, tend to exalt the sex; and my imagination has always delighted in giving them a beau ideal likeness, but I only drew them as a painter or statuary would do, as they should be; perhaps my prejudices, and keeping them at a distance, contributed to prevent the illusion from altogether being worn out and destroyed as to their celestial qualities. They are in an un- natural state of society. The Turks and eastern people manage these matters better than we do. They lock them up, and they are much happier. Give a woman a looking-glass and a few sugar- plumbs, and she will be satisfied. I have suffered from the other sex ever since I remember any- thing. I began by being jilted, and ended by being unwived. Those are the wisest who make no connexions of wife or mistress.'

At this his last place of residence in Italy, he became acquainted with the Gamba family ; and formed at the house of her father no equivocal acquaintance with the countess Guiccioli, a lady who at twenty years of age"had married a husband of sixty ; who tolerated the connexion with his lord- ship. The lady was of course all attraction, and lord Byron longer devoted to her, we believe than to any other of his connexions of this kind : but from such fathers ā matches ā husbands ā and lovers, may our native land at least be long pre- served ! Mr. Leigh Hunt, who had been invited out to Italy with his family, joined him at Pisa in 1822, and with this writer, in conjunction with Mr. Percy Bysshe Shelley, the publication called The Liberal, was commenced, which owing to the unhappy fate of Mr. Shelley (who perished by the upsetting of a boat in the Mediterranean), extended only to four numbers. In this periodi- cal work appeared the celebrated Vision of Judg- ment, caused by a performance of the same fool- ish title, written by Mr. Southey. Our opinion of these performances approaches that of an orator, (the Rev. Mr. Irving), who has on some occa- sions no small share of the true poetic feeling. He says, ' with the one blasphemy is virtue when it makes for loyalty ; with the other blasphemy is the food and spice of jest-making. ā I know not whether the self confident tone of the one, or the ill-placed merriment of the other, displeaseth me the more. It is ignoble and impious to rob the sublimest of subjects of all its

grandeur and effect, in order to serve wretched interests and vulgar passions." Heaven and Earth, a mystery, first appeared also in the Liberal. It is founded on the alleged intercourse between angels and the daughters of men before the flood. Werner, a tragedy ; the Deformed Transformed, a drama; and the last cantos of Don Juan, complete the list of lord Byron's works, all of which he finish- ed prior to the autumn of 1822. Don Juan we exclude from all consideration as a work of lord Byron : it is unworthy of him. But the March on Rome of the Deformed Transformed is worthy of his best days. We can only find space for the first two stanzas, and the .concluding one.ā

1.

'Tis the morn, but dim and dark. Whither flies the silent lark ? Whither shrinks the clouded Ā»un ? Is the day indeed begun ?

BYRON.

V41

Nature's eye is melancholy O'er the city high and holy : But without there is a din Should arouse the Saints within. And revive the heroic ashes Round which yellow Tiber dashes. Oh ye seven hills ! awaken, Ere your very base be shaken !

2.

Hearken to the steady stamp ! Mars is in their very tramp ! Not a step is out of tune ! As the tides obey the moon, On they march, though to self-slaughter, Regular as rolling water, Whose high waves o'ersweep the border Of huge moles, but keep their order, Breaking only rank by rank. Hearken to the armour's clank ! Look down o'er each frowning warrior, How he glares upon the barrier : Look on each step of each ladder, As the stripes that streak an adder.

8.

Yet once more, ye old Penates ! Let not your quenched hearths be Ate's ' Yet again ye shadowy heroes, Yield not to these stranger Neros ! Though the son who slew his mother, Shed Rome's blood, he was your brother : 'Twas the Roman curbed the Roman ; ā Brennus was the baffled foeman. Yet again ye Saints and Martyrs, Rise ! for yours are holier charters. Mighty gods of temples falling, Yet in ruin still appalling ! Mightier founders of those altars, True, and Christian, ā strike the assaulters ! Tyber ! Tyber '. let thy torrent Show even nature's self abhorrent. Let each breathing heart dilated Turn, as doth the lion baited ! Rome be crushed to

one wide tomb, But be still the Roman's Rome !

*above all, of one satiated and disgusted with th*Ā» formality, hypocrisy, and sameness of daily life. Dwelling upon that country, as it is clear from all lord Byron's writings he did, with the fondest solicitude, and being, as he was well known to be, an ardent though perhaps not a very syste- matic lover of freedom, we may be certain * that he was no unconcerned spectator of its recent revolution : and as soon as it appeared to him that his presence might be useful, he prepared to visit once more the shores of Greece.'*

On his thirty-sixth birth-day, he thus apostro- phises himself:

If thou regret thy youth, why live ? The land of honorable death Is here ā Up to the field and give

Away thy breath ā Awake not Greece ā She is awake, Awake my spirit ! ā

Lord Byron embarked at Leghorn and arrived in Cephaloniain the early part of August 1823, attended by a suite of six or seven friends in an English vessel (the Hercules, captain Scott), which he had hired for the purpose of taking him to Greece. His lordship had never seen any of the volcanic mountains, and for this purpose the vessel deviated from its regular course in order to pass the island of Stromboli. The vessel lay off this place a whole night in the hopes of wit- nessing the usual phenomena, when, for the first time within the memory of man, the volcano emitted no fire, and the disappointed poet was obliged to proceed, in no good humor with the forge of Vulcan. We abridge the Narrative of a Friend of Greece for the sequel.

' It was a point of importance to determine on the particular part of Greece to which his lord- ship should direct his course ā the country was afflicted by intestine divisions, and lord Byron thought that if he wished to serve it, he must keep aloof from faction. The different parties had their respective seats of influence, and to choose a residence, if not in fact, was in ap-

a

Lord Byron quitted Pisa in theˆ autumn of pearance, to choose a party. In a country where

communication is impeded by natural obstacles and unassisted by civilised regulations, which had scarcely succeeded in expelling a barbarian master, and where the clashing interests of con- tending factions often make it advantageous to conceal the truth, the extreme difficulty of pro- curing accurate information may be easily sup- posed. It, therefore, became

necessary to make some stay in a place which might serve as a convenient post of observation, and from which assistance could be rendered where it appeared to be most needed. Cephalonia was fixed upon ; where lord Byron was extremely well received

1822, and wintered at Genoa. The motives which induced him to leave Italy and join the Greeks, struggling for emancipation from the yoke of their ignorant and cruel oppressors, are the most creditable, upon the whole, of any which ever swayed his wayward mind. It was in Greece that his high poetical faculties had been first most powerfully developed ; and they who know the delight attendant, even in a very inferior degree, upon this process, will know how to appreciate the tender associations which cling to the scenes and the persons that have first sti- mulated their genius. ‘ Greece, a land of the

most venerable and illustrious history, of a pe- by the English civil and military authorities,

*culiarly grand and beautiful scenery, inhabited by various races, of the most wild and pic- turesque manners, was to him the land of excite- ment, never cloying ā never wearying, ever changing excitement.’ ‘ Such,’ continues an able contemporary writer, * must necessarily have been the chosen and favorite spot of a man of powerful and original intellect, of quick and sensible feelings, of a restless and untameable spirit, of affections, of various information, and,*

who, generally speaking, seemed well inclined to further the objects of his visit to Greece. Anxious, however, to avoid involving the govern- ment of the island in any difficulty respecting himself, or for some other cause, he remained on board the vessel until further intelligence could be procured.

‘ \V hen lord Byron arrived in the Ionian Islands, Greece, though even then an intelligent observer could scarcely entertain a doubt of her ulti: .viiu

success, was in a most unsettled state. The third campaign had commenced, and had already been marked by several instances of distinguished success. Odysseus and Niketas had effectually harassed and dispersed the two armies of Yusuff Pasha, and Mustapha Pasha, who had entered Eastern Greece, by the passes of Thermopylae. Corinth, still held by the Turks, was reduced to the greatest extremities ā and, indeed, surrendered in the course of the autumn. The Morea might also be said to be thoroughly emancipated. Pa- tras, Modon, and Coron, and the castle of the Morea, did then and still hold out against the combined assaults of famine and the

troops of the besiegers. But the ancient Peloponnesus had, at this moment, more to fear from the dis- sentions of its chiefs, that the efforts of the enemy ā they had absolutely assumed something like the character of a civil war. The generals had been ordered on different services, when it ap- peared, that the funds destined for the main- tenance of their armies were already consumed in satisfying old demands for arrears. Much confusion arose, and a bloody conflict actually took place in the streets of Tripolitza, between a troop of Spartiates and another of Arcadians, the followers of rival 'leaders. The military chiefs, at the head of whom was the able but avaricious Colocotronis, at that time vice-presi- dent of the executive government, were jealous of the party which may be termed the civil faction. Over this party presided Mavrocor- datos, who, as a Constantinopolitan, was con- sidered as a foreigner, and who, on account of his being a dexterous diplomatist, a good letter- writer, and a lover of intrigue, was regarded with feelings of jealousy and hatred by the rude and iron-handed generals of the Morea. Mavro- cordatos was secretary to foreign affairs, and was accused of holding correspondence with foreign courts without the knowledge of the government, and of aiming at getting himself elected the president of the legislative body. It turned out that the actual president fled from the seat of government, and that Mavrocordatos was elected jnto the office. He too was soon obliged to re- treat, and had just resigned the office and retired to the island of Hydra, where the civil and com- mercial party was strong, and where he was held in considerable estimation, when lord Byron ar- rived at Cephalonia.

' Western Greece too was in a very critical situation ā Mustapha, Pasha of Scutari, was ad- vancing on Acarnania in large force, and was on the point of being resisted by the chivalrous devo- tion of the brave Marco Botzaris. This chief, worthy of the best days of Greece, succeeded on the 9th of August (O. S.) by his famous night attack, in cutting off a considerable part of the Turkish army, and fell a sacrifice to his generous efforts. In spite of this check, however, the Pasha advanced and proceeded towards Anatoli- con and Messolonghi ; the latter place was in- vested by Mustapha, and the Albanian chief, Omer-Vriones, by the early part of October. The Turkish fleet had arrived in the waters of Patras about the middle of June, and continued to blockade (at least nominally) Messolonghi, and ail the other ports of NYestem Greece up to

the arrival of lord Byron. Previous to Marco Botzaris's arrival at Carpenissi, the little village where he discomfited the Turks, he had heard of lord Byron's arrival in Greece, and it is not a little remarkable that the last act he did before proceeding to the attack, was to write a warm invitation to his lordship to come to Messolonghi, offering to leave the army, and to give him a public reception in a manner suitable to the oc- casion and serviceable to the cause.

- *Almost the first act of lord Byron in Greece, was the arming and provisioning of forty Suliotes, whom he sent to join in the defence of Messolonghi. After the battle he transmitted bandages and medicines, of which he had brought a large store from Italy, and pecuniary succour to those who had been wounded in the battle. He had already made an offer to the government, to which he himself alludes, as well as to the dissentions in Greece, in a letter of which this is an extract. ‘ I offered to advance a thousand dollars a month for the succour of Messolonghi, and the Suliotes under Botzaris (since killed), but the government have answered me through*

- of this Island, that they wish to

confer with me previously, which is in fact, saying they wish me to expend my money in some other direction. I will take care that it is for the public cause, otherwise I will not advance a para ā the opposition say they want to cajole me, and the party in power say the others wish to seduce me, so between the two I have a diffi- cult part to play ; however, I will have nothing to do with the factions unless to reconcile them

if possible ‘ Though solicited in the most

*flattering manner by count Metaxa, the Exarch of Messolonghi, and others, to repair to that place, lord Byron had too reasonable a fear of falling into the hands of a party to take a de- cided step in his present state of information. He determined to communicate alone with *he established government; for this purpose he despatched two of his friends, Mr. Tre- lawny and Mr. Hamilton Browne, in order to deliver a letter from him to the government, and to collect intelligence respecting the real state of things. The extreme want of money which was at that time felt in Greece, and the knowledge that lord Byron had brought large funds with the intention of devoting them to the cause, made all parties extremely eager for his presence. He, however, yielded to none of the pressing entreaties that were made to him, but after waiting undecided six weeks in his vessel, he took up his residence on shore, at the village of Metaxata within five or six miles ot Argostoli.*

Here he resumed his usual occupations, while he kept a watchful eye on all the transactions of Greece, and carried on a very active intercourse with every part of it. Those who know lord Byron’s character, know that he rarely resisted the impulse of his feeling, and that these im- pulses were often of the most benevolent, kind. As usual, the neighbourhood of his residence never ceased to experience some kind and mu- nificent exertion of his unfailing, but by no means indiscriminate or ill-applied, generosity. His physician says, that the day seemed sad and

gloomy to him, when he had not employed himself in some generous exertion. He provided even in Greece for many Italian families in dis- tress, and indulged the people of the country even in paying for the religious ceremonies which they deemed essential to their success. Our in- formant mentions one circumstance in particular, which affords some idea of the way in which he loved to be of service. While at Metaxata the fall of a large mass of earth had buried some persons alive. He heard of the accident while at dinner, and starting up from the table, ran to the spot, accompanied by the physician, who took with him a supply of medicines. The laborers who were engaged in digging out their com- panions, soon became alarmed for themselves, and refused to go on, saying, they believed they had dug out all the bodies which had been co- vered by the ruins. Lord Byron endeavoured to induce them to continue their exertions, but finding menaces in vain, he seized a spade and began to dig most zealously : at length the pea- santry joined him, and they succeeded in saving two more persons from certain death.

The friends whom lord Byron had despatched to the government proceeded to the Morea, and crossed the country to Tripolitza, from which place it appeared, that the two assemblies had removed to Salamis. At Tripolitza, however, they had an opportunity of seeing Colocotronis, some of the other distinguished chiefs, as well as the confidential officers of Mavrocordatos' suite, whom he had left behind him in his pre- cipitate retreat from the chair of the legislative assembly, and, consequently, they were able to collect a considerable quantity of information, and procure answers to the questions with which lord Byron had charged them. After doing this, they proceeded to the place where the assembly was collecting. His queries were of a very searching and judicious nature, and the answers obtained were complete enough to afford a very accurate idea of the state, resources, and inten- tions of the country.

The congress met at Salarais to deliberate on the most important questions, the form of the government, and the measures of the future cam- paign. The legislative assembly consisted of fifty, and the executive of five. They received the agents of lord Byron in the most friendly manner, and opened every thing to them without reserve ; and enabled them to convey to him a very in- structive account of the real state of affairs. Ulysses Odysseus, a brave and dexterous moun- tain chief, of great power and consummate mili- tary skill at that time, and still in command of Athens, was about to lead 5000 Albanians into Negropont, whither Mr. Trelawny agreed to ac- company him as his aide-de-camp, being promised any number of men he

chose under his com- mand. Colocotronis and his son, a fine, spirited young man, with all their forces were to undertake the siege of Patras. Tombasi, the ad- miral of Hydra, was in command at Candia, where active warfare was expected. Staicps was to remain at Corinth, which surrendered in Oc- tober, very soon after the congress. Marco Botzari's brother, with his Suliotes, and Mavro- cordatos, were to take charge of Messolonghi,

which at that time, October 1823, was m a very critical state, being blockaded both by land and sea.' Mavrocordatos at this time was endea- vouring to collect a fleet for the relief of Messo- longhi.

Lord Byron's intentions at the same period appear from the following extracts : ā ' It is my intention to proceed by sea to Nauplia di Ro- mania, as soon as I have managed this business. I mean the advance of the 400,000 piastres for the fleet. My time here has not been entirely lost; indeed, you will perceive by some former documents, that any advantage from my then proceeding to the Morea was doubtful. We have at last named the deputies, and I have written a strong remonstrance on their divisions to Mavro- cordatos, which 1 understand was forwarded to the legislative body by the prince.' He did not, however, depart for the seat of government at the time he had expected, and conceived it neces- sary to address the authorities again on the sub- ject of their dissentions. The following is a translation of the concluding part of this very ad- mirable letter : ā

'Allow me to add once for all, I desire the well-being of Greece and nothing else ; I will do all I can to secure it; but I cannot consent, I never will consent, to the English public, or English individuals, being deceived as to the real state of Greek affairs. The rest, gentlemen, depends on you ; you have fought gloriously ; act honorably towards your fellow-citizens and towards the world, and then it will no more be said, as has been repeated for 2000 years with the Roman historian, that Philopcemen was the last of the Grecians. Let not calumny itself (and it is difficult to guard against it in so difficult a struggle) compare the Turkish pasha with the patriot Greek in peace, after you have extermi- nated him in war.

' 30th November, 1823. N. B.'

In another letter, written a few days ufter this, we find a circumstance mentioned which turned his views from the Morea to Western Greece. It must be remembered that the Suliotes were his old favorites, and that their late bravery had raised them still higher in his estimation. ' The Suliotes, now in Acarnania, are very anxious that I should take them under my direction, and go over and put things to rights in the Morea, which, without a force seems impracticable, and really though very reluctant, as my letters

will have shown you, tc take such a measure, there seems hardly any milder remedy. However, I will not do any thing rashly, and have only continued here so long in the hope of seeing things reconciled, and have done all in my power there- for. Had I gone sooner they would have forced me into one party or the other, and I doubt as much now. But we will do our best. December 7th, 1823.' ' I am convinced if they (the Greeks) succeed in getting the loan, the liberty of Greece will be definitively founded on a firm basis. True, there is much difference of opinion existing amongst the people in authority here, as well as in every other country, and some little squabbhr for place and power, but they all unite agaust the common enemy. Love of liberty and execra-

tion of their barbarous oppressors actuate them. "What they want, to ensure success and consoli- date tne goverment, is money ā money ā money.'

Lord Byron continues to allude to these un- fortunate differences, and is pleasant upon the gasconading which distinguishes the Greek of this day as it did the Greek of the age of Cleon. ' C will tell you the recent special interpo- sition of the gods in behalf of the Greeks, who seem to have no enemies in heaven or earth to be dreaded but their own tendency to discord among themselves. But these too, it is to be hoped, will be mitigated, and then we can take the field on the offensive; instead of being reduced to the ' petite guerre' of defending the same fortresses year after year, and taking a few ships, and starving out a castle, and making more fuss about them than Alexander in his cups or Buonaparte in a bulletin. Our friends have done something in the way of the Spartans, but they have not in- herited their style. December 10th, 1823.' Soon after the date of this letter the long desired squad- ron arrived in the waters of Messolonghi, and in . letter written three days after the date of the last, December 13th, his lordship says that * he jnomentarily expects advices from prince Mav rocordatos, who is on board, and has, I under- stand, despatches from the legislative to me ; in consequence of which, after paying the squadron, I shall probably join him at sea or on shore.'*

He speaks afterwards of the supplies, with some pleasantry, and concludes a letter to his banker, in Cephalonia, thus : ' I hope things here will go well, some time or other ; I will stick by the cause as long as a cause exists, first or second.' His lordship had by this time yielded to the solicitations of Mavrocordatos, who repeatedly urged him in the most pressing manner to cross over to Messolonghi, and who offered to send, and did send, ship

after ship to Cephalonia, to bring him over. He seems to have been chiefly delayed by the difficulty in procuring money for his Italian bills. When the supplies were procured, and his other preparations made for departure, two Ionian ves- sels were hired, and embarking his horses and effects, his lordship sailed from Argostoli on the 29th of December. Anchoring at Zante the same evening, the whole of the following day was oc- cupied in making his pecuniary arrangements

with Mr. ; and, after receiving a quantity of

specie on board, he proceeded towards Messo- longhi. But count Gamba had been charged with the vessel in which the horses and part of the money were embarked ; and when off Chiarenza, a point which lies between Zante and the place of their destination, they were surprised at day-light on finding themselves under the bows of a Turkish frigate. Owing, however, to the activity displayed on board lord Byron's vessel, and her superior sailing, she escaped, while the second was fired at, brought to, and carried into Patras ; but Yu- suff Pasha released the vessel.

The wind becoming contrary, Lord Byron's vessel took shelter at Dagromestre, where Prince Mavrocordatos despatched a gun-boat t.o accom- pany him, while a portion of the Greek squadron, stationed at Messolonghi, were ordered to cruise in the offing. The vessel afterwards grounded

on a shoal near the Scrofes, and was with diffi- culty got off.

Lord Byron was received at Messolonghi with the most enthusiastic demonstrations of joy. The ships anchored off the fortress fired a salute as he passed. Prince Mavrocordatos and all the au- thorities, with all the troops and the population collected together, met him on his landing and accompanied him to the house which had been prepared for him, amidst the shouts of the multi- tude and the discharge of cannon. Nothing could exceed the eagerness with which he had been expected, except the satisfaction which was displayed on his arrival.

One of the first objects to which Lord Byron naturally turned his attention was, to mitigate the ferocity with which the war had been carried on. He had not been long at Messolon- ghi, before an opportunity presented itself for showing his sense of Yusuff Pasha's moderation in releasing Count Gamba. Hearing that there were four Turkish prisoners in the town, he re- quested that Prince Mavrocodatos would place them in his hands; this being immediately granted, they were sent to the castle of the Morea, near Patras, with the following letter ad- dressed to the Turkish chief.

‘ Highness,ā A vessel in which a friend and some domestics of mine were embarked, was de- tained a few days ago and released by order of your highness. I have now to thank you, not for liberating the vessel, which as carrying a neutral flag, and being under British protection, no one had a right to detain, but for having treated my friends with so much kindness while they were in your hands.

‘ In the hope, therefore, that it may not be altogether displeasing to your highness, I have requested the governor of this place to release four Turkish prisoners, and he has humanely con- sented to do so. 1 lose no time, therefore, ir sending them back, in order to make as early a return as I could for your courtesy on a late oc- casion. These prisoners are liberated without any conditions; but, should the circumstance find a place in your recollection, I venture to beg, that your highness will treat such Greeks as may henceforth fall into your hands with hu- manity, more especially since the horrors of war are sufficiently great in themselves, without being aggravated by wanton cruelties on either side.

‘NOEL BYRON.

‘ Messolonghi, 23rd Janury, 1824.’

Another grand object with Lord Byron, and one which he never ceased to forward with the most anxious solicitude, was to reconcile the quarrels of the native chiefs, to make them friendly and confiding to one another, and sub- missive to the orders of the government. He had neither time nor much opportunity before his decease to carry this point to any great extent.

Mavrocordatos had dwelt on the importance of his lordship’s presence at Messolonghi. Ac- cordingly Lord Byron landed at Messolonghi, animated with military ardor. Five hundred Suliotes, the bravest and most resolute of the soldiers of Greece, were taken into his pay on the 1st of January, 1824; an object worthy of them and their leader was not difficult to be

found, m the castle of Lepanto, which commands the gulf of that name, the only fortress occu- pied by the Turks in Western Greece. Its po- sition at the mouth of the gulf, is one of great importance, and enables it to keep up a constant communication with Patras, and while this was the case, it was impossible to reduce it in the or- dinary mode of starvation. The garrison con- sisted of 500 Turks, and a considerable num- ber of Albanians ; the soldiers were clamorous for their pay, and much confusion was said to reign in the place. It was understood that the Albanians would surrender on

the approach of Lord Byron, and on being paid their arrears, which amounted to 23,000 dollars. Lord Byron was raised to the highest pitch of enthusiasm, and spent his whole time in preparing for the expedition. At the latter end of January. Lord Byron was appointed by the Greek government to the sole command of all the 3000 troops des- tined to act against Lepanto. But the Suhotes, who conceived that they had found a patron whose wealth was inexhaustible, determined to make the most of the occasion, and proceeded to make the most extravagant demands on their leader for arrears, and under other pretences. Untameable in the field, they were equally un- manageable in a town, and were at this mo- ment peculiarly disposed to be obstinate, riotous, and mercenary. They had been chiefly in- strumental in preserving Messolonghi, when besieged the previous autumn by the Turks, had been driven from their abodes, and the whole of their families were at this time in the town destitute of either home or sufficient supplies. Of turbulent and reckless character, they kept the place in awe, and Mavrocordatos having, unlike the other captains, no soldiers of his own, was glad to find a body of valiant mercenaries. Within a fortnight after Lord Byron's arrival, a burgher refusing to quarter some Suliotes who rudely demanded entrance in his house, was killed, and a riot ensued in which some lives were lost. Lord Byron's impatient spirit could ill brook the delay of a favorite scheme, and he saw, with the utmost chagrin, that the state of his favorite troops was such as to render any at- tempt to lead them out at present impracti- cable.

The project of proceeding against Lepanto being thus suspended, at a moment when lord Byron's enthusiasm was at its height, it produced a degree of irritability which, if it was not the sole cause, contributed greatly to a severe fit of epilepsy, with which he was attacked on the 15th of February. His lordship was sit- ting in the apartment of colonel Stanhope, the active and enlightened representative of the Greek committee in Greece, who had gone out to co-operate with lord Byron, and was talking in a jocular manner with Mr. Parry the engineer, when it was observed, from occasional and rapid changes in his countenance, that he was suffering under some strong emotion. On a sudden he complained of a weakness in one of his legs, and rose, but finding himself unable to walk, he cried out for assistance. He then fell into a state of nervous and convulsive agitation, and was placed on a bed. For some minutes his counteDauce was much distorted. He however,

quickly recovered his senses, his speech returned and he soon appeared perfectly well, although enfeebled and exhausted by the violence of the struggle. During the fit he behaved with his usual remarkable firmness, and his efforts in contending with, and attempting to master the disease, are described as gigantic. In the course of the month the attack was repeated four times; the violence of the disorder at length yielded to the remedies

which his physicians advised, such as bleeding, cold bathing, perfect relaxation of mind, &c., and he gradually recovered. An accident happened during this illness, which was ill calculated to aid the efforts of his medical advisers. A Suliote walked into the Seraglio, which had formerly been used as a sort of for- tress and barrack for the Suliotes. The sentinel on guard ordered him to retire ; and the ser- jeant of the guard pushed him back. The Suliote struck again : the sergeant and he closed and struggled, when the Suliote drew a pistol from his belt, and shot captain Sass, a Swede, who came up, and ordered him to the guard room. This was a serious affair, and great apprehensions were entertained that it would not end here. The Suliotes refused to surrender the man to justice, alleging that he had been struck, which, in Suliote law, justifies all the consequences which may follow.

Notwithstanding lord Byron's improvement in health, his friends felt from the first that he ought to try a change of air. A gentleman of Zante wrote to him early in March,, to induce him to return to that island for a time ; in reply to his letter, he said, I cannot quit Greece while there is a chance of roy being of (even supposed) utility, ā there is a stake worth millions such as I am, ā and while I can stand at all, I must stand by the cause.

*After so severe a fit of illness, it may well be supposed that he was in no humor to pursue his scheme against Lepanto ā supposing that his state of health had been such as to bear the fatigue of a campaign in Greece. The Suliotes, how- ever, showed some signs of repentance, and offered to place themselves at his lordship's dis- posal. They had however another objection to the nature of the service. In a letter which colonel Stanhope wrote to lord Byron on the 6th of March, from Athens, he tells his lordship that he had bivouacked on the 21st of February in the hut of the prefect of the Lepanto district, who had just had a conference with the garrison of that place. This man said that if lord Byron would march there with a considerable force and the .arrears due to the troops, that the fortress would be surrendered ; and colonel Stanhope adds a pressing entreaty that lord Byron would proceed there immediately, and take advantage of this disposition on the part of the garrison. To this his lordship has appended this note : ' the Suliotes have declined marching against Lepanto. saying that they would BOt fight again** stone walls. Colonel Stanhope also knows their conduct here, in other respects lately.' \ e may conclude that the expedition to Lepanto was not thought of after this time.*

This letter, which communicated the facility with which Lepanto might be taken, also an- nounced to lord Byrou the intention of '

Odysseus, to summon a congress of chiefs at Salona, to consider of a mode of uniting more closely the interests of Eastern and Western Greece, and arranging between them some method of strict co-operation. The whole of these two districts are all subordinate to their respective governments, and, as the Turkish army was expected to come down, it was supposed by Odysseus that some plan of acting in concert might be hit upon, which would not only enable them to resist the enemy with greater effect, but likewise rapidly advance the progress of civilisa- tion and the authority of the government and constitution ; Odysseus, who had the most in- fluence in Eastern Greece, and was able to collect all the chiefs of his own district, was most desirous of prevailing upon Mavrocordatos and lord Byron, who were all-powerful in the opposite territory, to be present at this congress, which he proposed to hold at Salona, a town nearly on the confines of the two departments. Two agents were sent to persuade them to join in the design and repair to Salona. Odysseus himself, first despatched Mr. Finlay, and after him captain Humphries went over to Messolonghi with all haste, by desire of colonel Stanhope. The latter succeeded : lord Byron, as may be supposed, was well disposed to the measure, but his consent was for some time held back by the prince, who had reasons for not approving the congress. Mavrocordatos was always averse to meeting Odysseus, a man of a very different character from himself, nor did he relish the idea ā¢jf lord Byron's quitting the seat of his govern- ment. It was however apparently settled that both should attend at Salona.

But they did not set out in a few days as it seems to have been intended. In the govern- ment, which since lord Byron's arrival at Messo- longhi had been changed, the civil and island interest now greatly preponderated, and conse- quently by it a congress of military chiefs was looked upon with some jealousy, and most unjustly stiled an unconstitutional measure. Mavrocordatos's views were now those of the government, so that, in addition to his private motives, he had also a public interest in with- holding lord Byron from Salona. Various p-etexts were urged for delay ā among others, whether a true or a pretended one is not exactly ascertained, a design of delivering up Messo- longhi to the Turks was alleged against the Suliotes. But at last came lord Byron's fatal illness, and all schemes of congresses and cam- paigns were for a time forgotten in the appre- nensions entertained for his life, and in the subsequent lamentations over his death : the meeting took place at Salona, on the 16th of April ; Mavrocordatos was not there, and lord Byron was on his death-bed.

- *My master' says Mr. Fletcher, ' continued his usual custom of riding daily when the weather would permit, until the 9th of April. But on that ill-fated day, he got very wet, and on his return home, his*

lordship changed the whole of his dress, but he had been too long in his wet clothes, and the cold, of which he had complained more or less ever since we left Cephalonia, made this attack be more severely

felt. Though rather feverish during the nieht his lordship slept pretty well, but complained" in the morning of a pain in his bones and a head- ache : this did not, however, prevent him from taking a ride in the afternoon, which I grieve to say was his last. On his return, my master said that the saddle was not perfectly dry, from being so wet the day before, and observed that he thought it made him worse. His lordship was again visited by the same slow fever, and I was sorry to perceive on the next morning, that his illness appeared to be increasing. He was very low, and complained of not having had any sleep during the night. His lordship's appetite was also quite gone. I prepared a little arrow- root, of which he 'took three or four spoonfuls, saying it was very good, but could take no more. It was not till the third day, the 12th, that I began to be alarmed for my master. In all his former colds, he always slept well, and was never affected by this slow fever. I therefore went to Dr. Bruno and Mr. Millingen, the two medical attendants, and enquired minutely into every circumstance connected with my master's present illness : both replied that there was no danger, and I might make myself perfectly easy on the subject, for all would be well in a few days. This was on the 13th; on the following day I found my master in such a state, that I could not feel happy without supplicating that he wo-ild send to Zante for Dr. Thomas : after expressing my fears- lest his lordship should get worse, he desired me to consult the doctors, which I did, and was told there was no occasion for calling in any person, as they hoped all would be well in a few days. Here I should remark, that his lordship repeatedly said in the course of the day, he was sure the doctors did not understand hi disease ; to which I answered, then, my lord, have other advice by all means. ' They tell me/ said his lordship, ' that it is only a common cold, which you know I have had a thousand times.' I am sure, my lord, said I, that you never had one of so serious a nature. ' I think I never had,' was his lordship's answer. I repeated my supplications that Dr. Thomas should be sent for on the 15th, and was again assured that my master would be better in two or three days. After these confident assurances, I did not renew my entreaties until it was too late. With respect to the medicines that were given to my master I could not persuade myself that those of a strong purgative nature were the best adapted for his complaint, concluding that, as he had nothing on his stomach, the only effect would be to create pain : indeed this must have been the case with a person in perfect health. The whole nourishment taken by my master for the last eight days, consisted of a small quantity of broth at two or three different times, and two spoonfuls of arrow-root on the 1.8th, the day before his death. The first time I heard of there being any intention of*

bleeding his lordship, was on the 15th, when it was proposed by Dr. Bruno, but objected to at first by my master, who asked Mr. Millingen if there was any very great reason for taking blood : the latter replied that it might be of service, but added that it could be deferred till the next day. And accordingly my master

was bled in the right arm, on the evening of the 16th, and a pound of blood was taken. I ob- served at the time, that it had a most inflamed appearance. Dr. Bruno now began to say he had frequently urged my master to be bled, but that he always refused ; a long dispute now arose ā ¢ibout the time that had been lost, and the neces- sity of sending for medical assistance to Zante, ā¢upon which I was informed for the first time, that it would be of no use, as my master would be better, or no more, before the arrival of Dr. Thomas. His lordship continued to get worse, but Dr. Bruno said, he thought letting blood again would save his life, and I lost no time in telling my master how necessary it was to com- ply with the doctor's wishes ; to this he replied by saying, he feared they knew nothing about his disorder, and then stretching out his arm, said, ' here, take my arm and do whatever you like.' His lordship continued to get weaker, and on the 17th he was bled twice in the morning, and at two o'clock in the afternoon ; the bleeding at both times was followed by fainting fits, and he would have fallen down more than once, had I not caught him in my arms. In order to pre- vent such an accident, I took care not to let his lordship stir without supporting him. On this day, my master said to me twice, ā 'I cannot sleep, and you well know I have not been able to sleep for more than a week : I know,' added his lordship, 'that a man can only be a certain time without sleep, and then he must go mad, without any one being able to save him ; and I would ten times sooner shoot myself than be mad, for I am not afraid of dying, I am more fit to die than people think.' I do not, however, believe that his lordship had any apprehension of his fate till the day after, the 18th, when he said, ' I fear you and Tita will be ill by sitting up constantly night and day.' I answered, 'we shall never leave your lordship till you are bet- ter.' As my master had a slight fit of delirium on the 16th, I took care to remove the pistols and stiletto which had hitherto been kept at his bed side in the night. On the 18th his lordship addressed me frequently, and seemed to be very much dissatisfied with his medical treatment. I then said, ' Do allow me to send for Dr. Tho- mas,' to which he answered, 'do so, but be quick. I am only sorry I did not let you do so before, as I am sure they have mistaken 'my dis- ease; write yourself, for I know they would not like to see other doctors here.' I did not lose a moment in obeying my master's orders, and on informing Dr. Bruno and

Mr. Millengen of it, they said it was very right, as they now began to be afraid themselves. On returning to my master's room, his first words were, ' Have you sent ?' 'I hare, my lord,' was my answer ; upon which he said, 'You have done right, for I should like to know what is the matter with me.' Although his lordship did not appear to think his dissolution was so near, I could perceive he was getting weaker every hour, and he even began to have occasional fits of delirium. He afterwards said, ' I now begin to think I am seri- ously ill, and, in case I should be taken off sud- denly, I wish to give you several directions, which I hope you will be particular in seeing

executed.' I answered I would, in case such an event came to pass, but expressed a hope that he would live many years, to execute them much better himself, than I could. To this my master replied, ' No, it is now nearly over,' ā and then added, 'I must tell you H!! without losing a moment.' I then said, 'Shall I go my lord, and fetch pen, ink, and paper?' Oh! my God, no ā you will lose too much time, and I have it not to spare, for my time is now short,' said his lord- ship, and immediately after, ' Now, pay atten- tion;' his lordship commenced by saying, 'You will be provided for. I begged him, however, to proceed with things of more consequence ; he then continued, ' Oh, my poor dear child ! my dear Ada ; my God, could I but have seen her ! give her my blessing ā and my dear sister Augus- ta and her children; ā and you will go to lady Byron, and say ā¢ tell her everything, ā

you are friends with her.' His lordship appeared to be greatly affected at this moment. Here my master's voice failed him, so that I could only catch a Word at intervals, but he kept muttering something very seriously for some time, and would often raise his voice and say, 'Fletcher, now if you do not execute every order which I have given you, I will torment you hereafter if possible.' Here I told his lordship in a state of the greatest perplexity, that I had not understood a word of what he said, to which he replied, ' Oh, my God ! then all is lost ! for it is now too late ā can it be possible you have not understood me?' 'No, my lord,' said I, 'but I pray you to try and inform me once more.' ' How can I ?' rejoined my master, 'it is now too late, and all is over.' I said, ' Not our will, but God's be done;' and he answered, 'Yes, not mine be

done ā but I will try ' His lordship did

indeed make several efforts to speak, but could only repeat two or three words at a time, such as 'my wife! my child ! my sister! you know all, ā you must say all, ā you know my wishes ;' the rest was quite unintelligible. A consultation was now held (about noon), when it was deter- mined to administer some Peruvian bark and wine. My master had now been nine days with- out any sustenance whatever, except what I have already

mentioned. With the exception of a few words, which can only interest those to whom they were addressed, and which, if required, 1 shall communicate to themselves, it was impos- sible to understand anything his lordship said, after taking the bark. He expressed a wish to sleep. I at one time asked whether I should call Mr. Parry, to which he replied, ‘ Yes, you may call him.’ Mr. Parry desired him to compose himself. He shed tears, and, apparently, sunk into a slumber. Mr. Parry went away, expect- ing to find him refreshed on his return, ā but it was the commencement of the lethargy preceding his death. The last words I heard my master utter were at six o’clock on the evening of ‘the 18th, when he said, Ā«I must sleep now:’ upon which he laid down, never to rise again ! for he did not move hand or foot during the following twenty-four hours. His lordship appea

raising his head, and I thought he seemed to get quite stiff. The rattling and choking in the throat took place every half hour ; and we con- tinued to raise his head whenever the fit came on, till six o’clock in the evening of the 19th, when I saw my master open his eyes, and then shut them, but without showing any symptom of pain, or moving hand or foot. ‘ Oh ! my God ;’ I exclaimed, ‘ I fear his lordship is gone.’ The doctors then felt his pulse, and said, ‘ You are right ā he is gone.’

From the account of the examination of the body it is plain that lord Byron died in conse- quence of inflammation of the brain : at least if the appearances really were as described : and the cause of the attack was clearly his exposure to wet and cold on the 9th of April.

His lordship’s death was a severe blow to the people of Messolonghi, and they testified their sincere and deep sorrow by paying his remains all the honors their state could by any possibi- lity invent and carry into execution. The ruJe and military mode in which the inhabitants of Messolonghi, and other places, vented their la- mentations over the body of their deceased pa- tron and benefactor, touches the heart more deeply than the vain and empty pageantry of much more civilised states. Immediately after the death of lord Byron, and it was instantly known, for the whole town were watching the event, the prince Mavrocordatos published the following proclamation : ā

Art. 1185.

‘ Provisional Government of Western Greece.’

‘ The present day of festivity and rejoicing, is turned into one of sorrow and

mourning.

‘ The lord Noel Byron departed this life at six o’clock last night, after an illness of ten days : his death being caused by an inflammatory fever. Such was the effect of his lordship’s illness on the public mind, that all classes had forgotten their usual recreations of Easter, even before the afflicting end was apprehended.

‘The loss of this illustrious individual is un- doubtedly to be deplored by all Greece ; but it must be more especially a subject of lamenta- tion at Messolonghi, where his generosity has been so conspicuously displayed, and of which he had even become a citizen, with the ulterior de- termination of participating in all the dangers of the war.

‘ Every body is acquainted with the beneficent acts of his lordship, and none can cease to hail his name as that of a real benefactor.

‘Until, therefore, the final determination of the national government be known, and by vir- tue of the powers with which it has been pleased to invest me, I hereby decree,

‘ 1st. Tomorrow morning, at daylight, thirty- seven minute guns will be fired from the grand battery, being the number which corresponds with the age of the illustrious deceased.

- *2nd. All the public offices, even to the tribu- nals, are to remain closed for three successive tlays.*

‘3rd. All the shops, except those in which provisions or medicines are sold, will also be shut: and it is strictly enjoined, that every spe-

cies of public amusement, and other demonstri tions of festivity, at Easter, may be suspended

‘4th. A general mourning will be observed for twenty-one days.

‘ 5th. Prayers and a funeral service are to be offered up in all the churches.

(Signed) A. MAVROCORDATOS.

GIORGIUS PRAIDIS,

Given at Messolonghi, Secretary

this 19th day of April, 1824.

There was considerable difficulty in fixing upon the place of interment. No

directions had been left by lord By^on ā and no one could speak as to the wishes he might have entertained on the point. After the embalming, the first step was to send the body to Zante, where the authorities were to decide as to its ultimate destination. Lord Sidney Osborne, a relation of lord Byron by marriage, the secretary of the senate at Corfu, repaired' to Zante to meet it. It was his wish, and that of some others, that his lordship should be interred in that island ā a proposition which was received with indignation and most decidedly opposed by the majority of the English. By one it was proposed that his remains should have been deposited in the temple of Theseus, or in the Parthenon at Athens, and as some importance might have been attached to the circumstance by the Greeks, and as there is something consola- tory in the idea of lord Byron reposing at last in so venerable a spot, thus re-consecrating, as it were, the sacred land of the arts and the muses, we cannot but lament that the measure was not listened to. Ulysses sent an express to Messo- longhi, to solicit that his ashes might be laid in Athens ; the body had then, however, reached Zante, and it appearing to be the almost unani- mous wish of the English that it should be sent to England, for public burial in Westminster Abbey or St. Paul's, the resident of the island yielded. The Florida was therefore taken up for that purpose.

On its arrival in England, the body lay in state in London for two days, and was escorted out of town by a train of carriages belonging to distinguished personages of various parties. At Nottingham it was received by the corporation, and attended to the place of interment at Huck- nall, near his former seat of Newstead Abbey, where a plain marble slab records his name and title, date of death, and age. Lord Byron, be- sides his legitimate child and heiress, left another daughter in Italy, to whom he bequeathed Ā£5000 on the condition of her not marrying an English- man. His successor to the title was his cousin, Captain George Anson Byron, of the navy.

We have alluded to certain suppressed ' Me- moirs' which lord Byron is said to have written. These he presented to his friend Mr. Thomas Moore, who sold or pledged the copy-right to Mr. Murray for 2000 guineas. On the demise of his lordship an arrangement took place with the family, by which the manuscript was destroyed, and the money returned.

Into the personal character of lord Byron we are not disposed to enter deeply : the grave has scarcely closed upon him; and various exculpa- tory, as well as honorable facts, in his history,

may yet be brought to light. Certainly his efforts for the Greek cause (in which we have followed him therefore at considerable length) present the redeeming points of his character. Here he found an unoccupied field for high de- signs and noble daring. The poet, and the scholar, and the British peer, could here receive and impart unquestionable honor. Here, there- rore, his purse %vas as freely opened as his per- son and character were boldly embarked, and his former dissipated habits forsaken. And although he was scarcely permitted to see the morning star of the liberties of Greece, he accomplished something for her future benefit, in the union he counselled and for a time effected amongst her rulers ; in mitigating the ferocities that

had hitherto marked the Greek as well sa the Turkish mode of warfare ; and in the splendid disinterestedness of his example. As a poet claiming the first rank, and perhaps the first name of his age, he was only too independent of every acknowledged school : his thoughts, his feelings, his modes of expression, were alto- gether self-emanative ; he bends every tlung to the purpose of his genius ; he owes little to any rules of his art, and nothing to imitation or his predecessors. But his works have already formed the reader's judgment respecting him. They are published in both the common 8vc. and small 3vo. sizes; the former in 7 vols. UK- small 8vo. in 17 vols.

BYRON'S ISLAND, an island in the Pacific Ocean, about twelve miles in length, low and flat, full of woods, in which the cocoa tree is predominant. The inhabitants are tall and well proportioned, and of good features. All go naked, wearing strings of shells as ornaments round the neck and wrists. One individual was seen with a string of human teeth about his waist, which he refused to part with. These people use various weapons ; the most remark- able is a spear, which, for three feet of its length, Ā»s set full of shark's teeth. This island was dis- covered by commodore Byron, in 1765. Long. 173Ā° 16′ E., lat. 1Ā°18'S.

BYRRHUS, in entomology, a genus of in- sects belonging to the order of coleoptera. The feelers are clavated, pretty solid, and a little compressed. The species of this genus are gigas, pilula, ater, dorsalis, varius, aeneus, niti- dus, fasciatus, and virescens.

BYRSEUS, in fabulous history, a king of Thrace, who having entertained Jupiter, Mer- cury, and -Neptune, with great hospitality, was offered, as a reward for his virtue, whatever he should ask. Having no children, he asked a son, whom these deities accordingly co-operated to produce, in a manner equally miraculous and ridiculous, by jointly making their water in

a bull's hide ; which, being buried in the earth, in due time produced the boy Orion.

BYSAS, a Thracian monarch, who, according to Diodorus Siculus, founded Byzantium. Eus- tathius makes him a native of Megara, who arrived in Thrace, and settled there with a co- lony c-T Megarenses, a short time before the ex- pedition of the Argonaute

BYSSOLETE, a massy ih,\Ā«Ā«rtii, of an olive- green color, in short stiff filaments, implanted perpendicularly on stones, like moss. It has been found near Mont Blanc, on gneiss.

BYSSUM, or BYSSUS, a fine thready matter produced in India, Egypt, and about Elis in Achaia, of which the richest apparel was an- ciently made, especially that worn by the priests both Jewish and Egyptian. Some interpreters lender the Greek /3u

from our silk, as appears from many ancient writers, particularly Julius Pollux. M. Simon agrees with Hesychius and Bochart, that the byssus was a finer kind of linen, which was fre- quently dyed purple. Some authors will have the byssus to be the same with our cotton, others take it for the linum asbestinum ; and others for the lock or bunch of silky hair found adhering to the pinna marina, by which it fastens itself to other bodies. That of Judea was the finest.

BYSSUS, in botany, a genus of mosses, belong- ing to the order algae, in the cryptogamia class of plants ; and ranked by some under algae, the fifty-seventh order in the natural method ; though others raak them nnder the fifty-eighth, fungi. The characters are, that the mosses of it are com- posed of simple and uniform parts, and always appear in the form of excrescences, either of a woolly or of a dusty matter. It seems properly a genus of a middle kind, between the. mush- rooms and the mosses, but most approaching to the latter, as the several species of it are of longer duration, and want that fleshy texture which dis- tinguishes the fungus class, and as they never produce heads, nor have any thing of the figure or texture of fungi. They have not yet been discovered to have either flower or seed, but ap- pear always in form of threads, or of a light down, on the surface of many different bodies, but principally such as are liable to putrefaction. Michaeli, in his Nov. Gen. Plantamm, p. 210, mentions the seeds of some of the byssi : but later botanists, and particularly the indefatigable l)il- lenius, were never able to observe them. This last author has described twenty species of th.se small plants. There are fifteen natives of Britain. They are found in many parts of Europe, cover- ing the ground like a carpet.

BYSSUS asbestinus, a species of asbestus or combustible flax, composed of fine flexible paral- lel fibres. It is found plentifully in Sweden, either white or of different shades of green. At a copper mine, in \Vestmannland, it forms the greatest part of the vein out of which the ore is dug ; and, by the heat of the furnace which melts the metal, is changed into a pure semi-transpa- rent glass.

BYSTROPOGON, in botany, a genus of plants of the class didynamia, order gymnosper- mia, natural order verticillatae ; essential tharac-

ters, CAL. bearded ; COR. a bifid upper lip, the lower one being three lobed ; STAM. distant. There are seven species, viz. 1. B. pectinatum, a perennial plant, growing from six to seven feet high, and bearing a fine yellow flower; 2. B. plu- fliosum, a native of the Canary Isles ; 3. B. ori- ganifolium, also from the Canaries; 4. B. Canari- ensis, found at Madeira; 5. B. punctatum, brought from Madeira by Sir Joseph Banks ; 6. B. suavolens, an annual shrub, growing in South America, and the West Indies. It is very much made use of as a cephalic and alexi- pharmic.

BYZANTIUM, an ancient city of Thrace, situated on the Bosphorus. It was founded, ac- cording to Eusebius, about the thirtieth olympiad, while Tullius Hostilius reigned in Rome. But according to Diodorus Siculus, the foundations were laid in the time of the Argonauts, by one Bysas, from whom the city was called Byzan- tium. See BYSAS. ā¢ Velleius Paterculus ascribes the founding of it to the Milesians, and Aramia- nus Marcellinus to the inhabitants of Attica. Some ancient Byzantine medals bear the name and head of Bysas, with the prow of a ship on the reverse. The year after the destruction of Jerusalem by Titus, Byzantium was reduced to a Roman province. In A. D. 193 it took part with Niger against Severus. It was strongly garrisoned by Niger, as being a place of the ut- most importance. It was soon after invested by Severus ; and, as he was universally hated for his cruelty, the inhabitants defended themselves with the greatest resolution. They had been supplied with a great number of warlike machines, most of them invented and built by Periscus, a native of Nicsea, and the greatest engineer of his age. For a long time they baffled all the attempts of the assailants, killed great numbers of them, and crushed with large stones such as approached the walls ; and when stones began to fail, they used the statues of their gods and heroes. At last they were obliged to submit, through famine, after having been reduced to the necessity of

devour- ing one another. Severus put all the magistrates and soldiers to the sword ; but spared the engi- neer Periscus. Before this siege Byzantium was the greatest, most populous, and wealthiest city in Thrace. It was surrounded by walls of an extraordinary height and breadth ; and defended by a great number of towers, seven of which were built with such art, that the least noise heard in one of them was immediately conveyed to all the rest. But Severus was no sooner master of it, than he laid it in ashes. The inhabitants were stripped of all their effects, and sold for slaves, and the walls levelled with the ground. By the chronicle of Alexandria we are informed, that, soon after this terrible catastrophe, Severus him- self caused a great part of the city to be rebuilt, calling it Antonina from his son Antoninus Ca-

racalla. In 262 the tyrant Gallienus wreaked his fury on the inhabitants of Byzantium. He intended to besiege it; but on his arrival, despair- ed of being able to make himself master of such a strong place. He was admitted the next day however, into the city ; and, without regarding the terms he had agieed to, caused the soldiers and all the inhabitants to be put to the sword. Trebellius Pollio says, that not a single person was left alive. What the reason was for such an extraordinary massacre, we are nowhere inform- ed. In the wars between the emperors Licinius and Maximin, Byzantium was obliged to submit to the latter, but was soon after recovered by Licinius. In 323 it was taken from Licinius by Constantine the Great, who in 330 greatly en- larged and beautified it. He began with ex- tending its walls from sea to sea ; and, while some of the workmen were busied in rearing them, others were employed in raising within them a great number of stately buildings, and among others a palace no way inferior in magnificence and extent to that of Rome. He built a capitol and amphitheatre, and made a circus maximus, several forums, porticoes, and public baths ; and divided the whole city into fourteen regions. Thus Byzantium became one of the most flourish- ing and populous cities of the empire. Vast numbers of people flocked to it from Pontus, Thrace, and Asia, Constantine having decreed, that such as had lands in those countries should not be at liberty to dispose of them, nor even leave them to their heirs at their death, unless they had a house in his new city. But however desirous the emperor was that his city should be filled with people, he did not wish it to be in- habited by any but Christians. He therefore caused all the idols to be pulled down, and all their temples consecrated to the true God. He built besides an incredible number of churches, and caused crosses to be erected in all the squares and public places. Most of the buildings being finished, it was solemnly dedicated to the Virgin Mary, according to Cedrenus, but, according to Eusebius, to the God of Martyrs. At the same time Byzantium was equalled to Rome in point of privileges. The same rights and immunities were granted to its inhabitants as to those of the

metropolis. He established a senate and other magistrates, with a power and authority equal to those of Old Rome. He took up his residence in the new city, and changed its name to CON- STANTINOPLE, which see.

BZOVIUS (Abraham), a celebrated writer of the seventeenth century. His chief work is the continuation of Baronius's' Annals. He was a native of Poland, and a Dominican friar. Upon his coming to Rome he was received with open arms by the pope, and had an apartment assign- ed him in the Vatican. He died in 1637, aged seventy.

'51

c.

Cj the third letter of the alphabet, has two sounds ; but neither of them properly its own. Ben Jonson says, 'our forefathers might very well have spared it in our tongue.' It sounds like k, before a, o, u, or a consonant ; and like s, before e, i, and y. In Saxon and Irish it is invariably pronounced like k.

C, in music, the name of that note in the na- tural major mode, to which Guido applied the monosyllable, for which the Italians now sub- stitute DĀ °. ā C above G gamut, that note which is a fourth higher than G gamut. ā C above the bass cliff, that note which is a fifth higher than the bass cliff. ā C above the treble cliff, a note which is a fourth higher than the treble cliff.

CAA APIA, in botany, the Brasilian name of the dorstema Brasiliensis, the root of which so much resembles the ipecacuanha in its virtues, that some have erroneously called it by the same name. Tt is astringent and emetic, but possesses both qualities in a weaker degree, and is there- fore given in a larger dose, a dram being com- monly given at once. The Brasilians bruise the whole plant, and express the juice, which they take internally, and apply externally to wounds by poisoned arrows, and by the bites of serpents.

*CAABA, or CAABAH, properly signifies a square stone building ; but is particularly applied by the Mahommedans to the temple of Mecca. This edifice is indisputably so ancient, that its original use and the name of its builder are lost in a cloud of idle traditions. The Mahommedans affirm that it is almost coeval with the world, and they pretend that Adam, after his expulsion from paradise, supplicated divine permission to erect a building like what he had seen there, called ' Beit al Mamar,' or the frequented house, and * Al Dorah/ towards which he might direct his prayers, and which he might compass, as the angels do the celestial one. Upon which God let down a representation of that house in curtains of light, and set it*

in Mecca, perpendicularly under its original, ordering the patriarch to turn towards it when he prayed, and to compass it by way of devotion. After Adam's death, they say, his son Seth built a house in the same form, of stones and clay, which, being destroyed by the deluge, was rebuilt by Abraham and Ishmael, at the command of God, in the place where the former had stood, and after the same model ; di- rections for this purpose having been given them by revelation. Independently of these fabulous traditions, it is not improbable that it was erected by some of the patriarchs descended from Ish- mael ; but whether it was built as a place of divine worship, as a fortress, as a sepulchre, or as a monument of the treaty between the old possessors of Arabia and the sons of Kedar, it is impossible to ascertain. Reland supposes that it was the mansion of some ancient patriarch, and on that account revered by his posterity. At length it came to be appropriated to the service of pagan Arab divinities ; but that it was not

originally a temple seems to appear from these circumstances, ā that the door was not placed in the middle of the structure, and that, for many ages, there was no divine worship performed in it, though the pagan Arabs frequently went in procession round it. It is most probable, how- ever, that the caaba was primarily designed for religious purposes ; and it is certain that it was held in the highest veneration long before the birth of Mahomet. Having undergone several reparations, it was, a few years after his birth, rebuilt by the tribe of Koreish, who had ac- quired the custody of it either by fraud or force, on the same foundation; afterwards repaired by Abdallah Ebn Zobeir, the caliph of Mecca, and again rebuilt by Yusof, surnamed Al Hej&j, in the seventy-fourth year of the Hegira, with some alterations, in the form in which it now re- mains. ā¢ The temple is in length, from north to south, about twenty-four cubits; in breadth, from east to west, twenty-three; and in height twenty-seven. The door, which is on the east side, stands about four cubits from the ground ; the floor being level with the bottom of the door. In the corner next this door is the black stone, so much celelebrated among the Mahommedans. On the north side of the caaba, within a semicir- cular enclosure fifty cubits long, lies the white stone, said to be the sepulchre of Ishmael, which receives the rain water from the caaba by a spout, formerly of wood, but now of gold. The black stone, according to the Mahommedans, was brought down from heaven by Gabriel at the creation o. the world ; and originally of a white color ; but contracted the blackness which now appears on it, from the guilt of the sins committed by the sons of men ! It is set in silver, and fixed in the south-east corner of the caaba, looking towards Basra, about seven spans from the ground. This stone, upon which there is the figure of a human head, is held in the highest estimation among the Arabs; all the pilgrims kissing it with great demotion, and some even calling it the right hand of God. Its blackness, which is only superficial, is probably owing to the kisses and

touches o. so many people. After the Karmatians had taken Mecca, they carried away this precious stone, and could by no means be prevailed upon to restore it ; but finding at last that they were unable to prevent the concourse of pilgrims to Mecca, they sent it back of their own accord, after having kept it twenty-two years. The double roof of the caaba is supported within by three octagonal pillars of aloes-wood ; between which, on a bar of iron, hang some silver Limps. The outside is covered with rich black damask, adorned with aĀ« embroidered band of gold, which is changed every year, and was formerly sent by the caliphs, afterwards by the suhans K Egypt, and is now provided by the Turkish em- perors. The caaba, at some distance, is almost surounded by a circular enclosure of pillars, joined towards the bottom by a low balustrade, and towards the top by bars of silver. Just

without this inner enclosure, on the south, north, and west sides of the caaba, are three buildings, which are the oratories where three of the ortho- dox sects assemble to perform their devotions. Towards the south-east stands an edifice which covers the well zemzen, the treasury, and the cupola of Al Abbas. Formerly there was another cupola, that went under the name of the hemi- cycle, or cupola of Judaea: but whether any re- mains of that are now to be seen is unknown ; nor is it easy to obtain information in this respect, all Christians being denied access to this holy place. At a small distance from the caaba, on the east side, is the station of Abraham ; where is another stone much respected by the Mahotn- medans, and where they pretend to show the footsteps of the patriarch, where he stood when he built the caaba. Here the fourth sect of Arabs, viz. that of Al Shafei, assemble for re- ligious purposes. The square colonnade, or great piazza, which at a considerable distance encloses these buildings, consists, according to Al Jan- nabi, of 448 pillars, and has no less than thirty- eight gates. Mr. Sale compares this piazza to that of the Royal Exchange at London, but allows it to be much larger. It is covered with small domes or cupolas, from the four corners of which lise as many minarets or steeples with double galleries, and adorned with gilded spires and crescents, as are also the cupolas which cover the piazza and other buildings. Between the columns of both enclosures hang a greai number of lamps, which are constantly lighted at night. The first foundation of this second enclosure was laid by Omar, who built no more than a low wall, to prevent the court of the caaba from being encroached upon by private build- ings : but by the liberality of succeeding princes the whole has been raised to that state of

magni- ficence in which it appears at present. This temple is an asylum for all criminals ; but it is most remarkable for the pilgrimages made to it by the devout mussulmans, who pay so great a veneration to it, that they believe a single sight of its sacred walls, without any particular act of devotion, is as meritorious, in the sight of God, as the most careful discharge of duty, for a whole year, in any other temple !

CAAMINA, or CAAMINIA, in botany, a name given by the Spaniards and others to the finest sort of Paraguayan tea. It is the leaf of a shrub which grows on the mountains of Maracaya, and is used in Chili and Peru, as tea is with us. The mountains where this shrub grows naturally are far from the inhabited parts of Paraguay; but the people of the place know so well the value and use of it, that they constantly furnish them- selves with great quantities of it from the spot. They used to go out on these expeditions many thousands together ; leaving their country in the meantime exposed to the insults of their enemies, ˆnd many of themselves perishing by fatigue. To avoid these inconveniences, they have of late planted these trees about their habitations; but the leaves of these cultivated ones have not the fine flavor of those that grow wild. The king of Spain has permitted the Indians of Paraguay to bring to the town of Santa Fe 12,000 arobas of the leaves of this tree every year; but they are

not able to procure so much of the wild leaves annually; about half the quantity is the utmost they bring ; the other half is made up of the leaves of the trees in their own plantations : and this sells at a lower price, and is called pabos. The aroba is about twenty-five pounds weight ; the general price is four piastres ; and the money is always divided, among the people of the co- lony.

CAANA, KAANA, a town in Upper Egypt, on the east banks of the Nile, whence they carry corn and pulse to Mecca. It contains several monuments of antiquity, inscribed with hiero- glyphics. It is 320 miles south of Cairo. Long. 30Ā° 23′ E., lat. 26Ā° 30′ N.

CAB. n. s. [3p] A Hebrew measure, con- taining about three pints English, or the eigh- teenth part of the ephah.

CABAL', v. & n. ~\ Heb. cabala ; from hence CAB'ALA, n. Ttal. cabala; Fr. cabals.

CAB'ALIST, The verb is in Fr. cabaler;

CAB'ALISM, ˆ Ital. cabalare. Jewish tra-

CABALIS'TICAL, Tdition concerning the Old CABALIS'TICK, Testament; mere inven-

CABALIS'TICALLY, tionsof the rabbies, which CABAL'LER. J they,, a crew of cunning

deceivers, united for the purpose of vile intrigue, and securing to themselves the veneration of the people, pretended were divine mysteries. A cabal is a body of men united in some close de- sign ; to form close intrigues ; to unite in small parties. A cabal differs from a party, as few from many.

Factious and rich, bold at the council board ; But, cautious in the field, he shunned the sword ; A close caballer, and tongue-valiant lord. Drydcn, His mournful friends, summoned to take their

leaves,

ArĀ». thronged about his couch, and sit in council : What those caballing captains may design, I must prevent, by being first in action. Id,

When each, by cursed cabals of women, strove To draw the indulgent king to partial love. Id.

Then Jove thus spake : with care and pain We formed this name, renowned in rhime,

Not thine, immortal Neufgermain ! Cost studious cdbalists more time. Stcift.

She often interposed her royal authority, to break the cabals which were forming against her first minis- ters. Addison. The letters are caballistical , and carry more in them than it is proper for the world to be acquainted with.

Id.

He taught him to repeat two caballistiek words, in pronouncing of which the whole secret consisted.

Spectator.

CABAL is said to have been a kind of acrosti- cal name given to the infamous ministry of Charles II., composed of Clifford, Ashley, Buck- ingham, Arlington, and Lauderdale ; the first letters of whose names, in this order, formed the word which has since become an appellative for similar juntos. But it would appear to be of greater antiquity.

CABALA, or CABALA VEIN, in natural his- tory, a kind of iron ore, commonly wrought in Sussex. It is stony, of a brownish color, with a blush

*of red, which is more or less conspicuous in different parts of the same masses. It i**

usually found in thin strata, near the surface, and is not very rich in iron, but runs very readily in the fire.

CABALA. See CABBALA.

CABALARIA, in botany; class polygamia, order dioscia : CAL. small, persisting, campanulate, with five oval divisions : COR. wheel-shaped ; tube very short ; border divided into five oval seg- ments : STAM. anthers five, inserted at the base of the segments of the corolla : PIST. stigma sessile, five-sided ; germ superior, nearly round : PER. globular, drupe one-seeded, with five ob- long points. Eight species are described in the Flora Peruviensis, all shrubs, natives of South America.

CABALLARIA, in middle age writers, lands held by the tenure of furnishing a horseman with suitable equipage, in time of war, or when the lord had occasion for him.

CABALLI, or COBALES, among mystic philo- sophers, denote the shades, or bodies of men who died any sudden or violent death before the expiration of their predestinated term of life. They were supposed to wander as ghosts over the face of the earth, till their destined term was accomplished ; being doomed to live out the time as spirits, which they ought to have spent in the flesh.

CABALLINUM, in ancient geography, a town of the /Edui, in Gallia Celtica; now called CHALOXS SUR SAONE, which see.

CABALLINUS, in ancient geography, a clear fountain of mount Helicon, in Boeotia; called Hippocrene by the Greeks, fabled to have been opened by Pegasus on striking the rock with his hoof, and hence called Pegasus.

CABANIS (Peter John George), a French physician, born about 1756. He became con- nected with Mirabeau, and was one of the coun- cil of five hundred in the revolution. He died in 1808. His works are, ā 1. Observations sur les Hopitaux, 8vo. 2. Journal de la Maladie et de la Mort de Mirabeau, 8vo. 3. Melanges de Litterature Allemande. 4. Du Degre de Certitude de la Medicine, 8vo. 5. Quelques Considerations sur 1′*

Organization Sociale en generate, 12mo. 6. Des Rapports du Physique et du Morale de l'Homme, 2 vols. 8vo. 7. Coup d'ceil sur les Revolutions et la Reforme de la Medicine, 8vo. 8. Observations sur les Affec- tions Catarrhales, 8vo.

CAB'BAGE, v. & n.) Cole, with a head;

CAB'BAGE-TREE. $ a species of plant. Fr. c hou cabus ; Ital. volo cappuccio ; capitati, from Lat. cuput. The name is supposed by some to have beeen given to particular kinds of cole, to distinguish them from others that do not cabbage or head. To cabbage, is to form a head as the plants begin to cabbage. To cab- bage, a cant word among tailors, and refers to what is taken or purloined in cutting out clothes, is from the Ital. capexzo, roba caputa ; from Lat. capio.

'Tis scarce an hundred years since we first had cabbagei out of Holland, Sir Arth. Ashley of M'iWrg St. Giles, in Dorsetshire, being, as I am told, the srst who planted them in England.

Acetaria, or Discourse of Sallets.

Amongst herbs to be eaten, I find gourds, cowcum- VOL. IV.

bers, cnleworts, melons, disallowed, but especially cabbage. Burton't Anatomy of Melancholy.

Your taylor, instead of shreads, cabbage who'le yards of cloth. Arbiithnot.*

The leaves are large, fleshy, and of a glaucous color ; the flowers consist of four leaves, which are succeeded by long taper pods, containing several round acrid seeds. The species are, cabbage. Savoy cabbage. Broccoli. The cauliflower. The musk cab- bage. Branching tree cabbage, from the sea coast. Colewort. Perennial Alpine colewort. Perfoliated wild cabbage, &c. Miller.

It is very common in the Caribbee islands, where it grows to a prodigious height. The leaves of this tree envelope each other, so that those which are in- closed, being deprived of the air, are blanched ; which is the part the inhabitants cut for plaits for hats, and the young shoots are pickled : hut when- ever this part is cut out, the trees are destroyed ; nor do they rise again from the old roots ; so that there are very few trees left remaining near plantations. Id.

Cole cabbage, and coleworts, are soft and demul- cent, without any acidity ; the jelly or juice of red cabbage, baked in an oven, and mixed with honey, is an excellent pectoral. Arbuthnot, on Aliment.

CABBAGE. See BRASSICA.

CABBAGE BARK TREE. See GEOFFROZA.

CABBAGE, DOG'S. See THELIGONUM.

CABBAGE PALM, TRUE. See ARECA.

CABBAGE, SEA. See CRAMBE.

CABBAGE, TREE. See CACALIA.

CABBALA, a mysterious kind of science, pretended to have been delivered by revelation to the ancient Jews, and transmitted by oral tradi- tion to those of our times ; serving for interpre- tation of the books both of nature and Scripture. The word is also written Cabala, Kabbala, Ka- bala, Cabalistica, Ars Cabala, and Gaballa. It is originally Hebrew, nSap, kabbalah ; and pro- perly signifies reception ; formed from the verb S3p, kibel, to receive by tradition. Cabbala then primarily denotes any sentiment, opinion, usage, or explication of Scripture transmitted from father to son. In this sense, the word is not only applied to the whole art ; but also to each operation performed according to its rules. Thus R. Jac. Ben-Ascher, surnamed Baal-Hattu- rim, is said to have compiled most of the cabbalas invented on the books of Moses before his time. The cabbala is by some called theacromatic phi- losophy of Moses, by way of distinction from the exoteric or popular doctrine. The generality of the Jews prefer the cabbala to the Scripture; comparing the former to the sparkling lustre of a precious stone, and the latter to the faint glimmering of a candle. The first author who delivered any thing of the cabbala was Joachaides, Simon son of Joachai, who published a famous cabbalistical work, entitled Zohar. Some say, he lived about the time of the destruction of Je- rusalem by Tkus; others only in the tenth cen- tury. There are no sure principles of this know- ledge. It depends entirely upon the traditions of the ancients. The cabbalists have abundance of names which they call sacred ; these they make use of in invoking of spirits, and imagine they receive great light from them. They tell us that the secrets of the cabbala were disco- vered to Moses on mount Sinai ; and that these have been delivered down to them from father

to son, without interruption, and without any use of letters ; for to write them down, is what they are by no means permitted to do. This is 1'kewise termed the oral law, because it passed from father to son, in order to distinguish it from the written laws. Another kind of cabbala, viz.

Artificial CABBALA, consists in searching for abstruse and mysterious significations of a word in Scripture, whence they borrow certain explanations, by combining the letters which compose it : this cabbala is divided into three kinds, the gematric, the notaricon, and the temura or themurah. The gematric consists in taking the letters of a Hebrew word for ciphers or arithmetical numbers, and explaining every word by the arithmetical value of the letters whereof it is composed. The notaricon consists in taking every particular letter of a word for an entire diction. The themurah (change) consists in making different transpositions or changes of letters, placing one for the other, or one before the other. Some visionaries among the Jews be lieve that Jesus Christ wrought his miracles by virtue of the mysteries of the cabbala.

CABBALA is also applied to the abuse which visionaries make of Scripture, for discovering futurity, by the study and consideration of the combination of certain words, letters, and num- bers, in the sacred writings. All the words, terms, magical figures, numbers, letters, charms, &c. used in the Jewish magic, or in the herme- tical science, are comprised under this species of cabbala. But it is only the Christians that call it by this name, on account of the resemblance this art bears to the explication of the Jewish cabbala : for the Jews never use the word in any such sense, but ever with the utmost respect and ve- neration. It is not, however, the magic of the Jews alone which we call cabttala, but the word is for any kind of magic.

CABECA, or CABESSE, a name gjven to the finest silks in the East Indies ; those from fifteen to twenty per cent, inferior, being called bariga or barina.

CABELLO, or CAVELLO, PORTO, a sea-port of Venezuela, South America, with a most excel- lent and capacious harbour. It is situated a league to the west of the bay of Borburata, and has become the emporium of the commerce of the province. Men of war communicate with the land by means of a flying bridge of three or four toises long, the water being at all times smooth, and the bay defended on all sides from the wind. Porto Cabello, originally founded by some Dutch pirates, stood formerly on a penin- sula, surrounded by the sea, except where a neck of land about 1 00 toises broad joined it with the continent. This has been now traversed by a canal, which divides the old town from the su- burbs, and connects the northern and the southern coasts. The buildings on the continent are by far the most numerous. A bridge crosses the canal, which has a gate shut every

evening, and a military guard. The new streets, which are chiefly outside the gate, have been laid out in a line, the public squares, places for markets, &c. being well regulated ; so that this part of the town has become the residence of the principal merchants. But it is not considered a healthy

place for Europeans. The population has been estimated at 9000.

An aqueduct, five thousand varas long, con- veys the waters of the Rio Estevan by a trench to the town. This work has cost more than 30,000 piastres ; but its waters gush out in every street. Porto Cabello is the deposit of all the eastern part of the province of Venezuela. Its stores furnish to the jurisdictions of Valencia, San Carlos, Barquisimeto, St. Philip, and one part of the Valleys of Aragua, all the merchandise consumed ; and it is at this port also that a great portion of the articles cultivated within those dis- tricts arrive. More than 10,000 mules are ex- ported annually. They are thrown down with ropes, and then hoisted on board the Vessels by means of a machine. Ranged in two files, they with difficulty keep their feet during the rolling and pitching of the ship ; and, in order to frighten and render them docile, the drum is beaten dur- ing a great part of the day and night. ' We may guess,' says a late traveller, ' what quiet a pas- senger enjoys, who has the courage to embark for Jamaica in a schooner laden with mules.'

Next to Carthagena, it is the most important fortified place on this coast. Art has had scarcely any thing to add to the advantages which the nature of the spot presents. A neck of land stretches first towards the north, and then towards the west. Its western extremity is op- posite to a range of islands, connected by bridges, and so close together that they might be taken for another neck of land. One vessel only can enter the harbour at a time ; while the largest ships can anchor very near land, to take in water. There is no other danger in entering than the reefs of Punta Brava, opposite which a battery of eight guns has been erected. Toward the west and south-west is the fort, which is a regu- lar pentagon with five bastions ; in this direction also is the battery of the reef, and the forti- fications that surround the ancient town, founded on an island of a trapezoidal form. The bottom of the basin or little lake which forms the har- bour of Porto Cabello, turns behind the suburb to the south-west.

The real defence of the harbour consists in the low batteries of the neck of land at Punta Brava, and of the reef: but from ignorance of this prin- ciple, a new fort, the Belvedere (Mirador) of Solano, has been constructed at a great expense, on the mountains towards the south, that command the suburb. It is a quarter of a league distant from the harbour, and is raised 400 or 500 feet above the surface of the water. The works have cost annually, during a great numbetof years, from 20,000 to 30,000 piastres, but have been of late suspended. The vessels of La Guayra, which is less a

port than a bad open roadstead, come to Porto Cabello to be caulked and repaired.

CABENDA a port of the western coast of Africa, situated a little to the north of the river Zaire, in the district called properly Cacongo. Its situation is so beautiful as to have obtained for it the name of the Paradise of the coast. The landing is easy and safe, and the town is known by a conical mountain, covered with wood, which appears behind it. On the oppo- site bank is Togno, and both places have driven

a large trade in slaves, which the Portuguese have long endeavoured to monopolise. The ap- proach from Malemba is sometimes dangerous.

CABESTAN, or CABESTEIGN (William de), a gentleman of Provence, and a troubadour, who, gaining the good graces of Triclino, wife of Ray- mond de Scillans, was murdered by the husband out of jealousy. Raymond afterwards caused his heart to be served up for the table of his wife, who, on being informed of what she had uncon- sciously eaten, died of grief.

CABIDOS, or C AVI DOS, a long measure usedat Goa, and other places of the East Indies, belong- ing to the Portuguese, to measure stuffs, and linens, and equal to four-sevenths of the Paris ell.

CABILIAU, in ichthyology, a name which some authors call the common cod-fish, the mor- bua and asellus major of other writers.

CAB'IN, v. & n. j Ara. qoobbu ; Heb. kaba;

CAB'INED, adj. > Per. khwab ; Chald. khuba;

CABIN'MATE. jltal. capanno ; Fr. cubane ; Welsh, caban ; Teut. koben ; all allied to Lat. cavus. A cottage ; a room in a ship ; any small place of dwelling, chamber, or apartment, whe- ther fixed or temporary.

So long in secret cabin there he held

Her captive to his sensual desire, Till that with timely fruit her belly swelled,

And bore a boy unto a savage sire. Spenser.

Fleance is escaped ; I had else been perfect, As broad and general as the casing air ; But now I am cabined, cribbed, confined, bound in, To saucy doubts and fear. Shaktfieare.

I will make you feed on berries and on roots, And feed on curds and whey, and suck the goat, And cabin in a cave. Id.

Come from marble bowers, many times the gay

harbour of anguish,

Unto a silly cabin, though weak, yet stronger against

woes. Sidney.

Men may not expect the use of many cabins, and

safety at once, in the sea service. Raleigh.

The nice morn, on the Indian steep,

From her cabined loophole peep. Milton.

Neither should that odious custom be allowed, of

staying off the green surface of the ground, to cover

their cabini, or make up their ditches. Swift.

Whose wit at best was next to none, And now that little next is gone ; Against the court is always blabbing, And calls the senate-house a cabin. Id.

The chessboard, we say, is in the same place it was, if it remain in the same part of the cabin, though the ship sails all the while. Locke.

CABINS, in ships, are the apartments where the officers usually reside. There are many of these in a large ship ; the principal of which is de- signed for the commander. In ships of the line, this chamber is furnished with an open gallery in the ship's stern, and a little gallery on each quarter. The apartments where the inferior offi- cers, or common sailors, sleep and mess are usually called births. The bed places for the sailors at the ship's side in merchantmen are also called cabins.

CABINET, v. & n. \ Fr. cabinet ; Ital. ga CAB'INET-COUNCIL, (binetto ; diminutive of CAB'INF.T-MAKER, i cabin. A small cham- CAB'INET-SECRETS, n. 3 her; a repository; a caest of drawers. A cabinet-council is a

select

choice number of persons, who hold their con- sultations in a place of seclusion from otheis. Hearken awhile in the green cabinet,

The laurel song of careful Colinet. Spenttr.

The doctrine of Italy, and practice of France, in some kings' times, hath introduced cabinet-council.*

Bacvn,

At both corners of the farther side, let there be two delicate or rich cabinets, daintily paved, richly hanged, glazed with crystalline glass, and a rich cu- pola in the midst, and all other elegancy that may be thought on. Id.

Who sees a soul in such a body set, Might love the treasure for the cabinet. Ben Jtmson.

We cannot discourse of the secret, but by describing our duty ; but so much duty must needs open a cabi- net of mysteries. Taylor.

You began in the cabinet what you afterwards practised in the camp. Dryden.

Thy breast hath ever been the cabinet

Where I have locked my secrets. Denham.

From the highest to the lowest it is universally read ; from the cabinet-council to the nursery.

Gay to Swift.

The root of an old white thorn will make very fine boxes and combs ; so that they would be of great use for the cabinet-makers, as well as the turners, and others. Mortimer.

CABINET is also used in speaking of the more select and secret councils of a prince or adminis- tration. Thus we say, the secrets, the intrigues of the cabinet. To avoid the inconveniences of a numerous council, some of the despotic princes of Europe first introduced cabinet councils. King Charles 1. is charged with first establishing this usage in England. Besides his privy council, that prince erected a kind of cabinet council, or junto, under the denomination of a council of state ; composed of archbishop Laud, the earl of Strafford, and lord Cottington, with the se- cretaries of State. Yet some

pretend to find the substance of a cabinet council of much greater antiquity, and even allowed by parliament, who anciently settled a quorum of persons most con- fided in, without whose presence no arduous matter was to be determined ; giving them power to act without consulting the rest of the council.

As long ago as the 28th of Henry III. a char- ter was passed in affirmance of the ancient rights of the kingdom ; which provided that four great men, chosen by common consent, who were to be conservators of the kingdom, among other things, should see to the disposing of monies given by parliament, and appropriated to particu- lar uses ; and parliament were to be summoned as they should advise. Of these four any two made a quorum ; and generally the chief justice of England, and chancellor, were of the number of conservators. In the first of Henry VI. the parliament provides, that the quorum for the privy council be six or four at least ; and that, in all weighty considerations, the dukes of Bedford and Gloucester, the king's uncles, should be present ; which seems to be erecting a cabinet by law.

CABIRI, a term in the theology of the an- cient Pagans, signifying great and powerful gods ; being a name given to the gods of Samothracia. They were also worshipped in other parts of Greece, as Leinnos and Thebes, where the cabi-

Heb. khc.be I ;

TIB were celebrated in honpr of them ; these gods are said to be four in number ; viz. Axieros, Axiocersa, Axiocersus, and Casmilus. Their festivals were celebrated in Thebes and Lemnos, but especially in Samothracia, an island conse- crated to the Cabiri. All who were initiated into the mysteries of these gods, were thought to be secured thereby from storms at sea, and all other dangers. The obscenitieswhich prevailed at the celebration have obliged the authors of every country to pass over them in silence, and say that it was unlawful to reveal them. These deities are often confounded with the Corybantes, Ana- ces, Dioscuri, &c., and according to Herodotus, Vulcan was their father. This author mentions the sacrilege which Cambyses committed in en- tering their temple, and turning to ridicule their sacred mysteries. They were supposed to pre- side over metals.

These deities are repre- sented on medals, as in the annexed figure of a man with a hammer in his right hand, and in his left an anvil, or something resembling.

CA'BLE, re. 1 Ara. kabl ;

CA'BLED, adj.) ica/iiXoc ; Goth, kadel ; Swed.

and Belg. kabel ; Fr. cable. A thick rope for an

anchor.

What though the mast be now blown overboard, The cable broke, the holding anchor lost, And half our sailors swallowed in the flood, Yet lives our pilot still. Shakspeare.

The length of the cable is the life of the ship in all extremities ; and the reason is, because it makes so many bendings and waves, as the ship, riding at that length, is not able to stretch it ; and nothing breaks that is not stretched. Raleigh.

The cables crack ; the sailors' fearful cries Ascend ; and sable night involves the skies. Dryden.

Self-flattered, unexperienced, high in hope, Wben young, with sanguine cheer, and streamers gay, We cut our cable, launch into the world, And fondly dream each wind and star our friend.

Young's Night Thought. Should we at least be driven by dire decree*

Too near the fatal margin of the sea,

The hull dismasted there awhile may ride,

With lengthened cables, on the raging tide.

Falconer's Shipwreck.

Hoarse o'er her side the rustling cable rings ; The sails are furled ; and, anchoring, round she swings; And gazing loiterers on the land, discern Her boat descending from the latticed stern.

Byron's Corsair.

CABLE, the long thick rope, serving to hold ships firm at anchor, and to tow vessels in large xivers. In Europe, the cables are commonly made of hemp ; in Africa, of long straw or rushes called bass ; and in Asia, of a

peculiar kind of Indian grass. Every cable, of whatsoever thick- ness it be, is composed of three strands ; every strand of three ropes; and every rope of three twists ; the twist is made of more or less threads, according as the cable is to be thicker or thinner. There are some cables, however, manufactured of four strands ; which are chiefly the production of Italy and Provence. In the manufacture of cables after the rooes are made, they use sticks.

which they pass first between the ropes of which they make the strands, and afterwards between the strands of which they make the cable, to the end that they may all twist the better, and be more regularly wound together ; and also, to pre- vent them from entwining or entangling, they hang, at the end of each strand and of each rope, a weight of lead or of stone. There is no mer- chant-ship, however weak, but has at least three cables ; viz., the chief cable, or cable of the sheet anchor, a common cable, and a smaller one. All cables ought to be 120 fathoms in length; for which purpose the threads or yarns must be 180 fathoms, as they are diminished one- third in length by twisting. Besides this length, it is necessary to splice at least two cables toge- ther, in order to double the length when a ship is obliged to anchor in deep water. For although it is not common to anchor in a greater depth than forty fathoms, yet if there is only one cable, and the ship rides in a stormy and tempestuous sea, the anchor will of necessity sustain the weight and violent jerking of the ship, in a di- rection too perpendicular. By this effort it will unavoidably be loosened from its hold ; whereas it is evident, that if the cable, by its great length, were to draw more horizontally on the anchor, it would bear a much greater force. A long cable is not so apt to break as a short one ; because it will bear a great deal more stretching before it comes to the greatest strain ; it, there- fore, resembles a sort of spring, which may be very easily extended, and afterwards recovers its first state, as soon as the force which extended it is removed ; and by increasing the radius of mo- tion, the arch grows nearer to a right line, and consequently the change of place is made less sensible.

The number of threads each cable is composed of, is always proportioned to its length and thickness ; and it is by this number of threads that its weight and value are ascertained : thus, a cable of three inches circumference, or one inch diameter, ought to consist of forty-eight or- dinary threads, and to weigh 192 pounds; and on this foundation is calculated the following table, very useful for all people engaged in ma- rine commerce, who fit out merchantmen on their own account, or freight them on the account of others :

Weight. 192 pounds.

308 484 696 952 1244 1572 1940 2392 2796 3284 3808 4372 4976

5616 6296 7016 7772

Circumf.

Threads.

3 inches

48

4

77

5

121

6

174

7

238

8

311

9

393

10

485

11

598

12

699

13

821

14

952

15

1093

16

1244

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1404

18

1574

19

1754

20

1943

CAB

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CAB

CAKIE, SHEET ANCHOR, is the greatest cable belonging to a ship.

CABLE, STREAM, a hauser or rope, sometimes smaller than the bowers, and used to moor the ship in a river or haven, sheltered from the wind and sea, &c.

To serve or plait the CABLE, is to bind it about with ropes, clouts, &c. to keep it from galling in the hawse. To splice the cable, is to make two pieces fast together by working the several threads of the rope the one into the other. Pay more Cable, is to let more out of the ship. Pay cheap the Cable, is to hand it out apace. Veer more Cable, is to let more out, &c.

CABLED, CABLEE, in heraldry, a term ap- plied to a cross formed of the two ends of a ship's cable ; sometimes also to a cross covered O'-er with rounds of rope ; more properly called a cross corded.

CABO, or CAPO D'!STRIA. See CAPO D'ISTRIA.

CABOCHED, in heraldry, is when the heads of beasts are borne without any part of the neck, full faced.

CABOLETTO, in commerce, a coin of the republic of Genoa, worth about 3d. of our money.

CABOT (Sebastian), the first discoverer of the continent of America, (see AMERICA, sect. 4.\ was the son of John Cabot, a Venetian. He was born at Bristol in 1 477 ; and, before he was twenty years of age, made several voyages. The first of any consequence seems to have been with his father, who had a commission from Henry VII. for the discovery of a north-west passage to India. They sailed in the spring 1497 : and pro- ceeding to the north-west, they discovered land, which for that reason they called Prima-vista, or Newfoundland. Another smaller island they called St. John, from its being discovered on the feast of St. John Baptist ; after which they sailed along the coast of the American continent, as far as Cape Florida, and then returned with a good cargo, and three Indians to England. Thus the honor of the discovery of America is due to Ca- bot, not to Columbus, who did not begin his voyage till a year after that of Cabot. Sebastian, in 1517, sailed for the East Indies, but, after touching on the coast of Brasil, he shaped his course to Hispaniola and Porto Rico, where he carried on some trade, and returned to England. He soon after entered into the service of Spain, where he was made pilot-major, and entrusted with reviewing all projects for discoveries, which were then very numerous. His great capacity and approved integrity induced many eminent merchants to treat with him about a voyage by the newly discovered Straits of Magellan to the Mo- i lucc-s. He therefore sailed in 1525, first to the Canaries, then to the Cape Verd islands; thence to St. Augustine and the island of Patos ; when some of his people beginning to be mutinous, and refusing to pass through the Straits, he laid aside the design of sailing for the Moluccas ; left some of the principal mutineers upon a desert island"; and, sailing up the rivers of Plata and Paraguay, discovered, and built forts in, a large iract of fine country, that produced gold, silver, and other rich commodities. He thence des- patched messengers to Spain for a supply of pro-

visions, ammunition, goods for trade, and a re- cruit of men ; but his request not being readily complied with, after staying five years in America, he then returned home ; where he met with a cold reception, the merchants being displeased at his not having pursued his voyage to the Mo- luccas,

while his treatment of the mutineers had given umbrage at court. Hence he returned to England ; and being introduced to the duke of Somerset, then Lord Protector, a new office was erected for him ; he was made governor of the mystery and company of the merchant adven- turers for the discovery of regions, dominions, islands, and places unknown ; a pension was granted him, by letters patent of Ā£166. 13. 4d. per annum ; and he was consulted on all affairs relative to trade. In 1522, by his advice, the court fitted out some ships for the discovery of the northern parts of the world. This produced the first voyage the English made to Russia, and the beginning of that commerce which has ever since been carried on between the two nations. The Russia Company was now founded by a charter granted by Philip and Mary ; and of this company Sebastian was appointed governor for life. He is said to be the first who took notice of the variation of the needle, and who published a map of the world. The exact time of his death is not known, but he lived to be above seventy years of age.*

CABRAL (Pedro Alvares), a Portuguese navigator, who commanded the second fleet which was sent to the Indies in 1500. He received the royal standard from the hands of the king, in the church of Belem, and the bishop of Viseu placed on his head a hat which had been blessed by the pope. In this voyage he was driven on that part of the coast of America now called Brasil, where he landed, and called the spot Santa Cruz. Thence he sailed to Sofala, on the coast of Africa, and next to Calicut, where he entered into a treaty with the zamorin ; and in 1501 returned to Portugal, richly laden. He wrote an account of his voyage, which was pub- lished at Venice.

CABRILLA, in ichthyology, a species of perca, found in the Mediterranean sea, the body of which is marked with four longitudinal san- guineous bands.

CABRUSI, in the writings of the ancients, a word frequently used to express Cyprian, or coming from the island of Cyprus. The ancient Greeks had almost all their vitriols and vitriolic minerals from this island ; they therefore called these cabrusi, without any addition. It is pro- bable that our word copperas, the common name of green vitriol, is derived from this word.

CABUIA, a West Indian species of hemp, produced in Panama, from a plant resembling the chardonor iris; when ripe they lay it to steep in water, and after drying it, beat it with wooden mallets till nothing but the hemp remains, which they afterwards spin, and make thread and ropes of it; the former of which is so hard and tough, that with it they saw iron, by fitting it on a box, and laying a little sand over the metal as the work proceeds.

CABUL, or GABOUL, a city of Asia, and capi- tal of the province of Cabulistan. It lies on the

frontiers of Great Bukharia, on the south side of the mountains which divide the former territories of the Mogul from that part of Great Tartary. It was one of the finest places in that part of the world ; large, rich, and very populous. Being considered as the key of the great Mogul's dominions on thatside, great care was taken to keep its fortifica- tions in repair, arid a numerous garrison was main- tained for its security. It lies on the road be- tween Samarcand and Lahore ; and is much fre- quented by the Tartars, Persians, and Indians. The Usbec Tartars drive there a great trade in slaves and horses, of which it is said that no fewer than 60,000 are sold annually. The Per- sians bring black cattle and sheep, which ren- ders provisions very cheap. The city stands on the river Attock, which falls into the Indus, and affords a speedy passage for all the rich commo- dities in the country behind it: which, when brought to Cabul, are exchanged for slaves and horses, and conveyed by merchants of different countries to all parts of the world. There has been a small'Armenian colony here since the time of Nadir Shah, and among the most industrious of its inhabitants are the Hindoos. Cabul has several fine palaces and spacious caravanseras ; and lies 680 miles north-west of Delhi. Long. 68Ā° 58′ E., lat.34Ā°36'N.

CABUL, or CAUBDL. See CAUBUL.

CABURE, in ornithology, a small Brasilian bird of the owl kind ; very beautiful, and easily tamed. It is brown, variegated with white, and is feathered down to the toes. The Brasilians keep it tame for its diverting tricks; it will play with people like a monkey, and is perfectly harmless.

CA'BURNS, n. s. Small ropes used in ships.

CACAGOGA, in ancient medicinal writers, a word used for certain ointments intended for rub- bing on the fundament to procure stools. The most common of these was made of alum mixed with honey, and boiled till the whole was of a tawney color.

CAC ALIA, in botany, alpine colt's foot; a genus of the order polygamia aequalis, and class syngenesia. The receptacle is naked; the pap- pus hairy ; the calyx cylindrical, oblong and caly- culated, or having a small calyx of very short scales only at the base. There are forty species. The principal are C. ficoides, a native of the Cape of Good Hope. It rises with strong round stalks to the height of seven or eight feet, woody at bottom, but soft and succulent upwards, send- ing out many irregular branches, garnished more

than half their length with thick, taper, succulent leaves, a little compressed on two sides, ending in points, covered with a whitish glaucous farina, which comes off when handled. These, .vhen broken, emit a strong odor of turpentine, and are full of a viscous juice; at the extremity of the branches, the flowers are produced in small umbels; they are white, tubulous, and cut into five parts at the top. The leaves are pickled by the French, who esteem them much. They have a method of preserving the white farina upon them, which adds greatly to the beauty of the pickle when brought to table. C. kleinia, with a compound shrubby stalk. It grows natu- rally in the Canary Islands, but has long been cultivated in the English gardens. It rises with

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a thick fleshy stem, divided at certain distances into so many joints. Each of these divisions swell much larger in the middle than at each end ; and the stalks divide into many irregular branches of the same form, which, toward their extiemities, are garnished with long, narrow, spear-shaped leaves of a glaucous color, standing all round the stalks without order. As they fall off, they leave a scar at the place, which always remains on the branches. The flowers are produced in large clusters at the extremity of the branches, which are tubulous, and of a faint carnation color. They appear in August and September, but continue great part of October, and are not succeeded by seeds in this country. This plant has been called the cabbage tree, from the resem- blance which the stalk of it has to the cabbage : others have entitled it the carnation tree, from the shape of the leaves and the color of the flowers. C. suaveolens, with a herbaceous stalk, a native of North America. It has a perennial creeping root, which sends out many stalks, gar- nished with triangular spear-shaped leaves, sawed on their edges, of a pale green on their under side, but a deep shining green above, placed alternately. The stalks rise to seven or eight feet, and are terminated by umbels of white flowers, which are succeeded by oblong seeds covered with down. It flowers in August, and the seeds ripen in October. The stalks decay in autumn, and new ones rise in spring. This plant multiplies greatly by its spreading roots, as well as by the seeds, which are spread to a great distance by the wind, their down greatly assisting their conveyance. The roots cast out of Chelsea garden, being carried by the tide to a great distance, have fixed themselves to the banks of the river, and increased so much, that in a few years this species may probably appear as a native of England.

CACALL5L,, in entomology, a species of chry- somela; of a greenish color, with a longitudinal blue streak on the wing-cases and blue suture ; wings red. Inhabiting Austria.

CACAO, in botany. See THEOBROMA.

CACERES, an ancient town of Spain, in Estremadura, noted for the exceeding fine wool of the neighbourhood. It has four churches and seven religious houses, with a population of about 7000. It is thirty miles south-east of Alacantara, and thirty-five south-west of Placen- tia. Between this town and Brocas, there is a wood, where the allies defeated the rear-guard of the duke of Berwick, April 7th, 1706.

CACHAO, KACHO, KECHO, or BACKHINK, a city of Tonquin, the capital of that kingdom, and formerly the residence of the sovereigns of that country. It is situated on the west side of the Songkoi, about eighty miles from the sea. The principal streets are wide, and paved with bricks and small stones; but intermediate spaces are left unpaved for the passage of elephants and other beasts of burden. The whole town, which is large and straggling, is surrounded by a bam- boo hedge. The houses are a few of them con- structed of brick, but the larger proportion of mud and timber, thatched with straw, leaves, or reeds. The royal palace is several miles in cir- cuit, and surrounded y high walls. It contains

many extensive public and other buildings of handsome appearance, and the place is celebrated for its excellent police. Cachao is a place of great resort. The river is generally covered with the vessels of neighbouring nations, equaling in numbers, it is said, many of the most frequented European ports. It exports gold, beautiful silks of its own manufacture, and the finest lackered ware of the east. The imports are arms, chintz, long cloths, pepper, &c. Both the English and Dutch formerly had commercial establishments here, which have been withdrawn. On the oppo- site side of the river is Campez, a town of the Chinese. Cachao was set on fire by some incen- diaries discharging arrows on the roofs in the middle of the eighteenth century, and immense damage ensued. Fires are now prohibited during the night, and permitted only during some hours of the day, under severe fines. It is supposed to contain 40,000 souls.

CACHAR, a province of the Burmhan em- pire, lying in 25Ā° of N. lat., between Bengal and Ava. A communication exists by water to the centre of the province. Through Assam, and by land, the British intercourse with it is principally carried on from Silhet. The inhabi- .ants are Hindoos, generally, of the Katri caste. The country is fertile, buj; overgrown in parts with jungle, and thinly peopled. In 1774 Oun- daboo, the general of the Burmese, marched against the rajah of Cachar; who possessed the

sovereignty of a productive though mountainous country, north-west of Munipoor, and advanced within three days march of Cospoor. Here he was opposed by Chawal, the rajah, leagued with the Gossain rajah; and his troops being attacked by the hill fever were all dispersed or cut off. A second expedition of the Burmese was more suc- cessful ; and compelled the rajah to consent to pay, besides a sum of money, a maiden of the royal blood to the king of Ava, and a tree with the roots bound in the native clay, as an unequi- vocal token of homage.

CACHECTICAL, adj.) From cachexy;

CACHEC'TICK. \ having an ill habit

ā¢Ā»f body ; showing an ill habit.

Young and florid blood, rather than vapid and aachectical. Arbuthnot on Air.

The crude chyle swims in the blood, and appears as milk in the blood, of some persons who are cachectic.

Flayer.

CACHEF, or CACHEEF, in the Turkish affairs, the governor of a city, town, or province of Egypt. The title is also given to the comman- ders of little flying armies, intended to keep the Arabs in obedience.

CACHEFTECK, the government of acachef. Egypt is divided by the Turks into thirty-nine of these governments.

CACHET, LETTRES DE, private letters or mandates, issued by the French monarchs under the royal signet, before the revolution, for the apprehension of individuals, who were obnoxi- ous to the court, and who, in such cases, were generally lodged in the bastile %vithcnt trial, and very often never more heard of. The late cele- brated Mirabeau, who was himself many years a sufferer under this tyranny, wrote a learned and

spirited treatise, in four volumes, 8vo. on Lettrei de Cachet.

CAC'HEXY, n. s. Kaxt&a; a general word to express a great variety of symptoms : most commonly it denotes such a distemperature ot the humors, as hinders nutrition, and weakens the vital and animal functions; proceeding from weakness of the fibres, and an abuse of the non- naturals, and often from severe and acate dis- tempers. In Cullen's Nosology, cachexiae forms a class of diseases, which includes three orders, namely, m'arcores, intumescentiae, and impete- gines.

CACHINNATION, n. s. Lat. cachinnat io ; a loud laughter.

CACHINNATIO, in medicine, an hysterical or maniacal tendency to immoderate laughter.

CACHLEX, in natural history, a name used by some authors for the small pebbles found on the sea and river shores, which being heated red hot, and quenched in whey, are said to have an astringent virtue.

CACHOLONG; a variety of quartz. It is opaque, dull on the surface, internally, of a pearly lustre, brittle, with a flat conchoidal frac- ture, and harder than opal. Its color is milk- white, greyish, white, or yellowish. It is not fusible before the blow-pipe. Specific gravity 2-2. It is found in detached masses on the river Cach in Bukharia, in the trap rocks of Iceland, in Greenland, and the Feroe islands. Brogniart states that this mineral is also found in the vici- nity of Paris, in the cavities of a calcareous brec- cia, sometimes hard, with a shining fracture, at other times resembling chalk.

CACIIRYS, in botany, a genus of the dygi- nia order, and pentandria class of plants ; natural order forty-fifth, umbellatae. The fruit is sub- ovate, angled, and cork or spongy ringed. Spe- cies seven; chiefly natives of Sicily, and the Barbary coast. The principal species are, 1. C. Hungaria, with a plain fungous channelled seed ;

2. C. libanotis, with smooth furrowed seeds ;

3. C. linearis, with plain channelled fruit: 4. C. Cretica, with double winged leaves ; 5. C.odon- talgica ; with leaves doubly pinnate, and lance- linear, pubescent leaflets; seeds quite smooth. The root is aromatic, and employed for the tooth- ache, instead of that of the pyretherum, whence its specific name. The last two are natives of Siberia.

CACHRYS, or CANCHRYS, in ancient botany, de- noted a scaly tuft, growing like a katkin on the oak, beech, pine, &c. or, according to others, an unseasonable kind of bud, appearing either in spring, or autumn, and which, after the winter is over, spreads or shoots into branches. The word is sometimes also used for the seed of rose- mary, or even the plant itself; sometimes for barley roasted in a furnace, to render it more easy to grind.

CACIIRYS, in entomology, a species of papilio hesperia, with entire wings of a yellowish color, with a brown border spotted with white. Found at Cayenne.

CACHUNDE, a medicine, highly celebrated among the Chinese and Indians, made of several aromatic ingredients, perfumes, medicinal earth,

and precious stones. They make the whole into

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a stiff paste, and form out of it several figures, according to their fancy, which are dried for use ; these are principally used in the East Indies, but are sometimes brought over to Portugal. In China the principal persons usually carry a small

Siece in their mouths, which is a continued cor- ial, and gives their breath a very sweet smell. It is a highly valuable medicine, also, in all ner- vous complaints ; and is esteemed a prolonger of life, and a provocative to venery, the two great intentions of most of the medicines in use in the East.

CACHYMIA, in metallurgy, a term used by Paracelsus for an imperfect metalline ore.

CACIQUES, a denomination anciently given by the original Americans to governors of pro- vinces and generals of armies. It was also ap- plied to the sovereigns of the five great native kingdoms of the island of Hispaniola, and also to the sovereigns in the other islands. Their power over the subject, which was hereditary, was absolute, and they were regarded with almost idolatrous veneration ; there were also subordi- nate chieftains, or princes, who were tributaries to the sovereign of each district.

CACK'EREL, n. s. A fish, said to make those who eat it laxative.

CACK'LE, v. & n. } Swed . kackla ; Teut.

CACK'LER, sklcheln; Bel. kaeckelen.

CACK'LTNG, n. 3 The noise of a hen after laying her egg ; to cry like a cock or hen, or a #oose ; a cackler is one who noisily tells his own and others affairs; a tell-tale; a tatler. And for these water-foulis tho began

The gose to speke ; and in her cahelynge,

She said : Pece now, take kepe every man,

And herken whiche reson I shal forth bring ;

My witte is sharpe, I love no tarying j

I say, I rede him, though he were my brother,

But she wil love him, let him love another.

Chaucer's Assemble of Foules.

The nightingale, if she should sing by day, When every goose is cackling, would be thought No better a musician than the wren. Sftakspeare.

The silver goose before the shining gate There flew, and by her cackle saved the state. ,

Dryrlen.

The trembling widow, and her daughters twain, This woeful cackling cry with horrour heard Of those distracted damsels in the yard. Id.

Nic grinned, cackled, and laughed, till he was like to kill himself, and fell a frisking and dancing about the room. Arbuthnot. '

Thus vaunting cross the mead she stalks,

The cackling brood attend her walks.

Moore't Fables.

CACOCHY'MICAL, adj. > From cacochy-] my;

my; havirtg the humors corrupted.

It will prove very advantageous, if only cacochy- mick, to clarify his blood with a laxative.

Harvey on Consumptions.

If the body be cacochymical, the tumours are apt to degenerate into very venomous and malignant ab- scesses. Wiseman.

The ancient writers distinguished putrid fevers, by putrefaction of blood, choler, melancholy, and phlegm ; and this is to he explained by an effervescence hap- pening in a particular cacochymical blood.

Flayer on the Humoun.

CAC'OCIIYMY, n. s. KaKoXvpia; a depra- vation of the humors from a sound state, to what the physicians call by a general name of a ca- cochymy. Spots and discolorations of the skin, are signs of weak fibres ; for

the lateral vessels, which lie out of the road of circulation, let gross humors pass, which could not, if the vessels had their due degree of stricture.

Strong beer, a liquor that attributes the half of its ill qualities to the hops, consisting of an acrimonious fiery nature, sets the blood, upon the least cacochymy, into an orgasmus. Harvey

CACODE'MON, 1 Gr. ica/coc, evil; and CACODEMO'NIAL, j Salpiav, a demon. An evil or mischievous demon or spirit.

Nor was the dog a cacodaemon, But a true dog, that would show tricks For the' emperor, and leap o'er sticks.

Butler's Hudibras, part ii. canto 3.

CACODES, in ancient medical writers, a name given to matter discharged from the hu- man body, with an ill smell.

CACONGO, a small state of western Africa, bounded on the south by the Zaire, which sepa- rates it from Congo, and on the north by Loango. The country is mountainous, but fertile, and the climate less humid and hurtful to Europeans than that of Loango. The government is a limited monarchy ; and on the death of the sove- reign, the most powerful or popular chief ascends the throne. Justice is administered by him in person, beginning usually at six in the morning, and continuing till eleven in the forenoon. He is said to solace himself at every judgment he delivers, with a draught of palm wine, without which the sentence would not be legal. All the principal inhabitants show a fondness for Euro- pean goods and customs, and many of them have their apartments furnished in the European style, with beds, chairs, plate, &c. The mambouc of Malemba, when visited by Degrandpre, had a cook whom he had sent to be trained in France. The chief port is Malemba, which is situate fifty miles south of Loango.

CACOORS, in botany, a species of mimosa. Its seeds have been thrown by the sea on the Hebrides and Orkneys.

CACOPHONIA; from icaicoc, evil, and furtj, voice, a bad sound of words ; in grammar and rhetoric, the meeting of two letters, or syllables, which yield an uncouth and disagreeable sound.

These things shall lie by, till you come to carp at them, and alter rhimes, grammar, triplets, and caco- phonies of all kinds. Pope to Swift.

CACTI, in entomology, a species of coccinella with black wing-sheaths, and two red spots. Found on the cactus grandiflora of America. Also the name of a species of coccus.

CACTUS, in botany, a genus of the monogo- gynia order, and icosandria class of plants ; natural order thirteenth, succulentae : CAL. is monophyllous, superior, imbricated; COR. poly- petalous ; the fruit an uninocular, polyspermous berry. This genus has been well subdivided into 1. those of a roundish form, .generally- called melon-thistles ; 2. creeping with lateral roots, commonly named cereuses; 3. erect, supporting themselves, and called torch- thistles ;

4. compressed, with proliferous joints. Prickly pears, or Indian figs- The melon-thistles are plants of a singular structure, but especially the larger kinds of them ; which appear like a large, fleshy, green melon, with deep ribs, set all over with strong sharp thorns ; and, when the plants are cut through the middle, their inside is a soft pale-green fleshy substance, very full of moisture ; the taste of which is- agreeably acid. There are twenty-eight species, all natives of the West Indies. The three following are the most remarkable : viz. 1. C. tuna, proliferous jointed ; the joints ovate-oblong; spines subulate, in clus- ters : flower large and yellow : a prickly pear ; 2. C. grandiflora, one of the creeping cereuses. The flower of this species, though very short- lived, is said to be as grand and beautiful as any in the vegetable system : it begins to open in the evening about seven o'clock, and fades about four in the morning ; so that the same flower only continues in perfection about six hours. The calyx when expanded is about a foot in diameter, of a splendid yellow within, and a dark brown without ; the petals are many, and of a pure white ; and the great number of recurved stamina, surrounding the style in the centre of the flower, make a grand appearance, to which may be added the beautiful scent which perfumes the air to a considerable distance. It flowers in July. 3. C. opuntia ; the prickly leaves of this plant abound with a mucilaginous matter, which is esteemed in its native countries an emollient, m the form of poultice.

CACULE, in the materia medica, a name given by Avicenna, Serapion, and all the other Arabian writers, to the cardamom seeds. They distinguish two kinds of this fruit, a larger, and a smaller. The larger is the grain of paradise, and the smaller the common cardamom.

CACU'MINATE,u. a. Lat. cacumino; to make sharp or pyramidal.

CACUS, in fabulous history, the son of Vul- can, an Italian shepherd upon mount Aventine. As Hercules was driving home the herd of king Geryon,

whom he had slain, Cacus robbed him of some of his oxen, which he drew backward into his den lest they should be discovered, by their traces. Hercules at last finding them out by their lowing, killed Cacus with his club. The death of this monster is the subject of a fine episode in Virgil's / Eneid. He was said to have been of prodigious bulk, half man, half satyr, and to have had three heads.

CACUS, in entomology, an Indian species of sphinx, having indented black wings, marked with three light streaks; posterior pair striated.

Ā£AI? 7 A water insect, called the case

CAD DIS. >

/-. / i worm.

CA DEW. y

He loves the mayfly, which is bred of the cod- worm, or caddis ; and these make the trout bold and lusty. Waltuns Angler.

CADARI, or K ADARI, from -np,cadara, Arab. Ā» v. power ; a sect of Mahommedans, who assert free-will, and deny all absolute predestination. The author of this sect was Mabed ben Kaled Al Gihoni, who suffered martyrdom for it.

C ADA'VER, (Lat. cadaver, from cado ;

*CADAVEROUS, adj. * to fall, or fallen; a dead*

body ; having the qualities ant. appearance of a corpse.

In vain do they scruple to approach the dead, who liviugly are cadaverous, for fear of any outward pollu- tion, whose temper pollutes themselves.

Browne't Vulgar Errourt.

The urine, long detained in the bladder, as well as glass, will grow red, fretid, cadaverous, and alkaline. The case is the same with the stagnant waters of hy- dropical persons. Arbuthnot on Aliment.*

Since, whilst a man is truly and properly said to live, many affections belong to his corporeal part, or are performed in it, or by it, that make this automa- ton called his body, much, and very advantageously differing from a mere cadaver.

Boyle't Christian Virtuoso, vol. vi. p. 748.

But scare away the vultures for an hour j The scent cadaverous (for, oh ! how rank The stench of profligates !) soon lures them back.

Young. On Public Affairs.

CAD'DIS, Ā«. This word is used in Erse for the variegated cloths of the Highlanders. It is also a kind of ferret or worsted lace of which garters were formerly made, Caddis garter is one of the epithets bestowed by prince Henry on the landlord. ā 1 Henry IV. ii. 4.

He hath ribbons of all the colours of the rainbow ; inkles, caddises, cambricks, lawns ; why he sings them over as if they were gods and goddesses. Shakujieare.

CADE' v. & 7i. > Old. Fr. coder, cadeler ;

CADE', adj. $ Ital. caudeare, codeare, from Lat. cauda, to go after ; and like Lat. seauor, to cherish ; Fr. cadeler, to make ornamental tails to capital letters, signified afterwards to orna- ment ; and thus cadeau was a tail, a flourish, a treat, and a suite. Cade, the substantive, nadof ; Lat. cadus; Ital. cado, a small cask or barrel; the adjective is from Fr. cadeler, which signifies tame, soft, delicate, as a cade lamb, a lamb bred at home. Thus the verb and adjective agree ; for to cade is to follow, attend, cherish ; to breed up tenderly.

We, John Cade, so termed of our tupposed father. ā Or rather of stealing a. cade of herrings. Shaktpeare.

Soon as thy liquor from the narrow cells Of close pressed husks is freed, thou must refrain Thy thirsty soul ; let none persuade to broach Thy thick, unwholesome, undigested cadet. Philips.

CADE (Jack), a native of England (from which place he had been obliged to fly for his crimes), who, heading the Kentish men, who were then in commotion, drove the court from London, and took possession of the capital. Having seized and beheaded Lord Say and Sele, late high trea- surer of England, and his son-in-law Sir James Cromer, sheriff of Kent, they proceeded to pillage the city ; but they were soon driven out of it, and, failing in their attempts to repossess it, they agreed to a short truce. An amnesty being pro- claimed to all who should return home, his fol- lowers fell off in great numbers. Cade first fled to Queenborough, but being refused admittance put on a disguise, and 'eft his followers. A pro- clamation was immediately published, offering a reward of 1000 marks to Ā«ny who brought him in, dead or alive. He was discovered lurking in a garden at Hothfield, in Sussex, by Alexander Eden, a gentleman of Kent, and, making some resistance, was killed, and his body was to London.

CADE-OIL, in the materia medica, a name given to an oil much in use in some parts of France and Germany. The physicians have called it oleum cadae, or oleum de cada. This is sup- posed by some to be the pisselaeum of the an- cients, but improperly : it is made of the fruit of the oxycedrus, which is called by the people of those places cada.

CA'DENCE, v. &n.J Lat. cado, to fall;

CA'DENCY, >Fr. cadence; Ital. cu-

CA'DENT. J denza ; Span, cadencia.

To fall in sound; to any thing going down; de- clining ; to the gradual gentle fall in a measure of poetry or music. It is sometimes used for the general modulation of the voice.

And nalheless hath set thy wit, Althoughe in thy hed ful lite is, To make bokes, songes and dites, In rime or elles in cadence, As thou best canst, in reverence Of love and of his servauntes eke That have his service sought.

Chaucer's House of Fame. ā¢ Let it stamp wrinkles in her brow of youth, With cadent tears fret channels in her cheeks.

Shakspeare's King Lear.

The sliding, in the close or cadence, hath an agree- ment with the figure in rhetorick, which they call praeter expectatum j for there is pleasure even in being deceived. Bacon.

There be words not made with lungs, Sententious showers ! O let them fall ! Their cadence is rhetorical. Crashaw.

Hollow rocks retain

The sound of blustering winds, which all night long Had roused the sea, now with hoarse cadence lull Sea-faring men, o'erwatched. Milton.

Now was the sun in western cadence low From noon ; and gentle airs, due at their hours To fan the earth, now waked. Id.

The words, the versification, and all the other ele- gancies of sound, as

cadences, and turns of words upon the thought, perform exactly the same office both in dramatick and epick poetry. Dryden.

He hath a confused remembrance of words since he left the university ; he hath lost half their mean- ing, and puts them together with no regard, except to their cadence. Swift.

Accept this token, Carteret, of good-will, The voice of nature, undebased by skill, These parting numbers, cadenced by my grief, For thy loved sake, and for my own relief, If aught, alas ! thy absence may relieve, Now I am left, perhaps, through life to grieve.

Philips. To Lord Carteret.

It is very observable, that though the measure is the same in which the musical efforts of Fear, Anger, and Despair, are described, yet, by the variations of the cadence, the character and operation of each is strongly expressed.

Commentary on Collins' Ode on the Passions. If we would keep up the attention of the reader or hearer, if we would preserve vivacity and strength in our composition, we must be very attentive to vary our measures. This regards the distribulion of the members, as well as the cadence of the period.

Blair's Lectures.

CADENCE, in reading, from cadere, Lat. to fall, is a falling of the voice below the key-note at the close of every period. In reading, whether prose, or verse, a certain tone is assumed which

is called the key-note ; and in this tone the bulk of the words are sounded ; but this note is generalVy lowered towards the close of every sentence.

CADENCE, or REPOSE, in music, the termina- tion of an harmonical phrase on a repose, or on a perfect chord. See Music.

CADENCE DU DIABLE, the devil's cadence, a shake of an extraordinary effect : it is made on the violin, by beating the little finger on a note held by the third finger, whilst the two first exe- cute different notes upon the next string. Its invention is attributed to Tartini, who, as it is said, receiving a lesson from the devil in a dream, was taught to perform this cadence.

CA'DET, > Fr. cadet ; Ital. caudata, co-

CA'DETSHIP. \ data, cardeto, from Lat. cauda; Fr. queue, retinue, suite,

may have had the same origin with Lat. sequor and secundut. Its pri- mary application is to a younger brother, or to the youngest. It is now used to designate a volunteer in the army without a commission ; a follower. It is specially appropriated to young gentlemen sent out to India by the East India Company to seek their fortunes in the military profession.

Joseph was the youngest of the twelve, and David the eleventh son, and the cadet of Jesse.

Browne's Vulgar Errours.

CADET is a word naturalised in our language from the French. At Paris the cadets had an equal patrimony with the rest, before the revo- lution. At Caux, in Normandy, the custom was to leave all to the eldest, except a small portion to the cadets. In Spain it is usual for one of the cadets in great families to take the mother's name.

CADET, in military language, is a young gen- tleman who applies himself to the study of forti- fication, gunnery, &c. and who sometimes serves in the army, with or without pay, till a vacancy happens for his promotion. There is a company of gentlemen cadets maintained at Woolwich, at the king's expense, where they are taught all the sciences necessary to form a complete officer. Their number has lately been increased, and commissions are given to them when qualified. A cadet in the French service, did not receive any pay, but entered as a volunteer in a troop or company, for the specific purpose of becom- ing master of military tactics.

CADGE', v. ? Teut. kautser and kaupster, a

CADG'ER, n. 5 dealer are cognate with chap- man ; but Teut. ketsher, is a carrier. Thus a cadger is a higgler, a huckster, and seller of goods. Archdeacon Nares observes :

A round frame of wood, on which the cadgers or

sellers of hawks carried their birds for sale. See

Bailey : and cadger is also given, as meaning a

huckster, from which the familiar term codger is more

ā¢ likely to be formed, than from any foreign origin.

CADI, or CADEI, "Hp, or ˆKp, Arab. i. e. a judge ; in the Turkish empire, is generally taken for the judge of a town ; judges of provinces being distinguished by the appellation of moulas. There are numerous complaints

of the avarice, iniquity, and extortion of the Turkish cadis ; all justice is venal ; the people bribe the cadis, the cadis bribe the moulas, and the moulas the cadi-

leschers, and the cadileschers the mufti. Each cadi has his Serjeants, who summon persons to answer complaints. If the party summoned fails to appear at the hour appointed, sentence is passed in favor of his adversary. It is usually vain to appeal from the sentences of the cadi, as the cause is never heard a-new, but judgment is passed on the case as stated by the cadi. But the cadis are often cashiered and punished for flagrant injustice, with the bastinado and mulcts ; the law, however, does not allow them to be put to death. Constantinople has had cadis ever since 1390, when Bajazet I. obliged John Paleo- logus, emperor of the Greeks, to admit cadis to judge all controversies that occurred between the Greeks and the Turks settled there. In some countries of Africa the cadis are also judges of religious matters. Among the Moors, cadi is the denomination of their higher order of priests or doctors, answering to the rabbies among the Jews.

CADIA, in botany, a genus of plants of the class decandria, and order monogynia: CAL. five-cleft ; petals equal, inversely heart-shaped ; legume polyspermous. Species one only; a native of Arabia Felix, with solitary, axillary, one or two-flowered peduncles, of a purple hue.

CADILESCHER, or CADILESKER, a capital officer of justice among the Turks, answering to a chief justice among us. It is said that this authority was originally confined to the soldiery ; but that at present it extends to the determination of all kinds of law-suits ; only it is subject to appeals. There are but three cadileschers in all the grand seignior's territories, viz. 1st of Europe; 2d of Natolia; and 3d at Grand Cairo. This last is the most considerable. They have their seats in the divan next to the grand vizier.

CADIZ, a city and sea-port of Spain, in Andalusia, supposed to have been founded by the Phoenicians ; who settled a colony here, and gave it the name of Gadis, or Gadira. It was afterwards incorporated by the Roman empire, under the title of Municipium. It then fell into the hands of the Saracens, who held it till the middle of the thirteenth century, when it was recovered by the Spaniards. ā¢ In 1596 it was taken and plundered by the English, under the earl of Essex ; and the attempt was repeated by the duke of Ormond in 1702, but after landing his troops he found it impracticable to remain. During the dreadful earthquake which de- molished Lisbon on the 1st of November, 1755, the sea rising in an extraordinary manner,

over- flowed the country about Cadiz to a great extent, and by its leaving behind it wrecks, which ap- peared to have belonged to a temple, a tradition that the ancient city of Cadiz was once swal- lowed by an earthquake, appeared to be con- firmed. It is certain that the sea without the straits of Gibraltar has encroached upon the land. It is said, that in very calm weather, when the tide is low, the ruins of the old houses, and the remains of the temple of Hercules, may sometimes be discerned under the water. The view on entering the bay is exceedingly fine : on one extremity of the left point is the town of Rota, a little farther off appear the castle of Ca- talina and die neat city of Santa Maria ; at a

greater distance, on the lap of a lofty hill, stand? Medina ; nearer the sea the town of Puerto Reil and the arsenal of the Caraccas ; and on the ex- tremity of the right hand point the city of Cadiz. When this extensive bay is filled as it sometimes is with the vessels of different nations, displaying their respective colors amidst a forest of masts, the whiteness of the houses, their size and ap- parent cleanliness, the magnificence of the public edifices, and the neat and regular fortifications, form together a most striking assemblage of ob- jects. Opposite Cadiz the land has little ap- pearance of verdure ; and, except the vineyards near Santa Maria and Rota, all is brown and barren.

The best houses have brick- floors and stone ot marble stairs ; and, the windows generally looking into the patio or court, are private and retired ; and under the house is a cistern, which, in the rainy season, is filled with water. But good water is very scarce here : they usually prefer drinking that which is brought in casks, by boats, from St. Mary's. To cool this water, and render it fit for drinking, they filter it though small jars of porous clay, which renders it very pleasant and refreshing. The richer inhabitants use water cooled with ice, which is brought daily in large quantities, from the mountains of Ronda, and in this climate is a great luxury. Every dwelling is a sort of separate fort, and capable of military defence. The streets of this city are remarkably well paved, which may in some measure arise from there being few or no wheel-carriages to destroy the pavement. Coaches are not in use, and most of the streets are too narrow to admit them. Carts for the conveyance of goods are also almost unknown. The Gallegos, or na- tives of Gallicia, a strong and industrious race of men, perform those laborious occupations for which, in other cities, horses and carts are em- ployed. By the help of poles on their shoulders these men remove the heaviest articles with the utmost facility ; and being frugal, as well as in- dustrious, execute their tasks at a cheap rate. Every large town in Spain is filled with them : a man from any other part of Spain, following the occupation of a porter, is from custom called the Gallego, a name at present implying the oc- cupation as well as the country. The entrances of the houses are the receptacles of every kind of filth ; and, except in those

belonging to the houses of the richer class, who keep a Gallego sitting at the door, you are almost suffocated by stench before you reach the apartments. This city, placed on a peninsula, at the termina- tion of a long sandy isthmus, has no unoccupied ground, and can spare little for squares. The Plaza de St. Antonio is the only one and is very small ; but being surrounded with magnificent houses, and contrasted with the streets, all of which with one exception are very narrow), it has a good effect, and is the principal resort of the in- habitants. To the ladies it is the mall ; to the merchants the exchange ; and to the officers, the parade. The Alameyda, or public walk, is very beautiful ; always dry under foot, and furnished with good marble seats on both sides; being close to the sea, the trees do not thrive, and indeed afford very little shade: the cool sea

breeze is however enjoyed towards evening, and the walk is then crowded with good company. The whole of the ramparts that surround the city are also agreeable promenades, from which the sea breaking over the rocks, and the varied scenery of the bay, form a charming prospect.

Cadiz is defended by four forts, St. Sebastian, St. Catherine, Louis, and Matagorda ; the two last form the defence of the grand arsenal called La Caraccas, in which there are no less than three basins, and twelve docks, with ample supplies of naval stores. The bay is the grand rendezvous of the Spanish navy. An insulated tract at the mouth of the river Guadalete is called the island of Leon, and the city stands at the extremity of a long tongue of land, projecting in a north-west direction from this island, communicating with the rest of it by a road nearly five miles in length. It is surrounded, therefore, by the sea. on the north-east and west, which, with the nar- rowness of the land communication, prevents its capture by a military force, so long as its pos- sessors are masters of the sea. This was stri- kingly exemplified in the long blockade of 1810, 1811, and 1812.

Among the public buildings, the old cathedral is chiefly remarkable for its paintings, most of which are copies ; and its treasures, which con- sist of gems, many large silver candlesticks and lamps, and three custodias, one of which is con- structed of the finest silver, weighing fifty-one arobas, and another of solid gold. The church of the capuchins, the church of the oratory, and some of the convents, also contain some fine pictures. The best collections, however, are to be found in the possession of private individuals.

In the garden of the convent of the capuchins, Mr. Jacob saw a tree, which

he considered to be the only one of the kind in Europe ; it yields the resinous gum called Dragon's blood. He was informed that it came originally from the East Indies. A new cathedral has been erecting ever since 1722, and, if ever finished, will be a most magnificent edifice. But the labor of many years is as yet required to complete it. The chief expense has heen hitherto defrayed by the Consulado, or body of merchants, which have expended upwards of a million of dollars. It is of white marble, but towards the sea the saline par- ticles have changed it to a brown color ; the marble Corinthian pillars within are very hand- some ; the dome designed to occupy the centre is not begun, and the interior has been for many years a heap of rubbish. The asylum, or general work-house, maintains above 800 paupers of every nation, age, or sex, who are instructed and employed in useful arts. The boys are employed in manufacturing silk, linen, cotton, and printed calicoes; the girls in spinning, in needle-work, and in household business ; and the aged and infirm work according to their abilities and strength. It was greatly improved by count O'Reilly in 1785, but it degenerated after his resignation. It is a handsome building, with Doric columns, and a front of 260 feet ; has several courts ; and round the principal one is a gallery with sixteen columns of the Doric order. The other charitable institutions are ; the royal military hospital, which accommodates eighty

students, who are maintained and educated at the king's expense ; two hospitals for the sick, one set apart for each sex ; and an asylum for forty-seven widows, founded by a Turkish merchant.

The manufactures are few, being confined to ribbons and silk net-work ; but its commercial industry is great. It is unquestionably the prin- cipal trading port in the south of Spain, and was long the seat of the public board for American affairs : there has been here also an East India Company since 1782. The American trade was a monopoly until 1778 ; what it afterwards became, it now avails little to state: in 1791, which may be considered an average year, the imports from America amounted in gold and silver to Ā£5,500,000 sterling; the number of vessels arriving from that quarter were 176, and the total number of ships that entered the port was 1010. The imports from America, exclusive of gold and silver, were cocoa, tobacco, sugar, chocolate, vanilla, and all kinds of colonial pro- duce. The exports to that quarter, hardware, linen, (Silesian and Irish), and woollens, along with wine, oil, almonds, raisins, wax, cinnamon, paper, books, and medicines. But the changes and revolutions at home, and the loss of the colonies, have annihilated large portions of this trade. There are still, however, few great sea-ports in Europe that are not occasionally connected with Cadiz; and English, Irish, Italian, French, and Dutch merchants are es- tablished here. The common period for bills of exchange with England, Holland, Germany, and other foreign countries, except

France, is sixty days date. Smuggling is also a profitable, and by no means a decreasing pursuit. Linen is manufactured in the country adjoining in con- siderable quantity ; and an important branch of industry is carried on in the neighbourhood, in the preparation of salt. The pits extend from the bay of Puntal to Santa Maria, and belong to the Spanish government. Fishermen from all the maritime countries of Europe ; but especially from the neighbouring coasts of Normandy, are constantly coming in here for supplies of this article.

Cadiz has often been an object of attack by Great Britain. In 1596 the earl of Essex and the lord high admiral Howard pillaged this city : thirty years afterwards lord Wimbledon landed an army of 10,000 men here : but though it was supported by a fleet of eighty ships it re- embarked after storming a fort. In 1702 the duke of Ormond and Sir George Rooke attempted to seize the city for the archduke Charles of Austria, but failed in the object. We bombarded Cadiz in 1800 ; and from this port sailed the combined fleets of France and Spain in 1805, to be the final trophies of lord Nelson's fame in the battle of Trafalgar. Here, in 1808, the French fleet sur- rendered to the Spaniards ; and next year, when Seville fell into the hands of the French, Cadiz be- came the first seat of the central Junta, and of the Cortes. It now sustained the long French block- ade, from which it was not relieved until the battle of Salamanca. The civil government of Cadiz is in the hands of a king's lieutenant and commandant.; and a mayor and two alcades. It is a bishop's suffragan of Seville, and contains

twenty-eight parishes, and is the seat of a captain, general, and other officers of marine. The population has fluctuated of late years from 60,000 to 20,000. It is forty-five miles north- west of Gibraltar, and sixty south-west of Seville.

CADIZADELITES, a sect ofMahommedans, very like the ancient Stoics. They shun feasts and diversions, and affect an extraordinary gravity in all their actions ; they are continually talking of God, and some of them make a jum- ble of Christianity and Mahommedanism.

CADMEAN LETTERS, the ancient Greek or Ionic characters, such as they were first brought by Cadmus from Phoenicia; whence Herodotus also calls them Phoenician letters. Some say, that Cadmus was not the inventor, nor even the importer of the Greek letters, but only the mo- deller and reformer

of the alphabet; and hence they acquired the appellation of Cadmean or Phoenician letters ; whereas rjefore that time they had been called Pelasgian.

CADMIA, in pharmacy, a name which has been variously applied ; but it usually denotes a mineral substance, whereof there are two kinds, natural and artificial.

CADMIA ARTIFICIAL, CADMIA. FORNA.CUM, or CADMIA OF THE FURNACES, is a matter sub- limed when ores containing zinc, like those of Rammelsberg, are smelted. This cadmia con- sists of the flowers of the semi-metal sublimed during the fusion, and adhering to the inner sur- faces of the walls of furnaces, where they suffer a semi- fusion, and therefore acquire more solidity. So great a quantity of these are collected, that they form very thick incrustations, which must be frequently taken off. The name has also been given to all the soots and metallic subli- mates formed by smelting in the grate, although there is certainly a difference in these matters. Ancient chemists distinguished five kinds of cadmia fornacum, viz. C. botryitis, resembling a bunch of grapes, which is found in the middle of the furnace. C. calamitis, found hanging round the iron rods, with which the matter is stirred in the furnace, and generally in the form of quills; whence the name from calamus a quill. It is reckoned desiccative and detersive, and is used to cicatrize ulcers. C. capnitis, found at the mouth of the furnace. It is used by some in diseases of the eyes. C. ostracitis, found at the bottom of the furnace in the form of a sea shell. C. flacitis, found at the top of the furnace, in the form of a crust. It is also used by some in diseases of the eyes.

CADMIA, NATURAL, is of two sorts ; the one containing arsenic, and called cadmia fossilis, or cobalt; the other containing zinc, called cala- mine, or lapis calaminaris. See CALAMINE. Cadmia is also used by Pliny for copper ore, or the stone of which copper is made.

CADM1TES, in natural history, a kind of gem, nearly resembling the ostracites ; from which it only differs in that the latter is some- times girt with blue spots.

CADMIUM, in mineralogy, a new metal first discovered at Hanover in 1817, by Mr. Stromeyer, in carbonate of zinc. He obtains it in the follow- ” g manner : ā Dissolve the substance which con- a.ns cadmium in sulphuric acid, and pass through

the acidulous solution a current of sulphuretted hydrogen. Wash this precipitate, dissolve it in concentrated muriatic acid, and expel the excess of acid by evaporation. The residue is then to be dissolved in water, and

precipitated by carbo- nate of ammonia, of which an excess must be added, to redissolve the zinc and the copper thaÃ» may have been precipitated by the sulphuretted hydrogen. This carbonate of cadmium, being well washed, is heated, to drive off the carbonic acid, and the remaining oxide reduced by mixing it with lamp-black, and exposing it to a moderate red heat in a glass or earthen retort. Dr. Wol- laston's process is preferred for its precision and the facility with which it yields the metal ; we subjoin it from Dr. Ure. ' From the solution o the salt of zinc supposed to contain cadmium, precipitate all the other metallic impurities by iron ; filter and immerse a cylinder of zinc into the clear solution. If cadmium be present it will be thrown down in the metallic state, aud, when redissolved in muriatic acid, will exhibit its peculiar character on the application of the proper tests.' Mr. W. Herapath states that he has obtained it in quantities from the soot collected in the zinc works at Bristol. The metal is ob- tained by dissolving this substance in muriatic acid, filtering, evaporating to dryness, redissolv- ing and filtering, then precipitating by a plate of zinc. The cadmium thrown down is to be mixed with a little lamp-black or wax, put into a black or green glass tube, and placed in the red heat of a common fire, until the cadmium has sublimed into the cool part of the tube ; then the residuum is to be shaken out, which is easily done without loss of cadmium. A little wax introduced into the tube, and a gentle heat applied, the metal melts, and by agitation forms a button.*

The color of cadmium is a fine white, with a slight shade of bluish-gray, very similar to that of tin; which metal it also resembles in lustre and susceptibility of polish. Its texture is compact, and its fracture hackly. It crystallises in octohe- drons, and presents when cooling the appearance of leaves of fern. It is flexible, and yields rea- dily to the knife ; but is harder and more tena- cious than tin; and, like it, stains paper. It is ductile and malleable, but when long hammered it scales off in different places. Its specific gra- vity is 8-6040. It melts, and is volatilised under a red heat. Its vapor, which has no smell, may be condensed in drops, which, on congealing, present distinct traces of crystallisation. When heated in the open air, it burns like tin, passing into a smoke, which falls and forms a very fixed oxide, of a brownish-yellow color. Nitric acid readily dissolves it cold ; dilute sulphuric, nnin- atic, and even acetic acids, act feebly on it with the disengagement of hydrogen.

Cadmium forms a single oxide, in which 100 parts of the metal are combined with 14-352 of oxygen. The prime equivalent of cadmium de- duced from this compound seems to be very nearly 7, and that of the oxide 8. This oxide varies in its appearance according to the circumstances, from a brownish-yellow to a dark brown, and even a blackish colour. With charcoal it is re- duced with rapidity below a red heat. It gives a transparent colorless glass bead with borax.

The fixed alkalies do not dissolve the oxide of cadmium in a sensible degree; but liquid ammo- nia readily dissolves it. On evaporating the solution, the oxide falls in a dense gelatinous hydrate. With the acids it forms salts, which are almost all colorless, have a sharp metallic taste, and are generally soluble in water. Cadmium also unites easily with most of the metals, when heated with them out of contact of air. Most of its alloys are brittle and colorless.

CADMUS, in fabulous history, king of Thebes, the son of Agenor, king of Phoenicia, and the brother of Phoenix, Cilix, and Europa. He carried into Greece the sixteen simple letters of the Greek alphabet ; and there built Thebes, in BcEotia. The poets say, that he left his na- tive country in search of his sister Europa, whom Jupiter had carried away in the form of a bull ; and that, enquiring of "the Delphic oracle for a settlement, he was answered, that he should fol- low the direction of a cow, and build a city where she lay down. Having arrived among the Phocenses, he was met by a cow, who con- ducted him through Bceotia to the place where Thebes was afterwards built : but as he was about to sacrifice his guide to Pallas, he sent two of his company to the fountain of Dirce for water. The waters were sacred to Mars, and guarded by a dragon, which devoured all the Phoenician's attendants. Cadmus tired of their seeming delay, went to the place, and saw the monster still feeding on their flesh. He attacked the dragon, and overcame it by the assistance of Minerva, and sowed the teeth in a plain, upon which armed men suddenly rose up from the ground. He threw a stone in the midst of them, and they instantly turned their arms one against the other, till all perished except five, who assisted him in building his city. Soon after, he married Hermione the daughter of Venus, with whom he lived in thd greatest cordiality, and by whom he had a son, Polydorus, and four daugh- ters, Ino, Agave, Autonoe, and Semele. Juno persecuted these children ; and their well-known misfortunes so distracted Cadmus and'Hermione, that they retired to Illyricum, loaded with grief, and infirm with age. They entreated the gods to remove them from the misfortunes of life, and they were immediately changed into serpents. Some explain the dragon's fable, by supposing that it was a king of the country whom Cadmus conquered by war ; and the armed men rising from the field, is no more than men armed with brass, according to the ambiguous signification of the Phoenician word. Cadmus was the first who introduced the use of letters into Greece ; but some maintain, that the alphabet which he brought from Phoenicia, was only different from that which was used by

the ancient inhabitants of Greece. This alphabet consisted only of sixteen letters, to which Palamedes afterwards added four, and Simonides of Melos the same number. The worship of many of the Egyptian and Phoenician deities was also introduced by Cadmus, who is supposed to have come into Greece 1493 years before the Christian era, and to have died sixty-one years after. According to those who believe that Thebes was built at the sound of Amuhion's lyre, Cadmus built only a

small citadel, which he called Cadmea, and laid the foundation of a city which was finished Ly one of his successors.

CADOGAN (William Bromley), M.A. -was the second son of the first earl Cadogan, and born in 1751. He was educated at Westminster school, whence he removed to Christ-Church, Oxford, where he took the degree of B.A. and entered into orders. In 1774 lord chancellor Bathurst gave him the vicarage of St. Giles, Reading ; soon after which he was presented to the rectory of Chelsea. He was a most indefati- gable parish minister and priest, and died much esteemed in 1797. He published some single sermons ; and after his death his Discourses, Letters, and Memoirs were collected by Mr. Cecil. See Cecil's Life of Cadogan.

CADOGAN (William), M.D. was educated at Oriel College, Oxford, where he took his degree of M.A. in 1755 ; and the same year was made doctor of physic. He became a fellow of the college, before which he delivered two Harveian orations. Dr. Cadogan became famous for pre- scribing an abstemious regimen in the gout, in Dissertations on that disorder, 8vo. 1764. He also published a treatise on the Management of Children, and died in 1797, aged eighty-six.

CADORE, a town of the Venetian territory, in the district of the Cadorin, on the frontier of the Tyrol, near the Piave. It carries on a traffic in iron and the timber of the district, which is abundant in those productions. The Austrians were defeated here by the French in 1797. In 1806 Bonaparte created Cadore into a duchy, whose possessor had a revenue of 60,000 franks, or Ã£2,500 sterling. It' was bestowed, in 1809, on his minister Champagny. Titian was a na- tive of this place. It is fifteen miles north of Belluno, forty-two north-east of Trent, and fifty-three west of Friuli, the district is said to contain 22,000 inhabitants.

CADSAND, a small town and insulated tract of Flanders, formed by the sea, the Wester Scheldt, and other rivers and canals. It belongs to the district or ' free land' of Sluys, consisting of drained marshes : it is very fruitful in corn, and the pasturage is excellent. High embank- ments, constructed at a vast expense, defend it generally from the sea, but hardly sufficient in north-west winds. The Dutch by means of pos- sessing this

island command the navigation of the Scheldt. It was taken by the French on the 29th July, 1794; and occupied for a while by our army in the unfortunate Walcheren expe- dition. The town is two miles north-west of Sluys.

CADUCEUS, in ancient mythology, Mer- cury's rod, a wand entwisted by two serpents, and furnished with wings, as in the annexed figure. It was given to him by Apollo, for his seven-stringed harp. The" caduceus afforded him the power of bringing souls out of hell, and also to cast any one into sleep. In Roman antiquity it was used as a symbol of peace and con- cord. The Romans sent the Carthaginians a javelin and a caduceus, offering them their choice either of war or peace. Those why de-

nouncod war were called feciales ; and those who went to demand peace caduceatores, be- cause they bore a caduceus in their hand. The caduceus on medals is a common symbol, signi- fying good conduct, peace, and prosperity. The rod expresses power, the two serpents prudence, and the two wings diligence.

CADUCl, in botany, to fall, the name of a class in Linnasus's Calycina, consisting of plants whose calyx is a simple periauthium, supporting a single flower or fructification, and falling off either before or with the petals. It stands op- posed to the classes persistentes, and is ex- emplified in mustard and ranunculus.

CADURCUM, CADURCUS, or CADURX, in ancient geography, a town of Aquitania; si- tuated between the river Oldus, running from the north, and the Tarnis from the south, and falling into the Garumna ; now called Cahors.

CADUS, in antiquity, a wine-vessel, contain- ing eighty amphorae or firkins ; each of which, according to the best accounts, held nine gallons, though some make them only seven. See AM- PHORA.

C/ECILIA, in zoology, a genus of serpents belonging to the amphibia class. The caecilia has no scales ; it is smooth, and moves by means of lateral rugae or prickles. The upper lip is prominent, and furnished with two tentacula. It has no tail. There are only two species, viz. 1. C. glutinosa, with 340 rugae or prickles above, and ten below, the anus. It is of a brownish color, with a white line on the side, and is a native of the Indies,

and South America. 2. C.tentaculata, with 135 rugae. It is about a foot long, and an inch in circumference, preserving a uniform cylindrical shape from the one end to the other. The teeth are very small. It has such a resem- blance to an eel that it may easily be mistaken for one ; but, as it has neither fins n6r gills, it cannot be classed with the fishes. It is a native of America, and its bite is not poisonous. 1 C./ECULUS, a son of Vulcan, conceived, as some say, by his mother, when a spark of fire fell into her bosom. He was called Caeculus, because his eyes were small. After a life spent in plundering and rapine, he built Praeneste : but being unable to find inhabitants, he implored Vulcan to show whether he really (was his father. Upon this a flame suddenly shone among the multitude who were assembled to see some spectacle, and they were immediately persuaded to become the subjects of Caeculus. Virg. /En. 7, v. 680, says that he was found in fire by shepherds, and on that account called son of Vulcan, who is the god of fire.

CAECUM, or CCECCM, the blind gut, so called from its being perforated at one end only. The first portion of the large intestines, placed in the right iliac region, about four fingers' breadth in length. It is in this intestine that the ileum terminates by a valve, called the valve of the caecum, and the appendicula caeci ver- miformis is also attached to it. See ANATOMY.

C/ELEBS, in entomology, a species of cimex, of brownish gray color, with three points on the scutellum, and a yellowish apex. 1'irst found in New Holland.

CyELUS, in the Pagan mythology, the god

of the heavens, was represented as the son of ./Ether and Dies, the father of Saturn and Ops, and progenitor of all the gods.

CEMENT. See CEMENT.

C2EMENTUM, in oryctology, a genus of argillaceous earths, consisting of iron, alumine, a large quantity of silica, and generally a small portion of carbonate of lime; hardish, lightish, and porous; of an earthy texture; imbibing water with a hissing noise ; crackling when dried, rough ; without lustre : when powdered and beaten up with water and quicklime, becoming so hard as not to be penetrated by water; easily melting in the fire into a black scoria. Three species. 1. C. tufa. Tufa. Tuffwacke. Col- lected into entire cliffs, and vast strata about vol- canic mountains. Found particularly about Naples and Rome. It is commonly magnetic, of an earthy fracture, and not easily decomposed by the action of the air. 2. C. tarras. Trass. Forming large strata under the surface of the common soil. Found on the banks of the Rhine ; principally near Andernach, and on mount Vogelberg,

some feet under the surface, where streams of water have not had access ; dull, gray or blackish, rarely variegated. When pounded, it makes the best cement for buildings under water. 3. C. columnare. Prismatic cement. There are two varieties ; the prisms being sometimes five and sometimes six-sided. Found on the banks of the Rhine, and some- times near the base of mount ;Etna, in columnar masses of a gray color, close to each other, and forming internally the common mass.

CAEN, a considerable town in France, in the department of the Calvados, and ci-devant pro- vince of Lower Normandy, of which it was the capital. It has a celebrated university, founded in 1431, by our Henry VI., and an academy of literature ; and contains twelve parish churches, and about 40,000 citizens. It has also a castle which was built by the English. The town is built chiefly of a white stone, which, though not durable, is of beautiful appearance, and the streets are wider than those of most French towns. The principal squares are the Place Royal, and the Place St. Sauveur. In the former is the Hotel de Ville, a public library, and the Muse"edes Aits. Our William the con- queror, who was buried here, built the Abbaye aux Hommes ; which is a noble, though rather plain structure. The Palais de Justice is a handsome modern building. Malherbe was bora here, and Huet, bishop of Avranches. There is a considerable trade carried on at Caen in linen, lace, stockings, caps, and serges, of home manufacture, as well as in cattle, horses, dye stuffs, cider, and skins. The town is but eight miles from the sea, and has a good communication with it by the river Orne, which vessels of 160 tons burden can ascend with the tide. The neigh- bourhood is pleasant and fertile, but flat. F.d- \ard 111. was stoutly resisted here in 1346 ; but the English took Caen in 1417, and retained it thirty-one years. It is sixty-two miles west by south of Rouen, and 132 west by north of Paris. Long. 0Ā°27'\V., lat. 49Ā°11'N.

C.I'. RE, in ancient geography, a town of Etru- ria, the royal residence of Meientius. It-, an-

cient name was Argyllae. In Strabo's time not the least vestige of it remained, except the baths called Cseritana.

CˆERITES TABUUE, the tables of the Roman censors. In these were entered the names of such as for some misdemeanor for- feited their right of suffrage, or were degraded from a higher to a less honorable tribe. They

were so named from the people of Care, who hospitably receiving the Romans after the taking of Rome by the Gauls, were, on the Romans re- covering their city, honored with all the privileges of citizens, except the right of voting.

CAERMARTHEN. See CARMARTHEN.

CAERNARVON. See CARNARVON.

CAERLEON, an ancient market town of Monmouthshire, on the Usk, over which is a handsome stone bridge, is said to have been a residence of one of the British kings, and was at a very early period distinguished for its ecclesiastical and literary foundations. Its name signifies the fort ot the Legion. By the Ro- mans it was called Isca, Isca Colonia, and Civitas Legionis II. Augusta. In order to dis- tinguish it from Exeter, which was likewise called Isca, it was also denominated Isca Silurum. Here the Roman praetor resided, and had his Palatium, which, in all proba- bility, was where the old mansion called the lodge now stands. Here also the courts were held for Britannia Secunda, and the imperial edicts were promulgated. Mr. Cox, the tourist, endeavoured to take a survey of the ancient city, which appeared to him to be oblong, inclining to a square, enclosing a circumference of 1800 yards, but the Roman city must have had exten- sive suburbs.

Giraldus Cambrensis visited Caerleon, in making the tour of Wales with archbishop Bald- win, in the year 1180. At that time it was hastening to decay ; but to the learned arch- deacon it continued to display evident marks of former magnificence. He speaks of ‘ its splendid palaces, which once emulated with their gilded roofs the grandeur of Rome, for it was originally built by the Roman princes, and adorned with stately edifices ; a gigantic tower, numerous baths, ruins of a temple, and a theatre, the walls of which are partly standing. Here we still see,’ he adds, ‘both within and without the walls, subterraneous buildings, aqueducts and vaulted caverns, and stoves so excellently contrived, as to convey their heat through secret and imper- ceptible pores.’ Of its Christian antiquities he says, ‘ Here lie two illustrious, and next to Alban and Amphibalus, the two most celebrated proto- martyrs of Britain, Julius and Aaron, of whom both had a church within the city, dedicated to their memory ; for, in former ages, it contained three fine churches : the first was that of Julius, adorned with a convent of Franciscan friars,

devoted to the virgin deity ; the second, that of his holy associate Aaron, and illustrious for us order of regular canons; the third was at one time the metropolitan church of all Cambria.’ Part of an ancient castle is still remaining; it appears to have been 300 yards in circumference; and from

the eminence on which it was situated, commanded one of the most beautiful and ex- tensive views in England. There is an amphi- theatre on the banks of the Usk, of an oval concavity, measuring seventy-four yards by sixty- four, and six in depth : the natives call it king Arthur's round table. The present church, a good specimen of the Norman era, is kept in good repair by the testamentary benefaction of the late Charles Williams, Esq. a native of the place. He also founded a charity-school for thirty boys and twenty girls. The town now con- sists only of two or three small streets. In the vicinity are extensive iron and tin works. The market is on Thursday, and well supplied. There is also a smaller market on Saturday.

CjERULATA, in entomology, a species of phalaena geometra, the wings of which are banded with two caeruleous bands.

C./ERULEA, sky blue, the specific name of a chrysomela, pirnelia cicindelia, and necydalis, so called from their shining blue color.

C.KRULEA, in ichthyology, a species of cory- phaena, found in the American Ocean.

C.ERULEA, in ornithology, an American spe- cies of ardea ; the blue heron of Latham ; the blue bittern of Catesby. The color of the body is blue, whence its name. Also, an Indian spe- cies of alcedo; the ispida indica torquata of Brisson ; and the white collared king's fisher of Latham. Also, a species of procellaria ; the blue petrel of Latham. Also, a fine species of certhia or creeper, from Cayenne. Also, a South Ame- rican columba; the tlacapoilotl of Ray ; and blue pigeon of Latham. And, lastly, a species of muscicapa, or fly-catcher, found in the Philip- pine isles. This is the azure fly-catcher of La- tham.

CjERULEOCEPHALIA, in entomology, a species of cantharis with a red thorax, fuscous wing cases, and the posterior part of the head blue black. Also, a species of bombyx, com- ' monly called the figure of eight moth.

CALRULEOCEPHALA, in ornithology, a species of alcedo. Buffon calls it martin-pecheur a tete bleue, and petit-martin-pecheur du Sene- gal; and it is the blue-headed king's fisher of Latham.

CˆERULEOCEPHALUS, in entomology, a species of curculio, of a violet color, with testa- ceous thorax and elytra. Found in Germany.

CJERULEOCEPHALUS, in ornithology, a species of psittacus ; the red and blue parrot of Wil- loughby and Latham. Found in Guiana and Cayenne.

END OF VOL. IV.

Volume V (Caerulescens - Clerc)

The London Encyclopaedia

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Eratmuf.

A reader should sit down to a book, especially of the miscellaneous kind, as a well-behaved visitor does to a ban- quet. The master of the Feast exerts himself to satisfy his guests ; but if, after all his care and pains, something should appear on the table that does not suit this or that person’s taste, they politely pass it over without notice, and commend other dishes, that they may not distress a kind host. Tramlalion.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPEDIA METROPOLITANA,

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

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THE

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CˆRULESCENS, in entomology, a small species of cancer, abundant in the seas between the tropics. Also, a black species of cryptoce- phalus ; with the striated elytrae casrulescens. Found in Barbary. Also, a species of cpram- byx, inhabiting Germany. Also, a species of chrysomela, of a greenish blue color.

CˆRULESCENS, in ornithology, a species of anas. This kind inhabits North America; the color is fuscous, beneath white ; wing-coverts and posterior part of the back bluish. This is the anser sylvestris freti Hudsonis of Brisson ; the blue-winged goose of Latham ; 1'oie des Esquimaux of Burton. Also, a species of rallus ; the blue-necked rail of Latham. A Cape of Good Hope bird.

C/ERULEUS, in entomology, a species of cimex, entirely blue, without any spots. Also, the name of a species of carabus, rhinomacer, cucajus, scarabseus, and cryptocephalus. All European insects, except the last, which is found in the tropics of Africa.

C.KRULEUS, in ornithology, a species of cucu- lus ; the blue Madagascar cuckoo of Latham ; and le taitson of Buffon. Also the name of a species of oriolus ; the blue oriole of Latham ; the Xanthormus caeruleus of Brisson ; and the blue jay of Ray. Also a species of Ramphas- tos; the blue toucan of Latham. Found in South America.

C.SRULEUS, in zoology, a species of coluber, the scales of which are white on one side and beneath.

CAER\VYS, a parish and market town of Flint, five miles S.S.E. from St. Asaph, and 204 north-west from London. The word Caer signifies a city, and Gwys, a summons, the county assizes having been regularly

held here, though now removed to Mould. In the middle of the town are four streets, in the centre stands a fine elm tree. At this place it was customary, in ancient times, for the princes of Wales to give a silver harp annually to the best bard or musi- cian; but this custom has been discontinued ever since the reign of queen Elizabeth. The market on Tuesday is the best in the county.

C.'ESALPINIA, BRASILETTO, or BRASJL- WOOD, a genus of the monogynia order, and decandria class of plants; natural order thir- ty-third, lomentaceae ; CAL. quinquefid, with the lowest segment larger in proportion. There are five petals, the lowest most beautiful It is a leguminous plant. There are nine species, the most remarkable of which are, C. Brasiliensis, commonly called brasiletto. It grows naturally in the warmest parts of America, from whence IIP wood is imported for the dvers who use it Vol.. V.□□□ PART!.

much. The demand has been so great, that none of the large trees are left in any of the British plantations; the largest remaining being not above two inches in thickness, and eight or nine feet in height. The branches are slender and full of small prickles ; the leaves are pinnated ; the lobes growing opposite to one another, broad at their ends, with one notch. The flowers are white, papilionaceous, with many stamina and yellow apices, growing in a pyramidal spike, at the end of a long slender stalk : the pods enclose several small round seeds. The color produced from this wood is greatly improved by solution of tin in aqua regia. 2. C. mimosa or mimo- sordes. Prickly leaflets, oblong, obtuse : stamens shorter than the corals, legumes woolly. A sen- sitive plant like the mimosa tribe, and a native of the East Indies.

C/ESALPINUS (Andrew), an eminent phi- losopher, physician, and botanist, was born at Arezzo. After having been many years professor at Pisa, he became physician to Pope Clement VIII. He was the author of Questiones Peri- pateticse, a work, defending the philosophy of Aristotle against the doctrines of Galen, from which he appears to have approached very near to the theory of the circulation of the blood ; having explained the use of the valves of the heart, and pointed out the course which these compelled the blood to take on both sides during the contraction and dilatation of that organ. He wrote also a botanical work De Plantis, and is justly esteemed the founder of Systematic Boxany. His Hortus Siccus, consisting of 785 dried spe- cimens of plants, pasted on 266 folio pages, was extant in 1740. He died at Rome in 1603.

C/ESAR (Caius Julius), the illustrious Ro- man general and historian,

was of the family of the Julii, who pretended to be descended from Venus by /Eneas. See JULIUS CAESAR. He was born at Rome on the 12th of the month Quin- tilis (afterwards from him called July) A. U. C. 653, and lost his father in 669. Being nephew to Marius, he was early proscribed by Sylla ; who was with much entreaty prevailed on to save his life- Uiat said to his friends when he consented, thai* ××× he saw in that young man many Mariuses.' Caesar, by his valor and eloquence, soon acquired the highest reputation in the field and in the senate. Beloved and respected by his fellow-citizens, he enjoyed successively every magisterial and military honor the republic could bestow, consistent with its free constitution. But at length having subdued Pompey, the great rival of his growing power, his boundless ambition effaced the glory of his former actions : for, pur- suing his favorite maxim, ' that he had rather

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be the first man in a village, than the second in Rome,' he procured himself to be chosen perpe- tual dictator; and, not content with this uncon- stitutional power, his faction had resolved to raise him to the imperial dignity ; when the friends of the civil liberties of the republic rashly assassinated him in the senate-house. By this impolitic measure they defeated their own pur- pose, involving the city in that consternation and terror, which produced general anarchy, and paved the way to the revolution they wanted to prevent ; the imperial government being abso- lutely founded on the murder of Julius Caesar. He fell in the fifty-sixth year of his age, A. A. C. 43. His Commentaries contain a History of his principal Voyages, Battles, and Victories. The London edition, in 1712, in folio, is preferred. A particular detail of Caesar's transactions will be found under the article ROME.

CˆSAR, in Roman antiquity, a title borne by all the emperors from Julius Caesar to the de- struction of the empire. It was also used ˆs a title of distinction for the presumptive heir of the empire, as King of the Romans is now used for that of the German. This title took its rise from the surname of the first emperor, which, by a decree of the senate, all the succeeding emperors were to bear. Under his successor, the appel- lation of Augustus being appropriated to the emperors, in compliment to that prince, the title Caesar was given to the second person in the em- pire, though still it continued to be also given to the first; and hence the difference betwixt Cassar used simply, and Cfesar with the addition of Im- perator Augustus. The dignity of Caesar remained to the second of the empire, till Alexius Comne- nus having elected Nicephorus Melissenus Caesar, by contract, and it being

necessary to confer some higher dignity on his own brother Isaacius, he created him Sebastocrator, with the prece- dency over Melissenus ; ordering, that in all ac- clamations, &c. Isaacius Sebastocrator should be named the second, and Melissenus Caesar the third.

CAESAR (Sir Julius), a learned civilian, was descended by the female line from the dukes de Cesarini in Italy ; and was bora near Tottenham, in Middlesex, in 1557. He was educated at Ox- ford, advanced to many honorable employments, admitted LL. D. of Oxford and Paris, and for the last twenty years of his life was master of the rolls. He was remarkable for his extensive bounty and charity to all persons of worth, so that he seemed to be the almoner general of the nation. He died in 1639, in the seventy-ninth year of his age. It is very remarkable that the MSS. of this lawyer were offered, by the execu- tors of some of his descendants, to a cheese- monger for waste paper ; but, being timely in- fpected by Mr. Samuel Paterson, that gentleman Siscovered their worth, and had the satisfaction lo find his judgment confirmed by the profession, to whom they were sold in lots for upwards of ►►500, in 1757.

CJESAREA, an ancient city on the coast of Pho?nicia. It was conveniently situated for trade ; but had a very dangerous harbour, so that no ships could be safe in it when the wind was at south-west. Herod the Great, king of Judea,

CJES

remedied this inconvenience at an immense ex- pence and labor, and made it one of the most convenient havens on that coast. He also beau- tified it with many buildings, and bestowed twelve years on the finishing and adorning it.

C.KSAREA AUGUSTA, in ancient geography, a Roman colony, situated on the river Iberus in Spain, before called Salduba, in the territories of the Edetani; now commonly thought to be Saragossa.

CAESARIAN OPERATION. See MIDWIFERY

CˆESARIANS, C&SARIENSES, in Roman an- tiquity, were officers or ministers of the Roman emperors ; they kept the account of the revenues of the emperors ; and took possession, in their name, of such things as devolved or were con- fiscated to them.

CˆESAROMAGUS, a town of theTrinobantes, in Britain ; by some supposed to be Chelmsford, by others Brentford, and by others Burflet.

C7ESONES, a denomination given to those cut out of their mothers' wombs. Pliny ranks this as an auspicious kind, of birth ; the elder Scipio Africanus, and the first of the family of Caesars, were brought into the world in this way.

CˆESTUS, in antiquity, a large gantlet made of raw hide, which the wrestlers made use of when they fought at the public games. ××× It was a kind of leathern strap, strengthened with lead or plates of iron, which encompassed the hand, the wrist, and part of the arm, to defend these parts as well as to enforce their blows.

C./ESULIA, in botany, a genus of the class syngenesia, order polygamia aequalis. Recep- tacle chaffy ; seeds involved in the chaff; down- less; calyx three-leaved. Two species only : 1, C. axillaris, with leaves lanceolate, tapering to the base, serrate, alternate ; a native of the East Indies. 2. C. radicans: with leaves lanceolate, tapering to the top, very entire, opposite. A na- tive of Guinea.

CAESURA, in the ancient poetry, is when, in the scanning of a verse, a word is divided, so that one part seems cut off, and belongs to a dif- ferent foot from the rest :

Mentijri nojli : nunjquam menjdacia prosunt ;

where the syllables ri, li, quam, and men, are caesuras. Or, it denotes a certain division of the words between the feet of a verse ; whereby the last syllable of a word becomes the first of a foot : as in

Armavi|rumque ca(no,Troji/××qui | primus ab | oris j where the syllables no and jtE are caesuras.

C.ESURA, or C.SOURE, in the modern poetry, denotes a rest or pause towards the middle of an Alexandrian verse, by which the voice and pro- nunciation are aided, and the verse, as it were, divided into two hemistichs.

CjETERIS PARIBUS, a Latin term in fre- quent use among mathematical and physical writers. The words literally signify other things being alike or equal. Thus we say, the heavier the bullet, caeteris paribus, the greater the range; i. e. by how much the bullet is heavier, if the length and diameter of the piece and strength of the powder be the same, by so much will the utmost range or distance of a piece of ordnance be the greater. Thus also, in a physical way,

CAFFRARIA.

we say, the velocity and quantity circulating in a given time through any section of an artery, will, creteris paribus, be according to its diame- ter, and nearness to or distance from the heart.

C.&TOBRIX, in ancient geography, a town of Lusitania, near the mouth of the Tagus, on the east side; now extinct. It had its name from its fishery ; and there still exist fish-ponds on the shore, made with plaster of Paris, which illus- trate the name of the ruined city.

CZEYX, in mythology, a king of Thrace, who was metamorphosed into a halcyon.

CAFER, in entomology, an African species of cirnex : color black, with a white band on the thorax ; ferruginous wing-cases, with four white spots. Also a species of green scarabaeus, with the margin of the thorax and elytrse spotted with white. Inhabiting the Cape of Good Hope.

CAFER, in ornithology, a species of merops, with gray plumage and a yellow spot near the anus, tail long. Native of Ethiopia. Also, a species of picus, brown above, beneath light green, dotted with black, the under part of the wings and tail vermilion colored. Found at the Cape of Good Hope.

CAFFA, or KAFFA, a city and port town of Russia in Europe, situated on the south-east part of Crim Tartary. It is the most consider- able town in the country, and gives name to the straits mentioned below. It was anciently called Theodosia ; a name which has been restored since the Russians have obtained this country. It is 150 miles north-east of Constantinople.

CAFFA, STRAITS OF, run from the Euxine or Black Sea, to the Palus Meotus, or Sea of Azoph.

CAFFACA, in natural history, a name given by the Turks and Tartars to a peculiar kind of earth, of a gray color, having a light cast of green in it. It is very soft and unctuous, and resem- bles our fullers' earth ; but is more astringent, and adheres very firmly to the tongue ; these people use this earth when they bathe.

CAFFEIN, the base of coffee. By adding muriate of tin to an infusion of unroasted coffee, M. Chenevix obtained a precipitate, which he washed and decomposed by sulphuretted hydro- gen. The supernatant liquid contained a pecu- liar bitter principle, which occasioned a green precipitate in concentrated solutions of iron. When the liquor was evaporated to dryness, it was yellow and transparent like horn. It did

not attract moisture from the air, but was soluble in water and alcohol. The solution had a plea- sant bitter taste, and assumed with alkalies a garnet-red color. It is as delicate a test of iron as infusion of galls ; yet gelatine occasions no precipitate with it.

CAFFER, Bos. See Bos.

CAFFER, in entomology, a Cape of Good Hope species of cerambyx ; color brassy green, thorax spinous, wing-cases testaceous, and short an- tennae.

CAFF1LA, a company of merchants or tra- vellers who join together, in order to go with more security through the dominions of the Grand Mogul, and other countries on the continent of the East Indies. The caffila differs from a ca- ravan, at least in Persia; for the caffila belongs properly to some sovereign or some powerful

company in Europe, whereas a caravan is a com- pany of particular merchants, each trading upon his own account.

CAFFRA, in entomology, a species of apis, hirsute and black, with the posterior part of the thorax and anterior part of the abdomen yellow.

CAFFRA, in ornithology, a species of certhia ; color fuscous, the breast and abdomen pale, and the middle feathers of the tail longest. This bird and the Caffra apis are both natives of Caffraria, whence their name.

CAFFRARIA, a country of Africa, extending across the southern part of the continent, and contained on the west between the twentieth and twenty-fifth degree of south latitude, and between the twenty-fourth and thirty-second degree of south latitude on the east. Some geographers have applied this name to the whole country ly- ing south of Cape Negro and the River Del Spiritu Santo, and reaching toward the north, between Lower Guinea and Monomatapa, as high as the equator. But the appellation should be confined to that portion of cou- ntry inhabited by the Caffres, from whom it takes its name ; a people with whom we are closely connected by our colonial possessions at the Cape, and differing widely in appearance, disposition, and manners, both from the negroes as well as the Hottentots of this continent.

Of their countiy our knowledge is as yet de- fective, though it has been lately increased by the travels of Mr. Campbell and others. The Booa huanas, Barroloos, Damaras, Tambookies, and the inhabitants of Cafferland, who are particu- larly distinguished by the colonists of the

Cape of Good Hope, by the name of Caffres, are the principal tribes of which we have any account : and it is to the latter of these that the descrip- tions of Paterson, Sparmann, Vaillant, and Bar- row, refer.

Towards the east, this country is in many places extremely fertile. The mountains are co- vered with forests, and the plains with luxuriant herbage, refreshed and fertilised by innumerable streams. But towards the west it is a perfect desert. The inhabitants keep no cattle, and their whole subsistence depends upon the exchanging of copper rings and beads with the Booshuanas on the east, and the Namaqua Hottentots on the south. These rings they manufacture from cop- per ore, found in great abundance, in a chain 01 mountains extending from the Orange River to the tropic. On the banks of the Great Fish River, which is the boundary between the Cape colony and Cafferland, Mr. Barrow experienced a very remarkable variation in the temperature of the air, during the space of two days, and the climate generally is very variable, but they have little rain, except in summer, when it is accompanied by thunder and lightning.

Mr. Campbell has principally illustrated the towns of the interior, which we treat in their al- phabetical places, and particularly Lekatoo, which was also visited in 1801 by commissioners from the Cape colonial government. See AF- RICA.

The history and habits of the Caffres have be- come additionally interesting to this country since the tide of emigration has been directed B2

eastward of our Cape colony, and their charac- ter has become, to numerous British settlers, that of the most important plunderers upon earth.

These tribes ars supposed to be of Arabic origin. They call themselves Kaussis. Like the Hottentots, they are a singularly insulated race. We are persuaded from a diligent comparison of the best accounts, that, also, like the Hottentots, they ;ire a greatly injured people, and have been goadod, by the bad usage of many generations, to the outrages they are still found to commit. The practice of the rite of circumcision alone seems to connect them with the history of the world. This they perform, like the Mahomme- dans, in the twelfth or thirteenth year, but con- nect with it no religious ceremony or notion, except that of respect to their ancestors. If they have any sort of religion besides, it is unaccom- panied with any public rites. Their language is soft and

harmonious, and differs much from that of the Hottentots, although the names of their mountains and rivers are evidently of Hottentot origin.

The dwellings of these people resemble bee- hives, constructed on a wooden frame, and plas- tered both within and without with a composition of clay and the dung of cattle. They are then neatly covered with a kind of matting.

Every Caffer bears arms, not as a profession, but as the exigence of his affairs seem to de- mand it. They are all both shepherds and warriors, as have been the greatest and the best of mankind ; they evidently prefer the former mode of life, and there seems no just foundation for attributing to them a cruel or sanguinary disposition ; their moderation towards the colo nists, in a variety of instances, directly indicates the contrary. And of treachery they have not a shade in their character. ‘ Le Caffre,’ says M. Vaillant, ‘ cherche toujours son ennemi face a face; il ne peut lancer sa hassagai, qu’il ne soit a decouvert ; le Hottentot, au contraire, cache sous une roche, ou derriere un buisson, envoie la mort, sans s’exposer a la recevoir ; 1’un est le tigre perh’de qui fond traitreusement sur la proie; 1’autre est le lion genereux qui s’annonce, se montre, attaque, et peril, s’il n’est pas vainquer.’ His principal weapons are the hassagai, or omkontoo, as he calls it, a sort of spear with an iron head of a foot long, fixed to a tapering shaft of about four feet in length; and the keerie. The former he throws with wonderful dexterity, seldom failing of his mark, at the distance of fifty or sixty paces. The keerie is used either in a close engagement or at a distance. It is n club of about two feet and a half long, and at one end nearly three inches in diameter. To these we may add a shield of an oval shape, made of the thickest part of a bullock’s hide, which he carries to defend himself against the darts and arrows of his enemy. Unlike his neighbours, the Hottentots and Bosjesmans, he does not use poison on his weapons, and rarely attacks by surprise.

The Caffres are more attached to a pastoral than an agricultural life; though their soil, as far as it is known, and particularly to the east, offers great facilities for cultivation, and is so extremely fertile, that, with a very little labor,

it might be made to produce the finest grain and fruits of the colony. So extremely negligent are they of these advantages, that a large species of water melon and niil’.et aie their principa, culinary plants. They likewise cultivate some tobacco and hemp, both of which they use for smoking. They rarely kill any of the cattla for food, except to show hospitality to a stranger. Milk is their ordinary diet, which they

always use in a curdled state ; berries of various de- scriptions, and the seeds of plants, which the natives call plantains, are also eaten, and a few of the gramineous roots with which the woods and the banks of the rivers abound. Occasion- ally too, the palm-bread of the Bosjesmans is found amongst them. Their total ignorance of the use of ardent spirits, and fermented liquors, and their general temperance and activity, pre- serve them from the ravages of many disorders which abound amongst the other native tribes, to say nothing of the value of their independence. Their wealth consisting solely of their cattle, they devote the principal part of their time to the management of them, which is conducted with great regularity; and even the affairs of the dairy are superintended wholly by the men. By a sharp whistling sound, made either artifi- cially with a piece of bone or ivory, or by means of the hand applied to the mouth (as our Eng- lish boys frequently make it), they contrive to inure their cattle to a sort of mechanical train- ing. One signal of this kind disperses them in the morning to their pastures, another separates the cows from the herd to be milked, and a third collects them all for marching. Among their oxen many resemble the black cattle of the Highlands, others are as remarkable for their size, and are not unlike the Alderney cow. Some are used for riding, as they have no horses among them, and the horns of these they twist into a variety of fantastic shapes. The con- structing their habitations, y the breaking up of the ground and preparing it for the seed, and the gathering in of their harvest, fall to the lot of the women ; who also manufacture a coarse earthenware for boiling their food, and very neat reed baskets, which serve as milk pails. The commerce of this people is divided between the Dutch farmers and their eastern neighbours, the Tambookies. To the former they bring their cattle in exchange for small pieces of copper and iron, glass beads, and other trifles ; from the Tambookie nation they procure their wives.

Previous courtship is not considered necessary to marriage. When a man once selects the ob- ject of his wishes, nothing remains but to strike a bargain with the father ; the amount of which is generally an ox or a couple of cows ; and the damsel resigns herself to her fate, without emo- tion or surprise. The Tambookie wives, how- ever, are thought rather a dear commodity ; they are rarely obtained but by the chiefs ; and, among the common people, this custom of purchasing wives renders polygamy, though allowable, not frequent, as they can seldom afford the price of more than one. Their marriages are celebrated with feasts and dancing, which not unfrequently last for weeks together. ‘ A Caffre woman,”

C A F F R A II I A.

Mr. Bartow says, ‘is only serious when she dances ; and at such times her eyes are constantly fixed on the ground, and her whole body seems to be thrown into convulsive motions.’

The government of the Caffres is monarchical, but administered by various subordinate chiefs, who are distinguished from the people at large by a brass chain suspended on the left side of the head, from a wreath of copper beads. The regal honor descends from father to son ; in default of the latter to a nephew ; and, in default of both, it becomes elective, an occasion, when it occurs, of considerable strife. Their rulers seem to have no control, however, over the lives or properties of those they govern. Their laws, apparently suggested by natural principles, are very few arid simple. If the death of a fellow creature be the effect of accident, a fine is paid to the relatives of the deceased, but premeditated murder is visited with instant death. Of imprisonment for any crime they have no conception ; restitution is the punishment inflicted for theft ; and the same laws, in cases of their delinquency, are applied equally to the chiefs and to their subjects.

Mr. Barrow, in the course of his first expedi- tion into Caffre-land, penetrated to the capital, which is not far east of the Fish River, and con- ducted a negociation with their king Gaika, of which he gives a very interesting account. Hav- ing waited for some time in conversation with the mother of this chief, about thirty-five, and his queen, a very pretty girl of fifteen, the king made his appearance on an ox in full gallop, at- tended by five or six of his people. Business commenced, with little ceremony, undertheshade of a mimosa. Anticipating, with great prompti- tude and ease of manner, the general object of the visit, he began by observing, that none of the Uaffres who had passed the frontier were to be considered as his subjects. ‘ He said they were chiefs as well as himself, and entirely indepen- dent of him; but that his ancestors had always held the first rank in the country, and their su- premacy had been acknowledged by the colonists on all occasions; that all those Caffres and their chiefs who had a long time been desirous to enter under the protection of his family had been Aindly received, and that those who chose rather to remain independent had been permitted to do so without being considered in the light of ene- mies.’ He then entered as freely into the history of his family. ‘ He informed us,’ continues Mr. B. ‘that his father died and left him when very young, under the guardianship of Zembei, one of Ids first chiefs, and his own brother, who had acted as regent during his minority ; but that raving refused to resign to him his rights, on loming at years of discretion, his father’s friends jad showed themselves in his favor, and by their assistance he had obliged his uncle to fly ; that this man had then joined Khootar, a powerful

chief to the northward, and with their united power had made war upon him : that he had been Hctorious and had taken Zembei prisoner.' In- stead of a cruel death, which we should have, magined the uncle now to have been exposed to,. Be was treated it seems with great lenity and respect, his wives and children were returned to him, and he was only so far considered a captive

as never to be suffered to leave the village in which the king resided.

They have some singular practices in the in- terment of their dead. The bodies of their chil- dren are deposited in ant-hills, which have been excavated by the ant-eater. On their chiefs only is bestowed the honor of a grave, which is gene- rally dug very deep in the places where their oxen, stand during the night; the rest of their dead are thrown promiscuously into a ditch, and left without covering to be devoured by the wolves, whom the Caffres never attempt to destroy, from a consideration of their services. With this apparent neglect of their bodies, a Cattre not only cherishes great respect for his deceased relatives, but to swear by their memory is to take the most sacred oath.

The Caffre women possess cheerful and ani- mated countenances, are modest in their carriage, lively and curious, but not intruding; and, though of a color nearly approaching to black, their well- constructed features, their beautifully clean teeth, and their eyes dark and sparkling, combine to render many comparatively handsome. They have neither the thick lips nor the flat noses of African negroes. As the females of a nation but partially civilised, they are remarkable for a sprightly and active turn of mind, and in this respect are totally different from their neighbours the Hottentots. In point of general figure, how- ever, the latter seem to have the advantage in their youth.

The men are tall, muscular and robust, of an open countenance, and manly graceful figure. Good nature and intelligence are depicted in their features, which never betray any signs of fear or suspicion. Their hair, which is short and curling, and their skin, which is nearly black, are rubbed over with a solution of red ochre ; and though a few wear cloaks of skin, most of them go quite naked. The women wear cloaks that extend below the calf of the leg ;. and their head-dress, which is a leather cap, is adorned with beads, shells, and polished pieces of iron 01 copper.

CAFFRISTAN, or KUTTORE, an extensive mountainous region of India, bounding Cabul to the north, and extending northward from the

thirty-fifth degree of latitude to Cashmere. The general level of this country is considerably above those on each side of it. Kuttore is the general name of this tract; that of Caffristan signifies the land of infidels. It is classed as a dependency of Cashgar, by the people of llinr dostan, but is little known to them. It seems to be governed by a number of petty chieftains, and has members worth the attention of the various enquirers of the neighbourhood.

CAGANUS, or CACANUS, an appellation anciently given by the Huns to their kings. The word appears also to have been formerly applied to the princes of Muscovyˆ now called czars. From the same also, probably, the Tartar title chain or kan, had its origin.

CAGAO, in natural history, the Indian name of a large bird which inhabits the mountains, and feeds on pistachio nuts, and other fruit" which it swallows whole. It is very voracious, and is of the size of a hen, but has a longer neck.

CAG ˆ

CAGE', v. & n. Fr. cage ; Ital. gaggia, gab- bia; Belg. kovi ; Lat. cavea; a place of con- finement ; a prison ; a coop for birds ; generally a place shut in and fastened.

Take any bird and put it in a cage, And do all thin entente and thy coragp, To foster it tenderly with mete and drinke Of all deiutees that thou canst bethinke, And keepe it all so clenely as thou may ; Although the cage of gold be never so gay. Yet had this bird, by twenty thousand fold, Lever in a forest that is wide and cold, Gon eten worms, and swiche wretchednesse ; For ever this bird will don his besinesse To escape out of this cage whan that he may : His libertee the bird desireth, ay.

Chaucer's Canterbury Tales.

See whether a cage can please a bird ? or whether a dog grow not fiercer with tying ? Sidney.

He taught me how to know a man in love ; in ###which cage of rushes, I am sure you are not a prisoner.

Shakspeare.

He cwoln, and pampered, with high fare, Sits down, and snorts, caged in his basket chair.

Donne.

Have you not seen the nightingale A prisoner like coopt in a cage ; How doth she chant her wonted tale In that her narrow hermitage ; Even then her charming melody doth prove That all her bars are trees, her cage a grove.

Old Song. Sir ►►. L' Estrange.

The bird in thrall, the more contented lyes, Because the hawke so neere her she espyes, And though the cage were open, more would feare To venture out than to continue there ; So if thou couldst perceive what birds of prey Are hovering round about thce every day, To seize thy soule (when she abroad shall goe, To take the freedome she desireth so), Thou farre more fearfull, wouldst of them, become Then thou art now of what thou fiyest from.

George Withers.

Though slaves, like birds that sing not in a cage, They lost their genius, and poetick rage ; H>mers again and Pindars may be found, And his great actions with their numbers crowned.

Waller.

And parrots, imitating human tongue, And singing birds in silver cages hung j And every fragrant flower, and oilorous green. Were sorted well, with lumps of amber laid between.

Dry den.

The reason why so few marriages are happy, is, because young ladies spend their time in making nets, not in making cages. Swift.

A man recurs to our fancy, by remembering his garment ; a beast, bird, or fish, by the cage, or court- yard, or cistern, wherein it was kept.

Wattt on the Mind. The yelping cur her heels assaults ; The magpie blabs out all her faults ; Poll in the uproar, from her cage, With this rebuke outscrcamed her rage. Gay.

So settling on his cage, by play,

And chirp, and kiss, he seemed to say,

You must not live alone. Nor would he quit that chosen stand, Till I

with slow and cautious hand,

Returned him to his own.

Cou-per. The Faithful Bird.

CAG

You gave me last week a young linnet. Shut up in a fine golden cage ;

Yet how sad the poor thing was within it ••• O how did it flutter and rage ;

Then he moped and he pined,

That his wings were confined, Till I opened the door of his den ;

Then so merry was he,

Because he was free, He came to his cage back again.

Garrick,

CAGES, CAVEJE, in antiquity, were places in the ancient amphitheatres, wherein wild beast* were kept, ready to be let out for sport. These beasts were usually brought to Rome shut up in oaken or beechen cages, artfully formed, and covered or shaded with boughs, that the creatures, deceived with the appearance of a wood, might fancy themselves in their forest. The fiercer sort were pent in iron cages, lest wooden prisons should be broke through. The caveae were a sort of iron cages different from dens, which were under ground and dark ; whereas the caveae being airy and light, the beasts rushed out of them with more alacrity and fierceness than if they had been pent under ground. Iron cages have been formerly used for the security or punishment of prisoners. Bajazet is said to have died in one when prisoner to Timour the Tartar, but the correctness of this idea is doubted, and seemingly on good grounds, by some historians. They were used in France by Louis XIV., and in England by Edward I., who confined the countess of Buchan in this manner, at the castle of Berwick-upon-Tweed.

CAGGAW, in botany, a name given by the people of Guinea, to a plant which they boil in water, and use the decoction to wash the mouth with, as a cure for the tooth-ache. Its leaves are smooth and shining, like those of the laurel, but they are thin, and bend like those of the bay.

CAGIT, in natural history, a name given by the people of the Philippine Islands, to a spe- cies of parrot, very common in their woods ; it is of a middling size, and is all over of a fine green color.

CAGLIARI, the capital of the island of Sar- dinia, is seated on the declivity of a hill, has a university, and is an archbishop's see. The har- bour, which is at the mouth of the river Mular- gia, is excellent, and the town has a good trade; but it is a place of no strength, and small size. It was taken, with the whole island, by the Eng- lish in 1708, who transferred it to the emperor Charles VI. ; but it was retaken by the Spaniards in 1717, and about two years afterwards ceded to the duke of Savoy, in lieu of Sicily. The ob- jects of traffic are salt, oil, and wine. Inhabitants about 30,000.

CAGLIARI (Paul), called also Paulo Veronese, an excellent painter, born at Verona, in 1532. Gabriel Cagliari, his father, was a sculptor, and Antonio Badile, his uncle, was his master in painting. He was esteemed the best of the Lom- bard painters, and styled, il pittor felice, the happy painter. There is scarcely a church in Venice where some of his performances are not to be seen. De Piles says, ' his picture of the marriage at Cana, is almost the triumph of

painting itself.' Philip II. of Spain, sent for him to paint the Escurial, and made him great offers; cut Paul excused himself from leaving his own lountry, where his reputation was so well estab- lished, that most of the princes of Europe ordered their ambassadors to procure something of his hand at any rate. Titian used to say, he was the ornament of his profession. And Guido lleni being asked which of his predecessors he would choose to be, were it in his power, after Raphael and Corregio, named Paul Veronese. He died of a fever at Venice in 1588, and had a tomb and a statue of brass erected to his mem- ory in the church of St. Sebastian.

CAHIRCONRIGH, a conical mountain of Ireland, in Kerry, Munster, more than 700 yards above the sea level, and forming a sort of penin- sula between the bays of Castlemayn and Tralee.

CAI1ILLO, in ichthyology, a name given by some authors to the lupus marinus, or wolf fish.

CAHORS, a considerable walled town of France, in the department of the Lot, and ci-devant province of Querci. It is seated on a peninsula of the river, and built partly on a craggy rock. The principal street is

narrow; and terminates in the market-place, in which is the town-house. The cathedral is a Gothic structure, and has a large square steeple. It has a university, and is forty-five miles north-west of Toulouse. It has a population of 1 1,728 inhabi- tants; and manufactures of woollen and fine linen, brandy, and oil. In the vicinity is raised the celebrated vin de grave. It had formerly a university, and is still a bishop's see.

CA11YS, a dry measure for corn, used in some parts of Spain, particularly at Seville and at Cadiz. It is near a bushel of our measure.

CAIA, in Roman antiquity, a common prae- nomen among the women, as Caius was among the men. Hence the custom of the bride saying, on being introduced into her husband's house, ' Ubi tu Caius, ego Caia,' i. e. ' Where you are master, I will be mistress.'

CAIA, in the Turkish military orders, an officer serving in the post of a deputy or steward, and acting for the body of janissaries.

CAJA, in entomology, the specific name of the garden tiger moth, a well-known species of phalana. The anterior wings are whitish, with large fuscous spots: posterior ones red, with black spots.

CAJ ANA, a town of European Russia, in Fin- land, the capital of the district of Cajana Lehn. It stands on lake Ulea, on the borders of Lap-land, where the Pytha forms a tremendous cata- ract. The inhabitants gain their living by tillage. It is seventy-two miles south-east of Uleaborg.

CAIANI, in ecclesiastical history, a sect of heretics, thus denominated from one Caianus of Alexandria, their leader, otherwise called Aph-thartodocetae.

CAJANIA, a province of Sweden, the same with East Bothnia. See BOTHNIA.

CAIAPHAS, high priest of the Jews, succeed- ed Simon, the son of Camith, about A. D. 16, or as Calrnet thinks, in 25, and married the daugh- ler of Annas, who was conjoined with him in the priestly office. His iniquitous conduct with re- gard to oui Siviour, with his strong, though

undesigned, expression of the necessity of one dying to save others, are recorded by the evan- gelists. About two years after our Saviour's

death, Caiaphas and Pilate were both deposed by Vitellius, then governor of Syria, and after- wards emperor : whereupon Caiaphas, unable to bear this disgrace, killed himself, A. D. 35. See

ANNAS.

CAIC, CAICA, or CAIQUE, in sea language, is used to denote the skiff or sloop belonging to a galley. The Cossacs give the same name to a small kind of bark used in the navigation of the Black Sea. It is equipped with forty or fifty soldiers; their employment is a kind of piracy.

CAICOS, a cluster of islands in the Atlantic, between St. Domingo and the Bahama islands, on the edge of one of the Bahama banks. North of this bank are four or five islands of consider- able extent. The largest, called the Grand Caicos, is due north from St. Domingo, and about 400 miles from New Providence ; about sixty miles long, and two or three broad. There are here several good anchorages, particularly that at St. George's Key, where there is a port of entry, and a small battery. The harbour ad- mits vessels drawing fourteen feet water. But none of the settlements are very flourishing. Long. 72□□ W., lat. 21□□ N.

CATCUS, in entomology, a species of sphinx, inhabiting Surinam. Color of the wings fuscous : posterior pair rufous, streaked with black ; ab- domen cinerous, with black rings.

CAJEPUT OIL, the volatile oil obtained by distillation from the leaves of the cajeputa offici- narum, the melaleuca leucadertdron of Linnaeus, frequent on the mountains of Atnboyna, and other Molucca islands. It is prepared in great quantities, and sent to Holland in copper flasks. As it comes to us, it is of a green color, from the copper of the flasks ; very limpid, lighter than water, of a strong smell resembling camphor, and a strong pungent taste, like that of cardamoms, and is often adulterated with other essential oils, colored with the resin of milfoil. It burns en- tirely away, without leaving any residuum. In medicine it is used as a general stimulant and antispasmodic. Hence it is recommended in flatulent colic, paralysis, chorea, hooping cough, and convulsive disorders in general. The dose is from one to six drops. It is also of consider- able use externally applied for the relief of tooth- ache, rheumatic pains, sprains, &c. Insects have a great aversion to this oil ; the vapor of which appears to intoxicate and kill them. Cajeput oil is a perfect solvent of caoutchouc, from which solution a fine drying varnish may be made.

CAJETA, in ancient geography, a port and town of Latium, so called

from ˆEneas’s nurse ; now called Gaeta.

CAJETAN (Cardinal), was born atCajeta, in Naples, in 14G9.” His proper name was Thomas de Vio ; but he adopted that of Cajetan from the place of his nativity. lie defended the authority of the pope, which suffered greatly at the council of Nice, in a work entitled, Of the Power of the Pope ; and for this work he obtained the bishop- ric of Cajeta. He was afterwards raised to the archiepiscopal see of Palermo, and in 1517 was

made a cardinal by pope Leo X. The year after, he was sent as legate into Germany, t<; quiet the commotions raised against indulgences by Martin Luther; but Luther, under protec- tion of Frederic, elector of Saxony, set him at defiance; for though he obeyed the cardinal's summons in repairing to Augsburg, yet he ren- dered all his proceedings ineffectual. He died in 1534. He wrote Commentaries upon Aris- totle's Philosophy, and upon Thomas Aquinas's Theology; and made a literal Translation of the Old and New Testament.

CAIFA, CAIPHA, or HAIFA, a sea-port town of Palestine, on the south side of the bay of Acre. From a poor village this has sprung up on the ruins of an ancient city, at the foot of Mount Carmel. It is built without plan, and defended by walls on the land side, which were constructed by Daher, a late chief of Acre ; he also established a custom-house here, at a time when the port of Acre was choked. It is now governed by an Arab ; the inhabitants are Ma- hommedans and Greeks. In March, 1799, the Turks evacuated Caifa at the approach of the French general, Kleber, leaving abundant stores in the place. The French established a garri- son here, and built ovens for the use of the army, which tlie British soon after made an unsuccess- ful attempt to destroy. Distant thirteen miles south-west of Acre.

CAI-FONG, or KAI-FONG, a city of China, the capital of the province of Honan. It stands only two leagues from the Hoang-ho, or Yellow River, and is situated so low that the bed of the river is higher ground than the city, and, to guard against inundations, strong dykes or em- bankments have been constructed, which extend above ninety miles. When it was besieged by 100,000 rebels, in 1642, the commander of a body of forces sent for its rel.ief, resolved to attempt drowning the enemy, by breaking down the embankment. His stratagem was successful ; but, while the enemy was destroyed, the inun- dation overwhelmed also the city, and 300,000 of the inhabitants perished. At that time it was nine miles in circumference. It has been sub-

sequently re-built, but in an inferior style. Its jurisdiction comprehends four cities of the second class, and thirty of the third. Distant 315 miles south-west of Pekin.

CAILLE (Nicholas Louis de la), an eminent mathematician and astronomer, was born at Ru- migny, in the diocese of Rheims, in 1713. In 1729 he went to Paris, where he studied the clas- sics, philosophy, and mathematics. Afterwards he studied divinity at the college of Lisieux, was ordained a deacon, and officiated in the church of the college of Mazarin several years ; but he never entered into orders, apprehending that his astronomical studies might too much interfere with his religious duties. In 1739 he was con- joined with M. de Thury, son of M. Cassini, in verifying the meridian of the royal observatory, through the whole kingdom of France. In No- retnber, the same year, whilst he was engaged in the operations which this grand undertaking Required, he was elected into the vacant mathe- fcatical chair, which the celebrated M. Varignon Sad so worthily filled. Here he began to deliver

lectures about the end of 1740; and an obser- vatory was erected for his use in the college, and furnished with the best instruments. In May 1741, he was admitted into the Royal Academy of Sciences, as an adjoint member for astronomy. Besides many excellent papers in their memoirs, he published Elements of Geography, Mechan- ics, Optics, and Astronomy. He carefully com- puted all the eclipses of the sun and moon that had happened since the Christian era, which were printed in a book published by two Bene- dictines, entitled L' Art de Verefier les Dates, &c., Paris, 1750, in 4to. Besides these, he com- piled a volume of Astronomical Ephemerides, from 1745 to 1755 ; another from 1755 to 1765 ; a third from 1765 to 1775 ; an excellent work, entitled Astronomiae Fundamenta Novissimis Solis et Stellarum Observationibus Stabilita; and the most correct solar tables that ever ap- peared. Having gone through a seven yeara series of astronomical observations in his own observatory, he formed a project of going to observe the southern stars at the Cape of Good Hope. This was highly approved of by the academy, and by the prime minister Comte d' Argenson, and readily agreed to by the states of Holland. At length, on the 21st of November, 1 759, he sailed for the Cape, and arrived there on the 19th of April, 1751. Here he accom- plished the measurement of a degree of latitude, and returned to Paris the 27th of September, 1754; and at his coming into port, he refused a bribe of 100,000 livres, offered by one that thirsted less after glory than gain, to be sharer in his immunity from custom-house searchers. After receiving

the congratulatory visits of his more intimate friends and the astronomers, he drew up a reply to some strictures, which pro- fessor Euler had published relative to the meridian, and then he settled the results of the comparison of his own, with the observations of other astronomers, for the parallaxes. His fame was now established upon a firm basis, and he was unanimously elected a member of the Royal Society at London ; of the institute of Bologna ; of the Imperial Academy at Petersburgh ; and ot" the royal academies of Berlin, Stockholm, and Gottingen. In 1760 he was attacked by a severe fit of the gout ; which, however, did not inter- rupt his studies ; for he then planned out a History of Astronomy, through all Ages, with a Comparison of the Ancient and Modern Obser- vations, and the Construction and Use of the Instruments employed in making them. In order to pursue this task, in a suitable retire- ment, he obtained a grant of apartments in the royal palace of Vincennes ; and whilst his astro- nomical apparatus was erecting there, he began printing his catalogue of the southern stars, and the third volume of his Ephemerides. The state of his health was, towards the end of 1763, greatly reduced. This induced him to settle his affairs ; his MSS. he committed to the care and discretion of his esteemed friend M. Maraldi. It was at last determined that a vein should be opened : but this brought on an obstinate lethar- gy, of which he died, aged forty-nine.

CAILLOMA, a town of Peru, in the provincp of Collahuas, famous for the silver mines of its

neighbourhood. The country around is barren, but the mountains are supposed to contain many untouched veins of precious metal. It is forty- six miles N.N. E. of Arequipa.

CAIMACAN, or CAIMACAM, in the Turkish iffairs, a dignity in the Ottoman empire, answer- ing to lieutenant or rather deputy, among us. There are usually two caimacans; one resides at Constantinople, as governor thereof; the other attends the grand vizier in quality of his lieu- tenant, secretary of state, and first minister o►► his council, and gives audience to ambassadors Sometimes there is a third caimacan, who attend., the sultan; whom he acquaints with any public disturbances, and receives his orders concerning them.

CAIMAN, the American name of a crocodile.

CAIN, the eldest son of Adam and Eve, and thˆ first man born into this

world. He is gene- rally styled the first murderer ; but, although it is certain that he killed his brother Abel, it appears by no means equally certain that he intended it Death, except that of the beasts sacrificed by Abtl, was then hardly known; and the extent of suffering which the human body could bear, without inducing death, was totally unknown. It seems, therefore, probable, that Cain had killed his brother in a fit of passion, when he intended nothing more than a severe drubbing. This seems further confirmed by the punishment inflicted on him by the Searcher of hearts; which was only banishment, a punishment often inflicted since for manslaughter. He is the first builder on record. Philo pretends that he built seven cities. ††† Alsted. Chron. p. 257.

CAINAN, or KENAN, the son of Enoch, great- grandson of Adam, and the fourth of the Ante- diluvian patriarchs, was born A.M. 325: begat Mahalaleel in 395, and died in 1235, aged 910. There was another Cainan, the son of Arphaxad, and father of Salah ; mentioned only in the Sep- tuagint, Gen. x. 24., and xi. 12; and in Luke, iii. 36: of this name no notice is taken in the Hebrew text, the Samaritan, or the Vulgate.

CAINIANS, or CAINITES, a sect of heretics in the second century, so called on account of their great respect lor Cain, and Judas, and others of the same class, who, according to them, had a mighty knowledge of all things. Dr. Lardner, however, disputes the credibility of the relations, of Epiphanius and Irenaeus, concerning this people.

CAJOLE’, v. ~\ Fr. cajoler ; Goth, goela,

CAJOL’ER, ygagoela, to entice. See to

CAJOL’ERY, n. j GULL. It describes a pur- pose, and that of the worst kind, deception; to cajole is to entrap by flattery, coaxing and wheedling.

The one affronts him, while the other cajoles and

pities him : takes up his quarrel, shakes his head at

it, clasps his hand upon his breast, and then protests

and protests. L’ Estrange.

Thought he, ‘tis no mean part of civil

State prudence, to cajole the devil. Hudibrat.

A plan to rob the house was laid, The thief with love seduced the maid ; Cajoled the cur, and stroked his head, And bought his secresy with bread.

Cor,

) CAI

If the king were present, Cleon, there would be no need of my answering to what you have just proposed. He would himself reprove you for en- deavouring to cajole him into an imitation of foreign absurdities, and for bringing enmity upon him, by such unmanly flattery. As he is absent, I take upon me to tell you, in his name, that no praise is lasting but what is rational.

Q. Curtius. Trans.

CAIQUE. See CAIC.

CA IRA, French, the name, or rather chorus of a political French song, very popular all over France, in the beginning of the revolution. The words literally signify, it will do, or it will go on, and are said to have been used almost proverbially by the late Dr. Franklin, concerning the . American revolution ; from which circumstance they were adopted as the chorus of the French revolution song. Songs, however, as well as states, are subject to revolu- tions. This song and the Marseilloise hymn, another popular French song, were both prohi- bited from being sung in public by the French directory, soon after the revolution in September 1797, they being considered as rallying signs of the party in opposition.

CAIRNS, or CARNES, the vulgar name of those heaps of stones which are to be seen in many- places of Britain, particularly Scotland and Wales. They are composed of stones of all di- mensions, thrown together in a conical form,

feet over, and of vast height. They may justly be supposed to have been proportioned in size to the rank of the person, or to his popularity : the people of a whole district assembled to show their respect to the deceased ; and, by an active honoring of his memory, soon accumulated heaps equal to those that astonish us at this time. But these honors were not merely

those of the day ; as long as the memory of the deceased endured not a passenger went by without adding a stone to the heap; they supposed it would be an honor to the dead, and acceptable to his manes. To this moment there is a proverbial expression among the Highlanders, allusive to the old prac- tice : a suppliant will tell his patron, ‘ Curri mi doch er do charne,’ ‘ I will add a stone to your cairn ;’ meaning, when you are no more, I will do all possible honor to your memory. Cairns are to be found in all parts of our islands, in Cornwall, Wales, and all parts of north Britain ; they were in use among the northern nations ; Dahlberg, in his 323d plate, has giv-en the figure of one. In Wales they are called carneddau : but the proverb taken from them there, is not of the complimental kind : ‘ Karn ar dy hen,’ or, ‘ A cairn on your head,’ is a token of impre- cation.

CAIRO, or GRAND CAIRO, (Victorious), sometimes called the queen of cities, stands upon the east bank of the Nile, a little above the Delta, or plain of Lower Egypt. Founded, according to the oriental writers, in the sixteenth century,it received its present name from Moaz, the first caliph, m memory of his conquest of Egypt. H>re he erected a splendid palace; but two cen- turies elapsed before Cairo could be considered as anything but the famed residence of a military sovereign. In the Crusades the neighbouring capital of Egypt, Fostat, was reduced to ashes, to disappoint the Christians of their booty ; and the inhabitants sought an asylum in Cairo, which from that period became the capital of this coun- try. It was greatly enlarged, adorned, and for- tified, by the emperor Saladin, and was in the height of its prosperity about the commencement of the fifteenth century. As a central emporium for the trade of Europe and Asia, and closely connected with Alexandria, it was a first rate commercial city, and respectable also for men of science and learning. But the conquest of Egypt by the Turks, and the discovery of a passage to India by the Cape of Good Hope, diverted this flourishing trade, and all the intercourse of Europe with the east into a different channel, and caused a decline from which it has never arisen. But Cairo is still described as a large city, equal in extent to Paris. It is of a crescent form, more than nine miles in circumference ; and seen from the Nile, from which it is about a mile distant, it presents a most magnificent scene, in which the citadel towering above innumerable other lofty edifices, and countless minarets, all springing as it were out of a grove of the richest foliage, are the most conspicuous objects. On a nearer ap- proach the streets are found to be crooked, nar- row, and unpaved ; and from the crowds of men and animals, pressing along through dust and filth, &re any thing but -agreeable. The houses me chiefly of wood, or unburnt bricks dried in*

the sun, and consist only of a single story. Some, however, are constructed of a soft stone. The houses are crowded into groupes, with large intervening

spaces, all of which, as well as the courts and gardens within the walls, are covered with water by the welcome inundation of the Nile. The terraced roofs of the houses are de- scribed by Sonnini as covered with innumerable turtle doves, crows, kites, and vultures, which are never disturbed by the inhabitants, and con- sequently exhibit a degree of tameness and fami- liarity which appears surprising to an European. In the interior the better houses have a large hall, rising the whole height of the house, and covered with a small dome. Every thing here is arranged with a view to coolness ; the floor is inlaid with marble and colored earthenware, and fountains spring up into marble basins. Mats and mattresses cover the floor, over which is spread a rich car- pet, on which they sit cross-legged. . Around the wall is a sort of sofa with cushions, to support the back and elbows ; and above, at the height of seven or eight feet, a range of shelves adorned with porcelain. The walls are either chequered with sentences from the Koran, or with painted foliage and flowers. The windows have neither glass nor moving sashes, but open lattice work, which frequently costs more than our glazing; and into which a dim light enters from the inner courts, pleasingly qualified by their verdure. The widest street in Cairo is one which traverses the whole length of the city, but would be re- garded only as a lane in Europe. The others are so narrow, that a slight covering is frequently thrown over them, to exclude the sun's rays. Most of the streets, or at least every district, has a gate which is shut as soon as it is dark. A canal supplied by the Nile, called the Calisch, and which is from fifteen to twenty feet broad, runs through the city. Its mouth, when the waters of the river begin to increase, is closed by a mound of earth, which is not removed till they have risen to a certain height. The opening then takes place, and a magnificent festival is celebrated on the occasion. The bashaw places himself in a tent, which stands by the side of the canal ; nuts, melons, and some small coins, are thrown in, and a discharge of fire-works takes place. From the river to the city the canal is only an ill kept ditch, without any lining, or even any regular boundary. The Arabs indeed assert, that it is paved with marble, but if so, it is en- tirely concealed beneath the mud. Along the line of it, in the city, there are a number of large squares, from a quarter to three quarters of a mile round, into which its water is conducted. During the season of inundation, these of course bear the appearance of lakes, and, being bordered by the finest houses in Cairo, present a scene of great beauty, especially when covered with plea- sure boats and barges, and enlivened by music and fire works. When the inundation subsides the lake becomes a marsh, and a repository of mud, from which the most offensive vapors ex- hale. The whole, however, is quickly dried up by the intense heat of the sun, and it is then soon covered by luxuriant vegetation. It now often becomes a theatre for those exhibitions which form the delight of the inhabitants; and in which

jugglers, tumblers, mountebanks, and dancing girls, display in succession their various feats. The citadel, which stands on a rocky eminence, is three miles in circumference, and affords one of the most splendid views in Egypt. It includes the palace of the pacha, the barracks of the janis- saries, and some remains of antiquity ; among which is Joseph's well, dug to the depth of 276 feet through the solid rock. The diameter of the well varies at different depths, and, where it is contracted, stages are formed for oxen to drive a wheel for raising the water. A huge pile of building within the citadel is called Joseph's pa- lace, the great hall of which has been much ad- mired.

Among the other public buildings of this city, the resevoirs for water, and the baths, are worth notice ; the warehouses as well as the market places, are spacious and commodious ; but the mosques, of which more than 300 are erected within the walls, form, with their numerous and lofty minarets, the chief ornament of the place. The Jews have a synagogue here , and the Greeks, and other sects of .Christians, places of worship.

A caravan arrives at Cairo from Abyssinia, loaded with the rich productions of the interior of Africa, and, being joined by another from the western part of Africa, it proceeds towards Ara- bia. This perilous journey is undertaken partly for religious, and partly fcr commercial purposes. Having performed the prescribed ceremonies at the holy city, and exchanged their merchandise for the commodities of the east, the immense body of travellers, amounting, it is said, sometimes to 100,000, return from Mecca by the same route. Its manufactures are linen cloth, silk stuffs, sugar, sal-ammoniac, salt-petre, and coarse gunpowder; glass lamps, and several kinds of leather. The mode of hatching chickens by means of artificial heat, which has been long known in Egypt, is still practised here. Cairo also contains a book- market, where a prodigious number of beautiful manuscripts are exposed for sale. Here Dr. Clarke purchased for seven pounds a complete copy of the Arabian Nights, having many tales which have not been translated into the European languages ; but it was unfortunately lost. Many of the Mamelukes collect large and expensive libraries. The police here is well managed, and a general quiet results. The principal occasions on which it is disturbed, are those of marriage and circumcision. The bride, a few days before the ceremony, walks in procession to the bath, ###where she remains till the nuptials, when a second procession takes place. On these occasions, all the magnificence which a family is able to dis- play is ostentatiously paraded. The bride, pre- ceded by a band of music, walks below a mag- nificent canopy, surrounded

and followed by nu- merous attendants. Every article of finery which can be collected is carried by the attendants, a small portion being assigned to each. The pro- cessions for the other purpose are also splendid, and attended by numerous horsemen and bands of music.

The population of Cairo is variously stated, from the extreme amounts of 250,000, 300,000, to 700,000, souls ; it is composed of people of all countries and religions. Among those of

oriental origin, and who have it in their power to indulge in them, the luxurious manners and customs of the east prevail. Sailing on the Nile is one great amusement of all classes in Cairo, and vessels of a light construction are elegantly fitted up for this purpose. Boulac, about a mile to the west of Cairo, on the right bank of the river, is its principal port. It suffered severely from the French, who plundered and burned it to the ground.

About a mile distant, higher up the river, stands Fostat, or Old Cairo, as it is sometimes called, formerly the capital of Egypt, and still a popu- lous place. The great canal, which formed a communication between the Nile and the Red sea, passes off from the river near this place, and proceeds towards Cairo, where it divides the city as we have already mentioned. This place is inhabited in a great measure by Copts, who have twelve churches, and, among others, one of pe- culiar sanctity, which they report to have been the residence of the Virgin Mary, when she was compelled to fly into Egypt. Their c'hurches generally consist of a nave and two aisles, with galleries supported by pillars, and adorned in front with columns that support the roof. The part containing the altar is separated by a parti- tion that is finely adorned with carving, and inlaid with ivory and tortoise-shell. The patriarch of the Coptic church is established at Old Cairo. A street is called by his name, in which is the church of St. Macarius, where he is elected and enthroned. The Jews have also an ancient syna- gogue here. Dr. Pococke saw two ancient manuscripts of the law, and a manuscript of the Bible amongst them, pretended to have been written by Ezra. To the north-east there is an ancient mosque, called Amrah, said to contain nearly 400 pillars, collected from various more ancient edifices. In Old Cairo are granaries, which are honored with the name of Joseph; they are square courts, surrounded with walls fifteen or twenty feet high, and without any roof. The grain is only covered with matting, which ill protects it from birds, for whose depredations an allowance is said to be made to the keepers. The aqueduct, a rustic edifice, by which water is conveyed to the castle of New Cairo, is a su- perior work ; it is a hexagon building, each side being eighty or ninety feet in length, and about as many in height ; on the outside there is an easy ascent for oxen, who turn the Persian wheels by which the water is raised to the top. The whole is supported by arches from

ten to fif- teen feet wide, of which Pococke counted 289, but Sonnini 350. Opposite to it is the mouth of the canal before mentioned. On an island in the middle of the river (Rhoda), is the celebrated Mikias Nilometer, or measurer of the Nile, the purpose of which is to ascertain the rising of the river during the annual inundation. It is com- posed of a noble marble pillar, surmounted by a Corinthian capital, which rises from the centre of a basin having a communication with the Nile, and, being graduated, indicates the increase in the height of that important stream. A splendid dome supported by columns, surmounts the pil- lar. This building is said to be 1000 years old.

CAIRO, a small town of Italy, in Piedrnout,

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in tnc Duchy of Montferrat, between Acqui and Finale, on the road to Savona. Here is a consi- derable carrying trade, and here was fought on 21st September, 1794, a bloody battle between the French and the Austro-Sardinians, in which the latter were defeated. In 1796 the town was taken by the French. It stands on the river Bormida ; twelve mile? E.N.E. of Ceva, eighteen south of Acqui, and twenth-five E.N.E. of Mon- dovi. Population 4000.

CAIRO is also th►► name of a post-township of the United States, in Greene County, New York.

CAISSON, in military affairs, a wooden frame or chest, made square, the side planks about two inches thick : it may be made to contain loaded shells. Caissons are buried under ground, at the depth of five or six feet, under some work the enemy intends to possess himself of; and when he becomes master of it, fire is put to the train, which inflames the shells and blows up the assailants. Sometimes a quantity ofloose powder is put into the chest on which the shells are placed, sufficient to put them in motion, and raise them above ground ; at the same time that the blast of powder sets fire to the fuze in the shells, which must be calculated to burn from 1 to 2►► seconds. Also a kind of flat-bottomed boat in which brick or stone work is built, then sunk to the bottom for forming the foundations. Some of the caissons which were usedbyLabelye, for the erection of Westminster-bridge, contained above 150 load of fir timber. They are also used in dock-yards to raise ships, ►►► the water being let in so as to allow the caisson to be brought under the bottom of the vessel, it is then pumped out, and the

buoyancy of the large caisson raises the vessel. The ship's sides and bottom tending to fall outwards, by their own weight, and the sides and bottom of the caisson tending to be forced inwards, by the external pressure of the water, it is obvious, that by placing props or shoars between, both will be supported, while the ship will ride with all her stores on board, and masts standing nearly as easy as when in water.

CAITAIA, in zoology, the name of an Ame- rican monkey, remarkable for its smell, having somewhat of a scent of musk ; its hair is long and of a whitish-yellow color ; its head is round ; its forehead depressed, and very small ; its nose small and flatted, and its tail arched. It is easily tamed, but very clamorous and quarrelsome.

CAITHNESS, otherwise called the county of Wick, is the most northern county of Scotland. It is bounded on the east by the ocean, and by Strathnaver and Sutherland on the south and south-west; from these it is divided by the mountain Orde, and a continued ridge of hills as far as Knockfin, and thence by the whole course of the river Hallowdale. On the north it is washed by the Pentland frith, which divides it from the Orkneys. It extends thirty-five miles from north to south, and about twenty from east to west. The coast is rocky, and remarkable for a number of bays and promontories. Of these, the principal are Sandside-head, to the west, pointing to the opening of Pentland-fi ith ; Orcas, now Holbom-hcad and Dunnet-Hcad, both

pointing northward to the frith. Scribister-bay, on the north-west, is a good harbour, where ships may ride securely. Rice-bay, on the east side, extends three miles in breadth ; but is of dangerous access, on account of some sunk rocks at the entrance. At the bottom of this bay ap- pear the ruins of two strong castles the seat of the earl of Caithness, called Castle Sinclair, and Gernego, joined to each other by a draw-bridge. Duncan's-bay, otherwise called Dunsby-head, is the north-east point of Caithness, and the most extreme promontory in Britain. At this place the breadth of the frith does not exceed twelve miles. It is the ordinary ferry to the Orkneys. Here is likewise Clythness pointing east and Noshead pointing north-east. The sea in this place is very impetuous, being in continual agi- tation from violent counter-tides, currents, and vortices. The only island belonging to this county is that of Stroma, in the Pentland frith, two miles from the main land. The county of Caithness, though chiefly mountainous, flattens towards the sea-coast, where the ground is arable, and produces good harvests of oats and barley, sufficient for the natives, and yielding a surplus for exportation. Caithness is well watered with small rivers, brooks, lakes, and fountains, and affords a few woods of birch, but is in general bare of trees; and even those the inhabitants plant are stunted in their growth. Lead is found at Dunnet, copper at Old Urk, and iron ore at

several places ; but these advantages are not improved. The air of Caithness is tempe- rate, though in the latitude of 58►►, where the longest day in summer lasts eighteen hours ; and when the sun sets he makes so small an arch of a circle below the horizon, that the people enjoy twilight until he rises again. The fuel used by the inhabitants of Caithness consists of peat and turf, which the ground yields in great plenty. The forests of Moravins and Berridale afford abundance of red deer and roe-bucks : the country is well stored with hares, rabbits, growse, heathcocks, plover, and all sorts of game ; besides a peculiar species of birds called snow-fleets ; which are about the size of a sparrow, exceed- ingly delicious, and come hither in large flights about the middle of February, and depart in April. The hills are covered with sheep and black cattle, which are so numerous that a fat cow has been sold for 4s. sterling. The rocks along the coasts are frequented by eagles, hawks, and all kinds of sea-fowl, whose eggs and young are taken in vast quantities by the natives. The rivers and lakes abound with trout, salmon, and eels; and the sea affords a very advantageous fishery. Various obelisks and ancient monu- ments appear in this district, and several Romish chapels are still standing. Caithness is well peopled with a race of hardy inhabitants, who employ themselves chiefly in fishing and breed- ing sheep and black cattle, and are remarkably industrious. This county sends out in some years about 20,000 head of black cattle, but in bad seasons the farmers kill and salt vast num- bers for sale. Great numbers of swine are also reared. They are short, high-backed, long- bristled, sharp, slender, and long-nosed ; have long erect ears, and a most ferocious look. Vast

numbers of salmon are taken at Castle-hill, Dunnet, Wick, and Thurso. In November great numbers of seals are a'so taken.

CAITIFF, n. &, adj. or\ Ital. cattivo, a

CAI'TIVE, (captive; a slave ; a

CAI'TIVELY, ►► wretch; Fr. chetlf ;

CAI'TIVEXESS. 3 Rom. caitiv, from

Lat. captivus, a slave; whence it came to signify a bad man, with some implication of meanness ; as knave in English, and fur in Latin ; so certain- ly does slavery destroy virtue. 'H/ucrv ri}c nptrijc mroaivvTai ►►tt\oiov

i/pap- ••• Homer. A slave and a scoundrel are signified by the same words in many languages. A mean villain ; a despicable knave ; it often implies a mixture of wickedness and misery.

The spyrit of the Lord on me, for which thing he anoyntide me ; he sente me to pveche to pore men, to hecle contryt men in herte, and to preche remis- sioun to caitifs, and sighte to blinde men, and to deliver broken men into remissioun.

Wiclif's New Test. Luke iv.

Vile caitiff"! vassal of dread and despair, Unworthy of the common breathed air ! \VIiy livest thou, dead dog, a longer day, And dost not unto death thyself prepare ? Spenser.

Tis not impossible

Hut one, the wicked'st caitiff on the ground, May seem as shy, as grave, as just, as absolute, As Angelo. Sluikspeare.

The wretched caitiff, all alone, As he believed, began to moan, And tell his story to himself. Hudibras.

CAIUS (Dr.) See KAYE.

CAKE', v. & n. ˆ Per. kak ; Arab, kaak ;

CAKE'BKEAD, >Swed. kaka ; Teut. hack :

CAKE'HOUSE. j Belg. koek ; Welsh caccen, a small flat bread ; a sweet biscuit ; concreted, co- agulated matter. To cake is to form into a solid mass ; to clot together. A cake, metaphorically, and in vulgar speech, is one who is soft, lumpish, and heavy ; a fool without vivacity.

And whan the miller saw that they were gon, He half a bushel of her flour hath take, A nd bad his wif go knede it in a cake.

Chaucer's Canterbury Tales.

You must be seeing christenings ! do you look for ale and cakes here, you rude rascals? Shakspeare.

This is that very Mab,

That plats the manes of horses in the night,

And cakes the elflocks in foul sluttish hairs. Id.

There is a cake that groweth upon the side of a dead tree, that hath gotten no name, but it is large, and of a chestnut colour, and hard and pithy.

Bacon's Natural History.

The dismal day was come ; the priests prepare their leavened cakes, and fillets for my hair. Drydcn.

Then when the fleecy skies new cloath the wood, And cakes of rustling ice come rolling down the flood.

Id.

He rinsed the wound,

And washed away the strings and clotted blood, That caked within. Addixun.

This burning matter, as it sunk very leisurely, had time to cake together, and form the bottom, which covers the mouth of that dreadful vault, which lies underneath it. Addism on Italy.

The good woman on her return, finding the cakes all burnt, rated the king (Alfred) very severely, that he always seemed well pleased to eat her warm cakes, tho' Le was thus negligent in toasting them. Humtt.

CAKILE, sea- rocket, in botany, a genus of plants ; class tetradynamia, order siliculosa ; silicle lanceolate, four sided : no valves : two deciduous joints, each containing a single seed ; the lower joint with a tooth each side at the tip. Two species. 1. C. maritima, found on our own sea-shores, with leaves pinnatifid, and linear slightly-toothed divisions. 2. C. ./Egyptiaca, a native both of Egypt and Italy.

CALABAR, OLD and NEW, settlements of Western Africa, are situated, the former on a river of the same name, which is of considerable magnitude, and forms, at its mouth, a species of estuary ; and the latter on a stream named by the Portuguese the Rio Real. They are perhaps eighty miles apart. The soil is a loose but fertile sand, yielding yams in abundance, fine sugar canes, Cayenne pepper, &c. The country is overrun with brushwood, amongst which the natives plaut their yams. The roads are scarcely to be called more than foot-paths, but the interior is not known for above twenty or thirty miles. The natives are well formed, particularly the women before they become mothers ; afterwards, it is said, their breasts become unusually pen- dent, and to European sight very disgusting. There is a remarkable amphibious animal in this district, called the manatea, about six feet long, and nine in circumference, having a head as large as an ox, and large fins

like hands. The inhabitants observe an eighth day holiday, and spend a large portion of the time in drinking palm wine to intoxication, and in sleep. The principal place on Old Calabar River is called Duke Town, and contains about 2000 inha- bitants ; at the distance of two or three miles is Henshaw Town, and King John Ambos Town, with each about 300 inhabitants. About eight miles north is Creek Town, situated on a small navigable stream, and containing about 1500 people. Old Town was formerly the capital, but it has been almost abandoned of late, and is now inferior to Duke Town. The traders' houses are built of wood brought from Liverpool, and thatched with bamboo leaves. In the in- terior are Aqua and Howatt ; but the greater number of slaves, which are exported, are drawn from the coast. Mr. Nicholls, in 180.5, attempted to reach the Niger by the way of Calabar ; but was seized with the fever of the country, and fell a victim to it three months after his arrival. The atmosphere which is breathed here is, in truth, highly noxious to Europeans, the air being stagnant, and loaded with marsh mias- mata. Duke Town is in about long. 8►► E., lat. 5►► 4tf N.

The Rio Real flows down from the north-west, from a remote source ; and can be ascended by boats and shallops only, but vessels of any size anchor in the road at its mouth. The town of New Calabar is the centre of the Dutch com- merce in this part of Africa. It stands on an island formed by the river, and contains upwards of 900 inhabitants.

CAL'ABASH. Span, calabaˆa, KaXirte; Fr. calabasse, a species of gourd or pompion, the fruit of the adansonia or baobab tree.

CALABASH, in botany. See CUCURBITA.

CALABASH, in commerce, a light kind of ves-

sel. formed of the shell of a gourd, emptied and aned, serving to put divers kinds of goods in, as pitch, resin, and the like. The Indians, botli of the North and South Sea, put the pearls they have fished in calabashes, and the negroes on the coast of Africa do the same with their gold-dust. The smaller calabashes are also frequently used by these people as a measure, by which they sell these precious commodities to the Europeans. The same vessels likewise serve to hold liquors, and answer as cups, and bottles, for soldiers and pilgrims.

CALABASH TREE. See MELASTOMO.

CALABASH TREE, AFRICAN. See ADANSONIA.

CALABOZO, a town in the province of Ve- nezuela, South America, founded in the early part of the last century by a commercial company of Guipuscoa. It is situated between the Guarico to the west, and the Orituco to the east; but nearer the former than the latter. The streets and houses have an agreeable aspect, and it has a neat church. The fine pasturage of the adjacent country rears numerous herds of cattle. The town is subject to occasional inundations from the mighty streams adjacent, and the climate is very hot, though tempered by the north-east breezes. There are five dependent villages or missions, containing altogether 98,000 head of cattle. The town itself has about 5000 inhabitants, and is 156 miles south of Caraccas.

CALABRIA, a country of Italy, in the king- dom of Naples, which was almost entirely desolated by the earthquakes of 1783. The reiterated shocks extended from Cape Spartivento to Amantea, above the gulf of St. Eufemia, and also affected that part of Sicily which lies oppo- site to the southern extremity of Italy. Those of the 5th and 7th of February and the 28th of March were the most violent, and completed the destruction of every building throughout the above-mentioned space. Not one stone was left upon another, south of the narrow isthmus of Squill ace ; and a very large proportion of the inhabitants were killed by the falling of their houses, near 40,000 lives being lost. Some were dug out alive, after remaining a surprising \ength of time buried among the rubbish. Mes- sina became a mass of ruins ; its beautiful pa- lazzata was thrown in upon the town, and its quay cracked into ditches full of water; Reggio was almost destroyed ; Tropea greatly damaged ; and every other place in the province levelled to the ground. Before and during the concussion the clouds gathered, and then hung immovable and heavy over the earth. At Palmi the atmosphere had so fiery an aspect, that many people thought part of the town was burning. It was afterwards remembered, that an unusual heat had affected the skins of several persons just before the shock; the rivers assumed a muddy ash-colored tinge, and a sulphureous smell was almost general. A frigate passing between Calabria and Lipari felt so severe a shock, that the steersman was thrown from the helm, and the cannons were raised up to their carriages, while all around the sea ex- haled a strong smell of brimstone. Stupendous alterations were occasioned in the face of the country ; rivers choked up by the falling in of

the hills, were converted into lakes, which if not speedily drained by some convulsion, or opened by human labor, would have stagnated and filled the air with pestilential vapors, and destroyed the remnants of population.

Whole acres of ground, with houses and trees upon them, were broken off from the plains, and washed many furlongs down the deep hollows which the course of the rivers had worn ; there, to the astonishment and terror of beholders, they found a new foundation to fix upon, either in an upright or an inclining position. In short, every species of phenomenon, incident to these destructive commotions of the earth, was to be seen in its utmost extent and variety in this ruined country. Their Sicilian majesties, with the utmost expedition, despatched vessels loaded with every thing that could be thought of on the occasion for the relief and accommodation of the distressed Calabrians ; a general officer went from Naples with engineers and troops to direct the operations of the persons employed in clearing away and rebuilding the houses, and to defend the property of all the sufferers. The king ordered this officer to take all the money the royal treasures could supply or borrow ; for, rather than it should be wanting on this pressing call, he was determined to part with his plate, nay, the very furniture of his palace. A messenger sent off from a town near Reggio on the 8th of February, travelled four days without shelter, and without being able to procure a morsel of bread. To add to all their other sufferings, the Calabrians found themselves and the miserable wreck of their fortunes exposed to the depredations of robbers and pirates; and to this accumulated distress succeeded a most inclement season, which obstructed every effort made to alleviate it; almost daily earth- quakes kept the inhabitants in continual dread, not of being destroyed by the fall of houses, for none were left, but of being swallowed up by the splitting of the earth, or buried in the waves by some sudden inundation. See EARTH- QUAKE. Calabria is divided into Ulterior and Citerior.

CALABRIA CITERIOR, or CITRA, i. e. HITHER CALABRIA, is one of the twelve provinces of Naples ; and is bounded on the south by Cala- bria Ulterior, on the north by Basilicata, and on the west and east by the sea. Cosenza is the capital.

CALABRIA ULTERIOR, orULTRA,i. e. FARTHER CALABRIA, is washed by the Mediterranean Sea on the east, south, and west, and bounded by Calabria Citra on the north. Reggio is the ca- pital.

CALACINE, or CALLACHENE, in ancient geography, an extensive district of Assyria, north- east of the Tigris, and south of the Gordian mountains of Armenia.

CALADE, in the menage, the sloping de- clivity of a menage ground, upon which we ride down a horse several times, putting him to a short gallop, with his fore hams in the air, to learn him to ply or bend his haunches, and form his stop upon the aids of the ciflves of the legs, the stay of the bridle, and the caveson seasonablv given.

the root so called is knotty, and somewhat like that of the polypody tribe. It has been exhi- bited internally at Rome, with success, in dropsy ; and it is said to be efficacious in pleurisy, con- tusions, and abscesses.

CALAHORRA, an episcopal town of Spain, in Old Castile, seated on a fertile soil, on the side of a hill which extends to the banks of the river Ebro. It is sixty-miles north-west of Sa- ragossa.

CALAIS, a sea-port town of France, the chief town of a district in the department of the Pas de Calais, the seat of a prefecture of police, and of a tribunal of commerce. It is situated on marshy ground, which, by means of sluices, may be overflowed at pleasure, and is nearly surrounded by a moat and a wall, which is used as a public promenade. Calais is defended by a citadel on the north-west side, near the sea, nearly as large as the town. Fort Nieulay, an oblong square, was built in 1680, is supported by piles, and connected with this citadel by a mole. The harbour is not large, and is much obstructed with sand, even common merchantmen can only come in at high water. It consists of a large quay, terminated by two long wooden piers. A century ago it is said to have been capable of admitting vessels of 300 or 400 tons, but it has now only three fathoms at high water. Proposals have re- peatedly been made to improve and deepen the harbour ; but these have not as yet been listened to, though the expense would probably not ex- ceed 1,500,000 livres. The country around is well cultivated, particularly between Calais and Gravelines, and houses environed with wood, rich meadows, and corn-fields, everywhere ap- pear. The town is a parallelogram, having its long side towards the sea. The streets are wide and regular, well paved, and tolerably clean ; and the houses are well built. The public buildings worth notice are the arsenal, built by Cardinal Richelieu, the churches and monas- teries, a tolerably good theatre, and the hotel at the Lion D' Argent, which in fact is itself a small town. The principal manufactures are stockings and soap ; and it possesses a very con- siderable coasting trade. It is also the great mart for the salt and gin of Holland ; and the fishing of cod, herrings, and mackerel, is carried on to a great extent. Two fairs are held an- nually here ; one on the 10th January, which continues for ten days ; and another on the 1 1th July, for nine days ; the principal articles of traffic are cattle, jewellery goods, iron and cop- per ware. This trade is much facilitated by the canals which communicate with Gravelines, Ardres, St. Omer, Dunkirk, and several other places in the north of France. Regular packet- boats, in the time of peace, sail twice a week or oftener, with the mail between Calais and Dover. The inhabitants derive a considerable part of their support from

the intercourse with England.

In the twelfth century, the town was nothing more than a village belonging to the counts of Boulogne, but was afterwards so well fortified, that Edward III. in 1346, after the battle of Cressy, could only reduce it by famine. It continued in the possession of England till 1558, when it was taken by surprise by the duke

ot Guise. By the subsequent treaty of Chateau- Cambresis, it was stipulated that the French should retain it for eight years, at the expiration of which, queen Elizabeth sent troops to de- mand it ; but the surrender was evaded on the ground that the English had violated the treaty by the bombardment of Havre-de- Grace. In 1596 it was taken by assault by the Spaniards, but restored to France at the peace of Vervins. It was bombarded in 1694 by the English, under Sir Cloudesly Shovel, but without much damage. Louis XVIII. landed here from his long exile on the 24th of April, 1814 : a monu ment is erected on the spot to commemorate the event. Near the town also is a monument on the spot where Blanchard descended. Calais was not the scene of a single execution, it is said, during the French revolution. It is twenty miles north-east of Boulogne, twenty-five south- west of Dunkirk, fifty-five north of Abbeville, 170 north of Paris, and seventeen and a half south-east of Dover. Population 8500.

CALAIS (St.), is a small town of France, in the department of the Sarthe. Population 3646.

CALAIS is also the name of a township of the United States, in Caledonia county, Vermont, 105 miles north-east of Bennington.

CALAIS, in fabulous history, the twin brother of Zethes. They were said to have been the sons of Boreas and Orythyia, and to have had wings. They went on the voyage to Colchis with the Argonauts, delivered Phineus from the harpies, and were slain by Hercules.

CALAIS, STRAITS OF, a department of France, bounded on the east by the department of the North ; on the south by that of the Somme; on the west by the British Channel, and on the north by the straits of Dover. It is formed partly out of the ci-devant province of Artois, and partly from that of Picardy. Calais, St. Omer, Be- thune, Hesdin, Arras, and Bapaume are its chief towns.

CALAMAN'CO. Lat. caula monicha, a sort of woollen stuff, so called from being used by monks. In the middle ages Dr. Johnson says it signified a hat. It is manufactured in England, Brabant, and Flanders, particularly at Lisle,

Tournay, Antwerp, and a few other towns. It has a fine gloss ; and is chequered in the warp, whence the cheques appear only on the right side. Some calamancoes are quite plain, others hare broad stripes adorned with flowers, some with plain broad stripes, some with narrow stripes, and others watered.

He was of a bulk and stature larger than ordinary, had a red coat, flung open to shew a calamanco waist- coat. Tatler.

CALAMATA, or CALAMETA, a considerable town of European Turkey, in the Morea, and province of Belvedera. It was taken by the Venetians in 1685; but the Turks retook it with all the Morea. It stands on the river Spi- narza, eight miles from the sea, on the site of the ancient Sparta.

CALAMBA, or CALAMBAC, in commerce, a kind of wood brought from China, usually sold under the denomination of agallochum, or aloes- wood.

CALAMIANES, a group of twelve islands

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in the Eastern seas, lying north and north-east of Paragoa, the most westerly of the Philippines, and about half-way between Mindora and Pala- wan. They are surrounded by rocks and shoals, which render the navigation intricate. The largest two are called Busvagon and Calamiane, the latter being about twenty-three miles long by five broad, and the whole forming a province which passes uhdar its name. The sultan of Borneo and the Spaniards divide the principal and best parts of them, independent of whom, some natives rove in the interior. They are of mild disposition, and the country produces a pe- culiar kind of birds' nests, which form an article of traffic, some rice, honey, wax, and pearls. Long. 120►► 20′ E., lat. 12►► N.

CAL'AMINE, LAPIS CALAMINARIS, or CAD- MI A FOSSILIS, w. s. An ore of zinc, containing zinc, iron, and sometimes other substances. It is consi- derably heavy ; moderately hard and brittle ; of a consistence between stone and earth : the color is sometimes whitish or gray : sometimes yellowish, or of a deep yellow ; sometimes red ; sometimes brown or blackish. It is plentiful in several parts of Europe, Spain, Sweden, Bo- hemia, Saxony, France, and England, particu- larly in Derbyshire, and also in Wales. The calamine of England, however, is by the best judges allowed to be superior in quality to that of most other countries. It seldom lies very deep, being chiefly found in clayey grounds near the surface. In some places it is mixed with lead ores. It is the only true ore of zinc, and is used as an ingredient in making brass. New- mann relates various

experiments with this mi- neral, the result of which was to show, that it contained iron as well as zinc. See ZINC. The lapis calaminaris, calcined, powdered, and sifted, forms a heavy brownish-yellow powder, which, when mixed with wax and oil, forms the ceratum lapidis calaminaris, ceratum epuloticum of the old dispensaries, the most commonly used of all the simple unguents. It is also employed in collyria against defluxions of thin acrid humors upon the eyes, for drying up the moist running ulcers, and healing excoriations. It is the basis of an officinal epulotic cerate.

\Ve must not omit those, which, though cot of so much beauty, yet are of greater use, viz. loadstones, ⬛⬛⬛whetstones of all kinds, limestones, calamine, or lapis calaminaris. Locke.

CAL'AMINT, n. s. Lat. calamintha, the name of a plant. See MALISSA.

CALAMINTHA, in ancient geography, a town of Lybia, mentioned by Herodotus.

CALAMiTA, or CALAMITIS, is used to denote the magnet or loadstone.

CALAMITA ALBA, in natural history, the name of an earth dug in Spain and Italy, of ' nard texture, a white color, and stypt'c taste. They pretend that this attracts flesh as ihe magnet does iron, and thence call it magnes carneus.*

CALAMITIS, a name given by some to the osteocolla, which, when in small pieces, some- times pretty exactly resembles the barrel of a quill ; others have called some of the fossile co- ralloides by the same name, there being fre- quently in them the resemblance of several quills cemented together, in stone.

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CALAMITY, n. } Lat. calamitas; Ir.

CALAM'ITOUS, adj. S calamite ; Ital. caUtmita The primary idea is destruction of corn, when standing on the ground; from hence it has de- rived its general and extensive application to every species of outward injury, inflicted either by design or accident. Thus it comprehends every description of misery, disease of body, in- felicity of mind, wretchedness of condition. Who after thraldome of the gentle squire,

Which she beheld with lamentable eye,

Was touched with compassion entire,

And much lamented his calamity,

That for her sake fell into misery. Spenser.

Why should calamity be full of words-.

Shaktpeare. King Richard III.

Alack,

You are transported by calamity, Thither where more attends you ; and you slander The helms o' the state, who care for you like fatherSi When you curse them as enemies.

Id. Corialantu.

Another ill accident is drought, and the spindling of the corn, which with us is rare, but in hotter coun- tries common ; insomuch as the word calamity was first derived from calamous, when the corn could not get out of the stalk. Bacon.

Thither let us tend

From off the tossing of these fiery waves, There rest, if any rest can harbour there, And reassembling our afflicted powers, Consult how we may henceforth most offend Our enemy, our own loss how repair, How overcome this dire calamity, What reinforcements we 'may gain from hope ; If not, what resolution from despair. Milton.

Strict necessity

Subdues me, and calamitous constraint! Lest on my head both sin and punishment, However insupportable, be all Devolved. Id.

This infinite calamity shall cause To human life, and household peace confound. Id.

Much rather I shall chuse To live the poorest in my tribe, than richest. And be in that calamitous prison left. Id.

In this sad and calamitous condition, deliverance from an oppressour would have even revived them.

South.

What calamitous effects the air of this city wrought upon us the last year, you may read in my discourse of the plague. Harvey on Consumptions.

This is a gracious provision God Almighty hath made in favour of the necessitous and calamitous ; the state of some, in this life, being so extremely wretched and deplorable, when compared with others.

Calamy.

From adverse shores in safety let her hear Foreign calamity, and distant war ; Of which, great heaven, let her no portion bear.

Prior.

CAL'AMUS, n. s. Lat. A sort of reed or sweet scented wood, mentioned in Scripture with the other ingredients of the sacred perfumes. It is a knotty root, reddish without, and white within, which puts forth long and narrow leaves, and brought from the Indies. The prophets speak of it as a foreign commodity of great va- lue. The sweet reeds have no smell when they

are green, ❓❓❓ but when they are dry only. Their form differs not from other reeds, and their smell is perceived upon entering the marshes.

Take them also unto thee principal spices of pure myrrh, of sweet cinnamon, and of sweet calamus.

Exodus, xxx. 23.

CALAMUS, in botany, a genus of the monogy- nia order, and hexandria class of plants : natural order fifth, tripetaloideae : CAL. is hexaphyllous : COR. none, the fruit is a dry monospermous ber- ry, imbricated backwards. There are nine species, the principal one is, C. rotang. The stem is without branches, has a crown at top, and is everywhere beset with straight spines. This is the true Indian cane, which is not visible on the outside ; but the bark being taken off disco- vers the smooth stick, which has no marks of spine on the bark. Sumatra is said to be the place where most of these sticks grow. Such are to be chosen as are of proper growth between two joints, suitable to the fashionable length of canes as they are worn ; but such are scarce. The calamus rotang is one of the plants from which the drug called dragon's blood is obtained. The petrocarpus draco and dracasna draco, also afford this resin. It is generally much adulte- rated, and varies in goodness and purity. The best kind is of a dark red color, which, when ' powdered, changes to crimson : it is soluble in al- cohol, but not in water. It readily melts and catches flame : has no smell, but discovers some degree of warmth and pungency to the taste. The ancient Greeks were acquainted with the astringent power of this drug, in which character it was formerly much employed in haemorrhages and alvine

fluxes.

CALAMCS, in the ancient poets, denotes a sim- ple kind of pipe, the musical instrument of the shepherds, \isually made either of an oaten stalk or a reed.

CALAMUS, AROMATICUS, or sweet-scented flag, in the materia medica, a species of flag called acorus by Linnaeus.

CALAMUS SCRIPTORIUS, in antiquity, a reed or rush to write with. The ancients made use of styles to write on tables covered with wax, and of reed, or rush, to write on parchment, or Egyptian paper. Also, a kind of canal at the bottom of the fourth ventricle of the brain, so called from its resemblance to a pen.

CALAMY (Edmund), an eminent pvesbyte- rian divine, born at London in 1600, and edu- cated at Cambridge, where his attachment to the Arminian party excluded him from a fellowship. Dr. Felton, bishop of Ely, however, made him his chaplain; and, in 1639, he was chosen mi- nister of St. Mary Aldermary, in London. Upon the opening of the long parliament, he distin- guished himself in defence of the Presbyterian cause ; and had a principal hand in writing the famous Smectymnus, which he says, gave the first deadly blow to episcopacy. The authors of this tract were five, the initials of those names formed the name under which it was published, viz. Stephen Marshal, Edmund Calamy, Thomas Young, Matthew Newcomen, and William Spar- stow. He was afterwards an active member in the assembly of divines, and used his utmost en- deavours to prevent those violences committed VOL. V.

after the king was brought from the Isle of Wight. In Cromwell's time he lived privately, but was assiduous in promoting the king's re- turn ; for which he was afterwards offered a bishopric, but refused it. lie was ejected for nonconformity in 1662 ; and died of grief at the sight of the great fire of London in 1666.

CALAMY (Edmund), grandson of the preceding, by his eldest son Mr. Edmu ˆd Calamy, who was ejected out of the living of moxton in Essex on St. Bartholomew's day, 1662. He was born in London, April 5th, 1671. After having learned the languages, and gone through a course of na- tural philosophy and logic, at a private academy in England, he studied philosophy and civil law, at the university of Utrecht, and attended the lectures of the learned Grsevius. While he re- sided there, an offer of a professor's chair in the university of Edinburgh was made him by prin-

cipal Carstairs, sent over on purpose to find a person properly qualified for the office. This he declined, and returned to England in 1691, bringing with him letters from Graevius to pro- fessors Pocock and Bernard, who obtained leavf for him to prosecute his studies in the Bodleiau library. He entered into an examination of tl> controversy between the conformists and the noi. conformists ; which determined him to join th- latter; and coming to London, in 1692, he was chosen assistant to Mr. Matthew Sylvester, at Blackfriars ; and in 1674 ordained at Mr. An-. nesly's meeting-house. In 1702 he was chosen one of the lecturers in Salter's-hall ; and in 1703 succeeded Mr. Vincent Alsop in Westminster. He drew up the table of contents to Mr. Baxter's History of his Life and Times, which was sen' to the press in 1696 ; and added to it an Index/ He next composed an abridgment of it, with an Account of many other Ministers who were ejected after the Restoration ; Their Apology containing the grounds of their nonconformity ; and aContinuation of their History till 1691. This work was published in 1702. He afterward pub- lished a Defence of Nonconformity, in tracts, in answer to Dr. Hoadley. In 1709 he made a tour to Scotland ; and had the degree of D. D. conferred on him by the universities of Edin- burgh, Aberdeen, and Glasgow. In 1713 he pub- blished a second edition of his Abridgement of Baxter's History, in which, among other addi- tions, there is a continuation of the history through King William's reign, and Queen Anne's, down to the passing of the Occasional Bill ; and in the close is subjoined the reformed liturgy, which was drawn up and presented to the bishops in 1661. In 1718 he wrote a Vindica- tion of his grandfather and others, against cer- tain reflections cast upon them by Mr. Echard in his History of England; and in 1728 ap- peared the Continuation of the Account of the Ministers, Lectureis, Masters, Fellows of Col- leges, and Schoolmasters, who were ejected after the Restoration. He died June 3rd, 1732, greatly regretted both by the dissenters and members of the established church, with many of whom he lived iu great intimacy. Besides the pieces already mentioned, he published many sermons. He was twice mariied and had thirteen children.

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CALANDRE, a name given by the French writers to an insect that does vast mischief in granaries. It is properly of the scarabaeus or beetle class ; it has two antennae formed of many round joints, and covered with a soft and short down; from the anterior part of the head there is thrust out a trunk,

which is so formed at the end, that the creature easily makes way with it through the coat or skin that covers the grain, and gets at the meal or farina on which it feeds ; the inside of the grain is also the place where the females deposit their eggs, that the young pro- geny may be born with provision about them. When the the female has pierced a grain of corn for this purpose, she deposites in it one egg, or at the utmost two, but she most frequently lays them single ; these eggs hatch into small worms, which are usually found with their bodies rolled up in a spiral form, and after eating till they ar- rive at their full growth, they are changed into chrysales, and from these, in about a fortnight, comes out the perfect calandre. The female lays a considerable number of eggs ; and the in- crease of these creatures would he very great ; but while in the egg state, and even while in that of the worm, they are subject to be eaten by mites; these little vermin are always very plen- tiful in granaries, and they destroy the far greater number of the larger animals.

CALAPIA, in entomology, an American spe- cies of cancer, having a crenulated thorax, with the posterior angles dilated, hand-claws crested.

*GALAS (John), an unfortunate protestant merchant at Toulouse, inhumanly butchered under form of law, to gratify the sanguinary im- pulse of ignorant Popish zeal. He had lived forty years at Toulouse. His wife was an Englishwoman of French extraction, and they had five sons ; one of whom, Lewis, had turned Catholic, through the persuasion of a Catholic
नaid who had lived thirty years in the family, in October, 1761, the family consisted of Galas, his wife, Mark Antony their son, Peter their se- cond son, and this maid. Anthony was educated for the bar, but, being of melancholy turn, was continually dwelling on passages from authors on the subject of suicide, and one night in that month hanged himself on a bar laid across two folding doors in their shop. The crowd col- lected by the confusion of the family on so shock- ing a discovery, took it into their heads, that he had been strangled by the family to prevent his changmghis religion, and that this was a common practice among Protestants. The officers of justice adopted the popular tale, and were supplied by the mob with what they accepted as evidences of the fact. The fraternity of White Penitents got the body, buried it with great ceremony, and performed a solemn service for him as a martyr ; the Franciscans did the same : and after these formalities no one doubted the guilt of the de- voted heretical family. They were all con- demned to the torture, to bring them to confes- sion; they appealed to the parliament; who, as weak and wicked as the subordinate magistrates, sentenced the father to the torture, ordinary and extraordinary, to be broken alive upon the wheel, and then to be burned to ashes ; which decree, to the disgrace of humanity, was actually carried*

into execution. Peter Calas, the other son, was banished for life ; and the rest were acquitted. The distracted widow found some friends, and among the rest M. Voltaire, who laid her case before the council of state at Versailles, and the parliament at Toulouse were ordered to trans- mit the proceedings. These the king and coun- cil unanimously agreed to annul ; the capitoul, or chief magistrate of Toulouse, was degraded and fined ; old Calas was declared to have been innocent ; and every imputation of guilt was re- moved from the family, who also received from the king and clergy considerable gratuities.

CA'LASH, n. s. From Fr. caleche. It is a light kind of carriage, with very low wheels, open on all sides for the conveniency of the air and prospect, or at most enclosed with light mantles of cloth to be opened and shut at plea- mire.

Daniel, a sprightly swain, that used to slash The vigorous steeds that drew his lord's calath. King.

The ancients used calashes, the figures of several of \ them being to be seen on ancient monuments. They are very simple, light, and drove by the traveller him- self. Arbuthnot on Coins.

CALASIO (Marius), a Franciscan professor of Hebrew at Rome. He published there, in 1621, a concordance of the Bible, which consisted of 4 vols. folio. This valuable work, is in fact a com- plete lexicon of the Hebrew,with its various depen- dent dialects ; forbesides the Hebrew words in the Bible, which are in the body of the boojc with the Latin version over against them, there are in the margin the differences between the septua- gint version and the vulgate ; so that at one view may be seen wherein the three texts agree, and wherein they differ. Moreover at the beginning of every article there is a kind of dictionary, which gives the signification of each Hebrew word ; and affords an opportunity of comparing it with the Syriac, Arabic, and Chaldee. A valu- able edition of this work was published in Lon- don, 1747, edited by the Rev. W. Romaine, assis- ted by Rowe Mores, and Lutzena a Portuguese Jevu.

CALASIRIS orCALASSis, in antiquity, a linen tunic fringed at the bottom, and worn by the Egyptians under a white woollen garment : which last they pulled off when they entered the temples, being only allowed to appear there in linen.

CALATHUS, in antiquity, a kind of hand basket made of light wood or rushes ; used by the women to gather flowers, but chiefly to put their work in. The figure of the calathus, as repre- sented on ancient monuments, is narrow at the bottom, and widening upwards like that of a top. The

Calathus or work basket of Minerva is no less celebrated among the poets than her distaff. It was also the name of a cup for wine used in sa- crifices.

CALATOR, from icaXaw, to call, in antiquity, a crier, appointed to publish any thing aloud, or call the people together.

CALATRAVA, a city of Spain in New Cas- tile on the river Guadiana, forty-five miles south of Toledo.

CALATHAVA, KNIGHTS OF, a military order in Spain instituted under Sancho III. king of Cas-

me, upon the following occasion : ??? When that prince took the strong fort of Calatrava from the Moors of Andalusia, he gave it to the templars, who, not being able to defend it, returned it him again. Don Raymond, of the order of Cister- cians, accompanied with several persons of qua- lity, then made an offer to defend the place, which the king thereupon delivered to them, and instituted that order. It increased so much under the reign of Alphonsus, that the knights desired to have a grand master, which was granted. Fer- dinand and Isabella afterwards, with the consent of pope Innocent VIII. re-united the grandmas- tership of Calatrava to the Spanish crown ; so that the kings of Spain are now become perpetual administrators thereof. Their rules and habits were at first those of the Cistercians, but their pre- sent habit is a mantle of white silk, tied with a cordon and tassels, and on the left arm the cross of the order is embroidered. Their cross is a cross fleury gules as in the annexed figure, and is worn at the stomach, pendants to a red ribbon. It is styled the gallant order of Calatrava.

CALAURIA, in ancient geography, an island of Greece in the Saronic bay, over against the port of Troezen, at the distance of forty stadia. Hither Demosthenes went twice into banishment; and here he died. Neptune was said to have ac- cepted this island from Apollo in exchange for Delos. The city of this name stood on a high ridgenearly in the middle of the island, command- ing an extensive view of the gulph and its coasts. Here was the temple of Neptune ; the priestess of which was a virgin, who was dismissed when marriageable. The Macedonians, when they had reduced Greece, were afraid to violate the sanc- tuary, by forcing from it the fugitives, his suppli- ants. Antipater commanded his general to bring away the orators, who had offended him, alive ; but Demosthenes could not be prevailed on to surrender. His monument remained in the second century, within the

enclosure of the tem- ple. The city of Calauria has been long aban- doned. Traces of buildings, and of ancient walls, appear nearly level with the ground ; and some stones, in their places, each with a seat and back, forming a little circle, once perhaps a bath. The temple, which was of the Doric order, and not large, as may be inferred from the fragments, is reduced to an inconsiderable heap of ruins. The island is now called Poro.

C. ALBUM, in entomology, an European spe- cies of curculio, particularly distinguished by having an incur vated line on the wing-cases at the base, also the specific name of the common butterfly, a well known species of the European papiliones. This insect has angulated wings of a fulvous color, spotted with black : the posterior wings marked beneath with a white curved line resembling the letter C, whence its name.

CALCANEUM, calx, the heel, calcar pterna, os calcis. The largest bone of the tarsus, which forms the heel. See ANATOMY.

CALCANTHUM, red vitriol. See VITRIOL.

*CALCAR, in glass-making, a small oven, or reverberatory furnace, in which the first calcina- tion of sand and salt of potashes is made for the turning them into what is called frit. This furnace is made in the fashion of an oven ten feet long, **** seven broad in the widest part, and two deep. On one side of it is a trench six inches square, the upper part of which is level with the calcar, and separated only from it at the mouth by bricks nine inches wide. Into this trench they put sea coal, the flame of which is carried into every part of the furnace, and is reverberated from the roof upon the frit, over the surface of which the smoke flies, and goes out at the mouth of the calcar ; the coaU burn on iron grates, and the ashes fall through.*

CALCAII (John de), a celebrated painter, was the disciple of Titian, and perfected himself by studying Raphael. Among other pieces he drew a nativity, representing the angels around the in- fant Jesus ; and so ordered the disposition of hi.4 picture, that the light all proceeds from the child. He died at Naples, in 1 546, in the flower of his age. He designed the anatomical figures of Vesalius, the portraits of the painters of Vasari.

CALCAR, in conchology, a species of Turbo, of which Chemnitz gives several distinct varieties from India,the South Seas, and the Mediterranean. Also a species of nautilus, found in the Adriatic, and described by Plancus among his miscroscopic shells.

CALCAR, in entomology, a small German spe cies of curculio, of a black color, with single toothed thighs and testaceous antenna? and feet.

CALCARATA. in entomology, a small species of buprestis, with bidentated

striated wing-cases, shanks of the middle legs toothed : body copper-colored : found on German trees.

CALCARATUS, a species of cerambyx, color violaceous-black, thighs rufous, the posterior ones dentated. Also a species of cimex, color fuscous, abdomen sanguineous above, the posterior thighs six-toothed. Both these inhabit Europe.

CALCAREOUS, in mineralogy, the third order of the class earths, according to Gmelin's system, consisting principally of carbonate of lime.

CALCAREOUS SPAR, crystallised carbonate of lime. It occurs crystallised in more than 600 different forms, all having for their primitive form an obtuse rhomboid. It occurs also in mas- sive and imitative shapes.

The colors of calc-spar are gray, yellow, red and green, lustre vitreous : fracture foliated, with a threefold cleavage, translucent. It is less hard than fluor spar, and is easily broken ; specific gravity, 2'7, 43'6, carbonic acid, and 56-4 lime. It effervesces powerfully with acids, and some varieties are phosphorescent on hot coals. It is found in veins in all rocks, from granite to allu- vial strata. The rarest and most beautiful crys- tals are found in Derbyshire.

CALCA'RIOUS. Lat. calx, calcis; lime; lapis coctus, from \a\g, denoting a stone or frag- ments of stones, from which cement or mortar is made. ??? Vossius. Scheidius on the other hand, by mutations of icXaw, frango, obtains K\at, whence ica\|.

On the east side, ia the most broken part of die

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precipices, is a stratmn of bones of all sizes, belong- ing to various animals and fowls, enchased in an in- crustation of a reddish calcarious rock. Swinburne.

CALC BARIUM, in antiquity, a largess be- stowed on Roman soldiers for buying shoes. In monasteries, calcearium denoted the daily service of cleaning the shoes of the religious.

CAL'CEATED, adj. Lat. calcatus; shod; fitted with shoes.

CALCEDON. See CHALCEDOX.

CALCEDONIANS, a denomination given by f'optic writers to the Melchites, on account of their adherence to the council of Calcedon.

CALCEDO'NIUS, n. s. Lat. the calcedony. A kind of precious stone. See CHALCEDONY.

Calcedonius is of the agate kind, and of a misty grey, clouded with blue, or with purple.

Woodward on Fossils.

CALCEOLARIA, from calceolis, a slipper, Slipper-wort; a genus of plants, class, diandria ; order, monogynia : CAL. one-leaved perianth : COR. monopetalous : STAM. two filaments ; incum- bent anthers : PIST. a roundish germ : with Aery short style ; and blunt stigma : PER. capsule sub- conic ; seeds numerous. Nine species ; almost all natives of Pern; generally with yellow clus- tering flowers, some of which are beautiful and well worth cultivating.

CALCHAS, in fabulous history, a famous di- viner, who followed the Greek army to Troy. He foretold Miat the siege would last ten years ; and that the fleet, which was detained in the port of Aulis by contrary winds, would not sail till Agamemnon's daughter had been sacrificed to Diana. He had received the power of divination from Apollo. Calchas was informed, that as soon as he found a man more skilled than himself in divination, he must perish ; and this happened near Colophon, after the Trojan war. lie was unable to tell how many figs were in the branches of ~a certain fig-tree ; and when Mopsus mention- ed the exact number, Calchas died through grief.

CALCHOPHONOS LAPIS, among the an- cients, a name given to a stone of a black color, and considerable hardness, which, when cut into thin plates, and struck against by any other hard body, gave a sound like that of brass : it seerns to have been one of the hard black marbles.

CALCIFRAGUS, stone-breaking, an appel- lation given by some to the scolopendrium, by others to pimpernel, on account of their lithron- triptic quality.

CALCIMURITE, in mineralogy, a species of earth, or stone, of the consistency of clay, found near Thionville. Its color is blue or olive green, and it contains magnesia, mixed with a conside- rable portion of calcareous earth, and some iron. The olive green colored, contains no argil. The blue is used by potters.

CALCINATION. The fixed residences of such matters as have undergone

combustion, says Dr. Ure, are called cinders in common language, and calces, or now more commonly oxides, by chemists ; and the operation, when considered with regard to these residues, is termed calcina- tion. In this general way it has likewise been ap- plied to bodies, not really combustible, but only deprived of some of their principles by heat.

Thus we hear of the calcination of chalk, to con vert it into lime, by driving oft' its carbonic acid and water ; of gypsum or plaster stone, of alum, of borax, and other saline bodies, by which they are deprived of their water of crystallisation ; of bones, which lose their volatile parts by this treatment; and of various other bodies. See CHEMISTRY. For the ancient definition, see the next article.

CALCINE', v.^\ See CALCARIOUS. To re-

CALX', n. I duce to a calx. Calcination

CAL'CINATE, v. Vis thus described by Junius,

CALCINA'TIOX, i as quoted by Dr. Johnson : ???

CAL'CINABLE. j Such a management of bodies by fire as renders them reducible to powder ; wherefore it is called chemical pulverisation. This is the next degree of the power of fire be- yond that of fusion ; for when fusion is longer continued, not only the more subtle particles of the body itself fly off, but the particles of fire likewise insinuate themselves in such multitudes, and are so blended through its whole substance, that the fluidity, first caused by the fire, can no longer subsist. From this union arises a third kind of body, which, being very porous and brittle, is easily reduced to powder ; for, the fire having penetrated everywhere into the pores of the body, the particles are both hindered from mutual contact, and divided into minute atoms. Our lampcs brenning bothe night and day,

To bring about our craft, if that we may ;

Our furaeis eke of calcination,

And of waters albitication.

Unslekked lime and gleire of an ey.

Chaucer's Canterbury T.ik.*

Gold, that is more dense than lead, resists pe- remptorily all the dividing power of fire ; and will not be reduced into a calx, or lime, by such operations as reduce lead into it. Digty-

Divers residences of bodies are thrown away, as soon as the distillation or calcination of the body that yieldeth them is ended. Boyle.

This may be effected, but not without calcittution, or reducing it by art into a subtile powder.

Browne's Vulgar Errowrs. Fiery disputes that union have calcined,

Almost as many minds as men we find. Denliam.

This chrystal is a pellucid fissile stone, clear as water, and without colour, enduring a red heat, with- out losing its transparency, and, in a very strong heat, calcining with fusion. Newton's Opticks.

The solids seem to be earth, bound together with some oil ; for if a bone be calcined, so as the least force will crumble it, being immersed in oil, it will

grow firm again. Arbuthnot on Aliments.

In hardening, by baking without melting, the heat hath these degrees ; first, it indurateth, then maketh fragile, and lastly it doth calcinate.

Bacon's Nat. Hist.

' The earth that drinketh in the rain that cometh oft upon it,' is but a faint emblem of a calcined mind. Expos. N. T. Heb. vi.

CALCIS LIQUOR, solution of lime formerly called aqua calcis. Take one pound of lime, and boiling water, three gallons ; pour the water on the lime, let it stand for some time, and then pour it into stopped glass bottles together with the lime that remains. It is exhibited internally in cardialgia, spasms, diarrhoea, in doses of two and three ounces, &c. ; and in proportionate doses in convulsions of children arising from acidity; or

ulcerated intestines, intermittent fevers, &c. Ex- ternally it is applied to burns and ulcers.

CALCIS MURIATIS LIQUOR, take of muriate of lime two ounces, distilled water three fluid ounces; dissolve the salt in the water, and filter it through paper.

CALCIS ()s. See ANATOMY.

CALCIUM, the metallic basis of lime, first procured by Sir H. Davy, by the process which he used for obtaining BARIUM ; which see. It was in such small quantities, that little could be said concerning its nature. It appeared brighter and whiter than either barium or strontium; and burned when gently heated, producing dry lime. There is only one known combination of cal- cium and oxygen, which is the important sub- stance called lime. See LIME.

CALCOGRAPIIY, from Ka\KoS, brass and ypa^w, to write, the art of writing on brass.

CALC SINTER. Stalactitical carbonate of lime. It is found in pendulous conical rods, massive, and in many shapes. Fracture lamellar, or divergent fibrous. Lustre silky or pearly. Colors various, but rarely green. Translucent, very brittle. Large stalactites are found in the grotto of Antiparos, the woodman's cave in the llartz, the cave of Auxelle in France,

in the cave of Castleton in Derbyshire, and Macalister cave in Sky. They are formed by the filtration of carbonated lime water, through the crevices of the roofs of caverns.

CALCTUFF, an alluvial formation of car- bonate of lime, probably deposited from cal- careous springs. It has a yellowish-gray color ; a dull lustre ; a fine grained earthy fracture ; and is usually marked with impressions of vegetable matter. Its specific gravity is nearly the same with that of water. It is soft, and easily cut or broken.

CALCULARY, a congeries of little strong knots, dispersed through the whole parenchyma of a pear. The calculary is most observed in rough-tasted or choak-pears. The knots lie more contiguous and compact together towards the pear, where they surround the acetary. About the stalks they stand more distant ; but towards the cork or stool of the flower they still grow closer, and there at last gather into the firmness of a plumb stone. The calculary is no essential part, but rather a disease of the fruit ; the several knots whereof it consists being only so many concretions or precipitations out of the sap, as we see in wines, and other liquors.

CALCULATION is particularly used for the computations in astronomy and geometry, for making tables of logarithms, ephemerides, find ing the time of eclipses, &c. See ASTRONOMY, GEOMETRY, and LOGARITHMS.

CAL'CULE, v. & n. ~\ Fr. calculer; Ital. cal-

CAL'CULATE, v. | culare; Span, calcular;

CALCULATION, {Lat. calculus, from calx,

CAL'CULATIVE, j calcia. Calculi, were

CAL'CULATOR, | small stones used in

CAL'CULATORY. J counting, reckoning, and computing. Hence to calcule, or calculate, is to enumerate, reckon, cast up, from parti- culars to the aggregate.

His tables Toletanes forth he brought, Ful wcl corrected, that there: lacked nought

Nother his collect nc his expans were,

Nother his rotes ne his other gere,

As beii his centres, and his argumentes,

For his equations in every thing,

And by his eighte speres in his working,

He knew ful wel how far Anath was shove,

Fro the hed of thiike Aries above,

That in the ninthe spere considered is,

Ful sotilly he culculed all this.

Chaucer. Canterbury Tales,

The general calcule, which was made in the las: perambulation, exceeded eight millions.

Howel's Vocal Forest.

Cypher, that great friend to calculation; or rather, which changeth calculation into easy computation.

Holder on Time.

But if you would consmer tne true cause. Why all these fires, why all these gliding ghosts, Why birds, and beasts, from quality and kind, Why old men, fools, and children calculate, Why all these things change, from their ordinance, Their natures and pre-formed faculties, To monstrous quality ; why you shall find, That heaven hath infused them with these spirits, To make them instruments of fear, and warning, Unto some monstrous state. Sliakspeare.

If then their calculation be true, for so they reckon

Hooker.

Being different from calculations of the ancients, their observations confirm not ours.

Browne's Vulgar Errours.

The whole body of the clergy and their families, make near 100,000 souls, that is about an eighteenth part of the nation. And reckoning the population of England and Wales at eight millions of people, every clergyman would have a congregation of four hundred and forty-four persons to attend to, in the ssme way of calculation.

Simpson's Plea for Religion.

CALCULOSE', adj.) From Lat. calculus.

CAL'CULOUS. f Stony ; gritty.

The volatile salt of urine will coagulate spirits of wine ; and thus, perhaps, the stones, or calculose con- cretions in the kidney or bladder, may be produced. Browne's Vulgar Errours.

I have found, by opening the kidneys of a calculous person, that the stone is formed earlier than I have suggested. Sharp,

CALCULUS, in antiquity, a little stone or peb- ble, was used in making computations, taking suffrages, playing at tables, and the like. In after times, pieces of ivory, and counters of silver, gold, &c. were used in lieu thereof, but still retaining the ancient names. The Roman judges anciently gave their opinions by calculi, which were white for absolution, and black for condemnation. Hence calculus albus, in ancient writers, denotes a favourable vote, either in a person to be absolved and acquitted of a charge, or elected to some dignity or post; as calculus niger the contrary. This usage is said to have been borrowed from the Thracians, who marked their happy or prosperous days by white, and their unfortunate by black, pebbles, put each night into an urn. Besides the diversity of color, there were some calculi also which had characters engraven on them, as those which were in use in taking the suffrages in the senate and at assemblies of the people. These calculi' were made of thin wood, polished, and covered over with wax. Their form is still suen in some,

medals of the Cassian family ; and the manner of casting them into the urns, in the medals of the Licinian family. These calculi were marked with the letters A for absolve, i. e. I acquit; C for condemno, I condemn ; N L, non liquet, i. e. it is not clear, must be further examined and ad- ditional information given. Calculi lusorii were the chess-men, or little balls, which were em- ployed in the game of chess, which the poets allude to, both as to their matter, their color, and their use. They were made either of ivory, of . old, silver, or glass.

CALCULUS, in chemistry, this word, physiolo- gically and medically applied, designates those concretions of a morbid kind which are found in the viscera and cavities of animal bodies, as the kidneys and urinary bladder, the liver, gall- bladder, and ducts ; and occasionally in the

intestinal canal ; to these last, however, the term concretion, rather than calculus, is more usually applied, and under that word we shall notice them, confining our account in the present article to urinary and biliary calculi.

Of urinary calculi. ••• These are found at dif- ferent times in the kidneys, the ureters, the urinary bladder, the urethra, and the prostate gland. They are for the most part made up of those materials, disproportionately combined, which always exist in other proportions in the urine itself. To this law, however, there are occasional exceptions. One of the principal in- gredients in urine, as will be seen by turning to the articles CHEMISTRY and URINE, is uric acid, and accordingly we find the largest proportion of the concretions now to be noticed to contain uric acid as a master princple; indeed Majendie, who has published a small treatise especially on the subject of urinaiy calculi, seems to think that, neither in a pathological nor practical point of view, is it of much importance to take cognizance of any other ; in this opinion he is however manifestly erroneous ; for although the uric acid calculus is, as above intimated, of by far the most frequent occurrence, we very often meet with others which are exceedingly different in chemical composition, and for the counteraction of which a different medicinal process is deman- ded. See MEDICINE. It ought always to be recollected that there are very few instances in which the substances that give the character to calculi are found singly. When we talk of uric acid calculus, and especially of the other concre- tions, we mean merely that the name by which they are designated expresses the predominance of the principle.

Urinary calculi may be classed under the several following heads.

1 . Uric or lilhic acid calculi, which are formed mainly of uric acid.

2. Urate of ammonia calculi.

3. Ammoniaco-magnesian phosphate, or, as they are called, triple calculi.

4. Calculi of phosphate of lime.

5. Calculi of oxalate of lime (mulberry cal- culusi).

6. Calculi of the carbonate of lime.

7. Calculi of cystic pxide.

Uric acid calculus ••• This, as above stated, is much more frequent in its occurrence than any

other. Some have averaged their number at about half of the whole number of concretions that are found. Calculi of this kind are of various sizes, from that of a common nut to that of a large egg. They more resemble the common hard compact stones that are found in the roads, than do the other calculi ; their shape is for the most part oval ; they have an internal central nucleus from which rays proceed. Their color is for the most part of a yellowish brown or fawn.

When treated with the blow-pipe this calculus blackens and gives out a"n ammoniacal odor. It is soluble in pure alkalies.

The red sand so ' commonly voided in gra- velly complaints consists almost entirely of uric acid.

The urate of ammonia calculus is in its pure state by no means common, but this composition is often found in cases where the uric acid is in excess, and in this way a mixed calculus is formed. This calculus is of a clayish color, and it is more earthy in its fracture than the uric acid concretion ; it is also much more soluble in water, and a distinguishing property of it, from the mere uric acid calculus, is its solubility in the alkaline sub-carbonates, while the latter requires the alkali to be pure to dissolve it.

The ammoniaco-magnesian phosphate, is scarcely ever found unmixed ; its most usual combination is with the species next to be described, viz. the phosphate of lime, and the union constitutes the fusible calculus of Wollaston, so named because it is susceptible of being melted or fused into a vitreous matter by the blow-pipe.

The ammoniaco-magnesian phosphate is white, or of a pale gray ; its texture is much softer than that of the uric acid calculus. This species frequently attains a very large size. When voided in the form of gravel it is white.

This calculus is soluble in acids, and not in pure alkalies.

The phosphate of lime calculus is of a pale brown or gray color, and smooth on its exter- nal surface. It is made up of laminae that are easily separated. This, like the triple calculus, is easily soluble in the mineral acids, especially the muriatic. It requires an intense and long continued heat from the blow-pipe to fuse it. The calculi that are found in the prostate gland are of this species.

Oxalate of lime, or mulberry calculus, is much darker in its color than the other varieties. Its external surface is marked by projecting tubercles giving with its color something of a mulberry appearance. Sometimes it is smooth and palet externally ; in this case it is also in smaller mas- ses, and has

been compared to a hemp-seed. This kind of calculus (the mulberry) is exceedingly hard.

Muriatic and nitric acids, if concentrated and heated, dissolve this species of calculus; but it is necessary for easy solution that the concretion be first powdered. Pure alkalies do not act upon it, but the alkaline carbonates, when digested with it, separate the oxalic acid from it which is replaced by the carbonic acid.

The carbonate of lime calculus is exceedingly rare Mr. Brande tells us that among several

Hundred calculi from the human bladder, which Ae examined, he ntver met with a single instance of it.

Cyotic oxide calculus is so named from its being composed of a peculiar animal substance which lias the chemkal habitudes of an oxide, and from Dr. Wollaston, the discoverer of it, having1 at first supposed it to be confined to the bladder : this calculus more nearly resembles the ammoniaco-magnesian phosphate in its external ap- pearance than any other, but it is more compact and less laminated.

This calculus is soluble both in acids and alkalies. The acetic, tartaric, and citric acids do not however act upon it freely, neither does alcohol, nor water, nor the carbonate of am- monia.

A j-aiit/tic oxide calculus, and a fibrinous cal- culus, have been described by Dr. Marcet as differing from every other known species. The first is of a reddish color, not so readily soluble in acids as in alkalies ; its solution in nitric acid when evaporated giving a yellow color (whence the name) ; it is considerably more soluble in water than uric acid calculus, and less easily soluble in acids than the cystic oxide. The other calculus seemed similar in its properties to fibrine, and hence Dr. Marcet proposed that, in the event of other instances of the same kind being found, the name fibrinous should be given to it

The following is an outline of the classification proposed by Fourcroy and Vauquelen after the analysis of more than 600 of these concretions. We copy the table from the last edition of Dr. Henry's Elements of Chemistry.

GENUS I. ??? Calculi composed chiefly of one ingredient.

Species 1. Calculus of uric acid.

2. Calculus of urate of ammmonia.

3. Calculus of carbonate of lime.

4. Calculus of oxalate of lime.

GENUS II. ††† Calculi composed of two ingredients.

Species 1. Calculus of uric acid and earthy phosphates in distinct layers.

2. Calculus of uric acid and earthy phosphates intimately mixed.

3. Calculus of urate of ammonia and the phosphates in layers.

4. Calculus of the same ingredients intimately mixed.

5. Calculus of earthy phosphates mixed, or else in fine layers.

6. Calculus of oxalate of lime and uric acid in distinct layers.

7. Calculus of oxalate of lime and earthy phosphates in layers.

GENUS III. ††† Calculi composed of three or

four ingredients.

Species 1. Calculus of uric acid or urate of ammonia, earthy phosphates, and oxalate of lime.

2. Calculus of uric acid, urate cf ammonia, earthy phosphates and silex.

The urinary concretions found in the blad-

ders of inferior animals contain no uric acid : they consist mainly of carbonate and phosphate of lime cemented by animal matter.

For an account of the symptoms which gravelly concretions produce, and for the dietetic and medicinal management of gravel and stone, see the articles MEDICINE and SURGERY.

CALCULI, BILIARY, called gall-stones. Four- croy described one species of these as consisting chiefly of adipocire ; but Chevreul has given the name of cholesterine to the crystalline matter of biliary concretions, because it does not, like true adipocire, produce a soap with alkalies.

Cholesterine is described as a peculiar animal principle, insoluble in water,

and nearly so in cold alcohol : but soluble in nitric acid. It is fusible at 280□□, and if rapidly heated to about 400 it evaporates in dense smoke.

Some biliary calculi appear to be mere 'inspis- sations of bile, being soluble however in alcohol and water; and these inspissations are often found mixed in various degrees and proportions with the cholesterenic species, thus constituting concretions of intermediate characters.

The biliary calculi of the ox seem to consist almost entirely of the yellow matter of bile in a concrete state ; this is used as a pigment. For further information on biliary concretions, see the article MEDICINE.

CALCULUS DIFFERENTIALS is a method of differencing quantities, or of finding an infinitely small quantity, which, being taken infinite times, shall be equal to a given quantity ; or, it is the arithmetic of the infinitely small differences of variable quantities. The foundation of this cal- culus is an infinitely small quantity, or an infi- nitesimal, which is a portion of a quantity incomparable to that quantity, or that is less than any assignable one, and therefore accounted as nothing ; the error accruing by omitting it being less than any assignable one. Hence two quan- titieˆ, only differing by an infinitesimal, are re- puted equal. Thus, in astronomy, the diameter of the earth is an infinitesimal, in respect of the distance of the fixed stars ; and the same holds in abstract quantities. The term, infinitesimal, therefore, is merely relative, and involves a rela- tion to another quantity ; and does not denote any real ens, or being. Now infinitesimals are called differentials, or differential quantities, when they are considered as the differences of two quantities. Sir Isaac Newton calls them moments ; considering them as the momentary increments of quantities, e. g. of a line, genera- ted by the flux of a point, or of a surface by the flux of a line. The differential calculus, therefore, and the doctrine of fluxions, are the same thing under different names; the former given by M. Leibnitz, and the latter by Sir Isaac Newton : each of whom lay claim to the discovery. There is, indeed, a difference in the manner of expressing the quantities resulting from the different views wherein the two authors consider the infinitesimal;.; the one as moments, the other as differences. Leibnitz, and most foreigners, express the differentials of quantities by the same letters as variable ones, only pre- fixing the letter d : thus the differential of JT is called d .r ; and that of y, du ; now d a- is a

positive quantity, if x continually increase ; ne- gative, if it decrease. The English, with Sir Isaac Newton, instead of d x write x (with a dot over it);

for dy,y, &c. which foreigners object against, on account of that confusion of points which they imagine arises when differentials are again differenced ; besides that the printers are more apt to overlook a point than a letter. The rules for differencing quantities are the very same as those for finding their fluxions. See FLUXIONS.

CALCULUS EXPONENTIALIS is a method of differencing exponential quantities, or of finding and summing up the differentials or moments of exponential quantities ; or at least bringing them to geometrical constructions. By exponential quantity, is here understood a power, whose ex- ponent is variable ; e. g. JTX. ⬜⬜. xy. where the exponent x does not denote the same in all the points of a curve, but in some stands for two, in others for three, in others for five, &c. To difference an exponential quantity is the same problem as to find its fluxion. See FLUXIONS.*

CALCULUS INTEGRALIS, or SUMMATORIUS, is a method of integrating, or summing up mo- ments, or differential quantities ; i. e. from a dif- ferential quantity given, to find the quantity from whose differencing the differential results. The integral calculus, therefore, is the inverse of the differential one : and is similar to the inverse method of fluxions, the rules of which also apply to the calculus integralis. See FLUXIONS.

CALCULUS LITERALIS, or LITERAL CALCULUS, is the same with specious arithmetic, or algebra, so called from its using the letters of the alpha- bet ; in contradistinction to numeral arithmetic, which uses figures. See ALGEBRA.

CALCULUS MINERVA, among the ancient lawyers, denoted the decision of a cause, wherein the judges were equally divided. The expression is taken from the history of Orestes, represented by ./Eschylus and Euripides ; at whose trial, be- fore the Areopagites, for the murder of his mother, the votes being divided for and against him, Minerva interposed, and gave the casting calculus or vote, on his behalf.

CALCULUS or PARTIAL DIFFERENCES, is an im- provement on the integral calculus suggested by M. D'Alembert. It applies successfully to some of the most difficult problems, such as those relating to vibrating cords, the propagation of sound, the equilibrium and motion of fluids, tautochrones in resisting media, &c.

When we have a function, z, of two variable quantities, x and y, or of a greater number, we know that by differencing first with respect to x, and then with respect toy, we have the differential d z ~ p d x { g d y, p and.g being co-efficients that aftect d x and d y respectively. Thus the complete differential of z is p d x \ q dy ; where p d x and q d y are the differentials

to which are kjiven the name of partial.

It is usual to denote these co-efficients of dx

and d y, in this manner , – ••• : signifying what

d x dy

happens with regard to the function z, by making it first vary as x and dividing by d x, and then causing it to vary as y and dividing by dy; so

that the complete value of d x is represented by

•••^••• d x + – ••• : and it is under this form that d x d y

equations of partial differences commonly present themselves. Thus every equation between z, x,y,

d z d z •••j ••• , -j ••• , and, if we please, between one or

several constant quantities, will be an equation of partial differences : such is, for example, the

d z d z

equation, a - b x y ••• o ; which sig- nifies, that, in order to the solution of the problem producing this equation, we must find a function of x and y, such that the co-efficient of the dif- ferential d x multiplied by a, plus that of d y multiplied by 6, shall be zz x y. This is one of the simplest of this kind of equations, and is called an equation of partial differences of the first order. One of the second order, is of the form

d ? J 2 – ,13 7 /7 3 –*

I U> Z |TD_ I l –

dx axdy dx3 dy3*

f P ••• o, is one of the third order.

To give an idea of the nature and resolution of equations of partial differences, let us take one

of the most simple, such as -7 ••• zz P, where P dy

is any function whatever of x, y, and constant quantities. It is required, therefore, to find a function z of x and y, which, differentiated ac- cording

to y and divided by d y, shall be equal to the given function P. In order to this, multi- plying all by d y, we shall have ००० dy zz P dy;

whence it follows that P d y is only a part of the differential of z, namely that which is found by

d 2 making it vary as y : thus the integral of -j००० dy,

which is 2 (since the preceding expression re- sulted from the differentiation), making it only vaiy as y will be equal to S. P d y plus, a func- tion which can only be in terms of x, and which, similar to the constant quantity added to every integral to render it complete, can only be de- termined bˆy the conditions of _ the problem. Representing indefinitely this function of .r by F (j), we shall have z ००० S. P d y + F (x). So

likewise, if we had – ००० zz P, we should find 'L

००० S. P d x + F (y).

We present an example : Let the equation be

j zz a xy f y3; we shall have evidently S. P dy zz ००० ˆ-pi-; for in this expression we have only

a .r i/'

y-ˆ+b

4'

y variable. Thus z will be zz

-4 i

+ F (*). Differencing this equation regard ing y

d z only as variable, we shall have ००० dy zz (axy \ y3}

d y zz P d y ; for F (x\ ought not by the nature of the question to give any differential, x being reputed constant with regard to y.

We have, in this example, supposed z to be a function of only two variables, y and x ; but it might have been a function of three variables,

CALCUTTA. 25

and have one or two partial differentials. Then, whose relation is expressed

by a determinate law

and in the first case, the arbitrary function might we find what that function becomes when the

bp a function of two other variables : thus, sup- law itself is supposed to experience any variation

*posin- 2 was a function of *, y, u, and that we had indefinitely small, occasioned by the variation of*

d z one or of several of the terms which express that

only one of the partial differences of z, as ••• , jaw< This calculus is almost the only means of

the method of integrating would be the same; we should integrate only with regard to x, and the function to add would be a function oft/ and u, denoted by F (y, u). Finally, in the case where we

d z d z

resolving a multitude of problems de maximis et minimis, wherein the difficulty is fur greater than in such problems de maximis et minimis, as are the object of the ordinary differential or fluxionary calculus. Such, in this new order of difficulties,

should have two partial differences, as j-ˆ, •••

of the three which would form the complete dif- ferential, we should have only to add a function of ?/, F (u), namely, that of the variable whose

is the problem wherein it is required to ascertain the curve -which will conduct a falling body in virtue of its acceleration to a given point, right line, or curve, in the least time.

In general every problem of this nature is re-

partial difference is absent; and thus it would duced to finding the maximum or the minimum

be with a greater number of variable quantities But, omitting more complicated examples, we

of a formula such as S. Z d x, where Z is a func- tion of x, or of constant quantities, or of x and

pass to the integral calculus of partial differences ; yt or of X) ˆ and z, or of more variables : Z may

even contain integrals, as S V, &c., or integrals of integrals, as S V S v, &c. ; and the methods of taking the variations of these expressions which constitute the rules of the calculus. See La- grange's Analytical Functions. Cousin, Bossut, and Lacroix, have likewise explained its princi- ples, and shown its applications, in their treatises on the Integral Calculus.

CALCULUS TIBURTINUS, a sort of figured stone, found in great plenty about the cataracts

which is the method of finding a function of several variables, when we know the relation of the differential co-efficients of the total differential. What we here call differential co-efficients, are the factors which affect the differentials d x, d y, d t, Sec. : these co-efficients may be denoted by d z d z d z

p, q, r, &c. ; SO that p = ,, q = , r – ˆ

&c. : and if from hence we pass to the superior

d d z dd z

orders, we shall havep1 , 2-,

white color, and in shape oblong, round, or

d d z

Sec. Thus, according to this manner of

considering the calculus, it is required, having given the relation between p, q, r, &c., to deter- mine the function z ; or, otherwise, havinsr given the equation d z pdx + qdy + rdt, &c., and knowing the relation between p,

*Let, therefore, the equation be d z~pd x *

q d y (limiting ourselves here to a function of to the honor of this goddess, having long stood two variable quantities), and suppose thˆ relation near the villages of Gobindpore and Chuttanutty.

The situation, though very advantageous both

echinated. These are a species of the strire la- pidea;, and so like sugar-plumbs, that it is a common jest at Rome to deceive the unex- perienced by

serving them up at desserts.

CALCUTTA, a city of Bengal, the capital of British India, and a bishop's see, stands upon the eastern bank of the river Bhagrarutti or Hooghly, about 100 miles from the Indian Ocean. It derives its name from Caly, the goddess of time according to the Hindoo mythology, and Cutta, a house or temple : a celebrated erection,

between ;; and q to be thus expressed : ††† 9 ††† ap + b, where †† and b are constant quantities ; the value of z is thus obtained. In the preceding equation, putting for q its value ap + b, we have dz~=.pd.t + (ap --b}dy; whencedz ††† b dy=.p (d x f a d >/). But the first member of this equa- tion is integrable, and gives z ††† b y ; the second ought therefore to be so, if the differential pro- posed has an integral : and that this may have place it is necessary that p be a function of x j a y ; whence it follows that the integral sought will be z ††† b y ††† F (x f a y). Thus, we may form a variety of suppositions of relations be- tween z, x, y and p, q, or of these latter between themselves and with the former; and there will

for external and internal commerce, vessels of the largest size coming up from the sea, and the Ganges opening a communication with the most northern parts of Ilindostan, is considered un- healthy ; the country round being marshy, and extensive lakes, with an immense tract of jungle, coming up close to the town. The Sunderbunds, a collection of marshy jungles, though they have been reduced by recent improvements, are still very extensive, and generate in this hot climate those diseases against which few Euro- pean constitutions can long struggle. The ap- proach to Calcutta is very striking, at full tide the river is about a mile broad, and both banks

result so many particular cases of equations of are lined with the villas of European residents, partial differences to integrate. Euler, in his The spires of the churches, temples and minarets, Integralis, has given complete instnic- the company's botanical gardens, and the citadel

tions on this subject: the reader may likewise advantageously consult Traites du Calcul dif- ferentiel et du Calcul Integral du. M. Lacroix.

The calculus of variations, suggested by La- grange, is that by which, having given an ex- pression or function of two or more variables

of Fort William, combine in a magnificent coup d'o?il, and exhibit a first impression of the importance of the British possessions on this con- tinent highly interesting and striking. This capital extends in a very various breadth, about six miles along the river. Between the town

and Fort William is a noble esplanade, on one side of which appear the best houses of Cal- cutta, in a line with the new government- house. This is an Ionic structure on a rustic base, the central is the state part of the building, which was erected during the government of the marquis Wellesley. On the north side there is a flight of steps, under which carriages drive to the entrance, and on the south a circular colon- nade, surmounted with a dome. The wings at the four corners contain the private apartments, and are connected together by well ventilated circular passages. The other public buildings are the town-house, the two English churches, the courts of justice, and the various places of native Portuguese, Armenian, Greek and Ca- tholic worship. The metropolitan, under the title of bishop of Calcutta, assisted by three archdeacons, has the superintendence of all the ecclesiastical affairs of India ; the other clergy are called chaplains, and are all considered as belonging to the military; except those who have charge of the two English churches. There is also a resident clergymen of the church of Scotland, and a church of that communion.

The southern part of Calcutta is occupied al- most entirely by Europeans, who have adopted a style of building, at once magnificent in ap- pearance, and well adapted to the climate. Every house of respectability is detached, enclosed with walls, and fronted with an elegant veranda shading a flight of steps. The northern part, which contains perhaps three-fourths of the city, is chiefly inhabited by natives, and is of a totally, different appearance. The best houses are of brick, two stories high, and having ter- races on the roof, but the far greater part are mere mud or bamboo cottages ; the streets are narrow, crowded, unpaved, and filthy. The white ant commits great ravages in all parts of the town, and will sometimes wholly destroy the timbers of a house before any damage appears. Fires are also very frequent in the north part.

What was once the village of Chouringhee, and a mere collection of native huts, is now a splendid suburb of Calcutta, extending into the country a considerable distance. The sides of the principal square are 500 yards in extent, the middle being occupied by a large tank. Here is the old fort and the custom-house, in front of which a handsome quay has been lately con- structed. In the back of this village is the burying-ground, no graves being allowed in the church-yard.

Fort William, the strongest fortress in India, stands about a quarter of a mile below the town. It is an octagon, not exact in its sides. Five of them next the land are regular, but the others being designed to guard against an

attack by water, are accommodated to the bearing of the guns upon all objects in the river. The interior is very open and extensive ; presenting large grass-plats and gravel-walks, shaded by trees intermixed with piles of balls, shells, rows of cannon, and accommodated for 12 or 15,000 men ; a house for the commandant, a cannon foundry, and an arsenal, well supplied with stores. The works are so contrived as scarcely to be seen on the land side, but on a very near approach.

Upwards of twenty well furnished bazaars sup- ply the city with all the requisites of life, and the materials of a very lucrative and extensive commerce with every part of the east. Vessels of all sizes, and to the amount of 50,000 tons burden, are often seen off the town : but the larger ships generally stop at Diamond harbour. There are several docks for building ships, and its com- merce amounts to nearly ––10,000,000 per annum. The tables of all classes here are supplied with game, and those of the wealthy with abundance of plantains, pine-apples, melons, peaches, and oranges. In 1802 the population was computed at 600,000; a few years after, (including the suburbs), at 1,000,000, of which about one-half may be given to the city. And the surrounding districts were said, in the same year, to contain within a space of twenty miles 2,225,000, or more than 1760 persons to a square mile. In the town there are supposed to be about 80,000 houses. In the year 1690 the English first founded a factory here, by virtue of a firman granted to them by the emperor Aurengzebe. In the year 1696, in consequence of a rebellion in Bengal, they were allowed to fortify it. This place is that called the Old Fort, and it is 210 yards in length and about 115 in breadth; and consisting of a rampart and four bastions, with two gates. It contains all the company's store- houses, and a few dwelling-houses. In the year 1698, the prince Azeen Ooshan, grandson of Aurungzebe, granted the Company a perpetual lease of the three villages before mentioned ; in the subsequent year, in compliment to king Wil- liam, the factory was dignified with the title of Fort William. It and the town continued to flourish till the year 1756, when it was taken by the nabob Suraja Dowlah, and the greater part of the garrison were suffocated in the infamous black hole, which is now used as a store room. The nabob now changed its name to Alynagur, but when it was retaken by lord Clive and admi- ral Watson, in 1757, its former title was restored. The new fort was begun in 1 758. Calcutta con- tains, besides the supreme court of justice, a court for the district of Calcutta, and a number of police magistrates to superintend the peace of the town. There are also courts of appeal from the Calcutta circuit, and from all the other courts of justice of Bengal and its dependencies. The natives out of Calcutta are tried by their own laws. Here are also a College, well endowed by government, and which cultivates any branch of oriental literature with great success ; an Asiatic Society, and other literary institutions ; a theatre, assembly rooms in abundance, &c.

During the late war with France, the Euro- pean inhabitants were all embodied into a militia corps of infantry and cavalry, and formerly the city was nearly surrounded by a trench called the Mahratta ditch, but it has been for some time dry. Ascending the river from Calcutta we ar- rive at Barnagore, a village on the east bank, where the Dutch had formerly a fort. Serampore, on the right bank, ten miles above Calcutta, is a Danish settlement, consisting of a few factors' houses, and a native town, with a battery for saluting. Here are the chief establishments of the Bap'isi mission. Accounts are kept here in

current rupees, an imaginary coin, annas and pici, twelve pici being one anna, and sixteen annas a rupee.

In 1811-12, there arrived at Calcutta

V&asels. Tonnage.

193 under English colors . . . 78,504

11 under Portuguese colors . . 4,180

8 under American colors. . . 2,313

389 under Indian colors, of all sizes 66.227

601

151,224

The clearances out were about of similar amount. Calcutta stands in N. lat. 22►► 34 ., E. long. 88►► 28′

CALCARIA JUDICIARIA, in our ancient bar- barous customs, the method of trial by boiling water. See ORDEAL.

CALDARIUM, in the ancient baths, 1. A brazen vessel of hot water, placed in the hypo- caustum, to be drawn thence into the piscina or bath, to give it the proper heat: 2. A stove or sudatory, being a close vaulted room, wherein by hot dry fumes, without water, people were brought into a profuse perspiration.

CALDERON (Don Pedro, De la Barca), a Spanish officer, who, after having signalised him- self in the military profession, quitted it for the ecclesiastical, and then commenced dramatic writer. His dramatic works make 1 7 vols. in 4to. Some Spanish writers have compared him to Shakspeare. He nourished about 1640.

CALDERWOOD (David), a divine of the church of Scotland, and a distinguished writer in behalf of the Presbyterians. He was settled about 1604 at Crelling near Jedburg. Being desirous of bringing the church of Scotland nearer to a conformity with that of England, King James I. earnestly endeavoured to restore the episcopal authority, and enlarge the powers of the Scotch bishops. This was very warmly opposed by many of the ministers, particularly by Mr. Calderwood ; who, when James Law, bishop of Orkney, came to visit the presbyteries of Merse and Teviotdale, declined his jurisdic- tion, by a paper dated May 5th, 1608. In May, the next year, king James went to Scotland ; and on the 17th June held a parliament at Edin- burgh : when the clergy met in one of the chur- ches, to advise with the bishops. This assembly was contrived in order to resemble the English convocation. To this Mr. Calderwood ob- jected ; and on hearing of their intention to pass a bill, empowering James to alter the constitu- tions of the church, he, with several other ministers, protested, and said that they would rather submit to any penal law than obey such an authority. This protest was presented to the clerk register, who refused to read it before the states. However, though not read, it had its effect ; for although the bill had the consent of parliament, yet the king caused it to be laid aside, and not long after called a general assem- bly at St. Andrews. Soon after, the parliament was dissolved, and Mr. Calderwood was sum- moned to appear before the high commission court at St. Andrews, to answer for his mutinous and seditious behaviour. The king came to that city in person ; and Mr. Calderwood, refusing to

comply with what the king in person required of him, was imprisoned. Afterwards the privy council ordered him to banish himself out of the king's dominions before Michaelmas, and not to return without licence. Having unsuccessfully applied to the king for a prorogation of his sentence, he retired to Holland, where, in 1623, he published his celebrated piece entitled Altare Damascenum, in which he attacks the church of England with great asperity. He returned home and remained some time in obscurity. During his retirement, he collected all the memorials relating to the ecclesiastical affairs of Scotland, from the beginning of the Reformation to the death of king James ; which collection is still preserved in the university library in Glasgow. In 1643 he was employed in drawing up the Porm of the Directory for the public Worship of God by the General Assembly. He died at Jed- burg about 1652.

CAL'DRON, Lat. caldarium ; Fr. chaudron. A large pot or boiler.

In the midst of all

There placed was a caldron wide and tall. Upon a mighty furnace, Doming hot.

Faerie Queene. Fire burn; and cauldron bubble. Shakspeare.

And now about the cauldron sing Like elves and fairies in a ring. Enchanting all that you put in. Id.

And the priest's custom was, that when any man offered sacrifice, the priest's servant came while the flesh was in seething, with a flesh-hook of three teeth in his hand : and he struck it into the pan, or kettle, or caldron, or pot, all that the flesh-hook brought up the priest took for himself. 1 Sam. ii. 14.

Some strip the skin ; some portion out the spoil ; The limbs, yet trembling, in the caldrons boil j Some on the fire the reeking entrails broil.

Dryden't JEneid.

In the late eruptions, this great hollow was like a vast caldron, filled with glowing and melted matter, which, as it boiled over in any part, ran down the sides of the mountain. Addlson.

CALDWALL (Richard), a learned English physician, born in Staffordshire, about 1513. He studied physic at Oxford ; and was examined, admitted into, and made censor of, the college of physicians at London, all in one day. Six weeks after he was chosen one of the elects ; and in 1570, president. He wrote several medical pieces, and translated a book on the art of surgery, written by one Horatio More, a Floren- tine physician. Camden says that Caldwall founded a chirurgical lecture in the college of physicians and endowed it with a handsome salary. He died in 1585.

CALE, or KALE, a species of brassica.

CALE (la), a French punishment, inflicted when a soldier, or sailor, maliciously wounds another. The offender is tied to the yard arm, suddenly plunged into the sea and then drawn up again, as often his offence merits.

CALEB, in botany, a genus of the polygamia a?qualis order, and syngenesia class of plants ; natural order, forty-ninth, compositae. Receptacle paleaceous, the pappus hairy, calyx imbricated. There are eight species, natives of the West Indies.

of Judah, one of the twelve spies who were sent to view the land of Canaan, and the only one who joined with Joshua in giving a favorable report of it. His capture of Hebron, defeat of the Anakims, and portioning of his daughter Achsah, are recorded in Josh. xiv. 6. 15, xv. 13. 19, and Judg. i. 9, 15. This hero had three sons and a numerous posterity.*

CALEDONIA, the ancient name of Scot- land. From Tacitus, Dio, and Solinus. we find that ancient Caledonia comprehended all that country lying north of the Forth and Clyde. In proportion as the Silures or Cimbri advanced toward the north, the Caledonians, being more circumscribed, were forced to emigrate into the islands on the western coasts of Scotland. It is in this period, probably, we ought to place the first great migration of the British Gael into Ireland; that kingdom being much nearer to Galloway and Cantire, than many of the Scottish isles are to the continent of North Britain. To the country which the Caledonians possessed, they gave the name of Cael-doch ; which is the only appellation the Scots, who speak the Gaelic language, know for their own division of Britain. Cael-doch is a compound of Gael or Gael, the first colony of the ancient Gauls who emigrated into Britain, and doch, a district or division. The Romans, by transposing the letter 1 in Gael, and by softening into a Latin termination the ch of doch, formed the well known name of Cale- donia. This appears to be a much more natural etymology than that of Camden, from the old British word kaled, hard, because the people were a hardy rustic race. See SCOTLAND.

CALEDONIA, NEW, an island in the South Sea, discovered by Captain Cook, and next to New Holland and New Zealand, the largest that has been discovered in that sea. It extends from 19►► 37′ to 22►► 30′ S. lat. and from 163►► 37′ to 167►► 14′ E. long. Its length from north-west to south-west is about eighty leagues ; but its greatest breadth does not exceed ten leagues. This island is diversified by hills and valleys, amongst which issue abundance of rivulets. Along its north-east shore the land is flat ; well watered, and cultivated; but the mountains and higher parts of the land are in general barren. The country in general bears a great resemblance to those parts of New South Wales, which lie under the same parallel. Its natural productions are also generally the same, and the woods are without underwood, as in that country. The whole coast is surrounded by reefs and shoals which render access to it dangerous ; but every part seems inhabited. The natives begin their cultivation by setting fire to the grass, &c. with which the ground is covered, but have no notion of preserving its vigor by manure ; they, how- ever, recruit it by letting- it lie

for some years untouched. New Caledonia seems to differ "from all the other islands yet discovered in the South Sea, in being entirely destitute of volcanic pro- ductions. New species of several plants were found, particularly a new passion-flower ; and a few young bread-fruit trees not sufficiently grown to bear fruit; plantains and sugar-canes are' found here also in small quantity, and cocoa hut trees are small and thinly planted. Caputi

*or Melaleuca trees were also found in flower Mosqui*oes are very numerous. A great variety of birds were seen, for the most part entirely new ; particularly a beautiful species of parrot before unknown. A new species of fish, of the ˆrenus tetraodon, was caught by captain Cook's people, and after some hesitation cooked and eaten. Its oiliness, happily, though it had no other bad taste, prevented them from taking above a morsel or two. In a few hours after they had retired to rest, they were awakened by alarming symptoms, being all seized with an extreme giddiness : their hands and feet benum- bed, so that they were scarcely able to move; and great languor and oppression Doming over them. Emetics were administered with some success, but sudorifics relieved them. But the effects of this poison did not go off entirely for six weeks. There are great numbers of turtles on this island. The houses are circular huts, something like a bee-hive, and full as close and warm ; they commonly erect two or three near each other under a cluster of lofty fig-trees, whose leaves are impervious to the sun. Their canoes are clumsy vessels, made of two trees hollowed out, having a raised gunnel about two inches high, and closed at each end with a bulk head of the same height ; so that the whole is like a long square trough, about three feet shorter than the body of the canoe. Two thus fitted are fastened to each other about three feet asunder, by means of cross spars, which project about a foot over each side. A deck is laid over them, made of plank and small round spars, on which they have a hearth, and generally a fire burning; they are navigated by one or two latteen sails, extended to a small latteen yard, the end of which is fixed to a notch in the deck. The inha- bitants are robust, in general well proportioned, and of honest dispositions. A few measured six feet four inches. Some wear their hair long and tie it up to the crown of their heads ; others suffer only a large lock to grow on eacli side, which they tie up in clubs; many others as well as all the women wear it cropt short. The men go almost entirely naked. The dress of the women who are of modest character, is a short petticoat or fringe, consisting of filaments or little cords, about eight inches long, fastened to a very long string, which they tie several times round their waist. The married women wear a black- and the unmarried a white petticoat. The general ornaments of both sexes are ear-rings, necklaces, amulets, and bracelets made of shells, stones, &c. Their fishing tackle they prize: above everything. Notwithstanding their inoffen- sive disposition, these islanders are well*

provided with clubs, spears, darts, and slings : their clubs are about two feet and a half long, and variously formed ; some like a scythe, others like a pick- axe ; some with a head like a hawk, others with round heads ; but all neatly made, and ornamen- ted. The slings are simple, but they form the stones into a shape something like an egg. They drive the dart by the assistance of short cords knobbed at one end and looped at the other, called by the seamen beckets. These contain a quantity of red wool taken from the gn;at Indian bat. Bows and arrows arc wholly

unknown among them, and their language bears little affinity to that spoken in the other South Sea islands; their only musical instrument is a kind of whistle of brown wood, about two inches long. Many of them were observed to have their legs and arms much swelled with a kind of leprosy. Lieutenant Pickersgill was showed a chief whom they named Tea-beoma, and styled their arrekee or king ; but nothing further is known of their government, and no- thing at all of their religion. The French ex- pedition called here in 1793, and found the in- habitants much altered for the worse both in their manners and condition. Many groups of herds were deserted, and cultivated land abandoned : in 1774 it was supposed to have had 50,000 in- habitants, but seems at this last visit to have declined greatly. Long. 163►► 3; ‘ lat. 20►► S.

CALEDONICA, in ornithology, a species of ardea, the Caledonian night heron of Latham. The general color of the plumage is ferruginous arid white beneath : legs yellow ; crest on the back of the head of three feathers ; bill and frontlet black, eye-brows white, area of the eyes green.

CALEFACIENTIA, or CALEFACIENTS, in medicine, heating or warming medicines.

CALEFACTION may be denned, the pro- duction of heat in a body from the action of fire, or that impulse impressed by a hot body on others around it. It is used in pharmacy, by way of distinction from coction, which implies boiling. Medicines of this kind diffuse a sen- sation of warmth by their immediate impression on the nerves, without any actual increase of the temperature ; they also tend to accelerate the circulation, and therefore to augment the actual heat. It has been ascertained that the animal temperature is generated by the chemical changes which take place in the blood in the course of circulation, in consequence of the absorption and evolution of different gaseous fluids. When- ever, therefore, the rapidity of the circulation at large is increased, by general stimulants ; or the vessels of any part are, by a local stimulas, ex- cited to greater action, and transmit a larger pro- portion of blood ; the evolution of heat will

necessarily be augmented ; and there will be a sensation of warmth in the general system in all its parts.

CALENBERG, a principality of Lower Sax- ony, one of the four divisions of Brunswick ; boun- ded on the north by the duchy of Verden, on the east by the principality of Zell, on the south by

tboˆe of Grunenliagen and Wolfenbuttle, and on th? west by Westphalia. See BRUNSWICK.

CALENBERG, a castle of Germany, in the principality seated on the river Leine, fifteen miles south of Hanover, and subject to the King of Hanover. Long. 9►► 43′ E., lat. 52►► 20′ N .

CALENDAR, in astronomy and chronology. See CHRONOLOGY. The late revolutionary calen- dar of the French was a distribution of time entirely new, adopted by the Convention, soon after the abolition of royalty, in 1792; and still continued with little alteration until 1801. The year commenced at midnight, on the beginning of that day, on which the true autumnal equinox falls, by the observatory of Paris. It was divided into twelve equal months, of thirty days each ; after which five supplementary days were added, to complete the 365 days of the ordinary year. These five days did not belong to any month. They were first named sans-culottides, in honor of the sans-culottes, or inferior ranks of society ; but this name was changed soon after the revo- lution in July 1794. Each month was divided into three decades of ten days each ; distinguished by first, second, and third decade. The years that received an intercalary day, when the posi- tion of the equinox requires it, which we call em- bolismic, bissextile, or leap-years, the French called Olympic; and the period of four years, ending with an Olympic year, an olympiad. The intercalary day, on that occasion, was placed after the ordinary five supplementary days, and being the last day of the Olympic year, was dedicated to Olympic games to be celebrated in honor of the revolution; and to the renovation of the national oath, ‘ To live free or die.’ The months had all new names expressive of their respective relations, either to the season of the year, the temperature of the air, or the state of the vege- tation. Each day from midnight to midnight, was divided into ten parts, each part into ten others, and so on to the last measurable portion of time. The days of the decade were denomina- ted from the first ten numbers, thus ; Primdi, Duodi, Tridi, Quatridi, Quintidi, Sextidi, Sep- tidi, Octidi, Nonidi, Decadi. In the almanac, or annual calendar, instead of the numerous names of saints, in the popish calendars, every day was inscribed with the name of some animal, utensil, work, fruit, flower, or vegetable, suited to the day or the

season. As a curious relic of the revolution, and containing some improvements mixed with far more serious objections, we sub- join

THE NAMES OF THE MONTHS AND SUPPLEMENTARY DAYS.

AUTUMN. WINTER. SPRING. SUM MET..

NAMES.

SIGNIFICATION.

rVendemiaire,

Vintage month,

< Brumaire,

Fog month,

(.Frimaire,

Sleet month,

f Nivose,

Snow month,

< Pluviose,

Rainy month.

CVentose,

Windy month.

f Germinal,

Bud month,

< Floreal,

Flower month,

C Prairial,

Pasture month,

f Messidor, < Thermidor, O'ructidor,

Harvest month, Hot month, Fruit month,

DURATION. from Sept. 22. to Oct. 21.

Oct. 22.

Nov. 21 Dec. 21.

Jan. 20.

Feb. 19.

March 21

April 20.-

May 20.

June 19.

July 19.

Aug. 19. ???

Nov. 20. Dec. 20. Jan. 19. Feb. 18. March 20. April 19. May 19. June 18. July 18. Aug. 17. Sept. 16.

30

Les Vertus, Le Genie, Le Travail,

CALENDER.

SUPPLEMENTARY DAYS, DEDICATED AS FEASTS TO

The Virtues,

Genius,

Labor,

Sept. 17. Sept. 18. Sept. 19.

CALENDAR OF PRISONERS, in law, a list of all the prisoners' names in the custody of each sheriff. See EXECUTION.

CALENDARIUM FESTUM. The Christians retained much of the ceremony and wantonness of the calends of January, which for many ages was held

a feast, and celebrated by the clergy with great indecencies, under the names of festum kalendarium, or hypodiaconorum, or stultorum, i. e. the feast of fools. The people met masked in the church, and in a ludicrous way proceeded to the election of a mock pope, who exercised a jurisdiction over them suited to the festivity of the occasion. Fathers, councils, and popes, long la- bored to restrain this licence, to little purpose. The feast of the calends was in being as low as the close of the fifteenth century.

CAL'ENDER, v. & n.) Lat. cylindrus ; Fr.

CAL'ENDERER, n, > calandrer ; a hot press, an iron cylinder filled with hot coals. To ca- lender is, with this instrument to hot-press ; to dress cloth ; to lay the nap of cloth smooth. A calender is also a press in which clothiers smooth their cloth.

CALENDER is a machine used for pressing silks, stuffs, calicoes, or linens ; to make them smooth, even, and glossy. It is also used for watering, or giving the waves to tabbies and mohairs. The word came into our language per- haps immediately from the French calandre, which is derived from the Latin cylindrus : be- cause the whole effect of the machine depends upon cylinders.

*These commonly consist of two large wooden rollers, round which the pieces are wound ; they are then put between two large, close, polished planks of wood, or plates of iron, the lower serving as a fixed base, and the upper being- movable, by means of a wheel like that of a crane, with a rope, fastened to a spindle, which makes its axis ; this upper part is of a prodigious weight, sometimes twenty or thirty thousand pounds. It is the weight of this part, together with its alternate motion, that gives the polish, and makes the waves on the stuffs, by causing the cylinders on which they are put to roll with great force over the lower board. The rollers are taken off, and put on again by inclining the machine. The French used formerly an extraordinary ma- chine, called the royal calender, made b*y order of M. Colbert ; the lower table or plank of which ⁂was made of a block of smooth marble, and the upper lined at bottom with a plate of polished copper. This was called the great calender, they have also a small one with tables of polished iron or steel. Calenders without wheels are some- times wrought by a horse harnessed to a wooden bar, which turns a large arbor placed upright ; at the top of which, on a kind of drum, is wound u. rope, the two ends of which, being fastened to the extremities of the upper plank of the engine, give it motion. But the horse calender is in lit- tle esteem. Worsteds are sometimes calendered in the thread. Domestically this operation is also*

L'Opinion,

known by the name of mangling ; and a section of the useful machine once so common in En- gland, is seen below.

This is in fact merely a strone level table, with a stout cover, and made of well seasoned wood to prevent its casting. The cloth being smoothly spread upon it, the coffer A, which is placed upon two smoothly turned rollers of iron, is made to move alternately from one end of the table to the other, until the cloth is sufficiently smoothed, when a fresh portion is spread upon the table, and the operation repeated until the process is finished with the whole. The cloth may be very regularly and quickly drawn along the table, by unwinding it from a roller at one end, and winding it upon a similar roller at the other. If it be desirable occasionally to employ heat, it may be done by casting the iron rollers of the coffer, A, hollow, and filling the cavity with small cylin- ders of cast iron, previously heated. The motion is communicated to the coffer, A, by two belts, cords, or chains B, B, which, after passing over a pulley at either end of the table, are wound round the cylinder or barrel C. By turning a handle or winch, W, the barrel is moved round, and the motion communicated to the box in either direction.

While the foregoing machine has been found very serviceable in large families, and will shorten the operation of ironing, as it is termed, by dis- posing quite as neatly of bed linen and large clothes ; for purposes of business, what has been called the five bowl calender is generally used. This machine is usually set in motion by a horse, or in large manufactories by water wheels, or the steam engine ; we give in our plate CALENDER- ING an elevation of it. Fig. 1 . is a front elevation. The frame work, A, consists of three strong pieces of hard wood, and sometimes of cast iron, two of them upright (made generally of 12-in. by 6 stuff), and connected by a transverse piece at top equally stout, and perhaps by a cross rail below ; both being well secured by screw bolts, as upon them bears the whole stress of the ma- chine. What are called the bowls, or calenders, are placed one above the other between the top and the bottom. Of these the bowls marked e and i, are generally of the same diameter, and made of hard wood or iron. In working the machine, the whole five bowls are made to revolve on their respective axes, each moving in an in- verted direction to that next it, or with which it

moves; and the revolutions are in an inverse ratio to the diameters, exposing an equal portion of the circumference of each to that of the other against which it presses. A belt passing over and turning the pullies at D, communicates the motion ; a pully being fast upon the axis of the main cylinder g. /‘and h receive their motions by means of the wheels C C being worked with B, affixed to the axis of g e and i, by their regular friction upon /“and h. The cloth is placed first down the front of e, and behind f; then in front of g, and behind A, finally it comes out in front of i, and falls down on a clean board or into a box contrived to receive it. The folding it up smoothly and carefully, now prepares the cloth for pressing. This is generally done by placing a certain number of pieces between thin smooth boards of wood, and pieces of glazed pasteboard above and below every piece of cloth. For the common screw press, water presses on the prin- ciple of Mr. Bramah’s forcing press have been lately introduced, and by this means, while the strength of a child is sufficient for the operation, its power may be rendered greater than almost any ordinary exertion of human force. Their successful operation, however, depending greatly upon local circumstances, they have not as yet superseded the common screw press in Glasgow and Manchester. See HYDRAULICS.

f, and A, as we have said, are generally hard wood or cast iron cylinders, and the main cy- linder or bowlg, used formerly to be made of wood. But in Lancashire, what have been called paper bowls are now generally preferred. Its first cost is five or six times as great as that of a wooden one, but its advantage is, that it never warps or splits, and takes eventually a much smoother surface, while it presses better against every part of the cloth. The construction of the paper bowl is thus explained in Dr. Brewster’s Ency- clopaedia. The axis of the cylinder is a square bar of malleable iron, of the proper length. Upon this is first put a strong round plate of cast iron, of the diameter intended for the cylinder when finished. A quantity of thick stout paste- board is then procured, and cut into round pieces, rather larger in the diameter than the iron plate. In the plates, and in every piece of the pasteboard, a square hole must be cut in the centre to

receive the axis ; and the circle being divided into four or five equal parts, a hole must also be cut at each of the divisions, an inch or two within the rim. These pieces of pasteboard being successively put upon the axis, a long rod of malleable iron, with a head at one end, and screwed at the other, is also introduced through each of the holes near the rim, and this is continued until a sufficient number are thus placed to form a cylinder of the length required, proper allowance being made for the compression which the pasteboard is afterwards to undergo. Another round plate is then put on, and nuts being put upon the screws, the whole are screwed tight, and a cylinder formed. The cylinder is now to be placed in a stove, exposed to a strong heat, and must be kept there for at least several days ; and, as the pasteboard shrinks by exposure to the heat, the screws must be frequently tightened until the whole mass has been compressed as

much as possible. When the cylinder is thus brought to a sufficient degree of density, it is re- moved from the stove ; and, when allowed to cool, the expansion of the pasteboard forms a substance almost inconceivably dense and hard. Nothing now remains but to turn the cylinder, and this is an operation of no slight labor and patience. The motion in turning must be slow, not exceeding forty revolutions in a minute, and the substance is now so hard and tough, that tools of a very small size must be used to cut or scrape it until true.. Three men are generally employed for the turning, even when the motion of the cylinder is effected by mechanical power, two being necessary to sharpen tools for the third who turns, so quickly are they blunted.

Tin's useful engine was first introduced into this country by the Hugonots, driven by perse- cution from France and Holland. Lawns and muslins being of light texture, require a machine of lighter power and pressure. This is repre- sented in our plate CALENDERING, fig. 2, and consists of three cylinders of equal diameters (generally about six inches), easily moved by a common winch or handle at F. The central cylinder is iron, and the others wood or paste- board. They are moved with equal velocities by the small wheels at E. The machine is always used cold.

The GLAZING CALENDER, an improvement upon the common five-bowl calender for the purposes of glazing cloth, was first invented by the superintendent of Mr. Miller's works of Glasgow : a profile view and description of the machine are furnished in the Edinburgh En- cyclopaedia, whence we extract it. The machine is exhibited in fig. 3 of our plate. It consists of five bowls or cylinders, like the common calen- der, but instead of those bowls revolving with a velocity in the inverse ratio of their respective diameters, so as always to present an equal sur- face, and to act merely by their pressure against each other, the bowls or cylinders /'and A move with greater velocity than the bowls e,g, and i, and thus create or

generate friction at three several parts of the operation. This difference is produced merely by the addition of a few wheels ; and the difference between the common and glazing calender will be seen at a single glance, by comparing the wheel work of figs. 1. and 3. In fig. 1 the motion of all the cylin- ders is in the inverse ratio of their diameters, so that each presents an equal surface. In fig. 3 the motion, instead of being directly communi- cated from 9 to 7, as in fig. 1, is given by the intervention of two additional wheels. The in- crease of motion depending entirely on the relative number of the wheels B and C, on the axis of the cylinders 9 and 7 to each other (for the intermediate wheels E and F merely com- municate the motion without affecting the velo- city), 9 is made to revolve considerably quicker than in the common calender, and thus the ne- cessary friction is created. To reduce the glazing to the common calender, it is only necessary to remove the wheels E and F entirely, and to sub- stitute a larger wheel for the wheel B, which may be calculated to work directly into the wheel C. The profile view given in this figure affords

opportunity also of showing the way in which the cloth is conducted from the table II over the roller I, through the calender, and received again at G. This is common to both calenders. A patent for Scotland was taken for the glazing calender ; and, upon a trial of some years, it has met with the entire approbation of those who have been in habits of having their goods glazed by it. As one machine, by being worked day and night, is capable of glazing nearly 1000 pieces of cloth of twenty-eight yards each, in a week, it is peculiarly adapted for the occasional hurry to which shippers are sometimes unavoi- dably subjected.

CALENDERS, a sect of dervises, or Mahomme- dan friars, the disciples of Santon Calender!. They are rather a sect of Epicureans than a society of religious. They honor a tavern as much as a mosque, and think they pay as acceptable worship to God by the free use of his creatures as others do by the greatest austerities and acts of devo- tion. They are called in Persia, and Arabia, Abdals or Abdallat, i.e. persons consecrated to the honor and service of God. Their garment is a single coat, of a variety of pieces, quilted like a rug. They preach in the market-places, and live upon what their auditors bestow upon them.

CAL'ENDS, n. “) Lat. calendarium. An CAL'ENDAR, v. & n. > almanac, or yearly re- CALEN'DOGRAPHER. ˆgister, in which the months and stated

times are marked as festivals and holidays. The first days of the months were denominated kalends. The word means calling, or proclaiming, and was applied to these particular days, because on them it was declared, or announced, whether the nones of the months should be five or seven. To calendar, is to re- cord, or register.

Twenty-five years have I but gone in travail Of you my sons ; nor till this present hour, My heavy burdens are delivered :' ••• The duke my husband, and my children both, And you the calendar of their nativity, Go to a gospel's feast, and go with me.*

Shahspeare. Comedy of Errors. What hath this day deserved ? what hath it done, That it in golden letter should be set Among the high tides, in the calendar?

Shakspeare. King John.

We compute from calendars differing from one another ; the compute of the one anticipating that of the other. Brown.

Cursed be the day when first I did appear; Let it be blotted from the calendar, Lest it pollute the month ! Dryden's Pallet.

Experienced men, inured to city ways, Heed not the calendar to count their days. Gay.

CALENDS, in Roman antiquity. See KAL- ENDS.

CALENDS, GREEK, a proverbial expression among the Romans, adopted into most modern languages, signifying never, because the Greeks had no calends.

CALENDULA, in botany, the marigold ; a genus of the polygamia necessaria order, and syngenesia class of plants ; natural order forty-ninth, composite ••• The receptacle is naked;

there is no pappus : CAL. polyphyllous and equal ; the seeds of the disk membranaceous. Of this there are twenty-five species ; natives of the Cape and South of Europe. They are so well known as to need no description except ••• C.fructicosa, which some years ago was introduced from the Cape of Good Hope. It has a slender shrubby perennial stalk, rising to seven or eight feet, but requiring support : this sends out a great number of weak branches, from the bottom to the top, which hang downward unless sup- ported : they are garnished with oval leaves, having short flat foot-stalks, of a shining green color on their upper side, but pale underneath. The flowers come out at the end of the branches, on short naked foot-

stalks. The flowers of the common marigold have been exhibited medicinally : as aperients in uterine obstructions and icteric disorders, and as diaphoretics in exanthe- matous fevers. The leaves of the plant are stimulating, aperient, and antiscorbutic.

CALEN.DULA, in ornithology, a species of the motacilla, found in Pennsylvania. The color is greenish ash, the crown having a deep yellow hue, and the abdomen and wings yellowish be- neath. This is the roitelet rubis of Buffon, the ruby crowned wren of Latham, and calendula Pennsylvanica of Brisson.

CALENS, in entomology, a species of chrysis of a large size : color glossy blue ; abdomen golden ; tail blue and armed with four teeth. Found in Siberia. Also a species of cimex found in India. The head, thorax, and wing-cases, are black, scutel fulvous.

CAL'ENTURE, Lat. caleo ; Span, calentar, calentura ; the word signifies to heat ; a fever. Dr. Johnson says, it is a disease peculiar to sailors in a hot climate, wherein they imagine the sea to be green fields, and will throw them- selves into it. This sense may be gathered from some of the following illustrations : ???

Thus said the scark-tt whore to her gallant,

Who strait designed his brother to supplant ;

Fiends of ambition here his soul possessed ,

And thirst of empire calentured his breast. Marvcll.

And for that lethargy there was no cure, But to be cast into a calenture. Denham.

So, by a calenture misled,

The mariner with rapture sees, On the smooth ocean's azure bed,

Enamelled fields and verdant trees : With eager haste he longs to rove

In that fantastic scene, and thinks It must be some enchanted grove ;

And in he leaps, and down he sinks.

Swift.

???CALENTURE, in medicine, is a disease more frequently mentioned by former than by any later writers of credit. Dr. Stubbs (Philosph.

Transact. No. 36.) relates two cases which oc- curred during a voyage to Jamaica. They we-e accompanied with delirium, independent of fever, and produced by disorders in the stomach and bowels. The symptoms were therefore quickly removed by an emetic. The popular definition describes it as a distemper peculiar to seamen in hot climates, in which they imagine the

sea to be green fields and will throw themselves into it. Such is the common idea ; but it is most probable that the natural wish of a febrile delirium to cool the body, by leaping into water, has in this case been mistaken for the imagina- tion of green fields &c. in the sea. A calenture has been cured by vomiting, bleeding, a spare diet and the neutral salts ; a single vomit commonly removing the delirium, and the cooling medi- cines completing the cure.

GALES, in ancient geography, a municipal city of some note in Campania near Casilinum.

CALF', n. "| Teut. kable, kulbe ; Sax.

CALVE', v. j cealf ; Swed. half; Arm.

CALF'-LIKE, I kelve, apparently from Goth.

CAL'VISH, f ko, a cow, and alf, progeny ;

CALF'HEAD, ala, afta, to bring forth. Mil

CALF'-SKIN. J ton uses the word in this general sense ; but its common acceptation is the young of a cow. The same word, differently derived, signifies the thick part of the leg. Goth, and Swed. kafle, is a round stump.

I would they were barbarians, as they are, Though in Rome littered ; no Romans, as they are

not, Though calved in the porch o' the' capitol.

Shahspeare.

When she's calved, then set the dam aside, And for the tender progeny provide. Dryden.

The colt hath about four years of growth ; and so the fawn, and so the calf.

Bacon's Natural History. Acosta tells us of a fowl in Peru, called condore, which will kill and eat up a whole calf at a time.

Wilhins.

Ah, Blouzelind ! I love thee more by half Than does their fawns, or cows the new-fallen calf.

Gay.

The witless lamb may sport upon the plain, The frisking kid delight the gaping swain ; The wanton calf may skip with many a bound, And my cur, Tray, play deftest feats around ; But neither lamb, nor kid, nor calf, nor Tray, Dance like Buxoma on the first of May. Id.

When waggish boys the stunted besom ply, To rid the slabby pavement ; pass not by Ere thou hast held their hands ; some heedless flirt Will overspread thy calves with spattering dirt. Id.

CALF, in husbandry. A calf should be allowed to suck and follow its mother during the first six or eight days ; after this it begins to eat pretty well. But if the object be to have it quickly fattened for the market, a few raw eggs every day, with boiled milk, and a little bread, will make it excellent veal in four or five weeks. This applies only to such as are designed for the butcher. When in- tended to be brought up, they ought to have at least two months suck; as the longer they suck, the stronger and larger they grow. Those that are brought forth in April, May, or June, are the most proper for this; when calved later, they do not acquire sufficient strength to support them during the winter. There are two ways of breed- ing calves intended to be reared. The one is to let the calf run about with its dam all the year round; which is the method in the cheap breed- ing countries, and is generally allowed to make the best cattle. The other is to take them from the dam after they have sucked about a fortnight ; they are then to be taught to drink flat milk. VOL. V.

which is to be made but just warm, it being very dangerous to give it them too hot. The best time of weaning calves is from January to May ; they should have milk for twelve weeks after; and a fortnight before that is left oif, water should be mixed with the milk in larger quantities. When they have been fed on milk for a month, little wisps of hay should be placed about them, in cleft sticks, to induce them to eat. In the beginning of April they should be turned out to grass ; only, for a few days, they should be taken in at night, and have milk and water, till they are so able to feed themselves that they do not regard it. The grass must not be too rank, but short and sweet, that they may like it, and yet get it with some labour.

Calves should always be weaned at grass;' for if it be done with hay and water, they often grow big-bellied and rot. When those are selected which are to be kept as bulls, the rest should be gelded ; the sooner the better. Between ten and twenty days is the pro- per age. About London almost all the calves are fatted for the butcher, as there is a good mar- ket for them, and the lands are not so profitable to breed upon as in cheaper countries. The way to make calves fat and fine is to keep them very clean; give them fresh litter every day; and to hang a large chalk-stone, where they can easi- ly get at it to lick it, but out of the way of being fouled by the dung and urine. The coops are to be placed so as not to have too much sun, and so high above the ground that the urine may run off. Some bleed them once when they are a month old, and a second time before they kill them ; which greatly whitens the flesh; the bleed- ing is, by some, repeated oftener, but this is suf- ficient. Calves are very apt to be loose in their bowels; which wastes and very much injures them. The remedy is to give them, from a horn, chalk scraped among milk. If it does not suc- ceed, give them bole armoniac in large doses, and use the cold bath every morning. If a cow will not let a strange calf suck her, the common method is to rub both her nose and the calPs with a little brandy, which generally reconciles them.

CALF, in zoology. See Bos.

CALF, GOLDEN, an idol, set up and worshiped by the Israelites at the foot of mount Sinai. Our version makes Aaron fashion this calf with a graving tool after he had cast it in a mould : the Geneva translation makes him engrave it first, and cast it afterwards. Others, render the whole verse thus ; ' And Aaron received them (the golden earings), and tied them up in a bag, and got them cast into a molten calf;' which version is authorised by the different senses of the word tzur, which signifies to tie up or bind, as well as to shape or form ; and of the word cherret, which is used both for a graving tool and a bag. See AARON. This calf Moses is said to have burnt with fire, ground to powder, and strewed upon the water which the people were to drink. How this could be accomplished has been a question. Many have thought, that as gold is indestructible, it could only be burnt by the miraculous power of God; but M. Stahl conjectures, that Moses dissolved it by means of liver of sulphur. See CHEMISTRY, Index. M. Voltaire, in his Essay on Toleration (in other respects an excellent

work), argues much upon the impossibility of grinding to powder so ductile a metal as gold ; but any goldsmith could have informed him, that nothing is easier ; for the purest gold may at any time be made as brittle as glass, by mixing with it a small quantity of brass ; nay, such an antipa- thy exists between the two metals, that gold, in working, will often become quite unmalleable, by only accidentally touching a piece of brass, while it is warm. And if we suppose the Egyp- tian goldsmiths to have been as fond of profit, as the modern jewellers of Europe, it is probable they might have put brass pins (a practice now not uncommon) in the joints of the gold ear- nngs, which they had sold or lent to the Hebrew ladies; in which case, the whole mass being melted together, when the calf was made, Moses would require no miraculous power to enable him to grind it to powder; nor would he even need to throw in any additional quantity of brass, to render it brittle, when he burnt, or melted, it, (as perhaps the word should be rendered) with fire.

CALF, SEA. See PHOCA. CALF-SKIXS, in the leather manufacture, are prepared and dressed by the tanners, skinners, and curriers, who sell them for the use of shoe makers, sadlers, book-binders, and others, who employ them in their several manufactures. The English calf-skin is much valued abroad, and the sale of it very considerable in France and other countries; where attempts have been made to imitate it, but in vain; the smallness and weak- ness of the calves about Paris, which at fifteen days old are not so big as the English ones when newly calved, being an insurmountable obstacle. CALF AT, in ornithology, a species of embe- riza ; rather smaller than the common sparrow : color hoary; vinaceous beneath; head, throat, and margin of the tail, black; bill, legs, and orbits, red. This is le Calfat of Buffon, and the red eyed bunting of Latham; and is found at Madagascar.

CAL'IBER,") ft. calibre; from Lat. cava-

CAL'IVER, > libra; measure of a tube; but

CAL'IBRE. j xˆa was an ' instrument for

measuring. It signifies the bore of fire arms ;

metaphorically applied to the quality, state, or

degree ; the size or dimensions of intellect, worth,

or estimation.

They could not but be convinced, that declamations of this kind would rouse him ; that he must think, coming from men of their calibre, they were

highly mischievous.

Dwrke. Appeal from the New to the Old Whigt.

CALIBER, or CALIPER, properly denotes the diameter of any body ; thus we say, two columns of the same caliber; the caliber of a bullet, &c.

CALIBER COMPASSES, CALIPER COMPASSES, or CALLIPERS, a sort of compasses made 'with arched legs, to take the diameter of round or swelling bodies. Caliber compasses are chiefly used by gunners, for taking the diameters of the parts of a piece of ordnance, or of bombs, bullets, &c. Their legs are therefore circular ; and move on an arch of brass, whereon is marked the inches and half inches, to show how far the points of the compasses are opened asunder. The gaugers, al.so, sometimes use calibers, to embrace the two

heads of any cask, in order to find its length. The calibers used by carpenters and joiners, are a piece of board, notched triangular wise in the middle, for taking measures.

CALLIPERS, GUNNER'S, are instruments in which a right line is so divided as that the first part being equal to the diameter of an iron or leaden ball of one pound weight, the other parts are to the first as the diameters of balls of two, three, or four, &c. pounds are to the diameter of a ball of one pound. The caliber is used by engineers, from the weight of the ball given, to determine its diameter, or vice versa. The gunner's calli- pers consist of two thin plates of brass joined by a rivet, so as to move quite round each other : the length from the centre of the joint is between six inches and a foot, and the breadth from one to two inches; that of the most convenient size is about nine inches long. Many scales, tables, and proportions &c. .may be introduced on this instru- ment; but none are essential to it, except those for taking the caliber of shot and cannon, and for measuring the magnitude of salient and entering angles. The most complete and best sort of cal- lipers, however, usually contain the following articles, viz. first, the measure of convex diame- ters in inches, &c ; second, of concave diameters ; third, the weight of iron shot of given diameters; fourth, the weight of iron shot for given gun bores ; fifth, the degrees of a semicircle ; sixth, the pro- portion of troy and avoirdupois weight ; seventh, the proportion of English and French feet and pounds weight; eighth, factors used in circular and spherical figures; ninth, tables of the speci- fic gravities and weight of bodies; tenth, tables of the quantity of powder necessary for the proof and service of brass and iron guns; eleventh, rules for computing the number of shot or shells in a complete pile; twelfth, rules for the fall or descent of

heavy bodies; thirteenth, rules for the raising of water; fourteenth, rules for firing artil- lery and mortars ; fifteenth, a line of inches ; six- teenth, logarithmetic scales of numbers, sines, versed sines, and tangents; seventeenth, a secto- ral line of equal parts, or the line of lines ; eigh- teenth, a sectoral line of planes and superficies ; and, nineteenth, a sectoral line of solids. See COMPASSES.

CAL'ICE, n. s. Lat. culix. A cup ; a chalice.

There is a natural analogy between the ablution of the body and the purification of the soul ; between eating the holy bread and drinking the sacred calice, and a participation of the body and blood of Christ.

Taylor.

CALICHON, an ancient instrument of the lute kind, mounted with five strings, tuned to the following ascending intervals : viz. G, first line bass, C F A and D following.

CAL'ICO, J Fr. calicut. A kind

CAL'ICO-PRINTER. J of cotton cloth, brought from Calicut, in Malabar. This cloth is deco- rated with various colors, forms, and figures, by a process of painting.

If thou but please to walk into the Pawn To buy thee cambrick, calico, or lawn, If thou the whiteness of the same wouldst prove From thy far whiter hand pluck off thy glove ; And those which by as the beholders staud, Will take thy hand for lawn, lawn for thy hand.

Dray ton. Edward IV. to Mrs. SJunc.

CALIFORNIA.

35

I wear the hooped petticoat, and am all in calicoes what the finest are in silks. It is a dreadful thing to be poor and proud. Spectator, No. 292.

As, suppose an ingenious gentleman should write a poem of advice to a callico-printcr : do you think there is a girl in England, that would wear any thing but the taking of Lisle, or the battle of Oudenarde ? They would certainly be all the fashion, till the heroes abroad had cut out some more patterns. I should fancy small skirmishes might do for under pet- ticoats, provided they had a siege for the upper.

Tatler, No. 3.

CALICO, a species of cloth of cotton thread, manufactured, formerly, at Calicut in the East Indies; but we have now in this country esta- blished manufactories which equal those in the east. It is said that in this business, and in the printing of calicoes, there are 250,000 persons employed.

CALICUT, or CALICODU, a town and district extending along the coast of Malabar, between the parallels of 10►► and 12►► N. lat., one of the principal residences of the Nairs, the Calicut rajah, or Zamorin of the Europeans, being one of their chiefs. lie is called by his own caste the Tamuri rajah. According to Dr. Bu- chanan, the origin of the name of this town and district is traced to Cheruman Permal, a usurper who lived 1000 years since, and who, having divided Malabar amongst his nobles, had no prin- cipality to bestow on the ancestor of the Tamuri (Zamorin). He therefore gave that chief his sword, with all the territory, in which a cock crowing at a small temple here could be heard ; hence these, his original dominions of the Tamu- ri, were called Calicodu, or cock crowing. The place continued to be the chief residence of the Tamuri Rajah until the Mahommedan invasion, and became a flourishing city, owing to the suc- cess that its lords had in war, and the encourage- ment which they gave to commerce. Tippoo destroyed the town and removed its inhabitants ; but, in little more than a year after, the English conquered the province, and the old inhabitants returned with joy and rebuilt the town. See Buchanan's Journey through Malabar.

The males of the family of the rajah, are called Tamburans, and the females Tamburetties. Their offspring are generally the children of Namburis, or brahmins of high caste, and sometimes Nairs of the highest rank. Although these females are betrothed in infancy, and marry at the age of ten, they never cohabit with their husbands, which it is said would be esteemed a profanation ; but live in the houses of their mothers and brothers, at the expense of the husband, and adopting other men for their companions. No man thus knows his own father. This family pretends to far higher rank than the brahmins. In 1766, according to Mr. Hamilton, 'when Hyder invaded Mala- bar, the Cochin rajah quietly submitted to pay tribute ; while the pride of the Zamorin refused any kind of submission; and, after an unavailing resistance, being made prisoner, set fire to the house in which he was confined, and was burned with it. Several of his personal attendants, who were accidentally excluded when he shut the door, afterwards threw themselves into the flames and perished with their ma?!:er. ' The chiefs of

Punatoor, Mannacollatil, Talapuli, Tirumana- chery, Agemcutil, and others, were at one time tributary to the Zamorin, and furnished quotas of

troops to him in war. He is now entirely a sti- pendiary of the British government.

The town of Calicut, the capital of the district, stands in lat. 11►► 18′ N., long. 75►► 50′ E., and contains perhaps, 5,000 houses. It is inhabited chiefly by Mopleys ; and is situated on a river navigable by boats 100 miles, by which a great quantity of teak timberis floated down for exports. It also exports areka, cocoa-nuts, pepper, ginger, turmeric, cardemums, coir, and charcoal of the cocoa-nut shell, remarkable for the intense heat it gives ; and manufactures piece goods. This port is the principal one of India visited by the Arabs of Muscat. Here Vasco de Gama freighted, in 1498, the first European vessel that ever sailed tor the west, with Indian commodities. The sea, however, has long since covered the ancient city, and at very low tides the tops of temples and minarets are said to be seen. The present town stands, low and unsheltered, on the sea shore. The streets are narrow, crowded with people, and dir- ty. Hyder AH took the town in 1773, and ex- pelled 'the merchants and factors, ordering the cocoa-nut trees and sandal wood to be destroyed, and the pepper vines to be rooted out. Tippoo Saib afterwards destroyed it more completely as we have seen. Yet it has since flourished under British domination and protection. It is distant seventy-six miles west of Coimbetore, and ninety-five south-west of Seringapatam. Long. 75►► 30′ E., lat 11►►15'N.

CAL'ID, > See CALX, CALCAREOUS, and CALID'ITV. J CALCINE.

Ice will dissolve in any way of heat ; for it will dissolve with fire, it will colliquate iu water, or warm oil ; nor doth it only submit into an actual heat, but not endure the potential calidity of many waters.

Browne's Vulgar Errours.

CALIDJE PLANTS, from calor, heat; plants that are natives of warm climates; such as those of the East Indies, South America, &c. These plants, says Linneeus, will bear a degree of heat which is 40►►, on a scale in which the freezing point is 0, and 100 the heat of boiling water. In the tenth degree of cold they cease to grow, lose their leaves, become barren, and perish.

CALIDRIS, in ornithology, a species of sco- lopax; the red shank of Latham, totanuss of Bris- son, and rotbren of Frisch. The bill is straight and red; legs scarlet, secondary quill-feathers white. . Inhabits England and America.

CALIDUCT, in antiquity, a kind of pipe, disposed along the walls of houses or apartments, for conveying heat to several remote parts of the house from

one common furnace.

CALIDUS, in entomology, a species of ci- mex, of a fuscous color above, and testaceous beneath; antennae black. Found in Africa.

CA'LIF, n. s. f Arab, khalifa; an heir or

CA'LIPH. $ successor. A title assumed by the successors of Mahomet among the Sara- cens, who were vested with absolute power iu affairs both religious and civil. Thomson says, it signifies a vicar, a lieutenant, one who holds the place of Mahomet.

CALIF. See CALIPH

CALIFORNIA, a considerable peninsula on the Pacific Ocean, united on the north to the continent of North America, from which the other part is separated by a narrow sea, called the Gulf of California, and bounded on the south and west by the Pacific Ocean, near 300 leagues in length, and in different places ten, twenty, thirty, and forty leagues wide. It in- cludes a superficial area of above 9000 leagues. This peninsula is said to have been discovered by Sir Francis Drake, and by him called New Albion; and the Gulf of California has been sometimes called the Vermilion Sea, Purple Sea, and Red Sea. In a peninsula of so vast an ex- tent, which reaches nearly from the 23rd to the 45th degree of latitude, the soil and climate must naturally be found to vary. Some parts ire continually covered with flowers, while others are inhospitable deserts. According to father Bergert de Schelestat, it is nothing but a chain of barren rocks, covered with briars, with- out water, without wood, thinly inhabited, and incapable of culture ; only the sea-coasts having been discovered till 1788. The heat would be insupportable, if not moderated in the afternoon by the east wind, which blows but seldom, or by the south, which is there more frequent. It rare- ly rains, and then only in small quantities. The soil is naked rock, or covered with pebbles, fertile in some few places which are watered. It seems to have been produced by a volcano or an earth- quake ; few fruit trees are found, some forest trees and underwood, towards the south, are all that offer; Indian figs grow wild. Such was the account given ; but later observations and disco- veries have explored places, particularly in the northern division of this peninsula, where the soil is excellent, and capable of culture ; and it is reported, that vines grow naturally on the mountains ; that the Jesuits, when they resided there, made wine enough to serve for the con- sumption

of Mexico, of an excellent quality, and in its taste approaching to that of Madeira. Here also grain of every kind is said to flourish well : together with all the roots and fruits of the tropics and such as have been imported for Spain. Fish, game, hares, and rabbits, are very common, and the most enchanting birds. Small gray well flavored partridges feed in companies of three or four hundred in the thickets. In the forests are found gigantic stags, in flocks of forty or fifty at a time. They are brown, with large branches nearly four feet and a-half long, and considered among the most beautiful amimals of America. Sebastian Viscaino asserts that he saw some whose branches were nearly nine feet in length. They are very fleet, and can scarcely be taken, except by artifice. Perouse saw them taken in this way : ††† A stag's head was fixed with its long branches upon an Indian's head, who, armed with a bow and arrows, crept on all fours among the brushwood and long grass, imitating the motion of a stag when feeding. He thus drew around him the unsuspecting herd, and then shot among them with fine effect.

Latterly horses, cattle, sheep, and other do- mestic animals, have greatly increased here. The coasts furnish great quantities of fish ; and in the southern part of the peninsula, the pearl oyster

has been an article of flourishing commerce to the colonists. It seems also, from M. Humboldt, that the Indian population had considerably in- creased in California just before his visit. He says it had more than doubled within the twelve preceding years. Here are eighteeen Spanish missions, founded between the years 1769 and 1798, and containing together apopulation of from 15 to 17,000 souls. The residence of the governor of the Californias is at Monterey. He has a salary of 4000 piasters ; but his authority is not allowed to interfere with the affairs of the mis- sions ; except to grant assistance when they require it. His real subjects, therefore, are only about 400 military, distributed in the different presidios, and which keep in subjection about 50,000 wandering Indians. Every parish is governed by two missionaries, whose authority over the converted Indians is absolute ; and the domestic economy of each mission differs little from that of a West India plantation. ' The men and women,' according to Perouse, ' are assembled by the sound of a bell ; one of the priests conducts them to their work, to church, and to all their other exercises.' Pearl oysters are found on the coast of Old California, and have been, during two centuries, a great inducement to adventurers to visit that barren region. The oysters are most abundant in the southern partj particularly round the islands of Santa Cruz, San Josef, and the bay of Ceralvo. They lie in great numbers on the banks which are called hostias, in three or four fathoms water ; and may be seen as plainly as if on the surface of the water. The pearls are large and beautiful, but of an irregular figure ; but this fishery has of late years mucr . declined.

The native tribes that inhabit the country ac- knowledge few regular chiefs. Each father is a prince in his own family, but his power ceases wlun the children are able to provide for themselves. Each tribe has, nevertheless, sometimes persons appointed, who call assemblies to divide the pro- ductions of the earth, regulate the fisheries, and to march at their head, if engaged in war. They owe their rank to the choice of their companions, but they are agents only, not princes. The shade of a tree serves them as a retreat during the day, and in the night they retire to their huts, built on piles at the side of rivers or ponds. Want of provision obliges them often to change their abode, and in severe winters they retire into caves. A girdle and piece of linen, which passes round the body, some ornaments for the head, and a chain of pearls, serve them for dress and finery; some insert colored feathers in holes, which they make in their ears and nostrils ; some bind their forehead with bands, like net-work, with which too they cover their arms, adorned with chains of pearls like bracelets. Those who live towards the north, where they have no pearls, dress their heads with shells. The women commonly wear a species of long robe, made of the leaves of palms \ some wear nothing but a girdle. These palm-leaves are woven with art, and dyed of different colors ; and of them they make baskets, which hold their roots and provisions.

CALIFORNIA, THE GULF OF, SEA OF CORTES, or VERMILION SEA, formed by the peninsula of

*Ca.ifornia on the west, and the continent on the east, is 300 leagues long, and fifty to twenty broad. The chief knowledge we have of it is, that the east coast is high and broken, lined with shoals, to the latitude of 27ˆ**.** The only places on the coast (the intendance of Sonoro) are the port of Guitivas, at the mouth of the considerable river Mayo ; and that of Guayma at the mouth of the Yaqui. This last is sur- rounded by elevated hills, and before the entrance is Pelican Island, which is left on the right hand in entering. Ships anchor in five fathoms. The small Spanish village is ten miles up the river. The Colorado, a considerable river, falls into the head of this gulf. The bay of Monterey, the best on the coast of New California, is very in- different ; it is limited by Point Pinos (fir tree) on the south, and point Anno Nueva on the north, distant seven leagues. The whole is bordered by a sandy beach, but entirely exposed, except round Point Pinos, where is a cove, in which a few ships may lie, and this is properly the port of Monterey. The river of that name is an insig- nificant stream, four leagues north-east of the bay. San Francisco, the most northern of the ports of the Spanish missions, is an excellent harbour, entirely between two low points which expand into a noble basin. On the south shore is the Presidio, and a fort garrisoned by thirty- five men, and a*

lieutenant of artillery. Sir Fran- cis Drake's Bay is four leagues north of San Fran- cisco, open to the south and south-east, but affording good anchorage on the south shore. It receives a river, whose mouth is crossed by a bar, with a surf that renders its entrance dange- rous. Port de la Podega is seven leagues north of Sir Francis Drake's Bay. Cape Mendocino is a promontory, with two elevated points, ten miles asunder, the southernmost resembling Dunnose, on the Isle of Wight. Twenty leagues farther north is Port Trinidad, an open bay, but which receives a river that may be entered 'by boats, and wood and water are abundant. Cape Blanco, named Cape Orford by Vancouver, is a low point, covered to the water's edge with wood.

CALIG7E, in Roman antiquity, soldiers shoes, made like sandals, without upper leather to cover the superior part of the foot, though otherwise reaching to the middle of the leg, and fastened with thongs. The sole of the caliga was of wood, like the sabot of the French peasants, and its bottom stuck full of nails. From these caligse the emperor Caligula took his name, as having been born in the army, and afterwards bred up in the habit of a soldier. According to Du Cange, a sort of caligas was also worn by monks and bishops, when they celebrated mass pontifically.

CALIGATI, an appellation applied by some ancient writers to the common soldiers in the Roman armies, from the caligae which they wore.

CALIGATION, ►►. ˆ Lat. caliga,' dark-

CALIG'INOUS, adj. > ness, obscurity, cloudi-

CALIG'INOUSNF.SS, n. j ness; dim.

Instead of a diminution, or imperfect vision, in the mole, we affirm an abolition, or total privation ; in- stead of caligation or dimness, we conclude a cecity or blindness. Brown.

CALIGO, or CALIGATIO, in medicine, cloudi- ness, dimness, or suffusion of sight, caused by

the interposition of some opaque substance be- tween the light and the optic netve. The species of caligo are distinguished according to the situa- tion of the interposed body : thus caligo lentis, caligo corneas, caligo pupillae, caligo humorum, and caligo palpebrarum.

CAL'IGRAPHY, orl From Ka\os, beau- CAL'LIGRAPHY, n. ? tiful, and ypaˆw, to CAL'LIGRAPHIC. 5 grave or write. Beau- tiful writing. See CALLIGRAPHY.

This language is incapable of caligraphy.

Priduaux.

The minutes of acts, &c. were always taken in a kind of cypher, or short-hand ; such as the notes of Tyro in Gruter : by which means, the notaries were enabled to keep pace with a speaker, or person who dictated. These notes, being understood by few, were copied over fair, and at length, by persons who had a good hand, for sale, &c. and these were called calligraphy. Dr. A. Rees.

CALIGULA, the Roman emperor and tyrant, began his reign A. D. 37, with every promising appearance of becoming the real father of his people; but at the end of eight months he was seized with a fever, which, it is thought, left a frenzy on his mind : for his disposition totally changed, and he committed the most atrocious acts of impiety, cruelty, and folly; such as pro- claiming his horse consul, feeding it at his table, introducing it to the temple in the vestments of the priests of Jupiter, &c. and causing sacrifices to be offered to himself, his wife, and the horse. After having murdered many of his subjects with his own hands, and caused others to be put to death without any just cause, he was assassinated by a tribune of the people as he came out of the amphitheatre, A. D. 41, in the twenty-ninth year of his age, and the fourth of his reign. ❖❖❖ See ROME, HISTORY OF.

CALIN, a compound metal, whereof the Chinese make tea canisters, and the like. The ingredients seem to be lead and tin.

CALIPH. Arab, khalifa, an heir or successor. A title assumed by the successors of Mahomet among the Saracens, who were vested with ab- solute power in affairs both religious and civil. See KHALIF.

CALIPPIC PERIOD, in chronology, a series of seventy-six years, perpetually recurring, at every repetition of which it was supposed by its inventor Calippus, an Athenian, the mean, new, and full moons, would return to the same day and hour of the solar year. Meton, 100 years before, had invented the period or cycle, of nine- teen years ; assuming the quantity of the solar year 365d. 6h. 18′ 56″ 503 314 34s ; and the lunar month, 29d. 12A. 45′ 47″ 263 484 305 : but Calip- pus, considering that the Metonic quantity of the solar year was not exact, multiplied Melon's pe- riod by four, and thence arose a period of seventy- six years, called the Calippic. The Calippic period, therefore, contains 27,559 days : and since the lunar cycle contains 235 luna- tions, and the Calippic period is quadruple of this, it contains 940 lunations. This period began in the third year of the 112th Olympiad, or the 4,384th of the Julian period It is demon

strated, nowever, that the Calippic period itself is not accurate ; tlmt is does not bring the new and full moons precisely to their places : 8/t. 5′ 52* 60″ being the excess of 940 lunations above seventy-six solar years ; but brings them too late, by a whole day in 225 years.

CALISTE, in conchology, a species of Venus, set with transverse acute striae, membraneous in front, the anterior slope short, and the posterior aperture obscure. Found on the shores of the Red Sea.

CALIX, or CALYX. See BOTANY.

CALIXTINS, a name given to those, among the Lutherans, who follow the sentiments of Ca- lixtus. See CALIXTUS. Also a sect in Bohemia, derived from the Hussites, about the middle of the fifteenth century, who asserted the use of the cup, as essential to the eucharist. They are not ranked by Romanists in the list of heretics, as in the main they still adhered to the doctrine of Rome. The reformation they aimed at extended only to four articles : 1. To restore the cup to the laity. 2. To subject criminal clergymen to pu- nishment by the civil magistrate. 3. To strip the clergy of their lands, lordships, and all temporal jurisdictions. 4. To grant liberty to all capable priests to preach the word of God.

CALIXTUS (George), a celebrated divine, and professor at Helmstadt, in the Duchy of Brunswick, who died in 1656. He opposed the opinion of St. Augustin, on predestination, and endeavoured to form a union among the various members of the Romish, Lutheran, and reformed churches.

CALK’, v. ~\ Fr.caZrtge.salcum or tow;

CALK’ER.

CALK’ING

CALK’ING

ten ; Fr. calfater ; Hind, kalaputta ; Ara. kalaf’a, kilufat ; icaXjjˆartje, are used in the sense of our word. To stop the seams of a ship ; to cram or stuff in materials to keep out the water from leaks and chasms, made by violence or accident. Calking is used in a more general sense : Cham- bers says, it is a term in painting, used where the backside is covered with black

lead, or red chalk, and the lines traced through on a waxed plate, wall, or other matter, by passing lightly over each stroke of the design with a point, which leaves an impression of the color on the plate or wall.

Thy riches, and thy fairs, thy merchandise, thy martners, and thy pilots, thy calhers, and the occu- piers of thy merchandise, and all thy men of war, that are in thee, and in all thy company which is in the midst of thee, shall fall into the midst of the seas in the days of thy ruin.

Ezehicl xxvii. 27.

There is a great errour committed in the manner of calking his majesty's ships ; which, being done with rotten oakum, is the cause they are leaky.

Raleigh's Essays.

So hero some pick out bullets from the side ; Some drive old oakum through each seam and rift j

Their left hand does the calking iron guide, The rattling mallet with the right they lift. Dryden.

CALKING, a term in painting. See the pre- ceding article.

urcnes.

CALK', v. ~\ Fr.caZflge.salcum or tow; CALK'ER, n. f or Sax. c&le, the keel of a CA LK'ING, ? ship ; but Swed. kullfattra ;

*CALK'ING-IRON. * Dan. kalfatre ; Bel. kalfa-*

CALKING, in maritime affairs. See CAULKING.

CALKINS, the prominent parts at the ex- tremities of a horse-shoe, bent downwards, and forged to a sort of point. They are apt to make horses trip; they also occasion bleymes, and ruin the back sinews. If fashioned in form of a hare's ear, and the horn of a horse's heel be pared a little low, they do little damage; whereas, the great square calkins spoil the foot. Calkins are either single or double, that is, at one end of the shoe, or at both : these last are deemed less hurt- ful, as the horses can tread more even.

CALL', v. & n. ˆ KaXtw ; Lat. calo ; Welsh

CALL'ER, n. > and Aim.galw ; Goth, kalla ;

CALL'ING, n. 3 Swed. kala; Teut. and Belg. kallen ; Heb. kol ; Ara. gal, the voice. To name ; to speak aloud ; to invite ; to mark, signify, or denote.

Its religious sense ot ilmne vocation, (for which see below) has but too often been used lightly, by both religious and irreligious men. As used alone with prepositions an- nexed, and in all the different shades of its acceptations, it is thus exhibited by Dr. John- son. We shall, however, a little vary his ‘llustrations.

To name ; to denominate.

And God called the light day, and the darkness he called night. Genesis i. 5.

Whilst on her father’s knee the damsel played, Patty he fondly called the smiling maid. Gay.

And what they call the prudent part Is to wear interest next the heart. Id.

To summon, or invite, to or from any place, thing, or person. It is often used with local particles, as up, down, in, out, off.

Of all the day she saw him not with eye ; She trowed he was in som maladio, For, for no crie, hire maiden coud him calle, He n’olde answer for nothing that might fallc.

Chaucer’s Canterbury Tales.

Wherein his weaker wandering steps to guyde, An auncient matrone she to her does call, Whose sober lookes her wisdome well descryde Her name was Mercy ; well known over all To be both gratious and eke liberall. Spenser.

Be not amazed ; call all your senses to you ; de- fend my reputation, or bid farewell to your good life for ever. Shahspeare.

Why came not the slave back to me when I called him. Id. King Lear,

Are you called forth from out a world of men, To slay the innocent ? Id. Richard III.

The soul makes use of her memory, to call to mind what she is to treat of. Duppa’s Rules to Devotion.

Or call up him that left half told The story of Cambuscan bold. Milton.

Such fine employments our whole days divide ; The salutations of the morning tide.

Call up the sun ; those ended, to the hall We wait the patron, hear the

lawyers bawl. Dryden. Then by consent abstain from further toils,

Call off the dogs, and gather up the spoils. Addison.

I am called off from public dissertations, by a do- mestic affair of great importance. Taller.

The passions call away the thoughts, with incessant importunity, toward the object that incited them.

Wallf.

CAL 39

Up springs the lark

Shrill voiced and loud, the messenger of morn ; Ere yet the shadows fly, he mounted sings Amid the dawning clouds, and from their haunU Calls up the tuneful nations.

Thornton's Seasons. Spring.

A stag sprang from the pasture at his call, A ud kneeling licked the withered hand that tied A wreath of woodbine round his antlers tall, And hung his lofty neck with many a flowret small.

Beattie.

To convoke ; to summon together.

How call we our high court of parliament.

S/utkspeare.

The king being informed of much that had passed that night, sent to the lord mayor to call a common council immediately. Clarendon.

To summon judicially.

The king had sent for the earl to return home, where he should be called to account for all his mis- carriages. Id.

Once a day, especially in the' early years of life and study, call yourselves to an account, what new ideas, what new proposition or truth, you have gained.

Watts.

To summon by command.

In that day did the Lord God of hosts call to weep- ing and to mourning, and to baldness, and to girding with sackcloth. Isaiah xxii. 12.

Shall we call in the ambassador, my liefce ?

*Si'iukspeare**

See thy Mother is near ??? Hark ! she calls thee to hear, What age and experience advise. Guy.

To invoke.

I call God for a record upon my soul, that, to spare you, I came not as yet unto Corinth.

2 Corinthians, i. 23.

To appeal to.

When that lord perplexed their counsels and de- signs with inconvenient objections in law, the autho- rity of the lord Manchester, who had trod the same paths, was still called upon. Clarendon.

To proclaim ; to publish.

Nor ballad singer, placed above the crowd, Sings -with a note so shrilling, sweet, and loud, Nor parish clerk, who calls the psalm, so clear.

Gay.

To answer ; to reply or echo back. Or from the mountain-glade's aerial brow, While to her song a thousand echoes call, Marks the wild woodland wave below, Where shepherds pipe unseen, and waters fall.

Beattie.

To excite; to put in action; to bring into view.

He swells with angry pride, And calls forth all his spots on every side.

Cowley.

See Dionysius Homer's thoughts refine, And call new beauties forth from every line. Pope.

To stigmatise with some opprobrious denomi-, nation.

Deafness unqualifies men for all company, except friends j whom I can call names, if they do not speak loud enough. Swift to Pope.

CAL

To call back ; to revoke ; to retract.

He also is wise, and will bring evil, and will not call buck his words ; but will arise against the house of the evil doers ; and against the help of them that work iniquity. Isaiah xxxi. 2.

To call for ; to demand ; to require ; to claim.

Madam, his majesty doth call for you, And for your grace, and you, my noble lord.

Shakipeare.

You see how men of merit are sought after ; the undeserver may sleep, when the man of action is calledfor. Id.

Among them he a spirit of phrensy sent, Who hurt their minds, And urged you on, with mad desire, To call in haste for their destroyer.

Milton's Sampson Agonislc's. For master, or for servant here to call, Was all alike, where only two were all.

Dryden's Fabks.

I have been accustomed to entwine My thoughts with Nature rather in the fields, Than Art in galleries ; though a work divine Calls for my spirit's homage, yet it yields Less than it feels j because the weapon which it

wields Is of another temper. Byron's Childe Harold.

To call in ; to resume money at interest.

Horace describes an old usurer, as so charmed with the pleasures of a country life, that, in order to make a purchase, he called in all his money ; but what was the event of it? why, in a very few days after, he put it out again. Addison's Spectator.

To call in; to resume any thing that is in other hands.

If clipped money be called in all at once, and stop- ped from passing by

weight, I fear it will stop trade.

Locke.

Neither is any thing more cruel and oppressive in the French government, than their practice of calling in their money, after they have sunk it very low, and then coining it anew, at a higher value. Swift,

To call in ; to summon together ; to invite.

The heat is past, follow no farther now ; Call in the powers, good cousin Westmoreland.

Shakspearc.

He fears my subjects loyalty, And now must call in strangers.

Denham's Sophy.

To call over ; to read aloud a list or muster- roll.

To call out; to challenge; to summon to fight.

When their sovereign's quarrel calls' em oat His foes to mortal combat they defy.

Dryden'i Virgil.

The verb used in the neutral sense signifies to stop without intention of staying. . This meaning probably arose from the custom of denoting one's presence at the door by a -call ; but it is now used with great latitude. This sense is well enough preserved by the particles on or at ; but is forgotten, and the expression made barbarous by in.

To make a short visit. And, as you go, call on my brother Quintus, And pray him, with the tribunes, to come to me.

Ben Jonao.*

CAL

40

He ordered her to call at his house once a week, which she did for some time after, when he heard no more of her. Temple.

That I might begin as near the fountain-head as possible, I first of all called

in at St. James's.

Addison's Spectator.

To call on ; to solicit for a favor, or a debt. '

I would be lotii to pay him before his day ; what need I be so forward with him, that calls not on me ? Shakspeare. Henry IV.

To call on ; to repeat solemnly.

Thrice call upon my name ; thrice beat your breast ; And hail me thrice to everlasting rest. Dryden,

The Athenians, when they lost any men at sea, went to the shores, and, catting thrice on their name, raised a cenotaph, or empty monument, to their me- mories. Broome on the Odyssey.

To call upon ; to implore ; to pray to.

Call upon me in the day of trouble ; I will deliver thee, and thou shalt glorify me. Psalm i. 15.

The neuter substantive from the verb has also a diversity of acceptations, as will be obvious from the subjoined instances.

A vocal address of summons or invitation.

But death comes not at call, justice divine Mends not her slowest pace for prayers or cries.

Milton.

But would you sing, and rival Orpheus' strain, The wondering forest soon should dance again : The moving mountains hear the powerfull call, And headlong streams hang listening in their fall.

Pope.

A requisition authoritative and public.

It may be feared, whether our nobility would con- tentedly suffer themselves to be always at the call, and to stand to the sentence, of a number of mean persons. Hooker's Preface.

Divine vocation; summons to true religion.

Yet he at length, time to himself best known, Remembering Abraham, by some wonderous cart, May bring them back repentant and sincere. Milton.

A summons from heaven ; an impulse.

How justly then will impious mortals fall, Whose pride would soar to heaven without a cull I

Those who to empire by dark paths aspi – Still plead a call to what they most desire.

Dryden.

St. Paul himself believed he did well, and that he had a call to it, when he persecuted the Christians, whom he confidently thought in the wrong : but yet it was he, and not they, who were mistaken. Locke.

Authority; command.

Oh, Sir ! I wish he were within my call, or yours.

A demand ; a claim.

Dependence is a perpetual call upon humanity, and a greater incitement to tenderness and pity, than any other motive whatsoever. Addison's Spectator.

An instrument to call birds.

For those birds or beasts were made from such pipes or call, as may express the several tones of those creatures, which are represented.*

Wilhim' Mathematical Magic.

Calling; vocation; employment.

Now through the land his cure of souls he stretched, And like a primitive apostle preached ; Still cheerful, ever constant to his call, By manv followed, loved ,by most admired by all.

Dryden.

CAL

A nomination.

Upon the sixteenth was held the sergeants' feast at Ely-place, there being

nine Serjeants of that call.

Bacon.

Calling is applied to vocation; profession; trade.

If God has interwoven such a pleasure with our ordinary calling, how much superior must that be, which arises from the survey of a pious life ? Surely, as much as Christianity is nobler than a trade.

South.

We find ourselves obliged to go on in honest in- dustry in our callings. Rogers. I cannot forbear warning you against endeavouring at wit in your sermons ; because many of your calling have made themselves ridiculous by attempting it.

Swift.

I left no calling for this idle trade, No duty broke, no father disobeyed. Pope. To proper station or employment. The Gauls found the Roman senators ready to die with honour in their callings.

To class of persons united by the same, employ- ment or profession.

It may be a caution to all Christian churches and magistrates, not to impose celibacy on whole callings, and great multitudes of men or women, who cannot be supposable to have the gift of continence.

Hammond.

Divine vocation ; invitation or impulse to the true religion.

Give all diligence, to make your calling and elec- tion sure. 2 Peter, i. 10.

St. Peter was ignorant of the caHin

CALL, among fowlers, the noise or cry of a bird, especially to its young, or to its mate in coupling time. One method of catching par- tridges is by the natural call of a hen trained for the purpose, which drawing the cocks to her, they are entangled in a net. Different birds re- quire different calls ; but most of them are com- posed of a pipe or reed, with a little leathern bag, somewhat in form of a bellows; which, by the motion given thereto, yields a noise like that of the species of bird to be taken. The call for partridges is formed like a boat bored through, and fitted with a pipe or swan's quill, &c. to be blown with the mouth, to make the noise of the cock partridge, which is very different from the call of the hen. Calls for quails,

&c. are made of a leathern purse in shape like a pear, stuffed with horse hair, and fitted at the end with the bone of a cat's, hare's, or coney's leg, formed like a flageolet. They are played, by squeezing the purse in the palm of the hand, at the same time striking on the flageolet part with the thumb, to counterfeit the call of the hen quail.

CALL, among sailors, a sort of whistle or pipe, of silver or brass, used by the boatswain and his mates to summon the sailors to their duty, and direct them in the different employments of the ship.

CALL OF THE HOUSE, in the British Parliament, is the calling over the names of the members, to discover whether there be any in the house not returned by the clerk of the crown ; or what members are absent without leave, or just cause. In the former case, every person answers to his

name, and departs out of the house, in the order wherein he is called. In the latter, each person stands up uncovered at the mention of his name.

CALLA, African or Ethiopian arum : a genus of the monogynia order, in the heptandria class of plants; natural order second, piperitae : CAL. spatha plain ; the spadix covered with florets ; there is no corolla ; no petals ; and the berries polyspermous. There are three known species. The principal is C. ./Ethiopica, a plant which grows naturally at the Cape of Good Hope. It propagates very fast by offsets, which should be taken off in the end of August, at which time the old leaves decay ; for at this time the roots are in their most inactive state. They are so hardy as to live without any cover in mild winters, if planted in a warm border and dry soil ; but, with a little shelter, they may be preserved in full growth, even in hard frost.

CALLAO, a sea-port of Peru, and the port of Lima, is at the mouth of the river of this latter name, and built on a low flat point of land, strongly fortified. Its road, which is the best of Peru, affords good anchorage all over it, is shel- tered by many desert islands, and protected by several batteries. The frequency of earthquakes here, have caused the houses to be built of slight materials, and they make altogether, says Mr. Stephenson, ' a sorry appearance.' They are generally about twenty feet high, with mud walls, flat roofs, and divided into two stories ; the under one forms a row of small shops open in front, and the upper one an uncouth corridor. About a quarter of a mile from the landing place is the draw-bridge, over a dry

foss, and an en- trance under an arched gateway to the castle, the Real Felipe. The former city of Callao stood at a short distance to the south of this town Ulloa describes the memorable scene of the earthquake which swallowed up above 3000 souls here in 1746. ‘ The sea,’ says he, ‘ receding to a considerable distance from the shore, re- turned in mountainous waves, foaming with the violence of the agitation, and suddenly turned Callao and the neighbouring country into a sea. This was not, however, totally performed by the first swell of the waves, for the sea retiring fur- ther, returned with still more impetuosity, the stupendous water covering both the walls and other buildings of the place, so that whatever had escaped the first, was now totally over- whelmed by these terrible mountains of waves, and nothing remained except a piece of the wall of the port of Santa Cruz, as a memorial of this terrible devastation. There were then twenty- three ships and vessels, great and small, in the harbour, of which nineteen were absolutely sunk, and the other four, amongst which was a frigate called St. Fermus, carried by the force of the waves to a great distance up the country. This terrible inundation extended to other parts on the coast, as Cavallos and Guanape. At Callao, where the number of inhabitants amounted to about 4000, two hundred only escaped ; and twenty-two of these by means of the above- mentioned fragment of a wall. On a calm day the ruins may yet be seen under water at that part of the bay called the mar braba, rough sea, and on the beach a sentry is constantly placed,

according to a recent traveller, for the purpose of taking charge of any treasure that may be washed ashore ; a circumstance that often hap- pens. An old mulatto, one of the three or four who were saved, told Mr. Stephenson that he was sitting on some timber which had been landed from a ship in the bay, at the time that the great wave of the sea rolled in and buried the city, and that he was carried clinging to the log, near to the chapel, a distance of three miles. Callao is six miles distant from Lima.

CALLA-SUJUNG, or CALLA-SUSUNG, a town of Asia, in the island of Bouton, seated about a mile from the sea, on the top of a small hill sur- rounded with cocoa-nut trees.

CALLE, in ancient geography, a town of Hi- gher Spain, seated on an eminence, which hung over the river Durius. It is now called Oporto.

CAL’LET, v. & n. Fr. calotte ; a coif or naif kerchief for a woman ; also a little light cap, or night-cap worn under a hat. Perhaps the distinguishing badge at one period of lewd and infamous women, for of such persons the word is descriptive. Skinner applies it to an impu- dent woman ; Dr. Johnson to a trull.

The firste parte of this name we have yfounde : Let us ethimologise the secounde : As the firste findir mente, I am right sure, Cfor Calot; for Of, we havin 0; And L for leude ; and I) for Demenure : The craft of the enventour ye male se, lo ! How one name signifieth personis two, ••• A colde olde knave, cokcold himself wenying ; And eke a calot of Leude Demyning.

Chaucer'i Remedie of Love.

He called her whore : a beggar in his drink Could not have laid such terms upon his cutlet.

Shakspeare.

lAGO. What name fair lady ?

Dts. Such as, she says, my lord did say I was.

EMIL. He called her whore ; a beggar in his drink, Could not have laid such terms upon his collet.

I AGO. Why did he so?

DES. I do not know, I am sure, I am none such. Shakspeare. Othello.

CALL EVA, in ancient British geography, a town of the Atrebates ; now called VVallingford. See ATREBATES.

CALL1AS, the cousin german of Aristides the Just, but of a character the very opposite of that disinterested hero. At the battle of Marathon, Callias being a torch-bearer, and in virtue of his office, having a fillet on his head, one of the Per- sians took him for a king, and, falling down at his feet, discovered to him a vast quantity of gold hid in a well. Callias not only seized it for his own use, but had the cruelty to kill the poor man, that he might not mention it to others ; by which infamous action he entailed on his posterity the name of Laccopluti, or enriched by the well. The only good action recorded of him is his ge- nerosity in relieving his brother-in-law Cimon from prison, by paying the heavy fine to which he was so unjustly and ungratefully subjected by the Athenians. See ATTICA.

CALLIBLEPHARA, from icaXXoc, beauty, and /3\••0apov, eye-lid; in ancient medical writers, a name given to certain compositions intended to make the eye-lids beautiful.

CALLICARPA. See JOUNSONIA.

GAL

CALLICO. See CALICO and COTTON.

CALLICRATES, an ancient sculptor, who is said to have engraved some of Homer's verses on a grain of millet, made an ivory chariot that might be concealed under the wing of a fly, and an ant of ivory, in which all the members were distinct. He flourished about A.A.C. 472.

CALLICHTHYS, in ichthyology, a species of silurus, having the second dorsal fin one-rayed ; a double row of scales on the sides ; cirri four.

CALLIGONUM, in botany, a genus of the digynia order, belonging to the polyandria class of plants; and in the natural method ranking under the twelfth order, holoracese. The calyx is pentaphyllous, without petals or styles ; the fruit hispid and monospermous. There are three species, natives of Ararat, Barbary, and Russia.

CALLIGRAPHY, the art of small beautiful writing. Callicrates is said to have written an elegant distich on a sesamum seed. Peter Bale, in 1575, wrote the Lord's prayer, creed, ten com- mandments, and two short prayers in Latin, with his own name, motto, day of the month, year of the Lord, and reign of the queen, in the compass of a single penny, inchased in a ring and border of gold, and covered with a crystal, all so accu- rately written as to be very legible with a mag- nifying glass.

CALLIMACHUS, a celebrated architect, painter, and sculptor, born at Corinth, who having seen by accident a vessel about which the plant called acanthus had raised its leaves, con- ceived the idea of forming the Corinthian capital. See ACANTHUS. He flourished about A. A.C. 540.

CALLIMACHUS, a celebrated Greek poet, a native of Cyrene, in Lybia, flourished under Ptolemy Philadelphus, and Ptolemy Euergetes, kings of Egypt, about A. C. 280. He passed, according to Quintilian, for the prince of the Greek elegiac poets. His style is elegant, deli- cate, and nervous. He wrote a great number of small poems, of which we have only some hymns and epigrams remaining. Catullus has closely imitated him, and translated into Latin verse his small poem on the locks of Berenice. Calli- machus was also a grammarian and a learned critic. There is an edition of his remains, by Messrs. Le Fevre, 4to. ; and another in 2 vols. 8vo., with notes by Spanheim, Graevius, Bent- ley, &c. Dr. Tytler of Brechin has translated his poems into English verse.

CALLIMUS, or CALAINUS, in physiology, a stony substance mentioned by

Pliny, found in the cavity of the aetites, or eagle stone. It fills the hollow of the aetites, much as the yoke does the white of an egg. See -SvriTES.

CALLINICUS of Heliopolis, inventor of a composition to burn in the water, called the Greek fire.

CALLIONYMUS, the dragonet, in ichthy- ology, a genus of fishes belonging to the order of jugulares. The upper lip is doubled up ; the eyes are very near each other ; the membrane of the gills has six radii ; breathing aperture in the neck ; the operculum is shut ; the body is naked ; and the ventral fins are at a great distance from each other. There are seven species ; the prin- cipal are, C, dracunculus, with the first bone of

the back fin shorter than its body, which is of a spotted yellow color. It frequents the shores of Genoa and Rome. C. Indicus, has a smooth head, with longitudinal wrinkles ; the lower jaw is a little longer than the upper one ; the tongue obtuse and emarginated ; the apertures of the gills are large : it is of a livid color, and the anus is in the middle of the body. It is a native of Asia. C. lyra, with the first bone of the back fin as long as the body of the animal, and a cirrhus at the anus. It is found as far north as Norway and Spitzbergen, and as far south as the Mediterranean Sea. It is not unfrequent on the Scarborough coast, where it is taken by the hook in thirty or forty fathoms water. It is often found in the stomach of the cod.

CALLIOPE, from icaXXoc, beauty, and wˆ, voice, in the Pagan mythology, the muse who presides over eloquence and heroic poetry. She was fabled to have a very sweet voice, and was reckoned the first of the nine sisters. Horace styles her Regina :

Descende caelo, et die age tibia,

Regina, longum, Calliope, melos,

Seu voce mine mavis acuta,

Seu fidihus citharave Phoebi. Her distinguishing office was to record the wor- thy actions ot the living; arid, accordingly, she is represented with tablets in her hand.

CALLIOPE, in entomology, a species of papilio, the wings of which are yellow ; the anterior pair three streaks ; the posterior ones, three bands.

CAL'LIPERS, 7i. i. Of this word I know not the etymology ; nor does any thing more pro- bably occur, than that, perhaps, the word is corrupted from clippers, instruments with which any thing is clipped, enclosed or embraced. Compasses with bowed shanks.

*Callipers measure the distance of any round, cy- lindrick, conical body; so that when workmen use them, they open the two points to their described ***width, and turn so much stuff off the intended place, till the two points of the callipers fit just over their work. Moron's Mechanical Exercises,*

CALLIPERS. See CALIBER COMPASSES.

CALLIPOLIS, in ancient geography, the name of several cities of antiquity, particularly one upon the Hellespont, next the Propontis, and opposite to Lampsacus in Asia; now called Gallipoli.

CALLIPIC PERI'OD. See CALIPPIC.

CALLlRRHOE, in ancient geography, called also Enneacrunos, from its nine springs, a foun- tain not far from Athens, greatly adorned by Pisistratus, where there were several wells, but this was only the running spring. It was also the name of a very fine spring of hot water be- yond Jordan, near the Dead Sea, into which it runs.

CALLISIA, in botany, a genus of the mono- gynia order, in the triandria class of plants ; in the natural method of the sixth order, ensatae : CAL. triphyllous ; the petals are three ; antherae double ; the capsule is bilocular. There is but one species, a native of America and the West Indies.

CALLISTHENES, the philosopher, disciple, and relation of Aristotle, by whose desire he accompanied Alexander the Great in his expeditions : but proving too severe a censurer

of that hero's conduct, he was put by him to the torture, on suspicion of a treasonable conspira- cy, and died under it, A. A. C. 328.

CALLISTIA, in Grecian antiquity, a Les- bian festival? wherein the women presented them- selves in Juno's temple, and the prize was assigned to the fairest. There was another of these contentions at the festival of Ceres Eleu- sinia, among the Parrhasians ; and another among the Eleans, where the most beautiful man was presented with a complete suit of armour, which he consecrated to Minerva ; to whose temple he walked in procession, accom- panied by his friends, who adorned him with ribands, and crowned him with a garland of myrtle.

CALLTSTO, in fabulous history, the daughter of Lycaon, king of Arcadia, and one of Diana's nymphs. Jupiter, falling in love with her, assumed the form of Diana, and in due time she was delivered of Areas. Juno, enraged, turned her into a she bear. Meantime Areas grew up, and became a famous hunter, when he was fif- teen years of age; but as he was just going to shoot his mother, not knowing her in her savage form, Jupiter interposed to prevent the parricide, and translated them both to the stars, where they . became the constellations, called the greater and lesser bear. ••• Ovid. Metam. Lib. ii. Fab. 5.

CALLISTRATUS, an excellent Athenian orator, who was banished for having obtained too great an authority in the government. De- mosthenes was so struck with the force of his eloquence, and the glory that it procured him, that he abandoned philosophy, and resolved thenceforward to apply himself to oratory.

CALLISTUS (John Andronicus), was a native of Thessalonica, and professor of peripa- tetic philosophy in Constantinople, where he was much esteemed for his learning. When that city was taken he fled to Rome, where he read lectures on Aristotle, and afterwards moved to Florence, where he had a vast concourse of dis- ciples : among whom were Angel us Politianus, Janus Pannonius, George Valla, and others. Towards the end of his life he removed to France, where he died, in an advanced age, with the character of a learned and worthy man. He left some Greek MSS., particularly one, in the public library at Paris, entitled A Monody on the Miseries of Constantinople.

CALLITRICHE, or STAR-GRASS, in botany, a genus of the digynia order, in the monandria class of plants ; natural order twelfth, holora- ceae. It has no calyx, but two petals, and the capsule is bilocular and tetraspermous. The species are all annuals.

CALLOT (James), a celebrated engraver, born at Nancy, in 1593. In his youth he tra- velled to Rome to learn designing and engrav- ing, and thence to Florence, where the grand duke took him into his service. . After the death of that prince, Callot returned home, when Henry, duke of Lorraine, settled a considerable pension upon him. His leputation soon spread- ing all over Europe, the infanta of the Nether- lands drew him to Brussels, where he engraved the siege of Breda. Louis XIII. made him de- sign the sieges of Rochelle and Rhe. Having

taken Nancy in 1631, he proposed that Callot should represent the new conquest ; but Callot begged to be excused; and some courtiers re- solving to oblige him to do it, he answered,, that he would sooner cut off his thumb, than do any thing against the honor of his prfnce and country. This

excuse the king accepted ; and said, that the duke of Lorraine was happy in having such faithful and affectionate subjects. Callot followed his business so closely, that, though he died at forty-three years of age, he is said to have left of his own execution 1500 pieces. The following are a few of the principal : 1. The Murder of the Innocents. 2. The Marriage of Cana in Galilee. 3. The Passion of Christ, on twelve very small upright plates ; first impres- sions very scarce. 4. St. John in the island of Patmos. 5. The Temptation of St. Anthony. 6. The Punishments; the execution of several criminals. 7. The Miseries of War; in eigh- teen small plates. 8. The great Fair of Florence. 9. The little Fair, or Players at Bowls. This is one of the scarcest of Callot's prints ; and it is very difficult to meet with a fine impression of it

CALLIXTUS III. a Spaniard, named Al- phonso de Borgia, elected Pope in 1455, and died in 1458, after attempting in vain to stir up the princes of Europe against the Turks. Medals were struck in ho- nor of this pope, bearing, as in the annexed figure, his effigy, and the inscription, CALISTUS III. PONT. MAX.

CALLOSA, in entomology, a small Italian species of apis, the color of which is a dark shin- ing blue, with a white lip, and white callous dots on each side of the thorax, in front of the wings.

CAL'LOUS, adj.~\ Lat. callus; Fr. callo- CAL'LOUSNESS, SsiYe. Properly that hard- CALLOS'ITY. j ness of the foot induced by walking. Indurated; hardened; inexorable; applied to wounds or the edges of ulcers when in an insensible state ; to the mind that is slug- gish and misapprehensive ; to a hard unfeeling heart, dead to the sympathies and tendernesses of human nature.

Licentiousness has so long passed for sharpness of ???wit, and greatness of mind, that the conscience is grawn callous. L' Estrange.

The wretch is drenched too deep ; His soul is stupid, and his heart asleep ; Fattened in vice, so callous and so gross, He sins, and sees not, senseless of his loss.

Dry den.

The oftenerwe use the organs of touching, the more of these scales are formed, and the skin becomes the thicker, and so a callousness grows upon it.

Cheyne.

In progress of time, the ulcers became sinuous and callous, with induration

of the glands. Wiseman.

The surgeon ought to vary the diet of his patient, as he finds the fibres loosen too much, are too flaccid, and produce funguses ; or as they harden, and pro- duce callosities; in the first case, wine aud spirituous liquors are useful, in the last hurtful.

Arbulhrwt on Diet

f CAL

If they let go their hope of everlasting life with ###willingness, and entertain final perdition with exulta- tion, ought they not to be esteemed destitute of com- mon sense, and abandoned to a callousness and numb- ness of soul. Bentley.

CAL'LOW. Sax. calu; Swed. kahl, skallig, from Lat. ca/vt##, unfledged ; naked. By Lye it is applied to the smoothness and nakedness of unfledged birds ; by Drayton to the smoothness or softness of the down; and by Fletcher (Met.) to a newly fledged wing. The ' soft and callow down ' of the elegant Drayton, is clearly in allusion to the natural state of the wing in young birds; in which at the same time the down is beautifully ' soft.'

And through his soft and callow down doth flow As loth so soon hia presence to forego.

The Owl.

Thy love no time began, no time decays,

But still increaseth with decreasing days : Where then may we begin, where may we end thy praise ?

My calluw wing, that newly left the nest,

How can it make so high a towering flight ?

O depth without a depth ! in humble breast,

With praises I admire so wondrous height.

Fletcher's Purple Island, can. 1.

Bursting with kindly rapture, forth disclosed Their callow young. Milton.

Then as an eagle, who with pious care Was beating widely on the wing for prey, To her now silent airy does repair. And finds her callow infants

forced away.

Dry (fen.

How in small flights they know to try their young, And teach the callow child her parent's song. Prior.

So speeds the wily fox, all armed with fear, Who lately filched the turkey's callow care. Gay.

And oft the wily dwarf in ambush lay, And often made the callow young his prey, With slaughtered victims heaped his board, and smiled To avenge the parents' trespass on the child. Beat tie.

CALLUS, or CALLOSITY, in a general sense, is any cutaneous, corneous, or osseous hardness, natural or preternatural ; but most frequently it signifies the callus generated about the edges of a fracture, provided by nature to preserve the fractured bones, in the situation in which they are replaced by the surgeon. A callus, in this sense, is originally a sort of jelly, or liquid viscous matter, that issues from the small arteries and bony fibres of the divided parts, and fills up the cavities be- tween them. It first appears of a cartilaginous substance ; but at length becomes quite bony, and joins the fractured part so firmly together, that the limb will often make greater resistance to any external violence with this part, than with those which were never broken. It is not always in the power of surgeons to restrain or command its growth ; for sometimes a broken bone, for want of due action in its vessels, will remain several months disunited ; and, at other times, the callus becomes so exuberant as to cause an un- sightly enlargement of the bone, around the broken extremities. That preternatural hard and thick- ened state of the skin which constitutes the disease named a corn, is also termed callus, and to the , lamina of horny cuticle which forms on the hands of hard-working people, the same name is applied. Surgeons apply the term callus to the edges of old ulcers, when they become thickened and iu-

sensible. This kind of induration is unfavorable to a cure, and should be removed by the knife or caustic, if it cannot be softened by emollient poultices, &c.

CALM', v. adj. & n.-\ Fr. calme ; Ital. Sp. CALM'LY, ' Port, calrna, ˆoXaw ; It.

CALM'NESS, i cato, signify to lower ;

CALMY', adj. J allay ; abate ; but pos-

sibly Lat. quietum, quietillum, quillum, tranquil- lum, may have produced calm : quiet ; still ; easy ; peaceable ; fair ; gentle ; unmoved. To calm and to becalm differ in some degree ; to calm is to stop motion, and to becalm is to withhold from motion.

So shall the sea be calm unto us. Jonah.

And now they nigh approached to the sted, Where as those mermaides dwelt : it was a still And calmy bay, on one side sheltered With the broad shadow of an hoary hill.

Faerie Queene.

It seemeth most agreeable to reason, that the waters rather stood in a quiet calm, than that they moved with any raging or overbearing violence.

Raleigh. Sir, 'tis fit

You have strong party, or defend yourself By calmness, or by absence, all's in anger.

Shahspeare ,

I see thou art implacable, more deaf To prayers than winds or seas ; yet winds to seas Are reconciled at length, and sea to shore ; Thy anger unappeasable still rages Eternal tempest, never to be calmed. Milton.

Angling was, after tedious study, a rest to his mind, a cheererof his spirits, a di verier of sadness, a calmer of unquiet thoughts, a moderator of passions, a procurer of contentedness. Walton.

But against that thou sittest afloat, Like Venus in her pearly boat j The halcyons calming all that's nigh, Betwixt the air and water fly. Marvell.

O help ! O help ! I see it faint And dye as calmly as a saint. Id

Much him the honour of his ancient race Inspired, nor would he his own deeds deface, And secret joy in his calm soul does rise, That Monk looks on to see how Douglas dies. Id. Great and strange calms usually portend the most violent storms ; and therefore, since storms and calms do always follow one another, certainly, of the two, it is much more eligible to have the storm first, and the calm afterwards : since a calm before a storm is com- monly a peace of a man's own making ; but a calm after a storm, a peace of God's. South.

His curled brows Frown on the gentle stream, which calmly flows.

Denham. I will bear it

With all the tender sufferance of a friend. As calmly as the wounded patient bears The artist's hand that ministers his cure.

Otway's Orphan.

I beg the grace,

You would lay by those terrours of your face ; Till calmness to your eyes you first restore, I am afraid, and I can beg no more. Dryden.

Jesus, whose bare word checked the sea, as much

exerts himself in silencing the tempests, and calming

the intestine storms, within our breasts.

Decay of Piety. The queen her speech with calm attention hears,

Her eyes restrain the silver-streaming tears. 2'ojie.

CAL 45

He willed to stay,

The sacred rites and hecatombs to pay, And calm Minerva's wrath. Id.

Religion's cheerful flame her bosom warms, Calm all her hours, and brightens all her charms.*

CAL

Gay.

Gradual sinks the breeae Into a perfect calm ; that not a breath Is heard to quiver through the closing woods, Or rustling turn the many-twinkling leaves Of aspin tall. Thomson's Seasons.

Affliction is the wholesome soil of virtue, Where patience, honour, sweet humanity, Calm fortitude take root, and strongly flourish.

Mallet and Thomson's Alfred. Hail awful scenes, that cairn the troubled breast, And woo the weary to profound repose j Can passion's wildest uproar lay to rest, And whisper comfort to the man of woei ? Seattle,

Clear as its current, glide the sauntering hours With a culm languor, which, though to the eye Idlesse it seem, hath its morality. Byron.

CALM, the state of rest which appears in the air and sea when there is no wind stirring. A calm is more dreaded by a sea-faring man than a storm, if he has a strong ship and sea room ; for under the line excessive heat sometimes produces such dead calms, that ships are obliged to stay two or three months without being able to stir. Two opposite winds will sometimes produce a calm. This frequently occurs in the Gulf of Mexico, at no great distance from the shore, where some gust or land wind will so poise the general easterly wind, as to produce a perfect calm. Calms are never so great on the Ocean as on the Mediterranean, as the flux and reflux of the former keep the water in a continual agita- tion, even where there is no wind ; whereas there being no tides in the latter, the calm is sometimes so dead, that the water is as clear as a looking- glass ; but such calms are almost constant pre- sages of an approaching storm. On the coasts about Smyrna, a long calm is reputed a prognos- tic of an earthquake. It is not uncommon for vessels to be becalmed, in the road of the constant Levantine winds, in places where they ride near the land. Thus between the two capes of Car- tooche toward the main, and Cape Antonia in Cuba, the sea is narrow, and there is often a calm produced by some gust of a land wind that poises the Levantine wind, and renders the whole perfectly still for two or three days. In this case the current that runs here is of use to the vessels, it it sets right ; when it sets easterly, a ship will have a passage in three or four days to the Ha- vannah ; but if otherwise, it is often a fortnight or three weeks' sail, the ship being embayed in the Gulf of Mexico. When the weather is per- fectly calm, the sailors try which way the current sets, by sending out a boat, which will ride mo- tionless though there is no bottom to be found, as well as if secured by the strongest anchor. Their method is this : they row the boat to a little dis- tance from the ship, and then throw over their plummet, which is about forty pounds weight ; they let this sink to about 200 fathoms ; and then, though it never reaches the bottom, the boat will turn head against the current, and ride as firmly as possible.

CALM LATITUDES, in sea language, are situated

in the Atlantic Ocean, between the tropic of Can- cer and the latitude of 29□□ north, or they denote the space that lies between the trade and variable winds, because it is frequently subject to calms of long duration.

CALMAR, a sea-port of Sweden, in the pro- vince of Smaland, 150 miles south-west of Stock- holm, and forty from Carlscroon. It is divided into two towns, the old and the new. The new town is built a little way from the other, and is large and handsome.

CALMET (Augustine), one of the most learned and laborious writers of the eighteenth century, was born at Mesnil le Horgue, in France, in 1672, and took the habit of the Benedictines in 1688. Having passed through the usual course of philosophy and theology, he was employed in teaching the younger part of the community, till, in 1704, he settled as sub-prior in the abbey of Munster, in Alsace, where he presided over an academy of eight or ten monks devoted to the study of the Scriptures. There he composed his commentaries on the Scriptures, published in French from 1707 to 1716. In 1718 he was appointed to the abbacy of St. Leopold in Nancy ; and in 1728 he was elected abbot of Senones. The title of a bishop in partibus was offered him, but he declined accepting it. He wrote, 1. Commentaire Litteral surtous lesLivres de 1'An- cien et du Nouveau Testament, 23 vols. 4to. 1707-1716, reprinted in 26 vols. 4to., and also in 9 vols. fol. ; abridged in 14 vols. 4to. by Rondet, and a new edition of the abridgment in 17 vols. 4to. Avignon, 1767-73. 2. The Dissertations and Prefaces, published separately, 2 vols. 4to. Paris, 1720. 3. Histoire de 1'Ancien et du Nouveau Testament, intended as an introduction to Fleury's Ecclesiastical History, 2 and 4 vols. 4to., and 5 and 7 vols. 12mo, 4. Dictionnaire Historique, Critique, et Chronologique, de la Bible, 4 vols. fol. Paris, 1730, translated into English by Samuel D'Oyly, 3 vols. fol. London, 1732, and a new edition in 4to. 1793, &c. 5. Histoire Ecclesiastique et Civile de la Lorraine, 3 vols. fol. reprinted in 5 vols. fol. 1745. 6. Bibliotheque des Ecrivains de Lorraine, fol. 1751. 7. Histoire Universelle Sacree et Profane. 15 vols. 4to. &c.

CALMUCKS. See KALMUCKS.

CALNE, a town of Wiltshire, seated on the river of the same name. It had a palace of the West Saxon kings. Its chief manufacture is cloth. It sends one member to parliament ; and lies twelve miles west of Marlborough, and eighty-eight west of London.

CALNE A, in ancient geography, a city in the land of Shinar, built by Nimrod, and the last city mentioned (Gen. x. 10.) as belonging to his kingdom. It is believed to be the same with Calno mentioned in Isaiah x. 9, and with Can- neh in Ezekiel xxvii. 23. It is observed that it must have been situated in Mesopotamia, since these prophets join it with Haran, Eden, Assyria, and Chilmad, which carried on a trade with Tyre. It is said by Chaldee interpreters, as well as by Eusebius and Jerome, to be the same with Ctesiphon, upon the Tigris, about three miles dis- tant from Seleucia, and that for some time it was the capital city of the Parthiaus.

CALODENDRUM, in botany, a genus of the class pentandria, order digynia. The essen- tial characters are CAL. five-parted : COR. petals five ; nectaries five : PER. capsule five-celled and five-angled ; but the corolla, nectary, and sta- mens so often differ in the number of their parts, that the capsule may be said to be the only es- sential. There is but one species : a native of the Cape.

ALOGERI, KoXoyspoi, in church history, mo s of the Greek church, divided into three degrees ; viz. the archari, or novices ; the micro- chemi, or the ordinary professed ; and the mega- lochemi, or more perfect ; they are likewise di- vided into cacnobites, anchorites, and recluses. The caenobites are employed in reciting their offices from midnight to sun-set ; they are ob- liged to make three genuflexions at the door of the choir, and returning, to bow to the right and to the left, to their brethren. The anchorites re- tire from the world, and live in hermitages in the neighbourhood of the monasteries ; they cultivate a little spot of ground, and never go out but on Sundays and holidays, to perform their devotions at the next monastery. The recluses shut them- selves up in grottoes and caverns on the tops of mountains, which they never leave, abandoning themselves entirely to Providence : they live on the alms sent them by the neighbouring monas- teries. Some reckon the Caloyers a branch of the Calogeri.

CALOMEL, chloride of mercury, frequently called mild muriate, or dulcified sublimate of mercury.

CALOPHYLLUM, in botany, a genus of the monogynia order, and polyandria class of plants : COR. tetrapetalous : CAL. tetraphyllous and color- ed ; the fruit a globose plum. There are two species, both lofty trees, indigenous to India ; from one of which, C. inophyllum, upon inci- sion of its bark, exudes the resin called tacamahac.

CALOPUS, in zoology, a genus of the class insecta, order coleoptera. Antennas filiform ; feelers four, the fore-ones clavate, the hind-ones filiform : thorax gibbous ; wing-cases linear. Three species; two European, one American.

CALORIMETER, an instrument first con- trived by Lavoisier and Laplace, to measure the heat given out by a body in cooling. It consists of three vessels, placed one within the other, so as to leave two cavities between them ; a frame of iron net-work being suspended in the middle of the innermost vessel, to hold the heated body. The two exterior concentric interstices are filled with bruised ice, by the fusion of which the heat given out by the central hot body is measured. The water runs off through the bottom, which terminates in the shape of a funnel, with a stop- cock.

CALOTE, a species of skull-cap worn under the hat by officers and soldiers of the French cavalry, and which is proof against a sabre or a sword. Calotes are usually made of iron, or dressed leather. Those delivered out to the troops are made of iron.

CALOTE, a term used in the French service for the lieutenant's court, at which the first lieute- nant of the regiment, for the time being, always presided. It look cognizance, as a court of ho-

nor, of all disputes in which the laws of honor or of good breeding had been violated. Our re- gimental committees resemble the calote, espe- cially with regard to the expulsion of an officer, or the sending of him to Coventry.

CALOTES, in zoology, a species of lacerta, with a round long tail ; the fore part of the back, and hinder part of the head being dentated Found in the island of Ceylon.

CALOTTE', n. s. French. See CALLET.

CALO'YERS, n. s. KoXoC. Monks of the Greek church.

Temperate as caloyers in their secret cells.

Madden on Boulter.

CALOYERS are of the order of St. Basil. A numerous body of them live on Mount Athos, and never marry, though others of that church do. They abstain from flesh, and fare very hardly, their ordinary meals being olives pickled when they are ripe. They are about 6000 in all, and inhabit several parts of the mountain. They are so respected that the Turks themselves will

often send them alms. These monks are not idle, but labor with the axe, spade, and sickle, dress- ing themselves like hermits. Formerly they had fine Greek MSS., but they are now become so illiterate, that they can scarcely read or write. They live to a great age. See CALOGERI.

CALPE, a mountain of Andalusia in Spain ; at the foot of which, towards the sea, stands Gibraltar. It is half a league in height towards the land, and so steep that there is no approach- ing it on that side. It was anciently reckoned one of the pillars of Hercules ; Abyla being the other.

CALPHURNIA, a female orator of ancient Rome, who pleaded her own causes before the senate ; but is said to have proved so trouble- some, that they made a law, that thenceforward no woman should be allowed to plead.

CALPHURNIUS (Titus), a Latin poet of Sicily, who lived under the emperor Carus and his son. Seven of his eclogues are extant.

CALTHA, in botany, marsh marigold, a genus of the monogynia order, in the polyandria class of plants, No calyx; five petals; no nectaria; capsules many, and polyspermous. There are but two species known; viz. 1. C. palustris, with stem erect; found in our own marshes : 2. C. natans, with procumbent floating stem ; a na- tive of Siberia. The flowers gathered before they expand, and preserved in salted vinegar, are a good substitute for capers. The juice of the ‘ petals, boiled with alum, stains paper yellow. Goats and sheep eat this plant; horses, cows, and swine, refuse it.

CALTROP, in botany. See TRIBULUS.

CALTROPS, n. s. Sax. colrnaeppe ; an in- strument made with three spikes, so that which way soever it falls to the ground, one of them points upright, to wound horses feet. ††† A plant common in France, Spain, and Italy, where it grows among corn, and is very troublesome ; for the fruit being armed with strong prickles, run into the feet of the cattle. This is certainly the plant mentioned in Virgil’s Georgics, under the name of tribulus.

The ground about was thick sown with caltrops, which very much incommoded the shoeless Moors.

*Dr. Adduon’i Account of Tangier *,*

CALVIN.

CALTROPS, in military affairs, an instru- ment with four iron points,

disposed in an angu- lar form, so that three of them are always on the ground, and the fourth pointing upwards. They are scattered over the ground where the enemy's cavalry is to pass, in order to embarrass them.

CALVA, or CALVARIA, from calvus, bald; the scalp or upper part of the cranium, compre- hending all above the eyes, temples, ears, and occipital eminence.

CALVART (Denis), a celebrated painter, born at Antwerp in 1552. He studied painting under Fontana and Sabbatini. He opened a school at Bologna, which became celebrated ; and from which proceeded Guido, Albani, and other great masters. Calvart was well skilled in architecture, perspective, and anatomy, which he considered as necessary to a painter, and taught to his pupils. His principal works are at Bo- logna, Rome, and Reggio. He died at Bologna, in 1619.

CALVARY, from calvaria, i. e. the place of a skull, called also Golgotha, which signifies the same, a hill cf Judea, west of Jerusalem, on the outside of the city, where our Saviocrwas cruci- fied, and where malefactors were commonly executed. Some derive the name from the re- semblance of the hill to a man's head; others from its baldness, as it was said to be destitute of verdure ; but it is more probable, that the hill derived its name from the many skulls of those executed, being carelessly tossed about upon it. Tradition says Adam was buried upon it. The British Princess Helena, the mother of Constan- tine the Great, about A. D. 330, erected a magnifi- cent church over our Saviour's sepulchre, near it, which is still visited by superstitious pilgrims.

CALVARY, in heraldry, a cross, so called be- cause it resembles the cross on which our Saviour suffered. It is always set upon steps.

CALVARY, in the customs of the Roman Ca- tholic church, is a term sometimes used for a kind of chapel devotion, raised on a hillock near a city ; in memory of the place where Jesus Christ was crucified near Jerusalem. Such was the Calvary of St. Valerian, near Paris : it was accompained with several little chapels, in each of which was represented in sculpture one of the mysteries of the passion. The Roman Catholics vindicate these pictorial exhibitions of the mys- teries of religion, as justifiable upon the same principle as any other mode of bringing the facts memorialised upon the eye of the mind ; and as particularly useful to those classes of society whose inclinations or avocations will per- mit them to - ead or think but little.

CALVERT, a county of the United States, in the Western Shore of Maryland ; bounded on the east by the Chesapeake ; on the north by Anne-

Arundel county; and on the south and west by the river Patuxent. It is thirty-three miles and a half long from the mouth of the Patuxent to Lion's Creek, and nineteen and a half broad. The surface is hilly and the soil sandy ; but it produces good crops of Indian corn, though the tobacco is of an inferior quality.

CAI.VERT, George, afterwards Lord Baltimore, was born at Kipliu, in Yorkshire, about 1582,

and educated at Oxford, where he took the degree of B. A. He was made secretary to Sir Robert Cecil ; he was afterwards knighted, and ia 1618 appointed one of the principal secre- taries of state. But after he had enjoyed that office about five years, he resigned it, telling king James, that he was become a Roman Catholic, ××× that he must either be wanting to his trust, or violate his conscience in discharging his office. This ingenuous confession so affected the king, that he continued him privy counsellor all his reign, and created him baron Baltimore. He afterwards obtained a grant of a country on the north part of Virginia from Charles I. who called it Maryland, in honor of his queen ; but he died in April, 1632, aged 50, before the patent was made out. It was, however, filled up to his son Cecil, lord Baltimore ; and bears date June 20th, 1632. It was held from the crown as part of the manor of Windsor, on one singular condition, viz. to present two Indian arrows yearly, on Easter Tuesday, at the castle, where they are kept and shown to visitors. His lord- ship wrote, 1. A Latin poem on the death of Sir Henry Upton. 2. Speeches in Parliament. 3. Various Letters of State. 4. The Answer of Tom Tell-Truth. 5. The Practice of Princes. And, 6. The Lamentation of the Kirk.

CALVI (Lazzaro), was born at Genoa, and was one of the scholars of Perino del Vaga, as was his brother Panteolo, with whom he worked. In the Palavicini palace, they painted the cele- brated continence of Scipio. Envy worked so strongly in the breast of Lazzaro, that he had recourse to the foulest arts to avenge himself of those who were his rivals. Among those who fell victims to his unprincipled spirit, was Gia- como Bargone, whom he poisoned ; and against other artists he contrived the basest machinations, in order to effect their ruin. At length he was employed to paint, in connexion with Andrea Semini and Luca Cambiasi, a picture of the birth of John the Baptist ; but though Calvi exercised Ki'S best powers, he fell short of Cambiasi, and Lazzaro, in a fit of mortification, went to sea. He followed that occupation twenty years, and then returned to his original profession, which he practised till his eighty-fifth year. He died in 1606 aged 105.

CALVILLE', n. s. French ; a sort of apple.

CALVIN, or CAUVIX, (John), a celebrated reformer of the sixteenth century, whose religi- ous tenets have given rise to a large and respect- able party among Protestants, called CALVINISTS, (which see), was born at Noyon, a city of Pi- cardy, July 10th, 1509. His father was a cooper, in respectable but not affluent circumstances, and sufficiently esteemed in the neighbourhood to be able to introduce his son into the Montmor family; with the children of which he was edu- cated at his father's expense. He was sent with the children of his patron to the College de la Marche, at Paris, then under the regency of Ma- turin Cordier, and soon became distinguished for his application to study. From the College of La Marche he was removed to that of Mortaign, when he entered upon the pursuit of dialectics and philosophy, under the tuition of a learned Spaniard. In 1529 his father had sufficient in-

terest with the bishop of Noyon to procure the young student a benefice in the cathedral church of that city, and the rectory of Pont L'Eveque, the parish in which he was born. Here, though not ordained, he is said to have preached fre- quently ; but becoming intimate with a protes- tant relative, Pierre Robert Olivetan, author of a French translation of the Scriptures, he felt dissatisfied with his station, and gradually re- solved to quit the Romish communion. His fa- ther, at about the same period, began to apprehend that he could better ensure his advancement in life in the law than in the church. He now, therefore, removed to Orleans, and applied him- self, with his characteristic ardor, to the lectures of Pierre de L'Etoile, a celebrated civilian, after- wards president of the parliament of Paris. Here he received a doctor's degree ; studied the Scriptures as well as the law very closely, and is said by his late night hours to have laid the foundation of a weakness in his stomach, which finally shortened his days. His legal attainments were so universally acknowledged at Orleans, that, in the absence of the professors, he frequently lectured for them before the university. Scaliger says, that at the age of twenty-two he was the most learned man in Europe.

To complete his education for the law, he re- moved for a short time from Orleans to Bourges, where, while attending the lectures of Andrii Alciat, he contracted an intimate acquaintance with Melchiar Wolmar, the Greek professor of the university. In acknowledgment for Wol- mar's instruction in that language, Calvin after- wards dedicated to him his Commentary on the Second Epistle to the Corinthians ; and in this neighbourhood he is said to have been occasion- ally engaged in village preaching.

His father died while he was in his twenty- fourth year, and the circumstance compelled him to close his college life, and, after a short residence at Noyon, to proceed to Paris. In the title page of his first work, a Commentary on Seneca's De Clementia, which he published here in 1533, we first find that slight change in his name, which has been unfairly adverted to. ' In reality,' says Mr. Drelincourt, ' it is very in- considerable, or rather nothing at all : for being to turn Cauvin (his family name) into Latin, if one would give it an air and termination suita- ble to the genius of the language, how can one turn it otherwise than by Calvinus ?' And ' his first work being written in Latin, and he thereby known by the name of Calvinus, if after that, when he wrote in French, he had used any other name but that of Calvin,the work might have been taken for another man's.' The friends of the re- formed religion now heard of his attachment to their system, and induced him to relinquish all secular pursuits. His zeal and sincerity was soon put to the test. Having supplied his friend Nicholas Cop, rector of 1'Acaaemie de Paris, with hints for a speech, in which were some se- vere reflections on popery, the rector, at the in- stigation of the Sorbonne, was summoned before the parliament, and only eluded punishment by withdrawing to Basil. Calvin was also advised to take flight ; and had. scarcely quitted Paris when a warrant was issued for his apprehension,

and his apartments were searched by the bailiff Marin, one of the most relentless persecutors of the age. His papers disclosed a number of the names of the Protestants who were about, it is said, to be proscribed, when the queen of Navarre interposed in their favor, allayed the storm for a time, and even ventured to recal Calvin. Pru- dence, however, dictated his retreat from the eye of the hostile authorities ; and he chose Saint- onge for his place of retirement, where he em- ployed himself in the composition of homilies adapted to the capacities of the common people. He also visited, at this time, the aged Jacques Le Fevre d'Estaples, formerly the tutor of the children of Francis I. who had retired under the protection of the queen of Navarre to Nerac. The worthy old confessor welcomed him heartily^ and predicted his future celebrity as an instru- ment of establishing the true religion. In 1534 Calvin visited Paris, partly with a view to meet the celebrated Michael Servetus, whose opinions respecting the Trinity were now becoming known. It was a journey of some danger, as this year was disgraced by many cruelties inflict- ed on the reformed at Paris ; but Servetus did not appear. The king, it is said, being particularly exasperated at an attack on the mass, which was nailed to the door of the Louvre, went bare- headed with his sons in procession, as an expia- tion of the crime, ordered eighty of the reformers to be burnt alive in the most conspicuous parts of the capital, and declared that if his own sons were to become infected with their detestable heresy, they should suffer the same fate.

Calvin now determined to quit France, which he did ; having first published a treatise, called Psychopannychiam, against the sentiments of those who maintain that the soul sleeps between death and the resurrection. He followed his friend Cop to Basil, where he studied the He- brew language, and brought together the materials of his great work, the Institutions of the Christian Religion. It was designed as an apology for his persecuted brethren; openly avowing their real differences with the Church of Rome, but de- fending them from the imputation of teaching the levelling doctrines of the Anabaptists. The first edition, which it is probable was written both in French and Latin, was published in 1535, in 8vo. being only a rough sketch or outline of what is known at present as this work. The second edition appeared in 1536 at Strasburgh, in folio, and was both larger and more correct than the first. The third edition, still more complete, was printed at the same place in 1543. A fourth edition came out, with considerable im- provements ; and a fifth corrected edition in 4to was printed in 1550 at Geneva, having two in- dexes. In 1558 the Latin and French editions both received the author's final revision.

The doctrinal peculiarities of this work, we are not engaged, as encyclopaedists, to vindicate ; few modern Protestants espouse them all: but the palm of erudite learning, profound Scrip- ture knowledge, and superior logical arrange- ments was universally awarded to its author. Its Latinity has been generally admired, and especially the introductory address to Francis I. Bayle quotes the remarkable testimony of two cele-

brated Catholics in its favor : ••• Scultingius said, 4 In England Calvin's Institutions is almost pre- ferred to the Bible itself. The pretended Eng- lish bishops enjoin all the clergy to get the book almost by heart, never to have it out of their hands, to lay it by them in a conspicuous part of their pulpits ; in a word, to prize it and keep it as carefully as the old Romans are said to have preserved the Sibylline oracles.' Staple- ton says, 'The Institutions of Calvin are so greatly esteemed in England, that the book has been most accurately translated into English, and is even fixed in the parish churches for the people to read. Moreover, in each of the two universities, after the students have finished their circuit in philosophy, as many of them as are designed for the ministry, are lectured first of all in that book.'

Dr. Ileylin, the friend of Laud, and the avowed adversary of Calvinism, gives a similar testimony. Referring to the reign of Elizabeth, ' Predestination, and the points depending there- upon,' says he, ' were

received as the established doctrines of the Church of England. The books of Calvin were the rule by which all men were to square their writings : his only word, like the ipse dixit of Pythagoras, was admitted for the sole canon to which they were to frame and conform their judgments. It was safer for any man in those times to have been looked upon as an heathen or publican, than an Anti-Calvinist.'

When finishing his Institutes, Calvin heard that many parts of Italy had exhibited consider- able symptoms of attachment to the new religion. He hastened, therefore, to the court of the duchess of Ferrara, the accomplished daughter of Louis XII., and here, while he confirmed his distinguished patroness in her Protestant princi- ples, he secured her lasting esteem, and laid the foundation of a future correspondence with her. At this period also he visited and preached in Piedmont: a pillar, eight feet high, commemo- rating his arrival and departure, was lately exist- ing at Aost. Its inscription was ' llanc Calvini fuga erexit anno MDXLI. Religionis constan- tia reparavit anno MDCCXLI.'

Calvin returned from Italy to France, taking with him a younger brother of the name of Anthony, but finding persecution still desolating his native countiy, he once more determined to take up his abode at Basil or Strasburgh : and, being accidentally diverted from the main road by the existing war, arrived at Geneva in August 1536. Here the courageous and decided Farel entreated him to stay for the help of the cause of God : and solemnly warning him, in the name of his Maker and Redeemer, that he would pros- per in nothing if he declined so holy a work, and sought his own repose, he was induced to settle himself at once. The consistory and magistracy, with the consent of the whole city, offered him a ministerial charge in the course of the month ; he was also made professor of iivinity in the academy.

He was at first assailed by various difficulties ; the Anabaptists had obtained some footing in the city, and were to be expelled ; he was accused by one Caroly of Arianism, and it was thought expedient that he should defend himself before VOL. V.

the synod of Berne. This he did to the full satisfaction of that body ; procured in less than a year after his first coining to Geneva the formal renunciation of popery, by the public authori- ties, and proceeded boldly with his colleagues in the reform of the public morals. He thus aroused the enmity of many influential persons ; and an unhappy schism arising between the church of Berne and that of Geneva, as to the mode of celebrating the eucharist, these parties did not fail to inflame it. By the synod of Lau- sanne it was at last decreed that all the churches ought to use unleavened bread at the Lord's sup- per; Calvin and Farel hesitated to

yield obe- dience to this decree : the result was an order from the council of Geneva for these faithful ministers forthwith to leave the town. 'Ah !' said Calvin, ' had I served men, I should have been poorly recompensed ; but I have served a master, who, far from forgetting his tme servants, pays them where he has no obligation.'

Our reformer retired to Strasburgh, where, by the influence of Bucer, he was immediately ap- pointed pastor of a church, and professor of theology. Here he composed his Treatise on the Lord's Supper, and an eloquent reply to Cardinal Sadolet, who endeavoured to recal the Genevese to the Catholic church. He also reclaimed many of the people from the Anabap- tist errors. In 1541 he attended the diet, con- voked to meet at Worms, and afterwards at Ratisbon : and here he was introduced to Me- lancthon, who ever after spoke of him as ' the theologian' of the day.

The same year the Genevese evinced their regret at his absence by publicly voting for his recal : and the inhabitants of Strasburgh, though they finally relinquished him to the entreaties of the council of that city, bestowed on him the freedom of their own, and offered to continue his emoluments after his return to Geneva. This took place in the latter part of the year 1541 ; and his system of ecclesiastical discipline, called the Consistory, was established at Geneva by order of the general council, dated the 20th of November in that year. Shortly after his return, he published a Catechism in Latin and French. ' During a fortnight in each month,' we are told, ' he preached every day ; gave three lectures in theology every week ; assisted at all the delibe- rations of the consistory, and at the meetings of the pastors ; met the congregation every Friday ; instructed the French churches by the frequent advices which they solicited from him ; defend- ed the Reformation against the attacks of its enemies, and particularly those of the French priests ; was forced to repel his numerous an- tagonists, by various books which he composed for that purpose ; and found time to publish several other works, which, by their solidity and depth, are calculated for the instruction of every age.'

In 1543 he composed for the church of Ge- neva a Liturgy, accompanied with Directions for Celebrating the Ordinances of Baptism and the Lord's Supper. His personal and official character were now held in such high esteem in that city, that its entire affairs, civil and eccle- siastical, were moulded by him : and the snares

of secular influence and earthly greatness sur- rounded him on every side. The learned Cas- taiio having endeavoured to disseminate some opinions differing from those of our reformer, on the descent of Christ into hell, was banished from Geneva. A James Grant is said to have been condemned to death in 1547 for impiety, treason, and speaking disrespectfully of Calvin ; and in 1553 drew on the memorable persecution of Servetus by the public authorities.

Previously to this last event, we find him en- eugaged in controversy with the decisions of the council of Trent, in a work called The Antidote: with the divines of Rouen, who had renewed the heresy of Carpocrates on that church, in composing his commentaries in the epistle of St. Paul; and in a correspondence with Luther, Bucer, and all the principal reformers. In 1 548 he was joined in the public affairs by the cele- brated Beza. He also had a long controversy with Jerome Bolzec, a Carmelite friar, who began to teach the sentiments afterwards espoused by Arminius. The celebrated John Knox visited him at about this period. 'Calvin' says Dr. M Crie, * was then in the zenith of his reputa- tion and usefulness, had completed the eccle- siastical establishment of that city ; and, having surmounted the opposition raised by those who envied his authority, or disliked his system of doctrine aiid discipline, was securely seated in the affections of the citizens. His writings were already translated into the different languages of Europe ; and Geneva was thronged with strangers from Germany, France, Poland, Hungary, and even from Spain and Italy, who came to consult him about the advancement of the Reformation, or to find shelter from the persecutions to which they were exposed in their native countries. Calvin was respected by none more than by the Protestants of England ; and, at the desire of archbishop Cranmer, he had imparted to the protector Somerset, and to Edward VI. his ad- vice as to the best method of advancing the Reformation in that kingdom. Knox was af- fectionately received by him as a refugee from England ; and an intimate friendship was soon formed between them, which subsisted until the death of Calvin in 1564. They were nearly of the same age ; and there was a striking simi- larity in their sentiments and in the more pro- minent features of their character. The Ge- nevan Reformer was highly pleased with the piety and talents of Knox, who, in his turn, en- tertained a greater esteem and deference for Calvin than for any other of the Reformers.*

Servetus was a Spanish physician, who had ac- quired a respectable professional character at Vienne ; his works Restitutio Christianismi, De Trinitatis Erroribus ; et in Ptolemeum Com- Tnentarius had also with his heretical pravity established his undoubted claims to considerable learning. It was no palliation of the perse- cuting zeal of Calvin that the Papists had already condemned some of their performances to be burnt by heresy. Calvin instigated the council of Geneva to sieze, imprison, and finally nut

the author to a cruel death.

This disgraceful tale has been amplified by the assqrtion that Calvin wrote to the magistrates of

Vienne to procure the arrest of Servetus, that he had thirsted for years for his blood, &c. There is, perhaps, no clear evidence of this r the fact seems to be that Servetus was passing through Geneva to Naples, with a view to find a retreat from per- secution, when he fell thus unhappily into its fangs. Nor do we know that the matter is much extenuated (excused it never can be) by the fact that Bucer, and even Melancthon, approved of the conduct of our reformer in instigating the sacrifice of Servetus. The plain truth is, that Calvin was seduced by his dangerous worldly influence, to imagine that he could thus serve the cause of his peaceful and benevolent master: and that he in this instance must stand recorded to posterity in the unholy character of a per- secutor unto blood. ' He acted in this case,' say his apologists, ' as he uniformly did, from no party view, or paltry resentments, but from a strong sense of duty, and an ardent love to truth. What he did in it, he did with his characteristic steadiness and zeal : and it is evident, that his chief anxiety was, not to punish Servetus, but to make him retract his error, a design which was frustrated by the obstinacy, the violence, and the impious language, of Servetus himself.' More- over, persecution we are told was the sin of the age. No part of this apology has, we confess, much weight with us. The spirit of persecution to which the reformers at any time lent themselves was in them the more inexcusable, as they had been themselves, and saw their brethren daily, sufferers from this very spirit. It was the sin against which God in the judgments and trials of that age peculiarly warned them ; no admi- ration of what they effected should make us palliate the enormity of their thus manifesting the disposition of him who was ' a destroyer' from the beginning ; and it must have been the pride of the zealot, and the interests of the party being injured, rather than any pure or real love of truth, that ever orompted these bloody deeds: of which in this instance we speak the more freely, because we honor Calvin much.

After this event Calvin's life is chequered with but few matters of public importance. His efforts at promoting a universal Christian discipline at Geneva were often impeded ; and his extensive projects for the establishment of his own views of ecclesiastical government, in other countries, not very successful. He was deeply afflicted by the frequent persecution of his bre- thren in France, and by the disunion among the Protestants of various parts of Europe : the latter he earnestly sought to heal ; and certainly, by his talents and remonstrances, abated the violence of the former.

In February, 1564, this great man became con- scious of his approaching death ; and on the 2d of that month preached his last sermon, and delivered his last lecture in the day. Being visited on tke 10th of March by Beza and several private friends, he spoke of his expected de- parture with great composure and solemnity ; and having been carried to the council on the 27th, he took his leave of them with much affection, declaring that he never more ex- pected to appear in that place. On the 2d of April, though much reduced, he attended the

public services of his church, and received the sacrament from the hands of Beza. On the 28th, all the clergy of the town and neighbourhood being assembled in the room, he gave them a parting address, exhorting them to steadfastness and perseverance, and instancing his own rernaik- able success as an encouragement to their labors. His remaining days were devoted to private duties and meditation. He died with great calmness on the 24th of May.

The works and system of Calvin will ever claim for him a distinguished place in the history of modern Christianity. No writer of the Re- formation made so many converts to his peculiar views ; no one name has designated the religious system of such multitudes. His treatises when all collected in 1560 formed nine volumes folio. For an abstract of his views see below.

CALVINISM, in modern ecclesiastical history, designates certain prominent articles of belief, rather than the entire religious creed of those who avow the system, and it is not strictly the name of a sect, for it is connected with no pe- culiar form of church government or discipline, but prevails among Episcopalians, Presbyterians, Independents, and Methodists. The Calvinistic Baptists are also numerous.

Many writers, with Dr. Evans (Sketch of the Different Denominations of the Christian World), speak of the tenets of Calvinism as, predestina- tion, original sin, particular redemption, irre- sistible grace, and the final perseverance of the people of God : sometimes called by theologians the five points. But the doctrine of original sin is by no means peculiar to the Calvinists. It is, with some modifications, a sentiment held by most protestant sects. This author adds, as the Calvinists differ among themselves in the expli- cation of these tenets, it would be difficult to give a specific account of them. Generally speaking, however, they comprehend the fol- lowing propositions. 1. That God has chosen a certain number in Christ to everlasting glory, before the foundation of the world, according to

his immutable purpose, and of his free grace and love, without the least foresight of faith, good works, or any conditions performed by the creature ; and that the rest of mankind he was pleased to pass by, and ordain them to dishonor and wrath for their sins, to the praise of his vin- dictive justice. 2. That Jesus Christ, by his death and sufferings, made an atonement only for the sins of the elect. 3. That mankind are totally depraved in consequence of the fall ; and, by virtue of Adam's being their public head, the guilt of his sin was imputed, and a corrupt nature conveyed to all his posterity, from which proceed all actual transgressions ; and that by sin we are made subject to death, and all miseries, temporal, spiritual, and eternal. 4. That all whom God has predestined to life, he is pleased, in his appointed time, effectually to call by his word and spirit out of that state of sin and death, in which they are by nature, to grace and salvation by Jesus Christ. And 5. That those whom God has effectually called and sanctified by his spirit shall never finally fall from a state of grace. Some have supposed that the trinity was one of the five points ; but this is a mistake,

since both the Calvinists arid Arminians, who formed the synod of Dort (where this phrase, five points, originated) were on the article of the trinity generally agreed. The most pro- minent feature of this system is, the election of some, and reprobation of others, from all eternity.

Calvin's own system extended to the discipline and government of the Christian church, the na- ture of the Eucharist, and the qualification of those who were entitled to the participation of it. He considered every church as a separate and in- dependent body, invested with the power of legis- lating for itself; and proposed that it should be governed by presbyteries and synods, composed of clergy and laity, without bishops or any cleri- cal subordination; maintaining, that the province of the civil magistrate extended only to its pro- tection and outward accommodation. In order to facilitate a union with the Lutheran church, he acknowledged a real, though spiritual, pre- sence of Christ in the Eucharist; that true Christians were united to the man Christ in this ordinance ; and that divine grace was conferred upon them, and sealed to them, m the celebration of it. The privilege of communion he confined to pious and regenerate believers. Calvinism long subsisted in its most complete exhibition in the city of Geneva ; whence it was propagated into Germany, France, the United Provinces, Scotland, and England. In France it was abolished by the revocation of the edict of Nantz, in 1685. It has has been the prevailing religion in the United Provinces ever since the year 1571 . In Scotland the celebrated John Knox not only established the doctrinal sentiments, but the ce- remonies, rites, and discipline of the Genevan church as nearly as possible.

In England the discipline of that church, if we except the period of the

Commonwealth, never prevailed ; but the degree to which, with propriety, the articles of the established creed may be considered as Calvinistic, has, almost from the period of the Reformation, been a matter of controversy. The majority of the clergy certainly have not in general been Calvinists : but num- bers of respectable and learned individuals among them are and have been so. These have contended that the thirty-nine articles moderately but decidedly assert the peculiarities of their creed. On the other hand, the bishop of Winchester has published a very popular work, entitled A Refu- tation of Calvinism, in which he insists that neither the homilies nor any of the formularies of the church contain any thing in favor of that system.

CALUMBA, the root of the cocculus palmatus. This root is imported from Ceylon, in circular, brown knobs, wrinkled on the outer surface, yel- lowish within, and consisting of woody, and medullary laminae. Its smell is aromatic, its taste pungent, and very bitter. Spirit of wine extracts its virtues in the greatest perfection, its watery infusion being more perishable than that of other bitters. The extract made first by spirit and then by water, and reduced by evapor ation to a semi-tiuid consistence, is found to be equal if not superior in efficacy, to the pow- der. As an antiseptic, Calumbarootis certainly

inferior to bark ; but as ‘ a corrector of putrid bile it is greatly superior ; whence also it is pro- bable, that it would be of service in the West India yellow fever. It does not appear to have the least heating quality ; it occasions no distur- bance, and agrees very well with a milk diet, as it is not disposed to acidity. The dose of the powdered root is half a drachm, which, in urgent cases, may be repeated every third or fourth hour.

CALUMET, a symbolical instrument of great importance among the American Indians. It is a pipe, whose bowl is generally made of a soft red marble ; the tube of a very long reed, orna- mented with wings and feathers of birds. No affair of consequence is transacted without the calumet. It appears ia meetings of commerce or exchanges, and in congresses for .determining peace or war. The acceptance of the calumet is a mark of concurrence with the terms proposed, as a refusal is a certain mark of rejection. Even in the rage of a conflict this pipe is sometimes offered : and, if accepted, the weapons of des- truction instantly drop from their hands,

and a truce ensues. The calumet of peace is different from that of war. They make use of the former to seal their alliances and treaties, to travel with safety, and to receive strangers ; but of the latter to proclaim war. It consists of a red stone, like marble, formed into a cavity resembling the head of a tobacco pipe, and fixed to a hollow reed. They adorn it with feathers of various colors ; and name it the calumet of the sun, to which luminary they present it, in expectation of there- by obtaining a change of weather as often as they desire. From the winged ornaments of the calumet, and its conciliating uses, writers compare it to the caduceus of Mercury, which was carried by the caduceatores of peace, with terms to the hostile states.

CALUMET, DANCE OF THE, is a solemn rite among the Indians on various occasions. They dare not wash themselves in rivers in the beginning of summer, nor taste of the new fruits, without performing it; and the same ceremony always confirms a peace or precedes a war. It is performed in winter in their cabins, and in summer in the open fields. For this purpose they choose a spot among trees to shade them from the heat of the sun, and lay in the middle a large mat, as a carpet, setting upon it the god of the chief of the company. On the right hand of this image they place the calumet, as their great deity, erecting around it a kind of trophy with their arms. The hour of dancing being come, those who are to sing take the most honor- able seats under the shade of the trees. . The company is then ranged round, every one, before he sits down, saluting the monitor, which is done by blowing upon it the smoke of their tobacco. Each person next receive? the calumet in rotation, and holding it with both hands, dances to the cadence of the vocal music, which is accompanied with the beating;of a sort of drum. During this exercise, he gives a signal to one of their warriors, who takes a bow, arrow, and axe, from the tro- phies already mentioned, and fights him ; the former defending himself with the calumet only, and both of them dancin,g all the while. This

mock engagement being over, he who holds the calumet makes a speech, in which he gives an account of the battles he has fought, and the prisoners he has taken, and then receives a cloak, or some other present from the chief of the ball. He then resigns the calumet to another, who, having acted a similar part, delivers it to a third, and he to a fourth, &c. till at last the instrument returns to the person who began the ceremony, and who presents it to the nation invited to the feast, as a mark of their friendship, and a confir- mation of their alliance.

CALUMNI.ZE, JUDICIITM, was an action brought against the plaintiff in a court for a false and malicious accusation. When an accuser did not prove his charge, nor seemed to have suffici- ent or probable grounds for bringing any, the judges in pronouncing sentence used the formula calumniosus es :

which gave the defendant a right to bring an action of calumny ; the penalty of which was frontis inustio, or burning on the fore- head.

Lat. calumnior ; Fr.

CALUM'NIATE,

CALUMNIA'TION,

CALUM'NIATOR,

CALUM'NIATORY,

CALUM'NIOUS,

CALUM'NIOUSLY,

CALUM'NIOUSNESS,

CALUM'NY.

calomnier ; to accuse falsely ; to charge with- out just ground ; a false and malicious represen- tatioa to an offensive purpose. To slander; to impeach the credit,

and blemish the fame of another by injurious

imputations founded in falsehood.

Beauty, wit, high birth, desert in service, Love, friendship, charity, are subject all To envious and calumniating time. Shakspeare.

HAM. If thou dost marry, I'll give thee this plague for thy dowry : Be thou as chaste as ice, as pure as snow, thou shalt not escape calumny. Get thee to a nunnery ; farewell : Or, if thou wilt needs marry, marry a fool j for wise men know well enough, what monsters you make of them. To a nunnery go ; and quickly too. Id.

No might nor greatness in mortality, Can censure 'scape, back-wounding calumny, The whitest virtue strikes. Id.

He that would live clear of the envy and hatred of potent calumniators, must lay his finger on his mouth, and keep his hand out of the ink-pot. L'Eitranye.

He mixes truth with falsehood, and has not forgot- ten the rule of calumniating strongly, that something may remain. Dryden't Fables. Pref.

One trade or art, even those that should be the most liberal, make it their business to disdain and calumniate another. Sprat.

It is a very hard calumny upon our soil or climate, to affirm, that so excellent a fruit will not grow here.

Temple.

In order to heal this infirmity, which is natural to the best and wisest of men, I have taken a particular pleasure in observing the conduct of the old philoso- phers, how they bore themselves up against the malice and detraction of their enemies. The way to silence calumny, says Bias, is to be always exercised in such things as are praise-worthy. Guardian.

Do I calumniate ? thou ungrateful Vanoc.- ††† Perfidious prince ! ††† Is it a calumny To say that Gwendolen, betrothed to Yver, Was by her father first assured to Valens 1

A. Philips.

CAL

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Behold the host ! delighting to deprave, Who track the steps of glory to the grave, Watch every fault that daring genius owes, Half to the ardours which its birth bestows, Distort the truth, accumulate the lie, And pile the pyramid of Calumny! Byru.t.

CALUMNY was admirably personified by Apelles. This celebrated painter, having been accused of conspiracy against Ptolemy, king of Egypt ; determined to represent calumny in a picture. On the right of this celebrated piece was seated a man with large ears, resembling Midas, stretching out his hand to Calumny, who approached him ; and near him were placed two female figures, of Ignorance and Diffidence. On the other side stood Calumny, a beautiful female, appearing agitated and enraged ; she held in her left hand a flaming torch, and with her right she dragged by the hair a youth, who was lifting his hands towards the heavens, and calling the gods to witness in his favor. Before her moved a pale and deformed man, with piercing eyes, who seemed to have just recovered from a long illness : this was Envy. Two other females conversed with Calumny : these were Concealment and Deceit. Another female followed, clothed in black, with tattered garments, which was Repen- tance; she turned her head backward, dissolved in tears, and looked with shame upon Truth who

approached her.

CALUMNY, OATH OF, Juramentum, or rather Jusjurandum, Calumnies, among civilians and canonists, was an oath which both parties in a cause were obliged to take ; the plaintiff that he did not bring his charge, and the defendant that he did not deny it, with a design to abuse each other, but because they believed their cause was just and good ; that they would not deny the truth, nor create unnecessary delays, nor offer the judge or evidence any gifts or bribes. If the plaintiff refused this oath, the complaint was dis- missed ; if the defendant, it was taken pro con- fesso. The Juramentum calumnite is much dis- used, as a great occasion of perjury. Anciently the advocates and proctors also took this oath, but of late it is dispensed with, and thought suffi- cient that they take it once for all. at their first admission to practice.

CALX properly signifies lime, but is used by chemists and physicians for a fine powder remain- ing after the calcination or corrosion of metals and other mineral substances. All metalic calces made by fire, are found to weigh more than the metal from which they were originally produced. CALX NATIVA, in natural history, a kind of marly earth, of a dead whitish color, which, if thrown into water, makes a considerable bubbling and hissing noise, and has, without previous burning, the quality of making a cement like lime or plaster of Paris. It is found in En- gland.

CALX VIVA, or quick-lime, that whereon no water has been cast, in contradistinction to lime which has been slacked. See LIME.

CALYCANTHUS, in botany, a genus of the polygynia order, in the icosandria class of plants : CAL. is monophyllous, urceolate, with small colored leaves : COR. consisting of the leaves on the calyx ; the styles are numerous, each with a

glandula stigma; the seeds are many, each with n train, within a succulent calyx. The species are all shrubs, the chief are, 1. C. floridus, flower- ing calycanthus, or Carolina allspice tree, a na- tive of Carolina, It is of a brown color, and when bruised emits a most agreeable odor. The leaves that garnish this delightful aromatic ar^of ••• an oval figure, pointed, nearly four inches long, and at least two and a-half broad, placed opposite by pairs on the branches. At the end of these stand the flowers, of a kind of chocolate purple color, and possessed of the opposite qualities of the bark on the branches. They stand single on their short foot-stalks, come out in May and June, and are succeeded by ripe seeds in En- gland. The propagation of this shrub is not very difficult.

CALYCANTHUS PRJECOX, a native of Japan. This species is not inured to

the climate of Bri- tain.

CALYCERA, from KaXw?, calyx, and Kepac, a horn ; a genus of plants, of the class syngene- sia, order segregata : CAL. common, polyphyl- lous proper, five-toothed. Florets tubular, male and hermaphrodite, seeds naked. There is but one species, C. herbacea; native of Chili.

CALYCIFLORUS, in zoology, a species of brachionus, of a simple form, the shell being crenated behind, and the upper lip four-toothed. Found iu standing waters, but invisible to the naked eye.

CALYCINA, in entomology, a Swedish species of aranea; the aranea Kleynii of Scopoli. It is of a pale yellowish color, and derives its name from its habit of secreting itself in the calyces of flowers from which the corolla has fallen, to fasten on the flies that are tempted thi- ther in search of the nectareous juices.

CALYCINA METHODUS, CALYCINE METHOD, a system of botanical classification, founded upon the calyx, and published by Linnaeus at Ley den, in 1738, in his Classes Plantarum.

CAL'YCLE, 7i. s. Lat. calyculus ; a small bud of a plant.

CALYDON, a city of jEtolia, where (Eneus, the father of Meleager reigned. The Evenus flows through it, and it receives its name from Calydon the son of .ZEtolus. During the reign of (JEneus, Diana sent a wild boar to ravage the country, on account of the neglect which had been shown to her divinity by the king. All the princes of that age assembled to hunt this boar, which event was greatly celebrated by the poets, under the name of the chase of the Calydonian boar. Meleager killed the animal with his own hand, and gave the head to Atalanta, of whom he was enamoured. The skin was preserved, and was still seen in the time of Pausanias, in the temple of Minerva. The tusks were also preserved by the Arcadians in Tegea, and Augustus carried them away to Rome, because the people of Tegea had followed the party of Antony. These tusks were shown for a long time at Rome, one of them was about half an ell long, and the other was broken. See MELEAGER and ATALANTA.

CALYPLECTUS, in botany, a genus of plants, of the class icosandria, order monogynia : CAL. bell-shaped, perianth leathery, with from ten to twelve folds, and the same number of teeth : COR.

CAM

ten to twelve petals, attached to the folds of the calyx : STAM. about thirty : PIST. germ supe- rior, striated : PERIC. capsule, one celled, longi- tudinally striated in its upper part, opening irre- gularly. Seeds numerous, and membranous.

CALYPSO, in entomology, an African species of papilio, distinguished by having the wings roundish and yellow ; a dot, the tip of the ante- rior pair, and the margin of the posterior ones black.

CALYPSO, one of the Oceanides, or a daughter of Atlas, according to some writers, was goddess of silence, and reigned in the island of Ogygia. But the situation, and even the existence, of this island is doubted. When Ulysses was ship- wrecked on her coasts, she received him with great hospitality, and offered him immortality if he would remain with her as a husband. The hero refused, and after seven years' delay, he was permitted to depart from the island by order of Mercury, the messenger of Jupiter. During his stay, Ulysses had two sons by Calypso, Nausi- thous and Nausinous. Calypso was inconsolable at the departure of Ulysses.

CALYPTRA, in botany, the calyptre, a tender skin that loosely covers the top of the theca, like a cup. The calyptra is villose or hairy, when composed of hairs ; entire, when it covers the whole top of the theca, dimidiate when it half covers the theca, and dentated when the rim is set with teeth.

CALYX, in botany. See BOTASY.

CAM, or GRANTA, a river of England, formed by the junction of the Rhee which rises in Hert- fordshire, and the Granta which rises in Essex. This takes place near Cambridge, to which the united stream gives name, and afterwards flows into the Ouse.

CAMˆEA, in natural history, a genus of the semi-pellucid gems, approaching to the onyx structure, being composed of zones, and formed on a crystalline basis; but having the zones very broad and thick, and laid alternately one on another, usually less transparent and more debased with earth than the onyxes. There are four species ; viz. 1. the dull-looking onyx, with broad black and white zones ; the camsea of the moderns, and the Arabian onyx. It is found in Egypt, Arabia, Persia, and the East Indies. 2. The dull broad-zoned, green and white camaea, or the jaspicameo of the Italians ; found in the East indies, and some parts of America. 3. The hard camaea, with broad white and chestnut colored veins. 4. The hard camsca, with bluish, white, and flesh-colored broad veins, being the sardonyx of Pliny's time, brought from the East Indies.

CAMAIIA, in the materia medica, a name given by Avicenna and others to the large mush- rooms found in the deserts of Numidia, and many other parts of Africa. They are white on the outside : the modern Africans call them terfon, and are very fond of them ; they eat them with milk, water, and spices, and account them wholesome and nutritive.

CAMA'IEU, n. s. From camehuia, which name is given by the orientals to the onyx, when, in preparing it, they find another color. A stone with various figures and representations of landscapes, formed by nature. In painting, a

term used when there is only one color, airl where the lights and shadows are of gold, wiouˆUt on a golden or azure ground. This kind of work is chiefly used to represent basso relievos.

CAMAIEU, or CAMAYEU, in mineralogy, a word used to express a peculiar sort of onyx : also by some to express a stone, whereon are found various figures and representations of landscapes, &c. formed by a kind of lusus na- turae ; so as to exhibit pictures without painting. The word comes from camehuia, a name the Orientals gave to the onyx, when tbˆv find, in preparing it, another color. It is now used to express those precious stones, as onyxes, cor- nelians, and agates, whereon the lapidaries em- ploy their art to aid nature, and perfect those representations ; and also any kind of gem, whereon figures maybe engraven, either indented, or in relievo. In this sense the lapidaries of Paris were called in the statutes, cutters of ca- mayeux. It is more particularly used for those stones of differently colored laminae. These laminae are left or removed with much art, for the head, the beard, the hair, and other colors of a bust. Some antique cameos have four layers, as the fine one of the apotheosis of Augustus, and that of Germanicus in the Royal Library at Paris ; one of the same subject as the first men- tioned, and another of Rome and Augustus, in the cabinet at Vienna.

CAMALDOLITES, CAMALDULIANS, or CA- MALDUNIANS, an order of religious, founded by Romuald, an Italian fanatic, in 1023, in the de- sert of Camaldoli. Their rule is that of St. Benedict ; and their houses, by the statutes, are never to be less than five leagues from cities. The Camaldolites have not borne that title from the beginning of their order ; till the close of the eleventh century they were called Romualdins, from the name of their founder. Till that time, Camaldolite was a particular name for those of the desert Camaldoli ; and D. Grandi observes, was not given to the whole order, in regard it was in this monastery that the order commenced, but because the regulation was best maintained here. Guido Grandi, mathematician to the grand duke of Tuscany, and a monk of this order, published Camaldulian Dissertations, on the origin and establishment of it.

They were dis- guislied into two classes, viz. Coenobites and Eremites.

CAMALODUNUM, in ancient geography, a town of the Trinobantes, the first Roman colony of veterans in Britain. From the Itineraries it appears to have stood where Maiden now stands. It continued to be an open place under the Ro- mans ; a place of pleasure rather than strength ; adorned with splendid works, as a theatre, and a temple of Claudius : which the Britons con- sidered as badges of slavery, and which gave rise to several commotions.

CAMARGUE, or CAMABQUE, LA, a tract of Provence, France, insulated by the two principal mouths of the Rhone. It is sometimes called the Delta of France. It is a cluster of islands, spread over nearly 200 square miles, and sepa- rated only by canals. The soil is fertile in corn and pasture, though very marshy in parti- cular places, and much impregnated with salt.

3000 black cattle are said to be found here, a like stock of horses, and 40,000 sheep. The island is the property of the town of Aries ; and belongs to the department of the Mouths of the Rhone. It is divided into nine parishes, and numerous villages.

CAMARINA, in ancient geography, a city of Sicily, built by the Syracusans on an eminence near the sea, in the south of Sicily, to the west of the promontory Pachynum, between the rivers Hipparis and .Oanus. Nothing remains but its ancient walls, a mile and a half in com- pass ; with a few houses. It is now called Ca- marana.

CAMARINA PALUS, a marsh or lake, near the city, from which it took its name. In a time of drought, the stench of the lake produced a pes- tilence ; upon which the inhabitants consulted the oracle, whether they should not drain it. The oracle dissuaded them : they notwithstanding drained it, and opened a way for their enemies to come and plunder their city : hence the proverb, Ne moveas Camarinam, that is, not to remove one evil to bring on a greater. It is now called Lago di Camarana.

CAMARINES, a province on the south of Lucori, one of the Philippine islands. There are several hot springs here, and some of a pe- trifying quality. The capital is Caceres.

CAMARONES, a large river of western Africa, which is, however, but little

known to Europeans. It forms at its mouth a number of alluvial islands. Long. 9►► 0′ E., lat. 3►► 30′ S.

CAMARONES, a river of Patagonia, which, forming a bay of that name, falls into the At- lantic in lat. 44►► 45′ S.

CAMAROSIS, in surgery, denotes a fracture of a bone, wherein the two broken ends rise and form a kind of arch. It is chiefly applied to fractures in the skull.

CAMASSEI, or CAMACE, (Andrew), painter of history and landscape, was born at Bevagna, and studied under Dominichino and Sacchi. He was employed in St. Peter's at Rome, and at St. John Lateran ; and his works are much admired for sweetness of coloring, and de- licacy of pencil. He died in the bloom of life, when his reputation was daily advancing, A. D.

1657.

CAMBAHEE, a considerable river of South Carolina, formed by the junction of two large streams which rise in Orangeburg, and after passing into Charleston district, unite, and run- ning south-east, enter St. Helena Sound, a little to the south-west of Ashepoo.

CAMBAL, a fertile and hilly district of Southern Abyssinia. Its inhabitants are inde- pendent, and consist of Christians, Mahom- medans, and Pagans.

CAMBAY, a sea-port town of Ahmedabad, Mindostan, in the province of Gujerat, the Cu- manes of Ptolemy. It stands at the top of a gulf of the same name, and was formerly a flourishing commercial port, but the sea has re- nred from the coast considerably, and the navi- gation of the gulf is dangerous. Its principal Jrade now is in corn, cornelians, and cottons, for Bombay ; and a few elephants' teeth and cor-

nelians for the China markets. There are three extensive bazaars. The town is surrounded by i►► brick wall, and most of the houses are of brick or stone. The wall is about five miles in circuit, enclosing five noble reservoirs of water. The inhabitants are considered very expert plasterers. So early as the fifth century this town is con- jectured to have been the capital of the Baleyras and of the western Hindoo emperors. It was taken by the Mahommedans in the thirteenth century, and in the sixteenth presented to the Portuguese the magnificent ruins of a first-rate city : but these were more to the south than the site of the present town. Here, however, are still seen Hindoo subterranean temples, con- structed since the Mahommedan invasion, and the houses of opulent persons contain numerous apartments under ground. In a subterranean Jain temple are two statues of deities of large size. The inscription on one, which is white, intimates that it is an

image of Parswanatha, carved and consecrated in the reign of the emperor Acber, A.D. 1602. That on the other, the black one, has merely the date 1651, with the names of two Banyans who brought it here. This place was first taken possession of by the British in 1780, but restored three years after- wards to the Mahrattas. It was again taken in the last Mahratta war, and confirmed to the com- pany in 1803. It is in the jurisdiction of Broach.

CAMBAYES, in commerce, cotton cloths made at Bengal, Madras, and some other places on the coast of Coromandel. They are proper for the trade of Marseilles, whither the English at Madras sent great numbers of them. Many of them are also imported to Holland.

CAM'BER, n. 1 Lat. cumwrus; Fr. cam-

CAM'BERING. 5 bre ; Per. khami, an arch or curve. A word mentioned by Skinner as pecu- liar to ship-builders, who say that a place is cambering, when they mean arched.

Camber, a piece of timber cut arching, so as a considerable weight being set upon it, it may in length of time be induced to a straight.

Moxon's Mechanical Exercises,

CAMBERT, a French musician of the seven- teenth century, much admired for the manner in which he touched the organ. He became super- intendent of music to Anne of Austria, the queen-mother. The abbe Perin associated him in the privilege he obtained of setting up an opera in 1669. Cambert set to music two pas- torals, one entitled Pomona, the other Ariadne, which were the first operas given in France. He also wrote a piece entitled The Pains and Plea- sures of Love. These pieces pleased the public ; yet, in 1672, Lully obtained the privilege of the opera, and Cambert came to England, where he be- came superintendent of music to king Charles II. and died in 1677.

CAMBODIA, a country of Asia, in the East Indies, bounded on the north by the kingdom of Laos, on the east by Cochin-China and Tsiampa, and on the south and west by the gull and kingdom of Siam. It extends about 400 miles from north to south, and 150 in breadth from east to west, being watered by a fine stream, generally known by the name of the country. The coast is flat and woody ; the eastern and

CAMBRIDGE.

Round Church, in Bridge Street, is a curious Charles VI. and Philip V. of Spain. During the western parts of the interior mountainous, in- ' -French

revolution it was the theatre of war, and tersected by deep ravines; but the middle, i□□□ J□□□□□w*.-□□□□□ □□□□□ iw.fc□□□ J^□□*□□.Ki-i>i-v□□ through which the river passes, is a fine plain. Here are found precious stones of several species, and gold in considerable quantities. The soil is*

lord Wellington had his head quarters here in 1 81 5. It was afterwards one of the eighteen fortresses placed under his surveillance for five years. Six- teen miles south-east of Douay, seventeen west

fertile producing legumes, rice, and fruits in of Valenciennes, and 110 N.N. E. of Paris.

*abundance, as well as many medicinal plants, □□□□□□" D^ – – * ^□□□1□□□ □□□> ~*

the sandal and eagle-wood-tree, and many other valuable vegetables. Lions, elephants, and tigers are found here; and the cattle are ex- tremely plentiful. Silk and ivory are abundant

CAM'BRIC, n. s. From Cambray, a city in Flanders, where it was principally made. A kind of fine linen, used for handkerchiefs, ruffles, wo- men's sleeves and caps, &c.

He hath ribbons ol all the colours ot the rainbow ,

Confederate in the cheat, they draw the throng, And camMck handkerchiefs reward the song. Gay.

CAMBRICS are now made at other places in This manufacture

V f . _i i □□□ i i □□□, j JCLC inuu riuuuus ui an mu LUIUUIS ui me raiiiuow ,

and cheap. This country is said to be inhabited ink]e8) caddises> camMclu, and lawns. Shakspenre by a mixed race of 1,000,000 Cochin Chinese, Malays, Japanese, and Portuguese. The men are handsome, with long hair and a yellow com plexion. The women are said to be licentious. France besides Cambray- Both sexes dress in a kind of robe. – has long prove

ligion is that of the Siamese. Cambodia, or France For manv years it appeared that Eng- Lowaic, the capital, is seated on the westihoreot the iand did not in this article contribute less than river Me-kon, Cambu Cha't, or Cambodia, about □□200)000 per annum to the interest of France, 150 miles north of its mouth. Long. 104 15 whica induced the British

parliament to enact E., lat. 13►► 10′ N. Its inhabitants carry on little m laws to prevent it. See 18 Geo. II. c. 36, traffic with other nations, and never cross the sea, and 21 Geo n c 26 gee also 32 Geo. II. c. 32, it is said, for commercial objects. Their exports and 4 Geo m c 37> which reguiates the cam- are various kinds of wood, betel-nut, mother-of bric manufactory. Cambrics now allowed in pearl-shells, peltry, silk and coarse cloths. In tllis country are manufactured in Scotland and the year 1670 the English attempted to traffic ireiana. Any persons convicted of wearing, here, but their intercourse was short and un- selling (except for exportation), or making up satisfactory. Saigong is the chief port of for njre any French cambrics or lawns, were liable export. to a penalty of ►►5 by the first two statutes cited

CAMBOGIA, in botany, a genus of the mo- above ; but the new system of free trade has nogynia order, belonging to the polyandria class ma(Je a change with respect to the admission of of plants; and in the natural method ranking French manufactures.

under the thirty-ninth order, tricoccae. The CAMBRIDGE (CANTABRIGIA, Latin), a COR. is tetrapetalous ; the CAL. tetraphyllous ; county town of England, situated on the river and the fruit is a pome with eight cells, and so- Cam, eleven miles east of Ely, and fifty-one north litary seeds. The principal species is C. gutta, a of London. It was the Camboritum, or Granta, native of India ; it yields the gum resin known of the Romans, and a well known station of that by the name of gamboge. people, as the numerous urns, coins, and other

CAMBRASINES, in commerce, fine linen antiquities dug up here attest. The modern made in Egypt, of which there is a considerable town is of small consideration, except for its trade at Cairo, Alexandria, and Raschit. They connexion with the University, being only about are so called from their resemblance to cam- a mile in length, and half a mile broad ; the brics. best streets are Trumpington Street, and St. An-

CAMBRAY, a well-built city of the Nether- drew's Street, united with Regent Street towards lands, on the banks of the Scheldt. It is an arch- Gogmagog hills; but the whole is well paved, bishop's see. The cathedral, episcopal palace, Its population has been pretty stationary at and several of the public buildings, are magnifi- somewhat more than 10,000 for many years, but cent, and the streets are spacious. The popu- has since reached 14,000, and is still increasing, lation is about 16,000, but the once flourishing The tradespeople derive their support principally manufactures of linen, cambrick (which derives from the learned residents and visitors of the its name from this place), lace, tapestry, and colleges. Butter is a production of the neigh- hosiery, are much reduced. A considerable busi-

bourhood for which the market is celebrated, and ness, however, is conducted in them, and in the which it sends in considerable quantities to Lon- neighbourhood are some noble bleaching grounds, don. That which is sold in Cambridge is made A citadel and regular fortress defend the place, up in the form of rolls, a yard long, and weigh- It was the Camaracum of the ancients, and gave ing just a pound. Here is also a trade in wool, the title of archbishop to the celebrated Fenelon. oil, iron, corn, and cheese. Here is a noble Charles V. garrisoned and fortified this city : the foundation called Addenbrookes' Hospital, lately Spaniards took it by surprize in 1595, after which much enlarged, which, as a general infirmary, is it remained in their possession until 1677, when resorted to from all parts of the county ; nume- it was taken by Ixmis XIV. to whom it was con- rous charity schools and almshouses; and some firmed by the peace of Nimeguen. It is also of the churches of the town are remarkable, noted in history for the famous league of 1507, Great St. Mary's, the University church, is a fine against the republic of Venice ; for a treaty con- Gothic edifice, having a lofty tower crowned with eluded here in 1529 between Francis I. of France, four beautiful pinnacles ; that of St. Sepulchre and the emperor Charles V; and for negociations was built in imitation of the church of the Holy opened here, but terminated at Vienna, between Sepulclire at Jerusalem. Market on Saturday

Cambridge Castle was built by William the Conqueror, but much dilapidated in the suc- ceeding reigns and during the wars of the barons; a gate house of the original edifice is still stand- ing, and is now the county gaol. Richard II. held a parliament here, and the audacious Wat Tyler burnt the University records in the market place. It was often molested at this period by outlaws from the neighbouring fens. The pa- rishes are fourteen, and the churches thirteen, in number; and the dissenters are numerous and respectable, having three commodious chapels, three of smaller size, and a Quaker's meeting- house, though none of that persuasion reside in the town. Cambridge is governed by a mayor, recorder, thirteen aldermen, twenty-four common council-men, and a town-clerk, and the town sends two members to parliament. The police is under the joint direction of the university and corporation, the vice-chancellor being always a magistrate ex officio. Fronting the shire-hall, in the market-place, stands Hobson's conduit,

the gift of a celebrated horse jockey and carrier, ir⁇ the reign of James 1., whose conduct gave rise to the expression of Ilobson's choice, 'that or none;' for in letting out his horses he strictly followed that rotation which

gave each an equal share of work ; and refused, it is said, to let any other than that which stood next. Near the gardens of Bene't College is a botanic garden of five acres, with a large house for the use of the go-' vernors, curator, &c., given to the University by the late Dr. Walker, and augmented by the be- nefaction of the late Dr. Betham.

The University of Cambridge consists of thirteen colleges and four halls, the latter enjoy- ing; equal privileges with the former. Th

Colleges or Halls. St. Peter's, or Peter House Clare Hall . . . Pembroke Hall . . . . Corpus Christ! .... Gonville and Caius College

Founders. A. D.

Hugo de Balsham 1257

..... 1326,1342

Mary de St. Paul 1343

. . . 1356

Edmund Gonville and Dr. Caius 1348, 1557

Trinity Hall . . . . . William Bateman, bishop of Norwich . 1351

King's College Henry VI. VII. and VIII 1441

Queen's College . . V . . Margaret of Anjou 1448

Catherine Hall . .'...'. . Robert Woodlark 1474

Jesus College John Alcock, bishop of Ely 1496

Christ College Margaret, countess of Richmond . . 1506

St. John's College Trinity College . . . Magdalen College . . Emanuel College . . . Sidney Sussex College . Downing College

The same 1511

Henry VIII 1540

Thomas, lord Audley 1542

Sir Walter Mildmay 1584

Frances, countess of Sussex 1593

Sir George Downing 1800

At the first foundation of these splendid are to consider and determine what graces are schools there was no public provision for the proper to be brought before the body of the accommodation or maintenance of the scholars ; university, and each of them has a negative but afterwards inns began to be erected by pious voice. All graces must first pass the caput be- persons for their reception; and in the time of fore they can be produced to the senate. Each Edward I. colleges were regularly endowed, college has its school and library, as at Oxford, The university enjoys great privileges. It is of which those of Trinity and St. John are the governed by a chancellor, who is always a noble- most considerable. The senate of this univer- man, and has a commissary under him, but may sity includes all the doctors and masters of arts, be changed every third year; a high steward, and is divided into two houses: the first con- chosen by the senate ; a vice-chancellor, chosen sisting of regents, or those who have not been annually by the senate, out of two named by the masters of arts five years, called white- hoods, heads of colleges from their own number ; two from the lining of their hoods. The second are proctors, chosen every year; and two taxers, who, non-regents, or those who have taken the degree with the proctors, regulate the weights and mea- of master upwards of five years, but have not sures ; two moderators, and two scrutators. The advanced to the degree of doctor; these are called other officers are, a registrar or keeper of the black-hoods. The doctors under two years archives, three esquire beadles, one yeoman standing can vote only in the regent-house ; but beadle, the library-keepers, &c. There is also all others may vote in which house they please.

a commissary, who is usually appointed an assistant, or accessor, and deputy high-steward to the vice-chancellor in his court; and a public orator, who is the mouth of the university on public occasions, writes their letters, 'presents

In the senate-house the rejection of all officers, the appointment of the magistrates, and the ad- mission to degrees, takes place ; and no lan- guage but Latin is permitted to be spoken at its meetings. Besides the fellows and scholars,

noblemen to their degrees with a speech, &c. there are two other orders, called pensioners, the The caput (which consists of the vice-chancellor, greater and the less ; the former are the young a doctor of divinity, a doctor of laws, a doctor of nobility, and gentlemen of fortune, called fellow- physic, a regent and non-regent master of arts, commoners, because they dine with the fellows . who are chosen yearly on the twelfth of October), the less are dieted with the scholars. There is

also a considerable number of scholars of inferior fortune, called sizars : these, though not of the foundation, are capable of receiving many bene- factions, called exhibitions, and frequently attain the highest honors. To particularise the build- ings, and peculiar privileges, of each of the col- leges in detail, will hardly be expected from us. We can only furnish the reader with a cursory glance at them.

St. Peter's College, or Peter House, was for- merly two hostels, or hospitals, and appropriated in 1257, by Hugo de Balsbam, prior of Ely, to the use of students. He endowed this founda- tion in 1214, for the support of a master, four- teen fellows, twenty-nine Bible clerks, and eight poor scholars ; the number to be afterwards reˆ gulated by the fluctuation of the revenues. The fellowships have been since increased by nu- merous benefactions. The chapel was erected in 1632. The building surrounds two courts (the largest cased with stone), which are separated by a cloister and gallery. A lady Mary Ramsey is said to have once offered to leave a consider- able property to St. Peter's, if it should be agreed to be called afterwards ' Peter and Mary's College.' Dr. Soame, the master, replied ••• , ' Peter hath been too long a bachelor to think of a companion in his old age.' ' A dear bought jest,' says Fuller, ' for lady Ramsey, disgusted at the refusal, turned the stream of her benevolence into a different channel.'

Clare Hall was erected on the former site of University Hall, a college founded in 1326 by Dr. Richard Baden. This being, about sixteen years after its erection, destroyed by fire, it was rebuilt on a more extended scale by Elizabeth de Burgh, in 1344; and she, being last heiress of the earls of Clare, gave to it its present name, with endowment for a master, ten fellows, and ten scholars. Richard III., Thomas Cecil, earl of Exeter, John Freeman, esq., William Butler, esq., and Samuel Blythe, esq., severally augmented the revenues, which now maintain seventeen fel- lows, and between thirty and forty scholars. This college, which stands near the north-west angle of King's College chapel, is more uniform in its buildings than most of its neighbours, and as pleasantly situated as any in the university. It was rebuilt of stone in 1638, except the cha- pel, which was erected in 1703, by Sir James Burroughs, at a cost of ••7000. The alcove over the altar contains a fine painting of the Saluta- tion, from the hand of Cipriani.

Pembroke Hall was founded in 1343, by Mary, Countess of Pembroke, and endowed by a charter of Edward III. for a master and six fellows. Henry VI. greatly enriched it. The number of fellowships is sixteen, and the scholarships about seventy. The chapel was built by bishop Wren, from a

design of his nephew, Sir Christopher Wren. Here is a small detached building, con- taining a curious astronomical machine, or sphere, which was partly made by Dr. Roger Long, author of a celebrated treatise on astro- nomy, who, at his death, bequeathed the interest of ––200 bank annuities, to keep ‘ the instrument and place’ ingoou repair. The college consists of twt courts, separated by a hall, having at one end thje combination room. Dr. lyng’s spliere –––s eighteen feet in diameter, and will contain*

thir’y persons sitting conveniently. It contains meridians, a zodiac, several of the constellations painted on the ceiling, is penetrated by the poles, &c., but was never completed.

Corpus Christi, or Bene’t College, was esta- blished by the union of two religious guilds, and patronised largely by Henry Plantagenet, duke of Lancaster, whom the brethren chose their first alderman. Sir John Cambridge and his son much increased its revenues, which were appro- priated in 1356 to the maintenance of a master, eight fellows, six scholars, and three Bible clerks. Since that period the endowments have supported twelve fellows, and nearly sixty scholarships. The name of Bene’t, or Benedict College, arose from its proximity to the church of that saint. Its greatest single benefactor was Matthew Parker, archbishop of Canterbury, who founded two fel- lowships and five scholarships, and bestowed on it the valuable library of Stoke-clare College, Suffolk, besides many valuable MSS. The buildings of this college also surround a square court. Dr. Herring, some years since archbishop of Canterbury, left ––1000 towards its recent improvements, which consist of an entire new court, with a handsome Gothic front towards Trumpington street.

Gonville and Caius, called frequently King’s College, was founded in the year 1348, by Edmund Gonville, and at first called Gonville Hall; but in 1557 Dr. John Caius, physician to Queen Mary, built a new court, and the three remarkable gates inscribed respectively, ‘ Hu- militatis,’ the gate of humility; ‘Virttitis,’ the gate of virtue ; ‘ Is Caius posuit Sapientiae’ (John Caius built this in honour of wisdom) ; ‘ Honorisc,’ the gate of honor. Since the time of Dr. Caius the fellowships have increased to twenty-nine, and the scholarships to nearly 100, The principal court has been cased with stone and partly rebuilt. In the chapel is a tomb to the memory of Dr. Caius, with the following terse epitaph : –––

Fui CAIUS

VIVIT POST FUNERA VIRTUS.

Trinity Hall was originally one of those hostels where the students resided

at their own expense ; and was appropriated by Richard Crovyder, prior of Ely, in the reign of Henry III. Bateman, bishop of Norwich, converted it into a college in 1351, and provided for a master, three fellows, and two scholars : various benefactions have increased the fellowships to twelve, and the scholarships to fourteen. The hall is faced with stone, and the buildings are very neat and uniform. Among its modern be- nefactions is one of ►►20,000, left in 1747, by Dr. John Andrews, for the erection of two spa- cious wings.

King's College, founded by Henry VI. in 1441, is the pride of Cambridge. In 1443 he endowed it for a provost, seventy fellows or scholars, three chaplains, six clerks, sixteen choristers, and a music master, sixteen officers of the foundation, twelve servitors for the senior follows, and six poor scholars. All the designs of this munificent monarch, however were never completed, and but a small part of the intended buildings were erected Henry VII. may be

called its second founder. Towards the latter end of liis reign he expended upwards of ►►'2000 on its edifices, besides presenting the college with ►►5000 separately, for furnishing the chapel and provost's residence. In the chapel library is a plan of the college, as intended to be built by his predecessor. Some splendid additions have .ately been made to this noble college.

King's College Chapel has been considered the most exact, as it is certainly one of the most oeautiful specimens of Gothic architecture in Europe. The whole edifice is 316 feet in length, and eighty-four in breadth. Eleven immense buttresses support each side, and terminate in elegant pinnacles. On each corner is an octan- gular tower, 146J feet high, and crowned with a noble dome. The open worked battlements give an airiness to its appearance, in fine contrast with the massive part of the structure. The in- terior is yet more striking ; and its vast stone roof, unsupported by a single pillar, becomes an object of astonishment and awe to all who see it for the first time. It is in the form of a Gothic arch, flattened at the centre, and is divided into twelve parts, separated by the eleven principal arches, which spring from the buttresses. Each division of the roof is formed of groined arches, beautifully carved, and in the centre is one massy stone, of above a ton weight, ornamented with roses and portcullisses. The inside walls are wholly covered with numerous sculptured ornaments of almost inimitable workmanship. These represent the arms of the houses of York and Lancaster, with a number of crowns, roses, portcullisses, &c. . Some of the supporters, cut in stone, display the hand of a master, and equal in expression almost any marble sculpture. On a panel, at the upper part of

the screen which separates the anti-chape, from the choir, is a small piece in very bold relief, which is univer- sally admired, representing the Almighty hurling the rebel angels from heaven ; and on the altar- piece is a fine ‘ taking down from the cross,’ which was presented by the Earl of Carlisle, and is supposed to be a production of Raphael. Its magnificent and exquisitely painted windows complete the enchantment of the inner scene. In the arrangement of the paintings, the subjects from the New Testament, on the north side, are all prior to the crucifixion of our Saviour; while those on the south side are posterior to that event ; and the east window is devoted entirely to the most material circumstances immediately connected with that awful deed. This window i;> fifty-three feet high, and twenty-eight wide, and is separated by two elegant buttresses and a transom into six compartments. Each compart- ment contains one subject, and is divided by muUions into three lights.

Queens College was founded in 1448, by Margaret of Anjou, consort of Henry VI., and endowed with ►►200 per annum for the support of a principal, and four fellows. Elizabeth Wood- ville, queen of Edward IV. was prevailed on by Andrew Ducket, the master, to complete its buildings, and establish it for a master, nineteen fellows, and forty-five scholars. She has since been celebrated annually, as the co-founder. The buildings surround two quadrangular courts, one of which has a cloister of about 330 feet. This

stands on the east bank of the Cam, over which is a curious wooden bridge of one arch, sup- ported by rustic abutments of stone.

Catharine Hall was founded by Woodlark, chancellor of the University, in 1474, and en- dowed for a master and three or moie fellows. The number is now increased to five; and eight bye-fellowships with ten scholarships. The build- ings occupy three sides of a square court, and are separated from the street by an iron palisade and an avenue of elms. Its west front, opposite Queen’s, has a noble portico.

Jesus College, erected on the foundations of an ancient Benedictine nunnery, was founded by Alcock, Bishop of Ely, in 1496, for a master, six fellows, and six scholars. The endowments at present provide for sixteen fellows and fifty scholars. The college is at a short distance from the town, and the chapel is supposed to have been the ancient conventual church. A tomb of one of the nuns is still remaining, wun the inscription, ►►►

MOKIBVS. ORNATA. JACET. HIC. BONA. BERTHA. ROSATA.

It is said that a subterraneous passage exists from this college to Barnwell priory, about a mile distant.

Christ's College, built on the site of an hostel, called God's House, and founded by Henry VI., was endowed, in 1506, by Margaret, countess of Richmond and Derby. The establishment now maintains a master, fifteen fellows, and seventy scholars. The buildings enclose a small quad- rangular court, behind which is a modern struc- ture by Inigo Jones. In the gardens is shown a mulberry tree, which Milton olanted when a student here.

:❓❓❓ St. John's College, built en the site of the hos- pital of St. John's, in 1511, and finished in 151 6, was endowed by Margaret countess of Richmond, for a master and thirty-one fellows ; but its bene- factors have raised a revenue to support sixty-one fellows and 114 scholars. The buildings are of brick, and surround three courts. A new court, surrounded by magnificent buildings, in the Gothic style, has recently been formed on the opposite side of the river, towards the fields; these are probably the most splendid of the new erections in the University. The entrance court from the town has a magnificent portal and four towers. On the other side of a brook, which bounds the walks of the college, are the remains of an ancient and spacious building, called Py- thagoras'School, belonging with some houses and several acres of land to Merton College, Oxford. Its walls are strengthened with buttresses, sup- porting arches of the Saxon style ; the building is otherwise devoid of ornament, except one window on each side, which has a pillar in the centre, with a decorated capital with a round moulding. This is supposed to have been the place where the first tutors of the university delivered their lectures.

Magdalen College. ❓❓❓ This foundation of Staf- ford, duke of Buckingham, was confiscated at his death; and, being afterwards obtained from the king, was endowed by Thomas, lord Audley, for a master and four fellows. The latter have since been increased to seventeen, and several

scnolarships have been added. This college is of brick, and surrounds two courts. The library contains the books and MSS. of Samuel Pepys, esq., secretary to the Admiralty, in the reigns of Charles II. and his successor. The chapel has a curious plaster of Paris altar-piece.

Trinity, the largest college of th❓❓ university, surrounds two noble quadrangular courts, whose gateways, chapel, and library are fine specimens of architecture. It was founded, in 1546, by Henry VIII., on the site of two other colleges and a hostel, and originally endowed for a master, sixty fellows, sixty-seven scholars, four conducts, three public professors, thirteen poor scholars, twenty beadsmen, and other officers; the

number on the establishment has amounted to upwards of 400, of late. The inner court, called after the name of Dr. Thomas Neville, was chiefly built at his expense, in the year 1009. On its west side is the library, a capacious building, 200 feet in length, forty in breadth, and thirty-eight high. Beneath is a spacious piazza, which opens to the river and gardens. On the south side of this court another has been lately built, containing numerous sets of rooms for students. The chapel contains a fine statue of Sir Isaac Newton, by Roubiliac. He is represented in a loose gown of a master of arts, with a prism in his hands. His countenance is turned upwards, with a look of profound meditation, and on the pedestal is the inscription, Qui genus humanum ingenio superavit. The drapery and features are considered extremely beautiful. No object in the university deserves a visitor's notice more than the library of this college. It is a superb apart- ment, occupying one side of the quadrangle called Neville's court. The books are all ranged on either side, and the compartments crowned with busts of ancient and modern authors.

Emanuel College, founded in 1584 by Sir Walter Mildmay, on the site of a Dominican convent, was endowed for a master, three fellows, and four scholars. Additional donations have provided for the support of fifteen fellows, and nearly 100 scholars and exhibitionists. The hall is thought one of the most elegant in Cambridge ; and the altar-piece in the chapel is very fine.

Sidney Sussex College was founded by Frances Sidney, countess of Sussex, who by will be- queathed upwards of ►►5000 towards a college for a master, ten fellows, and twenty scholars. The first stone of the college was laid on the 20th of May, in 1596, and the building completed in 1599. The chapel and the library were rebuilt recently. The foundation now provides for seven fellows, ten bye-fellows, twenty scholars, and twenty-four bye-scholars, besides a mathe- matical lecturer, and the exhibitioners.

Downing College, the last of these noble esta- blishments, was originally provided for by the will of Sir George Downing, who died in 1717 ; but, the bequest being disputed, the great seal was not affixed to its charter unt.il the year 1800. This provides for a master, a professor of English law, a professor of medicine, and sixteen fellows. The latter are to vacate the fellowships at the ex- piration of twelve years, unless they obtain a licence to hold them longer.

The Senate-House, in the centre of the town, is a uoble building of tin-Corinthian order, designed

by Sir James Burrows. It forms the north side of the quadrangle, of which the public schools and library are designed to be the western side. The

gallery, supported by fluted columns, is said to be capable of containing 1100 persons; and the whole room, within, is considered the most superb in Europe. It contains statues of George I. and II., the duke of Somerset, by Itysbrach, &c. The schools surround a small court. On the west are the philosophy schools, where disputations are held. On the north the divinity school ; and on the left, or south entrance of the court, that of law and physic. At the south-east corner of the philosophy schools is a geometrical staircase, lead- ing to the university library, which occupies the quadrangular apartments above the schools. The original building was erected about the year 1480. The east front, containing the new library, was rebuilt in 1775. Members of the senate, and all bachelors of law and physic, are entitled to have books from this library at any time (not exceeding ten volumes). The statue of Ceres, brought from the temple at Eleusis, by Dr. Clarke, graces the vestibule. The pedestal was designed by Flaxman, from the original in the temple of Minerva Polias at Athens. Here is also (brought from Athens by the same gentleman) the column placed on the tomb of Euclid of Megara, the disciple of Socrates, with an inscription in bas relief. The library contains upwards of 90,OOO volumes, besides various curious MSS. The libraries of the several colleges are also rich in MSS., missals, pictures, and curious natural productions and remains, which it is impossible here to particularise.

The University of Cambridge is, on the whole, elegant rather than magnificent. It possesses princely revenues, and many fine specimens of the arts. Its recent improvements, in several of the colleges, have added greatly to its utility and splendour. Its walks and gardens, as scenes for retirement and study, are no where surpassed. But it forms no consistent whole ; it has grown under the separate designs of its architects and founders into a splendid collection of disjointed buildings, which would be the noble ornaments of separate towns, but a mind that can compre- hend the whole always regrets that there was no presiding design for it. The best apology for this is the plain fact of the case ××× like every thing characteristic of our country, it has been the creature of necessity and utility rather than of theory and art. This university sends two mem- bers to parliament, independently of the two for the town of Cambridge.

CAMBRIDGE, a post town of the United States, in South Carolina, capital of the district of Ninety-Six. It is situated in Abbeville county, eighty miles W.N.W. of Columbia, 165 north- west of Charlestown, and fifty north by west of Augusta in Georgia. A district court is held on the 26th of April and November, and a county court for Abbeville county March 25th and Sep- tember 12lh. It is 745 miles from Philadelphia. CAMBRIDGE, one of the largest and most flourishing towns of Middlesex County, Massa- chusetts, is agreeably situated on the north side of Chailes River, over which a bridge has been erected, connecting it with Boston. It contains, esides Harvard

university, about 100 dwellings.

congregational and episcopalian churches, and a court house. The university which is considered the most respectable in the united States, consists of several large, spacious brick edifices. Harvard hall is divided into six apartments, one of which is appropriated for the library, two for the philosophical apparatus, one for the museum, a fifth for a refectory, and the other for a chapel. The library contains upwards of 20,000 volumes. The philosophical apparatus has cost nearly ––1500, and is one of the completest on the American continent. This university was first instituted in 1636, and was no more than an academic free-school ; two years after, in con- sequence of a donation left it by the Rev. Mr. Harvard of Charlestown, who died there, it was named Harvard College. In 1650 its first char- ter was obtained from the government of Massa- chusetts; and in the mean time it received several donations from learned men in Europe. Dr. Lettsom of London was amongst the most distinguished and liberal of these contributors. The governor, lieutenant-governor, the council and senate, the president of the university, and the congregational ministers of the six adjoining towns, are, during office, overseers of the univer- sity. The corporation is a distinct body, in whom is vested the property of the university. The number of those who had been admitted to academi- cal degrees, from its first establishment, to July, 1793, was 3360. The usual number of resident students, is from 200 to 250. A supreme court is held here, the last Tuesday in October, and a court of common pleas the last Tuesday in November. It is 350 miles from Philadelphia. Long. 70–– 45′ W., lat. 42–– 25′ N.

CAMBRIDGE, the chief town of Dorchester county, eastern shore of Maryland. It is situ- ated on the south side of Choptank river, about fifteen miles from its mouth ; the river is here nearly two miles wide. It contains about fifty houses, a church, and 300 inhabitants. The situation of the town is healthy and agreeable. It is eighteen miles north-west by west of Vienna, thirty-seven south of Easton, and 152 S. S. W. of Philadelphia. Long. 0–– 59′ W., lat. 38–– 34′ N.

CAMBRIDGE MANUSCRIPT, a copy of the Gospels and Acts of the Apostles in Greek and Latin. Beza found it in the monastery of Ire- naeus at Lyons in 1562, and gave it to the university of Cambridge in 1582. It is a quarto, and written on vellum ; sixty-six leaves of it are much torn and mutilated, and ten of these are supplied by a later transcriber. Beza conjectures that this MS. might have been written so early as the time of Iraeneus. Wetstein apprehends that it either returned or was first brought from Egypt into France ; that it is the same copy which Druthmar, an

ancient expositor, who lived about A. D. 840, had seen, and which, he observes,; was ascribed to St. Hilary ; and that It. Stephens had given a particular account of it in his edition of the New Testament in 1550. It is sometimes called Stevens's Second Manu- script. Mill agrees with F. Simon, that it was written in the western part of the world by a Latin scribe, and that it is to a great degree

interpolated and corrupted : he observes, that it agiees so much with the Latin Vulgate as to afford reason for concluding that it was corrected or formed upon a corrupt and faulty copy of that translation. From this and the Clermont copy of St. Paul's epistles, Beza published his larger Annotations in 1582.

CAMBRIDGESHIRE is an inland county of England, about fifty miles long and twenty- five miles broad, bounded on the north by Lin- colnshire, on the east by Norfolk and Suffolk, on the south by Essex and Herts, and on the west by Bedford and Huntingdonshire. It was in- cluded in the ancient territory of the Iceni, and after the Roman conquest was the third province of Flavia Caesariensis. During the Saxon hep- tarchy it belonged to the kingdom of the East Angles. Its hundreds are Armingford, Ches- terton, Cheveley, Chilford, Fiendish, Longstow, Northstow, Papworth, Redfield, Staine, Staplow, Triplow, Wetherley, Whittlesford, and the Isle of Ely ; the latter being under a palatinate ju- risdiction pertaining to the see of Ely. In this see is the whole county, with the exception of a small part belonging to that of Norwich, Cambridgeshire contains the city of Ely, nine market towns, viz. Cambridge, Caxton, Linton, March, Newmarket, Soham, Thorney, Wisbeach, and Royston, and 164 parishes.

The county is in general flat and little diver- sified with engaging prospects ; the whole of its northern part is occupied more or less by the fens of the Isle of Ely, penetrated in all di- rections by drains, and in various stages of re- demption from their former swampy state. Here is the great Bedford Level, as it is called, con- taining 400,000 acres of land ; and the towns and villages that are scattered over the surface of the country present their spires and buildings like the towns of a flat island on the ocean, or of an oasis in the African desert ; and are to be seen for many miles around. The climate is very different in different parts ; in the neigh- bourhood of the fens it is considered unhealthy and aguish, in the southern parts of the county it is dry and more wholesome. But the most foggy parts have undergone a great melioration of climate of late years, and the same persevering efforts that have redeemed a most promising soil from waste, and given to it the abundant wheat- crops with which it is now crowned, have dissi- pated -the damps and vapors that generated disease. The only rivers of this county are the Cam or Granta, the Nene and the Ouse. The Cambridgeshire canal begins with the Ouse at Harrimere, and runs to

Cambridge; theWisbeach canal joins the Wisbeach river at the old sluice of that town, and opens a communication between this county and Norfolk and Suffolk. The Gogmagog hills, the highest in the county, begin about four miles to the south-east of Cambridge, and form one of the terminations of the range of chalk hills that commence in the south-west of England. Along the district from hence to Newmarket the country is bleak, and inhabited but thinly. Chalk, chinch, as it is called, silt, gault, sand, peat, and gravel, are the substrata of this county. The chinch is a species of lime-

CAM

stone. The gault is a blue clay, pertaining to has been much improved by the present earl

the fenny districts ; where also the silt, a fine It is three miles from Caxton. sea-sand, and peat, are found in great abund- CAMBYSES, king of Persia, son of Cyrus

ance. the Great. He conquered Egypt, and, after

Cambridgeshire is chiefly an arable county, having been beaten in some skirmish with the

Wheat and oats are grown largely in the northern, Ethiopians, he found, on returning to Memphis,

and barley in the southern, parts. Coleseed the Egyptians rejoicing on having found their god

also occupies a considerable portion, it has been Apis, which so provoked him, that he killed

said a fourth, of the fen lands. It is generally their god, and plundered their temples. When

eaten green with sheep. Hemp, flax, mustard- he attacked Pelusium, he placed at the head of

seed, and osiers are also grown largely in this district. The turf is very valuable in some parts ;

his army a number of cats and dogs ; and the Egyptians refusing to kill animals which they

and the garden produce on the borders of the reverenced as divinities,

became an easy prey, fens is abundant. The breeds of sheep are the Cambyses afterwards sent an army of 50,000 Norfolk, west country, and Cambridgeshire ; and men to destroy Jupiter Ammon's temple, but it a cross breed of the Leicester and Lincoln. The was overwhelmed by the sands. He next re- farrners also pride them&elves much on their large solved to attack the Carthaginians and ./Ethiopians. vi ††† i ††. 1 jje tilled his brother Smerdis from mere sus-

picion, and flayed alive a partial judge, whose skin he nailed on the judgment seat, and ap- pointed his son to succeed him, telling him to remember where he sat. He died of a small

Cambridgeshire is:.Jittle distinguished by its manufactures. Oil-mills, for crushing seed and making oil-cake, were once sour es of consider able trade at Wisbeach, and still are found at Whittlesford and Sawston ; at the last place is also a respectable paper manufactory. Malt is

wound he had given himself with his sword as he mounted on horseback, A.C. 521.; and

made in considerable quantities in the north-west the Egyptians observed, that it was the same of the county, and a coarse pottery, together with place on which he had wounded their god Apis, excellent white bricks, at Ely, Chatteris, and and that therefore he was visited by the hand of

Cambridge.

the gods. A short time before his death, having

One of the oldest and most complete specimens been reproved by one of his courtiers in the

of Saxon architecture in this kingdom is found most delicate manner for his intemperance, he

in the conventual church of Ely. It was erected shot the censurer's son to the heart with an arrow,

in king Edgar's reign. The two transepts of and then asked the father if he had not a steady

the cathedral are celebrated specimens of the hand, though intoxicated.

massy Norman style ; the whole of that edifice, indeed, is very interesting to the antiquary. See

CAMCHATKA. See KAMTSCHATKA. CAMDEN, a county of the United States,

ELY. Near Chesterton are vestiges of a square in Edenton district, North Carolina ; bounded Roman camp, called Harborough, or Arbury. north by the state of Virginia, south-west and Three parts of the vallum remain, and enclose west by Pasquotank river, which separates it nearly six acres of ground, in which various from Pasquotank county, and east by Currituck. coins have been discovered ; one of which had The chief town is Jonesborough- the head of Rome on one side, and Castor and CAMDEN, a district of South Carolina, Pollux on horseback on the other. About four bounded on the north-east by Cheraws, south- miles to the east of Cambridge, on the Gog- east by George-town, north by the state of North magog hills, are the remains of a circular fort or Carolina, north-west by Pinkney,' west by camp, which has three ramparts and two grafts. Ninety-Six, south-west by Orangeburgh, and It is about 246 paces in diameter, enclosing south by Charleston district. It is eighty-two thirteen acres and a half of land. Some anti- miles from north to south, and sixty from east to quaries have supposed that it was erected by west, and is divided into the following counties,

- _ .

the British as a check to the Romans at Har- borough. Southward is a Roman highway.

viz. Fairfield, Richland, Lancaster, Kershaw, Clermont, Clarendon, and Salem. It is watered

When a road was making from March to by the Catabaw, which passes nearly through the Wisbeach, in 1730, three urns were discovered middle of it. In the north part of the district full of burnt bones and ashes, and a pot con- are the Catabaw Indians ; the only tribe which taining 300 pieces of silver coin, of all the em- resides in the state. See CATABAW. The upper perors from Vespasian to Antoninus Pius.

No county of England has exhibited more decided improvements in its general appearance

part of this district is diversified with hills, the soil in general rich, and the country well wa- tered. It produces good crops of Indian corn,

than some parts of the county of Cambridge, of wheat, rye, barley, tobacco, cotton, &c. late years : none, on the other hand, has expe- CAMDEN, a post town of South Carolina, and rienced more fluctuations in the value of pro- capital of the district. It is situated in Kershaw perty, and

the rise and fall of agricultural county, on the east side of the Wateree, 120 produce. The only mansion in the county worth miles north by west of Charleston. It has a particular notice is Wimpole, the seat of the court house, jail, and Episcopalian church. It earl of Ilardwicke. It is a spacious brick is situated on a large navigable river, and structure, with noble wings, that have been added carries on a brisk trade with the back counties since its erection ; the east wing is connected A district court is held here on the 26th of April with the offices, and the west with a large green- and November. A battle was fought at this hou?e. The entrance is by a double flight of town on the 16th August, 1780, between gen steps. , The interior of the fabric is elegant, and ral Gates and lord Cornwallis, in which the Ame-*

CAM

ricarw were defeated. Another was fought, on the 25th April, 1791, between lord Rawdon and general Greene, who was encamped within a mile of the town. The Americans had 126 killed, and 100 taken prisoners. The English had about 100 killed. The 13th of May following the British evacuated and burnt the town. See AMERICA. Jt is thirty-five miles north-east of Columbia, and 626 south-west by south of Phil- adelphia. Lon. 5►► 23′ W., lat. 34►► 17″ N.

CAMDKN (William), the great antiquary, was born in London in 1551. His father was a na- tive of Litch field, and his mother was of the ancient family of Curwens in Cumberland. He was educated at Christ's hospital, and St. Paul's school ; and from thence sent, in 1566, to Oxford, and entered servitor of Magdalen College ; but, being disappointed of a demy's place, he re- moved to Broadgate hall, and two years after, to Christ Church, where he was supported by his friend Dr. Thornton. About this time he was a candidate for the fellowship of All-souls College, but lost it by the intrigues of the Popish party. In 1570, lie supplicated the regents of the university to be admitted B. A. but in this also he miscarried. The following year he came to London, where he prosecuted his favorite study of antiquity, under Dr. Goodman, dean of Westminster, by whose interest he was made second master of Westminster school, in 1575. Between his leaving the university and this period, he took several journeys to different parts of England, to collect materials for his Britannia, in which he was now deeply engaged. In 1581 he became intimately acquainted with the learned president Brisson, who was then in England; and in 1586 he published the first edition gf his Britannia, dedicated to lord Bur- leigh; and such was its reception, that eight editions of it were published in four years,

and another in 1594. The title is Britannia, sive Florentissimorum Regnorum Anglite, Scotias, Ilibernioe, et Insularum Adjacentium, ex intima Antiquitute, Chorographica Descriptio. In 1593 he succeeded to the head master of Westminster school. In 1597 he published his Greek gram- mar, and was appointed Clarencieux king at arms. In 1600 he made a tour as far as Car- lisle, accompanied by his friend, Mr. (afterwards Sir Robert) Cotton. In 1600 he began his cor- respondence with De Thou, which continued to the death of that historian. In 1607 he pub- lished his last edition of the Britannia, which is that from which the English translations have been made; and in 1608 he began to digest his materials for a history of the reign of queen Elizabeth. In 1609, after recovering from a dangerous illness, he retired to Chislehurst in Kent, where he continued to spend the summer during the remainder of his life. The first part of his annals of the queen did not appear till 1615, and he determined that the second volume should not appear till after his death. The reign of queen Elizabeth was so recent when his first volume was published, that many of the persons concerned, or their dependents, were still living. It is no wonder, therefore, lhat the historian should offend those whose ac- tions would not bear enquiry. Some of his

enemies were clamorous and troublesome; which determined him not to publish the second volume during his life ; but he deposited one copy in the Cottonian library, and transmitted another to his friend Dupuy at Paris. It was first printed at Leyden in 1625. The MS. was entirely finished in 1617 ; and from that time he was principally employed in collecting more materials for the further improvement of his Britannia. In 1622, being now upwards of seventy, and finding his health declining, he de- termined to execute his design of founding an history lecture in the university of Oxford. His deed of gift was accordingly transmitted by his friend Mr. Heather, to Mr. Wheare, who was, by himself, appointed his first professor. He died at Chislehurst, in 1623, in the seventy third year of his age ; and was buried in West- minster Abbey, where a monument of white marble was erected to his memory.

CAM'EL, ra. ~\ Arab, quinel, boogume- CAM'EL-BACKED, {Ion, gimel; Heb. gamal, CAM'EL-DIUVER. f CAMEL'OPARD. J large animal ; common in Asia and Africa. The one sort is large, and full of flesh, and fit to carry burdens of a thousand pounds weight, having one bunch upon its back. The other have two bundle's upon their backs, like a natural saddle, and are fit either for bur- dens, or men to ride on.}_ A third kind is leaner, and of a smaller size, called dromedaries, because of their swiftness, which are generally used for riding by men of quality.- The camelopard (Lat. camtftus zn&pardus) is an Abyssinian ani- mal, taller than an elephant, but not so thick. He is so named, because he has a neck and head like a camel ; he is spotted like a pard, but his spots are white upon a red ground.

The Ita- lians call him giraffa. See CAMELUS.

Woo to you scribis and fui-isces ypocritis, ??? blyndc lederis, cleiisynge a gnattc, but swolowynge a camel.

WickUff't New Test. Matt. 23. Camclt have large solid feet, but not hard. Camel will continue ten or twelve days without eating or drinking, and keep water a long time in their sto- mach, for their refreshment. Calmet.*

In silent horrour o'er the boundless waste, The driver, Hassan, with his camels past: One cruise of water on his back he bore. And his light scrip contained a scanty store ; A fan of painted feathers in his hand To guard his shaded face from scorching sand.

Collins' Eclogue, ii. Patient of thirst and toil, Son of the desart ! even the camel feels, Shot through his withered heart, the fiery blast.

Tfumison.

The stomach of the camel is well known to contain large quantities of water, and to retain it un- changed for a considerable length of time. This properly qualifies it for living in the desert.

Paley's Natural TJteology.

CAMEL, in mechanics, a kind of machine used in Holland for lifting ships, in order to bring them over the Pampus, at the mouth of the river Y, where the shallowness of the water hinders large ships from passing. It Is also used in other places, particularly at the dock of Petersburgh, the vessels built there being, in

their passage to Cronstradt, lifted over the bar by means of camels. Theˆe machines were originally invented by the celebrated De Witt, and were introduced into Russia by Peter the Great. A camel is composed of two separate parts, whose outsides are perpendicular, and whose insides are concave, shaped so as to em- brace the hull of a ship on both sides. Each part has a small cabin with sixteen pumps and ten plugs, and contains twenty men. They are embraced to the ship underneath by means of cables, and entirely enclose its sides and bottom ; being then towed to the bar, the plugs are opened, and the water admitted until the camel sinks with the ship and runs a-ground. Then, the water being pumped out, the camel rises, lifts up the vessel, and the whole is towed over the bar. This is on the same principle with the CAISSON, which see.

CAMEL, in zoology. See CAMELUS.

CAMELEON. See CHAMELEON, and LA-

CERTA.

CAMELEON MINERAL. When pure potash and black oxide of manganese are fused together in a crucible, a compound is formed, whose solu- tion in water, at first green, passes spontaneously through the whole series of colored rays to the red. From this latter tint, the solution may be made to retrograde in color to the original green, by the addition of potash ; or it may be ren- dered altogether colorless, by adding either sul- phurous acid or chlorine to the solution. It is generally regarded as a manganeseate of potash, and the various phenomena attributed to the combination of oxygen.

CAMELFORD, a borough town of Cornwall, seated on the Camel, consisting of about 100 houses, badly built ; but the streets are broad and well paved. It has a great market for yarn on Fri- day. It was here that king Arthur was mortally wounded by his nephew Mordred, who was killed on the spot. It was made a borough, by char- ter from Richard, duke of Cornwall, when king of the Romans, who granted it a market and fair, and it was incorporated by Charles I.

CAMELLIA, in botany, a genus of the poly- andria order, and monadelphia class of plants; natural order thirty-seventh, columniferae : CAL. imbricated and polyphyllous, with the interior leaves larger than the exterior. There are seve- ral species, natives of China and Japan. The principal is C. Japonica, which Thunburg, in his Flora Japonica, describes as growing every where in the groves and gardens of Japan, where it becomes a prodigiously large and tall tree, highly esteemed by the natives for the ele- gance of its large and very variable blossoms, and its evergreen leaves. It is there found with sin- gle and double flowers, white, red, and purple, produced from April to October. With us, the camellia is generally treated as a stove plant, and propagated by layers.

CAMELOPARDALIS, in zoology, camelo- pard or giraffe, a genus of the class mam- malia, order pecora. The essential generic characters are, that the horns are simple, and terminated by a tuft of black hair ; lower fore- teeth eight, broad and thin ; body whitish, mixed with tawny, and speckled with rusty spots.

The only species is C. giraffa. The giraffa in- habits Ethiopia, the Cape of Good Hope, and is sometimes seen at Sennaar. It feeds on leaves and shoots of trees, and it sometimes grazes, b t then its fore legs are stretched

asunder, to allow its mouth to reach the ground ; and when about to lie down, it kneels like the camel. Its fore feet are longer than the hind ones, and it is in front one of the tallest and most elegant animals with which we are acquainted. It is generally met with in flocks of fifteen or twenty, which on being alarmed fly in every direction. CAM'ELOT, n. s. ˆ From camel. A kind CAM'LET, > of stuff originally made

CAM'ELIN. j by a mixture of silk and

camels' hair; it is now made with wool and silk.

And anon Dame Abstinence strelned Toke on a robe of cameiine, And gan her gratche as a begine.

Chaucer's Canterbury Tales.

This habit was not of camels' skin, nor any coarse texture of its hair, but rather some finer weave of camelot, grograin, or the like ; inasmuch as these staffs are supposed to be made of the hair of that animal.

Browne's Vulgar Errours.

Meantime the pastor shears their hoary beards, And eases of their hair the loaden herds : Their camelots warm in tents the soldier bold, And shield the shivering mariner from cold. Dryden.

Now in thy trunk thy D'Oily habit fold, The silken drugget ill can fence the cold, The freezes spongy nap is soaked with rain. And showers soon soak the camlet's cockled grain.

Gay.

CAMELOT, or CHAMBLET. See CAMLET.

CAMELUS, the CAMEL, in zoology, SoJ, ca/tijXoc, a genus of quadrupeds belonging to the order of pecora. The characters t of the camel are these : it has no horns ; it lias six fore- teeth in the under jaw ; the laniarii are wide set, three in the upper, and two in the lower jaw ; and there is a fissure in the upper lip, resembling a cleft in the lip of a hare. There are seven species. 1. Camelus bactrianus, the bactrian camel, has two bunches on the back, but is in ali other respects like the dromedarius, of which it seems to be a mere variety, rather than a dif- ferent species; and is equally adapted for riding or carrying loads. It is still found wild in the deserts of the temperate parts of Asia, particu- larly in those between China and India. These are larger and more generous than the domesti- cated race. The Bactrian camel is very common in Asia, is extremely hardy, and in great

use among the Tartars and Mongols, as a beast of burden, from the Caspian to China. It bears even so severe a climate as that of Siberia, being found about the "lake Baikal, where the Burats and Mongols keep great numbers. They are far less than those of Western Tartary. Here they live during winter on willows and other trees, and become very lean by this diet. They lose their hair in April, and go naked all May, amidst the frosts of that severe climate. There are several varieties of this species. The Turkman is the largest and strongest. The Arabian is hardy. The common sort travel about thirty miles a day. In Arabia they are trained for running-matches : and in many place for car-*

rying couriers, who can go above 100 miles a day on them for nine days together, over burning deserts, uninhabitable by any living creature. The African camels are the most hardy, having ..nore distant and more dreadful deserts to pass over than any of the others, from Numidia to Ethiopia. In Western Tartary there is a white variety, very scarce, and sacred to the idols and priests. The Chinese have a swift variety, which they call by the expressive name of Fong-Kyo- Fo, or camels with feet of the wind. Fat drawn from them, is esteemed in many dis- orders, such as ulcers, numbness, and con- sumptions. This species of camel is rare in Arabia, and only kept by great men. Camels have constituted the riches of Arabia from the time of Job. The patriarch reckoned 6000 camels among his pastoral treasures, and the modern Arabs estimate their wealth by the number of these animals ; by them the whole commerce is carred on through burning tracts, impassable but by beasts which Providence formed expressly for them. Their soles are adapted to the sands, their toughness and spungy softness preventing them from cracking. Their great powers of abstaining from drinking enable them to pass over unwatered tracts for many days, without requiring the least liquid ; and their patience under hunger is such that they will travel many days fed only with a few dates, or some small balls of bean or barley-meal, or on the miserable thorny plants they meet with in the deserts. The Arabians regard the camel as a present from Heaven, a sacred animal, without whose assistance they could neither carry on trade, nor travel. Camel's milk is their common food. They also eat its flesh, that of the young camel being reckoned highly savory. Of the hair of those animals, which is fine and soft, and which is completely renewed every year, the Arabians make stuffs for clothes, and other fur-niture. With their camels, they not only want nothing, but have nothing to fear. In one day, they can perform a journey of fifty leagues into the desert, which cuts off every approach from their enemies. With a view to his predatory expeditions, the Arab instructs, rears, and ex- ercises his camels.

A few days after their birth, he folds their limbs under their belly, forces them to remain on the ground, and, in this situation, loads them with a pretty heavy weight, which is never removed but for the purpose of replacing a greater. Instead of allowing them to feed at pleasure, and to drink when they are dry, he begins with regulating their meals, and makes them gradually travel long journeys, diminishing, at the same time, the quantity of their aliment. \Vhen they acquire some strength, they are trained to the course. He excites their emula- tion by the example of horses, and, in time, renders them more robust. After he is certain of the strength, fleetness, and sobriety of his camels, he loads them with his own and their food, sets off with them, reaches unperceived the confines of the desert, robs the first pas- sengers he meets, pillages the solitary houses, joads his camels with the booty, and, if pur- sued, accelerates his retreat. On these oc- casions he unfolds his own talents and those Vol.. V.

of the camels. He mounts one of the fleetest, conducts the troop, and makes them travel night and day, almost without either stopping, eating, or drinking ; and, in this manner, he easily performs a journey of 900 miles in eight days. During this period of fatigue, they are perpetually loaded, and he allows them each day, one hour only of repose, and a ball of paste. They often run thus nine or ten days, without drink ; and when, by chance, there is a pool at some distance, they scent the water half a league off. Thirst makes them double their pace, and they drink as much at once as serves them for the future as well as the past; for their journeys often last several weeks, and their absti- nence continues an equal time. Of all carriages, that by camels is the cheapest and most expe- ditious. The merchants and other passengers unite in a caravan, to prevent the insults and robberies of the Arabs. These caravans are often very numerous, and are always composed of more camels than men. Each camel is loaded in proportion to his strength ; and, when overloaded, he refuses to march, and continues lying till his burden is lightened. The large camels generally carry 1000 or 1200 pounds weight, and the smallest from 600 to 700. In these commercial travels, their march is not has- tened ; as the route is often 700 or 800 leagues, their motions and journeys are regulated. They walk only, and perform from about ten to twelve leagues each day. Every night they are un~ loaded, and allowed to pasture at freedom. When in a rich country, or fertile meadow, they eat, in less than an hour, as much as serves them to ruminate the whole night, and to nourish them twenty-four hours. But they seldom meet with such pastures ; neither is this delicate food ne- cessary for them. They even seem to prefer wormwood, thistles, nettles, broom cassia, and other prickly vegetables, to the softest herbage. As long as they find plants to browse they easily dispense with drink. This facility of abstaining long from drink proceeds not, however, from habit alone, but is rather an effect of their struc- ture. Independent of the four

stomachs, which are common to ruminating animals, the camels have a fifth bag, which serves them as a reser- voir for water. This fifth stomach is peculiar to the camel. It is so large as to contain a vast quantity of fluid, where it remains without cor- rupting, or mixing with other aliments. When the animal is pressed with thirst, and has oc- casion for water to macerate his dry food in ru- minating, he makes part of this water mount into his paunch, or even as high as the cesopha- gus, by a simple contraction of certain muscles. It is by this singular construction that the camel is enabled to pass several days without drinking, and to take at a time a prodigious quantity of water. Travellers, when much oppressed with drought, are sometimes obliged to kill their camels in order to have a supply of drink from these reservoirs. These inoffensive creatures must suffer much ; for they utter the most la- mentable cries, especially when overloaded. But though perpetually oppressed, their fortitude is equal to their docility. At the first signal, they bend their knees and lie down to be loaded.

As soon as they are loaded, they rise sponta- neously, and without any assistance. One of them is mounted by their conductor, who goes before, and regulates the march of all the fol- lowers. They require neither whip nor spur. But, when they begin to be tired, their courage is said to be supported, or rather their fatigue is charmed, by singing, or by the sound of some instrument. Their conductors relieve each other in singing; and, when they want to prolong the journey, they give the animals but one hour's rest, after which, resuming their song, they pro- ceed on their march for several hours more, and the singing is continued till they arrive at another resting place, when the camels again lie down ; and their loads, by unloosing the ropes, are al- lowed to glide off on each side of the animals. Thus they sleep on their bellies in the middle of their baggage, which, next morning, is fixed on their backs with equal quickness and facility as it had been detached the evening before. One male only is left for eight or ten females ; and the laboring camels a;e generally geldings. They are unquestionably weaker than unmuti- lated males ; but are more tractable, and always ready for service ; while the former are not only unmanageable, but almost furious, during the rutting season, which lasts forty days, and returns annually in the spring. They then foam con- tinually, and one or two red vesicles, as large as a hog's bladder, issue from their mouths. In this season they eat little, and attack and bite animals, and even their own masters, to whom at all other times they are very submissive. The time of gestation is near twelve months ; and like all large quadrupeds, the female brings forth

only one at a birth. Her milk is copious and thick ; and when mixed with a large quantity of water, affords an excellent nourishment to men. The females are not obliged to labor, but are al- lowed to pasture and produce at full liberty. The advantage derived from their produce and their milk is perhaps superior to what could be drawn from their working. In some places, however, most of the females are cas- trated, to fit them for labor; and it is alle- ged, that this operation, instead of diminishing augments their vigor and plumpness. In gene- ral, the fatter camels are, the more they are capa- ble of enduring fatigue. During long journeys, in\vhich their conductor is obliged to husband their food, and when they often suffer much hunger and thirst, their bunches gradually dimi- nish, and become so flat, that the place where they were is only perceptible by the length of the hair, which is always longer on these parts than on the rest of the back. The meagreness of the body augments in proportion as the bunches decrease. The Moors, who transport all articles of mer- chandise from Barbary and Numidia, as far as Ethiopia, set out with their camels well laden, which are very fat and vigorous; and bring back the same animals so meagre that they commonly are sold at a low price to the Arabs of the desert, 10 be again fattened. Ancient authors assert, that camels are in a condition for propagating at the age of three years ; but this is doubtful, for, in three years, they have not acquired one-half their growth. The young camel sucks twelve months, but, when meant to be trained, to render him

strong and robust in the chase, he is allowed to suck and pasture at freedom during the first year, and is not loaded or made to perform any labor till he is four year old. He generally lives forty and sometimes fifty years, which duration of life is proportioned to the time of his growth. Considering, under one point of view, all the qualities of this animal, and all the advantages derived from him, it must be acknowleged, thai he is the most useful creature subjected to the service of man. Gold and silk constitute not the true riches of the East. The camel is the genuine treasure of Asia. 2. Camelus dromedarius, the Arabian camel, with one bunch or protuberance on the back. It has four callous protuberances on the fore legs, and two on the hind ones. This species is common in Africa, and the warmer parts of Asia. It is a common beast of burdjen in Egypt, and along the countries which border on the Mediterranean Sea ; in Morocco, Sahara, or the Desert, and Ethiopia ; but nowhere south of those kingdoms. In Asia it is equally com- mon in Turkey or Arabia ; but scarcely seen farther north than Persia, being too tender to bear a more severe climate. India is destitute of this animal. 3. Camelus glama, or llama, the South American camel sheep, has an almost even black, small head, fine black eyes, and very long neck bending much, and very protuberant near the junction with the body ; in a tame state, with smooth short hair ; in a wild

state, with long coarse hair, white, gray, and russet, disposed in spots ; with a black line from the head along the top of the back to the tail, and belly white. The tail is short; the height from four to four feet and a half; the length from the neck to the tail, six feet. In general the shape exactly re- sembles a camel, only it wants the dorsal bunch. It is the camel of Peru and Chili ; and, before the arrival of the Spaniards, was the only beast of burden known to the Indians. It is very mild, gentle, and tractable. Before the introduction of mules, they were used by the Indians to plough the land : at present they serve to carry burdens of about lOOlbs. They lie down to the burden ; and when wearied no blows can pro- voke them to go on, and nothing but caresses can make them arise. Their flesh is eaten, and is said to be as good as mutton. The wool has a strong disagreeable scent. They are very sure- footed, and are, therefore, used to carry the Pe- ruvian ores over the ruggedest hills and narrowest paths of the Andes. They inhabit that vast chain of mountains through their whole length to the straits of Magellan ; but, except where these hills approach the sea, as in Patagonia, never appear on the coasts. Like the camel, they have powers of abstaining long from drink, sometimes for four or five days ; like that animal, their food is coarse. In a wild state they keep in great herds in the highest and steepest parts of the hills ; and while they are feeding, one keeps sentry on the pinnacle of some rock : if it perceives the ap- proach of any one it neighs ; the herd take the alarm, and go off with incredible speed. They outrun all dogs : there is no way of killing them but with the gun. They are killed for the sake of their flesh and hair ; for the Indians weave the last into cloth. The huanaco, the arcucanus, and the vicuna, so nearly resemble this ani-

mal, that they by no means merit a separate description.

4. Camelus pacos, or the sheep of Chili, has no bunch on its back. It is covered with a fine va- luable wool, which is of a rose red color on the back of the animal, and white on the belly. They are of the same nature with the llama, in- habit the same places, but are more capable of supporting the rigor of frost and snow; they live in vast herds, are very timid, and exces- sively swift. The Indians take the pacos in a strange manner; they tie cords with bits of cloth or wool hanging on them, about three or four feet from the ground, across the narrow passes of the mountains, then drive those ani- mals towards them, which are so terrified by the flutter of the rags that, huddling together, they give the hunters an opportunity to kill with their slings as many as they please. The tame ones will carry from fifty to seventy-five pounds, but are kept principally for the

sake of the wool and the flesh, the latter of which is exceedingly well tasted.

CAMELUS, in zoology, a species of trichoda, found in vegetable infusions. This is thickish, hairy before, and emarginate on each side in the middle.

CAMELUS, in entomology, a species of scara- bscus; thorax four-homed; shield bicornuted behind ; body black. Inhabits Germany.

CAMEO. See CAMAIEU.

CAMERA JˆEOLIA, a contrivance for blowing the fire for the fusion of ores, without bellows, by means of water falling through a funnel into a close vessel, which sends from it so much air as continually blows the fire if there be the space of another vessel for it to expatiate in by the way, as it there lets fall its humidity. See BLOWING MACHINE.

CAMERA LUCIDA, a contrivance of Dr. Hook for making the image of any thing appear on a wall in a light room, either by day or night. Opposite to the place or wall where the appear- ance is to be, make a hole of at least a foot in diameter, or if there be a high window with a casement opened. At a convenient distance, to prevent its being perceived by the company in the room, place the object or picture intended to be represented, but in an inverted situation. If the picture be transparent, reflect the sun's rays by means of a looking-glass, so as that they may pass through it towards the place of representa- tion ; and to prevent any rays from passing aside it, let the picture be encompassed with some board or cloth. If the object be a statue, or a living creature, it must be much enlightened by casting the sun's rays on it, either by reflection, refraction, or both. Between this object and the place of representation put a broad convex glass, ground to such a convexity as that it may repre- sent the object distinctly in such place. The nearer this is situated to the object the more will the image be magnified on the wall, and the fur- ther the less ; such diversity depending on the difference of the spheres of the glasses. If the object cannot be conveniently inverted, there must be two large glasses of proper spheres, si- tuated at suitable distances, easily found by trial, to make the representations erect. The whole

apparatus of object-glasses, &c. with the person employed in the management of them, are to be placed without the window or hole, so that they may not be perceived by the spectators in the room, and the operation itself will be easily per- formed.

CAMERA LUCIDA is also the name of an instru- ment for taking views, invented by Dr. Wollas- ton in 1807. We shall copy his own description of

this ingenious invention.

‘ While I look directly down at a sheet of paper on my table, if I hold between my eye and the paper a piece of plane glass, inclined from me downwards at an angle of 45►►, I see by re- flection the view that is before me, in the same direction that I see my paper through the glass. I might then take a sketch of it; but the position of the object would be reversed.

To obtain a direct view it is necessary to have two reflections. The transparent glass must for this purpose be inclined to the perpendicular line of sight only the half of 45►►, that it may re- flect tˆ~- view a second time from a piece of looking-glass placed beneath it, and inclined up- wards at an equal angle. The objects now ap- pear as if seen through the paper in the same place as before ; but they are direct instead of being inverted, and they may be discerned in this manner sufficiently well for determining the prin- cipal positions.

The pencil, however, and any object which it is to trace, cannot both be seen distinctly in the same state of the eye, on account of the difference of their distances; and the efforts of successive adaptation of the eye, to one or the other, would become painful if frequently repeated. In order to remedy this inconvenience, the paper and pencil may be viewed through a convex lens of such a focus as to require no more effort than is necessary for seeing the distant objects distinctly. These will then appear to correspond with the paper in distance as well as direction, and may be drawn with facility, and with any desired de- gree of precision.

This arrangement of glasses will probably be best understood from inspection of plate II., fig. 1., a b is the transparent glass ; b c the lower re- flector ; 6 d a convex lens (of twelve inches focus) ; e the position of the eye ; and fg h e the course of the rays.

In some cases a different construction will be preferable. Those eyes, which without assistance are adapted to seeing near objects alone, will not admit the use of a convex glass ; but will, on the contrary, require one that is concave to be placed in front, to render the distant objects distinct. The frame for a glass of this construction is repre- sented at i k, fig. 3, turning upon the same hinge at h, with a convex glass in the frame I ?n, and moving in such a manner, that either of the glasses may be turned alone into its place, as may be necessary to suit an eye that is long or short sighted. Those persons, however, whose sight is nearly perfect, may at pleasure use either of the glasses.

The instrument represented in that figure dif- fers, moreover, in other

respects from the fore- going, which I have chosen to describe first, be- cause the action of the reflectors there employed

would be more generally understood. But those who are conversant with the science of optics will perceive the advantage that may be derived in this instance from prismatic reflection ; for when a ray of light has entered a solid piece of glass, and falls from within upon any surface, at an inclination of only twenty-two or twenty-three degrees, as above supposed, the refractive power of the glass is such as to suffer none of that light to pass out, and the surface becomes in this case the most brilliant reflector that can be employed.

Fig. 2. represents the section of a solid pris- matic piece of glass, within which both the reflec- tions requisite are effected at the surfaces ab,bc, in such a manner that the ray fg, after being re- flected first at g, and again at h, arrives at the eye in a direction h e at right angles to f g.

There is another circumstance in this construc- ion necessary to be attended to, and which re- nains to be explained. Where the reflection was >roduced by a piece of plane glass, it is obvious hat any objects behind the glass, if sufficiently lluminated, might be seen through the glass as ###veil as the reflected image. But when the pris- matic reflector is employed, since no light can be transmitted directly through it, the eye must be so placed that only a part of its pupil may be in- tercepted by the edge of the prism, as at e, fig. 2. The distant objects will then be seen by this por- tion of the eye, while the paper and pencil are seen past the edge of the prism by the remainder of the pupil.

In order to avoid the inconvenience that might prise from an unintentional motion of the eye, the relative quantities of light to be received from the object, and from the paper, are regulated by a small hole in a piece of brass, which by moving on a centre at r, fig. 3., is capable of adjustment to every inequality of light that is likely to occur. Since the size of the whole instrument, from being so near the eye, does not require to be large, I have, on many accounts, preferred the smallest size that could be executed with correct- ness, and have had it constructed on such a scale, that the lenses are only three-fourths of an inch in diameter.

Though the original design and principal use of this instrument is to facilitate the delineation of objects in true perspective, yet this is by no

means the sole purpose to which it is adapted; for the same arrangement of reflectors may be employed with equal advantage for copying what has been already drawn, and may thus assist a learner in acquiring at least a correct outline of any subject.

For this purpose, the drawing to be copied should be placed as nearly as may be at the same distance before the instrument that the paper is beneath the eye-hole ; for in that case the size will be the same, and no lens will be necessary, either to the object or to the pencil.

By a proper use of the same instrument, every purpose of the pentagraph may also be answered, as a painting may be reduced in any proportion required, by placing it at a distance in due pro- portion, greater than that of the paper from the instrument. In this case a lens becomes requi- site for enabling the .eye to see at two unequal distances with equal distinctness ; and in order

that one lens may suit for all these purposes, there is an advantage in carrying the height of the stand according to the proportion in which the reduction is to be effected.

The principles upon which the height of the stem is adjusted will be readily understood by those who are accustomed to optical considera- tions. For as in taking a perspective view, the rays from the paper are rendered parallel, by placing a lens at the distance of its principal focus from the paper, because the rays received from the distant objects are parallel ; so alsn when the object seen by reflection is at so shor1 a distance that the rays received from it are, in a certain degree, divergent, the rays from the paper should be made to have the same degree of divergency, in order that the paper may 1)9 seen distinctly by the same eye ; and for tha purpose, the lens must be placed at a distance less than its principal focus. The stem of the instrument is accordingly marked at certain dis- tances, to which the conjugate foci are in the several proportions of two, three, four, &,c. to one; so that distinct vision may be obtained in all cases, by placing the painting proportionably more distant.

By transposing the convex lens to the front of the instrument, and reversing the proportional distances, the artist might also enlarge his smaller sketches with every desirable degree of correci- ness, and the naturalist might delineate minute objects in any degree magnified.

Since the primary intention of this instrument is already, in some measure, answered by the camera obscura, a comparison will naturally be made between them.

The objections to the camera obscura are,

1st. That it is too large to be carried about with convenience.

The camera lucida is as small and portable as can be wished.

2dly, In the former, all objects that are not situated near the centre of view are more or less distorted.

In this there is no distortion ; so that every line, even the most remote from the centre of view, is as straight as those through the centre.

3dly, In that the field of view does not extend beyond 30►►, or at most 35►► with distinctness.

But in the camera lucida as much as 70►► or 80►► might be included in one view.

It is obvious, that the preceding contrivance may be applied to a telescope, for the purpose of taking sketches of the different objects that may be contained within the field of view; but as it is only a small portion of a landscape, or of any large object, that can be seen at once through a telescope, it would be desirable to have some contrivance by which the objects seen in differem fields ot view, and sketched upon the same piece of paper, might be all connected with each other into one landscape. This, however, can be done only to a certain extent, as will appear from plate II. fig. 4. Let A B be the direction of th<►► telescope, which, when placed upon a suitable stand, can be moved round the axis O in a hori- zontal plane, B b b'; B, the extremity of the eye- tube at which the prism of the camera lucida is fixed ; M N, the paper lying in a horizontal po-

CAMERA.

sition ; and a b, a' b', successive positions of tlie telescope in a plane parallel to M N. Let EF be the field of view of the telescope, when seen on the paper by reflection from the prism ; then the instrument must be so constructed, that when the telescope is in the position a b, and di- rected to the part of the landscape immediately adjacent to that which is contained in the field EF, the field of view FG, when seen by reflec- tion from the prism, must be in contact with E F. When this happens we have B b rz C c, and the angle B F b ►►► E B F the angle subtended by the field of view; but it is obvious, that when the telescope is moved from the position A B into the position ab, its angular motion round O, viz. the angle B O b, is equal to an angle com- prehended by the field of view, that is, to the angle BFE; therefore, in the triangles OB►►>, B F b, we have the angles at O and F equal, and the side B 6 common ; and consequently the side OB is

equal to the side BC. From this it follows, that, in order to have the successive fields of view, EF, FG, G H, all joined to each other, or at their proper relative distances, the distance of the eye from the paper must be equal to its distance from the centre of motion O, round which the telescope revolves. The telescope should therefore be placed upon a stand, so con- structed that the centre of motion, O, may be placed in different positions between the eye- piece and the object-glass ; by which means, the observer may vary the distance of the paper from his eye, according as he wishes to have his draw- ing on a large or a small scale. By the instru- ment, when thus constructed, we are enabled to take a connected panoramic view of any hori- zontal zone of a landscape, whose breadth does not exceed the field of view of the telescope. The objects contained in the different fields of view, will be arranged in a circle whose diameter is equal to the distance of the eye from the centre of motion.

This instrument is admirably fitted for taking a correct outline of the visible horizon, with all the various indentations with which that line is generally broken by the intervention of valleys and mountains. Unless the horizon is extremely and unusually contracted, the field of view of a common telescope will contain a zone which will easily comprehend every depression and eleva- tion ; and even when the place of the observer is embosomed in an amphitheatre of mountains which rise around him with various elevations, the field of view may be enlarged by diminishing the magnifying power of the telescope. For this purpose, the micrometrical telescope, invented by Dr. Brewster, is particularly applicable, as the magnifying power can be increased or dimi- nished without changing any of the lenses; and as the distance between the eye and the centre of motion, O, can be altered, even though the telescope is fixed to its stand. The microme- trical telescope having also the properties of a compound microscope, any long object which cannot be contained in the field of view, in the direction of its length, may be delineated in a

milar manner. This contrivance cannot be ap- plied to the common compound microscope, as it has not a motion round an axis.

The camera lucida of Dr. Wollaston might br fitted up with a horizontal motion, and without the aid of a telescope, so as to delineate one con- tinued zone of a landscape ; but when the objects are small, or at a considerable distance, a tele- scope becomes indispensably necessary. See the Philosophical Magazine, vol. xxvii. p. 343 ; Ni- cholson's Journal, vol. xvii. p. 1., vol. xxiii. p. 372, vol. xxiv. p. 146; and Brewster's Treatise on New Philosophical Instruments, Edinb. 1812, book i. p. 11, book iii. p. 133, and book vi.

CAMERA OBSCURA, Latin, the dark chamber, an optical machine, used in

a darkened chamber, so that the light coming only through a double con- vex glass, objects exposed to day-light, and op- posite to the glass, are represented inverted upon any white matter placed in the focus of the glass. It was invented by Baptista Porta. It affords very diverting spectacles, both by exhibiting images perfectly like their objects, and each clothed in its native colors, and by express- ing, at the same time, all their motions ; which latter no other art can imitate. By means of this instrument, a person unacquainted with de- signing will be able to delineate objects with the greatest accuracy and justness. See OPTICS.

CAM'ERADE, n. s. Lat from camera, a chamber. One that lodges in the same cham- ber ; a bosom companion. By corruption we now use comrade.

Camerades with him, and confederates in his de- sign. Rymer.

GAMER ARIA, in botany : a genus of the monogynia order, and pentandria class of plants ; natural order, thirtieth, contortae : COR. contorta ; two horizontal follicles at the base of the seed- case, and the seeds are inserted into a proper membrane. There are four species ; the princi- pal are 1 C. angustifolia has an irregular shrubby stalk, which rises about eight feet, send- ing out many branches, garnished with very narrow thin leaves, placed opposite, at each joint. The flowers are produced scatteringly at the end of the branches, which are shaped like those of the latifolia, but smaller. It is a native of Jamaica. 2. C. latifolia, a native of the island of Cuba. It rises with a shrubby stalk to ten or twelve feet, dividing into several branches, garnished with roundish pointed leaves placed opposite. The flowers are produced at the end of branches in loose clusters, which have long tubes enlarging gradually upward, and at the top are cut into five segments, broad at the base, but ending in sharp points ; the flower is of a yellow- ish white color. Both these plants abound with an acrid milky juice like the spurge. They are propagated by seeds, which must be procured from the places of their growth. They may also be produced by cuttings planted in a hot-bed during summer : they must have a bark stove for they are very tender, but in warm weather they must have plenty of air.

CAMERARIUS (Joachim), one of the most learned writers of his time, was born in 1500, at Bamberg, in Franconia. He embraced the reformation very early, and formed a close friend- ship with Melancthon, whose life he wrote. On the establishment of a college at Nuremburg?

Camerarius was made professor of belles lettres. He afterwards removed to Leipsic to superin- tend the university, where he died in 1575. He translated into Latin, Herodotus, Demosthenes, Xenophon, Euclid, Homer, Theocritus, Sopho- cles, Lucian, Theodoret, Nicephorus, &c. He published a catalogue of the bishops of the prin- cipal sees; Greek Epistles; Accounts of his Journeys, in Latin verse ; a Commentary on Plautus ; the Lives of Helius Eobanus Hessus, and Philip Melancthon, &c.

CA'MERATED, adj. Lat. cameratus, arched ; roofed slopewise.

CAM'ERATION, n. s. Lat. cameratio ; a vaulting or arching.

CAMERLINGO, denotes the cardinal who governs the ecclesiastical state, and administers justice. It is the most eminent office at the court of Rome, because he is at the head of the trea- sury. During a vacation of the papal chair, the cardinal camerlingo publishes edicts, coins mo- ney, and exerts every other prerogative of a so- vereign prince; he has under him a treasurer- general, auditor-general, and twelve prelates, called clerks of the chamber.

CAMERON (John), one of the most famous divines among the Protestants of France, in the seventeenth century, was bom at Glasgow, in 1580, where he taught the Greek tongue ; and having read lectures upon that language for about a year, travelled, and became professor and minister at Bourdeaux, Sedan, and Saumur, at which last place he broached his doctrine of grace and free will, which was framed by Amy- raut, Cappel, Bochart, Daille, and others of the more learned among the reformed ministers, who judged Calvin's doctrines on these points too harsh. He published, 1. Theological Lectures; 2. Icon Johannis �Cameronis ; and some miscel- laneous pieces. He died in 1625, aged sixty.

CAMERON (Richard), the founder of the Scots Cameronians, was a famous field-preacher, who, refusing to accept the indulgence to tender consciences, granted by king Charles II., think- ing such an acceptance an acknowledgment of the king's supremacy, and that he had before a right to silence them, made a defection from his brethren, and even headed a rebellion, in which he was killed.

CAMERONIANS, a sect in Scotland, who separated from the Presbyterians in 1666, and continued long to hold their religious assemblies in the fields. The Cameronians took their de- nomination from Richard Cameron. They were never entirely reduced till the Revolution, when they voluntarily submitted to king William. The Cameronians adhere rigidly to the form of government established in 1648. They are also called Cargillites, from another of their preach- ers. There are not, it is said, above fourteen or fifteen congregations among them, and those not large.

CAMERONITES, a party of Calvinists in France, who asserted that the will of man is only determined by the practical judgment of the mind ; that the cause of men's doing good or evil proceeds from the knowledge which God infuses into them ; and that God does not move the will physically, but only morally, in virtue

of its dependence on the judgment of the mind They were so named from

professor John Came- ron. They are a sort of mitigated Calvinists, and approach to the opinion of the Arminians.

GAMES, a name given to the small slender rods of cast lead, of which the glaziers make their turned lead. The lead being cast into slender rods of twelve or fourteen inches long each, is called the came ; sometimes also they call each of these rods a came, which, being after- wards drawn through their vice, makes their turned lead.

CAMILLA, queen of the Volsci, daughter of Metablus and Camilla, was educated in the woods, inured to the labors of hunting, and fed upon the milk of mares. Her father devoted her, when young, to the service of Diana. When she was declared queen, she marched at the head of an army, accompanied by three youthful females like herself, to assist Turnus against ./Eneas, where she signalised herself by the num- bers that perished by her hand.

CAMILLA, in entomology, an European species of papilio, the P. rivularis of Scopoli, and P. lucilla of Esper. The wings of this species are indent- eel, black, and glossed with blue, with a white band and spot on each side ; posterior wings beneath at the base silvery and immaculate.

CAMILLA, and CAMILLI, in antiquity, girls and boys who ministered in the sacrifices of the gods; and especially those who attended the flamen dialis, or priest of Jupiter. The word seems borrowed from the language of the ancient Etrurians, where it signified minister, and was changed from casmillus.

CAMILLUS (Furius), an illustrious hero of the Roman republic. He triumphed four times was five times dictator, and was justly honored with the title of the second founder of Rome. Lucius Apuleius, one of the tribunes, prosecuted him to make him give an account of the spoils taken at Veii. Camillus anticipated judgment, and banished himself voluntarily. During his banishment, the Gauls sacked Rome; but instead of rejoicing at the punishment of his ungrateful countrymen, he exerted all his wisdom and bravery to drive away ihe enemy ; and yet kept with the utmost strictness the law of Rome, in refusing to accept the command, which several private persons offered him. The Romans, who were besieged in the Capitol, created him dic- tator, A. A. C. 363; in which office he acted with so much bravery and conduct, that he en- tirely drove the Gauls out of the territories of the commonwealth. He died A. A. C. 385, aged 81. He conquered the Hernici, Volsci, Latini, and Etrurians, and dissuaded his countrymen from their intention of leaving Rome to reside at Veii. When he besieged Falisci, he rejected, with proper indignation, the offers of a school- master, who had betrayed into his hands the sons of the most worthy

citizens.

CAMINA, or YERVA CAM IN A, in botany, an American herb, the same with what is otherwise called Paraguay tea, or yerva conpallo. See ILEX.

CAMINISTIQUIA, in geography, a river of Upper Canada, which discharges itself into the lake Superior, thirty miles east of the Grand Portage.

CAMION, in the military art, a small cart with three wheels, for carrying pullets, &c. CAMISA'DO, n.) From camisa, a shirt. A CAM'ISATED, adj.] nocturnal assault, wherein the soldiers wear shirts over their armour, to know their own company from the enemy, lest they should in the dark kill of their own com- pany instead of the enemy.

For I this day will lead the forlorn hope, The camisado shall be given by me.

Old Play. Four Prentices of London.

They had appointed the same night, whose dark- ness would have encreased the fear, to have given a camisado upon the English. Hfiyward.

CAMISARDS, a name given by the French to the Calvinists of the Cevennes, who formed a league, and took up arms in their own defence in 1688.

CAMLET, or CAMBLF.T, a kind of stuff made of goats' hair, with wool or silk : in some, the warp is silk and wool twisted together, and the woof hair. The true, or oriental camlet is made of the pure hair of a sort of goat, frequent about Angora; all the inhabitants whereof are employed in the manufacture and commerce of camlets. Mention is made in writers of the middle age, of stuffs made of camels' hair, under the denomi- nations of cameletum and camelinum, whence probably the origin of the term ; but these are represented as strangely coarse, rough, and prickly, and seem to have been chiefly used among the monks by way of mortification, as the hair shirt of later times. We have no camlets made in Europe of the goats' hair alone; even at Brussels, they add a mixture of woollen thread. England, France, Holland, and Flanders, are the chief places of this manufacture. Brussels ex- ceeds them all in the beauty and quality of its camlets : those of England are reputed the second.

CAMLETS, FIGURED, are those of one color, whereon are stamped various figures, flowers, foliage, &c., by means of hot irons, which are a kind of moulds, passed together with the stuff, under a press. These are chiefly brought from Amiens and Flanders; the commerce of these was anciently much more considerable than at present.

CAMLETS, WATERED, those which, after weaving, receive a certain preparation with wa- ter ; and are afterwards passed under a hot press, which gives them a smoothness and lustre.

CAMLETS, WAVED, are those whereon waves are impressed, as on taobi nets ; by means of a calender, under which they are passed and repassed several times. The manufacturers, &c. of camlets ought to take care they do not acquire any needless plaits ; it being almost impossible to get them out again. This is notorious, even to a proverb: we say, a person is like camlet, he has taken his plait.

GAMMA, a province of Loango in Africa, the inhabitants of which are continually at war with those of Gobbi, another province of Loango. See GOBBI. The weapons they formerly used in heir wars were the short pike, bows and arrows, ord and dagger; but since the Europeans

have become acquainted with that coast, they have supplied them with fire-arms.

CAM'MOCK, n. s. Sax. cammoc; Lat. ononis. An herb ; the same with petty whin, or rest-harrow, as this herb is always called, though the proper name seems to be wrest-harrow, from its strong roots resting the harrow aside.

CAMOENS (Lewis De), a famous Portuguese poet, the honor of whose birth is claimed by dif- ferent cities. But according to N. Antonia and Manuel Correa, his intimate friend, he was born at Lisbon in 1517. His family was of conside- rable note, and originally Spanish. The elder branch of it, according to Castera, intermarried with the blood royal of Portugal. But the younger branch had the superior honor to pro- duce the author of the Lusiad. The misfortunes of the poet began early. In his infancy, Simon Vaz de Camoens, his father, being commander of a vessel, was shipwrecked at Goa, where, with his life, the greatest part of his fortune was lost. His mother, however, Anne de Macedo of Sant- aren, provided for the education of her son Lewis at the university of Coimbra. What he acquired there his works discover; an intimacy with the classics, equal to that of Scaliger, but directed by the taste of a Milton or a Pope. When he left the university, he appeared at court. He was handsome ; had sparkling eyes ; with the finest complexion ; and was a polished scholar ; which, added to

the natural vivacity of his disposition, rendered him an accomplished gentleman. Courts are the scenes of intrigue ; and intrigue was fa- shionable at Lisbon. But the particulars of the amours of Camoens are unknown. Only this appears ; he aspired above his rank, for he was banished from court ; arid in several of his son- nets he ascribes his misfortunes to love. He now retired to his mother's friends at Santaren. Here he renewed his studies, and began his poem on the discovery of India. John III. at this time prepared an armament against Africa. Camoens, tired of his inactive obscure life, went to Ceuta in this expedition, and displayed his valor in se- veral rencounters. In a naval engagement with the Moors in the straits of Gibraltar, in the con- flict of boarding, he was among the foremost, and lost his right eye. Yet neither the hurry of actual service nor the dissipation of the camp could stifle his genius. He continued his Lusiad, and several of his most beautiful sonnets were written in Africa, while, as he expressed it, ' One hand the pen, and one the sword, employed.' The fame of his valor had now reached the court, and he obtained permission to return to Lisbon. But, while he solicited an establishment which he had merited in battle, the malignity of evil tongues was injuriously poured upon him. Though the bloom of his youth was effaced by long residence under the scorching sun-beams of Africa, and disfigured by the loss of an eye, his presence gave uneasiness to some gentlemen of families of the first rank, where he had formerly visited. Jealousy is the characteristic of the Spanish and Portuguese; its resentment knows no bounds, and Camoens now found it prudent to banish himself from his native country. Accordingly, in 1553, he sailed for India, with a resolution never to return. As the ship left the Tagus, he

exclaimed in the words of the sepulchral monu- ment of Scipio Africanus, Ingrata patria, non possedebis ossa mea ! ' Ungrateful country, thou shall not possess my bones '. ' But he knew not what evils in the East would awake the re- membrance of his native fields. When Camoens arrived in India, a fleet was ready to sail to re- venge the king of Cochin on the king of Pimenta. Without any rest on shore after his long voyage, he joined this armament, and in the conquest of the Alagada islands displayed his usual bravery. In 1554 he attended Vasconcello in an expedition to the Red Sea. Here, says Faria, as Camoens had no use for his sword, he employed his pen. Nor was his activity confined to the fleet or camp. He visited Mount Felix, and the adjacent inhos- pitable regions of Africa, which he so strongly pictures in the Lusiad, and in one of his little pieces, where he laments the absence of his mis- tress. When he returned to Goa, he enjoyed a tranquillity which enabled him to bestow his at- tention on his Epic. But

this serenity was in- terrupted, perhaps by his own imprudence. He wrote some satires which gave offence ; and, by order of the viceroy, Francisco Barreto, he was banished to China. The accomplishments of Camoens soon found him friends, even under the disgrace of banishment. He was appointed commissary of the defunct in the island of Ma- cao. Here he continued his Lusiad ; and here also, after five years residence, he acquired a for- tune equal to his wishes. Don Constantine de Braganza was now viceroy of India; and Ca- moens, desirous to return to Goa, resigned his charge. In a ship, freighted by himself, he set sail ; but was shipwrecked in the gulf near the mouth of the river Mehon on the coast of China. All he had acquired was lost ; as he tells us in the seventh Lusiad :

‘ Now blest with all the wealth fond hope could

crave, Soon I beheld that wealth beneath the wave

For ever lost ;

My life like Judah’s heaven-doom’d king of yore, By miracle prolong’d.’

His poems, which he held in one hand, while he cut the waves with the other, were all that he

fossessed, when he stood friendless on the un-> nown shore. But the natives gave him a most humane reception; which he has immortalised ###n that beautiful prophetic song in the tenth Lu- siad. On the banks of the Mehon, he wrote his beautiful paraphrase of the psalm, where the lews, in the finest strain of poetry, are repre- sented as hanging their harps on the willows by the rivers of Babylon, and weeping their exile from their native country. Here Camoens con- tinued some time, till an opportunity offered to cany him to Goa. When he arrived at that city, Don Constantine de Braganza, the viceroy, ad- mitted him into intimate friendship, and Camoens was happy till count Rodondo assumed the go- vernment. But now, those who had formerly procured his banishment, exerted all their arts against him. Rodondo, when he entered on of- fice, pretended to be the friend of Camoens , yet, he soon after suffered him to be thrown into the common prison. Camoens, however, in a pub-

lic trial, fully refuted every accusation of his con- duct while commissary at Macao, and his enemies were loaded with ignominy. But Camoens had some creditors, who detained him in prison a considerable time, till the gentlemen of Goa, ashamed that a man of his singular merit should experience such treatment among them, set him at liberty. He again assumed the profession of arms, and received the allowance of a gentleman volunteer, a character at this time common in Portuguese India. Soon after,

Pedro Barreto, who was appointed governor of the fort at Sofala, allured the poet by high promises, to attend him thither. Though the only motive of Barreto was to retain the conversation of Camoens at his table, it was his least care to render the life of his guest agreeable. Chagrined with his treatment, and a considerable time having elapsed in vain depen- dence upon Barreto, Camoens resolved to return to his native country. A ship, on the homeward voyage, at this time touched at Sofala, and seve- ral gentlemen who were on board were desirous that Camoens should accompany them. But to prevent this, the governor ungenerously charged him with a debt for board. Anthony de Cabra however, and Hector de Silveira, paid the de- mand ; and ' Camoens,' says Faria, ' and the honor of Barreto were sold together.' After an absence of sixteen years, Camoens, in 1569, re- turned to Lisbon, unhappy even in his arrival, for the pestilence then raged in that city, and prevented his publication for three years. At last, in 1572, he printed his Lusiad, which, in the opening of the first book, in a most elegant turn of compliment, he addressed to king Sebas- tian, then in his eighteenth year. The king, says the French translator, was so pleased with his merit, that he gave the author a pension of 4000 reals, on condition that he should reside at court. But this salary, says the same writer, was withdrawn by cardinal Henry, who succeeded to the crown of Portugal, lost by Sebastian at the battle of Alcazar. Though Henry was the great patron of one species of literature, yet the author of the Lusiad was utterly neglected by him, and under his inglorious reign, died in all the misery of poverty. By some, it is said, he died in an almshouse. It appears, however, that he had not even the certainty of subsistence which these houses provide. He had a black servant, who had grown old witli him, who had long expe- rienced his master's humanity. This grateful Indian, a native of Java, who, according to some writers, saved his master's life in the shipwreck, begged in the streets of Lisbon, for the only man in Portugal on whom God had bestowed those talents, which tend to elevate the spirit of a dege- nerate age. To the eye of a careful observer, the fate of Camoens throws great light on that of his country, and will appear strictly connected witli it. The same ignorance, the same despicable spirit, which suffered Camoens to depend on alms, sunk the kingdom of Portugal into the most abject vassalage ever experienced by a con- quered nation. While the grandees were blind to the ruin which impended over them, Camoens beheld it with a pungency of grief which hasten- ed his exit. In one of his letters he has these remarkable words : ' Em sim accaberey a vida,'

&c. 'I am ending the course of my life; the world will witness how I have loved my coun- try. I have returned, not only to die in her bosom, but to die with her.' In this unhappy situation, in 1579, in his sixty-second year, the year after the fatal defeat of Don Sebastian, died Lewis de Camoens, the greatest literary genius ever produced in Portugal ; a man equal in martial courage and honor to her greatest heroes. And he was buried in a manner suitable to the poverty in which he died. The Lusiad has been translated once into Latin, twice into Italian, once into French, four times into Spanish, and once into English, by Mr. Mickle. Some of his minor poems have been translated into English, in beau- tiful, if not very faithful, language, by lord Strangford.

CAM'OMILE, n. s. A flower. See ANTHEMIS. CAMORTA, one of the Nicobar isles, in the Bay of Bengal, on which the Danes had a settle- ment during the last century. It is about twenty- nine miles in length from north to south, and five miles broad. On. the south-east coast is a good harbour. It is covered in parts with the poon tree, used for masts in India, and has even fruitful spots, but is thinly peopled. See NICO- BAR.

CA'MOS, or N Fr. eamuser; Lat. si CA'MOYS, or / mus ; Ital. camuso. Flat

CA'MOUS, adj. \nosed; to bend; to break; CA'MOUSED, adj. V to flatten the nose ; from CA'MOUSLY. J sa/jTrrw, I bend. Dr.

Johnson says, that camow-nosed is hook-nosed.

Round was his face, and camitse was his nose ; As pilled as an ape was his skull.

Chaucer's Canterbury Tales.

Many Spaniards, of the race of Barbary Moors, though after frequent commixture, have not worn out the cumous nose unto this day.

Browne's Vulgar Errotirs,

CAMOUFLET, in military affairs, a kind of stinking combustible blown out of paper cases into the miners' faces, when they are at work in the galleries of the countermines. They are to be ranked at present, not only among the disused, but we hope among the never to be renewed resources of a weak garrison.

CAMP', v. & n. ~\ Sax. camp, corresponds CAMPAIGN', ˆwith Lat. castrum, from

CAMP'-FIGHT, i Goth, kiamp, a soldier ; CAMP'MASTER. JSwed. kamp;

Sax. camp; Arm. kimp; Welsh, camp ; Irish, campa; Ital. campo ; Fr. camp. A contest, or place of armies; a military station in the field. The root of the Goth, word is kapp, a contest ; from which we have our word cope, to contend. Its general acceptation is the place and order of tents for soldiers in the field. It has also a signification that has nothing to do with the pomp and cir cumstance of glorious war ; it often means no more than a field, plain, or open country. Campaign is equally applied to an extensive level country, and to the season that armies keep the field.

From ofimp to camp, through the foul womb of

night, The hum of either army stilly sounds. Shukspeare.

I, his despiteful Juno, sent him forth, From courtly friends, with camping foes to live. Id.

For their trial by camp-fight, the accuser was, with fhe peril of his own body, to prove the accused guilty ; and, by offering him his glove or gantlet, to challenge him to this trial. Hahewell.

This might have hastened his march, which would have made a fair conclusion of the campaign.

Clarendon.

In countries thinly inhabited, and especially in vast campaniaS, there are few cities, besides what grow by the residence of kings. Temple.

Command the children of Israel, that they put out of the camp every leper, and overy one that hath an issue, and whosoever is defiled by the dead : Both male and female shall ye put out, without the camp shall ye put them ; that they defile not their campa in the midst whereof I dwell. Numb. v. 2 ××× 4.

What hindered me from going into Spain ? That was my province, where I should have had the less dreaded Asdrubal, not Hannibal, to deal with. ××× But hearing, as I passed along the coast of Gaul, of this enemy's march, I landed my troops, sent the horse forward, and pitched my camp upon the Rhone. A part of my cavalry encountered, and defeated that of the enemy. Hooke's Speech of Scipio.

I served thee fifteen hard campaigns, A nd pitched thy standard in these foreign fields ; By me thy greatness grew ; thy years grew with it ××× But thy ingratitude out-grew them both. Drydjn.

Those grateful groves that shade the plain,

Where Tiber rolls majestic to the main,

And fattens, as he runs, the fair campaign. Garth. An Iliad rising out of one campaign. Add'tMn.

Next, to secure our camp and naval powers,

Raise an embattled wall with lofty towers. Pope. And perfect victor had the duke remained,

But that Prince Hubert privately retired,

And long before the camp at Brescia gained,

Whence he returned with double fury fired. Gay. On Addison's sweet lays. Attention waits,

And Silence guards the place while he repeats ;

His muse alike on every subject charms,

Whether she paints the god of love or anus ;

In him pathetic Ovid sings again,

And Homer's Iliad shines in his campaign. Id.

' Not far from hence/ said he, ' a chosen few Lie camped, my trusty followers in the field. Id.

On the banks of the Niester, the prudent Athan- aric, more attentive to his own than to the general safety, had fixed the camp of the Visigoths, with the firm resolution of opposing the victorious barbarians, whom he thought it less advisible to provoke.

Gibbon.

What though I saw with steady view

Bath spread of nymphs her proud array ;

And faced, with anguish well concealed,

The shafts that frequent round me flew ; Think not that from the fatal field

I bore a heart entire away !

Nor yet, believe me, thus retired,

Hill, grove, or lawn, my plaint resound ;

A secret pleasure soothes my pain,

And with heroic ardour fired I cherish each illustrious wound

In memory of that bright campaign. Dr. T. Percy.

And for his tongue, the camp is full of licence, And the sharp stinging of a lively rogue I to my mind far preferable to The gross, dull, heavy, gloomy, execrations Of a mere famished, sullen, grumbling slave.*

Byron, Deformed Transformed.

CAMP is also used by the Siamese, and some other nations in the East Indies, as the name of the quarters which they assign to foreigners who

"4

come to trade. In these every nation forms a kind of town, where they carry on their trade, not only keeping all their warehouses and shops, but also living in these canaps with their whole fami- lies. The Europeans, however, may live either in the cities or suburbs, as they please.

CAMPS, in respect to their location, ought to be planted near water, in a country of forage, where the soldiers may find wood for dressing their victuals ; flave a free communication with gar- risons, and with a country from whence it may be supplied with provisions ; and, if possible, be situated on a rising ground, in a dry gravelly soil. The advantages of the ground ought also to be considered, as marshes, woods, rivers, and enclosures ; and if the camp be near the enemy, with no river or marsh to cover it, it ought to be intrenched. An army generally encamps fronting the enemy : in two lines, running paral- lel, about 500 yards distance; the horse and dragoons on the wings, and the foot in the centre : sometimes a body of two, three, or four brigades is encamped behind the two lines, and is called the reserve. The artillery and bread waggons are generally encamped in the rear of the two lines. A battalion of foot is allowed eighty or 100 paces for its camp ; and thirty or forty for an interval, betwixt one battalion and another. A squadron of horse is allowed thirty for its camp, thirty for an interval, and more if the ground will allow it. Where the grounds are equally dry, those camps are always the most healthful that are pitched on the banks of large rivers : because, in the hot season, situations of this kind have a stream of fresh air from the water, serving to carry off noxious exhalations. On the other hand, next to marshes, the worst encampments are on low grounds close beset with trees : for then the air is not only moist and hurtful, but, by stagnating, becomes more

susceptible of corruption. How- ever, let the situation of camps be ever so good, they are frequently rendered infectious by putrid effluvia of various kinds, which make it neces- sary to leave the ground with all the filth of the camp behind. This should be frequently done, if consistent with the military operations. It may also be a proper caution to order the privy- pits to be made at a distance, either in the front or the rear, as the then stationary winds may best carry off the effluvia from the camp. It will also be necessary to change the straw fre- quently, as being not only apt to rot, but to re- tain the infectious steams of the sick. But if fresh straw cannot be procured, more care must be taken in airing the tents, as well as the old straw. Several modern medical writers have considered the diseases of camps, among whom Drs. Pringle and Monro may be mentioned as most celebrated.

CAMPS, ANCIENT FORMS OF. The disposition of the Hebrew encampment was at first laid out by God himself. Their camp was of a quadrangu- lar form, surrounded with an enclosure of the height of ten hand-breadths. It made a square of twelve miles in compass about the tabernacle ; and within this was the Levites' camp. The Greeks had also their camps, fortified with gates and ditches. The Lacedaemonians made their

camp of a round figure, looking upon that as the most perfect and defensive of any form ; though they doubtless dispensed with it when circum- stances required. In the other Grecian camps, the most valiant of the soldiers were placed at the extremities, the rest in the middle. Thus Homer tells us that Achilles arid Ajax were posted at the ends of the camp before Troy, as bulwarks on each side of the other princes. The figure of the Roman camp was a square divided into two principal parts : in the upper parts were the general's pavilion, or praetorium, and the tent of the chief officers ; in the lower, those of inferior degree. On one side of the praetorium stood the quaestorium, or apartment of the trea- surer ; and near this the forum, both for a mar- ket-place and the assembling of councils. On the other side of the praetorium were lodged the legati ; and below it the tribunes had their quar- ters, opposite to their respective legions. Aside from the tribunes were the praefecti of the foreign troops, over against their respective wings ; and behind these were the lodgments of the evocati ; then those of the extraordinarii and ablecti equites, which concluded the higher part of the camp. Between the two partitions was a spot of ground called principia, for the altars and images of the gods, and probably also for the chief en- signs. The middle of the lower partition was assigned to the Roman horse ; next to them were quartered the triarii ; then the principes, and close by them the hastati ; afterwards the foreign horse, and lastly the foreign foot. They fortified their camp with a ditch and parapet, which they termed fossa and vallum ; in the latter some dis-

tinguish two parts, viz. the agger or earth, and the sudes or wooden stakes driven in to secure it. The camps were sometimes surrounded by walls made of hewn stone ; and the tents themselves formed of the same matter.

In the front of a Turkish camp are quartered the janissaries and other foot, whose tents encom- pass their aga : in the rear are the quarters of the spahis and other horsemen. The body of the camp is possessed by the stately tents or pa- vilions of the vizier, reis effendi, kahija, the tefter- dar bashaw, and kapislar kahiasee. In the middle of these tents is a spacious field, wherein are erected a building for the divan, and a hafna or treasury. When the ground is marked out for a camp, all wait for the pitching of the tent lailac, the place where the courts of justice are held ; it being the disposition of this, that regu- lates all the rest. The Arabs still live in camps, as the ancient Scenites did. The camp of the Assyne Emir, or king of the country about Tad- mor, is described by a traveller who viewed it, as spread over a very large plain, and possessing so vast a space, that, though he had the advantage of a rising ground, he could not see the utmost extent of it. The king's tent was near the mid- dle ; scarce distinguishable from the rest, except that it was bigger, being made, like the others, of a sort of hair-cloth.

The CAMPAGNA DI ROMA, or Territory of Rome, is bounded on the north by II Patrimonio di St. Pietro and Sabina, on the north-east and east by the kingdom of Naples, and on the south

and west by the Tuscan Sea. It is the most im- portant of the States of the Church, having Rome for its capital, and comprehending the greater part of ancient Latium. It is from fifty to seventy miles long, and from forty to sixty broad. Its formation is entirely volcanic. Here are > now many waste and unhealthy tracts, thinly peopled. The ruins of temples and tombs are the only conspicuous objects. The Pontine marshes cover a large district in the south-east, and fill the atmosphere with the most noxious vapors. But a good road has lately been cut through them. The soil is generally fertile, and wants only an intelligent and healthy population to render it productive. The towns of note, oesides Rome, are Velletri, Frascati, Palestrina, Terracina, Tivoli, Ardea, Veroli, Albano, Net- tuno, Ostia, Castel-Gandolfo, and Marino. The chief river is the Tiber, which separates this pro- vince from St. Peter's Patrimony.

CAM PAN, a town of France, in the depart- ment of the Upper Pyrenees, on the left bank of the Adour. Population 4200. This is one of the most romantic parts of France; the hills abound in red, white, and gray marble. The inhabitants rear cattle, and travel for employment into Spain. Two miles and a half south of Bagneres.

CAMPANELLA (Thomas), a celebrated Italian philosopher, born at Stilo, in Calabria, in 1568. He distinguished himself very early, for at the age of thirteen he was a perfect master of the ancient orators and poets. His peculiar in- clination was to philosophy, to which he at last confined his whole time and study. At the age of twenty-two he formed a new system of philo- sophy, which raised him many enemies among the partizans of Aristotle. This induced him to go to Rome, whence he proceeded to Florence and Padua. In 1598 he returned to Calabria, where he was seized and carried to Naples, put seven times to the rack, and finally imprisoned for twenty- four years. During his confinement, he wrote his famous work, entitled Atheismus Triumphatus. Being at length set at liberty, he went to Paris, where he was graciously received by Louis XIII. and cardinal Richelieu ; the latter procured him a pension of 2000 livres. Campanella passed the remainder of his days in a monastery at Paris, and died in 1639.

CAMPANIA. See CAMPAGNA DI ROMA.

CAMPAN'IFORM, adj. Lat. campana, a bell, and forma. A term used of flowers, which are in the shape of a bell.

CAMPANILE, a bell tower, a detached tower in some parts of Italy, erected for the pur- pose of containing bells. The narrowness of the base, combined with the great elevation of these towers, has occasioned several of them to settle, as it is called, and to deviate considerably from their original perpendicular.

The campanile of Pisa, called Torre Pendente, or the hanging tower, is the most remarkable of these. Its form is that of a cylinder surrounded with eight stories of columns placed over each other ; the last story, which forms the belfry, re- tiring a little from the general line of elevation. All the columns are of marble: from each column springs two arches, and between the columns

and the circular wall of the tower is an open gallery. The height to the platform is 150 feet, and the building inclines nearly thirteen feet from the perpendicular.

CAMPANULA, the bell-flower, a genus of the monogynia order, in the

*pentandria class of plants ; natural order, twenty-ninth, campa- naceae : COR. campanulated, with its fundus closed up by the valves that support the stamina: STIG. trifid : CAP. inferior, or below the recep- tacle of the flower, opening and emitting the seeds by lateral pores. Of this genus there are no fewer than eighty-five species, but the fol- lowing are the most worthy of attention : ***

1. C. Canariensis, with an orach leaf and tube- rous root, is a native of the Canary Islands. The flowers are produced from the joints of the stalk, which are the perfect bell shape, and hang down- ward, they are of a flame color, marked with stripes of a brownish red ; the flower is divided into five parts ; at the bottom of each is seated a nectarium, covered with a white transparent skin, much resembling those of the crown imperial, but smaller. The flowers begin to open in the beginning of October, and there is often a suc- cession of them till March. The stalks decay to the root in June, and new ones spring up in August.

2. C. decurrens, the peach-leaved bell-flower, is a native of the northern parts of Europe; of this there are some with white, and some with blue flowers, and some with double flowers of both colors. These last have of late been propa- gated in such abundance as to have almost banished from the gardens those with single flowers.

3. C. hybrida, or common Venus's looking- glass, seldom rises more than six inches, with a stalk branching from the bottom upwards. This was formerly cultivated in the gardens; but since the speculum has been introduced, whose flowers are very similar, it has almost supplanted this; for the other is a much taller plant, and the flowers larger.

4. C.latifolia, or great bell-flower. The flowers come out singly upon short foot-stalks; their colors are blue, purple and white.

5. C. medium, the Canterbury bell-flower, is a biennial plant, perishing soon after it has ripened its seeds. It grows naturally in the woods of Italy and Austria; but is cultivated in the Bri- tish gardens for the beauty of its flowers, which are blue, purple, white, and striped, with double flowers of all the colors. From the setting on of the leaves proceed the foot-stalks of the flowers; those which are on the lower part of the stalk and branches diminishing gradually in their length upward, and thereby forming a sort of pyramid. The flowers of this kind are very large, and make a fine appearance. The seeds ripen in September, and the plants decay soon after.

6. C. ranunculus, the rampion, the roundish fleshy roots of which are eatable, and much cul- tivated in France for sallads; it was formerly cultivated in the English gardens for the same purpose, but is now generally

neglected. It is a native of Britain ; but the roots of the wild sort never grow to half the size of those which are cultivated.

7. C. speculum with yellow eye-bright leaves. From the wings of the leaves come out the flowers sitting close to the stalks, which are of a beautiful purple, inclining to a violet color. In the evening, they contract and fold into a penta- gonal figure ; from whence ii is by some called viola pentagonia, or five-cornered violet.

8. C. trachelium, with nettle leaves, and a pe- ennial root. Towards the upper part of the stalks, the flowers come out alternately Upon short tri fid foot-stalks having hairy empalements. The colors of the flowers are a deep and pale blue and white, with double flowers of the same; only the double flowered kind merits a place in gardens.

The first species is propagated by parting the roots, which must be done with caution : for if they are broken or wounded, the milky juice will flow plentifully ; and if planted before the wounds are skinned over, they rot : when any of them are broken, they should be laid in the green-house a few days to heal. They must not be too often parted, if they are expected to flower well ; for they are thus weakened. The best time for transplanting and parting them is in July, soon after the stalks are decayed. They succeed best in light sandy loam, mixed with a fourth part of screened lime-rubbish : when the roots are first planted, the pots should be placed in the shade, and unless the season is very dry they should not be watered. About mid-August the roots will begin to put out fibres ; at which time, if the pots are placed under a hot-bed frame, opened every day to enjoy the free air, it will greatly forward them for flowering, and increase their strength. The plants thus managed, by the middle of September will have grown so tall as not to be kept any longer under the glass frame ; they must, therefore, be removed into a dry airy glass case, where they may enjoy the air in free mild weather, but screened from the cold. The second, fourth, fifth, and eighth species are so easily propagated by parting the roots, or by seeds, that no particular directions for the cul- ture need be given. The third and seventh species are easily propagated by seeds, which they produce in plenty. If the seeds are sown in autumn, the plants will flower early in the spring; but, if sown in spring, they will not flower till mid-June; and, if a third sowing is performed about the middle of May, the plants will flower in August; but good seeds must not be expected from these. The ranunculus, which is cultivated for its esculent roots, may be pro- pagated by seeds, which are to be sown in a shady border, and the ground to be well hoed.

The roots ought to be taken up, in winter, as they are wanted. They will continue good till April, at which time they send out their stalks, when the roots become hard.

CAM PAS PE, a most beautiful concubine of Alexander the Great, who ordered Apelles to draw her picture naked. But the painter, dur- ing the operation, falling in love with her, the conqueror of the world conquered his own pas- sion so far, as to give her up to him.

CAMPBELL (George), D. D. the son of the Rev. C. Campbell, was born in 1719 at Aber- deen, where he was educated. He was at first articled to a writer of Ihe signet, but turned his

attention to divinity, and obtained in 1748 the church of Banchory Ternan. In 1756 he became one of the ministers of Aberdeen; and in 1759 was chosen principal of Marischal College. He now began his celebrated Essay on Miracles, in answer to Hume, and on the publication of it received his diploma from King's College, Aber- deen. In 1771 he was elected divinity professor. This professorship he resigned some years before his death, and the king settled on him a pension of ►►300 a year. He died in 1796. His other prin- cipal works are : The Philosophy of Rhetoric, in 2 vols. 8vo. 1776 ; A Sermon, on Allegiance, preached on the king's fast day, 1777, 4to. ; An Address to the People of Scotland, on the Alarms raised by what is called the Popish Bill, 8vo. 1780; A Translation of the Gospels, with Pre- liminary Dissertations, 2 vols. 8vo., 1793. This was his last and greatest work ; the fruit of copious erudition and unwearied application, for about thirty years ; and will lead the attentive reader to regret that the other books of the New' Testament had not been elucidated by the same judicious author.

CAMPBELL (John), second duke of Argyle and Greenwich, was born October 10th, 1680. At the age of fifteen he had made a considerable progress in classical learning. His father then perceived and encouraged his military disposition, and introduced him to king William, who in 1694 gave him the command of a regiment. In this situation he remained till the death of his father in 1 703 ; when, becoming duke of Argyle, he was sworn of queen Anne's privy council, made captain of the Scotch horse guards, and appointed one of the extraordinary lords of session. In 1704 the queen, reviving the Scottish order of the thistle, installed the duke one of the knights, and soon after appointed him high commissioner to the Scotch parliament; where, being of great service in promoting the Union, he was on his return created a peer of England, and in 1710 knight of the garter. He first distinguished him- self at the battle of Oudenard ; where he com- manded as brigadier-general. He was also present under the duke of Marlborough at the siege of Ghent, and took possession of the town. He

had a share likewise in the victory of Mal- plaquet, by dislodging the French from the wood of Sart, and gaining a post of great conse- quence. Soon after, he was sent to take the com- mand in Spain ; and, after the reduction of Port Mahon, returned to England. Having now a seat in the house of lords, he censured the mea- sures of the ministry with such freedom, that he was deprived of all his places : but at the acces- sion of George I. he recovered his influence. At the breaking out of the rebellion in 1715 he was made commander-in-chief in North Britain. In direct opposition to that part of the army he commanded, at the head of all his Campbells was placed Campbell earl of Braidalbin, a noble- man of the same family and kindred. The con- sequence was, that both sets of Campbells, from family affection, refused to strike a stroke, and retired out of the battle. He arrived in London March 6th, 1716, and was in high favor ; but, to the surprise of people of all ranks, he was in a few months divested of all his employments ; and

from this period to 1718 signalised himself in a civil capacity. In the beginning of 1719 he was again admitted into favor, appointed lord steward of the household, and, in April following, created duke of Greenwich. He continued in the ad- ministration during the remaining part of that reign; and, after the accession of king George II, till April 1740 ; when he delivered a speech with which the ministry being highly offended, he was again dismissed. He was soon however restored ; but not approving of the measures of the new ministry, gave up all his posts for the last time, and died in privacy, of a paralytic disorder, on the 4th of October, 1743. A noble monument, by Roubilliac, was erected in West- minster Abbey to his memory. The titles of duke and earl of Greenwich, and baron of Chatham, became extinct at his death ; but in his other titles he was succeeded by his younger brother Archibald, earl of Hay.

CAMPBELL (John), an historical, biographical, and political writer, was born at Edinburgh, March 8th, 1708; and was the fourth son of Robert Campbell of Glenlyon, by a Miss Smith of Windsor in Berkshire, a descendant of the poet Waller. At five years of age he was brought from Scotland to Windsor, where he received his education ; and was placed as clerk to an attorney. This profession, however, he never followed ; but, by a close application to science, qualified him- self to appear with great advantage in the literary world. In 1736 he gave to the public, in 2 vols. folio, The Military History of Prince Eugene and the Duke of Marlborough,

enriched with maps, plans, and cuts. The reputation he ac- quired occasioned him soon after to be solicited to take a part in the Ancient Universal History. Whilst employed in this work, Mr. Campbell found leisure to undertake several other pieces. In 1739 he published the Travels and Adventures of Edward Brown, Esq., 8vo. ; and Memoirs of the Bashaw Duke de Ripperda, 8vo. ; reprinted, with improvements, in 1740. These were fol- lowed, in 1741, by the Concise History of Spanish America, 8vo. In 1742 he published A Letter to a Friend in the Country, on the Pub- lication of Thurloe's State Papers ; and the first and second vols. of his Lives of the English Ad- mirals, and other eminent British Seamen. The two remaining vols. were completed in 1744; and the whole, not long after, was translated into German. This was the first of Mr. Campbell's works to which he prefixed his name. In 1743 he published Ilermippus Redivivus ; a second edition of which, much improved and enlarged, came out in 1749. In 1744 he gave to the pub- lic, in 2 vols. folio, his Voyages and Travels, on Dr. Harris's plan. The time and care employed by Mr. Campbell in this important undertaking, did not prevent his engaging in another great work, the Biographia Britannica, which began to be published in weekly numbers in 1745, and extended to 7 vols. folio ; but his articles were only in the first 4 vols. When the late Mr. Dodsley formed the design of the Preceptor, which appeared in 1748, Mr. Campbell was en- gaged to assist in it. The parts written by him were the Introduction to Chronology, and the Discourse on Trade and Commerce. In 1750

he published the first separate edition of his Present State of Europe ; a work which had been originally begun in 1746 in the Museum, a valuable periodical work printed for Dodsley. The next great undertaking which called for the exertion of his abilities and learning, was The Modern Universal History. This extensive work was published, in detached parts, till it amounted to 16 vols. folio; and a second edition of it, in 8vo., began to appear in 1759. The parts written by Mr. Campbell were, the his- tories of the Portuguese, Dutch, Spanish, French, Swedish, Danish, atid Ostend Settlements in the East Indies ; and the Histories of the kingdoms of Spain, Portugal, Algarve, and Navarre ; and of France, from Clovis to 1656. The degree of LL. D. was conferred upon him June 18th, 1754, by the university of Glasgow. His favorite work was, A Political Survey of Great Britain, 2 vols. 4to., published a short time before his death ; in which the extent of his knowledge, and hi? patriotic spirrt, are equally conspicuous. He was, during the latter part of his life, agent for the province of Georgia in North America ; and died in 1775, aged sixty -seven.

CAMPBELL, a county of Virginia, bounded on the north by the Fluvanna, which divides it from Amherst ††† east by Charlotte and Prince Edward counties ; north-east by Buckingham ; west by Franklin and Bedford counties ; and south by Pittsylvania. It is forty-five miles in length, and

thirty in breadth.

CAMPBELTOVVN, a royal burgh and post town in the parish of the same name, in the county of Argyle, seated on the lake of Kilkerran, on the eastern shore of the district of Kintyre, of which It is the chief town. It has a good har- bour; and is now a very considerable place, though within these sixty years only a petty fish- ing town. It has in fact been created by the fishery; having been apppointed the place of rendezvous for the busses ; and above 300 have been seen in the harbour at once. Its vicinity to the markets of Ireland and the Clyde, are advan- tages which very few sea-ports enjoy. The har- bour is about two miles long and one broad, in the form of a crescent, with from six to ten fa- thoms water, and excellent anchorage, surrounded by high hills on each side, and an island to shel- ter the entrance. Two public libraries are also established, and a good school. This town was erected into a royal burgh in 1701, and is go- verned by a provost, two bailies, a dean of guild, treasurer, and twelve counsellors. It joins with Ayr, Irvine, Inverary, and Rothsay, in sending a member to parliament. It lies thirty miles west of Ayr, and 176 miles west by south from Edinburgh.

CAMPDEN, a market town of Gloucester- shire, famous for its stocking manufactures. The church is a fine gothic building, said to be as old as William II. Here is also a grammar school and two charity schools. In the neighbourhood is a silk mill and manufactory. Market on Wed- nesday. Seven miles east from Evesham, and ninety W.NAV. from London.

CAMPEACHY, a town of Mexico, seated on the east coast of the bay of this name, and defended by a good wall and strong forts : but it

>s not so rich as formerly ; having been once the principal port for the sale of logwood. It was taken by the English in 1596; by the buccaneers in 1650 and 1678 ; and by the Flibusters of St. Domingo in 1685, who set it on fire. and blew up the citadel. It was once a considerable native town, and the Spaniards afterwards found many curious Indian antiquities here. The port is large, but the water shallow. The houses are of stone, and generally well built. Population about 6000. Its principal trade is in wax and 'cotton cloth, which is manufactured here.

CAMPEACHY. WOOD, in botany. See HJEMA- TOXYLUM.

CAM PEN, a fortified town of the Nether- lands, has a citadel and harbour ; but the latter is almost choked up with sand. It was taken by the Dutch in 1578, and by the French in 1672 ; they abandoned it in 1673. It is seated near the mouth of the river Yssel, on the Zuider Zee. The most remarkable edifices are the two churches, the town-house, and the wooden bridge across the Yssel, which is 720 feet long, and 20 broad The country around can readily be laid under water. Population 6200. Thirteen miles north of Arnheim, and forty-five north-east of Amsterdam.

CAMPESTRAL, adj. Latin, campestris; growing in fields.

The mountain beech is the whitest ; but the cam- pettral, or wild beech, is blacker and more durable.

Mortimer.

CAMPESTRE, in antiquity, a cover for the body, worn by the Roman soldiers in their field exercises ; being girt under the navel, and hanging down to the knees. The name is formed from campus, the field, where they performed these exercises.

CAMP FIGHT, among old law writers, is spelt KAMP FIGHT. We therefore refer the reader, for an account of this obsolete mode of legal duelling to that article.

CAM'PHIRE, v. & n.-\ Ka0►►pa ; Ar. Heb.

CAM'PHIRE-TREE, (Per. kafoor ; Sans.

CAM'PHORATE, n. tkupoor ; Fr.camphre;

CAM'PHORATED.) Lat. camphora. A

white resinous gum.

There are two sorts of this tree ; one is a native of the isle of Borneo, from which the best camphire is taken, which is supposed to be a natural exudation from the tree, produced in such places where the bark of the tree has been wounded or cut. The other sort is a native of Japan, which Dr. Kempfer describes to be a kind of bay, bearing black or purple berries, from whence the inhabitants prepare their camphire, by making a simple decoction of the root and wood of this tree, cut into small pieces ; but this sort of cam- phire is in value eighty or an hundred times less than the true Bornean camphire. Miller.

Spirit of wine camphorated, is a remedy frequently applied externally in

cases of inflammations, &c.

Dr. A. Reet.

CAMPHIRE, CAMPHOR, or CAMPHORA, a solid concrete juice extracted from the wood of the laurus camphora. See LAURUS CAMPHORS..

CAMPHOROSMA, in botany, stinking ground pine, a genus of the tetrandria order and mono- gynia class of plants : natural order twelfth, ho- loraceae : CAL. is pitcher-shaped and indented,

there is no corolla ; and the capsule contains a single seed. It is reputed cephalic and nervine ; though little used in modern practice. It takes the name from its smell, which bears some re- semblance to that of camphor. There aie five species. Of these the principal is, C. Monspe- liensis, which grows especially about Montpelier It has been produced as a specific for the dropsy and asthma.

CAMPHUYSEN (Dirk Theodore Raphael), an eminent painter, born at Gorcum in 1586. He learned the art from Govertze, but soon far surpassed his master. His subjects were land- scapes, mostly small, with ruinous buildings, huts of peasants, or views of villages on the banks of rivers. He generally represented them by moon light. His pencil is remarkably soft ; his coloring very transparent, and his expert- ness in perspective is seen in the proportional distances of his objects. Few of his works are to be met with, and they bring considerable prices.

*CAMPIAN (Edmund), ah English Jesuit, born in London, of indigent parents, in 1540; and educated at Christ's Hospital, where he had the honor to deliver an oration before queen Mary on her accession to the throne. He was admitted a scholar of St. John's College in Ox- ford on its foundation, and took the degree of M.A. in 1564. About the same time he was ordained, and became an eloquent Protestant preacher. In 1566, when queen Elizabeth was entertained by the yniversity of Oxford, he spoke an elegant oration before her majesty, and was also respondent in the philosophy act in St. Mary's church. In 1568 he was junior proctor of the University. In 1569 he went over to Ireland, where he wrote a history of that kingdom, and became papist, and being assiduous in persuad- ing others to follow his example, was committed to prison. He soon, however, made his escape, and in 1571 proceeded to Douay in Flanders, where he publicly recanted his former opinions, and was created B. D. He went soon after to Rome, where, in 1573, he was admitted of the Society of Jesus, and was sent by the general to Vienna, where he wrote his tragedy, called Nec- tar et Ambrosia, which was acted before the em- peror with great applause. He went next to Prague, where he resided in the Jesuits' college^*

about six years, and then returned to Rome. From thence, in 1580, he was sent by pope Gre- gory XIII. with father Parsons, to convert the people of England. They were joyfully received by their friends ; but had not been long in Eng- land before Campian was apprehended, and conducted in triumph to London. He was im- prisoned in the tower ; where, says Wood, ‘ he did undergo many examinations, abuses, wrack- ings, tortures.’ He was finally condemned on the statute 25 Edward III. for high treason; and butchered at Tyburn, with two or three of his fraternity. ‘ All writers, whether Protestant or Popish, say, that he was a man of admirable parts ; an elegant orator, a subtle philosopher and disputant, and an exact preacher, whether in English or Latin, of a sweet disposition, and a well polished man.’ His History of Ireland, in two books, was published by Sir James Ware,

from a MS. in the Cotton library, Dublin, 1633, folio. He wrote also Chronologia Universalis, a very learned work ; and various other tracts.

CAMPICURSIO, in the ancient military art, a march of armed men for several miles, from and back again to the camp, to instruct them in the military pace.

CAMPIDOCTORES, or CAMPIDUCTORES, in the Roman army, officers who instructed the soldiery in the discipline and exercises of war, and the art of handling their weapons to advan- tage. These are also sometimes called campigeni and armidoctores.

CAM’PION, n. s. Lat. lychnis ; a plant. See LYCHNIS.

CAMPIOX, Viscous. See SILENE. CAMPION, WILD. See AGROSTEMA. CAMPIT/E, in church history, an appellation given to the donatists, on account of their as- sembling in the fields for want of churches. CAMPIUSA, in botany. See SCABIOSA. CAMPOIDES, in botany. See SCORPIURUS. CAMPO MAYOR, a barrier town and fortress of Portugal, in the province of Alentejo, district of Elvas. It contains about 5300 inhabitants, and is well fortified. The explosion of a pow- der magazine in 1712, which was struck by light- ning, laid the town in ruins. It was taken in the war between Spain and Portugal in 1801, but restored at the peace. It is eight miles north of Elvas, ten north-west of Badajoz (in Spain), and 100 east of Lisbon.

CAMPS (Francis De), abbot of Notre Dame at Signy, was born at Amiens in 1643 ; and dis- tinguished himself by his knowledge of medals, by writing a History of France, and several other works. He died at Paris in

1723.

CAMPUS, in antiquity, a field or vacant plain in a city, not built upon, left vacant on account of shows, combats, exercises, or other uses of the citizens.

CAMPUS MARTIUS, in ancient history, a large plain in the suburbs of ancient Rome, lying be- tween the Quirinal and Capitoline mounts and the Tiber; thus called because consecrated to the god Mars, and set apart for military sports and exercises, to which the Roman youth were trained ; such as the use of arms, and all manner of feats of activity. Here the races were run, either with chariots or single horses ; here also stood the villa publica or palace for the reception of ambassadors, who were not permitted to enter the city. Many of the public comitia were held in the same field, part of which was for that pur- pose cantoned out. The place was also nobly decorated with statues, arches, columns, porti- coes, and the like structures. It was given to the Roman people by a vestal virgin ; but they were deprived of it by Tarquin the Proud, who made it a private field, and sowed corn in it. \ hen Tarquin was driven from Rome the people recovered it, and threw away into the Tiber the corn which had grown there, deeming it unlawful for any man to eat of the produce of that land. The sheaves which were thrown into the river stopped in a shallow ford, and by the accumu- lated collection of mud became firm ground, and formed an island, which was called the Holy Island, or the island of jEsculapius.

CA1S

CAMPUS SCELERATUS, a place without the walls of ancient Rome, where the Vestals who had violated their vows of virginity were buried alive.

CAMUS (Charles Stephen Lews), a cele- brated French mathematician, born at Cressy in 1699. His early ingenuity in mechanics induced his parents to send him to a college at Paris, at ten years of age ; where within two years he made such rapid progress, that he gave lectures on mathematics and defrayed his own expenses, without farther charge to them. In 1727 he gained the prize given by the Academy of Sciences, ‘ to determine the most advantageous way of masting ships ;’ in consequence of which, he was made adjoint mechanician to the aca- demy; and, in 1730, professor of architecture. In 1 733 he became secretary and associate ; and distinguished himself by his Memoirs on Moving Forces ; on the Figure of the Teeth of Wheels and Pinions; and on Pumps. In 1736 he was sent with Messrs. Clairaut, Maupertius, and Monnier, on the celebrated expedition to measure a degree at the North Polar circle ; in which he proved highly useful, both as a mathematician and mechanic. In 1741 he was appointed

geo- metrician in the academy, and invented a gauging rod, to measure all kinds of casks and calculate their contents. In 1 747 he was examiner of the schools of artillery, and in 1765 elected F. R. S. of London. He died, May the 4th, 1768, after having published many mathematical works ; the principal of which are, Elements of Me- chanics, 8vo. and a Course of Mathematics for the Use of Engineers, 4 vols. 8vo.

CAN', v. Goth, kunnan ; Ang. Sax. can, cunnan ; Swed.G./c<⬜⬜7ina; Icelandic, /cu⬜⬜na,DutchandGer. kennen. In Wicklif's translation of the New Testament we constantly find may used for can : as in the remarkable passages, John iii. 4, Nycodeme seide to him, how may a man be borun whanne he is olde ? when he may entre agen into his modir wombe ? John vi. 52, How may this geve to us his fleich to ete ? and sometimes, ' moun,' as in John xiv. 5, ' Thomas seith to him, Lord, we witen not winder thou goist, and how moun we wite the weye ?' Johnson says, it is sometimes, though rarely, used alone ; but is in constant use as an expression of the potential mood ; as, I can do, thou canst do, I could do, thon couldst do. It has no other terminations. Dr. Johnson also further remarks, that it is dis- tinguished from may, as power from permission ; I can do it, it is in my power ; I may do it, it is allowed me : but in poetry they are confounded. Can is used of the person with the verb active, where may is used of the thing with the verb passive; as, I can do it, it may or can be done.

But Chaucer (though he can but lewdely On metres and on riming craftily) Hath sayd hem, in swiche English as he can, Of olde time, as knoweth many a man ; And if he have not sayd hem, leve brother, In a book he hath sayd hem in another.

Chaucer. The Man of Lowes' Prologue.

Estward there stood a gate of marble white, Westward right swiche another in th' opposite. For in the land there's no craftles man, That geometric, or arsmetrike can.

Id. Knight's Tali.

But ah ! who can deceive his destiny,

Or weene by warning to avoyd his fate. Spenser.

It (original sin) makes God to be all that for which

any thing or person is or can be hated ; for it makes

nim neither to be good, nor just, nor reasonable ; but

an enemy to a great part of mankind. Jer. Taylor.

for nothing lovelier can be found

In woman, than to study houshold good.

And good works in her husband to promote. Milton.

In place there is licence to do good and evil, whereof the latter is a curse ; for, in evil, the best condition is not to will ; the second, not to can.

Bacon.

O, there's the wonder ! Mecsnas and Agrippa, who can most With Csesar, are his foes. Dryden.

If she can make me blest ! she only can : Empire and wealth, and all she brings beside, Are but the train and trappings of her love. /./.

Simplicity alone can grace The manners of the rural race. Swift.

Fortune ! fury ! rage ! despair ! I cannot, cannot, cannot bear. Gay.

And be it so. Let those deplore their doom Whose hope still grovels in this dark sojourn,

But lofty souls, who look beyond the tomb, Can smile at fate, and wonder how they mourn.

Beat lie.

Can mortal strength presume to soar so high, Can mortal sight so oft bedim'd with tears,

Such glory bear ! ††† for lo ! the shadows fly From nature's face ††† Confusion disappears, And order charms the eye, and harmony the ears.

Id.

Can glittering plume, or can the imperial wreath Redeem from unrelenting fate the brave ?

What note of triumph can her clarion breathe To alarm the eternal midnight of the grave ? Id.

If from society we learn to live, 'Tis solitude should teach us how to die ;

It hath no flatterers ; vanity can give No hollow aid ; alone ••• man with his God must strive. Byron's Childe Harold.

May and might express the possibility or liberty of doing a thing; can and could, the power, as it may rain ; I may write or read ; He might have improved more than he has j He can write much better than, he could last year.

Lindley Murray.

CAN, re.) Swed. kann; Teut. karma ; CAN'AKIN, jSax. canne; Dutch, kan; Arm. can ; Fr. canette ; Lat. cantharus. A drinking vessel; a cup, originally, perhaps, formed of reeds or canes ; anything hollow, with some de- gree of length, easily converted into a vessel for drinking.

Oh ! whether thee I closely hug In honest can, or nut-brown jug,

Or in a tankard hail ; In barrel or in bettle pent, I give the generous spirit vent,

Still may 1 feast on ale. Gay.

A pump's can is a sort of wooden jug or pitcher, wherewith seamen pour water into pumps to make them work. Can-hook, an instrument used to sling a cask by the ends of the staves . it consists of a broad and flat hook fixed to each end of a short rope, and the tackle which serves to hoist or lower it, is fastened to the middle of the rope. Vt. A . Reet.

CAN

One tree, the coco, affordeth stuff for housing, clothing, shipping, meat, drink, and can. Grew.

His empty can, with ears half worn away, Was hung on high, to boast the triumph of the day.

Dryden.

CANA, in ancient geography, a town on the confines of Galilee ; memorable for our Saviour's first miracle of turning water into wine.

CANAAN, TWO, Heb. i. e. a merchant; the fourth son of Ham. The prophecy of Noah, that he ' should be a servant of servants to his brethren,' seems to have been fulfilled in his descendants. It was completed with regard to Shem, not only in that a considerable part of the seven nations of

the Canaanites were made slaves to the Israelites, when they took possession of their land, as part of the remainder of them were afterwards enslaved by Solomon ; but also by the subsequent expeditions of the Assyrians and Per- sians, who were both descended from Shem; and under whom the Canaanites suffered subjection, as well as the Israelites ; not to mention the con- quest of part of Canaan by the Elamites, or Per- sians, under Chedorlaomer, prior to them all. With regard to Japhet, we find a completion of the prophecy, in the successive conquests of the Greeks and Romans in Palestine and Phoenicia, where the Canaanites were settled ; but especially in the total subversion of the Carthaginian power by the Romans ; besides some invasions of the northern nations, as the posterity of Thogarma and Magog; wherein many of them, probably, were carried away captive. The posterity of Canaan were very numerous. His eldest son was Sidon, who at least founded and peopled the city of Sidon, and was the father of the Sidonians and Phoenicians. Canaan had besides ten sons, who were the fathers of people dwelling in Pa- lestine, and in part of Syria ; namely, the Hit- tites, the Jebusites, the Amorites, the Girgasites, the Hivites, the Arkites, the Sinites, the Arva- dites, the Semarites, and Hamathites.

CANAAN, the tract of country which lies be- tween the Mediterranean Sea and the mountains of Arabia, and extends from Egypt to Phoenicia, was bounded on the east by the mountains of Arabia ; on the south by the wilderness of Paran, Iduma;a, and Egypt; on the west by the Medi- terranean, called in Hebrew the Great Sea; on the north by the mountains of Libanus. Its length from the city of Dan to Beersheba, was about seventy leagues ; and its breadth from the Mediterranean Sea to the eastern borders, in some places thirty. This country, afterwards called Palestine, from the Philistines, who inha- bited the sea coasts, was also denominated the Land of Promise, from the promise God made Abraham of giving it to him ; the Land of Israel, from the Israelites having made themselves mas- ters of it; of Judah, from the tribe of Judah, which was the most considerable of the twelve ; and the Holy Land, from its having been sanc- tified by the presence, actions, miracles, and death of Jesus Christ. The first inhabitants of ‘ were the Canaanites, who were descended frora Canaan, and the eleven sons of that patriarch. Here they multiplied extremely ; trade and war were their first occupations ; these gave rise to

their riches, and several colonies were planted oy them over the islands and

maritime provinces of the Mediterranean. The measure of their xlolatry and abominations was completed, when God delivered their country into the hands of the Israelites. In St. Athanasius's time, the African, still said they were descended from the Canaan- ites ; and the Punic tongue was almost entirely the same with the Canaanitish and Hebrew lan- guages. The colonies which Cadmus carried into Thebes in Boeotia, and his brother Cilix into Cilicia, came from the stock of Canaan. The isles of Sicily, Sardinia, Malta, Cyprus, Corfu, Majorca and Minorca, Gades and Ebusus, are thought to have been peopled by them. Bochart, in his large work, entitled Canaan, has set this matter in a clear light. Many of the old inhabi- tants of the north-west of Canaan, however, par- ticularly on the coast of Tyre and Sidon, were not driven out by the children of Israel, whence this tract seems to have retained the name of Canaan long after those other parts of the coun- try, which were better inhabited by the Israelites, had lost the name. The Greeks called this tract, inhabited by the old Canaanites, Phoenicia; the more inland parts, being inhabited partly by Ca- naanites, and partly by Syrians, Syrophcenicia : and hence the woman, said by St. Matthew (xv. 22.) to be a woman of Canaan, whose daughter Jesus cured, is said by St. Mark (vii. 26.) to be a Syrophcenician by nation, as she was a Greek by religion and language.

CANADA. See AMERICA, BRITISH, vol. ii. p- 46 ००० 49, where is a full account of this inter- esting colony.

CANAILLE', n. s. French. The lowest people ; the dregs ; the lees ; the offscouring of the people : a French term of reproach.

CANAL', Lat. canalis. Virgil uses canalis for a trough. It literally means the hollow of any thing, like the hollow of a cane. Thus nar- row pieces of water in a garden, which are drawn out to any considerable length, are called canals. And the term is now appropriated to any tract or course of water made by art. It is used in its primitive sense, in anatomy, to designate any conduit or passage through which the juices of the body flow.

But soche a fairenesse of a necke Yhad that swete, that bone nor brecke, "N'as there none seen that missesatte, It was white, smothe, streight, and pure flatte, Withouten hole or canel bone, And by seming she had none.

Chaucer's Boke of the Duchesse. The walks and long canals reply. Pope.

So with strong arm immortal Brindley leads His long canals, and parts the velvet meads ; Winding in lucid lines, the watery mass Mines the firm rock, or loads the deep morass. Dur

The rushing flood from sloping pavements pours, And blackens the canals

with dirty showers. Gay. CANALS. See INLAND NAVIGATION. CANAL'-COAL, n. s. A fine kind of coal, du

Even our canal-coal nearly equals the foreign jet.

Woodward.

CANALES SEMICIRCULARIES, three semi- circular canals placed in the posterior part of the

labyrinth of the ear. They open by five orifices into the vestibulum. See EAR and PHYSIOLOGY. CANALIC'ULATED, adj. from Lat. cana-liculatus ; channelled ; made like a pipe or gutter.

CANALIS ARTERIOSUS, canaliculus arterio- sus ; canalis botalii. A blood-vessel peculiar to the foetus, disappearing after birth ; through which the blood passes from the pulmonary ar- tery into the aorta.

CANALIS NASALIS, a canal going from the internal canthus of the eye downwards into the nose : it is situated in the superior maxillary bone, and is lined with the pituitary membrane conti- nued from the nose.

CANALIS PETITIANUS, a triangular cavity, naturally containing a moisture, between the two laminae of the hyaloid membrane of the eye, in the anterior part, formed by the separation of the anterior lamina from the posterior. It is named after its discoverer, M. Petit.

CANALIS VENOSUS, a canal peculiar to the fetus, disappearing after birth, that conveys the maternal blood from the porta of the liver to the ascending vena cava.

CANANDAQUA, a post town, the capital of Ontario county, seated near the lake, thirty miles from Jerusalem, and 434 N. N. W. of Philadel- phia. Courts of sessions and common pleas are held in it, first Tuesday of June and November. CANANORE, a town and district on the coast of Malabar, once a separate kingdom. The natives are generally Mahommedans ; and tho country produces pepper, cardamoms, ginger, mi robolans, and tamarinds, in which they drive p considerable trade. The town has a safe bar bour. It formerly belonged to the Portuguese, and had a strong fort to guard it; but in 1683 the Dutch, together with the natives, drove them out, and enlarged the fortifications. It was af- terwards taken by Tippoo Saib, and finally by the English in 1790. It is under a native sovereign, tributary to the East India Company. Distant fifteen miles north-east of Tellicherry, and 100 W. S. W. of Seringapatam.

CANARA, or CAN ATA, a province of Hindos- tan, on the coast of

Malabar. Here is a pagoda, called Ramtrut, which is visited every year by a great number of pilgrims, and the custom of burning the wives with their husbands is much practised. The lower grounds yield every year two crops of corn or rice ; and the higher produce pepper, betel-nuts, sanders wood, iron and steel. The whole province is about 180 miles in length, and from thirty to seventy broad : the climate fine, and the teak wood abundant. The principal towns are Barcelore, Batecola, Carwar, Mangalore, and Onore. It was ceded by Tippoo Saib to the English in

1799.

CANARIA, in ancient geography, one of the Fortunate Islands, a proof that these are what we now call the Canaries. Canaria had its name from abounding with dogs of an enormous size.

CANARIA, or the GRAND CANARY, an island in the Atlantic Ocean, about 180 miles from the coast of Africa. It is forty-two miles long, twenty-seven broad, about 100 in circumference, and thirty-three in diameter. It is fruitful, and

famous for its wine. It also abounds with apples, melons, oranges, citrons, pomegranates, figs, olives, peaches, and plantations. The fir and palm-trees are the most common. The towns are, Canary the capital, Gualdera, and Geria.

CANARINA, in botany, a genus of plants of the class hexandria, and order monogynia : CAL. six-leaved : COR. six-cleft, and campanulate ; STic.six: CAPS, inferior, six-celled, many-seeded. Species one only, a native of the Canaries.

CANARIUM, in antiquity, from canis, a dog, a lloman sacrifice, wherein dogs of a red color were sacrificed, for a security of the fruits of the earth against the raging heats of Sirius in the dog-days.

CANARIUM, in botany, a genus of the dioecia order, in the pentandria class of plants. Its cha- racters are, that it has male and female flowers ; that in both the calyx has three leaves, and the corolla consists of three petals ; the fruit is a drupa with a three-cornered nut. There is but one species, an East Indian tree.

CANA'RY, a kind of linnet, a dance, and a peculiar wine, are imported from the Canary Isles, and thence deriving their name.

I will to my honest knight Falstaff, and drink canary with him. ❓❓❓ I

think I shall drink pipe, wine first with him ; I'll make him dance. Shakspeare.

Master, will you win your love with a French brawl ? ††† How mean'st thou, brawling in French ? ††† No, my compleat master ; but to jigg off a tune at the tongue's end, canary to it with your feet, humour it with turning up your eyelids. Id.

Of singing birds, they have linnets, goldfinches, ruddocks, canary-birds, blackbirds, thrushes, and divers others. Carew.

CANARY, or CIVIDAD DE PALMAS, the capital of the island of Canaria. It has an indifferent castle, a court of inquisition, and the supreme council of the rest of the Canary Islands. It is a bishop's see, and has four convents, two for men and two for women. It is about three miles in compass, and contains 12,000 inhabitants. The houses are only one story high, and flat at the top ; but they are well built. The cathedral is a handsome structure.

CANARY BIRDS, in ornithology. See FRIN- CILLA.

CANARY GRASS. See PHALARIS.

CANARY ISLANDS, or CANARIES, are situated in the Atlantic Ocean, over against Morocco. They were formerly called the Fortunate Islands, on account of the temperate healthy air, and ex- cellent fruits. The land is very fruitful both in wheat and barley. The cattle thrive well, and the woods are full of all sorts of game. The birds are well known throughout Europe. Sugar canes abound greatly, but the Spaniards first planted vines here, whence we have the wine called Canary. These islands were not unknown to the ancients ; but they were forgotten till John de Betencourt discovered them, in 1402. It is said they were first inhabited by the Phoenicians, or Carthaginians, but the inhabitants could not tell from whence they were derived ; on the con- trary they did not know there was any other country in the world. Their language, manners, and customs, had no resemblance to those of their neighbours. They had no. iron. The Spaniards

obtained possession of them all, except Madeira, which belongs to the Portuguese ; and they still retain them. The settlers are chiefly Spaniards, though there are some of the original natives re- maining, whom they call Guanches. These are somewhat civilised by their intercourse with the Spaniards ; and are a hardy, active, bold people-. They live on the mountains, and their chief food is goats' milk. Their complexion is tawny and their noses flat. ††††††† The Spanish vessels, when they sailed

for the West Indies, always called at these islands, going and coming. Their names are ALLEGRANZA, CANARIA, FERRO, FUERTAVEN- TURA, GOMERA, GRACIOSA, INSIERNO, LiANCE-

ROTTA, LOBOS, MADEIRA, PALMA, RoCCA, ST.

CLARE, SALVAGES, and TENERIFFE. See those articles.' Long, from 12►► to 31►► W. Lat. from 27►► 30′ to 29►► 30′ N.

CANCALLE, a sea-port town of France, in the department of the Morbihan, and ci-devant province of Upper Britanny. Here the British landed in 1 758, in their way to St. Malo, where they burned a great number of ships in the harbour, and then retired without loss. It is eight miles from St. Malo.

CANCAMUM, among ancient Greek physi- cians, a gum resin, supposed to be gum lac. CAN'CEL, v. & n. ~) From Lat. cancelli ; CANCELLATED, adj. > lattices ; the mode of CANCELLATION. ˆobliteration, by lines crossing each other. Hence to cross out, is to cancel by wiping out or expunging the contents of an instrument by two lines drawn in the man- ner of a cross. Blackstone uses the word in its technical and proper sense. To blot out; to supersede ; to destroy ; in reference to any thins written. To cancel a debt is, to cross the bill."

Now welcome night, thou night so long expected, That long day's labour doth at last defray, And all my cares which cruel love collected Has summed in one, and cancelled for aye. Spenser.

Know then, I here forget all former griefs, Cancel all grudge ; repeal thee home again.

SJiakspeare.

but those elect

Angels, contented with their fame in heaven, Seek not the praise of men : the other sort, In might though wondrous, and in acts of war, Nor of renown less eager, yet by doom Cancelled from heaven and sacred memory, Nameless in dark oblivion let them dwell. Milton.

Such a plot was layed,

Had not Ashley betrayed,

As had cancelled all former disasters,

And your wives had been strumpets To his highness's trumpets, And foot-boys had all been your masters.

Marvell.

My warm assistance gave thee birth, Or thou hadst perished low in earth ; But upstarts, to support their station, Cancel at once all obligation. Gay.

The tail of the castor is almost bald, though the beast is very hairy ; and cancellated, with some re- semblance to the scales of fishes. Grew.

. Thou, whom avenging powers obey, Cancel my debt, too great to pay, Before the sad accounting day. Roscommun.

I pass the bills, my lords,

For cancelling your debts. Southerns.

In the proper sense of the word, to cancel is to deface an obligation, bv passing the pen from top to

CAN

bottom, or across it ; -which makes a kind of chequer lattice, called by the Latins cancelli. Dr. A . Rees.

CAN'CELEER, s. or) From Fr. cfiancel- CAN'CELIER. \ lor ; the turn of a

light-flown hawk upon the wing to recover her self, when she misses her aim in the stoop. Dr Rees (Cyclopedia) says, ' It is when a light- flown hawk, in her stooping, turns two or three times upon the wing, to recover herself before she seizes.'

Nor with the falcon fetch a cancelleer.

T. Weever's Epigram. Also as a verb, to cancelier, to turn in flight.

the partridge sprung,

He makes his stoop ; but wanting breath, is forced To cancelier ; then with such speed as if He carried lightning in his wings, he strikes The trembling bird. Mass. Guard.

CANCELLATA, in conchology, a species of area, inhabiting the American Ocean, the shell of which is marked with the cancellated striae, and bearded ; the margin gaping in the middle.

CANCELLI, in building, lattice windows, or those made of cross bars disposed latticewise. It is also used for rails or balusters enclosing the communion table, a court of justice, or the like ; and for the net-work in the inside of hollow bones.

CANCELLING, in the civil law, an act whereby a person consents that some former deed be rendered null and void ; otherwise called recision.

CAN'CER, n. "ˆ Sax. cancere ; Fr. cancre ;

CAN'CERATE, v. Sltal. cancro ; Span, cancer;

CAN'CEROUS. 3 Dutch, kancker. A viru- lent swelling, which generally suppurates, pro- ducing a hard, uneven, obstinate sore, which spreads and deepens by fibres which appear like the legs and claws of a crab ; while its general appearance resembles the creature after which it is named.

But striking his fist upon the point of a nail in the ???wall, his hand cancerated, he fell into a fever, and soon after died on't. L' Estrange.

How they are to be treated when they are stru- mous, schirrus, or cancerous, you may see in their proper places. Wiseman.

Any of these three may degenerate into a schirrus, and that schirrus into a cancer. Id.

As when a cancer on the body feeds,

And gradual death from limb to limb proceeds ;

So does the chilness to each vital part

Spread by degrees, and creeps into the heart.

Addison.

CAN'CER, n. s. Lat. cancer. A crabfish; the sign of the summer solstice.

When now no more the alternate twins are fired, And Cancer reddens with the solar blaze, Short is the doubtful empire of the night. Thomson.

CANCER, in astronomy, one of the twelve signs, represented on the globe in the form of a crab, and thus marked (03). It is the fourth constel- lation in the starry zodiac. See ASTRONOMY. The reason generally assigned for its name as well as figure, is a supposed resemblance which the sun's motion in this sign bears to the crab. As the latter walks backwards, so the former, in this part of his course, begins to go backwards,

or recede from us. By others, the disposition of stars in this sign is supposed to have giveu the first hint to the representation of a crab. It gives name to a quadrant of the ecliptic, viz.

CANCER, TROPIC OF, in astronomy, a lesser circle of the sphere, parallel to the equator, and passing through the sign Cancer. See ASTRO- NOMY.

CANCER, in medicine, a roundish, unequal, hard, and livid tumor, generally seated in the glandulous part of the body, supposed to be so called, because it appears at length with turgid veins, shooting out from it, so as to resemble, as it is thought, the figure of a crab-fish. See MEDICINE. The mat- ter of cancer was found by Dr. Crawford to give a green color to syrup of violets, and treated with sulphuric acid, to emit a gas resembling sulphuretted hydrogen, which he supposes to have existed in combination with ammonia in the ulcer. Hence the action of virulent pus on me- tallic salts. He likewise observed, that its odor was destroyed by aqueous chlorine, which he therefore recommends for washing cancerous sores. But although several medicines, both in- ternal and external have been tried, and in some instances partially succeeded, the only method of cure on which reliance may be placed is that by extirpating the part affected.

CANCER, in zoology, a genus of insects of the order of aptera. The generic characters are these : they have eight legs (seldom ten or six), besides the two large claws which answer the purpose of hands. They have two eyes at a con- siderable distance from each other, and for the most part supported by a kind of pedunculi or foot-stalks ; the eyes are likewise elongated and moveable ; they have two clawed palpi, and the tail is jointed. The species have been well di- vided into these classes :

1. The crab, properly so called, having four filiform antennae. See CRAB. 2. Pagarus an- tennas, pedunculate, inhabiting cast-off shells. 3. Galathaea, antennae unequal. 4. Astacus, or the lobster, with foliaceous tail. See LOBSTER. 6. Squilla, with a very short thorax. 6. Gam- marus, antennas pedunculate and simple. 7. Scyllarus, having two biarticulate plates instead of the hinder antennas. See also SHRIMP.

CANCROMA, or boat-bill, in ornithology, a genus of birds belonging to the order of grallae : the characters of which are, ××× the bill is broad, with a keel along the middle ; the nostrils are small, and lodged in a furrow; the tongue is small, and the toes are divided. There are two species: 1. C. cancrophaga, or the brown boat- bill. In this species the under parts, instead of ash color, are of a pale rufous brown ; the tail rufous ash ; and the upper parts wholly of a cream color ; the bill and legs of a yellow

brown. It inhabits Cayenne, Guiana, and Brasil, and chiefly frequents such parts as are near the water : in such places it perches on the trees which hang over the streams, and like the king's- fisher, drops down on the fish which swim be- neath. It has been thought to live on crabs like- wise, whence the Linnaaan name. 2. C. coch- leari, the crested boat-bill, is of the size of a fowl ; the length twenty-two inches. The bill is four inches long, and of singular form, not un-

like a boat with the keel uppermost ; the upper mandible has a prominent ridge at the top, and on each side of this a channel, at the bottom of which the nostrils are placed ; these are oval, and situated obliquely ; the general color of the bill is dusky ; from the hind head springs a long black crest, the feathers which compose it narrow, and end in a point.

CANDAHAR. See KANDAHAR.

CANDELA FUMALIS, the smoking candle, is an odoriferous mass, shaped like a candle, the use of which is to fumigate rooms where there is any contagion or noxious smell. The candela fu- malis, or candela pro suffitu odorata, as it is also called, consists of aromatic powders, mixed up with a third or more of the charcoal of willow or lime tree, and reduced to a proper consistence with a mucilage of gum tragacanth, labdanum, or turpentine. It excites a grateful smell with- out any flame, and corrects the state of the air.

CAN'DENT, adj. Lat. candens. Hot; in the highest degree of heat, next to fusion.

If a wire be heated only at one end, according as that end is cooled upward or downward, it respec- tively acquires a verticity, as we have declared in wires totally candent. Brown.

CANDEROS, in the materia medica, an East Indian gum, not much known among us, though sometimes imported. It has much the appear- ance of amber, only it is white and pellucid. Garcias and others tell us that the people of Borneo have the art of adulterating the crude camphor with large quantities of this gum.

CANDIA, the ancient Crete, one of the largest islands in the Mediterranean, and situate south of the Grecian Archipelago, is about 180 miles long, and

twenty-five to thirty broad. The island abounds with mountains, the most remarkable of which are the Psilorite or Ida of the ancients, and the mountains of Sphachia or the white mountains, the summits of which are covered with snow nearly half the year. The fertile valleys abound with springs of excellent water. Of the natural advantages and salubri- ous climate of this island, travellers speak with raptures. The heat is never excessive ; and in the plains violent cold is never felt. In the warmest days of summer the atmosphere is cooled by breezes from the sea. December and January are their only winter months, and then there is a copious fall of rain ; the sky is obscured with clouds, and the north winds blow violently ; but in February the ground is again overspread with flowers and rising crops ; and the rest of the year is almost one continued fine day. Thus the air here is always found ex- tremely congenial to delicate constitutions, and epidemical diseases are almost unknown. Fevers prevail here in the summer, but are not gene- rally dangerous. This fine country is, however, infested with one dreadful disorder, the leprosy, which is infectious, and said to be instantaneously communicated by contact. The victims who are attacked by it, are driven from society, and confined to little ruinous houses on the way side. They are strictly forbidden to leave these dwell- ings, or hold intercourse with any person. Having generally beside their huts a small garden producing pulse, they. feed poultry; and with

what they obtain from passengers, find means in drag out a painful life in circumstances of shock- ing bodily distress. The disorder appears to be chiefly confined to the poor Greeks.

The coast of Candia abounds with excellent harbours, the principal of which are Grabusa on the west, the bay of Suda on the north, and Paleo Castro on the east. The south is almost inaccessible.

But little labor is here required to produce the necessaries or the luxuries of life. But the insecurity of property, under the tyranny of the Turks, prevents all attempts at extensive cultiva- tion. It yields, however, abundance of oil, silk, honey, wax, saffron, figs, walnuts, apricots, almonds, oranges, ‘citrons, olives, melons, and grapes, which grow very large, and produce wine of an excellent flavor. Shrubs and-flowers also abound in this salubrious spot. Its princi- pal manufacture is soap, which, though not so good as French soap, is still preferred by the Turks for its cheapness.

Candia is at present governed by three pachas, who reside respectively at Candia, Canea, and Retimo. For the earlier history of this island see CRETE. It came into the possession of the Venetians by purchase, in the year 1194, and soon began to flourish under the laws of that republic. The inhabitants, encouraged by their masters, engaged in commerce and agriculture. The Venetian commandants readily afforded to those travellers

who visited the island, every assistance necessary to enable them to extend and improve useful knowledge. Belon, the naturalist, is lavish in praise of their good offices, and describes, in an interesting manner, the flourishing state of that part of the island which he visited. The seat of government was esta- blished at Candia, the magistrates and officers, who composed the council, resided there. The provisor general was president. He possessed the chief authority; and his power extended over the whole principality. It continued in the possession of the Venetians for five cen- turies and a half. Cornaro held the chief com- mand when it was threatened with a storm, on the side of Constantinople. The Turks, for a whole year, had been employed in preparing a vast armament. They deceived Coruaro, by as- suring him that it was intended against Malta. In 1645, in the midst of a solemn peace, they appeared unexpectedly before Crete with a fleet of 400 sail, having on board 60,000 land forces, under the command of four pachas. The em- peror Ibrahim, under whom this expedition was undertaken, had no fair pretext in offer in justification of the enterprise. He made use of all that perfidy which characterises the people of the east, to impose on the Venetian senate. He loaded their ambassadors with presents; directed his fleet to bear for Cape Matapan, as if they had been going beyond the Archipelago ; and caused the governors of Tina and Cerigna to be solemnly assured, that the republic had nothing to fear for her possessions. At the very instant when he was making those assurances, his nava. armament entered the gulf of Canea ; and, pas- sing between that city and St. Theodore, anchor, ed at the mouth of Platania. Tre Venetians

not expecting this sudden attack, had made no preparations to repel it. The Turks landed without opposition. The isle of St. Theodore is but a league and a half from Canea, and is only three quarters of a league in compass. The Venetians had erected two forts there; one of which, standing on the summit of the highest eminence, on the coast of that little isle, was called Turluru ; the other on a lower situation, was named St. Theodore. It was an important object to the Mussulmans to make themselves masters of that rock, which might annoy their ships. They immediately attacked it with ardor. The first of those fortresses, being destitute of soldiers and cannon, was taken without striking a blow. The garrison of the other consisted of no more than sixty men. They made a gallant defence and stood out till the last extremity ; and, when the Turks at last prevailed, their num- ber was diminished to ten, whom the captain pacha cruelly caused to be beheaded. Being now masters of that important post, as well as of Lazaret, an elevated rock, standing above half a league from Canea, the Turks invested the city by sea and land. General Cornaro was struck, as with a thunder- clap, when he learned the descent of the enemy. In the whole island there were no more than a body of 3500 infantry, and a small number of

cavalry. The besieged city was defended only by 1000 regular troops, and a few citizens, who were able to bear arms. He made haste to give the republic notice of his distress; and posted himself off the road, that he might the more readily succour the besieged city. He threw a body of 250 men into the town, before the lines of the enemy were com- pleted. He afterwards made several attempts to strengthen the besieged with other reinforce- ments ; but in vain. The Turks had advanced in bodies close to the town, had carried a half- moon battery, which covered the gate of Retimo ; and were battering the walls night and day with their numerous artillery. The besieged defended themselves with resolute valor, and the smallest advantage which the besiegers gained cost them dear. Cornaro made an attempt to arm the Greeks, particularly the Spachiots, who boasted loudly of their valor. He formed a battalion of these. But the sera of their valor was long past. When they beheld the enemy, and heard the thunder of the cannon, they took to flight ; not one of them would stand fire. While the senate of Venice were deliberating on the means to be used for relieving Canea, and endeavouring to equip a fleet, the Mahommedan generals were sacrificing the lives of their soldiers to bring their enterprise to a glorious termination. In different engagements they had already lost 20,000 warriors ; but, descending into the ditches, they had undermined the walls, and blown up the most impregnable forts with explosions of powder. They sprung one of those mines be- neath the bastion of St. Demetri. It overturned a considerable part of the wall, which crushed all the defenders of the bastion. That instant the besiegers sprung up with their sabres in their hands, and taking advantage of the general con- sternation of the besieged in that quarter, made themselves masters of the post. The besieged,

recovering from their terror, attacked them with unequalled intrepidity. About 400 men assailed 2000 Turks already firmly posted on the wall, and pressed upon them with such obstinate and dauntless valor, that they killed a great number, and drove the rest down into the ditch. In this extremity, every person in the city was in arms. The Greek monks took up muskets ; and the women, forgetting the delicacy of their sex, ap- peared on the walls among the defenders, either supplying the men with ammunition and arms, or fighting themselves ; and several of those daring heroines lost their lives. For fifty days the city held out against all the forces of the Turks. If even at the end of that time, the Ve- netians had sent a naval armament to its reliefr the kingdom of Candia might have been saved. Doubtless, they were not ignorant of this well- known fact. The north wind blows straight into the harbour of Canea. When it blows a little briskly, the sea rages. It is then impossible for any squadron of ships, however numerous, to form in line of battle in the harbour, and to meet an enemy. If the Venetians had set out from Cerigo with a fair wind, they

might have reached Canea in five hours, and might have en- tered the harbour with full sails, without being exposed to one cannon shot; while none of the Turkish ships would have dared to appear before them ; or, if they had ventured, must have been driven back on the shore, and dashed in pieces among the rocks. But, instead of thus taking advantage of the natural circumstances of the place, they sent a few galleys, which, not daring to double Cape Spada, coasted along the southern shore of the island, and failed of accomplishing the design of their expedition. At last, the Ca- neans, despairing of relief from Venice, seeing three breaches made in their walls, through which the infidels might easily advance upon them, ex- hausted with fatigue and covered with wounds, and reduced to the number of 500 men, who were obliged to scatter themselves round the walls, which were half a league in extent, and undermined in all quarters, demanded a parley, and offered to capitulate. They obtained very honorable conditions ; and after a glorious defence of two months, which cost the Turks more than 20,000 men, marched out of the city with the honors of war. Those citizens who did not choose to continue in the city were permitted to remove ; and the Ottomans faithfully observed their stipu- lations.

The Venetians, after the loss of Canea, retired to Retimo. The captain pacha laid siege to the citadel of Suda, situated in the entrance of the bay, on a high rock, of about a quarter of a league in circumference. He raised earthen batteries, and made an ineffectual attempt to level its ramparts. At last, despairing of taking it by assault, he left some forces to block it up from all communication, and advanced toward.' Retimo. That city, being unwalled, was de fended by a citadel, standing on an eminence which overlooks the harbour. General Cornaro had retired thither. At the approach of the enemy, he advanced from the city, and waited for them in the open field. During the action, he encouraged his soldiers, by fighting in the

ranks. A glorious death was the reward of his valor ; but his fall determined the fate of Re- timo. The Turks having landed additional forces, they introduced the plague, which was almost a constant attendant on their armies. This dreadful pest destroyed most part oT the inhabitants. The rest escaped into the Venetian territories, and the island was left almost deso- late. The siege of the capital commenced in 1646, and was protracted much longer than that of Troy. For two years the Turks scarce gained any advantages before that city. They were often routed by the Venetians, and some- times compelled to retire to Retimo. In 1649 Ussein Pacha, who blockaded Candia, receiving no supplies, owing to the revolutions at Constan- tinople by the deposition and death of Ibrahim, and accession of

Mahomet IV. was compelled to raise the siege, and retreat to Canea. The Venetians were then on the sea with a strong squadron. They attacked the Turkish fleet in the bay of Smyrna, burnt twelve of their ships and two galleys, and killed 6000 of their men. Some time after, the Mahommedans having lan- ded an army on Candia, renewed the siege of the city with greater vigor, and made themselves masters of an advanced fort that was very troublesome to the besieged ; which obliged them to blow it up. From 1650 to 1658, the Ve- netians, continuing masters of the sea, intercep- ted the Turks every year in the straits of the Dardanelles, and fought them in four naval engagements ; in which they defeated their numerous fleets, sunk a number of their caravels, took others, and extended the terror of their arms even to the walls of Constantinople. That capital became a scene of tumult and disorder. The grand seignior, alarmed, left the city with precipitation. These great successes revived the hopes of the Venetians and depressed the courage of the Turks. The latter converted the siege of Candia into a blockade, and suffered consider- able losses. The Sultan, to exclude the Ve- netian fleet from the Dardanelles, caused two for- tresses to be built at the entrance of the straits. He ordered the pacha of Canea to appear again before the walls of Candia, and to make every possible effort to gain the city. In the mean- time the Venetians made several attempts on Canea. In 1 660 the city was about to surren- der, when the pacha of Rhodes' reinforced it with a body of 2000 men. He doubled the extremity of Cape Melee, within sight of the Venetian fleet,' which was becalmed off Cape Spada, and could not advance one fathom to oppose an enemy considerably weaker than themselves. Kiopruli, knowing that the mur- murs of the people against the long con- tinuance of the siege of Candia were rising to a height, and fearing a general revolt, set out from Constantinople about the end of 1666, at the head of a formidable army. Having escaped the Venetian fleet, which was lying off Canea, he landed at Palio Castro, and formed the lines around Candia. Under his command were four pachas, and the flower of the Ottoman forces. Those troops, being encouraged by their chiefs, and supported by a great quantity of aitillery, performed prodigies of valor. All the

exterior forts were destroyed. Nothing now re- mained to the besieged but the bare line of the walls, unprotected by fortresses; and these being battered, by an incessant discharge of artillery, soon gave way on all quarters. Still, however, (incredible as it may apppear) the Candians held out three years against all the forces of the Ottoman empire. At last they were about to capitulate, when the hope of assistance from France re-animated their valor. The expected succours arrived on the 26th of June, 1669. They were conducted by the duke of Noailles. Next day the ardor of the French prompted them to make a general sally. The duke of Beaufort, admiral of France, assumed the com- mand. He was the first to advance

against the Mussulmans, and was followed by a numerous body of infantry and cavalry. They rushed furiously upon the enemy, forced the trenches, and would have compelled them to abandon their lines and artillery, had not an unforeseen accident damped their courage. In the midst of the engagement a powder magazine blew up ; the duke of Beaufort and the foremost of the combatants lost their lives ; the French ranks were broken, and fled in disorder ; and the duke of Noailles- with difficulty effected a retreat within the walls of Candia. The French accused the Italians of having betrayed them ; and on that pretext pre- pared to set off sooner than the time agreed upon. No intreaties of the commandant could prevail with them to delay their departure. This determined the fate of the city, which had only 500 men left to defend it. Morosoni Capitulated with Kiopruli, to whom he surrendered the king- dom of Crete, excepting only the Suda, Grabusa, and Spina-Longa. The grand vizier made his entrance into Candia, Oct. 4th, 1670 ; and stayed eight months in it, inspecting the reparation of its walls and fortresses. The three fortresses left in the hands of the Venetians continued long in their possession, but were all taken at last. In short, after a war of 30 years continuance, in the course of which more than 200,000 men fell, Candia was entirely subdued by the Turks, in whose hands it still continues.

CANDIA, the capital of the above island, is a fortified town, containing from 12,000 to 15,000 inhabitants, by far the greater part of whom are Turks. The houses are mean and irregular. The manufacture of soap is carried on very ex- tensively here. The harbour, once large and commodious, is now very much choked with sand and will not admit more than ten merchant- men. The Governor is a pacha of three tails, and seraskier or military commandant of the whole island. Long 25►► 4′ E., lat. 35►► 16′ N.

CANDIDATE, v. adj. & n.-j Fr. candide ;

CAN'DID, adj. I Ital. Candida ;

CAN'DIDLY, \Span. Candida;

CAN'DIDNESS, i Lat. Candidas;

CAN'DOUR. } candidus is from

candeo, as lucidus is from luceo. Thus, in ad- dition to white, it is applied to any thing that is bright and glowing, as to snow recently fallen ; to polished silver; to the light of a candle. In this sense, however, it is rare in English. IB process of time it was employed to designate all persons, who arc expectants of any office, in ob-

CAN

Jaining which the suffrages of others are required, because among the Romans such persons, on such occasions, wore a garment more white than ordinary (Candida toga). It is metaphorically applied to ingenuousness, openness of temper, purity of mind ; without prejudice or malice ; or sincere and unpretending goodness.

It presently sees the guilt of a sinful action; and, on the other side, observes the candidncss of a man's very principles, and the sincerity of his intentions.

South. The box receives all back ; but, poured from

thence, The stoucs came candid forth, the hue of innocence.

Dry den.

Thy first-fruits of poesy were given To make thyself a welcome inmate there, While yet a youug probationer, And candidate of heaven. Id.

We have often desired they would deal candidly with us ; for, if the matter stuck only there, we would propose that every one should swear, that is a mem- ber of the church of Ireland. Swift. The import of the discourse will, for'the most part, if there be no designed fallacy, sufficiently lead candid aud intelligent readers into the true meaning of it.

Locke.

A candid judge will read each piece of wit, With the same spirit that its author writ. Pope. What could thus high thy rash ambition raise ? Art thou, fond youth, a candidate for praise ? Id.

So many candidates there stand for wit, A place at court is scarce so hard to get. Anonymous. One would be surprised to see so many candidates for glory. Addison.

But let untender thoughts afar be driven,

Nor venture to arraign the dread decree, For know to man, as candidate for heaven,

The voice of the Eternal said, Be free ! Seattle. Yet are the darkened eye, the withered face,

Or hoary hair, I never will repine ; But spare, O time, whate'er of mental grace,

Of candour, love, or sympathy divine, Whate'er of fancy's ray or friendship's flame is mine. Id.

CANDIDATES, in the college of physicians, London, is the order of members, out of whom the fellows are chosen. They must be natives of England, doctors of physic, admitted to the de- grees in our own universities, and ought to have practised four years before they are admitted into the order.

CANDIDATI MILITES, an order of soldiers, among the Romans, who served as the emperor's body-guards to defend him in battle. They were the tallest and strongest of the whole troops, and most proper to inspire terror. They were called candidati, because clothed in white, either that they might be more conspicuous, or because they were considered in the way of preferment.

CANDIDATI PRINCIPIS, were those who were recommended to any offices by the emperors. The candidatus principis was also an office in the court of the emperor of Constantinople, an- swering to a secretary of state among us.

CANDIDUS, in entomology, a species of cerambyx ; color white, thorax and body fuscous, with two white stripes : its country unknown.

CAN'DIFY, v. a. Lat. candifico. To make white; to whiten.

CANDISH, a considerable province of Asia, in the dominions of the Great Mogul, bounded by Chytor and Malvo on the north, Orixa on the east, Deccan on the south, and Guzarat on the west. It is populous and rich ; and abounds in cotton, rice, and Indigo. Brampore is the capital town. It is subject to the Poonah Mahrattas.

CANDITEERS, in fortification, frames to lay brushwood on to cover the workmen.

C AN'DLE, n. ~\ Lat. candela ; Ara. qun- CAN'DLE-BEAM, del ; Per.candel; Yr.chan- CAN'DLE-CASE, delle ; supposed from can-

CAN'DLE-HOLDER, dldus, white ; but Goth. CAN'DLE-LIGHT, kˆndcl, from kyndael, is a CAN'DLE-MINE, (fire-match ; and kyndil, CAN'DLE-SNUFF, (Sax. candel, a torch, a CAN'DLE-STICK, light ; icaiw, to bum. See CAN'DLE-STUFF, KINDLE. The metaphori- CAN'DLE-TREES, cal beam of light is cha- CAN'DLE-WASTER, racterised according to the CAN'DLES'-ENDS. J luminous body by or from which it is supposed to be

protruded. It is hence that we speak of sun-beams and of moon- beams. Our ancestors spoke of candle-beams ; and the sonneteer still sings of the lustre that beamed from the eye of his mistress. Candle- stick, Sax. condelsticca ; condletreow is a stock or tree for a candle ; that which holds the candle. Candles'ends, to drink off. A piece of romantic extravagance long practised by amorous gallants. It perhaps may be asked, why drink ing offcandles'-ends, for flap-dragons, should be esteemed an agreeable qualification? The an- swer is, that, as a feat of gallantry, to swallow a candles'end formed a more formidable and dis agreeable flap-dragon than any other substance, and therefore afforded a stronger testimony of zeal for the lady to whose health it was drank. See FLAP-DRAGON and DAGGERED ARMS.

Why doth the prince love him so then ? Because he eats conger and fennel ; and drinks off candles'-ends for flap-dragons. Shahspeare.

CANDLE-WASTERS; rakes who sit up all night, and therefore waste much candle. It certainly does not, as some have supposed, relate to the custom explained under the words candles'-ends ; for a book-worm is called a candle-waster. See TODD.

Let wantons, light of heart Tickle the senseless rushes with their heels ; For I am propertied with a grandsire phrase, To be a candle-holder, and look on. Shahtpeare.

How far that little candle throws his beams ! So shines a good deed in a naughty world. Id.

The horsemen sit like fixed candlesticks, With torch-staves in their hands ; and their poor jades Lob down their heads. Id,

By these blessed candles of the night, Had you been there, I think you would have begged The ring of me, to give the worthy doctor. Id.

Why, Petruchio is coming, in a new hat, and an old jerkin ; a pair of old breeches, thrice turned ; a pair of boots that had been candle-cnsei ; an old rusty sword taken out of the town armory, with a broken hilt, and chapcless, with two broken points. Id.

Here burns my candle out, ay, here it dies, Which, while it lasted , gave

king Henry light. Id.

We see the wax candies last longer than tallow cardies f because wax is more firm and hard.

Bacon's Natural History.

In darkness candlelight may serve to guide men's steps, which to use in the day were madness.

Hookei:

By the help of oil, and wax, and other candlestuff, the flame may continue, and the y ick not burn.

Bacon.

These countries were once Christian, and members

of the church, and where the golden candlesticks did

stand. Bacon.

Carouse her health in cans

And candles' -ends. Beaumont and Fletcher.

But none that will hung themselves for love, or eat candles' -ends, &c. as the sublunary lovers do.

Ben Jonson's Masque of the Moon.

Before the day was done, her work she sped, And never went by candlelight to bed. Dryd. Fab. The boding owl

Steals from her private cell by night,

And flies about the candlelight. Swift.

Such as are adapted to meals, will indifferently serve for dinners or suppers, only distinguishing between daylight and candle-light. Id.

Take a child, and, setting a candle before him, you shall find his pupil to contract very much, to exclude the light, with the brightness whereof it would other- wise be dazzled. Ray.

I know a friend, who has converted the essays of a man of quality into a

kind of fringe for his candlesticks.

Addison.

I shall find him coals and candlelight.

Molineux to Locke.

CANDLE. A tallow candle, to be good, must be part sheeps' and part bullocks' tallow. Hogs' tallow makes the caadle gutter, and always gives an offensive smell, with a thick black smoke. The wick ought to be pure, sufficiently dry, and properly twisted ; otherwise the candle will emit an inconstant vibratory flame, which is both pre- judicial to the eyes and insufficient for the dis- tinct illumination of objects. There are two sorts of tallow candles; the one dipped, the other moulded : the former are the common candles ; the others the invention of the sieur le Brege at Paris. Candles are also made of sper- maceti and wax.

CANDLE, MEDICATED. See BOUGIE.

CANDLE, SALE, or AUCTION BY INCH OF, is when a small piece of candle, being lighted, the bystanders are allowed to bid for the merchan- dise that is selling ; but the moment the candle is out, the commodity is adjudged to the highest bidder. This mode of sale seems to have been borrowed from the church of Rome, where there is an excommunication by inch of candle, when the sinner is allowed to come to repentance while the candle continues burning ; but after it is consumed he remains finally excommunicated.

CANDLES. See CHANDLERY.

CANDLE BOMBS, a name given to small glass bubbles, having a neck about an inch long, with a very slender bore, by means of which a small quantity of water is introduced into them, and the orifice afterwards closed up. The stalk being put through the wick of a burning candle, the flame soon rarifies the water into steam, by the

elasticity of which the glass is burst with a loud crack. They are of dangerous use.

CANDLEMAS, n. s. from candle and mass. The feast of the Purification of the Blessed Vir- gin, which was formerly celebrated with many lights in churches.

The harvest dinners are held by every wealthy man , or, as we term it, by every good liver, between Michaelmas and candlemuss.

Carew's Survey of Cornwall.

There is a general tradition in most parts of Europe, that inferreth the coldness of the succeeding winter, upon shining of the sun upon candlemas day.

Browne's Vulgar Errours.

Come candlemas nine years ago she died, And now lies bury'd by the yew-tree side. Gay.

CANDLEMAS, a feast in honor of the puri- fication of the Virgin Mary, held on the 2d of February. The ancient Christians on that day used lights in their churches and processions, in memory, it is said, of our Saviour's being on that day declared by Simon ' to be a light to lighten the Gentiles.' In imitation of this custom, the Roman Catholics on this day consecrate aL the tapers and candles which they use in their churches during the whole year. At Rome, the pope performs that ceremony himself, and dis- tributes wax-candles to the cardinals and others, who carry them in procession through the great hall of the pope's palace. This ceremony was prohibited in England by an order of council in 1548. Candlemas is one of the four terms of the year for paying and receiving rents, or borrowed money, &c. In the courts of law Candlemas term begins 1 5th January, and ends 3d February.

CANDLESTICK, GOLDEN, one of the sacred utensils made by Moses to be placed in the Jewish tabernacle. See Exod. xxv. 31, Sec. and 1 Kings vii. 49. This sacred utensil, upon the destruction of the temple by the Romans, was lodged in the temple of peace built by Vespa- sian ; and the representation of it is still to be seen on the triumphal arch at the foot of mount Palatine, on which this triumph is delineated.

CAN'DOCK, n. s.. Aweed that grows in rivers.

Let the pond lie dry six or twelve months, both to kill the water-weeds, as water-lilies, candocks, reate, and bullruRhes ; and also, that as these die for want of water, so grass may grow on the pond's bottom.

Walton.

CAN'DY, from Sans, khand; Per. cande; Ara. alkende. To conserve with sugar; to incrust with congelations; to give certain appearances resembling those of sugarcandy ; to form or con- geal into glistening substances ; into icicles. The word is sometimes used to whiten, to give the appearance of purity and innocence.

Will the cold brook,

Candied with ice, cawdle thy morning toast, To cure thy o'er-night's surfeit ? Shakspeare.

Should the poor be flatterM ? ?Jo, let the candy'd tongue lick absurd pomp, And crook the pregnant hinges of the knee, Where thrift may follow fawning. Shakspeare

Since when those frosts that winter brings,

Which candy ever green, Renew us like the teeming springs,

And we thus fresh are seen. Draytoi..

CAN

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CAN

*Now that the ***winter 's gone, the earth hath lost Her snow-white robes, and now no more the frost Candies the grass, or casts an icy cream Upon the silver lake or chrystal stream. But the warm sun thaws the benumbed earth. And makes it tender, gives a record birth To the dead swallow, wakes in hollow tree The drowsy cuckoo and the humble bee.*

Carew. The Spring.

They have in Turkey confections like to candied son- serves, made of sugar and lemon, or sugar and citrons, or sugar and violets, and some other flowers, and mix. ture of amber. Bacon.

With candy'd plantanes, and the juicy pine, On choicest melons and sweet grapes they dine.

Waller.

CAN'DY; LION'S FOOT. See CATANANCHE. CANDY, or SUGAR CANDY, a preparation of sugar made by melting and crystallising it six or seven times over, to render it hard or transpa- rent. It is of three kinds, white, yellow, and red. The white comes from the loaf-sugar, the yellow from the cassonado, the brown from the muscavado.

CANDY, a kingdom of Asia, in the centre of the island of Ceylon, is separated from the country possessed by Europeans on the coast by almost impenetrable woods and mountains. The passes are extremely steep and

difficult, and so little known, even to the natives, that the exact dimensions of these dominions have nerer been ascertained. The climate is particularly un- healthy to Europeans on account of the heavy fogs which prevail.

The country is divided into provinces and districts. A high range of mountains extends across the whole country, and divides the island into two different climates. On one side the rains are incessant, and on the other there has been a continued drought for several years. Several rivers intersect this country > but they are rendered unnavigable by the very rapid current during the rainy season, and they are almost dried up during the summer months. The Candians are divided into castes ; the nobles form the first or highest rank, ••• the second in- cludes the better artificers, such as goldsmiths, painters, &c. ••• the third the meaner kind of arti- ficers, as barbers, weavers, and the common soldiers ; the laborers of all descriptions and the peasantry are included in the fourth caste. They worship the idol Buddha.

The government is despotic, and supported by presents or contributions brought by the peo- ple, or rather enforced by the king's officers. They consist of money, corn, fruit, precious stones, and all articles of their own manufacture. The submission of the subject to the sovereign is almost unbounded. The former never dares appear on horseback ; indeed this animal is only kept in the royal stud.

The capital (see below) has been frequently attacked by Europeans and again given up. It was taken by the Dutch in 1796, but they only kept possession about nine months. In 1 802 a war again broke out, and the Candians submitted to the English army of 3000 men, under the command of Major Mendarval, who left here Major Davie, with a garrison. The garrison, however, being small, they soon suffered very materially from

the climate, and were obliged to surrender, on condition of being allowed to march to Trincomalee. This treacherous people, however, felt no repugnance at misleading and cruelly murdering the greater part of them in cold blood. Another expedition failed in 1804, but a third was resolved upon in 1815, and an army of 3000 men took possession of the capital. ID March, 1816, the monarch, Wikremc RˆjaSinha, was finally deposed, and the 'kingdom annexed to the British dominions.

CANDY, the capital of the Candian dominions, about 142 miles from Trincomalee, and 108 from Columbo, stands on a plain, surrounded by mountains covered with thick jungle and almost impenetrable woods. The town is, as it were, fortified by a thick thorn hedge, and is ap- proached by difficult narrow passes, guarded by gates of the same materials. The town stands near the banks of the river Maha-villa-gonga, and is formed of one

principal street, about two miles long, with narrow lanes branching from it. At the extremity of the street is the palace, containing a great number of apartments, some of them curiously painted, and others ornamented with plate glasses. The principal building consists of two squares, one within the other ; the interior is the royal residence. The houses of the town are very mean. Long. 80►► 47′ E., lat. 7►► 23′ N. See CEYLON.

CANE, n. & v.) TLavva; Lat. canna. A

CA'KY. J kind of strong reed, of

which walking staffs are made ; a walking-staff. A lance; a dart made of cane: whence the Spanish inego de cannas. The plant which yields the sugar. To beat with a walking-stick. Cany signifies full of canes, or consisting of canes.

Shall I to please another wine-sprung mind Lose all mine own ; God hath given me a measure Short of his cane and body : must I find A pain in that wherein he finds a pleasure. Herbert.

But in his way lights on the barren plains Of Sericana, where Chineses drive, With sails and wind, their cany waggons light. Milton.

The king thrust the captain from him with his cane ; whereupon he took his leave and went home. Harvey.

Abenamar, thy youth these sports has known, Of which thy age is now spectator grown ; Judge-like thou sitt'st, to praise or to arraign The flying skirmish of the darted cane. Dryden.

If the poker be out of the way, or broken, stir the fire with your master's cane. Swift.

If the strong cane support thy walking hand, Chairmen no longer shall the wall command.

Gay's Trivia.

This cane or reed, grows plentifully both in the East and West Indies. Other reeds have their skin hard and dry, and their pulp void of juice ; but the skin of the su- gar cane is soft. It usually grows four or five feet high, and about half an inch in diameter. The stem or stalk is divided by knots a foot and a half apart. At the top it puts forth long green tufted leaves, from the middle of which arise the flower and the seed. They usually plant them in pieces a foot and a half below the top of the flower ; and they are ordinarily ripe in ten months, at which time they are found quite full of a

white succulent marrow, whence is expressed the liquor of which sugar is made. Chambers.

And the sweet liquor on the cane bestow From which prepared the luscious sugars flow.

Blackmcre.

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CAN

Ambition '. does ambition there reside ? Yes ! when the boy in manly mood astride, Of headstrong prowess innocently vain, Canters, the jockey of his father's cane. Biihop.

CANE, GROTTO DEL, i. e. the dog's grotto, a cave of Naples, seven miles from Puzzoii, where many dogs have been suffocated to show the effect of a mephitic vapgr, which rises a foot above the bottom of this grotto. CANE, in botany. See ARUNDO. CANE, SUGAR. See SACCHARUM CANELLA, in botany, a genus of the mono- gynia order, and dodecandria class of plants, natural order twelfth, holoraceae : CAL. three- lobed; the petals five; the anthera twelve to twenty-one, growing on an urceolated or bladder- shaped nectarium ; and the fruit is a trilocular berry with two seeds. There is but one known species, C. alba. It grows usually about twenty feet high, and eight or ten inches in thickness, in most of the Bahama islands. The leaves are narrow at the stalk, growing wider at their ends, which are broad and rounding, having a middle rib only ; they are very smooth, and of a light shining green. The whole plant is very aromatic, the bark particularly, being used in distilling, and in greater esteem in the more northern parts of the world than in Britain. The bark is the canella alba of the shops. It is brought to us rolled up into long quills, thicker than the cin- namon, and both outwardly and inwardly of a whitish color, lightly inclining to yellow. Infu- sions of it in water are of a yellowish color, and smell of the canella : but they are rather bitter than aromatic. Tinctures in rectified spirit have the warmth of the bark, but little of its smell. Proof spirit dissolves the aromatic as well as the bitter matter of the canella, and is therefore the best menstruum. This bark is a warm pungent aromatic, though not of the most agreeable kind : nor are any of the preparations of it very grate- ful. Canella alba is often employed where a warm stimulant to the stomach is necessary, and as a corrigent of other articles. It is now, how- ever, little used in composition by the London College ; the only officinal formula which it enters being the pulvis aloeticus

; but with the Edin- burgh College it is an ingredient in the tinctura amaro, vinum amarum, vinum rhei, as it is use- ful as covering the taste of some other articles.

CANEPHORIA, a ceremony celebrated by the Athenian virgins on the eve of their marriage day, in which the maid, conducted by her father ,and mother, went to the temple of Minerva, car- rying with her a basket full of little curiosities, as presents to Diana, to engage her to make the marriage state happy; or, as the scholiast of Theocritus has it, the basket was intended as a kind of honorable amends made to that goddess, the protectrix of virginity, for abandoning her party ; or as a ceremony to appease her wrath. Suidas calls it a festival in honor of Diana. Ca- nephoria was also a festival in honor of Bacchus, celebrated particularly by the Athenians, in which the young maids carried golden baskets full of fruit, covered to conceal the mystery from the uninitiated.

CANES, in Egypt and other eastern countries, a poor sort of buildings for the receolion of

strangers and travellers, who are accommodated with a room at a small price, but with no other necessaries ; so that, excepting the room, there are no greater accommodations in these nouses than in the deserts except that there is a market near.

CANES VF.NATICI, m astronomy, the grey- hounds, two new constellations first established by Hevelius, between the tail of the Great Bear and the arms of Bootes, above the Coma Berenices. The first is called asterion, being next the Bear's tail ; the other chara

CANGA, in the Chinese affairs, a wooden clog borne on the neck by way of punishment for divers offences The canga is composed of two pieces of wood notched, to receive the cri minal's neck ; the load lies on his shoulders, and is more or less heavy according to the qua- lity of his offence. Some cangas weigh 200lbs. ; the generality from fifty to sixty. The manda- rins condemn to the punishment of the canga, Sentence of death is sometimes changed for this kind of punishment.

CANGE (Sieu Du). See FRESNE Du.

CANGIAGIO, or CAMBIASI, (Lewis), one of the most eminent of the Genoese painters, was born in 1527. His works at Genoa are very nu- merous ; and he was employed by the king of Spain to adorn part of the Escurial. He was not only expeditious, but worked equally well with both hands ; and, by that unusual power, executed more designs, and finished grand works with his own pencil, in a much shorter time, than most other

artists could do with several as- sistants. At the age of seventeen, being employed in painting the front of an elegant house, in fresco, on his entering on the scaffold the other artists concluded from his youth that he could be no- thing more than a grinder of colors, and, there- fore, when he took up the pallet, they attempted to prevent him, being apprehensive that he would spoil the work, but after a few strokes of his pencil they acknowledged their mistake, and allowed him to proceed. He died in 1585.

CANICULA, in astronomy, a star in the con- stellation canis major, called also the dog-star ; by the Greeks Sapioc, Sirius. It is the tenth in order in the Britannic catalogue; in Tycho's and Ptolemy's it is the second, It is situated in the mouth of the constellation, and is of the first magnitude, being the largest and brightest star in the heavens. From the rising of this star not cosmically, or with the sun, but heliacally, that is, its emersion from the, sun's rays, the ancients reckoned their dies caniculares, canicular days, or dog days. The Egyptians and Ethiopians began their year at the rising of the canicula, reckoning to its rise again the next year. The reason of their choice of the canicula, before the other stars, to compute their time by, was not only the superior brightness of that star, but be- cause its heliacal rising was in Egypt a time of singular note, as falling on the greatest augmen- tation of the Nile. Ephestion adds, that from the aspect and color of canicula the Egyptians drew prognostics concerning the rise of the Nile ; and, according to Florus, predicted the future state of the year ; so that the first rising of this star was annually observed with great attention.

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Order Ctinis

C.Lupus.TK-Z/1

C.Yulpus. Fox

C . Lao-opus .Arctic Fox

CANICULAR, adj. Lat. canicularis. Belong- ing to the dog-star; as canicular, or dog days.

In regard to different latitudes, unto some the cani- cular days are in the winter, as unto such as are un- der the equinoctial line ; for unto them the dog-star ariseth, when the sun is about the tropick of Cancer, which season unto them is winter. Browne's Vul. Err.

CANICULUM, or CANICULUS, in the Byzan- tine antiquities, a golden standish or ink vessel, decorated with precious stones, wherein was kept the sacred encaustum, or red ink, where- with the emperors signed their decrees, letters, &c. The name alludes to the figure of a dog which it represented, or rather because it was supported by the figures of dogs. The caniculum was under the care of a particular officer of state.

CANINANA, in zoology, a species of serpent found in America, and esteemed one of the less poisonous kinds. It grows to about two feet long ; and is green on the back, and yellow on the belly. It feeds on eggs and small birds : the natives cut off the head and tail, and eat the body as a delicate fish.

CANINE', adj. Lat. caninus. Having the pro- perties of a dog. Canine hunger, or bulimia, in medicine, is an appetite that cannot be satisfied.

A kind of women are made up of canine particles : these are scolds, who imitate the animals out of which they were taken, always busy and barking, and snarl at every one that come in their way. Addison.*

It may occasion an exorbitant appetite of usual things, which they will take in such quantities, till they vomit them up like dogs ; from whence it is called canine. Arbuthnot.

CANINE MADNESS. See MEDCINE.

CANINE TEETH, are two sharp edged teeth in each jaw : one on each side, placed between the incisores and molares.

CANINI (John Angelo and Mark Anthony), two brothers, natives of Rome,

celebrated for their love of antiquities. John excelled in de- signs for engraving on stones, particularly heads ; Mark engraved them. They were encouraged by Colbert to publish a succession of heads of the heroes and great men of antiquity, designed from medals, antique stones, and other ancient remains ; but John died at Rome soon after the work was begun : Mark Anthony, however, pro- cured assistance, finished and published it in Italian, in 1669. The cuts of this edition were engraved by Canini, Picard, and Valet; and a curious explanation is given, which discovers the skill of the Caninis in history and mythology. The French edition of Amsterdam, 1731, is spu- rious.

CANIS, in zoology, the dog, a genus of qua- drupeds, belonging to the order of ferae. The characters of the dog are these : six fore-teeth in the upper jaw, those in the sides longer than the intermediate ones, which are lobated ; in the under jaw there are also six fore-teeth, those on the sides being lobated. He has six grinders in the upper, and seven in the lower jaw. The teeth called dog-teeth are four, one on each side, both in the lower and upper jaw, sharp-pointed, bent a little inward, and at a distance from any of the rest. Zoologists commonly reckon four- teen species of this genus. Mr. Kerr, in his Ani- mal kingdom, enumerates seventeen : but zoolo

gical arrangement seems not yet to have arrived at its perfection. Mr. Pennant, with consider- able propriety (as Mr. Kerr remarks), excludes all the hyenae from this genus. Indeed to ordi- nary readers it must appear somewhat strange, to class animals of such very opposite natures as the fox, the wolf, and the hyenae, under the same genus with the dog. Adopting Mr. Kerr's ar- rangement in general, we state the different spe- cies and varieties as follows : ⬛⬛⬛

I. CANIS ADIVE, the barbary fox, or chacal of Buffon, the jackal adive, has a long and slender nose, sharp upright ears, long bushy tail ; color, a very pale brown ; space above and below the eyes black ; from behind each ear there is a black line, which soon divides into two, which extend to the lower part of the neck ; and the tail is surrounded with three broad rings. This species is of the size of the common fox, but the limbs are shorter, and the nose is more slender.

II. CANIS ANTABCTICUS, the new Holland dog, or dog of New South Wales, is thus de- scribed by Mr. Kerr : ⬛⬛⬛ ' the tail is bushy and hangs downwards; the ears are short and erect; and the muzzle is pointed. It inhabits New Holland ; is rather less than two feet high ; and about two feet and a half in length. His head resembles that of a fox, having a pointed muzzle, garnished with whiskers, and short erect ears ; the body and tail light brown; paler towards the belly, on the sides of the face and throat. The hind parts of the fore-legs, the fore parts of the hind-legs, and all the

feet, are white. On the whole it is a very elegant, but fierce and cruel, animal ; from which, with its figure, the total want of the common voice of the dog, and from general resemblance in other respects, it seems more properly to belong to the wolf kind.'

III. CANIS AUREVS, the schackal, or jackal, as described by Pennant, has yellowish brown irides; ears erect, formed like those of a fox, but shorter and less pointed ; hairy, with white within ; brown without, tinged and dusky : head shorter than that of a fox, and nose blunter: lips black, and somewhat loose : neck and body very much resembling those of that animal, but the body more compressed ; the legs have the same resemblance, but are longer : tail thickest in the middle, tapering to the point : five toes on the fore-feet, the inner toe very short, and placed high : four toes on the hind feet, all covered with hair even to the claws. The hairs are much stifFer than those of a fox, but scarcely so stiff as those of a wolf ; short about the nose; on the back three inches long ; on the belly shorter : those at the end of the tail four inches long: color of the upper part of the body a dirty tawny ; on the back, mixed with black : lower part of the body of a yellowish white: tail tipt with black ; the rest of ihe same color with the back : the legs of an unmixed tawny brown : the fore-legs marked (but not always) with a black spot on the knees; but on no part are those vivid colors which could merit the title of golden, bestowed on it by Ksempfer. The length from the nose to the root of the tail is little more than twenty-nine inches English : the tail, to the ends of the hairs, ten inches and three quarters, the tip reaching to the top of the hind legs: the

height, from the space between the shoulders to the ground, rather more than eighteen inches and a half; the hind parts a little higher. This spe- c.es inhabits all the hot and temperate parts of Asia, India, Persia, Arabia, Great Tartary, and about Mount Caucasus, Syria, and the Holy Land. It is found in most parts of Africa, from Barbary to the Cape of Good Hope.

IV. CANIS CERDO, the zerda, has a very pointed visage; large bright black eyes; very large ears, of a bright rose color, internally lined with long hairs ; the orifice so small as not to be risible, probably covered with a valve or mem- brane ; the legs and feet are like those of a dog ; the tail is taper ; color between a straw and pale brown : length from nose to tail ten inches ; ears three inches and a half long ; tail six ; height not five. It inhabits the vast desert of Sahara, which extends beyond mount Atlas. It burrows in the sandy ground, which shows the necessity of the valves to the ears ; and is so exceedingly swift that it is very rarely taken alive. It feeds on insects,

especially locusts, sits on its rump, is very vigilant, barks like a dog, but much shiiller, and that chiefly in the night: is never observed to be sportive. We are indebted to Mr. Eric Skioldebrand, formerly Swedish con- sul at Algiers, for our knowledge of this singular animal. He never could procure but one alive, which escaped before he examined its teeth : the genus is very uncertain : the form of its head and legs, and some of its manners, determined Mr. Pennant to rank it in this genus. That which was in possession of Mr. Skioldebrand fed freely from the hand, and would eat bread or boiled meat. Buffon has given a figure of this animal; but from the authority of Mr. Bruce ascribes to it a different place, and different manners. He says that it is found to the south of the Palus Tritonides, in Lybia; that it has something of the nature of the hare, and some- thing of the squirrel; and that it lives on the palm-trees, and feeds on the fruits.

V. CANIS CINEREO-ARGENTEUS, the silvery fox of Louisiana, resembles the common fox in form, but has a most beautiful coat. The short hairs are of a deep brown ; and over them spring long silvery hairs, which give the animal a very elegant appearance. They live in forests abound- ing in game, and never attempt the poultry which run at large. The woody eminences in Louisiana are everywhere pierced with their holes.

VI. CANIS FAMILIARIS, the domestic or faith- ful dog, is distinguished from the other species by having its tail bent to the left side, which mark is so singular, that perhaps the tail of no other quadruped is bent in this manner. Of this species there are a great number of varieties. Linnaeus enumerates eleven ; Buffon gives figures of twenty-seven ; and Mr. Kerr enumerates no fewer than forty. He is so important an animal that we shall resume the consideration of the species under the article Doc.

VII. CANIS HYJENA has a straight jointed tail, with the hair of its neck erect, small naked ears, and four toes on each foot. See HYJENA.

VIII. CANIS INDICIIS, or AUSTIIALIS, the an- Urctic fox, the coyotl of Fernandez, and the

loup-renard of Bougainville, has short pointed ears ; irides hazel ; head and body cinereous brown ; hair more woolly than that of the com- mon fox, resembling much that of the arctic ; legs dashed with rust color; tail dusky, tipped with white, shorter and more bushy than that of the common fox, than which it is about one-third larger. It has much the habit of the wolf, in ears, tail, and strength of limbs. Hence the French name loup-renard, or wolf-fox. It may be a wolf degenerated by climate. The largest are those of Senegal : the next are the European : those of North America are still smaller. The Mexican wolves, which Mr. Pennant apprehends to be this species, are again less ; and this, which inhabits the Falkland Isles, near the

extremity of South America, is dwindled to the size described.

IX. CANIS LACOPUS, the arctic fox, has a sharp nose ; short rounded ears, almost hid in the fur ; long and soft hair, somewhat woolly ; short legs ; toes covered on all parts, like that of a common hare, with fur ; tail short and more bushy than that of the common fox, of a bluish gray or ash color, sometimes white : the young of the gray are black before they come to maturity : the hair much longer in winter than summer, as is usual with animals of cold climates. It inhabits the countries bordering on the Frozen Sea ; Kams- chatka ; the isles between it and America, and the opposite parts of America discovered in Beh- ring's expedition in 1741 ; and is found in Green- land, Iceland, Spitzbergen, Nova Zembla, and Lapland. It burrows under ground, forms holes many feet in length, and strews the bottom with moss. In Greenland and Spitzbergen it lives in the clefts of recks, not being able to burrow by reason of the frost : two or three pair inhabit the same hole. They are in heat about Lady-day ; and during that time they continue in the open air, but afterwards take to their holes. The Greenlanders take them either in pitfalls dug in the snow, and baited with the capelin fish ; or in springes made with whalebone, laid over a hole made in the snow, strewed over at bottom with the same kind of fish ; or in traps made like little huts, with flat stones, with a broad one by way of door, which falls down, by means of a string baited on the inside with a piece of flesh, when- ever the fox enters and pulls at it. The Green- landers preserve the skins for traffic ; and in cases of necessity eat the flesh. They also make but- tons of the skins ; and split the tendons, and make use of them instead of thread. Mr. Kerr men- tions two varieties : viz. 1. C. lagopus albus, the isatis, or white arctic fox; and 2. C. lagopus caerulescens, the bluish arctic fox. The furs of these are more esteemed than those of the white.

X. CANIS LUPUS, the wolf, has a long head, pointed nose, ears erect and \sharp, long legs well clothed with hair; tail bushy and bending down, with the tip black ; head and neck ash colored ; body generally pale brown tinged with yellow : sometimes found white, and sometimes entirely black. He is larger and fiercer than a dog. His eyes sparkle, and there is a great degree of fury and wildness in his looks. When he walks he draws up his claws, to prevent his tread from being heard. His neck is short, but admits of quick motion to either side. His teeth are large

and sharp ; ancWiis bite is terrible, as his strength is great. Cruel, cowardly, and suspicious, the wolf flies from man ; and seldom ventures

out of the woods, except pressed by hunger : but when this becomes extreme, he braves danger, and will attack men, horses, dogs, and cattle of all kinds; even the graves of the dead are not proof against his rapacity. Unlike the dog, he is ar enemy to all society, and keeps no company even with those of his own species. When several wolves appear together, it is not a society of peace, but of war; it is attended with tumult and dreadful bowlings, and indicates an attack upon some large animal, as a stag, an ox, or a formidable mastiff. This military expedition is no sooner finished than they separate, and each returns in silence to his solitude. There is even little intercourse between the males and females : they feel the mutual attractions of love but once a year, and never re- main long together. The females come in season iu winter : many males follow the same female ; and this association is more bloody than the for- mer ; for they growl, chase, fight, and tear one another, and often sacrifice him that is preferred by, the female. The female commonly flies a long time, fatigues her admirers, and retires while they sleep, with the most alert or most favorite male. They begin with the old females about the end of December, and finish with the young ones in February or beginning of March. The time of gestation is about four months and a half; and young whelps are found from the end of April to the month of July. When the females are about to bring forth they search for a concealed place in the inmost recesses of the forest. After fixing on the spot, they make it smooth and plain for a considerable space, by cutting and tearing up with their teeth all the brambles and brush-wood. They then bring great quantities of moss, and prepare a commodious bed for their young, which are generally five or six, though sometimes they bring forth seven, eight, and even nine, but never less than three. They come into the world blind, like dogs ; the mother suckles them some weeks, and soon learns them to eat flesh, which she prepares for them by tearing it into small pieces. Some time after she brings them field mice, young hares, partridges, and other fowls. The young wolves begin by playing with these animals, and at last worry them ; then the mother pulls off the feathers, tears them in pieces, and gives a part to each of her young. They never leave their den till the end of six weeks or two months. They then follow their mother, who leads them to drink. She conducts them back to the den, or, when any danger is apprehended, obliges them to conceal themselves elsewhere. Though, like other females, the she wolf is naturally more timid than the male ; yet, when her young are attacked, she defends them with intrepidity, loses all sense of danger, and becomes perfectly furious. She never leaves them till their education is finished, till they are so strong as to need no assistance or protection, and have ac- quired talents for rapine, which generally hap- pens in ten or twelve months after their first teeth (which commonly fall out in the first month) are replaced. Wolves are full grown at the end of two or three years, and live fifteen or twenty years. When old, they turn whitish, and

their

teeth are much worn. They sleep, but more during the day than the night, and it is always a slight slumber. They drink often ; and, in the time of drought, when there is no water in the hollows, or in the trunks of old trees, they repair, several times in a day, to the brooks or rivulets. Though extremely voracious, if supplied with water, they can pass four or five days without meat. The wolf has great strength, especially in the anterior parts of the body, in the muscles of the neck and jaws. He carries a sheep in his mouth, and, at the same time, outruns the shep- herds ; so that he can only be stopped or de- prived of his prey by dogs. His bite is cruel, and always more obstinate in proportion to the small- ness of the resistance ; for, when an animal can defend itself, he is cautious and circumspect. He never fights but from necessity. When wounded with a ball, he cries; and yet, when despatching him with bludgeons, he complains not. When he falls into a snare, he is so over- come with terror, that he may either be killed or taken alive without resistance : he allows him- self to be chained, muzzled, and led any where, without exhibiting the least symptom of resent- ment or discontent. The senses of the wolf are excellent, but particularly that of smelling, which often extends farther than his eye. The odor of carrion strikes him at the distance of more than a league. He likewise scents live animals very far, and hunts them a long time by following their track. When he issues from the wood, he never loses the wind. He stops upon the borders of the forest, smells on all sides, and receives the emanations of living or dead animals ; brought to him from a distance by the wind. Though he gives the preference to living animals ; yet he de- vours the most putrid carcases. He is fond of human flesh ; and, if stronger, he would perhaps eat no other. Wolves have been known to follow armies, to come in troops to the field of battle, where bodies are carelessly interred, to tear them up, and to devour them with an insatiable avi- dity. And, when once accustomed to human flesh, are said ever after to attack men. Wolves of this vicious disposition are called loups ga- roux by the French peasants, who suppose them to be possessed with some evil spirits; and of this nature were the were- wulfs of the old Saxons. The wolf inhabits the continents of Europe, Asia, Africa, and America; Kamtschatka, and even as high as the arctic circle. Those of North America are the smallest ; and, when reclaimed, are the dogs of the natives : the wolves of Sene- gal are the largest and fiercest; they prey in company with the lion. They are found in Africa as low as the Cape. In the east, and particu- larly in Persia, wolves are exhibited as spectacles to the people. When young, they are learned to dance, or rather to perform a kind of wrestling with a number of men. Buffon brought up se- veral of them : ‘ When young, or during the first year,’ he informs us, ‘ they are very docile, and even caressing; and, if well fed, neither disturb the poultry nor any other animal : but at the age of

eighteen months or two years, their natural ferocity appears, and they must be chained to prevent them from running off and doing mis- chief. I brought up one till the age of eighteen or nineteen months, in a court along with fowls

none of which he ever attacked; but, for his first essay, he killed the whole in one night, without eating any of them. Another, having broken his chain, ran off, after killing a dog with whom he had lived in great familiarity.' In England king Edgar is said first to have attempted the extirpa- tion of wolves, by commuting the punishments of certain crimes into the acceptance of a certain number of wolves' tongues from the criminal ; and in Wales, by converting the tax of gold and silver into an annual tax of 300 wolves' heads. We find, however, that some centuries after the reign of this monarch, these animals were in- creased to such a degree as to become again the object of royal attention : accordingly Edward I. issued his royal mandate to Peter Corbet to su- perintend and assist in the destruction of them m the several counties of Gloucester, Worcester, Hereford, Salop, and Stafford ; and in the adja- cent county of Derby, certain persons at Worm-hill, says Camden, held their lands by the duty of hunting and taking the wolves that infested the country, whence they were styled wolvehunt. Far- ther back, in Athelstan's reign, wolves abounded so much in Yorkshire, that a retreat was built at Flixton, in that county, ' to defend passengers from the wolves, that they should not be devour- ed by them :' and such ravages did those animals make during winter, particularly in January, when the cold was severest, that the Saxons dis- tinguished that month by the name of the wolf month. They also called an outlaw wolf's-head, as being out of the protection of the law, pro- scribed, and as liable to be killed as that de- structive beast.

Ireland was infested by wolves for many cen- turies after their extinction in England; for there are accounts of some being found there as late as 1710, the last presentment for killing of wolves being made in the county of Cork about that time. In many parts of Sweden the number of wolves has been considerably diminished by placing poisoned carcases in their way : but in other places they are found in great multitudes. Hunger sometimes compels them to eat lichens : these vegetables were found in the body of one killed by a soldier; but it was so weak, that it could scarcely move. It probably had fed on the lichen vulpinus, which is a known poison to these animals. Madness, in certain years, is apt to seize the wolf. The consequences are often very melancholy. Mad wolves will bite hogs and dogs, and the last again the human species. The symptoms are the same with those attendant

on the bite of a mad dog. Fury sparkles in their eyes; a glutinous saliva distils from their mouths; they carry their tails low, and bite in- differently men and beasts. It is remarkable that this disease happens in the depth of winter. Often, towards spring, wolves get upon the ice of the sea, to prey on the young seals, which they catch asleep : but this repast often proves fatal to them; for the ice, detached from the shore, carries them to a great distance from land, before they are sensible of it. In some years a large district is by this means delivered from these pernicious beasts; which are heard howl- ing in a most dreadful manner, far in the sea. When wolves come to make their attack on cattle, they never fail attempting to frighten away

the men by their loud cries ; but the sound of the horn makes them fly. Then} is nothing va- luable in the wolf but "his skin, which makes a warm durable fur. His flesh is so bad, that it is rejected with abhorrence by all other quadrupeds ; no animal but a wolf will voluntarily eat a wolf. The smell of his breath is exceedingly offensive, As, to appease hunger, he swallows indiscrimi- nately ⬚⬚⬚everything he can find, corrupted flesh bones, hair, skins half tanned and covered with lime, he vomits frequently. In fine, the wolf is consummately disagreeable ; his aspect is base and savage, his voice dreadful, his odor insup- portable, his disposition perverse, his manners ferocious ; odious and destructive when living, and, when dead, perfectly useless, except for his fur. Mr. Kerr enumerates four other varieties of this species, viz. 2. C. lupus albus, the white wolf,- found near the Jenisea, in the eastern parts of Asiatic Russia, much valued on account of its fur. 3. C. lupus fasciatus, the striped wolf. It is of a gray color striped with black, and inha- bits the Cape of Good Hope. 4. C. lupus flavus, the yellow wolf, found in France and Germany, having a thicker fur, and more yellow color than the common kind. It is more wild, but less destructive, as it never troubles the flocks, or the habitations of men. 5. C. lupus niger, the black wolf. This variety inhabits Canada, and is of a uniform black color. It is not so long as the common kind; the ears are larger, more erect and more distant, but in every other cir- cumstance it resembles the common European wolf.

XI. CANIS MESOMELAS, the capesch of Schre- ber, the tenlie, or kenlie, of the Hottentots, the Cape jackal, has erect yellowish brown ears, mixed with a few scattered black hairs : the head is of a yellowish brown, mixed with black and white, growing darker towards the hind part ; the sides are of a light brown, varied with dusky hairs : the body and also the back part of the legs are of a yellowish brown, lightest on the body ; the throat, breast, and belly white. On the neck, shoulders, and back, is a band 01 black. The tail is bushy, of a yellowish brown : marked on the upper part with a longitudinal stripe of black, and towards the end encircled with two rings of black, and is tipt with white. In length, the animal is two feet and three

quarters, to the the origin of the tail : the tail is one foot. It inhabits the countries about the Cape of Good Hope, and is found as high as the line.

XII. CANIS MEXICANUS, has a smooth tail, bent downwards. The body is ash colored, va- riegated with dusky stripes and tawny spots, on the forehead, neck, breast, belly, and tail. Its head is large, and neck thick. It has great jaws and strong teeth. Above its mouth are bristles as large, but not so hard, as the spines of a hedgehog. Seba calls it the quauhpecolti, or mountain cat; and Hernandes stiles it the xoloitcuintli, or Mexican wolf. It inhabits the warm parts of Mexico and New Spain, and agrees with the European wolf in its manners ; whence it is also called lupus, though ranked as a different species. There is also a white Mexi can wolf.

XIII. CANIS THOUS, or the Surinam wolf,

has a smooth tail bent downwaids. The body is gray on the upper and white on the under parts. Its face has a wart over each eye, on each cheek, and under the throat. It is about the size of a large cat ; and, according to Linnaeus, is found at Surinam. It is mentioned also by Pennant.

XIV. CA.NIS VtRGiNiANUs, the gray fox of Catesby, Sec. has a sharp nose ; sharp, long, up- right ears ; legs long ; color gray, except a little redness about the ears. It inhabits Carolina, and the warmer parts of North America, and differs from the arctic fox in form, and the nature of its dwelling : agreeing with the common fox in the first, but not in the last. It never bur- rows, but lives in hollow trees; it gives no diversion to the sportsman ; for after a mile's chase, it takes to its retreat; it has no strong smell ; it feeds on poultry, birds, &c. These foxes are easily made tame ; their skins, when in season, are used for muffs.

XV. 1. CANisVuLPES, the common fox, has a straight tail, white at the point. His body is yellowish, or rather straw-colored ; his ears are small and erect ; his lips are whitish, and his fore feet black. From the base of the tail a strong scent is emitted, which to some people is very fragrant, and to others extremely disagree- able. The fox is a native of almost every quarter of the globe, and is of such a wild and savage nature, that it is impossible fully to tame him. He is esteemed the most sagacious and crafty of all beasts of prey. The former quality he shows in his method of providing himself with an asy- lum, where he retires from pressing dangers, dwells, and brings up his young : and his crafti- ness is chiefly discovered by the schemes he falls upon to catch lambs, geese, hens, and all kinds of small

birds. The fox fixes his abode on the border of the wood, in the neighbourhood of cot- tages : he listens to the crowing of the cocks and the cries of the poultry. He scents them at a distance; he chooses his time with judgment; he conceals his road as well as his design : he slips forward with caution, sometimes even trail- ing his body, and seldom makes a fruitless expedition. If he can leap the wall, or get in underneath, he ravages the poultry yard, puts all to death, and then retires softly with his prey, which he either hides under the herbage, or car- ries off to his kennel. He returns in a few minutes for another, which he carries off, or con- ceals in the same manner, but in a different plaice. In this way he proceeds till the progress of the sun, or some movements in the house, ad- vertise him that it is time to retire to his den. He plays the same game with the catchers of thrushes, woodcocks, &c. He visits the nets and bird-lime very early in the morning, carries off successively the birds which are entangled, and lays them in different places, especially near the sides of highways, in the furrows, under the herbage or brushwood, where they sometimes lie two or three days ; but he knows perfectly where to find them when he is in need. He hunts the young hares in the plains, seizes old ones in their seats, never misses those which are wounded, digs out the rabbits in the warrens, discovers the nests of partridges and quails, seizes the mothers

on the eggs, and destroys- a vast quantity of game. The fox is exceedingly voracious ; be- sides flesh of all kinds, he eats, with equal avidity, eggs, milk, cheese, fruits, and particu- larly grapes. When the young hares and par- tridges fail him, he makes war against rats, field mice, serpents, lizards, toads, &c. Of these he destroys vast numbers ; and this is the only service he does to mankind. He is so fond of honey, that he attacks the wild bees, wasps, and hornets. They at first put him to flight by a thousand stings; but he retires only for the put- pose of rolling himself on the ground to crush them ; and he returns so often to the charge, that he obliges them to abandon the hive, which he soon uncovers, and devours both the honey, and wax. In a word he eats fish, lobsters, grass- hoppers, &c. The fox is not easily, and never fully tamed : he languishes when deprived of liberty ; and, if kept too long in a domestic state, he dies of chagrin. Foxes produce but once a year; and the litter Commonly consists of four or five, seldom six, and never less than three. When the female is full, she retires, and seldom goes out of her hole, where she prepares a bed for her young. She comes in season in the winter ; and young foxes are found in the month of April. When she perceives that her retreat is discovered, and that her young have been disturbed, she carries them off one by one, and goes in search of another habitation. The young are brought forth blind; like the dog's, they grow eighteen months or two years, and live thirteen or fourteen years. The senses of the fox are as good as those of the wolf ; the organs of his voice are more pliant and perfect. The wolf sends forth only frightful bowlings ;

but the fox barks, yelps, and utters a mournful cry like that of the peacock. He varies his tones accord- ing to the different sentiments with which he is affected : he has an accent peculiar to the chase, and tones of desire, of complaint, and of sorrow. He has another cry expressive of acute pain, which he utters only when he is shot, or has some of his members broken; for he never mourns over any other wound; and, like the wolf, may be beat till he is killed with a blud- geon without complaining : but he always defends himself to the last with great courage and bravery. His bite is obstinate and dangerous ; and the severest blows will hardly make him quit his hold. In winter, particularly during frost, he yelps perpetually; but, in summer, he is almost entirely silent, and, during this season, casts his hair. He sleeps sound, in a round form, and may be easily approached without wakening ; but, when he only reposes himself, he extends his hind legs, and lies on his belly. It is in this situation that he spies the birds along the hedges, and meditates schemes for their sur- prise. The fox flies when he hears the explosion of a gun, or smells gunpowder. He is exceed- ingly fond of grapes, and does much mischief in vineyards. Various methods are daily employed to destroy foxes : they are hunted with dogs; iron traps are frequently set at their holes ; which are sometimes smoked to make them rim out, that they may fall into the snares, or be killed by dogs or fire-arms. The chase of the fox requiies

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less apparatus, and is more amusing than that of the wolf. To the latter every dog has great reluctance ; but all dogs hunt the fox spontane- ously and with pleasure ; for, though his odor be strong, they often prefer him to the stag or the hare.

Of all animals the fox has the most significant eye, by which it expresses every passion of love, fear, hatred, &c. He is remarkably playful ; but, like all savage creatures, half reclaimed, will on the least offence bite those he is most familiar with. He is a great admirer of his bushy tail, with which he frequently amuses and exercises himself, by running in circles to catch it : and in cold weather, wraps it round his nose. The smell of this animal is in general very strong, and that of his urine remarkably fetid. It is so obnoxious, that it has often proved the means of his escape from the dogs. In warm weather it will quit its habitation for the sake of basking in the sun, or to enjoy the free air; but then it rarely lies exposed, but chooses some thick brake, that it may rest secure from surprise. Crows, magpies, and other birds who consider the fox as their common enemy, will often, by their notes of anger point out its retreat. The skin of this animal is furnished with a warm soft fur, which in many parts of Europe is used to make muffs, and to line clothes. Vast numbers are taken in the Valais, and the Alpine parts of Switzerland. At Lau- sanne there are furriers who are

often in posses- sion of between 2000 and 3000 skins, all taken in one winter. There are several varieties of the fox, differing either in color or form, viz. : 2 ??? 4. C. vulpes alopex, the brant fox, or field fox of Linnaeus, considered by him as a distinct spe- cies, has a straight tail, with a black tip, and a blackish fur, thicker than that of the common kind. Mr. Kerr says, it ‘ inhabits Europe, Asia, and Chili, and is less frequent, smaller, and of a darker color than the common fox, to which it is very similar in all other respects. That described by Mr. Pennant came from Pennsyl- vania. Authors do not seem properly agreed about the animal to which this name is given : at least the coal fox, of Buffbn, and the brant fox, of Pennant, are considerably different, though quoted by Gmelin as synonymous.’ They are therefore added as sub-varieties, a. C. vulpes alopex Americanus, the brant fox, as described by Gesner and Linnaeus, is of a fiery redness; and called by the first brand-fuchs, by the last brandraef ; it is scarcely half the size of the common fox : the nose is black, and much sharper ; the space round the ears ferruginous ; the forehead, back, shoulders, thighs, and sides, black, mixed with red, ash-co’or, and black; the belly yellowish ; the tail black above, red beneath, and cinereous on its side. It is a native of Pennsylvania, b. C. vulpes alopex Euro- paeus, the charbonnier, or coal fox of Buffon, has remarkably black feet and legs, and inhabits that part of France formerly called Burgundy. It is of a silvery gray color, and has the tail tipt with white. C. lycaon, the black fox, is the most cunning of the genus, and its skin the most valuable ; a lin- ing of it is, in Russia, esteemed preferable to the finest sables : a single skin will sell for 400 ru-

bles. It inhabits the northern parts of Europe, Asia, and North America.

CANIS MAJOR, the great dog, in astronomy, a constellation of the southern hemisphere, below Orion’s feet, somewhat to the westward. See ASTRONOMY.

CANIS MINOR, the little dog, in astronomy, a constellation of the northern hemisphere ; called also by the Greeks Procyon, and by the Latins Antecanis and Canicula. See ASTRONOMY.

CANISIUS (Henry), a native of Nimeguen, whose real name was De Hondt, one of the most learned men of his time, was professor of canon law at Ingolstadt. His principal works are, 1 . Summa Juris Canonici. 2. Antiquae Lexicones, 7 vols. 4to, a very valuable work. He died in

1609.

CANISTER, n. s. Lat. canistrum. A small basket. A small vessel in which any thing, such as tea or coffee, is laid up.

White lilies in full canisters they bring,

With all the glories of the purple spring. Dryden.

CAN'KER, v. a. & n. } Lat. cancer. It CAN'KERBIT, part. adj. (seems to have the same meaning and original with cancer, but to be accidentally written with a ft, when it denotes bad qualities in a less degree; or canker might come from, Fr. chancre, Ital. canchero, and can- cer from the Latin. A worm, that preys upon and destroys fruits. A fly that commits the same species of depredation. Any thing that corrupts or consumes. An eating or corroding humor. Corrosion : virulence. A kind of wild worthless rose; the dog rose. To grow corrupt: implying something venomous and malignant. To cor- rupt ; to corrode. To infect ; to pollute.

His chamber all was Banged about with rolls

And old records from ancient times derived Some made in books, some in long parchment scrolls, That were all worm-eaten and full of canlter holes.

Spenter.

And loathfull idlenes he doth detest, The canfer-worme of everie gentle brest ; The which to banish with faire exercise Of knightly feates, he daylie doth devise.

Spenser. Mother Hubberd's Tale. I am not glad, that such a sore of time Should seek a plaister by a contemn'd revolt, And heal the inveterate canker of one wound By making many. SJiakfpcart.

As with age his body uglier grows, So his mind with cankers. Id.

Yet writers say, as in the sweetest bud The eating canker dwells ; so eating love Inhabits in the finest wits of all. Id.

Know, my name is lost, By treason's tooth baregnawn and cankerbit. Id.

Or if these cankered foes, as most men say, So mighty be, that gird this wall of clay, What makes it hold so long, and threatened ruin stay. Fletc/ ier'i Purple Island. Restore to God his due in tithe and time : A tithe purloined cankers the whole estate. Herbert. It is the canker and ruin of many inons estates, which, in process of time, breeds a public poverty.*

Bacon.

There be of flies, eaterpillers, canker flies, and bear flies. Walton' t Angler.

As the Jesscan hero did appease Saul's stormy rage aud stopped his black disease.

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So the learn'J bard with artful song suppressed

The swelling passion of his canker'd breast ;

And in his heart kind influences shed

(if country's love, by truth and justice bred. Marvell.

Draw a cherry with the leaf, the shaft of a steeple, single or canker rose. Peacham.

A huffing, shining, nattering, cringing coward, A canker worm of peace, was raised above him.

Otway.

To some new clime, or to thy native sky, Oh friendless and forsaken virtue ! fly : The Indian air is deadly to thee grown ; Deceit and cankered malice rule thy throne. Dryden.

That eating canker, grief, and wasteful spite, Preys on the rosy bloom of youth and beauty. Rowe.

An honest man will enjoy himself better in a moderate fortune, that is gained with honour and reputation, than in an overgrown estate, that is can- kered with the acquisitions of rapine and exaction.

A ddison.

No longer live the cankers of my court ; All to your several states with speed resort ; Waste in wild riot what your land allows, There ply the early feast and late carouse. Pope.

Thus, when a villain crams his chest. Gold is the canker of the breast : 'Tis avarice, insolence, and pride. And every shocking vice beside. Gay.

Beyond the lowly vale of shepherd's life

They never roam'd : secure beneath the storm Which in ambition's lofty land is rife ;

Where peace and love are canker'd by the worm Of pride, each bud of joy industrious to deform.

Seattle.

How hideous and forlorn ! where ruthless Care, With cankering tooth osrrodes the seeds of life ;

And deaf with passions' storms when pines Despair, And howling furies rouse the eternal strife. Id.

CANKER, in farriery, a disease incident to horses, consisting of a kind of fungous excres- cence in their feet, which sometimes destroys, the whole hoo , and so the horse. See FARRIERY.

CANKER, in gardening, a disease incident to trees, proceeding chiefly from the nature of the soil, which makes the bark rot and fall. If the canker be in a bough, cut it off; in a large bough, at some distance from the stem ; in a small one, close to it ; but, for over-hot strong ground, the ground is to be cooled about the roots with pond mud and cow dung.

CANNA, in botany, Indian flowering reed ; a genus of the monogynia order, and monandria class of plants, natural order eighth, scitaminsg : CAL.triphyllous : COR. erect, divided into six parts, with a distinct lip, bipartite and rolled back ; the style lanceolate, and growing to the corolla : CAPS. crowned with the calyx. There are five species, viz. 1. C. coccinea, hath larger leaves than any of the other four species, and the stalks rise much higher. The flowers are produced in large spikes ; and are of a bright crimson, or rather scarlet color. 2. C. glauca, with a very large yellow flower, is a native of South America. 3. C. In- dica, or common broad-leaved flowering cane, is a native of both Indies; the inhabitants of the British islands in America call it Indian shot, from the roundness and hardness of the seeds. It has a thick fleshy tuberous root: which di- Voi, V.

vides into many irregular knobs; it sends out many large oval leaves, without order. 4. C. angustifolia, a plant common to the tropical parts of America. 5. C. juncea, a Chinese plant, with a small rufous flower and grassy leaves.

CANNA likewise denotes a sort of long mea- sure, otherwise called by modern authors a cane, by the Latins calamus, and in scripture a reed.

CAN'NABINE,a$. Lat. cannobinus. Hempen.

CANN ABIS, in botany, hemp ; a genus of the pentandria order, and dioecia class, natural order fifty-third, scabridae : CAL. of the male quinquepartite, of the female monophyllous, entire, and gaping at the side : COR. none, styles two : the fruit is a nut, bivalved, within the closed calyx. Of this there is but one species, viz. C. saliva. It is propagated in the rich fenny parts of Lincolnshire in great quantities, for its bark, which is useful for cordage, cloth, &c. and the seeds abound with oil. Hemp is always sown on a deep, moist, rich, soil such as is found in Holland, Lincolnshire, and the fens of the island of Ely, where it is cultivated to great advantage as it might be in many other parts of England, where there is a soil of the same kind ; but it will not thrive on clayey or stiff cold land. The ground on which hemp is to be sown, should be well ploughed, and made very fine by harrowing. When the plants are come up, they should be hoed out as turnips are, leaving them two feet apart ; observe also to cut down all weeds, which, if well performed in dry weather, will destroy them. This crop, however, will require a second hoeing, in about six weeks after the first; and, if this is well performed, the crop will require no further care. The first season for pulling hemp is usually about the middle of August, when they begin to pull what they call the simble hemp, being that which is composed of the male plants ; but it would be much better to defer this for a fortnight or threeweeks longer, until those male plants have fully shed their fa- rina or dust, without which the seeds will prove only empty husks. These decay soon after they have shed their farina. The second pulling is a little after Michaelmas, when the seeds are ripe. This is usually called karle hemp, and consists of the female plants which were left. This karle hemp is bound in bundles of a yard compass, statute measure, which are laid in the sun for a few days to dry; and then it is stacked up, or housed, to keep it dry till the seed can be threshed out. An acre of hemp, on a rich soil, will produce nearly three quarters of seed, which, together with the unwrought hemp, is worth ►►6 to ►►8. Hemp is esteemed very effectual for destroying weeds ; but this it accomplishes by impoverishing the ground, and thus robbing them of their nou- rishment ; so that a crop of it must not be re- peated on the same spot. Some seeds of a large kind of hemp, growing in China, were some years ago sent by the East India Company to the So- ciety for the encouragement of Arts, Manufac- tures, and Commerce. From the leaves of hemp pounded and boiled in water, the natives of the East Indies prepare an intoxicating liquor, of which they are very fond. The plant when fresh, has a rank narcotic smell ; the water in which the stalks are soaked, in order to separate the

tongh rind for mechanic uses, is said to be vio- lently poisonous, and to produce its effects almost as soon as drank. The seeds also have some smell of the herb, and their taste is unctuous and sweetish : they are recommended, boiled in milk, or triturated with water into an emulsion, against coughs, heat of urine, and the like.

CANR/E, in ancient geography, a town of Apulia, in the Adriatic, at the mouth of the river Aufidus, rendered famous by a terrible overthrow which the Romans received from the Carthaginians under Hannibal. The Roman consuls, ./Emilius Paulus and Terentius Varro, being authorised by the Senate to quit the defensive plan, and take the chance of a battle, inarched from Canusium, and eucamped a few miles east, in two unequal divi- sions, with the Aufidus between them. In this position they meant to wait for an opportunity of engaging to advantage; but Hannibal, whose critical situation, in a desolate country without refuge or allies, could admit of no delay, found means to inflame the vanity of Varro by some trivial advantages in skirmishes between the light horse. Varro, elated with this success, deter- mined to bring matters to a speedy conclusion. The Romans were more numerous than the Car- thaginians ; but the latter were superior in ca- valry. The army of the former consisted of 87,000 men ; that of the latter of 40,000 foot and 1000 horse. Without entering into the par- ticulars of the battle, which is fully narrated by the Roman historians, it is sufficient to say that the most moderate computation makes the num- ber of Romans killed to amount to 45,000, among whom were TEmilius Paulus the consul, and the pro-consuls Servilius and Attilius. The scene of action is marked by the name of Pezzo di Sangue, the Field of Blood. In 1201 the arch- bishop of Palermo and his rebellious associates, who had taken advantage of the nonage of Fre- derick of Suabia, were cut to pieces at Cannae by Walter de Brienne, sent by the pope to defend the young king's dominions. The traces of this town are very faint, consisting of fragments of altars, cornices, gates, walls, vaults, and under- ground granaries. It was destroyed the year before the battle ; but, being rebuilt, became an episcopal see in the infancy of Christianity. It was again ruined in the sixth century, but seems to have subsisted many ages later ; for we read of its contending witli Barletta for the territory, which till then had been enjoyed in common by them ; and in 1284 Charles I. issued an edict for dividing the lands, to prevent future litiga- tion. The prosperity of the towns along the coast, which increased in wealth and population by embarkations for the crusades and by traffic, proved the annihilation of the great inland cities; and Cannae was probably abandoned entirely be- fore the end of the thirteenth century.

CANNAY, one of the Western Isles of Scot- land, south-west of Sky. It is fertile and verdant, and has vast ranges of basaltic pillars, rising above each other, from the sea, somewhat resem- bling the Giant's Causeway in Ireland. See BASALTES.

CANNEL COAL. See AMPELITF.S and COAL.

CANNEQUINS, in commerce, white cotton cloths brought from the East Indies. They are

much used in trading on the coast of Guinea, particularly about the rivers Senegal and Gambia. They are folded square, and are about eight ells long.

CANNES, a town of France, in the depart- ment of the Var, and ci-devant province of Pro- vence, on the coast of the Mediterranean, with a harbour and a castle. There is an excellent fishery for pilchards, and good fruit is grown in the environs. Napoleon Buonaparte landed here on his return from Elba, 1st March, 1815.

*CAN'NIBAL, n. i An anthropophagite, CAN'NIBALLY, adj. ˆa man-eater. ' In the CAN'NIBALISM, * manner of a cannibal. The practice of man-eating.*

CANNIBALS. See ANTHROPOPHAGI. CANNING (George), was born in London, April 11, 1770. His father, a man of consider- able abilities and literary cultivation, had of- fended his family by marrying a lady without fortune, and died in 1771, leaving his widow destitute. She had recourse to the stage for support, but was not very successful, and was afterwards twice married. She lived to see the success of her son, from whom she ever received the tenderest marks of filial love. Mr. Canning inherited a small estate in Ireland, was educated at Eton, where he was distinguished for industry, vigour of mind, and elegance of taste, and, at the age of fifteen, formed the plan of a periodical called the Microcosm, of which he was the editor. In 1787 he was entered at Oxford. His vacations were passed with Sheridan, by whom he was introduced to Burke, Fox, and other distin- guished whigs. Although Sheridan announced him as the future ornament of his party, yet he was brought into parliament in 1793 by Mr. Pitt. During the first session he remained silent. His maiden effort was made in 1794, on the Sardinian treaty, and rather disappointed expectation. In 1796, he was under-secretary of state. In 1797, he projected, with some of his friends, the Anti-Jacobin, or Weekly Examiner, of which Gifford was appointed editor, and to which he contributed. In 1798, he supported Wilberforce's motion foi the abolition of the slave-trade. In July, 1800, he married Joanna, daughter of general Scott, a lady with a fortune of ►►100,000. The administration being dis- solved in 1801, lie became a

member of the op- position, until the restoration of Pitt in 1804. In 1807, he was appointed secretary of state for foreign affairs in the Portland administration. A political misunderstanding with lord Castlereagh led to a duel between him and that minister, in which he was slightly wounded. This dispute occasioned the dissolution of the ministry. He invariably supported the admission of the Catho- lics into power, purely as a matter of expediency. To Mr. Canning was principally owing the first blow which shook the throne of Napoleon ; the British policy in Spain was directed and ani- mated by him. " If there was any part of his political life," he declared, " in which he gloried, it was that, in the face of every difficulty, discou- ragement, and prophecy of failure, his had been the hand which had committed England to an alliance with Spain." In 1812 he was elected member of Parliament for Liverpool ; from

which he was also returned in 1814, 1818, 1820. In 1814, he was appointed minister to Portugal, a'nd remained absent about two years. In 1819, he declared his hostility to parliamentary reform in any shape ; and his speech on lord John Russell's motion for reform, in 1822, is among the most finished specimens of his eloquence. On the impeachment of the queen, he declared, that " towards the object of that investigation, he felt an unaltered regard and affection ;" and soon after resigned the presidency of the board of control, and went abroad. Having been nomi- nated governor-general of India, he was on the point of embarking, when the death of the mar- quis of Londonderry called him to the cabinet as secretary for foreign affairs (Sept. 16, 1822). One of his earliest acts, in this situation, was to check the French influence in Spain. In 1825, he communicated to foreign ministers the deter- mination of his majesty to appoint charges d'affaires to Colombia, Mexico, and Buenos Ayres. In answer to the charge of having en- couraged the attack upon Portugal, by having permitted the occupation of Spain by France, he uttered the memorable words : " Was it neces- sary that we should blockade Cadiz? No. I looked another way ; I resolved that if France had Spain, it should not be Spain with the Indies. I called the new world into existence, to redress the balance of the old." April 12, 1827, his appointment to be prime minister was announced. His administration was terminated by his death, the 8th of August following ; but not until it had been crowned by the treaty of London (July 6), for the settlement of the affairs of Greece. ••• As a statesman, he was liberal, pro found, consistent, and independent. His elo- quence was persuasive and impassioned ; his reasoning clear and logical ; his manner grace- ful ; his expression winning ; and his whole ap- pearance prepossessing. His wit was brilliant, and his satire was extremely caustic. He died poor. His remains were deposited in West- minster Abbey.

CAN'NIPPERS, n. s. corrupted from CALLI- PERS ; which' see.

CAN'NON, M. ⬛⬛⬛"! Ital. cannone; Fr.

CAN'NONADE, v. \ cannon, from cane, a CANNON-BALL, n. vpipe, meaning a large CAN'XON-BULLET, n. ftube. A great gun for CAN'KON-SHOT, ⬛⬛. | battery. A gun larger CAN'NONIER.) than can be managed

by the hand. They are of so many sizes that they decrease in the bore from a ball of forty- eight pounds to a ball of five ounces. To can- nonade : to play the great guns ; to batter or attack with great guns. A cannonier is the en- gineer that manages the cannon.

CANNON. These destructive missile engines have long been of considerable importance in miliiary tactics. Their invention must obviously have been subsequent to the discovery of gun- powder. Mezeray states that King Edward struck terror into the French army, by five or six pieces of cannon ; it being the first time they had encountered such thundering machines. In the list of aids raised for the redemption of king John of France, in 1368, mention is made of an officer in the French army, called the master of

the king's cannon, and of his providing four large cannon for the garrison of Harfleur. But father Daniel, in his life of Philip of Valois, produces a proof from the records of the chamber of accounts at Paris, that cannon and gunpowder were used in the year 1338. The Germans carry the invention of cannon farther back, and ascribe it to Albertus Magnus, a Dominican monk, about the year 1250. But Isaac Vossius assures us that they were known in China upwards of 1900 years ago ; being employed by the Emperoi Kitey, in the year of Christ 85.

Cannon were originally made of bars of iron fitted together lengthways, or of sheets of iron rolled up arid fastened together, and hooped with iron rings, and sometimes of wood. They were ponderous, clumsy, cumbrous, in a great measure unmanageable, and could not be trans- ported from one place to another, but with great difficulty and labor. They were chiefly employed for throwing large stones like the machines of the ancients, which they succeeded. These were gradually supplanted by brass cannon, which had much smaller calibers, and threw iron bul- lets instead of stones, but prodnced in a few hours greater effects than the others could in many days. These guns were first cast of a mixture of copper and tin, called gun-metal from that circumstance, which continued to be employed for the same purpose for a long time before cast iron was made use of. As the use of artillery, however, became more general, and the number of cannon greatly increased, iron guns were invented by way of lessening the ex- pense. An idea, however, that prevailed of their being very liable to burst when much

heated by firing, retarded the general introduction of them into military service, and was the cause of their being made much heavier than brass guns of the same caliber. And this apprehension was strengthened by some accidents that took place, either through improper management, or the carelessness and unskilfulness of the early foun- ders ; this has militated against the general use o! them even down to the present time. When cast, however, with iron obtained from good ore, they resist bursting as much as brass cannon, and possess great advantages over them. ,

At present, cannon take their names from the weights of the balls, which they respectively dis- charge. Thus a piece that discharges a ball of twenty-four pounds, is called a twenty-four pounder ; one that takes a ball of twelve pounds is called a twelve pounder ; and so of the rest, divided into the following sorts.

Ship-guns, consisting of forty-two, thirty-six, twenty-four, eighteen, twelve, nine, six and three pounders.

Garrison guns, consisting of forty-two, thirty- two, twenty-four, eighteen, twelve, nine and six pounders.

Battering guns, consisting of twenty-four, eighteen, and" twelve pounders, and sometimes, though but seldom, of forty-two pounders.

Field pieces, consisting of twelve, nine, six, three, two, one and a half, one, and half- pounders.

The different parts of a gun will be best un- derstood by a reference to platell. MISCELLANY,

3 11 2

100

CANNON.

fig. 6, in which a 6 is the length of the gun ; ne the first reinforce; e f the second reinforce; fb the chase; A 6 the muzzle; ah the cascable; a c the breech ; c d the vent field ; fi the chace girdle; rs the base ring and ogee; t the vent astragal and fillets ; p q the first reinforce ring and ogee ; v w the second reinforce ring and ogee ; x the chace astragal and fillets ; z the muzzle astragal and fillets ; n the muzzle mould- ings ; m the swelling of the muzzle ; a i the breech mouldings.

The vacant cylinder, wherein the powder and ball are lodged, is called the bore, and the en- trance of the bore the mouth of the gun. The cylindric

parts t, by which the gun is fixed upon its carriage, are called trunnions; and the handles on brass pieces are called dolphins, from the fish whose form they represent. The diameter of the bore is called the caliber of the piece. Lastly, the difference between the diameters of the shot and the bore, is called the windage of the gun.

The mode of casting cannon is too important to be passed unnoticed in this article. This process was, until about half a century ago, considered an arduous undertaking ; and so little were the fundamental principles of the art under- stood, that we are assured that not one in three of the shells cast for the mortar service could be admitted into the stores. Such have been the improvements made, that thousands of articles which used to be from necessity made of wrought iron, are now to be had from the foundries at less than one-fifth of their former prices; while the material itself has been so highly perfected, that instances have been known of cast-iron being sufficiently "soft to bear the file, and sufficiently ductile to undergo the ham- mer. Such, indeed, could not be done but at a considerable expense ; nor does it appear that much good could result in general. With respect to military apparatus, it is found expedient to have the whole of our cannon, mortars, carronades, shot, shells, and garrison gun-carriages, cast at the several foundries established in the vicinity of coal and iron mines, whereby the work is done at a comparatively low expense, and the articles can be conveyed by water to the warren at Wool- wich, much under the prices at which they could be cast at the place, to which both the iron and the coals must be transported.

Guns are usually cast from metal brought into the fluid state in a reverberatory furnace, and the moulds are formed of loam or dry sand. Guns cast in loam do not come from the mould with a surface so correctly resembling that of the model as those cast in dry sand, and in order to render the surface correct, and to remedy defects, it was always necessary to subject them to the process of turning. In guns carefully cast in dry sand, the process of turning might be dispensed with, the gun would then be strengthened by the outer skin of metal, which, having cooled more rapidly than the other parts, is the hardest : this outer skin is also less liable to rust than the surface laid bare by turning, The mould of a gun in dry sand,

at the same time that it is more accurate, is also sooner made and dried than a loam mould.

It may be proper to state that some experi- ments are at present being made at Douay, in cannon founding, under the direction of Messrs. Gay Lussac and D'Arcet, which tend to show that the addition of a small proportion of iron into the alloy of brass nearly doubles the force of resistance.

Brass guns are subject to melt at the interior extremity of the touch-hole, by the heat of quick firing; and the melted parts are driven out by the explosion, so as to render the touch-hole too wide. To prevent this, there is sometimes a bush of copper inserted, and in this bush the touch-hole is drilled. The copper, being less fusible than the brass, is not melted by the heat of firing the piece. To form the bush, a cy- lindrical piece of copper is hammered cold, and made into the form of a male screw. A hole is then bored, reaching from the surface of the gun into its bore ; the diameter of this cylindrical hole is equal to the diameter of the cylinder of copper measured from the bottom of the threads of the screw. The piece of copper is then screwed into the cylindrical hole, and the touch-hole is drilled in it.

Cannon were formerly made of a very great length, which rendered them exceedingly heavy, and the use of them very limited and trouble- some. There were some of them employed by the Turks, in 1394, at the siege of Constantinople, then in possession of the Christians, and also in 1452, which threw a weight of 100 Ibs. ; but they could not stand repeated firing. Louis XII. had one cast at Tours of the same size, that threw a ball from the bastile to Charenton. One of these extraordinary cannon was taken at the siege of Diu in 1546, by Don John de Castro, and is now in the castle of St. Julian de Barra, ten miles from Lisbon. The length of it is twenty feet seven inches ; its diameter at the middle is six feet three inches ; and it threw 100 Ibs. weight. It has neither dolphins, rings, nor a button ; is of an unusual kind of metal, and has an inscription on it, which says that it was cast in 1400. For- merly strange and uncommon names were given to cannon. Thus Louis XII., in 1503, had twelve brass cannon, cast of an extraordinary size, called after the twelve peers of France. The Spaniards and Portuguese named theirs after their saints. The emperor Charles V., when he went against Tunis, had twelve cannon founded, which he called the Twelve Apostles. At Milan there is a seventy-pounder called the Pimontelli; and there is one at Bois-le-duc called the Devil. At Dover castle there is a sixty-pounder called Queen Elizabeth's pocket-pistol. There is an eighty-pounder in the Tower of London, brought thither from Edinburgh castle, called Mounts- meff, and another in the royal arsenal at Berlin, called the Thunderer. The large gunsemployed by the French at the siege of Cadi? threw shells more than four miles.

A brief tabular view of the dimensions and weight of iron and brass guns may now be given.

CANNON.

Table of the Length, Weight, Caliber, and Charges, of British Government Iron Guns.

Length.

Weight.

Diameter of the Bore.

Diameter of the Shot.

Diameter of the Shot Gauge.

- –

Charge.

Ft. In.

Curt. Ib. oz.

In.

In.

In.

Proof. Ib.

Service. Ib.

42-Pounder gun

10 0

67 0 0

7-018

6-684

6-795

25-0

14-0

32-Pounder gun

10 0

58 0 0

6-410

6-105

6-207

21-8

10-11

24-Pounder gun

10 0

52 0 0

5-824

5-547

5-639

18-0

8-0

18-Pounder gun

9 6

42 0 0

5-292

5-040

5-124

15-0

6-0

12-Pounder gun

9 6

34 0 0

4-623

4-403

4-476

12-0

4-0

9-Pounder gun

9 6

30 1 0

4-20

-4-000

4-066

9-0

3-0

6-Pounder gun

9 0

24 0 0

3-668

3-498

3-552

6-0

2-0

4-Pounder gun

6 0

12 1 0

3-204

3-053 ‘

3-104

4-0

1-5

3-Pounder gun

4 6

710

2-913

2-775

2-820

3-0

1-0

2-Pounder gun

3 9

420

2-544

2-423

2-463

2-0

0-11

1-Pounder gun

3 0

220

2-019

1-293

, 1-955

1-0

0-6

A-Pounder gun

3 0

120

1-602

1-526

1-551

0-8

0-3

BRASS CANNON.

Nature.

Poun- ders.

Length.

Weight.

Caliber of the gun.

Diame- ter of the shot

ft. in.

cwt. qr. Ib.

in. hunt!

in.hund

‘

42

9 6

61 0 0

7-3

6-68

24

9 6

52 0 0

5-83

5-54

H

12

9 0

29 0 0

4-63

4-40

•

9

9 0

26 0 0

4-21

4-0

8 0

19 0 0

3-66

3-48

3

7 0

11 2 0

2-91

2-77

*1**

6 0

520

2-31

2-2

?f

H

*3 **

24 12 6

8 0 6 6 5 0

42 1 21 21 0 14 10 1 0

5-83 4-63 3-66

5-54 4-40 3-48

f

24

5 6

16 1 12

5-83

5-54

P)

11

12 6

5 0 4 6

8 3 18 4 3 14

4-63 3-66

4-40 3-48

c

3

3 6

234

2-91

2.77

BRASS SHIP GUNS.

Caliber.

Length.

Weight.

3-Pounder . . .

ft. in.

3 6

cwt. qr. Ib.

5 1 17

6-Pounder . . .

4 4

6 2 14

9-Pounder . . .

5 0

10 0 0

12-Pounder. . .

5 6

13 1 3

18-Pounder . . .

6 4

20 0 0

24-Pounder . . .

7 0

26 2 7

32-Pounder . . .

7 6

35 1 17

36-Founder . . .

7 10

40 0 0

42-Pounder . . .

8 4

46 2 0

48-Pounder .

8 6

53 0 14

VV e have now to notice a new description of missile weapon, which may properly find a place in this article; we allude to the steam-cannon, suggested by Mr. Perkins. This ingenious American has proposed to employ the elastic force of water converted into steam for the pur- pose of

propelling bullets ; and the power of the apparatus must of necessity depend on the in- tensity of the heat which is employed. A small

cannon has already been constructed, which, when connected with the generator or boiler, has been found to discharge ordinary musket- bullets at the rate of 240 in the minute, and with such tremendous force, that, after passing through an inch deal, the ball, in striking against an iron- target, became flattened on one side and squeezed out; The original size of the bullets was 0-65 of an inch ; but, after striking the target, they were plano-convex, and their diameter 1-070 inches, and 0‘29 of an inch thick.

CAN’NOT. A word compounded of can and not : noting inability.

Sir ! seyd the burgeyse, no mevelle it is to me, For many a time and oft, I cannot sey how lome, He hath be in your marches ; and as I trow in Room Also he was ybore, yf I ne ly shall.

Chaucer’s Canterbury Tales. And you, most noble Lord : that can and dare Redresse the wrong of miserable wight, Cannot employ your most victorious speare In better quariell than defence of right, And for a lady ‘gainst a faithlesse knight. Spenser.

Thus though we cannot make our sun Stand still, yet we v.-ill make him run. Marvell. I cannot but believe many a child can tell twenty, long before he has any idea of infinity at all. Locke.

To cities and the court repair, A fortune cannot fail thee there.

Gay.

Base envy withers at another’s joy, And hates that excellence it cannot reach.

Thomson.

There is a spur in its half movements, to become All that the others cannot, in such things As still are free to both, to compensate For stepdame Nature’s avarice at first. Byron.

CANNULA, or CANULA, in surgery, a tube. They are introduced into hollow ulcers, in order to facilitate a discharge of pus or any other sub-stance ; or into wounds either accidental or arti- ficial, of the large cavities, as the thorax or ab- domen ; they are used in the operation of bron-chotomy ; and, by some, after cutting for the stone, as a drain for urine. Other cannulae are used for introducing cauteries, either actual or po-tential, in order to guard the parts adjacent from

to be cauterised, from that injury. They are of various figures ; oval, round,and crooked.

CANO (Alonzo), a statuary, who has been called the Michael Angelo of Spain, was born at Grenada, in 1 600. He studied architecture and sculpture from his youth, first under his father, and then at Seville; his first instructions in painting were received from Juan dell Castillo. He was after this made royal architect, king's painter, and in- structor to the prince, Don Balthazar Carlos. While enjoying the great celebrity which his ta- lents and attainments deserved, he one evening found his house robbed, and his wife murdered in his absence ; an Italian servant having fled. The magistrates, because Cano was of a jealous disposi- tion, seemed now determined to sacrifice him, and he fled to Valencia, but afterwards returned to Ma- drid ; where he endured torture, without criminat- ing himself, and the king restored him to favor. He afterwards embraced an ecclesiastical life, as a protection from prosecution. When the priest, at the hour of his death, held to him a crucifix, he told him to take it away, for it was so badly done he could not bear the sight of such a per- formance. He died in 1676. See Cumberland's Anecdotes of Eminent Spanish Painters.

CANO'A, n. s. > Sp. canoa. But the word

CANOE'. 1 is said to be originally West

Indian ; Columbus having found it in use at San Salvador, on his arrival thete. A boat made by cutting the trunk of a tree into a hollow vessel.

Others made rafts of wood ; others devised the boat of one tree, called the canoa, which the Gauls upon the Rhone used in assisting the transportation of Hannibal's army. Ruleiyh.

In a war against Semiramis, they had four thou- sand monoxyla, or canoes of one piece of timber.

Arbuthnot on Coins,

CANOES are Indian boats, sometimes formed of several pieces of bark put together, but more frequently by the hollowing out the trunk of some tree. The largest are made of the cotton tree ; some of them will carry between twenty and thirty hogsheads of sugar or molasses. Some are made to carry sail ; and for this purpose are steeped in water till they become pliant ; after which their sides are extended, and strong beams placedjbetween

them, on which a deck is after- wards laid that serves to support their sides. The other sorts very rarely carry sail, unless when going before the wind ; their sails are made of short silk grass or rushes. They are commonly rowed with paddles, which are pieces of light wood somewhat resembling a com- shovel ; and, instead of rowing wkh it horizontally like an oar, they manage it perpendicularly. The small canoes are very narrow, having only room for one person in breadth, and seven or eight lengthwise. The American Indians, when they are under the necessity of landing to avoid a water-fall, or of crossing the land from one river to another, carry their canoes on their heads, till they arrive at a place where they can launch them again. Some nations have vessels under this name, which dif- fer from these, as the inhabitants of Greenland, &c. The Esquimaux canoe is, however, the only one essentially different ; this is formed of ribs of whalebone, from end to end, sewed to-

Kavuv. A rule; a law. The laws made by ecclesiastical coun- cils. The books of Holy Scripture : or the f great rule. A dignitary ‘ in cathedral churches. Canons Regular. Such as are placed in monas- teries. Canons Secular.

gether with strong muscles, and covered with seal-skins. It is very small and light, and gene- rally contains but one person, who, by fastening his large skin cloak to the sides of the canoe, renders the whole water-tight, so that if overset, he can recover himself with his paddle, without injury. The paddle is ten feet long, and flat at each end ; and so expert are the natives in the use of it, that they can keep up with any English ten-oared boat.

CAN’ON, n.

CAN’ONESS, n.

CANONICAL, adj.

CANON’ICALLY, adv.

CANON’ICALNESS, n.

CAN’ONIST, n.

CAN’ONIZATION, n.

CAN’ON IZE, fl. a.

CAN’ON RY, n.

CAN’ONSHIP, n. Lay canons, who have been, as a mark of honor, admitted into some chapters. Canonical signi- fies according to the canon,

constituting the canon; regular, stated, fixed by ecclesiastical laws. Spiritual, relating to the church. A ca- nonist is a man versed in the ecclesiastical laws ; a professor of the canon law. Canonisation is the act of declaring saintship : to canonise is to put into the canon, or rule, for observing festi- vals ; to declare any man a saint.

In poyse and philosophie also he can endite ; Cevile an canounc, and al maner lawes, Seneca and Sydrak, and Salamony's sawys, And the seven sciences and eke law of armys.

Chaucer's Canterbury Tale.*

His books are almost the very canon to judge both doctrine and discipline by. Hooker.

Public readings there are of books and writings, not canonical, whereby the church doth also preach, or openly make known, the doctrine of virtuous conver- sation. Id.

The king, desirous to bring into the house of Lan- caster celestial honour, became suitor to pope Julius, to canonize king Henry VI. for a saint. Bacon.

For deans and canons, or prebends of cathedral churches, they were of great use in the church ; they were to be of counsel with the bishop for his revenue, and for his government, in causes ecclesiastical. Id.

By those hymns all shall approve Us canonised for love. Donne.

Religious canons, civil laws, are cruel ;

Then what should war be ? Shaktpeare.

Seven times in a day do I praise thee, said David :

from this definite number some ages of the church

took their pattern for their canonical hours. Taylor <

It is a known story of the friar, who on a fasting

day, bid his capon be carp, and then very canonically

eat it. Government of the Tongue.

A canon', that's a place too mean No, doctor, you shall be a dean ; Two dozen eanons round your stall, And you the tyrant o'er them all. Swift.

Canon law, is that law, which is made and ordained in a general council, or provincial synod, of the church. Ayliffe.

York anciently had a metropolitan jurisdiction over all the bishops of Scotland, from whom they had their consecration, and to whom they swore canonical obe- dience. Id.

CANON.

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Canon alao denotes those books of Scripture, which allotted for the performance of divine service, in

a cathedral, or collegiate church. Canons are of no great antiquity ; Pasquier observes that the name was not known before Charlemagne; at least the first we hear of are in Gregory de Tours, who mentions a college of canons instituted by

are received as inspired and canonical, to distinguish them from either profane, apocryphal, or disputed books. Thus we say, that Genesis is part of the sacred canon of the Scripture. Id,

There are, in popish countries, women they call

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secular eanonexes, living after the example of secular Baldwin XVI archbishop of that city, in the time ThneSs’e were looked on as lapsed persons, and greai of Clotharius I. The common .opinion attributes severities of penance were prescribed them by the the institution of this order to Chrodegangus canon, of Ancyra. Stillingfleet. bishop of Metz, about the middle of the eighth

It is very suspicious, that the interests of particular Century. Originally canons were only priests or families, or churches, have too great a sway in canon- inferior ecclesiastics, who lived in community, Nations Addison residing by the cathedral church, to assist the

~ John Fisher, bishop of Rochester, when the king bishop; depending entirely on his will; sup- would have translated him from that poor bishoprick, ported by the revenues of the bishopric, and liv- he refused, saying, he would not forsake his poor ing in the same house, as his domestics or coun- little old wife ; thinking of the fifteenth canon of the sellers, &C. They even inherited his moveables, Nicene council, and that of

the canonists, Matrimo- till A.D. 817, when this was prohibited by the nium inter episcopum et ecclesiam esse contraction, Sfc. council of Aix-la-Chapelle, and a new rule sub-

Camden's Remains, stituted in the place of that which had been ap-

Of whose strange crimes no canonist can tell pointed by Chrodegangus, and which was

In what commandment's large contents they dwell. observed for the most part in the west till the

Pope, twelfth century. By degrees these communities

Canons, in logick, are such as these : every part of a of priests, shaking off their dependence, formed

division, singly taken, must contain less than the separate bodies, whereof the bishops, however,

whole ; and a definition must be peculiar and proper were still the heads. In the tenth century there

to the thing defined. Watts, were communities of the same kind, established

He [Edward I.] seems to have been the first chris- even in cities where there were no bishops ;

tian prince that passed a statute of mortmain ; and these were called collegiates, as they used the

prevented by law the clergy from making new acqui- terms congregation and college indifferently ; the

sitions of lands, which, by the ecclesiastical canons, name chapter now given to these bodies being

they were for ever prohibited from alienating. much more modern. Under the second race of

Hume's History of England. the French kingS) the canonical life had spread

The canon law is a body of Roman ecclesiastical all over the country ; and each cathedral had its law, relative to such matters as that church either chapter distinct from the rest of the clergy, has, or pretends to have, the proper jurisdiction over. They ha(j tne name canon frOm the Greek xaviav, Blackttone's Commentaries. which signifies three different things : a rule, a

pension, or fixed revenue to live on, and a cata- logue of matricula, all which are applicable to them. In time the canons freed themselves from their rules ; and at length they ceased to live in community: yet they still formed bodies; pre- CANON, in an ecclesiastical sense, is a rule, tending to other functions besides the celebra- either of doctrine or discipline, enacted espe- tion of the common office in the church, yet cially by a council, and confirmed by the so- assuming the rights of the rest of the clergy, vereign. Canons are properly decisions of making themselves a necessary council of the matters of religion, or regulations of the policy bishop ; taking upon them the administration of and discipline of a church, made by councils, a see during a vacancy, and the election of a either general, national, or provincial. Such bishop to supply it. There are even some chap- are the canons of the council of Nice, or Trent, ters exempt from the jurisdiction of the bishop, &c. There have been various collections of the and owning no head but their dean. After the canons of the Eastern councils ; but four prin- example of cathedral chapters, collegiate ones cipal ones, each ampler than the preceding. The also continued to form bodies, after they had first, according to Usher, A. D. 380, contained abandoned living in community. Canons are of only those of the first ecumenical council, and various kinds, particularly in the Romish church : the first provincial ones : they were but 164 in as: 1. Canons, cardinal. 2. Canons, domicil- number. To these, Dionysius Exiguus, in 520, lary. 3. Canons expectative, &c. 4. Canons, added the fifty canons of the apostles, and those lay or honorary, are such among the laity as have of the other general councils. The Greek can- been admitted, out of honor and respect, into ons in this second collection end with those of some chapter of canons. Dr. Johnson confounds the council of Chalcedon ; to which are sub- these with the secular canons. 5. Canons, regu- joined those of the council of Sardica, and the lar, are those who still live in community, and African councils. The fourth and last collection who have, to the practice of their rules, added comes down as low as the second council of the solemn profession of vows. They are called Nice; and it is on this that Balsamon and Zo- regulars, to distinguish them from those secular naras have commented. canons who abandon living in community, and

CANON OF SCRIPTURE. See BIBLE. observing the canons made for the maintenance

CANON, in a modern ecclesiastical sense, is a of the ancient discipline, person who possesses a prebend, or revenue CANON is also used in the Romish church :

But a word or two : His stature is twelve cubits : would you so far Outstep these times, and be a Titan ? or (To talk canonicatty} wax a Son Of Anak ?

CANON.

1. By way of excellence for the secret words of the mass, from the preface to the pater, in the middle of which the priest consecrates the host.

2. For the catalogue of saints acknowledged and canonised in the church of Rome. 3. In mo- nastic orders, for a book wherein the religious of every convent have a fair transcript of the rules of their order frequently read among them as their local statutes. Canons is also applied to other compositions : as ⁂

1. CANON, PASCHAL, a table of the moveable feasts, showing the day of Easter, and the other feasts depending on it, for a cycle of nineteen years. The paschal canon is supposed to be the calculation of Eusebius of Csesarea, and to have been done by the order of the council of Nice.

2. CANONS, APOSTOLICAL, those which have been usually ascribed to St. Clement. Bellar- min, Baronius, &c. will have them to be ge- nuine canons of the apostlas. Cotelerius ob- serves that they cannot be ascribed to the apostles or Clement, because they are not received with other books of Scripture, are not quoted by the writers of the first ages, and contain many things not agreeable to the apostolical times. Hinc- mar, De Marca, Beveridge, &c. take them to be framed by the bishops who were the apostles' disciples in the second or third century ; but Daille, 8cc. maintain them to have been forged by some heretic in the sixth century ; and S. Basnage conjectures that though some of them are ancient, and collected in the fifth century, others are not older than the seventh. The Greek church allow only eighty-five of them, and the Latins only fifty, though there are eighty-four in the edition given of them in the Corpus Juris Canonici.

CANON, in geometry and algebra, a general rule for the solution of all cases of a like nature with the present enquiry. Thus every last step of an equation is a canon; and, if turned into words, becomes a rule to solve all questions of the same nature with that proposed.

CANON, in ancient music, is a method of de- termining the intervals of notes. Ptolemy, re- jecting the Aristoxenian way of measuring the intervals in music, by the magnitude of a tone, (which was supposed to be formed by the diffe- rence between a diaperite and a diatessaron), thought that musical intervals should be distin- guished according to the proportions which the sounds terminating those intervals bear to one another, when considered according to their de- gree of acuteness or gravity ; which, before Aristoxenus, was the old Pythagorean way. He therefore made the

diapason consist in a double ratio ; the diapente in a sesquialterate ; the dia- tessaron in a sesquitertian ; and the tone itself in a sesquioctave ; and all the other intervals ac- cording to the proportion of the sounds that terminate them ; wherefore taking the cauon for a determinate line of any length, he shows how this canon is to be cut accordingly, so that it may represent the respective intervals ; and this me- thod answers exactly to experiment in the dif- ferent lengths of musical chords. From this canon Ptolemy and his followers have been called Canonica ; as those of Aristoxenus were called Musici.

CANON, in music, is a short modern composi- tion of two or more parts, in which one leads and the other follows ; and is a fugue so bound up or restrained, that the following part or parts must precisely repeat the same notes, with the same degrees, rising or falling, which were ex- pressed by the leading part. It is therefore tied to so strict a rule that it is called canon.

CANON LAW is a collection of ecclesiastical laws, serving as the rule of church government. The power of making laws was exercised by the church before the Roman empire became Chris- tian. The canon law that obtained throughout the west till the twelfth century, was the collec- tion of canons made by Dionysius Exiguus in 520, the capitularies of Charlemagne, and the decrees of the popes from Syricius to Anastasius III. The canon law, even when papal authority was at its height in England, was of no force when it contradicted the prerogative of the king, the laws, statutes, and customs of the realm, or the doctrine of the established church. The ec- clesiastical jurisdiction of the see of Rome in England was founded on the canon law; and this created quarrels between kings and several archbishops and prelates who adhered to the papal usurpation. Besides the foreign canons, there were several laws and constitutions made here for the government of the church, but all these received their force from the royal assent, and if, at any lime, the ecclesiastical courts did, by their sentence, endeavour to enforce obedience to such canons, the courts at common law, upon complaints made, would grant prohibition. The authority vested in the church of England of making canons was ascertained by a statute of Henry VIII. commonly called the act of the clergy's submission, by which they acknowledged that the convocation had always been assembled by the king's writ ; so that though the power of making canons resided in the clergy met in con- vocation, their force was derived from the autho- rity of the king's assenting to and confirming them. The old canons continued in full force till the reign of James I. when the clergy being assembled in convocation, the king gave them leave to treat and consult upon canons, which they did, and presented them to the king, who gave them the royal assent : these were a collec- tion out of the several preceding canons and in- junctions. Some of these canons are now obso- lete. In the reign of Charles I. several canons were passed by the clergy in convocation.

CAN'ON, among chirurgeons, an instrument used in sewing up wounds. A large sort of printing letter, probably so called from being first used in printing a book of canons ; or per- haps from its size, and therefore properly written cannon.

CAN'ON-BIT, n. s. That part of the bit let into the horse's mouth.

A goodly person, and could manage fair His stubborn steed with canon-bit, Who under him did trample as the air. Spenser.

CAtfONARCHA, or CANON ARCHUS, tin office in the Greek church, answering to the precentor in the Latin, or chanter in the English church.

CANONESS, in the Romish church, is a woman who enjoys a prebend, affixed by the foundation

to maids, without their being obliged to renounce the world, or make any vows.

CANONGATE, a burgh adjacent and under vassalage to Edinburgh, of which it is one of the suburbs. See EDINBURGH. It is governed by a baron bailie and two resident magistrates, ap- pointed by the Town Council of Edinburgh. Their jurisdiction extends to the east side of the Pleasance, and to the populous town of North Leith.

CANONICA, in philosophical history, an appellation given by Epicurus to his doctrine of logic, as consisting of a few rules for directing the understanding in the pursuit of truth. The great principle of Epicurus's canonica is, that the senses are never deceived; and therefore that every sensation of an appearance is true.

CANONICAL HOURS are certain stated times of the day, consigned, more especially by the Ro- mish church, to the offices of prayer and devo- tion. Such are matins, lauds, sixth, ninth, vespers. In England the canonical hours are from eight to twelve in the forenoon, before or after which, marriage cannot be legally per- formed in any parish church.

CANONICAL LIFE is the rule of living pre- scribed by the ancient clergy who lived in community. The canonical life was a kind of medium between the monastic and clerical lives. Originally the orders of monks and clerks

were entirely distinct ; but pious persons afterwards instituted colleges of priests and canons, where clerks brought up for the ministry, as well as others already engaged therein, might live under a fixed rule, which, though somewhat more easy than the monastic, was more restrained than the secular. Authors are divided about the founder of the canonical life. Some will have it to be founded by the apostles, others ascribe it to pope Urban I. about A-D. 1230, who is said to have ordered bishops to provide such of their clergy as were willing to live in community, with necessaries out of the revenues of their churches. The generality attribute ft to St. Augustin, who, having gathered a number of clerks to devote themselves to religion, instituted a monastery within his episcopal palace, where he lived in community with them. Onuphrius Panvinius says that pope Gelasius I. about A. D. 495, placed the first regular canons of St. Augustin in the Lateran church.

CANONICAL OBEDIENCE is that submission which, by the ecclesiastical laws, the inferior clergy are to pay to their bishops, and the reli- gious to their superiors.

CANONICAL PORTION, so much of the effects of a person deceased, as the canons allow to his parish church.

CANONICAL PUNISHMENTS are those which the church may inflict, such as excommunication, degradation, and penance, in Roman Catholic countries ; also fasting, alms, whipping, &c.

CANONICAL SINS, in the ancient church, those which were capital or mortal, such as idolatry, murder, adultery, heresy, and schism.

CANONISATION, in the Romish church, suc- ceeds beatification. Before a beatified person is canonised, the qualifications of the candidate are strictly examined into, in some consistories held

for that purpose ; after which, one of the consis- torial advocates, in the presence of the pope and cardinals, makes the panegyric of the person who is to be proclaimed a saint, and gives a particular detail of his life and miracles: which done, the holy father decrees his canonisation, and appoints the day. On the day of canonisation the pope officiates in white, and the cardinals are dressed in the same color. St. Peter's church is hung with rich tapestry, upon which the arms of the pope, and of the prince or state requiring the canonisation, are embroidered in gold and silver. The following rule is now observed, though it has not been in force above a century, viz. not to enter into the enquiries prior to canonisation till fifty years, at least, after the death of the person to be canonised. This rite of the mo- dern Romans resembles the deification of the ancient Romans, and,

in all probability, takes its rise from it.

CANOPUS, in astronomy, a star of the first magnitude in the rudder of Argo.

CANOPUS, in Pagan mythology, one of the deities of the ancient Egyptians, and the god of water. It is said, that the Chaldeans, who worshipped fire, carried their deity through other countries to try its power, in order that, if it ob- tained the victory over the other gods, it might be acknowledged as the tme object of worship ; and it having easily subdued the gods of wood, stone, brass, silver, and gold, its priests declared that all gods did it homage. This the priests of Canopus hearing, and finding that the Chaldeans had brought their gods to contend with Canopus, they took a large earthen vessel, in which they bored several holes, which they afterwards stop- ped with wax, and having filled the vessel with water, painted it of several colors, and fitting the head of their idol to it, brought it out, in or- der to contend with the Chaldean deity. The Chaldeans accordingly kindled their fire all around it; but the heat having melted the wax, the wa- ter gushed out through the holes and extinguished the fire ; and thus Canopus conquered the god of the Chaldeans. Canopus, according to Stra- bo, was a native of Amycla, had been Menelaus's pilot, and had a temple erected to him in the town of Canopus. It is mentioned by Dionysius. Vossius remarks the vanity of the Greeks, who, as he conjectures, hearing of the Egyptian deity, took an opportunity of deifying the pilot of Menelaus, and giving out that the Egyptian god Canopus had been a Greek.

CANOPUS, in ancient geography, a city of Lower Egypt, on the Mediterranean, near one of the mouths of the Nile, 120 stadia or thirteen miles east of Alexandria : as old as the war of Troy, Canopus being there buried. See ABOU- KIR.

CAN'OPY, v. a.&n.-i The noun is from

CAN'OPIED. J luavuTrtiov barbarous;

Lat. canopium ; Fr. canopee ; a covering of state over a throne, or bed ; anything spread above the head. The Canopy of Heaven is the con- cave limit of our vision, beyond which the eye cannot penetrate : when studded with stars at night, it is like a dark mantle bespangled with gems, and is the canopy under which we walk, or repose.

She is there brought unto a paled green, And placed under a stately

*canopy, The warlike feats of both those knights to *ee.*

Faerie Qtieene.

I have of late (but wherefore I know not) lost all my mirth ??? Indeed it goes so heavily with my dispo- sition, that this goodly frame, the earth, seems to me a steril promontory ; this most excellent canopy, the air look you, this brave o'erhanging firmament, this majestic roof, fretted with golden fires, why it appears no other to me than a foul and pestilent congregation of vapours. Shakspcare.

I sat me down to watch upon a bank With ivy canopied, and interwove With flaunting honeysuckle, and began, Wrapt in a pleasing fit of melancholy, To meditate my rural minstrelsy, Till fancy had her fill. Milton's Comua.

"Now spread the night her spangled canopy, And summoned every restless eye to sleep. Fairfax. The birch, the myrtle, and the bay,

Like friends did all embrace ; And their large branches did display

To canopy the place. Dryden.

CANOPY formed from icwywTmov, a mosquito net, of rwvwi//, a gnat. Canopies are also borne over the head in processions of state, after the manner of umbrellas, The canopy of an altar is called Ciborium. The Roman grandees had their canopies, or spread veils, called thensae, over their chairs ; and in temples over the statues of the gods. The modern cardinals still retain the use of canopies.

CAN'OROUS, adj. Lat. canons. Musical ; tuneful.

Birds that are most canorous, and whose notes we most commend, are of little throats, and short.

Browne's Vulgar Errours.

CANOSA, a town of Puglia, Naples, occupy- ing part of the site of the ancient Canusium. The old city was one of the most considerable in this part of Italy, for extent, population, and magnificent buildings. The aera of Trajan seems to have been that of its greatest splendor ; but this pomp only served to mark it as a capital ob- ject for the avarice and fury of the Barbarians. Genseric, Totila, and Autharis, treated it with extreme cruelty. The deplorable state to which this province was reduced in 590 is concisely but strongly painted by Gregory the Great. ' On every side,' said he, ' we hear groans ! On every side we behold crowds of mourners, cities burnt,

castles rased to the ground, countries laid waste, provinces become deserts, some citizens led away captives, and others inhumanly massacred.' No town in Puglia suffered more from the Sara- cens ; and the contests between the Greeks and Normans increased the measure of its woes, which was completed by a conflagration when it was stormed by Duke Robert. In 1090 it was assigned to Bohemund, prince of Antioch, who died here in 1111. Under the reign of Ferdi- nand III. it belonged to the Grimaldis. On their forfeiture, the Assaititi acquired it. The ancient city stood in a plain between the hills and the river Ofanto.

CANOVA (Antonio), one of the greatest, per- haps the greatest, of modern scujptors, was born in 1757, at Passagno, a small village of the Trevisan, in the Venetian states. The first indi-

cation of his talent he is said to have given when he was twelve years old, by modelling a lion in butter, to be sent up to the table of Falieri, the seigneur of the village. Struck with the genius which was displayed in this fragile performance, Falieri took him under his protection, and com- mitted him to the tuition of Torretti, who was considered the most eminent sculptor of that period. His powers were now rapidly deve- loped : he was admitted a member of the Aca- demy of Fine Arts at Venice, and gained several prizes. At the age of seventeen he produced his statue of Eurydice. Shortly after the death of Torretti, his youthful pupil commenced busi- ness on his own account, in the cloisters of San Stefano at Venice. His reputation increased daily ; and Venice soon became too narrow a sphere for his exertions. In 1779 Girolamo Zuliano, the Venetian ambassador at Rome, in- vited him to that capital. Canova accepted the invitation ; and, previous to his departure, was gratified by a pension of three hundred ducats from the Academy of Fine Arts, as a reward for his groupe of Dedalus and Icarus. At Rome he became acquainted with Sir William Hamilton, who introduced him to all his friends ; and no long time elapsed before he was patronised by all the Englishmen of taste who visited the ' eternal city.' The various Roman pontiffs and nobility also vied in finding occupation for his creative chisel. So fully was he employed, that it was not until the year 1798 he could indulge his de- sire of travelling. In that and the following year he travelled through Germany and Prussia, in company with Prince Rezzonico. On his re- turn to Rome, Pius VII. appointed him in- spector general of the fine arts, and conferred on him the honor of knighthood. In 1802 the first-consul of France desired to see him at Paris ; the pontiff permitted his absence ; he was re- ceived in the French capital with the respect due to his genius ; and was chosen one of the foreign associates of the Institute. When, how- ever, he next visited Paris, which was in 1815, his presence excited no feelings but those of anger and hatred. On that occasion he appeared in the character of ambassador from the pope, to claim, and superintend the sending back, the numerous works

of art of which Italy, had been deprived by the victorious arms of Buonaparte. Sarcasms and witticisms were lavished on him ; and it was said, that instead of being called the pope's ambassador, he ought to have been denomi- nated the pope's packer. For these splenetic effu- sions, however, he was fully indemnified by his re- ception in England, where he was treated as a brother by all who were connected with the arts, and was presented with a brilliant snuff-box by the prince regent. Still more gratifying honors awaited him on his return to Rome. The Academy of St. Luke went in a body to meet him ; and the pope not only granted him a pension of three thousand crowns, and created him marquis of Ischia, but also, at an audience which he gave to him on the 5th of January, 1816, put into his hands a billet, announcing that the artist's name was inscribed on 'The Book of the Capitol.' The pension Canova resolved to dedicate en- tirely to the benefit of the artr, and of those

who professed them. Nor was he a scanty dis- penser of the fortune which he had gained by the exercise of his talents. He established prizes, endowed academies, and diffused his bounty among the aged and unfortunate. A favorite occupation of his latter years was the erection of a magnificent church, at Possagno, to con- tain his statue of Religion. This building was not completed at the period of his decease. His death took place at Venice on the 22d of October, 1822, and he was buried in the ca- thedral of St. Mark, his funeral being attended by all the public authorities of the city.

Among the numerous works of Canova may be mentioned his Love and Psyche, reposing; Psyche, standing; Love and Psyche, standing; Venus and Adonis ; a repentant Mary Magda- len; Perseus, holding the head of Medusa; Ferdinand IV. of Naples ; the athletes Krengan and Damoxenes ; Hebe, pouring out nectar ; Hercules, dashing Lycus against a rock; Na- poleon, as Mars the pacificator ; the mother of Napoleon ; Venus, resting, for which Paulina Buonaparte sat ; Venus, quitting the bath ; The- seus, vanquishing the centaur; the Three Graces; Religion, crowned ; Mars and Venus ; Peace and the Graces ; a winged Peace ; a statue of Washington ; and several mausoleums, among which are those of the popes Clement XIII. and XIV. and of Maria Christiana, archduchess of Austria. His Psyche, standing and holding a butterfly by the wings, is one of his early pro- ductions, but, though it has high merit, he was not satisfied with it. ' That,' said he, in a com- pany, ' is one of the sins of my youth.' ' Canova,' replied an accomplished and beautiful woman, ' such sins are not mortal.'

The works of Canova have been engraved by Vitali, Bertini, Marchetti, Raciani, Bertinelli, Cameroti, Bonato, Fontana, and Moses. The edition from the graver of Moses is, we believe, the only one which has appeared in this country.

CANQUES, in commerce, a sort of cotton cloth made in China, with which the Chinese make the garments next their skin, which are properly their shirts.

CANSIERA, in botany, a genus of plants of the class tetrandria, order digynia : CAL. ven- tricose, four-toothed: COR. none: nectary, four- leaved, surrounding the base of the germ: berry, one-celled ; seed, one, superior. One species only, an East Indian climbing plant, with small yellow flowers.

CANSTRISIUS, an officer in the church of Constantinople, whose business it is to take care of the patriarch's pontifical vestments, assist in robing him, and during mass to hold the in- cense pot, and sprinkle holy water among the people, while the hymn of the Trinity is sing- ing.

CANT, s. & v. 1 Probably, says Johnson,

CAN'TER, J from cantus. Thomson,

thinks that it is fjom canto; adopted from the Latin into the Italian ; and, as canto in the one signified to repeat often the same thing, in the other it means to juggle, to deceive; whence, cantambanco, a mountebank ; egti canta, he fibs. In defining it, Johnson adds, that it implies the odd tone of voice used by vagrants; but imagin-

ed by some to be corrupted from quaint. It is a verbal affectation, employed either to excite pity or command respect. It is peculiar to no class of society. There is the cant of criticism, the cant of religion, the cant of infidelity ; and the jargon talked by every particular profession, to mystify and obscure it, is entitled to the same denomination. It implies, in all cases, a degree of hypocrisy or an intention to deceive, by im- posing upon others jargon for wisdom; the appearance of goodness for goodness itself. It is one of the expedients by which fools attempt to raise themselves as objects of admiration ; and by which rogues attempt to mislead others for their own advantage, Swift uses the noun in the sense of an auction, and it is very expressive of the method by which goods are disposed of at such sales. Those who describe the imaginary qualities of horses, so as to obtain unwary pur- chasers, are now called chanters. May not auc- tioneers be so described for a similar reason ; a puffer is a chanter, a chanter is a canter, and to puff is the life and soul of an auctioneer. Thus an auction is a cant, from Lat. quanlo', Ital. in- canto ; Fr. encan.

For knaves and fools being near of kin,

As Dutch boors are t'a sooterkin,

Both parties joined to do their best

To damn the publick interest,

And herded only in consults,

To put by one another's bolts,

T' out-cant the Babylonian labourers,

And all their dialects of jabberers,

And tug at both ends of the saw,

To tear down government and law.

Butler^s Hudibrag.

Men cant about materia and forma ; hunt chimeras by rules of art, or dress up ignorance in words of bulk or sound which may stop up the mouth of en- quiry. Glanville.

That uncouth affected garb of speech, or canting language rather, if I may so call it, which they have of late taken up, is the signal distinction and charac- teristical note of that, which, in that their new lan- guage, they call the godly party. Sanderson.

The busy, subtle serpents of the law Did first my mind from true obedience draw; While I did limits to the king prescribe, And took for oracles that canting tribe. Roscommon.

Of promise prodigal, while power you want, And preaching in the self-denying cant.

Dry den's Attrengzebe.

I write not always in the proper terms of naviga- tion, land service, or in the cant of any profession.

Dry den.

The affectation of some late authors, to introduce and multiply cant words, is the most ruinous corrup tion in any language. Swift.

Numbers of these tenants, or their descendants, are now offering to sell their leases by cant, even those which were for lives. Id.

Your tragic heroes shall not rant, Nor shepherds use poetic cant. Id. _

A few general rules, with a certain cant of words, has sometimes set up an illiterate heavy writer for a most judicious and formidable critick. Addison.

When a pleasant thought plays in the features, before it discovers itself in words, it raises too great an expectation and loses the advantage of giving sur- prise. Wit and humour are no less poorly recom- mended by a levity of phrase and that kind of Ian-

guage which may be distinguished by the name of cant. Spectator.

Of all the cants which are canted in this canting ⬚⬚⬚world, though the cant of hypocrites may be the worst, the cant of criticism is the most tormenting. Sterne. I want a hero : an uncommon want,

When every year and month sends forth a new one ; Till, after cloying the gazettes with cant, The age discovers he is not the true one.

Byron. Don Juan.

The primum mobile of England is cant. Id.

CANT, s. \ A side, an edge ; Goth, and CAN'TER, s. } Swed. kant ; the gallop of an ambling horse, in which one side moves before the other ; called ludicrously, says Thomson, a Canterbury gallop; because Kent and Canterbury are also from cant, a side. Johnson gives another reason. The hand gallop of an ambling horse, commonly called a canter; said to be derived from the monks riding to Canterbury on easy ambling horses.

CANT', n. ~\ From canto, which sig-

CAN'TLE, n. & u. nines a piece, section, CANTI'LEVERS, > square, or angle. Fr. CAN'TICLE, j chantel, chanteau, a small

CANT'LET. J piece, or fragment. To

can tie, is to cut in pieces ; to project in small angles. Cantilevers are small

pieces of wood to support the eaves of a house. A cantle is a piece with corners. Gantlet is the diminu- tive ; a small piece or fragment. Cant is supposed to mean a niche in the following passage of Ben Jonson :

The first and principal person in the temple was Irene, or Peace j she was placed aloft in a cant.

Ben Jonson.

In this sense it is also used by Decker:

Directly under her, in a cant by herself, was Areta enthroned. Decker.

Canticle is a section, or a piece ; but usually applied to a song ; it is thus used in Scripture.

For nature hath not taken his beginning Of no partie, ne cantel, of a thing, ❖❖❖ .

But of a thing that parfit is and stable. Descending so till it be corrumpable.

Chaucer's Canterbury Tales.

See how this river comes me crankling in, And cuts me from the best of all my land A huge half-moon, a monstrous cantle out.

Shakspeare. Henry 7F

Nor shield nor armour can their force oppose ; Huge tantlets of his buckler strew the ground, And no defence in his bored arms is found. Dryden.

For four times talking, if one piece thou take, That must be cantled, and the judge go snack.

Dry den' t Juvenal.

CANTABRIA, a district of Tarraconensis, on the Oceanus Cantabricus, now called Biscay. Dr. Wallis makes the Cantabrian the ancient language of all Spain ; which, according to him, like the Gaulish, gave way to a kind of broken Latin, called romance or romanshe ; which by degrees was refined into the Castilian, or present Spanish. The Cantabrians were famous an- ciently for their warlike character. In con- junction with the Asturians, they carried on a long war with the Romans ; but were subdued by them about A. A. C. 25. Impatient, however, of a foreign yoke, they soon revolted. Most of their

youth had been taken prisoners by the Romans, and sold for slaves to the

neighbouring nations ; but, having found means to break their chains, they cut the throats of their masters ; and, re- turning to their own country, attacked the Roman garrisons with incredible fury. As the Canta- brians had waged war with the Romans for upwards of 200 years, they were well acquainted with their manner of fighting, no way inferior to them in courage, and were now become despe- rate ; knowing that if they were conquered, after having so often attempted to recover their liberty, they must expect the most severe usage. Animated with this reflection, they fell upon the Romans with a fury hardly to be imagined, routed them in several engagements, and de- fended themselves, when attacked, with such intrepidity, that Agrippa afterwards owned that he had never, either by sea or land, been engaged in a more dangerous enterprise. But, having at last prevailed upon his forces to try the chance of an engagement in the open field, he so ani- mated them by his example, that after a most obstinate dispute, he gained a complete victory, which put an end to that destructive war. All the Cantabrians fit to bear arms were cut in pieces; their castles and strong holds taken and rased ; and their women, children and old men (none else being left alive) were obliged to abandon the mountainous places, and settle in the plain.

CANTABRICUS OCEANUS, the ancient name of the Bay of Biscay.

CANTABRUM, in antiquity, a large flag used by the Romao emperors, distinguished by its pe- culiar color, and bearing some motto of good omen, to encourage the soldiers.

CANTACUZENUS (Johannes), emperor of Constantinople, and an historian, was born in Constantinople, of a noble family. He was bred to letters and to arms, and admitted to the high- est offices of the state. The emperor Androni- cus loaded him with wealth and honors ; made him generalissimo of his forces ; and desired him to join him in the government, but this he refused. Andronicus dying in 1341, left to Cantacuzenus the care of the empire, till John Paleologus, then only nine years of age, should be fit to take it upon himself. This trust he faithfully dis- charged; till the empress dowager and her faction forming a party against him, declared him a traitor. On this, the principal nobility and the army besought him to ascend the throne ; and accordingly he was crowned, 21st May, 1342. This was followed by a civil war, which lasted five years : when he had John admitted a partner with him in the empire, and their union was confirmed by his giving him his daughter in marriage. Suspicions and enmities, however, soon arising, the war broke out again, and Can- tacuzenus, unwilling to continue the effusion of blood, abdicated his share of the empire; and, retiring to a monastery, took the habit of a monk and the name of Joasaphas. In this retirement, he lived till 1411, when he was upwards of 100 years of age. Here he wrote a history of his own times, a

Latin translation of which, from the Greek MS. was published by Pontanus at Ingol- stadt, in 1603; and a splendid edition was prin-

ted at Paris, in 1645, in three volumes folio, of the original Greek, and Pontanus's Latin version. lie also wrote an apology for theChristian religion against that of Mahomet, under the name of Christodulus.

CANTA, a province and town of Peru, situ- ated in the Cordillera, and supporting immense herds of cattle, sheep, and wild goats. The sheep is of the cama species. The town of Canta stands in lat. 11►► 10′ south.

CANTAL, a chain of mountains in upper Auvergne, France, the highest peak in which (called the Plomb de Cantal) is said to be 5918 feet above the level of the sea. They give name to the following department, through the centre of which they run.

CANTAL, an interior department in the south of France, part of the late province of Auvergne ; it is now divided into four arrondissements, twenty-three cantons, and 272 communes; it is in the diocese of St. Flour, and royal jurisdiction of lliom, its area is 1,124,802 arpents. It is a hilly country producing some wine ; and is a grazing rather than an arable district. It has manufactures of linen, leather, and paper ; and contains some antimony and other minerals The river Dordogne rises in the north part of the department, and the Tuyere, a branch of the Lot in the south. Population in 1825, 552,100 ; Aurillac, the chief town, is 108 French leagues or 258 English miles due south of Paris. Mauriac, Murat, and St. Flour, are the chief towns of the other three arrondissements.

CANTARINI (Simon), a famous painter, ro, was the disciple of Guido ; and copied the manner of his master so exactly, that it is often difficult to distinguish their works. He died at Verona in 1648.

CANTATA, in music, is a composition, first used in Italy, intermixed with recitatives, airs, and different movements, chiefly intended for a single voice, with a thorough bass, though sometimes for other instruments.

CAPTATION, n. s. From Lat. canto. The act of singing.

CANTEENS, in military language, tin vessels in the form of square bottles, used for carrying water to supply the soldiers in camp. Also a machine made of wood or leather, with compart- ments for several utensils, generally used by officers.

CANTEMIR (Demetrius), the son of a prince of Moldavia. Disappointed by

not succeeding his father in that dignity, held under the Ottoman Porte, he went over with his army to the czar Peter the great, against whom he had been sent by the grand seignior, and signalised himself in the czar's service. He is the author of a Latin history of the origin and decline of the Ottoman empire. lie died at his estate in the Ukraine in

1729.

CANTEMIR (Antiochus), esteemed the foun- der of the Russian poetry, was the youngest son of Demetrius. Under the professors, whom the rzar, Peter, had invited to Petersburgh, he learned mathematics, physic, history, moral philosophy, and polite literature ; when he had finished his academic course he printed a Con- cordance to the Psalms, in the Russian language,

and was elected member of the Academy. When but twenty-three years of age, he was nominated minister at the court of Great Britain ; and his dexterity in the management of public affairs was as much admired as his taste for science. He had the same reputation in France, whither he went in 1738, in quality of minister plenipo- tentiary, and soon after was invested with the character of ambassador extraordinary. He died of a dropsy, at Paris, in 1744, aged forty-four years.

CANTERBURY, a city of England, capital of the county of Kent. It is seated on the banks of the river Stour, fifty-five miles east by south of London, on the great high road to Dover, from which it is distant seventeen miles. Can- terbury is a place of great antiquity ; by the an- cient Britons it was dignified by the title of Caerkent, or the City of Kent; and its site was too favorable to escape the enlightened attention of the Romans, by whom it was called Duro- vernum. Ethelbert, the fifth king of Kent, who began his reign in 568, made it his residence ; after the Norman conquest, William Rufus made Canterbury the chief archiepiscopal see of Eng- land, and conferred it wholly upon the bishops ; but it owes its chief celebrity to the massacre of its bishop Thomas a Becket, on the 29th of December 1170. Some disputes having arisen between the bishop and the king, Henry II., four surveillants of the court, took upon them- selves to avenge what they considered an affront offered to the king; for which purpose they pro- ceeded secretly to Canterbury, and murdered the prelate by beating him with clubs, whilst en- gaged at vespers in the church of St. Benedict (now extinct). Becket was a very imperious man ; but there does not appear to have been any thing in his conduct to justify so revengeful an act ; and, to the credit of the king, he does not appear to have been a party to it. He dispatched a deputation to the pope to exonerate himself from having participated in so foul a deed, and the pope sent two legates to impose upon

him a public penance, in expiation of the crime. The king accordingly proceeded to Canterbury, and when arrived within sight of the city he dismounted from his horse, and walked barefoot to the church, and prostrated himself for a whole day before the shrine of the murdered bishop, who had become canonised as a saint. On the following day he presented his back to the monks, and put scourges into their hands, with which they inflicted a punishment of eighty lashes, after which he received absolution. Henry has been accused of hypocrisy, in submit- ting to this ceremony. It possibly was so; but the page of history does not fully justify the conclusion. After this event, Canterbury became the grand resort of pilgrims from every part of England, as well as of numbers from various parts of Europe, who contributed to render the shrine of the martyr one of the richest in Chris- tendom ; it continued so until Henry VIII. seized all the offerings, which were exceedingly valuable, and appropriated them to his own use. It is still an archiepiscopal see, and its incum- bent is primate of all England, taking prece- dence of all the nobility and great otiicers of

state, not of the royal blood ; at the coronation of the sovereigns of England, he places the crown on their head ; the king and queen, wher- ever they may be residing, are regarded as his domestic parishioners; his provincial and sub- dean, chancellor, and chaplain, are all bishops. The cathedral is a noble structure ; its building commenced in the reign of Henry II., four or five years after the murder of Becket, but was not finished till the reign of Henry V. It is 514 feet in length from west to east within the walls ; the east transept is 154 feet, and the choir 180 feet, the height of the vaulted roof is eighty feet, and of the tower 235 feet; several kings, princes, cardinals, and bishops have been interred here. It formerly contained thirty-eight altars : the shrine of Becket was placed in a chapel dedi- cated to the Holy Trinity, behind the great altar. This noble edifice suffered greatly during the fa- natical reign of Cromwell, who quartered his ca- valry within its walls. It was, however, thorough- ly repaired after the Restoration. In 1784 an elegant organ was introduced, and in 1788 the floor was new laid with stone; it has a most beautiful window of stained glass, and the whole is now in a fine state of preservation. In addi- tion to the cathedral, to which are attached, be- side the archbishop, dean, sub-dean, and chan- cellor, twelve prebends, six preachers, six minor canons, six substitutes, twelve lay clerks, ten choristers, two masters, fifty scholars, and twelve almsmen ; there are fifteen other churches ; and within the precincts of the cathedral is the ar- chiepiscopal palace, and a grammar

school founded by Henry VIII. Canterbury contains several other public buildings, both ancient and modern ; among the former is the guildhall, Christ Church gate, &c. ; and among the latter, are a theatre and public assembly rooms ; a hill on the outskirts of the city being laid out with ter- raced walks, and tastefully planted, forming a delightful promenade. It had formerly a consi- derable manufacture of silk, which has materially declined of late years ; and its chief trading im- portance now consists in its extensive thorough- fare ; being the point of conveyance to London from Dover, Deal, Ramsgate, and Margate, tfie travelling intercourse is very great; it is also the chief place of fashionable resort in the coun- ty, and its annual races and periodical assemblies attract numerous visitors: The surrounding country is very fertile, producing great quan- tities of hops, wheat, and other grain, and its markets on Wednesdays and Saturdays are nu- merously attended. It has two springs of mine- ral water within the city, strongly impregnated with sulphur and steel. The corporation con- sists of a mayor, twelve aldermen, twenty-four common-council-men, four serjeants-at-mace, sheriff, coroner, &c. who hold a court in the guildhall to try civil and criminal cases every Monday, and on Tuesdays for city affairs. It returns two members to parliament. It some- what declined in population during the twenty years' war, which commenced in 1793, owing to the non-intercourse between London and Paris, between which it is the great thorough- fare. The number of inhabitants in 1801 was 10,498; in 1811 only 10,200; but increased in

1821 to 12,745. It is six miles distant from the south bank of the Thames.

CANTERBURY, a town of the United States, in Connecticut, agreeably situated in VVindham county on the west side of the river Quim- aboug, over which there is a wooden bridge. It is nine miles east by south of Windham.

CANTERBURY BELLS. See CAMPANULA.

CANTERUS (William), an eminent linguist and philologer, was born at Utrecht, in 1542. He studied at Louvaine and Paris ; and afterwards visited the universities of Germany and Italy. He died at Louvaine in 1575, aged thirty-three. He was master of six languages, besides that of his native country; and wrote several philolo- gical and critical works, among which are, Notse, Scholia, Emendationes, et Explicationes, in Euripidem, Sophoclem, ./Eschylum, Ciceronem, Propertium, Ausonium, &c. and many transla- tions of Greek authors.

CANTHAR'IDES, n. s. Lat. Spanish flies, used to raise blisters.

The flies cantharides, are bred of a worm, or cater pillar, but peculiar to

certain fruit trees ; as are the fig-tree, the pine-tree, and the wild brier ; all which bear sweet fruit, and fruit that hath a kind of secret biting or sharpness ; for the fig hath a milk in it that is sweet and corrosive ; the pine apple hath a kernel that is strong and abstersive. Bacon's Natural Hist.

CANTHARIDES, in medicine and zoology, a kind of poisonous insects, much used as an epispastic. The stimulating power of cantharides is caused by a very acrid resinous substance, contained in these insects, two scruples of which Neumann extracted from four ounces of cantha- rides by spirit of wine. Canlharides are very sharp and corrosive, abounding with a subtile, caustic, volatile salt ; whereby they become ex- ceedingly injurious to the bladder, so as to ulcerate it, even when applied externally, if suffered to lie on too long. They are much commended in fevers, &c. See MEDICINE.

CANTHARIS, in zoology, a genus of insects of the order coleoptera. The feelers of this genus are setaceous ; the breast is marginated, and shorter than the head ; the elytra, or wing- cases, are flexile ; and the sides of the belly are plated and papillous. This is an extremely rapacious tribe, preying even on its own species, except the lymexylon of Linnaeus, which feed- on wood. This numerous and extensive genus has been well divided by Gmelin into the three following sections: 1. Those having four feelers of a hatchet shape. 2. Having filiform feelers, with the last joint cetaceous. These are the malachii of Fabricius. 3. Fore-feelers project- ing, the last joint but one with a large ovate, cleft appendage; the last joint ovate, acute. The lymexylon of Fabricius. The canthaiis is found scattered in all parts of the world, es pecially in Europe.

CANTHIUM, in botany, a genus of plants of the tetrandria class and monogynia order : CAL. four-toothed, superior : COR. one-petalled, with a short inflated tube, and four-parted bor- der, the mouth downy ; drupe two-celled, with a one-celled nut in each. Species only one ; a Coromandel shrub, with small yellow flowers.

CANT ON.

Ill

CANTHUS, n. s. Latin, from KavOoe, the tire or iron binding of a cart wheel ; which induces Dr. Turton to suppose that it originally signified the circular extremity of the eye-lid. It now means, in anatomy, the angle or corner of the eye. The internal is called the greater, the ex- ternal the lesser canthus.

A gentlewoman was seized with an inflammation and tumour in the great canthus, or angle of her eye.

Wiseman.

CANTHUS, in chemistry, the lip of a vessel, or that part of the mouth, which is a little hol- lowed, for the easy pouring off a liquor. Hence to decant, is to pour through that place.

CANTICLES, or THE SONG OF SOLOMON, a book of the Old Testament, is in the opinion of Dr. Lowth, an allegorical epithalamium or nuptial dialogue, in which" the principal charac- ters are Solomon, his bride, and a chorus of virgins. Some are of opinion that it is to be taken altogether in a literal sense ; but the gene- rality of Jews and Christians have esteemed it wholly allegorical, expressing the union of Jesus Christ and the church. Dr. Lowth has sup- ported this opinion, by showing that the sacred writers often apply to God and his people metaphors derived from the conjugal state. Our Saviour is styled a bridegroom by John the Baptist, John iii. and is represented in the same character in the parable of the ten virgins, and in the book of Revelation. Bishop Horsley says, ' In the prophetical book of the Song of Solomon, the union of Christ and his church is described in images taken entirely from the mutual passion and early love of Solomon and his bride. Read the Song of Solomon, you will find the Hebrew king, if you know any thing of his history, produced indeed as the emblem of a greater personage ; but you will find him in every page.' Sermons, vol. 1, p. 73, second edition.

CANTII, an ancient people of Britain, who inhabited Cantium, now Kent.

CANTILIVERS, pieces of wood framed into the front or other sides of a house, to sustain the moulding and eaves over it.

CANTIMAKONS, or CATIMAUONS, a kind of floats or rafts, used by the inhabitants of the coast of Coromandel to fish in, and to trade along the coast. They are made of three or four small canoes, or trunks of trees, dug hollow, and tied together with cacao ropes, with a triangular sail in the middle, made of mats. Those who manage them are almost half in the water, there being only a place in the middle a little raised to hold their merchandise.

CANTIUM, in ancient geography, a pro- montory of Britain, now named North Foreland. CANTIUM, an ancient territory in South Bri- tain whence the English word Kent is derived ; supposed to have been the first district which received a colony from the continent. The si- tuation of Cantium occasioned its being much frequented by the Romans, who generally took their way through it, in their marches to and from the continent. Few places in Britain are more frequently mentioned by the Roman wri- ters than Portus Rutupensis. Portus Dubris, now Dover, Durobrivse and

Durovernum, now

Rochester and Canterbury, were also Roman towns and stations. Cantium, in the most per- fect state of the Roman government, made a part of the province called Flavia Caesariensis. See KENT.

CANTO ; Arab, kata ; KCITOV, icavra, KOVTO , Lat. cento; Ital. canto; a section, a division, part, portion, piece. Thus a division or section of a poem, or a song.

But evermore my shield did me defend Against the storme of every dreadfull stoure : Thus safely with my love I thence did wend. So ended he his tale, where I this canto end. Spenser. Why, what would you do ?

❖❖❖ Make a willow cabbin at your gate,

And call upon my soul within the house ;

Write loyal cantos of contemned love.

Shakspeare. Twelfth Night. Then should thy shepherd (poorest shepherd) sing

A thousand cantos in thy heavenly praise, And rouse his flagging muse, and fluttering wing,

To chaunt thy wonders in immortal lays.

Fletcher's Purple Island. But now the city and the train we leave,

To seek the duke and make his fortune known ; And how the rest the dreadful news receive,

Shall be in the succeeding cantos shown. day.

CANTON, v. a. & n. } Fr. c.unton ; Lat.

CAN'TONIZE, v. a. fcenlena. See CANTO.

CAN'TONMENT. j A small parcel or di-

vision of land. A small community, or clan. To divide into little parts. To parcel out into small divisions.

The same is the case of rovers by land ; such as yet, are some cantons in Arabia, and some petty kings of the mountains adjacent to straits and ways.

Bacon's Holy War

Thus was all Ireland cantonized among ten persons of the English nation. Davies on Ireland.

The whole forest was in a manner cantonized amongst a very few in number, of whom some had regal rights.

Howel.

Only that little canton of land, called the English pale, containing four small shires, did maintain a bor- dering war with the Irish, and retain the form of English government. Davies.

Families shall quit all subjection to him, and can- ton his empire into less governments for themselves.

Locke.

It would certainly be for the good of mankind, to have all the mighty empires and monarchies of the world cantoned out into petty states and principalities.

Addison on Italy.

They canton out to themselves a little province in the intellectual world, where they fancy the light shines, and all the rest is in darkness.

Watts on the Mind.

CANTON, a city, sea-port, and capital of Quantong, the most southern province of China, and the only port in that vast empire with which Europeans are permitted to hold any intercourse. It is finely situated on the north bank of a noble river, which, by numerous collateral branches, intersects all the southern part of the empire; one branch is from the north, which, by a portage of only one day's journey, communicates with, the great chain of inland waters extending to Pekin, and intersecting every intermediate pro vince, thereby affording a facility of conveyance by water, which renders Canton peculiarly well

adapted for the great outport of the empire. The harbour is very commodious, and, being sheltered by several small islands, it affords secure moor- ings for the innumerable barks and junks which navigate the inland

*waters ; all the foreign ships anchor several miles distant from the town, not on account of the incapacity of the harbour to accommodate them, but from the peculiarly jealous policy of the Chinese, which seems to
دread nothing so much as sociality of intercourse. Canton consists of three towns, divided by high walls, but so conjoined as to form almost a regu- ‘ lar square. The streets are long and straight, paved with flag-stones, and adorned with trium- phal arches. The houses in general have only one floor, built of earth or brick, some of them fantastically colored, and covered with tiles. The better class of people are carried about in chairs ; but the common sort walk barefooted and bareheaded. At the end of every street is a barrier, which is shut every evening, as well as the gates of the city. The Europeans and Ameri- cans occupy a range of buildings termed the factories, fronting a spacious quay along the bank of the river, without the city, which no foreigner is permitted to enter without the special permis- sion of the viceroy, which is very seldom obtained. The foreign trade of Canton re- solves itself into a monopoly more peculiar and oppressive than anywhere else exists; it is vested in twelve persons, precisely on the same principle as the twelve Jews are permitted to act as brokers in the city of London ; each paying a large premium for the privilege of trading, or, in other words, as far as the princi- ple applies in China, for the privilege of extort- ing from, and oppressing the producers of the commodities in which they trade- There is, however, this difference in China : though the whole of the twelve individuals trade on separate accounts, they are collectively amenable, as well to foreigners as to the government, for any de- fault or mulct imposed upon any one or more of them individually ; whereas each of the Jew bro- kers of London is responsible only for his own acts. In addition to the external commerce of Canton, it also appears to be the seat of almost every branch of manufacture, more espe- cially of silks and household gods ; the manu- facture of the latter, in consequence of there being no public worship in China, and every house having its own collection of idols, forms one of the most important branches of occupation. The main article of export from Canton is Tea, which since 1798, to England alone, has averaged about 25,000,000 of Ibs., whilst to America and other parts (since 1815 more especially) it has been gradually increasing, making an aggregate ave- rage quantity annually exported at the period of 1826, of about 40,000,000 Ibs. The other principal articles exported to England are raw silk and nankeens, of the former about 250,000 Ibs. weight, and of the latter, about 600,000 pieces, of four and seven yards each, annually ; a few manufactured silks and crapes, porcelain vases, fans, ivory chess-men, fancy boxes, and other toys, soy, and ink, constitute the remaining exports to England, which employ about twenty- five sail of ships annually, .of about 1200 tons*

each ; the reimbursement by the English for the above productions is made

in cotton wool, opium, and some other articles, from Bombay and Ben- gal, and in woollen cloths, lead, &c. from Eng- land, to the amount of about ––700,000 annually. In addition to the trade direct to England, there is also an extensive traffic on English account between the different ports of India and Canton, which consists in a reciprocal interchange of the productions of the respective countries, and in which porcelain and paper form considerable articles of export from Canton. The intercourse of America with Canton, on the part of America, is maintained with furs from the North-west coast, sandal-wood, and the edible birds' nests, collected among the eastern islands, and with dollars ; a considerable portion of the tea ex- ported in American ships, being on account and risk of the Chinese merchants, more especially the portion brought to Hamburgh, Antwerp, and other European ports, is wholly reimbursed in specie. The imposts of the government on its external commerce are levied on the length and breadth of the shipping entering and leaving the port. The following statement of the amount of duties returned to the Chinese treasury, for the year 1822, will best show the extent and pro- portion of the three great branches into which the external commerce of Canton resolves itself: viz. 1st, that with the English East India Com- pany; 2d, that with the different ports of British India ; 3d, that with America : ––––*

On Import. On Export.

Eng. East Ind. Comp. 395,112 460,042

Country Trade . . . 118,533 80,623

America 276,578 339,409

Total Tale

880,074

The tale being only equal to 6s. 8d. of English money, the whole impost will be seen to amount, according to the above statement, to only ––556,800, not equal to the amount levied on the single article of coals alone, at the port of Lon- don ; and yet such is the extent and insidious nature of the intermediate oppression of the Chi- nese hong (or council, which is the term by which the twelve privileged merchants of Can- ton are collectively called) on one side ; and the English East India Company on the other ; that whilst the 25,000,000 Ibs. of tea annually con- sumed in Great Britain and Ireland, costs the con- sumer, on an average, at least 7s. per lb., it does not yield to the producer, including the inland conveyance to Canton, an average of 3––d. per lb.

In 1823 several thousand houses in Can- ton were destroyed by fire, but

the ground has since been rebuilt upon. The population has been estimated at about 1,500,000, but more recent accounts imply that the extent of popu- lation, not only of Canton, but of China gene- rally, has been greatly exaggerated. See on this head CHINA, and more particularly QUANG-TONG. It is in the lat. of 23□□ 8′ N., and 113□□ 2′ of E. long., being 16□□ 47', or about 1190 British statute miles south by west of Pekin, the metro- polis of the empire.

CANTON (John), an ingenious natural philo- sopher, born at Stroud, in Gloucestershire, in

1718. lie was placed, when young, under the care of Mr. Davis, a very able mathematician, and had made some progress in algebra and astronomy, when his father took him from school, and put him to learn his own business, of a broad cloth weaver. This was not able to damp his zeal for knowledge. His leisure was devoted to the cultivation of astronomical science ; and, by the help of the Caroline tables annexed to Wing's Astronomy, he computed eclipses of the moon and other phenomena. lie also at this time computed and cut upon stone, with no better an instrument than a com- mon knife, the lines of a large upright sun-dial, on which, besides the hour of the day, was shown the rising of the sun, his place in the ecliptic, &c. When this was finished and made known to his father, he permitted it to be placed against the front of his house, where it excited the admiration of several gentlemen in the neighbourhood, which was followed by the offer to this youth of the use of their libraries. In one of these he found Martin's Philosophical Grammar, which was the first book that gave him a taste for natural philosophy. In the pos- session of another gentleman, a few miles from Stroud, he first saw a pair of globes ; an object that afforded him uncommon pleasure, from the great ease with which he could solve those pro- blems he had hitherto been accustomed to com- pute. Among other persons with whom he be- came acquainted in early life, was the ingenious Dr. Miles, of Tooting, who, perceiving that Canton possessed abilities too promising to be confined within the narrow limits of a country town, prevailed on his father to permit him to rome to London. After having served five years as clerk to Mr. Watkins, of the academy at Spital Square, he was taken into partnership, and succeeded him in the academy, where he continued during life. Towards the end of 1749, he undertook experiments to determine to what height rockets may be made to ascend, and at what distance their light may be seen. In 1750 was read at the Royal Society, his method of making artificial magnets, without the use of, and yet far superior to, any natural ones. This paper

procured him the honor of being elected a member of the Society, and the present of their gold medal. The same year he was com- plimented with the degree of 'M.A. by the uni- versity of Aberdeen ; and, in 1751, was chosen one of the council of the Royal Society. In 1752 he was so fortunate as to be the first per- son in England, who, by attracting the electric fire from the clouds during a thunder-storm, verified Dr. Franklin's hypothesis of the simi- larity of lightning and electricity. Next year, his paper entitled, Electrical Experiments, with an attempt to account for their several Pheno- mena, was read to the Royal Society. In the same paper Mr. Canton mentioned his having discovered, by a great number of experiments, that some clouds were in a positive, and some in a negative state of electricity. In the Lady's Dairy for 1756 our author answered the prize question that had been proposed in the preced- ing year ; viz, ' How can what we call the shoot- ing of stars be best accounted for: what is the VOL. V.

substince of this phenomenon ; and in what state of the atmosphere doth it most frequently show itself?' Our philosopher's next communi- cation to the public was a letter in the Gentle- man's Magazine for September, 1759, on the electrical properties of the tourmalin, in which the laws of that wonderful stone are laid down in a very concise and elegant manner. On De- cember 13th, in the same year, was read at the Royal Society, An attempt to account for the regular diurnal variation of the Horizontal Mag- netic Needle ; and also for its irregular variation at the time of an Aurora Borealis. A complete year's observations of the diurnal variations of the needle are annexed to the paper. On Novem- ber 5th, 1761, he communicated to the Royal Society an account of the Transit of Venus, June 6th, 1761, observed in Spital Square. His next communication was a letter addressed to Dr. Benjamin Franklin, and read February 4th, 1762, containing some remarks on Mr. Delaval's electrical experiments. On December 16th, 1762, another curious addition was made by him to philosophical knowledge, in a paper, entitled, Experiments to Prove that Water is not Incom- pressible. These experiments are a complete refutation of the famous Florentine experiment, which so many philosophers have mentioned as a proof of the incompressibility of water. On St. Andrew's day, 1763, he was elected the third time one of the council of the Royal Society ; and on November 8th, in the following year, were read, before that learned body, his farther Experiments and Observations on the Compressi- bility of Water, and some other fluids. The establishment of this fact, in opposition to the received opinion, formed on the hasty decision of the Florentine Academy, was thought to be deserving of the Society's gold medal. It was accordingly moved for in the council of 1764; and after several invidious delays, which ter- minated much to the honor of Mr. Canton, 'it was presented to him November, 30th, 1765. His next communication to the Royal Society was on December 22nd, 1768, An

easy Method of Making a Phosphorus, that will imbibe and emit light like the Bolognian Stone ; with Ex- periments and Observations. The dean and chapter of St. Paul's having in a letter to the president, dated March 6th, 1769, requested the opinion of the Royal Society relative to the best and most effectual method of fixing electrical conductors to preserve that cathedral from dam- age by lightning, Mr. Canton was one of the committee appointed to take the letter into con- sideration, and to report their opinion upon it. The other members were, Dr. Watson, Dr. Franklin, Mr. Delaval, and Mr. Wilson. Their report was made on the 8th of June following ; and the mode recommended by them was carried' into execution. The last paper of our author's, which was read before the Royal So- ciety, was on December 21st, 1769; and con- tained Experiments to prove that the Luminous- ness of the Sea arises from the Putrefaction of its Animal Substances. Besides the above, he wrote a number of papers, which appeared in different publications, particularly the Gentle- man's Magazine. He fell into a dropsy, which

carried him off, March 22nd, 1772, in tne fifty- fourth year of his age.
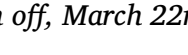

CANTONING, in the military art, is the al- lotting distinct and separate quarters to eacli regiment ; the town where they are quartered being divided into as many cantons as there are regiments.

CAN'TRED, n. s. The same in Wales as an hundred in England. For cantre, in the British language, signifieth an hundred.

The king rogrants to him all that province, reserving only the city of Dublin, and the cantreds next adjoin- ing and the maritime towns. Dames on Ireland.

CANT-TIMBERS, in ship-building, those timbers which are situated at the two ends of a ship. They derive their name from being canted, or raised obliquely from the keel ; in contra- distinction from those whose planes are per- pendicular to it. The upper ends of those on the bow, or fore part of the ship, are inclined to the stern; as those in the after, or hind part, incline to the stern-post above. See SIIIP- BUILDING.

CANTUA, in botany, a genus of plants of the pentandria class, and monogynia order : CAL. five or three cleft : COR. funnel-shaped : STIG.

three-cleft: CAPS, three-valved, three-celled, many-seeded : SEEDS winged. Species four; natives of South America.

CANTY, adj. Goth, hat; kiat; Swed. katja; gay, joyful, wanton; whence, Fr. catin, a woman of pleasure.

CANVAS, in commerce, a very clear un- bleached cloth of hemp or flax, woven regularly in little squares. It is used for working tapes- try with the needle, by passing the threads of gold, silver, silk, or wool, through the intervals of squares. Also a coarse cloth of hemp, un- bleached, somewhat clear, which serves to cover women's stays ; to stiffen men's clothes, and to make some other of their wearing apparel, &c.

CANVAS, among painters, is the cloth on which they usually draw their pictures ; the can- vas being smoothed over with a slick-stone, then fixed, and afterwards whited over, makes what the painters call their primed cloth, on which they draw their first sketches with coal or chalk, and afterwards finish with colors.

CANVAS is also used among the French for the model or first words whereon an air or piece of music is composed, and given to a poet to regulate and finish. The canvas of a song con- tains certain notes of the composer, which show the poet the measure of the verses he is to make.

CAN'VASS, v. a. & n. I Per. kanu; Lat.

CAN'VASSING, \ cannabis; Fr. cane-

vas; Ital. canavaccio. Coarse hempen cloth, woven for several uses ; as sails, painting cloths, tents. It is also so constructed as to be a sifting cloth, through which the lighter particles pass ; but the grosser matter is retained. Thus it is metaphorically applied to sift, to examine; to sifting voices, or trying them, previously to the decisive act of voting : also to debate, to discuss ; to separate the truth from error, as the sieve or canvass separates, by the act of straining, the heterogeneous mixtures that may be put into it.

The master commanded forthwith to set on all the canvats they could, and fly homeward. Sidney.

And eke the pens that did his pinions bind, Were like main yards with flying canvass lin'd.

Spenser. Eftsoones her shallow ship away did slide,

More swift than swallow shores the liquid sky, Withouten oare or pilot it to guide,

Or winged canvas with the wind to fly ; Onely she turn'd a pin ; and by and by, It cut away upon the yielding wave. Spenser.

There be that can pack cards, and yet cannot play well : so there are some that are good in canvasses and factions, that are otherwise weak men. Bacon.

Elizabeth being to resolve upon an officer, and being, by some that canvassed for others, put in some doubt of that person she meant to advance, said, she was like one with a lanthorn seeking a man. Id.

*The curs discovered a raw hide in the bottom of a river, and laid their heads together how to come at it : they canvassed the matter one way and t'other, and concluded, that the way to get it, was to drink their
वे way to it. L'Estrange.*

Their canvass castles up they quickly rear, And build a city in a hour's space. Fairfax.

Where'er thy navy spreads her canvass wings, Homage to thee, and peace to all, she brings. Waller.

Spread a large canvass, painter, to contain The great assembly and the numerous train. Marvell.

This crime of canvassing, or soliciting, for church preferment, is, by the canon law, called simony.

Ayliffe's Parergon, Thou, Kneller, long with noble pride,

The foremost of thy art hast vied

With nature in a generous strife,

And touch'd the canvass into life. Addison.

So when a general bids the martial train Spread their encampment o'er the spacious plain ; ' Thick rising tents a canvass city build, And the loud dice resound thro' all the field. Gay.

Happy the maid, who, from green sickness free, In canvass or in Holland pocket bears A crooked sixpence. Bramston.

Then towered the masts ; the canvass swelled on high j And waving streamers floated in the sky.

Falconer's Shipwreck.

CANULA. See CANNULA.

CANUSIUM, in ancient geography, a town of Apulia, on the south side of the Aufidus, west of Cannae ; whither the Romans fled after the defeat sustained there. It was founded by Diomede, and afterwards became a Roman colony. It was famous for its red shining wool ; whence those who wore clothes made of it were called Canusinati. It is now called CANOSA ; which see.

CANUTE, the first Danish king of England. He married Emma, widow of king Ethelred , and put to death several persons of quality who stood in his way to the crown. Having thus settled his power in England, he made a voyage to his kingdom of Denmark, in order to resist the attacks of the king of Sweden ; and carried along with him a great body of the English, under the command of Earl Godwin. This nobleman was stationed next the Swedish camp; and observing a favourable opportunity, he attacked the enemy in the night, drove them from their trenches, and obtained a decisive victory. In another voyage which he afterwards made to Denmark, Canute attacked Norway, and expelled the just but un- warlike Olaus from his kingdom, of which he

kept possession till the deatli of that prince. By a spirit of devotion, no less than by his equitable administration, he gained in a great measure the affections of his subjects. Some of his flatterers breaking out one day in admiration of his gran- tleur, exclaimed, that every thing was possible for him : upon which the monarch, it is said, ordered a chair to be set on the sea shore while the tide was making ; and, as the waters approached, he commanded them to retire, and to obey the voice of him who was lord of the ocean. He feigned to sit some time in expecta- tion of their submission ; but when the sea still advanced towards him, and began to wash him with its billows, he turned to his courtiers, and remarked to them, that every creature in the universe was feeble and impotent, and that power resided with one Being alone, in whose hands were all the elements of nature, who could say to the ocean, ‘ thus far shall thou go, and no farther,’ and who could level with his nod the most towering piles of human pride and ambition. From this time, it is said, he never would wear a crown. He died in the twentieth year of his reign ; andwas interred at Winchester.

CANZONE, in music, signifies, in general, a song, where some little fugues

are introduced : but it is sometimes used for a sort of Italian poem, usually long, to which music may be composed in the style of a cantata. If this term be added to a piece of instrumental music, it signifies much the same as cantata : if placed in any part of a sonata, it implies the same meaning as allegro, and only denotes that the part to which it is prefixed is to be played or sung in a brisk and lively manner.

CAN'ZONET, n. s. Ital. canxonetta. A lit- tle song.

Vecchi was most pleasing of all others, for his con- ceit and variety, as well his madrigals as canzonets.

Peacham.

CAOUTCHOUC, or Indian rubber, an elastic gum, produced from the jatropha elastica and other plants of South America, and possessed of the most singular properties. No substance is yet known which is so pliable, and at the same time so elastic ; and it is capable of resisting the action of very powerful menstrua. The Indians make boots of it, which water cannot penetrate, and which, when smoked, have the appearance of real leather; bottles are also made of it. Flambeaux, an inch and a half in diameter, and two feet long, are likewise made of this resin, they give a beautiful light, have no bad smell, and bum twelve hours. A kind of cloth is also prepared from it, which the inhabitants of Quito apply to the same purposes as our oil-cloth and sail-cloth. It is formed by moulds into a variety of figures for use and ornament. The great Frederick king of Prussia had a pair of boots made of caoutchouc. A mould of wrought clay, the exact figure of his leg, was covered with ethereal solution of caoutchouc, laid on in alter- nate layers by a brush, until it acquired the proper thickness ; the whole was then held over a strong smoke of burning vegetables, to harden into the texture and appearance of leather. When the whole was thus prepared, the inside

mould was broken and taken out. To form this resin into small tubes, M. Macquer prepared a solid cylindrical mould of wax, of the desired size and shape, and then, dipping a pencil into the ethereal solution of the resin, coated the mould over with it, till he had covered it with a coat of resin of a sufficient thickness. He then threw the whole piece into boiling water; by the heat of which the wax soon melted, and rising to the surface left the resinous tube completely formed. Mr. Macintosh has a patent for cloth rendered water-proof with a solution of caout- chouc. If linseed oil be rendered very drying by digesting it upon an oxide of lead, and afterwards applied with a small brush on any surface, and dried by the sun or in the smoke, it makes an ar- tificial caoutchouc, and it will afford a pellicle of considerable firmness, transparent, burning like caoutchouc, and

wonderfully elastic. A pound of this oil, spread upon a stone, and exposed to the air for six or seven months, acquires almost aty the other properties of caoutchouc : it is used to make catheters and bougies, to varnish balloons, and for other purposes. It will also answer the same end in rubbing out pencil marks.

CAP, n. & v. a. Welsh cap ; Sax. caeppe ; Germ, cappe ; Ft. cappe ; Ital. cuppa; Span, cap- pa.; Dan. and Dutch kappe; Lat. caput; a head. A covering for the head, that which is usually worn ; and a vessel, used by divers, to protect the head, and secure free respiration, when under water. Anything that covers the top, or that which is topmost and highest. It is technically applied to a piece of lead, laid over the touch- hole of a gun, to preserve the prime. The cap of maintenance is one of the regalia, carried be- fore the. king at his coronation. To cap, is to cover the head ; to make a reverence by uncover- ing it. To protect that by covering, which exposure would injure or weaken. It also signi- fies to contend, from Goth, and Swed. kapp ; Sax. camp, to contest ; see To COPE. Thus it has been applied to striving for the mastery, and to rival conflicts, whether personal, literary, or skil- ful, for superiority. To cap verses is to name, alternately, verses beginning with a particular letter ; to name in opposition to emulation ; to name, alternately, in contest. To cap, is likewise to deprive of the cap ; to take it by force or fraud. Shakspeare uses the noun in the same sense in which we now apply the term hat as the ensign of the cardinalate.

For I wol tell a legend and a lif Both of a carpenter and of his wif, How that a clerk hath the wrighte's cappe.

Chaucer's Canterbury Tales.

If one, by another occasion, take any thing from another, as boys sometimes use to cap one another, the same is straight felony. Spenser on Ireland.

Here is the cap your worship did bespeak. ††† ††† Why, this was moulded on a poringer, A velvet dish. Shakspeare. Taming of the Shrew

I have ever held rny cap off to thy fortune. ††† ††† Thou hast served me with much faith. Id.

Three great ones of the city, In personal suit to make me his lieutenant, Oft capped to him : ††† and by the faitli of man, I know my price, I "in worth no worse a place.

S/iakitpeare. Othello. I 2

They morfi and less came in with cap and knee, Met him m boroughs, cities, villages. Id. Henry IV.

Thou art the cap of all the fools alive. Id. Timon.

Enicus, king of Sweden, had an inchanted cap, by virtue of which, and some magical murmur or whis- pering terms, he could command spirits, trouble the ayre, and make the wind stand which way he would ; insomuch, that when there was any great wind or storm, the common people were wont to say the king now had on his conjuring cap. Burton. Anat. Mel.

At the court gate met him four noblemen in cloth of gold, and rich fur caps, embroidered with pearl and stone. Milton. Hist. Moscovia,

The bones next the joint are capped with a smooth cartilaginous substance, serving both to strength and motion. Derham.

Where Henderson and the other masses, Were sent cap texts, and put cases. Hudibras.

Sure it is a pitiful pretence to ingenuity that can be thus kept up, there being little need of any other faculty but memory, to cap texts.

Government of the Tongue.

There is an author of ours, whom I would desire him to read, before lie ventures at capping characters.

A tier bury.

First, lolling sloth, in woollen cap, Taking her after dinner nap. Swift.

*CAP, in ship-building, a strong, thick, block of ***wood, used to confine two masts together, when one is erected at the head of the other in order to lengthen it. It is furnished with two holes, perpendicular to its length and breadth, and parallel to its thickness : one of these is square and the other round ; the former being solidly fixed upon the upper end of the lower mast, whilst the latter receives the mast employed to lengthen it, and secures it in this position. The breadth of all caps is equal to twice the diameter of the top-mast, and the length to twice the breadth. The thickness*

of the main and fore- caps is half the diameter of their breadths ; the mizen-cap three-sevenths, and the top-mast caps two-fifths of their respective breadths.

*CAPS, ANCIENT. The Romans were many ages without any regular covering for the head : when either the rain or sun was troublesome, the lappet of the gown was thrown over the head ; and hence it. is that all the ancient statues appear bare-headed, excepting sometimes a wreath or the like. And the same usage obtained among
उउthe Greeks, where, at least during the heroic age, no caps were known. The sort of caps or covers of the head in use among the Romans on divers occasions, were the pitra, pileus, cucullus, galerus, and palliolum; the differences between which are often confounded by ancient as well as modern writers.*

The general use of caps and hats is referred to the year 1449, the first seen in these parts of the world being at the entry of Charles VII. -into Rouen : from that time they began to take place of chaperoons, or hoods. When the cap was of velvet, they called it mortier; when of wool, simply bonnet. None but kings, princes, and knights, were allowed the use of the raortier. The cap was the head-dress of the clergy and graduates. Pasquier says, that it was anciently z. part of the hood worn by the people of the robe ; the skirts whereof being cut off as an in- cumbrance, left the round cap an easy commo-

dious cover for the head ; which cap being afterwards assumed by the people, those of the gown changed it for a square one, first invented by a Frenchman, called Patrouillet : he adds, that the giving of the cap to the students in the uni- versities, was to denote, that they had acquired full liberty, and were no longer subject to the rod of their superiors ; in imitation of the ancient Romans, who gave a pileus, or cap, to their slaves, in the ceremony of making them free : whence the proverb, Vocare servos ad pileum. Hence, also, on medals, the cap is the symbol of liberty, whom they represent holding a cap in her right hand, by the point.

The French clergy wear a shallow kind of cap, called calotte, which only covers the lop of the head, made of leather, satin, worsted, or other stuff. The red cap is a mark of dignity allowed only to those who are raised to the car- dinalate. During the first five years of the French revolution, the red cap was a mark of democracy. The secular clergy are distinguished by black leathern caps, the regulars by knit and worsted ones. Churchmen, and members of universities, students in law, physic, &c. as well as graduates, wear square caps. In most univer- sities, doctors are distinguished by peculiar caps, given them on assuming the doctorate. In that of Edinburgh, the principal only touches the young graduate's head with a velvet cap. Wick- liffe calls the canons of his time bifurcati, from

their caps. Pasquier observes, that in his time, the caps worn by the churchmen, &c. were called square caps ; though, in effect, they were round yellow caps. The Chinese have not the use of the hat, like us ; but wear a cap of pe- culiar structure, which the laws of civility will not allow them to put off: it is different for the different seasons of the year : that used in sum- mer is in form of a cone, ending at top in a point. It is made of a very beautiful kind of mat, much valued in that country, and lined with satin ; to this is added, at top, a large lock of red silk, which falls all round as low as the bottom ; so that, in walking, the silk fluctuating regularly on all sides, makes a graceful appear- ance ; sometimes, instead of silk, they use a kind of bright red hair, the lustre of which no weather effaces. In winter they wear a plush cap, bor- dered with martlet's or fox's skin ; as to the rest, like those for the summer. These caps are fre- quently sold for eight or ten crowns. The cap is sometimes used as a mark of infamy ; in Italy the Jews are distinguished by a yellow cap ; at Lucca by an orange one. In France, by the old laws, those who had been bankrupts were ob- liged ever after to wear a green cap to prevent people from being imposed on in any future commerce. By several arrets, in 1584, 1622, 1628, 1688, it was decreed, that if they were at any time found without their green cap, their protection should be null, and their creditors empowered to cast them into prison.

CA'PABLE, adj. ~\ Fr. capuble ; It. capace ;

CAPABILITY, n. >Span. capaz ; Lat. capax,

CA'PABLENESS, n. j capio ; fit to receive, or do; power of receiving, or doing ; intelligent; able to understand ; intellectually capacious ; susceptible ; qualified for, without natural or

legal impediment. Before a noun, capable has the particle of. In our old writers it bears the sense of capacious. Shakspeare, in a quotation below, uses it in the meaning of hollow, but this also is now obsolete. Capability was, some years ago, ludicrously converted into an epithet, and affixed to the name of Brown, the celebrated landscape gardener, in consequence of his perpetually using the phrase ' it has capabilities,' while he was viewing the scenery which the owner wished him to improve.

Sure he that made us with such large discouse, Looking before and after, gave us not That capability and godlike reason To rust in us unused.

Slutkspeare. Hamlet.

Look you, how pale he glares ; His form and cause conjoined, preaching to stones, Would make them capable. Id. ib.

Of my land,

Loyal and natural boy, 111 work the means To make thr-e capable. Id. King Lear.

Lean but upon a rush, The cicatrice and capable impressure Thy palm some moments keeps.

Id. As You Like It.

To say that the more capable, or the better deserver,

hath such right to govern, as he may compulsorily

bring under the less worthy, is idle. Bacon.

I am much bound to God, that he hath endued you

with one capable of the best instructions. Diyby.

What secret springs their eager 'passions move, Hnw capable of death for injured love.

Dryden's Virgil. Besides his picture

I will send far and near, that all the kingdom May have due note of him ; and of my land, Loyal and natural boy, I'll work the means, To make thee capable. Shakspeare. Kiny Lear. There is no man that believes the goodness of God, but must be inclined to think, that he hath made some things for as long a duration as they are capable of. Tillotson.

The soul, immortal substance, to remain, Conscious of joy, and capable of pain. Prior. When we consider so much of that space, as is equal to, or capable to receive a body of any assigned di- mensions. Locke. When you hear any person give his judgment, con- sider with yourself whether he be a capable judge.

Watts.

Fr. capacite ; Ital. cu- } pacita ; Span, capuci- dad; Lat. cupacitus. 'To capacify and capa- citate signify to qualify ; to render capable. For the first of these verbs I remember but one au- thority, which is in South's Sermons.

Capacious, in its primary sense, is wide, large, and ample ; but is applied only to that which is capable of containing ; and figuratively, it expresses equal to much knowledge, or great design. Capacity is the ability to contain ; space ; mental and physical power and state, condition and character.

No intellectual creature is able, by capacity, to do that which Nature doth without capacity and knowledge.

Hooker.

Notwithstanding thy capacity Receiveth as the sea, nought enters there, Of what validity and pitch soe'er, But falls into abatement and low price.

Slinkspcarc,

CAPA'CIFY, v. CAPA'CITATE, v. CAPA'CIOUS, adj. CAPA'CIOUSLY, adv. CAPA'CIOUSNESS, n. CAPA'CITY, n.

Had our palace the capacity To camp this host, we would all sup together.

Id.

For they that most and greatest things embrace, Enlarge thereby their mind's capacity, As streams enlarged, enlarge their channel's space.

Daviei.

A concave measure of known and determined ca- pacity, serves to measure the capaciousness of any other vessel. In like manner to a given weight, the weight of all other bodies may be reduced and so found out. Holden on Time.

In spiritual natures, so much as there is of desire, so much there is also of a capacity to receive. I do not say there is always a capacity to receive the very thing they desire, for that may be impossible.

Smth.

A miraculous revolution reducing many from the head of a triumphant rebellion to their old condition of masons, smiths, and carpenters ; that in this ca- pacity they might repair what, as colonels and captains, they had ruined and defaced. Id.

An heroic poem requires the accomplishment of some extraordinary undertaking ; which requires the duty of a soldier, and the capacity and prudence of a general. Dryden.

By this instruction we may be capacitated to ob- serve those errors. Id. There remained, in the capacity of the exhausted cylinder, store of little rooms, or spaces, empty or devoid of air. Boyle. Space, considered in length, breadth, and thickness, I think, may be called capacity. Locke.

Since the world's wide frame does not include, A cause with such capacities endued, Some other cause o'er Nature must preside.

Blackmore.

These sort of men were sycophants only, and were endued with arts of life, to capacitate them for the conversation of the rich and great. Taller.

The next upon the optic list is old Janus, who stood in a double sighted capacity, like a person placed be- twixt two opposite looking glasses, and so took a sort of retrospective cast at one view. Spectator.

Van (for 'tis fit the reader know it) Is both a herald and a poet ; No wonder then if nicely skilled In both capacities to build. Staift.

There are some person of a good genius, and a capa- cious mind, who write and speak very obscurely. Wattt Beneath the incessant weeping of those drains, I see the rocky siphons stretched immense, The mighty reservoirs of hardened chalk, Of stiff compacted clay, capacious found.

Thomson's Seasons.

CAPACITY, in geometry, the solid contents of any body. Our hollow measures for wine, beer, corn, salt, &c. are called measures of ca- pacity.

CAPACITY, in law, the ability of a man, or body politic, to give or take lands, or other things, or sue actions. Our law allows the king two capacities ; a natural and a political : in the first, he may purchase lands to him and his heirs ; in the second, to him and his successors. The clergy of the church of England have the like.

CAPANEUS, a noble Argive, son of Hippo- nous and Astinome, and husband to Evadne. He was so impious, that when he went to the Theban war, he declared that he would take Thebes even in spite of Jupiter. Such contempt

provoked the god, n-ho struck him dead with a thunderbolt. His body was

burnt separately from the others, and his wife threw herself on the burning pile to mingle her ashes with his. It is said that /Esculapius restored him to life.

CAP-A'-PE', > Fr. cap-a-pie. From head CAP-A'-PIE'. j to foot; all over; completely armed.

A figure like your father, Armed at all points, exactly cap-a-pe, Appears before their., and, with solemn march, Goes slow and stately by them.

V Shakspeare. Hamlet.

There for the two contending knights he sent, Armed cap-a-pie, with reverence low they bent.

Dryden. Fables. A woodlouse,

That folds up itself in itself for a house, As round as a ball, without head, without tail, Inclosed cap-a-pe in a strong coat of mail. Swift.
CAPAR'ISON, v. & n. Fr.caparaf ore /Span. caparazon ; from Lat. capio and paro. It was formerly spelt caparasson, and signifies, prima- rily, the bards or trappings of a horse, but is ap- plied ludicrously to any pompous dress. The homely definition given by the Farmer's Dic- tionary is, ' a horse cloth, or a sort of cover for a horse, which is spread over his furniture.'

Don't you think, though I am caparisoned like a man, I have a doublet and hose in my disposition ?

Shakspeare. As You Like It. Tilting furniture, emblazoned shields, Impresses quaint, caparisons, and steeds, Bases, and tinsel trappings, gorgeous knights At joust and tournament. Paradite Lout.

Some wore a breast-plate, and alight juppon, Their horses clothed with rich caparison.

Dryden's Fablet.

The steeds caparisoned with purple stand, With golden trappings, glorious to behold, And champ betwixt their teeth the foaming gold.

Dryden.

CAPE, n. Fr. cape ; Ital. capo ; Dan. kappe ; Lat. caput. A headland, a promontory ; also the neck piece of a cloak. Its application from the Latin is quite obvious in the first case, and not ob- scure in the second ; the cape being, as Minsheu observes, the superior part of the garment. In the

northern languages, it is not from the whole head, but from the nose, that the designation of a promontory is derived ; and from them many headlands both on the French and English coasts received names, as in Dungeness, Cape Gris- nez, &c.

What from the cape can you discern at sea ? Nothing at all ; it is n high wrought flood.

Shakspeare. Othello. The parting sun,

Beyond the earth's green cape and verdant isles, Hesperian sets ; my signal to depart.

Paradise Lift.

The Romans made war upon the Tarentines, and obliged them by treaty not to sail beyond the cape.

Arbuthnot,

But now Athenian mountains they descry, And o'er the surge Colonna frowns on high. Beside the cape's protecting verge is placed A range of columns, long by time defaced.

Falconer.

He was cloathed in a robe of .fine black cloth, with v'idc sleeves and cape. Bacun.

CAPE, in law, a judicial writ concerning plea of lands or tenements, and divided into cape magnum and cape parvum, both of wnich affect things immovable.

Cape magnum is designed to lie where a person has brought a praecipe quod reddat of a thing that touches a plea of land, and the tenant makes default at the day given to him in the original writ; then this writ shall go for the king, to take the land into his hands : and if he comes not at the day given him, he loses his land, &c.

Cape parvum, called petit-cape, is denned thus : when the tenant is summoned in plea of land, and cometh at the summons, and his appearance is recorded ; and after he maketh default at the day that is given to him, then this writ shall go for the king.

CAPE COAST CASTLE. See AFRICA and ASHANTEE.

CAPE DE VERD ISLANDS. See VERDI,, CAPE DE.

CAPE OF GOOD HOPE. The colony of the Cape of Good Hope, stretches along the whole of the southern extremity of Africa from the cape of that name (originally called Cabo dos Tormentos, the Cape of Storms, by the Portuguese) to the Great Fish river, the Rio d Infante of the Portuguese, or from 17►► 36′ to 28►► 17′ E. long, and lies between 29►► 55′ and 34►► 17′ S. lat. Its most western point is at the mouth of the Koussie river, which, with the Bosjesman's country, forms the northern boun- dary of the colony ; on the west and south it is bounded by the Atlantic and Indian Oceans ; and on the east by Kaffreland. Its length from west to east, from the point of the Cape Penin- sula to the mouth of Fish river, is 580 miles; from the river Koussie to the Snowy Mountains 520 miles : giving a mean breadth of about 550 miles. Its breadth from south to north, from the mouth of the Koussie to the Cape Point, is 315 miles ; from the Nieuwveldt Mountains to Plet- tenberg's bay 160 miles : giving a mean breadth of 223 miles, and including an area of 128,150 square miles, according to the chart constructed by order of lord Macartney, during the British possession of the colony, prior to the peace of Amiens. On the east, upon which the CafTre tribes are often making incursions, it is neces- sary to preserve the chain of posts particularly strong. Northward the boundary line is little more than imaginary, being formed by the com- mencement of arid sands, stretching into the in- terior of the continent, or the winding ranges of barren hills, where no settled tribes can exist. Over this district are scattered 61,947 inhabitants (exclusive of the British army and navy), accord- ing to the latest returns : of whom 10,983 are white males, 9,482 white females; 1,281 servants and people of color; 25,754 slaves; and 14,447 Hottentots.*

The whole colony is intersected by chains of mountains crossing it from east to west, and ge- nerally barren ; some few ranges on the western coast run- from south to mrth, and one in parti- cular, which begins at False Bay opposite the Cape Point, stretches northward to Olifant river, i\n extent of about 210 miles.

The most southern of the former chains leaves

a belt of coast of irregular breadth, varying from 20 to 60 miles) which is well covered with soil, indented with bays, and watered by nume- rous streams. The second great chain, formed by the Zwarte Berg or Black Mountains, is of much greater elevation, and more rugged in ap- pearance than the former. It frequently breaks like the Andes of the New Contmen;, into dou- ble and treble ranges, and encloses with the first i series of

elevated plains of about the general width of the coast lands from north to south, but very various in their character ; occasionally presenting nothing but a succession of clay flats, known by the name of Karroo. In other places small plantations and farms meet the eye, on the borders of feeble streams ; and are as extremely productive as the surrounding flats are barren. The whole of these lands are much higher than those to the south of the ranges, and the tempe- rature is as various as the aspect of the country. The third principal chain, of a still greater aver- age height, is denominated the Nieuwveldt's Ge- bergte, and forms the northern boundary of a vast uninhabited karroo, or desert, commencing at the foot of the second. Here severe frosts in the bad monsoons, and the vehement heats of the summer months, seem alike the enemies of all vegetation, and human habitations rarely re- lieve the waste.

Of the various cays that indentthe long range of coast possessed by this colony, False Bay and Table Bay, the former on the southern, and the latter on the western shore of the Cape Peninsula, are the principal resort for shipping. From Sep- tember to May, usually reckoned as the summer months, Table Bay presents a secure shelter from the south-east winds ; and during the rest of the year False Bay, and its cove or adjunct, Simon's Bay, are preferred, as shielding vessels from the northern and north-west winds. Hout, or Wood Bay and Chapman's Bay, on the west coast, are also frequently entered The first of these, though small, is remarkably sheltered by the surrounding heights ; but the eddy winds, caused by that circumstance, render it difficult of egress and regress. Between Simon's Bay and Cape Town is a remarkable pass, which may be called the Thermopylae of the Cape, and to which, as well as indeed to all the principal bays and passes of the colony, the attention of govern- ment has of late been particularly directed. This pass is now supposed to be impregnable to any army that could be landed in the bay. Saldhana Bay, in lat. 33►► S. is commodious and well sheltered, being about fifteen miles long from north to south, and from two to three miles broad, and running between lofty granite hills ; but wood and water are very scarce in the neighbourhood. The rivers on the western coast are Olifant or Elephant River, which empties itself into the Atlantic in S. lat. 31►► 30'. ; and the Berg, or Mountain River, which has its source in the Roggeveldt Mountains, and after receiving several minor streams in its passage, falls into St. Helena bay. On the south are Gauritz River, the principal stream that waters the colony, and which, descending from the Black Mountains, becomes during the rains a very rapid torrent; Bror<) lliver, falling into*

Sebastian's Bay, and nearly a mile in width aV 'the mouth ; Camtoos River, running into a bay of the same name, and deep enough within the bar to float a ship of the line ; Sondag, or Sun- day River, which rises in the Nieuwveldt or Snow Mountains, and after watering a conside- rable

portion of the Graaff Reynet district, dis- charges itself in a south-east direction in Zwart Kops or Algoa Bay ; Zwart Kops River ; and the Great Fish River, which takes its rise in the Snow Mountains, at a distance of 200 miles from the sea. None of these streams are calculated for the navigation of vessels of burden, being almost uniformly blocked at the mouths by beds of sand or reefs of rock ; they are, however, well stored with fish, particularly with a small kind of turtle, perch, and eels ; and are exceedingly prized 'by the colonists for the fertility which crowns their banks.

The climate of this colony is, on the whole, salubrious, but subject to very sudden changes of temperature. Duringwhat is called the gc nd monsoon, or the summer months, commencing in September, south-east winds are most fre- quent, and, springing up about noon, drive the whole atmosphere into circulation, and die away in the evening, which is delightfully cool and exhilarating. Sometimes, however, they assume a more violent and stormy character ; a dry and blasting heat attends them, and sweeps ove> > the land like a mildew ; relaxing the human frame, and spreading destruction among the luxuriant fruits of the district. In the bad monsoon, or winter months, north-east winds prevail. There seem to be few or no diseases peculiar to this spot; in Cape Town, however, the instances of longevity are rare, and bilious fevers are frequent everywhere among the slaves. The annual deaths in the town, taken on the average of eighty years, were about two and a-half per cent, among the white, and three per cent, among the slave popu- lation.

The territory of the cape was divided by the Dutch into four districts or drosdys, each of which was governed byalandrost, and a council of six hemraaden. These were, 1. The Cape. 2. Stellenbosch and Drakenstein. 3. Zwellen- dam, and 4. Graaff Reynet. The Dutch system of government has been followed by the British, but subdivisions of the country districts have taken place. The northern part of what was once the united district of Stellenbosch and Drakenstein, has been called the district of Tul bagh, and a new drosdy and landrostship has been erected. District George has been formed out of the southern parts of Zwellendam, east of the river Gauritz ; and the southern part of Graaff Reynet has been called the district of Uitenhagen. That of the Cape is by far the most important of these governments, and reaches from St. Helena Bay, to the breadth of twenty-five miles from the shores of the ocean ; being about eighty miles in length ; twenty-five in breadth ; and containing an area of 2000 square miles.

Cape Town, the capital, is situated in the bosom of hills branching 0-ut from the Table Mountain, and is a neat and well built placo The streets throughout arc at ii

each other, and composed of houses mostly built of stone. Many have canals running down them, shaded with avenues of oaks, and a fine stream from Table Mountain fertilises the neighbour- hood- There are several handsome squares devoted to the public markets and military pur- poses ; a Calvinist and Lutheran church, guard- house, justice court, and theatre. The govern- ment house is on the side of Table Mountain, surrounded by a fine public garden, and several handsome villas. Eastward of the town is a pentagon fort or castle, surrounded with a ditch and outworks, which enclose the bank, called the Lombard hank, the orphan chamber, and other public offices ; here also are a magazine for military stores, and barracks for 4,000 men. The town is further defended by several forts on the shores of Table Bay ; the principal of which are Fort Knokke, connected with the castle by the rampart called the Sea lines, and Craig's Tower, east; the Lion's Rump, Rogge Bay bat- tery, Amsterdam, and Chavenne battery, west ; and an important outwork, called the Mouille, at the entrance of the bay. The inhabitants are estimated at about 5,500 whites and people of color, and 10,000 blacks.

The Table Mountain is too conspicuous a feature of this part of the colony to escape the attention of any stranger ; while it will reward the most scientific investigation of its natural history, and presents some very curious minera- logical facts. At a distance it assumes the ap- pearance of an immense battlement in ruins, crowned during the summer months with an ele- gant fleecy cloud, which, in allusion to the popular name of the central part of the mountain has been not unaptly called the Table Cloth. The north front, facing Cape Town, forms a horizontal line at top, of about two miles in length, the face of which is supported by a number of project- ing rocks that stand out upon the plain below like buttresses, and terminate in the mountain about midway towards the summit. Two great chasms divide the upper part of its face into three distinct eminences (the centre one falling back, and its wings or bastions projecting for- ward), which are named from east to west, the Devil's Head, Table Mount, and Lion's Head. Along the sea shore the west side is highly pic- turesque, presenting a vast number of pointed and time-worn masses, rising at last into a solid rounded block, resembling, according to some descriptions, the dome of St. Paul's cathedral placed upon a conical-shaped eminence. This part of the mountain is 3315 feet above the level of the sea ; the eastern wing (the Devil's Hill) is also remarkable for its craggy broken brow; it runs off at right angles to the front, and is the most elevated of the three summits, being 3582 feet in altitude. The Table, properly so called, is only 2160 feet above the bay. Southward the mountain breaks away in steps or terraces

into the chain that extends along the whole Cape Peninsula. A deep chasm, that divides the cur- tain from the left bastion of the mountain, leads the way from the town to the summit of this ro- mantic elevation. Its length is about three quar- ters of a mile, and the angle of ascent through it about forty-five degrees.' The entrance is parti-

cularly imposing. Perpendicular walls of granite here rise on each side of the passenger, at the dis- tance of eighty yards from each other, to the height of 1000 feet, and gradually close towards the open- ing at the top, on which he in a moment finds himself commanding a boundless view. The pensa mucronata, a tall and elegant shrub, is peculiar to this spot ; as also a species of heath, called the physodes, which bears a beautiful cluster of white flowers. The air on the summit is in most parts of the year mild and pleasant; in winter it is about 15►► of Fahrenheit lower than at Cape Town ; and in summer still more, through the density of the Table Cloud.

Stellenbosch, and Drakenstein, are districts of the former Dutch division, which comprehended the present divisions of Stellenbosch and Tul- bagh. They were formerly governed by one landrost and two hemraaden, but are now entirely distinct governments, and extend together, from Cape 1'Aguillas south, to the river Koussie north- ward, and from the ocean and the Cape district west, to B.reede River and the Gamka, or Lion's River eastward ; having a mean length of 380 miles, and a breadth of about 150 ; enclosing an area of 55,000 square miles. Scarcely a twentieth part of this area is in a state of culti- vation. The valley of Drakenstein, however, on the east of the Cape, is well inhabited, and the sections of these districts between False Bay and the long range of mountains that run northward to the Elephant River, are amongst the most fruitful parts of the colony. East Zwartland, and the neighbourhood of the twenty-four rivers, are valleys in this direction that are called the Gra- naries of the Cape ; and the Roggeveldt moun- tains and valleys yield a large and strong breed of horses, originally introduced from South America.

The original district of Zwellendam compre- hended the most southern belt of land in the colony, lying between the Black Mountains and the ocean, north and south ; and the district of Stellenbosch, and that of Graaff Reynet, east and west. It was about 380 miles long, and sixty broad, containing an area of 19,000 square miles. District George now cuts off about one- half of the fruitful portion of this district towards the south. The mountains of the coast are clothed with forest trees, and the plains with shrubs. This part of the colony as a whole is more fruitful than any other ; and contains one subdivision out of which the Dutch government reserved 20,000 acres of land in its own hands for the growth of corn, of which it yielded 10,000 muids annually, besides nourishment for 1000 horses, and 1000 head of cattle. The village of Zwellendam is situated in a delightful

valley, and the new rising town of the name of George, is in the immediate neighbourhood of the land just mentioned.

Graaff Reynet district is bounded on the north by the Bosjesmans' country, or the limits of the colony in this direction ; on the south by the districts George, Uitenhagen, and the sea ; west by part of Zwellendam ; and east by Kaffreland. The eastern subdivisions (by far the most pro- ductive) are molested by the incursions of the Kaflres and Bosjesmans, who recently seized

and murdered the landrost of the district, with all his family, at his own residence in the village of Graaff Key net. Very little grain is grown in this district, from the difficulty of its finding a market, and from the circumstance of the fre- quent descent of locusts from the mountains ; but cattle and sheep thrive well here. The Village at which the landrost resides scarcely boasts a dozen houses besides his own. In the Sneuwberg division of this district on the banks of the Fish River, are two mineral springs of great repute among the colonists, for the cure of rheumatic and cutaneous disorders ; the water is at the temperature of 88►► Fahrenheit. South of these waters, and west of Sunday River, is a large salt water lake, which is an object of resort for the inhabitants of various neighbouring and remote regions, who obtain a valuable supply of that mineral from it annually. The salt is taken out in masses of from four to six inches thick, which are broken down on the banks of the lake, where a much finer salt accumulates after a dry wind ; the latter indeed is said to equal in its native state any of the refined salts of this country.

The predominant soils of this colony are a stiff clay, into which no plough will enter until it is thoroughly soaked with rain, and a light red sand, capable of extreme fertility wherever it is sufficiently irrigated. The superinduced soil, which is furnished by the decomposition of vegetables, is of course rarely seen in a country everywhere penetrated by ranges of naked mountains, and three-fifths of whose sur- face wears not the least appearance of verdure during the greater part of the year. Sometimes, indeed, where these eminences form a channel for the floods of the rainy season, or natural springs are found, a singular luxuriance will appear in the valleys, and many farmers have cultivated these patches among the mountains on the southern coast ; but no part of the earth has hitherto seemed abandoned to more complete sterility than the greater portion of those vast karroo plains that occupy the interstices between the great mountain-ranges. Impenetrable clays, strewed with sand, stretch for miles

under the aching eye ; and the larger and smaller hills that interrupt the surface are only diversified masses of sandstone, blue slate, felspar, and ironstone, in the midst of which a single blade of grass is rarely seen.

The operations of nature are here, however, conducted in singular extremes. Where iron or its oxydes are liberally mixed with the clay, and the fertilising aid of the feeblest rill can be brought to bear upon the soil, astonishing fer- tility will occasionally ensue ; some of the best grapes and fruits of the colony are yielded on these spots, the influence of a few showers of rain in other places is equally remarkable ; parched as they will appear with the hot season, and utterly deserted by everything living, the rains of a few days will clothe whole acres with verdure ; the botanist is suddenly presented with the richest harvest of plants that is to be found in any country; and flocks of antelopes are quietly grazing. Of the capabilities of such a country, therefore, under the hand of British industry, it is quite impossible to form a. fair esti-

mate at present. A deep and fertile soil appears to reward the long culture of some of the most unpromising spots. Such, at any rate, is the character of the land stretching from Cape Town to the east, or between the most southern moun- tains and the shore.

Different portions of the colony are very differ- ently affected by the heats of summer ; and in the Table Valley an epitome of all the varieties may be said to be found. One of the British officers, who was stationed there during our for- mer possession of the Cape, ‘ declared,’ says Mr. Barrow, ‘ that those who lived in it were either in an oven, or at the funnel of a pair of bellows, or under a water spout.’ There is a difference in the summer months of from eight to ten degrees, of Fahrenheit’s scale, between the tem- perature of Cape Town and Wynberg, at the distance only of about eight miles, from the cir- cumstance of the latter lying to the windward of the Table Mountain and the former to leeward of it. The summer is not oppressive to English- men in its general temperature at the Cape, and during the months of July, August, and Septem- ber^ answering, as we have seen, to our winter months), all the European settlers are glad, as a home, of a constant fire. The characteristic in- dications of the approach of winter at the Cape are the withdrawing of the silvery cloud from the head of the Table Mountain, and the gradual change of the winds from south-east to north-west. A raw and cold feel first accompanies the latter, which gradually heighten into perfect hurricanes, and storms of thunder and lightning, which con- tinue for several days. When the weather clears, the mountains east and north are seen to be covered with snow, and the head of the venerable Table to have exchanged its fleecy garb for a thin covering of snow or ice. The British soldiers were so remarkably healthy, during our first occupation of the place, that in the regimental hospitals of 5000 troops

not more than 100 men were entered during several months (and with complaints brought on from the sort of excesses in which the natives indulge), while the general hospital had not one sick man. There is hardly a finer spot, indeed, in the domi- nions of Great Britain, as we shall see in the sequel of this account, for the seasoning of troops for a warm climate. Eastward of the colony, the Caffres, who are inured to exertion from their childhood, present as fine a race of men, generally reaching six feet high, robust and mus- cular, as are to be found on any portion of the globe.

In almost every part of the isthmus that con- nects the Cape Peninsula with the continent, fresh water rises at the depth of ten or twelve feet. At Wynberg, eight miles from Cape Town, a rill of water was recently discovered in boring at about twenty feet below the surface of the ground ; and when some workmen were pricking for coal in the Tiger Hills, at an elevation of twenty feet, a copious stream of water, according to the above author, was collected in the level in the month of February, the dryest season of the year.

The profitable productions of the colony, taken as a whole, are wine, grain, all the Euro-

pean and most of the tropical fruits, vegetables of every description, cattle and sheep. At the foot of the Table Mountain are considerable plantations of the protea argentea, or silver tree 'a species of the protea peculiar to this spot), tie stone pine, and the white poplar. Avenues of oak adorn the country houses, and this tree grows rapidly throughout the colony, but rarely to any perfection as timber. It is constantly cut down, with the rest of the few forest trees of the Cape, for fuel, an article very scarce here, and which seems to have been very intemperately supplied from the plantations of late years, with- out any provision for a succession of trees. Another species of protea, the kreupel boom of the Dutch, is also planted extensively on the hills of the Cape district ; its bark is used in tanning, and the branches for fire-wood, a purpose to which are devoted various other species of this tree, which grow wild throughout the Peninsula, and many heath plants that grow on the smaller hills of that neighbourhood. Most families in decent circumstances are obliged to keep a slave employed entirely in the collection of this latter article.

Lord Macartney directed various efforts to be made during the period of his government, in search for ' fossil coal ; and the operations in the neighbourhood of Table Bay were not wholly unsuccessful, when they were

suspended by the discovery of a stratum of coally matter along the banks of a deep rivulet, flowing out of Tyger- berg Hill, on the east of the isthmus which joins the Cape Peninsula to the continent. It ran ho- rizontally, from ten inches to two feet in width over a bed of indurated clay, and was surrounded by strata of pipe-clay and white sandstone. The main bed does not appear to have been found ; but large ligneous blocks were dug out in some places ; in others the lithanthrax of naturalists, a turfy sort of coal, appeared, similar to the Bovey coal of England. The ligneous blocks burnt with a clear flame, leaving white ashes ; the more earthy and compact parts of the stratum not so clear, and leaving a sort of slaty caulk, with a brown crust.

On the mountains of the southern coast as we have already stated, and particularly in the neighbourhood of Plettenberg's Bay, some lofty forests are found. The trees are of quick growth and considerable size, but generally hollow in the heart and much twisted in grain ; profitable timber is rarely procured from them.

Wheat, barley, and pulse, are cultivated with success throughout the Cape district, and in the valleys of Drakenstein, East Zwartland, and the Twenty-four Rivers, which appear capable of any kind of agriculture. In fruits, flowers, and elegant shrubbery, no country exceeds the Cape. The apricots, oranges, peaches, prunes, and grapes, of Europe, flourish in the greatest perfection; pomegranates, melons, apples and pears, almonds, chestnuts, walnuts and mulberries, are also plentiful. The apples and pears are rather infe- rior ; but strawberries are found ripe all the year and a few raspberries of a superior quality. No grapes in Europe are thought superior to those of this colony.

There are some good pasture farms on the

eastern side of the mountains that run northward from the Cape, and at the southern foot of the Zwartzberg, or Black Mountains. In the same direction are found whole plains of the com – mon aloe, which forms a considerable article of traffic. Horses are the favorite speculation of the grazing farmers in this direction, however, and the rye-grass of the district appears to suit them well.

The wild animals of the Cape are the lion, rhinoceros, elephant, hippopotamus, buffalo, wolf, panther, leopard, hyaena, jackal, zebra, tiger-cat, quacha, and various tribes of antelopes. Of these the gnoo, an elegant mixture of the horse and antelope, seems peculiar to this part of Africa. His body, shoulders, and mane, resemble those of the former animal, except that the mane is rather under than upon the neck, running from the breast between the fore legs ; his legs have the exquisite finish of those of the

antelope ; while his head resembles that of a buffalo. The flocks of antelopes have greatly receded from the coast within these few years, and are now principally confined to the eastern, or Graaff Reyuet district. The lion is said to be peculiarly cowardly and treacherous here. The elephant is taken by the Hottentots by digging pits under his haunts; but the European settlers openly hunt him, as well as the rhinoceros, and kill them with fire arms. Here are also hares, and a rock-rabbit without a tail.

Ostriches, eagles,vultures,kites,pelicans,cranes, ibises, flamingos, and spoon-bills, with wild ducks, geese, teal, snipes, and partridges, abound in the colony ; together with a vast variety of the smaller birds of most beautiful plumage. The markets are well supplied with fish, both from the open sea, the rivers, and the numerous inlets of the coast. Bream, perch, soles, mack- erel, skate, and rock-fish, are the most common ; and, of shell-fish, the oyster, crab, and muscle. Seals were once found in large quantities in the islets of False Bay, but are considerably dimi- nished of late years. The whale is taken in Table Bay : a company of merchants formerly associated in the town for the prosecution of a South Whale Fishery ; it was a speculation, however, that did not succeed ; the fish are cer- tainly inferior to the whale of the northern seas, though Mr. Barrow is still sanguine in his expec- tations from a similar undertaking.

The horses most in request here are the black and grizzled breed of South America, which art elegant in appearance, and though small are very strong. Large numbers of oxen are raised in the eastern division, and the animal is much used in draught work throughout the colony. In his make he runs to waste, (as the English farmtr would say) the shoulders are high, his legs unu- sually long, and his horns large. Mr. Barrow saw many of them with long scars in their sides, arising from the practice of cutting them with knives, as a method of urging them forward over a difficult pass; and mentions a wealthy inhabi- tant of the Cape whg boasted that he could at any time start his team on a full gallop by only whetting his knife on the side of the waggon ! ‘ In exhibiting this masterly experiment,’ he adds, ‘ the effect of a constant and long perseverance

in brutality, to some of his friends, the waggon was overturned, and one of the company, unluckily not the proprietor, had his leg broken. Hotten- tot’s Holland Kloof, a steep pass over the first range of mountains beyond the promontory of the (Jape, has been the scene of many an instance of this sort of cruelty. I have heard a fellow boast that after cutting and slashing one of his oxen in the kloof till an entire piece of a foot square did not

remain in his whole hide, he stabbed him to the heart ; and the same person is said, at another time, to have kindled a fire under the belly of an ox, because it could not draw the waggon up the same kloof.' Goats are numerous in some parts ; hogs are badly fed, and never eaten at a respectable table ; and poultry is very rarely seen.

At Cape Town, is the seat of government, and a court of justice, to which the provincial courts appeal ; the landrosts, or resident magis- trates of the other districts, exercising a feeble authority. The Dutch system of governing this colony was found, indeed, on its conquest by our arms, to be exceedingly ill-contrived, and badly executed ; but quite impossible to be sud- denly changed amongst an obstinate and igno- rant race of colonists. The landrosts were originally appointed for the purpose of settling disputes between the farmer and the oppressed natives ; he was impowered to levy fines to a certain amount, and to collect the government and parochial imposts. His assistant council, called the hemraaden, comprised a few of the principal settlers of the neighbourhood, gene- rally about six ; and under them were placed an indefinite number of feldtwagtmeesteers, or su- perintendents of subdivisions of the district, who were to settle the watercourses, rights to springs, &c. The boors, as they call themselves, who were the principal agents of this administration, of course, always favored their brother boors; crimes of every kind were committed with impu- nity, within a few miles of the Cape ; and the mere inconvenience of discontinuing his personal visits to the markets of the capital was the sole punishment of the murderer, and men under sentence of outlawry for contempt of the pro- vincial courts. Public justice, however, has of late been gradually assuming its firm British cha- racter.

*About midway between False Bay and Table Bay, are the two farms mentioned by Dr. Sparr- man, as producing the genuine Constantia wine, of which they yield from fifty to a hundred leaguers of 154 gallons, annually. They lie di- rectly under the mountains, a circumstance to which the richness of the soil is, no doubt, in part to be attributed ; the grapes are the mtisca- tel ; and particular care is taken in the whole process of the vineyard, to sustain the reputation of the spot, and in particular to reject all stalks and unripe fruit from the press. The whole of the farms on this part of the Peninsula yield to- gether about 700 leaguers of wine ; and green and ripe grapes, and prepared raisins, are sent in abundance from them to Cape Town. A distinct and laborious collection of the bulbous roots of
े Peninsula has been thought worthy of a place*

in the botanic garden at Kew ; but many of it > elegant varieties are still said to be wanting there.

The shrubs and heath plants that diversify the hills of the Cape district, the

chasms of the mountains, and every spot where a root will strike, are also almost endless in their variety ; Doctor Roxburgh enumerated 1 30 species of the latter between the Cape, and the first range of mountains. The wax plant also grows abun- dantly on the sandy parts of the isthmus. In the clefts of kloofs of the mountains in this dis- trict are found the few remaining holds of the hy- aenas and wolves, which formerly infested even the streets of the capital, and still approach its outskirts in the night, in scent of the offal and dead cattle which are suffered to be thrown down on the public roads. The das, called by Pennant the Cape cavy, is a curious little animal, which also abounds in these caverns. Its size is about that of a rabbit ; its color a light dusk ; its ears are short, and it has no tail ; the flesh is eaten at table. The steenbok, the Guinea antelope of Pennant, and once the most numerous of the an- telope tribe in this district, is now nearly exter- minated.

The inlets of South Africa abound with whales which run from fifty to sixty feet in length, and yield from six to ten tons of oil. They appear to make these bays a shelter for their young, and it is remarkable that none but females have been caught for years together. They are easier taken than in the northern seas, but, from their inferior size, the bone is not valuable. The penguin now supplies the place of the seal on the islands of False Bay. Scolopendras,scorpions, and immense black spiders, infest the Cape ; but the mosqui- toes are not so annoying as in most warm cli- mates. A particular species of garden locust is, perhaps, the most formidable insect of the coun- try : and the bite of the small sand-fly is very troublesome. Small land turtles are found in all the open parts of the peninsula; the camel ion is also frequently seen, and various species of lizards. The most formidable of the snake tribe (which every where abounds, and most of which are venomous) is the cobra capella, as it is called, or hooded snake, of which the Hottentots are particularly afraid, and for which they, as well as the Dutch settlers, use a ridiculous remedy, called the slange steen, or snake stone. It is de- clared by those who deal in it to be a stone taken out of the head of a particular kind of serpent, and the criterion of its virtue is that, when plunged into water, it should produce bubbles on the surface. The fact is, it is a piece of ivory or firm bone, burnt round the edges into an oval shape, and the porosity of the bone constitutes its virtues, such as they are. The fascinating power of serpents over birds is uniformly asser- ted in this country, but their influence is not supposed to be extended to the human species.

All marriages in the colony must be performed at Cape Town ; the following table contains a list of them for eight years, and the christenings and burials of the capital during the same period ; giving an increase of christenings above burials of 1,4 16 in that time.

r~

Marriages.

Christenings.

Burials.

1790

130

350

186

1791

97

354

146

1792

174

360

144

1793

158

288

116

1794

211

308

111

1795

213

308

145

1796

249

257

168

1797

217

364

157

In eight years.

‘1449

2589

1173

To the north-east of Stellenbosch are the val- leys of Great and Little Drakenstein, sheltered by lofty mountains, and well watered throughout by the river Berg and its minor streams, which unite in about the centre of them. The subdi- vision of Little Drakenstein is enclosed, as it were, by the larger valleys, and the two together supply full two-thirds of the wine of the Cape market. On the west of this valley is the village of Paarl, surrounded by a very fine tract of land, and distinguished by a curious mass of granite, surmounted with a number of large round stones, like the pearls of a necklace, to which it owes its name. The pearl is inaccessible on three sides, and rises about 400 feet from its base on the summit of the mountain, where it measures in circumference, according to this writer, a full mile.

The sloping northern side by which it is ascended, is upwards of 1000 feet in length, and nearly covered with a species of green lichen. Towards the summit it is split by two deep clefts crossing at right angles, in which grow a number of beautiful aloes, and several cryptogamous plants. The whole side of the mountain is a perfect garden of various and beautiful plants.

In the autumn the exquisite scenery of this spot is further heightened by the presence of large numbers of a beautiful little bird called the creeper, some species of which unite the most enchanting powers of voice with their elegant attractions for the eye, and occasionally call off the attention of the traveller from every other part of the scene.

The mountains to the east of this valley are the barrier wall between the Cape, or western coast, and the interior ; and there are but three passes, or kloofs, that are ever crossed by wheels. Eland's Kloof to the north, which opens into plains almost entirely uninhabited. Roode Sand Kloof opposite to Sandhana Bay, which com- municates with Graaf Reynet and the north-east of the colony ; and Hottentot's Holland Kloof, in the neighbourhood of False Bay, which leads from the Cape into the district of Zwellendam.

Tranche Hoeck, the French Corner, occupies the south-east angle of this beautiful valley, and is not the less interesting from the recollection of the causes that brought its first settlers here, the persecutions that ensued on the revocation of the edict of Nantz. To these injured confessors of Protestantism the whole colony is indebted for the cultivation of the vine, here first intro- duced by them.

The division of East Zvvartland and the

twenty-four rivers, ' the Granaries of the Cape,' deserve particular notice. They lie to the north- west of the valley of Drakenstein, or between the Berg river west, and the great northern chain of mountains east. The wheat crops are very fine and full, and the land rich to perfect lux- uriance. Rice also nourishes in the marshy grounds, and abundance of fruit ; but wine is only made for domestic use. The Berg river, whose numerous streams give name to it, is an invaluable acquisition to the valley of the twenty- four rivers ; and being capable, at a compara- tively small expense, of a communication with Saldhana Bay, bids fair, in some future time, to open an important avenue of supplies to ship-

Sing. ' Should the bay of Saldiif na,' says Mr. arrow, ' at any future period, become the general rendezvous for shipping, these two di- visions will be more valuable than all the rest of the colony.' The crops in the Zwartland dis- trict are more precarious, having a greater de- pendence on the quantity of rain that falls.

Nortn of the plain of the twenty-four rivers is the Picquet Berg, which grows tobacco in large quantities, and of the best description in the colony, Here also horses, cattle, and sheep, are more cultivated than to the south, while the grain and fruit is not inferior.

The division of Olifant's or Elephant's River terminates this fruitful series of plains. This stream is navigable for small craft full twenty miles up the country ; but its banks are uninha- bited until it reaches this valley, which is situated between a double ridge of the mountains that run northward from the Cape.

Crossing the great chain of mountains to the east, we now have a succession of grazing farms, scattered over vast karroo plains, and producing some of the finest horses and horned cattle of the colony.

To the "north-west, at the distance of five days' journey over an absolute desert, is the rch gra- zing country formerly inhabited by the Namaaqua Hottentots. It consists of a series of plains at the foot of the Khamies Berg mountains, which form the northern extremity of the colony, and unite with the Copper Mountains, which run ?n unknown course into the interior of the con- tinent.

Among the Roggeveldt Mountains in thi? neighbourhood, and a little to the south, is the division of Roode Sand, or Waveren, about thirty miles in length, and seventy miles from Cape Town ; on the road to which is the kloof of Roode Sand, a much frequented pass through the great chain of mountains. Here is a small rising village, with a church and comfortable parsonage. The valley is abundantly watered by streams connected with the Berg and Breed rivers, and is fruitful both in grain and wine. The Chinese bamboo flourishes in great beauty ; rice, tfie Cape olive, and the palma Christi.

Further south, on the border of the Hex and Breede rivers, are some excellent meadows, well adapted for the growth of corn ; no part of the colony is better watered. South of this is Zoek Milk, or Sweet Milk's Valley, containing the meritorious establishment of the Moravians, or Hem liiiters as they were originally called, whose

kind offices towards the poor oppressed aborigines of the country were never duly appreciated by the Dutch. During both the periods in which tlve colony has been in British possession, their influence has been much encouraged and in- creased. These appear, indeed, missionaries well

adapted to obtain a permanent triumph in their benevolent designs. They have devoted themselves to the civilisation of the Hottentot, as the best mode of reaching both his un- derstanding and his heart. Mr. Barrow, in his first journey, found three of their venerable ministers surrounded by 600 Hottentots, and an establishment that breathed the simplicity and meek effective zeal of their system. Their church, at the upper end of the valley, was a plain but neat edifice ; their corn mill the best in the colony ; and the garden of their village in the highest state of cultivation. One ' adorned' his Christianity, thus circumstanced, by acting as the smith of the establishment; another as a shoemaker, and a third as a tailor. ' They were men of the middle age,' savs Mr. B., ' plain and decent in their dress ; cleanly in their persons ; of modest manners ; meek and humble in their deportment, but intelligent and lively in con- versation ; zealous in the cause of the mission, but free from bigotry or enthusiasm.' . It is their habit to teach every one of their converts some useful trade. The place is now called Gnaden- thal, and contains about 1300 inhabitants. There is a similar establishment at Groenekloof.

The Kamnasie mountain on the east is sur- rounded with a few grazing lands and woody hills, that lead down to the Lange Kloof, or Long Pass, a delightful valley between the moun- tains, along which runs one of the best roads in the colony. A series of rich pastures here sud- denly burst upon the traveller, bordered by a profusion of heath plants, and studded with farm-houses, to the length of 150 miles; each farm being, by a regulation of the Dutch government, three miles distant from the other. At every house is a vineyard and fruitery, yielding the Persian or Muscatel grape, which is generally dried in a summary way for the Cape market ; and remarkably fine oranges. The inferior and bruised grapes are thrown with the under-growings, and with the lees or dregs of new wine, into large vessels to ferment, and from this is procured the brandewyn, an execrable cheap spirit, of the Cape. Here are also extensive plantations of tobacco.

There is but one road leading to the south of the valley called the Duyvil's Kop, or Devil's Head, which is esteemed one of the most for- midable passes of the country. Sixteen oxen were yoked to each waggon of Mr. Barrow's party in passing this place, which toward the top is a complete set of stairs, or steps from stratum to stratum of the rock, some of them from three to four feet high, while the width of the road is not more than fifteen paces. Over these it was necessary to lift the waggons by main strength ; and just as our traveller reached the summit, one of those remarkable changes in the weather took place which will strikingly illustrate the character of this climate. The day had been remarkably pleasant, the thermometer standing at 74□□, when

the whole hemisphere was sudden .y overcast, and an immense sheet of

black vapor ap- proached from the south-east. Rolling up the mountain in distinct volumes, rapidly succeeding each other, it completely immersed the party at the top, and the temperature sunk to 39□□. Snow had fallen on the same day (the longest in the year) near Zwellendam, and laid for some time on the mountains, unmelted. The descent on the south side is by no means difficult.

The most eastern division of this portion of the colony comprehends all the country between Plet- tenberg's and Camtoos Bay, and is penetrated by a range of forests running parallel with the sea coast for 150 miles, where the stately elephant, the rhinoceros, the buffalo, and the antelope, are found in their primitive herds. There is no re- gular road through these thickets, but many large and well watered plains have been cleared in the midst of them. We count no less than □□□nine minor rivers in the official chart. There are also several lakes abounding with fish. Cattle and sheep are the principal productions, but there is no part of the colony more evidently capable of improvement, or indeed of any kind of agriculture. The wood of this district has never been fairly cultivated ; such of it as is only fit for fuel can hardly be got to market, through the badness of the roads from the prin- cipal forests to the Cape. Were these once equal to what the demands of the Cape for fuel, and the abundance of the supplies in this neigh- bourhood alike seem to dictate, an unfailing source of emolument would be opened to the colonist, and a capital supplied for the working of the iron ores, and the rearing of profitable timber, to an almost indefinite quantity.

The settlement of the town of George, in this neighbourhood, is one of those circumstances that must tend to the development of these resources ; it was a measure of Sir J. Cradock's government. This and the Graaff lleynet district furnish the principal and best trees of the colony.

Of these the cyperus or cedar-hout has the recommendation of a strong turpentine smell, which preserves furniture from insects ; the geel-houts run occasionally much larger, and would make an excellent substitute for fir on a variety of occasions ; the hassagai-hout is an elegant wood for domestic purposes ; the koeha might be recommended for superior household furniture ; and the planks of the wit Essenhout for flooring of all sorts, and boat planks in par- ticular.

Graaff Reynet District, as originally laid down, was the termination of the colony eastward ; di- vided between about 700 families. The whole of the south of this division up to Albany has been recently called the district of Uitenhagen. It is generally speaking, a grazing district, but grows upwards of 10,000 muids of good corn annually ; and about half the quantity of barley. See ALBANY. The inhabitants of this colony may be considered as divided into six very dis- tinct classes of human beings; including, per-

haps, as great a variety of human character as could be found upon any equul space of the earth's surface. 1. The native, or Hottento tribes. See HOTTENTOTS. 2. The slave popula-

tion. 3. The vine growers. 4. The grain far- mers. 5. The graziers ; and 6. The town's peo- ple of the cape.

The slave population Mr. Barrow describes as better fed and clothed than any of the peasantry of Europe : the domestic slaves at Cape Town live a wretchedly idle life. Every child amongst the richer inhabitants has its attendant of this description ; and to humor its caprices is amongst their most important employments. Twenty or thirty of them, in other establishments, will be engaged to do the work of six good English ser- vants. The education of children is also, in many cases, wholly left to the most clever of them. The aspiring temper of this part of the population was decidedly indicated at that period of the French revolution which was fatal to the independence of Holland. Just at the crisis of the arrival of the British forces in 1 795, the slaves had their regular meetings, and discussions upon the prevailing doctrines of the day, and were even becoming bold enough to hint to their mis- tresses, ' We carry you now ; but by-and-by it will be our turn.' The whole system, in fact, is a disgrace and an incumbrance to the colony.

The vine growers, or wine boors as they are called at the Cape, are the most opulent culti- vators of the soil of this colony. Their lands are chiefly freehold, exempt from almost all taxes, and capable of any sort of cultivation. The size of their farms is about 120 acres, English, and the culture of the grape, with an elegant garden, generally occupies the whole. Descended from the old. French families who first introduced the vine into the colony, they retain much of the suavity and communicativeness of their ancestors, and in this respect, as well as in the numerous comforts of their establishments, impress the stranger with a feeling of their respectability and of their decided superiority over their neigh- bours. But the French language is never heard amongst them, and a French book of any kind is rarely seen.

The produce of their vineyards is brought to market from September to the period of the new vintage in February or March, but principally in the four last months of the year. Here it is subject to a rate of three rix-dollars per legger of wine or brandy, on passing the barrier ; but no duty is laid upon.it at the vineyard, or when sold in the country. The only taxes to which the

grower is subject are a small capitation rate to- wards repairing the highways leading into Cape Town, and what is called the lion and tiger money, a district rate originally levied to defray the expenses of exterminating those animals, but now devoted to the general exigencies of each division. At his farms he will rear his sheep, and his corn, perhaps, or obtain them readily in exchange for wine. Milch cows for his family, and occasionally poukry, are also among the comforts of his establishment.

The grain farmers, or corn boors, are also generally opulent, and assume the next rank in society to the wine boors. The most respectable of them live either in the Cape district, or the neighbouring parts of Stellenbosch and Draken- stein. They occupy loan farms, or such as are held by lease under government, and their paro-

chial taxes are not more than those of the wine growers. They are a selfish and quarrelsome race. The eastern mode of treading out the corn by oxen is the substitute for threshing here. A great part of the straw is wasted ; the chaff only and short straw of barley being preserved as fodder for horses. The wheat in the Cape dis- trict is fine and full in the ear, weighing from sixty to sixty-five pounds a bushel ; a cargo sent to Mark-lane, on the capture of the Cape in 1795, fetched the highest price of the day.

The graziers are the lowest class of the colo- nists, and consist in many parts of the refuse of European society : of sailors who abandon their vessels, or deserters from the troops, who may have been stationed here, or have put in at the Cape. If they are fortunate enough to recom- mend themselves to a settled boor's family, and marry one of his daughters (which they frequently will), a few sheep and cattle are given them to begin the world with, and those who are steady sometimes attain considerable comforts.

The inhabitants of Cape Town are a very distinct race from most of those which we have described, and yet are intimately connected with all their pursuits. In addition to its importance as a capital, and as the chief market of redun- dant produce, Cape Town stands at present be- tween the only two channels of exportation and importation, Table Bay and False Bay, and is the military key of the colony. Here, therefore, numerous agents of the boor's reside ; and the koopman, or merchant, is a man of importance. While the phlegm and apathy of the Dutch character seldom appear more conspicuously than at this place, and nowhere so devoid of common industry, men of undoubted talent, intelligence, and integrity, are found at the head of this class. The mercantile advantages of Cape Town have been latterly, however, in some degree diverted to Simon's Town, a rising place, containing the naval arsenal of the colony, and about 150 neat houses on the shore of Simon's bay.

The established religion of the Cape colony is Calvinism or the reformed church ; the mi- nisters of which are a highly respected and respectable body of men, both in the town and country. All other sects are tolerated, but not directly countenanced or paid. The clergy are entitled in civil life to take place next to the pre- sident of the court of justice in town, and to the landrost in the country ; and their widows are provided for for life. Education we regret to add is at a very low ebb in this capital, and through- out the colony.

The original discovery of the Cape of Good Hope is traced to Bartholomew Diaz, who with a small expedition fitted out by John II. of Portugal, five years before Columbus embarked on his first voyage, first discovered the Cape ; but the weather-beaten condition of his ships, and the violence of the winds, compelled him to steer homewards, after denominating this promontory Cabo Tormentos, the Cape of Storms, or, as other writers state, Cabo dos todos Tormentos, the Cape of all Plagues. His royal master, how- ever, directed it to be called The Cape of Good Hope ; and is said to have deprived himself of sleep, to form plans for availing himself of its

advantages. A second expedition was despatched 10 these regions in the year 1497, when, on the 26th of November, Vasco de Gama successfully doubled the Cape, and coasted the eastern shores of Africa to Melinda, in Zanguebar. The fol- lowing year the Portuguese admiral, Rio D'ln- fante, landed in this neighbourhood on a voyage to India, and gave his own name to what is now called the Great Fish River ; where shortly after- wards the court of Portugal attempted to form a settlement. In 1509 the viceroy of Brasil, Francisco D'Almeyda, putting in here for provi- sions was repulsed ; and, on attempting to head a reinforcement, was mortally wounded by a poisoned arrow. The revenge taken by his coun- trymen three years aftei, began the series of inju- ries which the tribes of this country have received from Europeans. A large piece of brass ordnance, loaded with missiles, was landed as a present to the natives, who had shown themselves extremely fond of brass, and they were drawing it by ropes ashore, when it was barbarously fired amongst the crowd, and made a dreadful slaughter. After this we hear no more of the Portuguese at the Cape, except as visiting it, in common with other nations trading to the east.

At the beginning of the seventeenth century, the Dutch East India Company turned their at- tention to the Cape as a permanent possession, and built a fort for their protection when there. Every ship bound to the east was provided with a stone on which her name and that of each of her principal

officers were engraved ; to these they were to add the date at which she touched at the Cape ; and burying it in a particular spot with a tin box underneath, containing letters for Holland, the returning ships sought for it, and carried them home. The English afterwards adopted the same custom.

In 1620 Andrew Shilling and Humphrey Fitz- herbert, commanders of vessels bound to the East Indies, hearing that the Dutch intended to establish a colony at the Cape in the following year, planted the British standard here, and took possession of it in the name of ‘ James, king of England,’ because they ‘ thought it better that the Dutch or any other nation whatever should be his majesty’s subjects in this place, than that his subjects should be subject to any other.’ This sentiment seems to have been supported in no particular way by the government at home. In 1650 Van Iliebeck, or Roebeck, a surgeon of a Dutch Indiaman, was equipped with every neces- sary for the settlement of himself and 100 fol- lowers, and appointed admiral and governor in chief at the Cape. He ordered the natives a quantity of brass beads, toys, brandy and tobac- co, worth 50,000 guilders, it is said, for the de- livery of a certain portion of land which has since become the site of Cape Town. Women and more cautious adventurers now joined them from home, and we soon find them penetrating to the Salt River.

From 1659 to 1661 the new settlers were much annoyed by wars with the native tribes. At last, the native chiefs ag-eed to confirm to the Dutch three leagues of land, round the fort, on condition that they should claim no more. And this is the only public attempt that seems to have been made

against this colony by the Hottentots, during the whole period of its history.

Stellenbosch district was planted about the year 1609 by Governor Simon Vander Stel, who gave it his name, according to the authors of the Universal History ; i. e. Stel ??? and Bosch or Bush, from the abundance of the shrubs in the neighbourhood. S”ome modern travellers suppose it to be derived from the stenbok, or antelope, which once abounded here. The same governor first organised a militia, and military board, for the defence of the colony. The vineyards of Constantia, also, were enclosed and settled by this spirited governor, and named after his wife, a lady who is honored by one remaining statue to her memory over the door of the mansion, and another over the cellar-door of the establish- ment. Simon’s Bay and Valley appear likewise to owe their names to him.

The colony was for a long time subject to the governor of Batavia, through whom all the or- ders of the home government were sent; and it was directed that no two farms in the country should be established at less than three miles’ dis- tance from each other. No further events of im- portance

occur in the history of the Cape, until the revolution of Holland at the close of the last century. This extended its influence to this re- mote settlement as early as 1795 ; and the Bri- tish government fortunately resolved to take pos- session of the colony for the prince of Orange, at the very period when a convention had already been established, and was about to de- clare it a free and independent republic. A French force had been confidently expected, and the first determination of the public authorities was to hold out against the British attack, and to call out the burgher cavalry, who were to per- form wonders against the enemy. Some few of them answered the summons. General Sir James Craig, at the head of about 1600 men, led on the attack, and brought his guns to bear, he quickly drove the Dutch within their lines, and a very few shots from our artillery decided the contest. In the middle of the night offers of capitulation were sent to the British commander, and the whole colony passed into our hands almost as easily as it had done into those of the Dutch. It was restored in full sovereignty to the Batavian republic, in March, 1803.

On the renewal of the war with France, and its dependencies, Great Britain did not fail to consider the Cape as an important point of attack upon the enemy ; and seems to have awoke to the determination of holding it permanently. A well-appointed force of 5000 men, under Sir David Baird and Sir Home Popham, appeared before the town in January 1806, and were re- ceived by about equal numbers, under the conl- mand of the same governor to whom we had relinquished the colony. The two armies met in the plain at the foot of Table Mountain. The Highland brigade, under general Ferguson, led the attack, and the enemy retreated through a neighbouring defile to the mountains, when ho- norable terms were proposed, and agreed upon, for the cession of the place to the British troops. At the peace of Paris it was definitely recognised as a colony of Great Britain. See Barrow's

T^aoelsm Southern Africa; Vaillant, Lichtenstein, and Campbell's Travels ; and the Interesting Jour- nal of the Rev. Mr. Latrobe's Visit to South Africa i 1815 and 1816.*

CAPEL (Arthur, lord), a devoted and truly noble adherent of Charles I. was the son of Sir Henry Capel, Knt. on whose death he suc- ceeded to the fortunes of his family. In 1640 lie represented the county of Hertford in par- liament, and voted in the first instance against the king's measures, and for the attainder of Stafford. Finding, however, the extravagance of the views of his party, he had the intrepidity to abandon it, and was soon advanced by Charles to the peerage by the title of lord Capel, of Hadham. He defended Colchester in 1649, against the par- liamentary forces, but,

being obliged to surrender to Fairfax, he was committed to the Tower, and, although at first he made his escape, being re- taken, he was beheaded March 9th, 1649. Cla- rendon says he was a man in whom the malice of his enemies could find no fault, and that his friends might be well content with Cromwell's character of him.

CAPEL (Arthur), his son, was created earl of Essex at the Restoration, and employed as am- bassador to Denmark. In 1679 he became, for a few months, first lord of the treasury. But, being accused of being concerned in the rye- nouse plot, he was committed to the Tower in 1683. He was found a few days afterwards with his throat cut.

CAPELL (Edward), a celebrated dramatic critic, was born in Suffolk, and educated at Bury. The duke of Grafton bestowed on him the office of deputy inspector of plays, to which a salary is annexed of ––200 a year. In 1745 he first projected an edition of Shakspeare, of the strictest accuracy, to be collated and published, in due time, ex fide codicum. He immediately pro- ceeded to collect and compare the oldest and scarcest copies ; noting the original excellencies and defects of the rarest quartos, and distin- guishing the improvements or variations of the first, second, and third folios; and, after many years' labor, produced a very beautiful small oc- tavo, in ten volumes, with an Introduction. In 1763 he published three large volumes in quarto, entitled Notes and Various Readings of Shaks- peare ; together with the School of Shakspeare, or Extracts from divers English books, that were in print in the Author's tin? 3 ; evidently showing from whence his several Fables were taken, and some parcel of his Dialogue. Also farther Ex- tracts, which contribute to a due understanding of his Writings, or give a light to the History of his Life, or to the Dramatic History of his Time. Mr. Capell was also the editor of a volume of ancient poems, called Prolusions; and the Alteration of Antony and Cleopatra, as acted at Drury Lane, in 1758. He died January 24th,

1781.

CAPELLA, in astronomy, a bright fixed star in the left shoulder of the constellation Auriga.

CAPELLO ˆBianca), a Venetian lady, of respectable family, and duchess of Tuscany, in the sixteenth century. Her father, Bart. Capello, a patrician of Venice, discountenancing an in- trigue into which she fell in early life, she left

her native city in company with her paramour. Bonaventure. She was pregnant, and the lovers married at Florence. Here the uncommon beauty of her person soon attracted the attentions of Francis, son of Cosmo de

Medici, the reigning dull e of Tuscany ; the husband consenting to his own dishonor, was advanced; and he being assassinated in the course of a new intrigue, Bi- anca became the avowed mistress of Francis. She is said at this time to have feigned a second pregnancy, and to have imposed the purchased chi'd of some poor parents on her admirer as his own son. Ultimately, on the death of the wife of Francis, and his accession to the ducal throne, she induced the republic of Venice to acknowledge her as ' a daughter of the state,' and was publicly married, and installed duchess of Tuscany in 1579. This elevated station she oc- cupied nearly nine years, to the great disgust of the other members of the Medicean family, and died within two days of her husband (not without the suspicion of both being poisoned), in Oc- tober, 1587. His successor would not suffer her remains to be buried in the family vault, and procured the illegitimacy of her child to be pub- licly recorded.

CAPELLUS (Lewis), an eminent French Protestant divine, born at Sedan about 1579. He was author of some learned works; but is chiefly known from the controversy he engaged in with the younger Buxtorf, concerning the an- tiquity of the Hebrew points, which Capellus undertook to disprove. His Critica Sacra was also an elaborate work, and excited some dis- putes. He died in 1658, having made an abridgement of his life in his work De gente Capellorum. He was also the author of Historia Illustrata; Templi Hierosolymetani Delineatio Triplex; De Critica Nuper se Edita; Ad Novem Davidis Lyram Animadversiones ; Cronologia Sacra ; Diatriba de Verio et Antiquis Ebraorum Literis ; Spicilegium Post Messem.

CA'PER, v. &w. ~) Fr. capriole ; Ital. cu-

CA'PERER, n. \priola; from the Lat.

CA'PER-CUTTING, n. j caper, a goat. A leap ; a jump ; a skip. The verb is expressive of dan- cing sportively; skipping merrily; 'like die leaping and springing up of goates, when they leape and play,' says Minsheu. It is also used as a contemptuous designation of dancing ; as is the word caperer for a dancer. To cut a caper is to leap up with a dance-like motion. The Italians have an equivalent phrase, tagliar le ca- priole, which is translated by to caper, to prance. A caper, Fr. capre ; Dutch, kapre ; was once the designation cf a privateer, or pirate-ship ; per- haps from the quickness and desultoriness of iUs motions.

We, that are true lovers, run into strange capers , but as all is mortal in nature, so is all nature in love mortal in folly. Sliahspeare. As you like it,

The truth is, I am old in judgment ; and he that ###will caper with me for a thousand marks, let him lend me the money, and have at him. Id.

Henry IV.

Our master

Capering to eye her. Id. Tempest.

His nimble hand's instinct then taught each string

A cuperiny cheerfulness, and made them sing

To their own dance. Crushnia,

CAP /

We that are true lovers, run into strange capers ; out as all is mortal in nature, so is all nature in love uxirtal in folly.

Shaktpeare. As you like it.

jie tumbler's gambols some delight afford j T?o less the nimble caperer on the cord : l!ut these are still insipid stuff to thee, Cooped in a ship, and tossed upon the sea.

Dryden's Juvenal.

Flimnap, the treasurer, is allowed to cut a caper, on the strait rope, at least an inch higher than any other lord in the whole empire. Swift's Gulliver.

The family tript it about, and capered like hail stones bounding from a marble floor. Artsuthnot's John Bull.

The stage would need no force, nor song, nor dance, Nor capering monsieur from active France. Rowe.

CA'PER, n. 1 Fr. capre, Lat. capparis ;

CA'PER-BUSH, $ KaTTTropic. An acid pickle, made of the flower-buds of a shrub. The word is always used in the plural, except when it forms a compound with another word, as in caper- sauce. See CAPPARIS.

We invent new sauces and pickles, which resemble the animal ferment in taste and virtue, as mangoes, olives, and capers. Flayer.

CAPER, in shipping, a vessel used by the Dutch for cruising and taking vessels from the enemy ; in which sense, caper amounts to the same with privateer. Capers are commonly double officered, and crowded with hands even beyond the rates of ships of war, because the thing chiefly in view is

boarding the enemies.

CAPER BEAN. See ZYGOPHYLLUM.

CAPERNAUM, a city celebrated in the gos- pels, being the place where Jesus usually resided during the time of his ministry. This city is no where mentioned in the Old Testament under this or any other name ; and therefore it is pro- bable that it was built after the return from the Babylonish captivity. It stood on the coast of Galilee, in the borders of Zebulon and Nephtha- lim (Matt. iv. 15), and took its name from an adjacent spring, which probably was an induce- ment to build the town in the place where it stood. Capernaum was said by our Lord him- self to be exalted unto heaven ; but, because its inhabitants made no right use of the privileges they enjoyed, he denounced that it should be brought down to hell (Matt. xi. 23), which has certainly been verified : for, as Dr. Wells ob- serves, so far is it from being the metropolis of all Galilee, as it once was, that it consisted long ago of no more than six poor cottages.

CAPEROLANS, a congregation of religious in Italy, so called from Peter Caperole, their founder, in the fifteenth century. The Milanese and Venetians being at war, the enmity occa- sioned thereby spread itself to the very cloisters. The superiors of minor brothers, of the province of Milan, which extended itself as far as the ter- ritories of the republic of Venice, carried it so haughtily over the Venetians, that those of the convent of Brescia resolved to shake off a yoke which was grown insupportable to them. The superiors, informed of this, expelled the principal authors of this design; viz. Peter Caperole, Mat- thew de Thareillo, and Bonaventure of Brescia. Peter Caperole, a man of an enterprising genius, VOL. V.

found means to separate the convents of Brescia, Bergamo, and Cremona, from the province of Milan. This occasioned a law-suit between the vicar general and these convents, which was de- termined in favor of the latter; and in 1475, by the authority of Pope Sixtus IV. they were erected into a distinct vicariate, under the title ot that of Brescia. This not satisfying the ambition of Caperole, he obtained, by the interposition of the Doge of Venice, that this vicariate might be erected into a congregation; called from him Caperolans.

CAPH, a Jewish measure of capacity for things, estimated by Kimchi at the thirtieth part of the log, by Arbuthnot at the sixteenth part of the hin, or thirty-second of the seah, amounting to f of an English pint. It does not occur in Scripture as the name of any measure.

CAPHAR, a duty which the Turks exact from the Christians who carry or send merchandises from Aleppo to Jerusalem and other places in Syria. This duty was first imposed by the Christians themselves, when they were in pos- session of the Holy Land, for the maintenance of the troops which were planted in difficult passes, to observe the Arabs and prevent their incur- sions. It is still continued, and much increased by the Turks, under pretence of defending the Christians against the Arabs ; with whom, never- theless, they keep a secret intelligence, favoring their excursions and plunders.

CAPI-AG A, or C A PI-AGASSI, a Turkish officer, governor of the gates of the seraglio, or grand master of the seraglio. He enjoys the first dig- nity among the white eunuchs : he is always near the person of the grand seignior : he intro- duces ambassadors to their audience : nobody enters or goes out of the grand seignior's apart- ment but by his means. He has the privilege of wearing the turban in the seraglio, and of going everywhere on horseback. He accompanies the grand seignior to the apartment of the sultanas, but stops at the door without entering. The grand seignior bears the expense of his table, and allows him at the rate of about fifty shillings per day : but his office brings him in abundance of presents ; no affair of consequence coming to the emperor's knowledge without passing through his hand. He cannot be bashaw when he quits his post.

CAPIAS. A writ of two sorts, one before judgment, called capias ad respondendum, in an action personal, if the sheriff, upon the first writ of distress, return that he has no effects in his jurisdiction. The other is a writ of execution after judgment.

CAPIAS AD RESPONDENDUM is where an ori- ginal is issued out, to take the defendant, and make him answer the plaintiff.

CAPIAS, after judgment, is of divers kinds.1 such as,

CAPIAS AD SATISFACIENDUM, a writ of exe cution that issues on a judgment obtained, and lies where any person recovers in a persona action, as for debt, damages, &c. in which cases this writ issues to the sheriff, commanding hin to take the body of him against whom the deJ is recovered, who is to be kept in prison till make satisfaction.*

CAPIAS IN WiTHtRNAM, a writ that lies for cattle in Withernam : that is, where a distress taken is driven out of the country, so that the sheriff cannot make deliverance upon a replevin ; then this writ issues, commanding the sheriff to take as many beasts of the 'distrainer, &c.

CAPIAS PRO FINE is a writ lying^where a person is fined to the king, for some offence committed against a statute, and he does not discharge the fine according to the judgment; therefore his body shall be taken by this writ, and committed to gaol till the fine is paid.

CAPIAS VT LEGATUM, a writ which lies against any one outlawed, upon any action personal or criminal, by which the sheriff is ordered to ap- prehend the party outlawed, for not appearing on the exigent, and keep him in safe custody till the day of his return, when he is to present him to the court, to be there farther ordered for his contempt.

CAPJGI, Turk. i. e. gate, a door-keeper of the Turkish seraglio. There are about 500 ca- pigis in the seraglio, divided into two com- panies; one consisting of 300, under a chief called Capigi-bassa, who has a stipend of three ducats per day ; the other consists of 200, called Cuccicapigi, and their chief Cuccicapigi-bassa, who has two ducats. The capigis have from seven to fifteen aspers per day. Their business is to assist the janissaries in the guard of the first and second gates of the seraglio ; sometimes all together, as when the Turk holds a general council, receives an ambassador, or goes to the mosque; and sometimes only in part, being ranged on either side to prevent people entering with arms, tumults being made, &c.

CAPILLA'CEOUS, adj.-\ .Lat. capillus, CAPIL'LAMENT, n. I quasi capitis pilus,

CAPIL'LARY, n. & adj. VfromTriXoc. Hairy; CAPILLA'TION, n. I hair-like ; in deli-

CAPIL'LATURE, n. J cate filaments. Ca-

pillary is most commonly applied to the fibres of plants, and the minute vessels of bodies. Mine- ralogists also apply it to ores which shoot out thread-like branches. Capillaceous is the same with capillary, when the latter is used as an adjective. Capillation is obsolete. Capillature, Bailey defines to be, a bush of hair, a frizzling of the hair. This word also is disused.

Our common hyssop is not the least of vegetables, nor observed to grow upon walls ; but rather, some kind of capillaries, which are very small plants, and on-.y grow upon walls and stony places.

Browne's Vulgar Errours.

Nor is the humour contained in smaller veins, or obscure tap illations, but in a vesicle. Id.

Ten capillary arteries in some parts of the body, as in the brain, are not equal to one hair ; and the smallest lymphatic vessels are an hundred times smaller than the smallest capillary artery.

Arbuthnot on Aliments.

Capillary or capillaceous plants, are such as have no xntiin stalk or stem, but grow to the ground, as hairs on the head ; and which bear their seeds in little tufts or protuberances on the backside of their leaves.

Quincy.

Those small threads, or hairs, which grow up in the middle of a flower, and adorned with little knobs at the top, are called capillaments. Id.

CAP'ILLAIRE, n. Fr. Genuine yipillaire is a syrup of adiantum but in this country it is frequently made of water, orange flower water, eggs and sugar. A few spoonsful of it in water, either with or without the addition of orgeat, makes a pleasant beverage.

CAPILLAMENTS in a general sense, signifies a hair; whence the word is applied to several things, which on account of their length or their fineness resemble hairs : as,

CAPILLAMENTS OF THE NERVES, in anatomy, the fine fibres or filaments whereof the nerves are composed.

CAP1LLARIS, or CAPILLATA, ARBOR, an ancient tree at Rome, on which the vestal vir- gins, when shaven for their office, hung up their hair, and consecrated it to the gods.

CAPILLARY TUBES. See TUBES, CAPILLARY.

CAPILLUS VENERIS. See ADIANTUM.

CAPISCHOLUS, or CAPISCOLUS, in ecclesi- astical writers, denotes an officer in certain cathe- drals, who had the superintendency of the choir, or band of music, answering to what in other churches is called chanter or precentor. The word is also written cabiscolus, and caput-scholse, q. d. the head of the school, or band of music. The office is also called scolasticus, as having the instruction of the young clerks and choristers, how to perform

their duty.

CAPITA, DISTRIBUTION BY, in law, signifies the appointing to every man an equal share of a personal estate; when all the claimants claim in their own rights, as in equal degrees of kindred, and not jure representationis.

CAPITA, SUCCESSION BY, where the claimants are next in degree to the ancestor, in their own right, and not by right of representation.

CAP'ITAL, n. & adj.-\ Lat. capitalis, from

CAPITALIST, n. I caput, the head. Ac-

CAP'ITALLY, adv. V cordingly, capital uni-

CAP'ITALNESS, ra. i formly implies pre-

*CAP'ITATION, n. _/ eminence, whether of place, action, possession, or crime. The capital of a pillar is that part which crowns the whole ; the capital of a country is its principal city ; a capital crime is one of such magnitude that it can be expiated only by death ; capital letters are the letters that head a sentence ; capital in a mercantile sense, is the money which is em- ployed to gain other sums ; and a capitalist is a person who trades with a large capital, and is commonly known by the denomination of a monied man ; capitation refers still more closely to caput, and means numeration or taxation by the head. Sherwood defines capitalness to be * a capital offence, cupitahte ;' but I know of no authority for the word.*

I will, out of that infinite number, reckon but some that are most capital, and commonly occurrent "both in the life and conditions of private men.

Spenser on Ireland.

As to swerve in the least points is errour ; so the capital enemies thereof God hateth, as his deadly foes, aliens, and without repentance, children of endless perdition. Hooker.

Edmund, I arrest thee On capital treason. Shakspeare. King Lear.

In capital causes, wherein but one man's life is in question, the evidence ought to be clear ; much more, in a judgment upon a war, which is capital

to thou- sands. Bacun.

This had been

Perhaps thy capital seat from whence had spread All generations. Paradise Lost.

Our most considerable actions arc always present like capital letters to an aged and dim eye.

Taylor's Holy Living.

They do, in themselves, tend to confirm the truth

of a capital article in religion. Atterbury.

Several cases deserve greater punishment than

many crimes that are capital among us. Swift.

You see the volute of the lonick, the foliage of the

Corinthian, and the novali of the Dorick, mixed

without any regularity on the same capital.

Addison on Italy.

I take the expenditure of the capitalist, not the value of the capital, as my standard ; because it is the standard upon which, among us, property, as an ob- ject of taxation, is rated.

Burke. Letter III. on a Regicide Peace. He suffered for not performing the commandment of God concerning capitation ; that, when the people were numbered, for every head they should pay unto God a shekel. Browne.

Either from design or from accident, the mode of assessment seemed to unite the substance of a land tax with the forms of a capitation. The returns which were sent, of every province or district, expressed the number of tributary subjects, and the amount of the public impositions. The latter of these sums was divided by the former ; and the estimate, that such a province contained so many capita, or heads of tri- bute ; and that each head was rated at such a price ; was universally received, not only in the popular, but even in the legal computation. Gibbon.

CAPITANA, or CAPTAIN GALLEY, the chief or principal galley of a state, riot dignified with the title of a kingdom. It was anciently the de-

nomination of the chief galley of France, which the commander went on board of.

CAPITANATA, a province of the kingdom of Naples, bordering on the Adriatic, formed of what is commonly called the Spur of Italy ; a collateral ridge of the Appenines bounds it on the north, dividing it from Abruzzo Citra ; on the south it is bounded by Terra di Bari; the spur or promontory of mount Gargano, projecting into the Adriatic, is mountainous, the remaining part of the province is an arid plain, though not unproductive either in grain or cattle ; it is intersected by several streams falling into the Adriatic. The slopes of mount Gargano are planted with orange groves, and its quarries furnish stone for nearly all the buildings of the province, the area of which is about 3500 square miles; population about 200,000. The principal sea-port is Manfre- donia, a little north of which is Monte St. Angelo. The principal towns in the interior are, St. Se- vero, Foggia, and Lucera.

CAPITANEATE.in a general sense, the same with Capitania, the Brazilian governments. Capi- taneats, in Prussia, are a kind of estates, which, besides their revenue, raise their owners to the rank of nobility. They are also called Starosties. CAPITANEI, or CATANEI, in Italy, was a denomination given to all the dukes, marquisses, and counts, who were called capitanei regis.

The same appellation was given to persons of inferior rank who were invested with fees, for- merly distinguished by the appellation of valvasores majores.

CAPITATION, a tax raised on each person, in proportion to his labor, industry, office, rank, &c. It is a very ancient kind of tribute. The Latins call it tributum, by which taxes on per- sons are distinguished from taxes on merchan- dise, which were called vectigalia. Capitations are never practised among us but in exigencies of state. In France the capitation was intro- duced by Louis XIV. in 1695 ; and was a tax very different from the taille, being levied from all persons except the clergy, even the princes of the blood not being exempted from it.

CAP1TE, in law, is a species of ancient tenure of land. See TENURE.

CAPITE CENSI, in antiquity, the lowest rank of Roman citizens, who in public taxes were rated the least of all, being such as never were worth above 365 asses. They were supposed to have been thus called, because they were rather counted and marshalled by their heads than by their estates. The capite censi made part of the sixth class of citizens, below the proletarii, who formed the other moiety of that class. They were not

enrolled in the army, being judged not able to support the expense of war ; for in those days the soldiers maintained themselves. It does not appear, that before Caius Marius any of the Roman generals listed the capite censi in their armies.

CAPITO, in ichthyology. See ZERTA.

CAPITOL, CAPITOLIUM, in antiquity, a cele- brated temple and citadel on the Mons Capito- linus at Rome, in which the senate anciently as- sembled ; and which still serves as the city-hall for the meeting of the conservators of the Roman people. It had its name capitol, from caput, a man's head, which was said to have been found fresh, and bleeding, upon digging the foundation of the temple built in honor of Jupiter. Arno- bius adds, that the man's name was Tolius, whence caputolinum. The first foundations of the capitol were laid by Tarquin I. A. U. C. 139. His successor Servius raised the walls ; and Tarquin Superbus finished it in the year 221. But it was not consecrated till the third year after the expulsion of the kings. The ceremony of the dedication of the temple was performed by the consul Horatius in 256. The capitol con- sisted of three parts ; a nave sacred to Jupiter ; and two wings consecrated to Juno and Minerva. It was ascended by 100 stairs ; the frontispiece and sides were surrounded with galleries, in which those who w,ere honored with triumphs entertained the senate at a magnificent banquet, after the sacrifices had been offered to the gods. Both the inside and outside were enriched with an infinity of ornaments, the most distinguished of which was the statue of Jupiter, with his gol- den thunderbolt, sceptre, and crown. All the consuls successively made donations to the capi- tol, and Augustus bestowed upon it at one time 2000 pounds weight of gold. Its thresholds were made of brass, and its roof was gold. In the capitol also were a temple to Jupiter the guardian, and another to Juno, with the mint ;

and on the descent of the bill was the temple of Concord. This beautiful edifice contained the most sacred deposits, such as the ancylia, the books of the Sibyls, &c. The capitol was burnt during the civil war of Marius, and Sylla rebuilt it, but died before the dedication, which was performed by Q. Catulus. It was again burnt by Vitellius, and rebuilt by Vespasian. It was burnt a third time by lightning under Titus, and restored by Domitian, who

spent 12,000 talents in the gilding only.

CAPITOL was also a name anciently applied to all the principal temples, in most of the colonies throughout the Roman Empire ; as at Constan- tinople, Jerusalem, Carthage, Ravenna, Capua, &c.

CAPITOLINE GAMES, annual games insti- tuted by Camillus, in honor of Jupiter Capitoli- nus, and in commemoration of the capitol not being taken by the Gauls. Plutarch tells us, that a part of the ceremony consisted in the pub- lic crier putting up the Hetrurians to sale by auction ; they also took an old man, and, tying a golden bulla about his neck, exposed him to the public derision. Festus says they also dressed him in a pretexta. There was another kind of Capitoline games, instituted by Domitian, where- in there were rewards and crowns bestowed on the poets, champions, orators, historians and musi- cians. These last were celebrated every five years, and became so famous, that instead of cal- culating time by lustra, they began to count by Capitoline games, as the Greeks did by Olym- piads. However, this custom was riot of long continuance.

CAPITOLINI, in Roman antiquity, a college of men residing in the capitol, to whom was committed the care of the Capitoline games.

CAPITOLINUS (Mons), in the history of architecture, one of the seven hills of Rome, anciently called Saturnius as the residence of Saturn, and Tarpeius from the maid who betrayed it to the Sabines. It is believed to have been first enclosed when Romulus admitted Titus Ta- tius into the partnership of his throne ; and then to have been decorated with a temple of Jupiter Feretrius. The thatched cottage of their first king, which crowned the Capitoline Mount, was long an object of veneration to the Romans. It is mentioned by Vitruvius in the reign of Au- gustus, and still later by Lactantius and Macro- bius in the fourth century.

CAPITOUL, or CAPITOL, an appellation given formerly to the chief magistrates of Tou- louse, -who had the administration of justice and policy in the city. They were much the same with the consuls, bailiffs, burgo- masters, mayors, ⬚⬚nd aldermen, &c. in other cities. In ancient ⬚⬚cts they were called consules capitularii, or ca- \pitolirri, and their body capitulum. They had ⬚⬚⬚fce custody of the town-house, which was anci- ently called capitol. The office only lasted one year, ennobled the bearers, and entitled them to the jus imaginum, i. e. when their administration expired their pictures were hungup in the town- house.

CAPITULAR, or CAPITULARY, denotes an act passed in a chapter, either of knights, canons, or religious. The capitular of Charlemagne, Charles

the Bald, &c. are the laws, both ecclesiastical an civil, made by those emperors in the general as- semblies of the people ; which was the way in which the constitutions of most of the ancient princes were made : each person present, though a plebeian, setting his hand to them. They had their name from being divided into capitula, chapters, or sections. In these capitulars did jurisprudence anciently

French

the whole

consist.

CAPIT'ULATE, v CAPITULA'TION, n. CAPIT'ULATOR, n, CAPIT'ULAR, n.

These seem to be all derived from caput, the head; though some would ˆdeduce thefirst three from

CAPIT'ULARLY, adv. capio. To capitulate, is

CAPIT'ULARY, adj. \ to surrender ; and, in

CAPI'TILE, n. J the ordinary acceptation,

a capitulation is the terms on which the surren- der is made. Of the latter word, however, there is another use, confined to the German empire ; and denoting the contract made by the emperor with the electors. In the quotation from Shakspeare, the word capitulate is defined by Johnson, ' drawing up anything in heads or articles ;' but Stevens, more probably interprets it as ' making head/ Capitular signifies both a member of a chapter and the body of the statutes of a chapter; and capitularly implies convened as an ecclesiastical chapter. Wicliffe, in his bible, uses capitile in the sense of the sum, the substance, the heads.

The king took it as a great indignity, that thieves should offer to capitulate with him as enemies.

Hay ward. Percy, Northumberland,

The archbishop of York, Douglas, and Mortimer,

Capitulate against us, and are up.

Shakspeare. Henry IV.

It was not a complete conquest, but rather a de- dition upon terms and capitulation, agreed between the conqueror and the conquered ; wherein, usually, the yielding party secured to themselves their law and religion. Hale.*

I still pursued, and, about two o'clock this afternoon, she thought fit to capitulate. Spectator.

The Nadhirites were more guilty, since they con- spired in a friendly

interview to assassinate the pro- phet. He besieged their castle, three miles from Medina, but their resolute defence obtained an honorable capitulation, and the garrison, sounding their trumpets and beating their drums, was per- mitted to depart with the honors of war. Gibbon.

That this practice continued till the time of Charle- main, appears by a constitution in his capitular.

Taylor.

The nuns of St. Ursula acted the wisest; ??? they never attempted to go to bed at all. The dean of Strasburg, the prebendaries, the capitulars and domi- ciliars (capitularly assembled in the morning to con- sider the case of buttered buns) all wished they had followed the nuns of St. Ursula's example.

Sterne. Slawkenburgiui's Tale.

Canonists do agree, that the chapter makes decrees and statutes, which shall bind the chapter itself, and all its members or capitulars.

Ayliffe.

CAPITULATION, in military affairs has been used both in ancient and modern warfare, to signify a treaty made between the inhabitants of a place besieged and the besiegers, for the deliver- ing up the place on certain conditions. The most honorable terms of capitulation are, to

march out at the breach with arms and baggage, drums beating, colors flying, a match lighted at both ends, and some pieces of cannon, waggons, and convoys for their baggage, and for their sick and wounded.

CAPITULUM, in ecclesiastical writers, de- noted part of a chapter of the Bible read and ex- plained ; whence ire ad capitulum, to go to such a lecture. Afterwards the place where such exercises were performed was named domus capituli.

CAPITULUM, in the ancient military art, was a transverse beam, wherein were holes through which passed the strings, whereby the arms of huge engines, as balistse, catapultae, and scor- pions, were played, or worked.

CAPNICON, chimney money, a tax which the eastern emperors levied for

smoke, and which of consequence was due from all, even the poorest, who kept a fire. It was first exacted by Nicephorus.

CAPNOMANCY ; from KCUTVOS, smoke, and HavTtia, divination ; a kind of divination by means of smoke, used by the ancients in their sacrifices. The general rule was, when the smoke was thin and light, and rose straight up, it was a good omen : if the contrary, it was an ill one. There was also a species of capnomancy, consisting in the observation of the smoke rising from poppy and jessamine seed, cast upon lighted coals.

CAPO D'ISTRIA, a town and fortress of Venetian Istria, on the east side of the gulf of Trieste. The town is seated on a small island, connected with the main land by a draw bridge and causeway, about half a mile in length. It is the see of a bishop, and has a cathedral and several other churches and religious houses ; the population is about 5000, and their chief support :B derived from salt and wine ; the former is ex- ported in large quantities. It is twelve miles due south of Trieste, in the latitude of 45►► 4′ N. and 14►► E. long.

CAPOC, in commerce, a sort of cotton so fine and so short that it cannot be spun. It is used in the East Indies to line palanquins, to make beds, mattrasses, cushions, pillows, &c.

CAPO'CHE, v. -\ Fr. capuce, capuchon ;

CAPO'UCH, n. I Ital. cappuccio ; a monk's

CAPU'CH, n. \ cowl or hood ; the cape

CAPU'CHED, adj. I of a cloak ; capuchin is

CAPUCHI'N, n. J a female garment, consist- ing of a hood, and takes its name from its re- semblance to the dress of the capuchin monks. Capuched signifies covered over as with a hood. Johnson declares himself unable to form a distinct idea of the meaning of the word capoched, but supposes that it may stand for stripped of the hood. May it not mean blinded them with their own hoods ?

Capoched your rabbins of the synod, And snapped their canons with a Why not? Grave synod, men that were revered For solid face and length of beard. Hudibrta.

They are differently cucullatcd and capuched upon the head and back j and, in the cicada, the eyes are more prominent. Browne's Vulgar Errours.

He wore a little brown capouch, girt very near to uis body with a white

towel.

Shelton. Translation of Don Quixote.

CA'PON, v. & n. -\ Lat. capo ; Fr. chapon ; CA'PONET, n. f Ital. capone ; Swed. kapun ; CA'PONISE, v. i Dan. capun ; Ger. kapphan ; CA'PON-FASHION. ./ Dut. kapoen. . A castrated cock. The term is also applied in ridicule to an effeminate fellow. Birch uses the verb to capon ; and Daines Barrington, in his paper on singing birds, has to caponise, which is, proba bly of his own formation, as there appears no other authority. Capon-fashion was an expres- sion of archers, descriptive of the steel of an arrow, when it was short-breasted, and big to- wards the head.

And eke there was a polkat in his hawe, That, as he sayd, his capons had yslawe ; And feyn he wolde him wreken, if he might, Of vermine that destroied hem by night.

Cliaucer's Canterbury Tales. And then the justice, Its fair round belly, with good capon lined.

Shakspeare. As You Like It. Yet must he hunt his greedy landlord's hall, With ofton presents at each festival : With crammed capont every new year's morne, Or with green rheeses when his shee" ar►► shorne.

BoM

All come in, the farmer and the clown ►►►, And no one empty-hand, to salute Thy lord and lady, though they have no suit. Some bring a capon, some a rural cake, Some nuts, some apples. Ben Johnson.

Muley Hamet, king of Fez and Morocco, spent three pounds on the sauce of a c ipon : it is nothing iu our times : we scorn all that is cheap.

Burton. Anat. of Mel.

In good roast beef my landlord sticks his knife ; The capon fat delights his dainty wife.

Gay. Pastoral I.

CAPOT, v. & n. Fr. To win all the tricks on the cards at the game of picquet.

CAPPADINE, in commerce, a sort of silk flock, taken from the upper part of the silk worm pod, after the true silk has been wound off. Slight stuffs called lassis and carbass, are made of it.

CAPPADOCIA, an ancient kingdom of Asia, comprehending all that country which lies be- tween Mount Taurus and the Euxine Sea. It was divided by the Persians into two satrapies or governments ; by the Macedonians into two kingdoms, viz. :

1. CAPPADOCIA AD PONTUM, more commonly called Pontus. See PONTUS.

2. CAPPADOCIA AD TAURUM, CAPPADOCIA MAGNA, or CAPPADQCIA. properly so called, in ancient geography, a country lying between 38►► and 41►► N. latitude. It was bounded by Pontus on the north; Lycaonia and part of Armenia Major on the south ; Galatia on the west; and by Euphrates and part of Armenia Minor on the east. The first king of Cappadocia, of whom we read, was Pharnaces, raised to the crown by Cyrus, who gave him his sister, Atossa, in mar- riage. He was killed in a war with the Hyrca- nians. After him came a succession of eight kings, of whom we only know that they con- tinued faithful to the Persian interest. In the time of Alexander the Great, Cappadocia was governed by Ariarathes II. who, notwithstanding the vast conquests of the Macedonian monarch,

also continued in alliance with Persia. Death prevented Alexander from invading his domi- nions; but Perdiccas,. marching against him with a powerful and well- disciplined army, dispersed his forces, and having taken Ariarathes himself prisoner, crucified ‘ him, with all those of the royal blood whom he could get into his power. Diodorus, however, says that he was killed in the battle. He is said to have reigned eighty-two years. His son Ariarathes III. having escaped the general slaughter, fled into Armenia, where he was concealed, till the dissensions among the Macedonians gave him an opportunity of recover- ing his kingdom. Amyntas, governor of Cappa- docia, opposed him ; but, being defeated in a pitched battle, the Macedonians were obliged to abandon all the strong holds. Ariarathes, after a long and peaceable reign, left his kingdom to his son Ariaramnes II. who applied himself more to the arts of peace than war, in consequence of which Cappadocia flourished greatly during his reign. He was succeeded by Ariarathes IV. his son, who proved a very warlike prince, and hav- ing overcome Arsaces, founder of the Parthian monarchy, considerably enlarged his dominions. His successor, Ariarathes V. married the daugh- ter of Antiochus the Great, and entered into an alliance with that prince against the Romans ; but Antiochus being defeated, Ariarathes was obliged to sue for peace, which he obtained, upon paying a fine of 2000 talents. He

after- wards assisted the republic with men and money against Perseus, king of Macedon, on which ac- count he was by the senate honored with the title of the ‘ friend and ally of the Roman people.’ He left the kingdom in a very flourish- ing condition to his son Mithridates, who, on his accession, took the name of Ariarathes VI. This prince (surnamed Philopater, from the filial respect and love he showed his father from his infancy), immediately renewed the alliance with Rome. He restored Mithrobarzanes, son to Ladriades, king of the Lesser Armenia, to his father’s kingdom, though he foresaw that the Armenians would lay hold of that opportunity to join Artaxias, who was then on the point of invading Cappadocia, and presented the senate of Rome with a golden crown, in acknowledg- ment of their assistance at this time. The senate, in return, sent him a staff and chair of ivory, which were presents usually bestowed on those only whom they looked upon as attached to their interest. Not long before this, Demetrius Joter, king of Syria, unsuccessfully invaded his dominions, and set up a rival pretender to the throne, one Orophernes, a supposed son of the late king. The senate now decreed that Ariara- thes and he should reign as partners ; but next year his rival was driven out, and Ariarathes, be- ing restored, demanded of the Priennians 400 talents of gold, which Orophernes had deposited with them. They replied, ‘ that, as they had been trusted with the money by Orophernes, they could deliver it to none but himself, or such as came in his name.’ Upon this the king ravaged their territory with an army. The Priennians, however, though besieged by the united forces of Ariarathes and Attalus, not only made an obstinate defence, but found means to

restore the money to Orophernes. At last tney applied to the Romans for assistance, who en- joined the two kings to raise the siege. Ariar- athes immediately obeyed, and marching his army into Assyria, joined Alexander Balas against Demetrius, who, in the very first engage- ment was slain, and his army entirely dispersed ; Ariarathes having on that occasion given un- common proofs of his courage and conduct. Scrme years after, a war breaking out between the Romans and Aristonicus, who claimed the king- dom of Pergamus in light of his father, Ariara- thes. joined the former, and was slain in the same battle in which P. Crassus, proconsul of Asia, was taken, and the Roman army cut in pieces. He left six sons by his wife, Laodice, on whom the Romans bestowed Lycaonia and Cilicia. But Laodice, fearing lest her children, when they came of age, should take the govern- ment out of her hands, poisoned five of them, the youngest only having escaped her cruelty by being conveyed out of the kingdom. The monster herself was soon after put to death by her subjects. She was succeeded by Ariarathes VII. who, soon after his accession, married another Laodice, daughter of Mithridates the Great, hoping to find in that prince a powerful friend to support him against Nicomedes, king of Bi-

thynia, who laid claim to part of Cappadocia. But Mithridates, instead of assisting, procured one Gordius to poison his son-in-law ; and on his death seized the kingdom under pretence of maintaining the rights of the Cappadocians against Nicomedes, till the children of Ariarathes were in a condition to govern it. The Cappa- docians at first fancied themselves obliged to their new protector; but, finding him unwilling to resign the kingdom to the lawful heir, they rose up in arms, and driving out all his garri- sons, placed Ariarathes VIII. eldest son of their deceased king, on the throne. The new prince now found himself immediately engaged in war with Nicomedes ; but, being assisted by Mithri- dates, not only drove him out of Cappadocia, but stripped him of a great part of his hereditary dominions. On the conclusion of the peace, Mithridates seeking for some pretence to quarrel with Ariarathes, insisted upon his recalling Gor- dius, who had murdered his father ; which being rejected with abhorrence, a war ensued. Mithri- dates took the field first, in hopes of over-run- ning Cappadocia before Ariarathes could be in a condition to make head against him ; but, con- trary to his expectation, he was met on the fron- tiers by the king of Cappadocia, with an army no way inferior to his own. Hereupon he in- vited Ariarathes to a conference ; and in sight of both armies stabbed him with a dagger, which he had concealed under his garment. This struck such terror into the Cappadocians, that they immediately dispersed, and gave Mithri- dates an opportunity of possessing himself of the kingdom without the least opposition. The Cappadocians, however, not able to endure the tyranny of his prefects, soon shook off' the yoke ; and recalling the king's brother, who had fled into the province of Asia, proclaimed him king. He was scarcely seated on the throne, however, before Mithridates invaded the kingdom at the

head of a very numerous army, and, having drawn Ariarathes to a battle, defeated his army with great slaughter, and obliged him to abandon the kingdom. The unhappy prince soon after died of grief, and Mithridates bestowed the kingdom on his own son, who was then only eight years old, giving him at the same time the name of Ariarathes X. Cappadocia passed through va- rious struggles for and with their Roman allies, till the reign of Ariobarzanes II. who proved no less faithful to the Romans than his predecessors. On the breaking out of the civil war between Ccesar and Pompey, he sided with the latter ; but after the death of Pompey, was received injo favor by Caesar, who bestowed upon him great part of Armenia. While Cassar was engaged in a war with the Egyptians, Pharnaces, king of Pontus, invaded Cappadocia, and stripped Ario- barzanes of all his dominions ; but Caesar, hav- ing defeated Pharnaces,

restored the king of Cappadocia, and honored him with new titles of friendship. After the murder of Caesar, Ario- barzanes, having refused to join Brutus and Cassius, was by them declared an enemy to the republic, and soon after taken prisoner and put to death. He was succeeded by his brother, Ariobarzanes III. who was by Marc Antony de- prived both of his kingdom and life ; and in him ended the family of Ariobarzanes. Archelaus, the grandson of that general of the same name, who commanded against Sylla in the Mithridatic war, was by Marc Antony placed on the throne of Cappadocia, though nowise related either to the family of Pharnaces or Ariobarzanes. His preferment was entirely owing to his mother, Glaphyra, a woman of great beauty, but of loose behaviour, who, in return for her com- pliance with the desires of Antony, obtained the kingdom of Cappadocia for her son. In the war between Augustus and Antony, he joined the latter; but, at the intercession of the Cap pado- cians, was pardoned by the emperor. He after- wards received from him Armenia the Lesser, and Cilicia Trachfea, for having assisted the Romans in clearing the seas of pirates, who greatly infested the coasts of Asia. He con- tracted a strict friendship with Herod the Great," king of Judea, and married his daughter Glaphyra to Alexander, Herod's son. In the reign of Tiberius, Archelaus was summoned to appear before the se'nate, for he had always been hated by that emperor, because, in his retirement, at Rhodes, he had paid him no sort of respect. This had proceeded from no aversion in him to Tiberius, but from the warning given Archelaus by his friends at Rome. For Caius Ctesar, the presumptive heir to the empire, was then alive, and had been sent to compose the differences of the east, whence the friendship of Tiberius was then looked upon as dangerous. But when he came to the empire, Tiberius, remembering the disrespect shown him by Archelaus, enticed the litter to Rome by means of letters from Livia, . who promised him her son Tiberius's pardon, provided he came in person to implore it. Ar- chelaus obeyed the summons, and hastened to Rome, where he was received by the emperor with great wrath and contempt, and soon after accused as a criminal in the senate. The crimes

of which lie was accused were mere fictions ; but his concern at seeing himself treated as a malefactor was so great, that he died soon after of grief, or, as others say, laid violent hands on himself. He is said to have reigned fifty years. On the death of Archelaus, Cappadocia was re- duced to a Roman province, and governed by those of the equestrian order. It continued sub- ject to the Romans till the invasion of the eastern empire by the Turks, to whom it is now subject. The Turks have four Beglerbeglics in it.

CAPPANUS, a name given by some authors to a worm that adheres to and gnaws the bottoms of ships, to which it is extremely pernicious, especially in the East and West Indies ; to pre- vent this, ships are now sheathed with

copper, the first trial of which was made on his majesty's frigate the Alarm.

CAPPARIS, in botany, a genus of the mono- gynia order, and polyandria class of plants, na- tural order twenty-fifth, putamineae : CAL. tetra-phyllous and coriaceous ; the petals are four, the stamina are long ; the fruit is a berry, carnous, unilocular, and pedunculated. There are thirty species, of which the principal is C. spinosa, or common caper, a low shrub, generally growing out of the joints of old walls, the fissures of rocks, and among rubbish, in most of the warm parts of Europe. It has woody stalks, which send out many lateral slender branches. At the joints, between the branches, come out the flowers on long foot-stalks; before these expand, the bud, with the empalement, is gathered for pick- ling. Those which are left expand in form of a single rose, having five large white petals, which are roundish and concave ; in the middle are placed a great number of long stamina, surround- ing a style which rises above them, and crowned with an oval gerrnen, which afterwards becomes a capsule filled with kidney-shaped seeds. This plant is very difficult to preserve in Britain ; it delights to grow in crevices of rocks, old walls, &c. and always thrives best in an horizontal pos- ture ; so that, when planted either in pots or in the full ground, they seldom thrive, though they may be kept alive for some years. They are pro- pagated by seeds in the warm parts of Europe, but very seldom in Britain. The buds, pickled with vinegar, &c. are brought to Britain annually from Italy and the Mediterranean. They are supposed to excite appetite and assist digestion 5 and to be particularly useful as detergents and aperients in obstructions of the liver and spleen.

CAPPE (Newcome), a dissenting divine of the Unitarian persuasion, was born in 1732-3, at Leeds. He was placed at an early age with Dr. Aikin, at Kibworth, in Leicestershire, and afterwards with Dr. Doddridge. He went to Glasgow to complete his education in 175?, and settled ultimately as the pastor of a dissenting congregation at York. He died in 1800, having held this situation forty ye'ars. His works are : Discourses on the Providence and Government of God; Remarks in Vindication of Dr. Priest- ley ; a Selection of Psalms for Social Worship ; Critical Remarks on many important parts of Scripture, 2 vols. 8vo. &c.

CAPRA, the goat, a genus of quadrupeds be- longing to the order pecora. The horns are

persistent, hollow, turned upwards, erect, and scabrous. There are eight fore teeth in the under jaw, and none in the upper ; and they have no dog

teeth. In describing the different species and varieties of this genus, we have again to complain of that confusion of names and descriptions, which we find among zoolo- gists, and which renders it extremely difficult to give a complete, and at the same time a distinct, arrangement of them all. Linnaeus and other naturalists reckon fourteen species of this genus, under one of which, viz. the dorcas, they include most of the varieties of the antelope. Ken- reckons only eleven, some of which are by others ranked only as varieties of the common species. But both Kerr and Pennant, as well as Gmelin, Erxleben, and Pallas, make the antelope a dis- tinct genus, forming a link between the goat (capra), and the deer (cervus), with the former of which the antelopes agree in the texture of their horns, which have a core, and in their never casting them; and with the latter, in their ele- gance of form. Of this genus Kerr enumerates twenty-nine species. Adhering, however, to Linnaeus's classification of the whole tribe under one genus (though we by no means dispute the propriety of dividing the goats from the ante- lopes), the following is the most complete ar- rangement we can make of these animals.

I. CAPRA .&GAGRUS of Pallas and Gmelin ; the cervicapra of Kaempfer, and the Caucasan goat of Pennant and Zimmerman, has large smooth black horns, sharply ridged on their upper, and hollowed on their under surface. There are no vestiges of knots or rings, but on the upper surface are some wavy risings ; they bend much back, and are much hooked at the end, approaching a little at the points. On the chin is a great beard, dusky, mixed with chest- nut. The fore part of the head is black, the sides mixed with brown ; the rest of the animal gray, or gray mixed with rust color. Along the middle of the back, from the neck to the tail, is a black list; and the tail is black. The female is either destitute of horns, or has very short ones. In size it is superior to the largest he- goat, but in form and agility resembles a stag. They inhabit the lower mountains of Caucasus and Taurus, all Asia Minor, and perhaps the mountains of India, and abound on the inhos- pitable hills of Persia. It is an animal of great agility.

II. CAPRA AMMON has semicircular, plain, white horns, and no beard. It is about the size of a ram, and is a native of Siberia. This ani- mal is called the wild sheep by Mr. Pennant, and is accordingly ranked as a species of ovis by Kerr.

III. CAPRA BEZOARTICA, the bezoar goat, is bearded, and has long, wrinkled, slender, up- right, tapering, sharp-pointed horns. It is a native of Persia. The bezoar is found in one of its stomachs, called abomasus. It has a red fur, with a white breast and belly ; and is classed among the antelopes by Gmelin, Pallas, Pen- nant, &c.

IV. CAPRA CAUCASICA, the Caucasan goat, de- scribed by Kerr, as quite

a different species from the Caucasan goat of Pennant. The horns, he

says, are slightly triangular, knobbed on their anterior surface and arched backwards, consi- derably divaricating, with their extremities turned inwards. It inhabits the bare, schistic, rocky summits of mount Caucasus, near the origin of the Terek and Chouban rivers. The horns of the male are of a dirty blackish color, and much longer than those of the common goat ; those of the female are brownish, and much smaller. The upper parts of the body are a bright brown- ish gray, with a narrow dark brown line along the back; the under parts are whitish, and the limbs black. The hair is harsh, somewhat stiff, ash-colored at the roots, and mixed with an ash- colored wool. It is about the size of a common goat, with which, however, it will not breed ; and is rather shorter and broader in its general form.

V. CAPRA CERVICAPRA, the lidmee, or In- dian antelope of Buffon, has long prominently annulated, tapering, plaited, cylindrical horns, and inhabits Barbary. The hair near the horns is longer than in any other part of the body. The females want horns.

VI. CAPRA DEPRESS A, the African goat, has short, thick, triangular, depressed, horns, bent in- wards, lying on the head. It is about the size of a kid; and the hair is long and pendulous, rough in the male, but smooth in the female. The male has also two long hairy wattles be- low the chin.

VII. CAPRA DORCAS, the antelope, has cylin- drical annulated horns, bent backward, con- torted, and arising from the front between the eyes. It is a native of Africa and Mexico. These animals are of a restless and timid dis- position; extremely watchful ; of great vivacity ; remarkably swift; exceedingly agile; and their boundings so light and elastic, as to strike the spectator with astonishment. What appears sin- gular, they will stop in the middle of their course, for a moment gaze at their pursuers, and then resume their flight. The chase of these animals is a favorite diversion in the east. The greyhound is unequal in the course; and the sportsman is obliged to call in the aid of the falcon, trained to the work, to seize on the ani- mal, and so to impede its motions as to give the dog time to overtake it. It is a common com- pliment in the east ; to say, ‘ Aine el czazel,’ i. e. you have the eyes of an antelope. Some species form herds of 2000 or 3000, while others keep in small troops of five or six. They generally reside in hilly countries, and some browse like the goat. To the distinctive marks of the ante- lope we may add the following characteristics viz. that most of them have distinct lachrymA pits under the eyes ; that all have a plait of the skin subdivided into several cells in the groins ; brushes of hair on the knees, and beautiful black eyes: in general also their flesh is excellent. Kerr, who, as already observed, classes the an- telope as a distinct genus, enumerates twenty- nine species; among which he ranks the Bezoap tica, cervicapra,

gazella, and tartarica of Lin- naeus.

VIII. CAPRA GAZELLA, the goat antelope of Linnaeus, the antelope oryx, or Bezoartica of Pallas, the pasan of Buffon, or Egyptian ante-

lope of Pennant, has straight, slender, distinctly annulatcd horns, three feet long, which taper to a point : the body and sides are of a reddish ash color, with a dusky line along the hack. It in- habits Syria, Arabia, Persia, India, Egypt, Ethiopia, and the Cape. It is about the size of a fallow deer. Gmelin takes this for the zebi of Scripture.

IX. CAPRA GNOU, has scabrous horns, thick at the base, bending forward close to the head, then suddenly reverting upwards. The mouth is square; the nostrils covered with broad flaps. From the nose, half way up the front, is a thick oblong square brush of long stiff black hairs reflected upwards, on each side of which the other hairs are long, and point closely down the cheeks. Round the eyes are disposed in a ra- diated form several strong hairs. The neck is short, and a little arched. On the top is a strong and upright mane, reaching from the horns be- yond the shoulders. On the chin is a long white beard ; and on the gullet a very long pendulous bunch of hair. The legs are long, elegant, and slender, like those of a stag. On each foot is only a single spurious or hind hoof. It is a strange compound of animals ; having a vast head like that of an ox, body and tail like a horse, legs like a stag, and the sinus lacrymalis of an ante- lope. Its ordinary size is about that of a com- mon galloway; its length being. somewhat above five, and height rather more than four feet. These animals inhabit in great numbers the fine plains of the great Namaquas, far north of the Cape of Good Hope, extending from south lati- tude 25►► to 28►► 42', where Africa seems at once to open its vast treasures of hoofed quadrupeds. The gnou is an excedingly fierce animal : on the sight of anybody it usually drops its head, and puts itself into an attitude of offence ; and will dart with its horns against the pales of the en- closure towards the persons on the outside ; yet it will afterwards take the bread which is offered. It will often go upon its knees, run swiftly in that singular posture, and furrow the ground with its horns and legs. The Hottentots call it gnou from its voice. It has two notes, one re- sembling the bellowing of an ox, the other more clear. It is called an ox by the Europeans, and is stiled accordingly bos gnou by Zimmerman.

X. CAPRA HIRCUS, the common goat, with arched carinated horns, and a long beard. It is a native of the eastern mountains. Goats are animals of

more sagacity than sheep. Instead of having an antipathy to mankind, they voluntarily mingle with them, and are easily tamed. Even in uninhabited countries, they betray no savage dispositions. They have a lively, capricious, and wandering disposition ; are fond of high and so- litary places, and frequently sleep upon the very points of rocks. They are more easily sup- ported than any other animal of the same size ; for there is hardly a herb, or the bark of a tree, which they will not eat. Neither are they liable to so many diseases as sheep, and can bear heat and cold with less inconvenience. Goats go with young four months and a half, and bring forth from the end of February to the end of April. They have only two teats, and generally bring forth but one or two young ; sometimes

three, and in good warm pastures there have been instances, though rare, of their bringing forth four at a time. ►► Both young and old are affected by the weather ; a rainy season makes them thin, a dry sunny one fat and blythe. In our climate they seldom live above eleven or twelve years. Though their food costs next to nothing, their produce is valuable. The whitest wigs are made of their hair; for which purpose that of the he- goat is most in request. The Welsh goats are far superior in size, and in length and fineness of hair, to those of other mountainous countries. Their usual color is white : those of France and the Alps are short- haired, reddish, and the horns small. Bolsters, made from the hair of a goat, were in use in the days of Saul, as appears from 1 Sam. xix. 13. The species very probably was the Angora goat, whose soft and silky hair supplied a most luxu- rious couch. ....The suet of the goat is in great esteem as well as the hair. The inhabitants of Caernarvonshire suffer these animals to run wild on the rocks in winter as well as in summer ; and kill them in October for the sake of their fat. The goats killed for this purpose are about four or five years old. Their suet makes candles far superior in whiteness and goodness to those made from that of the sheep or the ox, and accord- ingly brings a much greater price in the market; nor are the horns without their use, the country- people making of them excellent handles for tucks and penknives. ►►► The skin is peculiarly well adapted for the glove manufactory, espe- cially that of the kid : abroad it is dressed and made into stockings, bed- ticks, bed-hangings, sheets, and even shirts. In the army it covers the horseman's arms, and carries the foot-soldier's provisions. As it takes a dye better than any other skin, it was formerly much used for hang- ings in the houses of people of fortune, being susceptible of the richest colors, and when flow- ered and ornamented with gold and silver, be- came an elegant and superb furniture. The flesh is of great use to the inhabitants of those coun- tries which abound with goats ; and affords them a cheap and plentiful provision in winter. The haunches are frequently salted and dried, and supply all the uses of bacon : this by the Welsh is called coch yr wden, or hung venison. The meat of a spayed goat of six or seven years old,

(which is called hyfr) is reckoned the best; being generally very fat and sweet. It makes an excellent pasty ; goes under the name of rock venison ; and is little inferior to that of the deer. The milk is sweet, nourishing, and medicinal. It is an excellent succedaneum foe ass's milk; and has, with a tea-spoonful oi hartshorn, drunk warm in bed in the morning and afternoon, and repeated for some time, proved a cure for phthisis when not too far gone. In some of the mountainous parts of Scotland and Ireland, the milk is made into whey, which has done wonders in this and similar cases ; and to many of those places there is as great a resort of patients of all ranks, as there is in England to the spas or baths. The milk of this animal must be salutary, as it browses only on the tops, tendrils and flowers, of the mountain shrubs, and medt dicinal herbs ; rejecting the grosser parts. Tbl

blood of the he-goat, dried, was formerly reckon- ed a specific in pleurisies, and is even taken no- tice of by Dr. Mead for this purpose; but is now deservedly neglected. Cheese made of goat's milk is much valued in some of our mountainous countries, when kept to a proper age. It has a peculiar taste and flavor. There are several va- rieties of the common goat: such as, 1. C. hircus Angorensis, the Angora goat, a variety found only in the tract that surrounds Angora, Beibazar, and Cougna, in Asiatic Turkey, and about Gombron in Persia. 2. C. hircus capri- cornus, the capricorne of Buffon, has short horns, the ends turned forwards, their sides annulated, and the rings more prominent before than behind. Kerr says the place, history, and even figure, of this animal are uncertain. 3. C. hircus mutica, the cabonus goat of Pennant, is ranked by Kerr as a distinct species, although he styles it ' a va- riety resembling the common domestic goat in everything but the want of horns.' Perhaps this deficiency may be accidental, like that of many of the Scots oxen.

XI. CAPRA IBEX, the wild goat, is sup- posed to be the stock whence the tame species sprung. It has large knotty horns reclined upou its back, is of a yellowish color, and its beard is black. The females are less and have smaller horns, more like those of a common she-goat, and with few knobs on the upper surface : they bring forth one kid, seldom two, at a birth. They in- habit the highest Alps of the Orisons country and the Valais ; they are also found in Crete, Italy, the Appenines, Germany, Siberia, and Kamtschat- ka. They are very wild, and difficult to be shot, as they always keep on the highest points. Their chase is exceedingly dangerous : being very strong, they often tumble the incautious huntsman down the precipices, unless he has time to lie down, and let the animals pass over

him. They are said not to be long-lived. Their flesh is much esteemed, and their skins are very thin.

XII. CAPRA MAMBRINA, or MAMBRICA, the Syrian goat, has short reclined horns, pendent ears, and a beard. It is a native of the east. Their ears are of vast length ; from one to two feet; and sometimes so troublesome, that the owners cut off one to enable the animal to feed with more ease. These animals supply Aleppo with milk. They are larger than the common goats.

XIII. 1. CAPRA REVERSA, the buck of Juda, has short, smooth, erect horns, curved a little forwards. It is about the size of a kid of a year old. It inhabits Juda, or Widaw, in Africa. Kerr describes another variety, viz. 2. C. reversa nana, styled by Buffon, the other buck of Juda. It inhabits the same country, is likewise of dwarfish size, and, though joined with the pre-ceding by Gmelin, is separated by Kerr, on ac- count of the different figure of the horns ; which he describes as ' very thick, rounded on the up- per surface, with two sharp edges below; and bent backwards with a slight spiral twist, down- wards, outwards, and upwards.'

XIV. CAPRA RUPICAPRA, the chamois goat, has smooth, erect, and crooked horns. The body is of a dusky red color ; but the front, top of the bead, gullet, and inside of the ears are white;

the under part of the tail is blackish ; and the up- per lip is a little divided. It inhabits the Alps of Switzerland, Italy, and the ci-devant province of Dauphine, the Pyrenean mountains, Greece, and Crete : does not dwell so high in the hills as the ibex, and is found in greater numbers. It is of the size of a domestic goat, and its hair is as short as that of a hind. Its vivacity is delightful, and its agility truly admirable. These animals are very social ; they go in little flocks of from three to twenty; sometimes from sixty to a hundred of them are seen dispersed along the declivity of the same mountain. The large males keep at a distance from the rest, except in the rutting season, when they join the females, and beat off all the young. At this period, their ardor is still longer than that of the wild bucks. They bleat often, and run from one mountain to another. Their season of love is in the months of October and November, and they bring forth in March and April. A young female takes the male at the age of eighteen months. The females bring forth one, but rarely two, at a time. The young follow their mothers till October, if not dispersed by the hunters or the wolves. They live between twenty and thirty years. Their flesh is very good. A fat chamois goat will yield from ten to twelve pounds of suet, which is harder and better than that of the goat. The blood of the chamois is extremely hot, and is said to have qualities and virtues nearly equal to those of the wild goat. The voice of the chamois is a very low and almost imperceptible kind of

bleating, resembling that of a hoarse domestic goat. By this bleating they collect together. But, when alarmed, or when they perceive an enemy, they advertise one another by a kind of whistling noise. The sight of the chamois is very penetrating, and his sense of smelling is acute. When he sees a man distinctly, he stops for some time, and flies off when he makes a nearer approach. His sense of hearing is equally acute, for he hears the smallest noise. When the wind blows in the direction of a man, he will perceive the scent at the distance of more than half a league. Hence, when he smells or hears any thing which alarms him, he whistles with such force, that the rocks and forests re-echo the sound. All his brethren that are near take the alarm. This whistling is performed through the nostrils, and consists of a strong blowing, similar to the sound which a man may make by fixing his tongue to the palate, with his teeth nearly shut, his lips open, and somewhat extended, and blowing long and with great force. The chamois is very fond of the leaves and tender buds of shrubs, particularly of the meum athamanta. Kramer, in his Hist. Nat. Aust. supposes the balls called asgagropila, found in his stomach, to be occa- sioned by this food. See EGAGROPIL. *He ruminates like the common goat. His head is adorned with two small horns, from half a foot to nine inches in length. Their color is a, fine black, and they are placed on the front nearly between his eyes ; and, instead of being reflected backwards, like those of other animals, they ad- vance forward above the eyes, and bend back- ward at the points, which are extremely sharp. He adjusts his ears most beautifully to the points of his horns. Two tufts of black hair descend*

from his horns to the sides of his face. The rest of the head is of a yellowish white color, which never changes. The horns of the chamois are used for the heads of canes. Those of the female are smaller and less crooked. The skin of the cha- mois, when dressed, is very strong, nervous, and- supple, and makes excellent riding breeches, gloves and vests. Garments of this kind last long, and are of great use to manufacturers. The chamois goats are so impatient of heat, that, in summer, tliey are only to be found under the shades of caverns in the rocks, among masses of congealed snow and ice, or in elevated forests, on the northern declivities of the most scabrous moun- tains, where the rays of the sun seldom penetrate. They pasture in the mornings and evenings, and seldom during the day. Their mode of climb- ing or descending inaccessible rocks is admirable. They neither mount nor descend perpendicularly, but in an oblique line. When descending, par- ticularly, they throw themselves down across a rock which is nearly perpendicular, and of twenty or Jiirty feet in height, without having a single prop to support their feet. In doing this, they strike their feet

three or four times against the rock, till they arrive at a proper resting place below. The spring of their tendons is so great, that, when leaping about among the precipices, one would imagine they had wings instead of limbs. The legs are long; those behind are some- what longer, and always crooked, which favors their springing to a great distance ; and, when they throw themselves from a height, the hind legs receive the shock, and perform the office of two springs in breaking the fall. During winter, they inhabit the lower forests, and live upon pine leaves, the buds of trees, bushes, and such green or dry herbs as they can find by scratching off the snow with their feet. The forests that delight them most, are those which are very full of rocks and precipices. The hunting of the chamois is very difficult and laborious. See HUNTING. This species is ranked among the antelopes by Messrs. Pennant, Kerr, Gme- lin, &c.

XV. CAPRA TARTARICA, the saiga of Buffon, has cylindrical, straight, annulated horns ; the points inclining inward, the ends smooth ; the other part surrounded with very prominent annu- li; of a pale yellow color, and the greatest part semipellucid ; the cutting teeth are placed so loose in their sockets, as to move with the least touch. The male is covered with a rough hair like the he-goat, and has a very strong smell ; the female is smoother. The hair on the sides and throat is long, and resembles wool ; that on the neck and head is hoary ; the back and sides of a dirty white ; the breast, belly, and inside of the thighs, of a shining white. The females are destitute of horns. These animals inhabit all the deserts from the Danube and Dnieper to the River Irtish, but not beyond. Nor are they ever seen to the N. of 54►► or 55►► lat. They are found in Poland, Moldavia, about Mount Caucasus, the Caspian Sea, and Siberia, in the dreary open de- serts, where salt springs abound, feeding on the salt, acrid, and aromatic plants of those coun- tries, and grow in summer very fat : but their flesh acquires a taste disagreeable to many people, and

is scarcely eatable, until it is suffered to grow cold after dressing. The females go with young the whole winter; and bring forth in the northern deserts in May. The young are covered with a soft fleece, like new dropped lambs, and curled and waved. They are regularly migratory. In the rutting season, late in autumn, they collect in flocks of thousands, and retire into the southern deserts. In the spring they divide into little flocks, and return northward. The male feeds promiscuously with the females and their young. They rarely lie down all at the same time ; but, by a provident instinct, some are always keeping watch ; and, when they are tired, they seemingly give notice to such as have t,aken their rest, who rise instantly, and relieve the sentinels. They thus often preserve them- selves from the attack of wolves, and the surprise of the huntsmen. They are excessively swift, and will outrun the fleetest horse or greyhound ; yet partly through fear (for they are 'the most timid of animals), and partly by the shortness

of their breath, they are very soon taken. If they are bit by a dog they instantly fall down, nor will they even offer to rise. In running they seem to in- cline on one side. In a wild state they have no voice. When brought up tame, the young emit a short sort of bleating, like sheep. The males are very libidinous. When taken young they may easily be tamed ; but, if caught at full age, they are so wild and obstinate as to refuse all food. When they die, their noses are quite flaccid. They are hunted for the sake of their flesh, horns, and skins, which are excellent for gloves, belts, &c. See HUNTING. The fat re- sembles that of mutton; in taste, that of a buck : the head is reckoned the most delicate part.

CAPRˆE SALTANTES, Lat. i. e. dancing goats, in meteorology, fiery meteors or exhalations, sometimes seen in the atmosphere. They form inflected lines, resembling in some measure the caperings of a goat ; whence the name.

CAPRARIA, in botany, goat-weed, a genus of the angiospermia order, and didynamia class of plants ; natural order fortieth, personatae : CAL. quinquepartite : COR. campanulated, quin- queh'd, with acute segments : CAPS, bivalved, bilocular, and polyspermous. Species, six ; the principal, C. biflora, is a native of the warm parts of America.

CAPREA, orCAPRE.s, in ancient geography, an island in the Tuscan Sea, famous for the re- treat of the emperor Tiberius for seven years. See TIBERIUS. Before he came hither Capreae had attracted the notice of Augustus, as a most eligible retreat, though almost in the centre of the empire. His successor preferred it to every other residence; and in order to vary his plea- sures, and enjoy the advantages as well as avoid the inconveniences of each revolving season built twelve villas in different temperatures, and dedicated to the twelve greater gods : the ruins of some of them are still to be seen. The odium attached to the memory of Tiberius proved fatal to his favorite abode ; scarcely was his death pro- claimed at Rome, when the senate issued orders for the demolition of every fabric he had raised on the island, which, by way of disgrace, was

thenceforward destined to be a state prison. The wife and sister of Commodus were banished to its inhospitable rocks, which were soon stained with their blood. In the middle ages Capreae became an appendage of the Amalfitan republic, and, after the downfall of that state, fell to the

duchy of Naples. There stood a pharos on this island, which, a few days before the death of Tiberius, was overthrown by an earthquake. See CAPRI.

CAP'REOLATE, adj. from the Lat. capreolus, a vine tendril.

Such plants as turn, wind, and creep along the ground, by means of tendrils, as gourds, melons, and cucumbers, are termed, in botany, capreolate plants.

Harris.

CAPREOLI, in botany, the tendrils by which vines, peas, and other creeping plants, fasten themselves to any thing near them. See BOTANY.

CAPREOLUS, in anatomy, the helix, or outer ambit of the ear.

CAPRI, an island at the entrance of the Gulf of Naples, anciently called Caprea, seven miles long, and two broad. A large portion of its sur- face is unfit for cultivation ; but every spot that will admit the hoe, is industriously tilled, and richly laden with the best productions of the earth. It exhibits some relics of its ancient grandeur. Two broken columns show the en- trance of Tiberius's court (see CAPREA) ; at Santa Maria there are extensive vaults and reser- voirs ; and, on an adjacent hill, the remains of a light house. The island is much frequented by quails, forming the principal revenue of the bishop, whence he is called the bishop of quails.

CAPRI, the capital of the above isle, seated on a high rock at the west end of it, twenty-seven miles from Naples. Long. 14►► 8′ E., lat. 40►►11′ N.

CAPRI'CE, v Fr. caprice; Ital. CO CA PRI'CHIO, I priccio ; Span, capricho;

CAPRI'CIOUS, vfrom Lat. coper, a goat;

CAPRI'CIOUSLY, i allusively to the wanton-

CAPRI'CIOUSNESS. J ness and freakishness of that animal. Serenius, on the other hand, traces caprice to the Gothic kepra, corrugare frontem. ' Caprichio,' says Sherwood, is ' a fantasticall hu- mour ;' and the word caprice, in the French, he defines to be a' humour, caprichio, giddy thought, fantasticall conceit ; a sudden will, desire, or purpose to do a thing, for which one hath no (ap- parent) reason.' This is so full and correct that it is unnecessary to add anything to it. The de- rivatives from the primary word need no explana- tion.

Will this capricio hold in thee, art sure ?

Shakspeare. All' Well.*

*TonCH. I am hare with thee and thy goats as the most capricious p*ct, honest Ovid, was among the Goths.*

JAO. O knowledge ill inhabited! worse than Jove in a thatched-house !

Id. At You Like It.

Act freely, carelessly, and capriciously , as if our veins ran with quicksilver. Ben Jonson.

Capricious, wanton, bold and brutal lust, Is meanly selfish ; when resisted cruel, And, like the blast of pestilential winds, Taints the sweet bloom of Nature's fairest forms. Milton'i Comiu.

It is a pleasant spectacle to behold the shifts, wind- ings, and unexpected coprichios of distressed Nature, when pursued by a close and well-managed experi- ment. Glanoille, Preface to the Scepsis. We are not be guided in the sense of that book, either by the misreports of some ancients, or the ca- prichios of one or two neoterics. Grew.

Quoth Hudibras, 'tis a caprich Beyond the infliction of a witch ; So cheats to play with those still aim, That do not understand 'he game. Hudibrat. Heaven's great view is one, and that the whole j That counterworks each folly and caprice, That disappoints the effect of every vice. Pope. A subject ought to suppose that there are reasons, although he be not apprised of them ; otherwise, he must tax his prince of capriciousneis, inconstancy, or ill design. Swift.

Love's a capricious power ; I've known it hold, Out, though a fever caused by its own heat, But be much puzzled by a cough and cold. And find a quinsy very hard to treat. Byron.

CAP'RICORN, n. Lat. capricornus. One of the zodiacal signs ; the winter solstice.

But when the golden spring reveals the year, And the white bird returns, whom serpents fear ; That season deem the best to plant thy vines : Next that, is when autumnal warmth declines ; Ere heat is quite decayed, or cold begun, Or Capricorn admits the winter sun.

Dryden. Georgics, b. ii.

Let the longest night in Capricorn be of fifteen hours, the day consequently must be of nine.

Notes to Creech's Manilius.

CAPRICORN, one of the signs of the zodiac, marked thus yj>. The ancients accounted Capri- corn the tenth sign; and it made the winter solstice with regard to our hemisphere : but the stars having advanced a whole sign towards the east, Capricorn is now rather the eleventh sign ; and it is at the sun's entry into Sagittarius, that the solstice happens, though the ancient manner of speaking is still retained. This sign is repre- sented on ancient monuments, medals, &c. as having the fore part of a goat, and the hind part of a fish, which is the form of an JEgipan : some- times simply under the form of a goat. The stars in this constellation are 0-0-3'3-9'35- in all fifty of the first six magnitudes.

CAPRICORN, TROPIC OF, a lesser circle of the sphere, which is parallel to the equinoctial, pass- ing through the beginning of Capricorn. See ASTRONOMY.

CAPRIFICATION, n. Lat. caprificatio. An operation performed to ripen the fruit of the fig- tree.

The process of caprification being unknown to these savages, the figs come to nothing. Bruce.

CAPRIFICATION, a method used in the Le- vant, for ripening the fruit of the domestic fig tree, by means of insects bred in that of the wild fig tree. The most ample and satisfactory accounts of this curious operation in gardening are those of Tournefort and Pontedera : the for- mer, in his Voyage to the Levant, and in a Memoir delivered to the Academy of Sciences at Paris in 1705; the latter, in his Anthologia. The caprification of the ancient Greeks and Ro- mans, described by Theophrastus, Plutarch, Pliny, and other authors of antiquity, corresponds in every circumstance with what is practised at this

day in the Archipelago and in Italy. These all agree in declaring, that the wild fig tree, caprifi- cus, never ripened its fruit ; but was absolutely necessary for ripening that of the garden or domestic fig, over which the husbandmen sus- pended its branches. The reason has been sup- posed to

be that by the punctures of these insects the vessels of the fruit are lacerated, and thereby a greater quantity of nutritious juice derived thither ; or that, in depositing their eggs, the gnats leave behind them some sort of liquor proper to ferment gently with the milk of the figs, and to make their flesh tender. The figs in Pro- vence, and even at Paris, ripen much sooner for having their buds pricked with a straw, dipped in olive oil. Plums and pears likewise pricked by some insects, ripen much faster, and the flesh round such puncture is better tasted than the rest. Linnaeus explained the operation, by sup- posing that the insects brought the farina from the wild fig, which contained the male flowers only, to the domestic fig, which contained the female ones. Hasselquist, from what he saw in Palestine, seemed to doubt of this mode of fruc- tification. M. Bernard, in the Memoirs of the Society of Agriculture, opposes it more decidedly. He could never find the insect ii. the cultivated fig ; and, in reality, it appeared to leave the wild fig after the stamina were mature, and their pollen dissipated : besides, he adds, what they may have brought on their wings must be rubbed away, in the little aperture which they would form for themselves.

*CA'PRIFOLE, Lat. caprifolium. Minsheu spells it caprifoile. The honey-suckle. See Lo- NICERA. ***

With wanton yvie-twine entrayled athwart,

And eglantine and caprifole emong.

Spenser. Faerie Queen.

*CAPRIMULGUS, the goat-sucker, or fern- owl, in ornithology, a genus of birds of the order passeres. The beak is incurvated, small, tapering, and depressed at the base; the mouth opens very wide. They lay two eggs, which they deposit on the naked ground ; the lateral toes are connected by a small membrane to the middle one. There are several species or varieties in different countries, but all nearly similar to one or other of the following : *** C. Americanus has the tubes of the nostrils very conspicuous. It is a night bird, and is found in America. C. Europaeus has the tubes of the nostrils hardly visible. It feeds on insects. This bird makes but a short stay with us ; appearing the latter end of May, and disappearing in Sep- tember. Scopoli seems to credit the report of their sucking the teats of goats, an error delivered down from the days of Aristotle. Its notes are most singular. The loudest so much resembles that of a large spinning wheel, that the Welsh call this bird aderyn y droell, or the wheel bird. It lays its eggs on the bare ground; usually two; they are of a long form, of a whitish hue, prettily marbled with a reddish brown. Its plumage is a beautiful mixture of white, black, ash-color, and ferruginous, disposed in lines, bars, and spots. The male is distinguished from the female by a great oval white spot near*

the end of the three first quill-feathers, and another on the outmost

feathers of the tail. A variety, only eight inches in length, inhabits Virginia, in summer : arrives there towards the middle of April, and frequents the mountainous parts, but will frequently ap- proach the houses in the evening, crying several times very loud, somewhat like the word, whip-eriwhip, or whip-poor-will, the first and last syllables pronounced loudest. Its eggs are of a dull green, with dusky spots and streaks. Another variety, larger, inhabits Virginia and Carolina ; where it is called the rain-bird, be. cause it nerer appears in the day-time, except when the sky, being obscured with clouds, betokens rain.

CAPRIOLE', n. Fr. capriole, cabriole: in horsemanship, a peculiar kind of leap, also call- ed the goats' leap. The word was also formerly descriptive of springing up in dancing ; but is no longer used in that sense.

Caprioles are leaps such as a horse makes in one and the same place, without advancing forwards, and in such a manner that when he is in the air, and height of his leap, he yerks or strikes out with his hinder legs even and near. A capriole is the most difficult of all the high menage, or raised airs. It is different from the cioupade in this, that the horse does not show his shoes ; and from a balotade, in that he does not yerk out in a balotade.

Farrier's Dictionary

A gallant dance, that lively doth bewray A spirit and a virtue masculine,

Impatient that her house on earth should stay. Since she herself is fiery and divine ; Oft doth she make her body upward fine k

With lofty turns and caprioles in the air,

With which the lusty tunes accordeth fair.

Davies. Orchestra.

CAPRIOLE. To make this air perfect, the horse should raise his fore and hind parts equally high, and when he strikes out behind, his croupe should be level with his withers. In rising and coming down his head should be quite steady, and his forehead presented quite straight ; in rising, his fore legs should be equally and a good deal bent; he ought to strike out with all his force with his hind legs ; his feet should be of an equal height ; and, lastly, he should, at every leap, fall a foot and a-half or two feet distant from the spot where he rose.

CAPSARIUS, from capsa, a chest, among the Roman bankers, was he who

had the care of the money-chest or coffer; also a servant who attended the Roman youth to school, carrying a satchel with their books in it; sometimes also called librarius.

CAPSICUM, in botany, Cayenne or Guinea pepper, a genus of the monogynia order, and pentandria class of plants ; natural order twenty-eighth, luridae : con. verticillated ; fruit, a sap- less berry. Species four, viz.: ††† C. annuum, with oblong fruit, the common long-podded cap-sicuni, commonly cultivated in the gardens. Of this there is one variety with red, and another with yellow fruit ; and of these there are several sub-varieties, differing only in the size and figure of their fruit. From the pods of this plant is produced the Guinea pepper of the shops. C. frutescens, Barbary pepper, with small pyrami- dal fruit growing erect. C. boccatum, having dark green leaves, white flowers, and roundish

CAP

red berries, from the powder of which is made the common Cayenne pepper. C. sinense, hav- ing soft red fruit, and longer dark shining green leaves.

CAPSQUARES, strong plates of iron which cover the trunnions of a gun, and keep it in the carriage. They are fastened by a hinge to the prize-plate, that they may lift up and down, and form the part of an arch in the middle to receive a third part of the thickness of the trunnions ; for two-thirds are let into the carriage, and the other end is fastened by two iron wedges called the forelocks and keys.

CAP'STAN, 7i.) Fr. cabestan ; Span, cubes- CAP'STAN-BAR. J trante, or cabrestante ; Belg. kapstand. It is sometimes erroneously called capstern. A cylinder, which is made to revolve by means of levers, for the purpose of raising any great weight, particularly the anchors of ships. The capstan-bar is the lever.

The weighing of anchors by the capstan is also new. Sir Walter Raleigh.

No more behold thee turn my watch's key, As seamen at the capstan anchors weigh.

Steift.

The CAPSTAN usually consists of a strong cy- linder of wood, with a truncated cone proceeding from the under extremity of its head. Jt is con-structed on the principle of the wheel and axle, and is put in motion by bars or levers, called hand-spikes. An apparatus of this description is generally employed on ship-board for the raising of anchors and other

violent manipula- tions.

There are commonly two capstans in a ship of war; the main-capstan, placed behind the main- mast, standing on the first deck, and reaching four or five feet above the second ; this is also called the double-capstan, because it has two drum-heads, and serves two decks for drawing of anchors, and because its force may be doubled by applying hands on each deck. It has bars, whelps, &c., for turning and stopping it. The other is the jeer-capstan, or little capstan : this stands on the second deck, between the main- mast and the mizen : its use is, chiefly, to heave up the jeer-rope, or to heave up the viol, to hold off by when the anchor is weighed, and on other occasions where a less force is required than to weigh the anchors, &c.

The parts of a capstan are ••• the foot, which is the lowest part ; the spindle, the smallest part of •••which turns round in an iron socket, called the saucer ; the whelps, a sort of brackets set into the body of the capstan close under the bars, and reaching downwards from the lower part of the drum-head to the deck ; the barrel, the main body of the whole ; the drum-head, which is a broad cylindric piece of wood fixed above the barrel and whelps, in which are the holes for the bars to be put into ; the bars, which are small pieces of timber by which the men heave ; the pins, which are little bolts of iron, thrust perpen- dicularly through the holes of the drum-head, and through a correspondent hole in the end of the bar made to receive them when the bars are fixed ; the pawls, which are pieces of iron bolted to one ecd of the beams of .the deck, close to the

body of the capstan, but so a that it has liberty to turn about every way ; and against them do the whelps of the capstan bear ; so that the capstan may be stopped from turning back. There are also hanging pawls, which reach from the deck above to the drum-head immediately beneath it ; and, lastly, the swifter, which is a rope passed horizontally through holes in the outer ends o. the bars, and, being drawn tight, is designed to keep the men steady whilst they work, and to afford room for a greater number to work at once.*

An important improvement has been suggested in the capstan by captain Hamilton of the royal navy, which is that of reducing the number of whelps from six to five, making the lower part more obtuse, and filling it up circular by the chocks, and also making the upper part more perpendicular in the sides, and open, the whelps being a portion of a circle.

There is a simple and powerful capstan which may now be noticed. It

consists of a compound barrel, or rather of two cylinders of different radii. If a rope be attached to one extremity of the smaller cylinder, and then, after passing round a pulley be made to coil on a large one, so that as the one rope unwinds the other is rolled up, the apparatus may be considered, as complete.

In describing a capstan of this kind, Dr Ro- bison asserts, that when the diameters of the cylinders which compose the double barrel are as 16 to 17, and their circumferences as 48 to 51, the pulley is brought nearer to the capstan by about three inches for each revolution of the bar. This, however, is a mistake, as the pufley is brought only an inch and a half nearer the axis. This will be evident if we conceive a quantity of rope, equal to the circumference of the larger cylinder, to be wound up all at once, and a quantity equal to the circumference of the lesser one, to be unwound all at once. In the present case 51 inches of rope will be coiled round the larger part of the barrel by one revolution of the cap- stan bar, and consequently the load would be raised 25►► feet, the rope being doubled. Let 48 inches of rope be now unwound from the lesser cylinder, and the load will sink 24 feet ; therefore 25 J ►►►► 24►►►► 1J feet is the whole height or distance through which the weight has be&n moved. See MECHANICS.

CAP'SULE, n. \ Lat. capsula, the dimi CAP'SOLAR, adj. I nutiveofcapsrt,fromra^a, CAP'SULARY, adj. V a little chest. The cell, CAP'SULATE, adj. i or ear, in plants, which CAP'SULATED, adj. J holds the seeds. The first two of the adjectives, derived from the noun, signify hollow, like a chest ; the last two, enclosed, as in a chest.

It ascendeth not directly into- the throat, but as- cending first into a capsulary reception of the breast- bone, it ascendeth again into the neck.

Browne's Vulgar Errouri.

Such (seeds) as are corrupted and state, will swim ; and this agreeth unto the seeds of plants locked up and capsiilated in their husks. Id.

The heart lies immersed, or capsidated, in a carti- lage, which Includes the h6art, as the skull doth the brain. Derham.

On threshing, I found things as I expected ; the cars not filled, some of the

capsules quite empty, and several others containing only withered hungry grain, inferior to the appearance of rye.

Burke on Scarcity.

The capsule of the geranium and the beard of wild oats are twisted for a similar purpose, and dislodge their seeds on wet days, when the ground is best fitted to receive them. Hence, one of these, with its adhering capsule, or beard, fixed on a stand, serves the purpose of an hygrometer, twisting itself, more or less, according to the moisture of the air.

Darwin.

CAPSULE. See BOTANY. CAP'TAIN, n&cs. ˆ Fr. capitaine; Ital.

Span, capi- Dut. kapitein ; kapten. ' In says Johnson, 'capitaneus, being one of those who, by tenure in capite, were obliged to bring soldiers to the war.' Skinner, however, derives it from caput. Todd supposes it to be a hybrid word, from caput, and thane, an ancient title of honor. It was anciently the title of a chief commander; but this use of the word is now nearly, if not quite, obsolete. Connected with this, it implied a man skilled in war; and it is still occasionally thus used. Its common acceptation is a commander of a ship, or of a company in a regiment ; but it is also employed in some civilcases, as in the captain of a class at school. The captain-general of an army is a general in chief, says Johnson ; but the term has a larger scope, extending to authority over various bodies of forces. The British monarch is captain-general, or generalissimo, of all the troops in his dominions. Captainry is chieftain- ship, or power over a certain district. Captain- ship, besides its obvious meaning, also denotes skill in military affairs.

Nashan shall be captain of Judah. Numbers. He sent unto him a captain of fifty. Kinys. Awhile they fled, but soone returned againe With greater fury than before was found ; And evermore their cruell capitaine Sought with his rascal routs t' enclose them round, And, overcome, to tread them on the ground.

Spenser.

There snould be no rewards taken for captainries of countries, no shares of bishoprics for nominating bishops. Id.

Dismayed not this Our captains, Macbeth and Banquo ?

Shakspeare. Macbeth.

A captain! these villains will make the name of captain as odious as the word occupy ; therefore cap- tains had need look to it. Id. Henry IV.

Therefore, so please you to return with us, And of our Athens, thine and ours, to take The captainship.

The lieutenant of the colonel's company might well pretend to the next vacant captainship in the same re- giment. Wotton. To diminish the Irish lords, he did abolish their pretended and usurped captainships. Davies on Ireland.

The grim captain, in a surly tone, Cries cut ••• Pack up, you rascals, and begone.

Dryden.

So the sweet lark, high poised in air, Shuts close his oinions to his breast,

If chance his mate's shrill calls he hear,

And drops at once into her nest.

The noblest captain in the British fleet

Might envy William's lip those kisses sweet. Ga;i.

There's Captain Pannel, absent half his life, Comes back, and is the kinder to his wife ; Yet Pannel's wife is brown, compared to me, And Mistress Biddel sure is fifty-three. Id.

CAPTAIN BASHAW, or CAPOUDAN BASHAW, the Turkish high admiral. He holds the third office in the empire, and is invested with the same power at sea that the vizier has on shore. He has absolute authority over the officers of the marine and ar- senal, whom he may punish, cashier, or put to death, as soon as he is without the Dardanelles. He commands in chief in all the maritime coun- tries, cities, castles, &c. ; and at Constantinople, is the first magistrate of police in the villages on the side of the Porte, and the canal of the Black Sea. The mark of his authority is a large Indian cane, which he carries in his hand, both in the arsenal and with the army. His chief revenue arises from a capitation of the islands in the Ar chipelago, and certain governments in Natolia and Gallipoli. He also receives the pay of all men who die during a campaign ; a fifth of all prizes made by the begs ; and he exacts contri- butions in all places where he passes.

CAPTAIN LIEUTENANT, an officer, who, with the rank of captain, but the

pay of lieutenant, commands a troop or company in the name of some other person, who is dispensed with on account of his quality from performing the func- tions of his post. Thus the colonel being usually captain of the first company of his regiment, that company is commanded by his deputy as captain lieutenant.

CAPTAIN OF A COMPANY OR TROOP, a com- missioned officer, who commands a company of foot, or a troop of horse, under a colonel. The duty of this officer is to be careful to keep his company full of able bodied soldiers; to visit their tents and lodgings, to see what is wanting ; to cause them to keep themselves neat and clean in their clothes, and their arms bright. He has power in his own company to make Serjeants and corporals, and lance-corporals. In the horse and foot-guards, the captains have the rank of lieutenant-colonels of the army.

CAPTAIN OF A MERCHANT SHIP, he who has the direction of the ship, her crew, lading, &c. In small ships, and short voyages, he is more ordinarily called the master. In the Mediterra- nean, he is called the patroon. ††† The proprietor of the vessel appoints thp captain or master ; and he is to form the crew, and choose and hire the pilots, mates, and seamen ; though when the proprietor and master reside on the same spot, they generally act in concert together.

CAPTAIN, POST, an officer commanding any vessel of war from a ship of the line down to a ship-rigged sloop. Formerly, a twenty -gunned ship was the smallest that gave post rank, but by a late regulation of the Lords Commissioners of the Admiralty, the largest class of ship sloops has been added to the list of post-ships, and post-captains under three years standing are now appointed to them, unless they happened to be se- lected as flag-captains to admirals' ships ; after

being three years posted, they are appointed to frigates, which they may continue to command fill they are of ten years standing, when they ˆe generally removed to fifty or sixty-four gun ships, preparatory to their taking the command cf ships of the line.

CAPTATION, n. Old Fr. captation; from Lat. capto. The practice of catching favor or ap- plause ; courtship ; flattery.

I am content my heart should be discovered, †††with- out any of those

dresses, or popular captations, which some men use in their speeches. King Charles,

CA'PTION, n. Lat capio, to take. A legal term, which has various meanings in the English and Scotch law. In England, when any com- mission at law or in equity is executed, the com- missioners subscribe the names to a certificate, testifying when and where the commission was executed ; and this is called a caption. There is likewise the caption of an indictment, setting forth of the style of the court before which the jurors made their presentment. The act of ar- resting a man is also called the caption. In Scotch law, caption is a writ issuing under his majesty's signet, commanding messengers at arms to apprehend and detain a debtor ; and likewise a writ issued by the court of session, to compel agents of the court to return pa- pers belonging to processes or law suits, under penalty of being sent to prison in case of diso- bedience.

There is also an obsolete English use of the word, signifying to take a person unawares by some trick or cavil. It is thus used by Chilling- worth, in his Religion of Protestants.

CA'PTIOUS, adj. } Fr. captieux ; Ital. cap-

CA'PTIOUSLY, adv. > zioso ; Span, capcioso ;

CA'PTIOUSNESS, n.J Lat. captiosus. ' Of catch- ing,' says Minsheu, ' because captious men catch at others.' To be captious is to be prone to cavil ; ready to take sudden and unexpected of- fence, where none is intended to be given. The captious man is one of the most unpleasant of companions. There is no probability of avoid- ing a quarrel with him. He raises a dispute on everything that is said, and, by a sinister sort of transmutation, converts the most innocent words and actions into premeditated affront. He will even go beyond Hotspur, for he will ' cavil on the ninth part of a hair,' though there be nothing in ' the way of bargain ' to excite him to it. Captious also means insidious, ensnaring ; as will be seen in the quotation from Bacon ; but is less frequently used in this -sense:

She taught him likewise to avoid sundry captious and tempting questions, which were like to be asked of him. Bacon.

If he show a forwardness to be reasoning about things, take care that nobody check this inclination, or mislead it by captious or fallacious ways of talking with him. Locke.

Use your words as captiotuly as you can, in your arguing on one side, and apply distinctions on the other. Id.

Cautiousness is a fault opposite to civility ; it often produces misbecoming and provoking expressions and carriage. Id.

Friend, quoth the Cur, I meant no harm ; Then why so captious, why so warm ? My words, in common acceptation, Could never give this provocation. Gay.

CAPTIVATE, v. & adj.ˆ Fr. captive, cap CAPTIVA'TION, n. lif; Ital. cattivare,

CAPTA'TION, n. \ cattivo; Span, cap-

CAP'TIVE, v. n. & adj. \tivar ; captivo ; mo- CAP'TIVAUNCE, n. I dern Span, cauti-

CAP'TURE, ti. & n. var, cautivo ; Lat.

CAP'TOR, n. J captivo, captivus ;

from capio. To make prisoner ; to reduce to slavery ; to enthral or subjugate, mentally or corporeally. Captivate and captivation were once used in the sterner sense of to take pri- soner; they are now applied only to the victorious ascendancy which is acquired over the mind by beauty and the fine arts; the willing thraldom of the heart. Mr. Todd ob- serves, that to captive ' was used formerly with the accent on the last syllable, but now it is on the first. The old accent seems to have been discontinued in Milton's time ; for Dryden, it appears, places the accent on the first syllable.' This, however, may be disputed ; as instances of the accent being thrown on the first syllable are to be found in Shakspeare and other writers, who preceded Milton. Captive takes to before the captor. Captivaunce is synonymous with cap- tivity. In the quotation from the Psalms, capti- vity is put, by a bold figure, a personification, for those who had led others captive. Capture, as a verb, is of modern introduction.

Thou hast ascended on high, though hast led cap- tivity captive, thou hast received gifts for men.

Psalm Ixviii. 18.

Love, that liveth and reigneth in my thought, That built his seat within my captive breast. Clad in the armes, wherein with me he fought,

Oft in my face he doth his banner rest. She that methought to love, and suffer pain,

My doubtfull hope, and eke my hot desire, With shamfast cloke to shadow

and restrain. Her smiling grace converteth straight to ire.

Surrey.

But being all defeated save a few, Rather than fly, or be captived, herself she slew.

Spenser.

How ill beseeming is it in thy sex, To triumph, like an Amazonian trull, Upon their woes, whom fortune captivates.

Shakspeare.

Thou hast by tyranny these many years Wasted our country, slain our citizens And sent our sons and husbands captivate. Id.

You have the captives, Who were the opposites of this day's strife. Id.

If thou say Antony lives, 'tis well, Or friends with Caesar, or not captive to him.

Id.

My woman's heart Grossly grew captive to his honey words. Id.

This is the Serjeant,

Who, like a good and hardy soldier, fought 'Gainst my captivity. Id.

For men to be tied, and led by authority, as it were with a kind of captivity of judgment ; and though there be reason to the contrary, not to listen to it.

Hooker.

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Then when I am thy captive talk of chains, Proud limitary cherub; but ere then Far heavier load thyself expect to feel From my prevailing arm, though heaven's king Ride oil thy wings, and thou with thy compeers, Used to the yoke, draws't his triumphant wheels In progress through the road of heaven star-paved.

Milton's Paradise Lost.

There in captivity he lets them dwell The space of seventy years, then brings them back.

Id.

Thou leavest them to hostile sword Of heathen and profane, their carcasses To dogs and fowls a prey, or else captived.

Id. Satnson Agonittes.

lie deserves to be a slave that is content to have the rational sovereignty of his soul, and the. liberty of his will so captivated. King Charles I.

Now nothing more at Chatam's left to burn, The Holland squadron leisurely return ; And, spite of Ruperts and of Albermarles, To Ruyter's triumph led the captive Charles.

Marvell.

To make a final conquest of all me, Love did compose so sweet an enemy, In whom both beauties to my death agree, Joining themselves in fatal harmony ; That, while she with eyes my heart doth bind, She with her voice might captivate my mind. Id.

What further fear of danger can there be ? Beauty, which captives all things, sets me free.

Dryden.

But Fate forbids ; the Stygian floods oppose, A nd with nine circling streams the captive souls enclose.

Id.

The name of Ormond will be more celebrated in his captivity than in his greatest triumphs. H-

They stand firm, keep out the enemy truth, that would captivate, or disturb them. Locke.

They lay a trap for themselves, and captivate their understandings to mistake, falsehood, and error.

Id.

Wisdom enters the last, and so captivates him with, her appearance, that he gives himself up to her.

Addiscm.

*When love's well-timed, 'tis not a fault to love ; The strong, the brave, the virtuous, and the wise, Sink in the soft captivity together. Id**

Still lay the god : the nymph surprised, Yet mistress of herself, devised How she the vagrant mi^ht enthrall, A ad captive him who captives all. Prior.

The great sagacity, and many artifices, used by birds, in the investigation and capture of their prey.

Derluim.

Free from shame, They captive : I ensure the penal claim.

Pope's Odyssey. Yet the wise captive, meeting art with art,

Pretends great love to princely Hubert's side ; And offers many a secret to impart, Which may against his foe's strong arms provide.

Gay.

When Congreve's favoured pantomime to grace, She comes a captive queen of Moorish race.

Churchill.

The unequal conflict was terminated in fifteen days ;

and it was with extreme reluctance that Mahomet

yielded to the importunities of his allies, and con-

ientrd to spare the lives of the captives. Gib/ion.

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Alas ! full oft on guilt's victorious car,

The spoils of virtue are in triumph borne,

While the fair captive, marked with many a scar, In long obscurity oppressed, forlorn.

Resigns to tears her angel form. Bcattie.

Hope not, thoxigh all that captivates the wise, All that endears the good, exalt thy praise,

Hope not to taste repose, for envy's eyes

At fairest worth still point her deadly rays. Id.

Though fairest captives daily met his eye, He shunned, not sought, but coldly passed them by.

Byron' t Corsair.

CAPTIVES formerly became the slaves of those who took them; and though slavery, such as obtained among the ancients, is now abolished, some shadow of it still remains in respect of prisoners of war, who are accounted the pro- perty of their captors. The Romans used their captives with great barbarity ; their necks were exposed to the soldiers to be trampled on, and their persons afterwards scd by public auction. Captives were frequently burnt in the funeral piles of the ancient wari;'oi i, as a sacrifice to the funeral gods. Those of royal or noble blood had their heads shaven, and their hair sent to Rome to serve as decorations for female toys, &c. They were led in triumph, loaded with chains, as far as the foot of the Capitoline Mount, for they were not permitted to ascend the sacred hill, but carried thence to prison. Those of quality were honored with golden chains on their hands and feet, and golden collars on their necks. If they made their escape, or killed themselves, to avoid the ignominy of being carried in triumph, their effigies were frequently carried in their place.

CAPTURE is particularly applied to a ship taken at sea. Captures made at sea were for- merly held to be the property of the captors after a possession of twenty-four hours; but the mo- dern authorities require, that before the property can be changed, the goods must have been brought into port, and have continued a night intra prasidia, in a place of safe custody, so that all hope of recovering them was lost. Capture is likewise used for an arrest or seizure of a cri- minal, debtor, &c. at land.

CAPUA, in ancient geography, a very ancient city of Italy, in Campania, anil capital of that district. It was a settlement of the Osci before the foundation of Rome, and as the amazing fer- tility of the land, and a lucrative commerce, poured immense wealth upon its inhabitants, it became one of the most extensive and magnifi- cent cities in the world. With riches excessive luxury crept in, and the Capuans soon lost the power of repelling those nations whom their in- solence had exasperated. Roman aid was asked and granted, but the soldiers sent to defend it wished to make it their prey. Jealous of the avarice and ambition of Rome, the Capuans warmly

espoused the quarrel of Carthage, and Hannibal made Capua his winter quarters after the battle of Cannae; and there his hitherto in- vincible soldiers were enervated by pleasure arid indolence. When, through a failure of supplies from Carthage, Hannibal was under the necessity of leaving the Capuans to defend themselves, this city, which had long been invested, was surren- dered at discretion to the consuls Appius Clau- dius and Q. Fulvius Flaccus. The senators

were put to death, the nobles imprisoned for life, and all the citizens sold and dispersed, except Yibius and his friends, who killed themselves. The buildings were spared by the victor ; and Capua was left to be a harbour for the husband- men, a warehouse for goods, and a granary for corn. Colonies were sent to inhabit it, and in process of time it regained a degree of its impor- tance. But Genseric the Vandal was more cruel than the Romans, for he massacred the inhabi- tants, and burned the town. Narses rebuilt it ; but in 841 it was totally destroyed by the Sara- cens, and the inhabitants driven to the moun- tains. Since the foundation of the new city, the ancient Capua has remained in ruins.

CAPUA, in modern geography, is a neat little city of Naples, in Terra di Lavoro, built on part of the site of old Capua. It owes its origin to the Lom- bard inhabitants of the old city, who, some time after the departure of the Saracens, ventured down again into the plain ; but, not deeming their force equal to the defence of their former exten- sive circuit, built a smaller town on the banks of the Volturno, and on the site of the ancient Casilinum. In 856 Landulph formed here an independent earldom, and in the course of a few generations Capua acquired the title of a princi- pality. In the eleventh century the Normans of Aversa expelled the Lombard race of princes, and Richard their chief became prince of Capua. The grandson of Tancred of Hauteville drove out the descendants of Richard, and united this state to the rest of his possessions. Capua is at present fortified according to the rules of modern art, and may be considered as the key of the kingdom ; though far removed from the frontier, it is the only fortification that really covers the approach to Naples. It was, however, taken by the French, under general Championnet, on the 1 1 th January, 1797. It is fifteen miles north- east of Naples, and 100 south-east of Rome. Long. 15►► 7′ E., lat. 11►► 26′ N.

CAPUCHINS, religious of the order of St. Francis in its strictest observance

; deriving their name from capuce, or capuchon, a stuff cowl, wherewith they cover their heads. They are clothed with brown or gray ; always bare-footed ; never go in a coach, nor ever shave their beards. They are a reform from the order of Minors, commonly called cordeliers, set on foot in the six- teenth century by Matthew Baschi, who pretended to have been advised from heaven to practise the rule of St. Francis to the letter. Pope Clement VII, in 1525, gave him permission to retire into solitude, with as many others as chose to embrace the strict observance, and in 1 528 they obtained his bull. In 1529 the order was brought into complete form ; Matthew was elected general, and the chapter made constitutions.

CAPUENA, in icthyology, a fish caught in the American seas, and esteemed very delicate. It is round shaped, and usually about five inches long.

CAPURA, in botany, a genus of the mono- gynia order, belonging to the hexandria class of plants. C.purpurata, is a nativeof the East Indies.

CAPUT, the head. See HEAD, SKULL, FACE, and ANATOMY.

CAPUT BARONIJE, the head of the barony, or

CAPUT HONORIS, the head of the honor, in ancient customs, denoted the chief seat of a nobleman, where he made his usual residence, and held his court. It could not be settled in dowry ; nor could be divided among the daughters, in case there were no son to inherit; but was to descend entire to the eldest daughter, caeteris filiabus aliunde satisfactis.

CAPUT GALLINAGINIS, in anatomy, is a kind of septum, or spongious border, at the extremi- ties or apertures of each of the vesiculae seminales; serving to prevent the semen coming from one side, from rushing upon, and so stopping the discharge of the other.

CAPUT LUPINUM, a term anciently applied to an outlawed felon, who might be knocked on the head like a wolf, by any one that met him ; be-cause, having renounced all law, he was to be dealt with as in a state of nature, when every one that should find him might slay him. But now it is holden that no man is entitled to kill him wantonly and wilfully; but in so doing he is guilty of murder, unless it is done in the endea- vour to apprehend him.

CAPUT MORTUUM, a name given by old che- mists to fixed and exhausted residuums remaining in retorts after distillations. As these residuums are very different, according to the substances dis- tilled, and the degree of heat employed, they are by the more accurate modern chemists particu- larly specified.

CAQUETA, a river of South America, which rises in the province of Quito, near the ancient city of Macao at the western base of the Andes, in the lat. of 2►► N., from whence it runs in an E. S. E. direction towards the equator. Before it crosses the equator it communicates with another stream or channel of .waters, running in a north-east direction ; this channel is called the Negro, and is supposed to communicate with the Orinoco, whilst the main branch runs in a south- east direction to the Amazons, into which it falls in the lat. of 4►► S. ; this branch of the Caquetais sometimes called the Japura Yupina, and some Portuguese adventurers in 1744 are said to have reached the Orinoco from the Amazons by this stream and that of the Negro ; a circumstance which the Prussian traveller Humboldt has since said to have confirmed as practicable; having himself passed from one river to another in a canoe, he no doubt believes that there is a union of the waters of those two noble rivers ; but high as his authority stands, further evidence is still wanting, as the Negro after running north-east for about 160 miles, then runs east, bearing a little south for upwards of 100 miles, when it takes a course parallel with the Japura into the Amazons about eighty miles lower down, first receiving the waters of lake Parima ; this branch in its south-east course is called the Great Negro, and, being far more capacious than the Japura, has probably been mistaken for the Orinoco. It is not impossible, however, but that some of the collateral streams of this branch may in the rainy season communicate with some of the col- lateral branches of the Orinoco in the lat. of about 3►► N. From the point where the Negro branches off to- the north-east, another stream diverges more to the west, and runs parallel with the

Japura at a distance of about eighty miles into the Amazons.

CAR, CHAR, in the names of places, seems to have relation to the Britisn caer, a city. Gib- son's Camden.

CAR, n. \ Lat. carrus ; Fr. char; Ital. CAR'MAN, s. } and Sp. carro ; Welsh and Ar- mor, car ; Sw. karra ; Ger. and Dut. karre. A small carriage of burden, says Johnson, usually drawn by one horse or two. I suspect that the word is now seldom employed in this sense in Eng- land ; its diminutive, cart, being the denomination of such vehicles; though the name is still retained in the compound, car-man. In Ireland, however, car is in common use, and is applied to various sorts of conveyances; among which is the jaunting car, a kind of carriage for excursions of plea- sure. The word is more extensively known in its poetical meaning, that of a dignified or splendid vehicle ; a war or triumphal chariot. The car of day is the solar

luminary ; the ‘ silver car’ of Cynthia is the moon. Dryden gives the name of the northern car to the constellation, Charles’ wain, or the bear.

Henry is dead, and never shall revive : Upon a wooden coffin we attend, And death’s dishonorable victory, We with our stately presence glorify, Like victors bound to a triumphal car.

Shalupeare.

Wilt thou aspire to guide the heavenly car, And with thy daring folly burn the world ? Id.

And the gilded car of day, His glowing axle doth allay In the sfeep Atlantic stream. Milton.

Every fixt and every wandering star, The Pleiads, Hyads, and the Northern Car.

Dryden.

See where he comes, the darling of the war ! See millions crowding round the gilded car.

Prior.

When a lady comes in a coach to our shop, it must be followed by a car loaded with Wood’s money.

Swift.

If the strong cane support thy walking hand, Chairmen no longer shall the wall command j Even sturdy carmen shall thy nod obey, And rattling coaches stop to make a way.

Gay. Trivia.

Now Venus mounts her car ; she shakes the reins, And steers her turtles to Cythera’s plains ; Straight to the grot with graceful step she goes, Her loose ambrosiac hair behind her flows. Gay.

And many a band of ardent youths were seen,

Some in rapture fired by glory’s charms ; Or hurled the thundering car along the green, Or march’d embattled on in glittering arms.

Beattie.

CAR, in archaeology, a sort of carriage drawn by beasts of burden; a war chariot. In different ancient examples, cars are represented either with two or four wheels, drawn by different animals ; as horses, mules, elephants, lions, panthers, &c. The invention of cars is attributed by someto Erichthonius, king of Athens, whose distorted legs pre- vented his walking ; by others to Triptolemus, or Trochilus. The Athenians dedicated them to Pallas. The coursing cars or chariots were also used in public festivities and games; these were in the form of a shell mounted upon two wheels, higher

before than behind, and ornamented with painting and sculpture. When they were drawn by two horses, they were called bigae, wher►► with three trigae, and quadrigae when they were drawn by four horses, which were always abreast.

The covered cars (currus arcuati), which were in use among the Romans, differed from the others only by having an arched covering above Some of the eastern nations used, in their wars, cars armed with scythes and other cutting instru- ments on the wheels ; they were drawn by strong horses, and made dreadful havoc in the army of their enemies. Triumphal cars were often exe- cuted in marble. One is preserved in the museum of the Vatican at Rome. The use of triumphal cars was introduced, according to some, by Romulus, and to others by Tarquin the elder, o”r Valerius Poplicola.

The cars of the different divinities are drawn by those animals which are sacred to each ; as that of Mercury by rams, of Minerva by owls, that of Venus by swans or doves, that of Apollo by griffins, of Juno by peacocks, and that of Diana by stags.

CARA, a river of European Russia, which, directs its course towards the Arctic Ocean, and forms the boundary between Asia and Europe, for the space of about 140 miles ; the Arabian chain terminating so far from the sea of Cara- skoi, or Karskoi.

CAR’ABINE,or-\ Fr. carabine; Ital. ca-

CAR’BINE, n. f rabino ; Ger. carabiner ;

CARABIN’IER, or f Swed. karbin; diminutive,

CAREIN’IER, n. J says Thompson, of carraba- listan, a field bow mounted on a carriage, at- tached formerly to cavalry. The carabine, called also a petronel, is a small sort of fire arm, shorter than a fusil, and carrying a ball of twenty-four in the pound, hung by the light horse at a belt over the left shoulder. It is a kind of medium between the pistol and the musket, having its barrel two feet and a half long. It is generally rifled.

He with his whole troop advanced from the gross of their horse, and discharging all their pistols on the ground, within little more than carabine shot of his own body, presented himself and his troop to Prince Rupert ; and immediately, with his highness, charged the enemy. Clarendon.

*CARABINS, otherwise called argoulets, were a species of hussars in the ancient French militia, and sometimes acted on foot. They
वे were chosen and resolute men. All the princi- pal officers of the army used to have them as their guards. And they were often stationed at the outposts for the purpose of harassing the enemy, guarding narrow passes, &c. In action they generally engaged in front of the dragoons, or on the wings of the first line. The term comes from the Arabian word Karab, which sig- nifies generally a warlike instrument of any kind.*

CARABUS, in zoology, a genus of insects of the order of coleoptera, or the beetle. The feelers are bristly ; the breast is shaped like a heart, and marginated ; and the elytra are likewise margi- nated. There are 324 known species of this genus, mostly distinguished by their color. The most remarkable is C. crepitans, the bombardier, with the breast, head, and legs, ferruginous or

iron colored, and the elytra black. It keeps it- self concealed among stones, and seems to make little use of its wings : when it moves, it is by a sort of jump; and, whenever it is touched, one is surprised to hear a noise resembling the dis- charge of a musket, in miniature, during which a blue smoke may be perceived to proceed from its anus. It may be made at any time to play off its artillery, by scratching its back with a needle. Rolandet, who first made these observations, says it can give twenty discharges successively. A bladder placed near the anus is the arsenal whence it derives its store ; and this is its chief defence against an enemy, although the , smoke emitted seems to be altogether inoffensive, except by causing a fright, or concealing its course. Its chief enemy is another species of the same genus, but four times larger: when pursued and fatigued, the bombardier has recourse to this stratagem, by lying down in the path of the large carabus, which advances with open mouth and claws to seize it ; but, on this discharge of the artillery, suddenly draws back, and remains awhile con- fused : during which the bombardier conceals himself in some neighbouring crevice. If he does not find one, the large carabus returns, takes the insect "by the head, and tears it off.

CARACALLA (M. Antoninus Bassianus), succeeded his father Severus, on the imperial throne of Rome, A. D. 2 1 1 , and put the physicians to death for not despatching him as he would have had them. He killed his brother Geta ; and put Papinianus to death because he would not defend his parricides. He married Julia, his father's widow. Going to Alexandria, he mas- sacred almost the whole of the inhabitants. See ALEXANDRIA. In short, no fewer than 20,000 persons were murdered by his orders. At last, going from Edessa to Mesopotamia, one of his captains slew him in the seventh year of his reign.

CARACALLA, in antiquity, a long garment, having a sort of capuchin, or hood a-top, and reaching to the heels ; worn among the Romans by both men and women, in the city and the camp. Spartian and Xiphilin represent the em- peror Caracalla as the inventor of this garment, and hence suppose that appellation was first given him. Others, with more probability, make the caracalla originally a Gallic habit brought to Rome by that emperor, who first enjoined the soldiery to wear it, and from whom the people also called it antoninian. St. Jerome informs us that the caracalla, with a retrenchment of the capuchin, became an ecclesiastical garment. It is described as made of several pieces cut and sewed together, and hanging down to the feet.

CARACCAS, or CARACAS, a department, pro- rince, and city, of Colombia, South America. The department of Caraccas includes the pro- vinces of Caraccas Proper and Barinas : the re- sidence of the intendancy or departmental go- Ternment being in the city of Caraccas. The

population of this department is about 550,000′ The province of Caraccas in its climate, natural scenery, and fertility, is nowhere transcended. On the coasts the heat is indeed, at particular seasons, almost overpowering to Europeans, ††† La Guayra being, according to Humboldt's observa- tions, one of the hottest places on the earth ; but in the mountain valleys of the interior, and be- side its refreshing streams, the atmosphere is mild, pure, and exquisitely sweet. The soil yields all the usual productions of the West Indies in rich abundance, and is exceedingly favorable to cochineal, dye-woods, gums, resins, sarsaparilla, sassafras, liquorice, squills, storax, cassia, aloes, and medicinal drugs : as also to maize, vanilla, cotton, indigo, sugar, tobacco, and coffee ; but its staple article is cocoa, of a very superior quality. Immense herds of cattle, sheep, and deer, graze on the plains of the in- terior, where also horses and mules are found in considerable numbers, and all kinds of game. The forests produce every kind of useful and orna- mental wood ††† black, red, and yellow ebony; mahogany and cedar are very common, so that the last is used for door-posts and window- frames as frequently as deal with us. The Spa- niards first introduced cocoa-trees and indigo here ; the former at an early

period of their con- quest; the latter in 1774.

La Guayra is the principal port of the pro- vince, and only five leagues from the capital, with which it communicates by a noble road. A chain of mountains, which separate it from the high valley of Caraccas, descends directly into the sea ; so that the houses of La Guayra are backed with almost perpendicular rocks, and stones rolling from them frequently occasion accidents to the town. It contains but two pa- rallel streets, running east and west, and about 7000 inhabitants. The streets are ill-paved arid narrow, and the houses generally mean. The only singular objects here are the batteries, which are well disposed and kept in good order : that of Cerrocoloredo commands the roadstead. This is open to all winds, never exceeds eight fathoms in depth at a quarter of a league from the beach, and the sand so quickly buries the anchors of vessels remaining here, that they are obliged to be removed every eight days. The annual amount of its exports is said to be about ––347,000, in cocoa, indigo, coffee, and hides; and the im- ports about 520,000, all the goods being pur- chased as well as sold at Caracas, and only loaded or unloaded here. The men who carry the cocoa on board the ships are remarkable for their mus- cular strength ; and, though they frequently wade up to their breasts in the water, are never mo- lested by the sharks that are so abundant in this part. The inhabitants say that a bishop once gave his benediction to all who should appear here, and thus tamed their nature ! We are indebted to colonel Hale's interesting little work entitled Colombia, for the following :

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C A R A C C A S.

II. Revenue of the Port of La Guayra, from the 1st of January to the 31st of October, 1823, taken from the OFFICIAL RETURN.

Dollars.

Import Duties 515,609 0►►

Export ditto 153,101 3►►

Tonnage ditto 5,778 3►►

Salt ditto 4,083 1$

Anchorage ditto 414 0

Prizes 105,552 3

Duties appropriated to the Military

Hospital . 6,038 OJ

790,576 2►►

The city of Caraecas is situate in 10►► 30′ 15″ N. lat., and 67►► 4′ 45″ W. long., at the entrance of the plain of Chacao, which extends three leagues east towards Cauriman and the Cuesta de Auyamas, and is two

leagues and a half broad. This plain, through which runs the river Guayra, is 414 toises above the level of the sea ; three other rivers (very small) cross the town from north to south. Its climate has been called a perpetual spring. – The temperature is gene- rally between 20►► and 26►► in the day, and 16►► and 18►► at night. But this general mildness is connected with great fluctuations in the weather. Humboldt sometimes, among the vapors of No- vember and December, could scarcely think him- self in one of the temperate valleys of the torrid zone ; but rather in the north of Germany, among the pines and the larches overshadowing the mountains of the Hartz. The following have been given as the differences of climate between Caraecas and La Guayra : ►►►

Caraecas.

LaGuayra.

Height

Level of

454 Toises.

the Sea.

Mean temp, of the year

21►► to 22►►

28►►

Mean temp, of the hot

season . . .

24

29

Mean temp, of the cold

season . . .

19

23-5

Maximum ....

29

35

Minimum ....

11

21

The streets of Caraecas are straight, well paved, and well built, intersecting each other at right angles, and at a distance of about three hundred feet : there are eight squares, if such they may be called, five of them being very irregular enclo- sures ; but the pla►►a major, occupying about 300 square feet, and the great market of the city, is a respectable collection of buildings, public and private. On the east is the cathedral, and on the same side begin the barracks, continued round to the south. In the market abundance of every kind of provision is to be found. Fruits, vegetables, meat, salted provisions, poultry, fish, game, bread, monkeys, parrots, &c. The churches of Candelana and St. Paul are the only distinc- tions of the other squares worth naming. The houses of many individuals are well built, and of Jiandsome appearance ; being generally of ma-

sonry, with frame-work, after the Roman man- ner, or of brick. Humboldt thought them only too high in a region so subject to earthquakes as Caraecas. Those of the respectable inhabitants are neatly and even superbly furnished. ‘ We behold in them,’ says an anonymous, but re- spectable description of Colombia, ‘. beautiful glasses; at the windows, and over the inside doors, elegant curtains of crimson damask ; chairs, and sofas made of wood, the seats of which, covered with leather or damask, are stuffed with hair and adorned with Gothic work, but overloaded with gilding; bedsteads with deep headboards, showing nothing but gold, co- vered by superb damask counterpanes, and a number of down pillows in fine muslin cases, trimmed with lace. There is seldom, it is true, more than one bed of this magnificence in each house, which is in general the nuptial couch, and afterwards serves as a bed of state. The eye wanders also over tables with gilded feet ; chests of drawers, on which the gilder has exhausted all the resources of his art; brilliant lustres, sus- pended in the principal apartments; cornices, which seem to have been dipped in gold ; and rich carpets, covering at least ail that part of the room where the seats of honor are placed : for the parlour furniture is disposed in such a man- ner, that the sofa, which constitutes the most essential article of household attire, is situate at one end, with the chairs arranged on the right and left ; and opposite, the principal bed of the house, placed at the other extremity of the room, in a chamber, the door of which is open, unless it be fixed in

an alcove equally open, and by the side of the seats of honor,

‘ Except the barracks,Caraccas possesses scarce- ly any public edifices but those dedicated to reli- gion, viz. eight churches and five convents. The barracks, which will hold 2000 men, are hand- some, and situate on a spot commanding beau- tiful views. They are storied, with a double yard, and occupied by the troops of the line alone. The militia have their barracks in the opposite part of the city. Here is also a college, founded in 1778 by the bishop Antonio Gon- zalez d’Acuna, and converted into a university in 1792 ; and a theatre, which will hold 1500 or 1800 persons.- The population in 1812 was 50,000, when, in the great earthquake on the 12th of March, 12,000 are supposed at once to have perished. The late political convulsions are supposed to have farther reduced the present population of the city to 20,000.

‘ It is divided between whites, negroes, and a few Indians. The first are either merchants, planters, professional, or military men ; very proud, and disdaining all kinds of labor. ‘ The women of Caraecas are seldom – blondes ; but, with hair of the blackness of jet, they have the white of alabaster. Their eyes, large and finely shaped, speak, in an expressive manner, that language which is of all countries. The carna- tion of their lips is finely softened by the white- ness of their skins, and concurs to form that ensemble which we denominate beauty. Their stature does not correspond with their shape: we see few above the middle size, many below. It would be losing time to search for pretty feet :

as they pass a great portion of their lives at their windows, one would say, that nature had wished to embellish only that part of their bodies which they expose to view. Their gait also is deficient in grace.’

The luxury of European capitals is by no means unattainable at CaYaccas. The Spanish gra- vity and the Creole voluptuousness are seen in singular combination. The inhabitants of this and the other towns of Colombia seldom dine with each other, and are on the whole temperate ; but they give frequent collations of coffee, cho- colate, tea, cakes, and wine, when they display their porcelain and fine glass, and the ladies, both old and young, appear in all their attrac- tions.

Before the revolution every house of respec- tability was encumbered by a vast train of do- mestic slaves. Religious festivals are so frequent at

Caraccas, that there are very few days in the year on which they do net celebrate some saint, and what multiplies them almost to infinity is, that every festival is preceded by a neuvaine, or succession of nine days, consecrated to prayer ; and followed by an octave, or succession of eight days, during which to their prayers the faithful join public amusements, such as fire-works, concerts, &c. : the most brilliant part of their festivals is the procession of the saint who is cele- brated. \Vhen the men go to church they must always wear a coat, great coat, or cloak, and the women, rich or poor, especially the whites, are rigorously rtquired to be in black. Their dress on this occasion generally consists in a petticoat and veil of black. Negroes only have a white veil. Posts are now forwarded regularly and periodically, from the capital only, for Mara- caibo, Porto Cavello, Santa Fe, Cumana, and Guiana. All the towns lying on the road to these places enjoy the advantages of the mail. All the roads of the country are under the direct control of the Government.

The coast of the Caraccas was discovered by Columbus in 1498, during his third voyage to the western world. In 1550 the former captain- generalship of the Caraccas was established, and ultimately contained nearly 48,000 square leagues (twenty-five to a degree) and a million of inha- bitants. It existed, with some slight variations of territory, to the revolution in 1810, see CO- LOMBIA, and comprehended the province of Ve- nezuela, in the centre ; the government of Mara- caibo, westward ; Guiana, south ; Cumana, east ; and the island of Margaretta.

CARACCI (Lewis, Augustin, and Hannibal), three celebrated painters of Bologna. Lewis was born in 1555; and was cousin-german to Angus- tin and Hannibal, who were brothers, the sons of a tailor, who gave them a liberal education. They were both disciples of their cousin Lewis. Augustin gained a knowledge of mathematics, natural philosophy, music, poetry, and most of the liberal arts : 'but, though painting was his principal pursuit, he learned the art of engraving from Cornelius Cort, and surpassed all the mas- ters of his time. Hannibal never deviated from his pencil. These three painters, at length formed a plan of association, and founded that celebrated school, called Caracci's Academy. Hither the

young students resorted to be instructed in the rudiments of painting ; here the Caracci taught freely all that came. Lewis's charge was to make a collection of antique statues and bas-reliefs. They had designs of the best masters ; a collec- tion of curious books on all subjects relating to their art ; and a skilful anatomist to teach what belonged to the knitting and motions of the muscles, &c. There were often disputations in the academy ; and the literati, as well as painters, proposed questions, which were always decided by Lewis. The fame of the Caracci reaching Rome, the cardinal Farnese sent for Hannibal, to paint the gallery of his palace. Hannibal willingly

went, having a great desire to see Ra- phael's works, with the antique statues, &c. The gusto which he took there from the ancient sculp- ture, made him change his Bolognian manner for one more learned, but less natural in the design and coloring. Augustin followed Hannibal, to assist him in the Farnese gallery ; but the bro- thers not agreeing, Farnese sent Augustin to the court of Parma, where he died in 1602, aged forty-five. His most celebrated piece is the communion of St. Jerome, in Bologna. In the meanwhile, Hannibal continued working in the Farnese gallery at Rome; and, after eight years labor, finished the painting? in the perfection in which they are still to be seen ; but the cardinal, influenced by ignorance and avarice, gave him but a little above ––200. This confirmed him in a melancholy, to which his temper naturally in- clined, and made him resolve never more to touch his pencil; which resolution he had un- doubtedly kept, if his necessities had not com- pelled him to break it. It is said that his melan- choly gained so much upon him, that at times it affected his reason. It did not, however, put a stop to his amours; and his debaucheries at Naples, whither he had retired for the recovery of his health, brought a distemper upon him, of which he died in 1609, in his forty-ninth year. His veneration for Raphael was so great, that it was his death-bed request to be buried in the same tomb with him; which was accordingly done in the pantheon at Rome. There are ex- tant several prints of the Virgin, and some other subjects etched by him. He is said to have been an open-hearted man; very communicative to his scholars; and so extremely kind to them, that he generally kept his money in the same box with his colors, that they might have recourse to either as they had occasion. While Hannibal worked at Rome, T>ewis was courted from all parts of Lombardy, especially by the clergy; and we may judge of his capacity and facility, by the great number of his works. In the midst of these employments Hannibal solicited him to come and assist him in the Farnese gallery, so earnestly, that he went to Rome and corrected several things in that gallery ; but, after painting a figure or two, he returned to Bologna, where he died in 1619, aged sixty-four.

CAR'ACK, n. Span, carraca ; Old. Fr. car- raque ; Ger. caracke ; low Lat. carraca. But Minsheu derives the word from the Ital. carico, a freight or burden. A carack, often spelt car- rack and carrick, is a large ship of burden, the same with those that are now called galleons

Oh, sir, upon her nose, all o'er embellished with rabies, carbuncles,

sapphires, declining their rich as pect to the hot breath of Spain ; who sent whole anna, does of carrackf to be ballasted at her nose. Shahtpeare

In which river, the greatest carack of Portuga, may ride afloat ten miles within the forts. Raleigh.

The bigger whale like some huge carack lay, Which wanteth sea room with her foes to play.

Waller.

CA'RACOL, v. & n.) Sp. caracolear, from CA'RACOLE. j caracal, a snail ; with

reference to the spiral turns in the snail's shell. But the Spanish itself is derived from Heb. carac, through Ar. garagal. In horsemanship, an oblique tread, traced out in semi-rounds, changing from one hand to the other, without observing a regular ground. The half turn, which, after his discharge, a horseman makes to pass from the front of the squadron to the rear is called caracole. The caracole is also made by a whole troop of cavalry, for the purpose indicated in the fol- lowing quotation.

When the horse advance to charge in battle, they ride sometimes in caracoles, to amuse the enemy, and put them in doubt whether they are about to charge them in the front or on the flank.

Farrier's Dictionary.

CAR'ACT, n. 1 Kepariov. Lat. ceratium ;

CAR'AT, n. $ Arab, keerat, Per. charat ; Fr. carat ; Ital. caratto. Rennet derives it from carracta, which anciently signified any weight. Besides the two spellings already given, this word is spelt in a variety of ways ; carract, karract, carrat, and karrat. It denotes a four-grain weight, for weighing diamonds, the grains of which are somewhat lighter than common grains ; an imaginary weight by which the degree of purity in gold is indicated ; and, figuratively, the value of anything.

A mark, being an ounce troy, is divided into twenty-four equal parts, called caracti, and each caract into four grains : by this weight is distinguished the different fineness of their gold ; for, if to the finest gold be put two cat xtt of alloy, both making, when cold, but an ounce, or twenty-four caractt, then this gold is said to be twenty-two caracti fine. Cocker.

Thou best of gold, art worst of gold ; Other, less fine in caract, is more precious.

Shaktpearc.

They are men that set the caract and value upon things as they love them ; but science is not every man's mistress. Ben Jonson.

CARACT AC US, a renowned king of the an- cient British people, called SilureF, inhabiting South Wales. Having valiantly oeienaeu ms country seven years against the Romans fie was at last defeated ; and flying to Oarusmanaua, queen of the Brigantes, was by ner treacnerousiy delivered up to the Romans and led in triumph to the emperor Claudius, then a: York : where his noble behaviour, and heroic but pathetic speech, obtained him not only his liberty, but the esteem of the emperor, A.D. 52. Buchanan, Monipenny, and the other ancient Scots histo- rians, make this heroic prince one of the Scots monarchs; nephew and successor to king Me-

tellanus: and jay that he was elected general of the united army of Scots, Picts, and Britons.

CARAMANIA, an interior province of Asiatic Turkey, east of Natolia, comprising about 35,000 square miles of surface ; it is excluded from the Mediterranean by Itchiil, a very rugged and mountainous district, but which is commonly considered as forming part of the province of Caramania; but be that as it may, the Alpine character of the part bordering on the Mediter- ranean, precludes it from deriving much advan- tage from the water communication on that side. It is intersected by the Kisil Jermak, which, after a course of about 350 miles, flows north into the Black Sea, it has a salt water lake of considerable extent in the north-west part of the province ; and in the south-west are several lakes of fresh water, which yield abundance of fish ; the equilibrium of the waters of all these lakes seems to be maintained by evaporation, no visible outlet appearing ; the forests in the mountainous parts of the province yield abundance of the finest timber, both oak and pine, and the vine and fig-tree, with innumerable varieties of flowering and odoriferous shrubs, luxuriate in every part. Caramania comprehends the ancient Pamphylia, and a great part of Cilicia, Pisidiaand Cappadocia II. Bajazet united it to the Ottoman Empire in 1488, and thus a country once teeming with population, and studded with numerous fine cities and towns, is again a desert inhabited by tribes of Turcomans, partaking more of a negro mode than a settled life. They, however, carry on some external traffic, in camels' hair, goats' wool, and opium. Of the number of i►►s inhabitants there is no account worthy of atten- tion ; but they probably do not exceed from 150 to 200,000. Cogni or Konich, in the lat. of 38►► 10′ N. and 32►► 25′ of E. long., 308 miles east of Smyrna, and 150 north of the shore of the Mediterranean is the capital ; the other principal towns are Erekli, Akserai, and Ker-shehr on the banks of the Kisil Jermak; and Kaisarich, to- wards

the eastern extremity of the province. Konich and Erekli are on the route of the cara- vans from Constantinople to Aleppo.

CARAPACE, the thick, solid shell, which covers the turtle ; and to which adhere those fine transparent shells, called tortoise shells, of which snuff-boxes, &c. are made.

CARAPOPEBA, in zoology, a small species of lizard, common in the Brasils, and esteemed poisonous. Its body is of a liver color, and has several white spots. There are marks of white on the tail, variegated with yellow. Its eyes are brierht and vivid.

CAR'AVAN, n.) Ar. and Per. kerwan ;

CARAVAN SARY,TI. > Turk, kervan ; Fr. eara- vanne ⬚- Ital. caravana. Its tmmarv meaning is a troop of persons assemoled to journey toge- ther, either for commercial purposes, or in pil- grimage. Secondarily, it denotes a large co- vered conveyance for goods ; the name of which is sometimes abbreviated into van. A caravan- sary, Per. kerwansura, is a house built in the eastern countries, chiefly in dry, barren, desert places, for the reception of travellers. It differ however, from an inn, by affording onlv shelter except in some few cases.*

They set forth

Their airy caravan, high over seas Flying, and over lands, with mutual wing Easing their flight. Paradise Lost.

Sir, what ill chance hath brought thee to this place, So far from path or road of men, who pass In troop or caravan? Paradise Regained.

When Joseph, and the blessed virgin mother, had lost their most holy son, they sought him in the re- tinues of their kindred, and the caravans of the Gali- lean pilgrims. Bishop Taylor. The inns which receive the caravans in Persia, and the eastern countries, are called by the name of cara- vantariet. Spectator. The spacious mansion, like a Turkish caravansary, entertains the vagabond with only bare lodging.

Pope's Letters.

There, deadly Sumiel striding o'er the land, Sweeps his red wing, and whirls the burning sand j As winds the weary caravan along, The fiery storm involves the hapless throng.

Scott.

League after league, through many a lingering day, Steer the swart caravans their sultry way ; O'er sandy wastes, on gasping camels toil, Or print with pilgrim steps the burning soil.

Darwin.

CARAVAN, or KARAVAN, in Africa and the east, derived from the Persian word which sig- nifies a merchant, is a company of travellers and pilgrims, more particularly of merchants, who, for their greater security, and to assist each other, march in a body through the deserts, and other dangerous places, which are infested with Arab and native robbers. There are four regular ca- ravans which go yearly to Mecca ; the first from Damascus, composed of pilgrims and merchants from Europe and Asia ; the second from Cairo, for the Mahommedans of Barbary; the third from Zibith, near the mouth of the Red Sea, where those of Arabia and India meet; the fourth from Babylon, where the Persians assemble. Most of the inland commerce of the east is carried on by caravans. Peter the Great esta- blished a trade between Russia and China by means of a caravan. Bougnon, geographer to the duke of Lorraine, published a treatise of the caravans of merchants in Asia. There are com- monly four chief officers of a caravan, viz. the caravan bachi, or chief; the captain-guide ; cap- tain of the rest; and captain of distribution. The first has absolute command over all the rest : the second is absolute in the march : the office of the third only commences when the caravan stops and makes a stay : to the fourth it belongs to dispose of every part of the corps, in case of an attack or battle ; he has also the inspection over the distribution of provisions, which is made under him by several distributors, who give se- curity to the master of the caravan, and hav? each of them a certain number of persons, elephants, iromedaries, &c. to take care of at their own peril. The treasurer of the caravan makes a ˆfth officer, who has under him several agents and interpreters, who keep journals of all that lasses, for the satisfaction of all concerned. Any dealer is at liberty to form a caravan. He in whose name it is raised, is considered as the chief of the caravan, unless he appoint some other in his place. If there are several merchants equally

concerned, they elect a caravan bachi ; after which, they appoint officers to conduct the cara- van and decide all controversies. There have been also sea caravans, established on the same footing, and for the same purposes.

CARAVA'NCE, > Span, garbanzo, a species

CARABA'NCE, n. J of kidney-bean, with pods like the carob.

CARAVANSARY, or CARAVANSERAˆ in ar- chitecture, a large house or public building, erected for the reception of travellers. These buildings are seldom more than one story high, and are usually of a quadrangular form, with porticos in the interior for the horses and camels; chambers for the merchants and travellers, and warehouses for the merchandise.

CAR'AVEL, or) Fr. caravelle ; Basque,

CAR'VEL, n. J carabella ; Span, caravel- la ; Ital. caravela ; Ger. karfe ; Lat. cara- bas. Carvel is the spelling most in use, but the word is sometimes spelt carveil. A swift bark ; a light, round, old-fashioned ship, of 120 or 140 tons burden, with a square poop, rigged and fitted out like a galley, formerly used in Spain and Portugal. It is also, as appears from Sir T. Herbert's Travels, an old name of the urtica marina, or sea blubber.

I gave them orders if they found any Indians there, to send in the little fly boat, or the carvel, into the river ; for, with our great ships, we durst not approach the coast. Raleigh.

She may spare me her misen and her bonnets, strike her main petticoat, and yet outsail me. I am a carvel to her. Beaumont and Fletcher.

In an obstinate engagement with some Venetian caravels, the vessel on board which he served took fire.

Robertson,

The con;eZ is a sea fome, floating on the ocean, of a globous form. Sir T. Herbert.

CARAVEL, a small vessel on the coast of France, used in fishing herrings on the banks They are commonly from twenty-five to thirty tons burden.

CAR' AW AY, n. Fr. carvi ; Ital. alcaravea Span, alcarahueya ; Lat. carum. A plant pro- ducing warm aromatic seeds, which are used in medicine and confectionary. See CARUM. CAR'BON, n. ~\ Yr.carbone ; Lat.ear-

CARBONA'CEOUS, adj. > bo. Carbon is one of CARBON'IC. j the simple bodies of

chemistry ; carbonaceous is that which contains carbon ; carbonic that

which relates to carbon.

CARBON. Charcoal is a word often em- ployed synonymously with carbon : but, although charcoal is the form under which carbon most commonly occurs, yet it is in this form mixed with several extraneous ingredients. The dia- mond was concluded, by Guyton Morveau, to be the only form of pure carbon ; but the experi- ments of Allen and Pepys have tended to show that these hard substances, although so widely different in external character and appearance, are chemically the same ; the difference between them seeming to result from the different state of aggregation of their particles. It further seems that the diamond is absolutely free from both water and hydrogen ; and it is in this particular, as well as in the mode by which its particles are aggregated, that the difference seems to obtain

between charcoal and the diamond. Diamond converts iron into steel ; which power is likewise characteristic of charcoal. See DIAMOND.

Charcoal appears to be the same substance from whatever wood it is procured, but it is usually made upon a large scale from oak, chest- nut, elm, beech, or ash-wood. Lamp black may be regarded as a very pure carbon, after it has been heated red hot in a very close vessel. This is prepared by causing the dense smoke, arising from refuse resin burnt in a furnace, to be col- lected.

Although charcoal, as we have said, is the same in principle from whatever source it may have been obtained, some woods give much more of it than others. From 100 parts of the follow- ing woods, Messrs. Allen and Pepys obtained the quantities of charcoal as stated in the an- nexed table :

Beech . . 15-00 Mahogany . 15-75 Lignum Vita 17-25

Oak

Fir

Box

17-40 18-17 20-25

Charcoal conducts electricity, although the wood from which it has been procured, if simply deprived of its moisture by evaporating it, is a non-conductor. It, however, conducts caloric very slowly. It is insoluble in water, and hence charring wood preserves it from the effects of moisture in some measure ; but it has an attrac- tion for a given portion of water, which it retains with force, and when heated nearly red hot it has the power of decomposing the fluid, forming with its oxygen either carbonic oxide or carbonic acid, according to the quantity employed ; it also com- bines with the hydrogen of the water and forms carburetted hydrogen.

Charcoal possessing a powerful affinity for oxy- gen, becomes useful in deoxygenating metallic oxides, and thus reviving the metal. It com- bines also with sulphur and hydrogen. With iron, as above intimated, it forms steel.

It has an antiseptic power, and hence its uti- lity in correcting the smell of foul ulcers ; ‘ on this account,’ says Dr. Ure, ‘ it is the best denti- frice.’ It enters into the composition of gun- powder; and in its finer states, as in ivory black, lamp black, 8cc. it constitutes the basis of black paints, of printers’ ink, and of Indian ink.

Carbon, in its union with different bases, forms important compounds, which will be elsewhere noticed. See CHEMISTRY.

CARBONA’DE, n. \ Fr. carbonade ; from

CARBONA’DO, v. &n. i Lat. c arbo, a coal. Meat cut across, to be broiled on the coals. Cotgrave and Sherwood define it to mean also a ‘ slash over the face, which fetcheth the flesh with it.’ By an extension of this meaning, the verb signi- fies to cut and hack any part of the body ; but, thus applied, it is used only in a ludicrous or contemptuous sense.

If I come in his way willingly, let him make a car- bonado of me. Shaltspeare.

CARBONARI, a sect of Italian and German freemasons.

CARBON ARIA, in ancient geography, one of the mouths of the Eridanus in Italy, mentioned by Pliny : new II Porto-di-Goro

CARBONATES are neutral salts, composed of the carbonic acid, and certain bases. See CHEMISTRY.

CARBONIC ACID. In the article AIR, and in the history of chemical science, it will be seen what an important part the discovery of this acid performed, in aiding the progress, and altering the complexion, of chemical

science.

This acid is produced abundantly by various processes of nature ; the best method of obtain- ing it artificially for the purposes of experiments, is that of pouring dilute muriatic acid upon mar- ble, which is a carbonate of lime; in this way the carbonic acid is set at liberty, and it may be collected over water.

Most of the carbonates will, indeed, give out their carbonic acid by being treated with heat, even without the assistance of another acid, since the affinity by which it is retained, with its several bases, is for the most part feeble. Chalk, for instance, or unslaked lime, soon becomes quick- lime by the application of heat, which causes the separation of the carbonic acid from the material, and thus leaves it in a caustic, or pure, or quick condition.

Carbonic acid may be analysed by the action of the metal potassium, which is capable of ab- stracting its oxygen (it is a compound of oxygen and carbon), and with the aid of heat burns it with great splendor ; charcoal is deposited, and an oxide of potassium is formed. In this, and in some other cases, oxygen is seen alternate'y producing acid and alkali. If carbonic acid, ob- tained by burning the diamond in oxygen, be thus decomposed by potassium, the carbon makes its appearance in the form of charcoal, equal in weight to the diamond consumed.

There are some other substances which at high temperatures are capable of decomposing car- bonic acid, and abstracting part of its oxygen ; thus, if a mixture of two parts of hydrogen and one of carbonic acid, by volume, be passed through a red hot tube with a proper apparatus, water is formed, and carbonic oxide passes into the receiver, mixed with the excess of hydrogen.

If carbonic acid be passed over red hot char- coal, it becomes converted into carbonic oxide by taking up an additional portion of base. The blue flame, often seen upon the surface of a charcoal fire, arises from the combustion of the carbonic oxide formed in this way ; the air en- tering at the bottom forms carbonic acid, which, passing through the red hot charcoal, becomes converted into carbonic oxide.

At a bright red heat, iron decomposes car- bonic acid, by abstracting a portion of its oxy- gen, and forming oxide of iron and carbonic oxide (Brande).

For the various combinations of carbonic acid with bases, see CHEMISTRY, and the respective articles.

CAR'BUNCLE, n. ˆ Fr. carbuncle ;Ita..

CAR'BUNCLED, adj. t carbonchio ; Span.

CARBU'NCULAR, adj. icarbunculoˆat.car-

*CARBUNCULA'TION, n. * bunculus. A gem, once believed to shine in the dark, like a glow- ing coal, whence its name, from the diminutive of carbo : red spots or pimples on the face and body, very commonly one of the merited brands*

and punishments of a drunkard. Carbuncular signifies belonging to a carbuncle; or red, like that gem. Carbunculation is applied to the blast- ing of young plants, whether effected by excessive heat or by an opposite cause, when ' the parching air burns frore, and cold perform the effect of fire.'

A carbuncle entire, as big as thou art, Were not so rich a jewel. Shalupeare.

An armour all of gold ; it was a king's ??? He has deserved it, were it carbuncled Like holy Phoebus' car. Id.

His head

Crested aloft, and carbuncle his eyes, V'ith burnished neck of verdant gold.

Paradise Lost.

It was a pestilent fever, but there followed no car- buncle, no purple or livid spots, or the like, the mass of the blood not being tainted. Bacon.

It is believed that a carbuncle doth shine in the dark like a burning cole, from whence it hath its name,

Wilhins.

Red blisters rising on their paps appear, And flaming carbuncles and noisome sweat.

Vryden.

Carbuncle is a stone of the ruby kind, of a rich blood-red colour

Woodward.

CARBUNCLE, in heraldry, a charge or bearing, consisting of eight radii, four whereof make a common cross, and the other four a saltier. Some call these radii, bartons- or staves, because round, and enriched with buttons, or pearled like pilgrim's staves.

CARBUNCLE, in medicine. See ANTHRAX. CARBUNCLE, in natural history, a very elegant gem, whose color is deep red, with an admixture of scarlet. This gem was known among the an- cients by the name of anthrax. It is usually found pure, and of the same degree of hardness with the sapphire. It is naturally of an angular figure ; and is found adhering, by its base, to a heavy and ferruginous stone of the emery kind : its usual size is nearly a quarter of an inch in length, and two-thirds of that in diameter in its thickest parts : when held up against the sun it loses its deep tinge, and becomes exactly of the color of a burning charcoal, whence the name. It bears the fire unaltered. It is found only in the East Indies, and there but very rarely.

CARBURET OF SULPHUR, 8cc. See CHE- MISTRY, and HYDROGEN.

CARBURETTED HYDROGEN GAS. See CHE- MISTRY.

CA'RCANET, or \ Fr. carcan ; Belg. kar- CA'RKNET, n. \kant; Swed.

Say that I lingered with you at your shop, To see the making of her carcanet. Shahspeare. I have, seen her beset and bedect all over with emeralds and pearls, and a carcanet about her neck.

Hakewell.

CA'RCASS, n.) Fr. carquasse, car-

CA'RCASS-LIKE, adj. $ casse; Mid. La.t. carca-

sium. By some etymologists, a violent attempt

has been made to derive the word from carquois,

a quiver ; than which nothing, it seems, can well be more ' false and forced.' Minsheu finds its origin in carocassa, flesh decayed, or deprived of life. Its meanings are, a dead body ; ludicrously, a living body ; the decayed parts, the ruins, the remains, of anything; the uncompleted, unorna- mented parts of anything, as of a house ; lastly, an oblong iron shell, filled with combustibles, to be thrown from a mortar.

But when this carcass here to earth shall be refard, I do bequeath myweried ghost to serve her afterward.

Surrey.

To blot the honour of the dead, And with foul cowardise his carcass shame, Whose living hands immortalized his name.

Spenser. Here's a stay,

That shakes the rotten carcass of old death Out of his rags ! Here's a large mouth, indeed, That spits forth death, and mountains, rocks, and seas ! Id.

To-day how many would have .given their honours To've saved their carcassei ! Id.

4. rotten carcass of a boat, not rigged. Nor tackle, sail, nor mast. Id.

Where cattle pastured late, now scattered lies, With carcasses aiud arms, the insangnined field.

Milton.

If a man visits his sick friend in hope of a le- gacy, he is a vulture, and only waits for the carcass.

Tayler.

What could be thought a sufficient motive to have had an eternal carcass of an universe, wherein the materials and positions of it were eternally laid to- gether. Hole's Origin of Mankind.

The scaly nations of the sea profound, Like shipwrecked carcasses are driven aground.

Dryden.

He that finds himself in any distress, either of car- cass or of fortune, should deliberate upon the matter before he prays for a change. L' Estrange.

Methinks I scent some some rich repast, The savor strengthens with .the blast, Snuff then, the promised feast inhale, I taste the carcass in vhe gale. Gay.

This penknife keen my windpipe shall divide, What shall I fall as squeaking pigs have dyed, No ××× To some tree this carcats I'll suspend, But

worrying curs find such untimely end. Id.

CARCASS, a kind of combustible, consisting of an iron case filled with composition, and so called because the circles that pass from one plate to another seem to represent the ribs of a skeleton or carcass. Carcasses were formerly made ob- long as well as round, but these have been found so uncertain in their flight that they are now en- tirely rejected. The composition with which they are filled is thus made: ††† boil 15 Ibs. of pitch in a glazed earthen pot, and mix with it 3 Ibs. of tallow, 30 Ibs. of powder, 6 Ibs. of salt- petre, and as many slopins as can be put in : the case is then filled with this ; loaded pistol barrels, and grenades, are put in with it, and it is wrapped in a cloth and well pitched ; lastly, three or four holes are bored in it, and filled with fuse composition : from these the long flame issues, and will set anything on fire within six feet of its range. Carcasses are thrown out ot mortars, and weigh from fifty to 230 Ibs accord-

ing to the size of the mortars out of which they are to be thrown. There are other carcasses for the sea-service, which so nearly resemble these, that any further description will be needless.

CARCASSONE, an ancient city and bishop's see of France, the capital of the present depart- ment of the Aude, a river which divides it into the upper and lower town. The former, which is by far the more ancient, and contains the ca- thedral, bears exclusively the name of the city : the lower town is of modern erection, and on the whole better built. Together they now contain about 15,000 inhabitants, who manufacture cloth for the Levant, and conduct a considerable ex- port trade by means of the canal of Languedoc, which runs within a mile of this place. When, in the thirteenth century, Innocent III. had pro- scribed the Albigenses for heresy, Raymond, the reigning viscount of Carcassone, was included in that proscription. Simon de Montfort, general of the army of the church, invested Carcassone in 1209. The inhabitants, terrified at the fate of other places where the most dreadful massacres had been committed, demanded leave to capitu- late ; but this act of mercy was only extended to them under a condition equally cruel, unparal- leled, and, indeed, incredible, if we had not the unanimous testimony of all the contemporary writers. The people were all obliged, without exception of rank or sex, to evacuate it in a state of nudity ; and Agnes, the viscountess, was not exempted, though young and

beautiful, from this ignominious and shocking disgrace. Carcassone is thirty-six miles west of Narbonne, and fifty south-east of Toulouse.

CAR'CELAGE, Lat. career. Prison fees. CAR'CERAL, Lat. career. Belonging lo a prison.

CARCERES, in the ancient Circensian games, were enclosures in the circus, wherein the horses were restrained till the signal was given for start- ing, when they at once flew open.

CARCIIJO'MA, n.') From icapcivoc, a

CARCINOM'ATOUS, adj. J crab. A cancer; a

disease in the horny coat of the eye ; cancerous ;

having a tendency to cancer.

CARCINOMA. See CANCER.

CARD, v. & n. ~\ Fr. carte ; Ital. carta ;.

CARD-TABLE, n. j Lat. charta; x"P7r'K<

CAR'DER, n. I The most extensive

CAP/DING, n. [meaning of the word

CARD-DEVOTED, adj. [card is a stiff kind of

CARD-MAKER, n. I paper painted with

CARD-MATCH, n. \ figures, a certain num-

CARD-TABLE, n. J ber of pieces of which

is called a pack, and is used in games of chance

or skill. By means of this pack, health, temper,

fortune, and often honor, are made a sacrifice

by the card-devoted throng. A more honorable

appropriation of the word is to the paper placed

under the mariner's needle, and marked with the

various winds- ; and to the instrument with which

wool is carded. These cards contribute to remedy

the evils which are inflicted by the other species.

Card is also a short note, written in the third

person, and on card paper. To card, as

derived from the noun, is to play much at cards;

but the verb is disused in this sense. In its

usual acceptation it rneaji3 to romb wool with a

piece of wood, thick set with crooked wirp►► It then has its origin from Fr. carder ; Lat. car- duus, teazle; the teazle having been originally employed for this purpose. In old writers we find it, too, with the opposite meanings of blend- ing together and disentangling.

A thousand wayes he them could entertame, With all the thriftles games that may be found ; With mumming and with masking all around, With dice, with cards, with biliards farre unfit, With shuttlecocks, raissecming manlie wit.

Spenser. Mother Hubberd's Tale As pilot well expert in perilous wave, That to a steadfast star his course hath bent, When foggy mistes or cloudy tempest have The faithful light of that faire lampe yblent, And cover'd heaven with hideous dreriment Upon his card and compass firmes his eye, (The masters of his long experiment) And to them does the steddy helme apply, Bidding his winged vessell fairely forward fly.

Scatter

The lilly, lady of the flowery field, The flower-de-luce her lovely paramoure, Bid thee to them thy fruitlesse labors yield, And soone leave off this toylsome weary stoure – Loe ! loe ! how brave she decks her bounteous boure, With silken curtens and gold coverletts, Therein to shrowd her sumptuous belamoure ' Yet neither spinnes nor cards, ne cares nor fretts. But to her mother Nature all her care she letts. Id.

A vengeance on your crafty withered hide ' Yet I have faced it with a card of ten.

Shalapeare.

Am not I Christophero Sly, by occupation a card maker. Id.

The very quarters that they blow, All the quarters that they know, I' th' shipman's card. Id.

How absolute the knave is ! we must speak by the card, or equivocation will undo us. Id.

The clothiers all have put off, The spinsters, carders, fullers, weavers. Id.

The while their wives do sit Beside them, carding wool. May's Virgil. It is an excellent drink for a consumption, to bo drank either alone, or carded with some other beer.

Bacon.

It is necessary that this book be carded and purged of certain base things.

Skelton. Translation of Don Quixote. Many too nicely take exceptions at cardes, tables, and dice, and such mixt lusorious lots (whom Gata- ker well confutes), which though they be honest in themselves, yet may justly be otherwise excepted at, as they are often abused, and forbidden as things most pernicious. Burton. Anat. Mel

Go card and spin, And leave the business of the war to men.

Dryden

Well he the title of St. Alban's bore, For never Bacon studyed nature more ; But age allaying now that youthful heat, Fits him in France to play at cards and cheat.

HJarvell.

Soon she spreads her hand, the aerial guard Descend, and sit on each important card ; First, Ariel perched upon a matadore. ××× Pupe.

See how the world its veterans rewards . A youth of frolics, an old age of cards. Id.

On life's vast ocean diversely we sail, Reason the card, but passion is the gale. /'.××.

GAR

CAR

Take care, that those may not make the most noise ###who have the least to sell, wh'ch is very observable in the venders of cnrd matches. Add'aon.

Whe'her there be not every year more cash circu lated at the card-tables of Dublin, that at all the fairs of Ireland? Berkley.

Sure cards he has for every thing,

Which well court-card they name, And statesmanlike calls in the king,*

To help out a bad game. Gay

The cards are dealt, the bett is made And the wide park hath lost its shade. Id

The pilot's fair machinery strews the deck, And cards and needles swim in floating wreck.

Falconer.

Cards were superfluous here, with all the tricks That idleness has ever yet contrived To fill the void of an unfurnished brain, To palliate dulness, and give time a shove.

Cotoper.

As he that travels far, oft turns aside To view some rugged rock or mouldering tower, Which seen delights him not : ### So I with brush in hand and palette spread, Paint cards, and dolls, and every idle thing, That fancy finds in her excursive nights. Id.

CARDS, PLAYING. Playing cards were in- vented in France, about the end of the reign of Charles the Fifth. No mention is made of them previous to that found in the Chronicle, written by Petit Jehan de Saintre, at the time he was page to that prince. The ordinances of St. Louis, of Charles IV., and of Charles V. at the beginning of his reign, in mentioning the different games in vogue, only speak of dice and back-gammon, without naming cards. Under Charles VI., a painter, named Jacquemin Grin- gonneau, who resided at Paris, in the Rue de la Verrerie, manufactured cards. In an ac- comit-book of Charles Poupart, superintend- ent of finance, and hanker to Charles VI. there is an entry of fifty-six Paris sous paid to Jacquemin Gringonneur, the painter, for three packs of cards, gilded and colored, and of various devices, to be presented to our lord the king, for his diversion,

during the intervals of his unfortunate malady. Probably it is in this circumstance that the generally received tradition, which rigid moralists have turned to so much account, of cards having been first invented for the amusement of an idiot, originated. After what has been stated above, it is unnecessary to observe that this tradition is unfounded. Like many other popular errors, however, it has been productive of so much inslruction that its exist- ence can hardly be a subject of regret.

All the early games of cards are of French in- vention, and most of these retain, in all coun- ries where they are played, the whole or greater part of the terms in the original language. The names by which the playing cards are at present known in France were given to them in the reign of Charles VII. ; and the game of picquet, the oldest of any known, was invented at the same period.

The mode of manufacturing playing cards is simple and may be easily explained : indeed it nearly resembles the early mode of book print- ing, being performed by means of blocks or on- graved moulds, and a sheet of wet or mcist

*card is laid on the form or block, which is first lightly brushed over with an ink, made of lamp black mixed with starch and water ; and then rubbed off witli a round list, in the hand. The court-cards they color by help of several patterns called * stanefiles,' consisting of papers cut through with a penknife : within the aper- tures or incisions of which the several colors, as red, &c. are severally applied, for at the first printing the card has only a mere outline. These patterns are painted with oil-colors, to keep Ihem from wearing out by the brushes : being laid on the paste-board they slide a brush full of color loose over the pattern, which leaving the color within the apertures, forms the face or figure of the card.*

In the manufacture of cards the ingenuity of the artisaa is sometimes employed to aid the arts of the sharper and professional gambler. Thus we find that there are marked and brief cards : the first of these are so called when the aces, kings, queens, and knaves, are marked on the corners of the backs with spots of different number and order, either with clear water, or water tinged with pale Indian ink, that those in the secret may distinguish them. Aces are marked with single spots on two corners oppo- site, diagonally ; kings with two spots at the same corners ; knaves with the same number trans versed, &c. Brief cards are those which are either longer or broader than the rest, chiefly used at whist and picquet. The broad cards are usually for kings, queens, knaves, and aces ; the long for the rest. Their design is to direct the cutting, to enable him in the secret to cut the cards disadvantageously to his adversary, and draw the person unacquainted with the fraud to cut them favorably for the sharper. As the

pack is placed either endways or sideways to him that is to cut, the long or broad cards natu- rally lead him to cut to them.

CARDAMINE, in botany, lady's smock, a genus of the siliquosa order, and the tetradyna- mia class of plants, natural order thirty-ninth, siliquosa. The siliqua parts asunder with a spring, and the valves roll spirally backward ; the stigma is entire, and the calyx a little gap- ing. Of this there are twenty-two known spe- cies ; but the most remarkable is the C. praten- sis, with a large purplish flower. It grows naturally in many parts of Britain, and is also called cuckow-flower. The single sorts are not admitted into gardens, but the double deserve a place, as making a pretty appearance during the time they are in flower. The flower of this spe- cies has a place in the Materia Medica, upon the authority of Sir George Baker, who has published five cases, two of chorea sancti viti, one of spas- modic asthma, an hemiplegia, and a case of spasmodic affections of the lower limbs, wherein the flores cardamines were supposed to have been successfully used.

CARDAMOMUM. SeeAwoMUM CARDAN (Jerome), one of the most extraor- dinary geniuses of his age, was born at Pavia, 24th Sept. 1501. He was born with his head covered with black curled hair. When four years old he was carried to Milan, where his father was an advocate. At twenty he entered

the university, and two years afterwards lectured on Euclid. In 1523 he went to Padua, and was admitted M. A. ; and, in 1525, M.D. He mar- ried about 1531. At the age of thirty-two he became professor of mathematics at Milan. In 1539 he was admitted 0" the college of physi- cians at Milan ; and in 1543 read public lec- tures on medicine in that city, and at Pavia in 1544 ; but discontinued them, because he could not get payment of his salary, and returned to Milan. In 1552 he went into Scotland, having been sent for by the archbishop of St. Andrews, then forty years old, and who had for ten years been afflicted with a shortness of breath. He began to recover from the moment that Cardan prescribed for him. Cardan, in his journey to Scotland, crossed France, and returned through Germany and the Netherlands, along the Rhine. On this occasion he went to London, and calcu- lated king Edward's nativity. Returning to Milan, he continued there till October 1552, and thence proceeded to Pavia, whence he was in- vited to Bologna in 1562. He taught in this city till 1570, but left it in 1571, and*

went to Rome, where he lived for some time without public employment. He was, however, ad- milted a member of the college of physicians, and received a pension from the pope. He died at Rome, according to Thuanus, 21st September, 1575. Cardan asserted that he was always at- tended by an aerial spirit, emanated partly from Saturn, and partly from Mercury, who was the constant guide of his actions. He was exceed- ingly vain of his acquirements, and odd in his temper. Scaliger says, that, having fixed the time of his death, he abstained from food that his prediction might be fulfilled, and that his continuance to live might not discredit his art. The Lyons edition of his works, published in 1663, consist of 10 vols. fol.

CARDFACAL, adj.) Old Fr. cardiaque;

CAR'DIACK, adj. > from icap&a, the heart. Cordial ; having the quality of invigorating the spirits. It was used by some of our old writers to express a sensation of pain in or about the heart.

The stomachick, cafdiack, and diuretic qualities of this fountain somewhat resemble those of tar water.

Bishop Berkeley. CARDIACS, in medicine. See CORDIALS.

CARDIACUS PLEXUS in anatomy, is formed oy the nerves which supply the heart, and which are derived from the superior and inferior cer- vical, and first dorsal ganglia of the great sympa- thetic nerve, from the par vagum and the recur- rent nerve.

CAR'DIALGY, n. from KapSia, the heart, and aXyoc, pain. The heart-burn ; a pain supposed to he felt in the heart, but more properly in the stomach, which someiimes rises all along from thence up to the oesophagus, occasioned by some acrimonious matter. Quincy.

CARDIALGIA. See MEDICINE.

CARDIFF, a borough and sea-port of South Wales, capital of Glamorganshire. It is seated on the east bank of the River Taafe or Tay, near its entrance into the mouth of the Severn. It

was first founded in 1080. In 1100 Robert Fitshammon, a Norman, built and strongly for- tified a castle, and surrounded it by a wall, but it was taken soon after by the native Britons In the tower of the castle, Robert, Duke of Nor mandy, brother of William Rufus and Henry I. was kept a close prisoner twenty-six years, and was afterwards interred in Gloucester cathedral. The castle was again taken by a Norman force, assisted by the earl of Pembroke, in 1232. It early surrendered to the parliamentary forces in the contest which placed the sovereignty of the kingdom in the hands of

Cromwell ; it was con- stituted a royal garrison at the restoration of Charles II.; it is now fast mouldering to decay, part of its stone walls having been appropriated to build dwellings in the town. Cardiff had formerly two religious houses of black and of white friars, and two churches, one of which was destroyed by an inundation in 1607, to- gether with many other buildings ; the remain- ing church has a high tower, of light and elegant architecture. The town is compact and well built; the town-hall is a respectable modern edifice, contiguous to it is the county gaol, and there is an elegant bridge of five arches over the Taaf. Four miles north of the town, at Melyn Griffin, is an extensive manufacture of tin-plates, and twenty-one miles further north is Merthyr Tydvil, where there are the most extensive iron works in the world, the produce of which is conveyed by a canal, having a fall of 568 feet, into the tide lock at Cardiff, from whence it is shipped to London, Bristol, and other parts. In addition to the activity which these convey- ances occasion, Cardiff also ships a considerable quantity of butter and grain to Bristol. It- markets on Wednesdays and Saturdays are nu merously attended, as are also three fairs on the second Wednesday in March, April, and May, and again in June, September, and November. The advantages which it derives from this traffic have occasioned a considerable increase of popu- lation since the commencement of the present century ; the number in 1801 having been only 1870, and in 1821, 3521. The assizes for the county of Glamorgan are held here, and, in con- junction with seven other towns, it returns one member to parliament. Cardiff is forty miles west of Bristol, forty-seven east of Swansea, and 160 west of London. Long. 3►► 12′ W., lat. 51►► 28′ N.

CARDIGAN, a maritime county of South Wales, extending for about fifty miles along the shore of St. George's Channel, from the river Tievy, which divides it from Pembroke and Caermarthenshires on the south, to the Dovey, which divides it from Merionethshire, north ; being about thirty miles in mean breadth, bound- ed on the east by the counties of Montgomery, Radnor, and Brecknock. The Rheidol and one or two other rivers intersect the county from east to west. Parts of this county are very fertile, both in tillage and pasture, which enables the inhabitants to produce a considerable surplus of grain, and small black cattle, with which, and some few sheep and wool, they obtain a tolerable supply of manufactured and colonial produc- tions. Poultry and wild fowl are also abundant,

ˆnd the herring fishery has of late years been ‘iirsued with considerable success. Its area Comprises 675 square miles, divided into sixty- five parishes, which in 1821 contained 11,304 inhabited houses, and 57,784 inhabitants, being an increase of thirty per cent, since 1801. The principal towns besides Cardigan are Aberystwith and Llanbeder.

CARDIGAN, the chief town of the preceding county, is situate at the mouth of the Tieve, over which is a handsome bridge of seven arches, at the south-west extremity of the county. It had formerly a strong and extensive castle, of which but little now remains. It was from hence that the first descent upon Ireland was made by the English. The church is a spacious edifice ; the county gaol and hall have been re- built within the present century. It is a corpo- rate town governed by a mayor, twelve alder- men, &c., and unites with Aberystwith and Llanbeder in returning one member to parliament. Holds a market day on Wednesdays and Sa- turdays. It is twenty-five miles E. N. E. of Saint David’s Head, 132 miles west of Gloucester, and about the same distance due east of Waterford, in Ireland. Its commerce by sea is confined to the coast. It owns, however, a considerable amount of shipping, employed chiefly in carrying.

CARDIGAN BAY is formed by St. David’s Head, the western point of Pembrokeshire, south, in the latitude of 51 44′ N. and 5 17′ of W. longitude, and Bardsey Island, off the south- west point of Caernarvonshire, north, in the latitude of 52 44′ and 4 30′ of W. long. ; the main coast of Caernarvonshire being in the lon- gitude of about four degrees ; it gives a stretch of about forty miles from west to east, and fifty from south to north, within the bay.

CAR’DINAL, n. & adj.~\ Fr. cardinal; Lat. CAR’DINALATE, (cardinalis, princi-

CAR’DINALSHIP, pal, chief. A car-

CAR’DINALIZE, v. .) dinal is one of the

governors of the Romish church, by whom the pope is elected out of their own number. See the next article. Ayliffe says that ‘ a cardinal is so styled, because serviceable to the apostolick see, as an axle or hinge on which the whole government of the church turns; or as they have, from the pope’s

grant, the hinge and government of the Romish church.' A woman's cloke was at one period called a cardinal, probably from its being made of red or scarlet, the color worn by cardinals. Cardinalate and cardinalship indicate the office and rank of a cardinal. Sheldon, in his Mira- cles of Antichrist, uses the verb cardinalize, to signify the making cardinals. Principal or chief is expressed by the adjective, as in the instances cardinal virtues, winds, and signs.

Bulles of popes and of cardinales, Of patriarches and bishoppes eke I shewe, And in Latin I speke a wordes few To saffron with my predication, And for to stere men to devotion.

Chaucer. Canterbury Tales. You hold a fair assembly ; You are a churchman, or I'll tell you cardinal, I should judge now unhappily. Sftaktpeare.

The divisions of the year in frequent use with Astronomers, according to the cardinal intersections

of the zodiack ; that is, the two equinoctials, and bofli the solstitial points. Browne..

His cardinal perfection was industry. Clarendon.

An ingenious cavalier, hearing that an old friend of his was advanced to the cardinalate, went to congratu- late his eminence on his new honour. L' Estrange.

Whether he should divest the cardinakhip, or rule with a double greatness. Wotton.

A peaceful and perpetual succession was ascer- tained by Alexander the third, who finally abolished the tumultary votes of the clergy and people, and de- nned the right of election in the sole college of ear. dinals. Gibbon.

CARDINALS, in their first institution, were only the principal priests of the parishes of Rome ; the chief priest of a parish next the bishop, being called presbyter cardinalis, to dis- tinguish him from the other petty priests who had no church. It is uncertain when thetermwas first applied. Leo IV. in the council of Rome, held in 853, calls them presbyteros sui cardinis; and their churches, parochias cardinales. The car- dinals continued on this footing till the eleventh century ; it was a considerable time before they had the precedence over bishops, or the election of the pope. It was not, however, only at Rome that priests bore this title ; for there were cardinal priests in France : thus, the curate of the parish of St. John de Vignes is called in old charters the car- dinal priest of that parish. The title is also given to some

bishops, quatenus bishops ; e. g. to those of Mentz and Milan : the archbishop of Bourges is also, in ancient writings, called cardi- nal. The sacred college consists of seventy car- dinals, divided into three classes ; viz. bishops, priests, and deacons. They compose the pope's council or senate ; in the Vatican is a constitution of pope John, which regulates the rights and titles of the cardinals ; and which declares, that as the pope represents Moses, so the cardinals represent the seventy elders, who, under the pontifical authority, decide private differences. The cardinal bishops, who are the pope's vicars, bear the titles of the bishoprics assigned to them ; the rest take such titles as are given them : the number of cardinal bishops has been fixed ; but that of cardinal priests and deacons, and conse- quently the sacred college itself, has often fluc- tuated. Till 1125 the college only consisted of fifty-two or fifty-three ; the council of Constance reduced them to twenty-four ; but Sixtus IV. about 1480, raised them again to fifty- three, and Leo X. to sixty-five. The dress of a cardinal is a red soutane, a rochet, a short purple man- tle, and a red hat. The cardinals began to wear the red hat at the council of Lyons, in 1243. The decree of pope Urban VIII., whereby it is ap- pointed that the cardinals be addressed under the title of eminence, is dated 1630; till then they were called illustrissimi. When cardinals are sent to the courts of princes, it is in quality of legates a latere ; and, when they are appointed governors of towns, their government is called by the name of legation. The income of a cardinal at present is not equal, we are told, to that of many Eng- lish benefices. At the period of the first direct attack of France on the papal power, they had rarely more than 4000 piastres, about ––900 or ––1000 sterling per annum, independently of

other benefices. At present their income is not above half that amount. But their expenses are not large, consisting chiefly of an old gilt coach, dirty laquais, and very inferior horses.

CARDINAL POINTS, in cosmography, are the four intersections of the horizon with the meri- dian, and the prime vertical circle. Of these, two, viz. the intersection of the horizon and me- ridian, are called north and south, with regard to the poles they are directed to. The other two, viz. the intersections of the horizon, and first ver- tical, are called east and west. The cardinal points, therefore, coincide with the four cardinal regions of the heavens ; and are 90–– distant from each other. The intermediate points are called collateral.

CARDING, a preparation of wool, cotton, hair, or flax, by passing it between the iron points, cr teeth, of two instruments, called cards, to comb, disentangle, and range the hairs or fibres thereof, and to dispose it for spinning, &c. Before the wool be carded, it is oiled, or greased with oil, whereof one-fourth of the weight of the wool is required, for wool destined for the woof of stuff's ; and one-eighth for that of the warp.

CARDIOID, in the higher geometry, an alge- braical curve, so called, by Castillioni, from its an heart.

CARDIOSPERMUM, in botany, heart pea, a genus of the trigynia order, and octandria class of plants; natural order thirty-ninth, trihilatae : CAL. tetraphyllous, petals four; the nectarium

class of plants ; order forty-ninth, composite . CAL. ovate, imbricated with prickly scales, and the receptacle hairy. Of this genus there are thirty-six species, ten of which are natives of Britain, and, being troublesome well-known weeds, require no description. Some of the ex- otics are propagated in gardens for the sake of variety.

CARDUGS BENEDICTUS.

CA'RE, v. & n.

CA'REFUL, adj.

CA'REFULLY, adv.

CA'REFULNESS, n.

CA'RELESS, adj.

CA'RELESSLY, adv.

CA'RELESS NESS, n.

CA'RE-BEGUILING, adj.

CA'RE-CRAZEP, adj.

CA'RE-.OEFYING, adj.

CA'RE-TUNED, adj.

CA'RE- WOUNDED, adj. J perturbation ; con- cern ; regard ; and having charge of : it is used to give cautions, as in take care ; and, familiarly, to manifest some degree of affection, and also defiance, as ' he cares not for

me now' ??? ' I care not for your threats ;' and it also denotes the object of our attention and anxiety. The verb and its offspring, of course, partake of the nature of the noun. When the verb signifies to be inclined, to be disposed, it takes for before nouns, and to before verbs ; when it means to be affected with, or to have a regard for, it takes

See CNICUS.

Maes. Goth, kara , Ang.Sax. care,cear; Lat. cura. The ap plications of the noun, the verb, and the adjectives and adverbs which are formed from them, are numerous. The noun expresses so- licitude ; anxiety ;

Behold, thou hast been careful for us with all this care, what is to be done for thee ? 2 Kings iv. 13.

Hear now this, thou that art given to pleasures,

Isaiah xlvii. 8.

Martha, thou art careful and troubled about many

Luke x. 41.

Arviragus in all this care.

tetraphyllous and unequal : the CAPS, three, for. Careless, which is frequently synonymous grown together, and inflated. There are four with cheerful, undisturbed, is combined with of species, natives of the East and West Indies. and about. Careful, when it stands for provident

CARDITO, in geography, a town of Naples, or diligent, is followed by of or for ; when it de- in the province of Calabria ultra, eight miles notes watchful, cautious, it precedes of. Care- E.S.E. of Reggio. faltyj besides its obvious significations, has been

CARDIUM, the cockle, in zoology, a genus of employed, though not commonly, to mark a insects belonging to the order of vermes testacea?. countenance wearing the lines of care. The The animal is a tethys; shell bivalve, nearly compounds do not need any explanation, equilateral ; equivalve, longitudinally ribbed, or grooved, with a toothed margin ; hinge with two teeth near the beak, and a larger remote lateral

one on each side, each locking into the 'opposite. that dwellfcst careleis>y. rifty-two species, inhabiting the shores of all parts of the globe. The common cockle, or car- dium edule, may serve as a general specimen of tlimSs- the whole. In this the shell is antiquated, with twenty-eight

depressed ribs, with obsolete, re- curved scales. Found on all the sandy coasts in great abundance, lodged a little beneath the sand ; its burrow pointed out by a round de- pressed spot ; shell generally white, with sometimes a bluish or yellowish cast ; the ribs a little rough near the circumference. The fish affords a wholesome and nutritive food. Most of the species are edible: but chiefly this and C. rnsti- cum, which is also chiefly found on the European and especially on the Mediterranean coast.

CARDONA, a town of Spain, in Catalonia, with a castle. Near it is a mountain of solid rock salt, of which are made vases, snuff-boxes, and trinkets ; and there are vineyards that pro- duce excellent wine. It is seated on the Car- denero, thirty-six miles north-west of Barcelona.

CARDUUS, in botany, the thistle ; a genus of the polygamia sequalis order, and syngenesia

Hath sent his lettres home of his welfare, And that he wol come hastily again, Or elles had this sorwe hire herte slain.

Chawxr. Cant. Talcs.

And in his way, it happed him to ride In all his care, under a forest side. Irˆ

The piteous maiden, careful, comfortless, Does throw out thrilling shrieks, and shrieking cries.

Spenser.

There he him found all carelessly displayed, In secret shadow from the sunny ray. Id.

Knowing that if the worst befal them, they shall lose nothing but themselves, whereof they seem very careless. Id. On Ireland.

O my poor kingdom, sick with civil blows ; When lhat my care could not withhold thyˆ riots, What wilt thou do, when riot is thy care ?

Sltakspcare.

Well, sweet Jack, have a care of thyself. 1JL

CAR

You dote on her that cares not for your love. Id. By him that raised me to this careful height,

F►►OHI that contented hap which I enjoyed. Id.

You come most carefully upon your hour. Id.

Nor lose the good advantage of his grace,

By seeming cold, or careless of his wilL Id.

Many young gentlemen flock to him every day ; ►►id fleet the time carelessly, as they did in. the golden world. Id,

*Tor Coriolanus, neither to care whether they love OT hate him, manifests the true knowledge he has of their disposition, and, out of his noble carelessness, i*iN them plainly see it. Id.*

These both put off a poor petitioner, The care-crazed mother of a many children. Id.

She cared not what pain she put her body to, since the better part, her mind, was laid under such agony.

Sidney,

Every word he speaks is a syren's note To drown the careless hearer.

Beaumont's Sea Voyage.

A woman, the more curious she is about her face, is commonly the more careless about her house.

Ben Jonson

As the Germans, both in language and manners, differed from the Hungarians, so were they always at variance with them ; and therefore much cared not, though they were by him subdued. Knollet.

The death of Selymus was, with all carefulness, Concealed by Ferhates. Id.

Who, in the other extreme, only doth Call a rough carelessness good fashion ; Whose cloak his spurs tear, or whom he spits on, He cares not. Donne.

Welcome, thou pleasing slumber ; Awhile embrace me in thy leaden arms, And charm my careful thoughts. Denham.

Not caring to observe the wind, Or the new sea explore. Waller.

Not content to see, That others write as carelessly as he. Id.

These are the effects of doting age ; Vain doubts, and idle cares, and over caution.

Dryden.

Or if I would take care, that care should be, For wit that scorned the world, and lived like me.

Id.

Flushed were his cheeks, and glowing were his eyes : Is she thy care ? is she thy care ? he cries ? Id.

Well, on my terms thou wilt not be my heir ; If thou carett little, less shall be my care. Id.

To cure their mad ambition they were sent To rule a distant province, each alone : What could a careful father more have done. Id.

By consideiing him so carefully as I did before my attempt, I have made some faint resemblance of him.

Id.

The foolish virgins had taken no care for a further supply after the oil, which was at first put into their lamps, was spent, as the wise had done. Tillotson.

The remarks are introduced by a compliment to the works of an author, who, I am sure, would not care for being praised at the'expence of another's reputa- tion, Addison.

Having been now acquainted, the two sexes did not care to part. Id.

Envy, how carefully does it look ! how meagre and ill-complexioned \ Collier.

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The solemn notes bid earthly passions fiy, Lull all my cares, and lift my soul on high.

Swift.

Pope

None taught the trees a nobler race to bear, Or more improved the vegetable care.

Thus wisely careless, innocently gay, Cheerful he played. Id.

The freedom of saying as many careless things as other people, without being so severely remarked on.

Id.

I who at sometimes spend, at others spare, Divided between carelessness and care. Id.

Where few are rich, few care for it, where many are so, many desire it. Temple.

Begone ! the priest expects you at the altar. But, tyrant, have a care, I come not thither.

A. Philip.*

Careless of thunder from the clouds that break, My only omens from your looks I take. Granville.

The court he quits to fly from care, And seeks the peace of rural air ; His groves, his fields, amused his hours, He pruned his trees, he raised his flowers ; But care again his steps pursues, Warns him of blasts, of blighting dews, Of plundering insects, snails, and rains, And droughts that starved the laboured plains : Abroad, at home, the spectre's there, In vain we seek to fly from care. Gay.

Soon as the morning lark salutes the day, Through dewy fields I take my frequent way, Where I behold a farmer's early care, In the revolving labours of the year. Id.

Martha (her careful mother's name) she bore, But now her careful mother was no more. Id.

O what passion then, What melting sentiments of kindly care, On the new parents seize . Thomson.

In my cheerful morn of life, When nursed by careless solitude I lived, And sung of nature with unceasing joy, Pleased how I wandered through your rough domain.

Id.

Then, pilgrim, turn, thy cares forego,

All earth-born cares are wrong : Man wants but little here below,

Nor wants that little long. Goldsmith's Hermit. She loves to wander on the untrodden lawn,

Or the green bosom of reclining hill, Soothed by the careless warbler of the dawn. Or the lone plaint of ever-murmuring rill.

Beattie.

From such apostles, oh ye mitred heads, Preserve the church ! and lay not careless hands On sculls that cannot teach and will not learn.

Cowper-

Thnse eyes that tell us what the sun is made of, Born to be ploughed with years, and sown with cares, And reaped by death, lord of the human soil.

Byron.

CARE'EN, v. a. &. n. > Fr. carener, from CARE'ENAGE, n. 3 Lat. carina, a heel.

Trimming and repairing the bottom of a vessel. See the next article. The neuter verb signifies to be in a state of careenage. When the work- men cannot come at the bottom of the ship, and therefore can only careen part of her, it is called a half-careen. Careenage is the place where the operation is performed, and also the money giver, for careening.

M

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CAR

The fleet careened, the winds propitious filled The swelling sails, the glittering transports waved Their pennons gay, and halcyon's azure wing With flight auspicious skimmed the placid main.

Shenstone.

CAREENING. A ship is said to be brought to the careen, when most of her lading being taken out, she is is hulled down on one side, by a small vessel,

as low as necessary ; and there kept by the weight of the ballast, ordnance, &c. as well as by ropes, lest her masts should be strained too much ; in order that her sides and bottom may be trimmed, seams caulked, or any thing that is faulty under water mended. Hence, when a ship lies on one side when she sails, she is said to sail on the careen.

CAR E'ER, v. & n. Fr. carriere ; Ital. carriera ; Span, carrera ; Lat. currere. To career is to move with a rapid motion. The noun denotes the ground on which a race is run ; the space run over; the act of running swiftly; fulness of speed; velocity of motion; an uninterrupted course of action.

They had run themselves too far out of breath to go back the same career. . Sidney.

What reign can hold licentious wickedness, When down the hill he holds his fierce career.

Shakspeare.

Shall qaips and sentences, and these paper bullets of the brain, undo a man from his c.ireer of humour.

Id.

The sun

Declined, was hasting now with prone career, To the ocean isles, and in the ascending scale Of heaven, the gtars that usher evening rose.

Milton.

With eyes, the wheels

Of beryl, and careering fires between. Id,

Through optick trunck the planet seemed to hear, And hurls them off e'er since in his career. Marvell.

Knights in knightly deeds should persevere, And still continue what at first they were ; Continue and proceed in honour's fair career.

Dryden.

Practice them now to curb the turning steed Mocking the foe ; now to his rapid speed To give the rein, and, in the full career, To draw the certain sword, or send the pointed spear.

Prior.

And but Guajthirerus' ready aid was near, (His father's offspring by a foreign bed) Here he had run his last of life's career,

And swelled the growing number of the dead.

Gay. While storms remote but murmur in thy ear,

Nor waves in ruinous uproar round thee roll, Yet yet a moment check thy proud career,

And curb the keen resolve that prompts thy soul.

Beattie.

Or rein the planets in their swift careers, Gilding with borrowed light their twinkling spheres.

Darwin.

*CARELIA, the eastern province of Finland, extending from Savolaxia on the north, to the gulf of Finland on the south. In the thirteenth century it became subject to Sweden, but in 1309 was ceded to Russia. It is now almost en- tirely included in the government of Wiborg ***

and is thinly peopled, abounding in lakes and marshes.

*CARENTAN, a town of France, in the de- partment of the Channel, and chief place of a canton, in the district of St. L6, situate in a marshy soil, which makes the air insalubrious. It has a port for small vessels ; its principal com- merce consists of butter and cattle. Lat. 49** 18′ N., long. 1** 21′ 50″ W.*

CA'RENTANE, n. quarantine ; Lat. quudra- gena, or quarantena. A papal indulgence, mul- tiplying forty-fold the remission of penance.

CARES, or KARES, a town of European Tur- key, seated on Mount Athos, in an elevated and pleasant situation ; it has several convents, and a market every Saturday for corn and other pro- visions. It is seventeen miles south-east of Sa- loniki.

*CARESAN, or CASSEN, a sea-port town of Arabia Felix, seated on the Indian Ocean, 100 leagues north-east from Aden. Lat. 16** 5′ N., long. 52** 7′ E.*

CARE'SS, v. & n. Fr. caresser ; Ital. ca- rezzare ; Sp. acariciar. This word,

which seems not to have been in use in our language much more than a century and a half, has given risa to disputes among the etymologists. Skinner sharply reprehends Junius for deriving it from Xapi►►t

He she knew, would intermix Grateful digressions, and solve high dispute With conjugal caresses. Milton.

If I can feast, and please, and carets my mind with the pleasures of worthy speculations, or virtuous prac- tises, let greatness and malice vex and abridge me if they can. South.

After his successor had publicly owned himself a Roman Catholick, he began with his first caresses to the church party. Swift.

A snappish cur alone carest, By lies had banished all the rest. Gay.

On Latmos' top see young Endymion lies, Feigned sleep hath closed the bloomy lover's eyes, See to her soft embraces how she steals, And on his lips her warm caresses seals. Id.

Drear anguish urged her on to press

Full many a hand, as wild she mourned ; Of comfort glad, the drear caress

The damp, chill, dying hand returned.

Penrose.

Pale are those lips where soft caresses hunt, Wan the warm cheek, and mute the tender tongup, Cold rests that feeling heart on Dcrwent's shore. And those love-lighted eye-balls roll no more.

Darwin.

Ah ! fondly youthful hearts can press, To seize and share the dear caress.

liyrafr Giacv.

CAR

CA RET, n. Lat. caret, there is wanting. A note, like an inverted capital A►► between two words, to denote that something has been omitted, and is interlined.

CAREW (George), an eminent commander in Ireland, born in Devonshire, in 1557. He was made president of Munster by queen Elizabeth ; ⁂when, joining his forces with the earl of Tho- mond, he reduced the Irish insurgents, and brought the earl of Desmond to his trial. King James I. made him governor of Guernsey, and created him baron. He was an elegant scholar, and wrote Pacata Hibernia, a history of the late wars in Ireland, printed after his death in 1633. He made several collections for a history of Henry V. which are digested into Speed's His- tory of Great Britain. Besides these, he collected materials of Irish history, in four large MS. vo- lumes, now in the Bodleian library, Oxford.

CAREW (Richard), the eldest son of Thomas Carew, of East Anthony, and author of the Sur- vey of Cornwall, was born in- 1555. When very young he became a commoner of Christ Church College, Oxford ; and at fourteen years of age had the honor of disputing, extempore, with the afterwards famous Sir Philip Sidney, in the pre- sence of the earls of Leicester, Warwick, and other nobility. After spending three years at the university, he spent other three at the Middle Temple, and then travelled. Not long after his return to England, he married, in 1577, Juliana Arundel, of Trerice. In 1581 he was made jus- tice of the peace, and, in 1586, high sheriff of Cornwall. In 1589 he was elected a member of the College of Antiquaries. His Survey of Cornwall was published, in 4to. at London, in 1602; and has been twice reprinted, in 1723, and 1769. Of this work Camden has spoken in high terms. He translated a work from the Italian, entitled, The Examination of Men's Wits : in which, by discovering the variety of natures, is showed for what profession each one is apt, and how far he shall profit therein. This was published at London, 1594 and 1604 ; but has been principally ascribed by some to his fa- ther. Carew wrote also, The true and ready Way to Learn the Latin Tongue. He was a gentleman of abilities and literature, and was held in great esteem by the most eminent scholars of his time, particularly Sir Henry Spelman.

CAREW (Sir George), younger brother of Richard, was educated at Oxford, studied the law in the inns of court, and then travelled for farther improvement. On his return he was called to the bar, and after some time appointed secretary to Sir Christopher Hatton, lord chan- cellor, by the special recommendation of queen Elizabeth, who gave him a prothonotaryship in the chancery, and conferred on him the honor of knighthood. In 1597 he was sent ambassador to the king of Poland. Under king James I. he was one of the commissioners for treating with the Scots concerning a union between the two kingdoms; after which he was appointed am- bassador to France, where he continued from the end of 1605 till 1609. He there formed an intimacy with Thuanus, to whom he communi- cated an account of the transactions in Poland, whilst he was employed there, which was of

great service to that admirable author in drawing up the twenty-first book of his history. After Sir George's return from France, he was ap- pointed master of the court of Wards, which he did not long live to enjoy, for it appears by a letter from Thuanus to Camden, in 1613, that he was then lately deceased. Sir George married Thomasine, daughter of Sir Francis Godolphin, great-grandfather of the lord treasurer Godol- phin, and had by her two sons and three daugh- ters. When Sir George returned from his French embassy, he drew up, and addressed to James L A Relation of the State of France, with the cha- racters of Henry IV. and the principal Persons of that Court. The characters are drawn from personal knowledge and close observation, and might be of service to an historian. The compo- sition is perspicuous and manly, and entirely free from the pedantry which prevailed in the reign of James I. This valuable tract lay long in MS. till Dr. Birch published it in 1749, at the end of his Historical View of the Negociations between the Courts of England, France, and Brussels, from 1592 to 1617.

CAREW (Thomas), descended from the family of Carew, in Gloucestershire, was gentleman of the privy chamber to Charles I. who always esteemed him one of the most celebrated wits of his court. He was the companion of Ben Jon- son and Sir William Davenant, and left behind him several poems, and a masque, called Caslum Britannicum, performed at Whitehall by the king and several of his nobles, with their sons. Carew was assisted in the contrivance by Inigo Jones, and the music was set by Henry Lawes. He died in the prime of life, about 1639.

CAREX, sedge grass, in botany, a genus of plants, of themonoecia order, in the triandria class of plants, natural order third, calamariae. The characters are male flowers, digested into a long spike : CAL. an oblong and imbricated omentum, consisting of acute, hollow, and lanceolated scales, each containing one flower : COR. none ; the sta- mina are three erect setaceous filaments of the length of the calyx ; the antherae are oblong and erect. In the female flowers the CAL. the same as in the male ; there are no petals, but an in- flated oblong nectarium ; the germen is triangu- lar, and is placed within the nectarium; the style is very short; the stigmata are two or three, long, crooked, pointed, and hoary. The necta- rium grows larger when the flower is fallen, and contains the seed, which is single, of an acute ovate form, triangular, and has one of its angles usually much smaller than the others. There are ninety-eight species, too well known to need any description.

CARGADORS, a name which the Dutch give to those brokers whose business is to find freight for ships outward bound, and to give notice to the merchants, who have commodities to send by sea, of the ships that are ready to sail, and of the places for which they are bound.

CA'RGASON, n. a Fr. charge, says Dr.

CA'RGO, n. 5J►►bnson. Todd refers to

Old Fr. cargue, and the Ital. carico or carco, a burden. Skinner goes to the Lat. carrus. In Span, cargo, and eargazon. But the original may be traced to the Welsh tars, pl.cargoz, a

charge, load, or cargo. A ship's lading; the mer- chandise conveyed in her.

My body is a cargtuon of ill-humours.

Howell.

A ship whose cargo was no less than a whole world, that carried the fortune and hopes of all pos- terity. Durnet's Theory. This gentleman was then a young adventurer :n the republic of letters, and just fitted out for the uni- versity with a good cargo of Latin and Greek.

Addison. One gang of people instantly was put

Upon the pumps, and the remainder srt To get up part of the cargo, and what not, But they could not come at the leak as yet.

Byron's Don Juan.

CARGILLITES, a denomination given to a religious sect in Scotland, more generally known by that of Cameronians. See CAMERONIANS.

CARIA, in ancient geography, a country of Asia, whose limits are extended by some, and contracted by others. Mela and Pliny extend the maritime Caria from Jasusand Halicarnassus, to Calynda, and the borders of Lycia. Ptolemy extends the inland Caria to the Meander and beyond.

CARIACO, a city in the Colombian new pro- vince of Orinoco, containing a population of about 6000. Tt is seated near the shore of the Carrihean Sea, but is approached np a gulf or bay, extending from west to east about forty miles ; on the south shore of the entrance to this gulf, is the city of Cumana, which may be regarded as the great out-port of the country, bordering on the river ?.nd gulf of Cariaco, as well as of that town, see therefore CUMANA.

CARIANS, CARIATES, or CARIATIDES, the inhabitants of Caria, called

also Cares, Ca- rissae, Carides, and Carise. The Carians being the Swiss of those days, were hired and placed in the front of the battle. Cum care Carissa, de- noted the behaviour of clowns. The Carians are said to have come originally from the islands to the continent, and to have been formerly subject to Minos, and called Leleges. They are of a common original with the Mysi and Lydi, hav- 'ng a common temple, of very ancient standing, at Melassa, a town of Caria, called Jovis Carii Delubrum. Homer calls them barbarians in language.

CARIATIDES. See CARIANS and CARYA- TIDES. ⬩⬩⬩

CARIBBEE ISLANDS, a chain of islands, forming the south-eastern boundary of the West India Seas, lying between the island of Trinidad in the lat. of 10⬩⬩ N. and Porto Rico, or the Virgin Islands, in the lat. of 18⬩⬩ N. The fol- lowing list exhibits the several islands in geo- graphical order, beginning in the south ; with the latitude and longitude of the principal town or port of each island, viz.

WINDWARD.

Lat. Long.

1. Tobago . . 11⬩⬩ 22′ N. 60⬩⬩ 32′ W.

2. Grenada . . 12 3 ⬩⬩⬩ 61 50 ⬩⬩⬩

3. Barbadoes .13 5 ⬩⬩⬩ 59 43 ⬩⬩⬩

4. St. Vincent .13 9 ⬩⬩⬩ 61 15 ⬩⬩⬩

5. St. Lucia . . 13 57 — 61 7 ⬩⬩⬩

6. Martinique . 14 36 ⬩⬩⬩ 61 7 ⬩⬩⬩

CAR

LEEWARD.

7.

Dominica . .

15⬩⬩

18′ N.

61⬩⬩

28′

W

ft

Mariegalante .

15

52 ⬩⬩⬩

61

22

⬩⬩⬩

.0.

Guadaloupe

16

0 ⬩⬩⬩

61

48

⬩⬩⬩

⬩⬩⬩

Deseada . .

16

20 ⬩⬩⬩

61

7

⬩⬩⬩

10.

Montserrat . .

16

48 ⬛⬛⬛

62

17

⬛⬛⬛

11.

Antigua . .

17

3 ⬛⬛⬛

61

50

⬛⬛⬛

1:2.

Nevis . . .

17

10 ⬛⬛⬛

62

43

⬛⬛⬛

13.

St. Kitts . .

17

19 ⬛⬛⬛

62

49

◆◆◆

14.

St. Eustatia

17

29 ◆◆◆

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4

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15.

Barbuda . .

17

47 ◆◆◆

62

2

◆◆◆

16,

St.Bartholomew

17

54 ◆◆◆

62

52

◆◆◆

17.

St. Martin . .

18

1 ⬛⬛⬛

63

7

⬛⬛⬛

18.

Anguilla . .

18

11 ⬛⬛⬛

63

16

⬛⬛⬛

In addition to~ the above, there are several small islands dependent on Grenada, and two or three more dependent on Guadaloupe. This groupe of islands was discovered by Columbus on his second voyage ; he made the island of Deseada on the 26th of September, 1493, after which he successively visited Dominica, Gua- daloupe, and several others ; the whole of the Islands in the American Seas were originally designated the West Indies ; but the above groupe were found inhabited by a numerous race of men, more robust and energetic than those of the large islands of Cuba, Hayti, Jamaica, and Porto Rico, though apparently of the same common origin or stock ; the people being called Caribs has occasioned the islands to be distin- guished by their name, of the Caribbees. Those north of Martinique are denominated by nautical men, the leeward ; and those on the south, the windward ; and they are sometimes called the Greater Antilles, to distinguish them from another groupe of islands which flank the coast of Caraccas, or what is now the north coast of Columbia, which is called the Lesser Antilles. Originally the whole of the islands in the American Seas were granted by the pope of Rome, in full title to Spain ; but the Caribbees appear not to have been taken possession of, or even claimed by them, until the English, French and Dutch severally contended for

empire in the west. The period of their falling into the hands of the different European powers, and which of those powers, will be found under the heads of the respective islands, as will also the extent, several local properties, and produc- tions of each ; the native inhabitants will be seen to have fallen a sacrifice to the cruelty, avarice, and contending passions of the several Euro- peans who alternately held possession of the dif- ferent islands, until, in 1660, the whole of the re- maining native inhabitants were concentrated upon the island St. Vincent, where scarce an individual now remains. The race as in all the larger islands may be said to be extinct. At present, 1826, of the Caribbees, Martinique, Guadaloupe, Deseada, and its other depen- dancies, are held by the French ; St. Eustatia by the Dutch ; St. Bartholomew by the Swedes ; and the remainder by the English. ††† See WEST INDIES.

CARIBBEAN SEA, is that part of the Atlantic Ocean within, or west of the Caribbee Isles, in the long, of 62†† W. ; or, as laid down in the pre- ceding article, extending west to the bay of lion-

duras, in long. 04†† W. ; bounded on the north by Jamaica, St. Domingo, Porto Rico, and the Virgin Islands, and south by the Spanish main, or north coast of the new republic of Colombia, comprising a surface of water exceeding 500,000 geographical miles.

CARICA, the papaw, a genus of the decan- dria order, and dioecia class of plants, natural, order, thirty-eighth, tricoccse: CAL. of the male, almost none: COR. quinquefid and funnel- shaped ; the filaments in the tube of the corolla, a longer and shorter one alternately : CAL. of the female quinquedentated : COR. pentapetalous, with five stigmata ; the fruit an unilocular and polyspermous berry. 1. C. papaya, rises with a thick, soft, herbaceous stem, to the height of eighteen or twenty feet, naked till within two or three feet of the top. The leaves come out on every side, upon very long foot-stalks. Those undermost are almost horizontal, but those on the top are erect ; in full grown plants they are very large, and divided into many lobes deeply sinuated. The flowers of the male plant are produced from between the leaves on the upper part of the plant : these are of a pure white, and have an agreeable odor. The flowers of the female papaya also come out from between the leaves towards the upper part of the plant ; they are large, bell-shaped, composed of six pe- tals, and commonly yellow ; when these fall away, the germen swells to a large fleshy fruit, of the size

of a small melon. These fruits are of different forms, some angular and compressed at both ends ; others oval or globular, and some pyramidal. When the roundish fruit are nearly ripe, the inhabitants of India boil and eat them with their meat, as we do turnips. They have somewhat the flavor of a pompion. Previous to boiling they soak them for some time in salt and water, to extract the corrosive juice ; but they mostly pickle the long fruit, and thus they make no had succedaneum for mango. The buds of the female flowers are gathered, and made into a sweet meat ; and the shells of the ripe fruit are boiled, and, with the insides, are eaten with sugar and pepper, like melons. 2. C. prosoposa dif- fers from the other in having a branching stalk, the lobes of the other shaped like a pear, and of a sweeter flavor than the papaya. Both species being natives of hot countries, they cannot be preserved in Britain unless constantly kept in a warm stove. They are easily propagated by seeds, which are annually brought in plenty from the West Indies, though the seeds of the Euro- pean plants ripen well. When grown to a large size, they make a noble appearance with their strong upright stems, garnished on every side near the top with large shining leaves, spreading out nearly three feet all round the stem : the flowers of the male sort coming out in clusters on every side, and the fruit of the female growing round the stalks between the leaves, are so different from anything of European production, as well to entitle these plants to a place in the gardens of the curious.

CARICATURA, in painting, denotes the concealment of real beauties, and the exaggera- tion cf blemishes, but still so as to preserve a resemblance of the object. It was practised by

the ancients, as well as by many eminent modern artists ; there are several on the walls of Ilereu- laneum, one of which in particular represented ./ Eneas, Anchises, and Ascanius, with the heads of hogs and an ape. English artists have long been celebrated for indulging the satirical vein in painting, and multitudes of caricatures are daily making their appearance on public men and manners. If Hogarth is excepted as a painter of a higher class, no one has excelled Gillray in this branch of art. The two Cruikshanks at present are at the head of this department, and have often approached the best of Gillray's works.

*CARICATUR'E, v. & n. **

> to load or over-

Ital. caricatura, CARICATU'RA, n. CARICATU'RIST, n. j charge. A cari-

cature is a colored or distorted representation, which exaggerates defects of person or style, to a ridiculous excess, yet preserves a resemblance of the

object. The caricaturist is an artist, who may often make us laugh, but whom we seldom esteem. It is in the service of politics that this defoiming art is most frequently employed.

CA'RICOUS TUMORS, n. Lat. carica, a fig. A tumor in the form of a fig.

CARIDES, or CARIDA, a town of Asia Minor, in Phrygia.

CARIDIEN, an island of Asia, in the Indian Sea, near the west coast of the island of Ceylon ; twelve miles long and two wide.

CA'RIES, n, ˆ Lat. caries. The rotten- CARIO'SITY, n. Sness peculiar to a bone; CA'RIOUS, adj. j rottenness ; rotten. See MEDICINE and SURGERY. Indexes.

Fistulas of long continuance, are, for the most part,

accompanied with ulcerations of the gland, and caries

in the bone. Wiseman.

This is too general, taking in all cariosity and ulcers

of the bones. Id.

I discovered the blood to arise by a carious tooth.

Id.

CARILLONS, a species of chimes frequent in the ci-devant Netherlands, particularly at Ghent and Antwerp, and played on a number of bells in a belfrey, forming a complete scale of tones and semitones, like those on the harpsichord and organ. There are pedals communicating with the great bells, upon which the carilloneur with his feet plays the base to sprightly airs performed with the two hands upon the upper species of keys. These keys are projecting sticks, wide enough asunder to be struck with violence and velocity by either of the hands edgeways, with- out danger of hitting the neighbouring key. The player is provided with a thick leather covering for the little finger of each han-l, to guard against the violence of the stroke. They are heard through a large town. The music bells of Edin- burgh are a species of carillons

CARINA, Lat. The keel of a ship, or that long piece of timber running along the bottom of the ship from head to stern, upon which the whole structure is built. It is also used for the whole capacity of a ship, containing all the space below the decks; and sometimes for the whole ship. Among

*anatomists it is used, 1. to denote the spina dorsi ; 2. the embryo of a chick appearing in an incubated egg. It consists of the er.tire vertebrae, as they appear after ten or twelve day**

ncubatlon. It is thus called, because crooked in the form of the keel of a ship. Among bota- nists it is used for the lower petalura of a papi- lionaceous flower.

CARINJE, women hired among the ancient Romans to weep at funerals : thus called from Caria, the country whence most of them came.

CA'RINATED, adj. Lat. carina. Bent like the hull of a ship ; whence, in botany, a leaf, a scale, a nectary, is said to be carinated, when it is longitudinally hollow above, and has a corre- sponding sharpish protuberance beneath.

CARINTHIA, DUCHY OF, an interior pro- vince or division of the Austrian empire, lying between the lat. of 46□□ 21′ and 47□□ 6′ N. and 12□□ 30′ to 14□□ 50′ of E. long, comprising an area of about 3500 English square miles ; the west end borders on the Tyrol, and it is bounded on the north by the bishopric of Saltzburgh and Upper Styria, east by Lower Styria, and south by Upper Carniola, and the Venetian territory. The river Drave, which rises in the Tyrol and falls into the Danube at Belgrade, intersects Carinthia; its whole extent from west to east receiving several tributary streams, both from the north and south. There are also several lakes, which, as well as the rivers, yield abundance of excellent fish. It is a mountainous and woody district, the mountains yielding abundance of iron, lead, and copper, as well as quicksilver, bismuth, and zinc, and also the purest marbles, and a variety of gems ; whilst the forests abound with the finest timber, the valleys afford some excellent pasturage, as well as fertile lands for tillage ; but being edged in by mountains both on the north and south, whilst the remoteness of the course of the Drave precludes it from being made available as a channel of conveyance, the rich store of natural products which this district con- tains are of little advantage either to the inhabi- tants or to the world. Could a water communi- cation be obtained with the Adriatic, which, by a social and reciprocal order of society, might be effected with the west end of the province, either by the Tajamento, or the Piave, Carinthia might then rank among the most interesting and important districts of Europe; but under the bigoted, blind,

and passive policy of Austria, the inhabitants of Carinthia pass away their time in indolence and apathy ; such supply of foreign productions as they do get being obtained in exchange for the cattle which are driven to the markets of the towns of Italy. Carinthia at one time formed part of the territory of Bavaria, but on Rodolphus attaining the imperial dignity, he conferred it in 1282 on Maynard, count of Tyrol, on condition that it should revert to the house of Austria, in default of Maynard's male issue, which happened in 1331. It was overrun by the French under Buonaparte, during his campaign in Italy ; he had his head quarters at Villach in March 1797, but it has since reverted again to Austria, and is divided for local jurisdiction into two parts, Upper and Lower ; the former on the west, containing about 175,000 inhabitants, and the latter on the east, about 105,000. The prin- cipal towns in the upper part are Gmund and Villach ; and in the lower, Clagenfurt (which is

the capital of the duchy), Wolfsberg, Wolfen- marck, Pleyburg, &c. The inhabitants, who speak chiefly the Sclavonian language, are bigot- ed adherents to the ceremonies of the Romish church, and contribute to the Austrian govern- ment an impost of about ––250,000 English per annum.

CARIOSUS, rotten stone, in oryctology, a genus of argillaceous earths ; consisting of alu- mine, silica, and carbonate of lime, with a small portion of iron ; light, soft, falling to powder in water; effervescing with nitric acid; hardening a little red in the fire. One species only. Found in Derbyshire and other coal countries ; gene- rally over veins of coal ; colors dirty yellow, dull brown, or gray. It easily moulders in the open air, for which reason it has been denominated rotten-stone. It is principally used for polishing metals and other substances.

CARIPI, a kind of cavalry in the Turkish army. Of these about 1000 are not slaves, nor bred up in the seraglio, like the rest ; but are generally Moors or renegado Christians, who, being poor, and having their fortune to seek by their dexterity and courage, have arrived at the rank of horse guards to the grand seignior.

CAR1SBROOK, a village contiguous to Newport, in the Isle of Wight, remarkable for its castle and church, which are both very ancient. The church had once a convent of monks annex- ed, part of which is now a farm-house, still re- taining the name of the priory. The castle, which is a picturesque edifice, stands on an eminence, and was the prison of Charles I. in 1647, be- fore he was delivered to the parliament forces. It is now nominally the seat of the governor of the Isle of Wight. See ISLE OF WIGHT.

CARISSA, in botany, a genus of the monogy- nia order and pentandria class of plants ; natural order thirtieth, contortae : COR. twisted ; berries one or two ; many-seeded. Five species ; some spinous, others unarmed ; all Indian plants. The fruit of C. carandus is eaten by the natives, and is of pleasant taste.

CARITATIS POCULUM, the grace cup, was an extraordinary allowance of wine or other liquors, wherein the religious at festivals drank in commemoration of their founder and bene- factors.

CA'RK, v. & n. ❖❖❖> Welsh, & Ang.-Sax. care.

CA'RKING, n. 3 This seems a sufficiently satisfactory derivation ; but Junius chooses to go further a field, and makes Kapic the parent word, though with no small portion of etymolo- gical distortion. Care in the Welsh means care, solicitude, anxiety; carcus, solicitous, anxious, careful. The sense of the English word is the same. Cark as a noun is obsolete ; the verb is nearly so, and is always used in an ill sense. Unconnected with this, and whence derived I know not, is carke ; denoting, says Minsheu, ' a quantity of wool, whereof thirty make a sarpler,' equal to half a sack.

What pathe listc you to treade ? what trade will you

assay ?

The courts of plea by braule and bate drive gecie peace away.

In house for wife and childe there is but earlte and

care,

With travel and with toyle enough in fields we used to fair. Man't Life ; in Uncertaine Auctor.*

He down did lay His heavy head, devoid of careful cark.

Spenser.

And Klaius taking for his younglings' carte, Lest greedy eyes to them might challenge lay, Busy with oker did their shoulders mark.

Sidney.

Hark, my husband, he's singing and hoiting -, And I'm fair to carhe and care, and all little enough. Beaumont and Fletcher.

What can be vainer, than to lavish out our lives in the search of trifles, and to lie carking for the un- profitable goods of this world ? L' Estrange.

CA'RLE, v. & n.ˆ Goth, karl, in which CA'RLISII, adj. f language it meant simply a CA'RLISHNESS, 71. ►► man ; Welsh, carl, acovet- C A'RLOT, n. J ous man ; Ang.-Sax. carl, a

miser, a rustic, a male. Its usual acceptation, in English, is a mean, uncivilised, rough, brutal, man. In England this word is now superseded by churl it still obtains in Scotland. Carle, Johnson tells us, is also the name of a kind of hemp. Tusser has ' the finable, to spin, and the carl for her seed;' from which it is evident that carle is female hemp. Carlot signifies a country- man, says Todd ; and in the quotation from Shakspeare it undoubtedly is so, but it will not bear such a construction in the extract from Drayton, the person there alluded to being a peer.

His knave was a strong carle for the nones, And by the haspe he haf it of at ones ; Into the flore the dore fell anon.

Cftaucer. Cant. Tales.

Right in the midst, whereas they breast to breast,

Should meet a trap was letten downe to fall Into the floud ; straight leapt the carle unblest,

Well weening that his foe was falne withall ;

But he was well aware and lept before his fall.

Spenser.

The next year Hardicanute sending his house carles, so they called his officers, to gather the tribute imposed ; two of them rigorous in their office were slain at Worcester by the people ; whereat the king enraged sent Leofric, duke of Mercia, and Seward of Northumberland, with great forces and commission to slay the citizens, rifle and burn the city, and waste the whole province. Milton. Hist, of Eng.

Answer, thou carle, and judge this riddle right, 111 frankly own thee for a cunning wight. Gay.

The editor was a covetous earle, and would have bis pearls of the highest price. Bentley.

CARLEBY, OLD AND NEW, two towns on the coast of West Bothnia, about fifty miles north of Wasa.

CARLETON (George), a learned bishop of the seventeenth century, born at Norham, in Northumberland, in 1559. He was principally indebted for his education, both at school and at the university, to the liberality of Bernard Gil- pin. Upon quitting the university, he was advanced, in 1617, without any previous ecclesi- astical preferment, to the bishopric of Llandaff. He was a person of solid judgment, and various

reading. To the papists he -was a bitter foe and with regard to the doctrine of predestination, a rigid Calvinistn. He published many works, both in English and Latin, the principal among which are his Heroici Characteres, or Heroic Characters, Oxon. 4to. 1603; Tythes Examined, and proved to be due to the Clergy by a Divine Right, Lond. Ho. 1606-1611 ; Jurisdiction Royal, Episcopal and Papal, wherein is declared how the Pope hath intruded upon the jurisdic- tion of temporal princes, and of the church, &c. Lond. 4to. 1610 ; Astrologimania, a treatise against Judicial Astrology, 4to. 1624 ; Vita Ber- nardi Gilpin, 4to. 1626 ; this work was translated into English in 1629. He sat in the Short Par- liament, for Arundel in Sussex.

CARLINA, the carline thistle : a genus of the polygamia sequalis order, and syngenesia class ot plants ; natural order forty-ninth, composite : CAL. is radiated with long colored marginal scales. There are twelve known species. C. vulgaris is the only one that is a native of Britain. All the others are natives of the south of France or Italy ; and are very easily propagated in this country by seeds, which must be sown on a bed of fresh un- dunged earth, where they are to remain, as they do not bear transplanting. The second year most of them will flower ; but rarely produce good seeds in this country, and some of the plants decay soon after they have flowered, so that it is difficult to maintain them here. The roots are used in medicine, and for that purpose are im- ported. As w[illegible] receive them they are about an inch thick, externally of a rusty brown color corroded as it were on the surface, and perfo- rated with numerous small holes, appearing as if worm eaten. They have a strong smell, and a sub-acid, bitterish, weakly aromatic taste. They are reckoned warm alexipharmics and dia-

E heretics. Hoffman the Elder relates that he as observed a decoction of them in broth occa- sion vomiting. They have been for some time greatly esteemed among foreign physicians ; but never were much in use in this country. The present .practice entirely rejects them, nor are they often to be

met with in the shops.

CARLINE KNEES are timbers going athwart a ship, from the sides to the hatch-way, serving to sustain the deck on both sides.

CARLINGFORD, a populous parish and town in the county of Louth, Ireland. The parish comprises a promontory between Dun- dalk and Carlingford Bay. The town is situate on the south shore of the bay of Carlingford, and is noted for its oyster fishery ; it is a corpo- rate town, and returns two members to the Irish parliament. It is eight miles south of Newry, and fifty-two north of Dublin.

CARLINWARK LOCH, a lake in Kirkcud- brightshire, originally 116 square acres in extent; but reduced in 1765 to eighty, ten feet of water being then taken off by a canal to the Dee. It is a great source of improvement to the adjacent grounds, as it contains an inexhaustible fund of the very best shell marl. It was sold in 1788, for ►►2000 sterling. Before it was drained there were two isles in it, at the north and south ends, on which water fowls bred in great abundance. Many antiquities were found in it, particularly a

*brass dagger, plated with *old, twenty-two inches Ions?, and several canoes hollowed out like those of the American Indians.*

CARLISLE, a city, bishop's see, and capital of the county of Cumberland, England, is situ- ate at the junction of three rivers, Calder, Petter- ill, and Eden, about six miles above the entrance of the united streams into Solway Frith, and thirteen miles from the south-west frontier of Scotland. Carlisle has held a distinguished rank among the cities of England, in every period of British history, and is supposed to have been first founded by Luil, a native Briton, long before the irruption of the Romans into England. The contiguity of Carlisle to Scotland, during the less social habits, and distinctiveness of inter- est, of the people of that country, frequently ex- posed it to their depredations ; to avoid which, the Romans, on their possessing themselves of this part of England, erected a wall from Solway Frith to the German Ocean, which included on one side Carlisle, and on the other, Newcastle within its southern limits. After the departure of the Romans from England, the Roman wall did not prevent the Scots and Picts from renewing their incursions, and they soon reduced Carlisle to a heap of ruins, in which state it continued till 680, when Egbert king of Northumberland encompassed it with a wall, and repaired its church ; but

it was again doomed to destruction in the eighth and ninth centuries, by the Norwe- gians and Danes, and it remained in this state until after the Norman conquest, when it was further protected by a citadel and castle, built by William Rufus, having three gates, called the English, Irish, and Scotch, with reference to their bearing on the side of each respective coun- try. These defences, however, did not prevent it from falling into the possession of the Scots, who held it alternately with the English from the period of William Rufus, to that of Henry VII. It was constituted a bishop's see by Henry I., de- stroyed by fire by the Scots, in the reign of Hen- ry HI., and experienced the same disaster twice in the following reign. In 1568 the castle was made the prison house of the unfortunate Mary of Scotland; in 1645 it surrendered, through famine, to the parliamentary force;and in 1745 fell into the possession of the partizans of the Pre- tender, but was immediately after retaken by the duke of Cumberland, who demolished the gates and part of the wall ; and it has since that period enjoyed an uninterrupted tranquillity. Since the commencement of the present century, it has undergone great improvements : and on. the site of the citadel two commodious court houses have been erected, the county gaol rebuilt, a handsome stone bridge built over the Eden, with other im- provements have contributed to render it one of the most agreeable and interesting cities of Eng- land. The castle is still kept in repair, and serves, with other purposes, for a magazine, and an armoury of about 10,000 stand of arms. The cathedral is a stately and venerable edifice, partly of Saxon and partly of Gothic architecture ; there are two other churches, as well as several meeting houses. The markets, on Wednesdays and Saturdays, are well supplied with every thing ne- cessary for subsistence and comfort. The cotton

manufacture has established itself upon an extend- ed scale in this city ,whilst the architectural and ex- ternal appearances of the city have indicated great social improvement and national prosperity. The conveyance of its commodities of commerce has been facilitated by a canal to the Solway Frith, and it is a point of union and interchange for the mails to all parts of England, Scotland, and Ire- land. Its corporation consists of a mayor, twelve aldermen, &c. It returns two members to parlia- ment, and is 101 miles south-east of Glasgow, ninety-one south by east of Edinburgh, and 303 N. N. W. of London.

CARLISLE, a town of Schoarie county, state of New York. Population in 1820, 1583 ; forty miles west of Albany.

CARLISLE, a town of Pennsylvania, capital of Cumberland county, with a college, and four edi- fices for public worship. It is situate near a creek of the Susquehannah, 100 miles west by north of Philadelphia.

CARLISLE BAY, on the south coast of Jamaica ; west coast of Barbadoes, and island of Antigua.

CARLISLE (Frederic Howard), earl of, was born in May 1748, his mother being Isabella Byron, sister of Admiral Byron, whose life we have sketched. He was brought up at Eton with Mr. Fox; and finished his education at Christ Church, Oxford. In 1777 he was appointed treasurer of the royal household, and appointed in the following year one of the British commissioners to adjust the differences between the mo- ther country and her then revolted American colonies : but the mission, it is well known, proved wholly abortive. In 1780 he was vice- roy of Ireland. As a writer he is known by a tragedy called the Father's Revenge, which re- ceived the decided approbation of Dr. Johnson, the Stepmother, a tragedy, and some Poems. His nephew, Lord Byron, as we have shown, treated the poetical character of this nobleman with great contempt in his English Bards and Scotch Reviewers : but there was evidently more of private pique in the affair, than any steadiness of judgment. See BYRON. Lord Carlisle married a daughter of the marquis of Stafford, by whom he had a son, born in 1773. The coun- tess died January 27th, 1824; and the earl, Sep- tember 4th, 1825.

CARLOCK, in commerce, a sort of isinglass, made of the sturgeon 's bladder, imported from Archangel. The chief use of it is for clarifying wine, but it is also used by the dyers. The best carlock comes from Astracan, where great num- bers of the fish are caught.

CARLOS, ST., a city in the interior of the new Colombian province of Apure, situate on one of the branches of the Apure river, about eighty-five miles S. S. W. of Valencia. The in- habitants are principally descendants of settlers from the Canary Isles, who are more industrious and social than those from Old Spain. Under the newly formed government of Colombia, St. Carlos promises to become a flourishing place, being situate in a very fertile country, affording great inducements to agricultural enterprise. Population in 1826, about 10,000.

CARLOS DE MONTEREY, SAN, the principal settlement of New California, on the west coast

of North America, in the lat. of 36►► 36′ N., and 121►► 34′ of W. long. It is beautifully situated within a small bay of the same name, first

dis- covered by Cabrillo in 1542, who named it Bahia de Finos, on account of the graceful aspect of the forest of pines, intermixed with oaks, which covered the mountains of St. Lucia, rising with gentle ascent from the bay. It was afterwards visited by the Count de Monterey, from whom it received its present name. The Jesuits in their turn became enamoured with the spot, and formed a settlement here. The forests and mountains which rise immediately from the coast, preclude much intercourse with the inte- rior; nor does it appear that there is any river of magnitude, either north or south, for some distance, otherwise it would be an inviting spot for colonisation.

CARLOW, anciently called Catherlogh, an interior county of the province of Leinster, in the south-east part of Ireland ; it is bounded on the west by the Barrow River, which divides it from the county of Kilkenny, afterwards flowing past New Ross into Waterford harbour ; on the east it is intersected by the Slaney River, which falls into Wexford Haven ; a small portion of the county lies west of the Barrow, and the portion east of the Slaney borders on the county oc Wicklow, and partakes of the mountainous cha- racter of that county, as does also the portion west of the Barrow, and the south-east part bor- dering on the county of Wexford ; the part be- tween the two rivers is beautifully undulated and exceedingly fertile, both in tillage and pas- ture, and produces the best butter in all Ireland. It contains inexhaustible quarries of excellent limestone, and beds of marl and clays, and in the mountains are iron ore and oxide of manganese. Carlovv county contains 137,050 Irish planta- tion acres ; is divided into six baronies and forty-six parishes. The only towns of note in the county, besides Carlow, the capital, are Tullow and Racket's Town; in that part of the county west of the Barrow is the ecclesias- tical see of Leighlin, now united to Ferns in the county of Wexford.

CARLOW, the chief and assize town of the pre- ceding county, is situate on the east bank of the Barrow River, at the north-west extremity of the county, bordering on Queen's and Kildare coun- ties. The remains of a castle overhanging the river, the ruins of a very fine abbey, a convent, and Roman Catholic college, are the principal objects of interest in the town. It has also a respectable market- house, county court-house, gaol, and cavalry barracks, and manufactures some woollen cloths. The castle is supposed to have been erected by king John of England, to secure the passage of the Barrow; it continued for several centuries a fortress of much importance. In the reign of Richard II. it was surprised by Donald M'Art O'Kavanagh, king of Leinster, and re- mained in his possession a considerable time. In 1577 the tower and castle surrendered, after a long and desperate siege, to Rory Oge O'Moore, who inflicted great cruelty on the inhabitants. In 1642, 500 Englishmeii, imprisoned in the castle, were rescued by a detachment of the duke

of Ormond's army ; and in 1650 it surrendered to the parliamentary forces. In an effort since that time to renovate the building, the foundation gave way, and it has since remained a heap of ruins. On the 27th of May, 1798, the town was furiously assailed at two o'clock in the morning, by a large body of Irish, who, after ,a most sanguinary conflict, were routed by the English cavalry stationed in the barracks, aided by the yeomanry. Some coarse woollen cloth is manu- factured in the town and its vicinity ; some of the inhabitants carry on, by means of the Barrow, an extensive traffic in lime, and stone coal, ob- tained just within Queen's county. Carlow is one of the thirty-one places in Ireland each of which returned a member to the parliament of the United Kingdom. It is eighteen miles north- east of the city of Kilkenny, and thirty-nine south- west of Dublin.

CARLOWITZ, a town of Sclavonia, where a peace was concluded between the Turks and Germans in 1669. It is seated on the south bank of the Danube, just below Peterwarjen, thirty-eight miles north-west of Belgrade. Popu- lation about 5600.

CARLSBAD, a town of Bohemia, in the circle of Saatz, celebrated for its hot baths, discovered by the emperor Charles IV. as he was hunting. It is seated on the Topel, near its confluence with the Egra, twenty-four miles E. N. E. of Eger, and seventy south -east of Dresden. It is very celebrated for its mineral waters.

CARLSCRONA, or CARLSCROON, a sea-port of Sweden, in the province of Blekingen, on the Baltic. It is the residence of the governor of the province, and was founded by Charles IX ; but, for its present rank as a sea-port, is indebted to Charles XI. It has long been the principal rendezvous of the Swedish navy. The harbour is commanded by two forts, and other fortifica- tions ; but the docks are the chief objects of in- terest. One of them, constructed in the year 1714, was excavated from the solid rock; its length is 190 feet, its breadth forty-six, and its depth thirty-three. The new semicircular dock is of greater dimensions ; it is divided into four com- partments, each of which has five slips for vessels, a gate forty-eight feet in width, and nearly thirty in height, and an edifice over it with a copper roof. The walls are of granite, and nearly forty feet thick, being filled up in the middle with earth. The harbour will hold altogether about 100 ves- sels. The Swedish admiralty had once its seat here, but removed to Stockholm in 1776. Here is an anchor foundry. The exports are timber, tar, potash, tallow, and marble. Population 13,800. . It is 220 miles S.S.W. of Stockholm.

CARLSHRUE, a town in the northern part of the territory of the grand duke of Baden, and now the ducal residence. It was first laid out in 1715; the original plan included thirty-two streets, and a palace in the centre. It

was taken possession of by the French in 1796, when only nine of the streets were built ; nor was it of much note till after the final termination of the war in 1814 : since which it has become the permanent residence of the grand duke. The palace is a spacious and elegant edifice, the centre sur

mounted with a lofty spire; on one side is a chapel, and on the other a librarj, containing 40,000 volumes of valuable books, and a collec- tion of minerals and medals. A philosophical apparatus, and an extensive botanic garden, ad- joins the palace. Carlshrue has churches for the Lutherans, Calvinists, and Catholics ; and also a Jews' synagogue ; all religionists being on equal terms in the Baden territory. The other public buildings are a town hall, courts, an academy, poor-houses, and barracks ; and most of the build- ings, private as well as public, being of stone, the whole make a respectable, and rather an im- posing appearance. The chief dependence of the inhabitants is on the court, and public busi- ness of the dukedom, and foreign embassies. The population has been progressively increasing since 1810, and in 1825 amounted to 16,030. It is about forty miles north by east of Stras- burgh, and about the same distance west by north of Stutgard.

CARLSTADT, a town of Franconia, in the principality of Wurtzburg, seated on the Maine, thirteen miles north by west of Wurtzburg. It is now included in the Bavarian circle of the Lower Maine. Population about 2200.

CARLSTADT, the capital of Croatia, with a for- tress ; seated on the Kulpa, a branch of the Save, at the influx of the Corona, 180 miles south by west of Vienna, and forty-five E. N. E. of Fiume.

CARLSTADT, a town of Sweden, capital of Wermeland, and a bishop's see. It stands on the north side of the lake Wenner, and on the island of Tingwalla, which is formed by two branches of the Clara. The houses are built of wood and painted ; the episcopal palace is also of wood, and has an extensive front. The in- habitants carry on a trade in copper, iron, and wood, across the lake. It is 155 miles west of Stockholm. Population about 1500.

CARLYLE (Joseph Dacres), an English di- vine, famous for hi►► oriental learning, was born at Carlisle in 1759, where his father practised physic with considerable reputation. After re- ceiving the usual course of grammar-school edu- cation in Carlisle, he was removed to Christ's College,

Cambridge ; and having resided about two years there, he was admitted of Queen's Col- lege, and obtained a fellowship. He now began to study the Arabic language, in which he made uncommon progress ; and, with the assistance of David Zabio, an Asiatic, born at Bagdad, then residing at Cambridge, he entered on the study of the other oriental tongues. Having continued about ten years in college, during which he pro- ceeded to his degree of B. D., he married and settled at Carlisle. He was chosen professor of Arabic on the resignation of Dr. Craven in 1794; and collated to the chancellorship of Carlisle in 1795. In 1796 he published Specimens of Arabian Poetry, with elegant translations, .and brief memoirs of the authors. In 1799 he ac- companied lord Elgin in his embassy to Constan- tinople; where he gained admittance to the libraries, and made catalogues of the works they contained ; and from whence he made excursions into Asia Minor, and explored, with interesting accuracy, the site of ancient Troy. Having visited Egypt, Syria, and the Holy Land, gleaning lite-

rary treasures wherever he went, he returned to Constantinople, from whence he travelled through Italy and Germany to England, where he landed in the end of 1801. The bishop of Carlisle soon after presented him to the rich rectory of New- castle upon Tyne ; but his travels had injured his constitution, and this worthy and ingenious man died at Newcastle in 1804. About the time of his death he was engaged in superintending an edition of the Arabic Bible ; a Dissertation on the Troad ; and Observations made during his Tour in the East.

CARMAGNOLA, a fortified town of Italy, in Piedmont. It was taken by the French, and retaken by Prince Eugene in 1691. It is seated in a country abounding in corn, flax, and silk, near the Po. Here is an annual fair, which is much frequented from Savoy and Dauphine". Early in the revolution it fell into the hands of the French, and gave its name to one of the most popular republican songs. Population about 12,000. It is twelve miles S. S. E. of Turin.

CARMANIA, in ancient geography, a country of Asia, east of Persia, having Par'.hia on the north, Gedrosia on the east, the Persian Gulf, and the Indian, or the Carmanian, Sea on the south. Its name was derived from the Syriac, carma, a vine, for which it was famous, yielding clusters of grapes three feet long. It is now called Ker- man, or Carimania, and is a province of modern Persia. It was anciently divided into Carmania Deserta, south of Parthia ; and, Carmania Pro- pria, south of Carmania Deserta, quite to the sea.

CAERMARTHEN, or CARMARTHEN, the chief town in the county of Caermarthen, South Wales, situated at the distance of 218 miles west of London. It is also a borough containing a population of 9995 souls, holds

markets every Wednesday and Saturday, and fairs on the 3rd and 4th of June, 10th of July, 12th of August, 9th of October, and 1 4th of November. The chancery and exchequer for South Wales were established here, and here the ancient Britons held their patriarchal synods. ••• The present town occupies a commanding position on the northern bank of the river Towy, which is crossed by a bridge of seven arches ; and the bay of Caermarthen into which the river falls, is included between Caldy Island and the Worm's Head, distant from each other just fourteen miles. ••• Henry VIII. granted the in- habitants the privilege of being represented in parliament. The corporation consists of a mayor, recorder, town clerk, six peers, and two sheriffs, the last being the returning officers at the elections for appointing a burgess to parlia- ment. The great sessions for the county are held here, as well as a mayor's court, and quarter sessions alternately, with Llandilo. The trade consists principally in the manufacture and export of tin, coal, and iron, and an extensive and improving traffic is established between this town and Bristol. The Towy is navigable up to the town by vessels of 300 tons burden ; and the quay is spacious and convenient. Amongst its public buildings the most important are the church of St. Peter, a chapel of ease, besides meeting houses, the county gaol, town hall, &c.

Caermarthen boasts the possession of several literary societies, and two public journals issue from its press. A handsome monument to the memory of the gallant Sir Thomas Picton stands near the town ; and that remarkable person Mefddyn, or Merlin, the prophet, was born here. He flourished, A. D. 480, and has left the name of Caer-merddyn (Caermarthen) i. e. the city of Merlin, to fix the place of his nativity. ••• The duke of Leeds takes the title of marquis from this place.

CARMARTHENSHIRE, one of the six counties comprehended within South Wales. It was anciently called Dimetia, and is bounded on the north by Cardiganshire, on the east by Brecon, on the west by Pembroke, and the south by Glamorganshire and the Bristol chan- nel. The surface presents considerable variety, undulating generally, sometimes very hilly, and, occasionally, even swelling into mountains. The area covers 590,640 acres, which sustain a popu- lation of 100,800. It is separated into eight hundreds, viz. : Carnwallon, Cathinog, Caeo, Derllys, Elvet, Iskennen, Cidwelly, and Perfedd. In these are the market towns of Caermarthen, the capital, Llandovery, Cidwelly, Llandeilo fawr, Llanelly, Newcastle-in-Emlyn, and Llangadoc. There are eighty-seven parishes within the shire, all

under the control of the diocese of St. Davids. Tin plates and woollen stockings are amongst the manufactures, the latter disposed of in every market town, the former shipped principally at Llanelly. Many British and Roman antiquities are scattered over the face of the county, and some few places are consecrated to history and poetry. Grongar hill possesses a classical notoriety, and Llandeilo fawr witnessed the fall of Cambrian independence in the final struggle between Llewellyn and King Edward I., of England. An ancient Roman road is still distinct near to Llandovery, and many coins of that victorious people have been found in the vicinity of Whitland and elsewhere. Llanegwad parish abounds in antique remains, both Roman and British, and to the north of the town of Caer- marthen stands a remarkable cairn, 150 feet in circumference, and eighteen in height, enclosing a stone chest nine feet in length, the lid of which is entire. Other cairns of less magnitude, bnt containing sepulchral remains, have also been met with in other places in this county. Caer- marthen borough sends one member to parlia- ment, and a second is returned by the county.

CARMEL, a high mountain of Palestine, standing on the skirts of the sea, and forming the most remarkable head-land on all that coast. It extends east as far as the plain of Jezreel, and from the city of that name quite to Caesarea on the south. It seems to have had the name of Carmel from its great fertility ; this word, in He- brew, signifying the vine of God, and being used in Scripture to denote any useful spot. Carmel has been greatly revered both by Jews and Chris- tians, from its having been the residence of the prophet Elijah, who is supposed to have lived there in a cave (which is there shown) before he was taken up into heaven.

CARMELITES, one of the four tribes of men- dicant friars; so named from mount Carmel.

*They pretend to descend in an uninterrupted succession from Elijah, Elisha, and the sons of the prophets. Phocas, a Greek monk, speaks the most reasonably. He says that in his time, 1 1 85, Elias's cave was still extant on the mountain ; near which were the remains of a building, which intimated that there had been anciently a monas- tery***that some years before, an old monk, a priest of Calabria, by revelation, as he pre- tended, from the prophet Elias, fixed there, and assembled ten brothers. In 1209 Albert, patriarch of Jerusalem, gave the solitaries a rigid rule, which Papebroch has since printed. This rule contained sixteen articles. These con- fined them to their cells ; enjoined them to continue day and night in prayer; prohibited their having any property ; enjoined fasting from the feast of the holy cross till Easter, except on Sundays ; abstinence at all times from flesh ; obliged them to manual labor ; imposed a strict silence on them from vespers till the tierce the next day. After the establishment of the Car- melites in Europe, their rule was in some res- pects altered ; the first time,*

by pope Innocent IV., who added to the first article a precept of chastity, and relaxed the eleventh, which enjoins abstinence at all times from flesh, permitting them, when they travelled, to eat boiled flesh. The rule was again mitigated by the popes Eu- genius IV., and Pius II. The habit of the Car- melites was at first white, and the cloak laced at the bottom with several lists,. But Pope Hono- rius IV. commanded them to change it for that of the Minims. Their scapulary is a small woolen habit of a brown color, thrown over their shoulders. They wear no linen shirts ; but instead of them linsey wolsey, which they change twice a week in the summer and once a week in the winter.

CARMEN, an ancient term among the Latins, used in various senses ; as 1 . a verse : 2. a spell, charm, form of expiation or execration, couched in few words, in a mystic order, on which its efficacy depended.

CARMENTA, or CARMETIS, in fabulous his- tory, a prophetess of Arcadia, and the mother of Evander, with whom she came into Italy sixty years before the Trojan war.

CARMINATIVES comprehend coriander- seeds, aniseed, peppermint,and the like medicines, used in colics, or other flatulent disorders, to dispel wind. The word comes from the Latin carmen, a charm ; and is supposed to have been a general name for all medicines which operated, like charms, in an extraordinary manner. Hence, as the most violent pains frequently arose from wind, and immediately ceased upon its disper- sion, the term carminative was applied to medi- cines which gave relief in windy cases, as if they cured by enchantment. It is now almost obsolete.

CARMINE, a powder, of a very beautiful red color, partaking of the shades of scarlet and purple. It is used by painters in miniature; but, on account of its high price, they are often induced to substitute lake. The manner of pro- ducing it is preserved a secret by color-makers ; and, though many receipts have been published, none has ever been found to answer the purpose. See PAINTING.

CAR'NAGE, n. CAR'NAL, adj. CAR'JJALIST, n. CAR'NALITE, n. CARNAL'ITY, n. CAR'NALIZE, v. CAR'NALLY, adj. CAR'NALNESS, n. CAR'NAL-MINDED, adj. CAR'NAL-MINDEDNESS,W.J

note belonging to the flesh ; addicted to fleshly practices ; unspiritual ;

sensual ; gross ; and in their worst sense, libidinous, lustful, lecherous. A carnalite is a worldly-minded man ; a carna- list seems to be some shades darker in character ; to carnalise is to degrade the mind by employing it in ministering only to the lusts of the flesh ; reducing it to that state in which', as Milton beautifully expresses it,

The soul grows clotted by contagion, Imbodies ami imbrutes, till she quite lose The divine property of her first being.

For to be carnally minded is death ; but to be spi ritually minded is life and peace. ••• Because the carnal mind is enmity against God : for it is not subject to the law of God, neither indeed can be.

Romans viii. 7.

So as fortune wold that was Isopes frend, This worthy king that same yere made his carnal end. Chaucer. Cant. Tales.

CARNARVON, a town in the parish of Llanbeblig, hundred of Is-gorfai, and county of Caernarvon, in North Wales. It is a borough town, the capital of the county, and of the northern principality, and is beautifully situated at the confluence of the river Seiont with the straits of Menai. Here are held the great and quarter sessions. Markets on Wednesdays and Satur- days, and five fairs in each year. It lies 235 miles north-west by west of London. The population is estimatedat 5,788. The public buildings are not architectural although convenient. The hotel is a handsome design, and the English chapel ap- propriate, but the county court, market house, gaol, and custom house, have only the excel- lence of their accommodation to recommend them. The guild, or town hall, is a handsome apartment occupying the ancient flanking towers of the principal gate. It was restored and decorated at the expense of Sir Watkyn Williams Wynne, bart. Three excellent and spacious inns are provided for the accommodation of visiters, exclusive of several comfortable houses of less pretensions. The domestic or country trade of this town is considerable, but its prosperity and wealth are attributable to the large exports of slate made annually from the quays. The metal of Cylgwyn and Llanllyffni quarries is superior to the smooth pink slate exported from other places, a circumstance seldom known beyond the vicinity of the slate country. Ships are repaired here, and vessels occasionally built, a trade much promoted by the advantage of a patent slip. The noble castle of Caernarvon, the birth place of Edward II. is the most spacious and elegant of the first Edward's mili- tary structuies, being intended for the residence of the royal family. It appears as a figure-head

This whole class of the harp-like form into which the ancient of words

descends walls are disposed, a design artfully adopted, from Lat. caro, car- like the accouchement of Queen Eleanor in nis, flesh. Carnage Caernarvon castle, to soothe and win over his means slaughter; lately conquered subjects. Caernarvon is governed massacre; and also, by a mayor, who is constable of the castle, by poetically, heaps patent, one alderman, and two bailiffs, &c., and, of flesh. Carnal, in conjunction with Pwllheli and other ancient and the words places, returns one member to parliament. Near formed from it, de- the site of King Edward's fortifications stood the ancient Roman Segoritium, some small remains of, which still exist, a Roman road may also be traced, and several camps or stations are yet quite perfect at small distances around. Plus Mawr, within the walls, a mansion belonging to one of the earliest Saxon settlers walls, may be classed amongst the antiquities. The Her- bert family take the title of earl from this ancient town.

CARNARVONSHIRE, a county of North Wales. It is bounded by the sea on the north, by Denbighshire on the east, by Merionethshire and the sea on the south, and on the west by the Menai straits and the Irish Sea. It extends forty-five miles in length, but varies exceedingly in breadth, and occupies an area of 260,000 acres of land. It is divided into ten hundreds, viz. : Commitmaen, Creuddyn, Dinllaen, Effi- onydd, Gafflogian, Isaf, Is-gorfai, Nant-Conway, Uchaf, Uwch-gorfai, and the separate jurisdiction of Bangor city. It includes the market towns of Caernarvon, Pwllheli, and Nevin, and em- braces seventy-one parishes, subject to the control of the bishop of Bangor. The popu- lation is estimated at 66,500. This is one of the most mountainous and romantic districts in the United Kingdom, and here the great chain of mountains, which appears to rise from the sea at Penmaen- mawr and the Rifaels, attains its maximum height, 3759 feet in the summit of Snowdon, the loftiest of the Cambrian Alps. The general composition of the Caernarvonshire hills is clay slate, including copper and lead ores, the principal mines of which are situated at Llanberis, Nantle-pooles, and Beddgelert, besides pure slate at Llandegai, Llanberis, Llanllyffni, and other places. In the export of slates, ores, light cattle, and some woollen, the chief trade consists, and the accommodation of tourists forms a profitable occupation to num- bers. Many rivers and rivulets descend from the mountains, and either proceed with short courses to the sea or meander into the adjoining counties. The Conway is the most important, and perhaps the next in magnitude are the Ogwen, Llugwy, Lleder, Seiont, and Coluryn. Lakes are also numerous, almost every hollow amongst the hills constitutes a draining reservoir of an ex- tensive district. Llanberis and Nantgwynant lakes are celebrated for the sublimity of the accompanying scenery, to which may be added, as not inferior in grandeur, Llyn Idwal, Ogwren, and Crafnant. Strangers have been admitted to an inspection of the wildest districts of this county by the construction of excellent roads

through Llanberis and Nant Francon, and a free intercourse is opened with Anglesea by the erection of the Menai suspension bridge. The remains of antiquity are various and many. The

Cairn, Cromlech, and Roman camp are still distinguishable. Ancient British castles remain at Dolwydellan, Nant Francon, Criccieth, and Dolbadarn, while the noble ruins of Caernarvon and Conway castles evince the power and resources of the English prince by whom Cam- bria was finally subdued.

CARNATIC, a territory of Hindostan, ex- tending along the east coast from Cape Comorin, the southern extremity of Asia, in 8►► 4′ N. lat. to near the mouth of theKistnain 16►►N. lat. vary- ing in breadth from fifty to 100 miles, bounded on the west by the Mysore, and on the east for about two degrees of latitude, by the gulf of Manara and Palk's Strait, which divides it from the north end of the island of Ceylon, the re- mainder of its eastern boundary being better known by the name of the coast of Coromandel. The principal towns on the coast, beginning from the south, are Negapatam, Pondicherry, Madras, Pullicat, and Gangapatam; and those in the in- terior, beginning also from the south, are Tinevelly, Madura, Tritchinopoly, Tanjore, Atcot, Nellore, and Ongole. Numerous streams and rivers from the westward intersect this territory, the princi- pal of which are the Cauvery, Cuddalore, Paliare, and Pennar. The soil is various in quality, being in some places exceedingly fertile, and in others sandy and barren ; and the inhabitants occasionally exposed to great privation for want of water. Numerous fortresses, and monuments of art, are spread over every part of this territory, indicating long continued civilisation and opu- lence, more so than in most other parts of Hin- dostan. The Carnatic was formerly the domi- nion of the nabob of Arcot, who became one of the earliest and apparently most faithful allies of the British in their career of conquest in the east. The nabob of Arcot's dominions were guaranteed to him, on condition of paying a subsidy of fif- teen lacks of pagodas annually, afterwards re- duced to nine lacks, and further not to enter into alliance with any European or other power, with-, out the consent of the British. But, on the sur- render of Seringapatam to the British in 1800, there was found, among the records of the sultan, papers confirmatory of the secret violation of the treaty of the nabob of Arcot with the British, who consequently dispossessed the nabob of his authority, and since 1801 the Carnatic has been uninterruptedly possessed

by the British, and included in the presidency of MADRAS, which see.

CARNATION, n.s. > ~Fr.incarnadin; Ital.

CARNA'TIONED, adj. \incarnatino, incarnato; Span, encarnado ; Lat. caro, carnis. The natural flesh color ; the name of a flower. The adjec- tive denotes colored like the flower. When the flesh is well executed, and has the natural tint, painters say, ' the carnation is very good.'

And lo the wretch ! whose vile, whose insect lust Laid this gay daughter of the spring in dust : O punish him ! or to the Elysian shades Dismiss my soul, where no carnation fades. Pope.

While the hues of youth, Carnationed like a sleeping infant's cheek, Rocked by the beating of her mother's heart, Or the rose tints that summer twilight leaves Upon the lofty glacier's virgin snow,

The blush of earth embracing with her heaven, Tinge thy celestial aspect, and make tame The beauties of the sun-bow which bends o'er theo.

Byron's Manfred,

CARNATION, in botany. See DIANTHUS.

CARNATION, among painters, is understood of all the parts of a picture, in general, which represent flesh, or which are naked and without drapery. Titian and Corregio in Italy, and Ru- bens and Vandyke in Flanders, excelled in carnations. In coloring for flesh, there is so great a variety, that it is hard to lay down any general rules for instruction therein; neither are there any regarded by those who have acquired a skill this way. The various coloring for carnations may be easily produced, by taking more or less red, blue, yellow, or bistre, whether for the first coloring, or for the finishing : the color for women should be bluish ; for children a little red, both fresh and gay ; and for the men it should incline to yellow, especially if they are old.

CARNATION, SPANISH. See POINCIANA.

CARNATION TREE. See CACALIA.

CARNEADES, a celebrated Greek philoso- pher, born at Cyrene in Africa, and founder of the third academy. He was an antagonist of the Stoics ; and applied himself with great eagerness to refute the works of Chrysippus, one of the most celebrated philosophers of their sect. The power of his eloquence was dreaded even by the Roman senate. The Athenians being condemned by the Romans to pay a fine of 500 talents for plundering the

city of Oropus, sent Carneades, Diogenes, and Critolaus, to Rome, as ambassa- dors, who got it mitigated to 100 talents. Be- fore they had an audience of the senate, they harangued to great multitudes, in different parts of the city. Carneades excelled in the vehe- ment, and rapid Critolaus in the correct and elegant, and Diogenes in the simple and modest kind of eloquence. The former having one day harangued before Galba, and Cato the censor with great variety of thought, and copiousness of diction, in praise of justice, undertook the next day, with a view of establishing the doc- trine of the uncertainty of human knowledge, to refute all his former arguments. Cato moved, that these ambassadors should be im- mediately sent back, as it was very difficult to discern the truth through the arguments of Car- neades. He was afraid of that subtlety of wit, with which Carneades maintained either side of a question. His grand principle was, trnt there are only resemblances of truth in the mind of man; so that of two things directly opposite, either may be chosen indifferently. Quintilian remarks, that though Carneades argued in favor of injustice, yet he himself acted according to the strictest rules of justice. Carneades lived to be eighty-five years old ; some say ninety : his death is placed in the fourth year of the 162d Olympiad.

CARNEDDE, in British antiquity, heaps of stones, supposed to be druidical remains, and thrown together at confirming a covenant. Gen. xxxi. 46. They are very common in the isle of Anglesey.

CARNEIA, in antiquity, a festival in honor of Apollo, surnamed Carneus, held in most cities of Greece, but especially at Sparta, where it was first instituted. The reason of the name, as well as the occasion of the institution, is controverted. It lasted nine days, beginning on the thirteenth day of the month Carneus. The ceremonies were an imitation of the method of living and discipline used in camps.

CARNEL; the building of ships, first with their timber and beams, and after bringing on their planks, is called camel work, to distinguish it from clinch work. Vessels also, which go with mizen sails instead of main sails, are by some called camels.

CARNELIAN, or CORNELION, in natural history, a sub-species of calcedony, of which there are three kinds, distinguished by three colors, a red, a yellow, and a white. The red is very well known among us ; is found

in round- ish or oval masses, like our common pebbles, and is generally met with between one inch and two or three inches in diameter : it is of a fine, compact, and close texture ; of a glossy surface ; am1 of all the degrees of red, from the palest flesi color to the deepest blood red. It has a conchoidal fracture, and a specific gravity of 2‘6. It is semitransparent, and has a glistening lustre. It consists of 94 silica, 3‘5 alumina, and 0‘75 oxide of iron. It is generally free from spots, clouds, or variegations; but sometimes it is veined very beautifully with an extremely pale red, or with white ; the veins forming concentric circles, or other less regular figures, about a nu- cleus, in the manner of those of agates. The pieces of carnelian which are all of one color, and perfectly free from veins, are those which our jewellers generally make use of for seals, though the variegated ones are much more beau- tiful. For this purpose it is excellently adapted, being not too hard for cutting, and yet hard enough not to be liable to accidents, to take a good polish, and to separate easily from the wax. It is not at all affected by acid menstruums : the fire divests it of a part of its color, and leaves it of a pale red ; but a strong and long continued heat will reduce it to a pale dirty gray. The finest carnelians are those of the East Indies ; but there are very beautiful ones found in the rivers of Silesia and Bohemia; and we have some good ones in Britain.

CARNESVILLE. See FRANKFORT. CARNEW, a parish and town of Ireland; the parish is partly in the county of Wicklow, and partly in Wexford, and in 1821 contained a po- pulation of 5328. The town is in the county of Wicklow forty-four miles S.S.W. of Dublin, and sixteen north of Enniscorthy, and in 1821 con- tained 855 inhabitants ; it has some manufactures of coarse woollens. It is distinguished for the defeat of the king’s troops by the insurgents in

1798.

CARNHAWL, a town of Hindostan, in the province of Delhi. Here, in 1739, Kouli Khan gained a victory over the army of the great mogul; and in 1761 the Seiks, under Abdalla, defeated the Mahrattas. It is seated at the junc- tion of the Hissar canal with the Jumna. It is eighty miles north-west of Delhi.

CARNIFEX, among the Romans, the common executioner. By reason of the odiousness of his office, he was expressly prohibited from having his dwelling house within the city. In middle age writers, carnifex denotes a butcher. Under the Anglo-Danish kings, the carnifex was an offi- cer of great dignity; being ranked with the archbishop of York, earl Goodwin, and the lord steward. Flor. Wigorn. Anno. 1040. The pub- lic executioner was also an office of dignity y under the kings of Israel.

CA'RNIFY,v. ˆj All from Lat. caro,

CARNIFICA'TION, n. I carnis. To carnifyis to

CARNI'VOROUS, adj. I generate flesh ; to con-

CARNO'SITY, n. j vert nutriment into flesh;

CA'RNOUS, adj. \ carnificating is the ac-

CA'RNEOUS, adj. j tion of so generating or

converting. Carnivorous is flesh-eating ; car-

nosity is a fleshy excrescence ; and carnous and

carneous are fleshy.

At the same time, I think, I deliberate, I purpose, I command ; in inferior faculties, I walk, I see, I hear, I digest, I sanguify, I carnify.

Hale. Origin of Mankind.

The first or outward part is a thick and carnous covering, like that of a walnut ; the second, a dry and flosculous coat, commonly called mace.

Browne's Vulgar Errours.

In a calf, the umbilical vessels terminate in certain bodies, divided into a multitude of carneous papillae.

Ray.

The muscle whereby he is enabled to draw himself together, the anatomists describe to be a distinct car- nous muscle, extended to the ear. Id.

In birds there is no mastication or comminution of the meat in the mouth ; but, in such as are not carni- vorous, it is immediately swallowed into the crop or craw. Id.

By this method, and by this course of diet, with sudorificks, the ulcers are healed, and that carnosity resolved. Wiseman,

Man is by his frame, as well as by his appetite, a carnivorous animal. Ar but knot.

But man is a carnivorous production,

And must have meals, at least one meal a day ; He cannot live like woodcocks upon suction,

But, like the shark and tiger, must have prey.

Byron's Don Juan.

CARNIOLA, a ducny of Germany, anciently Carnia, from the Carni, a tribe of Scythians, is bounded on the south by the Adriatic Sea, and part of Istria; on the north by Carinthia and Stiria; on the east by Sclavonia and Croatia; on the west by Friuli, the county of Gorz or Goritz, and a part of the Gulf of Venice ; ex- tending in length about 110 miles, and in breadth about fifty. It is very mountainous : some of its hilly parts being cultivated and inhabited, others covered with wood, and others buried in perpetual snow. The valleys are remarkably fruitful. Here are also mines of iron, lead, and copper; but salt is an imperial monopoly. It contains many medicinal springs and inland lakes. The common people are very hardy, go- ing barefooted in winter through the snow, with open breasts, and sleeping on a hard bench, without bed or bolster. Their food is also very coarse and mean. In winter, when tho. snow

lies deep on the ground, the mountaineers bind either small baskets, or long thin narrow boards, like the Laplanders, to their feet, on which, with the help of a stout staff, they descend with great velocity from the mountains. When the snow is frozen, they make use of a sort of skaits. In different parts the inhabitants differ greatly in their dress, language, and manner of living. In Upper and Lower Carniola they wear long beards. The languages chiefly in use are the Sclavonian and German. The duchy is divided into the Upper, Lower, Middle, and Inner, Car- niola. The principal commodities exported are iron, steel, lead, quicksilver, white and red wine, oil of olives, cattle, sheep, cheese, linen, and a kind of woollen stuff called mahalan, Spa- nish leather, honey, walnuts, and timber ; together with all manner of wood work, as boxes, dishes, &c. Christianity was first planted here in the eighth century. Lutheranism made a con- siderable progress in it; but, excepting the Wallachians or Uskokes, who are of the Greek church, and style themselves staraverzi, i. e. old believers, all the inhabitants are Roman Catho- lics. Carniola was long a marquisate, but in 1231 was erected into a duchy. As its propor- tion towards the maintenance of the army, it pays annually 363,171 florins; but only two

regiments of foot are quartered in it. Lay- bach, 170 miles S. S. W. of Vienna, and twenty-eight north-east of Trieste, is the capital of the duchy. The other principal towns are Ratmansdorf, Kramburg, Stein, and Ydria, in the North or Upper Carniola ; Weichselburg, Gu- rikfield, Landstratz, and Rudolfweith, in the south-east, or Lower ; Trieste in the south-west, or Inner ; and Laas, Gottlchee, Tscherment, and Mouling in the Middle district. For commer- cial purposes it has the advantage of the port of Fiume, in Austrian Istria, as well as Trieste.

CA'RNIVAL, n. Fr. carnaval ; Ital. carnevale. A popish feast before Lent; a time of luxury See the next article.

The whole year is but one mad carnival, and we are voluptuous not so much upon desire and appetite, as by way of exploit and bravery.

Decay of Piety.

0 great man-eater !

Whose every day is carnival, not sated yet ? Unheard of epicure ! without a fellow !

Blair's Grave.

CARNIVAL, or CARNAVAL, was formerly ob- served with great solemnity by the Italians, particularly at Rome and Venice, from the twelfth day till Lent. Mr. Du Cange derives the word from Cam a-val, by reason the flesh then goes to pot, to make amends for the season of abstinence next ensuing. Accordingly in the corrupt Latin, he observes, it was called carnel- evamen, and carnisprivium ; as the Spaniards still denominate it carnes tollendas. Feasts, balls, operas, concerts of music, marriages, in- trigues, &c. are chiefly held in carnival times. It begins at Venice the second holiday in Christ- mas. Lady Morgan gives the following lively picture of the carnival at Rome in 1820 : ###

' To the ceremonies and festivities of Christ-

mas succeeds the carnival: that season of enjoyment over which concience holds no jurisdiction, and care no sway.

' On the first day of the Corso few of the re- gular forces are assembled; but all Rome is already a masquerade rehearsal. Old women are patching harlequin's jackets before their doors. Young ones assume the innocent waxen- faced mask, white trowsers, and shirt hanging loosely over every thing, with its sleeves tied with colored ribbons ### the common disguise of all those who can afford no other. Already they try the point of their yet

*unexercised wit, and ‘ intriguent’ and ‘ danno guai,’ (i. e. tease and torment) all who pass on foot or in carriages ; but more especially the forestieri, who are usuallv taken for English. Children are every where busy making or tying on their paper masks, and girding their wooden swords. At the sound of the cannon, which fired from the Piazza di Venezia, each day announce the commencement of the amusements, shops are closed, palaces de- serted, and the Corso’s long and narrow defile teems with nearly the whole of the Roman population. The scene then exhibited is truly singular ; and for the first day or two infinitely amusing. The whole length of the street, from the Porta del Popolo to the foot of the Capitol, a distance of considerably more than a mile, is patrolled by troops of cavalry, the windows and balconies are crowded from the first to the sixth story by spectators and actors, who from time to time descend, and take their place and parts in the procession of carriages, or among the maskers on foot. Here and there the monk’s crown and cardinal’s red skull-cap are seen peeping among heads not more fantastic than their own. The chairs and scaffolding along the sides of the street are filled to crushing with maskers, and countryfolk in their gala dresses (by far the most grotesque that the Carnival produces). The centre of the Corso is occupied by the carriages of princes, potentates, the ambassadors of all nations, and the municipality of Rome ; and two lines of carriages, moving in opposite di- rections on each side, are filled by English peers, Irish commoners, Polish counts, Spanish gran- dees, German barons, Scotch lairds, and French marquises ; but above all, by the hired jobs of the badauds and pizzicaroli of Rome. These form not the least curious and interesting part of the procession, and best represent the Carnival, as it existed a century back. In an open car- riage sits, bolt upright, la signora padrona, or mistress of the family, nearly the whole of her beautiful bust exposed, or only covered by rows of coral, pearl, or false gems : her white satin robe and gaudy head-dress left to * the pitiless pelting of the storm,’ showered indiscriminately from all the houses and by the pedestrians on the occupants of carriages, in the form of sugar- plums, but in substance of plaster of paris or lime. Opposite to her, sits her caro sposo, the model of all those cari sposi, of whom Jerry Sneak is the abstract and type. He, good man is dressed as a grand sultan or Muscovite czar : his hands meekly folded, his eyes blinded with lime, and his face unmasked, to show that it is*

ta him belongs the gay set-out, the handsome wife, the golden turban, and crimson caftan. The cavalier pagante, if there is one in the family, or the favorite Abate, if there is not, occupies the place next the lady, snugly hidden under the popular dress of Pierrot or Pagliaccio ; while all the little signorini of the family, male and female, habited as harlequins, columbines, and kings and queens, are stuffed in without mercy. Even the

coachman is supplied with a dress, and straddles over the box as an elderly lady, or an Arcadian shepherdess ; and the footman (or the shop 'prentice, or the scroccone, who assumes his place behind the carriage) takes the guise of an English miss, or a French court lady ; and figures in a spencer and short petticoat, with an occasional ' god-dam ;' or, accoutred with an hoop and a fan, salutes the passers-by with ' Buon giour,. Messieurs.'

' The carriages of a few of the princes, of the governor of Rome, and of Monsieur Blacas, the French ambassador, were conspicuous for their gaudy splendor; while the morris-dancers of Europe, the most thinking people of England, always foremost in the career of amusement, made more noise, occasioned more bustle, and threw more lime, than all the rest of the population put together.

' At the Ave Maria, or fall of day, the cannon again fire as a signal to clear the street for the horse-course. All noise then ceases ; the car- riages file off by the nearest avenue, their owners scramble to their windows, balconies, chairs, or scaffolds; while the pedestrians, that have no such resources, driven by the soldiery from the open street, are crowded on the footways to suf- focation. But no terror, no discipline, can res- train their ardor to see the first starting of the horses ; and lives, constantly risked, are fre- quently lost in this childish eagerness for a childish amusement.

' A temporary barrier, erected near the Porta del Popolo, is the point from which the race commences : another on the Piazzi di Venezia is the termination of the course. The horses are small, and of little value. They have no rider, but are placed each in a stall behind a rope, which is dropped as soon as the moment for starting arrives ; when the animals seldom require to be put in motion by force. A number of tin foil and paper flags are stuck over their haunches, small pointed bodies are placed to operate as a spur ; and the noise and the pain of these decorations serve to put the horse on his full speed, to which it is further urged by the shouting of the populace. At the sound of the trumpet (the signal for starting), even at the approach of the officer who gives the order, the animals exhibit their impatience to be off; and they continue their race, or rather their flight, amidst the screams, plaudits, and vivats of the people of all ranks. This scene forms the last act of each day's spectacle ; when every one is obliged to quit his Carnival habit ; for it is only on one or two particular evenings that there is a masked ball at the Alberti Palace.'

CABNOSITY is used by some authors for a little tubercle or wen, formed in the urethra, ihe

OAR

neck of the bladder, or yard, which stops the passage of the urine. Carnosities are very dif- ficult of cure : they are not easily known but by introducing a probe into the passage, which there meets with resistance. They usually arise from some ill managed venereal malady.

CARNOT (L. N.), a distinguished revolu- tionist of France, was born in Burgundy, ana entered the corps of engineers while very young. At the beginning of the revolution he was a knight of the order of St. Louis, and a deputy to the national convention. He became a mem- ber of the committee of public safety, in the days of Robespierre, Barrere, Couthon, and St. Just, and had the chief direction of military affairs. When, on the fall of Robespierre, the convention arrested the other members of the committee, he insisted on sharing their fate. From 1795 to 1797 he was one of the five members of the directory, but being charged in the latter year with a royalist conspiracy, though he was through life, perhaps, the steadiest ot modern republicans, he was sentenced to banish- ment from France, and Buonaparte, on becoming first consul, recalled him, and made him minis- ter of the war department. He voted against the establishment of the imperial government, but this piece of political honesty his master never resented, and afterwards appointed him chief inspector of reviews. On his retiring, he re- ceived a pension of 20,000 francs. After the campaign in Russia, he wrote a noble letter to the now falling emperor of France, offering his services to his country, and was made governor of Antwerp. During the Hundred Days Carnot was the minister of the interior, and displayed his previous probity and honor. In June 1815 he was a leading member of the provisional go- vernment, and heartily, but vainly, endeavoured to prevent the re-establishment of monarchy in France, from which he finally retired at that period, and died in 1823, in exile. Buonaparte, it is said, spoke slightingly of his military opi- nions : but he was certainly a superior military mathematician. His works are, Reflexions sur la Metaphysique duCalcul Infinitesimal, 1 797,8 vo. De la Correlation des Figures de Geometric, 1801, 8vo ; La Geometric de Position, 1803, 4to; Me moire sur la Relation qui existe entre les Distances respectives de cinq Points quelconques pris dans 1′ Espace, suivi d'un Essai sur les Transversales, 1806, 4to. He also wrote On the Defence of Fortified Places.

CARO (Annibal), a celebrated Italian poet, born at Civita Nuova in 1507. He was secre- tary to the duke of Parma : afterwards to car- dinal Farnese ; and was also a knight of Malta. He translated Virgil's yEneid into Italian, and was said by some to have equalled the original. He also translated Aristotle's Rhetoric, two Ora- tions of Gregory Nazianzen, |and a discourse of Cyprian. He wrote a comedy ; and a miscellany of his poems was printed at Venice in 1584. He died in Rome in 1566.

CA'ROB, s. A.T. karob, garoba ; Syr. c/iaronba; Mod. Gr. icapa/3o\oc,

Span, carabo ; Ital. carru.- ba ; Fr. carrov.be. A tree bearing large pods, called St. John's breed, or locust. See CEUATOMIA.

CAROLINA.

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CAROCHA, a name which the Spaniards aud Portuguese give to a mitre made of pasteboard, on which are painted flames and figures of de- mons, worn by those who are condemned to death by the infernal tribunal of the inquisition.

CARO'CHE, s. > Fr. carosse ; Ital. carroz-

CARO'CHED, adj. \ za; Lat. caruca; napaxiov. A coach; a pleasure carriage. Minsheu says, a great coach. The word is frequent in our old writers, but is now obsolete. Mr. Todd thinks, that the modern unauthorised term barouch, may have been introduced by some learned charioteer, with a retrospective view to caroche.-'

CAROENON, in antiquity, icapoivov, or Ca- renum, names given by the Greeks and Romans to wine boiled over a slow fire, till only a half, third, or fourth part remained, and then mixed with honey or spices. Wine thus improved ac- quired several other names, such as mustum, mul- sum, sapa, defrutum, &c. At this time the same operation is performed with respect to sack, Spanish, Hungarian, and Italian wines. In Italy, new wine which has been thus boiled, is put into flasks, and used for sallad and sauces. In Naples it is called musto collo, but in Florence it still retains the name of sapa. Plin. 1. xxii. c. 2. Columella, de re rustica, 1. xii. c. 20.

CA'ROL, v. & n. ? Fr. carolle ; Ital. carola;

CA'ROLIXG, n. 5 Lat. choraula. There is no lack of imputed parents for this word. .Somner thinks it probable, though it is not easy to see the probability, that the words /cvpte t\ir} gaudium, %atpw, gaudeo.' Cleland fetches it from the Celtic, car, or cir, a circle ; be- cause k is a song sung in a round ; while Min- sheu derives it 'of singing, rola, rola, that is bearing the burden of the song, as they tearme it ;' and Mr. Brande partly agrees with him, as he deduces it from cantare and rola. Carolle, say Sherwood, is ' a kind of daunce wherein many daunce together.' None of them, how- ever, have noticed that the Welsh carawl, a love song, a carol, though not bearing quite as close a resemblance in the pronunciation as as it does to the eye, may possibly be the ori- ginal. To carol is to sing; to warble; to sing joyously ; to sing in praise of. ††† A carol, in a re- stricted sense, is a devotional or joyous song ; generally, any song.

And let the graces dance unto the rest, For they can do it best ; The whiles the maidens do their Carols sing, To which the woods shall answer, and their echo ring. Spenser.

The fields did laugh, the flowres did freshly spring, The trees did bud, and early blossomes bore, And all the quire of birds did sweetly sing, And told the gardin's pleasures in their caroling. Id.

And hear such heavenly notes and carolings Of God's high praise, that tills the broken sky. Id. No night is now with hymn or carol blest. Shakfpeare.

The carol they began that hour, How that life was but a flower. Id.

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Even in the Old Testament, If you listen to David's harp, you shall hear as many hearse-like airs as carol.*

Bacon.

They gladly thither haste ; and, by a choir Of squadroned angels, hear his carol sung.

Milton.

She with precious violed liquors heals, For which the shepherds at their festivals Carol her goodness loud in rustic lays. Id.

Opposed to her, on t'other side advance, The costly feast, the carol and the dance, Minstrels and music, poetry and play. And balls by night, and tournaments by day.

Dryden.

This done, she sung, and carolled out so clear, That men and angels might rejoice to hear. Id.

Come, let's in some carol new Pay to love and them their due. Marvell.

Young Colin Clout, a lad of peerless meed, Full well could dance, and deftly tune the reed, In every wood his carols sweet were known, At every wake his nimble feats were shown. Gay9 Deep mourns the turtle in sequestered bower, And shrill lark carols clear from her aerial towe.*

Beattie. Her influence oft the festive hamlet proves,

Where the high carol cheers the' exulting ring ; And oft she roams the maze

of wildering groves, Listening the' unnumbered melodies of spring.

Id.

Methought she carolled blithely in her youth, As the couched nestling trills his vesper lay j But song and smile, beauty and melody, And youth and happiness, are gone from her.

Maturin.

CAROLATH, a town and principality of Si- lesia, in the circle of Glogau, on the Oder, three miles N.N.W. of Beuthen.

CAROLINA, an extensive country of North America, originally comprehending the west part of Florida, and lying between 29►► and 36►► 30′ lat. N. It was bounded on the east by the Atlantic, on the west by the river Mississippi, on the north by Virginia, and on the south of Georgia by the Floridas. It is seated between the extremities of heat and cold, though the heat is more troublesome in summer than the cold in winter, the winters being very short, and the frosty mornings frequently succeeded by warm days. The air is generally serene and clear the greatest part of the year, but has heavy rains both in winter and at midsummer. Westerly winds bring very pleasant weather. The depth of winter is towards the end of February, but even then the ice is not strong enough to bear a man. In August and September there are sometimes winds, which are so violent as to make lanes of 100 feet wide, through the woods, tearing up the trees by the roots. They commonly happen about the time of the hurricanes which rage so fatally among the islands between the tropics. The soil on the coast is sandy ; but farther up the country is so fruitful that they are at little trouble to' manure their land. The grain most cultivated is Indian corn and rice, but any sort will thrive. There are also pulse of several sorts, little known in England. All kinds of garden vegetables may be had in great plenty. Cotton, has been planted here of late with great success; but the pitch pine tree forms the staple commo-

dity of the country, affording pitch, tar, and turpentine, besides its value as timber. Fine white and red oak is also abundant, and cypress and bay trees crowd the swamps. The long spongy moss of these parts is said, in a remark- able way, to absorb the deleterious vapors, and contribute to the health of the inhabitants. In the back country the misletoe is found. An in-

ferior kind of indigo, and various gums and medicinal drugs are also cultivated. Firs are bought of the Indians with vermillion, gunpow- der, coarse cloth, iron, &c. and form a consider- able article in trade. Carolina is adorned with many beautiful rivers, among which the Ten- nessee is the most conspicuous ; and woods, which afford delightful seats for the planters, and ren- der the enclosure of their lands very easy. As they have plenty of fish, wild fowl and venison, besides other necessaries, produced naturally, they live easy and luxuriously ; and are not very refined in their manners. The chief mountains are the APALACHIAN, which see.

Carolina was discovered by Sebastian Cabot, about A. D.I 500; but the settling being ne- glected by the English, a colony of French Pro- testants were transported thither, and named the place of their settlement Carolina, in honor of Charles IX. of France; but in a short time the colony was destroyed by the Spaniards ; and no other attempt was made by any European power to settle there till 1664, when 800 English landed at Cape Fear, and took possession of the country. In 1670, Charles II. of Britain granted Carolina to lords Berkeley, Clarendon, Craven and Ash- ley, Sir George Carteret, Sir William Berkley, and Sir John Colliton. The plan of government for this new colony was drawn up by the cele- brated Mr. Locke, who proposed a universal toleration in religious matters, the only restric- tion being, that every person claiming the pro- tection of the settlement, should, at the age of seventeen, register himself in some communion. The code of Carolina gave the eight proprietors, and their heirs, not only all the rights of a mo- narch, but all the powers of legislation. This sovereign body, called the Palatine Court, was Invested with the right of nominating to all em- ployments and dignities, and even of conferring nobility, but with new and unprecedented titles. They were, for instance, to create in each county two caciques, each of whom was to be possessed of 24,000 acres of land ; and a landgrave, who was to have 80,000. The persons on whom these honors should be bestowed, were to compose the upper house, and their possessions were made unalienable. They had only the right of letting out a third part of them at the most for three lives. The lower house was composed of the deputies from the several counties and towns. The number of this representative body was to be increased as the colony grew more populous. No tenant was to pay more than about one shil- ling per acre, and even this rent was redeemable. All the inhabitants, both slaves and freemen, were under an obligation to take up arms upon the first order from the palatine court. The de- fects of this constitution soon became apparent. The proprietary lords endeavoured to establish an arbitrary government ; and the colonists exerted

themselves with great zeal to avoid servitude' In consequence of this struggle, the whole pro- vince, distracted with tumults and dissensions, became incapable of making any progress, though great things had been

expected from its peculiar advantages of situation. In 1705 Carteret, afterwards lord Granville, who, as oldest proprie- tor, was sole governor, formed a design of ob- liging all the non-conformists to declaie them- selves of the Church of England. This act of violence, though disavowed by the mother coun- try, inflamed the minds of the people. In 1720 the province was attacked by several bands of savages, driven to despair by a continued course of the most atrocious violence and injustice. These unfortunate wretches were all put to the sword; but in 1728 the lords proprietors having refused to contribute towards the expenses of an expedition, of which they were to share the im- mediate benefits, were all deprived of their pre- rogative, except lord Granville. The colony was taken under the immediate protection of the crown, and from that time began to flourish. The settlement of Georgia commenced in 1752, and the division took place between North and South Carolina, about three years earlier.

CAROLINA, NORTH, one of the United States of America, situated between 1►► 1′ and 6►► 35′ W. long, of Washington, and between 33►► 51′ and 36►► 30′ N. lat. It is 450 miles long from east to west, and 180 broad from north to south, being bounded on the north by Virginia, on the east and south-east by the Atlantic, on the south by South Carolina, and on the west by the new state of Tennessee. This last was originally a part of North Carolina, but was given up to the United States in 1789, and since erected into a separate state. See TENNESSEE. North Carolina is divided into eight districts, viz. Edenton, New- bern, and Wilmington, which extend along the coast; and Halifax, Hillsborough, Salisbury, , Morgan, and Fayetteville, the greater part of which extend across the state from north to south. These districts are subdivided into sixty-two coun- ties, which will be described in their order ; their aggregate superficies amounting, according to American computation, to 43,800 square miles. The chief rivers are the Chowan, Roanoke, Pam- lico, Yadkin, Catawba, Neuse, Cape Fear, Pas- quotank, &c. The chief sounds are Albemarle, Pamlico, and Core. Although North Carolina has upwards of 200 miles of sea-coast, besides being indented by three very large inlets called sounds, it does not afford one good harbour; indeed, a ledge of sand banks flank the coast in its whole extent, rendering the navigation very dan- gerous in stormy weather, and almost inaccessible at all times ; it consequently partakes more of the character of an interior than a maritime state. Some little external intercourse, however, is main- tained through Wilmington, situated on Cape Fear River, which intersects the centre of the state from north to south, falling into the sea in the lat. of 34►► N,. and the productions of the western part of the state are facilitated in their conveyance to market by the Yadkin and Catawba Rivers, which intersect that part between the long, of 3►► and 4►► W. running south into South Carolina. The Neuse, Tar, Roanoke, and Cho-

wan, are other rivers which intersect the north- cast part of the state falling into the great inlets cf Pamlico and Albermarle Sounds, which it is proposed to connect with Chesapeake Bay, by rreans of the Pasquotank, and a canal through the Dismal Swamp. The coast for about seventy m.'les from tho shore is level and swampy, but westward the ground gradually rises into a moun- tainous country, being in parts beautifully diver- sified. Ground peas run along the surface of the earth, and are covered by hand with a light mould. The pods run under ground. They taste like nuts and are eaten raw or roasted. The country suits the breeding of sheep, but their wool is neither good nor plentiful on the low lands. Black cattle are easily raised, requiring little provision in winter, and in summer nothing but a little salt occasionally. Pork is also raised with little trouble. The hogs are allowed to roam at large in the woods, and grow fat on acorns and roots. The climate is said to be peculiarly favorable to the vine. A species of rock, sup- posed to be a concretion of marine shells, sup- plies the want of lime-stone, and the state abounds with iron ore. The annual exports amounted on the 30th Sept. 1791, to 524,548 dollars, and in 1823 to only 482,417, the ship- ping belonging to the state in 1821 was 38,864 tons. In 1820 the population was 638,829, of whom 14,612 were free blacks, and 205,01 7 were slaves. The north Carolinians are mostly plan- ters, and have little intercourse with strangers, but have a natural fondness for society which renders them hospitable to travellers. In the maritime districts, the prevailing religious sects are the Episcopalians and Methodists ; but in the wes- tern, the Presbyterians and Moravians are most numerous. Quakers and Baptists are also inter- spersed through the state. All persons in public offices, and all who deny the being of a God, are excluded from sitting in either house of assembly. Newbern is the largest town of North Carolina, and was formerly the residence ,of the governor. Each of the other six above mentioned, however, had their turns at the seat of the general assem- bly, till lately that Releigh, situate near the centre of the state, has been established as the metropolis. In 1789 the general assembly passed a law incorporating forty gentlemen, five from each district, as trustees of the University of North Carolina; to whom in December 1791, they granted a fcan of ►►5000 to enable them to proceed with their buildings. There is a very good academy at Warenton, another at Williams- borough, in Granville, and several others of con- siderable note, in different towns in the state. In the south-west part of the state is a very singular mountain.

CAROLINA, SOUTH, another of the United States of North America, being divided from North Carolina by a conventional line, and by the Atlantic coast, in a S. S.W. direction; from the lat. of 33►► 50′ to the Savannah

River, in the lat. of 32►► 2′ N. ; and by the Savannah River, in a N.N.W. direction, until it cuts the south-west point of North Carolina, which separates it from the state of Georgia, its area being 30,800 square miles. The general features, character of the soil, and productions of this state are very simi-

lar to North Carolina, but having the advantage of several fine navigable rivers and some tolera- bly good harbours, to facilitate an external commerce, whilst North Carolina ranks among the least, South Carolina ranks among the most im- portant states of the Union. The Yadkin River, rising in the north-east, which when it enters this state is called the Great Pedee, and, after being' joined by several tributary streams, falls into George-town Bay; and the Catawba, which also rises in the north-east, and in this state is first called the Wateree, and afterwards the Santee, is united by ˆa canal to Cooper River, which falls into Charleston harbour. Numerous streams, intersecting all the north-west part, unite with the Santee about the centre of the state ; and be- tween the Santee and the Savannah are the Edisto, Bigslake, and Coosawhatchie Rivers ; so that there is hardly five miles in the state without the advantage of water communications : be- tween the mouths of the Santee and Savannah rivers, the coast is flanked by a chain of islands, on which is produced the valuable cotton called. Sea Island. The swamps produce vast quantities of the finest rice, the seed of which was first in- troduced from Madagascar at the close of the seventeenth century, and previous to 1790 indigo ' was cultivated to a great extent, and with pro- portionate advantage ; but, since that period, the culture of the cotton plant in the upland country has superseded every other pursuit, and has been carried to an extent without any precedent. The value exported, including rice, in 1823 amounted to 6,898,814 dollars ; whilst the value of the merchandise imported direct did not exceed 2,419,100 dollars, the balance being equalised through New York, Philadelphia, and Baltimore. South Carolina is divided into thirty districts, and the population, which in 1790 was only 240,073, in 1820 was 502,741, of whom 6806 were free blacks, and 258,475 slaves. Columbia, nearly in the centre of the state, 506 miles south- west by south of Washington, is the seat of its legislative assembly.

Charleston, which was formerly the capital of all Carolina before the division, is still reckoned the chief town ; but Columbia is the seat of go- vernment. The public offices have, however, in some measure been divided for the accommoda- tion of the inhabitants of the lower counties, and a branch of each retained in Charleston. There are several respectable academies in Charleston, one in Beaufort, on Port Royal Island, and se- veral others in different parts of the state. Three colleges have lately been incorporated by law ; one at Charleston, one at Winnsborough, in the district of Camden, and the other at Cambridge, in the district of Ninety-

Six. The legislature, in their session in January 1795, appointed a committee to enquire into the practicability of, and to report apian for the establishment of schools in different parts of the state. The Presbyterians are the most numerous religious sect.

CAROLINE, a county of the state of Mary- land, bounded on Uie east by Kent county, state of Delaware, and on the west by the Tuckapo and Choptank Rivers, which fall into Chesa- peake Bay. Also an interior county in the east part of Virginia, bounded on the north-east by

the Rappahannack River, and south-west by the North Anna River.

*CAROLIVE AMELIA ELIZABETH, late queen of England, and consort of his late majesty king George IV. was born on the 17th of May, 1768. Her father, Charles William Ferdinand, heredi- tary prince of Brunswick, succeeded to the dukedom in 1780, and died 10th November, 1806. See BRUNSWICK. This princess, in com- mon with her sisters, received her education al- most entirely under the inspection of the duchess : she was from her youth of a gay and lively dis- position, and particularly attentive to the English visitors at her father's court ; whom she called, * The good and brave English ! '*

Some months after the French revolution, she had a personal interview with her cousin the duke of York, and from that period the family alliance appears to have been in contemplation. Negociations for a marriage between his present majesty, then prince of Wales, and the princess Caroline of Brunswick, were accordingly entered into ; and every arrangement having been com- pleted, on the morning of the 20th of Decem- ber, 1794, the princess, now become by contract princess of Wales, accompanied by her mother and a numerous retinue, departed from Bruns- wick for Vienna. Here, on their arrival, the duchess was indisposed ; but having revived, they proceeded to the palace of Harrenhausen, near Hanover; where the royal party dined. On the 3d of Jannary 1795, they reached Osnaburg, where a messenger met them from lord St. He- lens, to announce the return of commodore Payne's squadron to England, and the danger of ►►ntering Holland. The bishop's palace had been prepared for their reception ; and after a resi- dence of a few weeks stay at Hanover, they pro- ceeded to Cuxhaven, and the princess embarked March 28th, on

board his Majesty's ship Jupiter. She landed from this vessel at Greenwich in the afternoon of the 4th April. Magnificent prepa- rations had been made for her reception : on the 8th of April, was celebrated her marriage with the Prince of Wales. But the union was never, personally, a happy one. Its principal impor- tance to the nation arose, of course, from the ex- pectation of a family in the direct line of the crown, and in the ensuing year was born the princess Charlotte, the joy, the pride of the coun- try ; and in her early death, the object of its live- liest grief.

We draw a vail over the circumstance known at the time, as the ' Delicate Investigation,' in which the princess of Wales was fully acquitted of all serious charges, by the most impartial judges. In August 1814 she went abroad, con- trary to the advice of her confidential friends ; if such she ever possessed. Her conduct in this memorable absence became publicly scrutinised on her return ; and a bill of pains and penalties on the direct charge of adultery, was introduced into Parliament by his Majesty's ministers, and read a first and second time in the house of lords. The majority, however, in its favor was so small, and the whole measure evidently so repugnant to the feelings of the country that it was finally withdrawn.

lii less than a fortnight after the coronation of

the king, her majesty was taken dangerously ill, in consequence of having taken a very large dose of magnesia. On Thursday the 2d of August, she was attended by three physicians, Dr. Maton, Dr. Warren, and Dr. Holland, and copiously bled ; she passed a quiet night, but her symp- toms remained the same. The following day she was immersed for about a quarter of an hour in a warm bath, which moderated the pain, but in other respects was unavailing. Connected with inflammation of the bowels was a nausea at the stomach, which repelled both food and medicine. Another physician, Dr. Ainslie, was now called in ; her majesty's legal advisers also attended for the management of her property and other legal matters. Towards the morning of Saturday she obtained some tranquil sleep ; but her dis- order, with some fluctuations, increased speedily, and on the 7th, during the king's absence in Ireland, she died at Brandenburgh House, Ham- mersmith. Her funeral was conducted by the go- vernment ; and the populace evinced a singular attachment to her memory by compelling it, con- trary to the public orders given, to pass through the city of London. The body was finally con- veyed, agreeably to her own request, to the family vault of her ancestors at Brunswick.

CAROLINE ISLANDS, a range of thirty islands in the North Pacific Ocean, discovered in 1686, by the Spaniards. They lie to the east of the Philippines, between 138►► and 155►► E. long, and 8►► and 1

1►► N. lat. The natives resemble those of the Philippines. The most considera- ble island is Hogoleu, about ninety miles long and forty broad : the next is-Yap,. at the west extremity of the chain, but not above a third part of the size of Hogoleu. They have been little visited by recent navigators.

CAROLINEA, in botany, a genus of the class monadelphia, order polyandria : CAL. sin- gle, truncate; filaments branched; STYLE very long : STIG. six : CAPS, woody, one-celled, many-seeded. Species two; one a Guiana tree with very entire leaves; flowers solitary, very large and yellow ; filaments red ; antherae purple. The other, denominated also bombax, a South American plant of less, consequence.

CAROLOSTADIANS, or CARLOSTADIANS, an ancient sect of Lutherans, who denied .the real presence of Christ in the Eucharist; thus denominated from their leader Carolostadius. They are the same with the Sacramentarians, and agree in most things with the Zuinglians.

CAROLOSTADIUS (Andrew), archdeacon of Wittenberg, was converted by Luther, and was the first of all the reformed clergy who took a wife ; but afterwards disagreed with Luther, chiefly on the point of the sacrament.

CAROLUS, an ancient English gold coin, broad and thin, struck under Charles I. Its va- lue has of late been at twenty-three shillings, though at the time it was coined it was rated at twenty.

CAROTIDS. See ANATOMY.

CARORA, a city of Colombia, in the pro- vince of Venzuela, situate about forty-five miles from the strait that separates the gulf from the lake of Maracaibo, and 150 miles west of Va- lencia, It is intersected by a stream called the

Morera, that runs east into the Caribbean Sea. The inhabitants, about 6000 in number, subsist principally by means of cattle and mules, which they drive to, the coast for transhipment to the West India islands. The surrounding country produces a variety of odoriferous balsams and aromatics.

CA'ROTID, adj.-i Lat. carotides. Two

CARO'TIDAL, adj. \ arteries, from the aorta ascendens, which have their origin near the sub- clavian arteries.

The carotid, vertebral, and splenick arteries, are not only variously contorted, but also here and there dilated, to moderate the motion of the blood. Ray.

The two carotidal and the two vertebral arteries, are this golden quaternion. Smith,

CARO'USE, v. & n. ˆ Fr. carouse, carous- CARO'USER, n. >ser; Span, caraos. Dr.

CARO'USAL, n. j Johnson, after Menage

and Skinner, derives the French from the Ger- man, gar ausx, all out, meaning ' empty it entirely.' The Spanish caraos signifies the act of drinking a person's health in a bumper. The origin of the word has also been sought in the Dutch ruischen, to roar ; and in the Celtic car, a circle, because carousing is the custom of drink- ing round. To carouse is to quaff copious cups ; to imbibe drink lavishly. A carouse denotes a drinking match ; a hearty dose of liquor. Ca- rousal, which was formerly accented on the first syllable, is a festival ; and that too common cha- racter, a toper, is entitled to the more poetical appellation of a carouser.

Now, my sick fool, Roderigo,

Whom love hath almost turned the wrong side out, To Desdemona hath to-night carttused Potations pottle deep. Shakspeare,

He calls for wine, a health, quoth he, as if H'ad been aboard carousing to his mates After a storm. Id.

Please you, we may contrive this afternoon, And quaff carouses to our mistress' health. Id.

Learn with how little life may be preserved, In gold and myrrh they need not to carouse.

Raleigh.

Now hats fly off, and youths carouse, Healths first go round, and then the house, The brides came thick and thick. Suclding.

He had so many eyes watching over him, as he could not drink a full carouse of sack, but the state was advertised thereof within few hours after.

Davies ott Ireland,

Our cheerful guests carouse the sparkling tears Of the rich grape, whilst musick charms their ears.

Denham.

This game, these carousals Ascanius taught, And building Alba to the Latins brought.

Dryden.

Waste in wild riot what your land allows, There ply the early feast and late carouss.

Pope.

The bold carouser, and adventuring dame, Nor fear the fever, nor refuse the flame ; Safe in his skill, from all constraint set free, But conscious shame, remorse, and piety.

Granville.

Death leads the dance, or stamps the deadly die, Nor ever fails the midnight bowl to crown, Gaily carousing to his gay compeers, Inly he laughs, to see them laugh at him Aa absent fur. ••• Young's Night Thoughts.

CARP. Fr. carpe ; Ital. carpione. A fresh- water fish, usually kept in ponds.

Nor drain I ponds, the golden carp to take, Nor trowl for pikes, dispeoples of the lake.*

Gay's Rural Sports.

CA'RP, v. & n. \ Fr. charpir; Ital. cnr CA'RPER, t pire ; Lat. carpo. The

CA'RPING, adj. •• French signifies to comb CA'RPINGLY, adv.) wool, to hackle flax ; the Italian expresses to snatch away, to wrest. In Welsh carpiaw means to tear, to tear away ; and carp is that which is torn away. In all these words the analogy with the English may be traced. To carp is to censure ; to cavil at ; to find fault with ; which may be considered as a sort of snatching at ; wresting ; pulling to pieces . Carping is equivalent to captious and cen- sorious.

Tertullian, even often through discontentment, carpeth injuriously at them, as though they did it even when they were free from such meaning. Hooker,

His mouth a poisonous quiver, where he hides

Sharp venomed arrows, which his bitter tongue,

With squibs, carps, jests, unto their objects guides ;

Nor fears he gods on earth, or Heaven to wrong.

Fletcher's Purple Island. This your all-licensed fool Doth hourly carp and quarrel, breaking forth In rank and not to be endured riot. Shakspeara.

I have not these weeds, ' By putting on the cunning of a carper. Id.

We derive out of the Latin at second hand by the French, and make good English, as in these ad verbs f carpingly, currently, actively, colourably. Camd-?n.

When (spoke,

My honest homely words were eurped and censured, For want of courtly style. Dryden.

No carping critick interrupts his praise, No rival strives but for a second place.

Granville-

*Lay aside therefore a carping spirit, and read even an adversary with an honest desire to find out out his true meaning ; do not snatch at little lapses and ap- pearances of mistake. Wat's^*

CARP, in ichthyology. See CYPRINUS, and ANGLING.

CARP^EA, KcrpTraia, a kind of dance anciently in use among the Athenians and Magnesians, performed by two persons, the one a laborer, the other acting as a robber. The laborer laying by his arms, went to ploughing and sowing, still looking warily about him as afraid of being sur- prised j the robber at length appeared, and the laborer quitting his plough, betook himself to his arms, and fought in defence of his oxen. The whole was performed to the sound of flutes, and in cadence. Sometimes the robber was overcome, and sometimes the laborer ; the vic- tor's reward being the oxen and plough. The design of the exercise was to teach and accustom the peasants to defend themselves against the attacks of ruffians.

CARPATHIAN MOUNTAINS, a grand chain ⬛⬛⬛which divides Hungary and Transylvania from Poland on the north and north-east, and from Moravia on the north-west, extending about 500 miles. See BASTARKIC.C

ALPS.

CARPATHIAN SEA, or CARPATHIUM MARE, the sea that washes the coast of Carpathus.

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CARPENTRY.

CARPATHUS, orCARPATHOS, an island on the coast of Asia, 200 stadia or furlongs in compass, and 100 in length. Its name is said to be from its situation on the coast of Caria. It lies between Rhodes and Crete, in the Carpathian Sea, and is said to have been first inhabited by some Cretan soldiers of Minos. According to Strabo it had anciently four cities ; according to Scy- lax only three, whilst Ptolemy mentions but one, which he calls Posepum. The island is now called Scarpanto.

CARPENDOLO, a town of Italy, seated on the Miese, in the Veronese, included in the Italian republic. A battle was fought at this place in 'January 1797, between the French and Austrians, wherein the republicans under general Menard were victorious, and took 900 prisoners.

CARPENTARIA, a large bay on the north coast of New Holland, discovered in 1618, by a Dutch captain, named Carpenter. That part of the country which borders on the east side of the ˆ>ay is also called Carpentaria. It has about 1200 miles of coast, and some good harbours. It is frequented by Chinese junks to fish for the the :Beche-le-mar, 'one of the most delicious of the finny tribe, which superabound at the en- trance of this bay.

CA'RPENTER, n. > Fr. charpentier ; Span.

CA'RPENTRY, n. $ carpintero ; low Lat. carpentarim. An artificer in wood, as far as relates to the largest and strongest part of the wood work in houses and ships. The finer work belongs to the joiner. The trade or art of a carpenter.

This work performed with advisement good,

Godfrey his carpenters, and men of skill

In all the camp, sent to an aged wood.

Fairfax's Tasso.

In building Hiero's great ship, there were three hundred carpenters

employed for a year together.

Wilkins.

In burdened vessels first with speedy care,

His plenteous stores do seasoned timbers send ;

Whither the brawny carpenters repair,

And, as the surgeons of maimed ships, attend.

Dry den.

It had been more proper for me to have introduced carpentry before joinery, because necessity did doubt- less compel our forefathers to use the conveniency of the first, rather than the extravagancy of the last.

Mozon's Mechanical Exerciset,

CARPENTER, SHIP, an officer appointed to examine and keep in order the frame of a ship, together with her masts, yards, boats, and all other wooden machinery. It is his duty in par- ticular to ke&p the ship tight; to review the decks and sides, and to caulk them when it is necessary. In the time of battle, he is to ex- amine, with all possible attention, the lower apartments of the ship, to stop any holes that may have been made by shot, with wooden plugs provided r,f yeveral sizes.

CARPENTRAS, a beautiful town of France, in Provence, standing on the left bank of the Anson, at the foot of Mont Ventoux. It was once the capital of the papal county of Ve- naissin, and the see of a bishop, but became incorporated with France at the revolution, and now belongs to the department of Vaucluse. It hns a good public library,, bequeathed originally

to the town by one of its bishops ; a Roman triumphal arch in tolerable preservation ; and several remarkable Roman antiquities. Wine, brandy, and fruit, are its staple articles of trade. In the neighbourhood is a fine modern aqueduct of forty-eight arches. Population about 9000, including perhaps 2000 Jews. Distant twelve miles east of Orange, and thirty-eight north-west of Aix.

CARPENTRY. The art of carpentry, generally speaking, includes every method of working or employing timber in the construction of build- ings ; but, as it is evident that coarse rough work requires very different management from the delicate finish of interior arrangement, it is usually

divided into two classes. Carpentry, properly so called, to which belongs flooring, roofing, and the working of all large pieces of wood ; and Joinery, which includes the various ornamental works in wood, (except cabinet-making), besides doors, window sashes, and other objects intended for close inspection. The mode of constructing roofs has already been examined under the article ARCHITECTURE, which see. Joinery will also form a distinct subject in our arrangement ; we commence, therefore, with the more elementary parts of the art.

The modes by which timbers are connected to- gether are, generally speaking, perpendicularly, obliquely, sideways, and endways. When tim- bers are joined perpendicularly, the fibres and joints of one piece run perpendicularly to the fibres of the other ; and the joint may then be termed a transverse or a perpendicular joint. When they are connected obliquely, the fibres of the one piece run in an oblique direction to- wards those of the other ; and for this reason i is called oblique joining, and the joint is termed an oblique joint. Timbers are joined sideways when their joints are parallel to the fibres of each piece; and therefore it is termed lateral, or longitudinal, joining, and the joint is called a lateral or a longitudinal joint. When timbers are joined edgeways, their common seam or joint is perpendicular to the fibres of each piece, and the joint is then said to be a butting joint.*

With respect to joining timbers perpendicular- ly, fig. 1. plate I. CARPENTRY, represents a sec- tion of a trimmer, and a part of the joist, framed with a simple mortise and tenon in a longitudi- nal direction. The teuoti is usually made in the middle with a plain shoulder.

Fig. 3 represents a section of a girder through its mortises, and figs. 2 and 4 delineate part of the joist in a longitudinal direction. The best method, in order to give strength to the tenons, is to make a rest of a short length under it, with a sloping shoulder above, extending in a line from the extremity of the rest, to the perpendicu- lar of the square shoulder below at the upper edge of the joist.

Fig. 4, plate I. of CARPENTRY, represents the section of a double floor, with a girder taken in a transverse direction to the bridging joists.

A shows the section of the girder ; DE, D E, the binding joists; a, a, a, represent also the ends of bridging joists; b, b, b, the ends of ceil- ing joists, chased, mortised into binding joists, by a method which will be hereafter described

Fig. 5, of the same plate, shows the section ef

PACET83.VO7, .V

PLATE JI

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CARPENTRY.

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a double floor, taken in a transverse direction to timber to another, by dove-tailing, so that the the binding joists. A, A, exhibit sections of surface of the one may be parallel and perpendi-

the binding joists ; D E, part of abridging joist ; M, N, ceiling joists ; and E F, EF, parts of ceil- ing joists. It may be readily seen that the tenons of the binding joists are made in the same manner as described in the preceding design for a girder and joists.

Fig. 6 exhibits a method whereoy a piece of

cular to that of the other ; these figures also re- present various forms of cutting tne dovetail, and are very useful in showing the mode of fixin^ angle-ties to wall plates, &c. &c. It is evident that timbers can be joined by this method either perpendicularly or obliquely.

Fig. 20, CARPENTRY, plate II., exhibits another

timber may be framed between two parallel method of fixing beams to wall plates, in order pieces, which are supposed immoveable. In to bind the sides of the building together, order to make close work, the extremity of the A piece of timber may be joined at ritrht tenon, and the bottom of the mortise at one end, angles to another in the manner of fig. 21, which are made to assume the arc of a circle, with its is a longitudinal section in the direction of the centre in one edge of the mortise ; and the ex- fibres of both pieces. A mortise is made in the trerr-ity of the tenon, and the bottom of the mor- one piece to correspond with its breadth, which tise at the other end, in a

concentric arc from is to form the perpendicular; the edge of the the same centre. The mortise at this end being tenon is then cut with a dove-tail notch, so that much longer than the breadth of the tenon, there the piece may be at right angles with the other, will be a large part of the mortise still open, and a wedge or key is next driven from the which may be afterwards filled up. Instead of other edge of the tenon, which forces it quite the bottom of the mortise, in this instance, be- close. When the timber of which the piece ing formed in the arc of a circle, it may be cut containing the dovetail may be formed, is not parallel to the edge, at the deepest part, as it quite dry, the tenon will shrink in proportion will not impede the transverse piece going into to its' breadth, by which circumstance the per- ils place. In forming the mortise and tenon, at pendicular piece will become liable to be drawn the 'end where the centre is placed, there is no out from the other to a certain degree. This necessity for tke mortise and tenon to form an defect is remedied in the section exhibited at entire quadrant, but the bottom may be parallel, fig. 22, where, instead of the edge of the tenon and the edge only which is opposite the centre being cut in the form of a dovetail, a notch is made circular. This useful mode of framing is made in it. Fig. 23, shows another view of the much used in ceiling, joisting for double floors, perpendicular piece with the wedge. &c. and the long mortises cut in this manner are Figs. 24, 25, 26, exhibit the methods used for called chase mortises. the meeting of a brace and straining piece under

If it be required to notch one piece of timber a truss beam. Of these methods the first is the to another, or to connect the two, so as they may best.

form one right angle, with an equal degree of Fig. 27 exhibits a method of securing a collar strength in each, then each piece should be beam at one extremity, and preventing it from notched half through, and afterwards the two being pulled away at the joint, by a bolt made should be nailed 01 pinned together. Fig. 7 to pass through the rafter, at the angle formed by represents two pieces of timber framed after this their meeting.

manner ; and fig. 8 shows the socket of one Fig. 28 represents one form of the heel of a piece, which receives the neck or substance of principal rafter, with the socket cut in the end of the other. the tie beam to receive it; this method, however,

By making a corresponding notch at any con- is defective in strength, because the small part venient distance from the end in each piece, two cut across the fibres of the beam being too near pieces may be connected together, so as to form its extremity, it will become liable to be forced four right angles. Fig. 9 shows two pieces away, in consequence of its having to sustain the framed as above, and fig. 10 exhibits the socket entire force of

the rafter.

of one of the pieces, which is cut out to receive Fig. 29 is intended to remedy this detect, by the part remaining in the other, after its socket forming two abutments equally deep into the is also cut out. By this mode of joining tim- beam; a mode which not only produces a re- bers, the pieces may be so notched as to have sistance to the rafter, fully equal to that in the their surfaces in the same plane, or one above the former method, but adds to it the strength of the other, as may be found convenient. intermediate part contained between the two

These methods are used to connect bond abutments. The intermediate part in this mode, timbers at the corners of a building. Fig. 11 from having the fibres cut across, is easily split represents an excellent mode of fitting beams away.

to wall plates, when the walls are affected by Another mode of forming a douole resistance, lateral pressure. A small notch is cut out of is shown at fig. 30. In this figure it will be ob- the beam, and the contrary parts, forming a served that the heels of the rafter and the socket double notch, are cut in the wall plate to receive are cut parallel to the fibres of the tie beam, the it. Fig. 11 represents a longitudinal part of the end of the rafter forming one abutment, and the beam upon a transverse section of the wall plate ; tenon the other, which has the effect of removing and fig- 12 shows the upper part of the wall it farther from the extremity, plate, wherein the two notches are made; fig. Fig. 3 1 represents the best mode of forming a 13, lower side of the beam, exhibiting the notch, resistance on the heel of the rafter and socket at Figs. 14, 15, 16, 17, 18, 19, CARPENTRY, plate the extremity of the beam. The abutment, by I. represent methods of joining one piece of this plan, is brought nearer to the inner pan of

the heel, which of course leaves a greater length on the end of the beam, and renders the resist- ance still greater than that produced by the wood. In order still further to strengthen and secure it, a strap may be placed round the extre- mity of the rafter, and the two ends may be bolted together, through the beam, as is repre- sented in figs. 31 and 32.

Fig. 33 represents the mode of forming a junction of the rafters, and the joggle-head of the king-post, together with the manner of strap- ping them. This mode, however, will be found defective when the joggle-head of the king-post should happen to shrink ; for it is evident, that in that case, the

roof will descend, and conse- quently put it out of shape.

Fig. 34, introduced by Mr. Nicholson, shows a mode of forming a junction by making the rafters meet each other, without the intervention of the joggle-head, which is usually made to the king-post, and of course it has a great advantage over the preceding method.

Fig. 35, introduced by Mr. Nicholson, represents another mode of hanging king-posts to their prin- cipal rafters, which meet each other, as in fig. 11. Instead of the forked strap, a bolt is used in this case with a spreading head, so as to form a shoulder perpendicular to the rafters, which are notched on purpose to receive it. This has the effect, also, of preventing the rafters of a roof from sinking in the middle. The whole may be made of iron, consisting of two parts connected together by means of a screw, which will draw the beam as high as may be required. No. 1 is part of the king-post with the bolt. Nos. 2 and 3 are parts of the rafters, and No. 4 pre- sents a view of the upper edge of the rafters.

Figs. 36 and 37 exhibit the most approved forms for the abutments of the braces, at the lower part of the kind's post.

Fig. 38 shows the form of an abutment, when the part which makes the resistance in the dirˆc- tion of the king-post is perpendicular to it, and sometimes another form of the abutment is used where the part of the shoulders which makes the resistance is perpendicular to the brace.

Mr. P. Nicholson has introduced a very valua-►► ble mode of connecting two braces with an iron king-post. It is effected by employing a smaU rod of iron sufficiently strong to bear qp the middle of the beam, and to resist the force, pf the braces by the weight of the middle rafters. The strap, which prevents the braces from being pushed downwards, has an eye through each side, and the bottom of the king-rod is formed with a cross, equal in length to the thickness of the braces ; this cross is perforated \n its length to receive the bolt.

We come now to the consideration of floors A floor, in carpentry, is the timber-work for sup- porting the boards upon which we walk. A row of timbers employed in floors is called joisting. When a floor consists only of one row of timbers, it is called a common joist floor.

Framed floors are those where the ends of joists are supported by a large beam of timber, called a girder, which is mortised from a .eh ver- tical side to receive the tenons which are cut on the ends of the joists. When a framed floor

consists of only one row of joists, the floor is said to be single framed.

When the joists on each side of the girder support another row of tim- bers, parallel to the girder, the floor is called a doable floor. The row of timbers which are fas- tened to the girder by mortise and tenons are called binding joists, and those timbers which are supported by the binding joists, are called bridging joists. To a double framed floor there is another row of small timbers, attached to the binding joists, for supporting the lath and plas- ter ; and are either nailed to the underside of the binding joists, or fixed to them by means of mortise a.id tenon.

In some single joisted floors every third or fourth joist is made deeper than the intermediate joists, and the ceiling joists are fixed to the deep joists, the one crossing the other at right angles. This construction is adapted to the prevention of sound, which must suffer an intermission by reason of the space between the timbers. As no timbers must enter a wall where there are fire- places or flues, the ends of the joists, instead of being supported by the wall at such places, must be supported by a piece of timber parallel thereto by mortise and tenons, and this piece of timber must be fixed by mortise and tenons at each end, to the nearest joists to such fire-place or flue ; each of these joists is called a trimming joist, and the piece of timber which supports the joists leading to the fire-place or flues, is called a trimmer. As the trimming joists have also to support the intermediate joists, they ought to be in thickness equal to the breadth of the common joists, increased by a sixth part of that breadth. In double floors, the under sides of the bind- ing joists are frequently framed flush with the under-side of the girder, and about three or four inches below the top, in order to receive the bridging joists. Some old authors direct that the bridging joists should be pmned down to the binding joists ; but this is unnecessary, and be- sides, it weakens the binding joists; this prac- tice is therefore inadmissible.

It was formerly the practice to place the'bind- ing joists about three feet or three feet six inches , distant from each other ; the mean distance of the present practice is about five feet. Single floors, consisting of the same quantity of timber, are much stronger than framed floors ; but a pre- ference is sometimes given to framed floors in superior buildings, on account that they are not so liable to fracture the ceilings, and because they conduct sound more imperfectly than a common joist floor, and hence it is that single floors can only be employed in inferior buildings. ˆFramed floors differ from double floors only in the binding joists being framed to girders. In single floors, where the joists exceed eight feet bearing, pieces of board ought to be inserted in the spaces between the joists in a vertical posi- tion, and nearly the whole depth of the joists, and in one continued line at right angles to the joisting. The pieces of timber thus inserted are called struts, and the floor is said to be strutted , the struts ought not to be driven in with great force, but their ends should be in close contact with the vertical sides of the joists, and should be fixed thereto with a nail at each end.

The strutting of a floor is of great use when the joists are thin and deep, in preventing their buck- ling pressure ; but for this purpose there is another method called keying, which consists in framing short pieces of timber between the joists ; but as the mortises which receive the tenons weaken the joists, and as the keys cannot be in a straight line, and since this method adds considerably to the expense, this practice is not so eligible as that of strutting. Single joist flooring may be used to any extent not exceeding sixteen feet ; but when it is desirable to preserve the ceiling free from cracks, and to prevent the passage of sound, a framed floor is necessary.

The ceiling joists in double floors are gene- rally put in after the building is up ; if, therefore, they are fixed by means of mortises in the sides of the binding joists, to relieve tenons on their ends, the space between every other two mortises must be grooved out alternately upon the oppo- site sides of the two adjacent binding posts ; by this means the ceiling posts may easily be put in their places by inserting the tenon in each ceiling joist in the mortises at one end, and sliding the tenon on the other end along the groove in the arc of a circle, until the ceiling joist come at a right angle with the binding joist. The long mortises or grooves in the sides of the binding joists are called chace mortises or pulley mor- tises. The ceiling joists may be thirteen or fourteen inches apart ; the thickness of the bridg- ing joists and ceiling joists need not be greater than what is sufficient to resist splitting by the driving in of the nails in order to fix them. It has been found by experience, that two inches is a sufficient thickness for the purpose.

In double framed floors, the distance of bridg- ing joists in the clear ought to be about twelve inches, and should never exceed thirteen. It is a good practice to plane the upper edges of the bridging joists straight, because, when the board- ing is laid, the faces for walking upon will be more regular than if the boards had been laid down upon the edges of the bridging joists when rough from the saw.

We have now to consider the subject of the strength of timber, one of the most important in the art of carpentry ; since, without a due regard to it, no erections can possibly be made, but what depend solely on chance for their success. Yet, of all the branches of the science of archi- tecture, none, perhaps, has received so little elu- cidation from the investigations of the learned. Nor will the cause of this seeming neglect appear problematical, when it is considered that there is none requiring such vast and expensive appa- ratus, more close and continued application, or more judgment and

practical experience to obtain any decisive conclusions. Accordingly, in our own country, experiments have never been made on a scale sufficiently large to be of much impor- tance as a guide in practice ; and we owe to the liberality of the ancient monarchy of France nearly all the knowledge we possess on this most interesting subject. Messrs. Buffbn and Du Hamel, about the middle of the last century, were directed by that government to make a variety of experiments ; they were furnished with ample funds and apparatus, and all the forests of

France were at their disposal for subjects. The reports of M. de Buffbn may be found in the Memoirs of the French Academy for the years 1740, 1741, 1742, and 1760; and those of M. Du Hamel in his work, Sur 1'Exploitation des Arbres, and sur le Conservation et la Transpor- tation de Bois. The essential parts of them we shall notice presently.

The strength of all bodies consists in the cohe- sion of their particles, and as this cohesion ad- mits of many modifications, in its various appear- ances of hardness, elasticity, and softness, the texture of bodies must be taken into account be- fore we can arrive at mathematical demonstrations on the subject : and the experiments recorded, have been, for the reasons before assigned, so few, limited, and doubtful, as to produce no principles on which to ground our future cal- culations.

A general idea of the force of the attraction of cohesion may be obtained from the instance of a lever, in which, by the compression of one end, a strain is occasioned in a distant part. In order to understand its nature with precision it will be necessary to review such general laws as are immediately necessary as a guide in mechanical operations.

First. We have presumptive evidence to prove that all bodies are elastic in a certain degree, that is, when their form or bulk is changed by cer- tain moderate compressions, it requires the con- tinuance of the force producing the change, in order to continue the body in its altered state, and, when the compressing force is removed, the body recovers its original form and tension.

Secondly. That whatever may be the situation of the particles composing a body, with respect to each other when in a state of quiescence, they are kept in their respective places by the balance of opposing forces.

Thirdly. It is an established fact, that every body has some degree of compressibility, as well as of dilatability ; and when the changes produ- ced in its dimensions are so moderate, that the body completely recovers its original form on the cessation of the changing force, the extensions or compressions bear a sensible proportion to the extending or compressing

forces ; and, therefore, the connecting forces are proportioned to the distance, at which the particles are diverted, or se- parated, from their usual state of quiescence.

Fourthly. It is universally observable, that when the dilatations have proceeded to a certain length, a less addition of force is afterwards sufficient to increase the dilatation in the same de- gree. For instance, when a pillar of wood is overloaded, it swells out, and small crevices ap- pear in the direction of the fibres. After this, it will not bear half of the previous load.

Fifthly. That the forces connecting the parti- cles composing tangible or solid bodies, are altered by a variation of distance, not only in degree, but also in kind.

Having now enumerated the principal modes, in which cohesion confers strength on solid bodies, we proceed to consider the strains to which this strength may be opposed.

These strains are three in number, viz. ††† First. A piece of matter may be torn asunder :

††† to this strain king-posts, tie-beams, stretchers, &c. &c. are liable.

Second. It may be crushed : ††† as in the case of pillars, truss beams, &c. &c.

Third. It may be broken across, as may hap- pen to a joist or lever of any kind.

With respect to the first strain, it may be ob- served, that it is the simplest of all strains, and that the others are but modifications of it ; it being directly opposed to the force of cohesion, without being influenced, except in a slight degree, in its action, by any particular circumstances. When a body of considerable length, such as a rope, or a rod of wood, or metal, has any force exerted on one of its ends, it will naturally be resisted by the other, from the effect or operation of cohesion. When this body is fastened at one end, we may conceive all its parts to be in a similar state of tension, since all experiments on natural bodies concur to prove, that the forces which connect their particles in any way whate- yer, are equal and opposite.

If, therefore, the cohesion be equal, that is, if the body be of a homogeneous texture, the par- ticles will be changed from their natural state, and separated to equal distances. Of course the connecting powers of cohesion thus excited and exerted, in opposition to the straining force, are also equal. This force, therefore, may be so increased as gradually to separate the particles of the body more and more from each other : and, in a relative proportion, the power of cohesion will be weakened, till a fracture ensues, and the body itself is quickly broken in all its parts. If the external force be only sufficient to produce such a curvature on the body that when it is withdrawn it will recover its former state, it is clear that this strain may be repeated as often as is required, and that the body which has with- stood it once will always withstand it. It should be borne in mind, however, that we here speak only of occasional strains, for it is a fact no less well known than important, that a body will not suffer a permament strain of more than one half of what it will bear when first imposed

In stretching and breaking fibrous bodies, though the visible extension is frequently very considerable, it does not solely arise from the in- creasing the distance of the particles composing the cohering fibre, but is chiefly occasioned by drawing the crooked fibre straight. In this res- pect a great diversity prevails, as well as in the powers required to withstand a strain. In some woods, such as fir, the fibres on which the strength most depends, are very straight, and woods of this nature, it should be remarked, are generally very elastic, and break abruptly when overstrained ; others, as oak, have their resisting fibres very crooked, and stretch very sensibly when subjected to a strain. These kinds of woods do not break so suddenly, but exhibit visible signs of a derangement of texture.

With respect to the absolute force, it seems hardly necessary to mention, that the trunk of a tree is formed of numerous longitudinal fibres, which, by annual growth, are formed in rings, or nearly in the form of concentric circles. These, by their united force of cohesion, resist separa- tion, and the strength, therefore, is proportioned

to the area of the section opposed to the resisting force.

The following are a few useful facts concern- ing the tenacity of wood : It is generally agreed that the heart of a tree is the weakest part, and that this weakness increases with the age of the tree. The fact is denied by Buffon, who, however, does not prove his assertion.

The outer fibres called the blea, are also weaker than the rest.

The wood is stronger in the middle of the trunk than at the root, or the springing of the branches, and the wood of the branches is weaker than

that of the trunk.

The wood on the northern side of European trees is weaker than the rest, and that on the southern is the strongest.

The heart of a tree is never in its centre, but always nearer the north side, and the annual plates are consequently thinner on that side. The tree is strongest where the annual plates are thickest; the reason of which is, that the trachea or air-vessels, which form the separation between these plates, are weaker than the simple ligneous fibres.

*From the experiments of Muschenbroek we ‘ have some useful information as to the absolute strength of different woods. They were all formed into convenient slips, and part of the slip was cut away to a parallelepiped, one-fifth of an inch square, and therefore the twenty-fifth part of a square inch in section. The following is the table in which the number of pounds denotes the absolute strength of a square inch : ***

Pounds.

Locust tree 20100

Jujeb 18500

Beech and Oak 17300

Orange 15500

Alder 13900

Elm – 13200

Mulberry 12500

Willow 12500

Ash 12000

Plum ...’.... 11800

Elder 10000

Pomegranate 9750

Lemon 9250

Tamarind 8750

Fir 8330

Walnut 8130

Pitch pine 7650

Quince 6750

Cypreas 6000

Poplar 5500

Cedar 4880

It should be observed that the writer assigns a much greater tenacity to these woods than othej s who have treated on the subject; the reason for the great difference however is, that he gives the weight that will just tear them asunder; while others, as Mr. Emerson, give that which may be suspended to them with safety.

Muschenbroek gives a very minute detail of his experiments on the ash and walnut, in which he states the weights required to tear asunder slips taken from the four sides of these trees, and, on each side, in a regular progression from the

centre to the circumference. The numbers in the foregoing table corresponding with these two woods may be considered, therefore, as the ave- rage of more than fifty trials of each. lie men- tions also that all the other numbers were calcu- lated with the same care. For these reasons some confidence may be placed in the results ; though they carry the degrees of tenacity consi- derably higher than those enumerated by some other writers. This gives 8640 for the greatest strength of a square inch, which is much inferior to Muschenbroek's calculation.

These numbers express something more than the utmost attraction of cohesion, the weights are such as will very quickly (that is in a minute or two) tear the rods asunder. In general it may be observed, that two-thirds of these weights will greatly impair the strength after a considera- ble time, and that one-half, is the utmost that can remain suspended at them, without incurring the risk of their demolition; and on this calcu- lation of one-half of the nominal weight, the engi- neer should reckon in all his constructions; though, even in this respect, there are great shades of

difference. Woods of a very straight fibre, such as fir, will suffer less injury from a load which is not sufficient to break them immedi- ately.

Mr. Emerson mentions the following as the weights, or loads, which may be safely suspended to an inch square, of the several bodies hereafter enumerated : ***

Pounds.

Iron 76400

Brass 35600

Hempen Hope 19600

Ivory 15700

Oak, Box, Yew, and Plum tree 7850

Elm, Ash, and Beech . . . 6070

Walnut and Plum .... 5360 Red fir, Holly, Elder, Plane, and

Crab 5000

Cherry and Hazel 4760

Alder, Ash, Birch, and Willow 4290

Lead 430

Freestone 914

*This ingenious gentleman has laid down as a practical rule, that a cylinder, whose diameter is six inches, will carry, when loaded to one-fourth of its absolute strength, as follows : ***

Iron . . Good rope Oak . . Fir

Cwt.

135

22

14

9

We have next to consider the compression of timber: theoretically speaking, the positive strength of a body suffering under compression will bear a relative proportion to the area of its section : it is absolutely impossible for a piece of timber to be so straight, and the weight acting upon it so equally disposed, a.s to press in a di- rection precisely perpendicular upon each fibre. If therefore we conceive the smallest force acting transversely, it will be easily imagined that the length will have much to do with the strength.

Parent has shown that the force required to crush a body, is nearly equal to that which will tear it asunder. He observes, also, that it requires something more than sixty pounds on every square line, to crush a piece of sound oak ; but this rule is by no means general, glass, for instance, will carry a hundred times more on it than oak in this way, but will not bear suspended above four or five times as much. Oak will sus- pend a great deal more than fir, but fir, as a pil- lar, will carry twice as much. Woods of a soft texture, although they may be composed of very tenacious fibres, are

more easily crushed by the load upon them. The softness of texture is chiefly owing to the crooked nature of their fibres, and to the existence of considerable vacuities be- tween each fibre, so that they are more easily bent in a lateral direction and crushed. When a post is overstrained by its load, it is observed to increase sensibly in diameter.

The first author who has considered the com- pression of columns with attention is the cele- brated Euler, who published, in the Berlin Me- moirs for 1757, his theoiy of the strength of columns. The general proposition established by this theory is, that the strength of prismatic columns is in the direct quadruplicate ratio of their diameters and the inverse ratio of their lengths. He prosecuted this subject in the Pe- tersburgh Commentaries for 1778, confirming his former theory. Muschenbroek has compared the theory with experiments, but the comparison has been very unsatisfactory, the experiments neither confirming nor positively negativing the theory.

The next and most common strain to which bodies are exposed, is that which tends to break them across.

In strains of this kind it frequently happens, that the►►power of a lever is exerted in addition to the positive force of the strain.

Let A B C D, in the above diagram, be supposed to represent the vertical section of a prismatic solid, projecting horizontally from a wall in which it is firmly fixed ; and let a weight be hung on it at B, or let any power act at B, in a direction perpendicular to A B. ►►► Let this body be also considered to possess insuperable strength in every part, except in the vertical section DA, perpendicular to its length, in which section only it must break. ►►► Let the cohesion be uniform throughout the whole of this section: that is, let each of the adjoining particles of the two parts cohere with an equal force/. There are two ways in which it may then break. The part A B C D, may simply slide down along the sur- face of the fracture, provided the power acting at B be equal to the accumulated force which is exerted by every particle composing the section, in the direction A D. But let this be supposed as effectually prevented by something supporting

the point A. The action at P, tends to make the body turn round A (or round a horizontal line passing through A at right angles with A B) in the saire manner as round a joint. This it cannot do without separating at the line D A, in which case the adjoining particles at D, or at E, will be

separated horizontally. But their attrac- tion of cohesion resists this separation. In order, therefore, that the fracture may happen at the place intended, the energy of the power P, acting by means of the lever A B, must be supe- rior to the accumulated energies of the compo- nent particles. The energy of each depends not only on its cohesive, or connecting force, but also on its peculiar situation ; for the supposed insuperable firmness of the rest of the body, ren- ders it a lever turning round the fulcrum A, and the individual cohesive power of each particle, such as D or E, acts by means of the arm DA or E A. The precise energy of each particle will consequently be ascertained by multiplying the force individually exerted by it at the moment of fracture, by the arm of the lever which ena- bles it to act.

Let us then suppose that, at the moment of fracture, every individual particle exerts an equal force f. The energy of D, will be D A x f, that of F will be E A x f, and that of the whole will be the sum of all these products. Let the depth D A of the section, be called d, and let any un- determined part of it, as A E, be called x, then the space occupied by any particle will be x. The cohesion of this space may be represented by f x, and that of the whole by f d. The energy by which each element x, of the line D A, or d, resists the fracture, will be f x x, and :►►ie whole accumulated energies will be f x./xi. This is ►►►well known to be f x i d 2, or f d x ►► d. It is the same thing, therefore, as if the cohesion, f d, of the whole section had been concentred toge- ther at the point G, which is in the middle of DA.

In the next place, we may remark, that a cer- tain determinate curvature being suitable to every beam it cannot be exceeded without breaking it ; since two adjoining particles are thereby separa- ted, and an end is put to their cohesion. A fibre can be extended only to a certain degree of its length. The ultimate extension of the outer fibres must bear a certain proportion to its leng 0, and this proportion is similar in the point of depth to the radius of ultimate curvature, which is, therefore, determinate. Consequently a beam of uniform breadth and depth, is most in- curvated where the strain is greatest, and will necessarily break in the most incurvated part. But by changing its form, so as to render the strength of its different sections in the ratio of the strain, it is evident that the curvature will be the same throughout, or that it may be made to vary according to any law.*

CARPENTUM, in antiquity, a name com- mon to divers sorts of vehicles, answering to coaches, waggons, carts, &c. among us. The carpentum was originally a kind of car in which the Roman ladies were carried ; though in after times it was also used in war. Some derive the word from carras ; others from carmenta, by a conversion of the m into' p.

CARPESIUM, in botany, a genus of the or- der polygamia superflua, and

syngenesia class of plants ; natural order forty-ninth, compositae. Receptacle naked; downless : CAL. imbricate, the outer scales reflected ; florets of the margin five-cleft. Species two ; one native of the south of Europe, the other of China.

CAR'PET, v. & n. Ital. carpetta; Dutch kar- pet. A parti-colored covering, made of wool, to spread on a floor ; formerly, the name was given to a table-cover. Poetically, it signifies level ground, adorned with flowers; and any variegated surface. The word is also prover- bially used for an easy and luxurious state ; a carpet knight is one who has never seen service. To be on the carpet is to be under consideration ; to be in hand.

Be the Jacks fair within, the Jills fair without, carpet laid, and every thing in order? Shakspeare. Go, signify as much, while here we march*

Upon the grassy carpet of this plain. Id.

He is knight, dubbed with unbacked rapier, and upon carpet consideration. Id.

Against the wall, in the middle of the half pace, is a chair placed before him, with a table and carpet before it. Bacon.

We found him in a fair chamber, richly hanged and carpeted under foot, without any degrees in the state ; he was set upon a low throne, richly adorned, and a rich cloth of state over his head, of blue sattia embroidered. Bacon.

In the year 1555, Chancelor made another voyage to this place, with letters from Queen Mary ; had a house in Mosco, and diet appointed him ; and was soon admitted to the emperor's presence in a large room spread with carpets; at his entering and salutation all stood up, the emperor only sitting, ex- cept when the queen's name was read, or spoken, for then he himself would rise ; at dinner he sat bare- headed ; his crown and a rich cap hanging on a pin- nacle by. Milton. Hittory of Motcovia.

The carpet ground shall be with leaves o'er spread. And boughs shall weave a covering for your head.

Dryden.

The whole dry land is, for the most part, covered over with a carpet of green grass and other herbs.

Ray. One track led winding down a shelving dale,

All ►►.rch'd with bending branches over-head, The other opening to the northern gale,

Wide and more wide its greenwood carpet spread.

CARPET KNIGHTS, a denomination given to gown-men and others, of peaceable profession, who on account of their birth, office, or merits, are raised to the honor of knighthood.

I change

My thought, and hold thy valor light As that of some vain carpet knight.

Scutt'i Lady of the Lake.

CARPI, a ci-devant principality of Moden

CARPI, the capital of the above district is situated on the Sechia. It has a strong castle,

and lies twelve miles north of Modena. Long. 11►► 12'E., lat. 11►►45'N.

CARPI, a town of Italy, in the Veronese, included in the late republic, and dependency of Benaco ; memorable for a victory gained by the imperialists over the French, in 1701. It is situated on the Adige, twenty-seven miles south of Verona.

CAKPI (Girolamo da), history and portrait painter, born at Ferrara, in 1501, and a dis- ciple of Garofalo. He acquired such an ex- cellence in the imitation of Corregio's style, that many paintings copied by him were taken for originals, and eagerly purchased by the con- noisseurs. Nor is it improbable, that several of his paintings pass at this day for the genuine works of Corregio. He died in 1556.

CARPI (Ugo da), an Italian painter, remark- able for being the inventor of that species of engraving on wood, distinguished by the name of chiaro scuro, in imitation of drawing. This is performed by using more blocks than one ; and Ugo da Carpi usually had three ; the first of the outline and dark shadows, the second for the lighter, and the third for the half tint. In that manner he struck off prints after several de- signs, and cartons of Raphael ;

particularly one of the Sybil, a descent from the cross, and the history of Simon the Sorcerer. He died in 1500.

CARPINUS, the horn-bean, in botany : a genus of the polyandria order, and moncecia class of plants; natural order fiftieth, amentaceae : CAL. of the male monophyllous and ciliated ; amentum, with roundish scales : COR. none, stamina twenty : CAL. of the female monophyl- lous and ciliated ; amentum with oblong scales : COR. none, two germens, with two styles on each. The fruit is an angular nut. There are four species, viz. 1. C.betulus, or wych-hazel, a deciduous tree, much resembling the beech, native of Europe and America. As an under- wood, it affords stakes and elders, fuel and char- coal. Its timber ranks with that of the beech and the sycamore ; and the inner bark is said to be much used in Scandinavia to dye yellow. The only superior excellency of the horn-beam lies in its fitness for sheltering gardens, nurseries, and young plantations in winter. 2. C. ostrya, the hop horn-beam, a native of Italy and Vir- ginia. This is of taller growth than the eastern kind, and will arrive to the height of twenty feet or more. 3. C. Virginiana. Common to this province of America; with lanceolate, pointed leaves, and very long cones. 4. C. duinensis ; a native of Carniola ; with the scales of its cones somewhat hearted, doubly toothed ; female ament, ovate.

CARP'MEALS, n. s. A kind of coarse cloth made in the North of England.

Phillips World of Words.

CARPOBALSAM, from Kap7roc, fruit, and ˆaXtra/ioc, balsam, in the materia medica, the fruit of the tree which yields the true oriental balsam. It is used in Egypt, in all the inten- tions in which the balsam 'itself is applied. The only use the Europeans make of it is in Venice treacle and mithridate ; and in these not a great deal, for cubebs and juniper berries are gene- rally substituted in its place.

CARPOCRATES, a heretic of the second century, who revived and added to the errors of Simon Magus, Menander, Saturninus, and other Gnostics. He owned, with them, one sole prin- ciple and father of all things, whose name as well as nature was unknown. The world, he taught, was created by angels, vastly inferior to the first principle. He opposed the divinity of Jesus Christ; making him a mere man, begotten of Mary by Joseph, though possessed of uncom- mon gifts which set him above other creatures. He inculcated a community of women.

CARPOLITHI, or fruit-stone rocks of the Germans, are composed of a kind of jasper, of the nature of the amygdaloides, or almond stones. Bertrand asserts that the latter appear to be com- posed of elliptical pieces like

petrified almonds, though in truth they are only small oblong pieces of calcareous stone rounded by attrition, and sometimes small muscle shells connected by a stony concretion. The name carpolithi, how- ever, is given in general by writers on fossils to all stony concretions that resemble fruit of any kind.

CAR'PUS, n. s., Lat., the wrist ; so named by anatomists, which is made up of eight little bones, of different figures and thickness, placed in two ranks, four in each rank. They are strongly tied together by the ligaments which come from the radius, and by the annulary liga- ments. See ANATOMY. Quincy.

I found one of the bones of the carpus lying loose in the wound. Wiseman's Surgery.

CARR (Sir John), a late travelling attorney, originally of Dorsetshire, who amused the public as a tourist, and in a celebrated trial for libel. His first publication was, The Stranger in France, 4to, 1803, which becoming popular was followed by A Tour round the Baltic, 1805; The Stranger in Ireland, 1806; A Tour through Holland, down the Rhine, &c. 1807; and ATour through Scot- land, 1809. In Ireland he was knighted by the lord lieutenant, a circumstance which, together with his general literary pretensions, became the topic of witty ridicule in My Pocket Bcok, or Hints for a Ryghte Merrie and Conceitede Tour, to be called The Stranger in Ireland. This jeu- d'esprit was foolishly enough made the ground of a prosecution for libel, in which the knight was unsuccessful. A small volume of Poems also bears Sir John Carr's name.

CARRA (John Lewis), a noted actor in the French revolution, was born at Pont de Vesles, in 1743, and bred to the law, but quitted that profession in pursuit of letters. Previous to the breaking out of the revolution, he travelled as far as Moldavia, and there became secretary to the hospodar. Returning to France about the beginning of the political ferment he became the publisher of a journal, entitled Les Annales Politiques et Litteraires, which was widely cir- culated, and procured Carra's appointment as one of the keepers of the national library ; and he was afterwards nominated a rrrember of the convention. He was distinguished by the keen- ness of his temper, and was employed as a com- missioner to the army ; but having, as was said, proposed to proscribe the Bourbon family and place the duke of York on the throne of France,

he came under the charge of being in the pay of England. However ridiculous this may appear, Carra having always sided with the Girondists, fell with that party, and was guillotined in Oc- tober, 1793. He was author of a History of Moldavia and Wailachia, 12mo. ; New Prin- ciples of Philosophy, 2 vols. 4to. ; An Essay on Aerial Navigation, in which he gives some direc- tions for the guiding of Air Balloons ; An Exa- mination of Animal Magnetism ; Historical Me- moirs of the Bastile, and other Tracts.

CARRAC, or CARRACA, a name given by the Portuguese to the vessels sent to Brasil and the East Indies ; being large, round built, and fitted for fight as well as burden.

CARRE (Lewis), an eminent French mathe- matician, born in Brie, A. D. 1663. His father was a farmer and intended him for the church, but young Carre refused to enter into orders. In the midst of his father's displeasure on this ac- count, while he was uncertain what to follow, he was engaged as an amanuensis by the celebrated Malebranche, under whom, he, for seven years, studied mathematics and metaphysics ; branches of science which he afterwards taught. In 1697 M. Varignon made choice of him as one of his eleves in the academy; and in 1700 Carre pub- lished the first complete work on the Integral Calculus, which he afterwards republished with corrections. He was soon after made an asso ciate, and at last a pensioner and mechanician of the academy. He was author of many pieces on mathematics, of which twenty are printed in the memoirs of the French Academy of Sciences, and the rest remain in MS. in their possession. He died in 1711, aged forty-eight.

CARRIAGE BLOCK, a cart made on purpose for carrying mortars and their beds from place to place. See FORTIFICATION.

CARRIAGE TRUCK, two short planks of wood, supported on two axle trees, having four trucks of solid wood for carrying mortars or guns upon battery, where their own carriages cannot go. They are drawn by men.

CARRIAGE, in rural economy, is a sort of con- duit made of timber or brick. Its use is to convey the water in one main Over another, which runs at right angles with it; its depth and breadth being of the same dimensions with the main it belongs to.

CARRICK, the southern division of Ayrshire, Scotland. It borders on Galloway; stretches thirty-two miles in length ; and is a hilly coun- try fit for pasturage. The chief rivers are the Stenchiar and Girvan, both abounding with sal- mon. Here are also several lakes and forests ; and the

people on the coast employ themselves in the herring fishery, though they have no har- bour of any consequence. The only towns are Bergen and Maybole. The prince of Wales is earl of Carnck.

CARRICKFERGUS, COUNTY ANDTOWN OF, in Ireland. The town is seated on the north shore of Belfast Lough, or, as it is sometimes called, Carrickfergus Bay, eight miles N.N.W. of the town of Belfast. It was formerly a place of considerable importance, both as a fortress and commercial town ; a castle boldly situated on a rock projecting into the sea, is supposed to

have been built by Hugh de Lacy in 1178. It still serves as a depot for arms and ammunition. In 1223 a monastery was founded, and since that time Carrickfergus has repeatedly been the scene of important events. King William III. landed herein 1690, and in 1763 it surrendered, after a gallant resistance, to a French force under Admiral Thurot, who was so8n after intercepted by an English squadron off the isle of Man, to which the French fleet surrendered, after an en- gagement in vyhich Thurot lost his life. At the dissolution of the monastic institutions, the lands of Carrickfergus were granted to Sir Edmond Fitzgerald, by whom they were assigned to Ar- thur Chichester, ancestor of the Marquises of Donegal. It is now relatively an inconsider- able place; it however retains its corporate' pri- vileges and civil jurisdictions. It is regarded as forming part of the county of Antrim, but Carrickfergus holds its own assize, and is no otherways connected with Antrim than by conti- guity. The corporation consists of a mayor, annually elected, a recorder, two sheriffs, seven- teen aldermen, and twenty-four burgesses.

CARRICK-ON-SHANNON, a town of Ireland, in the parish of Killoghah, county of Leitrim. The town is seated on the east bank of the Shannon; and it is the shire and assize town of the county, and prior to the union of Ireland with England it returned two members to the Irish parliament. In the vicinity are the ruins of a castle. Its most prominent public building now is! a bar- rack.

CARRIER. A common carrier, having the charge and carriage of goods, is to answer for the same, or the value, to the owner. And where goods are delivered to a carrier, and he is robbed of them, he shall be charged and answer for them, because of the hire. If a common carrier who is offered his hire, and who has convenience, refuses to carry goods, he is liable to an action, in the same manner as an inn-keeper who re- fuses to entertain a guest. One brought a box to a carrier, with a large sum of money, and the carrier demanded of the owner what was in it ; he answered, that it was filled with silks and such like goods. The carrier took it, was robbed, and adjudged to make it good, but a special ac- ceptance, as, provided there is

no charge of money, would have excused the carrier. If a person deliver to a carrier's book-keeper two bags of money sealed up, to be carried from London to Exeter, and tell him that it is ––200, and take his receipt for it, with promise of deli very for 10s. per cent, carriage and risk : though it be proved that there was ––400 in the bags, if the carrier be robbed he shall answer only for ––200, because there was a particular undertaking for that sum and no more; and his reward, which makes him answerable, extends no farther. If a carrier or porter loses goods which he is en- trusted to carry, a special action in the case lies against him, on the custom of the realm, and not trover; and so of a common carrier by boat. Also against a lighter-man spoiling goods he is to carry, by letting water come to them.

CARRIER PIGEON, or COURIER PIGEON, a spe- cies of pigeon so called, because it was the custom of the east to send letters by them. These birds

though carried hood-winked, twenty, thirty, or even 100 miles, will find their way in a very little time to the place where they were bred. They are trained to this service in Turkey and Persia; and are carried first, while young, short flights of half a mile, afterwards more, till at length they will return from the farthest part of the kingdom. Lithgow assures us, that one of ––!>2se birds will carry a letter from Babylon to Aleppo, which is thirty days' journey, in forty.- eight hours. This practice is very ancient; Hir- tius and Brutus, at the siege of Modena, held a correspondence by pigeons. And Ovid tells us, that Taurosthenes, by a pigeon stained with purple, gave notice to his father of his victory at the Olympic Gameis, sending it to him at ˆEgina. In modern times, the most noted were the pigeons of Aleppo, which served as couriers at Alexan- dretta and Bagdad. The manner of sending advice by them was this : they took pairs which had young ones, and carried them on horseback to the place from whence they wished them to return, taking care to let them have a full view. When the news arrived, the correspondent tied a billet to the pigeon's foot, and let her loose. The bird, impatient to see its young, flew off like lightning, and arrived at Aleppo in ten hours from Alexandretta, and in two days from Bagdad. It was easy for them to find their way back, as Aleppo may be discovered at an im- mense distance. This pigeon has nothing pecu- liar in its form, except its nostrils, which, instead of being smooth and even, are swelled and rough. See COLUMBA.

CARRIER (John Baptist), one of the many monsters whose barbarous

disposition the French revolution unshackled, was born at Aurillac, in 1756. Having passed through the inferior func- tions of the law, he was chosen deputy for the department of Cantal, in the national conven- tion, an honor which his denunciations and sanguinary acts fully merited. He was sent with a band of cut-throats into La Vendee, where he butchered great numbers, merely because they were suspected of favoring royalty. At Nantes his savage brutality was particularly dis- played : there he caused no fewer than twenty- four to be put to death in one day, four of whom were only about fourteen years of age ; and, as if at a loss to vent his rage, he forced crowds of miserable people on board covered barges, and sunk them in the Loire. It would be shocking to humanity to attempt an enumeration of the ferocious acts of this wretch and his savage crew : on the fall of the mountain party he was ordered back to Paris, tried before the revolutionary tri- bunal, condemned, and guillotined, December 15th, 1794.

CAR'RION, n. & adj. Fr. charogne ; old Fr. f. arogne, caroigne ; Ital. curogna ; Span, carrona; Dutch, kreng ; from Lat. euro and rodens. The carcase of something unfit for food ; flesh too corrupted to be eaten ; a reproachful and con- temptuous appellation ; that which relates to, or feeds on, carcases.

They did eat the dead carrions, and one another soon aftei ; insomuch that the very carcases they scraped out of their graves. Spenser on Ireland.

It is I,

That, lying by the violets in the sun, Do as the carrion does, not as the flower. Sftalupeare.

This foul deed shall smell above the earth, With carrion men groaning for burial. Id.

Shall we send that foolish carrion, Mrs. Quickly, to him, and excuse his throwing into the water? Id.

Match to match I have encountered him, And made a prey for carrion kites, and crows, Even of the bonny beast he loved so well. Id.

Not all the pride that makes thee swell,

As big as thou dost, blown up veal ;

Nor all thy tricks and slights to cheat,

Sell all thy carrion for good meat. Hudibrat

Sheep, oxen, horses fall; and heaped on.high

The differing species in confusion lie ;

Till, warned by frequent ills, the way they found

To lodge their loathsome carrion in the ground.

Dry den . The wolves will get a breakfast by my death,

Yet scarce enough their hunger to supply j

For love has made me carrion ere I die. Id.

Criticks, as they are birds of prey, have ever a na- tural inclination to carrion. Pope.

The sexton's indignation moved The mean comparison reproved, Their undiscerning palate blamed, Which two-legged carrion thus defamed. Gay.

For this was all thy caution ? For this, thy painful labours at the glass? To' improve those charms, and keep them in repair , For which the spoiler thanks thee not. Foul feeder ! Coarse fare and carrion please thee full as well. Blair. Blest genius ! who bestows his toil and pains

On each dull passage each dull book contains ;

The toil more grateful, as the task more low :

So carrion is the quarry of a crow. Mallet.

CARROBALISTA, in the ancient military art, denotes a species of balista, mounted on wheels, and drawn by horses ; by which, it dif- fered from the manubalista, which being lesser and lighter, was drawn by the hand.

CARROCERUM, or CARROCIUM, in writers of the middle age, denotes the banner or chief flag of an army, which was mounted on a kind of chariot, and drawn by oxen.

CARRON, a river of Scotland, in Stirling- shire, which rises about the middle of the isth- mus, between the friths of Forth and Clyde, and divides that country into two nearly equal parts. The whole length of its course from west to east is not above fourteen miles. ••• It falls into the Frith of Forth about three miles north-east of Falkirk. There is no river in Scotland, and few in the whole island of Britain, whose banks have been the scenes of more memorable transactions ; and latterly this stream has given name to the celebrated Carrou iron works. See STIRLING- SHIRE.

CARRONADE, a short kind of ordnance, capable of carrying a large ball, and useful in close engagements at sea ; so named from the Carron. See GUNNERY.

CARROOR, or CAROOR, a town and fort of Hindostan, in the Mysore. It was entered by general Meadows, in June, 1790, having been evacuated by the troops of Tippoo Sultan. It is sixty-five miles east by south of Coimbetore. CARROSSA, a considerable town of Italy, in the late Italian republic, and department of the Adda, situaied on the Po. opposite Piacenza,

where general Buonaparte passed the Po with his army, almost without resistance, on the 7th of May, 1796.

CAR'ROT, n. ~\ Fr. carotte ; barb. Lat. CAR'ROTINESS, n. >carota, supposed to be CAR'ROTY, adj. J from icappi►►a, for wpp pi'fa, the yellow root ; an esculent root, of an orange color. Carrotiness and carroty are ap- plied to red hair, from the resemblance which its color bears to that of the vegetable.

Carrot, though garden roots, yet they do well in*

the fields for seed. Mortimer.

His spouse orders the sack to be immediately opened,

and greedily pulls out of it half a dozen bunches of

carrots. Dennis,

If the potatoe's taste delights, Or the red carrots' sweet invites, Indulge thy morn and evening hours, But let due care regard my flowers. Gay.

CARROT, in botany. See DAUCUS. CAR'ROWS, n. an Irish word, which the quotation from Spenser fully defines.

The carrowt are a kind of people that wander up

and down to gentlemen's houses, living only upon

cards and dice ; who, though they have little or no-

hing of their own, yet will they play for much money.

Spenser on Ireland.

CARRUCA, from carrus, Lat., in antiquity, a splendid kind of car or chariot, mounted on four wheels, richly decorated with gold, silver, ivory, &c., in which the emperors, senators, &c., were carried. Carruca is also used in writers of the middle age, for plough; and sometimes for Carrucate.

CARRUCAGE, carucagium, a kind of tax anciently imposed on every plough. It also de- notes, in husbandry, the ploughing of ground, either ordinary, as for grain, hemp, and flax ; or extraordinary, as for woad, dyer's weed, rape, and the like.

CARRUCATE, carrucata, in our ancient laws, a plough-land, or as much arable ground as can be tilled in a year with one plough. In Doomsday Inquisition, the arable land is esti- mated in carrucates, the pasture in hides, and meadow in acres.

CA'RRY, v. a. & ra.-v Fr. charier ; from

CA'RRIAGE, n. (Lat. currus, says Dr.

CA'RRIER, n. {Johnson. In Span.

CA'RRY-TALE, n. J accarear signifies to carry or convey something in a cart, or other carriage. But Serenius refers the origin of the word to Sw. Kara (pronounced kura), to carry, to drive ; kerra ; a vehicle ; Goth. kera. The verb to carry is of such various signification, that, after having explained the words spring- ing from it, we shall give Dr. Johnson's defi- nitions, with some additional authorities ; as to alter them would, in this case, be merely to make a change without effecting an improvement.

Carriage denotes the act of carrying ; conquest or acquisition, but this meaning is now obso- lete, although we still say the enemy carried the place ; a vehicle ; a frame for holding cannon ; behaviour; personal manners ; conduct, practices, and manner of transacting; which last sense, also, is now obsolete. A carrier is whatever car- ries, but is chiefly used to mark one whose trade it is to ccnvey goods for others. It is likewise

the distinctive name of a species of pigeon, which is taught to carry letters, and whose ser- vices, once devoted to lovers and friends, are now chiefly employed by the boxing and gambling tribe. What a carry-tale is, every one's ex- perience has enabled him to define and despise.

The unequal agitation of winds, though material to the carriage of sounds

farther or less way, yet do not confound the articulation. Bacon.

Before his eyes he did cast a mist, by his own insinuations, and by the carriage of his youth, that expressed a natural princely behaviour. Id.

The manner of carriage of the business, was as if there had been secret inquisition upon him. Id.

You must distinguish between the motion of the air, which is but a vehiculum causae, a carrier of the sounds, and the sounds conveyed. Id.

You may hurt yourself; nay, utterly Grow from the king's acquaintance by this carriage.

Shakspeare.

Solyman resolved to besiege Vienna, in good hope that, by the carriage away of that, the other cities would without resistance be yielded. Knollet.

He commanded the great ordnance to be laid upon carriaget, which before lay bound in great unwieldy timber. Id,

There are tame and wild pjgeons ; and of tame there are croppers, carrier, runts. Walton.*

He advised the new governor to have so much discretion in his carriage, that there might be no notice taken of the exercise of his religion. Clarendon.

If it seem so strange to move this obelisk for so little space, what may we think of the carriage of it out of Egypt ? Wilknu.

Though in my face there's no affected frown, Nor in my carriage a feigned hiceness shown, I keep my honour still without a stain. Dryden.

For winds, when homeward they return, will drive The loaded carriers from their evening hive. Id.

The welcome news is in the letter found ;

The carrier's not commissioned to expound j

It speaks itself. Id.

Let them have ever so learned lectures of breeding, that which will most influence their carriage will be the company they converse with, and the fashion of those about him. Locke.

The roads are crowded with carriers, laden with rich manufactures. Swift.

A carrier every night and morn

Would see his horses eat their corn ;

This sunk the hostler's vails, 'tis true,

But then his horses had their due. Gay.

What horse or carriage can take up and bear away all the loppings of a branchy tree at once. Watts.

We shall now proceed to the verb, which iu its active and neuter states, has nearly forty dif- ferent shades of meaning. To carry is, to convey from a place ; opposed to bring, or convey to a place ; often with a particle, signify- ing departure, as away, off".

When he dieth he shall carry nothing away.

Psalm xlix. 18.

And devout men carried Stephen to his burial.

Acts, viii. 2.

I mean to carry her away this evening by the help of these two soldiers. Dryden's Spanish Friar

As in a hive's vimineous dome, Ten thousand bpes enjoy their home j Each does her studious action vary, To go and come, to fetch and carry. Prior.

They exposed their goods with the price marked, then retired, the merchants came, left the price which

ihry would give upon the goods, and retired ; the Sores returning, carried off either their goods or mo- ney, as they liked best. Arbuthnot.

To transport.

They began to carry about in beds those that were

sick. Markvi. 55.

Where many great ordnance are shot off together,

the sound will be carried, at the least, twenty miles

upon the land. Bacon.

Ah ! rather why

Did's thou not form me sordid as my fate, Base-minded, dull, and fit to carry burdens.

Otwny's Venice Preserved.

To bear; to have about one.

Do not take out bones like surgeons I have met with, who carry them about in their pockets.

Wiseman's Surgery.

To take; to have with one.

If the ideas of liberty and volition were carried along with us in our minds, a great part of the diffi- culties that perplex men's thoughts would be easier resolved. Locke.

I have listened with my utmost attention for half an hour to an orator, without being able to carry away one single sentence out of a whole sermon. Swift.

When we go from home in quest of amusement, or to the fields for the sake of exercise, we shall do well to leave all our speculations behind ; if we carry them with us the exercise will fatigue the body with- out refreshing it. Beattie.

To convey by force.

Go, carry Sir John Falstaff to the Fleet ; Take all his company along with him.

Shakspeare. Henry IV. To effect anything.

There are some vain persons, that whatsoever goeth alone, or moveth upon greater means, if they have never so little hand in it, they think it is they that carry it. Bacon.

Oft-tiraes we lose the occasion of carrying a busi- ness well thoroughly by our too much haste.

Ben Jonson's Discovery.

These advantages will be of no effect ; unless we improve them to words, in the carrying of our main- point. Addison.

To gain in competition.

And hardly shall I carry out my side,

Her husband being alive. Shakspeare.

1 see not yet how any of these six reasons can be

fairly avoided ; and yet if any of them hold good,

it is enough to carry the cause. Saunderson.

The latter still enjoying his place, and continuing

a joint commissioner of the treasury, still opposed,

and commonly carried away everything against him.

Clarendon. To gain after resistance.

The count woos your daughter, Lays down his wanton siege before her beauty ; Resolves to carry her ; let her consent, As we'll direct her now, 'tis best to bear it.

Shakspeare.

The town was distressed, and ready for an assault, which, if it had been given, would have cost much blood : but yet the town would h;ive been carried in the end. Bacon's Henry VII.

To gain : with it ; that is, to prevail, le por- ter, Fr.

Are you all resolved to give your voices ? But that's no matter -, the greater part carries it.

Shakspeare.

VOL. V,

If the numerousnass of a train must carry il} vir'ua may go follow Astraea,

and vice only will be worth the courting. Glanville.

Children, who live together, often strive for mas- tery, whose wills shall carry it over the rest.

Locke.

To bear out ; to face through, with it.

If a man carries it off, there is so much money saved ; and if he be detected, there will be something pleasant in the frolick. L' Estrange.

To continue external appearance. My niece is already in the belief that he's mad ; v.'c may carry it thus for our pleasure and his penance.

Shakspeare.

To manage ; to transact.

The senate is generally as numerous as our house of commons ; and yet carries its resolutions so pri- vately, that they are seldom known.

Addison on Italy.

To behave ; to conduct ; with the reciprocal pronoun.

Neglect not also the examples of those that have carried themselves ill in the same place. Bacon.

He attended the king into Scotland, where he did carry himself with much singular sweetness and tem- per. Wotten.

He carried himself so insolently in the house, and out of the house, to all persons, that he became odious. Clarendon.

Sometimes with it ; as, she carries it high.

To bring forward ; to advance in any progress.

It is not to be imagined how far constancy will carry a man ; however, it is better walking slowly in a rugged way, than to break a leg and be a cripple.

Locke.

There is no vice which mankind carries to such wild extremes as that of avarice. Swift.

To urge ; to bear forward with some kind of internal impulse.

Men are strongly carried out to, and hardly took off from, the practice of vice. South.

He that the world, or flesh, or devil, can carry away from the profession of an obedience to Christ, is no son of the faithful Abraham.

Hammond's Practical Catechism.

Ill nature, passion, and revenge, will carry them too far in punishing others ; and therefore God hath certainly appointed government to restrain the par- tiality and violence of men. Swift. Ambition is an idol, on whose wings

Great minds are carried only to extreme,

To be sublimely great, or to be nothing.

Southern's Loyal Brother,

To hear ; to have ; to obtain.

In some vegetables we see something that carries a kind of analogy to sense ; they contract their leaves against the cold ; thev open them to the favourable heat. Hole's Origin of Mankind.

To exhibit ; to show ; to display on the out- side ; to set to view.

The aspect of every one in the family carries so much satisfaction, that it appears he knows his happy lot. Addison.

To imply , to import.

It carries too great an imputation of ignorance, lightness, or folly, for men to quit and renounce their former tenets, presently, upon the offer of an argument which they cannot immediately answer.

Lot its.

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CAR

To contain ; to comprise.

He thought it carried something of an argument in it, to prove that doctrine. Watts on tlte Mind.

To have annexed ; to have anything joined : with the particle with.

There -was a righteous and a searching law, di rectly forbidding such practices; and they knew that it carried with it the divine stamp. South,

The obvious portions' of extension that affect our senses, carry with them into the mind the idea of finite. Loclte.

To convey or bear anything united or ad- hering, by communication of motion.

We see also manifestly, that sounds are carried with wind : and therefore sounds will be heard fur- ther with the wind than against the wind.

Bacon' Natural History.*

To move or continue anything in a certain direction

His chimney is carried up through the whole rock, so that you see the sky through it, notwithstanding the rooms lie very deep. Addison on Italy.

To push on ideas, arguments, or anything successive in a train.

Manethes, that wrote of the Egyptians, hath carried up their government to an incredible distance.

Hole's Origin of Mankindˆ

To receive ; to endure : not in use.

Some have in readiness so many odd stories, as there is nothing but they can wrap it into a tale, to luake others carry it witk more pleasure. Bacon.

To convey by means of something supporting.

Carry camomile, or wild thyme, or the green straw- berry, upon sticks, as you do hops upon poles.

Bacon's Nat. Hist.

To bear, as trees.

Set them a reasonable depth, and they will carry more shoots upon the stem. Bacon's Nat. Hist.

To fetch and bring, as dogs.

Young whelps learn easily to carry ; young popin- jays learn quickly to sptak. Assham's Schoolmaster.

To carry off. To kill.

Old Parr lived to one hundred and fifty-three years of age, and might have gone further if the change of air had not carried him off. Temple.

To carry on. To promote ; to help forward.

It carries on the same design that is promoted by authors of a graver turn, and only does it in another

Addison.

To carry on. To continue; to put forward from one stage to another.

jzEneas's settlement in Italy was carried on through all the oppositions in his way to it, both by sea and land- Addison.

To carry on. To prosecute ; not to let cease.

France will not consent to furnish us with money sufficient lo carry on the war. Temple.

To carry through. To support; to keep from falling, or being conquered.

That grace will carry us if we do not wilfully betray our succours, victoriously through all difficulties.

Hammond.

To CARRY, v. n. A hare is said by hunters to carry, when she runs on rotten ground, or on frost, and it sticks to her feet.

CAR

2. A horse is said to carry well, when his neck is archeH, and he holds his head high; but when his neck is short, and ill shaped, and he lowers his head, he is said to carry low.

CARRYING WIND, a term applied by dealers in horses to one that frequently tosses his nose as high as his ears, and does not carry hand-somely. The difference between carrying in the wind, and beating upon the hand, is this: that the horse that carries in the wind puts up his head without shaking, and sometimes beats upon the hand. The opposite to carrying in the wind, is arming and carrying low ; and even between these

two there is a difference in wind.

CARSTAIRS (William), an eminent Scotch divine, was the son of a clergyman, and born at a village near Glasgow in 1649. He studied theology ; and the persecutions and oppressions of government, both in regard to civil and re- ligious liberty, having excited his strongest indig- nation, he went to Utrecht. During his residence abroad, he became acquainted with pensionary Fagelˆand entered with warmth into the. interest of the prince of Orange. 'On his return to Scot- land to procure a license, he became disgusted with the insolent conduct of archbishop Sharp, and went back to Holland. His prudence, his reserve, and his political address, were 'strong recommendations to the prince of Orange ; who employed him in personal negotiations in Hol- land, England, and Scotland. Upon the ele- vation of his master to the British throne, he was appointed the king's chaplain for Scotland, and employed in settling the affairs of that kingdom. William, who carried politics into religion, was solicitous that episcopacy should be established there. Carstairs, more versant in the affairs of his native country, saw all the impropriety of this project, and the danger that would arise from enforcing it. His reasonings, his remon- strances, his intreaties, overcame the firmness of king William. He yielded to considerations founded alike in policy and in prudence ; and to Carstairs Scotland is indebted for the full establishment of its church in the Presbyterian form of government. The death of king William was a severe affliction to him ; and it happened before that prince had provided for him with the liberality he deserved. He was continued, how- ever, in his office by queen Anne; and was ap- pointed principal to the University of Edinburgh. He was one of the ministers of the city, and four times moderator of the general assembly. His influence and activity were also exerted with success in promoting the arts and sciences. The universities of Scotland owe him the highest ob- ligations. He procured for them an augmenta- tion of the salaries of their professors; a circumstance to which may be ascribed their reputation, as it enabled them to cultivate with spirit the different branches of knowledge. His religion had no mixture of austerity ; his secular transactions were attended with no imputation of artifice; and the versatility of his talents made him pass with ease from a court to a col- lege. He was among the last who suffered tor- ture before the privy council, to make him divulge the secrets entrusted to him, which he firmly resisted ; and after the revolution, that

CAR

.nhurnan instrument, the thumbikins, was given CART. In London and Westminster, carts to him in a present, by the council. It is said shall not

carry more than twelve sacks of meal, that king William expressed a desire to see it, 750 bricks, one chaldron of coals, &c. on pain and actually tried it on, bidding the doctor turn of forfeiting one of the horses. Carmen are for- the screw ; but at the third turn, he cried out, bidden to ride either on their carts or horses. ‘ Hold, hold, doctor! another turn would make They are to lead or drive them on foot through me confess anything !’ This excellent person the streets, on the forfeiture of ten shillings, died in 1715 ; and in 1754 his State Papers and Stat. 1 Geo. I., cap. 57.

CARTE (Thomas), the historian, was the son of Mr. Samuel Carte, prebendary of Litchfield, and born in 1686. He was reader in the abbey-church at Bath ; and, on the accession of the

Lat. currus. In its most house of Hanover, he refused to take the oaths extensive signification, cart and put on a lay habit. He is said to have acted is a carriage in general, as secretary to bishop Atterbury before his and formerly cart and car- troubles; and in 1722, being accused of high >ter were used for chariot treason, a reward of ►►1000 was offered for ap- and charioteer. Cart is prehending him : but queen Caroline, the pa-

Letters, with an Account of his Life, were pub- lished in 1 vol., 4to, by Dr. M’Cormick.

CART, v.&cn. CA’RTAGE, n. CA’RTER, n. CA’RTERLY, n. CA’RTFUL, n. CA’RT-IIOHSE, n. CA’RT-JADE, n. CA’RT-LOAD, ►►. CA’UT-ROPE, n. CA’RT-RUT, 71. CA’RT-WAY, n.

Ang.-Sax. crtet, cral ; Welsh, cart ; Fr. charette ;

now almost uniformly ap- troness of learned men, obtained leave for him plied to a two-wheeled to return home in security. He published, 1. carriage, for the convey- An edition of Thuanus, in 7 vols. folio. 2. The

CA’RT-WIIEEL, n. \ ance of goods, the driver Life of the first Duke of Ormond, 3 vols. folio. CA’RT-WRIGHT, n.J of which is a carman. To 3. The History of England, 4 vols. folio. 4. A cart is to load a cart, and to expose in such a Collection of Original Letters and Papers con- vehicle, as a punishment. The fatal cart is the cerning the Affairs of England, 2 vols. 8vo ; and vehicle in which criminals are conveyed to ex- some other works. He died in April, 1754. His edition. Cartage is the employment, or hire, of History of England ends in 1654. His design of a cart; and carterly is rude, like a carter, was to have brought it down to the Revolution ; The meaning of the compounds is sufficiently for which purpose he had taken great pains in

copying every thing valuable that could be met with in England, Scotland,

France, Ireland, &c He had a series of Memoirs, from the beginning to the end of Charles lid's reign. At his death, all his papers fell into the hands of his widow, and are now deposited in the Bodleian library, having been delivered by Mr. Jernegan, her second husband, to the university, 1778, for a valuable consideration. Whilst they were in this gentleman's possession, the earl of Hardwicke paid ►►200 for the perusal of them. For a consideration of ►►-300, Mr Macpherson had the use of them ; and from these and otner materials compiled his History and State Papers. It is not generally known that this ingenious individual was the original founder of the City Library con- nected with the corporation of London. Mr. Carte's first prospectus was published in 1743

CARTE BLANCHE, Fr. A blank paper; a paper to be filled up with such conditions as the person tr. \vliom it is sent thinks proper.

CARTEL, n. s. Fr. cartel; Ital. cartello. A

obvious.

And right at entring of the townes end, To which this Sompnour shope him for to wende, , They saw a cart, that charged was with hay, V/hich that a carter drove forth on his way ; Depe was the way ; for which the carte stood ; The carter smote and cried as he were wood Heit scot, heit brok, what space for the stones ?

f.hauccr. Cant. Tales.

Alas! what weights are these that load my heart! I am as dull as winter-starved sheep, Tired as a jade in overloaded cart. Sidney.

Full thirty times has Phoebus' cart gone round Neptune's salt wash, and Tellus' orbed ground ; And thii-ty dozen moons, with borrowed sheen, About the world have times twelve thirties been ; Si ace love our hearts, and Hymen did our hands Unite commutual in most sacred bands. Shakspeare.

Let me be no assistant for a state, But keep a farm and carters. Id.

It was determiner! that these sick and wounded soldiers should be carried on the cart-horses. Knulles. Democritus ne'er laughed so loud

ToleeTawdT carted 'through the►►owd. Hudibras. writing containing, for the most part, stipulations

between enemies ; anciently any public paper.

They flatly disavouch To yield him more obedience, or support ; And as to perjured duke of Lancaster, Their cartel of defiance, they prefer.

Daniel's Civil War.

*As this discord among the sisterhood is likely to engage them in a long and lingering war, it is the more necessary that there should be a cartel settled among them. Addison's Freeholder**

CARTEL SHIP, a ship commissioned in time of war to exchange the prisoners of two hostile powers ; also to carry any proposal from the cne to the other. The officer who commands her must carry no cargo, ammunition, or implements of war, except a single gun for signals.

CARTKRET, a maritime county of North

O 2

Now while my friend, just ready to depart, Was packing all his goods in one poor cart, He stopped a little. Drydcn.

Carter and host confronted face to face. Id.

The squire, whose good grace was to open the scene, Now fitted the altar, now traversed the cart, And often took leave, but was loath to depart. Prior.

She chuckled when a bawd was carted ; And thought tne nation ne'er would thrive, Till all the whores were burnt alive. Id.

Let Wood and his accomplices travel about a country with cart loads of their ware, aud see who will take it. Swift.

Oh happy streets ! to rumbling wheels unknown, No curts, no coaches, shake the floating town ! Gay. Oxen are not so good for draught, where you have occasion to cart much, but for winter ploughing.

Mortimer.

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CARTHAGE.

Carolina, in the district of Newbern, bounded on '.he south by Core Sound ; north by Craven ; east and north-east by Pamlico Sound and Neus River ; and on the west by Onslow county. The chief town is Beaufort.

CARTES (Rene Des), one of the most emi- nent philosophers and mathematicians in the seventeenth century. He was descended of an ancient family in Touraine, in France, and born 31st of March 1596. At the Jesuits' college at La Fleche, he made a very great progress in the learned languages and polite literature, and be- came acquainted with Father Mersenne. He was originally designed for the army ; but his constitution not permitting him to expose himself to its fatigues, he was sent to Paris, where he launched into gaming, and had prodigious suc- cess. Here Mersenne persuaded him to return to study ; which he pursued till he went to Hol- land, in May 1616, when he engaged as a volun- teer in the service of the prince of Orange. While he was in garrison at Breda, he wrote a Treatise on Music, and laid the foundation of several of his works. He was at the siege of llochelle in 1628 ; returned to Paris ; and a few days after his return, at an assembly of men of learning, in the house of Monsignor Bagni, the pope's nuncio, was prevailed upon to explain his sentiments with regard to philosophy, when the nuncio urged him to publish his system. Upon this he went to Amsterdam, and from thence to Franeker, where he began his Metaphysical Meditations, and drew up his Discourse on Meteors. He made a short tour to England ; and, in the neighbourhood of London, made some observations concerning the declination of the magnet. He returned to Holland, where he finished his Treatise on the World. ' His books made a great noise in France ; and in Holland his system bid fair to discard the old philosophy. Voetius, being rector of the university of Utrecht, procured his philosophy to be prohibited, and wrote against him ; but he immediately published a vindication of it. In 1647 he returned to France, where the king settled a pension of 3000 livres upon him. Christiana, queen of Sweden, invited him into that kingdom, received him with the greatest civility, and engaged him to attend her every morning at five o'clock, to instruct her in philosophy. She also desired him to revise and digest all his unpublished writings, and to form a complete body of philosophy from them. She likewise proposed to allow him a revenue, and to form an academy, of which he was to be the director. But these designs were frustrated by his death in 1650. His body was interred at Stockholm, and seventeen years afterwards re- moved to Paris, where a magnificent monument was erected to him in the church of St. Genevieve du Mont. Dr. Halley, in a paper concerning optics, observes, that though some of the ancients mention refraction as an effect of transparent mediums, Des Cartes was the first who discovered the laws of refraction, and reduced dioptrics to a science. His philosophy, it is well known, has given way to the more accurate discoveries and demonstrations of the Newtonian system. See

AsTEONOMY.

CARTHAGE, a celebrated city of antiquity,

the capital of Africa Propria ; and which fo: many years disputed with Rome the sovereignty of the world. According to Velleius Paterculus, this city was built sixty-five, according to Justin and Trogus twelve, according to others 100 or 1 40 years, before the foundations of Rome were laid. It is on all hands agreed that the Phoe- nicians were the founders. It was situated on a peninsula of the Mediterranean, thirty-six miles north-west of Tunis, and 352 east of Algiers ; directly opposite to Rome.

At the third Punic war, Carthage appears to have been one of the first cities in the world. It was no less than 360 stadia, or forty-five miles in circumference, and was joined to the continent by an isthmus, twenty-three stadia or three miles and a furlong in breadth. On the west side pro- jected a long tract of land half a stadium broad; which, shooting out into the sea, separated ir from a lake or morass, and was strongly fortified on all sides by rocks and a single wall. In the middle of the city stood the citadel of Byrsa, having on the top of it a temple sacred to ./Escu- lapius, seated upon rocks on a very high hill, to which the ascent was by sixty steps. On the south side the city was surrounded by a triple wall thirty cubits high ; flanked all round by parapets and towers, at equal distances of 480 feet. Every tower had its foundation sunk thirty- two feet deep, and was four stories high, though the walls were but two : they were arched ; and in the lower part, corresponding in depth with the foundations above mentioned, were stalls large enough to hold 300 elephants with their fodder, &c. Over these were stalls and other conveniences for 4000 horses ; and there was like- wise room for lodging 20,000 foot and 4000 cavalry, without incommoding the inhabitants. There were two harbours, \vhich had one com- mon entrance seventy feet broad, and shut up with chains. The first was appropriated to the merchants ; and included in it a vast number of places of refreshment, and all kinds of accommo- dations for seamen. The second, as well as the island of Cothon, in the midst of it, was lined with large keys, in which were receptacles for sheltering 220 ships of war. Over these were magazines of all sorts of naval stores. The en- trance into each of these receptacles was adorned with two marble pillars of the Ionic order; so that both the harbour and island represented on each side two magnificent galleries. Near this island was a temple of Apollo, in which was a statue of the god, of massy gold ; and the inside of the temple all lined with plates of the same metal, weighing 1000 talents. The city was twenty- three miles in circumference, and con- tained 700,000 inhabitants. Of their power we may have some idea, by the quantity of arms they delivered up to the Roman consuls. The whole army was astonished with the long train of carts loaded with them, which were thought sufficient to have armed all Africa. On this occasion there were put into the hands of the Romans 2000 catapultse, 200,000 complete suits of armour, with an innumerable quantity of swords, darts, javelins, arrows, and beams armed with iron,

which were thrown from the ramparts by the balistae.

CARTHAGE.

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The beginning of the Carthaginian history, like that of most other nations, is obscure and unc2rta.:n. In the seventh year of Pygmalion, king of Tyre, his sister Elisa, or Dido, is said to have fled, with some of her companions and vas- sals, from the cruelty and avarice of her brother Sichieus. She first touched at the island of Cy- prus, where she met with a priest of Jupiter, who was desirous of attending her, to which she readily consented, and fixed the priesthood in his family. At that time it was a custom in the island of Cyprus, for the young women to go on certain stated days, before marriage, to the sea side, to look for strangers, that might possibly ar- rive on their coasts, in order to prostitute them- selves for gain, that they might thereby acquire a dowry. Out of these the Tyrians selected eighty, whom they carried alons? with them. From Cyprus they sailed directly for the coast of Africa, and at last safely landed in the province called Africa Propria, not far from Utica. The inhabitants received their countrymen with great joy, and invited them to settle among them. The common fable is, that the Phoenicians imposed upon the Africans in the following manner : ❓❓❓ They desired, for their intended settlement, only as much ground as an ox's hide would encompass. This request the Africans laughed at ; but were surprised, when, upon their granting it, they saw Elisa cut the hide into the smallest shreds, by which means it surrounded a large territory ; in which she built the citadel called Byrsa. The learned, however, are now unanimous in explod- ing this fable ; and it is certain that the Cartha- ginians for many years paid an annual tribute to the Africans for the ground they possessed. The new city soon became populous and flourishing, by the accession of the neighbouring Africans, who came thither at first with a view to traffic. In a short time it became so considerable, that larbas, a neighbouring prince, thought of making himself master of it without any effusion of blood. In order to this, he desired that an embassy of ten of the most noble Carthaginians might be sent him; and, upon their arrival, proposed to them a mar- riage with Dido, threatening war in case of a re- fusal. The ambassadors, being afraid to deliver this message, told the queen that larbas desired some person might be sent him who was capable of civilising his Africans ; but that there was no possibility of finding any of her subjects, who would leave his relations for the conversion of such barbarians. For this they were repri- manded by the queen, who told them that they ought to be ashamed of refusing to live in any manner for the benefit of their country. They now informed her, therefore, of the true nature of their message from larbas ; and that, accord- ing to her own decision, she ought to sacrifice herself for the good

of her country. The un- happy queen, rather than submit to be the wife of such a barbarian, caused a funeral pile to be erected, and put an end to her life with a dagger. This is Justin's account of the death of queen Dido, and is the most probable ; Virgil's story of her amour with /Eneas being considered fabu- lous, even in the days of Macrobius. The Punic archives being destroyed by the Komans, there is now a chasm in the Carthaginian history for

above 300 years. It appears, however, that, from the beginning, the Carthaginians applied them- selves to maritime affairs, and were formidable by sea in the time of Cyrus and Cambyses. From Diodorus Siculus and Justin it also ap- pears, that the principal support of the Cartha- ginians were the mines of Spain, in which coun- try they seem to have established themselves very early. Justin insinuates, that the first Car- thaginian settlement in Spain happened when the city of Gades, now Cadiz, was in its infancy. About the year before Christ 503 the Cartha- ginians entered into a treaty with the Romans. It related chiefly to matters of navigation and commerce. From it we learn that the whole island of Sardinia, and part of Sicily, were then subject to Carthage ; that they were very well acquainted with the coasts of Italy ; and that, even at this early period, a spirit of jealousy had arisen between the two republics. About this period the Carthaginians wished to discontinue the tribute they had hitherto paid the Africans, for the ground on which their city stood. But, notwithstanding all their power, they were ob- liged to conclude a peace, one of the articles of which was, that the tribute should be continued. By degrees they extended their power over all the islands in the Mediterranean, Sicily excepted; and for the conquest of this they made prepa- rations, about A. A. C. 480. Their army con- sisted of 300,000 men; their fleet of upwards of 2000 men of war, and 3000 transports. Ha- milcar, their general, having landed their nume- rous forces, attacked Himera, a city of considerable importance, but was at last assaulted in his trenches by Gelon and Theron, the tyrants of Syracuse and Agrigentum, who gave the Carthaginians one of their greatest overthrows : 150,000 were killed in the battle and pursuit, we are told, and all the rest taken prisoners ; and of their 2000 ships of war and 3000 transports, eight ships only, which then happened to be out at sea, escaped. These sailed for Carthage, but were cast away, and every soul perished, except a few who were saved in a boat, and at last reached Carthage with the dismal news of the total loss of the fleet and army. No words can express the conster- nation of the city upon receiving the news of this disaster. Ambassadors were despatched to Sicily, with orders to conclude a peace upon any terms. They are said to have prostrated them- selves before Gelon, and with tears to have en- treated him to receive their city into favor. He granted their request, upon condition that Car- thage should pay him 2000 talents of

silver, that they should build two temples, wkpre the articles of the treaty should be depositea, and that for the future they should abstain from human sa- crifices. The Carthaginians complimented his wife Demarata with a crown of gold worth a 100 talents. From this time little mention is made of the Carthaginians for seventy years. They, however, gradually extended their domi- nions in Africa,, shook off the tribute which gave them so much uneasiness, and went to war with the Cyrenians in this interval. At last two brothers, called Philaeni, were sent out for Car- thage, who, partly by their superior celerity and still more by their uncommon patriotism,

gained a large extent of territory to Carthage. See PHIUENI. About A. A. C. 412, Hannibal was appointed to assist the Egestines, a Sicilian people, against the Selinuntines, and having landed his forces he immediately marched for Selinus. In his way he took Emporium. Se- linus made a vigorous defence, but at last the city was taken by storm ; about 16,000 of the inhabitants being massacred : the temples were plundered, and the city rased to the ground. Hannibal next laid siege to Himera, wishing to revenge the death of his grandfather Hamilcar, who had been slain here by Gelon. Finding his battering engines not to answer his purpose, he undermined the wall with large beams of timber, to which he set fire, and thus 'laid it flat on the ground. At last he became master of the place, and treated it as he had done Selinus. The Carthaginians were now so much elated, that they meditated the reduction of the whole island. But age and infirmities advanced upon Hannibal ; all Sicily was alarmed ; and the prin- cipal cities were put into the best state of defence. The Carthaginians first marched to Agrigentum, and began to batter the walls with great fury, but were defeated by a reinforcement of other Syracusans, and forced to retreat under the walls of Agrigentum with the loss of 6000 men. They finally, however, took the place, and immense booty was found in it. Their next attempt was upon Gela, to the assistance of which Dionysius came, with an army of 50,000 foot, and 1000 horse. With these he attacked the Carthaginian camp, but was repulsed with loss, and sent a trumpet to Imilcar to desire a cessation of arms, in order, as was pretended, to bury the dead, but in reality to give the people of Gela an op- portunity to escape. Most of the citizens left the place in the night, and Dionysius, with the army, followed them. The Carthaginians finding the city deserted by most of its inhabitants, im- mediately entered it, putting to death all who remained ; after which, Imilcar, having plun- dered it, moved towards Camarina : but the in- habitants of this city had likewise been drawn off i y Dionysius, and it underwent the same fate wit)- Gela. Imilcar now finding

his army veakened by these exertions, and by a plague wh'ich broke out in it, sent a herald to Syracuse tT offer terms of peace. The Carthaginians, besides their ancient acquisitions in Sicily, were, according to this proposal, to possess the coun tries of the Silicani, the Selinuntines, the Hime- reans, and Agrigentines ; the people of Gela and Camarina to be permitted to reside in their re- spective cities, upon paying an annual tribute to the Carthaginians ; and the other Sicilians to preserve their independence. The Syracusans were to remain under Dionysius. That tyrant concluded this peace only to gain time, and to put himself in a condition to attack the Cartha- ginian territories with greater force. Immediately afterwards he gave up to the fury of, the popu- lace the persons and possessions of the Carthagi- nians who resided1 in Syracuse. Their ships, which were then in the harbour, laded with car- goes of great value, were plundered, and their houses ransacked. This example was followed throughout the whole island. He ultimately

advanced with his army on Mount Eryx, near which stood Motya, a Carthaginian colony, which he invested. But soon after, leaving his brother Leptines to carry on the siege, he proceeded to reduce the cities in alliance with the Carthagi- nians. The Carthaginians, in the meantime, sent officers to Europe, with considerable sums, to raise troops. Ten galleys. were also sent from Cartilage to destroy all the ships that were found in the harbour of Syracuse. The admiral entered the harbour by night, without being perceived by the enemy ; and having sunk most of the ships he found there, returned without the loss of a man. All this while the Motyans defended themselves with great vigor. At last the place was taken by storm, and the Greek soldiers began a general massacre. Next year, notwith- standing a considerable loss sustained in a sea- fight with Leptines, Himilco, the Carthaginian general, landed a powerful army at Panormus, seized upon Eryx, and then advancing towards Motya, made himself master of it, before Dio- nysius could send any forces to its relief. He next advanced to Messina, which he besieged and took ; after which most of the Siculi revolted from Dionysius. Notwithstanding this defection, Dionysius, finding his forces still amount to 30,000 foot and 3000 horse, advanced against the enemy, and, after several fluctuations of defeat and success, attacked the African general unex- pectedly, ruined his fleet, and made himself master of his camp. Himilco finding himseli unable to sustain another attack, came to a private agreement with Dionysius ; who, for 300 talents, consented to let him escape to Africa, with the shattered remains of his fleet and army. Arrived at Carthage, Himilco was unable to bea: his misfortunes, and put an end to his own life. Notwithstanding these disasters, the Carthaginians made new attempts upon Sicily, from A. A. C. 392 to 367, when the Syracusans being divided by civil dissentions, the Carthaginians thought it a proper time to exert all their efforts, in order to

become masters of the island. They fitted out a fleet, and entered into alliance with Icetas, tyrant of Leontini, who pretended to have taken Syracuse under his protection. By this treaty the two powers engaged to assist each other, in order to expel Dionysius II. after which they were to divide the island between them. The Sy- racusans applied for succours to the Corinthians ; and they readily sent them a body of troops, under the command of Timoleon. We cannot, here detail his operations. See TIMOLEON. The Carthaginians at last concluded a peace on the following turms : that all the Greek cities should be set free; that the river Halycus should be the boundary between the territories of both parties ; that the natives of the cities subject to the Carthaginians should be allowed to withdraw, if they pleased, to Syracuse, or its dependencies, with their families and effects ; and lastly, that Carthage should not, for the future, give any assistance to the remaining tyrants against Sy- racuse. About A. A. C. 31(5 the Carthaginians engaged in another bloody war with the Sicilians, the particulars of which the reader will find narrated under the article SYRACUSE. It is only necessary here to mention, that the Carthaginians,

although at first very successful in their war with Agathocles, tyrant of Syracuse, were soon after, by a singular and bold manoeuvre, attacked in their own territories, their generals, Hanno and Bomilcar, defeated with great loss, and their capital itself besieged, by that prince, at the very time his own capital, Syracuse, was besieged by their general Hamilcar : who was at last obliged fo. raise the siege, and was defeated and beheaded by ta? Syracusans. These defeats led the su- perstitious Carthaginians to suppose they had fallen under the displeasure of their gods, by neglecting (according to their horrid system of priestcraft), to sacrifice children of noble fa- milies to them. They therefore sacrificed 200 children of the first rank, besides 300 other persons, who voluntarily offered themselves, to appease the wrath of their bloody deities ! Aga- thocles, however, continued successful for a con- siderable time, till at last the tide turned in favor of the Carthaginians; whose generals, Hanno and Himilco, gained two great victories, and finally declared a peace on these terms : 1. That the Greeks should deliver up all the places they held in Africa, receiving from them 300 talents. 2. That such of them as were willing to serve in the Carthaginian army should be kindly treated, and receive the usual pay. And 3. That the rest should be transported to Sicily, and have the city of Selinus for their habitation. During this war, the Agrigentines finding the Carthaginians and Syracusans had mutually weakened each other, took the opportunity of re- covering many places out of the hands of both parties.

See AGRIGENTUM. From the peace with Syracuse, to the first war with the Romans, we find nothing remarkable in the history of Carthage.

The first Punic war, as it is commonly called, happened about A. A. C. 256. At that time, the Carthaginians were possessed of extensive dominions in Africa ; they had made considerable progress in Spain ; were masters of Sardinia, Corsica, and all the islands on the coast of Italy ; and had extended their conquests to a great part of Sicily. The occasion of the first rupture between the two republics was the interference of the Romans with the affairs of Sicily. The Mamertines being vanquished in battle, and re- duced to great straits by Iliero, king of Syracuse, had resolved to deliver up Messina, the only city they now possessed, but Hannibal obtained possession of it by stratagem. Some were for ac- cepting the permanent protection of Carthage ; others for surrendering to the king of Syracuse; but the greater part were for calling in the Ro- mans to their assistance. Deputies were ac- cordingly .sent to Rome, and Caius Claudius was dispatched with a fleet to Rhegium. He crossed the straits, and had a conference with the Mamertines. in which he prevailed upon them all to accept of the protection of Rome : and made the necessary preparations for transporting his forces. But the Carthaginian admiral, coining up with them near the coast of Sicily, attacked them with great fury. During the engagemept, a violent storm arose, which dashed many of the Roman vessels against the rocks, and greatly damaged their squadron; by which voans

Claudius was forced to retire to flhegium, which he accomplished with difficulty. Hanno restored all the vessels he had taken ; but ordered the deputies sent with them to expostulate with the Roman general upon the infraction of the treaties subsisting between the two republics. This expostulation, however just, produced an open rupture ; Claudius soon after possessing himself of Messina. Such was the beginning of the first Punic war, which lasted twenty-four years. The particulars belong properly to the history of ROME, which see. Peace was at last concluded upon terms very unfavorable to the Carthaginians; who were bound by them, 1. To quit Sicily en- tirely, and all the Italian islands. 2. To pay the Romans 2200 talents of silver, or ►►437,250, at equal payments, within ten years, and 1000 talents immediately. 3. To restore the Roman captives and deserters without ransom ; and to pay for their own. And, 4. Not to make war upon king Hiero or his allies. This bloody and expensive war had no sooner terminated, than the Carthaginians found themselves engaged in another, which had almost proved fatal to them. It is called by ancient historians the Libyan war, or the war with the mercenaries, as it arose out of the mutiny of those mercenary troops which the Carthaginians had hired during the war, and were not, at its close, able at once to pay. To complete their misery, they had no prospect of assistance from any foreign ally. They

did not, however, despond, but adopted every prudent measure of defence. Hanno was appointed com- mander in chief, and the most strenuous efforts were made to reduce the rebels by force of arms. In the mean time Mathos, and Spendius, their leaders, laid siege to Utica and Hippacra ; and cut off all communication betwixt Carthage and the continent of Africa. The capital was thus kept in a kind of blockade. Hanno was dis- patched to the relief of Utica with a large body of forces, 100 elephants, and a tram of battering engines. He immediately attacked their intrench- ments, and after an obstinate dispute, forced them. The mercenaries lost a vast number of men ; and the advantages gained by Hanno were so great, that they might have proved decisive, had he improved them : but becoming secure after his victory, the mercenaries rallied their forces, cut off many of his men, and plun- dered his camp, forcing the rest to fly into the town. He also suffered the mercenaries to take possession of the isthmus, on which Carthage stood, and which joined the peninsula to the con- tinent of Africa. The Carthaginians, therefore, now placed Hamilcar Barcas at the head of their forces. He marched against the enemy with 10,000 men, horse and foot ; being all the troops the Carthaginians could at this time assemble. Mathos, after he had possessed himself of the isthmus, passed the Bagrada by night, and advancing into the plain where his elephants were capable of acting, drew up his troops in order of battle; Spendius, then drew a body of 10,000 men out of Mathos's camp, which he posted on one side of Hamilcar, and ordered 15,000 from Utica to observe him on the other, thinking to surrouna the Carthaginians, and cut them all off at once. Ilamilcar now feigning a retreat, engaged them

at a disadvantage ; and gave them a total over- throw with the loss of 6000 killed and 2000 taken prisoners. He pursued them to the town near the bridge, which he entered without oppo- sition, the mercenaries flying in great confusion to Tunis. Upon this many towns submitted voluntarily to the Carthaginians, whilst others were reduced by force. Mathos, however, pushed on the siege of Hippo with vigor, and Spendius and Autaritus, commanders of the Gauls, at the head of a detachment of 6000 men, from the camp at Tunis, and 2000 Gallic horse, having received a strong reinforcement of Africans and Numidians, and seizing all the heights around the plain in which Hamilcar lay encamped, resolved to attack him. Had a battle now ensued, Hamilcar and his army must have been cut off; but a young Numidian nobleman deser- ted the mercenaries with 2000 men ; a battle ensued just at this juncture, and the Africans were entirely overthrown, with the loss of 10,000 men killed, and 4000 taken prisoners. Mathos and his associates hearing of the lenity of Hamilcar towards his

captives, and fearing it might occasion a defection among his troops, thought that the best expedient would be to put them upon some action so execrable in its nature, that no hopes of reconciliation might remain. Cisco and all the Carthaginian prisoners were therefore put to death. In revenge for this enormity, Hamilcar threw all the prisoners that fell into his hands to be devoured by wild beasts ! After this the mercenaries were able to take the field with 50,000 men. But Hamilcar being much superior to them in tactics, shut them up at last in a post so situated, that he kept them strictly besieged ; and the enemy not daring to venture a battle, began to fortify their camp, and surround it with ditches and intrenchments. They were soon so hard pressed by famine, that they were obliged to eat one another. At last, being reduced to the utmost extremity of misery, they insisted that Spendius, Autaritus, and Zar- xas, their leaders, should have a personal con- ference with Hamilcar, and make proposals of peace. This was accordingly concluded upon the following terms, viz. That ten of the ring-leaders should be left entirely to the mercy of the Carthaginians ; and that the troops should all be disarmed, every man retiring only in a single coat. The treaty was no sooner concluded than Hamilcar, by virtue of the first article, seized upon the negociators themselves, and the army being informed that their chiefs were under arrest, had immediately recourse to arms, as suspecting they were betrayed ; but Hamilcar, drawing out his forces in order of battle, sur- rounded them, and either cut them to pieces, or trod them to death with his elephants. The number of wretches who perished on this oc- casion amounted to above 40,000. Hamilcar now invested "Tunis, and being joined in the command by Hannibal, the army was no sooner encamped, than he caused Spendius and the rest of the prisoners, to be let out in view of the besieged, and crucified near the walls. Ma- thos, however, sallied out, took several prisoners, among whom was Hannibal himself, and plun- dered his camp. Taking the body of Spendius

from the cross, Mathos immediately substituted Hannibal in its room ; and thirty Carthaginian prisoners of distinction were crucified around him. Upon this disaster, Hamilcar decamped, and posted himself along the sea-coast, near the mouth of the Baˆrada. Thirty senators w►►re now sent from Carthage, with Hanno at their head, to consult with Hamilcar about the proper measures for putting an end to this unnatural war ; all the youth capable of bearing arms were at the same time pressed into the service ; by which means a strong reinforcement being sent to Hamilcar, he soon found himself in a condition to act offensively. He now drew Mathos into frequent ambuscades, and gave him a notable overthrow near Leptis. This reduced the rebels to the necessity of hazarding a deci- sive battle, which proved fatal to them. They fled almost at the first onset ; Mathos, with a few, escaped to a neighbouring town, where he was taken, carried to Carthage, and executed ; and then, by the reduction of the revolted cities,

an end was put to this war, which, from the excesses of cruelty committed in it, according to Polybius, went among the Greeks by the name of the inexpiable war.

During the Lybian war, the Romans wrested the island of Sardinia from the Carthaginians ; which the latter, not being able to resist, were ob- liged to submit to; Hamilcar finding his country not in a condition to enter into an immediate war with Rome. He now, however, projected the con- quest of Spain, by which means the Carthaginians might have troops capable of coping with the Ro- mans. Here he commanded nine years, during which he subdued many of the barbarous nations, and amassed an immense quantity of treasure. At last he was killed in a battle, and was suc- ceeded by his son-in-law Asdrubal. This gene- ral fully answered the expectations of his coun- trymen ; greatly enlarged their dominions in Spain ; and built the city of New Carthage, now Carthagena. The Romans, who did not choose to come to an open rupture with him, on account of the apprehensions they were under of an in- vasion from the Gauls, concluded at this time the following treaty with Carthage : ††† 1 . That the Carthaginians should not pass the Iberus. 2. That the Saguntines, a colony of Zacynthians, and a city situated between the Iberus and that part of Spain subject to the Carthaginians, as well as the other Greek colonies there, should enjoy their ancient rights and privileges. As- drubal, after having governed the Carthaginian dominions in Spain for eight years, was treache- rously murdered by a Gaul whose master he had put to death. Hannibal the younger was now sa- luted general by the army with demonstrations of joy. In the first campaign, he conquered the Olcades, a nation seated hear the Iberus. Next year he subdued the Vaccrei, another nation in that neighbourhood. Soon after, the Carpsetani, one of the most powerful nations in Spain, de- clared against the Carthaginians. Their army consisted of 100,000 men, with which they pro- posed to attack Hannibal on his return from the Vaccsei ; but by stratagem they were utterly de- feated, and the nation obliged to submit. Nor- thing now remained to oppose the progress of

the Carthaginian arms, but the city of Saguntum. Hannibal, for some time, did not think proper to come to a rupture with the Romans, by at- tacking that place. At last he found means to embroil some of the neighbouring cantons, espe- cially the Turdetani, with the Saguntines, and thus furnished himself with a pretence to attack their city. Upon the commencement of the siege, the Roman senate dispatched two ambassadors to Hannibal, with orders to proceed to Carthage, in case the general refused to give them

satisfaction. They were scarce landed, when Hannibal, who was carrying on the siege of Saguntum with great vigor, sent them word that he had something else to do than to give audience to ambassadors. At last, however, he admitted them ; and in an- swer to their remonstrances, told them, that the Saguntines had drawn their misfortunes upon themselves, by committing hostilities against the allies of Carthage ; and at the same time desired the deputies, if they had any complaints to make of him, to carry them to the senate of Carthage. On their arrival in that capital, they demanded that Hannibal might be delivered up to the Ro- mans, to be punished according to his deserts ; and this not being complied with, war was im- mediately declared between the two republics. The Saguntines defended themselves for eight months with incredible bravery; but at last, their city was taken, and the inhabitants were treated with the utmost cruelty. After this, Han- nibal put his African troops into winter quarters at New Carthage ; but in order to gain their affection, he permitted the Spaniards to retire to their respective homes.

Having taken measures for securing Africa and Spain, he now passed the Iberus, subdued all the nations betwixt that river and the Pyre- nees, appointed Hanno commander of all the newly conquered districts, and began his march for Italy. Upon mustering his forces, after they had been weakened by sieges, desertion, mor- tality, and a detachment of 10,000 foot and 1000 horse, left with Hanno to support him in his new post, he found them to amount to 50,000 foot and 9000 horse, all veteran troops, and the best in the world. Hannibal easily crossed the Pyre- nees ; passed by Ruscino, a frontier town of the Gauls ; and arrived on the banks of the Rhone without opposition. But in passing this river, he met with some opposition from the Gauls; and was for some time in doubt whether he should advance to engage the Romans, who, under Scipio, were marching that way, or con- tinue his march for Italy. To the latter he was soon determined by the arrival of Magilus, prince of the Boii, who brought rich presents, and offered to conduct the Carthaginian army over the Alps. Nothing could have happened more favorable to Hannibal's affairs, as there was no room to doubt the sincerity of this prince. It is not known with certainty where Hannibal began to ascend these celebrated barriers. As soon as he began his march, the petty kings of the coun- try assembled their forces in great numbers ; and taking possession of the eminences over which the Carthaginians must pass, continued harassing them, and disputing every foot of ground. At last, after a fatiguing march of nine days, he

arrived at the summit of the pass. Here he en- camped, and halted two days, to give his wearied troops some repose, and to wait for the strag- glers. The sight of the snow covering the ground terrified them, it is said, extremely. Hannibal led them to the top of the highest rock on the side of

Italy, and, showing them the fruitful plains of Insubria, told them that the Gauls, whose country they saw, were ready to join them. He also told them, that by climbing the Alps, they had scaled the walls of Rome. At last, after almost incredible fatigue and exertions, their way, which was exceedingly narrow, lay between two precipices ; the declivity, which was very steep, had become more dangerous by the falling away of the earth. Here the guides stopped ; and the whole army being terrified, Hannibal proposed at first to attempt some other way : but every path around him being covered with snow, he found himself under the necessity of cutting a way through the rock itself. This was not accomplished without vast labor; and Hannibal, having spent nine days in ascending, and six in descending, the Alps, at last reached Insubria. Upon reviewing his army, he found, that of the 50,000 foot with whom he set out from New Carthage five months and fifteen days before, he had now only 20,000, and that his 9000 horse were reduced to 6000. He did not languish in idleness ; but, joining the Insubrians, who were at war with the Taurinians, laid siege to Taurinum, the only city in that country, and in three days became master of it, putting all who resisted to the sword. The neighbouring tribes voluntarily submitted to the conqueror, and sup- plied his army with all sorts of provisions.
**** Having thus brought our Carthaginian hero to the borders of the Roman territories, we refer the reader for an account of his repeated and astonishing victories, as well as his ultimate de- feats, during the second Punic war (which was chiefly carried on in Italy), to the History of Rome : and shall hasten to relate the accumu- lated distresses and final catastrophe of his coun- try, which that hero exerted himself so much to prevent. After a tedious and expensive war of fourteen years, the Carthaginians were obliged to submit to the following very humiliating terms of peace, viz. 1. To deliver up all the Roman de- serters, fugitive slaves, prisoners, and all the Italians whom Hannibal had obliged to follow him : 2. To give up all their ships of war except ten triremes, with all their tame elephants, and to train up no more of these animals for war : 3. Nol to engage in any war without the consent of the Romans : 4. To pay to the Romans, in fifty years, 10,000 Euboic talents, at equal pay- ments : 5. To restore to Masinissa all that they had usurped from him or his ancestors, and to enter into an alliance with him : 6. To assist the Romans both by sea and land, when called upo-i : and 7. Never to make any levies either in Ga – or Liguria. These terms appeared so intolerable to the people of Carthage, that they threatened to burn the houses of the nobility ; but Hannibal having assembled 600 foot and 500 horse at Mar- thama, prevented an insurrection, and by his influence completed the accommodation. These terms of peace, however, were scarcely signed,*

when Masinissa seized part of the Carthaginian dominions in Africa, pretending that they for- merly belonged to his family. The Cartha- ginians, through the mediation of the Romans, found themselves under a necessity of ceding these countries to that ambitious prince, and of entering into an alliance with him. Hannibal was now intrusted with the command of an army against some neighbouring nations in Africa; but this being disagreeable to the Romans, he was removed from it, and raised to the dignity of a prsetor of Carthage. But the Romans com- pelled his ungrateful country, at last, to expel him from this post, and he was obliged to fly to Antiochus king of Syria ; his effects were con- fiscated, his house rased, and a public decree declared him an exile. Carthage now became, as she deserved to be, miserably dependent on Rome. Disputes arising with Masinissa, he made an ir- ruption into the province of Tysca, where he seized fifty, or as some say, seventy towns and castles. This obliged the Carthaginians to apply with importunity to the Roman senate for redress : but Masinissa was left at liberty to pursue his plans. The Romans, however, affected to show a great regard to the principles of justice and honor, and sent Cato into Africa, to accommodate all differences. The Carthaginians now appealed to the treaty concluded with Scipio, as the only rule by which their conduct and that of their ad- versary ought to be examined. But to prevent a rupture as much as possible, by a decree of the senate, they impeached Asdrubal, general of the army, and Carthalo, commander of the auxiliary forces, with their accomplices, as guilty of high treason, for being the authors of the war against the king of Numidia. About this time, the city of Utica, being the second in Africa, and famous for its riches, as well as its equally commodious and capacious port, submitted to the Romans ; the latter, notwithstanding the most humble conduct on the part of this once great republic, declared war immediately against the Carthaginians. The consuls, M. Manlius Nepos, and L. Marcius Censorinus, were despatched with an army and fleet to commence hostilities. The land forces consisted of 80,000 foot and 4000 chosen horse ; and the fleet of fifty quinqueremes, besides a vast number of transports. The consuls had secret orders from the senate, not to conclude their operations but by the destruction of Car- thage. That devoted city was now ordered to send 300 young noblemen of the first distinction to the praetor Fabius at Lilybaeum, within the space of thirty days, and comply with all the orders of the consuls. These hard terms filled the whole city with grief, but the hostages were delivered ; and they arrived at Lilybaeum before the thirty days were expired. The consuls only told them, that upon their arrival at Utica, they should learn the farther orders of the republic. Here they first demanded a sufficient supply of corn for the subsistence of their troops. 2. That they should deliver up into their hands all the triremes they were then masters ‘of. 3. That they should put them in possession of all their military machines. And 4, that they should immediately convey all their arms into

the Roman camp. As i>are was taken that there should be a convenient

interval of time betwixt every one of those de- mands, the Carthaginians found themselves en- snared, and could not reject any one of them, though they submitted to the last with the ut- most reluctance. Censorinus, now imagining them incapable of sustaining a siege, commanded them to abandon their city, or as Zonaras says, to demolish it ; permitting them to build another, eighty stadia fom the sea, but without walls or for- tifications. After their first feelings of surprise and indignation had subsided, the senators of Carthage now assembled and resolved to sustain a siege. They were stripped of their arms and destitute of provisions ; but despair raised their courage, and suggested numerous expedients. They gathered on the ramparts heaps of stones, to serve them instead of arms in case of a sur- prise ; and gave the slaves and common prisoners their liberty, and incorporated them in the mi- litia. Asdrubal was recalled, and invited to em- ploy the 20,000 men he had raised against his country, in defence of it. Another Asdrubal was appointed to command in Carthage ; and all seemed resolute to save the city, or perish in its ruins. Every day they are said to have manu- factured 144 bucklers, 300 swords, 1000 darts, and 500 lances and javelins. Where iron and brass were wanting, they made use of silver and gold, melting down the statues, vases, and the plate of private families. As tow and flax were wanting to make cords for working the machines, women of the first rank freely cut off their hair, and dedicated it to that use. Without the walls, Asdrubal employed troops in getting together provisions, and conveying them safe into Car- thage ; at length the Roman army sat down be- fore the place and invested it. Persuaded that the Carthaginians had no arms, they flattered themselves that they should carry the city by assault. Accordingly, they approached to plant their scaling ladders ; but, to their astonishment, discovered a prodigious multitude of men on the ramparts, in the armour they had newly made, and were obliged to resign their enterprise. In the mean time Asdrubal, having collected from all places subject to Carthage a prodigious number of troops, encamped within reach of the Romans, and reduced them to great straits for want of provisions. The troops of Marcius were attacked with a violent epidemic. He therefore ordered his fleet to draw as near the shore as possible, in order to transport them to a healthier spot. Asdrubal, being informed of this, ordered all the old barks in the harbour to be filled with faggots, tow, sulphur, bitumen, and other com- bustible materials ; and taking advantage of the wind, which blew towards the enemy, let them drive upon the Roman ships, which were for the most part consumed. After this disaster, Mar- cius was recalled, and the Carthaginians made a brisk sally upon the remaining consul's camp, and would have succeeded, had not ./Emilianus marched out of the opposite gate to where the attack was made, and falling unexpectedly on their rear,*

obliged them to return in disoider to the city. Asdrubal shortly after gave battle to the consul near Nepheris, and rushing down the hill, cut a great number of the Romans in pieces. The whole Rom××× army would now have been

destroyed, had not Scipjo TEmilianus, at the head of 300 horse, sustained the attack of Asdrubal's forces, and covered the legions, while they passed a river in their retreat. When the army had crossed, it was perceived that four manipuli were wanting ; and, soon after, they were informed that they had retired to an eminence, where they expected to be cut off. Upon this Emilianus, taking with him a chosen body of horse, and provisions for two days, crossed the river, and flew to the assistance of his countrymen. He seized a hill over against that on which the four manipuli were posted ; and, after some hours re pose, marched against the Carthaginians who kept them invested ; and in spite of all opposi- tion, opened a way for their escape. On his re- turn to the army, his companions, who had de- spaired of his return, carried him to his quarters in triumph ; and the manipuli he had saved gave him a crown of gramen. The next year the war in Africa fell by lot to the consul L. Calpurnius Piso; and he continued to employ ˆEmilianus in several important enterprises. He took several castles ; and in one of his excursions, had a private conference with Phameas, general, under Asdrubal, of the Carthaginian cavalry, and brought him over, together with 2200 of his horse, to the Roman interest. Under the consul Cal- purnius Piso himself, however, the Roman arms were unsuccessful. He invested Clupea, but was obliged to abandon the enterprise. From this place he went to vent his rage on Neapolis, which professed a strict neutrality, and had even a safeguard from the Romans. The consul, however, plundered the place. Next year Scipio JEinilianus was chosen consul, and ordered to pass into Africa : upon his arrival the face of affairs was greatly changed. At the time of his entering the port of Utica, 3500 Romans were in great danger of being cut in pieces before Carthage. These troops had seized Megalia, one of the suburbs of the city ; but had not fur- nished themselves with provisions to subsist there, and could not retreat. ˆEmilianus obliged the Carthaginians to retire within their walls, and safely conveyed his countrymen to Utica. Hav- ing then drawn together all the troops, he ap- plied himself wholly to the siege of the capital. He carried Megalia by assault, the Carthaginian garrison retiring into the citadel of Byrsa. As- drubal was so enraged at this loss, that he caused all the Roman captives taken in the last two years to be brought upon the ramparts, and thrown headlong, in the sight of the Roman army, from the top of the wall. He was of a temper remarkably inhuman, and is said to have ordered

several of these unhappy wretches to be flayed alive. /Emilianus, in the mean time, was busy in drawing lines of circumvallation and con- travallation across the neck of land which joined Carthage to the continent of Africa. All the avenues on the land side were thus shut up, so that the city could receive no provisions that way. His next care was to raise a mole in the sea, to block up the old port, the new one being already shut up by the Roman fleet, and this great work he effected with immense labor. The mole reached from the western neck of land, of which the Romans were masters, to the entrance

of the port, being ninety feet broad at the bottom, and eighty at the top. The besieged, when the Romans first began this surprising work, laughed at the attempt ; but were no less alarmed than astonished, when they beheld a vast mole appear- ing above water, and by that means the port rendered inaccessible to ships, and quite useless. Once more prompted by despair, however, the Carthaginians dug a new bason, and cut a pas- sage into the sea, by which they could receive the provisions that were sent them by the troops in the field. With equal diligence and expe- dition, they fitted out a fleet of fifty triremes, which, to the great surprise of the Romans, ap- peared suddenly advancing into the sea through this new canal, and even ventured to give the enemy battle. The action lasted the whole day, with little advantage on either side. The day after, the consul endeavoured to make himself master of a terrace, which covered the city on the side next the sea; and on this occasion the besieged signalised themselves in a most remark- able manner. Great numbers of them, naked and unarmed, went into the water in the dead of the night, with unlighted torches in their hands; and having, partly by swimming, partly by wad- ing, got within reach of the Roman engines, they struck fire, lighted their torches, and threw them with fury against the machines. The sudden appearance of these naked men, who looked like so many monsters started up out of the sea, so terrified the Romans who guarded the machines, that they began to retire in the utmost con- fusion. This, however, did not discourage the consul : he renewed the attack a few days after, carried the terrace by assault, and lodged 4000 men upon it. As this was an important post, because it pent in Carthage on the sea side, ˆEmilianus took care to fortify it against the sal- lies of the enemy; and winter now approaching, he suspended all further attacks on the place. He was, not, however, inactive. The Carthagi- nians had a very numerous army, strongly en- camped near Nepheris, whence convoys of pro- visions were sent by sea to the besieged, and brought into the new bason. Emilianus there- fore attacked the enemy's entrenchments here, put 70,000 to the sword, and made 10,000 prisoners ; all the country people, who could not retire to Carthage, having taken refuge in this camp. After this he laid siege to Nepheris, which he reduced in twenty-two days. Early in the spring he renewed the siege of Carthage,

and ordered Laelius to attempt the reduction of Co- tho, a small island which divided the two ports. vEmilianus himself made a false attack on the citadel to facilitate this object ; and when he understood by the loud shouts of the troops of Laslius, that he had made himself master of Cotho, he fell unexpectedly on the neighbouring gate of the city, which he broke down, and made a lodgment within it. The following day he ordered 4000 fresh troops to be sent from his camp, and, having solemnly devoted Carthage to the infernal gods, began to advance through the streets of the city to attack the citadel. The houses on both sides were very high, and filled with Carthaginians, who poured on the Romans darts and stones, so that they cou'd not proceed

till they had cleared them. From the market place to the citadel, two bodies of men. fought their way every step, one above on the roofs of the houses, the other belo%v in the streets. The slaughter was immense. The air rung with la- mentations. The pro-consul at last commanded fire to be set to that quarter of the town which lay next to the citadel ; and multitudes, who had escaped the sword of the enemy, perished in the flames, or by the fall of the houses. After the fire, which lasted six days, had opened a large area where all his troops could act, ./Emilianus ap- peared with his whole army before Byrsa, when 25,000 women, and 30,000 men, came out of the gates, and threw themselves prostrate before him, asking no favor but life. Asdrubal's wife ear- r.estly entreated her husband to suffer her to join the suppliants, and carry with her to the pro- consul he.r two sons, who were as yet very young ; but he denied her request, and rejected her remonstrances with menaces. The Roman deserters, seeing themselves excluded from mercy, resolved to die sword in hand. To them Asdru- bal committed the care of his wife and children ; after which he, in a most cowardly manner, privately threw himself at the conqueror's feet. The Carthaginiaas in the citadel no sooner under- stood that their commander had abandoned the place, than they threw open the gates, and put the Romans in possession of Byrsa. They had now no enemy to contend with but the 900 de- serters, who, being reduced to despair, retreated into the temple of /Esculapius, a second building within the first. There the proconsul attacked them ; and these unhappy wretches, finding no way to escape, set fire to the temple. As the flames spread, they retreated from one part of the building to another, till they reached the roof. Here Asdrubal's wife appeared in her best apparel, uttering the most bitter impreca- tions against her husband, whom she saw stand- ing below with ./Emilianus. ' Base coward,' said she, ' the mean things thou hast done to save thy life shall not avail thee ; thou shall die this instant in thy two children.' Having thus spoken, she stabbed both

the infants with a dag- ger ; and while they were yet struggling for life, threw them from the top of the temple, and then leaped down after them into the flames. ˆEmili- anus delivered up the city to be plundered, in the manner prescribed by the Roman mi- litary law. The soldiers were allowed to ap- propriate to themselves all the furniture, uten- sils, and brass money, they should find in private houses; but all the gold and silver, the statues, pictures, &c. were put into the hands of the quaestors. On this occasion the cities of Si- cily, which had been often plundered by the Carthaginian armies, recovered a number of statues, pictures, and other valuable monu- ments; amongst the rest, the famous brazen bull, which Phalaris had ordered to be cast, and used as the chief instrument of his cruelty, was restored to the inhabitants of Agri- gentum. As ./Emilianus wished to spare what remained of this stately metropolis, he wrote to the senate on the subject, from whom he received the following orders : 1. To destroy entirely the city of Carthage, with Byrsa and Megalia, and to

leave no traces of them. 2. To dismantle all the cities that had lent Carthage any assistance. 3 T.o enlarge the territories of those cities which had declared for the Romans, with lands taken from the enemy. 4. To divide all the lands be- tween Hippo and Carthage among the inhabi- tants of Utica. 5. To subject all the Africans of the Carthaginian slate, both men and women, to pay an annual tribute at so much per head. 6. To turn the whole country, formerly subject to the Carthaginian state, into a Roman province, lo be governed by a prselor, like Sicily. Com- missioners were also sent into Africa, lo settle jointly with the pro-consul the state of the new province. Thus fell Carthage, about A. A. C. 146 ; a city whose destruction may be attributed more to the intrigues of an abandoned faction, than to the power of its rival. The treasure /Emilianus carried off was immense : Pliny making it amount to 4,470,000 pounds weight of silver.

The Romans ordered Carthage never to be in- habited again, denouncing dreadful imprecations against those who should attempt to rebuild any part of it, especially Byrsa and Megalia. About twenty-four years after, however, C. Gracchus, tribune of the people, undertook to rebuild it ; and, to that end, conducted thither a colony of 6000 Roman citizens. The workmen, according to Plutarch, were terrified by many unlucky omens, while they were laying the foundations of the new city; which the senate being informed of, they would have suspended the attempt. But the tribune, little affected with such presages, continued to carry on the work, and finished it in a few days. Hence it is probable that only a kind of huts were erected ; but whether Grac- chus executed his design, or the work was en- tirely discontinued, it is certain that Carthage was the first Roman colony ever sent out of Italy. According to some, it was rebuilt by Julius Caesar ; and Strabo, who flourished in the reign of Tiberius, affirms it to have been equal, in his time, if not superior, to any other city in Africa. It was

reckoned the capital of Africa for near 700 years after the Christian sera. Max- entius laid it in ashes about the sixth or seventh year of Constantine's reign. Genseric, king of the Vandals, took it A. D. 439 ; but about a cen- tury afterwards it was re-annexed to the Roman empire by the renowned Belisarius. At last the Saracens, under Mahomet's successors, towards the close of the seventh century, com- pletely destroyed all its vestiges. On the ruins there now stands a small village, called Melcha. There are three eminences here, it is said, which are so many masses of fine marble pounded to- gether, and are in all probability the remains of temples or other distinguished buildings. The present ruins are not the remains of the ancient city destroyed by the Romans ; who after taking it entirely erased it ; and ploughed up the very foundations ; so strictly they adhered to the in- human advice perpetually inculcated by Cato the elder, Delenda est Carthago. They are the ruins of the second city, which was destroyed by the Saracens.

CARTHAGENA, an ancient and well built town of Spain on the coast, and in the kingdom of

Murcia; capital of a territory of the same name. It was built by Asdrubal, the Carthaginian ge- neral, and named after Carthage. See CAR- THAGE. It possesses the best harbour in Spain, but the former bishop's see is transferred to To- ledo. Here is a manufacture of sail-cloth and extensive alum works. In the neighbourhood are found rubies, amethysts, and other precious stones ; and about four miles to the east are the hot springs of Archena. Population 25,000. It was taken by Sir John Leake in 1706, and retaken by the duke of Berwick soon after. It is twenty-five miles S. S. E. of Murcia, and 115 S.S.W. of Valencia.-

CARTHAGENA, a province of Colombia (for- merly of the kingdom of New Granada), South America, in the department of Magdalena. It is bounded on the north by the Spanish main ; on the south by the province of Antioquia ; on the east by the great river Magdalena, and on the west by the river and province of Darien. It is eighty-five leagues long from north to south, and fifty-three wide from east to west. It is of a moist and warm temperature, full of mountains and woods, and towards the north part very swampy ; but it is fertile in maize, rice, fruits, and cj.ttle, in the hides of which it drives a great trade. ??? Its mountains, among which that ridge of the Andes terminates which divides the bed of the Magdalena from the

Darien, yield several fine dye-woods, gums, and balsams. The great plains or savannas of Zenu, Zamba, Tolu, Mem- pox and Barancas, are also very fruitful. The Magdalena and the Cauca are its most imoortant rivers.

The European and native settlements are chiefly on the coast, or in the valley. Gold is said to have been abundant formerly in the hills and rivers, but has been little seen of late. Maize bread, called bollos, is used both by the natives and Europeans, but the negroes make use of the cassava bread, made from roots. Some opulent families use European flour. Sugar-cane plan- tations are common , the cotton-tree, and an ex- cellent species of the cacao. The fruit of this prov:nce are melons, grapes, oranges, dates, the pine-apple, the plaintain, banana, papaws, yams, mameis, sapotes, limes, and tamarinds. The trees here grow to an immense bulk, and form a pleasing shade from the scorching sun. The canoes of the natives are formed of an excellent mahogany called acajou, and a beautiful white and red cedar is in common use. Here is also a poisonous fruit called the mancanillo, from the Spanish word mancana, an apple, the fruit of which resembles the European apple in shape, color, and taste ; but the juice of this tree is so acrid, that it blisters the skin of those employed in felling it, and it is reckoned dangerous, we are told, to remain under its shade after a shower, as the droppings have the same quality. Nu- merous tribes of wild animals are found in the forests, among which the jaguar and the Ameri- can leopard are the fiercest, and commit exten- sive depredations on the neighbouring plantations. Cattle and swine are numerous ; and several rare and beautiful species of birds. The wild geese are caught by the Indians in a curious manner. In the places which they frequent, the

Indians put calabashes or gourds, which, con- stantly floating on the surface of the water, cause no alarm to the geese, and when they are suffi- ciently accustomed to see them, the Indian gets into the water at a distance from the flock, with a gourd over his head ; he then advances amongst them, and draws them by the legs under the sur- face, until he has procured as many as he wants.

The insects and reptiles are numerous. The centipede, the scorpion, and the spider, are all very troublesome; and amongst the serpents, the rattle-snake, the dart, and the dreadful corales, or coral snakes, are the most venomous. This province contains a population of 170,000 souls. It sends six representatives, and with Santa Marta arid Rio Hacha, four senators to the congress of Columbia.

CARTHAGENA, a city of Columbia, South America, the capital of the above province, is situated in a peninsula, joined to some others, and to the continent by two artificial necks of land ; the broadest of which is only seventy yards wide. The suburb Xexemani, in the island near the town, is

nearly as large as the town itself, and is surrounded, as well as the city, with strong modern fortifications. At a small distance en the continent is a hill, 150 feet high, commanding both the fortifications and the strong fort of St. Lazaro. Tiie bay of Carthagena is two leagues and a half from north to south, is completely land-locked, and has capital anchorage. Its chief disadvantage is the shoals near its entrance. It abounds with ex- cellent turtle and other fish, but the numerous sharks render bathing unsafe.

The city is well planned, the houses generally of stone, the streets broad, straight, and well paved, and with lattices in the Spanish manner. The cathedral, churches, and monasteries, are the only public buildings worth notice. Cartha- gena is very subject 10 the leprosy ; to prevent the increase of which, they have an hospital in which lepers are comfortably provided for, but confined for life.

The exports consist of cotton, sugar, Brazil and other woods, including that of indigo, cin- chona, balm of Tolu, and ipecacuanha. The imports are European manufactures and other goods. Population about 25,000.

CARTHAMUS, in botany : a genus of the order of polygamia sequalis, syngenesia class of plants, natural order forty-ninth, composite : CAL. is ovate, imbricated with scales, close below, and augmented with subovate foliaceous appen- dices at top. Of this genus there are sixteen known specimens ; but the only remarkable one isC. tinc- torius, with a saffron colored flower, a native of Egypt, and some of the warm parts of Asia. It is cultivated in many parts of Europe, and in the the Levant, from whence great quantities of it are annually imported into Britain for dyeing and paintinsj. The good quality of this commo- dity is in the color, which is of a bright saffron hue : and in this the British carthamus very often fails. The plants are propagated by seeds. The flowers should be taken off as they come to per- fection : but this must be performed when they are perfectly dry ; and then they should be placed in a kiln with a moderate fire, in the

same manner as the true saffron. The seeds have been celebrated as a cathartic ; but they operate very slowly, and for the most part disorder the stomach and bowels, especially when given in substance; triturated with distilled aromatic waters, they prove less offensive, yet inferior in efficacy to the common purgatives. A species of Egyptian parrot is very fond of them ; to other birds or beasts they would prove a mortal poison.

CARTHUSIAN POWDER. See KERMES.

CARTHUSIANS, a religious order founded A. D.. 1080, by one Bruno; so called from the desert of Chartreuse, the place of their institution. Their rule is extremely severe. They must not go out of their cells, except to church, without leave of their superior ; nor speak to any person without leave. They must not keep any meat or drink till next day : their beds are of straw, co- vered with a felt ; their clothing two hair-cloths, two cowls, two pair of hose, aud a cloke, all coarse. In the refectory, they must keep thfir eyes on the dish, their hands on the table, their attention on the reader, and their hearts fixed on God. Women must not come into their churches.

CARTILAGE, n. ~\ ~La.l.cartilago. Car-

CARTILAGI'NEOUS, adj. >tilage, says Quincy,

CARTILA'GINOUS, adj. j is a smooth and solid body, softer than a bone, but harder than a li- gament. In it are no cavities or cells for con- taining of marrow ; nor is it covered over with any membrane to make it sensible, as the bones are. The cartilages have a natural elasticity, by which, if they are forced from their natural figure or situation, they return to it of them- selves, as soon as that force is taken away. The adjectives, of course, signify that which con- sists of cartilage. See the next article.

Canals, by degrees, are abolished, and grow solid ; several of them united grow a membrane ; these mem- branes further consolidated become cartilages, and car- tilages bones. Arbuthnot.

By -what artifice the cartilagineous kind of fishes poise themselves, ascend and descend at pleasure, and continue in what depth of water they list, is as yet unknown. Ray.

The larynx gives passage to the breath, and as the breath passeth through the rimula, makes a vibration of those cartilaginous bodies, which forms that breath into a vocal sound or voice.

Holder's Elements of Speech.

CARTILAGE, (cartilago, quasi carnilago; from caro, carnis, flesh). A white, elastic, glis- tening substance, growing to bones, and com- monly called gristle. Cartilages are divided by anatomists into obducent, which cover the moveable articulations of bones ; inter-articular, which are situated between the articulations, and which unite one bone with another. Their use is to lubricate the articulations of bones, and to connect some bones by an immoveable cohesion. Sec ANATOMY.

CARTILAGINOUS, in ichthyology, a title given to all fish whose muscles are supported by car- tilages instead of bones. It comprehends the same genera to which Linnaeus has given the name of amphibia nantes : Many of the cartila- ginous fish are viviparous, being excluded from egg, which is hatched within them. The egg consists of a whije and yolk ; and is lodged in a case formeXl of a thick tough substance, not

unlike softened horn : such are the eˆps of the ray and shark kinds. Some are oviparous ; such are the sturgeon, &c. They breathe either through certain apertures beneath, as in the ray ; on their sides, as in the shark, &c. ; or on the top of the head, as in the pipe-fish; for they have not co- vers to their gills, like the bony fish.

CARTMEL, a town of Lancashire, seated among the fells, near the river Kent. It has a handsome church, built in the form of a cross ; and a market on Monday, well supplied with corn, sheep, and fish. It is eleven miles north by west of Lancaster, and 261 N. N.W. of London.

CARTO'ON, n. Fr. carton; Ital. cartone ; Lat. cltartu. A painting or drawing on large paper. The celebrated series of drawings by Raphael is called the cartoons, by way of emi- nence, for the same reason that the most noble of musical instruments is named the organ.

It is with a vulgar idea that the world beholds the cartoons of Raphael, and every one feels his share of pleasure and entertainment. . Watts.

CARTOON, or CARTON, is a design drawn on strong paper, to be afterwards calked through and transferred on the fresh plaster of a wall, to be painted in Fresco. It is also used for a de- sign colored, for working in mosaic, tapestry, &c. The word is from the Italian cartone, (carta paper, and one large), denoting many sheets of paper pasted on canvas, on which large designs are made, whether colored or with chalks only. Of these many are to be seen at Rome, particu- larly by Domenichino. Those by Andrea Man- tegna, which are at Hampton Court, were made for paintings in the old ducal palace at Mantua. But the most famous performances of this sort are the

CARTOONS OF RAPHAEL, so deservedly ap- plauded throughout Europe, with regard to the invention, and to the noble expression of such a variety of characters, countenances, and attitudes ; they are seven in number, and form only a small part of the historical designs executed by this great artist, while engaged in the chambers of the Va- tican, under popes Julius II. and Leo X. When finished, they were sent to Flanders, to be copied in tapestry, for adorning the pontifical apart- ments. On that city being plundered in the time of Clement VII. Raphael's scholars fled, and none were left to enquire after the original cartoons, which lay neglected in the store-rooms of the manufactory. The important revolutions also which followed in the Low Countries pre- vented their being noticed. It was therefore a fortunate circumstance that these seven escaped the wreck of the others, which were torn in pieces, and of which fragments are dispersed in different collections. These seven were purchased by Rubens for Charles I. and they have been so roughly handled from the first, that holes were pricked for the weavers to pounce the outlines, and other parts almost cut through in tracing. In this state they also fortunately escaped the sale amongst the royal collection, from the dis- proportioned appraisement of these seven at ►►300, and the nine pieces, being the triumph of Julius Csesai, by Andrea Mantegna, at ►►1000. Thev seem to have been little taken notice of, till

King William built a gallery for them at Hamp- ton Court ; where they are now open to public inspection. Mr. Holloway has engraved sqme excellent plates of these cartoons.

CARTOUCH, in architecture and sculpture, an ornament representing a scroll of paper. It is usually a flat member, with wavings to represent some inscription, device, epithet, or ornament of armoury. They are, in architecture, much the same as modillions ; only these are set un- der the cornice in wainscoting, and those under the cornice at the eaves of a house.

CARTOUCHE, in the military art, a case of wood about three inches thick at the bottom, girt with marlin, holding about 400 musket balls, besides six or eight balls of iron, of a pound weight, to be fired out of a howitaer, for the defence of a pass, &c.

CA'RTRAGE, or } Fr. cartouche; Ital. car-

CA'RTRIDGF., n. $ toccia. A parchment, flannel, or paper case, filled with

gunpowder for the service of artillery or musketry.

Our monarch stands in person by, His new-cast cannons firmly to explore ;

The strength of big-corned powder loves to try, And ball and cartrage sorts for every bore.

Dryden.

Are you sure you do nothing to quit scores with .hem ? ??? Nothing at all your honour, unless now and then we happen to fling a cartridge into the kitchen fire, or put a spatterdash or so into the soup ; and some- times little Ned drums up and down stairs a little in the night. Sheridan.

CARTRIDGE, a paper or case, holding the exact charge of a fire-arm. Those for muskets, carbines, and pistols, hold both the powder and ball for the charge ; and those for cannon and mortars are usually in cases of pasteboard or tin, sometimes of wood, half a foot long, adapted to the caliber of the piece.

CARTRIDGE Box, a case of wood or turned iron, covered with leather, holding a dozen mus- ket cartridges. It is worn upon a belt, and hangs a little lower than the right pocket-hole.

CA'RTULARY. Old Fr. cartulaire ; Lat. cfiarta- Johnson erroneously defines cartulary or chartulary, as a place where records are kept, whereas it signifies the record itself, and the title of an ecclesiastical officer to whose care the records are committed.

Entering a memorial of them in the chartulary or leger-book of some adjacent monastery. Blackstone.

CART WRIGHT (Christopher), an English divine, born at York, in 1602. He was very eminent for his knowledge in the Hebrew lan- guage ; and wrote Electa Targumico-Rabbinica in Genesim, et in Exodum, published in 1643 and 1653, 8vo. He died in 1652.

CARTWRIGHT (Thomas), a celebrated divine of the puritan party, born in Herefordshire in 1555 He received his education at St. John's College, Cambridge, of which he became a fellow, but afterwards exchanged for a fellowship in Trinity. Having taken his degree of B. D. in 1567, he commenced preacher, and became very popular ; but his opinions being somewhat pres- byterian, he was complained of by archbishop Grindal, and was prevented from taking his

doctor's degree, and obliged to give up his fel lowship. He now went over to

the continent, and was chosen minister to the English mer- chants at Antwerp, and afterwards at Middle- burg; but returning to England, he used his utmost endeavour to overturn the ecclesiastical order, and establish the discipline of the Gene- van church. Having written several pieces with that view, to which Dr. Whitgift replied, Cart- wright was at length thrown into prison. By the favor of lord Burleigh and the earl of Leicester, however, he was released from his confinement, and the latter appointed him master of his hos pital at Warwick, where he died in J603. He wrote a Harmony of the Gospels in Latin, which was published at Amsterdam in 1647; also a Commentary on the Proverbs, and various othe. works. His Confutation of the Rhenish Testa- ment did not come out till after Iris death.

CARTWRIGHT (William), an eminent divine and poet, born at Northway, nearTewkesbury, in Gloucestershire, in 1611. He finished his edu- cation at Oxford ; afterwards went into orders, and became a preacher in the University. In 1642 he was successor in the church of Salisbury; and, in 1643, junior proctor and metaphysical reader in the University. He was an expert linguist, and an excellent orator. There are ex- tant four of his plays, and some poems. He died in 1644, aged thirty-three.

CARTWRIGHT (John), an English gentleman, of eccentric political character, was the third son of William Cartwright, Esq. of Marnham, in the county of Nottingham, and born there in 1740. He was educated at Newark grammar-school, and afterwards entered into the navy', in which he rose to the rank of lieutenant; but objecting to the American war, he retired from the service. He now became major in the Nottinghamshire militia, a circumstance to which he owed the popular title of major, long after he ceased to hold the commission. In 1775 he published a tract entitled American Independence the Glory and Interest of Great Britain ; and joined Dr. John Jebb in 1780, Granville Sharpe, &c. in forming the Society for Constitutional Informa- tion. He was roused by the French revolution to publish The Commonwealth in Danger, 1795, and was afterwards the author of numerous pub- lications on a Reform in the House of Commons. On the death of his elder brother, the estate of Marnham devolved to him, which he sold and purchased Brothertoft, near Boston, Lincolnshire. He afterwards lived for some time at Enfield, whence in 1810 he removed to Westminster. After the Manchester slaughter, major Cartwright attended a meeting at Birmingham, respecting that unhappy business, and subjected himself to an indictment with others for a conspiracy. He was tried and found guilty at the Warwick assizes, and received sentence, June 1, 1821, to pay a fine of ►►100 to the king. His death took place at his house in Burton-Crescent, September 23rd, 1 824. The Life and Correspondence of major Cartwriˆl.t were published by his niece in 1826.

CARVAGE, carvagium, the same with car- rucage. Henry III. is said to have taken carvage, that is two marks of silver, off every knight's fee, towards the marriage of his sister Isabella to the

emperor. Carvage could only be imposed on tenants in capite.

CARVE, a. & n. ˆ Ang.-Sax. ceorfan, kserf ;

CAR'VER, n. > Dutch, kerven ; Goth, kerf-

CAR'VING, n. Jwa; Swed. karfoa. To cut any substance, either into eatable pieces or elegant forms ; to grave or engrave ; to divide into portions ; to distribute ; to follow the pro- fession of a sculptor. Carver is a sculptor ; in the more modern acceptation, it means an inferior kind of artist, who executes the ornaments of picture frames, glasses, and furniture; it is also one who serves at table ; one who apportions according to his pleasure. Carving, as a noun, signifies, carved figures, sculpture. In the quotation from Shakspeare, illustrative of carving at table, though much has been ingeniously said in defence of the present reading, I am disposed to believe that carve is a typographical error, and that, probably, the original word was crave.

But yet had I forgotten to devise The noble Iteming and the portraitures ˆ The shape, the countenance, of the figures That weren in the oratories three. Chaucer.

Or they will buy his sheep forth of the cote, On they will careen the shepherd's throat. Spenser.

Run, run, Orlando, cane on every tree, The fair, the chaste, the unexpressive she.

Shakspeare.

Urave Macbeth, with his brandished steel, Like valour's minion, carved out his passage. Id.

I do mean to make love to Ford's wife ; I spy en- tertainment in her; she discourses, she carves, she gives the leer of invitation. Id.

In this kind, to come in braving arms,

Be his own carver, and cut out his way,

To find out right with wrong, ??? it may not be. Id.

How dares sinful dust and ashes invade the prero- gative of Providence, and carve out to himself the seasons and issues of life and death. South.

Yet fearing idleness, the nurse of ill,

In sculpture exercised his happy skill ;

And carved in ivory such a maid, so fair,

As nature could not with his art compare,

Were she to work. Dryden.

The labourer's share, being seldom more than a bare subsistence, never allows that body of men op- portunity to struggle with the richer, unless when some common and great distress emboldens them to carve to their wants. Locke.

They can no more last like the ancients, than ex- cellent carvings in wood like those in marble and brass. Temple.

Well then, things handsomely were served,

My mistress for the strangers carved. Prior.

Were any common booty got,

'Twas his each portion to allot ;

For why, he found there might be picking,

Even in the carving of a chicken. Gay.

Had Democrates really carved mount Athos into a statue of Alexander the Great, and had the memory of the fact been obliterated by some accident, who could have afterwards have proved it impossible ; but that it might casually have been ? Bentley.

A CARVER, to cut up meat, was stiled by the Romans, carptor and carpus; sometimes scissor, scmdendi magister, and structor. In the great families at Rome, the carver was an officer of some rank. There were masters to teach the

art regularly, by figures of animals cut in wood- The Greeks also had their carvers, called SutTpoi, q. d. deribitares, or distributors. In the primi- tive times, the master of the feast carved for all his guests. Thus in Homer, when Agamemnon's ambassadors were entertained at Achilles's table, the hero himself carved the meat. In Sparta, the office on solemn occasions was exercised by some of the chief men. In Scotland, the king has an hereditary carver in the family of Anstru- ther.

CARVER (Jonathan), was born at Connecticut, North America, in 1732. His father, who was a justice of peace, died when he was only five years of age ; and his friends educated him in the medical line. But he preferred a military life ; and joining the army, served with considerable reputation till the peace of 1763. He afterwards resolved on travelling, and the route he projected was to explore the interior of America, and to penetrate as far as the Pacific Ocean, which he accomplished, amidst innumerable difficulties, and published an Account of his Travels in 1776. After returning from his arduous journey, he came over to England, in hopes of some prefer- ment, but was disappointed, and, to support himself and his family, was under the necessity of accepting the office of clerk of the lottery. He died in very poor circumstances, in 1780. Besides the Account of his Travels, he wrote an Essay on the Culture of Tobacco.

CARVING, in a general sense, the art or act of cutting or fashioning a hard body, by means of some sharp instrument, especially a chissel. In this sense carving includes statuary and engraving, as well as cutting in wood. But in the strict and limited sense, it is the art of cutting figures in wood. In this sense, according to Pliny, it is prior both to statuary and painting. To carve a figure, it must be first drawn or pasted on the wood. The rest of the block, not covered by the lines of the design, are then to be cut away with little narrow pointed knives. The wood fittest for the use is that which is hard, tough, and close, as beech, but especially box ; to pre- pare it for drawing the design on, it is washed over with white lead tempered in water ; which enables it either to bear ink or the crayon, or even to take the impression by chalking. When the design is to be pasted on the wood, this whiten- ing is omitted. The printed side of the figure being wiped over with gum tragacanth dissolved in water, it is clapped smooth on the wood, and let dry; then wetted slightly over, and the surface of the paper gently fretted off, till all the strokes of the figure appear distinctly ; after which the carver begins to cut out the figure.

CARUM, in botany, a genus of the digynia order, and pentrandria class of plants ; natural order, forty-fifth, umbellatce. The fruit is ovate, oblong, and striated ; the involucrum monophyl- lous : the petals are carinated or keel-shaped be- low, and marginatecl by their inflection. 1. C. carui, the caraway of the shops, grows naturally in many places of Britain. It is a

*biennial plant which rises from seeds one year, flowers the next,
ववand perishes soon after the seeds are ripe. It has a strong aromatic taste, and a taper root like a parsnip, but much smaller, which runs deep*

CAR

into the ground, sending out many small fibres. From the root rise one or two smooth, solid, channelled stalks, about two feet high, garnished with winged leaves, having long naked foot stalks. C. hispanicum is also a biennial, and is a native of Spain. It rises with a stronger stalk than the former, which seldom grows more than a foot and a-half high ; but is closely garnished with fiue narrow leaves like those of dill. The seeds have an aromatic smell, and a warm pun- gent taste. They are used in cakes, incrusted with sugar, as sweetmeats, and distilled with spirituous liquors for the sake of the flavor they afford. They are in the number of the four greater hot seeds ; and frequently employed as a stomachic and carminative, in flatulent colics, Sec.

CARUNCULA, or CARUNCLE, in anatomy, is a term applied to several parts of the human body. See ANATOMY.

CARUNCUL.E PAPPILLARES, or MAMIL LARES, little protuberances in the inside of the pelvis of the kidneys, made by the extremities of the tubes, which bring the serum from the glands in the exterior parts, ta the pelvis. They are about the size of a pea, and were first obser- ved by Carpus.

*CAR WAR, a seaport town in the province of North Canara, Hindostan. It was formerly a place of considerable commerce; the East India Company having had a factory here in 1673, but during the reign of Tippoo Saib, the town went entirely to decay. The terra japonica grows here below the Ghauts in abundance : and the Mahratta merchants purchase considerable quan- tities of salt at Carwar. The northern part of this district is but thinly inhabited, and the hills are very unproductive. Slaves are not found here. At the mouth of the river Carwar is a fort called Sedasiva Row, built by one of the Rajahs of Soonda, whose name it bears. It is fifty-four miles south by east from Goa. Lat. 14वववववव

into pub- lic life, he stood foremost in all attacks on the high prerogative of the cro%vn ; but when civil convulsions came to an extremity, he defended the limited powers that remained to monarchy. Anxious however for his country, he seems to have dreaded equally the prosperity of the royal

Early, and that of the parliament; and among is intimate fiiends, often sadly reiterated the word ••• Peace. Yet he freely exposed his person for the king in all hazardous enterprises, and was killed in the thirty-fourth year of his age, at the battle of Newbury. He wrote ••• 1. Speech on ill Counsellors about the King. 2. Speech against Lord Keeper Finch and die Judges. 3. Speech against the Bishops. 4. Speech concer- ning Episcopacy. 5. A Discourse on the Infal- libility of the Church of Rome; and a View of some Exceptions made gainst that Discourse. 6. A Letter to F. M.'s five Captious Questions pro- VOL. A.*

pounded by a Factor of the Papacy, 4to. ; and 7 . A Letter to Dr. Beale, Master of St. John's Col ••• lege, Cambridge.

GARY A, or CARYAE, a town of Laconia, be- tween Sparta and the borders of Messenia : where stood a temple of Diana, thence called Caryatis.

CARYATES, in antiquity, a festival in honor of Diana, held at Carya. The chief cere- mony was a dance said to have been invented by Castor and Pollux, and performed by the virgins of the place. During Xerxes' invasion, the La- conians not daring to appear and celebrate the customary solemnity, to prevent incurring the anger of the goddess by such an intermission, the neighbouring swains are said to have assembled and sung bucolismi, or, pastorals, which is said to have been the origin of bucolic poetry.

CARYATES, or CARYATIDES, from Carya, a city taken by the Greeks, who led away the women captives : and, to perpetuate their slavery, represented them in buildings as charged with burdens ; and thus gave rise to the name of an order of columns or pilasters, under the figures of women, dressed in long robes, serving to sup- port entablatures.

CARYL (Joseph), an eminent divine of the seventeenth century, bred at Oxford, and some time preacher to the society of Lincoln's Inn. He was a frequent preacher before the long par- liament, a licenser of their books, a member of the assembly of divines, and one of the triers for the approbation of ministers ; in all which ca- pacities he showed himself a man of consider- able parts and learning, but with great zeal against the king's person and cause. On the Restoration, he was silenced by the act of uni- formity, and lived privately in London ; where, besides other works, he

distinguished himself by a laborious Exposition of the Book of Job; and died in 1672.

CARYLL (John), an English poet, of the Roman Catholic persuasion, secretary to queen Mary, the wife of James II., and one who fol- lowed the fortunes of his master, who knighted him. He was the author of two plays : 1. The English Princess, or the Death of Richard III., 1667, 4to. 2. Sir Salomon, or the Cautious Coxcomb, 1671, 4to; and in 1700 he published The Psalms of David, translated from the Vul- gate, 12mo.

CARYOCAR, in botany, a genus of the tetragynia order, and polyandria class of plants : CAL. quinquepartite, the petals five, the styles most frequently four. The fruit is a plum, with nucleuses, and four furrows netted. Three spe- cies : West Indies, and South America ; C. nuciferum yields a drupe of the size of a man's head, the nuts of which are eatable.

CARYOPHYLLEUS, in zoology, a genus of the class vermes ; order intestina. Body round ; mouth dilated and fringed ; clay -color ; about an inch long. Inhabits the intestines of various fresh-water fishes.

CARYOPHYLLt>S,in botany, the clove tree, a genus of the monogym'a order, and poly- andria class of plants : natural order nineteenth, hesperidea : COR. i tttrapetalous ; CAL. tetra- phyllous; the belly monosperraous below tufe P*

receptacle of the flower. Of this the principal species is C. aromaticus, which is a native of the Molucca Islands, particularly of Amboyna, where it is principally cultivated. The clove tree resembles, in its bark, the olive; and is about the height of the laurel, which it also resembles in its leaves. No verdure is ever seen under it. It has a great number of branches, at the extremities of which are produced vast quan- tities of flowers, that are first white, then green, and at last pretty red and hard. When they arrive at this degree of maturity, they are, pro- perly speaking, cloves. As they dry, they assume a dark yellowish cast ; and, when gather- ed, become of a deep brown. The season for gathering the cloves is from October to Febru- ary. The boughs of the trees are then strongly shaken, or the cloves beaten down with long reeds. Large cloths are spread te receive them, and they are afterwards either dried in the sun, or in the smoke of the bamboo cane. The cloves which escape the notice of those who gather them, or are purposely left upon the tree, con- tinue to grow till they are about an inch in

thickness; and these falling off, produce new plants, which do not bear in less than eight or nine years. The clove, to be in perfection, must be full sized, heavy, oily, and easily broken ; of a fine smell, and of a hot aromatic taste, so as almost to bum the throat. It should make the fingers smart when handled, and leave an oily moisture upon them when pressed. In the East Indies, and in some parts of Europe, it is so much admired, as to be thought an indispensable ingredient in almost every dish. It is put into their food, liquors, wines, and enters likewise the composition of their perfumes. Cloves are very hot, stimulating, aromatics ; and ppssesSj in an eminent degree, the general virtues of sub- stances of this class. Their pungency resides in their resin ; or rather in a combination of resin with essential oil : for the spirituous extract is very pungent ; but if the oil and the resin con- tained in this extract are separated from each other by distillation, the oil will be very mild; and any pungency which it does retain, proceeds from some small portion of adhering resin, and the remaining resin will be insipid. No plant, or part of any plant, contains such a quantity of oil as cloves do. From sixteen ounces, Newman obtained by distillation two ounces and two drams ; and Hoffman obtained an ounce and an half of oil from two ounces of the spice. The oil is specifically heavier than water. Cloves acquire weight by imbibing water ; and this they will do at some considerable distance. The Dutch, who trade in cloves, make a considerable advantage by knowing this secret. They sell them always by weight ; and when a bag of cloves is ordered, they hang it, for several hours before it is sent in, over a vessel of water, at about two feet distance from the surface. The clove tree is never cultivated in Europe. At Amboyna the company have allotted the inhabi- tants 4000 parcels of land, on each of which they were at first allowed, and about the year 1720 compelled, to plant about 125 trees, amounting in all to 500,000. Each of these trees produces annually On an average more than

two pound of cloves ; and, consequently, the collective produce must weigh more than a mil- lion. The cultivator is paid with the specie that is constantly returned to the company, and re- ceives some unbleached cottons, which are brought from Coromandel. . CARYOPHYLLUS, the pink. See DIANTHUS.

CARYOPHYLLTJS, bennet. See GEUM.

CARYOTA, in botany, a genus of plants of the order moncecia, class polyandria : male CAL. common ; COR. tripartite ; the stamina very nu- merous ; female one pistil, and a dispermous berry.

CASA (John de la), archbishop of Benevento, was born at Florence in 1503. He was educated at Bologna, and afterwards settled at Rome, where he was appointed clerk of the apostolical chamber in 1538. In 1544 he

received the arch- bishopric of Benevento, and the same year was sent nuncio to Venice, where he displayed great diplomatic abilities. On account of his connex- ion with cardinal Farnese, he fell into disgrace under Julius III., but under Paul IV. he was made secretary of state. His principal work is entitled Galatea, or Art of Living in the World. He also wrote several beautiful Italian poems ; the Lives of Cardinals Contarini and Bembo, &c. He died in 1556.

CASAL, a strong town of Italy, the capital of the duchy of Montferrat, having a citadel and bishop's see, and standing on the right bank of the Po. The principal traffic of the place is in cattle, pigs, and hams; the last of which are much esteemed for their fine flavor. This place has frequently changed masters, having been in possession of the Spaniards, the French, and the king of Sardinia. It has been under the last government since 1746. Long. 8►► 19′ E., lat. 45►► 12′ N.

CASAS (Bartholomew de las), bishop of Chi- apa, was born at Seville, in 1474; and in 1493 sailed, together with his father, with Christopher Columbus, on his second voyage to Hispaniola. On his return to Spain he embraced the state of an ecclesiastic, and obtained a curacy in the island of Cuba, where he employed his time in endeavouring to convert the Indians, and in protecting them, as much as possible, from the cruelty of his countrymen. At last the court, moved by his continual remonstrances, passed several laws in favor of the Indians, and ordered the governors to see them executed. He died at Madrid, in 1566, aged ninety-two. His principal works are, An Account of the Destruction of the Indies ; several Treatises in favor of the Indies, against Sepulveda, who wrote a book to justify the inhuman barbarities committed by the Spa- niards ; and also a very curious, and now scarce, work in Latin, on this question, Whe- ther kings or princes can, consistently with con- science, or in virtue of any right or title, alienate their subjects, and place them under the do- minion of another sovereign ?

CASATI (Paul), a learned Jesuit, bom at Placentia in 1617. After having taught mathe- matics and divinity at Home, he was sent into Sweden to queen Christina, whom he prevailed on to embrace the Roman Catholic religion. He wrote, 1. Vacuum Proscriptum. 2. Terra Ma-

chinis Mota. 3. Mechanicorum Libn Octo. 4. De Igne Dissertationes ; which

is much es- teemed. 5. De Angelis Disputatio Theolog. 6. Hydrostaticae Dissertationes. 7. Opticae Dispu- tationes. It is remarkable that he wrote this treatise on optics at eighty-eight years of age, and after he was blind. He also wrote several books in Italian. He died at Parma in 1 707.

C AS AU BON (Isaac), a learned divine and critic, born at Geneva in 1559. He was chosen professor of Greek at Geneva, when only twenty-three years of age; and in 1586 he married a daughter of Henry Stephens, the printer, by whom he had twenty children. Having con- tinued at Geneva about twelve years, he after- wards went to fill the professor's chair at Mont- pellier ; being dissatisfied with his situation, he removed to Paris, in hopes of a professorship which was promised him, but which he never obtained ; and though a pension was granted him, it was ill paid. In 1600 ho was one of the judges on the Protestant side, in the conference between cardinal du Perron and du Plessis Mor- nay, and gave his voice against the latter, from which it was thought he was going to change his party and religious opinion; and cardinal du Perron was directed to communicate with him in that view : but the result was the inflexible reso- lution of Casaubon to hold by the Protestant principles. His pension, however, was increased, and he was appointed librarian to the king in 1603. After the death of Henry IV. he went to England with Sir Henry Wotton, ambassador from king James I., where he was kindly re- ceived. King James settled a considerable pen- sion on him, and gave him a prebend at West- minster, and another at Canterbury. He died in 1614, and was interred in Westminster abbey, where a monument was erected to him. He was the author of valuable notes on Diogenes Laertius, inserted in Stephens' edition of that author, 1594. Also the various readings, &c. of Theocritus, in Crispinus' Geneva edition. 3. Strabonis Geographic, &c. fol. Genev. 1587. 4. Novum Testamentum Graecum, 16mo. 1587, with notes. 5. Dionysius Halicarnassensis, &c. fol. Genev. 1588. 6. Polyseni Stratagematum Libri VIII, 16mo. 1589. 7. Dictearchi Geogra- phica, &c. 8vo. Genev. 1589. 8. Aristotelis Opera, &c. fol. Genev. 1605. 9. C. Plinii et Epistolae, &c. 12mo. Genev. 1591. 10. Theo- phrasti Characters, &c. 12mo. 1592. 11. Apu- leii Apologia, &c. 4to. 1593. 12. C. Suetonii Tranquilli Opera, 4to. Genev. 1595, Paris. 1610. 13. Publ. Syri Mimi, &c. 8vo. 1598. 14. Athe- ncei Deipnosophist, &c. 2 vols. fol. Genev. 1597. 15. Historias Augustas Scriptores, 4to. Paris. 1603. 16. Persii Satyrs?, &c. 8vo. Paris. 1605, Lond. 1647. 17. De Satyricae Grfficorum, &c. ××vo. Paris. 1605. 18. Polybii Opera, &c. fol. Paris. 1609. 19. Josephi Scaligeri Opera, 4to. Paris. 1610, Francof. 1612. 20. De Rebus Sa- cris et Ecclesiasticis Exercitationes XVI.

CASAUBON (Meric), the son of Isaac, was born at Geneva in 1599. He was bred at Ox- ford, and took the degree of M. A. in 1621 . The same year he published a book in defence of his father, against the calumnies of

certain Roman Catholics ; which gained him the favor of king

James I. and a considerable reputation abroad. He was made prebendary of Canterbury by arch- bishop Laud. In the beginning of the civil v.ur he lost all his promotions, but still continued to publish. Oliver Cromwell, then lieutenant-ge- neral of the parliament's forces, would have era- ployed him in writing the history of the war; but he declined it, owning, that his subject would oblige him to make such reflections as would be ungrateful, if not injurious, to his lordship. Notwithstanding this answer, Cromwell, sensible of his worth, ordered ––300 or ––400 to be paid him by Cromwell, a bookseller in London, on demand, without requiring from him any ac- knowledgment. But this offer he rejected, though his circumstances were then low. At the same time it was proposed by his friend Mr. Greaves, who belonged to the library at St. James's, that if Casaubon would gratify Cromwell, all his father's books (which were then in the royal li- brary, having been purchased by king James) should be restored to him, and a pension of ––300 a year paid to the family, as long as the youngest son of Dr. Casaubon should live ; but this also was refused. He likewise refused handsome offers from Christina queen of Sweden, being determined to spend the remainder of his life in England. At the Restoration he recovered all his preferments, and continued writing till his death in 1671. He was the author of an Eng- lish translation of Antoninus's Medications, and of Lucius Florus ; editions of several of the classics, with notes ; with many other works : and he left a number of MSS. to the university of Oxford.

CASCABLE, the knob or button of metal, be- hind the breech of a cannon, as a sort of handle whereby to elevate and direct the piece. The neck of the cascable is the part which joins it to the breech-mouldings ; its diameter is three- quarters of a calibre; that of the button some- thing more than a calibre. The length of the cascable is always two calibres and a quarter.

CAS'CADE, Fr. cascade ; Ital. cascata ; from cascare, to fall. A cataract ; a water-fall ; ge- nerally applied to those which are either artificial, or of minor or secondary importance.

Rivers diverted from their native course.

And bound with chains of artificial force,

From large cascades in pleasing tumult rolled,

Or rose through figured stone, or breathing gold.

Prior.

The river Teverone throws itself down a preci- pice, and falls by several

cascades from one rock to another, till it gains the bottom of the valley.

Addison.

CASCADES are either natural, as that at Tivoli, &c. or artificial, as these at Versailles, &c. and either fall with gentle descent, as those of Sceaux ; or in form of a busset, as at Trianon ; or down steps, in form of perron, as at St. Cloud ; or from bason to bason, &c.

*CASCHROM, a kind of lever, or crooked spade, used instead of the plough,*upon rocky ground, in the island of Barray.*

CASE, v. & n. -\ Fr. caisse ; Ital. cassu ; CA'SE-KNIFE, s. /Span, caxa ; Lat. cnpsa ; CA'SE-HAKDEN, >Ka/^a. Such are the de- CA SE-SIIOT, i rivations from the southern CA'SE-WORM. ./languages. Those from the

northern are equally close. Aloes. Goth, has; Sw. kasse ; Hung, kass ; Ic. cash ; Dutch kas ; Scot, caasic. All of which mean something that contains. A case is primarily, that which covers or contains any thing else; as a covering; a box ; a sheath. In its secondary meanings, it still clearly refers to the idea of including. It indicates condition with respect to external cir- cumstances ; the state of things, of the body, or of disease ; a statement of a disease ; a narra- tive, or question, submitted to a barrister, for his opinion; the condition of the body, with respect to plumpness or leaness ; a contingence ; a possible event ; a particular instance ; repre- sentation of any fact or question ; and the change in the terminations of nouns. In case, is a form of supposition, meaning if it should happen. Johnson says, this is a form of speech now little used : but why he says so, is not apparent, the phrase being still frequently heard. To case is, to inclose in a case ; to envelope as a case does ; to put on an exterior covering of materials, dif- ferent from those of tho interior; and, lastly, but unusually, to uncover, ' < skin. The neuter verb is employed only lu Lcrously, in the signification of putting cases, containing representations of facts.

And such a case betide, and that as fast, That Troilus wel understode that she Na's nat so kinde as that hire ought to be ; And, finally, he wote, now out of dout That al is lost that he hath ben about.

Chaucer. Troilus and Creseide. Unworthy wretch, quoth he, of so great grace,

How dare I think such glory to attain? These that have it attained were in like case, Quoth he, as wretched, and lived in like pain.

Spenser.

Well, I do find each man most wise in his own case.

Sidney.

Heart, once be stronger than thy continent, Crack thy frail case. Shahspeare.

Question your royal thoughts, make the case yours.

Id.

Thou lyest, most ignorant monster, I am in caie to

'ostle a constable. Jd.

Case ye, case ye, on with your vizors. Id.

Thy cry went once for thee, And still it might, and yet it may aiain, If thou would'st not entomb thyself alive, And cote thy reputation in a tent. Id.

For in case it should be certain, hard it cannot be for them to show us where we shall find it ; that we may say, that these were the orders of the apostles.

Hooker.

It was well ; for we had rather met with calms and

contrary winds, than any tempests ; for our sick were

many, and in very ill cote. Bacon.

If he be not apt to beat over matters, and to call

up one thing to prove and illustrate another, let him

study the lawyer's cotes ; so every defect of the mind

may have a special receipt. jaˆ

A sure retreat to his forces, in case they should

have an ill day, or unlucky chance in the field. Id.

In each, seven small brass ana iron guns,

charged with cote-shot. Clarendon'.

Quoth Ralph, I should not, if I were, In cote for action, now be here. Hudibri,.*

The low-roofed tortoises do dwell Itt cttsei lit of tortoise-shell. Maroell.

Each thought was visible that rolled within, As through a crystal case the figured hours are seen.

Dryden.

Some knew the face,

And all had heard the much lamented case. Id.

Pray have but patience till then, and when I am

in a little better case, I'll throw myself in the very

mouth of you. L' Estrange.

They presently fall to reasoning and eating upon

the matter with him, and laying distinctions before

him. id,

Cadises, or case-worms, are to be found in this

nation, in several distinct counties. FLoyer.

Just then, Cariss;t drew, with tempting grace, A two-edged weapon from the shining cose. Pope. My youth may be made, as it never fails in executions a cose of compassion.

Id. Preface to his Works.

The case of the holy house is nobly designed, and

executed by great masters. Addison,

The king always acts with a great case-knife stuck

in his girdle, which the lady snatches from him in the

struggle, and so defends herself. Id.

Your parents did not produce you much into the

world, whereby you have fewer ill impressions ; but

they failed, as is generally the case, in too much

neglecting to cultivate your mind. Swift.

The priest was pretty well in case,

And shewed some humour in his face. Id.

Chalybeate water seems to be a proper remedy in

hypochondriacal caset. Arbuthnot.

The atheist, in case things should fall out contrary

to his belief or expectation, has made no provision for

this case. Tillotson.

The case is plain, the monarch said, False glory hath my youth mislead. Guy.

Love calls me hence, a favourite cow Expect me near yon barley-mow, And when a lady's in the case, You know all other things gives place. Id.

For who, to thoughtless ignorance a prey,

Neglects to hold short dalliance with a book ? Who there but wishes to prolong his stay, And on those cases cast a lingering look.

Duncombe,

Indeed ! Pray which of the houses use you ill ? ??? There's the Red Lion an't half so civil as the Old Red Lion. There's the White Horse, if he wasn't case-htrdened, ought to be ashamed to show his face.

Sheridan.

CASE, in grammar. See GRAMMAR.

CASE, in printing, a large flat oblong frame placed aslope, divided into several little square cells ; in each of which are lodged a number of types of the same kind, whence the compositor takes them out, as he needs them, to compose his matter. See PRINTING.

CASEARIA, in botany, a genus of plants of the class decandria, order monogynia. CAL. five- leaved : COR. none; nectary four or five-leave; 1, alternating with the stamens : CAPS, berried \vithin, three-valved, one-celled : SEEDS wrapped in a pulpy pellicle. Species twelve, ten natives of the West Indies and South America; the other two natives of India.

CASE-HARDENING, is a superficial con- version of iron into steel, by cementation with vegetable or animal coals. This operation is generally practised upon small pieces of iron

wrought into tools and instruments to which a superficial conversion is sufficient : and may be performed conveniently by putting the pieces of iron to be case-hardened, together with the cement, into an iron box, which is to be closely shut and exposed to a red heat for some hours. By this cementation a certain thickness from the surface of the iron will be converted into steel, and a proper hardness may be afterwards given by sudden extinction of the heated pieces of con- verted iron in a cold fluid. See IRON.

CASEIC ACID, the name given by Proust to an acid found in cheeses, to which he ascribes their flavor. It is of the color and consistence of syrup ; reddens litmus paper ; and has an acid bitter taste mixed with that of cheese. It con- cretes, on standing, into a granular transparent mass like honey. It does not affect lime water, muriate of tin, or acetate of lead. It precipitates the oxides of silver, gold, and mercury ; but not the oxides of metals that more strongly attract oxygen. With infusion of galls it produces a thick white precipitate. Nitric acid converts it into oxalic acid, forming at the same time a little benzoic acid, and some of the yellow bitter principle.

C ASEL (John), a learned German, born at Got- tingeri in 1533 ; having studied in several univer- sities, he travelled to Italy, and was made doctor of laws at Pisa. In 1563 he became professor of philosophy and eloquence at Rostock, and after- wards at Helmstadt, where he died in 1613. He excelled in his knowledge of the Greek fathers ; and he warmly opposed Daniel Hoffman and others, who maintained that philosophy is ad- verse to

theology, and that many things are true in the latter which are false in the former. He carried on a correspondence with some of the most eminent scholars of his age ; and left many works, both Greek and Latin, in verse and prose.

CASE'MATE, Fr. casemate; Ital. casamatta; Span, casamata. A sufficient portion of etymo- logical nonsense has been written with respect to the derivation of this word. Nugent says, ' xaff~ nara, hiatus, openings, or hollow places under ground : the Italians read casamatta, which some suppose to have been designed to express casa- a matti a mad-house, or place to put fools in.' Those who thus supposed, must have been qua- lified to reside in such a house. Some, with more plausibility, bring the word from casa armata. Minsheu, however, seems to have hit the right nail upon the head ; he finds the origin of case- mate in the Spanish rasa, a house, and matar, to kill; and this is quite in accordance with the thing explained. Casemate, in its most ex- tended sense, means a covered or arched work, to protect the troops from shot or shells, when they are not on duty. But the operative case- mate, as it may be called, and from which the name is derived, is a covered battery in the flank of a bastion, next the curtain, which is meant to scatter death among the besiegers when they at- tempt to pass the ditch, or attack the breach of the opposite bastion.

CASE'MENT, from Ital. casamento, says Johnson; but as that word means a large house, it is not easy to discover how the name of an

edifice ot magnitude came to be converted into that of a small window. Others refer it to Kdfffia, hiatus. A casement is a little moveable window, mostly within a larger, turning on hinges, and usually glazed with glass set in lead.

Why then you may have a casement of the great chamber window, where we play, open, and the moon may shine in at the casement.

Shakspeare. Midsummer Night's Dream. They, wakened with the noise, did fly From inward room to window eye, And gently opening lid, the casement, Looked out, but yet with some amazement.

Hudibras.

His scatter'd pence the flying Nicker flings And with the copper shower the casement rings. Gay.

Like passengers who, at a distance, See a man thrown out of a casement,

All we can do for your assistance

Is to afford you our amazement. J. H. Stevenson.

CASEMENT, or CASEMATE, in architecture, a hollow moulding, which some architects make one-sixth of a circle, and others one-fourth.

CA'SEOUS, adj. Lat. caseus; resembling cheese; cheesy.

Its fibrous parts are from the caseous parts of the chyle. Flayer on the Humours.

CASERN, n. Fr. caserne ; a lodgment erected between the rampart and the houses of fortified towns, to serve as apartments or lodgings for the soldiers of the garrison. They have usually two beds in each, for six soldiers, who mount guard alternately ; the third part being always on duty.

CASH, v. & n. ~\ Fr. "casse, caisse; Ital.

CA'SHIER, n. fcassa; Span, cam; Ger.

CASH-BOOK, n. i baste ; Dutch, hist, kas ;

CASH-KEEPER, n. J Swed. cassa; Lat. capsa; money in hand, or in a coffer; coin. By a rhetorical figure, the container is put for the thing contained. To cash is to give money for a note of hand, or other mercantile security. Cashier and cash-keeper signify the person who has the charge of the money ; the receiver and payer. The first of these two words is that which is now most in use.

A thief, bent to unhoard the cash Of some rich burgher. Paradise Lost.

If a steward or cashier be suffered to run on, with- out bringing him to a reckoning, such a sottish for- bearance will teach him to shuffle. South.

Flight of cashiers, or mobs, he'll never mind ; And knows no losses, while the muse is kind. Pope.

He sent the thief, that stole the cash, away, And punish'd him that put it in his way. Id.

Dispensator was properly a cash-keeper ', or privy- purse. Arbuthnot. If cash run low, his lands in fee,

Are, or for sale or mortgage, free. Gay. If love don't rule, cash does, and cash alone ;

Cash rules the grove, and fells it too besides ; Without cash, camps were thin, and courts were none ; Without cash, Malthus tells you ' Take no

brides.' So cath rules love the ruler, in his own

High ground, as virgin Cynthia sways the tides.

Byron. .Don Jutvt. A fellow in a market town, Most musical, cried razors up and down,

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And offered twelve for eighteen-pence ; Which certainly seemed wonderous cheap. And for the money quite a heap, As every man would buy with cash and sense.

Wolcot.

CASH, or > Fr. casser ; Lat. cassare. To

CASH'IER,;. 5 discard ; to dismiss with re- proach. It is now mostly used to express the breaking of an officer. There is another sense of the word, equivalent to annulling or vacating; as appears in the quotations .from South and Locke.*

Does't not go well ? Cassio hath beaten thee ; And thou by that small hurt hast cashiered Cassio.

Shakspeare.

And thereupon cashing the greatest part of his land army, he only retained one thousand of the best sol- diers. Gorges,

Seconds in factions many times prove principals ; but many times also they prove cyphers, and are cashiered. Bacon.

If I had omitted what he said, his thoughts and words being thus casiuered in my hands, he had no longer been Lucretius. Dryden.

If we should find a father corrupting his son, or a mother her daughter, we must charge this upon a pe- culiar anomaly and baseness of nature ; if the name of nature may be allowed to that which seems to be utter cashiering of it, and deviation from, and a con- tradiction to, the common principles of humanity.

South.

Some cashier, or at least endeavour to invalidate, all other arguments, and forbid us to hearken to those proofs, as weak or fallacious. Locke.

The ruling rogue, who dreads to be cashiered,

Contrives, as he is hated, to-be feared. Swift.

CASHELL, or CASHEL, a well built city of Tipperary, about three miles from the river Suir. It is the see of an archbishop; and it formerly contained a palace in which the kings of Murister resided. The fine ruins of an old Gothic cathe- dral, supposed to have been built by St. Patrick, are worthy of notice. It is said to have been the first stone edifice in Ireland. Its appearance, together with the ruins of Cormac's chapel, and hall of audience, is extremely picturesque, being-

a large lake or bason, and that the waters forced themselves a passage into the river Jhelura. It forms a very beautiful and fertile valley, of about ninety miles in length and forty in breadth, bounded on the north and north-east by the Himmaleh mountains, on the south and south- east by Kishtewar, and on the west and south- west by Lahore, Pounce, Muzufferhabad, &c. Its limits towards the last country are a low thick wood, skirted by a rivulet.

Eastern writers speak of this valley as a per-' petual paradise : it is ' well watered every where' certainly, and its natural defences are at once magnificent and strong. Roses, violets, and in- numerable species of flowers, grow wild ; and venomous reptiles, so common in various sur- rounding countries, are here unknown. The Erincipal streams are the Jhelum, and the Chota mgh. The chief towns, Cashmere, Sampre, and Islamabad. The mountains, for the most part, are covered with trees and verdure, affording ex- cellent pasture for cattle. Amongst them are many romantic valleys, ths inhabitants of which have scarcely any communication with the plains; and on account of their poverty, and the inac- cessible situation of their dwellings, never have been subdued. The vale of Cashmere itself is generally flat, and very fertile in rice, the general food of the districts. Wheat and barley are cul- tivated at the foot of the hills, where also all the fruits of Europe flourish. A superior saffron is also produced in Cashmere, and iron of an excel- lent quality- abounds in some of the mountains. The sengerah, or water-nut, of the lakes, forms a portion of the food of the lower class. The shawls of Cashmere are manufactured from wool of the goats of Thibet. It is, when imported, of a dark gray tint, and bleached in Cashmere by a preparation of the flour of rice. No other wool but that of Thibet ever succeeds in this manufac- ture. The piece, which in the weaving always has the rough side downwards, generally weighs from ten to twelve pounds ; the borders are joined on afterwards.

Plain shawls are woven by two men ; the flowered or spotted ones require a third assistant ; and the manufacture is so slow,

built on the edge of a steep rock. . The tomb of that not more than a quarter of an inch of the

Cormac is seen in this chapel. At the east angle of the building stands a lofty round tower, the architecture of which is a great curiosity, particularly the roof, which is formed of stones so admirably jointed that it appears perfectly smooth, as if covered with a fine cement. The tower is fifty-four feet in circumference, five stories high, and communicates with the chapel by subter- ranean passages. The modern buildings worthy of note are the cathedral, of Grecian architecture, the archbishop's palace, a plain but commodious building, containing an excellent library, and many curious manuscripts ; a handsome market- house, a session's house, a county infirmary, a charter school handsomely endowed, and barracks for foot soldiers. It is a corporate town, and sends one member to the imperial parliament. It is seventy-six miles from Dublin

CASHMERE, the ancient Aspira, a province of northern Hindostan, now belonging to Afghau- nistaun. Its form is nearly oval : tradition says, with some appearance of truth, that it was once

finest sort is made in the course of a day. Six- teen thousand looms are said to be employed upon this manufacture ; and 80,000 shawls are made annually. The revenue of the province is fre- quently transmitted in these to Cabul. Here also is made the finest writing paper of the east : the other exports are, sugar, paper, lacquered ware, otto of roses, and drugs. The natives are remarkably ingenious and acute ; white, robust, and well made : the females have been long cele- brated for their beauty. The whole country does not contain more than 500,000 inhabitants. CASHMERE, or SERINAGHUR, the capital of the above province, stands on each side of the river Jhelum, over which there are five wooden bridges : the breadth of the city is irregular, in some places being nearly two miles ; and it extends about three miles on each side of the Jhelum. It is without fortifications, but there is a citadel, called Shore Ghur, in the south-east quarter, where the governor resides. The houses are chiefly of wood, with walls of brick and mortar : and on

the wooden roofs a bed of fine earth is seen, which in the summer is sown

with flowers. The streets are narrow, and choked with filth. The puhlic buildings are unimportant ; but in the neighbourhood are the remains of several hand- some palaces, built by the Ilindostanee emperors. In the north-east quarter of the town is the Ball Lake, an oval of five or six miles in circuit, and communicating with the Jhelum by a narrow channel. On the east side of this beautiful sheet of water is a detached hill, called Tukhti Solo- mon, on which stands a mosque, dedicated to king Solomon. In the centre is an island, con- taining the palace Shah al imaret, or ' prince of building.' Here its founder, the emperor Jehan- gire, and his successor Shah Jehan, retired from the heat and bustle of an Indian court, to enjoy the delightful tranquillity of this almost unearthly scene. Cashmere is 587 travelling miles from Lahore, 1564 from Calcutta, and 1822 from Madras.

CASHOO, a medicinal and aromatic drug, used in Hindostan by the natives, who chew it either alone, or mixed with areca. It is extracted from a tree called catee, by decoction, macera- tion, and evaporation. It is said to strengthen the stomach, sweeten the breath, stop coughing, fasten loose teeth, &c. Kempfer says it is pre- pared at Odowara, in the various forms of pills, flowers, small idols, &c.

CASI, in the Persian police, one of the two judges under the nadab, who decide all religious matters, grant divorces, &c., and have deputies in all cities of the kingdom.

CASIMIR (Matthias Sorbiewski), a Polish Jesuit, born in 1597. He was a most excellent poet. His odes, episodes, and epigrams, have been thought equal to those of the finest wits of Greece and Rome. Dr. Watts has translated one or two of his small pieces, which are added to his Lyric Poems. He died at Warsaw in 1640, aged forty-three. The best edition of his poems is that of Paris, 1759.

CASING OF TIMBER WORK, among builders, is the plastering the house all over the outside with mortar, and then striking it while wet by a ruler, with the corner of a trowel, to make it re- semble the joints of free-stone.

CASK, v. & n.) Fr. casque ; It. and Sp.

CASK'ET, v. & n. S casco ; Lat. cadus, cassis. Serenius refers the word case to Moes. Goth, kas, yas, vasculum ; and it seems probable that cask is from the same root. A cask, in the common usage of the word, signifies a barrel or vessel of wood, to contain liquor or provisions. Poeti- cally, it is a helmet, a head-piece. The diminu- tive casket, is a small box, in which to deposit jewels, or things of value.

Great inconveniences grow by the beer casks being commonly so ill-

seasoned and conditioned, as that a great part of the beer is ever lost and cast away.

Raleigh.

Beer, if it be over new or over stale, over strong or not sod, smell of the cask, sharp or sour, is most unwholesome. Burton. Anat. Mel.

Let thy blows, doubly redoubled, !';;!! h>.e amazing thunder on the cast/ tie Of thy pernicious enemy. Shaksvcare.

They found him dead and cast into the streets, An empty casket, where the jewel, life, By some damned hand was robbed and ta'en a",:.—.

1<1.

I have writ my letters, casketed my treasure, and given order for our horses. Id.

Mine eye hath found that sad sepulchral rock, That was the casket of heaven's richest store. Miltun.

Perhaps to-morrow he may change his wine, And drink old sparkling Alban or Setine, Whose title, and whose age, with mould o'ergrown, The good old cask for ever keeps unknown. I);

And these

Sling weighty stones, when from afar they fitrht : Their casques are cork, a covering thick and liˆht. Id.

Why does he load with darts His trembling hands, and crush beneath a cask His wrinkled brows ? Addisim.

This casket India's glaring gems unlocks, And all Arabia breathes from yonder box. Pope.

In the host of Xerxes they served on foot'; and their arms were a dagger, or a javelin, a woodea casque, and a buckler of raw hides. Gibbon.

Ten thousand casks

For ever dribbling out their base contents,

Touch'd by the Midas finger of the state,

Bleed gold for ministers to sport away. Cavaper,

CASKET. See CABINET.

CASKETS, in the sea language, are small ropes made of fmnet, and fastened to gromets, or little rings upon the yards, to make fast the sail to the yard when it is to be furled.

CASLON, an eminent letter-founder, born in 1692, in Hales Owen, Shropshire. He served an apprenticeship to an engraver of orna- ments on gun-barrels ; and carried on this trade in Vine-street, near the Minories. He also exer- cised his ingenuity in making tools for the book- binders, and for the chasing of silver plate. While he was thus engaged, Mr. Bowyer acci- dentally saw the lettering of a book which he thought uncommonly neat ; and enquiring who the artist was that made the letters, was led to cultivate an acquaintance with him. Not long- after, Mr. Bowyer took him to see Mr. James's foundry. Caslon had never before seen any part of the business ; and being asked by his friend if he thought he could cut types, he requested a day to consider the matter, and then replied that, he had no doubt but he could. Upon this, Messrs. Bowyer, Bettenham, and Watts, had such confidence in his abilities that they lent him ––500, and he applied himself to his new busi- ness with equal assiduity and success. In 1720 the Society for Promoting Christian Knowledge deemed it expedient to print the New Testament and Psalter in the Arabic language, for the bene- fit of the poor Christians in Palestine, Syria, Mesopotamia, Arabia, and Egypt; and Mr. (– Ion was appointed to cut the fount ; he distin- guished his specimens by the name of English Arabic. He arrived at length to such perfection in type founding, that he not only freed us from the necessity of importing types from Holland, but, in the beauty and elegance of those made by him, he so far exceeded the productions of the best artificers, that his types were exported to the continent ; and his foundry became one of the most celebrated in Europe. He died in 176fi.

CASPIAN SEA, a large central lake of Asia, bounded by the province of Astrakhan on the north, and by Persia on the south-east and west. It is upwards of 400 miles long from south to north, and 300 broad. It forms several gulfs, and contains between Astrakhan and Astrabad an incredible number of small islands. Its bottom is mud, but sometimes mixed with shells. At the distance of some miles from land it is 500 fathoms deep ; but on approaching the shore it is everywhere so shallow, that the smallest vessels, if loaded, are obliged to remain at a distance. Being enclosed on all sides by land, and its banks being in the neighbourhood of very high mountains, its navigation is perfectly different from that of every other sea.

Certain winds pre- vail with such absolute sway, that vessels are often deprived of every resource ; and in its whole extent there is scarcely a port that can be tailed safe. The north, the north-east, and the east winds, blow frequently, and occasion most violent tempests. Along the eastern shore the east winds prevail ; for which reason vessels bound from Persia to Astrakhan always direct their course along this shore. Although the extent of this sea is immense, the variety of its productions is exceedingly small. This undoubtedly pro- ceeds from its want of communication with the ocean, which cannot impart to it any portion of its inexhaustible stores. But the animals which it nourishes multiply to such a degree, that the Russians, who alone are in condition to make them turn to account, justly consider them as a never-failing source of profit and wealth. Its fisheries are the sole occupation of the people inhabiting the banks of the Wolga and the Jaik. Salmon, sturgeon, and other fish, abound in all parts, as well as in the rivers that communicate with it, and which they ascend at spawning time. Seals also are extremely numerous. The varie- ties of the species are diversified, however, only by the color. Some are quite black, others white ; some whitish, yellowish, &c., and some streaked like a tiger. See PHOCA. They crawl upon the islands, where the fishermen kill them with long clubs. One is hardly despatched when others come to his assistance and share his fate. They are exceedingly tenacious of life, and en- dure more than thirty hard blows before they die. They will even live for several days after having received many mortal wounds. At Astrakhan a sort of gray soap is made of their fat mixed with pot-ashes, which is much valued for its property of cleansing and taking grease from woollen stuffs. The greatest numbers are killed in spring and autumn. Many small vessels go from Astrakhan merely to catch seals. The only shell fish, found in the Caspian, are three or four species of cockle, the common muscle, some species of snails, and one or two others. It abounds, how- ever, in birds of different kinds. Geese, ducks, storks, herons, crows, &c. frequent the shores. Of birds properly aquatic, it contains the grebe, the crested diver, the pelican, the cormorant, and almost every species of gull. The waters are very impure, the nature of its bottom affecting it greatly. In general, indeed, they are salt; but the saltness is diminished by the north, the north- east, and north-west winds; the north winds often

causing the rivers to discharge into it vast quan- tities of troubled water impregnated with clay. These variations, to which the sea is exposed, are more or less considerable, according to the nature of the winds ; they affect the color of the river waters to a certain distance from the shore, till these mixing with those of the sea, which then resume the ascendancy, the fine green color appears, which is natural to the ocean. It is well known that, besides its salt taste, all sea wa- ter has a sensible bitterness, which must be attri- buted not only to the salt itself, but to the mix- ture of different

substances that unite with it, particularly to different sorts of alum, the ordi- nary effect of different combinations of acids. The waters of the Caspian have a peculiar acrid taste, which affects the tongue with an impression similar to that made by the bile of animals ; a property, of which this sea is not equally per- ceptible at all seasons. When the north and north-west winds have raged for a considerable time, this taste is sensibly felt ; but when the wind has been south, very imperfectly. To ac- count for this phenomenon, we must observe, that the Caspian is surrounded on its west side by the mountains of Caucasus, which extend from Derbent to the Black Sea. These abound with combustible and mineral substances ; and springs of naphtha are common at the foot of them. It is chiefly to the naphtha that we must attribute the cause of the bitterness peculiar to its waters ; and it is certain, that the north and north-west winds detach the greatest quantities of it. But it is not a bitter taste alone, that the naphtha communicates to the waters of the Caspian : these waters were analysed by M. Gmelin, and found to contain, besides the com- mon sea-salt, a considerable proportion of Glauber salt, intimately united with the former, and which is evidently a production of the naph- tha. As the waters of the Caspian have no out- let, they are discharged by subterranean canals through the earth, where they deposit beds of salt ; the surface of which corresponds with that of the level of the sea. The two great deserts which extend from it to the east and west, are chiefly composed of saline earth, in which the salt is formed by efflorescence into regular crys- tals ; for which reason salt showers and dews are exceedingly common in that neighbourhood. The salt of the marshes at Astrahkan, and that found in efflorescence in the deserts, are by no means pure sea-salt, but much debased by Glau- ber salt. In many places, indeed, it is found with crystals of a lozenge shape, which are pe- culiar to it, without any cubical appearance, like those of sea salt. A great deal has been written on the successive augmentation and decrease of the Caspian Sea, but with little truth. There is indeed a certain rise and fall of its waters, but in which no observation has ever discovered any regularity. Many suppose, it is not impro- bable, that the shores of the Caspian were much more extensive than at present, and that it once communicated with the Black Sea. It is probable too, that the level of this last was formerly much higher. If then it be allowed, that the waters of the Black Sea, before it procured an exit by the Straits of Constantinople, rose several fathoms

above their present level, which, from many con- curring circumstances,

may easily be admitted, it follows, that all the plains of the Crimea, the Kumari, the Wolga, and the Jaik, and those of Great Tartary beyond the lake of Aral, in ancient times formed but one sea, which embraced the north extremity of Caucasus by a narrow strait of little depth ; the vestiges of which are still ob- vious in the river Mantysch.

CASS, or ~) Fr. casser ; low Lat.

CAS'SATE, v. & n. > ensnare. To vacate ; in-

CAS'SATION, n. J validate ; make void ; nul- lify. Cassation is the act of making null and void

To cass all old and unfaithful hands, and entertain new. Raleigh.

This opinion supersedes and cassates the best me- dium we have. Ray.

CASS ANA (John Augustine), an eminent pain- ter, was born in 1664 ; and educated, together with his brother Nicholas, by their father John Francis Cassana, a Genoese. His principal works were paintings of animals and fruits, and in that style he arrived at a high degree of eminence, imitat- ing nature with exactness, beauty, and truth, and expressing the various plumage of his birds, and the hairs of the different animals, with great delicacy. At last he determined to visit Genoa, where his family had lived in es- teem ; and took with him several pictures which he had already finished. But by attempting to appear as a person of greater wealth and conse- quence than he really was, and by giving pre- sents of pictures to several of the principal no- bility of that city, he unhappily reduced himself to the most necessitous circumstances, and was almost deprived of the means to procure even the necessaries of life. He died in 1718.

CASSANA (Nicholas, or Nicoletto), an eminent Italian painter, brother to the preceding, was born at Venice in 1659. He soon distinguished himself by the beauty of his coloring, the grace- fulness of his figures in historical compositions, as well as portrait ; in which last he peculiarly excelled. People of the first rank were anxious to obtain their portraits. The grand duke of Tuscany invited Nicoletto to his court; where he painted the portraits of that prince, the princess his consort, and many of the principal nobility of Florence. Among other historical subjects, he executed a very beautiful design, on the Con- spiracy of Catiline. Nicoletto was at last invited to England, and introduced to queen Anne, to paint her portrait ; but he did not enjoy his good fortune long, as he died in London, in

1713.

CASSANDER, king of Macedon after Alex- der the Great, was the son of

Antipater. He made several conquests in Greece, abolished de- mocracy at Athens, and gave the government of that state to the orator, Demetrius Phalereus. Olympias, the mother of Alexander, having caused Aridaeus and his wife Euridyce, with sthers of Cassander's party, to be put to death ; Ae besieged Pydne, whither the queen had re- tired, took it by stratagem, and slew her. He married Thessalonice, the sister of Alexander; and killed Roxana and Alexander, the wife and son of that conaueror. At length he entered

into an alliance with Seleucus and Lysimachus, against Antigonus and Demetrius ; over whom he obtained a great victory near Ipsus, in Phry- gia, A. A. C. 301, and died three years after, in the nineteenth year of his reign.

CASSANDRA, in fabulous history, the daugh- ter of Priam and Hecuba, was beloved of Apollo, who promised to bestow on her the spirit of pro- phecy, provided she would consent to his love. Cassandra seemed to accept the proposal ; but had no sooner obtained that gift, than she laughed, at the tempter, and broke her word. Apollo, being enraged, revenged himself by causing no credit to be given to her predictions; hence she in vain prophesied the ruin of Troy. Ajax, the son of Oileus, having ravished her in the temple of Minerva, he was struck with thunder. She fell into the hands of Agamemnon, who loved her to distraction ; but she predicted to him in vain, that he would be assassinated in his own country. He was killed, with her, by the in- trigues of Clytemnestra ; but their death was avenged by Orestes.

CASSANDRA, in natural history, a very elegant sea-shell of the concha globosa kind, more usually known bv the name of the lyra or harp shell.

CASSANO, a town of Italy in the Milanese, late in the republican department of the Adda, rendered memorable by an obstinate battle, fought between the Germans and French in 1705. It is seated on the Adda.

CASSAVI. See JATROPHA.

CASSAY, a province in the Burmhau em- pire, bounded on the north by Cachar and As- sam, on the east by the river Keenduem, south by Arracan, and west by Bengal. It lies in about the 24►► of north latitude. The capital is Muni- poor. The natives are called Katthee by the Burmhans, and much resemble the native tribes of Hindostan. Many of them, formerly prisoners of war, are now settled in the neighbourhood of Ummerapoora, where their skill as artisans ob- tains them a comfortable living. They are the gunsmiths of the whole Burmhan empire, and the only cavalry employed in their armies. Their music is said to be remarkably pleasant to the English ear. See BURMHAN EMPIRE.

CASSEL, a considerable town of Germany, the capital of the electorate, and the residence of the elector of Hesse Cassel. It is situated on the river Fulda, in Lower Hesse, and is divided into the Old Town, the Lower New Town, and the Upper New Town. Few places contain more numerous or more elegant public buildings than the last The principal are the state house, the foundry, the arsenal, the parade square, the barracks, the church of St. Martin, public li- brary, and new house of correction. Strangers also are much pleased with the public gar- dens, the orangery, baths, and menagerie. The noble castle of Weissenstein is about half a mile out of the town, and is a most princely seat. In the Upper New Town is the school, called Collegium Carolinum, founded in 1709. The museum is very rich in antiquities. There are manufactories here of china and woollen stuffs, but the trade of the town is small. During the seven years' war it was long the head-quarteis

of the French. The fortifications were afterwards destroyed and have not been renewed ; the gates were removed to the extremity of the old out-works, and the space thus cleared was laid out in streets, gardens, and promenades. Population in 1810, 20,300. Cassel was the capital of Jerome Buo- naparte's kingdom of Westphalia. It is fifty miles south-east of Paderborn, and eighty-four north-east of Coblentz.

CASSIA, in botany, a genus of the monogy- nia order and decandria class of plants ; natural order thirty-third, lomentacea: : CAL. pentaphyl- lous; petals five; anthera upper three barren; lower three beaked : a leguminous plant. There are fifty-nine known species, all natives of warm climates. The most remarkable are, 1. C. fistula, the purging cassia of Alexandria. It is a native of Egypt and both Indies, where it rises to the height of forty or fifty feet. The flowers are produced at the end of the branches, each standing upon a long foot-stalk ; these are composed of fine yellow concave petals, which are succeeded by cylindrical pods from one to two feet long, with a dark brown woody shell, divided into many cells by transverse partitions, each con- taining one or two oval, smooth, compressed seeds, lodged in a blackish pulp, which is used in medicine. There are two sorts of this drug in the shops; one brought from the East Indies, the other from the west. The pods should be chosen weighty, new, not rattling (from tne seeds being loose within them) when shaken. The pulp should be of a bright shining black color, and a sweet taste. Greatest part of the pulp dissolves both in water and rectified spirit ; and may be extracted from the cane by either.

The shops employ water, boiling the bruised pod therein, and afterwards evaporating the solution to a due consistence. The pulp is a gentle laxa-

this article, such as those of infusion, powder, tincture, and electuary. The dose of senna in substance, is from a scruple to a drachm : in infusion, from one to three or four drachms. It has been customary to reject the pedicles of the leaves of senna as of little or no use : Geoffroy however observes, that they are not much infe- rior in efficacy to the leaves themselves. The pods or seed-vessels are by the college of Brus- sels preferred to the leaves : they are less apt to gripe, but proportionably less purgative.

CASSIA lignea. See LAURUS

CASSIA, poet's. See OSYRIS.

CASSIBELAN, or CASSIBELAUNUS, king of the Trinobantes, the son of Heli, succeeded his brother king Lud, about A.A.C. 62. About five years after his accession, Julius Csesar having landed his army on the British coast, Cassibelan was chosen commander in chief of the British forces; but these undisciplined and disunited troops, though they made a brave opposition, fell an easy conquest to the veteran Romans : A.A.C. 55. Cassibelan therefore made the best terms he could with Caesar, and engaged to pay a tribute of about ––3000 a year to the Romans, and to send hostages for the payment. Only two of the British states, however, fulfilled their part of this treaty : whereupon Caesar returned next year with a fleet of 800 ships ; and though Cassibelan opposed him with all the united force of South Britain, he was repeatedly defeated; his capital burnt, and Mandubratius, Csesar's ally, established as king of the Trinobantes, Cassibelan died A.A.C. 48.

CASSIDA, in zoology, a genus of insects of the order of coleoptera. The feelers are like threads, but thicker on the outside ; the elytra are marginated ; and the head is hid under the thorax ; from which last circumstance is derived

tive medicine, and frequently given in a dose of the name of the genus. The larva of this species,

some drams in costive habits. Geoffroy says, it does service in the tension of the belly, which sometimes follows the imprudent use of antimo- nials : and that it may be advantageously acuated with the more acrid purgatives, or antimonial emetics, or employed to abate their force. 2. C. senna is a shrubby plant cultivated in Per- sia, Syria, and Arabia, for the leaves, which form a considerable article of commerce. They are of a lively

yellowish green color, a faint not very agreeable smell, and a subacrid, bitterish, nau- seous taste. They are brought from the above places, dried and picked from the stalks, to Alexandria in Egypt, and thence imported into Europe. Senna is a very useful cathartic, ope- rating mildly, and yet effectually : and if judi- ciously dosed and managed, rarely occasioning the ill consequences which too frequently follow the exhibition of the stronger purges. The only inconveniences complained of in this drug are, its being apt to produce griping pains. The griping quality depends upon a resinous sub- stance, which, like the other bodies of this class, is naturally disposed to adhere to the coats of the intestines. The smell of senna resides in its more volatile parts, and may be discharged by lightly boiling infusions of it made in water. The colleges both of London and Edinburgh

by the help of the two prongs which are to be found at its hinder extremity, makes itself, with its own excrements, a kind of umbrella that shelters it from the sun and rain. This larva casts its slough several times. Thistle and ver- ticillated plants are inhabited by these insects. There is one species, the chrysalis of which re- sembles an armorial escutcheon. It is that which produces our variegated cassida, and is a very singular one. Numbers of them are found on the side of ponds.

CASSIDARIUS, in Roman antiquity, an offi- cer in the armories, who had the care of the helmets.

CASSIDONY. See GNAFHALIUM.

CASSINA, or CASHNA, a kingdom of central Africa, first described by Mr. Lucas as situated to the west of Bornou, and south of the Niger. It appears to rank next to Bornou in importance among the kingdoms of the interior ; but its geo- graphical and political features are too little known for us to offer any detailed statement of them. Cassina is said to form the southern limit of Fezzan, from which it is separated by the mountaias of Eyre, so that it includes Agades and the surrounding regions ; it resembles Bor- nou in its general appearance and productions, government, &c. . Its commerce with northern Africa is maintained by a caravan which sets out

have given several formula; for the exhibition of from Fezzan, by Assouda, Ganatt, and Agades,

and arrives at the capital in about sixty days : a journey of five days is

now said to bring it to the Niger. The exports consist of slaves, gold- dust, cotton, and red and yellow goat skins. The imports are woollen stuffs, hardware, carpets, knives, arms, mirrors, and toys. The currency is in small shells, called cowries, 5000 of which are worth about ––l sterling.

CASSINE, in botany, a genus of the trigynia order and pentandria class of plants; natural order twenty-third, dumosse : CAL. quinquepartite ; the petals are five ; and the fruit is a trispermous berry. There are four species, all of them na- tives of warm climates.

CASSINIAN CURVE, or CASSINOID, in astro- nomy, is an elliptic curve proposed by John Dominic Cassini, as the orbit of a planet. In this curve the product of two lines drawn from its foci to any point in the curve shall be equal to a given quantity, viz. to the rectangle under the aphelion and perihelion distances of the planet. The celestial observations, however, by no means correspond with this curve; and in- deed it in some cases has breaches in its conti- nuation, which are perfectly incompatible with the motion of a planet ; so that it can by no means be admitted into astronomy. See Dr. O. Gregory's Astronomy, p. 183.

CASSINI (John Dominic), an eminent astro- nomer, born at Piedmont in 1635. His early proficiency in astronomy procured him an invi- tation to the mathematical chair at Bologna when he was only fifteen years of age : and, a comet appearing in 1652, he first asserted the regula- rity of the orbits of those bodies. In the same year he solved a problem given up by Kepler and Bullialdus, which was to determine geome- trically the apogee and eccentricity of a planet from its true and mean place. In 1653 he drew his famous meridian line at Bologna, which is described by lady Morgan in her account of a visit to that city in 1820, as occupying an extent of 206 French feet, and making, as the inscrip- tion indicates, the 64 > 0,000th part of the earth's circumference. The gnomon or hole by which the sun's rays enter, is eighty-three feet in height above the pavement. This instrument marks the distance from the zenith, the sun's passage through the signs of the zodiac, the hours of the night, and other astronomical facts. In 1663 he was appointed inspector general of the forti- fications of Urbino, and superintendent of all the rivers in the ecclesiastical state : he still however prosecuted his astronomical studies, and discovered the revolution of Mars round his own axis. In 1666 he published his Theory of Jupiter's Satellites. Cassini was invited into France by Louis XIV. in 1669, where he settled as first professor in the royal observatory. In 1677 he demonstrated the line of Jupiter's diur- nal rotation; and in 1684 discovered four more satellites belonging to Satur.n, Huygens having observed one before. In 1695 he went to Italy to inspect the meridian line, which he had settled in- 1653, and in 1700 he continued the meridian line cf France, which had been begun by Picard. lie inhabited the royal

observatory at Paris more than forty years; and died in

1712, having lost his sight some years before.

CASSINI (James), the son of the preceding, was born at Paris, in 1677. He was educated at the Mazarine College under Varignon, pro- fessor of mathematics ; and when only seventeen years of age admitted a member of the Academy. In 1696 he visited England, and was there chosen a fellow of the Royal Society. In 1712 he succeeded his father in the royal observatory at Paris, and increased the stock of science by nu- merous discoveries. But having, in 1720, pub- lished a book on the figure of the earth, main- taining, in opposition to Newton, that it was an oblong spheroid, the French king sent two com- panies of mathematicians, one towards the polar circle, and the other to the equator, to measure a degree ; a decided refutation of Cassini's opi- nion was the result. In 1723 he described a perpendicular to the meridian of France, from Paris to St. Malo, and in 1724 from Paris to Strasburgh. In 1740 he published Elements of Astronomy, with Astronomical Tables. He died iu 1756.

CASSINI DE THURY (Caesar Franfois), son of- the above, was born at Paris, in 1714. When ten years of age he calculated the phases of the solar eclipse of 1727. He succeeded his father, and employed himself for many years in perfect- ing a general chart of France, and in continuing the perpendicular of the meridian of Paris. He wrote a great number of papers, published m the Memoirs of the Academy of Sciences. He died in 1784.

CASSI'NO, n. A game at cards, in which four are dealt to each player, four being also placed on the board. His object is to take as many cards as possible, by making combinations. Thus, a ten in his hand will take a ten from the board, or any number of cards which can be made to combine into tens. The greatest num- ber of cards reckons three points ; and of spades, one ; the ten of diamonds, two ; the two of spades one ; and each of the aces, one.

CASSIODORUS (Marcus Aurelius), secre- tary of state to Theodoric king of the Goths, was born at Squillace, in Naples, about A. I). 481 He was also appointed governor of Sicily by the same prince; and in 514 was raised to the dig- nity of consul, in which Athalaric continued him, but Vitiges deprived him of all his offices. Perceiving the fall of the Gothic kingdom, and tired of the troubles of a public station, he re- solved to retire from the world, and accordingly went to his native place, Squillace, where, having buiit a hermitage and a monastery, he devoted himself to his studies and religion. Here also he amused himself in making sun-dials, clep- sydrae, and perpetual lamps. He died about 577. He wrote a Chronology from the begin- ning of the world to the year 519; a History of the Goths,

of which an abridgment only remains ; Letters, written while secretary, yet extant and valuable; a Treatise on Orthography; and Commentaries on several Passages of Scrip- ture ; of the latter those most esteemed are his Divine Institutions, and his Treatise on the Soul. The best edition of his works is that of Father Garret, printed at Rouen in 1679.

CASSIOPEIA, in astronomy, one of the con- stellations of the northern hemisphere, situated next to Cepheus. In 1572 there appeared a new star in this constellation, which at first surpassed in magnitude and brightness Jupiter himself; but it diminished by degrees, and at last disap- peared, at the end of eighteen months. It asto- nished all the astronomers of that age, many of whom wrote dissertations on it ; among the rest Tycho Brahe, Kepler, Maurolycus, Lycetus, Gramineus. This constellation contains fifty-two stars of the first six magnitudes.

CASSIOPEIA, in fabulous history, wife to Ce- pheus, king of Ethiopia, and mother of Andro- meda. She boasted that she was more beautiful than the Nereides, who desired Neptune to re- venge the affront, on which he sent a sea-mon- ster into the country, which did much harm. To appease the god, her daughter Andromeda was exposed to the monster, but was rescued by Perseus, who obtained of Jupiter that Cassiopeia might be placed after her death among the stars : hence the constellation of that name.

CASSIOWARY. See STRUTHIO.

CASSIS, in antiquity, a plated or metalline helmet ; different from the galea, which was of leather.

CASSITERIA, from Kaactrtpoc, tin, in the natural history of fossils, a genus of crystals, the figures of which are influenced by an admixture of some particles of tin. The cassiteria are of two kinds ; the whitish pellucid cassiterion, and the brown. The first is a tolerably bright and pellucid crystal, and seldom subject to the com- mon blemishes of crystal : it is of a perfect and regular form, in the figure of a quadrilateral py- ramid. The brown cassiterion is like the former in figure ; it is of a very smooth and glossy sur- face. They are found chiefly in Devonshire and Cornwall.

CASSITERIDES, in ancient geography, a cluster of islands west of the Land's End, oppo- site to Celtiberia, and famous for their tin. They were formerly open to none but Phoenicians, who carried on this commerce from

Gades, con- cealing the navigation from the rest of the world. They are supposed to be the present Scilly Islands.

CASSIUS (Longinus Caius), one of the con- spirators against Caesar. He was married to Junia, the sister of Marcus Brutus. After his defeat at Philippi, he ordered one of his freed men to put him to death with his own sword, A. A. C. 41. See ROME.

CAS'SOCK, n. FT. cosaque; Ital. casacca; Sp. casaca; Gr. kausak; Dutch, kazack ; Dan. kasjack ; Swed. kasjacka; Arm. keseg ; Welsh, casog. This word was formerly applied to a part of the upper dress of a soldier, as is shown by the quotation from Shakspeare ; but it is now confined to a garment worn by clergymen.

And now the fox had gotten him a goune, And the ape a cassocke, sidelong hanging doune ; For they their occupation meant to change, And now in other state abroad tr> range.

Spenser. Mother Hubbard's Tale.

Half dare not shake the snow from off their cassocks, lest they shake themselves to pieces. Shakspeare,

His scanty salary compelled him to run deep in debt for a new gown and cassock, and now and then forced him to write some paper of wit or humour, or preach a sermon for ten shillings, to supply his neces- sities. Swift.

CASSONADE, in commerce, cask sugar, or sugar put into casks after the first purification, but which has not been refined. It is sold either in powder or in lumps ; the whitest, and that of which the lumps are largest, is the best. Many imagine it sweetens more than loaf-sugar, but it is certain that it yields a great deal more scum.

CASSOWARY. See STEUTHIO.

CASSWEED, in botany. See THLASPI.

CASSYTA, in botany, a genus of the mono- gynia order, and enneandria class of plants : CAL. none ; COR. in the form of a calyx, divided into six segments ; the nectarium is composed of three truncated glands encompassing the germen ; the interior filaments are glandular; and the drupe contains a single seed. There are but two species, both Indian species.

CAST, v. & n. ˆ Goth, kasta ; Dan.

CAST'-AWAY, n. & adj. \ kast ; Swed. kasta.

CAS'TER, n. { This, as Johnson just-

CAS'TING, n. [ly observes, is a word

CAS'TING-NET, n. I of multifarious and

CAS'TLING, n.) indefinite use ; as,

independently of the significations which it has when it stands by itself, it acquires numerous others from being united with prepositions. In order, therefore, to show the full power of it, we shall adopt his arrangement, with the addition of some authorities, and shades of meaning.

CAST, v. a. To throw with the hand.

I rather chuse to endure the ❓❓❓ ounds of those darts, which envy casteth at novelty, than to go on safely and sleepily in the easy ways of ancient mistakings.*

Raleigh.

Then cast thy sword away, And yield thee to my mercy, or I strike

Dryden and Lee, Cast on the bank he dies with gasping pains,

And trickling blood his sil vof mail distains. Gay.

To throw away, as useless or noxious.

If thy right hand offend thee, cut it off, and cait it from thee. Matthew.

To throw as from an engine.

Slings to cast stones. Chronicles.

To scatter by the hand : as, to cast seed.

Cast the dust into the brook. Deuteronomy.

Nor that she pays while she survives To her dead love this tribute due, But runts abroad those donatives

At the installing of a new. Marvcll.

To force by violence.

Cast them into the Red Sea. Exodus.

To shed.

Nor shall your vine cast her fruit Malachy.

To throw from a high place.

Bear him to the rock Tarpeian, and from thence Into destruction cast him. Shakspeare. Coriolamts.

To throw as a net or snare.

I speak for your own profit, not that I may cast a snare upon you. 1 Car. vii. 35.

To drop ; to let fall.

They let down the boat into the sea, as though they would have cast anchor. Acts, xxvii. 30.

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For Santa Cruz the glad fleet takes her way, And safely there casts anchor in the bay. Marvell. To throw dice or lots. And Joshua cast lots for them in SLiloh.

Jahua, xviii. 10. To throw in wrestling.

And I think, being too strong for him, though he took my legs sometime, yet I made a shift to cast him. Sliakspeare.

To throw, as worthless or hateful.

His carcase was cast in the way. Chronicles. To drive by violence of weather. Howbeit we must be cast upon a certain island.

Acts.

What length of lands, what ocean have you passed, >\rhat storms sustained, and on what shore been cast ?

Drydcn. To emit.

This fumes off in the calcination of the stone, and casts a sulphureous smell. Woodward.

To bring suddenly or unexpectedly. Content themselves with that which was

the irre- mediable error of former time, or the necessity of the present hath cast upon them. Hooker.

To build by throwing up earth ; to raise. And shooting in the earth casts up a mount of clay. Spenser's Faerie Queene.

Earth-worms will come forth, and moles will cast up more, and fleas bite more, against rain.

Bacon's Nat. Hist.

To put into or out of any certain state, with the notion of descent or depression : as, the king was cast from his throne.

Jesus had heard that John was cast into prison.

Matthew.

To condemn in a criminal trial.

But oh, that treacherous breast! to whom weak you Did trust our counsels, and we both may rue, Having his falsehood found too late, 'twas he That made me cast you guilty, and you me. Donne.

There then we met j both tried and both were

cast ; And this irrevocable ˆentence past. Dryden.

To overcome or defeat in a law suit ; from Fr. caster.

The northern men were agreed, and in effect all the other, to cast our London escheatour.

Cainden's Remains. To defeat.

No martial project to surprise, Can ever be attempted twice ; Nor cast design serve afterwards, As gamesters tear their losing cards. Hudibras. To cashier.

You are but now cast in his mood, a punishment more in policy than in malice ; even so as one would beat his offenceless dog, to affright an imperious lion.

Shakspeare.

To leave behind in a race.

In short, so swift your judgments turn and wind, You cast jo.tr fleetest wits a mile behind. Dryden. To shed , to let fall ; to lay aside ; to moult ; to change for new.

The casting of the skin is, by the ancients, com- pared to the breaking of the secundine, or cawl, but not rightly ; for that were to make every casting of the skin a new birth : and besides, the secundine is but a general cover, not shaped according to the parts, but the skin is shaped according to the parts. The

creatures that cast the skin, are the snake, the viper, the grasshopper, the lizard, the silkworm, &c. Bacon.

The waving harvest bends beneath his blast, The forest shakes, the groves their honours cast,

Dryden.

The ladies have been in a kind of moulting season, having cast great quantities of ribbon and cambrick and reduced the human figure to the beautiful globular form. Addison.

To lay aside, as fit to be used or worn no longer.

So may cast poets write ; there's no pretension To argue loss of wit, from loss of pension. Dryden.

He has ever been of opinion, that giving cast clothes to be worn by valets, has a very ill effect upon little minds. Addison.

To have abortions ; to bring forth before the time.

Thy ewes and thy she-goats have not cast their young. Genesis.

To make to preponderate ; to decide by over- balancing; to give over-weight.

Which being inclined, not constrained, contain within themselves the casting act, and a power to command the conclusion. Browne's Vulgar Errours.

How much interest casts the balance in cases du- bious. South.

Not many years ago, it so happened, that a cobler had the casting vote for the life of a criminal, which he very graciously gave on the merciful side.

Addison on Italy.

To compute ; to reckon ; to calculate.

Hearts, tongues, figures, scribes, bards, poets, cannot Think, speak, cast, write, sing, number, ho ! His love to Antony. Shtikspeare.

You cast the event of war, my noble lord, And summed the account of chance, before you said, Let us make head. Id.

I have lately been casting in my thoughts the seve- ral unhappinesses of life, and comparing the infelici- ties of old age to those of infancy. Addison.

To contrive ; to plan out.

The cloister facing the south is covered with vines, and would have been proper for an orange-house ; and had, I doubt not, been cast for that purpose, if this piece of gardening had been then in as much vogue as it is now. Temple.

To judge ; to consider in order to judgment.

If thou couldst, doctor, cast The water of my land, find her disease, And purge it to a sound and pristine health, I would applaud thee. Shakspeare.

Peace, brother, be not over exquisite To cast the fashion of uncertain evils. Milton.

To fix the parts in a play.

Our parts in the other world will be new cast, and mankind will be there ranged in different stations of superiority. Addison.

To glance ; to direct : applied to the eye or mind.

Beryn rode forth in his wey, his page ran him by. Full sore adred in hert, and cast about his eye Up and down, even long the strete, and for his anger swete. Chaucer. Cant. Tale.*

A losel wandering by the way, One that to bounty never catt his mind

Ne thought of heaven ever did assay His baser breast. Spenser.

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Zclmanc's languishing countenance, with crossed arms, and sometimes cast up eyes, she thought to have an excellent grace. Sidney.

Begin, auspicious boy, to cast about Thy infant eyes, and, with a smile, thy mother single out. Dry den's Virgil.

Far eastward cast thine eye, from whence the sun, And orient science, at a birth begun. Pope's Dunciad. Quick to the neighbouring tree he flics,

There, trembling, casts around his eyes j

No foe appears, his fears were vain,

Pleased he renews the sprightly strain. Beattie.

You cannot behold a covetous spirit walk by a gold- smith's shop without casting a wishful eye at the heaps upon the counter. Spectator.

To found ; to form by running in a mould ; to melt metal in,to figures.

When any such curious work of silver is to be cast, as requires that the impression of hairs, or very slen- der lines, be taken off by the metal, it is not enough that the silver be barely melted, but it must be kept a considerable while in a strong fusion. Boyle.

The father's grief restrained his art ; He twice essay'd to cast his son in gold, Twice from his hands he dropped the forming mould.

Dryden.

To model ; to form by rule.

Under this influence, derived from mathematical studies, some have been tempted to cast all their logical, their metaphysical, and their theological and moral learning into this method. Watts's Logic.

To communicate by reflection or emanation.

So bright a splendour, so divine a grace, The glorious Daphnis casts on bis illustrious race.

Dryden.

To yield or give up, without reserve or con- dition.

The reason of mankind cannot suggest any solid ground of satisfaction, but in making God our friend, and in carrying a conscience so clear, as may

en- courage us, with confidence, to cast ourselves upon him. South.

*To inflict, or throw**

The world is apt to cast great blame on those who have an indifferency for opinions, especially in religion. Locke.

To cast aside. To dismiss as useless or in- convenient.

J have bought

Golden opinions from all sort of people, Which would be worn now in their newest gloss, "Not cast aside so soon, Shakspeare.

To cast away. To shipwreck. Sir Francis Drake and John Thomas, meeting with a storm, it thrust John Thomas upon the islands to the south, where he was cast away. Raleigh's Essays.

'Twas in a shipwreck, when the seas Ruled, and the winds did what they please, That my poor lover floating lay, And ere brought forth, was cast away. Marvell. But now our fears tempestuous grow,

And rn. ft our hopes away ; Whilst you, regardless of our woe,

Sit careless at a play. Dorset.

To cast away. To lavish ; to waste in pro- fusion ; to turn to no use.

They that want means to nourish children, will abstain from marriage ; or, which is all one, they cast atvay their bodies upon rich old women.

Raleigh's Esiays.

O Marcia, O my sister ! still there's hope, Our father will not cast away a life So needful to us all, and to his country.

Addison's Cato. To cast away. To ruin.

It is no impossible thing for states, by an oversight in some one act or treaty between them and th&ir po- tent opposites, utterly to cast away themselves for ever. Hooker.

To cast away. To dismiss ; to drive away.

Hang sorrow ! let's to yonder hut repair, And with trim sonnets cast away our care. Gay. To cast back. To render tardy ; to put be- hind.

Your younger feet ; while mine, cast back with age, Come lagging after. Milton.

To cast by. To reject or dismiss, with neg- lect or hate.

Old Capulet and Montagu,1 Have made Verona's ancient citizens Cast by their grave beseeming ornaments.

Shakspeare.

When men, presuming themselves to be the only masters of right reason, cast by the votes and opinions of the rest of mankind, as not worthy of reckoning.

Locke.

To cast down. To deject; to depress the mind.

We're not the first,

*Who, with best meaning, have incurred the worst .******* *For thee, oppressed king, I am cast down ; Myself could else outfrown false fortune's frown.*

Shtikspeare.

The best way will be to let him see you are much cast down, and afflicted, for the ill opinion he enter- tains of you. Addison.

To cast forth. To emit.

He shall grow as the lily, and cast forth his roots as Lebanon. Hoi'M.

To cast forth. To eject.

They cast me forth into the sea. Jomih To cast off. To discard; to put away.

The prince will, in the perfectness of time, Cast off his followers. Sliakspearj.

He led me on to mightiest deeds, But now hath cast me off, as never kno

Milton.

*' How ! not call him father ? * I see preferment alters a man strangely ; this may serve me for an use of in- struction, to cast off my father, when I*

am great.

Dryden.

To cast off. To reject.

It is not to be imagined, that a whole society of men should publicly and professedly disown and cast off a rule, which they could not but be infallibly cer- tain was a law. Locke.

To cast off. To disburden one s self of.

All conspired in one to cast off their subjection to the crown of England. Spenser's State of Ireland

The true reason why any man is an atheist, is be- cause he is a wicked man : religion would curb him in his lusts ; and therefore he casts it off, and puts ah the scorn upon it he can. Tillotson,

To cast off. To leave behind.

Away he scours cross fjie fields, casts off the dogs, and gains a wood : but pressing through a thicket, the bushes held him by the horns, till the hounds came in, and plucked him down, L'Etiru-.iya.

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To cast off. A hunting term. To let go or set free : as, to cast off the dogs.

To cast out. To reject ; to turn out of doors.

Thy brat hath been cast out, like to itself, no father owning it. Shakspeare.

To cast out. To vent ; to speak : with some intimation of negligence or vehemence.

Why dost thou cast out such ungenerous terms Against the lords and sovereigns of the world?

Addistin.

To cast up. To compute ; to calculate.

Some writers, in casting vp the goods most desira- ble in life, have given them this, rank, health, beauty, and riches. Temple.

To cast up. To vomit. Thou, beastly feeder, art so full of him, That thou

provokest thyself to cast him up. Sliak.

Thy foolish errour find ;

Cast up the poison that infects thy mind. Dryden. To cast up. To throw or lift up. Cast vp the curtein, loke how that it is.

Choutcer's Cant. Tales.

To cast upon. To refer to ; to resign to.

If things were cast upon this issue, that God should never prevent sin till man deserved it, the best would sin and sin for ever. South.

To CAST. v. n.

To contrive ; to turn the thoughts.

Then, closely as he might, he cast to leave

The court, not asking any pass or leave. Spenser.

But first he casts to change his proper shape, Which else might work him danger or delay : And now a stripling cherub he appears. Milton.

To admit of a form, by casting or melting.

It comes at the first fusion into a mass that is im- mediately malleable, and will not run thin, so as to cast and mould, unless mixed with poorer ore, or cinders. Woodward on Fossils.

To be formed as if in a mould.

These features cast in heavenly mould Shall like my coarser earth grow old ; Like common grass, the fairest flower Must feel the hoary season's power. Oay.

To warp ; to grow out of form.

Stuff is said to cast or warp, when, by its own drought, or moisture of the air, or other accident, it alters its flatness or straightness.

Moxon's Mechanical Exercises.

To vomit.

I cannot abide them, they make me ready to cast.

B. Jonson.

To cast about. To contrive; to look for means.

We have three that bend themselves, looking into the experiments of their fellows, and cast about how to draw out of them things of use and practice for man's life and knowledge. Bacun's New Atalantis.

As a fox, with hot pursuit Chased thro' a warren, cast about To save his credit. Hudibras.

All events called casual, among inanimate bodies, are mechanically produced according to the determi- nate figures, textures, and motions of those bodies, which are not conscious of their own operations, nor contrive and cast about how to bring such events to Pass- Bentley.

To cast about ; to retrace the steps.

The people that Ishmael had carried away captive from Mizpeth rust about and returned, and went to Johanan. Jeremiah xli. 14.

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CAST, n.

The act of casting or throwing ; a throw.

So when a sort of lusty shepherds throw The bar by turns, and none the rest outgo So far, but that the rest are measuring casts, Their emulation and their pastime lasts. Waller.

The thing thrown.

Yet all these dreadful deeds, this deadly fray, A cast of dreadful dust will soon allay,

Dryden's Virgil.

State of anything cast or thrown. Plato compares life to a game at tables ; there what cast we shall have is not ia our power j but to manage it well, that is. Norris.

Manner of throwing.

Some harrow their ground over, and sow wheat or rye on it with atroad cast ; some only with a single cast, and some with a double. Mortimer.

The space through which anything is thrown.

And he was withdrawn from them about a stone's cast, and kneeled down and prayed. Luke.

And ere he hail riden a stone's cast, a blynd man

with him met,

And spak no word, but sesed him fast by th? lap, And cried ' out and harowe/ and nere him gan to stap. Chaucer's Cant. Tales.

A stroke; a touch.

We have them all with one voice for giving him a cast of their court prophecy. South.

This was a cast of Wood's politics ; for his infor- mation was wholly false and groundless. Swift.

Motion of the eye ; direction of the eye. Pity causeth sometimes tears, and a flexion or cast of the eye aside ; for pity is but grief in another's be- half ; the cast of the eye is a gesture of aversion, or lothness, to behold the object of pity.

Bacon's Nat. History. There, held in holy passion still Forget thyself to marble, till With a sad leaden, downward cast, Thou fix them on the earth as fast. Milton.

He that squints is said popularly to have a cast with his eye.

A man shall be sure to have a cast of their eye to warn him, before they give him a cast of their nature to betray him. South.

The throw of dice.

Were it good,

To set the exact wealth of all our states All at one cast ; to set so rich a main On the nice hazard of some doubtful hour ?

Shakspeare.

Venture from throwing dice ; chance from the fall of dice.

When you have brought them to the very last cast, they will offer to come to you, and submit themselves Spenser on Ireland.

With better grace an ancient chief may yield The long contested honours of the field, Than venture all his fortune at a cast, And fight, like Hannibal, to lose at last. Dryd n.

A mould ; a form.

The whale would have been an heroic poem, but in another cast and figure than any that ever had been written before. Prior.

The act of casting metal.

Such daily cast of brazen cannon. Shz!tspeare.

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A shade or tendency to any color. The qualities of blood in a healthy state are to be f crid, the red part congealing, and the serum ought t be without any greenish cast.

Arbuttinot on Aliments. Exterior appearance.

The native hue of resolution Is sicklied o'er with the pale catt of thought.

Shakipeare,

Manner ; air ; mein.

Pretty conceptions, fine metaphors, glittering ex- pressions, and something of a neat cast of verse, are properly the dress, gems, or loose ornaments of poetry. Pope's Letters.

A flight; a number of hawks dismissed from the fist.

A cast of merlins there wa►► besides, which, flying off a gallant height, would beat the birds that rose down unto the bushes, as falcons will do wild fowl over a river. Sidney.

CAST; from the Welsh; a trick.

CA'STA. Span, a breed ; a race ; a species.

CASTAGNO (Andrew Del), historical painter, was born at Oastagno, in 1409, and was origi- nally enrployed in tending cattle ; but, having

accidentally seen an ordinary painter at work, he made such efforts to imitate him, as asto- nished all who saw his productions. The genius of Andrew became at last a common topic of discourse in Florence, and excited the curiosity of Bernardetto de Medici so far that he sent for him, and perceiving that he had promising talents, placed him under the care of the best masters then in Florence. He painted only in distemper and fresco, with a manner of coloring that was not very agreeable, till he learned the art of painting in oil from Dominic Venetiano, who had derived his knowledge of that discovery from Antonello da Messina. Being less admired than Venetiano, he formed the horrid resolution of assassinating his friend and benefactor, and stabbed him at the corner of a street so secretly, that he escaped unobserved and unsuspected to his own house. Thither Dominic was soon after conveyed, to die in the arms of his murderer. No discovery of this inhuman transaction was made till Andrew, through remorse of conscience, confessed it on his death-bed, in 1480. He finished several considerable works at Florence, by which he gained great reputation. His most noted picture was lately in the hall of justice at Florence, representing the execution of the con- spirators against the house of Medici.

CASTALIO (Sebastian), was born in the pro- vince of Dauphiny in 1515. Calvin, during his stay at Strasburgh in 1540 and 1541, procured him a regent's place in the college of Geneva; but after continuing in this office nearly three years, Castalio was forced to quit it in 1544, on account of his opinions. See CALVIN. He re- tired to Basil, where he was made Greek pro- fessor, and died in 1564, aged forty-eight. His works are very considerable. In 1545 he printed, ;n elegant Latin, at Basil, Dialogorum Sacrorum, Libri IV., a work containing the principal his- tories of the Bible thrown into the form of dia- logues. But his principal work is a Latin and French translation of the Scriptures. He began the Latin translation at. Geneva in 1542, a:ul

finished it at Basil in 1550. It was printed at Basil, in 1551, and dedicated to Edward VI. king of England. The French version was de- dicated to Henry II. of France, and printed at Basil, in 1555.

CASTALIUS FONS, Castalia, a fountain at the foot of mount Parnassus, in Phocis, near the temple of Apollo, or near Delphi ; sacred to the Muses. Its murmurs were thought prophetic.

CASTANET, n. Fr. castagnettes ; Span. castanita. Castaneta is a diminutive of castana, a chestnut ; and the name is supposed to be given to the instrument either from its being made of chestnut wood, or from its resemblance to the shell of a chestnut. Two small pieces of hollow ivory, or hard wood, which dancers rattle in their hands, in cadence to their motions.

If there had been words enow between them, to have expressed provocation, they had gone together by the ears like a pair of castanets. Congreve.

CASTANETS, CASTANETTAS, or CASTAGNETTES, are a kind of musical instrument, with which the Moors, Spaniards, and Bohemians accom- pany their dances, sarabands, and guitars, It consists of two little round pieces of wood dried, and hollowed in the manner of a spoon, the concavities whereof are placed one on another, fastened to the thumb, and beat from time to time with the middle finger, to direct their mo- tion and cadences. The castanets may be beat eight or nine times in a second.

CAST'AWAY, n. fc adj. A person abandoned by Providence ; anything thrown away ; useless ; valueless.

Lest that by any means, when I have preached to others, I myself should be a castaway. 1 Cor. ix. 27.

Neither given any leave to search in particular who are the heirs of the kingdom of God, who cast- aways. Hooker.

We only prize, pamper, and exalt this vassal and slave of death ; or only remember, at our castaway leisure, the imprisoned immortal soul. Raleigh.

CASTE, in the eastern affairs, is used in a sense somewhat similar to Dr. Johnson's defini- tion for a tribe, or number of families, of the same rank and profession. The division of a nation into castes chiefly obtains in the dominions formerly belonging to the Great Mogul, Bengal, the island ot Ceylon, and the great peninsula opposite. See BRAHMIN and HINDOSTAN.

CASTED. The participle preterite of cast, but improperly, and found perhaps only in the following passage.

When the mind is quickened, out of doubt,

The organs, though defunct and dead before,

Break up their drowsy grave, and newly move

With casted slough and fresh legerity. Shakspeare.

CASTEL (Lewis Bertrand), a learned Jesuit,

born at Montpelier in 1688. He distinguished

himself by writing on gravity, mathematics, and

the music of colors, a whimsical idea, which he took great pains to reduce to practice. His piece on gravity, entitled Traite de la Pensateur Universelle, was printed at Paris in 1724. He afterwards published his Mathematique Univei- selle, which occasioned his being unanimously chosen F.R. S. of London. He was also a member of the academies of Bourdeaux and Rouen : but his Clavecin Oculaire excited most

attention ; and he spent much time and expense in making an harpsichord for the eye, but with- out success. He also wrote for and against Sir Isaac Newton, and published several other works; the principal of which are, Le Plan d'une Mathe- matique Abregee, and a treatise entitled Optique des Couleurs. He led a very exemplary life, and died in 1757.

CASTELL (Edmund), D.D., a learned Eng- lish divine of the seventeenth century, distin- guished by his skill in the eastern languages. He was educated at Cambridge; where he was master of Catharine hall, Arabic professor, and canon of Canterbury. He was also chaplain to Charles IT. He had a great share in the labor of printing the Polyglott Bible of London ; and wrote the Heptaglotton pro Septem Orientali- bus, 8cc. On this excellent work, which occu- pied a great part of his life, he bestowed incredible pains and expense, even to the break- ing of his constitution, and exhausting of his fortune. It is said he expended no less than ––12,000 upon it. At length, when it was print- ed, the copies remained unsold upon his hands. He died in 1685, and bequeathed all his oriental MSS. to the university of Cambridge, on con- dition that his name should be written on every copy in the collection.

CASTELLA, a town of Italy, about five miles north-east of Mantua, where an obstinate battle was fought between the French and Austria ns, on the 12th of September, 1796, when the for- mer were defeated.

CASTELLATIO, or CASTELLATION, in mid- dle age writers, the act of building a castle, or of fortifying a house, and making it a castle. By the ancient English laws, castellation was pro- hibited, without the king's especial license.

CASTELLI (Bernard), an eminent painter, born at Genoa in 1557. He excelled in color- ing and in portraits. He was the intimate friend of Tasso, and designed and etched the figures of his Hierosolyma Liberata. He died at Genoa in 1629.

CASTELLO, CITTA m (the Tifernum Tiber- inum of the ancients), a bishop's see in the province of Umbria, and States of the Church, on the Tiber, the capital of a county of the same name. It is well fortified, has a castle, and con- tains ten churches.

CASTELLO Rosso, or KASTELORIZO, a small island of the Mediterranean, divided from the coast of Caramania by a channel, about half a mile wide. It is rocky and high, the summit rising about 800 feet above the ocean. There is a town of this name on it, with a good small harbour. It is principally inhabited by Greeks, under the government of a Turkish aga, depend- ent on the bey of Rhodes. Long. 29□□ 37′ □□., lat. 39□□ 8′ N.

CASTELLON DE LA PLANA, a large town in a very fertile part of Valencia, Spain, about half a league from the coast of the Mediterranean. The Moorish walls and towers are in tolerable repair. It has eight gates and two suburbs. The streets are generally broad, and the houses well-built. A spacious square contains the town-house and principal church. The only objects of interest are the church buildings, the town-house, and a VOL. V.

vast tower or belfry, 260 feet in height, and 161 in circumference. Population 11,000. Twenty- eight miles south of Valencia.

CASTELNAUDARY, or CHATEL-NAUDAR- RY, a silk manufacturing town of Upper Lan- guedoc, France, in the department of the Aude. It stands on an eminence near the canal of Lan- guedoc. The country around is fertile in corn. Here is a collegiate chapter, and in the vicinity the grand reservoir which supplies the canal with water. A battle was fought here in 1632, between the duke of Montmorency and marshal Schom- berg, in which the former was defeated and made prisoner. Thirty-three miles south-east of Toulouse, and 460 south of Paris.

CASTELLUM, Lat. i. e. a little castle, origi- nally seems to have signified a small fort for a little garrison : though Suetonius uses the word where the fortification was large enough to con- tain a cohort. The castella, according

to Vege- tius, were often like towns, built on the borders of the empire, and where there were constant guards, and fences against the enemy. Horsley takes them for much the same with stations.

CAST'ER, v. & n. A thrower ; he who casts; an accomptant ; a man who calculates nativities. The noun signifies a small wheel, fixed to a swivel such as tables move on.

If with this throw the strongest caster vie, Still, further still, I bid the discus fly. Pope.

Did any of them set up for a caster of fortunate figures, what might he not get by his predictions ?

Adduon.

CASTIFICA'TION. Lat. castus and facio Chastity. The word is used in his sense by- Bishop Taylor, but I know of no other authority for it.

CA'STIGATE, v. ~\ Ital. castigare ; Span. CASTIGA'TION, n. tcastigur ; Lat. castigo. CA'STIGATOR, n. {To castigate, is to inflict CA'STIGATORY, adj. J chastisement, or punish- ment; to correct; to render pure; castigation is the punishment, correction, penance, or disci- pline, which is suffered; the emendations, or purifications which are made; the castigator is the agent in these operations; and castigatory signifies punitive, for the purpose of amending.

If thou didst put this sour cold habit on To castigate thy pride, 'twere well. Sfiaktpeare.

This hand of your's requires A sequester from liberty, fasting and prayer, With castigation, exercise devout. Id.

The ancients had these conjectures touching these floods and conflagrations, so as to frame them into an hypothesis for the castigation of the excesses of ge- neration. Hale. There were other ends of penalties inflicted, either probatory, castigatory, or exemplary.

Bramhall against Hobbei.

Their castigations were accompanied with encour- agements ; which care was taken to keep me from looking on as mere compliments. Boyle,

He had adjusted and castigated the then Latin Vul- gate to the best GreeV exemplars. Bentley.

CASTIGATIOX, among the Romans, the pun- ishment of an offender by blows, or beating with a wand or switch. Castigation was chiefly a military punishment ; the power of inflicting it on the soldiery was given to the tribures. Some make it of two kinds; the one with a stick or

cane, called fustigatio; the other with rods, called flagellatio : the latter was the most dis- honorable.

CASTIGLIONE DELLESTIVIERE, or DELLA STIVERA, a town of Lombardy, in the territory of Mantua, formerly the capital of a principality of this name. It is surrounded with walls, but the castle was long since demolished by the French. The allies took it in 1701, but were defeated near it by the French in 1706. Several actions took place here between the French and Austnins in August, 1796; and Buonaparte conferred a dukedom of this name on Augereau. It is fifteen miles south-east of Brescia, and twenty north-west of Mantua.

CASTIGLIONE (John Benedict), a celebrated painter, born at Genoa in 1616. His first mas- ter was John Baptist Paggi. He afterwards studied under Andrew Ferrari; and perfected himself under Vandyck, who then resided at Genoa. He painted portraits, historical pieces, landscapes, and castles. In the latter of which he is said chiefly to have excelled ; as well as in fairs, markets, and all kinds of rural scenes. We have also a great number of his etchings, which are all spirited, free, and full of taste. His drawing of the naked figure, though by no means correct, is in a style that indicates the hand of a master.

CASTIGLIONE (Balthazer), an eminent Italian nobleman, descended from an illustrious family, and born at his own villa at Casalico, in the duchy of Milan, in 1478. He studied painting, sculpture, and architecture, and he so much ex- celled in these arts, that Raphael Urbino and Buonarotti submitted their works for his appro- bation. When he was twenty-six years of age Guido Ubaldo, duke of Urbino, sent him am- bassador to pope Julius II. He was sent upon a second embassy to Louis XII. of France, and upon a third to Henry VII. of England. Cas- tiglione died in 1529, when acting as legate at Toledo for Clement VII. with Charles V. of Spain. His principal work is entitled II Cor- tegiano ; the Courtier. A version of it, together with the original Italian, was published at Lon- don in 1727, by A. P. Castiglione, a gentleman of the same family.

CASTILE, NEW, also called the kingdom of Toledo, a province of Spain, bounded on the north by Old Castile, on the east by the king- doms of Arragon and Valencia, on the south by those of Murcia and Andalusia, and on the west by the kingdom of Leon. It is divided into three parts, Argaria, Mancha, and Sierra; Ma- drid being the capital. The air is pure and healthy ; but the land mountainous, sterile, and neglected, though watered with most beautiful streams. The northern part produces fruits and wine, and the south excellent pasturage. It is watered by the navigable rivers, the Tagus, the Xucar,and the Guadiana, besides smaller streams; and contains the provinces of Toledo, Cuenca, Guadalaxara, Madrid, St. Ildefonso, Aranjuez, and St. Lorenzo. The principal towns are, be- side the capital, Toledo, Cuexˆa, Kequena, and Talavera. It contains one archbishopric, one bishopric, three universities, two cathedrals, and five collegiate chapters, two abbeys, four mili-

tary commanderies, 116 hospitals, 375 religious houses, and 1301 parishes. Its administration includes one general, and four local military governments, together with four provincial in- tendancies. Its population, which has not been officially ascertained for many years, is taken at about one million.

An extensive chain of high and rocky moun- tains, which runs from east to west, divides New from OLD CASTILE, a province, with the title of a kingdom. It is about 192 miles in length, and 1 1 5 in breadth ; bounded on the south by New Castile, on the east by Arragon and Na- varre, on the north by Biscay and Asturias, and on the west by the kingdom of Leon. The capital is Burgos. Other principal towns are Valladolid, Segovia, Avila, Calatrava, Logrono, and Soria : its ecclesiastical establishments are, one archbishopric, seven bishoprics, thirty-four chapters, and 394 religious houses. The military government is in a captain general ; there are also six provincial intendants, and a royal chan- cery. Population about 1,200,000.

In the mountains are copper mines, which however have been little attended to, pyrites, quartz, marble, and chalk ; also several mineral springs. The chief rivers are the Xalon, Douro, Ebro, Carrion, and Tormes. Part of the soil is very fertile in rye, wheat, and barley : and some districts produce an inferior wine ; but the whole province is remarkably destitute of wood. Mad- der is cultivated with success, and 400 or 500 tons are said to be exported annually. The pas- turage is generally fine, and is the foundation of the entire wealth of the province. Segovian wool is nowhere exceeded, if equalled, in qua- lity ; the numerous flocks of merino sheep find a salutary exchange of food between the warm plains during winter, and the sides of the moun- tains in summer ; and the butter of Burgos and its neighbourhood is celebrated throughout Spain. The manufactures are

confined to a few woollen and linen establishments, those of earthenware, leather, paper, and glass ; but wool is the only considerable export. With its three universities, Castile partakes of the universal degradation of Spain, with regard to intellectual culture : liter- ature and the arts are nowhere in Europe at a lower ebb. The inhabitants are remarkably quiet, reserved, proud, and lethargic, in their manners; but honest, simple, and kind. Old Castile has given birth to several of the kings of Spain ; those of Castile formerly divided their residence between Burgos and Toledo ; but Charles V. transferred the seat of government to Madrid.

CASTILLAN, or CASTILLANE, a gold coin current in Spain, worth fourteen rials and six- teen deniers.

CASTILLON, a town of France, in the de- partment of the Gironde, and ci-devant province of Guienne, seated on the Dordogne, twenty-five miles east of Bourdeaux. It is memorable for a victory obtained by the French over the English in 1451.

CASTING, among sculptors, the taking off casts and impressions of figures, busts, medals, leaves, &c. The method of taking off casts of figures and busts is most generally by the use of

p'aster of Paris, i.e. alabaster calcined by a gen- tle heat. The advantage of this substance above others, is, that notwithstanding a slight calcina- tion reduces it to a pulverine state, it becomes again a tenacious and cohering body by being moistened with water, and afterwards suffered to dry ; by which means either a concave or a con- vex figure may be given by a proper mould or model to it when wet, and retained by the hard- ness it acquires when dry : and, from these qua- lities, it is fitted for the double purpose of making both casts and moulds. The particular manner of making casts depends on the form of the sub- ject to be taken. Where there are no projecting parts, or where there are such as form only a right or any greater angle with the principal sur- face of the body, it is very easy ; but where parts project in lesser angles, or form a curve inclined towards the principal surface of the body, the work is more difficult. The first step is the forming the mould. If the original or model be a bas relief, or any o.her piece of a flat form, having its surface first greased or oiled, it must be placed on a proper table, and surrounded by a frame, the sides of which must be at such a distance from it as will allow a proper thickness for the sides of the mould. As much plaster as will cover and rise to such a thickness as may give sufficient strength to the mould, and fill the hollow*

betwixt the frame and the model, must be moistened with water, till it be just of such con- sistence as will allow it to be poured upon the model. This must be done as soon as possible; or the plaster would concrete or set. The whole must remain in this condition, till the plaster has attained its hardness ; and then the frame being taken away, the preparatory cast or mould thus formed may be taken off from the subject entire. Where the original subject is of a round or erect form, a different method must be pursued; and the mould must be divided into several pieces : or if the subject consists of detached and pro- jecting parts, it is frequently most expedient to cast such parts separately, and afterwards join them together. Where the original subject forms a round, or spheroid, or any part of such round or spheroid, more than one half the plaster must be used without any frame to keep it round the model ; and must be tempered with water to such a cons-istence, that it may be wrought with the hand like very soft paste : but though it must not be so fluid as when prepared for flat figured models, it must yet be as moist as is com- patible with 4s cohering sufficiently to hold to- gether: and, being thus prepared, it must be put upon the model, and compressed with the hand, or any flat instrument, that the parts of it may adapt themselves, in the most perfect manner, to those of the subject, as well as be compact with respect to themselves. When the model is so covered to a convenient thickness, the whole must be left at rest till the plaster be firm, so as to bear dividing without falling to pieces, or being liable to be put out of its form by slight violence ; and it must then be divided into pieces, in order to its being taken off from the model, by cutting it with a very thin bladed knife ; and being divided, must be cautiously taken off, and kept till dry : but it must be always

carefully observed, before the separation of the parts be made, to notch them cross the joints, or lines of the division, at proper distances, that they may with ease and certainty be properly con- joined again; which would be much more pre- carious and troublesome without such directive marks. The art of properly dividing the moulds, in order to make them separate from the model, requires more dexterity and skill than any other thing in the art of casting; and does not admit of rules for the most advantageous conduct of it in every case. Where the subject is of a round or spheroidal form, it is best to divide the mould into three parts, which will then easily come off from the model ; and the same will hold good of a cylinder, or any regularly curved figure. The mould being thus formed, and dry, and the parts put together, it must be first greased, and placed in such a position that the hollow may lie up- wards, and then filled with plaster mixed with water, in the same proportion and manner as – directed for casting the mould : and when the cast is perfectly dry, it must be taken out of the mould, and repaired where it is necessary; which finishes the operation. Where the model forms curves which intersect each other, the conduct of

the operation must be varied with respect to the manner of taking the cast of the mould from off the subject or model ; and where there are long projecting parts, such as legs or arms, they should be wrought in separate casts. The ope- rator may easily judge from the original subject, what parts will come off together, arid what re- quire to be separated : the principle of the whole consists only in this, that where under-workings, as they are called, occur, i. e. wherever a straight line, drawn from the basis or insertion of any projection, would be cut or crossed by any part of such projection, such part cannot be taken off without a division; which must be made either in the place where the projection would cross the straight line ; or, as that is frequently diffi- cult, the whole projection must be separated from the main body, and divided also lengthwise into two parts : and where there are no projections from the principal surfaces, but the body is so formed as to render the surface a composition of such curves, that a straight line being .ˆawn parallel to the surface of one part would be cut by the outline, in one or more places, of another part, a division of the whole should be made, so as to reduce the parts of it into regular curves, which must then be treated as such. In larger masses, where there would otherwise be a great thickness of the plaster, a core or body may b►► put within the mould, in order to produce a hoK low in the cast ; which both saves the expense of the plaster, and renders the cast lighter. This core may be of wood, where the forming a hol- low of a straight figure, or a conical one with the basis outward, will answer the end : but if the cavity require to be round, or of any curved figure, the core cannot be then drawn while en- tire ; and consequently should be of such matter as may be taken out piece-meal. In this case, the core is best formed of clay; which must be worked upon wires to give it tenacity, and sus- pended in the hollow of the mould, by cross wires lying over the mouth ; and when the plas

ter is sufficiently set to bear handling, the clay must be picked out by a proper instrument. Where it is desired to render the plaster harder, the water with which it is tempered should be mixed with parchment size properly prepared, which will make it very firm and tenacious. In the same manner, figures, busts, &c. may be cast of lead, or any other metal, in the moulds of plaster : only the expense of plaster, and the tediousness of its becoming sufficiently dry, when in a very large mass, to bear the heat of melted metal, render the use of loam, compounded with some other proper materials, preferable where large subjects are in question. The clay, in this case, should be washed over till it be perfectly free from gravel ; and then

mixed with one-third or more of fine sand or sifted coal ashes, to pre- vent its cracking. Whether plaster or clay be employed for the casting in metal, it is extremely necessary to have the moild perfectly dry ; other- wise the moisture, being rarefied, will make an explosion that will blow the metal out of the mould, and endanger the operator. Where the parts of a mould are large, or project much, and consequently require great tenacity to keep them together, flocks of cloth, prepared like those de- signed for paper-hangings, or fine cotton, cut very short, should be mixed with the ashes or sand before they are added to the clay to make the composition for the mould. The proportion should be according to the degree of cohesion required : but a small quantity will answer the end, if the other ingredients of the composition be good, and the parts of the mould properly linked together by means of the wires above directed. But these materials, being combus- tible, must not be mixed in the composition for moulds, which are intended to receive mixed metals. There is a method of taking casts in metals from small animals, and the parts of ve- getables, which may be practised for some pur- poses with advantage : particularly for the deco- rating grottoes or rock-work, where nature is imitated. The proper kinds of animals are lizards, snakes, frogs, birds, or insects; the casts of which, if properly colored, will be exact re- presentations of the originals. This is to be per- formed by the following method : ••• A cpffin or proper chest for forming the mould being pre- pared of clay, or four pieces of boards fixed together, the animal, or parts of vegetables, must be suspended in it by a string ; and the leaves tendrils, or other detached parts of the vege- tables, or the legs, wings, &c. of the animals, properly separated and adjusted in their right position by a small pair of pincers : a due quan- tity of plaster of Paris and calcined talc, in equal quantities, with some alumen plumosum, must then be tempered with water to the proper con- sistence for casting; and the subject from whence the cast is to be taken, as well as the sides of the coffin, moistened with spirit of wine. The coffin must then be filled with the tempered compo- sition of the plaster and talc, putting at the same time a piece of straight . stick or wood to the principal part of the bpdy of the subject, and pieces of thick wire to the extremities of the other parts, that they may form, when drawn out, after the matter of the mould is properly set

and firm, a channel for pouring in the melted metal, and vents for the air ; which otherwise, by the rarefaction it would undergo from the heat of the metal, would blow it out or burst the mould. In a short time the plaster and talc will set and become hard, when the stick and wires may be drawn out, and the frame or coffin in which the mould was cast taken away : and the mould must then be put first into a moderate heat, and afterwards, when it is as dry as can be rendered by that degree, removed iato a greater ; which may be gradually increased till the whole be red hot. The animal, or part of

any vegetable, which was included in the mould, will then be burnt to a coal ; and may be totally calcined to ashes, by blowing for some time gently into the channel and passages made for pouring in the metal, and giving vent to the air, which will, at the same time that it destroys the remainder of the animal or vegetable matter, blow out the ashes. The mould must then be suffered to cool gently; and will be perfect ; the destruction of the substance of the animal or vegetable having produced a hollow of a figure correspondent to it: but it may be nevertheless proper to shake the mould, and turn it upside dowu, as well as to blow with bellows into each of the air vents, in order to free it wholly from any remainder of the ashes ; or, where there may be an opportunity of filling the hollow with quicksilver without expense, it will be found a very effectual method of clearing the cavity, as all dust, ashes, or small detached bo- dies will necessarily rise to the surface of the quicksilver, and be poured out with it. The mould being thus prepared, it must be heated very hot when used, if the cast be made with copper or brass : but a less degree will serve for lead or tin : and the matter being poured in, the mould must be gently struck ; and then allowed to rest till it be cold : at which time it must be carefully taken from the cast, but with- out the least force ; for such parts of the matter as appear to adhere more strongly, must be softened by soaking in water, till they be en- tirely loosened, that none of the more delicate parts of the cast may be broken off or bent. Where the alumen plumosum, or talc, cannot be procured, the plaster may be used alone ; but it is apt to be calcined by the heat used in burning the animal or vegetable from whence the cast is taken, and to become of too incohering and crumbly a texture : or, for cheapness, Stur- bridge or any other good clay, washed over till it be perfectly fine, and mixed with an equal part of sand, and some flocks cut small, may be employed. Pounded pumice-stone and plaster of Paris, taken in equal quantities, and mixed with washed clay in the same proportion, is said to make excellent moulds for this and parallel uses. Casts of medals, or such small pieces as are of a similar form, may be made in plaster by the me- thod directed for bas relievos. Nothing more is required than to form a mould by laying them on a proper board ; and having surrounded them by a rim made of a piece of card, or pasteboard, to fill the rim with soft tempered plaster of Paris ; which mould, when dry, will serve for several casts. But it is better to form the mould of melted sul- phur; which will produce a sharper impressioa

in tne cast, and be more durable than those made of plaster. The casts are

likewise frequently made of sulphur, which being melted must be treated exactly in the same manner as the plaster. For taking casts from medals, a mixture of brim- stone and red lead has been recommended ; equal parts of these are to be put over the fire in a la- dle, till they soften to the consistence of pap ; then they are kindled with a piece of paper, and stirred for some time. The vessel being after- wards covered close, and continued ou the fire, the mixture grows fluid in a few minutes. It is then to be poured on the medal, previously oiled and wiped clean. The casts are very neat; their color sometimes a pretty deep dark, sometimes a dark gray : they are very durable ; and when soiled may be washed clean in spirit of wine. Dr. Lettsom recommends tin foil for taking off casts from medals. The thinnest kind is to be used. It should be laid over the subject from which the impression is to be taken, and then rubbed with a brush, or a pin, till it has per- fectly received the impression. The tin foil should now be pared close to the edge of the metal, till it is brought to the same circumference ; the me- dal must then be reversed, and the tin foil will drop off into a chip-box or mould placed ready to receive it. Thus the concave side of the foil will be uppermost, and upon this plaster of Paris, prepared in the usual manner, may be poured. When dry, the whole is to be taken out, and the tin foil sticking on the plaster will give a perfect representation of the medal, almost equal in beauty to silver. If the box or mould is a little larger than the medal, the plaster running round the tin foil will give the appearance of a white frame, or circular border ; whence the new made medal will appear more neat and beautiful. Casts may be made likewise with iron, prepared in the following manner : Take any iron bar, or piece of a similar form, and, having heated it red hot, hold it over a vessel containing water, and touch it very slightly with a roll of sulphur, which will immediately dissolve it, and make it fall in drops into the water. As much iron as may be wanted being thus dissolved, pour the water out of the vessel ; and pick out the drops formed by the melted iron from those of the sul- phur, which contain little or no iron, and will be distinguishable from the other by their color and weight. The iron will thus be rendered so fusible, that it will run with less heat than is re- quired to melt lead ; and may be employed for making casts of medals, and many other such purposes, with great convenience and advantage. Impressions of medals, having the same effect as casts, may be made also of isinglass glue by the following means : ××× Melt the isinglass, beaten, as commonly used, in an earthern pipkin, with the addition of as much water as will cover it, stirring it gently till the whole is dissolved : then, with a brush of camel's hair, cover the medal, which siiould be previously well cleansed and warmed, and then laid horizontally on a board or table, greased in the part around the medal. Let them rest afterwards till the glue be properly hardened, and then, with a pin, raise the edge of it, and separate it carefully from the medal ; the cast will be thus formed by the glue as hard

as horn ; and so light, that a thousand will scarcely weigh an ounce. In order to render the relief of the medal more apparent, a small quan- tity of carmine may be mixed with the melted isinglass ; or the medal may be previously coated with leaf gold by breathing on it, and then lay- ing it on the leaf, which will by this means ad- here to it; but the leaf gold is apt to impair a little the sharpness of the impression. Impres- sions of medals may be likewise taken in putty; but it should be the true kind, made of calx of tin, and drying oil. These may be formed in the moulds, previously taken in plaster or sulphur ; or moulds may be made in its own substance, in the manner directed for those of the plaster. These impressions will be very sharp and hard ; but the greatest disadvantage that attends them, is their drying very slowly, and being liable in the mean time to be damaged.

CASTING, in foundry, the running a metai into a mould, prepared for that purpose. See FOUNDRY.

CA'STING NET. A net to be thrown into the water, and not left stationary.

Casting nets did rivers' bottoms sweep. May's Virgil.

CA'STLE, n. CA'STLERY, or CA'STELRY, n. CA'STLET, n. CA'STLED, adj. CA'STELLAIN, n. CA'STELLANY, n. CA'STELLATED, adj. CASTELLA'TION, n. CA'STLE-PUILDER, n. CA'STLE-BUILDING, n.

Goth.kastali; Arm. kestell ;Welsh castell ; Ital. castello ; Lat. cas- tellum, dim. of cas- trum. Castle, says Johnson, is a strong house,fortified against assaults. A castle, says Sherwood, ' is properly a house fur- nished with towers, incom passed by walls CA'STLE-GUARD, n. and ditches; and

CA'STLE-WARD, n. } strengthened by a mount or donjon in the midst ; yet the French courtiers tearme so any house of the king's.' There is another sort of castle, which we call a castle in the air, and the French, chateau en Espagne, which is frequently constructed by men of poetical and sanguine minds. Such construc- tors bear the name of castle-builders, and their occupation that of castle-building. Their activity in fabricating aerial dwellings very often reduces them to the necessity of inhabiting unpleasant earthly abodes. Castellan is the lord, and also the captain-governor, or constable of a castle; castellany is ' a castlewicke, or castleship ; the estate, jurisdiction, or dignitie of a lord castel- lan ;' castelry is the custody or government of a castle. Castellated signifies enclosed within ⬛⬛⬛⬛⬛ building, and also castle-like; and castellation. now obsolete, means to fortify a house so as to convert it into a castle. Castle-guard was one of the feudal tenures ; and castle-ward an impost, laid upon those who resided within a certain distance of any castle, the produce of which was applied to the maintenance of those who held watch and ward within the fortress.

Castled and castle-crowned denote surmounted by a castle.

Now stood hire castel faste by the sea, And often with hire frendes walked she, Here to disporten on the bank an-hie.

Chaucer. Cant. Tu'.fJ.

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The cattle of Macduff I will surprise.

Shaktpeare.

These were but like castles in the air, and in men's fancies vainly imagined. Raleigh.

But while these devices he all doth compare, "None solid enough seemed for his strong castor,

He himself would not dwell in a castle of air, Tho' he'ad built full many a one for his master.

Marvell.

The horses' neighing by the wind is blown, And castled elephants o'erlook the town. Dry den.

The banker cried, ' Behold my castle walls, My statues, gardens, fountains, and canals, With land of twenty thousand acres round ! All these I sell thee for ten thousand pound.' Gay.

When, by the breath of Fortune blown, Your airy castles were o'erthrown, Have I been ever prone to blame, Or mortified your horns with shame ? Id.

Yon castle's glittering towers contain No pit of woe, no clanking chain ,

Nor to the suppliants' wail resound : The open doors the needy bless, v

The unfriended hail their calm recess,

And gladness smiles around. Beattie.

CASTLE, in sea language, denotes an eleva- tion on the deck of a vessel ;

or a part of the deck, fore and aft, raised above the rest. See FORE-CASTLE.

CASTLES, as fortifications, are now almost en-- tirely exploded. See FORTIFICATION. .Par- ticular castles we notice under the names of their respective places.*

CASTLEBAR, a populous market town of Ire- land, capital of the county of Mayo. It carries on a brisk trade, and has a barrack for a troop of horse ; with a charter school capable of re- ceiving fifty children, endowed with two acres of land, rent-free, by lord Lucan ; who has also granted a lease of twenty acres more at a pepper corn yearly. Castlebar is memorable for having been the head quarters of general Lake, in Au- gust 1798, when he was attacked by about 800 French troops and a party of the rebels, who obliged him to retreat with the loss of twenty men and six pieces of canon, and kept posses- sion of the place for twenty days afterwards. It is thirty-five miles north of Galway. Long. 9►► 25′ W., lat. 53►► 45′ N.

CASTLE-CARY, "a remarkable Roman station, about four miles west from Falkirk, on the bor- ders of Stirlingshire, in Scotland. It compre- hends several acres of ground, is of a square form, and is surrounded with a wall of stone and mortar ; all the space within the walls has been occupied by buildings, the ruins of which have raised the earth eight or ten feet above its natu- ral surface; so that the fort now seems like hill-top surrounded with a sunk fence. In 1770 some workmen employed in searching for stones, for the great canal which passes near it, disco- vered several apartments of stone ; and in one of them a great number of stones about two feet in length, and standing erect, with marks of fire upon them, as if they had been employed in supporting some vessel under which fire was put. In a hollow of the rock near this place, 1771, a considerable quantity of wheat, quite black with

age, was found, with wedges and hammers, sup- posed to have been Roman.

CASTLE-CARY, a town in Somersetshire, three miles from Wincanton, and 114 west by south of London. It has a market on Tuesday, and fairs on Midsummer, Lent, Whit-Tuesday, and May 1st. It has a mineral water like that of Epsom.

'CASTLE ISLAND, an island of the United States, situated in the harbor of Boston, three miles from the town. It contains about twenty acres of land, and is fortified ; commanding the entrance of the harbor.

CASTLE-RISING, a borough of Norfolk, which sent two members to

parliament. It was formerly a place of some note, but its market is now disused, its harbour choked up, and the castle, whence its name, is in ruins. It is seven miles north-east of Lynn, and 103 N.N.E. of London.

CASTLETOWN, the capital of trie isle of Man, seated on the south-west part of the island. In the centre of the town, on a high rock, is Castle-Rushen, a magnificent fabric, built of freestone in 960, by Guttred, a prince of the Danish line, who lies buried in the edifice. It is occupied by the governor of the island, and on the side of it are the chancery, offices, and good barracks. The distance of the harbour, however, which is rocky and shallow, renders this place of small importance. Near the town is a fine quarry of black marble, whence the flight of steps leading to St. Paul's cathedral was taken.

CA'STLING, n. An abortive.

We should rather rely upon the urine of a castling's bladder, a resolution of crab's eyes, f►►r a second dis- tillation of urine, as Helmont hath recommended.

Browne's Vulgar Errours.

CA'STOR, n. A beaver. The best kind of hat, made of the beaver's fur. This last sense seems to be falling into disuse.

Like hunted castors conscious of their store, Their waylaid wealth to Norway's coast they bring.

Dryden.

CA'STOR, or CHESTER, are derived from the Sax. ceaster, a city, town, or castle ; and that from the Latin, castrum : the Saxons choosing to fix in such places of strength and figure as the Romans had before built or fortified. ►►► Gibson's Camden.

CASTOR, in astronomy, a moiety of the con- stellation Gemini. It is also called Rasalgenze, Apollo, Aphellan, Avellar, and Anelar.

CASTOR, in zoology, the beaver, a genus of quadrupeds belonging to the order of glires. The fore-teeth of the upper jaw are truncated, and hollowed in a transverse angular direction. The tops of the fore-teeth of the lower jaw lie in a transverse direction; grinders four in each jaw, and the tail depressed. There are two species : viz. C. fiber, the common beaver, with a plain ovated tail, found on the banks of the rivers in Europe, Asia, and America. It has short ears, hid in the fur; a blunt nose ; the fore-feet small, the hinder large ; its length from nose to tail about three feet ; tail about

one. It is from the inguinal glands of this animal that the castor is obtained, where it is contained in Douches.

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Nothing equals the art with which these animals construct their dwellings. They choose a level piece of ground, with a small rivulet running through it. This they form into a pond by making a dam across; first by driving into the ground stakes of five or six feet ir. length, placed in rows, wattling each row with pliant twigs, and filling the interstices with clay, ramming it down close. The side next the water is sloped, the other perpendicular; the bottom is from ten to twelve feet thick, but the thickness gradually diminishes to the top, which is about two or three : the length of these dams is sometimes not less than 100 feet. Their houses are made in the water, collected by means of the dam, and are placed near the edge of the shore. They are buiit on piles; are either round or oval; but their tops are vaulted, so that their inside resem- bles an oven, the top a dome. The walls are two feet thick, made of earth, stones, and sticks, most artificially laid together, and the walls within neatly plastered. In each house are two openings, the one into the water, the other to- wards the land. The height of these houses above the water is eight feet. They often make two or three stories in each dwelling, for the convenience of change in case of floods. , Each house contains from twenty to thirty beavers ; and the number of houses in each pond is from ten to twenty-five. Each beaver forms its bed of moss ; and each family forms its magazine of winter provisions, which consist of bark and boughs of trees. These they lodge under water, and fetch into their apartments as occasion re- quires. Their summer food is leaves, fruits, and sometimes crabs and craw-fish, but they are not fond of fish. To effect these works a community of 200 or 300 assembles ; each bears his share in the labor ; some fall to gnawing with their teeth trees of great size, to form beams or piles ; others roll the pieces along the water; others dive, and with their feet scrape holes in order to place them in ; while others exert their efforts to rear them in their proper places; another party is em- ployed in collecting twigs to wattle the piles with ; a third in collecting earth, stones, and clay ; a fourth is busied in beating and temper- ing- the mortar; others in carrying it on their broad tails to proper places ; and with the same instrument they ram it between the piles, and plaster the inside of their houses. A certain number of smart strokes given with their tails is a signal made by the overseer for repairing to such and such places, either for mending any defects, or at the approach of an enemy ; and the whole society attend to it with the utmost assi- duity. Their time of building is early in sum- mer, for in winter they never stir but to their magazines of provisions, and during that season are very fat. They breed once a-year,

and bring forth at the latter end of the winter two or three young at a birth. Besides these associated beavers, there is a variety called terriers, which either want industry or sagacity to form houses like the others. They burrow in the banks of rivers, making their holes beneath the freezing depth of the water, and work up for a great num- ber of feet. These also form their winter stock of provisions. In hunting the beave/p the savages

*sometimes shoot them, always getting on the con- trary side of the wind ; for they are very shy, quick in hearing, and of a keen scent. This is generally done when the beavers are at work, or on shore feeding on poplar bark. If they hear any noise when at work, they immediately jump into the water, and continue there some time ; and when they rise, it is at a distance from the place where they went in. They sometimes are taken with traps of poplar sticks laid in a path near the water, which, when the beaver begins to feed upon, they cause a large log of wood to fall upon their necks, which is put in motion by their moving of the sticks. The Indians gene- rally prefer this way of taking them, because it does not damage their skins. In winter they break the ice in two places, at a distance from the house, the one behind the other. Then they take away the broken ice with a kind of racket, the better to see where to place their stakes. They fasten their nets to these, which have large meshes, and sometimes are eighteen or twenty yards in length. When these are fixed, they proceed to demolish the house, and turn a dog therein, which, terrifying the beaver, he imme- diately leaves it, and takes to the water ; after which he is soon entangled by the net. The skins are very valuable. See BEAVER. 2. C. hui- dobrius. Chilese beaver. Tail compressed, lanceolate, hairy ; fore-feet lobed, hind-feet pal- mate ; head nearly square ; snout obtuse ; eyes small ; ears short, round ; hair double like C. fiber ; the undermost finer than a rabbit's, and hence valued by furriers; on the back cinereous ; belly whitish. Inhabits Chili, in the deepest parts of lakes and rivers ; fierce ; feeds on fishes, on crabs chiefly; remains long under water; is without the wonderful architecture and castor of C. fiber; produces from two to three young; length about three feet. The soft or short hair very fine, and, like that of C. fiber, used in the manufacture of hats, and certain cloths which have the softness of velvet. In Chili the animal is denominated guillino**

CASTOR and POLLUX, in meteorology, a fiery meteor, which appears sometimes sticking to a part of the ship, in form of one, two, or even three or four balls. When one is seen alone, it is called Helena, which portends the severest part of the storm to be yet behind ; two are de- nominated Castor and Pollux, and sometimes Tyndarides, which portend a cessation of the storm. Castor and Pollux are called by the Spaniards, San Elmo ; by the French, St. Elme, St. Nicholas, St. Clare, St. Helene ; by the Ita- lians, Hermo; by the Dutch, Vree Vuuren. These meteors are rarely seen till the tempest is nigh spent. When the meteor sticks to the masts, yards, &c., they

conclude, from the air's not having motion enough to dissipate this flame, that a profound calm is at hand ; if it flutter about, it indicates a storm.

CASTOR and POLLUX, in pagan mythology, were twin brothers, sons of Jupiter, by Leda, the wife of Tyndarus, king of Sparta. Jupiter being enamoured of Leda, changed himself into a beau- tiful swan, and desired Venus to metamorphose herself into an eagle ; after which the goddess pursued the god with apparent ferocity, and Ju-*

*piter led for :etuge into the arms of Leda, who was bathing in the Eurotas. Jupiter availed himself of his situation, and Leda, who was al Teady pregnant, nine months after brought forth *wo eggs, from one of which issued Pollux and Helena, and from the other Castor and Clytem- nestra. The two former were the offspring of Jupiter, and the latter were supposed to be the children of Tyndarus. Immediately after their birth Mercury carried the two brothers to Pal- lene where they were educated ; and when they arrived at mature age they embarked with Jason to go in search of the golden fleece ; in which expedition both remarkably displayed their cou- rage. Pollux conquered and slew Amyous, in the combat of the cestus, from which he was ever after considered the god and patron of boxing and wrestling ; and Castor distinguished himself in the management of horses. After their return from Colchis they united in the most in- violable friendship, and cleared the Hellespont and neighbouring seas of pirates ; and hence they have always been considered friendly to na- vigation. In a violent storm, during the Argo- uautic expedition, two flames of fire "were seen to play round the heads of the sons of Leda, and the tempest instantly ceased, and the sea was calmed ; from which their power to protect sailors has been more firmly believed, and the two fires, so frequent in storms, have since been known by the name of Castor and Pollux. The two brothers made war against the Athenians to recover their sister Helen, whom Theseus had carried away; and from their clemency to the conquered they obtained the surname of Anaces, or benefactors. They were initiated in the sa- cred mysteries of the Cabiri, and in those of Ceres at Eleusis. Having been invited to a feast when Lynceus and Idas were going to ce- lebrate their marriage with Phoebe and Talaira, the daughters of Leucippus, brother to Tyn- darus, they became enamoured of the two wo- men whose nuptials they were to celebrate, and determined to carry them off and marry them, which so provoked Lynceus and Idas, that a battle ensued, wherein Castor killed the former, and was killed by the latter. Pollux being im- mortal, after killing Idas, to revenge the death of his brother, entreated Jupiter to restore his be- loved Castor, or to be himself deprived of im-*

mortality ; and Jupiter allowed Castor to share the immortality of his brother. Thus, so long as the one was upon earth, the other was de- tained in the infernal regions, and they lived and died alternately every day; or, as others say, every six months. For this act of fraternal love Jupiter translated them into the skies, where they formed the constellation Gemini, one of which stars rises as the other sets. A martial dance, called the Pyrrhic or Castorian dance, was invented in honor of these deities, whom the Cephalenses placed among the D►► Magni, and offered to them white lambs. The Romans also paid them particular honors, on account of the assistance they are said to have given them in an engagement against the Latins; in which, ap- pearing mounted on white horses, they turned the scale of victory in their favor for which a temple was erected to them in the forum.

CASTOREUM, in the materia medica, Castor;

the inguinal glands of the beaver. The ancients had a notion that it was lodged in the testicles ; and that the animal, when hard pressed, would bite them off, and leave them to its pursuers, as if conscious of what they wanted to destroy him for. According to Bouillon La Grange, it con- sists of a mucilage, a bitter extract, a resin, an essential oil, in which its peculiar smell appears to reside, and a flaky crystalline matter, much re- sembling the adipocere of biliary calculi. The best sort of castor comes from Russia. The Russian castor is in large hard round bags, which appear, when cut, full of a brittle, red, liver-co- lored substance, interspersed with membranes and fibres exquisitely interwoven. An inferior sort is brought from Uantzic, and is generally fat and moist. The American castor, which is tht worst of all, is in longish thin cods. Russia castor has a strong disagreeable smell ; and an acrid, bitterish, and nauseous taste. Water ex- tracts the nauseous part, with little of the finer bitter ; rectified spirit extracts this last without much of the nauseous ; proof spirit both : water elevates the whole of its flavor in distillation : rectified spirit brings over nothing. Castor is looked upon as one of the antihysteric medicines : some celebrated practitioners, nevertheless, have doubted its virtues ; and Neuman and Stahl de- clare it insignificant. Experience, however, has shown that the virtues of castor are considerable, though less than they have in general been sup- posed.

CASTOR UIL, in medicine, bee RICINUM.

CASTRAMETA'TION, n. Lat. castrametor. The art or practice of encamping and tracing out camps. By an extension of its original meaning, it is sometimes applied to all the ordinary opera- tions of a campaign.

Their castrametation, even under the most practicable and commodious circumstances of ground, is sometimes ambiguous. Warton.

CA'STRATE, v .) Lat. castro. To geld ;

CASTRA'TION, n. $ to remove the obscene parts of a writing ; to take out any part of a book ; generally, though seldom used in this sense, to take away. The operation of gelding.

Ye castrate the desires of the flesh. Martin.

The largest needle should be used in taking up the spermatic vessels in castration. Sharpe.

CASTRATION. See SURGERY.

CASTRATION OF BRUTES. See GELDING and SPAYING.

CASTRATION OF PLANTS consists in cutting off the antherae, or tops of the stamina, before they have attained maturity, and dispersed their male ' dust This operation has been frequently prac- tised by the moderns, with a view to establish or confute the doctrine of the sexes of plants. See BOTANY. It succeeds principally on those which have their male flowers detached from the female. In such as have both male and female flowers contained within the same covers, this operation cannot be easily performed without en- dangering the neighbouring organs.

CASTREN'SIAN, adj. Lat. castrensis. Be longing to a camp.

CASTRENSIANI, or CASTRENSES, in anti- quity, servants in the Greek emperor's household, who had the care of what related to his table and cloathing.

CASTRES, a large town of France, in the de- partment of the Tarn, and ci-devant province of Lan- guedoc, of which it was recently an episcopal see. It is seated in a fine valley on the Agout, and has some flourishing manufactures of cotton, woollen, silk, and stuffs. In the reign of Louis XIII. Castres was a kind of protestant republic; but in 1629 its fortifications were demolished. Near it are mines of turquoise stones. It was the birth place of Rapin de Thoyras, Abel Boyer, and M. Dacier. It is twenty miles south of Alby, and thirty-five east of Thoulouse. Population

13,727.

CASTRO, or CASTREMONIUM, a duchy and town of Italy, in the States of the Church, be- tween St. Peter's Patrimony, the Mediterranean, Tuscany, the Orvietana, and the river Marta. The duchy is about twenty-five miles in length, and from ten to thirteen broad. The town of Castro is situated near the river Ospada, ten miles from the sea, and was once much larger than at present. In 1649 pope Innocent X. or- dered it to be razed to the ground, in consequence of the inhabitants having murdered the bishop whom he had sent here. The episcopal see was at this time removed to Aquapendente. Twenty- five miles south-west of Orvieto, and fifty-five north-west of Rome.

CASTRO, the ancient Mytilene, a sea-port town on the north-east coast of the island of Metelin, standing on a lofty neck of land, with a harooui on each side. It is about a mile in circumference, and is well built. Here is a castle three quarters of a mile in compass ; and to the west the ruins of the city of Mytilene. The town contains three or four Greek churches. Distant thirty miles south-west of Adramiti. Long. 26►► 28′ E., lat. 39►► N.

CASTRO, the principal town of the island of Lemnos, situated on the west side, and on the site of the ancient Myrina. It is about a mile and a half in circumference, and has a mixed po- pulation of about 3000 Turks and Greeks. The latter have three churches and a bishop. On a high rock in the neighbourhood stands a strong castle.

CASTRUCCIO (Castracani), a celebrated Italian general, born at Lucca, in Florence, in 1284, and left by his parent or parents in a vine- yard covered with leaves, where he was found by a widow lady and a priest her brother. The lady having no children, they resolved to bring him up, and educate him as their own child. He was destined for the priesthood, but was scarcely eighteen when he entered the army, and was made a lieutenant of a company of foot by Fran- cisco Guinigi, of the party of the Ghibelines. He was soon after made general, and became the chief of the party. Those who had been ba- nished from their country fled to him for protec- tion, and promised, that if he could restore them to their estates, they would serve him so effec- tually that the sovereignty of their country should be his reward. He entered into a league with the prince of Milan, and kept his army constantly on foot. The Florentines entered into a war with him, but Castruccio fought his way through them ; and the supreme authority of Tuscany was ready to fall into his hands, when a period

was put to hi,? life. In May, 1328, he gained a complete victory over his enemies, after which he was seized with an ague, which carried him off in a few days, in the forty-fourth year of his age.

CASTRUM DOLORIS, in writers of the middle age, denotes a catafalco, or

a lofty tomb of state, erected in honor of some person of eminence, usually in the church where his bodyis interred; and decorated with arms, emblems, lights, &c.

CASU COJSSIMILI, in English law, a writ of entry granted where a tenant, by courtesy or for life, aliens either in fee, in tail, or for the term of another's life. It is brought by him in rever- sion against the person to whom such tenant does so alien, to the prejudice of the reversioner in the tenant's life time.

CASU PROVISO, a writ of entry founded on the statute of Gloucester, where a tenant in dower aliens the lands she so holds in fee, or for life ; and lies for the party in reversion against the alienee.

CA'SUAL, adj. ~\ Fr. casuel ; Lat. casus. CA'SUALLY, adv. f All these words signify CA'SUALNESS, n. ►► dependence upon accident, CA'SUALTY, n.) chance, uncertainty; some- thing that does not arise from a set pr.rpose, but springs from a momentary and unexpected cause. A casualty is a thing that happens suddenly and unforeseen; a mischance that produces unnatural death.

The revenue of Ireland, both certain and casual, did not arise unto ten thousand pounds. Duvies on Ireland.

That which seemeth most casual aud subject to for- tune, is yet disposed by the ordinance of God. Raleigh,

With more patience men endure the losses that befal them by mere casualty, than the damages which they sustain by injustice. /rf.

Wool new shorn, laid casually upon a vessel of ver- juice, had drank up the verjuice, though the vessel was without any flaw. Bacon.

Go, bid my women Search for a jewel, which too casually Hath left my arm. i-hakapeare.

Builds in the weather on the outward wall, Even in the force and road of casualty. Id.

Whether found where casual fire Had wasted woods, on mountain, or in vale, Down to the veins of earth. Milton.

Most of our rarities have been found out by casual emergency, and have been the works of time and chance, rather than of philosophy. Glanville,

The commissioners entertained themselves by the fire side in general and

casual discourses. Clarendon.

We find one casualty in our bills, of which, though there be daily talk, there is little effect.

Grant's Bills of Mortality.

That Octavius Casar should shift his camp that night that it happened to be took by the enemy, was a mere casualty ; yet it preserved a person who lived to establish a total alteration of government in the imperial city of the world. South.

I should have acquainted my judge with one advan- tage, and which I now casually remember. Dryden.

It is observed in particular nations, that, within the space of two or three hundred years, notwithstanding all casualties, the number of men doubles.

Burnct's Theory.

CAT

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CAT

The expences of some of them always exceed their certain annual income ; but seldom their casual sup- plies. I call them casual, in compliance with the common form. Atterbury.

He that resigns his peace to little casualties, and suffers the course of his life to be interrupted by for- tuitous inadvertencies or offences, delivers up himself to the direction of the wind, and loses all that con- stancy and equanimity which constitute the chief praise of a wise man. Johnson. Rambler.

CASUARINA, in botany, a 'genus of the mo- nandria order, and monoecia class of plants : MALE CAL. of the amentum : COR. a bipartite scale : FEMALE CAL. of the amentum : COR. none : the STYL. bipartite : fruit, a cone. Species, five : three from the South Sea islands, and two from the East Indies.

*CA'SUIST, n. s. ˆ Fr. casuiste ; from CASUI'STICAL, adj. ˆLat. casus. A casuist is CA'SUISTRY, n. j one who studies, and gives judgment upon, cases of conscience ; and who, generally, is too prone to deal in dangerous subtleties, and * to divide a hair twixt north and north-west side.' Pascal*

has exposed this race of beings, and their shameful casuistry, in a masterly manner, in his Provincial Letters.

The judgment of any casuist, or learned divin< >, concerning the state of a man's soul, is not sufficient to give him confidence. South.

What arguments they have to beguile poor simple unstable souls with, I know not, but surely the prac- tical, casuistical, that is, the principal vital part of their religion savours very little of spirituality. It,

You can scarce see a bench of porters without two or three cawists in it, that will settle you the rights of princes. Addison.

Who shall decide when doctors disagree, And soundest casuists doubt, like you and me. Pope.

One only doubt remains, full oft I've heard, By casuists brave and deep divines averred, That 'tis too much for human race to know, The bliss of heaven above, and earth below. Id.

This concession would pass for good casuistry in these ages. Id. Odyssey. Notes.

Morality, by her false guardians drawn,

Chicane in furs, and casuistry in lawn. 11.

CASUISTS. Escobar has made a collection of the opinions of all the casuists before him. M. Le Fevre, preceptor of Louis XIII. called the books of the casuists the art of quibbling with God. Mayer published a bibliotheca of casuists, containing an account of all the writers on cases of conscience, ranged under three heads; the first comprehending the Lutheran, the second the Calvinist, the third the Romish, casuists.

CASUISTRY is drawn partly from natural reason or equity ; partly from authority of Scripture, the canon law, councils, fathers, &c. To casuistry belongs the decision of all difficulties arising about what a man may concern himself, and law- fully do or not do ; what is sin or not sin ; what things a man is obliged to do, to discharge his duty ; and what he may omit without breach of it. Professors of casuistry, however, have con- fined themselves to no rule of morals which they have not instructed mankind to evade. The Jesuits held the foremost rank in this long-famous study : until the Lettres Provinciales of Pascal, swept their whole system into the dust. A useful

English translation of them was given to the public a few years since, by

Dr. Cox.

CASUS OMISSIONIS, in Scots law. In action proving the tenor of obligations inextinguishable by the debtor's retiring or cancelling them, it is necessary for the pursuer, before he is allowed a proof of the tenor, to condescend upon such a casus omissionis, or accident by which the writing was destroyed, as shows it was lost while in the writer's possession.

CASWELL, a county of North Carolina, in Hillsborough district ; bounded on the east by Person; on the north by Virginia: on the west by Guilford, and on the south by Orange county. Leesburgh is the chief town.

CAT, n. 1 Fr. chat; Ital.

CAT-IN-PAN, n. gat to; Span, aud

CAT-O'-NINE TAILS, n. Port.gato; Arab

CAT'S PAW, n. kith ; Per. katt ;

CAT-EYED, adj. Heb. kat ; Turk.

CAT-A-MOU'NTAIN, n & adj. \kady ; Rus. kote ;

C A'TCAL, and f Pol . kote ; Welsh ,

CATPIPE, n. cath; Ic. cat; Ar.

CATERWA'UL, v. caz ; Goth, and

CA'TLIKE, adj. all its dialects,

C A'TISH, adj kat, or katze ; Lat.

CA'TLING, n. j catus. A domes-

tic animal that catches mice. See FELIS. A cat-o'-nine tails is a whip with nine lashes, used to punish criminals. To turn cat-in-pan, sup- posed to be corrupted from cate in pan, is to change sides ; but the quotation from Bacon shows that it had formerly another meaning. Cat's paw is a trivial expression, signifying the tool of another person. Cat-a-mountain is a fierce animal, resembling a cat; and a catcal is a shrill, squeaking instrument, once much em- ployed by critics, in the play-house,- to condemn plays. Catling means a young cat ; catgut ; a dismembering knife used by surgeons ; and the down growing about walnut trees.

full oft

Have I, upon this benche, faren full wele ??? Here have I eten many a merry mele. And fro the bench he drove away the cot, And laid adoun his potent and his hat, And eke his scrip and set himself adoun.

Chaucer. Cant. Tales. 'Twas you incensed the'rabble : Cats that can judge as fitly of his worth, As I can of those mysteries, which heaven Will not have earth to know. Shakspeare.

Thrice the brindcd cat hath mewed. Id.

A lioness, with udders all drawn dry, Lav couching, head ou ground, with cat-like watch.

Id.

What musick there will be in him, after Hector has knocked out his brains, I know not. But I am sure none ; unless the fiddler Apollo get his sinews to make catlings of. Id.

There is a cunning which we, in England, call the turning of the cat in the pan ; which is, when that which a man says to another, he lays it as if another had said it to him. Bacon.

What a caterwauling do you keep here ! If my lady has not called up her steward Malvolio, and bid him turn you out of doors, never trust me. Id.

Some songsters can no more sing in any chamber but their own, than some clerks can read in any book but their own ; put them out of their road once, and they are mere cat-pipes and dunces. V Estrange

CATACOMBS.

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Was no dispute between

The caterwauliruj brethren ? Hudibras.

Ybu dread reformers of an impious age, You awful cat o' nine tails to the stage, This once be just, and in our cause engage.

Prologue to Vanbrugh's False Friend. If cat-eyed, then a Pallas is their love ; If freckled, she's a party-colored dove. Dryden. The black prince of Monomotapa, by -whose sides were seen the glaring cat-a-mountain, and the quill- darting porcupine. Arbuthnotand Pope's Scriblerus. A young lady, at the theatre, conceived a passion for a notorious rake that headed a party of catcals.

Spectator,

Three cat-calls be the bribe Of him whose chattering shames the monkey tribe.

Pope.

Have I not sat with thee full many a night, When dying embers were our only light, When every creature did iu slumbers lie, Besides our cat, my Colin Clout and I ? No troublous thoughts the cat or Colin move, While I alone am kept awake by love. Gay.

Let cats and catlings of ignoble line, Slumber in bee-hive chairs, in dairies dine.

Huddisford.

Ye sage divines, if so concise our span, Who for preferment would turn cat-in-pan ? Since clergymen and cats one fate betides, And worms shall eat their sermons and their hides.

Id,

There, like Alcena's, shall Grima'kin's son In bliss repose, his mousing labours done ; Fate, envy, curs, time, tide, and traps, defy, And caterwaul to all eternity Id.

CAT, in sea affairs, a ship employed in the coal trade, formed from the Norwegian model. It is distinguished by a narrow stern, projecting quarters, a deep waist, and by having ornamen- tal figures on the prow. These vessels are gene- rally built remarkably strong, ana carry from 400 to 600 tons, or in the language of the mariners, fiom twenty to thirty keels of coals. Cat is also a sort of strong tackle, or combination of pullies, to hook and draw the anchor perpendicularly up to the cat-head.

CAT, in zoology. See FELIS. CATABATT1ST, Gr. Kara and /3a7m►►w. An opponent, or abuser, of baptism, particularly of that of infants.

CATABASION, from xara^amnv, to descend ; in the Greek church, a place under the altar wherein the relics are kept.

CATABAW, a river of the United States, which rises at the foot of the Apalachian Moun- tains, in North Carolina ; thence runs east for nearly forty miles ; then turns gradually south, af- terwards south by east, and passing into South Carolina, where it obtains the name of the Wa- teree, afterwards unites with the Congaree, and forms the Santee.

CATABAW, a town of South Carolina, in the north part of Camden district, a few miles east of the river of this name adjoining the divisional line of north Carolina, near the main road lead- ing from Camden to Charlotte, about fifty-six miles north from Philadelphia.

The CATABAW INDIANS were a nation of North Americans, inhabiting the above town and disrrjcf . They were for many years at war with

the Six Nations, and were recKoned the most formidable of their enemies. They have often penetrated into their country, which it is said no southern or western tribe ever did.

CATABULENSES, in the middle age, a sort of ministers of the empire, appointed to conduct the public carriage from one catabulum, or stage, to another. The catabulenses also had the charge of conveying the public corn to and from the mills ; whence, in the Theodosian code, they are joined with bakers.

CATABULUM, in the middle age, a kind of stable, wherein beasts, especially of burden and carriage, were kept for the public service. The ancient Christians were sometimes condemned to serve in the catabula, that is to work at the cleaning of them, attending the beasts, &c.

CATACHRE'SIS, n. 1 From Karaxp□□?

CATACHRE'STICAL, adj. } abuse. The catachre- sis is, however, not always a fault ; it is even sometimes a great beauty. It is a trope, which borrows the name of one thing to express another ; and is censurable only when it is ungracefully and violently employed. When, in describing the descent of Raphael, Milton, instead of using the word flies, says, that he ' sails between worlds and worlds,' the catachresis gives addi- tional animation. Catachrestical is forced, far- fetched.

I ask, if now and then he does not offer at a cata- chresis, wresting and torturing a word into another meaning. Dryden,

A catachrestical and far-derived similitude it holds with men, that is, in bifurcation.

Browne's Vulgar Errours.

CATACLASIS, from KaraieXau>, I distort ; in medicine, denotes a disorder of the eye, wherein the eyelid is inverted by a convulsion of the muscles that close it.

CATACLYSM, old Fr. catadismei Karu- K\u

The opinion that held these cataclysms, and empy- roses universal, was such as held that it put a total consummation unto things in this lower world. Hale.

CATACOMBS, n. From Kara and K0[ij3os, a hollow or cavity. Subterraneous cavities for the burial of the dead, of which there are a great number about three miles from Home, supposed to be the caves and cells where the primitive Christians hid and assembled themselves, and where they interred the martyrs, which are accord- ingly visited with devotion. Chambers.

On the side of Naples are the catacombs, which must have been full of stench, if the dead bodies that lay in them were left to rot in open niches. Addison.

CATACOMBS are subterraneous caves used for tombs, and sometimes form streets of tombs. They have been constructed of various forms by all ancient nations ; but those of Egypt, Naples, Syracuse, and Paris, may be considered as the most celebrated.

Before we enter into any detailed account of the Egyptian catacombs, it will be but just to furnish some notice of the labors of the dis- tinguished and persevering individual to whom we are principally indebted for our knowledge of these vast funeral relics. If the late Mr. Bel-

ront was less critically, or less profoundly, versed in the science and literature of antiquity, than some other of those European travellers who have busied themselves in exploring the wonders of Egypt, he was in native shrewdness of obser- vation, enterprising perseverance, and presence of mind in new and untried situations, inferior to none, and superior to most. It was he who found access to that pyramid (of Cephrenes) whose interior chambers the mercenary cupidity, and the antiquarian curiosity, of centuries had sought for in vain ; and it was Belzoni who, not merely discovered and penetrated the subter- ranean mysteries of a Theban tomb, or rather a sepulchral palace, or perhaps temple, which had been closed for thousands of years ; but actually, though possessed of very limited resources, save those of his own ingenuity, effected its virtual transportation from the capital city of the ancient world, to the metropolis of the modern.

Our space will only permit a notice of Bel- zoni's principal discovery, namely, the tomb of ' Psammis the Powerful,' which may assuredly be

considered as the chef d' oeuvre of ancient se- pulture. It is situated in the neighbourhood of Beban el Malook; and Belzoni, when he had passed through the external aperture, found him- self in a beautiful hall, twenty-seven feet six inches, by twenty-five feet ten inches, in which were four pillars, three feet square. At the end of this room, and opposite the aperture, is a large door, from which three steps lead down into a chamber with two pillars. This is twenty- eight feet two inches, by twenty five feet six inches. The pillars are three feet ten inches square. Returning into the entrance-hall, he saw on the left of the aperture a large stair- case, which descended into a corridor ; this is thirteen feet four inches long, seven and a half wide, and has eighteen steps. At the bottom he entered a beautiful corridor thirty-six feet six inches, by six feet eleven inches. Belzoni per- ceived that the paintings became more perfect as he advanced farther into the interior. They retained their gloss, or a kind of varnish over the colors, which had a beautiful effect ; the figures being painted on a white ground. At the end of this corridor he descended ten steps into another, seventeen feet two inches, by ten feet five inches. Proceeding onwards, through a series of apartments, Belzoni says that the treasure he found in the centre of the principal saloon had not ' its equal in the world.' The sarcophagus to which he alludes is now in the British Museum, and is formed of the finest oriental alabaster, nine feet rive inches long, and three feet seven inches wide ; its thickness is only two inches, and it is transparent when a light is placed in the inside of it. It is minutely sculptured within and without with several hun- dred figures, which do not exceed two inches in height. The cover was not there, it had been taken out and broken into several pieces, which were found in digging before the first entiance. The sarcophagus was over a staircase in the centre of the saloon, which pommunicated with a subterraneous passage leading downwards, three hundred feet in length. At the end of this passage was found a great quantity of bats' dung.

which choked it up. One hundred feet from the entrance was a staircase in good preserva- tion, but the rock below had changed its sub- stance from a beautiful solid calcareous stone into a kind of black rotten slate, which crumbled into dust only by touching. Belzoni, in further describing the tomb, says ' this subterraneous passage proceeded in a south-west direction through the mountain ;' and he adds, ' I measured the distance from the entrance, and also the rocks above, and found that the passage reaches nearly half way through the mountain to the upper part of the valley. I have reason to sup- pose that this passage was used to come into the tomb by another entrance, but this could not be after the death of the person who was buried there, for at the bottom of the stairs just under the sarcophagus a wall was built, which entirely closed the communication between the tomb and the subterraneous passage. Some large blocks of stone were placed under the sarcophagus horizontally, level with the

pavement of the sa- loon, that no one might perceive any stairs or subterranean passage was there. The door-way of the side-board room had been walled up, and forced open, as we found the stones with which it was shut, and the mortar in the jambs. The staircase of the entrance-hall had been walled up also at the bottom, and the space filled with rub- bish, and the floor covered with large blocks of stone, so as to deceive any one who should force the fallen wall near the pit, and make him sup- pose that the tomb ended with the entrance-hall and the drawing-room. The tomb faces the north-east, and the direction of the whole runs straight south-west.'

The tombs of Gournou are not far from Car- nak. These sepulchres are excavated in all di- rections in the rocks, but generally with the entrance facing the east, as the chain of these mountains runs from north to south- They are intermixed of all sizes, and some of them have porticoes hewn out of the rocks before the en- trance ; but generally they are within the outer door, which is mostly adorned with well-finished figures and hieroglyphics, and generally the watchful fox is represented at each side of the inner door leading to the grotto. Some of them are very extensive, and run down in various di- rections, something like winding stairs, having on each side, at regular distances of a few paces, small chambers to deposit the mummies. Some have deep shafts, or wells, with excavations on each side of the shaft to receive the mummies ; and at the bottom of the wells are passages lead- ing to smaller apartments, with endless winding recesses.

Upper Egypt also contains some very remark- able catacombs. They are situated in the neigh- bourhood of the great canal, and consist of gal- leries extending a considerable way under ground, or rather into the rock. They were probably at first the quarries, whence the stones necessary for building the houses of Alexandria were ex- tracted ; and after having furnished the people of the country with materials for their habitations during their lives, they become their last abode after death. Though of immense extent, they did not require laborious efforts, the stratum of

stone being calcareous and soft. It was, no doubt, on account of the softness of the rock that the ancient Egyptians covered the inside of the galleries with a kind of mortar, which has ac- quired a great degree of solidity, and is not easily broken. The great part of these subter- raneous passages have fallen in. In the small number of those in which it was still possible to penetrate, was perceivable, on each side, three rows of tombs placed one above another. Their longest sides form an inclined plane inwards, so that the bottom of the tomb is much nar- rower than the upper

part. At the extremity of some of these galleries there are separate chambers with their tombs, set apart, no doubt, for the interment of a family, or of a particular class of citizens.

If we may believe the Arabs, the catacombs have a subterraneous communication with the pyramids of Memphis. This opinion of their immense extent appears exaggerated. It does not, however, go beyond the other gigantic works of the Egyptians, and might be worth the trouble of verification. It is more certain that they ex- tend as far as the sea at the head of the old port. The three grottoes, or cavities, hollo wed out of the rock by the sea side, which the Egyptians have honored, rather improperly, with the name of Cleopatra's baths, appear to be a continuation of them. See EGYPT and AFRICA.

The catacombs ot Syracuse must now be noticed. These excavations commence beneath the church of St. John, and the primitive Chris- tians are supposed to have assembled here se- cretly in times of persecution, and also to have interred their brethren in these vaults. These subterraneous alleys cross each other in many directions, and are hewn with more care and regularity than the catacombs of St. Januarius at Naples. On each side of the walls are recesses cut into the rock, and in the floor of these cavi- ties coffins of all sizes have been hollowed out. In some places there are twenty troughs, one behind another ; skeletons have been often found in them, with a piece of money in their mouths. Swinburne says that he saw ' a gold coin of the time of Icetas, that was just taken out of the jaws of a body found in a tomb here.'

Naples also boasts its catacombs, though they are in no shape comparable to those already noticed. There is a curious circumstance con- nected with the public exhibition of the dead in these vaults, which deserves to be noticed. It is thus described by Swinburne : ??? ' It is a cus- tom here, on All Souls Day, to throw open the charnel-houses, lighted up with torches, and decked out with all the flowery pageantry of May-day ; crowds follow crowds through these vaults to behold the coffins, nay the bodies, of their friends and relations ; the floors are divided into beds like a garden ; and under these heaps of earth the corpses are laid in regular succes- sion ; the place is perfectly dry, for the soil is rather a pounded stone than earth, and parches up the flesh completely in a twelvemonth ; when that period is elapsed, the body is taken up, dressed in a religious habit, and fixed like a statue in a niche ; many retain a horrid resem- blance to what they were when animated ; and

some show strong marks of agony in their dis- torted features.' They are much better preserved than the mummies of Toulouse, which pass for such singular curiosities.

The Parisian catacombs are of a comparatively modern date; and their employment as burial places appears to have originated in a ‘ royal ordinance, dated 1777.’ Prior to that time they had been little more than a series of rudely con- structed excavations or quarries, from whence the stone for the erection of Paris had been raised. The quarries had been worked from time immemorial without any system, every man working where he would, till it became danger- ous to work them farther ; and it was only known, as a popular tradition, that they extended under great part of the city, till the year 1774, when some alarming accidents roused the attention of the government. They were then properly sur- veyed, and plans of them taken, and the result was the frightful discovery that the churches, palaces, and most of the southern parts of Paris were undermined, and in imminent danger of sinking into the pit below them. A special commission was appointed to direct such works as might be required. The necessity of the undertaking was fully shown the very day that the commission was installed ; a house in the Rue d’ Enfer having that day sunk down eight- and-twenty metres below the level of its court- yard. Engineers were now employed to examine the whole of the quarries, and prop the streets, churches, palaces, and buildings which were in danger of being engulfed. One set of work- men were employed in this curious service ††† another in exploring the labyrinth of excava- tions, some of which were under the others, and opening galleries between them, that the extent of the peril might be known ; and, to prevent future evils of the same kind, all the quarries which were still in use in the environs of Paris, were placed under the inspection of the commissioners, that they might be worked upon some safe system. Never had any men a more arduous or more important commission. The pillars which had been left by the quarriers in their operations, without any regularity, were, in many places, too weak for the enormous weight above ; and, in most places, had themselves been undermined, or perhaps originally stood upon ground which had previously been hollowed. In some instances they hao given way, in others the roof had dipt and threatened to fall ; in others again, great masses had fallen in. The great aqueduct of Arcueil passed over this treacherous ground ; it had already suffered some shocks, and if the quarries had continued to be neglected, an ac- cident must sooner or later have happened to this water-course, which would have cut off the supply from the fountains of Paris, and have filled the excavations with water.

Such was the state of the quarries when the commission was appointed in 1777, under M. Charles Guillaumot, as inspector-general. The thought of converting them into a necropolis originated with M. Lenoir, lie-.tenant-geneial of the police ; and the proposa . for removing the dead from St. Innocent’s was the more easily entertained, because a recep’acle so convenient

and so unexceptionable in all respects, was ready to receive them. That part of the. quarries under the Plaine de Mont Souris was allotted for this purpose; a house known by the name of La Tombe Isoire, or Isound (from a famous rob- ber who once infested that neighbourhood), on the old road to Orleans, was purchased with a piece of ground adjoining ; and the first opera- tions were to make an entrance into the quarries by a flight of seventy-seven steps (the depth be- ing seventeen metres), and to sink a well from the surface, down which the bones might be thrown. Meantime the workmen below walled off that part of the quarries which was designed for the great charnel-house, opened a communi- cation between the upper and lower vaults, and built pillars to prop the roof. When all these necessary preliminaries had been completed, the ceremony of blessing and consecrating the in- tended catacombs was performed with great so- lemnity ; and on that same day the removal from the cemetery began.

The catacombs, during the revolution, were so much neglected, that in many places the soil had fallen in, and choked the communications ; water came in by nitration, the roof was cracked in many places, and threatened fresh downfalls, and the bones themselves lay in immense heaps, mingled with the rubbish, and blocking up the way. It was not till 1810 that M. de Thury was enabled to pursue his plans ; and the workmen then had to make galleries through the bones themselves, which in some places lay above thirty yards thick. It was necessary also to provide for a circulation of air, the atmosphere not having been improved by the quantity of animal remains which had been introduced. The manner in which this was effected is singularly easy. The wells which supplied the houses above with water were sunk below the quarries, and formed in those excavations so. many round towers. M. de Thury merely opened the masonry of these walls, and luted into the opening the up- per half of a broken bottle, with the neck out- wards : it is only necessary to uncork two, three, or more of these bottles when fresh air is wanted. Channels were made to carry off the water, steps constructed from the lower to the upper excava- tion, pillars built in good taste to support the dangerous parts of the roof, and the skulls and bones built up along the walls : those which bore marks of disease, or were otherwise remarkable for their formation, were set apart, and arranged in a cabinet. The whole range was then fitted up with ornaments and inscriptions. Among the ornaments was a fountain, in which four golden fish are imprisoned. They appear to have grown in this unnatural situation, but they have not spawned ; three of them have retained their bril- liant

color, but some spots have appeared upon the fourth ; and it seems probable that exclusion from light may produce, though more slowly, the same effect upon them that it does upon vegetables.

The spring which rises here was discovered by the workmen, the basin was made for their use, and a subterraneous" aqueduct carries off the waters. M. de Thury named it at first the

*' Spring of Oblivion,' and inscribed over it these lines of Virgil : ***

Animas quibus altera fato Corpora debentur, Lethasi ad fluminis uadaia Secures laticcs et longa oblivia.potant.

*This inscription has very properly been changed for the most apposite text which could have been found in Scripture : *** Whosoever drinketh of this water shall thirst again : but whosoever drinketh of the water that I shall give him shall never thirst : but the water that I shall give him shall be in him a well of water, springing up into everlasting life.'*

Amongst the other objects of attention in these subterranean vaults, may be particularly enume- rated the mineralogical cabinet, which contains specimens of the strata of the soils of the cata- combs ; the collection of diseased bones ; the re- volutionary tombs and obelisks, and the fountain of the Woman of Samaria.

CATACOUSTICS, from Kara and aicsw, I hear; called also cataphonics, the science of reflected sounds, or that part of acoustics, which considers the properties of echoes. See ACOUS- TICS.

*CATADIOPTRIC, or CATADIOPTRICAL, from Kara, against, and SioirTffiai, to k**ok through ; belonging to a reflecting telescope.*

CATADROMUS, from Kara and Spopoc, a race, in antiquity, a stretched sloping rope in the theatres, down which the Funambuli walked to show their skill. Elephants were also taught to run down the catadromus. Suetonius speaks of the exploit of a Roman knight, who passed down the catadromus, mounted on an elephant's back.

CATAFALCO, Ital. a scaffold, a decoration of architecture, sculpture, and painting; raised on a timber scaffold, to show a coffin or tomb, in a funeral solemnity.

CATAGMATICK, adj. xara^a, a fracture. That which has the power of consolidating the parts.

I put on a catagmatich emplaster, and, by the use of a laced glove,

scattered the pituitous swelling, and strengthened it. Wiseman.

CATAGRAPIIA, in antiquity, denote oblique figures or views of men's faces, answering to what the moderns call profiles.

CATAHOOCHEE, a large navigable river of the United States, in Georgia, which rises in the Apalachian mountains, and running south through an extensive and fertile country, belong- ing to the Creek Indians, unites with the Flint in lat. 31►►, and forms the Appalachicola.

CATALE'PSIS,and> KaraX^. A lighter

CATALEPSY, n. 5 species of the apoplexy

or epilepsy.

There is a disease called a catalepsis, wherein the patient is suddenly seized without sense or motion, and remains in the same posture in which the disease seizeth him. Arbuthnot.

And three fat mice slew for his second course ! But, while the third his grinders dyed with gore, Sudden those grinders closed ►►► to grind no more ! And (dire to t^ell) commissioned by Old Nick, A cutalepty made an end of Dick. Hudduford.

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CATALEPSIS, from icara\?/^ie, to seize or hold ; catalepsy, a sudden suppression of mo- tion and sensation ; the body remaining in the same posture that it was in when seized. See MEDICINE.

CATALOGUE, v. & re. f Fr. catalogue ,

C,A'TALOGIZE, v. \ Ital. and Span, ca-

talogo ; Lat. catalogus ; icaraXoyoc- A roll, list, register, or enumeration of particulars ; a register of things one by one.

In the catalogue ye go for men ; Showghes, water rugs, and demy wolves, are cleped All by the name of dogs. Shakspeare.

Make a catalogue of prosperous sacrilegious persons, and I believe they will be repeated sooner than the alphabet. South.

In the library of manuscripts belonging to St. Lau- rence, of which there is a printed catalogue, I looked into the Virgil which disputes its antiquity with that of the Vatican. Addison.

Studied, deliberated, catalogued files of murder.

Burke. Dick, premier cat upon the catalogue

Of eats that grace a caterwauling age,

Scared by fate's cat-call quits this earthly stage !

Huddesford.

CATALONIA, a mountainous province on the north-east of Spain, bounded on the north by the Pyrenees, on the east by the Mediter- ranean, on the south by Valencia, and on the west by Arragon. It is about forty-four leagues long, and forty broad. The mountains are rich in iron, marble, lead, and coal, as well as in copper, tin, antimony, and other minerals. There are also found occasionally here topazes, ame- thysts, colored crystals, and other stones. The rivers and mineral waters of Catalonia are also numerous, and almost all flow into the Ebro. Irrigation is here carried on systematically, and the agriculture, as well as the general state of the manufactures and commerce, is superior to that of any part of Spain. The principal objects of culture aie vines, on the largest scale; olives, silk, hemp, and flax ; a few flocks of sheep are also raised. The wool produced is not above 30,000 cwt. annually. Another point in which Catalonia affords a striking contrast to other pro vinces of Spain, is in the abundance of its plan- tations. Elms, poplars, pines, spread over a variety of situations ; and cork trees are so abundant, that this province exports this useful commodity to almost every part of Europe. The inhabitants are in number about 900,000, of which about 12,500 belong to the ecclesiastical profession or to monasteries ; 7,000 come under the description of students (1020 to the law), while the titled class, or noblesse, are computed at 1266; and the number of servants at 20,963. The province contains one university, one arch- bishopric, one grand priory, seven bishoprics, sixteen commanderies of the order of Malta, and above 300 religious establishments. Its capital is Barcelona ; the other principal towns are Tarragona, Tortosa, Lerida, Gerona, Figueras, and Manresa. A great trade was formerly car- ried on between Catalonia and the American colonies of Spain, and the commerce of the pro- vince is still brisk with Italy, the south of France F.ngland, Holland, and the north of Europe , the exports consist in produce of the province,

and the imports in manufactures, corn, and salt fish. The inland traffic is

chiefly with Arragon, which yields the Catalonians corn, wool, and silk. The principal manufactures are woollens, silks, and cottons, hats, leather, gunpowder, and hardware. The roads are said to be much neg- lected.

Catalonia was that part of Spain which first attracted the attention of the Romans, anl first received the power and miseries of their sway. It was taken from them by the Goths in 470 ; from the latter by the Moors towards the yeaf 712 ; and from them by the French in the be-‘ ginning of the ninth century. Barcelona now became the capital of a territory, which corres- ponded in limits with the present province ; and the last of its counts, Raymond V., ascended the throne of Arragon in 1137. The family then extended its dominion over the islands of Major- ca and Minorca, the kingdom of Valencia, and finally the whole Spanish monarchy. The counts of Barcelona divided Catalonia into viguieries, which were governed by officers called viguiers. During the war of the succession, the inhabitants joined the standard of the archduke Charles ; but, when the imperial troops had evacuated Spain, they were, after an obstinate resistance, obliged to yield to Philip V. The province then lost its privileges and peculiar laws, in punish- ment for its turbulent spirit, and became govern- ed like the other parts of Spain.

*The Catalonians are haughty and authori- tative, looking down upon the rest of their countrymen as decidedly their inferiors; they regard the Castilians, in particular, with aversion ; and bear towards the French an invincible ani- mosity. They are distinguished, it is said, on the other hand, for their honesty, steadiness, and diligence. The principal families in Madrid generally have Catalans at the head of their af- fairs; and they are scattered, as muleteers and callessieros, over every province of the kingdom. Laborde has well described their general character. ‘ The desire of wealth/ says he, * makes them industrious ; emula- tion makes them active, leads them to every part of the word, and enables them to brave the perils of long voyages ; and glory blinds them to every kind of danger. When they love, they love warmly; but their hatred is implacable, and they have rarely sufficient strength of mind to stifle their resentment. But we are not, there- fore, to imagine the Catalan disposed to mischief; he is not so naturally. He works himself into a rage, and is loud, but seldom commits acts of violence. In a political point of view, the Ca- talan is restless and factious ; he is for ever sighing for a liberty, or rather independence, which he has often attempted to acquire, and which has so frequently impelled him to take up arms. But, as devoted in his attachment, as ter- rible in his hatred, he is ready to make every sacrifice for a prince who knows how to gain his love.’ This country formed the principal theatre of the revolutionary war against Buona- parte.*

CATAMENIA, in medicine, from Kara, according to, and /iijj/, the month,

menses. The monthly discharge from the uterus of females

after about the age of fourteen till near fifty. Although it has been much disputed, yet there can be but little doubt that it is a natural secre- tion, and not a rupture of the arteries in the uterus. During pregnancy, and while giving suck, if the person is in good health, the menses cease to flow. The discharge is commonly from five to six ounces, and last from three to five clays. The use of this discharge is to lubricate the uterus, in order to render it fit for the recep- tion of the foetus, and after they have ceased, women rarely, if ever conceive.

CATANA, or CATINA, in ancient geography, a town of Sicily, opposite to / Etna, on the south- east, one of the five Roman colonies ; anciently built by the people of Naxos, seven years after the building of Syracuse, A. A. C. 728. It was the birth place of Charondas, the famous lawgiv- er. It is now called Catanea.

CATANANCHE, Candia lion's foot: a ge nus of the polygamia aequalis order, and syngen- esia class of plants; natural order forty-ninth, composite : CAL. imbricated ; receptacle palea- ceous; the pappus furnished with awns by cali- culus of five stiff hairs. There are three species, of which the most remarkable is the C. cerulea which sends out many long, narrow, hairy leaves which are jagged on their edges like those of the buckshorn plantain, but broader. Each of the branches is terminated by single heads of flowers, of a fine blue color. It is a perennial plant, and may be propagated either by slips or seeds. The seeds ripen in August.

CATANIA, or CATANEA, a city of Sicily, seated on the gulph, near the foot of Mount R.I- na. It was founded by the Chalcidians, soon after the settlement of Syracuse, and enjoyed great tranquillity till Hiero I. expelled the citi- zens ; and, after replenishing the town with a new stock of inhabitants, gave it the name of jˆEtna : immediately after his decease, it regained its ancient name, and the citizens returned to it. Catania fell into the hands of the Romans, among their earliest acquisitions in Sicily, and became the residence of a prater. It was adorned with sumptuous buildings of all kinds, and every convenience was procured to supply the natural and artificial wants of life. It was destroyed by Pompey's son, but restored with superior magnificence by Augustus. The reign of Decius is famous in the history of this city, for the martyrdom of its patroness St. Agatha. On every

emergency her intercession is implored. She is piously believed to have preserved Cata- nia from being overwhelmed by torrents of lava, or shaken to pieces by earthquakes : yet its ancient edifices are covered by repeated streams of volcanic matter ; and almost every house, even her own church, has been thrown to the ground. In the reign of William the Good, 20,000 Catanians, with their pastor at their head, were destroyed before the sacred veil could be properly placed to check the flames. In the last century, the eruptions and earthquakes raged with redoubled violence, and Catania was twice demolished. See^LxNA. The prince of Biscari has been at great pains, and spent a large sum of money, in working down to the ancient town, which, on account of the numerous torrents of

lava, that have flowed out of Mount ./Etna for these last thousand years, is now to be sought for in dark caverns, many feet below the present surface of the earth. Swinburne informs us, that he descended into baths, sepulchres, an am- phitheatre, and a theatre, all very much injured by the various catastrophes that have befallen them. They were erected upon old beds of lava, and even built with square pieces of the same substance, which in no instance appears to have been fused by the contact of new lavas. The sciarra or stones of cold lava have constantly proved as strong a barrier against the flowing torrent of fire as any other stone could have been, though some authors were of opinion that the hot matter would melt the old mass, and incor- porate with it. This city has been frequently defended from the burning streams, by the solid mass of its own ramparts, and by the air com- pressed between them and the lava ; as appears by the torrent having stopped within a small distance of the walls, and taken another direc- tion. But when the walls were broken or low, the lava collected itself till it rose to a great height, and then poured over in a curve. There is a well at the foot of the old walls of Catania, where the lava, after running along the parapet, and then falling forwards, has produced a very complete lofty arch over the spring. The church is a noble fabric. It is accounted the largest in Sicily, though neither a porch nor cupola has been erected, from a doubt of the solidity of the foundations, which are no other than the bed of lava that ran out of ^itna in 1669, and is sup- posed to be full of cavities. The organ is much esteemed by connoisseurs in musical in- struments. Catania, in Mr. Swinburne's time, was reviving with great splendor. The harbour is at present considered as one of the best ir> Sicily, and the exports of wine, grain, oil, silk goods, and amber, are considerable. Population about 16,000. It is fifty-two miles south-west of Messina.

CATANZARO, a city of Naples, the capital of Calabria Ulterior, with a bishop's see. It is the usual residence of the governor of the pro- vince, and seated on a mountain near the Gulf of Squillace, forty-two miles south of Cosenza.

CATAPAN, or CATIPAN, from Karena□□□, captain, a name given by the Greeks, about the twelfth century, to the governor of their domini- ons in Italy.

CATAPELTA, an instrument of punishment among the ancients, consisting of a kind of press, composed of planks, between which the criminal was crushed to death.

CATAPHONICS, the science which investi- gates the properties of reflected sounds. See ACOUSTICS.

CA'TAPHRACT, n. Lat cataphracta ; Kara- tppaKTOf. A horseman in complete armor. On each side went armed guards, Both horse and foot ; before him and behind, Archers and slingers, cataphracts and spears.

Milton.

CATAPHRACTA, from Kara, and Qpaairw, to arm ; in the ancient military art, a piece of heavy defensive armour, formed of cloth or leather, fortified with iron scales or links, wherewith

sometimes only the breast, sometimes the whole body, and sometimes the horse too, was covered. It was in use among the Sarmatians, Persians, and other barbarians. The Romans also adopt- ed it early for their foot ; and, according to Vegetius, kept it till the time of Gratian, when the military discipline growing remiss, the Ro- man foot thought the cataphracts as well as the helmet too great a load to bear, and therefore threw both by, choosing rather to march against the enemy bare-breasted : by which, in the wars with the Goths, multitudes were destroyed.

CATAPHRACT/E NAVES, ships armed and covered in fight, so that they could not be easily damaged by the enemy. They were covered over with boards or planks, on which the soldiers were placed to defend them ; the rowers sitting underneath, thus screened from the enemy's weapons.

CATAPHRACTARII, or CATAPHRACTI EQUITES, were a sort of cuirassiers, not only fortified with armour themselves, but having their horses guarded with solid plates of brass or other metals, usually lined with skins, andwrought into plumes, or other forms. But their disad- vantage was their upweildiness, by which, if once unhorsed, they were unable to

rise, and thus fell a prey to the enemy.

CATAPIIRYGIANS, a sect in the second cen- tury, so called from being originally of Phrygia. They were orthodox in everything, except that they took Montanus for a prophet, and Priscilla and Maximilla for true prophetesses, to be con- sulted in everything relating to religion; as sup- posing the Holy Spirit had abandoned the church. See MONTANIST.

CATAPLASM, n. A poultice; a moist, emollient application, to allay inflammation, and forward suppuration.

I bought an unction of a mountebank,

So mortal, that but dip a knife in it,

Where it draws blood, no cataplasm so rare,

Collected from all simples that have virtue

Under the moon, can save. Sfutkfpeare.

The eloquence of the declaration, not contradicting, but enforcing sentiments of the truest humanity ; has left stings that have penetrated more than skin deep into my mind ; and never can they be extraeted by all the surgery of murder ; never can the throbbings they have created be assuaged by all the emollient cataplasmt of robbery and confiscation. Burke.

CA'TAPUCE, n. French, catapuce. An old name lor two species of plants ; the palma chris- tij and the garden spurge, the former of which was called the great ; the latter, the less.

A day or two ye shal han degestives Of wormes or ye take your laxatives, Of laureola, centauria, and fumetere, Or elles of ellebor that groweth there, Of catapuce or of gaitre beries, Or erbe ive growing in our yard that mery is. Chaucer's Canterbury Talei.

CATAPULT, n. Lat. catapulta ; KaraTrvXrtjs- An ancient warlike engine, described in the quotation, and more fully in the next article. ††† The balista violently shot great stones and quar- ries ; as also the catapults. Camden.

CATAPULT, or CATAPULTA, was also used for throwing arrows and darts upon the enemy. VOL. V,

Some of these engines were of such force that they would throw stones of a

hundred weight. Josephus takes notice of the surprising effects of them, and says, that the stones thrown out of them beat down the battlements, knocked off the angles of the towers, and would level a whole file of men from one end to the other, were the phalanx ever so deep. The base is composed of two large beams, 2, 3. The length of those beams is fifteen diameters of the bore of the capitals, 9. At the two extremities of each beam, two double mortises are cut to receive the eight tenons of two cross beams, each of them four of the diameters in length. In the centre of each of the beams of the base, and near two-thirds of their length, a hole perfectly round, and nineteen inches in diameter, should be bored : these holes must be exactly opposite to each other, and should in- crease gradually to the inside of the beams, so that each of them, being sixteen inches on the outside towards the capitals, 9, should be seven- teen and a half at the opening on the inside, and the edges carefully rounded off. The capitals, 9, are, in a manner, the soul of the machine, and serve to twist and strain the cordage, which forms its principle or power of motion. The capitals are of cast brass or iron; each consist- ing of a wheel with teeth, C 10, of two inches and a half thick. The hollow or bore of these wheels should be eleven inches and a quarter in diameter, perfectly round, and the edges smooth- ed down. As the friction would be too great, if the capitals rubbed against the beams, by the extreme straining of the cordage, which draws them towards these beams, that inconvenience is remedied by the means of eight friction wheels, or cylinders of brass, about the thirteenth of an inch in diameter, and an inch and one-sixth in length, placed circularly, and turning upon axes, as represented at D 13, B 12. One of these friction wheels at large with its screw, by which it is fastened into, the beam, is represented at A. Upon this number of cylindrical wheels the ca- pitals, 9, must be placed in the beams, 2, 3, so that the cylinders do not extend to the teeth of the wheels, which must receive a strong pinion 14. By means of this pinion, the wheel of the capital is made to turn for straining the cordage with the key 15. The capital wheel has a strong catch 16, and another of the same kind may be added to prevent anything from giving way through the extreme and violent force of the strained cordage. The capital piece of the ma- chine is a nut or cross pin of iron, 17, seen at C, and hammered cold into its form. It divides the bore of the capitals exactly in two equal parts and is fixed in grooves about an inch deep. This piece, or nut, ought to be about two inches and one-third thick at the top, 18, as represented in the section at B ; and rounded off and polished as much as possible, that the cords folded over it may not be hurt or cut by the roughness or edges of the iron. Its height ought to be eight inches, decreasing gradually in thickness to the bottom, where it ought to be only one inch. It must be very exactly inserted in the capitals. After placing the two capitals in the holes of the two beams, in a right line with each other, and fixing the two cross diametrical nuts, or pieces

6var which the cordage is to wind, one end of the cord is reeved throusrh a hole in one of the capi- tals in the base, and made fast to a nail within the beam. The other side of the cord is then carried through the hole in the opposite beam and capital, and so wound over the cross pieces of iron in the centre of the two capitals till they are full, the cordage forming a large skain. The tension of the cordage ought to be exactly equal, that is, the several foldings of the cord over the capital pieces should be equally strained, and so near each other, as not to leave the least space between them. As soon as the first fold or skain of cord has filled up one whole space or breadth of the capital pieces, another must be carried over it; and so on, always equally straining the end till no more will pass through the capitals, and the skain of cordage entirely fills them, ob- serving to rub it from time to time with soap. At three or four inches behind the cordage, thus wound over the capital piece, two very strong upright beams, 21, are raised; these are posts of oak fourteen inches thick, crossed over at top by another of the same solidity. The height of the upright beams is. seven and a half diameters; each supported behind with very strong props, 25, fixed at bottom in the extremities of the base 2, 3. The cross beam 24 is supported in the same manner by a prop in the centre. The tree, arm, or stylus, 22, should be of sound ash. Its length is from fifteen to sixteen diameters of the bore of the capitals. The end of the bottom, or that fixed in the middle of the skain, is ten in- ches thick, and fourteen broad. To strengthen the arm or tree, it should be wrapt round with a cloth dipped in strong glue, like the tree of a saddle, and bound very hard with waxed thread, of the sixth of an inch in diameter from the large end at bottom almost to the top, as represented in the figure. At the top of the arm, just under the iron hand or receiver 27, a strong cord is fastened, with two loops twisted one within ano- ther, for the greater strength. Into these two oops the hook of a b “iss pulley 28 is put. The cord 29 is then reeved through the pulley, and fastened to the roll 30. The cock or trigger 31, which serves as a stay, is then brought to it, and made fast by its hook to the extremity of the hand, 27, in which the body to be discharged is placed. The pulley at the neck of the arm is then unhooked ; and when the trigger is to let it off, a stroke must be given upon it with an iron bar or crow of about an inch in diameter; on which the arm flies up with a force almost equal to that of a modern mortar. The cushion or stomacher, 23, placed exactly in the middle of the cross beam 24, should be covered with a tanned ox hide, and stuffed with hair, the arm striking against it with inconceivable force. It is to be observed, that the tree or arm, 22, describes

an angle of ninety degrees, beginning at the cock, and ending at the stomacher or cushion. Some of the spears, &c. thrown by these engines, are said to have been eighteen feet long, and to have been thrown with such velocity as to take fire in their course In fig. 2 A B C D is the frame that holds the darts or arrows, which may be of different numbers, and placed in different direc- tions. E F is a large and strong iron spring,

which is bent by a rope that goes over three puˆ lies, I, K, L ; and is drawn by one or severa. men ; this rope may be fastened to a pin at M. The rope, therefore, being set at liberty, the spring must strike the darts with great violence, and send them, with surprising velocity, to a great distance. This instrument differs in some particulars from the description we have of that of the ancients ; principally in the throwing of several darts at the same time, one only being thrown by theirs. See BALISTA.

CATARACT, n. FT. cataracts ; Lat. cuta- racta ; jcaraicapr;. A fall of water from an ele- vation ; a shoot of water ; a cascade ; but the latter word is now more commonly applied to minor or artificial cataracts. Cataract formerly meant also a flood gate, and a portcullis.*

Blow, winds, and crack your cheeks j rage, blow ‘ You cataracts and hurricanoes, spout Till you have drenched our steeples. Shakspeare.

What if all

Her stores were opened, and the firmament Of hell should spout her cataracts of fire ? Impendent horrors ! Paradise Lost.

Go, fool, and teach a cataract to creep ! Can thirst of empire, vengeance, beauty, wait?

Young’s Brothers.

Too charming visions of intense delight ! Why ? whither vanish ye ? Her eagle flight Fancy renews ; and full athwart mine eye Throws an enormous cataract : ††† from on high In awful stillness deepening waters glide E’en to the ru8e rocks ridge abrupt, then slide Ponderous down, down, the void, and pitch below In thunders. ††† Bishop.

“Nymphs ! you from cliff to cliff attendant guide In headlong cataracts the impetuous tide j Or lead o’er wastes of Abyssinian sands, The bright expanse to Egypt’s showerless lands.

Darwin. O paragon of cats, whose loss distracts

My soul, and turns my tears to cataracts,

Nor craft nor courage could thy doom prorogue.

fftifldesfortt,

CA'TARACT, n. This word, in its medical sense of a disorder in the eye, has been derived from the same root as the former word. Cle- land, however, and with apparent reason, con- tends that it is only a barbarous formation of the words cakoeroc or cacoeroco, still in use in the southern parts of France ; the meaning of which is a speck, or any gathering over the eye.

Saladine (celandine), hath a yellow milk, which hath likewise much acrimony ; for it cleanseth the eyes : it is good also for cataracts. Bacon.

CATARACT, in hydrography, is occasioned by a precipice in the channel of a river, caused by rocks or other obstacles, stopping the course of the stream, from whence the water falls with a greater noise and impetuosity. Such are the ca- taracts of the Nile, the Danube, Rhine, &c. In that of Niagara, the perpendicular fall of the wa- ter is 137 feet; and in that of Pistill Rhaiadr, in North Wales, the fall of water is nearly 240 feet from the mountain to the lower pool. Strabo calls that a cataract which we call a cascade; and what we call a cataract, the ancients usually called catadupa. Herminius has an express dis- sertation, De Admirandis Mundi Cataractis, Supra et Subterraneis : where he uses the word in a nev

sense ; signifying, by cataract, any violent motion of the elements.

CATARACT is defined a disorder of the humors of the eye, by which the pupil, that ought to ap- pear transparent and black, looks opaque, blue, gray, brown, &c. whereby vision is variously im- peded, or totally destroyed. See SURGERY.

CATA'RRH, n. -} Fr. catarre; old Fr.

CATA'RRHAL, adj. ˆcatarrhe; from KarappeM,

C&TA'TiRiiovs,adj.jdeJiuo. A defluxion of sharp serum from the glands about the head and throat ; a species of that disorder which is fa- miliarly termed a cold. See MEDICINE, Index. The adjectives signify that which relates to, or proceeds from, a catarrh.

All feverous kinds, Convulsions, epilepsies, fierce catarrhs.

Paradise Lost.

Neither was the body then subject to die by piece- meal, and languish under coughs, catarrhs, or con- sumptions. South.

The catarrhal fever requires evacuations. Floyer.

Old age attended -with a glutinous, cold, catarrhous, leucophlegmatick constitution. Arbuthnot,

Cat-grandams vexed with asthmas and catarrhs, And superstitious cats who curse their stars.

Huddesford.

CATASTASIS, in poetry, the third part of the ancient drama; being that wherein the iu- trigue, or action, set forth in the epitasis, is sup- ported, carried on, and heightened, till it be ripe for the unravelling in the catastrophe. Scaliger defines it, the full growth of the fable, while things are at a stand in that confusion to which the poet has brought them.

CATASTROMA, in ancient ships of war, a sort of scaffold on the head and stern, whereon the soldiers were posted.

CATA'STROPHE, n. Fr. catastrophe ; Ka- T

Pa-t ! he comes like the catastrophe of the old co- medy. Shakspeare.

That philosopher declares for tragedies, whose catas- trophes are unhappy, with relation to the principal characters. Dennis.

Here was a mighty revolution, the most horrible and portentous catastrophe that nature ever yet saw ; an elegant and habitable earth quite shattered.

Woodward. Cats of each class, craft, calling, and degree,

Mourn Dick's calamitous catastrophe. Huddesford.

CATASTROPHE, in the ancient dramatic poetry, the fourth and last part, or that immediately succeeding the catastasis: or, according to others, the third only; the whole drama being divided into protasis, epitasis, and catastrophe ; or in the terms of Aristotle, prologue, epilogue, and exode. The catastrophe clears up everything, and is the discovery or winding up of the plot. It has its peculiar place: for it ought entirely to be contained, not only in the last act, but in the very conclusion of it; and when the plot is

finished, the play should be so also.

CATAWESSY, or HUGHESBURG, a town of Pennsylvania, in Northumberland county, si- tuated at the mouth of the Catawessy creek, on the east branch of the Susquehannah, twenty-five

miles E.N.E. of Suubury, and 100 north-west of Philadelphia.

CATCH, v. & n. ~\ This word has

CA'TCHABLE, adj. many claimants for

CA'TCHER, n. (its origin. Junius,

CA'TCHPENNY, n. & adj. fin the most peremp- CA'TCHPOLE, n. I tory terms, refers it

CA'TCHWORD, n. j to the Greek: Kart-

X□□v (says he) quod detinere, obtinere, occupa- re, significat : mutuatur sua tempora ab inus. the- mate Karaderived from the substantive cat, as that creature seizes suddenly on its prey. The meanings of the verb and noun are numerous. The power of stopping that which is in motion, and of retaining after hav ing stopped, is the primary idea. The verb, in its active sense, signifies to lay hold on with the hand ; to stop anything in its flight ; to seize by pursuing ; to stop anything falling ; to ensnare or entrap ; to receive suddenly ; to seize sud- denly, eagerly, unexpectedly ; to gain the affec- tions ; to charm ; to receive any contagion or disease. Catching at, is a sudden endeavour to seize ; catching up, is snatching ; catching a Tartar, is to be taken at the moment when we are expecting to take. In the neuter sense the verb denotes, to be contagious ; to lay hold sud- denly. The noun is expressive of seizure ; watching to seize ; an advantage taken ; quick taking ; the thing caught ; profit ; advantage ; a short interval of action ; anything that catches ; a small swift-sailing ship, often written ketch ; and, lastly, a peculiar species of musical compo- sition. Catchable is liable to be caught. A catchpenny is a worthless publication; whether it be a silly journey to the north, a novel, a lam- poon, or a piece of doggrel. A catchpole is a serjeant; a bum-bailiff. A catchword is the last word at the corner of a page, under the last line.

And when he arose against me, I caught him by his beard, and smote him, and slew him.

1 Sam. xvii. 35.

And they sent unto him certain of the Pharisees and of the Herodians, to

catch him in his words.

Mark, xii. 13.

The mule went under the thick boughs of a great oak, and his head caught hold of the oak.

2 Sam. xvii. 19. To catch something out of his mouth that they

might accuse him. Luke, xi. 54.

And in the meen whils that Beryn thus gan pleyn, A cachepoll stode besides, his name was Machaign, And herd all the wordes, and knew also tofore How Beryn was tormented both with las and more.

Chaucer's Canterbury Tales. Taught by his open eye,

His eye, that even did mark her trodden grass, That she would fain the catch of Streplion fly.

Sidney.

I saw him run after a gilded butterfly, and, when he caught it, he let it go again ; and after it again ; and over and over he conies, and up again : and caught it again. Shakfj/cure.

CAT

I've perused her well ; Beauty and honour in her are so mingled, That they have caught the king. Id.

Those measles,

Which we disdain should tetter us, yet seek The very way to catch them. Id.

Saucy lictors

Witt catch at us like strumpets, and scald rhimers Ballad us out of tune. Id.

'Tis time to give them physic, their diseases Are grown so catching. Id.

This is the tune of our catch, played by the picture of uobody. Id.

Here Hector shall have a great catch, if he knock out your b'rains ; he were as good crack a fusty nut with no kernel. Id.

All which notions are but ignorant catches of a few things, which are most obvious to men's observations.

Bacon.

Several quires, placed one over against another, and taking the voice by catches anthemwise, give great pleasure. Id.

Catchpoll, though now it be used as a word of con- tempt, yet, in ancient times, it seems to have been used without reproach, for such as we now call ser- jeants of the mace, or any other that uses to arrest men upon any cause. Cow ill.

Here she comes, but with a look Far more catching than my hook. Marvell.

Scallops will move so strongly, as oftentimes to leap out of the catclter, wherein they are caught.

Grew.

We retain a c > ttch of those pretty stories, and our awakened imagination smiles in the recollection.

Glanville.

The curling smoke mounts heavy from the fires, At length it catches flame, and in a blaze expires.

Dryden.

For I am young, a novice in the trade, The fool of love, unpractised to persuade, And want the soothing arts that catch the fair, But cuught myself, lie struggling in the snare. Id.

Fate of empires, and the fall of kings, Should turn on flying hours and catch of moments.

Id.

These artificial methods of reasoning are more adapted to catch and entangle the mind, than to in- struct and inform the understanding. Locke.

It has been writ by catches, with many intervals. Id. Others, to catch the breeze of breathing air, To Tusculum or Algido repair. Addison.

Both of them lay upon the catch for a great action.

Id.

Or call the winds through long arcades to roar,

: Proud to catch cold at a Venetian door. Pope.

A shepherd diverted himself with tossing up eggs,

and catching them again. Spectator.

The eagerness of a knave makes him often as

cute/table, as the ignorance of a fool. Lord Halifax.

Another monster,

Sullen of aspect, by the vulgar called A catchpoll, whose polluted hands the gods With force incredible and magic charms Erst have endued, if he his ample palm Should haply on ill-fated shoulder lay Of debtor. Philips.

Sonnets or elegies lo Chloris Might raise a house about two stories ; A lyric ode would slate j a catch Would tile ; an epigram would thatch. Swift.

Now twenty springs had clothed the park with

green

Since Lydia knew the blossoms of fifteen, No lovers now her morning hours molest, And catch her at her toilette half undrest. Gay.

When poor Alicia's maddening brains are racked, And strongly imaged griefs her mind distract, ††† Struck with her grief, I catch the madness too ! My brain turns round, the headless trunk I view.

Churchill. Hear, thou, of heaven unconscious ! From the

blaze

Of glory stream'd from Jove's eternal throne Thy soul, 0 mortal, caught the inspiring rays

That to a god exalt earth's raptured son. Beattie.

CATCH, in the musical sense of the word, a fugue in the unison, wherein, to humor some conceit in the words, the melody is broken, and the sense

interrupted in one part, and caught again or supported by another. Mr. Jackson defines a catch, ‘ a piece for three or more voices, one of which leads, and the others follow in the same notes. It must be so contrived, that rests (which are made for that purpose) in the music of one line be filled up with a word or two from another line; these form a cross purpose, or catch, from whence the name.

CATCHFLY. See LYCHNIS and SILENE.

CATECHESIS, an instruction given any person in the first rudiments of an art or science; but more particularly of the Christian religion. In the ancient church it was an instruction given viva voce, either to children or adult heathens, preparatory to their receiving baptism.

- The root this word is Itywc, echo, sonus, repetitio; because in catechising the thing is repeated, resounded. To ca- techise is to instruct by asking questions, and correcting the answers ; to ques- don ; to interrogate. Catechism, in its oldest sense, denotes

of

CATECHISE, v.

CATECHISA’TION, n,

CA’TECHISER, n.

CA’TECHISIKG, n.

CA’TECHISM, n.

CA’TECHIST, n.

CATECHI’STICAL, adj.

CATECHI’STICALLY, adv.

CATECHE’TICAL, adj.

CATECHE’TICALLY, adv.

CATECHE’TICK, adj.

CATECHU’MEN, n.

CATECHUME’NICAL, adj.

CATECHU'MENIST, n. a form of religious instruction, by question and answer ; but it is now applied to books written in the interrogative manner, upon any subject. Catechist and catechiser are synonymous, and signify the person who interrogates. Catechising and catechisation are also equivalent terms, to express the act of interrogation. That which consists of, or instructs by, questions and an- swers, is described by the adjectives catechetic, catechetical, and catechistical. Catechumen, and catechumenist (the latter word is of rare occur- rence), signify one who has not yet gone beyond the first rudiments of Christianity ; the lowest order of Christians in the primitive church. See CATECHUMENS.

I will catechise the world for him, that is, make questions, and bid them answer. Shakspeare.

Why, then, I suck my teeth, and catechise

My piked man of countries. Id.

Ways of teaching there have been sundry always usual in God's church, for the first introduction of

youth to the knowledge of God, the Jews even to this

Hark you, good Maria, Have you got a good catechiser here ?

Beaumont and Fletcher.

None of years and knowledge was admitted, who had not been instructed by the catechist in this foun- dation, which the catechist received from the bishop.

Hammond.

He had no catechitm but the creution, needed no study but reflection, and read no book but the volume of the world. South.

Could turn the Covenant, and translate

The Gospel into spoons and plate ;

Expound upon all merchants' cases,

And open the intricatest places ;

Could catechise a money-box,

And prove all pouches orthodox. Butter.

The prayers of the church did not begin in St. Austin's time, till the Catechumens were dismissed.

Stillingflect.

Socrates introduced a catechetical method of argu- ing ; he would ask his adversary question upon ques- tion, till he convinced him, out of his own mouth, that his opinions were wrong. Spectator.

There flies about a strange report, Of some express arrived at court, I'm stopped by all the fools I meet, And catechised in every street. Swift.

CATECHISM, in its primary sense, signifies an instruction in the principles of the Christian re- ligion, delivered viva voce, so as to require fre- quent repetitions from the disciple or hearer. Anciently the candidates for baptism were thus instructed in the principles of religion.

CATECHIST denotes a person appointed to in- struct those intended for baptism, by word of mouth, in the fundamental articles of Christianity. The catechists of the ancient churches were ministers usually distinct from the bishops and presbyters, and had their catechumena or audi- tories apart. But they did not constitute any distinct order of the clergy, being chosen out of any order. The bishop himself sometimes per- formed the office ; at other times presbyters, readers, or deacons. Origen was made catechist at Alexandria when only eighteen years of age, and consequently incapable of the deaconship.

CATECHU, in botany. See MIMOSA.

CATECHUMLNS, in church history, had a title to the common name of Christians, being a de- gree above pagans and heretics, though not con- summated by baptism. They were admitted to this state by the imposition of hands, and the sign of the cross. The children of believing parents were admitted catechumens as soon as they were capable of instruction ; but at what age those of heathen parents were admitted is not so clear. As to the time of their continuance in this state, there were no general rules ; but the prac- tice varied according to the difference of times and places, and the proficiency of the catechu- mens. There were four degrees of catechumens; the first were those instructed privately without the church, and kept for some time from the privilege of entering it, to make them the more desirous

of it, The next were the audientes, so called from their being admitted to hear sermons, and the Scriptures read in the church, but not al-

lowed to partake of the prayers. The third were the genuflectentes, so called because they re- ceived imposition of hands kneeling. The fourth were the competentes and electi, denoting the immediate candidates for baptism, appointed to be baptised at next festival. These, after exami- nation, were exercised for twenty days together, and were obliged to fasting and confession some days before baptism they were veiled ; and it be- came customary to touch their ears, saying, ‘ Ephatha,’ i. e. be opened ; also to anoint their eyes with clay, in pretence of imitating our Saviour’s practice.

CATECHUMENUM ; 1. A name given to an upper gallery in the churches : 2. A sort of school-house near the church, where the catechu- mens met to receive the instructions of the cate- chists.

CATEGAT, sometimes called the Sound, an entrance into the Baltic from the German Ocean, running between Denmark, Jutland, Sweden, and Norway.

CATEGORIARES, a minister in the Greek church, whose business is to proclaim the feast- days, take care of the lights, &c.

CA’TEGORY, n. ˆ Kcmjyopia ; the root

CATEGO’RICAL, adj. >is by some supposed

CATEGU’RICALLY, adv. j to be Ayopa, forum, the bar; an harangue; others find it in Kara and ayttpw, congrego, colligo, which seems to be the most rational opinion. A category is a class ; rank ; order of ideas ; predicament. See the next article. Categorical denotes absolute ; ade- quate ; positive ; equal to the thing to be ex- pressed. Categorically is directly; expressly; positively ; plainly. Give me a categorical an- swer, or, answer me categorically, means, give me a plain, full, and final answer.

The king’s commissioners desired to know, whether the parliament’s commissioners did believe that bi- shops were unlawful 1 Tiiey could never obtain a categorical answer. Clarendon.

I dare affirm, and that categorically, in all parts wherever trade is great, and continues so, that tiade must be nationally profitable. Child.

The absolute infinitude, in a manner, quite changes the nature of beings, and exalts them into a different category. Chcyne.

A single proposition, which is also categorical, may be divided again into

simple and complex. Watts.

❖❖❖ Prudes, who when they're asked the question,

squall, And ne'er give answer categorical. Huddesford.

CATEGORY, in logic, a series of all the attri- butes contained under any genus. The ancient philosophers distributed all the objects of our thoughts and ideas into certain genera or classes, not so much, say they, to learn what they do not know, as to communicate a distinct notion of what they do know. These classes the Greeks called categories, and the Latins predicaments. Aristotle made ten categories, comprehending under the first all substantives ; and all accidents under the nine last, viz. quantity, quality, rela- tion, action, passion, time, place, situation, and habit, which ure usually expressed by the follow- ing technical distich :

Arbor, sex, servosˆ ardore, refrigerat. ustos, Rure eras stabo, nee tunicatus ero.

CATEIA, in ancient writers, a kind of javelin, used among the ancient Gauls and Germans, made heavy, and therefore not fitted to fly far, but doing great execution where it did reach; and having an apparatus by which the person who threw it might draw it back again. It is mentioned by Virgil, jEn. lib. vii. ver. 741.

CATENARY, in the higher geometry, is a curve line formed by a cord hanging freely from two points of suspension, whether the points be horizontal or not. It is otherwise called the elastic curve. The nature of this curve was sought after by Galileo, who thought it was the same with the parabola ; but though Jungius de- tected this mistake, its true nature was not dis- covered till 1691, in consequence of M. John Bernouilli having published it as a problem in the Acta Eruditorum, to the mathematicians in Europe. In 1697 Dr. D. Gregory published an investigation of its properties, which before had been discovered by Bernoulli! and Leibnitz. This curve is of the mechanical kind, and cannot be expressed by a finite algebraical equation in sim- ple terms of its abciss and ordinate. The inves- tigation of the nature and chief properties of this curve will be found under the article FLUXIONS.

or physically. The noun signifies link ; regular connexion ; the adjective, having a relation or resemblance to a chain ; but it is rarely, if ever, used, except as descriptive of a peculiar geome- trical curve. See the preceding article.

This catenation or conserving union, whenever his pleasure shall divide, let go, or separate, they shall 'all from their existence. Browne.

In geometry, the catenarian curve is formed by a rope or chain hanging freely between two points of suspension. Harris.

The back is bent after the manner of the catenarian curve, by which it obtains that curvature that is safest for the included marrow. Cheyne.

CATER, v. & n.~\ Fr.queter; It. accatare; GATE, n. fSp. cator; Ger. kaufen;

CA'TERER, n. \ Ang.Sax. ceapian ; acea CA'TERESS, n. lpian;Goth. kates. The CA'TERY, n. J noun cate,which Dr. John- son erroneously represents as having no plural, Skinner conjectures to be a contraction of the word delicates. ButMr.Todd more happily considers it it as a variation of the antiquated English word acates, which he derives from the old Fr. acat, achat, purchase. Both the English wordshowever, are probably from the Goth. Cates, are viands, food ; and almost uniformly denote something more delicate than usual. To cater is to provide victuals; the cater, caterer, or cateress, is the provider ; and eatery was formerly a name of the larder or pantry. The four of cards and dice is called cater; but this is a corruption of the Fr. quatre.

The dearest cates are best; and 'tis an ordinary thing to bestow twenty or thirty pounds on a dish, some thousand crowns upon a dinner. Burton. Anat. Mel.

Well, say what cates you have, For soldiers' stomachs always serve them well.

SlMktpeare.

He that doth the ravens feed, Yea providently caters for the sparrow. Be comfort to my age. Id.

The fair acceptance, sir, creates The entertainment perfect, not the cates.

B. Jonson,

O wasteful riot, never well content, With low-prized fare ; hunger ambitious

Of cates, by land and sea far-fetched and sent.

Raleigh.

The oysters dredged in this Lyner, find a welcomer acceptance, where the taste is cater for the stomach, than those of the Tamar. Carew's Cornwall.

He made the greedy ravens to be Elias's caterers, and bring him food. King Charles.

Impostor ! do not charge most innocent nature, As if she would her children should be riotous With her abundance : she, good cateress, Means her provision only to the good. Milton.

Alas ! how simple to these cafe, Was that crude apple that diverted Eve ! Id. Seldom shall one see in cities and courts that ath- letic vigour, which is seen in poor houses, where nature is their cook, and necessity their caterer. South.*

They, by the alluring odour drawn, in haste Fly to the dulcet cates, and crowding sip Their palatable bane. Philips.

Near him Retirement, pointing to the shade, And Independence, stood : the generous pair That simple life, the quiet- whispering grove, And the still raptures of the free-born soul, To cates prefer by virtue bought, not earned.

Thomson, Fastidious cats who pine for costly cates.

Huddesfvd.

CA'TER-COUSIN, a corruption of quatre- cousin; from the ridiculousness of claiming affinity with so remote a degree.

His master and he, saving your worship's reve- rence, are scarce cater-cousins. Shakspeare. CATERPILLAR. ' This word,' says John- son, 'Skinner, and Minsheu are inclined to derive from chatte peleuse, a weasel . It seems easily deducible from cates, food ; and piller, Fr. to rob ; the animal that eats up the fruits of the earth.' It appears evident either that there is a typographical error in the dictionary of the great lexicographer, or that he has overlooked the real meaning of Skinner and Minsheu, which seems simply to be that the insect is hairy like a cat. That 'weasel' is a press error, is rendered almost certain by the fact that chatte peleuse never designated that animal, but has always been an appellation of the weevil. The cater- pillar is a well-known insect, which is a potent destroyer of vegetation. The name is given to anything that is voracious and useless.

The caterpillar breedeth of dew and leaves ; for we see infinite caterpillars breed upon trees and hedges, by which the leaves of the trees or hedges are con- sumed. Bacon. Auster is drawn with a pot pouring forth water with which descend grasshoppers, caterpillars, and creatures bred by moisture. Peacham.

And what's a butterfly at best, He's but a caterpillar drest j And all thy race (a numerous seed) Shall prove of caterpillar breed. Gay.

CATERPILLAR, in zoology, is the name of all winged insects, while in their reptile or worm state.

CAT

CATESBˆA, the lily-thorn : a genus of the monogynia order, and tetandria class of plants ; natural order twenty-eighth, luridae : COR. is monopetalous, funnel-shaped, very long above the receptacle of the fruit; the STAM. are within its throat ; the fruit a polyspermous berry. There are two species ; the principal is C. spinosa, a native of the island of Providence.

CATFISH, n. The name of a sea-fish in the West Indies, so named from its round head and large glaring eyes, by which they are discovered in hollow rocks. See SQUALUS.

CATGUT, a denomination given to small strings for fiddles, and other instruments, made of the intestines of sheep or lambs, dried and twisted together, either singly, or several together. These are sometimes colored red, sometimes blue, but are commonly left whitish or brownish, the natural color of the gut. They are also used by watch-makers, cutlers, turners, and other arti- ficers. Great quantities are imported into England, and other countries, from Lyons and Italy.

CATHARINE (St.), a virgin of Alexandria, celebrated for her learning as well as piety, who is said to have suffered martyrdom under the emperor Maximin, about A.D. 236. Her body being afterwards discovered on Mount Sinai, gave rise to the order of Knights of St. Catharine. There are also two other saints of this name ; but their history will be more fit for the pages of a Romish calendar than for those of an encyclo- paedia.

CATHARINE (St.), FRATERNITY OF, AT SIENNA, a religious society instituted in that city, in .lonor of St. Catharine, whose wedding ring, said to have been presented to her by our Saviour, is still preserved as a valuable relic. This fra- ternity yearly endows a certain number of desti- tute virgins, and has the privilege of redeeming annually two criminals condemned for murder, and the same number of debtors, by paying their debts.

CATHARINE (St.), OF MOUNT SINAI, KNIGHTS OF, an ancient military order, erected for the as- sistance and protection of the numerous pilgrims who went to pay their devotions to the body of St. Catharine, on mount

Sinai. Travelling being very dangerous, by reason of the Arabs, an order of knighthood was erected in 1063, on the model of that of the holy sepulchre, and under the patronage of St. Catharine : the knights of which obliged themselves by oath to guard the body of the saint, keep the roads secure, observe the rule of St. Basil, and obey their grand master. Their habit was white, and on it were represented the instruments of martyrdom whereby the saint had suffered ; viz. a half wheel armed with spikes, and traversed with a sword stained with blood.

CATHARINE (St.), ORDER OF, an order of ladies of the first quality in the Russian court, instituted in 1714, by Catherine, wife of Peter the Great, in memory of his signal escape from the Turks, in 1711. The ensigns of this order are a red cross, supported by a figure of St. Catharine, and fastened to a scarlet string edged with silver, on which are inscribed the name of St. Catha- rine, and the motto ‘ Pro fide et patria.’

CATHARINENSTADT, the head of the Ger- man colonies on the Wolga in European Russia,

CAT

government of Saratov. It contains one long street, with eight smaller ones running off at right angles, and a small fortress to protect it against the attacks of the Tartars. Grain, tobacco, arid cattle are the productions of the neighbourhood.

CA’T-HARPINGS, n. Small ropes in a ship, running in little blocks from one side of the shrouds to the other, near the deck ; they belong only to the main shrouds ; and their use is to force the main , shrouds tight, for the ease and safety of the masts, when the ship rolls.

CATHA’RTICAL, adj. ˆ Ka0apnic6c, from

*CATHA’RTIC, adj. > Kara and alp < *i,tollo.*

CATHA’RTICALNESS. j Purging medicines; purging; having a purging quality. The ver- micular or peristaltick motion of the gut, says Quincy, continually helps on their contents from the pylorus to the rectum ; and every irritation either quickens that motion in its natural order, or occasions some little inversions in it. In both, what but slightly adheres to the coats will be loosened, and they will be more agitated and thus rendered more fluid. By this only it is ma- nifest, how a cathartic hastens and increases the discharges by stool ; but where the force of the stimulus is great, all the appendages of the bowels, and all the viscera in the abdomen, will be twitched ; by which a great deal will be drained back into the intestines, and made a part of what they discharge.

Quicksilver precipitated either with gold, or with- out addition, into a powder, is wont to be strongly enough cathartical. Boyle.

Lustrations and catharticks of the mind were sought for, and all endeavour used to calm and regulate the fury of the passions. Decay of Piety.

The piercing causticks ply their spiteful power, Emeticks ranch, and keen catharticks scour. Garth.

Plato has called mathematical demonstrations the catharticks or purgatives of the soul.

Addison's Spectator.

CATHARTICS. See MATERIA MEDICA.

CA'THEAD, n., a kind of fossil.

The nodules with leaves in them, called catheads, seem to consist of a sort of iron stone, not unlike that which is found in the rocks near Whitehaven in Cumberland, where they call them catscaups.

Woodward on Fossils.

CAT-HEADS, two strong short beams of timber, which project almost horizontally over the ship's bows on each side of the bowsprit ; being like two radii which extend from a centre taken in the direction of the bowsprit. That part of the cat-head which rests upon the forecastle, is se- curely bolted to the beams : the other part pro- jects like a crane as above described, and carries in its extremity two or three small wheels or sheaves of brass or strong wood, about which a rope called the cat-fall passes, and communicates with the cat-block, which also contains three sheaves. The machine formed by this combina- tion of pullies is called the cat, which serves to pull the anchor up to the cat-head, without tear- ing the ship's sides with its flukes. The cat-head also serves to suspend the anchor clear of the bow, when it is necessary to let it go : it is sup- ported by a sort of knee, which is generally or- namented with sculpture. The cat block is filled with a large and strong hood, which catches the ring of the anchor when it is to be drawn up.

CATHERINE.

CATHEDRA, Kafyfya, Gr. a chair, is used for, 1. a professor's chair; 2. a preacher's pulpit; and 3. a bishop's see, or throne, in a church.

CATHE'DRAL, n & adj. } KaOtSpa, a seat, CATHE'DRATED, adj. $ or chair, from Kara

and ttipa, a seat. The noun signifies the head church of a diocese. The adjective denotes epis- copal ; containing a bishop's see ; appertaining to an episcopal church ; and, adds Johnson, though doubtingly, ' in lovr phrase, antique, ve- nerable, old.' He gives the subjoined quotation from Pope, as illustrative of this sense of the \7ord. But it seems probable that Pope had no such meaning. He is describing long alleys of trees, and apparently alludes to the resemblance which their tall equidistant trunks and over-arching branches bear to the aisles of a Gothic cathedral. His friend Warburton considers Go- thic architecture as having originated in an imi-tation of a grove of tress. Cathedrated denotes relating to the chair, or authority, of a teacher ; but is obsolete.

A cathedral church is that wherein there are two or more persons, with a bishop at the head of them, that do make, as it were, one body politick.

Ayliffe's Parergon. Methought I sat in seat of majesty,

In the cathedral church of Westminster. Shahspeare.

Nature in vain us in one land compiles, If the cathedral still shall have its aisles. MarveU.

If his reproof be private or with the cathedrated au- thority of a praelecter or puhlick reader. Whitlock.

His constant and regular assisting at the cathe- dral service was never interrupted by the sharpness of weather. ' Locke.

Here aged trees cathedral walks compose, And mount the hill in venerable rows; There the green infants in their beds are laid. Pope.

There is nothing in Leghorn so extraordinary as the cathedral, which a man may view with pleasure after he has seen St. Peter's. Addiaon.

Who can forsake thy walls and not admire

The proud cathedral and the lofty spire. Gay.

CATHEDRAL. The name seems to have taken its rise from the manner of sitting in the ancient churches, or assemblies of primitive Christians. In these, the presbyterium ; at their head was the bishop who held the place of chairman, ca- thedralis, or cathedraticus ; and the presbyters, who sat on either side also called by the ancient fathers, assessores episcoporum. The

episcopal authority did not reside in the bishop alone; but in all the presbyters, whereof the bishop was president. A cathedral, therefore, originally was different from what it is now; the Christians, till the time of Constantine, having no liberty to build any temple; by their churches they only meant their assemblies ; and, by cathedrals, no- thing more than consistories.

CATHERINE I. empress of Russia, a woman who rose from the lowest to the highest rank in life, was the natural daughter of a peasant, and born at Ringen, a small village in Livonia, April the 5th, 1687. Her original name was Martha, which she changed for Catherine when she em- biaced the Greek religion. Count Rosen, a lieu- tenant-colonel in the Swedish service, the pro- prietor of the village, supported, according to

the custom of the country, both the mother an►► the child ; and was supposed by many to have been her father. She lost her mother when she was only three years old; and, as the count died about the same time, she was left in so destitute a situation, that the parish-clerk of the village took her into his house. Soon afterwards, M. Gluck, Lutheran minister of Marienburgh, took her under his protection, brought her up in his family, and employed her in attending his chil- dren. In 1701, about the fourteenth year of her age, she espoused a dragoon of the Swedish gar- rison of Marienburgh : who, according to some writers, lived only eight days with her. It is certain that he was absent when Marienburgh surrendered to the Russians ; and Catherine never saw him more. General Baur, upon the surrender of Marienburgh, being smitten with her beauty, took the young bride to his house, where she superintended his domestic affairs, and was supposed to he his mistress. Soon afterwards she was removed into the family of prince Menzikof, who was no less struck with her charms. With him she lived until 1704; when, in the seventeenth year of her age, she be- came the mistress of Peter the Great, and won so much upon his affections, that he espoused her on the 29th of May, 1711, at Jawerof in Poland; and on the 20th of February, 1 71 2, the marriage was publicly solemnised at Petersburg. Cathe- rine, by the most unwearied assiduity and unre- mitted attention, by the softness and complacency of her disposition, but above all by an extraordi- nary liveliness and gaiety of temper, acquired a wonderful ascendancy over the mind of the czar; and the emperor particularly specified her be- haviour at Pruth, in which she alone prevailed with him to sign a truce, as one of the reasons which induced him to crown her publicly at Moscow with his own hand. This ceremony was performed in 1724. On the death of Peter in 1725 she ascended the throne as his successor. Her favorite, prince Menzikof, chiefly managed the public affairs during her short reign, which terminated by her death in a fit of apoplexy, May, 1727. The empress Elizabeth, who after- wards succeeded to the throne, was one of her daughters by Peter I.

CATHERINE II. of Russia, a ‘ queen who doubless has a claim to be ranked among the great sovereigns of Europe, according to the usual acceptation of the word greatness, was the daughter of Christian Augustus, prince of An- halt-Zerbst. She was born, May the 2d, 1729, and baptised Sophia Augusta; but, upon her marriage with the grand duke of Russia, Sep- tember the 1st, 1745, and admission into the Greek church, she assumed the name of Cathe- rine. Her husband, Peter III. succeeded his aunt Elizabeth, January the 5th, 1762, but had not reigned six months, when he fell a sacrifice to his wife’s ambition ; being deposed on the 28th of June, and barbarously murdered on the 9th of July following. Upon the deposition of her unfortunate husband, Catherine II. was pro- claimed empress of all the Russias; and soon after endeavoured to conceal the crimes by which she ascended the throne, by the dazzling lustre of some of those actions which have blotted the

page of history with blood in all ages of the world, and have too long employed the pens of historians and poets. The history of these trans- actions will be found under the article RUSSCA ; but future historians will decide, whether the great exploits, displayed during her reign, are not more to be ascribed to the natural strength of the empire, the force of which it was her business to collect and concentrate, than to any superior personal genius which she possessed. As to the justice of these exploits, it need hardly be left to posterity to judge. Without entering into the merits of her claims upon the Turkish dominions, her invasion and partition of Poland, in conjunc- tion with other powers, particularly the king of Prussia, affords as flagrant an instance of the violation of the rights of nations, by open and unprovoked robbery and murder, as is to be found in the annals of the most barbarous savages. In short, the chief merit of Catherine, as a sovereign, seems like that of queen Elizabeth of England, to have consisted in selecting able ministers, admirals, and generals, to carry on the operations she had planned. In this respect, even her vices as a woman, which gave her the ascendant of an imperious character over her favorites, exempt from the weakness of sentiment, supplied the place of public virtues; and ba- nished from her government the degrading in- fluence, which courtiers elsewhere often exercise. She at last, however, allowed herself to be ruled by her freed man, Sabor, who deceived her with regard to the state of her forces, which did not amount to 200,000 men, though her military lists contained 400,000 : and her long preparations for the field terminal⁇⁇l in a disastrous war in Persia, by which two of her armies

were con- sumed. If her policy in relation to Austria and Poland was attended with success, it is, perhaps, less to be ascribed to her interference, than to the good sense she displayed in allowing her minis- ters to govern. Yet this policy was over-reached in her last war against the Turks, when, in spite of pompous promises, assisting Austria only with feeble succours, and suddenly finding her squad- rons held bound by those of Sweden, she left to her rival all the advantages of many bloody cam- paigns ; and excited in the grand seignior a de- sire of vengeance, which he was not long in inflicting. Nor were her plans of political ag- grandisement free from fluctuations and contra- dictions. During the American war, one would have imagined that the trident of Neptune was, by her exertions, about to become the sacred .symbol of liberty. She presented to the courts of Versailles, Madrid, and London, a memorial, in which she demanded, that the commerce of all nations, even of the belligerent powers, should be free and respected. She proposed that a league should be formed for its support, and for this purpose deputed prince Gallitzin to the States General. But, in 1793, she avowed prin- ciples directly opposite. Influenced solely by her rage against France, she announced war against that republic, without discussion, without manifesto, without even being able to allege, with regard to a state so remote from her terri- tories, that barbarous maxim, which has slipped from the pen of Montesquieu himself; ••• ' that the

lavv of natural defence sometimes involves the necessity of attack, when a people sees, that a longer peace would enable another power to effect their destruction.' Esprit de Loix, L. 1 ". c. 2. With all her foibles, however, Catherine had some right to the panegyrics of men of let- ters. She purchased the praises of several French philosophers, and she did not overlook the merits of various British authors. After the example of some of the tyrants of antiquity, she renewed the singularity of royal and philosophic banquets. Like Dionysius, Pisistratus, and Iliero, she col- lected Platos, Aristippi, and Pindars at her sup- pers. The imperial resentment, however, was sometimes excited ; on which occasions the wit was rewarded with banishment; a premium which Diderot received for his frankness. The compliment she paid to the rhetorical merits of Mr. Fox, by requesting his bust, and placing it between those of Cicero and Demosthenes in her library, for his having prevented the threatened rupture between Great Britain and Russia, re- flects honor on her memory, as well as on that of the orator. Her purchasing the libraries, letters, and papers of Messrs. Voltaire and D' Alembert also evidenced her literary taste ; unless, as a French writer suspects, she did it with a view to bury the relics of these great men. This extra- ordinary woman died suddenly and unseen, in her water-closet, on the 17th of November, 1796, in the sixty-seventh year of her age.*

CA'THERINE PEAR. See PYRUS. For steaks of red were mingled there,

Sucu as arc on a Catherine pear,

The side that's next the sun. Suckling.

CATHERINEBERG, a town of Sweden, in the province of West Gothland. It is the birth-place of the celebrated chemist, Sir Torbern Bergman.

CA'THETER. n. s. KaQtTTjp, from KaQiripi, I let down into. A hollow and somewhat crooked instrument, to thrust into the bladder, to assist in bringing away the urine, when the passage is stopped by a stone or gravel.

A large clyster, suddenly injected, hath frequently forced the urine out of the bladder; but if it fail, a catheter must help you. Wiseman's Surgery.

CATHETOLIPES, in natural history, the name of a genus of fossils of the class of the se- lenitse, but differing from the common kinds, in the constituent plates being ranged perpendicu- larly, and not horizontally on each other.

CATHETUS, in architecture, a perpendicular line, supposed to pass through the middle of a cylindrical body, as a baluster, column, &c.

CATHETUS, in geometry, a line or radius fall- ing perpendicularly on another line or surface ; thus the catheti of a right-angled triangle, are the two sides that include the right angle.

CATHO'LICISE, or ~\ Fr. catholique ; Ital.

CA'THOLISE, s- I cattolico; Spxatolico;

CA'THOLICK, n. & adj. \ Gr. eaOoXticoc, from

CA'THOLICKLY, S-oXoc, universal, the

CA'THOLICKNESS, n.] whole, all; thence ap-

CATHO'LICAL, adj. plied to the whole

CATHO'LICISM, n. J Christian church. ••• The verb is not in use. Cotgrave and Sherwood define it ' to catholikize it,play the catholicke, be-

come a catholicke.' Catholicism is adherence to the Catholic church ; orthodox faith ; catho- lickly is generally ; catholickness ; universality.

The church of Jesus Christ is called catholic, because it extends throughout the whole world, and is not limited by time. Some truths are said to be catholic because they are received by all the faithful. Catholic is often set in opposition to heretic or sectary, and to schismatic. Ca- tholic or canonical epistles, are seven in num- ber ; that of St. James, two of St. Peter, three of St. John, and that of St. Jude. They are called catholic, because they are directed to all the faithful, and not to any particular church ; and canonical, because they contain excellent rules of faith and morality.

Doubtless the success of those your great and ca- tholich endeavours will promote the empire of man over nature, and bring plentiful accession of glory to your nation. Glanville's Scepsis.

All pope's believers think something divine, When images speak, possesseth the shrine ; But they -who faith cathalick ne'er understood, When shrines give an answer, a knave's on the rood.

Marvell.

Those systems undertake to give an account of the formation of the universe, by mechanical hypotheses of matter, moved either uncertainly, or according to some catholick laws. Ray.

CATHOLIC CHURCH. The rise of heresies in- duced the primitive Christian church to assume to itself the appellation of catholic, being a cha- racteristic to distinguish itself from all sects, who, though they had party names, sometimes shel- tered themselves under the name of Christians. The Romish church now distinguishes itself by the name of catholic, in opposition to all who have separated from her communion, and whom she considers as heretics and schismatics, and her- self only as the true and Christian church. In the strict sense of the word, there is no catholic church in being, that is, no universal Christian communion. We shall treat of the existing state of the ROMAN CATHOLIC church under that more appropriate title.

CATHOLIC KING is a title which has been long hereditary to the king of Spain. Mariana pre- tends, that Recarede first received this title after he had destroyed Arianism in his kingdom, and that it is found in the council of Toledo for the year 589. Vasce ascribes the origin of it to Al- phonsus I. in 738. Some allege that it has been used only since the time of Ferdinand and Isa- bella. Colombiere says, it was given them on occasion of the expulsion of the Moors. The Bollandists pretend it had been borne by their

predecessors the Visigoth kings of Spain; and that Alexander VI. only renewed it to Ferdinand and Isabella. Others say, that Philip of Valois first bore the title ; which was given him after his death by the ecclesiastics, on account of his favoring their interests. In some epistles of the ancient popes, the title catholic is given to the kings of France and of Jerusalem, as well as to several patriarchs and primates.

*CATHO'LICON, n. *. from catholic ; Ca0o- XIKOV ia^a ; a universal medicine.*

Preservation against that sin, is the contemplation of the last judgment. This is indeed a catMiivn

against all ; but we find it particularly applied by 8t, Paul to judging and despising our brethren.

Government of the Tongue. Here the great masters of the healing art, These mighty mock-defrauders of the tomb. Spite of their juleps and catftolicon, Resign to fate ! Blair's Grave.

CATILINISM, n. from Catiline ; a conspi- racy.

CATILINE (Lucius Sergius), a Roman of a patrician family, who, having spent his fortune in debauchery, formed the design of destroying the senate, seizing the public treasury, setting Rome on fire, and usurping a sovereign power over his fellow citizens. He drew some young noblemen into his plot ; whom he prevailed upon, it is said, to drink human blood as a pledge of their union. His conspiracy, however, was discovere4 by the vigilance of Cicero, who was then consul. Upon which, retiring from Rome, he put himself at the head of an army, with several of the conspirators, and fought with incredible valor against Pe- treius, lieutenant to Anthony, who was colleague with Cicero in the consulship ; but was defeated and killed in battle. See ROME. Sallust has given an excellent history of this conspiracy.

CATO (Marcus Porcius), Major, the censor, one of the greatest men among the ancients, was born at Tusculum, A. U. C. 519, and A.A.C. 232. He began to bear arms at seventeen ; and, on all occasions, showed extraordinary courage and great sobriety ; considering no bodily exer- cise unworthy of him. He had but one horse for himself and his baggage, arid he always groomed it. At his return from his first campaign, he plowed his own ground, though he had slaves to do it. He dressed also like his slaves, sat at the same table with them, and partook of the same fare. He employed his rhetorical talents in pleading causes in the neigbouring cities without fee or reward. Valerius Flaccus, who had a country seat near Cato, conceiving an esteem for him, persuaded him to come to Rome; and here,

by his own merit, and the influence of so power- ful a patron, he was soon noticed. He was first elected tribune of the soldiers for Sicily. Next he was made questor in Africa under Scipio, whom he reproved for his profuseness to his soldiers. Being afterwards prator, he fulfilled the duties of that office with the strictest justice. He conquered Sardinia, governed it with ad- mirable moderation, and was elected consul. Being tribune in the Syrian war, he gave dis- tinguished proofs of his valor against Antiochus the Great ; and at his return stood candidate for the censorship. But the nobles, who not only envied him as a new man, but dreaded his se- verity, set up against him several powerful com- petitors. Valerius Flaccus, who had been his colleague in the consulship, was a ninth candi- date, and these two united their interests. On this occasion Cato, far from flattering the people, or giving hopes of gentleness in the execution of his office, declared from the rostra, with a threaten- ing look and voice, 'That the times required firm and vigorous magistrates to put a stop to that luxury which menaced the republic with ruin ; censors who would cut up the evil by the roots, and restore the rigor of ancient discipline.'

To the honor of the Romans, notwithstanding these intimations, they preferred him to all his competitors. The comitia also appointed his friend Valerius to be his colleague, without whom he had declared that he could not hope to compass the reformations he had in view. With all these accomplishments, Cato had very great faults. His ambition, poisoned with envy, disturbed both his own peace and that of the whole city, as long as he lived. Though he would not take bribes, he amassed wealth by all such means as the law did not punish. His fiFst act in his new office was naming his col- league to be prince of the senate. But what most offended the nobles and their ladies was the taxes he imposed on luxury in all its branches ; dress, household furniture, women's toilets, chariots, slaves, and equipage. The people, however, were so pleased with his regulat'ons, that they ordered a statue to be erected f> his honor in the temple of Health, with an inscrip- tion importing, that by his wise ordinances he had reformed the manners of the republic. Plu- tarch relates, that before this, upon some of Cato's friends expressing their surprise, that while many persons without merit or reputation had statues, he had none ; he answered, ' I had much rather it should be asked why the people have not erected a statue to Cato, tl an why they have.' Being, in the third Punic %var, despatched to Africa, he warmly exhorted the senate to destroy a city and republic, during the existence of which, Rome could never be safe : and after this time never spoke in the senate upon any subject, with- out concluding with these words, ' I am also of opinion that Carthage ought to

be destroyed.' Cato, however severe as a public magistrate, was, in private life, sociable and good-humored, and intermixed his conversation with the liveliest and happiest wit. Plutarch has collected a pretty large number of his sayings. He had married a very handsome wife, who, being extremely afraid of thunder, always threw herself into her hus- band's arms at the least noise she heard in the sky. Cato, who was very willing to be caressed, told his friends that ' his wife had found out a way to make him love bad weather ; and that he never was so happy as when Jupiter was angry.' Cato died A.U.C. 604, aged eighty-five. He wrote, 1 . A Roman History ; 2. Concerning the Art of War; 3. Of Rhetoric; 4. A Treatise of Husbandry. Of these, the last only is extant.

CATO (Marcus Portius), Minor, was great grandson of Cato the Censor, and from his in- fancy discovered a singular inflexibility of mind. Sylk, having had a friendship for the father of Cato, sent often for him and his brother. Cato, who was then about fourteen years of age, seeing the number of heads sometimes brought in, asked his preceptor, 'Why does nobody kill this man?' ' Because,' said the other, ' he is more feared than he is hated.' The boy replied, ' Why then did you not give me a sword when you brought me hither, that I might have stabbed him, and freed my country from this slavery ?' He imbibed the principles of the Stoic philosophy, under Anti- pater of Tyre. To increase his bodily strength, he inured himself to extremes of heat and cold ; and used to make journeys on foot, and bare-

headed, in all seasons. When he was sick, pa- tience and abstinence were his only remedies. Though remarkably sober in the beginning of his life, making it a rule to drink but once after supper, he insensibly contracted a habit of drink- ing more freely, and of sitting at table till morn- ing. His friends excused this, by saying that the affairs of the public engrossed his attention all the day ; and that, being ambitious of knowledge, he passed the night in the conversation of phi- losophers. Caesar wrote that Cato was once found dead drunk at the corner of a street, early in the morning, and that the people blushed when they found it was Cato. He affected singularity ; and magnanimity and constancy are generally ascribed to him. ' Cato,' says Seneca, ' having received a blow in the face, neither took revenge nor was angry ; he did not even pardon the affront, but denied that he had received it. His virtue raised him so high, that injury could not reach him. Our Stoic, however, was for going to law with Scipio ; but his friends diverted him from that design, and he revenged himself by making verses \ipon his rival. He married Attilia the daughter of Serranus, had two children by her, and after- wards divorced her for very indiscreet conduct. He served as a volunteer under Gallius in the war of Spartacus; but refused the military re- wards offered him by the commander. , Some years after, he went a legionary tribune into Macedonia, in which station he appeared,

*in his dress, and during a march, more like a private soldier than an officer. On his return home he was chosen questor ; and had scarce entered on his charge, when he made a great reformation with regard to the registrars, whose places were for life, and through whose hands all the public accounts passed. He greatly pleased the people, by making the assassins, to whom Sylla had given considerable rewards, for murdering the pro- scribed, disgorge their gains. At first his aus- terity and stiffness displeased his colleagues ; but afterwards they were glad to have his name to oppose to all the unjust solicitations, against which they would have found it difficult to de- fend themselves. To keep out a very bad man, he put in for the tribunate. He sided with Cicero against Catiline, and opposed Caesar on that oc- casion. His enemies sent him to recover Cyprus, which Ptolemy had forfeited, thinking to hurt his reputation by so difficult an undertaking; yet none could find fault with his conduct. He tried to bring about an agreement between Caesar and Pompey ; but, seeing it in vain, sided with the latter. When Pompey was slain, he fled to Utica ; and, being pursued by Caesar, advised his friends to be gone, and throw themselves on Caesar's clemency. His son, however, remained with him; and Statilius, a young man, remarkable for his hatred to Caesar. The evening before his death, after bathing, he supped with his friends and the magistrates of the city. They sat late, and the conversation was lively. * The discourse falling upon this maxim of the Stoics, that ' the wise man alone is free, and that the vicious are slaves ;' Demetrius, who was a Peripatetic, under- took to confute it. Cato, in answer, treated the matter with so much earnestness and vehemence of voice, that he confirmed the suspicions of his*

friends that Tie designed to kill himself. When he had done speaking, a melancholy silence en- sued ; and Cato perceiving it, turned the dis- course to the present situation of affairs, express- ing his concern for those who had been obliged to put to sea, as well as for those who had deter- mined to make their escape by land, and had a dry and sandy desert to pass. The company being dismissed, he walked for some time with a few friends, and going into his chamber, em- braced his son with more than usual tenderness, which farther confirmed the suspicions of his resolution. Then lying down on his bed, he took up Plato's Dialogue on the Immortality of the Soul. Having read for some time, he looked up, and missing his sword, which his son had re- moved, he called a slave, and asked who had taken it away; and, receiving no pertinent answer, he resumed his reading. Some time after, he asked again for his sword ; and, without showing any

impatience, ordered it to be brought to him ; but, having read out the book, and finding nobody had brought it, he called for all his servants, fell into a rage, and struck one of them on the mouth with so much violence that he very much hurt his own hand, crying out in a passionate manner, ‘ What ! do my own son and family con- spire to betray me, and deliver me up naked and unarmed to the enemy ?’ Immediately his son and friends rushed into the room ; and began to lament, and to beseech him to change his resolu- tion. Cato raising himself, and looking fiercely at them, ‘ How long is it,’ said he, ‘ since I have lost my senses, and my son is become my keeper?’ They withdrew, and the sword was brought by a young slave. Cato drew it, and finding the point to be sharp, ‘ Now,’ said he, ‘ I am my own master :’ and, laying it down, he took up his book again, which he read twice over. After this he slept so soundly that he was heard to snore by those near him. About midnight he called two of his freed men, Cleauthes his phy- sician, and Butas, whom he chiefly employed in the management of his affairs. ??? The last he sent to the port, to see whether all the Romans were gone; to the physician he gave his hand to be dressed, which was swelled by the blow he had given his slave. This was thought an intimation that he intended to live, and gave great joy to his family. It was now break of day, and Cato slept yet a little more, till Butas returned to tell him that all was perfectly quiet. He then ordered him to shut his door, and flung himself upon his bed, as if he meant to finish his night’s rest; but immediately he took his sword, and stabbed himself a little below his chest ; yet not being able to use his hand so well by reason of the swelling, the wound did not kill him. It threw him into a convulsion, in which he fell upon his bed, and overturned a table near it. The noise gave the alarm ; and his son and friends entering the room, found him weltering in his blood, and his bowels half out of his body. The surgeon, upon examination, found that his bowels were not cut ; and was preparing to replace them, and bind up the wound, when Cato recovering, thrust the surgeon from him, and tearing out his bowels, immediately expired, in the forty-eighth year of his age. By this rash act, independent of all other considerations, he carried his patriotism

to the highest degree of political frenzy: for Cato, dead, could be of no use to his country ; but had he preserved his life, his counsel might have moderated Caesar’s ambition, and, as Mon- tesquieu observes, hate given a different turn to public affairs.

CATO’NIAN, adj. from Cato; Cato-like, grave, austere.

CATOPTRICKS. See OPTICS and LIGHT.

CAT-SALT, a name given by salt workers to a very beautifully granulated kind of common salt. It is formed out of the bittern, or leach- brine, which

runs from the salt when taken out of the pan. When they draw out the common salt from the boiling pans, they put it into long wooden troughs, with holes bored at the bottom for the brine to drain out ; under these troughs are placed vessels to receive this brine, and across them small sticks to which the cat-aalt affixes it- self in very large and beautiful crystals. This salt contains some portion of the bitter purging salt, is very sharp and pungent, and is white when powdered, though pellucid in the mass. It is used by some for the table, but the greatest part of it is used by the makers of soap

CATSUP. See KETCHUP.

CATTARO, a fortified town of Austria, situ- ated at the bottom of a gulf of the same name, twenty-eight miles W. N. W.of Scutari, and ca- pital of the district of Cattaro. It is defended by a castle and battlements, and tue rocks around it are so steep and high, that in winter the sun is seen only for a few hours. This is a bishop's see ; and a chapter of twelve prebendaries meet here. There are alse three monasteries and two nunneries. Cattaro was ceded by the Austrians, its original possessors, to the French, at the peace of Presburg, 1805. The Russians, however, took possession of it till the peace of Tilsit, when it was again given up to France, but was re- turned to Austria at the congress of Vienna

CATTI, an ancient people of Germany, who inhabited the country reaching on the east to the river Sala, and on the north to Westphalia ; besides Hesse, Wetteravia, and part of the tract on the Rhine, and the banks of the Lahn.

CATTI, or CATTI VELLAUXI, one of the bravest of the ancient nations of Britain, seated in tht country which is now divided into the counties of Hertford, Bedford, and Bucks. The name o this people is written in different ways by Creel and Roman authors, being sometimes callet Cassi, Catticuchlani, Catticlaudani, &c. The; were of Belgic origin, and it is not improbable tha they derived their name Catti from the Belgic won Katten, which signifies illustrious or noble, an that the addition of Vellauni, on the banks c rivers, might be given to them after their arrival in Britain, as descriptive of the situation of their country. Cassibelan, their prince, was made commander-in-chief of the confederated Britons, not only on account of his own personal qualities, but also because he was at the head of one of their bravest and most powerful tribes. In the interval between the departure of Caesar and tht next invasion under Claudius, the Cattivellauni had reduced several of the neighbouring states under their obedience ; and again took the lead in opposition to the Romans at the second in- vasion, under their brave but unfortunate prince

Caractacus. The country of the Cattivellauni was much frequented and improved by the Romans after it was subdued. See DUROCOBRIVA.

CATTLE, n. The etymology of this word is uncertain. Skinner, Menage, and Spelman, de- rive it from capitalia, personal goods, whence the word chattels; and their conjecture seems not to be without foundation, as in the old French catal means moveables of any kind ; and the term chattail is provincially used in France, in the vici- nity of Lyons, to signify all the beasts on an estate. The word in the quotation from Chaucer, will admit of a double meaning ; but it probably stands for chatties, as we still say in legal lan- guage, goods and chatties ; but in that case it shows that there was no difference in the spelling of the two words. Cattle, besides its primary sense of beasts of pasture, is also used as a term of reproach.

For body, good, and catell, and lyff, he set at nought, So was his hert ywoundit for anger and for thought. Chaucer's Canterbury Tales^

Make poor men's Qattle break their necks.

Shakspeare.

Boys and women are for the most partcaW/e of this colour. Id.

When Lubberkin to town his cattle drove, A maiden fine bedight he hapt to love ; The maiden fine bedight his love retains, And for the village he forsakes the plains. Gay.

The exercise of fraud or rapine is unpunished in a lawless community ; and the market is continually replenished by the abuse of civil and paternal author- ity. Such a trade, which reduces the human species to the level of cattle, may tend to encourage marriage and population. Gibbon.

CATTLE is a collective word, implying those quadrupeds which serve either for tilling the ground, or for food to men. They are dis- tinguished into large, or black cattle, and small cattle : the former including horses, seldom known under that name, bulls, oxen, cows, calves, and heifers ; the latter, rams, ewes, sheep, lambs, goats, kids, &c. Cattle are the chief stock of a farm, and those who raise them are called graziers.

CATULLUS (C.), or Q. Valerius, a poet of Verona, who wrote in the times

of Caesar and Pompey, and whose compositions, though elegant, abound with the licentiousness common to that period. He was intimate with the most dis- tinguished men of his age, and directed his sa- tire against Caesar, whose only revenge was to invite the poet to his table. Catullus was the first Roman who imitated with success the Greek writers, and introduced their numbers among the Latins : and he died in the forty-sixth year of his age, B. C. 40. The best editions of his works, which consist only of epigrams, are that of Vulpius, 4to. Patavii, 1737, and that of Barbou, 12mo. Paris, 1754.

CATURUS, in botany, a genus of plants of the class dicecia, and order triandria. Male: CAL. none : COR. three-cleft. Female : CAL. tri- partite : COR. none: styles three: CAPS, three- grained and three-celled : SEED, solitary : spe- cies, two, one a native of India, the other of Co- chin China.

CATY, CATI, OI-CATTI, an East Indian weight used especially at China, equivalent to twenty – five ounces and two drams English. It is also used in Japan, Batavia, and other parts of the Indies, but differs in weight.

CATZENELBOGEN, a town and castle of Germany, in the late circle of the Upper Rhine, which gives name to a county. The river of Maine and the city of Mentz, with its territories, divide the county into Upper and Lower , the former belongs to Hesse Darmstadt, and is called Darmstadt from its capital; and the latter to Hesse Reinfields, of which St. Goar is the ca- pital. The town of- Catzenelbogen lies twenty- eight miles N.N. W. of Mentz, and has an iron mine near it.

CAVA, in anatomy, the largest vein in the body, terminating in the right ventricle of the heart. It is divided in cava ascendens and cava descendens. See ANATOMY.

CAVALCA'DE, n. Old Fr. cavalcade ; Ital. cavalcuta ; low Lat. caballicare ; from caballus, A procession on horseback.

First he that led the cavalcate Wore a sow-gelder's flagellate, On which he blew as strong a levete As well-feed lawyer on his brev'ate, When over one another's heads They charge, three ranks at once, like Sweads.

Hudibra.*

Your cavalcade the fair spectators view, From their high standings, yet look up to you j From your brave train each singles out a ray, And longs to date a conquest from your day.

Dryden.

How must the heart of the old man rejoice, when he saw such a numerous cavalcade of his own raising.

Addison.

CAVALCADEUR, or CAVELCADOUR, an- ciently denoted a riding-master, but is now only applied to a sort of equerries who have the di- rection of princes' stables.

CAVALI'ER, n & adj.-

CAVALIE'RISH, adj.

CAVALI'ERLY, adv.

CAVALI'ERNESS, n.

CAVALI'ERO, n. in its primary sense, indicates one who rides on horseback ; and, as that was anciently done only by persons of birth, the word was also applied to any gay, sprightly, military man or gentleman. Cavalier, as an adjective, not only means spright- ly, warlike, generous, brave, but also haughty, disdainful. In this last sense it became the designation of the party of Charles I. ; some of his military officers having given words of ' great contempt,' and even blows, to the ' vile rabble,' as Clarendon calls them. Cavalierly is haughtily; disdainfully. Cavalierness is arro- gant or contemptuous conduct.

For who is he, whose chin is but enriched With one appearing hair, that will not follow These culled and choice drawn cavaliers to France.

Shakspeare.

The people are naturally not valiant, and not much cavalier. Now it is the nature of cowards to hurt, where they can receive none. Stickling.

Fr. chevalier, cava- lier ; It. cavaliere ; ••• Sp. caballcro ; from Fr. chevul; Lat. ca- ballus. The noun,

Presbyter Hollis the first point should clear, The second Coventry, the cavalier, But would they not be argued back from sea, Then to return, home strait infecta re. Marcell. Each party grows proud of that appellation

which their adversaries at first intended as a reproach : of this sort were the Guclfs and Gibelines, Huguenots, and cavalier. Swift.*

In short, he was a very perfect cavaliero, And to his very valet seemed a hero.

Byron's Beppo.

CAVALIER, in history, an appellation, given in the revolution of 1649 to the royalists and parti- sans of Charles I. in opposition to the roundheads

piler. He never aspires indeed to form new and comprehensive views; yet, he generally im- proves, in some degree, the stock of valuable facts, by his own occasional experiments. He was the author of several papers, published at dif- ferent times in the Philosophical Transactions of the Royal Society of London. His publica- tions were as follows : A Complete Treatise of Electricity in Theory and Practice, with Original Experiments, one vol. 8vo. 1777, enlarged to three volumes in 1795. An Essay on the Theory and Practice of Medical Electricity, one vol.8vo. 1780. A Treatise on the Nature and Properties of Air, and other Permanently Elastic Fluids,

or puritans, the favorites of the parliament and with an Introduction to Chemistry, 4to. 1781.

Cromwell. See ENGLAND, HISTORY OF.

The History and Practice of Aerostation, 8yo.

CAVALIER, in fortification, an elevation of 1735. Mineralogical Tables, fol. accompanied

earth of different shapes, situated ordinarily in with an expianat0ry pamphlet, 1785. A Trea-

the gorge of a bastion, bordered with a parapet, tise Qn Magnetism, in Theory and Practice, with

and cut ir-to more or fewer embrasures, accord- orjginai experiments, 8vo. 1787. Description

ing to its capacity. Cavaliers are a double de- and Use of tlie Telescopical Mother-of-Pearl

fence for the faces of the opposite bastion : they Micrometer, invented by T. C. 8vo. 1793. An

defend the ditch, break the besiegers' galleries, Essav on tlie Medicinal

Properties of Factitious

command the traverses in dry moats, scour the Airs> wit^ an Appendix on the Nature of Blood,

saliant angle of the counterscarp, where the be- gvo. 1798. He died in London in the beginning

siegers have their counter batteries, and enfilade Of

.

the enemies trenches, or oblige them to multi- CA'VALRY. Fr. cavalerie. This word was ply their parallels. They are likewise very ser- formerly written and pronounced in four sylla- viceable in defending the breach and the re- ^les, and meant horsemanship, as well as horse- trenchments of the besieged, and can greatly men . but fae former sense has grown obsolete. incommode the entrenchments which the enemy Cavalry signifies horse troops ; bodies of men

make, being lodged in the bastion.

CAVELIERI (Bonaventure), an eminent ma- thematician of the seventeenth century, a native

furnished with horses for war.

If a state ^ most to gentlemen(and the husband- p\owmen be but as their workfolks, you may

"

of Milan, and professor of mathematics at Bo- jjave a'g00(] cavalry, but never good stable "bands of

logna, where he published several works on that f00t.

science, particularly the Method of Indivisibles.

He was a scholar of Galileo. His Directorium

Generate Uranometricum contains a great variety

of most useful rules in trigonometry and astro-

nomy

Bacon's Henry VII. Their cavalry, in the battle of Blenheim, could not sustain the shock of the British horse.

Addison on the War.

CAVALRY, a body of men that fight only on horseback. The word is derived from cavale-

CAVALLO (Tiberius), was born at Naples, in rie (French), and that from the Latin, caballus,

1749, and was the son of an eminent physician a horse. The Roman cavalry consisted wholly

of that place. His original destination was to a of equites, or knights. The Grecian cavalry

mercantile profession at London, and he came to were divided into cataphractse and non-cata-

England with that view in the year 1771. But the phractae, i. e. into heavy and light armed. Of

study of nature displaying superior attractions, the Greeks, the Thessalians excelled most in

he was seduced from the counting-house, to the leisure of philosophical retreat , and acquired a well merited reputation as a digester and eluci-dator of philosophical discoveries. In the year

cavalry. The Lacedaemonians, inhabiting a mountainous country, were but meanly furnished with cavalry, till, carrying their arms into other countries, they found great occasion for horse to

1779 he was admitted a member of the Neapoli- support and cover their foot. The Athenian ca-

tan Academy of Sciences, as well as of the Royal valry, for a considerable time, consisted only of

Society of London. For the progress and dif- ninety-six horsemen ; but, after expelling the

fusion of science, we are indebted not more to the Persians out of Greece, they increased the num-

happy efforts of original genius, than to the ju- ber to 300, and afterwards

to 1200, which was

dicious industry of those authors who, from time the highest number of cavalry the Athenians ever

to time, employ their talents in digesting and kept. The Turkish cavalry consists partly of

elucidating successive discoveries. The distin- spahis and partly of horsemen, raised and main-

guished rank which Mr. Cavallo held in this use- tained by the zaims and timariots. The chief

ful class of philosophical laborers, is sufficiently use of the cavalry is to make frequent excursions

known. His treatises on popular and interesting to disturb the enemy, intercept his convoys, and

branches of physics, may be justly esteemed destroy the country : in battle to support and

some of the best elementary works which are cover the foot, and to break through and disor-

extant in our language. They possess every re- der the enemy ; also to secure the retreat of the

quisite of such performances, perspicuity of foot. Formerly the manner of the fighting of

style, proper selection of 'materials, and clear the cavalry was, after firing their pistols or cara-

arrangement. The merit of Mr. Cavallo is not, bines to wheel off, to give opportunity for loading

however, the merit of a merely judicious com- again. Gustavus Adolphus is said to have firs'.

taught the cavalry to charge through, to march straight up to the enemy, with the sword drawn in the bridlehand, and each man having fired his piece, at the proper distance, to betake himself to his sword, and charge the enemy as was found most advantageous.

Modern cavalry consists of, first, Heavy Horse ; in England the Horse Guards and the Oxford Blues are the only troops of heavy horse ; second, Dragoons, distinguished from the former by being obliged to fight on foot as well as on horseback ; thirdly, Light Horse regiments, mounted on light swift horses, whose men are of middling stature, and but lightly accoutred; fourth, Hussars, originally Hungarian Horse, who wear a very short waistcoat, and a curious doublet, which generally hangs loose on the left shoulder, having several rows of buttons. Their arms are a long crooked sabre, and pistols and carbine ; fifth, Lancers, whose principal in- strument is a lance with a streamer to its head to frighten the horses of the enemy. See LANCERS.

CAVAN, a county of Ireland, in the province of Ulster, forty-seven miles long, and twenty- four broad ; bounded on the west by Leitrim ; on the north by Fermanagh ; on the east by Monaghan, Louth, and East Meath ; and on the south by West Meath and Longford. It con- tains upward of 8000 houses, tliirty-seven pa- rishes, seven baronies, and two boroughs ; viz. Cavan and Kilmore. It is populous, and carries on the linen manufacture to a great extent. It sends two members to parliament. It is bleak and open in many parts, but, between Cavan and Lough Erne, the country is picturesque and well wooded, and at the foot of the hills are many beautiful little lakes.

CAVAN, jhe capital of the above county, is fifty-four miles north-west of Dublin.

CA'VATE, v. Lat. cavo. To hollow out; to dig into a hollow.

CAVA'ZION, n. Lat. cavo. In architecture The hollowing or under-digging of the earth for cellarage ; allowed to be the sixth part of the height of the whole building.

CAUBUL, CABUL or KABOUL, a considerable province of Afghaunistaun, between the thirtieth and thirty-fifth degrees of north latitude. It is about 250 miles long, and 150 miles broad ; being bounded on the north by Kuttore, or Caff- ristan; on the south by Candahar and Baloo- chistan; on the east by the Indus; and on the west by Hindoo Kho Mountains, and the pro- vince of Bamian. The surface is diversified by vast snowy mountains, hills, extensive plains, and woods. Noble rivers traverse the province, of ###which Cabul, called also in some parts of its course Attacka, and

Cow or Cowraull, are the principal. The leading ridge of high mountains, usually covered with snow, runs from west to east from the neighbourhood of Ghizni to that of Deenkote on the Indus, below Attock, and di- vides the country into two parts. The tract ly- ing to the north of this is named Lumghanat, and to the south Bungishat ; each having one or more considerable streams that finally fall into the Indus. From the neighbourhood of this river to the city of Caubul there is so great deficiency of wood, that all classes of the people suffer at times from want of fuel Near Baramow

is a sandy, uninhabited valley, twenty miles in length ; and around Gundamouck the exposed part of the body is frequently covered with a ni- trous, scaly, and white substance, which exco- riates the skin, and tastes very salt. The chief towns are Cabul and Peshawer.

The soil and productions are very various. The plains of Peshawer and Candahar are fertile, and produce two crops annually of wheat and barley, which are here preferred to Indian corn and rice. The mountain chains are, many of them, condemned to perpetual sterility, and on the south, the moving sand being blown over the fertile tracts, often covers them and converts them into deserts. From Peshawer the central districts receive sugar and cotton cloths in ex- change for leather, iron, and tobacco ; and the same commodities, with lamp-oil, are exported to Candahar, for which the returns are made in European and Persian manufactures. Horses, furs, and hides, are brought to Caubul from Bocharia.

The regal government of Caubul has been compared to that which was exercised by the ancient Scottish monarchs. Over the great towns and their vicinity, and in regard to foreign dependencies, his authority is supreme and di- rect. The rest of the country is divided into clans, called Oolooss, who act nearly inde- pendently of the sovereign, furnishing contin- gents of troops or money in war. These are go- verned by a khaun ; who is appointed by the king, out of the oldest family of the oolooss, and who always acts in concert with the jeerga, or representative assembly of the people. Much of the ordinary judicial power is also in this body. The Afghauns of this district are rude in their manners,and the country affords abundant sheltt to banditti ; but the improvements that follow every portion of political liberty are seen very distinctly here, according to Mr. Elphistone, and their hospitality is unbounded. See AFGHAUNIS- TAUN.

The British government, in 1809, sent an em- bassy to the sovereign of this country, and at. alliance was entered into,- in which it was agreed that the armies of Caubul should oppose the progress of the French and Persians, in case they should attempt a passage to the British ter- ritories. Mr. Elphinstone's account of this mis- sion is the only description of the

territory worth referring to.

CAUBUL, the capital of the foregoing province, stands in a spacious plain, which is well watered by the river of that name, and interspersed with other small walled towns. The capital is sur- rounded by a wall, about a mile and a half in circumference, and the houses are built of stone, clay, and bricks unburnt. The vicinity is adorned by excellent fruit gardens, and the great bazaar, or market-place, is much crowded. The city is frequented by the Usbec Tartars, and Hin- doo merchants, who are protected by the govern- ment. It is 839 amiles distant from Delhi, and 1815 from Calcutta.

CAUCA, an ancient town in Old Castile, Spain, taken by the Romans under Lucullus, A. U. C. 601. when adreadful massacre of the in- habitants took place. It is eighteen miles noith of Segovia.

CATTCA, a large river of South America, which has its rise in the province of Popayan, between the great western and middle ridges of the Andes. After a course of about 500 miles, it falls into the Rio Magdalena, .in lat. 4►► 30′ S. Also a river in the province of Venezuela.

CAUCALIS, in botany, bastard parsley, a genus of the digynia order and pentandria class of plants ; natural order forty-fifth, umbellatae : Involucres undivided : flowers radiate : florets of the centre male ; fruit subovate, striate, muricate with stiff bristles. Species thirteen ; many of them natives cf the hedges or corn fields of our own country, the rest chiefly of the south of Europe.

CAUCASUS, a general name for a high ridge of mountains in Asia. Sir John Chardin de- scribes one mountain under this name as the highest of the ridge, and the most difficult to pass. It has frightful precipices, and in many places the roads are cut out of the solid rock. This .mountain is thirty-six leagues over, and the summit eight leagues broad. The top is per- petually covered with snow. Other parts, how- ever, are extremely fruitful.

The ridge extends between the Caspian and the Black Seas, and makes a curve near Astrakhan, directing its course towards the eastern shore of the Caspian, where they become secondary moun- tains, being disposed in strata. As they are an inexhaustible magazine of combustible substances, they contain an astonishing quantity of metals. Along the foot of the chain we sometimes meet with warm springs of naphtha of different qua- lities,

&c. see CASPIAN ; sometimes we find native sulphur, mines of vitriol, or lakes heated by in- ternal fires. These mountains, excepting the tops, which are always covered with snow, are very fertile ; abounding in corn, wine, honey, gum, fruits, hogs, and large cattle. The vines twine about the trees, and rise so high, that the inhabitants cannot gather the fruit from the uppermost branches. They are in- habited by various nations; as the ABKUAS, CIRCASSIANS, GEORGIANS, TARTARS, &c. who all speak different languages. See these articles. They have many streams of excellent water, and a vast number of towns and villages. The inha- bitants are for the most part Christians of the Georgian church. They have fine complexions, and the women are very beautiful. In winter they wear snow shoes in the form of rackets, which prevent them from sinking in the snow, and enable them to run upon it with great swift- ness.

CA'UDAL, adj. ˆ Lat. cauda. That which CA'UDATE, adj. > relates to the tail of an ani- CA'UDATED, adj. j mal ; having a tail.

How comete, caudate, crinite stars are framed I know. Fairfax. Tasso.

The tail, instead of scuta is furnished with sub caudal, squama. Russel.

CA'UDEBECK, n. A sort of light hat, so called from a town in France where they were first made.

CAUDEX, by Malpighi and others, is used for the stem or trunk of a free : by Linnaeus for the body of the root, part of which ascends, part descends See BOTANY.

CAUDIN./E FURCJE, or CAUOINJE FUKCULJE, spears disposed in the form of a gallows, under which prisoners of war were made to pass. They gave name to a narrow pass near Caudium, where theSamnites obliged the Roman army and the two consuls to lay down their arms and pass undet the gallows, or yoke, as a token of subjec- tion.

CA'UDLE, v. & n. Fr. chaudeuu, says Dr. Johnson ; but the old Fr. caudeiee, conies still nearer. Those who are fond of etymological travelling, may proceed to the Lat. calidus, and Gr. KavSavXof, as Junius and Skinner have done before them. The thing itself is a mixture of gruel, wine, or beer, sugar, and spices ; which is given to women in childbed, to those who visit them, and to sick people. To caudle is to make caudle ; to mix as caudle.

He had good broths, cuiulle, and such like; and I believe he did drink some wine. Wiseman.

Ye shall have a hempen caudle then, and the help of a hatchet.

Stiakspeare.

Will the cold brook,

Candied with ice, caudle thy morning toast, To cure thy o'eruight's surfeit. Id.

CA'VE, v. & n. -\ Fr. cave, caver, cavite ;

CA'VERN, n. f Ital..cauar, cavare, caverna ;

CA'VERNOUS, adj. tˆLat. cavea, caveus, hollow.

CA'VITY, ►►. J frora^aoc. Eol. dial, ˆa Foe

In the Goth, kaf means prqfundum, and may thence have been borrowed to signify any thing deep or hollow. A cave, or cavern, is a den ; a habitation in the earth ; it formerly meant also any hollow place. To cave, is to dwell in a cave. Cavernous, and caverned, indicate anything full of caverns, hollow, excavated ; and the latter word has likewise the sense of dwelling in a ca- vern. Cavity is hollowness ; hollow ; a hollow place.

Two little windows ever open lie, The sound unto the cave's third part conveying ;

And slender pipe, whose narrow cavity. Doth purge the inborn air, that idly staying, Would else corrupt, and still supplies the spending j The cave's third part in twenty by-ways bending, Is called the labyrinth, in hundred crooks ascending. Fletcher's Purple Isla nd.

Such as we, Cave here, haunt here as outlaws. Shahspcure.

The wrathful skies

Gallow the very wanderers of the dark And make them keep their caves. Id.

Bid him bring bis power Before sun-rising, lest his son George fall Into the blind cave of eternal night. Id.

Where wilt thou find a cavern dark enough To mask thy monstrous visage ? Id.

The object of sight doth strike upon the pupil of the eye directly ; whereas the cave of the ear doth hold off the sound a little. Bacon's Nat. Hist.

Clorinda pastures, caves, and springs, These once had been enticing things. Marvell. Through this a cave was dug with vast expence ; The work it

seemed of some suspicious prince.

Dryden.

There is nothing to be left void in a firm building ; even the cavities ought not to be filled with rubbish, which is of a perishing kind. Id.

High at his head from out the caverned rock, In living rills, a gushing fountain broke.

Pope's Odyssey.

No bandit fierce, no tyrant mad with pride, No caverned hermit, rests self-satisfied. Pope.

No great damages are done by earthquakes, except

only in those countries which are mountainous, and pUDlic controversy, and procured Cave the repu-

consequently stony and cavernous underneath.

Woodward's Natural History. Embattled troops, with flowing banners, pass Through flowery meads, delighted ; nor distrust The smiling surface ; whilst the caverned ground Bursts fatal, and involves the hopes of war In fiery whirles. Philipt.

tation of a writer. He afterwards obtained by his wife's interest a place in the post-office ; but still continued, at his intervals of attendance, to exercise his business. He corrected the Gradus ad Parnassum : for which he was liberally re- warded by the company of stationers. He was afterwards raised to the office of clerk of the

If the atmosphere was reduced into water, it would frank in which he acted with great spirit and notmake an orb above tlnrty-two feet deep wh.ch firmne' and his opposition to ?he abuse of this would soon be swallowed up by the camty of the sea, . . JX . ,

and the depressed parts of the earth. Bentley. privilege occasioned his ejectment from the office .

He had now, however, collected a sum sufficient

For as he spoke the rending glebe gave way,

And fires infernal from beneath broke forth, Disclosing horrid cavet unknown to day,

Deep in the bowels of the groaning earth. Goltho he calls ; his manly voice he rears

Oft to its pitch, which hill and dale rebound ;

The much-loved name each grot and cavern hears

And Goltho echoes through the sylvan bound.

Monsters of the foaming deep,

From the deep ooze and gelid cavern roused

They flounce and tremble in unweildy joy

Id.

for the purchase of a small printing-office, and began the Gentleman's Magazine ; to the suc- cess of which he owed the affluence in which he passed the last twenty years of his life, and the fame deservedly attached to the name of its projector. Mr. Cave continued to improve his Magazine, and had the satisfaction of seeing its success proportionate to his diligence, till, in 1753, he fell into a diarrhoea, and afterwards into a kind of lethargic insensibility ; and died Jan.

Who from the black and bloody cavern led The savage stern, and soothed his boisterous breath, Who spokf, and Science reared her radiant head And brightened o'er the long benighted waste.

Bealtie. Yet lingering comfortless in lonesome wild,

Where Echo sleeps mid caverned vales profound, The pride of Troy, Dominion's darling child, Pines while the slow hour stalks its sullen round.

Beattie

Is there no forest,

Whose shades are dark enough to shelter us, Or cavern, rifled by the perilous lightning, Where we must grapple with the tenantry wolf To earn our bloody lair? there let us bide, Nor hear the voice of man, nor call of heaven.

Thomson. 10th, \ 754, having just concluded the twenty-third

volume of his Magazine.

CA'VEAT, n. s. Lat. caveat, let him beware. Intimation of caution.

A caveat is an intimation given to some ordinary or ecclesiastical judge by the act of man, notifying to him, that he ought to beware how he acts in such or such an affair. Ayliffe.

The chiefest caveat in reformation must be to keep out the Scots. Spenser on Ireland.

I am in danger of commencing poet, perhaps lau- reat j pray desire Mr. Rowe to enter a caveat.

Trumbull to Popeˆ

CAVEAT, in law, an intimation to an ecclesi- astical judge, to beware how he acts in such an affair, is used to stop the proving of a will, the Haturin. granting letters of administration, &c. to the pre- CAVE (Dr. William), a learned English di- judice of another.

vine, born in 1637, educated in St. John's Col- CAVEATING, in fencing, is the shifting the ledge, Cambridge, and successively minister of sword from one side of that of the adversary to Hasely in Oxfordshire, All-hallows in London, the other.

and Islington. He became chaplain to Charles CAVENDISH (Sir William), descended of II. and in 1684 was installed a canon of Wind- an ancient family, was born about 1503. Having sor. He compiled the Lives of the Primitive had a liberal education, he was taken into the Fathers in the Three First Centuries of the family of cardinal Wolsey, whom he served as Church, esteemed a very useful work ; and His- gentleman usher of the chamber. In 1527 he toria Literaria, &c. in which he gives an exact attended his master on his splendid embassy to account of all who had written for or against France, returned with him to England, and was Christianity, from the time of Christ to the four- one of the few who continued faithful to him ni teenth century : which works produced a warm his disgrace. He was with him when he died, controversy between Dr. Cave and M. Le Clerc, and delayed going to court till he had performed who was

then writing his Bibliotheque Univer- the last duty of a faithful servant, by seeing his selle in Holland. Dr. Cave died in 1713. body decently interred. The king was so far

CAVE (Edward), celebrated as the projector of from disapproving of his fidelity, that he im- the Gentleman's Magazine, the first publication mediately took him into his household, made him of the kind in England, was born in 1691. After treasurer of his chamber, a privy-counsellor, and passing some time at the free school of Rugby, a knight. In 1540 he was nominated one of the he became clerk to a collector of excise ; but auditors of the court of augmentations, and soon soon left that situation and came up to London after obtained a grant of several lordships in in quest of more suitable employment. Here Hertfordshire. In the reign of Edward VI. his he bound himself apprentice to Mr. Collins, a estates were much increased by royal grants in printer of some reputation. Within two years seven different counties : and he continued in he attained to such skill in his art, and gained so favor during the reign of Mary I. He died in far the confidence of his master, that he was sent 1557. He was the founder of Chatsworth, arrd VOL. V. S

ancestor of the dukes of Devonshire. He wrote The Life and Death of Cardinal Wolsey : Lon- don 1667; reprinted in 1706.

CAVENDISH (William), duke of Newcastle, grandson of Sir William, was born in 1592. In 1610 he was made knight of the bath; in 1620 created baron Ogle, and viscount Mans- field; and in 1628 earl of Newcastle, and baron Cavendish. lie was after this made governor to the prince of Wales, afterwards Charles II. When the troubles broke out in Scotland, and the king's treasury was low, he contributed ––'10,000, and raised a troop of horse, consisting of about 200 knights and gentlemen, who served at their own charge, were commanded by the ––arl, and entitled the prince's troop. He after- wards raised a body of 8000 horse, foot, and dragoons ; with which he took some towns, and gained several unimportant victories. On this he was created marquis of Newcastle ; bxit the king's affairs being ruined by the rashness of prince Rupert, he went abroad, and staid for some time at Paris ; where his circumstances were so bad, that he and his wife were obliged to pawn their clothes for a dinner. He after- wards removed to Antwerp, where, notwithstand- ing his distress, he was treated, during an exile of eighteen years, with extraordinary marks of distinction.

On his return at the Restoration, he was created earl of Ogle and duke of Newcastle. He spent his time in a country retirement, was the patron of men of merit, and died in 1697, aged eighty-four. He wrote a treatise on Horse- manship, which is esteemed ; also four comedies.

CAVENDISH (William). This nobleman, who was the first duke of Devonshire, was born in 1640 ; and, in his twenty-first year, was elected one of the representatives of the county of Derby. In 1665 he served as a volunteer in the fleet, under the duke of York. As a mem- ber of parliament he distinguished himself against the arbitrary measures of the court ; he appeared as a witness in favor of Lord Russell ; and he offered to exchange clothes with that nobleman, to enable him to escape. His country is last- ingly indebted to him, for his having been a very active planner of the revolution of 1688.

CAVENDISH (Hon. Henry), was born in Lon- don, on the 10th of October, 1731. His father was lord Charles Cavendish, of the Devonshire family. During his father's lifetime he was kept rather in narrow circumstances, being only al- lowed an annuity of ►►500 a year. It was during this period that he acquired those habits of economy, and those oddities of character, which he ever afterwards exhibited. At his father's death he was left a very considerable fortune ; and an aunt, who died at a \later period, be- queathed him a very handsome addition. It ap- peared to be finally not in his power to spend the greater part of his income : so that at the period of his death he left behind him nearly ►►1,300,000, and was the greatest proprietor in the Bank of Eng- land. His private bankers, at one period thinking it improper to keep so large a balance as he had left in their hands, sent one of the partners to wait upon him, in order to learn how he wished to dispose of it. The banker was ad- mitted, and, after employing the necessary pre-

*cautions with a man of Mr. Cavendish's peculiar disposition, stated the circumstance, and begged to know whether it would not be proper to lay out the money. Mr. Cavendish dryly answered, * You may lay it out if you please,' and left the room. Mr. Cavendish hardly ever went into any other society than that of his scientific friends. He never was absent from the weekly dinner of the Royal Society Club, at the Crown and Anchor Tavern. At these dinners, when he happened to be seated near those he liked, he often con- versed a great deal ; though at other times he was very silent. He was, likewise, a constant attendant at Sir Joseph Banks's Sunday evening meetings. He had a house in London, which he only visited once or twice a week at stated times, and without ever speaking to the servants. It contained an excellent library, to which he gave all literary men the freest and most unres- trained access. But he lived in a house on Clapham Common, where he scarcely ever re- ceived any visitors. His relation, lord*

George Cavendish, to whom he left by will the greatest part of his fortune, visited him only once a year; and the visit hardly ever exceeded ten or twelve minutes. He was shy and bashful, to a degree bordering upon disease. He could not bear any person to be introduced to him, or to be pointed out, in any way, as a remarkable man. One Sunday evening, he was standing at Sir Joseph Banks's, in a crowded room, conversing with Mr. Hatchett, when Dr. Ingenhousz, who had a good deal of pomposity of manner, came up, with an Austrian gentleman in his hand, and introduced him formally to Mr. Cavendish. He mentioned the titles and qualifications of his friend at great length, and said that he had been peculiarly anxious to be introduced to a philosopher so pro- found, and so universally known and celebrated, as Mr. Cavendish. As soon as Dr. Ingenhousz had finished, the Austrian gentleman began, and assured Mr. Cavendish that his principal reason for coming to London was to see and converse with one of the greatest ornaments of the age, and one of the most illustrious philosophers that ever existed. To all these high-flown speeches Mr. Ca- vendish answered not a word ; but stood with his eyes cast down, quite abashed and confounded. At last, spying an opening in the crowd, he darted through it with all the speed he was master of; nor did he stop till he reached his carriage, which drove him directly home. Mr. Cavendish died on February the 4th, 1810, aged seventy-eight years, four months, and six days. His appear- ance did not much prepossess strangers in his favor; and in his speech he had an impediment. His education seems to have been very complete ; for he was an excellent mathematical scholar, a profound electrician, and a most acute and in- genious chemist. He never ventured to give an opinion upon any subject, unless he had studied it to the bottom. The whole of his literary labors consist of seventeen papers, published in the .Philosophical Transactions, ana occupying each only a few pages ; but full of the most important discoveries, and the most profound investigations. Ten of them treat of chemical subjects, two of electricity, two of meteorology, and three relate to asronomy.

CAVE'SSON, n. Fr. cavcsson, cave$on ; Ital. and Span, cabesson; Lat. caputrum. In horse- manship, a sort of noseband, sometimes made of iron, and sometimes of leather or wood ; sometimes flat, and sometimes hollow or twisted ; which is put upon the nose of a horse, to for- ward the suppling and breaking of him.

An iron caveisan saves and spares the mouths of y oung horses when they

are broken ; for, by the help ►►►- >f it, they are accustomed to obey the hand, and to bend the neck and shoulders, without hurting their mouths, or spoiling their bars with the bit.

Farrier' i Diet.

CAUF, Goth, kqf, kaj'a. A chest with holes in the top, to keep fish alive in the water.

CAUHQ-ROY, in natural history, a fossil which the natives of the East Indies calcine, and give in large doses in the hiccough, and pul- monary complaints. It is also used in dyeing. It is a kind of ochre, or clayey iron ore, found in great abundance in the hills. Iron is some- times extracted from it.

CAVIA, the cavy, in zoology, a genus of quadrupeds, belonging to the order of glires. They have two wedge-like cutting teeth in each jaw ; eight grinders in both. The fore feet have four or five toes ; the hind three, four, or five each. The tail is very short or entirely wanting; and the collar bones are wanting. They seem to hold a middle place between the marine quadru- peds and the rabbit genus ; and have a slow and mostly kind of leaping pace. They never climb trees, but dwell in hollow trees or in burrows which they dig in the earth; and live on vegetables. There are seven species, viz. 1. C. acuachy, the akouchy of Buffon, and olive cavy of Pen- nant, has a short tail ; is olive colored above and whitish below. It inhabits Guiana, Cayenne, and Brasil ; is about the size of a half grown rabbit ; is easily tamed, and is esteemed delicate food. The female brings one or two at a lit- ter. It inhabits woods, and lives on fruits. They are natives of Brasil. 2. C. aguti, the agouty, has a very short tail, the upper parts are brown, mixed with red and black ; the rump a bright orange, and the belly yellowish. They inhabit South America and the West India Islands. They search for their food through the day, and carry it home to their dwellings, where they hoard what they cannot eat. They feed sitting on their hind legs, and carry their food with their fore paws to their mouth. Their flesh is savoury like that of a rabbit. They grunt like pigs, and are very voracious. When angry they beat the ground with their feet. 3. C. aperea, the aperea, or Brasilian coney, has no tail ; is reddish above, and white below ; has short ears ; four toes before and three behind, the middle one longest; the upper lip divided; the fore feet black and naked. It lives in holes of rocks, from which it is hunted by small dogs. It is about a foot long, and runs like a hare. The flesh resem- bles that of a rabbit, but excels it in flavor. 4. C. capybara, the sus hydrochaeris of Lin- naeus, or river hog of Dampier, has five webbed toes guarded by hoofs, on the hind feet, but no tail ; is above two feet and a half long ; the head and nose are large and thick ; the eyes black ; the ears small, erect, rounded and naked ;

the upper jaw long ; and the upper lip divided. The neck and legs are short, and the hair is harsh like bristles. These animals inhabit the east of South America, from the isthmus to Brasil and Paraguay ; live in fenny woods near rivers ; swim, dive, and keep under water ; catch fish at night, but bring them on shore and eat them sitting on their hind legs, like apes. They feed also on vegetables. They keep together in large herds, and make a noise, like the braying of asses. 5. C. cobaya, the mus porcellus, gui- nea pig, or pig-like mouse of Linnasus, and the restless cavy of Pennant, has four toes on the fore, and three on the hind feet, but no tail : the color is white, variegated with irregular orange and black blotches. The body is thick, and sel- dom exceeds seven inches in length. They have short broad ears, and large prominent brownish eyes ; are very restless, and grunt continually like young pigs. They feed on bread, grain, fruits, &c. ; are very delicate, and cannot bear cold or moisture. The female breeds at three months old ; goes with young three weeks, and brings from four to twelve at a birth, though she has only two teats. 6. C. magellanica, the Pa- tagonian hare or cavy, is so large as to weigh sometimes twenty-six pounds. It has long legs, with four toes before, and three behind, armed with long black claws ; hardly any tail ; the nose has tufts of curly hair, and long numerous whiskers ; the ears are long and dilated ; the upper lip divided ; the face and back ash-co- lored; breast and sides tawny ; the belly a dirty white. It inhabits the country about Port De- sire in Patagonia. The flesh is white and well flavored. It feeds on vegetables, and burrows in the ground. 8. C. paca, the mus paca of Linnaeus, or spotted cavy of Pennant, has five toes on all the feet; and the sides are marked with rows of gray or pale yellow spots. The body and head measure about two feet in length ; the tail is like a small button, and so extremely short as to be hardly apparent ; the mouth is very small ; the "upper lip divided ; the nostrils are very large, and the muzzle is garnished with long whiskers ; the ears are short and roundish ; the eyes are large, prominent, and brownish ; the two cutting teeth in each jaw are very long and of great strength ; the hind legs are longer than the Ibre. This species inhabits Brasil, Guian? and probably all the warmer parts of America. It lives in fenny places near rivers, burrowing in the ground, and keeping its hole exceedingly clean, to which it has always three distinct out- lets. It grows very fat, and is esteemed a great delicacy. The female has two teats situate be- tween the hind thighs, and has only a single young one at a litter.

CAVIA'RE, n.) ' The etymology is un-

CA'VIEB.) certain/ says Johnson, ' un-

less it come from Lat. garum, sauce or pickle, made of fish salted.' Its Russian name is ikari. Todd is of opinion that it is adopted from the barb. Greek Kafiiapi or navinpt.

The eggs of a sturgeon, being salted and made up into a mass, were first brought from Constantinople by the Italians, and called civiare. Grew's Museum.

CAVIARE, the hard roes of the sturgeon, are formed into small cakes, ahout an inch thick

and three or four inches broad, by taking out all the nerves or strings; then washing the spawn in white wine or vinegar, and spreading it on a table. It is then salted and pressed in a fine bag; after which it is cased up in a vessel with a hole at the bottom, that if any moisture is left it may run out. Caviare is in great request among the Muscovites, on account of their three Lents, which they keep with a superstitious exact- ness. The Italians settled at Moscow carry on a very great trade in it throughout that empire, there being a prodigious quantity of sturgeon taken at the mouth of the Wolgaand other .rivers which fall into the Caspian sea. A pretty large quantity of caviare is also consumed in Italy and France. They get it from Archangel, but com- monly buy it of the English and Dutch. Ac- cording to Savary, the best caviare brought from Muscovy is prepared from the belluga, which is much preferable to that made of the spawn of sturgeon. A kind of caviare, or rather sausage, is also made from the spawn of some other fishes; particularly a sort of mullet caught in the Medi- terranean.

CA'VIL, v. & n.

CAVILLA'TION, n. CA'VILLER, s. CA'VILLINGLY, adv. CA'VILLINGNESS, n. CA'VILLOUS, adj.

\ Fr. caviller; Ital. I cavillare; Span, cavi- \ lar ; Lat cavillor. To)> cavil is to carp ; to raise captious, frivo- lous, verbal objec-

CA'VILLOUSLY, adj. J tions; to contest about trifles ; to wrangle without a solid reason ; to re- ceive with objections. It was once used in the sense of to mock, to scoff. The caviller is a character who has a strong relationship with the captious man ; the former, however, is less disposed per- haps to quarrel than the latter, less snappish, but equally teazing. Cavillation formerly meant a merry taunt, a subtle forged tale, but is now confined to the practice of making captious ob- jections.

I'll give thrice so much land . To any well-deserving friend ;

But, in the way of bargain, mark ye me,

I'll cavil on the ninth part of a hair. Skakspeare. My lord, you do not well in obstinacy

To cavil in the course of this contract. Id.

I might add so much concerning the large odds be- tween the case of the eldest churches in regard of heathens, and ours in respect of the church of Rome, that very cavillation itself should be satisfied. Hooker.

Wiser men consider how subject the best things have been unto cavil, when wits, possessed with dis- dain, have 8et them up as their mark to shoot at. Id.

Socrates held all philosophers cavillers and mad- men. Burton's Anat. Mel.

Thou didst accept them : wilt thou enjoy the good, Then cavil the conditions ? Paradise Lost.

Since that so cavittously is urged against us.

Milton. Art. of Peace.

Several divines, in order to answer the cavils of those adversaries to truth and morality, began to find out farther explanations. Swift.

He cavils first at the poet's insisting so much upon the effects of Achilles's rage. Pope's Notes on the Iliad.

The candour which Horace shews, is that which distinguishes a critic from a cavillnr. Addison.

Those persons are said to be caviUous and unfaithful advocates, by whose fraud and iniquity justice is de- stroyed. Ayliffe.

Let cavillers deny

That brutes have reason : sure 'tis something more ; 'Tis Heaven directs, and stratagems inspires, Beyond the short extent of human thought. Somervile. CA'VIN, n., in the military art, a natural hollow, fit to cover a body of troops, and conse- quently facilitate their approach to a place.

CAUK, n. I A

CAU'KY, adj. \ A coarse talky spar.

A white, opaque, cauky spar, shot or pointed.

Woodward.

CAUL, n. Isl. Ml; Per. kulah; Goth, kulle- A net for women's hair ; the hind part of a wo- man's cap ; any kind of small net ; the omen- turn ; vulgarly, the membrane which sometimes envelopes the head of a child at the birth, and is superstitiously believed to be a preservative from being drowned.

Let see which is the proudest of hem allc, That wereth or a kerchef or a calle, That dare say nay of what I shall you teche.

Chaucer. Cant Tales. A solemn silence was proclaimed, the judges sat

and heard, What truth could tell, or craft could fain, and who

should be preferred : Then beauty slept before the bar, whose breast and

neck was bare,

With hair trust up, and on her head a caul of gold she ware. Surrey.

Ne spared they to strip her naked all, Then when they bed despoiled her tire and caul, Such as she was, their eyes might her behold.

Spenser.

Her head with ringlets of her hair is crowned, And in a golden caul the curls are bound.

Dryden Mneid.

An Indian mantle of feathers, and the feathers wrought into a caul of packthread. Grew.

The caul serves for the warming the lower belly, like an apron or piece of woollen cloth. Hence a cer- tain gladiatour, whose caul Galen cut out, was so liable to suffer cold, that he kept his belly constantly covered with wool. Ray.

The beast they then divide, and disunite The ribs and limbs, observant of the rite : On these, in double cauls involv'd with art, The choicest morsels lay. Pope's Odyssey.

CAUL, in midwifery, a small part of the pla- centa sometimes found on the

head of the new born child, and formerly applied to several su- perstitious uses. To this day we sometimes see advertisements of this substance in the public papers ; sailors considering it a protection against drowning.

CAULABAGH, a town of Caubul, in the province of Paishawur, on the west side of the river Indus. Near this place are large rocks of pure salt, and a considerable alum manufacture. All the houses are built on terraces cut out of the hill, and the river here is confined to a chan- nel only about 400 yards wide. The town is some- times called Khara Bagh, or the Garden of Salt. CAULI'FEROUS. Lat. caulis and fero, a term in botany for such plants as have a true stalk.

CAULKING, orCAUKiNG, OF A SHIP, is driving very close a quantity of oakum, or old ropes un- twisted and drawn asunder, into the seams of the planks, or into the intervals where the planks are

joined together, in the ship's decks or sides, in order to prevent the entrance of water. After the oakum is driven very hard into these seams, it is covered with hot melted pitch or resin, to keep the water from rotting it. Among the an- cients, the first who made use of caulking, were the inhabitants of Phceacia, now Corfu. Wax and resin appear to have been commonly used previously to that period. The Poles use a sort of unctuous clay for the same purpose, on their navigable rivers.

CAULKING IRONS, iron chissels formed for caulking. Some of these are broad, some round, and others grooved.

CAU'PONATE. i Lat. caupono ; to keep a

CA'UPONISE.) victualling-house; to sell wine or victuals ; to act as a sutler.

CAURSINES, CAURSINI, Italians who came into England about 1235, terming themselves the pope's merchants, but driving no other trade but letting out money ; and having great banks in England, they differed little from Jews, ex- cept that they were more merciless to their debtors.

CAUSALTY, among miners, denotes the lighter, sulphureous, earthy part of ores, carried off in the operation of washing. This, in the mines, they throw in heaps upon banks, which in six or seven years they find it worth their

while, to work over again.

CAUSA MATRIMONII PRˆLOCUTI, in common law, a writ that lies where a woman gives land to a man in fee to the intent he shall marry her, and he refuses to do it in a reasonable time, being required by the woman ; and in such case, for not performing the condition, the entry of the woman into the lands again has been ad- judged lawful. The husband and wife 7►►ay sue this writ against the person who ought to have married her.

Lat. causa. Etymo- logists have been woe- fully at fault, with re- spect to the origin of this word. It has been seri- ously traced to chaos, be- cause all things sprung from chaos ; to icai'ireiv ; a cavendo ; a casu ; and to caiso ; but nothing

CAUSE, v. & n.

CA'USAL, adj.

CAUSA'LITY, n.

CAT/SALLY, adv.

CAUSA'TION, n.

CA'USATIVE, adj.

CAUSA'TOR, n.

CA'USELESS, adj.

CA'USELESSLY, adv.

CA'USER, n.

satisfactory has been written on the subject. A cause signifies that which produces or effects any thing; the reason, the agent, the inducing, or motive, power; reason of debate; subject of li- tigation ; side, party, ground or principle of ac- tion or opposition. To cause, is to effect, to bring about ; to produce. There is an obsolete usage of the verb, meaning to give a cause or reason which is trivial, not valid. Causable is that which may be caused ; causal, is relating to, implying, or containing causes ; causality, is the agency of a cause ; causally, according to the order, or series of causes ; causation, the act or capability of causing. In grammar, causative denotes that which expresses a cause or reason.

Whan he withstandeth our temptation, It is a caute of his salvation.

Cluntcer'r "ji□□terlury Talcs.

Yet is my truth yplight, And love avowed to other lady late, That, to remove the same, I have no might To change love causeless, is reproach to warlike knight. Spenser's Faerie Queene.

His whole oration stood upon' a short narration, which was the cause of this metamorphosis. Sidney.

Never was man whose apprehensions are sober, and by a pensive inspection advised, but hath found by an irresistible necessity one everlasting being, all for ever causing, and all for ever sustaining. Raleigh.

The rest shall bear some other sight, As cause will be obeyed. Shakipeare.

O madness of discourse !

That cause sets up with and against thyself. Id. Is not the causer of these timeless deaths

As blameful as the executioner. Id.

The wise and learned, amongst the very heathens themselves, have all acknowledged some first cause, whereupon originally the being of all things dependeth : neither have they otherwise spoken of that cause, than as an agent, which, knowing what and why it worketh, observeth, in working, a most exact order or law.

Hooker.

Human laws are not to be broken with scandal, nor at all without reason ; for he that does it causelessly, is a despiser of the law, and undervalues its autho- rity. Taylor's Holy Living.

Spices cause hot and head melancholy, and are for that cause forbidden by our physicians, to such men as are inclined to this malady, as pepper, ginger, cin- namon, cloves, mace, dates, &c., honey and sugar.

Burton. Anat. Mel. Well hast thou fought

The better fight, who single hast maintained,

Against revolted multitudes, the cause

Of truth, mightier than they in arms. Milton.

That may be miraculously effected in one, which is naturally causable in

another.

Browne's Vulgar Errortrs.

As he created all things, so is he beyond and in them all, in his very essence, as being the soul of their causalities, and the essential cause of their ex- istence. Id.

Thus may it more be causally made out, what Hip- pocrates affirmeth. Id.

Demonstratively understanding the simplicity of perfection, and the invisible condition of the first causator, it was out of the power of earth, or the areo- pagy of hell, to work them from it. Id.

Thus doth he sometimes delude us in the conceits of stars and meteors, besides their allowable actions, ascribing effects thereunto of independent causation.

Id. As women yet who apprehend

Some sudden cause of causeless fear,

Although that seeming caute take end,

A shaking through their limbs they find. Waller

Yet he does himself excuse, Nor indeed without a cause, For, according to the laws,

Why did Chloe once refuse. Marvell,

*So great, so constant, and so general a practice, must needs have not only a cause, but also a great, a a constant, and a general cause, every way commensu- rate to such an effect. South. Cause is a substance exerting its power into act, to make one thing begin to be. Locke Things that move so swift as not to affect the senses distinctly, and so cause not any train of ideas in the mind, are not perceived to move. "********

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CAUSE.

Reach the Almighty's sacred throne, And make his causeless power, the cause of all things known Blackmore's Creation.

Ere to thy cause, and thee, my heart inclined, Or love to party had seduced my mind. Tickell.

Says my uncle, I pray you discover, What hath been the cause of your woes,

That you pine and you whine like a lover, I have seen Molly Mog of the Rose. Gay.

Causal propositions are, where two propositions are joined by causal particles ; as, houses were not built, that they might be destroyed ; Rehoboam was un- happy, because he followed evil counsel.

Watts' Logic.

Yet soon the dance will cause the cheeks to glow. And melt the waxen lips, and neck of snow. Bishop.

Now, virtue, now thy powerful succour lend, Shield them for liberty who dare to die !

Ah ! Liberty ! will none thy cause befriend ? Are these thy sons, thy generous sons that fly.

Beattie.

Not to understand a treasure's worth, Till time has stolen away the slighted good, Is cause of half the poverty we feel, And makes the world the wilderness it is. Cowper.

CAUSE stands opposed to effect. We obtain the idea of cause and effect from observing the vicissitudes of things, while we perceive some qualities or substances begin to exist, and that they receive their existence from the due appli- cation and operation of other beings. Thus, flui- dity in wax or metals, is the effect of a certain degree of heat, which we observe to be constantly produced by the application of such heat ; which we therefore style the cause.

Aristotle, and the schoolmen after him, distin- guished four kinds of causes ; the efficient, the material, the formal, and the final. This, like many of Aristotle's distinctions, is only a dis- tinction of the various meanings of an ambiguous word ; for the efficient, the matter, the form, and the end, have nothing common in their nature, by which they may be accounted a species of the same genus ; but the Greek word, which we translate cause, had these four different mean- ings in Aristotle's days, and we have added other meanings. We do not indeed call the matter or the form of a thing its cause ; but we have final causes, instrumental causes, occasional causes, and many others. Thus the word cause has been so hackneyed, and made to have so many different meanings in the writings of philoso- phers, and in

the discourse of the vulgar, that its original and proper meaning is lost. With regard to the phenomena of nature, the impor- tant end of knowing their causes, is, that we may know when to expect them, or how to bring them about. 'This is very often of real impor- tance in life; and this purpose is served, by knowing what, by the course of nature, goes be- fore them and is connected with them ; and this, therefore, we call the cause of such a phenome- non. If a magnet be brought near to a mariner's compass, the needle, which was before at rest, immediately begins to move, and bends its course towards the magnet, or perhaps the contrary way. If an unlearned sailor is asked the cause f□□f this motion of the needle, he is at no loss for an answer. He tells you it is the magnet ; and the proof is clear; for, remove the magnet, and

the effect ceases ; bring it near, and the effect is again produced. It is, therefore, evident to sense, that the magnet is the cause of this effect. A Cartesian philosopher enters deeper into the cause of this phenomenon. He observes, that the magnet does not touch the needle, and there- fore can give it no impulse. He pities the ig- norance of the sailor. The effect is produced, says he, by magnetic effluvia, or subtile matter, which passes from the magnet to the needle, and forces it from its place. He can even show you, in a figure, where these magnetic effluvia issue from the magnet, what round they take, and what way they return home again. And thus he thinks he comprehends perfectly how, and by what cause, the motion of the needle is pro- duced. A Newtonian philosopher enquires what proof can be offered for the existence of magne- tic effluvia, and can find none. He therefore holds it as a fiction, an hypothesis; and he has learned that hypotheses ought to have no place in the philosophy of nature. He confesses his ignorance of the real cause of this motion, and thinks that his business as a philosopher is only to find from experiment the laws by which it is regulated in all cases. These three persons differ much in their sentiments with regard to the real cause of this phenomenon ; and the man who knows most is he who is sensible that he knows nothing of the matter. Yet all the three speak the same language, and acknowledge that the cause of this motion is the attractive or re- pulsive power of the magnet. What has been said of this, may be applied to every phenome- non that falls within the compass of natural phi- losophy. We deceive ourselves, if we conceive that we can point out the real efficient cause of any one of them. The grandest discovery ever made in natural philosophy, was that of the law of gravitation, which opens such a view of our planetary system, that it looks like something divine. But the author of this discovery was aware that he discovered no real cause, but only the law or rule according to which the unknown cause operates. Natural philosophers, who think accurately, have a precise meaning to the terms they use in the science ; and when they pretend to show the cause of any phenomenon of nature, they mean by the

cause a law of nature of which that phenomenon is a necessary consequence. The whole object of natural philosophy, as New- ton teaches, is reducible to these two heads : first, by just induction from experiment and ob- servation, to discover the laws of nature; and then to apply those laws to the solution of the phenomena of nature. This was all that this great philosopher attempted, and all that he thought attainable. And this indeed he attained in a great measure, with regard to the motions of our planetary system, and-with regard to the rays of light. But supposing that all the phe- nomena, which fall within the reach of our senses, were accounted for from general laws of nature, justly deduced from experience; that is, sup- posing natural philosophy brought to its utmost perfection, it does not discover the efficient cause of any ore phenomenon in nature. The laws of nature are the rules according to which the effects are produced ; but there must be a

cause which operates according to these rules. The rules of navigation never navigated a ship. The rules of architecture never built a house. Natural philosophers, hy great attention to the course of nature, have discovered many of her laws, and have very happily applied them to account for many phenomena : but they have never disco- vered the efficientcause of any one phenomenon ; nor do those who hare distinct notions of the principles of the science make any such pretence. Upon the theatre of nature we see innumerable effects, which require an agent endowed with active power ; but the agent is behind the scene. Whether it be the Supreme Cause alone, or a subordinate cause or causes ; and if subordinate causes be employed by the Almighty, what their nature, their number, and their different offices may be, are things hid, doubtless for wise rea- sons, from the human eye.

CAUSE, in medical language. The cause of a disease is denned by Galen to be that during the presence of which we are ill, and which being removed the disorders immediately cease. The doctrine of the causes of diseases is called etio- logy. Physicians divide causes into procatarc- tic, proximate, and remote.

Caise, procatarctic, curia ?rpoicarapcru:a, or primitive incipient, is either an occasion which of its Dwn nature does not beget a disease, but happening on a body inclined to diseases occa- sions a fever, gout, 8tc. (such as watching, fast- ing, and the like), or an evident and manifest

Ciuse which immediately produces the disease, as being sufficient thereto ; such as a sword in respect of a wound.

Cause, proximate, that principle in the body, which being present, the disease is also present; or, which being removed, the disease is taken avay ; such as the stone in a nephritic patient, th> virus of the small pox, syphilis, &c.

Cause, remote, predisponent, or antecedent, euna Trpojjys/uv?;, a latent disposition of the bocy, from whence some disease may arise ; such as a plethora in respect of a fever, or cacochymia in respect of a scurvy.

CAUSEWAY, DEVIL'S, a famous road of stones and rubbish, which ranges through the county of Northumberland, commonly supposed to be Romai.

CATSEWAV, GIANT'S, a huge pile of Basaltic columis in Antrim, Ireland. See BASALTES, and G ANT'S CAUSEWAY.

CA'USEY, or) Fr. chaussee ; Ital. calzata ;

CA'USEWAY, n. J Scot, calsey ; Mid. Lat. cal- ceata. A. raised, paved path ; a path elevated above tie rest of the ground. Causeway is an incorrect spelling.

To Shippim the lot came forth westward by the causey. \ Chron. xxvi. 16.

The other way Satan went down, The causeway to hell-gate. Milton.

-out that broad causey will direct your way. And /ou may reach the town by break of day.

Dryden.

Wiose causeway parts the vale with shady rows ? Whoe seats the weary traveller repose ? Pope.

CAUSTIC CURVE, in the higher geometry, a curvi formed by the concourse or coincidence of the nys of light reflected from some other curve.

CA'USTICAL, adj.^ Fr. caitstiquc ; Lat.

*CATISTI'CITY, ►►. * causticus; KUV-IKOQ. That*

CA'USTICK, n. & adj. (which can burn. A

CA'USTICKNESS, n. J burning application. It usually designates a chemical preparation in- tended to destroy some part of the flesh ; figu-

ratively, a bitter, sarcastic speaker.

If extirpation be safe, the best way will be by caus- tical medicines, or escaroticks. Wiseman's Surg.

I proposed eradicating by escaroticks, and began with a caustic stone. Id.

Air too hot, cold, and moist, abounding perhaps with caustic, astringent, and coagulating particles.

Arbuthnot.

It was a tenderness to mankind, that introduced corrosives and caustics, which are indeed but artificial fires. Temple.

The piercing caustict ply their spiteful power,

Emetics ranch, and keen catharticks scour. Garth.

CAUSTICITY, a quality belonging to several substances, by the acrimony of which the parts of living animals may be corroded and destroyed. Bodies which have this quality, when taken in- ternally, are true poisons. The causticity of some of these, as of arsenic, is so deadly, that even their external use is proscribed by most physicians. Several others, as nitrous acid, lapis infernalis or lunar caustic, common caustic, and butter of antimony, are daily and successfully used to consume fungous flesh, to open issues, &c. They succeed very well when properly em- ployed and skilfully managed.

CAUSTICS are generally divided into four sorts ; the common stronger caustic, the common milder caustic, the antimonial caustic, and the lunar caustic. See CAUSTICITY, CHEMISTRY, and PHARMACY.

CA'UTEL, n.

CA'UTELOUS,^'.

CA'UTELOUSLY, adv.

CA'UTELOUSNESS, n. I

CA'UTELTY, n.

reach or fetch ; guileful devise or endeavour ; also craft, subtiltie, trumperie, deceit, cousenage. Cauteller, to deceive, beguile, cousen, over-reach.' These definitions are so full, that it is unnecessary to say more in addition, than that cautel sometimes was used in the sense of a cau- tion.

Cautelous and cautelously had, also, in former times, an innocent as well as a sinister meaning ; they stood for cautious, wary, provi- dent.

Of themselves, for the most part, they are so caute- lous and wily-headed, especially being meii of so small experience and practice in law matters, that you would wonder whence they borrow such subtilties and sly shifts. Spenser on Ireland.

Perhaps he loves you now j And now no soil of cautel doth besmirch The virtue of his will. S/iakspeare.

Your son

Will or exceed the common, or be caught With cautelous baits and practice. Id.

Palladio doth wish, like a ctiuteloui artisan, that the inward walls might bear some good share in the bur- den. Wottan. All pretorian courts, if any of the parties be laid asleep, under pretence of a retirement, and the other

Old Fr. cautelk, cau- teleux, cauteller ; Lat.

. cautus. ‘ Cautelle,’ says Sherwood, ‘ a wile, cau-

‘telle, sleight; a crafty

party doth cautelously get the start and advantage ; ret they will set back all things in statu quo prius.

Bacon.

The Jews, not resolved of the sciatica side of Jacob, do cautelously, in their diet, abstain from both.

Browne.

*CA’UTERIZE, v. *\ Fr. cauteriser ; Lat. CAUTERIZA’TION, n. I cauterium ; rawnjptov. CA’UTERIZING, n. >To cauterise is to burn CA’UTERISM, n. 4 the flesh with a hot CA’UTFV.Y, n. J iron, which is called*

the actual cautery, or with some chemical caus- tic, which is denominated

the potential cautery. Cauterising signifies burning with a cautery. Cauterism is the application of cautery.

For each word a blister, and each false Be as a cauterizing to the root o' th' tongue, ??? Consuming it with speaking. Shaktpeare.

No marvel though cantharides have such a corro- sive and cauterizing quality ; for there is not one other of the insecta but is bred of a duller matter.

Bacon's Natural History.

In heat of fight it will be necessary to have your actual cautery always ready ; for that will secure the bleeding arteries in a moment. Wiseman's Surgery. The design of the cautery is to prevent the canal from closing ???, but the operators confess that, in per- sons cauterized, the tears trickle down ever after.

_Sharpr3 Surgery.

CAUTERISATION, in medicine, the art of burn- ing flesh. In some places they cauterise with burning tow, in others with cotton or moxa, in others with live coals ; some use Spanish wax, others pyramidal pieces of linen, others gold er silver ; Severinus recommends flame blown through a pipe ; but what is usually preferred among us is a hot iron. Cauterising irons are of various figures : some flat, others round, some curved, &c. of all which we find draughts in Al- bucasis, Scultetus, Ferrara, and others. Some- times a cautery is applied through a capsula, to prevent any terror from tire sight of it. This method was invented by Placentinus, and de- scribed by Scultetus. In the use of all cauteries, care is to be taken to defend the neighbouring parts, either by a lamina, defensive plaster, or lint moistened in oxycrate. Sometimes the hot iron is transmitted through a copper canula, for the greater safety of the adjoining parts. The degrees and manners of cauterising are varied according to the nature of the disease and the part affected.

CAUTERY, in surgery, a medicine for burning, eating, or corroding any solid part of the body. See PHARMACY.

CA'UTION, v. & w.ˆl Fr. caution; It. cau- CA'UTIONAL, adj. to; Span. caution ; Lat. CA'UTIONARY, adj. [cautio. The verb sig- CA'UTIOUS, adj. f nifies to warn ; to ap- CA'UTIOUSLY, adv. I prise of a danger. The CA'UTIOUSNESS, n. j noun bears the various meanings of wariness ; provident care to avert danger or evil ; security for and against ; a pro- visionary precept ; warning. Cautionary is a pledge given as a security ; and, also, a hint of something to be avoided.

Such conditions, and cautions of the condition, as might assure with as much assurance as worldly mat- ters bear. Sidney.

The Cedar, upon this new acquest, gave him part of Baccharia for caution for his disbursements.

Hmcell.

I could not but approve their generous constancy and tautiousness. King Charlet.

The parliament would yet give his majesty suffi- cient caution that the war should be prosecuted.

Clarendon.

I am made the cautionary pledge, The gage and hostage of your keeping it.

Southerne.

They know how fickle common lovers are ; Their oaths and vows are cautiously bolieved ; For few there are but have been once deceived.

Drydm.

In despite of all the rules and cautions of govern- ment, the most dangerous aid mortal of vices will come off. L'Estratge.

How shall our thought avoid the various snare : Or wisdom to our cautioned soul declare The different shapes thou pleasest to employ, When bent to hurt, and certain to destroy 1 Prior. Attention to the forementioned symptoms af&rds the best cautions and rules of diet, by way of preven- tion. Arbuthnot We should always act with great cautiousness and circumspection, in points, where it is not impossible that we may be deceived. Adiison. Is there no security for the island of Britain? Has (he enemy no cautionary tovms and sea-ports :o give us for securing trade 1 Swift. fie cautious of him ; for he is sometimes an incon- stant lover, because he hath a great advantage. Id,

To nutter here, to flutter there, on wing ; To talk, to tease, to simper or to sing. To prude it, to coquette it, ००० him to trust, Whose vain, loose life should caution, or disgust. It.

This shall direct thy cautious tread aright, Though not one glaring lamp enliven night. G

For youth alas, nor cautious age, Nor strength, nor speed, eludes their rage.

Beatie.

There is a courageous wisdom : there is also a false reptile prudence, the result not of caution but of f►►►ar.

Btfhe.

‘ Life’s a poor player.’ ►►► Then, ‘ play out the rlay, Ye villains !’ and above all keep a sharp eye,

Much less on what you do than what you say; Be hypocritical, be cautious, be Not what you seem, but always what you see.

Byron’s Don Juan.

CAUVERY, or CAVERY, a noble ri►►►er of Hindustan, in the province of Tanjore, which rises near the coast of Malabar, among theCoory hills, and passing through the Mysore, mar Se- ringapatam, below the Ghauts, falls into the sea by several mouths, after a course of nearly 400 miles. The island of Seringham is opjosite to Trichinopoly, formed by it.

To CAW, v. n. A word imitative of the sound. To cry as the raven, or crow : a term of ‘eproach.

Russet-pated choughs, many in sort, Rising and cawing at the gun’s report

Shak&eare.

A walk of aged elms, so very high, that therooks and crows upon the tops seem to be cawing in arother region. Adiison.

The rook, who high amid the boughs, In early spring, his airy city builds, And ceaseless caws. Thomson’s Spring.

Cawing rooks, and kites that swim sublime In still repeated circles, screaming loud,

The jay, the pie, and even the boding owl, That hails the rising moon, have ch \rcas for me.

Cowper,

Our ‘ royal bird’

Gone down it seems to Scotland, to be fiddled Unto by Sawney’s violin, we have heard : ••• Caw me, caw thee,’ for six month hath been hatching, This scene of royal itch and loyal scratching.*

Byron’f Don Juan.

CAXAMARCA, a province of Peru, South America, bounded on the north by that of Jaen,

the Peruvian incas, when the celebrated Pizarro landed at Tumpai, near the mouth of the Guaya- quil. Here are still shown a large room, part of the old palace, and the residence of the ca- cique Astopilco, where this ill-fated monarch was kept a prisoner for the space of three months, or from the first day of his meeting Pizarro to the day on which he was murdered by order of that general ; and in this room is the mark which he made on the wall, promising to fill it to that

- ,. ••• height with silver and gold as a ransom. In the

west by that of Sana and by a part ot Irux- ch . bel j to the Comm0n gaol , which was illo, south by that of Huamachuco, south-east fon••erl •• o| the al the altar stands oa

r

by the province of Caxamarquilla, east by that

Atahualpa was placed by the

of Chachapoyas, and north-west by that of Luya, s aniards and strangled, and under which he Chillaos, and Piura. It is 120 miles m length, Jg · ^^ ^ fountain in the plasaare

from south-east to north-west, and 108 breadth, lying between the fifth and eighth de- grees of south latitude. This province is much intersected by ramifications of the Cordillera ; and, having several low valleys, exhibits an epi- tome of all the various climates of the earth, from extreme heat to intense cold”: all kinds of fruit and grain peculiar to different climates are there- fore cultivated. It abounds also in cattle and

also visible the foundation stones of the small battery erected by Pizarro, in the front of which Valverde delivered his famous harangue to the inca, and whence he commanded the Spanish soldiers to massacre the Indians. About a league from the city are the baths where the inca was living when Pizarro

arrived ; the one on the right hand is called the bath of the inca. The present

aiso m caiueanu population of this city is about 12,000. See

*poultry; and several obrages, manufactories of *j►►. Stcphenson's Twenty Years' Residence in*

South America, vol. ii.

CAXAMARQUILLA, PATAZ, or PATA,a town and province of Peru, bounded on the east by the mountainous Indian country, on the north-east and north by the province of Chachapoyas, on the west and north-west by the river Amazons, here called the Tunguragua, which separates it from the provinces of Caxamarca, Guamachuco, and Conchucos; and on the south by that of Huamalies. It is seventy-eight miles long from

cloth, baizes, blankets, and tocuyos, have been established here. The most extensive manufac- tories of woollen cloths are Polloc and Sondor, belonging in 1812 to Don Tomas Bueno ; and that for blankets, at Yana-cancha, belonging at the same date to Don Miguel Sarachaga. The blankets are tastefully embroidered with loose yarn by the Indians, before they undergo the ope- ration of fulling. Many silver and gold mines also exist in the province ; but since the disco- very of the rich ores of Gualgayoc, in the neigh-

north to south, and eighteen wide. From the

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oounng province of Chota, those of Caxamarca eagt bound of this province flow the principal

have been abandoned On the shores of the tribut slTˆms of thle Amazons. It is of very

de las Crisnejas which falls into the Mara- d[veTsi&d temperature, but, in the warm and

are several washing places (lavaderos), of t rate regi►►ns very productive in wheat,

nver

non,

gold. On the north side of the province, where

it joins that of Jaen, excellent bark trees are

found. The population is about 50,000.

CAXAMARCA, the capital, is well supplied with flesh meat, poultry, bread, grain, vegetables, fruit, and every necessary of life ; cheese and butter are plentiful ; of the latter, a fresh supply is brought from the country every day. Fine fruits are also obtained from the valleys, such as paltas, the vegetable marrow, chirimoyas, and pine- apples, particularly from that part called de las Balsas, where the road to Chachapoyas crosses the Maranon. It carries on a consider- able trade with Lambayeque and other places on the coast, furnishing them with the different home manutactured articles ; such as baizes,

maize, bark, potatoes and sugar. There are also some gold and silver mines in the province. Po- pulation about 8,000. This is likewise the name of several small settlements of Peru. The capital is in latitude 7►► 36′ S.

CAXATAMBO, a mountainous and cold pro- vince of Peru, bounded on the north by the pro- vince of Huailas, or Guailas, on the north-east by that of Conchuios, on the east by that of Huamalies7 or Guamalies, on the south-east by that of Tarma, on the south by that of Chancay, and on the north-west by that of Santa. It is 100 miles from north-east to south-west, and about the same extent from north-west to south- east. It produces grain and cochineal, and abounds in cattle, seeds, and fruits, and still more

r. , ►►► i ,. ,,,, auumius in uaiiie, sccus, aiiu uiuwj O.IK-I omi iw►► >

bayetones, panetes, a kind of coarse cloth, blan- jn sh from the fleece of which its inhabitants

xets, flannels, tocuyos, &c. and receiving in re- manufaVture a cloth peculiar to the province.

turn European manufactures soap, sugar, cocoa Caxatambo the chief town, is in lat. 10►► 27′ S. brandy, wine, indigo, hierba de Paraguay, salted fish, iron, steel, &c. The inhabitants of the in- CA'XON, n. A burlesque appellation of a

tenor resort hither as to a kind of mart, for the purpose of selling their own produce and manu- factures, and for purchasing others which they may require ; some of the shops are well stored wLa European goods. Caxamarca is interesting in Jie history of Peru, as being the residence of the unfortunate emperor Atahualpa, the last of

wig.

The nuptials to grace, came from every quarter The worthies of Rag Fair, old caxora who barter ; Who the coverings of judges and counsellors' nobs, Cut down into majors, queus, scratches, and bobs.

Huddesfvd.

CAXON, in metallurgy, a chest of ores of sil-

ver, or any other metal that has been burnt, ground, and washed, and is ready to be re- fined.

CAXTON (William), commonly known as the first English printer, as, although Corsellis brought wooden types from Haerlem, yet Caxton was the first who used fusile types in England. He was born in Kent about the year 1412, and was apprenticed to a mercer of London. On his master's death, he was appointed agent for that company in the Low Countries, and was also employed, together with R. Whitehall, Esq. by Edward IV. to conclude a commercial treaty with the duke of Burgundy. During his resi- dence in Flanders he acquired a knowledge of the new invention of printing, and the first book he executed was the Recuyell of the History of Troy, translated by himself from the French, 1471. On his return to England, he set up a press near Westminster Abbey, and the first book there printed was, as far as can be ascer- tained, the Game of Chesse. In the Bodleian library there is a copy of ˆEsop's Fables, printed by Caxton, which is believed to be the first book which has its leaves numbered. After living to upwards of eighty, he died in 1494.

CAYANG, in botany, a leguminous plant, cultivated in the Mogul dominions for food. It is a kind of coarse pulse ; of which the Euro- peans use great quantities on ship-board in the East Indies. It is a species of the cytisus.

CAYENNE, an island of French Guiana, South America, about eighteen miles in length from north to south, and ten miles broad. It is separated from the main land of Guiana by the river Cayenne, and the Ouya. The soil towards the north is fertile and pleasant, but southward the country is flat, and abounds in marshy mea- dows, which are inundated periodically. Horses, cattle, goats, and sheep, abound every where. This island is well

known to have given name to the pepper capsicum minimum which is now obtained, however, both in the East and West Indies. This island was first settled by the French in 1625, and abandoned by them in 1654, when the English took possession of it, and were in their turn, compelled to leave it in 1664. The Dutch seized it in 1676, but it was recovered by France in the following year, and, though it ca- pitulated to the British in 1 809, was confirmed to its old masters at the peace of Paris in 1814. The north point is in 5►► 0 N. lat., and long. 53►► 15′ W.

CAYENNE, the capital, stands on tbx north shores of the island, and is defended by the fort San Louis. The harbour is convenient, though small, and the town, built in the form of a regu- lar hexagon, contains about 200 houses.

CAYLLAC, a sweet scented wood which prows in Siam ; the Siamese and Chinese burn it in their temples.

CAYLUS (Count de), Marquis de Sternay, baron de Bransac, was born at Paris 1692. He entered into the corps of the mousquetaires ; and in his first campaign, in 1709, he distinguished himself by his valor in such a manner, that Louis XIV. commended him before all the court. Upon the peace of Rastadt he travelled into Italy, and after a year's absence returned to Paris, and quitted the army. He then set out

for the Levant, arrived at Smyrna, visited the ruins [of Ephesus, and travelled through a great part of Europe and Asia. The Academy of Painting and Sculpture adopted him an honorary member in 1731 ; the academy of Belles Lettres conferred on him a similar honor in 1742. A fortunate accident soon after furnished him with the means of showing the composition and the coloring of the pictures of ancient Rome. The colored drawings which the famous Bartoli had taken there from antique pictures, fell into his hands. He had them engraved ; and, before he enriched the French king's cabinet with them, he gave a beautiful edition of them at his own ex- pense. Amidst his researches, nothing afforded him so much pleasure as his discovery of en- caustic painting. A description of Pliny's, but too concise to give a clear view of the matter, suggested the first idea of it. He availed him- self of the skill of Dr. Magault, a celebrated chemist of Paris, and by repeated experiments found out the secret of incorporating wax with divers tints and colors, and of making it obe- dient to the pencil. Pliny mentions two kinds of encaustic painting practised by the ancients ; one performed with wax, and the other upon ivory, with hot punches of iron. It was the for- mer that count Caylus had the merit of reviving; and M. Muntz afterwards made many experi- ments to carry it to perfection. In the hands of count Caylus, literature and the arts lent each other mutual aid. He published about forty dis- sertations in the Memoirs of the

Academy of Belles Lettres, and founded a prize of 500 livres, the object of which is to explain, by means ot authors and monuments, the usages of ancient nations. That he might enjoy with the whole world the treasures he had collected, he caused them to be engraved, and gave a learned description of them in a work which he embellished with 800 plates. To him the world is also indebted for that magnificent work, the De- scription of the Gems in the Royal Cabinet, He died in September 1765. His monu ment, in the chapel of St. Germain 1'Auxerrois, is perfectly the tomb of an antiquary. It was an ancient sepulchral antique, of tiie most beau- tiful porphyry, with ornaments in the Egyptian taste. From the moment he procured it, he had destined it to grace the place of his interment.

CAYMAN, in zoology, a species of alligator, ►►xmd in the southern parts of America, and on the coast of Guinea. This animal is the scourge and terror of all the large rivers of South Ame rica. Their boldness is such that a cayman has been known to come into the centre of an assembly of people in a public walk, seize a full grown man and drag him into the bed of the river for food. This happened once at Angustura in the presence of the governor and several other persons. The following ac- count of catching the cayman we quote from the Travels of Mr. Waterton in 1824. Having baited a large hook witii meat, they waited till one of these animals swallowed the bait, and they then had to pull him up and secure him. 'If you pull him up,' say the Indians, 'as soon as he sees you on the brink of the river, he will run at you and destroy you.' 'Never mind,' says our traveller, ' pull away, and leave the rest to me.'

And accordingly he placed himself upon the shore, with the mast of the canoe in his hand, ready to force it down the throat of the crocodile as soon as soon as he made his appearance.

' By the time the cayman was within two yards of me, I saw, says Mr. Waterton, he was in a state of fear and perturbation. I instantly dropped the mast, sprung up and jumped upon'his back, turning half round as I vaulted, so that I gained my seat with my face in a right position. I immediately seized his fore legs, and, by main force, twisted them on his back; thus they served me for a bridle.

' He now seemed to have recovered from his surprise, and probably fancying himself in hos- tile company, he began to plunge furiously, and

lashed the sand with his long and powerful tail. I was out of reach of the strokes of it, by being near his head. He continued to plunge and strike, and made my seat very uncomfortable. It must have been a fine sight for an unoccupied spectator.

‘ The people roared out in triumph, and were so vociferous, that it was some time before they heard me tell them to pull me and my beast of burden far- ther inland. I was apprehensive the rope might break,and then there would have been every chance of going down to the regions under water with the cayman. That would have been more peri- lous than Arion’s marine morning ride : ††† Delphini insidens, vada coerula sulcat Arion.

‘ The people now dragged us above forty yards on the sand, it was the first and last time I was ever on a cayman’s back. Should it bo asked how I managed to keep my seat, I would answer, I hunted some years with Lord Darlington’s fox hounds.’

CAYSTER, or CAYSTRUS, in ancient geogra- phy, a river of Ionia, whose mouth Ptolemy places between Colophon and Ephesus ; com- mended by the poets for the number of its swans. Its source was in the Montes Cilbiani.

CAYUGA, a river of North America, which falls into the Lake Erie on the south shore, about forty miles east of the mouth of Huron. Its mouth is capable of being navigated by sloops from the lake.

CAYUGA LAKE is in the state of New York and county of Onondaga. It extends north and south to the length of thirty-eight miles, its breadth varies from one to four miles, and its shore is very irregular. The north point is twenty-fire miles south of lake Ontario. This lake freezes in winter about six or eight miles above the outlet ; remaining open in the deeper parts. Lat. of the North Point 42†† 28′ N. Ions. 76†† 42′ W.

CAYUGA is also in the state of New York, and was erected into a separate county in 1799. Its form is irregular. On the north, where it is narrow, it is bounded by Lake Ontario, east by Onondaga and Cortlandt counties, south by Tioga county, west by Seneca county. Its great- est length north and south is seventy miles ; its greatest width is twenty miles. The whole area, which is broken and hilly, is computed at 845 square miles, or 540,800 acres. Calcareous petri- factions are frequent here, and salt springs are

found, and wrought to a considerable extent, also good limestone. The manufactures are woollen, linen, and cotton cloths. The county has also several flourishing iron works, distille- ries and tanning establishments ; it sends three members to Congress. CAZIQUE, CACIQUE. See CACIQUE. CEANOTHUS, New Jersey Tea, in botany, a genus of the monogynia

order, and pentan- dria class of plants ; natural order forty-third, dumosjE : CAL. quinquepartite ; petals five, pouched and arched : FRPIT a diy, trilocular, and trispermous berry. There are ten species, of which the most remarkable is the C. Ameri- canus, a native of most parts of North America, from whence the seeds have been imported into Europe. In England this plant seldom rises more than three feet high. ❖❖❖ The stem, which is of a pale brown color, sends out branches from the bottom. These are thin, flexible, and of a reddish color, which has occasioned this tree to be called red twig. The leaves stand on reddish pedicles, about half an inch in length. They are oval, serrated, pointed, about two inches and a half long, are proportionably broad, and have three nerves running lengthwise. The flowers grow at the ends of the twigs in clusters : they are of a white color, and when in blow give the shrub a most beautiful appearance. Indeed, it seems to be almost covered with them, as there is usually a cluster at the end of nearly every twig : and the leaves which appear among them serve as ornaments only. This tree blows in July ; and the flowers are succeeded by small brownish fruit, in which the seeds sometimes ripen in England. It is propagated by layers ; or from seeds sown in pots of compost, consisting of two parts of virgin earth well tempered and one part sand, about a quarter of an inch deep. The young seedlings must be defended from ex- treme cold in winter, as well as from the parching drought in summer. The best time of layering is in summer, just before they begin to flower : At that time lay the tender twigs of the spring shoots in the earth, and nip off the end which would produce the flowers. Within fifteen months some of them will be rooted.

CEASE, n., v. n. & a.~\ Fr. cesser ; Lat. & CE'ASEING, n. fltal. cessare ; from

CE'ASELESS, fcedo, to give place,

*CE'ASELESSLY. * give ground, retreat.*

To stop, to quit, to leave, to depart from, to de- sist from being or doing ; to put an end to ; to discontinue; to decease, to die. It is followed by from before a noun.

Therefore for Christ suffride in fleisch, be ye also aarmed bi the same thenking. for he that suffride iu fleische ceesride fro synnes.

Wicklif't Neu> Test. 2 Pet. iv. Evermore joie ghe, withoute ceetyng preie ghe.

Id. 1 f hess. v.

Wash you, make you cleane : take away the euill

of your workes from before mine eyes : cease to do

euill. Breeches Bible. Isai. i.

Get on your cloak, and haste you to lord Timon

Importune him for my monies ; be not ceased

With slight denial. Shakspeare. Timon of Athens.

Cease to persuade, my loving Proteus ; Home-keeping youth have ever homely wits. . Id. Two Gentlemen of Verona.

CEC

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CEC

The cease of majesty

Dies not alone j but, like a gulf, doth draw What's near it, with it. Id. Hamlet.

The main consents are had ; and here we'll stay To see our widower's second marriage-day.

COUNT. Which better than the first O dear heaven

bless ! Or, ere they meet, in me, O nature cease.

Id. Att's Well.

The care of God ceaseth not over his own, either in death or after it. Bp. Hall.

At first, every man thinks his fellow mocks him ; but now, perceiving this serious confusion, their only Answer was silence and ceasing : they could not come together, for no man could call them to be understood .

Id.

You may sooner, by imagination, quicken or slack

a motion, than raise or cease it ; as it is easier to

make a dog go slower, than to make him stand still.

Bacon's Natural History.

❓❓❓ He scarce had ceased, when the superior fiend Was moving toward the shore ; his pondrous shield, Ethereal temper, massy, large, and round, Behind him cast. Milton.

All these with ceaseless praise his works behold, Both day and night. / ❓❓❓/.

There the wicked cease from troubling ; and there the weary be at rest. Job iii. 17.

That praying always the ensuing discourse showeth to import restless importunity, and perseverance in prayer : the same which is so often commended to us by the phrases not to fainc, or faulter ; not to cease, or give over ; to continue instant, or hold out stoutly ; to strive earnestly, or contest and struggle in prayers.

Barrow's Sermons.

My guiltless blood must quench the ceaseless fire, On which my endless tears were bootless spent.

Fairfax.

The soul being removed, the faculties and opera- tions of life, sense, and intellection, cease from that moles corporea, and are no longer in it.

Hole's Origin of Mankind.

But now the wonder ceases, since I see She kept them only, Tityrus, for thee. Dryden.

The ministers of Christ have ceased from their la- bours. Bp. Spratt.

Like an oak

That stands secure, though all the winds employ Their ceaseless roar ; and only sheds its leaves, Or mast, which the revolving spring restores.

Philips.

Cease, fond nature, cease thy strife, And let me languish into life. Pope's Ode.

When it is the one, ruling, never-ceo❓❓'n

Defender of my rightful cause, While anguish from my bosom draws The deep-felt sigh, the ceaseless prayer, O make thy servant still thy care. Merrick.

And too short-lived to reach the realms of peace, Must cease for ever when the poor shall cease.

Cowper.

By ceaseless action all that is subsists, Constant rotation of.the unwearied wheel That nature rides upon, maintains her health, Her beauty, her fertility. Id.

It is that settled ceaseless gloom,

The fabled Hebrew wanderer bore, That will not look beyond the tomb,

But cannot hope for rest before. Byron.

What is my being ? Thou hast ceased to be ! Id,

CEBES, of Thebes, a Socratic philosopher author of the admired Tales : or, Dialogues on the Birth, Life, and Death of Mankind. He flourished about A. A. C. 405. The above piece is mentioned by Lucian, D. Laertius, Tertullian, and Suidas : but of Cebes himself we have no account, except that he is once mentioned by Plato, and once by Xenophon. The former says of him, in his Phaedo, that he was a sagacious investigator of truth, and never assented without the most convincing reasons : the latter, in his Memorabilia, ranks him among the few intimates of Socrates, who excelled the rest in innocence of life.

CECIL, a county of Maryland, on the eastern shore, and in the north-east corner of the state, bounded on the north by Pennsylvania ; on the west by the Susquehanna and Chesapeake Bay ; on the south by the Sassafras, which se- parates it from Kent county ; and on the east by the state of Delaware. The lands, though hilly, are fertile. The chief town is Elkton.

CECIL (William), lord Burleigh, treasurer of England in the reign of queen Elizabeth, the son of Richard Cecil, Esq. master of the robes to king Henry VIII., was born at Bourn, in Lincolnshire, in 1 520, and received the rudiments of his education at Grantham. About 1535 he was entered of St. John's College, Cambridge. At the age of sixteen he read a sophistry lecture, and at nineteen another on the Greek language, which was not then much cultivated. In 1541 he went to London with an intention to study law ; and accordingly entered himself of Gray's Inn, but Henry VIII. hearing of his classical and other learning, gave him the reversion of the

custos brevium, worth ►►210 a year. About this time he married the sister of Sir John Cheke ; and in 1547 was appointed master of requests by the protector, Somerset ; and soon after at- tended his noble patron on his expedition against the Scots. In 1548 Mr. Cecil was made secre- tary of state ; but in 1549, the duke of Northum- berland's faction prevailing, he suffered in the disgrace of the protector, and was sent prisoner to the Tower. After three months confinement he was released ; in 1551 restored to his office, and soon after knighted, and sworn of the privy- council. In 1553 he was made chancellor of the Order of the Garter. On the death of Ed- ward VI. Cecil prudently refused to have any concern in Northumberland's attempt in favor of the unfortunate Lady Jane Grey ; and, when queen Mary acceded to the throne, he was gra- ciously received at court, but, not choosing to change his religion, he was dismissed from his employments. During this reign he was twice elected knight of the shire for Lincoln, and often spoke in the house of commons with great free- dom and firmness, in opposition to the ministry. Nevertheless, though a protestant and a patriot, he had the address to steer through a very dan- gerous time without much inconvenience. Queen Elizabeth's accession, in 1558, dispelled the cloud

which had obscured his fortunes. During the reign of her sister, he had constantly corresponded with princess Elizabeth ; and, on the day of her accession, he presented her with a paper con- taining twelve articles necessary for her imme- diate despatch ; and in a few days was sworn of the privy council, and made secretary of state. His first advice to the queen was to call a parlia- ment; and the first business he proposed was the establishment of a national church. A plan of reformation was accordingly drawn up under his immediate inspection, and the legal establish- ment of the church of England was the conse- quence. His next important concern was to restore the value of the coin, which had in the preceding reigns been considerably debased. In 1561 he was appointed master of the wards ; and in 1571 created baron of Burleigh as a re- ward for his services, particularly in having lately stifled a formidable rebellion in the north. In 1561 he was honored with the garter, and raised to the office of Lord High Treasurer of England. From this period we find him the primum mo- bile of every material transaction during the glorious reign of queen Elizabeth. Notwithstand- ing the temporary influence of other favorites, lord Burleigh was the person in whom she chiefly confided in matters of importance. Having filled the highest and most important offices of the state for forty years, and guided the helm of go- vernment during the most glorious period of English history, he died August 4th, 1598, aged seventy-eight. He lived, indeed, in a manner suitable to his high rank. He had four places of residence, and at Theobalds, his favorite seat, he often entertained the

queen at vast expense. He was a man of singular abilities and pru- dence, amiable in his private character, and one of the most able, upright, and indefatigable ministers recorded in the English annals. His principal works are : 1. La Complainte de 1'ame Pecheresse, or the Complaint of a Sinful Soul, in French verse, in the king's library. 2. Ma- terials for Patten's Diarium, exped. Scotica;. Lond. 1541, 12mo. 3. Slanders and Lies mali- ciously, grossly, and impudently vomited out, in certain Traiterous Books and Pamphlets, against two counsellors, Sir Francis Bacon, and Sir William Cecil. 4. Precepts or Directions for the well-ordering of a Man's Life, 1634. Harl. Cat Tol. ii. p. 755. . 5. Meditations on the State of England during the reign of Queen Elizabeth, MS. 6. The Execution of Justice in England for the Maintenance of Public and Christian Peace, &c. Lond. 1581, 1583, Somer's Tracts, 4th collect, vol. i. p. 5. 7. Advice to Queen Elizabeth in Matters of Religion and State, ib. p. 101. 16.

CECILIA (Saint), the patroness of music, has been honored as a martyr ever since the fifth century. Her story, as delivered by the notaries of the Roman church, is, that she was a Roman lady born of noble parents about A. D. 235. That her parents married her to a young Pagan nobleman, named Valerianus, who, going to bed on her wedding night, was told by his spouse that she was nightly visited by an angel, and that he must forbear to approach her, otherwise the angel would destroy him. Vale-

rianus desired that he might see his rival tin angel, but his spouse told him that was impos- sible, unless he would consent to become a Christian. This he consented to, and was bap- tised by Pope Urban I. ; after which, returning to his wife, he found her in her closet at prayer, and by her side, the angel in the shape of a beautiful young man, clothed with brightness. After some conversation with the angel, Valeri- anus told him that he had a brother named Ti- burtius, whom he wished to partake of the grace which he himself had received. The angel told him that his desire was granted, and that they should be both crowned with martyrdom in a short time. Upon this the angel vanished, and his prophecy was soon fulfilled. Tiburtius was converted, and he and his brother were beheaded. Cecilia was offered her life if she would sacrifice to the Roman idols, but she refused ; upon which she was thrown into a caldron of boiling water ; others say that she was stifled in a dry bath, i.e. an enclosure, from whence the air was excluded, having a slow fire underneath. There is a tradi- tion of St. Cecilia, that she excelled in music ; and that the angel was drawn from the celestial regions by the charms of her melody. This has been deemed authority sufficient for making her the patroness of music. The above legend has given occasion to painters and sculptors to exer- cise their genius in representations of her playing on the organ or harp.

CE'CITY n. | Ctecitas, Lat. blindness ; CECU'TIENCY. J or tendency to blindness ; privation or cloudiness of sight.

They are not blind, nor yet distinctly see ; ther3 is in them no cecity, yet more than a cecutiency ; they have sight enough to discern the light, though not perhaps to distinguish objects or colors.

Browne's Vulgar Errvuri.

CECROPIA, in botany, a genus of the dian- dra order and dioecia class of plants, natural order fifty-third, scabrida?. Male, spathe cadu- cous, cunent imbricated with pear-shaped scales : COR. none. Female, germs imbricated : STYLE one : STIG. lacerated : SEED, a one seeded berry. Species one only, C. pellala, snake wood or trumpet tree, a native of the West Indies and South America.

CECROPS I. and II., kings of Athens. See ATTICA.

CE'DAR. -x Ang.Sax. ceder ; Tr.cedre; CE'DARLIKE. Lat.cedrws ; iwfyoc, a tree, of CE'DARN. V which there are various spe CE'DRINE. i cies. The description will be CE'DRY. J found under the botanical names. Cedarn and cedrine, the former of which epithets is used in Milton's Comus, signify that which is of, or belonging to, the ce- dar tree. Evelyn uses the adjective cedry, to express cedar-colored.*

Wherever the bright sun of heaven shall shine, His honor, and the greatness of his name Shall be, and make new nations : He shall flourish, And, like a mountain cedar, reach his branches To all the plains about him.

Shakspeare. Henry VIII.

Crowing gravity, so cedar-like. Ben Jor.xw.

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He spake of trees, from the cedar tree, that is in Lebanon, enen unto the hyssope that springeth out of the wall. ••• [From the hiest to the lowest note.]

Breeches' Bible, 1 Kings, iv. 33.

There was nothing but white marble without ; no- thing but cedar and gold within. Upon the hill of Sion stands that glittering snowy pile, which both

inviteth and dazzleth the eyes of passengers afar off : so much more precious within, as cedar is better than stone ; gold than cedar. Bp. Hall.

Hark ! his voice in thunder breaks ; Hushed to silence, while he speaks,

•

See, as louder yet they rise, Echoing through the vaulted skies, Loftiest cedart lie o'erthrown, Cedars of steep Lebanon. Merrick.

CEDAR, in botany. See JUNIPERUS. CEDAR, BASTARD. See THEOBROMA. CEDAR OF BUSACO. See CUPRESSUS. CEDAR OF LEBANON, called by the ancients cedrus magna, or the great cedar ; also cedrelate, KfSptXart]. See PINUS.

CEDAR, WHITE. See CUPRESSUS. CEDE, Lat. cedo, cedere. To give place; to yield. In modern time applied to the yielding, giving up, or resigning by treaty, some object or place that has been contested. See CESSION.

This fertile glebe, this fair domain, Had well nigh ceded to the slothful hands Of monks libidinous. Sherutone.

On the 10th of February (1697) Callieres, in the name of his master, agreed to the following prelimi- naries : ???

' That Din ant should be ceded to the Bishop of Liege, and all reunion since the treaty of Nimeguen be made void : that the French king should make restitution of Lorraine, and, upon conclusion of the peace, acknowledge the prince of Orange as king of Great Britain without condition or reserve.' Smollett. Much of the navigation of 1763 was also owing to the war ; this is manifest from the large part of it employed in the carriage for the ceded islands, with which the communication still continued open.

Burke.

CEDRELA, in botany, a genus of the mono- gynia order, in the pentandria class of plants, natural order fifty-fourth, miscellanea : CAL. withering: COR. quinquepetallous, funnel- shaped, and adhering to the receptaculum, a third of its length : CAPS, fire-celled and five- valved : SEED, winged and imbricated down- ward : species one only, C. novata, a tall tree growing in South America and the West In- dies.

CEDRUS, the cedar-tree, mahogany, &c. See JUNIPERUS, and PINUS.

CEFALU, a small city of Sicily, in the vale Demona, anciently called

Cephaloedis. It is a bishop's see, and has a strong fort. This town has a considerable fishery, but the harbour will not contain above thirty or forty vessels. Long. 13►► 13'E., lat. 38►► 5′ N.

CEIL, v. a. i Lat. calo, Fr. ciel ; (heaven).

CEIL'ING, n. \ This word was written for- merly (see below) siel ; and is at the present time spelt both ciel, after the French word, (although Cotgrare contends it cannot come from that quarter, the plurals of ciel, heaven, and ciel, a canopy, being different) and ceil. To

form the inner covering of a room or building , or to ornament it. ' A ceiled house,' la queatis, Vulg. in the Bible, Haggai i. 4, clearly means a superior and respectable house. The ceiling is the inner covering made.

He saytli I wil build me wide house, and large chambers : so he will make himselfe large \vindowes, and sieling with cedars, and paint them with vermil- lion. Breeches' Bible. Jer. xxii. 14.

Is it time for yourselves to dwell in your sieled houses, and this house lie waste. [Shewing that they sought not only their own necessities but their very pleasures before God's honour. Note].

Id. Hag. i. 4.

And he built the walls of the house within with boards of cedar, both the floor of the house, and the walls of the ceiling. 1 Kinys vi. 15.

And now the thickened sky,

Like a dark ceiling stood , down rushed the rain

Impetuous. Milton's Paradise Lott.

Varnish makes ceilings not only shine, but last.

Bacon.

How will he, from his house ceiled with cedar, be content with his Saviour's lot, not to have where to lay his head ? Decay of Piety,

So when the sun by day, or moon by night, Strike on the polished brass their trembling light, The glittering species here and there divide, And cast their dubious beams from side to side : Now on the walls, now on the pavement play, And to the ceiling flash the glaring day. Dryden.

A rude hand may build walls, form roofs, and lay floors, and provide all

that warmth and security re- quire, we only call the nicer artificers to carve the cornice, or to paint the ceiling. Johnson's Idler.*

CEILING, in architecture, the top or roof of a lower room, or a covering of plaster over laths nailed on the bottom of the joists that bear the floor of the upper room ; or, where there is no upper room, on joists for the purpose; hence called ceiling joists. Plastered ceilings are almost universal in Britain, more so than in any other country.

CEIMELIA; from Kupcu, to be laid up; in antiquity, precious pieces of furniture or orna- ments, reserved for extraordinary occasions and uses. Sacred garments, vessels, &c. are re- puted of the ceimelia of a church. Medals, an- tique stones, figures, MSS. records, &c. are the ceimelia of meh of letters.

CEL&N7E, in ancient geography, the capital of Phrygia Magna, situated on a mountain, at the common sources of the Meander and Mar- syas. The king of Persia had a strong palace beneath the citadel, by the springs of the Mar- syas, which rose in the market place, and flowed through the city. Cyrus the younger had also a palace there, but by the springs of the Meander which river passed likewise through the city. He had also an extensive park, full of wild beasts, and watered by the Meander, which ran through the middle. Xerxes is said to have built these palaces and the citadel after his return from Greece. Antiochus Soter removed the in- habitants of Celaenae into a city named, from his mother, Apamea; which became afterwards a mart inferior only to Ephesus. CELANDINE, in botany. See CHELIDO-

NIUM.

CELANDINE, LESSER. See RANUNCULUS.

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CELANDINE TREE. See BOCCONI..*

CELARENT, among logicians, a mode of syllogism, wherein the major and conclusion are universal negative propositions, and the minor a universal affirmative : e. g.

CE None whose understanding is limited can

be omniscient.

LA Every man's understanding is limited, RENT Therefore no man is omniscient.

CELASTRUS, in botany, the staff tree, a ge- nus of the monogynia order and pentandria class of plants, natural order forty-third, dumosae : COR. pentapetalous and patent: CAPS, quinquan- gular and trilocular : SEED, veiled. There are thirty known species, two of which are inured to our climate: viz. 1. C. bullatus, an uncertain deciduous shrub, a native of Virginia, about four feet high, rising from the ground with several stalks, which divide into many branches, and are covered with a brownish bark. 2. C. scan- dens, or bastard euonymus, with woody, twining stalks, rising by the help of neighbouring trees to twelve feet. In Senegal the iiegroes use the powder of the root as a specific against gonorr- hoeas, which it is said to cure in eight, or some- times in three days. An infusion of the bark of a species of staff tree, which grows in the Isle of France, is said to possess the same virtues.

CELEBES, or MACASSAR. See MACASSAR.

CEL'EBRATEji?.ˆ Lat. celebro, Fr. cele-

CELEBRA'TION, n. tkrer, Ital. celebrare. To

CELE'BRIOUS, t speak of; to praise; to

CELEB'RITY. 3 commend ; to make fa-

mous. That is celebrated which is much spoken of, or distinguished by solemn rites.

Besides the times which God himself in the law of Moses particularly specified, there were, through the wisdom of the church, certain others devised by oc- casion of like occurrence to those whereupon the for- mer had arisen ; as namely that which Mordecai and Esther did first celebrate in memory of the Lord's most wonderful protection, when Haman had laid his in- evitable plot, to man's thinking, for the utter extirpa- tion of the Jews, even in one day. Hooker.

The law of God, which appointed them days of so- lemnity, taught them likewise in what manner the same should be celebrated. Id.

He shall conceal it,

While you are willing it shall come to note ;

What time we will our celebration keep,

According to my birth. Shakspeare.

For (as that worthy man St. Ambrose saith) he is unworthy of the Lord, that otherwise doth celebrate that mystery, than it was delivered by him.

Homilies of the Church.

On the feast day, the father cometh forth, after di vine service, into a large room, where the . feast is celebrated. Bacon.

The manner of her receiving, and the celebrity of the marriage, were performed with great magnificence.

Id.

For the grave cannot praise thee; death cannot celebrate thee ; they that go down into the pit cannot hope for thy truth. Isaiah xxxviii. 18.

This boldness, together with my eminent ignorance, makes him admire the scarcity of learned men in our country, that could find no better Doctors to send to Dort-Conference than Master Hall. To your grief, Sir, it was a synod ; and that noble and cekkrious.

Bishop Hall.

It is evident by this, that the custom of the church was not only in celebration of the holy communion, but in all her other offices to say this prayer, not only for Christ's Catholic church, but for all the world.

Bishop Taylor.

No more shall be added in this place, his memory deserving a particular celebration, than that his learn- ing, piety, and virtue, have been attained by few.

Clarendon.

By not joining at stated times in celebration of di- vine worship, we may be well conceived wholly to disclaim God, or greatly to disesteem him.

Barrow's Sermon.*

The Jews, Jerusalem, and the temple, having been always so celebrious; yet when, after their captivities, they were despoiled of their glory, even then As- syrians, Greeks, and Romans, honoured with sacri- fices the Most High

God, whom that nation wor- shipped. Grew.

This pause of power 'tis Ireland's hour to mourn ; While England celebrates your safe return. Dryden.

The songs of Sion were psalms and pieces of poetry, that adored or celebrated the Supreme Being.

Addison.

I would have him read over the celebrated works of antiquity, which have stood the test of so many dif- ferent ages. Id.

It has lately been a celebrated question in the schools of philosophy, ' whether the soul always thinks.' Johnson's Idler.

CELERES; from celer, quick; in Roman antiquity, a regiment of body guards belonging to the Roman kings, established by Romulus, and composed of 300 young men, chosen out of the most illustrious Roman families, and ap- proved by the suffrages of the curias of the people, each of which furnished ten. The cele- res always attended near the king's person, to guard him and to execute his orders. In war they made the van- guard in the engagement, which they always began first ; in retreats they made the rear guard. Though they were a body of horse, yet they usually dismounted and fought on foot ; their commander was called tri- bune, or prefect of the celeres. They were di- vided into three troops of 100 each, commanded by a centurion ; their tribune was the second person in the kingdom. Brutus, who overturned the monarchy, was tribune of the celeres.

CELERIACK, in botany, a variety of the apium. See APIUM.

CELE'RITY, n. nSp, i►►XXw, to run swiftly. Hence the the Latin celero, to hasten ; and cele- rity, accelerate, acceleration, Eng. speed, swift- ness, quickness.

Forasmuch as that motion is circular whereby we make our divisions of time, and the compass of that circuit such that the heavens, which are therein con- tinually moved and keep in their motions celerity, must needs touch often the same points, they cannot choose but bring unto us by equal distances frequent returns of the same times. Hooker.

CLEO. Celerity is never more admired Than by the negligent.

ANT. A good rebuke

Which might have well becomed the best

of men To taunt ai slackness.

Shakspeare. Ant. and Cleop. Hence hath offence its quick celerity, When it is borne in high authority.

Id. Measure for Jfea&tre

In desire celerity itself is delay. Bacon.

Three things concur to make a percussion great ; the bigness, the density, and the celerity of the body moved. Digby.

Whatever encreaseth the density of the blood, even without encreasing its celerity, heats, because a denser body is hotter than a rarer.

Arbuthnot on Aliments.

I wondered .by what malignant power my peace was blasted, till I discovered at last that I had no- thing to do. Time, with all its celerity, moves slowly to him whose whole employment is to watch its flight. I am forced upon a thousand shifts to enable me to endure the tediousness of a day.

Johnson.

CELERITY, in mechanics, the swiftness of any body in motion. It is also defined to be an affection of motion, by which any moveable body runs through a given space in a given time.

CELERY, in botany, the English name of a variety of the apium graveolens. See APIUM.

CELE'STIFY, v' " Gr. KOI\OV, cavern, hol-*

CELE'STIAL, n. Slow; whence calum, ce-

CELE'STICAL, adj. 3 lestes, Lat. heavens, hea- venly. Celestify is to make heavenly ; celestial, that which is heavenly, or tending toward heaven, excellent, superior.

We should affirm, that all things were in all things, that heaven were but

earth terrestrified, and earth but heaven celestified, or that each part above had influence upon its affinity below. Browne's Vulgar Enours.

There stay until the twelve celestial signs Have brought about their annual reckoning.

Shakspeare. Play that sad note

I named my knell, whilst I sit meditating

On that celestial harmony I go to. Id.

You have heard with what constant faith, we should clothe and deck ourselves, that we might be fit and decent partakers of that celestial food.

Homilies of the Church.

There are also celestial bodies, and bodies terres- trial : but the glory of the celestial is one, and the glory of the terrestrial is another. 1 Cor. xv. 40.

HOST. Peace, I say ; hear mine host of the gar- ter. Am I politic? Ami subtle? Am I a machia- vel ? Shall I lose my doctor ? No ; he gives me the potions and the motions. Shall I lose my parson ? my priest ? my Sir Hugh ? No ; he gives me the pro- verbs, and the noverbs. Give me thy hand terres- trial, so : Give me thy hand, celestial ; so.

Shakspeare's Merry Wives.

If onions and garlic had grown as ripelv in tha wilderness, and manna had rained down no where but in Egypt, how would ye have hated those rude and strong sallads, and have run mad for these celes- tial delicates. Bishop. Hall.

My warbling lute, the lute I whilom strung, When to king John of Portugal I sung, Was but the prelude of that glorious day, When thou on silver Thames didst cut thy way, % With well-timed oars before the royal barge, Swelled with the pride of thy celestial charge. Dryden.

Thus affable and mild the prince precedes, And to the dome the unknown celestial leads. Pope.

Celestial powers thy servants are, Then what can earth to thee compare. Watts. Celestial maid, receive this prayer!

If e'er thy beam divine Should gild the brow of toiling care,

And bless a hut like mine. Carter.

And didst thou not, thy breast to his replying, Blend a celestial with a human heart,

And love, which dies as it was born in sighing, Share with immortal

transports ? Byron.

CELESTIN, the name of five popes of Rome ??? of whom the most remarkable was,

CELESTIN V. whose original name was Peter de Meuron. He was born at Ifernia, in Naples, in 1215, of mean parents. He retired, while very young, to a solitary mountain, to dedicate himself to prayer and mortification. The fame of his piety brought several, out of curiosity, to see him ; some of whom, charmed with his vir- tues, renounced the world to accompany him in his solitude. With these he formed a kind of community in 1254 ; which was approved by pope Urban IV. in 1264, and erected into a dis- tinct order, called the hermits of St. Damien. Peter governed this order till 1286, when his love of solitude and retirement induced him to quit the charge. In July, 1294, the great repu- tation of his sanctity raised him, though much against his will, to the pontificate. He then took the name of Celestin V. and his order that of Celestins from him. By his bull he approved their constitution, and confirmed all their monas- teries, to the number of twenty. But he sat too short a time in the chair of St. Peter to do much for his order; for having governed the church five months and a few days, and considering the great burden he had taken upon him, to which he thought himself unequal, he solemnly re- nounced the pontificate in a consistory held at Naples ; and died in 1269.

CELESTINS, a religious order so called from their founder pope Celestin V. After his death his order made great progress in Italy anJ France ; whither the then general Peter of Tivoli sent twelve religious, at the request of Philip the Fair, who gave them two monasteries; one in the forest of Orleans, and the other in that of Compiegne. This order likewise passed into several provinces of Germany. They had about ninety-six convents in Italy, and twenty-one in France, under the title of priories, before the revolution. The Celestins rise two hours after midnight, to say matins. They eat no flesh ex- cept when sick. They fast every Wednesday and Friday, from Easter to the feast of the ex- altation of the holy cross ; and, from the feast to Easter, every day. Their habit consists of a white gown, a capuche, and a black scapulary. In the choir, and when they go out of the monas- tery, they wear a black cowl with the capuche : their shirts are of serge.

CELEUMA, or CELEUSMA, from Kt\tven>, to call ; in antiquity, 1 . The shout or cry of the sea- men, whereby they animated each other in their work of rowing. 2. A kind of song or formula, rehearsed or played by the master or others, to direct the strokes and movement of the mariners, as well as to encourage them to labor.

CELEUSTES, in ancient navigation, the boat- swain or officer appointed to

give the rowers the signal, when they were to pull, and when to stop.

CE'LIACK, adj. KoiXia, the belly. Relating to the lower belly.

The blood moving slowly through the eeliack and mesenterick arteries, produces complaints.

Arbuthnot on Aliments.

CELI'BACY, n. } Lat. Calebs, from Gr.

CELI'BATE. S icoiXuf/ (icoir►►/ et \►►7rw), the

state of a single man ; one who is without the nuptial bed : unmarried.

And surely, if this man had not presumed, that, by reason of the long discontinuance of Popery, time had worn out of men's minds the memory of their odious filthinesses, he durst not thus boldly have pleaded for their abominable celibate. Bishop Hall.

Celibate, like the fly in the heart of an apple, dwells in a perpetual sweetness, but sits alone.

Bishop Taylor.

Had the apostle known of any vow of continence, or any ecclesiastical law rendering it a damnable sin, and a renouncing their first faith to marry, he would have restrained his words as Esthius here doth to those who were free from the law of celibacy : but I believe he knew of none whom God's law had placed under a necessity of burning. Whitby on 1 Cor. vii. 9.

The case of celibacy is the great evil of our nation ; and the indulgence of the vicious conduct of men in that state, with the ridicule to which women are ex- posed, though ever so virtuous, if long unmarried, is the root of the greatest irregularities of this nation.

Spectator, No. 528.

I can attribute their numbers to nothing but their frequent marriages ; for they look on celibacy as an accursed state, and generally are married before twenty. Id.

By teaching them how to carry themselves in their relations of husbands and wives, parents and children, they have without question, adorned the gospel, glo- rified God, and benefited man, much more than they could have done in the devoutest and strictest celibacy.

Atterbwty.

This decree was confirmed by Pope Innocent at the beginning of the fifth century ; and the celibacy of the clergy was fully decreed by Gregory the Seventh in the eleventh century ; and this has been the univer- sal law and practice of the church ever since. Thus hath the worship of demons and the prohibition of marriage gone constantly hand in hand together.

BisTuip New ton.

As an option of marriage, from which they can reasonably expect happiness, is not presented to every woman who deserves it, especially in times in which a licentious celibacy is in fashion with the men, a fa- ther should endeavour to enable his daughters to lead a single life with independence and decorum. Paley.

CELIBACY. The ancient Romans very wisely used all means imaginable to discourage celibacy. Nothing was more usual than for the censors to impose a fine on bachelors. Dionysius Hali- carnassensis mentions an ancient constitution whereby all persons of full age were obliged to ‘ marry. The first law of that kind, of which we have any certainty, is that under Augustus, called lex Julia de maritandis ordinibus. It was afterwards denominated Papin, Poppaea, and more usually Julia Papia, in regard of some amendments made to it under the consuls Papius and Poppaeus. By this law, divers prerogatives were given to persons who had many children ; penalties imposed on those who lived a single life, as that they should be incapable of receiving legacies, and not exceeding a certain proportion.

CELIBATE is a term chiefly used in speaking of the single life of the popish clergy, or the ob- ligation they are under to abstain from marriage. In this sense we say the law of celibate. Monks and religious take a vow of celibate ; and, what is sometimes very distinct, of chastity. The VOL. V.

church of Rome imposes a universal celibacy on its clergy, from the pope to the lowest sub- deacon. The advocates for this usage pretend, that a vow of perpetual celibacy was required in the ancient church as a condition of ordination, even from the earliest apostolic ages. It is gene- rally agreed, however, that most of the apostles were married : some say all of them, except St Paul and St. John. Be this as it may, in the next age after the apostles, we have accounts of many married bishops, presbyters, and

deacons. Novatus was a married presbyter of Carthage, as we learn from Cyprian ; who himself was also a married man ; and so was Caecilius the pres- byter who con verted him; and Numidius, another presbyter of Carthage. The Romanists reply to this, that all married persons, when ordained, promised to live separate from their wives by consent, which answered the vow of celibacy in other persons. But this is not only said without proof, but against it. There seems early indeed to have been a tendency towards the introduc- tion of such a law, by one or two zealots ; but the motion was no sooner made than it was quashed by the authority of wise men. Thus Eusebius observes, that Piuytus, bishop of Gnos- sus in Crete, was for imposing the law of celi- bacy upon his brethren ; but Dionysius, bishop of Corinth, wrote to him, that he should consider the weakness of men. In the council of Nice, A. D. 325, the motion was renewed for a law to oblige the clergy to abstain from all conjugal society with their wives, whom they had married before ordination; but Paphnutius, a famous Egyptian bishop, and one who himself was never married, vigorously declaimed against it, upon which it was unanimously rejected. The council in Trullo, held in 692, made a difference in this respect between bishops and presbyters ; allow- ing presbyters, deacons, and all the inferior or- ders, to cohabit with their wives after ordination ; and giving the Romish church a rebuke for the prohibition : but at the same time laying an in- junction upon bishops to live separate from their wives, and appointing the wives to betake them- selves to a monastic life, or become deaconesses in the church. And thus was a celibate esta- blished in the Greek church, but only as to bishops. In the Latin church, the like establish- ment was also made, but by slow steps in many places. For in Africa, even bishops cohabited with their wives at the time of the council "of Trullo. CELL, n. CE'LLAR,

CE'LLAEAGE, |or hollow place where CE'LLULAR, ad. J things are hidden or con- cealed : hence a place of retirement or seclusion ; and a cellar or storehouse under the ground.

The lyf is more than mete, and the body more than clothing. Behold the crowis : for thei sowen not, neither repen, to which is no celer, no berne, and God fedith them, how myche more ye ben of more prys than thei t Widif's New Test. Luke, xii

Besides, she did intend confession, At Patrick's cell this even ; and there she was not.

Shakspearet

HAM. Ha, ha, boy! sayest thou so ? art thou thero, come on, true-penny ? ••• you hear this fellow m the cellerage ••• consent to s'.vfar. Id.

Hamlet.

T

~\ vs, confinement; whence fcelo; Lat. to hide. A cave

Mine ryes he closed, but open left the cell Of fancy, my internal sight. Milton. Par. Lost.

Then did religion in a lazy cell, In empty, airy contemplations dwell. Denham.

The brain contains ten thousand cells, In each some active fancy dwells. Prior.

In cottages and' lowly cells True piety neglected dwells ; Till called to heaven, its native seat, Where the good man alone is great.

Somervile.

How bees for ever, though a monarch reign, Their separate cells and properties maintain. Pope.

Let these, by thy inflictions won The example of his deeds to shun, (While as from morn to eve they roam, Some ruined cell their casual home, Each night affords), by hunger led, Seek at the rich man's gate their bread.

Merrick.

How soft the music of those village bells, Falling at intervals upon the ear In cadence sweet, now dying all away, l^ow pealing loud again, and louder still, Clear and sonorous as the gale comes on ' With easy force it opens all the cells Where memory slept. Cowper.

Adieu, thou dreary pile, where r.ever dies The sullen echo of repentant sighs ! Ye sister mourners of each lonely cell nured to hymiis and sorrow, fare ye well ! For happier scenes I fly this darksome grove ; To saints a prison, but a tomb to love. Sheridan. This cave was surely shaped out for the greeting Of an enamoured goddess, and the cell Haunted by holy love ††† the earliest oracle ! Byron. The urine, insinuating itself amongst the neighbour- ing muscles, and cellular membranes, destroyed four.

Sharp's Surgery.

The interstices of the cellular substance are lubri- cated and moistened by a serous or watery fluid, poured out from the exhalent arteries, and again taken in by the absorbents. It thus acquires a pli- ancy and softness, which adapt it particularly to serve as a connecting medium for parts, which have motion on each other. The importance of this pro- perty will be best understood by observing the effects of its loss. Dr. A. Reen.

CELL is also used for a lesser or subordinate sort of monastery dependent on a great one, by which it was erected, and continues to be go- verned. The great abbeys in England had most of them cells in places distant from the mother abbey, to which they were accountable, and from which they received their superiors. The alien priories in England were cells to abbeys in Nor- mandy, France, Italy, &c. The name was also given to rich monasteries, not dependent on any other. It signifies also a little apartment, wherein the ancient monks, solitaries, and hermits, lived in retirement. The name is still retained in various monasteries. The dormitory is frequently divided into cells or lodges. The Carthusians have each a separate cell. The hall wherein the Roman conclave is held, is divided, by partitions, into cells, for the cardinals to lodge in.

CELLAR differs from vault, as the latter is sup- posed to be deeper, the former being frequently little below the surface of the ground. Cellars, in modern buildings, are the lowest rooms in a house, the ceilings of which usually lie level with

*the surface of the ground on which the house is built ; or they are situated under the pavement before the house, especially in streets and squares. CELLARER, or CELLERER, CELLERARIUS, or CELLARIUS, an officer in monasteries, to whom belong the care and procurement of provisions for the convent. The cellerarius was one of the four obedientiarii, or great officers of monasteries : under his ordering was the pistrinum or bake-house, and the bracinum, or brew-house. In the richer houses there were particular lands set apart for the maintenance of his office, called in ancient writings ad cibum monachorum. His whole office in ancient times had a respect to that origin : he was to see his lord's corn got in, and laid up in granaries ; and his appointment consisted in a certain proportion thereof, usually fixed at a thirteenth part of the whole, together with a furred gown. * The office of cellarer then only differed in name from those of bailiff and minstrel ; excepting that the cellarer had the re- ceipt of his lord's rents through the whole extent of his jurisdiction. The cellarer was also an officer in chapters, to whom belonged the care of the temporals, and particularly the distributing of bread, wine, and money, to canons for their attendance in the choir. In some places he was called burser.*

CELLARIUM, in antiquity, an allowance of provisions furnished out of the cella, to the go- vernor of the province and his officers, &c. Cel- larium differed from penus, as the former was only a store-house for several days, the latter for a long time. Thus the Bactroperatae are said by St. Jerome to carry cellar about with them.

CELLARIUS (Christopher), was born in 1638, at Smalcalde, in Franconia, where his father was minister. He was successively rector of the colleges at Weymar, Zeits, and Merse- bourg ; and the king of Prussia having founded an university at Hall, in 1693, he was prevailed on to be professor of eloquence and history thece, where he composed the greatest part of his works. His great application to study hastened the infir- mities of old age. His works relate to grammar, geography, history, and the oriental languages, and the number of them is amazing. lie died in 1707.

CELLEPOR7E, a genus of marine plants, or rather animals ; a class of worms in the Linnsean system. They are of the genus of the lytho- phyta. See CORAL.

CELLINI (Benvenuto), an eminent statuary, contemporary with Michael Angelo, and Julio Romano, and was employed by popes, kings, and other patrons of arts and sciences. Some of his productions are much esteemed. He lived to a very considerable old age; and his life, almost to the last, was a continued scene of alter- nate adventure, patronage, persecution, and mis- fortune. He wrote his own history, which was not, however, published till 1730, probably on account of the freedom with which he therein treated many distinguished personages of Italy and other countries. It was translated into Eng- lish by Dr. Nugent, in 1771, to which the reader is referred, as it will not admit of a proper abridg- ment. He also wrote treatises on goldsmiths' work and on casting statues.

CELLULAR INTERSTICES, or CELLULAR MEM- BRANE. See ANATOMY.

CELOSIA, cocks-comb : a genus of the mo- nogynia order, pentandria class of plants ; na- tural order fifty-fourth, miscellanese : CAL. tri- phyllous : COR. five-petalled in appearance : STAM. conjoined at the base to the plaited nec- turium : CAPS, gaping horizontally. There are eighteen species, of v.hich the most worthy of notice is the C. cristata, or common cocks-comb, so called on account of its crested head of flowers, resembling a cock's comb ; of which there are many varieties. The principal colors of

their flowers are red, purple, yellow, and white ; but there are some whose heads are variegated with two or three colors. The heads are sometimes divided like a],iume of feathers, and are of a beautiful scarle.; color. These plants are very tender exotics, and require a great deal of care to cultivate them in this country.

C ELS I A, in botany: a genus of the angio- spermia order, and tridynamia class of plants ; natural order twenty-eighth, luridae : CAL. quin- quepartite : con. wheel-shaped ; the filaments bearded or woolly : CAPS, bilocular. Species, five ; two being natives of Candia and the East Indies, two of Armenia, and one of the plains of Algiers.

CE'LSITUDE, n. s. Lat. celsitudo. Height.

CELSUS (Aurelius Cornelius). It is com- monly supposed, that this esteemed ancient au- thor was a Roman, of the Cornelian family, born towards the end of the reign of Augustus, and still living in the time of Caligula. But these points are not established upon certain testimony, and it is even disputed whether he practised medicine; though his perfect acquaintance with the doctrines of his predecessors, his accurate descriptions of diseases, and his judicious rules of treatment, appear to leave little room for doubt on that head. At any rate, his eight books, De Medicina, have gained him deserved cele- brity in modern times, containing a large fund of valuable information ; detailed in remarkably elegant and concise language. In surgery par- ticularly he has been greatly admired, for the methods of practice laid down, and for describing several operations as they are still performed. He was the Hippocrates of the Latins, and, with- out him, the writings of that father in physic would be often unintelligible, and often misun- derstood by us. He shows us also how the an- cients cured distempers by friction, bathing, &c. The Elzevir edition of Celsus, in 1650, by Van- der Linden, is the best, being entirely corrected from his MSS.

CELSUS, an Epicurean philosopher, in the second century. He wrote a work against the Christians, entitled, The True Discourse; to which Origen, at the desire of Ambrose his friend, wrote a learned answer. To this philosopher Lucian dedicated his Pseudomanies.

CELTˆi, or CELTES, an ancient nation, by which most of the countries of Europe are thought to have been peopled. The general opinion is that they are descended from Corner, the eldest son of Japhet: that Gomer settled in Phrygia; his sons Ashkenaz and Togarmah in Armenia, and Kiphath in Cappadocia : that the

Celtae, took the left hand, spreading westward towards Poland, Hungary, Germany, France, and Spain; while the descendants of Magog, Gomer's

brother, moving eastward, peopled Tar- tary. In this large European tract, the Celtes began to appear a powerful nation under several considerable kingdoms. Mention is made of them indeed in so many parts of Europe, by ancient geographers and historians, that Ortelius took Celtica to be a general name for the conti- nent of Europe, and made a map of it bearing this title. In those parts of Asia which they possessed, as well as in the different parts of Europe, the Celtes went by various names. In Lesser Asia they were known by the names of Titans and Sacks ; in the northern parts of Europe by those of Cimmerians, Cimbrians, &c. and in the southern parts they were called Celtes, Gauls, or Galatians. As to the government of the Celtes, all we know is, that the curetes, and afterwards druids and bards, were the inter- preters of their laws ; judged all causes criminal and civil ; and their sentence was reckoned so sacred, that whoever refused to abide by it was excluded from assisting at their sacred rites; after which no man dared to converse with him ; so that this punishment was reckoned even severer than death itself. They neither reared temples nor statues to the Deity, but destroyed them wherever they could find them, planting in their stead large spacious groves ; which, being open on the top and sides, were, in their opinion, more acceptable to the divine Being, who is absolutely unconfined. The Celtes accounted the oak the emblem of the Deity, and preferred that tree above all others to plant their groves with, attri- buting several supernatural virtues both to itﹾﹾ wood, leaves, fruit, and misletoe ; all which were made use of in their sacrifices and other parts of their worship. But after they had adopted the idolatrous superstition of the Romans and other nations, and the apotheosis of their heroes and princes, they came to worship them much in the same manner: as Jupiter under the name of Taran, which in the Celtic signifies thunder; Mercury, whom some authors call Heus, or He- sus, probably from the Celtic huadh, which sig- nifies a dog, and might be the Anubis latrans of the Egyptians. But Mars was held in the greatest veneration by the warlike, and Mercury by the trading part of the nation. The care of religion was immediately under their curetes-, druids, and bards. See BARDS, DRUIDS, and GAUL.

CELTES, certain ancient instruments of a wedge-like form, of which several have been discovered in different parts of Great Britain. Antiquarians have generally attributed them to the Celtae; but, not agreeing as to their use, dis- tinguished them by the above appellation. Whitaker makes it probable that they were Bri- tish battle-axes. See BATTLE-AXE.

CELTIBERI, or CELTIBERIANS (i. e. the Celtae seated on the Iberus), the inhabitants of Celtiberia. They were very brave and warlike, their cavalry in particular was excellent. They wore a black rough cloak, the shag of which was like goats' hair. Some of them had light bucklers like the Gauls ; others, hollow and round ones

like those of other nations. They all wore boots made of hair, aid iron helmets adorned with crests of a purple color. They used swords which cut on both sides, and poniards of a foot long. Their arms were of an admirable temper, and are said to have been prepared in the follow- .ng manner:. they buried plates of iron under ground, where they let them remain till the rust aad eaten the weakest part of the metal, and the rest was consequently hard and firm. Of this excellent iron they made their swords, which were so strong and well tempered, that there was neither buckler nor helmet that could resist their edge. The Celtiberians were very cruel towards their enemies and malefactors, but showed the greatest humanity to their guests. They not only cheerfully granted their hospitality to strangers who travelled in their country, but were desirous that they should seek protection under their roof.

CELTIBERIA, in ancient geography, a terri- tory south-west of Spain, along the side of the river Iberus. Sometimes the greatest part of Spain was called by this name.

CELTIS, in botany, the lote, or nettle-tree ; a genus of the monc~cia order, and polygamia class of plants; natural order fifty-third, scabridae. It is a hermaphrodite plant : female CAL. quin- quepartite : COR. none : there are five stamina, and two styles : FRUIT a monospermous plum. Male CAL. hexapetalous : COR. none : there are six stamina, and an embryo of a pistillum. There are twelve known species, all of them deciduous. The principal are : 1. C. occidentalis, the western celtis, a native of Virginia, growing with large, fair, straight stems ; the branches are numerous and diffuse ; the bark is of a darkish gray color; the leaves are of a pleasant green, three or four inches long, deeply serrated, and in a narrow point, nearly resemble the leaves of the common stinging nettle, and continue on the trees till late in the autumn. ‘ The wood of the lote tree is extremely durable. In Italy they make their flutes, pipes, and other wind instruments of it. With us the coach-makers use it for the frames ot their vehicles.’ 2. C. orientalis, the eastern cel- tis, a native of Armenia. It grows to about twelve feet; and the branches are numerous, smooth, and of a greenish color. The leaves are smaller than those of the others, though they are of a thicker texture, and a lighter green. The flowers come out from the wings of the leaves, on slender foot-stalks : they are yellowish, appear early in spring, and are succeeded by large yel- low fruit.

CE’JVI ENT, v. a. ~\ Lat. ctzmentum, from c

CEME'KT, n. {do, to break by beating;

CEME'NTEU, n. j because ancient cements were made of small, broken stones : to join, or make to cohere ; to come into union or cohesion; anything that binds or unites.

*MEN, What's the news? ***

COM, Your temples burned in their cement; and Your franchises, whereon you stood, confined Into an augur's bore. Shahs. Coriolanus.

But how the fear of us May cement their divisions, and bind up The petty difference, 'we yet not know. Id.

There is a cement compounded of flour, whites of eggs, and stones powdered, that becometh hard as

*marble. *** You may see divers pebbles, and a crust of cement or stone between them, as hard as the pebbles themselves. Bacon.*

Look over the whole creation, and you shall see, that the band or cement, that holds together all the parts of this great and glorious fabrick, is gratitude.

South.

It is very observable that Arrianus, saith L. VII., the temple of Belus, in the midst of the city of Babylon, of a vast bigness, was made of bricks ce- mented with asphakus.

Whiiby's Commentary, Gen. xi. 3.

Madam, religion is the foundation and cement of

human societies : and when they that serve at God's

altar shall be exposed to poverty, then religion itself

will be confined to them.

Hooker's Speech to Q. Elizabeth, God having designed man for a sociable creature, furnished him with language, which was to be the great instrument and cementer of society. Locke.

Liquid bodies have nothing to cement them ; they are all loose and incoherent, and in a perpetual flux : even an heap of sand or fine powder, will suffer no hollowness within them, though they be dry substan- ces,

Burnet's Theory of the Earth.

Love with white lead cements his wings ; White lead was sent us to repair

Two brightest, brittlest, earthly things, 4 lady's face, and china ware. Swift.

The foundation was made of rough stone, joined together with a most firm cement ; upon this was laid another layer, consisting of small stones and cement.

Arbuthnot.

When a wound is recent, and the parts of it are divided by a sharp instrument, they will, if held in close contact for some time, reunite by inosculation, and cement like one branch of a tree ingrafted on another. Sharp's Surgery.

These walls were drawn round the city in the form of an exact square, each side of which was 120 fur- longs, or fifteen miles in length, and all built of large bricks, cemented together with bitumen, a glutinous slime - arising out of the earth in that country, which binds in building much stronger and firmer than lime, and soon grows much harder than the brick or stones themselves which it cements together.

Prideuux's Connection.

On the side altar censed with sacred smoke, And bright with flaming fires. Dryden.

The foundation was made of rough stones, joined together with a most firm cement ; upon this was laid another layer, consisting of small stones and cement. Arbuthnot on Coins.

*An advantageous peace was at last concluded, ***where he had given the law. The allies were so en- raged against each other, that they were not likely to cement soon in any new confederacy. Hume.*

*CEMENT comprehends mortar, solder, glue, &c. ; but has been sometimes restrained to com- positions used for holding together broken glasses, china, and earthenware. For this purpose the juice of garlic is recommended as exceedingly proper, being both very strong, and, if the opera- tion is performed with care, leaving little or no mark. Quicklime and the white of an egg mixed together, and expeditiously used, are also very proper for this purpose. Dr. Lewis recom- mends a mixture of quicklime and cheese, in the following manner : *** ' Sweet cheese shaved thin*

and stirred with boiling hot water, changes into a tenacious slime, which does not mingle with the water. Worked with fresh quantities of hot water, and then mixed upon a hot stone with a proper quantity of unslaked lime, into the con- sistence of a paste, it proves a strong and durable cement for wood, stone, earthenware, and glass. When thoroughly dry, which it will be in two or three days, it is not in the least acted upon by water. Cheese barely beaten with quick lime, as directed by some ofthechemistsfor luting cracked glasses, is not near so efficacious.' A composition of the drying oil of linseed and white lead is also used for the same purposes, but is greatly inferior.

CEMENT, in building, is used to denote any kind of mortar of a stronger kind than ordinary. The cement commonly used is of two kinds ; hot, and cold. The hot cement is made of resin, bees-wax, brick-dust, and chalk, boiled together. The bricks to be cemented are heated, and rubbed one upon another, with cement between them. The cold cement is that above described for ce- menting china, &c., which is sometimes, though rarely, employed in building. The ruins of the ancient Roman buildings are found to cohere so strongly, that most people have imagined the ancients were acquainted with some kind of mortar, which, in comparison of ours, might justly be called cement ; and that to our want of knowledge of the materials they used, is owing the great inferiority of modern buildings in their durability. Dr. Anderson, in his Essays on Agriculture, has discussed this subject at con- siderable length, and seemingly with great judg- ment. He is the only person who has given a rational theory of the uses of lime in building, and why it comes to be the proper basis of all cements. It is in substance as follows : Lime which has been slacked and mixed with sand, becomes hard and consistent when dry, by a process similar to that which produces the natu- ral stalactites in caverns. These are always formed by water dropping from the roof. By some unknown and inexplicable process of na- ture, this water has dissolved in it a small por- tion of calcareous matter in a caustic state. As long as the water continues covered from the air, it keeps the earth dissolved in it; it being the natural property of calcareous earths, when de- prived of their fixed air, to dissolve in water. But when the small drop of water comes to be exposed to the air, the calcareous matter contained in it begins to attract the fixable part of the at- mospbere. In proportion as it does so, it also begins to separate from the water, and to resume its native form, the limestone of marble. This process Dr. Anderson calls a crystallisation ; and when the calcareous matter is perfectly crystal- lised in this manner, he affirms that it is to all intents and purposes limestone or marble of the same consistence as before : and ' in

this manner,' says he, ' within the memory of man, have huge rocks of marble been formed near Matlock in Derbyshire.' If lime in a caustic state is mixed with water, part of the lime will be dissolved, and will also begin to crystallise. The water which parted with the crystallised lime, will then begin to act upon the remainder, which it could

not dissolve before ; and thus the process will continue, either till the lime be all reduced to an effete, or crystalline state, or something hinders the action of the water upon it. It is this crys- tallisation which is observed by the workmen when a heap of lime is mixed with water, and left for some time to macerate. A hard crust is formed upon the surface, which is ignorantly called frosting, though it takes place in summer as well as in winter. If therefore the hardness of the lime, or its becoming a cement, depends en- tirely on the formation of its crystals, it is evi- dent that the perfection of the cement must depend on the perfection of the crystals, and the hardness of the matters which are entangled among them. The additional substances used in making of mortar, such as sand, brick-dust, or the like, according to Dr. Anderson, serve only for a purpose similar to what is answered by sticks put into a vessel full of any saline solution, namely, to afford the crystals an opportunity of fastening themselves upon it. If therefore the matter interposed between the crystals of the lime is of a friable, brittle nature, such as brick-dust or chalk, the mortar will be of a weak and im- perfect kind ; but when the particles are hard, angular, and very difficult to be broken, such as those of river or pit-sand, the mortar turns out exceedingly good and strong. Sea-sand is found to be an improper material for mortar, which Dr. Anderson ascribes to its being less angular than the other kinds. That the crystallisation may be more perfect, he also recommends a large quantity of water, that the ingredients be perfectly mixed together, and that the drying be as slow as pos- sible. An attention to these circumstances, he thinks, would make the buildings of the moderns equally durable with those of the ancients ; and from what remains of the ancient Roman works, he thinks a very strong proof of his hypothesis might be adduced. The great thickness of their walls necessarily required a vast length of time to dry. The middle of them was composed of pebbles thrown in at random, and which have evidently had mortar so thin as to be poured in among them. Thus a great quantity of lime would be dissolved, and the crystallisation per- formed in the most perfect manner ; and the inde- fatigable pains and perseverance for which the Romans were so remarkable in all their under- takings, leaving no room to doubt that they would take care to have the ingredients mixed together as well as possible. The consequence of all thij is, that the buildings formed in this manner are all as firm as if cut out of a solid rock ; the mor- tar being equally hard, if not more so, than the stones themselves, Nowithstanding the bad suc- cess of those who have attempted to repeat M. Loriot's experiments, however, Dr.

Black informs us that a cement of this kind is certainly practica- ble. It is done, he says, by powdering the lime while hot from the kiln, and throwing it into a thin paste of sand and water ; which not slaking immediately, absorbs the water from the mortal by degrees, and forms a very hard mass. ‘ It is plain,’ he adds, ‘ that the strength of this mortal depends on using the lime hot or fresh from the kiln.’ By mixing together gypsum and quick lime, and then adding water, we may form a c

ment of tolerable hardness, and which apparently might be used to advantage in making troughs for holding water, or lining small canals for it to run in. Mr. Weigleb says, that a good mortar or cement which will not crack, may be obtained by mixing three parts of a thin magma of slaked lime with one of powdered gypsum ; but adds, that it is only used in a dry situation. A mix- ture of tarras with slaked lime acquires in time a stony hardness, and may be used for preventing water from entering. See MORTAR, STUCCO, and BRICKLAYING.

CEMENT, in chemistry, is used to signify all those powders and pastes with which any body is surrounded in pots or crucibles, and which are capable, by the help of fire, of producing changes upon that body. They are made of various ma- terials ; and are used for different purposes, as for parting gold from silver, converting iron into brass; and by cementation more considerable changes can be effected upon bodies, than by ap- plying to them liquids of any kind ; because the active matters are then in a state of vapor, and assisted by a very considerable degree of heat.

CE’METERY, n. Koi/ujjrijpiov ; Lat. camen- terium, i. e. a sleeping place, or dormitory. ‘ The Christians,’ says Suicer, ‘ because they believe in the resurrection of the dead, will have death rather styled Koiprjffig and VTTVOQ than Bavaroˆ ; hence they called burying-places icot/ijjrjjpia, i. e. places designed for rest and sleep.’ (Suicer. Thesaur.) which Estrus confirms.

In this, therefore, say the Platonists, consist the punishment of a voluptuous man after death. The souls of the dead appear frequently in cemeteries, and hover about the places where their bodies are buried, as still hankering about their own brutal pleasures, and desiring again to enter the body. Addison.

In the early ages, the Christians held their assem- blies in the cemeteries, as

we learn from Eusebius and Tertullian ; the latter of whom calls those cemeteries where they met to pray, areas. Valerian seems to have confiscated the cemeteries and places destined for divine worship, which were restored again to the Christians by Gallian. Dr. A. Rees.

CEMETERY. Anciently none were buried in churches or church-yards : it was even unlawful to inter in cities, and the cemeteries were without the walls. It appears from Eusebius and Ter- tullian, that, in the early ages, the Christians as- sembled ior divine worship in the cemeteries. Valerian confiscated the cemeteries and other places of divine worship, but they were restored again by Gallienus. As the martyrs were buried in these places, the Christians chose them for building churches on, when Constantine estab- lished their religion ; and hence some derive the rule which still obtains in the church of Rome, never to consecrate an altar, without putting un- der it the relics of some saint. The practice of consecrating cemeteries is of some antiquity. The bishop walked round it in procession, with the crozier or pastoral staff in his hand, the holy water pot being carried before, out of which the aspersions were made.

'CE'NATOR-Y, adj. From Lat. c□□na, an evening meal. Relating or belonging to supper.

The Romans washed, were anointed, and wore a "snatury garment j and the same was practised by the Jews. Brown.

CENCHRUS, in botany, a genus of tne mo- noecia order, and polygamia class of plants; natural order fourth, gramina. The involucrum is facinated, echinated, and biflorous : CAL. a bi- florous glume, with one floret male, and the other hermaphrodite. The hermaphrodite COR. is a pointless glume : there are three STAM. : one SEED : male COR. a pointless glume ; with three stamina. Species fifteen ; scattered in various parts of the globe.

CENEGILD, in the Saxon antiquities, an ex- piatory mulct, paid by one who had killed a man, to the kindred of the deceased. The word is compounded of the Saxon cinne, i. e. relation, and gild, payment.

CENIS MOUNT, or MONT CENIS, a lofty mountain of the Savoy Alps, separating the mar- quisate of Susa from the county of Maurienue, and situated at an equal distance between Turin and Chamberry. Its principal peak, La Roche St. Michael, is above 9000 feet above the level of the ocean : across it is one of the most important passes of the Alps, very much improved by Buonaparte. There is an hospital near the sum- mit, called La Ramaire, on the plan of that of the Great St. Gothard. Lady Morgan collects some lively details of the passage of the moun- tain in former times. Benvenuto Cellini's jour ney over them to France, in the sixteenth century

Evelyn's in the seventeenth, and Lady Mar Wortley's, and Horace Walpole's, in the eigh teenth, are all described in terms which seem to exhaust the details of possible danger. ' I in- tend to set out to-morrow,' says the brilliant am- bassadress to the Ottoman Porte, ' and pass those dreadful Alps so much talked of. If I come to the bottom you shall hear of me.' ' We began, to ascend Mont Cenis, being carried on little seats of twisted osier fixed upon poles, upon men's shoulders.' Horace Walpole's description is still mere formidable. ' At the foot of Mont Cenis we were obliged to quit our chaise, which was taken to pieces and loaded on mules ; and we were carried in low arm-chairs on poles, swathed in beaver bonnets, beaver gloves, beaver stockings, muffs, and bear-skins.' ' The dexterity and nimtJleness of the mountaineers is incon- ceivable ; they run down steeps and frozen preci- pices.'••• ' We had twelve men and nine mules to carry us.' ••• ' On the top of the highest Alps, by the side of a wood of firs, there darted out a young wolf, seized poor dear Tory by the throat ; and, before we could possibly prevent it, sprung up by the side of the rock, and carried him off.' This lady's description of her own passage of this once formidable barrier of rival states, is equally animated. ' Descending to the inn-yard to begin our journey, we found our carriage un- disturbed, with four post-horses, and two smart postilions, whose impatient, ' Allons, Monsieur, aliens, Madame,' recalled the technical jargon of the first stage from Paris. Their ' vif, vif,' put the horses into motion ; and we ascended in a trot that broad, smooth, magnificent road, which, carried over the mightiest acclivities of the migh- tiest regions, exceeds the military highways of antiquity, and shames the paved roads of modern France, whose price was the degradation of a nation (the Corvee). The roar?, indeed, when*

we passed it, was covered with snow ; but the fences on either side marked its breadth ; and the facility of its winding ascent proved the boldness, ingenuity, and perfection of its design. At cer- tain distances arose the safe asylums (maisons de refuge) against the tormenta, or the avalanche : and the Cantonieri presented themselves with their pick-axes and shovels, giving courage where aid was not wanted. A post-house, or a barrack, disputed the site with the bears and wolves ; and the rapidity of the whole passage rendered beaver swathings, or any other extraordinary precautions against cold, unnecessary All that had been danger, difficulty, and suffering, but twenty years back, was now safe, facile, and enjoyable ; secure beyond the chance of accident, sublime beyond the reach of thought. Legitimate princes

! divine- righted sovereigns ! houses of France ! Austria and Savoy ! ‘ which of you hai-e done this ?’ There is not one among you, descendants of a Clovis, a Barbarossa, or an Amadeus, but may in safe conscience shake his innocent head,, and answer, ‘ Thou canst not say ‘twas I did it ! Neither does the world accuse you !’

CENOBI’TICAL, adj. From KOIVOQ, com- mon, or belonging to many, and /3ioc, life. Living in community : applied principally to religious communities.

They have multitudes of religious orders : black -Vid gray, eremitical and cenubitical, and nuns.

Stillingfleet.

CE’NOTAPH, n. From KEJ/OC, void, empty, and raˆoc, a tomb. A monument for one else- where buried ; or among the Greeks, as Potter says, ‘ for one that never obtained a just funeral.’ Priam, to whom the story -was unknown,

As dead, deplored his metamorphosed son ;

A cenotaph his name and title kept,

And Hector round the tomb with all his brothers wept. Dryden’s Fables.

The Athenians, when they lost any men at sea, raised a cenotaph, or empty monument.

Notes on Odyssey.

It has been a question, whether the cenotaphia had the same’religious regard that was paid to sepulchres where the remains of the deceased were deposited ? For the resolution hereof it may be observed, that such of them, as were only erected for the honour of the dead, were not held so sacred as to call for any judgment upon such as profaned them ; but the rest, wherein ghost’s were thought to reside, seem to have been in the same condition with sepulchres, the want whereof they were designed to supply.

Potter’s Antiquities.

CENOTAPH, in antiquity, an empty tomb, ejected by way of honor to the deceased. It is distinguished from a sepulchre, in which a coffin was deposited. Of these there were two sorts ; one for those who had, and another for those who had not, been honored with funeral rites in another place. The sign, whereby honorary sepulchres were distinguished from

others, was commonly the wreck of a ship, to denote the de- cease of the person in some foreign country.

CENSE, 7i. ►►►> Lat. census. The numbering

CE'NSION, > of the people and the valuation

CE'NSUS. j of their property. Hence, a tax, rate, or assessment. In Great Britain and Ame- rica the Roman custom of taking a regular cen-

sus, or enumeration of the people, has been re- vived in modern times ; but is not of sufficient standing to have been much used by authors.

We see what floods of treasure have flowed into Europe by that action ; so that the cense or rates of Christendom, are raised since ten times, yea, twenty times told. Bacon.

What, did Caesar know Joseph and Mary ? His charge was universal, to a world of subjects, through all the Roman empire. God intended this censhn only for the Blessed Virgin and her Son, that Christ might be born where he should. Caesar meant to fill his coffers ; God meant to fulfil his prophecies.

Bishop Hall.

CENSE, v. -) Fr. encenser; Ital. incenso,

CE'NSER,TZ. f from incendere, Lat. To burn.

CE'NSING, n. 3 ' Contracted,' says Dr. John- son, ' from incense ;' and now signifying to per- fume with odors, i. e. spices burnt, or burning.

And after the veil the seconde tabernacle, that is, seid sancta sanctorum, that is, hooli of hooli thingis, hauynge a goldun censer and the arke of the testament kevered aboute on eache side with gold.

Wiclif's New Testament. Heb. ix.

And like as in the Scriptures, ofte tymes under the name of Jerusalem is ment the whole kingdom of Juda, so, under the name of Rome, here may be un- derstanded the unyversall worlde, with all their abomi- nations and divilishnesses, their idolatryes, witch- craftes, sectes, superstitions, papacyes, priesthoodes, relygions, shavings, anointings, blessings, censings, processions, and the divil of all such beggeryes.

Bale's Image of both Churchet.

In his hand he bore a golden censor with perfume ; and, censing about the

altar, having first kindled his fire >n the top, is interrupted by the genius.

Ben Jonson.

I'll tell thee what, thou thin man in a censer! I will have you soundly swinged for this, you blue-bottle rogue ! you filthy famished correctioner. Shakspeare.

Here's snip, and nip, and cut, and slish, and slush, Like to a censer in a barber's shop.

Why, what o' devils' name, tailor, callest thou this ?

Id.

Had Aaron thrust in himself with empty hands, I doubt whether he had prevailed ; now the censer w►►.s his protection: when we come with supplications in our lianas, we need not fear the strokes of God.

Bishop Hall.

And the priest did cense the surplus carcase, and holy water was sprinkled on the vile bodie in the form accustomed. Tltuanus. (Trims.)

The golden censers, in which they carried the in- cense to the altar, were twenty thousand : the other censers, in which they carried fire from the great altar to the little altar, within the temple, were fifty thou- sand. WTiiston's Josephtu.

CENSER, in antiquity, is chiefly used in speak- ing of the Jewish worship. Among the Greeks and Romans it is more frequently called thuri- bulum, \t/3ai/wnc, and accera. The Jewish cen- ser was a small sort of chafing-dish, covered with a dome, and suspended by a chain. Josephus tells us that Solomon made 20,000 gold censers for the temple of Jerusalem, to offer perfumes in, and 50,000 others to carry fire in.

CENSIO, in antiquity, the act or office of the censor. See CENSUS. Censio included both the valuing a man's estate, and the imposing penalties.

*CENSIO HASTARIA, a punishment inflicted on a Roman soldier, for some offence, whereby hi**

liasta or spear was taken from him, and con- sequently his wages and hopes of preferment stopped.

CE'NSOR, ►►. \ Lat. censor; 'He who CENSO'RIAL. I executed the census at

CENSO'RIAN. – y Rome, and was empower- CENSO'RIOUS. {ed, as a magistrate, to CENSO'RIOUSNESS. I censure and punish evil CE'NSORSHIP. ˆ generally, even to the de- grading the senators, &c. See the extract from Lempriere. Hence applied to a critic, or any severe judge of others ; to the disposition to judge harshly ; and the office of determining au- thoritatively what may or may not be printed. As, after a thirty years' struggle for liberty, we have a modern censorship of the press in France. Sometimes it has q/"before the object of reproach, and sometimes on or upon.

After the office of the censors had remained for some time unaltered, the Romans, jealous of their power, abridged the duration of their office, and a law was made A. U. C. 420, by Mamercus ./Emilius, to limit the time of the censorship to eighteen months. Their office was more honorable, though less powerful, than that of the consuls ; the badges of their office were the same, but the censors were not allowed to have lictors to walk before them as the consuls. When one of the censors died, no one was elected in his room till five years were expired, and his colleague immediately resigned. This circumstance originated from the death of a censor before the sacking of Rome by Brennus, and was ever after deemed an unfortu- nate event to the republic. The eirperors abolished the censors, and took upon themselves to execute their office. Lempriere's Class. Diet.

It was brought to Rome in the censorship of Clau- dius. Browne's Vulgar Errours. As the chancery had the pretorian power for equity, so the star-chamber had the censorian power for of- fences under the degree of capital. Bacon. Troublesome, censorious, dividing, spirits occasioned more thoughts of those unhappy controversies about forms and ceremonies, church government, &c. and I was still more satisfied, even when most serious, that the bitter extremes of dissenters, as well as of rigid conformists, were highly displeasing to God.

French's Diary, 1677. Ill-natured censors of the present age, And fond of all the follies of the past.

Roscommon,

Do not too many believe no religion to be pure, but what is intemperately rigid ; no zeal to be spiritual, but what is censorious, or vindictive 1 Spratt.

Sourness of disposition, and rudeness of behaviour, censoriousness and sinister interpretation of things, all cross and distasteful humours, render the conversa- tion of men grievous and uneasy to one another.

Tillotson.

The most severe censor cannot but be pleased with the prodigality of his wit, though at the same time, he could have wished that the master of it had been a better manager. Dry den.

He treated all his inferiors of the clergy with a most sanctified pride ; was rigorously and universally censorious upon all his brethren of the gown. Swift.

My God, if truth their censure guide, If guilt be in my facts descried, If e'er from my dissembling heart My friend has found the hostile part

Now in the dust my life be laid,

And earth's dark womb my glory shade.

Merrick,

A statesman, who is possessed of real merit, should look upon his political censurers with the same neglect that a good writer regards his critics. Addiion.

You, my disciples, live in a very censorious age, and the scribes and pharisees, who are in the highest esteem for the strictness of their lives, place a great part of their own religion in condemning others ; but see to it, that you do not judge those about you, io this rigorous and severe manner.

Doddridge's Expositor, Matt. vii.

Whatever references is due to his diligence, or his attainments, it can be no criminal degree of censo- riousness to charge that etymologist with want of judgment, who can seriously derive dream from drama, because life is a drama, and drama is dream.

Johnson. Those who raise envy will easily incur censure.

Id. Idler.

It commonly happens to him who endeavours to obtain distinction by ridicule or censure, that he teaches others to practise his own arts against himself.

Id.

I therefore dismiss it with frigid tranquillity, having little to fear or hope from censure or from praise.

Id.

I am sorry to find the censure I have passed upon Occiduus is even better founded than I supposed.

Courper.

In youth, the seed-time of our days, Full many a crop is spoiled by praise ; And all the spring-tide fields of Hope Smiles that should ripen, wither up. While censure, rigid and unkind, Nips the young buds and starves the mind.

Smith's Album.

CENSORS, from censere, to see ; two prime magistrates in ancient Rome. Their business was to register the effects of the Roman citizens, to impose taxes, and to take cognisance of the manners of the citizens. They had a power to censure immorality, by inflicting some mark of ignominy on the offender. They had even a power to create the princeps senatus, and to expel from the senate such as they deemed un- worthy of that office. This power they sometimes exercised arbitrarily, and therefore a law was passed, that no senator should be degraded, until he had been formally accused and found guilty by both the censors. They also filled up the vacancies in the senate, upon any remarkable deficiency in their numbers ; they let out to farm all the lands and revenues of the republic ; and contracted with artificers, for building and re- pairing all the public works, both in Rome and the colonies of Italy. In all parts of their office, however, an appeal always lay from the sentence of the censors, to that of an assembly of the people. The first two censors were created A. U.C. 311, upon the senate observing that the consuls were so much taken up with war, as not to have time to look into other matters. The of- fice continued till the time of the emperors, who assumed the censorial power, calling themselves morum pnefecti ; though Vespasian and his sons resumed the title of censors. Decius attempted to restore the dignity to a particular magistrate. After this we hear no more of the censors, till Constantine's time, who made his brother censor, and he "seems to have been the last that enjoyed

the office. The office was so considerable, that for a long time none aspired to it till they had passed all the rest ; so that it was thought sur- prising that Crassus should have been admitted censor, without having been either consul or praetor. At first the censors enjoyed their dig- nity for five years, but in A.U.C. 420, the dic- tator Mamertinus made a law restraining it to a year and an half, which was afterwards observed very strictly. At first one of the censors was elected out of a patrician, and the other out of a plebeian family; and, upon the death of either, the other was discharged from his office and two new ones elected, but not till the next lustrum. In 622 both censors were chosen from among the plebeians ; and after that time the office was shared between the senate and people. After their election in the Comitia Centurialia, the censors proceeded to the capitol, where they took an oath to act equitably and impartially throughout the whole course of their administra- tion. The late aristocratical government of Ve- nice had a censor of the manners of the people, whose office lasted six months.

CE'NSURE, v. & n.-\ Lat. censura, of the

CE'NSURER, [same etymology as cen-

CE'NSURABLE, I SOT. To give sentence

CE'NSURING, n. J judicially, or otherwise; to express an unfavorable opinion; a judicial sentence ; an opinion of any kind. See the pas- sages from Shakspeare ; reprimand ; blame ; a condemnatory sentence or opinion.

Power of censure and ordination appeareth even by Scripture marvellous probable, to have been derived from Christ to his church, without this surmised equality in them to whom he hath committed the same.

Hooker.

Scripture hath said, ' For this very cause left I thee in Crete, that thou shouldst redress the things that remain ; and shouldst ordain presbyters in every city; as I appointed thee.' In the former place the power of censure is spoken of, and the power of ordi- nation in the latter. Id. Most honored madam,

My lord of York ??? out of his noble nature,

Zeal and obedience he sdll bore your grace ;

Forgetting, like a good man, your late censure,

Both of his truth and him (which was too far),

Offers, as I do, in a sign of peace,

His service and his counsel.

Shakspeare. Henry VIII,

GLOS. Madam, the king is old enough himself,

To give his censure ; these are no women's matters.

Q. MAR. If he be old enough, what needs your

grace To be protector of his excellence ?

Id. Henry VI.

Madam, and you, my sister, will you go To give your censures in this weighty business ?

Id. Richard III. We must not stint Our necessary actions with the fear To cope malicious censures. Id. Hen. VIII.

They that can inflict censures upon presbyters, have certainly superiority of jurisdiction over presbyters, for asqualis squalem coercere non potest, saith the law- Jer. Taylor.

In St. Paul's time, though the censure of heresy were not so loose and forward as afterwards ; and all that were called heretics were clearly such, and highly

criminal ; yet as their crime was, so was their cen- sure, that is spiritual. Taylor on Prophecy.

But if I have answered every challenge, vindicated every authority ; censured nothing unjustly ; satisfied all his malicious objections, and warranted every sentence of my poor epistle ; let my apology live and pass, and let my refuter go as he is. Bishop Hall.

What need we care for the censures of men, if our hearts can tell us that we are in favour with God. Id.

There is a deep corruption of mind and manners, which engageth men in their own defence to censure others, diverting the blame from home, and

shrouding their own under the covert of other men's faults.

Barrow.

All mankind in a lump is severely censured, as void of any real goodness or true virtue ; so fatally depraved as not to be corrigible by any good discip- line ; not to be recoverable even by the grace of God. Yea God himself is hardly spared, his providence coming under the bold obliquy of those, who, as the Psalmist speaketh of some in his time, whose race doth yet survive, speak loftily, and set their mouth against the heavens. Id.

The like censurings and despisings have embittered the spirits, and whetted both the tongues and pens of learned men one against another. Sanderson.

It cannot reasonably be thought that Christ doth here forbid church governors to judge, condemn, and pass the censures of the church upon notorious and scandalous offenders, because he hath himself enjoined the execution of her censures upon those who will not hear the church when she requires them to repent of, and satisfy their Christian brothers for, any trespass done against him. Whitby on Matt. vii. 1.

CENSUS, in Roman antiquity, an authentic declaration made before the censors, by the people, of their respective names and places of abode. This was registered by the censors ; and contained an enumeration, in writing, of all the estates, lands, and inheritances they possessed ; their quantity, quality, place, wives, children, domestics, tenants, and slaves. In the provinces the census served not only to discover the sub- stance of each person, but where, and in what marmer and proportion, taxes might be best im- posed. The census at Rome is commonly thought to have been held every five years : but Middle- ton has snovvn, that both census and lustrum were held at various irregular and uncertain intervals. The census was an excellent expedient for disco- vering the strength of the state ; the number of the citizens, how many were fit for war, and how many for offices of other kinds, how much each was able to pay of taxes, &c. It went through all ranks of people, though under dif- ferent names : that of the common people was called census ; that of the knights, census, recen- sio, recognitio ; that of the senators, lectio, relec- tio. ••• Hence it came to be used personally.

CENSUS was also used for a person worth 100,000 sesterces, or who was entered as such in the censual tables, on his own declaration. In this sense, it amounts to the same with clas- sicus, or a man of the first class ; though Gellius limits the estate of such to 125,000 asses. By the Voconian law, no census was allowed to give by his will above a fourth part of what he was worth to a woman. Census was likewise used in other senses: as, 1. For the

wherein the professions of the people were entered ; and which was frequently cited and appealed to, as evidence in the courts of justice. 2. A man's whole substance or estate. 3. A tax on persons, or a capitation tax. See CAPITE.

CENSUS DUPLICATUS, a double rent, paid by vassals to their lords on extraordinary occasions ; as expeditions to the Holy Land, &c.

CENSUS ECCLESI* ROMANS, an annual con- tribution voluntarily paid to the see of Rome by the several princes of Europe.

CENSUS EQUESTER, in Roman antiquity, the estate of a knight, rated at 400,000 sesterces, which was required to qualify a person for that order, and without which no virtue or merit was available.

CENSUS SENATORIUS, the patrimony of a sena- tor, was limited to a certain value; being at first rated at 800,000 sesterces, but afterwards, under Augustus, enlarged to 1,200,000.

CENT. Lat. centum, a hundred. Five per cent; that is so much by, or for, the hundred.

CE'NTAUR, n. ˆ A poetical being, sup-

CE'NTAUR-LIKE, adj. > posed to be compound-

CE'NTAURY, n. j ed of the upper part of

a man, and the lower part of a horse ; the sign Sagittarius in the zodiac. For the plant centaury, see CENTAUREA.

Down from the waist they are centaurs, though women all above. Shakspeare.

He, as if, centaur-like, he had been one piece with his horse. Sidney.

The idea of a centaur has no more falsehood in it than the name centaur. Locke.

Add pounded galls, and roses dry, And with Cecropian thyme strong scented centaury.

Dryden.

The chearless empire of the sky To Capricorn the Centaur archer yields.

Thomson.

CENTAUR, in astronomy, a part of a southern constellation, usually joined with the wolf. See ASTRONOMV.

CENTAURS, in mythology, from KEVTW, to gall, and ravpoc, a bull ; fabulous monsters, half men and half horses. The poets pretend that the cen- taurs were the sons of Ixion and a cloud : the reason of which fency is, that the people so named retired to a castle, called v►►t\ri, which signifies a cloud. Some will have the centaurs to have been a body of shepherds and herdsmen, rich in cattle, who inhabited the mountains of Arcadia, and to whom is attributed the invention of bucolic poetry. Palaephaetus, in his book of Incredibles, relates that, in the reign of Ixion, king of Thessaly, a herd of bulls on mount Thes- salus ran mad, and ravaged the whole country, rendering the mountains inaccessible ; that some young men who had found out the art of taming and mounting horses, undertook to clear the mountains of these animals, which they pursued on horseback, and thence obtained the appella- tion of centaurs. This success rendering them insolent, they insulted the Lapithae, a people of Thessaly : and because when attacked they fled with great rapidity, it was' supposed they were half horses and half men. The centaurs in reality were a tribe of Lapithae, who inhabited

the city Pelethronium, adjoining to mount Pelion, and first invented the art of breaking horses, as is intimated by Virgil.

CENTAUREA, greater centaury : a genus of the polygamia frustanea order, and syngenesia class of plants ; natural order, forty-ninth ; com- positae. The receptacle is bristly, the pappus simple, the COR. of the radius funnel-shaped, longer than those of the disk, and irregular. There are upwards of 131 species; of which we shall only mention two : viz. 1. C. cyanus, the blue bottle, grows commonly among corn. The expressed juice of this flower stains linen of a beautiful blue color, but is not permanent. Boyle says, that the juice of the inner petals, with a little alum, makes a beautiful permanent color, equal to ultramarine. 2. C. glastifolia. The root of this species is an article in the materia medica. It has a rough, somewhat acrid taste, and abounds with a red viscid juice. Its rough taste has gained it some esteem as an astringent ; its acri- mony as an aperient; and its glutinous quality as a vulnerary : but the present practice takes very little notice of it.

CENTENARIO, or CENTENARIUS, in the middle age; 1. an officer who had the command, with the administration of justice, in a village. The centenarii were under the jurisdiction and command of the court. We find them among the Franks, Germans, Lombards, Goths, &c. 2. An officer who had the command of 100 men; more frequently called a centurion. 3. An of- ficer, in monasteries, who had the command of 100 monks.

CE'NTENARY, n.~) Lat. centenarius. The

CENTEN'NIAL, adj. > number of a hundred.

CENTI'LOQUY, n. 3 Mason uses the word centennial to denote the hundredth anniversary. Centiloquy is a collection of a hundred sayings. See CENTILOQUIUM.

In every centenary of years from the creation, some small abatement should have been made. Hakewill.

CENTININUM OVUM, i. e. the lOOdth egg, among naturalists, a sort of hen's egg much smaller than ordinary, vulgarly called a cock's egg; from which it has been fabulously held that the cockatrice is produced. The name is taken from an opinion, that these are the last eggs which hens lay, having laid 100 before. They have no yolks, but in other respects differ not from common ones; having the albumen, chalazes, membranes, &c. in common with others. In the place |of the yolk is found a little body like a serpent coiled up, which doubtless gave rise to the fable of the basilisk's origin from thence. Their origin is with probability ascribed by Hervey to this, that the yolks in the vitellary of the hen are exhausted before the albumina.

CENTE'SIMAL, n. Lat. centesimus. Hun- dredth; the next step of progression after deci- mal in the arithmetic of fractions.

The neglect of a few ccntcsimals in the side of the cube, would bring it to an equality with the cube of a foot. Arbuthnot on Coins.

CENTESIMATION, a milder kind of mili- tary punishment, in cases of desertion, mutiny, and the like, when only every lOOdth man is executed.

CENTESIMA USURA, that wherein the inte- rest in 100 months became

equal to the princi- pal : i. e. where the money is laid out at one per cent, per month ; answering to what in our style would be called twelve per cent.; for the Ro- mans reckoned their interest not by the year, but by $ie month.

CENTIFO'LIOUS, adj. from Lat. centum and folium. Having an hundred leaves.

CENTILOQUIUM, a collection of 100 sen- tences, opinions, or sayings. The Centiloquium of Hermes, contains 100 aphorisms, or astrolo- gical sentences, supposed to have been written by some Arab, and falsely fathered on Hermes Trismegistus. It is only extant in Latin, in which it has several times been printed. The Centiloquium of Ptolemy is a famous astrological piece, frequently confounded with the former, consisting likewise of 100 sentences, divided into short aphorisms.

CE'NTINEL. See SENTINEL.

CE'NTIPEDE, n. Lat. from centum and^es. A poisonous insect in the West Indies, com- monly called by the English forty legs.

CENTIPEDE WORMS, such as have a great many feet, though the number does not amount to 100, as the term imports.

CENTIPES. See SCOLOPENDRA.

CEN'TO, n. Lat. cento. A composition formed by joining scraps from other authors.

It is quilted, as it were, out of shreds of divers poets, such as scholars call a cento. Camden's Rem.

This hath made it to be suspected of too much com- pliance with that church, and her offices of devotion, and that it is a very cento composed out of the Mass book, Pontifical, Breviaries, Manuals, and Portuises of the Roman church. Jer. Taylor.

If any man think the poem a cento, our poet will but have done the same in jest which Boileau did in earnest. Advertisement to Pope's Dunciad.

CENTONARII, in antiquity, certain of the Roman army, who provided different sorts of ►►tuff called centones, used to quench the fire which the enemies' engines threw into the camp.

CE'NTRE, v. &. n. CE'NTRAL, adj. CENTRA'LITY, n. CE'NTRALLY, adv. CE'NTRICAL, or CE'NTRICLE, adj. CE'NTRICALLY, adv.

CE'NTRICALNESS, n. CENTRI'FUGAL, adj.

Lat. centrum ; Ktvrpov. That point which is equi- distant from every part of the circumference. The verb, and all its [kindred words, partake of, or have reference to, this meaning. To centre is to fix on a centre ; to

CENTRI'PETAL, adj. J collect, and be collect- ed, to a point; to rest on; to be placed in the midst. Centrifugal signifies flying from a centre ; centripetal, having a tendency towards it.

The heavens themselves, the planets, and this centre, Observe degree, priority, and place. Shakspeare,

He that has light within his own clear breast, May sit i' the centre, and enjoy bright day. But he that hides a dark soul and foul thoughts, 15enighted walks under the mid-day sun ; Himself is his own dungeon. Milton.

As God in heaven

Is centre, yet extends to all ; so thou Centring reccivest from all those orbs. Id. One foot he centred, and the other turned Round through the vast profundity obscure. Id.

Some that have deeper digged Love's mine than I, Say where his centrick happiness doth lie. Donne.

Do not sigh, fair nymph, for fire Hath no wings, yet doth as hire Till it hit against the pole ; Heaven's the centre of the soul. MarveU.

O impudent and regardful of thy own,

Whose thoughts are centred on thyself alone.

Dryden. What hopes you had in Diomed, lay down j

Our hopes must center in ourselves alone. Id.

Though one of the feet most commonly bears the ???weight, yet the whole weight rests centrally upon it.

Id.

He may take a range all the world over, and draw in all that wide air and circumference of sin and vice, and centre it in his own breast. South.

Where there is no visible truth wherein to centre, errour is as wide as men's

fancies, and may wander to eternity. Decay of Piety.

There is now, and was then, a space or cavity iu the central parts of it ; so large as to give reception to that mighty mass of water.

Woodward's Natural History.

It was attested by the visible centring of all the old prophecies in the person of Christ, and by the com- pletion of these prophecies since, which he himself uttered. Atterliw-y.

Umbriel, a dusky melancholy sprite,

Down to the central earth, his proper scene,

Repairs. Pope's Rape of the Loch.

They described an hyperbola, by changing the cen- tripetal into a centrifugal force. Ckeyne.

Might not, in ancient times, the near passing of some large comet of greater magnetic power than this globo of ours, have been a means of changing its poles, and thereby wracking and deranging its surface, placing in different regions the-effect of centrifugal force, so as to raise the waters of the sea in some, while they were depressed in others ? Id..

His wealth, fame, honors, all that I intend, Subsist and centre in one point ††† a friend. Cowper,

Through constant dread of giving truth offence, He ties up all his hearers in suspense ; Knows what he knows, as if he knew it not, What he remembers seems to have forgot : His sole opinion, whatsoe'er befall, Centring at last in having none at a. . Id.

Thou chief star !

Centre of many stars ! which makest our earth

Endurable, and tempcrest the hues

And hearts of all who walk within thy rays !

By ran.

CENTRE OF A SPHERE, a point in the middle, from which all lines drawn to the surface are equal.

CENTRE OF GRAVITY, in mechanics, that point about which all the parts of a body do in any situation exactly balance each other.

CENTRE OF MOTION, that point which remains at rest, while all the other parts of a body move about it.

CENTRIFUGAL FORCE. See MECHANICS.

CENTRIPETAL FORCE. See MECHANICS.

CENTRISCUS, in ichthyology, a genus of fishes belonging to the order of amphibia iiantes. The head gradually ends in a narrow snout, the aperture is broad and flat ; the belly is carinated ; and the belly (ins united. There are three spe- cies, viz. 1. C. scolopax, with a rough scabrous body, and a straight extended tail. It has two ventral fins, with four rays in each, but no teeth.

It is found in the Mediterranean. 2. C. scuta- tatus has its back covered with a smooth bony shell, which ends in a sharp spine, under which is the tail ; but the back fins are between the tail and the spine. It is a native of the East Indies. 3. C. valitarus, body oblong, lanceolate and rough, with small recumbent bristles at the nos- trils. A native of Amboyna.

GENTRY. See SENTINEL.

CENTUMCELLJE, in ancient geography, Trajan's villa in Tuscany, on the coast, three miles from Algae ; with an excellent port, called Trajanus Portus ; and a factitious island at the mouth of the port, made with a huge block of stone, on which two turrets rose, with two en- trances into the basin or harbor. It is now cal- led Civita Vecchia. Long. 11►► 51′ E., lat. 42►► 5'N.

CENTUMVTRI, in Roman antiquity, judges appointed to decide common causes among the people : they were chosen, three out of each tribe ; and, though 105 in number, were called centumviri, from the round number centum, an hundred.

CENTUNCULUS, in botany, a genus of the monogynia order, and tetrandria class of plants; natural order twentieth, rotacea : CAL. quadri- fid : COR. quadrifid, and patent ; the stamina are short : CAPS, is

unilocular, cut round or parting horizontally.

CE'NTUPLE,t>.&o<#. 1 Lat. centuplex. A

CENTU'PLICATE, v.) hundredfold; to mul- tiply a hundred fold.

Then would he centuple thy former store,

And make thee far more happy than before.

Sandys.

CENTU'RIATE, v. Lat. centurio. To di- vide into hundreds.

CENTURIATOR, n. From century. A name given to historians who distinguish times by centuries ; which is generally the method of ecclesiastical history.

The centuriators of Magdeburg were the first that dis- covered this grand imposture. Ayliffe's Parergon.

CENTU'RION, 7i. Lat. centurio. A Roman military officer, who had the command of a hundred men.

And the centurion and thei that weren with him kepynge Jhesus whann thei sighen the erthe ochalyng, and the thinges that weren do so, thei dredden gretly and seiden, verily this was Goddis sone. Widif's New Testament. Matt, xxvii.

And he commanded a centurion to keep Paul, and to let him have liberty, and that he should forbid none of his acquaintance to minister or come unto him.

Acts xxiv. 23.

Have an army ready, say you ? ••• A most royal one. The centurions and their charges distinctly billetted in the entertainment, and to be on foot at an hour's warning. Shakspeare.

CENTURIONS, in Roman antiquity. See MA- NIPULUS. Every one of the thirty manipuli in a legion was divided into two ordines, or cen- turies. Every manipulus was allowed two cen- turions, one to each century ••• and, to determine the point of priority between them, they were created at two different elections. The thirty who were made first always took the precedency of their fellows; and therefore commanded the

right hand, as the others did the left. The triarii had their centurions elected

first, next to them the principes, and afterwards the hastati. Primi ordines is sometimes used in historians for the centurions of these orders ; and the centurions are sometimes styled principes ordinum, and principes centurionem. These distinctions af- forded a wide field for promotion : first through all the orders of the hastati ; then through the principes ; and afterwards from the last order of the triarii to the primipilus, the most hono- rable of the centurions.

CENTURIPA, CENTURIPE, or CENTORIPA, in ancient geography, a town on the south-west of the territory of JEtna, on the river Cyamoso- rus : now call Centurippi. It was a democra- tical city, which, like Syracuse, received its liberty from Timoleon. Its inhabitants culti- vated the fine arts, particularly sculpture and en- graving. It was taken by the Romans, plun- dered and oppressed by Verres, destroyed by Pompey, and restored by Octavius, who made it the residence of a Roman colony. In digging for the remains of antiquities, cameos are no where found in such abundance as at Centurippi and its environs. The situation of the place is romantic : it is built on the summit of a vast group of rocks, which was probably chosen as the most difficult of access, and consequently the safest in times of civil commotion. The re- mains still existing of its 'ancient bridge are a proof of its having been once a considerable city.

CE'NTURY. Lat. centwria. A hundred. The word is most frequently applied to specify time; but is also used to signify number merely; as in a ' century of inventions.'

When with wood leaves and weeds I've strewed

his grave,

And on it said a century of prayers, Such as I can, twice o'er, I'll weep and sigh.

S/iakspeare.

The nature of eternity is such, that though our joys after some centuries of years may seem to have grown older by having been enjoyed so many ages, yet will they really still continue new. Boyle.

And now time's whiter series is begun, Which in soft centuries shall smoothly run.

Dry den.

Romulus, as you may read , did divide the Romans into tribes, and the tribes into centuries or hundreds.

Sjiencer.

*The lists of bishops are filled with greater numbers than one would expect ; but the succession was quick in the three first centuries, because the bishop often ended in the martyr. Addison**

*When we see men grow old, and die at a certain time from one another, from century to century, we laugh at the elixir that promises to prolong life a thousand years. Johnson**

CENTURY, in antiquity. The Roman people, when assembled for electing magistrates, en- acting laws, or deliberating upon any public af- fair, were always divided into centuries, and voted by centuries, that their votes might be the more easily collected, whence these assemblies were called comitiacenturiata. The Roman co- horts were also divided into centuries. See CENTURION, and COHORT.

CEO

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CEP

CEODES, in botany, a genus of the dioecia order, belonging to the polygamia class of plants : CAL. none: COR. monopetalous, with a short ter- minated tube ; the stamina are ten subulated fila- ments ; the antherae roundish.

CEOL, an initial in the names of men, which signifies a ship or vessel, such as those that the Saxons landed in.

CEORLES, one of the classes into which the people were distinguished among the Ang.lo- Saxons. The ceorles, who were persons com- pletely free, and descended from a long race of freemen, constituted a middle class between the laborers and mechanics (who were generally slaves, or descended frorrj slaves), on the one hand, and the nobility on the other. They might go where they pleased, and pursue any way of life that was most agreeable to their humor ; but so many of them applied to agricul- ure, and farming the lands of the nobility, that a (eorl was the most common name for a husband- man or farmer in the Anglo-Saxon times. They seem in general to have been a kind of gen- tleman farmers ; and if any one of them acquired the property of five hides of land, upon which he had a church, a kitchen, a bell-house, and a great gate, and obtained a seat and office in the king's court, he was esteemed a nobleman or thane. If a ceorl applied to learning, and at- tained to priest's orders, he was also considered as a thane ; his weregild, or price of his life, was the same, and

his testimony had the same weight in a court of justice. When he applied to trade, and made three voyages beyond sea, in a ship of his own, and with a cargo belonging to himself, he was also advanced to the dignity of a thane. But if a ceorl inclined to arms, he became the sithcundman, or military retainer, to some potent and warlike earl, and was called the huscarle of such an earl. If one of these huscarles acquitted himself so well as to obtain from his patron either five hides of land, or a gilt sword, helmet, and breastplate, as a reward of his valor, he was likewise considered as a thane. Thus the temple of honor stood open to these ceorles, whether they applied to agriculture, commerce, letters, or arms, which were then the only professions es- teemed worthy of a freeman.

CEOS, CEA, CIA, or Cos, in ancient geogra- phy, one of the Cyclades, opposite to Sunium, in Achaia. It is fifty miles in compass, and is commended by the ancients for its fertility and richness of its pasture. The first silk stuffs, ac- cording to Pliny and Solinus, were wrought here. Ceos was particularly famous for excellent figs. It was first peopled by Aristaeus, the son of Apollo and Cyrene, who, being grieved for the death of his son, Actseon, retired from Thebes, at the per- suasion of his mother, and went over with some Thebans to Ceos, at that time uninhabited. Dio- dorus Siculus tells us, that he retired to the island of Cos; b:; the ancients, as Servitus observes, called both .hese islands by the name of Cos. Ceos became so populous, that a law was made, commanding all persons upwards of sixty to be poisoned, that others might be able to subsist : so that none above sixty were seen to be in the island, being obliged, after they arrived at that ago, either to submit to the law, or abandon thf

country, together with their effects. Ceos had, in former times, four famous cities, viz. Julia, Carthaea, Coressus, and Prseessa. The two latter were, according to Pliny, swallowed up by an earthquake. The other two flourished in Strabo's time. Carthaea stood on a rising ground, at the end of a valley, abcut three miles from the sea. The situation of it agrees with that of the pre- sent town of Zia, which gives name to the whole island. The ruins both of Carthaea and Julis are still remaining ; those of the latter take up the whole mountain, and are called by the modern inhabitants Polis, that is, the city. See POLIS. Ceos was, with the other Greek islands, subdued by the Romans, and. bestowed upon the Athe- nians by Marc Antony the triumvir, together with ˆEgina, Tinos, and some other adjoining islands, which were all reduced to one Roman province by Vespasian. The island is now called Zia.

CE'PHALALGY, n. Ke

CEPHALANTHUS, button-wood, a genus of the monogynia order, and tetrandria class of plants; natural order forty-eighth, aggregatae. No

common calyx ; the proper one is superior, and funnel-shaped ; the receptacle globose and naked, with one downy seed. There are five species, natives of the East Indies, the princi- pal is C. occidentalis, a deciduous shrub, native of North America. It grows to about five or six feet high ; and is not a very bushy plant, as the branches are always placed thinly in proportion to the size of the leaves, which will grow more than three inches long, and one and a half broad, if the trees are planted in a proper soil. The leaves stand opposite by pairs on the twigs, and sometimes by threes, and are of a light-green color : their upper surface is smooth ; they have a strong nerve running from that on each side to the borders. These, as well as the foot-stalk in autumn, dye a reddish color. The flowers, which are aggregate, are produced at the ends of the branches, in globular heads, in July. The florets which compose these heads are funnel-shaped, of a yellow color, and fas►► tened to an axis on the middle.

CEPHALENIA, or CEPHALLENIA, an island of the Ionian sea, between Ithaca and Zacyn- thus, known in Homer's time by the names of Samos and Epirus Melaena. It is about eighty miles long, forty broad, and 130 in compass. It had anciently four cities. Strabo tells us, that in his time there were only two cities remaining; but Pliny speaks of three, adding, that the ruins of Same, the metropolis, which had been des- troyed by the Romans, were still in being. The names of the four cities were, according to Thu- cydides, Same, Prone, Cranii, and Palae. This island was subdued by the Thebans, under Am- phitryo, who is said to have killed Pterelas, who then reigned in it. While Amphitryo was car- rying on the war in Cephalenia, then called Samos, Cephalus, having accidentally killed his wife Procris, fled to Amphitryo, who received him, and made him governor of the island, which thenceforth was called Cephalenia. After it had been long subject to the Thebans, it fell under the dominion of the Macedonians, and was taken from them by the /Ktolians, who held it till it

was reduced by M. Fulvius Nobilior ; who, having gained the metropolis after a siege of four months, sold all the citizens for slaves, adding Jhe whole island to the dominions of Rome. It Js now called Cephalonia.

CEPHA'LICK, adj. Kt0oX►►/. That which is medicinal to the head.

Cephalick are all such as attenuate the blood, so as S> make it circulate easily through the capillary ves- sels of the brain. Arbuthnot on Aliment.

I dressed him up with soft folded linen, dipped in a cephatick balsam. Wiseman.

CEPHALIC MEDICINES comprehend cordials, with whatever promotes a free circulation of the blood through the brain. Except when the dis- order arises from excess of heat, of an in- flammatory disposition in the head, moist topicals should never be used ; but always dry ones. To rub the head after it is shaved proves an in- stantaneous cure for a cephalalgia, a stuffing of the head, and a weakness of the eyes, arising from a weak and relaxed state of the fibres.

CEPHALIC VEIN, in anatomy, creeps along the arm between the skin and the muscles, and di- vides it into two branches ; the external goes down to the wrist, where it joins the basilica, and turns up to the back of the hand ; the in- ternal branch, together with a small one of the basilica, makes the mediana. See ANATOMY. The ancients used to open this vein for disorders of the head, for which reason it bears this name ; but a better acquaintance with the circulation of the blood informs us, that there is no foundation for such a notion.

CEPHALONOMANTIA, from MfoXc, ovoc, an ass, and fiavraa. A method of divination, by an ass's head broiled on the coals. After mut- tering a few prayers, the names of several per- sons suspected of a theft, or the like, were re- peated over ; he at whose name the ass's jaws made any motion, was held convicted.

CEPHALUS, in fabulous history, an Athenian hero, who married Procris, the daughter of Pan- dion, king of Athens. Ovid represents him as having been so beautiful, that Aurora fell in love with him ; but, at the same time, as so constant to his wife, that even the charms of the rosy god- dess could not prevail on him to break his nup- tial vow : whereupon Aurora changed his form to that of another man. His wife gave him a javelin, which had the peculiar property of never missing its aim ; ००० a property which proved fatal to herself ; ००० for, one day being out in a wood, where he was hunting, he, mistaking her among the rustling leaves, for a wild beast, killed her with it. Ovid narrates his adventures at large, with the metamorphosis of his dog into a stone, &c. Metam. Lib. vii. Tab. 25 ००० 28.

CEPHEUS, in fabulous history, a king of Arcadia, on whose head Minerva fastening one of Medusa's hairs, he was rendered invincible.

CER AM, an island of the eastern seas, between 160 and 180 miles in length, and about forty in breadth. A chain of mountains, from 6500 to 7000 feet high, intersects it longitudinally. The sago tree is found here in

large forests. Wild hogs and deer are also numerous, and birds of paradise, together with a bird called the salangan. The natives, who are said to be a cruel and fe-

rocious race, confine themselves to the interior ; but the island is under the dominion of chiefs acknowledging the rule of the Dutch, who have destroyed most of the clove trees. Many sin- gular stories are told of the natives. They are a stout and strong race, it is said, and so active, that they run down the wild hogs. Their clothing is only a bandage of cloth of the bark of a tree round the loins ; their arms, a bamboo sword, and bow and arrows. The qualification for mar riage in the men is the production of the head of a person whom they have treacherously murdered ; nor can they build a new house until they have destroyed an enemy. The heads thus collected, after being triumphantly exposed in the villages, are conveyed to the inmost recesses of the woods, where their idolatrous rites are performed, and where, says Rumphius, ‘ the devil answers their questions, and often carries away some of them, especially children, for three or four months, when he brings them back, after having presented them with certain presents.’ Valentyn informs as that parents deliver their children to the priests, to be instructed in the religion of the demon they worship; and the priests receiving the chil- dren in the darkest recess of their leafy temples, the parents are made to believe that they are sacrificed by the dismal screams they hear, and by the bloody spears being thrust through the roof of the temple. In three or four months, however, they are returned to them with presents of some Chinese copper coins on strings. The principal food of these tribes is the wild animals of the woods, rats and snakes. They take but one wife, to whom they are constant. The island has several good ports, particularly Lahoo, near the south-west end, where the Dutch had for- merly a resident; Sawa, on the north, and Wakoo on the north-east.

CERAMBYX, in zoology, a genus of insects of the beetle kind, belonging to the order of in- secta coleoptera. The antennae are long and small ; the breast is spinous or gibbous ; and the elytra are linear. Linnaeus enumerates eighty-three species, chiefly distinguished by the figure of the breast.

CERA’STES, n. Ktpa-rˆc- A serpent hav- ing horns, or supposed to have them.

Scorpion, and asp, and amphisbena dire, Cerastes horned, hydras, and elops drear. Milton.

CERASTES, in zoology, the trivial name of a species of anguis and coluber.

CERAST1UM, mouse-ear: a genus of the pentagynia order and decandria class of plants ; natural order twenty-second, carophylleae : CAL. pentaphyllous ; the petals are bifid : CAPS, is unilocular, and opening at the top. There are twenty-two known species, but none of them possessed of any remarkable property, growing wild in all parts of the world.

CE'RATE, n. s. Lat. cera, wax. A medicine made of wax, which, with oil, or some softer substance, makes a consistence softer than a plaster. Quincy. See PHARMACY.

CE'RATED, adj. Lat. ceratus. Waxed; covered with wax.

CERATION, the name given by the ancients to the small seeds of ceratonia used by the Arabian physicians as a weight to adjust the doses of

medicines ; as tne grain weight with us took its rise from a grain of barley.

CERATOCARPUS, in botany : a genus of die monandria order, and moncecia class of plants ; natural order twelfth, holoracese : male CAL. biparite : COR. none ; the filament are long : female CAL. diphyllous, and grown to the ger- men ; the styles are two ; the seed is two-horned and compressed. Species 1 . C. arenaria, a native of sandy deserts in Tartary.

CERATONIA, the carob tree, or St. John's bread : a genus of the polycecia order, and po- lygamia class of plants ; natural order thirty- third, lomentaceae : CAL. hermaphrodite and quinquepartite : COR. none; the STAM. are five ; the style is filiform ; the legumen coriaceous and polyspermous. It is also dioecious, or male and female distinct on different plants. There is but one species, viz. C. siliqua, a native of Spain, of some parts of Italy, and the Levant. It is an ever-green ; and, in the countries where it is native, grows in the hedges. It produces a quantity of long, flat, brown colored pods, which are thick, meally, and of a sweetish taste. These pods are eaten by the poorer sort of inhabitants when there is a scarcity of other food. They are called St. John's bread, from an assertion of some, that those were the locusts St. John eat with his honey in the wilderness. The tree may be propagated in this country from seeds which must be sown in a moderate hot-bed, and the plants inured to the open air by degrees.

CERATOPHYLLUM, in botany : a genus of the polyandria order, and moncecia class of plants: natural order fifteenth, inundatae : male CAL.

multipartite : COR. none : STAM. from six- teen to twenty : female CAL. multipartite ; one pistil; no style; one naked seed. Species 1. C. demersum, common in all parts of Europe and Great Britain.

CERAUNIA, CERAUNIAS, or CERAUNIUS LAPIS, in natural history, from i►►pauj/oc, a thun- derbolt, a sort of flinty stone, of no certain color, but of a pyramidal or wedge-like figure ; popularly supposed to fall from the clouds in the time of thunder-storms, and to be possessed of divers notable virtues, as promoting sleep, pre- serving from lightning, &c. The ceraunia is the same with the thunder-stone, or arrow's head. These are frequently confounded with the ombrice and brontiae, as being all supposed to have the same origin. Most naturalists take the ceraunia for a native stone, formed among the pyrites, of a saline, concrete, mineral juice. Mercatus and Dr. Woodward assert it to be artificial, and to have been thus fashioned by tools. The ceraunia, according to these authors, are the heads of the ancient weapons of war, in use before the inven- tion of iron : which, upon the introduction of that metal, growing into disuse, were dispersed in the fields through different countries. Some of them had possibly served in the early ages for axes, others for wedges, others for chissels ; but the greater part for arrow-heads, darts, and lances. The ceraunia is also held by Pliny for a white or crystal-colored gem, that attracted lightning to itself. What this was, is hard to say. Prudentius also speaks of a yellow ce- raunia ; by which he is supposed to mean the carbuncle or pyropus.

CERBERA, in botany, a genus of the mono- gynia order, and pentandria class of plants; natural order thirtieth, contortae : COR. contorted. The fruit a monospermous plum. The most remarkable species is C. atrouai, a native of the warm parts of America, It rises with an irre- gular stem to eight or ten feet, sending out many crooked diffused branches, which towards their tops are garnished with thick succulent leaves of a lucid green, smooth and very full of a milky juice. The flowers come out in loose bunches at the end of the branches : they are of a cream color, having long narrow tubes, and at the top are cut into five obtuse segments, which seem twisted, so as to stand oblique to the tube. The wood of this tree smells very foully, and the ker- nels of the nuts are deadly poison, to which there is no antidote ; so that the Indians will not even use the wood for fuel.

CERBERUS, in mythology, a three-headed mastiff, the son of Typhon and Echidna, and placed to guard the gates of hell. He fawned upon those who entered, but devoured all who attempted to get back He was, how- ever, mastered by Hercules, who dragged him up to the earth, when, in struggling, a foam dropped from his mouth, which produced the poisonous herb called aconite, or wolf's-bane. Some have supposed that Cerberus is the symbol of the earth, or of all-devouring time : and that its three mouths represent the present, past, and future. The victory obtained by Hercules

over this monster, denotes the conquest which this hero acquired over his passions. Mr. Bryant supposes that Cerberus was the name of a place, and that it signified the temple of the sun ; deriv- ing it from kir abor, the place of light. This temple was also called Tor Caph-El, which was changed to rpue►►j0aX.of ; and hence Cerberus was supposed to have had three heads. It was like- wise called tor keren, turris regia; whence rpt icapjjvoc, from rpac, three, and Kapi\vov, head.

CERCIS, the Judas tree, a genus of the mo- nogynia order, and decandria class of plants ; natural order thirty-third, lomentaceae : CAL. is quinquedentated, and gibbous below : COR. pa- pilionaceous, with a short vexillum or flag petal under the wings or side petals ; a leguminous plant. There are only two species, both decidu- ous. 1. C. Canadensis, or Canadian cercis, will grow to the size of the first sort in some places. The branches are also irregular. The leaves are cordated. downy, and alternate. The flowers are usually of a palish red, and show themselves in spring, before the leaves are grown to their size. These too are often eaten in sallads, and afford an excellent pickle. There is a variety of this with deep red, and another with purpl flowers. These trees not only exhibit their flowers in clusters, in different colors, early in spring, before the leaves are grown to such a size as to hide them ; but also afford a pleasing variety, from the difference of the upper and lower surface of the leaves, the one being of a fine green, the other of a hoary cast, which the waving winds present alternately to view. 2. C. sili- quastrum, common Judas tree, or Italian cercis, a native of Italy and other parts of the soutn of Europe.

CERDON, a Syrian, who, being accused of Manicheism, came to Rome in the time of pope Hyginus, and abjured his errors about A. D.56 ; but was afterwards convicted of persisting in them, and cast out of the church. Cerdon as- serted two principles, the one good and the other evil. This last, according to him, was the creator of the world, and the god that appeared under the old law. The first, whom he called unknown, was the father of Jesus Christ; who, he taught, was incarnate only in appearance, and was not born of a virgin ; nor did he suffer death but in appearance. He denied the resur- rection; and rejected all the books of the Old Testament, as coming from an evil principle. Marcion was his disciple.

CERDONIANS, ancient heretics, who main- tained most of the errors of Simon Magus, Satur- ninus, and the Manichees, so named from their

leader Cerdon.

CERE, v. ~\ AT. kir ; Chald. kera ;

CE'REOUS, f Kijpdf ; Lat. cera, wax. To

CE'RECLOTH,TZ. ⬜⬜wax; waxy; a cloth smeared

CE'REMENT, n. J with waxy or gummy sub- stances, to be applied to wounds; cloths dipped in melted wax, in which dead bodies were wrap- ped, after having been embalmed.

The ancient Egyptian mummies were shrouded in a number of folds of linen, besmeared with gums, in manner of cerecloth. Bacon.

Let me not burst in ignorance, but tell Why canonized bones, hearsed in earth, Have burst their cerements ? Shahspeare.

You ought to pierce the skin with a needle, and strong brown thread cered, about half an inch from the edges of the lips. Wiseman.

The tyranny of silence is not lasting,

And though events be hidden, just men's groans

Will burst all cerement, even a living grave !

Byron. The Two Foscari.

CERE, the naked skin with which the base of the bill is covered in the hawk kind.

CEREALIA, in antiquity, feasts of Ceres, in- stituted by Triptomelus, son of Celeus king of Eleusis, in gratitude for his having been in- structed by Ceres, who was supposed to have been his nurse, in the art of cultivating corn and making bread. There were two feasts of this kind at Athens ; the one called Eleusinia, the other Thesmophoria. On these occasions Bac- chus, as well as Ceres, was honored. The vic- tims offered were hogs, on account of the waste they make in the products of the earth. Whether wine was offered is much disputed among the critics. Plautus and Macrobius countenance the negative side; Cato and Virgil the positive. Macrobius says, indeed, they did not offer wine to Ceres, but mulsum, which was a composition of wine and honey boiled up together; that the sacrifice made on the 21st of December to that goddess and Hercules, was a pregnant sow, to- gether with cakes and mulsum. The cereal ia passed from the Greeks to the Romans, who held them for eight days successively ; commen- cing on

the 5th of the ides of April. The women alone were concerned in the celebration, all dressed in white; the men, likewise in white, were only spectators. They ate nothing till after sunset ; because Ceres, in her search after her

daughter, took no repast but in the evening. This festival was omitted by the Romans after the defeat at Cannae, the mourning being so uni- versal, that there were no women to celebrate it, out of mourning.

CEREALIA, in botany, the name used by Lin- naeus for the larger esculent seeds of the grasses : viz. rice, wheat, rye, barley, oats, millet, panic grass, Indian millet, holcus, zizania, and maize. To these may be added darnel, which, by pr►►- paration, is rendered esculent.

CERE'ALIOUS, adj. Lat. cerealis. Pertaining to corn.

CE'REBEL. Lat. cerebellum ; the little brain ; a roundish viscus forming part of the brain.

In the head of man, the base of the brain and cere- bel, yea, of the whole skull, is yet parallel to the hor.zon. Derham.

CEREBELLUM. See ANATOMY. Index. CEREBRUM, the brain. See ANATOMY. Index, and BRAIN.

Surprise my readers, while I tell 'em Of cerebrum and cerebellum. Prior.

CE'REMONY, n. ~] fr.ceremonle;li. CEREMO'NIAL, n. & adj. and Span, teremo- CEREMO'NIALLY, adv. [nia; Lat. caremo- CEREMO'N lous, j n ia ; It popnvia. Cle-

CEREMO'NIOUSLY, adv. land contends that CEREMO'NIOUSNESS, n. J it is derived from cir-y-won, ' meaning a custom saered, or passed into a law by the shire or gemot.' Ceremony is a religious rite or form ; a form of civility, and of state. Ceremonial, as a noun, signifies accus- tomed external form or rite ; the order for the rites and forms of the Romish church; as an adjective, relating to forms; formal; adhering to old forms. Ceremonious means, consisting of outward rites ; awful ; attentive to old rites and formalities ; observant of the rules of civility ; civil and formal to a troublesome extent.

The name of ceremonies we do not use in so large a meaning, as to bring sacraments within the compass and reach thereof; although things belonging to the outward form and seemly administration of them are contained in that name, even as we use it. For the name of ceremonies we use as they themselves do.

Hooker.

Bring her up to the high altar that she may The sacred ceremonies partake. Spenser.

Disrobe the images If you find them decked with ceremony.

Shahspwc.

He is superstitious grown of late, Quite from the main opinion he held once, Of fantasy, of dreams, and ceremonies. Id.

The sauce to meat is ceremony ; Meeting were bare without it. Id.

What art thou, thou idle ceremony ? What kind of god art thou, that sufierest more Of mortal grief than do thy worshippers ? Art thou augbt else but place, degree, and form?

Id,

What mockery will it be,

To want the bridegroom when the priest attends To speak the ceremonial rites of marriage. /

Then let us take a ceremonious leave, And loving farewell, of our several friends. U.

O, the sacrifice,

How ceremonious, solemn, and unearthly : It was i' th' offering. Id.

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You are too senseless obstinate, my lord ; Too ceremonious and traditional. Sltakspeare.

Ceremoniously let us prepare Some welcome for the mistress of the house. Id.

The old caitiff was grown so ceremonious, as he would needs accompany me some miles in my way.

Sidney.

Not to use ceremonies at all, is to teach others not to use them again, and so diminish respect to him- self. Bacon.

Oh monstrous, superstitious puritan, Of refined manners, yet ceremonial man ; That when thou meetest one with enquiring eyes Dost search, and, like a needy broker, prize The silk and gold he wears. Donne.

Christ did take away that external ceremonial wor- ship among the Jews. Stulingfleet.

We are to carry it from the hand to the heart, <, improve a ceremonial nicety into a substantial deity, and the modes of civility into the realities of religion.

South.

Under a different economy of religion, God was more tender of the shell and ceremonious part of his worship. Id.

With dumb pride, and a set formal face, He moves in the dull ceremonial track, With Jove's embroidered coat upon his back. Dryden.

A coarser place,

Where pomp and ceremonies entered not, Where greatness was shut out, and highness well forgot. Id.

They have a set of ceremonious phrases, that run through all ranks and degrees among them. Addison.

The only condition that could make it prudent for the clergy to alter the ceremonial or any indifferent part, would be a resolution in the legislature to pre- vent new sects. Swift.

CEREMONIAL, CEREMONIALS, the order of the rules and forms of the Romish church. This book was published in 1516 by the bishop of Corcyra ; at which the college of cardinals were so scandalised, that some of them voted to have the author as well as the book burnt, for exposing the sacred ceremonies to the eyes of profane people.

CEREMONIAL LAW, the regulations given by Moses relating to the worship of God among the ancient Jews. In this sense it is the same with the Levitical law, and stands distinguished from the moral, as well as judicial law. See LAW.

CEREMONIES, MASTER OF THE, an officer in- stituted by King James I. for the reception of ambassadors and strangers of quality. He wears about his neck a chain of gold, with a medal, having on one side an emblem of peace, with this motto, Beati pacifici, and on the other an emblem of war, with Dieu et mon droit.

CEREMONIES, MARSHAL OF THE, is an officer, subordinate to the above.

CERES, in heathen mythology, the goddess of corn. She was the daughter of Saturn and Ops, and the mother of Proserpine, by Jupiter. Pluto having stolen away Proserpine, Ceres tra- velled all over the world in quest of her, by the help of a torch, which she had lighted in Mount jEtna. In this search, she came to Celeus, king of Eleusis, and undertook to bring up his infant son Triptolemus. To render her charge immor- tal, she fed him with divine milk, and in the night covered him with f.re. Celeus observing an un- usual improvement in his son. resolved to watch VOL. V.

his nurse, to which end he hid himself in that y/art of the house where she used to cover the child with fire ;. but when ho saw her put the infant under the embers, he cried out and discovered himself. Ceres punished his curiosity with death. After- wards she taught the youth agriculture, and mounted him in a chariot drawn by winged dragons, that he might traverse the world, and teach mankind the use of corn and fruits. Hav- ing at last discovered, by the nymph Arethusa, that Proserpine was in the infernal regions, she applied to Jupiter, and obtained of him that her daughter should be restored, provided she had tasted nothing during her stay; but Ascalaphus declaring that while walking in Pluto's orchard, ˆhe had pulled an apple, and had tasted of the seeds, she was for ever forbidden to return. Ceres, out of revenge, turned Ascalaphus into an owl. At length, Jupiter, to mitigate her grief, permitted Proserpine to pass one half the year in the infernal regions with Pluto, and the other half with her mother on earth. Cicero mentions a temple of Ceres at Catanea in Sicily, where was a very ancient statue of that goddess, but entirely concealed from the sight of men, every thing being performed by matrons and virgins.

CERES, and PALLAS, two minor planets, the former of which was discovered on the 1st of January, 1801, by M. Piazza, astronomer-royal at Palermo, and the latter by Dr. Olbers of Hamburgh. Ceres, more distant from the Sun than Mars, and nearer than Jupiter, its mean distance being above 250,000,000 English miles, is so small that glasses of a very high magnifying power will not show it with a distinctly defined diameter, which is only 160 English miles; and revolves round the sun in four years 222 days. Pallas, nearer than Jupiter, is nearly 270,000,000 English miles distant from the sun, and its dia- meter only 110 miles, so that it is more

imper- ceptible than Ceres, both owing to its inferior size, and superior distance from the earth, when both are in opposition to the sun.

CERET, a town of France, in the depart- ment of the Eastern Pyrenees, and ci-devant province of Roussillon, with a magnificent bridge of a single arch, over the river Tet. In 1660 the commissioners of France and Spain met in this town to settle the limits of the two kingdoms. It is twelve miles from Perpignan.

CERIGNOLA, a town of the Capitanata, Na- ples, on the borders of the province of Bari. In the neighbourhood are the ruins of the ancient Salapia. It contains about 12,000 inhabitants, and is twenty-eight miles south-east of Manfre- donia.

CERIGO, or CHERIGO, the ancient Cythera, one of the seven islands of the Ionian republic. It is situated at the entrance of the Grecian Archi- pelago, in the gulf of Maritonisi, or Kolokythia, and to the south of the Morea. It is seventeen miles long, ten broad, and about forty-fiye in circumference ; and consists for the most part of barren rocky mountains. Some corn, wine, oil, flax, and cotton are raised here ; and there are also flocks of sheep and goats on the hills, as well as cattle. The inhabitants, who are about 10,000, are poor, and profess the Greek religion. Thu island formerly belonced to the Venetinn.J, ane

was taken from tnem by the French in 1797; but it was retaken two years after, and incorporated into the Ionian republic. The French again had possession of it in 1807, but were expelled by the English in 1809. Cerigo sends one deputy to the legislative assembly of the Ionian republic.

CERIGO, or KUPSULI, the ancient Cythera, the chief town of the island, is a small place, pro- tected by a castle, on the declivity of a moun- tain, not far from the south coast, where it has a convenient harbour, called Porto Delphino. Population 1200.

CERINTHE, honeywort, a genus of the mo- nogynia order and pentandria class of plants ; natural order forty-first, asperifoliae. The limb of the corolla is a ventricose tube with the throat pervious; and there are two bilocular seeds. There are three species, natives of Germany, Italy, and the

Alps. They are low annual plants with purple, yellow, and red flowers, which may be propagated by seed sown in autumn, in a warm situation.

CERINTHIANS, ancient heretics, who denied the deity of Jesus Christ : so named from Cerin- thus. They believed that he was a mere man, the son of Joseph and Mary ; but that, in his baptism, a celestial virtue descended on him in form of a dove ; by means of which he was con- secrated by the holy spirit ; made Christ, and wrought so many miracles : that, as he received it from heaven, it quitted him after his passion, and returned to the place whence it came, ?o that Jesus, whom they called a pure man, really died and rose again; but that Christ, who was dis- tinguished from Jesus, did not suffer at all. It was partly to refute this sect that St. John wrote his gospel. They received the gospel of St. Matthew, to countenance their doctrine of cir- cumcision, from Christ's being circumcised, but they omitted the genealogy; and discarded the epistles of St. Paul, because that apostle held cir- cumcision abolished.

CERINTHUS, one of the first heresiarchs, being contemporary with the apostles. Besides the above tenets, he ascribed the creation, not to God, but to angels ; and taught that circumcision ought to be retained under the gospel. He is looked upon as the head of the converted Jews, who raised, in the church of Antioch, the dis- sension mentioned in Acts xv. He published a work under the title of Apocalypse, whence some have pretended that he was the author of St. John's Re'-elation. See APOCALYPSE.

CERNE-ABBAS, a market town of Dorset, seven miles north of Dorchester, and 127 from London. It is situate on the river Cerne, and had formerly a stately abbey of Benedictines, founded in the tenth century, by Ailmcr, earl of Cornwall. Part of its remains are still visible at the north end of the town. Cerne consists of four or five streets, pleasantly situate in a valley sur- rounded by hills. At the east end of the town, on the side of a steep hill, called Trendle Hill, is a gigantic human figure, cut in chalk, 180 feet high ; his left hand is extended, and his right, which is erect, holds a club ; between his legs are three rude letteisj scarcely legible, and over them, in modern figures, 748. It is said to be

the representation of Cenric, son of Cuthred, king of Wessex, who was slain in battle. Others suppose it be the figure of some deity, and say the letters are JAO. It covers nearly an acre of ground, yet seems to have been cut with some idea of the rules of proportion. It is repaired about once in seven years, by clearing the fur- rows and filling them with fresh chalk. Various have been the opinions of the origin of this fi- gure. Dr. Stukely thinks it is the figure of Her- cules, called Heil by the Saxons, and cut as a memorial of their arrival, in compliment to Eli, who expelled the Belgic.

CEROCHYTOS ; from jci;poc, wax, and -ˆvta, to melt ; in antiquity, a method of painting in wax, melted and colored with pigments for the purpose, and applied with pencils.

CEROMA, in antiquity ; 1. A mixture of oil and wax with which the ancient wrestlers rubbed themselves : not only to make their limbs more sleek, and less capable of being laid hold of, but more pliable and fit for exercise. 2. A cerate, or cerecloth.

CEROMANTIA,an ancient method of divina- tion, by means of wax melted over a vessel of water, and let drop in three distinct spaces ; ob- serving the figure, situation, distance, and con- cretion of the drops.

CEROPEGIA, in botany, a genus of the mo- nogynia order and pentandria class of plants ; natural order thirtieth, contortae. There are two erect follicles ; the seeds plumose or covered with a feathered pappus ; the limb of the corolla con- nivent or closing at top. There are six species, natives of the East Indies and Cape of Good Hope.

*CE'ROTE, n. s. The same with CERATE, which see. , ***

In those which are critical, a cerate of oil of olives, with white wax, hath hitherto served my purpose.

Wiseman.

CERTAIN, adj. -\ Certtis, Lat. ; certain,

CE'RTAINLY. I Fr. from cerno, Lat. : To

CE'RTAINTY. \ perceive,which Ainsworth

*CE'RTES, adj. i derives from ****cpivco, Gr. to*

CE'RTITUDE. J judge, or try. Fixed, sure, immutable, exact, particular ; without question or doubt. Certes was commonly the word used for certainly, from Chaucer to Butler.

Of which man I have not certayn what thing I schul write to the lord, for which thing I broughte him to ghou, and moost to thee, thou kyng Agrippa, that whanne axing is maad, I have what I gchal write. Wicklif's New Test. Dedis of Apostles, 25.

The kynde or beawtye of the whyche vestures, a certayne darkness or rather ignorance of oldcnes for- gotten, had obscuryd and darkened, as the smoke is wont to darken images that stand nyghe the smoke.

Colville's Boetnu.

Certet the soverainst thinge of desire and most ore- ture resonable, have, or els shuld have, full appetite to thir perfeccyon ; unresonable bestes mowen not sithe reson hath in Tiem, no workinge than resona- ble that wol not, is comparisoned to unresonable, and made lyke 'hem. Chaucer.

No certainly, he was a fayre prelat, He was not pale as a forpined gost ; A fat swan loved he best of any rost, His palfrey was as broune as is a bcry. In.

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The hydden traynes I know, and secret snares of

love, How soone a loke will prynte a thoughte that never

may remove ; The slypper state I know, the sodein twines from

welthe,

The doubtfull hope, the ceriaine wooe, and sure de- spaired helthe. Skelton.

But notwithstandyng certes in my mind, I durst well swere, as true ye shall them find In every poynt eche answere by and by, As are the iudgementes of astronomye.

Sir Thomas More.

But of al this poynte, is there no certaintie, and ' whoso diuineth vpon coniectures, may as wel shote to farre as to short. Id.

In these things, whereof the Scripture appointed! no certainty, the use of the people of God, or the or- dinances of our fathers, must serve for a law.

Hooker.

TIT. We wait for certain money here, Sir. FLAV. Ay,

If money were as certain as your waiting, Twere sure enough.

Shakspeare. Tim. of Athens. For, certes, these are people of the island. Id.

Some certain of your brethren roared, and ran From noise of our own drums. Id.

Doubting things go ill, often hurts more Than to be sure they do ; for certainties Or are past remedies, or timely knowing, The remedy then born. Id.

Certes, Sir knight, you 'vebeen too much to blame, Thus for to blot the honour of the dead, And with foul cowardice his carcase shame, Whose living hands immortalized his name. Spenser. It is certainly an argument of a great love, and a great confidence, and a great sincerity, and a great hope, when a man lays down his life in attestation of a proposition. Taylor on Prophecying .

You shall gather a certain rate. Exodus.

How should mens favour be but like themselves, variable and inconsistent? There is no certainty but in the favour of God, in whom can be no change j whose love is entailed upon a thousand generations.*

Bishop Hall.

Distrust makes our danger greater, and our helps less than they are, and forecasts ever worse than shall be ; and if evils be possible, it makes them certain.

Id.

Can the wisdom of the heart remedy the craft of the heart ? Certainly it may. Id.

However, I with thee have fixed my lot, Certain to undergo like doom : if death, Consort with thee. Milton's Paradise Lost.

Certes, our authors are to blame.

Sutler's Hudibras.

Let there be certain leather bass made of several

bignesses, which, for the matter of them, should be

tractable. Wilkins.

Those things are certain among men, which cannot

be denied without obstinacy and folly. TMotson.

This form before Alcyone present, To make her certain of the sad event, Dryden.

Virtue that directs our ways, Thro' certain dangers to uncertain praise. Id.

They thought at first they dreamed ; for 'twas of- fence With them to question certitude of sense. Id.

Certainty is two-fold ; certainty of truth and cer- tainty of knowledge. Certainty of truth is, when words are so put together in propositions, as exactly to express the agreement or disagreement of the ideas

they stand for, as really it is. Certainty of knowledge is to perceive the agreement and disagreement of ideas, as expressed in any proposition. This w►► usually call knowing, or being certain of the truth of any proposition. Locke.

Who calls the council, states a certain day, Who forms the phalanx, and who points the way.

Pope.

Certain it is that a man may, if he will, let his heart close to the having no regard to any thing but his dear self, even with exclusion of his very chil- dren. Spectator, No. 490. Revelation, in plain and express language, declares some doctrines which our reason at present knows not with evidence and certainty, how or in what sense to reconcile to some of its own principles ; as, that the child Jesus is the mighty God, &c. Watts. He that has a coast has likewise the sea to a cer- tain distance ; he that possesses a fortress has the right of prohibiting another fortress to be built within the command of its cannon. Dr. Johnson. But how frequent soever may be the examples of existence without thought, it is certainly a state not much to be desired. Idler. The Scriptures commonly presuppose in the persons to whom they speak, a knowledge of the subjects of natural justice, and are employed, not so much to teach new rules of morality, as to enforce the prac- tice of it by new sanctions, and by a greater certainty ►►► which last seemed to be the proper business of a re- velation from God. Poky.

Then faith and hope no more the mind employ, One lost in certainty, and one in joy. Anonymous.

On a certain occasion when her niece was sitting at her side, she asked his opinion concerning the law- fulness of such amusements as are found at Vauxhall or Ranelagh. Cowper's Private Correspondence.

Would you have me praise her hair? Let her place my garland there j Is her hand so white and pure ? I must press it to he sure; Nor can I be certain then,

Till it grateful press again. Sheridan.

CERTHIA, in ornithology, the creeper or ox-eye, a genus belonging to the order of picae. The beak is arched, slender, sharp, and triangu- lar ; the tongue is sharp at the point, and the feet are of the walking kind, i. e. having the toes open and unconnected. Of this genus near fifty species have been enumerated by ornithologists. The following are a few of the most remarkable : 1. C. cardinalis, the cardinal creeper, has the head, neck, and breast, of a crimson color ; down the middle of the back is a stripe of the same color to the rump: the rest of the body is black, and the wings and tail are black. It inhabits the cultivated parts of the island of Tanna ; is there called kuyameta, and lives by sucking the nectar of flowers. 2. C. coerulea, the blue creeper, has the head of a most elegant blue ; but on each side there is a stripe of black like velvet, in which the eye is placed ; the chin and throat are marked with black in the same man- ner, the rest of the body violet blue. It inhabits Cayenne. Seba says that it makes its nest with great art. The outside is composed of dry stalks of grass, or such like, but within of very downy soft materials, in the shape of a retort, which it suspends from some weak twig, at the end of a branch of the tree ; the opening or mouth down- wards, facing the ground : the neck is a foot in length, but the real nest is quite at the top, so

that the bird has to climb up this funnel-like opening to get at the nest. Thus it is secure from every barm, neither monkey, snake, nor lizard, daring to venture at the end of the branch, as it ???would not support them. 3. C. familiaris, the common ox-eye is grey above, and white under- neath, with brown wings and ten white spots on the ten prime feathers. This bird is found in most parts of Europe, though it is believed no- where so common as in Britain. The facility with which it runs on the bark of a tree, in all directions, is wonderful : this it does with as much ease as a fly on a glass window. It lives principally, if not wholly, on insects, which it finds in the chinks and among the moss of trees. It builds its nest in some hole of a tree, and lays generally four eggs, very rarely more than seven: these are ash-colored, marked at the end with spots and streaks of a deeper color, and the shell is pretty hard. It remains in the places which it frequents during the winter, and builds its nest early in the spring. 4. C.Loteni, Loten's creeper, has the head, neck, back, rump, scapu- lars, and upper tail

coverts, of green gold ; be- neath, from the breast to the vent, of velvet black, which is separated from the green on the neck by a transverse bright violet band, a line and a half in breadth : the lesser wing coverts are of this last color; the middle coverts are green gold ; and the greater coverts are very fine black, edged with green gold on the outer edge ; the quills are of the same color, as are also the tail feathers. The female differs in having the breast, belly, sides, thighs, under wing and tail coverts of a dirty white, spotted with black; and the wings and tail not of so fine a black. It in- habits Ceylon and Madagascar, and is called angaladian. Buffon says it makes its nest of the down of plants, in form of a cup, like that of a chaffinch, the female laying generally five or six eggs ; and that it is sometimes chased by the tarantula spider, which seizes on the whole brood, and sucks the blood of the young birds. 5. C. pusilla, or the brown and white creeper, accord- ing to Edwards, is not above half the size of our European creeper. The upper part of the body is brown, with a changeable gloss of copper ; the under parts are white; the quills brown, edged with glossy copper ; the tail blackish, the outer feather tipped with white. Those who keep these birds at the Cape of Good Hope, having many sorts in large cages, supply them with only honey and water. They also catch flies which come within the reach of their confinement; and these make up their whole subsistence. It has been attempted to transport them further, but the want of flies on board a ship prevented them living more than three weeks, so necessary are insects to their sub- sistence. 6. C. simulans, the mocking bird, or cassique, is of the size of the lesser thrush. On the cheeks is a narrow white spot; the head, especially on the crown, is inclined to violet : the plumage in general is olive green, inclining to yellow on the unďr parts ; the quills are brown, the secondaries edged with .olive; the color of the tail is like that of the secondaries, and some- what forked ; the legs are dusky blue, and the claws black. They are found in great numbers in South America, and are thus described by Mr. Waterloo in his Wanderings : ••• ‘ The cassique,

in size, is larger than the starling ; he courts, the society of man, but disdains to live by his labors. When nature calls for suppoit, he repairs to the neighbouring forest, and there partakes of the store of fruits and seeds, which she has produced in abundance for her aerial tribes. When his repast is over, he returns to man, and pays the little tribute which he owes him for his protec- tion ; he takes his station on a tree close to his house, and there, for hours together, pours forth a succession of imitative notes. His own song is sweet, but very short. If a toucan be yelping in the neighbourhood, he drops it, and imitates him. Then he will amuse his protector with the cries of the different species of the wood-pecker ; and, when the sheep bleat, he will distinctly answer them. Then comes his own song again, and if a dog or a guinea fowl interrupt him he takes them off admirably, and by his

different gestures during the time, you would conclude that he enjoys the sport.' 7. C. viridis, the hook-billed green creeper has a bill of an inch and three quarters long, and bent in a semicircle. The plumage in general is olive green, palest beneath, and somewhat inclined to yellow ; the quills and tail are dusky, the legs dusky brown, and the feathers just above the knee or garter, white. It inhabits the Sandwich islands in general, and is one of the birds whose plumage the natives make use of in constructing their feathered garments which, having these olive-green feathers inter-mixed with the beautiful scarlet and yellow ones belonging to the next species, and yellow-tufted bee-eater, make some of the most beautiful cover- ings of these islanders.

CERTIFICATE, TRIAL BY, in the English law, a species of trial allowed in such cases, where the evidence of the person certifying is the only proper criterion of the point in dispute. See TRIAL.

CE'RTIFY, v. a. > Fr. certifier, from Lat.

CERTIFICATE. J certus and Jio. To be made sure. It has of, says Dr. Johnson, before the thing told, and after the person told.

But I certify you, brethren, that the gospel which was preached of me is not after man. Gal. i. 2.

The English ambassadores returned out of Flan- ders from Maximilian, and certified the king, that he was not to hope for any aid from him. Bacon.

This is designed to certify those things that are confirmed of God's favour. Hammond's Fundamentals.

A certificate of poverty is as good as a protection.

L'Estrange.

I can bring certificates that I behave myself soberly before company. Addison.

If a question of mere law arises in Chancery, it is the practice to refer it to the opinion of the judges of King's Bench or Common Pleas, upon a case stated for that purpose, wherein all the material facts are admitted, and the point of law is submitted to their decision, who thereupon hear it solemnly argued by counsel on both sides, and certify their opinion to the chancellor. And upon such certificatf the decree is usually founded.

Blackftone's Commentaries. CERTIORARI, a writ issuing out of the chancery or king's bench, to call up the records of a cause therein

depending, that justice may be done ; upon complaint made by bill, that the party who seeks the said writ, hath received hard dealing in the said court. A certiorari is made i e

turnable either in common pleas, or in chancery, or the king's bench, in which last mentioned court it lies where the king would be certified of a re- cord. Indictments from inferior courts, and pro- ceedings of the quarter sessions of the peace, may also be removed into the king's bench by a certi- orari; here the very record must be returned, and not a transcript of it; though usually in chan- cery, if acertiorari be returnable there, it removes only the tenor of the record.

CERTITUDE, considered in the things or ideas which are the objects of our understanding, is a necessary agreement or disagreement of one part of our knowledge with another ; as applied to the mind, it is the perception of such agreement or disagreement, or such a firm well-grounded assent, as excludes not only all manner of doubt, but all conceivable possibility of a mistake. There are three sorts of certitude or assurance, according to the different natures and circum- stances of things, viz. : Certitude, mathematical, is that arising irom mathematical evidence ; such as that the three angles of a triangle are equal to two right angles. Certitude, moral, is that founded on moral evidence, and is frequently equivalent to a mathematical one ; as that there was formerly such an emperor as Julius Caesar, and that he wrote the commentaries which pass under his name, because the historians of those times have recorded it, and no man has ever dis- proved it since; this affords a moral certitude, in common sense so great, that one would be thought a madman who should deny it. Natural or physical certitude is that which depends upon the evidence of sense, as that I see such or such a color, or hear such or such a sound ; no body questions the truth of this, where the organs, the medium, and the object are rightly disposed.

CERTOSA, a village of the late Italian re- public, in the department of the Ticino, and ci-devant principality of Pavia, famous for its Carthusian convent, in the middle of a great park, the square wall of which is twenty miles in cir- cumference, and reaches nearly to Pavia. Here Francis I. king of France, was taken prisoner by the Austrians, on the 20th February, 1525.

CERVANTES SAAVEDRA (Michael de), the inimitable author of Don Quixote, was born at Madrid in 1549. From his infancy he was fond of books ; but he applied himself wholly to novels and poetry, especially those of Spanish and Italian authors. He went to Italy to serve car- dinal Aquaviva, to whom he was chamberlain at Rome, and afterwards followed the profession of a soldier for some years, under the victorious Co- lonna. He was present at the battle of Lepanto in 1571, in which he lost his left hand by a shot. After this he was takes by the Moors and carried to Algiers, where he continued a captive five years and a half. Then he returned to Spain, and wrote several comedies and tragedies, which were well received, and acted with great ap- plause. In 1584 he published his Galatea, a novel, in six books. But the work which has immortalised his name, is the History of Don Quixote; the first part of which was printed at Madrid in 1605. This is a satire upon books of knight-errantry ; and the chief end of it was to destroy the reputation of these books. It was

universally read; and the most eminent painters, tapestry-workers, engravers, and sculptors, were soon employed in representing the history of Don Quixote. Cervantes's work, even in his lifetime, had the honor of receiving royal appro- bation. As Philip III. was standing in a bal- cony of his palace at Madrid, he observed a stu- dent on the banks of the Manzanares reading a book, and from time to time breaking off and beating his forehead, with extraordinary marks of delight ; upon which the king said, ' That scholar is either mad, or reading Don Quixote :' the latter of which proved to be tne case. But, notwithstanding the vast applause his book every where met with, Cervantes had much ado to keep himself from starving. In 1615 he published a second part. He wrote also The Force of Blood, in two volumes, and The Troubles of Persiles and Sigismunda. He had employed many years in writing this novel, and finished it but just before his death ; for he did not live to see it published. His sickness was of such a nature, that he was able to be his own historian. At the end of the preface to this work, he represents himself on horseback upon the road, and a student, who had overtaken him, engaged in conversation with him : ' And happening to talk of my illness,' says he, ' the student soon let me know my doom, by saying it was a dropsy I had got ; the thirst at- tending which, all the water of the ocean, though it were not salt, would not suffice to quench. Therefore Senor Cervantes, says he, you must drink nothing at all, but do not forget to eat ; for this alone will recover you without any other physic. I have been told the same by others, answered I ; but I can no more forbear tippling, than if I were born to do nothing else. My life is drawing to an end ; and from the daily journal of my pulse, I shall have finished my course by next Sunday at the farthest. ??? But adieu, my friends all, for I am going to die ; and I hope to see you ere long in the other world, as happy as heart can wish.' His dropsy increased, and at last

proved fatal to him ; yet he continued to speak and to write bon mots. He received the last sacrament on the 18th of April, 1616; yet the day after wrote a Dedication of his book to the Count de Lemos.

CERVICAL ARTERIES. See ANATOMY.

CERVICAL NERVES, seven pairs of nerves, so called, as having their origin in the cervix. See ANATOMY.

CERVICAL SINUSES, or CERVICAL VEINS. See ANATOMY.

CERVIX, in anatomy, properly denotes the hind part of the neck ; as distinguished from the fore part, called jugulum, or the throat. See ANATOMY.

CERVIX SCAPULAE, the head of the shoulder- blade, or that upper process whose sinus receives the head of the humerus.

CERVIX UTERI, the neck of the uterus; called also vagina. See ANATOMY.

CE'RULE, \ Lat. caruleus, from caiu

CERU'LEAN, \ leus, caluni, sky-colored ;

CERU'LEOUS, {blue; Sir Thomas More

CERULI'FIC. J speaks of the ceruleous or blue-colored sea.

It afforded a solution with now and then a iigh:

touch of sky-colour, but nothing near so high as the ceruleovs tincture of silver. Boyle,

From thee the sapphire solid ether takes Its hue cerulean. Thomson's Summer.

On spring's fair lap, cerulean sisters! pour From airy urns the sun-illumined shower, Feed with the dulcet drops my tender broods, Mellifluous flowers, and aromatic buds. Darwin.

No meretricious graces to beguile, No clustering ornaments to clog the pile ; From ostentation as from weakness free, It stands like the cerulean arch we see, Majestic in its own simplicity. Courper. '

CERUMEN. See ANATOMY. CE'RUSE, n. s. Cerussa, Lat. ; white lead. See WHITE LEAD.

A preparation of lead with vinegar, which is of a white colour ; whence many other things, resembling it in that particular, are by chymists called ceruse ; as the ceruse of antimony, and the like. Quincy.

Of his visage, children were sore aferd, Ther n'as quicksilver, litharge, ne brimston, Boras, ceruse, ne oile of tartre non, Ne oinement that wolde dense or bite. Chaucer. Fair virgins blushed upon him ; wedded dames

Bloomed also in less transitory hues ; For both commodities dwell by the Thames,

The painting and the painted ; youth, ceruse, Against his heart preferred their usual claims,

Such as no gentleman can quite refuse ; Daughters admired his dress, and pious mothers Enquired his income ; and if be had brothers.

Byron. Don Juan.

CERUSE or CEBUSS, white lead. See LEAD WHITE.

CERUSE, as a medicine, is used externally, cither mixed in ointments, or by sprinkling it on old gleeting and watery ulcers, and in many di- seases of the skin. If, when it is reduced into a fine powder, it is received in with the breath in inspiration, and carried down into the lungs, it causes an incurable asthma. Instances of the very pernicious effects of this metal are too often seen among those persons who work lead in any form, hut particularly among the workers of white lead. CERVUS, the deer, in zoology, a genus of quadrupeds, belonging to the order of pecora. The horns are solid, branched, and brittle, covered with a hairy, or rather velvet skin (which falls off at full growth), and growing from the top ; they likewise fall off and are renewed annually. There are eight fore teeth in the under jaw, but no dog teeth. The principal species are the following : 1. C. alces, the elk, or moose deer, the alee or machlis of Pliny, has broad palmated horns, very short beams or none, and a fleshy protuberance on the throat. The neck is much shorter than the head, with a short, thick, upright mane, of a light brown color. The eyes are small, the ears a foot long, very broad and slouching ; nostrils very large ; the upper lip square, hangs greatly over the lower, and has a deep sulcus in the mid- dle, so as to appear almost bifid. This is the bulkiest animal of the deer kind, being sometimes seventeen hands high, and weighing about 1200 pounds. The female is less than the male, and wants horns. The elks inhabit Europe, America, and Asia, as far as Japan ; chiefly frequenting the "old and

woody regions. They are found in all the woody tracts of the temperate parts of Russia, but not on the Arctic flats, nor in Kamtschatka.

In Siberia they grow to an enormous size, parti- cularly among the mountains. The elk and the moose, according to Mr. Pennant, are the same species ; the last derived from musa, the Algonkin name for that animal. These animals reside amidst forests, for the conveniency of browsing the boughs of trees, being prevented from grazing with ease, by the shortness of their necks and length of their legs. They often have recourse to water plants, which they can readily get at by wading. They are very fond of the anagyris foetida, or stinking bean trefoil, and will uncover the snow with their feet to get at it. In passing through the woods, they carry their heads in a horizontal position, to prevent their horns from being entangled in the branches. They have a singular gait : their pace is a shambling trot, but they go with great swiftness. In their common walk they lift their feet very high, and will with- out any difficulty clear a gate five feet high. They feed principally in the night. They ruminate like the ox. They go to rut in autumn ; are at that time very furious, seeking the female by swimming from isle to isle. These bring two young at a birth, in April, which follow the dam a whole year. During the summer they keep in families. In deep snows they collect in numbers in the forests of pines, for protection from the inclemency of the weather, under the shelter of those ever-greens. They are very inoffensive, except in the rutting season ; but when wounded they will turn on the assailant, and attack him with their horns, or trample him to death beneath their great hoofs. Their flesh is extremely sweet and nourishing. The tongues are excellent ; but the nose is perfect marrow, and esteemed the greatest delicacy in Canada. The skin makes excellent buff; being strong, soft, and light ; yet so thick, that it is said to resist a musket bullet. The Indians dress the hide, and, after soaking it for some time, stretch and render it supple by a lather of the brains in hot water. They not only make their snow shoes of the skin, but, after a chase, form canoes with it ; they sew the skins neatly together, cover the seams with an unctuous earth, and embark in them with their spoils to return home. The hair on the neck, withers, and hams of a full-grown elk, is of much use in ma- king mattresses and saddles ; being by its great length well adapted for these purposes, and the palmated parts of the horns are farther excavated by the savages, and converted into ladles, which will hold a pint. On all these accounts they are a principal object of chase.

2. C. axis, the axis, has erect rounded horns, with three snags pointing upwards, and no brow ant- lers. The animals of this genus are very tame, and have the sense of smelling in an exquisite degree. This species is about the size of the fallow-deer; of a light red color; the bodj beautifully marked with white spots ; along the lower part of the sides, next the belly, is a line of white ; the tail is long, red above, and white be- neath. They are

common on the banks of the Ganges, and in the Isle of Ceylon. This species bears the climate of Europe, having been bred in the Prince of Orange's Menagerie at the Hague The larger axis of Pennant is of a reddish brown color, and has very thick, large, strong, and rug

get! three-forked whitish horns. It is as large as a horse, and inhabits the marshes of Borneo and Ceylon.

3. C. capreolus, the roe-buck, has erect, cylin- drical branched horns, and forked at the top. His size is only three feet nine inches long, two feet three inches high before, and two feet seven inches high behind ; weight from fifty to sixty pounds. Though the least of the deer kind, his figure is most elegant and handsome. His eyes are more brilliant and animated than those of the stag. His limbs are more nimble, his movements quicker, and he bounds seemingly without effort, with equal vigor and agility. His coat or hair is always clean, smooth, and glossy. He never wallows in the mire like the stag, but delights in dry and elevated situations, where the air is pu- rest. He is likewise more crafty, conceals him- self with greater address, and derives superior resources from instinct : for though he leaves a stronger scent than the stag, which redoubles the ardor and appetite of the dogs, he knows how to withdraw himself from their pursuit, by the rapi- dity with "which he begins his flight, and by his numerous doublings. As soon as he finds that the first efforts of a rapid flight have been unsuc- cessful, he repeatedly returns on his former steps, and, after confounding by these opposite move- ments, he rises from the earth by one long bound, and, retiring to one side, lies down flat on his belly ; and in this immoveable situation he allows the whole troop of his deceived enemies to pass very near him. The roe-deer differs from the stag and fallow deer in disposition, temperament, manners, and almost every natural habit. In- stead of associating in herds they live in separate families. They are constant in their amours, and never unfaithful like the stag. They rut but once a-year, and only for fifteen days, commencing at the end of October, and ending before the fif- teenth day of November. During this period, they suffer not their fawns to remain with them. The sire drives them off, but after the rutting season is past, they return to their mother, and remain with her some time ; after which they se- parate entirely, and remove to a distance from the place which gave them birth. The female goes with young five months and a half, and brings forth about the end of April or beginning of May. She produces two at a time, which she is obliged to conceal from the buck while very young. In ten or twelve days, they acquire strength sufficient to enable them to follow her. When threatened

with danger, she hides them in a close thicket, and to preserve them, presents herself to bo chased. Roe-bucks prefer a moun- tainous woody country to a plain one. They were formerly very common in Wales, in the North of England, and in Scotland ; but at pre- sent the species nowhere exists in Great Britain, except in the Scottish Highlands. In France they are more frequent ; they are also found in Italy, Sweden, and Norway; and are also met witli in Siberia. Wild roes, during summer, feed on grass ; and are very fond of the rubus saxatilis, called in the Highlands the roe-buck-berry ; but in winter, when the ground is covered with snow, they browse on the tender branches of the fir and birch.

4. C. dama, or the fallow-deer, buck and doe ; with horns branched, recurved, compressed, and palmated at the top. The color is various; red- dish, deep brown, white or spotted. This species is very numerous in England ; but, except on a few chases, confined in parks. They are easily tamed, and their venison is in high esteem among the luxurious. During rutting-time they will contend with each other for their mistress, but are less fierce than the stag, though equally inconstant. In order to drink, deer plunge their noses very deep under water, and continue them in that situation for a considerable time ; but, to_ obviate any inconveniency, they can open two vents, one at the inner corner of each eye, having a communication with the nose. This extraor- dinary provision of nature may be of singular service to beasts of chase, by affording them free respiration ; these additional nostrils being thrown open when they are hard run. Mr. Pennant has observed the same curious organisation in the an- telope. See CAPRA. This species is the jachmur of the Scriptures.

5. C. elaphus, the stag, has long cylindrical rami- fied horns, bent backwards, and slender sharp brow antlers. The color is generally a reddish brown with some black about the face, and a black line down the hind part of the neck, and between the shoulders. Stags are common in Europe, Barbary, the north of Asia, and America. In spring they shed their horns, which fall off spontaneously, or on rubbing them gently against the branches of trees. The old stags cast their horns first, which happens about the end of Fe- bruary or beginning of March ; but the shedding of the horns is advanced by a mild, and retarded by a severe and long winter. As soon as the stags cast their horns, they separate, the young ones only keeping together. They advance into the cultivated country, and remain among brush- wood during summer, till their horns are renewed. In this season, they walk with their heads low to prevent their horns from being rubbed against the branches ; for they continue to have sensibi- lity till they acquire their full growth. The horns of the oldest stags are not half completed in the middle of May ; nor acquire their full length and hardness before the end of July. Those of the younger stags are proportionally later, both in shedding and being renewed. But as soon as they have acquired

their full dimen- sions and solidity, the stags rub them against the trees, to clear them of a skin with which they are covered. Soon after the stags have polished their horns, they begin to feel the rut. Towards the end of August, or beginning of September, they leave the coppice, return to the forests, and search for the hinds. They cry with a loud voice; their neck and throat swell ; they become per- fectly restless ; they strike their horns against trees and hedges; and seem to be transported with fury, chasing from country to country till they find the hinds whom they compel into com- pliance ; for the female at first avoids and flies from the male, and never submits till she be fa- tigued with the pursuit. When two stags ap- proach the same hind, they furiously fight. If nearly equal, in strength, they threaten, paw the ground, set up texrible cries, and attack each other

with such fury, that they often inflict mortal wounds with the strokes of their horns. The combat never terminates but in the defeat or flight of one of the rivals. The stag is very in- constant, having often several females at a time; and when he has but one hind, his attachment to her does not continue above a few days. He then leaves her, goes in quest of another, with whom he remains a still shorter time ; and in this man- ner passes from one to another till he is perfectly exhausted. This ardor lasts only three weeks, during which the stags take very little food, and neither sleep nor rest. Hence, at the end of the rutting season, they are so meagre and exhausted that they recover not their strength for a conside- rable time. They generally retire to the borders of the forests, feed upon the cultivated fields, and remain there till their strength is re-established. In seasons when acorns and nuts are plentiful, the stags soon recover their strength, and a second rutting frequently happens at the end of October ; but it is of much shorter duration than the first. The hinds go with young eight months and some days, and seldom produce more than one fawn. They bring forth in May or the begin- ning of June, and anxiously conceal their fawns. The young are not called fawns or calves after the sixth month. The knobs of their horns then begin to appear, and they get the name of knob- bers till their horns lengthen into spears, and then they are called brocks or staggards. During the first season they never leave their mothers. In winter, the stags and hinds of all ages keep toge- ther in flocks, which are always more numerous iii proportion to the rigor of the season. They separate in spring : the hinds retire to bring forth ; and, during this period, the flocks con- sist only of knobbers and young stags. In gene- ral, thf stags are inclined to associate, and nothing but fear or necessity obliges them to disperse. The life of the stag is spent in alternate plenty and want, vigor and debility, without having any change introduced into his constitution by these opposite extremes. He grows five or six years, and lives to thirty-five or forty years. What has been reported concerning the longevity of the stag,

is only a popular prejudice, which has pre- vailed ever since the days of Aristotle ; an ac- count is given of a stag taken by Charles VI. in the forest of Senlis, with a collar, upon which was written, Caesar hoc mihi donavit ; people rather choosing to believe that this animal had lived 1000 years, and had his collar from a Ro- man emperor, instead of supposing that he came from Germany, where all the emperors take the name of Csesar.

The stag has a fine eye, an acute smell, and an excellent ear. When listening he raises his head, erects his ears, and hears from a great distance. He is a simple, and yet a curious and crafty animal. When hissed or called to from a distance, he stops short, and looks stedfastly, and with a kind of admiration, at carriages, cattle, or men ; and if they have neither arms nor dogs, he moves on unconcernedly, and without flying. He appears to listen, with great delight, to the shepherd's pipe, and the hunters sometirnes employ this artifice to deceive him. In general, he is less afraid of men than of dogs, and is never suspicious, or uses any

arts of concealment, but in proportion to the dis turbance he has received. He eats slow, and has a choice in the aliment; and after his stomach is full, he lies down and ruminates at leisure. He seems to ruminate with less facility than the ox. It is only by violent efforts that the stag can make the food rise from the first stomach. His voice is stronger and more quivering, in proportion as he advances in years. The voice of the hind is shorter and more feeble. She never bellows from love, but from fear. The stag, during the rutting season, bellows dreadfully, and is then so transported, that nothing terrifies him; he is therefore easily surprised; as he is loaded with fat, he cannot keep long before the dogs. But he is dangerous when at bay, and attacks the dogs with fury. He drinks no water in winter nor in spring, the dews and tender herbage being then sufficient to extinguish his thirst ; but during the parching heats of summer, to obtain drink, he frequents the brooks, the marshes, and the foun- tains ; and, in the season of love, he is so over- heated, that he searches everywhere for water, not only to satisfy his immoderate thirst; but to bathe and refresh his body. He then swims easier than at any other time, and has been obser- ved crossing very large rivers. It has even been alleged, that attracted by the odor of the hinds, the stags in the rutting season, throw themselves into the sea, and pass from one island to another at the distance of several leagues. They leap still more nimbly than they swim ; for, when pursued, they easily clear a hedge, pale, or fence of six feet high. Their food varies in different seasons. In autumn, after rutting, they search for the buds of green shrubs, the flowers of broom or heath, the leaves of brambles, &c. During the snows of winter they feed upon the bark, moss, &c. of trees, and in mild weather they browse in the wheat fields. In the beginning of spring, they go in quest of the catkins of the poplar, willow, and hazel trees, the flowers and buds of the cornel tree, &c. In summer when they have great choice they prefer rye

to all other grain, and the black berry-bearing alder to all other wood. The flesh of the fawn is very good : that of the hind and knobber not bad ; but that of the stag has al- ways a strong and disagreeable taste. The skin and the horn? are the most useful parts of this ani- mal. The skin makes a pliable and very durable leather. The horns are used by cutlers, sword slippers, &c. and a volatile spirit, much employed in medicine, is extracted from them by chemists. In America, stags feed eagerly on the broad-leaved kalmia ; although that plant is poison to all other horned animals. The American stags grow very fat: their tallow is much esteemed for candles. In Britain the stag is become less common than formerly ; its excessive viciousness during the rutting season, and the badness of its flesh, induce most people to part with the species. Stags are still found wild in the Highlands of Scotland, in herds of 400 or 500 ranging at full liberty over the hills of the north. Formerly the great High- land chieftains used to hunt with the magnificence of eastern monarchs, assembling 4000 or 5000 of their clan, who drove the deer into the toils or to the stations the lairds had placed themselves in : but, as this pretence was frequently used to col-

iect their vassals for rebellious purposes, an act was passed prohibiting any assemblies of this na- ture. Stags are likewise met with on the moors that border Corn wall and Devonshire ; and in Ire- land on the mountains of Kerry, where they add greatly to the magnificence of the romantic sce- nery. The stags of Ireland during its uncultiva- ted state, and while it remained an almost bound- less tract of forest, had an exact agreement in habit with those that range at present through the wilds of America. They were less in body, but very fat ; and their horns of a size far superior to those of Europe, but in form they agreed in all points.

6. C. Guineensis, the Guinea deer of Gmelin, and gray deer of Pennant, is about the size of a cat, of a grayish color, and black underneath. It is a native of Guinea, and the size and figure 3f its horns have not been hitherto described with any precision. It is doubtful whether it belongs to the genus of deer, musk, or antelope.

7. C. Mexicanus, the Mexican deer of Pen- nant, and the Biche de Bois of Barrere, has strong thick rugged horns, bending forwards, three fork- ed at their extremities, with one erect snag about two inches above the base. It is of a reddish color, spotted with white when young, and is about the size of a roe. The head is large, the eyes bright, and the neck thick. It inhabits New Spain, Guiana and Brasil. The flesh is in- ferior to venison.

8. C. muntjac, themuntjac of Schreber, or the rib-faced deer of Pennant, has three longitudinal ribs extending from the horns to the eyes, and a projecting tusk on each side of the upper jaw. It inhabits Java and Ceylon ; is less than the roe, and resembles the Porcine deer in shape. The horns are placed on a bony process which rises three inches above the skull and is covered with hair. They are three-forked, the uppermost branch being hooked. The flesh is much es- teemed.

9. C. porcinus, the porcine, or hog-deer of Pennant, has slender trifurcated horns, the body is thick and clumsy ; the legs fine and slender : the upper part of the neck, body, and sides, brown; belly and rump of a lighter color. They are found in Bengal, and Borneo. They are ta- ken in square pit-falls, about four feet deep, covered with some slight materials.

10. C. pygargus, the Aha of Gmelin, and the tailless roe of Pennant has three forked horns, but no tail. It inhabits the woody mountains of Rus- sia and Siberia, beyond the Volga, and in Hirca- nia. It resembles the roe, but it is much larger ; is of the same deep red, with a large bed of white on the buttocks extending up the back. The fur is very thick; and on the belly and limbs yellowish. The horns are very rugged at the bases and full of knobs. At the approach of winter it becomes hoary and descends into the plains.

11. C. tarandus, the rein-deer, is a native of Lapland, and the northern parts of Europe, Asia, and America. The horns are large, cylindrical, branched, bent forwards, and palmated at the ends. Two of the branches hang over the face. It is about the size of a buck, of a dirty whitish color; the hairs of his skin are thick and strong.

To the Laplanders this animal is a substitute for the horse, the cow, the goat, and the sheep ; and is their only wealth : the milk affords them cheese ; the flesh food ; the skin cloathing ; the tendons bow-strings ; and when split, thread ; the horns glue ; the bones, spoons. During winter it sup- plies the want of a horse, and draws their sledges with amazing swiftness over the frozen lakes and rivers, or over the snow which at that time covers the whole country. A Laplander is rich who is possessed of a herd of 1000 rein deer. In au- tumn they seek the highest hills, to avoid the Lapland gad-fly, which at that time deposits its eggs in their skin ; it is the pest of these animals, and numbers die that are thus visited. The mo- ment a single fly appears, the whole herd instantly perceive it; they fling up their heads, toss about their horns, and at once attempt to fly for shelter amidst the snows of the loftiest mountains. In summer they feed on several plants ; but during winter on the rein liverwort (a species of lichen), which lies far beneath the snow, which they re- move with their feet and palmated brow antlers. The Samoieds, less intelligent than the Laplan- ders, consider them in no other view than as ani- mals of draught, to convey them to the chase

of the wild reins ; which they kill for the sake of the skins, either to clothe themselves, or to cover their tents. They know not the delicacy of the milk or cheese; but prefer for their repast the intestines of beasts, or the half-putrid flesh of a horse, ox, or sheep, which they find dead on the high road. ††† Thejioreki, a nation of Kamtschatka, may be placed on a level with the Samoieds. They keep immense herds of reins ; some of the richest of them to the amount of 1 0,000 or 20,000 ; yet eat none except such as they kill for the sake of the skins ; an article of commerce with their neighbours the Kamtschatkans ; otherwise they content themselves with the flesh of those which die by disease or chase. They train them in the sledge, but neglect them for every domestic pur- pose. They couple two to each carriage ; and the deer will travel 150 versts in a day, that is, 112 English miles. They castrate the males by piercing the spermatic arteries, and tying the scrotum tight with a thong. The savage and uninformed Esquimaux and Greenlanders, who possess, amidst their snows, these beautiful ani- mals, neglect not only the domestic uses, but even are ignorant of their advantage in the sledge. The flesh of the rein is the most coveted part of their food ; they eat it raw, dressed, and dried and smoked with the snow lichen. The wearied hunters will drink the raw blood ; but it is usually dressed with the berries of the heath ; they eagerly devour the contents of the stomach, but use the intestines boiled. The skin, sometimes a part of their clothing, dressed with the hair on, is soft and pliant ; it forms also the inner lining of their tents, and most excellent blankets. The tendons are their bow-strings, and when split are the threads with which they sew their jackets. The rein-deers are found in the neighbourhood oi Hudson's Bay, in most amazing numbers, co- lumns of 8000 or 10,000 are seen annually pas- sing from north to south in March and April, driven out of the woods by the musquitoes, seek- ing refreshment on the shore, and a quiet place to

drop their young. They go to rut in September, and the males soon after shed their horns ; they are at that season very fat, but so rank and mus- ky as not to be eatable. The females drop their young in June, in the most sequestered spots they can find ; and then they likewise lose their horns. Beasts of prey follow the herds : first, the wolves, who single out the stragglers (for they fear to at- tack the drove), detach and hunt them down; the foxes attend at a distance, to pick up the offals left by the former. In autumn the deer with the fawns re-migrate northward. The Indians are very attentive to their motions ; for the rein forms tho chief part

not only of their dress but of their food. They often kill multitudes for the sake of their tongues only ; but generally they separate the flesh from the bones, and preserve it by dry- ing it in the smoke ; they also save the fat, and sell it to the English in bladders, who use it in frying instead of butter. The skins are also an article of commerce. Several attempts have been made to introduce this useful animal to other countries, but they have hitherto proved unsuc- cessful. Sir. H. Liddell brought over a flock in 1786, but they all died of the rot on account of the unaccustomed richness of their pasture. Mr. Bullock, in 1821, prevailed on a Lapland shepherd to accompany some of them to England, where they were exhibited in Piccadilly ; and after the novelty was over, they were sent to Abberley Hall, the seat of Sir C. Smith, where two were living in 1824.

12. C. Virginianus, the Virginian deer of Pen- nant, has slender horns bending much forwards, very slightly palmated at the extremities, with numerous branches on the interior edges, but no brow antlers. . It inhabits Virginia and Carolina, greatly resembles the fallow deer, but is higher at the shoulders, and has a longer tail and longer legs. The color is a cinereous brown or ash co- lor. These animals are gregarious, very active, restless, and easily domesticated. They are ex- tremely numerous in all the territory south of Canada ; but especially in the vast savannahs contiguous to the Mississippi, and the great rivers which flow into it, They graze in herds innu- merable, along with the stags and buffaloes. They are capable of being tamed, and when pro- perly trained, are used by the Indians to decoy the wild deer (especially in the rutting season), within shot. Both bucks and does herd from September to March; after that they separate, and the does secrete themselves to bring forth, and are found with difficulty. The bucks from this time keep separate till the amorous season of September revolves. The deer begin to feed as soon as night begins; and sometimes, in the rainy season, in the day; otherwise they seldom or never quit their haunts. Those which live near the shores are lean, subject to worms in their head and throats, generated from the eggs depo- sited in those parts. Those that frequent the hills and savannahs are in better case. ID hard win- ters they will feed on the long moss which hangs from the trees on the northern parts. These and other cloven footed quadrupeds of America are very fond of salt, and resort eagerly to the places impregnated with it. They are always seen in great numbers in the spots where the

ground has been torn by torrents or other acci- dents, where they are seen licking the earth. Such spots are called licking places. The hunts- men are sure of finding the game there ; for not- withstanding they are often disturbed, the buffa- loes and deer are so passionately fond of the savory regale, as to bid defiance to all danger, and return in droves to their favorite haunts. See DEER.

CERVUS VOLANS, in entomology, a name given by authors to the stag-fly, or horned beetle, a very large species of beetles with horns sloped, and something like those of the stag. It is found in Essex

CERYX, in antiquity, a sort of public crier, appointed to proclaim or publish things aloud in assemblies. The ceryx among the Greeks an- swered to the praeco among the Romans. Our criers have only a small part of their office and authority. There were two kinds of ceryces, civil and sacred. The former were those ap- pointed to call assemblies ond make silence therein ; also to go on messages, and do 'the office of our heralds, &c. The sacred ceryces were a sort of priests, whose office was to pro- claim silence in the public games and sacrifices, publish the names of the conquerors, proclaim feasts, and the like. The priesthood of the ceryces was annexed to a particular family, the descendents of Ceryx, son of Eumolpus. To them it also belonged to lead solemn victims to slaughter. Before the ceremonies began, they called silence in the assembly, by the formula, Evd>r)p,tiTt ffiyr) irag ►►

CESARE, among logicians, one of the modes of the second figure of syllogisms; the minor proposition of which is a universal affirmative, and the other two universal negatives ; thus,

CE No immoral books ought to be printed ;

sA But every obscene book is immoral ;

RE Therefore no obscene books ought to be printed.

CESA'RIAN, adj. > From Caesar (see the

CESA'REAN J quotation from Quincy),

or rather from Lat. cado, casum, and a circum- stance in his birth which seems to have given the name to his family.

The Cesarian section is cutting a child out of the womb, either dead or alive, when it cannot otherwise be delivered. Which circumstance, it is said, first gave the name of Caesar to the Roman family so called. Quinty.

Rooted where once the Adrian wave flowed o'er, To where the last Cesarian fortress stood. Byron.

CESENATICO, a town of the late Italian re public, in the department of the Rubicon, near the sea ; and now belonging to the states of the church. It has a good harbour, and a well con- structed canal, on the bridge over which are two marble Corinthian pillars. The inhabitants ot this town

having arrested a messenger with des- patches, the English, in 1800, set fire to the moles of the harbour, and burnt or sunk sixteen vessels. It is sixteen miles south-east of Ravenna.

CESPITOSJE, PLANT, (from cespes, turf or sod), plants which produce many stems from one root, and thence form a :lose thick carpet on the surface of the earth.*

CESS, v. & n. I Junius says from Lat.

CE'SSMENT. } saisire, to levy. Dr. John- son thinks it is a corruption of census, a tax ; but the more probable etymology seems to be assesso, to levy a tax. To make a rate or levy ; a tax levied. It seems to have been used by Shaks- peare for bounds or limits ; the phrase, say the commentators, being taken from a cess, tax, or subsidy.

We are to consider how much land there is in all Ulster, that, according to the quantity thereof we may cess the said rent, and allowance issuing thereout.

Spenser on Ireland.

The like cess is also charged upon the country some- times for victualling the soldiers, when they lie in garrison. Id.

I pr'ythee, Tom, beat Cult's saddle, put a few flocks in the point ; the poor jade is wrung in the withers out of all cess. Shakxpeare. Henry IV.

CESS, v. n. ~\ From Lat. cccdo. To give

CES'SIBLE adj.f place; to yield; often syno-

CESSIBI'LITY, Vnymous with CEDE, which

CE'SSION, n. I see. But meaning also to

CE'SSIONARY. J omit a legal duty.

In law, he that ceaseth or neglecteth so long to perform a duty belonging to him, as that by his cess, or cess>ny, he incurreth the danger of law, and hath, or may have, the writ cessavit brought against him. Where it is said

the tenant cesseth, such phrase is to be understood as if it were said, the tenant cesseth to do that which he ought, or is bound, to do by his land or tenement. Cowell.

Sound is not produced without some resistance,

either in the air or the body percussed ; for if there

be a mere yielding, or cession, it produceth no sound.

Bacon's Natural History.

A parity in their council would make and secure the best peace they can with France, by a cession of Flanders to that crown, in exchange for other pro- vinces. Temple.

A cessionary bankrupt is one -who has delivered up all his effects. Martin.

If the parts of the strucken body be so easily cessible, as without difficulty the stroke can divide then, then it enters into such a body, till it hath spent its force.

Digby on the Soul.

If the subject strucken be of a proportionate cessi- bility, it seems to dull and deaden the stroke ; whereas, if the thing strucken be hard, the stroke seems to lose no force, but to work a greater effect. Id.

That none of the princes or states to whom these cessions were made, should call their subjects to ac- count for any part of their conduct while under the dominion of their enemies, but should bury all past transactions in oblivion. Robertton'i Charles V.

France had positively declared that she would not evacuate the six towns before the requisite cession was made to Sweden ; and her honour seemed now en- gaged to support that declaration. Hume.

CESSATION. Lat. cessatio ; Fr. cessation. Intermission, stoppage, from whatever cause; rest.

The day was yearly observed for a festival, by ces- tation from labour, and by resorting to church.

Hayward.

True piety, without cessation tost By theories, the practick part is lost. Denham. When the surcours of the poor pi-otestants in Ire- land were

diverted, I was intreated to get them some respite, by a ccfsaHmi. j(ing Charles.

The rising of a parliament is a kind of cessation from politicks. Addison's Freeholder.

The serum, which is mixed with an alkali, being poured out to that which is mixed with an acid, raiseth an effervescence ; at the cessation of which, the salts, of which the acid was composed, will be regene- rated. Arbuthnot on Aliments.

To this those were invited whom the cessation of war deprived of employment, and made burthensome to their country. Dr. Johnson.

He who trusts one whom he designs to sue, is crimi- nal by the act of trust ; the cessation of such insidious traffick is to be desired, ant. no reason can be given why a change of the law should impair any other.

Idler.

CESSATION OF ARMS. When the commander of a place finds things reduced to an extremity, so that he must eitner surrender, or sacrifice the garrison and inhabitants to the mercy of the enemy, he plants a white flag on the breach, or beats the chamade ; on which a cessation of hostilities com- mences, to give time for a capitulation.

CESSION, in law, an act by which a person surrenders and transmits to another person a right which belonged to himself. Cession is more particularly used in the civil law for a voluntary surrender of a person's effects to his creditors, to avoid imprisonment. See BANKRUPT. In se veral places the cession carried with it a mark of infamy, and obliged the person . to wear a green cap or bonnet; at Lucca an orange one: to neglect this was to forfeit the privileges of the cession. This was originally intended to signify that the cessionary was become poor, through his own folly. The Italian lawyers describe the ceremony of the cession to consist in striking the bare breech three times against a stone, called lapis vituperii, in presence of the judge. Formerly it consisted in giving up the girdles and keys in court : the ancients using to carry at their girdles the chief utensils wherewith they got their living ; as the scrivener his escritoire, the merchant his bag, &c. The form of cession among the ancient Gauls and Romans was as follows : the cessionary gathered up dust in his left hand from the four corners of the house, and standing on the threshold, holding the door- post in his right hand, threw the dust back over his shoulder ; then stripping to the shirt, and quitting his girdle and bags, he jumped with a pole over a hedge; hereby letting the world know, that he had nothing left, and that

when he jumped all he was worth was in the air with him.

CESSION, in the ecclesiastical law, is when an ecclesiastical person is created a bishop without dispensation, or being otherwise qualified. In both these cases, their first benefices become void by cession, without any resignation. To those livings that the person had, who was created bishop, the king may present for that time, who- soever be patron ; and in the other case the pa- tron may present : but by dispensation of re- tainder, a bishop may retain some or all the preferments he had, before he was made bishop.

CESTRUM, bastard jasmine, a genus of the monogynia order and pentandria class of plants : natural order twenty-eighth, luridae : COR. funnel- shaped ; the stamina each sending out a little

tooth about the middle of the inside : FRUIT, berry, one-celled, many seeded. There are six- teen species, natives of the warmest parts of America ; and cannot be preserved in this coun- try without artificial heat. They are flowering shrubs, rising in height from five to twelve feet, with flowers of a white or pale yellow color. The flowers of one species, called Badmington jasmine, emit a strong scent after sun-set. They may be propagated either by seed or cuttings.

CESTUI, a French word, signifying he or him, frequently used in the old English law writings. Thus, Cestui qui trust, a person who has lands, &c. committed to him for the benefit of another ; and if such person does not perform his trust, he is compellable to it in Chancery. Cestui qui vie, one for whose life any lands, &c. are granted. Cestui qui use, a person to whose use any one is imfeoffed of lands or tenements. Formerly the feoffees to uses were deemed owners of land, but now the possession is adjudged in cestui qui use.

CE'STUS, n. s. Lat. cestus ; French ceste. The girdle of Venus. Collins, in his Ode on the Poetical Character, speaks of Fancy's ' cest of implest power,' and it is well known the ⬚⬚atin word was applied to any girdle.

Venus, without any ornament but her own beauties, not so much as her own cestus. Addison's Spectator.

CESTUS, CESTUM, or CESTON, among the an- cient poets, was a fine embroidered girdle, said to be worn by Venus, to which Homer ascribes the power of charming and conciliating love. Also a kind of glove used by the ancient pugi- Jists. The Greeks had four different sorts of cestus. The first,

which was called imantes, was made of the hide of an ox, dried but not dressed. The second, called myrmecas, was covered with a metal. The third, named meliques, was made of thin leathern thongs ; and did not cover either the wrist or fingers, but only the back of the hand. The fourth, which was called sphoeroe, the thick glove, was covered with lead to render the blow more destructive.

CETA'CEOUS, adj. Lat. cete, whales. Of the whale kind.

Such fishes as have lungs or respiration are not

without the wezzon, as whales and cetaceout animals.

Browne's Vulgar Errours.

He hath created variety of these cetaceous fishes, �which converse chiefly in the northern seas, whose who'e body being encompassed round with a copious fat or blubber, it is enabled to abide the greatest cold of the sea water. Ray on the Creation.

CETE, the name of Linnaeus's seventh order of mammalia, comprehending the monodon, ba- loeua, physeter, and delphinus.

CETIC ACID, a name given by Chevreul to a supposed peculiar principle of spermaceti, which he has lately found to be the substance he has called margarine, combined with a fatty mat- ter. It is a white solid substance fusible at nearly the same point as spermaceti, but which does not, on cooling, crystallise in plates. It is insoluble in water, but much more soluble in al- cohol than spermaceti, and is susceptible of union with various bases, with which it forms salts or soaps.

CETINE, the name given by Chevreul to sper- maceti. See CHEMISTRY, FAT and SPERMACETI.

CETTE, or SETTE, a populous and well-built sea-port of France, in Languedoc, situated at the mouth of a canal on a sand-bank between the Mediterranean and the lake of Thau. The har- bour is convenient and protected by several forts. It has a large sugar refinery ; a good export trade in wine ; a soap work, and a tobacco ma- nufactory ; a neighbouring salt lake abounds also in that mineral. Population 8000. It is eighteen miles south-west of Montpelier.

CETUS, in astronomy, a large constellation of the southern hemisphere, under Pisces, and next the water of Aquarius. In the mandible of cetus is a variable star which appears and dis- appears periodically, passing through the several degrees of magnitude, in about 333 days. See ASTRONOMY.

CETUS, in mythology, the sea monster which Neptune, at the suit of the nymphs, sent to de- vour Andromeda for the pride of her mother, and which, being killed by Perseus, was translated to the stars.

CEVADIC ACID, this is produced by the action of potass on the fat matter of tht cevadilla, a plant from Senegal, of the delphinium and aco- nite class. Cevadic acid was discovered by Pel- letier and Caventou. It is in the form of needles, or fine white crystalline concretions. Its odor is analogous to that of butyric acid. It is solu- ble in water, and, like other acids, xmites with bases.

CEVENNES, or SEVENNES, a chain of moun- tains in the south of France, and ci-devant province of Languedoc, remarkable for the frequent meetings of the Protestants in the seventeenth century, and as a place of security for them against the tyranny of their popish rulers. It extends through the departments of the Upper Loire, Ardeche, and Card, and is connected with the mountains of the Vivarais and Gevaudan. Though not so lofty as the mountains of Auvergne, they are as rugged and almost as cold. In Queen Anne's reign an attempt was made to assist the Protes- tants secluded here, by an English fleet in the Mediterranean ; but the French had occupied all the passes. Fortunately the age of bigotry is now, if revived, less powerful, in France.

CEUTA, a sea-port town of Morocco, imme- diately opposite to Gibraltar. It is near the Apes mountain, the ancient Abyla, one of the pillars of Hercules, and the only settlement which Spain retains of her former possessions in Morocco. John, king of Portugal, took it in 1409; and, after the death of Sebastian, Spain again received it, with other dominions of Portugal. It was finally ceded to the Spanish crown by the treaty of Lis- bon in 1688. In 1694, and for six years follow- ing, it was kept in blockade by the Moors ; but it is nearly impregnable, and they were obliged to raise the siege. It has a good but small har- bour.

CEYLON, a large island in the Indian Ocean, separated from the south-eastern extremity of the Coromandel coast by a strait called Manaar or Manar, which is crossed by a narrow ridge of rocks and sand, called Adam's Bridge ; the great- est depth over which at high water is from three

to four feet. It is situated at the entrance of the Bay of Bengal westward, and distant from Cape Comorin in Hindostan about 140 miles, but the nearest approach it makes to that continent is at Point Calymere to the

*north, hardly more than one-fourth of that distance. It lies between the parallels of 5►► 50′ and 9►► 50′ N. latitude, and between 79►► 50′ and 32►► 10′ E. longitude. It is nearly oval, resembling in general outline the shape of a pear, its extreme length being about 280 miles, and its breadth about 170. The most elevated ground is in the south, the mountains gradually sinking into an extensive table land, which occupies the centre of the island. On the cast the shore is bold and rocky and the water deep : the north and north-west coasts, from Point Pedro to Columbo or Colom, are flat and indented with bays and inlets from the sea, the .argest of which extends almost across the island from Mullipati to Jafnapatam. The peninsula > >f that name is formed by this indentation, round *hich lie a cluster of islands, separated by nar- ; ow channels from the body of the island. The north-west coast is so full of sand-banks and shallows that vessels of a large size cannot ap- proach the harbours. Trincomale and Point de Galle afford anchorage for the largest ships, and Uolumbo at certain seasons. This island is Bounded on the west, south, and east by the In- dian Ocean, on the north-west by the southern part of Hindostan, and on the north-east by the Bay of Bengal.*

In the interior there are many steep and lofty mountains, covered with forests and abounding in almost impenetrable jungles, which completely surround the king of Candy's dominions. The mo►►t lofty range divides the island nearly into two parts, the southern point of which, Adam's Peak, in latitude nearly 7►► N., and longitude about 80►► 40′ E., rises upwards of 6000 feet in height above the level of the sea ; another ridge, called Namam Kuli Kandi, is about 5500 feet high; another, Neuvera Cliya, rises 5000 feet with a circumference of not quite twenty miles ; and another is about 4000 feet high ; in general, however, the mountainous region does not ex- ceed from one to two thousand feet in perpendi- cular height. The elevation of the hilly region, between the mountains and the shore may be es- timated on the average at 500 feet ; and that of the shore near the sea at fifty. Adam's Peak is visible more than forty miles out at sea.

Ceylon was known to the ancients by the name of Taprobane ; the Sanscrit name is Tapobon, or the hallowed groves or wilderness of prayer ; the natives call it Lanca, the Holy Land ; its name Zeilan, or Ceylon, is probably derived from Sinhal, the lions; the native name of the inha- bitants, Cingalese, comes from the Indian name Sing, a lion; which seems also to be the origin of Serlen-dibra and Serendib, by the latter of which names it is known to the Mahommedan nations.

There are no very considerable rivers, except the Malwaganga or Mahaville-ganga, the Wal- lewe or Neel-ganga, and the Mullwadda, all rising from Adam's Peak ; the first flowing north- ward into Trincomale

Bay, the second taking a southerly course, and falling into the sea about

thirty miles east of Cape Comorin, and the last flowing north-west and west to its mouth at Mutwal, a little north of Columbo. These rivers are rendered unfit for navigation to any great extent from the sea, by reason of the great beds of rock and the rapid descent from the hills. There are several lakes, valuable as means of na- vigable communication, and for the abundance of their fish. Of these, the lagunes near Negombo and Colombo on the western coast, and the tanks of Padiviel Colom in the interior north- ward, and Cattu-arro on the north-west, which are both several miles in circumference, are the chief. The principal gulfs and bays are those of Trincomale on the east, another in the north to the south of Jaffra peninsula, and another on the west running up to Putulang.

Although Ceylon lies so near the equator, the heat is not so excessive as on the neighbouring coast of Coromandel ; this is especially the case on the coast from the free circulation of the sea breezes. The mountains and table-land in the interior produce the same effect as the ghauts in Hindostan ; these form a barrier to the periodical winds or monsoons, and a corresponding change of season occurs. While the Malabar coast is visited in the months of May, June, and July with hurricanes, torrents of rain, and tremendous storms of thunder and lightning, the western coast of Ceylon experiences the same visitation, while the weather is calm and dry on the north ;rn and eastern sides of the island, and also on the coast of Coromandel. On the contrary, when in October and November the north-east monsoon assails the eastern side of the peninsula, the northern and eastern sides of the island have abundance of rain, while it is extremely dry on the opposite shores. In the central region there is a material difference, on account of the greater elevation ; in March and April the rains fall, but accompanied in the highest parts with severer storms than are felt in the table land of India. On the south the medium of the ther- mometer throughout the year is 82►► with trifling variations ; on the north it is 86►►, and the maxi- mum much greater. The climate in the interior is very inimical to an European constitution, the air confined between the mountains, the marshes, and close vegetation producing what is called in India the jungle fever. The berry-berry, an en- demial disease, a kind of dropsy, proves fatal in a few days ; the leprosy and elephantiasis are also common.

The varieties of primitive rock in this island, according to Dr. Davy, are extremely numerous, yet the species are few and ill defined. That which most prevails is granite or gneiss, the others are quartz rock, hornblende rock, and do- lomite. The varieties of granite and gneiss (we quote from this intelligent author) ‘ are innume- rable, passing often from one to another, and oc- casionally changing their character altogether, and

assuming appearances for which, in small masses, it would be difficult to afford appropriate names. These changes, and endless varieties, depend chiefly on composition, on the propor- tions of the elements, on the excess or deficiency of one or more, or on the addition of new ingre- dients, not to mention mechanical structure.

variation of which, though obscure in relation to causes, has a manifest effect in modifying ap- pearances. Regular granite is not of very com- mon occurrence. One of the best instances I know of it is in the neighbourhood of Point de Galle, where it is of a gray color, and fine grained Graphic granite is still rarer- The only good example of it with which I am acquainted is at Trincomale, where it occurs of a beautiful quality on the sea shore, about half a mile below Chapel Point, embedded on a granite rock. The quartz envelops the crystal in very thin hexago- nal or trigonal cases, so that nothing can be more different in appearance than the longitudi- nal and transverse fracture of the rock. Neither is sienite common. I have found it in several places in the neighbourhood of Atgalle Meddam- ahaneura and in some other parts of the Kand- yan province. It occurs rather forming a part of rocks of a different kind than in great moun- tain masses. Well formed gneiss is more abun- dant than granite. Its structure may be seen in many places, but nowhere more beautiful tnan at Amanapoora, in the Kandyan provinces, where it consists of white felspar and quartz, in a finely crystalline state with layers of black mica, con- taining, disseminated through it, numerous crystals of a light-colored garnet.'

In the interior of Ceylon the native central go- vernment of Candy has existed perhaps for 2000 years. At the beginning of the last century its seven tributary states became six, and in the course of it the native powers and possessions were perpetually attacked by the Dutch ; the religion of Buddhoo was at an extremely low ebb, its doctrines almost forgotten, and its ce- remonies in entire disuse. Embassies were sent more than once to the neighbouring peninsula, to obtain an accession of priests. On the coast the European powers have, for nearly 300 years, been obtaining those important settlements, all of which are now fallen into the hands of the British. The provinces of the coast are twelve in number; and have been thus given : 1. Batti- kalo. 2. Caltura. 3. Chelaw. 4. Colombo. 5. Galle. 6. Jafnapatam. 7. Manaar. 8. Ma- gampatture. 9. Matura. 10. Patelam. 11. Trincomale. 12. Wannia.

The late kingdom of Candy, for in point of fact its monarch has been

recently dethroned, and the king of Great Britain is the acknowledged sovereign of the whole island, was divided into forty-six districts, beside innumerable subdi- visions, of hundreds and townships, but very thinly peopled, and containing not three towns of importance.

The entire population of the island is divisible therefore into four parts. 1. The native Sin- ghalese. 2. Malabar colonists. 3. Mahom- medan colonists. 4. European settlers. The religion of the first, or native class, is, as we have intimated, that of Buddhoo, and their language a dialect of the Sanscrit. Like the Hindoos, they acknowledge the four principal castes. 1. The Ekshastria wanse, or royal caste. 2. The Brach- mina wanse, or caste of Brahmans. 3. Wiessia wanse, composed of three subdivisions, viz. merchants, cultivators of the earth, and shep herds. 4. The Kshoodra wanse (mean or low

caste), subdivided into sixty castes. The fol- lowing are the subdivisions of the two principal castes according to Dr. Davy, and will give the reader an impression of the singular union of secular and religious matters in these distinc- tions.

I. Wiessia wans$.

1. Goewanse

2. Nillemakareya

Cultivators. Shepherds.

II. Kshoodra

1.

Carawe . . .

Fishermen.

2.

Chandos . . .

Toddy-drawers.

3.

Achari . . .

Smiths, &c.

4.

Hannawli

Taylors.

5.

Badda hela badda

Potters.

6.

Ambattea peoph

Barbers.

7.

Rada badda

Washermen.

8.

Halee . . .

Chalias.

9.

Hakooro . ??? .

Jaggery-makers.

10.

Hunu badde

Chunam or Lime burner-

11.

Pannayo . . .

Grass-cutters.

12.

Villedurai.

13.

Dodda weddahs

f

Paduas.

14.

Paduas . . <

Iron-smelters. Executioners.

15.

or Maha badde j

Tom-tom beaters.

i.

16.

Handee.

17.

Pallaroo.

18.

Olee.

19.

Radayo.

20.

Palee.

21.

Kinnera badde.

Out-castet. Gattaroo. Rhodees.

Of no caste, but attached. The Singalese Christians to the Goewanse. The Marakkala, or Moormen, to the Carawe".

For the distinguishing tenets of Buddhism, the prevailing religion of the people of Ceylon, see the article BURMHAN EMPIRE. In their religious pro- fession they are thus distinct from India, though the population was first derived from that coun- try. On the taking of Candy by the British na- tion, missionary societies, and other benevolent institutions, directed their attention to this coun- try ; they have occupied various stations, and by late accounts they appear to have some prospect of success. Before that time some had professed Christianity, either according to the tenets of the church of Holland, introduced by the Dutch, or the Papal doctrines, first diffused by the Portu- guese ; but these are little superior to the Pagans, and retain several of their customs.

Near Trincomal4 are seven hot springs, en- closed with a wall. The place is called Cannea, and the springs all flow from the same source, in a low quartz soil. The waters are considered highly efficacious in cutaneous and rheumatic complaints. There is another spring at Kala- bowa, of water, so hot that the hand cannot bear it.

The minerals of the island are numerous, and precious stones, of a middle quality, particularly

abundant ; for the ruby, the topaz, and the diamond of Ceylon are inferior both to those of Golconda and of the Brasils. Other stones found here are the amethyst, tourmalin, blue and green sapphire, white and black crystal, the cat's-eye,

species of opal, and cornelians.

The only metals at present found are said to be iron and manganese ; but the iron is never seen in veins. Lead, tin, and quicksilver are also said to have been formerly wrought in the interior, but never to any purpose. In

1797 a mine of the last was discovered at Cotta, six miles from Colombo.

The salt pans of the interior, arising from not less than twenty-two caverns, which furnish nitre and nitrate of lime, afford, with the pro- duce of the salt-lakes, a revenue of ––10,000 a year to government. The latter are situated on the south-east coast.

In the strait of Manaar, about fifteen miles from the shore, are found the oyster banks, from which pearls are procured. There are about fourteen in a space of about thirty miles in length by twenty-four broad ; in only two of these during the season, that is about two months in the year, the fishery is carried on. The go- vernment generally lets the right of fishing, and the time and number of the boats are fixed, the contractor sometimes disposing of his share to the owners of the boats. The bay of Condatchy is the principal rendezvous ; the boat crews, about 6000, are roused at midnight by the firing of a gun, and all is bustle and confusion. The boat being anchored, and all ready, the diver ties a heavy stone to his foot and descends ; he then leaves the stone, and lying on his belly, col- lects everything he can lay hold of, puts it into a basket he has with him, and then rises. Few stay longer under water than from a minute to a minute and a half. More than 1000 divers often go down every minute ; and their noise and number more effectually preserve them from the sharks, than all the arts of the two necro- mancers, employed, according to their super- stitious notions, to charm them. When the oysters are brought up they are piled in heaps, and left till they are sufficiently decayed to be washed, when the pearls are found in the fleshy part, some yielding several, others none. The fish are like cockles in shape, about nine inches round, but totally unfit for eating. The pearls, when all collected, are passed through sieves of different sized round holes, and sorted for sale, or sometimes sold together at the rate of about ––'5 an ounce. The revenue arising from this fishery was in the year 1798 about ––140,000, but on the average from 1804 to 1814 it did not ex-' ceed 60,000, and it has been less since that time. The largest pearls, as big as a large pea, though generally the least perfect, are most valued by the Indians, and usually sold to their princes ; the finest of the second, about the size of a mid- dling pea, are strung in necklaces and sent to Europe ; a handsome necklace costs from ––150 to ––300, or a guinea a pearl ; but one ofHhe size of peppercorns may be had for ––15 or ––20. Those of the size of shot are very cheap. The chank or shell fishery on the northern shore is also important, not only as they are sold in various

parts of India, and cut into rings for female or- naments, but as a preparation of the divers for the pearl fishery.

The upper provinces of India supply this island with the wheat it consumes ;

it grows a small quantity of Indian corn, but the chief article of food is rice. The principal agricul- tural labor consists in the cultivation of that grain. This, however, is not raised in sufficient quantity to obviate the necessity of large im- portations. It is hoped that foreign supplies will become less necessary, by the improvement and extension of cultivation, and as the noxious jungles of the interior give place to the healthful and productive corn-field. The rice is generally sown in level lands; as the hills are less favor- able for retaining sufficient water to keep the soil continually moist, which is indispensably requisite in the cultivation of this grain. But even the sloping sides of the hills are occa- sionally brought to render their tribute to the Ceylon harvest; in accomplishing which, the natives manifest great ingenuity.

Their mode of cultivating the rice is curious. Around the fields intended for the reception of the seed small embankments are raised, to the height of three feet, to retain the water ; which is then let in upon the grounds, which are le- velled for the purpose, and soon completely inundates them. When the fields begin to get dry, buffalos are introduced to tread them over, according to the scriptural description, Isa. xxxii. 20, or they are turned over with a sort of light plough. The ground thus prepared looks like one large tract of mud ; and in this state it receives the rice, which is previously steeped in water, mixed with the lime of burnt shells. The soil is afterwards levelled, and prevented from caking into lumps, by a description of harrow, or rake, which consists of a piece of board, fixed to a pole, drawn along edgewise. As the rice will not thrive except the ground be completely drenched, the fields are carefully embanked against the commencement of the rainy season. They usually sow in July and August, and reap in February. If proper advantage be taken of the monsoons, they sometimes have two crops a year.

From the tenure under which the lands are held, they are required to clear the whole of their fields at the same time. This obliges them to arrange for the whole crop of rice to be ripe together. In this their agricultural labor princi- pally consists. The several kinds of rice which ripen at different periods are, by the manner of sowing, and the quantity of water introduced, made to advance equally. When ripe, instead of reaping it according to the European custom, they pull it up by the roots, and then lay it out to dry. The straw is trodden by oxen, to sepa- rate the grain from the ear ; and is afterwards beaten in a kind of wooden mortar, to remove the husk. Their inundated fields attract a terri- ble enemy in the alligator, who frequently enters unperceived, and conceals himself among the embankments. The natives are obliged to exa- fnine them with great care, before they venture among the mud and water.

Here are also thirty-nine snecies of pine, and

a variety of ornamental woods and other timber. Ceylon also produces gram, a grain which is used principally for domesticated animals ; coriander, cardamoms and a few other kinds of seed. The briogal, the sweet potatoe, the yam, and considerable varieties of the bean, the Portuguese green, and the Indian spinach, are plentiful ; also small onions, garlic, and ginger. The pumpkin is sometimes made, by cooking, to re- semble turnips and carrots , various species of gourd are rendered by the same means palatable. French beans, and green peas, and some other European vegetables, are raised in private gardens. The soil of the Kondyan hills, has been con- sidered favorable for the cultivation of the pota- toe; attempts are also making to raise the English cabbage. Some suppose that wheat will ultimately be grown successfully in the in- terior provinces. The sugar-cane is but very partially cultivated : it is sold at the bazaars to children, as a kind of luxury, in pieces a few inches long. The most delicious pine-apples are produced in the open fields, after the manner of turnips in England.

But the cinnamon tree merits especial notice among its vegetable productions. In its wild state this tree grows to the height of from twenty, to thirty feet, and is about three feet in circum- ference ; but, when cultivated, is not suffered to attain so large a size. There are several species of the cinnamon tree ; the finest and most valued is found in the government gardens, and is from four to ten feet in height : the trunk is slender, with numerous branches shooting out from it on every side. The wood is soft, light and porous, in appearance somewhat resembling our osier; a vast number of fibres issue forth from the root, and, shooting out into slender twigs, form a bush around it. The leaf has the appearance of the laurel in shape, but is not of so deep a green ; when bruised it has the scent and taste of cloves. The blossom is white, but not very fragrant. The fruit resembles an acorn, but is somewhat smaller; from this the Singhalese extract an oil, which is much esteemed by them. The Dutch governor, M. Falck, who was a native of the island, and whose memory is still held in high esteem, was the first who devoted any particular attention to the cultivation of the cinnamon-tree. His plans were followed up by our government; and considerable tracts of many miles are at present occupied by this valuable tree, which are under the constant su- perintendence of the Chalias, or Mahabadde Singhalese. An English civilian is placed at the head of this department; and intelligent and as- siduous headmen attend to the prosecution of the work. The mode of obtaining the cinnamon, which is the inner bark of this tree, is this : When about three years old, the branches are taken from the stock; the outer bark, or coating, is then scraped off with a knife of a peculiar form, concave on the one side, and

curved on the other. With the point of this knife the bark is ripped up longwise, and the curved side is then employed in gradually loosening it f- om the branch, till it can be taken off entire In this state it appears in the form of tubes open at one side, the smaller of which being inserted within

the larger, they are thus spread out to dry, and by the heat of the sun they contract, until they attain the form in which they are seen in the European markets. The cinnamon thus pre- pared is safely lodged in the government store- houses, where it undergoes a careful examination and is sorted according to its quality. It is brought to Europe in bundles of about eighty pounds weight, which are packed as closely as possible in the hold of the vessels, and all the interstices filled up with black pepper; which prevents the flavor from evaporating, or the article from being otherwise injured. The best cinnamon is rather pliable, and not much thicker than strong writing-paper. From the stout kind, and the refuse, the oil of cinnamon is prepared ; and the water used in the process has also lately become an article of commercial speculation.

A species of bread-fruit, known by the name of the jack-tree, also grows in Ceylon, and is invaluable to the natives. Its manner of growth resembles a chestnut- tree, shooting forth branches in all directions. It often exceeds the bulk and height of the largest oak ; the leaves are much used in feeding sheep, and other animals. The fruit grows from the trunk of the tree, or from the principal branches, is of an oval fonT!, and sometimes a foot in length, and often more in circumference, and so heavy that two native men will bend under the weight of a single apple. It is covered with a thick green coat of a scaly appearance, and contains a number of seeds, each enclosed in a fleshy substance, of the size and form of the green fig ; this substance is of a yellow color, and of a rich and delicious taste. The seeds resemble a chestnut, and are roasted and eaten in the same manner. The fruit has a strong unpleasant smell and taste when first cut open ; but when well washed and steeped in salt water, these entirely disappear. The wood of this tree is employed in all sub- stantial buildings : it is rather weighty, of a yellowish cast, and receives a polish nearly as well as mahogany. It is used in the manufacture of household furniture and looks very handsome.

The cocoa-nut, palmyra, and jack-trees, are highly esteemed by the natives; and furnish a certain resource against the failure of more pre- carious sustenance. ‘ The man who plants any one of these useful trees, confers a lasting benefit on himself, and hands down to posterity more certain riches, than can be procured in less genial climates by a life of the most toilsome labor. When the seeds, or slips, are once put into the ground they require no cultivation, no pruning, no kind of attention ; but spontane- ously advance to maturity, and yield a regular and never-failing produce.’

The banyan-tree is sufficiently remarkable to be noticed. Branches from those which grow horizontally from the trunk, strike into the earth, where they take root, and return their obligations to the parent tree, by giving it support from the newly-formed root. The Singhalese pay divine honors to this tree, and make a pavement round it, which they keep constantly swept. They place lighted lamps images, and sacred flowers under it, and bow before it with great veneration

Animals in great variety range in the forests, and shelter in the jungles of this island. The elephants are renowned for their strength and docility ; and they are taken alive in considerable numbers. In this proceeding, which is the source of an important revenue to government, the in- habitants display much ingenuity. It lias been thus described : ‘ When the government has fixed on the time of hunting elephants, the snare, which consists of an extensive piece of ground, is marked out with large stakes of wood, in a triangular shape, having an open base towards the forest ; and at the apex a narrow funnel, like the cod of a fish-net. The people of the dis- trict are then ordered to drive the herds towards the snare ; employing for this purpose, guns, and drums, and trumpets, torches and fire-works ; or, in the words of a Dutch author, which are in themselves enough to frighten the stoutest elephant: schietgeweer, flambawan, en vuur- stuckeryen, pypers, en hoorenblaazers, trommels, en tambolin-heros. On the present occasion, August 1800, this tremendous assemblage com- menced its operation at the distance of thirty miles from the trap, advancing slowly in a chain of 3000 men, who were employed in this service two months. As the circle narrows, the fires and the noises approach each other : and when the elephants get within the gaping jaws of the trap, the grand business of the campaign is con- sidered as brought to a termination. The go- vernor and other spectators then resort to the scene of action, and the guns, drums, trumpets, blunderbusses, and thunder, once more rend the air ; as their incessant din is judged necessary to terrify the animals, and prevent them from making a retrograde movement. The first com- partment of the enclosure is about 1800 feet in circumference ; the fold, with which it commu- nicates by a single gate, is not more than 100 feet long and forty broad ; and the space is nar- rowed by a rivulet or canal, five feet deep : beyond this, the funnel gradually contracts into a straight passage, five feet broad, and 100 feet long.

‘ The next process was, to drive the entrapped elephant into the water-fold. From the water- snare, they are next driven into the long funnel, one at a time; and as they singly arrive at the far- thest extremity, a huge beam is

let down behind each ; when thus hemmed in, the hunters con- trive to secure him, by binding his legs with ropes. Two tame elephants are then brought to the gate, and the captive is passed between them. They feel his tusks, if he has any, and his pro- boscis ; sometimes, seemingly, to sooth his anger, and to reconcile him to his new condition ; and sometimes, if refractory, they batter him with their heads, till they have reduced him to perfect submission. Thus is he marched to 'the garden of stalls,' where he is very soon completely trained. 'The marching oft" of this venerable trio,' says Cordiner, 'is a sight truly magnifi- cent ; and exhibits a noble specimen of the skill of man, united with the sagacity of the ele- phant.' ' ***** *Quarterly Review.*

A diminutive animal of the deer kind, not larger than a hare, is brought to Colombo, VOL. V7.

confined in cages for sale. The royal tiger is not to be met with ; but the smaller kind, with leopards, tiger cats, foxes, jackalls, hyenas, bears, and an indefinite number of the monkty tribes are found. They have every species of European poultry, with pheasants, red-legged partridges, storks, cranes, herons, various sorts of water-fowls and pigeons. Parrots and par- roquets abound, and the honey bird, which di- rects the natives to the places where the bees have deposited their honey. Ceylon also abounds in reptiles, and particularly in ser- pents. The Cobra manillas, and the whip and grass snakes are small ; but, with the Cobra de ca- pello, or hooded snakes, are poisonous ; various harmless species are found in the woods and waters. The rock snake is found here full thirty feet in length ; and alligators not far short of that size have been killed in the rivers.

The island is well supplied with both fresh and salt-water fish, many of them very delicate eating. The shark is frequently caught of a prodigious size. This tyrant of the Indian seas not only strikes terror into the finny tribes, but preys also on the human species. Some En- glish gentlemen, one day amusing themselves with bathing in the surf, a short distance from Colpetty, were alarmed by the appearance of a shark. In the midst of their uneasiness, one of the company, a young gentleman named May, exclaimed that he was wounded. The water was instantly discolored with blood ; and, as he was hastening to the shore, the monster inflicted a second wound. On being taken out of the sea, he was unable to stand. .,It was found that the femoral artery was so completely divided, as to cause almost instantaneous death ! The fisher- men, when angling among the rocks, sometimes stand for hours, with incredible patience, in ex- pectation of their uncertain prey ; but are com- pelled to use the utmost caution, lest they should be surprised by the shark. The divers, we have seen, have little need to fear them. He is, how- ever, sometimes caught with the larger fishing- hooks ; and then cut up into small pieces, and sold to inexperienced

purchasers as king-fish. The real king-fish is a favorite at a Ceylon table, in flavor much resembling the salmon, but of a different color. Several kinds of flat-fish are brought to the Ceylon markets ; among which the pomfret is highly esteemed : fine soals are not uncommon. The coast also supplies mack- erel, herrings in great abundance, lobsters, crabs and pawns. Muscles and oysters are alse found.

So early as the fourteenth century, Sir John Mandeville appears to have had a correct idea of the extent of this island. At the beginning of the sixteenth century the Portuguese arrived here, and continued to maintain their superio- rity until 1556 : the Dutch having at that period united with the king of Candy to expel them. Colombo, their last settlement, was be- seiged by the united Dutch and native forces, upwards of seven months. At this time the king of Candy was a powerful despotic sove- reign of the interior, and soon commenced a series of wars with his new friends. The Dutch

twice possessed themselves of his capital, but so many of their troops fell victims annually to the climate, that it was not until 1766 that they finally drove them from the coast. After this he paid them a tribute in the productions of the country, while they nominally acknowledged his sovereignty as emperor of Ceylon.

The British, during the war with France in 1782, captured Trincomale; but it was shortly after retaken by the French admiral Suffrein. In 1795 it sustained a siege of three weeks by our forces, commanded by general Stuart, when the Diomede frigate unfortunately struck, and was lost on a rock in the neighbourhood ; it finally, however, capitulated with the rest of the Dutch settlements, and was formally ceded to Great Britain by the peace of Amiens. The following year it was formed into a royal government, the crown appointing all its officers, and regulating the whole internal management. The council is composed of the governor, chief justice, the coaimander of the forces, and a secretary. The entire revenues yielded by the island to our government, have been estimated at ►►250,000.

C FAUT. A note in the scale of music.

Gamut I am, the ground of all accord, A re, to plead Hortensio's passion ;

B mi, Bianca, take him for thy lord, C faut, that loves with all affection. Shakspeare.

CH has, in words purely English, or fully na- turalised, the sound of tsh ; a peculiar pronun- ciation, which it is hard to describe in words. In some words derived from the French, it has the sound of sh, as chaise; and, in some derived from the Greek, the sound of k, cholerick.

CHABLAIS, a province belonging to Savoy, with the title of a duchy. It extends along the south bank of the lake of Geneva, being bounded by the Genevan territory to the west, and the Valais east.

CHACE. See CHASE.

CHACHAPOIS, a province of Peru, South America, bounded on the east by the eastern ridges of the Andes, north-west by the provinces Luya and Chillaos, and west by Caxamarca. Its length from north-west to south-east, is about thirty-eight leagues, and its breadth nearly the same. In some of the valleys it is exceedingly hot, and in the more elevated parts it is as ex- tremely cold . It grows maize, wheat, cocoa, herbs and fruits ; but the staple productions are tobacco and cotton. The latter the women spin, and is chiefly manufactured in sail cloth. Here are fine breeds of cattle, horses, and sheep. Only one gold mine is worked. Population 10,000. A river of this name runs into the Ama- zons.

CHACO, a considerable country of South America, situated between the rivers Paraguay and Pilcamayo, or about from 19►► to 37►► S. latitude. It was first seized by the Spaniards in 1536, and is not naturally fruitful ; but con- tains the celebrated Potosi and other mines. Its European masters, howev,er, never extirpated the brave natives, nor drove them from the centre of the country, which they still inhabit. Its length is said to be about 750 and its breadth 450 miles.

It is well watered, yields most of the produc- tions of other parts of Peru, and contains a population it is said of above 100,000 souls. CHAD, n. s. A sort of fish. Of round fish, there are brit, sprat, ►►►whiting, chad, eels, conger, millet. Carew's Survey of Cornwall.

CH7ERONEA, in ancient geography, the last town, or rather village, of Boeotia, towards Pho- cis ; the birth-place of Plutarch : famous for the fatal defeat of the confederate Greeks by Philip of Macedon (see PHILIP); as well as for that of Mithridates by the Romans, wherein the for- mer lost 110,000 men.

CA.EROPHYLLUM, chervil: a genus of the digynia order, and pentandria class of plants ; natural order forty-fifth, umbellatae. The involu- crum is reflexed concave, the petals inflexed-cor- date ; the fruit oblong and smooth. There are eleven known species, two of which, called cow- weed and wild-chervil, are weeds common in many places of Britain. The roots of the first have been found poisonous when used as parsnips ; the rundles afford an indifferent yellow dye ; the leaves and stalks a beautiful green. Its presence indicates a fertile soil, but it ought to be rooted out from all pastures early in the spring, as no animal but the ass will eat it. It is one of the most early plants in shooting, so that by the beginning of April the leaves are nearly two feet high.

CHˆTIA, in zoology. See GORDIUS AQUA- TICUS.

CHˆLTODON, in ichthyology, a genus of fishes belonging to the order of thoriaci. The head small ; mouth small ; the lips retractile ; teeth (mostly) setaceous, flexile, moveable, equal, closely set, and very numerous; eyes round, small, vertical, furnished with a nictitant mem- brane : gill membrane irom three to six rayed ; body broad, compressed, scaly, generally fas- ciated ; dorsal and anal fins rigid, fleshy, coated with scales. There are sixty-eight known species, distinguished from each other principally by the figure of the tail, and the number of spines in the back-fin. The most remarkable is the rostratus, or shooting fish, having a hollow cylindrical beak. It is a native of the East Indies, where it frequents the sides of the sea and rivers in search of food, from its singular manner of obtaining which it receives its name. When it observes a fly sitting on the plants that grow in shallow water, it swims on to the distance of four, five, or six feet ; and then, with a sur- prising dexterity, it ejects out of its tubular mouth a single drop of water, which never fails striking the fly into the water, where it soon becomes its prey.

CHAFE, v. a., v. n. & n. s. } Fr. echauffer, CHA'FFEIN, > from Lat. ca'lefa.

CHA'FING-DISH. J do. To warm

with rubbing ; to heat by rage or hurry ; to make angry; to rage, to pet, to fume, to rave, to boil. To fret against any thing. Thus the noun sig- nifies a heat, a rage, a fury, a passion, a fume, a pet, a fret, a storm. Chaffein is a vessel for heating water; and chafing dish, a portable dish for healing or containing hot coals.

When Sir Thomas More was speaker of the parlia- ment, with his wisdom ►►nd eloquence he so crossed a

purpose of cardinal Wolsey's, that the rardinal, in a chafe, sent for him to Whitehall. Cainden's Remains.

At last, recovering heart, he does begin To rub her temples, and to chafe her skin.

Spenser's Faerie Queene. Therewith he 'gan full terribly to roar, And chafed at that indignity right sore.

Id. Hub. Tale.

Make proof of the incorporation of silver and tin in equal quantities, whether it will endure the ordi- nary fire which belongeth to chafingdishes, posnets, and such other silver vessels.

Bacon's Physical Remains.

He will not rejoice so much at the abuse of Fal- staff, as he will chafe at the doctor's marrying my daughter. Shakspeare.

Once upon a raw and gusty day, The troubled Tyber chafing with his shores.

Id. Julius Ceesar.

Have I not heard the sea puffed up with winds, Rige like an augry boar chafed with sweat? Id.

At this the knight grew high in chafe, And staring furiously on Ralph, He trembled. Hudibrat.

Soft, and more soft, at every touch it grew ; Like pliant wax, when chafing hands reduce The former mass to form, and frame to use.

Dryden.

This chafed the boar; his nostrils flames expire, And his red eyeballs roll with living fire. Id.

An offer of pardon more chafed the rage of those, who were resolved to live or die together.

Sir John Hayward.

How did they fume, and stamp, and roar, and chafe, And swear! ००० not Addison himself was safe. Pope.

CHA'FER, s. Sax. ceafor ; Teut. kiever ; literally the chewer ; called also cockchafer, for clockchafer. A May bug, a kind of beetle that feeds on the leaves of trees.

CHA'FERY, n. s. A forge in an iron mill, where the iron is wrought into complete bars, and brought to perfection. ००० Phillips.

CHAFERY, in the iron works, is the name of one of the two principal forges. The other is called the finery. When the iron has been wrought at the finery into what is called an an- cony, or square mass, hammered into a bar in its middle, but with its two ends rough, the business to be done at the chafery is the reducing the whole to the same shape, by hammering down these rough ends to the shape of the middle part.

CHAFE- WAX, n. s. An officer belonging to the lord chancellor, who fits the wax for the seal- ing of writs. ००० Harris.

CHAFF, n.s. -\ Pers. khah ; Sax. ceaf;

CHA'FFY, adj. 9 Teut. kaff ; Arm. scoff. The

CHA'FFLESS, adj. ०० husks of corn that are se-

CHA'FFING, n. J parated by thrashing and winnowing. It is used for anything worthless. The derivatives explain themselves. Chaffinch is a bird, so called because it delights in chaff. ००० Johnson adds, it is by some admired for its song. But it has but two notes, and is no more a bird of song than the house sparrow.

The love I bear him,

Made me to fail you thus ; but the gods made you, Unlike all others, chaffless. Shakspeare.

Pleasure vith instruction should be joined ;

So take the corn, and leave the chaff behind.

Dryden.

The c'laffinch, and other small birds, are inju- rious to some fruits. Mortimer.

CHAFF-CUTTER, a machine for making chaff to feed horses. ••• The advantages of an easy and expeditious method of cutting straw into chaff, by an engine which could be used by common laborers, have occasioned various attempts to bring such an engine to perfection. One of the most common is that of M'Dougal, which regu- lates the pressure of the straw with great exact- ness and facility. A curved knife is fixed on the inside of a wheel which passes in front of a long box containing the straw, and by turning this wheel the straw is cut, and the same opera- tion brings forward the straw by means of a spiral groove.

CHAFFER, v. n. & v. a. f Heb. copher ; CHA'FFERER, re. s. S-Got. kaupr; Teu.

CH A'FFERY, n. s. j kaaffer ; Lat. caw-

po. To higgle ; to bargain ; to buy; to ex- change.

He chaffed chayres in which churchmen were set, And breach of lawes to privie farm did let.

Spenser. Mother Hubbard's Tale. Approaching nigh, he never staid to greet, Ne chaffer words, proud courage to provoke.

Faerie Queene.

The third is, merchandise and chaffery; that is, buying and selling. Spenser's State of Ireland.

N'or rode himself to Paul's, the publick fair, To clwffer for preferments with his gold, Where bishopricks and sinecures are sold.

Dryden's Fables.

In disputes with chairmen, when your master sends you to chaffer with them, take pity, and tell your master that they will not take a farthing less. Swift.

CHA'FFWEED, ••. s. Lat. gnaphalium. An herb; the same with cudweed.

CHAGAING, a considerable town of the Bir- man empire, stands on the Irawaddy river,opposi te to Ava. It was the capital of this state, in 1764, and the numerous spires and gilded roofs it pre- sents to the eye, from the various hills on which it is built, render the landscape most splendid. The houses are of timber, and the town carries on an extensive traffic, it being the emporium of all cotton intended for the China market. Here also is a considerable manufacture of marble images of Gaudama, whence the

whole Birmaii empire is supplied. The quarries where the materials are obtained are only a few miles distant.

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CHAG RE, a navigable river of South America, in the province of Panama, which has it's source in the mountains of the interior, and falls into the ocean, thirty milesW. S. W. of Portobello, in lat. 9►► 18′ N., long. 80►► 16′ W. It is navi- gable for large barks as far as Cruses, where there is a wharf for unloading, and a custom- house. The greater part of the commerce be- tween Portobello and Panama, is conducted on this stream, on the banks of which, great num- bers of alligators appear. It traverses a fertile country.

CHAGRI'N, n. s. & v. a. Fr. chagrin, cka- grlner ; to vex ; to put out of temper ; to teaze; to make uneasy. Perhaps, says Thomson, from Ital. sgradire, the contrary of gratiare, to please: from Lat. grutus.

Hear me, and touch Belinda with chagrin,

That single act gives half the world the spleen.

Pope.

I grieve with the old, for so many additional incon- veniences and chagrint, more than their small remain of life seemed destined to undergo. Id. Letters.

CHAIN, n. s. & v. a.~\ Fr.chaine ; Lat. cate-

CHAIN-PUMP, n. s. tna; abond; a manacle;

CHAIN-SHOT, n. s. {a series of links fasten-

CHAI.N-WOKK, n. s. J ed one within another, applied to various uses, namely : to confine, to fasten, to unite ; to keep in a state of slavery. The noun is likewise figuratively used to signify a series linked together, as of causes or thoughts ; a succession ; a subordination.

And Pharaoh took off his ring, anil put it upon Jo- seph's hand, and put a gold chain about his neck.

Genesis, xli. 42.

Nets of chequerwork, and wreaths of chainwork, for the chapiters which were upon the tops of the pillars.

1 Kings.

It is not long since the striking of the top-mast, a wonderful great ease to great ships, both at sea and in harbour, hath been devised ; together with the chain-pump, which takes up twice as much water as the ordinary did ; and we have lately added the bon- net and the drabble. Raleigh's Essays. O Warwick, I .do bend my knee with thine,

And in this vow do chain my soul with thine.

Shakspeare.

They repeal daily any wholesome act established against the rich, and provide more piercing statutes daily to chain up and restrain the poor.

Id. Coriolamu.

Reign thou ia Hell, thy kingdom ; let me serve In Heaven God, ever blest, and his divine Behests obey, worthiest to be obeyed ; Yet chains in Hell, not realms expect. Milton.

Those so mistake the Christian religion, as to think it is only a chain of fatal decrees, to deny all liberty of man's choice toward good or evil. Hammond.

A surveyor may as soon, with his chain, measure out infinite space, as a philosopher by the quickest flight ol mind, reach it; or by thinking, comprehend ". Locke.

In sea fights, oftentimes, the buttock, the brawn of the thigh, and the calf of the leg, are torn off by the chaimhot, and splinters. Wiseman's Surgery.

This world, 'tis true, Was made for Ctesar ,' but for Titus too : And which more b'.est? who chained his country, say, Or he whose virtue sighed tc ose a day ? Pope.

. Still in constraint your suffering sex remains, Or bound in formal, or in real chains. Id,

Silent, but quick, they stoop, his chains unbind ; Once more his limbs are free as mountain wind.

CHAIN also denotes a kind of string, of twist ed wire ; serving to hang watches, tweezer-'j;.ises, and other valuable toys upon. The invention of this is ascribed to the English ; whence, in fo- reign countries, it is denominated the English chain. These chains are usually either of gold, silver, or gilt copper ; the thread or wire of each kind is very fine. In making these chains, a part of the wire is folded into little links of an oval form; the longest diameter about three lines ; the shortest, one. These, after they have been exactly soldered, are again folded in two ; and then interwoven, by several other threads of the same thickness ; some whereof, which pass from one end to the other, imitate the warp of a stuff; and the others, which pass transverse, the woof. There are at least 4000 little links in a chain of four pendants ; which are bound so equally, and firmly together, that the whole seems to consist of one entire piece. Of late years, however, the manufacture of this kind of chains, has been almost entirely superseded by that of the polished steel ones ; which are much supe- rior in beauty, and are manufactured in great variety of patterns and at all prices, at Birming- ham, Sheffield, &c.

CHAIN, in surveying, a measure, consisting of a certain number of links of iron wire, usually 100, serving to take the dimensions of fields, &c. This is what Mersenne takes to be the arvipen- dium of the ancients. The chain is of various dimensions, as the length or number of links varies: that commonly used in measuring land, called Gunter's chain, is in length four poles or perches; or twenty-two yards; or sixty-six feet, or 100 links; each link being seven inches ––3. This chain is peculiarly adapted to land measur- ing in England, as ten square chains make exactly an English acre. Its chief convenience is in finding readily the numbers contained in a given field. Some instead of chains use ropes ; but these are liable to several irregularities ; from the different degrees of moisture, and of the force which stretches them. Schwenterus, in his Practical Geometry, tells us, he has observed a rope sixteen feet long, reduced to fifteen in an hour's time, by the mere falling of a hoar frost. To obviate these inconveniences, Wolfius directs, that the little strands whereof the rope consists be twisted contrary ways, and the rope dipped in boiling hot oil ; and when dry, drawn through melted wax. A rope thus prepared, will neither gain nor lose anything, even though kept under water all day.

CHAINS, in ship-building, are strong links or plates of iron, the lower ends of which are bolted through the ship's side to the timber.

CHAINS, GOLD, are among the badges of dig- nity of the chief magistrates of a city, as the lord mayor of London, the lord provost and bailies of Edinburgh, &c. ––– Something like this obtained among the ancient

Gauls : the principal ornament of those in power and authority was a gold chain, which they wore on all occasions ;

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and even in batt e to distinguish them from the common soldiers.

*CHAINS, HANGING IN, a kind of punishment inflicted on murderers. By statute 25 Geo. II. *.. 37, the judge shall direct such to be executed on the next day but one, unless Sunday intervene ; and their bodies to be delivered to the surgeons to be dissected and anatomised : and he may direct them to be hung in chains. This punish- ment has not been used for many years past in Scotland.*

CHAIN-SHOT; two bullets or half bullets, fastened together by a chain, which, when they fly open, cut away whatever is before them. Chain-shot is used at sea, to tear down yards or masts, and to cut the shrouds or rigging of a ship.

CHAIN, TOP, on board a ship, a chain to sling the sail yards in time of battle, to prevent them from falling down, when the ropes by which they are hung, happen to be shot away, or rendered incapable of service.

CHAIN-WALES, or CHANNELS, of a ship, porte- boissoirs, are broad and thick planks projecting horizontally from the ship's outside, abreast of and somewhat behind the masts. They are formed to extend the shrouds from each other, and from the middle line of the ship, so as to give a greater support to the masts, as well as to prevent the shrouds from damaging the gun- wale, or being hurt by rubbing against it. Every mast has its chain-wales, which are either built above or below the second deck ports in a ship of the line : they are strongly connected to the side by knees, bolts, and standards, besides, being confined thereto by the chains whose upper ends pass through notches on the outer edge of the chain-wales, so as to unite with the shrouds above.

CHAIN-WORK, is a term sometimes used in the arts for different species of cloth and other manufacture, in which the threads are linked or united together in the manner of a chain ; thus hosiery, tambouring, and various kinds of fancy silk and cotton weaving have been described under this name; as well as the formation of nets for fishing and other purposes. We object to grouping so many unconnected pursuits under this one metaphorical term, and refer the reader to the distinct articles HOSIERY, NET-WORK, WEAVING, &c.

CHAJOTLI, or CHAYOTI, a Mexican fruit of a round shape, and similar in the husk with which it is covered to the chestnut, but four or five times

larger, and of a much deeper green color. Its kernel is of a greenish white, and has a large white stone in the middle, like it in substance. It is boiled, and the stone eaten with it. This fruit is produced by a twining perennial plant, the root of which is also good to eat.

CHAIR, n. s. & v. 1 Chald. go/far; icoOˆpa;

CHAIRMAN. $ Fr. chuire. A moveable

seat; either stationed in a room, and move- able by hand at pleasure; or borne by men, and carried from place to place ; or drawn on wheels by other animals. It is also applied to a seat of authority, dignity, and power ; thrones, and other seats of honor and precedency are termed chairs.

And sodenly, or he wos of it ware, God daunted all his pride and all his host j For he so sore fell out of his chare, That it his liir.mes and his skin to-tare. So that he neither mighte go ne ride j But in a chaire men about him hare, Alle forbrused bothe bak and side.

Chaucer's Canterbury Tales,

He makes for England, here to claim the crown. ••• Is the chair empty ? Is the sword unswayed ? Is the king dead ? Shakspeare. K. Richard III.

If thou be that princely eagle's bird, Show thy descent by gazing 'gainst the sun ; For chair and dukedom, throne and kingdom, say ; Either that's thine, or else thou wert not his. Id,

Her grace sat down to rest awhile, In a rich chair of state. Id. Henry VII f

The committee of the Commons appointed Mr.Pyn to take the chair. Clarendon

One elbows him, one justles in the shole ; A rafter breaks his head, or clmirman's pole.

Dryden,

Troy chairmen bore the wooden steed, Pregnant with Greeks, impatient to be freed ; Those bully Greeks, who, as the moderns do, Instead of paying chairmen, run them through.

Stviji.

Think what an equipage thou hast in air, And view with scorn two pages and a chair. Pope.

Whether thou choose Cervantes' serious air, Or laugh and shake in Rabelais' easy chair, Or praise the court, or magnify mankind, Or thy grieved country's copper chains unbind. Id. If a chair be defined a seat for a single person, with a back belonging to it, then a stool is a seat for a single person, without a back. Watts's Logic.

In assemblies generally one person is chosen chair- man or moderator, to keep the several speakers to the rules of order. Id,

CHAIR, CATHEDRA, was anciently used for the pulpit. It is still applied to the place whence professors and regents in universities deliver their lectures, and teach the sciences to their pupils.

CHAIR, CURTJLE, was an ivory seat, placed on a car, wherein were seated the prime magistrates of Rome, and those to whom the honor of a triumph had been granted. See CURULE.

CHAIR, SEDAN, a covered vehicle for carrying a single person, being supported by poles, car- ried by two men. The number of Sedan chairs for hire in London, was limited by act 12 Geo. I. c. 12, to 400 ; and no person is obliged to pay for a hackney chair more than the rate allowed by the act for a hackney coach driven two-third parts of the said distance. But the use of hackney coaches and other horse carriages has so completely superseded the sedan, that they are now scarcely ever to be met with except in the establishments of aged persons, who, from a love to the fashions of their youth, have refused lo adopt the present more convenient custom.

CHAISE, n. s. Fr. chaise. A carriage of pleasure drawn by one horse.

Instead of the chariot he might have said the chaise of government ; for a chaise is driven by the person that sits in it. Addison.

*CHALAZA, a white knotty string at each end of an egg,*formed of a plexus of the fibres of the*

membranes, -by which the yolk and white are connected together. See EGG.

CHALCEDON, or CALCEDON, anciently called Procerastis and Coleusa, a city of Bithynia, situ- ated at the mouth of the Euxine, on the north extremity of theThracian Bosphorus, over against Byzantium. Chalcedon became famous on ac- count of the council which was held there A. D. 451, against Eutyches. The emperor Valens caused the walls of this city to be levelled with the ground lor siding with Procopius, and the materials to be conveyed to Constantinople, where they were employed in building the famous Valentinian aqueduct. Chalcedon is at present a poor place, known to the Greeks by its ancient name, and to the Turks by that of Cadiaci, i. e. the judge's town.

CHALCEDONY, in natural history, a genus of the semipellucid gems. They are of a regular structure, not tabulated ; of a semi-opaque crys- talline basis ; and variegated with different co- lors, disposed in form of mists or clouds, and, if nicely examined, found to be owing to an admixture of various colored earths, but im- perfectly blended in the mass, and often visible in distinct moleculae. It has been doubted whether the ancients were acquainted with the stone we call chalcedony ; they having described a Chalcedonian carbuncle and emerald, neither of which can at all agree with the characters of our stone ; but they have also described a Chal- cedonian jasper, which seems to have been the stone they describe by the word turbida, which extremely well agrees with our chalcedony. There are four known species of the chalcedony. 1 . A bluish white one. This is the most common of all, and is found in the shape of our flints and pebbles, in masses of two or three inches or more in diameter. It is of a whitish color, with a faint cloud of blue diffused all over it, but always in the greatest degree near the surface. This is less hard than the oriental onyx. The oriental chalcedonies are the only ones of any value ; they are found in vast abundance on the shores of rivers in all parts of the East Indies, and frequently come over among the ballast of the East India ships. They are common in Si- lesia, Bohemia, and other parts of Europe ; but with us are less hard, more opaque, and of very little value. 2. The dull milky veined chalcedony. This is a stone of little value ; and is sometimes met with among our lapidaries, who mistake it for a kind of nephritic stone. It is of a yellow- ish white or cream color, with a few milk-white veins. This is principally found in New Spain. 3. The brownish, black, dull, and cloudy chal- cedony, known to the ancients by the name of smoky jasper, or jaspis capnitis. This is the least beautiful stone of all the class : it is of a pale brownish white, clouded all over with a blackish mist, as the common chalcedony is with a blue. 1 1 is common in the East and West Indies, and .n Germany ; but is very little valued, and is seldom worked into anything better than the handles of knives. 4. The yellow and red chal- cedony is greatly superior to all the rest in beau- ty ; and is in great repute in Italy, though very little known among us. It is naturally composed of an

admixture of red and yellow only, on a

clouded crystalline basis ; but is sometimes found blended with the matter of common chalcedony, and then is mixed with blue. It is all over of the misty hue of the common chalcedony. This is found only in the East Indies, and there not plentifully. The Italians make it into beads, and call these cassidonies; but they are not deter- minate in the use cf the word, but call beads of several of the agates by the same name. All the chalcedonies readily give fire with steel, and make no effervescence with aqua-fortis.

CHALCEDONIUS is also the name of a ge- nus of earth, in the modern divisions of oryctology, comprising several species of stones which will be described under their specific names. They are described as consisting of silica, a small quantity of alumine, with sometimes about a tenth of lime, and a slight trace of oxide of iron ; hard, lightish, shining within, breaking into indeter- minate fragments with sharp edges ; compact, not mouldering in the air, of a more or less per- fectly conchoidal texture ; never opake ; tough, admitting a high polish, and generally of a com- mon form ; not melting before the blow-pipe. See CORNELIAN, CHALCEDONY, ONYX, &c.

CHALCIS, in ancient geography, a city of Eubcea in that part which is nearest to Bceotia, first founded by an Athenian colony. There were three other towns of this name in Thrace, Acar- nania, and Sicily, all subject to the Corinthians.

CHALCIDIC, CHALCIDICUM, orCuALCEDo- NIUM, in ancient architecture, a large magnificent hall belonging to a court of jnstice. Festus says, it took its name from the city Chalcis. Philan- der will have it to be the court where affairs of money and coinage were regulated ; so called from xaXfcoc, brass, and Sucrj, justice. Others say, the money was struck in it ; and derive the word from xa\Koe, brass, and OIKOC, house. In Vitru- vius, it is used for the auditory of a basilica; in other ancient writers for a hall where the heathens imagined their gods dined.

CHALCIDICE, in ancient geography, an eas- tern district of Macedonia, stretching north- wards between the Sinus Toronaeus and Singi- ticus ; formerly a part of Thrace, but taken by Philip.

CHALCO'GRAPHER, n. s. Xaˆorpaˆoc, of X►►\KOC brass, and ypaˆw to write or engrave. An engraver in brass.

CHALCO'GRAPHY, n. s. XaXicorpa0ia. En- graving in brass.

CHALCONDYLAS (Demetrius), a learned Greek, born at Constantinople, who left that city after its being taken by the Turks, and afterwards taught

Greek in several cities of Italy. He com- posed a Greek grammar ; and died at Milan in

1513.

CHALCONDYLAS (Laonicus), a famous Greek historian of the fifteenth century, born at Athens. He wrote an excellent history of the Turks, from Ottoman, who reigned about A. D. 1300, to Mahomet II. in 1543.

CHALDEA, in ancient geography, 1. in a large sense, included Babylonia ; as in the pro- phecies of Jeremiah and Ezekiel. 2. In a re- stricted sense, it denoted a province of Babylonia, towards Arabia Deserta; called in Scripture the Land of the Chaldeans. It is said to have been

named from Chaled the IV. son of Nahor. See BABYLOMA.

CHALDEE, or CHALDAIC, LANGUAGE, that spoken by the Chaldeans. It is a dialect of the HEBREW, which see.

CHALDEE PARAPHRASE. There are three Chaldee paraphrases in Walton's Polyglot ; viz. 1. of Onkelos ; 2. of Jonathan son of Uziel ; and 3. of Jerusalem. See BIBLE.

CHA'LDER, n. s. ˆ A dry English measure

CHA'LDRON, n. s. >for coals, consisting of

CHA'UDRON, n. s. j thirty-six bushels heaped up, according to the sealed bushel kept at Guild- hall, London. The chaldron should weigh two thousand pounds.

CHALDRON, an English measure of dry goods, consisting of thirty-six bushels, heaped up in the form of a cone. See BUSHEL.

CHA'LICE n.) Sax. calic ; Fr. calif e ;

CHA'LICED, adj. $ Lat. calix ; a cup, a bowl. It is generally used for a cup employed in acts of worship ; the sacramental chalice is the cup used at the administration of the Lord's Supper. The adjective is obsolete; it is applied by Shakspeare to the cell or cup of a flower.

Hark '. hark '. the lark at heaven's gate sings, And Photbus 'gins arise,

His steeds to water at these springs,

On chaliced flowers that lies. Shakspeare.

When in your motion you are hot, And, that he calls for drink, I'll have prepared him A chalice for the nonce. Id.

All the church at that time did not think emblema- tical figures unlawful ornaments of cups or chalices.

Stillingfleet.

CHALICE. is peculiarly applied to the cup used to administer the wine in the sacrament, and by the Roman Catholics in the mass. The use of the chalice, or communicating in both kinds, is by the church of Rome denied to the laity, who communicate only in one kind ; the clergy alone being allowed the privilege of com- municating in both kinds.

CHALIZA, in the Jewish customs, the cere- mony whereby a widow pulls off her brother-in- law's shoes, who should espouse her, and thus is at liberty to marry whom she pleases.

CHA'LK, n. s. & v. a. ~) Calck, Welsh ; CHA'LKY, adj. fcealc, cealcj-ran,

CHA'LK-CUTTER. f Saxon. To chalk is

CIIA'LK-PIT. 3 to use this substance

as a marking or writing instrument ; to apply chalk to any of the purposes to which it may be adapted, or for which it is useful. It is used metaphorically for any act of marking, describ- ing, or tracing out.

Chalk is a white fossile, usually reckoned a stone, but by some reckoned among the boles. It is used in medicine as an absorbent, and is celebrated for curing the heartburn. Chambers.

He maketh all the stones of the altar as chalk stones, that are beaten in sunder. Isaiah.

Chalk is of two sorts ; the hard, dry, strong chalk, ###which is best for lime ; and a soft, unctuous clialk, which is best for lands, because it easily dissolves with rain or frost. Mortimer.

Land that is chalked, if it is not well dunged, will receive but little benefit from the second chalking. Id.

And this chanon into the crosselet cast A powder, n'ot I never whereof it

wos Ymade ††† other of chalk, other of glos, Or somwhat elles. Chaucer's Cant. Tales.

Being not propt by ancestry, whose grace Chalks successours their way. Shakspeare.

As far as I could ken the chalky cliffs, When from thy shore the tempest beat us back, I stood upon the hatches in the storm. Id.

Chalky water towards the top of earth is too fretting.

Baatn.

The beastly rabble then came down From all the garrets in the town, And stalls and shopboards in vast swarms, With new cftalked bills and rusty arms. Hudlbrat.

With chalk I first describe a circle here, Where these ethereal spirits must appear. Dryden. With these helps I might at least have chalked out a way for others, to amend my errours in a like de- sign. Id. The time falls within the compass here chalked out by nature, very punctually.

Woodward's Natural History.

Shells, by the seamen called chalk eggs, are dug up commonly in the chalk-pits, where the chalk-cutters drive a great trade with them. Id.

CHALK. The name of this mineral is generally derived from Kreta, and probably the ancients may have used, in place of chalk, the marl found in Creta, the modern Candia ; but true chalk occurs no where in that island ; on the contrary, it is imported for economical purposes in barrels, from Brusa and Magnesia.

Chalk may be considered as a peculiar for- mation, and abounds particularly on the south of England, and north of France. Color yellow-ish white, sometimes snow and grayish white. Its specific gravity is from 2-315 to 2'657.

Chalk is of two kinds : hard, dry and firm, or soft and unctuous. The former sort is the best calculated for burning into lime ; but the latter furnishes the best manure for lands. Both these species, however, are an excellent manure for sandy soils, as they fill up the interstices, or pores, and give the land a degree of consistence, which adapts it for the purposes of vegetation, and totally exterminates that pernicious weed, the corn marygold, or yellow ox-eye, chrysanthe- mum segetum, L. which abounds particularly in sandy soils. It has a very different effect on clayey ground ;

for so far from rendering it more compact which is too much so already, it in- sinuates itself into the small pores ; and, by raising a fermentation, exposes the clay more to the operations of the frost, rain, sun, and air ; by which means its too coherent particles are loosened, and it is reduced to a state of pulve- risation.

It is, however, a circumstance worthy of re- mark, that, although the Kentish chalk agrees extremely well with other clayey soils, yet when laid on those lands in Kent, situated near the pits, it by no means answers the expectations of the farmer. This is probably owing to the Ken- tish clays partaking in some degree of the nature of chalk, which, therefore, has not so good an effect in Kent, as in other parts of England ; the quality of the manure being nearly congenial with the soil. It also deˆrves to be noticed,

that chalk, however excellent it may be in itself, when mixed with dung or any other manure, is so far from ameliorating the soil, that crops to be raised from it receive no benefit whatever, and it totally loses its invigorating qualities.

There are two processes by which chalk is obtained for the purpose of manuring land ; the first is by uncallowing a piece of ground, and making it convenient for a pit, where the carts may be drawn into it, and filled : this is on a presumption that the chalk lies near the surface, and that the pit is within a small distance of the field on which the manure is to be laid. The other method is to sink pits in the field where the chalk is intended to be laid as a manure, and which is far preferable to that of drawing it in carts as before mentioned. In this case, a number of pits are to be sunk according to the extent of the field. These pits are to be made in the form and circumference of a well, with an apparatus at the top, and a bucket to draw up the chalk. The people who undertake this bu- siness, having been brought up to it from their infancy, perform it with great facility, and without any timidity, though attended with much danger. A person is employed at the top to draw up the contents of the pit, shoot the chalk into a barrow, and wheel the same on the land. When the laborer has arrived at the chalk, jphich takes up a longer or less interval of time according to the depth at which it lies, and has dug some little time therein in the perpendicular form wherein he began the pit, he proceeds to form apertures in different horizontal directions ; so that where the chalk is good, and the pit stands firm, large tracts of ground are under- mined for this purpose.

Chalk lime may be easily prepared, so as to be fully equal if not superior to

stone lime. The reason why this is not generally thought to be the case, probably is, that not being of so close a texture, it is sooner spoiled by the absorption of carbonic acid, when exposed to the atmosphere after it is made. A cask of chalk lime should never therefore be opened till the moment it is to be slaked and the greatest expedition should be used in the slaking, and in the making and applying the mortar to use. In the quiescent air of a room, a pound, avoirdupois, of chalk lime, becomes two ounces and a half heavier in two days ; and nearly the whole of this increase of weight consists of the carbonic acid which it has imbibed from the atmosphere. See LIME.

The vast ridges of chalk, in England, are always bordered by parallel range of sand or sand-stone, beneath and alternating with.which are situated the beds of fullers-earth. Chalk-hills are also singularly characterised by their dryness and their verdure : the most porous sand-stone is scarcely so deficient in springs of water, and yet, except upon almost perpendicular descents, the white surface of the chalk is uniformly covered with fine turf or wood. The chalk-hills in England occupy a greater extent than in any other country, they run in a direction nearly from east to west parallel to eaqh other, and separated by ranges of sand-stone, and low tracts of gravel and clay. The most northern and loftiest range ❑❑❑ >f chalk commences at the promontory of Flam-*

borough head in Yorkshire, and proceeds west- ward for nearly twenty miles. In the county 01 Lincoln are some fragments of a ridge near Grantham. Two ridges traverse the midland counties, and reach as far west as the borders of Oxfordshire : these ridges are no where so con- spicuous as in the county of Bedford, where they approach near to each other, being only separated by the Woburn and Ampthill range of sand-stone. The country south of the Thames also con- tains two ridges, the one commencing at the north and south Forelands, passing through the north of Kent, the middle of Surrey, and the north of Hampshire, and including the North Downs of Banstead, Epsom, &c. ; the other commen- cing near Hastings and at the lofty promontory of Beachy-head, passes through Sussex, and the south of Hampshire, into Dorsetshire.

In medicine chalk is reputed to be one of the most useful absorbents, and in this light mainly deserves notice ; as the astringent virtues, which some have attributed to it, are utterly unfounded, unless so far as the earth is saturated with acid, in which combination it forms a saline concrete, that is manifestly astringent.

CHALK, BLACK, a name given by painters to a species of earth with which they draw on blue paper, &c. It is found in pieces from two to ten feet long, and from four inches to twenty broad, generally flat, but somewhat rising

in the middle, and thinner towards the edges, commonly lying in large quantities together. While in the earth it is moist and flaky : but being dried, it becomes considerably hard and very light ; but always breaks in some particular direction ; and if attentively examined, when fresh broken, ap- pears of a striated texture. To the touch it is soft and smooth, stains very freely, and by virtue of the smoothness makes very neat marks. It is easily reduced into an impalpable soft powder, without any diminution of its blackness. In this state it mixes easily with oil into a smooth paste; and, being diffused through water, it slowly settles in a black slimy or muddy form ; properties which make its use very convenient to the painters, both in oil and water colors. It appears to be an earth quite different from com- mon chalk, and rather of the slaty bituminous kind. In the fire it becomes white, with a reddish cast, and very friable, retaining its flaky structure, and looking much like the white flaky masses which some sorts of pit-coal leave in burning. Neither the chalk nor these ashes are at all affected by acids. The color shops are supplied with this earth from Italy or Germany ; though some parts of England afford substances, nearly, if not entirely, of the same quality, and which are found to be equally serviceable for marking, and as black paints.

CHALK, RED, an earth much used by painters and artificers, and common in the color shops. It is properly an indurated clayey ochre ; and is dug in Germany, Italy, Spain, and France, but in greatest quantity in Flanders. It is of a fiue, even, and firm texture ; very heavy and very hard ; of a pale red on the outside, but of a deep dusky chocolate color within. It adheres firmly to the tongue, is perfectly insipid to the taste, and makes no effervescence with acids.

CHALK, SILVER. See ARGENTARIA.

CHALK, YELLOW. See TRIPOLI.

CHALK-STONES, in medicine, signify the con- cretions of calcareous matter in the hands and feet of people violently afflicted with the gout. Leuwenhoek examined these by the microscope ; but his observations and distinctions have led to nothing useful, with regard to the nature or cure of the disease. Dr. Wollaston was the first who demonstrated their true composition to be uric acid combined with ammonia, and thus explained the mysterious pathological relation between gout and gravel. Gouty

concretions are soft and friable. They are insoluble in cold, and but slightly in boiling water. An acid being added to this solution seizes the soda, and the uric acid is de- posited in small crystals.

CHA'LLENGE, v. a. & n. s. } Bar. Lat. cal-

CHA'LLENGER, n. s. j lagium, calan-

gium ; French, chalenger. A demand, an ap- peal, a call to fight. The verb is rather more extensive in its signification. To call either to answer for an offence, or to contest for superiority. It also means to accuse, to claim, to object, to demand the fulfilment of a promise or engagement. In the sense of objecting to, it is a term of law. See below.

The people, anon, had suspect in this thing, By maner of the cherles chalenging, That it wos by the assent of Appius ; They wisten well that he was lecherous.

Chaucer's Cant. Tales.

You are mine enemy, I make my challenge, You shall not be my judge. Shakspeare.

And so much duty as my mother shewed To you, preferring you before her father ; So much I challenge, that I may profess Due to the Moor, my lord. Id.

Had you not been their father, these white flakes Did challenge pity of them. Id.

The prince of Wales stepped forth before the king, And, nephew, challenged you to single fight. Id.

Whose worth

Stood challenger on mount of all the age, For her perfections. Id.

Earnest challengers there are of trial, by some pub- lic disputation. Hooker. That divine order, whereby the pre-eminence of chiefest acceptation is by the best things worthily challenged. Id. Many of them be such losels and scatterlings, as that they cannot easily by any sheriff be gotten, when they are challenged for any such fact.

Spenser on Ireland. For't has been held by many that As Montaigne playing with his cat, Complains she thought him but an ass Much more she would Sir Hudibras ; For that's the name our valiant kuight To all his challengers

did write.

Butler's Hudibras.

Thus formed for speed, he challenges the wind, And leaves the Scythian arrow far behind.

Dryden.

Death was denounced ; He took the summons, void of fear, And unconcernedly cast his eyes around, As if to find and dare the griesly challenger. Id.

So when a tyger sucks the bullock's blood, A famish'd lion, issuing from the wood, Roars loudly fierce, and challenges the food. Id.

I will now challenge you of your promise, to give me certain rules as to the principles of blazonry.

Peacham on Drawing.

I challenge any man to make any pretence to power by right of fatherhood, either intelligible or possible.

Locke

CHALLENGE, in the law of England, is an exception made to jurors, either in civil or cri- minal cases.

CHALLENGES, in civil cases, are of two sorts : challenges to the array, and challenges to the poll. Challenges to the array is when the whole number is objected to, as being unfairly empan- nelled, and may be made upon account of par- tiality, or some default of the sheriff, or his under officer, who arrayed the panel. Also, though there be no personal objection against the sheriff, yet if he arrays the panel at the nomination, or under the direction of either party this is good cause of challenge to the array. Formerly the jury was to come de vicineto, i. e. from the im- mediate neighbourhood ; but by statute 4 and 5 Ann. c. 16, this was abolished upon all civil actions, except upon penal statutes ; and upon those also by the 24th Geo. II. c. 18, the jury being now only to come de corpore comitatus, i. e. from the body of the county at large. The array by the ancient law may also be challenged, if an alien be party to the suit, and, upon a rule obtained by his motion to the court for a jury de medietate linguae, such a one be not returned by the sheriff pursuant to the statute 28 Edward III. c. 13, enforced by 8 Henry VI. c. 29, which enacts, that where either party is an alien born, the jury shall be one-half denizens, and the other aliens, if

so many be forthcoming in the place, for the more impartial trial : a privilege as ancient in England as the time of king Ethelred, in whose statute de monticolis Walliae (then aliens to the crown of England), c. 3, it is ordained, ‘ duodeni legates homines, quorum sex Walli, et sex Angli erunt, Anglis et Wallis jus dicunto.’ Challenges to the polls, in capita, are exceptions to particular jurors ; and seem to answer the re- cusatio judicis in the civil and canon laws ; by the constitution of which, a judge might be re- fused upon any suspicion of partiality. But it is now held that judges or justices cannot be challenged. But challenges to the polls of the jury are reduced to four heads by Sir Edward Coke: 1. Propter honoris respectum; as, if a lord of parliament be impannelled on a jury, he may be challenged by either party, or he may challenge himself. 2. Propter defectum ; as, if a juryman be an alien born, this defect is of birth : if he be a slave or bondman, this is defect of liberty, and he cannot be a liber et legalis homo. Females are also excluded, propter de- fectum sexus ; except when a widow feigns her- self with child, in order to exclude the next heir, and a supposititious birth is suspected to be in- tended ; then, upon the writ de ventre inspiciendo, a jury of women is to be impannelled to try the question whether she be with child or not. But the principal deficiency is defect of estate suffi- cient to qualify a man to be a juror, which de- pends upon a variety of statutes. 3. Propter affectum for suspicion of bias or partiality. This

may be either a principal challenge, or to the favor. A principal challenge is such, where the cause assigned carries with it, prima facie, evident marks of suspicion, either of malice or favor: as, that a juror is of kin to either party within the ninth degree; that he has an interest in the cause ; that he has taken money for his verdict, &c. which, if true, cannot be overruled, for jurors must be omni exceptione majores. Chal- lenges to the favor, are where the party objects only some probable circumstances of suspicion, the validity of which must be left to the determi- nation of triers. 4. Challenges propterdelictum, are for some crime or misdemeanor that affects the juror’s credit, and renders him infamous : as for a conviction of treason, felony, perjury, or conspiracy ; or if, for some infamous offence, he hath received judgment of the pillory or the like.

CHALLENGES, h. criminal cases, may be made either on the part of the king, or on that of the prisoner ; to the whole array, or to the separate polls, for the same reasons that they may be in civil causes. For it is here at

least as necessary as there, that the sheriff or returning officer be totally indifferent; that, where an alien is in- dicted, the jury should be de medietate, or half foreigners, if so many are found in the place, which does not indeed hold in treasons, aliens being very improper judges of the breach of al- legiance ; nor yet in the case of gipseys, under the statute 22 Henry VIII. c. 10 ; that on every panel there should be a competent number of hundreders ; and that the particular jurors should be omni exceptione majores, not liable to any objections whatever. Challenges on any of the foregoing accounts are styled challenges for cause ; which may be without stint in both civil and criminal trials. But in criminal cases, or at least in capital ones, there is, in favorem vita?, allowed to the prisoner an arbitrary and capri- cious species of challenge to a certain number of jurors, without showing any cause at all : which is called a peremptory challenge : a pro- vision full of that tenderness and humanity to prisoners for which our laws are justly famous. This is grounded on two reasons : 1 . As every one must be sensible what sudden impressions and unaccountable prejudices we are apt to conceive upon the bare looks and gestures of another ; and how necessary it is, that a prisoner, when put to defend his life, should have a good opinion of his jury, the want of which might totally disconcert him ; the law wills not that he should be tried by any one man, against whom he has conceived a prejudice, even without being able to assign a reason for such his dislike. 2. Because upon challenges for cause shown, if the reason assigned prove insufficient to set aside the juror, perhaps the bare questioning his in- difference may sometimes provoke a resentment ; to prevent all ill consequences from which, the prisoner is still at liberty, if he pleases, peremp- torily to set him aside. This privilege of pe- remptory challenges, granted to the prisoner, is denied to the king by the statute 33 Edw. I. stat. 4, which enacts, that the king shall challenge no jurors without assigning a ?ause certain, to be tried and approved by the court However, it

is held that the king need not assign his cause of challenge till all the panel is gone through, and unless there cannot be a full jury without the persons so challenged. And then, and not sooner, the king's counsel must show the cause : othewise the juror shall be sworn. The peremp- tory challenges of the prisoner must, however, have some reasonable boundary; otherwise he might never be tried. This reasonable boundary is settled by the common law to the number of thirty-five ; or, one under the number of three full juries. For the law judges, that thirty-five are fully sufficient to allow the most timorous man to challenge through mere caprice ; and that he who peremptorily challenges a greater number, or three full juries, has no intention to be tried at all. And therefore it deals with one who peremptorily challenges above thirty-five, and will not retract his challenge, as with one who stands mute, or refuses his trial ; by sen- tencing him to the peine forte et dure in felony, and by attainting him in treason. And so

the law stands at this day with regard to treason ot any kind. But by statute 22 Hen. VIII. c. 14, which, with regard to felonies, stands unrepealed, no person arraigned for felony can be admitted to make more than twenty peremptory chal- lenges.

CHALLONER (Richard), a Roman Ca- tholic bishop, and eminent divine, was the son of a dissenter, a wine-cooper, at Lewes, in Sus- sex. He was born in 1691, and his father dying early in his life, his mother met with that pro- tection from two respectable Catholic families in the neighbourhood, which induced her to edu- cate her son in that faith. He was sent to the English college of Douay, where he took orders, and was appointed professor of divinity. Being, in 1730, appointed to the English mission, he became bishop of Debra, and apostolic vicar of the southern district. He died in 1781, at the age of ninety. His principal works are, 1 . The Catholic Christian instructed in the Sacraments, Sacrifices, and Ceremonies of the Church. This was in reply to the celebrated work on the Con- formity between Popery and Paganism, by Dr. Conyers Middleton. 2. Memoirs of Missionary Priests, and others, of both sexes, who suffered on account of their Religion, from 1577 to 1688. 3. Spirit of Dissenting Teachers. 4. Grounds of the old Religion. 5. Unerring Authority of the Catholic Church. 6. The City of God. 7. A Caveat against Methodism. 8. The Devotion of the Catholics to the Virgin truly represented. 9. The Papist Misrepresented and Represented, abridged from Gother.

CHALMERS (George,) F. R. S. and F. S. A., a miscellaneous writer, born in Scotland, went in early life to America, but on the breaking out of the war of independence returned to London, and obtained a situation in the office of the board of trade. This he retained to his death in 1825. His works are, Political Annals of the United Colonies, 4to. ; Estimate of the Strength of Great Britain, during the present and four pre- ceding ReigL's, 8vo. ; Opinions on Subjects of Public Lawai'd Commercial Policy, connected with Americai Independence, 8vo, ; Life of Daniel De Foe, $vo. ; Life of Thomas Ruddi-

man, 8vo. ; Apology for the Believers in the Shakspeare Papers, 8vo. ; Caledonia, or an Ac- count, Historical and Geographical, of North Britain, 4to. ; Chronological Account of Com- merce and Coinage in Great Britain, 8vo. ; Life of Mary, Queen of Scots, 4to. He also edited the works of Sir David Lyndesay, and some other old writers.

CHALONER (Sir Thomas), a statesman, soldier, and poet, descended from an ancient family in Denbigh, in Wales, was born at London about A. D. 1515. Having been educated in both universities, he was introduced to Henry VIII. who sent him abroad in the retinue of Sir Henry Knevet, ambassador to Charles V. whom he attended on his fatal expedition in 1541 to Algiers. Chaloner returned soon after to England, and was appointed first clerk of the council, which office he held during the rest of that reign. On the accession of Edward VI. he became a favorite of the duke of Somerset, whom he at- tended to Scotland, and was knighted by him, after the battle of Musselburgh, in 1547. The duke's fall put a stop to Sir Thomas's ex- pectations, and involved him in difficulties. During the reign of Mary, being a protestant, he was in great danger ; but, having many power- ful friends, he escaped. On the accession of queen Elizabeth, he appeared again at court ; and was appointed ambassador to the emperor Ferdinand I. being the first ambassador she no- minated. His commission was of great im- portance ; and the queen was so well satisfied with his conduct, that, soon after his return, she sent him in the same capacity to Spain. He embarked for Spain in 1561, and returned to London in 1564, in consequence of his own re- quest, expressed in an elegy written in imitation of Ovid. He died in 1565. His poetical works were published in 1579. His chief work was that Of Restoring the English Republic, in ten bo'oks, which he wrote while in Spain. This great man, who knew how to transact as well as write upon, the most important affairs of states and kingdoms, could also descend to compose a Dictionary for Children, and to trans- late from the Latin a book Of the Offices of Servants.

CHALONER (Sir Thomas), the only son of the preceding, was born in 1559. He merits parti- cular notice, not only as a skilful naturalist in an age wherein natural history was very little understood, but as the founder of the alum works in Yorkshire, which have since proved so ad- vantageous to the commerce of this kingdom. Being very young when his father died, lord Burleigh sent him to St. Paul's School, and af- terwards to Magdalen College, Oxford, where he discovered extraordinary talents for Latin and English poetry. About 1580 he made the tour of Europe, and returned to England before 1584. About this time he married the daughter of Sir William Fleetwood. In 1591 he was knighted ; and, some time after, discovered the alum mines on his estate at Gisborough, in York- shire. Towards the end of the queen's reign, Sir Thomas visited Scotland ; and returning to England in the retinue of king James I. was im- mediately appointed governor to prince Henry.

He died in 1615. He wrote, 1. Dedication to Lord Burleigh, of his father's poetical works, dated 1579." 2. The Virtue of Nitre, London, 1584, 4to. Sir Thomas, during his residence in Italy, being particularly fond of natural

history, had spent some time at Puzzoli, where he was very attentive to the art of producing alum. This attention proved infinitely serviceable to his country, though of no great benefit to himself or his family, his attempt being attended with much difficulty and expense. It was begun about A. D. 1600, but was not brought to any per- fection till some time in the reign of Charles I. by the assistance of one Russel a Walloon, and two other workmen, from the alum works at Rochelle. By one of the arbitrary acts of Charles, it was then deemed a mine royal, and granted to Sir Paul Pindar. The long parliament adjudged it a monopoly, and justly restored it to the original proprietors.

CHALONS SUR MARNE, the Roman Ca- talaunum, a large town of Champagne, France, situated on the Marne, of the department of which it is the capital. The river, which is crossed by several bridges, divides it into three parts, viz. the town, properly so called, the island, and the suburb. Here is a fine Gothic cathedral, of the thirteenth century, eleven parish churches, three secularised abbeys, several con- vents, and a handsome town-house, together with an academy of sciences and belles-lettres, founded in 1750. Woollen manufactures, tanneries, and yarn-spinning, occupy the attention of the greater part of its inhabitants, who amount to about 12,000. But it has a good trade in corn and wine. Twenty-five miles south-east of Rheims, forty south-west of Verdun, and 103 east of Paris.

CHALONS SUR SAONE, the ancient Cabillonum, a well-built town of France, in Burgundy, on the right bank of the Saone. The number of inhabitants is about 9000, exclusive of the small town of St. Lawrence, on an island, near the opposite bank of the river, which communicates with the town by a stone bridge. Chalons is the see of a bishop, has six parish churches, two abbeys, and eight other religious foundations. The quay runs along the banks of the Saone ; it is a solid and beautiful piece of workmanship. The manufactures are inconsiderable. It is 170 miles north of Lyons, and 214 south-east of Paris.

CHALY'BEATE, aˆ.from Lat.chalybs, steel. Impregnated with iron or steel ; having the qua- lities of steel.

The diet ought to strengthen the solids, allowing spices and wine, and the use of chalybeate waters.

Arlruthnot on Diet.

CHALYBEATE, a term applied to any mineral water which abounds with iron ; such are the Tunbridge, Spa, Cheltenham, &c.

CHALYBES, in ancient geography, a people of the Hither Asia. Their

situation is differently assigned ; Strabo placing them in Paphla- gonia, east of Synope ; Apollodius Rhodius and Stephanus, on the east of the Thermodon, in Pontus ; called Halizones by Homer. They eivher gave their name to, or took it from the iron manufactures, their only support.

CHAM, or KHAN. See KHAN.

CHAMA, in zoology, a genus of shell-fish, belonging to the order of vermes testacas. The shell is thick, and has two valves ; it is an animal of the oyster kind. Linnaeus enumerates fourteen species, principally distinguished by the figure of their shells.

CHA'MADE, n. s. French. The beat of the drum which declares a surrender.

Several French battalions made a show of resist- ance, but upon our preparing to fill up a little fosse, in order to attack them, they beat the chamade, and sent us charts blanche. Additon.

CHAMADE, a signal to inform the enemy that some proposition is to be made to capitulate, to have leave to bury the dead, make a truce, or the like.

CHAM7ELEON, in botany, a genus of plants, of the syngenesia class, and polygamia order; natural order segregata : CAL. six or eight flowered, imbricated, and many-leaved : FLORETS tubular, hermaphrodite ; receptaculum naked : SEEDS co- vered with the calycle growing to them. Species one; a native of the south of Europe, with simple white stem, and short white flowers. The root of this plant is a bitter diaphoretic me- dicine.

CHAM^EROPS, in botany, the dwarf palm, or little palmetto, a genus of the class polygamia, and order trioecia ; natural order palmae : CAL. tripartite : COR. tripetalous ; STAM. six, pistils three, and three monospermous plums. The male is a distinct plant, the same as the her- maphrodite. There are three species, the most remarkable of which is the C. glabra, a native of the West Indies, and warm parts of America, also of the corresponding latitudes of Asia and Africa. It never rises with a tall stem; but, when the plants are old, their leaves are five or six feet long, and upwards of two broad ; these spread open like a fan, having many foldings, and at the top are deeply divided like the fingers of a hand. This plant the

Americans call thatch, from the use to which the leaves are applied. It may be easily raised in this country from seeds brought from America ; but as the plants are tender, they must be constantly kept in a bark-stove.

CHA'MBER, n. s. & v. ►►."►► Ka/iapa ; Lat. ca- CHA'MBERER, v. s. mera; It. camera;

CHA'MBERING, Fr. chambre ; Sw.

CHA'MBER-FELLOW, \kammar; Welsh,

CHA'MBERLAIN, siambr. A cavity,

CHA'MBERLAINSHIP, a room, an apart-

CHA'MBERMAID. J ment. It has va-

rious technical significations, which are all, however, easily traced to the original etymon. Chamberlain describes an officer of state, and an officer of the royal household. It is, indeed, sometimes used in its primitive sense for a mere servant, who has the care of the chambers. As chambers are sleeping apartments, and as the term was formerly almost exclusively applied to such, the verb takes a peculiar meaning from the application, and signifies to be wanton ; to in- trigue, as well as to reside in a chamber. And the substantive, chamberer, is understood in the same sense, a man of intrigue, a debauchee.

Hire herte is veray chambre of holinesse ; Hire hond ministre of freedom for almessc.

Chaucer. Cant. Tulet

' My Lord,' quod she, ' I wote and wist alway, How that betwixen your magnificence And my poverte, no wight ne can ne may Maken comparison ; it is no nay : I ne held ne never digne in no manere To be your wif, ne yet your cliamberere. Id.

Let us walk honestly as in the day, not in rioting and drunkenness, not in chambering and wantonness.

Romans,

I have not those soft parts of conversation That chamberers have. ShaJapeare.

Bid them come forth, and hear me Or at their chamber door I'll beat the drum, Till it cry, sleep to death. Id.

When we have marked with blood those sleepy two, Of his own chamber. Id,

Humbly complaining to her deity, Got my lord chamberlain his liberty. Id.

Thinkst thou

That the bleak air, thy boisterous chamberlain, Will put thy shirt on warm ? Id.

Men will not hiss,

The chambermaid was named Ciss. Ben Jonson. He was made lord steward, that the staff of chamber- lain might be put into the hands of his brother.

Clarendon, He served at first ˆEmilia's cJiamberluin.

Dryden's Fables.

In the imperial chamber this vulgar answer is not

admitted, viz. I do not believe it, as the matter is

propounded and alleged. Ayliffe's Parergon.

The dark caves of death, and chambers of the grave.

Prior,

Petit has, from an examination of the figure of the eye, argued against the possibility of a film's existence in the posteriour chamber. Sharp,

A patriot is a fool in every age,

Whom all lord chamberlains allow the stage. Pope. It is my fortune to have a chamberfellow , with whom I agree very well in many sentiments.

Spectator.

Some coarse country wench, almost decayed, Trudges to town, and first turns chambermaid. Pope.

CHAMBER, in military affairs, is variously ap- plied : thus, chamber, bomb, or powder chamber, a place sunk under ground for holding the pow- der, or bombs, where they may be out of danger, and secured from the rain. Chamber of a mor- tar, is that part of the chase much narrower than

the rest of the cylinder, where the powder lies. It is of different forms; sometimes like a re- versed cone ; sometimes globular, with a neck for its communication with the cylinder, whence it is called a bottled chamber ; but most commonly cylindrical, that being the form which is found by experience to carry the ball to the greatest distance.

CHAMBER, APOSTOLICAL, of Rome, that wherein affairs relating to the revenues of the church and the pope are transacted. This council consists of the cardinal camerlingo, the governor of the rota, a treasurer, an auditor, a president, one advocate-general, a solicitor-general, a com- missary, and twelve clerks.

CHAMBER, IMPERIAL, of Spires, now of Wetzlar, the supreme court of judicatory in the empire, erected by Maximilian I. This chamber lias a right of judging by appeal ; and is the

last resort of all civil affairs of the states and subjects of the empire; except matrimonial causes, these being left to the pope, and cri- minal causes, which either belong to particular princes or towns, or are cognizable by all the states of the empire in a diet. By the treaty of Osnaburgh, in 1648, fifty assessors were ap- pointed for this chamber, whereof twenty-four were to be Protestants, and twenty-six Catholics ; besides five presidents, two Protestants and three Catholics.

CHAMBER, PRIVY. Gentlemen of the privy chamber are servants of the king, who wait on him and the queen at court, in their diversions, &c. Their number is forty-eight, under the lord chamberlain ; of whom twelve are in quar- terly waiting, and two of these lie in the privy chamber. In the absence of the lord cham- berlain, or vice-chamberlain, they execute the king's orders. The gentlemen of the privy chamber were instituted by Henry VII.

CH-VMBER, STAR. See STAR-CHAMBER.

CHAMBERLAIN OF ENGLAND, LORD GREAT, to whose office belongs the government of the palace at Westminster ; and upon all solemn occasions the keys of Westminster-hall and the court of requests are delivered to him; he disposes of the sword of state to be carried before the king when he comes to the parliament, and goes on the right hand of the sword next to the king's person : he has the care of providing all things in

the House of Lords in the time of parlia- ment ; to him belongs livery and lodgings in the king's court, &c. The gentleman usher of the black rod, yeoman usher, &c. are under his authority. He has livery and lodging in the king's court ; and receives fees from each arch- bishop or bishop when they perform their ho- mage to the king, and from all peers at their creation, or doing their homage. At the corona- tion of every king he has forty ells of crimson velvet for his own robes. On the coronation day, he brings the king his shirt, coif, and wear- ing clothes ; and, after the king is dressed, he claims his bed, and all the furniture of his cham- ber, for his fees ; he also carries the coif, gloves and linen, to be used by the king on that occa- sion ; the sword and scabbard ; the gold to be offered by the king, and the robes royal and crown : he dresses and undresses the king on that day, waits on him before and after dinner, &c. The office of Lord Great Chamberlain of England is hereditary; and where a person dies seized in fee of his office, leaving two sisters, the office belongs to both sisters, and they may execute it by deputy : but such deputy must be approved of by the king, and must not be of a degree inferior to a knight.

CHAMBERLAIN, LORD, OF THE HOUSEHOLD, has the oversight of the removing wardrobes, or of beds, tents, revels, music, comedians, hunt- ing, messengers, &.c. retained in the king's ser- vice. He has also the oversight and direction of the Serjeants at arms, of all physicians, apothecaries, surgeons, barbers, the king's chap- lains, 8cc. and administers the oath to all officers above stairs.

CHAMBERLAIN OF LONDON, is the receiverof the city money, he also presides over the affairs of

masters and apprentices, and creates freemen of the city, &c. His office lasts only a year, but it is customary to re-elect him, unless he is charged with a misdemeanor in his office.

CHAMBERLAINS OF THE EXCHEQUER. In this court there are two chamberlains, who keep a controlment of the pells of receipts and exitus, and have keys of the treasury, records, &c.

CHAMBERLAYNE (Edward), descended from an ancient family, was born in Gloucester- shire, 1616, and made the tour of Europe during the civil war. After the Restoration, he went as secretary with the earl of Carlisle, to Sweden ; ⬛⬛⬛was appointed tutor to the young duke of Graf- ton, and was afterwards chosen to instruct prince George of Denmark in the English tongue. He died in 1703, and was buried in a vault in Chelsea church- yard. His monumental inscrip- tion mentions six books of his writing ; and he was so desirous of doing service to posterity, that he ordered some copies of his books to be covered with wax and buried with him. That work

by which he is best known, is his Anglise Notitiae, or the Present State of England, which has been often re-printed.

CHAMBERLAYNE (John), F.R.S. continuator of his father's useful work, was admitted into Trinity College, Oxford, in 1685. He wrote Dissertations Historical, Critical, Theological, and Moral, on the most memorable events of the Old and New Testaments, with Chronological Tables, in one volume folio ; and translated various works from the French, Dutch, and other languages. He likewise communicated some pieces to the Royal Society, inserted in Philosophical Transactions. After a useful and well-spent life, he died in 1724.

CHAMBERRY, a populous town of Savoy, and the former capital of the duchy of that name. It has a castle, and is well built, but has no fortifications. It is watered by several streams, which have their sources in St. Martin's-hill, and run through several of the streets. There are piazzas under most of the houses, where people may walk dry in the worst weather. It has large and handsome suburbs ; and in the centre of the town is the palace. The parliament of Savoy formerly met in it, and a royal council is still held here. The inhabitants are about 12,000 in number,and in the neighbourhood are some excellent baths. It is thirty-seven miles north- east of Grenoble, and fifty-five east of Lyons.

CHA'MBERS. Short pieces of ordnance, or cannon, which stood on their breeching without any carriage, used chiefly for rejoicings, and theatrical cannonades, being little more than chambers for powder. They are however enu- merated by authors among other pieces of artil- lery, and by the following passage seem not to have been excluded from real service.

To serve bravely is to come halting off you know : To venture upon the charged chambers bravely.

Shakspeare. Nares.

Names given them, as cannons, demi-cannons, chambers, arquebuse, musket, &c. Camden's Remains.

CHAMBERS (Ephraim), compiler of a Cy- clopaedia or Scientific Dictionary that was the foundation of Dr. Rees's celebrated work, was

born at Milton in Westmoreland. His parents were Presbyterians ; and his education such as is commonly given to qualify a youth for trade. He was apprenticed to Mr. Senex, the globe- maker, a business connected with literature, especially with astronomyand geography. During his residence with this skilful mechanic, he con- tracted that taste for science which accompanied him through life. Even at this period, he formed the design of his grand work, the Cyclopaedia ; and some of the first articles of it were written behind the counter. Having conceived the idea of so great an undertaking, he justly concluded that the execution of it would not consist with the avocations of trade ; and therefore he quitted Mr. Senex, and took chambers at Gray's Inn, where he chiefly resided during the rest of his life. The first edition, which was the result of many years intense application, appeared in 1728 in two vols. folio. It was published by sub- scription at four guineas, and the list of sub- scribers was very respectable. The dedication to the king is dated October 15th, 1727. The re- putation that Mr. Chambers acquired by this undertaking, procured him the honor of being elected F.R.S. November 6th, 1729. In less than ten years a second edition became necessary ; which accordingly was printed, with corrections and additions, in 1738 ; and was followed by a third in 1739. Although the Cyclopaedia was the grand business of Mr. Chambers' life, and almost the sole foundation of his fame, his at- tention was not wholly confined to this under- taking. He was concerned in a periodical pub- lication, entitled, The Literary Magazine, which was begun in 1735. In this work he wrote a variety of articles, and particularly a review of Morgan's Moral Philosophy. He was engaged likewise, in conjunction with professor John Martyn, F. R. S., in preparing for the press a translation and abridgment of the Philosophical history and Memoirs of the Royal Academy of Sciences at Paris. This undertaking was com- prised in five volumes octavo, which did not ap- pear till 1742, some time after our author's de- cease, when they were published in the joint names of Messrs Martyn and Chambers. Mr. Chambers also published a translation of the Jesuit's Perspective, from the French ; which was printed in quarto, and went through several editions. His close and unremitting attention to study at length impaired his health, and obliged him to make an excursion to the south of France, but without that benefit which had been expected. Returning to England, he died at Canonbury House, Islington, May 15th, 1740, and was buried at Westminster, where an in- scription, written by himself, is placed on the north side of the cloisters of the Abbey. After his death, other two editions of his Cyclopaedia were published. The proprietors afterwards procured a supplement to be compiled, which extended to two volumes more: and in 1778 began to be published in weekly numbers, an edition of both, improved and incorporated into one alphabet, by Dr. Rees, which was completed in four volumes folio. The doctor, it is well known, afterwards published forty volumes quarto on the same plan. See CYCLOPEDIA.

CHAMBERS (Sir Robert), an eminent lawyer, born at Newcastle-upon-Tyne, in 1737, where he received his education under Moyses, along with lord Eldon and Sir Willam Scott ; and the friendship they there contracted continued till death. He was chosen exhibitioner of Lin- coln College, Oxford, in 1754, and afterwards became fellow of University College, where he was again associated with the Scotts and other eminent characters, particularly Sir William Jones. In 1766 he was appointed Vinerian professor of law in the room of Sir William Blackstone ; and about the same time he was made principal of New Inn Hall. In 1768 an offer was made him to go out as attorney-general of Jamaica, which he declined ; but in 1773 he accepted the place of second judge in the supreme court of judicature at Bengal; and such was the regard which the university entertained for him, that, in case he should think proper to re- turn, they continued to him the professorship three years. In 1778 the honor of knighthood was conferred on him, as a testimony of the royal approbation of his upright conduct. In 1791 Sir Robert succeeded to the office of chief justice on the resignation of Sir Elijah Impey ; and in 1797 he was chosen president of the Asiatic Society. He returned to England in 1799, but being of a delicate constitution the change to a northern climate soon affected his health ; to preserve which he went to France in autumn, 1802, but died at Paris on the 9th of May following. His remains were brought to England and interred in the Temple. He wrote an elegant epitaph in Latin, inscribed on the monument of his friend, Sir William Jones, at Oxford.

CHAMBERS (Sir William), an eminent archi- tect, was born at Stockholm, of an ancient Scotch family which had resided some years there. When about eighteen years of age he was ap- pointed supercargo to the Swedish East India company, and brought from China the Asiatic style of ornament, which became so fashionable in England at one time, under the royal patron- age. Mr. Chambers settled in England, where he gained considerable business as an architect, and became surveyor-general of the Board of Works, fellow of the Royal and Antiquarian So- cieties, treasurer of the Royal Academy, and knight of the polar star in Sweden. The build- ing of Somerset-house will prove a lasting mo- nument of his skill and taste ; but his principal works are his stair-cases, and his designs for interior arrangements. He died in March, 1796. He wrote a treatise on civil architecture, which is considered a valuable work.

CHA'MBLET, v. n. From camelot. To va-ry; to variegate. See CAMELOT.

Some have the veins more varied ami chambleted ; as oak, whereof wainscot is made.

Bacon's Natural History.

CHAMBRE (Martin Cureau de la,) phy- sician to Louis XIV. was distinguished by his knowledge of medicine and philosophy. He was born at Mans ; and was received into the French Academy in 1625, and afterwards into the Academy of Sciences. His principal works

are Les Caracteres dcs Passions, 4 vols. 4to. 2. L'art de connoitre les Hommes. 3. De la Conrioissance des Betes. 4. Conjectures sur la Digestion. 5. De 1'Iris. 6. De la Lumiere. 7. Le Systeme de 1'Ame. 8. Le Debordement du Nil,4to.

CHA'MBREL of a horse. The joint or bend- ing of the upper part of the hinder leg. ••• Far- •••vVr's Diet.

CHAME'LEON, n. s. Xaˆl̂XfMV-

I can add colours even to the chameleon ; Change shapes with Proteus, for advantage.

Shakspeare.

One part devours the other, and leaves not so much as a mouthful of that popular air, which the cliameleoiis gasp after. Decay of Piety.

The thin chameleon, fed with air, receives The colour of the thing to which he cleaves.

Dryden.

As the chamelion, which is known To have no colours of his own, But borrows from his neighbour's hue His white or black, his green or blue. Prior.

The CHAMELEON has four feet, and on each foot three claws. Its tail is long ; with this, as well as with its feet, it fastens itself to the branches of trees. Its tail is flat, its nose long, ending in an obtuse point; its back is sharp, its skin plaited, and jagged like a saw from the neck to the last joint of the tail, and upon its head it has something like a comb ; like a fish, it has no neck. Some have asserted, that it lives only upon air ; but it has been observed to feed on flies, caught with its tongue, which is about ten inches long, and three thick; made of white flesh, round, but flat at the end

; or hollow and open, resembling an elephant's trunk. It also shrinks, and grows longer. This animal is said to assume the color of those things to which it is applied ; but our modern observers assure us, that its natural color, when at rest and in the shade, is a bluish gray; though some are yellow, and others green, but both of a smaller kind. When it is exposed to the sun, the gray changes into a darker gray, inclining to a dun color; and its parts, which have least of the light upon them, are changed into spots of different colors. The grain of its skin, when the light does not shine upon it, is like cloth mixed with many colors. Sometimes, when it is handled, it seems speckled with dark spots, inclining to green. If it be put upon a black hat, it appears to be of a violet color : and sometimes, if it be wrapped up in linen, it is white ; but it changes color only in some parts of the body. ††† Culmet.

CHAMELEON, in astronomy, a constella- tion of the southern hemisphere, near the south pole, invisible in our latitude. See ASTRONOMY.

CHAMELEON, in zoology. See LACERTA.

To CHA'MFER, v. a. Fr. chambrer. To channel ; to make furrows or gutters upon a column.

CHA'MFER, n. s. i From to chamfer. A

CHA'MFRET, n. s. \ small furrow or gutter on a column.

CHAMFERING, in architecture, a phrase used for cutting anything aslope on the under side.

CHAMIER (Daniel), an eminent protestant divine, born in Dauphine. He was many years

preacher at Montelimart; from whence he went in 1612 to Montauban, to be professor of di- vinity, and was killed by a cannon ball during the siege in 1621. The most considerable of his works is his Panstratia Catholica, or Wars of the Lord, in four volumes folio ; in which he treats very learnedly of the controversies between the Protestants and Roman Catholics.

CHA'MLET, n. s. See CAMELOT. Stuff made originally of camel's hair.

To make a cltamlet, draw five lines, waved over- thwart, if your diapering consists of a double line.

Peaeham on Drawing.

CIIA'MOIS n. s. Fr. chamois. An animal of the goat kind, whose skin is

made into soft leather, called among us shammy.

These are the beasts which you shall eat ; the ox, the sheep, and wild ox, and the chamois.

Deuteronomy.

CHAMOIS, in zoology. See CAPRA.

CHA'MOMILE, n. s. xa/tat/[illegible]*jXoi>. An odo- riferous plant.*

Cool violets, and orpine growing still, Embathed balm, and cheerful galingale,

Fresh costmary, and breathful chamomile, Dull poppy, and drink quickening setuale.

Spenser.

For though the chamomile, the more it is trodden, on the faster it grows ; yet youth, the more it is wasted, the sooner it wears. Shakspeare.

Posset drink with chamomile flowers.

Flayer on the Humours.

CHAMOS, or CHEMOSH, the idol of the Moabites. The name comes from a root which, in Arabic, signifies to make haste ; for which reason many believe Chamos to be the sun, whose precipitate course might well procure it the name of swift or speedy. Others have con- founded chamos with the god Hammon, adored not only in Libya and Egypt, but also in Arabia, Ethiopia, and the Indies. Macrobius shows that Hammon was the sun ; and the horns, with which he was represented, denoted his rays. Calmet is of opinion, that the god Hamonus, and Apollo Chomeus, mentioned by Strabo and Ammianus Marcellinus, was the very same as Chamos or the sun. These deities were wor- shipped in many of the eastern provinces. Some who go upon the resemblance of the Hebrew term chamos, to that of the Greek KWJUOC, have believed chamos to signify Bacchus the god of drunkenness. St. Jerome, and with him most other interpreters, take Chamos and Peor for the same deity. But if Baal-Peor were the same as Tammuz or Adonis, Chamos must be the god of the sun.

CHAMOUNI, an elevated valley of the Alp?, situated at the foot of Mont Blanc. See ALPS and BLANC.

CHAMP, v. a. > Fr. champayer. To bite

CHOMP, v. n. 5 with the frequent action of the teeth ; to devour violently and voraciously. To perform frequently the action of biting, as a horse bites the bit ; mashing with the teeth.

They began to repent of that they had done, and irefully to champ upon the bit they had taken into their mouths. Hooker.

Coffee and opium are taken down, tobacco but in smoke, and betel is but champed in the mouth with a little lime. Bacon.

Muttering and champing, as though his cud had troubled him, he gave occasion to Musidoris, to come near him. Sidney,

The fiend reply'd not, overcome with rage j But, like a proud steed reined, went haughty on, Champing his iron curb. Milton's Paradise Lost.

CHAMPAGNE,a ci-devant province of France, about 162 miles long, and 112 broad. It was bounded on the north by Hainault and Luxem- burg, on the east by Lorraine and Franche Comte, on the south by Burgundy, and on the west by the Isle of France and Soissonnois. Its principal rivers are the Meuse, Seine, Marne, Aube, and Aine. Its chief trade consists in ex- cellent wine, all sorts of corn, linen clotfi, wool- len stuffs, cattle, and sheep. It was divided into the higher and lower, and Troyes was the capital. Its sub-divisions were Champagne Proper, Rhemois, Rethelois, Pertois, Vallage, Bassigni, Senonois, and Brie Champenoise. It now forms the departments of Ardennes, Aube, Marne, and Upper Marne.

CHAMPAGNE PROPER, one of the eight ci- devant sub-divisions of Champagne, compre- hended the towns of Troyes, Chalons, St. Mene- hould, Epernay, and Vertus.

CHA'MPAIGN, n. s. Fr. champaigne ; Ital. campagna, from Latin, campus. A flat open country.

In the abuses of the customs, meseems, you have a fair champaign laid open to you, in which you may at large stretch out your discourse.

Spenser's State of Ireland. Of all these bounds,

With shadowy forests and with champaigns' rich'd, We make thee lady.

Shahipeare.

From his side two rivers flowed,

The one winding, the other straight, and left between Fair champaign, with less rivers intervened. Milton.

CHAMPAIN, or POINT CHAMPIAN, in he- raldry, a mark of dishonor in the coat of arms of him who kills a prisoner of war, after he has cried quarter.

CHAMP DE MARS, French, i. e. the field of Mars, an extensive field in Paris, which, in 1790, was fitted up in the form of an amphitheatre, capable of holding nearly a million of people, for the purpose of celebrating the anniversary of the revolution, July 14th, 1789.

CHAMPANEER, a town and district of the province of Gujerat, Hindostan, situated between the twenty-second and twenty-third degrees of northern latitude. It is bounded on the north by Godra, on the east by the Mahratta territories of Holkar, on the south by the Ner- budda river, and on the west by Baroach ; it is subject to the Mahrattas, part of it belonging to Scindeah, the remainder to the Guicowar. This territory in 1803 was conquered by the British, but at the peace the forts once belonging to Scindeah were restored ; and the Guicowar be- came one of our allies.

CHAMPANEER, the town, was formerly the capital of Gujerat, and Has a citadel on the top of a lofty mountain. The great natural and artificial strength of the place, the ruins of

Hindoo temples, &c. indicate its past importance, but the present houses are mean huts.

CHA'MPERTORS, n.s. From champerty; in law. Such as move suits, or cause them to be moved, either by their own or others procure- ment, and pursue, at their proper costs, to have part of the land in contest, or part of the gains. ††† Cowell.

CHA'MPERTY, n. s. Fr. champart ; in law. A maintenance of any man in his suit, while de- pending, upon condition to have part of the thing when it is recovered. It is used in Chaucer to signify share of land ; partnership in power. ††† Id.

Thus may ye seen, that wisdom ne richesse, Beaute ne sleighte, strengthe ne hardinesse, Ne may with Venus holden champarte, For as hire liste the world may she gie,

C/uiucer's Canterbury Tales.

CHAMPERTY, is a bargain with the plaintiff or defendant, campum partire, to divide the land, or other matters sued for between them, if they prevail at law ; whereupon the champertor is to carry on the party's suit at his own expense. Champert, in the ci-devant French law, signified a similar division of profits, being a part of the crop annually due to the landlord. In our sense of the word, it signifies the purchasing of a suit, or right of suing; a practice so much abhorred by our law, that it is one main reason why z chose in action, or thing of which one hath the right but not the possession, is not assignable in common law ; because no man should purchase any pretence to sue in another's right. These pests of society were severely animadverted on by the Roman law ; and were punished by the forfeiture of a third part of their goods and per petual infamy. And it is enacted by statute 32 Henry VIII. c. 9, that no one shall sell or pur- chase any pretended right or title to land, unless the vender hath received the profits thereof for one whole year before such grant, or hath been in actual possession of the land, or of the rever- ††† sion or remainder ; on pain that both purchaser and vender shall each forfeit the value of such land to the king and the prosecutor.

CHAMP I'GNON, n. s. Fr. champignon; a kind of mushroom.

It has the resemblance of a large champignon before it is opened, branching out into a large round knob.

Woodward.

CHA'MPION, n. s. & v. a. Fr. champion; Ital. campione ; Goth, kiampur; Teut. kacmpe , Sax. cempa. A warrior ; one who undertakes a cause in single combat ; a man bold in contest. To champion is to espouse a cause ; to undertake its defence ; to challenge to the combat, of whatever nature the combat may be.

There was ne none with Gamelyn, That wolde wrestle more, For he handled the champion So wonderously sore. Chaucer's Canterbury Tales.

The champion stout

Eftsoones dismounted from his courser brave, And to the dwarfe awhile his needless spore he gave.

Spenser. A stouter champion never handled sword.

Shahspeare.

The seed of Banquo kings !

Tlather than so, come, Fate, into the list,

And champion me to the utterance. Shakspeare.

In many armies the matter should be tried hy duel between two champions. Bacon.

O light of Trojans, and support of Troy,

Thy father's champion, and thy country's joy !

Dry den.

This makes you incapable of conviction ; and they applaud themselves as zealous champions for truth, v hen indeed they are contending for errour. Locke. Will not our own and fellow-nations sneer,

To view these champions cheated of their fame,

By foes in fight o'erthrown, yet victors here, Where Scorn her finger points through many a coming year. Byron. Childe Harold.

CHAMPION, in the ancient sense of the word, was a person who fought instead of those that, by custom, were obliged to accept the duel, but had a just excuse for dispensing with it, as be- ing too old or infirm, being ecclesiastics, or the like. See BATTEL.

CHAMPION OF THE KING, campio regis, an ancient officer, who, at the coronation of our kings, when the king is at dinner, rides armed cap-a-pee, into Westminster Hall, and makes proclamation and challenge, in defence of the king's right to the crown. See CORONATION.

CHAMPLAIN, a lake of the United States of North America, situated between New York and Vermont, formerly part of the dividing line between these states.

CHANCE, n. s., v. n., & adj.-\ Fr. chance ;

CHA'NCEFUL, f from Lat. ca-

CHA'NCE-MEDLEY, n. s. tsus, cadentia.

CHA'NCEABLE, adj. J An event, ac-

cident, hazard ; anything fortuitous ; luck. For- tune or misfortune ; whatever is accidental or casual ; applied to persons and kings. The verb is used in all these senses. Chance-medley is a term in law.

Myself would offer you t' accompany

In this adventurous chanceful jeopardy. Spenser,

The trial thereof was cut off by the chanceable com- ing thither of the king of Iberia. Sidney.

Now we'll together, and the chance of goodness Belike our warranted quarrel! Shakspeare.

Think what a chance thou chancest on j but think ; ००० Thou hast thy mistress still. Id.

These things are commonly not observed, but left to take their chance. Bacon's Essays.

\cJtance, but chance may lead, where I may meet Some wandering spirit of heaven, by fountain side, Or in thick shade retired. Milton's Paradise Lost.

If such an one should have the ill hap, at any time, to strike a man dead with a -smart saying, it ought, in all reason and conscience, to be judged but a chance-medley. South.

Chance is but a mere name, and really nothing in itself ; a conception of our minds, and only a com- pendious way of speaking, whereby we would express, that such effects as are commonly attributed to chance, ०००were verily produced by their true and proper causes, but without their design to produce them. Bentley. Now should they part, malicious tongues would say, They met like chance companions on the way.

Dryden. All nature is but art, unknown to thee ;

All chance direction, which thou can'st not see.

Pope. Of chance or change 0 let not man complain,

Else shall he never, never cease to wail. Beattie. VOL. V.

Suffering, I suffer not ००० sincerely love,

Yet feel no touch of that enlivening flame ; As chance inclines me,

unconcerned I move,

All times, and all events, to me the same. Cowper.

CHANCES, DOCTRINE OF, that branch of ana- lysis which investigates the probability of given events taking place, from an examination of the circumstances under which they can happen; a science totally unknown to the ancients.

About the year 1654, M. Nieu, a friend of the celebrated Pascal, though himself unac- quainted with mathematics, proposed to the philosopher the following questions. 1. Two gamesters wanting each a certain number of points in a game, agree to desist from playing ; how ought the money to be divided between them ? 2. In how many throws may a person undertake to throw a certain number of points with two dice ? The problems occasioned a correspon- dence between Pascal, Roberval, Fermat, and other celebrated mathematicians of that day. Their ingenuity was exerted in their solution, and the discussion which they occasioned led inevitably to the determination of the principles on which the science rests.

Pascal discovered the solution of both these problems, but they were not published until after his death, in a work entitled Triangle Arithmetique. Huygens answered the second of these problems in the year 1657, and pub- lished his solution in a small work entitled Ra- tiocinia de Ludo Aleoe ; it is given by Schooten, at the end of his work Exercitationes Geome- tricse. Huygens here proposed five problems on chances for solution, as a sort of challenge to mathematicians : the novelty of the subject and the celebrity of the proposer attracted great attention; and many papers were now published on various branches of this subject, in the transactions of different learned societies.

An application of this theory, of the greatest importance and utility, was soon afterwards made by a distinguished philosopher. Dr. Hal- ley investigated the subject of life-annuities on the theory of chances, and gave, in the 196th number of the Philosophical Transactions, a table of the probabilities of life for every five years, from one year to seventy. The same application was made by Hudde ; and the cele- brated Craig, a Scotch mathematician, applied it to the estimation of moral evidence.

In 1685 James Bernouilli proposed, in the Journal des Scavans de France, two problems relating to the doctrine of chances : and, as they remained unanswered, he himself gave their solution five years afterwards, in the Leipsic Acts. He afterwards undertook a work De arte Conjectandi, in which the subject vs treated more at length : but Bernouilli died before he com- pleted it. It was published in 1713, and was translated by the late

baron Maseres, and re- ceived from him copious notes and commen- taries.

Subsequently appeared Montmort's Essai d'Analyse sur le jeux de Hazard, and in 1713 a second edition of this work was published, much enlarged and improved, and containing some letters which had passed between him and John and Nicholas Bernouilli on this subject. He

here mentioned two works, which appeared in the interval between the first and second edition of his work, the one a Latin thesis of N. Ber- nouilli, the other the production of De Moivre, and entitled De Mensura Sortis, first published in the Philosophical Transactions for 1710. This paper contained some reflections on the analysis of Montmort, which elicited a reply from the latter in his second edition; this was answered by De Moivre in the preface to his Doctrine of Chances, published in 1718, re- published in 1738, and again 1750. The two latter editions of this work may be considered as containing a complete exposition of the sci- ence of chances. After the publication of the second edition of De Moivre's work, the doc- trine of chances became extremely popular, and many works have since been published on the subject. The most esteemed of these are Simp- son On the Nature and Laws of Chance, in 1740. Clark's Law of Chance, 1748. In 1781 a work was published by the celebrated Condorcet, on this subject, besides occasional essays in the work? of various other authors, as D'Alembert's Opuscula, Dodson's Mathematical Repository, vol. ii. Price, Philosophical Transactions, 1762, Waring, Philosophical Transactions, 1791. See also Montucla, Histoire des Mathematiques, torn iii. p. 380.

Laws of Chances. The circumstances and limitations under which events may happen, are so various, that it is impossible to reduce the method of proceeding in each case to any general method : in this then, as in some of the higher branches of analysis, much must be left to the judgment of the analyst; and no subject re- quires more his care and attention.

Def. 1. The probability of an event is the ratio of the number of chances in favor of its happening, to the number of all the chances both in favor of its happening and against it.

Def. 2. The expectation of an event is the present value of any sum or thing which de- pends, either on the happening or failing of such an event.

Def. 3. Events are independent, when the happening or failing of any one

of them, neither increases nor lessens the probability of the rest.

Def. 4. Two events are contrary, when one of them must, and both together cannot happen.

Prop. 1. If an event may take place in n dif- ferent ways, and each of these be equally likely to happen, the probability that it will take place in a specified way, is properly represented by J, certainty being represented by unity ; or, which is the same thing, if the value of certainty be unity, the value of the expectation that the event will happen in a specified way is J.

For the sum of all the probabilities is cer- tainty or unity, because the event must happen in some one of the ways, and the probabilities are equal, therefore, each of them js J. And if the certainty be a, the value of the expectation will be ⬜⬜⬜⬜⬜

We gladly avail ourselves of the following illustration of this interesting subject, from Mr. W. Upcott's collection of original letters. It forms part of Mr. Secretary Pepys' correspon- dence, and contains the subject of a very curious question with its solution, by Sir Isaac (then Mr.) Newton.

A hath six dice in a box, with which he is to fling at least one six, for a wager laid with R.

B hath twelve dice in another box, with which he is to fling at least two sixes, for a wager laid with S.

C hath eighteen dice in another box, with which he is to fling at least three sixes, for a wager laid with T.

The stakes of R, S, and T, are equal ; what ought A, B, and C, to stake, that the parties may play upon equal advantage ?

To compute this, I set down the following progressions of numbers :

6 the number of the dice.

15

46656 the number of all the chances upon them. 15625 the number of chances without sixes.

3125

18750 chances for one six, and no more.

625

9375 chances for two sixes, and no more.

Progr.

1.

1

2

3

4

5

⬛⬛⬛

2.

0

1

3

6

10

⬛⬛⬛

3.

6

36

216

1296

7776

⬛⬛⬛

4.

5

25

125

625

3125

⬩⬩⬩

5.

1

5

25

125

625

⬩⬩⬩

6.

1

10

75

500

3125

⬩⬩⬩

7.

1

5

25

125

8.

1

15

150

1250

The progressions in this table are thus found : the first progression, which expresses the number of the dice, is an arithmetical one : viz. 1, 2, 3, 4, 5, &c. the second is found, by adding to every term, the term of the progression above it, viz. 0 + 1=1, 1+2=3, 3 + 3 = 6, 6 + 4 = 10, 10 + 5 = 15, &c. the third pro- gression, which expresses the number of all the chances upon the dice, is found by multiplying the number 6 into itself continually; and the fourth, fifth, and seventh, are found by multi- plying the number 5 into itself continually ; the sixth is found by multiplying the terms of the first and fifth, viz. 1 X 1 = 1, 2 x 5 = 10, 3 X 25 = 75, 4 x 125 = 500, &c. and the eighth is found by multiplying the terms of the second and seventh, viz. 1×1 ??? 1, 3×5 =

15, 6 X 25 = 150, 10 X 125 = 1250, &c. and by these rules the progressions may be con- tinued on to as many dice as you please.

Now, since A plays with six dice, to know what he and R ought to stake, I consult the numbers in the column under six, and there, from 46,656, the number of all the chances upon those dice expressed in the third progression, I subduct 15,625, the number of all the chances, without a six expressed in the fourth ; and the remainder, 31,031, is the number of all the chances, with one six, or above : therefore the stake of A must be to the stake of R, upot equal advantage, as 31,031 to 15,625, or ?i??i to 1 ; for their stakes must be as their expectations, that is, as the number of chances which make for them. In like manner, if you would know

CHA

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CHA

what B and S ought to stake upon twelve dice, produce the progressions to

the column of twelve dice, and the sum of the numbers in the fourth and sixth progressions, viz. 244,140,625 4 585,937,500 rz 830,078,125, will be the number of chances for S ; and this number, subducted from the number of all the chances in the third progression, viz. 2,176,782,336, will leave 1,346,704,211, the number of chances for B; therefore the stake of B would be to the stake of S, as 1,346,704,211 to 830,078,125, or "HJuˆiU to !□□□ And so, by producing the pro- gressions to the number of eighteen dice, and taking the sum of the numbers in the fourth, sixth, and eight progressions, for the number of the chances for T, and the difference between this number, and that in the third column, for the number of the chances for C, you will have the proportion of their stakes upon equal ad- vantage. And thence it will appear, that when the stakes of R, S, and T, are units (suppose one pound or one guinea), and by consequence equal, the stake of A must be greater than that of B, and that of B greater than that of C, and therefore A has the greatest expectation. The question might have been thus stated, and an- swered in fewer words : if Peter is to have but one throw for a stake of □□1000, and has his choice of throwing either one six at least upon six dice, or two at least upon twelve, or three at least upon eighteen, which throw ought he to choose ; and of what value is his chance or expec- tation upon every throw, were he to sell it? Answer : upon six dice there are 46,656 chances, whereof 31,031 are for him; upon twelve, there are 2, 176,782, 336 chances, whereof 1,346,704,2 11 are for him : therefore his chance, or expecta- tion, is worth the fˆth part of □□1000, in the first case, and the 4(,%th part of □□1000, in the second ; that is, □□665 Os. 2rf. in the first case, and □□618 13s. 4d. in the second. In the third case, the value will be found still less.

CHA'NCEL, n. s. From Lat. cancclli, lat- tices, with which the chancel was enclosed. The eastern part of the church, in which the altar is placed.

Whether it be allowable or no, that the minister should say service in the chancel. Hooker.

The chancel of this church is vaulted with a single stone, of four feet in thickness, and an hundred and fourteen in circumference. Addison on Italy.

CHANCEL, is that part of the choir of a church, between the altar and the rail that incloses it, tfhere the minister is placed at the celebration rf the communion. The right of a seat and a sepulchre in the chancels is one of the privileges of founders.

CHA'NCELLOR,n.s. Lat. cancellarius ; Fr. chancelller ; from cancellare literas, vel scriptum linea per medium ducta damnare ; and seemeth of itself likewise to be derived ti cancellis, which signify all one with ictyicXt

Sic., a lattice; that is, a thing made of wood or iron bars, laid cross- ways one over another, so that a man may see through them in and out. It may be thought that judgment seats were compassed in with bars, to defend the judges and other officers from the press of the multitude, and yet not to hinder any man's view.

Vice-chancellors whose knowledge is but small, And chancellors who nothing know at all ; Ill-brooked the generous spirit, in lLose days, When learning was the certain road to praise. When nobles, with a love of science blessed, Approved in others what themselves possessed.

Churchill.

Turn out, you rogue ! how like a beast you lie, Go, buckle to the law. Is this an hour To stretch your limbs ? you'll ne'er be chancellor,

Dryden, jnn.

Aristides was a person of the strictest justice, and best acquainted with the laws, as well as forms, of their government j so that he was, in a manner, chan- cellor of Athens. Sicift.

CHANCELLOR, in the Roman law, was at first only a chief notary under the emperors : and was called cancellarius, because he sat behind a lattice, to avoid being crowded by the people : though some derive the word from cancellare, to cancel. See CHANCERY. This officer was af- terwards invested with a general superinten- dency over the rest of the officers of the prince. From the Roman empire it passed to the Ro- man church, ever emulous of imperial state : and hence every bishop has to this day his chan- cellor. See below. When the modern king- doms of Europe were established upon the ruins of the empire, almost every state preserved its chancellor, with different jurisdictions and dig- nities, according to their constitutions. But in all of them he seems to have had the supervision of charters, letters, and such other public instru- ments of the crown as were authenticated in the most solemn manner: and, therefore, when the seals came in use, he had always the custody of the king's great seal.

CHANCELLOR, LORD HIGH OF GREAT BRI- TAIN, OR LORD KEEPER OF THE GREAT SEAL is the highest honor of the long robe, being cre- ated by the mere delivery of the king's great seal into his custody ; whereby he becomes, without writ or patent, an officer of the greatest weight and power of any subsisting in the kingdom. He is a privy counsellor by his office ; and, ac- cording to lord chancellor Ellesmere, prolocutor of the house of lords by prescription. To him belongs the appointment of all the justices of peace throughout the kingdom. Being in for- mer times

commonly an ecclesiastic, for none else were then capable of an office so conversant in writing, and presiding over the royal chapel, he became keeper of the king's conscience ; vi- sitor in right of the king, of all hospitals and colleges of the king's foundation; and patron of all the king's livings under ►►20 per annum, in the king's book. He is the general guardian ol all infants, ideots, and lunatics ; and has the superintendence of all charitable institutions in the kingdom ►►► over and above the extensive jurisdiction which he exercises in his judicia.. capacity in the court of chancery. He takes precedence of every temporal lord, except the royal family, and of all others except the arch- bishop of Canterbury. It is declared, by stat. 25, Edward III. treason to slay the Chancel- lor in his place, and doing his office. In his judicial capacity, all the other officers of the court of chancery are his assistants; viz. the vice-

chancellor, the master of the rolls, the masters in chancery, &c.

The Master of the Rolls in England hath judicial power, and may sit for the chancellor; but he has certain causes assigned him to hear and decree. By his office he is chief of the masters in chancery, and chief clerk of the petty bag office. The master of the rolls in Ireland has a similar authority.

The office of Vice Chancellor was created by stat. 53, George III. c. 24, by which the crown is empowered to appoint by letters patent, some barrister of fifteen years standing, to be an ad- ditional judge and assistant to the lord chan- cellor, lord keeper, or lords commissioners of the great seal of the united kingdom, in the dis- charge of their respective offices, to be called Vice Chancellor of England, to hold such office during his good behaviour. He is empowered to hear and determine all causes depending in the court of chancery in England, either as a court of law or equity, or incident to any mi- nisterial office of the said court, or submitted to such court or to the lord chancellor, &c. by any act of parliament, as the chancellor, &c. shall direct ; and all decrees, orders, &c. made by the vice-chancellor shall be valid, as acts of the court, but subject to be reversed or altered by the lord chancellor, &c. and no such decree, &c. shall be enrolled till signed by the chancellor, &c. It is expressly provided that the vice- chancellor shall not have power to reverse or alter any decree, &c. made by the chancellor, &c. unless authorised by the chancellor, &c. so to

do ; nor to reverse any decree or order of the master of the rolls. He shall sit for the chan- cellor, &c. when required, and while the chan- cellor is also sitting, and have a separate court, and shall rank next to the master of the rolls, and have a secretary, train-bearer, usher, &c. He may be removed by address of both houses. His salary is ––5000 per annum, to be paid out of the interest of unclaimed suitors' money. This office, although it has been ably discharged, yet, in allowing an appeal to the chancellor, it has but little relieved the delays of the court.

The twelve Masters in Chancery, the six clerks, the cursitors, register, master of the sub- poena office, &c. are other officers of the chan- cellor's court, whose duties we need not parti- cularise.

There is also a lord high chancellor of Ireland ; but the lord chancellor of Great Bri- tain, holds the great seal of the united kingdom. See 53 George III. c. 24. The former office of the lord chancellor of Scotland is now filled by a lord keeper of the great seal, with a salary of ––3000 a-year.

The CHANCELLOR OF AN UNIVERSITY seals the diplomas, or letters of degrees, provision, &c. given in the university, either personally or by his vice-chancellor. He also holds what is called the chancellor's court. See CAMBRIDGE and OXFORD.

CHANCELLOR OF A DIOCESE; or, of a bishop, a person appointed to hold the bishop's courts, and to assist him in matters of ecclesiastical law. This officer, as well "as all other ecclesiastical

ones, if lay or married, must be a doctor of the civil law in some university.

CHANCELLOR OF THE DUCHY of LANCASTER, is an officer before whom, or his deputy, the court of the duchy chamber of Lancaster is held ; being a special jurisdiction concerning all manner of equity relating to lands holden of the king in right of the duchy of Lancaster. See LANCASTER, DUCHY OF.

CHANCELLOR OF THE EXCHEQUER, is a great officer of the crown, who, it is thought, was originally appointed for the qualifying extre- mities in the Exchequer : he sometimes sits in court, and in the Exchequer Chamber: and, with the judges of the court, orders things to the king's best benefit. He is mentioned in statute 25, H. 8. c. 16 ; and has by the statute 33 H. c. 39, power with others, to compound for the forfeitures upon penal statutes, bonds and recognisances, entered into to the king : he has also great authority in the management of the royal revenue, &c. which seems of late to be his chief business, being commonly the first com- missioner of the treasury.

CHANCELLOR (Richard), a brave English navigator, in the sixteenth century. He was appointed commander of one of the vessels sent out under Sir Hugh Willoughby, to discover a north-west passage to China, in 1553. Sebas- tian Cabot, who projected this voyage, and who was then in great favor with Edward VI. ob- tained letters of recommendation, in Latin, Greek, and other languages, to the sovereigns in the north-east parts of the world; but Sir Hugh Willoughby was parted from his company, and perished on the coast of Lapland, where he had stopped to winter. Captain Chancellor vras, however, more fortunate, and having discovered Russia, was introduced to the grand duke, John Basilovitz, by whom he was graciously received, and obtained permission for the English to trade in his dominions. When he returned to En- gland king Edward was dead, but queen Mary was not insensible of the advantages held out by the discovery of enlarging the national com- merce, and a company of adventurers was in- corporated, who sent captain Chancellor again to Russia. He was returning to England, ac- companied by a Russian ambassador and suite, but was unfortunately wrecked on the coast of Norway, where he perished, after exerting him- self in the bravest manner to save the Russians, who arrived in London in 1557.

CHANCELLORSHIP, n.s. The office of chan- cellor.

The Sunday after More gave up his chancellorihip of England, he came himself to his wife's pew, and used the usual words of his gentleman-usher, Madam, my lord is gone. Camden.

CHANCE-MEDLEY, in law, is defined a case where one is doing a lawful act, and a person ii killed by chance thereby ; for if the act be un lawful, it is felony. If a person cast, not in- tending harm, a stone, which happens to hit one whereof he dies ; or shoots an arrow in an high- way, and another that passeth by is killed there- with; or if a workman, in throwing down rub- bish from a house after warning to take care,

Kills a person ; or a schoolmaster in correcting his scholar, a master his servant, or an officer in whipping a criminal in a reasonable manner, happens to occasion his death ; it is chance- medley and misadventure. If a man whips his horse in a street to make him gallop, and the horse runs over a child and kills it, it is man- slaughter ; but if another whips the horse, it is manslaughter in him, and chance-medley in the rider.

CHA'NCERY, n. s. From chancellor; proba- bly chancellery, then shortened. The court of equity and conscience, moderating the rigor of other courts, that are tied to the letter of the law ; whereof the lord chancellor of England is the chief judge, or the lord keeper of the great seal.

The contumacy and contempt of the party must be signified in the court of chancery, by the bishop's let- ters under the seal episcopal. Ayliffe's Parergon.

CHANCERY, as an extraordinary court, pro- ceeds by the rules of equity and conscience ; and moderates the rigor of the common law, considering the intention rather than the words of the law. It gives relief for and against in- fants, notwithstanding their minority, and for and against married women, notwithstanding their coverture. All frauds and deceits for which there is no redress at common law ; all breaches of trust and confidence ; and accidents, as to relieve ob- ligors, mortgagers, &c. against penalties and forfeitures, where the intent was to pay the debt, are here remedied : for in chancery, a forfeiture &c. shall not bind, where a thing may be done after or compensation made for it. Also this court gives relief against the extremity of un- reasonable engagements entered into without consideration ; obliges creditors that are unrea- sonable to compound with an unfortunate debtor; and makes executors, &c. give security and pay interest for money that is to lie long in their hands. This court may confirm title to lands, though one hath through mistake lost his wri- tings ; and render conveyances, defective through mistake, &c. good and" perfect. In chancery, copy holders may be relieved against the ill- usage of their lords ; enclosures of lands that are common be decreed ; and this court may decree money or lands given to charitable uses, oblige men to account with each other. &c. But in all cases where the plaintiff can have his re- medy in law, he ought not to be relieved in chan- cery ; and a thing which may be tried by a jury is not triable in this court.

CHANCERY, as an ordinary legal court, holds pleas of recognizances acknowledged in the chancery, writs of scire facias, for repeal of letters patent, writs of partition, &c. and also of all personal actions by or against any officer of the court. Sometimes a supersedeas, or writ of privilege, has been granted to discharge a person out of prison ; hence may be had a habeas cor- pus prohibition, &c. in the vacation ; and here a subpoena may be had to force witnesses to ap- pear in other courts, when they have no power to call them. But, in prosecuting causes, if the parties descend to issue, this court cannot try it by jury ; but the lord chancellor delivers the re- cord into the King's Bench to be tried there;

and after trial it is to be remanded into the chan- cery, and there judgment

given : though if there be a demurrer in law, it shall be argued in this court. In this court is also kept the officina justitiae ; out of which all original writs that pass under the great seal, all commissions of charitable uses, sewers, bankruptcy, idiocy, lunacy, and the like, do issue ; and for which it is always open to the subject, who may there at any time demand and have, ex debito justitise, any writ that his occasions may call for. These writs, relating to the business of the subject, and the returns of them, were, according to the sim- plicity of ancient times, originally kept in hanaperia, in a hamper, and the others (relating to such matters wherein the crown is mediately or immediately concerned) were preserved in a little sack or bag, in parva bagga : and hence arose the distinction of the hanaper office, and the petty-bag office, which both belong to the com- mon law court in chancery.

The proceedings in chancery, are, first to file the bill of complaint, signed by some counsel setting forth the fraud or injury done, or wrong sustained, and praying relief: after which pro- cess of subpoena issues, to compel the defendant to appear ; when he puts in his answer to the bill of complaint, if there be no cause for the plea to the jurisdiction of the court, in dis- ability of the person, or in bar, &c. Then the plaintiff brings his replication, unless he files exceptions against the answer as insufficient, re- ferring it to a master to report whether it be sufficient or not ; to which report exceptions may also be made. Suits being sometimes im- perfect in their frame, or becoming so by accident before their end has been obtained ; or the interests in the property in litigation being often changed, pending the suit ; to supply the defects arising from any such circumstances, new suits may become necessary, to add to, or continue, or obtain the benefit of, the original suit. A litigation commenced by one party, sometimes renders necessary a litigation by another party, to operate as a defence, or to obtain a full deci- sion on the rights of all parties. Bills filed for this purpose are termed cross bills. Where the court has given judgment on a suit, it will in some cases permit that judgment to be contro- verted, suspended, or avoided by a second suit; and sometimes a second suit becomes necessary to carry into execution a judgment of the court. Suits instituted for any of these purposes are also commenced by bill ; and hence arises a variety of distinctions of the kinds of bills necessary to answer the several purposes; as bills of review which among other causes may be brought, where new matter is discovered, in time, after the decree made, bills of revivor, &c. and on all the different kinds of bills there may be the same pleadings as on a bill used for in- stituting an original suit. It frequently hap- pens, that pending a suit, the parties discover some error or defect in some of the pleadings ; and if this can be rectified by amendment of the pleadings, the court will in many cases per- mit it. The indulgence is most extensive in the case of bills : which being often framed upon an

inaccurate state of the case, it was formerly

the practice to supply their deficiences, and avoid the consequences of errors by special re- applications : but this tending to long and in- tricate pleading, special replication, requiring a rejoinder in which the defendant might in like manner supply defects in his answer, and to which the plaintiff might sur-rejoin, the special replication is now disused for this purpose : and the court will in general permit a plaintiff to rectify any error or supply any defect in his bill, either by amendment or by a supplemental bill, and will also permit, in some cases, a defendant in like manner to complete his answer, either by amendment or by a further answer. The answer, replication, rejoinder, &c. being settled, and the parties come to issue, witnesses on both sides are examined upon interrogatories, either in court or by commission in the country, wherein the parties usually join. Publication is then made of the depositions, and the cause is set down for hearing ; after which follows the de- cree. But an appeal lies finally to the house of lords.

CHA'NCRE, n. s. 5 Fr. chancre ; Ital. can-

CHA'NCROUS, adj. $chero ; Lat. cancer. A malignant ulcer, usually arising from venereal maladies.

This small bcil or pimple soon bursts and leaves a sore of a corresponding size, foul and sloughy at the bottom, -with hard retorted edges, and which, from the corroding appearance which it assumes, has by the French been denominated chancre, a term which we have also adopted. Bell on Lues Venerea.

It is possible he was not well cured, and would have relapsed with a chancre. Wiseman.

You may think I am too strict in giving so many internals in the cure of so small an ulcer as a chancre, or rather chancrous callus. Id,

CHANDE'LIER, n. s. Fr. chandelier. A branch for candles.

CHANDELIER, in fortification, a kind of moveable parapet, consisting of a wooden frame, made of two upright stakes, about six feet high, with cross planks between them ; serving to sup- port facines to cover the pioneers.

CHANDERNAGORE, a town of Hindostan Proper, in Bengal, on the

Hoogly, twenty-one leagues above Calcutta. It is a league in cir- cumference, and is exposed on the western side; but its harbour is excellent, and the air is as pure as it can be on the banks of the Ganges. It was originally a French settlement, and had a very strong fort, which was taken and de- stroyed by admiral Watson in 1757.

CHA'NDLER,n. s. Fr. chandelier. An artisan whose trade is to make candles, or a person who sells them. A chandler's shop, howevef, is a place for almost every species of pedling mer- chandise.

The sack that thou hast drunken me, would have bought me lights as good cheap at the dearest chan. Jlert in Europe. Shakspeare.

But whether black or lighter dyes are ###worn,

The chandler' basket on his shoulder borne,*

With tallow spots thy coat. Gay.

CHANDLER (Edward), bishop of Durham, was educated at Emanuel College, Cambridge. In 1693 he became chaplain to Dr. Lloyd, bishop of Litchfield and Coventry ; and in 1717 he was

made bishop of the same diocese. In 1730 he was translated to Durham, and died in 1750, aged about eighty. He was a man of considerable learning, and, besides publishing various single sermons, distinguished himself by his Defence of Christianity, from the prophecies of the Old Testament, wherein are considered all the ob- jections against this kind of proof, advanced in a late Discourse of the Grounds and Reasons of the Christian Religion, which has gone through three editions. He also wrote a Chronological Dissertation prefixed to Arnold's Commentary on Ecclesiasticus ; and a curious biographical Preface to Dr. Cudworth's Treatise on Morality.

CHANDLER (Samuel), D.D., F.R.S., and F.S.A., a respectable dissenting minister, chosen, in 171 6, pastor of the Presbyterian congregation at Peckham, where he continued some years. Here he married, and began to have a consider- able family, when, by the fatal South-sea scheme of 1720, he lost the whole fortune he had re- ceived with his wife. He engaged in the trade of a bookseller ; and officiated as joint preacher with the learned Dr. Lardner, at the meeting- house in Old Jewry, London : in which he after- wards succeeded as sole pastor. On the death of George II. in 1760, Dr. Chandler published a sermon on that event, in which he compared that prince to king David. This gave rise to a pamphlet, entitled, The History of the Man after God's own Heart; wherein the character of David was grossly vilified. Dr. Chandler, therefore, published, in 1762, A Review of

the History of the Man after God's own Heart ; and subsequently a A Critical History of the Life of David, 2 vols. 8vo. He died May 8th, 1766, aged seventy-three. In 1768 four volumes of his sermons were published by Dr. Amory ; and in 1777 was published in 4to, his Paraphrase and Notes on the Epistles of St. Paul to the Galatians and Ephesians, with a Critical and Practical Com- mentary on the two Epistles of St. Paul to the Thessalonians. Dr. Chandler also wrote, A Vindication of the Christian Religion ; Reflec- tions on the conduct of the Modern Deists, in their late writings against Christianity; A Vin- dication of the Antiquity and Authority of Daniel's Prophecies, and their Application to Jesus Christ ; and The History of Persecution.

CHANDLERY, the art and trade of making and selling candles. Generally, the manufacture and selling of sealing wax and wafers are united with it in London and other large towns ; and a variety of other trades in the country. Our present object is not to attempt to enlighten the worthy tradesman in his various pursuits, but only to exhibit the best modes of manufacturing the first of these articles, candles.

These have been made of various materials. The Roman candles were first composed of strings surrounded with wax, or dipped in pitch, then of papyrus covered with wax ; and some- times of the pith of rushes, and wax or tallow. Wax candles were at this early period preferred on occasions of ceremony and for religious offices, and tallow for common use. Lord Bacon (Nat. Hist. cent. iv. and viii.) proposes various improvements in the composition of candles, the materials to be used for their wicks &c. ; and

in modern times different resins, gums, and sa-

operation is denominated ' pulling the cotton,' by which the threads are laid smooth, all knots and unevennesses removed, and, in short, the cotton is rendered fit for use. It is now spread, that is, placed at equal distances, on rods about half an inch in diameter and three feet long ; these are called ' broaches.' When this dressing, as it is

which they call ' lobchock.' The wick is made called, is not sufficient to keep the wicks sepa- of cotton, and is wrapped round a small stick or rate from each other on the dipping sticks, a

body

match of the bamboo cane : the body of the candle is of white tallow,

coated to about the one-thirtieth of an inch thick, with a red waxy

number of them are dipped in melted tallow, and being rubbed between the palms of the hands, the tallow which adheres to them cools,

matter. This ingenious people obtain most of and the wick assumes a consistency.

their tallow from the vegetable fat of the croton 2. Of rendering and preparing the tallow. ††† The

sebiferum or tallow-tree. Generally their can- fat of the sheep and the ox furnished by butchers,

dies are firmer than those made of animal tallow, and free from all offensive odor ; but they are not equal to those of wax, or spermaceti. Inferior candles are also made of grease of too

by large and small tallow merchants, and waste- ful or dishonest servants, is chiefly employed in this manufacture. For moulded candles, sheep-tallow, is used with a certain proportion of the

little consistence to be used, and sometimes of best kind of ox-tallow ; that which is yielded

animal fat, without the contrivance of being coated with the firmer substance of the tallow- tree or wax. Their wicks are of different materials. Most commonly they use a light inflam- mable wood, in the lower extremity of which is pierced a small tube to receive an iron pin, which is fixed on the flat top of the candlestick, and thus supports the candle without the necessity of a socket. The candle-makers at Munich have for some years prepared tallow candles with wooden wicks. But in this country, and as a manufacture of some importance, a candle has been defined, a cotton or linen wick, loosely twisted, and covered with tallow, wax, or sper- maceti, in a cylindrical figure; which, being lighted at the end, serves to illuminate a place in the absence of the sun. Cotton is therefore to be considered the staple wick, and tallow or wax as composing generally the body of the candle.

Tallow candles are again of two sorts; the dipped and the moulded : called technically dips and moulds ; the latter are said to have been first invented by a M. Brez, of Paris, and are a modern improvement. Except with regard to melting the tallow and preparing the wick, the manufacture of these two kinds is very different.

by sheep-fat being brighter and of firmer tex- ture than ox-tallow, which is

employed with inferior pieces of sheep-tallow for dips.

The tallow being sorted, is prepared by chop- ping the fat, arid then boiling it for some time in a large copper, technically called rendering it ; and when the tallow is extracted by the process of fire, the remainder is subjected to the opera- tion of a strong iron press, and the cake that is left after the tallow is expressed from it is called greaves, or the crackling : with this dogs are fed, and a large portion of the ducks that supply the London markets. The liquid tallow is now drained through an iron sieve into an- other vessel, that all its fibrous or solid parts may be separated. A farther purification being still necessary, . the tallow is put into another vessel with a portion of water, which is found to carry with it to the bottom many soluble impurities remaining in the tallow. After this process the tallow is deposited or stowed away in tubs for future use : some superior makers always preferring to mix tallow after a twelve- month's age with that which is newly rendered .

3. Of the operation of Dipping. ••• The liquid tallow when drawn from the tubs is conveyed

1. Of the cotton and tlie preparation of the into a vessel called the mould, sink, or abyss, of

wick. ••• The best cotton for candle-wicks, and that which is said to be generally used for mould

an angular form like a prism, except that it is not equilateral, the side on which it opens being

candles, comes from Turkey, and other parts of seldom above ten inches high, and the others,

the Levant, packed in bales, and has often been the source of alarm, as likely to communicate the plague or other infectious disorders : that used for common candles is said to be brought from

which make its depth, fifteen. Ou the angle formed by its greater sides, it is supported by two feet, and placed on a kind of bench, in form of a trough, to catch the droppings of the candles

Smyrna in the wool, which grows on trees in a as taken out. The workman is seated so as con-

nut-shape, the shell enclosing the cotton.

The chandler employs women to wind the cotton into large balls ; he then

takes five, six, or eight of these balls, and drawing out the threads from each, cuts them into proper lengths, according to the size of the candles wanted. The machine for cutting the cotton is a smooth board, made to be fixed on the knees ; on the upper surface are the blade of a razor and a round piece of cane, placed at a certain distance from one another, according to the length of the cotton wanted : the cotton is carried round the

veniently to reach over this vessel : and he takes three sticks, or broaches, at a time, strung with the proper number of wicks, viz. sixteeen, if the candles are to be of eight in the pound ; twelve, if of six in the pound, &c. ; and holding them equidistant, by means of the second and third finger of each hand, which he puts between them, he plunges the wicks two or three times for their first lay, and and holding them some time over the vessel, to let them drain, hangs them on a rack, or irame, where they continue to grow hard and cold. When cooled, they are

cane, and, being brought to the razor, is instantly dipped a second time, then a third, as before ; separated from the several balls. The next only for the third lay they are immersed but

twice, in all the rest thrice. The operation is repeated more or less times, according to the in- tended thickness of the candles. With the last dip they neck them, as it is called, i. e. plunge them below that part of the wick where the other lays ended. The vat is supplied from time to time during the operation with fresh tallow, which is kept to the proper heat by means of a gentle fire. Such is the old mode of dipping, and that still practised largely in the country. A modern invention has diminished much of the labor of the tallow-chandler, in the mode of dipping candles. The wicks are pre- pared as has been described, and spread on the broaches, and when five or six of these broaches are filled with cotton, they are, at both ends, fixed into two small pieces of box-wood, so as to nnite, as it were, the several broaches into one moveable frame, full of wicks. This frame is suspended on one end of a lever over the vat, while the other is balanced with weights in a scale, which can be increased or diminished at pleasure. The workman has, therefore, only to guide this simple machine down and up. This apparatus has been further improved in some manufactories by the use of a horizontal wheel and an upright shaft, with twelve arms placed horizontally and at equal distances. A frame lupporting six or more rods, having each, say, eighteen wicks, is suspended from the extremity of each arm ; and the frames as they come suc- cessively over the dipping mould, are plunged

downward in the tallow. One advantage thus obtained is, that, as the wheel moves round the drippings cool regularly, and return in a fixed time to the workmen. In all these methods it is usual for the maker to be continually checking the additional weights of his candles, by transfer- ring the broaches for a moment to a pair of scales within reach.

4. For making Mould Candles ••• The mould in which moulded candles, or moulds, as they are termed, are cast, consists of a frame of wood, furnished with hollow metal cylinders, generally of pewter, of the diameter and length of the candle wanted. At the extremity of these is the neck, which is a little cavity in the form of a dome, having a moulding withinside, and pierced in the middle with a hole big enough for the totton to pass through. The cotton is introduced into the shaft of the mould by a piece of wire being thrust through the aperture of the hook till it comes out of the neck ; the other end of the cotton is so fastened as to keep it in a perpendi- cular situation, and in the middle of the candle ; the moulds are then filled with warm tallow, and left to be very cold before they can be drawn out of the pipes. The following diagram will need no further explanation :

Iff]

Some chandlers bleach their best candles by hanging them out on rods or broaches, to the dew, and earliest rays of the sun, for eight or ten days : care being taken to screen them from the too intense heat of the sun, and from rain.

The humble rush-light, so relieving to the bed of sickness, must not be forgotten as another labor of the chandler. Split rushes, and lately small cotton wicks, have been introduced into this manufacture, as intended to burn without the necessity of snuffing. The minuteness of the cotton wick makes it very well answer this purpose.

5. Of Wax Candles made by the Ladle.••• The wicks being prepared, a dozen of them are tied by the neck, at equal distances, round an iron circle, suspended directly over a large basin of copper, tinned and full of melted wax : a large ladleful of this wax is gently poured on the tops of the wicks one after another, and the operation continued till the candle arrives at its destined bigness, with this precaution, that the first three ladles be poured on at the top of the wick, the fourth at the height of three-fourths, the fifth at one-half, and the sixth at one-fourth, in order to give the candle its pyramidal form. Then the candles are taken down, kept warm, and rolled and smoothed upon a walnut-tree table, with a long square instrument of box, smooth at the bottom.

6. Wax candles are also made by the hand. The workmen begin to soften the wax by work- ing it several times in hot water, contained in a narrow but deep caldron. A piece of the wax is then taken out, and disposed by little and little around the wick, which is hung on a hook in the wall, by the extremity opposite to the neck ; so that they begin with the large end, diminishing still as they descend towards the neck. In other respects the method is nearly the same as in the former case. However, it must be observed, that in the former case water is always used to moisten the several instruments, to prevent the wax from sticking ; and, in the latter, oil of olives, or lard, for the hands, &c. The cylindrical wax-candles are either made as the former, with a ladle, or drawn. Wax-candles, or tapers, drawn, are so called because they are actually drawn in the manner of wire by means of two large rollers of wood turned by a handle, which turning back- wards and forwards several times, pass the wick through melted wax contained in a brass basin, and at the same time through the holes of an instrument like that used for drawing wire, fastened on one side of the basin.

The advantage of wax over tallow candles con- sists not entirely, as some articles of fashion, in their comparative dearness, but in a mechanical superiority in the cup of liquid oil, afforded by the inferior degree of fusibility in the wax. That is, the oil rises within and around each wick by the common capillary attraction ; tallow melts at the 92nd degree of Fahrenheit's thermometer; spermaceti at the 133rd degree ; and bleached wax at 155 degraes: hence a smaller wick serves the less fusible wax candle, or sufficiently appro- priates the rising oil. Though therefore the flame of a wax candle is not so bright as that of a tallow candle when just snuffed, its lesser bulk disposes it to bend and drop off at the top

of the flame, and thus renders unnecessary the operation of snuffing. See CANDLES.

CHA'NFRIN, n.s. Old Fr. The forepart of the head of a horse, which extends from under the ears, along the interval between the eye- brows, down to his nose.

CHA'NGE, v. a., v.n. & n. s. "| Bar.Lat. tam-

CHANGEABLE, adj. CHA'NGEABLENESS, n. s. CHA'NGEABLY, adj. CHA'NGEFUL, adj. CHA'NGELING, n. s. CHA'NGER, n. s. changer; Lat.

commuto.

hire; perhaps, saysThomson, Vfrom ajua/3w, XajufijSw; Ital. cambiare, can- glare; French, To alter ; to substitute ;

to commute; to barter. Changeling, from change, is a word arising from an odd superstitious opi- nion that the fairies steal away children, and put others that are ugly and stupid in their places ; it is, however, employed in various senses; to signify an idiot, a fool, a natural ; one apt to change ; a waverer ; anything substituted and put in the place of another. In ludicrous speech

I will now put forth a riddle unto you ; if you can find it out, then I will give you thirty sheets, and thirty change of garments. Judges.

For the elements were changed in themselves by a kind of harmony j like as in a psaltery notes change the name of the tune, and yet are always sounds.

Wisdom.

As soon as he saw the tomb where his moder lay, His colour gan to chaunge into a deadly hew.

Chaucer's Canterbury Tales.

Here is the fountaine of the wordes good ! Now therefore if thou wilt enriched bee, Arise thee well, and chaunge thy wilful mood ; Least thou perhaps hereafter wish and be withstood.

Spenser.

Unsound plots and changeful orders are daily de- vised for her good, yet never effectually prosecuted.

Id.

And her base elfin breed there for thee left : Such men do changelings call, so changed by fairies'

theft. Id. Faerie Quesne.

At length he betrothed himself to one worthy to be

liked, if any worthiness might excuse so unworthy a

changeableness. Sidney.

One Julia, that his changing thought forgot, Would better fit his chamber. Sliakspeare.

Thou shall not see me blush, Nor change my countenance for this arrest ; A heart unspotted is not easily daunted. Id. Now the tailor make thy doublet of changeable taf- feta; for thy mind is a very opal. Id.

I folded the writ up in the form of the other, Subscribed it, gave the impression, placed it safely, The changeling never known. Id.

I am weary of this moon ; would he would change- Id.

Take seeds or roots, and set some of them imme- diately after the change, and others of the same kind immediately after the full. Bacon't Nat. Hist.

If how long they are to continue in force, be no where expressed, then have we no light to direct our ludgment concerning the changeableness or immuta- bility of them, but considering the nature and quality of such laws. Hooker.

A steady mind will admit steady methods and coun- sels ; there is no measure to be taken of a changeable humour. L'Estrunye.

Twas not long

Before from world to world they swung j As they had turned from side to side, And as they changelings lived, they died.

Hudibras. The French and we still change ; but here's the

curse, They change for better, and we change for worse.

Dryden. Changelings and fools of heaven, and thence shut

out,

Wildly we roam in discontent about. Id.

A shopkeeper might be able to change a guinea or

a moidore, when a customer comes for a crown's

worth of goods. Swift.

Changes will befall, and friends may part,

But distance only cannot change the heart. Cowper,

Where 'midst the changeful scenery ever new, Fancy a thousand wondrous forms descries. Beattie.

Upon a tone,

A touch of her's, his blood would ebb and flow, And his cheek change tempestuously ??? his heart Unknowing of his cause of agony. Byron.

CHANGES, in arithmetic, the permutations or variations of any number of things, with re- gard to their position, order, &c. as how many changes may be rung on a number of bells ; how many different ways any number of persons may be placed ; how many variations may be made of any number of letters, or any other things proposed to be varied. See COMBINATION. To find out such number of changes, multiply con- tinually together all the terms in a series of arithmetical progression, whose first term and common difference are each unity or 1, and the last term the number of things proposed to be varied, thus, $1 \times 2 \times 3 \times 4 \times 5$, &c. till the last number be the proposed number of things. So that if it be asked, how many different ways a company of six persons may be placed, at table for instance, the answer will be 720 ways : but if only one person is added to this small company, the various ways in which they may be placed will amount to 5040 : and if the company be in- creased to thirteen persons, the possible varia- tions in ranking them will amount to the astonish- ing number of 6,227,020,800 different ways. This may give some idea of the incredible (we had almost said infinite) number of possible combinations of the twenty-four letters of the alphabet.

CHANGER, an officer belonging to the king's mint. See MINT, and MONEY-CHANGER.

CHANG-HAI, a town of China, in the pro- vince of Kiang-nan. In this town and the vil- lages dependent on it, are more than 200,000 weavers of cotton cloth. It is eighteen miles south-east of Song Kiang.

CHANG-TONG, an important province of the Chinese empire, bounded on the east by the province of Pe-tche-li and part of Honan, on the south by that of Kiang-nan, on the east by the Eastern Sea, and on the north by the gulf of Pe-tche-li. Along the coast are several forts. It is crossed towards the south by a chain of mountains, above 170 miles in length, and is in this quarter composed of hills and swamps, in- terspersed with large tracts of country, resem- bling our own fenny districts in Cambridgeshire. The province contains numerous lakes, rivers,

and canals: through that whicn is called the Grand Canal, the principal navigation to the south of Pekin is carried on. The principal productions are a coarse silk, wheat, millet, and indigo : and many of the inhabitants subsist by fishing. The province is divided into six dis- tricts, which contain six towns of the first class, and 114 of the second and third. The capital is Tsi-nan, on the south banks of the river Tsi, or Tsing ; and among the others of larger size, are Yentcheou, Tong-chang-tsin, Kin-kieng. The celebrated Confucius was born at Kio-feou, which contains several monuments to his memory. Population 24,000,000.

CHA'NNEL, n. s. &u. a. .Lat. canalis; Fri canal ; the course of a stream of water, a longi- tudinal cavity either for water or any other sub- stance. A strait or narrow sea between two countries, as the British channel, between Bri- tain and France ; St. George's Channel, between England and Ireland. Metaphorically a course of procedure. The verb signifies to cut any thing in channels.

It is not so easy, now that things are grown into an habit, and have their certain course, to change the channel, and turn their streams another way.

Spenser's State of Ireland.

Draw them to Tyber's banks, and weep your tears Into the channel, till the lowest stream Do kiss the most exalted shores of all. Shakspeare.

No more shall trenching war channel her fields, Nor bruise her flowerets with the armed hoofs Of hostile paces. Id.

Those oaken giants of the ancient race,

That ruled all seas, and did our channel grace.

MarveO.

Complaint, and hot desires, the lover's hell, And scalding tears, that wore a channel where they fell. Dryden's Fables.

Torrents, and loud impetuous cataracts,

Roll down the lofty mountain's channeled sides,

And to the vale convey their foaming tides. .

Blackmore.

Oh ! bear me hence, where water's force displays More useful energy ; where classic praise Adorned the names of chiefs long dead, who brought Thro' channeled rocks concentering streams, and taught One aqueduct divided lands to lave, And hostile realms to drink one common wave.

Bishop.

CHAN-SI, a province of China, and one of the smallest in the empire, is bounded on the east by Petcheli, on the south by Honan, on the west by Chen-si, and on the north by the great wall. The climate is salubrious and agreeable, and the soil generally fertile, though the country is full of mountains. The country abounds in grapes, musk, porphyry, marble, lapis lazuli, and jasper of various colors; and iron mines as well as salt pits and crystal are very com- mon. Here are five cities of the first class, and eighty-five of the second and third : the principal are Tai-youen-fou the capital, Ngan-y, Fuen-tcheou-fou, and Tai-tong-fou. Carpets and rugs are also manufactured in the province. CHA'NT, v. a. & v. n. ~\ Fr. chanter. To CHA'NTER, n. s. f sing, to celebrate by

CHA'NTRESS, n. s. ►► song, to make me-

*CHA NTRY, n. *. J lody with the voice.*

Chanter and chantress distinguish the agent and the sex of those who thus sing and make melody.

They chant to the sound of the viol, and invent to themselves instruments of musick. Amos, vi. 7.

He sette not his benefice to hire, And let his shepe acombred in the mire And ran unto London, unto seint Poules, To seeken him a chanterie for soules. Chaucer. Now go with me, and with this holy man, Into the chantry by. Shakspeare.

The poets chant in the theatres, the shepherds in the mountains. BramJtall.

Sweet bird, that shunn'st the noise of folly, Most musical, most melancholy ! Thee, chantress oft, the woods among, I woo to hear thy even song. Milton .

A pleasant grove, With chant of tuneful birds resounding loud. Id.

Heaven heard his song, and hastened his relief ; And changed to snowy plumes his hoary hair, And winged his flight to chant aloft in air. Dryden

You curious chanters of the wood, That warble forth dame nature's lays, Wotton,

How carols now the lusty muleteer, Of love, romance, devotion is his lay ? As whilome he was wont the leagues to cheer, His quick bells wildly jingling on the way, Now as he speeds, he chaunts ??? Viva el Rey !

Byron's Childe Harold.

CHANT, GREGORIAN, introduced by pope Gregory the Great, who established schools of chanters, and corrected the church music. This at first was called the Roman song ; afterwards the plain song ; as the choir and people sing in unison.

CHANTICLEER, n. s. from chanter and clair, Fr. The name given to the cock from the clearness and loudness of his crow.

A yerd she had, enclosed all about, And stickes, and a drie ditch without, In which she had a cok highte chanticlere, In all the land of crowing n'as his pere,

Chawer's Cant. Tales.

And cheerful chanticleer, with his note shrill, Had warned once, that Phoebus' fiery car In haste was climbing up the eastern hill. Spenser.

CHANTILLY, a small town of France, in the department of the Seine and Oise, twenty-five miles north from Paris. It has a forest, and near it stood the magnificent hunting s-eat of the prince of Conde, which was destroyed in the Revolution.

CHAOASES, an order of horse, in the service of the grand seignior, who always go out with the bashaw.

CHA'OS, n. s. I Lat. chaos. The mass of

CBAO'TIC, adj. J matter supposed to be in con- fusion before it was divided by the creation into its proper classes and elements. Confusion, ir- regular mixture. Anything where the parts arc undistinguished.

The whole universe would have been a confused chaos, without beauty or

order. Bentley.

Had I followed the worst, I could not have brought church and state to sueh a ehaos of confusions as some have done. Gauden for King Charles.

When the terraqueous globe was in a chaotick state, and the earthly particles subsided, then those several beds were, in all probability, reposited in the earth.

Derhun.

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Alike in ignorance, his reason such, Whether he thinks too little, or too much : Chaos of thought and passion, all confused, Still by himself abused or disabused. Pope.

Here, waiter, more wine, let me sit while I'm able, Till all my companions sink under the table ; Then, with chaos and blunders encircling my head, Let me ponder and tell what I think of the dead.

Goldsmith.

CHAOS. See EARTH. Chaos is represented by the ancients as the first principle, ovum, or seed of nature and the world. All the sophists, sages, naturalists, philosophers, theologues, and poets, held that chaos was the eldest and first principle, rt apxaiov xa►►G- The Barbarians, Phoenicians, Egyptians, Persians, &c. refer the origin of the world to a rude, mixed, confused mass of matter. The Greeks, Orpheus, Hesiod, Menander, Aristophanes, Euripides, and the writers of the Cyclic Poems, all speak of the first chaos : the Ionic and Platonic philosophers build the world out of it. Plato expressly says, ' chaos, or first matter, was the ytvoe, stock, out of which every thing was composed. The Stoics hold, that as the world was first made of a chaos, it shall at last be reduced to a chaos. Lastly, the Latins, as Ennius, Varro, Ovid, Lucretius, Statius, &c. are all of the same opinion. Nor is there any sect or nation whatever, that does not derive the SiaKOffftjffte, the structure of the world, from a chaos. It does not appear who first broached the notion of a chaos. Moses, the earliest of all writers, derives the origin of this world from a confusion of matter, dark, void, deep, without form (tohu bohu) ; which is precisely the chaos of the Greeks and Barbarian philosophers. Moses goes no farther than the creation from this chaos ; and where Moses stops, there, precisely, do all

*the rest. Dr. Burnet endeavours to show, that as the ancient philosophers, &c. who wrote of the cosmogony, acknowledged a chaos for the principle of their world ; so the divines, or writers of the theogony, derive the origin or generation of their fabled gods from the same principle. ***

CHAOS, in entomology, a genus of insects be- longing to the order of vermes zoophyta. The body has no shell or covering. It is capable of reviving after being dead to appearance for a long time, but has no joints or external organs of sen- sation. There are five species, mostly obtained by infusions of different vegetables in water, and only discoverable by the microscope. See ANI- MALCULE.

the same with chop ; nor were they probably distinguished at first, otherwise than by accident ; but they have now a meaning somewhat different, though referrible to the same original sense. To break into hiatus, or gapings. The noun is de- rived from the verb, and signifies a cleft, an aper- ture, an opening, a gaping, a chink.

Like a table upon which you may run your finger without rubs, and your nail cannot find a joint ; not horrid, rough, wrinkled, gaping, orcJtapt. BenJonson. Cooling ointment made,

Which on their sunburnt cheeks and their chapt skins they laid. Dryden's Fables,

It weakened more and more the arch of the earth- drying it immoderately, and chapping it in sundry places. Burnet.

Then would unbalanced heat licentious reign, Crack the dry hill, and chap the russet plain.

Rlackmore.

CHAP, n. s. ~\ This is not often used,

*CUA'PLESS, n. s. t except by anatomists, in CHA'P-FALLEN, adj. ** the singular. The upper CHAPS, n. s. J or under part of a beast's*

mouth.

So on the downs we see A hastened hare from greedy greyhound go, And past all hope, his chaps to frustrate so. Sidney. Open your mouth ; you cannot tell who's your friend ; open your chaps again. Shahspeare.

Now chapless, and knocked about the mazzard with a sexton's spade. Id.

Froth fills his chaps, he sends a grunting sound, And part he churns, and part befoams the ground.

Dryden.

A chapfatten beaver loosely hanging by The cloven helm. Id.

The nether chap in the male skeleton is half an inch broader than in the female. Grew's Museum.

CHAP. Goth, skapur, from skapa, to beget ; a lad, a boy ; a vulgar appellation.

CHAPE, n. s.) Fr. chape ; SKCTQ. Thus

CHA'PELESS. J derived, it signifies a co- ver, or the top of a scabbard made of brass or silver ; but traced from Fr. echope ; Sax. srftappe ; from Lat. capio. It is applied to the catch of any thing by which it is held in its place ; as the hook of a scabbard by which it sticks in the belt ; the point by which a buckle is held to the back strap.

This is Monsieur Parolles, that had the whole theory of the war in the knot of his scarf, and the practice in the chape of his dagger. Shakspeare.

An old rusty sword, with a broken hilt, and chape- less, with two broken points. Id.

CHAPEAU, in heraldry, an ancient cap of dignity worn by dukes, being scarlet-colored velvet on the outside, and lined with a fur. It is frequently borne above an helmet instead of a wreath, under gentlemen's crests.

CHA'PEL, n. s. ~) lleb.kabaeli; Ara-

CHA'PELLANY, n. s. > bic, kaaba eli ; Coptic,

CHA'PELRY, n. s. jcaphel; Gr.Kairii EXt; Goth, kapell ; Ital. capeila ; Fr chapelle ; the house of God ; a place of worship. Applied generally, since the act of toleration, to houses of worship indiscriminately, with the exception of the parish churches. In the establishment of the country, however, they are particularly distin- guished, as the second illustration will manifest. : a little wyde

There was an holy chappell edifyede, Wherein the hermite dewly wont to say

His holy things, each morne and eventyde ; Thereby a christal streame did gently play,

Which from a sacred fountaine welled forth alway.

Spenser.

A chapel is of two sorts ; either adjoining to a church, as a parcel of the same, which men of worth build ; or else separate from the mother church, where the parish is wide, and is commonly called a chapel of ease, because it is built for the ease of one or more parishioners, that dwell too far from the church, and is served by some inferiour curate, provided for at the

charge of the rector, or of such as have benefit by it, as the composition or custom is. Cowett.

She went in among those few trees, so closed in the tops together, as they might seem a little chapel.

Sidney.

Will you dispatch us here under this tree, or shall we go with you to your chapel ? Sliakspeare.

Where truth erecteth her church, he helps errour to rear up a chapel hard by. Howel.

A chapellany is usually, said to be that which does not subsist of itself, but is built and founded within some other church, and is dependent thereon. Id.

CHAPELS, FREE, such as were founded by kings of England. They are free from all epis- copal jurisdiction, and only to be visited by the founder and his successors; which is done by the lord chancellor : yet the king may license any subject to build and endow a chapel, and by letters patent exempt it from the visitation of the ordinary.

Parochial CHAPELS, differ from parish churches only in name.

CHAPELAIN (James), an eminent French poet born at Paris in 1 595, and often mentioned in the works of Balzac, Menage, and others. He wrote several works, particularly, an heroic poem, called La Pucelle, ou France Delivre'e, which employed him several years. He was one of the king's counsellors, and very covetous; and died in 1674, very rich.

CHAPEL-HILL, a post town of the United States, in Orange County, North Carolina, the seat of the new University of North Carolina. It is eleven miles south by east of Hillsborough, and 465 south-west of Philadelphia.

CHA'PERON, ra. s. French. A kind of hood or cap worn by the knights of the garter in their habits.

I will omit the honourable habiliments, as robes of state, parliament robes, chaperons, and caps of state.

Camden.

CHAPERON, CHAPERONNE, or CHAPEROON, was a sort of hood or covering for the head, an- ciently worn by both men and women, of all ranks, and afterwards appropriated to the doc- tors, and licentiates in colleges, &c. Hence the name passed to certain little shields, and other funeral devices, placed on the foreheads of the horses that drew the hearses in pompous funerals, which are still called chaperoons, or shafferoons ; because these were originally fastened on the chaperonnes, worn by those horses.

CHA'PITER, n. s. Chapiteau, Fr. The up- per part or capital of a pillar.

He overlaid their chapiter and their fillets with gold. Exodus.*

CHA'PLAIN, n. s. 1 Lat. capellanus, one

CHA'PLAINSHIP, n.s. } that officiates in domes- tic worship, or that performs divine service in a chapel, and attends the king or other person, for the instruction of him and his family, to read prayers, and preach. The peers have the pri- vilege of conferring chaplainships according to their rank. See PEERAGE. Chaplainship is the possession of the office or its revenues. Wishing me to permit

John de la Court, my chaplain} a choice hour To hˆar from him a matter of some moment.

Shahspcare.

Chaplain, away ! thy priesthood saves thy life. Id,

Since death and sin did human nature blot, The chiefest blessing Adam's chaplain got. Marvell.

A chief governor can never fail of some worthless illiterate chaplain, fond of a title and precedence.

Swift.

CHA'PLET, n. s. Chapdet, Fr. A garland or wreath to be worn about the head ; and a string of beads worn in the Romish church.

Where bene the nosegayes that she dight for thee, The coloured chaplets wrought with a chiefe. The knotted rush-ringes, and gilt rosemaree, For she deemed nothing too deere for thee.

Spenser's Shepheard's Calendar. Upon old Hyems' chin, and icy crown,

An odorous chaplet of sweet summer's buds,

Is, as in mockery, set. Shakspeare.

I strangely long to know

Whether they nobler chaplets wear,

Those that their mistress' scorn did bear,

Or those that were used kindly. Suckling.

The winding ivy chaplet to Invade, And folded fern, that your fair forehead shade.

Dryden.

They made an humble chaplet for the king. Swift.

CHA'PLET, in architecture, a little moulding carved into round beads, pearls, or olives.

CHA'PLET, a tuft of feathers on the peacock's head.

CHAPLET is frequently used to signify the circle of a crown. There are instances of its being borne in a coat of arms, as well as for crests ; the paternal arms for Lascelles are argent, three chaplets, gules.

CHA'PMAN, n. s. ceapman, Sax. A cheap- ner ; one that offers as a purchaser. And spedily the tables were ylaide,

And to the diner faste they hem spedde,

And richely this monk the chapman fedde ;

And after dinner, Dan John sobrely

This chapman toke apart. Chaucer's Cant. Tales. Fair Diomede, you do as chapmen do,

Dispraise the thing that you intend to buy.

Shakspeare.

Yet have they seen the maps, and bought 'em too, And understand 'em as most chapmen do.

Ben Jonson.

CHAPONE (Hester), an authoress, the daughter of T. Mulso, Esq. was born at Twywell in Northamptonshire, in 1727, and at the age of nineteen years is said to have written a romance. She was then discouraged by her mother from continuing her studies, but at stolen opportuni- ties composed the interesting story of Fidelia in the Adventurer, an Ode to Peace, and a Poem prefixed to the translation of Epictetus, by Mrs. Carter. She married, in 1760, Mr. Chapone, a legal gentleman, but her married life lasted only ten months, and was not happy. She was now and for the rest of her life a widow in nar- row circumstances. In 1770 she went with Mrs. Montague to Scotland, and in 1773 appeared her Letters on the Improvement of the Mind. This was followed by a volume of Miscellanies. But the loss of a beloved niece, to whom her Letters were addressed, and that of her brother, preying upon her mind, she gradually declined in health, and expired at Hadley, December 25th, 1801. Her works, with a sketch of her life were collected and published in 1807.

CHAPPE, in heraldry, the dividing an es- cutcheon by lines drawn from the centre of the upper edge to the angles below, into three parts, the sections on the sides being of different metal or color from the rest.

CHATTER, n. s. Cfiapitre, Fr. from capi- tulum, Latin. A division of a book. The pro- verbial phrase, ' to the end of the chapter/ signifies throughout; to the end.

Now for as moche as the second part of penitence stont in confession of mouth, as I began in the first chapitre, I say, seint Augustine saith sinne is every word aud every dede, and all that men coveiten, against the law of Jesus Christ. Chaucer. Persones Tale.

The first book we divide into three sections ; where- of the first is these three chapters. Burnet's Theory.

If these mighty men at chapter and verse, can pro- duce no scripture, to overthrow our church ceremo- nies, I will undertake to produce scripture enough to warrant them. South.

Money does all things ; it gives and it takes away, it makes honest men and knaves, fools and philoso- phers ; and so forward, mutatis mutandis, to the end of the chapter. L' Estrange.

CHA'PTER, from capitulurn, signifieth, in our common law, as in the canon law, whence it is borrowed, an assembly of the clergy of a cathe- dral or collegiate church. Cowell.

The abbot takes the advice and consent of his chap- ter, before he enters on any matters of importance.

Addison on Italy. So skimming the fat off, Say grace with your hat off, O, then with what rapture Will it fill dean and chapter I Gay.

The place where delinquents receive discipline and correction. Ayliffe 's Parerg.

A decretal epistle. Id.

Chapter-house ; the place in which assemblies of the clergy are held.

Though the canonical constitution does strictly re- quire it to be made in tlie cathedral, yet it matters not where it be made, either in the choir or chapter- house. Ayliffe ' Parerg.*

CHAPTER, in ecclesiastical polity, an assem- bly of the clergy of a collegiate church or cathe- dral. It was in the eighth century that the body of canons began to be called a chapter. They were a standing council to the bishop, and, dur- ing the vacancy of the see, had the jurisdiction of the diocese. In the early ages the bishop was head of the chapter; afterwards abbots and other dignities were preferred to this distinction. The deans and chapters had the privilege of choosing the bishops in England; but Henry VIII. got this power vested in the crown. Those he thus regulated were called deans and chapters of the new foundation ; such are Canterbury, Win- chester, ˆEly, Carlisle, 8cc. See DEAN.

CHA'PTREL, n. s. probably from chapiter. The capitals of pillars, or pilasters, which sup- port arches, commonly called imposts.

Let the keystone break without the arch, so much as you project over the jaums with the chaptrels.

Moron.

CHAR. Lat. scarus ; Irish, cear, red ; from Kipptv, a kind of trout, found only in Winander- jnueer, Lancashire.

CHAR, n.s. & v. a. } Bar. Lat. carlo;

CHA'RCOAL. j Fr. charbon, from

K►►ta►►, wood burnt to cinders. To blacken wood by burning it in the fire. Charcoal is thus pro- duced.

Spray wood, in charring, parts into various cracks.

Woodward Love is a fire that burns and sparkles

In men as naturally as in charcoals,

Which sooty chymists stop in holes,

When out of wood they extract coals. Hudibras.

Is there who, locked from ink and paper, scrawls, With desperate charcoal round his darkened walls ?

Pope.

I see no frightful spectacle of infuriated power, or suffering humanity ►►► I see no tortures ►►► I hear no shrieks ►►► I no longer see the human heart charred in the flame of its own vile and paltry passions ►►► black and bloodless ►►► capable only of catching and commu- nicating that destructive fire by which it devours, and is itself devoured. Curran's Speechet.

CHAR, n. s. & v. n.) Teut. kar ; Saxon,

CHA'RWOMAN, n. s. $ cerre ; Swedish, kora; Sax. cerren ; Teut. kerren ; to go about, to turn. Thus the noun signifies a turn, a job, a day's work. To char is to work at other's houses by the day, without being a hired servant. Thus a charwo- man is a woman hired incidentally for odd work, or single days.

A meer woman, and commanded

By such poor passion, as the maid that milks

And does the meanest chars. Shalispeare.

She, harvest done, to char work did aspire ;

Meat, drink, and two-pence were her daily hire.

Dry den.

*Get three or four char-women to attend you con- stantly in the kitchen,
ॡ whom you pay only with the broken meat, a few coals, and all the cinders.*

Swift.

CIIARA, in botany, a genus of the monandria order and monoecia class of plants. Male, CAL. none : COR. none : anthera placed under the germen. Female, CAL. tetraphyllous : COR. none; the stigma quiuquefid : SEED, polyspermous- berry.

CHARABON. See CHERIBON.

CHARACENE, the most southern part of Susiana, a province of Persia, lying on the Persian Gulf, between the Tigris and the Eulaeus ; so named from the city of Chorax. It was seized by Pasines, the son of Sogdonacus, king of the neighbouring Arabs, during the troubles of Sy- ria, and erected into a kingdom. Lucian calls him Hyspasines, and adds, that he ruled over the Characeni and the neighbouring people : he died in the eighty-fifth year of his age. The only other kings of this country, mentioned by the ancients, are Teraeus, who died in the ninety- second year of his age ; and after him Artabazus VII. as Lucian informs us, who was driven from the throne by his subjects, but restored by the Parthians.

CHA'RACTER, n. s. & v. aˆ Lat. charac-

CiiARAcrERi'sxiCAL, adj. \ ter ; Gr. Xa-

CHARACTERI'STICALNESS. [paicrjjp.Itspri-

CHARACTERI'STIC. ˆmary sense is a

CHARACTERIZE, v. a. mark, a stamp,

CHA'RACTERLESS. an impression.

CIIA'RACTERY. J In its secon-

dary meaning it is applied to the instrument tha!

produces the mark, stamp, or impression : thus, the hand or manner of writing is termed charac- ter ; so are letters used in printing or writing. Hence it has proceeded to denote whatever distinguishes any thing or person ; the marks and impressions which they exhibit of qualities good or bad. Whatever enacts, represents, or describes, gives the character. Hence fictitious personages on the stage, are called the charac- ters. The peculiar properties, whether natural or moral, or both, constitute the character. As these are the qualities that strike or impress others, they are so termed.

I found the letter thrown in at the casement of my closet. You know the character to be your brother's.

Shakspeare.

But his neat cookery !

He cuts our roots in characters. Id.

Shew me one scar charactered on thy skin. Id. And mighty states characterless are grated

To dusty nothing. Id.

All my engagements I will construe to thee,

All the charactery of my sad brows. Id.

They may be called anticipations, prenotions, or sentiments, characterized, and engraven in the soul, born with it, and growing up with it.

Hole's Origin of Mankind. In outward also her resembling less

His image, who made both ; and less expressing

The character of that dominion given

O'er other creatures. Milton. Paradise Lost.

The pleasing poison

The visage quite transforms of him that drinks,

And the inglorious likeness of a beast

Fixes instead, unmpulding reason's mintage,

diarectered in the face. Id.

Each drew fair characters, yet none

Of these they feigned excels their own. Denham.

The shining quality of an epick hero, his magnani- mity, his constancy, his patience, his piety, or what- ever characteristical virtue his poet gives him, raises our admiration. Id.

There are faces not only individual, but gentili- tious and national ; European, ??? Asiatick, Chinese, African, and Grecian faces are characterized.

A r but knot on Air.

The chief honour of the magistrate consists in maintaining the dignity of his character by suitable actions. Atterbury.

It is some commendation, that we have avoided publicly to characterize any person, without long ex- perience. Swift.

This vast invention exerts itself in Homer, in a manner superior to that of any poet ; it is the great and peculiar characteristich which distinguishes him from all others. Pope.

This subterraneous passage is much mended, since Seneca gave so bad a character of it.

Addison on Italy.

Some write a narrative of wars, and feats Of heroes little known ; and call the rant An history : describe the man, of whom His own coevals took but little note, And paint his person, character, and views, As they had known him from his mother's womb.

Cotcper. The Garden.

CHARACTER, in a general sense, signifies a mark or figure, drawn on paper, metal, stone, or other matter, with a pen, graver, chissel, or other instrument. The various kinds of characters may be reduced to three

classes, viz. literal characters, numeral characters, and abbreviations.

CHARACTERS, LITERAL, are letters of the al-

phabet, serving to indicate some articulate sound, expressive of some idea or conception of the mind. See ALPHABET.

CHARACTERS, AKABIC NUMERAL, are the common figures now used throughout Europe and America, in all sorts of calculations. See ARITHMETIC.

CHARACTERS, FRENCH NUMERAL, used in the ci-devant chamber of accounts, and by those concerned in the revenue, were chiefly Roman numerals, only in small letters : thus j, or i, i, v 5, x 10, 1 50, and c 100. But instead of m, or cjc, the Greek y was used for 1000 ; and some- times jjjxxx for 90 : b was also used for v 5.

CHARACTERS, GREEK NUMERAL. The Greeks had three ways of expressing numbers: ××× I. Every letter, according to its place in the al- phabet, denoted a number from a, 1, to w, 24. In this manner the books of Homer's Iliad are numbered. II. Another way was by dividing the alphabet into, first, 8 Units: a 1, /3 2, &c. Secondly, 8 tens: i 10, K 20, &c. Thirdly? 8 hundreds : p 100, a 200, &c. And, to complete these numbers, the contraction III. The third way was by six capital letters, being the initials of the words; thus, I [ia for put] 1 ; n [Trsvrf] 5 ; A [Siica] 10 ; H [Hicarov] 100 ; X [xiXut] 1000 ; M [/luptaj 10,000 : and when the letter n enclosed any of these, except I, it showed the enclosed letter to be five times its own value, as

JA| 50, |H| 500, JXJ 5000, JM| 50,000.

*CHARACTERS, HEBREW NUMERAL. The He- brew alphabet was divided into nine units: K 1, 3 2, &c.××× 9 tens : ' 10, 3, 20, &c.××× 9 hundreds : p 100, T 200, &c. T 500, ×× 600, 3 700, *) 800, ×× 900. Thousands were sometimes expressed by the units prefixed to hundreds, as "iSnK, 1534, &c., and even to tens, as, ××××, 1070, &c. But generally by^the word t\h&, 1000; D'^X, 2000 ; Q'S^K, with the other numerals prefixed, to signify the number of thousands; e.g. O^KD, 3000, &c.*

CHARACTERS, ROMAN NUMERAL, consist of seven majuscule letters of the Roman alphabet, viz. I, V, X, L, C, D, M. The I denotes 1, V 5, X 10, L 50, C 100, D 500, and M 1000. The I repeated twice makes 2, II; thrice, 3, III ; four is expressed thus IV, as I before V or X takes one from the number expressed by the letters. One I added to V. makes VI. 6 ; two, VII. 7 ; and three, VIII. 8 ; nine is expressed by an I before X, thus, IX. X before L or C, diminishes the number by tens : thus, XL de- notes forty, XC ninety

; but X after L or C, proportionably increases them ; as LX sixty ; LXX seventy, &c. The C before D or M di- minishes each by a hundred. Five hundred is sometimes expressed by an I before a C inverted thuslQ; and jl 000 by an I between two C's, the one direct and the other inverted, thus CI3. The addition of C and 3 before and after, raises C!Q by tens ; thus, CCI33 expresses ten thou- sand, CCCI^33, a hundred thousand. The Romans also expressed any number of thousands

by a line drawn over any numeral less than a thousand; thus~V denotes 5000; "DT 60,000; so likewise M is one million, MM two rail- lions, &c.

CHARACTERS OF THE ASPECTS, NODES, &c. Bq. Biquintile <5 or S Conjunction

SI Dragon's head SS Semisextile

*751 Dragon's tail * Sextile*

□□ Opposition Td. Tredecile

n Quartile A Trine

Q Quintile Vc. Quincunx

CHARACTERS OF THE PLANETS. See PLANETS.

CHARACTERS OF THE SIGNS. See ZODIAC.

CHARACTERS IN CHEMISTRY. See CHEMISTRY.

CHARACTERS IN GEOMETRY AND TRIGONOME- TRY, ARE

/. an angle ' a minute

*/. right angle * a second*

0 a circle '" a third

0 a degree "" fourths

V Equiangular, or si- J_ perpendicular = milar [ ] Zj rectangle

_L equilateral D square

|| parallel A triangle

CHARACTERS IN GRAMMAR, POETRY, RHETORIC,

&c. ARE

! admiration ‘ emphasis, or accent

‘ apostrophe – hyphen

- asterisk ? interrogation

breve IT paragraph

A caret ( ) parenthesis

A circumflex . period

: colon ” quotation

, comma f J references

[] crochet ►► section

- dialysis ; semicolon

CHARACTERS IN MEDICINE AND PHARMACY, ARE

of each alike.

Ana, 5

C. C. cornu cervi, hartshorn

Coch. cochleare, a spoonful

Cong, congius, a gallon

Gr. grains

L. L. laudanum

P. JR. paries aqua.es, equal quantities

P. P. pulvis patrum, Jesuits’ bark

S. A. secundem artem, according to art

Ss. or ss. semis, the half of any tiling

Tinct. Theb. tinctura thebaica, laudanum, &c.

CHARACTERS IN Music. See Music.

CHARACTERS IN OLD LAW WRITINGS AND INSCRIPTIONS.

CHARACTER, in natural history, is synonymous with the definition of the genera of animals, plants, &c.

CHARADE, a modern species of literary amusement. It owes its name to the idler who invented it. Its subject must be a word of two syllables, each forming a distinct word; and these two syllables must be concealed in an enig- matical description, first separately, and then to- gether. It is too well known to young persons to require any illustration in a Dictionary of Science.

the feet have three toes. There are about thirty- two species, of which the following are the most remarkable : 1. C. hiaticula, the sea lark of Ray, has a black breast, a white streak along the front, the top of the head is brown, and the legs and beak are reddish. They are found on the shores of Europe and America. 2. C. morinel- lus, the dotterel of Ray, has an iron-colored breast, a small white streak on the breast and eye-brows, and black legs. It is a native of Europe, and is found in the counties of Cam- bridge, Lincoln, and Derby. 3. C. cedicnemus, the stone curlew of Ray, is of a gray color, with two of the prime wing feathers black, but white in the middle ; it has a sharp bill, and ash- colored feet, and is about the size of a crow. In Hampshire, Norfolk, and on Lincoln heath, it is called the stone curlew, from a similarity of colors to the curlew. It has a shrill voice, somewhat resembling that of the black woodpecker, which it raises and lowers successively, uttering agree- able notes. 4. C. pluvialis, the green plover of Ray, is black above, with green spots, white underneath, and the feet are ash-colored. It is a native of Europe. 5. C. Zelandicus, the New Zealand plover, has the fore part of the head, the eye, chin, and throat, black, passing backwards in a collar at the hind head ; all the back part of the head, behind the eye, greenish ash-color ; these two colors divided by white ; the plumage on the upper parts of the body is the same color as the back of the head : the quills and tail are dusky : the last order of coverts is white for some part of their length, forming a bar on the wing : the under parts of the body are white, and the legs red. It inhabits Queen Charlotte's Sound ; where it is known by the name of doodooroa at- too.

CHARASM, a fertile country of Asia, bounded on the north by Turkestan,

east by Great Bucha- ria, south by Khorasan, and west by the Caspian Sea. It is divided among several Tartarian princes, of whom one takes the title of khan, with a sort of pre-eminence over the rest. See KHA- RASM.

CHARBON, in the menage, the little black spot or mark which remains after a large spot in the cavity of the corner teeth of a horse. About the seventh or eighth year, when the ca- vity fills up, the tooth being smooth aud equal, it is said to be rased.

CHARCAS, or CHERCOS, a province or in- tendancy of the united provinces of South America, formerly included in the kingdom of Peru; and then, by the Spanish government, with the vice-royalty of Buenos Ayres. It is a mountainous region that has been little explored, but is described as bounded on the north by Peru, on the east by Brasil, and on the west by the great ridge of the Andes. It is nearly 900 miles in length; subject, in the mountains, to extreme cold, and to excessive heat in the plains.

CHARCOAL. See CARBON and GUNPOW-

CHARDIN (Sir John), a celebrated traveller, born at Paris in 1643. His father, who was a

CHARADRIUS, in ornithology, a genus be- jeweller, had him educated in the Protestant re-

longing to the order of grallse. The beak is cy- lindrical and blunt ; the nostrils are linear, and

ligion : after which he travelled into Persia and India. He came to England subsequently to the

revocation of the edict of Nantes, in 1685, and had the honor of knighthood conferred on him by Charles II. He died at London in 1713. His account of his travels is much esteemed.

*CHARENTE, a department of France, bc-unded by those of the Deux Sevres and Vienne on the north ; Upper Vienne on the east ; Dordogne on the south ; and Lower Charente on the west. It
ncludes the ci-devant province of Angoumois. Angouleme is the capital. The air is generally warmer than at Paris, though the country is hilly. The soil produces*

abundance of wheat, rye, oats, Spanish corn, saffron, grapes, and all sorts of fruits. It has several iron mines, which yield a very good sort of iron. This province suffered severely during the civil wars in La Vendee.

CHARENTE, LOWER, a department of France, bounded by that of the Charente on the east; Gironde on the south ; the Bay of Biscay on the west ; the department of La Vendee on the north, and that of the Deux Sevres on the north- east. It consists of the ci-devant province of Aunis and Saintonge. Saintes is the capital.

CHARENTE, a river of France, which rises in the department of the Dordogne, and after run- ning through the two departments, to which it gives name, and passing by Angouleme, Saintes, and Rochefort, falls into theBay of Biscay, oppo- site to the isle of Oleion. It abounds with ex- cellent fish, and often overflows its banks.

CHARENTON, a town of France, four miles south-east of Paris, seated on the Seine, near its confluence with the Marne. In this town the Protestants had their principal church, which was demolished upon the revocation of the edict of Nantes. Also a town of France, in the depart- ment of the Allier, the ci-devant province of Bourbonnois, seated 011 the Marmande.

CHARES the Lydiau, a celebrated statuary, was the disciple of Lysippus, and the con- structor of the famous colossus of the sun, in the city of Rhodes. Flourished 288 years before Christ.

CHARETTE (de la Contrie, F.A.), a celebrated French royalist, born in 1763. He was bred to the navy, and rose to the rank of lieutenant ; but is chiefly famed as the leader of a party of royalists in La Vendee. He was defeated in February, 1796, and wounded in the head, besides having three fingers cut off with a sabre. He escaped from the field of battle, but in a short time after was taken in a wood, and carried to Nantes, where he was shot in March following. He refused to kneel, but laid open his breast, and, with a spirit undaunted, gave the signal for the soldiers to fire.

CHA'REY, adj. ˆ Teut. cherig, kareg, karg.

CHA'RILY, adv. > Careful, attentive, saving;

CHA'RINESS. n. J caution; nicety; scrupu- lousness. .

What paper do you take up so charily ?

Shakspeare.

I will consent to act any villany against him, that may not sully the

chariness of your honesty. Id.

The chariest maid is prodigal enough, If she unmask her beauty to the moon.

Id.

CHARGE, v.a.,v. n.,& n. s.ˆ. Lat. curatio. CHANGEABLE, adj. I Care, trust,

CHA'RGEABLENESS, n. s. (commission for CHA'RGEABLY, adv. Ta certain pur-

CHA'RGEFUL, adj. l pose. When sy-

*CHA'RGER, n. s. * nonymouswiih*

the Fr. charge, Ital. carica, carca, Span, carga, it means a load, weight, pressure, attack, impo- sition, expense, command. The verb is derived from this, and signifies to load, press upon, at- tack, onerate, impose, command ; as also to en- trust; to commission.

And the captain of the guard charged Joseph with them, and he served them. Genesis.

The priest shall cftargeher by an oath. Numbers. And his angels he charged with folly. Job.

Hir dremes shul not now be told for me j Ful were hir hedes of fumositee, That causeth dreme of which ther is no charge.

Chaucer. The Squiere's Tale. Fiercely at first those knights they .did assayle., And drove them to recoile, but when againe They gave fresh charge their forces gan to fayle, Unable their encounter to sustaine. Spenser,

Saul might even lawfully have offered to God, those reserved spoils, had not the Lord, in that par- ticular case, given special charge to the contrary.

Hooker.

He procured it not with his money, but by his wisdom ; not chargeably bought by him, but liberally given by others by his means. Asc/utm.

Thou canst not, cardinal, devise a name So slight, unworthy, and ridiculous, To charge me to an answer as the pope.

Shakspeare.

What a sigh is there. The heart is

sorely charged. Id.

Asses of great charge. Id,

What you have charged me with, that I have done.

Id.

With his prepared sword he charges home My unprovided body, lanced my arm. Id.

Here's the note

How much your chain weighs to the utmost carat, The fineness of the gold, the charge/id fashion. Id.

I may not suffer you to visit them ; The king hath strictly charged the contrary. Id.

Their neighing coursers daring of the spur, Their armed staves in charge, their beavers down.

Id.

Their charge was always born by the queen, and duly paid out of the exchequer.

Bacon's Advice to Villiers.

Honourable retreats are no ways inferior to brave charges ; as having less of fortune, more of discipline, and as much of valour. Id. War with Spain.

He who requires

From us no other service, than to keep This one, this easy charge ; of all the trees In Paradise, that bear delicious fruit So various, not to taste that only tree ××× Of knowledge, planted by the tree of life.

Milton.

Why hast thou, Satan, broke the bounds prescribed To thy transgressions, and disturbed the charge Of others ? Id. Paradise Lost.

Nothing can be a reasonable ground of despising a man, but some fault or other chargeaole upon him.

South.

They both accept the cltarge wilh me, To fight a battel from all gunshot free.

Marvell.

CHA

337

CHA

No more accuse thy pen, but charge the crime On native sloth, and negligence of time. Dryden.

The Grecians rally, and their powers unite ; With fury charge us, and renew the fight. Id.

Why dost thou turn thy face ? I charge thee, an- swer To what I shall enquire. ”

All the tributes land and sea affords, Heaped in great charges load our sumptuous boards.

Denham.

That which most deters me from such trials, is not their chargeableness, but their unsatisfactoriness, though they should succeed. Boyle.

A fault in the ordinary method of education, is the tharging of children’s memories with rules and pre- cepts. Locke.

It is not barely the ploughman’s pains; the reaper’s and thrasher’s toil, and the baker’s sweat, is to be counted into the bread we eat ; the plough, mill, oven, or any other utensils, must all be charged on the account of labour. Id.

It is easy to account for the difficulties he charges on the peripatetick doctrine. Id.

The gospel chargeth us with piety towards God, and justice and charity to men, and temperance and chastity in reference to ourselves. Tillotson.

Go, first the master of thy herds to find,

True to his charge, a loyal swain and kind. Pope.

We charge that upon necessity, which was really desired and chosen. Wattt's Logic.

Distinguished by the splendour of his arms, he charged in person the cavalry of his rival ; and his irresistible attack determined the fortune of the day.

Gibbon. Here pause we for the present ••• as even then

That awful pause dividing life from death, Struck for an instant on the hearts of men,

Thousands of whom were drawing their last breath ; A moment, and all will be life again! The march ! the charge ! the shouts of either faith !

Byron.

What ho ! my chargers ! Never yet were better, Since Phaeton was upset into the Po.

Id. Deformed Transformed.

CHARGE, in gunnery. See GUXNERY.

CHARGE, in heraldry, is applied to the figures represented on the escutcheon, by which the bearers are distinguished from one another. Too many charges are not so honorable as fewer.

CHARGE, in law. It signifies also a thing done that bindeth him who doth it ; of which discharge is the removal. Lands may be charged in various ways ; as, by grant of rent out of them ; by sta- tutes, judgments, conditions, warranties, 8cc.

CHARILA, a festival observed once in nine years by the Delphians, and so called after a girl named Charila, who was sacrificed at Delphi in a famine.

CHA'RIOT, n.s.v. a.ˆ Fr. chariot; Ital.

CHARIOTE'ER, n.s. fcarrelto; Welsh car-

CHA'RIOT-RACE. j rliod. A wheeled car ;

for it is well known the Britons fought in such. Chaucer writes it char. Also

a lighter kind of coach with only front seats ; a carriage of plea- sure.

Amonges other thinges that he wan Hire char, that was with gold wrought and pierrie ; This grete Remain, this Aurelian, Hath with him lad for that men shuld it see.

Chaucer. Monhes Tale. VOL. V.

Thy grand captain Antony, Shall set thee on triumphant cluiriots, And put garlands on thy head. Shalispeare.

An angel all in flames ascended, As in a fiery column charioting His godlike presence.

Milton's Sampson Ayonistei.

All the ground,

With shivered armour strown, and on a heap, Chariot and charioteer lay overturned, And fiery foaming steeds. Id. Paradise Lost.

But at my back I always hear Time's winged chariot hurrying near, And yonder all before us lye, Deserts of vast eternity. Marvell.

Show us the youthful handsome cJiarioteer, Firm in his seat, and running his career. Prior. There is a wonderful vigour and spirit in the de- scription of the horse and chariot-race. Addison.

Or when the sun casts a declining ray, And drives his chariot down the western way, Let your obsequious ranger search around, Where yellow stubble withers on the ground.

Gay's Rural Sports.

CHARIOTS, in antiquity, were chiefly used in war, and called bigae, trigae, &c. according to the number of horses applied to draw them. Every chariot carried two men, who were probably the warrior and the charioteer ; and we read of seve- ral men of note and valor employed in driving the chariot. Warriors in close fight, alighted out of the chariot, and fought on foot; but when they were weary, which often happened by rea- son of their armour, they retired into their cha- riots, and thence annoyed their enemies with darts and missive weapons. The covinus was a war chariot, and a very terrible instrument of de- struction ; being armed with sharp scythes and hooks for cutting and tearing all who came within its reach. This kind was made very slight, and had few or no men in it besides the charioteer ; being designed to drive with great force and ra- pidity, and to do execution

chiefly with its hooks and scythes. The essedum and rheda were also war chariots, probably of a large size, and stronger made than the covinus, designed for containing a charioteer, and one or two warriors. The greatest number of the British war chariots seem to have been of this kind. Chariots were sometimes consecrated to the sun. The trium- phal chariot was one of the principal ornaments of the Roman celebration of a victory.

CHARISIA, in antiquity, a wake, or night festival, instituted in honor of the graces.

CHARITES, and Gratia;, in heathen my- thology, the three Graces; the daughter of Ju- piter and Eurynome. Their names were Aglaia, Thalia, and Euphrosyne.

CHA'RITY, n. s. ˆ Lat. caritas ; Fr. cha-

CHA'RITABLE, adj. yrite ; xaPa- Love; kind-

CHA'RITABLY, adv.j ness ; beneficence. Its

sweeter acceptation is alms-giving, or relief

given to the poor.

Concerning charity, the final object whereof is that incomprehensible beauty which shiueth in the coun- tenance of Christ, the Son of the living God. Hooker.

There she awhile him stayes, himselfe to rest, That to the rest more hable he might be : During which time, in every good behest, And godly worke of alines and charitee, Shee him instructed with great induslrie. Speiuer

z

We must incline to the king ; I will look for him, and privily relieve him ; go you and maintain talk with the duke, that my charity be not of him per- ceived. Shakspeare.

How had you been my friends else ? Why have you that charitable title from thousands, did younotrhiefly belong to my heart ? Id. Timon.

Only add

Deeds to thy knowledge answerable ; add faith,

Add virtue, patience, temperance ; add love,

By name to come called charity, the soul

Of all the rest. Milton.

By thee,

Founded in reason, loyal, just, and pure,

Relations dear, and all the charities

Of father, son, and brother, first were known. Id.

He that hinders a charitable person from giving alms to a poor man, is tied to restitution, if he hin- dered him by fraud or violence. Taylor's Holy Living. I never had the confidence to beg a charity.

Dryden.

The heathen poet, in commending the charity of Dido to the Trojans, spoke like a Christian. . Id.

My errours, I hope, are only those of charity to mankind ; and such as my own charity had caused me to commit, that of others may more easily excuse.

Id.

Charity, or a love of God which works by a love of cur neighbour, is greater than faith or hope.

A tier bury. In faith and hope the world will disagree,

But all mankind's concern is charity. Pope.

Pleased with his guests the good man learned to

glow,

And quite forgot their vices in their woe ; Careless their merits or their faults to scan, His pity gave ere charity began. Goldsmith.

The societies which were instituted in the cities of the Roman empire were

united only by the ties of faith and charity. Gibbon.

CHARITY, FEASTS OF. See AGAPE.

CHARITY OF OUR LADY, in church history, a ci-devant religious order in France, established in the thirteenth century, which, though charity was the principal motive of their union, became so disorderly and irregular, that their order dwindled, and at last became extinct.

CHARITY OF ST. HIPPOLITUS, a religious con- gregation, founded about the end of the four- teenth century, by one Bernardin Alvarez, a Mexican, in honor of St. Hippolitus, the martyr, patron of Mexico, and approved of by pope Gre- gory XIII.

CHARITY, ORDER OF. There are- several re- ligious orders which bear this title ; particularly one instituted by St. John de Dieu, for the as- sistance of the sick ; approved of in 1520, by Leo X. and confirmed by Paul V. in 1617. They apply themselves wholly to the service of the diseased.

CHARK. See CHAR. To make charcoal.

Excess either with an apoplexy knocks a man on the head, or with a fever, like fire in a strong water shop, burns him down to the ground ; or, if it flames not out, charks him to a coal.

Grew' Cosmologia Sucra.*

CHARKOV, or KHARKOF, a town and go- vernment of Europe in 'Russia, standing on the rivers Charka and Lapan, which divide it into three parts. Here has long been a considerable monastic college, which, in 1803, was erected

into a university ; and the town contains ten churches, two convents, and 11,000 inhabitants. The houses are mostly of wood, and the place is very ill paved. Four great yearly fairs are held at Charkov. It is 350 miles south- west of Mos- cow, and 640 S.S.E. of Petersburg.

CHA'RLATAN, n. s. } Yr. charlatan; ltd.

CHARLATA'NICAL, adj. \ciarlatano; a market

CHA'RLATANRY, n. s. j crier, a quack; from ciarlare ; Lat. ciere. A mountebank ; an igno- rant pretender to knowledge ; one who wheedles and cheats.

For charlatans can do no good, Until they're mounted in a crowd.

Hudibras.

A cowardly soldier and a charlatanical doctor, are the principal subjects of comedy. Cowley.

CHARLEMONT (James Caulfield), Earl of, an Irish literary nobleman, patriot, and the friend of Burke, Flood, and other celebrated statesmen of the sister island ; travelled when young, in France, It .ly, Greece, and Asia Minor. On his return he took his seat in the Irish house of peers as baron Caulfield, and was raised in 1763 to the earldom of Charlemont. He is re- markable both for the firmness and mildness with which he acted as the commander of the armed volunteer association of Ireland, who, during the American war, obtained the relinquishment of all control over Ireland by the British legislature. He was president of the Royal Irish Academy ; and died much esteemed and respected, in August, 1799, aged seventy. Letters highly honorable to this nobleman have appeared in a volume en- titled, Original Letters, principally from lord Charlemont, Edmund Burke, &c. to the right hon. Henry Flood, 1820, 4to., and an interesting life of him, by Mr. Hardy.

CHARLEMONT, a fortress on the frontiers of the Netherlands, and now belonging to that kingdom. It was ceded to France by the treaty of Nimeguen, and retained by that power till 1815, when it was given up to the sovereign of the Netherlands. While under the French do- minion it formed part of the department of the Ardennes. It is about twenty-five miles south- west of Namur. Long. 4►► 40′ E., lat. 50►► 6′ N.

CHARLEMONT, a town of Ireland, situated on the Blackwater, in the county of Armagh, about six miles south-east of Dungannon, and sixty- eight north-west of Dublin. Long. 6►► 50 W., lat. 50►► 16′ N.*

CHARLEROY, a strong town of the Nether- lands, in the county of Namur. It is situated on the Sambre, eighteen miles west of Namur; and has often been taken and retaken in the wars of the Netherlands. At Ligny, near this town, Napoleon first attacked the Prussian line, just previous to the battle of Waterloo, defeated it, and compelled it to fall back to Wavres. Since the peace the fortifications have been re- paired ; and the town now contains 4000 inha- bitants.

CHARLEMAGNE. See FRANCE.

CHARLES I. and II. See ENGLAND. ‘

CHARLES V. See GERMANY and SPAIN.

CHARLES IX. See FRANCE.

CHARLES XII. See SWEDEN.

CHARLES, a county of Maryland, on ihe western shore, bounded on the south and west

by the Potomac, which separates it from Vir- ginia ; on the north by Prince George's ; on the east by the Patuxent, and on the south-east by St. Mary's. It is twenty-seven miles long, and equally broad. The lands in general are low and sandy, and produce tobaoco, Indian corn, and potatoes. The chief town is Port Tobacco.

CHARLES, LAKE ST., a lake of Lower Canada, twelve miles north of Quebec. It is surrounded by most beautiful scenery, and extends about four miles in length, giving its source to a river of the same name, which is not above thirty yards wide at its mouth, and falls into the ocean near Quebec.

CHARLES, a river of Massachusetts, which flows from a spring near Hopkinton, in Wor- cester county, and falls into Boston harbour, between that city and Charlestown. It is na- vigable in boats for seven miles, up to Water- town. In its course through Newton township it has several romantic and picturesque water- falls. Two bridges are erected over it. See CHARLESTON.

CHARLES, CAPE, a promontory of Virginia, on the north side of Chesapeake Bay. Long. 75►► 30′ \V., lat. 37►► 12′ N.

CHARLES, CAPE, a promontory on the south- west part of the strait, entering Hudson's Bay, Long. 75►► 15′ W., lat. 62►► 10′ N.

CHARLES-CITT, a county in Virginia, thirty miles long, and nine broad. It is bounded on the north and east by the Chickahominy, which separates it from the counties of New Kent and James-city ; on the south and west by James- river, and on the north-west by Henrico.

CHARLES'S WAIN, n. s. The northern con- stellation called the bear. ' Karl wagn,' says Thomson, ' in the Gothic dialect, is supposed by some to be named after Thor, who was called karl ; by others from Charlemagne.'

There are seven stars in Ursa minor, and in Charles's- wain, or Plaustrum of Ursa major, seven.

CHARLESTON, a district of the United States, in South Carolina, bounded on the north- east by that of George-town ; on the north-west by Orangeburgh; on the soirth-west by Beau- fort, and on the south-east by the ocean. Its form is oblong, being about sixty miles long and fifty-five broad. It is watered by the rivers \N ando, Cooper, Ashley, Ponpon, Ashepoo, and Combahee. The soil near the rivers and on the coast is rich and well cultivated, producing large crops of Indian corn, rice, indigo, &c.

CHARLESTON, a handsome city in the above district, and the capital of the state, situated on the peninsula formed by the Ashley and the Cooper, which unite on the east side "of it, fall into the ocean six miles east by south of it, and are navigable, for twenty miles above it. This city is built on a regular plan, consisting of parallel streets, which extend east and west from river to river, and are crossed by others at right angles. Their breadth is from thirty-five to sixty-six feet, and they are furnished with piazzas. The houses are mostly of brick and well built. The public buildings are a state-house, an exchange, an ar- moury, a college, several academies, an oruhan-

house, a poors'house, a Jewish synagogue, and numerous other places of worship. The situation is healthy, and the neighbourhood very beau tiful. The harbour is commodious, but a bar hinders vessels of more than 200 tons burden, loaded, from entering. The fortifications are strong, having Fort Mechanic on the south, Fort Pinckney on the east, Fort Moultrie on the southern part of Sullivan's Island, and Fort Johnson, about three miles to the south-east. Charleston carries on almost the entire trade of the state, and is the fourth commercial town in the Union. It was incorporated in 1733, and divided into thirteen wards, each of which chooses a warden, and from these the citizens elect an in- tendant. The intendant and wardens form the city council. A federal circuit court is held in it on the 25th of October, and a district court quarterly, on Monday. It has often suffered from fire. This city lies 119 miles north-east of Savannah, 376 from Edington, 540 from Richmond, 644 from Baltimore, and 746 south- west by south of Philadelphia.

CHARLESTON, a handsome town of Massachu- setts, and the largest in Middlesex county. It is seated ton a peninsula formed by the river Mystic on the north, and a bay of Charles Rivei on the south-west. It is separated from Boston by the Charles, over which a bridge was erected in 1787, supported by 'seventy-five wooden piers, with a draw-bridge in the middle for the passage of vessels. Charleston is connected with Maiden by another bridge, erected in 1788. This town was burnt in 1775 by general Gage, when houses and property were destroyed to the amount of ►►136,900,

but it has revived of late, and contains about 2000 inhabitants. They manufacture pot and pearl-ashes, rum, brass, pewter, leather, &cv and a small ship-building trade is carried on.

CHARLESTON, a post town of Maryland, on the eastern shore, in Cecil county, west of the river North East, four miles from the head of Chesapeake Bay. It is chiefly inhabited by per- sons engaged in the herring fishery. It is ten miles west-south-west of Elkton, and fifty-nine south-west by west of Philadelphia. Several other towns of the United States bear the same name.

CHARLESTON, one of the four principal towns of Barbadoes.

CHARLESTOWN, the only town in the isle of Nevis. On the south side of it there is a large spot of sulphureous ground, at a chasm called Sulphur Gut, the heat of which is so great as to be felt through the soles of one's shoes. A pond a quarter of a mile from the town is milk warm, and has excellent fish. Here are many good houses and shops.

CHARLEVILLE, a town of France, the head of a canton in the department of Ardennes. The streets are straight, and the houses of equal height. It has a magnificent square, with a foun- tain in the centre. It is seated on the Meuse, near Mezieres, to which it is connected by a bridge and causeway : fifteen miles north-west of Sedan, and 140 north-east of Paris. Popu- lation 7700.

CHARLOCK, n. s. A weed growing among

the corn with a yellow flower. It is a species of inithridate mustard.

CHARLOTTE, a populous and fertile county of Virginia, bounded by Campbell county on the west, Prince Edward and Buckingham on the north, Mecklenburgh on the south-east, and Halifax and Pennsylvania counties on the south. CHARLOTTE TOWN, the capital of Dominica, formerly called llosseau. It stands on a point of land on the south-west side of the island, which forms two bays, and is twenty-one miles south-east of Prince Rupert's Bay.

CHARLOTTENBURG, a town of the elec- torate of Brandenburgh, in the Middle Mark, with a royal palace and magnificent gardens. It was built by Sophia Charlotte, the first queen of Prussia, and is situated on the river Spree, four miles east-south-east of Berlin. Population 2350. CHARM, n. s. & v. a.ˆ\ Fr. charme, from CHA'RMED, adj. I Lat. carmen. Words,

CHA'RMER, n. s. or philtres, or cha-

CHA'RMERESS, n. s. ˆracters, imagined to CHA'RMING, part. adj. I have some occult or CHA'RMINGLY, adv. \ unintelligible power. CHA'RMINGNESS, n. s. J Something of power to subdue opposition, and gain the affections ; to summon by incantation; to subdue by some secret power; to amaze ; to overpower : one that has the power of charms or enchantments; a word of endearment between lOvers ; pleasing in the highest degree ; the power of pleasing in the highest degree.

There sawe I, playing, jogel►►urs; Magicians and tragetours ; And phitonesses, charmeresses , And olde witches, and sorceresses That uscn exorsiasions And eke subfumigacions.

Chaitcer'i Home of Fame. I never knew a woman so dote upon a man ; surely

I think you have charms. Not I, I assure thee j

setting the attractions of my good parts aside, I have no other eharmt. Shakspeare.

That handkerchief

Did an Egyptian to my mother give ; She was a charmer, and could almost read The thoughts of people. Id.

I, in mine own woe charmed,

Could not find death, where I did hear him groan . Nor feel him where he struck. Id

Let fall thy blade on vulnerable crests ; I bear a charmed life, which must not yield To one of woman born. Id.

Upon my knees

I charm you by my once commended beauty, By all your vows of love, and that great vow Which did incorporate and make us one. Id.

'Tis your graces

That from my mutest conscience to my tongue Charms this report out. Id,

Arcadia was the charmed circle, where all his spirits for ever should be enchanted. Sidney.

We implore thy powerful hand, To undo the ehcurmed band Of true virgin here distressed. Milton.

*By slain beasts' entrails, and fowls' .narked flight, Tiiereto he tempests raised by many a spright, ***nd charmed the sun and moon, and changed the day and night. Fletcher's Purple Island.*

To famed Apelles when young Ammon brought

The darling idol of his captive heart ; And the pleased nymph with kind attention sat, To have her charms recorded by his art. Waller. The passion you pretended,

Was only to obtain ; But when the charm is ended,

The charmer you disdain. Dryden.

She smiled very charmingly, and discovered as fine a set of teeth as ever eye beheld. Addisun.

Oh! who the exquisite delight can tell,

The joy which mutual confidence imparts ! Or who can paint the charm unspeakable Which links in tender bands two faithful hearts ? Mrs. Tighe's Psyche.

CHA'RNEL, adj. } Fr. chamier ; Lat. CHA'RNEL-HOUSE, n. s. S carnarium ; from euro, carnis, Carnarium was supposed to be origi- nally cranarium, a place of skulls. Containing flesh or carcases ; a cemetery ; a vault, in which dead bodies are deposited.

If charnel-houses and our graves must send Those that we bury, back ; our monuments Shall be the maws of kites. Shakspcare.

When they were in those charnel-houses, every one was placed in order, and a black pillar or coffin set by him. Taylor.

Such are those thick and gloomy shadows damp, Oft found in charnel vaults and sepulchres Lingering, and sitting by a new-made grave. Milfrn.

CHARNEL HOUSES were anciently a kind of galleries, usually in or near a church-yard, over which were laid the bones of the dead, after the flesh

was wholly consumed. Charnel houses are now usually adjoining to the chwrch.

CHARON, in fabulous history, the son of Erebus and Nox, whose office was to ferry the souls of the deceased over the waters of Styx and Acheron, to the infernal regions. See STYX.

CHARPENTIER (Francis), dean of the French Academy, was born in 1620. M. Col- bert made use of his abilities in establishing his Academy of Medals and Inscriptions ; and no person of that learned society contributed more towards that superb series of medals, which were struck on the events that distinguished the reign of Louis XIV. He published, 1. The Life of Socrates, 1650. 2, 3. Translations of Xeno- phon's Memorabilia and Cyropsedia, 1558. 4. An Account of the French East India Company, 1665. And, 5, 6. Two works on the Excellency of the French Language; with some other pieces. He died in 1702, aged eighty-two.

CHART, n. s. Lat. charta. A delineation or map of coasts, for the use of sailors. It is distinguished from a map, by representing only the coasts

The Portuguese, when they had doubled the Cape of Good Hope, found skilful pilots using astronomical instruments, geographical charts, and compasses.

Arbuthnot.

CHART, or SEA CHART, in hydrography, is a projection of some part of the earth's superfices in piano. Sea charts differ very considerably from geographical or land maps, which are of no use in navigation. They are of different kind ? ; such as,

CHART, GLOBULAR, a meridional projection, wlyerein the distance of the eye from the plane of

the meridian, upon which the projection is made, is supposed to be equal to the line of the angle 45□□. This projection comes the nearest of all to the nature of the globe, because the meridians therein are placed at equal distances; the pa- rallels also are nearly equidistant, and conse- quently the several parts of the earth have their proper proportion of magnitude, distance, and situation, nearly the same as on the globe itself. See

GLOBULAR PROJECTION.

CHART, HYDROGRAPHIC, a sheet of large paper, whereon several parts of the land and sea are described, with their respective coasts, har- bours, sounds, flats, rocks, shelves, sands, &c. together with the longitude and latitude of each place, and the points of the compass.

CHART, MERCATOR'S/IS that where the meri- dians are straight lines, parallel to each other, and equidistant; the parallels are also straight lines, and parallel to each other : but the dis- tance between them increases from the equinoc- tial towards either pole, in the ratio of the secant of the latitude to the radius. Suppose the super- ficies of the terrestrial globe to be taken off, and extended on a plane, so as to make the meridians parallel to each other, and the degrees of longi- tude everywhere equal, it is easy to conceive that it must be productive of the most palpable errors ; for an island in latitude 60►►, where the radius of the parallel is only equal to one half of the radius of the equator, will have its length from east to west distorted in a double ratio to what it was on the globe ; i. e. its length from east to west compared with its breadth from north to south will appear in a double propor- tion to what it is in reality : so that, in whatever proportion the degrees of any parallel are in- creased or diminished by a projection in piano, the degrees of longitude ought to be increased or diminished in the same ratio ; otherwise the true bearings of places will be lost, as in the case of the plane chart, where the degrees of latitude and longitude are all equal. Although this pro- jection is commonly called Mercator's projec- tion, yet our countryman, Mr. Wright, had long before demonstrated its use, and shown a ready way of constructing it, by enlarging the meridian line, by a continued addition of secants. See NAVIGATION.

CHART, PLANE, is a representation of some small part of the earth only, or of some parti- cular place, without regard to its relative situa- tion.

CHA'RTER, n. s. ~\ Lat. charta. Any CHA'RTER-PARTY, ?i. s. > writing bestowing CHA'RTERED, adj. } privileges or rights. Privilege ; immunity ; exemption ; invested with privileges by charter; privileged. Charter-party, Fr. charh-e partie. A paper relating to a con- tract, of which each party has a copy.

A conference between the king [John] and the barons \vas appointed at Runnemede, between Wind- sor and Staines ; a place which has ever since been extremely celebrated on account of this great event. The two parties encamped apart, like open enemies ; and, after a debate of a few days, the king, on the 19th June, with a facility somewhat suspicious, signed and sealed the charter which was required of him. This famous deed, commonly called the Great

Charter, either granted or secured very importan liberties and privileges to every order of men in the kingdom ; to the clergy, to the barons, and lo the people. Hume's History of England.

I must have liberty

Withal as large a charter as the wind,

To blow on whom I please ; for so fools have ;

And they that are most galled with my folly,

They most must laugh. Shukspeare.

When he speaks The air, a chartered libertine, is still. Id.

It is not to be wondered that the great charter whereby God bestowed the whole earth upon Adam, and confirmed it unto the sons of Noah, being as brief in word as large in effect, hath bred much quarrel of interpretation. Raleigh's Essays.

Here was that charter sealed, wherein the crown All marks of arbitrary power lays down. Denham.

God renewed this charter of man's sovereignty over the creatures. South.

CHARTA, xaPT►►7C> originally signifies a sort of paper made of the plant papyrus or biblus. See PAPER. The word is also used in our an- cient customs for a charter, 01 deed in writing. See CHARTER.

CHARTA EMPORETICA, in pharmacy, &c. a kind of paper made very soft and porous, used for the purpose of filtering.

CHARTA MAGNA. See MAGNA CHARTA.

CHARTER-PARTY, Fr. chartre-partie, is an in- strument of freightage, or articles of agreement made between merchants and sea-faring men, concerning their merchandise and maritime affairs. The charter-party must be in writing ; and be signed both by the proprietor or the master of the ship, and the merchant who freights it. It should contain the name and the burden of the vessel ; the names of the master and the freighter; the rate of freight; and the time of loading and unloading ; and the other conditions agreed on. It is properly a deed, whereby the master or proprietor of the vessel engages to fur- nish immediately a sound vessel well equipped, caulked, and stopped, provided with anchors, sails, cordage, and all other furniture to make the voyage required, as equipage, hands, victuals, and

other munitions ; in consideration of a cer- tain sum to be paid by the merchant for the freight. Lastly, the ship with all its furniture, and the cargo, are respectively subjected to the conditions of the charter-party. The charter- party differs from a bill of lading, in that the first is for the entire freight, both going and re- turning ; whereas the latter is only for a part of the freight, or at most only for the voyage one way.

CHARTOPHYLAX, an officer of the church of Constantinople, who, when the sacrament is administered, gives notice to the priests to come to the table. He represents the patriarch upon the bench, tries all ecclesiastical causes, keeps the marriage registers, assists at the consecration of bishops, and presents the bishop elect, and all other subordinate clergy.

CHARTRES, an ancient and large town of France, in the department of the Eure and Loire, and the see of a bishop. Its ancient name was Autricum, and Carnutes. Its principal trade is in corn, wine, and some few manufactured goods. The cathedral is one of the finest in France, and

its steeple is much admired. It is seated on the Eure, over which is a bridge built by Vauban. It was the birthplace of Nicole the moralist, the poet Regnier, and Brissot. Forty-five miles south-west of Paris. Long. 1►► 34′ E., lat. 48►► 27′ N.

CHARTREUSE, or the GRAND CHAR- TREUSE, a late celebrated monastery, the capital of all the convents of the Carthusian monks, about seven miles north-east of Grenoble, in the ci-devant province of Dauphine, now in the de- partment of the Isere. The situation of this place has been much admired and celebrated, being one of the most romantic and beautiful scenes to be seen in the whole range of the Alps. From Echelles, a little village in the mountains of Savoy, to the Chartreuse, which is built on a mountain of the same name, the distance is six miles. Along this course, the road runs winding up, for the most part not six feet broad. On one hand is the rock with woods of pine tree hanging over head ; on the other a prodigious precipice almost perpendicular ; at the bottom of which rolls a torrent, that sometimes tumbling among the fragments of stone which have fallen from on high, and sometimes precipitating itself down vast descents with a noise like thunder, rendered yet more tremendous by the echo from the moun- tains on each side, concurs to form one of the most solemn, the most romantic, and most asto- nishing scenes in nature.

CHARTREUSE of London, corruptly called the Charter-house, took its

name from the Grand Chartreuse, but is now converted into an hospital, and endowed with a noble revenue. Here are maintained eighty decayed gentlemen, not under fifty years of age : and forty boys are educated and fitted either for the university or trades. Those sent to the university have an exhibition of ►►20 a year for eight years ; and have an im- mediate title to nine church livings in the gift of the governors of the hospital, who are sixteen in number, all persons of the first distinction, and taking their turns in the nomination of pensioners and scholars . For a description of the new and excellent method of discipline, adopted by the school of this foundation, see EDUCATION.

CHARYBDIS, in ancient geography, a fa- mous whirlpool in the strait of Messina, lying between Calabria in Italy and the island of Sicily, opposite to Scylla, a dangerous rock on the coast of Italy, against which mariners were often dashed in endeavouring to avoid Cha- rybdis ; whence the Latin adage,

Incidit in Scyllam qui vult vitare Charybdin.

This whirlpool is said to have been much affected by the dreadful earthquake in 1783. It is now called Calofaro and Larema.

CHASE, v. a. & n. s. > The substantive agrees CHA'SER, n. t. 5 with the Isl. and Swed. kas; Fr. chace ; Ital. caccia; Teut. jeichen, jagen, to drive, to pursue, to hunt. Thus the verb sig- nifies to hunt ; to pursue as an enemy ; to drive away ; to follow as a thing desirable ; to drive. The substantive chaser, is sometimes used for en- chaser, a chaser of metals.

And Abimclcch chased him, aud he fled before him.

Judges,

It shall be as the chased roe.

Istiiah.

Upon a day

As she the woodes with bow and shaftes did raunge, The hartlesse hynde and roebuck to dismay, Ban Faunus chaunst to meet her by the way, And kindling fire at her faire-burning eye, Inflamed was to follow beauties chace ; And chaced her, that fast from him did fly ; As hynd from her, so she fled from her enemy.

Spenser.

She, seeing the towering of her pursued chace, went circling about, rising so with the less sense of rising.

Sidney

Whilst he was hastening in the cJuue, it seems, Of this fair couple, meets he on the way The father of this seeming lady. Shahspeare.

A maid I am, and of thy virgin train ; Oh ! let me still that spotless name retain, Frequent the forests, thy chaste will obey, And only make the beasts of chase my prey.

Dryden.

When the following morn had chased away The flying stars, and light restored the day. Id.

Yet this mad chase of fame, by few pursued, Has drawn destruction on the multitude.

Id. Juvenal.

They seek that joy, which used to glow Expanded on the hero's face,

When the thick squadrons prest the foe And William led the glorious chase. Prior.

Stretched on the lawn, his second hope survey, At once the chaser, and at once the prey ! Lo, Rufus, tugging at the deadly dart, Bleeds in the forest like a wounded hart. Pope.

Let the keen hunter from the chase refrain, Nor render all the ploughman's labour vain When Ceres pours out plenty from her horn, And clothes the fields with golden ears of corn.

❓❓❓ Gay's Rural Sports.

CHASES, or CHACES, want courts of attach- ment, swainmote, and justice-seat. See FOREST. Crompton observes that a forest cannot be in the hands of a subject, but it forthwith loses its name, and becomes a chase ; as all those courts lose their nature when they come into the hands of a subject ; and that none but a king can make a lord chief justice in eyre of the forest. See JUSTICE IN EYRE.

CHASING, in sculpture, the art of embossing on metals. This is the art of representing figures, &c. in a kind of bassi relievi, which is punched out from behind, and sculptured on the front with small chisels and gravers.

See ENCHASING. CHASM, n. s. Xa

Some lazy ages, lost in ease, No action leave to busy chronicles ; Such, whose supine felicity but makes In story chasms, in epochas mistakes. Dryden. In all that visible corporeal world, we see no chasms or gaps. Locke.

The ground adust her riven mouth disparts ; Horrible chasm ! profound. Philips.

CHA'SSELAS,n.s. French. A sort of grape. CHA'STEN,v.a. \ Fr. chattier, chasti CHASTI'SE, v. a. 9ment; Lat. castigo. To CHASTISEMENT,?.?, ►► afflict for faults; to cor- CHASTI'SER, n.s. V rect by severe treatment; by justice, suffering inflicted ; but distinguished from that which is penal.*

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Chasten thy son -while there is hope, and let not thy soul spare for his crying. Proverbs.

But who so woll chattise. me, Anone my love yloste hath he ; For I love no roan, in no gise, That woll me reprove or chastise. But I woll all folk undertake, And of no wight no teching take ; For I that other folk chastie, Woll not be taught fro my folie.

Chaucer's Romaunt oj the Ruse. My hreast I'll burst with straining of my courage, But I will chastise this high-minded strumpet.

Shahnpeare.

Shall I so much dishonour my fair stars, On equal terms to give him chastisement. Id.

He held the chastisement of one, which molested the see of Rome, pleasing to God. Raleigh's Essays.

I follow thee, safe guide! the path

Thou leadest me! and to the hand of heaven submit,

However chastening. Milton's Paradise Lost.

I am glad to see the vanity or envy of the canting

chymists thus discovered and chastised. Boyle.

Like you, commissioned to chastise and bless, He must avenge the world, and give it peace. Prior.

Some feel the rod, And own, like us, the father's chastening hand.

R'juie.

The gay social sense

By decency chastised. Thomson.

He had been tempted ••• chastened ••• and the chain Yet on his arms, might ever there remain.

Byron's Cors&ir.

CHASTITY, n. s.~\ Lat. castitas, castus; CHASTE, adj. \Fr. cliaste. Purity; free-

CHA'STELY, adv. •• dom from obscurity ; free- CHA'STEXESS, n. s. J dom from bad mixture of any kind. Purity of the marriage bed. Purity of language opposed to barbarisms ; without con- tamination.

Love your children j be discreet ; chaste, keepers at home. Titus.

Now as to the outragious array of women, God wote, that though the visiges of som of hem semen ful chaste and debonaire, yet notifien they in hir array of attire, likerousuesse and pride.

Chaucer's Canterbury Tales. It is chaste and pure as purest snow, Xe lets her waves with any filth be dyde ; But ever, like herself, unstayned hath been tryde.

Spenser.

You should not pass here ; no, though it were as virtuous to lie as to live chastely. Shakspeare.

Who can be bound by any solemn vow To force a spotless virgin' cliastity. Id.*

There is not chastity enough in language, Without offence to utter them. Id. Much Ado.

Chastity is either abstinence or continence : absti- nence is that ot virgins or

widows : continence, of married persons : chaste marriages are honourable and pleasing to God. Taylor.

And our chaste lamps we hourly trim, Lest the great bridegroom find them dim. Marvell.

Succession of a long descent, Vi hid) cJiastely in the channels ran, And from our demi-gods began. Dryden

Even here, where frozen oltastity retires, Love finds an altar for forbidden fires. Pope.

Among words which signify the same principal ideas, some are clean and decent, others unclean ; some chaste, others obscene. Watts's Logic.

The chaste severity of the fathers, in whatever re lated to the commerce of the two sexes, flowed from the same principle ; their abhorrence of every enjoy- ment which might gratify the sensual, and degrade the spiritual, nature of man. Gibbon.*

CHASTITY, LAWS RESPECTING. The Roman law justifies homicide in defence of the chastity either of one's self or relations ; and so also stood the la%v in the Jewish republic. Our law like- wise justifies a woman for killing a man who attempts to ravish her. Even the husband or father may kill a man who attempts a rape upon his wife or daughter ; but not if lie takes them in adultery by consent: for the one is forcible and felonious, but not the other.

CHAT, v. n., v. a., & n. s. } From fr.caqueter, CIIA'TT':.R, v. n. & n. s. / Skinner ; Isl. kuttru , CHA'TTLRER, n. s. 5 Dan. jadde.ro. ; per

haps from achat, purchase or cheapening, on ac- count of the prate naturally produced in a bargain; or only, as it is most likely, contracted from chat- ter. To prate; to talk idly; to prattle; to cackle; to converse at ease. Idle talk ; prate ; slight or negligent tattle. Chatter is derived from the same etymon, and differs very little in meaning from chat. It signifies to talk idly or carelessly ; to make a noise as a pie, or other unharmonious bird ; to make a noise by collision of the teeth. Nightingales seldom sing, the pie still chattereth.

Sidney.

So doth the cuckow, when the mavis sings, Begin his witless note apace to chatter. Spenser.

Lords, that can prate As amply and unnecessarily As this Gonzalo, I myself

would make A chough of as deep chat. Shakspeare.

Your prattling nurse Into a rapture lets her baby cry, While she chats him. Id.

Because that I familiarly sometimes Do use you for my fool, and chat with you, Your sauciness will jest upon my love. Id.

The shepherds on the lawn

Sat simply chatting in a rustick row. MUton.

With much good-will the motion was embraced, To chat awhile on their adventures passed. Drydtti.

Your birds of knowledge, that in dusky air Chatter futurity. Id

The time between before the fire they sat. And shortened the delay by pleasing chat. Id

Stood Theodore surprised in deadly fright, \Vilh chattering teeth, and bristling hair upright. Id.

Dip but your toes into cold water, Their correspondent teeth will chatter. Prior. The least is good, far greater than the tick!:: his palate with a glass of wine, or the idle chat of a soaking club. Locke.

Come sit by rr.y side while this picture I draw ; In chattering a magpie, in pride a jackdaw ; A temper the devil himself could not bridle, Impertinent mixture of busy and idle. Swift.

I am a member of a female society who call our- selves the chit-chat club, and am ordered by the whole sisterhood to congratulate you upon the use of your tongue. Spectator.

The birds,

Assembled on affairs of love, And with much twitter and much cliatter Began to agitate the matter. Cowp►►r.

CHAT, n. ►►. The keys of trees are called chats ; as, ash chats.

CHAT, in the cannon foundry, an instrument used in the examination of ordnance ; consisting of a piece of iron fastened to a wooden shaft, and having three prongs, which, being introduced into the bore of the gun, show whether it be honey-combed, damaged, or otherwise defective. There is an improvement on this, having a spring so contrived that the least cavity releases the spring, and by means of a catch instantly betrays tire defect.

CHATEAU-CAMBRESIS,OrCATEAU-CAMBRE-

sis, iii the department of the North, and late province of Cambresis. It has a magnificent palace, which belonged to the ci-devant archie- piscopal see of Cambray; and is famous for the treaty concluded between Henry II. of France, and Philip II. of Spain. It also had, before the Revolution, a noble Benedictine abbey, now sup- pressed. It is seated on the Seille, fifteen miles south-east of Camhray.

CHATEAU-DAUPHIN, a very strong castle of Piedmont, in the marquisate of Saluces, belong- ing to the king of Sardinia. It was taken by the combined army of France and Spain in 1 744, and restored by the treaty of Aix-la-Chapelle.

CHATEAU DU LOIRE, a town of France, in the department of the Sarte, and ci-devant province of Maine, famous for sustaining a siege of seven years against Herbert count of Mans. It is seated on the Loire, twenty-two miles south-east of Mans, and ninety-seven west of Paris. Many small towns in France have the prefix, Chateau.

CHATEAUROTJX, a large town of France, capital of the department of the Indre, and ci-devant pro- vince of Berry. It has a considerable woollen manufacture, and is seated in a very pleasant plain on the Indre, fifteen miles south-west of Issoudun, and 150 south-west of Paris. Popu- lation 8500.

CHATEL (Peter du), in Latin, Castellanus, a learned French divine, born at Arc, and educated at Dijon. He assisted Erasmus in his transla- tions from the Greek, and became corrector of the press in Frobenius's office at Basil. Henry II. translated him to Orleans, where he died in

1552.

CHATELET, the name of certain ci-devant courts of justice in France. The grand chatelet at Paris was the place where the presidial or ordinary court of justice of the provost of Paris was held ; and consisted of presidial, a civil chamber, a criminal chamber, and a chamber of policy.

CHATELLANY, n. s. Fr. chdtelenie. The district under the dominion of a

castle.

Here are about twenty towns and forts of great im- portance, with their cfwtellanies and dependencies.

Dryden.

CHATELLERAULT, a town of France, in the department of the Vienne, and late province of Poitou ; seated in a fertile and pleasant coun- try, on the river Vienne, over which is a hand- some stnne bridge. It is noted for its cutlery, watch-making, cloth, and the cutting of false diamonds. It is twenty-two. miles northeast of Poitiers, and 168 south-west of Paris.

CHATHAM, called in Domesday book Cet- cham, an important market town of Kent, ad- joining the east side of the city of Rochester, on the Medwav. It i►► "neofthe principal stations

of the royal navy ; the yards and magazines, of which there are whole streets, being furnished with all kinds of stores, and materials for build- ing, rigging, and repairing the largest vessels. The entrance into the Medway is defended by Sheerness and other forts ; notwithstanding which the Dutch burnt several ships of war here in the reign of Charles II. The dock-yard and ordnance- wharf are, together, about a mile in length ; some of the store rooms are near 700 feet long, and the sail loft is 209 feet. Twenty smiths' forges are often at work, and some of the anchors made here weigh between four and five tons. The new rope-house is 1140 feet in length, in which cables are made 120 fathoms long and twenty- two inches in circumference. In the yard are four docks for repairing, and six slips for build- ing vessels. The unfortunate Royal-George, the Victory, and the Royal-Charlotte, three of the largest ships in the navy, were built here. There is in this town a complete set of block machinery similar to that of Portsmorth. The victualling office, a neat and convenient building, stands at the entrance of the town.

The chest of Chatham, instituted in 1553, by the seamen in the service of queen Elizabeth, for the relief of thfe sufferers in the defeat of the Spanish armada, was moved to Greenwich in 1802, and placed under the direction of the first lord of the admiralty. But here is an hospital for decayed mariners and shipwrights, and their widows, from which the pensioners have eight shillings and their widows seven shilling per week, and a quarter of a chaldron of coals yearly, no person being eligible who has not been maimed or disabled, or otherwise brought to poverty in the royal navy. Twenty-six governors preside over the institution, four of whom are elective ; and the others are governors by virtue of their respective offices, viz. the archbishop of Canterbury, the bishop of Rochester, the lord high admiral,

the lord-warden of the Cinque- ports, the dean of Rochester, the treasurer, comp- troller, surveyor and clerk of the acts, six prin- cipal master mariners, two principal shipwrights, the master and warden of the Trinity-house, the commissioner, the two master-attendants, and the master-shipwright of Chatham dock-yard. This hospital, called Sir John Hawkins's, has lately been rebuilt.

In 1757 the present Zincs were commenced un- der the direction of William, duke of Cumberland, and much enlarged during the latewar. Chatham is thirty-one miles E. S. E. of London. ••• The population in 1821 was 15,268.

CHATHAM, a well-cultivated county of North Carolina, in Hillsborough district, bounded on the west by Randolph, north by Orange, east by Wake, and south by Cumberland and Moore counties. It is watered by the north-west branch of Cape Fear River. It abounds in iron ore, which is manufactured into iron a. Fish-creek. The chief town is Pitshurg.*

CHATHAM ISLAND, an island in the South Pa- cific, discovered by Lieutenant Broughton in 1791, but hitherto little explored. Near the coast it is woody and well furnished with har- bours : fish and the feathered tribes are numer- ous, and the latter remarkably tame. The inha- bitants are copper-colored and verv wild. Lat.

of the noith point 43•• 43′ S , long. 183 2′ E. Also an island in the South Pacific, supposed by the officers of the Pandora to be twice as large as Otaheite. The natives spoke of a large river in the interior, which empties itself into a spacious bay. They traded in an unusually fair way.

CHATHAM STRAIT, a channel on the west coast of North America, which divides King George the Third's Archipelago from Admiralty Island. It is about 100 miles in length from north to south ; and was found by Vancouver very abund- ant in sea-otters.

CHATTEL, n. s. See CATTLE. Any move- able possession ; a term scarce used but in forms C••f law.

Nay, look not big, nor stamp, nor stare, nor fret j I -will be master of what is mine own ; She is my goods, my cfiatteli. Shaktpeare.

Honour's a lease for lives to come, And cannot be extended from The legal tenant ; 'tis a chattle Not to be forfeited in battle. Hudibras.

CHATTERPOOR, an ancient city of Hin- dostan, so named from its founder, the rajah Chattersal, in the district of Bundelcund and province of Allahabad. It is situated not far from the famous Pinnah diamond mines, and was formerly a flourishing entrepot for the trade between the Deccan and Benares. It was ob- tained by' the British at the close of the last Mahratta war; and is 237 miles from Benares, 698 from Calcutta, and 247 from Bombay.

CHATTERTON (Thomas), an English poet, whose fate and performances excited some years ago, in no small degree, the public attention, and gave rise to much controversy. He was born at Bristol, November 20th, 1752; and educated at a charity school on St. Augustin's Back, where nothing more was taught than reading, writing, and arithmetic. At fourteen years of age, he was articled clerk to an attorney at Bristol, with whom he continued about three years. Though his education was thus confined, he discovered an early turn for poetry, English antiquities, and heraldry. In April, 1770, he left Bristol, dis- gusted with his profession, and came to London in hopes of advancing his fortune by his pen. Having written something in praise of Beckford, the lord mayor, he had the honor of being pre- sented to his lordship ; and observes, respecting his reception, ' there is no money to be got on this side of the question. However, he is a poor author who cannot write on both sides. Essays on the patriotic side will fetch no more than what the copy is sold for. As the patriots themselves are searching for places, they have no gratuity to spare. On the other hand unpopular essays will not even be accepted, and you must pay to have them printed ; but then you seldom lose by it, as courtiers are so sensible of their deficiency in merit, that they generously reward all who know how to daub them with the appearance of it.' He continued to write incessantly in various pe- riodical publications. But all these exertions of his genius brought in so little money, that he was soon reduced to the extremes! indigence : and at last, oppressed with poverty and disease, he in a fit of despair, put an end to his existence by taking poison, August, 1770. In 1777 were

published in 1 vol. 8vo., Poems supposed to have been written at Bristol, by Thomas Rowley and others, in the fifteenth century, the greatest part now first published from the most authentic copies, with an engraved specimen of one of the MSS. : to which are added a Preface, an Intro- ductory Account of the several Pieces, and a Glossary. And in 1778 were published in one vol. 8vo., Miscellanies in Prose and Verse, by Thomas Chatterton, supposed author of the Poems published under the names of Rowley, &c. Dr. Watkins, in his Memoir of Chatterton, says, What has given celebrity to his name, is the real or pretended discovery of poems, written in the fifteenth century, by Thomas Rowley, a priest of Bristol, and others, in Redcliffe church, of which Chatterton's ancestors had been sextons near a

century and a half. His father certainly removed a number of parchments from an old chest in that church, most of which were used in covering books. Young Chatterton, from the perusal of some of them, is supposed to have formed the design of a literary forgery. A sharp controversy was carried on for some time on that point, between Mr. Warton, Mr. Bryant, Mr. Matthias, and others; and the poems are now generally considered as Chatter- ton's own productions. A new edition of his works was published by Mr. Southey, in 3 vols. 8vo.

CHATS WORTH, a villa on the peak of Derby, a magnificent seat of the duke of Devon- shire. It is seated on the Derwent, and built of stone dug on the spot; being six miles from Chesterfield, and 141 from London. It was here that Mary, queen of Scots, was imprisoned seven- teen years, in memory of which part of the build- ing is called the Queen of Scots' Apartments. Its gardens and park occupy an extent of nine miles in circumference.

CHAVARIGHTS, or CHAVARITES, a sect of Mahommedans, who deny that God ever sent a prophet that, was infallible, with a commission to give a law to mankind. They say, that if such an office were necessary, it would not be con- fined to a single family, but that every man of probity and virtue would be capable of that honor.

CHAUCER (Sir Geoffrey), the father of Eng- lish poetry, in the fourteenth century, was born in London in 1328. After he left the university he travelled into Holland, France and other countries. Upon his return he entered himself in the. Inner Temple, where he studied the law. His first station at court was that of page to Ed- ward III. from whom he had a pension. Soon after, he was made gentleman, of the king's privy chamber, and shield-bearer to the king. He spent his younger days in a constant attendance at court, or for the most part living near it, in a square stone house, near the park gate at Woodstock, still called Chaucer's House. Be- ing patronised by the duke of Lancaster, he was sent in 1373 to the republic of Genoa, to hire ships for the king's navy ; and the king was so well satisfied witli his negociations, that on his return he obtained a grant of a pitcher of wine daily in the port of London, to be delivered by the butler of England; and soon after was made

comptroller of the customs for wool, wool-fells, and hides; an office which

he discharged with great diligence and integrity. At this period, his income was about ►►1000 a year ; a sum which in those days enabled him to live with dignity in his office, and hospitality among his friends. It was in this meridian blaze of prospe- rity, that he wrote his most humorous poems. His satires against the priests were probably written to oblige his patron the duke of Lancas- ter, W!K> favored the cause of Wickliff, and en- deavoured to expose the clergy to the indigna- tion of the people. la the last year of Edward III. our poet was employed in a commission to treat with the French ; and, in the beginning of Richard's reign, he was in some degree of favor at court. But the duke's interest failing, that of Chaucer entirely sunk ; and the former passing over sea, his friends felt all the malice of the opposite party. These misfortunes occasioned his writing that excellent treatise, The Testament of Love, an imitation of Boethius on the Conso- lation of Philosophy. He soon after returned to Woodstock, where he produced his admirable treatise of the Astrolabe. The duke of Lancaster at last surmounting his troubles, married lady Catharine Swynford, sister to Chaucer's wife ; so that Thomas Chaucer, our poet's son, became allied to most of the nobility, and to several of the kings of England. By the influence of the duke's marriage, he again obtained a considera- ble share of wealth. But being now near se- venty, he retired to Donnington Castle near Newbury. He had not enjoyed his retirement long before Henry IV. son of the duke of Lan- caster, assumed the crown, and in the first year of his reign gave our poet several marks of his favor. But the grants of the late king being annulled, Chaucer, to procure fresh grants of his pensions, left his retirement, and applied to court : where, though he obtained a confirmation of some grants, yet the fatigue of attendance, and his great age, prevented him from enjoying them. He fell sick at London, and ended his days in the seventy-second year of his age. He was in- terred in Westminster Abbey ; and in 1556 Mr. Nicholas Bingham, a gentleman of Oxford, erected a handsome monument for him there at his own expense. Caxton first printed the Can- terbury Tales ; but his works were first collected and pubhshed in one volume folio by William Thynne, London, in 1542. They were after- wards reprinted in 1561, 1598, 1602; and at Oxford in 1721.

CHAUCI, an ancient people of Germany, who inhabited Chaucis. They were divided into, 1. Chauci Majores, the ancient inhabitants, of the territory now called Bremen, and part of Lunen- burg; and 2. Chauci Minores, the ancient inha- bitants of East Friesland, and Oldenburg.

CHAUDIERE, a river of Canada, North America, has its source in Lake Megantic, Lower Canada, and after a northerly course of 102 miles, falls into the St. Lawrence, six miles above Que- bec. Its breadth varies from 350 to 600 yards. Its banks are steep and woody, and the stream is divided by numerous islands; but is princi- pally remarkable for its beautiful falls,

about four miles before it discharges itself into the St. Law-

rence. Here it presents one of the greatest "na- tural curiosities of the New Continent. The stream, not less than 360 feet wide, rushes forth from the shades of a thick wood, and expands considerably just above the cataract. Immense masses of disjointed rock now arrest its progress, and impel the whole of its agitated waters down a precipice of 120 perpendicular feet. In the centre, and on the very brow of this precipice, is a projecting fragment of rock, that forms an island, on which appears a single handsome fir- tree. The surrounding scenery altogether is said to be beautiful beyond description : yielding in grandeur only to the Falls of Niagara, but in picturesque combinations and effect, to no other earthly object. The water, in some particular parts of the fall, rolls over its immoveable ob- structions in majestic sheets and volumes, which seem to shake the whole earth around, and to be capable of bearing away everything below : in other places it is interrupted by fragments of rock, widely scattered over the face of the preci- pice, and conducting the angry element from cavity to cavity, until it mingles in ungovernable rage with the boiling surge at bottom; and hur- ries onward until it is lost in the St. Lawrence. The margin of immense woods, on either side, adds, in no small degree, to the romance of the scenery ; and uniting their dark foliage with the brown heads of the weather-beaten rocks form a fine contrast with the milky whiteness of the va- por and spray around.

CHAUD-MEDLEY. See CHANCE-MEDLEY.

CHA'VENDER, n. s. Fr. chevesne. The chub : a fish.

These are a choice bait for the chub, or chavender, or indeed any great fish. Walton's Angler.

CHAULIEU (William Amfrye de), abbe d'Aumale, one of the most polite and ingenious of the French poets, was born in 1639, and died at the age of eighty-four. The most complete edition of his poems is that printed in 2 vols. 8vo. in 1733.

CIIAUMONT, a considerable town of France, in the department of the Loire, on the Siez. It has manufactures of cloth, silk, and ribands. Twenty-two miles S. S. W. of Lyons. Popula- tion 5000.

CHAUMONTE'LLE, n. s. French. A. sort of pear.

CHAUN f , a town of France, in the depart- ment of the Aisne, and ci-devant province of Picardy ; seated on the Oise, twenty miles east of Noyon. Long. 3°° 18′ E., lat. 49°° 17′ N.

CHAUVJN (Stephen), a celebrated Protestant minister, born at Nismes in 1640. He left France upon the revocation of the edict of Nantes, and retired to Rotterdam, where he began a new Journal des Sfavans; and afterwards re- moving to Berlin, continued it there three years. He was made professor of philosophy at Berlin, and discharged that office with much honor and reputation, His principal work is a Philosophi- cal Dictionary, in Latin, which he published at Rotterdam in 1692; and gave a new edition of it much augmented, at Lewarden, in 1713, folio. He died in 1735, aged eighty-five.

*CHAW, v. a. & n. *. Germ, kawen. To champ between the teeth ; to chew, to masticate.*

The noun is derived from the verb. It means the chap; the upper or under part of a beast's mouth.

And next to him [Avarice] malicious Envy rode Upon a ravenous wolfe, and still did chaw Between his cankred teeth a venemous tode That all the poison run about his chaw ; But inwardly he chawed his own maw. Spenser.

They come to us, but us love draws ; He swallows us, and never chaws ; He is the tyrant pike, and we the fry. Donne. The man who laught but once, to see an ass Mumbling to make the cross-grained thistles pass, Might laugh again, to see a jury chaw The prickles of unpalatable law. Dryden.

I will turn thee back, and put hooks into thy chaws, and will bring thee forth, and all thme army.

Exekiel.

CHA'WDRON, or CHAUDRON. Goth, kui- dron, kuithron, a paunch ; Sax. cwith ; Swed. qued ; Scot. kite. The stomach ; the entrails of a beast Chaldron is sometimes thus written, which is a measure of 36 bushels of coals.

Add thereto a tyger's chawdron, For the ingredients of our cauldron. Shakspeare.

CHAZELLES (John Matthew), a celebrated French mathematician and

engineer, born at Lyons in 1657. M. du Hamel, observing his strong predilection for astronomy, introduced him to M. Cassini, who employed him in his observato- ry. Having, in 1684, instructed the duke of Mor- temar in mathematics, he procured him the pro- fessorship of hydrography, ***for the galleys of Marseilles. In 1686, the galleys made four courses merely for exercise. Chazelles went on hoard every time with them ; kept his school upon the sea, and showed the practice of what he taught. In 1687, and 1688, he drew many plans of ports, roads, towns, and forts, which were lodged with the ministers of state. At the beginning of the war, which ended with the peace of Ryswick, Chazelles was sent to make the experiment, whether the galleys might not serve to tow the men of war when the wind failed or proved contrary, and help to. secure the coast of Prance upon the ocean. Accordingly, in 1690, fifteen galleys, new built, set sail for Ilochefort, cruised as far as Torbay, and proved useful at the descent upon Tinmouth. After this, he digested into order the observations he had made on the coasts of the ocean ; and drew dis- tinct maps, with descriptions to them. These maps were inserted in the Neptune Francoise, published in 1692, when Chazelles was engineer at the descent of Oneglia. To make observations on geography and astronomy, he undertook a voyage to the Levant in 1693 ; and, among other things, he measured the pyramids of Egypt, and found the four sides of the largest of them exactly to face the four cardinal points of the compass. He made a report of his voyage, on his return, to the Academy of Sciences, upon which he was named a member in 1 695, and had many papers inserted in their Memoirs, from 1693 to 1708. He died, at Marseilles, 16th Jan. 1710. CHEAP, n. s. & adj.*** *Swed. hop; Teut. CHE'APEN, v. a. Ikauff; Belg. /coop;*

CHE'APLY, adv. /Sax cˆap, a bargain;

CUE'APNESS, n. s. J Swed. godt, kop ; Fr

a bonne march's. ; Old Fr. a chapt, a chat, a ceapt, a purchase, from Goth, kaupa. Cheaping, chip- ping, is an old term for market, when connected with the names of places, as Chipping Norton, Eastcheap, Cheapside. To cheapen, is not only to bargain, but to abate the terms of the seller, or to purchase at a lower rate than is demanded ; to bid for or ask the price of a commodity.

With danger uttren we all our chaffare ; Gret prees at market maketh dere ware, And to gret chepe is holden at litel prise ; This knoweth every woman that is wise. Chaucer, The goodness, that is cheap in beauty, makes beauty brief in goodness. Shakspeare.

Rich she shall be, that's certain ; wise, or I'll none ; virtuous, or I'll never cheapen her. Id.

He that is too much in any thing, so that he giveth another occasion of society, maketh himself cheap.

Bacon.

Ancient statues incite merchant-strangers to bring in commodities ; having for end cheapness. Id.

The same wine which we pay so dear for now-a- days, in that good world, was very good cheap.

Sidney.

It is many a wise man's case to tire himself out with hunting after that abroad, which he carries about him all the while, and may have it better cheap at home. L' Estrange.

Blood, rapines, massacres, were cheaply bought, So mighty recompence your beauty brought. Dryden.

May your sick fame still languish till it die, And you grow cheap in every subject's eye. Id.

The discredit which is grown upon Ireland, has been the great discouragement to other nations to transplant themselves hither, and prevailed farther than all the invitations which the cheapness and plenty of the country has made them. Temple.

The merchant ought to make his out-set as cheap as possible, that he may find greater profit upon his returns ; and nothing will enable him to do this like the reduction of the price of labour upon all our ma- nufactures. Spectator.

Incomparable gem! thy worth untold ; Cheap though blood-bought ; and thrown away when sold. Cowper.

CHEAR. See CHEER. CHEAT, v. a. & n. s. > Thomson traces the CHE'ATER, n. $.] substantive to Sax.

ceat, from Isl. and Swed. kyta, to change ; Lat. capta, captus ; and he gives the following defini- tions : deception, fraud, imposture. Johnson thus accounts for its form and application, pro- bably from Fr. acheter, to purchase, alluding to the tricks used in making bargains. Of the noun he

observes, some think it is abbreviated from escheat, because many fraudulent measures being taken by the lords of manors in procuring es- cheats, cheat, the abridgment, was brought to convey a bad meaning. To defraud ; to impose upon ; to trick. It is used commonly of low cunning. Cheat is a fraud, a trick, an impos- ture ; a cheat, or cheater, is one guilty of fraud.

I that am curtailed of man's fair proportion j Cheated of feature by dissembling nature, Deformed, unfinished. Shakspeare.

I will be cheater to them both, and they shall be exchequers to me. [It is here for escheater.] Id.

And drowned their discipline like a kitten On which they'd been so long a sitting ; Decried it as a holy cfteat, Grown out of date, and obsolete. tntdibrai.

An English pilot too (oh shame! oh sin !) Cheated of 's pay was he that showed them in.

Marrell.

All sorts of injurious persons, the sacrilegious, the detainers of tithes, cheaters of men's inheritances, false witnesses and accusers.

Taylor's Rule of Living Holy. No man will trust a known cheat. South.

When I consider life, 'tis all a cheat; Yet, fooled with hope, men favour the deceit : Trust on, and think to-morrow will repay j To-morrow's falser than the former day. Dryden. It is a dangerous commerce, where an honest man is sure at first of being cheated ; and he recovers not his losses, but by learning to cheat others. Id,

The cheat ambition, eager to espouse Dominion, courts it with a lying shew, And shines in borrowed pomp to serve a turn.

Jeffery's Edwin.

CHEAT, in law, any common imposter. If any person deceitfully get into his hands or possession any money or other things of any other person's by any false token, &c. being convicted, he shall have such punishment by

imprisonment, or by any corporeal pain except death, as shall be adjudged by the persons before whom he shall be convicted. As there are some frauds which may be relieved civilly, so there are others which cannot, but must be punished criminally. Thus, if a minor, pre- tending to be of age, defrauds many persons by taking credit for a considerable quantity of goods, and then insisting on his nonage, the persons injured cannot recover the value of their goods, but they may indict and punish him for a com- mon cheat. Persons convicted of obtaining mo- ney or goods by false pretences, or of sending threatening letters in order to extort money or goods, may be punished with fine or imprison- ment, or by whipping, or transportation.

CHEBAR, a river of Chaldea, where the pro- phet Ezekiel saw several of his visions. It is thought to have been cut between the Euphrates and the Tigris. Others say it had its rise near the head of the Tigris, and, running south-west through Mesopotamia, fell into the Euphrates, a little south of Carchemish.

CHECK, v. a., v. n. & n. s. > From the Fr,

CUE'CK-MATE, n. s. $ echecs, chess. To

repress ; to curb ; to restrain ; to warn of danger ; to reprove ; to chide ; to control by a counter- reckoning ; to arrest ; to stop the progress of any person or thing ; to class ; to compare ; to inter- fere ; sudden repressure and restraint ; any stop or interruption ; the correspondent cipher of a bank-bill; a term used in the game of chess when one party obliges the other either to move or guard the king. See CHESS.

Therwith, Fortune ysayed : ' Cheke,' here ;

And ' mate,' in the myd poynt of the checkere ;

With a paune errant. Alas !

Ful craftyer to play she was

Than Athalus that made the game,

First of the chesse so was his name.

Chaucer's Boke of the Duchesse.

Richard, with his eyes brimful of tears, Then checked and rated by Northumberland, Did speak these words, now proved a prophecy.

Shakspeare. Rebellion in this land shall lose its sway,

Meeting the check of such another day. Id.

Oh ! this life

Is nobler than attending for a check, Shakspeare. Love they him called, that gave me the checkmate. But better might they have behote him hate. Spenser. If love clieck with business, it troubleth men's for- tunes. Bacon. Fames may be sown and raised, they may be spread and multiplied, they may be checked and laid dead.

Id.

We see also, that kings that have been fortunate conquerors in their first years, must have some check or arrest in their fortunes. Id. Essays.

I hate when vice can bolt her arguments, And virtue has no tongue to check her pride.

Milton.

He who sat at a table, richly and deliciously fur- nished, but with a sword hanging over his head by one single thread or hair, surely had enough to check his appetite. South.

He was unhappily too much used as a check upon the lord Coventry. Clarendon.

I'll avoid his presence j It checks too strong upon me. Dryden.

You want to lead

My reason blindfold, like a hampered lion

Checked of his noble vigour. Otway.

The mind once jaded, by an attempt above its

power, either is disabled for the future, or else checks

at any vigorous undertaking ever after. Locke.

The great struggle with passions is in the first check.

Rogers.

He still remembered that he once was young ; His easy presence checked no decent joy.

Armstrong's Art of Preserving Health. He hears where'er he moves, the dreadful sound j Check the deep vales, and check the woods rebound : No place remains : he sees the certain fate, And yields his throne to ruin, and checkmate.

Sir W. Jones. Nor be thy generous indignation checked,

Nor checked the tender tear to misery given ; From Guilt's contagious power shall that protect, This soften and refine the soul for heaven. Beattie. CHECK. In falconry. When a hawk forsakes her proper game to follow rooks, pies, or other birds that cross her flight. ••• Chambers.

A young woman is a hawk upon her wings ; and if she be handsome, she is the more subject to go out on check. Suckling.

When whistled from the fist Some falcon stoops at what her eye designed, And witli her eagerness, the quarry missed, Straight flies a check, and clips it down the wind.

Dryden.

CHE'CKER, v. a & n. s. ^ Of the same de- CHE'QUER, v. a. >rivation as the last

CHE'CKERWORK, n. s. j word. To varie- gate or diversify, in the "nanner of a chess-board, with alternate colors, or with darker and brighter parts ; work varied alternately as to its colors or materials.

Nets of checker-work and wreaths of chain-work

for the chapiters which were upon the top of the

pillars. 1 Kings.

They toke their in and loggit them at mydmorowe

I trowe,

Atte cheker of the hope that many a man doth know. Chaucer's Cant. Tales.

The gray-eyed morn smiles on the frowning night, Checkering the eastern cloud? with streaks of light.

Shniupearc,

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The wealthy spring yet never bore

That sweet nor dainty flower, That damasked not the dickered floor

Of Cynthia's summer bower. Drayton.

In the chess-board, the use of each chess-man is

determined only within that checquered pisce of wood.

Locke.

In our present condition, which is a middle state, our minds are, as it were, chequered with truth and falsehood. Addison.

Here waving groves a checkered scene display, And part admit, and part exclude the day. Pope.

Of armies on the chequered field arrayed And guiltless war in pleasing form displayed. When two bold kings contend with vain alarms, In ivory this, and that in ebon arms.

Sir W. Jones.

CHE'CKROLL, n. s. From check and roll. A roll, or book, containing the names of such as are attendants on, and in pay to, great person- ages, as their household servants.

Not daring to extend this law further thfcn to the king's servants in checkroll, lest it should have been too harsh to the gentlemen of the kingdom.

Bacon's Henry VII.

CHECKY, in heraldry, is when the shield, or a bordure, &c. is chequered, or divided into chequers or squares, in the manner of a chess- board. This is one of the most noble and an- cient figures used in armoury ; and ought to be given to none but great warriors, in token of their bravery ; for the chess-board represents a field of battle ; and the pawns placed on both

sides represent the soldiers of the two armies, which move, attack, advance, or retire, according to the will of the gamesters, who are the generals. This figure is always composed of metal and color ; but some authors would have it reckoned among the several sorts of furs. See HERALDRY.

CHEDORLAOMER.kingof Elam, the first monarch recorded in authentic history, who made other kings tributaries. His name signifies a generation of bondage, and, about A. M. 2078, he subdued the kingdoms of Sodom, Gomorrah, Ad mah, Zeboim, and Zoar, which, after serving him twelve years, rebelled. See Gen. xiv. Shuckford supposes him to have been the same with Ninyas king of Assyria; but his reasons are not conclusive.

CHEDUBA, an island in the bay of Bengal, on the coast of Arracan, twenty-five miles in length. It yields abundance of rice, and was governed by a lieutenant of the Burmese govern- ment, to whom it belonged. It has been ceded to the East India Company by the recent treaty. The most western point is in long. 93►► 40′ E., lat. 18►► 40′ N.

CHEEK, n. s. Sax. ceac. The side of the face below the eye.

I awoke,

And found my chamber full of smoke ; JM v chekes eke unto the eres, And all my body wet with teres.

Chaucer's Dreame. Her noˆe, her mouthe, and eye, and cheke,

Well wrought. Id. Romaunt of the Rose.

And now and then an ample tear trilled down

Her delicate cheek. Shakspeare.

Her beauty hangs upon the cheek of night

Like a rich jewel in an ˆEthiop's ear. Id.

I shall survey, and sji? Death in thy cheeks, and darkness in thy eye.

Ddnne. Her eyes, her lips, her cheeks, her shape, her

features,

Seem to be drawn, by love's own hand ; by love Himself in love. Dryden's Love Triumphant.

We bleed, we tremble, we forget, we smile, The mind turns fool, before the cheek is dry.

Young's Night Thoughts.

CHEEK, a general name among mechanics, for almost all those pieces of their machines and intruments that are double, and perfectly alike.

CHEEKS, in ship-building, are two pieces of timber, fitted one on each side of the mast at the top, serving to strengthen the masts there. The uppermost bail or piece of timber in the beak of a ship, is called the cheek. The knees which fasten the beak head to the ship, are called cheeks ; and the sides of any block, or the sides of a ship's carriage of a gun, are also called cheeks.

CHE'EKBONE, n. s. From cheek and bone.

I cut the tumour, and felt the slug : it lay partly under the os jugale, or cheekbone. Wiseman.

CHE'EKTOOTH, n. s. From cheek and tooth. The hinder-tooth or tusk.

He hath the cheekteeth of a great lion. Joel

CHEER,n.s.,v.a.,&v.n.>) Ital. ciera ; Fr. CHE'ERER, n.s. chere; Span, xira;

*CHE'ERFUL, adj. Lat. churls; x*P*C-*

CHE'ERFULLY, adv. ˆ The French signi-

CHE'ERFULLXESS, n.s f fies entertainment, CHE'ERLESS, adj. and the Spanish

CHE'ERLY, adj. & adv. the countenance ; CHE'ERY, adj. j it seems to have in

English some relation to both these senses. En- tertainment ; jollity ; gaiety. To incite ; to en- courage ; to inspirit ; to comfort ; to console. Gladdener ; giver of gaiety ; full of life ; mirth ; of gay appearance. Freedom from dejection, and gloom ; alacrity. Cheerless the reverse of all this.

Wherefore, with all my hert, I pray Ye rise, and let us talk and play : And see how many ladies here Be comen for to make gode chere.

Chaucer's Dreame.

Her chere was simple as birde in boure.

Id. Romaunt of the Rose.

Right faithful true he was in deed and word, But of his cheer did seem too solemn sad : Nothing did he dread, but ever was ydrad. Spenser.

The clieerful birds of sundry kind Do chaunt sweet musick to Jelight his mind.

Faerie Qveene. But though my cates be mean, take them in gooa

part;

Better cheer you may have, but not with better b

Shaftspeaf!.

*I have not that alacrity of spirit, Nor cheer of mind, that I was wout to have. /*********/.*

He ended ; and his words their drooping cheer Enlightened, and their languished hope revived.

Miifn.

Oft listening how the hounds and horn Cheerly rouse the slumbering morn.

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Dot trine fs that which must prepare men for discip- line ; and men never go on so cheerfully, as when they see where they go. South.

Sad Amynta sighed alone, From the cheerless dawn of morning Till the dews of night returning. Dryden.

Displeased at what, not suffering, they had seen, They went to cheer the faction of the green. Id.

With what resolution and cheerfulness, with what courage and patience, did vast numbers of all sorts of people, in the first ages of Christianity, encounter all the rage and malice of the world, and embrace tor- ments and death. Tillotson. They are useful to mankind, in affording them con- renient situations of houses and villages, reflecting the benign and cherishing sun beams, and so rendering their habitations both more comfortable and more cheerly in winter. Ray on the Creation.

Hark ! a glad voice the lonely desert cheers : Prepare the way ; a god, a god appears !

Pope's Messiah.

Saffron is the safest and most simple cordial, the greatest reviver of the heart, and cheererof the spirits.

Temple.

Prime cheerer, light, Of all material beings first and best.

Thomson's Summer.

Conn, let us hie, and quaff a cheery bowl ; Let cyder new wash sorrow from thy soul.

Gay's Pastorals.

Hope, like the glimmering taper's light, Adorns and cheers the way ; And still as darker grows the night Emits a brighter ray. Goldsmith.

And none did love him ??? though to hall and bower He gathered revellers from far and near, He knew them flatterers of the festal hour ; The heartless parasites of present cheer.

Byron's Childe Harold. CHEESE, n. s. CHE'ESE-CAKE, n. s.

CHE'ESE-MONGER, n. $.

CIIE'ESE-PARING, CIIE'ESE-PRESS, n. s. CHE'ESE-VAT, n.s. CHE'ESY, adj.

Lat. caseus; Sax. cyse ; Tartar and Turk.

aous, coagulated milk,

-produced from Goth, and Swed. ost, curds. Food made from milk curds. Cheese-cake

consists of soft curds," sugar, and butter. Cheese- monger is one who deals in cheese. The press and the vat are machines used in the making of cheese. In the one the curds are pressed and in the other they are confined.

I will rather trust a Fleming with my butter, the Welshman with my cheese, than my wife with herself.

Shaktpeare.

Of all cheeses, I take that kind which we call Ban- 1 ury cheese to be the best. Burton' t Anat. Mel.

A true owl of London, That gives out he's undone, Being a cheesemonger,

By trusting. Ben Jonson.

His sen►►e occasions the careless rustic to judge the

sun no bigger than a cheesevat. GlanviUe.

Where many a man at variance with his wife. With softening mead and cheesecake ends the strife.

King.

The cleanly cheesepress she could never turn, Her aukward fist did ne'er employ the churn.

Gay's Pastorals.

Acids mixed with them precipitate a tophaccous clialky matter, but not a cheesy substance.

Arbuthnot on Aliments.

But how shall I

Pass where in piles Cornavion cheeses lye ? Cheese that the table's closing rites denies, And bids me with the unwilling chaplain rise.

Gay.

Ye who but see the saving man at table And scorn his temperate board as none at all, And wonder how the wealthy can be sparing, Know not what

visions spring from each cheese-paring.

Byron.

CHEESE, in rural economy, is composed of coagulated milk, which has undergone a chemi- cal process, combined with the mechanical ope- ration of a powerful press, usually employed to expel the serum or whey, which would otherwise retain it in a nearly fluid state, and as such pro- duce decomposition.

The quality, and as such the value, of cheese generally depends on the nature of the milk em- ployed, which varies very considerably in differ- ent parts of England. Indeed, almost every country has places noted for this commodity ; thus Chester and Gloucester cheese are famous in England ; and the Parmesan cheese is in no less repute abroad, especially in France. This sort of cheese is entirely made of sweet cow-milk ; while at Ilochefort, in Languedoc, they make it of ewes' milk ; and in other places it is usual to add goat or ewe's milk, in a certain proportion, to that of the cow. There is likewise a kind of medicated cheese made by intimately mixing the expressed juice of certain herbs, as sage oˆ mint, with the curd, before it is formed into a cheese. The Laplanders manufacture a species of cheese of the milk of their rein-deer, which is not only of great service to them as food, but also for a variety of other purposes connected with domestic economy.

The finest cheese prepared in England, speak- ing generally, is furnished from the dairies in Cheshire, some connoisseurs may perhaps prefer Stilton ; and, as this important article of British manufacture is now exported to a considerable extent, we purpose under the article Dairy to enter pretty fully into the various modes of pre- paring it. See DAIRY.

CHEILOCACE, a swelling of the lips, to which the inhabitants of northern countries, especially children, are said to be very subject.

CHE1RANTHUS, stock gilliflower, or wall- flower, a genus of the siliquosse order, and the tetradynamia class of olants : GERM. marked with a glandulous denti►► e on each side; CAL. is close, with two of its leaves gibbous at the base ; SEED plane. . There are thirty-four known species, of which the following are most worthy of notice : ►►► C. annuus, or ten weeks' stock, with an upright, woody, smooth stalk, divided into a branchy head, twelve or fifteen inches high, garnished with spear-shaped, blunt, hoary leaves, a little indented, and all the bran- ches terminated by long erect spikes of numerous flowers of different colors, in different varieties C cheiri, or the common wall-flower, with ligne- ous, long, tough roots; an upright, woody, abiding stalk, divided into many erect angular branches,

forming a bushy head from one to two feet high, closely garnished with spear-shaped, acute, smooth leaves, and all the branches termi-

natmg in long erect spikes of numerous flowers, which in different varieties are yellow, bloody, white, &c. C. incanus, the hoary cheiranthus, with ligneous, long, naked, white roots ; and an upright, strong, woody, abiding stem, from one to three feet high, branchy at top, adorned with long, spear-shaped, obtuse, hoary leaves ; and the top of the stalk and all the branches termi- nated by erect spikes of flowers from one to two or three feet long, of different colors in different varieties. The last two sorts are very hardy evergreen biennials or perennials; but the first, being an annual plant, must be continued by seed sown every year ; and even the last two, notwithstanding their being perennial, degenerate so much in their flowers after the first year, that it will be proper also to raise an annual supply of them. The seeds are to be saved only from the plants with single flowers ; for the double ones bring no seeds to perfection. The seeds are to be chosen from such flowers as have five, six, or more petals, or from such as grow near to the double ones. They may be sown in the full ground in the spring, and afterwards transplant- ed. When fine doubles of the last two kinds are obtained, they may be multiplied by slips from the old plants.

CHEKAO, in natural history, a hard, stfny earth found in many parts of the East Indies, and sometimes used by the Chinese in their porce- lain manufactures.

CHEKE (Sir John), a celebrated statesman, grammarian, and divine, of an ancient family in the Isle of Wight, was born at Cambridge in 1514, and educated in that university; where, after taking his degrees in arts, he was first cho- sen Greek lecturer, and in 1540 professor of that language, with a stipend of ––40 a-year. In this station he was principally instrumental in reformingthe pronunciation of the Greek language, which, having been much neglected, was imper- fectly understood. In 1544 he was sent to the court of Henry VIII., and appointed tutor for the Latin language, jointly with Sir Anthony Cooke, to prince Edward, about which time he was made canon of the college newly founded in Oxford. On the accession of his royal pupil to the crown, he was first rewarded with a pension of 100 marks, and afterwards obtained several considerable grants from the crown. In 1550 he was made chief gentleman of the privy chamber; in 1551 he was knighted; in 1552 made cham- berlain of the exchequer ; in

1553 clerk of the council ; and soon after secretary of state and privy councillor. But these honors were of short duration. Having concurred in the measures of the duke of Northumberland, settling the crown on the unfortunate lady Jane Grey, and acted as her secretary during the nine days of her reign, on the accession of queen Mary he was sent to the tower, and stripped of the greatest part of his possessions. In September, 1554. he obtained his liberty, and a license to go abroad. He first went to Basil, thence to Italy, and afterwards returned to Strasburg, where he was reduced to the necessity of reading Greek lectures for sub- sistence. In 1556 he set out to meet his wife at Brussels ; but, before he reached that city, he was seized by order of Philip II., hoodwinked, and

thrown into a waggon ; and thus ignominionsly conducted to a ship, which brought him to the tower of London. He soon found that religion was the cause of his imprisonment ; for he was immediately visited by two Romish priests, who piously endeavoured to convert him, but without success. However, he was visited by Flecken- ham ; who told him from the queen, that he must either comply or burn. Sir John accordingly complied in form, and his lands were restored : but his remorse soon put an end to his life. He died in September, 1557, at the house of his friend Mr. Peter Osborne, in Wood-street, Lon- don, and was buried in St. Alban's church. He left three sons, the eldest of whom, Henry, was knighted by queen Elizabeth. He wrote, 1. A Latin Translation of two of St. Chrysostom's Homilies, London, 1543, 4to. 2. The Hurt of Sedition, London, 1549, 1576, 1641. 3. Latin Translation of the English Communion Service : printed among Bucer's Opuscula. 4. De Pro- nunciatione Graecae, Basil, 1555, 8vo.

CHELIDONIUM, celandine, horned, or prickly poppy, a genus of the monogynia order and pentandria class of plants ; natural order twenty-seventh, rhaeadaea : COR. is tetrapetalous : CAL. diphyllous, siliqua unilocular and linear. C. majus is an article in the materia medica.

CHELMSFORD, a populous town in the centre of Essex, and the capital of the county, is seated in a beautiful valley between the Chelmer and the Can. Maurice, bishop of London, first made it a place of importance, A. D. 1100, by building a bridge of three arches over the latter river ; which, being narrow, though very dura- ble, was taken down not long since, and an ele- gant stone bridge of one arch erected in its stead. The natural confluence of these rivers is about half a mile from the town ; but a little below the bridge the Chelmer is diverted into the Can b- a canal. Chelmsford is separated by the Can from the hamlet of Moulsham. The principal street is spacious, and adorned with elegant buildings. The town has an ancient Gothic church; a free-school founded by Edward VI.; a theatre; and a magnificent new county house, fronted with stone, and placed with great taste, in an oblique position, at the end of the high street.

In an open space, adjoining the town- hall, stands a public conduit ; its origin is uncertain, but it has been beautified by the fami- ly of the Fitzwalters, is of a quadrangular form, about fifteen feet high, and built of stone and brick, with a pipe on each of the four sides. The spring which supplies it, rises at Burgess- Well, about a quarter of a mile from the town. To the left of the Shire-Hall is the church, about 300 years old, a stately structure, at the west end of which stands a square stone tower, with pyra- mids at each corner, and a neat spire. The windows are gothic. In 1800 the whole middle aisle, from the tower to the chancel, fell in. Chelmsford is a great thoroughfare ; the east road from London passing through it. The late queen Charlotte gave an annual plate of 100 guineas, and two subscription plates are annually run for on the race ground at Gaily wood common. There is a well-stocked market on Friday, and this town sends two members to parliament. It

1 ies twenty-one miles south-west by west of Col- chester, and twenty-nine miles north-east by east of London.

CHELMSFORp,a town of Massachusetts, in Mid- dlesex county, situated on the south side of the Merrimackjover which is a curious bridge, at Pa- tucket Falls, which connects the town with Dra- cut. It is twenty-eight miles N. N.W. of Boston.

CHELONE, in botany, a genus of the angios- permia order, and didynarnia class of plants; natural order fortieth, personatse : CAL. quinque- partite ; the rudiment of a fifth filament among the highest stamina ; the capsule bilocular. There are three species, all natives of North America ; and are herbaceous flowery perenni- als, with upright stalks two feet high, decorated with spear-shaped leaves, and beautiful spikes of monopetalous, ringent flowers, red, rose-colored, blue, and purple. They flower from September to November, and are sometimes succeeded by ripe seeds in this country. They are very hardy, and may be propagated by seeds in any soil ; but the first two multiply so fast by their creep- ing roots, that the seeds are seldom regarded.

CHELSEA, a fine village, situated on the north bank of the Thames, a mile west of West- minster, remarkable for the magnificent hospital for invalids and old decrepit soldiers; and a noble botanic garden belonging to the Company of Apothecaries. The royal hospital for invalids was first

projected by Stephen Fox, who him- self contributed above ►►l 3,000 to its establish- ment. It was designed by Sir C. Wren, begun by Charles II. carried on by James II. and finished by William III. It consists of a vast range of buildings, that form three large elegant squares. It stands at a small distance from the river, and is built of brick, excepting the orna- mental parts, which are of freestone. The prin- cipal building is a large quadrangle, open on the south side, having in the centre a bronze statue of the founder Charles II. in Roman attire. Its whole length is 270 feet. In the wings are sixteen wards, in which are accommodations for above 400 men ; and there are, besides, in the' other buildings, a considerable number of apartments for officers and servants. The whole expense of erecting the building is computed to have been ►►150,000; and the extent of it is about forty- eight acres. It is under the direction of com- missioners, who consist generally of officers of state and of war. The governor has a salary of ►►500, the lieutenant-governor ►►400, the major ►►250. The physician, secretary, comptroller, deputy-treasurer, steward, and surgeon, have each ►►100 yearly, and many of the other officers have considerable salaries. There are also in- ferior officers, Serjeants, corporals, and drums, who all do garrison duty ; and there are above 10,000 out- pensioners; all which expense is de- frayed by a poundage deducted from the army, deficiences being made good by parliament. The annual expense of the house establishment, in- cluding officers salaries, and all incidental charges, varies from 27,000. to ►►30,000. The botanic garden is very exteosive, enriched with a variety of domestic and exotic plants, the original stock of which was given to the apothecaries of London by Sir Hans Sloarie. The Royal Mili-*

tary Asylum for educating about 1000 cuildren of non-commissioned officers and soldiers, has lately been erected by a grant from parliament near Sloane Square. Towards the support of this institution, the whole army contributes one day' pay per annum.*

CHELTENHAM, or CIIILTENHA.M, a marktt town, nine miles north-east of Gloucester, and ninety-five from London, which takes its nan-e from the rivulet Chilt, passing through it into the Seveni from Dowdeswell. The town lies in a flat marshy soil, on the borders of a fine fertile vale, about two miles from Clieve, Presbury, and Lockhampton hills, which join the Cotswolds, and form a kind of semicircle, defending the town from those cold blasts which proceed from the eastern quarter. There is no manufacture carried on, but the poorer inhabitants spin wool for the clothiers around. On an easy ascent, about half a mile south of the church, rises the Spa, whhh first attracted the attention of the public in 1740. It is ascended by pleasant gravel walks, and at the Spa there is a walk 200 yards long, and twenty feet broad. The pump appears under a dome, through a neat archway, with two pos- terns, and supported by pillars ; on

the left is the breakfasting room, forty feet by twenty, with an orchestra; this is occasionally converted into a ball-room. The season for drinking the waters is from May to October. They are impregnated with salts, sulphur, steel, calcareous earth, and operate at the same time as purgative and resto- rative, very much resembling those of Scar- borough. Other springs of the same quality are found not far distant,, but they are not frequented. Dry weather is the best for these waters, as well as for all mineral waters ; they are more plentiful in rainy seasons, but not so powerful. The town has a market on Thursday, and fairs on Holy Thursday, St. James's day, and the 2d Thursday in September. It has been much improved within these twenty years. A new market-house has been erected, the streets cleaned and paved ; a theatre has been erected, and the whole town beautified considerably. The church is a vener- able gothic structure, in the form of a cross, with aisles on each side, and an octagonal spire in the middle. The churchyard is the most commodi- ous in England, 300 feet long, and is planted with double rows of lime-trees.

CHE'LY, n. s. Lat. chela. The. claw of a shell fish.

It happeneth often, I confess, that a lobster hath the c/iely, or great claw, of one side longer than the other. Browne.

CHEMINAlS(Tirnoleon), a celebrated French preacher, born at Paris in 1682. He was for some time teacher of languages and rhetoric in the Jesuits' school at Orleans ; and afterwards gained much applause as a preacher, both at Paris and Versailles : his style was exceedingly pathetic, and indeed unrivalled till the appear- ance of Massillon. His health early declined, but such was his zeal that when unable to preach he visited die country for the purpose of in- structing the poor. After his death, which took place in his thirty-eighth year, three volumes of his sermons were published by Bretonneau, which have been since reprinted

CHEMISTRY.

1. CiiEMiSTRT. The reader will observe, by attending to the following definitions of this interesting and popular science, that there have been some difficulties attendant upon endeavours to mark precisely its proper boundaries, or to distinguish accurately the nature of chemical, as separate from other branches of natural phi- losophy.

2. ' When we consider,' says the Abbe Hau'y, ' the general and permanent properties of bodies, or when the changes that these bodies undergo are slight, and they return to their former state after the cause has ceased to

act ; when also, the laws which determine the reciprocal action of the same bodies are propagated to distances more or less considerable ; the results of our observa- tions are still within the confines of natural philosophy. But when the phenomena depend on the ultimate action which the molecules exert on each other at distances almost infinitely small, by virtue of which the molecules separate, to unite again in a different order, forming new combinations with new properties, the study of the phenomena belongs to chemistry.'

3. ' Chemistry,' says Jacquin, ' is that branch of natural philosophy which unfolds the nature of all material bodies, determines the number and properties of their component parts, and teaches us how those parts are united, and by what means they may be separated and recom- bined.'

4. Dr. Thomson defines the science to be ' that which treats of those events or changes in natural bodies which are not accompanied by sensible motions.'

5. Murray calls ' it the science which investi- gates the combinations of matter, and the laws of those general forces by which these combina- tions are established and subverted.'

6. ' It is the object of chemistry,' says Mr. Brande, ' to investigate all changes in the con- stitution of matter, whether effected by heat, mixture, or other means.'

7. Dr. Ure's definition is, ' the science which investigates the composition of material sub- stances, and the permanent changes of constitu- tion which their mutual actions produce.'

8. While an author, of whose labors in the present treatise we shall largely avail ourselves, defines chemistry, that branch of philosophy, ' the object of which is to discover and explain the changes of composition that occur among the integrant and constituent parts of different bodies.'

9. It will be perceived that most of the above definitions (and we might multiply their number) go upon the idea of combination in bodies, pro- ducing change; a principle we may illustrate oy a very familiar example. Suppose two sub- stances in a state of powder, or minute commi- nution of their particles, to be rubbed together m a mortar, an intimate mixture would be thus obtained of the particles of the one with the .ˆarticles of the other mass; but suppose this to

be mere mixture, and that, notwithstanding their very intimate

combination, the particles of each body retain their essential characters, the ope- ration will have been, not a chemical, but a mechanical process ; no absolute change has been effected, and why ? because, as the chemists express themselves, no attraction had existed be- tween these bodies ; but supposing two other masses of matter to be treated in the same man- ner, the particles of these last having towards each other a mutual attraction or affinity ; then, instead of a simple intermixture, or mere me- chanical combination of the two substances, a positive interchange of principles shall have been effected, and the resuit of the union shall be a tertium quid ; a something actually different from the two materials upon which the experi- ment has been made.

10. In this example the distinction between mechanical and chemical agency is sufficiently definite and precise ; but a change may be ef- fected by the mutual action of bodies upon each other, which is rather formative than essential, and it is in these last that the sciences of natural philosophy and chemistry seem so to blend in with each other, that it is not in all instances easy to preserve their respective peculiarities. If change of essence were positively requisite to constitute a chemical process, solution and the expansion of bodies by heat would scarcely be recognisable as chemical effects, and there are many cir- cumstances that occur in nature or are instituted by art, which are at once both formative and essential; although, then, change in essence is one of the most conspicuous, it is not, perhaps, the sole characteristic of chemical agency ; and if we be desirous of stamping a niore abstract and definite mark upon the objects of chemical investigation, we must still seek for something further in order to effect our purpose.

11. We have seen above that Mr. Brande claims for chemistry the right and power of in- vestigating all changes in the constitution of matter ; and it is in this word constitution that we shall find the principal secret of distinction to be between this and other branches of na- tural science, the constituent principles, or, as it is somewhat hypothetically expressed, the mo- lecules of bodies being the objects of its recogni- tion, while the business of the natural philoso- pher rather refers to mass. See ATTRACTION.

12. We do not know then that we can do better than adopt the definition above given from Dr. Henry, and call chemistry 'that science, the object of which, is to discover and explain the changes of composition that occur among the integrant and constituent parts of different bodies.'

13. For the introductory and historical part of the present treatise, that part to which w ? immediately proceed, we shall be much indebtec? to another contemporary writer of great and deserved celebrity ; we allude to Mr.

Brand?, whose historical sketch of the progress of clie-

mical science, prefixed to his Manual of Che- mistry, is in our minds a master-piece of com- position and able reasoning ; a meed of praise, this, which no one having read it, will feel reluctant to bestow, when he shall have recol- lected the combination of talent and acquire- ment supposed in an individual at once to detail facts with fidelity, arrange them in logical order, and wield the pen of an elegant and powerful writer.

14. The history of the science which we are now about to present, will, it is proper to say, embrace some particulars, not intelligible to those who shall come to its perusal entirely ignorant of the principles of chemistry. We would recommend, however, a careful reading of it, even by such persons, prior to their enter- ing upon the body of the treatise; and after this last shall have been studied and digested, the introduction may then be reperused with more satisfaction and profit.

PART I.

PROGRESS OF CHEMICAL SCIENCE.

15. ‘ Chemistry,’ says Mr. Brande, ‘ cannot be said to have existed as a science previous to the commencement of the seventeenth century ; for although we find in the writings of the earlier chemists m?iny curious and important facts and discoveries, these remained useless and unap- plied so long as the minds of men were exclu- sively directed to the transmutation of metals, the fabrication of an universal elixir, and the production of the alcahest or general solvent. Although, therefore, it may often’ be amusing and sometimes profitable to revert to the crude speculations and waking dreams of the volumin- ous writers on these subjects who were eminent in the fourteenth and two successive centuries, the time of the student will be more usefully employed in tracing the labors of those who, discarding visionary hypotheses, proceeded to the investigation of truth, and who were led on not by the vague glimmerings of speculative no- tions, but by the steady day-light of real phi- losophy.

16. It may be right briefly to advert to the circumstances of more ancient times in reference to chemical pursuits, than those from which Mr. Brande commences his historical disquisi- tion. In these earlier periods, however, che- mistry, if it might be said to exist at all, rather existed as an art than

*as a science. ‘ Were we,’ says a writer of fifteen years ago, ‘ to treat of the history of chemical arts, we should be car- ried back to a very remote era; were we to speak of chemistry as a science, our history would scarcely yet have a beginning. Chemical arts do not imply chemical science ; and we shall consequently overlook the fancies of those who see in common operations, the rudiments of what has since been so advantageously de- veloped ; who admire, for instance, the ingenuity of those ancient artists who could be so far in- structed as to produce a Scarlet dye, when they were in reality ignorant of such a color.’ * And’ says another writer in the same spirit, and with equal truth, ‘ although the working of metals, and*

other chemical arts, were known in the early ages of the world ; and among the Egyptians, Greeks, and Romans, many of the arts depend- ing on chemistry had reached some degree of perfection ; yet this knowledge must be regarded as consisting only of a number of scattered, un- connected facts, which deserve not to be dis- tinguished by the name of science. A carpenter may erect a piece of machinery, arranged and constructed exactly similar to what he has seen, without the knowledge of a single principle of its construction ; but the man of science, who can neither handle the axe nor the chisel, ob- serves and estimates the power and operation of all its parts, and determines the general effect of the whole machine.

17. In Egypt, however, many processes ap- pear to have been carried on which implied at least very considerable acquaintance with what we should call chemical facts, such as painting on glass, fabricating porcelain, gilding of metals, extracting salts from their bases, separating oils, and preparing wine and vinegar. The dying of silks too was common among the ancient Egyp- tians ; and the process of embalming was of course a chemical one. They likewise worked considerably among metals.

18. In this last employ the Phoenicians also were expert, and these people are described as skilled in the manufacture of glass. Many mineral substances were also familiar to the Phoenicians.

19. The historians of the Chinese, claim for these people a very early acquaintance with chemical, as well as other branches of phi- losophy. Metallurgic processes are said to have been from the most ancient date carried on by the Chinese, and working in horn and ivory very common with them.

20. It is, perhaps, in Greece and Rome that we hear less of arts and manufactures, and institutions of a chemical nature, than in other countries of ancient times. Mathematics, philosophy, the fine arts, and what in the present day would be termed polite literature, rather occupied

the attention of the former of these people, than those particulars which had to do with the more vulgar business of life ; and in respect to the latter, the Romans, ‘ the pomp, pride, and circumstance of war’ for a very long period so absorbed every other consideration, as to render them inattentive to, and almost despisers of, everything that had not some connexion with military affairs.

21. ‘It is,’ to revert to the author from whom we have deviated, ‘ among our own countrymen that we discover the fathers of chemical phi- losophy ; for Bacon, Boyle, Hooke, Mayow, and Newton present unequivocal claims to that dis- tinctive title. As induction from experiment is exclusively the basis of chemical science, little progress could be made in it till the futility of of the ancient philosophical systems had been shown, and their influence annihilated, till the true end of science was rightly defined, and the road to it rendered straight and passable ; till the necessity of well-digested experiment had been established, which ‘ first procures the light, then shows the way by its means.’

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22. The history of chemistry necessarily com- prises an account of alchemic attempts to con- vert the baser metals into gold, to obtain an universal medicine, and to procure the means of obviating the necessity of death ; for, difficult as it may appear in the present day to conceive how these visionary projects could be made the subjects of serious investigation and pursuit, certain it is, that such notions were largely entertained and extensively acted on ; and in some cases by individuals, who, with the exception of being influenced by this, the fan-atic knavery of the times in which they lived, seemed men of high intellect and correct morals.

23. Under the word ALCHEMY the reader will find a notice of some of the most con- spicuous of those individuals whose exertions and experiments were directed by the desire and expectation of finding ‘ the philosopher’s stone,’ and the ‘ universal elixer.’ We shall in this place enlarge a little on this history, and pre- sent the reader with an abridgment of Mr. Brande’s account of Alchymy, such we find to be his orthography of the word. See the Etymological Definitions.

24. Hermes Trismegistus, who is said to have lived in the year of the world 2076 (we now extract from Mr. Brande), has generally been quoted as the oldest of the alchemists : there can, however, be very little doubt that the writings attributed to him are entirely spurious. The Tractatus Aureus, or Golden Work, is evi- dently a farrago of occult philosophy, belonging to a

much later period. Hermes, at the outset, is made to apologise for divulging the secrets of the black art. ‘ I should never have revealed them,’ he says, ‘had not the fear of eternal judg- ment, or the hazard of the perdition of my soul, prevailed with me for such a concealment. It is a debt I am willing to pay to the just, even as the Father of the just has liberally bestowed it upon me.’ After this prelude we might expect to be let into some of the mysteries of alchemy, but our curiosity is quickly disappointed by finding that they are only revealed to the eyes and ears of the sons of art, ‘ not to the profane, the unworthy, and the scoffers, who, being as greedy dogs, wolves, and foxes, are not to feed at our divine repast.’ The reader is then con- ducted into what is termed the innermost chamber, and regaled with a history and explication of various matters relating to the philosopher’s stone, by means of which, ‘ through the permission of the Omnipotent, the greatest disease is cured, and sorrow, distress, evil, and every hurtful thing evaded, by help of which we pass from darkness to light, from a desert and wilderness to a habitation and home, and from straightness and necessities to a large and ample estate.’ We are then di- rected to ‘catch the flying bird,’ by which is meant quicksilver, ‘ and drown t so that it may fly no more ;’ this is what is afterwards termed the fixation of mercury, by waiting it to gold. It is then to be plunged into the ‘ well of the philosophers,’ or aqua regia, ‘ by which its soul ###will be dissipated, and its corporeal particles united to the red eagle,’ or muriate of gold.

25. All the details bear upon this one point, that of increasing the weight of gold by the in-

fluence of mercury, and this imaginary document of Hermes will suffice as an example of all the earliest alchemical authors.

26. Geber is another great name in the history of alchemy, who lived probably not later than the seventh century. His three books of al- chemy were published atStrasburg in 1520, and if genuine, of which there is much doubt, con- tain matter that well justifies the praise of Boerhaave, who considers him as a first-rate philosopher of his age. In his chapter on the Alchemie of Sol, after descanting upon the dif- ferent means of refining and dissolving gold, he describes several solar medicines, in language which is tolerably intelligible ; they are all so- lutions of gold in nitro-muriatic acid, with the addition of quicksilver, nitre, common salt, and some other saline matters, and the student is di- rected to prepare his mind for their performance by suitable acts of piety and charity, which, if earnestly and perseveringly carried on, may, after due time, enable him, in the language of Dr. Salmon, his translator, ‘ to change argent vive into an infinite solific and lunific, without the help of anything more than its multipli- cation.

27. Artephius, in 123G, published several alchemical tracts. We are told by

Roger Bacon and others that he died at the advanced age of 125, having prolonged his life by the miraculous virtues of his medicines ; but his name, and that of John de Rupescissa, are now deservedly buried in oblivion.

28. Roger Bacon was a native of Ilchester, in Somersetshire, and descended from an ancient and honorable family. He acquired celebrity at Oxford, after his return from Paris, in 1240; but his boldness in opposing the dogmas of the schools, occasioned him to be subjected to much and violent opposition, and even, it is said, en- dangered his life.

29. I know of no work, says Mr. Brande, that strikes one with more surprise and admiration than the Opus Majus of Roger Bacon, ‘ he stands alone, like a beacon upon a waste ; his expressions are conspicuous and comprehensive, such as betoken a rare and unclouded intellect ; and they are full of anticipations of the advan- tages likely to be derived from that mode of in- vestigation insisted upon by his great successor, chancellor Bacon. This resemblance between Roger Bacon and his illustrious namesake has scarcely been noticed by the historians of his period ; it has, however, not escaped Mr. Hal- lam’s observation, who adverts to it in the History of the Middle Ages. ‘ Whether lord Bacon,’ he says, ‘ ever read the Opus Majus I know not, but it is singular that his favorite quaint expression, prerogative scientiarum should be found in that work ; and whoever reads the sixth part of the Opus Majus upon experimental science, must be struck by it as the prototype in spirit of the Novum Organum. The same san- guine, and sometimes rash confidence in the effect of physical discoveries ; the same fondness for experiments ; the same preference of in- ductive to abstract reasoning; pervade both works.

30. Bacoa’s alchemical work that has been

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most spoken of, is the Mirror of Alchemy. To him has been ascribed the invention of gun- powder by some, while others have traced it to Bartholomew Schwartz, a German monk, who lived early in the fourteenth century. But, ac- cording to an Arabic writer in the Escurial collection, this composition was brought into Europe by the Saracenic invaders. It seems to be pretty well made out, that the use of gun- powder was known in the early part of the fourteenth century. Edward III. employed ar- tillery with memorable effect at the battle of Cressy, and in the fifteenth century hand cannons and muskets came into use, and gunpowder was in common employ.

31. Contemporary with Bacon was Albert of Cologne, who was the inventor of the celebrated brazen head, which Dr. Aquinas, his pupil,

demolished, in consequence of its being suspected to be an agent of the devil.

32. Albertus Magnus was said to be deeply skilled in alchemic lore, as was also Raymond Lully of Majorca, who died on his passage from Africa,, in 1315, whither he had been to propa- gate the gospel. Lully is said to have converted iron into gold, in the presence of Edward I. in London. Arnold de Villeneuve prophesied that the world would come to an end in 1376. He was renowned as a physician and astrologer, as well as an alchemist ; and Mariana and others ridi- culously accuse him of magic.

33. The treatise on alchemy published at Paris in 1561, and attributed to Flamel, is said to be spurious. Flamel was thought to possess the secret, from his becoming suddenly, as it is said, very rich. He was celebrated also for his hieroglyphics, ‘ which are much of the same cast as those that now adorn Moore’s Almanack, and quite as edifying.’

34. George Ripley figures in Salmon’s col- lection as the author of the Marrow of Alchymy. He was a chemical poet, and Mr. Brande ex- tracts the following stanzas from the preface to his Compound of Alchemic, dedicated to Edward IV.

But into chapters thys Treatis I shall devyde, In number twelve, with dew recapytulatyon : Superfluous rehearsalls I lay asyde, Intending only to give trew informatyon, Both of the theoryke and practycall operatyon ; That by my writyng who so will guyded be, Of hys intente perfectly speed shall he.

The fyrst chapter shall be of natural! Calcination; The second of Dyssolution, secret and phylosophycall ; The third of our elementall Separation ; The fourth of Conjunction matrimonial! ; The fyfth of Putrefaction then followe shall ; Of Congelation Albyficative shall be the sixt, Then of Cybation, the seaventh, shall follow next.

The secret of our Sully mation the eyght shall

show ;

The nynth shall be of Fermentatyon ; The tenth of our Exaltation I trow ; The eleventh of our mervelose Multiplication ; The twelfth of Projection, then recapytulatyon. And so this treatise shall take an < mi, By the help of God, as I intend

Thus here the tract of Alchemie doth end, Which tract was by George Ripley, Chanon, penn’d. It was composed, writt, and signed his owrie, In anno twice seaven hundred seaventy-one. Reader, assist him, make it thy desire, That after lyfe he may have gentle fire !

AMEN.

35. Failure after failure, although it might shake the faith placed in alchemy, did not pre- vent perseverance, and men still continued to act under the belief that eventual success would attend the great endeavour. Salmon's creed is that of most of his contemporaries ; ' as to the great and philosophic work,' says he, meaning transmutation, ' it is my opinion and belief that there is such a thing in nature. I know the matter of fact to be true, though the way and manner of doing it is as yet hid from me. I have been eye-witness of so much as is able to convince any man, endued with rational faculties, that there is a possibility of the trans- mutation of metals ; yet, for all these things, will not advise any man, ignorant of the power of nature, and the way of operation, to attempt the work, lest, erring in the foundation, he should suffer loss, and blame me. Without doubt it is a gift of God from above, and he that attains it must patiently wait the moving of the waters : when the destined angel moves the waters of the pool, then is the time to immerge the leprous metal, and cleanse it from all impurities.'

36. Van Helmont expresses himself on the same subject in the following words : ' I am con- strained to believe in the making of gold and silver, though I know many exquisite chemists who have consumed their own and other men's goods in search of this mystery; and to this day we see these unworthy and simple laborers cun- ningly deluded by a diabolical crew of gold and silver sucking flies and leeches. But I know that many will contradict this truth ; one says it is the work of the devil, and another that the sauce is dearer than the meat.'

37. Bergman, speaking of transmuting re- lations, says, ' although most of them are de- ceptive, and many uncertain ; some bear such character and testimony, that unless we reject all historical evidence, we must allow them entitled to confidence.'

38. ' For my own part,' says Mr. Brande, ' the perusal of the histories of transmutation,' and, as far as we have perused them, we have formed the same judgment, ' appears to me to furnish solid grounds for a diametrically opposite opinion fiom that expressed by Bergman. The histories are all of a most suspicious character ; some- times the fraud was open and intentional, se- conded by juggling dexterity ; at other times the performers deceived themselves ; they purchased what was called a powder of projection, prepared by the adepts, containing a portion of gold, and when they threw it into the fire with mercury, and found that portion of gold remaining in their crucible, they had not wit enough to detect its source. But the cases which are quoted as least exceptionable, are often exactly those which are really impossible. I mean where the weight ot the powder of projection, and of the lead, or other base metal, taken conjointly, was exceeded

by that of the gold produced. Such is Herne's history of Paykul's transmutation, who, with six drachms of lead and one of powder, produced an ingot that was coined into 147 ducats ; and many others. But the most celebrated history of transmutation is that given by Helvetius, in his Brief of the Golden Calf; discovering the rarest miracle in nature, how, by the smallest portion of the philosopher's stone, a great piece of common lead was totally transmuted into the purest resplendent gold, at the Hague, in 1666. 39. As this, says Mr. Brande, is a luminous epitome of all that has been done on this subject I shall briefly abridge the proceedings. ' The 27th day of December, 1666, in the afternoon, came a stranger to my house at the Hague, in a plebeick habit, of honest gravity and serious authority, of a mean stature, and a little long face, black hair, not curled, a beardless chin, and about forty-four years (as I guess) of age, and born in North Holland. After salutation, he beseeched me with great reverence to pardon his rude accesses, for he was a lover of the pyrotech- nian art, and having read my treatise against the sympathetic powder of Sir Kenelm Digby, and observed my doubt about this phylosophic mys- tery, induced him to ask me if I really was a disbeliever as to the existence of an universal medicine which would cure all diseases, unless the principal parts were perished or the predes- tinated time of death come. I replied, I never met with an adept, or saw such a medicine, though I had fervently praid for it. Then I said surely you are a learned physician. No, said he, I am a brass founder and lover of chemistry. He then took from his bosom pouch a neat ivory box, and out of it three ponderous lumps of stone, each about the bigness of a walnut. I greedily saw and handled for a quarter of an hour this most noble substance, the value ot which might be somewhere about twenty tons of gold ; and having drawn from the owner many rare secrets of its admirable effects, I returned him this treasure of treasures with a most sorrowful mind, humbly beseeching him to bestow a fragment of it upon me in perpetual memory of him though but the size of a coriander seed. No, no, said he, that is not lawful ; though thou wouldst give me as many golden ducats as would fill this room ; for it would have particular consequences, and if fire could be burned of fire, I would at this instant rather cast it all into the fiercest flames. He then asked if I had a private chamber whose prospect was from the public street ; so I presently conducted him to my best furnished room backwards, which he entered says Helvetius, in the true spirit of Dutch clean- liness, without wiping his shoes, which were full of snow and dirt. I now expected he would bestow some great secret upon me, but in vain. He asked for a piece of gold, and opening his doublet showed me five pieces of that precious metal which he wore upon a green riband, and which very much excelled mine inflexibility

and colour, each being the size of a small trencher. I now earnestly again craved a crumb of the stone, and at last, out of his philosophical com- miseration, he gave me a morsel as large as a rape-seed, but I said this scanty morsel will

scarcely transmute four grains of lead. Then, said he, deliver it me back : which I did in hopes of a greater parcel ; but he cutting off half with his nail said, even this is sufficient for thee. Sir, said I, with a dejected countenance, what means this, and he said even that will transmute half an ounce of lead. So I gave him great thanks, and said I would try it and reveal it to no one. He then took his leave and said he would call again next morning at nine. I then confessed that while the mass of his medi- cine was in my hand the day before, I had secretly scraped off a bit with my nail, which I projected on lead, but it caused no transmutation for the whole flew away in fumes. Friend, said he, thou art more dexterous in committing theft than in applying medicine; hadst thou wrapt up thy stolen prey in yellow wax it would have penetrated and transmuted the lead into gold. I then asked if the philosophic work cost much or required long time, for philosophers say that nine or ten months are required for it. He answered, their writings are only to be under- stood by the adepts, without whom no student can prepare this magistery. Fling not away therefore thy money and goods in hunting out this art, for thou shalt never find it. To which, I replied, as thy master showed it to thee, so mayest thou perchance discover something thereof to me, who know the rudiments, and therefore it may be easier to add to a foundation than begin anew. In this art, said he, it is quite otherwise ; for unless taou knowest the thing from head to heel thou canst not break open the glassy seal of Hermes. But enough, to- morrow at the ninth hour I will show thee the manner of projection. But Elias never came again, so my wife, who was curious in the art whereof the worthy man had discoursed, teazed me to make the experiment with the little spark of bounty the artist had left me ; so I melted half an ounce of lead, upon which my wife put in the said medicine, it hissed and bubbled and in a quarter of an hour the mass of lead was transmuted into fine gold, at which we were exceedingly amazed. I took it to the goldsmith, who judged it most excellent, and willingly offered fifty florins for each ounce.' Such adds Mr. Brande, is the celebrated history of Elias the artist, and Dr. Helvetius.

40. Evelyn in his diary mentions that Sir Kenelm Digby gave him a certain powder ' with which he affirmed he had fixed mercury before the late king. He advised me to try (says Evelyn) and digest a little better, and gave me a water which he said was only rain water of the autum- nal equinox exceedingly rectified and very volatile ; it had a taste of strong vitriolic, and smelt like aqua-fortis. He intended it for a dissolvent of calx of gold ; but the truth is Sir Kenelm was an arrant mountebank.'

41. Descartes is said to have supported the opinion that life might be prolonged for a very considerable period; this opinion would seem to imply a belief in the discovery of some philo- sophical process or specific, but says our author his plan seemed to be the very rational one of li- miting all excess of diet, and enjoining punctual and frugal me. ►►►>.

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42. Elias Ashmole published, in 1652, his The? train Chemicum Britannicum, containing several Poeticall Pieces of our famous English ►►►philosophers who have written the Hermetique Mysteries in their own ancient language. The most remarkable piece in this collection is the Ordinall of Alchimy, by Thomas Norton, illus- trated by several comical cuts. It treats, in separate chapters, of the objects of the occult science ; of the difficulties of attaining them ; of the different methods of pursuing them ; of the characters of the elements ; and of the five con- cords, of which the first is patience, the second assistance, the third instruments, the fourth situation, and the fifth planetary influence. It is difficult to select from this production any specimen capable of conveying an idea of its merits, that can come within the limits of a quotation. Perhaps the following lines picked out of the second chapter, touching ' the Regi- ment of Fiers' may serve to convey some idea of the author's talents in the double capacity of poet and philosopher.

In many authors written you may see, Totum consistit in ignis regimine ; Wherefore in all things so proceed, That heat work no more, no less than it need \ Wherein many of Geber's cooks Deceived were, though they be wise in books. Such heate wherewith a pig or goose is scalded In this arte Decoction it is called ; Such heate as dry the lawne karchiefs fair, In thirty operations serveth for our ayre ; But for divisions you must use such heate, As cooks make, when they roast raw meat. Ignis humidus, another fier alsoe Is, and yet seemeth oppositum in adjecto ; Another fier, is fier of dessication, For matters which be imbibed with humectatioa. Ignis corrodent serveth in this arte, Elementa propinqua wisely to depart. By one point of excess all your work is slieiit , And one point too little is insufficient ; Who can be sure to find its trew degree. Majister magnvs in igne shall he be. All that hath pleasure in this booke to reade, Pray for my soule, and all both quick and df-ade. In this year of Christ 1477, This work was begun, honor to God in heaven.

43. Some few believers in transmutation have been found in later times. Dr. Price of Guildford, in the year 1782, professed to convert mercury into silver and gold by means of a white and a red powder, and is said to have

convinced many disbelievers of the possibility of this change : his experiments were to have been repeated before an adequate tribunal, but he put a period to his existence by swallowing laurel water.

44. Peter Woulfe, who died so late as 1805, and who is the author of several papers in the Philosophical Transactions, was a believer in the mysteries of the transmuting art. He had long vainly searched for the elixir, and attributed his repeated failures to the want of due preparation by pious and charitable acts. And a few other persons, adds Mr. Brande, of less note might be quoted as believers in transmutation, but the history of one is that of all : and in the emphatic language of Spenser, they were doomed

To lose good days that might he better spent, To waste long nights in pensive discontent j To speed to day, to be put back to morrow, To feed on hope, to pine with fear and sorrow ; To fret their souls with crosses and with cares, To eat their hearts, through comfortless despairs : Unhappy wights ! born to disastrous end, That do their lives in tedious tendance spend.

45. But although the alchemists have given us little in the way of useful facts, or applicable discoveries, their reign was fruitful in the inven- tion of apparatus. Alembics, stills, retorts, receivers, and a variety of whimsical and com- plex vessels, in glass and porcelain, are described and depicted in their works ; and they not only possessed all the furnaces with which our modern laboratories are necessarily supplied, but were particularly expert in their construction, and often surprisingly happy in their invention, and in this way the beau ideal of their strange anticipation has worked good to their posterity.

46. Contemporary with the alchemists lived other men, whose pursuits were conducted upon more rational principles; and although, in the writings of these individuals, you sometimes meet with matter indicating the complexion of the times in which they wrote, and tinctured with astrological, and magical, and alchemical notions, yet, compared with the men who have just passed before us in review, they were en- lightened philosophers and sober reasoners ; these often, says Mr. B., indulged in the insane caprices of the mere searchers of the philoso- pher's stone, but their madness had method in it, and their wanderings were not without a plan.

47. Of these persons, the first which our author selects, is Basil Valentine, of Erfurth, who wrote about the middle of the fifteenth century, and who may justly be considered as one of the founders of modern chemistry : his experiments always had an object, and he details them with intelligible perspicuity ; it is true that he often launches into the sea of alchemy, but he returns unpolluted by its follies; when he speaks as an adept he is as absurd

as need be, but as the narrator of experiments he abounds in shrewd remarks, and was uncommonly successful in his pursuits. The extant works of Valentine are not very numerous, and they have mostly become extremely scarce. In 1671 his Tri- umphant Chariot of Antimony was republished at Amsterdam, from the original edition of 1624, with copious notes, by Dr. Theodore Kirkingius; and, a few years after, an English translation of that celebrated production was printed at London. In 1644 his Ilaliographia appeared at Bologna. This work treats of the preparation, uses, and virtues of mineral, animal, and vegetable salts, and is a curious and well-digested body of in- formation upon a variety of chemical subjects. In both these works Valentine appears in the double capacity of chemist and physician. In physic he was a brave champion for the chemical sect, and, in his Triumphant Chariot of Anti- mony, especially, abounds in reflections, not of the mildest description, upon the practice and theories of his adversaries, whom he despises, because unable to prepare their own medicines,

'they know not whether they be hot or dry, black or white ; they only know them as written in books, and seek after nothing but money. Labor is tedious to them, and they commit all to chance ; they have no conscience, and coals are outlandish wares with them ; they write long scrolls of prescriptions, and the apothecary thumps their medicine in his mortar, and health out of his patient.'

48. In the Currus Triumphalis is, however, to be found much useful matter. To Valentine we owe the first accurate mention of, and intelligible directions for, the preparation of nitric, muriatic, and sulphuric acids. His process for obtaining the water of nitre, as he terms the acid, viz. that of distilling three parts of powdered earthen-ware with one of nitre, is still followed in some coun- tries, and the acid it affords is sufficiently pure. It was supposed, by the old chemists, that the clay in this process held down the nitre so as to expose it to the searching influence of the fire ; but the decomposition, and consequent produc- tion of the acid, depends upon the attraction of the potash of the nitre for the ingredients of the clay.

49. Another process mentioned by Valentine, though this seems to have been known to Ray- mond Lully, is much nearer that at present in use. It consists in distilling equal parts of nitre and dried green vitriol. The residue consists of sulphate of potass and oxide of iron; the former may be separated by washing with hot water, and an oxide of iron of a deep red color remains, used by the polishers of plate glass under the name of

colcothar.

50. In the Haliographia a third process is mentioned, which consists in distilling salt-petre with finely powdered flints. In this case the si- lica combines with the potass, and the acid is dis- engaged.

51. This water, or acid spirit of nitre, was af- terwards called aqua-fortis, and its true nature and chemical history made but little advance until the researches of Priestley and Cavendish, which were commenced about the middle of the last century.

52. The method which in this country is now resorted to, for the production of aqua-fortis, consists in the decomposition of nitre by sulphu- ric acid ; the results are liquid nitric acid and sulphate of potash.

53. To Basil Valentine seems due the honor, also, of discovering the oil of vitriol, or, as it is now called, sulphuric acid. It is in the Halio- graphia that oil of vitriol is distinctly mentioned, ‘ and what,’ says Mr. Brande, ‘ is curious, we find, in the chapter of that tract relating to the extrac- tion of the salts of iron, particular directions for the preparation of the sulphate of iron, by dis- solving iron filings in a mixture of one part of oil of vitriol and two of water; this solution,’ he says, ‘ when putaside in a cool place, soon forms beautiful crystals ; ‘ and in another section wo are told, that ‘this salt is an excellent tonic, tkit it comforts weak stomachs, and that, externally applied, it is a valuable styptic;’ and this, in fact, is nearly all that we can say of the prepara- tion and medical uses of this salt of iron at the present day.

54. The mode of obtaining sulphuric acid, by the distillation of sulphate of iron or green vitriol, is still extensively practised upon the continent, in Germany, Sweden, and more especially at Bleyl in Bohmia. The vitriol is first deprived of its water of crystallisation and then submitted, in glass retorts coated with clay, to a red heat ; white fumes pass over into the receivers which become very hot during the condensation of these fumes into an unctuous reddish-brown fluid, which, from its viscidity and appearance, acquired the name of oil of vitriol ; there remains in the ves- sels a substance of a fine red color, which, when washed and levigated, furnishes what has been termed colcothar, or caput mortuum, of vitriol; ; for the old chemists were in the habit of repre- senting the dregs and last products of substances by the symbol of a death’s head and cross bones.

55. The oil of vitriol, thus prepared, exhales fumes when exposed to a moist atmosphere, and occasionally congeals or crystallises ; circum- stances which led to its name of glacial oil of vitriol, and which show that it differs from the acid as ordinarily prepared.

56. That sulphur, during combustion, produ- ces a portion of acid water, seems to have been known at a very early period ; but the method of obtaining sulphuric acid, by burning a mix- ture of sulphur and nitre, was first, it appears, described by Valentine in his Chariot of Anti- mony, under the name of oil of antimony, for he employed sulphuret of antimony for its produc- tion. The original recipe runs thus : ‘Take of antimony, sulphur, salt-nitre, of each equal parts, fulminate them under a bell, as oil of sulphur per campanum is made, which way of preparation has long since been known to the ancients, but you will have a better way if, instead of a bell, you take an alembic, and apply to it a recipient; so you will obtain more oil, which will indeed be of the same color as that made of common sul- phur, but in powers and virtues not a little more excellent.’

57. Dr. Ward, the inventor of many celebrated nostrums, was the first person who brought this preparation into notice in England ; and he obtained a patent for his invention, and for a con- siderable time monopolised the manufacture of the acid. At length Dr. Roebuck, an eminent physician of Birmingham, substituted an appara- tus of lead for the glass vessels previously used. This was in 1746, since which the price of the acid has been greatly reduced, and the manufac- turer consequently enabled to employ it for a variety of purposes to which it was previously inapplicable from its scarcity and high price. In 1772 the first manufactory of sulphuric acid, near the metropolis, was established by Messrs. Kingscote and Walker at Battersea.

58. To Valentine, it has been said, was known the necessity and advantage of nitre, as an addi- tion to sulphur, in increasing the acid product ; but the manner in which nitre operates is a later discovery. It has bean supposed merely to fur- nish oxygen, but that this is not the case is proved by sulphurous, and not sulphuric, acid being the result of burning sulphur in pure, oxygen. The solution of this chemical problem has been chiefly

effected by the researches of Sir H. Davy, who has proved that the products of the nitre are concerned in transferring oxygen to the sulphur. A patent has, however, lately been taken out for a mode of preparing sulphuric acid by the com- bustion of pyrites, without the intervention of nitre, which promises perfect success.

59. The numerous antimonial preparations described in the Chariot of Antimony, deserve more notice than they have generally received from the chemical historian ; and the perusal of that work affords some insight into

the celebrated disputes between the galenical and chemical physicians, which were afterwards pushed so far by Paracelsus.

60. Of this extraordinary man, Paracelsus, the following account is given by our author. His real name was Philip Hochener, which he changed on commencing his professional career into Theophrastus Bombastus Paracelsus. At an early age he visited the most renowned towns in Europe, and returning to his native country was made professor of medicine and chemistry at Basle ; he availed himself of his public situa- tion, not to instruct the unlearned, but to vilify his contemporaries and predecessors. It is generally said that his dissolute manners and intractable temper obliged him to quit his oc- cupation. But others have told a more plausible story : a rich Canon fell sick, and getting frightened, offered 100 florins to any one who could cure him. Paracelsus administered three pills, and the Canon got well ; but being so soon restored, and by such simple means, he refused to fulfil his promise. The matter was brought before a magistrate, who decreed that the doctor should only recover the customary fee. Irritated at the flimsy excuses and unpardonable ingrati- tude of the priest, and at the magistrate's partial decision, Paracelsus declared that he would leave the inhabitants of Basle to the eternal de- struction which they deserved ; he then retired to Strasburg, and thence into Hungary, where he took to drinking, and died in great poverty at Saltzburg im 1541, and in the forty-third year of his age. Though we can fix upon no particular discovery upon which to found his merits as a chemist, and though his writings are deficient in the acumen and knowledge displayed by several of his contemporaries and immediate successors, especially bjr Theodore de Mayerne and Du Chesne, or, as he was generally called, Quercita- nus, it is undeniable that he gave a most im- portant turn to pharmaceutical chemistry ; and calomel, first described by Crollius in 1609, with a variety of mercurial and antimonial prepara- tions, as likewise opium, came into general use. Although the chemical physicians, however, were very successful, they were aware of the unpopu- larity of their means ; people were frightened at the idea of mercury and antimony, which were accordingly exhibi'ed under fantastic and assu- med names. Towards the end of the fifteenth century the use of antimony was prohibited at Paris; and Besnier expelled the faculty for having persevered in administering it. In En- gland chemical medicines began to be em- ployed in the reign of Charles I. In 1644 Schroder published his Chemico-medical Phar-

macopoeia; and, shortly after, that of the Lon- don College made its appearance ; but, although the history of pharmaceutical chemistry must not be blended with the abstract progress of the science, yet should it not be forgotten that the great modern improvements in chemistry have sprung from its. application to medicine, and that the foundations of chemical science are to be found in the medical and pharmaceutical writers of the

sixteenth century, who rescued it from the hands of the alchemical pretenders, and gave it a place and character of its own.

61. Van Helmont now appeared on the field of science, and Mr. Brande, in that part of che- mical history which leads him to the mention of this celebrated philosopher, takes occasion to present the following extract from his work, as illustrative of the style and pursuits of their au- thor : ‘ In 1594,’ says Van Helmont, ‘ I finished my courses of philosophy, but upon seeing none admitted to examinations at Louvain who were not in a gown and hood, as though the garment made the man, I was struck with the mockery of taking degrees in arts. I therefore thought it more profitable seriously and consci- entiously to examine myself : and then I per- ceived that I really knew nothing, or, at least, nothing that was worth knowing. I had, in fact, merely learned to talk and to wrangle, and there- fore refused the title of master of arts, finding that nothing was sacred, nothing true; and I was unwilling to be declared master of the seven arts when my conscience told me I knew not one. The Jesuits, who then taught philosophy at Louvain, expounded to me the disquisitions, and secrets of magic, but these were empty and unprofitable conceits ; and instead of grain I reaped stubble. In moral philosophy, when I expected to grasp the quintessence of truth, the empty and swollen bubble snapped in my hands. I then turned my thoughts to medicine: and, having seriously read Galen and Hippocrates, noted all that seemed certain and incontroverti- ble; but was dismayed upon revising my notes, when I found that the pains I had bestowed, and the years I had spent, were altogether fruit- less ; but I learned, at least, the emptiness of books, and formal discourses and promises of the schools. I went abroad, and there I found the same sluggishness iu study, the same blind obedience to the doctrines of their forefathers, the same deep-rooted ignorance.’

62. The elemental doctrine was now in full vogue ; and salt, sulphur, and mercury were talked of as the ultimate parts of matter. In the writings of Van Helmont we find allusions to the existence of aeriform fluids ; and the word gas first occurs in his pages. He even distin- guishes between condensible, and permanently elastic, fluids; and his gas sylvestre seems to be what was subsequently termed fixed air, the caitjunic acid gas of modern times. The weight and elasticity of the air seem to have been appre- ciated and well argued upon by Van Helmont ; and he has detailed the effect of temperature and pressure in reference to atmospheric condi- tion.

63. The historian of chemical discoveries and improvements hu now arrived at the rtjddle of*

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the serenteenth century; and, among the writers of his time, Glauber of Amsterdam stands out conspicuous. He was not a mere experimenter, hut a sensible and acute reasoner. In consis- tency with the fashion of the age, he depreciated the labors of others, and talked too presumptu- ously and egotistically of his own claims to atten- tion ; but, in spite of these drawbacks, we find a great deal to admire and to praise in the writings of this chemist.

64. The distillation of volatile alkali from bones, and its conversion into sal-ammoniac, by the affusion of spirit of salt ; the preparation of sulphate of ammonia, which he calls secret sal- ammoniac, and its conversion into common sal- ammoniac by distillation with common salt; the production of blue vitriol by the action of acid of vitriol upon the green rust of copper ; the distillation of vinegar from wood, and the forma- tion of a variety of salts, useful in medicine and the arts, by its action upon alkaline, earthy, and metallic substances ; the distillation of muriatic acid, or spirit of salt, from a mixture of common salt and acid of vitriol ; and the extraction of sulphate of soda, or sal mirabile, from the resi- due of this experiment, are a few, and only a very few, of the truly important inventions and discoveries that crowd upon us in the perusal of the verbose pages of Glauber. Of these, the production of vinegar of wood, and of muriatic acid, may perhaps be regarded as of the greatest interest and importance.

65. The acid liquor produced during the de- structive distillation of wood, has lately becom&a manufacture of much importance, and is prepared by the makers of gunpowder, who obtain it as the result of their process for procuring charcoal.

66. Glauber describes the distillatory appara- tus, which he calls a press for extracting the juice of wood ; he shows its condensation into an acid liquor, and directs the method of burn- ing lime by ranging layers of chalk alternately with those of the wood. He also says that, by rectifying this spirit, 'a sharp hot oil of a dark reddish color remains, and the vinegar passes over fit for the preparation of medicines, and all other uses to which vinegar is applicable.' The oil, he says, is an admirable preservative of wood, and, when saponified with alkali, forms a most valuable manure; 'a hogshead of which may be carried into fields and vineyards, far remote, more easily than ten loads of common manure, which is carried to vineyards, in rocky places, with great difficulty. As to the spirit, physicians may use this noble and efficacious juice, with great honor and profit, in the cure of many dis- eases hitherto incurable ; ' and he highly extols an acid bath made by due admixture of the vin- egar of wood with warm water; he also shows the mode of concentrating it by exposure to cold, when ' the phlegm only freezeth, but the sharp spirit remaineth in the ' middle of the hogshead, so sharp that it corrodeth metals like aqua-fortis.' After many

other shrewd and clever remarks, re- specting the tar of wood and its acid, Glauber closes his discourse, fearing that it will not be believed by many, which he says he cannot help ; 4 it contenteth me that I have written the truth, and lighted a candle to my neighbours.'

67. The preparation of muriatic acid, as no\r commonly conducted, was first directed by Glau- ber ; he obtained it by distilling common salt with acid of vitriol, and gives a sufficiently clear account of the nature of the chemical ch.inge that ensues. The residue of this operation re- tains to this day the name of Glauber's salt, or, as he termed it, sal mirabile. Upon its virtues he has descanted at great length, and though, in his history of this salt, its value and uses are preposterously exaggerated, his observations serve to show the diligence and acuteness with which he investigated its applications, and offer proofs of the extensive information which he possessed, relative to many processes of agriculture and the arts. Salt, in short, was Glauber's favorite ele- ment. ' It is, ' says he, ' the beginning and end of all things, and it increaseth and exalteth their powers and virtues ; it is the true universal me- dicine; not that I would have any man persuade himself that in these words I would assert im- mortality, for my purpose tendeth not thither, seeing that I am not ignorant there is no medi- cine against death.' And then, adverting to the opposition to chemical medicines by contempo- rary physicians, he advises them not to envy those who have received such divine gifts as his won- derful salt, nor to provoke the innocent with their filthy calumnies and slanders, but to leave those things which exceed their capacities. ' Nothing,' he says, ' can extinguish truth ; it may be prest but cannot be overcome ; like the sun's light it may be hidden but not extinguished.'

68. The directions he gives for the preparation of the sal mirabile, and the account of its pro- perties, are in general very correct. 'Its color ought to be white and transparent ; its figure is in long strize of crystals ; its taste is like ice melting upon the tongue, and yields some bitter- ishness. Being dried in the fire, and all the moisture gone off, it will lose about three parts of its own body, and retain a fourth part only ; being dissolved in water it will recover those three parts again. But, on the contrary, if it shoot into a square figure, and has as yet a saltish taste, and being dried loseth but little of its weight, it is not worth a rush, and shows that either the oil of vitriol was not good, or not enough of it used in the operation. These things we would not bury in silence, that so we might well advise young beginners, and withdraw them from their errors.'

69. The present mode of preparing muriatic acid is almost exactly that devised by Glauber. In its pure state it was first obtained and exam- ined by Dr. Priestley. The composition of this acid is a discovery of more modern date. The investigation which led to it was commenced by Scheele,

and perfected by our contemporaries, Gay Lussac and Davy.

70. Glauber has great merit as an inventor and improver of chemical apparatus, much of which is depicted in the plates attached to his works. The form of distillatory vessels, com- monly called Woulfe's apparatus, is found in Glauber's chemical furnaces ; and he contrived a very ingenious mode of heating large vessels of water by steam, and with great economy of fuel, a method now often resorted to.

71. He published a pamphlet, called 'The Consolation of Navigators, in which is taught how they who travel by sea may preserve them- selves from hunger and thirst, and also from those diseases which are wont to happen in long voyages. Written for the health, comfort, and solace of all those who travel by water for the good of their country. ' The very sensible plan of employing extract of malt as a portable vege- table diet, and dilute muriatic acid to quench thirst, is here recommended ; and many of the medicinal uses of the muriatic acid are dwelt upon at length, which have been claimed as recent discoveries. On the whole there is no author, contemporary with Glauber, who has written so much to the purpose, and in whom we find such abundant anticipations of modern sci- entific improvements. ' He was cast, ' says Mr. Brande, from whom we have extracted the whole of the above account, ' in the true mould of an experimental chemist, and had he lived in a more propitious age would doubtless have rivalled the eminence of Scheele and Priestley.'

72. In 1662 the Royal Society was incorpo- rated, by Charles II., under a royal charter; and in 1666 the Royal Academy of Sciences was in- stituted at Paris, under the prelection of Louis XIV. ; in the annals of this last the names of Homberg, Geoffroy, and the two Lemerys soon became celebrated. Homberg discovered the ooracic acid, which he prepared under the name of sedative salt. He was also the discoverer of cyrophorus. Boyle and Hooke became conspi- cuous in our own country ; the former a volu- minous writer, of a most amiable temper and upright mind ; the latter an original and acute experimentalist, but a peevish and distrustful man.

73. Of Boyle, his contemporary, Evelyn speaks in the following words : ' he had a mar- vellous sagacity in finding out many useful and noble experiments. Never did stubborn matter come under his inquisition, but he extorted a confession of all that lay in her most intricate Tecesses, and what he discovered he as faithfully registered and frankly communicated. In this, exceeding my lord Verulam, who (though never to be mentioned

without honor and admiration) was used not to tell all that came to hand. His severer studies did not in the least sour his conversation, and I question whether any man has produced more experiments without dogmatis- ing. He was a corpuscularian without Epicurus, a great and happy analyser, addicted to no par- ticular sect, but, as became a generous and free philosopher, preferring truth above all ; in a word, a person of that singular candor and worth, that to draw a just character of him, one must ran through all the virtues as well as all the sciences.'

74. It is well said, however, of Boyle, by Mr. Brande, that he was rather the historian than the actor in science ; but it may be remarked, he adds, that in Boyle, and especially in his con- temporary Hooke, we have the first genuine ex- ample of the influence of lord Bacon's doctrines, which actuated all their proceedings, and pro- duced effects marvellously beneficial. Mr. Boyle's Ess►►vs on the successfulness and unsuc- cessfulness o" experiments, and the preface to

his philosophical writings, are in the genuine spirit of experimental research ; and Hooke, in the preface to the Micrographia, has spoken much to the point, and in language so novel and bold in the then state of the science, that upon perusing it we are struck with the entire confidence which it bespeaks for his subsequent experimental details.

75. After adverting to the deep-rooted errors that have been grafted upon science, by the shpperiness of the memory, the rashness of the understanding, and the narrowness of the senses, and shewing that these failings may in some de- gree be obviated by the right ordering, and rendering them duly subservient to each other, he proceeds to point out the means of tracing the footsteps of nature, ' not' as he says, ' in her ordinary course only, but also in her doublings and turnings; and in this investigation, upon which the desirable reform in philosophy is to be founded, there is not so much required any strength of imagination, or exactness of method, or depth of contemplation, as a sincere hand and faithful eye, to examine and record the things themselves as they really appear.

76. In the article AIR it has been stated, that Hooke, in a measure, anticipated some of the recent discoveries which have so much enriched chemical science, in reference to the part per^ formed by the presence of atmospheric air in combustion. Thus he speaks of the air as the universal dissolvent of inflammable bodies, of the dissolution generating heat which we call fire, that this dissolution is made by a substance mixed with the air, that is like unto, or the very same as, that which is fixed in salt-petre ; that, of the burning body, one portion is turned into air, and anothe/ portion is indissoluble, &c. so that he concludes there is no such thing as an element

of fire, but that flame results from the mutual agency of the volatile parts of combus- tibles, and a part of the atmosphere.

77. He particularly also alludes to the use of the air in respiration, as well as in combustion. In his Lampas published in 1677, he has given a very beautiful explanation of the way in which a candle burns ; he attributes the light and heat to the action of the air upon the combustible matter of the flame, and shows that the interior of the flame is not luminous, by the simple ex- pedient of viewing its section through a thin piece of glass, or of mica.

78. To the intimations of Mayow, who pub- lished in 1674, we have also adverted in the article Aiu, and extracted the account given of him from the historical sketch of which we are now making use. About this time Beccher and Stahl, in Germany, were at work on the subject of combustion, and they succeeded in establish- ing an hypothesis in explanation of this pheno- menon, which' came afterwards into such general reception under the name of the Phlogistic Theory. Beccher, too, in his Physica Subterranea, anticipated much of what is received as geolo- gical theory in the present day. His notions, however, of the elementary constitution ot bodies, are obscure and gratuitous. He talks' o. air, water, and three earths, one "of which is in- flammable, another mercurial, and another fusi-

ble. The three earths, combined with water, constitute a universal acid, which is the base of all other acids. The combination of two earths produces lapideous bodies, and in the metals the three earths are united in various proportions. We are requested by Mr. Brande to compare these doctrines with the luminous experiments of Hooke, in order to set the merits of the latter in their true light.

79. Stahl rejected the mercurial earth of Becher, and retained as elements, water, acid, earth, and fire ; or as he termed it phlogiston, a principal of extreme tenuity, and prone to a kind of vibratory motion, in which it appears as fire. When phosphorus is burned, it produces an acid matter, with the evolution of much heat and light, consequently phosphorus consists of acid and phlogiston ; if this acid be now heated with charcoal, or other body abounding in phlogiston, phosphorus will be reproduced.

80. When zinc is heated to redness, it burns with a brilliant flame, and is converted into a white earthy substance or calx. Hence zinc consists of this

earth and phlogiston.

81. It will be observed, that nothing is said here of the increase of weight which Rey and Mayow had noticed ; the first attributing it to the condensation of air, the second to the fixation of Hooke's nitro-aerial particles. Nor is any notice taken of the circumstance, that air is absolutely necessary for combustion.

82. In spite of these objections, however, against the phlogistic theory, it was generally embraced as a correct rationale of combustion, until overturned by Lavoisier, ' who, availing himself of the discoveries of Scheele, Priestley, and Black, brought an insuperable mass of evi- dence to bear against the doctrine of phlogiston.' But, as we shall soon see, he himself generalised to an extent not warranted by fact, and it has been reserved for still more recent chemists, especially for Sir H. Davy, to show that many of Lavoisier's inferences, however correct as ob- jections to the phlogistic hypothesis, are not tenable as satisfactory explanations of the whole process of which their promulgator assumed to be the sole discoverer.

83. We should do injustice to Mr. Brande, and to the cause of legitimate science, were we not to extract the sentence with which he con- cludes that section of his history to which the reader is now brought. ' We may glean some profit,' says he, ' upon the field of discussion that we have passed over. It may teach us circumspection in adopting hypotheses, and cau- tion in deduction even from experiments ; while in the views that have successively risen and vanished, in the confident security with which they have been at one time, received, and the unceremonious neglect into which they have subsequently fallen, we have painted as it were before us, a striking memento of the frailty and insignificance of human exertions.'

84. Mayow, whose name has been adverted to above, and who is mentioned in the thirty- first section of the article AIR, as tracing the analogy between combustion and respiration, and as approaching very nearly to the pneumatic discoveries of subsequent times, had likewise a

considerable insight into the nature of chemical union and decomposition; before his time it was imagined that bodies combined in a sort of mechanical manner, and that the chemical union of an acid and an alkali resulted from the des- truction of the particles of its components. It was not admitted, or at least not generally ad- mitted, that the acid and alkali existed as such, and might again be separated from the neutral salt. Mayow first set about rectifying this gross error. When the spirit of salt, he says, is mixed with sal volatile, or, to use more intelligi- ble terms, when muriatic acid is saturated with ammonia, sal-ammoniac is produced, in which it is true, neither the properties of acid nor of alkali are apparent ;

yet, if salt of tartar be dis- tilled with sal-ammoniac, the volatile alkali will be displaced with all its previous characters, be- cause there is a greater attraction between spirit of salt and tartar, than between spirit of salt and volatile alkali. Again, to show that the acid is not destroyed in saline combustions, he instances the decomposition of nitre by oil of vitriol, which he says displaces the nitric acid, and the residuum in the retort furnishes vitriolated tartar. It may be asked, he says, why, when nitre is heated, the nitric acid does not rise, for it is, as we have just seen, very volatile ; the reason is, that it is restrained and' kept down by its attrac- tion for the tartar, and can only be displaced by bodies which have a stronger attraction for tartar than it.

85. He then goes on to show that acids have a greater attraction for alkalies than for metals. The metals, he says, are soluble in one or other of the acids, but their solutions are decomposed by salt of tartar ; the acid then combines with the tartar, and the metal is precipitated. In the same way alkali unites to sulphur; but if this combination be dissolved in water, and acid added to the solution, the sulphur falls, and the acid and alkali unite.

86. Combinations of sulphur with metals are also decomposed by acids ; thus if sulphuret of antimony be distilled with aqua-fortis, the acid and metal combine, and sulphur sublimes.

87. Mayow's views relating to chemical at- traction are at once clever and correct, and their merit will be especially enhanced by a com- parison with the absurd and groundless specula- tions previously entertained upon this subject, which indeed are too crude and silly to merit repetition. But he has other, and more weighty evidence in his favor, for it is remarkable that his views and language were adopted by Newton, and that the masterly sketch of chemical attrac- tion given by that philosopher in the queries, annexed to the third book of optics, is nearly in the language, and quite in the spirit, and meaning of his predecessor. The following are a few of the points urged by Newton in the explication of these phenomena.

88. If carbonate of potash be exposed to the air it deliquesces, in consequence, says Newton, of an attraction between the salt and the parti- cles of water contained in the atmosphere. And why does not common salt and salt-petre deli- quesce in the same way, except for want of such attraction.

89. And again, where he especially comes in contact with Mayow, he says, ‘ when spirit of vit- riol, poured upon common salt or salt-petre, makes an ebullition, and affords on distillation the muriatic and nitric acids, the acid part of the spirit of vitriol staying behind, does not this ar- gue that the fixed alkali in the common salt and salt-petre attracts the acid spirit of the vitriol more strongly than its own spirit, and, not being able to hold them both, lets go its own. How these attractions may be performed, ‘ continues Newton, ‘ I do not here consider ; what I call at- traction may be performed by impulse, or by some other means unknown to me : I use that word to signify any force by which bodies tend towards one another, whatever be the cause.’ Thus, he says, ‘ muriatic acid unites to salt of tar- tar by virtue of their respective attractions ; but when oil of vitriol is poured upon this compound the former acid is displaced by the superior at- traction of the latter. Silver is separated from aqua-fortis by quicksilver, quicksilver by copper, and copper by iron ; which argues that the acid particles of the aqua-fortis are attracted more strongly by iron than by copper, by copper than by quicksilver, and by quicksilver than by sil- ver.

90. Thus, then, chiefly by the experimental labors of Mayow, and the sagacious views of Newton, the old and prevailing notions of atomic forms of bodies, the hypothesis of hooks, rings, points and wedges, by which the component parts of bodies were supposed to be held united, gave way to the simple and independent expres- sion of facts.

*91. We now proceed to give, from Mr. Brande, an outline of the doctrines of chemical attraction, from the time of Mayow to the pre- sent period. In 1718 Geoffroy invented those tables of affinity which are given in elementary works, and which have certainly proved of ser- vice in extending chemical knosvledge ; he con- sidered the order in which bodies separate each other from a given body as permanent and con- stant. Thus, he thought, the metals were always separated from acids by the absorbent earths, these by volatile alkali, and the volatile by the fixed alkalis ; to represent, therefore, the attrac- tion of acids for these substances, he placed them at the head of a column, with the other bodies beneath in the order of attraction : ***

ACIDS.

Fixed alkalis. Volatile alkali. Absorbent earths. Metals.

*92. He then constructed a column for each particular acid ; thus the table for nitric acid, taken from Newton’s experiments, would stand as follows : ****

NITRIC ACID.

Fixed alkali. Copper.

Volatile alkali. Lead.

Earths. Mercury.

Iron. ‘ Silver.

93. Gilbert and Limbourg, in 1751 and 1758, extended, and in some respects improved, these

tabular representations of the results of attraction ; but no considerable progress was made in the investigation connected with the subject until Bergman published his dissertation upon it, in 1775. Bergman was born in Sweden in 1735, and died in 1784.

94. Bergman named affinity elective attraction. He considered that every substance possessed a peculiar attractive force for every other substance with which it combines, a force capable of being represented numerically : he regarded decompo- sition as complete ; that is whenever a third body, c, is added to a compound, a, b, for one of the constituents of which it has a stronger attrac- tion than that which already exists between them, the compound will be decomposed and the whole of one of its elements transferred to the added body. Thus suppose the attraction of a for b to be represented by 1, and of a for c by 2, then the addition of c to a b will produce the compound a c, and b will be separated. When lime water is added to nitrate of magnesia the latter earth is precipitated, and the former combines with the nitric acid. Hence nitric acid, poured upon a mixture of lime and magnesia, dissolves the former in preference to the latter earth.

95. The observation of these facts led Berg- man to call this kind of attraction elective, and he has given tables showing these relative at- tractions of bodies both in the dry and humid way.

SILVER.

Lead.

Copper.

Mercury.

Bismuth.

Tin.

Gold.

OXIDE OF SILVER. Sulphuric acid. Oxalic. Phosphoric. Nitric. Tartaric. Citric.

96. Bergman's opinions relative to affinity were generally admitted as correct, and con- sidered as standard authority, till Berthollet published his work on Chemical Statics, in 1803, in which he endeavoured to revive, under a new aspect, some of the old chemico-mechanical doc- trines, and to prove that the forms of the acting particles and their magnitude, or masses of matter, were concerned in influencing the re- sults. Though these doctrines may now be considered as exploded, they had many advo- cates, and were rapidly gaining ground, until the promulgation of the theory of definite proportionals. The experiments adduced by Ber- thollet in support of his hypothesis appeared at first very satisfactory ; but upon minute inspection they are found to have their weak points, and many of the errors into which they led have been successfully unravelled by professor Pfaff of Kiel, by Sir II. Davy, and others. In illustration of the agency of the mass of matter, Berthollet has adduced the mutual action of sulphate of potassa and baryta : when ' solution of baryta is added to sulphate of potassa potassa is liberated, and sulphate of baryta is formed and precipitated insoluble ; but if a large quantity of potassa be added to a smalt quantity of sulphate of baryta the mass will, ' according to Berthollet, ' prevail over what ap-

pears to oe the real chemical affiaity, and sulphate of potassa will be formed and baryta evolved. But Sir II. Davy has very ingeniously exposed the fallacy to which this experiment is liable ; he has shown that pure potassa does not effect any change upon sulphate of baryta, but that making experiments in open vessels part of the potassa acquires carbonic acid, and then a double affinity is brought into action, the bodies present being carbonate of potassa and sulphate of baryta. Elements of Chemical Philosophy, p. 119.

97. Berthollet's notion that the acting bodies are divided among each other, in proportions depending upon their relative masses and at- tractions, has been combated and disproved by Pfaff, who has shown that tartrate of lime is completely decomposed by adding to it a quantity of sulphuric acid, exactly sufficient to saturate the lime it contains ; and in the same way he has shown that oxalate of lead is decomposed by adding sulphuric acid sufficient to saturate the oxide of lead ; in these cases pure tartaric and oxalic acids are evolved.

98. But the establishment of the atomic theory, from which we learn that bodies combine only in certain definite proportions, has gone further to elucidate the very important subject of chemical attraction, and to subvert the doc- trines of Berthollet, than any previous objections or partial experimental investigations. In es- tablishing this theory all the eminent chemists of Europe have taken an active part, so that it be- comes very difficult to assign to each his indi- vidual merit.

99. Under the word attraction our readers will find an account of this, the atomic theory, taken principally from the last edition of Dr. Henry's Elements ; but as the following statement of its leading principles by Mr. Brande is ex- ceedingly well made, and as it is necessary to fulfil the engagement above entered into, of tracing the doctrine of chemical affinity down to our own times, we shall continue to extract from our author, at the risk of repeating ourselves.

100. Between the years 1792 and 1802, Dr. Richter, of Berlin, published his Geometry of the Chemical Elements, containing a series of tables, showing the weight of each base, capable of saturating one hundred parts of each acid, and the weight of each acid capable of saturating one hundred parts of each base. He observed, that in all these tables the bases and the acids follow the same order, and further, that the numbers in each table constitute a series having the same ra-tio to each other in all the tables. Thus, supposing in the table of sulphates, one hundred parts of acid were saturated by one hundred of soda, two hundred of potassa, and ––Jiree hundred of baryta ; then, in the table of nitrates, the same ratio would hold good, and the soda, potassa, and baryta, would there also stand to each other in the rotation of one, two, and three.

101. Thus was explained, why, when two neutral salts decompose each other, the newly- formed salts are also neutral ; for the same pro- portion of bases that saturate a given weight of one acid, saturate a given weight also of all the other acids. Hence numbers may be attached

to each acid, and to each base, indicating the weight of it which will saturate the numbers at- tached to all the other acids and bases. Upon this principle elementary works on chemistry contain tables .of the representative numbers of bodies ; and, upon the same principle, Dr. Wol- laston, in the Philosophical Transactions of 1814, by adapting such table of number to a moveable scale, on the principle of Gunter's sliding rule, has constructed the logoraetric scale of chemical equivalents, which is so important and valuable an instrument to the practical chemist.

102. Mr. Higgins, in 1789, in his Compa- rative View of the Phlogistic and Antiphlogistic Theories, and Mr. Dalton, in 1804, in his New System of

Chemical Philosophy, called the at- tention of chemists to the definite proportions in which bodies unite, that form several compounds. Thus, seventy parts of potash unite to thirty of carbonic acid, and to sixty, but not to any in- termediate proportions. Jf we represent the weight of nitrogen by thirteen, it will form the following compounds with oxygen :

Nitrous oxide . 13 + 7,5 oxygen.

Nitric oxide . . 13 j 15

Hyponitrous acid 13 + 22,5

Nitrous acid . 13 + 30

Nitric acid . . 13 + 37,5

103. Similar observations apply to all other bodies ; and it was hence that Mr. Dalton was induced to assert, that these proportional num- bers represent the respective weights of the atoms of combining bodies ; and one atom of nitrogen was said, in the above case, to combine with one, two, three, four, or five atoms of oxygen.

104. In selecting the body which should be assumed as unity in this numeric representation, Mr. Dalton adopted hydrogen; and I, says Mr. Brande, am induced, for several reasons, to follow his example, though there is weighty au- thority in favor of oxygen. It will be seen, by turning to the article ATTRACTION, that Dr. Henry expresses concern that this difference should have obtained among chemists respecting the assumed unit, because, he says, and very justly says, it is" extremely desirable that chemical writers should employ a universal standard of comparison.

105. Mr. Brande concludes this section of his history by noticing the extension which Gay Lussac has proposed of definite proportions to aeriform bodies, considering these as determinable by volume, a view, he says, which clashes with parts of Mr. Dalton's atomic hypothesis, but which may be adopted, independent of hy- pothetical views, as a beautiful expression of facts.

106. From a review of the preceding details, the reader may form some notion of the state in which the science of chemistry existed at the end of the seventeenth century ; and by comparing the theories of the French school, which we shall soon have to notice, with the suggestions of Mayow and Hooke, more especially in re- lation to combustion and acidification, it will be seen how nearly the individuals just named approached to that explanation of laws and civ-

eumstances which was afterwards more unequi- vocally proposed by Lavoisier and his followers. See ACID and COMBUSTION.

107. Though something is at least due to Mayow, we must in justice, says Mr. Brande, con- fer the merit of founding pneumatic chemistry upon Dr. Stephen Hales, who was born in Kent, 1667, whose researches came before the public very early in the last century. ‘ He refused a ca- non ry of Windsor, that he might continue to devote himself to his parochial duties, and fa- vorite scientific pursuits ; and as piety, truth, and virtue, were the principles of his character, he lived in universal esteem to the age of eighty-four, dying at Teddington, on the fourth of January, 1761, where he was buried under the church-tower, which he had rebuilt at his own expense.’

108. Dr. Hales employed several methods of collecting and examining the gaseous products of a variety of bodies, many of which are nearly similar to those in present use, and in prosecuting his enquiries he stumbled upon a variety of curious facts and observations ; but having un- luckily predetermined that the various products formed were mere modifications and contami- nations of common air, he let slip a numerous series of discoveries, once fairly within his grasp, and which were afterwards eagerly amassed, and successfully reasoned upon by Priestley and his contemporaries.

109. In the article AIR will be found a state- ment of the experiments and reasonings of Dr. Hales ; and the reader, by turning to the thirty- second, and few following sections of that article, will save us the necessity of repeating it here. We shall, therefore, in the present in- stance, confine ourselves to copying what Mr. Brande says of this chemist, and of his contem- porary Boerhaave, in concluding the seventh section of the historical investigation under notice.

110. When it is recollected, says Mr. B. that Hales wrote at the commencement of the last century, that there were then very few models of scientific composition extant that were worth copying, and that a pompous and obscure style of writing was very prevalent among his experi- mental contemporaries, we cannot but admire the perspicuous and unadorned manner in which he details his facts and observations ; he has all the merit in this respect that belongs to Boyle without his diffusiveness ; and a pleasing vein of sound and unaffected morality accompanies his argument, and leads him whilst endeavouring to unveil the mysteries of nature to direct our attention with becoming modesty to the penury of man’s wisdom,

when compared with the ad- mirable adjustment of causes and effects discover- able in her lowliest works.

111. Contemporary with Hales was the cele- brated Boerhaave who was born near Ley den 1668, and died 1738. He was a man who laid medicine and chemistry under deep obligations; the former by his successful practice, and happy method of instruction ; the latter by diligently experimenting on some of its most difficult de- partments. ‘ He prosecuted chemistry’ says Dr. Johnson, ‘ with all the ardor of a philosopher

whose industry was not to be wearied, and whose love of truth was too strong to suffer him to acquiesce in the report of others.’

112. Boerhaave’s original chemical investi- gations were nearly of the same nature as those of Hales ; he experimented upon the gaseous products afforded by a variety of vegetable and animal substances ; he attributed the elasticity of air to its union with fire, and considered its ponderable matter as susceptible of chemical combinations. In disclosing these views he has certainly sketched an outline of one of the mo- dern theories of combustion, but he went no further, and was not more successful than Hales in discriminating between common air and the various gaseous products that resulted from some of his experiments. His writings are enumerated in chronological order in the masterly sketch of his life written by Dr. Johnson ; ‘ they have,’ says his biographer, ‘ made all encomiums useless and vain, since no man can attentively peruse them without admiring the abilities and reverencing the virtues of the author.’ His only chemical work, entitled, Elementa Chemise, was first published in 1732. It contains a useful essay on the history of the science.

113. We have now arrived at the sera when chemistry ‘ assumed a more important and inter- esting aspect,’ and should proceed in order to detail the two leading and most important dis- coveries of Dr. Black, had this not already been done in the article AIR, to which we again refer our readers. In the thirty-seventh and following sections of that article will be found an account of these discoveries, which most certainly cleared the ground for the erection of the Lavoisierian theory, and the reader, by continuing to read the page►► to which we now refer, will also be fur- nished with materials for appreciating the labors of Dr. Priestley, as contributing to the establish- ment of pneumatic chemistry. The discoveries of this philosopher, says Mr. Brande, are second in importance to none that had been previously made, and barely inferior to those that have adorned the recent progress of chemistry. We can scarcely call him the founder of pneumatic chemistry, after perusing the works of Hales and Black ; but he achieved more in that new de- partment of the science than any cf his predeces- sors or contemporaries ; and though on some points anticipated, his claims to

originality are on others quite unequivocal. He cannot be called the discoverer of nitrous gas, for it is noticed by Mayow ; yet he developed its prin- cipal properties, pointed out its useful eudiomet- rical applications, and showed many new modes of obtaining it. He has been stigmatised as a defender of the unintelligible system of phlogis- ton, and he did defend it with unpardonable pertinacity ; but when we reflect that equally erroneous theories have been as warmly espoused in our own days, by men who in no respect are to be considered as inferior to our author, we must not impeach his discernment upon so flimsy an accusation. When we consider his numerous and, as it were, incompatible occupations, and remember the many channels into which his ex- ertions were occasionally diverted, we presently detect the source of that wavering of opinion and

unsteadiness of research, that his philosophical pursuits display. His experiments were almost always submitted to the public in a crude and undigested form, for he had no time to build them into theories, or concoct them into genera- lisations, and it is perhaps as vrell that he had not, for the bent of his mind was evidently such as to shine in experiment rather than argument.

114. Bergman is here again to be noticed, and his researches dwelt upon with some degree of minuteness ; researches, says our author, which always appear to have been made with an object in view, and there is an unity of design- in his philosophical papers which pleasingly distin- guishes them from the undigested chaos of ex- periments and observations which we are obliged to wade through in preceding authors. Berg- man was born in Sweden in the year 1735 and died in 1784.

115. It is upon his analytical talents, says Mr. Brande, that I prupose to dwell ; it is there that he was pre-eminently original and successful, and upon that foundation his character as a chemist may be safely built.

116. The use of tests for the discovery of cer- tain substances held in aqueous and other solu- tions, was first particularly dwelt upon by Boyle, and he was sometimes very fortunate in their contrivance and applications. He noticed the conversion of certain vegetable blues to red by acids, and to green by alkalis ; the cloudiness produced by common salt in solution of silver, and the discoloration by liver of sulphur ; and several other circumstances connected with the de- tection of certain principles by chemical re-agents.

117. In 1667 Du Clos undertook an exami- nation of the waters of France ; and in 1686 Hierne published some clever experiments upon the same subject in Sweden. In these writers the use of galls for the detection of iron is alluded, to and the necessity pointed out of examining the residuary product of evaporation.

118. In 1726, and 1729, Boulduc used spirit of wine to precipitate certair saline bodies inso- luble in that menstruum. In 1755 Venel poin- ted out the existence of fixed air in the waters of Seltzer, Spa, and Pyrmont. Lane in 1769 shewed the method of imitating chalybeate springs, and in 1772 Dr. Priestley published directions for saturating water with fixed air.

,119. Bergman, in his Essay on Mineral Wa- ters, after adverting to a variety of circumstances relating to their general characters and sources, proceeds to point out, in the seventh section, the principal re-agents and precipitants useful in their examination, and to describe the nature of their changes and indications, with useful preci- sion, in the following order : = ˆ

120. A. Infusion of litmus, or turnsole, is so delicate a test for the acids, that a single grain of sulphuric acid reddens 408 cubic inches of the blue tincture.

Paper dipped in this tincture and reddened by distilled vinegar, has its blue color restored by alkalis ; but the tincture is more sensible than the paper, for the latter is not reddened by aerial acid (fixed air), yet one part of water sa- turated with aerial acid, renders fifty parts of the vnfusiori red.

121. B. Tincture of Brasil-wood becomes blue by alkalis, and is sensible to less than one grain of crystallized soda in 4000 of water.

122. C. Turmeric, either on paper or in watery tincture, is a good, but less sensible test for al- kalis, which render it brown.

123. D. Tincture of galls discovers iron by a purple or black cloud.

124. E. Prussiate of potash produces a blue tinge in water containing a minute portion of iron; it also precipitates other metals; copper brown ; manganese white.

125. F. Sulphuric acid forms a white precipi- tate in all solutions containing baryta. If it pro- duce bubbles it indicates some combination of aerial acid. Nitric acid is highly useful for show- ing the presence of sulphur, which it precipitates from all hepatic waters.

126. G. Oxalic acid detects the minutest quantity of lime by producing a white cloud, either immediately or after some hours. This test shows that

scarcely any water is free from lime ; and the purest within twenty-four hours deposits a portion of oxalate of lime, although sometimes so sparingly as to escape observation, unless lines be drawn on the bottom of the ves- sel with a glass rod, in the direction of which the precipitate attaches itself.

127. II. Aerated fixed alkali, throws down the metals and earths ; if the substance be easily soluble in aerial acid, the caustic alkali may be used.

128. I. Aerated volatile alkali, also throws down earths and rrietals, and is an excellent test for the presence of copper, which it indicates by a blue color, more or less intense according to the quantity of alkali added.

129. K. Lime water detects aerial acid (it should be recollected that carbonic acid, or fixed air, is always meant by this term) by a precipitate of aerated lime.

130. L. Muriate of baryta forms an insoluble white precipitate in water, containing any soluble vitriolic salt ; twelve grains of crystallied Glau- ber's salts dissolved in a kanne of distilled water (about three quarts) immediately exhibits white striae on the application of this test. Even one grain in the kanne exhibits a white cloud after some hours, and as it only contains 0,26 grains of sulphuric acid, we may judge of the nicety of this precipitant, which even exceeds turnsole itself in sensibility.

131. M. Muriate of lime maybe used for the detection of fixed alkali, but it is an ambiguous test, because if sulphate of magnesia be present it produces gypsum.

132. N. Solution of alum is also of little use, though occasionally employed as a test for al- kalies.

133. O. Nitrate of silver is a certain and de- licate indicator of muriatic acid, and its combi- nations. A grain of common salt in a kanne of water is instantly rendered evident by white streaks. Under some circumstances it may also form a precipitate with sulphuric acid, but sul- phate of silver is much more soluble than muri- ate ; thus no visible turbidness arises unless the kanne of water contain ninety-eight grains of Glauber's salt, or twenty-five of vitriolic acid.

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The presence of hepatic air renders the precipi- tate of silver more or less brown. Alkalis, lime, and magnesia, also precipitate nitrate of silver.

134. P. Nitrate of mercury is a prevaricating test, but very sensible to a

variety of substances that may exist in mineral waters. As Bergman has not pointed out any particular application, in which ttiis salt is essential, it will not be necesary to follow up his remarks on it, though in other respects important.

135. Q. Corrosive Sublimate ;

136. R. Acetate of Lead;

137. S. Sulphate of iron; and

138. T. White arsenic; are next enumerated, but their utility is dubious, and the observations upon them of little value to the analyst.

139. U. Spirituous solution of soap is useful in giving general indications of the purity of water, which, if pure, scarcely renders it opales- cent; but if abounding in foreign materials, or hard and unfit for washing, it produces more or less opacity or precipitation.

140. X. Liver of sulphur is affected by so many causes, that it may be dispensed with in the examination of waters.

141. Y. Alcohol throws down such salts as it cannot dissolve, especially the sulphates. It dis- solves many muriates and nitrates.

142. At the end of this list, Mr. Brande states that he has thus enumerated the tests recommend- ed by Bergman, and given an abridged account of his remarks upon them, for the purpose of showing the rapid stride which, under his assis- tance, was made in analytical chemistry ; it is true that of many of these re-agents, and of their ap- plication, he was not the inventor, but he was the first who showed the real value and limits of the indications which they afford; an effort of no common sagacity, when we revert to the state of chemistry in his time.

143. The gaseous contents of mineral waters, are next adverted to by Bergman. These may be expelled by heating a given portion of the water in a retort, the beak of which is plunged into the mercurio-pneumatic apparatus, and the gas secured in the usual way. It generally consists of pure air, and aerial acid ; the latter may be absolved by lime-water. The presence of hepa- tic air is easily recognised by its fcetor.

144. The remaining water is directed to be evaporated to dryness, and the residue weighed and digested in pure alcohol, shaken with eight parts of cold water; and finally the matters which resist the actions of alcohol and cold water, are to be boiled in four or five hundred parts of distilled water, and the solution filtered. The ultimate residuum generally contains iron and

carbonate of lime, or perhaps of magnesia previously suspended by carbonic acid ; it may be in a few instances argillaceous or silicious, and perhaps contain manganese,and directions are given at length for its separate analysis, as well as that of the aqueous and alcoholic solutions; it is here that Bergman displays an ingenuity and accuracy then new to chemical science, for in measuring his merits by a true estimate, we must go back to the state of chemistry at his time, and divest ourselves of its modern perfections and refinements; then the peculiar and genuine

character of his researches will become promi- nent.

*145. Bergman's merits as an assayist of metals in the humid way (a dissertation on which he published) are pointed out by Mr. Brande ; after a luminous summary of the general phe- nomena of the solution of metals, he (Bergman) advances a series of facts relating to their preci- pitation ; he shows that the caustic fixed alkalis occasion precipitates of the calces, but loaded with water by which their weight is much in- creased ; that carbonated alkali' precipitates carbonated oxides by double decomposition ; that certain acids, which form insoluble com- pounds with metals, throw them down from their soluble compounds; that certain salts act in the same way by double elective attraction; and that in some cases triple combinations ensue, as when platina is precipitated by sal-ammoniac. He then adverts to the decomposition of one metallic salt by another, even where the acid is the same in both. Thus sulphate of iron, and mu- riate of tin, decompose muriate of gold. The metals also precipitate one another after a certain order, which is the same in all acid solvents, and effected by double elective attraction ; ' for the me- tal to be precipitated exists in the solution in a calcined state, that being reduced by the phlo- giston of the precipitant, falls to the bottom; while the precipitant being calcined becomes so- luble. * Although,' he says, ' many anomalous circumstances occur in this matter, the order is constant and never inverted.' The fifth section of this paper, explains the use of tests for discri- minating the metals, pointing out the colors of metallic precipitates. ' Gold and Platinum are only in part separated from acids by the alkalis. Nitrate of silver affords a brown precipitate with caustic alkali, a white one with aerated soda and with muriatic acid.' Solution of muriate of mercury gives a red precipitate with carbonated, and a yellow or orange with caustic alkali. The latter is black if the solution be prepared without heat. Nitrate of lead is precipitated white by caustic alkali, an excess of which redissolves the precipitate. Nitrate of copper gives a bright green compound with aerated, and brown with phlogisticated alkali (ferro-prussiate of potassa). Iron is thrown down green by aerated alkali, and the precipitate, on exsiccation, becomes brownish yellow. Tin gives a white cloud with all the alkalis; bismuth white with water and alkalis; nickel greenish white with alkalis and ferro-prus- siate of potassa ; zinc and antimony white with all alkalis.*

146. Bergman's essay on fixed air, or, as we have found he calls it, aerial acid, is the last of which Mr. Brande makes particular mention. The dissertation which Mr. B. quotes was read in 1 774 before the Royal Society of Sciences at Upsal, and is printed in their Transactions for 1775. After describing the several methods of obtaining this air by the action of acids upon carbonates, by submitting them to a red heat and by fermentation, he proceeds to define the mean- ing of the term acid, in order to show that fixed air belongs to that class of bodies, that it is so- luble in water, that it has a sour taste, reddens turnsole and unites to and forms crystallizable

compounds with alkalies, destroying at the same time their causticity.

147. He detected this air in the marmor me- tallicum of Cronstedt (carbonate of baryta), and observed the rapidity with which baryta water absorbs carbonic acid from the air, forming an effervescent precipitate. Speaking of the action of carbonic acid upon lime, he gives a masterly sketch of the principal facts relating to the com- position and decomposition of the carbonate of lime ; he shows the solubility of calcareous spar, in water impregnated with fixed air, and its sub- sequent deposition, often in small crystals ; and the same property is also proved to belong to magnesia. Bergman then goes on to discuss the elective attractions of fixed air, of which he gives the following table : ⁂

AERIAL ACID.

Pure Terra ponderosa.

Lime.

Fixed Vegetable alkali.

Fixed Mineral alkali.

Magnesia.

Volatile alkali.

Zinc.

Manganese.

Iron.

lie says 'it appears to be the weakest acid known, for it is expelled not only

by vinegar but by the phlogisticated acid of nitre and vitriol (nitrous and sulphurous acids) ; yet he observes that acetate of lead is decomosped by carbonic acid, which appears an anomaly, and suggests a question which he leaves undecided till experi- ment shall have enabled him to explain it. The acid properties of fixed air are most dwelt upon, and the probability of its acidity resulting from foreign matter negatived ; for when rightly de- purated, though extricated by the most different means from the most different materials, whether by fire or by solution, it is nevertheless always the same and always acid. I conclude then, with all the certainty attainable in physics, that acidity is a property essential to that elastic fluid.' From the imperfection of apparatus, Bergman erred a good deal in calculating the specific gravity of fixed air ; he, however, proved it heavier than atmospheric air, and thence ac- counts for its lodging in low situations, as in pits and gjots ; it is also shown to extinguish flame.

148. Cavendish and Scheele were contempo- raries, and immediate successors of Bergman; the former (Mr. C.) was born in London 1731, and died at Clapham 1810 ; the latter (Scheele) was born at Strasbend in 1742, and died 1786. The first was a leading person in the scientific circles of London, of noble family and princely affluence ; the latter of humble origin, and with limited means, mabe up for deficiencies of place and fortune by zeal and economy, and in the re- tirement of a Swedish village raised a reputation that soon extended itself over Europe.

149. The properties and habits of hydrogen were investigated by Mr. Cavendish with re- markable success. These investigations were, indeed, entirely his own ; for though Mayow had

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collected it, and Hales had proved its combusti- bility, it may be safely asserted t'^at the pheno- notnena of its production had entirely escaped attention, and that its principal properties were previously unknown. Mr. Cavenish shews that different metals afford different quantities of hydrogen ; thus zinc yielded more than iron, and iron more than tin ; and further, that the state of dilution and quantity of the acid, pro- vided there were enough to dissolve the metal, did not affect either the quantity or properties of the air. 'In examining its properties, our author observed that it extinguished flame, des- troyed animal life, and burned, when pure, with a pale blue flame : he determined its specific gravity, and found that it was the lightest of all ponderable matter, hence its subsequent sugges- tion by Black and Cavallo as a substitute for rarified air in the balloon.

150. Having determined the specific gravity and other abstract properties of hydrogen gas, Mr. Cavendish proceeded to examine the result of its

combustion, and found that when mixed with atmospheric air in certain proportions, it exploded on the contact of flame, and deposited moisture in the vessel used for the experiment ; this observation led to one of the most important discoveries in modern chemistry, namely, the composition of water. The circumstance to which we allude, was indeed first noticed by Macquer, in 1766, and was referred by Mr. Watt to the production of water in 1783 ; but experimental proofs were still wanting, and they were supplied in a masterly manner by Mr. Cavendish in a paper given to the Royal Society in 1784. He found that steam of pure hy- drogen, burned either in air or oxygen, produced a vapor condensible into pure water. The same product resulted from the rapid combustion of mixture of inflammable and dephlogisticated airs (oxygen and hydrogen gases). The experi- ments were subsequently verified by analytical researches : water was decomposed by Lavoisier by passing steam through a red hot tube, con- taining iron, which absorbs its oxygen, and pure hydrogen is liberated in a gaseous form. The decomposing energies of electricity, have also been applied to this fluid, and it is found uni- formly to be resolved into one volume of oxygen, and two of hydrogen, which disappear on passing an electric spark through the mixture, and are converted into their weight of pure water.

151. Mr. Cavendish may be said to have dis- covered the true composition of the nitric acid, or at least he was the first to produce it by pass- ing electric explosions through mixtures of oxygen and nitrogen over solutions of potash.

152. Of Scheele's contributions to chemical science, Mr. Brande speaks in the following terms : While Priestley and Cavendish were contributing to the chemical eminence of Bri- tain, Scheele was diligently employed in the same pursuit, under the patronage and guidance of Bergman, of whom it has been emphatically said, 'that his greatest discovery was the dis- covery of Scheele,' for he was the first to remark his promising genius and rising merit.

153. Scheele's publication, entitled Chemical

Observations and Experiments on Air and Fire, is prefaced by an introduction from the pen of his patron Bergman, setting forth the advantages of experimental science, and the probable be- nefits that may

result from the application of chemistry to the treatment and cure of diseases.

154. Finding air necessary for the production of fire, Scheeie first turned his attention to its analysis; he found that solution of liver of sul- phur, and certain other sulphureous compounds, occasioned a diminution in the bulk of air, to which they were exposed, equal to one part in about five, the flame of hydrogen and that of sulphur caused a similar decrease of bulk in air standing over water, and lime-water not being rendered in either case turbid by the residuums, no fixed air was formed. He then obtains empyreal air (oxygen) by the decomposition of nitric acid, and other processes ; describes the method of transferring, collecting, and examining the gases, and endeavours to prove that heat is a compound of empyreal air and phlogiston ; he also shows by direct experiments, that the absorption occasioned in atmospheric air by liver of sulphur, is referrible to the abstraction of its empyreal portion ; that it totally absorbs empy- real air, and that, upon adding to the residuary portion of atmospheric air, a quantity of em- pyreal air, equal to that absorbed by the sul- phureous liquor, an air is again compounded, similar in all respects to that of the atmosphere. The identity of these investigations, with those of Priestley, will not fail of being observed, but it must be recollected that they were entirely independent, and that, although Priestley was in the field a little before him, Scheeie was un- acquainted with his proceedings.

155. The details concerning the nature of air are followed by an enquiry into the properties of heat and light, which, though a little tainted by false theory, bears the stamp of an able and original mind. Adverting to the reflection of the rays from a common fire, by a concave me- tallic mirror, he remarks that they pass in straight lines, without suffering any derangement from currents or undulations in the atmosphere which they traverse; that glass intercepts the heat but not the light, that a mirror of glass reflects the light but absorbs the heat, whereas metal reflects both ; the metal, therefore, if clean, does not be- come heated ; but, if blackened over a burning candle, it then absorbs heat, and becomes very warm. He notices the distinction between heated air, and heat emanating in straight lines; ‘ represent to yourself a little hillock of burning coals; in this case the heat darting from this hillock all around, is that which maybe reflected by a metallic polished plate ; that, on the’ con- trary, which rises upwards, and may be driven by winds to and fro, unites with the air. I call the first kind by way of distinction, radiant heat.’ Discussing the phenomena of solar and terrestrial radiation, he considers their apparent differences to result, not from any absolute difference in the nature of the emanating principles, but in their quantity. ‘ There is no doubt,’ he says, ‘ about the light of the sun and that of a burning candle being the same thing; for this affects the eye in the j&rce manner as the sun, and represents the same

colors through the prism, but being weaker it is no wonder that its beams, collected in a burning glass, will not burn; nor is there any doubt about light being a body in the same manner as heat, but I cannot persuade myself that light and heat are the same thing, since experiment proves the contrary.

156. Finding that light- blackened nitrate of silver, though heat alone had no effect upon it, he considers light as containing an inflammable principle, and shows that luna cornea after long exposure to the sun's rays, is no longer perfectly soluble in ammonia, but leaves a portion of re- duced silver ; he also shows that when put into water, it forms muriatic acid in the light, but not in the dark ; and that the violet rays pro- duce these effects more rapidly and powerfully than the other colored rays, and even than white light.

157. Among Scheele's experiments on air and fire, some curious facts are detailed respecting the spontaneously inflammable compound dis- covered early in the last century by Homoeig and called pyrophorus ; it is shown that potass is necessary to its formation; and that alum crystallised by ammonia, is unfit for its produc- tion. The evolution of hydrogen during the action of iron upon sulphur, and of nitrogen in the detonation of fulminating gold, are also among the facts contained in this essay ; as well as a variety of curious circumstances relating to the effect of vegetation and respiration upon air; and it closes with an accoxint of the pro- perties of sulphuretted hydrogen.

158. Scheeie was more'to be praised for a dili- gent observation and careful collection of facts, than for reasoning or theorising upon the facts detailed; but then, says Mr. Brande, he is so rich in facts, that we the more easily overlook theoretical failings. His Dissertation on Man- ganese for instance, with a description of the principal salts of that metal, contains the im- portant discovery of dephlogisticated muriatic acid, or, as it is now termed, chlorine. In ano- ther place we shall have to show that the views of Scheeie respecting the nature of this sub- stance and the muriatic acid are correct; and that the term oxymuriatic acid, by which it was known in the French school, implies an erro- neous notion of its constituent principles. To Sir H. Davy we are indebted for the revival and confirmation of Scheele's theory respecting .the nature of chlorine; indeed the antioxygenous views of this last mentioned philosopher, if we may so express ourselves, have proved, in refer- ence to the matter now adverted to, of much importance in their bearings upon the doctrines of chemistry generally.

159. In his essays on fluor spar and its acid, Scheeie has committed several errors, amongst which, the most glaring is the conclusion which he draws respecting the formation of silicious earth. When powdered fluor spar is

distilled with sulphuric acid in a glass retort, the silicious earth of the glass is dissolved by the acid of the fluor, carried over with it in the gaseous state, and in part deposited in the receiver containing water. Scheeie inferred that silicious earth was here formed by the union t►►f fluor, acid, and

water ; and, persisting in his error, he endeavours to show that the same formation ensues in metallic vessels, and therefore independent of glass ; but he takes no due precautions against the the presence of silica in the fluor he used. Yet there is much to praise in the methods of analysis employed in investigating the nature of this singular body ; it is a subject full of difficulties, and can scarcely be called complete even at the present day, though it has engaged the attention of the most acute analysts. The acids of arsenic and of molybdenum were first examined by

Woodward in 1724. In 1752 Macquer's dis- sertation upon it presented a connected view of its chemical history, which, however, was im- perfect and unsatisfactory. Scheele directed his attention to the discovery of the principle upon which its color depended. He shows that the salt afforded by digesting Prussian blue in caustic pot ash, is a triple compound of the coloring principle, iron and pot ash ; iron being the medium by which the coloring matter is attached to the alkali. This salt he decomposed by distilling its aqueous solution with a small

Scheele, aud he first showed the difference be- quantity of concentrated vitriolic acid; and the

tween molybdenum and pluipbago, and pointed liquor which passed into the receiver carried

out the existence of charcoal and iron in the with it a great portion of the coloring principle,

latter. which has since been termed Prussic acid.

160. In 1778 Scheele made known the pre- Scheele then goes on to show that the action of

paration of the arsenite of copper, and recom- this acid, in its pure state, upon metallic solu-

mended it as a useful and permanent color in tions, is very different from

that which it exhibits

oil and water painting; and in 1779 he took up when combined with alkalis. United with lime,

the important subject of the decomposition of he found that it afforded precipitates in the

neutral salts by unslaked lime, and iron. He greater number of metallic solutions, found upon the iron hoops of a tub of salted

turnips, which had been placed in a damp cel- lar, a quantity of salt resembling mineral alkali, and was struck with the circumstance, ‘ knowing that the attraction of acid of salt is weaker for iron than for mineral alkali.’ He dipped plates of several other metals into solutions of Glau- ber’s salt, but found that iron only was effectual in their decomposition, and that the action was more rapid in a damp cellar then elsewhere ; he also found that quicklime decomposed those salts in the same situation, and that the decomposi- tion was dependent upon the presence of car- bonic acid in the atmosphere of the vault.

161. In the essays on Milk, and Sugar of Milk, there are many curious circumstances re- specting the action of re-agents upon that liquid, and these papers deserve particular notice, as among the earliest specimens of the analysis of animal fluids. Scheele observes that, from his experiments, it appears ‘ that the acid of milk is an acid of a peculiar kind ; and though it expels the vinegar from acetated vegetable alkali, yet it seems destined, if I may so speak, to be vinegar.’ He attributes its difference to the want of some ferment, and shows that the addition of a little brandy to milk, causes it, when fermented, to afford good vinegar.

162. The method of obtaining the citric acid, and some other vegetable acids, by decomposing their compounds with lime by sulphuric acid, is also among Scheele’s discoveries ; his essays on Tungsten, on the Preparation of Calomel in the humid way, on Urinary Calculi, on Ether, and on Benzoic acid, each contains important facts, displays new modes of enquiry, and deserves the perusal of those who may be engaged in in- vestigations relating to the several subjects on which they treat.

163. The last essay to which Mr. Brande adverts, in his historical view of Scheele’s discoveries, was published in 1782, and is entitled, Experi- ments on the Coloring Matter of Prussian Blue. This very singular substance was accidentally discovered early in the last century, by Dies- bach, a color- maker at Berlin ; the preparation was, however, kept secret till published by

164. Lavoisier’s celebrated reformation in chemical science and

nomenclature, falls now to be noticed, which, although it came to affect the whole body of chemical doctrine and reasoning, consists of very little more than a generalisation ; and, as we shall immediately see, in some cases, a false, or too hasty, generalisation of facts and circumstances which had been observed and de- tailed by others. It cannot, however, be de- nied, even by those who are least disposed to appreciate highly the claims of Lavoisier, that chemistry has become a more simple, a more in- teresting, and a more satisfactory pursuit, since the destruction of the phlogistic hypothesis, and the introduction in its stead of the oxygenous explanation of combustion. We have seen above that Rey, so far back as early in the seventeenth century, demonstrated that air causes that in- crease of weight which is effected in metals during calcination. Hooke too, in 1667, showed that part only of the atmosphere was concerned in the support of flame. Oxygen gas, or, as he termed it, dephlogisticated air, was discovered by Dr. Priestley. Cavendish proved the com- position of water to be a compound of this air and hydrogen ; but the reasonings and inferences of these philosophers were interfered with and injured by the hypothesis of phlogiston or the inflammable principle, and Lavoisier by discard- ing this imaginary or ideal something, and look- ing as it were only to what was sensible or tan- gible, embodied the suggestions of Rey and Hooke into one leading principle of pneumatic theory, and regarded the circumstances of cal- cination and combustion to be the combination of the ponderable part of the air employed in the process with the burnt or calcined body. He exposed fifty cubic inches of atmospheric air to heated mercury ; by this exposure the air under- went a decrease equal to one-sixth of its original bulk, and became unfit for breathing, or for again acting in the phenomenon of combustion ; at the same time the metal was converted partly into a reddish matter, forty-five grains of which, heated red hot, afforded 41-5 of running mer- cury, and seven or eight cubical inches of gas which proved to be the dephlogisticated air of

Dr. Priestley. He then recombined the forty- 1wo cubical inches of the air that had been rendered unfit for combustion, with the eight cubical inches of the dephlogisticated air sepa- rated from the mercury, and thus produced the original fifty cubical inches of common or at- mospheric air.

165. The above experiment affords an instance not of combustion but of calcination, the difference of these two phenomena consisting principally in the slowness or rapidity with which the ae rial union is accomplished. But how are the heat and light to be accounted for, which are sensibly evolved or made manifest when combustion is effected? Our theorist considered all aeriform existence to be a compound of a ponderable base with heat (caloric) and light ; now when this base is made to unite with a body during the process of com- bustion, the caloric and light are necessarily disengaged, and in this disengagement you have the sensible circumstances of the process. Instead, then, of explaining combustion or calcination by assuming the presence and operation of a princi- ple which has not been demonstrated, and which, even in its supposition, is contradicted by the fact that the body operated on acquires rather than loses by becoming dephlogisticated, Lavoi- sier proposed that the denomination of the pro- duct should be as it were the statement of what had manifestly taken place in the process, and that the designation of the process itself should be founded on the same principles. Hence, upon this nomenclature being adopted, it became necessary to consider dephlogistication as oxyge- nation, and to study the chemists who had writ- ten at the time of phlogiston being in vogue, under the recollection of this change.

166. But why were bodies, thus having become united with a part of the air, named oxygenated ? So early as the year 1667, Mayow, in his experi- mental investigations, found that the igneous part of the atmosphere, as he termed it, was concerned in the formation of some acid bodies ; and, al- though this principle had been subsequently in a measure lost sight of, it was found to harmonise with succeeding discoveries, and more especially with the great discoveries of Priestley and Scheele respecting dephlogisticated or empyreal, or, as it is now termed, oxygenous air; and Lavoisier, seizing upon these facts and principles, extended, generalised, and applied, what had before been in some sort observed ; and conceived that the vivifying, or empyreal, or pure, or dephlogisti- cated portion of the atmosphere, was the univer- sal principle of acidification ; on this account the name oxygen was applied to it: and, as we have before observed (see ACID), this enunciation of Lavoisier came to be generally received and ac- cepted as the foundation of a new system of chemical doctrine, and both inflammability and acidity were thought to be fully explained by the

oxygenous theory ; the language in which chemi- cal facts were announced, underwent this leading mutation, and it was expected that every new development of fact would harmonise with the ne%v theory of causation.

167. Guy ton Morveau, and Fourcroy, were the two principal associates of Lavoisier in tuetbodisinp the new nomenclature ; the first of

these celebrated men was born at Dijon in 1737, and died 1815; the second (Fourcroy) was born at Paris in 1755, and died in 1809.

168. It shortly, however, was ascertained that Lavoisier and his associates had assumed too much for oxygenous agency, both in respect of acidification and combustion (see ACID and COMBUSTION) ; and the researches of Sir Hum- phry Davy in particular have demonstrated the errors of the French school in its ingenious at- tempt at grasping simplicity. To the article CHLORINE, and to the body of the present trea- tise, we must refer our readers for a full explana- tion of these discoveries and inferences ; and shall bring the present essay to a close by remarking generally that the progress of chemistry has beer, very powerfully aided within the few preceding years by the important discovery of the metallic mode of exciting the electric power, and the re- lation of this power in its various modifications to chemical changes.

169. That the contact of different metals (we now again employ the words of Mr. Brande), is frequently attended by their electrical excita- tion, seems first to have been observed by Mr. Bennet in the year 1789 ; and the curious experi- ments of Galvani upon the convulsions excited in the limbs of animals, by the application of cer- tain metals to their muscular and nervous fibres, led Volta to investigate the cause of such phe- nomena, and to attempt the accumulation of such electricity, which he attained by a succes- sion of copper and zinc plates, with intervening pieces of moistened pasteboard ; the zinc ex- tremity of this pile was always in the positive, and the copper in the negative, electrical state ; and the quantity and intensity of the electricity vˆere found to augment with the number of alter- nations.

170 This instrument has been productive of two series of discoveries in chemistry, one of which has arisen out of its power in producing heat, and the other from its peculiar influence over the composition of bodies. The former has taught us the fusion and combustion of a number of substances ; the latter has developed a new cause which influences chemical effects, depend- ing upon the communication of attractive and repulsive energies to the elements of compound bodies.

171. Substances, held together by the strongest known affinities, suffer decomposition when sub- mitted to the action of this all-powerful agent,

one series or class of elements being always at- tracted by the one pole, and another by the op- posite electrical surface ; and it has been inferred from these facts that one power is productive o. electrical and of chemical changes, acting in the former instance upon masses of matter, in the latter upon its elementary particles.

We have thus brought to a conclusion the first, or introductory part, of our present trea- tise ; it has already been intimated that the reader will find his account in going over the whele, al- though many portions of it, for fully understand- ing and appreciating them, will require some knowledge of the subject. We now proceed to the second division of the Essay, and treat of Chemical Properties and Principles generally.

CHEMISTRY.

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PART II.

OF CHEMICAL LAWS, PROPERTIES, AND PRIN- CIPLES.

172. AFFINITY. ••• Under the word ATTRAC- TION, in this work, the reader will find a distinc- tion pointed out between the modifications of attractive power as exerted upon masses, or upon the particles or atoms of matter : and a further distinction, it will there be seen, obtains between cohesive attraction and the attraction of affinity ; the first term denoting the power which is exer- cised upon particles of a similar nature, while affinity applies to the tendency of union between particles of a dissimilar kind; a distinction which is illustrated in the following manner : ••• A lump of copper may be considered as composed of an infinite number of minute particles, or integrant parts, each of which has precisely the same pro- perties as those that belong to the whole mass. These are united by the force of cohesion. But if the copper be combined with another metal (such as zinc), we obtain a compound (brass), the constituent parts of which, copper and zinc, are combined by the power of chemical affinity.

173. But in chemical treatises it is necessary to take cognizance of cohesive attraction, which indeed, in one sense, may be considered as a che- mical power, since, as we have seen, its influence is exerted among the minute particles of which a simple mass is formed ; or it is rather, we should say, the business of chemistry to investigate the nature, and trace the operation of those powers and principles by which cohesive attraction is interfered with and modified.

174. Cohesion, as implied by the term, is most strongly exerted in solid?, and according to the degree of solidity in a body, is the exertion of the

power; in liquids it acts with considerably less energy, and in the gaseous or aeriform mo- dification of matter its power seems to be lost. Water, when existing in the condition of ice, has, of course, considerable cohesion : when it re- assumes the state of water the cohesion is dimi- nished, and by the time that it is completely converted into vapor, the power is gone.

175. Mechanical force, solution, and heat, are the three main powers by which this cohesive property of bodies is broken in upon, lessened, and destroyed. As an example of the first we may adduce the common process of pounding a mass in a mortar, which is in fact a mechanical and forcible separation of particles : solution ef- fects the division in a different manner, and to a greater extent ; while heat for the most part ope- rates with still greater energy, but is much varied in its influence according to the nature and circumstances of the body upon which its agency is exerted.

176. The two last powers, solution and heat, are Urictly chemical in their operations, and, of course, fall to be considered in the present trea- tise. Of heat, however, we shall defer the inves- tigation till we shall have considered the subject of affinity. We are now then to treat of

177. SOLUTION and CRYSTALLIZATION. ××× When a solid disappears in a liquid, if the com- pound exhibit perfect transparency, an example of solution is presented ; for the expression is

applied both to the act and the result. Thus solution takes place when you throw a small quantity of common salt into a sufficient quan- tity of water; the salt disappears, or, in other words, is dissolved. Now this is a case of che- mical attraction overcoming the cohesive power; but it acts within certain limits, for a given quantity of water has only the power of di"solv ing a certain portion of salt ; and when tiiis is effected, the point of saturation is said to be ar- rived at, and the compound of the salt and water is named a saturated solution ; after this, the balance may be said to turn on the side of cohesion, the chemical affinity between the solid and fluid being able to manifest itself no further.

178. In this illustration we have supposed the water to be at its ordinary temperature; but if you heat the fluid, in some cases, you will there- by give greater scope to solution, or enable some salts to unite in a greater quantity with the water ; but when the solution thus charged with a super- abundance of salt is suffered to cool down to its ordinary standard, that portion of the salt which had united with the water in consequence of the fluid's increased heat will be deposited ; and in this reproduction of solids, a most interesting series of phenomena often develope themselves.

179. By the process of cooling, a supersatu- rated solution is thus made to

deposit solid mat- ter ; but the application of heat will, under some circumstances, effect the same thing; the heat expelling a portion of the fluid, or, as it is termed, evaporating it, and thus giving room for the co- hesive attraction again to exert itself. If this process of evaporation be conducted slowly and carefully, the saline particles will gradually ap- proach each other, and the cohesion or aggrega- tion will be effected according to certain laws, and regularly shaped masses called crystals will be formed.

180. In this act of separation, however, the crystals of almost all salts take with them a quan- tity of water which is necessary to their exist- ence, and which is called their water of crystal- lisation ; this is present in some crystals in a much larger proportion than in others; thus the salt called sulphate of soda contains hi its cry- stallized form more than half its weight of water, while in the crystals of some other salts a very small portion of flu.d is present ; but it is impor- tant to observe that in every salt it exists, not in uncertain and indefinite, but in definite propor- tions ; that is, that the same kind of salt always requires for its crystallisation the same quantity of water.

181. There is another law also in reference to the water of crystallization that is necessary to recognise, viz. that it is retained in different salts with very different degrees of force. Mere ex- posure to the atmosphere is sufficient to dissipate the water of crystallization from some kinds of salts ; while others, on the contrary, instead of imparting water to the air, take water from. it. The first species are called efflorescent, because they become dry and flowery when exposed to the air ; the second are termed deliquescent salts, from their readily liquifying.

182. When two salts are contained in the same solution, varying in their degree of solubi-

lity, and having no strong attraction for each other they may be obtained separately ; for, by a careful evaporation of part of the solvent, that salt, the particles of which have the greatest co- hesive tendency, will crystallise first. If both salts are more soluble in heated than in common water, and the temperature of the solvent lias been increased, the crystals will not appear till the water cools. But if one of them, like com- mon salt, is equally soluble in hot and in cold water, crystals will make their appearance even during the act of evaporation. In this way nitre may be separated from common salt; nitre being more soluble in hot than in cold

water, its cry- stals will not appear till after the solvent has been cooled, while the crystals of the common salt will form during the evaporation of the water ; that is, under the continued application of heat.

183. Crystallisation is induced or accelerated by introducing into the solution a solid substance as a nucleus, such as a piece of thread or wood : but it is still more so by immersing in the solu- tion an already formed crystal of the same kind with that we expect to be formed ; and in some instances if there be more than one kind of salt in solution that will most readily separate, even caeteris paribus, of which the crystal or crystals have been introduced.

184. A strong solution of salt will sometimes refuse to crystallise, if kept excluded from air, but crystals will instantaneously form, upon ad- mission of air. Agitation too, will often occasion the immediate and copious production of crystals in a solution which will not crystallise, till thus treated. The admission of light also, and the agency of the electric power, will in some cases rapidly excite crystallisation.

185. The nature of the solvent has an influence over crystallisation. Alcohol and water will both dissolve some salts, but the affinity of the former for them shall be so weak that crystals are much more readily thrown down from alcoholic, than from aqueous solutions.

186. But the great and fundamental law of crystallisation is that which has been alluded to in par. 179, viz, that every solid has a ten- dency to assume a peculiar shape. Thus com- mon salt, when most perfectly crystallised, forms regular cubes ; nitre assumes the shape of a six-sided prism, and alum that of anoctahedron ; so truly is this the case, that we are often able to determine the composition of a substance by observing its external characters ; but not so invariably, for there are certain exceptions, at least seeming exceptions to the principle, that identity of crystalline form is necessarily con- nected with identity of chemical composition ; and it has been known that the same solid ad- mits of great variety of crystalline figure, with- out any variation of its chemical composition. But still the tendency as it is expressed above, of every solid to assume a peculiar shape, must be received is a fundamental law in crystallisa- tion ; the variet-ies being occasioned by accidental circumstances which interfere with cohesive ten- dency, and the diversities themselves being found reducible to a small number of simple figures, which for eacn individual species is always the si me.

THEORY OF CRYSTALLISATION.'

187. Bergman first suggested that all crystal- lised forms had one primitive

nucleus, a sug- gestion he was induced to make in consequence of its having been observed, tLat when a piece of calcareous spar was broken with care, its particles assumed a rhomboidal figure. This suggestion, and the consequent investigation to which it led, was still further pursued by Rome" de Lisle, who referred all the variations of form in different crystallised substances to certain truncations of an invariable primitive nucleus. But his method of proceeding was hypothetical, inasmuch as he supposed a given primitive form to be truncated in different manners, and thus established a gradation from simple, and primitive to complicated figures.

188. The Abbe Haiiy was the first to unfold in an experimental and mathematical manner the true theory of crystalline formation. It is known to those who are in the practice of polish- ing gems, that crystals only present plane and smooth surfaces when cut or broken in certain directions; when the split by the instrument is effected in other directions, an uneven and irregular surface is exposed. Now the Abbe pursuing this sort of natural division in crys- tallised bodies, found that the last product of the artificial division of a six-sided crystal of calcareous spar, was an obtuse rhomboid, and likewise, that other forms of calcareous spar, however different at first, were reducible at last to the rhomboidal solid, by the same mode of treatment ; whereas a crystal of another kind, a cube for instance, of fluor spar, presented in its ultimate division the octahedron form.

189. Pursuing still further this method of division, Haiiy obtained six primitive forms, viz. 1. The Parallelopipedon, which includes all the six-sided solids, parallel two and two. 2. The tetrahedron. 3. The octahedron. 4. The hexangular prism. 5. The rhombic dodecahedron with equal rhomboidal planes. 6. The trian- gular dodecahedron with triangular planes.

190. By further mechanical divisions, these primitive forms were found resolvable into integral elements or moleculae, as Haiiy termed them, which are three in number, viz. 1. The parallelopipedon or simplest solid, with six faces parallel two and two. 2. The triangular or simplest prism, with five surfaces. 3. The tetrahedron or simplest pyramid, with four sur- faces ; the secondary forms being supposed de- pendent upon decrements of particles, taking place on different edges and angles of the pri- mitive ones.

191. But in this theory of crystallisation, the following question suggests itself, viz. as a whole mass of fluor spar is divisible into the tetrahedron and octahedron forms, which of these forms is to be regarded as primitive ? and further, as neither of these can fill space without leaving vacuities, how is it possible to suppose any arrangement by which the particles will remain at rest, so as to form the base of a per- manent crystal ?

192. This difficulty Dr. Wollaston has most ingeniously obviated by considering the elemen- tary particles as spheres ; and Mr. Daniell has

'ately described a new process of developing the structure of crystals which while it is superior to that of mechanical division has served to pro- duce some remarkable confirmations of Dr. Wol- laston's hypothesis.

193. If a shapeless mass of alum be immersed in water and left leisurely to dissolve, it will be found at the end of three weeks to have been more acted upon by the solvent, at the upper than at the lower part ; and the mass will have assumed a pyramidal shape. At the lower end ot the mass octahedrons and sections of the same figure will appear in abundance and as if carved upon its surface. Other salts yield other figures, the figures varying with the different faces of the original mass. ' In this way alum alone furnishes octahedrons, tetrahedrons, cubes four and eight-sided prisms either with plain or pyramidal terminations, and rhombic parallelo- pipedons. It is evident, then, that no theory of crystallisation can be admitted which is not foun- ded upon such a disposition of constituent parti- cles as may furnish all these modifications by mere abstraction of certain individuals from the congeries, without altering the original relative position of those which remain ; and these con- ditions may be fulfilled by such an arrangement of spherical particles, as would arise from the combination of an indefinite number of balls en- dued with mutual attraction, and no other geo- metrical solid is adequate to the purpose ; and where bodies afford crystals differing from the octahedral series, an analogous explanation is furnished by supposing their constituent particles to consist of oblate spheroids, whose axes bear different proportions to each other in different substances. Hence we may also conclude that the internal structure of all crystals of the same body is alike, however the external shapes differ. In corroboration of the above hypothesis we may remark that the hexaedron is, of all geometrical figures, that which includes the greatest capacity under the least surface. If, therefore, the ultimate particles of crystalline bodies be spheres or sphe- roids, the greatest possible number in the least space will be included in this form. It is pro- bable that the exterior shape of every crystal is determined by the nucleus first formed by a certain definite number of particles, which by the power of mutual attraction overcome the resis- tance of the medium in which they were suspen- ded, or from which they were separated. This number may vary with the solvent or other con- tingent circumstances. Four spherical particles thus united, would balance each other in a tetrahe- dral group, six in a octahedral group, and each would present particular points of

attraction, to which all subsequent deposits would be directed. Now, let us imagine two nuclei formed in the same solution, whose axes run in contrary direc- tions ; their increase will consequently be in contrary directions, and each will attract a par- ticular system of particles from the surrounding medium. If these two systems should cross each other in their course, a greater number will be brought within the sphere of mutual re- action at the point of junction, and they ought to arrange .hemselves in the least possible compass. The facts here answer to the theory. If we select any

crystals having others crossing them nearly a% right angles, and separate them, the points of junction invariably present an hexaedral arrange- ment.'[illegible] *Brande.*

For further information on the interesting sub- ject of crystallisation, and for engraved figures illustrative of the facts and the theory the reader is referred to the article CRYSTALOGRAPHY. in the body of the work.

ELECTIVE AFFINITY.

194. Bodies attract each other unequally, and if several be brought together those first enter into combination which have the strongest mutual affinity [illegible] *hence the propriety and the application of the term elective as applied to chemical at- traction. Let A represent nitric acid and B C a composition of lime andjmagnesia, B being the symbol of the former, and C of the latter ; then we should say say that A will unite to B in pre- ference to C, and consequently if we add an aqueous solution of B to a solution of C in A, C is thrown down to the bottom of the vessel, and A and C become united ; in other words the lime occupies the place which the magnesia had first occupied and the magnesia is precipitated.*

195. The above is a case of what is termed by the chemists single elective affinity, and tables of attraction have been formed from actual ob- servation of the respective tendencies in bodies thus to unite and reject. One acid for instance is taken and placed at the head of a column, and the substances with which it manifests a ten- dency to combine, are arranged according to the degree in which this tendency is manifested, the substance which the acid attracts most power- fully being placed nearest to it, and that for which it shews the least attraction being inserted at the bottom of the list.

196. But it is necessary to observe that dis- placement of bodies, in consequence of affinities being brought into play is often double and com- plicated, new compounds being produced instead of simple and single precipitates ; it frequently happens for example that the compound of two principles refuses to be separated by the addition of a third or a fourth

separately, but if this third and fourth be united and made to come into contact with the first compound, then a separation or a decomposition will be the result. Illustra- tions of this fact and principle are made by the following diagrams :

Nitric acid-

Sulphuric acid

Barytes

Soda

Nitrate of barytes, or p. composition of nitric acid with barytes in solution, is supposed to be mixed with sulphate of soda or a combination of sulphuric acid and soda, the results are sulphate of barytes and nitrate of soda as indicated by the diagonal lines.

197. A still more complete view of the re- sulting changes is presented by the following

diagram ; tne origina. compounds being placed on the outside of the vertical brackets, and the new compounds above and below the outsides of the horizontal lines of the diagram, and the component parts being inserted within the diagram.

Nitrate of Soda

Nitric acid

Soda

Nitrate of _ Barytes

_ Sulphate of Soda.

Sulphuric Barytes

J acid

Sulphate of Barytes.

198. In the instance of double decomposition it has been supposed that two

series of affinities may be traced, and Mr. Kirwan proposed the term quiescent to express the one and divellent to characterise the other, the former tending to preserve the original compound, or resisting efforts to change it, the latter tending to disunite �t, and effect new combinations.

199. The above example is one in which the quiescent affinities are between the nitric acid, ind the barytes, and the divellent between the sulphuric acid and barytes, and of course, the divellent must be more forcible than the qui- escent affinities in order to effect the decom- position.

200. But this hypothesis of quiescent and divellent affinities, or rather this mode of ex- plaining the phenomena that occur in conse- quence of different affinities of a complex kind, will be found illegitimate in several instances ; the forces of attraction being very materially in- terfered with by several extraneous forces, and circumstances, which now demand notice.

201. i. Quantity has a very powerful in- fluence upon affinity, thus if two salts be mixed together in certain proportions decomposition will ensue ; but the same effect will not be pro- duced in some other proportions. Hence a larger quantity may make up for a weaker affi- nity, and vice versa.

202. ii. Cohesion greatly influences the tendency which bodies may otherwise possess of union and separation. Place in sulphuric acid a quantity of solid fluate of lime, and you will find but little action take place between the two materials ; but rub the stone into powder before you immerse it in the acid, and a violent action is the immediate result.

203. iii. Insolubility interferes with the chemical influence of affinity ; this indeed may be considered as having been partly stated under the head of cohesion ; but cohesion and solubi- lity are not in all senses identical forces. It is to be remarked, moreover, that both insolubility and cohesion, under some circumstances, favor affinity. When, for example, to the compound of sulphuric acid with barytes (sulphate of ba- iyta), soda is added ; decomposition would be immediately effected were it not prevented by the insolubility and cohesion of the compound.

204. iv. Specific gravity must necessarily act in aid of insolubility in interfering with chemical affinity ; and so must

205. v. Elasticity. Elastic fluids, indeed, it has already been remarked, have their particleg separated so widely, that although the bases of them may possess very powerful attractions for the bases of others, the mechanical condition in which the material exists by preventing approxi- mation prevents union ; and combination can often only then be procured where a

strong me- chanical pressure is made to oppose this tenden- cy to separate.

206. vi. Temperature, as will shortly "be stated more at large, has a most formidable in- fluence upon the circumstances of affinity ; an increase of temperature at one time assisting, at another impeding chemical combinations.

207. vii. Chemical union is influenced in a most marked and important manner by the dif- ferent modifications of electricity. We have already indeed said enough to prove how very effective this agency proves in operating chemi- cal change, and shall have occasion hereafter to revert to the subject.

208. To mechanical pressure, as influencing combination, we have just alluded under the fifth head ; and enough has now been advanced to prove that statements of laws and principles, which go upon the supposition of affinity, as an abstract power, must necessarily be erroneous, since so many circumstances, connected with the being of material substance, interfere with the regularity of its operation.

209. While investigating the laws of chemical affinity, Berthollet thought that he had discovered ground to infer that bodies whose affinities are thus interfered with by extraneous forces, might otherwise be united in every proportion. He conceived also that ' the affinities of a compound are not newly acquired ; but are merely the mo- dified affinity of its constituents, the action of which, in their separate state, is counteracted by the prevalence of opposing forces. By com- bination these forces are so far overcome, that the affinities of the constituent are enabled to exert themselves.' See 96, et seq.

210. Elementary affinities is a term applied by Berthollet to the individual affinities of con- stituents ; while he calls the action of different affinities present in one compound, resulting affinities. The term resulting affinity is used also to express the force with which a simple body acts on a compound. ' A simple body indeed may exert towards a compound both an elementary and a resulting affinity. If the ele- mentary affinity prevails, it will unite only with one of the principles of the compound, as when a simple body, by its affinity for oxygen, decom- poses nitric acid, and liberates its nitrogen in a separate form. If the resulting affinity be pre- dominant, the simple body will unite with the whole compound, without effecting any disunion of its elements. From these views it may be in- ferred that we are not in any case to deny the existence of an affinity between two bodies, merely because they do not combine when pre- sented to each other ; for an affinity may be sup- pressed by the prevalence of opposing forces.'

21 1 . The theory of Berthollet (says Dr. Henry) which promised, on its first developement, to throw new light on many subjects of chemical

philosophy, has lost much of its probability by the subsequent progress of the science. It is directly indeed at variance with the doctrine of definite proportions, which may now be con- sidered as firmly established. It is liable more- over, to the following objections.

212. i. It has been shown by professor Plaffof Keil, that in various cases where two acids are brought into contact with one base, the base unites with one acid to the entire exclusion of the other. When, for example to a given weight of lime, quantities of sulphuric and tartaric acids are put, either of which would exactly neutralise the lime, the sulphuric acid unites with the lime to the entire exclusion of the tartaric. The same evidence of a superior affinity of the sul- phuric acid over that of the oxalic, is obtained by placing those acids in contact with as much oxide of lead as would exactly saturate either of them. Again, comparing the action of two bases on one acid, the same law is found to hold good, for when potassa and magnesia are mixed with just as much sulphuric acid as is required to neutralise either of them, the potassa seizes the whole of the acid, and no part of it unites with the magnesia. Nor can these effects be explained by any of those extraneous forces which Ber- thollet supposes, in all cases, to regulate chemical action, or by any principle but a stronger affinity of sulphuric acid, than of tartaric or oxalic acid for the different bases, and of potassa than mag- nesia for the same acid. See 97.

213. ii. Some of the cases which Berthollet adduces to shew the reciprocal displacement of two bodies by each other from a third, are ex- amples, not of single elective affinity, in which three bodies only are concerned, but of complex affinity in which the attractions of four bodies are brought into action.

214. iii. In other cases, the consideration of the 'affinities of two A and B for a third C is complicated with this circumstance, that the neutral compound of A and B has an affinity for a further portion of one of the ingredients. If then C be brought into contact with the com- pound A B, we may have acting at the same moment the affinity of C for A, which partly de- composes the compound A B ; and the affinity of the undecom posed part of A B for that portion of B which is set at liberty. For instance, when nitric acid acts on sulphate of potassa, some ni- trate of potassa is formed ; and the sulphuric acid which is set at liberty, uniting with the un-

decomposed'sulphate of potassa, composes a new salt, consisting of sulphate of potassa with an ex- cess of sulphuric acia.

215. iv. It is a strong objection to the the- ory of Berthollet, that in some cases decomposi- tion happens, which, according to hisviews, ought not to take place ; that in others decomposition does not ensue, which the theory would have led us to anticipate.

216. v. The theory is objectionable, inas- much as in several instances properties are sup- posed to operate before the bodies exist, to which those properties are attributed. It is inconceiv- able, for instance, that the cohesion or insolubi- lity of sulphate of baryta can have any share in producing the decomposition of sulphate of po-

tassa by that earth, for the insolubility of sulphate of baryta can have no agency till that compound is formed, which is the very effect to be ex- plained.

217. We have thus preferred making use of Dr. Henry's language in objecting to some of the doctrines of Berthollet, because the objections are stated in a perspicuous and concise manner. It must be understood, as indeed Dr. Henry himself admits, that the extraneous forces above adverted to, do in reality much modify attractive influences ; but ' they are entitled only to be considered as secondary causes, and not as deter- mining combinations or decompositions, nor as regulating the proportions in which bodies unite ; independently of the superior force of chemical affinity.'

218. It has been above intimated, that the theory of definite proportions, which in itself, unincumbered by some of the explanations or elucidations of it, is now generally admitted as a system of facts, goes counter to the views which Berthollet took of chemical affinity. Under the word ATTRACTION the reader will find an account of this theory, we may here take occasion to re- peat its main and leading principle to be, that when bodies unite, so as to form one compound only, that compound always contains the same relative proportions of its components ; and, when two bodies unite in more than one proportion, the second, third, &c., proportions are multiples or divisors of the first, a principle the development and substantiation of which have served to give a new complexion to the whole body of chemical science. See ATTRACTION, and sec. 27 et seq. of the present essay. The doctrine of Chemical Equivalents also explains these phenomena.

HEAT, CALORIC.

219. Philosophers have frequently to deplore, both the natural poverty and

artificial laxity of language ; the terminology of causation is often applied to the mere expression of effect, the idea of process is blinded with product, and com- mon perception is taken as an estimate of powers whose real value and extent can only be apprecia- ted by other tests than those of fallacious feeling.

220. That the sensation of heat which a body imparts, to a person feeling it, is not the true measure of the quantity of power producing this sensation, is exceedingly obvious to modern science, and, moreover, as it seemed inconsistent with that precision of language which philoso- phy seeks after, to confound the cause of the sensation with the sensation itself, the word calo- ric was substituted for heat, when the power fell to be considered by the chemist; an objection, however, may be fairly taken, even to this term, partly on the principle that makes the use of the word heat itself objectionable, and partly inas- much as a substantive notion is conveyed by its employment, when, in point of fact, the materia- lity of the power has not hitherto been demon- strated.

221. Heat, or Caloric, so far as its chemical agencies are in question, may be considered as a principle and power opposed to cohesive attrac- tion, for its tendency is to separate the particles of bodies, to a greater than their natural distance and the varied susceptibility of bodies, thus to

be acted on by heat, determines, in the general way, the varied form in which they exist as more or less solid, or fluid, or aeriform. (See

240.)

222. But heat and temperature, as we have just intimated, are not to be confounded. By the latter term we are to understand the condition of a body, relatively to its power of producing the sensation of heat, and generally of occa- sioning expansion ; by the former, the chemist expresses the absolute quantity of the power present in the body, whether it be imparted to the sensations or not. The caloric of temperature or expansion is usually named free or uncom- bined caloric, the heat of bodies not thus de- monstrated was formerly termed latent, and now, usually, combined heat. ,

223. The relative quantities of heat which different masses of matter in the same condition demand, to raise them to the same temperature, is named their specific heat ; and those bodies which require most heat for such elevation are said to have the greatest capacity for heat.

224. Now the capacities of bodies for heat considerably influence, of course, the rate at which they are heated and cooled ; those bodies having the greatest capacity which are the most slowly heated and cooled.

225. From this law it follows that when different masses of matter are exposed to the same source of heat, they permit it to pass through them, or into and out of them, with very different degrees of rapidity ; or in other words, they have various conducting powers. Among solid bodies metals are the best con- ductors ; silver, and gold, and copper, being better conductors than platinum, iron, and lead. Next to the metals the diamond and topaz may probably be placed; then glass; then flinty and hard stony bodies in general ; then soft and earthy bodies of a porous constitution ; then wood, and, lastly, down, feathers, wool, and other porous articles of clothing.

226. ' The different conducting powers of bo- dies, in respect to heat, are shown in the appli- cation of wooden handles to metallic vessels ; or a stratum of ivory or wood is interposed between the hot vessel and the metal handle. The transfer of heat is thus prevented. Heat is con- fined by bad conductors ; hence clothing for cold climates consists of woollen materials ; hence, too, the walls of furnaces are composed of clay and sand. Confined air is a very bad conductor of heat ; hence the advantage of double doors to furnaces, to prevent the escape of heat; and a double wall, with an interposed stratum of air to an icehouse, which prevents the influx of :ieat from without.

227. ' From the different conducting powers of bodies, in respect to heat, arise the sensations of heat and cold, experienced upon their appli- cation to our organs, though their thermometric temperature is similar. Good conductors occa- sion, when touched, a greater sensation of heat and cold than bad ones. .Metal feels cold, be- cause it readily carries off the heat of the body ; and we cannot touch a piece of metal immersed in air of a temperature moderate to our sense.' Brande. '

228. But heat is not only different in the quantity and readiness with which it is given off from bodies, but also in respect to its mode of impartation to surrounding media ; it is not only sent out from bodies, and diffused over matter by general communication, but it is likewise projected in right lines with great velocity, and in the same manner, so far as motion is con- cerned, as is light. So great, indeed, is the velocity with which calorific rays are transmitted, that Pictet found no perceptible interval between the time at which caloric quitted a heated body, and impinged upon a thermometer at the distance of sixty-nine feet.

229. The first is called the heat of communi- cation, by which a tendency

to equilibrium, and equality of temperature is brought into act; the second is named distinctly, heat of ra- diation.

230. The heat of communication, then, as we have just intimated, and as its appellative, indeed, implies, diffuses itself freely through all matter, and mingles with the air through which it is conveyed, while the heat of radiation, or radiant, or radiating heat, moves through air without ap- pearing to communicate to the medium any increase of temperature, and without being de- pendent on any agency of the medium through which it passes : it even traverses a vacuum ; and, on the other hand, it will pass through dense and opaque bodies, though by the inter- vention of these bodies its velocity is very greatly impaired.

231. The heat we feel in approaching a fire is chiefly occasioned by radiation, while the general heat of the room is the heat of commu- nication. It must, however, be noticed, that radiation does not depend upon the medium through which it passes, or rather upon any agency of that medium, but appears to be the same through all the different varieties of aeri- form bodies, yet that the gases differ materially from each other in their conducting power. ' Caloric, also, radiates from bodies at all tem- peratures, but the quantity radiated bears some proportion to the excess of the temperature ot the hot body above that of the surrounding me- dium.' Hence, if we have any number of bodies at different temperatures, in the vicinity of .each other, they may all, agreeably to the ingenious theory of M. Prevost, be considered both as ra- diating and receiving caloric ; but the hot ones will radiatq more than they receive, while the cold ones will receive more than they radiate.

232. The process of radiation appears to be constantly going on from the surface of the earth, and it is partly on this principle that we are to explain why the heat which our planet is inces- santly receiving from the sun does not accumulate to such a degree as to render it a less fit Imi- tation for man. The period when radiation from the surface of the globe is most discoverable by its effects, seems to be during the night, es- pecially when the sky is perfectly unclouded ; for a covering of clouds serves as a mantle to the earth, and prevents the free escape of radiart heat. Under favorable circumstances, it has been shown by Dr. Wells, that the temperature of the ground, especially when its covering is

formed of some substance that radiates freely, is several degrees below that of the atmospheric stratum a few feet above it. It is this diminished

temperature of the earth's surface that occasions the deposition of dew and hoar frost, which are always observed to be most abundantly formed, under a clear unclouded sky/ Henry. See METEOROLOGY.

233. The cause of radiation, or rather the principle upon which it is effected, has been the subject of investigation and controversy. Some have accounted for it upon the assumption of heated bodies occasioning undulations in the air, something in the same manner as the waving excited by bodies when they emit sound ; but it is said that the different phenomena of prismatic refraction, and of solar and terrestrial radiation, are not satisfactorily explained by such an 'hy- pothesis.

234. It has been suggested further, that if we consider sensible heat in bodies to depend upon vibrations ff their particles, a certain intensity of vibrations may send off particles into free space, and particles moving rapidly in right lines may, in losing their own motions, commu- nicate a vibratory motion to the particles of ter- restrial bodies. (Davy's Elements, quoted by Brande.) We must, however, know more than we at present do, of the absolute essence of heat, or whether it is matter or mere power before speculations on its modus operand! can be received as entitled to the character of le gitimacy.

235. The heating effect of solar rays, it has long been known, depend much upon the color of the surfaces upon which they infringe, and black and dark bodies are more heated than those which are white or of light tints, circum- stances dependent upon absorption and reflection. Hence the superiority of dark colored dresses in the winter season, and the preference properly given to light colored clothes during the heats of summer.

236. Professor Leslie has shewn that the phe- nomena of terrestrial radiation are connected with the nature of the radiating surface, and that those surfaces which are the best radiators of this heat are also gifted with the greatest absorbing power. Leslie on Heat.

237. Unmetallic and unpolished surfaces are the best radiators and also the best receivers of radiant heat ; while polished metallic substances are the worst radiators, and have the least absor- bing powers. In experiments with metallic mir- rors, the whole nearly of the heat is reflected, and- the mirror itself does not become warm ; but if it. be coated with any unpolished, and especially unmetallic coating, as with paper, or paint, the reflection is then scarcely perceptible, and the mirror becomes hot from the absorption of the radiant matter. Brande.

238. The laws of radiant heat and of light are in some sort so similar that it has been imagined they both depend upon slight modifications of the

same substance or power ; on this head we cannot do better than extract the following sen- tences from an author whose reasonings are generally acute, and whose language is always perspicuous, ••• Dr. Murray.

239. The calorific rays (says this author) which exist in the solar beams though incapable of pro- ducing illumination have all the physical proper- ties of the rays of light, observe the same laws of reflection and refraction, and are only inferior to a certain extent in their power of penetrating transparent bodies ; hence the opinion may be advanced as not improbable, that they are of the same nature as light, only with less projectile force, or existing under some modification which renders them incapable of affecting the organ of vision. From these solar calorific rays, there is a kind of transition to the rays projected from heated bodies, displayed in the fact that the lat- ter differ in their projectile power according to the temperature at which they are thrown off, those discharged atahigh heat penetrating trans- parent media with more facility than those which emanate at a lower temperature. We thus in some measure trace the gradation .into quiescent caloric ; while the facts, on the one hand, that the discharge by radiation from bodies reduces their temperature ; and on the other, that the whole excess of heat in a body may be extracted from it without any radiation, by direct communication to another ; equally prove, that the principle dis- charged by radiation and by slow communication is precisely the same : yet caloric in the state in which it remains in bodies producing temper- ature, and its effects, expansion, fluidity, &c. is ,so different in all its laws from light, and there is so much obscurity with regard to any con- ceivable operation by which it should assume these different modifications, that the whole subject must be regarded as very imperfectly understood. Dr. Hutton advanced an hypothesis, that radiant heat is light in a state incapable of exciting illumination, founded on the inference that as the heating power of the different species of visible light is not proportional to their power of exciting vision, there may be a species of light capable of exciting temperature without being luminous ; see LIGHT. This, however, is vague ; it does not account for the relation of radiant caloric to quiescent caloric ; nor for the fact that ra- diant caloric has none of the chemical properties of light, and it is even doubtful if light apart from caloric has any heating power. Were the materi- ality of caloric established, the hypothesis might not be an improbable one, that the calorific rays are composed of light and caloric ; that this combination may take place in different propor- tions,so as to give rise to different degrees ofenergy predominant in the one or the other, and may extend even to the different rays of visible light, which differ in the degree in which they excite heat. But all such speculations it must, be ac- knowledged, are deficient in precision and rest on no satisfactory evidence.

240. We are now to return to the consideration of caloric as a

communicating and diffusive power. All bodies in nature are regarded as subject to two opposing forces, viz. the attraction of their own particles, and the repulsive influence of heat (see 221), and the degree of expan- sion in bodies, in the genera way, bears a propor- tion to their temperature. It is upon this princi- ple of the expansibility of matter by heat, that the thermometer has been constructed ××× an instru-

ment of large utility both to enable us to acquire and to state the laws and properties of heat From what has been observed however (220) it will follow that it is not the absolute quantity of heat that the thermometer indicates, but that it merely ascertains the quantum of one of the principal effects of heat. Some one body is taken and the degree of expansion produced by heat in that body observed, and it is then made the standard measure to which every thing is referred. The standard, as is generally known, is most commonly quicksilver, a quantity of which is contained in a small globe of glass, from which descends along narrowtube (see THERMOMETER), and the quicksilver rises or falls according to the increment of temperature.

241. Expansion then or the dilatation of bodies may be considered as an almost universal consequence of an increase of temperature. But expansion and temperature are not in all bodies proportionate. Liquids expand more than solids, aeriform bodies more than liquids.

242. Nor is the same degree of expansion produced even in the same solid or fluid body, at all temperatures, by the same increment of heat, in the general way the expansion is greater when the temperature is high than when it is low. The explanation of this fact is that the force opposing expansion, viz. cohesion, is dimi- nished by the interposition of caloric between the particles of bodies, and therefore, when equal quantities of caloric are added in succession, the last portions meet with less resistance to their expansive force than the first. In gases which are destitute of cohesion, equal increments of heat appear on the contrary to be attended with precisely equal augmentations of bulk.

243. The tendency of heat to produce an equili- brium has already been intimated. All bodies in a given space soon arrive at an equality of temperature. This is effected through the medi- um of the air. ‘ When a heated ball or iron is exposed to the open air, the caloric which is accumulated in it flows out, and its temperature is gradually reduced to that of the surrounding medium. This is owing to two distinct causes ; the

air, immediately surrounding the ball, ac- quires part of the caloric which escapes, and having its bulk increased, is rendered specifically lighter and ascends. This is succeeded by a cooler and heavier portion of air from above, which in its turn is expanded and carries off a second quantity of caloric. Hence a considerable part of the caloric which is lost by a heated body is conveyed away by the ambient air ; a property of which advantage is taken in the warming and ventilating of apartments. But the refrigeration cannot be wholly explained on this principle; for it has long been known that heated bodies cool, though with less celerity, under the exhausted receiver of an air pump, and even in a Torricel- lian vacuum.'

244. We have hitherto considered the proper- ties of caloric as the power itself is free or not permanently combined ; it will be recollected however that we intimated' its susceptibility of combination with other bodies, in such sort as to lose its general characteristics of a free power (see 222), and we now have to notice the very

important doctrine of latent, or combined, or specific heat to which the reader will find specif reference made in the article AIR.

245. Bodies in passing to a rarer from a den- ser state, not only receive large increments of caloric, but they generally absorb heat ; that is they are made to receive and contain more heat, than is evident to the senses, or even to the ther- mometer. And on the other hand an increase in the density of a body, is for the most part at- tended by the circumstance of setting free a part of the caloric of such body, which was be- fore in a manner locked up in it, or not being evidenced by temperature, is called latent heat. If you hammer a piece of metal, you make it hotter, that is, you increase its density and by so doing, let out some of its latent heat. In the same manner, you let out heat from a liquid by converting it into a solid, and from a gas by bringing it down into the liquid form. Steam and boiling water, may be at precisely the same temperature, though in a pound of the latter, a much smaller quantity of caloric is contained, than in a pound of the former ; therefore in redu- cing steam to the state of water, at a given tem- perature, you of course set free a much great- er quantity of caloric, than by cooling down the same weight of water to the same measure of temperature.

246. Does this latent heat of bodies, or that part of their caloric, that is not evidenced by temperature, combine chemically with the mass ? ' Does ice, for example, when changed into water, form a chemical union with caloric, similar to that which exists between potassa and sulphuric acid ? ' Modern chemistry inclines to the negative of this view, since it is not necessary for the ex- trication of caloric from a body, that more energetic affinities be brought into play, as in the case of dislodgment of substances, or principles

from compounds ; it may be urged moreover, that it is not very easy to conceive that sort of union, which implies tangible and demonstrable matter, in a principle the materiality of which, -as before stated, has not yet been brought to absolute proof.

247. In further considering caloric as the cause of liquidity and vapor, it will be seen how influential the fact of latent, or specific, or com- bined heat proves, over several of the most im- portant processes, which are incessantly going on in the vast laboratory of nature.

248. We shall take occasion to extract a few of the propositions, which we meet with in Dr. Henry's volumes on the subject of temperature, and heat connected with liquefaction. '1. The temperature of melting snow, or thawing ice, is uniformly the same at all times and in all places. 2. The sensible heat, or temperature of ice, o{ 32►► Fahrenheit is not changed by liquefaction.' A thermometer in pounded ice stands at 32►►, and at the very same point in the water, which results from the liquefaction of ice. '3. Yet ice, during liquefaction must absorb much caloric. Let it be recollected further, that 'the heat which is thus rendered latent, by the fusion, or liquefaction of various bodies, is not a constant quantity, but varies for each individual body,' and that the absorption cf caloric is often exten-

eively effected b) admixture of another body with snow, while the snow is in the process of liquefac- tion. These effects of cold, producing mixtures are so interesting and important, that we shall ex- tract the examples given of them, in the work to which allusion has just been made; adding some to them, from the same work, illustrative of the evolution or production of heat.

249. i. Dilute a portion of nitric acid with an equal weight of water ; and when the mixture has cooled, add to it a quantity of light fresh fallen snow. On immersing the thermometer in the mixture, a very considerable reduction of temperature will be observed. This is owing to the absorption and intimate fixation, of the free caloric of the mixture, by the liquefying snow.

250. ii. Mix quickly together equal weights of fresh fallen snow, at 32►► and of common salt cooled by exposure to a freezing atmosphere down to 32►►. The two solid bodies on admix- ture, will rapidly liquefy ; and the thermometer will sink 32 , or to 0 ; or according to Sir C. Blagden,

(Philosophical Transactions Ixxviii. 281) to 4►► lower. To understand this experiment, it must be recollected that the snow and salt, though at the freezing temperature of water, have each a considerable portion of uncombined caloric. Now salt has a strong affinity for water, but the union cannot take place while the water conti- nues solid. In order therefore, to act on the salt, the snow absorbs all the free caloric required for its liquefaction ; and during this change the free caloric both of the snow and of the salt, amounting to 32►► becomes latent, and is conceal- ed in the solution. This solution remains in a liquid state at 0, or 4►► below 0 of Fahrenheit ; but if a greater degree of cold be applied to it, the salt separates in a concrete form.

251. iii. Most neutral salts also during solu- tion in water, absorb much caloric, and the cold thus generated is so intense as to freeze water, and, even to congeal mercury. The former ex- periment, however, viz. the congelation of water may easily be repeated on a summer's day. Add to thirty-two drachms of water, eleven drachms of muriate of ammonia, ten of nitrate of potassa, and sixteen of sulphate of soda, all finely powˆ dered. The salts may be dissolved separately in the order sec down. A thermometer put into the solution, will show that the cold produced is at or below freezing ; and a little water in a thin glass tube, being immersed in the solution will be frozen in a few minutes. Various other freezing mixtures are described in Mr. Walker's papers in the Philosophical Transactions, fcr 1787, 88, 89, 95, and 1801.

252. iv. Crystallized muriate of lime when mixed with snow, produces a most intense degree of cold. This property was discovered some years ago, by Mr. Lovitz, of St. Petersburgh, and has since been applied, in this country, to the congelation of mercury on a very extensive scale. The proportions which answer best are about equal weights of the salt finely powdered, and of fresh fallen and light snow. On mixing these together, and immersing a thermometer in the mixture, the mercury sinks with great rapi- dity . For measuring exactly the cold produced, a spirit thermometer, graduated to 50►► below 0 of

Fahrenheit or still lower should be employed. A few pounds are sufficient 1o congeal a large mass of mercury. By means of thirteen pounds of the muriate and an equal weight of snow. Messrs. Pepys and Allen, froze fifty-six pounds of quicksilver into a solid mass. The mixture of the whole quantity of salt and snow, however, was not made at once, but part was expended in cooling the materials themselves.

253. On a small scale it may be sufficient to employ two or three pounds of the salt. Let a few ounces of murcury in a very thin glass retort be immersed, first in a mixture of one pound of each and when this has

ceased to act, let another similar mixture be prepared. The second will never fail to congeal the quicksilver. The salt thus expended may be again evaporated and crystallised for future experiments.

We now proceed to the illustration of the contrary principle, viz. that of evolving heat, and we shall continue as above proposed, to extract from the same author.

254. i. Water, if covered with a thin stratum of oil, and kept perfectly free from agitation, may be cooled down more than 20►► below 32►►; but in shaking it, or dropping into it a small frag- ment of ice, it immediately congeals, and the temperature rises to 32►►.

255. ii. Expose to the atmosphere when at a temperature below freezing, (for example, at 25►► Fahrenheit,) two equal quantities of water, in one only of which about a fourth of its weight of common salt has been dissolved. The saline solution will be gradually cooled without freez- ing to 4►►. The pure water will then pro- gressively descend to 32►►, and will there remain stationary a considerable time before it congeals ; yet while thus stationary, it cannot be doubted that the pure water is yielding caloric to the atmosphere, equally with the saline solution, for it is impossible that a warmer body can be sur- rounded by a cooler one without imparting caloric to the latter. The reason of this equable temperature is well explained by Dr. Crawford, on Heat, p. 80. Water, he observes, during freezing, is acted upon by two different powers ; it is deprived of caloric by exposure to a medium whose temperature is below 32►►, and it is sup- plied with caloric by the evolution of that prin- ciple from itself, viz. of that portion which constituted its fluidity. As these powers are exactly equal, the temperature of the water must remain unchanged till the caloric of fluidity is all evolved.

256. iii. The evolution of caloric during the congelation of water, is well illustrated by the following experiment of Dr. Crawford : ►►► Into a round tin vessel put a pound of powdered ice, surround this by a mixture of snow and salt in a larger vessel, and stir the ice in the inner one till its temperature is reduced to + 4►► of Fahrenheit. To the ice thus cooled, add a pound of water at 32►►. One-fifth of this will be frozen ; and the temperature of the ice will rise from 4 to 32C. In this instance the caloric evolved by the congelation of one-fifth of a pound of water, raises the temperature of a pound of ice 28►►.

257. iv. If we dissolve sulphate of soda in

water, in the proportion of one part to five, and surround tht solution by a freezing mixtu ††, it cools gradually down to 31††. The salt at this point begins to be deposited, and stops the cooling entirely. This evolution of caloric during the separation of a salt, is exactly the re- verse of what happens during its solution. Blagden, Philosophical Transactions, Ixxviii. 290.

258. v. To a saturated solution of sulphate of potassa in water, or of any salt that is insoluble in alcohol, add an equal measure of alcohol. The alcohol attracting the water more strongly than the salt, retains it, precipitates the salt, and considerable heat is produced. Henry.

259. It can also be understood how import- ant these laws and circumstances, with respect to the latency and evolution of heat, according as bodies pass from one form to another, are in the operations of nature. All persons are aware that a fall of snow after a continuance of cold, pro- duces an atmospheric warmth, a fact which is occasioned by the evolution of heat consequent upon the formation of the snow ; and the same principle of change and interchange of the evo- lution and absorption of heat will be found upon investigation to regulate or accompany the mu- tations that are incessantly going on both around and upon, and even within the earth. See ME- TEOROLOGY.

260. It will easily be understood, from what has been advanced above, that caloric, whatever may be its nature, is a power diffused through every modification of matter ††† in fact through the whole material universe ; that it is the cause of that condition of bodies called temperature ; that it has a tendency to diffuse itself freely so as to produce a common temperature ; but that dif- ferent bodies, and even different forms of the same bodies, require very different quanti- ties of heat in order to manifest the same tempe- rature.

We now proceed to a further illustration of these principles by considering caloric as the cause of vaporization.

261. Throw as much heat as you please into water after it has once boiled, but you will not thereby make it one degree hotter, provided the experiment be made under the common pressure of the atmosphere; but if you subject the water to a pressure more powerful than that under which it naturally exists, you may then raise the temperature of the fluid above the boiling point, and the heating of it may indeed be carried to an almost unlimited extent, provided as the tempe- perature becomes augmented you contrive an equivalent pressure. Now what is the cause of these effects ? Why is it

that we are not able to raise water, under ordinary circumstances, beyond 212►► by any increment of heat ? Because at this point of temperature the fluid in question assumes a new form : it becomes steam ; this steam being at the same temperature with the water, but having a much larger capacity of heat than was possessed by the water, it becomes latent in it, or it becomes the heat of combination instead of the heat of temperature. '

262. Now different fluids, change into the va- porous or gaseous state at very different degrees of temperature, some indeed only requiring the

common atmospheric heat to cause their vapor- ous existence, and these bodies therefore natu- rally exist in the aeriform state. But in all cases if we diminish atmospheric pressure we add to the facility of assuming this condition. Even water itself will boil, or in other words become steam, at a lower temperature when the barom- eter is at 28 inches, than when it is at 31. At the top of Mont Blanc, where the atmospheric pressure is comparatively small, Saussure found that it boiled at 187►►, so that the heights of mountains, and even of buildings may be cal- culated by reference to the temperature at which water boils upon their summits. The following pleasing and simple experiment is given by che- mists.

263. Insert a stopcock securely into the neck of a Florence flask, containing a little water ; and heat it over a lamp till the water boils, and the steam freely escapes by the open stopcock ; then suddenly remove the lamp and close the cock. The water will soon cease to boil ; but if plunged into a vessel of cold water, the boiling imme- diately recommences, ceasing again if the flask be held near the fire.

264. The explanation of this phenomenon will immediately suggest itself to the reader. The confined steam over the surface of the water presses upon it and prevents ebullition; by cooling this steam it is reduced to water, the pressure is thus taken off and boiling recommen- ces, from the heat being in sufficient quantity to cause ebullition without pressure.

265. We have spoken of steam and vapor as identical existences; but it may be said the former is visible, while the latter is not ; it is only, however, when there is a degree of con- densation in steam that it becomes at all visible ; and this condensation is a reapproach to the fluid state. In like manner, we find dense fogs often produced when the weather becomes suddenly cold after having been very warm ; the matter which is now fog, and therefore visible, having been vapor and invisible at the former high temperature of the atmosphere.

266. From what has been advanced, the infe- rence will readily be made, that caloric commu- nicates its repulsive power, as it is expressed, to matter

; and that while this repulsive power tends to change the constitution of matter, it is chiefly counteracted by the pressure of the atmosphere ; for were this removed many bodies which at pre- sent exist as liquids, would become gaseous; so that a similar effect will be produced in relation to the formative condition of matter by two causes, either by diminishing atmospherical pres- sure, or adding caloric. It has even been proved that water, by great pressure, may be heated to above 400►► of Fahrenheit without boiling, while in vacuo it will assume the form of steam at a very low temperature. Then again under the common pressure of the atmosphere, pure zether will boil or become gaseous at 96►►, while water re- quires 212►►. So that as heat is the occasion of the resistance given to external pressure, so is the variety of existence, in matter dependent upon the susceptibility of its being thus influen- ced by heat. Those bodies that are named per- manently elastic fluids or gases, are parts of the

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constitution of the material universe, which, re- quire more than natural pressure on the one hand, or more than natural attraction of heat on the other, to convert them even into a fluid state.

267. It must be recollected, however, that both liquid bodies, and even solid ones that are in a certain degree porous, are capable of absorb- ing gases, but even during this absorption the temperature of the absorbing substance is raised in proportion to the amount and rapidity with ►►►which the gas becomes condensed or absorbed : the great law always obtaining, that sensible heat is increased in proportion as latent heat is diminished, and that latent heat is increased as sensible heat is lessened.

LIGHT.

268. When treating of the radiation of heat, we observed that several laws regulating it seem to be similar to those by which light is propa- gated ; light and caloric have indeed been con- sidered as modifications of the same radiant matter, one at any rate being a common source or accompaniment of the other, for bodies that are highlv heated become at the same time luminous.

269. The chemist, however, finds reason to regard light and heat as possessed of different properties ; caloric, as we have seen, pervades matter, and penetrates it, producing expansion, fluidity, and gaseous condition, and giving rise to the sensation of heat even when no illumina- tion is excited. Light produces chemical changes in bodies which are by no

means, to say the least, in the ratio of the degree of heat pro- duced. Indeed, opposite effects of a chemical nature are in some cases produced by light and heat ; as in the instance of nitric acid, which is changed into nitrous acid by exposure to light, while this last nitrous acid is converted into nitric by a proper application and due measure of heat.

270. It would be out of place here to treat of light in any other way than as a chemical agent, but it is necessary to state, that its in- fluence as a chemical power is most important and extensive. As, however, its action is for the most part displayed in detaching oxygen from its combinations, it will be necessary to treat of this last principle before any discussion of the qualities of the agent now under notice, in reference to this particular, can be intelligible. We have already remarked, that light proves in- fluential often in promoting crystallisation.

271. Light, in the state in which it reaches the eye, is not a simple body, but is divisible mto seven primary rays, red, orange, yellow, green, blue, indigo, and violet ; this division is effected by the prism upon a ray of white light, and, when they are collected by a lens into a focus, the ray of white or uncolored light is again produced. Now these rays, as separated by the prism, possess chemical properties of various powers, or rather of different degrees of power ; and it has therefore been thought, that the solar beams consist of three distinct kinds of rays, viz. rays of illumination, calorific, and oxidising rays, and rays that are dis-oxidising or hydrogenating.

272. Light, though not penetrating and dif-

fusive among the particles of matter in the same manner with heat, is yet capable in some instances of entering into a sort of combination with bodies, and in different degrees. In some cases it is absorbed by the body, and again evolved, unchanged, and without exciting any alteration of temperature, and without being attended by any circumstances analagous to combustion. Phosphorence, as it is termed, is an instance of this kind of absorption and evo- lution. The sea, when agitated in a dark night, often shows this phosphorence in a beautiful manner; the light from the glow-worm seems to have been received and to be emitted upon a similar principle. The extrication of light, however, from what are termed solar phosphori is materially influenced by temperature. Attri- tion also evolves light from phosphorescent bodies. Light too, as we have intimated, is disengaged in various chemical circumstances, where nothing like combustion obtains. ‘ Thus fresh prepared pure magnesia added suddenly to highly concentrated sulphuric acid, exhibits a red heat.’

273. For measuring the relative intensities of light from various sources, an instrument has been contrived called the photometer. It is construc- ted on

the principle that the power of a burning body to illuminate any defined space is directly as the intensity of the light, and inversely as the square of the distance. If two unequal lights shine on the same surface at equal obliquities, and an opaque body be interposed between each of them and the illuminated surface, the two shadows must differ in intensity or blackness ; for the shadow formed by intercepting the greater light will be illuminated by the lesser light only ; and reversely, the other shadow will be illumi- nated by the greater light ; that is, the stronger light will be attended by the deeper shadow. But it is easy, by removing the stronger light to a greater distance, to render the shadow which it produces not deeper than that of the smaller, or of precisely the same intensity. Tin's equali- sation being effected, the quantity of light emitted by each lamp or candle, will be as the square of the distance of the burning body from the white surface.

274. The photometer of Mr. Leslie is founded on a different principle, viz. that light, in pro- portion to its absorption, produces heat. The degree of heat produced, and consequently of light absorbed, is measured by the expansion of a confined portion of air. A minute description of the ingenious instrument contrived by Mr. Leslie with this view, may be seen in his work on Heat, or in the third volume of Nicholson's 4to. Journal.

275. In its construction it bears a considerable resemblance to the differential thermometer (see THERMOMETER) ; and Mr. Brande has ascertained that by substituting sether, as in Dr. Howard's modification of the differential thermometer, the sensibility of the photometer is gieatly increased, and that it becomes most delicately susceptible of the impression of light. An instrument of this sort he found fully adequate to determine the comparative illuminating powers of different gases which cannot be done when the photometer is filled with air Henry. See also OPTICS.

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ELECTRICITY AS A CHEMICAL AGENT.

276. As a chemical agent we say, for it is only in this point of view that the power demands consideration in the present treatise ; it is however necessary to describe generally the mode in which electricity is manifested or elicited, first in respect to those circumstances to which the adjective electrical would more strictly apply ; and secondly to what is called galvanic or voltaic electricity.

277. If a glass rod be rubbed with a piece of dry silk, light will soon start out from its surface ; and if we then present to it some light bodies, as

pieces of straw, these will be first attracted and then repelled. The same condition of surface will be produced by rubbing a piece of sealing- wax with dry and warm flannel. In these cases the glass rod or the stick of sealing-wax are said to be electrically excited, and, when in a dark room, a luminous appearance always manifests itself in the bodies thus heated. All bodies, however, are not susceptible of being brought into this condition. Hence the distinction, in relation to electricity, of bodies into two classes, namely, electrics, and non-electrics ; the first affording electricity from friction, the non-elec- trics being unsusceptible of this excitation.

278. Bodies too, in relation to electricity, are divided into conductors and non-conductors, the latter being in fact electrics, and therefore inca- pable of conducting or carrying off the excited power, while a body which has the power of thus conducting electricity, is necessarily not in an electric state, and therefore is a non-electric or conductor. Glass, resinous substances, sul- phur, oils, and aeriform fluids are the principal non-conductors of electrics, while the non-elec- trics or conductors are metals, earthy and saline substances, and water.

279. Bodies are considered further in their electrical states as positive or negative. When for example glass is rubbed with silk, a portion of electricity parts from the silk and enters the glass ; the glass in this way becomes positive, and the silk negative. Now it is conceived, that as in the instance of heat so with regard to elec- tricity, all bodies contain it, but that the pheno- menon of its excitation or manifestation depends upon its equilibrium being disturbed ; the bodies either acquiring more or less than their natural or orderly proportion.

280. Electricity is intimately connected both with heat and light ; its production of heat seems dependent greatly on the resistance which a body may oppose to its transmission; yet the heat which it excites may be considered as in some sort peculiar, since the fusibility of metals from the electric action is not in a degree proportionate to the heat applied.

281. That light is connected with electric exci- tation is shown by the luminous spark which attends the transmission of the power from one conductor to another, and it has already been stated, and we shall immediately more particu- larly show, how influential it proves over chemical combination, and chemical surface altogether; indeed, as stated in the first part of the piesent_ treatise (see 169), the agent in ques- tion, especially as excited into operation by the

means immediately to be mentioned, has been brought into most comprehensive and successful requisition, for the purpose of unfolding some of the leading facts, the development of which has proved of most

momentous bearing upon chemical science and art generally.

VOLTAIC, OR GALVANIC ELECTRICITY.

282. Galvani was the first who accidentally observed, that contractions were excited in the limbs of frogs, by applying a conductor of elec- tricity to the nerves and muscles of the animal. He inferred from this observation, that the two parts are in different states, of electricity; the one positive and the other negative, and that the application of the conductor occasions the dis- charge producing the muscular contraction. But Volta took a different view of the subject, he proved indeed that Galvani's hypothesis was unstable, by exciting contractions in conse- quence of establishing a connexion between different parts of a muscle or of a nerve ; and that to produce the effect, two different metals are necessary ; he showed also that in a similar way sensations can be excited ; that when one metal, for example, is applied to the under sur- face of the tongue, and another to the upper surface, on bringing thair edges into contact, or connecting them by a conductor, a peculiar taste is felt.

283. For some time, says Dr. Murray, the prosecution of these experiments, and the discus- sion of the questions they involved, engaged the attention of philosophers ; at length the ca pital discovery, by Volta, of a mode of augmenting greatly the Galvanic energy, de- monstrated the falsity of the hypothesis, that its production is a process of vitality, introduced into science a new principle, and conferred on chemistry an instrument of nearly unlimited power. And this discovery, it deserves to be remarked, was not the result of accident, and scarcely in any degree of the progress of the department of knowledge with which it was connected ; it was the fruit of preconceived theory, or rather hypothesis, and, but for the ap- plication of that theory, might for ever have remained unknown. In this respect the pile of Volta stands unrivalled in the history of phi- losophy.

284. Under the word ELECTRICITY, in this Encyclopaedia, will be found a more particular history and account of Galvanism, as it is most commonly termed ; but the importance of the subject, in its bearing upon chemical science, makes it expedient that even in this place we give a succinct statement of its leading prin- ciples.

285. Dr. Henry, in his Elements of Experi- mental Chemistry, treats of Galvanism under the following several items : ⁂

i. The construction of Galvanic apparatus, and the circumstances essential to the excitement of this modification of electricity.

ii. The facts which establish its identity with the electricity excited by

ordinary processes.

iii. The agency of the electric or Galvanic fluid (power ?), in producing chemical changes.

iv, The theory by which these changes in the

present state of our knowledge are best ex- plained.

v. The hypotheses, which have been framed to account for the origin of the electricity, excited by galvanic arrangements. And,

vi. A general view of the phenomena of electrico-magnetic motion, which, with the prin- ciples deducible from them, promise to throw light on some of the most interesting, but ob- scure operations of nature.

It will be for us to abridge the account of Dr. Henry.

286. It has been stated above, that electricity is excited by friction ; but in Voltaic electricity friction is not necessary. All that is required is the simple contact of different conducting bodies with each other ; and it has even been found by Dessaignes that two discs of the same metal, heated to different temperatures, give sufficient electricity to excite contractions in the legs of a frog prepared for the purpose. Con- ductors of electricity have been divided into perfect and imperfect, the former comprehending the metals plumbago and charcoal, the mineral acids, and saline solutions ; the latter, or imper- fect, including water, alcohol and ether, sul- phur, oils, resins, metallic oxides and compounds of chlorine.

287. The least complicated galvanic arrange- ment, is termed a simple galvanic circle. It consists of three conductors, two of which must be of the one class, and one of the other class. In the following tables, constructed by Sir II. Davy, some different simple circles are arranged in the order of their powers, the most energetic occupying the highest place ; or, what is of more importance, being most readily oxydated.

288. Table of some electrical arrangements which by combination form Voltaic batteries, composed of two conductors, and one imperfect conductor.

Zinc,

Each of these

SOLUTIONS OF

Iron, Tin, Lead, Copper, Silver,

is the positive pole to all the metals below it, and negative with respect to

Nitric acid, Muriatic acid, Sulphuric acid, Sal-ammoniac,

Gold, Platinum,

the metals a- bove it in the

Other neutral salts.

Charcoal.

column.

289. Table of some electrical arrangements, consisting of one perfect conductor, and two imperfect conductors.

SOLUTION OF

Copper,

Nitric acid,

Sulphuret of potassa, Potassa, Soda.

Silver, Lead, Tin, Zinc, Other metals,

Sulphuric acid, Muriatic acid, Any solutions containing acid.

Charcoal.

290. In explanation of these tables, Sir H. Davy, observes, that in all cases, when the fluid menstrua afford oxygen, those metals which VOL. VT

have the strongest attraction for oxygen, are those which form the positive pole. But when the fluid menstrua afford sulphur to the metals, the metal, which under the existing circum- stances has the strongest attraction for sulphur, determines the positive pole. Thus in a series of copper and iron plates, introduced into a por- celain trough, the cells of which are filled with water, or acid solutions, the iron is positive and the copper negative; but when the > cells are filled with solutions of sulphuret of potassa, the

copper is positive and the iron negative. When one rnetal only is concerned, the surface opposite the acid is negative, and that in contact with solution of alkali and sulphur, or of alkali is positive. Elements of Chem. Phil. p. 148.

291. Of Simple Galvanic Circles. ❖❖❖ When a piece of zinc is laid upon the tongue, and a piece of silver under it, no sensation is excited while the metals are kept apart ; but immediately that you bring them into contact a metallic taste is perceived. This instance affords an example of the arrangement of two perfect conductors, which are the metals, with one imperfect one, the tongue, or rather the fluids which the tongue contains. The metallic taste would seem to be occasioned by the excitement of a small quan- tity of electricity, from the contact of the metals, and its action on the nerves of the tongue.

292. Compound Galvanic Circles, or Galvanic Batteries. ❖❖❖ The principle of these is the multi- plication of simple ones. Thus if, between a plate of zinc and of silver, a piece of moistened cloth, of the same sizp with these plates, be in- terposed, and brought into contact, a simple galvanic circle is formed, as in the instance above adduced ; but if these be piled on each other, in the order of zinc, silver, cloth, for several repetitions, we obtain a galvanic battery, termed from its discoverer the pile of Volta. The power of such a combination is sufficient to give a smart shock, as may be felt by grasping in the hands, which should be previously moistened, two metallic rods, and touching with these the upper and lower extremity of the pile. The shock may be renewed at pleasure, until after a few hours the activity of the pile begins to abate, and finally ceases altogether.

293. The metals composing a galvanic battery may be more conveniently arranged in the form of a trough ; a happy invention of Mr. Cruik- shank : in a long and narrow wooden trough, made of baked wood, grooves are cut opposite to, and at the distance of between one-third and three-quarters of an inch from, each other ; and into these are let down, and secured by cement, square plates of zinc and copper, previously united together by soldering. The space, there- fore, between each pair of plates forms a cell for the purpose of containing the liquid, by which the combination is to be made active. When constructed in this way the trough affords an example of a galvanic combination of the first kind (see the first table above), formed by two perfect, and one imperfect conductor. But it admits of being modified, by cementing into the grooves plates of one metal only, and filling the cells alternately with two different liquids, as diluted nitric acid, and solution of sulphuret of

potassa. : In this case we have a battery of the second order, formed by the repetition of one perfect and two imperfect conductors. See the second table above.

294. Other modifications of these galvanic apparatuses will, as above intimated, be described in the article ELECTRO-GALVANISM.

Here it may be sufficient to add, using the words still of the author whom we are following, that every combination which is capable of forming a simple galvanic circle, may, by sufficient repe- tition, be made to compose a battery. The combinations also which are most active in simple circles are observed to be more efficient in com- pound ones.

295. To construct a battery of the first order, it is essential that a fluid be employed which exerts a chemical action upon one of the metals. Pure water, entirely deprived of air, appears to be inefficient. In general, indeed, the galvanic effect is within certain limits proportioned to the rapidity with which the more oxidable metal is acted upon by the intervening fluid. The fluid generally used is nitric acid, with twenty or thirty times its weight of water. A battery which has ceased to be efficient has its activity renewed by emptying the cells of their liquor, and uncovering the plates : when the cells are filled with diluted nitric acid, the apparatus con- tinues active, even under the exhausted receiver of an air-pump, or in an atmosphere of car- bonic acid or nitrogen gases. But if the cells be filled with water only, all action is suspended by placing it under any of these circumstances. Hence it appears that the oxidation of one or both of the metals composing the trough is essential to the excitement of galvanic elec- tricity.

296. Are Galvanism and Electricity identical powers? ??? In adverting to, and discussing this question, Dr. Henry points out the following striking resemblances :

i. The sensation produced by the galvanic shock is extremely similar to that which is excited by the discharge of a Leyden jar. Both in-i fluences also are propagated through a number of persons without any perceptible interval of time.

ii. Those bodies which are conductors of elec- tricity are also conductors of the galvanic fluid (galvanism ?) as the metals, charcoal, and a variety of liquids. Again, it is not transmitted by glass, sulphur, and the whole class of electrics, which do not convey ordinary electricity. Among liquids, those only are conductors of electricity and galvanism which contain oxygen as

one of their elements.

. iii. The galvanic fluid passes through air, and certait other non-conductors, in the form of sparks, accompanied with a snap or report ; and, like the electric fluid, it may be made to inflame gunpowder, phosphorus, and mixtures of oxygen and hydrogen gases.

iv. The Voltaic apparatus is capable of com- municating a charge to a Leyden jar, or even to a battery. If the zinc end of a pile, whether it be uppermost or the contrary, be made to com- municate with the inside of a jar, it is charged positively. If circumstances be reversed, and

the copper end be similarly connected, the jar is charged negatively. The shocks do not differ from those of a jar or battery, charged to the same intensity by a common electrical ma- chine.

v. Galvanism, even when excited by a single galvanic cirde only, such as a piece of zinc, a similar one of copper, and a piece of cloth, moistened with a solution of muriate of ammo- nia, distinctly affects the gold leaf of the con- densing electrometer. If the zinc end be uppermost, and be connected directly with the instrument, the electricity indicated is positive ; if the pin of the electrometer touch the copper, the electricity is negative; A pile, consisting of sixty combinations, produces the effect still more remarkably.*

vi. The chemical changes produced by galvanic and common electricity, so far as they have hi- therto been examined, are precisely similar. On this last proposition it is necessary to dwell more particularly, and, in so doing, we shall still follow the author from whom, in the present section, we have already so largely ex- tracted.

297. The most simple chemical effects, pro- duced alike by the agency of electricity and galvanism, is the ignition and fusion of metals ; when, indeed, the galvanic power is excited to a considerable extent, metallic wires may be ig- nited and fused, as is the case with a strong electric battery ; but, in the former instance, the particles of the wire are not scattered to a distance, as they are in the latter, since electricity seems to act with greater violence than gal- vanism. Actual combustion, also, of metallic wires may be effected both by electricity and galvanism.

298. But a much more remarkable action is exerted by the elective and galvanic fluids in disuniting the elements of several combi- nations. One of the first discoveries of the chemical agency of the pile, was its power of de-composing water. Two piles of any metallic wire are thrust through separate corks, which are fitted into the open ends of a glass tube, in such a way that the extremities of the wires, when the corks are in their places,

may not be in contact, but may be at the distance from each other of about a quarter of an inch.

299. If the parts of the wire which project from without the tube, be made to communicate the one with the zinc or positive end, and the other with the copper, or negative end of a gal- vanic battery, a remarkable appearance takes place. The wire connected with the zinc, or positive end of the pile or trough, where it is in contact with the water, if an oxidable metal is rapidly oxidised, while from the negative wire a stream of small bubbles of gas arises. But if the wires employed be of a metal which is not susceptible of oxidation, such as gold or platina, gas is then extricated from both wires, and may be separately collected.

300. When a stream of galvanic electricity is made to act upon confined water, oxygen gas is given out at the positive end and hydrogen at the negative end, and in the proportions which by their union compose water. At an eaily

period of the enquiry it was found, however, by Mr. Cruikshank, that the water surrounding the positive wire became impregnated with a lit- tle acid, and that round the negative wire with a little alkali.

301. It was afterwards discovered, by Sir H. Davy, that the gases constituting water may be separately produced from two quantities of water not immediately in contact with each other ; this rery important discovery evinced the trans- ference of the elements of a combination to a considerable distance, through intervening sub- stances, and in a form that escapes the cognisance of our senses. But not only the elements of water but saline compositions and even metallic salts were decomposed in the same way by Sir H. Davy, the acid element of the salt being al- ways collected at the positive, and the earthy or alkaline one at the negative side of the ar- rangement. Sir H. Davy even found that acids by galvanic excitation may be made to traverse opposite principles without combination, or be transferred through solutions of alkali, from the negative to the positive side, while on the other hand alkalis and metallic oxides were found transmissable from the positive to the negative side, through intervening solutions of acids.

302. These very singular and very momentous discoveries rendered clear what before seemed difficult of explanation, viz. why, by the agency of galvanism on water, alkali appears at the negative and acid at the positive

wire. Sir H. Davy ascertained that all water, however carefully distilled, contains neutral salts in a state of solu- tion, i rom these impurities the alkaline and acid elements are separated, agreeably to a law which has already been explained. In the same way, also, the muriatic acid and alkali are accounted for, which some chemists have obtained by gal- vanising what was before considered as pure water ; a fact which has been urged in proof of the synthetic production of both these bodies. Absolutely pure water, it has been demonstrated by SirH. Davy, yields nothing but hydrogen and oxygen gases. See HYDROGEN in the present treatise.

303. Now it has been shown that ordinary electricity, properly managed, is equal to the production of these curious decompositions ; and it is fair to conclude, that galvanism and elec- tricity are modifications of the same power.

304. A most important -inference has been deduced from the discovery of these facts, viz. that hydrogen, alkalis, metals, and oxides, exist in a positively electrified state, and therefore will be repelled by surfaces which are in the same condition with themselves; that they will, on the contrary, be attracted by surfaces that are negatively electrified ; and oxygen, as also the acids, in consequence of the oxygen they contain, being in a negative state, will be attracted by positive surfaces, and repelled by negative ones.

305. To apply this theory to the simplest possible case, the decomposition of water, the hydrogen of this compound being itself positively electrified, is repelled by the positive wire, and attracted by the negative one, while, on the con- trary, oxygen being negative, is repelled by the

negative wire, and attracted by the positive one. The flame of a candle, which consists chiefly of ignited charcoal, when placed between a positive and negative surface, bends towards the latter, but the flame of phosphorus, consisting chiefly of acid matter, when similarly placed, takes a direction towards the positive surface. In the case of neutral salts, the negative acid is at- tracted by the positive wire, and the positively electrified alkali by the negative wire.

306. Thus then, continues our author, a power has been discovered, superior in its energy to chemical affinity, and capable either of coun- teracting it, or of modifying it according to cir- cumstances. The chemical attraction between two bodies may be destroyed by giving one of them an electric state, opposite to its natural one ; or the tendency to union may be increased by exalting the natural electrical energies.

Further remarks on the theory of the gal- vanic, arrangement, and on the points on which there is a seeming difference between Voltaic and common

electricity, will best be discussed under the articles ELECTRICITY and GALVANISM, to which we refer the reader.

PART III.

307. Having thus investigated, to the extent of our limits, the general laws and principles of chemical action, we are now to proceed in our enquiries respecting the individual substances, and their diversified compounds, the consideration of which comes under the cognisance of chemical philosophy ; indeed, the whole world of matter, as far as composition is concerned, lies before us ; there is nothing with which, in a certain way, the chemist has not to do; and, as far as arrangement is concerned, we should now, had we been writing but some few years since, have adopted an arrangement of this vast mass of ma- terials, something similar, if not quite the same, as that pursued by Dr. Murray, in his excellent work. We should have proceeded to treat of atmospheric air, or at least have here referred the reader to that portion of the work in which it is treated of; we should then have gone on to the consideration of water, and its base ; to acids, their bases and composition; to alkalis, with their bases; to earths, and their bases; metals, and their combinations ; and thence into the three great divisions of matter, mineral, ve- getable, and animal.

308. The very curious and extensively opera- ting circumstances to which we have just re- ferred at the end of the preceding section, have, however, given rise to a modification of these arrangements, founded on the principle that bodies are divisible into two great classes, viz. electro-negative, and electro-positive. Upon such assumption is founded the division and arrangement which Dr. Henry adopts ; and it appears, to say the least, to have this i

309. This arrangement, therefore, we shal",

likewise, to a certain extent, adopt, although it may be opecr, as what artificial classification is not ? to some objections ; it of course leaves untouched the animal and vegetable kingdoms, or the materials of organic existence, which therefore, as in other treatises, will fall to be considered separately, and after inorganic exis- tence shall have been disposed of. The objec- tions which apply to the subdivisions, till recently very generally observed, of combustible and non-combustible, will be best stated, because most easily understood, as we proceed in our investigations.

310. ELECTRO-NEGATIVE BODIES. ••• Oxygen. This is only known as a separate principle in a gaseous state of existence, and even in this state it is combined with caloric ; in the article AIR several substances are mentioned as those from which oxygen gas may be obtained, and it is there stated, that the chlorate of potass yields it in the greatest purity. We have likewise given in that paper the general character and habits of oxygen, which need not be here repeated.

311. Oxygen was long supposed to be the only supporter of combustion, and in the La- voisierian theory it was treated of as essential to that process. It is now found, however, that other bodies are equally entitled to rank as sup- porters of combustion, among which are chlorine and iodine. The hypothesis of combustion pro- posed by the French philosophers, has indeed been found altogether unstable, both as it respects \he supposed necessity of oxygen for the pro- cess, and its condensation, and as it endeavoured to explain the heat and light at times evolved. Numerous are the instances in which oxygen, in the process of combustion, instead of being so- lidified, actually becomes gaseous during the operation; the light, moreover, depends upon the combustible, and not upon the measure of oxygen consumed, and there are several cases of combustion, as just intimated, in which no oxygen is present. Combustion is much more probably dependent upon the electrical conditions of bodies, and ought at any rate to be considered rather as an intense chemical action generally, than dependent, as Lavoisier conceived, upon a particular principle or form of matter. It will be inferred from what has been advanced above, that all bodies acting powerfully upon each other are in the opposite electrical states, and heat and light may be evolved as a consequence of the annihilation of these opposite conditions, occasioned by their combination.

312. Substances capable of combining with oxygen, afford one or other of the following products: 1. An acid. 2. An alkali, or earth, or 3. An oxide.

313. We have already observed (see ACID) that the theory of Lavoisier, which regarded oxygen as the universal principle of acidity, is not consistent with more recent observations and discoveries ; but that acids are often the pro- duct of oxygenation will be seen as we proceed. It is not easy, as we have before remarked, to give very precise definitions of acids, since some bodies have all the other characteristics of acids at the same time that they do not impart sour- ness to the taste : of the alkalis and earths too

there is some want of precision in respect of their distinctive designations, but they are gene- rally known by their tendency to combine with the acids, and by this union losing their indivi- dual characters. See ALKALI and EARTH.

314. Oxide is a term applied to bodies tha have a less quantity of oxygen united to them than that which is sufficient to produce acidity ; these bodies may often be brought to the con- dition of positive acidity by causing them to combine with more oxygen, and the loss of the acidifying portion of oxygen may be again so managed, and effected only in such quantity, as that the acid shall be reduced to a state ►►f oxide.

315. Chlorine. This substance was discovered by Scheele in 1774. It was named by the dis- coverer dephlogisticated muriatic acid. In the French nomenclature it was denominated oxy- genated muriatic acid. It may be obtained in a gaseous form, by mixing black oxide of man- ganese with muriatic acid, and heating the mix- ture over a lamp in a glass retort. The gas is soon evolved, and may be collected over warm water very conveniently ; cold water soon ab- sorbs it.

316. A mixture of eight parts of muriate of soda, three of black oxide of manganese, four of sulphuric acid, and four of water will, if pro- perly heated, evolve chlorine.

317. This gas has a pungent and disagreeable smell of a suffocating kind, and it is of a yel- lowish green color, hence its name from ˆXwpoc, green.

318. It is heavier than common air; when dry it suffers no change by being subjected to the most intense cold; but in its common state it may be condensed into a liquid form, and, when exposed to a freezing temperature, the aqueous part of the gas is deposited in the form of crystals ; this, however, is again taken up by the gas upon the re-application of heat.

319. Chlorine is not altered by exposure to very high temperatures. When it is suddenly and greatly condensed, by mechanical pressure, heat and light are evolved. Electricity does not alter it. When a burning taper is introduced into a jar of chlorine, the flame becomes imme- diately red, a dense smoke is emitted from it, and it is soon extinguished. But many bodies, such as phosphorus, and even several of the metals, when finely powdered, are spontaneously ignited upon being immersed in chlorine, and burn in it very brilliantly. The combustion in- deed of phosphorus in this gas is vehement.

320. Chlorine is heavier than common air, 100 cubic inches weigh 75‘375 grains.

321. It was once imagined, as may be inferred from its former names, to be composed of oxygen and muriatic acid. It is now treated of as a simple body ; and the fact of its not being changed by electricity is in favor of this sup- position.

322. Chlorine and oxygen unite so as to form oxides and acids.

323. The euchlorine or protoxide of chlorine was discovered by Sir H. Davy ; it may bo ob- tained by mixing muriatic acid with chlorate of potass, and stirring the mixture with a platinum

knife ; a yellow powder will be the result, which :s to be put into a retort, and by means of a water bath, the temperature of 150►► applied; the oxide will pass on0, and it may be collected over quicksilver.

324. Euchlorine when gently heated explodes, expands, and becomes decomposed. Five parts in volume become six, consisting of a mixture of oxygen and chlorine gases, in such proportions that euchlorine must be composed of two in volume of chlorine, and one of oxygen, the latter being condensed into half its bulk, or by weight of

Chlorine Oxygen

100 22-79

100.

These proportions indicate that euchlorine is constituted of one atom of chlorine ►►► 36, + one atom of oxygen ►►► 8, and hence its atom must weigh 44. ►►► Henry.

325. Combustion was in the Lavoisierian school, supposed to be necessarily attended with a condensation of the bodies, which unke du- ring the process; but the circumstances attending the decomposition of euchlorine by heat, viz. an expansion of the elements, prove the hypothesis not to be well founded.

326. What has been called deutoxide, or tri- toxide, or with more propriety the Peroxide of Chlorine, is procured by triturating fifty or sixty grains of the powdered chlorate of potass with a little sulphuric acid, so as to form a thick paste, which is to be put irtto a retort and heated, but not to the boiling point. The gas may be received over mercury. It has a lively yellow color, more brilliant than the euchlorine, and it is more ab- sorbable by water. Its saturated solution in water is of a deep yellow color, imparts an astrin- gent taste, and it may be kept unchanged in the dark ; the rays of light, however, decompose it and form from it chlorine and chloric acid.

327. Chloric acid. ††† Gay-Lussac, was the dis- cover of tliis compound of chlorine and oxygen; it is obtained by adding dilute sulphuric acid to the chlorate of barytes ; but this is a compound that exists only in the liquid state; and Sir H. Davy has even disputed the simple combination of chlorine and oxygen ; he considers the liquid acid of Gay Lussac to be constituted of two proportions, in the atomic composition of hydro- gen, one of chlorine, and six of oxygen. Under the word ACID the reader will find it stated, that Dr. Murray has argued for the existence of hy- drogen as an acidifying principle generally, and not as a mere constituent of the water with which substances are combined; and this state- ment of Sir H. Davy, in reference to the compo- sition of the chloric acid, in some measure harmo- nises with that assumption.

328. Perchloric acid. ††† In the process of ob- taining peroxide of chlorine a peculiar salt is formed, which was first noticed by count Stadion ; its taste is somewhat like the common muriate of potass. At the heat of 412†† it is resolved into oxygen and muriate of potass, in the proportion of 46 of the former to 56 of the latter. From this salt sulphuric acid at 28†† disengages the

perchloric acid, which consists of chlorine and oxygen ; but it does not exist independent of water, or a base. See. CHLORINE, in the body of the work.

329. IODINE. ††† This newly discovered sub- stance may be obtained from a solution of kelp or barilla, or from the ley of ashes of marine plants, which furnish the mineral alkali. The following process is given. Lixiviate powdered kelp with cold water, evaporate the lixivium till a pellicle forms and set aside to crystallize- evaporate the mother liquor to dryness, and pour upon the mass half the weight of sulphuric acid. Apply a gentle heat to this mixture in the flask of an alembic, and fumes of a white color will arise and become condensed in the form of opaque ciystals. The iodine first passes into the receiver in the form of beautiful violet vapors. The crystals are to be quickly dried upon blot- ting paper.

330. Iodine was first discovered in 1812, by M. Courtois, a manufacturer of saltpetre at Pa- ris. Vauquelin, Gay Lussac, and Davy, have ably and fully investigated its properties. See Annales de Chemie, 90th, 91st, and 93rd vols. and the Philosophical Transactions for 1814.

331. Iodine, like chlorine, is electro-negative, and therefore introduced here. It is solid at the ordinary temperature of the atmosphere, but ex- tremely volatile, and at a temperature somewhat under 80†† emits a violet vapor. It produces a yellow stain upon the skin. It is sparingly so- luble in water, much more so in alcohol and asther. The color of the solution is yellow. The color of iodine is of a bluish black, its lustre is

metallic, and its taste acrid. Its name is from tuifojc, violaceous, on account of its vapor being of a beautiful violet color. Its specific gravity is =4-946.

332. Iodine combines with oxygen and with chlorine, and by this combination produces two acids which have been named lodic and Chlori-odic.

333. lodic or Oiiodic acid.❖❖❖ This compound of oxygen and iodine cannot be obtained imme- diately, for iodine does not undergo change by being merely heated with oxygen, or even with chlorate of potass. It is, therefore procured by the intervention of protoxide of chlorine. We may introduce iodine into a small flask, and disengage the chlorine oxide from it by a due ad- mixture of chlorate of potass ; ‘ or 100 grains of chlorate of potass may be introduced into a small retort with 400 grains of liquid muriatic acid of the specific gravity 1-105 ; annex to the retort a small globular receiver having a bent tube issuing from it, and passing to the bottom of a small flask containing about fifty grains of io- dine ; carefully apply the heat of a lamp to the retort, by which oxide of chlorine will be disen- gaged, and which will be decomposed and ab- sorbed by the iodine. A compound is then formed, which consists of chloriodic and oxiodic acids. The former is separable by a gentle heat, the lat- ter remains as a white, semitransparent, sour, and inodorous body, very soluble in water. It consists of 1 17‘7 iodine, 37‘5 oxygen. (Brande).

334. lodous acid. ❖❖❖ Sig. Sementini procured a yellow fluid by distilling iodine and chlorate of

potass together in equal parts, after trituration in a porcelain mortar. This fluid has an acid, astringent taste, and the name iodous acid has been given to it ; but the proportion of its ele- ments has not been ascertained. Quarterly Jour- nal of Science and Art, xvii. 381.

335. Chloriodic acid, or as it is called by Gay Lussac chlorure of iodine, is obtained by the di- rect action of chlorine upon iodine, iodine ab- sorbing less than one-third of its weight of chlo- rine; the union produces crystals of a deep orange color. Gay Lussac states indeed that two compounds are the result of this combination, the one, as noticed, of a deep orange color, the other an orange red, the largest portion of chlo- rine being contained in the first.

336. Chloriodic acid precipitates the salts of iron and other metals.

337. Nature of Iodine (From Dr. Henry's Elements). Iodine, from all that we yet know respecting it, is to be considered as a simple or elementary body, having a very striking analogy with chlorine, which it resembles, firstly, in form- ing one acid by uniting with hydrogen, and a different acid with oxygen ; secondly, in its effects on vegetable colors; thirdly, in its affording with the fixed alkalis, salts, which nearly ap- proach in character to chlorates ; and fourthly, in its electrical habits. Its discovery indeed lends strong support to that theory which considers chlorine as a simple body, and muriatic acid as a compound of chlorine and hydrogen. In the property of forming an acid, whether it be united with hydrogen or oxygen, iodine bears also an analogy to sulphur ; and it is remarked by Gay Lussac of the combinations of chlorine, iodine, and sulphur, with the elements of water, that while the acids which they respectively form with oxygen have their elements strongly con- densed, those formed with hydrogen have their elements very feebly united. Sulphur has the strongest affinity for oxygen, then iodine, and lastly chlorine. But for hydrogen, chlorine has a stronger attraction than iodine, and iodine than sulphur ; whence it appears that the affinity of each of those bodies for oxygen is inversely pro- portionate to its affinity for hydrogen.

338. The source of iodine in nature has been investigated by M. Gaultier de Claubry. His first experiments were directed to the several varieties of fucus, the combustion of which fur- nishes the soda of sea-weeds. Before these vege- tables are destroyed by combustion he ascertained that iodine exists in them, in the state of hydri- odate of potassa ; and that calcination only de- stroys the vegetable matter with which it is com- bined. As the hydriodate of potassa is a deli- quescent salt, it remains in the mother liquor after separating the carbonate of soda, and most of the other salts, by crystallisation. . In the course of these experiments M. De Claubry found that starch is one of the most delicate tests of the presence of iodine, and if added to any liquid containing it, with a few drops of sulphuric acid, iodine is indicated by a blue color of greater or less intensity. In this way he detected iodine in the decoction of several varieties of fucus ; but he was unable to discover the slightest trace of it in sea-water. The fucus saccharinus yielded

it most abundantly ; and, in order to obtain it by the cheapest and easiest process, he recommends that we should submit this fucus, dried and re duced to powder, to distillation with sulphuric acid.

339. In the Addenda to Dr. Henry's Elements, we meet with the following additional notification in reference to the source &c. of iodine : ' The only known sources of iodine were certain vege- tables and some marine molluscae, till Vauquelin discovered it a few months since in the specimen of a mineral, sent from Mexico, under the name of 'Virgin silver from

Serpentine.' The best method of separating the iodine from this sub- stance was found to be as follows : Five parts of the pulverised mineral were heated with two parts of caustic potassa, and a little water to facilitate the mixture; and kept some time in fusion. The mass was washed with water till the latter ceased to become alkaline ; a portion of the liquor saturated with nitric acid has the property of rendering starch blue, when a few drops of solution of chlorine had been previously added, Of the portion insoluble by water, dilu- ted nitric acid dissolved a part with effervescence ; but there remained a yellowish substance resem- blipg chloride of silver, which became orange colored by heat, and passed to a greenish yellow on cooling. This substance was iodine of silver.

340. The alkaline liquor afforded hydriodate of potassa, by saturating the alkali with sulphuric acid, evaporating to dryness, and adding alcohol, which took up the hydriodate only, leaving the sulphate of potassa. The whole iodine thus ex- tracted from 100 grains of the ore, Vauquelin calculates at 1 8 J grains ; and on reviewing the composition of the ore, the other ingredients of which were sulphur, lead and silver, he considers it as most probable that all the iodine contained in the native mineral was united with the latter metal. It is probable that with this clue to more perfect analysis, iodine will be found in othe- minerals, and especially in ores of silver, foi which metal it has like chlorine a strong attrac- tion. Ann. de Chym. et de Phys. xxix. 991.

341. FLUORINE. This is a principle which has not hitherto been obtained in a separate state ; it seems to be united with hydrogen in the fluoric acid; this acid, like the muriatic, appears to be composed of hydrogen, and a peculiar base, which base in the instance before us, has been denominated fluorine by Sir H. Davy; and phtore from $0op►►oc, destructive, by Ampere : it possesses a negative electric energy, which is proved by its being determined to the positive pole.

342. It exists in the fluor spar, a mineral found in great beauty and abundance in Derbyshire. This spar is stated to be composed of twenty calcium, and 17'1 fluorine. See FLUORIC ACID.

343. ELECTRO-POSITIVE BODIES. ►►► The bodies which fall now to be considered have been usually classed as inflammable or combustible ; to this appellation, Dr. Henry very properly states, that the same objection exists as to that of supporters of combustion. Against our author's own clas- sification, it may, however, be objected that the title of electro-positive includes all substances with the exception of the few just noticed. Dr. Henry, indeed, anticipates this objection, and

proposes a subordinate division of elementary bodies, that is of those bodies which have not hitherto been resolved into a more simple state.

344. i. Those which by combining with oxygen, chlorine, or hydrogen, are capable of being converted into acids, but which have no me- tallic properties.

345. ii. Those which either decidedly rank as metals, or are so nearly allied to metals in their general habitudes, as to render it improper to assign to them any other place in a chemical arrangement. In the class of metals will be found a few bodies which yield acids when united with oxygen ; and one or two which are even acidified by combination with hydrogen.

346. One great advantage, as it appears to us, m adopting this arrangement, is, as above-inti- mated, that it preserves in the student's mind a constant recollection of the great principles of electro-chemical science, and of the immense benefit these new views have already conferred on chemistry, and still promise to confer.

347. In Mr. Brande's Manual, which cannot be too highly recommended to the student, the fol- lowing substances are introduced for considera- tion in his division, under the title of Simple Acidifiable and Inflammable Substances ; and he prefaces the notice of them by stating ' that the bodies belonging to this class are electro-positive, and consequently, when separated from their com- binations with the substances described in the last chapter, (oxygen, chlorine, iodine), by Voltaic electricity ; they are attracted by the negative surface. With very few exceptions they com- bine with the three supporters of combustion already described, and of these compounds one or more are acids. They are six in number. 1. Hydrogen. 2. Nitrogen. 3. Sulphur. 4. Phos- phorus. 5. Carbon. 6. Boron. The plan that we are about to pursue will lead to the investi- gation of these bodies and principles, almost in the direct order, thus adopted by Mr. Brande. They are all acidifiable, but not all in strict pro- priety combustible or inflammable bodies.

*348. HYDROGEN. See AIR, p. 381.***Hy- drogen exists in a state of gas, or, in other words, it is combined with caloric, and probably with electricity and light, to such an extent as to oc- casion its gaseous constitution, and from this combination we cannot separate it any other other way than by causing it to combine with some other substance. This gas was first atten- tively examined by Mr. Cavendish ; it was for- merly termed inflammable air. It may be prepared by the action of dilute sulphuric acid upon iron filings or upon zinc. The gas will escape, and may*

be collected in the usual manner. Mr. Do- novan has proposed, in order to purify the gas from admixture with sulphuretted hydrogen and carbonic, that we should first agitate common hydrogen with lime water during a few minutes; next with a little nitrous acid ; afterwards with a solution of green sulphate of iron, and finally with water. Dr. Henry, in alluding to this pro- posal, says it appears to him that the carbonic acid, and sulphuretted hydrogen, may equally well be removed by the simple process of washing the crude gas, either with lime-water or with a solution of caustic potassa.

349. For the properties and peculiarities of hydrogen gas, we refer to the article AIR; but we may quote in this place an illustration which is given in Dr. Henry's work, of the fact that elastic fluids or gases ptnetrate each other, and become thoroughly mixed under all circum- stances ; in this, differing from common or in- elastic fluids (liquids) which are capable of a re- maining in contact with each other for a long- time without admixture.

320. ' Provide two glass vials, each of the ca- pacity of about an ounce measure, and also a tube open at both ends, ten inches long, and l-20th inch bore. At each end the tube is to be passed through a perforated cork, adapted to the necks of the vials. Fill one of the bottles with hydrogen gas, and the otber with oxygen gas ; place the latter on a table with its mouth up- wards ; and into this insert the tube secured by its cork. Then holding the hydrogen bottle with its mouth downwards, fit it upon the cork at the top of the tube. The two bottles thus connected, are to be suffered to remain in this perpendicular position. After standing two or three hours, separate the vials and apply a lighted taper to their mouths, when it will almost certainly oc- casion an explosion in both. The hydrogen gas, though sixteen times lighter than the oxygen, must, therefore, have descended through the tube from the upper into the lower vial; and the oxygen gas, contrary to what might have been expected from its greater weight, must have as- scended through the tube, and displaced the lighter hydrogen.'

351. Hydrogen and Oxygen. (Water.) ••• Mix two volumes of hydrogen gas with one volume of oxygen gas, and inflame the mixture by the electric spark in a proper apparatus ; the gases will by this treatment disappear totally, and the inner surface of the vessel will be moistened with a fluid which will be found to be pure water, and equal in weight to the gases which have disappeared.

352. Again, expose pure water to the action of Voltaic electricity, and you resolve it into hydrogen, which will be disengaged at the nega- tive pole, and oxygen will be disengaged at the positive pole; the hydrogen will be two volumes, the oxygen one, so that water is demonstrated both by synthesis and analysis to be formed of hydrogen and oxygen, in the proportion of two volumes of the former to one of the latter.

353. Under the word WATER, in the body of the work, we shall enter into a disquisition on its properties ; it may be here generally stated, that in its ordinary and natural state, such as spring and river water, it always contains air, and that it is always so far combined with foreign sub- stances as considerably to interfere with its ab- stract existence. The water immediately from rain is purer, but even this always contains some of the atmospherical elements, and also some traces of vegetable or animal matter. Even after water has been distilled, some impurities or particles of foreign matter remain in it, and to render it completely free from these impregna- tions, it requires to be slowly and carefully re- distilled. More or less of water is ever con- tained in the air of the atmosphere, even in the dryest weather, and many bodies, from mere ex-

posure to the atmosphere, will abstract a portion of it, or in other words of its moisture; such are the deliquescent salts mentioned under the nead of crystallisation. Whether aqueous fluids exist in the atmosphere chemically com- bined, or merely mechanically mixed, has been made a question ; or rather, it has been debated whether it is chemical solution or mere calorific influence which retains that portion of fluid in the air which is capable of being deposited by an alteration of circumstances ; it is most con- sistent with the general analogy of material ex- istence, perhaps, to suppose the latter to be the case.

354. M. Thenard has shown that an additional quantity of oxygen may be made to unite with water, so as to constitute a very different pro- portion of hydrogen and oxygen in composition, than the proportion of water. This combination is effected by means of the peroxide of barium, a substance afterwards to be described. See Quarterly Journal of Science and Art, vol. viii. p. 114, 115.

355. Hydrogen with Chlorine, Muriatic Acid, or, more consistently with the new theory and nomenclature, Hydro-chloric Acid. ??? Mix equal quantities of hydrogen and chlorine, and expose them to the action of a lighted taper, or even to the direct action of the sun's rays, an explosion or detonation will take place; the same effect will be produced by Voltaic electricity, showing, says Mr. Brande, a curious analogy between eleQtric and solar light ; for ordinary artificial light does not accelerate the combination (see Brande's account in the Philosophical Transac- tions of 1820). The produce of the union of equal parts of chlorine, whether effected sud- denly and with explosion, or silently, is muriatic, or more properly speaking, hydrochloric acid gas.

356. This acid is procurable by other methods ; it may be obtained by pouring sulphuric acid on common salt, the sulphuric acid unites in this case with the base of the salt, and the muriatic acid is evolved in the form of gas.

357. Muriatic acid gas has a pungent smell, it is caustic in its action upon the skin, it ex- tinguishes flame, it is heavier than common air. Its specific gravity is stated by Gay Lussac to be 1-278 ; 100 cubic inches, according to Mr. Brande, weigh 38‘8 grains. It is very rapidly absorbed by water, and, when dissolved in that fluid, it forms the liquid muriatic acid, for the mode of preparing which, and for the theory of its formation, see HYDROCHLORIC ACID.

358. This acid in a liquid state manifests the following properties. It emits suffocating whitish fumes, it affords muriatic gas by being heated with heat. When diluted with water an elevation of temperature is occasioned ; it combines freely with the alkalis and with most of the earths, both in their caustic, or rather pure, and their carbonated states. It is specifically heavier than water. When brought into contact with any substance containing oxygen in a state of loose combination, its hydrogen unites with this oxygen, forming water, while the chlorine becomes liberated in the state of gas. Indeed chlorine is procured in this way, but it is usual not to employ the already formed liquid acid

for the purpose, but to use the materials that have the power of furnishing the acid gas, as the chloride of sodium (common salt), oxide of manganese, and sulphuric acid.

359. On the theories which have prevailed respecting Chlorine and Muriatic Acid. ❖❖❖ As these have an important bearing upon the le- gitimacy of the new electro-chemical doctrines, we shall take the liberty of extracting verbatim, the account of them, found in Dr. Henry’s volumes. ‘ There are few subjects,’ says Dr. Henry, ‘ respecting which the opinions of chemists have undergone such frequent changes as concerning the nature of chlorine and of muriatic acid. The views originally taken by Scheele, the illustrious discoverer of the former substance, was that the muriatic acid is com- pounded of a certain base, and an imaginary principle called phlogiston (see part 1st.) ; and that by the action of certain bodies it became dephlogisticated, or deprived of that supposed principle of inflammability. It was afterwards found, however, that all bodies which are capa- ble of producing this change in muriatic acid contain oxygen, and that their portion of oxygen is diminished by the process. It appeared, therefore, to be an obvious conclusion, that what, takes place in the action of metallic ‘oxides on muriatic acid, is simply the transference of oxygen from the oxide to muriatic acid; and, conformably with this theory, the

resulting gas received the name of oxygenated muriatic, or oxymuriatic acid. Sir H. Davy was led by his early experiments to modify in some degree this view of the theory of the process ; and to con- sider the muriatic acid as a compound of a cer- tain basis with water ; and the oxymuriatic acid as a compound of the same basis with oxygen. This modification was rendered necessary by the fact, that when a metallic body is heated in muriatic gas, oxymuriatic acid is obtained, and water ap- pears in a separate state. It was evident, there- fore, that muriatic acid gas must either contain water ready formed, or the elements of water, or hydrogen capable of composing water with the oxygen of the oxide. But at a subsequent period, the same distinguished philosopher was induced by the experiments of Gay Lussac and Thenard, as well as by his own researches, to form a different theory on the subject. Oxy- muriatic acid he now considers as a simple or undecompounded substance ; and muriatic acid as a compound of that simple substance with hydrogen. To convert the muriatic acid into chlorine we have only, according to this view, to abstract hydrogen from the muriatic acid ; and this, it is believed, is all that is effected by the action of those oxides which are adapted to the purpose. Again, to convert chlorine into mu- riatic acid, we have only to combine it with hydrogen; and accordingly, the simple mixture of one measure of each of these gases, when ex- posed for a short time to the sun's rays, or ex- ploded by an electric spark, affords two measures of muriatic acid gas.

360. The oxymuriatic acid, or chlorine, as Sir H. Davy proposes to call it, in order to avoid all connexion of its name with hypothetical views, is supposed also to unite at once with

the metals, without requiring, like the sulphuric, nitric, and other acids, that the metals should first be in the state of oxides. In proof of this theory it appears to be sufficiently established, that no oxygen can be obtained either alone, or in a state of combination with combustible bodies added for the purpose, from the com- pounds of chlorine and metals. The analyses, Jiowever, of the metallic muriates, as they were formerly considered, remain unimpeached by ihis change of theory. All that is necessary to transmute in ideas a muriate, into a compound of chlorine, is to deduct the oxygen from the me- tallic oxide ; and adding to it the muriatic acid, to consider the same as chlorine. For example, muriate of soda, deprived of all water, con- sists, On the old theory, of muriatic acid 46'7 28

Soda composed of { gˆ lot]

32

100 60

On the old theory, chloride of sodium consists of Sodium .... 40 24 Chlorine 60 36

100 60

On the discarded theory of oxymuriatic acid, that supposed compound was stated to be con- stituted of three volumes of muriatic acid gas, f 1 volume of oxygen condensed into 2 volumes, and by weight of

Oxygen .... 22‘22 8 Muriatic acid . , – 77-78 28

100

36

361. According to this view, the atom of dry muriatic acid (hydrogen being unity, and oxygen 8), would be equivalent to 28 ; and this + 8 (1 atom of oxygen), would give 36 for the atom of oxymuriatic acid. The latter number, in- deed, still represents the atom of chlorine as de- duced from the fact, that it unites with an equal volume of hydrogen gas, and is 36 times speci- fically heavier than that inflammable gas. We may consider then, 60 parts of common salt as composed, according to the old view, of 28 parts dry muriatic acid, and 32 parts of soda, (~ 24 sodium and 8 oxygen), or of 24 sodium ###4- 36 chlorine, according to the new theory.

362. It is remarkable, that there is hardly any fact connected with the chemical history of chlorine and muriatic acid, that does not admit of being almost as well explained upon the hy- pothesis that chlorine is compound, as upon that of its being a simple substance. On the whole, however, the weight of evidence is very much in favor of the new, or rather the revived opinion of its elementary nature, especially since the discovery of iodine ; and I have little scruple, therefore, in adopting it, as affording the most simple and satisfactory explanation of pheno- mena, as well as the best ground-work for a conspicuous arrangement of the objects of che- mistry. The reader who wishes to examine fully the evidence for both opinions, is referred to the controversy between Dr. Murray and J.

Davy, in the 34th volume of Nicholson’s Jour nal; to Sir II. Davy’s paper, in the Philoso- phical Transactions for 1818, p. 169 ; to the 8th vol. of Transactions of the Royal Society of Edinburgh; the Annals of Philosophy, 12th vol. 379, and xiii. 26, 285; and to a paper by Mr. R. Phillips in the

new series of that work, vol. 1st, p. 27, on the action of chlorides on water.' Henry.

363 Hydrogen and Iodine. ††† When iodine is- presented to nascent hydrogen, a union is produced and a gaseous acid is the result, which is named hydriodic acid. This gas is best prepared in any quantity, by the action of moistened iodine, upon phosphorus It is received over mercury, but, as it is soon decomposed by that metal, it should be transferred as soon as possible into an exhausted vessel.

364. This acid is colorless, and has an ex- tremely sour taste ; it smells like muriatic acid. Its specific gravity, as compared with hydrogen, is given as 59'3 to 1 ; 100 cubic inches weighing 133-6 grains.

365. In a liquid form it is best procured by passing sulphuretted hydrogen through a mix- ture of iodine and water ; sulphur becomes de- posited, and, on heating and filtering the liquor, we obtain a pure solution of hydriodic acid.

366. This liquid acid is slowly decomposed by the action of atmospheric air, its hydrogen is attracted by the oxygen of the air, and a por- tion of iodine is thereby rendered free, which colors the liquor. It is likewise decomposed by concentrated sulphuric, by nitric acid, and by chlorine. Voltaic electricity rapidly decom- poses the liquid acid, iodine appearing at the positive, and hydrogen at the negative pole. Although the acid gas so powerfully acts upon mercury, the liquid acid does not affect it. Those bodies called oxides, in which the oxygen is loosely combined, readily decompose the acid, and neutral salts are obtained, called hy- driodates ; a process of preparing the hydriodate of potass, is given in the new series of the An- nals of Philosophy, vol. vii. p. 48. We men- tion this on account of the salt having lately been employed as an important article in medicine. See MEDICINE.

367. Hydrogen with Fluorine (Fluoric acid). ††† This is introduced here under the pre- sumption that hydrogen is its acidifying princi- ple ; 'there appears,' says Dr. Henry, 'every reason to believe, that hydrogen is the acidifying principle of fluoric acid, and that, in the same manner as hydrochloric acid is constituted of chlorine united with hydrogen, this acid also consists of a peculiar base, belonging, like chlo- rine, to the electro-negative class of bodies, and rendered acid by combination with hydro- gen.' To this basis, though not yet exhibited in a separate state, the name of fluorine has been given, and the acid has been termed hydro- fluoric.

368. This acid may be procured in a liquid state, by distilling the powdered fluor spar, with twice its weight of strong sulphuric acid. Mr. Knight, in the

seventeenth volume of the Philo- sophical Magazine, has described and repre- sented an ingenious apparatus for the purpose.

369. One peculiarity of tne fluoric acid is, that it acts strongly on glass ; hence it has been employed for etchings on glass. This peculia- rity makes it of course necessary to preserve it in bottles, composed of materials which the acid has not power thus to corrode, those of silver or lead may be used.

370. Fluorine, it will be recollected, is at present rather a supposed than an actually de- monstrated base. The fluates are still treated of by some chemists as compounds of fluoric acid with metallic oxides; but Sir H. Davy and M. Ampere, as we have already stated, con- sider them as compounds of metals, with a peculiar principle analogous to chlorides, which has been called fluorine or phtore. ‘ Fluor spar, for example, may be either a fluate of lime, or a fluoride of calcium. And in the same manner that we convert, in imagination, a muriate into a chloride, we may change a fluate into a flu- oride. Thus fluor spar may be constituted either of

1 atom of fluoric acid 10

,. ,. t 20 calcium) 1 atom of lime J 8 oxygen J ...

28

Weight of the atom of anhydrous >

fluate of lime $

Or it may consist of

1 atom of fluorine, 10 + 8 18

1 atom of calcium 20

Weight of the atom of fluoride of calcium 38

371. It should be added, that if the latter views be correct, fluates, like muriates, can only be capable of existing either in solution, or in a state of hydrous salts. The actual conversion of a fluoride into a fluate will then be attended with the decomposition of an atom of water ; and 1 of hydrogen by weight will unite with 18 fluorine, making the real atomic weight of fluoric acid 19, while 8 of oxygen will unite with the atom of metallic base. The atomic weight of the fluate will, in that case, be 19 + that of the

alkaline, or earthy base, or 9 (~ to an atom of water) more than the number assigned to the anhydrous compound.' Henry.

372. NITROGEN, OR AZOTE (seethe article AIR, p. 380, No. 56, ००० Nitrogen, or azote, (the latter word derived from the Greek AIR, we may give the following : fill a bottle about one-fourth with the solution of nitrous gas, in liquid sulphate of iron, or with liquid sulphate of lime, and agitate it with the air that fills the rest of the bottle. During the agitation the thumb must be firmly placed over the mouth of the bottle, and when removed the mouth of the bottle must be im- mersed in a cup-full of the same solution, which will supply the place of the absorbed air. The agitation and admission of fluid must be re- newed alternately, so long as any absorption takes place.

ˆ73. Various attempts have been made, but

hitherto without success, to discover the ingre- dients of which nitrogen is composed, supposing it to be a compound body. Sir H. Davy ignited, by means of intense electricity, potassium in ni- trogen gas, and hydrogen appeared as the result, some nitrogen being at the same time found deficient. Hence it was supposed that the ni- trogen had suffered some decomposition, but in further experiments it was ascertained that n proportion to the potassium being free from a coating of potassa, which contains water, in that proportion, was less hydrogen found to appear, and less nitrogen was also observed to be wanting.

374. Nitrogen and Oxygen. ००० Besides the pro- portion of nitrogen with oxygen that forms at mospheric air, and for an account of which we refer to the article AIR, these bodies are known to unite in four other proportions, and constitute the compounds called,

i. Nitrous oxide of Davy, or the protoxide of nitrogen.

ii. Nitric oxide, or deutoxide of nitrogen, iii. Nitrous acid, iv. Nitric acid.

375. Nitrous Oxide. ००० The salt called nitrate of ammonia will yield this gas, by being heated in a retort to a temperature of between 420 and 430००. It may be collected over water. The theory of its formation is as follows : nitric acid is made up of oxygen and nitrous gas, as we shall shortly state; the component parts of am- monia are hydrogen and nitrogen. By an increase of temperature, the nitrous gas combines with an additional dose of nitrogen, and thus nitrous oxide is formed ; the oxygen of the decomposed nitric acid unites with the hydrogen of the am- monia, and forms water.

376. Nitrous oxide gas has the following cha- racteristics : it is heavier

than common air, 100 cubic inches weighing, according to Brande, 46′ 125 grains; compared with hydrogen, it? specific gravity is 20′ 5 to 1. Its taste is sweet, and its smell not disagreeable. It is easily ab- sorbed by water. It supports combustion, and a taper immersed in it burns brilliantly, some- times with a crackling noise. Red-hot charcoal burns in it with brilliancy, and consumes some of its oxygen. Many of the metals likewise decompose it at a high temperature. This gas detonates with hydrogen, and ‘ the best analysis of it is effected in this manner : one volume of nitrous oxide requires one volume of hydrogen. This mixture, fired by the electric spark, pro- duces water, and one volume of nitrogen remains. Now, as one volume of hydrogen takes half a volume of oxygen to form water, nitrous oxide must consist of two volumes of nitrogen and one volume of oxygen ; these three volumes being so condensed, in consequence of chemical union, as only to fill the space of two volumes. The specific gravity of nitrogen, compared with oxygen, is as 13 to 15. Nitrous oxide therefore consists of

13 Nitrogen 7-5 Oxygen

Number for nitrous oxide ‘20-5

r

Or,

Nitrogen

13

Oxygen

7-5

Nitrous Oxide

20-5

Brande.

For an account of the extraordinary properties of this gas, when taken into the lungs, consult Researches, Chemical and Philosophical, chiefly concerning nitrous oxide, extracts of which will be found in the article AIR, in this Encyclo- paedia.

377. Nitric Oxide, Nitrous Gas, or Deutoxide of Nitrogen. ??? This was discovered by Hales (see part first), but its properties were first dis- tinctly investigated by Dr. Priestley, under the denomination of nitrous air. Deutoxide of ni- trogen is its most appropriate appellation, but it is now very generally known by the name of ni- trous gas.

378. This gas may be obtained by pouring nitric acid upon copper filings. The copper is thus made to unite with part of the oxygen of the nitric acid, and from this loss the nitric acid is converted into nitrous gas, which has the fol- lowing properties.

379. It is heavier than common air, 100 cubic inches weighing, according to Brande, 3T5 grains. When well washed with water it is not acid, and will not be found to redden the color of litmus. It extinguishes flame, and is fatal to animal life. If, however, phosphorus and char- coal be introduced into it in a state of ignition, they continue to burn with vehemence. It does not detonate when mixed with hydrogen. Dr. Henry has shown, in the Philosophical Trans- actions for 1809, that when mixed with ammonia an electric spark produces a detonation.

380. Nitrous gas is decomposed by almost all bodies that attract oxygen ; and some bodies that have a more than common affinity for oxygen, reduce the gas to its ultimate elements.

381. Charcoal, ignited in 100 measures, gives 50 measures of nitrogen gas and 50 of carbonic acid. Arsenic, zinc, or potassium, when heated in it, evolve half its volume of nitrogen. Gay Lussac obtained, as the mean of three expe- riments, in which 100 volumes of nitrous gas were decomposed, in two by sulphuret of barium, and in one by tin, 49-5 parts of nitrogen. Ni- trous gas should consist, therefore, of 1 volume of oxygen f 1 volume of nitrogen, neither of which elements is in a state of condensation. We may therefore consider nitrous gas as con- stituted of one atom of nitrogen ××× 14, and two atoms of oxygen ~ 16, and its representative number will be 30. It composition then is

Vols.

Nitrogen 1 Oxygen 1

By weight

46-60 100 53-40 114

100

214

382. No distinct information is obtained res- pecting the constitution of nitrous gas by the long continued action of electricity. One-half of the azote, according to Mr. Dalton, is liberated and the remainder unites with the evolved oxy- gen and composes nitrous acid.

383. Nitrons gas, and chlorine, when both perfectly dry have no action whatever on each other, but if water be present, there is an im- mediate decomposition, its hydrogen combining with the chlorine to form muriatic acid, and its oxygen with the nitrous gas, to form nitrous acid.

384. Nitrous gas is absorbed by the green sulphate and muriate of iron which do not absorb nitrogen gas. To ascertain, therefore, how much nitrogen gas a given quantity of nitrous gas con- tains, let it be agitated in a graduated tube with one of these solutions. This analysis is neces- sary previously to deducing, from its effects on at- mospheric air, the proportions of oxygen gas ; for we must abstract from the residuum the quantity of nitrogen introduced by the nitrous gas (Henry). For an account of the use which is made of nitrous gas in eudiometrical experiments or in ascertaining the purity of the air consult the article EUDIOMETER, in

which article the hypo- nitrous acid will be adverted to, the per-nitrous acid of Gay Lussac.

*385. Nitrous acid.*********~Is a combination of nitrous gas and oxygen, when the former is pre- sented to the* ******* *latter they combine and a gaseous compound of a deep yellow1 color is the result ; two measures of nitrous gas with one of oxygen are the proportions for the production of nitrou? acid gas ; the admixture occasions a condensation down to half, or according to Gay Lussac two- thirds of the volume.*

386. Nitrous acid gas supports the combustion of a taper, of phosphorous, and of charcoal ; but it extinguishes sulphur. It is freely absorbed by water, and the solution becomes green. Its specific gravity to hydrogen is as 28-6 to 1. 100 cubic inches weigh 64‘5 grains.

387. To form the liquid acid it is only neces- sary to saturate water with the gas. Dr. Thom- son states that it may be procured pure by distilling nitrate of lead, but the product of this distillation according to Gay Lussac is hypo- nitrous acid this last chemist states that the ni- trous acid is decomposed with so much readiness when it comes into contact with solutions of al- kali, that it is incapable of forming a distinct class of salts. He found for instance that with a solution of potassa it afforded hypo- nitrate, and nitrate of potassa, but nothing properly entitled to the appellation of a nitrite. In this the nitrous acid differs most materially from the substance next to be noticed, viz.

388. Nitric acid. ******* *Mr. Cavendish in the year 1785 first demonstrated the nature of this acid. It may be produced by passing electric sparks through a mixture of oxygen and nitrogen gases. The following method is given for effecting this combination :* ******* *Let a proper tube be filled with, and inverted in mercury. Pass into it a portion of atmospheric air, or an artificial mixture of nitrogen and oxygen gases, in the proportion of one of the former to two of the latter. Let an*

iron wire, lengtnened out with one of platinum be introduced within the tube, so that the latter metal only may be in contact with the mixed gases : and let the end of this wire be distant about one-fourth of an inch from the extremity of the upper conducting one. When the appa- ratus is thus disposed, pass a series of electric sparks or shocks through the gases for several hours. The mixture will be diminished in bulk ; will redden litmus paper when enclosed in it ; and will exhibit distinctly the smell of nitrous

acid. If the experiment be repeated with the addition of a few drops of solution of potassa in contact with the gases we shall obtain a combination of nitric acid with that alkali. The pro- portions which Mr. Cavendish found necessary for mutual saturation were five parts of oxygen gas and three of common air, or seven parts of oxygen gas to three of nitrogen gas. The acid says Dr. H., from whom we have extracted the above, thus obtained being constituted of 100 measures of nitrogen + 233 oxygen, appears therefore to have been intermediate between nitrous and nitric acid, or more probably consis- ted of both those acids in a state of mixture. No evolution either of light or heat attends this combination, which is very slowly and gradually effected.

389. Pure nitric acid in a gaseous state is composed according to Davy of 29►► nitrogen and 70►► oxygen. The later experiments of this philosopher have led him to the conclusion that four in volume of nitrous gas, and two of oxy- gen gas, when condensed in water, absorb, in becoming nitric acid, one in volume of oxygen. Dr. Wollaston from his experiments and from those of Richter and Phillips infers that nitric acid contains by weight 50 of oxygen to 17-54 of nitrogen ; in volume the proportions are 1 of nitrogen and 2►► of oxygen.

390. This gas may be decomposed by causing it to pass through a porcelain tube heated to red- ness, and by this treatment it is resolved into nitrous acid gas, oxygen, and water.

391. For preparing the liquid nitric acid we are directed, in the last edition of the London Pharmacopoeia, to mix two pounds of nitrate of potass deprived of its water of crystallisation by heat with two pounds of sulphuric acid ; a glass retort is to be used in the mixture and it is to be distilled in a sand-bath until a red vapor rises. The acid in the receiver is to be mixed with another ounce of nitrate of potassa and again to be distilled. This rectification Mr. Philips con- siders unnecessary.

392. The muriatic and sulphuric acids that generally contaminate the nitric acid of commerce J may be separated from it by adding nitrate of baryta to precipitate the latter, and nitrate of sil- ver, for the precipitation of the muriatic acid : This last the nitrate of silver may be put in solu- tion, lo the suspected acid, first and continued so longasitproduces a white precipitate. Whenthis ceases pour off the clear liquor and add in the same manner the nitrate of barytes ; then if the acid be distilled it will pass off perfectly pure.

393. Nitric acid is without color, and emits white fumes when exposed to the air, it is ex-

tremely corrosive ; its specific gravity is modified by the water it contains.

At about 40 it con- geals. It absorbs water from the air, increasing its bulk, and lessening its specific gravity. A sudden mixture of it with half its quantity of water occasions the evolution of heat. It re- tains its oxygen with little force ; it is thus in part decomposed by the sun's rays, which separates oxygen from it, and all combustible bodies act the same upon it with more or less readiness, in proportion to their affinity for oxygen. With hydrogen, at as high temperature, detona- tion is occasioned, essential oils are inflamed by nitric acid when it is suddenly poured upon them.

394. Nitro Muriatic Acid. This is the aqua regia of the alchemists. A mixture of nitric and muriatic acids, acquiring the power of dis- solving gold, a power which neither of the acids possesses separately. The mixture of these two bodies occasions the evolution of chlorine; it would appear from the experiments of Sir H. Davy, that a mutual decomposition takes place, the hydrogen of the muriatic acid abstracts oxygen from the nitric, and in consequence the nitric becomes nitrous acid, water is formed, and, as we have said, chlorine evolves. The mode then in which this aqua regia affects gold, is by causing its combination with chlorine.

395. Nitro-muriatic salts cannot be formed, for when this combination acts upon alkalis or earths, the two acids as far as they combine do so separately ; and metallic bodies dissolved in aqua regia only yield muriates.

396. Nitrogen and Chlorine. (Chlorine of Nitrogen.) We are recommended by Mr.Brande to form this salt by filling a perfectly clean glass basin with a solution of about one part of sal- ammoniac in twelve of water, and inverting it in a tall jar of chlorine. The saline solution becomes gradually absorbed and rises into the jar, a film forms upon the surface, and it ac- quires a deep yellow color. At length small globules, looking like yellow oil, collect upon its surface, and successively fall into the basin beneath, whence they are most conveniently re- moved by drawing them into a small and per- fectly clean glass syringe, made of a glass tube drawn to a pointed orifice, and having a copper wire with a little tow wrapped round it for a piston. In this way a globule may be drawn into the tube, and transferred to any other vessel.

397. This is the most powerfully explosive and detonating substance that is known, so much so, that in experiments it is not safe to employ a quantity larger than a grain of mustard seed. It is especially thus combustible with phosphorus and the fixed oils. Dulong, who discovered the compound, was severely wounded in his first experiments with it, and Sir H. Davy had hi? eye injured by it.

398. The specific gravity of the fluid Sir H, Davy has determined to be . 1-653, water being 1 . It is not congealed even by a very high de- gree of

cold, it is said not to become solid at 16►►. There are some bodies termed combustible with which it seemed to unite without decom- position ; nor did metals, resins, or sugar, cause it to explode.

CHEMISTRY.

397

399. It is best analysed by heating it with mercury, which combines with the chlorine, and sets the nitrogen free. Sir H. Davy, from various experiments of this kind, concludes that the chlorine of nitrogen is composed of four in vo- lume of chlorine to one in volume of nitrogen, or of

Chlorine . . . 91-2 Nitrogen ... 8-8

100-0

We are told by Mr. Brande, that it yields by decomposition one volume of nitrogen and four of chlorine, and as the specific gravity of nitrogen to chlorine is as 13 to 33,5, so it may be said to consist of one proportional of nitrogen, + 4 proportionals of chlorine, or 1 3►► + 1 34►► by weight, and its number will be 147.

400. Nitrogen and Iodine. ►►► If iodine be kept in a solution of ammonia in water, hydriodic acid is produced, and besides this, a brown powder which is an iodide of nitrogen, and which explodes with great violence upon the slightest touch. This compound evaporates spontaneously when exposed to the atmosphere. When it detonates it gives out the purple fumes of iodine ; but, attempts having failed to collect the products, the proportions of its components have not been ascertained. Gay Lussac sup- poses it to consist of three atoms of iodine, and one atom of nitrogen.

CARBON.

For an account of this substance, and its pro- duct carbonic acid, see CARBON and CARBONIC ACID in the present work ; see also the word DIAMOND.

401. Carbonic Oxide. ►►► The composition of this gas was first made known by Mr. Cruick- shank of Woolwich, an account of which will be found in Nicholson's Quarto Journal, the fifth volume. It is usually obtained by subject- ing carbonic acid to the action of substances which abstract from the acid a portion of its oxygen. The mixture we are told which affords the gas in its purest state, is formed of equal parts of carbonate of baryta and clean iron filings; these should be introduced into

a small earthen retort, so as nearly to fill it, and be ex- posed to a red heat.

Whether the gas be obtained by this or any other process, it must be washed with lime or a solution of potassa.

402. Carbonic oxide is lighter than common air. Its specific gravity being to hydrogen' as 13'2 to 1, 100 cubic inches weighing about thirty grains. It is destructive of animal life. ' When two volumes of carbonic oxide and one of oxygen are acted on by the electric spark, a detonation ensues, and two volumes of carbonic acid are produced. Whence it appears that carbonic acid contains just twice as much oxygen as carbonic oxide, which, may be con- sidered as a compouncfof one volume of oxygen and one volume of gaseous carbon; or of one proportional of carbon .and one of oxygen, the latter being so expanded as to occupy two vo- lumes. Brande.

403. Carbonic oxide is inflammable, and

burns with a blue flame ; but when mixed with common air it does not explode as do other in- flammable gases, but burns silently. A mixture, however, of two measures of it with one of common air, forms a composition, which will explode by the introduction of red hot iron, or a lighted taper. ' When carbonic oxide, mingled with an equal bulk of hydrogen gas, is passed through an ignited tube, the tube becomes lined with charcoal. In this temperature, the hydrogen attacks oxygen more strongly than it is retained by the charcoal, and water is formed. It was found also by Gay Lussac to be decomposed by the action of potassium, which combines with the oxygen, and precipitates charcoal ; and Dbbeireiner, by bringing it into contact with sulphureted oxide of platinum, converted it into half its volume of carbonic acid. Henry.

404. Carbon with chlorine. When carbureted hydrogen, mixed with a great excess of chlorine, is exposed to the action of light, a white crys- talline substance is formed, which Mr. Faraday has termed perchloride of carbon. This sub- stance has scarcely any taste ; it resembles cam- phor in its odor ; its specific gravity is about 2. It does not conduct electricity. It is not readily combustible, but burns with a brilliant light in oxygen gas. It is not soluble in water, but it freely dissolves in ether and alcohol; and the solutions deposit arborescent and quadrangular crystals. Volatile and fixed oils also dissolve it. It is not acted on by acids nor by alkalis ; but at a red heat most of the metals decompose it. Chlorine has no action on it. Iodine abstracts from it part of its chlorine when applied to it at a high temperature. No water exists in it. Hy- drogen gas when transmitted along with it through red hot tubes, decomposes it, muriatic acid and charcoal being produced. The composition of the perchloride seems to be about 10 of carbon, and 90 of chlorine, or the atomic composition is stated as

3 atoms of chlorine ~ 108 2 atoms of carbon ~ 12

Weight of its atom 120

405. The proto-chloride of carbon is a fluid substance, obtained by passing perchloride of carbon through a heated tube containing frag- ments of rock crystal. This is a limpid colorless fluid, a non-conductor of electricity, not com- bustible except when held in the flame of a spirit lamp, when it burns with a yellow light and emits much smoke, with fumes of muriatic acid It does not become solid even at 0□□. At about 160, or from that to 170, it rises in vapor.

<406. It is insoluble in water, but soluble in alcohol, ether, and the oils. Neither alkalis nor acids produce any effect upon it. It dissolves chlorine, iodine, sulphur, and phosphorus. The metals when treated with it at a high degree of heat absorb its chlorine, and set free the carbon ; and oxides, in the measure of oxygen they con- tain, form with it either carbonic acid or carbonic oxide. Its composition is stated as follows : □□□ 1 atom of chlorine . . 36 1 atom of carbon . . 6

42

398

CHEMISTRY.

407. Sub-chloride of carbon. □□□ This composition was accidentally discovered during the distillation of nitric acid from crude nitre and sulphate of iron ; only a few grains were procured at each process. Julin (in the Ann. of Phil. N. S. 1st vol. 216) states its properties as follows. □□□

408. It is white, consists of small soft adhe- sive fibres, sinks slowly in water ; is insoluble in it whether hot or cold ; is tasteless ; has a pecu- liar smell, somewhat resembling spermaceti ; is not acted on by concentrated and boiling acids or alkalis, except that some of them dissolve a small portion of sulphur ; dissolves in hot oil of turpentine, and in alcohol, but most of it crystal- lises in needles on cooling, burns in the flame of a lamp with a greenish blue flame, and a slight smell of chlorine ; when heated melts, boils, and sublimes between 350□□, and 450□□ or sublimes slowly at a heat of 250□□, forming long needles. Potassium burns with a vivid flame in its vapor, and charcoal is deposited ; and a solution of the residuum, in nitric acid, gives a copious precipi- tate with nitrate of silver.

409. Dr. Henry states the composition of this substance as follows : □□□

1 atom of chlorine

2 atoms of carbon

36 12

48

He proposes to name it provisionally, the sub- chloride of carbon.

410. Thus, he says, we have three distinct compounds of chlorine and carbon, viz.

At. of chlor. At. of carb. The pro-chloride … 3 + 2 The proto-chloride . . 1 + 1 The sub-chloride ... 1 j 2

And it is probable that another chloride of car- bon will hereafter be found, consisting of two atoms of chlorine and one of carbon.

411. Carbon with chlorine and oxygen (chlo- ro-carbonic acid). ••• This was termed by its dis- coverer, Dr. John Davy, phosgene gas, from its being produced through the agency of light. It is formed by mixing equal volumes of chlorine and carbonic acid gases, and exposing them to the sun's rays ; condensation takes place to half their united volumes, and a gas is formed of intolerably pungent odor. Wiien dissolved in •••water, it is changed into carbonic and muriatic acid gases. Chloro-carbonic acid is composed of an atom of carbon, an atom of oxygen, and an atom of chlorine. It condenses four times its volume of ammoniacal gas, and the product is a peculiar compound of a white color, from which the more powerful acids disengage muriatic and carbonic acids, but it is dissolved by acetic acid without effervescence. Several of the metals decompose it, and combine with the chlorine, evolving carbonic oxide, equivalent in volume to the original gas. Chloro-carbonic acid gas af- fords then an example of an acid with a simple base, and two acidifying principles, oxygen and chlorine, which are often united in the perfor- mance of this function. Henry.

412. BORON. ••• This substance was first procu- red by Sir H. Davy, in 1808, by means of vol-

taic electricity on boracic acid. It was subse- quently obtained in greater abundance and with more facility, by heating equal parts of potassium and boracic acid ; in this experiment of Gay Lussac and Thenurd, the oxygen of the boron is taken by the potassium and the boron is thus set free. Berzelius recommends the decomposition of an alkaline'boro fluid by potassium, as the best me- thod of obtaining the base. Boron appears in the form of a

brown insoluble powder, burning with brilliancy when heated as high as 6000□□, the com- bustion being more vivid in oxygen gas, or if the boron be mixed with substances which part freely with their oxygen. In this way boracic acid may be obtained ; but this is usually procu- red by dissolving the salt called borax in hot water, and adding sulphuric acid. See BORACIC ACID. Boron is a non-conductor of electricity.

413. The experiments upon the composition of Boracic acid, says Brande, are much at variance. Berzelius's determination probably approaches nearest the truth ; he regards it as containing 1 bo- ron j 3 oxygen. If therefore we consider it as consisting of 1 proportional of boron and 2 of oxygen, the number representing boron will be 5 and boracic acid will consist of

5 Boron 15 Oxygen

20 Boracic acid

414. Fluoboric acid. □□□ This appears to be a com- pound of fluorine with boron. It is gaseous, and may be obtained by distilling, in a glass retort, one part of fused boracic acid, two of fluor spar, and twelve of sulphuric acid. Sir H. Davy and Gay Lussac procured it in the process they adop- ted in order to obtain fluoric acid gas perfectly free from water, viz. that of distilling perfectly dry boracic acid with fluate of lime. Fluoboric acid gas seems to contain no water, but to have so strong an affinity for it as to take it from other gases which hold it in combination. Hence the cloudiness that is produced by mixing this gas with atmospheric air. Water copiously dis- solves the gas. Its specific gravity is stated to be 32'22 compared with hydrogen, and about 2-400 with atmospheric air. It acts energetically on vegetable and animal substances, depriving them of moisture and hydrogen. Potassium, or sodium, heated in it, produces fluate of potassa or soda, and boron is separated.

PHOSPHORUS.

415. This is obtained by distilling concrete phosphoric acid, with half its weight of char- coal at a red heat. The mixture is put into a coated earthen retort placed in a small porta- ble furnace, the tube of the retort should be immersed about half an inch into the basin of water. A great quantity of gas escapes, some of which is spontaneously inflammable, and, when the retort has obtained a bright red heat, a sub- stance looking like wax, of a reddish color, passes over : this, which is impure phosphorus, may be rendered pure by melting ic under warm water, and squeezing it through a piece of fine shamoy leather: but great care must be taken that none adheres to the nails and fingers, which

would inflame on taking them out of the water, and produce a painful and troublesome burn, it is usually formed into sticks, by pouring it, when fluid, into a funnel tube under water.

416. In performing this distillation a high tem- perature is required, so that the furnace should be sufficiently capacious to hold a body of char- coal piled up above the retort, which, as earthen- ware becomes permeable to the vapor of phos- phorus at a red heat, must be coated with a mixture of slaked lime and solution of borax.; this mixture may be laid on with a brush in two or three successive coats, and forms an excellent verifiable lute. Brande.

417. Phosphorus is an highly inflammable sub- stance : its specific gravity 1-770. When ex- posed to the air it exhales luminous fumes of a peculiar odor. It may be ignited by friction ; in oxygen gas it burns very brilliantly, as also in nitrous oxide, nitrous and chlorine gases. Phos- phoric acid is the product of a rapid combustion of phosphorus in oxygen.

418. The only information which we possess respecting the nature of phosphorus, is derived from the electro-chemical researches of Sir H. Davy. When acted on by a battery of 500 pairs of plates in the same manner as sulphur, gas was produced in considerable quantities, and the phosphorus became of a deep red brown color. The gas proved to be phosphureted hydrogen, and was equal in bulk to about four times the phos- phorus employed. Hence hydrogen may pro- bably be one of its components, but no confirma- tion of the truth of this view is derived from the recent experiments of the same philosopher, which, indeed, are rather contradictory to it. Henry.

419- Phosphorus is capable of being oxyge- nated in various ways. Oxide of phosphorus is formed on the surface of the material when it is kept for some time under water. This sub- stance is inflammable, but not so volatile or fusible as is phosphorus itself. It is this which is gene- rally employed in the phosphoric match boxes, But besides this oxide there are three acid combi- nations of phosphorus and oxygen, which have been named phosphorus, hypophosphorus, and phosphoric acids.

420. Phosphorus acid. ××× This is Dest obtained by subliming phosphorus through corrosive sub- limate (a perchloride of murcury) ; then mixing the product with water, and heating it till it becomes of the consistence of a syrup. The re- sulting liquid is a compound of phosphorus

acid and water, and it has therefore been named hy- dro-phosphorus acid.

421. The water is decomposed in the opera- tion, its hydrogen, combining with the chlorine, forms muriatic acid ; and its oxygen, uniting with phosphorus, forms phosphorus acid. Heat expels the muriatic acid from the mixture.

According to Davy, 100 grains of phosphorus acid consists of

Phosphorus . . . 59‘7 Oxygen 40‘3

100

422. Hypophosphorus acid. ††† This is produced by pouring sulphuric acid upon the soluble salt

of baryta, resulting from the action of phos- phuret of baryta on water. The acid is to be added in just sufficient quantities to sepa- rate the baryta, and the solution which remains is the hypophosphorus acid, which, when evapo- rated to a certain extent, yields a sour viscid liquid, eagerly attractive of oxygen, and unsus- ceptible of crystallisation. It is doubtful whe- ther this substance may not be a hydracid, or a triple compound of oxygen, phosphorus, and hydrogen ; in this case, as Dr. Henry remarks, its proper appellation would be hydro-phos- phorus acid.

423. Phosphoric acid. ††† This may be produced, of course, by the combustion of phosphorus in oxygen, or in atmospheric air, under a dry bell glass ; but the following is given as the most economical method.

424. On 20 pounds of bone, calcined to whiteness and finely powdered, pour 20 quarts of boiling water, and add 16†† pounds of sul- phuric acid, diluted with an equal weight of water (in general much less of sulphuric acid is employed). Let these materials be well stirred together, and be kept in mixture about 24 hours. Let the whole mass be next put into a conical bag, of sufficiently porous and strong linen, in order to separate the clear liquor, and let it be washed with water, till the water ceases to have much acidity to the taste. Evaporate the strained liquor in earthen vessels, placed in a sand heat, and when reduced to about half its bulk, let it cool. A white sediment will form inconsider- able quantity, which must be allowed to sub- side ; the clear solution must be decanted and boiled to dryness in a glass vessel. A white mass will remain, which is the dry phosphoric acid. This may be fused in a crucible, and poured out on a clean copper dish. A transpa- rent glass is obtained, which is the phosphoric acid in a glacial state ; not, however, perfectly pure, but containing sulphate and phosphate of lime. According to Fourcroy and Vauquelin, it is, in fact, a super-phosphate of lime, con- taining, in 100 parts, only 30 of

uncombined phosphoric acid, and 70 of neutral phosphate of lime ; but, when prepared with the full propor- tion of sulphuric acid, Mr. Dalton finds only from 8 to 12 per cent, of the calcareous phos- phates. To separate the latter, Dr. Higgins neutralised the acid liquor, obtained by the action of sulphuric acid on bones, with carbo- nate of ammonia, ‘ the neutral liquor was de- canted and evaporated, till a portion of it depo- sited crystals on cooling ; and was then poured, while hot, into a thin glass balloon, which was placed on a sand-bed of a reverberatory furnace. The mouth of the balloon being covered with an inverted crucible, the fire was gradually raised till the sand pot was obscurely red. In this way the sulphate of ammonia, and ammonia that neutralised the phosphoric acid, were both expelled, and the phosphoric acid remained in the form of a transparent colorless glass, still retaining a minute quantity of ammonia. The glacial acid may also be prepared from perfectly pure phosphoric acid, which has been made by acting on phosphorus with nitric acid. It is remarkable, that, according to the experiments

**f Berthier, it contains at least one-fourth its weight of water, a proportion which could scarcely 4ave been expected in so hard a substance.’ Henry.*

425. Phosphate of ammonia, exposed to a red Aeat in a platinum crucible, affords also a phos- phoric acid, which is very pure.

426. Phosphoric acid is deliquescent and so- luble. It is not susceptible of decomposition by the action of heat merely. When distilled in an earthern retort, with about half its weight of charcoal powdered, the glacial acid is decom- posed ; its oxygen, uniting with the carbon, forms carbonic acid, and part of the phosphorus rises in a separate state ; another, and the larger part, escapes in combination with hydrogen. In this way phosphorus is best obtained.

427. Phosphorus and chlorine. ††† These ele- ments combine in two proportions, constituting two definite compounds, viz. the perchloride, or bichloride, and the chloride, or proto-chloride.

428. When phosphorus is treated with chlo- rine, it burns with a pale flame, and produces a white volatile compound, which condenses on the sides of the vessel. This is the perchloride of phosphorus, a substance which was for some time confounded with phosphoric acid ; but its volatility is sufficient to mark the difference. It rises in vapor at a temperature considerably below 212††. It acts violently on water, a mutual

decomposition being effected, muriatic and phosphoric acids being the result. When trans- mitted through a red hot porcelain tube, with oxygen, phosphoric acid is formed and chlorine evolved ; this fact is in proof, that the affinity of oxygen for phosphorus, is stronger than chlo- rine.

*429. The chloride, or proto-chloride of phos- phorus.**** *Sir H. Davy recommends the prepara- tion of this compound, by passing the vapor of phosphorus over corrosive sublimate, which is a perchloride of mercury. By this process calomel, or proto-chloride of mercury is formed, and the phosphorus unites with one proportional of chlorine.*

430. Chloride of phosphorus is a liquid of the specific gravity 1-45. It soon, upon stand- ing, deposits a portion of phosphorus, and be- comes limpid and without color. It is converted into the perchloride by chlorine. Ammonia separates phosphorus, and produces a triple compound.

431. It acts upon water with much energy, and produces muriatic and phosphorus acids; while the perchloride produces muriatic and phosphoric acids, ‘ for as, in the perchloride, there are two proportionals of chlorine, so in acting upon water, two of oxygen must be evolved, which, uniting to one of phosphorus, generate phosphoric acid. The chloride of phosphorus, on the contrary, containing only one proportional of chlorine, produces muriatic acid, and phosphoric acid, when it decomposes water. But the phosphorus acid thus produced, always contains water, which it throws off when heated in ammonia, forming, with that alkali, a dry phosphate. This experiment shows that the hydro-phosphorus acid consists of two propor- tionals of phosphorus acid, zr 37 + 1 water

= 8-5.’

432. Phosphorus with Iodine. *** *Iodide of phos- phorus is formed by the simple combination of iodine with phosphorus ; the compound is of a reddish brown color, and if the components be quite dry when they are made to come into con- tact, their combination produces no evolution of gas; but if they be moistened, then hydriodic acid is formed from the union of iodine with the hydrogen of the water, a little subphosphureted hydrogen is also produced, and phosphorus re- mains in solution.*

SULPHUR.

433. Sulphur, or brimstone, is met with either as a compact solid body, usually in the shape of long rolls, or in the form of a light powder, called flower of sulphur. It is principally a mi- neral product. The sulphur of commerce is generally purer than that which is met with in this country, which is usually combined with a portion of the metal from which it has

been separated.

434. Sulphur volatilises at about the tem- perature of 180□□, if the heat be carried up to 225□□ it liquifies ; by a rapid increase of tempe- rature up to from 350 to 400□□, it becomes viscid, and of a deep brown color. It sublimes at 600□□, and after fusion it forms a crystalline fibrous mass.

435. If sulphur be converted into vapor in close vessels, it is again collected in a solid form ; what remains has been named sulphur vivum.

436. For pharmaceutical purposes it is occa- sionally precipitated from its alkaline combina- tions by an acid, and is then the milk of sulphur, or precipitated sulphur of the pharmacopoeia. This precipitated sulphur is considered by Dr. Thomson as a compound of sulphur and water.

437. We may judge of the purity of sulphur by heating it gradually upon a piece of pla- tinum leaf; when, if free from impurities, it will totally evaporate. Boiling oil of turpentine will also dissolve sulphur completely, if it be pure.

438. That sulphur contains hydrogen was proved by the experiments of Sir H. Davy, who produced sulphureted hydrogen from it by powerful voltaic influence; and the action of potassium upon it demonstrates the same thing, these two bodies enter energetically into combi- nation, and sulphureted hydrogen is evolved with intense heat and light.

439. But whether hydrogen be an incidental or inherent ingredient of sulphur is considered as still doubtful, both by Davy and Berzelius ; the latter chemist found, upon heating oxide of lead with sulphur, that the quantity of water produced was not sufficient to indicate any de- finite proportion of hydrogen in sulphur.

440. Sulphur and Oxygen. □□□ Two well-defined compounds are formed by the combination of sulphur with oxygen, viz. sulphurous and sul- phuric acid. The first may be obtained by several processes : 1 , By burning sulphur in oxygen gas. 2. By heating mercurial oxide with sulphur. 3. By boiling mercury in sulphuric acid; and, 4. By burning sulphur, at a low temperature, in common air, under a glass bell.

441. Sulphurous acid has a suffocating smell, resembling that which attends the burning of sulphur itself. It is more than twice as heavy as atmospheric air. In a gaseous state it extin- guishes burning bodies ; and it

is fatal to animal Jife when exclusively respired.

442. Water absorbs about thirty-three times its bulk, or one-eleventh its weight, and caloric is evolved by the union. The watery solution does not, as acids in general do, redden an in- fusion of litmus, but it entirely destroys its color. Hence its use in bleaching several sub- stances ; it is employed sometimes to check fer- mentation in wines.

443. Sulphurous acid maybe converted to the state of sulphuric, by imparting oxygen to it. If water, impregnated with sulphurous acid, be exposed to oxygen gas, the oxygen gradually becomes absorbed, and thus is sulphuric acid formed. By the addition of a little oxide of manganese to water saturated with sulphurous acid gas, sulphuric acid will be produced. This gas is likewise formed into sulphuric acid by ad- mixture with chlorine, if the gases are in contact with water ; the hydrogen of the water in this case combines with the chlorine, and the oxygen with the sulphurous acid. The contact of water is also necessary to the formation of the sulphuric acid, when the decompositions are effected by means of nitrous acid gas.

444. Sulphurous acid gas is decomposed by the application of heat, in contact with some combustible substances. A mixture of sulphurous acid and hydrogen gases, passed through a red- hot porcelain tube, will be attended by the fol- lowing decomposition and result; the oxygen of the acid will combine with the hydrogen, and form water, while sulphur will be deposited in a separate form.

Sulphurous acid, we are told, consists of

1 atom of sulphur . . . 16

2 atoms of oxygen ... 16

32

the relative weight of the atom of sulphur being double that of oxygen.

In volumes, it is constituted of 1 vol. of vapor of sulphur) , ,. , 1 vol. of oxygen . . j condensed into 1 vol.

445. Sulphuric acid was formerly obtained from sulphate of iron (green vitriol) by distilla- tion. It is now generally formed by burning a mixture of about eight parts of sulphur with one of nitre, in close leaden chambers, containing water. See Parkes' Chemical Essays, vol. ii. See also the first part of the present essay.

446. Sulphuric acid is a limpid and colorless fluid ; it is oily in its consistence, hence the vulgar name of oil of vitriol. A very consider- able heat is evolved when sulphuric acid and water are suddenly mixed. It is acrid and caustic ; it is nearly twice as heavy as water. It may be frozen by a sufficient reduction of tem- perature; and when, at the specific gravity of 1-780, it requires forits congelation even a less degree of cold than is sufficient to freeze water. All combustible matters decompose sulphuric acid, it is therefore necessary in preserving it, to

exclude such matters of every kind, and to keep it in bottles with well-fitting glass stoppers.

447. The atomic weights of sulphur and sul- phuric acid are stated as follows :

Weight of the atom of sulphur .... 16 Real sulphuric acid ••• 1 atom sulphur f 3 >

.oxygen $

Liquid sulphuric acid ~ 1 real acid J 1)

water $

448. Sulphuric acid is largely consumed in a variety of manufactures. It is used by the makers of nitric, muriatic, citric, and tartaric acids ; by bleachers, dyers, tin-plate makers, brass-founders, and gilders. For these purposes it is generally sufficiently pure as it comes from the wholesale manufacturer; but as traces of lead, lime, and potassa are usually found in it, it often requires to be purified by distillation, for the use of the experimental chemist.

449. The distillation of this acid in glass re- torts, requires some precaution, in consequence of the violent jerks which the production of its vapor occasions, and which often break the vessel ; this may be prevented by putting some strips of platinum into the acid ; it then boils quietly, and it is only necessary to take care that the neck of the retort and receiver are not broken, in consequence of the high temperature of the con- densing acid. This very useful contrivance, says Mr. Brande, was first shown me by Mr. James Smith.

450. If the acid of commerce contain dis- solved sulphate of lead, it becomes turbid, on dilution, so that its remaining clear when mixed with water, is some proof of its purity, as far, at least, as lead is concerned.

451. When sulphuric acid was procured by the distillation of green vitriol it was frequently observed that a portion concreted into a white mass of racliated crystals. The same substance has also been remarked as occasionally formed in the acid of the English manufacturers. It has been called glacial or fuming sulphuric acid, and is by Dr. Thomson considered as the pure or anhydrous acid ; that is sulphuric acid free from water, it appears however probable that it consist? of sulphuric acid combined with a portion o.p sulphurous acid.

452. It has long been an object with the ma- nufacturer to obtain sulphuric acid without the aid of nitre, and a patent has been obtained for a process of this kind, invented by Mr. Hill. It consists in submitting coarsely powdered iron pyrites (sulphuret of iron) to a red heat, in cy- linders communicating with a leaden chamber containing water. The sulphur, as it burns out of the pyrites, appears at once to pass into the state of sulphuric acid. Brande.

453. The theory of the formation of sulphuric acid, when it is procured from sulphur, is generally that of sulphur acquiring a certain quantity of oxygen, either from the atmosphere or from the bodies with which the sulphur is made to come in contact ; when the acid is formed by burning nitre and sulphur together, sulphurous acid is generated, while the nitre occasions the produc- tion of nitric oxide, which produces nitrous acid gas. ‘ When these gases, i. e. sulphurous and nitrous acids, are perfectly dry they do not act

upon each other, but moisture being present in small quantities they form a white solid, which is instantly decomposed when put into water. The nitrous acid reverts to the state of nitrous oxide, having transferred one additional proportional of oxygen to the sulphurous acid, and with water producing the sulphuric acid ; while the nitric oxide by the action of the air again affords nitrous acid, which plays the same part as before.’

454. Sulphuric acid is susceptible of decom- position, by being treated with combustible sub- stances at high temperatures. Indeed heat alone will decompose it. If the vapor of the acid be passed through a red hot tube of glass or porcelain it is resolved into sulphurous acid gas and oxygen gas. Platinum wires, communicating with the extremities of a galvanic pile, will also decompose the acid, and jt will be found that, at the end of the

negative wire, floculi of sulphur make their appearance, while at the positive end oxygen gas is evolved. In this experiment some sulphate of platinum is said to be formed, pro- duced by the action of the acid upon the pla- tinum, and indicated by the presence of a brownish tinge.

455. The hypo-sulphurous acid does not exist, as do the two acids just mentioned, separable from a base ; nor does hypo-sulphuric acid.

456. Sulphur with chlorine. ••• Chloride of sul- phur was first described by Dr. Thomson, in Nicholson's Journal. Upon sulphur being heated with chlorine more than twice its weight of the gas is absorbed, the product is a greenish yellow fluid, which exhales suffocating fumes when ex- posed to the air ; its specific gravity is 1-6. It is volatile below 200•• of Fahrenheit. It does not affect vegetable blues when they are in a dry state, but upon water being added, it instantly reddens them, sulphur becomes deposited, and sulphurous, sulphuric, and muriatic acids are formed from the decomposition of the water, its hydrogen uniting with the chlorine, and its oxy- gen combining with a portion of the sulphur to form the sulphuric and sulphurous acids, while another portion of sulphur is, as above stated, thrown down.

457. Sulphur and iodine readily combine at a gentle heat and form a black compound, not un- like the sulphuret of antimony. This was first described by Gay Lussac in the An. de China. 91 . Its precise composition does not seem to be known.

SELENIUM.

458. Berzelius detected this substance in the sulphur of Fahlun in Sweden, and he at first supposed it to be tellurium. The process jof extracting it is described in the 13th volume of the Annals of Philosophy. This material has since been discovered in the volcanic rocks of Lipari ; and more recently several minerals from the east have been found to contain it by the analysis of Mr. Henry Rose (See An. de Chim. et de Phys. xxix. 113.) A seleniuret of lead has also been analysed from the Lawrence Mine at Clausthal, which bore a considerable resem- blance to galena, and from "which selenium was sublimed by heating the material in a glass tube.

459. The color of selenium is gray, but it varies considerably ; it has a bright metallic lus- tre, and by most chemists is arranged among the metals. When heated before a blow-pipe it ex- hales fumes, with a smell like that of horse-radish, which is so powerful that it is said a fragment not exceeding l-50th of a grain is sufficient to impregnate the air of a large apartment.

460. Selenium combines with the oxygen of the air when heated. The

selenic oxide gas is but sparingly soluble in water. It does not unite with liquid alkalis. It seems to belong to the same class of oxides as the carbonic oxide.

461. Selenic Acid. ††† If selenium be heated to dryness in combination with nitric acid, a volatile and crystallisable compound is formed, which is the selenic acid. This may likewise be obtained by dissolving selenium in nitric and nitro-mu- riatic acid, and evaporating the solution in a retort. This acid unites with most bases in two proportions, forming a class of salts called sele- niates, biselianates, &c. See Annales de Chimie et Physique, torn. vii. Thomson's Annals, ii. and xii.

462. Selenium absorbs chlorine gas, with which it forms a brown liquid, that by the ad- dition of more chlorine is changed into a white solid mass. Berzelius states this to be a com- pound of muriatic and selenic acids, but it is probably composed, says Dr. Henry, of chloride of selenium and the latter acid.

After treating of the acidifiable bodies (not metallic), and their combination with oxygen, chlorine, iodine, and fluorine, the author, whose arrangement we hitherto adopt, proceeds to con- sider their combination with each other.

NITROGEN AND HYDROGEN. (Ammonia).

463. Ammonia in a gaseous form may be ob- tained by mixing equal parts of muriate of am- monia and dry quicklime, or two of the former and one of the latter ; they are to be introduced into a small glass retort, a gentle heat applied, and the gas that is evolved collected over mer- cury.

464. This gas has a strong pungent smell ; it has a specific gravity to hydrogen of 8 to 1, 100 cubical inches weighing a little more than 18 grains. It extinguishes flame, and is fatal to animal life ; it converts most vegetable blues to green, and yellows to red; thereby establishing its alkaline properties, and it has obtained the vul- gar appellation of volatile alkali. It is readily absorbed by water, and when the liquid is sa- turated with the gas, liquid ammonia is produced ; which may be formed in the way recommended by Mr. R. Phillips. Remarks on the London Pharmacopeia, for an account of this process see AMMONIA and PHARMACY.

465. Ammoniacal gas may be analysed by applying an electric spark to a mixture of am- monia and oxygen gas, which inflames it, in the same way that the electric spark fires a mixture of hydrogen and oxygen gases. Dr. Henry first observed this, and published the announcement in the

Philosophical Transactions for 1809.

*466. To obtain accurate results we are directed to ‘ use less oxygen at first than is sufficient to saturate the whole hydrogen of the alkali, for h**

the full proportion of oxygen be employed, part of the nitrogen also is condensed into nitric acid. In the first combustion of 100 volumes of ammonia, we may use therefore fifty measures of oxygen, which will be entirely consumed. To the residue we may add 3 oz. or 35 measures more, and inflame the mixture by an electric spark, rioting the diminution. Of this diminu- tion one-third is oxygen, and, adding to it the oxygen spent in the first combustion, we have the whole oxygen consumed . This being doubled, shows the volumes of hydrogen in 100 of am- monia, which will generally prove to be 150. The nitrogen may be learned by deducting from that found by heat in the residue, the quantity introduced as an impurity of the oxygen, and it will be found that when the process has been carefully performed, the remainder amounts to fifty volumes/ Henri/.

467. Ammonia is decomposed by passing it through a red-hot iron tube ; it thus becomes expanded, and is resolved into hydrogen and nitrogen gases. It is also decomposed by pass- ing it over black oxide of manganese, heated red-hot in a porcelain tube ; water and nitrous acid gases are formed, as well as nitrate of am- monia.

468. The decomposition of many animal sub- stances occasions the production of ammonia ; it is also formed during the violent action of nitric acid upon some of the metals, and by moistened iron filings exposed to nitrogen gas, in which last case, the iron decomposes the water, and the liberated hydrogen combines with the nitrogen to form ammonia.

469. Ammonia combines with the acids, form- ing a class of salts which are generally soluble in water, and whiph are for the most part dis- sipated, and even decomposed, by heat. See AMMONIA in the body of the work.

470. Chlorine and Ammonia. ††† When the gases of chlorine and ammonia are mixed, a partial decomposition of the ammonia is occasioned, nitrogen is liberated, and muriate of ammonia formed.

Ammoniacal Salts.

471. Ammonia and chloric acid. ††† Chlorate of ammonia is formed either by saturating car- bonate of ammonia with chloric acid, or by pre-

cipitating the solution of any earthy chlorate by it. It exists in needle-shaped crystals, which are exceedingly soluble in water, and detonate when thrown upon hot coals with a red flame. The exact proportion of its components has not been demonstrated.

472. Ammonia and iodine. ††† Upon the ad- dition of iodine to liquid ammonia, a part unites to the hydrogen of the ammonia and becomes hydriodic acid, while another part combines with its nitrogen, and is precipitated in the form of a black powder. This compound of nitrogen and iodine detonates with extreme readiness.

473. lodate of ammonia, or ammonia saturated with iodic acid, exists in small crystals of an indeterminate form ; when heated it is readily decomposed, it detonates, and iodine escapes ; oxygen, nitrogen, and water are also formed.

474. Hydrivdate of Ammonia is formed of

equal volumes of ammoniacal and hydroidic acid gases. It crystallises in cubes.

475. Hydrochlorute of Ammonia, Muriate of Ammonia, or Sal-ammoniac. ††† Mix equal volumes of ammoniacal and muriatic acid gases, and they will become entirely condensed into a white solid, which solid is sal-ammoniac, as it is com- monly called. For the commercial and other modes of obtaining it, consult the article AM- MOMAC, SAL.

476. ‘ Muriate of ammonia exhibits the fol- lowing properties.

It is volatilised without being liquified or de- composed, or, in other words, may be sublimed. Sir H. Davy finds that it may even be passed without alteration through glass or porcelain tubes, heated to redness. When, however, it is transmitted over ignited metals, it is decomposed into its gaseous elements. It is readily soluble in water, three parts and a half of which, at 60††, take up one of the salt. During its solution much caloric is absorbed. In boiling water it is still more soluble ; and the solution in cooling shoots into regular crystals. ††† It slightly attracts moisture from the air. ††† On the addition of a solution of pure potassa, or pure soda, the alkali is disengaged, as is evinced by the pun- gent smell that arises on the mixture of these two bodies, though perfectly inodorous when separate. ††† Though generally considered as a neutral salt, yet if placed on litmus papei, and moistened, Berzelius observes, that the paper is reddened after some moments, as it would be by an acid. It is decomposed by strontia, lime, and magnesia.’ Henry.

477. ‘ Native muriate of ammonia, occurs mas sive and crystallised in the

vicinity of volcanoes, and in the cracks and pores of lava, near their craters. It has thus been found at jEtna, and at Vesuvius, in the Solfa-terra, near Naples, and in some of the Tupcan Lakes. An efflorescence of native sal-ammoniac, is sometimes seen upon pit coal. Its color varies from the admixture of foreign matter, and it is frequently yellow from the presence of sulphur. It is said that con- siderable quantities of native sal-ammoniac are also found in the country of Bucharia, where it occurs with sulphur in rocks of indurated clay. The ancients according to Pliny, called this salt ammoniac, because it was found near the temple of Jupiter Ammon in Africa.' Brands.

478. Ammonia and nitric acid. Nitrate of ammonia. ††† This salt, from its exploding at a high temperature, was formerly called nitrum flam- mans. The most simple and direct mode of procuring it, is by saturating dilute nitric acid with carbonate of ammonia. The salt takes on a different form, according to the manner iu which its solution may have been evaporated. If the liquor be evaporated by a heat under 100†† its crystals are six-sided prisms, terminated by long six-sided pyramids. If the heat applied be at 212††, the crystals on cooling bect.-me thin and fibrous. It is deliquescent in all its forms when exposed to the atmosphere, but it is less soluble when it has been formed in the regular mode of crystallisation, than when boiled down into a shapeless mass.

479. The most important property of nitrate

of ammonia, is that it yields, as already stated, the nitrous oxide.

480. The mode of its preparation influences its composition as well as its solubility ; the variations of the compound are stated by Sir H. Davy to be as follows :

Prismatic; Fibrous. Compact.

69-5 72-5 74-5 Acid.

18-4 19-3 19-8 Ammonia.

12-1 8-2 5-7 Water.

100-

100-

481. Ammonia with carbonic acid. ††† The ammonical and carbonic acid gases readily com- bine to form carbonate of ammonia. One vo- lume of the latter and two of the former, being mixed in a glass vessel over mercury, undergo a complete condensation, and carbonate of am- monia is the result. This is one of the most useful of the ammoniacal compounds.

482. A bi-carbonate is engendered if water be present, for this so far overcomes the elasticity of the gas as to enable the salt formed to take up another volume of carbonic acid.

483. Carbonate of ammonia is generally met with in cakes which are broken away from the vessel in which the salt sublimes, when it is made by treating muriate of ammonia with car- bonate of lime. This salt ought indeed to be called hydrated carbonate of ammonia, since the result of the combination is carbonate of am- monia, water, and chloride of calcium, the two first being in union ; and, even supposing the materials of the compounds to be dry, water comes to be formed by the union of the hydrogen abstracted from the muriatic acid, with the oxygen taken from the lime.

484. Under the name of the sub-carbonate of ammonia, another compound is met with in the shops, produced by mixing one part of muriate of ammonia with one and a half of dry carbonate of lime, and exposing them to heat in a proper apparatus.

485. This Mr. Phillips says, ought to be named the sesqui-carbonate of ammonia, and it should thus appear that ammonia and carbonic acid combine together in three known propor- tions, viz. the carbonate composed of one pro- portional acid -f 1 base, the sesqui-carbonate composed of 1-5 acid f 1 base, and the bi- carbonate of 2 acid f 1 base. The odor of the sesqui-carbonate is pungent, its taste is pene- trating and saline ; it renders blues green, and reddens turmeric. A pint of water at 60††† dis-

solves rather less than four ounces. This solution is the liquor ammoniae sub-car bonatis of the London Pharmacopoeia.

486. Borate of ammonia is formed by satu- rating boracic acid with ammonia ; it is formed in crystals. Phosphate of ammonia is very soluble, but does not easily crystallise. Hypo- phosphite of ammonia. Composition unknown. Phosphate of ammonia is a common ingredient in urine, especially of the carnivorous animals. It may be formed by saturating the

*superphos phate of lime, which results from the action of sulphuric acid on bones, with carbonate of am- monia ; or by at once saturating phosphoric acid with ammonia. It crystallises in four-sided pyramids with square bases, which are soluble in twice their weight of water at 6►►. Hyposi*l- phite of ammonia is strictly, according to Mr. Herschell, a bi-salt. It may be formed by pass- ing sulphurous acid through the aqueous solution of the sulphuret. This salt does not freely crystallise. Its taste is exceedingly bitter and pungent. Sulphate of ammonia may be formed by passing ammonia into sulphuric acid ; but it is usually prepared by dilute sulphuric acid, with the sub-carbonate; or by decomposing muriate of ammonia by sulphuric acid. This salt crystallises in six-sided prisms, which have a bitter and pungent taste ; are slightly deli- quescent, and are soluble in an equal weight of boiling water. Seleniates of ammonia exist in three different proportions, forming seleniates, biseleniates, and quadrisileniates.*

HYDROGEN WITH CARBON.

487. Carbon and hydrogen combine so as to form carbureted hydrogen gas; this union is effected in several natural processes, especially those of putrefaction ; it cannot, however, be effected by heating charcoal at once in hydrogen gas, since the cohesive attraction existing between the particles of the charcoal prevents the free chemical combination between the two sub- stances.

488. Another combination of these substances is generally known by the name of olefiant gas, which was first noticed by the chemists of Hol- land, and termed by them olefiant, and to a third combination Mr. Dalton has given the provisional name of super-olefiant ; this last, however, has never been exhibited in a separate form.

489. We extract from Dr. Henry's Chemistry the following table, giving a general view of these gases.

Specific Gravity.

Proportions by weight.

Proportions in Volume.

7 Condensed into one ►► volume.

1. Carbt. Hydrogen 2. Olefiant . . . 3. Super Olefiant .

0.555 0-972 1-458

6 carb. 2 hydr. 12 carb. 2 hydr. 18 carb. 3 hydr.

1 carb. 2 hydr. 2 carb. 2 hydr. 3 carb. 3 hydr.

490. It has been supposed, from the variety of specific gravity and composition of gases obtained by the combination of carbon and hydrogen, that they are capable of combination in- definitely, that is in every proportion ; but this is conceived to be an erroneous supposition by other chemists, and it is thought that appearances

favoring that inference, are attributable to the peculiarity, that the combinations differ from each other, not so much in the relative proportions of their elements, as in the number of atoms or volumes condensed into a given volume.

491. Carbureted hydrogen gas. ••• To this gas

has been given the name of heavy inflammable air, gas of marshes, hydrocarburet, proto-carburet of hydrogen ; and Dr. Thomson has termed it bi-hydroguret of carbon.

492. By stirring the bottom of stagnant water, we may generally obtain some of this gas, but it is in this instance mixed with some free carbonic and nitrogen gas.

493. Carbureted hydrogen is inflammable, it burns with a bright yellow flame, and gives out much more light in its combustion than does hydrogen gas. To burn it completely, in oxygen gas, it is necessary to use more than twice its volume of the latter. ‘ Now we know that in carbonic acid gas there exists exactly its volume of oxygen ; and hence one volume of the oxygen spent is found in that compound, and the other volume has formed water with the hydrogen, which last element must have existed in quantity equivalent to twice the bulk of the inflammable gas.

494. Bi-hydroguret of carbon, it is said above, has been applied to this gas as more designative of its proportional composition ; and this name, proposed by Dr. Thomson, is allowed by Dr. Henry to be more appropriate than carbureted hydrogen, which is only therefore retained upon the ground of its being objectionable to lay aside appella- tions which long custom has sanctioned.

495. Olefiant gas is also called by Dr. Thom- son hydroguret of carbon ; and Mr. Brande tells us that he is induced to consider this as the only definite compound of carbon and hydrogen, the gas just mentioned being in

his opinion a mixture of carbureted hydrogen and hydrogen.

496. Olefiant gas may be obtained by distilling in a glass retort, with a gentle heat, three or four parts of sulphuric acid with one of alcohol. It may be collected over water, and freed from carbonic acid by washing it with liquid potassa.

497. When pure this gas has very little odor ; when set on fire it burns with a dense and bright flame ; and when mixed with oxygen gas it de- tonates loudly.

498. Upon mixing together chlorine and ole- fiant gases in equal quantities, an immediate di- minution follows, one half of which diminution is due to the olefiant, and one to the chlorine gas ; these gases having been found to saturate each other in equal quantities. If the gas be mixed with eight or nine times its bulk of chlo- rine, and exposed to the rays of the sun, an hydro-chloride of carbon is formed, which, upon being still continued to be subjected to light, changes into the crystalline compound already mentioned as having been discovered by Mr. Faraday, and which is the perchloride of carbon.

499. A hydriodide of carbon, or hydro-car- buret of iodine, is formed by mixing the percar- bureted hydrogen with iodine, and likewise ex- posing them to the sun's rays. This compound was first discovered by Mr. Faraday, also in the laboratory of the Royal Institution ; it assumes the form of a crystalline salt, and appears according to the analysis of Mr. Faraday to consist of 1 atom of iodine + 2 olefiant gas.

500. A super olefiant gas is mentioned in the Philosophical Transactions of 1821, by Dr. Henry, as having been discovered by Mr. Dalton ; but

it has not yet been exhibited in a separate form.

501. Of the mixed combustible gases from moist charcoal, alcohol, ether, coal, oil-tallow, and wax. And on thejlre damp of coal mines ; and the con- struction and principle of the safety lamp of Sir H. Davy. ••• As the consideration of the several particulars mentioned above, involves a good deal of very interesting matter, not only in a philosophic, but in a practical point of view ; and, as we have found nothing in our researches respecting them more satisfactorily concise than the disquisition of Dr. Henry, we shall take the liberty of extracting from his Elements the whole section which relates to these topics.

502. The three gases, says Dr. Henry, which have been just described under the names of carbureted hydrogen, olefiant, and super olefiant gases, appear to me to be the only compounds of those elements that have as yet

been proved to be distinct and well characterized species. It is of mixtures of two or more of those three gases, with occasionally a proportion of carbonic oxide, and a few other gases, that the almost infinite variety of aeriform products are constituted, which are obtainable by the exposure of mois- tened charcoal, of alcohol, or ether, of oil, tallow, wax, or coal, to a heat a little above ignition. This view of the subject at least appears to me to be much more probable than that they are so many distinct compounds of carbon and hy- drogen, which, on this theory, would be capable of uniting in all possible proportions with each other.

503. Of these aeriform compounds, the gases from coal and from oil are of most importance, from their widely extensive use in artifical illu- mination.

504. Coal gas. ??? By submitting coal to distil- lation in an iron retort, besides a portion of tar, and solution of carbonate of ammonia, which condense in a liquid form, a large quantity of permanent gas is evolved. This gas I have shown (Philosophical Transactions 1808 and 1820) is extremely variable in composition and properties, not only when prepared from different coals, but from the same kind of coal under dif- ferent circumstances. Within certain limits, the more quickly the heat is applied the greater is the quantity, and the better the quality, of the gas obtained from coal ; for too slow a heat ex- pels the inflammable matter in the form of tar. The earliest products of the gas are also the heaviest and most combustible, and there is a gradual decline in quality towards the close of the dis'tillation, insomuch, that the last products are inferior by more than one-half to the first. Thft general name of coal gas is therefore quite indefinite, it is in fact a mixture of the two varieties of carbureted hydrogen, with a third which remains to be more fully investigated, as well as with hydrogen gas, carbonic oxide, car- bonic acid, nitrogen and sulphureted hydrogen gases in ever varying proportions. For the methods of separating these gases from each other, Dr. Henry refers to papers which he has published in the Philosophical Transactions for 1808, 1820, and 1824, and in the third vol. of the second series of the Manchester Society's

Memoirs, or the fifteenth vol. of Annals of Phi- losophy.

505. ' Coal gas, ' he continues, ' as generally produced, has a very disagreable odor, arising from sulphureted hydrogen, and perhaps a little sulphuret of carbon ; but both these may be wash- ed out of it by cream of lime with very little loss of illuminating power, and with an entire removal of all unpleasant smell either before or during burning. The best gas has the

specific gravity ⁂650 or upwards; and each volume consumes about 2 J volumes of oxygen and gives 1⁂ volume of carbonic acid; the last portions have a specific gravity as low as 340, and each volume con sumes about 8-10ths of a volume of oxygen and gives about 3-10ths of a volume of carbonic acid. In the best gas, chlorine, properly applied, detects from thirteen to twenty per cent, of olefiant gas, and the remainder is almost pure carbureted hydrogen ; but the last products contain little or no olefiant gas, much less carbureted hydrogen, and instead of these a large proportion of hydro- gen and carbonic oxide, both of which afford very little light by their combustion.'

506. It is scarcely possible to assign the quantity of gas which ought to be obtained from a given weight of coal, but it may be considered as an approach to a general average to state that 112 Ibs. of good coal are capable of giving from 450 to 500 cubic feet of gas, of such quality that half a cubic foot per hour is equivalent to a mould candle of six to the pound, burning during the same space of time.

507. Oil gas ⁂ 'In Nicholson's Journal I have,' says Dr. Henry, 'given an account of some experiments on the gas obtained by the destructive distillation of spermaceti oil> which showed that of all the artificial gases, this, next to olefiant gas, consumes most oxygen, and is the best adapted to afford light." ⁂ Since that time, an apparatus has been in- vented, by Messrs Taylor of London, which has greatly facilitated the preparation of oil gas on a large scale, and this gas is now much used as a source of artificial light. The process consists in letting whale oil (the purity of which is not essential, since inferior oil answers the purpose,) fall by drops into an iron cylinder, placed horizontally in a furnace, and ignited to a cherry redness. From each wine gallon of oil about 100 cubic feet of gas may with care be obtained, of the specific gravity of more than 900, containing upwards of forty per cent, of gas condensable by chlorine, and of which 100 volumes consume 260 volumes of oxygen and yield 158 of carbonic acid. But of gas from Wigan cannel, when the whole product is mingled together, 100 measures do not saturate more than 155 of oxygen, and give 88 measures of carbonic acid. Oil gas, therefore, from this document, may be inferred to contain, in a given volume, twice the quantity of combustible mat- ter that is present in the average of gas from cannel coal ; and its illuminating power will be as 2 to 1. The experiments of Mr. Brande led him to conclude that to produce the light of ten wax candles for one hour, there were required :

2600 cubical inches of olefiant gas 4875 oil gas

13120 coal ⁂as.

But it seems probable that the coal gas em- ployed in his experiments was below the general standard, and that it is a fair average to consider one volume of oil gas as equivalent to two or at most to two and a half of gas from coal of good quality. This estimate agrees with the experi- ence of the late Mr. Creighton of Glasgow, author of the excellent article Gas Lights, in the Sup- plement to the Encyclopaedia Britahnica. Oil gas he considers as superior, in an equal volume, to good average coal gas, in the proportion of only two to one; and he has given the following table of the comparative expense of lighting with these two gases, and ".vith oil and tallow : ???

Valuing the quantity of light given by 1 Ib. s. d.

of tallow in candles at 10

An equal quantity of light-from sperm oil, consumed in an Argand's lamp, will

cost 0 6??

Ditto from whale oil gas 0 4??-

Ditto from coal gas 0 2|

Twenty cubic feet of coal gas, or ten of oil gas, he considers as equivalent to a pound of tal- low, and 5000 grains of good sperm oil to 7000 of tallow, or 1 Ib avoirdupois.

508. The advantages of oil gas over gas from, coal are, that smaller distilling vessels are re- quired ; that gasometers and conduit pipes of half the capacity are sufficient ; that no washing apparatus is necessary ; that the trouble and expense of removing waste materials is avoided ; and that the gas affords a much brighter light with a smaller production of heat, and also of water. When only a moderate quantity of light is required, when it is an object to save room or labor, and in countries where coal is dear, oil gas is entitled to a decided preference ; but it cannot be brought into competition with coal gas where coal is cheap, or where the establishments to be lighted are of very considerable magnitude, and of such a nature as to allow of their being freely ventilated.

509. Of the comparative value of different compounds of hydrogen and charcoal, for the purposes of illumination, it still appears to me that the only accurate test is the one which I proposed in Nicholson's Journal for 1805, viz. the quantities of oxygen gas required to saturate equal volumes. In other words, the illuminating powers of different gases will be proportioned to the numbers of volumes of gaseous carbon con- densed into one volume of gas ; and of these the oxygen consumed, and the carbonic

acid pro- duced, afford an accurate measure. If 100 vol- umes, for instance, of one gas require for perfect combustion 100 volumes of oxygen, and 100 volumes of another gas take 200 of oxygen, the value of the second will be double that of the first. Specific gravity, though a guide to a cer- tain extent, is not a sufficient one ; for the weight of a gas may be owing to a large proportion of carbonic oxide, which is capable of giving out only a very small quantity of light. Photomet- rical experiments also appear to require greater perfection in the instruments that have been in- vented for that purpose, before we can impˆcitly trust to results obtained by their means ; but there can be no fallacy in the combustion of these gases by oxygen, if conducted with ordinary rare,

and especially if, in each instance, an average be taken of two or three trials, which need not oc- cupy more than a few minutes. Nor can it admit of a doubt that, other circumstances being equal, the brilliancy of light evolved by the com- bustion of gases which are constituted of purely inflammable matter, will bear a proportion to their densities, perhaps even a greater propor- tion than one strictly arithmetical; because while by the combustion' of denser gases a higher tem- perature is produced, the cooling agencies re- main the same. It is probable, therefore, that, of two gases composed of the same ingre- dients, that which has a double density will afford somewhat more than a double quantity of light.

510. Thejire damp of coal mines (we continue to extract from Dr. Henry), by an analysis of it which I published in 1806 (Nicholson's Journal xix. 149), was shown to be identical in composi- tion with carbureted hydrogen. This conclusion coincides with the subsequent results of Sir H. Davy, who has enlarged our knowledge of the chemical history of the fire damp by several im- portant facts (Philosophical Transactions, 1816>; and has been led by an ingenious and happy chain of reasoning to a discovery most important to the interest of humanity. The most readily explosive mixture of fire damp with common air he found to be one measure of the inflammable gas, to seven or eight of air. The mixture was not capable of being set on fire by charcoal in a state of active combustion, nor by iron ignited to a red, nor even to a white heat, except when in a state of brilliant combustion : in which respect the fire damp differs from, other combustible gases.

511. It was in attempting to measure the ex- pansion occasioned by the combustion of a mix- ture of fire damp and air, that Sir H. Davy dis- covered a fact which afterwards led him to the most novel and important

results. An explosive mixture could not, he ascertained, be kindled in a glass tube so narrow as one-seventh of an inch diameter; and when two separate reservoirs of an explosive mixture were connected by a me- tallic tube one-fifth of an inch diameter, and an inch and a half in length ; and one of the por- tions of gas was set on fire, the explosion did not extend to the other. Fine wire sieves or wire gauze, interposed between two separate quanti- ties of an explosive mixture, were also found to prevent the combustion of one portion from spreading to the other. A mixture of fire damp and air, in explosive proportions, was deprived of its power of exploding by the addition of about one-seventh its bulk of carbonic acid, or nitrogen gas.

512. Reflection on these facts suggested to Sir H. Davy, the possibility of constructing a lamp, in which the flame, by being supplied with only a limited quantity of air, might produce carbonic acid and nitrogen in such proportion as to destroy the combustibility of explosive mixtures ; and which might also, by the nature of its apertures for giving admittance and exit to the air, be rendered incapable of spreading com- bustion to the surrounding atmosphere, supposing this to be an inflammable one. This most desi-

rable object was accomplished by the use of air- tight lanterns supplied with air through tubes or canals of small diameter, or through apertures covered with wire gauze below the flame, and having a chimney at the upper part, on a similar system, for carrying off the foul air. The appara- tus was afterwards simplified by covering or sur- rounding the flame of a lamp or a candle with a cylindrical wire sieve, having at least 625 aper- tures in a square inch. Within this cylinder, when the fire damp encompassing it is to the air as 1 to 12, the flame of the wick is seen sur- rounded by the feeble blue flame of the gas. When the proportion is as 1 to 5, 6, or 7, the cylinder is filled with the flame of the fire damp; but though the wire gauze becomes red hot, the exte- rior air, even when explosive, is not kindled. The lamp is therefore safe in the most dangerous atmospheres, and has been used most extensively in the mines of Whitehaven, Newcastle, and other places, without the occurrence of a single failure or accident.

513. The effect of the safety lamp depends on the cooling agency of the wire gauze, exerted on the portion of gas burning within the cylinder. Hence a lamp may be secure where there is no current of an explosive mixture to occasion it being strongly heated ; and yet not safe when the current passes through it with great rapidity. But any atmosphere, however explosive, may be rendered harmless by increasing the cooling sur- face ; which may be done either by diminishing the size of the apertures, or by increasing their depth, both of which are perfectly within the power of the manufacturer of the wire gauze.

514. When a small coil of platinum wire is hung above the wick of the lamp, within the wire gauze cylinder, the metal continues to glow long after the lamp is extinguished, and affords light enough to guide the miner in what other- wise would be impenetrable darkness. In this case the combustion of the fire damp is continued so slowly, and at so low a temperature, as not to be adequate to that ignition of gaseous matter which constitutes flame, though it excites a temperature sufficient to render platinum wire luminous. A similar ignition of platinum wire, it has been found, may be supported for many hours, by surrounding the flame of a spirit lamp with small coils of that metal, not exceeding ˆ of an inch in diameter. Twelve coils of this wire twisted spirally round the tube of a tobacco-pipe, or round anything that will render the coils about ˆ of an inch in diameter, are to surround, six the wick of the lamp, and six to remain elevated above the wick. The wick should be small and quite loose in the burner of the lamp ; and the fibres of the cotton surrounded by the coil should be laid as straight as possible. When the lamp, after being lighted for a few moments, is blown out, the platinum wire continues to glow for seve- ral hours, as long as there is a supply of spirit of wine, and to give light enough to read by ; and sometimes the heat produced is sufficient to re- kindle the lamp spontaneously.

515. Mr. Faraday has recently published an account of other combinations of carbon and hy- drogen, the one a bicarburet of hydrogen, con- sisting of two proportionals of carbon and one

hydrogen; and the other a new gas or vapor ⁂with the same elements both in kind and propor- tion as those of oletiant gas, yet in a different state of combination. See Philosophical Trans- actions, 1825.

HYDROGEN WITH PHOSPHORUS.

516. Sir H. Davy gave the name of hydro- phosphoric gas to the compound of phosphorus and hydrogen, which is obtained by heating the solid phosphorus acid without the contact of air. Dr. Thomson proposed that it should be called the bi-hydroguret of phosphorus. This gas has an unpleasant smell, but not so offensive as the phosphureted hydrogen. It is not inflammable spontaneously, but when it is heated with oxygen it explodes. In chlorine it inflames spontaneously, and explodes with a white flame. Its specific gravity to hydrogen is as 12 or 13 to 1. 100 cu- bical inches weigh‘29‘25 grains. It is constituted we are told of two atoms of hydrogen and one of phosphorus ; the hydrogen, however, is con- densed

*into half its bulk. The theory of its for- mation appears to be, that the water is decom- posed, the oxygen of it going with a portion of the phosphorus acid to form phosphoric acid,
 ا ا ا while the hydrogen with the phosphorus existing in another portion of the phosphorus acid form together the gas.*

517. Phosphureted hydrogen gas, or the hy- droguret of Thomson. ا ا ا There are several ways of obtaining this composition. We are directed by Dr. Thomson to fill a small retort with water acidulated with muriatic acid, and then throw in a few lumps of phosphuret of lime ; the mere action of the phosphuret upon water will indeed be sufficient to disengage the gas ; the water be- coming decomposed, its oxygen combining with part of the phosphorus forming phosphoric acid, this unites with the lime, and, the hydrogen dis- solving, another portion of phosphorus passes off as the gas in question ; which may also be ob- tained by putting into five parts of water half a part of phosphorus, cut into very small pieces, with one of finely granulated zinc, and adding three parts of strong sulphuric acid. This affords an amusing experiment. The gas is disengaged in small bubbles which cover the whole surface of the fluid, and take fire on reaching the air, these are succeeded by others and a well of fire is produced.

518. Phosphureted hydrogen gas is colorless, it has a nauseous smell like onions, it inflames spontaneously upon coming into contact with air, and when mixed suddenly with oxygen detonates. It burns also with chlorine, and with nitrous oxide, forming, in the first case, muriatic acid and perchloride of phosphorus. There is a mutual decomposition upon mixing sulphureous acid gas and phosphureted hydrogen. The gas is decom- posed by electricity. It deposits phosphorus on standing, without any diminution of volume. It may be regarded as containing one proportional of phosphorus, and one of hydrogen.

519. Subphosphureted Hydrogen gas. We have said above that phosphureted hydrogen deposits phosphorus upon standing, and it has been stated that three aeriform compounds of hydrogen and phosphorus exist, the bi-hydroguret of phospho-

rus, containing 2 proportionals of hydrogen to 1 of phosphorus, the phosphureted hydrogen 1- to 1, and the subphosphureted hydrogen with 1. 0-75 520. The existence of varieties of phosphu- reted hydrogen has been questioned by Mr Dalton, who conceives that the apparent diversi- ties of composition in these gases are referrible to the admixture of various proportions of free hydrogen in them.

HYDROGEN WITH SULPHUR.

521. Sulphureted hydrogen gas. ❖❖❖ This gas may be obtained by subliming sulphur in hydro- gen gas, or presenting sulphur to nascent hydro- gen, which is done when sulphuret of iron is acted on by dilute sulphuric acid. But the best mode of obtaining it seems to be, that of mixing bruised sulphuret of antimony (the crude anti- mony of commerce), with muriatic acid, by which admixture and the proper application of heat the sulphureted hydrogen will be disengaged in large quantity.

522. It has the following properties, a smell like that of rotten eggs, a specific gravity to hydrogen 16 to 1. 100 cubic inches weighing 36 grains. It is quickly fatal to animal life when respired. It is inflammable, and during its combustion water and sulphurous acid are formed. It tarnishes polished metals. It is absorbed by water, and this fluid saturated with the gas reddens the infu- sion of litmus. It is decomposed by chlorine, and when subjected to a succession of electric explosions, sulphur is thrown down from it with- out any alteration in the volume of the gas. Sulphureted hydrogen is copiously absorbed by the alkalis and by all the earths, excepting alu- mina and zirconia. It unites with ammonia in equal volumes. When acted upon by potassium or sodium a brilliant combustion is the consequence ; a quantity of hydrogen gas is evolved precisely equivalent to that which the same weight of me- tal would have separated from water, the metal loses its lustre, and becomes grayish, or amber colored, or reddish ; and by the action of diluted muriatic acid the whole of the sulphureted hy- drogen is recovered. This experiment proves that sulphureted hydrogen, and consequently sulphur, contains no oxygen, for in that case the potassium having had its affinity for oxygen partly satisfied, would not, after being acted on by the gas, evolve the original quantity of sulphureted hydrogen from water. All that appears to take place during the combustion, is the combination of the metal with sulphur, the liberation of hy- drogen, and the formation of a sulphuret of po- tassium or sodium, which disengages from water exactly as much hydrogen as would have been evolved by the metal in its separate state, and this, hydrogen, while in a nascent state redissolves the sulphur.

523. The bi-sulphureted hydrogen is obtained by mixing muriatic acid with the hydro-sulphuret of potassa, its proportionals are stated as two of sulphur with one of hydrogen.

HYDROGEN WITH SELENIUM.

524. Seleniureted Hydrogen Gas. ❖❖❖ This gas is obtained by acting on a compound of sele- nium and potassium with diluted muriatic acid ;

it is colorless, resembles in smell the sulphureted hydrogen, and produces a very irritating effect on the nostrils. It is soluble in water, reddens vegetable blues, and precipitates metallic solu- tions. Its atomic composition is one of selenium and one of hydrogen.

NITROGEN AND CARBON.

525. Carluiet of nitrogen (cyanogen). This gaseous compound may be obtained by heating dry cyanuret of mercury. It must be collected over mercury. Cyanogen is a gaseous fluid, with a strong penetrating smell. Its specific gravity to hydrogen is 24‘4, 100 cubic inches weighing from fifty-four to fifty-five grains. Gay Lussac states its proportional to be two volumes of gaseous carbon, and one of nitrogen, condensed into one.

526. The aqueous solution reddens vege- table blues ; but this property seems consequent upon the decomposition, and mutual re-action, of the elements of cyanogen upon those of water. Viuquelin states that it is gradually changed into carbonic and hydro-cyanic acids, ammonia, a peculiar acid (cyanic), and a brown matter, containing carbon. See Annals of Phil. vol.xiii. p. 430, and Annales de Chim. Oct. 1818.

527. Prussic acid (hydro-cyanic), cyanogen and hydrogen. ††† This compound may be ob- tained by distilling cyanuret of mercury with muriatic acid. But Vauquelin finding the pro- duct small from this process, passed a current of sulphureted hydrogen gas through cyanide of mercury, the tube of the glass which contained it, ending in a receiver, kept cool by a mixture of salt and snow. For the mode in which the London College order its preparation for medical use, see the article PHARMACY.

528. This acid has a great tendency to de- compose by keeping. When in a gaseous form, it is absorbed by water and by alcohol. It acts, if given in any quantity, as a speedy poison, and the gas, when received into the lungs, proves quickly fatal. The specific gravity of the gas, compared with hydrogen, is stated to be 12-7, 100 cubic inches weighing 28‘575 grains. At a temperature under 95†† of Fahrenheit, it forms, with oxygen gas, a mixture which detonates when an electric spark is passed through it. For its use in medicine, see MEDICINE.

529. Chloro-prussic (chloro-cyanic) acid. ††† M. Berthollet discovered that when hydro-cyanic acid is mixed with chlorine, it acquires new properties. Under the notion that the compound thus formed had acquired oxygen, the name oxyprussic acid was applied to it. But Gay Lussac found that it is formed of equal volumes of chlorine and cyanogen, and, on this account, he proposed the name of chloro-cyanic acid to designate it. To prepare this compound he passed a current of chlorine gas through a

solution of hydro-cyanic acid, till it destroyed the color of sulphate of indigo. He further deprived it of its excess of chlorine, by agitating the liquid with mercury ; and then distillation, with a gentle heat, gave the gas, which was as just stated, called oxyprussic acid. This is not, however, pure chloro-cyanic acid, but a mixture of it with carbonic acid.

530. The acid thus obtained is colorless, vo- latile, and penetrating; it reddens litmus, is

not inflammable, and does not detonate when mixed with twice its bulk of oxygen Gi iiy- drogen.

531 . Gay Lussac gives the constituents of this acid as follows : ???

1 vol. of gaseous carbonˆ

i a vol. of nitrogen > condensed into 1 vol.

?? a vol. of chlorine j

532. Cyanide of iodine is a pungent com- pound, perfectly white, and in the form of long needles ; it is obtained by heating a mixture of one part iodine and two parts cyanide of mer- cury; both the substances must be quite dry. It is soluble in water, and more readily so in alcohol ; unlike the compound of cyanogen with chlorine, the solution of cyanide of iodine does not manifest acid properties. It is resolved by muriatic acid into hydro-cyanic acid and iodine.

533. Sulphuro-prussic (sulpha-cyanic) acid. ??? To this acid Mr. Porrett gave the name of sul- phureted chyazic acid. Dr. Ure gives the following directions for its formation : dissolve in water one part of sulphuret of potassa, and boil it for a considerable time with three or four parts of powdered Prussian blue (ferro-cyanite of potassa), added at intervals. Sulphuret of iron is formed, and a colorless liquid, containing the new acid, combined with potassa, mixed with hydro-sulphate and sulphate of potassa. Render this liquid sensibly sour by the addition of sul- phuric acid. Continue the boiling for a little, and when it cools add a little peroxide of man- ganese, in fine powder, which will give the liquid a fine crimson color. To the filtered liquid add a solution, containing per-sulphate of copper and proto-sulphate of iron, in the proportion of two of the former salt to three of the latter, until the crimson color disappears. Sulphuro-prussiate of copper falls. Boil this with a so- lution of potassa, which will separate the copper. Distil the liquid mixed with sulphuric acid in a glass retort, and the peculiar acid will come over. By saturation with carbonate of baryta, and then throwing down this by the equivalent quantity of sulphuric acid, the sulphuro-prussic acid is obtained pure.

534. Sulpho-cyanic acid is a transparent and colorless liquid ; its odor somewhat resembles the acetic acid. Its specific gravity is 1-022. At a boiling heat it dissolves a little sulphur, and then precipitates oxide of silver from the nitrate of a dark color. When the pure acid is em- ployed the precipitate is white.

535. Mr. Porrett infers from his trials that sulpho-cyanic acid consists of one-third by weight of the elements of hydro-cyanic acid, and two-thirds of sulphur.

The salts formed of this acid and different bases have been examined by Mr. Porrett, and an account of them will be found in the fifth volume of the Annals of Philosophy.

536. Ferro-cyanic Acid (fcrrochyazic of Por- rett.)❓❓❓ This acid is ordered to be obtained by adding to a solution of the salt called triple-prussiate, or ferro-cyanate of baryta, sulphuric acid in just sufficient quantity to throw down the baryta.

537. This acid is of a pale yellow color. without smell, is decomposed by heat, and can

uever therefore be obtained by distillation ; for subjected to this process hydro-cyanic acid, and hydro-cyanate of iron, would be formed, which, by exposure to light, becomes blue. The salts called triple phosphates, are formed by combining the acid in question with alkalis, earths, and the metallic oxides.

538. ‘ We are indebted,’ says Dr. Henry, ‘ to Mr. Porrett for the view which is most commonly taken of the nature of the acid entering into the composition of the salts formerly called prussiates, or triple prussiates. It had generally been sup- posed that the protoxide of iron, which is always present in these salts, acted the part of a base, with which, as well as with an alkali or earth, the prussic acid was supposed to be united in the triple compounds. Mr. Porrett, however, has rendered it more probable that the oxide is really an element of the acid, and not a base ; for he finds that when the triple prussiate of soda in solution is exposed to galvanic electricity, the oxide of iron is carried along with the ele- ments of the prussic acid to the positive pole, whereas if it had existed as a base, it would have been determined to Ihe negative pole. He proposed for it the name of ferruretted chyazic acid ; but I prefer that of ferro-cyanic, which not necessarily excluding hydrogen from its com- position, is still consistent

with the view arising out of Mr. Porrett's researches. This view ex- plains why the iron in triple prussiates (ferro- cyanates) is not discoverable by the most delicate tests, for it can no more be affected by them than sulphur can be indicated by its appropriate tests, when existing in sulphuric acid.'

For further remarks on the composition and the theory of ferro-prussic formation, see PRUSSIC ACID in the body of the work.

539. The radical of the acid in question is stated to be formed of one atom of iron and three atoms of cyanogen.

540. Nitrogen and phosphorus do not appear to produce any definite compound ; but, in some instances of animal decomposition, the azote or nitrogen that is evolved seems to hold phosphorus in solution.

COMPOUNDS OF PHOSPHORUS.

541. Phosphuret of sulphur. ††† If one atom or proportional of sulphur be united to one of sulphur by fusion (16 + 12) sulphuretted hy- drogen will be evolved, and the compound will be a phosphuret of sulphur, which is much more fusible than is phosphurus itself, and indeed exists in a liquid state at the common tem- perature of the atmosphere. At a heat below 50†† it is crystallisable.

542. Phosphuret of selenium has not been sa- tisfactorily analysed.

COMPOUNDS OF SULPHUR.

543. Bitulphuret of carbon is a liquid pro- cured by passing sulphur over charcoal that is heated to redness ; or by distilling a mixture of charcoal with native bisulphuret of iron.

544. This liquid is colorless ; it has a peculiar feted odor, is exceedingly volatile, and has a pungent taste. Its specific gravity is 1-272. It boils at 106†† and does not congeal at 60†† below 0. It possesses a very extraordinary power of engendering cold during evaporation,

the cold being intense. It is inflammable, and when burned with oxygen produces sulphureous and carbonic acids. Chlorine decomposes it and produces chloride of sulphur. The alkalis act upon it slowly ; the acids do not appear to affect it.

545. Its atomic proportionals are two of sulphur to one of carbon. It was called byLampadius, its discoverer, alcohol of sulphur.

546. An acid is obtained by a mixture of the sulphuret of carbon with pure

potassa, which acid contains sulphur, carbon, and hydrogen ; it was named by Zuse of Copenhagen hydroxanlhic, on account of the yellow color of its compounds. That this acid contains hydrogen was proved by iodine when treated with it producing hydriodic acid.

547. Ammonia treated with the sulphuret of carbon undergoes decomposition, and the sul- phuret itself likewise becomes decomposed, the result of the combination is the production of two new salts, the one stated to be a new acid, which may be considered as a compound of sul- pho- cyanic, and sulphuretted hydrogen, the other containing a double sulphuret of hydrogen and carbon. See Ann. de Chem. et de Phys. xxvi. 66, 113, and Quarterly Journal of Science Sac. xviii. 149.

548. A Sulphuret of selenium may be formed by mixing and melting one part of selenium with 100 parts of sulphur ; or better by precipitating a solution of selenic acid by sulphuretted hydrogen gas, washing the product with a small quantity of muriatic acid.

549. A sulphuret of boron may be obtained by burning boron in the vapor of sulphur.

PART IV.

METALS.

550. These constitute a most important class of bodies, as well in relation to the arts and luxuries of life generally, as in reference to their chemical circumstances or susceptibilities ; and in this last point of view modern science has unfolded particulars of which the philosophy of former times was entirely ignorant ; indeed the number of substances which go under the name of metals has been lately much increased, many of them being of very recent discovery, and the discovery itself being the result of scientific research, rather than of incidental observation.

551. Some of the bodies however at present acknowledged as metals have scarcely been exhibited in a separate form, and are classed among the metals merely upon analogical prin- ciples, and because the earths in which they have been discovered exhibit a manifest resemblance to the oxides of those metals that have been detected in an abstract and independent form.

552. We shall first treat of the general proper- ties of metals.' We shall then give from the best authorities,and as far as they are known, the dates, order and times, in which respective metals were discovered, with the names of the discoverers ; and afterwards proceed to treat individually of each of them.

553. Metals are characterised in general by a peculiar lustre, indeed the metallic lustre is pro- verbial. Of this property, however, they are possessed in strikingly different degrees.

554. They are conductors both of caloric and electricity, ‘ when their surface is extensive enough to convey away the electricity which seeks a passage no change is produced in them, but when insufficient the electric fluid penetrates into them, heats them, and sometimes fuses and even volatilises them. In this state of vapor they burn more or less vividly, and with differ- ently colored flames, zinc with a white flame mixed with blue and red; tin bluish white ; lead bluish or purple ; and silver green.’

555. They are fusible : but this quality they likewise possess in very different measures. Even in the common temperature of our climate mercury exists in a fluid state, but it is the only known metal that is possessed of this degree of fusibility. Some indeed are infusible by very high heats.

556. Many but not all of them are malleable, that is are susceptible of extension or expansion over a surface by the blows of a hammer. Gold is the most malleable of metals. Five grains of it may be beaten out so as to cover a surface of 272 square inches. Those metals which were formerly considered as insusceptible of this ex- tension were called semi-metals, but this dis- tinction is not observed in scientific classification, and indeed there is no precise line of distinction to be drawn between the non-malleable and the malleable metals ; the quality progressively diminishing in one direction, and increasing in another.

557. Ductility is another quality of metals, by which is understood their capacity of being drawn out into wire. It has been asserted that a grain of gold may be extended to the length of 500 feet ‘ but even this has been surpassed by Dr. Wollaston, for, by surrounding the gold with sil- ver, he has been able to extend it so that 700 feet weighed only one grain, which gives a thick- ness of only 3ˆ55 of an inch. The coating of silver was afterwards removed by nitric acid which has no action on gold.’

558. Some metals are exceedingly elastic, in this respect iron, and the modification of it called steel, are particularly conspicuous, hence the use of steel in springs. Such metals as are elastic and hard, are likewise sonorous, or are in other words capable from their construction of exciting and conveying sound. Bell-metal is an alloy of tin and copper, and it is much more sonorous than either of its constituents abstractedly.

559. Many of the metals are crystalline, that is capable of assuming by particular management the form of crystals ; and indeed the structure of some of them is naturally crystalline and lamel- lated. Bismuth and antimony are conspicu- ously so.

560. Of those metals which are exhibited to us in saline combinations, their metallic part, when heated with voltaic electricity, separates at the negative pole.

561 . Metals when exposed to the action of oxy- gen, chlorine, or iodine at an elevated temperature, enter into combination with one or other of these elements in definite proportions; and the conse- quence of the combination is the formation of bodies which have lost most of the peculiar cha- racters of the metals themselves. They were formerly indeed, in reference to the susceptibility

now adverted to, considered as composed of a combustible base united with a principle of in- flammability, named phlogiston, which they lost by exposure to air at a high temperature, the air becoming thereby phlogisticated, incapable of ab- stracting again the principle, and therefore unfit for burning other metals, or other portions of the same metal not yet acted on. In the article AIK, and in the first part of the present treatise, the reader will find an account of the change which has recently taken place in reference to the ratio- nale or mode of explaining these circumstances of change ; suffice it to say here, that the increase of weight which the burnt metal undergoes, and moreover that weight being proved equivalent to what the air had lost, was shown in the Lavoisie- rian theory to be totally inconsistent with the principle of inflammability as a something con- tained in the metal operated upon and extricated by the operation.

562. It is now indeed admitted as a demonstra- ted principle that the reverse effect has place, that the metals, at a high temperature, are made to abstract the oxygenous portion of the atmosphere in which they are enveloped, and it is in conse- quence of their union with this substance that the variety of change is operated upon them; variety of change we say, for different metals re- quire different temperatures for the union of which we are speaking, and they are susceptible of being acted on some with less and some with more facility.

563. It should seem, however, that the law of multiples or definite proportions takes place in these instances of combination, and that the pro- portions in which metals unite with oxygen are so regulated that the oxygen of the greater pro- portion is a simple multiple of that in the less.

564. Metals unite, as above stated, with chlo- rine, and when they are

exposed at a high tem- perature to this gas the results are compounds of chlorine with the respective metals acted on ; and indeed the chlorine displays an exceedingly pow- erful affinity for the metal, being capable of ex- pelling the whole oxygen from a metallic oxide, and taking its place. In this case, too, the law of proportionals still holds.

565. Iodine too, we have remarked, enters into composition with the metals, and produces iodides, as oxygen occasions oxides, and chlorine chlorides ; but this substance is not capable of disengaging oxygen from the greater number of oxides, as is the case with chlorine.

566. Metals are for the most part susceptible of combination with each other; but for this purpose fusion or melting is required. When thus combined metals are called alloys, and they maintain, for the most part, their characteristic lustre. See the word ALLOY.

567. They combine with hydrogen, but the combinations with this substance are neither large in number, nor of much importance.

568. Those metals which are speedily acted on by common air and oxygen are also generally suscep- tible of decomposing water ; some of them rapid- ly, others slowly. There are some metals which are not acted on by air deprived of moisture, nor by water deprived of air ; but moist air, or water containing air, effect their oxidisement; tins appears to be the case with iron. (Dr. Mar-

shall Hall, Quarterly Journal, vii. 55). Water combines with some of the metallic oxides and produces oxides or metallic hydrates. In these the relative proportion of water is definite. Some are easily decomposed by heat, as hydrate of copper, others retain water, even when heated to redness. Brande.

569. With sulphur their combinations are much more numerous, complicated, and impor- tant ; some of the native metals are found in this combination, and the sulphurets have generally a semi-metallic appearance.

570. Phosphorus combines with the metals and produces phosphurets.

571. And there is one instance especially of carbon uniting with a metal (iron) in which the compound possesses peculiar and characteristic properties according to the proportion of either ingredient. Other carburets

are not of much importance.

572. The metals, including those which have not hitherto been found in an un combined form, are forty-two in number ; of these seven have been known from the remotest times ; these seven are :

01

Known from remote antiquity.

1. Gold, the ancient symbol of which was the Sun

2. Silver . . . ... Moon

3. Mercury . . . ..-[illegible]*,*[illegible] *. Mercury*

4. Copper ..... Venus

5. Iron . . . . . Mars

6. Tin ..... Jupiter

7. Lead Saturn

8. Zinc. [illegible] *The word zinc is first found in the writings of Paracelsus, although*

it is supposed that the ancients were acquainted with some of its ores . 1541

9. Bismuth, mentioned by Agricola 1530

10. Antimony. See part 1 (Valentine) .... Fifteenth century.

12′ Cobdt0′ \ Discovered by Brandt 1733

13. Platinum. Wood first recognised it as a peculiar body (Phil. Trans. 44) . 1741

14. Nickel. First shown distinctively by Cronstedt (Stockholm Trans.) . 1751

15. Manganese was obtained by Gahn in 1774

16. Tungsten, discovered by M. M. Delhuyart 1781

17. Tellurium

18. *Molybdenum*

19. *Titanium*

20. *Uranium*

21. *Chromium*

22. *Columbium*

23. *Palladium*

24. *Rhodium*

25. *Iridium)*

26. *Osmium J*

27. *Cerium*

28. *Potassium -*

29. *Sodium / 30! Barium *

31. *Strontium!*

32. *Calcium J*

33. *Lithium*

34. *Cadmium*

35. *Magnesium^)*

36. *Glucinum*

37. *Yttrium*

38. *Aluminum*

39. *Thorinum*

40. *Zirconium*

41. *Silicium*

42. *Selenium?*

Muller

Muller and Hulm ....

Gregor .....

Klaproth

Vauquelin (Annales de Chimie, vol. xxv.)

Hatchett (Phil. Trans.)

Wollaston (Phil. Trans.) .

1782 1782 1781 1789 1797 1802

1803

Tennant (Phil. Trans.) 1803

Hisinger and Berzelius 1804

Sir H. Davy

Arfwedsdon Stromeyer

All very recently discovered.

1807

1818 1819

The last eight are those which have already been alluded to as not having been yet seen in a separate form, and for the discovery of which chemistry has been mainly indebted to the experi- ments and researches of Sir H. Davy ; the last in- deed, selenium, has already been treated of under another head, and has at best but an equivocal title to be considered as a metal.

573. Chemical authors hˆve adopted various

excepting inasmuch as some are possessed of those qualities in a more marked degree,which have been considered their prominent characteristics.

574. ‘ I have not (says Dr. Ure in his excel- lent dictionary) seen any arrangement to which important objections may not be offered ; nor do 1 hope to present one which shall be exempt from criticism. The main

purposes of a methodical distribution, are to facilitate the acquirement,

classifications of metals ; -but all of them seem retention, and application of knowledge. With

to be more or less arbitrary or hypothetical ; regard to metals in general, I conceive these

since ‘ their relations to the various objects of purposes may be to a considerable extent at-

cheraistry are so complex and diversified,’ and tained, by beginning with those which are most

because there is no natural order of these bodies, eminently endowed with the characters of the

genus, which most distinctly possess the proper- ties that constitute their value in common life, and which caused the early inhabitants of the earth to give to the first metallurgists a place in mythology. Happy had their idolatry been always confined to such real benefactors.

Inventas aut qui vitarn excoluere per artes, Quique sui memores, alios fecere merendo.

By arranging metals according to the degree in which they possess the obvious qualities of unalterability by common agents ††† tenacity, and lustre, we also conciliate their most important chemical relations, namely those to oxygen, chlorine, and iodine ; since their metallic pre- eminence is, popularly speaking, inversely as their affinities for their dissolvents. In a strictly scientific view, these habitudes with oxygen should perhaps be less regarded in their classi- fication, than with chlorine, for this element has the most energetic attraction for the metals. But, on the other hand, oxygen which forms one-fifth

of the atmospheric volume, and eight-ninths of the aqueous mass, operates to a much greater extent among metallic bodies, and incessantly modifies their form both in nature and art. Now the order we propose to follow will indicate very nearly their relations to oxygen, which we may observe is the principal of arrangement pursued, but in the reverse way, by Brande and others. ‘ As we progressively descend the influences of that beautiful element progressively increase. Among the bodies near the head, its powers

are subjected by the metallic constitution ; but among those near the bottom, it exercises an almost despotic sway, which Volta's magical pile, di- rected by the genius of Davy, can only suspend for a season. The emancipated metal soon re- lapses under the dominion of oxygen.'

575. After this introduction, Dr. Ure presents his readers with a table of the metals, which we shall take the liberty of transcribing into our pages ; and then treat of them at large in the succession which this tabular view indicates.

General Table of the Metals.

NAMES.

Sp . gr.

Precipitanti.

Colour of precipitate! by

Ferro-prussiate of potash.

infusion of galls.

Hydro-sulphuret>.

Sulphuretted hydrogen.

1 Platinum

21-47

Mur. ammon.

0

0

Slack met pow.

2 Gold

19-30

(Sulph. iron (Nitr. mercury

Yellowish-white

3reen; met

Yellow

3 Silver

10-45

Jommon salt

White

Yellow-brown

Slack

Slack

4 Palladium 5 Mercury

11-8 13-6

Prus. mercury $ Common salt ?Heat

Deep orange White passing to yellow

3range-yellow

Slackish-brown Srownish-black

Slack-brown Black

6 Copper

89

Iron

Red-brown

Srown

Black

Do.

T

77

$ Sucrin. soda

Blue, or white

ˆrotox. 0

7 Jron

I with perox.

passing to blue

?erox. black

Slack

0

8 Tin

7-29

Dorr, sublim.

White

0

3rotox. black

Srown

9 Lead

11-35

Sulph. soda

Do.

White

Black

Black

,0 Nickel

8-4

>!ulph. potash?

Do.

jray-white

Do.

Do

.11 Cadmium 12 Zinc

8-6 6-9

Zinc \lk. carbonates

Do. Do.

0 0

)range-yellow

)range-yellow Yellowish- white

13 Bismuth

9-88

Water

Do.

Yellow

Slack-brown

Black-brown

14 Antimony

670

5 Water (Zinc

With dilute so- lutions white

**Vhite from wa- ter*

)range

Grange

15 Manganese

8-

Tart. pot.

White

0

White

Milkiness

16 Cobalt

8-6

\lk. carbonates

Brown -yellow

Yellow-white

Black

0

17 Tellurium

6-115

< Water ►► Antimony

0

Yellow

Blackish

18 Arsenic

$ 8-35? I 576?

Nitr. lead

White

Yellow

Yellow

1 19 Chromium

5-90

Do.

Green

Brown

3reen

120 Molybdenum |21 Tungsten

8-6 17-4

Do.? VInr. lime ?

Brown Dilute acids

Deep-brown

Brown

[22 Columbinm

5-6?

Zinc or inf. galls

Olive

Orange

Chocolate

23 Selenium

4-3?

$ Iron I Sulphite ainni.

24 Osmium

?

Mercury

Purple passing to deep blue

25 Rhodium

10-65

Zinc?

0

0

|26 Indium

18-68

Do?

0

t27 Uranium

9‘0

Ferro-pr. pot.

Brown-red

Chocolate

Brown Yellow

0

28 Titanium

?

Inf. galls.

Grass- green

Red-brown

Grass -green

0

29 Cerium

9

Oxal. aiiim.

Milk-white

0

White

0

30 Potassium

0-865

J Mur. plat. (_ Tart, acid

0

0

0

31 Sodium

0-972

32 Lithium ;

33 Calcium

34 Barium

35 Strontium

36 Magnesium

37 Yttrium

38 Gluciuum

i

39 Aluminum

i

40 Thorinum

i

41 Zirconium

1

142 Silicium

|

576. The first twelve are malleable, and so are the 30th, 31st, and 32nd in their congealed state.

577. The firs vjUeen yield oxides, which are neutral salifiable oases.*

578. The metals 17, 18, 19, 20, 21, 22, and 23, are acidifiable by combination with oxygen. Of the oxides of the" rest, up to the 30th, little is known. The remaining metals form, with oxy- gen, the alkaline and earthy bases.

579. We propose in the following pages, as above intimated, to adopt the arrangement of Dr. Ure ; but, before we commence the separate con- sideration of the substances now to be noticed, it may not be uninteresting to state the order in which Mr. Brande, Dr. Henry, and Dr. Murray treat of them.

580. ' Various classifications of the metals,' says the first of these writers, '

have been adopted by chemical authors ; some dependent upon their physical, others upon their chemical properties. The former can scarcely be considered as adapted to chemical enquiry, and the latter involve numerous difficulties in consequence of the gradual transition of metals of one class into those of another. I shall consider the metals in the order in which they are set down in the following table, and which is nearly that of their respective at- tractions for oxygen.

1. Potassium

2. Sodium

3. Lithium

4. Calcium

5. Barium

6. Strontium

7. Magnesium

8. Manganese

9. Iron

10. Zinc

11. Tin

12. Cadmium

23. Arsenic

24. Molybdenum

25. Chromium

26. Tungsten

27. Columbium

metallic state. The last six metals are placed in the list from analogy ; they are only known in the state of oxides, which have not hitherto been reduced.' Brande.

582. ' From a comparison of the resemblances among metals,' says Dr.

*Henry, ‘ both as to phy- sical and chemical properties, several arrange- ments of them have been formed into smaller classes. The circumstance on which a subordi- nate division of the metals is perhaps best foun- ded, is the nature of their relation to oxygen. Without creating more of these divisions than are absolutely necessary, it appears to me that they may be conveniently arranged under the following heads : ***

Class I. Metals that afford oxides whicli can- not be reduced to a metallic form without the addition of combustible matter.

Class II. Metals, the oxides of which are de- composed by heat only.

i. The first class, which have been termed base metals to distinguish them from the noble or perfect, may be again subdivided as follows :

583. 1. Metals that are either known from ex- periment, or believed from analogy, to absorb oxygen at high degrees of heat, and to decompose water at common temperatures. The metals that have been actually ascertained to produce these effects are six, viz.

13. Copper

14. Lead

15. Antimony

16. Bismuth

17. Cobalt

18. Uranium

19. Titanium

20. Cerium

21. Tellurium

22. Selenium

28. Nickel

29. Mercury

30. Osmium

31. Iridium

32. Rhodium

33. Palladium

34. Silver

35. Gold

36. Platinum

37. Silicium

38. Aluminum

39. Zirconium

40. Glucinum

41. Yttrium

42. Thorinum.

Potassium

Sodium

Lithium

Calcinum Barium and

Strontium.

*581. Of these metals, the first seven produce alkaline oxides, which are very difficult of reduc- tion ; and they readily decompose water at all temperatures, a character which announces their * powerful attraction for oxygen ; the next five de- compose water, when their temperature is raised to redness ; the ten following do not decompose water at a red heat ; nor do the next five, which produce acids by uniting to oxygen. The oxides of these twenty-seven metals are not reducible by heat alone, though some of them when heated give out a portion of oxygen. The nine metals which next follow, osmium excepted, have a com paratively feeble attraction for oxygen, and, when their oxides are heated, they are reduced to the*

584. There is a striking resemblance also be- tween the properties of the oxides of these metals^ Those of potassium, sodium, and lithium are readily soluble in water ; have a peculiar acrid taste ; change certain blue vegetable colors to green, and some yellow ones to brown ; neutra- lise acids, forming

salts, which, for the most part, are easily soluble ; and from these similarities have been classed together under the name of alkalis. With these oxides, those of calcium, barium, and strontium agree so nearly, that they also might without any impropriety be called alkalis ; but being themselves, as well as several of their neutral compounds with acids, less rea- dily soluble in water, they have been termed, perhaps without sufficient reason, alkaline earths.

*585. The metals belonging to this subdivision, which are as yet distinctly known to us only when in combination ; but which are presumed from analogy to have a similar relation to oxygen and water with those already enumerated ; are the seven following : ***

Magnesium Glucinum Yttrium Aluminum

Thorinum Zirconium and Silicium.

586. The oxides of these seven metals are sparingly soluble in water; have little or no taste ; do not afford solutions in water which are capable of acting on vegetable blue or brown colors ; but (silica excepted) unite with acids, and form neutral salts. They have been hitherto termed earths, or earths proper ; though the grounds of their distinction from other metallic oxides are constantly becoming more limited. It has been

questioned whether one of these bodies, silica, does not, as to its powers of combination, exhibit rather the qualities of an acid; and whether its base, which some writers have called silicon, can properly be arranged among metals.

587. 2. The second subdivision includes those metals which absorb oxygen from atmospheric air at high temperatures ; and decompose water, but only at increased temperatures. They are five in number, viz.

Manganese Tin and

Zinc Cadmium

Iron

The last of these is associated with the others from the agreement of its general properties with those of tin.

588. 3. Metals of the third subdivision, are capable like the foregoing, of absorbing oxygen at high temperatures, but not of decomposing water at any temperature. There are no less than fourteen which answer to this description ; viz.

Arsenic Cerium

Molybdenum Cobalt

Chromium Titanium

Tungsten Bismuth

Columbium Copper

Antimony Tellurium and

Uranium Lead.

Of these metals, the first five are distinctly acidi- fiable ; and the nine others are oxidisable only.

589. ii. The second class of metals, the oxides of which are reducible by heat, without the ad- dition of combustible matter, are nine in number, viz.

Mercury

Silver

Gold

Platinum

Palladium

Rhodium Indium Osmium and Nickel.

The first three have long been classed together under the name of noble or perfect metals, and the remaining ones have been associated with them as they have been respectively discovered. Nickel, which was for some time placed among the im- perfect metals, was removed a few years since into this class, after a more accurate investigation of its relation to oxygen.'

590. Dr. Murray introduces his account of individual metals in the following words : ' The class of metals has been subdivided into orders, under which the individual metals are arranged. Gold, silver, and platina, preserving their lustre on exposure to the air, possessing a high degree of

ductility and malleability, and not being oxi- dated when exposed to a high heat, have been placed in one order, under the appellation of perfect or noble metals. Quicksilver, copper, iron, tin, and lead, possessing ductility and mal- leability, but being oxidated by heat, have been placed together under the name of imperfect metals. The others, zinc, antimony, bismuth, cobalt, nickel, manganese, arsenic, (and the greater number of the newly-discovered metals, may be added to this order), having little duc- tility or malleability, were termed semi-metals. This was the old division, others have been in-

troduced; but any classification of this kind is inaccurate ; no advantage is gained by forming such orders, and they are altogether artificial each metal forms a species, and they may be considered individually in that order in which the transition is most natural, beginning with those which have the characteristic metallic properties, tenacity and specific gra\ity, in the highest degree. Those of recent discovery, and which are only imperfectly investigated, may be placed after the others.'

591. It will be obvious to the reader upon what principle we have thus laid before him the remarks of some of our best authors, on the subject of metallic classification ; the very dis- cussion involves matter of much interest, inas- much as, if duly attended to information will be found in it respecting the nabits of the several metals, in reference to combustibility, acidifia- bility, if we may so express it, and other par- ticulars. We now proceed, as it was above intimated we should, to follow the order of Dr. Ure, on account of its appearing to us to unite in some measure the natural with the chemical schemes of arrangement ; and therefore to effect the purpose of assisting the conception and the recognition of modern discoveries, without vio- lating the order in which it was the custom to treat of metallic substances, prior to the important revolutions in the doctrines and principles of chemistry.

592. It is right to say, that, in many instances at least, the habits, &c. of the metals will be discussed less in detail than might be expected in a treatise on chemistry, on account of notices which it is found necessary to take of them in the alphabetical arrangement of our work.

PLATINUM.

593. This is a metal of modern discovery. It is met with in South America ; but is mixed with several other substances when it reaches this country ; the pure metal may be obtained by dissolving the ore in nitro-muriatic acid, and then adding a solution of muriate of am- monia.

594. Platinum is white, somewhat resembling silver in color, but heavier by

far ; and it is ex- ceedingly ductile, tenacious, and malleable. It is extremely difficult of fusion. Under the blow-pipe, however, with oxygen gas, it may be melted. It is a very slow conductor of heat ; its expansibility by heat is less than that of steel. Like iron it may be welded. Its oxides are only procurable by a circuitous process ; it is said to be oxidifiable in three proportions, viz. about 8, 12, and 16 to 100 of the metal. But the subject, says Dr. Henry, requires more ac- curate investigation before we can assign with any confidence its equivalent number.

595. The metal is acted on by nitro-muriatic acid, as above stated, and by chlorine. Chloride of platinum is to be obtained by evaporating the solution in the nitro-muriatic acid ; then heating the product to whiteness, by which process chlo-' rine gas will be evolved. The dry compound is a chloride of platinum, which may be crystallised by careful management ; it has the property of being precipitated by a solution of muriate of

ammonia, which is almost peculiar to, or charac- teristic of, platinum. The chloride of platinum is, however, decomposed by ether.

596. Sulphuret of platinum. ??? This may be obtained by decomposing the chloride with sul- phureted hydrogen, but it is not easy to ascertain the precise composition of the sulphuret, since the sulphur of it is so soon converted into sul- phuric acid. There are, according to Mr. Ed- mund Davy, two other ways of forming the sulphuret: first, by heating the metal finely divided with sulphur ; and the second by heating three parts of the ammonia muriate of platinum with two of sulphur.

597. The sulphate of platinum is best pro- cured by acting on the sulphuret with nitric acid. ' The action of alcohol on this substance (the sulphate) occasions the formation of a sub- stance which is possessed of very singular pro- perties (Philosophical Transactions, 1820). Equal volumes of a strong aqueous solution of this sulphate and of alcohol, heated together, deposit a black powder, which, after being well edul- corated, and dried at a very gentle heat, exhibits the following properties : ???

598. It is black, and in small lumps, which are soft to the touch, and easily reduced to an impalpable powder. This powder is tasteless, and insoluble in water, either hot or cold. When gently heated on a slip of platinum, a feeble ex- plosion takes place, accompanied with a hissing noise, and a flash of red light, and the platinum is reduced. Brought into contact with ammo- niacal gas, it becomes red-hot and scintillates. It is instantly

decomposed by alcohol, as is shown in a very striking manner, by moistening paper, sand, cork, or sponge, with that fluid, and placing the smallest particle of the powder on them. It hisses, and becomes red-hot; and Mr. E. Davy, to whom we owe its discovery, proposes it as an excellent means of kindling a match. It appears to consist of 96 J per cent, platinum, with nitrous acid, a little oxygen, and a very minute propor- tion of carbon. The nitrous acid is accounted for by the peculiar way in which the sulphate had been formed. Henry.

599. Phosphuret of platinum is to be formed either by passing phosphureted hydrogen into a solution of the metal, or by heating phosphorus with it in exhausted tubes. Phosphuret of pla- tinum is a powder of a grayish blue appearance ; it is infusible, and is said to contain 17 to the 100 of phosphurus.

600. A fulminating platinum may be formed by precipitating a solution of platinum with a slight excess of pure ammonia. The precipitate is to be boiled in potassa nearly to dryness, and when well washed and dried is the fulminating platinum ; it seems to be a compound of oxide of platinum, ammonia, and water. It explodes at about 420►► with a very loud report. Percussion will not cause it to explode.

601. The alloys of platinum have not been

applied to use. Roll up together a piece of platinum foil with a piece of lead foil of equal dimensions, and cautiously direct the flame of a candle by a blow-pipe towards the edges of this roll, and you will occasion an explosive combi- nation of the two metals, the ignited particles emitting light in great quantities, and with a beau- tiful appearance. The same effect will be pro- duced by a small piece of tin or antimony, or zinc rolled in platina leaf, and heated in the same manner. ‘ By combining seven parts of platinum with sixteen of copper, and of zinc, Mr. Cooper obtained a mixture much resembling gold.’ Journal of Science and Arts, iii. p.

119.

For the specific gravity of this and of all the metals the table may be consulted.

GOLD.

602. This metal is found in a native state, mixed with a little silver or copper. Its color is various shades of yellow ; its forms are massive, ramose, and crystallised in cubes and octahedra. The veins of gold are confined to primitive coun- tries, but large quantities of this metal are col- lected in alluvial soils and in the beds of certain rivers, more especially those of the

west coast of Africa and of Peru, Brasil, and Mexico. In Europe the streams of Hungary and Transyl- vania have afforded a respectable quantity of gold ; it has been found also in the Rhine, the Rhone, and the Danube. Small quantities have been collected in Cornwall, and in the county of Wicklow in Ireland. Brande.

603. To obtain it in a state of purity standard gold must be dissolved in nitro-muriatic acid ; one part by weight of the metal to three of the acid ; the solution must be evaporated to dry- ness by a gentle heat, the dry mass re-dissolved in distilled water, and a solution then added to it of green sulphate of iron, which will pre- cipitate the gold in a state of fine powder, which, after being washed with diluted nitric acid, and then with distilled water, may be fused.

604. Pure gold is of a deep yellow color. It has very considerable lustre ; it may be melted at a moderate heat, and after fusion it crystallises. Its malleability and ductility have already been remarked upon. See the general characters of metals.

605. It is not oxidifiable by mere exposure to heat; but a powerful electric or galvanic impulse will bring it to the condition of a purple oxide.

606. the solvents of this metal are the nitro- muriatic acid, and chlorine. When gold, in a state of minute division, is heated in chlorine a compound of a deep yellow color results, which is said to consist of 97 gold + 33‘5 chlorine, When acted upon by water a muriate of gold is produced. Brande.

607. According to Pelletier there are two chlorides of gold.

Metal.

‘The proto-chloride or sub-chloride = 100 + 14-715 The per-chloride ˆsoluble) = 100 + 44-145

It is in the state of perchloride that gold ex- ists when dissolved by aqua regia. Henry.

608. Iodide of gold may be obtained by mix- ing muriate or chloride of the metal with hydri- odate of potash, or by acting on oxide of gold with hydriodic acid. The precipitate must be washed and dried. Pelletier (see Quarterly Journal of Science and Arts, 10. page 121), states the iodide of gold to consist of

Iodine 34

Gold 66

609. If this, says Mr. Brande, be considered a compoundofone proportional gold and one iodine, the number 228 must be adopted as the representative of gold, for 34 ; 66;: 117-7 : 228-3; anum- ber so much at variance with that deduced from other experiments, as to show the necessity of further enquiries, before either be adopted.

610. Oxides of this metal may be obtained by precipitating chloride of gold with magnesia, or potash.

611. From a solution of the metal in nitro- muriatic acid, a solution of pure ammonia also precipitates an oxide of gold, and a portion of the ammonia combining with the oxide forms fulmi- nating gold. .This upon being heated detonates violently, the ammonia of it being decomposed by the increased temperature, its hydrogen uni- ting with the oxygen of the oxide, and nitrogen gas being liberated in a state of high expansion. The gold by this process is reduced to its me- tallic state.

612. Several combustible bodies will decom- pose chloride of gold in solution, and the metal in this case also is reduced to its metallic state ; here the combustible materials seem to act by furnishing hydrogen to the chlorine.

613. Gold is precipitated from its solvent b y ether, but the oxide of gold is instantly re-dissol- ved by the ether, and forms the etherial solution of gold. This solution is advantageously applied to the gilding of steel, scissars, lancets, and other instruments which it protects from rust with a very small expenditure of gold. Henry.

614. Gold will unite with sulphur into a sul- phuret, by passing a current of sulphureted hy- drogen through an aqueous solution of muriate of gold. The sulphuret falls down in the form of a black precipitate.

615. With phosphorus, also, gold will com- bine intoaphosphuret, by heating gold leaf with phosphorus in a tube deprived of air. This has a gray color, and a metallic lustre.

616. For the methods of purifying gold by the operations of cupelling and quartation, the reader may consult Aikin'f Chemical Dictionary, article Gold.

617. Gold, which is too soft in its pure state for many purposes, has its hardness greatly in- creased by being melted or alloyed with a small

proportion of copper. It is a singular fact that some kinds of copper, which do not themselves appear defective in any respect, totally destroy the ductility of gold. This appears to be owing to the contamination of the copper with a very small quantity of lead and antimony, of either of which metals only about ˆth in weight is sufficient to produce this injurious effect. Henry.

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618. Mercury and gold combine with great ease, and produce a white amalgam much used in gilding. For this purpose the amalgam is applied to the surface of the silver, the mercury is then driven off by heat, and the gold remains adhering to the silver, and is burnished. This process is called water gilding.

619. In gilding porcelain, gold powder is ge- nerally employed, obtained by the decomposition of the muriate; it is applied with a pencil, and burnished after it has been exposed to the heat of the porcelain furnace.

Many curious facts relating to the properties of gold and its uses in the arts, will be found in Dr. Lewis's Philosophical Commerce of the Artt.

SILVER.

620. Silver is found native, but in this state it is seldom pure, being mixed with small portions of other metals. This metal has been found in Cornwall and Devonshire, and mines of it exist in some parts of the European continent, but the richest known mines of this metal are those of Peru and Mexico.

621. To obtain it in a state of purity, we are ordered to dissolve the standard silver of commerce in pure nitric acid, diluted with an equal measure of water, and to immerse a plate of clean cop- per into the solution, which soon occasions a precipitate of metallic silver. This precipitate is to be well washed with distilled water, and then boiled for a short time in solution of pure ammonia.

622. Silver is of a pure white color, and of very brilliant lustre ; it exceeds in malleability, and ductility, all the metals, with the exception of gold ; it may be drawn into a wire finer than hu- man hair. It is fusible at a bright red heat, and when in fusion is exceedingly brilliant.

623. It is not oxidised readily, even at a high temperature. The tarnish on silver is not merely oxidation, but, as shown by Proust, is occasioned by sulphureous vapors, and pure silver is not nearly so susceptible of it as that alloy of it with copper which is used for plate. An oxide of silver is produced by treating the metal with a powerful voltaic or electric influence. Pure water does not act upon the metal, but, when water is impregnated with animal or vegetable matter, a slight blackening of its surface takes place, owing to the presence of sulphur.

624. By adding lime water, or a solution of baryta, to a solution of nitrate of silver, and afterwards washing the precipitate, an oxide of the metal is obtained. This is of a dark olive color, and, is composed according to Sir H. Davy of 100 parts of silver united with 7-3 oxygen. Mr. Faraday has made it probable that another combination of oxygen with silver exists in which the oxygen is in an inferior proportion ; but this oxide does not seem capable of combining with acids.

*625. Fulminating silver may be procured by treating the oxide of the metal with ammonia; and a detonating silver is formed by adding alco- hol to a heated solution of silver in nitric acid. The first of these compounds detonates with a very gentle heat, and even by friction of the slightes**

kind. The second requires a smart blow, or long continued friction, to occasion its detonation.

626. Silver combines with chlorine and forms a chloride of silver, which may be most easily obtained by adding a solution of nitrate of silver to one of common salt, (muriate of soda, or chlo- ride of sodium ;) a precipitate falls of a white color, which, upon exposure to the air, be- comes brown, and ultimately black. When this chloride of silver is heated to dull redness, in a silver crucible, it fuses, and upon cooling con- cretes into a semi-transparent grayish substance, which is called luna-cornea, or horn silver.

627. Chloride of silver is very soluble in liquid ammonia ; it also dissolves in hyposulphurous acid, and is decomposed by hydrogen gas ; but hydrogen freed from all impurities, and directed upon moistened chloride of silver in the dark effects no change. Faraday, Journal of Science, viii. p. 375.

Chloride of silver is found native in some of the mines.

628. Iodide of silver may be formed by adding hydriodic acid to a solution of nitrate of silver. This is of a greenish-yellow color, and is not only insoluble in water, but also in liquid ammonia.

629. Sulphuret of silver. ††† The common tarnish of silver, as above intimated, is the formation of a sulphuret upon its surface. The sulphurets of the alkalis, and sulphureted hydrogen gas, preci- pitate silver from its solutions, and form sul- phurets. Native sulphuret, or vitreous silver ore, occurs in various forms.

630. With phosphorus, silver forms a white brittle compound ††† a phosphuret of the metal.

631. Salts of silver. Chlorate of silver is ob- tained by digesting oxide of silver in chloric acid. It assumes the form of rhomboid al crystals.

632. lodate of silver is precipitated in the form of a white powder, by adding iodic acid to the nitrate in solution. This is soluble in ammonia.

633. Sulphate of silver is formed by mixing nitrate of silver with sulphate of soda. It may be also procured by boiling silver in sulphuric acid. This salt appears in the form of needle- shaped prismatic crystals.

634. Hypo-sulphite of silver may be formed by dropping a weak solution of nitrate of silver into a weak solution of hypo-sulphate of soda. The flavor of this salt is highly sweet, though com- posed of bitter ingredients.

635. Nitrate of silver. ??? Nitric acid diluted with about three parts of water dissolves silver readily, and nitric oxide gas is disengaged. If the silver used be pure, the solution will be color- less ; if there be any mixture of copper, it will assume a greenish cast.

636. This solution when evaporated deposits large regular crystals, of a white color, which however blacken when exposed to the light. A solution of the salt stains animal substances a deep black ; and, what is very curious, the salt itself when taken into the stomach in small quantities, as employed medicinally, occasionally produces a grayish tinge over the whole skin, which remains for a great length of time.

637. If the salt be heated in a silver crucible it fuses, and then, when cast into small cylinders, forms the lapis infernalis or lunar caustic of the

shops ; the argenti nitras of the London Phar- macopoeia.

638. When mercury is introduced into the solution of nitrate of silver, a beautiful crystalline deposit is produced, which is called arbor Dianae. Beaume" directs the following process in order to be successful with this experiment : ??? ' Mix toge- ther six parts of a solution of silver in nitric acid, and four of a solution of mercury in the same acid, both completely saturated. Add a small quantity of distilled water ; and put the mixture into a conical glass, containing six parts of an amalgam made with seven parts of mercury and one of silver. At the end of some hours there appears on the surface of the amalgam a precipi- tate in the form of a vegetation.' Proust, how- ever, tells us that nothing more is necessary to produce the arborisation, as beautiful as may be, than to throw mercury into nitrate of silver very considerably diluted.

639. Nitrate of silver is employed for writing upon linen, under the name of marking ink.

640. Phosphate of silver is formed by dropping a solution of phosphate of soda into nitrate of silver. This compound is used in preparing chloric acid.

641. Silver is capable of combining with most of the other metals. The standard silver of this country is an alloy with copper, in the proportion of 0-90 to 11-10. See Aikin's Chemical Dictionary, and Children's Translation of Thenard on Che- mical Analysis.

PALLADIUM.

642. Dr. Wollaston directs the following pro- cess for obtaining palladium. Digest the ore of platinum in nitro-muriatic acid, neutralised by soda ; separate the platinum by muriate of ammonia and filter. Then to the filtered liquor let a solution of cyanuret of mercury be added. A flocculent precipitate is gradually formed, which is prussiate of palladium, and which yields palladium upon exposure to heat.

643. Palladium is of a dull white color, it is malleable and ductile. It requires for its fusion a temperature above that required for the fusion of gold. Muriatic acid, by being boiled upon this metal, acquires a beautiful red color. With sulphuric acid a blue color is produced. Nitric acid acts with more energy upon it, than either the sulphuric or muriatic ; but its best solvent is the nitro-muriatic acid ; and from all the solu- tions of the metal in the acids, alkalis and earths will produce precipitates. Palladium combines with sulphur, with potassa, and with the other metals. Like platinum, palladium destroys the coloi of gold, even when mixed with it in very small proportions. Dr. Wollaston has furnished an alloy of gold and palladium for the gradua- tion of the magnificent circular instrument, con- structed by Mr. Troughton for the Greenwich observatory. It has the appearance of platinum, and a degree of hardness which peculiarly fits it for receiving the graduations. Henry.

MERCURY.

644. This, as we have before stated, is the only known metal that is fluid at the ordinary temperature of the atmosphere ; and it requires for its solidity that the temperature be reduced to

about 40►► below zero of Fahrenheit. At about 660►► it boils and is converted into vapor.

645. This metal has been known from a very early period. It was named quicksilver from its semi-fluidity, joined with its white silvery ap- pearance. It is occasionally adulterated by a mixture of lead or bismuth ; but it is not then so fluid as when pure. The native metal occurs in small fluid globules, in most of the mines which produce the ores of this metal.

646. Oxides of mercury. ►►► Oxygen combines with mercury in two proportions, forming the black oxide or protoxide of the metal, which may be obtained by long agitation of it in con- tact with oxygen, or by washing calomel with hct lime water, or by boiling calomel with strong solutions of potassa or soda. This was named by Boerhaave, Ethiops per se. It exists in

the pilula hydrargyri, and in the mercurial ointment of the Pharmacopoeia.

647. The other or red oxide or peroxide of mercury is produced by exposing the fluid metal, at a high temperature, for several days to the action of oxygen. This oxide was formerly called pre- cipitate per se, or calcined mercury, and is the hydrargyri oxidum rubrum of the Pharmaco- poeia. This is said to be composed of 100 metal, and 8 of oxygen, while the black oxide contains just half the proportion of oxygen.

648. Peroxide of mercury is decomposed if exposed to the light for a length of time. It is soluble in water, and with ammonia forms an ammoniuret, which is decomposed by heat.

649. Mercury and chlorine. ••• These combine in two proportions, forming the chlorine or bi- chloride, and the proto-chloride (calomel). These compounds are usually named corrosive subli- mate, and calomel. As these salts are preparations of much interest and importance, we shall take the liberty of extracting from Mr. Brandes' Manual, his remarks on their formation and pro- perties.

650. Corrosive sublimate, or bi-chloride, or, as Mr. Brande calls it, perchloride, may be ob- tained, says he, by a variety of processes.

651. When mercury is heated in chlorine, it burns with a pale flame ; the gas is absorbed, and a white volatile substance rises, which is the perchloride.

652. It may also be obtained by dissolving peroxide of mercury in muriatic acid, evapora- ting to dryness, re-dissolving in water, and crys- tallising.

653. The ordinary process for making corro- sive sublimate, consists in exposing a mixture of chloride of sodium (common salt), and per-sul- phate of mercury, to heat 'in a flask, or other proper subliming vessel, a mutual decomposition ensues. The chlorine of the common salt unites to the mercury of the sulphate, and forms bi- chloride of mercury. The oxygen of the oxide of mercury converts the sodium of the salt into soda, which, with the sulphuric acid, produces sulphate of soda. This decomposition is exhibited in the following diagram : •••

1 proportional of perchloride of mercury = 257.

f -N

Chlorine 67 Mercury 190

2 proportionals of common salt < = 111 consist of.

Sulphuric acid

75

1 proportional of ., per-sulphate of mercury = 230 consist of.

Sodium 44 Oxygen 15

2 proportionals of sulphate of soda = 134.

Mr. Brande after this statement presents his readers with an account of the methods fol- lowed, both in the London Pharmacopoeia, and at Apothecaries' Hall, for the composition of the corrosive sublimate ; but, as we shall have to give these in the article PUARMACY, we here omit them.

654. Perchloride of mercury is usually seen in the form of a perfectly white, semi-transparent mass, exhibiting the appearance of imperfect crystallisation. It is sometimes procured in quadrangular prisms. Its taste is acrid and nauseous, and leaves a peculiar metallic and astringent flavor upon the tongue. It dissolves in twenty parts of water at 60□□, and in about half its weight at 212□□. It is more soluble in alcohol than in water. When heated it readily sublimes in the form of a dense white vapor, strongly affecting the nose and mouth. It dis- solves without decomposition in muriatic, nitric, and sulphuric acids ; the alkalis and several of the metals decompose it. It produces, with muriate of ammonia, a very soluble compound ; hence a solution of sal-ammoniac is used with

advantage in washing calomel, to free it from corrosive sublimate.

655. The compound commonly termed calomel (proto-chloride of mercury), was first mentioned by Crollius, early in the seventeenth century. The first directions for its preparation are given by Beguin in the Tyrocinium Chemicum, pub- lished in 1608. He calls it draco mitigatus. Several other fanciful names have been applied to it, such as aquila mitigata, manna metallorum, panchymagogum minerale, sublimatum dulce, mercurius dulcis, &c.

656. The most usual mode of preparing ca- lomel consists in triturating two parts of corro- sive sublimate with one of mercury, until the globules disappear, and the whole assumes the appearance of an homogenous gray powder, which is introduced into a matrass, placed in a sand heat, and gradually raised to redness. The calomel sublimes, mixed with a little corrosive sublimate, the greater part of which, however, being more volatile than the calomel, rises higher in the matrass ; that which adheres to the calomel may be separated by reducing the whole to a

fine powder, and washing in large quantities of hot distilled water. Pure calomel in the form of a yellowish white insipid powder remains.

657. It was formerly the custom to submit calomel to very numerous sublimations, under the idea of rendering it mild ; but these often tend to the production of corrosive sublimate ; and the calomel of the first sublimation, espe- cially if a little excess of mercury be found in it, is often more pure than that afforded by sub- sequent operations.

658. Here follows the method directed in the Pharmocopceia, for the production of calomel, which for the reasons given above we also omit.

659. It will be observed, continues Mr. B., that in these processes the operation consists in reducing the perchloride to the state of proto- chloride, by the addition of mercury. Various modes have, however, been adopted for the direct formation of calomel; two of these may here be noticed, of which the first is in the humid way, as devised by Scheele and Chenevix. It is as follows : ???

660. Form a nitrate of mercury, by dissolving as much mercury as possible in hot nitric acid ; then dissolve in boiling water a quantity of com- mon salt, equal to half the weight of the mercury used, and render the solution sensibly sour by muriatic acid, and pour the hot nitrate of mer- cury into it Wash and dry the precipitate.

661. If this process be carefully performed, and the precipitate thoroughly edulcorated, the calomel is sufficiently pure.

662. The second process, however, or that by which calomel is directly formed in the dry way, appears on the whole the least exceptionable for the production of this very important article of pharmacy. It is the method followed at Apo- thecaries' Hall, sanction having been obtained for its adoption from the Royal College of Phy- sicians. I ifty pounds of mercury are boiled with seventy pounds of sulphuric acidtodryness, in a cast-iron vessel : sixty-two pounds of the dry salt are triturated with forty pounds and a half of mer- cury, until the globules disappear, and thirty-four pounds of common salt are then added. This mix- ture is submitted to heat in earthen vessels, and from ninety-five to 100 Ibs. of calomel are the result. It is to be washed in large quantities of distilled water, after having been ground to fine and impalpable powder.

*663. Protochloride of mercury is usually seen in the form of a white mass of a crystalline texture ; and, when very slowly sublimed, it often presents regular four-sided prisms, perfectly transparent and colorless. Its specific gravity is 7*2. It is tasteless, and very nearly insoluble in water. It can scarcely be called poisonous, since in considerable doses it only proves purga- tive. By exposure to light it becomes brown upon its surface. If scratched it gives a yellow streak which is very characteristic, and does not belong to the perchloride. When very finely levigated it becomes of a buff color.*

664. It consists of one proportional of mer- cury, 190 + one proportional of chlorine 33 -5, and its representative number is 223‘5.

665. Native chloride of mercury, or mercurial horn ore, has been found in Germany, France,

and Spain, usually crystallised, and sometimes incrusting and massive. Brande.

666. Iodine and mercury unite in two pro- portions, forming the protiodide, which is a yel- low compound, and the priodide or the deut- iodide which is red. They are insoluble in water.

667. Salts of mercury. ••• Protosulphate of mercury is formed by boiling mercury in equal or double its weight of sulphuric acid. This salt requires 500 parts of water for its solution. If heated for some time to a pretty high tempera- ture, part of its acid is expelled, and a hard gray mass is formed. When this is removed from the fire, and hot water is poured upon it, a yellowish-colored substance is formed, which was formerly called turpeth or turbith mineral, it is a super-sulphate of mercury, and a biper- sulphate remains in solution.

668. Chlorate of mercury. ••• Both the oxides of mercury dissolve in chloric acid. Both the salts, when heated, give out oxygen, and are converted into per-oxide and per-chloride of mercury. An. de Chim. 95, 103.

669. Cyanide of mercury. ••• This may be formed by boiling one part of finely powdered red oxide of mercury, with two of Prussian blue, in eight parts of water. In this way a solution is obtained, which, if filtered while hot, deposits yellowish white crystals which are the cyanide.

670. Nitrates of mercury. ••• These are the prolo-nitrate and per- nitrate. The first is formed by dissolving mercury in nitric acid, without the assistance of heat ; this solution yields by eva- poration the salt in question. The second is procured by using heat in the solution, and the metal thereby

becomes more highly oxidated.

671. The substance commonly called red precipitate, is produced by exposing the nitrates to a heat gradually raised to upwards of 600►►, nitric acid is given off, and a brilliant red sub- stance remains, which is properly a nitro-oxide of mercury, and is thus designated in the Pharmacopoeia.

672. Fulminating mercury. ►►► The account of this preparation we extract verbatim from Dr. Henry's elements. ' Mercury is the base of a fulminating compound, discovered by the late Mr. E. Howard. To prepare this powder 100 grains (or a greater proportional quantity, not exceeding 500), are to be dissolved with heat in a measured ounce and half of nitric acid. The solution being poured cold upon two measur- ed ounces of alcohol, previously introduced into any convenient glass vessel, a moderate heat is to be applied till effervescence is excited. A white fume then begins to undulate on the sur- face of the liquor, and the powder will be gradually precipitated on the cessation of action and re-action. The precipitate is to be im- mediately collected on a filter, well washed with distilled water, and cautiously dried in a heat not exceeding that of a water bath. The imme- diate washing of the powder is material, because it is liable to the re-action of the nitric-acid ; and, while any of that acid adheres to it, it is very subject to be decomposed by the action of light. From 100 grains of mercury about 120 or 130 of the powder arc obtained (see Phi-

losophical Transactions, 1800). This powder lias the property of detonating loudly in a gentle heat, or by slight friction. Hence it has been proposed as a means of firing ordnance. But an accident described by professor Silliman, as having happened in his laboratory, shows that this fulminating compound explodes from such trifling causes as not to be kept without danger, even when secured from friction or heat. It has been shown from the experiments of Liebeg and Gay Lussac (Au. de Ch. et de Phys. 24 and 25), that fulminating mercury owes its properties to a peculiar acid united with oxide of mercury, which may be transferred from it to alkaline and other bases, but is not obtainable in a separate state. To this acid they have given the name of fulminic.

673. Sulphurets of mercury are two, the one formerly called ./Ethiop's mineral, and the other cinnabar. The first is obtained by triturating for a length of time one part of mercury with three of sulphur, or by pouring at once mercury into melted sulphur. If the black sulphuret or jEthiops be

fused together and sublimed, the red, or vermillion sulphuret is procured, which is the cinnabar of former times. Native cinnabar furnishes most of the mercury which is employed in commerce, this compound being distilled with iron filings. ./Ethiop's mineral is a proto-sul- phuret or sulphuret; cinnabar is abisulphuret of mercury.

674. With most of the metals mercury com- bines, and forms a class of compounds called amalgams ; in the case of these combinations mercury loses its fluidity. It is a curious fact, that a solid amalgam of lead, mixed with one of bismuth, instantly becomes fluid.

675. Combination with mercury gives to some metals a facility of uniting with oxygen. See the word AMALGAM.

COPPER.

676. Copper is found native, and in various states of combination ; the copper of commerce, too, is occasionally contaminated with other metals, as antimony, lead, and arsenic; and Berzelius states, that a small quantity of charcoal and sulphur are always found in it. Philosophical Mag. xlvii. 206. To be rendered perfectly pure it must be dissolved in muriatic acid, and into the solution a polished plate of iron is to be immersed, upon which the pure copper is pre- cipitated. When the metal has thus been pu- rified, it is to be washed with dilute sulphuric, or muriatic acid, and it may be fused, or kept in a divided form.

677. Copper has great malleability, ductility, and tenacity. It fuses at a dull white heat, and, if the heat be urged on, it evaporates in visible fumes.

678. The native copper is met with in different forms, massive, granular, and in crystals. It is found in Cornwall, Saxony, Siberia, Sweden, &c. It is also met with in America.

679. Oxides of copper. ××× This metal is sus- ceptible of two degrees of oxidisement; the one combination constituting the protoxide, the other the peroxide of the metal. The first, or lowest stase of oxidisement, forms a red substance; and the second, or maximum, is black.

680. The protoxide occurs native. It may be produced artificially, by mixing metallic copper and peroxide of copper in muriatic acid. If potassa be added to this solution, a hydrated protoxide is obtained, which falls to the bottom, which is of an orange color ; if quickly dried, without being subjected to oxygen, it becomes red.

681. The black, or peroxide, is procured by precipitating nitrate of copper with carbonate of potass. A simple ignition of the nitrate will produce it.

682. Chlorine with copper. ••• Copper is acted on forcibly by gaseous chlorine, and, when these materials are treated together, two compounds are simultaneously produced, the proto-chloride and per-chloride of copper. The first of these compounds was called resin of copper by Boyle. It is insoluble in water, but soluble in muriatic acid ; the color of it is dark brown, but it ac- quires a green hue by exposure to the air. This substance remains in the retort after the distil- lation of a mixture of two parts of corrosive sublimate (bi-chloride of mercury) and one of copper filings.

683. The per-chloride may be produced by dissolving peroxide of copper in muriatic acid, and evaporating to dryness at a heat below 400••. This compound is of a yellow color, but dissolved in water it becomes eventually green.

684. An iodide of copper may be precipitated from solutions of the metal, by hydriodic acid. This substance is brown and insoluble.

685. Salts of copper. ••• Muriatic acid does not act readily on metallic copper; but it freely dissolves the peroxide, and thus forms the per- muriate. A proto-muriate is also obtained by digesting copper filings with the peroxide of the metal in muriatic acid. A native submuriate of copper is found in Chili and Peru ; and ' it is a submuriate of copper that is formed by the de- structive action of sea-water upon the copper sheathing of ships, the oxygen necessary to the formation of the muriate being derived from the air of the atmosphere. Now, according to the views of Sir H. Davy, copper can only act upon sea-water when in a positive state, and that phi- losopher was therefore led to conceive, that if the electric state of the copper were reversed, by bringing it into contact with some metal of more energetic electrical power, the action of the sea- water would cease. Philosophical Transactions, 1824. This led him to a discovery which pro- mises to be most important in its practical con- sequences, viz. that extensive surfaces of copper may be completely protected from the corroding effects of sea-water, by placing comparatively small quantities of malleable or cast iron, in contact with the copper sheathing of a ship ; and it has been found that the covering of vessels so protected is uninjured, even by long voyages, in tropical countries. This discovery has been ap- plied by Dr. Bostock to the protection of utensils employed for culinary purposes.' An. of Philos. viii. p. 76. Henry.

686. Chlorate of copper is formed by dissolving peroxide of copper in chloric acid. This salt is of a bluish-green color, not easily crytallised,, and is deliquescent,

687. lodate of copper is procured by precipi- tation from solutions of copper, by means of the iodate of potassa or other alkaline iodates.

688. Nitrate of copper is obtained by direct solution of the metal in dilute nitric acid ; and a sub-nitrate is obtainable by adding a small portion of alkali to the solution of the nitrate. 1 There appears to be no proto-nitrate of copper, for protoxide of copper, digested in very dilute nitric acid, is resolved into peroxide, which dis- solves, and into metallic copper. Potassa forms in solution a bulky blue precipitate of hydrated peroxide of copper, which, when boiled in potassa or soda, becomes black from the loss of its com- bined water. Brande.

689. If peroxide of copper be dissolved in ammonia, a bright blue liquid will be produced, from which blue crystals may be procured by evaporation, and these constitute the ammoniaret of copper, or cuprate of ammonia.

690. Sulphates of copper. ??? The blue salt which is formed by digesting strong sulphuric acid with copper is a sulphate; but it is better to use the oxide of the metal for the preparation, otherwise, part of the sulphuric acid being de- composed, and furnishing oxygen to the metal, it is dissolved. The sulphate, or persulphate of copper, is a regularly crystallised salt, which has been called blue vitriol, or Roman vitriol. Upon a large scale this salt is formed by ex- posing to the air and moisture a sulphuret of copper. This preparation is the salt of Venus of the alchemists.

691. A sub-sulphate of copper may be formed by adding potassa or ammonia carefully to a so- lution of the sulphate ; and Dr. Thomson has recently described a quadri-sulphate, consisting of 1 atom of base + 4 atoms of acid.

692. Sulphite of copper may be obtained by passing sulphurous acid gas into a vessel con- taining water and oxide of copper. See An. de Chim. 83.

693. Phosphoric acid unites with the oxide of copper in two proportions, viz. into a bi-phos- phate and phosphate. The latter has been found in a native state near Cologne.

694. Carbonate of copper is formed by ex- posing the metal to a damp air ; and it may be produced by adding alkalis, in their carbonated state, to solutions of copper. There is a fine blue preparation of copper, which is called ver- diter, and principally used by silver-refiners ; this is formed by adding carbonate of lime to the nitrate of copper.

695. Native carbonate of copper is met with of a green and of a blue color ; the first (mala- chite) is found in Siberia, it has been met with in Cornwall. The blue carbonate is found in Bohemia, and near Lyons, &c. One variety of this is sometimes called the mountain blue.

696. Verdigris is an acetate of copper ; by the solution of this substance in distilled vinegar, a binacetate is formed. A sub-ac Jtate is procurable by acting on verdigris with water. Berzelius speaks of other proportionals of acetic acid with oxide of copper, An. of Phil. N. S. 8. 188.

697. A ferro-cyanate of copj>er is obtained by adding ferro-cyanate of potassa to a dilute solu- tion of sulphate or nitrate of copper, or to the

muriate of the metal. This substance has been recommended by Mr. Hatchett to be used as a brown pigment.

698. Sulphuret of copper exists native in two forms ; the one is black and is capable of being artificially formed by melting in a glass tube three parts of iron filings with one part of sulphur. The other is a bi-sulphuret, which forms the ore of copper called pyrites.

699. Phosphorus and copper unite by fusion, and form a phosphuret which is of a grayish- white color.

700. On the alloys of copper, as some of them are important, we shall extract some paragraphs from Mr. Brande's Manual. With gold it forms a fine yellow ductile compound, used for coin and ornamental work. Sterling or standard gold consists of 11 gold + 1 copper. The specific gravity of this alloy is 17-157. With silver it forms a white compound, used for plate and coin. Lead and copper require a high red heat for union ; the alloy is gray and brittle.

701. Brass is an alloy of copper and zinc. The metals are usually united by mixing granulated copper with calamine and charcoal ; the mixture is exposed to heat sufficient to reduce the cala- mine and melt the alloy, which is then cast into plates. The relative proportion of the two metals varies in the different kinds of brass ; there is usu- ally from twelve to eighteen percent, of zinc. Brass is very malleable and ductile when cold; and its color, and little liability to rust, recommend it in preference to copper for many purposes of the arts. According to M. Sage a very beautiful brass may be made by mixing fifty grains of oxide of copper, 100 of calamine, 400 of black flux, and thirty of charcoal powder ; melt these in a cru- cible till the blue flame is no longer seen round the cover, and, when cold, a button of brass is found at the bottom, of a golden color and weighing one-sixth more than the pure copper, obtained from the above

quantity of oxide.

702. The analysis of brass may be performed by solution in nitric acid ; add considerable ex- cess of solution of potass and boil, which will dissolve the oxide of zinc and leave that of cop- per, wash the latter, and dry, and heat to redness ; 125 parts indicate 100 of copper. The zinc in the filtered alkaline solution may be precipitated by carbonate of soda, having previously added a small excess of muriatic acid ; wash this pre- cipitate, dry it, and expose it to a red heat ; it is then oxide of zinc, 123 parts of which, indicate 100 of the metal.

703. Tutaneg is said to be an alloy of copper, zinc, and a little iron ; and tombac, Dutch gold, similor, Prince Rupert's metal, and pinchback are alloys, containing more copper than exists in brass, and consequently made by fusing va- rious proportions of copper with brass. Accor- ding to Wiegleb, manheim gold consists of three parts of copper, and one of zinc. A little tin is sometimes added, which, though it may improve the color, impairs the malleability of the alloy.

704. Speculum metal is an alloy of copper and tin, with a little arsenic; about 6 copper, 2 tin, 1 arsenic. On this subject the reader is referred to Mr. Edwards' experiments (Nicholson's Journal 4to. iii.) Bell-metal and bronze are alloys of

copper and tin ; they are harder, and more fusible, but less malleable than copper; the former consist of three parts of copper and one of tin; the latter from eight to twelve of tin with 100 of copper. A little zinc is added to small shrill bells.

705. Vessels of copper used for culinary pur- poses are usually coated with tin, to prevent the food from being contaminated with copper. Their interior surface is first cleaned, then rubbed over with sal-ammoniac. The vessel is then heated, a little pitch spread over the surface, and a bit of tin rubbed over it, which instantly unites with and covers the copper. Brande.

706. Respecting the alloys BRASS 8cc. From a recent investigation of them Mr. Dalton finds that in all alloys of copper which are characterised by useful properties, the ingredients enter in atomic proportions ; and it is probable that by attention to these proportions, the manufacture of the artificial alloys may be greatly improved.

707. Most of the copper of commerce is ob- tained from copper pyrites, or

yellow copper ore, which is a compound of sulphur, iron, and copper, in such proportions, as render it probable that it is composed of two atoms of proto-sulphuret of iron, and one atom of per-sulphuret of copper, with a little arsenic and earthy matter (An. of Philos. N. S. Ixxxiii. p. 301). The sulphur and arsenic are separated by roasting, and the cop- per is obtained by repeated fusions, in one of which an addition of charcoal is made. Henry.

IRON.

708. Iron, although not so malleable as gold and silver, is still more ductile than either of them. This metal exists in such abundance that few fossils are entirely free from it. Iron is of a bluish-white color, and is susceptible of very high polish. It is considered by many as of meteoric origin, and indeed, masses of native iron have been seen to fall from the atmos- phere. It is one of the most infusible of the metals.

709. Iron and oxygen. ••• The rusting of iron from exposure to a moist atmosphere, is, in fact, the combination of it with oxygen. It combines with this principle in at least two proportions, forming protoxide and peroxide. The protoxide may be artificially made by precipitating a solu- tion of sulphate of iron with potassa, washing and evaporating it. It is black ; Gay Lussac has sup- posed that in drying, an additional proportion of oxygen is absorbed, and thus that a deutoxide of the metal is formed. Mr. Brande says there is some reason to doubt the accuracy of this conclusion.

710. Protoxide of iron may be obtained by burning iron in oxygen gas ; this process forms a beautiful experiment, it was first described by Dr. Ingenhous.

*711. When this protoxide is boiled in nitric acid, and precipitated by ammonia, then washed dried and calcined, it is converted into a red- dish or brown oxide. This is the peroxide of the * metal.*

712. Corresponding with these two oxides of iron, there appear to be two hydrates, or hydro- oxides, obtainable by precipitating the acid solu- tions by a fixed alkali. It is, however, difficult to obtain a pure hydrate of iron, on account ol the facility with which it parts with water.

713. The native oxides of iron, says Mr Brande, constitute a very extensive and important class of metallic ores. They vary in color, de- pending upon mere texture in some cases ; in others upon the degree of oxidisement. Some varieties are magnetic, and those which contain the least oxygen are attracted by the magnet.

714. Magnetic iron ore is generally black, with a slight metallic lustre. It

occurs massive and octahedral. It is often sufficiently magnetic to take up a needle. It occurs chiefly in primitive countries, and is very abundant at Itoslagen in Sweden, where it is manufactured into a bar-iron particularly esteemed for making steel.

715. Another variety of oxide of iron is called iron glance, and micaceous iron ore. It is found crystallised, of singular beauty, in the isle of Elba, and occasionally among the volcanic products of Vesuvius, and the Lipari islands.

716. A third variety is haematite or red iron stone; it occurs in globular and stalactitic masses, having a fibrous and diverging structure. In this country it abounds near Ulverstone in Lan- cashire ; and most of our iron plate and wire is made from it. Sometimes it is of a brown, black, or ochraceous color.

717. A fourth variety of oxide of iron is known under the name of clay iron stone, on account of the quantity of argillaceous earth with which it is contaminated. It is found in masses of different shapes and sizes, and some- times in small round nodules like peas. Some of the globular masses are called aetites. It is abundant in the coal formations of Shrop- shire, South Wales, Staffordshire, and Scotland.

718. Though this is far from being the purest iron ore found in this country, it is the chief source of the cast and bar iron in ordinary use. Its employment is chiefly referrible to the coal which accompanies it.

719. The essential part of the process by which these ores of iron are reduced, consists in decomposing them by the action of charcoal at high temperatures. The argillaceous iron of Wales, Shropshire, &c. is first roasted and then smelted with lime-stone and coke ; the use of the former being to produce a fusible compound with the clay of the ore, by which the latter is enabled to act upon the oxide, and to reduce it to the metallic state. Brande.

720. Chlorine and iron unite in two propor- tions, forming the proto-chloride, and the per- chloride ; these products have not been much examined.

721. Iodine also unites with iron into a brown fusible compound, which is an iodide of the metal, and which, when acted upon by water, becomes a hydriodate of a green color.

*722. Sulphur and iron.**** *There is a proto-sul- phuret and a bi-sulphuret of iron, the latter of which is exclusively a natural product, and is found abundantly ; it is called iron-pyrites. The former may be prepared*

by melting iron filings

and sulphur together, this is also found native, but it is distinguishable from the bi-sulphuret by its black color and by its being magnetic, it is called indeed magnetic pyrites, to distinguish it from the common pyrite or yellow sulphuret. The magnetic pyrite is found to contain just half the sulphur which exists in the other.

723. Carbon and iron. ††† With carbon, iron smites in various proportions, and a great dif- ference is found in the properties of these com- pounds, according to the proportion of their ingre- dients. On these varieties, indeed, together with an occasional union of a small quantity of oxygen, depend the different kinds and qualities of the metal found in commerce, and employed in the arts.

724. There can scarcely, says Dr. Henry, be a more striking exampleof essential differences in external and physical characters being pro- duced by slight differences in chemical com- position, than in the carburets of iron, for steel owes its properties to not more than from ˆ5 to Tˆth its weight of carbon. This appears to be the only addition necessary to convert iron into steel ; for, though it is proved that the best steel is made from iron which has been procured from ores containing manganese, yet careful and skilful analysis discovers no manganese in steel. An. de Chim. et de Phys. torn. 32.

725. Steel is a compound, then, of iron and carbon, the proportions being variable ; and the latter metal is converted into the former by a process which is called cementing, and which consists of heating bar-iron in contact with charcoal. We should say that what is called cast or crude iron contains oxygen and the base of silica, besides incidental admixtures ; of this there are two species, the one containing more, the other less of carbon. By the process of puddling, as it is called (for an account of which see the eighty-first volume of the Philosophical Transactions), cast iron becomes converted into malleable, in other words it is made purer ; and it is now called bar-iron, which is used, as we have just stated, for the formation of steel. By combining a still larger quantity of carbon with the bar iron, the fine cast-steel is procured; so that steel, though, like cast-iron, it is combined with carbon, most essentially differs from iron, by being without oxygen, silex, and other matters.

726. Plumbago is another carburet of iron; this is used for black lead

pencils, and for cover- ing iron in order to prevent rust. Iron unites with various metals in alloy.

727. Salts of iron. ††† Copperas, or green vitriol as it has been called, is a sulphate of iron. It is usually formed by dissolving iron filings in dilute sulphuric acid. When in solution this salt absorbs nitric oxide gas, and acquires a brown color: it also unites with chlorine, muriatic acid becomes formed, and in this case the water of solution becomes decomposed.

728. By exposure to air, or if treated with nitric acid, it is converted from a proto-sulphate into a per-sulphate. Sulphuric acid used to be formed from this salt by expelling it with heat; and when thus treated a peroxide of iron re- mained in the vessel. This residue was known

under the appellation of colcothar or caput mor tuum vitrioli.

729. This salt (the green vitriol) occurs native in several of the coal mines of this country ; it is usually combined with pyrites.

730. Muriate of iron is formed by dissolving iron filings in muriatic acid. The proto-muriate is in crystals of a green color, the per-muriate is of a reddish brown. It is this last which is used in the preparation of the Pharmacopoeia called tinctura ferri muriatis.

731. Nitrate of iron ††† The nitric acid acting upon iron produces also the green or proto-nitrate, in which the oxide is at the minimum of oxida- tion, and the red or per-nitrate, in which it is at the maximum.

732. Carbonic acid unites with the protoxide of iron, aud forms a proto-carbonate

733. Ferro-cyanate of iron or Prussian blue.††† We shall give an account of this substance in a distinct article. Here we shall confine ourselves to extracting the following remarks from Dr. Henry, respecting its nature and properties : †††

*734. * Respecting the nature of Prussian blue a variety of opinions have been entertained, and it is still a subject on which chemists are by no means agreed. No theory respecting it can be entitled to notice that was anterior to Gay Lus- sac's discovery of cyanogen. His researches led him to believe that Prussian blue is a compound of cyanogen with metallic iron, and it is there- fore not a prussiate but a cyanide ; but Vau- quelin, having directed his attention to this part of the subject, was still induced to regard it as a true prussiate. According to Mr. Porrett's view, it is a compound of ferro-cyanic acid with peroxide of iron. Berzelius, not admitting the existence of any such acid as the ferro-cyanic, regards Prussian blue as a*

compound of hydro- cyanate of protoxide of iron with peroxide of iron, in proportions admitting of some variations (An. of Phil. N. S. 1. 444). Robiquet, on the other hand, considers it as a cyanide of iron combined with a ferro-cyanate of the peroxide and with water (An. de Chim. et Phys. 12 and 17). The subject, in its present state, appears to me very obscure, and I refer the reader, who is disposed to examine it, to the papers of Berzelius and Robiquet already quoted.'

For an account of the combination of iron with the gallic acid and tan, see the article INK in this Encyclopaedia.

735. Acetate of iron. ††† This combination may also, like the other salts of the metal, exist in two different states ; it is a per-acetate of iron, which is much used in dyeing and calico-printing, see DYEING.

736. Proto-phosphate of iron may be formed by adding solution of phosphate of soda to the proto-sulphate of iron ; and the per-phosphate by adding the same solution to the per-sulphate of iron.

737. The proto-phosphate is found native, both in the form of a blue powder and in prismatic crystals. It has been improperly named native Prussian blue.

738. Iron unites with many other metals in the way of alloy.

CHEMISTRY.

425

TIN.

739. The principal ore of this metal is the native oxide. The pure metal is obtained by heating this ore with charcoal. Tin, in its me- tallic state, has a silvery white color : it is mal- leable, though not very ductile. At a tempera- ture of 442†† it melts, and becomes gradually converted into a grayish powder. Several va- rieties of tin are met with in commerce, for the discrimination of which, and the means of judging their purity, Vauquelin has given useful instructions in the 77th volume of the Annales de Chimie ; and an interesting account of the ores of tin, and of the processes for extracting the metal in Cornwall, has been given by Mr. Tay- lor, in the 5th volume of the Geological Society's Transactions.

740. Tin and oxygen. ††† Two oxides of tin are procurable ††† the protoxide and the peroxide; the first being obtained by precipitating protomuriate of tin by ammonia; and the peroxide is formed by treating the metal with nitric acid; it may also be procured by throwing nitre, in

sufficient quantities, upon red-hot tin, or heating tin filings with red oxide of mercury.

741. The oxides of tin dissolve in the alkalis; they have indeed, in a certain degree, the proper- ties of acids.

742. Native oxide of tin is met with in Corn- wall, in Spain, and in Saxony. It has also been found in France, in the Indies, and in South America.

743. Chloride of tin may be formed by heat- ing together an amalgam of tin and chlorine, or by distilling a mixture of eight ounces of pow- dered tin and twenty-four ounces of the chloride of mercury ; in this last way a perchloride of tin is formed, while the first process produces the proto-chloride.

744. Iodide of tin may either be formed by the direct combination of iodine with the metal, or by adding hydriodic acid to a solution of the muriate. The proportion of its elements has not been ascertained.

745. Sulphuret of tin. ••• There are two of these compounds••• the sulphuret and the bi-sulphuret; the first obtainable by directly heating the metal with sulphur, the second, which has been named aurum musivum, formed by heating the oxide often with an equal weight of sulphur.

746. Phosphuret of tin may be obtained by dropping phosphorus into the melted metal.

SALTS OF TIN.

747. Sulphate of tin is formed by boiling the metal in sulphuric acid ; the solution deposits the salt in the form of white needle-shaped crystals.

748. Nitrate of tin maybe procured by acting upon the metal by diluted nitric acid ; it is ne- cessary that the acid be diluted, and, in the forma- tion of the compound, part of the water, as well as of the acid, is decomposed,

749. Muriate of tin. ••• We have a proto-muri- Hie and a permuriate of this metal ; the first obtained by heating one part of tin with two of muriatic acid. This constitutes the sal Jovis of the ancient chemists. The permuriate may be

procured by dissolving the metal in nitro-mui- atic acid.*

750. Chlorate of tin has not hitherto been subjected to examination. Neither has the iodate.

751. Acetate of tin is formed by digesting tin filings with the acetic acid : this salt is decom- posed by mere exposure to the air.

752. Phosphate of tin may be formed by adding phosphate of soda to the solutions of the metal.

753. Carbonate of tin is procured by adding carbonate of potass to the proto-muriate of the metal.

754. Tin forms alleys with many of the me- tals. Pewter is an alloy of this metal with anti- mony, copper, and bismuth ; the less pure form of pewter has a considerable admixture of lead. Equal parts of tin and lead formed into an alloy constitutes the plumbers' solder. Into the com- position of bronze, and bell-metal, tin also enters. An amalgam of tin and mercury is employed for the backs of looking-glasses. Iron plates are coated by tin, by dipping them into the melted metal.

LEAD.

755. The pure metal is principally obtained from the native sulphuret, but its natural com- pounds are very numerous.

756. Lead, when freed from its admixture, is of a bluish-white color ; at first it has consid- erable lustre, but it soon tarnishes, especially when exposed to a very moist atmosphere. It is considerably malleable, but has much less tenacity than several other metals. Its melting point is about 600□□, and when ignited with oxygen it throws off yellowish fumes, which are an oxide of the metal.

757. Lead and oxygen. □□□ There are three oxides of lead □□□ the protoxide, the deutoxide, and the peroxide. The first may be obtained by heating nitrate of lead, or by decomposing it with carbonate of soda. This oxide is insipid, and insoluble in water : it is of a pale yellow color. It is known in commerce by the name of massi- cot, and when vitrified it forms the litharge of the shops. The deutoxide is known by the name of minium or red lead. It is obtained by exposing the protoxide to heat and oxygen ; and the per- oxide is procured by subjecting the deutoxide to nitric acid in the way of digestion ; the product being one part protoxide and the other the per- oxide, which is a brown insoluble substance, and when heated is converted, by parting with oxygen, into the yellow oxide. This last, when precipitated by the alkalis, forms a hydrate of lead.

758. The oxides of lead give up part of their oxygen on the application of heat. When dis- tilled in an earthen retort they afford oxygen gas ; and still more readily when distilled with con- centrated sulphuric acid. They are completely reduced by being ignited with combustible matter. Thus, when a

mixture of red oxide of lead and charcoal is ignited in a crucible, a button of metallic lead will be found at the bot- tom of the vessel. Mere trituration of the per- oxide in a mortar with a little sulphur, and the

subsequent addition of a small bit of phosphorus, occasions a violent explosion. Thomsons An- nuls, ix. 31.

759. Pure water bas no action on lead, but it takes up a small portion of the oxide of that metal. When left in contact with water, with the access of atmospherical air, lead soon be- comes oxidised and dissolved, especially if agita- tion be used. Hence the danger of leaden pipes and vessels for containing water which is intended to be drunk. Water appears also to act more readily on lead when impregnated with the neu- tral salts that are occasionally present in spring waters. Henry.

760. Lead and Chlorine. ––– Chloride of lead may be obtained either by heating the metal in chlorine gas, or by precipitating the nitrate of lead by the addition of muriatic acid or common salt. Chloride of lead is a white and fusible substance, and after fusion the dried substance is named plumbum corneum, which is volatised by the application of a very high heat. This is the only direct compound of lead with chlorine that is known.

761. There is a substance named mineral or patent yellow, which is a sub- chloride of lead, or rather, perhaps, a compound of oxide and chlo- ride of the metal. It is formed by making into a paste two parts of the deutoxide with one of common salt. This substance, when subjected to the action of nitric acid, forms nitrate of lead; a portion of chloride is disengaged.

762. A native chloride of lead has been found in Derbyshire, in a crystallised form.

763. Iodide of lead may be formed either by the direct combination of the lead with iodine, the mixture being subjected properly to heat, or by adding either hydriodic acid or hydriodate of potassa to a solution of nitrate of lead.

764. Sulphuret of lead. ––– This, in its native state, is called galena, from which, as above stated, almost all the lead of commerce is pro- cured. It may be formed by decomposing the solution of the metal by sulphureted hydrogen. 'All the solutions of lead are decomposed by sulphureted hydrogen and by alkaline hydro- sulphurets, and a hydro-sulphureted oxide is thrown down. Hence these compounds are ex- cellent tests of the

presence of lead in wine or any other liquor, discovering it by a dark-colored precipitate. Hence also characters traced with a solution of acetate of lead become legible when exposed to sulphureted hydrogen gas. The same property explains, too, the effects of alkaline hydro-sulphurets in blackening the glass bottles in which their solutions are kept. The effect is owing to the action of the sulphureted hydrogen on the oxide of lead, which all glass contains.' Henry.

SALTS OF LEAD.

765. Sulphate of lead may be formed by boiling metallic lead in concentrated sulphuric acid, or by adding this acid or sulphate of soda to any other of the salts of lead. This substance is insoluble in water and in alcohol and in nitric acid : it is notf when artificially formed, crystal- line, but it is found native in some parts of Britain in prismatic crystals. Sulphite of lead

may be procured by digesting the yellow oxide of the metal in sulphurous acid, or by mixing solutions of nitrate of lead with sulphite of potass. This salt is white, insipid, and insoluble ; and, when subjected to heat, parts with sulphurous acid.

766. Nitrate of lead. ††† Nitric acid diluted dissolves lead, extricates nitrous gas, and a crys- talline salt is formed, which is whiti, transparent, and caustic. A sub-nitrate is formed by heating together a mixture of equal portions of nitrate and protoxide of the metal; or, if the acid used for the solution of lead be in smaller quantity than ne- cessary to the formation of the nitrate, a sub-nitrate is likewise formed.

767. Chevreuil and Berzelius have described three nitrites of lead, viz. the nitrite, the sub- nitrite and the hypo-nitrite ; of which a detailed account will be found in the second volume of Dr. Thomson's System of Chemistry ; but there seem doubts about the correctness of the results. See Dr. Thomson's System of Chemistry, vol. ii.

578.

768. Acetate of lead. ††† A substance which has long been known under the name of sugar of lead, and which is obtained by dissolving tne carbonate of the metal in distilled vinegar, is an acetate of lead. It is in the form of shining needle-shaped crystals, which are soluble in hot water, and almost equally so in cold. The so- lution, however, becomes decomposed merely by exposing it to the air ; the carbonates and sul- phates of the alkalis also decompose it. By being boiled in water with litharge the acetate passes to the sub-acetate. This salt is not so soluble as the acetate, and it

crystallises in plates.

769. Phosphate of lead is formed by mixing alkaline phosphates with nitrate or acetate of lead. The salt thus formed is insoluble in water, and of a yellowish-white color.

A sub-phosphate, a super-phosphate, and a nitro-phosphate have been described by Berze- lius (Ann. de Chim. et Phys. 2ˆ. Dr. Thom- son also speaks of a di-phosphate, with one proportional of the acid and two of the pro- toxide.

Native phosphate of lead is found in several of the mines in the north of England, and in Scot- land. It is brittle, semi-transparent, and appears in six-sided prisms.

770. Carbonate of lead may be produced by adding an alkaline carbonate to the nitrate. This is the white lead, or ceruse, of commerce ; it is usually manufactured by long continued exposure of thin sheets of lead to the vapor of vinegar. See Aikins Dictionary. Article Lead.

771. Native carbonate of lead is one of the most beautiful of the metallic ores ; it occurs crystallised, and fibrous, the former transparent, the latter generally opaque. It is soft and brit- tle, and occasionally tinged green with carbonate of copper, or gray by sulphuret of lead. The octahedron is its primitive form ; it also occurs prismatic and tabular. It has been found in Cumberland and Durham, and the acicular variety, of great beauty, in Cornwall. Brande.

772. A Chromate of lead is also found native in orange-colored prisms.

C H'E M I S T R Y.

427

NICKEL.

773. This metal, in an impure state, is sold under the name of speiss, which is principally a compound of arsenic and nickel. The metal is brought to a state of purity by the following process : ††† Reduce the speiss to powder, pour upon it a quantity of dilute sulphuric acid, and add the quantity of nitric acid which is necessary to dissolve it. Let the green liquid, thus pro- cured, be decanted and evaporated till it is suffi- ciently concentrated to crystallise ; the fine green crystals thus procured will be a sulphate of nickel. Let these be dissolved in water and again crystallised. These last crystals are again to be dissolved, and decomposed by carbonate of soda, by which process a carbonate of nickel is obtained, which is to be

made up into balls, or paste, with oil, and subjected to a great heat in a crucible surrounded with powdered charcoal. By this process a button of pure nickel will be obtained.

774. Nickel is a white metal, intermediate be- tween silver and tin. It admits of a fine polish. It is perfectly malleable and very ductile. It has a great power of conducting heat ; is diffi- cultly fusible, but absorbs oxygen readily when brought to a red heat.

775. Nickel is found native, in combination with arsenic, and with arsenic acid.

776. Oxides of nickel. ††† Of this metal we have a protoxide and a peroxide. By adding potassa to a solution of the nitrate we obtain the former; and the latter is procured, according to Thenard, by passing a current of chlorine gas through water in which the hydrate of the metal is suspended. The first of these oxides is of a gray color, the other is extremely black, and has a good deal of analogy with oxide of man- ganese,

777. Salts of nickel. ††† This metal is not much acted on by either the sulphuric or muriatic acid, but the former, as above intimated, is made a solvent of it by the addition of nitric acid, and thus a sulphate of nickel may be formed; this salt, which is of a beautiful green color, may also be obtained by digesting the oxide of the metal in dilute sulphuric acid.

778. The nitric solution of nickel is of a beau- tiful grass green color ; by evaporation it affords crystals of a rhomboid form, which are nitrate of nickel. These salts are deliquescent, and, when acted on by ammonia, an ammonio-nitrate of nickel is obtained, which is exceedingly change- able in its color. Indeed the salts of nickel generally, which afibrd with ammonia a green precipitate, assume a blue color when the ammo- nia is in excess. 'The yellow-green precipitate afforded by hydriodate of potass is very charac- teristic of nickel; but the nicest test of its presence is the ferro- cyanate of potassa, which produces a pale gray, or greenish-white pre- cipitate, in all the solutions of the metal.'

779. Chloride of nickel is obtained by heating the metal in chlorine gas. By heating the mu- riate of nickel in a glass tube a chloride is also obtained. These salts have not been accurately examined.

780. Iodide of nickel may likewise be formed by adding hydriodate of potass to the solutions

of the metal in the acids. This salt is insoluble, and of a greenish-yellow color.

781. Sulphuret of nickel ••• The metal may be directly combined with sulphur by fusion, and by this combination a grayish compound is formed, which is of metallic lustre and is brittle in its texture.

782. Carburet of nickel ••• ‘ Nickel is suscepti- ble of uniting with carbon, and is apt indeed to form this union when reduced from its salts by carbonaceous matter. According to Mr. Rose, it composes a substance resembling iodine or micaceous iron ore.’ Ann. of P kilos. N. I. 262 149 and 3201.

783. Of the alloys of nickel, says Mr. Brande, there is one which requires particular notice, namely that with iron, which forms the principal metallic ingredient in those lapideous masses which, in different countries, have fallen upon our globe, and which have been termed aerolites or meteoric stones. Though we really know nothing of the source or origin of these bodies, it has been ascertained, upon the most satisfac- tory evidence, that they are not of terrestrial formation, and consequently, since men began to think and reason correctly, their visits to our planet have awakened much speculation and some experimental research.

784. In the first place it deserves to be re- marked that we have very distinct evidence of the falling of stony bodies from the atmosphere, in various countries, and at very remote periods. For, to say nothing of the fabulous relations which encumber the annals of ancient Rome, or the extended catalogue of wonders flowing from the lively imagination of oriental writers, such events are recorded in holy writ, and have been set down by the most accredited of the early historians; and although philosophical scepticism long contended against the admission of the fact, it has in modern times received such unanswer- able proofs, as to be allowed by all who have candidly considered the evidence; and is only rejected by the really ignorant, or by those who, for the sake of singularity, affect disbelief.

785. Mr. Brande goes on to present instances of these visitations, and to speculate on their probable origin, but we must refer to the article METEOROLOGY for a further notice of this sub- ject, and shall here merely say that nickel enters into the composition of meteoric iron in various proportions. In a specimen from the arctic re- gions, Mr. Brande found the proportion of nickel to the amount of three per cent, and Mr. Children found nearly ten per cent, in a mass of the same material brought from Siberia.

CADMIUM.

786. Cadmium is a metal of very recent dis- covery. It is contained in

certain ores of zinc, and may be procured by digesting the ore in muriatic acid, by which we obtain a combination of muriate of zinc, and cadmium. This should be evaporated to dryness, and re-dissolved in water. If cadmium be present, the solution when treated with sulphureted hydrogen thro%vs down a yellow precipitate, and, if we immerse a plate of zinc into it, metallic cadmium is precipi- tated, or the ore may be dissolved in sulphuric

acid ; and through the solution a current of sul- phureted hydrogen gas be directed. The pre- cipitate must be well washed, dissolved in concentrated muriatic acid, and the excess of acid dissipated by evaporation. What remains must be dissolved in water and precipitated by carbonate of ammonia, which must be supplied in excess. In this way we obtain a carbonate of the metal, and the carbonic acid may be expelled from it, by a proper application of heat.

787. Cadmium closely resembles tin, both in its appearance and properties ; it however sur- passes it in tenacity, and is somewhat harder. It is very ductile. It is not more readily acted on by simple exposure to air than is tin, but when heated it forms an orange-colored oxide, which is easily reducible.

788. Oxide of cadmium is soluble in pure ammonia, but not in its carbonates ; with sulphu- reted hydrogen a yellow precipitate is formed from its solutions, and zinc will throw down from it metallic cadmium.

789. Sulphate, nitrate, chloride, iodide, carbo- nate, and phosphate of cadmium have all been found, but have not hitherto been examined in such sort as to make them be considered as accurate results, or compounds of much in- terest.

790. The metal too unites with sulphur so as to form a sulphuret, and with phosphorus to constitute a phosphuret.

ZINC.

791. The zinc of commerce is never pure, but contains sulphur, charcoal, lead, and sometimes copper, iron, and a small portion of arsenic and manganese. The common zinc of commerce is called speltre. The metal may be purified by dissolving this speltre in diluted sulphuric acid, and immersing a plate of zinc into the solution, which throws down the other metals that the so- lution contains; the clear solution must then be

decomposed by sub-carbonate of potass, and the precipitate, after being well washed, ignited with charcoal.

792. Zinc is of a white color, with a tincture of blue. It is malleable under a due degree of heat (see Philos. Mag. 23). It is also some- what ductile. It is fusible at about 680►► and the mass upon cooling assumes a crystalline form.

793. Oxide of zinc. ►►► This is obtained by heat- ing the metal in air. At a red heat it burns with a bright flame, and is converted into what has been called flowers of zinc, which is an oxide, white, insipid, and soluble in the alkalis. If in this state it be again subjected to a violent heat it fuses into a glass. The same oxide may be obtained, and in a greater degree of purity, by ad- ding ammonia to a solution of sulphate of zinc, the precipitate being washed and dried. This is the only known oxide of zinc, however it may be procured. See Thomson's Annals, p. 33. Zinc may be oxidised by being boiled with pure alka- line solutions ; and from all the salts of zinc the alkalis precipitate a hydrated oxide.

794. Chloride of sine is obtained either by evaporating the muriate of the metal or by heat-

ing leaf zinc in chlorine. There is only one known combination of zinc with chlorine; it was formerly called butter of zinc; it is a fusible compound, and by the action of water produces a muriate of zinc. It should be observed that the attraction of zinc for chlorine is very power- ful.

795. Iodine likewise combines with zinc, and produces a fusible and volatile compound, de- liquescent when exposed to the air, and crys- talline. This iodide of zinc becomes when it deliquesces a hydriodate.

796. Zinc and sulphur. ►►► Sulphuret of zinc is formed by heating the oxide of the metal with sulphur. This composition exists native under the name of blende. When formed artificially sulphuret of zinc is a yellowish-brown mass, but blende is a brittle soft mineral, differently shaded with brown and black. It is called by the miners black-jack.

797. Water impregnated with sulphureted hy- drogen decomposes after some time the solution of zinc, and forms a yellowish-white precipitate, which is probably a hydro-sulphuret.*

798. Phosphureted zinc is a whitish or lead co- lor compound, and has a metallic lustre some- whatlikelead. It is in some measure malleable. When subjected to a very high temperature it burns like zinc.

Salts. of Zinc.

799. Sulphate of zinc. ??? Diluted sulphuric acid readily oxidises and eventually dissolves the me- tal, giving off hydrogen, and leaving a sulphate of zinc, which shoots into regular crystals. The white vitriol of commerce is a sulphate of zinc^ which is either procured by a further evaporation than is necessary for the crystalline formation, or prepared from the native sulphuret. This salt is- found native at Holywell in Flintshire.

800. Sulphite of zinc is obtained by dissolving the metal in sulphurous acid. And hypo-sulphite is procured with the same acid by digestion, and after evaporation dissolving the produce in alco- hol and re-crystallising it.

801. Nitrate of zinc is a veiy deliquescent salt; it crystallises from solution of the metal in nitric acid.

802. The muriate of zinc, formed in the same manner with muriatic acid, does not crystallise. During the solution hydrogen gas of great purity is evolved. Indeed this is a common form of pro- curing hydrogen. When the muriate is heated in the air it loses muriatic acid and becomes mere oxide of zinc ; in a close vessel it parts with wa- ter and the residue is a chloride of zinc.

803. lodate of zinc is formed by adding iodate of potassa to a solution of sulphate of zinc.

804. Hydriodate of zinc is formed by iodide of zinc attracting moisture from the air.

805. Phosphate of zinc may be obtained by dissolving zinc in phosphoric acid, or by de- composing sulphate of zinc with phosphate of soda. Dr. Thomson formed a bi-phosphate of this metal.

*806. Carbonate of zinc, in its native form, con- stitutes the principal portion of the mineral called calamine. Artificially the carbonate i**

procured, by adding carbonate of potassa to sul- phate of zinc.

807. Acetate of zinc may either be formed by dissolving the white oxide in acetic acid, or by mixing the solutions of acetate of lead and sul- phate of zinc. This by evaporation affords beau- tiful crystals.

808. Ferro-cyanate of zinc is a yellowish-white precipitate, produced by adding ferro-cyanite of potassa to sulphate of zinc.

809. Zinc forms alloys with most of the other metals.

BISMUTH.

810. Native bismuth has been met with in the western extremity of Britain, and also in Ger- many, France, and Sweden. It is a brittle white metal with a tint of red ; it fuses at 476►►, and by slow cooling forms very distinct crystals.

811. The metal may be obtained pure by dissol- ving the bismuth of commerce in nitric acid, then decomposing the nitrate by water, which separates an oxide of bismuth, that may be reduced to a metallic state by heating it with black flux.

812. Oxide of bismuth is to be obtained by exposing the metal to heat and air, a fusible white oxide is thus formed, which burns with brilliancy ; if the heat be increased under free ex- posure to air, an abundance of yellow smoke is thus produced, which when subjected to a lower temperature condenses in the form of a yellowish- white sublimate.

813. This oxide of bismuth has been found native, but it occurs rarely.

814. Chloride of bismuth is procured by in- troducing the metal very finely divided into chlorine gas, or by evaporating the muriate of bismuth to dryness ; the salt thus obtained, after sublimation, deliquesces into a material which was formerly called butter of bismuth.

815. Iodide of bismuth is obtained by heating iodine with the metal. This product is of an orange color, and insoluble in water. If hy- driodic acid, or hydriodate of potassa be added to nitrate of bismuth, a precipitate is procured of a chocolate-brown color.

816. Sulphuret of bismuth is of a bluish-gray color, with a metallic lustre. It is produced by the direct combination of sulphur with the metal, but it is found, though rarely, native.

817. Salts of bismuth. ►►► The sulphate is a white compound, formed by the action of sulphuric acid on the metal ; it is not soluble in, but is decomposed by, water, from the action of which it is changed into a sub- sulphate and super- sulphate.

818. Nitrate of bismuth. ►►► This salt is formed by dissolving the metal in two parts of nitric acid and one of water, by which nitric oxide is evolved. If water be made to decompose this solution, a white substance is thrown down, which has been called pearl white, or magistery of bismuth. This substance has been introduced into the Pharmacopoeia under the

name of sub- in'trate of bismuth, and is an excellent medicine in some morbid conditions of the stomach. See MEDICINE.

819. An acetate of bismuth may be used as a white sympathetic ink; the nitrate will answer

the same purpose on this as corrosive. Cha- racters thus written are invisible when dry, but become legible on being immersed in water; exposure of them to sulphureted hydrogen turns them black.

820. The principal use of bismuth in the arts is in the formation of soft solders, which are fusible alloys with other metals. Gold is deprived of its ductility when combined with bismuth, even in very small quantities ; it also occasions silver and platinum to be brittle.

ANTIMONY.

821. The principal ore of this metal is its sulphuret. For the purpose of obtaining it in its metallic state, the native sulphuret is to be mixed, in the proportion of three parts to two, with crude tartar (the bi-tartrate of potass) ; to this may be added one-third of nitrate of potass, and the mixture is to be thrown by spoonfuls into a red-hot crucible ; at the bottom of the crucible the metal will form ; in this state it is met with in commerce, and it is nearly pure ; but for its complete purification it is to be dis- solved in nitro-muriatic acid, and the solution poured into water ; a white powder will now be precipitated, which must be washed, mixed with double its weight of tartar, and exposed to a dull red heat in a crucible, the product is the pure metal.

822. Another method of reducing the ore of antimony is to fuse it in a covered vessel, with half its weight of iron-filings, adding, when the mass has been brought to a state of fusion, a fourth part of nitrate of potassa.

823. Antimony is of a silvery-white color ; it is very brittle, and in its ordinary texture it is crystalline. Its fusible point is about 810□□, and at a high heat it is volatile.

824. Antimony and oxygen. □□□ Mere exposure to the air causes but little change in antimony at the ordinary temperature of the atmosphere, but when the heat is raised so as to fuse the metal, white fumes are emitted, which is the metal in combination with oxygen.

825. Proust says that all the oxides of anti- mony may be reduced to two, as far as their atomic proportions are concerned ; butBerzelius has contended for at least three definite com- pounds of this metal with oxygen. The first is to be obtained by pouring muriate of antimony into water ;

washing the precipitate with a weak solution of potassa, and afterwards with water ; then drying it ; or by boiling to dryness 200 parts of sulphuric acid with fifty parts of pow- dered metallic antimony, the residue being washed first in a weak solution of carbonate of potassa, and then with water. This forms the protoxide of antimony, and it appears, says Dr. Henry, to be the only oxide of antimony which is capable of acting as a true base with acids, and is that which gives activity to the principal medicinal preparations of that metal.

826. For the mode of preparing this oxide, as directed in the Pharmacopoeia, we refer to the article PHARMACY.

827. Berzelius directs for the formation of the second or white oxide, that metallic antimony be dissolved in nitric acid, and the product be subjected to heat; or that the metal be dissolved

in nitro-muriatic acid, decomposed by water, and the precipitate first washed, and then cal- cined in a platinum crucible.

828. The third or yellow oxide is to be ob- tained by mixing nitre and metallic antimony, or the protoxide of the metal, and fusing them. The residue afterwards being mixed with nitric acid, a white precipitate is formed which becomes yellow upon being heated. This is the peroxide of the metal ; which is precipitated from its combinations in the form of a white hydrate.

829. The white and yellow oxides are, strictly speaking, acids, and they have been called an- timonious and antimonic acids ; or by Berzelius, the stibions and stibic acids, from the Latin ap- pellative of the metal, stibium.

830. Chloride of antimony. ??? This was for- merly known under the name of butter of an- timony. It may be formed by distilling together one part of powdered antimony with two and a half of corrosive sublimate. This composition is a soft solid under the ordinary temperature of the air, but it becomes liquid on being ex- posed to a high heat, and in cooling crystallises. If water be added to the chloride of antimony, a hydrated protoxide of antimony is formed (this used to be called Algaroth powder, or mercurius vitae), with this also muriatic acid is generated, which may be taken up by potassa, and the oxide remains pure.

831. Iodide of antimony is of a dark red color ; when acted on by water hydriodic acid and oxide of the metal are produced. In the Quarterly

Journal, xviii. page 397, a compound of antimony, iodine, and sulphur, is mentioned, containing a proportional of each ingredient.

832. Sulphuret of antimony is easily formed by combining the metal with sulphur. The ar- tificial very closely resembles the natural sul- phuret. When this is exposed to a dull red heat oxygen is gradually absorbed, and the metal be- comes converted into a gray oxide. If to this a strong heat be applied, the substance fuses into a glassy matter which was formerly called glass of antimony, which is a compound of protoxide with about 10 or 15 per cent, of sulphuret: toge- ther with these ingredients there is usually also a little silex. If the sulphuret have its proportion to the oxide increased, an opaque compound is formed, of a reddish or yellowish color, which has been named saffron of antimony. With a still larger proportion of the sulphuret we obtain the liver of antimony.

833. Hydro-sulpkureted oxide of antimony. This compound is usually prepared by fusing equal parts of sulphuret of antimony and potassa ; it was long known under the name of Kermes mi- neral. The liquor is to be filtered while hot, and it is during the cooling that the kermes is depo- sited. If to the solution when cold, dilute sul- phuric acid be added, a red precipitate falls down, which, when washed and dried, is the golden sul- phur of antimony of former times, now called in the London Pharmacopoeia the precipitated sul- phuret of antimony. This only differs from the kermes in containing a larger quantity of surphu- reted hydrogen, it is a sulphureted hydro-sul- phuret.

834. Salts of antimony. ❓❓❓ When antimony is heated with sulphuric acid, the acid is decom- posed, the metal is oxidised, and a sub-sulphate is produced.

835. Nitric acid acts with much power on an- . timony, even to the extent, under some circum- stances, of inflammation. In this case ammonia is produced by the vehement decomposition of the acid, and the metal becomes peroxidised. 'The most convenient solvent of antimony is the nitro-muriatic acid, which acts upon the metal both in a separate state and as it exists in the black sulphuret. Muriatic acid acts on the lat- ter compound, and evolves sulphureted hydro- gen gas in abundance and of great purity, and muriate of ammonia is also formed, and remains in solution along with the muriate of antimony.' Berzelius, Ann. de Chim. et de Phys. xvi.

836. The celebrated preparation called James's Powder, according to the analysis of Dr. Pear- son (Phil. Trans. 1791), consists of 43 parts phosphate of lime and 57 protoxide of antimony; but of this, and its imitation by the London Col- lege of Physicians, in the Pulvis Antimonialis, as well as the Tartarised Antimony or Tartar emetic, which is a compound

of protoxide of antimony, potassa, and tartaric acid, we shall have to enlarge in the article PHARMACY.

837. Antimony forms an alloy with most of the other metals ; one of the most important of the alloys of antimony is that which it forms with lead. The metal for printers' types is a com- pound of antimony and lead, in the proportion of one part of the former to sixteen of the latter.

MANGANESE.

838. Native manganese is not the metal in its metallic state, but is an impure oxide of it. It may be obtained pure (that is the oxide) by heating the black peroxide with muriate of am- monia. Chlorine is disengaged from this mixture ; this chlorine attaches itself to the manganese, and when water is added a pure solution of muriate of manganese is obtained by filter. From this solution bi-carbonate of potassa precipitates a pure carbonate, from which the carbonic acid may be expelled by heat (Quarterly Journal vi. 358). Mr. Hatchet has shown that if iron be present in solution with muriatic acid, it may easily be thrown down by ammonia. The oxide thus pro- duced may be resolved into a metallic state by heating it with charcoal.

839. Manganese is of a dusky white color, it is very brittle, and when broken has a bright shining appearance. It is very difficult of fusion, and soon becomes an oxide by exposure to air.

840. Oxides of manganese. ??? A green, a brown, and a black oxide of this metal have been des- cribed. Berzelius, indeed, speaks of five distinct oxides of manganese, but Gay Lussac can only satisfy himself of the existence of three, viz. 1st. the protoxide obtained by dissolving man- ganese in diluted sulphuric acid, and precipita- ting it by a pure alkali out of the contact ot air, 2d. the deutoxide which remains after calcining the peroxide, or the greater part of the salts of manganese ; and 3d. the peroxide, or native black oxide.

841. When a solution of the first of these, the

protoxide, is treated with the alkalis, a white pre- cipitate is produced, which is ahydratedoxide of the metal.

842. There seems, however, to be much diffe- rence of opinion with respect to the modes and degrees in which oxygen unites with manganese, and we

refer the reader for a full statement of these differences to the last edition of Dr. Hen- ry's Elements.

843. The peroxide of manganese is black ; it is insoluble in acids, and, as we have observed, is found native in abundance. The color of the deutoxide is either brownish-black, or shining black, according to the mode of its preparation. The protoxide is at first of a brown color, but eventually changes to a beautiful light green. Exposure, however, to the air soon again changes it.

844. Manganese and chlorine. ••• Chloride of man- ganese may be formed by evaporating the muriate to dryness, and exposing the residue to a red heat, without the contact of air. It is a semi-transpa- rent pink-colored substance ; this, when dissolved in water, produces again a muriate of the metal. The action of iodine on manganese has not been examined.

845. Manganese and sulphur do not appear very susceptible of combination; in its metallic state, indeed, manganese will not unite with sul- phur, but a sulphuret of manganese was formed by Berthier, by heating the proto-sulphate of the metal in a charcoal crucible. ' The black oxide of manganese heated with sulphur forms a green- ish compound, and abundance of sulphurous acid is evolved; is this a sulphuret (enquires Mr. Brande) or a sulphureted oxide of manganese ?'

846. Salts of manganese. ••• The sulphate may be formed by dissolving the metal in diluted sul- phuric acid, hydrogen gas becomes abundantly evolved, and the solution throws down crystals which are the sulphate of manganese; or this salt may be formed by dissolving the protoxide and the proto-carbonate in strong sulphuric acid. When sulphate of manganese is decomposed by the hy- po-sulphite of lime, a hypo-sulphite of manganese is formed.

847. The nitrate. ••• Protoxide of manganese is readily dissolved in dilute nitric acid, and by this solution is formed a salt which is a proto-nitrate. The solution of this salt if exposed to the light throws down a peroxide of the metal.

848. Muriate of manganese, as above stated, may be formed by dissolving the chloride in water. It may also be readily produced by satu- rating muriatic acid with the carbonate.

849. Chlorate of manganese has not been in- vestigated.

850. Carbonate of manganese is precipitated by the carbonates of the alkalis from the proto- muriate, or proto-sulphate of the metal.

851. Phosphate of manganese is produced by adding phosphate of soda to the muriate of the metal.

852. We have not hitherto noticed the com- pound called chameleon mineral, so called from the change of color which its aqueous solution undergoes ; this compound is formed by mixing together equc.1 parts of the black oxide of man- ganese and nitre, and exposing them to a red

heat ; thus is formed a highly oxidised mangan- ese with potassa ; the same compound is like- wise procurable by fusing together one part of the oxide with five or six of solid potass. When to this salt a small quantity of water is added, a green solution is formed ; an additional quantity of water occasions the solution to be blue, a still further addition causes a purple color, which is heightened by a still greater quantity of water.

853. The properties of this singular substance have been lately investigated by Chevreul. To exclude the presence of iron, on which Scheele suspected its green color to depend, he prepared it by infusing, in a platinum crucible, one part of pure oxide of manganese with eight of potassa, prepared with alcohol. The color of the solu- tion was still green, and by the addition either of more water, or of carbonic acid, or an alkaline carbonate, became successively blue, violet, indi- go purple, and red. The green solution Chevreul supposes is a combination of caustic potassa with oxide of manganese, and the red of potassa, ox- ide of manganese, and carbonic acid. The inter- mediate colors result from the combination of these in different proportions, as may be proved by the direct mixture of a green with a red solu- tion. The agency of water, even when carefully deprived of carbonic acid, in effecting the same change, shows, however, that the theory does not account for all the phenomena. This fact Chev- reul explains by the action of water in diminish- ing the attraction between the potassa and oxide of manganese ; in which way, he apprehends that carbonic acid produces its effect. The oxide, both in the green and red compounds, he asserts is at the same degree of oxidation, a degree probably inferior to that of the native oxide.

854. Messrs. Chevillot and Edouard have ascertained that the colors of the chameleon mine- ral is owing to manganese, and not to any other metal ; that the contact of oxygen gas with the fused materials is essential to its formation, during which oxygen is absorbed ; and that the chame- leon compound is a neutral salt, susceptible of assuming a regular chrystallised form.

855. When these crystals are heated in con- tact with hydrogen gas, they cause it to inflame. They detonate violently with phosphorus ; and set fire to sulphur, arsenic, and antimony, and indeed to all combustible bodies

hitherto tried. 'The red compound was supposed to be a neutral manganesiate of potassa, and the green a subman- ganesiate ; but it seems more probable, from the experiments of Forchammer, that the difference between the red and green compounds depends not on the quantity of potassa combined with the oxide of manganese, but on the proportion of oxygen united with the manganese itself. (An- nals of Philosophy, xvi. 130). Conformably with this view he found that adding alcohol or carbonate of manganese to the red compound changed it to green by abstracting oxygen. The manganese in the latter compound he considers as forming an acid with a minimum of oyygen ; the proportions being 100 metal, and 96-847 metal oxygen, constituting manganesious acid ; the green salt therefore is a manganesiate of po- tassa. The red compound contains an acid which may be called the manganesic, and its compounds

manganesiates. In this acid 100 of metal are united with 132 of oxygen, proportions which do not, any more than those of the manganesious acid, agree with any atomic constitution ; the one indicating between three and four, and the other between four and five atoms of oxygen to each atom of metal. Though it appears therefore that manganese is capable of forming one or more true acids with oxygen, yet the proportions of the elements of these acids may be considered as still undetermined. The probability is, that man- ganesious acid consists of one atom of metal, and three atoms of oxygen, and the manganesic, of one atom of base, and four of oxygen. Man- ganese then is capable of uniting with oxygen in six different proportions, besides the compound oxide formed by the union of two other oxides. Henry.

COBALT.

856. This metal is found in its native state in the form of oxide, and mixed with other metals ; Saxony is said to produce the finest specimens of some of the ores of cobalt.

857. In order to obtain the metal pure, the cobalt of commerce (zaffre), is to be calcined with nitre and charcoal, to be reduced by means of black flux; and then the metal, having in this way been procured, is to be detonated with three times its weight of dried nitre, which produces an oxide, which is to be first cleared of its admix- tures, and then again reduced by the black flux. In the Manual of Chemistry by Mr. Brande, we met with the following directions for obtaining and purifying cobalt :
❖❖❖ ' The cobalt of commerce, in fine powder, may be calcined with

four parts of nitre and washed in hot water, by which arsenic is separated ; then digest in dilute nitric acid, and immerse a plate of iron, which will separate the copper ; filter and evaporate to dry- ness; digest the dry mass in liquid ammonia and filter : expel the excess of ammonia from the filtered liquor by heat, taking care not to pro- duce a precipitate, and then add solution of potassa, which throws down oxide of nickel; filter immediately and boil, which will occasion the separation of oxide of cobalt, and which ignited with charcoal furnishes the pure metal. In this process the first calcination with nitre often requires two or three repetitions, in order to get rid of the whole of the arsenic, which ad- heres to cobalt with much obstinacy.'

858. Cobalt is of a reddish-gray color ; it is easily reduced to powder, but for its fusion requires 136►► of Wedgwood. It crystallises after fusion if slowly cooled, and it is magnetic.

859. Oxygen and cobalt. ►►► Cobalt unites with oxygen in two proportions, forming the protoxide, or dark blue oxide; and the peroxide, or black oxide of cobalt.

860. The first may be procured by precipita- ting the nitrate of cobalt with potassa, or by sub- jecting the metal to a strong heat for a length of time under exposure to the air. This oxide, if treated with muriatic acid, gives chlorine gas, and a red solution is obtained; it becomes a red hydrate also by being left in contact with water ; if exposed to the atmosphere for any length of time, a gradual absorption of an additional quan-

tity of oxygen is the consequence, and the oxide assumes an olive-green appearance; this Sir H. Davy supposes to be a mixture of hydrate and oxide of the metal, rather than a peculiar metal.

861. The black peroxide is obtained by heat- ing the protoxide in the open air; and in this way the metal receives its maximum quantity of oxygen ; this is soluble in muriatic acid, and a copious disengagement of chlorine is effected during the solution.

862. Chlorine and cobalt. ►►► When heated in chlorine, the chloride of cobalt is formed ; but this compound has not been investigated.

863. Chlorine and sulphur. ►►► The sulphuret of cobalt is formed by heating the oxide of the metal with sulphur; a yellowish-white compound is the result, which does not seem to possess any interesting properties. The same may be said of the phosphuret of cobalt, which is also a white compound.

864. Salts of cobalt. ►►► Sulphate of cobalt may be obtained by

dissolving 'the newly formed protoxide in sulphuric acid. The salt somewhat resembles in its appearance the sulphate of iron; its reddish crystals, when dried with a high heat, fall into a blue powder, which is the anhydrous sulphate of cobalt.

865. ••• Nitro-muriate of cobalt. ••• In order to form this, we are directed to digest one part of cobalt, or still better of zaffre, in a sand heat, for some hours, with four parts of nitric acid. To this solution add one part of muriate of soda, and dilute with four parts of water. Characters written with this solution are illegible when cold; but when a gentle heat is applied they assume a beautiful color, which is invariably blue if the cobalt has been pure, or green if it con- tained iron or copper (see Philosophical Trans- actions, 1796). This experiment is rendered more amusing by drawing the trunk and branches of a tree in the ordinary manner, and tracing the leaves with a solution of cobalt. The tree ap- pears leafless till the paper is heated, when it suddenly becomes covered with beautiful foliage. Henry.

866. Nitrate of cobalt is a red deliquescent salt, which, by being treated with liquid potassa, becomes a hydrate.

867. Carbonate of cobalt may be produced by adding the carbonates of the alkalis to the sul- phate, nitrate, or muriate, of the metal ; it is pre- cipitated in the form of a reddish-blue powder.

868. Neither the chlorate nor the iodate of cobalt has been examined.

869. The phosphate is formed by adding phos- phate of soda to muriate of cobalt, or by dis- solving the carbonate in muriatic acid. It is of a lilac color, and insoluble, and if mixed with eight parts of precipitated alumina, and subjected to heat, it dries into a beautiful blue, which The- nard states may be substituted for ultramarine.

870. The alloys of cobalt are not very impor- tant. The principal value of the mineral is de- rived from its color. If zaffre, which is mostly brought from Germany, be fused with glass, smalt and azure blue are formed. Cobalt is em- ployed in the manufacture of colored porcelain, earthenware, and glass.

TELLURIUM.

8T1. The ores of this metal have been found in the mines of Transylvania,

and in Siberia. One hundred parts of an ore of gold, discovered by Klaproth, yielded above ninety of tellurium.

872. From the ores the metal is to be ex- tracted, by adding potassa to a solution of the ore in nitro-muriatic acid. This addition pre- cipitates all the metallic matter that may have been in the solution, and when added in excess again takes up a precipitate that the alkali had at first occasioned. When muriatic acid is added to this alkaline solution, a precipitate again takes place, and this treated with charcoal affords the metal.

873. Tellurium is of a whitish-gray color, with considerable lustre. It is brittle, easily fused, and is exceedingly volatile.

874. 0-xygen and tellurium. ††† Tellurium rea- dily burns when exposed to heat in contact with air; in its combustion it exhales a very peculiar odor, and exhibits a bluish flame with green edges ; a yellowish-white oxide is the result of the combustion.

875. Chlorine and tellurium. ††† By heating the metal in chlorine a white compound is formed, which is a chloride, and which is decomposed by water.

876. Iodine and tellurium. ††† Iodine also com- bines with the metal into an iodide, which forms an hydriodate when dissolved in water.

877. Hydi'Ogen and tellurium. ††† The metal is stated to form two distinct compounds with hy- drogen : '1st, By making tellurium the negative surface in water ; in the galvanic circuit a brown powder is formed, which is a solid hydruret of tellurium. 2dly, By acting with dilute sulphuric acid upon the alloy of tellurium and potassium (which may be obtained by heating a mixture of solid hydrate of potassa, tellurium, and charcoal), we obtain a peculiar gas. This gas has a smell resembling that of sulphureted hydrogen. It is absorbed by water, and a claret-colored solution results, which, by exposure to the air, becomes brown, and deposits tellurium. After being washed with a small quantity of water, it does not affect vegetable blue colors. It burns with a bluish flame, depositing oxide of tellurium. It unites with the alkalis, precipitates most me- tallic solutions, and is instantly decomposed by chlorine. It may be called tellureted hydrogen gas.' Henri/.

ARSENIC.

878. The substance which is found in the shops under the name of arsenic is not the metal itself in its abstract or pure state, but a white oxide of it, from which metallic arsenic is to be obtained by the following process : ††† Mix two parts of the white oxide with one of black flux (prepared

by deflagrating in a crucible one part of nitre with two of powdered tartar), and intro- ducing this mixture into a crucible, invert over this crucible another, and let the two be luted toge- ther A red heat is to be applied to the lower one, while the upper one is to be kept cool. In this way the arsenic will be reduced, and will be found lining the interior of the upper crucible.

879. Arsenic, in its native state, has been met VOL. V.

with in Cornwall, and in some parts of Europe; it is not unfrequently connected with cobalt, lead, silver, and nickel ores. It is of a steel blue color, very brittle, and easily fusible ; its vapor having a strong garlicky smell, by which its pre- sence is often detected. It burns, when thrown on a red hot iron, with a blue flame, and a white smoke. If exposed to moisture, an imperfect oxide is formed on the surface, which manifests itself by a gray incrustation.

880. Arsenic and oxygen. ††† Two definite com- pounds have been procured of arsenic and oxy- gen, and both of these are rather acids than oxides ; the one is indeed called generally arse- nious and the other arsenic acid, and the salts they form are named arsenites and arseniates.

881. The arsenious acid, or as it is usually termed white arsenic, is the most commonly occurring compound of this metal. It is white, semi-transparent and brittle. It is volatile at 380††. It has a very acrid taste ; is sparingly soluble in water, and by slow evaporation it forms tetrahedral crystals.

882. Arsenic acid. ††† Distillation of arsenious acid, or metallic arsenic with nitric acid, even- tually converts the arsenious into arsenic acid ; but we are directed, for effecting this conversion, to. mix four parts of muriatic acid, twenty-four of nitric, and eight parts of arsenious acid toge- ther, gradually raising the heat of the retort in which they are mixed.

883. Arsenic acid is a white substance ; it has a sour, and at the same time a metallic taste ; it is deliquescent, and does not crystallise.

884. Arsenic and chlorine. ††† Chloride of arse- nic may be formed by throwing the metal, finely powdered into chlorine; or by distilling six parts of corrosive sublimate with one part of powdered arsenic. In this way the substance is formed, which used to be called butter of arsenic. Wa- ter decomposes the chloride, white oxide of arse- nic or arsenious acid, being formed, and muriatic acid at the same time produced.

885. Iodine and arsenic. ††† An Iodide is obtained by heating the-metal with excess of iodine ; it is of a deep red color, is volatile ; and this, when

acted on by water, affords arsenic and hydriodic acids.

886. Arsenic and hydrogen. (Ar&enureltd hydrogen gas). ••• This may be obtained by dis- solving tin in liquid arsenic acid, or by adding a portion of metallic arsenic, or of the white oxide to that mixture of zinc filings, with dilute sul- phuric acid, which is commonly employed to produce hydrogen ; or the compound may be produced by presenting arsenic at once to nas- cent hydrogen.

887. This gas (arsenureted hydrogen), is a permanently elastic and invisible fluid ; it has a fetid garlicky smell, it extinguishes a taper, and burns when ignited, with a blue flame ; if the ig- nition be in oxygen gas, the flame is exceedingly brilliant ; during its burning it deposits arsenic and oxide of arsenic. If the gas be detonated with four volumes of oxygen, the result is arse- nious acid and water. A very strong attraction appears to exist between hydrogen and arsenic. ' If bubbles of chlorine be passed up into a jar of arsenureted hydrogen, standing over warm

water, flame and explosion are often produced, muriatic acid is formed, and a brown hydru- ret is deposited; but if the gas be passed in the same way by successive bubbles into chlorine, no inflammation results, absorption takes place, and muriatic acid and chloride of arsenic are formed. If the chlorine be not very pure, and •••when the gases are cold, inflammation seldom follows their mixture.' Brande.

888. Arsenic and sulphur. ••• There are two sul-

tallic chromates may be formed in the same way, and their colors, which are various and beautiful, often enable us to judge of the nature of the metal present. This chromate of soda forms insoluble precipitates in solution of silver, mer- cury, lead, copper, iron, and uranium; the co- lors are crimson, red, orange or yellow, apple- green, brown, and yellow. It forms no precipi- tate in solutions of nickel, zinc, tin, cobalt, gold, or platinum, whence, perhaps, it may be in-

phurets of arsenic ; one a red compound, which ferred that the chromates of the latter metals are

is commonly known under the name of realgar, •••which is found native in some parts of Germany and Switzerland, and which may be artificially K>rmed by heating arsenic and sulphur together. See DYEING.

889. The other is of a bright yellow color, and is named orpiment. This is also met with na-

soluble.

897. The chromates are decomposed by mu- riatic, nitric, and sulphuric acids. Muriatic acid, heated with the chromates, evolves chlorine, the chromic acid being reduced to the state of oxide. The most correct details respecting the chromates that have been published, are to be

tive in Europe, in China, and in South America ; it found in Vauquelin's Essay, Annales de Chimie, may be obtained by dissolving arsenic in muria-
70 tic acid, and adding to the solution hydrosulphuret of ammonia. It is used in calico printing.

890. Salts of arsenic. ••• These are not of much importance; 'they are found to resemble the phosphates ' in this, as in other respects, that though carefully neutralised when in solution, yet when concentrated by evaporation, they crys- tallise with an excess of base.'

The binarseniate of potassa is used in medi- cine. See PHARMACY and MEDICINE.

898. The green oxide of chromium is occa- sionally used in porcelain and enamel painting, and the artificial chromate of lead forms a rich and durable yellow.

899. The remaining compounds of chromium are as yet unexamined.
••• Brande.

MOLYBDENUM. 900. The most commonly found native

CHROMIUM.

891. This metal was discovered in 1797, by Vauquelin. It is to be obtained in a metallic state

form of this metal is that of a sulphuret, which was long supposed to be a carburet of iron. And, in order to procure the metal itself, this native sulphuret is to be exposed to a red heat till a gray powder is formed, which is to be dissolved

by heating its acidified oxide with charcoal. The in ammonia, and evaporated to dryness. The

color of chromium resembles iron, and not easily fused.

It is brittle,

residuum is to be treated with nitric acid, and again evaporated to dryness ; a white oxide of

obtained, which is easily soluble in acids.

893. This protoxide has been found native in France, it is the matter which gives color to the emerald.

894. A brown deutoxide of the metal is ob-

892. Chromium and oxygen. ••• When the metal is the metal is thus procured, which may be reduced subjected to heat in the air, a green protoxide is to a metallic state by heating it violently either

with charcoal or oil.

901. Molybdenum is of a whitish-yellow, and internally gray color ; it is exceedingly difficult of fusion ; it appears in the form of small grains.

902. Molybdenum and oxygen. ••• The metal be- tainable by exposing its nitrate to a red heat, comes acidified by exposure to heat and oxygen; This is not soluble in the acids, but when put into molybdic and molybdous acids being formed ac- muriatic acid, and the mixture is exposed to heat, cording to the quantity of combined oxygen ; the there is an evolution of chlorine, and a muriate first is a white crystalline substance, which is is formed. converted into the second acid by mixing with

895. The protoxide of chromium, or chromic two parts of it one part of powdered molybdenum, acid, may be procured with most facility by boil- triturating them in boiling water, filtering and ing the lead ore of the metal in a solution of po- tassa. We thus form an orange colored solution, which is made up of potassa and chromic acid ; then, if we add sulphuric acid and evaporate, crystals of chromic acid will make their appear- ance, in connexion with the sulphate of potassa.

In the general way chromate of iron is made use of, in conjunction with nitre, for the purpose of obtaining the acid, this being a more common, and

therefore a cheaper mineral than the chromate of perties of these salts.

evaporating. This is a fine blue substance, and is more soluble in water than the molybdic acid. Dr. Thomson states, that, besides these com- pounds of oxygen and molybdenum, a dark brown oxide may be obtained by heating the molybdic acid with charcoal.

903. Salts of molybdenum. ••• Both the acids unite with bases, and form saline compounds, but very little is known of the habits and pro-

lead.

896. Salts, Sfc. of chromium. ••• The chromates of ammonia, potassa, soda, lime, and magnesia,

TUNGSTEN. 904. The substance, which is vulgarly called

are soluble and crystallisable, and of an orange tungsten, consists of the tungsCic acid combined

color. The chromates of baryta and strontia, with lime, and the metal tungsten may either be

are difficultly soluble, and may be formed by procured from this substance, or from the material

adding chromate of potassa or soda to their so- called wolfram, which is composed of the same

luble saline compounds. The other insoluble me- acid in union with iron and manganese If the

former substance be employed, we are directed to fuse together one part of it with four of car- bonate of potassa, and then dissolve the mass in twelve parts of boiling water: add to this nitric acid, which precipitates tungstic acid by uniting with the potassa. The metal is to be procured by exposing the acid to charcoal with a strong heat. The experiment, it is said, frequently fails of success.

905. Tungsten, in color, resembles iron ; it is brittle, and exceedingly dense and hard ; it re- quires a high heat for fusion ; it i? oxidised by the combined action of heat and air ; its first oxide is brown, which by heat is converted into the peroxide or acid, which is without taste, in- soluble in water, and, by being exposed to very high temperatures, becomes successively green, yellow, and gray. It is deficient in some of the properties by which acids are usually character- ised ; and on this account Vauquelin proposes its being classed as an oxide.

906. It is considered as consisting of three proportionals of oxygen and one

of metal. It is remarkable, that when tuugstic acid, which is not free from a fixed alkali, is heated in contact with hydrogen gas, the product is not oxide of tungsten, but tungsten in a completely metallic state. The neutral tungstate of soda undergoes no change when ignited in hydrogen gas ; but the acid tungstate of that base is converted into a compound of soda and oxide of tungsten, which, when a portion of the neutral salt is washed off by water, assumes a bright gold color, and is capable of crystallising in regular cubes. It consists in 1 00 parts, of 86‘2 oxide of tungsten, 4- 13‘8 soda. Wohler believes that there are three chlorides of tungsten, but he has determined the composition of two only. The first is formed by heating the black oxide of tungsten in chlo- rine gas. The combination takes place with a disengagement of heat and light, and a smoke arises, which is condensed into scales of a yellow- ish-white, resembling native boracic acid. By the action of water this substance is converted into muriatic and tungstic acids. It is therefore a chloride with the maximum proportion of chlorine. The second chloride is formed almost exclusively when we heat metallic tungsten in chlorine gas ; the metal burns, and the chloride appears either in fine needles of a deep led color, or in a compact fused mass of the same color, and having nearly the brilliant fracture of cinnabar. It easily melts, and enters into ebulli- tion before being volatilised. Its composition seems to be analogous to that of the oxide ; the chlorine in the former being equivalent to the oxygen in the latter. Of the third chloride little is known, and in one of the modes of its pro- duction (viz. by the action of chlorine on sul- phuret of tungsten) it is probable that chloride of sulphur must at the same time be formed, and be mixed with the resulting compound.
**** Ann. deChim.et de Phys. xxix. 43. From the Ad- denda to Henry’s Elements.*

907. The tungstates are as yet but very im- perfectly known.

COLUMBIUM.

908. This metal was first discovered by Mr. Hatchctt, in a mineral belonging to the British

Museum, and supposed to have been brought from Massachusetts in North America; an ana- lagous, and according to Dr. Wollaston’s inves- tigation absolutely the same, metal, was discovered by a Swedish chemist of the name of Ekeberg, in the minerals called tantalite and yttro-tantalite, and he gave the name of tantalum to it.

909. Columbium has recently been reduced into a metallic form by Berzelius, by treating it with charcoal ; and by acting with potassium on the fluo-tantalate of potassa, fluate of potassa becomes formed, and the tantalum or columbium is revived. It is described as of a dark gray color,

of an irony appearance, having metallic lustre when scratched with a knife, as an exceed- ingly bad conductor of electricity, and as being convertible into an acid when strongly heated.

910. This acid, the columbic, Mr. Hatchett found to combine very readily with potassa. The properties of columbium remain for further in- vestigation.

SELENIUM. (See 458) OSMIUM, IRIDTUM, AND RHODIUM.

911. We arrange these three metals under one head, because they are all found in the ore of platinum.

912. Osmium and Iridium were discovered by Mr. Tennant in 1803 ; and in the same year were rhodium and palladium discovered by" Dr. Wollaston.

913. Osmium is to be separated from the pla- tinum ore by digesting the ore in mtro-muriatic acid, which dissolves the greater portion of it; the black powder which remains, when fused with potassa or soda, furnishes a brownish-yellow solution of oxide of osmium alkalised. Saturate the alkali with a mineral acid, and distil, and a colorless solution of the oxide of osmium passes from the retort into the receiver, which has a sweetish taste, and a smell somewhat resembling chlorine gas. Or the oxide may be directly ob- tained by distilling the original black powder with nitre or potassa.

914. When this oxide is shaken with mercury its peculiar smell is lost; and the metal combin- ing with the mercury forms an amalgam, which may be decomposed by distillation, leaving the osmium in a metallic form.

915. Osmium becomes oxidised with much fa- cility; it is insoluble in the acids, but soluble in potassa ; its oxide, as above remarked, has a very peculiar smell, and is exceedingly volatile. See for other methods of extracting osmium, &c. from the ore of platinum, Quarterly Journal, xii. 247.

916. As osmium is obtained from the alkaline solution of the black powder above mentioned, so is indium from the acid solution of the same ma- terial, or rather from that part of it which the acids take up. This was named iridium, from the circumstance of the solution undergoing se- veral changes in color.

917. Iridium may be obtained in its metallic state by immersing a plate of zinc into a solution of the muriate of the metal, or by subjecting to a violent heat the crystals of the muriate. It Is of a whitish color, and only fusible by

intent galvanic influence.

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CHEMISTRY.

918. Rhodium may be obtained from the platinum ore by the following process : ††† Digest it in a small quantity of nitro-muriatic acid, when the solution is saturated, pour it into a so- lution of muriate of ammonia, which will occa- sion a precipitate of the greater proportion of the platinum. Let the clear liquor be decanted, and a plate of zinc immersed in it, which will thus become coated with a black powder. Let this be separated from the zinc, and washed with dilute nitric acid, which will take up the copper and the lead contained in the black powder. Then digest the remainder in dilute nitro-muriatic acid, to which add a small quantity of muriate of soda ; now evaporate to dryness, and let the dry mass be repeatedly washed with alcohol ; the alcohol will take up the soda, muriate of pla- tinum, palladium, and rhodium, and leave a red substance ; which, when dissolved, throws down a black powder, if zinc be put into the solution. This may be strongly heated with borax, by which process the substance will acquire a white metallic lustre ; and this metal is rhodium.

919. Rhodium is extremely difficult effusion; it unites with the other metals (all that have been tried with it, except mercury,) in alloy. The alloy of it with lead, when dissolved in nitro- muriatic acid, and evaporated, forms an insolu- ble chloride ; the rose color of which originated the name of the metal.

920. Three oxides of rhodium have been de- scribed by Berzelius, the protoxide, the deutoxide, and the peroxide ; and Dr. Thomson's experi- ments have led to the verification of the pro- toxide and the peroxide ; the former a black, the latter a yellow substance.

For an account of PALLADIUM, see 642.

URANIUM.

921. This metal may be obtained from the mineral called pechblende, which was formerly considered an ore of zinc, but is now ascertained to be a native sulphuret of uranium. The mi- neral called uranite, contains a pretty pure oxide of uranium ; but it is scarce, and therefore not employed for the reduction of the metal.

922. The pechblende is to be finely powdered and digested with heat in

nitro-muriatic acid ; ammonia in excess is to be added, the precipitate to be collected, washed, and dried with con- siderable heat. By subjecting this dried mass to a very high temperature with charcoal, metallic uranium may be obtained.

923. Uranium is of a gray or liver-brown color, it is brittle, and with great difficulty fused .

924. Uranium with oxygen. ••• A protoxide and peroxide of the metal have been described ; but iie protoxides have so strong a tendency to pass tito the state of peroxides and the peroxides combine with other combinations of oxygen, and so few satisfactory experiments have hitherto been made on the subject, that less is known respecting it, than that of most other metals.

925. The salts too of uranium from the same cause are subject to changes.

TITANIUM.

926. Titanite, and menachanite are the two

minerals from which titanium is obtained. The first is an almost pure oxide of the metal ; and the metal may be procured from it by first fusing it with double its weight of potassa ; then dis- solving the fused mass in muriatic acid, and adding to the solution oxalic acid. In this way a pure oxalate of the metal is fonned, which is to be intensely heated with charcoal, for its re- duction to the metallic state ; which is a result, however, obtained with some difficulty, and the evidence of its accomplishment was hardly satisfactory, till some very recent observations of Dr. Wollaston with respect to the existence of the metal in a native state.

927. Titanium has a copper color. It is said to be capable of uniting with oxygen in two proportions, the one, the protoxide, forming a blue compound, while the peroxide or titanic acid is white.

928. It has been stated that no satisfactory compounds exist, ‘ in which titanium can be con- sidered as a base.’

929. Chlorides, however, and sulphurets of the metal have been described.

930. ‘ The solutions of titanium are colorless, and afford white precipitates with the alkalis ; ferro-cyanate of potassa gives a green precipitate, and infusion of galls a red one. Hydro-sulphu- ret of ammonia occasions a green precipitate.’

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CERIUM.

931. Berzelius and Hisinger first obtained the metal from a mineral which has been named cerite, on account of the metal which exists in it being named cerium, from having been dis- covered about the time of the discovery of the planet Ceres. This metal is also contained in & mineral from Greenland, called allanite, from Mr. Allan of Edinburgh having been the first to recognise it as a peculiar species.

932. Oxide of cerium is obtained from this ore, by reducing the ore to a fine powder, calcin- ing it, and then digesting it in nitro-muriatic acid. When this solution has been filtered, it must be saturated by potassa, and then precipitated by tar- trate of potassa or oxalic acid. The precipitate is the oxide of the metal, which, however, is ex- ceedingly difficult of reduction. Vauquelin's attempts succeeded only to the extent of ob- taining a very small metallic globule. This globule was slowly dissolved even in nitro-mu- riatic acid.

933. Cerium has been found to combine with oxygen in two proportions. The protoxide is a white compound, and the peroxide is of a red- dish-brown color.

934. Salts of cerium. ••• The sulphuric and the muriatic acids dissolve the peroxide, and produce yellow or orange colored crystals. Sulphuric acid also acts on the protoxide, and gives crys- tals which are white, and have a saccharine taste.

POTASSIUM.

935. The reader will have observed that in very many cases, especially when the subject to be treated of has involved the consideration oi novel doctrines and principles, we have pre- ferred announcing those principles in the lan- guage of able and experienced chemists, to making

use of our own words : in conformity with this rule we shall in the present instance extract ver- batim from Dr. Henry, the account which he gives of the discovery of the material now to be noticed.

936. This metal, says Dr. Henry, was dis- covered by Sir H . Davy in 1 807, and was obtained from a substance which will be described in this

section, under the name of potassa. To this discovery, and many others of a similar kind, that distinguished philosopher was led by a train of inductive reasoning, which is not surpassed by any investigation in the history of the physical sciences.

937. From the facts which have been stated in a former section, respecting the powers of electrical decomposition, it appeared to be a natural inference, that the same powers, applied in a state of the highest possible intensity, might disunite the elements of some bodies which had resisted all other instruments of analysis. If potassa, for example, were an oxide composed of oxygen, united to an inflammable base, it seemed probable, that, when subjected to the action of opposite electricities, the oxygen would be at- tracted by the positive wire, and repelled by the negative. At the same time the reverse pro- cess might be expected to take place, with res- pect to the combustible base, the appearance of which might be looked for at the negative pole.

938. In his first experiments suggested by these views, Sir H. Davy failed to effect the decom- position of potassa, owing to his employing the alkali in a state of aqueous solution, and to the consequent expenditure of the electrical energy in the mere decomposition of water. In his next trials the alkali was liquefied by heat in a pla- tinum dish, the outer surface of which, immediately under the alkali, was connected with the zinc or positive end of a battery, consisting of 100 pairs of plates, each six inches square. In this state the potassa was touched with a platinum wire, proceeding from the copper or negative end of the battery ; when instantly a most intense light was exhibited at the negative wire, and a column of flame arose from the point of contact, evidently owing to the development of combustible mat- ter. The results of the experiment could not, however, be collected, but were consumed im- mediately on being formed

939. The chief difficulty in subjecting potassa to electrical action is, that in a perfectly dry state it is a complete non-conductor of electricity. \Vhen rendered, however, in the least degree moist by breathing on it, it readily undergoes fusion and decomposition, by the application of strong electrical powers. For this purpose a piece of potassa weighing from sixty to seventy grains, may be placed on a small insulated plate of platinum, and may be connected, in the way already described, with the opposite end of a powerful electrical battery, containing not less than 100 pairs of six inch plates. On estab- lishing the connexion, the potas a will fuse at both places, where it is in contact with the plati num. A violent effervescence wil►► be seen at the upper surface, arising, as Sir H. Davy has ascer- tained, from the escape of oxygen gas. At the lower or negative surface, no gas will be libera-

ted ; but small bubbles will appear, having a high metallic lustre, and being precisely similar in visible characters to quicksilver. Some of these globules burn with an explosion and bright flame, while others are merely tarnished, and are protected from farther change by a white film which forms on their surface.

940. This production of metallic globules is entirely independent of the action of the atmos- phere ; for Sir II. Davy found that they may be produced in vacuo.

941. To preserve this new substance, it is necessary to immerse it immediately in pure naph tha. If exposed to the atmosphere, it is rapidly converted back again into the state of pure potassa. To prevent its oxidation still more effectually, Mr. Pepys has proposed to produce it under naphtha; and has contrived an ingenious apparatus for this purpose, which is described in the 31st volume of the Philosophical Magazine, p. 241.

942. Nothing then can be more satisfactory than the evidence furnished by these experiments of the nature of one of the fixed alkalis. By the powerful agency of opposite electricities, it is resolved into oxygen and a peculiar base. This base, like other combustible bodies, is repelled by positively electrified surfaces and attracted by negative ones ; and hence its own natural state of electricity must necessarily be positive. Again, by uniting with oxygen, it is once more changed into alkali, either slowly at ordinary temperatures, or with heat and light at high temperatures. We have the evidence therefore both of analysis and synthesis, that potassa is a compound of oxygen with a peculiar inflammable base.

943. In assigning to this newly discovered substance a fit place among the objects of che- mistry, Sir II. Davy was induced to class it among the metals, because it agrees with them in opacity, lustre, malleability, conducting pow- ers as to heat and electricity, and its qualities of chemical combination. The only property which can be urged against this arrangement is its ex- treme levity, which even exceeds that of water. But, when we compare the differences which ex- ist among the metals themselves, this will scarcely be considered as a valid objection. Tellurium, for example, which no chemist hesitates to con- sider as a metal, is only about six times heavier than the base of potassa, while it is four times lighter than platinum ; thus forming a sort of link between the old metals and the bases of the alkalis.

944. In giving names therefore to the alkaline bases, Sir H. Davy has adopted that termination which by common consent has been applied to other newly discovered metals, and which, though originally Latin, is now naturalised in our lan- guage. The base of potassa he has called potas-

sium, and the base of soda, sodium ; and these names have met with universal acceptation among chemical philosophers. Henry.

945. The decomposition of the alkalis has however been effected by other means than elec- trical agency. Gay Lussac and Thenard, soon after the announcement of Sir H. Davy's disco- veries, set about decomposing both the fixed alkalis by bringing them into contact with in-

tensely heated iron, which substance at a very high temperature attracts oxygen from the alkalis with more force than the base otherwise retains it ; and Mr. Brunnerhas subsequently found that the decomposition of the alkali is effected with much more facility by the employment of char- coal along with the iron. See Thenard's Traite de Chimie, and Quarterly Journal, xv. 279.

946. Potassium is a white metal, existing in small globules like quicksilver, at 70►►. At 150►► it is perfectly fused, and at 32►► it is a hard and brittle solid, and at 50►► it is soft and malleable, having the appearance of silver. It is a perfect conductor of electricity and heat.

947. Potassium and oxygen. ►►► This metal at- tracts oxygen even at the common temperature of the atmosphere ; and when it is thrown into water it instantly inflames, attracting the oxygen of the water, it becomes an oxide, which is dis- solved, and hydrogen gas is evolved. It is sus- ceptible, however, of different degrees of oxi- disement. If it be heated either in common air or oxygen gas below the point necessary for its inflammation, or merely confined for a few days in a phial loosely corked, a grayish substance is formed, which appears to be a mixture of pro- toxide of the metal with the metal itself.

948. The protoxide of potassium is best obtained by treating the metal as above stated with water, and a peroxide of the metal is obtained by pas- sing oxygen over potassa heated to redness, or heating potassium itself in a considerable excess of oxygen. This peroxide of potassium is of an orange color, when put into water it effer- vesces, oxygen gas being given off, and a solution of the hydrated protoxide obtained.

949. This hydrated pro'toxide, or hydrate of potassa, or caustic potash, may be procured by de- composing the carbonate of potassa by lime. This is the potassa fusa of the Pharmacopoeia, and is used by surgeons as a caustic. When purified, hydrate of potassa is white, exceedingly acrid and corrosive ; it rapidly absorbs moisture and carbonic acid from the air; it

neutralises acids, has a saponaceous feel, renders oil miscible with water, and proves a solvent to resins. It was formerly called vegetable alkali.

950. Potassium and chlorine. ••• Chlorine acts with much energy upon potassium, and by the mixture a white compound is formed, which has been named muriate of potassa, but which is properly a chloride of potassium. This com- pound is likewise formed by heating potassium in gaseous muriatic acid, the gas being in this case converted into chlorine, which directly attaches itself to the potassium, and hydrogen is evolved. This compound is stated to dissolve without decomposition in three parts of water at 68••. The crystals which it -forms are cubical ; they have a saline and hitter taste ; and do not undergo much change when exposed to the air. The salt was at one time known under the name of salt of silvius ; it has likewise been called regenerated sea-salt.

951. Iodine and potassium. ••• Iodine also acts on potassium with much energy. If they are heated together, iodine being in excess, a light of a purplish tinge is seen to issue from the combi- nation at the moment of Us forming. The com-

pound is white, fusible, and crystalline. It de- composes water, and forms an hydriodate of potassa, which again if exposed to heat gives out its water, and becomes reconverted into iodide of potassium.

952. Hydrogen and potassium. ••• Potassium heated in hydrogen produces a hydruret, which is of a gray color, not fusible, and without me- tallic lustre. It is inflammable, and burns vividly when exposed to a high temperature ; and it may be reduced to the state of potassium, by heating it very strongly in a close vessel, so as to liberate its hydrogen in a state of gas. Heated mercury will likewise liberate the hydrogen from this com pound, and produce an amalgam of the mercury with potassium.

953. Sulphur and potassium. ••• If potassium be fused with sulphur, a gray sulphuret of the me- tal is produced, heat and light being evolved from the combination. This compound gives out sulphureted hydrogen, when acted upon by water or diluted acids.

954. Phosphuret and potassium. ••• A phos- phuret of potassium may be produced by fusing these substances together. The color of this compound is leaden ; but there is another com- pound of the same materials of a chocolate color; so that it is probable these two bodies (potassium and phosphorus) unite in different proportions, the lead-colored compound consisting of two atoms of metal + 1 of phosphorus; and the chocolate of one atom of metal + 1 of phos- phorus.

955. Sulphate of potassa. ††† Several chemical operations give this salt as one of their results. It may be formed in the direct way by mixing sulphuric acid and potassa, and crystallising the solution.

956. The taste of this salt is bitter ; it fuses and eventually volatilises by a strong heat; it dissolves in sixteen parts of water at 60††, and five of boiling water. At high temperatures it is decomposed by charcoal, and becomes a sul- phuret, but it is not thus decomposed when treated with sulphur.

957. Super-sulphate, or bi-sulphate of potassa. ††† This may be formed by boiling the sulphate with sulphuric acid, or by dissolving in hot water the remains of the distillation of nitric acid from a mixture of sulphuric acid and nitrate of potass. This salt contains twice as much acid as the sulphate ; it has an exceedingly sour taste, is insoluble in alcohol, and acts power- fully on vegetable blues. It was formerly called arcanum duplicatum.

958. Nitrate of potassa. ††† This salt, which is commonly known under the name of nitre or saltpetre, is principally imported for commercial purposes from the East Indies. The nitre ot commerce is, however, exceedingly impure ; be- ing frequently mixed with a very large propor- tion of common salt, by which indeed it becomes partially decomposed.

959. It may be obtained directly by saturating nitric acid with potassa, and crystallising the solution.

960. In Franc and Germany it is artificially*

produced upon a very large scale, and in what are termed beds of nitre. The process consists in lixiviating old plaster rubbish. When animal and vegetable putrifaction go on in contact with soils which are calcareous, a nitrate of lime be- comes abundantly formed, and, from this, nitre is obtained by treating it with carbonate of potassa. See Thenard's Traite de Chimie Elementairte, for a full account of the French pro- cess for producing nitre.

961. Nitre forms in six-sided prismatic crys- tals ; it is soluble in seven times its weight of water at 60††, and water at 212†† takes up its own weight. The addition of common salt makes it much more soluble. Nitre fuses by the appli- cation of a moderate heat, and forms what is called sal-

prunelle,. which is moulded into cakes for sale. At a red heat nitre is decomposed, and this decomposition is materially assisted by a mixture of charcoal, to which it gives its oxygen, and the results are carbonic oxide and acid, nitrogen and sub-carbonate of potassa.

962. Nitre, by being subjected to such a de- gree of heat as to disengage a portion of its oxygen, is converted into a nitrite.

963. Sulphur decomposes nitre, and occasions different compounds, according to the propor- tion of the ingredients, and the mode of admix- ture.

964. The compound called fulminating pow- der is formed of three parts of nitre, two of salt of tartar, and one of sulphur. This composition violently explodes when thrown on a heated iron, owing to the rapid action of the sulphur upon the nitre. ,

965. Gunpowder is composed of one part of sulphur, one of powdered charcoal, and five of nitre, or of different proportions of the last in- gredient, according as rapidity and force of ex- plosion are required, the nitre being in the largest quantity in that powder which is required to explode quickly, as in the shooting powder. The ingredients are all separately powdered, then rubbed and beaten together with moisture into a cake, which is afterwards broken up, granulated, and dried very cautiously.

966. The action of the combustible materials upon the nitre, induced by augmented temper- ature, or by a spark, occasions the immediate production .of gaseous matter, and hence the ex- plosion of gunpowder. Carbonic oxide, car- bonic acid, nitrogen and sulphurous acid, are the principal gaseous results, and the solid residue consists of sub-carbonate, sulphate, andsulphuret of potassa and charcoal.

*967. Carbonate of potassa.**** *This is a salt of much importance. It has been called salt of tartar, potash, pearl-ash, &c. accordingly as it may have been procured, or according to the degree of purity in which it is met with.*

968. Potassa, in solution, easily attracts car- bonic acid, and the salt may be obtained by directly exposing a solution of potassa to the gas ; a solution of potassa which has condensed all the carbonic acid it is capable of absorbing, when evaporated to dryness,affords sub-carbonate, or more properly carbonate of potassa. Sub-car- bonate is the name under which it has been re- ceived into the Pharmacopoeia. See PHARMACY.

969. Carbonate of potassa may also be ob- tained by calcining the bi-tartrate of potassa, or tartar, as it is vulgarly called ; hence the name salt

of tartar.

970. Carbonate of potassa is a very deli- quescent salt ; it has an alkaline taste, and it renders blue infusions of vegetables green.

*971. It has the susceptibility of a surcharge of carbonic acid ; and this may be effected*by passing a current of carbonic -acid into a solution of the carbonate. This solution being slowly evaporated, affords crystals which are not so alkaline in their taste as the carbonate. They are properly a bi-carbonate, the quantity of car- bonic acid being double that of the carbonate.*

972. Chlorate of potassa. ••• This salt maybe formed either by passing chlorine gas through a solution of potassa, or by directly mixing liquid chloric acid with the solution of this salt. The solution is to be put on one side, in a place ex- cluded from light and heat for about twenty-four hours, and the chlorate will form crystals.

973. Chlorate of potassa has a sharp cool taste ; it gives out a phosphorescent light when triturated in the dark ; it requires for solution seventeen parts of cold, and two and a half of boiling water. It yields oxygen gas after fusion, when exposed to a high temperature. It acts with energy upon many inflammable bodies, and an explosion is caused by triturating it with sulphur, phosphorus, and charcoal. It has indeed been proposed as a substitute for nitre in gunpowder, but the facility with which it detonates when treated with inflammable sub- stances, constitutes an objection to its employ- ment for this purpose.

974. Perchlorale of potassa. (Oxy chlorate). This may be produced by mixing one part of the chlorate with three of sulphuric acid ; and exposing the mixture to a gradual heat, till the compound turns white. In this way is formed a mixture of bi-chlorate and per-chlorate, which may be separated by solution and crystallisation, since the bi-chlorate is much more soluble than the perchlorate.

975. This salt does not change vegetable colors ; for its solution it requires more than fifty times its weight of cold water. When sub- jected to the temperature -of 412••, it gives out oxygen, and chloride of potassium remains.

976. lodateand hydriodate of potassa. ••• These salts are both formed by putting iodine in a so- lution of potassa; the iodate is soluble with difficulty, while the hydriodate is very soluble ; the latter may be separated from the former by means of alcohol ; the iodate remaining in small white crystals.

977. Phosphate of potassa. ❖❖❖ This salt may be obtained by mixing phosphoric acid with a so- lution of carbonate of potassa to the point of neutralisation. The solution being carefully evaporated, must then be put aside for some days for crystals to form.

978. The sub-phosphate is procured by fusing together, in a platinum crucible, the phosphate and hydrate of potassa. A super or bi-phosphate is formed by dissolving the phosphate in phos- phoric acid.

979. There are likewise phosphites of potassa.

980. Borate of potassa may be procured by subjecting a mixture of boracic acid and nitrate of potassa to a bright red heat ; or it may be ob- tained by a mixture of boracic acid with potassa.

981. Fluoric acid unites with potassa, and .forms two distinct compounds, viz. the acid or bi-fluate, and the neutral fluate. And hydro- cyanate of potassa may be formed by mixing to- gether hydro-cyanic acid, and hydrate of potassa. This salt becomes a cyanide of potassa by cal- cination. The ferro-cyanate, which was for- merly called triple prussiate, is obtained by digesting the hydro-cyanite of potassa in a liquid state with the protoxide of iron ; or by digesting the ferro-cyanate of iron with the liquid hydrate of potassa. This curious compound is regarded by Berzelius rather as a cyanide than a hydro- cyanate, and ‘ this cyanide, in common with all those in which the metal is strongly electro- positive, as those of sodium, barium, &c. he believes to continue such, ev”en after solution in water ; while the cyanides with weaker bases, such as those of ammonia, and many of the metallic oxides, become on the contrary, hydro-cyanates.’

982. Potassa and sulphur. ❖❖❖ When these two substances are fused together, a red sulphuret of potassa is produced, formerly called liver of sulphur, This is a compound which is exceed- ingly soluble in water, and the solution becomes a hydro-sulphuret. ‘ The action of sulphuret of potassa on water, says Mr. Brande, is complicated, and has been variously explained. By some this is considered as a compound of potassium and sulphur, in which case, when acted upon by water, hydrogen is imparted to the sulphur and oxygen to the potassium, and a sulphuret of potassa, with excess of sulphur (or sulphureted sulphuret of potassa) is formed. If we consider the sulphuret as consisting of potassa and sul- phur, then the oxygen, as well as the hydrogen, of the water must be transferred to the sulphur, and sulphuric and sulphurous acid, and sulphu- reted hydrogen

would be formed. And gene- rally, when the solutions of the livers of sulphur are examined, sulphate and sulphite of the alkali are found. On the whole, however, it appears most probable, that when sulphur and the al- kalis are fused together at a high temperature, the latter undergo decomposition, and that sul- phurets of their metallic bases are actually formed.' Vauqudin. Ann.de Chim.

983. The hydro-sulphuret may be converted into a hypo-sulphite, by adding to it sulphurous acid ; and a sulphite is produced by subjecting a solution of potassa, in its carbonated state, to the action likewise of sulphurous acid.

984. Compounds of potassium with metals: (extracted from Dr. Henry's Elements). With mercury potassium gives some extraordinary and beautiful results. The combination is very rapid, and is effected by merely bringing the two metals into contact at the temperature of the atmos- phere. The amalgam in which the potassium is in the least proportion seems to consist of about 1 part in the weight of basis, and 76 of mercury. It is very soft and malleable, but, by increasing the proportion of potassium, we augment in a proportional degree the solidity and brittleness of the compound.

985. The compound of mercury and potassium may be obtained by an easy and simple process, first pointed out by Berzelius. Mercury, to the depth of a line, is put into a glass capsule two inches in diameter, with a flat bottom. On this a solution of pure potassa is poured ; an iron wire connects the mercury with the negative pole of a galvanic arrangement, which need not contain more than 20 pairs of plates; and a spiral pla- tina wire from the positive pole is immersed in the solution, and kept within about a line from the surface of the mercury. In six hours the effect is observable, and in twenty-four is very distinct ; for in that time more than 1200 grains of mer- cury will be rendered solid by combination with potassium. Unfortunately this combination cannot be so decomposed as to obtain the potas- sium in a separate state.

986. In this state of division potassium ap- pears to have its affinity for oxygen considerably increased. By a few minutes exposure to the air, potassa is formed, which deliquiates, and the mercury is left pure and unaltered. When a globule is thrown into water it produces a rapid decomposition and a hissing noise, potassa is re- generated, pure hydrogen disengaged, and the mercury remains free.

987. The fluid amalgam of potassium and mercury dissolves all the metals ; and in this state of union mercury even acquires the power of ac- ting on platina.

988. Potassium unites also with gold, silver, and copper; and when the

compounds are thrown into water, this fluid is decomposed, potassa is formed, and the metals are separated unaltered. When the reduction of an ore has been accom- plished by the use of fluxes containing potassa, M. Vauquelin has shown that the revived metal contains a greater or less proportion of potassium, which modifies its properties. By exposure to the air, or by the action of water, this impurity may be removed.

989. Potassium reduces all the metallic oxides when heated with them, even of those metals which most powerfully attract oxygen, such as oxides of iron. In consequence of this property, it decomposes and corrodes flint, and green glass by a very gentle heat ; potassa is generated with the oxygen taken from the metal, which dissolves the glass, and exposes a new surface. At a red heat even the purest glass formed merely of potassa and silica is acted upon. The alkali in the glass seems to give up a part of its oxygen to the potassium, and an oxide of potassium re- sults, with a less proportion of oxygen than is necessary to constitute potassa. The silica also it is probable is partly deoxidised.

SODIUM.

990. By a process similar to that which pro- cured potassium from potassa, Sir H. Davy ob- tained from soda the metal now to be noticed. In the chemical characters of this last metal there is also a considerable resemblance to potassium ; it is soft and malleable ; in color it resembles lead, when heated in contact with air it rapidly oxidi- ses, and when thrown into water it combines with the oxygen of the fluid, and causes hydrogen to be evolved with violent effervescence.

991. Sodium and oxygen. ??? The well known substance called soda is a protoxide of sodium. It may be obtained by burning sodium in air containing just enough of oxygen to change the metal into an alkali. In the experiment also just alluded to, of throwing sodium into water, a solution of soda is obtained. The substance, however, is commonly formed in an artificial manner by subjecting its carbonate to the action of lime.

992. A peroxide of the metal may be procured by burning it with an excess of oxygen. This substance is of an orange color ; it may be con- verted into soda by the action of water, its excess of oxygen escaping, and thus leaving a solution of the protoxide.

993. Sodium and chlorine. ??? Sodium when heated in chlorine produces a white compound, with a penetrating taste, which is a chloride of

sodium, or in other words common salt. This compound may also be formed by heating sodium in muriatic gas, and thus producing a muriate of soda, a name by which, until the discovery of Davy respecting the metallic composition of the alkalis, common salt was known. There is this difference, however, between the chloride of so- dium and the muriate of soda, that the latter can only exist in afluid state, or in a state of solution, while chloride of sodium has in reality no pro- per existence but in the condition of a solid, for when acted on by water it necessarily decom- poses the fluid and becomes a muriate of soda.

994. Common salt exists in a native state abun- dantly. It is found in large quantities in Ches- hire, and is called rock salt. For an account of its manufacture and properties, see the article SALT in this Encyclopaedia. See also Aikin's Dictionary of Chemistry, article Muriate of soda.

995. Sodium and Iodine. ••• Iodine acts on sodi- um in the same manner as itdoesonpotassium,and an iodide of sodium is the result ; this compound when treated with water forms both an hydriodate and iodate of soda.

996. Sulphur and phosphorus act upon sodium and produce sulphurets. The sulphuret of sodi- um is gray. The phosphuret has the appearance of lead.

Salts of Soda.

997. Sulphate of soda, formerly called sal mi- rabile or Glauber's salt. By the action of sul- phuric acid on common salt, sulphate of soda is readily produced. In this process the water of the sulphuric acid is decomposed, its hydrogen unites with the chlorine of the common salt and forms gaseous muriatic acid, while its oxygen going to the sodium forms soda. Then, further, the acid that has no water unites to soda to pro- duce sulphate of soda.

998. Sulphate of soda is precipitated from its solution in regular crystals, which are transparent and when exposed to the air they effloresce. This is a very soluble salt. Its taste is saline and bitter. The principal use of this salt is in medicine and pharmacy. See MEDICINE and PHARMACY.

999. A bi-sulpliate may be obtained by adding sulphuric acid to a solution of sulphate of soda while hot. It forms large rhomboidal crystals,

which are soluble in twice their weight of cold water. There is a sulphite and a hyposulphite of soda.

1000. Nitrate of soda. ••• This may be formed either by distilling

common salt with nitric acid, or by saturating the carbonate with nitric acid. This is the cubic nitre of former times ; its taste resembles the nitrate of potassa, but it is sharper. This last salt (nitre) in its crude state often con- tains it. It has been suggested as an economical substitute for nitre in the making of fire-works.

1001. Muriate of soda. See sect. 993.

1002. Carbonate of soda. ••• This salt is princi- pally obtained from marine plants, the ashes of which by lixiviation afford the impure alkali call- ed soda. Barilla and kelp are the two forms in which the impure soda of commerce is met with. The latter consists of the ashes of sea weed, while the former is the ash of the salsola soda. These substances are contaminated by muriate of soda and other impurities, from which they may be separated by solution, filtering, and re- crystallising.

1003. Carbonate of soda is an efflorescent salt, it has a large portion of water of crystallisa- tion, it has a strong alkaline taste, and changes vegetable blues into green.

1004. Bi-carbonate of soda is formed by passing carbonic acid through a solution of the carbonate, or by adding carbonate of ammonia to it. This salt has a much weaker alkaline taste than the carbonate, and it requires a consider- ably larger proportion of water for its solution.

1005. Mr. R. Phillips has analysed a substance found near Fezzan in Africa, which occurs there native in great abundance, and which is called trona. He found it to be a compound inter- mediate between the carbonate and bi-carbonate, and he hence terms it a sesqui-carbonate of soda. See Quarterly Journal, vii. p. 298. In the same Journal, i. p. 188, will be found an ac- count of a very productive soda lake in South America.

1006. Chlorate of soda.••• By adding chloric acid to carbonate of soda, this salt may be formed. It is not unlike, in its general charac- ter, the chlorate of potassa.

1007. Iodate of soda is formed by adding iodine to a solution of soda ; an hydriodate is produced at the same time ; which may be sepa- rated by alcohol. Iodide of sodium is formed from these salts by treating them with heat.

**1007. Phosphate of soda may be procured by saturating phosphoric acid with carbonate of soda, evaporating and crystallising. There seems to be some discrepancy in opinion with respect to the proportions with which the phosphoric acid enters into combination with soda. Of phos- phite and hypo-phosphite of soda very little is at present known.*

1008. Borate of soda. (Borax).□□□ This salt is brought from India in a crude state, under the name of tincal ; when it is purified it becomes the refined borax of the shops ; and when it is deprived of its water of crystallisation, it forms a white powder, and at length, on increasing the heat, it is changed into the glass of borax. The crystallised and purified salt is soluble in twenty parts of water at 60□□, and in six parts of boil-

ing water. Borax has a place in the Pharmaco- poeia. See MEDICINE and PHARMACY.

1009. The selenic and prussic acids form distinct salts with soda.

1010. Sodiwn and sulphur.□□□ A. sulphuret of so- dium maybe formed by treating sulphate of soda with charcoal : and hydro-sulphuret is produced in several of the processes by which soda is separated from its sulphate.

LITHIUM.

101 1. In analysing a mineral which goes under the name of petalite, a very small quantity of an alkali was found in it by M. Arfwedson, which he supposed at first to be soda. But, upon further investigation, he found that it was dis- similar to soda in some of its properties, more especially in the power it possessed of neutral- ising much, more acid. To this new principle then the name of lithion was given, deduced from its mineral or stony origin, and this term has since been changed into lithium.

1012. It has since been ascertained that the principle exists in a somewhat larger proportion in the mineral called triphane or spodumene. It has also been detected in some others.

1013. The most direct way of extracting it is to fuse the mineral, reduced to a fine powder, with two or three times its weight of carbonate of potassa, to dissolve this fused mass in muriatic acid, evaporating to dryness : then to digest the dried mass in alcohol, which dissolves but little else than the muriate of lithia, which is ob- tained pure by dissolving and evaporating it a second time. This muriate is now to be digested with carbonate of silver, which forms a carbonate of lithia, and this carbonate may be decomposed by lime or baryta as are other carbonates.

1014. Other and more economical ways have been proposed of preparing lithia, one of which is to mix the mineral, from which it is procured, with

twice its weight of fluor spar powdered, then to heat the mixture in sulphuric acid until the fluoric acid, with the silica, shall be vola- tilised ; a sulphate of lithia is in this way formed, which may be decomposed.

1015. When this substance (lithia) is submitted to the action of the voltaic influence it is de- composed, in the same manner as is potassa and soda ; but it again, after reduction, unites so ra- pidly with oxygen, that it has been found im- possible to collect the metallic base or lithium, so as to ascertain its properties. The propor- tions of its combination with oxygen are of course likewise still unsettled.

1016. Lithium with chlorine. ††† Chloride of lithium is to be obtained by evaporating the muriate of lithia, and then fusing the dried re- sidue. This is an extremely deliquescent sub- stance, herein differing from the chlorides of potassium and sodium ; it is white and semi- transparent; it is decomposed when subjected to a high heat in the open air, parting with its chlorine, imbibing oxygen, and acquiring alka- lescent properties. It moreover tinges the flame of a red color, and is crystallisable with con- siderable difficulty, all properties marking its dis- tinction from potassium or sodium.

1017. Sulphur and lithium. ††† Sulphuret of li-

thium appears capable of being formed in the same manner as a sulphuret of potassium.

1018. Salts of Lithia. ††† Sulphate of lithia forms crystals of small prisms, which are white and shining ; it has a saline but not bitter taste. A bi-sulphate is produced by adding an excess of acid to the sulphate. This is a more fusible and less soluble salt than the neutral sulphate.*

1019. Nitrate of lithia. ††† The crystals of this salt are rhomboids ; it is deliquescent and fusible ; it has a cooling taste.

1020. Muriate of lithia does not appear to be a crystallisable salt.

1021. Carbonate of lithia is alkaline, efflo- rescent and fusible. When fused on platinum, it acts powerfully upon that metal.

1022. Phosphate of lithia.††† This may be ob- tained by adding phosphoric acid to the sulphate mixed with ammonia. It is insoluble in this menstruum, and is therefore precipitated.

CALCIUM.

1023. Calcium, as its name indicates, is pro- cured from lime. When this

substance is nega- tively electrised, in contact with mercury, an amalgam of mercury, with a white metal, is ob- tained, which metal is calcium. But at present our knowledge of this metal is very imperfect, from the great difficulty of separating its mercu- rial amalgam, and from the rapidity with which it again unites with the oxygen that has been torn from it in the process of reduction. It ap- pears, however, that lime is formed of nine parts of this metallic base, united to 7‘5 parts of oxygen, so that its representative number will be = 26-5.

Lime. (Calx).

1024. This substance, in its carbonated state, is a very abundant product of nature. Marble, limestone, chalk, are all carbonates of lime ; and the shells of crustaceous animals are formed, in a very considerable measure, of this material.

1025. Lime may be freed from its carbonic acid, and obtained in a state of purity, by expos- ing one of its carbonates to the process of calcin- ation ; but, to obtain it absolutely free from all impurities, white marble should be dissolved in diluted muriatic acid, a small quantity of am- monia added, and the solution filtered; then carbonate of ammonia is to be added, which will cause the precipitation of the lime, which is to be washed and exposed to a white heat.

1026. Lime is of a grayish color; it is caustic, and converts vegetable blues to green. It is difficult of fusion. Exposed to air it absorbs water and carbonic acid, and passes from a gray to white.

1027. When water is poured upon lime, it becomes immediately hot, and is converted into a white powder. Every one is familiar with the process of slaking lime, and the disengagement of heat and vapor that takes place in that process. Now slaked lime is a hydrate of lime, or, more strictly speaking, a proto-hydrate ; the water, however, of this hydrate is not very forcibly re- tained, for it may be expelled by a strong heat, and leave the lime dry and pure.

1028. The disengaged heat is consequent upor.

yiart of the water, which enters into combination with lime, assuming a solid form ; and it is sup- posed in this state to pass into a more solid con- dition than that of ice, for it gives out more caloric than does the same quantity of water in becoming ice ; and even ice itself, when entering into

combination with lime, evolves heat.

1029. Lime is but sparingly soluble in water, and, what is very curious, it dissolves more readily and copiously in cold than in hot water; and Mr. Ualton has made H probable that ice would take up twice as much lime as boiling water. Its water solution tastes acid ; it turns vegetable blues to green, and unites with oil into a sapo- naceous compound.

1030. Lime water is prepared by pouring suf- ficient quantity of water on a mass of lime to form it into a thin paste ; then more is to be added, and the mixture stirred or shaken during the ad- dition. When the lime has settled, the clear liquor is to be decanted off for use, and kept in closely stopped vessels. The quantity of water that is used is not of much consequence, provided more lime is used than the water will dissolve.

1031. Oxygen and calcium. ††† For the reasons above stated, with respect to the habits of cal- cium in reference to oxygen, it is not very easy to predicate the degrees with which oxygen unites with the metal.

1032. Chlorine and calcium. ††† If we heat lime in chlorine, oxygen is evolved, and a chloride of calcium is formed. The same effect is produced by evaporating muriate of lime. Indeed the chloride of calcium and muriate of lime are mu- tually convertible, by adding or subtracting water. The chloride has a strong attraction for water : deliquescing with considerable ra- pidity, and forming an oily kind of solution, which has been called oil of lime. This solution is a muriate of lime. It crystallises at the tem- perature of 32††. One of the most powerful of our frigonfic mixtures is composed of these cry- stals with snow. The salt is very soluble in al- cohol, and during the solution much heat is ex- tricated.

1033. Iodide and calcium. (Iodide of calcium.) ††† This is to be obtained by evaporating the hydri- odateof lime to dryness, and strongly heating the residue. It is a white fusible compound.

1034. Calcium and sulphur. (Sulphurei of cal- cium).††† This has been formed by causing hydro- gen gas to pass over red-hot lime ; and Berliner obtained it by subjecting anhydrous sulphate of lime to a powerful heat with charcoal.

1035. Phosphorus and calcium. ††† To prepare the phosphuret of calcium, we have the following directions in Dr. Henry's Elements : ' Take a glass tube about twelve inches long, and one- third of an inch in diameter, sealed hermetically at one end. Let this tube be coated with clay, except within about half an inch of the sealed end. Put first into it a drachm or two of phos- phorus, cut into small pieces, and then fill the tube

with small bits of fresh burnt lime, of the size of plit peas. Stop the mouth of the tube loosely with a little paper, in order to prevent the free access of air. Next heat to redness that part of the tube which is coated with clay, by means of a chafing dish of red hot charcoal;

and when the lime may be supposed to be ignited apply heat to the part containing the phosphorus, so as to sublime it, and to bring the vapor of it into contact with the heated lime. The phos- phorus will decompose the lime, and will form with the calcium a compound of a reddish-brown color.' This compound has been erroneously termed phosphuret of lime ; it is, in fact, a phos- phuret of calcium.

Salts of Lime.

1036. Chloride or o.rumuriute of lime. ••• Chlo- ride or oxymuriate of lime has been abundantly made use of as a bleaching material ; it is formed by passing chlorine into proto-hydiate of lime, which has been finely powdered. This substance has been called bleaching powder.

1037. Chlorate of lime is most easily pro- duced, by dissolving carbonate of lime in chloric acid. The product is a deliquescent compound, which has a sharp, bitterish taste. It is capable of being formed into a chloride by the action of heat, oxygen gas being evolved.

1038. lodate and hydriodate of lime. ••• Of these salts the first is of very difficult solution, requiring several hundred times its weight of water to dissolve it. When subjected to a strong heat, it gives off both oxygen and iodine, its base remaining. The second is very deliques- cent, and when dried it becomes an iodide of calcium.

1039. Nitrate of lime is a deliquescent salt, it is found abundantly in old plaster and mortar, and nitrate of potassa is sometimes procured from it by the addition of carbonate of potassa. It may be artificially formed by diluting nitric acid with five or six parts of water, then satu- rating this solution with carbonate of lime, and afterwards crystallising. When this salt is fused, it concretes on cooling into a mass called, after its discoverer, Baldwin's phosphorus. This must be broken into pieces, and kept in a well closed phial.

1040. Carbonate of lime. ••• It has already been stated that this substance is abundantly formed by nature : indeed it is 'the most abundant com pound of this earth,' and we shall take the liberty of extracting that author's account of it, whoso words we have just quoted.

1041. ' Carbonate of lime,' says Mr.Brande, 'is the most abundant compound of this earth. \V hen lime water is exposed to air, it becomes

covered with an insoluble film of carbonate of lime, and hence is an excellent test of the pre- sence of carbonic acid. But excess of carbonic acid redissolves the precipitate, producing a su- per-carbonate. Carbonate of lime is precipitated by the carbonated alkalis from solutions of mu- riate, nitrate, and sulphate of lime. Exposed to a red heat the carbonic acid escapes, and quick- lime is obtained. It consists of .

26-5 lime.

20-7 carbonic acid.

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1042. Carbonate of lime occurs in nature in great abundance, and in various forms. The primitive form of crystallised carbonate of lime, or calcareous spar, is an obtuse rhomboid of 105►► 5', and 74►► 55'. Jts specific gravity is 2′ 7. It

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CHEMISTRY.

occurs in every kind of rock, and its secondary forms are more numerous than those of any other substance ; sometimes it forms fine stalac- tites, of which some of the caverns of Derbyshire furnish magnificent specimens ; it is here de- posited from its solution in water, acidulated by the carbonic acid, and substances immersed in this water become incrusted by carbonate of lime, when the excess of acid flies off, as seen in the petrifying well of Matlock. A fibrous vari- ety of carbonate of lime, called satin spar, is found in Cumberland.

1043. Another variety, originally found in Arragon in Spain, has been termed Arragonite ; it occurs in six-sided crystals, of a reddish color, and harder than the common carbonate. There is an acicular or fibrous variety found in France and Germany, and the white radiated substance improperly called flos ferri is also regarded as of the same species. Some varieties contain about vhree per cent, of strontia.

1044. All the varieties of marble and lime- stone consist essentially of carbonate of lim'e; of these, white granular limestone, or primitive marble, is most esteemed. There are also many colored varieties of extreme beauty. It is dis- tinguished from secondary limestone by the ab- sence of all organic remains, by its granularly foliated structure, and by its association with other primitive substances.

1045. The most celebrated statuary marble is that of Paros, and of Mons

Pentelicus, near Athens ; of these some of the finest specimens of ancient sculpture are composed. The marble of Carrara, or Luni, on the eastern coast of the gulf of Genoa, is also much esteemed ; it is milk white, and less crystalline than the Parian.

1046. Many beautiful marbles for ornamental purposes are quarried in Derbyshire, and espe- cially the black marble called also lucullite. Westmoreland and Devonshire also afford beauti- ful varieties; and in Anglesey a marble inter- mixed with green serpentine is found, little inferior in beauty to the verd antique.

1047. Among the inferior limestones we enu- merate many varieties, such as common marble, bituminous limestones, abundant upon the Avon, near Bristol, and known under the name of swine-stone, or stink-stone, from the peculiar smell which it affords when rubbed. Oolite or roe-stone, of which the houses of Bath are built, and its variety called Portland stone. Pisolite consists of small rounded masses, composed of concentric layers, with a grain of sand always in the centre; and lastly chalk and marl.

1048. All these substances are more or less useful for ornamental purposes, or for building ; they afford quick-lime when burned, and in that state are of great importance as manure, and as ingredients in the cements used for building. There is a great variety of limestones used for burning into quick-lime, and, generally speaking, any of the varieties may be used which neither fuse nor crumble into powder at the tempera- ture required to expel the carbonic acid, which is a full red heat.

1049. Borate of lime. ??? The composition form- ed by adding a solution of boracic acid to lime- water is white, insipid, and -sparingly soluble.

1 050. Fluate of lime. ??? Pour concentrated sul- phuric acid on the substance called rluor spar, and fluoric acid is expelled in the form of gas. Hence this mineral is known to be formed in a great measure of fluoric acid, united to calcium. The fluate of lime, as a principle, has not hitherto been obtained in an insulated state.

1051. Phosphate of lime. ??? This is a principal ingredient in the bones of animals. It may be produced artificially by mixing solutions of phos- phate of soda and muriate of lime ; or by dis- solving bones, which have been calcined and rubbed down to powder, in diluted muriatic acid.

1052. A bi-phosphale may be procured by digesting the phosphate in phosphoric acid ; and, according to the investigations of Mr. Dalton, a tri, octo and dodico-pTiosphate are procurable. Dr. Thomson's quadri-

phosphate, or glacial phos- phoric acid, Mr. D. believes to be an octo-phos- phate.

1053. Sulphate of lime occurs native in gyp- sum, plaster, stone, &c. It may be formed ar- tificially by adding to the carbonate a sufficient quantity of sulphuric acid. The crystallised form of it, when it has lost its water of crystalli- sation and fallen into a white powder, is called plaster of Paris. This becomes soon solid after it has been made into a paste with water.

1054. As we trespassed a little upon our pro- portional limits to present Mr. Brande's account of the native carbonate of lime, so in the pre- sent instance we shall do the same ; this, as well as the carbonate, being a beautiful and interest- ing product of nature.

1055. ' Native sulphate of lime,' says Mr. B, ' occurs in various forms. The crystallised variety is usually called selenite ; the fibrous and earthy, gypsum ; and the granular or massive, alabaster. The primitive form of selenite is a rhomboidal prism of 113►► 8', and 66►► 52'. The crystals are commonly transparent and of various colors; it is softer than native carbonate or carbonate of lime, and yields very easily to the nail. It is seldom found in veins, but generally dissemi- nated in artificial strata. It occurs in Cumber- land, at Alston, and in Oxfordshire, at Shotover Hill, where it is often accompanied by shells and pyrites, and appears to have resulted from their mutual decomposition. A beautiful fibrous variety is found in Derbyshire, applicable to or- namental purposes.

1056. Massive and granular gypsum is found in this country, accompanying the salt deposits in Cheshire. It abounds in Montmartre, near Paris, and contains organic remains ; sometimes it forms entire hills. In the Tyrolese, Swiss, and Italian Alps it is found upon the primitive rocks, often of the purest white, especially at Moutier, near Mont Blanc, and near the summit of Mount Cenis. It is turned by the lathe, and sculptured into a variety of beautiful forms, more especially by the Florentine artists.

1057. There is a variety of sulphate of lime which has been called anhydrous gypsum, or anhydrite, in reference to its containing no watei It is harder than selenite, and somttimes contains common salt, and is then called muriacite. It i rarely crystallised, generally massive and lamel lar, and susceptible of division into rectangular*

prisms. It has been found in Derbyshire and Nottinghamshire of a pale blue tint ; sometimes it is pink or reddish, and often white. It has been found at

Vulpino, in Italy, and hence called Vulpinite. The statuaries of Bergamo and Milan employ it; and artists know it by the name of marbre di Bergamo. A compound of sulphate of lime and sulphate of soda is found in the salt-mines of New Castile, which mineralogists have described under the name of glauberite.

1058. Sulphate of lime is without much taste or smell ; it is difficultly soluble in water. It is decomposed by the carbonates of the alkalis. It is on this principle that hard waters, in which there is generally sulphate of lime, curdle soap; the sulphuric acid of the sulphate seizing upon the alkali of the soap, and thus the oil becoming separate.

1059. Ferro-cyanate of lime is principally useful as a test of the presence of iron. Seleniate of lime has no particular interest.

1060. Lime and sulphur. ††† Besides the sul- phuret of calcium, already noticed, sulphurets of lime may be produced in the form of hydro-sul- phuret, hydrogurated sulphuret, hypo-sulphite, and sulphite, according to the quantities of aqueous fluids that are directly or indirectly em- ployed in their formation.

BARIUM.

1061. The earth baryta is employed for the ob- taining of this metal ; and it is procured by ne- gatively electrifying that substance in contact with mercury. The metal is of a dark gray color; it greedily absorbs oxygen, and is there- fore very speedily, and almost unresistingly, con- verted into the oxide of barium.

1062. This oxide of barium or baryta is ob- tained by subjecting nitrate of baryta, in its crys- tallised form, to a bright red heat. It is of a gray color, very difficult of fusion, and is the heaviest of the substances that go under the ge- neral appellation of earths, hence its name. It absorbs water with eagerness, and becomes a hydrate. Gay Lussac, and Thenard, have shown that the substance is capable of uniting with an additional quantity of oxygen to that which it contains in its state of baryta ; this is therefore called a deutoxide or peroxide of barytum.

1063. Sulphate of baryta. ††† This is an abun- dant product of nature, and is principally met with in Cumberland and Derbyshire; in this country it passes under the name of heavy spar. The Derbyshire variety of it is called cawk.

1064. The affinity of baryta for sulphuric acid is stronger than that for any other base, and its combination is therefore easily effected, either directly or by decomposition of any of the al- kaline sulphates, the insolubility too

of the salt makes baryta, with the facility of union just alluded to, a good test for the presence of sul- phuric acid.

1065. The native sulphate was employed by Mr. Wedgwood in the manufacture of jasper ware. When decomposed by charcoal or heated to redness in a paste it acquires the property of phosphorescence, and, as this substance was first produced and observed upon at Bologna, it has obtained the name of Bolognian phosphorus.

The artificial sulphate is used as a paint, under the name of permanent white.

1066. Sulphite and hypo-sulphite of baryta may be formed, the first by mixing sulphite of potassa with muriate of baryta, the next by adding muriate of baryta to a solution of hypo- suphite of lime. The first is an insoluble com- pound ; the last but slightly soluble.

1067. Nitrate of baryta may be formed by dis- solving the carbonate in nitric acid, evaporating and crystallising. The taste of this salt is acrid, and in a degree astringent. It is decomposed by a bright red heat, and by this decomposition a pure baryta may be obtained.

1068. Carbonate of baryta. ••• The earth baryta when pure has a very powerful affinity for carbonic acid, so that the carbonate is easily formed. It is a salt nearly insoluble in water ; it is tasteless, but acts as a virulent poison. The substance called witherite, (from its discoverer, Dr. With- ering,) is a native carbonate of baryta.

1069. Chlorate of baryta may be directly formed ; that is by the union of chlorine gas with a solution of pure baryta. The taste of this salt is highly pungent.

1070. Hydriodate and iodate of baryta. ••• The first is a crystallisable and very soluble salt. The second is exceedingly insoluble : if this hy- di iodate be evaporated and ignited, an iodide of barium is formed.

1071. Phosphate of baryta. ••• Phosphoric acid and baryta combine in several proportions, form ing neutral phosphate, bi-phosphate, and sesque- phosphate.

1072. Phosphite of baryta. ••• This combina- tion of phosphorus acid with baryta may be ob- tained by mixing muriate of baryta with phos- phate of ammonia.

1073. The borate of baryta is a white and in- soluble powder : it has not been particularly investigated.

1074. Barium and chlorine. ••• Chloride of ba- rium. This may be formed by heating pure ba- ryta in chlorine gas, or by dissolving its carbonate in diluted muriatic acid. ‘ When filtered and evaporated the solution, which contains muriate of baryta, not chloride of barium, yields regular crystals of the former salt, which have most com- monly the shape of tables, bevelled at the edges, or of eight-sided pyramids, applied base to base. These crystals dissolve in five parts of water, at 60••, or in a still smaller quantity of boiling wa- ter, and also in alcohol. They are not altered by exposure to the atmosphere ; sulphuric acid detaches the baryta, and the salt is also decom- posed by alkaline carbonates and sulphates. When the crystals are exposed to a red heat they are converted into chloride of barium.’ Henry. See CHLORINE.

1075. As of lime so of baryta, a ferro-cyanate and seleniate may be formed.

Nearly all the compounds with baryta, as a base, are poisonous, and may be formed in the same manner. It also occurs native in consider- able quantities. It is found, as well as the car- bonate, at Strontian in Scotland, and in the vici- nity of Bristol, as well as at Montmartre neat Paris. Strontia, like baryta, has a stronger affi- nity for sulphuric acid than have any of the

alkalis. Sulphite and hypo-sulphite may be formed with the sulphurous acid.

STRONTIUM.

1076. This metal is produced from strontia, as barium is from baryta. It somewhat resembles barium in its external appearance, and, like it, is converted soon into strontia by exposure to the oxygen of the air.

1077. Strontia. ••• Oxide of strontium may be formed either by subjecting the carbonate to a strong heat in the open air, or by igniting the ni- trate of strontia in a close vessel. The crystals of this salt have much the same habits and sus- ceptibilities as those of baryta ; but there is a difference in ihe form of the crystals; those of strontia, too, contain more combined water than those of baryta, and they are less soluble.

1078. Strontium and chlorine. ••• Chloride of strontium may be formed either by dissolving the carbonate in the muriatic acid, and heating to dryness, or by directly subjecting strontia to the action of chlorine gas.

This chloride is con- verted into muriate of strontia by subjecting it to the action of water, and then crystallising ; these salts are reconverted into a chloride by being ex- posed to a red heat.

1079. Strontium and iodine. ००० Iodide of stron- tium is formed like iodide of barium, by heating the hydriodate in a close vessel.

1080. Strontium and sulphur. ००० Sulphuret of strontium. This may be formed by subjecting the powdered sulphate of strontia to a red heat with charcoal, or by directly fusing the strontia with sulphur. Solution in water converts this sul- phuret into a hydro-sulphuret, and hydrogureted sulphuret of strontia.

1081. Sulphate of strontia. ००० This salt has a considerable resemblance to sulphate of baryta.

1082. Nitrate of strontia. ००० This salt may also be obtained in the same mariner as the nitrate of baryta. Its crystals communicate to the flame of a candle a deep red color ; and it is the salt which is employed at the theatres in the red fire.

1083. Carbonate of strontia. The habits of this earth, strontia, with carbonic acid, are consi- derably like those of baryta. This carbonate is found, as we have just stated, native in Argyll- shire. It was first discovered at Strontian in that county in 1787. Its color is greenish, and i occurs in crystals and in radiated masses.*

1084. Phospliate of strontia may be formed by mixing muriate of strontia and phosphate of soda. It is tasteless and insoluble in water, but soluble in an excess of phosphoric acid. A bi- phosphate may be formed of strontia.

1085. Borate of strontia was formed by Dr. Hope. It is a white powder, changes syrup of violets to a green, and is soluble in 130 parts of water.

1086. Seleniates of strontia are two; the neutral and the bi-seleniate. There is also a ferro-cyanite of strontia.

1087. It will have been observed that there exists a considerable resemblance between stron- tia and baryta, both in appearance and habits. As this circumstance has led to some confusion in analysis, we give the following extract from Mr. Brande on this subject.

1088. The following are some of the most striking points of resemblance. They are both found native in the states of sulphate and car- bonate only ; both sulphates are soluble in excess of sulphuric acid, and nearly insoluble in water; they are decomposable by similar means, as well as the native

carbonates ; they are both crystal- Usable from their hot aqueous solutions, and both attract carbonic acid. The carbonates are each soluble with effervescence in most of the acids ; but the native carbonates are not so easily acted upon as the artificial. Pure ammonia pre- cipitates neither the one nor the other.

1089. The following are essential distinctions. Baryta and all its salts, except the sulphate, are poisonous. The corresponding strontitic salts are innocent. Baryta tinges flame, yellow : stron- tia, red. Strontia has less attraction for acids than baryta, since the strontitic salts are decom- posed by baryta. The greater number of the barytic salts are less soluble than those of stron- tia; and they differ in their respective forms and solubilities. Pure baryta is ten times more soluble in water than pure strontia.

MAGNESIUM.

1090. This metal can hardly be said to have been demonstrated ; but when the earth of mag- nesia is negatively electrised with quicksilver, the resulting compound decomposes water, and occasions the formation of magnesia. In one experiment of Sir H. Davy, for the purpose of obtaining the metallic base of magnesia, a solid was obtained, which, from its whiteness and lustre, appeared evidently metallic. ‘ It sank rapidly in water, though surrounded by globules of gas, producing magnesia, and quickly changed in air, becoming covered with a white crust, and falling into a fine powder, which powder proved to be magnesia. He afterwards, by passing po- tassium over magnesia, at a high temperature, and introducing quicksilver into the tube while hot, obtained an amalgam, which was deprived of its potassium by the action of water. It then appeared as a solid white metallic mass, which, by exposure to the air, became covered with a dry white powder, and, when acted on by weak muriatic acid, gave off hydrogen gas in con- siderable quantities, and produced a solution of magnesia.’ Philosophical Transactions, 1808,

1810.

1091. Magnesia then is considered an oxide of magnesium. It may be obtained pure by ex- posing its carbonate to a red heat. It is a well- known substance, white, and almost tasteless ; it possesses, in some measure, the properties of an alkali, but it does not, like the other alkaline earths, absorb moisture or carbonic acid from the air. It appears, however, to have an affinity for water, and it combines with it under some cir- cumstances, so as to constitute a hydrate. Water, however, having been agitated with magnesia, and filtered through paper, does not, as in the case of lime-water, manifest the properties of the substance itself.

1092. Magnesia, in a state of impurity or ad- mixture, is by no means a rare production of nature ; it forms a considerable portion of what is called magnesian lime-stoue, serpentine, &c.

It nas not hitherto been much employed, except in medicine.

1093. Chlorine and magnesium. ••• The com- pound formed by heating magnesia in chlorine gas, and which is a chloride of magnesia, is not much known. The chloride of magnesium may be formed by mixing chloride of lime with sulphate of magnesia. The chlorate of magnesia is a bitter deliquescent salt, but not much known.

1094. Muriate of magnesia. ••• This is met with in some of the mineral waters, as well as in sea- water. It cannot like some of the other muriates be converted into a chloride of the base, since exposure to strong heat occasions a dissipation of part of the acid. Hydriodate of magnesia is a deliquescent salt, and also loses its acid by ex- posure to heat. When iodine is heated along with magnesia and water, both hydriodate and iodate of magnesia are formed. By concentrating the solution both salts are partly decomposed, and a flocculent iodide of magnesia is formed, resembling kermes in appearance, which when heated loses part of its iodine, and is changed in- to a sub-iodide. Henry.

1095. Nitrate of magnesia is formed by dis- solving the carbonate in diluted nitric acid. It is a crystalline salt, and has a cooling and bitter taste. The ammonio-nitrate may be obtained by mixing the solutions of nitrate of magnesia and nitrate of ammonia. This salt is less deliquescent than its components are separately.

1 096. Carbonate of magnesia is usually formed by adding a carbonated alkali to sulphate of magnesia. It is a white, tasteless, insoluble powder, and the carbonic acid is expelled from it at a red heat ; the residuum being calcined or pure magnesia. It appears that the carbonate of magnesia, is not a fully saturated carbonate, but that what has been generally considered the bi- carbonate, is in fact the true carbonate.

1097. Borate of magnesia, may be formed artificially. A native compound of boiacic acid and magnesia is instanced in the mineral called boracite, which is found near Luneburgh.

1098. Phosphate of magnesia may also be formed artificially ; and the ammonio-phosphate is produced by mixing solutions of phosphate of

ammonia and phosphate of magnesia. This salt according to Fourcroy contains equal weights of phosphate of ammonia, phosphate of magnesia and water. It is tasteless and decomposable by heat, leaving as a residue only phosphate of mag- nesia and water.

1099. Sulphate of magnesia. ††† This salt is one of importance, were it only for its very extensive use in medicine. It was at one time procured from the springs of Epsom, and hence its common name, Epsom salts. It is generally upon a large scale obtained from sea-water, the residue of which, after the separation of common salt, is called bittern, which is a mixture of sul- phate with muriate of magnesia; the latter is decomposed by sulphuric acid. It may be ob- tained by the direct admixture of pure magnesia with concentrated sulphuric acid.

1100. Sulphate of magnesia forms in crystals. It has a bitter taste : it is soluble in its own weight of water at 60 J and when exposed to heat

loses its water of crystallisation without decom position. This salt is largely used in the forma- tion of the carbonate of magnesia of the shops ; carbonate of potass and sulphate of magnesia being mixed together in a heated state. The am- moniaco-magnesian sulphate is formed by adding a solution of pure ammonia to that of sulphate of magnesia. A compound sulphate of potassa and magnesia has been produced by saturating bi- sulphate of potassa with magnesia. This salt has a bitter taste, and is not much more soluble than sulphate of potassa.*

1101. A compound sulphate of magnesia and soda has also been procured, which is soluble in rather more than three times its weight of water at 60††.

1102. Sulphite of magnesia may be procured by passing sulphurous acid into water, in which is diffused the carbonate of magnesia. ‘ The crystals into which this salt form effloresce in the air, and become slowly a sulphate. The hypo- sulphite may be obtained by heating a solution of the sulphite with flowers of suipher. This is an exceedingly bitter salt, and freely soluble in water ; but it is not deliquescent.

1103. The sulphurets of magnesia have not been much investigated.

1104. The selenic acid unites with magnesia in two proportions ; but the compounds have not been found to possess much interest.

1105. ‘The fossils which contain magnesia are generally soft and apparently unctuous to the touch ; they have seldom either lustre or trans- parency, and are generally more or less of a green color. Steatite or soapstone, talc, and asbestos, may be taken as instances. The chry- solite

also contains more than half its weight of magnesia. The mineral called bitter-spar, of which the finest specimens come from the Tyrol, contains forty-five per cent, carbonate of mag- nesia, fifty-two carbonate of lime, and a little iron and manganese. Its primitive crystal is a rhomboid nearly allied to that of carbonate of lime; its angles being 106►► 20', and 73►► 80'. It is of a yellowish color, and a pearly lustre, semi-transparent and brittle. A variety found at Miemo in Tuscany has been called Miemite. The species of marble called dolomite found 'in the Alps, and in Icolmkill in Scotland, contains also a large quantity, generally forty per cent, of car- bonate of magnesia. The same may be said of the magnesian lime-stone of Derby and Not- tingham : it is generally of a yellowish color, and less rapidly soluble in dilute muriatic acid, than the pure lime-stones, whence the French have termed it, chauxcarbonateelente. The lime which it affords is much esteemed for cements ; but for agricultural purposes it is often mischie- vous, in consequence of its remaining caustic for a very long time, and thus injuring the young plants.

1106. The separation of magnesia and lime, continues Mr. Brande, from whom we are now extracting, is a problem of some importance in analytical chemistry, as they often exist together in the same mineral, more especially in the varieties of magnesian lime-stone. When so- lution of carbonate of ammonia is added to the mixed solution of lime and magnesia in nitric

or muriatic acids, carbonate of lime falls, and the magnesia is retained in solution, and may be separated by boiling ; this method, however simple, is not susceptible of great accuracy, for a portion of carbonate of lime will always be re- tained along with the magnesia in solution, and a triple ammoniaco-magnesian salt is also formed. Mr. R. Phillips (Quarterly Journal vi. 317,) proposes the following process. ' To the mu- riatic or nitric solution of lime and magnesia, add sulphate of ammonia in sufficient quantity ; evaporate the mixture gradually to dryness, and then heat it to redness till it ceases to lose weight by the volatilistation of the muriate or nitrate of ammonia formed : note the weight of the mixed salt, reduce it to powder and wash it with a sa- turated solution of sulphate of lime, till all the sulphate of magnesia appears to be dissolved ; dry the sulphate of lime left, and, by deducting its weight from that of the mixed sulphates, the quantity of sulphate of magnesia dissolved will appear.' After repeated trials of the various modes of separating lime from magnesia, I am induced, adds Mr. Brande, to consider the fol- lo\ving as the least defective. To the mixed so- lution of lime and magnesia, add oxalite of am- monia slightly

acid, collect the precipitate, wash and dry it. Sixty-two parts indicate, 26‘5 of lime. If nitric or muriatic acid were used for solution, the magnesia may afterwards be obtained by evaporation, and heating the residue to redness in a platinum crucible till it ceases to lose weight. If sulphuric acid were the solvent the same operation affords dry sulphate of magnesia, of which fifty-six parts are equivalent to 18‘5 of magnesia.

YTTRIUM.

1107. The earth called Yttria or Ittria was discovered in 1794 by professor Gadolin, in a stone from Ytterby in Sweden. The mineral has since been called Gadolinite. Its metallic base has not yet been demonstrated in a separate form ; but the power that Yttria possesses of converting potassium into potassa, when heated with that metal, establishes its character as an oxide.

1 108. Yttria is to be obtained from its mineral by the following process : ‘ Powder the mineral and boil it in repeated portions of nitro-muriatic acid, evaporate nearly to dryness, dilute with water and filter, evaporate to dryness, ig- nite the residue for some hours in a close vessel, redissolve and filter. To this .solution add am- monia, which throws down Yttria and oxide of cerium ; heat the precipitate red hot, dissolve it in nitric acid, and evaporate to dryness ; dilute with 150 parts of water, and put crystals of sulphate of potassa into the liquid. The crys- tals gradually dissolve, and after some hours a white precipitate appears of oxide of cerium, the whole of which must be separated by a re- petition of this process. The liquor is then to be filtered, and the addition of pure ammonia forms a precipitate of yttria, which is to be washed, and heated red-hot. Berzelius in Thomson’s Chemistry, vol. i. p. 357.

1109. Yttria is insipid, smooth to the touch, very ponderous, insoluble in water, soluble in

most of the acids, infusible, but by intense neat, and without influence upon vegetable colors ; it is supposed to contain twenty-five per cent, of oxygen.

GLUCINUM.

1110. The base of glucina has not been de- monstrated, but it changes potassium into potassa, and hence the inference that it is an oxide of a metal which should of course be denominated glucinum.

1111. Glucinum was discovered by Vauque- lin in the year 1798, in the beryl, a precious stone of a green color. It also exists in the emerald of Peru, it is likewise found in euclase. We are directed to obtain the earth from any one of these minerals by the following process : ‘ reduce it to a

fine powder, and fuse it with thrice its weight of potassa ; dissolve in a di- lute muriatic acid ; evaporate to dryness ; re- dissolve in water, and precipitate by carbonate of- potassa. Dissolve this precipitate in sul- phuric acid., and add a little sulphate of potassa, and on evaporation crystals of alum will be ob- tained. These being separated, add excess of carbonate of ammonia to the residuary liquor, which will retain glucina in solution, but the alumina will be precipitated ; filter, and evapo- rate to dryness, and apply a red heat, glucina remains.'

111-2. Glucina is a fine white soft powder, insoluble in water, but soluble in liquid potassa and soda : with the acids forming combinations that have a sweet and somewhat astringent taste. Its name is derived from

ALUMINUM.

1113. Alumina changes potassium into potassa, and therefore it is presumed to be an oxide, but its base, which of course is analogically consi- dered to be entitled to the appellation of alumi- num, has not hitherto been demonstrated satis- factorily.

1114. This earth (alumina), may be separated from its admixtures by adding carbonate of am- monia, or bi-carbonate of potassa, to a solution of common alum. This substance is insipid and without odor ; it forms a cohesive mass with water. It is soluble in potassa, and in soda, and forms compounds with lime, baryta, strontia and silicn. In pottery and porcelain, alumina forms an es- sential ingredient.

1115. 'Alumina forms a very large proportion of the rocks and strata that compose this globe It is the chief ingredient in all the varieties o clay, and gives them the property of tenacity anc ductility, or of being capable of being moulded into the shapes of vessels, which are rendered hard and durable by the subsequent application of heat. Bricks, tiles, and all the varieties of pottery and porcelain are chiefly formed of alu- mina, with variable proportions of silica and other earths. It imparts to soils, when present in due proportion, the quality of being sufficiently retentive of moisture, for a soil may be too open and ight to be fertile, as well as too stiff from the excess of its aluminous ingredient. It is re- markable, also, that alumina nearly pure, com- poses some of the hardest minerals, such as the

corundum, which is hard enough to be employed in polishing diamonds.' Henri/.

1116. Alum. (Sulphate of Alumina, or, more properly speaking, sulphate of alumina and po- tassa).

1117. This salt may be prepared by roasting and lixiviating certain clays which contain pyrites, adding some potassa. See PHARMACY.

1118. It has a sweetish taste, it reddens vege- table blues ; when heated it swells up, loses its regular shape and appearance, and becomes what is called burnt alum. In this way, however, it seems that \ve cannot expel the whole of the acid. It dissolves in five parts of water at 60►►, and, when ignited with charcoal, a spontaneously in- flammable compound becomes formed, which is known by the name of Homberg's pyrophorus; a substance which is ordered to be prepared in the following manner : ►►► 'Mix equal parts of honey, or of brown sugar, and powdered alum in an iron ladle ; melt the mixture over a fire, and keep it stirred till dry ; reduce the dry mass to powder, and introduce it into a common phial coated with clay, and placed in a crucible of sand. Give the whole a red heat, and when a blue flame appears at the neck of the phial, allow it to burn about live minutes ; then remove it from the fire, stop the phial and allow it to cool, taking care that air cannot enter it.'

1119. Alum is used pretty extensively in the arts of dyeing and calico printing. It is also em- ployed in medicine.

1120. Muriate and nitrate of alumina may be formed by dissolving the purified earth in the acids ; but we are informed by Sir H. Davy, that no substance exists which can be considered as a true compound of alumina and chlorine.

1121. Ammonia, soda, and magnesia may be made to unite with alum.

For further information on aluminous compo- sition, see Dr. Thomson's System, and for an interesting account of aluminous, and silico- aluminous minerals, see Brande's Manual, vol. ii. p. 312.

THORINUM.

1122. The earth Thorina differs from alumina in being soluble in solution of potassa; from yttria by its astringent taste without sweetness, and by its neutral solutions affording a precipi- tate when boiled. From zirconia it differs in the following properties : 1st. after being heated to redness it is still soluble in acids. 2d. Sulphate of potassa occasions no precipitate in its solu- tions. 3d. It is precipitated by oxalate of am- monia. 4th. Sulphate of thorina crystallises while sulphate of zirconia does not. Brande from Thomson.

1 123. We do not absolutely know from expe-

riment that this earth is a metallic oxide, the in- ference that it is so is merely from analogy.

ZIRCONIUM.

1124. When potassium was brought into con- tact with zirconia heated, potassa was formed and dark metallic particles elicited.

1125. The earth was discovered by Klaproth in the precious stone called jargon or zircon. It has since been detected in the hyacinth. Its or- dinary form is in reddish crystals ; it is mixed in its native state with silica and a small quantity of iron. The pure earth is insoluble in water and in pure liquid alkalis, but soluble in the carbo- nates of these last. Its combinations with the acids into salts have not been much investigated.

SILICIUM.

1126. The experiments of Sir H. Davy, for the purpose of ascertaining the metallic base of the earth silica, were so far successful as that the phenomena produced left no doubt that like the other earths this also is an oxide; and Berzelius decomposed it by fusing it with charcoal and iron in a blast furnace, thus obtaining an alloy of iron and silicium.

1127. Silica, or silicious earth, is a very abun- dant product of nature. In flint and in rock crys- tal it exists almost pure. We may obtain it by calcining common gun flints, or by heating rock crystal to redness, adding water to it, and then reducing the quenched mass to a fine powder.

1128. When pure silica is white and tasteless it requires an intense heat for fusion. It readily unites with the fixed alkalis and forms glass. fSee Aikin's Dictionary, see also the article GLASS in this Encyclopaedia). It is not acted o> by any acid excepting the fluoric.*

1129. Silica is of most important use in the manufacture of glass, and a certain proportion of it is employed in the composition of porce- lain, in order to give a due hardness to the alu- minous or clayey earth which constitutes the principal part of porcelain. Silica is an essential ingredient in fertile soils; it divides the other portions of which a soil may be constituted, and occasions the ground to be more porous. See the articles SOIL and AGRICULTURE.

We shall now present our readers with the fol- lowing long but very useful tables from Dr. Ure, exhibiting at one view the habitudes, &c. of all the known metallic and earthy salts. It will be observed that both the bases,

and the compounds, are placed in alpbabetical order, so that the reader can at once refer to the substance, the form, composition, &c. of which ho is desirous to ascertain.

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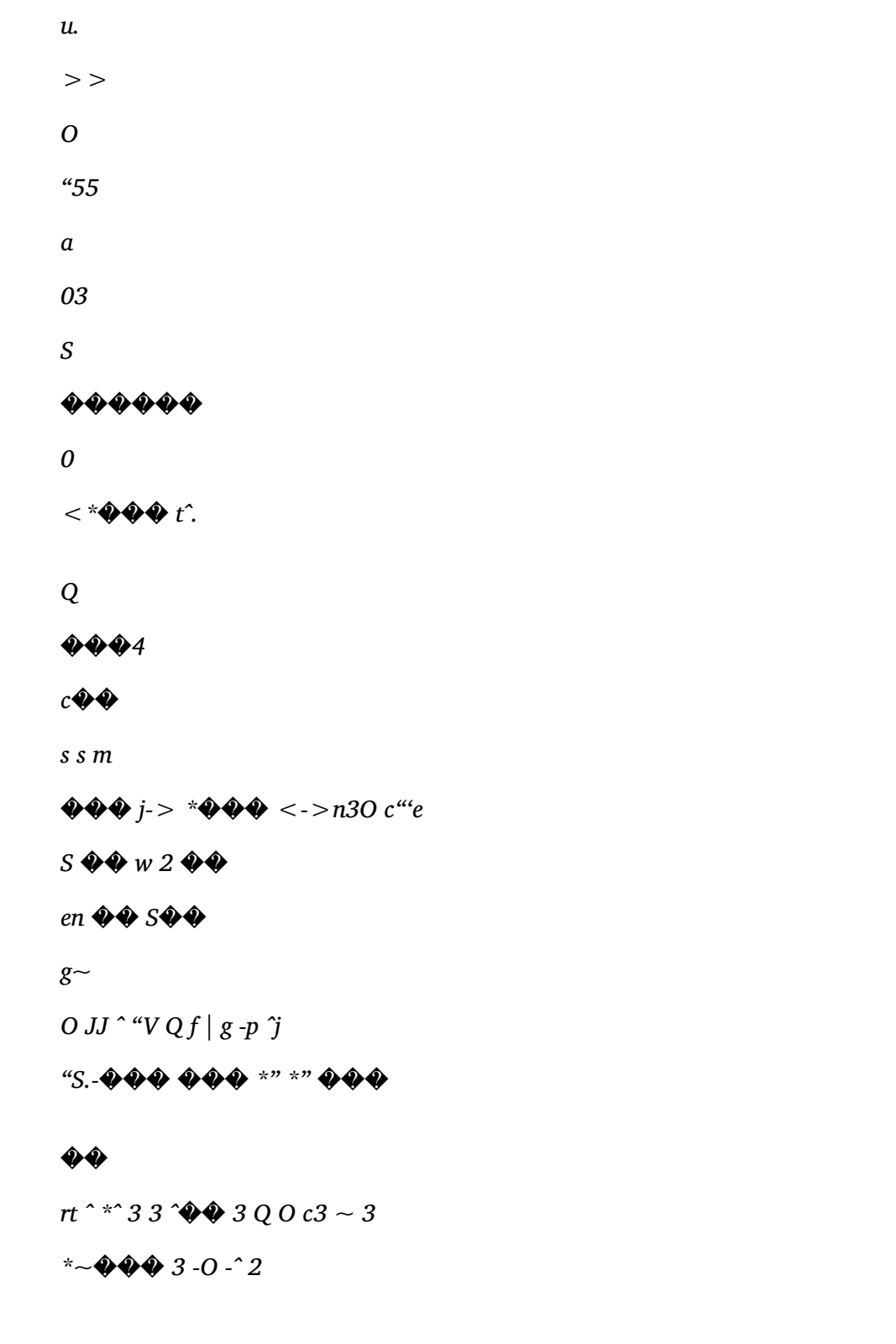

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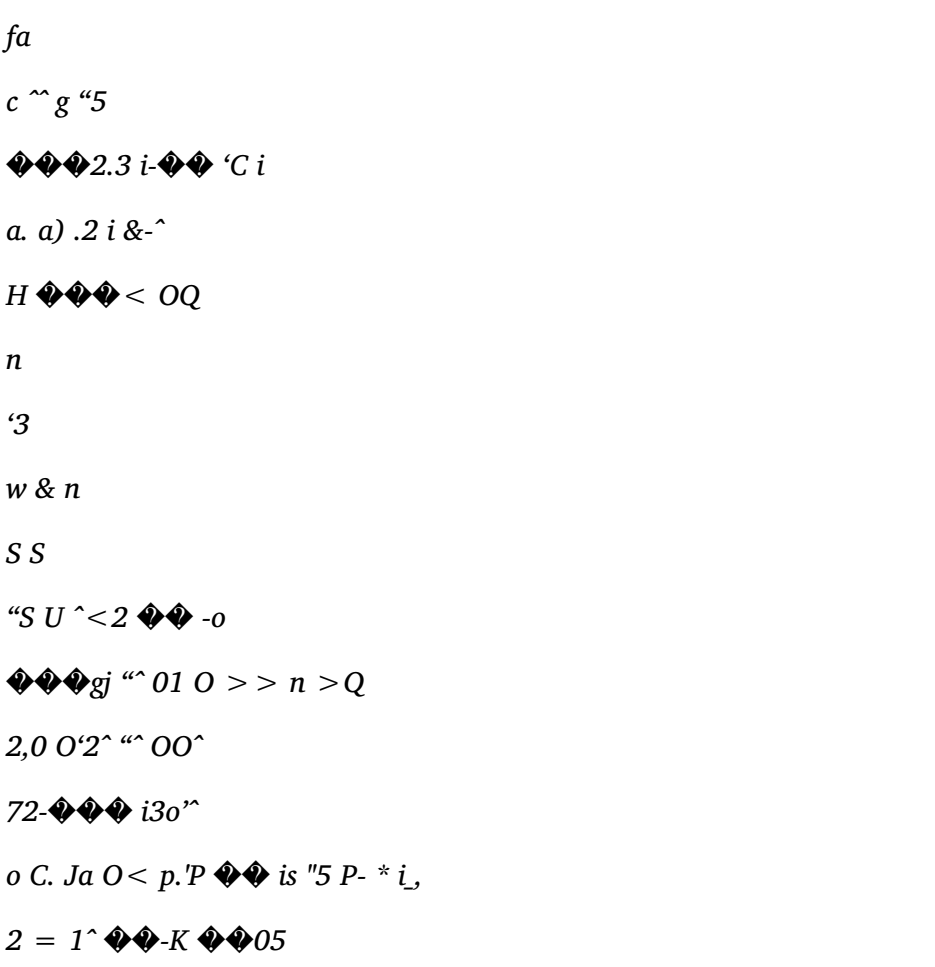

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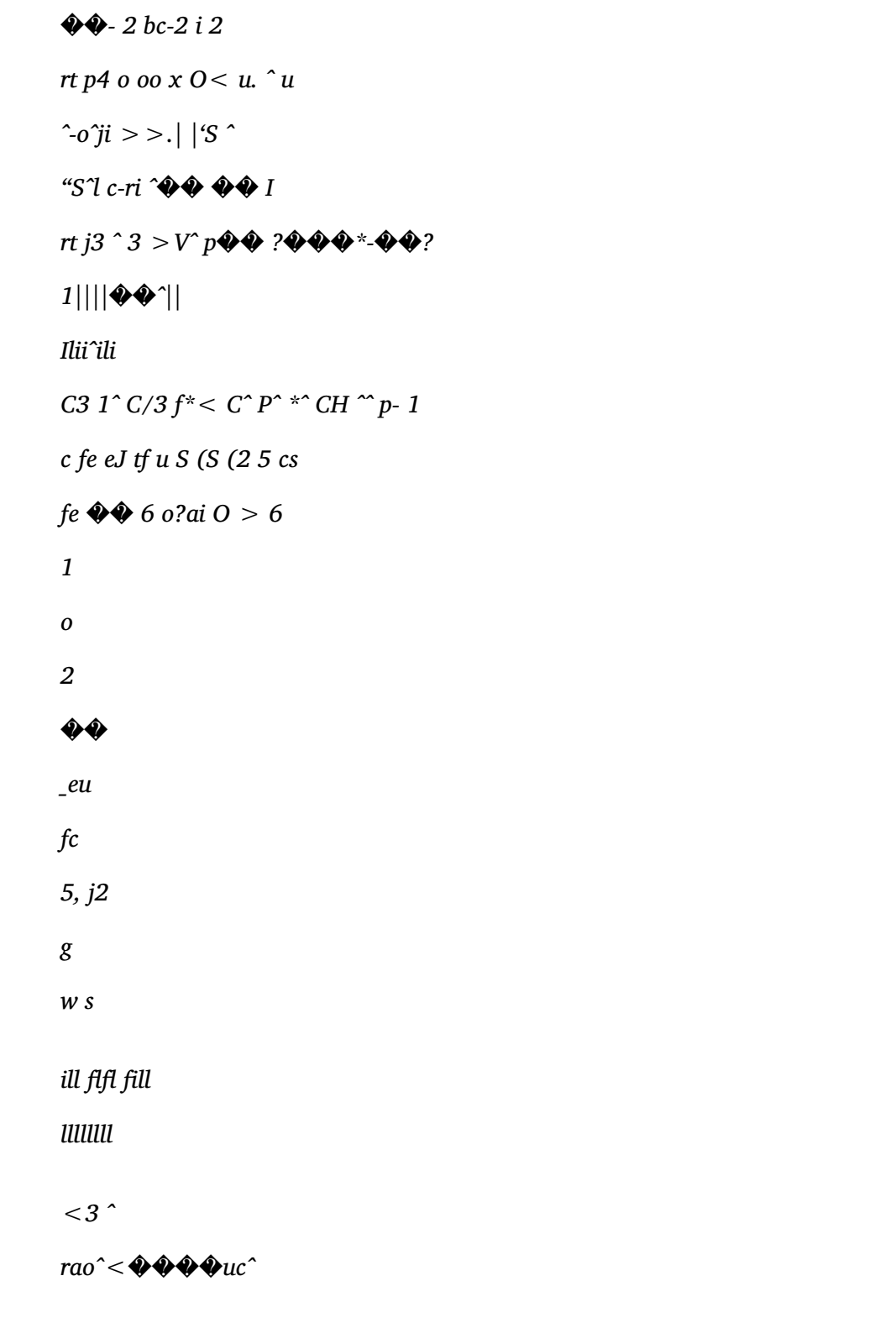
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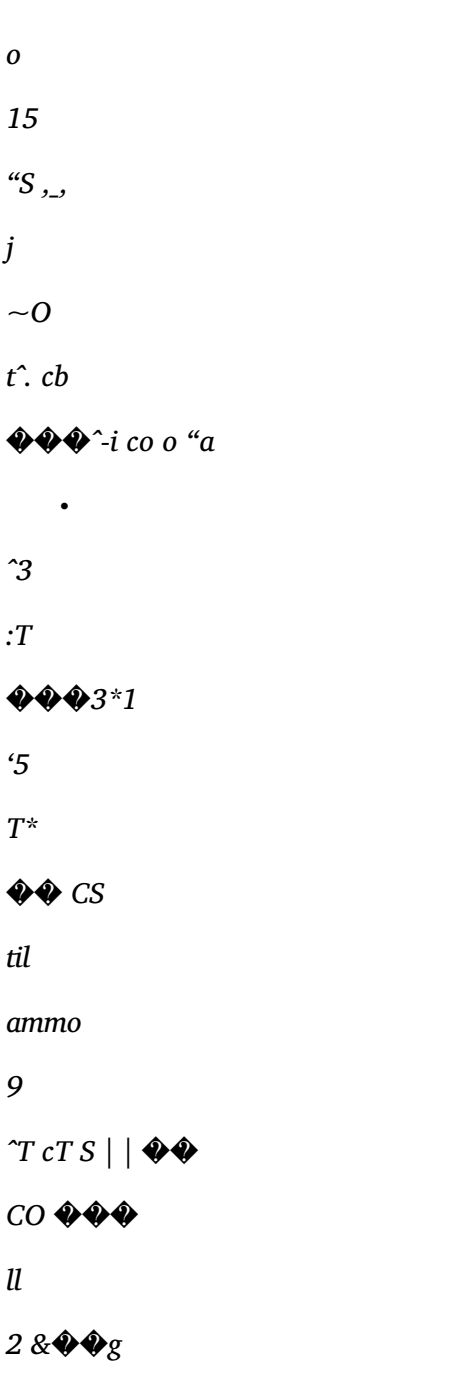

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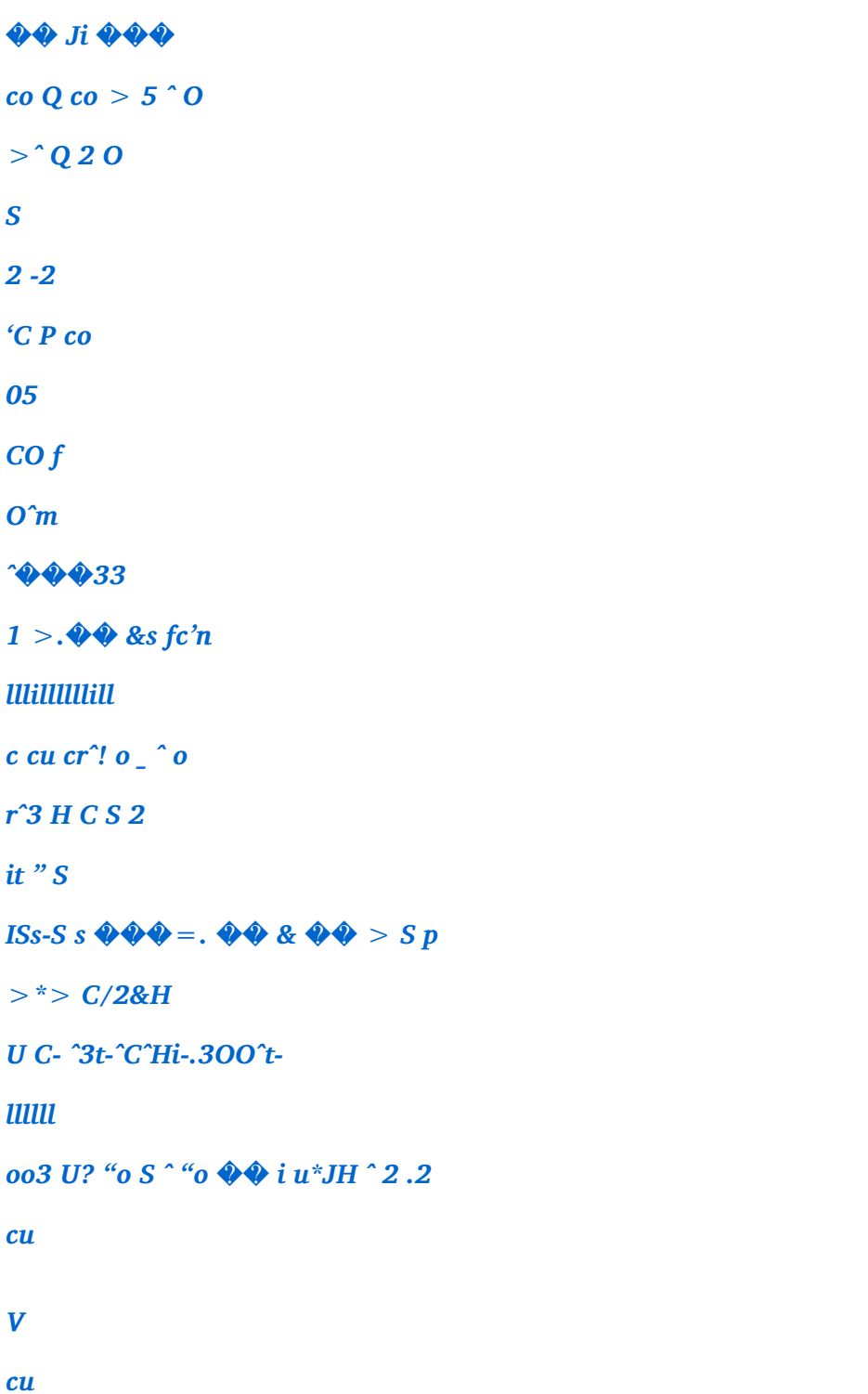

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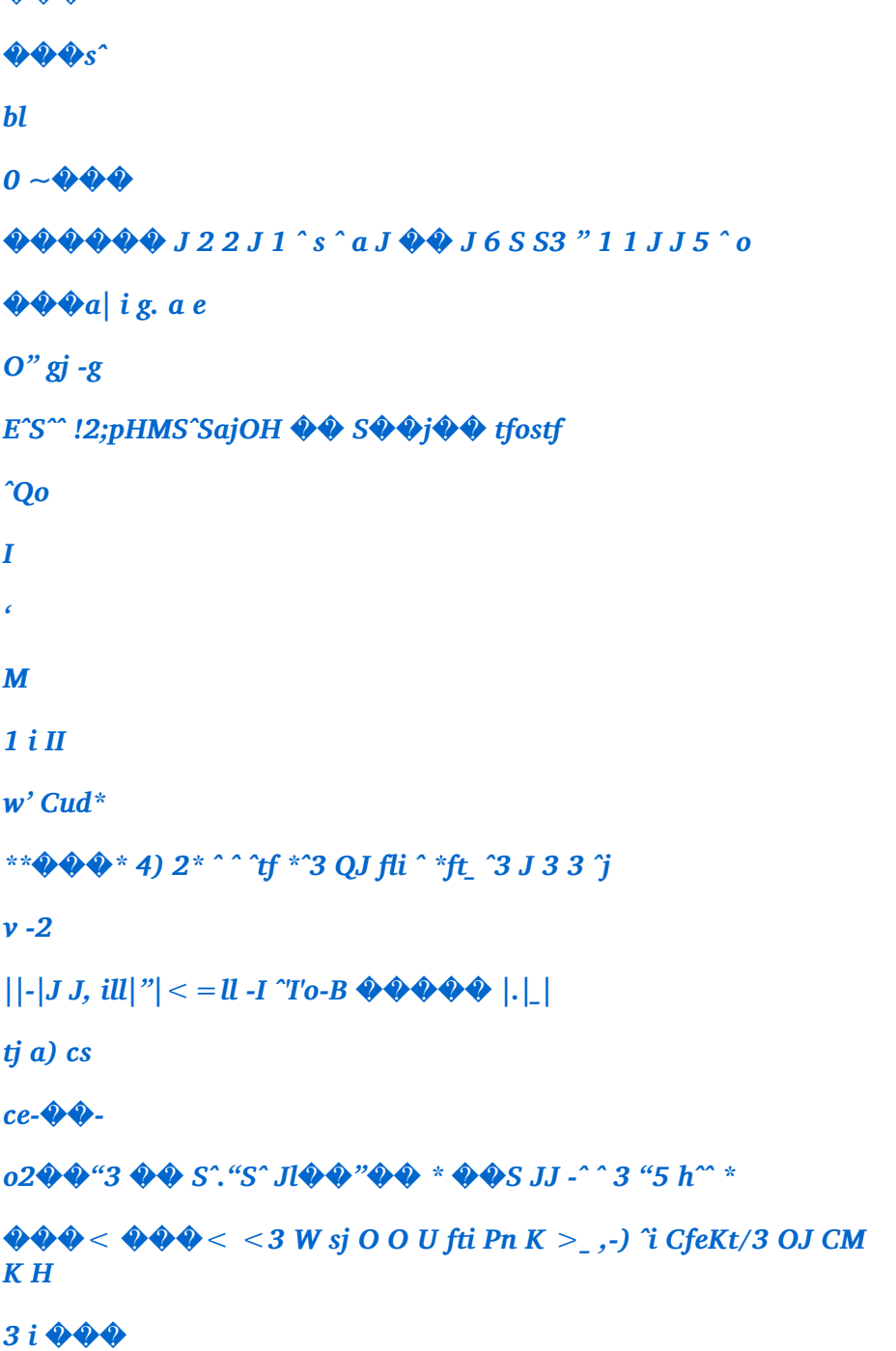

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PART V.

VEGETABLE SUBSTANCES.

1131. We are now to engage in the consider- ation of a different order of substances from any that have yet been under investigation, viz. the products of organisation, the regulating principle of which, being something not within the com- pass of mere material existence, renders the in- vestigation of the subject altogether dissimilar from that of substance, which is, ab origine ad finem, inert matter.

1132. Organic products are divided as to their chemical consideration into immediate or proximate and ultimate principles; the first term applying to those principles which actually exist during the existence and agency of the vital principle ; the second comprehending those compounds which formed in themselves, and abstractedly, no part of the vegetable or animal being, but which result from an entirely new, and now, strictly speaking, chemical arrange- ment of the elements of that being.

1133. In the article ANALYSIS we have ad- verted to a method recently proposed by Gay Lussac and Thenard for ascertaining the ultimate principles of vegetables with accuracy, these appear to be few in number, carbon, oxygen, and hydrogen being the principal of them ; some affording nitrogen, small quantities of sulphur, potassa, lime, soda, magnesia, silica, nitrate of potassa, and soda, muriate of soda, phosphate of lime, with minute quantities of iron in a state of oxide, and of oxide of manganese.

We now, however, are to consider the pro- ducts of vegetation, or those principles which result from the organic constitution of vegetable bodies, and which are displayed during the agency of vegetable life.

1134.’ The products of the vegetable economy,’ says Dr. Henry, ‘are either situated in particular organs or vessels, or are distributed through- out the whole plant. Sometimes they reside in the root or stalk, at others in the bark or leaves, at others they are peculiar to the fruit, the flowers, the seeds, and even to particular parts of these organs.’ When thus insulated, they may readily be procured in a

separate state ; and in several instances nothing more is required than the labor of collecting them. Thus gum exudes from some trees, and manna issues from the branches of others. Sometimes, however, we are presented with a variety of substances mingled together, and requiring separation by processes which are sufficiently simple, and which consist in repose, filtration, pressure, washing, distillation at a gentle heat, solution by water and alcohol, and similar operations that do not alter the nature of the bodies submitted to them.'

1135. 'The number of principles,' continues our author, ' which have thus been extracted from vegetables has of late years been greatly enlarged, and amounts at present to upwards of forty. Of these, the greater part are certainly entitled, by a train of properties sufficiently cha- racteristic, to rank as distinct compounds. But others seem so nearly allied t6 substances with which we have long been acquainted, that it

can serve no useful purpose to assign to them a different place in the system. The unnecessaiy multiplication indeed of vegetable principles contributes rather to retard than to advance the progress of this difficult part of chemistry ; and it is only in cases of decided and unequivocal differences of qualities, that we should proceed to the establishment of new principles.'

We are pleased to find our own sentiments in accordance with so great a master of chemical philosophy as is Dr. Henry, and we have often thought that there is a little too much of running to seed disposition in the present day, with respect to the detection of principles, now that our means of analysis are so largely facilitated by the vast improvements of modern science.

1136. Vegetable products have been divided by some authors into four classes. 1. Those which are usually solid, and not very combus- tible. 2. Those which are fluid or melt with heat, and burn like oils, and are all insoluble in water though they are generally soluble in al- cohol. 3. Substances which are not soluble in water, alcohol, or ether.

1137. Although we shall in some measure follow this division, it cannot be considered as throughout tenable ; and arrangements of this kind are of no utility in facilitating acquirement. In the first class have been arranged,

Acids Starch

Sugar Coloring matter

Sarcocoll Gluten

Asparagin Albumen

Gum Fibrin

Gelatin Bitter principle

Ulmin Extractive.

Inulin

ACETIC ACID.

1138. This acid, unless we except those which are ready formed in vegetables, appears to have been the first that was known to mankind. It seems to have been in very general use from the earliest times. When first prepared it is called vinegar ; when rectified by distillation it is called distilled vinegar, or acetous acid, by chemists ; when highly concentrated it i►► called radical vinegar, and by chemists acetic acid.

1139. Vinegar is prepared from beer, or wines, which become sour when exposed to the air at a temperature between 70►► and 80►►, and espe- cially if some fermenting substance be added to the liquor. It is also prepared in very con- siderable quantities by the distillation of wood.

1 140. Boerhaave describes a process for making vinegar from wine, which is still followed in many of the wine countries. Two large oaken vats or hogsheads, open at one end, have each a wooden grate or hurdle fixed about a foot above their bottom. On each of these, grates is placed a layer of the green twigs of the vine. The vessels may then be filled with the foot-stalks of grapes, called rape, in order to increase the strength of the fermentable matter. The vessels being thus prepared, one of them must be filled to the top with the wine to be fermented into vinegar, and the other must only be half filled. A fermentation, with increase of heat, soon takes

place in the half filled vessel, and at the end of very twenty-four

hours this must be filled up with liquor from the full vessel. The fermentation only goes on in the half filled vessel, and, by ex- thanging the liquor every twenty-four hours, the fermentation is checked, and goes on in each vessel alternately. In about iwelve or fifteen days the rinegar is formed ;□□□ though during winter longer time is necessary.

1141. Vinegar has generally the color of the liquor from which it was fermented, a sour taste, and an agreeable smell. Its specific gravity varies from 1-8135 to 1-0251. It is liable to spontaneous decomposition ; but Scheele dis- covered that by making it boil for a few seconds, and corking it in bottles, it may be made to keep a very long time. Vinegar contains one or more vegetable acids, besides the acetic ; and likewise mucilage, tartar, and coloring matter.

1142. When distilled by the heat of a water- bath, until about two-thirds have passed over, the impurities are left behind. The liquor which passes over is limpid as water, of an agreeable odor, and a strong acid taste. This is distilled vinegar, or the acetous acid of the chemists, and it consists of the acetic acid combined with a portion of water. It will keep any length of time in close vessels. Exposed to a moderate heat it wholly evaporates without change. Exposed to cold most of the aqueous part congeals, and what remains liquid is the acid in a high state of concentration. Mr. Lowitz has proved that the acid itself, however much it may be concentrated, congeals at 22□□ below 0.

1143. \Vhen acetate of copper is reduced to powder, and distilled, at first there conies over a liquor nearly tasteless and colorless, and after- wards a highly concentrated acid. When the heat is continued until the bottom of the retort is red-hot, no more acid comes over, and there remains a powder of the color of copper. The acid product, which should be collected in a receiver by itself, is tinged green by a little copper which comes over with it; but, by dis- tilling again with a gentle heat, it is obtained transparent and colorless like water. This acid is very pungent and concentrated ; and is the radical vinegar, or the vinegar of Venus of the alchemists.

1144. It was first supposed by Berthollet and others, that the acid, in this case, combined with a new portion of oxygen, obtained from the oxide of copper, from which it was distilled. Hence the name of acetic acid, which marked the highest dose of oxygen which could combine with any basis. But Adet, Darracq, Proust, and others, have demonstrated that radical vinegar differs in no respect from acetous acid, except in being much more concentrated, and in being more

completely freed of the impurities, which, in some degree, contaminate the former, as well as common vinegar. The opinion then of the basis of vinegar combining with different doses of oxygen, so as to constitute acids with different properties, is now given up.

1145. Lowitz, of Petersburg, has pointed out another method of obtaining acetic acid in a high state of concentration. To three parts of

acetate of potash add four parts of sulphuric acid, and distil off the acetic acid. The sulphuric acid combines with the potassa, and sets loose the acetic ; but a portion of the former comes over with the latter. This may be separated by distilling the product again from acetate of baryta.

1146. The specific gravity of distilled vinegar varies from 1-007 to 1-0095; but that of radical vinegar is as high as 1-080. The radical vinegar is very pungent and acrid ; it soon corrodes the skin, and changes vegetable blues to red. It is very volatile, and readily takes fire. It combines with water in any proportion, and during mixture much heat is evolved.

1147. This acid crystallises when prepared in the way last described. It may also be made to crystallise when made into a paste, with charcoal, and distilled with the heat of a water-bath, or 212►►, which expels the water combined with it. The heat being afterwards raised, the acid comes over, and crystallises in the receiver, provided it be changed.

1148. This acid oxidises iron, zinc, copper, nickel, tin ; and is not known to act upon the other metals. It combines with alkalis, earths, and metallic oxides, and the salts it forms with these substances are known by the name of acetates.

1 149. It is decomposed by sulphuric and ni- tric acids ; it dissolves the boracic, and absorbs carbonic acid. It combines a variety of ve- getable substances, such as oils, mucilage, and aromatics.

1150. Berzelius gives the proportional com- ponents of acetic acid,

Carbon . . . 4 6- 83 Oxygen . . . 46‘82 Hydrogen . . 6-35

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OXALIC ACID.

1151. The oxalic acid exists ready formed in the oxalis acetosella, or wood sorrel, and other plants of that genus, as was discovered by Scheele, to whom we are indebted for the discovery of this acid. It has also been called the saccharine acid, or acid of sugar, because it is commonly prepared from this substance.

1152. The process commonly employed for its preparation, is that which was recommended by Bergman. An ounce of white sugar powdered, is put into a tubulated retort, with three ounces of nitric acid, of the specific gravity of 1-567. The sugar dissolves, and fumes of nitrous acid escape. Then a receiver is fitted, and the liquor made to boil, which causes much nitrous gas to rise. When the liquor in the retort acquires a reddish-brown color, three ounces more of the nitric acid are added, and the boiling is con- tinued until the liquor becomes colorless. The contents of the retort being now emptied into a broad vessel, the oxalic acid, formed during the boiling, shoots into quadrilateral prisms which are often affixed to each other at an angle of 45►►. These crystals being collected, and dried upon blotting paper, may be farther purified by solu tion in distilled water, evaporating and crystal-

lising them a second time. If two ounces of nitric acid be added to the liquid residuum, boiled and crystallised as before, an additional quantity of the oxalic acid may be obtained.

1153. By the same process, oxalic acid may be obtained from gum arabic, alcohol, honey, wool, hair, and a variety of animal and vegetable substances. We have obtained it from powdered peat, when treated in this manner.

1154. Oxalic acid, thus prepared, is in the form of four-sided prisms, terminated by two-si- ded summits. They are transparent, and of a brilliant white color ; have a very acid taste, and redden all vegetable blues, except indigo.

1155. These crystals dissolve in water with a crackling noise. Boiling water dissolves its own weight, and water 65►► half its weight of them. Boiling alcohol dissolves 56 parts in 100 of its weight of these crystals, and at medium tempera- ture, only forty parts. Liquid oxalic acid has a very acrid taste when concentrated, but when much diluted it is a very agreeable acid. Accord- ing to Morveau, one part

of crystallised acid, conveys a sensible acidity to 2633 parts of water. Water may be evaporated from it, without carry- ing any of the acid along with it.

1156. This acid oxidises lead, copper, iron, tin, bismuth, nickel, cobalt, zinc, manganese ; but does not act upon gold, platinum, silver, or mer- cury. Jt combines with alkalis, earths, and me- tallic oxides ; and the salts it forms are called oxalates.

1157. When the crystals of oxalic acid are ex- posed to heat, a white smoke arises, which is very disagreeable to the eyes and nostrils. The resi- duum is whiter than the acid had been, and feths of its weight is lost, which is recovered by expo sure to the air. WThen distilled with a strong heat, it yields a great quantity of carbonic acid gas, and of carbureted hydrogen gas, while char- coal remains behind.

1158. Muriatic and the acetic acids dissolve the oxalic, but without altering it. The sulphu- ric acid, when assisted by heat, partly decomposes it, and charcoal is formed. At a boiling heat, nitric acid decomposes, and converts it into car- bonic acid and water. ••• Hence, in the formation of this acid, the nitric acid should not be added in excess. An accurate observation of Dr. Thom- son, determines its composition as follows :

Oxygen .... 64 Carbon .... 32 Hydrogen ... 4

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1159. Its property of forming an insoluble compound with lime renders it very useful for detecting the presence of lime in solutions. It takes lime from all the other acids ; and, if a little of it be dropped into the solution of any salt of lime, a white cloud is formed, which soon falls to the bottom. In this way lime may be pre- cipitated from its union with any of the other acids.

TARTARIC ACID.

1160. Tartar, or cream of tartar, a substance which is evolved during the fermentation of wine, lias long been the object of chemical investigation.

It was long ago discovered to be an acid united to potassa ; but Scheele was the first who ob- tained it in an uncombined state.

1161. To obtain the tartaric acid, the sub- stance called tartar, or cream of tartar (bitartrate of potassa),is boiled in water, and

powdered chalk added until effervescence ceases, and the liquor no longer reddens vegetable blues. Being allowed to cool, the liquor is thrown upon a filter, and well washed. A white powder is left upon the filter, which is tartaric acid combined with lime. This powder being put into a mattrass, and di- luted with water, has as much sulphuric acid added to it as is equal to the weight of the chalk employed. Allow it to digest twelve hours in a moderate heat, and stir it occasionally. The sulphuric acid combines with the lime, and falls to the bottom, while the tartaric acid remains dissolved in the water. The sulphate of lime being allowed to subside, the clear liquor is de- canted off, and a little acetate of lead dropped in which forms a white cloud, if any sulphuric acid should remain. Should this be the case, the liquor must be digested with more tartratc of lime, until all the sulphuric acid be absorbed. If not, the liquid, being slowly evaporated, de- posits about one-third of the weight of the tartar employed, of tartaric acid in a crystallised form. These crystals may be purified by dissolving them again in distilled water, and crystallising them a second time by slow evaporation. Fourcroy thinks this acid exists, in a state o. purity, in some vegetables ; and Vauquelin found a 64th part in the pulp of the tamarind.

1162. The crystals of tartaric acid are exceed- ingly various in their figure, size, and mode of arrangement. They have a sharp acid taste, and, diluted with water, the taste resembles that of lemon juice. The acid strongly reddens vegeta- ble blue colors. The crystals do not decompose when exposed to the air. They are very soluble in water, and a concentrated solution does not lose its acid properties in the air ; though one that is much diluted is apt to do so.

1163. When exposed to heat in an open fire the crystals burn, leaving a spongy residuum o. charcoal, in which a little lime has been detected. When distilled in close vessels this acid is con- verted into carbonic acid gas, and carbureted hydrogen gas, a colored oil, and a reddish acid liquor ; which was formerly distinguished by the name of pyrotartarous acid.

1164. Hermbstad ascertained that the tartaric acid, after being repeatedly distilled with six times its weight of nitric acid, is converted into the oxalic acid. Front 360 parts of tartaric acid he obtained, by this process, 560 parts of oxalic acid.

1165. This acid has never been applied to any use, but some of its compounds are much used in medicine. It combines in two different proportions with a great variety of bases. In order to detect the presence of this acid in any liquor, it is only necessary to drop in a

little of the solution of potassa, which, combining with the acid, will form a cloud, or insoluble salt.

1 166. This acid combines with metallic oxides, forming salts which are known by the name of tarlrates.

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1 167. According to Ure, the constituents of this acid are

Oxygen .

Carbon . Hydrogen

65-82

31-42

2-76

100-00

CITRIC ACID.

1168. It has long been known that the juice of oranges and lemons is an acid ; but it is not pure, as it contains mucilage, which renders it liable to spontaneous decomposition.

1169. Mr. Georgius, in 1774, published in the Swedish Memoirs a process for obtaining the acid pure. He filled bottles with lemon juice, and having corked them close set them in a cellar. In four years the mucilage had dropped to the bottom in flakes, a thick crust had formed at the cork, and the liquid was become limpid as water. Having decanted off this liquid he exposed it to a cold of 23►►, which froze great part of the water, and left behind a pretty strong acid. The acid was not, however, perfectly pure, and it was Scheele who first pointed out the method of ob- taining thvs acid in purity, and demonstrated its peculiar properties.

1170. Having filtered lemon juice, add pow- dered chalk to it, in small quantities, as long as effervescence takes place, or until the acid be sa- turated. The lime forms an insoluble compound with the citric acid, and falls to the bottom in the form of a white powder. This powder being thrown upon a filter, and washed with warm ►►►water until it comes off clear, must be put into a matrass with

six times its weight of water. Then add as much sulphuric acid as may be sufficient to saturate the lime and boil it for some minutes. The sulphuric acid now forms an in- soluble compound with the lime, while the citric acid remains dissolved in the water. Having thrown the sulphate of lime upon a filter, and washed off the citric acid with water, this acid is obtained in a liquid form. The liquid being now evaporated to the consistence of syrup, and set aside to cool, the citric acid is obtained in a crystallised form.

1171. Mr. Scheele advises to add sulphuric acid in excess, to ensure the separation of the lime, and Dize thinks this necessary to dissolve the mucilage which adheres to the citric acid. But Proust has proved that when too great an excess of the sulphuric acid is used, it acts upon the citric acid itself, converts part of it into char- coal, and prevents it from crystallising. This mistake is corrected by adding a little chalk. This chemist ascertained that ninety-four parts of lemon juice were necessary to saturate four parts of chalk ; and seven and a half parts of citrate of lime were obtained ; to decompose which required twenty parts of sulphuric acid, of the specific gravity 1-15. See, for an account of several modern improvements in the process, Parties' Chemical Essays, vol. iii.

1172. The crystals of citric acid are rhom- boidal prisms. Their taste is exceedingly acid, and even painful ; but, when sufficiently diluted with water, the acid is cooling and pleasant. The

acid has a slight odor of lemons, and redden vegetable blues.*

1173. When thrown in the fire the crystals melt, exhale an acrid vapor, and leave behind a small quantity' of charcoal. Distilled in close vessels, part evaporates without decomposition, and the remainder is converted into acetic acid, carbonic acid, and carbureted hydrogen gas, which comes over ; and charcoal is left in the retort.

1174. This acid is very soluble in water. Ac- cording to VauqueHn seventy-five parts of cold water dissolves 100 parts of its crystals ; and boiling water dissolves twice its weight of them. The crystals are not altered by exposure to the air ; and a strong solution may be kept a long time in close vessels, though it putrifies and is decomposed at last.

1175. Concentrated sulphuric acid converts the citric into acetic acid. Scheele could not convert it into oxalic acid by treating it with the nitric acid ; but Westrumb effected this con- version. By treating

sixty grains of citric acid with 200 grains of nitric acid, he got thirty grains of oxalic acid. With 300 grains of nitric acid he obtained only fifteen grains of oxalic acid ; and with 600 grains of nitric acid, no oxalic acid was obtained. On distilling these products, par- ticularly the last, it was found to consist of vinegar mixed with nitric acid. He therefore infers that Scheele had used too great a propor- tion of nitric acid, by which the citric acid had been converted into the acetic instead of the oxalic acid.

1176. Berzelius gives the constituents of citric acid as follows :
**

Oxygen . Hydrogen Carbon ,

54-831

3-800

41-369

100-000

1177. The salts it forms with metallic oxides are called citrates.

1178. The uses of this acid in making lemon- ade, punch, and other drinks, and as a seasoner for food are well known. The crystals of the acid have lately been introduced in place of the expressed juice of lemons, as much of the acid can thus, be conveyed under a small bulk. But they have not the peculiar flavor of the natural juice, which seems owing to their wanting the aromatic oils of the fruits.

MALIC ACID.

1179. This acid, as its name imports, abounds in apples, and is found in various fruits and plants ready formed. Its properties were first discover- ed by Scheele, who proposed the following pro- cess for extracting it.

1180. Having bruised four apples, squeeze out the juice, and filter it through a linen cloth Saturate this juice with potassa, and add to it acetate of lead until no more precipitation en- sues. The acetic acid combines with the potassa, and remains with it dissolved in the liquor ; while the lead combines with the malic acid, and goes to the bottom with it as an insoluble pow- der. Wash this precipitate carefully with water

and then pour upon it sulphuric acid diluted with ***water, until the liquor has a sharp acid taste with- out any of that sweetness which continues as long as any lead remains in it. The sulphuric acid forms an insoluble compound with the lead, lea- ving the malic acid in the liquor. By washing the sulphate of lead upon a filter, the pure malic acid is obtained combined with water.

1181. Vauquelin has ascertained that it may be extracted in abundance from the house-leek, or sempervivum tectorum, where it exists in union with lime. To the juice of the house-leek he added acetate of lead, as long as any precipitation took place. Having washed the precipitate, he decomposed it by diluted sulphuric acid, as di- rected by Scheele.

1182. Malic acid has also been obtained by the action of nitric acid on sugar. Equal parts of nitric acid and sugar being distilled until they assume a brown color, which happens when all the nitric acid is abstracted ; the oxalic acid, which may have been formed, is precipitated by lime water. Another acid remains which should be saturated with lime, and filtered. Pour upon this filtered liquor acetate of lead until no more precipitation ensues. The precipitate is the ma- lic acid combined with lead, which may be sepa- rated by diluted" sulphuric acid as before.

1183. Malic acid, thus obtained, is of a reddish brown color, and very acid taste. When evapo- rated it becomes thick and viscid, but does not crystallise. Exposed in thin layers to a dry at- mosphere, it dries and assumes the appearance of varnish ; and it is thought, at least with certain additions to correct its solubility in water, it might make a very brilliant varnish. It reddens vegetable blues. It is very soluble in water, and decomposes spontaneously when kept in vessels.

1184. When heated in open vessels it swells, exhales acrid fumes, and leaves a porous and vo- luminous charcoal. When distilled, it yields aci- dified water, a large proportion of carbonic acid gas, a little carbureted hydrogen gas ; and a porous coal is left in the retort.

1185. Sulphuric acid converts part of it into charcoal ; and nitric acid converts it into oxalic acid. Hence malic acid is composed of oxygen, hydrogen, and carbon. Vauquelin's proportions

Hydrogen .

Carbon

Oxygen

16-8 28-3 54-9

100-0

*1186. The malic has much resemblance to the citric acid; but it differs from the latter, 1st. In not forming crystals. 2nd. In forming a soluble salt with lime, while citrate of lime is almost in- soluble, even in boiling water. 3rd. In precipi- tating mercury, lead, and silver from nitrous acid and even diluted solution of gold ; while citric acid does not alter any of these solutions. 4th. In having a less affinity than the citric acid for lime. *.□□.*

1 187. The malic combines with metallic oxides, forming salts which have obtained the name of malates.

GALLIC ACID.

1188. The excrescence upon oak trees called the gall-nut, contains the gallic acid combined with tannin. This acid exists in a great variety of plants; and in the gall plant, from which it seems to have derived its name, it is found com- bined not only with tannin, but with a portion of camphor. The Dijon Academicians were the first who published experiments on this substance in 1777 ; but it was Scheele who first obtained the gallic acid nearly in a state of purity.

1189. Having exposed an infusion of gall-nuts a long time to the air, and occasionally removed the mouldy crust which gathers on its surface, he observed that it deposited a crystalline sediment of an acid taste. Having collected a large quan- tity of this sediment, and washed it with cold water, he dissolved it in hot water, filtered, and evaporated the liquid very slowly. It yielded an acid salt in crystals as fine as sand.

1190. Deyeux obtained the same acid by ex- posing gall-nuts in a large glass retort to a heat which was slowly and cautiously raised. The gallic acid was sublimed in the form of white crystalline plates. But the heat must not be too great, and the process must be stopped before any oil comes over ; otherwise the labor will be lost.

1191. When pure, the gallic acid is in the form of transparent

octahedral plates. It tastes acid, and somewhat astringent ; and has a pecu- liar aromatic odor when heated.

1192. It is soluble in twelve parts of cold water, and in one and a half of boiling water. The acid soon decomposes when the solution is heated. Cold alcohol dissolves one-fourth of its weight of this acid, and, when boiling hot, it dis- solves a quantity equal to its own weight. It is also soluble in ether.

1193. By a moderate heat it sublimes without alteration ; but a strong heat decomposes, and converts it into an acid water, carbureted hydro- gen gas, carbonic acid gas, oil, and charcoal. When distilled it yields oxygen gas, an acid li- quor; and some gallic acid comes over unchanged, while charcoal remains in the retort. If whati comes over into the receiver be repeatedly dis- tilled, the same products are obtained, until the acid is wholly decomposed. Or the acid may be wholly decomposed by the repeated distillation of a solution of it in water.

1194. The crystals of this acid do not alter by exposure to the air; but, when an aqueous solution of it is long exposed, it becomes brown, mouldy at the surface, and the acid is destroyed. Scheele, by treating the gallic with the nitric acid, in the usual way, converted it into the oxalic acid.

1195. From these circumstances it appears that the gallic acid, like the other vegetable acids, is composed of oxygen, hydrogen, and carbon. Berzelius's proportions of which are

Hydrogen Carbon Oxygen .

5-00 56-64 38-36

100-00

1 196. It displaces the carbonic acid, and com- bines with alkaline substances, and the salts it

forms have obtained the name of gallates ; but these have scarcely been examined. When drop- ped into water of baryta, strontia, or lime, it produces a bluish-red color, and occasions flaky precipitates consisting of the acid combined with ihese earths. It also precipitates

solutions of glucina, yttria, and zirconia in acids, and this forms a test by which these are distinguished from the other earths.

1197. It changes the color, and produces pre- cipitates in many of the metallic solutions. Richter has shown that it does not take iron from the sulphuric acid, unless it be assisted by a sub- stance which has an affinity for that acid ; and that it strikes a black color with all the oxides of iron. This, however, is denied by Proust and Berthollet, whose experiments seern to establish an opposite opinion.

1198. The gallic is reckoned one of the colo- rific acids, and it seems to produce this effect upon the oxides of metals, by making them ap- proach to the metallic state. Gold it completely reduces, when presented to it in solution. Hence this acid is used as a test to distinguish metals, from the color it strikes when dropped into their solutions. But it is still extremely doubtful whe- ther the gallic acid possesses this property in itself, or owes it to a portion of tannin in combination with it. Among the many processes for obtaining this acid, the following is pointed out by Mr. Brande as deserving notice : ××× Moisten bruised gall-nuts, and expose them for four or five weeks to a temperature of about 80××. A mouldy paste is formed, which is to be squeezed dry and digested in boiling water. It then affords a solution of gallic acid, which may be whitened by animal charcoal, and which, on evaporation, yields gallic acid crystals, in white needles. For an account of tannin and a further account of gallic acid, see ADDENDA to this ART.

BENZOIC ACID.

1199. This acid is obtained from a resin called Benzoin, or Benjamin, which abounds in several plants, but especially the stryax benzoe, a tree which grows in Sumatra, and other parts of the East Indies. It is likewise obtained from the balsam of Peru and Tolu ; from vanilla, and liquid amber. It exists in the urine of children, and in that of some adults ; but constantly in the urine of quadrupeds which live on grass and hay, especially in that of the horse and cow. It is supposed to ex-ist in many of the grasses, especially in the anthoxanthum odoratum, which ×××gives the fine scent to hay.

1200. This acid was first described, 1608, by Blaise de Vigenere, under the name of flowers of benzoin ; but is now called benzoic acid.

1201. It is usually obtained by sublimation, from a quantity of coarsely powdered benzoin put into an earthen pot, the mouth of

*which is covered by a cone of thick paper, to which the benzoic acid attaches itself. The heat applied is that of a sand-bath, well regulated ; because, without this, empyreumatic oil is apt to rise, and contaminate the acid . Neuman proposed moist- ening the benzoin with alcohol, and the acid rises after the alcohol is expelled. Geoffrey, in 1773, obtained this acid by digesting benzoin in hot water, which deposits crystals of the acid while *he water cools.*

1202. Scheele obtained the benzoic acid by dissolving benzoin in water mixed with lime, so as to be of the consistence of milk, poured upon the benzoin in small portions at a time. These were boiled together in a tinned pan, and con- stantly stirred, until the lime had combined with the acid. The liquor was then allowed to settle, and the limpid part decanted off. Successive additions of water were made, boiled, stirred, and decanted as before, until the whole acid was ex- tracted in union with the lime. The milky lime-water ought not to be added to the benzoin in too large a quantity at a time, otherwise the latter is apt to coagulate, and will not yield its acid. All these portions of decanted liquor be- ing added and filtered, and washed upon the filter with hot water, the acid in union with lime, is obtained in limpid solution. The liquid, being now considerably reduced by evaporation, must be strained into a glass vessel, to extract some which dissolves in it. When cool, muriatic acid is added, with constant stirring, until no precipi- tation ensues, or until the liquor begins to taste sour. The muriatic acid combines, and remains soluble with the lime ; while the benzoic acid is precipitated in the form of a fine powder.

1203. Mr. Hatchett digested benzoin in sul- phuric acid, and, from the compound, sublimed the benzoic acid by a gentle heat. By this pro- cess he obtained this acid in a high state of purity.

1204. Benzoic acid, thus obtained, is a light white powder ; its taste acrid and somewhat bitter ; its smell peculiar and aromatic , its spe- cific gravity 0-667. It hardly affects vegetable blues, but reddens infusion of turnsol, especially when hot.

1205. With a moderate heat it melts into a soft brown spongy substance, and forms a ra- diated crust on its surface while cooling. A greater heat volatilises this acid, with a strong odor. In contact with flame it burns, without leaving a residuum. Distilled in close vessels, part sublimes unaltered, part decomposes into oil and carbureted hydrogen gas.

1206. It is scarcely soluble in cold water ; but 480 grains of boiling

water dissolve twenty grains of it : nineteen grains of which are deposited, when the water cools, in long white feather-like crystals.

1207. It dissolves in the concentrated sulphu- ric, sulphurous, and nitric acids, rendering them somewhat brown, and is precipitated from these acids by adding water. Acetic acid also dissolves it when hot, and drops it in crystals when it cools, in the same way as water. The other acids are not known to have any effect upon it.

1208. Alcohol dissolves it copiously, and boil- ing alcohol takes up its own weight of this acid It is precipitated from alcohol by the addition o. water.

1209. It is not known to oxidise metals ; but it combines with alkalis, earths, and metallic oxides, forming salts which are called benzoates. Berzelius gives its proportions as follows : ###

*Hydrogen . . . 5‘16 Carbon . . . 74-41 Oxygen . . . 20*43*

100-00

SUCCINIC ACID.

1210. It is so called from the Latin name of amber, from which it is extracted. When this is exposed to heat, a volatile salt is sublimed from it, which Agricola called the salt of amber. Boyle first discovered it to be an acid ; and it is now known by the name of succinic acid.

1211. To prepare succinic acid, a retort is half filled with powdered amber; the powder covered with a quantity of dry sand ; a receiver luted on, and the retort placed in a sand-bath. On applying a moderate heat, there first passes over water, then acetic acid, and then the suc- cinic acid attaches itself to the neck of the retort. It’ the distillation be continued, there passes over a thick brown oil, which has an acid taste.

1212. To separate the succinic acid from the oil, it is dissolved in boiling water, and thrown upon a filter on which there is a small quantity of cotton, previously moistened with oil of am- ber. The oil mostly attaches itself to the cotton, while the acid passes through in union with the water. This water being slowly evaporated, the acid is

obtained in a crystallised form. Mor- veau has shown that it may be rendered perfectly pure by distilling from its crystals a sufficient quantity of nitric acid, provided the heat applied be not so great as to sublime the succinic acid along with the nitric.

1213. The crystals of this acid are transparent, white, shining ; and their figure is foliated, tri- angular, and prismatic. They have a sour taste, but are not corrosive. They redden tincture of turnsol, but have little effect upon other vege- table colors. With the heat of a sand-bath, this acid is partly sublimed unchanged, and partly decomposed, leaving a coally residuum.

1214. At the temperature 50°° ninety-six parts of water dissolve one of this acid. At 52°° one part of the acid is dissolved in twenty-four of water; and, at 212°°, water dissolves the half of its weight, and the acid crystallises as the water cools ; but still retains more of the acid in solu- tion than it can dissolve at the same temperature. It dissolves in boiling alcohol in the proportion of 177 parts of the acid to 240 of the alcohol, and again shoots into crystals as the solution cools.

1215. The sulphuric and nitric acids dissolve but do not decompose it, when assisted by heat. Muriatic acid does not act upon it when cold, but when heated it forms with it a gelatinous coagulum.

1216. Berzelius states its composition to be,

Hydrogen . . 4-512 Carbon . . . 47-600 Oxygen . . . 47-888

100-000

1217. This acid combines with alkalis, earths' and metallic oxides ; and the salts it forms are called succinates.

CAMPHORIC ACID.

1218. This acid, as the name imports, is ob- tained from camphor, a concrete substance which exudes from the laurus camphora, Linn, a ihrub of the East Indies. Camphor is so volatile that

it cannot be melted in open vessels, and, when placed under hot water, its vapor rises and may be burnt at the surface. When burnt m contact with oxygen, water is formed, charcoal is de- posited, and carbonic acid gas is disengaged. Hence it consists of carbon and hydrogen, the latter being prpbably in great proportion.

1219. The camphoric acid was first discovered by Kosegarten, in consequence of distilling nitric acid eight times successively off camphor. The process, according to La Grange, is as follows : ??? Put into a retort one part of camphor, and eight parts of nitric acid, of the specific gravity of 1-33. Distil with a moderate sand heat. Some camphor rises, and a great quantity of nitrous gas, and of carbonic acid gas, is emitted. The process must be repeated three times on the same camphor, with equal additions of acid each time, so that twenty-four parts of nitric acid are ne- cessary on the whole, for one part of camphor. After the third distillation, the retort being al- lowed to cool, crystals are deposited, which are the camphoric acid ; and their weight is some- what less than that of half the camphor employed. The crystals may be washed with cold water, and dried on blotting paper

1220. The crystals of camphoric acid are of a snowy whiteness, and parallelepiped form. They effloresce in the air, by parting with the water of crystallisation.

1221. The acid is soluble in 200 parts of cold water, and boiling water dissolves one-twelfth of its weight. It has a slightly acid and bitter taste, a smell like that of saffron ; and reddens vegetable colors. It is soluble in the sulphuric and muriatic acids. Alcohol dissolves it ; and the solution being left in contact with the air, the acid crystallises.

1222. When thrown upon ignited coals, it emits a dense aromatic vapor, and is entirely dissipated. By a gentle heat it melts and is sub- limed. When oxygen gas is passed through it in a heated porcelain tube, the acid is sublimed, without undergoing any change. But tviien it is distilled, it first melts and then sublimes; and its properties are then found to have undergone a change. It now acquires a strong aromatic smell ; its taste is less acrid ; and it no longer is soluble in water ; nor reddens the tincture 01 turnsol.

1223. The compounds which this acid forms with the alkalis, earths, and metallic oxides, are called camphorates. Its constituent parts have not been ascertained.

SUBERIC ACID.

1224. Thi5 acid is obtained from cork, which is the bark of the tree quercus suber, Linu. From suber, the Latin name of the tree, the acid de- rives its name. This acid was long confounded with the oxalic, until Bouillon La Grange proved it to possess properties different

from those of any other acid.

1225. To obtain suberic acid, six parts of nitric acid of specific gravity 1-261 are poured on one part of grated cork, or broken chips of cork, and the mixture is distilled as long as red vapors continue to escape. A yellow matter like wax rises to the surface of the liquid ; and,

while it is yet hot, it is poured into a glass or porcelain vessel, placed in a sand-bath over a gentle fire, and constantly stirred with a glass rod. The matter becomes thick ; and when white vapors begin to rise the vessel is removed from the sand-bath, and the matter is constantly stirred until it becomes cold. An orange colored mass is thus obtained, of a strong and pungent odor while hot, and of a peculiar aromatic smell when cold. Its consistence is that of honey.

1226. To separate the suberic acid from this mass, boiling water is to be poured upon it, and the heat kept up until it becomes liquid. It must then be thrown upon a filter, which keeps back what is insoluble in water. The filtered liquor, as it cools, becomes muddy, throws up a pellicle to its surface, and deposits a powdery sediment. The sediment being separated by fil- tration, the liquid should be evaporated to dryness by a gentle heat. The mass thus obtained is suberic acid.

1227. Suberic acid, thus obtained, does not crystallise. It tastes sour, ‘and slightly bitter; reddens vegetable blues ; and when dropped into a solution of indigo in sulphuric acid (com- monly called liquid blue) it changes its blue color into a green.

1228. Water from 60►► to 70►► of temperature dissolves only a very small proportion of this acid, but boiling water dissolves half its weight of it. If it be impure, it attracts moisture when exposed to the air. Exposed to light, and es- pecially the direct rays of the sun, it soon be- comes brown.

1229. Exposed to heat in a .matrass, it sub- limes, and the acid is deposited on the inside of the glass in zones of different colors. A stronger heat converts it into a substance resembling dis- tilled oil. It is not completely dissolved by the other acids, and alcohol, when mixed with it, develops an aromatic ether.

1230. It converts the blue nitrate and sulphate of copper into a green ; the green sulphate of iron into a deep yellow ; and the sulphate of

zinc into golden yellow. It oxidises silver, mer- cury, copper, lead, tin, iron, bismuth, arsenic, cobalt, zinc, antimony, manganese, and molyb- denum. It is not known to act on any of the other metals.

123 1; This acid combines with alkalis, earths, and metallic oxides, and the salts it forms with these substances, are called suberates.

MELLITIC ACID.

1232. This acid is derived from a mineral of a honey-yellow color, which has only been found among the beds of wood-coal, at Arten in Thu- ringia, and in Switzerland. Induced by the ac- cidental circumstance of its color, which varies considerably, Werner gave to this substance the name of honig stein (honey-stone) ; which foreign mineralogists changed into mellitite, from the Latin name of honey.

1233. Mellitite is in some degree combustible, and it is supposed to have been originally of ve- getable origin, and only an imperfect variety of coal. Various results were obtained by different chemists who analysed it; but in 1799 Klaproth ascertained it to be compounded of alumina and

a peculiar acid, to which he assigned the name of mellitic ; and his conclusions were confirmed by Vauquelin.

1234. To obtain the mellitic acid, reduce mel- litite to powder, and boil it in about seventy-two times its weight of water. The alumina sepa- rates from the acid in flakes ; and having filtered, and sufficiently evaporated the liquor, the acid \s obtained in a crystallised form.

1235. These crystals are either fine needles, or small short prisms, with shining faces. They are considerably hard. Their color is brownish; their taste sweetish-sour, which changes to bitter. They are not very soluble in water, though their degree of solubility is not ascertained.

1236. They are decomposed by heat, emitting a copious smoke, and leave behind a quantity of ashes. This acid is not convertible into the ox- alic acid.

1237. Klaproth's analysis gives the following as the composition of the mellilite :

Mellitic acid . . 46 Alumina ... 16 Water 38

1238. When it is distilled in a retort, the acid is completely decomposed, and its constituents enter into new combinations. Mellitic acid, like other vegetable acids, is composed of oxygen, hydrogen, and carbon; though the proportion of these ingredients is not perhaps ascertained. Though this acid in some particulars resembles the oxalic, it differs in several respects, and chiefly in the nature of the compounds it forms with other substances.

1239. This acid combines with alkalis, earths, and metallic oxides, and the salts it forms are named mellates.

LACCIC ACID.

1240. This acid is strictly speaking of animal origin, although it is generally arranged among the vegetable acids. It is obtained from a spe- cies of white lac ; a substance resembling bees- wax, which forms the nests of a kind of insects in the neighbourhood of Madras. It was disco- vered by Dr. Anderson in 1786, and it is formed in the shape of small cowry shells, by a species of the coccus, every way resembling the insect from which the Mexicans extract cochineal. These insects possess the art of collecting honey like bees, .and when Dr. Anderson proceeded to mul- tiply them, with a view to make cochineal, he found his crop very much diminished by the avi- dity with whirh the children he employed ate up their nests, owing to their sweet and agreeable taste.

1241. In 1793 this substance was examined by Dr. Pearson, at the request of Sir Joseph Banks, and the laccic acid was extracted from it by the following process : ××× 2000 grains of white lac were exposed to the degree of heat just sufficient to melt them. As they grew soft and fluid, there oozed out 550 grains of a reddish watery liquid, which smelled like newly baked bread. To this liquid Dr. Pearson gave the name of laccic acid.

1242. It changes turnsol to a red color ; when heated, smells like newly baked bread ; after being filtered, has a saltish bitter taste, but is not sour. After standing it grows turbid, and deposits a small quantity of sediment. At the temperature of 60×× its specific gravity is 1-025. Evaporation rendered it turbid ; and after standing it depo- sited small needle-shaped crystals among muci- laginous

matter.

1243. When distilled it came over at the tem- perature of 200□□, and a small quantity of extrac- tive matter remained behind. The distilled liquor was transparent and yellowish; did not redden paper stained with turnsol, nor change to a blue, paper dipped in sulphate of iron after being moistened with solution of notassa ; which showed it was not the prussic acid. About 1 00 grains of this distilled liquor being evaporated until it grew turbid, and set aside for a night, deposited acicular crystals, which, viewed through a lens, appeared in a group not unlike the umbel of parsley. They tasted bitterish.

1244. Another 100 grains being slowly eva- porated to dryness, left a blackish matter behind, which did not evaporate when heated very hot on a naked fire ; while oxalic acid was wholly dissipated by a much lower degree of heat. Hence this differs from oxalic acid.

1245. This acid combined and effervesced with the alkaline carbonates, and with that of lime. The salts it formed with potassa and lime, being heated red hot, were reconverted into carbonates. Hence it appears that this acid is of vegetable origin ; but whether it be a peculiar acid, or a mixture of some known acid with extraneous substances, the quantity examined by Dr. Pearson was too small to enable him to ascertain.

1246. Prussic acid has been detected in water distilled from bitter almonds, in laurel leaves, in peach blossoms, and in the bark of the primus padus. Vauquelin also discovered it in the ker- nels of apricots. For the mode of its artificial formation, and an account of its chemical habits and properties, see part III. of the present essay.

1247. Mor-oxylic acid. □□□ This was discovered by Klaproth, combined with lime in small yellow- ish grains, which exude from the trunk of the white mulberry.

1248. To obtain this acid in a separate state, the small grains in which it occurs were decom- posed by acetate of lead, and, to the insoluble precipitate, diluted sulphuric acid was added. From the liquid, fine needle- shaped crystals were obtained by evaporation, which had the taste of succiuic acid, were not altered by exposure to air, dissolved readily in water and in alcohol ; but did not, like succinic acid or its salts, precipitate metallic solutions. When heated in a retort, these crystals first yielded a little acid liquor, and then sublimed unaltered, adhering in colorless and transparent crystals to the top and neck of the retort.

The compounds which this acid fonns with bases have been called moroxylates. Henry.

1249. Phosphoric acid exists in a greater or less degree in almost all vegetable substances. It is generally however in combination with an alkaline base.

1250. Boletic acid. ††† This acid has been noticed

in the alphabetical order of the Encyclopaedia as existing in the juice of the boletus pseudo ignarius.

A class of salts from this acid may be termed boletates.

1251. Zumic acid. ††† tJraconnot, the discoverer of the boletic acid, was likewise the first to ob- serve this supposed new principle in rice, and Dr. Thomson proposed that it should be named zumic acid from ††v/x††j leaven. It has been since nowever nearly proved by Vogel to resemble too closely the lactic acid of Scheele and Berzelius to entitle it to distinct recognition.

1252. Kinic acid. ††† Vauquelin first procured this acid from crystals of a solution of Peruvian bark ; it is said to be distinguishable from other vegetable acids, by its forming a soluble salt with lime, and by its not precipitating silver or lead from their solutions.

1253. The meconic acid, according to Robiquet, is best obtained from the residuum of the mag- nesian salt left undissolved in the process for ex- tracting morphia. This acid is exceedingly soluble in water and alcohol. It reddens vegetable blues ; but its distinguishing character is the power it possesses of producing an intensely red color in solutions of iron oxidised to the maximum. It does not seem to possess the medicinal or dele- terious properties of opium when received into the stomach.

1254. The isaguric acid obtained from St. Ig- natius's bean (Ann. de Chim. et Phys. viii.) seems nearly to resemble the malic.

An acid has been procured from galls which differing from the gallic has been named ellagic.

SUGAR.

1255. Sugar seems to have been known in In- dia and in China from the remotest times. During the crusades the Venetians brought it from

India, and carried on a lucrative trade in sugar with the rest of Europe. It long continued to be used only as a medicine ; but since it began to be ex- tensively cultivated in the West Indies, it now enters largely into the composition of our food. In the East and West Indies it is extracted, by compression, from the arundo saccharifera, or sugar cane. In America it is extracted from the acer saccharinum, or sugar maple, but in too small quantity for exportation. In Prussia, and other parts of Germany, it has lately been extrac- ted from the beet root ; though this source of it seems to be too scanty ever to rival the sugar cane : sugar is also found in a variety of other plants, in grapes, and various fruits. The methods by which it is extracted, and the various purifica- tions it undergoes before it is prepared for use, are detailed in another part of this work. See SUGAR.

1256. Pure sugar is of a white color, is not altered by the air, though in moist air it imbibes a little water. It has a strong sweet taste, but no smell. It is brittle, and easily reduced to pow- der. In the dark, when two pieces are rubbed against each other, they emit a strong phos- phorescent light. It is very soluble in water, which at 48►► dissolves its own weight of sugar. At the boiling temperature, water takes up any quantity of sugar. When water is saturated with

sugar, it is called syrup, which is ropy and adhe- sive, and when spread upon paper it forms a sort of varnish, which water soon dissolves. When syrup is concentrated by boiling, and poured into pans which are kept in a room heated by stoves, so as to be scarcely supportable by animals, the sugar crystallises on small sticks placed in the pans for that purpose. The crystals are usually four or six-sided prisms, terminated by two-sided and sometimes by three-sided summits. This is called candied sugar.

1257. The alkaline earths combine with sugar, and superadd a bitter and astringent to its sweet taste. When lime is precipitated from it by sul- phuric acid, it recovers its former sweet taste. The fixed alkalis destroy the sweet taste of syrup more effectually than lime, but if they be precipitated by alcohol the sweet taste is restored.

1258. The acids dissolve sugar, and the con- centrated acids decompose it. Sulphuric acid converts it into water, acetic acid, and a bulky residuum of charcoal, of a black color ; while the sulphuric is converted into the sulphurous acid. Nitric acid converts it into the

malic and oxalic acids, as stated when treating of these acids. Liquid chlorine acid converts it into malic acid, and is itself changed into the common mu- riatic acid. Muriatic acid gas makes it assume a brown color, with a strong smell. The vege- table acids dissolve but do not seem to alter sugar. Alcohol dissolves from about a twelfth to a six- teenth part of its weight of sugar. When left undisturbed, the sugar separates in beautiful crystals. A moderate quantity of sugar retards the coagulation of milk, but a large quantity causes it to coagulate. The hydro-sulphurets, sulphurets, and phosphurets of alkalis and alka- line earths, decompose sugar, and change it into a substance resembling gum.

1259. When heated, sugar melts, swells, be- comes brownish-black, and emits air bubbles, with a peculiar smell to which the French have assigned the name of caromel. With a red heat it takes fire with a kind of explosion. When distilled, it first yields water, then pyromucous acid, which is merely a compound of oil and impure acetic acid ; afterwards empyreumatic oil and a bulky residue of charcoal remains in the retort. Mr. Cruickshanks introduced 480 grains of pure sugar into a retort, and, after healing them to redness, obtained the following products : ???

Pyromucous acid with a drop or

two of oil 270 grains

Charcoal 120

Carbureted hydrogen, and carbonic acids . 90

SARCOCOLL.

480

1260. From these experiments it is inferred that sugar is a vegetable oxide, composed en- tirely of oxygen, carbon, and hydrogen. The proportions Berzelius states to be

Oxygen . . . 49-4 Carbon . . . 44‘5 Hydrogen ... 6‘1

Vol. V.

1000

1261. It is said to exude from tne psenea sur cocolla, a shrub which is indigenous in the north- eastern parts of Africa. It comes to Europe

in the shape of oblong grains, from the size of a pea to that of a grain of sand. Its color is yellow, and sometimes reddish-brown, and it resembles gum-arabic. It smells somewhat like annise seed. It contains four different substances, of which the pure sarcocoll is by far the most abundant. The sarcocoll is separated by solution in water and alcohol, when it assumes the ap- pearance of jelly. It amounts to about TR0ths of the mass. When the liquor is evaporated, it assumes the appearance of brittle brown cakes like gum. Its specific gravity is 2-1684. Its taste is sweet, but leaves an impression of bitter- ness. It seems to be a compound of sugar and gum, but partaking more of the properties of sugar.

1262. Liqunnce seems to be a variety of sar- cocoll. It is obtained, by expression, from the roots of the glycyrreza glabra, a plant cultivated in the south of Europe, and of Britain. The juice is thickened by boiling. It comes from Spain in rolls, wrapped in bay leaves, and is afterwards purified, and formed into small cy- linders, about the size of a goose quill, which are sold under the name of refined liquorice. It is black and glossy, and besides sugar, contains about a third of mucilage, and some charcoal, which is not found in pure sarcocoll. These may be regarded as varieties of sugar, or rather sugar combined with other substances.

1263. Robiquetfound the following ingredieiits in liquorice : ???

1. Starch

2. Gluten

3. Liquorice sugar

4. Phosphate and malate of lime and mag-

nesia

5. An acrid oil

6. A substance like asparagin

7. Woody fibre.

ASPARAGIN.

1264. This substance was detected by Vau- quelin and Robiquet in the juice of aspara- gus. The juice, having been squeezed out, is evaporated to the consistence of syrup, and set aside. Various

crystals appear, and, among others, those of asparagin are white and trans- parent, and have the figure of rhomboidal prisms. It is hare' and brittle ; its taste cool and slightly nauseous. Does not dissolve in alcohol ; in hot water dissolves readily, but sparingly in co.d water.

GUM.

1265. Gum and mucilage are commonly con- founded together, though Hermstadt shows there is a shade of difference betwixt them, and that gum may be separated from mucilage by dropping into a strong solution of them sulphuric acid. The mucilage coagulates, while the gum remains dissolved, and may be decanted off. Gum exudes in the form of a tasteless juice from a great variety of trees, especially from those of the mimosa species. What is called gum arabic exudes from the mimosa nilotica. It also exudes

from the cherry, the wild cherry, and the plumb- tree of this country. It is usually in small pieces, like tears, hard, and so brittle that it can be reduced to powder. It is colorless when pure, but is commonly of a yellowish tinge. It has neither smell nor taste, and its specific gravity varies from 1-3161 to 1-4817. Exposed to the sun's rays it becomes white. Its solution in water is called mucilage, which is thick and ad- hesive, and is often used to give lustre and stiffness to linen. When spread out it soon dries, and assumes the appearance of a varnish, but water soon renders it glutinous, or washes it away. When the water is evaporated, the gum is obtained unaltered. When its solution is ex- posed to the air, it soon becomes mouldy on the surface, but it may remain several years without putrefaction. At last, however, the smell of acetic acid becomes perceptible in it. Exposed to heat, gum softens and swells, but does not melt. Air-bubbles are emitted, it becomes black, and when reduced to charcoal emits a low blue flame. When entirely consumed, a small quan- tity of white ashes remains, composed chiefly of the carbonates of lime and potash. Concentrated chloride of iron dropped into a strong solution of gum, converts it into a brown semi-transparent jelly, which is not very soluble in water. Sili cated potash produces a white flaky precipitate in solution of gum, while the liquid remains transparent. This forms a very delicate test of gum in solutions.

1266. Liquid potassa first converts gum into a curd, and then dissolves it; but it afterwards reverts to its curdled state. Lime-water and ammonia likewise dissolve gum, which may afterwards be separated little altered. Charcoal powder gives solution of gum a black color, which cannot be removed by filtration. But, if the charcoal be in great quantity, it retains the whole of the gum, and the water passes clear.

1267. The vegetable acids dissolve gurn with- out change. Sulphuric acid decomposes it, and there remains about 'twenty-nine per cent, of charcoal. Some tannin is formed with water and acetic acid. Strong muriatic acid forms a brown solution, from which some charcoal falls. If this solution be saturated with ammonia, evapo- rated to dry ness, and the residue digested in alcohol, a brown substance is extracted, which, when evaporated to dryness, bears a strong re- semblance to sugar. Chlorine converts gum into citric acid. Nitric acid, ⬜⬜vith heat, con- verts it into sacclactic acid, malic acid, and oxalic acid.

1268. Gum is insoluble in alcohol, and, when alcohol is dropped into its solution, the gum is precipitated in white flakes. Gum and sugar readily unite when both are dissolved in water. Alcohol dissolves a great part of the sugar in the mixture, and leaves a white substance composed of gum and sugar, resembling (he material of which the nests of wasps are composed.

1269. Gum, according to Dr. Ure's analysis, consists of

Carbon . . . 35-294 Oxygen . . . 58-823 Hydrogen . . . 5-883

100-000

Whether it contains a trace of nitrogen seems uncertain.

1270. Besides gum arabic, there are various other species of gum in common use, as gum Senegal, and gum tragacanth, the gum of the cherry and plumb-tree, &c. A mucilage also abounds in the leaves and roots of many plants, which might be extracted and used as gum. The bulbs of the hyacinth contain so much mu- cilage, that when dried they may be used as gum. George, of Petersburg, found that the stringy lichens yield a mucilage which lord Dun- donald proposed to employ as a substitute for gum, and it is much used by the calico-printers for that purpose. The fuci, or sea-weeds, yield a. mucilage which seems capable of answering the purposes of gum, could it be deprived of those deliquescent salts which the fuci imbibe from sea-

water.

1271. Gum, in the state of mucilage, is a very nutritive food. It is often used as a paste ; and the calico-printers use great quantities of it to give consistency to their colors, and prevent them from spreading upon the cloth. For the same reason it is employed in the making of ink. It forms the basis, or vehicle, of many mixtures applied in medicine.

JELLY (Vegetable).

1272. If the juice of bramble-berries, rasp- berries, currants, and a variety of other fruits, be squeezed through a cloth and set to rest, part of it coagulates. If the liquid part be poured off, 'and the coagulum washed with cold water, jelly is obtained nearly iu a state of purity. Its color is that of the berries from which it was squeezed. It is scarcely soluble in cold water, but very soluble in hot water, and, when the solution cools, it again coagulates into a jelly. If long boiled it does not afterwards coagulate. This is the reason why, in making currant and other jellies, if a sufficient quantity of sugar be not addfd to absorb all the juice of the fruit, if they attempt to concentrate it by long boiling, it remains ever after liquid, and no jelly is formed. Jelly combines readily with alkalis ; nitric acid converts it into oxalic acid, with hardly separating azotic gas. Its ultimate analysis has not been attempted.

ULMIN.

1273. We know nothing of this substance ex- cept from Klaproth, to whom a specimen was sent from Palermo in 1802, and he conjectures it to be an exudation from the ulmus nigra. It is of a black color, resembles gum in being readily soluble in water, but differs from it in the solution not being ropy, nor forming a paste. It agrees with gum in being insoluble in alcohol and ether, and in being precipitated from aqueous solution by alcohol in light brown flakes. The nitric acid and chlorine convert it into a resin, insoluble in water. In this respect it seems to be allied to the volatile or essential oils, which are changed into resins by being subjected to the same pro- cesses. When burnt it emits little smoke or flame, but leaves a spongy charcoal, which, when burned in the ooen air leaves a little carbonate of ootassa.

INULIX.

1274. Was extracted by Rose by boiling the roots of the inula helenium, or elacampane. The decoction, after standing some time, deposits the inulin in the form of white powder like starch. As far as appears respecting this substance, it seems to be only a variety of starch, or starch combined with some other vegetable product, differing from starch in this in yielding none of the waxy matter which is formed when starch is digested with the nitric acid.

STARCH.

1275. Starch is commonly made from wheat, and the process employed by manufacturers is to steep the wheat in cold water, the purest that can be got, until it becomes soft, and yields a milky juice when squeezed. It is then put into coarse linen bags and pressed in a vat tilled with water, which forces a milky juice through the cloth, containing much starch; and the pressure is repeated as long as the wheat yields any milky juice. The starch gradually falls to the bottom while the liquid gradually ferments into alcohol and vinegar, partly at the expense of the starch. The vinegar dissolves impurities, and the fer- mented liquor being poured off, the starch is re- peatedly washed with water. It is afterwards dried with a moderate heat, and during the dry- ing it splits into columnar masses which affect the quadrangular figure-

1276. Wheaten starch has a fine white color, with an inclination to blue. It has hardly any smell or taste, and when dry is not injured by long exposure to the air. It falls in powder, but forms a sort of emulsion with cold water; and forms a jelly with boiling water, which may be diluted by adding more water. When the water cools, the starch slowly falls to the bottom. Linen dipped into a solution of starch, and suddenly dried, acquires a considerable degree of stiffness. Hence one great use of starch is to convey a de- gree of stiffness, and a smooth skin to linen after it is bleached, and to linen clothes in the laundry. WThen the solution is evaporated to dryness, a brittle opaque substance is obtained, differing in appearance from common starch, probably owing to a portion of water retained in its composition. If starch be exposed to damp air, its surface be- comes mouldy, and it acquires an acid taste.

1277. The infusion of nutgalls combines with starch, and throws it down from every solution. The precipitate is again dissolved by heating the liquid to 120►►. The solution of nutgalls and starch is transparent, and has nearly the color of the nutgall infusion. Thus

infusion of nutgalls forms the best test of the presence of starch in any vegetable decoction. Potassa triturated with starch, and a little water, forms a semi-transparent jelly. On adding more water, an opal colored solution is obtained, from which the starch may be thrown down by an acid. When muriatic acid is used, an aromatic odor is produced. Sulphuric acid dissolves starch slowly, with such evolution of charcoal that if the quantity of starch be considerable, the compound becomes solid. At the same time a smell of sulphurous acid is perceptible, shewing that part of the sulphuric acid is decomposed. Diluted sulphuric acid dissolves

starch with heat, without apparent decomposition as the starch may be thrown down by alcohol. Nitric acid dissolves starch, without forming ox- alic acid,un!ess when assisted by heat, in wliicli case both oxalic and malic acid are fcrrr.ed. In this respect starch differs from sugar. Strong muriatic acid also dissolves starch slowly, without effervescence.

1278. When thrown upon a hot iron, starch melts, swells, froths, blackens, and burns with a bright flame like sugar, but it does not explode like the latter. At the same time it emits much smoke. When distilled it yields acidulous water empyreumatic oil, and much carbonic acid and carbureted hydrogen gas. The charcoal which remains is wholly consumed when burnt in the open air ; a proof that it contains little or no earth.

1279. Starch is found in a great variety of plants, and in different parts of plants. It is most commonly found in the seeds and bulbous roots of plants which are used as food. The seeds of several trees contain it as the chestnut,horse-chest- nut, and acorn. Having already stated the mode by which it is obtained from wheat; we shall briefly enumerate the other sources from which it is commonly obtained.

1280. Potatoe starch is made by grating down the potatoe, and placing the gratings upon a fine sieve over a tub or vat. Water being poured upon them, washes through a great quantity of starch. After it has time to settle, the acidulous liquor is poured off, and the sediment well washed with pure water. If the sediment be sufficiently washed, it is starch of a much brighter color, and which goes much farther, than wheaten starch. Though heavier than wheaten starch, it makes a much more beautiful hair powder. In one of the late bad seasons when the starch manufactories and. the distillation from grain were stopped, and when a great part of the potatoe crop was frozen in the ground by early frost, George Robertson esq. author of

the Agricultural Surveys of Edin- burgh and Mearns shires, made excellent starch from frosted potatoes. Having first cleaned them he bruised them into a pulp, and then treated them as above described. Though the potatoes were not half ripe, he calculated they might yield ►► 50 value per acre in starch. This deserves the attention of agriculturists, as frozen potatoes are good for nothing else.

1281 . Arrow is a farina or starch, from the foe- cula of the marantha arundinacia. Salop is ti.e farina obtained from several varieties of the orchis.

1282. Sou-ens is a species of starch made from the husks and coarse particles of oat-meal. The acid liquor being poured off, the starch, with a portion of the acid, is boiled in a pot; after which it forms a coagulum on cooling, well known in Scotland as a nutritive and agreeable species of food.

1283. Sago is extracted from the pith of seve- ral species of palm trees in the Moluccas, Philip- pines, and other islands in the East Indies. The palm being cut into pieces, the wood is split off, one side exposing the pith in the hollow of the tree. Upon this cold water is poured and the pith well stirred., which separates the starch from the fibrous part} ond what runs off is passed through

a fine sieve or searce. The starch is now allow- ed to settle, the water is poured off, and when the sediment is half dry it is granulated by being passed through a funnel. It is said to acquire its gray color by being dried by artificial heat. Sago is well known as a very nourishing food.

1284. Cassava is prepared from the roots of an American plant, the iatropha manihat. They are. peeled and pressed in a sack composed of rushes. A juice is forced out which is a deadly poison, and employed by the Indians to poison their ar- rows. This juice gradually deposits a white starch, which, being well washed, is innocent. What remains in the sack is also chiefly composed of starch, and being dried in smoke, and passed through a sieve, from the starch thus obtained the cassava bread is formed, which is often brought to Europe, and is highly nutritive. Ta- pioca is prepared from the same plant.

1285. The acid water poured from sowens, and what is produced by the starch makers, is greedily devoured by swine who fatten upon it. It has also been lately discovered that the grains and dregs of distillers and brewers go much farther in fattening all kinds of cattle, after they become sour, than when they are consumed in a sweet state. It has hence been inferred by rural econo- mists that all kinds of vegetable food, which admit of it, should be acidified before they are presented to animals.

1286. Berzelius makes starch to consist of

Carbon . Oxygen . Hydrogen

43-481

49-455

7-064

100-000

Dr. Ure's proportions give rather more oxygen.

INDIGO.

1287. Tin's beautiful pigment and dyestuff is extracted from the leaves of different species of plants, as the indigofera argentea, or wild indigo, which yields the best, though the smallest quan- tity; from the indigofera disperma, or guatimala indigo; and the indigofera tinctoria, or French indigo, which though of inferior quality yields the largest quantity, and is hence generally preferred by the planters. The plants are annually raised from seeds sown in trenches about a foot asunder. In the West Indies they are sown in March, and the plants are ready for cutting in May. Here four cuttings are often obtained in one year ; but in South America they require six months to attain maturity, and they seldom obtain more than two cuttings, often only one.

1288. The plants are cut with sickles and placed in a cistern about sixteen feet square, where they are pressed down with loaded planks. They are then covered with water to the depth of four or five inches. A fermentation takes place, which Le Blond thinks succeeds best with a tem- perature about 80►►. The water becomes turbid, assumes a green color, while volatile alkali and carbonic acid gas are emitted. Much attention is paid to this fermentation, because if carried too far the color is destroyed, if checked too soon, much of color remains

in the plants. When com- pleted, the liquor is let into a smaller cistern

placed below the former, called the battery, where it is violently agitated by levers moved by machi- nery, about fifteen or twenty minutes. Flocculi begin to appear, and the liquor seems curdled. A quantity of lime water is now poured in, which is supposed to prevent putrefaction, or to absorb carbonic acid gas, and hasten the deposition of the color. The pigment is now allowed to sub- side; after which, the water being drawn off, it is drained in small linen bags, and then dried in small wooden boxes in the shade.

1289. Dr. Roxburgh obtained indigo from the leaves of the merium tinctorium, a tree very com- mon in Hindostan. He kept the leaves in a copper full of water, at the temperature of 100□□, until they assumed a yellowish-blue color, and the liquor a deep green color. After which the liquor was drawn off, and treated as in the former case. Several chemists have also obtained indigo from the isatis tinctoria, or woad, a plant which grows wild in many parts of this country, and is much used as a dye-stuff. They treated the woad in the same way as was just described respecting the indigofera tinctoria. Some think the ancient Picts used this plant for dyeing their skins of a blue color. Chaptal elicited a blue color from goats-rue, sainfoin, chick peas and lucern, when treated after the manner of indigo. But he was not able to precipitate the color, and he ascribes his failure to an excess of extractive matter, which caused the liquor to froth, and kept the color suspended.

1290. Indigo seems to have been known HI the East Indies, as its name imports, from the earliest times. It was first brought to Europe, and its uses made known by the Dutch, in the six- teenth century. It may seem very strange that it was universally cried down as a destructive dye. Its use was prohibited in England by queen Elizabeth, and the prohibition was not removed until the reign of Charles II. Colbert restricted the French dyers to a limited quantity of it. In Saxony it was prohibited,- and the reasons as- signed in the edict were that it wa? a corrosive substance, only fit to be food for the devil. It was afterwards cultivated in Mexico and the West Indies, and these countries long supplied Europe with this article. Some of our en- lightened countrymen have lately restored the East Indian indigo to its ancient reputation, and it is now imported from the east in considerable quantities.

1291. Indigo is a light, compact, friable sub- stance, of a deep blue color. The tints of its surface vary according to the manner of its pre-

paration, between copper, violet, and blue. The lightest indigo is the best; and it is always mixed with other matters, derived either from the plant, or from carelessness in its manufacture Bergman found the best indigo he could procure to contain the following ingredients :

47 pure indigo

12 gum 6 resin

22 earth

13 oxide cf in>&

100

CHEMISTRY.

The earth consisted of

10-2 barya 10-0 lime 1-8 silica

22-0

Proust found a considerable portion of magnesia in the indigo he examined ; and it is probable the earthy ingredients vary in different speci- mens. Indigo, when freed of these extraneous matters, is a soft powder, of a deep blue color. It is not altered by air or water, though Bergman observed, that when long kept under water, it gave signs of putrefaction. Heated, it burns with a bluish red smoke, and a faint white flame, and leaves earthy ashes.

1292. Concentrated sulphuric acid dissolves it readily, and the sulphate of indigo, thus formed, is called liquid blue. When much con- centrated it appears black, but when diluted, is of a fine blue color. A single drop of the pre- paration communicates a blue color to many pounds of water. Heated sulphuric acid, or the acid in which sulphur has been boiled, dis- solves indigo more readily than the pure acid. If the sulphate be poured into boiling water it becomes green, but if into cold water it exhibits a fine blue color.

1293. From the analysis of the precipitate produced in this solution by potassa and its sul- phate, Mr. Crum considers it to be a compound of sulphate of potassa with a peculiar principle, which he names cerulin, and the precipitate itself he calls ceruleo sulphate of potassa. Ce- rulin it seems has many properties analagous to tan. If the solution of indigo in sulphuric acid be kept till it has lost its

yellow color, and be- come blue, the addition of water precipitates a purple substance quite different from indigo. From the property possessed by this substance of becoming purple-colored on the addition of cer- tain salts, Mr. Crum terms it phenecin. Henry.

1294. Nitric acid attacks indigo with great violence, unless it be largely diluted with water. When of the specific gravity l-52, it sets indigo on fire. Upon 100 grains of indigo, Mr. Hatchett poured an ounce of nitric acid, diluted with two ounces of water. When the effervescence began to subside, the liquid was evaporated to dryness on a sand-bath; water being now poured on, formed a beautiful yellow solution, of a very bitter taste. It appeared that artificial tannin had been formed, which, when combined with indigo, forms this color. When four parts of nitric acid are boiled upon one part of indigo, it is converted into tannin, oxalic acid, benzoic acid, and bitter principle. The other acids only dissolve indigo, as far as yet known, after it is precipitated from the sulphuric ; and with it they form a solution of a blue color. The fixed alkaline solutions, also, only act upon indigo after it is precipitated from a previous solution. The alkaline solutions are at first green, but afterwards become yellow. Am- monia and the alkaline earths produce nearly the same effects.

*1295. When indigo is mixed with bran, woad, Brasil wood, and other substances which readily ferment, it acquires ********* green color, and easily*

combines with lime or potassa. With such mix tures the vat is commonly prepared when indigo is used as a dye. See DYEING. It would ap- pear that the blue color of indigo is owing to an excess of oxygen in its composition ; for such substances as powerfully attract oxygen, change it to green, to yellow, or render it colorless. When cloth comes out of the vat, it is at first green, but soon becomes blue by attracting oxy- gen from the air. If the agent change it to yellow, it never recovers its first color, but the yellow remains permanent. On the other hand, when indigo is mixed with manganese, and other bodies which freely impart oxygen, its yellow color is changed, or destroyed. Mr. Dalton's analysis of indigo gives

Carbon . . . 75-5

Azote .... 7'7

Oxygen . . . 12-3

Hydrogen . . 3-5

100-0

For further information on the subject of indigo, see the article DYEING, and PKINTING, CALICO.

GLUTEN.

1296. Beccaria, an Italian philosopher, first discovered, that if wheat flour be made into dough with a little water, and then kneaded and worked with the hand under a rill of water, or stream from a tea-kettle, starch and mucilage are washed off. After the water passes off clear, trjere remains a substance called gluten. It is of a gray color, ductile and elastic, and may be drawn to twenty times its original length without breaking. When made thin it is white, and very much resembles animal tendon, and adheres so tenaciously, that it is often employed to cement broken pieces of china. It has scarcely any taste, has a peculiar smell, and after exposure to the air it assumes a brown color, and seems to be coated with oil. It dries in the air, becomes hard, brittle, slightly transparent, assumes a dark brown color, and re- sembles glue. Its fracture is then vitreous, or resembles that of glass. Fresh gluten obstinately retains a portion of water, to which it owes its elasticity and tenacity. After being boiled in water it loses both those properties.

1297. It is slightly soluble in cold water, and is precipitated when the water is heated. When kept moist it swells, undergoes fermentation, and emits bubbles of hydrogen and carbonic acid gases. At the same time it emits the smell of putrifying animal bodies. Cadet kept it twenty- four days in a damp room. It first assumed a crust, which being removed, its interior was con- verted into a substance resembling bird-lime. Rouelle, jun. ascertained, that if it be longer kept in such a situation, it assumes the smell and taste of cheese. It is blown up with cells, which contain a liquor consisting of ammonia and vinegar, which is commonly found in blown cheeses.

1298. When kept some months under water it becomes sour and fetid, swells, gives out carbonic acid, and rises to the surface. Part of it is now dissolved in the water, and, if sugar be added, the l;quor becomes vinegar without fermentation, or admission of air.

1299. If the bird-lime gluten of Cadet be tri- turated with alcohol, and then mixed with a suf- ficient quantity of that liquid, a portion of it is dissolved, and the compound forms an excellent varnish for covering paper or wood. It may also be employed to cement china ; and mixed with

⬛⬛ paints, especially vegetable colors, it forms an excellent ground. When mixed with lime it forms a good lute, and linen dipped into it ad- neres strongly to other bodies.

1300. Acetic acid dissolves gluten readily, and the gluten of Cadet it renders fit for making a varnish, but not for mixing with colors. Con- centrated sulphuric acid converts gluten into charcoal, with formation of water and ammonia, while inflammable air escapes. Nitric acid, when heated upon it, causes an emission of azotic gas; while oxalic and malic acids are formed, and oily flakes appear in the liquor. Alkalis and acids alternately precipitate gluten with considerable change in its qualities.

1301. Moist gluten, suddenly dried, swells to a great size. Dry gluten burns precisely like feathers or horn. When distilled, water comes over impregnated with ammonia and empyreu- matic oil. The charcoal which remains is with difficulty reduced to ashes. While fermenting, its flames blacken silver and lead, showing that sulphur is present. Though its constituents have not been minutely examined, it appears to be composed of oxygen, hydrogen, carbon, and azote. . These circumstances have led to a con- clusion that it possesses all the properties of an animal substance.

1302. Gluten exists in great abundance in wheat, and may easily be extracted from its flour. Sir H. Davy discovered a larger proportion of it in North American wheat than in English wheat. It has also been found in a great variety of other seeds, in the roots of many plants, and in all the leaves of plants which have been examined. It is found in the berries of many plants, such as those of the elder, the grape, &c. Proust did not find any of it in the potatoe. This substance seems to be the basis of bread, and of yeast. The vin- ous fermentation seems to be caused by the reci- procal action of gluten and of sugar upon each other. When the juice of the grape is deprived of its gluten, it does not ferment into wine ; when this ingredient is restored it ferments readily.

1303. Gliadine and Zimome, (from Dr. Henry's Elements.) From the experiments of M.Taddei, an Italian chemist, it appears that the gluten of ˆvheat may be decomposed into two principles, -ne of which

he has distinguished by the name jf gliadine, from y\iaf gluten, the other zimome, from Zvpr), a ferment. To separate them, fresh gluten must be kneaded with repeated portions of alcohol, as long as that fluid becomes milky by dilution with water The alkaline dissolves the gliadine and leaves the zimome.

1304. By evaporating the alcoholic solution, gliadine is obtained, forming a brittle, straw-yel- low, slightly transparent substance, with a weak smell, resembling that of the honey-comb ; and when gently heated, emitting an odor similar to that of boiled apples. In the mouth it be- comes adhesive, and has a sweetish and balsamic

taste. It is pretty soluble in boiling alcohol ; but the greater part precipitates as the alcohol cools. It softens, but does not dissolve in cold water. Its alcoholic solution becomes milky on adding water, and is precipitated in white flocks by alkaline carbonates. Dry gliadine dissolves in caustic alkalis and acids. It swells on burn- ing coals, and then contracts like animal matter. It burns with a bright flame, and leaves a por- tion of charcoal, which is difficult to be incin- erated.

1305. Zimome is obtained pure by boiling gluten in alcohol, or by digesting it in that fluid till it ceases to give out gliadine. There re- mains a shapeless mass, which is hard, tough, destitute of cohesion, and of an ash-white color. After being washed with water it recovers its viscosity, and becomes brown when left in con- tact with air. It is specifically heavier than water. It does not ferment like gluten, but putrifies, exhaling a foetid urinous odor. At a boiling temperature it is soluble in vinegar and in the mineral acids. It combines with potassa, and forms a kind of soap. Lime water, and so- lutions of alkaline carbonates, harden it, and give it a new appearance. It inflames when thrown on red hot coals, and emits an odor si- milar to that of burning hair or hoofs- Ann, of Phil. xv. 39. xvi. 88.

1306. M. Taddei has since discovered that powdered guaiacum is a test of the presence of zimome. When well kneaded with good wheat flour and a little water, and then exposed to the air, the guaiacum becomes a very fine blue color. Starch does not evolve this color, and bad flour only in a very small degree. But when guaiacum is worked up with gluten, and still better with pure zimome, the color insumtly ap- pears, and is a most superb blue. Guaiacum, however, does not become at all colored by zi- mome, unless the contact of oxygen be allowed. The powder of guaiacum is, therefore, a re-agent, capable of detecting the injurious alteration which flour sometimes undergoes by the spontaneous destruction of its gluten, and also of

ascertaining, in a general way, the proportion of that principle. Quar. Jour. viii. 377.

ALBUMEN.

1307. This name has been assigned to the whites of eggs, and to all glary tasteless sub- stances, which, like them, coagulate when heated nearly to the boiling point. In 1780 Scheele affirmed that many plants contained a substance analogous to curd. Vauquelin lately discovered that albumen abounded in the juice of the papaw tree, the carica papaya of botanists, which grows in Peru, and the Isle of France. Proust has as- certained that almonds, and other kernels from which emulsions are made, contain a substance resembling curd. Now curd and albumen seem nearly allied ; but, as we shall have occasion to treat of albumen under the head of animal sub- stances, we forbear entering into a description of its properties in this place.

BITTER PRINCIPLE.

1308. Many vegetable substances have an in- tensely bitter taste, and are used in medicine by

brewers, &c. This is particularly the case with the quassia amara and excelsa, the common quas- sia of the shops, with the roots of the gentiana lutea, common gentian; the leaves of humulus lupulus, the hop ; the bark and wood of spartium scoparium, common broom, the flowers and leaves of anthemis nobilis or chamomile, and many others unnecessary to be mentioned. This has led chemists to suppose that the peculiar taste and effects of these substances were owing to a distinct species of matter, which they distin- guish by the name of the bitter principle. It is certain, however, that there are shades of differ- ence between the bitters extracted from different vegetables, and it is not certain whether the bitter principle have been obtained free of all extra- neous mixture.

1309. That which is considered the purest is obtained by digesting quassia some time in water, and then evaporating to dry ness by a low heat. A brownish-yellow substance is left, somewhat transparent, without srnell, but of a very bitter taste. At first it is ductile, but at last becomes brittle. It is very soluble in water and alcohol. It is only precipitated from solution by nitrate of silver, and acetate of lead ;

and the last is used as a test to detect the bitter principle in li- quids.

1310. A second species approaches, in its pro- perties, to artificial tannin, and is distinguished by striking a green color with iron, and by pre- cipitating this metal from concentrated solutions. Bouillon la Grange found this species in the flowers of the arnica montana. It is also thought to exist in the absynthium vulgare (wormwood), juniperus sabinus (sabine), ruta graveolens (rue), anthemis nobilis (chamomile), achillea millefolium (milfoil).

1311. The third species is artificial, and it may be obtained by treating the white willow with nitric acid. Mr. Hatchett obtained it by treat- ing indigo with the same acid. It is of a deep yellow color, and of a very bitter taste, is so- luble both in water and in alcohol, and possesses the property of dyeing silk, woollen cloth, and cotton, of a permanent yellow color. It pos- sesses many properties of an acid, crystallises in elongated plates, and forms with alkalis crystal- lisable salts. With potassa it forms crystals less soluble than pure bitter principle, which burn like gunpowder when thrown upon ignited char- coal, and fulminate loudly with a purple light when struck upon an anvil. Ammonia deepens its color, and produces a copious deposition of fine yellow spicular crystals. It is probable this bitter is nearly allied to artificial tannin.

EXTRACTIVE PRINCIPLE.

1312. Chemists have long applied the name of extract, or extractive, to all those substances which were obtained from plants by means of water, and which, after the water was evaporated, remained in a dry state. But the term is now taken in a more limited sense, and as the term formerly included gum, jelly, and various other bodies, it seems now restricted to such of the coloring matters of plants as can be extracted by water. But as this extract has not been obtained in a pure state, exti active principle is preferred,

which indicates the substance which conveys to the extract its discriminating properties.

1313. According to Hermbstadt, this princi- ple is obtained in greatest purity by infusing saf- fron some time in water, filtering the solution, and evaporating to dryness. The solution, from whatever plant obtained, is always colored. Ex- tractive principle is soluble in water and alcohol, but not in ether. When the water is slowly eva- porated, the extract obtained is solid and trans- parent ; but when the evaporation is rapid it is opaque. It has always a strong taste,

which dif- fers according to the plant from which it is ob- tained. In consequence of repeated solutions and evaporations, it acquires a deeper color, and ceases to be soluble in water. This is supposed to be owing to the absorption of oxygen from the atmosphere, for which this principle has a strong affinity. If left exposed to the atmosphere, it putrifies and is destroyed. When chlorine is poured into a solution of this principle, a dark yellow precipitate is thrown down, which is in- soluble in water, but soluble in hot alcohol.

1314. This principle unites with alumina, and forms an insoluble compound. This is the rea- son why alum is so much used for fixing colors upon cloth. The color is combined with some substance which decomposes alum, and the cloth being previously dipped in a solution of alum, when presented to the color in solution, a mutual decomposition ensues. The acid of the alum combines with the solvent of the color, while the color combines with the alumina, already ad- hering to the cloth, producing a triple compound of cloth, alumina, and color. For many opera- tions acetate of alumina is preferable to common alum. The alkalis readily form soluble com- pounds with extractive. Muriate of tin is often used instead of alum to fix colors, and it operates in the same manner. But it has been lately found that if the cloth be previously soaked in chlorine, and then dipped in a solution of extractive, the color becomes more effectually fixed in the cloth than if either alumina, munute of tin had been employed. It would hence ap- pear that no other mordant is necessary to fix the colors of extractive, than combining them with oxygen. Many of the metallic salts com- bine with extractive, as well as muriate of tin, and precipitate it from solution. Most of the oxides produce the same effect.

1315. Extracts yield, by distillation, an acid liquor impregnated with ammonia. Lime causes their solution to exhale the smell of ammonia, and ammonia precipitates from the same solu- tion, lime combined with insoluble extractive. It has been observed that this principle is more abundant in old than in young plants. There are doubtless various species of extractive, which differ according to the plants from which they are derived. But these differences have not yet been sufficiently ascertained. Beside ulmin, the bitter principle, asparagin, inulin, and other principles, to which we elsewhere refer, some modern writers include the following under the head of extractive matter. Dr. Bostock how- ever, and others, have doubted whether after all there be any distinct principle to which the name of extinct or extractive can be legitimately

mushroom.

NARCOTIC PRINCIPLE, AND RECENTLY DISCOVERED VEGETABLE PRINCIPLES, CHIEFLY OF AN ALKA- LINE NATfIRE.

applied. The substances to which we allude are bulky coal is left, which contains some potassa. hematin from logwood ; polychroite from saf- It is soluble in all the acids, from which it is fron; picrotoxin from cocculus Indicus ; nice- precipitated by the alkalis, tin from tobacco; emetin from ipecacuanha; 1319. Derosne tried it upon dogs, and found medullin, a name applied to the pith of the sun- it to be more powerful than opium. Its bad flower ; and fungin, a substance contained in the effects were counteracted by causing the animals

to swallow vinegar. Derosne supposes that the vinegar operates by dissolving the narcotic prin- ciple ; and vinegar is known to counteract the effects of opium when taken in excess. ,

1320. The narcotic principle of opium, and 1316. It is well known that the milky juices other vegetables possessing narcotic power, has, of the poppy, the lettuce, and other plants, and since the publication of Derosne's Memoirs, been the decoction of others, as of the leaves of the investigated by Sertiirner and Robiquet. It digitalis purpurea, excite sleep, arid, if taken in has been termed morphia. Sertiirner recom- sufficient quantity, produce death. This led to mends that morphia be obtained from powdered a supposition that there is some peculiar sub- opium; .eight ounces rubbed with two or three stance in these plants, which, though mixed with ounces of acetic acid, so as to form a paste, with other materials, produces the effects described, the addition of a little water; then let two or To this substance was annexed the name of the three pints more of water be added; strain the narcotic principle. A substance being extracted liquor ; put into it a solution of pure ammonia, from opium, which possesses these properties in and then evaporate to one-fourth. During the i the highest degree, this substance was held to be process of evaporation a brown matter is thrown the narcotic principle in the highest degree of down, which is morphia. For another method, purity. Opium 'is obtained from the papaver see PHARMACY.

album, or white poppy, which is cultivated in 1321.' Morphia is ranged by some modern Egypt, and in many of the Asiatic nations. The authors among the native vegetable alkalis. It poppies are

planted in fertile soil, and well wa- seems to exist in opium, combined with a pecu- tered. After the seed capsules have attained Har acid called the meconic acid, and hence the nearly their full size, longitudinal incisions are utility of ammonia in the prepaiation of it- See made in them during three or four successive MEDICINE.

evenings. From these a milky juice issues, 1322. Strychnia, an alkaline principle lately which soon concretes, and being scraped off, and discovered in the bean of St. Ignatius, and nux ###wrought into cakes, forms the opium of com- vomica, and which it is said exists in a very raevce. pure state in the poison from the upas-tree, is a

1317. Opium is a tough brown substance, has crystalline substance, white, of an intensely bitter a peculiar smell, and an acrid nauseous bitter flavor, and one of the most virulent poisons that taste. It burns readily and strongly, and is a have yet been discovered.

compound of various substances, namely, sul- 1323. Brucia or brucine. ### This term has been phates of lime and potash, oil, resin, extractive applied to a principle lately obtained from the matter, gluten, &c. Digested in water, several Angustura bark. It is also a crystalline sub- of its constituents are dissolved ; and, when it is stance, with a bitter but less acrid taste than evaporated to the consistence of syrup, a pre- morphia.

cipitate appears, which is increased by diluting 1324. Delphia or delphine is procurable from the solution with water. The precipitate con- the seeds of the stavesacre (delphinium staphy- sists chiefly of resin, oxygenised extractive, and sagria). This is also a crystalline and alkaline narcotic principle. This being digested in alco- principle, with a bitter and acrid taste. See . hoi, the resin and narcotic principle only are Ann. de Chlm. xii.

dissolved. The narcotic principle falls in crys- 1325. To an acrid narcotic principle residing tals as the solution cools, but still colored with in the menispermum cocculus, the name of picro- resin. But by repeated solutions and crystalli- toxia has been given, which is also crystalline, sations it may be obtained tolerably pure. If and exceedingly bitter.

the residuum of opium which remains undis- 1326. Atropia. ### It was found in analysing the solved by water, be digested in alcohol, a con- leaves of the belladonna that they yielded a siderable portion of narcotic principle is obtained, narcotic princi'ple, somewhat like

morphia in combined with resin. This also may be purified its properties. This, like the other alkaline by repeated crystallisations. principles, from vegetables, forms salts with

1318. In its purest state, the narcotic princi- acids; but it has been observed that atropia pie is of a white color. It crystallises in rectan- demands an excess of acid for this combination, gular prisms with rhomboidal bases. It has so that its title to an alkali is somewhat equi- neither taste nor smell. It is soluble in about vocal.

400 parts of boiling water, but is insoluble in 1327. Atropia is an exceedingly powerful cold water. It is soluble in twenty-four parts of principle, producing even in its vapor giddiness boiling alcohol, and in 100 parts of cold alcohol, and dilatation of the pupils of the eyes. Hot ether dissolves it, but drops it when it cools. 1328. The seeds of the veratrum sabatilla, Heated it melts like wax,yields a yellow, acrid, the root of the veratrum album, and colchicum anu aromatic oil, some water, and carbonate of autumnale, yield a principle called veratria, ammonia. At last carbonic acid gas, carbureted which is exceedingly acrid without bitterness, hydrogen gas, and ammonia ccme ever. A and very powerful in its influence upon the ani

mal svstern. From hyoscyamus, and digitalis, two concentrated and active principles have lately been extracted.

1329. The cinchona bark gives cinchona and quinia, or quinin, and Robiquet has very recently described a peculiar principle from coffee, which he names cafea. These substances and principles will be enlarged on in other parts of our work. See MATERIA MEDICA, PHARMA- CY, and MEDICINE.

FIXED OILS. (Vegetable).

1330. Oils abound much in nature, and are of very extensive use in domestic economy, and in arts and manufactures. They were known at a very early period, are mentioned in the book of Genesis, and in Abraham's time were used even in lamps. Cecrops is said first to have intro- duced the cultivation of the olive into Attica, and to have made the Europeans acquainted with the use of oil. Homer's heroes used burning sticks instead of lamps.

1331. Oils are distinguished into the fixed or fat, and the volatile or

essential oils. The fixed oils require a higher temperature than that of boiling water to raise them in vapor. The vola- tile oils rise in vapor at a lower temperature than that of boiling water.

1332. Fixed oils are highly inflammable; are liquid, or become so by a gentle heat; their boiling point not under 600 ; have a mild taste ; a greasy feel, and leave a stain.

1333. They are also called expressed oils, be- cause they are obtained by compression from a great variety of vegetable, and some animal sub- stances. These oils are found chiefly in the seeds of vegetables ; and Fourcroy remarks they are found only in the seeds of the bicotyledinous class of plants. The seeds of plants from which they are chiefly extracted are the fruit of the olive, the kernels of almonds, and of a great va- riety of stone fruits ; from linseed, rape-seed, hemp-seed, poppy-seed, and a variety of other seeds, from which they are extracted by power- ful mechanical compression. Fixed oils may also be extracted from beech-mast, and various seeds of trees. Fixed oils are also obtained from animals, but these we arc afterwards to notice.

1334. The fixed oils are very numerous, and they have all some shades of difference from each other. Although we are not sufficiently ac- quainted with their nature to decide positively, it seems extremely probable that the oil is the same in all, and that their differences are occa sioned by extraneous matters in the composition of each species.

1335. All the fixed oils are insoluble in water. They are also lighter, and hence always float on the surface of that liquid. They are never per- fectly limpid, but always possess some degree of color. Nor are they perfectly fluid but possess a degree of tenacity, and adhere to the sides of the vessel in which they are contained. They all require a higher temperature than water to make them boil, and the boiling point often varies in different specimens of the same oil.

1336. When distilled, these oils are partially decomposed ; some acetic acid and water are formed, and a little charcoal remains in the re-

tort, while much carbureted hydrogen gas is evolved. The oil becomes lighter, more fluid, and has a stronger taste than before. Distilled oil was formerly dignified by the name of philoso- phical oil.

1337. When kindled in a state of vapor, fixed oil burns with a

yellowish-white flame. The use of a wick for a candle or lamp, is to present a sufficiently small quantity, and in regular suc- cession, of the oil to the action of heat, that it may be converted into vapor ; and the flame forms a cone, the interior of which is filled with this vapor, which only takes fire where it comes in contact with the oxygen gas of the atmosphere. If the whole oil be raised to 600►►, it takes fire spontaneously. When sufficiently eooled, the fixed oils are converted into ice ; but the freezing point is various in different oils.

1338. The linseed, nut, poppy, and hemp- seed oils, are the principal drying oils commonly used, and they are employed in the preparation of paints and varnishes. To qualify them for these purposes, they are always boiled some time in an iron pot, during which process they are partially decomposed, and much watery vapor, and carbureted hydrogen gas is emitted from them. Their color becomes deeper, an4, their con- sistency greater. During the boiling a little litharge is commonly mixed with them. For certain pur- poses they are set on fire during the boiling, and, after burning some time, they are extinguished by placing a lid over the pot ; after which the boiling is continued until they acquire the pro- per viscidity. By these means these oils lose their unctuosity. and approach the nature of resins. But they do not become brittle, for they still retain ‘ a considerable degree of toughness and ductility. Burning them some time is the most effectual method for destroying their unctu- osity.

1339. Nut oil is found to be the best for prin- ters’ ink, and next to it linseed oil. The oil is put into a pot only half full, burnt for about half an hour or more, and boiled to the proper con- sistency. It is then called varnish ; and two kinds, a thicker and a thinner, are prepared ; the latter to be mixed with the former, should its consistency be found too great. The varnish improves by keeping after it is prepared. It is ground with two ounces and a half of lamp black to every sixteen ounces of oil. Sometimes the black is extended with Spanish whitening, and sometimes receives a small admixture of Spanish or of Prussian blue. That the oil has under- gone some change by the boiling and burning, appears from printers’ ink adhering to wet paper. But it is still very different from a mucilage, be cause it does not combine with water, nor does it spread or stain the contiguous paper.*

1340. The fat oils, such as the oil of olives, of sweet almonds, of rape-seed, of ben, &c. by long exposure to the air, become white, thick, and opaque, so as to resemble tallow. This happens much sooner when they are poured upon water, so as to form a thin

coating upon its surface. This does not happen when they are excluded from contact with oxygen gas ; and hence it must be owing to the action, or more probably, the absorption of this gus.

1841. The fixed oils, when assisted by heat, readily dissolve sulphur, forming a reddish colored solution, which yields much sulphureted hydrogen gas by distillation. The solution de- posits the sulphur in octahedral crystals by slow cooling. When boiled in water, along with phos- phorus, these oils also dissolve a small propor- tion of the latter. The solution yields phos- phureted hydrogen gas by distillation, and appears luminous when spread on the surface of bodies.

1342. When the fixed oils are agitated in water, the mixture becomes milky, but the oily particles soon separate and rise to the surface. If gum-arabic, or any mucilage, be present, the oil does not separate, and the mixture becomes permanently milky. Such preparations are called emulsions, and they are commonly prepared by grinding oily seeds, such as those of almonds, in water, which contain both an oil and a mucilage to keep its particles separate.

1343. The fixed oils dissolve the white oxide of arsenic; and when boiled with the oxides of mercury, lead, or bismuth, they form the tough compounds called plasters, which are used as an artificial skin to exclude the air from wounds.

1344. Phosphoric acid deepens the color of these oils? and sulphuric acid first renders them black, afterwards converts them into bitumen, and at last decomposes them entirely, if its ac- tion be continued a sufficient length of time. The result is the formation of water, while char- coal is precipitated, and an acid evolved. But the action of this acid on these oils has not been sufficiently examined.

1345. The ultimate components of olive oil, as given by Gay Lussac, and Thenard, are : ???

77-21 carbon. 9-43 oxygen. 13-36 hydrogen.

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1346. The volatile oils are so called from their volatility, as they always rise in vapor at a lower temperature than 212??, or the

boiling point of water. They are also called essential oils, as they were supposed to contain the concentrated substance of the plant from which they were ob- tained. They are called aromatic oils, from the fragrant smell which they exhale.

1347. Beside these properties, they are very combustible, nearly as liquid as water, though sometimes viscid ; have an acrid taste ; are solu- ble in alcohol, and imperfectly in water ; after evaporation they leave no stain on paper. This last property enables us to judge whether they have been adulterated by a mixture of the fixed oils, for if a drop evaporates from paper without leaving a stain, they are pure, if not, they are adulterated.

1348. The volatile oils are almost all obtained from vegetables, though some few, such as oil of musk and others, are obtained from animals. They are obtained from all 'parts of plants, the root, the bark, the wood, 'the pith, the leaves, flowers, fruits, and seeds. But they are never found in those seeds which yield fixed oils.

1349. They may often be obtained by simple

expression, which is the case with oil of lemons? oranges, and bergamotte. But in general they are obtained by distilling the plants containing them, mixed with water, with a moderate heat. The oil comes over along with the water, and floats upon its surface. In this way the oil of lavender, peppermint, thyme, and various others, which are employed by the perfumer, are ob- tained. Oil of turpentine is obtained by distil- ling the juice called turpentine, which exudes from the juniper tree.

1350. Some of these oils are as limpid as wa- ter, and have no oily appearance, as oil of tur- pentine, oranges, lemons, bergamotte, roses. Some have a degree of viscidity, as oil of mace, cardamum, sassafras, cloves, cinnamon. Others gradually lose their fluidity and become solid, as oil of parsley, fennel, aniseed, balm. Others, when slowly evaporated, crystallise, as oil of thyme, peppermint, marjoram. Others soon acquire the consistence of butter, as the oil of nutmegs, hops and pepper. They are also of almost every color ; and some which are limpid at first, become brown by age. Their odors are also so various, as to defy all description. In fact all the fragrance of the vegetable kingdom is contained in the essential oils ; and, when these are extracted, plants have no smell what- ever. A description of their odors would there- fore be a description of the peculiar smell of each odoriferous plant. The specific gravity of these oils is also considerably various, and it va- ries in the same oil at different

periods of its age.

1351. The volatile oils evaporate readily when heated in the open air, and diffuse their peculiar odor ; but they do not evaporate so readily in close vessels, unless water be present. Without this, they are apt to be decomposed, they lose their odor, and become darker in the color. When exposed to cold, they freeze at different temperatures, according to the oil. Some at 17►► are partially crystallised, and converted into other substances, one of which resembles benzoic acid.

1352. When exposed to light in close vessels, their color becomes deeper, their consistency and specific gravity are increased, as well as their absolute weight. Tingry thinks these effects are produced by the fixation of light. But as the degree of effect is always proportional to the quantity of oil, and of air included in the ves- sel, it is more probably owing to the absorption of oxygen.

1353. Dr. Priestley ascertained that these oils, ►►►by exposure to the air, absorb oxygen, and also absorb it from the air in close vessels in which they are kept. He ascertained that oil of tur- pentine imbibes a considerable quantity of air, which can be extricated from it by means of the air-pump. By long exposure to air, the volatile oils lose their smell, become thick, and assume the appearance of resins.

1 354. Many of these oils, when dropped upon sugar, which is afterwards dissolved in water, convey to the water their peculiar taste and smell. This solution is known by the name of oleo-saccharum. They dissolve in alcohol, ether and the fixed oils. Oil of turpentine dis- solves slowly in alcohol, and afterwards separate►► from it.

CHEMISTRY.

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1355. When digested upon sulphur, at its melting temperature, they dissolve a portion of it, acquire a brown color, with a disagreeable smell and taste. These solutions used to be called balsams of sulphur, and a portion of the sulphur crystallises on slow cooling. When strongly heated, these balsams emit such quantities of gas, as to occasion dangerous explosions ; and they should be managed with much caution.

1356. With the assistance of heat, these oils dissolve a portion of phosphorus, though most of them part with it again on cooling. But if

ten parts of camphor be rubbed and mixed with one part of phosphorus, this mixture enters into permanent union with the essential oils, particu- larly the oil of cloves, and the solution possesses the property of being luminous without taking- fire. When the face or hands are rubbed, or letters written with it, they appear luminous in the dark. This is what Boyle used under the name of liquid phosphorus.

1357. The essential oils scarcely combine with alkalis. The medicinal preparation, called Starkey's soap, is made by triturating oil of tur- pentine with potassa, and the operation is so te- dious and laborious, that there is reason to be- lieve the oil is converted into resin, by absorbing oxygen from the atmosphere before it combines with the alkali. With resin the alkalis combine very readily.

1358. The sulphuric acid first dissolves these oils, then converts them into resin, and lastly into charcoal. They may be separated from the acid in any of these states by pouring in water. An acid soap may be formed by slowly dropping, and repeatedly stirring, oil of turpentine in sul- phuric acid. The soap separates from the mass ; is of the consistence of soft wax ; and soluble in water and alcohol. When this soap is decom- posed by an alkali, the oil is found to have been converted into a resin, and afterwards unites with alkalis.

1359. When concentrated nitric acid is poured suddenly upon any of the essential oils, '□□□ sets them on fire; but if the acid be diluted □□Jb water, it dissolves them, and converts them into resins, of a yellow color. Chlorine acts in the same way.

1360. When these oils are burnt in the open air, they emit a clear bright flame, with much smoke. The smoke, being collected, is found to consist of carbonic acid, water, and charcoal. From these facts, combined with the effects of acid supporters upon them, it is inferred that the volatile oils are composed of hydrogen and carbon, with various proportions of oxygen ; though no exact analysis of them has yet been attempted.

1361. The volatile oils are much used in me- dicine, in painting, and perfumery. Oil of tur- pentine is much used to dissolve resins, and the solutions are applied as varnishes to various bo- dies. The oil of turpentine used in this way readily evaporates, leaving the resin in contact with the body to which it is applied ; or the oil is oxygenated and becomes a resin itself; but the varnish does not become brittle like the original resin.

1362. There is another class of oils which has

been distinguished by the name of empyreuma- tic oils, which agree in some particulars with the volatile oils. They are formed when the other oils are distilled with a higher degree of heat than the boiling point of water, or by the appli- cation of high degrees of heat to moist animal and vegetable substances, which are not known to con- tain any oil. They are supposed to be the other oils changed, and partially decomposed by heat. They have a strongly fetid and disagreeable smell, and an acrid and harsh taste. They combine, in small proportion, with water, and are soluble in alcohol. It is from these oils that spirits and other distilled liquids, derive what is called an empyreumatic flavor, which happens either when the still is too large, and contains such an incumbent mass of liquid that the steam is compressed, and cannot freely rise from its bottom ; or when the neck and worm are too narrow to discharge the steam as fast as it is ge- nerated. In such cases the heat accumulates considerably higher than the vaporific point, before it can be carried of! by the steam ; the still is said to be burnt, its bottom often giving way ; and the spirits are impregnated with em- pyreumatic oil, formed by the accumulation of heat in the still.

BITUMENS.

1363. This name was formerly applied to all mineral inflammables, but is now restricted to substances which have a striking resemblance to vegetable oils and resins. Indeed there are strong reasons for believing that, if not all, at least this class of mineral inflammables, was ori- ginally derived from vegetables and animals : and, on this principle, may, with propriety, be introduced into this part of our treatise.

1364. This class of bodies is subdivided into mineral oils, and bitumens properly so called. The mineral oils bear a most striking resemblance to volatile oils which we have just been discus- sing, and ought to be classed with them. The bitumens are a more numerous class of bodies, and they seem to bear the same relation to the mineral oils, that resins bear to the volatile oils.

1365. The only mineral oil whose properties have been examined, is usually called petroleum, or rock oil, and sometimes coal oil, as it is ob- tained from fossil coal. It is very volatile, and distills without alteration ; is usually of a yel- lowish-brown color, though we have seen it rec- tified so as to be as limpid and fluid as water. It has a very acrid taste; and a disagreeable smell. Its specific gravity varies

from 0-730 to 0-878. It combines with alcohol, ether, the vo- latile and fixed oils, and possesses all the pro- perties of a volatile oil.

1366. In its purest form petroleum is usually called naphtha, in which state it issues in great abundance from many fissures in the mineral strata, along the shores of the Caspian, and in Persia. It also occurs in Germany, Italy, and various parts of Europe. It is often seen to form a white scum on the surface of water which issues from springs in this country, and some- times to ooze from fissures of rocks, where it may be collected in small quantities. In this state it is

limped and colorless, but becomes darker by ex- posure to the air.

1 367. Petroleum, and bitumen, were first ex- tracted from coal in this country, by lord Dun- donald, by distillation from kilns constructed for the purpose. The product of the first distilla- tion is a thin dark colored liquid, consisting of petroleum combined with coal tar. By ex- posure to the air, part of the petroleum evapo- rates, the liquid thickens, becomes blacker, and acquires the consistence of tar, and even be- comes solid if exposed a sufficient length of time. It would seem that oxygen is absorbed as well as volatile oil evaporated. But to inspis- sate his tar, lord Dundonald subjected it to a second distillation, by which he seems to have expelled too much of the volatile oil, as his tar was rendered brittle like resin, and was apt to crack and fall off from the sides of ships on which it was laid. Perhaps it would have been better to have combined some fixed oil, or wood tar, with his inspissated tar ; or to have brought the tar of the first distillation to the proper con- sistence by combining it with resin.

1368. In the sixth volume of the Asiatic Re- searches, 1-127, we have a very accurate descrip- tion, by Captain Hiram Cox, of a species of mi- neral oil, every way similar to the product of lord Dundonald's first distillation, which flows from numerous springs near Amarapoorah, the capital of the Burmhan empire in India. They dig nu- merous pits for this oil, to the depth of about 200 feet, and it yields a considerable income to the proprietors, as well as revenue to .the govern- ment. It oozes from strata of coal, and of dark bitumated clay, commonly called blae's in this country by the colliers. This oil is nearly as liquid as water when taken out, but by exposure to the air and to cold it becomes of a darker color, and

thicker consistency. It is combined with resin produced in this country, and used for the timbers of houses, and the bottoms of boats, which it defends from rotting, and from the at tacks of insects. It is also burnt in lamps, and rubbed on the skin to cure cutaneous eruptions, bruises, and rheumatisms. The opodeldoc, so much extolled in this country for curing sprains, seems to be nothing else but purified coal- oil.

1369. The bitumens, properly so called, are a more numerous class of bodies than the mineral oils. In general they seem to consist of a resin ous substance combined with a greater or smaller proportion of mineral oil. When they first issue from the earth, they are generally of the con- sistence of thin tar, but they become thick, and often consolidate, by exposure to the air.

1370. They are of various colors, but gene- rally brown or black. Their smell is distin- guished by the name of the bituminous smell, and when they are heated, or rubbed, somewhat resembles that of swine. They become electric by friction ; when heated they melt, and burn with a bright flame, and much smoke. They are all insoluble in water, and most of them in alcohol ; but they are all soluble in ether, and in the fixed and volatile oils. They do not com- bine with alkalis, nor form soaps. The acida

have little action on them; but the nitric acid dissolves and acts upon them nearly in the same way as it does on resins.

1371. To this class we would refer the sea- wax, or maltha, found on the lake Baikal in Si- beria, which is white, and of the consistence of white cerate, as Klaproth obtained a similar sub- stance by distilling wood-coal in Germany. Perhaps, also, the mineral tallow, described by Kirwan, and said to be found on the coast of Finland and other parts of Sweden, may be re- ferred to this class. Perhaps a white light sub- stance, called moss-tallow, which is found in the bottoms of peat bogs near Inverness and other parts of Scotland, may also be a mineral bi- tumen ; though we entertain some suspicion it may have been the tallow of cattle which had been killed by huntsmen, and dropped there when these bogs were woods, before the moss grew up. Though this substance has not been particularly examined, we may remark that it dif- fered from tallow in several respects, though it resembles it in some others, particularly in its melting and inflaming.

1372. By far the most abundant species of mi- neral bitumen, is distinguished by the name of asphaltum or mineral tar; and it is every way similar to the coal tar of lord Dundonald. Of .this there is

a considerable lake in the island of Tri- nidad, which is so much hardened on the surface by exposure to the air that people can walk upon it, though it is liquid below, and still more fluid when it issues from the mineral strata. This lake is supposed to have been the crater of a volcano, which has been filled up by bitumen flowing from contiguous strata of coal. It abounds in Albania, and is supposed to have been the substance chiefly employed in preparing the Greek fire. It abounds also on the1 shores of the Dead Sea, in Palestine ; and was used in place of mortar, for building the tower and walls of Babylon. The Egyptians employed it in em- balming. It is said to abound in Persia, and several parts of Asia. Considerable quantities of this substance often issue from the strata of stone quarries in the county of Caithness. At first it is nearly as fluid as water, but, by exposure to the air, it acquires a darker color, and the consistence of tar. By long exposure, it even becomes hard, and as black as jet.

1373. The color of this bitumen is at first dark brown, and it always becomes blacker the longer it is exposed to the air. Its specific gra- vity varies from 1'07, to 1'165, according to Kirwan.

1 374. Klaproth ascertained that the asphaltum of Albania is not soluble in alkalis, acids, water, or alcohol ; but it is soluble in petroleum and all the oils, and in sulphuric ether. Five parts of petroleum dissolved one part of asphaltum, and, being gently evaporated, left a black brown shining varnish. The solution in ether was of a pale brown red color, and being evaporated, a reddish semitransparent fluid substance was left,, still insoluble in alcohol.

1375. A hundred grains of this asphaltum being distilled by a heat gradually raised to red- ness, yielded

*Grains. *lt> cubic inches (German) carbure /ed*

hydrogen gas . . . ".6

A light brown fluid oil, or petroleum 32

Water tainted with ammonia . 6

Charcoal 30

Ashes '..... 16

The ashes consisted chiefly of silica and alumina, with some lime, iron, and manganese.

1376. As petroleum combined chiefly with a certain proportion of charcoal, forms bitumen, so bitumen, into whose composition a larger proportion of charcoal enters, forms mineral coal. Of this there are several varieties, but they may be classed under the general names of brown coal, and black coal. The brown coal has not been found in this country, but it abounds in some parts of Germany, and it contains some of the vegetable principles unchanged. The black coal abounds in Britain, and it may be regarded as the source of her wealth and pros- perity. It is of two kinds. The flaming coal, which contains a considerable portion of bitumen in its composition, ००० and what is usually called blind coal, because it burns without flame, and has lately been called glance coal by Werner. This is found at Kilkenny in Ireland, in some parts of Ayrshire, in the island of Arran, on the banks of the grand canal at Annfield, and differ- ent parts of Fifeshire, and in some districts of England. This last is charcoal, without bitumen, and hence it does not flame ; the flame of coal, like that of oil (1337) being owing to the com- bustion of bitumen after it is raised in vapor. Besides bitumen and charcoal, all these sorts of coal contain a greater or smaller admixture of extraneous earths, and sometimes of iron, sul- phur and other substances.

1377. When the flaming coal is distilled in lord Dundonald's method, it gives out" a vast quantity of heavy inflammable air, or carbureted hydrogen, gas ; a bituminous oil, at first fluid, but gradually changes to the consistence of tar ; and water impregnated with ammonia. Lord Dundonald has applied the oil to the making of varnishes. The residue is coak, or mineral char- coal, which yields a strong and steady heat, and is of great use in various manufactures.

1378. Mineral caoutchouc is another species of bitumen, only found in Derbyshire. It is so called from its resemblance to vegetable caout- chouc, or Indian rubber. It effaces pencil marks from paper, but stains it a little. It is elastic, of a dark brown, and sometimes of a red color. It resists all liquid menstrua, but dissolves in olive oil, according to Delametherie. Klaproth found it dissolved in petroleum, the solution being of a bright yellow color, and transparent. It bums with a bright flame, and melts by heat, retaining Us tenacity after melting, which is not the case with Indian rubber. After being melted it dissolves in oils.

1379. There is another bituminous substance connected with the Bovey coal in Devonshire, to which Mr. Hatchett assigned the name of resin- asphaltum, and whose chemical properties he ex- amined.□□□ It is of a pale ochre yellow color ; brit-

tle, and fracture vitreous; specific gravity 1-135 It burns with a bright flame, and emits a fragrant odor, at last tainted with a bituminous smell. It melts, and after cooling, is black, brittle, and fracture vitreous. Water does not act upon it; but a portion dissolves in alcohol, potassa, and nitric acid ; what dissolves having the properties of a resin, and the insoluble part of an asphaltum. Mr. Hatchett found it composed of

Resin 55

Asphaltum 41

Earths 3

99

WAX.

1380. It is well known that bees possess the power of forming wax, which Huber ascertained they can do from honey or sugar. But this sub- stance is also a vegetable product, and some plants yield it in such abundance that it might be profitably extracted from them. It coats the surface of the leaves of many trees, and the leaves being bruised, and digested, first in water then in alcohol, until all that is soluble in these liquids be extracted from them, the insoluble part is mixed with six times its weight of pure ammo- niacal solution, which dissolves the wax. The solution being filtered, the ammonia is saturated with diluted sulphuric acid, with constant stir- ring, which precipitates the wax in yellow pow- der. After being well washed, it is melted over a gentle fire.

1381. Wax is bleached, and acquires a pure white color, by exposing it in thin slices to the atmosphere. It has then hardly any smell, and its specific gravity is from 0‘8203 to 0‘9662. It is insoluble in water; melts at 155□□. At a greater heat it boils and flies off in vapor. An ig- nited body sets the vapor on fire, and this pro- perty renders wax very useful for making candles. Wax is soluble in boiling alcohol, and in heated ether. With the fixed oils it forms the compound called cerate, much used by surgeons, and whose consistency varies according to the proportion of oil. It also dissolves in heated oil of turpentine, and other volatile oils, and a part precipitates on cooling.

With the fixed alkalis it forms soap, arid with volatile alkali a soapy emulsion, scarcely soluble in water. The acids have little action on wax, and chlorine only bleaches, or renders it white. Hence wax is much employed as a lute to confine acids in vessels. From an experiment of Lavoisier it would appear that wax is com- posed of

82-28 parts carbon 17-72 hydrogen

lOO'OO

It probably contains also a portion of oxygen. As the absorption of oxygen renders the fixed oils concrete, wax is supposed to be a fixed oil which has become concrete by being saturated with oxygen.

1382. In Louisiana, and other parts of North America, a pale green wax is obtained from the berries of the myrica cerifera, which are boiled and squeezed in water. The wax is melted, a:ii

swims on the surface, where it is skimmed off. The Chinese extract wax from various vegetables ; and it is now thought to be a very abundant pro- duct of the vegetable kingdom.

CAMPHOR.

1383. Neumann first demonstrated this to be a distinct vegetable substance. It has long been known in the East, and was first brought to Eu- rope by the Arabians. It is obtained in Japan by distilling the wood of the laurus camphora, in large iron pots, along wiNth water. To the pots are fitted earthen heads stuffed with straw. The camphor sublimes, and concretes upon the straw. The Dutch subject it to a second sublimation in glass vessels of a turnip shape, having a small mouth covered with paper. When sublimed in close vessels it crystallises in hexagonal plates, or pyramids.

1384. Refined camphor is a white brittle sub- stance, of an acrid taste, and aromatic odor. Its specific gravity is 0-9887. It is so volatile that when exposed in open vessels in hot weather, it goes entirely off in vapor. It is insoluble in water, but communicates to it its peculiar smell. Rectified alcohol dissolves three-fourths of its weight of camphor, which is precipitated by add- ing water. When camphorated alcohol is dis- tilled, the spirit passes over first, leaving the camphor ; and this affords an easy way of puri- fying camphor.

Camphor is also soluble in the fixed and volatile oils. Acids dissolve camphor with effervescence, and it may be precipitated from the recent solution unaltered. Mr. Hat- chett, by digesting sulphuric acid on camphor, and afterwards distilling the compound, con- verted it into a yellow oil, charcoal, and a resinous substance resembling artificial tannin. Nitric acid converts camphor into a yellow substance resembling oil, which is called oil of camphor. With acetic acid it forms the compound called aromatic vinegar.

1385. When suddenly heated, camphor melts at 300►►, according to Venturi, and at 421►► ac- cording to Romini. It is very inflammable, and burns with much flame, without leaving a resi- duum. It even burns on the surface of water. Bouillon la Grange thinks camphor is composed of volatile oil and charcoal, and that its ultimate ingredients are carbon and hydrogen, the pro- portion of caebon being much greater than in oils.

1386. Camphor has been found to exist in all the volatile oils that have been examined, and is supposed to communicate to them their peculiar smell. If a volatile oil be exposed to the air at a temperature between 22►► and 54►►, part of the oil evaporates, and camphor crystallises. Or if the oil be distilled in a water-bath some degrees below the boiling point, until a third of the oil is forced over, camphor is found crystallised in the still. If this be removed, and the oil aijain dis- tilled, more camphor crystallises ; and in this way all the camphor may bft separated from the oil. The camphor thus obtained is purified by mixing it with a little dry lime and subliming it. This differs from common camphor in not form- ing a liquid solution with the sulphuric and the nitrid acids; and it is precipitated from the latter acid in a glutinous mass.

1387. Mr. Kind, of Eutin, having passed a ftream of muriatic acid gas through oil of tur- pentine, in a Woulfe's bottle, converted nearly one-half of the oil into camphor. The propor- tion of gas which answers best is what can be separated by sulphuric acid and heat from a quantity of common salt equal in weight to the oil of turpentine employed.

1388. Camphor is much used in medicine. It proves destructive to many species of insects, and the gall-plant, which contains camphor, is commonly called flea-bane in this country, from the use to which it is sometimes applied.

BIRD-LIME.

1389. This viscous substance exudes from the bark and leaves of several plants. It is said to abound in the berries of the misletoe. It is usually prepared by boiling the middle bark of the holly, seven or eight hours, until it becomes soft. It is then put into a hole in the earth, covered with stones, and left to ferment or rot for a fortnight or three weeks. This fermenta- tion changes it to a mucilaginous consistency ; and it is now pounded to a paste in mortars, and well washed with river water. It is soluble in ether, and in boiling alcohol. Its color is green- ish, its flavor sour, its consistence gluey, stringy, and tenacious. It has hence been much em- ployed in catching small birds. It reddens ve- getable blues. It softens, but does not dissolve in boiling water. Concentrated solution of pot- assa forms a species of soap with bird-lime.

RESINS.

1390. Resins derive their name from com- mon rosin, which is the most abundant of any of this class of substances. Resins are supposed to have the same relation to the volatile which wax has to the fixed oils, and to be formed in conse- quence of a combination of oxygen with volatile oils. Accordingly when a volatile oil is long exposed to the air it acquires the properties of a resin, in consequence, it is thought, of its com- bining with oxygen. The same change takes place more rapidly when oil of turpentine is exposed to chlorine. It is soon converted into a yellow resin. Resins often exude spon- taneously from trees, or flow from artificial wounds. They are frequently at first combined with a volatile oil from which they are separated by distillation. They are solid brittle substances, commonly of a yellow color. Their taste re- sembles that of volatile oils, but they have no smell unless they contain foreign ingredients.' They are all heavier than water. They are all non-conductors of electricity, and by friction are electrified negatively.

1391. When heated they melt, and when ig- nited they burn with a yellow flame, emitting at the same time much smoke. They are insoluble both in hot and in cold water, but when they are melted in water, or combined with volatile oil arid distilled with water, they become opaque and less brittle than formerly. This every shoe- maker knows who prepares his rosin by working it in warm water.

1392. They are, with only two exceptions, so- luble in alcohol, especially when it is heated,

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which takes up about one-third of its weight of resin. If the alcohol be distilled off, the resin remains unchanged. Or if water be poured into the solution, the resin falls in the state of a white powder. They are also soluble in sulphuric ether. Most of them are soluble in the fixed oils, and especially in the drying oils. They are also generally soluble in oil of turpentine and other volatile oils. They are soluble in the fixed alkaline solutions, and hence the soap manufac- turers put a quantity of rosin in their soap, which gives it a yellow color, a peculiar smell, and ren- ders it more soluble in water. In volatile alkali they only form an imperfect solution.

1393. Mr. Hatchett first discovered that resins are soluble in acids. Sulphuric acid being poured on them in powder, first dissolves the resins, and, by the assistance of heat, gradually converts them into artificial tannin and charcoal, which burns like mineral coal. The compound being washed, and the tannin separated by alco- hol and water, from 100 grains of the following resins, Mr. Hatchett obtained the following pro- portions of charcoal by this process :

Copal . , Mastich Elemi . . Tacamahac Amber . . Resin

67 grains

66

63

62

56

43

The same bodies when exposed to a red heat in close vessels yield very little charcoal. The fol- lowing is the quantity obtained by Mr. Hatchett irom 100 grains of several of them :

Mastich Amber Resin .

4‘50 grains

3-50

0-65

1394. Nitric acid of the specific gravity 1‘38, dissolves resin with the assistance of heat, and changes its nature. It is precipitated by water. If the acid be in sufficient quantity, and be long digested on a resin, a yellow viscid substance is obtained which is equally soluble in water and alcohol. At last the nitric acid converts resin into artificial tannin. Muriatic acid also dis- solves resins slowly. Mr. Hatchett recommends acetic acid as an excellent solvent of resins for vegetable analysis.

1395. By destructive distillation resins yield carbureted hydrogen gas, carbonic acid gas, some acidulous water, and much empyreumatic oil. When volatile oil is exposed to the air it is partly converted into resin, partly into the benzoic or camphoric acids, while a portion of water is also formed. It has hence been inferred that resin consists of volatile oil, combined with oxygen, and deprived of a portion of its hydrogen. To know if any substance contains resin, pour sul- phuric ether upon it in powder, and expose it to the light. If resin be present, the ether will assume a brown color. We shall now enume- rate a few of the more useful resins.

1396. Rvsin is obtained from the pinus sylves- tris, or Scotch fir, from the pinus abies, or spruce i\r, from the larix, and balsamea. When the bark is stripped from the fir trees in winter, they become encrusted with a white brittle substance,

consisting of rosin united to a small portion of oil. The yellow rosin is made by melting and agitating this substance in water, and it is more ductile than the others because it contains a small portion of oil. The larix yields Venice turpen- tine, the balsamea the balsam of Canada.

1397. Mastich is obtained from the pistacea lentiscus, a tree which grows in the Levant, and particularly in the island of Chios. Transverse incisions are made in the tree, from which a juice exudes, which concretes into this resin. It con- tains nearly a fifth of caoutchouc, from which the resin may be separated by solution in alcohol. It is chewed in Turkey, as we chew tobacco, and is often employed by surgeons to fill up the va- cuities of carious teeth.

1398. Sandarach is obtained from the juni- perus communis, or common juniper. It exudes spontaneously, and is soluble in about eight times its weight of water, but is not soluble in tallow or oil. It is also soluble in acids and alkalis.

1399. Elemi is obtained from the amyris ele- mifera, a tree which

grows in Canada, and Spa- nish America. Incisions being made in the bark, during dry weather, the resin exudes, and is allowed to harden in the sun. It has a strong and fragrant smell, which gradually diminishes.

1400. Tacamahac is obtained from the fagara octandra, a tree which grows in America. It has an aromatic smell, and is soluble in alcohol, but not in water.

1401. Anime is obtained from the hymenaea courbaril, or locust tree, which grows m North America. It very much resembles copal, but is easily soluble in alcohol, which copal is not. It is much employed in making varnishes, owing to its solubility in alcohol.

1402. Ladanum or labdanum exudes from the cistus creticus, a shrub which grows in Syria and the Grecian islands. Water dissolves about one- twelfth of it, which seems to be gum. Part of the remainder is soluble in alcohol. It gene- rally contains about one-fourth of its weight of extraneous matters.

1403. Botany Bay resin is obtained from the acarois resinifera, a singular sort of tree which grows near Botany Bay, and other parts of New South Wales. It exudes spontaneously, or from wounds made in the bark of the tree. Two- thirds of it are soluble, by digestion, in alcohol. The remaining third is extractive matter soluble in water, and woody fibre. It is partially solu- ble in alkaline solutions, and it burns like rosin.

1404. Black poplar resin was first pointed out by Schroder, who obtained it from the buds of the black poplar, by boiling them in water, and afterwards pressing them. The buds yield about one-fourth of their weight of this resin, which is very similar to the resin of Botany Bay.

1405. Green resin constitutes the coloring matter of the leaves of trees, and of almost all plants. It is insoluble in water, but soluble in alcohol, by which it may be extracted from the leaves of plants. If the leaves be immersed in chlorine they soon assume a withered appearance, but the coloring matter acquires the properties of resin in greater perfection.

1406. Copal is said to be obtained from the

rhus copallinum, a tree which abounds in several parts of North America. It is said also to be produced from various trees in Spanish America. li :s a white substance, sometimes opaque, often nearly transparent. It has long been reckoned a gum, because it is of difficult solution in alcohol, oil of turpentine, and in the fixed oils. But it melts when heated, and, as Mr. Hatchett dis- covered, is soluble in acids and in alkalis. With nitric acid it forms artificial tannin, and exhibits all the usual properties of the resins. It is there- fore now classed with the resins. If copal be suspended by a thread above the surface of alco- hol, in a close vessel, well corked, and the alcohol raised in vapor by the heat of a sand-bath, the copal melts, and drops like oil into the alcohol, and is .suddenly dissolved. After, the drops cease to be dissolved by the alcohol, it is unnecessary to continue the process, because the alcohol is now saturated with the copal. By a similar process copal may be combined with oil of tur- pentine. Copal was first used as an ingredient in varnishes by the French. It afterwards found its way into Holland, where the mode of pre- paring it was much improved. But the modes by which it is prepared have hitherto been kept a secret among workmen, and arc hardly known in the British Isles.

1407. Lac. ••• Though this substance has long been known in the arts, little is ascertained res- pecting its origin. It is said to be deposited on various species of trees in the East Indies, by an insect 'called chremes lacca. It seems to form the nests of these insects, and it appears doubt- ful whether it be formed in their bodies, or be merely an exudation occasioned by their punc- tures in the tree. In its original state it is called stick-lac, which is of a deep red color. When broken and boiled in water, the water dissolves a great part of this coloring matter, and the de- coction is used as a red dye. What remains undissolved is called seed-lac, which is of a brown color. Alcohol dissolves the greatest part of what the water has left. What the water leaves melts by heat, and, being formed into thin plates, is known under the name of shell-lac.

1408. To Mr. Hatchett we are indebted for an accurate analysis of the three species of lac, and the following table exhibits his results in parts of a 100.

TABLE.

Stick Lac. Seed Lar. Shell Lac.

Resin ... 68 88'5 90-9

Coloring matter 10 2‘5 0‘5

Wax 6 4-5 4-0

Gluten ... 5-5 2‘0 2-8 Foreign bodies 6‘5

Loss . 40 2-5 1-8

100-0

100-0

100-0

1409. Lao is of very extensive use in India. In Europe, besides furnishing a red dye, it forms the basis of sealing-wax. Black wax is formed by melting certain proportions of shell lac with oil of turpentine, and stirring into the solution a sufficient quantity of ivory black. Red wax is formed in the same manner, with vermilion, to

give the color. A portion of bleached bees-wax is often used to save the expense of lac. This substance also makes a conspicuous figure in the composition of varnishes. A solution of 100 grains of lac in four ounces of water, in which twenty grains of borax are also dissolved, and a sufficient quantity of lamp black is stirred in the mixture, constitutes Chinese ink.

1410. Amber is thought to be of vegetable origin, and, though it differs from resiu in some particulars, it agrees with it in most of its pro- perties. It is a light, hard and brittle substance, of a yellow color, and nearly transparent. Though usually tasteless, and without smell, it emits a fragrant odor when pounded or heated. It cannot be melted without losing weight, and changing its appearance. In a strong heat it burns, leaving a small quantity of ashes. It is not soluble in water, but dissolves after long digestion, in alcohol. A residuum is left, which is not acted on by alcohol. A boiling solution of the fixed alkalis converts amber into soap. It is also soluble in weak solution of potash, after very long digestion. Sulphuric acid converts it into a black resinous substance. Nitric acid, with heat, exhibits the same phenomena with it as with the other resins. It only combines with the fixed and volatile oils after being roasted, or melted by heat. In this case the solution forms amber varnish.

1411. Resin from bitumen. ??? Mr. Hatchett ascertained that when mineral bitumen, such as that which is distilled from pit-coal,

is digested in nitric acid, it acquires the properties of a resin. Its fracture is then dark brown, and it acquires a resinous lustre.

VARNISHES.

1412. As resins form the basis of varnishes, it may not be improper to conclude this branch of the subject with a short account of those which are in most frequent use. The object of var- nishes is to prevent the action of air and water on the varnished bodies. In most cases it is also desirable that they should be transparent, so as not to obscure the colors of the bodies to which they are applied. They should not crack nor scale off, and they should be susceptible of a fine polish. It is also necessary that the solvent of the resin used as a varnish, should be capable of drying. The solvents usually employed in making varnishes are alcohol, which forms what are called drying varnishes, volatile or essential oil, which forms what are called essential var- nishes, and the drying fixed oils which form the fat varnishes. Frequently more than one sol- vent, and different resins, are mixed in the same varnish. Powdered glass is also recommended by Mr. Tingry, to give them more consistency. The mixture is commonly made in a glass ma- trass immersed in a vessel of boiling water, and is stirred with a stick until the combination be completed. The materials, when necessary, are previously liquified in separate bottles by expo- sing them to the steam of boiling water. After the combination is effected, the varnish is poured off, and filtered through cotton,

1413. Chaptal, in his Chemistry applied to the Arts, recommends, on the authority of Tin-

gry, the following varnishes, which dry of them- selves.

1414. A very brilliant varnish for pasteboard, lx>xes, pen-cases, &c.

OZ.

Pure mastic . . 6 Sandarach . . 3 Pulverised glass . 4 Venice turpentine 3 Alcohol ... 32

1415. An equally brilliant and harder varnish for carriages, door and window frames, &c. is made by

OZ.

Copal, after it has been melted by a 1

*gentle heat, and poured into water j **

Sandarach 6

Pure mastic 3

Pulverised glass . 4

*Pure turpentine 2**

Alcohol 32

1416. An equally brilliant, but more pliable and solid varnish is obtained from

oz.

6 4 1

Sandarach .

Elemi . .

Anime . .

Camphor . . J

Alcohol . . 32

1417. For wainscot, iron-work, grates, balus- trades, &c.

OZ.

Sandarach . . 6 Shell-lac . . 2 Resin ... 4 Pure turpentine 4 Powdered glass 4 Alcohol . . 32

1418. For waxing tables and other furniture, melts over a slow fire,

OZ.

White wax 2

Add essence of turpentine pre-) .

viously liquified . . . J continue to stir until the composition become cold. This mixture, being rubbed upon furni- ture, conveys all the brilliancy of the finest var- nish.

1419. For violins, and instruments composed of rose wood, acajou, or plumb-tree, and par- ticular kinds of furniture,

OZ.

Seed lac . . 2

Sandarach . 4

Mastich . . 1

Benzoin . . 1

Turpentine . 2

Alcohol . . 32

1420. Various coloring substances, such as gamboge, dragon's blood, turmeric, saffron, &c. may be mixed in the composition of varnishes, so as to convey any particular color to the bodies which they cover. The following composition forms a varnish of a beautiful golden orange color : ??? Twelve grains of oriental saffron, and three-fourths of an ounce of turmeric being in- fused during twenty-four hours in twenty ounces

VOL. V.

of alcohol, pour this infusion into a well pulver- ised mixture of

oz. Sandarach 2

Elemi 2

Dragon's blood in tears 1 Seed lac [.... 1 Gamboge .... f This varnish is used for covering mathematical instruments, utensils of copper, iron, and steel. When applied to metals they should be previ- ously heated.

1421. A beautiful golden color may also be conveyed to vases, and utensils formed from the various compositions of copper, known by the name of brass, &c.

oz. grs.

*Amber ~\ f 2 ***

*Gamboge f triturated on \ 2 ***

*Seed lac ? porphyry j 6 ***

*Dragon's blood J \, *** 60*

Extract of red sandal, ... 7 24 dissolved in tincture of

*Oriental saffron *** 36*

*Alcohol 36 ***

1422. The above are the varnishes usually employed when alcohol is the principal solvent. From such varnishes the alcohol soon evapo- rates and leaves the varnish in a hard and brittle state, apt to crack and scale off, unless corrected by the other ingredients. In the composition of the essential varnishes, the volatile oil of turpen- tine is commonly used as the principal solvent of the resins. This oil, like alcohol, escapes in vapor; but part remains in union with the resins, and conveys to the varnish greater pliability, and renders the varnish less apt to crack and scale off, than those varnishes where alcohol is the principal solvent. It therefore follows that varnishes, where oil of turpentine is the princi- pal sol vent, are best adapted for pictures, leather, and such bodies as are exposed to be bent, folded, or dashed against hard substances.

*1423. The following varnish is recommended for pictures : ***

oz.

Purified mastic 12

Pure turpentine 1J

*White glass, pulverised .... 5 Camphor added in small fragments) ., after the resins are dissolved J * Rectified oil of turpentine . . .36*

1424. Another varnish for leather, wood, and metals, is composed of

oz. grs.

*Seed lac . . 4 *** Sandarach . 4 *** Dragon's blood OJ *** Turmeric . . 3 36 Gamboge . . 3 36 Pure turpentine 2 *** Pulverised glass 5 *** Oil of turpentine 32 ***

1425. Copal varnish, as Tingry discovered, may be formed by dissolving copal in ether, in the following manner : ††† Half an ounce of copal, in very fine powder, is gradually dropped into a flask containing two ounces of ether. The

flask is then closed, and agitated for about half an hour, and then left to repose. When after- wards agitated, if the liquid exhibit a wavy sur- face, and appear muddy, more ether must be added, as the solution is imperfect. The ether dissolves from a fifth to a fourth of its weight of copal. The varnish thus formed is of a pale citron color It is applied with a brush, and the substance on which it is spread should be covered with a slight coating of any volatile oil to prevent the too rapid evaporation of the ether. The oil may be afterwards wiped off by a linen cloth. This varnish forms such a hard coating on wood and metals, that it can hardly be defaced by either friction or blows.

1426. Copal varnish may also be prepared by solution in the essential, or volatile oils. When oil of turpentine is used as the solvent, it is pre- viously necessary to expose the oil to the sun for some months in bottles closely stopped, having an empty space of some fingers' breadth between the oil and the cork. Eight ounces of this prepared oil are put into a matrass, im- mersed in boiling water, and afterwards one ounce and a half of powdered copal is gradu- ally dropped into the matrass, during which the matrass is moved round among the water. After the solution is effected the matrass is removed from the bath, allowed to repose some days, and the liquid is filtered through cotton. ††† This var- nish has nearly the same properties with that which was last described ; but its success de- pends much on the state of the oil employed as the solvent.

1427. Other volatile oils are used as helps in the solution of copal for varnish. For example, two ounces of essential oil of lavender being heated in a matrass over a gentle fire, one ounce of powdered copal is added in small parcels, and the liquid stirred with a stick until the copal disappears. Six ounces of oil of turpentine, heated nearly to the boiling point, are then poured in at three different times, and the mix- ture is stirred incessantly until the combination be completed. This varnish is solid, and of a brilliant golden color, but less drying

than the preceding.

1428. Another varnish is prepared by putting six ounces of oil of lavender into a matrass, with ˆne dram of camphor, and heating them until they boil. Then two ounces of powdered copal are added, in very small portions, with constant stirring of the liquor. After the copal is well incorporated, a sufficient proportion of boiling oil of turpentine is gradually added, and the boiling and stirring are continued until the mix- ture has acquired the necessary consistency.

1429. Fat varji'uhes are chiefly employed to cover iron, copper, and utensils made of other metals. The oils chiefly employed as solvents are linseed rendered drying by the means which were described when treating of that oil and nut oil. A portion of oil of turpentine, or other essential oil, is commonly added to facilitate the drying. But the fat varnishes are so slow in drying, that the workmen are obliged to dry the articles covered with them, by the heat of stoves. A very good varnish is made by adding

8 ounces of boiling linseed oil to 16 ††† of copal melted in a matrass, 16 ††† of oil of turpentine. The two first ingredients being well stirred, the matrass is removed from the fire, and shaken until the heat abates. Then the heated oil of turpentine is added, the whole well stirred, and while yet hot is passed through a linen cloth. This varnish should be kept in wide-mouthed bottles, and it improves by keeping.

1430. Another hard, durable, and beautiful varnish may be formed by digesting together

6 ounces of copal 24 ††† drying linseed oil 1J ††† Venice turpentine 6 ††† oil of turpentine.

1431. Since balloons were invented many ex- periments have been made to procure a varnish sufficient to retain the gas. Caoutchouc is pre- ferable to all known substances for this purpose ; but as ether is the only solvent from which it parts with its properties unaltered, this solvent is too expensive for general use. The method commonly adopted is to liquify the caoutchouc cut into small slips, in a matrass over a sand- bath, and then to add boiling linseed oil, and after they are well stirred and incorporated, hfated essential oil k added. Each of the three ingredients are in equal proportions. After the varnish cools it is passed through a linen cloth. Linseed oil and nut oil, when rendered very drying, acquire all the properties of varnish, and are often used to cover balloons without any ad- dition. We shall resume

this subject under the word VARNISH. See also AEROSTATION.

GUAIACUM

1432. Is obtained from the guaiacum offici- nale, a tree in the West Indies, whose wood is uncommonly hard and heavy. It exudes spon- taneously, or billets being bored longitudinally, and heated at one end, the melted substance runs out at the other. It has long been used in medicine, particularly in rheumatic complaints. It is a solid substance resembling a resin, of a mixed brownish, reddish, or greenisu color ; and it becomes gray by exposure to light in the open air. When pounded or melted by heat it diffuses a fragrant odor. About nine per cent, of it are soluble in water, and the dissolved part possesses the properties of extractive. Al- cohol dissolves guaiacum readily. Liquid chlorine precipitates the solution of a tine pale blue color, which is permanent, and ren- ders it probable that guaiacum contains indigo in its composition. It is also soluble in sul- phuric ether, and in the sulphuric and nitric acids. Mr. Brande obtained from 100 parts of this substance by distillation,

Acidulous water .... 5‘5 Thick brown oil . . . . 24-5 Empyreumatic oil ... 30‘0

Charcoal 30-5

Carbonic acid and carbu- reted hydrogen gases . 9‘5

100-0

1433. This substance differs from the resias in containing a much greater proportion of

charcoal ; in forming oxalic acid when treated with nitric acid, but no tannin as is the case with the resms ; and in the various changes of color it undergoes, which seems a consequence of com- bining with various proportions of oxygen. BALSAMS.

1434. Balsams possess the general properties of resins, but differ from them in yielding a por- tion of benzoic acid when heated or digested in acids. Though insoluble in water they often yield benzoic acid when boiled in that liquid. The strong acids dissolve them, and the alkalis act upon them nearly as on the resins. Their name is

derived from the celebrated balm or balsam of Gilead. They are either liquid or solid. The liquid balsams yet known are five iu number.

1435. Opobalsamum, or balm of Gilead, is ob- tained from the amyris Gileadensis, a tree which grows in Arabia, especially near Mecca. It is so much esteemed by the Turks that little or none of it ever reaches this country. Of course its properties are not known in Europe, except from some vague reports.

1436. Copaiva is obtained from incisions made in the trunk of the copaifera officinalis, a tree which grows in South America, and in some of the West India Islands. It is of a yellowish color, transparent, at first resembles oil, but gra- dually acquires the consistence of honey. It has a pungent taste, and agreeable smell, and when mixed and distilled with water it yields from a half to three and three quarters of its weight of volatile oil. The residuum is resin. But when dis- tilled from awater-bath, without being mixed with water, only a few drops of oil and very little water are obtained. This led Schonberg to conclude that the balsam is decomposed when it is dis- tilled from an infusion in water, and that the oil and the resin are formed during the pro- cess. Distilled at the temperature of 550□□, it yields oil, acidulous water, a small proportion of carbonic acid, and much olefiant gas. It is so- luble in the sulphuric and nitric acids, both of which convert it into artificial tannin. It hence seems nearly allied to turpentine.

1437. Balsam of tolu is obtained from inci- sions made in the bark of the toluifera balsamum, a tree which grows in South America. It has a fragrant smell, is of reddish-brown color, and by age becomes solid and brittle. Distilled with water it yields very little volatile oil, but con- veys to the water its taste and smell. If the distillation be long continued benzoic acid sub- limes. Mr. Hatchett found it to be soluble in the alkalis, and that when dissolved in the smallest possible quantity of solution of potash, it lost its own smell, and assumed a most deli- cious odor, resembling that of clove pink. This smell he found to be permanent, and hence this preparation seems likely to answer as a perfume. Sulphuric acid, by digestion, converts about fifty- four per cent, of this substance into charcoal. A portion of artificial tannin is formed, and a con- siderable quantity of pure benzoic acid sublimes. Nitric acid acts upon it nearly in the same way as upon the resins. Benzoic acid sublimes, and by repeated digestions it is converted into arti- ficial tannin.

1438. Balsam of Peru is obtained by boiling

in water the twigs of the myroxylon Peruifera, % tree which grows in the warm parts of South America, and which abounds in resin. Its taste is hot and acrid, its smell agreeable, its color brown, and its consistence that of honey. Water, in which it has been boiled some time, deposits, on cooling, crystals of benzoic acid. Distilled from a sand-bath, with a heat gradually raised, some benzoic acid is first sublimed ; next some water and oil come over. At 550►► the balsam begins to boil, and much benzoic acid is sub- limed, while a little water, much oil, and gas, come over until the temperature reaches 617►►. The gas is chiefly carbonic acid mixed with a portion of olefiant gas. On increasing the heat a brownish oil comes over, and at last a black oil of the consistence of pitch, with a consider- able quantity of gas, part of which is carbonic acid, but the greatest part seems to be olefiant. Sulphuric acid converts this acid into charcoal, the proportion of which amounts to no less than sixty-four per cent, of the original weight of the balsam. The residue is artificial tannin. The nitric acid evolves the prussic acid, and converts the balsam into artificial tannin. Both acids oc- casion, by digestion, a copious sublimation of benzoic acid.

1439. Styrax is obtained by boiling the bark of the liquidambar styraciflua, a tree which grows in Virginia and several parts of America. A similar tree, called rosa mallos by the natives, grows in the island of Cobross, in the Red Sea, where the bark is boiled in salt water -to the consistence of bird-lime, and then put into casks. It is of a greenish color, an agreeable smell, and aromatic taste. It absorbs oxygen from the air and becomes harder. It is soluble in alcohol, and water extracts from it benzoic acid.

1440 The solid balsams are three in number, namely benzoin or benjamin, which is extracted from incisions made in the styrax benzoe, a tree which grows in Sumatra. It is a solid brittle substance, of a yellowish-white color ; has little taste, but a very agreeable smell, which is in- creased by heat. It has long been used in medicine, and when treating of benzoic acid, &c., we pointed out the methods by which the acid is extracted from the balsam. It is not affected by cold water, but boiling water takes up a portion of the acid . Warm alcohol dissolves it, and it is readily soluble in ether. Sulphuric acid dissolves it, while benzoic acid sublimes. By continued digestion the balsam is converted into artificial tannin, and into charcoal, of which the quantity is forty-eight per cent, of the benzoin dissolved. Nitric acid acts with violence on benzoin, and, when assisted by heat, converts part of it into artificial tannin. It is soluble in acetic acid, and in a boiling lee of the fixed alkalis. Mr. Brande exposed 100 grains of benzoin in a retort to a heat gradually raised to

redness. The products were

Benzoic acid 9‘0

Acidulous water 5-5

Butyraceous and empyreumatic oil . 60-0

Charcoal – 22-0

Carbureted hydrogen and carbonic

*acid gases 3*5*

2 K 2

lOO’O

500

CHEMISTRY.

1441. Storax is obtained from the styrax offi- cinalis, a tree which grows in the Levant, and some parts of Italy. It is brought to us in cakes, which are of a reddish-brown color, but soft to the touch. This is the most fragrant of aH the oalsams. It is soluble in alcohol; and, when dis- tilled by Neumann, nearly the same products were obtained as from benzoin.

1442. Dragon’s blood is said to be furnished by the calamus draco, the dracona draco, and the pterocarpus draco, trees which grow in the East Indies. Theie are two kinds of it, one in small oval drops, of a fine deep red, which become crimson when pounded. The other is in larger masses, some of which are pale, and some dark red. Alcohol dissolves the greatest part of it, forming a fine deep red solution, which stains marble, especially if it be heated. It also dissolves in oils, and conveys to them a deep red color. It melts by heat, inflames, and emits benzoic acid. When digested with lime a portion of it becomes soluble in water, and conveys to it a balsamic odor. Nitric acid de- taches benzoic acid, and converts the residue into artificial tannin. Sulphuric acid also converts it into artificial tannin, and evolves charcoal, amounting to forty eight per cent, of the dragon’s blood employed.

CAOUTCHOUC.

1443. This substance being much employed in rubbing out pencil

lines, and cleaning paper, is generally known in this country under the name of Indian rubber. It exudes, in the form of a milky juice, from punctures made in the havea caoutchouc, and the jatropha elastica, which grow in Brasil. It is also obtained from the ficus Indica, the artocarpus integrifolia, and the urceola elastica, in the East Indies. It may probably be obtained from several other trees. When the milky juice is exposed to the air, it gradually lets fall a concrete substance, which is caoutchouc. If chlorine be added to the juice, the deposition takes place immediately, and the chlorine loses its odor. If the milky juice be confined in a glass vessel with air, a skin of caoutchouc forms on its surface. This renders it probable that the for- mation of caoutchouc is effected by combination with oxygen.

1444. Caoutchouc is of a white color, without either taste or smell. The natives form it into bottles and other figures, by spreading the milky juice upon moulds of clay, and drying it in the smoke. This occasions the caoutchouc of com- merce to be of a dark color, as it is composed of alternate layers of caoutchouc and smoke. This substance is soft and pliable like leather. It is remarkably elastic, and can be drawn out to a great length, and recover its former figure if the force is removed. Its adhesion is such that it cannot be broken without a very considerable force. Mr. Gough of Manchester observed that when stretched its temperature is raised, and if it be then plunged into cold water it loses much of its contractile power and does not return to its former dimensions unless it be plunged into warm water or warmed in the hand. This is considered as a fine illustration of Dr. Black's theory of latent heat, and a proof that the elas-

ticity of caoutchouc, and the ductility of metals, are occasioned by the same cause, namely the latent heat they contain.

1445. Caoutchouc is insoluble in water, but if boiled some time it softens, and then if two pieces be applied to each other, and pressed, they adhere as if they were but one piece. In thi? way different pieces of caoutchouc may be sol- dered together, and made to assume any figure we please. This substance is insoluble in alco- hol ; but it is soluble in ether that has previously been washed with water. Alcohol precipitates caoutchouc from its etherial solution. After the ether is evaporated, the caoutchouc remains un- altered ; and this solution might be used like the original milky juice of the tree, for making var- nish, and utensils of various kinds of caoutchouc, were not the ether too expensive for ordinary purposes. The great Frederick king of Prussia had a pair of boots made of caoutchouc. A mould of wrought clay, the exact figure of his leg, was covered with etherial

solution of caout- chouc, laid on in alternate layers by a brush, until it acquired the proper thickness, after which the clay was knocked in pieces and taken out. Caoutchouc is also soluble in the volatile oils ; but after the oil is evaporated it never fully re- covers its former elasticity. Dr. Thomson ascer- tained that alkaline solutions take up a minute portion of caoutchouc. The acids scarcely act upon it, and the sulphuric only chars it exter- nally. Fabroni discovered that well rectified petroleum, or the volatile oil of coal, dissolves caoutchouc, and after the oil is evaporated, leaves it unaltered. We consider this to be a discovery of great importance, as it furnishes a cheap solvent of caoutchouc for converting it into varnish and various useful purposes, which has long been a desideratum in the arts. When heated it melts, but retains ever after the consistence of tar. It burns with a bright white flame, and in the countries where it abounds it is used as candles. It exists in a great variety of plants, but can only be profitably extracted from those in which it abounds. It is thought to be composed of carbon, hydrogen, azote, and oxygen. It is now employed to a considerable extent in rendering cloth and leather water-proof.

GUM RESINS.

1446. These substances have long been used in medicine, but they have not attracted much of the notice of chemists. They seem to be com- posed of extractive, and an oil approaching in its properties to a resin. They are usually solid, opaque, and brittle. They are inflammable, but do not melt by heat like the resins. Their smell is strong, and their taste often acrid. With water they form a milky solution ; with alcohol a trans- parent solution, which becomes milky on adding water. Like resins they dissolve in heated alka- line solutions, and Mr. Hatchett ascertained that sulphuric acid gradually converts them into char- coal and artificial tannin, as it does the resin. The principal of these substances which have been applied to use, are

1 447. Gulbanum, which is obtained from the bubon galbanum, a native plant of Africa. Its taste is strong, and smell peculiar. When dis-

tilled it yields about half its weight of volatile oil, which at first is of a blue color.

1448. Ammoniac is brought from the East In- dies, but its source is unknown in Europe. Its taste resembles that of galbanum, but its smell is more pleasant.

1449. Olibanum, is obtained from the junipe- rus lycta, a shrub which abounds chiefly in Arabia. It consists of yellow, transparent, and brittle masses, whose taste is bitter and nauseous, but when burnt it diffuses an agreeable smell. This is the frankincense of the ancients, and by many sects is still employed as an appendage of public worship.

1450. Asaftetida is obtained from the ferula asafoetida, a 'native plant of Persia. When the plant is about four years old, it is dug up, the roots cleaned, and, their extremities being cut off, there exudes a milky juice. Another portion of the root is then cut off, and more juice exudes, and this process is continued until the roots be exhausted. The juice hardens into brittle grains of different colors, whose taste is acrid and bitter, with a strong alliaceous and fetid smell. Dis- tilled with water or alcohol, it yields a volatile oil which possess all the active properties of asa- foetida, and is much used in medicine.

1451. Scammony is obtained from the roots of the convolvulus scammonia, a climbing plant of Syria. This substance is employed in medicine as a powerful cathartic.

1452. Gamboge or gamgutt, is obtained by wounding the shoots, or puncturing the bark, of the stulagmitis cambogioides, a tree which grows in various parts of India. It was first brought to Europe by the Dutch. Taken internally it ope- rates as a violent cathartic. It is partially soluble in water, and almost entirely in alcohol. It is of a fine yellow color, and is used as a paint, for coloring varnishes, and for staining marble.

1453. Myrrh, as we are informed by Mr. Bruce, is obtained from a genus of the mimosa, a plant which grows in Arabia and Abyssinia. It forms yellow tears, somewhat transparent when pure. Its taste is bitter and aromatic, its smell peculiar. It was much admired by the ancients, and is still much employed in medicine.

1454. Euphorbium is obtained from the eu- phorbia officinalis, from which it exudes in the form of milky juice, and is afterwards dried in the sun. It is reckoned poisonous. See, for further information on gum resins, MATERIA MEDICA.

COTTON.

1455. This product makes a conspicuous figure in the clothing of a great many civilised nations, and in this country a vast number of persons are constantly employed in its manu- facture. It envelopes the seeds of various plants, and the cotton of commerce is chiefly procured from different species of gossypium. Various plants, which yield cotton, grow wild within the tropics, and several species of them are cultivated in the East and West Indies. According to Mr. Bryan Edwards, those plants in the West Indies which yield the finest cotton, are what are called green seed cotton, from the color of their seeds. Of these there are two va-

rieties, distinguished by the ease and difficulty with which the cotton parts from the seeds. The cotton is enveloped in pods, which open when the seeds are ripe, and the cotton is separated from the seeds by means of rollers. ??? Cotton seems to be chiefly composed of carbon; but, as it has never been subjected to any precise chemical investigation, we shall not pretend to decide re- specting its component ingredients. For the methods of bleaching and dyeing cotton. See BLEACHING and DYEING.*

SUBEE.

1456. This consists of the outer bark of the quercus suber, or common cork. It is a light, spongy, and. elastic substance, and the trees which yield it grow in great abundance in Spain, and various countries not remote from the tropics. It dees not expand nor become sufficiently elastic for making corks, until after it has been partially burnt. It burns with a white bright flame, and leaves a light and bulky charcoal. By digestion, water and alcohol extract a yellowish solution from it; sulphuric acid chars it; and nitric acid converts it partly into suberic acid, partly into artificial tannin, partly into a substance resem- bling wax, and partly into a substance resem- bling starch. Fourcroy thinks the epidermis of all trees is a substance resembling cork.

WOOD.

1457. All plants contain more or less of what is called woody fibre. If plants be digested first in water and then in alcohol, until these solvents have taken up all the matters with which they can combine, there remains nothing but woody fibre. This consists of longitudinal fibres, easily separable into smaller fibres, and every plant exhibits cross sections peculiar to itself, and a particular arrangement of

fibres which would lead one to think that the woody fibres are bundles of regularly formed crystals. From this peculiar arrangement of the fibres, different species of wood can easily be distin- guished, even after they are petrified, and form parts of solid rocks. Woody fibre is not altered by water, alcohol, or exposure to the air. Weak alkaline solutions dissolve it, and it may be pre- cipitated from them by an acid without altera- tion. This property renders woody fibre capable of being extracted from other vegetable pro- ducts, few of which are soluble in weak alkaline, lees. Some of the acids char woody fibre, and it is converted into charcoal when heated to red- ness, without access of air. When charred by acids, it moulders down into a black powder. When charred by heat its fibres retain their original structure. Woody fibre constituting the bones of plants, it is generally understood that those trees which, after being charred, yield the greatest weight of charcoal compared with the original weight of the wood, form the most durable and least destructive timber. But an ex- periment of Proust seems to contradict this ge- nerally received opinion ; though in making such experiments it is hardly possible to be accurate. He took 1-00 of different trees, and found the weight of charcoal they yielded to be as follows :

Black ash Guaiacum Pine . . Green oak Heart of oak Wild ash . White ash

0-25 0-24 0-20 0-20 0-10 0-17 0-17

The woody fibre has recently been termed lignin- Its analysis gives,

Carbon . . . 53‘86

Oxygen . . . 41.02

5-12

100-00

Its atomic constitution being so near the ele- ments of acetic acid, that ‘ if deprived of 1 atom water, and three atoms of carbon, the other ele- ments would be convertible into that acid.’

The following principles have recently been detected in different vegetable substances.

1458. Polychroite is a name given by Bouillon and others, to the extract of saffron. It is of a deep yellow color, has a bitter taste, an agree- able smell, and is deliquescent. It loses its color by exposure to light and chlorine. Sul- phuric acid renders it blue, and nitric acid green. This principle unites with potassa, with lime, and with baryta. Its solutions in baryta and lime occasion yellow precipitates. It is precipitated of a dark brown color by sulphate of iron, nitrate of mercury separates a red, and subacetate of lead, a yellow precipitate. This variety of product as to color, has of course given rise to the name of the principle.

1459. Nicotin. ††† Vauquelin first separated this principle from tobacco. It is colorless, soluble in water, acrid, possesses the peculiar smell of tobacco, and is poisonously active upon life.

1460. Pollenin. ††† Professor John was the first to trace this principle in the pollen of tulips. It was at first supposed to be mere albumen. This has a yellow color, but is without taste or smell. Upon exposure to air it undergoes a sort of putrefaction, and acquires the smell of cheese. It is exceedingly combustible. The pollen of the lycopodium clavatum is said to be in frequent use at the theatres for the imitation of lightning, from the rapidity with which it inflames and burns.

1461. Lupulin ††† Dr. Ives has given this name to a yellow powder which is obtained by beat- ing and sifting the hop. It is said to be peculiar to the female plant. ‘ In preserving beer from the acetous fermentation, and in communicating an agreeable flavor to it, lupulin was found to be equivalent to ten times its weight of hop leaves. It is itself a compound substance, con- sisting of tan, extract, a bitter principle, wax, resin, and lignin. If analysed by the methods of Pelletier and Caventon it is not improbable that an ingredient might be discovered in the hop of an alkaline nature, in which its narcotic vir- tue would be found to reside.’ See Ann. of Phil. N. S. i. 194. Henry.

1462. Cathartine.••• This is a principle obtained from the senna leaves by Lassaigne. It is said to be a powerful cathartic in exceedingly small

doses. It is described as of a reddish color, soluble in water and alcohol, but not in ether ; its taste is peculiarly nauseous and bitter.

1463. Colycyntine. ••• Vauquelin proposes this designation for a yellow bitter substance, ob- tained from an alcoholic solution of colocynth, which appears to him to be a peculiar principle. Active and peculiar principles are also saia to reside in rhubarb and jalap. See Quarterly Journal, xvi. and xvii.

1464. Emetin. ••• A principle obtained by Pelle- tier and Dumas from Ipecacuan, of an acrid and bitter taste and highly emetic.

1465. Hcematin is the coloring principle of the hcematoxylon or logwood.

1466. Pipeline has been obtained from black pepper.

1467. Olivile from the olive tree, and

1468. Medullin is a name given to the pith of the sun flower, a principle which i s described as destitute of taste and smell, insoluble in water, alcohol, and oils, but soluble in nitric aeid, which converts it into oxalic acid ; and, when decom- posed by destructive distillation, it leaves char- coal, having a metallic lustre like bronze. The product of destructive distillation also abounds in ammonia.

1469. Many of these principles (which are daily multiplying, and which probably may be added to, before the pages we are now penning are out of the press), will be reverted to under the heads of MATERIA MEDICA, and PHARMACY, and the modes in which they are obtained wil. be more particularly described.

COMPOUNDS OF VEGETABLE ACIDS.

Previously to speaking of fermentation, we present the following brief enumeration of the compounds of vegetable acids, some of these have previously been slightly adverted to, and a more ample description of most of them will be found under MATERIA MEDICA, and PHAR- MACY.

1470. Acetate of potassa may be prepared by saturating acid with

the alkali. This is a very deliquescent salt, and extremely soluble.

1471. Acetate of soda may be formed either by mixing acetate of lime and crystallised sul- phate of soda, or by direct union of the soda with the acetic acid. This is a crystalline salt, requiring about three times its weight of cold water for solution.

1478. Acetate of ammonia. ††† The crystals of this salt when they are obtained, are exceed- ingly deliquescent. Acetate of ammonia has been long and extensively used in medicine ; it was formerly called spirit of Mindererus.

1479. Acetate of lime.††† This is a very soluble salt, both in water and alcohol.

1480. Acetate of baryta, of strontia, mag- nesia, and alumina are all capable of being formed. The last is a compound of some im- portance from its use in calico printing and dye- ing. See DYEING. For the modes of prepara- tion of such of those compounds as are used in medicine consult the article PHARMACY.

1481. Tartaric acid combines with potassa, to form a salt, formerly called soluble tartar. The proportions of this salt are stated, as

Tartaric acid Potassa

57-90 42-10

100-00

1482. Bi-tartrateq.fpotassa or super-tartrate as its name implies, is a combination of the tartaric acid with potassa in a larger proportion. The crystals, which when powdered, are vulgarly called cream of tartar, are a bi-tartrate of po- tassa.

1483. Tartrate of potassa and soda may be formed by mixing twenty-four of cream of tar- tar with eighteen parts of carbonate of soda. This is the much famed rochelle salts of the shops.

1484. Tartrate of soda is formed by saturating tartaric acid with carbonate of soda. By adding another proportional of the tartaric acid we form a bi-tartrate.

1485. Tartrate of ammonia may likewise be converted into a bi-tartrate.

1486. Tartrate of lime is formed iti the pro- cess of preparing tartaric acid by the addition of carbonate of lime to a solution of bi-tartrate of potassa.

1487. Baryta, strontia, magnesia, and alumina, may all be formed into tartrates by the acid. Most of the metals too, are susceptible of this combination.

1488. Citrates.††† The fixed and volatile alka- lies, baryta, magnesia, and lime, among the earths ; or metallic oxides, and zinc, iron, cop- per, and lead among the metals, have all been made to unite with the citric acid so as to form citrates.

1489. Malates or combinations of the malic acid with potassa, soda, lime, baryta, strontia, magnesia, and alumina, have been formed and investigated as well as those of iron and lead.

1490. Benzole acid has been made to combine so as to form benzoates with ammonia, potassa, soda, lime, baryta, strontia, magnesia, alumina, as well as with iron, lead, copper, zinc, man-ganese, &c.

1491. Succinates have been investigated of ammonia, potassa, soda, baryta, strontia, mag- nesia, alumina, lead, iron, and manganese.

1492. Oxalate of potassa. ††† This combination of oxalic acid and potassa if dissolved in oxalic acid produces a binoxalate, and if this again be digested in diluted nitric acid a quadroxalate is formed ; the salt which is thus formed exists in the juice of the wood-sorrel, and when it is ob- tained from that vegetable it is denominated salt of sorrel or essential salt of lemons.

1493. Oxalate of soda. ††† This salt nearly re- sembles in taste the oxalate of potassa, it exists in small grains; oxalate of soda may exists in binox- alate but not in quadroxalate proportions.

1494. Oxalate of ammonia. ††† This salt crystal- lises in long transparent prisms. This salt is of great use in the detection of lime, as it throws it down from almost all its combinations. There may be formed a super or bi-oxalate o” ammo- nia.*

1495. Oxalate of lime. ††† This compound is procured by adding either oxalic acid or oxa- late of ammonia to any solution of lime. It

is insoluble in excess of oxalic icid.

1496. The oxalates of strontia, baryta, and magnesia, are nearly insoluble.

1497. Oxalate of alumina is soluble in oxalic acid.

1498. If manganese, in a state of oxide, be di- gested with oxalic acid, carbonic acid is evolved, and the manganese reduced to a state of deutox- ide unites with the oxalic acid. This, after a time, becomes colorless, and a triple salt is formed con- taining the protoxide of manganese.

1499 Many beside of the metals combine into oxalates with the oxalic acid.

FERMENTATION.

1500. We now proceed to treat of the prin- cipal products of fermentation, or of that decom- position which vegetables undergo when placed in circumstances favorable to the change. Fer- mentation has been divided into the vinous, ace- tous, and putrefactive ; it is to the first however that we shall confine ourselves in the present in- stance ; since the product of the second, vinegar or acetous acid, has already been noticed, and the putrefactive change or decomposition of bodies is not with strict propriety ranked among the phe- nomena of fermentation. See DISTILLATION.

VINOUS FERMENTATION.

1501. This is also called the spirituous fermen- tation, because it produces wine, from which spi- rits may be obtained by distillation. This process must have been known at a very early period, for we read in the book of Genesis that Noah planted a vineyard, and got drunk with the wine it produced; which seems to indicate that the vinous fermentation was known long before the time of Noah. To bring on this fermentation three things are necessary : 1. A certain propor- tion of saccharine matter, or sugar. 2. Water, for if the materials be dry, sugar continues un- altered. 3. A temperature from 60°° to 70°°. The juice of the grape, which is commonly called must, ferments of itself at a temperature approaching to 70°°, and hence wine must have been early discovered in the warm climates, where they probably used the expressed juice of the grape, or of other fruits, as drink to quench their thirst. To make the fermentation succeed well, a large body of the liquor is convenient, because small quantities are apt to run into the acetous

fermentation. In must, besides sugar, there is a portion of gluten, of jelly, and of tartar. It seems to be the gluten which con- veys the disposition towards spontaneous fer- mentation. The juices of all berries which contain sugar, such as gooseberries, raspber- ries, strawberries, elderberries, currants, &c. &c. likewise the expressed juices of many fruits, such as apples, pears, &c. &c., the juices of many trees, such as the birch, the sugar maple, &c. &c. ferment spontaneously, and produce wine. The juice of the sugar-cane also ferments spontaneously, and from its wine, rum is ex- tracted by distillation. If the juices of fruits or of berries contain too little sugar, it is necessary to supply the deficiency by adding more. If they contain too much, and appear viscid, water must be added, or fermentation will not take place, or it will go on very slowly. See WINE.

1502. Beer is fermented from the seeds of plants, after they have been converted into a sac- charine substance by the process of germination or malting. See MALT and MALTING. Almost every species of corn has been employed for this purpose. In India they use rice ; and Mr. Mungo Park informs us, that in the interior of Africa they make beer from the holcus spicatus.

1504. But in the making of the wash used by distillers, which is a species of beer, a different plan is followed out. They apply a much greater proportion of yeast, and push the fer- mentation until all the saccharine be exhausted. They well know that if any sugar remains in their liquor undecomposed, it is lost to them, and yields no spirit. Another circumstance de-

Our ancestors used honey and various herbs to serves attention respecting the distillers. They

produce an intoxicating liquor, to which they

gave the name of mead. In modern Europe,

barley is the grain universally used for making

beer, and it is commonly malted before it is ap- vary their proportions of these ingredients, from

plied to this purpose; though in some cases a three to eight or ten

measures of raw grain to

proportion of raw grain is employed. The Greeks one of malt, according to the quality of the grain

find that a large proportion of raw grain, mixed with a small proportion of malt, yields more spi- rit than if they operated upon malt alone. They

ascribed the invention of beer to the ancient Egyptians.

1503. The extract of malt does not readily

and of the malt. These being hashed, or bruised into coarse meal, are thrown into their mashing tun, and, after the hot water is let in upon them,

ferment of itself, even though the temperature be are violently agitated in order to produce a com- plete incorporation with the liquid. The conse- quence is that a wort, or as they call it wash, is produced more highly saccharine than if the

favorable ; or it ferments very slowly ; or is apt to run into the acetous" or the putrefactive fermen- tations. To excite the vinous fermentation, a

proportion of yeast is always added to the extract, whole material operated upon had consisted of

or wort. Yeast is ascertained to consist chiefly

of gluten in a particular state, with a quantity of

carbonic acid gas entangled in its viscid substance.

Though the vinous fermentation has been excited

by impregnating the liquor with carbonic acid

malt.

1505. The phenomena attending the vinous fermentation, are a violent agitation in the liquor. It becomes thick and muddy, and throws a volu- minous frothy matter to the surface. Much car-

gas, it does not appear that yeast owes its proper- bonic acid gas escapes. The agitation and in-

*.! ❖❖❖ ❖❖. ❖❖!.: on._ u_i f ❖❖❖❖❖_:. i i crease of bulk of the liquor, seem to be owingto

the production and escape of this gas ; and the agitation produced by the escape of this gas, seems to bring all the substances dissolved in the liquor into chemical contact, so that they can mutually decompose each other. Access of air

ties to this gas. The bakers of Paris have long been accustomed to bring their yeast from Flan- ders, and, to save carriage, they squeeze the juice through bags and convey it in a dry form. In addition to this, Sir John Dalrymple dried yeast in rooms heated to a high temperature by stoves,

after it had been previously squeezed in bags of is not necessary to the vinous fermentation ; but

cloth. His yeast appeared in the form of a dry powder, yet, after being moistened with water, it excited the vinous fermentation, after being con- veyed to London, to the West Indies, and to several remote parts of the world. By his pro- cess, at least, no doubt can be entertained, but all the carbonic acid gas that previously existed

there must be sufficient opening to allow the car- bonic acid gas to escape ; otherwise the process will not commence, or will be wholly checked ; as it is only by the agitation of the liquor, in con- sequence of the escape of this gas, that the ingre- dients are brought to act upon each other. The carbonic acid in its escape carries off a consider-

in the yeast, was completely expelled. Yet soon able portion of the spirit already formed, and also after it was moistened it began to froth, and to of the unchanged liquor. It might, perhaps, be emit carbonic acid gas as it did when fresh. It

seems then that we are still unacquainted with the properties of yeast, and indeed are much in the dark with regard to the most ordinary pro- cesses which are going around us. But yeast bears a strong resemblance to the gluten in must, and the expressed juices of fruits. When this is extracted from them, they will not ferment unless it be restored. Sugar, though it be dissolved in water, will not ferment, but if mixed with the juices of fruits or berries, or with yeast, it fer- ments rapidly. The yeast, with a considerable addition of new yeast evolved from the ferment- ing mass, rises to the surface of the liquor, where it forms a frothy turbid scum. In the making of

beer, the object is not to push the fermentation until all the saccharine matter be decomposed, but to moderate its violence, and to check it in due time. For this purpose a certain quantity of hops is boiled with the wort before it is set to ferment. The essential oil of the hops conveys an agreeable flavor to the beer, and their bitter checks the violence of the fermentation, and pre- vents the liquor from running into the acetous or putrid fermentations. See BEER and BREWERY.

possible to conduct the carbonic acid through spaces where it might deposit its spirit, so that distillers might gain as much, or at least much better spirits from their fermenting tuns, than they obtain from their stills. During the fermen- tation, a considerable increase of temperature takes place, which varies according to circum- stances.

1506. When the process is finished, which requires longer or shorter time, according to the temperature of the weather, and other circum- stances, the liquor is no longer muddy but tran- sparent. Its specific gravity is considerably dimi- nished. It has no longer a sweet, but a vinous taste, and conveys a sensation of heat to the pa- late. Boerhaave was the first person who attended to the phenomena of fermentation; and Lavoisier has shown that during the process there is a mutual decomposition of sugar and water, by which alcohol, or ardent spirit, is pro- duced. Chaptal has also shown that in the fer- mentation of wine, a portion of the tartaric acid is decomposed, and converted into malic acid; and that, during the process, a quantity of azotic gas is evolved. From what source this gas

arises we are at a loss to decide. Sugar is not known to contain any of it ; and the experiments of Lavoisier lead us to conclude, that the pro- duction of spirit ceases, and the vinous fermen- tation stops, when all the sugar in the liquor is decomposed. -,,,,

OF ALCOHOL.

1507. Alcohol is an Arabic word, and it means the spirit, being the first product that was ob- tained after distillation was invented. It is also called spirit of wine, because it is obtained by distilling wine, beer, and other fermented liquors. We are informed in Holy Writ that Noah planted a vineyard and drank wine ; and it is probable the preparation of this liquor was discovered in very early times. Beer

seems to have been used by the Egyptians in the time of Herodotus, and Tacitus informs us it was the drink of the an- cient Germans. Though the Greeks and Ro- mans knew the use of wine, it does not appear from their writings that they were acquainted with distilled or ardent spirits. The northern nations of Europe knew intoxicating liquors from the earliest ages, and they seem to have chiefly used beer or mead, mixed with bitter and aromatic herbs. See SPIRIT OF WINF.

1508. At what time the distillation of ardent spirits from fermented liquors was first invented, is not certainly known, though it would seem that this art was long practised among the Hin- doos and other eastern nations, before it was known to the Arabians, or through them was adopted in Europe.

1509. When any fermented liquor is distilled, the first part that comes over is ardent spirits. These products are known by different names, according to the substance from which they are obtained. Thus brandy is distilled from wine, rum from the fermented juice of the sugar cane, whisky and gin from the fermented infusion of malt and grain. But, whatever name may be given to ardent spirits, they all consist of nearly three ingredients, namely, water, spirit or alcohol, and a little oil or resin, to which they owe their flavor and color.

1510. When the product of the first distilla- tion is distilled a second time, the portion which comes first over, being a more pure spirit than before, is called rectified spirits, and is sold under the name of alcohol, or spirit of wine. It still, however, contains a portion of water, if not also of oil, from which it may be separated by the following process.

1511. A quantity of highly rectified spirit is mixed with a portion of very dry and warm salt of tartar, or carbonate of potassa, which has a strong affinity for water and oil, but does not combine with pure spirit. Being agitated, the potassa combines with the water, and sinks with it to the bottom of the vessel, while the spirit float1? at top. The spirit may then be decanted off, or drawn off by a siphon ; or the solution of water and potassa may be drawn by a stop-cock through the bottom of the vessel. The alcohol thus obtained may be separated from any minute portion of alkali it may contain, by a very slow distillation from a water-bath. The spirit passes over and leaves the potassa behind ; but it is proper not to continue the distillation to dryness,

lest water and oil may be forced over from the remnant of potassa. This process was first men- tioned by Sully, and by its means alcohol is ob- tained in its highest state of purity. Arnold de Villa Nova, professor of medicine at Montpelier, first formed tinctures and introduced them into medicine by the use of alcohol ; and he seems first to have accurately described this liquid about the end of the thirteenth century.

1512. Alcohol thus prepared and purified is a light, colorless, and transparent liquid, of a penetrating and agreeable smell, and of a warm, stimulating, and acrid taste. It intoxicates much more powerfully than wine, or any other fer- mented liquor. Its specific gravity, when nearly pure, is 0'800, but at the temperature of 60►► it is seldom obtained above 0-820, and the alcohol of commerce, which is only rectified spirits, is seldom under 0-8371. Muschenbroeck, by means of salt of tartar, obtained it as low as 0-815, but in general, what is obtained by that process is seldom under 0-821.

1513. Dr. Black, by repeated distillations from muriate of lime, obtained alcohol, as low as 0 800. Lowitz of Petersburgh, and Richter, by following the same plan, obtained alcohol of a still lower specific gravity than Dr. Black. The latter chemist having exposed muriate of lime to a red heat, reduced it to powder, and put it into a retort while yet warm. He then poured upon it, at different intervals, a quantity of alcohol which had been purified to 0-821, nearly equal to the weight of the salt. A violent heat was produced, and the retort being put upon a sand- bath, and receiver adjusted, the liquid was made to boil. The salt was soon dissolved, and formed with the alcohol a thick solution. What had come over into the receiver was now poured back, and the whole distilled with a very gentle boiling nearly to dryness. The alcohol thus ob- tained was of the specific gravity of 0-792, at the temperature of 68►►. By a similar process, Lowitz obtained alcohol of the specific gravity 0-791 at the temperature of 68►►. These may be considered as the purest, states of alcohol, as there are no means known by which it can be deprived of more water. But, as the last portions of water seem to adhere to it with great force, it may possibly still contain some water. The specific gravity of alcohol is diminished in proportion as it is deprived of water ; and it increases in pro- portion as water is added to it. Hence the spe- cific gravity of this liquid is regarded as a standard of its purity.

1514. Alcohol has never been known to con- geal with the most intense cold that can be ap- plied. Mr. Walker cooled a spirit of wine

thermometer to ††† 91††, without any appearance of congelation. It is also very volatile. Fahren- heit found that alcohol, which at the tempera- ture of 60†† was about 0-820 of the specific gravity boiled at 176†† of temperature. When of 0‘80C specific gravity, it boils at 173ˆ††. In vacuo it boils at 56††, so that, were it not for the pressure of the atmosphere, this fluid would always be iu the form of a gas, transparent and invisible like common air.

1515. It is owing to its superior volatility tha alcohol, or spirit, separates from the watery mass in the process of distillation. If managed with

skill and attention, it is of no consequence whether the process of distillation be conducted rapidly or slowly. However violent the heat may be which is applied externally to the still, the in- ternal heat can never be greater than the vapo- rific point of the liquor. Each of the ingredients will come over in the order of its volatility, and it is only necessary to be more exact in turn- ing aside the last portions, which consist of spirit combined with oils. By attention to this cir- cumstance the Scotch distillers, who charge and run a still in less than five minutes, can make better spirits than formerly, when it required a week or a fortnight to run a still.

1516. Alcohol combines with water in all pro- portions ; and as there is a mutual penetration of the liquids, and a variation of the specific gra- vity of the mixture by every variation of the proportions, the specific gravity of the various compounds of alcohol and water cannot be de- duced by calculations from medium observations, but must be ascertained by experiment in each individual case. Lowitz, as above stated, having purified alcohol to 791 of specific gravity, at temperature 68††, preceded to ascertain the spe- cific gravity of various mixtures of this highly rectified alcohol with different proportions of water. The importance of this object for reve- nue and commerce, induced the British govern- ment to employ Sir Charles Blagden to execute a very minute series of experiments on this sub- ject, which were published in the Philosophical Transaction, 1 790 ; and the result of these were exhibited by Gilpin, in the same work, 1794, in a set of tables. The standard alcohol em- ployed at temperature 60†† was 0-825 of specific gravity, of which, according to Mr. Gilpin, 100 parts contained 4‘5 of water ; but according to Lowitz’s experiments, it must have contained

89 pure alcohol, 11 water.

100

1517. For an account of the hydrometer used to determine the strength of alcohol, and for several other particulars relating to this subject, the reader is referred to the article ALCOHOL, taken principally from Dr. lire's Dictionary.

1518. Alcohol is not altered by air or oxygen ga? at a moderate temperature ; but when kindled it I mrns in them with great violence, and leaves no residuum. Boerhaave first observed that the condensed vapor of burning alOehol consisted of water; and Dr. Black ascertained that the weight of this water exceeded that of the alcohol con- sumed. Lavoisier found that the weight of the water exceeded that of the alcohol, by about one- seventh part ; from which he inferred that hydro- gen formed a considerable constituent of alcohol. Dr. Ingenhousz first observed, that if the vapor of alcohol be mixed with a due proportion of oxygen gas, and fired by a lighted taper, or by the electric spark, it detonates with violence, and the products are water and carbonic acid.

1519. When assisted by heat, alcohol dis- bolves a little phosphorus ; and when this solution is dropped into a glass of water, in the dark, a beautiful jet of flame rises above the surface,

which is owing to sulphureted hydrogen gas escaping from the water. Alcohol hardly com- bines with sulphur except when the two bodies are mixed in a state of vapor. This is done by placing a phial containing alcohol in the bot- tom of a large glass cucurbite surrounded by flowers of sulphur. A head being adjusted, and the heat of a sand-bath applied, both bodies rise in vapor at once, and form a red liquor in the head of the cucurbite. Water precipitates the sulphur from this combination. Very strong al- cohol dissolves a little sulphur if digested upon its flowers some time, especially if assisted by heat ; and the quantity dissolved is in proportion to the strength of the alcohol.

1520. Alcohol dissolves the fixed alkalis very readily, forming an acrid reddish colored liquor, which was formerly called the acrid tincture of tartar. This liquor may be distilled over, though it is partly decomposed during the process. It is only by solution in alcohol that these alkalis can be obtained in a state of purity. Ammonia also dissolves in alcohol, with the assistance of a moderate heat ; but a greater heat expels the al- kali in the form of gas, with

some of the alcohol in union with it.

1521. Of the earths, alcohol ouly acts on strontia and baryta. It absorbs its own weight of nitrous gas. The sulphuric and nitric acids, and also chlorine, decompose alcohol. It dissolves all the other acids except the metallic, phospho- ric, and prussic acids.

1522. Alcohol dissolves a great variety of sa- line substances, and hence proves a. valuable in- strument in the hands of the chemist, not only for obtaining the alkalis in a state of purity, but for separating salts from each other, and from other bodies, with a view to investigate their properties. For this purpose tables have been constructed, exhibiting the proportions of the several salts that are soluble in alcohol, with the temperature at which the solution takes place ; and also the salts that are not soluble at any temperature. Such tables are highly useful for assisting the investigations of the chemist; they will be found in the article ALCOHOL, to which we have already referred.

1523. When the solutions of salts in alcohol are set on fire, the flame varies in color according to the salt : and this property might be improved into a test of the genus of salt held in solution. Thus the flame from solution of nitrate of stron- tia is purple; that from the cupreous salts is green; that from muriate of lime is of a red color, 8cc.

1524. Various opinions have been entertained concerning the composition of alcohol. Formerly it was supposed to be phlogiston combined with water by means of an acid, or phlogiston com bined with water alone. Lavoisier endeavoured to solve this problem by burning alcohol in a lamp, in a close vessel over mercury, to which was introduced through a pipe, a regulated quan- tity of oxygen gas, to support the combustion. The products were carbonic acid gas and water, the amount of which being ascertained, and com- pared with that of the alcohol and oxygen gas consumed, he calculated that 76-7083 grains of alcohol consumed, were composed of

22-840 carbon, Proportion of Spiri-

6-030 hydrogen, , Port ˆ .~SZ

*ˆ***830 water. *** Ditto : : : : : ; ; : : : **8*

7fi-nf. Ditto 23-71

76 7□□□□ Ditto ... , 23-39

1525. Subsequent experiments nave been Ditto □□□ 22‘30 made on the composition of alcohol; and the Ditto . 21-40 most satisfactory, according to Mr. Brande’s Ditto 19-00 statement, are those of Saussure, as quoted by ‘ Average ‘. 22-96 Dr. Thomson. Saussure passed alcohol through S.Madeira ‘ 24-42 a red hot tube made of porcelain, and terminal- Ditto 23-93 ing in a glass tube six feet long, and surrounded Ditto (Sercial) . ‘. 21-40 by ice ; all the products were carefully weighed. Ditto . 19-24 The result of this analysis was, that 100 parts of ‘Average ‘ 2227 pure alcohol consist of 6. Currant wine ‘. ‘. 20-55

Hydrogen . . x3‘70 7. Sherry 19-81

Carbon . . . 51-98 Ditto 19-83

Oxygen . ... 34-32 Ditto 18-79

Ditto 18.25

100-00 Average . . 19-17

These numbers approach to 3 proportionals of 8. Teneriffe 19.79

hydrogen rr 3; 2 of carbon □□□ 11-4; and 1 of 9. Colares 19-75

oxygen □□□ 7-5; or it may be regarded as com- 10- Lachryma Chrtsti 19-70

posed of 11- Constantia, white 19-75

Olefiant gas . . 61-63 12. Ditto, red 18-92

Water . . . 38-37 13□□ Lisbon 18-94

14. Malaga . □□□ 18-94

100-00 15. Bucellas 18-49

1526. If we consider it as composed of 1 volume 16. Red Madeira 22-30

of olefiant gas, and 1 volume of the vapor of water, ltto □□□ □□□ □□□ □□□ □□□ □□□

the 2 volumes being condensed into one, the n , Average . . 1

*specific gravity of the vapor of alcohol, compared \7′ ˆape ***chat***

with common air, will be 1-599, or, according 18. Cape Madeira 22-94

to Gay Lussac, 1-613. ˆ!tto 20-50

*Mr. Brande, from whom we have extracted 3 *** *** *** *** *** 18’n*

xhe above, some time since made some experi- . Average . . 20-51

ments on alcohol, in order to determine the agi- 19- ˆrfPe wme

*tated and interesting question, whether the 20′ Cwwdk *** ;*

*alcohol which distillation elicits existed before- * 18-10*

hand in the fermented liquors, or whether it is . Average . .

actually formed by the process of distillation. JJ’ ;, nu

*These experiments are related in the Philosophi- ****** - JJba Flora 17‘26*

cal Transactions for 1811 and 1813, and they 23- Ma aga,

seem to prove that, in the language of Mr. B., 24. White hermitage 17-4:

*** alcohol is a real educt, and not formed by the 25- Rousillon 19‘0(*

action of heat upon the elements existing in the Ditto .

fermented liquor.’ He has proved, indeed, that p Average . .

‘ alcohol may be obtained from fermented liquors 26> tl!aret

without the intervention of heat, by processes in 3

which nothing more can be effected than the ˆ!tto

separation of water.’ Ultto

1527. We shall take the liberty of extracting Average . . 15-10

the following table from the Manual of Chemis- 27> f?n,te ❓❓❓ ❓❓❓ ❓❓❓ ❓❓❓ – ❓❓❓ ❓❓❓ ❓❓❓ ❓❓❓ 17<05

try, showing the different proportions of spirit, 28′ Malmsey Madeira 16-4O

&c, existing in different kinds of fermented 29′ LLunel 15”52

liquors. 30. Sheraaz 15-52

Proportion of Spirit 31. Syracuse 15-28

*per cent, by measure. 32. Sauterne . 14*22*

1- Lissa 26-47 33. Burgundy 16-60

Ditto 24-35 Ditto 15-22

Average . . 25‘41 Ditto . 14‘53

2. Raisin wine 26-40 Ditto 11-95

Ditto 2;>-77 Average . . 14-57

Ditto 23-20 34. Hock . . 14-37

Average . . 25-12 Ditto 13-00

3. Marsala 26-03 Ditto (old in cask) 8-88

Ditto 25-05 Average . . 12-08

Average . . 25‘09 35. Nice 14-63

Proportion of Spirit per cent, by measure.

36. Barsac 13‘86

37. Tent 13-30

38. Champagne (still; 13-80

Ditto (sparkling) 12-80

Ditto (red) 12‘56

Ditto (ditto) 11-30

Average . . 12-61

39. Red hermitage 12-32

40. Vin de Grave 13-94

Ditto 12-80

Average . . 13-37

41. Frontignac (Rivesalte) .... 12‘79

42. Cote Rotie 12‘32

43. Gooseberry wine 11-84

44. Orange wine ??? average of six samples

made by a London manufacturer . 11-26

45. Tokay 9‘88

46. Elder wine , . > 8‘79

47. Cider, highest average 9‘87

Ditto, lowest ditto 5-21

48. Perry, average of four samples . . 7‘26

*49. Mead . . . * 7-32*

50. Ale (Burton) 8‘88

Ditto (Edinburgh) 6-20

Ditto (Dorchester) , 5-56

Average . . 6-87

51. Brown Stout 6‘80

52. London Porter (average) .... 4 '20

*53. Ditto small beer (average) ... 1*28*

54. Brandy 53'39

55. Rum 53-68

56. Gin 51-60

57. Scotch Whiskey 54'32

58. Irish ditto 53-90

ETHER.

1528. This liquid is alcohol decomposed, and converted into a volatile fragrant substance by the action of acids, assisted by heat. The proper- ties of ether are somewhat different according to the acid employed in its preparation, and it is hence distinguished into sulphuric ether, nitric ether, muriatic ether, &c.

SULPHURIC ETHER.

1529. Sulphuric ether is thus prepared : ??? Equal parts of alcohol and sulphuric acid are mixed and put into a retort, to which a large receiver is luted, and surrounded with ice, or the coldest water that can be procured. A gradual heat is applied to the retort, and, when the mix- ture boils, ether comes over and trickles down the sides of the receiver. When the product is equal to the half of the alcohol employed, the process must be stopped.

1530. This ether contains a portion of sulphu- rous acid, which may be separated by distilling it a second time, with a very moderate heat, from a little potassa. Mr. Dide recommends, as a more perfect purification, digesting, and after- wards distilling it from black oxide of mangan- ese in powder. The sulphurous is converted into the sulphuric acid, and combines with the manganese, and the ether should be distilled by the heat of a water-bath. Another process, and which is reckoned the best, was employed by Mr. Wolfe. A bottle, being three-fourths filled

with the impure ether, and a little water and slaked lime added, is violently agitated, and kept some time in water before taking out the cork. If still the smell of the acid remain, more lime must be added, and the bottle agitated as before. The acid combines with the lime,

and the mixture being allowed to settle, the ether is drawn off by a syphon, and distilled by a very gentle heat as before. This is called the rectifi- cation of ether.

1531. This ether still contains a portion of alcohol in its composition, and is seldom lighter than 0-775. Mr. Lowitz separated a great part of the alcohol by throwing in dry powdered salt of tartar, or dry powdered muriate of lime, in small portions, as long as the alcohol continued to dissolve these salts. The alcohol formed a liquid solution at bottom, while the ether swam at top. Its specific gravity was now only 0-746, after being treated with the salt of tartar, and 0-632 with the muriate of lime, at the tempera- ture of 60►►. This ether contained a small portion of the salts that had been mixed with it, from which it might be separated by distillation ; but this causes much of it to assume the gaseous form. The common method of separating the alcohol from rectified ether is by mixing, and afterwards distilling it from water, which is not so effectual as the process of Mr. Lowitz.

1532. Ether thus obtained is a light colorless liquid, of a very fragrant smell, and a hot pun- gent taste. It is so volatile that it cannot be poured from one vessel to another, without a considerable portion being evaporated. When poured on a table it quickly evaporates, and so much cold is generated by the evaporation, that if a phial filled with water be covered with a cloth, and dipped twice or thrice in ether, and exposed to the air, the water will be frozen. Ether boils at 98►► in the open air, and at 20►► below 0 in vacuo. Hence, were it not for the pressure of the atmosphere, this substance would always exist in the form of a gas. It speedily assumes the gaseous form in the open air. When exposed to a. cold of 46►►, it freezes and crystallises.

1533. Ether is a highly inflammable sub- stance, and when kindled in contact with oxygen gas, or common air, it rapidly burns with a fine white flame, leaving behind some traces of char- coal and of sulphuric acid. During combustion, carbonic acid gas is generated.

1534. Dr. Priestley observed that if ether be thrown in among any gaseous body, standing over mercury, it always doubles the bulk of the gas. If oxygen gas be expanded by ether, and kindled, it burns slowly, but without explosion. But Mr. Cruickshanks observed, that if one part in bulk of this mixed gas be added to three parts of pure oxygen gas, and kindled by a taper, or the electric spark, a very loud explosion takes place, and the products are water, and 2J parts of carbonic acid. He ascertained that one part of the vapor of ether

requires 6-8 parts of oxy- gen gas to consume it completely, and from the relative proportions of the products he infers that the carbon contained in ether is to its hydro- gen as five to one.

1535. Dr. Ingenhousz discovered that if one

drop of ether be thrown into a bottle, for every ten inches of air it contains, it detonates on ap- plying a lighted taper. The same method suc- ceeds with oxygen gas; but, when too much ether is added, it burns slowly without detonation.

1536. When the vapor of ether is passed through a red hot porcelain tube, it is wholly decomposed, and a great quantity of carbureted hydrogen gas is produced.

1537. Ten parts of water only take up one part of ether, but this fluid combines with alco- hol in all proportions. Ether dissolves a small proportion of phosphorus, but the addition of a little alcohol renders it milky; and by this we may discover whether ether be adulterated with alcohol. Twelve parts of ether dissolve one of sulphur, when long digested on flowers of sul- phur in a cold state. The solution is colorless, and has the taste and smell of sulphureted hydro- gen. Ether also combines with sulphur when they are brought to act upon each other in the state of vapor. Upon the other simple combus- tibles it is not known to act.

1538. Ether does not act upon metals, but it revives gold and silver when dropped into their solutions. It dissolves muriate of gold, and the chloride of mercury. It absorbs nitrous gas in great quantity.

1539. Sulphuric acid converts ether into a peculiar oil, called the sweet oil of wine, and this oil is also formed during the process by which ether is made, and comes over if the dis- tillation be continued. If a small quantity of ether, or a paper dipped in ether, be introduced into a bottle filled with chlorine gas, from which water has been abstracted, it first produces a white vapor, and then explodes and inflames spontaneously. A considerable quantity of char- coal is deposited, and carbonic acid gas is formed. The action of the other acids upon ether has not been minutely examined.

1540. Ether dissolves the fixed and volatile oils, resins, and the fluid bitumens; but it does not act upon gums.

1541. Much difference of opinion has been entertained respecting the composition of ether. Macquer supposed it to be alcohol, which the sulphuric acid had deprived of all its water. Scheele supposed it to be alcohol deprived of part of its phlogiston. Pelletier concluded from his experiments, that it is alcohol combined with oxygen. Dabit supposed ether to contain a greater proportion of oxygen and carbon, and a smaller proportion of hydrogen than alcohol. The experiments of Fourcroy and Vauquelm tended to subvert these opinions.

1542. They remarked three periods in the action of sulphuric acid upon alcohol. First, when a small quantity of ether and water are formed without the assistance of heat. The second, when all the ether which can be obtained is disengaged by the assistance of heat, without the accompaniment of sulphurous acid. The third, when the sweet oil of wine, olefiant gas, acetous acid, sulphurous acid, and carbonic acid, are afforded. The olefiant gas has been described, and they observed that the formation of water is common to all these stages. They hence in- ferred, that alcohol was decomposed during this

process, in the same way as if it had been passed through an ignited tube. Ether they supposed to be alcohol, from which part of its oxygen and hydrogen had been abstracted, and formed into water. The sweet oil and olefiant gas to be a continuation of this process, and not to differ from the ether, except in containing a greater proportion of carbon. The sulphurous and car- bonic acids they supposed to arise from the decomposition of part of the sulphuric acid, by means of carbon, towards the conclusion of the process.

1543. Saussure considers the component parts of ether to be

Hydrogen Carbon . Oxygen .

14-40 67-98 17-62

100-00

1544. Contrasting, says Dr. Henry, the com- position of alcohol, and that of ether, it will be easy to perceive what takes place when the for- mer is converted into the latter.

Alcohol consists of Olefiant gas, 4 atoms Aqueous vapor, 2 ditto

Or in volumes. Olefiant gas, 4 volumes Aqueous vapor, 4 ditto

Ether consists of Olefiant gas, 4 atoms Aqueous vapor, 1 atom

In volumes. Olefiant gas, 4 volumes Aqueous vapor, 2 ditto

To change alcohol into ether, all that is ne- cessary is to take away one atom, or two volumes, of aqueous vapor; and in this removal of one- half of the water, which forms an element of al- cohol, it seems to be universally agreed that etherification consists, even among those who differ as to the precise number of atoms consti- tuting those fluids. If then the conversion could be made without any loss, 46 parts of absolute alcohol should give 37 parts of ether, or 100 parts, by weight, of alcohol should give very nearly 80ˆ of ether, a proportion which, owing to a variety of causes, can never be obtained in practice.

1545. When we act upon alcohol with a pro- portion of sulphuric acid, sufficient to take away the whole of the water, we obtain little or no ether. Olefiant gas is in this case the principal product, mixed, however, with some sulphurous and carbonic acid gases, which are formed by the too energetic action of the sulphuric acid on the carbon of the alcohol. We can at pleasure then convert alcohol either into ether or olefiant gas, though each of those products is always accom- panied by others, resulting from a still further decomposition of that fluid into its ultimate ele- ments.

NITRIC ETHER.

1546. Nitric ether was first discovered by Kunkel in 1681 ; afterwards by Navier in 1742; and by Sebastiani in 1746.

1547. It was first prepared as follows : ??? Into a strong bottle, immersed in cold water or ice, twelve parts of alcohol are put, and eight parts of nitric acid are poured in at intervals, in small quantities at a time, and the bottle shaken at each addition of the acid. The bottle is well corked, and the cork secured by leather. After five or

six days, ether is formed, which floats on the surface of the liquor. The cork must first be pierced with a needle, to allow a quantity of nitrous gas to escape ; after which it may be pulled out, and the ether drawn off from the sur- face by a glass syphon.

1548. As the bottle is very apt to burst, by the quantity of nitrous gas generated during this process, Dr. Black adopted a very ingenious method of preventing this. Having put the proper quantity of acid into a bottle, he gently poured upon its surface a quantity of water, and upon the water the proper proportion of alcohol, without agitation or mixture. Thus he had a stratum of water interposed between the stratum of acid and alcohol, with which, each combining slowly, they met and acted upon each other without violence, and thus formed ether.

1549. The most expeditious method of ob- taining nitric ether is that which was proposed by Chaptal, and improved by Proust : ??? A mix- ture of 32 parts of alcohol and 24 of nitric acid, of specific gravity 1-3, is put into a retort. A large globular glass retort is luted to the receiver, furnished with a tube of safety. A tube con- nects this with a second vessel, which is also furnished with a tube of safety. Three of Wolfe's bottles, half full of alcohol, are connected by tubes with this second vessel. The apparatus being thus disposed, heat is applied in a chaffing dish to the retort, and removed as soon as the effervescence commences. The undecomposed acid which passes over is condensed in the two receivers, and the ether combines with the alcohol in Wolfe's bottles, and chiefly in the first ; while the tubes of safety prevent the nitrous gas from bursting the vessels. To separate the ether from the alcohol, saturate the latter with pure potassa, and distil with a gentle heat.

1550. The nitrous ether, thus obtained, con- tains a considerable portion of nitrous gas, and is hence very volatile. It contains also some nitric acid and oil, to which it owes its yellow color. Mixing it with water separates the nitrous gas; and the oil may be abstracted by repeated distil- lation from potassa or sugar. When kept some time, the nitric acid is decomposed, forming water and oxalic acid, which go to the bottom.

1551. Nitric ether is heavier than sulphuric ether, its specific gravity being 0-9000. Its taste and odor are nearly the same, though not quite so pleasant, owing probably to an admixture of foreign matter, from which the means have not been discovered of separating it.

1552. Nitric ether, according to Thenard, is composed of

Oxygen .

Carbon Nitrogen . Hydrogen

48-52

28-45

14-49

8-54

100-00

ETHERISED NITROUS GAS.

1553. If equal parts of alcohol and nitric acid be mixed, a violent effervescence ensues, or, if the acid be weak, when heat is applied. Much gas escapes, which may be collected in a vessel

over water, and is a compound of nitrous gas and ether.

1554. This gas has a disagreeable odor, mixed with that of ether. It is absorbed by water, alcohol, and solution of potassa ; burns with a yellow flame, and detonates when fired along with oxygen gas. It is decomposed by the sul- phuric, sulphurous, nitric, and muriatic acids, which combine with the ether, and leave the nitrous gas unchanged. The residuum, after this gas is extricated, consists chiefly of acetic acid

1555. A mixture of one part alcohol and three parts nitric acid of the specific gravity 1-261, effervesces and emits the same etherised nitrous gas. When the residuum, after the gas is extricated, is allowed to cool, it deposits cry- stals of oxalic acid.

1556. When one measure of nitric acid is poured upon its own weight of alcohol, and the same measure of sulphuric acid is added soon after, the mixture takes fire, and burns with great violence. In this case, if the products be col- lected, they are found to be ether and oil, which pass over when performed in a retort, or other close vessel.

MURIATIC ETHER.

1557. Muriatic ether may be made from the chloride of mercury, iron, arsenic, and antimony; but the salt which answers best is the chloride of tin. Courtanvaux first formed ether from this salt in 1759. Three parts of fuming chloride of tin, and one part of alcohol are mixed together ; and, after the heat and effervescence have ceased, the mixture is put into a retort to which two large receivers

are luted, and immersed in the coldest water that can be got, or in ice ; on ap- plying a moderate heat, there first comes over a little alcohol, then ether.

The liquid muriatic acid contains too much water to act upon alcohol so as to form ether. But ether may be formed by causing the acid in its gaseous form, when as much divested of water as possible, to act upon alcohol. For this pur- pose common salt should be kept at least an hour in a state of fusion, in order to expel its water of crystallisation. Having put 20 parts of this dried salt into a tubulated retort, which is connected by a bent tube, with a Wolfe's bottle containing 10 parts of the strongest alcohol, pour through the tube of the retort 10 parts of the most concentrated sulphuric acid. Having al- lowed the air in the vessels to escape, distil over the muriatic acid gas by the heat of a sand-bath, while the Wolfe's bottle is kept as cool as pos- sible. The muriatic acid passes over, and incor- porates with the alcohol in the bottle. This pro- duct being put into a retort, should be distilled over to about one-half. The product thus ob- tained is ether mixed with alcohol, which being saturated and agitated with an alkaline lee, the ether, which is usually 2J parts, floats on the surface, and may be drawn off by a syphon.

1558. Muriatic ether only differs from the sul- phuric, in exhaling an acrid odor, similar to that of sulphurous acid, when burnt; and in having an astringent taste like alum. Its specific gra- vity is about 0-719. An improved method of preparing this ether, and an account of its pro-

perties, by Thenard, may be found in Nicholson's Journal xviii. 177, or in the Philosophical Ma- gazine xxx. 101. Its nature has been a subject of doubt. Boullay considers it as a compound of muriatic acid and alcohol. But Robiquet and Colen, with great probability, regard it as a com- pound of olefiant gas with muriatic acid. Henry.

ACETIC ETHER.

1559. Count de Lauraguais, in 1759, disco- vered that ether may be formed by the action of acetic acid on alcohol. For this purpose equal quanties of alcohol, and of acetic acid from ace- tite of copper, are mixed and distilled. The al- cohol comes over, and it must be poured back, and distilled a second and third time. The pro- duct of

this third distillation is a mixture of acetic acid and ether. The acid being saturated with potash, and the compound again distilled with a moderate heat, the ether comes over pure.

1560. Bucholz obtained this ether by putting into a retort 16 parts of dry acetate of lead, 6 parts of strong sulphuric acid, and 9 parts of al- cohol. Ten parts being distilled over, the pro- duct was agitated with a third of its bulk of lime water. This caused the ether to rise to the surface where it could be drawn off.

1561. Scheele obtained acetic ether by dis- solving one part of dry acetate of potash in three parts of alcohol, adding more sulphuric acid than was necessary to saturate the potash, and then distilling. Acetioether exhales a perceptible smell of the acetic acid, and probably differs only from the sulphuric ether in containing a portion of acetic acid hi its composition. For further in- formation on the subject of ether, &c. formed from vegetable acids, see Thenard, Mem. d'Ar- cueil, ii. 5, or 37 Phil. Mag. 216.

1562. Chloric ether is directed to be formed by causing a current of olefiant gas and another of chlorine to meet in a glass balloon, by which a condensation of an oily fluid is occasioned, which burns with a green flame, giving out a smell of muriatic acid arid much soot. See OLEFIANT GAS and CARBURETED HYDROGEN.

1563. Hydriodic ethtr. ••• This was first pre- pared by Gay Lussac by distilling two measures of alcohol with one of concentrated hydriodic acid. This ether is not inflamed by bringing a body in a state of inflammation near it.

1564. Phosphoric ether is to be obtained by mixing thick phosphoric acid and alcohol. ' The first product is a portion of unchanged alcohol. After this a liquid passes over which has an ethereal smell and a specific gravity inferior to that of alcohol. It is very volatile, requires for its solution eight or ten parts of water, boils at 100••, and burns with a white flame, without leaving any trace of acid.

1565. Fluoric and Jiuoboric ethers have also been formed, as well as ethers, with the vegetable acids, but these last require the intervention of the mineral acids, so that there is some doubt in respect to their existence as distinct principles. The alkaline, earthy, and metallic substances, which are referred to in the above arrangement, beyond what have been included in the account already given, can scarcely be admitted as proximate principles, since their abstract pre-

sence is exceedingly small and often equivocal, as to their constituting essential parts of the sub- stance from which they have been extracted.

PART VI.

ANIMAL SUBSTANCES.

1566. The main difference between animal and vegetable matter, considering the subject in a chemical point of view, and in reference to their elemental condition, consists in the greater pro- portion of nitrogen or azote which enters into the composition of that class of organised existence which is now to be the subject of consideration. To the three great components of vegetable matter, oxygen, hydrogen, and carbon (says an author whom we have already so freely quoted), a fourth is in animal substances added, and con- stitutes a large proportion of their structure. To the nitrogen which they contain are owing some of the most important qualities that distinguish this class of compounds. Hence it is that in- stead of passing through the vinous or acetous fermentations they are peculiarly prone to un- dergo putrefaction, and that during this change they yield among other products both nitrogen gas and ammonia.

1567. Animal matters, continues this author, such as fibrin, albumen, gelatineˆ Sac. are com- posed of charcoal, of hydrogen, and of oxygen, in the proportions required to form water ; and of hydrogen and azote in the proportions neces- sary to constitute ammonia. They therefore hold among animal matters the same rank that sugar, gum, lignin, &c. possess among vegetable sub- stances. The animal acids again consist probably of carbon, oxygen, hydrogen, and azote, in such proportions that the oxygen and azote are in excess relatively to the hydrogen ; and the animal oils on the other hand will, in all probability, be shown to contain more hydrogen than is suffi- cient to convert their oxygen into water, and their azote into ammonia. Thus animal sub- stances will be divided into three great classes, relatively to the quantity of hydrogen, oxygen, and azote, which they contain.

1568. In addition to the four elementary bodies, already mentioned, as constituting the main in- gredients of animal matter, other elementary sub- stances are found occasionally in small propor- tions, such as sulphur, phosphorus, iron, and manganese. Some of the salts, as phosphate of lime, occur in large quantities, and others, such as muriate of soda, and potassa, &c. are sparingly diffused

through a few only of the animal fluids.

The proximate animal compounds are stated to be as follows : ???

Gelatine

Albumen

Mucus

Fibrin

Urea

Saccharine matter

Oil

Resin

Acids.

1569 Gelatin.??? This substance is yielded by the bones, ligaments, tendons, muscles, skin, hoofs, and most parts of animals. In order to ob- tain it in purity, it is only necessary to take part of the skin of an ox, and, after the hair is re- moved, to wash it repeatedly in cold water, until the water comes oft" colorless. The purified skm

being now boiled in pure water, a considerable time, oart of it will be dissolved. The solution being then evaporated to a proper consistence, and set aside to cool, becomes solid, and forms the tremulous substance, called jelly. This being allowed to dry slowly, becomes hard, semitrans- parent, its fracture vitreous, and is what is known under the name of glue.

1570. When pure, gelatine is colorless and se- mitransparent ; hard and brittle. In cold water it swells very much, and becomes again gelati- nous, but does not dissolve. If put into hot water, in its soft gelatinous state, it very soon dissolves, forming an opal colored solution, opaque in proportion to the quantity of gelatine. When allowed to cool, the solution resumes its original appearance of tremulous gelatine; and when passing into this state, if agitated in

cold water, it becomes completely soluble. When kept dry it remains unchanged ; but when dis- solved in water it soon putrefies. An acid is evolved, a fetid odor exhaled, and ammonia is formed.

1571. Exposed to heat when dry, it whitens, then blackens, and gradually consumes to a coal. Distilled, it yields a watery liquid impregnated with ammonia, a fetid empyreumatic oil, and leaves a bulky charcoal.

1572. Acids readily dissolve gelatine even when diluted, especially when assisted by heat. When nitric acid is digested upon it, some azotic gas, and then abundance of nitrous gas, are disen- gaged ; the gelatine is dissolved and converted into the oxalic and malic acids, excepting a small quantity of oil which floats on the surface. Mu- riatic acid forms with glue a brown solution, ###which gradually lets fall a white powder. This solution precipitates tan from water, and is used as a test to detect the presence of tan, even when combined with an alkali. Sulphuric acid slowly dissolves tan with emission of sulphurous acid. Chlorine gas, when passed through a solu- tion of gelatine, converts it into a white insoluble substance, lighter than and insoluble in water. It is soluble in alkalis, especially with heat, but the solution does not possess the properties of soap.

1573. Several metallic oxides, when agitated in solution of gelatine, combine, and form with it an insoluble compound. Some metallic salts likewise form a precipitate with gelatine. When a solution of tannin is dropped into a solution of gelatine, a copious white precipitate ensues. This soon dries in the open air, forming a brittle substance, unsusceptible of putrefaction, and re- sisting most of the chemical agents. It resembles over-tanned leather ; and it is the combination of tannin with the gelatine in skins that converts them into leather. See TANNING. This preci- pitate is again soluble in solution of gelatine. The solution of gelatine, or glue, is used to detect tannin in vegetable juices, as the decoction of tannin is used to detect gelatine in animal juices, from the precipitation which ensues when these solutions are mixed. A solution of gelatine so strong that it gelatinises when cold, answers best for throwing down tannin, and the gelatine so- lution when applied to detect tannin, should be used while hot. Wrhen triturated with water and oils, gelatine forms a sort of emulsion.

1574. Glue is a species of gelatine which may be made from most parts of animals, but the best is made from parings of hides, pelts from furriers, the hoofs and ears of oxen, sheep, calves, &c. The skins of animals yield the best, and those of old animals yield better

glue than those of young. The skins are first cleaned by diges- tion, in lime-water, then steeped in clean water, and laid in heaps to drain. They are afterwards boiled in copper caldrons, the impurities skimmed from the surface, and a little alum or finely powdered lime thrown in. The liquid is then drained through baskets, allowed to settle ; and the clear part being restored to the caldron is boiled and skimmed until it attains the proper consistency. It is then let into large horizontal coolers, where it forms a jelly on cooling. This is cut in slices with spades, which are afterwards cut into thin cakes with wires. These cakes are laid upon coarse horizontal nettings, under an open shed, where they dry by the lateral circula- tion of air. When glue is soluble in cold water it is not good. But in cold water it swells and becomes gelatinous. Its color is dark brown, with a degree of transparency. It is chiefly used for cementing pieces of wood together.

1575. Size is prepared in the same way, but with more care, from the skins of eels, horses, cats, rabbits, from vellum, parchment, and some kinds of white leather. It is transparent, though of inferior strength to glue. It enters into the composition of paper ; is employed by the. bleachers of linen, to give smoothness and ele- gance to cloth ; likewise by gilders, polishers, and by painters, to give adherence to what are called water, or size colors.

1576. Isinglass is an article of food in the countries where it is produced. It is chiefly ob- tained from the sturgeon, and otl.sr large fishes, which abound in the lower parts of the Wolga, and other great rivers which disembogue them- selves into the Black and Caspian Seas. Several large fishes in these quarters yield it ; but the sturgeon yields the best. It consists of the air-bladder or soom of the fish, which being clean washed, the exterior membrane is removed . The body of the bladder is then cut lengthways, formed into rolls, and dried in the air. Isinglass is more difficult of solution in water than glue. The solution is transparent, and it is used for a great variety of purposes. In this country it is chiefly used for clarifying, or giving transparency to wines, porter, and other fermented liquors. But the way it operates in these cases has not been satisfactorily explained by chemists. An inferior kind of isinglass is prepared by boiling the heads, fins, tails, 8cc. of fishes without scales, such as whales, cuttle fish, sharks, porpoises, &c. The boiling liquor must be frequently skimmed, and when properly concentrated it is thrown into flat coolers, where it consolidates.

1577. Portable Soup may be regarded as a species of gelatine : it is boiled from the flesh of animals, skimmed, and after attaining the

proper consistence, is let into coolers to consolidate. It is then cut into slices and dried like glue. But it is not necessary to be over anxious to separate all foreign ingredients from it, and some salt and spiceries are always mixed with it to prevent its

putrefaction, even though it should be exposed to dampness. In fact gelai'ne is the basis of all soups ; and animal jelly fc :□□□ ns a pleasant, as well as nutritive, species of fooil

1578. Gay Lussac's and Thenard's analysis of gelatine gives □□□

Carbon . . . 47-881

Oxygen . . . 27-207

Hydrogen . . . 7'914

Azote 16-998

100-000

See Hatchett's Observations on Animal Membrane, in Philos. Trans. 1800.

ALBUMEN.

1579. This is the Latin name for the white of an egg, and it has been extended to all substances possessing similar properties. The whites of eggs form a glary viscid liquid, which is soluble in water, and the solution gives a green color to vegetable blues, in consequence of containing soda. At 16.5□□ albumen coagulates into a white mass, which is solid in proportion to the time the heat has been applied. The coagulum is no longer soluble either in hot or in cold water. Acids and alcohol coagulate albumen as well as heat ; but if it be sufficiently diluted with water it does not coagulate by these agents. The coa- gulum is of the same weight, and occupies pre- cisely the same space, with the liquid albumen, and it does not appear that the consolidation is caused either by the emission or absorption of any aerial fluid. Liquid coagulum dries in the air, and forms a transparent varnish, which is used by book-binders. The dried varnish is so- luble in water. The acid metallic salts, when dropped into a filtered solution of albumen, oc- casion precipitates of various

colors, the metallic oxides forming insoluble compounds with albumen. The chloride of mercury is a very deli- cate test of the presence of albumen in ani- mal fluids. Tannin forms with it a yellowish precipitate, which is insoluble in water. When coagulated albumen is dried at 212□□, it becomes hard and semitransparentlike horn ; but becomes again soft and opaque after being digested in water. Mr. llatchett found that nitric acid con- verts coagulated albumen into gelatine. Boiling solution of potassa converts albumen into soap. This substance enters largely into the composition of animals, and in their solid parts it is in its coagulated state. Its property of coagulating by heat renders it useful for clarifying liquids. The serum of blood, whites of eggs, or other liquids, containing albumen, are mixed with the liquid to be clarified, and being heated it carries down all the loose particles which were diffused through the liquid.

1580. Albumen is said by Gay Lussac and Thenard, to consist of □□□

Carbon . . . 52-883

Oxygen . . . 23-872

Hydrogen . . . 7-540

Azote 15-705

Mucus

1581. Maybe obtained by evaporating saliva, or by macerating oysters in water, and then eva- porating to dryness. It is soluble in water, does not coagulate, and in its properties very much resembles the acacia gum. Its ultimate elements have not been ascertained.

FIBRIN.

1582. This substance exists only in the blood and in the muscles of animals. When blood is allowed to settle, a thick red clot forms in it, and falls to the bottom. This clot being separated, put into a linen cloth, and washed until the wa- ter comes off without either color or taste, what remains on the cloth is fibrin. Mr. Hatchett having minced some lean beef, during cold wea- ther, steeped it in water during fifteen days, each day changing and squeezing out the water. The shreds of muscle, amounting to about three pounds in weight, were now boiled in six quarts of fresh water during five hours each day, for three weeks, the water being changed and pressed out each day. What remained being dried by the heat of a water-bath, was

fibrin nearly pure.

1583. This substance is of a white color, is in- soluble in water and alcohol, and has neithei taste nor smell. It is not apt to putrefy, even when kept under water. It contracts suddenly by heat, emitting a smell of burning feathers. With a stronger heat it melts, and exposed to destructive distillation it yields water, carbonate of ammonia, a heavy fetid oil, carbonic acid, and carbureted hydrogen gas. A more copious charcoal is left than by gelatine or albumen, which contains phosphates of soda and of lime. Acids dissolve fibrin, and many of its acid solu- tions are gelatinous. The vegetable acids re- quire to be aided with heat. Weak nitric acid disengages from it much azotic gas. Concen- trated potassa and soda, by boiling, convert it into a brown soap, from which muriatic acid precipitates the fibrin in a form resembling tallow. In its properties it seems much to resemble coa- gulated albumen, with perhaps an excess of car- bon. Nitric acid converts both into gelatine.

1584. Analysis of fibrin : ###

Carbon . . . 53360

Oxygen . . . 19-685

Hydrogen . . . 7-021

Azote 19-934

100-000

UREA

100-000

1585. Is obtained by slowly evaporating to the consistence of thick syrup, a quantity of hu- man urine that had been voided several hours after a meal. By cooling it concretes into a crystalline mass; upon which pour, at different times, four times its weight of alcohol, and apply a gentle heat. The urea dissolves in the alcohol, and the solution being separated from the undis- solved salts, is put into a retort and distilled with a gentle heat, until it acquires the consis- tence of thick syrup. The alcohol is now se- parated, and what remains is urea, which crys- tallises on cooling in the form of thick plates

###J 1.

crossing each other. It is of the consistence of thick honey, of a yellowish-white color, and its smell resembles that of garlic or arsenic. It deliquesces, and is more soluble in water than in alcohol. Nitric acid precipitates from its watery solution a great number of bright pearl- colored crystals, composed of the acid and urea. When heated it melts, swells, and emits a most disagreeable smell. When distilled it yields first oenzoic acid, then crystals of carbonate of ammonia, carbureted hydrogen gas, with some prussic acid and oil. There remain charcoal, muriate of ammonia, and of soda. When long boiled in water, which is replaced as it evapo- rates, urea is also decomposed. A great quantity of carbonate of ammonia separates, acetic acid is formed, and charcoal precipitated. Its solu- tion in water, especially if a little gelatine be added, is subject to a gradual spontaneous de- composition, with disengagement of much ammonia. From the experiments of Fourcroy and Vauquelin, it was inferred that urea was com- posed of

Oxygen . . . 39-5 Azote . . . 32-5 Carbon . . . 14-7 Hydrogen . . . 13‘3

100-0

1586. Dr. Prout gives the following as the proportion of the elements of purified urea : ††† Oxygen . . . 26 66 Nitrogen . . . 46-66 Carbon . . . 1999 Hydrogen . . 6 66 Deficient . . 0-03

100-00

SACCHARINE MATTER.

The saccharine matters, or sugars, found in animals, are

1. Sugar of milk

2. Honey

3. Diabetic urine.

1587. Sugar of milk is obtained by evapora- ting fresh whey to the consistence of honey, allowing it to concrete by cooling, and then dis- solving it in water. The solution being clarified †††with white of eggs, filtered, and evaporated to the consistence of syrup, it

deposits on cooling semi-transparent parallelepiped crystals, which are terminated by four-sided pyramids. These crystals are sugar of milk, which differs in some cf its properties from other kinds of sugar.

1588. Honey, according to Cavezzali, is com- posed of sugar, mucilage, and an acid. To separate the sugar, the honey is melted, and carbonate of lime in powder added as long as effervescence appears ; the liquid being frequently skimmed while hot. On cooling it deposits crystals of sugar. It seems doubtful whether honey, which bees collect from vegetables, should be ranked as an animal or _vegetable product. Proust thinks there are two kinds of honey, one always liquid, the other solid and not deli- quescent, and that they may be separated by alcohol.'

'1589. Diabetic sugar is extracted from the urine of persons who labor under the disease called diabetes. Such urine yields a considerable proportion of sugar, commonly about a twelfth of its weight. Its color, taste, and granulation, are such that it cannot be distinguished from the raw or muscovado sugar of the West Indies. But it is said not to crystallise like common sugar, and hence seems to differ from it in some respects.

1590. Dr. Henry however tells us that he has been able to obtain beautiful white crystals from diabetic sugar, not inferior to those of vegetable sugar. Chevreul also states the same ; and Dr. Prout finds its composition precisely the same as vegetable sugar.

OILS.

1591. Spermaceti or cetine, which is chiefly extracted from the cranium of the physeter ma- crocephalus, or spermaceti whale, an animal which abounds in the Southern Ocean. It is se- parated from a liquid oil by means of a woollen bag, the remainder of which is extracted by an alkaline lee, and the spermaceti is afterwards fused. It forms a beautiful white scaly substance, brittle, with scarcely taste or smell. It makes excellent candles, and is much used in medicine. It melts at 1 12►►, and is said to dissolve caoutchouc when liquid, and that the compound forms an excellent luting for vessels.

1592. Fat, tallow, suet, hog's lard, butter. ►►► These differ in some particulars, from each other; but they all seem to be only varieties of the fixed oils. When hog's-lard is distilled it first yields water, then a white oil, with some acetic and sebacic acids. Abundance of the carbureted hydrogen and carbonic acid gases come

over with a most offensive smell. When the vessels are unluted the smell is detestable and intolerable. There remains in the retort a black coaly mass. When a little nitric acid is poured upon fat, and a moderate heat applied, it is converted into a yellow ointment, which Fourcroy considers as oxide of fat. This is said to have been successfully employed in France, in external venereal affections.

1593. Train oil is extracted from the blubber of the whale and other fishes. The livers of the dog-fish yield a much more pure oil than that obtained from whales. At first it is thick, but after depositing a mucilaginous matter, it becomes transparent, and of a reddish-brown-color. This oil is much used for burning in lamps, and, as it has a disagreeable smell, it may be purified by agitation with a little sulphuric acid, and then mixing it with water. After being allowed to settle, the oil swims on the surface, of a lighter color than before, the water continues milky, and a curdled matter is seen between the water and the oil . The oil being drawn off has no disagree- able smell when burned in lamps.

1594. The animal oil of Dippel is a species of volatile and aromatic oil which is obtained by distillation, chiefly from the horns and albumen of animals. The product of the first distillation is mixed with water, and distilled a second time. It changes syrup of violets to green, owing to its containing ammonia. It was formerly much

celebrated as a medicine but is now in little repute.

1595. Adipocire. ??? When muscular flesh is confined in a stream of running water it is partly converted into a substance having many of the properties of fat combined with a portion of am- monia, or the effect is more speedily accomplished by digesting mucsle in strong nitric acid. Chev- reul has supposed that this change of muscular flesh into what the French chemists have called adipocire, is a mere separation of the oleaginous or fatty matter from the muscular fibre. Dr. Thomson, on the contrary, thinks that new matter is rather formed. This substance has a near resemblance to spermaceti.

1596. Fat has been shown by the experiments of Braconnot and Chevreul to contain two dis- tinct substances, to which they have given the name of Stearine and Elaine, the former solid at the common temperature of the atmosphere, the latter liquid. These

separate principles are ob- tainable by boiling hog's lard in alcohol.

1597. When soap formed of hog's-lard and potassa is put into water, a portion only is dis- solved, the remainder consists of white scales composed of the alkali united to a peculiar acid, called by Chevreul margaritic acid, and separable from the above combination by muriatic acid.

1598. The portion of hog's-lard soap which is soluble in water, consists of another acid com- bined with potassa, this Chevreul has named oleic acid. This acid unites with salifiable bases into oleates.

1599. Berard, by mixing one volume of car- bonic acid, with ten of carbureted hydrogen and thirty of hydrogen, and passing the mixture through a red hot porcelain tube, produced a sub- stance in small white crystals, having many of the properties of fat. Dobeirener is said to have ob- tained the same product by igniting a mixture of coal gas and aqueous vapor.

ANIMAL RESINS.

1600. The principal animal resins are, Resin of bile. ??? This is obtained by pouring one part of concentrated muriatic acid into thirty-two parts of fresh ox bile. After the mixture has settled it is passed through a filter, and the filtered liquor evaporated in a glass vessel with a moderate heat. After it is sufficiently concentrated, a green sub- stance falls down. The liquid part being poured off, and the precipitate washed with water, it is resin of bile. It is of a dark brown color, but when spread upon wood or paper, is of a fine grass green, and, mixed with essential oil, might form a beautiful green varnish. It is of a very bitter taste ; is soluble in water and alcohol, and alkalis form it into a soap. When treated with chlorine, it loses its green color, and is converted into a substance resem- bling tallow. Ear-wax also contains a resin, which has not been particularly examined, as nature only furnishes this substance in small quantity. It is abhorred by insects, and placed as a sentinel to defend the drum of the ear against iheir attacks.

1601. Ambergris is now generally understood to be a concretion formed in the stomach of the spermaceti whale. It is often found floating on

the coasts of India, Africa, and Brasil, in small pieces ; but sometimes in masses of fifty or 100 Ibs. Great quantities of it have been occasionally found upon the shores of some of the Hebridian

isles, where the floating productions of the torrid zone are often conveyed by currents in the ocean, and the people not knowing its value, used it for rush-lights. ††† It is of an ash-gray color, with white and brownish-yellow streaks. It has no taste, but an agreeable smell, which improves by keeping. It melts at 122††, and rises in vapor at 212††. Distilled it yelds a white acid liquor, and a light volatile oil ; while a bulky charcoal re- mains behind. It is insoluble in water, but solu- ble in ether and alcohol. It is soluble in nitric acid, and in the alkalis, which convert it into soap. ††† According to Bouillon La Grange, 100 parts of ambergris are composed of

52‘7 adipocire

30-8 resin

11-1 ben zoic acid 5‘4 charcoal

100-0

1602. Pelletier and Caventon consider amber- gris not an animal resin, but as consisting chiefly of a substance similar to that found by Chevreul in biliary calculi, and called by him cholesterine. They have called the principle ambreine. It is said not to be convertible into soap, but to yield an acid to which the name ambreic acid has been given.

1603. Castor is obtained from two bags situa- ted in the inguen of the beaver, the smallest bag yielding the best. It has been much used in me- dicine. According to Bouillon La Grange it is composed of

1 . Carbonate of potassa

2. Carbonate of lime

3. Carbonate of ammonia

4. Iron

5. Resin, similar to that in bile

6. Extractive mucilage

7. Volatile oil.

1604. Civet is obtained from the inguen of the civet cat. In color and consistence it resembles butter. Its smell is so strong that it is insuffer- able unless it be diminished by mixture with other bodies. It

is used as a perfume. . It combines with oils, but not with alcohol.

1605. Musk is obtained from the quadruped called moschus moschiferus. It conveys its smell to water, and is soluble in alcohol, but the com- bination has. not the smell of musk. The same is the case with its solutions in the nitric and sulphuric acids. This substance is also used as a perfume.

1606- Animal acids have been enumerated a follow : ***

Phosphoric Lithic or Uric

Sulphurir Pyro Uric

Muriatic Purpnric

Carbonic Rosacic

Benzoic Amniotic

Acetic Lactic

Malic Saclactiˆ

Oxalic Sebacic

Hydrocyanic Formic.

*3 * 2 L 2*

Thefirst nine of these have been subjects of dis- quisition in former parts of the present treatise, and it only remains for us to treat of the others in the present place.

1607. The uric acid, or lithic, exists pretty abundantly in the urine, even in its healthy state, but it is combined generally with ammonia ; it constitutes one of the most common ingredients of urinary calculi, and the red gravel which is occasionally discharged with the urine is com- posed principally of this acid.

1608. When the uric acid is pure it is nearly colorless and without smell ; it reddens infusion of litmus, is readily soluble in caustic potassa, but not soluble in the carbonate of that alkali. Its

*combination with soda constitutes the princi- pal portion of those concretions which are formed in gouty individuals, and called chalk stones. It dissolves in nitric acid, and when the solution is evaporated, a residuum is obtained which has a fine red or carmine color, and which Dr. Hrout has lately shown possesses distinct acid proper- ties: he has named it purpuric acid, and of this acid he gives the following components :***

Carbon . . . 27-17

Oxygen . . . 36‘36

Hydrogen . . 4-54

*Azote . . *** 31-81*

99-88.

*1609. Pi/ro-uric acid. *** When uric acid is distilled, per se, a yellow sublimate arises ; this dissolved in water, and subacetate of lead added to it, gives a white precipitate, which washed with water, and decomposed by sulphureted hydrogen, yields the acid in question. This acid, when passed through a red hot glass tube, is decomposed and converted into the common products of animal matter.*

*1610. Rosacic acid.*** This differs but little from the uric acid, sulphuric and nitric acids operating nearly the same effects upon it as upon the uric acid.*

*1611. Amniot ic .acid. *** This was detected by Fourcroy and Vauquelin in the liquor of the amnios of the cow. It forms white crystals by slow evaporation, which have acid properties. It does not, however, decompose alkaline carbonates, nor does it throw down salts with earthy bases. *** If treated with a strong heat it is decomposed, emits ammonia and prussic acid, and leaves a large quantity of charcoal.*

1612. Lactic acid forms a component of sour milk ; and from this it may be obtained by evaporating it gently to about one-eighth, filtering and adding lime water; by which a lac- tate of lime is fornted, and from which oxalic acid will separate the lactic.

1613. This acid in its properties nearly re- sembles the acetic. Fourcroy, indeed, supposed it to be merely that acid with some of the com- ponents of the milk ; but Berzelius contends for its distinct

essential existence, and supposes it to exist in all animal fluids, either in a free state or in combination with soda.

1614. Saclactic acid may be formed by digest- ing sugar of milk with nitric acid, diluting the liquid with water, and thereby preventing crys-

tals of oxalic acid from being formed, and pro- ducing a white sediment, which is the acid in question. The same substance is procurable by treating powder of gum arabic with nitric acid. This acid reddens the color of litmus, and at a boiling heat effervesces with the alkaline carbo- nates. It forms also saclactates with several bases.

1615. Sebaac acid. ††† The acid which is obtained by adding finely powdered quicklime to melted fat, and disengaged by adding sulphuric acid, has been supposed by some to be a distinct acid ; but Thenard has contended that it is merely acetic acid with a little admixture of sulphurous. Besides this, however, we are told ‘ a different acid may be procured by first distilling hog’s lard, and washing the product with hot water. The watery solution, poured into one of acetate of lead, gives a flaky precipitate, which is to be heated along with sulphuric acid in a retort. No acid is distilled over, but, on the surface of the matter in the retort, there floats a substance resembling fat, which may be separated and washed with, boiling water. The water entirely dissolves it, and becomes concrete on cooling.’

1616. ††† This acid has great resemblance to the benzoic, which indeed Berzelius considers it to be, ‘impregnated with other products of the dis- tillation by which it has been obtained,’ and it is extremely probable, says Dr. Henry, that his opinion is well founded.

1617. A zoomic acid has been described, but Thenard has proved this to be merely the acetous, holding some animal matter in solution.

1618. formic acid (acid of ants).††† It has been alleged also that this is merely disguised acetic acid, or rather a mixture of acetic and malic acid. It is, however, considered by Berzelius and others to be a peculiar acid ; if approaches very nearly to the oxalic, and is said only to differ from it one proportional of hydrogen additional to the carbon and oxygen.

PARTS OF ANIMALS.

1619. The parts of which animals are com- posed are divided into solid and fluid. The solid parts are

1. Bones, shell?, crusts,

2. Horns, nails, scales,

3. Muscles,

4. Skin,

5. Membranes,

6. Tendons and ligaments,

7. Glands,

8. Brain and nerves,

9. Hair and feathers, 10. Silk, &c.

BONES, SHELLS, Cnusxs.

1620. The bones of animals are their most solid parts, and they are generally concealed from view. When bones are reduced to small pieces, and sufficiently boiled in water, they yield a portion of fat, which swims on the surface, and of gelatine which remains dissolved in the water, but when sufficiently concentrated it consolidates on cooling. Hence bones, when reduced to powder, and boiled, yield excellent soup. If an entire bone have its fat and gelatine removed by

boiling, and be afterwards steeped in a diluted acid, the earthy basis of the bone is withdrawn, and there remains a soft white elastic substance, of the figure of the bone, which has obtained the name of cartilage. Mr. Hatchett has shown that this substance possesses all the properties of co- agulated albumen. This cartilage is the first part of the bone that is formed, and hence bones are at first soft and flexible, and the earthy salts which give them hardness are deposited afterwards. Gelatine and fat convey toughness and strength to bones, and without them, especially the first, they are extremely brittle. The earthy salts which convey hardness and solidity to bones, are, 1. Phosphate of lime, which is by far the most abundant. 2. Carbonate of lime. 3. Phos- phate of magnesia, in the bones of inferior ani-

mals. 4. Sulphate of lime, detected by Mr. Hatchett in very minute proportion. ??? The fol- lowing is the analysis of ox bones by Fourcroy and Vauquelin.

Solid gelatine . . . Phosphate of lime . . Carbonate of lime . . Phosphate of magnesia .

51 37-7 10 1-3

100-0

The enamel of the teeth contains no cartilage, and, according to Fourcroy and Vauquelin, is composed of.

Phosphate of lime . . . 72‘9 Gelatine and water . . . 27‘1

100-0

to Mr. Pepys, and Hatchett, it is

But accordin composed of

Phosphate of lime Carbonate of lime Loss and water .

78

6

16

100

Carbonate of lime ... 66 Membrane 34

100

Pearl is a globular concretion often formed in these shells. It is a beautiful bluish-white color, and is composed of alternate and concentric coats of membrane and carbonate of lime. Its lamellar structure renders it iridescent.

1621. Crusts are the external covering of crabs, lobsters, prawns, cray-fish, echini, and various similar fishes. From Mr. Hatchett’s experiments they seem to be intermediate between bones and shells. They agree with bones in containing phosphate of lime, and they agree with shells in the predominance of carbonate of lime. They also contain cartilage, possessing the properties of coagulated albumen.

◆◆◆ From lobster crust Merat-Guillet obtained

Carbonate of lime ... 60 Phosphate of lime ... 14 Cartilage 26

From crust of cray fish Carbonate of lime Phosphate of lime Cartilage . . .

Mr. Hatchett found some fossil bones from the rock of Gibraltar to consist of phosphate of lime, with carbonate of lime in the interstices. Hence they resemble bones that have been burnt.

1620. Shells are the bones or covering of a great variety of fishes. Shells consist chiefly of carbonate of lime united to a soft animal matter. The carbonate of lime predominating in shells distinguishes them from bones, in which phos- phate of lime predominates. Shells are divided into two genera, the porcellanous, and mother- of-pearl. The porcellanous, such as veluta, cy- prea, &c. are compact, and break like porcelain ; and consist of carbonate of lime united to a soft animal matter. The mother-of-pearl shells, such as the fresh water muscle, the haliotis iris, the turbo olearius, &c. consist of alternate layers of carbonate of lime and fine membranes composed of coagulated albumen. Acids extract the car- bonate of lime, leaving the membranes, and the form of the shell entire. The oyster shell con- tains a very small proportion of the albuminous membrane, while the real mother-of-pearl shell contains, according to Mr. Hatchett, to whom we have been under so many obligations, **

From shells of hens' eggs Carbonate of lime Phosphate of lime Animal matter

100

60 12 28

100

89-6 5-7 4-7

1000

HORNS, NAILS, SCALES. 1622. These substances are flexible, elastic, and soften by heat, which is not the case with those just described. Horns may be cut with a knife, or rasped with a file ; but are so tough that they cannot be pounded. When heated they become soft and pliable, and may be formed into almost any shape. When formed into thin plates, they possess a degree of transparency, and

are often used instead of glass for windows and lanterns. When strongly heated in a Papin's digester they are said to be converted into a sub- stance resembling gelatine. Mr. Hatchett burnt 500 grains of ox horn. The residuum was only 1 -5 grains, not one-half of which was phosphate of lime. Hence horns contain very little earthy matter. They seem to consist chiefly of coagu- lated albumen, and probably also of gelatine. The only exception is the horn of the hart and buck, which seem intermediate between bone and horn. ••• The hoofs, talons, and claws of ani- mals seem to be the same with horns. To the same class may also be referred the bills of birds, the weapons of the sword and saw-fish, though many of these seem much harder than horns. They all agree in uniting a fibrous with a lamel- lated, or membranous texture.

1623. Nails defend the extremities of the fingers, are attached to the epidermis, and come off along with it. Water softens, but concen- trated acids and alkalis dissolve and decompose them. Mr. Hatchett ascertained that they coo-

sist of coagulated albumen, and a small propor- tion of phosphate of lime. Tortoise shell seems to approach to the nature of nail. When burnt, 500 grains of it yield three of earthy matter, con- sisting chiefly of phosphate of lime and soda, with a little iron.

1624. Scales are of two kinds. Those of ser- pents and other amphibious animals, bear a strik- ing resemblance to horn ; while those of fishes resemble mother-of-pearl. The crusts which cover certain insects seem to resemble the scales of serpents.

MUSCLES.

1625. Muscles consist of bundles of fibres, which maybe subdivided into smaller fibres ; and the minutest fibre, until it ceases to be seen by the best microscope, is always invested with a coating of cellular substance, or fat. As the muscles are the moving powers of the animal frame, the intention of this fat is to prevent the friction of the muscular fibres upon each other, which would instantly prove fatal to the animal. When a piece of flesh is minced down, and treated as was explained when discussing fibrin, the muscle is converted into a white fibrous sub- stance, composed chiefly of fibrin. Its other in- gredients are

1. Albumen,

2. Gelatine,

3. Extractive,

4. Phosphate of soda,

5. Phosphate of ammonia,

6. Phosphate and carbonate of lime.

It is obvious that when meat is boiled, the gela- tine, the extractive, and some of the salts will be dissolved in the water; and from these the nou- rishment and flavor of soups are partly derived. When meat is roasted, these substances continue in it ; and hence the superior flavor of roasted meat. But much of the nourishment of roasted meat is expelled by excessive heat ; and the most economical mode of dressing meat is by long and slow boiling.

*SKIN. ***

1626. This is a coating which covers all ani- mals excepting those which are covered with shells, and it has properties in common with the bark of trees. It consists of three membranes.

1627. The epidermis may be separated by steeping in hot water. It is elastic, and insolu- ble in water and alcohol, but soluble in alkalis and lime. It is tinged yellow by nitric acid, which volatile alkali changes to a deep orange color. The epidermis seems to be a particular modification of coagulated albumen.

1628. The retc mucosum is a very thin mem- brane below the epidermis, in which the color of the skin resides. The negroes acquire their blackness from a pigment lodged in this mem- brane. If a negro keep his hand or foot some time in water impregnated with chlorine, it be- comes nearly white ; but the former color after- wards returns. The composition of this mem- brane is not known, as its quantity is very small.

1629. The cutis, or real skin, is a thick dense membrane, composed of fibres interwoven simi- lar to those of a hat. It consists chiefly of gela- tine so compact as to resist the action of cold

water; but when long boiled in water it dissolves and forms glue. Those skins make the best glue which are of most difficult solution in

boiling water. ??? To form skins into leather, they are first steeped in lime and water, and the hair and cu- ticle scraped off. They are then well washed in water. To make sole leather, the thickest and strongest skins are steeped in saturated infusion of bark ; or the skins and bruised bark are placed in alternate layers, and as much water added as covers them. The skins are afterwards steeped in water slightly impregnated with sulphuric acid, or in the acid obtained from the fermenta- tion of barley or rye, which Sir H. Davy thinks produces a triple compound of skin, tan, and acid. Oak bark contains tannin and extractive, and, when a strong infusion of it is made, the tannin superabounds. This renders the skin hard, but apt to crack, and a different process is adopt- ed for making pliable leather. For this purpose the thin skins of cows, calves, ' &c. are first steeped some days in a lixivium of pigeon's dung, which renders them thinner and softer. They are then steeped at first in weak infusions of oak bark, and are gradually removed to those which are stronger and stronger until they be com- pletely impregnated ; which takes from two to four months. From this process they imbibe a greater proportion of extractive than the sole lea- ther, and are thus rendered pliable and tough. Sir H. Davy found that skins whilst tanning ab- sorb about one-third of their weight of vegetable matter. The tannin combines with the gelatine in the skin, renders it insoluble in water, and not disposed to putrefy. He found also that skins absorb the whole vegetable matter from infusion of bark, leaving nothing but pure water.

MEMBRANES, TENDONS, LIGAMENTS, GLANDS.

1630. Membranes are thin, semitransparent substances, which envelope the viscera, and other parts of the body, such as the dura and pia mater, the pleura, the peritoneum, the periosteum, &c. They also form reservoirs for the reception of juices which are to be afterwards discharged, of which we have examples in the gall and urinary bladders. Though little is known of their chemi- cal composition, they seem to be perfectly analo- gous to skin. A bladder being tanned is con- verted into leather.

1631. Tendons are strong pearl colored bodies, in which the muscles terminate, and by whicli they are inserted into the bones. By long boil ing they are converted into gelatine, and seem to be of the same nature with skin.

1632. Ligaments bind the bones together at the joints. When long boiled they yield a poi- tion of gelatine ; but the remainder resists the action of boiling water, and seems to consist ot coagulated albumen.

1633. Glands operate in forming or in alter- ing different liquids. They are divided into conglobate, which are small, and situated in the course of the lymphatics, and conglomerate, such as the liver, kidneys, &c. Of their chemical composition nothing is known.

BRAIN AND NERVES.

1634. The substance composing these organs seems to be quite peculiar, and to be constituted

of a fatty matter, which has been named by The- nard, ostnazome ; this matter upon its cooling after solution in heated alcohol, deposits itself in scales. In many respects it appears analogous to the principle called cholesterine.

HAIR, WOOL, FEATHERS. 1635. Hair and wool grow on various parts of animals, and are intended to defend them from the cold. Their surfaces are not smooth, but covered with scales consisting of imbricated cones, which give them a rough feel, occasion them to entangle and have given rise to the pro- cesses of felting and fulling. When hair is long boiled in water it yields gelatine, to which it owes its flexibility and toughness. What re- mains is brittle, and seems to consist of coagu- lated albumen. The softest hair yields gelatine most readily. Vauquelin dissolved human hair of various colors in water in a Papin's digester. If the heat was too great it was decomposed, and ammonia, carbonic acid, and empyreumatic oil formed. After being dissolved it slowly de- posited a bituminous oil, which was black when black hair, and yellowish-red when red hair was employed. It would seem that the color of hair is owing to an oil. When the oil is separated by nitration, the solution is nearly colorless, and infusion of nutgalls, and chlorine, occasion co- pious precipitates in it. But though it be much reduced by evaporation, it does not gelatinise. The alkaline lixivia readily dissolve hair, and hence wool was proposed by Chaptal as a sub- stitute for oil in the composition of soap. The sulphuric, muriatic, and nitric acids dissolve hair, with a separation of oil. Alcohol digested on hair separates two kinds of oil, the first white, the second of the color of the hair. When hair is burnt to ashes, it yields iron and man- ganese, phosphate, sulphate, and carbonate of lime, muriate of soda, and a considerable por- tion of silica. The ashes of white hair contain least iron, but some magnesia, which is wanting in hair of other colors.

From the experiments of Vauquelin it appears that black hair is composed of the following substances :

1. Animal matter, constituting the greatest part

2. White solid oil, in small quantity

3. Grayish-green oil, more abundant

4. Iron

5. Oxide of manganese

6. Phosphate of lime

7. Carbonate of lime, very scanty

8. Silica

9. Sulphur.

Vauquelin considers the animal matter to be chiefly a variety of inspissated mucus, but its precipitation by tannin seems to contradict that opinion. Mr. Hatchett thinks the quills of feathers consist chiefly of coagulated albumen, and their other parts to be nearly of the same composition with hair, though when boiled they yield no gelatine. Dr. Ure states the ultimate analysis of wool to give the following :

Carbon . . . 55‘00

Oxygen . . . 29‘40

Hydrogen . . 2-80

Azote . 12-80

SILK.

100-00

1636. The silk-worm is a native of China, and there the preparation and manufacture of silk have been known from the remotest times. It was first brought to Rome in the time of Au- gustus, and it continued to be carried over land, ind sold to the luxurious Romans for its weight in gold. In 555 two Persian monks brought some eggs of the insect to Constantinople, con- cealed in the hollow of a cane. Being carefully propagated, the manufacture of silk soon ex- tended itself

in Greece. In 1130 Roger King of Sicily forcibly carried off silk weavers from Greece, and settled them in Sicily, from which the manufacture extended into Italy, and after- wards into France. The revocation of the Edict of Nantes extended the silk manufacture into Britain.

1637. Silk is produced by various species of the caterpillar. The phalaena bombyx is com- monly propagated in Europe ; but the phalaena atlas yields a greater quantity. The insects feed on the leaves of the white mulberry tree. It is protruded from two small bags, in fine threads, formed into the shape of a clue, to cover the insects in their crysalis state. The threads and webs of spiders are of the same nature with silk, and Reaumur ascertained that the threads of the larger spiders were neither inferior in beauty nor strength to those of the silk-worm. Attempts were made to establish manufactories of this kind of silk, but the spiders attacked and destroyed each other.

1638. Raw silk varies in color from white to a reddish-yellow. The surface of its fine threads is covered with a varnish, which may be extracted by boiling in water, or by soap, when it assumes a fine white color. This varnish seems to be intermediate between gum and gelatine. It agrees with gum in not being acted on by alcohol, and with gelatine in being precipitated from water by tannin. When the water is evaporated this varnish is obtained of a black color, brittle, and of a shining fracture, and its weight is nearly one third of that of the raw silk from which it was extracted. Its soapy solution soon putrefies. Yellow silk contains a resin, which is soluble it? alcohol, or in a mixture of alcohol, with mu riatic acid, and when deprived of it, the silk ac- quires a fine white color.

1639. Silk itself is not soluble in water or al- cohol, and is not very combustible, though fire blackens and decomposes it. Distilled it yields a very great proportion of ammonia. Heated alkalis dissolve, and convert it into soap. The sulphuric, muriatic, and nitric acids also dis- solve it ; the latter with evolution of oxalic acid, and a fatty matter which swims on the sur- face. When kept in a damp place, it rots sooner or later ; but Dr. Wilson of Falkirk found a riband wrapped round the bone of an arm, which had lain more than eight years in the church-yard of that town. The body of the de- ceased had mouldered into earth, leaving nothing but the bones. This shows that silk is capable of resisting putrefaction, when not exposed to the action of the air. Dr. Ure obtained the fal- lowing results from the bleached limes of silk :

Carbon Oxygen Hydrogen . Nitrogen .

50-8

34-0

3-4

11-8

100-0

Cadet analysed spiders' webs, which seem to be nearly allied to silk, by treating them with water, alcohol, and incineration, and obtained the fol- lowing products. 1. Brown extract soluble in water, and not altered by exposure to the air. 2. Resinous matter, soluble in alcohol. 3. Alu mina. 4. Sulphate of lime. 5. Carbonate of soda. 6. Muriate of soda. 7. Carbonate of lime. 8. Iron. 9. Silica.

1640. We now proceed to the consideration of the fluid parts of an animal. The fluid parts of animals are the blood, which is the great re- servoir from which all the other fluid as well as solid parts of animals are extracted. The other fluid parts are called secretions, because they are secreted from the blood. The morbid concre- tions which are formed in various parts of the body, and the morbid fluids, shall be afterwards considered. At present we only consider those solid and fluid parts of animals which are formed while they are in a healthy state. These fluids may be reduced to the following :

BLOOD. Sec-etions.

1. Milk

2. Eggs

3. Saliva

4. Pancreatic juice

5. Bile

6. Cerumen

7. Tears

8. Liquor of the pericardium

9. Humors of the eye

10. Mucus of the nose, &c.

11. Synovia

12. Semen

13. Liquor of the amnios

14. Animal poisons.

Some fluids are secreted from the blood, and af- terwards ejected from the body. These are called excretions, the principal .of which are

15. Urine

16. Feces.

*1641. When blood is drawn from an animal, it gradually separates into two parts. One of these remains liquid, and has the color, and nearly the consistence of fresh whey, and is hence called serum. The other from its red color, being supposed to carry all the essence of the blood along with it, has obtained the name of cruor. The cruor has the consistency of curds when immediately precipitated from milk ; and hence the older physicians distin- guished the ingredients into which blood volun- tarily separated by terms which denoted what ook place in milk ; that is into curds and whey. This separation takes place though the blood be Kept at the same temperature which it had in the body of the animal ; though it should be mixed with water, or be placed in vacuo. Though we are entirely ignorant of what takes place in thebodbsof *nimals, it seems to follow,*

from these facts, that the decomposition of blood, in animals, is prevented by the peculiar powers of life which pervade all parts of the system, and by the muscular power of the heart and arteries. But we have two substances in blood which deserve attention; the serum and the cruor.

1642. The serum of blood is of a light greenish-yellow color, and converts syrup of violets to a green, owing to soda dissolved in it. At

the temperature of 156 ‘it coagulates, and also when boiling water is mixed with it. But if previously mixed with six parts of cold water, it does not coagulate by heat. The coagulum resembles the boiled white of an egg; and, if cut into small pieces, a muddy fluid, termed serosity, may be squeezed from it. If the resi- duum, after this fluid is separated, be washed in boiling water, it is found to possess all the pro- perties of coagulated albumen. The serum also contains gelatine, for if mixed with six times its weight of water, and boiled to coagulate the albumen, gelatine remains in the liquor, which may be obtained by concentration, and setting it to cool. Proust ascertained that it contains sul- phur, combined with ammonia in the state of hydro-sulphuret. Besides albumen, gelatine, hy- dro-sulphuret of ammonia, it also contains soda in a caustic state, apparently combined with ge- latine and albumen : muriate of soda, phosphate of soda, and phosphate of lime.

1643. Cruor, or the clot as it is often called, is of a red color and considerable consistence. If thrown upon a sieve, and washed with a small jet of water falling upon it, the coloring- matter is carried through, and there remains upon the sieve a white elastic substance which has all the properties of fibrin. What passes through the sieve is of a red color, and, if slowly evaporated to dryness, is found to con- sist of albumen and iron, part of which may be separated from it by the magnet. Neither the serum nor fibrin have been found to contain any iron. Fourcroy and Vauquelin have supposed that the iron exists in the blood in the state of sub-phosphate of iron.

1644. When new drawn blood is well stirred with a stick, the fibrin collects upon it, and may thus be removed. What remains no longer coagulates unless exposed to heat. When blood is slowly evaporated to dryness, and then sub- jected to destructive distillation, new compound-; are formed which did not previously exist ; and this takes place with regard to many animal and vegetable substances. The following ingredients have been detected in its composition

1. Water

2. Fibrin

3. Albumen

4. Gelatine

5. Hydro-sulphate of ammonia

6. Soda

7. Sub-phosphate ot iron

8. Muriate of soda

9. Phosphate of soda

10. Phosphate of lime

11. Benzoic acid, detected by Front. 164.5. JJei/elius finds the crassamentum cf

the blood to consist of

C H E M I S T R Y.

Coloring matter Albumen and Fibrin

64 36

100

The coloring matter when incinerated affords a

residue consisting of

Oxide of iron 50‘0

Subphosphate of iron . . . 7‘5

Phosphate of lime with magnesia 6-0

Lime. 20‘0

Carbonic acid and loss . . . 16-5

100-0

1646. AVhen blood is drawn from an indi- vidual in some circumstances of diseased action, fibrin collects on its surface, forming the buffy coat.

1647. By Berzelius, the red color of the blood >s supposed to be dependent upon the iron which enters its composition, but Brande and Yauque- lin consider its color referable to a peculiar ani- mal principle, independently of the presence of iron.

SECRETIONS.

MILK.

1648. Milk is secreted from the blood by that class of animals which has obtained the name of mammalia, and is intended for the nourishment of their offspring. The milk chiefly used by man as an article of food is that of the cow. It is a white opaque fluid, of an agreeable sweetish taste, and reddens vegetable blues. It is heavier than water, and lighter than blood ; but its spe- cific gravity varies at different times. It boils nearly at the same temperature with water.

1649. When allowed to remain some time at rest, it throws up a yellowish colored substance to its surface, known by the name of cream. The remaining milk is much thinner than it was be- fore, and is of a bluish-white color. If it be heated to 100°° and have a little rennet, formed by digesting water on the inner coat of a calf's stomach and preserved with salt, well mixed with it, the milk coagulates. It also coagulates when treated with alcohol, with acids, with infu- sion of the flowers of artichoke and of the this- tle, and a variety of other plants. It also coagu- lates if as much of any neutral salt as it can dis- solve be added to it while boiling ; or gum-ara- bic, or sugar. If the coagulum be broken, it soon separates into a white solid part called curd, and a greenish liquid part called whey. Thus milk may be separated into three parts, cream, curd, and whey. See BUTTER, MANUFACTURE OF.

1650. Cream is of a yellow color, and gradu- ally becomes thick by exposure to the atmosphere. If placed in a vessel of no great depth, it soon becomes solid ; mucus and byssi form upon its surface, and it no longer retains the properties of cream, but of a very fat cheese. In this way cream cheeses are made in this country. Thus cream contains a peculiar oil, curd, and some serum. The oil is separated from it by the pro- cess of churning, which divides cream into two parts, the one solid called butter, the other fluid, which resembles creamed milk.

1651. Butter is of a yellow color, melts at 96°° and becomes transparent. If kept melted

for some time, it deposits curd and whey, and assumes the appearance of an oil, but loses its peculiar flavor. If kept some time it becomes rancid ; but if it be well washed, and sufficiently purged of these foreign ingredients, it remains sweet much longer that when this precaution is not adopted. Distilled, it yields water, an acid, an oil at first fluid, and afterwards concrete. A small quantity of charcoal remains in the retort. 1652. When cream is churned it is

commonly kept some time until it becomes sour. Fresh cream requires at least four times as much churn- ing to make it yield butter, as sour cream does. Milk warm from the cow yields more butter than can be obtained from the cream it throws up ; but it requires proportionally mora churning than the cream, especially if the latter be previ- ously soured. When very sour cream is churned, the butter milk that is left is not nearly so sour as the creara had been ; though the butter re- mains perfectly sweet. This shows that the acid which had been formed in the cream is partly decomposed during the churning. Young and Thenard have shown that sour cream may be churned, and butter obtained, although atmos- pheric air be excluded. But in the Agricultural Survey of Mid-Lothian, an experiment on churn- ing is recorded which was conducted by Messrs. Robertson and Headrick. They operated on milk fresh drawn from the cow ; and it appeared that atmospheric air constantly entered into, and combined with the milk during the whole pro- cess. The butter was perfectly sweet, and the milk acquired that degree of acidity which dis- tinguishes- new churned milk. We are therefore inclined to think that the oil in milk, like other vegetable oils, is originally in A liquid state ; but that it consolidates into butter in consequence of absorbing oxygen, either from an acid previously formed in the cream, or formed by agitating the liquid in contact with air during the process of churning. Carbonic acid gas is sometimes extri- cated during churning, and the temperature gene- rally increases about four degrees. Butter may be churned from whey after the curd is extracted from it ; some persons are in the practice of gradually heating whey to about 150►► when it throws up its cream. This, being skimmed off, is churned into butter.

1653. Curd may be separated from creamed milk, or from butter milk, by the addition of ren- net. It is white and solid, and possesses many of the properties of coagulated albumen. When the moisture is squeezed out, it becomes hard and brittle. It is soluble in water, but readily combines with pure alkalis, especially when as- sisted by heat. With fixed alkalis much ammonia is evolved, and, if the heat be strong, charcoal is deposited. Wrhen precipitated by an acid, it is of a black color, melts like tallow, and never ac- quires the consistence of curd. Hence alkalis appear to decompose curd, and to convert it into ammonia and oil, or rather fat. The mineral acids, when much diluted, dissolve fresh undried curd, when assisted by heat. The vegetable acids only dissolve it when they are concentrated.

1654. Curd is the basis of cheese, and tiie best cheese is that from which as little as possible of the cream is abstracted. For this reason

it

should be subjected to as little pressure as possi- ble in abstracting the whey. For this purpose it is first cut in various directions with a wooden knife, and the whey which spontaneously sepa- rates is laved off. When the curd has acquired a firm consistence, it is repeatedly cut into small fragments by a four-edged knife, and thrown into a drainer. It is then repeatedly cut in the same manner, and subjected to a gentle pressure in the cheslet. By this process the oil in the curd attracts oxygen, and is converted into butter, which remains in union with the curd. The last portions of the whey are expelled by subjecting the cheese to violent pressure. If the soft curd be subjected to violent pressure, much of the cream goes off with the whey. Cheese of this sort melts when exposed to heat; but cheese from skimmed milk, or from butter-milk, dries and shrivels up like horn. Much of the cream is also expelled by overheating the milk before the rennet is applied. The heat should not ex- ceed 100□□.

1655. Whey contains a portion of curd, which may be separated by filtration or by boiling. In the latter case the curd rises and forms a thick scum on the surface, which may be skimmed off, and is called in the north float whey. Fresh whey is of a yellowish-green color, and of an agreeable sweet taste. But after the curd is carefully skimmed, and is allowed to settle some hours, it may be decanted off colorless like water. If this liquid be slowly evaporated, it deposits at last white crystals, which are sugar of milk. Whey also contains acetic acid, and hence red- dens vegetable bines. It also contains some mu- riate of potassa and of soda. Fourcroy and Vauquelin discovered in it some phosphate of magnesia and of iron, sulphate of potassa, and a peculiar extractive matter.

1656. Milk is capable of undergoing the vi- nous fermentation spontaneously, and then yields alcohol by distillation. Before this takes place it must previously become sour, and then be placed in the proper temperature. In this way the Tartars obtain a vinous liquor from mare's milk, to which they give the name of koumiss. The inhabitants of Orkney and Shetland prepare a vinous liquor from cow's milk by a process nearly similar.

1657. When milk is distilled there first comes over water containing animal matter, which soon putrefies. After being concentrated the

*milk coagulates, like albumen, into a thick unctuous yellowish-white substance. By increasing the heat this substance yields a transparent liquid, which becomes gradually colored ; some very fluid oil, then ammonia, an acid, and lastly a very thick black oil. At the same time carbureted hydrogen gas is emitted. There remains a coal, which contains carbonate and muriate of potash, phosphate of lime, and sometimes magnesia, iron, and muriate of soda. The contents of cows' milk have been given as follow : ***

1. Water

2. Oil

3. Curd

4. Extractive

5. Sugar of milk

6. Acetic acid

7. Muriate of soda

8. Muriate of potassa

9. Sulphate of potassa

10. Phosphate of lime

11. Phosphate of magnesia

12. Phosphate of iron.

*1658. Berzelius has recently stated the follow- ing to be the constituents of skimmed cows' milk : ***

Water 928-75

Cheese with a trace of butter . . 28-00

Sugar of milk 35-00

Muriate of potassa 1-70

Phosphate of potassa .... 0'25 Lactic acid, lactate of potassa, and a) fi _

trace of lactate of iron J

Earthy phosphates 0-30

Cream consists of Butter Cheese Whey

1000-00

4-5 3-5

92-0

100-0

1659. Women's milk contains much more sugar than cows' milk. It throws up abundance of white cream, and when this is separated, it becomes very thin, and of a bluish-white color. Women's milk has not been coagulated except by boiling ; nor can the cream be formed into butter by churning. Asses' milk very much re- sembles women's milk. Goats' milk differs little from cow's milk, except in containing less cream and more curd. It derives a peculiar flavor from the wild herbs on which the animals feed. Ewes' milk is thicker than cows' milk, and makes a pungent species of cheese. Mares' milk is thicker than women's milk, and contains more curd, but not so much as the milk of the cow. All these milks contain nearly the same ingredi- ents, though their proportions vary considerably ; and those of cows' milk vary with their food, and at different seasons of the year.

EGGS.

1660. Dr. Prout has lately examined with attention the nature and composition of eggs in the progress of incubation. Eggs lose a little of their weight by being boiled, and the water be- comes impregnated with about 0'3 grains of saline matter from an egg of common size. This saline fluid is found on evaporation to be strongly alkaline, and to contain also animal matter, sul- phuric and phosphoric acids, chlorine, lime, mag- nesia, and carbonates of those earths, all of which substances exist both in the white and the yolk.

1661 . The shell contains about two per cent, of animal matter, with one per cent, of phosphates of lime and magnesia, the rest being carbonate of lime with a little carbonate of magnesia. Vauquelin also found in the burnt shells traces of iron and sulphur.

1662. The yolk of the egg, besides the more common ingredients of animal fluids, contains a considerable portion of uncombined phos-

phorus, which, when the dried yolk is burnt, forms a glassy coating of phosphoric acid, that effectually defends the charcoal from combus- tion. In the white of an egg, which, as has beea

already stated, consists chiefly of albumen, sul- phur exists in a free state. In one instance the yolk weighing 316‘5 grains, contained 170‘2 water, 55‘3 albumen, and 91 yellow oil. But these proportions varied in different instances. Henry. See Philosophical Transactions, 1818.

‘^ SALIVA

1663. According to the most recent analysis of Berzelius consists of

Water 992-9

A peculiar animal matter . . 2‘9

Mucus .□□, . . 1‘4

*Alkaline muriates . . . 1*7*

Lactate of soda and animal matter 09 Pure soda 0 2

1000-0

Mr. Brande has found albumen, though not in- dicated by common tests, still to be indicated by galvanic agency. lie supposes that it exists in saliva, combined with soda.

BILE

1664. Is secreted by the glandular substance called the liver, and is collected in a reservoir, until needed for use, called the gall-bladder. The ancient physicians paid much attention to the bile juice, imputing to its sanity or the re- verse, the health or diseases which afflict the hu- man kind. The poets, who embalm and perpe- tuate all the nonsense which prevails in their times, ascribed to it a domineering influence on the intellectual vigor, the temper and dispositions of the mind. The bile with which we are best acquainted is ox-bile. It is of a yellowish-green color, bitter taste, and peculiar smell. When violently stirred it lathers like soap, and hence has been called animal soap. It combines with water in any proportion, but

not with oil ; though it readily combines with soap, and is used by fullers to take greasy stains out of cloth. The latest analysis of human bile with which we are furnished, is that of Thenard, who in 1100 t>arts of bile found the following products.

Water 1000

Undissolved yellow matter 10

Do. solution a trace.

Albumen 42

Resin 41

Soda 5-6

Phosphates of lime and soda, sulphate and muriate oi

soda, and oxide of iron 4-5

CERUMEN OF THE EAR.

16(35. This is a yellow-colored liquid secreted from glands in the auditory canal, which gradu- ally hardens by exposure to the air. Its object is to guard against insects, which would soon de- stroy the tympanum or drum of the ear. Whe- ther it acts as a poison to insects is not ascer- tained ; but it is certain that no insect likes to approach it if the contact can be avoided. Vau- quelin, from his own experiments and those of others on this substance, concludes that it con- sists of

1. Albumen

2. An inspissated oil

3. A coloring matter

4. Soda

5. Phosphate of lime.

TEARS AND Mucus.

1666. Tears are transparent and colorless like water, but always exhibit a salt taste. Exposed to the air, the liquid becomes thicker, and at last deposits cubical crystals in the midst of mucilage.

Fourcroy and Vauquelin state their composition to be

1. Water

2. MUCUS

3. Muriate of soda

4. Soda

5. Phosphate of lime

6. Phosphate of soda.

Berzelius's more recent analysis gives

Water 933'T

Mucus matter 53-0

Muriates of potassa and soda 5-6

Prepared lactate of soda . . 09 Albumen, and animal matter in-soluble in water but soluble in alcohol 3'5

1000-0

The saline parts scarcely amount to one per cent, of the whole. The mucus absorbs oxygen from the atmosphere, becomes thick and viscid, and assumes a yellow color. It then becomes in- soluble in water, though fresh tears are miscible with water in any proportion. The mucus of the nose is of the same properties with that which drops from the eyes, though, being longer sus- pended, and exposed to the air, it acquires greater consistency. Indeed the mucus of the eyes passes into the nostrils by particular aper- tures, which, being obstructed, the eyes become diseased. The mucus which lubricates various other parts of the body, has been supposed to consist of liquid albumen. Dr. Bostock has pointed out a difference in these substances.

LIQUOR OF THE PERICARDIUM.

1667. This liquor is enclosed in a membrane which invests the heart, and is intended to lu- bricate this organ, and to prevent the dangerous consequences of friction. Dr. Bostock examined this liquor taken from a boy who died suddenly. It very much resembled the serum of blood, and was composed of

Water 92-0

Albumen 5-5

Mucus 2-0

Muriate of soda . . 0-5

100-0

HUMORS OF THE EYE.

1668. There are three humors which compose the lens by which vision is affected ; and their different degrees of refracting power correct each other, and prevent the aberration of the rays of light. These humors are included within the cornea, and have obtained the names of the aqueous, the crystalline, and the vitreous humor. The vitreous is the interior humor, and is by far

the largest in proportion. Mr. Chenerix ex- amined the eyes of sheep, and found their aque- ous and vitreous humors not to differ sensibly in their composition, except that the latter was rather of more specific gravity than the former. He found them to consist of

1. Water

2. Albumen

3. Gelatine

4. Muriate of soda.

Nicholas also detected a little phosphate of lime. The crystalline humor, or lens, is solid and trans- parent, and is composed of concentric coats, the densest of which are next the centre. It is com- posed of albumen and gelatine united with water, and the quantity of gelatine, accord ing to Nicho- las, diminishes as we approach the centra of the lens. It is nearly soluble in water, but coagu- lates in hot water. The humors of the human eye, of those of oxen, and of birds, do not differ sensibly from those of sheep, except in possessing a small degree more specific gravity.

SYNOVIA.

1669. This liquid is secreted between the moving joints of animals, and is evidently in- tended to lubricate the parts, and to prevent friction. Mr. Margueron examined synovia taken from the joints of the lower extremities of oxen. When fresh from the joint it is a viscid, greenish colored, semitransparent fluid, having a smell not unlike that of frog spawn. It soon acquires the consistence of jelly, but afterwards recovers its fluidity, and deposits a thready-like matter. It combines with water and renders it viscid. Alcohol precipitates from it albumen, and acids precipitate a fibrous matter, which has the smell, color, taste, and elasticity of vegetable gluten. When distilled there first comes over water which soon putrefies ; then water contain- ing ammonia ; then empyreumatic oil and car- bonate of ammonia. The coal contains muriate and carbonate of soda, and some phosphate of ammonia. From Mr. Margueron's analysis, it appears that the synovia of the ox is composed of

11-86 fibrous mattter

4-52 albumen

1-75 muriate of soda

0-71 soda

0-70 phosphate of lime 80-46 water.

100-00

SEMEN.

1670. Of this Vauquelin published an analy- sis in 1791. When newly emitted it consists of two substances, one fluid and milky, supposed to be secreted by the prostate gland ; the other thick and mucilaginous, in which numerous shining filaments may be discovered, is supposed to be secreted by the testes. It has a disagree- able smell, an acrid irritating taste, and a greater specific gravity than water. Rubbed in a mor- tar it becomes frothy. It converts paper stained with the blossoms of mallows or violets to a green color, and hence contains an alkali. After some time the whole becomes perfectly liquid,

and then it readily dissolves in water, which does not take place when newly emitted. It readily combines with acids and alkalis . When exposed to the air at the temperature of 60°° it assumes a transparent pellicle, and deposits small transparent crystals of phosphate of lime. If kept in very moist air at 77°° it acquires the

color of the yolk of an egg; its taste becomes acid, it exhales the odor of putrid fish, and its surface is covered by the byssus septica. According to Vauquelin, semen is composed of 90 water

6 mucilage

3 phosphate of lime

1 soda.

100

LIQUOR OF THE AMNIOS.

1671. The amnios is a membrane which enve- lopes the foetus in the uterus, and it is filled with a liquor in which the foetus is immersed. Only the liquor amnii of women and of cows have yet been examined by Vauquelin and Buniva; and its probable this liquor varies in its properties in different animals. In the amnios of women this liquor is of a weak but pleasant odor, of a saltish taste, and of a slightly milky color, owing to a curdy matter suspended in it, which may be se- parated by filtration. It changes tincture of violets to green, and tincture of turnsole to red, which seem to indicate the presence both of an alkali and an acid. It froths when agitated, be- comes opaque when heated, and emits the smell of boiled white of egg. Acids render it more transparent. Alkalis and alcohol produce flaky precipitates ; the latter, being dried, becomes transparent, and much resembles glue. Infusion of nut galls produces a copious brown precipi- tate. "When slowly evaporated it becomes slightly milky, and leaves a residuum not ex- ceeding 0'012 of the whole. Thus the liquor in women's amnios has been found to consist of

98-8 water,

< albumen,

l-2< muriate of soda, soda, (.phosphate of lime, lime.

100-0

1672. The curdy matter suspended in this liquor is often found deposited upon the skin of the foetus, and is supposed by Vauquelin and Buniva to be formed from the albumen of that liquid, which has undergone some unknown changes. It has a strong resemblance to fat.

1673. The liquor in the amnios of the cow is of a brownish-red color, a bitter and acid taste, a viscidity similar to gum-arabic, and a peculiar smell. It reddens tincture of turnsole, and hence contains an acid. Muriate of baryta separates from it sulphuric acid. Alcohol separates a red- dish colored matter. By evaporating the liquor to a fourth part of its bulk, and allowing it to cool, it deposits crystals of amniotic acid. Thus the liquor of the amnios of cows contains

1. Water

2. A peculiar animal matter, supposed

a species of mucilage

CHEMISTRY.

525

3. Amniotic acid

4. Sulphate of soda.

!674. Dr. Prout's very recent analysis gave only

Water 977

Albumen .... 2'6

Substances soluble in alcohol 16' 6 Saline substances and sugar of milk , . 3.8

1000-0

ANIMAL POISONS.

1675. For what is known concerning these liquids we are principally indebted to Fontana. When poured into a fresh wound they occasion the disease or death of an animal. These poi- sonous juices are elaborated by serpents, bees, wasps, scorpions, spiders, &c. It seems now to be agreed among naturalists that the toad is not a poisonous reptile, and that he has been indebted for this unfavorable opinion to his disgusting ap- pearance alone. Yet dogs who have incautiously bitten toads, have been known to swell very much, and to labor under great pain. Little progress has yet been made in investigating the properties of animal poisons. The investigation is attended with extreme difficulty ; but could it be fully accomplished it would suggest an anti- dote against their deleterious effects.

1676. The poison of the viper is a yellow li- quid lodged in two small vesicles in the ani- mal's mouth. When it bites the vesicles are compressed and the poison is forced through a tube into the wound by the crooked fangs. If the vesicles or the fangs be extracted the bite is harmless. If the poison be inserted into a wound by sharp instruments it proves equally fatal as when it is inserted by the animal itself. The quantity in a single vesicle scarcely exceeds a drop; and Fontana having collected the poison of many hundred vipers, found it had no taste, but conveyed numbness to the tongue. It has the appearance of oil before the micros- cope, though it combines with water. It does not alter vegetable blues ; hence seems to con- tain no uncombined acid. Exposed to the air its water evaporates ; and Fontana could not distinguish between the residuum and gum Arabic. Both are of the same color and taste, both are equally soluble in water ; but whether the venom still retains its poisonous property after being evaporated into a gum, and again dis- solved in water, has not been ascertained. Indeed the simple act of tasting could be of no use in deciding such a question, because there have been men who swallowed wine glasses nearly full of the venom fresh drawn from vipers and rattle-snakes. They found it an exhilarating sort of juice, and to produce the same effects upon them as a dram of brandy, or rather a dose of opium. Had there been any ruptured blood- vessels in their gums, mouth, throat, or intestines, the experiment would have proved immediately fatal.

1677. Dr. Russel, from his experiments, thinks that the poison of all other serpents is precisely the same with that of the viper. This seems to 'je an erroneous opinion, for it is known that the

effect of the bite of serpents in this country, taking a general average, depends upon the size and strength of the serpent which inflicts the wound, compared with the size and strength of the animal upon whom the wound is inflicted. Against this general rule there are many ex- ceptions, for it is well known that there are se- veral species of serpents in this country which never attain a large size, but which inflict a more fatal wound than others of more than three times their length, and more than ten times their weight. The cobra di capello is a serpent which abounds in India. Its length varies from the size of a man's little finger, to from ten to thir- teen inches. The bite of this serpent does not de- pend upon the correlative size of its body and that of the animal bitten. Its bite, unless reme- dies are applied, always effects, sooner or later, the destruction of the animal bitten. It should appear that much ignorance still prevails respec- ting the principle upon which the agency depends of animal poisons ; it is pretty certain however that there is a difference in the

composition, as there is an ascertained difference in the effect, of the venom of serpents.

1678. Dr. Mead imagined the poison of ser- pents to consist of acids, and therefore recom- mended ammonia, or volatile alkali, as a certain cure. But we have seen that it exhibits no acid properties ; and the numerous ineffectual trials of Fontana robbed this application of all its ce- lebrity. Dr. Ramsay attempted to revive its credit as a cure for the bite of the rattle-snake. Others having observed that swine eat serpents, and seem not to be affected by their bite, have concluded that the grease with which these ani- mals are invested operated as an antidote against the poison. They have hence recommended hogs' lard, or sweet oil, as an infallible remedy. It appears that these applications can have no other effect than washing part of the venom out of the wound, before it enters the blood-vessels. The reason why swine do not seem to be hurt by the bite of serpents is, that the fat with which they are invested prevents the venom from en- tering their blood-vessels. In man and other animals the effect depends much upon the part of the body where the poison is inserted. Thus the bite of a viper seldom proves fatal to a sheep upon its legs, but if the animal should lie down upon a serpent and be bitten in the udder, or genitals, it always dies in consequence. If a man should incautiously swallow a wasp, and be stung by it in the throat, it proves fatal. Per- sons who have been bitten by serpents, though it did not prove fatal, have assured us that they always experienced a numbness and debility in the limb that had been bitten. As chemistry does not furnish us any certain knowledge 01 the properties of animal poisons the only an- tidote that appears infallible is an immediate ex- cision of the part, and preventing the venom from entering into the circulation of the blood. For further information see the article POISONS.

URINE.

1679. This has attracted more of the attention of physicians than almost any other animal fluid. The alchemists believing it to be a microcosm, or

concentrated essence of matter, labored to ex- tract from it their grand elixir, or philosopher's stone. It was by following out such projects that phosphorus was first discovered.

1680. Healthy urine, when fresh, is generally transparent, of a light amber color, emits a smell resembling that of violets, and has a disagreeable taste. When it cools its smell is that which is termed urinous ; and in a few days it emits a fetid alkaline smell. Lime water precipitates from fresh urine phosphate of lime. Hence this salt in urine contains an excess of acid ; and this is the reason why fresh urine reddens turnsole, and paper stained with the juice of radishes. The super-phosphate of lime abounds most in the urine of sick and of gouty persons. There is also present in urine a little of the phosphate of magnesia. Prout observed that urine contains some carbonate of lime, and its presence seems inconsistent with that of super-phosphate of lime. Urine generally when it cools, and always after it has been reduced by evaporation, deposits a brick-colored precipitate, which is uric acid in crystals. During fevers, and some other diseases, a brick-red sediment is deposited from urine, which, as before observed, is the rosacic acid of Prout. If urine, especially that of horses and cows, be evaporated to the consistence of a syrup, ‘ and have muriatic acid poured into it, a deposi- tion takes place of benzoic acid. Infusion of tannin precipitates from diseased urine gelatine or albumen. If urine be evaporated to a thick syrup, it consolidates on drying. Alcohol poured upon this mass dissolves urea, and being decanted off, and slowly distilled, the urea is obtained in a crystallised form. It is to urea that urine owes its peculiar properties. Prout also detected a small quantity of bile in urine. Urine likewise contains muriate of soda, and the fusible salt of urine, or microcosmic salt. It frequently also contains muriate of ammonia. These latter suits have the form of their crystals altered in conse- quence of holding urea in their composition. But the properties of these salts, and of urea, having been already illustrated, it seems unneces- sary to recapitulate what was already stated. A silver basin is blackened if urine be boiled in it, and therefore it contains sulphur. When the urine putrefies, the sulphur escapes with carbonic acid, and blackens paper stained with acetate of lead, when exposed to its fumes. Healthy urine there- fore contains the following ingredients. Though their portions vary from circumstances, and often some of these ingredients cannot be detected.

remains several days without putrefying; but diseased urine frequently putrefies the moment it is voided . This is supposed to be o %ving to the great proportion of albumen and gelatine it contains, which acting on the urea, new products are pro- duced. Ammonia is produced, which saturates the phosphoric, uric, and benzoic acid ; while- part of the gelatine is precipitated in the form of white flakes,

and the phosphates of lime and of magnesia form crystals on the sides of the vessel. The distillation of urine produces nearly the same changes as are effected by its putrefaction, and from both are obtained

1. Ammonia

2. Carbonate of ammonia

3. Phosphate of ammonia

4. Phosphate of magnesia and ammonia

5. Urate of ammonia

6. Acetate of ammonia

7. Benzoate of ammonia

8. Muriate of soda

9. Muriate of ammonia

1682. Considerable differences take place in the color and ingredients of urine from various diseases, which have lately become the objects of much attention with physicians and with che- mists. The urines of various animals differ from each other, and from that of man. In general the urine of graminivorous quadrupeds has been found to agree with that of men, in containing urea; but differs from it in being destitute of pnosphoric acid, the phosphates, and uric acid.

1683. Mr. Brande says the substances that are always found in urine, according to his own ex- periments, are the following :

1. Water

2. Carbonic acid

3. Phosphoric acid

4. Uric acid

5. Phosphate of lime

6. Phosphate of ammonia

7. Phosphate of soda

8. Phosphate of magnesia

9. Common salt

10. Sulphate of soda

11. Albumen

12. Urea.

1. Water

2. Phosphoric acid

3. Phosphate of lime

4. Phosphate of mag-

nesia

5. Carbonic acid

6. Carbonate of lime

7. Uric acid

8. llosacic acid

9. Benzoic acid

10. Gelatine

men

11. Urea

12. Resin of bile

13. Muriate of soda

14. Phosphate of soda

15. Phosphate of am-

monia

16. Muriate of ammonia

17. Sulphur.

1684. With regard to the proportion of tlie different ingredients of urine, says Dr. Henry, Berzelius finds that it differs essentially in the same individual, even from causes which have little influence on health. The following table and albu- may be considered as showing its average com- position.

Water . . ...

Q33-00

30 10

Sulphate of potassa . .

3-71

ˆ□□□1 A

Phosphate of soda . .

2-94

1 fiK

Muriate of soda . . .

4-45

1 681 . Several other salts have been occasionally detected in urine. No substance putrefies more rapidly than urine, or exhales a more disagreeable sineil during putrefaction. Healthy urine often

Free lactic acid ˆ

Lactate of ammonia I

Animal matter soluble in al-%

cohol, and accompanying!

the lactates

17-14

CHEMISTRY.

527

Animal matter insoluble in

alcohol Urea not separable from the

above Earthy phosphates with a trace

of fluate of lime . .

Uric acid ,

Mucus of the bladder . , Silica

17-14

1-00

1-00 0-32 0-03

of

1000-00

1685. Urea consists, according to Dr. Prout,

Oxygen Nitrogen Carbon Hydrogen

28-2

FECES.

1686. These are voided per anum by animals, after all the useful materials of their food are ex- tracted, and sent into circulation for the nourish- ment of their bodies. They consist of the indi- gestible parts of the food, mixed with various liquids, which are discharged upon them during their passage through the intestines. Vauquelin and Berzelius, Thaer and Einhof, have made ex- periments upon them with a view to ascertain the changes produced on food by digestion, or the cause of the fertility produced by feces when applied as a manure.

1687. Fresh human feces do not alter vegetable colors, and hence

contain no uncombined acid nor alkali. Their taste is sweetish bitter ; their smell is known to every one. Their consistency varies, and they lose about three-fourths of their weight when dried on a water bath. They may be diffused by agitation and maceration in water, and the liquid, being passed through a linen cloth, leaves a grayish brown matter, of a peculiar smell, which adheres long to the cloth. When dried, this substance amounts to about seven per cent, of the feces, and it exhibits remains of the vege- table, and perhaps animal, matters used as food.

1688. The liquid which passes through the cloth, deposits, after standing, a yellowish-green matter, which may be separated by the filter. When dry, it amounts to about fourteen per cent, of the feces. Alcohol separates from it a substance resembling the resin of bile. When this is re- moved, water dissolves a yellow substance, which seems to consist of mucus, with perhaps a little gelatine. Tannin makes it muddy, but forms no precipitate. This substance soon putrefies, and emits the smell of putrid urine. There remains a greenish gray substance, insoluble in water and alcohol, which, when burnt, leaves some silica and phosphate of potassa. The liquor which passes through the filter, is at first yellow, but becomes brown and muddy by exposure to the air. It was found to contain albumen, mixed with phosphoric salts, bile, or rather the resin of bile combined with soda, a peculiar sub stance of a reddish-brown color, soluble both in water and alcohol, to which acids give an intense brown color. A small quantity of tannin throws

it down in the form of a red powder ; but a large quantity in grayish-brown flakes. The liquor also contained various salts, of which ammonio- phosphate of magnesia is the principal. ??? Human feces then, according to Berzelius consist of the following ingredients : ???

Water 73-3

Vegetable and animal remains 7-0

Bile 0-9

*Albumen 0*9*

Peculiar extractive matter . . 2-7

Salts 1-2

Slimy matter; consisting of resin of bile, peculiar animal matter,

and insoluble residue . . . 14‘0

100-0

1689. Thaer and Einhof operated on the dung of oxen that were fed on turnips. It putrefied readily, and changed the oxygen of the air into car- bonic acid, as takes place in the putrefaction of ve- getables. When freuh, and dried on a steam-bath, 100 parts leave 28 J of solid matter. Eight ounces, diffused through water, let fall forty- five grains of sand. The liquid, on standing, de- posited a slimy substance, which was separated by the filter, and weighed, when dry, 480 grains. It was of the peculiar color and smell of the feces, and was considered by Einhof as the re- mains of vegetable matter used as food by the cattle. It probably contained also some resin of bile. The filtered solution was at first colorless, but soon became yellow, and then brown. Eva- porated to dryness it left a brownish matter of a bitterish taste, weighing ninety grains, which was soluble in water, but not in alcohol. It soon putrefied, exhaling ammonia, and burnt like animal matter. It contained some phosphoric salts. When fresh cows’ dung was dried and burnt, it left an ash composed of the following earths and salts, and in the following propor- tions : ???

Lime 12

Phosphate of lime 12-5

Magnesia 2

Iron 5

Alumina and some magnesia. . 14

Silica 52

Muriate and sulphate of potassa . 1-2

1690, Vauquelin having calculated the amount of fixed matters taken in by hens as food, and having ascertained the amount of fixed matters given out by eggs and excrement, during the same period, found the fixed matters given out consi- derably to exceed the fixed matters taken into their stomachs. The fixed parts taken in by a hen in ten days while she was was fed on oats, amounted to 356-057 grains, consisting of phos- phate of lime and silica. But during that time she gave out 971 ‘482 grains, consisting of phos- phate and carbonate of lime and silica, making the surplus given out 615-425 grains above what was taken in. Of this surplus 511-9H consisted of

carbonate of lime, of which none was taken in with the food. The quantity of phosphate of lime given out, exceeded that taken in by 137-796 grains ; but the silica given out- was less than

that taken in by 34-282 grains. It is possible the animal may have picked up carbonate of lime from the plaster of the room. But if not, and if this experiment be found correct, it will prove that neither phosphorus, nor lime, nor perhaps any of the earths are simple substances, and that animals have a power of forming them by the process of digestion. Indeed this fact seems now to be verified by the splendid dis- coveries of Sir H. Pavy so often alluded to, which have incontestably proved that the bases of the al- kalis and alkaline earths are metallic substances. It seems very probable that plants and animals have a power of forming: the earths, &c. from their principles absorbed by their roots or sto- machs, or from the atmosphere.

MORBID CONCRETIONS.

1691. Such of these as have been hitherto ob- served have been divided into

OSSIFICATIONS.

1602. Of these the first that occur are pineal concretions, which are formed in the pineal gland, situated in the centre of the brain. They resemble particles of sand, and can hardly be called morbid, because we believe they occur in all adults. 2. Salivary concretions are often formed in the salivary glands, especially the parotid and sublingual. 3. Pancreatic concre- tions are often found in the pancreas. 4. Pul- monary concretions are often coughed up by persons laboring under consumption, and the lungs of such persons contain many similar bodies. 5. Hepatic concretions. These are sometimes formed in the liver, and are commonly of a more irregular shape, and of a much larger size than any of the former. 6. Concretions in the prostate are sometimes formed in the prostate gland. 7. The extremities of the muscles, of the larger b ood vessels, together with the valves of the heart and aorta, often harden and assume the appearance of bone. This happens chiefly to aged persons, and unfits the organs for dis- charging their functions. Dr. Wollaston found pineal concretions to consist chiefly of phosphate of lime. Perhaps their composition may

vary with the age of the person, or they may some- times contain a mixture of phosphate of lime with silica. It was thought they were silicious, because such as were tried scratched glass, and were insoluble in every acid they applied. The other concretions which have been examined have been found to consist chiefly of phosphate of lime, and tough animal membrane. Some- times they contain a portion of carbonate of lime ; and a pulmonary concretion, examined by Mr. Crompton, contained no phosphate, but con- sisted of

Carbonate of lime . . Animal matter and water

18

100

INTESTINAL CONCRETIONS. 1693. These, sometimes of considerable size, are occasionally found in the stomach and intes- tines, seldom indeed of man, but more frequently in those of inferior animals. Some of tl-em are

called bezoars, and their medical virtues were much extolled, though they seem now to have lost their celebrity. The principal of these, as pointed out by Fourcroy and Vauquelir,, ××re, 1. Superphosphate of lime, which is arranged in concentric layers, very brittle, and easily sepa- rable from each other. They are partially so- luble in water, redden vegetable blues, and were found in the intestines of different mam- malia. 2. Phosphate of magnesia forms an uncommon concretion, semi-transparent, and usually of a yellowish color. It is arranged in layers not so easily separable as the former. 3. Phosphate of ammonia and magnesia. ××× This is the most common of any, is of a gray or brown color, is composed of crystals diverging like radii from a centre, and somewhat resembles spar of lime. It contains much animal matter, and is often found in the intestines of the horse, the elephant, and other herbivorous animals. 4. JBi- liary. ××× These are sometimes found in the intes- tines and gall-bladders of oxen. They are a coagulated mass, of a reddish-brown color. Painters use them as an orange-yellow pigment, and they do not seem to differ much from the resinous matter of bile. 5. Resinous. ××× These are the oriental bezoars formerly so celebrated, and are obtained from animals with which we are unacquainted. Fourcroy and Vauquelm dis- tinguish two varieties of them. The first are of a pale green color, and seem to consist of bile and resin. The second of a brown or violet color, and their composition more uncertain. Botli are fusible and combustible,

composed of con- centric layers, smooth, soft, and finely polished. The first is soluble in alcohol, the second in al- kalis. 6. Hairy. ❖❖❖ These consist of halls of hair, which are often of very large size, are felted together like a hat, and are found in the stomachs and intestines of various animals. They some- times contain a mixture of vegetable matters, sometimes are coated with animal matter. They occur frequently in cows, and are thought to be occasioned by the animals licking off their own- or each others' hair. By obstructing the passage of the intestines, they frequently occasion the death of the animal.

BILIARY CALCULI.

1694. This name, and that of gall-stones, has been applied to certain concretions which occur in the gall-bladder, or in the duct by which the bile passes into the intestines. They have long attracted the notice of physicians, as, by obstruc- ting or stopping the passage of the bile, they oc- casion the jaundice. Four kinds of them have been distinguished. The first is always of a white, yellow, or greenish color, of an oval shape, and sometimes as large as a pigeon's egg ; and constantly includes a nucleus of inspissated bile. Its specific gravity is less than that of water, being about 0-803. It is insoluble in water, but dissolves in hot alcohol, from which it drops in brilliant plates when the alcohol cools. It also melts by heat, and crystallises when cooling. It is soluble in oil of turpentine, and with alkalis forms a soap. Fourcroy describes the substance which forms this ncretion as con- sisting principally of adipocire. The second speciei

is of a polygonal shape, and a number of them are always found in the same gall-bladder together. In composition this species differs little from the former,being almost wholly composed of adipocire . The third species consists entirely of inspissated bile, and has not been found in the human species, though it is frequent in oxen and other inferior animals. Concerning the fourth species very little is known, except that it neither dissolves in alcohol nor in oil of turpentine.

1695. Chevreul, who has recently examined biliary calculi, gives to the crystalline matter, which is found in them, the name of cholesterine, being different in his opinion both from sperma- ceti and adipocire. See CALCULUS, BILIARY.

URINARY CALCULI.

1696. These are the most frequent, as well as the most formidable of all morbid concretions. They obtained the name of calculi from a sup- position they were stones. They are either egg- shaped, or polygonous, or resemble a cluster of mulberries, in which case they have obtained the name of mulberry. Many of them are very small, and some exceed the size of agoose-egg. Their color is deep brown, white, or dark gray, and often these colors are intermixed. Their surface is sometimes smooth, sometimes rough and unequal. Their specific gravity varies from 1-213 to 1-976. The substances of which they are composed are

1. Uric acid.

2. Urate of ammonia.

3. Phosphate of lime.

4. Phosphate of magnesia and ammonia.

5. Oxalate of lime.

6. Silica.

. Animal matter.

1697. Many of these calculi are composed en- tirely of uric acid, and most of them contain a greater or smaller proportion of this acid in their composition. The uric calculi are brown, po- lished, and resemble wood. They readily dissolve in solution of potassa or soda, from which any weak acid precipitates the uric. The precipitate is soluble in nitric acid, and the solution tinges the skin red. 2nd. The calculi composed of urate of ammonia occur less frequently than the former, though this substance enters into the composition of various other calculi. The only pure concre- tions of this sort, are the very small polygonal cal- culi, several of which are found in the'bladder at the same time. They are composed of thin layers, have the color of a dish of coffee, and rapidly dissolve in fixed alkaline lees, while they emit the odor of ammonia during solution. 3rd. The calculi composed of phosphate of lime which oc- curred to Fourcroy and Vauquelin, were white, and appeared like chips of broken chalk, which were held together by gelatinous matter. They were soluble in nitric, muriatic, and acetic acids ; and again precipitated by ammonia, fixed alkalis, and oxalic acid. The gelatinous part retained the

form of a membrane after the earthy part was dis- solved by very diluted acids. 4th. Calculi com- posed of phosphate of magnesia and ammonia never occur without combination with other sub- stances, sometimes phosphate and sometimes oxa- late of lime, and sometimes it covers uric acid. These calculi consist of white semitransparent, lamellar layers; and sometimes this substance is crystallised on their surface in the form of prisms. It is very soluble in acids, though much diluted ; and alkalis decompose it, leaving magnesia undis- solved. 5th. Oxalate of lime, combined with phosphate of lime, and usually with uric acid, was first detected in the mulberry calculi by Dr. Wollaston ; Fourcroy and Vauquelin found seve- ral calculi composed entirely of oxalate of lime and animal matter. Such calculi are of a dark green color, very hard and difficult to saw asun- der, and while sawing emit the smell of semen. They take a polish like ivory. They are only soluble, slowly and with difficulty, in very dilu- ted nitric acid, but are decomposed by the carbon- ates of potassa and soda. 6th. Fourcroy and Vau- quelin, who analysed upwards of 600 calculi, only found silica in two instances, in two mulberry calculi, where it was mixed with phosphate of lime. These calculi were of a lighter color than usual, very hard, difficult to saw or reduce to powder. Such an occurrence is very uncommon, and not easily accounted for. 7th. The animal matter, which enters into the composition of cal- culi, seems to be the cement which holds the more solid particles together. It may be easily known by the blackening of the calculi when ex- posed to great heat, and by their emitting the smell of ammonia.

1698. The calculi hitherto found in the blad- ders of the inferior animals are of a mixed nature. Those found in the graminivorous animals, such as the horse, rabbit, ox, and sow, are chiefly com- posed of carbonate of lime, mixed with animal matter. For an account of the varieties of cal- culi &c. see MEDICINE and the word CALCULUS.

GOUTY CONCRETIONS.

1699. These are formed in the joints of persons laboring under the gout. From their whitenes and softness they have obtained the name o chalk stones ; and there have been persons labor- ing under this disease who could write upon a wall, with the knuckles of their fingers, as if it had been done by chalk. They are usually small, but have sometimes been observed of the size of an egg. In 1797, Dr. Wollaston ascertained them to be composed of uric acid and soda. If uric acid, soda, and a little warm water be triturated together, a mass is formed which, after the excess of soda is washed off, has all

the properties of gouty concretions. We shall nov►► present to the reader the following tabular view, principally of vegetable compounds which we ex- tract from Mr. Brande.

1700. TABULAR VIEW OF THE EQUIVALENT NUMBERS OF VEGETABLE AND ANIMAL PRODUCTS, AND THEIR COMBINATIONS.

SUBSTANCES.

Equivalent Number.

COMPOSITION.

I. GUM . ... Bigummate of lead II. SUGAR ..... Saccharate of lead III, STARCH . . . Binamilate of lead IV. TANNIN Tannate of lead .... V. WAX

85 274-5 75 179-5 135 374-5 200 304-5 140

47 63 92 76-5 73-5 119-5 99 65-5 83 80-5 87-5 110 114-5 151-5

300? 21? 357?

62-5 78-5 107-5 170 186 92 199-5 89 196-5 135 114-5 81 98-5 96 203-5 103 125-5 233 200 167 274-5 115 222-5 136-5 100-5

98

170 gum. 4 104-5 oxide of lead. 75 sugar + 104-5 oxide of lead. 270 starch + 104-5 oxide of lead. 200 tannin + 104-5 oxide of lead.

47 S. A 4- 16ammon. 47 S. A. 4- 45 P. 47 S. A. + 29-5 S. 47 S. A. + 26-5 L. 47 S. A. + 72-5 B. 47 S. A. 4 52 S. 47 S. A. 4 18-5 M. 47 S. A. 4- 36 O. M. 47 S. A. + 33-5 O.I. 47 S. A. + 40-5 O.Z. 47 S. A. + 63O.T. 47 S. A. + 67-5 O.C. 47 S. A. 4- 104-5O.L.

62‘5 T.A. + 16ammon. 62-5 T.A. + 45 P. 125 T.A. + 45 P. 125 T.A. + 45 P 4 16 amm. 62-5 T.A. 4 29-5 S. 125 T.A. + 29-5 S. + 45 P. 62-5 T.A. + 26-5 L. 125 T.A. + 26-5 L. + 45 P. 62-5 T.A. +

72-5 B. 62-5 T. A. + 52 S. 62-5 T.A. + 18-5 M. 62-5 T.A. + 36 O.M. 62-5 T.A. + 33-5 O.I. 125 T. A. 4- 33-5 O I. + 45 P. 62-5 T. A. + 40-5 O. Z. 62-5 T.A. + 63 O.T. 125 T.A. 4- 63 O.T. 4- 45 P. 125 T.A. 4- 75 perox. C. 62-5 T.A. 4 104-5 O.L. 125 T. A. 4- 104-5 O. L. + 45 P. 62-5 T. A. 4 52-5 O. A. 125 T.A. 4 52-5 O.A. + 45 P. 62-5 T.A. 4- 74 O.B. 62-5 T.A. 4 38 O.C

62-5 T.A. + 35-5 O.N.

VI. OIL? VII. CAMPHORIC ACID? VIII. SUCCINICACID .... Succinate of ammonia . .

. ... j^ji

IX. MORPHIA ..... X. MECONIC ACID .... XI. STRICHNIA . . ००० .' XII. BRUCIA? XIII. DELPHIA? XIV. MELLITIC ACID? XV. TARTARIC ACID .... Tartrate of ammonia .

Bi-tartrate of potassa . Tartrate of potassa and ammonia

००० potassa and soda Tartrate of lime . . . .

००० baryta . .

००० strontia . ' . k ०००: .

००० manganese

ziuc . . .००० [I . ff

i copper

*lead . . -०००;०००' . ; ..^*

bismuth . . r, coba\t ००० uranium? titanium? cerium?

CHEMISTRY.

531

SUBSTANCES.

Equivalent Number.

COMPOSITION.

206 367-5 172-5 280 355 51-5 80-5 65 62 108 87-5 54 71-5 69 76

98-5 146 197-5 226-5 211 140 88 129-5 73-5

71 233 145-5 55-5 71-5 100-5 85 82 128 107-5 74 91-5 89 96' 118-5 186 160

129-5 93-5

90 253 165-5 66

112 128 157 141-5 138-5 184-5 216-5 48 64 93 77 74-5 120-5 100 66-5

62-5 T. A. + 197-5O.M. 125 T. A. + 197-5 O. M. + 45 P. 62-5 T. A. + 110 O. S. 125 T.A. + 110O.S. + 45 P.

35-5 O. A. + 16 am. 35-5 O. A. +45 P. 35-5 O. A. 4- 29-5 S. 35-5 O. A. + 26-5 L. 35-5 O. A. + 72-5 B. 35-5 O. A. 4- 52 S. 35-5 O. A. 4- 18-5 M. 35-5 O. A. + 36 O.M. 35-5 O. A. 4 33-5 O. I. 35-5 O. A. 4- 40-5 O.Z. 35-5 O. A. + 63O.T. 71 O. A. 4 75 perox. C. 146 Ox. Cop. 4- 51-5 oxal. am. 146 Ox, Cop. 4- 80-5 ox. pot. 146 Ox. Cop. 1 65 ox. sod. 35-5 O. A. 4- 104-5 O. L. 35-5 O. A. 4- 52-5 O. ant. 35-5 O. A. + 74 O. B. 35-5 O. A. + 38 O. C.

35-5 O. A. 4- 35-5 O. N. 35-5 O. A. + 197-5 O.M 35-5 O. A. 4- 110O. S.

55-5 C. A. + 16 am. 55-5 C. A. 4- 45 P. 55-5 C. A. 4 29-5 S. 55-5 C. A. 4- 26-5 L. 55-5 C. A. + 72-5 B. 55-5 C, A. 4 52 S. 55-5 C. A. + 18-5 M. 55-5 C. A. + 36 O.M. 55-5 C. A. + 33-5 O.I. 55-5 C. A. 4 40-5 O. Z. 55-5 C. A. 4- 63 O. T. 111C. A. 4- 75 per ox. C. 55-5 C. A. 4- 104-5 O.L.

55-5 C. A. 4- 74 O. B. 55-5 C. A. 4- 38 O. C.

55-5 C. A. + 55-5 O.N. 55-5 C. A. 4- 197-5 O.M. 55-5 C. A. 4- 110O. S.

112 B. A. 4- 16amm. 112 B. A. 4- 45 P. 112B.A. 4- 29-5 S. 112B. A. + 26-5 L. 112B.A- 4- 72-5 B. 112 B. A. 4- 104-5 OL.

48 A. A. + 16 amra. 48 A. A. 4- 45 P. 48 A. A. + 29-5 S 48 A. A. + 26-5 L 48 A. A. + 72-5 B. 48 A. A. 4 52 S. 48 A. A. 4 18-5 M.

silver and potassa. XVI. OXALIC ACID .... Oxal ate of ammonia .

soda .

iron . . . .

antimony .

XVII. CITRIC ACID Citrate of ammonia

□□□ iron .

*. *in*

□□□ copper

□□□ nickel . □□□ mercury silver . XVIII. MALIC ACID XIX. GALLIC ACID XX. BENZOIC ACID .... Benzoate of ammonia .

XXI. ACETIC ACID .... Acetate of ammonia .

2 M 2

532

CHEMISTRY.

SUBSTANCES.

Equivalent Number.

COMPOSITION.

Acetate of manganese

84 81-5 88-5 111 171 152-5 122 245-5 158

mpound of ma

33

48 A. A. + 36 O. M. 48 A. A. + 33-5 O. I. 48 A. A. + 40-5 O. Z. 48 A. A. + 63 O. T. 96 A. A. + 75 Perox. C. 48 A. A. + 104-5 O. L. 48 A. A. + 74 O. B. 48 A. A. + 197-5 O.M. 48 A. A. + 110 O. S.

ic and acetic acids.

□□□ ‘ □□□ tin

XXII. FORMIC ACID? . Probably a co XXIII. URIC ACID? .

APPENDIX

1701. The duty of an encyclopsediast is of a humble nature. It is for him to collect, and di- gest, and collate, and concentrate. Although humble, it is however, an important and respon- sible undertaking in which he engages. He is required not only to give a succinct account of all that is known respecting the science and sub- ject of which he treats, but also to render the conception of that subject, and the acquirement of that science, as facile to his readers as is con- sistent with its nature.

1702. In looking over what we have written and extracted on the subject of chemistry, it ap- pears to us that the reader may occasionally be at a loss, especially in understanding the tables of components, without a more ample and detailed account than will be found of the doctrine of equivalents as connected with the atomic theory, or, as it ought to be named, that of definite pro- portions.

1703. Under this feeling we present our rea- ders with the following able and ample disquisi- tion on this most interesting topic from Dr. Ure's Dictionary. We act in this particular under per- mission, and have thought it better at once to give the whole paper, proportionately long though it may bt found, than to attempt its abridgment.

1704. CHEMICAL EQUIVALENTS, a term hap- pily introduced into chemistry by Dr. Wollaston, to express the system of definite ratios, in which the corpuscular subjects of this science recipro- cally combine, referred to a common standard, reckoned unity. If, with this profound philoso- pher, we assume oxygen as the standard, from its almost universal relations to chemical matter, then calling it unity, we shall have, in the follow- ing examples, these ratios reduced to their lowest terms, in which the equivalents will be prime ratios :

The lowest ratio, or equivalent prime of oxygen being 1-000

That of hydrogen will be . 0.125

Fluor . . '. '-_□□□;. ' . 0-375

Carbon .' '.'. ' . 0-750

Phosphorus . . 1-500

Azote . ‘.’ . . 1-750

Sulphur ‘; ‘ . ??? . 2-000

Calcium . 2550

Sodium

Potassium

Copper

Barium

Lead

3-000 5-000 8-00 8-75

13-00, &c.

1705. The substances in the above table, sus- ceptible of reciprocal saturation, can combine with oxygen or with each other, not only in pro- portions corresponding to these numbers, but also frequently in multiple or sub-multiple pro- portions. We have therefore two distinct pro- positions on this interesting subject.

1706. i. The general reciprocity of the satu- rating proportions.

1707. ii. The multiple and submultiple pro- portions of prime equivalents, in which any one body may unite with any other body, to consti- tute successive binary compounds.

1708. The first proposition, or grand law of chemical combination, was discovered by J. B. Richter, of Berlin, about the year 1792. The second, of equal importance, and more recon- dite, was discovered so early as the year 1788, by Mr. W. Higgins.

1709. Richter inferred his from the remark- able and well established fact, that two neutral salts, in reciprocally decomposing each other, give birth to two new saline compounds, always perfectly neutral. Thus sulphate of soda being added to muriate of lime will produce perfectly neutral sulphate of lime and muriate of soda. The conclusions he drew were, First, that the quantities of two alkaline bases, adequate to neu- tralise equal weights of any one acid, are pro- portional to the quantities of the same bases, re- quisite to neutralise the same weights of every other acid. For example, six parts of potash, or four of soda, neutralise five of sulphuric acid ;

and 4-4 of potash are adequate to the saturatioH of five of nitric acid. Therefore, to find the quantity of soda equivalent to the saturation o this weight of nitric acid, we need not make ex periments, but merely compute it by the proper tional rule of Richter. Thus, as 6 : 4-4 : : 4 . 2-93 ; or, in words, as the potash equivalent to the sulphuric acid, is to the potash equivalent to the nitric acid, so is the soda equivalent to the first to the soda equivalent to the second. Anr> again, if 6-5 potash saturate five of muriatic gas, how much soda, by Richter's rule, will be re-

quired for the same effect? We say 6 : 6-5 : : 4 : 4-3. Thirdly, if 10-9 potash combine with five of carbonic acid, how much soda will be equi- valent to that effect? Now, 6 : 10'9 : : 4 : 7-26. Here, therefore, we have found that if six potash be equivalent to four soda, in saturating five of sulphuric acid, this ratio of six to four, or three to two, will pervade all the possible saline com- binations ; so that whatever be the quantity of potash requisite to saturate five, ten, &c. of any other acid, two-thirds of that quantity of soda will suffice.

1710. In the same manner let us find out for five of sulphuric, or of any one standard acid, the saturating quantity of ammonia, magnesia, lime, strontites, barytes, peroxide of copper, and the other bases ; then their proportions to potash thus ascertained for this acid will, by arithme- tical reduction, give their saturating quantity of every other acid, whose relation to potash, or in- deed to any one of these bases, is known.

1711. The experimental verification of this most important law occupied llichter from the year 1791 to the year 1802, in which period he

published, in successive parts, a curious work, entitled the Geometry of the Chemical Elements, or Principles of Stechiometry. We might havo expected greater accuracy in his investigations, from the circumstance that Dr. Wollaston se- lected his statement of the constituents of nitre, in preference to those of all other chemists, in the construction of his admirable table of chemical proportions.

1712. With indefatigable zeal Richter exa- mined, by experiment, each acid in its relation to the bases, and then compared the results

witfi those given by calculation, presenting both in an extensive series of tables.

1713. It is curious that he does not seem to have been aware that all his tables might have been reduced into a single one, of twenty-one numbers, divided into two columns, by means of which, every question relating to the included articles might be solved by the rule of three, or a sliding scale. The following table, computed by Fischer from Richter's last tables, was inserted by the celebrated Berthollet in a note to his che- mical statics.

Bases.

Oxygen ††† 1.

Acids.

Oxygen ††† 1.

Alumina

525

2-625

Fluoric 427

2-135

Magnesia

615

3-075

Carbonic 577

2-885

Ammonia

672

3-36

Sebacic 706

3-530

Lime

793

3-965

Muriatic 712

3-560

Soda

859

4-245

Oxalic . 755

3-775

Strontian

1329

6-645

Phosphoric 979

4-895

Potash

1605

8-025

Formic 988

4-94

Baryte

2222

1-111

Sulphuric 100Q

5-000

Succinic 1209

6-045

Nitric 1405

7-025

Acetic 1480

7-400

Citric 1683

8-415

Tartareous 1694

8-470

1714. 1 have added the two columns under oxygen, from which we see at once, that with the exception of the bases, lime, strontian, and soda, and the acids carbonic, muriatic, sulphuric, nitric, citric, and tartaric ; the numbers given by Richter do not form tolerable approximations to the true proportions. The object of the above table was to give directly the quantities of acid and alkali requisite for mutual saturation. For example, 1605, opposite to potash, is the quantity of that alkali equivalent to neutralise 427 of fluoric acid, 577 carbonic, 712 muriatic, 1000 sulphuric, &c. Each column affords also progressively in- creasing numbers. Those nearest the top have the greatest acid or alkaline energies, as mea- sured by their powers of saturation. The column of Richter gives, therefore, as far as the analy- tical mears of his time permitted, a table of the relative weights of what has since been hypothe- tically called the atoms.

1715. ii. But two chemical constituents fre- quently unite in different proportions, forming distinct and often dissimilar compounds. Thus oxygon and azote constitute in one proportion nitrous oxide, the intoxicating gas of Sir H. Davy ; in a second proportion nitric oxide, the

nitrous gas of Priestley ; in a third proportion nitrous acid ; and in a fourth proportion nitric acid. Is there any law regulating these various compounds, so that knowing the first proportion we may

infer the whole series ? This question was first considered in a work containing many curious anticipations of discoveries, to which posterior writers have laid claim, I mean Mr. Higgins's Comparative View of the Phlogistic and Antiphlogistic Theory, printed in 1788, and published early in 1789. Besides some addi- tional facts, decisively hostile to the hypothesis of phlogiston, this publication indicates the doc- trine of multiple proportion, with regard to the successive compounds of the same constituents. This was likewise interwoven with new and in- genious views concerning gaseous and atomical combination. Mr. Higgins having felt himself aggrieved at seeing discoveries, first announced by him in 1789, brought forward nineteen years afterwards by Mr. Dalton, in his own narre,. published in 1814 a book, entitled Experiments and Observations on the Atomic Theory and Electrical Phenomena. la this work he give, numerous quotations from his Comparative View which appear to establish his claim of priority to.*

ne discovery of multiple proportions, and the atomic theory of chemistry. It is no fault of Mr. Higgins that his first work partook of the imperfect analyses of the day. Indeed we have reason, on the contrary, to be surprised at his rejection of many errors then sanctioned by high authority, and his promulgation of many new truths whicli might appear to contemporary writers insulated or of little consequence, but to which subsequent researches have given a due place and importance in the system of chemical knowledge. Who would deny to Columbus the glory of discovering a new world, merely because the means of research placed within his power did not permit him to explore its extensive coasts ? ►► Is not that glory, on the contrary, greatly enhanced by the very early period at which the discovery was achieved, while naviga- tion as a science was still unknown? I shall quote a few passages, as he gives them, from his Comparative View, which I think are decisive in this historical discussion.

1716. ' Hepatic gas (sulphureted hydrogen,) as shall be shown, is hydrogen in its full extent, holding sulphur in solution.' This fact, of hy- drogen not changing its volume by combining with sulphur, has been marked among the valu- able discoveries of later times.

1717. ' Therefore 100 grains of sulphur re- quire only 100 or 102 of the dry gravitating matter of oxygen gas to form sulphurous acid. As

sulphurous acid gas is very little more than double the specific gravity of oxygen gas we may conclude that the ultimate particles of sul- phur and oxygen contain the same quantity of matter ; for oxygen gas suffers no considerable diminution of its bulk by uniting to the quantity of sulphur necessary for the formation of sul- phurous acid. It contracts 1-llth, as shall be shown hereafter.' Sir H. Davy has since proved, by accurate experiments, that hydrogen, in its conversion into sulphureted hydrogen, does not change its bulk agreeably to Mr. Higgins's early enunciation.

1718. The elementary proposition of Mr. Dai- ton's atomical hypothesis seems to be most ex- plicitly announced in the following paragraph of Mr. Higgins.

1719. ' As two cubic inches of hydrogen gas require but one cubic inch of oxygen gas to con- dense them to water, we may presume that they contain an equal number of divisions, and that the difference of the specific gravity of those gases depends on the size of their respective par- ticles ; or we may suppose that an ultimate par- ticle of hydrogen requires two or three or more particles of oxygen to saturate it. Were this the case, water, or its constituents, might be ob- tained in an intermediate state of combination, like those of sulphur and oxygen, or azote and oxygen, &c. This appears to be impossible; for in whatever proportion we mix hydrogen or oxygen gases, or under whatever circumstances we unite them, the resuH is invariably the same. Water is formed and the surplus of either of the gases is left behind unchanged.' ' From these circumstances we have sufficient reason to con- clude that water is composed of a single ultimate particle of oxygen, and an ultimate particle of

hydrogen, and that its atoms are incapable of uniting to a third particle of either of its con- stituents.'

1720. Mr. Higgins inculcates very strongly that when a body is capable of combining with another in two proportions, the third particle in- troduced is held by a much weaker affinity than that which unites the particles of the first or true binary compound.

1721. 'In my opinion the most perfect nitrous acid contains five of oxygen and one of azote. Nitrous gas, according to Kirwan, contains two volumes of oxygen gas and one of azotic gas. According to Lavoisier, 100 grains of nitrous gas contain thirty-two grains of azote, and sixty- eight of oxygen. I am of the former philoso- pher's opinion. I also am of opinion that every primary particle of azote is united to two of oxygen, and that the molecule thus formed is

surrounded with one common atmosphere of caloric.

1722. ‘ As this requires demonstration, let A in the annexed diagram represent an ultimate particle of azote, which attracts oxygen with the force of three ;

Let a be a particle of oxygen, whose attraction to A we will suppose to be three more ; hence they will unite with the force of six : the nature of this compound will be hereafter explained. Let us consider this to be the utmost force of at- traction that can subsist between oxygen and azote. We will now suppose a second particle of oxygen b to combine with A ; they will only unite with the force of 4J.’ ‘ This I consider to be the real structure of a molecule of nitrous gas. Let a third particle of oxygen c unite to A, it will combine only with the force of four. This is the state of the red molecules of nitrous vapor,. orT when condensed, the red nitrous acid.’ ‘ We will suppose a fourth particle of oxygen d, to combine with A ; it will unite with the force of 3 1, and so on with the rest of the particles of oxygen as the diagram represents-. This I con- sider to be the state of a molecule of the pale or straw-colored nitrous acid.

1723. ‘ When a fifth particle of oxygen, er unites, the force of union existing between the particles of the molecule is still diminished, as is represented by the diagram. The fractions show that the chemical attraction of azote for oxygen is nearly exhausted. This is the state of colorless nitrous acid, and, in my opinion, no more oxygen can unite to the azote, having its whole force of attraction expended in the particles a, 6, ct d, e. This illustrates the nature of saturation or de- finite proportions.

1724. ‘ We can readily perceive, from the fore- going demonstrations, that oxygen is retained with less force in the colorless nitrous acid than in the straw-colored; and the latter acid retains it with less force than the red nitrous acid ; and nitrous gas holds it with still more force than the red nitrous acid. This accounts for the sepa- ration of oxygen gas from the colorless nitrous acid (nitric acid) when exposed to the sun, at the same time that the acid becomes colored.

Nitrous acid in any other state will afford no oxygen, when exposed to the sun.

1725. 'Why the gaseous oxide should be more soluble in water than the nitrous gas, is what I cannot account for, unless it be occasioned by the smaller size of its calorific atmospheres, which may admit its atoms to come within the gravitating influence of that fluid.'

1726. It is impossible to deny the praise of singular ingenuity and justness to the above pas- sages ; and every one must be struck with their analogy, both as to atomical doctrines, and the calorific atmospheres of gases, single and com- pound, with the language and views expanded at full length in Mr. Dalton's new system of Chemical Philosophy, first framed about the year 1803, and published in 1808. It appears that this philosopher, after meditating on the definite proportions in which oxygen was shown by M. Proust to exist in the two oxides of the same metal, on the successive combinations of oxygen and azote, and the proportions of various other chemical compounds, was finally led to conclude, that the uniformity which obtains in corpuscular combinations, results from the cir- cumstance that they consist of one atom of the one constituent, united generally with one atom of the other, or with two or three atoms. And he further inferred, that the relative weights of these ultimate atoms might be ascertained from the proportion of the two constituents in a neu- tral compound.

1727. Chemistry is unquestionably under the greatest obligations to Mr. Dalton, for the pains with which he collated the various analyses of chemical bodies by different investigators; and for establishing, in opposition to the doctrine of indefinite affinity taught by the illustrious Ber- thollet, that the different compounds of the same principles did not pass into each other by imper- ceptible gradations, but proceeded, per saltum, in successive proportions, each a multiple of the first. Mr. Dalton has thus been no mean con- tributor to the advancement of the science. It is difficult to say how far his figured groups of spherical atoms have been beneficial or not. They may have had some use in aiding the con- ception of learners, and perhaps in giving a novel and imposing air to the atomical fabric. But their arrangement, and even their existence, are altogether hypothetical, and therefore ought to have no place in physical demonstrations.

1728. That water is a compound of an atom of oxygen and an atom of hydrogen, is assumed by Mr. Dalton as the basis of his system. But two volumes of hydrogen here combine with one of oxygen. He therefore infers, that an atom of hydrogen occupies double the bulk, in its gaseous state, of an atom of oxygen. These assumptions are obviously gratuitous. I agree with Dr. Prout in thinking that Sir H.

Davy has taken a more philosophical view of this subject. Gnided by the strict logic of chemistry, he places no hypothesis at the foundation of his fabric.

1729. Experiment shows, 1st, That in equal volumes oxygen weighs sixteen times more than hydrogen ; and 2dly, Triat water is formed by the union of one volume of the former, and two vol- umes of the latter -ras, or by weight of eight to one.

We are not in the least authorised to infer from this, that an atom of oxygen weighs eight times as much as an atom of hydrogen. For aught we know, water may be a compound of two atoms of hydrogen, and one of oxygen ; in which case we should have the proportion of the weights of the atoms, as given by equal volumes, namely, 1 to 16. There is no good reason for fixing on one compound of hydrogen, more than on another, in the determination of the basis of the equivalent scale. If we deliberate on that com- bination of hydrogen, in which its agency is ap- parently most energetic, namely, that with chlorine, we would surely never think of pitch- ing on two volumes as its unity or least propor- tion of combination; for it is one volume of hydrogen which unites with one volume of chlo- rine, producing two volumes of muriatic gas. Here, therefore, we see that one volume of hy- drogen is quite adequate to effect, in an active gaseous body of equal bulk, and thirty-six time its weight, an entire change of properties. Should we assume in gaseous chemistry, two volumes of hydrogen as the combining unit, or as representing an atom; then it should never unite in three volumes, or an atom and a half with another gas. Ammonia, however, is a com- pound of three volumes of hydrogen with one of azote; and, if two volumes of hydrogen to one of oxygen be called an atom to an atom, surely three volumes of hydrogen to one of azote should be called an atom and a half to an atom. Yet the Daltonian commentator, on the second occa- sion, counts one volume an atom of hydrogen, and, on the first, two volumes an atom.*

1730. We would steer clear of all these gra- tuitous assumptions and contradictions, by making a single volume of hydrogen represent its atom, or prime equivalent. 'There is an ad- vantage,' says Dr. Prout, ' in considering the volume of hydrogen equal to the atom, as, in this case, the specific gravities of most, or perhaps all elementary substances (hydrogen being one), will either exactly coincide with, or be some multiple of the weights, of their atoms; whereas, if we make the volume of oxygen unity, the weights of the atoms of most elementary sub- stances, except oxygen, will be double that of their specific gravities, with respect to hydrogen. The assumption of the

volume of hydrogen be- ing equal to the atom, will also enable us to find more readily the specific gravities of bodies in their gaseous state (either with respect to hydro- gen or atmospheric air), by means of Dr.Wollas- ton's logometric scale.

1731. 'If the views we have ventured to advance be correct, we may almost consider the Trpwrij i5\ij of the ancients to be realised in hy- drogen ; an opinion, by the by, not altogether new. If we actually consider this to be the case, and further consider the specific gravities of bodies, in their gaseous state, to represent the number of volumes condensed into one; or, in other words, the number of the absolute weight of a single volume of the first matter (irpia-tf t'Xq) which they contain, which is extremely probable; multiples in weight must always indi- cate multiples in volume, and vice versa ; and the specific gravities or absolute weights of

all bodies in a gaseous state, must be multiples of the specific gravity, or absolute weight of the first matter (irpwrti v\j), because all bodies in a gaseous state, which unite with one another, unite with reference to their volume."

1732. From these ingenious observations, we perceive the singular felicity of judgment, with which Sir H. Davy made choice of the single volume of hydrogen, for the unit of primary combination, in his Elements of Chemical Phi- losophy.

1733. Mr. Dalton's prelections on the atomic theory, and even the first volume of his new sys- tem of chemical philosophy, excited no sensation in the chemical world adequate to their merits. That part of his system which treated on caloric was blended with so much mere hypothesis, that chemists transferred a portion of the scepticism thus created, to his collation of primary and mul- tiple combinations. It was Dr. Wollaston who first decided public opinion in favor of the doc- trine of multiple proportions, by his elegant paper on super-acid and sub-acid salts, inserted in the Philosophical Transactions for 1808. The object of the atomic theory has been nowhere so happily stated as by this philosopher, in the following sentence;

1734. 'But, since the publication of Mr. Dal- ton's theory of chemical combination, as ex- plained and illustrated by Dr. Thomson (System, 3rd edition), the enquiry which I had designed appears superfluous,

as all the facts I had observed are but particular instances of the more general observation of Mr. Dalton, that in all cases the simple elements of bodies are disposed to unite atom to atom singly, or, if either is in excess, it exceeds by a ratio to be expressed by some simple multiple of the number of its atoms.'

1735. It is evident from this passage, that the principle which presented itself to Mr. Dalton, on a review of the labors of other chemists, had really occurred to Dr. Wnllaston. from his own, and that he would unquestionably have been speedily led to its full development.

1736. Dr. Wollaston, in the above decisive paper, demonstrates, that in the sub-carbonate and crystallised carbonate of potassa, the relation of the carbonic acid to the base, in the first, is exactly one-half of what it is in the second. The same law is shown to hold with regard to the two carbonates of soda, and the two sulphates of potassa; and, being applied to his experiments on the compounds of potassa and oxalic acid, leads him to conclude that the neutral oxalate may be considered as consisting of two particles potassa to one acid ; the binoxalate as one and one, or two potassa with two acid ; the quadrox- alate as one and two, or two potassa with four acid.

1737. We cannot withhold from our readers the following masterly observations, which must make every one regret that the full development of the atomic theory had not fallen within the scope of his researches. '

1738. 'But an explanation which admits a double share of potassa in the neutral salts (the oxalates), is not altogether unsatisfactory ; and I am farther inclined to think, that when our views ⬚⬚re sufficiently extended to enable us to reason

with precision concerning the proportions of ele- mentary atorrs, we shall find the arithmetical relation alone will not be sufficient to explain their mutual action, and that we shall be obliged to acquire a geometrical conception of their rela- tive arrangement, in all the three dimensions of solid extension.

1739. 'For instance, suppose the limit to the approach of particles to be the same in all direc- tions, and hence their virtual extent to be sphe- rical (which is the most simple hypothesis) ; in this case, when different sorts combine singly, there is but one mode of union. If they unite in the proportion of two to one, the two particles will naturally

arrange themselves at opposite poles of that to which they unite. If they be three, they might be arranged with regularity at the angles of an equilateral triangle, in a great circle surrounding the single spherule; but in this arrangement, for want of similar matter at the poles of this circle, the equilibrium would be unstable, and would be liable to be deranged by the slightest force of adjacent combinations ; but, when the number of one set of particles ex- ceeds in the proportion of four to one, then, on the contrary, a stable equilibrium may again take place, jf the four particles are situated at the angles of the four equilateral Triangles com- posing a regular tetrahedron.

1 740. ‘ But as this geometrical arrangement of the primary elements of matter is altogether con- jectural, and must rely for its confirmation or re- jection upon future enquiry, I am desirous that it should not be confounded with the results of the facts and observations related above, which are sufficiently distinct and satisfactory with re- spect to the existence of the law of simple mul- tiples. It is perhaps too much to hope, that the geometrical arrangement of primary particles will ever be perfectly known ; since, even admit- ting that a very small number of these atoms combining together would have a tendency to arrange themselves in the manner I have ima- gined, yet, until it is ascertained how small a proportion the primary particles themselves bear to the interval between them, it may be supposed that surrounding combinations, although them- selves analogous, might disturb this arrangement ; and, in that case, the effect of such interference must also be taken into the account, before any theory of chemical combination can be rendered complete.’

1741. I am not aware that any chemist has adduced experimental e \idence, to prove that a ‘ stable equilibrium may again take place, if the four particles are situated at the angles of the four equilateral triangles composing a regular te- trahedron.’ I have, therefore, much pleasure in referring to my researches on the constitution of liquid nitric acid, as unfolding a striking confir- mation of Dr. ‘ Wollaston’s true philosophy of atomical combination. When I wrote the fol- lowing sentence, I had no recollection whatever of Dr. Wollaston’s profound speculations on te- trahedral arrangement. ••• ‘ We perceive, that the liquid acid of 1-420, composed of 4 primes of water + 1 of dry acid, possesses the greatest power of resisting the influence of temperature to change its state. It requires the maximum heat to boil

it, when it distils unchanged ; and the max mum cold to effect its congelation.

1742. Here we have a fine example of the stability of equilibrium, introduced by the com- bination of four atoms with one. The discovery which I had also the good fortune to make with regard to the constitution of aqueous sulphuric acid, that the maximum condensation occurred when one atom of the real acid was combined with three atoms of water, is equally consonant to Dr. Wollaston's views. ' But in this arrange- ment,' says Dr. Wollaston, ' for want of similar matter at the poles of this circle, the equilibrium would be unstable, and would be liable to be de- ranged by the slightest force of adjacent combi- nations.' Compare with this remark the follow- ing sentence from my paper on sulphuric acid, as published in the Journal of Science, October 1817: ••• ' The terms cf dilution are, like loga- rithms, a series of numbers in arithmetical pro- gression, corresponding to another series, namely, the specific gravities, in geometrical progression. For, a little distance on both sides of the point of greatest condensation, the series converges with accelerated velocity, whence the 10 or 12 terms on either hand deviate a little from experiment.' Page 126. Or, in other words, a small addition of water or of acid to the above atomic group, produces a great change on the degree of con- densation ; which accords with the position ' that the equilibrium would be liable to be de- ranged by the slightest force of adjacent combi- nations.'

1743. While considering this part of Dr. Wollaston's important paper, let me advert to the curious facts pointed out in the article NITRIC ACID, relative to the compound of one atom of dry acid, and seven atoms of water. In my pa- per on the subject, published in the eighth num- ber of the Journal of Science, I showed that this liquid combination was accompanied with the greatest condensation of volume, and the greatest disengagement of heat. In composing this Dic- tionary, I calculated, for the first time, the ato- mical constitution of the nitric acids employed by Mr. Cavendish for cong'elation ; and found with great satisfaction, that the same proportion which had exhibited, in my experiments, the most intense reciprocal action, as was indicated both by the aggregation of particles and produc- tion of heat, was likewise that which most fa- vored solidification. Such acid congeals at ••• 2•• ; but, when either stronger or weaker, it requires a much lower temperature for that effect.

1744. iii. The next capital discovery in mul- tiple proportions, was made by M. Gay Lussac, in 1808, and published by him in the second volume of the Memoires d'Arcueil. After de- tailing a series of fine experiments, he deduces the following important inferences : ‘ Thus it evidently appears, that all gases, in their mutual action, uniformly combine in the most simple proportions ; and we have seen, in fact, in all the preceding examples, that the ratio of their union is that of 1 to 1, of 1 to 2, or of 1 to 3, by volume. It is important to observe, that when we consider the weights, there is no simple and definite relation between the elements of a first

combination ; it is only when there is a second between these same elements, that the new pro- portion of that body which has been added is a multiple of the first. Gases, on the contrary, in such proportions as can combine, give rise always to compounds whose elements are in volume, multiples the one of the other.

1745. ‘Not only do the gases combine in very simple proportions, as we have just seen, but moreover, the apparent contraction of volume which they experience by combination, has like- wise a simple relation with the volume of the gases, or rather with the volume of one of them.’

1746. By supposing the contraction of volume of the two gaseous constituents of water to be only equal to the whole volume of oxygen added, he found the ratio of the density of steam to be to that of air as 10 to 16 ; a computed result in exact correspondence with the experimental result lately obtained in an independent method by the same excellent philosopher. ‘ Ammonia- cal gas is composed in volume,’ says he, ‘ of 3 parts of hydrogen and 1 of azote, and its density, compared to that of air, is 0‘596 ; but, if we sup- pose the apparent contraction to be one-half of the total volume, we find 0‘594 for its density. Thus it is demonstrated, by this nearly perfect accordance, that the apparent contraction of its elements is precisely one-half of the total volume, or rather double the volume of azote.’ M. Gay Lussac subjoins to his beautiful memoir a table of gaseous combination, which, with some modi- fications derived from subsequent researches, will be inserted under the article GAS.

1747. The same volume of the Memoires pre- sents another important discovery of M. Gay Lussac, on the subject of equivalent proportions. It is entitled, On the Relation which exists be- tween the Oxidation of Metals, and their Capa- city of Saturation for the Acids. He here proves, by a series of experiments, that the quantity of acid which the different metallic oxides require for saturation, is

in the direct ratio of the quantity of oxygen which they respectively contain. ‘ I have arrived at this principle,’ says he, ‘ not by the comparison of the kno%vn proportions of the metallic salts, which are in general too inexact to enable us to recognise this law, but by observing the mutual precipitation of the metals from their solutions in acids.

1748. When we precipitate a solution of ace- tate of lead by a plate of zinc, there is formed a beautiful vegetation known under the name of the Tree of Saturn ; and which arises from the reduction of the lead by a galvanic process, a? was first shown by Silvester and Grotthus. We obtain at the same time a solution of acetate of zinc, equally neutral with that of the lead, and entirely exempt from this last metal. No hydro- gen, or almost none, is disengaged during the precipitation ; which proves, that the whole oxygen necessary to the zinc, for its becoming dissolved and saturating the acid, has been fur- nished to it by the lead.

1749. If we put into a solution of sulphate of copper, slightly acidulous, bright iron turnings in excess, the copper is almost instantly precipi- tated ; the temperature rises, and no gas is dis- engaged. The sulphate of iron which we obtain,

is that in which the oxide is at a minimum, and its acidity is exactly the same as that of the sul- phate of copper employed.

1750. We obtain similar results by decom- posing the acetate of copper by lead, especially with the aid of heat. But since the zinc preci- pitates the lead from its acetic solution, we may conclude, that it would also precipitate copper from its combination with the acetic acid. Ex- perience is here in perfect accordance with theory.

1751. We know with what facility copper precipitates silver from its nitric solution. All the oxygen which it needs for its solution is fur- nished to it by the oxide of silver; for no gas is disengaged, and the acidity is unchanged. The same thing happens with copper in regard to nitrate of mercury, and to cobalt in regard to nitrate of silver. In these last examples, as in the preceding, the precipitating metal finds, in the oxide of the metal which it precipitates, all the oxygen which is necessary to it for its oxi- disement, and for neutralising to the same degree the acid of the solution.

1752. These incontestable facts naturally con- duct to the principle announced above, that the acid in the metallic salts is directly proportional to the oxygen in their oxides. In the precipita- tion of one metal by another, the quantity of oxygen in each oxide remains the same, and con- sequently the larger dose of oxygen the precipi- tating metal takes, the less metal will it precipi- tate.

1753. M. Gay Lussac next proceeds to show, with regard to the same metals at their different stages of oxidisement, that they require of acid a quantity precisely proportional to the quantity of oxygen they may contain ; or that the acid in the salts is exactly proportional to the oxygen of the oxides. A very important result of this law is, the ready means it affords of determining the proportions of all the metallic salts. The pro- portions of one metallic salt, and the oxidation of the metals being given, we may determine those of all the salts of the same genus ; or the proportions of acid, and of oxide, of all the metallic salts, and the oxidation of a single metal being given, we can calculate the oxidation of all the rest. Since the peroxides require most acid, we can easily understand how the salts con- taining them should be, in general, more soluble than those with the protoxide.

1754. M. Gay Lussac concludes his memoir with this observation. When we precipitate a metallic solution, by sulphureted hydrogen, either alone or combined with an alkaline base, we obtain a sulphuret or a metallic hydrosul- phuret. In the first case, the hydrogen of the sulphureted hydrogen combines with all the oxygen of the oxide, and the sulphur forms a sul- phuret with the metal : in the second case, the sulphureted hydrogen combines directly with the oxide, without being decomposed ; and its proportion is such that there is sufficient hydro- gen to saturate all the oxygen of the oxide. The quantity of hydrogen neutralised, or capable of being so, depends therefore on the oxidation of the metal, as well as the quantity of the sulphur which can combine with it. Of consequence,

the same metal forms as many distinct sulphu- rets, as it is susceptible of distinct stages of oxi- dation in its acid solutions. And, as these de- grees of oxidation are fixed, we may also obtain sulphurets, of definite proportions, which we can easily determine, according to the quantity of oxygen to each metal, and the proportions of sulphureted hydrogen.

1755. The next chemist who contributed es- sentially to the improvement of the equivalent ratios of chemical bodies, was Berzelius. By an astonishing number of analyses, executed for the

most part with remarkable precision, he enabled chemical philosophers to fix, with corresponding accuracy, the equivalent ratios reduced to their lowest terms. He himself took oxygen as the unit of proportion.

1756. The results of all this emulous cultiva- tion were combined, and illustrated with original researches, by Sir H. Davy, in his Elements of Chemical Philosophy published in 1812. In this system of truths, which will never become obsolete, we find the claims of Mr. Higgins to , the discovery of the atomic theory justly advo- cated.

1757. But what peculiarly characterises this chemical work, is the sound anrihypothetical doctrines which it inculcates on chemical combi- nation. 'Mr. Higgins,' says Sir H., 'has sup- posed that water is composed of one particle of oxygen and one of hydrogen, and Mr. Dalton of an atom each ; but, in the doctrine of proportions derived from facts, it is not necessary to consider the combining bodies, either as composed of in- divisible particles, or even as always united, one and one, or one and two, or one and three pro- portions. Cases will be hereafter pointed out, in which the ratios are very different ; and at pre- sent, as we have no means whatever of judging either of the relative numbers, figures, or weights, of those particles of bodies which are not in con- tact, our numerical expressions ought to relate only to the results of experiments.'

1758. He conceives that the calculations will be much expedited,.and the formulae rendered more simple, by considering the smallest propor- tion of any combining body, namely, that of hy- drogen, as the integer. This radical proportion of hydrogen, is the Trpwrij v \►►j of the ancient philosophers.

1759. It has been objected by some, to our assuming hydrogen as the unit, that the numbers representing the metals would become inconve- niently large. But this could never be urged by any person acquainted with the theory of num- bers. For in what respect is it more convenient to reckon barium 8'75 on the atomic scale, or 8'75 X 16 zr 140 on Sir II. Davy's scale of ex- periment ; or is it any advantage to name, with Dr. Thomson, tin ►►► 7-375, or to call it 118, on the plan of the English philosopher? If the combining ratios of all bodies be multiples of hydrogen, as is probable, why not take hydrogen as the unit? I think this question will not be answered in the negative, by those who practise the reduction of chemical proportions. The de- fenders of the Daltonian hypothesis, that water consists of one atom oxygen to one atom hydro- gen, may refer to Dr. Wollaston's scale, as au-

thority for taking oxygen as the unit. But that admirable instrument, which has at once sub- jected thousands of chemical combinations to all the despatch and precision of logometric calcula- tion, is actually better adapted to the hydrogen unit than to the oxygen. For if we slide down the middle rule, till 10 on it stand opposite to 10 hydrogen on the left side, everything on the scale is given in accordance with Sir H. Davy's system of primary proportions, and M. Gay Lussac's theory of gaseous combination. This valuable concurrence, as is well pointed out by Dr. Prout, we lose by adopting the volume of oxygen as radix.

1760. In the first part of the Phil. Trans, for 1814, appeared Dr. Wollaston's description of his scale of chemical equivalents, ??? an instrument which has contributed more to facilitate the ge- neral study and practice of chemistry than any other invention of man. His paper is further valuable, in presenting a series of numbers de- noting the relative primary proportions, or weights of the atoms of the principal chemical bodies, both simple and compound, determined with singular sagacity, from a general review of the most exact analyses of other chemists, as well as his own.

1761. The list of substances which he has es- timated, are arranged on one or other side of a scale of numbers, in the order of their relative weights, and at such distances from each other, according to their weights, that the series of num- bers placed on a sliding scale can at pleasure be moved, so that any number expressing the weight of a compound, may be brought to correspond with the place of that compound in the adjacent column. The arrangement is then such, that the weight of any ingredient in its composition, of any re-agent to be employed, or precipitate that might be obtained in Us analysis, will be found opposite the point at which its respective name is placed.

1762. If the slider be drawn upwards, till 100 corresponds to muriate of soda, the scale will then show how much of each substance contained in the table is equivalent to 100 common salt. It shows, with regard to the different views of this salt, that it contains 46'6 dry muriatic acid, and 53-4 of soda, or 39'8 sodium, and 13-6 oxygen ; or, if viewed as chloride of sodium, that it contains 60-2 chlorine, and 39'8 sodium. With respect to re-agents, it may be seen, that 283 nitrate of lead, containing 191 of litharge, employed to

separate the muriatic acid, would yield a precipitate of 237 muriate of lead, and that there would then remain in solution nearly 146 nitrate of soda. It may at the same time be seen, that the acid in this quantity of salt would serve to make 232 corrosive sublimate, containing 185‘5 red oxide of mercury ; or make 91‘5 muriate of ammonia, composed of 62 muriatic gas (or hydromuriatic acid), and 29‘5 ammonia. The scale shows also, that for the purpose of obtaining the whole of the acid in distillation, the quantity of oil of vitriol required is nearly 84, and that the residuum of this distillation would be 122 dry sulphate of soda, from which might be obtained, by crystal- lisation, 277 of Glauber salt, containing 155 water of crystallisation. These, and many more such

answers, appear at once, by bare inspection, as soon as the weight of any substance intended for examination is made, by motion of the slider, correctly to correspond with its place in the ad- jacent column. Now, surely, the accurate and immediate solution of so many important prac tical problems, is an incalculable benefit con- ferred on the chemist.

1763. With regard to the method of laying down the divisions of this scale, those who are accustomed to the use of other sliding rules, and are practically acquainted with their properties, will recognise upon the slider itself, the common Gunter’s line of numbers (as it is called), and will be satisfied that the results which it gives are the same that would be obtained by arithme- tical computation.

1764. Those who are acquainted with the doc- trine of ratios, and with the use of logarithms as measures of ratios, will understand the principle on which this scale is founded, and will not need to be told, that all the divisions are logometric ; consequently, that the mechanical addition and subtraction of ratios here performed by juxtapo- sition, correspond in effect to the multiplication and division of the numbers, by which those ratios are expressed in common arithmetical notation.

1765. In his Essay on the cause of Chemical Proportions, Berzelius proposed a system of signs, to denote atomical combinations, which it may be proper briefly to explain. This sign is the initial letter, and by itself always expresses one atom, volume, or prime of the substance. When it is necessary to indicate several volumes, or primes, it is done by prefixing the number ; for example, the cuprous oxide, or protoxide of copper, is composed of a prime of oxygen and a prime of metal; its sign is therefore Cu + O. The cupric oxide, or deutoxide of copper, is com- posed of 1 prime metal, and 2 primes

oxygen ; therefore its sign is Cu + 2 O. In like manner the sign for sulphuric acid is S + 3 O ; for car- bonic acid, C j 2 O ; for water, 2 H + 0, &c.

1766. When we express a compound prime of the first order, or binary, we throw away the +, and place the number of primes above the letter, as the index or exponent is placed in arithmetic. For example, CuO + SO3 ~ sul- phate of copper ; CuO2 f 2SO3 =. bi- deutosul- phate of copper, or persulphate. These formula? have this advantage, that if we take away the oxygen, we see at once the ratio between the radicals. As to the primes of the second order, or ternary compounds, it is but rarely of any ad- vantage to express them by formulae, as one prime ; but if we wish to express them in that way, we may do it by using the parenthesis, as is done in algebraic formulae : for example, accord- ing to Berzelius, alum is composed of 3 primes of sulphate of alumina, and 1 of sulphate of pot- ash. Its symbol is 3 (Al O2 + 2SO3) + (Po2 + 2SO3). The prime of ammonia is 3HN ; viz. 3 primes hydrogen + 1 nitrogen. We shall use some of these abbreviations in our table of equi- valent primes, at the article SALT.

1767. To reduce analytical results, as usually given for 100 parts, to the equivalent prime ratios, or, in hypothetical language, to the atomic

proportions, is now a problem of perpetual re- currence, with which students are perplexed, as no rule has been given for its ready solution. We shall here explain it in detail.

1768. As in all reasoning we must proceed from what is known or determinate, to what is unknown or indeterminate, so, in every analysis, there must be one ingredient whose prime equi- valent is well ascertained. This is employed as the common measure, and the proportions of the rest are compared to it. Let us take, for in- stance, Sir H. Davy's analysis of fluate of lime, to determine the unknown number that should denote the prime of fluoric acid. We know, first of all, that 2 primes of oxygen ××× 2, combine with 1 of carbon ××× 0-75, to form the compound prime 2-75 of carbonic acid. We likewise know that carbonate of lime consists of 43-6 carbonic acid + 54-4 lime. We therefore make this pro- portion to determine the prime equivalent of lime.

i. 43-6 : 54-4:: 2-75 : 3-56 =. prime of lime.

ii. We know that 100 parts of dry sulphate of lime consists of 41 ‘6 lime and 58-4 acid. Hence, to find the prime of sulphuric acid, we make this proportion : ???

41-6 : 58-4 :: 3-56 : 5 z= prime of sulphuric acid.

iii. Sir H. Davy obtained from 100 grains of fluor spar in powder, acted on with repeated quantities of sulphuric acid and ignited, 175-2 grains of sulphate of lime. Now, since 100 grains of sulphate of lime contain, as above, 41-6 of lime, we have this proportion : ???

100 ; 41-6;: 175-2 : 72-88 = lime, correspond- ing to 175‘2 grains of sulphate, and which pre- viously existed in the 100 grains of fluor spar. If from 100 we subtract 72‘88, the difference

27-12 is the fluric acid, or the other ingredient of the fluor, which saturated the lime. Now to find its prime equivalent we say,

72-88 : 3-56 : : 27-12 ; 1‘325 ??? the prime or atom of fluoric acid from Sir H. Davy’s experi- ment.

1769. We shall give another example, derived from a more complex subject.

1770. M. Vauquelin found that 33 partsot lime, saturated with sorbic acid, and carefully dried, weighed 100 grains. Hence the difference, 67 grains, was acid. To find its equivalent prime, we say,

*As 33 : 67! *. 3-56= the prime of lime : 7-23 ??? the prime of the acid. But as he brought it to absolute neutrality, by a small portion of potash, we may take 7-5 for the prime.*

1771. M. Vauquelin subjected the acid, as it exists in the dry sorbates of lead and copper, to igneous analysis ; and obtained the following results. ???

Hydrogen . . . 16-8 Carbon .... 28‘3 Oxygen 54-9

100-0

1772. Now we must find such an assemblage of the primes or atoms of these elements as will form a sum total of 7‘5, and at the same time be to each other in the above proportions. The fol- lowing very

simple rule will give a ready ap- proximation ; and, with a common sliding scale, it may be worked by inspection.

1773. Multiply each proportion per cent, by the compound prime, and compare the products with the multiples of the constituent primes. You can then estimate the number of each prime re- quisite to compose the whole. Thus,

0-168 x 7-5 = 1-2600 or 10 hydrogen n 1‘25 0-283 X 7-5 = 2-1225 3 carbon =, 2‘25 0-549 X 7-5 = 4-1175 4 oxygen ••• 4-00

7-50

Theory. Experiment,

16-7 16-8

30-0 28-3

53-3 54-9

100-0 – 100-0

1774. The differences between these theoreti- cal and experimental proportions, are probably within the limits of the errors of the latter in the present state of analysis.

1775. If, on Dr. Wollaston’s scale, we mark with a type or pen 2h, 3h, &c. up to lOh ; 2c, 3c, 4c, 5c ; and 2n, 3n, 4n ; respectively opposite to twice, thrice, &c. the atoms of hydrogen, carbon, and nitrogen, as is already done for oxygen (with the exception of the fourth, where copper stands\ we shall then have ready approximations to the prime components, by inspection of the scale. Move the sliding part so that one of the quan- tities per cent, may stand opposite the nearest estimate of a multiple prime of that constituent. Thus we know that hydrogen, carbon, and oxy- gen, bear the relation to each other of 1, 6, 8 ; and, of course, the latter two that of 3 to 4. But 54-9 oxygen, being more than one-half of 100, the weight of oxygen in the compound prime is more than the half of 7‘5, and therefore points to 4. Place 54-9 opposite 4 oxygen (where copper stands), we shall find 18 opposite 10 hydrogen,

and 30-7 opposite 3 carbon. Here we see the proportions of carbon and hydrogen are both greater than by Vauquelin’s analysis. Try 51 opposite 4 oxygen, then opposite 3 carbon we have 28-7, and opposite 10 hydrogen 16-9. The proportions I have calculated

arithmetically, above, seem somewhat better approximations; they were deduced from hydrogen 0125,. and carbon 0‘75, instead of 0‘132 and 0‘754, as on the scale.

1776. If the weight of the compound prime is not given, then we must proceed to estimate the nearest prime proportions, after inspection of those per cent. The scale may be used with ad- vantage, as just now explained.

1777. The following case has been reckoned difficult of solution, and has been involved in an algebraic formula. Let us suppose a vegetable acid, containing combined water, whose prime equivalent is to be determined by experiment. A crystallised salt is made with it, for example, and a determ.nate quantity of soda. Suppose the alkali to form twenty-six per cent, of the salt.

The rest is water and acid. Dissolve 100 grains and add them to an indefinite quantity of the solution of any salt, with whose base the vegeta- ble acid forms an insoluble compound. Dry and weigh this precipitate. Without decomposing the latter we have sufficient data for determining the prime equivalent of the real acid. We make this proportion: ??? As the weight of soda is to its prime equivalent, so is the weight of the pre- cipitate to the prime of the compound. Suppose 148 grains of an insoluble salt of lead to have been obtained ; then 26 : 3‘95 : 1 148 : 22‘1 = the prime of the salt of lead. From this, if we deduct the weight of the prime equivalent of oxide of lead~ 14, we have 8‘1 for the prime equivalent of the acid. And the crystallised salt must have consisted of,

Diy acid Soda Water .

53-3 260 20-7

100-0

1778. As the above numbers were assumed merely for arithmetical illustration, the water is not atomically expressed. Indeed the problem of finding the acid prime does not require the salt to be either dried or weighed. A solution would suffice. Saturate a known weight of al- kali with an unknown quantity of the crystallised acid. Add this neutral solution to a redundant quantity of solution of nitrate of lead. Wash, dry, and weigh the insoluble precipitate, and

ap- ply the above rule.

1779. There are three systems of equivalent numbers at present employed : 1st, That having

oxygen as the radix; 2nd, that having one volume of hydrogen as the radix; 3rd, thaj having two volumes of hydrogen as the radix, on the Daltonian supposition that two volumes of hydrogen contain the same number of atoms as one volume of oxygen. As this hypothesis is destitute of proof, it evidently should be dis- carded from physical science. Since the volume of hydrogen is equal in weight to l-16th the weight of the volume of oxygen, the former two systems are mutually convertible, by multiplying the number in the oxygen ratio by sixteen, or 4 X 4, to obtain the number in the hydrogen scale ; and this is reconverted by the inverse operation, namely, dividing by sixteen, or by 4X4.

1780. Dr. Wollaston's scale, and SirH. Davy's proportional numbers, are adapted to the idea that water is a compound of 1 hydrogen + 7-5 oxygen by weight, or 15 + 1 by volume. Their mutual conversion is therefore very easy ; for if we add to Dr. Wollaston's number its half, the sum is Sir H. Davy's; and, of course, if we sub- tract from the number of the latter its third, the remainder is Dr. Wollaston's number. There is one very frequent variation in the weights of the primes among the best writers, namely, doubling or halving the number. This difference is occa- sioned generally by an uncertainty about the first term or proportion in which the body combines with oxygen; some chemists reckoning that a protoxide which others consider a deutoxide. Thus Sir H. Davy gives 103 as the number representing iron; from which, if we deduct i2i= 34-3, the remainder 68- 7 is nearly double of 34-5, the number of Dr. Wollaston.

I. ••• DR. WOLLASTON'S NUMERICAL TABLE OF CHEMICAL EQUIVALENTS. Dr. Wollaston's numbers represent the weights of the atoms of bodies, oxygen being called ten.

1. Hydrogen 1-32

2. Oxygen 10-00

*3. Water . . * . . 11-32*

4. Carbon 7-54

5. Carbonic acid (20 oxygen) . . 27'54

6. Sulphur 20-00

7. Sulphuric acid (30 oxygen) . . 50-00

8. Phosphorus 17-40

9. Phosphoric acid (20 oxygen) . ‘37-40 10. Azote or nitrogen . . . 17-54

11 Nitric acid (50 oxygen) . . 67-54

12 Muriatic acid, dry . . . 34-10

13. Oxymuriatic acid (10 oxygen) . 44-10

14. Chlorine 44-10 + 1-32 hydrogen

* muriatic acid gas . . 45-42*

15. Oxalic acid 47-00

16. Ammonia .... 21 ‘50

17. Soda 39-10

18. Sodium (above 10 oxygen,) . 29-10

19. Potassa 49-10

20. Potassium (above 10 oxygen) . 49‘10

21. Magnesia 24-60

22. Lime 35-46

23. Calcium (above 10 oxygen) . 25-46

24. Strontites 69-00

25. Barytes 97-00

*26. Iron . . . . 34‘50 Black oxide (10 oxygen) . . 44-50 Red oxide (15 oxygen) . . 49*50*

27. Copper 40-00

Black oxide (10 oxygen) . . 50-00

28. Zinc 41-00

Oxide (10 oxygen) . . . 51-00

29. Mercury 125-50

Red oxide (10 oxygen) . . 135-50

Black oxide (125-5 mercury) . 261-00

30. Lead 129-50

Litharge (1 0 oxygen) . . . 139-50

31. Silver 135-00

Oxide (10 oxygen) . . . 145-00

32. Sub-carbonate of ammonia . . 49‘00 Bi-carbonate (27‘5 carbonic acid) . 76-50

33. Sub-carbonate of soda . . 66-60 Bi-carbonate (27-5 C. A. + 11-3

water) 105-50

34. Sub-carbonate of potash . . 86-00 Bi-carbonate (27-5 C. A. + 11‘3

water) 125-50

35. Carbonate of lime . . . 63-00

36. barytes . . . 124-50

37. lead . . . 167-00

38. Sulphuric acid, d-y . . 50-00

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39. Sulphuric acid sp. gr. 1-850 (50

+ 11-3 water)

40. Sulphate of soda (10 water zr

113-2)

41. Sulphate of potash

42. Sulphate of magnesia, dry . Do. crystallised (7 water = 79‘3) .

43. Sulphate of lime, dry . Crystallised (2 water =. 22-64,) .

44. Sulphate of strontites

45. 46.

47. 48. 49.

□□□ barytes

copper (1 acid

oxide + 5 water) .

iron (7 water) .

zinc (do)

lead

50. Nitric acid, dry

Nitric acid. sp. gr. 1-50 (2 water □□□ 22-64) .

61-30

202-30 109-10

74-60 155-90

85-50 108-10 119-00 147-00

156-60 173-80 180-20 189-50 67-54

90-20

51. 52. 53. 54. 55. 56. 57. 58.

59. 60. 61. 62. 63. 64.

65. 66. 67.

Nitrate of soda .

potash . .

lime

barytes . ‘ .

Muriate of ammonia .

potash . “.

Oxymuriate of do. (60 oxygen)

Muriate of lime

❖❖❖ barytes . .

*❖❖❖ lead . . ‘ *” ‘:’*

Sub-muriate of do. (1 acid (1 oxygen + 2 mercury) .
❖❖❖”❖❖❖ >-. Phosphate of lead Oxalate of lead . . : .

Bin-oxalate of potash . . . .

106-60

126-60

103-00

164-50

20700

66-90

73-20

93-20

153-20

169-60

131-00

173-60

179-10

170-10

296-10 176-90 185-50 153-00

II. ??? TABLE CONSISTING OF FRIGORIFIC MIXTURES, HAVING THE POWER OF GENERATING OB

CREATING COLD, WITHOUT THE AID OF ICE, SUFFICIENT FOR ALL USEFUL AND PHILOSO- PHICAL PURPOSES, IN ANY PART OF THE WORLD AT ANY SEASON.

Frigorific Mixtures without Ice.

Mixtures.

Thermometer sinks.

Deg. of cold produced.

Muriate of ammonia Nitrate of potash Water

5 parts

5 . 16

From + 50?? to + 10??

40??

Muriate of ammonia Nitrate of potash Sulphate of soda Water

5 parts

5 8 . 16

From + 50?? to -f 4??

46

Nitrate of ammonia Water

1 part

1

From f 50?? to + 4??

46

Nitrate of ammonia Carbonate of soda Water

1 part

1 1

From -f 50►► to ►►► 7►►

57

Sulphate of soda Diluted nitric acid

3 parts

2

From + 50►► to ►►► 3►►

53

Su.phate of soda Muriate of ammonia Nitrate of potash Diluted nitric acid

6 parts

4 2 4

*From + 50►► to ►►► 10**

60

Sulphate of soda Nitrate of ammonia Diluted nitric acid

6 parts

5 4

From + 50►► to ►►► 14►►

64

Phosphate of soda Diluted nitric acid

9 parts

4

From + 50►► to ►►► 12►►

62

Phosphate of soda Nitrate of ammonia Diluted nitric acid

9 parts

6 4

From + 50 to ►►► 21►►

71

Sulphate of soda Muriatic acid

8 parts

5

From + 50►► to 0►►

50 ‘

Sulphate of soda Diluted sulphuric acid .

5 parts

4

From + 50►► to + 8►►

47

N.B. ►►► If the materials are mixed at a winner temperature than that expressed in the Table, the effect will he proportionably greater ; thus, if the most powerful of these mixtures be made when the air is - f 85 , it will sink die thermometer to + 2►►.

CHEMISTRY.

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1789. III. ►►► TABLE CONSISTING or FRIGORIFIC MIXTURES, COMPOSED OP ICES WITH CHEMICAL

SALTS AND ACIDS.

Frigorific Mixtures 'with Ice.

MIXTURES.

Thermometer sinks.

Deg. of cold produced.

Snow, or pounded ice 2 parts Muriate of soda ... 1

to ××× 5××

-

Snow, or pounded ice 5 parts Muriate of soda ... 2 Muriate of ammonia . . 1

a

2 to ××× 12××

×××

Cu

-

Snrvw, or pounded ice . . 24 parts Muriate of soda . . .10 Muriate of ammonia . . 5 Nitrate of potash ... 5

|J

××M to ××× is0

×××

-

Snow, or pounded ice . .12 parts Muriate of soda . . 5 Nitrate of ammonia ... 5

is

fn to ××× 25××

-

Snow 3 parts Diluted sulphuric acid . . 2

From + 32 to 23

55

Snow 8 parts Muriatic acid 5

From + 32 to 27

59

Snow ..... 7 parts Diluted nitric acid ... 4

From + 32 to 30

62

Snow 4 parts Muriate of lime ... 5

From 32 to 40

72

Snow 2 parts Crystallised muriate of lime . 3

From 4- 32 to 50

82

Snow ..... 3 parts

Potash 4

From + 32 to 51

83

N. B. The reason for the omissions in the last column of this Table, is, the thermometer sinking in these mixtures to the degree mentioned in the preceding column, and never lower, whatever may be the temperature of the materials at mixing.

1790. IV. TABLE CONSISTING OF FRIGORIFIC MIXTURES SELECTED FROM THE FOREGOING TABLES, AND COMBINED so AS TO INCREASE OR EXTEND COLD TO THE EXTREMEST DEGREES.

Combinations of Frigorific Mixtures.

MIXTURES.

Thermometer sinks.

Deg. of cold produced.

Phosphate of soda Nitrate of ammonia Diluted nitric acid

5 parts

3 4

From 0►► to ►►► 34►►

34

Phosphate of soda Nitrate of ammonia Diluted mixed acids

3 parts

2 4

From ►►► 34►► to ►►► 50►►

16

3 parts

Diluted nitric acid

2

From 0►► to ►►► 46►►

46

Snow ..... Diluted sulphuric acid Diluted nitric acid

8 parts

3 3

From ►►► 10►► to ►►► 56►►

46

Snow Diluted sulphuric acid

1 part

1

From ††† 20†† to ††† 60††

40

1

644

CHEMISTRY.

TABLE IV. ††† Continued.

Combinations of Frigorific Mixtures.

MIXTURES.

Thermometer sinks.

Deg. of coli I produced.

Snow .... Muriate of lime . . †††††;

3 parts

4

From + 20†† to ††† 48††

68

Snow .... Muriate of lime . .

3 parts

4

From + 10†† to ††† 54††

64

Snow .... Muriate of lime

2 parts

3

From ††† 15†† to ††† 68††

53

Snow .... Crystallised muriate of lime

1 part

2

From 0†† to ††† 66††

66

Snow .... Crystallised muriate of lime

1 part

3

From ††† 40†† to ††† 73††

33

Snow- .... Diluted sulphuric acid

8 parts

10

From ††† 68†† to ††† 91††

23

N B. ††† The materials in the first column are to be cooled, previously to mixing, to the tempera- ture recuired, by mixtures taken from either of the preceding tables.

V. ††† TABLE OF CAPACITIES OF DIFFERENT SUBSTANCES FOR CALORIC.

In this Table, the authorities are marked by the initials of the respective authors' names. ††† C. Crawford : K. Kirwan : Ir. Irvine : G. Gadolin : L. Lavoisier : W. Wilcke : M. Meyer.

1. Hydrogen gas

2. Oxygen gas

3 Atmospheric air

GASES.

21-4000 C. 4. Aqueous vapour 4‘7490 ००० 5. Carbonic acid gas 1-7900 ००० 6. Nitrogen gas

1-5500 C.

1-6454 ०००

०००7936 ०००

LIQUIDS.

7.

Solution of carbonate of am-

27.

monia

1-8510 K.

8.

Solution of brown sugar

1-0860 ०००

28.

9.

Alcohol (15-44) .

1-0860 ०००

10.

Arterial blood

1-0300 C.

29.

11.

1-0000

12.

Cow's milk ....

◆◆◆9999 C.

30.

13.

Sulphuret of ammonia .

9940 K.

31.

14.

Solution of muriate of soda,

1 in 10 of water

◆◆◆9360 G.

32.

15.

Alcohol (9-44) . . .

◆◆◆9300 Ir.

16.

Sulphuric acid, diluted with

33.

10 of water

◆◆◆9250 G.

17.

Solution of muriate of soda in

34.

6-4 of water . ◆◆◆. , . t.,ˆl-,

◆◆◆9050 G.

18.

Venous blood . . . .◆◆

◆◆◆8928 C.

35.

19.

Sulphuric acid, with 5 parts of

36.

water ....

◆◆◆8760 G.

37.

20.

Solution of muriate of soda in

38.

5 of water . . . ◆◆◆ =

◆◆◆8680 ◆◆◆

21.

Nitric acid (39) .

◆◆◆8440 K.

39.

22.

Solution of sulphate of mag-

40.

nesia in 2 of water .

◆◆◆8440 ◆◆◆

41.

23.

Solution of muriate of soda in

8 of water

◆◆◆8320

42.

24.

Solution of muriate of soda in

3-33 of water .

◆◆◆8200 G.

43.

25.

Solution of nitrate of potash in

8 of water

◆◆◆8167 L.

44.

26.

Solution of muriate of soda in

45.

2‘8 of water . ” “. ”

**

Solution of muriate of ammo- nia in 1-5 of water . . -7980 K.

Solution of muriate of soda sa- turated, or in 2-69 of water ‘7930 G.

Solution of supertartrate of

potash in 237-3 of water . -7650 K.

*Solution of carbonate of potash ‘7590 ***

Colourless sulphuric acid

*(51-55,56,57) . . . ‘7580 ***

Sulphuric acid, with 2 parts of

water . . -7490 G.

Solution of sulphate of iron in

2-5 of water . . . ‘7340 K.

Solution of sulphate of soda in

*2-9 of water . . . ‘7280 ***

*Olive oil .... -7100 ***

*Water of ammonia, sp. gr. 0-997 -7080 ***

*Muriatic acid, sp. gr. 1-122 . . ‘6800 ***

Sulphuric acid, 4 parts with 5 of

water -6631 L.

*Nitric acid, sp. gr. 1-29895 . ‘6613 ***

Solution of alum in 4-45 of water “6490 M.

Mixture of nitric acid with lime,

9$ to 1 . . . . -6189 L.

Sulphuric acid, with an equal

weight of water . . . -6050 G.

Sulphuric acid, 4 parts with 3 of

water ‘6031 L.

Alcohol (9-15) . ‘6021 C.

Nitrous acid, sp. gr. 1-35 . -5760 K.

*Linseed oil -5280 ***

LIQUIDS.-

47. Spermaceti oil (53) . . . -5000 C.

48. Sulphuric acid, with half of

water .... ‘5000 G.

49. Oil of turpentine (52) . . ‘4720 K.

*50. Sulphuric acid, with ** of water . -4420 G.*

51. Sulphuric acid (31-55,56,57) . ‘4290 C.

52. Oil of turpentine (49) . . ‘4000 Ir.

*53. Spermaceti oil (47) . ** -* . ‘3990 K.*

*54. Red wine vinegar . -, . . -3870 ***

CHEMISTRY.

-Continued.

55. Sulphuric acid, concentrated and

colorless (31)

56. Sulphuric acid, sp. gr. 1-87053

57. Sulphuric acid (31-51)

58. Spermaceti melted

59. Quicksilver, sp.gr. 13-30 .

60. Quicksilver ....

62.

SOLIDS.

63. Ice

64. ???

65. Ox-hide with the hair '.

66. Sheep's lungs .

67. Beef of an ox . . – ,

68. Scotch fir wood .

69. Lime tree wood

70. Spruce fir wood

71. Pitch pine wood ,. '.

72. Apple tree wood

73. Alderwood ...

74. Sessile-leaved oak .

75. Ash wood

76. Pear-tree wood

*77. Rice . ' . *;*

78. Horse-beans .

79. Dust of the pine-tiee

80. Peas ....

81. Beech ....

82. Hornbeam wood

83. Birch-wood

. 84. Wheat ....

85. Elm ....

86. White wax

87. Pedunculated oak wood .

88. Prune tree

89. Ebony- wood .

90. Quicklime with water, in the pro-

portion of 16 to 9

91. Barley

92. Oats

93. Charcoal of birch wood (99) .

94. Carbonate of magnesia .

95. Prussian blue

96. Quicklime saturated with water

and dried ....

97. Pit coal ....

98. Artificial gypsum

99. Charcoal (93)

100. Chalk (108) ....

101. Rust of iron .... 1C2. White clay .... 1(/3. White oxide of antimony

washed .... 1D4. Oxide of copper

105. Quicklime (107)

106. Muriate of soda in crystals

107. Quicklime (105)

JOS. Chalk (100) ....

109. Crown glass ....

110. Agate, sp. gr. 2-648

111. Earthen-ware ....

112. Crystal glass without lead

The above capacities of the gases arc all erroneous ; more or less incorrect. VOL. V.

545

□□□3390 G. □□□3345 L. □□□3330 Ir. □□□3200 □□□ □□□0330 K, □□□0290 L. □□□0290 W. □□□0280 Ir,

□□□9000 K.

113.

Cinders ....

□□□1923 C.

□□□8000 Ir.

114.

Sulphur ....

□□□1890 Ir.

□□□7870 C.

115.

Ashes of cinders

□□□1855 C.

□□□7690 □□□

116.

White glass, sp. gr. 2-386

◆◆◆1870 W.

◆◆◆7400 ◆◆◆

117.

White clay burnt .

◆◆◆1850 G.

◆◆◆6500 M.

118.

Black lead ....

◆◆◆1830 ◆◆◆

◆◆◆2600 ◆◆◆

119.

Sulphur .....

◆◆◆1830 K.

◆◆◆6000 ◆◆◆

120.

Oxide of antimony, nearly free

◆◆◆5800 ◆◆◆

◆◆◆1666 C.

◆◆◆5700 ◆◆◆

121.

Rust of iron, do. do.

◆◆◆1666 ◆◆◆

◆◆◆5300 M.

122.

Ashes of elm wood .

◆◆◆1402 ◆◆◆

◆◆◆5100 ◆◆◆

123.

Iron (125-127,128-132) .

◆◆◆1450 Ir.

◆◆◆5100 ◆◆◆

124.

Oxide of zinc, nearly freed from

◆◆◆5000 ◆◆◆

air . . ◆◆◆

◆◆◆1369 C.

◆◆◆5060 C.

125.

White cast iron

◆◆◆1320 G.

◆◆◆5020 ◆◆◆

126.

White oxide of arsenic

◆◆◆1260 ◆◆◆

◆◆◆5000 ◆◆◆

127.

Iron (123-132)

* 1269 C.*

*4920 *

128.

Iron, sp. gr. 7876 .

* 1260W.*

‘4900 M.

129.

Cast iron abounding in plum-

*4800 *

bago .....

1240 G.

* 4800 *

130.

Hardened steel

*1230 *

4770 C.

131.

Steel softened by fire

*1200 *

* 4700 M.*

132.

Soft bar iron, sp. gr. 7‘724

* 1190 *

4500 G.

133.

Brass, sp. gr. 8-356 (135)

◆◆◆1160 W.

◆◆◆4500 M.

134.

Copper, sp. gr. 8-785 (136) .

◆◆◆mow.

◆◆◆4400 ◆◆◆

135.

Brass (133) ....

◆◆◆1123 C.

◆◆◆4300 ◆◆◆

136.

Copper (133)

◆◆◆1111 ◆◆◆

137.

Sheet iron ....

◆◆◆1099 L.

◆◆◆4391 L.

138.

Zinc, sp.gr. 7-154 (143) .

◆◆◆1020 W.

◆◆◆4210 C.

139.

White oxide of tin, nearly free

* 4160*

990 C.

3950 G.

140.

Cast pure copper, heated be-

* 3790 *

tween charcoal, and cooled

* 3300 *

slowly, sp. gr. 7‘907 .

990 G.

141.

Hammered copper, sp. gr. 9‘150

970 G.

* 2800 G.*

142.

Oxide of tin .

* 960 K.*

2777 C.

143.

Zinc (198) .

943 C.

* 2640 G.*

144.

Ashes of charcoal .

909

2631 C.

145.

Sublimated arsenic

840 G.

2564

146.

Silver, sp.gr. 10-001

820 W.

2500

147.

Tin. (152) .

704 C.

2410 G.

148.

Yellow oxide of lead

680

149.

White lead ....

670 G.

2272 C.

150.

Antimony ....

* 645 *

*2272 *

151.

Antimony, sp. gr. 6’ 107 .

630 W.

*2239 *

152.

Tin, sp. gr. 7380 (147) .

*600 *

* 2260 G.*

153.

Red oxide of lead .

* 590 G.*

2168 L.

154.

Gold, sp. gr. 19-04

500 W.

* 2070 G.*

155.

Vitrified oxide of lead .

* 590 G..*

* 2000 Ir.*

156.

Bismuth, sp. gr. 9‘861

*430 W.

*1950 W.

*157.

Lead, sp. gr. 11-45

*420

. i Q er> ir

*1 *5R*

*352 C.

*i you IY. *1929 L.*

1 iJO.

and those of the other bodies are probably

TABLE VI. CORRESPONDENCE OF THE THERMOMETERS OF FAHRENHEIT AND REAUMUR, AND THAT o? CELSIUS OR THE CENTIGRADE THERMOMETER OF THE MODERN FRENCH CHEMISTS.

Fahr.

Heaum.

Celsi.

Fahr. Reaum.

Celsi.

Fahr.

Reaum.

Celsi.

Fahr.

Reaum.

Celd.

212

80

100

148

51-5

64-4

85

23-5

29-4

22

4-4

5-5

211

79-5

99-4

147

51-1

63-8

84

23-1

28-8

21

4-8

6-1

210

79-1

98-8

146

50-6

63-3

83

22‘6

28-3

20

5-3

6-6

209

78-6

98-3

145

50-2

62-7

82

22-2

27-7

19

5-7

7-2

208

78-2

97-7

144

49-7

62-2

81

21-7

27‘2

18

6-2

7-7

207

77-7

97-2

143

49-3

61-6

80

21-3

26-6

17

6-6

8-3

206

77-3

96-6

142

48-8

61-1

79

20-8

26-1

16

7-1

8-8

205

76-8

96-1

141

48-4

60-5

78

20-4

25-5

15

7-5

9-4

204

76-4

95-5

140

48

60

77

20

25

14

8

10

203

76

95

139

47-5

59-4

76

19-5

24-4

13

8-4

10-5

202

75-5

94-4

138

41-1

58‘8

75

19-1

23-8

12

8-8

11-1

201

75-1

93-8

137

46-6

58-3

74

18-6

23-3

11

9-3

11-6

200

74-6

93-3

136

46-2

57-7

73

18-2

22-7

10

9‘7

12-2

199

74-2

92-7

135 ‘ 45-7

57-2

72

17-7

22-2

9

10-2

12-7

198

73-7

92-2

134 j 45-3

56-6

71

17-3

21-6

B

10-6

13-3

197

73-3

91-6

133 ◆◆◆ 44-8

56-1

70

16-8

21-1

7

11-1

13-8

196

72-8

91-1

132

44-4

55-5

69

16-4

20-5

6

11-5

14-4

195

72-4

90-5

131

44

55

68

16

20

5

12

15

194

72

90

130

43-5

54-4

67

15-5

19-4

4

12-4

15-5

193

71-5

89-4

129

43-1

53-8

66

15-1

18-8

3

12-8

16-1

192

71-1

88-8

128

42-6

53-3

65

14-6

18-3

2

13-3

16-6

191

70-6

88-3

127

42-2

52-7

64

14-2

17-7

1

13-7

17-2

190

70-2

87-7

126

41-7

52-2

63

13-7

17-2

0

14-2

17-7

189

69-7

87-2

125

41-3

51-6

62

13-3

16-6

1

14-6

18-3

188

69-3

86-6′

124

40-8

51-1

61

12-8

16-1

2

15-1

18-8

187

68-8

86-1

123

40-4

50-5

60

12-4

15‘5

3

15-5

19-4

186

68-4

85-5

122

40

50

59

12

15

4

16

20

185

68

85

121

39-5

49-4

58

11-5

14-4

5

16-4

20-5

184

67-5

84-4

120

39-1

48-8

57

11-1

13-8

6

16-8

21-1

183

67-1

83-8

119

38-6

48-3

56

10-6

13-3

7

17-3

21-6

182

66-6

83-3

118

38-2

47-7

55

10-2

12‘7

8

17-7

22-2

181

66-2

82-7

117

37-7

47-2

54

9-7

12-2

9

18-2

22-7

180

65-7

82-2

116

37-3

46-6

53

9-3

11-6

10

18-6

23-3

179

65-3

81-6

115

36-8

46-1

52

8-8

11-1

11

19-1

23-8

178

64-8

81-1

114

36-4

45-5

61

8-4

10-5

12

19-5

24-4

177

64-4

80-5

113

36

45

50

8

10

13

20

25

176

64

80

112

35-5

44-4

49

7-5

9‘4

14

20-4

25-5

175

63-5

79-4

111

35-1

43-8

48

7-1

8-8

15

20-8

26-1

174

63-1

78-8

110

34-6

43‘3

47

6-6

8‘3

16

21-3

26-6

173

62-6

78-3

109

34-2

42‘7

46

6-2

7-7

17

21-7

27-2

172

62-2

77-7

108

33-7

42‘2

45

5-7

7-2

18

22-2

27-7

171

61-7

77-2

107

33-3

41-6

44

5-3

6-6

19

22-6

28-3

J70

61-3

76-6

106

32-8

41-1

43

4-8

6-1

20

33-1

28-8

169

60-8

76-1

105

32-4

40-5

42

4-4

5-5

21

23-5

29-4

168

60-4

75-5

104

32

40

41

4

5

22

24

30

167

60

75

103

31-5

39‘4

40

3-5

4-4

23

24-4

30-5

166

59-5

74-4

102

3i-l

38-8

39

3-1

3-8

24

24-8

3M

165

59-1

73-8

101

30-6

38-3

38

2-6

3-3

25

25-3

31-6

164

58-6

73-3

100

30-2

37-7

37

2-2

2-7

26

25-7

32-2

163

58-2

72-7

99

29-7

37-2

36

1-7

2-2

27

26-2

22-7

162

57-7

72-2

98

29-3

36-6

35

1-3

1-6

28

26-6

33-3

161

57-3

. 71-6

97

28-8

36-1

34

0-8

1-1

29

27-1

33-8

160

56-8

71-1

96

28-4

35-5

33

0-4

0-5

30

27-5

34-4

159

56-4

70-5

95

28

35

32

0

0

31

28-4

35

158

56

70

94

27-5

34-4

31

0-4

0-5

32

28

35-5

157

55-5

69-4

93

27-1

33-8

30

0-8

1-1

33

28-8

36-1

156

55-1

68-8

92

26-6

33-3

29

1-3

1-6

34

29-3

36-6

155

54-6

68-3

91

26-2

32-7

28

1-7

2-2

35

29-7

37-2

154

54-2

67-7

.90

25-7

32-2

27

2‘2

2-7

36

30-2

37-7

153

53-7

67-2

89

25-3

31-6

26

2‘6

3-3

*37^*

30-6

38-3

152

53-3

66-6

88

24-8

3M

25

3‘1

3-8 .

38

31-1

38-8

151

52-8

66-1

87

24-4

30-5

04

3‘5

4-4

39

31-5

39-4

150

52-4

65-5

86

24

30

23

4

5

40

32

40

149

52

65

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TABLE VII. ??? OF THE ELASTIC FORCE OF THE VAPOR OF WATER IN INCHES OF MERCURY

BY DR. URE.

Temp.

Force.

Temp.

Force.

Temp.

Force.

Temp.

Force.

Temp.

Force.

Temp.

Force.

24[illegible]

0–170

115[illegible]

2–820

195[illegible]

21–100

242[illegible]

53–600

270[illegible]

86–300

295[illegible]

129–000

32

0–200

120

3-300

200

23-600

245

56-340

271-2

88-000

295-6

130-400

40

0-250

125

3-830

205

25-900

245-8

57-100

273-7

91-200

297-1

133-900

50

0-360

130

4-366

210

28-880

248-5

60-400

275

93-480

298-8

137-400

55

0-416

135

5-070

212

30-000

250

61-900

275-7

94-600

300

139-700

60

0-516

140

5-770

216-6 33-400

251-6

63-500

277-9

97-800

300-6

140-900

65

0-630

145

6-600

220

35-540

254-5

66-700

279-5

101-600

302

144-300

70

0-726

150

7-530

221-6

36-700

255

67-250

280

101.900

303-8

147-700

75

0-860

155

8-500

225

39-110

257-5

69-800

281-8

104-400

305

150-560

80

1-010

160

9-600

226-3

40-100

260

72-300

283-8

107.700

306-8

154-400

85

1-170

165

10-800

230

43-100

260-4

72-800

285-2

112-200

308

157-700

90

1-360

170

12-050

230-5

43-500

262-8

75-900

287-2

114-800

310

161-300

95

1-640

175

13-550

234-5

46-800

264-9

77-900

289

118-200

311-4

164-800

100

1-860

180

15.160

235

47-220

265

78-040

290

120-150

312

167-000

105

2-100

185

16-900

238'5

50-300

267

81-900

292-3

123-100

Another Exper.

110

2-456

190

19-000

240

51-700

269

84-900

294

126-700

312►► 1165-5

TABLE VIII. ►►► OF THE ELASTIC FORCES OF THE VAPORS OF ALCOHOL, ETHER, OIL OF TUR- PENTINE, AND PETROLEUM, OR NAPHTHA, BY DR. URE.

Ether.

Alcoh. sp. gr. 0-813

Alcoh. sp. gr. 0-813

Petroleum.

Temp.

Force of Vapor.

Temp.

Force of Vapor.

Temp.

Force of Vapor.

Temp.

Force of Vapor.

34►►

6-20

32►►

0-40

193-3

46-60

316

30-00

44

8-10

40

0-56

196-3

50-10

320

31-70

54

10-30

45

0-70

200

53-00

325

34-00

64

13-00

50

0-86

206

60-10

330

36-40

74

16-10

55

1-00

210

65-00

335

38-90

84

20-00

60

1-23

214

69-30

340

41-60

94

24-70

65

1-49

216

72-20

345

44 10

104

30-00

70

1-76

220

78-50

350

46-86

75

2-10

225 i 87-50

355

50.20

2d. Ether.

80

Q C

2-45

2.f\O

230

o o o

94-10

O7. 1 A

360

*^^*

53-30

**i^-on*

*105**

30-00

o5

90

9o

3-40

232 236

y/ 10

103-60

ooo

370

oo yu

60-70

110

32-54

95

3-90

238

106-90

37

61-90

115

35.90

100

4-50

240

111-24

375

64-00

120

39-47

105

5-20

244

118-20

125 130

43-24 47-14

110 115

6-00 7-10

247 248

122-10 126-10

Oil of Turpentine.

135

51-90

120

8-10

249-7

131-40

Force of

140

56-90

125

9-25

250

132-30

Temp.

Vapor.

145

62″ 10

130

10‘60

252

138‘60

150

67-60

135

12-15

254-3

143-70

304[illegible]

30-00

155

73-60

140

13-90

258-6

151-60

307-6

32-60

160

80-30

145

15-95

260

155-20

310

33-50

165

86-40

150

18-00

262

161-40

315

35-20

170

92-80

155

20-30

264

166-10

320

37-06

175

99-10

160

22-60

322

37-80

180

108-30

165

25-40

326

40.20

185

116-10

170

28-30

330

42-10

190

124-80

173

30-00

336

45.00

195

133-70

178-3

33-50

340

47-30

200

142-80

180

34-73

343

4940

205

151-30

182-3

36-40

347

51-70

210

166-00

185-3

39-90

350

53-80

190

43-20

354

56-60

357

58-70

360

60-80

362

62-40

2 N 2

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TABLE IX. ××× OF THE SOLUBILITY OF SOME SOLIDS IN WATER.

NAMES OF SALTS.

Solubility in 100 pts. water.

NAMES OF SALTS.

Solubility in 100 pts. water.

At 60××.

At 212××.

At 603.

At 2120.

Muriate of lead

4-5

ACIDS.

lime

200

magnesia

100

Arsenic . . .

150

mercury .

5

50

Benzoic .

0-208

4-17

potash

33

Botacic

2

silver

o-A

Camphoric

1-04

8-3

soda

35-42

36-16

Citric

133 .

200

Strontites

150

Unlimited

Gallic

8-3

66

Nitrate of ammonia .

50

200

Mucic . .

0-84

1-25

barytes

8

25

Molybdenic

o-i

lime .

400

Oxalic

50

100

magnesia .

100

+100

Suberic

0-69

50

potash

14-25

100

Succinic .

4

50

soda .

33

+ 100

Tartaric .

Very soluble

Strontites .

100

200

Oxalate of Strontites

O'-A

SALIFIABLE BASES.

Phosphate of ammonia

25

+25

Barytes

5

50

barytes lime

0

o

0

o

crystallised Lime Potash . ..-□□□”.

57 0-2

Very soluble

Unlimited

magnesia potash . soda

6-6

Very soluble

25

50

Sorla

ditto

OUUCL □□□ . □□□

Strontites

0

o

Strontites crystallised

0-6 1-9

50

Phosphite of ammonia barytes .

50

o-i

+50

potash .

33

+ 33

SALTS.

Sulphate of ammonia

50

100

Acetate of ammonia .

Very soluble

barytes .

0-002

barytes

ditto

copper .

25

50

lime

ditto

iron

50

+ 100

magnesia .

ditto

lead

o-A

potash

100

lime

0-2

0-22

soda

Very soluble

magnesia

100 .

133

Strontites .

40

potash

6-25

20

Carbonate of ammonia

-j-30

100

soda

37

125

barytes

Insoluble

Strontites

0

0-02

lime

ditto

Sulphite of ammonia

100

magnesia

2

lime

0-125

potash .

25

83

magnesia

5

soda

50

-f-100

potash ???

100

Strontites

Insoluble

soda

25

100

Camphorate of ammonia

1

33

Saccholactate of potash

12

barytes

0-16

soda

20

lime .

0-5

Sub-borate of soda,borax

8-4

16-8

potash

33

+33

Super-sulph. of potash

50

+ 100

Citrate of soda .

60

alumina

lime . . ;

Insoluble

and potash (alum)

5

133

Chloiate of barytes .

25

+25

Super-oxalate of potash

10

mercury

25

tartrate of potash

11

31

potash

6

40

Tartrate of potash

25

soda

35

+ 35

&soda

20

Muriate of ammonia

33

100

antimony and

barytes

20

+20

potash .

6-6

33

~

J

EXPLANATION OF PLATE I.

Fig. 1. RETORT AND RECEIVER, a, Retort. 6, Receiver. The material is put into the body of the retort, heat applied, if necessary, and the vaporised matter passes into the receiver.

Fig. 2. GLASS ALEMBIC, a, Head. 6, Body. c, Pipe for the receiver. An alembic differs from

a still, inasmuch as it provides for the conden- sation of the vaporised material in itself, while a still has an apparatus appended for this purpose.

Fig. 3. KNIGHT'S MODIFICATION OF WOOLFE'S APPARATUS, a, a, a, Three vessels, each ground into the mouth of the one below it. b, b, b, Glass

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.London '.fublisfhrd/ ly JTAoma*f JfffSf.

tubes ; the middles of which are ground into the neck of their respective vessels, the upper ex- tremity standing above the surface of the liquor in the vessel, and the lower extremity reaching to near the bottom of the vessel beneath, e, Welter'? tube, to prevent absorp- tion. /*, an adopter ground to fit the receiver, to which any retort may be joined and luted before it is put into its place. c, Tube for conveying the gas into a pneumatic trough. The foot of the lowest vessel, d, slides in between two grooves in a square wooden foot, to secure the apparatus from oversetting. A stopple fitted to the upper vessel, instead of the adopter, f, converts it into a Nooth's apparatus, the materials being put into the vessel, a, and in this case it has the advantage of not having a valve liable to be out of order.

Fig. 4. At the side of the instrument is a form of one of the glass tubes employed.

Fig. 5. AN ALEMBIC, with its capital inserted into a vessel of water.

Fig. 6. MEUSMIER'S INSTRUMENT, to ascertain the quantity of water yielded by the combustion of a given weight of alcohol, a, b, c, d, Cooler. e,f, Worm contained in it. g, h, Chimney, k, a. glass tube, m, I, Argand's lamp. Things being properly disposed, and the lamp being filled with a determinate quantity of alcohol, it is set on fire, the water which is formed, during com- bustion, rises in the chimney, k, e, and being condensed in the worm, runs out at its extremity, f, ifciO the bottle, p. The use of the outer chim- ney, g, h, and of the sand between it, and in the inner one, is to prevent the lamp which proceeds from the worm from being cooled during com- bustion, which would occasion the water formed by the burning to fall back on the lamp, instead of passing on into the worm.

Fig. 7. FORM OF AN ALEMBIC, a, Body, b, The neck, c, The capital.

Fig. 8. JARS FOR PRECIPITATION.

Fig. 9. EVAPORATING VESSEL.

Fig. 10. TUBULATED RETORT, luted to b, a quilled receiver, the bottle c, standing on a block of wood, receiving the neck of the re- ceiver.

Fig. 11. GLASS BOTTLE, WITH SIGMOID TUBE, used for obtaining gaseous products from ad- mixtures, such as hydrogen gas from iron filings and diluted sulphuric acid.

Fig. 12. AN APPARATUS FOR PROCURING GAS, and at the same time precluding the possibility of its escape ; the bottle, a, is to receive the material acted upon ; b, the holder of the acid, or other liquid, which is to act upon the material ; c, a stop-cock ; d, a bent tube, which is to terminate under a receiver, filled with, and inverted in water.

Fig. 13. AN EUDIOMETER, for ascertaining the purity of a mixture of gases, containing oxygen gas, by means of nitrojs gas.

EXPLANATION OF PLATE II.

Fig. 1. DR. HOPE'S EUDIOMETER. It consists of a small bottle, of the capacity of twenty or twenty-four drachms, destined to contain the eudiosnetric liquid, arM having a small stopper at b. Into the neck of the bottle a tube is ac-

curately fitted by grinding, which holds precisely a cubic inch, and is divided into 100 equal pans. To use the apparatus the bottle is first filled with the liquid employed, which is best prepared by boiling a mixture of quicklime and sulphur with water, filtering the solution, and agitating it for some time in a bottle half filled with common air. The tube filled with the gas under exami- nation (or with atmospherical air when the quality of this compound is to be ascertained) is next to be put into its place, and, on inverting the instru- ment, the gas ascends into the bottle where it is to be brought extensively into contact with the liquid by brisk agitation. An absorption ensues ; and to supply its place the stopper b is opened under water ; a quantity of which rushes into the bottle. The stopper is replaced under water, the agitation renewed, and these operations are performed alternately till no further diminution takes place. The tube a is then withdrawn, the neck of the bottle being under water, and is held inverted in water for a few minutes, at the close of which the diminution will be apparent. Its amount may be measured by the graduated scale engraved on the tube. Dr. Henry makes the following objections to this instrument. If, says he, the tube a, and the stopper 6, are not both very accurately ground, air is apt to make its way

into the instrument to supply the partial vacuum occasioned by the absorption of oxygen gas. This absorption causes a diminished pressure within the bottle, and consequently towards the close of each agitation, the absorption goes on very slowly. Besides the eudiometrical liquid is constantly becoming more dilute by the admission of water through b. To obviate all these difficulties I have (says Dr. Henry) substituted for the glass bottle one of elastic gum, the tube of which being ground accurately into a short piece of very strong tube of wider bore, the outer surface of which is made rough by grinding and properly shaped, so that it may more effectually retain the neck of the elastic bottle when fixed by a string.

Fig. 2. DR. HENRY'S MODIFICATION OF DR. HOPE'S EUDIOMETER. a, Graduated tube, b, Bottle of elastic gum for containing the eudiome- trical fluid.

Fig. 3. A GAS RECEIVER, a. A glass flask b. This combined instruments used for determining the weight of gases, the flask being first weighed, when exhausted, and when a given quantity has been received, sav fifty cubic inches, it is to be again weighed, which of course will give the weight of fifty cubic inches of the particular gas experimented on.

Fig. 4. PLAIN JAR FOR RECEIVING GAS.

Fig. 5. A WIRE-STAND WITH A LEADEN FOOT, for the purpose of raising above the surface of water within a jar, any substance that is to be. subjected to. the action of a gas.

Fig. 6. APPARATUS FOR DRYING PRECIPI- TATES, supported by the ring of a lamp stand, a, A vessel of copper or sheet iron. 6, A conical vessel of thin glass, c, A moveablering to keep the glass vessel in its place. Water being poured into the vessel a, the vessel b, containing the substance to be dried is immersed into it, and the apparatus set over an Argandxs lamp. The steam escapes by the chimney d.

Fig. 7. PEPYS' APPARATUS, for ascertaining ihe quantity of carbonic acid ch jcharged from any substance by the addition of an acid ; the twisted tube from the bottle performs the office of a still worm, and condenses any liquid that may arise ⁂with the gas, causing it to fall down again into the bottle.

Fig. 8. A MUFFLE ; an instrument employed for the purpose of submitting substances to the continued action of a red heat with a consi- derable exposure to air at the same time.

Fig. 9. A JAR AND GAS RECEIVER.

Fig. 10. APPARATUS for showing that caloric exists in a latent form in gases, a, A retort into which salt and sulphuric acid are placed ; two ounces of the former, to half the weight of the latter : the gas which this mixture produces is received into a glass balloon, 6, from this a tube, c, descends into a vessel of water, d, of the tem- perature of the atmosphere. The temperature of the gas in the balloon, b, must be ascertained before the vessel is closed ; this is to be done by inserting into it a thermometer, e. In this ther- mometer the mercury will rise only a few degrees, while the mercury of another thermometer inser- ted into the water, d, will rise to the boiling point ; proving that the latent heat of the gas is given out when condensed by water.

Fig. 11. WOOLFE'S APPARATUS (common form of it), the original inventor of which was Glauber ; this was constructed upon the principle, that in gaseous formation some part of it may be ab- sorbable by water, while other parts are not. Now the gas that is not thus taken up by the water would increase in close vessels, so as eventually to occasion their bursting. The earlier chemists made a small hole in the upper parts of their retorts to allow the escape of the gas not condensable ; but, besides that this implies the loss of a considerable part of the product, it is often necessary to collect separately the gases that are, and are not, condensible by, and soluble in, water, so that it was necessary to have several receivers, or bottles with tubes, to convey away the gases not condensible, and collect them ac- cording to the wish of the experimenter, a, Retort. b, First receiver, c, Second receiver, rf, Third receiver, e, Bent tube for conveying away unab- sorbed gas. The materials introduced into the retort, and the distillation commenced, the vapor collects in t'i ? first receiver, and part is condensed while the evolved vapor passes through the tube into the second receiver, the tube terminating beneath the surface of water, which absorbs the produced gas to a certain extent ; when this ab- sorption cannot be carried further, the gas pas- ses off into the second bottle, the water of which becomes saturated, and that which is not absorb- able escapes through the bent tube, e, and of course if necessary may be collected. It will be perceived that the bottles have middle necks to which long tubes are attached, which communi- cating with the atmosphereˆ any occasional vac- cuum is immediately supplied from without, and

accidents thus guarded against.

Fig. 12. WOOLFE'S APPARATUS, WITH WEL- TER'S TUBE OF SAFETY. This renders the cen- tral openings from the bottles unnecessary. A small quantity of water being poured into the

funnel so as to about half fill the ball, 6 or e ; when absorption takes place the water rises in the ball till none remains in the tube, and then the air rushes in : on the other hand no gas can escape, as it has to overcome the pressure of a high column of water in the perpendicular tube. To this instrument, another form of which is re- presented, plate I. fig. 3, is appended a mercurial trough, d, and a jar, c, inverted in mercury for collecting the gas that is not absorbable by water, or condensible.

Fig. 13. A TUBE BLOWN IN THE MIDDLE INTO A BALL FOR DROPPING LIQUIDS. The ball being filled by the suction of the mouth applied to the upper "orifice, while the lower one is im- mersed in the liquid ; or by immersing the ball and tube at once into the liquid with the point downwards, then applying the finger to the upper orifice and cautiously removing it, the liquid will pass out in drops.

Fig. 14. The mode in which charcoal or any inflammable body is introduced into oxygen gas for rapid combustion.

EXPLANATION OF PLATE III.

Figs. 1, 2, 3. GLASS BOTTLES AND MATRASSES for solutions and experiments upon a small scale.

Figs. 4, 5, 6. CRUCIBLES, chiefly used for subjecting substances to a high heat.

Fig. 7. PORTABLE BLAST-FURNACE OF MR. AIKIN. ??? This is composed of three parts, all made out of the common thin black-lead melting pots sold in London for the use of the goldsmiths. The lower piece, c, is the bottom of one of these pots, and cut off so low as only to have a cavity of about an inch deep, and ground smooth above and below. The outside diameter over the top is five inches and a half. The middle piece, or fire-place, a, is a larger portion of a similar pot, with a cavity of about six inches deep, and mea- suring seven inches and a half over the top, out- side diameter, and perforated with six blast-holes at the bottom. These two pots are all that are absolutely necessary to the furnace for most ope- rations ; but when it is wished to heap up fuel above the top of a crucible

contained, and espe- cially to protect the eyes from the intolerable glare of the fire when in full height, an upper pot, b, is added, of the same dimensions as the middle one, and with a large opening in the side, cut to allow the exit of the smoke and flame. It has also an iron stem with a wooden handle (an old chisel answers the purpose very well) for removing it occasionally. The bellows, which are double, d, are firmly fixed, by a little contrivance, which will take off and on, to a heavy stool, as represented in the plate, and their handle should be lengthened so as to make them work easier to the hand. To increase their force, on particular occasions, a plate of lead may be firmly tied on the wood of the upper flap. The nozzle is received into a hole in the pot c, which conducts the blast into its cavity. Hence the air passes into the fire-place, a, through six holes of the size of a large gimlet, drilled at equal distances through the bottom of the pot, and all converging in an inward direction so that if prolonged they would meet about the centre of the upper part ofkhe fire. (Fig. 9. shows the distribution of these holes in the bottom.

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The large central hole is intended to receive a stand for supporting the crucible.) No luting is necessary in using this furnace, so that it may be set up and taken down immediately. Philoso- phical Magazine, vol. xvii. p. 166. See also Lire's Dictionary, article LABORATORY, and Henry's Elements.

Fig. 8. A FIXED FURNACE, which may be used for a wind-furnace, or for distillation with a sand heat.

Fig. 10. MR. AIKIN'S FURNACE, when used for showing the process of cupellation in a lec- ture room. The method of using it consists in causing a portion of the blast to be diverted from the fuel and to pass through a crucible in which the cupel is placed, a a, The furnace, b, The perforated stopper for the central blast, c c, A portion of earthen

tube through which the air passes, and is heated during this transit, e, A piece of soft brick, perforated to admit the earthen tube, f, which may be kept open for inspecting the process. No luting is required except to join /to e. (Henry). Improvements made by Mr. Aikin in this furnace, may be seen and had of Mr. Knight, in Foster-lane.

Fig. 11. KNIGHT'S PORTABLE FURNACE, com- posed of strong iron plate, lined with fire-lute, the inside diameter six inches. ††, The grate, b, The ash-pit door, d, The door of the fire-place when used as a sand-heat, e. e, Two holes, oppo- site to each other, for transmitting a tube, g, An opening for a retort neck when used for distilling with the naked fire. Dr. Henry, from whom we take this plate and description, says he finds it a great improvement to make the aperture for the chimney at k, as shown in the next figure, in- stead of directing it through the sand bath, ac- cording to the ordinary construction.

Fig. 12. A DIFFERENT VlEW OF THE SAME

FURNACE, a, The grate, c, The register of the ash-pit. /, A small door with a contrivance for supporting a muffle.

Figs. 13, and 14, are different views of a fur- nace of Mr. Knight's invention, and convertible to various purposes. It is nine inches square on its inside, and sixteen inches deep from the top to the grate. The face of the opening at g, fig. 13, rises at an angle which makes the back part five inches higher than the front. If the ash- pit, at i, be sunk below the level of the ground, the height of the furnace need not exceed eigh- teen inches. The ash-pit, a, must be at least eighteen inches deep below the surface of the ground. The grate, b, is formed of separate bars, three-fourths of an inch apart, and of a triangular shape. The chimney, f, is two inches and a half from the top, and four and a half by two and a half wide.

When we wish to apply this furnace to the purpose of occasional distillation, an opening, d fig. 14, is left on one side, which, when not wanted, is filled up by brick. Other pieces of brick may likewise be provided, with arched openings, one of them having a round hole in it, for occasionally transmitting a tube, and a corres- ponding hole, in fig. 13, must then be made in the opposite side of the furnace, to be closed when not wanted.

Fig. 15. Is a longitudinal section of a wind-

furnace, invented also by Mr. Knight, with an additional chamber for supplying the waste heat to useful purposes, a, The internal cavity, ft, The flue, passing into a hot chamber, c, An ap- pendage for drying, or roasting, &c. d, The flue, connecting it with the vertical chimney e. ff, covers, formed of twelve-inch Welsh tiles, with handles, g, The stoke hole, h, Bearing-bar, k, Ash-pit, sunk below the level of the ground.

EXPLANATION OF PLATE IV.

Fig. 1. MR. PEPYS' IMPROVEMENT OF WOOLFE'S APPARATUS. ••• The balloon, a, is sur- mounted by a vessel, b, accurately fitted to it, and furnished with a glass valve, allowing gas freely to pass into it, but preventing the water which it contains from falling into the balloon.

Fig. 2. A GASOMETER. ••• This consists of an outer fixed vessel a, and an inner moveable one b, both of japanned iron. The latter slides easily up and down with the other, and cords passing over pulleys suspend it, to which the counterpoises e,e, are attached. The gas enters from the vessel in which it has been formed by the communicating pipe d, and passes along the perpendicular pipe, indicated by dotted lines in the centre, into the cavity of the vessel 6, which continues to rise till it is full, and then it is stopped by the cross-bar to which the pulleys are attached.

Fig. 3. GAS RECEIVER.

Fig. 4. A GALVANIC TROUGH, a a (see ELEC- TRO-GALVANISM). The tube marked b is the ar rangement for decomposing water, a a, The trough.

Fig. 5. CUTHBERTSON'S APPARATUS, for show- ing the composition of water. A glass receiver a, with an aperture at the bottom, to which a piece of brass is cemented, perforated with two holes, one aperture conveying the oxygen gas, and one the hydrogen.

Fig. 6. A TUBULAR VESSEL, for several pur- poses of experiment.

Fig. 7. APPARATUS FOR DECOMPOSING WATER over red-hot iron or charcoal. ••• A retort ••, partly filled with water, is to be affixed to a gun-barrel b b, open at both ends, and filled up with iron wire, coiled up at both ends ; the barrel is to be placed, nearly horizontally, in a furnace, with a small elevation of that end nearest the retort. A fire is to be lighted in the furnace, and, when the gun-barrel has become red-hot, a lamp is to be applied under the retort a,

which will cause the water it contains to pass through the tube, and over the red-hot iron wire ; it will thus be decomposed, its oxygen uniting with the iron, and its hydrogen, passing over in the form of gas, will be received in the pneumatic cistern, or worm tub c.

Fig. 8. A CHEAP INSTRUMENT FOR FREEZING QUICKSILVER by muriate of lime and snow, a

Fig. 9. A WIRE STAND.

Fig. 10. AN APPARATUS for showing the di- minution effected in the volume of hydrogen ind oxygen gases, by their slow combustion. The jar inverted in f,f, is filled with oxygen cas ; the large bladder with hydrogen ; to this bladder it will be seen is attached a tube with a long brass pipe bent : a stop-cock is attached, d. The bladder being pressed, a stream of gas issues through the pipe, which may be set on fire by a spark from an electrical machine; the combustion being continued for a certain time, the water will rise gradually within the jar in proportion to the consumed oxygen.

Fig. 11. This figure lepresents the different parts of the apparatus required for measuring the quantity of elastic fluid given out during the action of an acid on calcareous soils. The bottle containing the soil is represented at a. b. The bottle containing the acid furnished with a stop- cock, c, The tube connected with a flaccid blad- der d. f, A graduated measure, e, The bottle for containing the bladder. When this instrument is used, a given quantity of soil is introduced into a. b is filled with muriatic acid diluted with an equal quantity of water, and the stop-cock being closed is connectedwith the upper orifice of a,which is ground to receive it. The tube c is introduced into the lower orifice of ††, and the bladder con- nected with it, placed in its flaccid state ine, which is filled with water. The graduated measure is placed under the tube of e. When the stopper- cock of b, is turned, the acid flows into a, and acts upon the soil ; the elastic fluid generated passes through e into the bladder, and displaces a quantity of water in e equal to it in bulk ; and this water flows through the tube into the gra- duated measure, the water in which gives by its volume the indication of the proportion of car- bonic acid disengaged from the soil; for every ounce measure of which two grains of carbonate of lime may be estimated. See SOIL and AGRI- CULTURE.

Fig. 12. A COMMON NOOTH'S APPARATUS for impregnating water with gas. The lower vessel, c, contains the effervescing materials; d, repre- sents a ground stopper closing an orifice, by which additional materials may be put into the lower vessel, b, The middle vessel opened both above and below to the neck of the lower vessel, which receives the inferior neck of the middle vessel ; this connexion is so contrived, that gas may pass up. but fluid cannot return, e, A cock to draw off the contents of 6 ; the upper vessel, a, is fitted by grinding into the upper neck of the middle vessel ; its inferior part consists of a tube that passes almost as low as the centre of the middle vessel. A ground stopper closing the upper orifice. When this apparatus is to be used, the effervescent materials are put into the lower vessel ; the middle vessel is filled with pure water, and put into. its place; and the upper vessel is filled and likewise put into its place. The consequence is, that the carbonic acid gas, passing through the valve at h, ascends into the upper part of the middle vessel b, where b) its elasticity it reacts on the water, and forces part up the tube into the vessel a ; part of the common air in this last being compressed, and the rest escaping by the stopper, which is made of

a conical figure that it may be easily raised. As more carbonic acid, or any other gas is extricated, more water rises, till at length the water in the middle vessel falls below the lower orifice of the tube. The gas then passes through the tube into the upper vessel, and expels more of the common air by raising the stopper. In this situation, the water in both vessels being in contact with a body of carbonic acid gas, it becomes strongly impregnated with this gas after a certain time. This effect may be hastened by taking off the middle and upper vessels together and agitating them.

Fig. 13. A BLOW-PIPE.

Fig. 14. VIVID COMBUSTION IN OXYGEN GAS.

Fig. 15. A BOTTLE AND TUB►► for directing a small stream of water on any object. This pur- pose, says Dr. Henry, from whom we take the figure, may be very conveniently effected by fixing a glass tube of small bore two or thiee inches long, and bent at one end to an obtuse angle, into a hole bored in a cork, which may be used as the stopper of an eight ounce phiaJ filled with water. On inverting the vial, and grasping the bottom of it, the warmth of the hand expels either a few drops, or a small stream of water which may be directed on any minute object. When the flow ceases it may be renewed if re- quired, by setting the bottle for a moment with its mouth upwards (which admits a fresh supply of cool air), and then proceeding as

before.

Fig. 16. The COMMON APPARATUS used for transferring air or gas from one vessel to another, a, A metal trough, k k, A shelf fixed in it. When the apparatus is used, the trough is to be filled with water, about one inch above the shelf, t, g, f, are glass jars inverted upon the shelf; these being filled with water, and thus inverted on the shelf, will remain so filled till displaced by directing a stream of air or gas into them, which, by its superior levity, will rise in the glass, and press upon and dislodge part of the water.

Fig. 17. A GAS-HOLDER, a and c, Two short pipes, terminated by cocks. 6, A pipe passing through the middle of the cover, reaching within half an inch of the bottom of the apparatus. The vessel is first filled with water through the fun- nel, at the top of the apparatus; the cock a, being left open and c shut. The gas from the gasome- ter is to be directed into the aperture a. The cock c is now opened, and 6 shut, and the vessel will thus be filled with gas by the expulsion of the water at c ; when this no longer flows the vessel is full of the gas, and now all the cocks are to be shut till the contents of the air-holder are required for use,. See for description and figures of improved gas-holders, the 13th, 24th. 27th, and 44th vols. of the Philosophical Maga- zine.

EXPLANATION OF PLATE V.

Fif 1. A LAMP FURNACE, improved by Mr. Accum. It consists of a brass rod, screwed to a foot of the same metal, loaded with lead. On this rod, which may be unscrewed in the middle, slide three brass sockets, terminating in brass rings, which rings are for supporting alembics, flasks, retorts, &c. By means of a thumb-screw acting on the rod of the lamp, each of the brass

rinf;s may be placed according to pleasure. Be- low these rings is a fountain lamp, on Argand's plan, which also slides on the main brass rod by means of a socket and thumb-screw. This lamp may be used for producing any degree of heat that the operator requires, from a very gentle one up to the high temperature requisite for dis- tilling mercury.

Fig. 2. INSTRUMENT FOR DIRECTING THE VA- POR OF ALCOHOL ON FLAME, a, A hollow s'phere for containing 'alcohol, resting upon

a shoulder in the ring o. b, A bent tube with a jet at the end, to convey the alcohol in the state of vapor to the flame at q ; this tube is continued in the inside up to c, which admits of a being nearly filled without any alcohol running over, d, A safety valve, the pressure of which is determined at pleasure, by screwing higher or lower on the pillar e, the two milled nuts /and g, carrying the steel arm /, which rests on the valve. /, An opening for putting in the alcohol, k, The lamp which adjusts to different distances from a, by sliding up or down the two pillars I, I. The dis- tance of the flame q from the jet is regulated by the pipe which holds the wick being a little re- moved from the centre of the brass piece rn, and of course revolving in a circle, n, The mahogany stand.*

Fig. 3. Represents the COMMON LARGE STILL, used for the distillation of spirits, a, The body. ti, The head, d, A spiral pipe, called the worm of the still, which passes through a tub of cold water, and condenses the vaporous material, which then comes out in a fluid form at e.

It is evident that the wider and more shallow the bottom of the still, so will be its power of effecting a good deal in a short time, as the whole bottom of the vessel may be subjected to lieat, and thus vaporisation speedily and copiously produced. This principle has been acted on to such an extent, that a still of the capacity of forty gallons in the body, and three in the head, charged with sixteen gallons of wash, can be worked 480 times in twenty-four hours.

Fig. 4. Presents a vertical section of this still, a, The bottom, joined to b, the shoulder, with

solder or rivets, or screws and lute, c , The turned up edge of the bottom, against which, and on a level with a, the brick work of the coping of the flue rests, preventing the flames from jetting up to touch c. d. The discharge pipe, e e, The body of the still. _/', Section of the central steam escape pipe, g, Section of one of the lateral steam escape pipes. A, Outside view of another, i i i i, Inferior apertures of lateral steam pipes, kkkk, Their superior apertures. II, Bottom scraper, or agi- tator, which may be either made to apply close to the bottom, or to drag chains, m, The upright shaft of this engine, as it is called, n, The hori- zontal wheel, with its supporters, o, Its vertical wheel, p, Its handle and shaft, g, Support of the shaft, r, Froth and ebullition jet breaker, resting on the cross bar s. t, Its upright shaft, u, Its cup- mouthed collar, filled with wool and grease, and held down by a plate and screws, v, General steam escape pipe, or head. The charge pipe, and the sight hole, for the man who

charges it to see when it is sufficiently full, are not seen in this view.

Fig. 5. A FUNNEL for introducing liquids into retorts, so as not to interfere with their necks.

Fig. 6. Another representation of a Woulfe's apparatus, with the supplying tube represented at h. See the other figures.

Fig. 7. A BRASS PRONG, with a wooden handle for holding an evaporating glass over a lamp.

Fig. 8. SECTION OF AN EVAPORATING DISH.

Fig. 9. A SEPARATOR, for separating liquids of different specific gravities, a, A ground stop- per. 6, A glass stop cock. " When the lightest of two liquids has risen completely to the top, the heaviest may be let out by opening the stop cock, a-nd again shutting it when all the heavy liquid has passed out.

Fig. 10. COMMON TROUGH, with an inverted jar for collecting gas, with a retort appended, con- taining the materials from which the gas is sup- plied.

Fig. 11. A PLAIN RETORT.

Fig. 12. AN ALEMBIC, WITH A RECEIVER

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ADDENDA.

We have referred to the word TANNIN, in the body of the

Encyclopaedia, for an account of this substance ; but, upon reconsideration, we have thought that the foregoing article will scarcely be allowed to comprehend every thing that a system of chemistry ought to embrace without a little more notice of- this principle (tannin) than will be found in the section on gallic acid.

This principle is contained in many vegetables;

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it is usually procured from the gall-nut, from the oak-bark, or from catechu ; its purest form we are told is derived from bruised grape seeds, by means of a small quantity of cold water; but upon a large-scale it is generally obtained from the bark of the oak, on account of its cheapness ; but various kinds of bark also afford the prin- ciple.

Tan or tannin has the following properties; when added to a solution of any animal jelly, it forms

a hard insoluble matter ; and it is upon this pro- perty the art of tanning depends. When evapo- rated to dryness tan forms a brown friable mass, resembling aloes in its appearance. This mass is soluble both in hot and cold water ; but not in alcohol.

From this watery solution almost all the acids throw down tan, by forming with it an insoluble compound. But nitric acid converts it into a yellowish brown matter, which is now soluble in alcohol. Chlorine produces on it the like change ; and peroxide of tin converts it into a sort of ex- tractive matter, ‘ probably by communicating oxygen.’

As tan possesses in a marked degree the above named property of changing glue into a hard and insoluble coagulum, its infusion may be relied on as a test of the presence of gelatine in bodies ; and again, solution of gelatine may be employed as a test of the presence of tan, for which pur- poses they are both used.

Mr. Hatchetthas shown that tan may be formed artificially by digesting charcoal in dilute nitric acid during several days ; and this artificial tannin seems only to differ from the natural, in resisting the action of nitric acid.

Varieties of artificial tan may also be formed by distilling nitric acid on common resin, or indigo, or several resinous substances ; as well as by the action of sulphuric acid on camphor, as- safastida, &c.

This artificial production is, in fact, a purer variety of tan than the natural, since it is free both from gallic acid and from the extractive principle, both of which are always present in

the natura. tannin. See Philosophical Trans- actions, 1805, 1806.

The other omission which we deem it proper to notice is, the circumstance of condensation or contraction by cold, although a general not being an universal law. Water by freezing be- comes actually increased in bulk, this fluid having obtained its maximum of

density at 40□□, and if it be cooled below that point it expands in pro- portion to the diminution of temperature ; in proportion we say, for it is a remarkable fact, that ‘ the rate of this expansion is equal for any number of degrees above or below this maximum of density, so that the bulk of water at 32□□ and at 48□□ will be the same.’

Under the words FREEZING and ICE we shall have to revert to this anomalous circumstance, and shew its utility in the economy of nature.

We may further state, as less important and regular exceptions to the principle of contraction by cold, that some salts in the act of crystal- lizing expand ; and that some of the metals are increased in bulk by congealment.

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□□□ 396. Chloride of nitrogen for chlorine of ni-

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□□□ 863. Sulphur and cobalt for chlorine and sul-

phur.

□□□ 954. Phosphorut and potassium for phoxphuret

and potassium.

□□□ 1033. Iodine and calcium for iodide and cal-

cium

CHEMNITZ, an old fortified town of Upper Saxony, on a river of the same name, in the marquisate of Meissen, containing three churches, and an hospital. Cottons, and other fine stuffs are made here ; and the bleaching is considerable. It lies thirty-five miles W.S.W. of Dresden, and thirty-two south-west of Meissen.

CHEMNITZ (Martin), a famous Lutheran di- vine, the disciple of Melancthon, was born at Britzen in Brandenburgh, in 1522. He was employed in several important negociations by the Protestant princes, and died in 1589. His principal work is an Examen of the Council of Trent, Latin.

CHEMOSH. SeeCHAMOSH.

CHEMOSIS, in surgery, a disease of the eye, proceeding from inflammation ; wherein the white of the eye has a jelly like appearance, and swells the transparent cornea. It may be cured by almost any mild astringent eye-water, especially if a very minute portion of camphor be added.

CHENIER (Marie Joseph), a time-serving man of letters during .the various revolutionary governments of France, was born at Constanti nople in 1762, his father being French consul there. He is said, early in life, to have been in the army. He wrote a drama, Charles the Ninth, which was received with applause, and dedicated it to Lewis XVI, as,

*'Monarque des Francois, roi d'un peuple fidelle.**

This was followed by the Death of Galas, Grac- chus, and Timoleon. In the revolution, Chenier became a Jacobin, and was member of the mu- nicipality of Paris on the 10th of August, 1792. His odes were sung on the anniversaries of the 14th of July, the 10th of August, and on various occasions of the kind. In September, 1792, he was a deputy of the national convention, and voted for the death of the king. In May, 1795, he declared against the terrorists, was appointed president of the convention in August, when the constitution of 1795 was completed, and afterwards became a member of the council of five hundred. He was proclaimed, on the 22nd of September, the first of French poets. In 1798 he was re-elected a member of the council of five hundred, and in December 1799 a mem- ber of the tribunate. Besides the above works, he wrote An Historical Sketch of the State and Progress of French Literature since 1789. He died at Paris in 1811.

CHENIER (Andrew), brother of the foregoing, was also a writer during the revolution, who, in 1794, gave offence to his brother's party. Being tried, and condemned to the guillotine, Marie Joseph Chenier is said to have brutally ex- claimed, ' If my brother is guilty let him perish.' This assertion, however, is believed to be a ca- lumny. He was executed in 1794, at the age of

thirty-one. The brother we are told received various letters from the departments, with this epigraph, ‘ Cain, restore to us thy brother!’

CHENISCUS,from xr\v, a goose, in antiquity, an ornament in the form of a goose, used on the prow and stern of ships.

CHENOIEA, in botany, a genus of plants of the order monogynia, class pentandria : CAL. quinquefied : COR. none. Style filiform ; stigmas two, and reflected : CAPS, umbilicated, monospermous. Species only one, a Cape shrub.

CHENOPODIUM, goose-foot, or wild orach, in botany, a genus of the digynia order, and pentandria class of plants ; natural order twelfth, holoraceae : CAL. pentaphyllousand pen- tagonal : COR. none, seed one, lenticular, supe- rior. There are twenty-six species, thirteen of which are natives of Britain. Most of them have an aromatic smell. A species which grows near the Mediterranean is used by the Egyptians in sallads, on account of its saltish aromatic taste. From this plant kelp is made in other countries. 1. C. ambrosoides, or the Mexican tea tree, easily propagated from seeds, and thrives best in a rich soil. 2. C. bonus henricus, or com- mon English mercury, found growing naturally in shady lanes, in many places in Britain. It was foimerly used as spinach. As an article of the Materia Medica, it once ranked among the emollient herbs ; is now never used. This plant is remarkable, according to M.M. Chevalier and Lasseigne, for containing uncombined ammonia, which is probably the vehicle of the remarkably nauseous odor which it exhales, strongly resemb- ling that of putrid fish. When it is bruised with- water, and the liquor expressed and afterwards distilled, we procure a fluid containing the sub- carbonate of ammonia, and an oily matter, which gives the fluid a milky appearance. If the ex- pressed juice of the chenopodium be evaporated to an extract, it is found to be alkaline; there seems to be acetic acid in it. Its basis is said to be of an albuminous nature. It is stated also to contain a small quantity of the substance which the French call osmazome, a little of an aromatic resin, and a bitter matter, soluble both in alcohol and water, as well as several saline bodies. 3. C. botrys, or the oak of Jerusalem, with oblong sinuate leaves, thrives best in a rich light earth, and may be easily propagated from seeds, as indeed all the other species may be. 4. C.scoparia, thebelvideie, or annual mock cy- press, is of a beautiful pyramidal form, resem- bling a young cypress tree. This is a plant much esteemed in China. About the end of March and beginning of April, the belvidere springs up ; its suckers or shoots rise to the height of eight or nine inches, in shape of a child’s fist half shut; it afterwards extends itself, and sends forth a number of branches

loaded with leaves, like those of flax ; and, as it grows, its branches arrange themselves naturally in the form of a beautiful pyramid ; its leaves, yet tender, abound with juice, and have a very agreeable taste. \ hen in its full beauty its leaves become hard and unfit {'or the table ; but nourishment is then found in Us root, which serves as a resource in times of famine and scarcity. When the belvi- V

*dere has attained to its natural size the Chinese separate its principal s*alk from the rest, and put it into a lye of ashes, which cleans and softens it, and frees it from all impurities of the bark. After this, it is exposed to the sun ; and, when dry, it is baked and seasoned. From the root, which has something of a violet color, they strip the skin by filaments, which may be boiled and eaten : but what is particularly sought after, is the root itself; of which, when reduced to pow- der, they collect only what remains in the bottom of the vessel, and form it into small loaves, that are baked bv being held over the steam of boil- ing water.*

CHEN-SI, or SHEN-ST, a province of China, bounded on the east by the Iloang-ho, which se- parates it from Chan-si, on the south by the provinces of Se-tchuen and Hou-quang, on the north by Tartary and the great wall, and on the west by the country of the Moguls. It is one of the most extensive provinces of the empire ; and has two viceroys, besides the governors of So-tcheou, and Kan-tcheou, which are the strongest places in the country. The climate is temperate, and the people civil and affable to strangers. The soil is fertile, and produces plentiful crops of wheat and millet. They have also honey, wax, musk, rhubarb, cinnabar, and coal mines. Gold dust is washed down by the torrents and rivers. They have a vast number of deer, bears, musk goats, wild bulls, &c. be- sides an animal resembling a tiger, whose skin is singularly beautiful ; a species of bats as large as hens, and several other animals quite unknown in Europe. The province is divided into two parts, the east and the west, and contains eight cities of the first rank, and 106 of the second and third. Singan-fou is the capital.

CHEN-YANG, a mountainous province of Chinese Tartary, formerly known as Leao-tong, and bounded on the south by the great wall of China. Here are various mines and some noble timber. Wheat, millet, and legumes, and most of the European fruits are grown here, as well as cotton in abundance. Great numbers of sheep and cattle are also reared. The capital, is Moukden, or Chen-yang, besides which, there are several other ill-built towns in the district.

CHEPELIO, or CHEPELLO, an island in the bay of Panama, and

province of Darien, South America, situated about three leagues from the city of Panama, which it supplies with provisions. Lon. 79►► 55′ W., lat. 8►► 46′ N.

CHEPSTOW, a sea-port and market town of England, in the county of Monmouth : si- tuated neur the mouth of the Wye, over which there is a high bridge. It is a large and flourish- ing town, formerly walled round, and defended by a castle, part of which still remains. Chepstow is the port for all the towns seated on the Wye arid Lug. Ships, of 600 tons burden are built here, and even those of 700 tons come up to the town. The tide comes in at this place with greater rapidity than at Bristol, and sometimes rises at the bridge fifty or sixty feet perpendicular. This bridge is of cast-iron, and connects Mon- mouth and Gloucestershire, it was erected in 1816 ; and is maintained at their joint expense.

CHERBOURG.

It lies twenty-eight miles south-west of Glou- cester, and 135 W.N.W. of London.

CHEQ, or CHERIF, the prince of Mecca, who 13 high priest, and sovereign pontiff of all the Mahommedans of whatever sect or country they be. The grand seignior, sophis, moguls, khans of Tartary, &c. send him yearly presents, and vast sums of money to provide for all the pilgrims during the seventeen days of their devotion. His powei is now much diminished.

CHER, a department of France, which com- prehends part of the ci-devant province of Berri. It is bounded on the east by the department of the Nievre ; on the south by that of the Allier; on the west by those of the Indre, Loire, and Cher; and on the north by the Loiret. It abounds in corn, wine, hemp, and flax : the pasturage is also excellent. But iron is the principal article of commerce. It contains about 2,900 square miles, and 239,561 inhabi- tants. Bourges is the chief town.

CHER, a river of France, which gives name to the above department. It rises in the depart- ment of the Crease ; is navigable above Vierzon, and, after watering Tours, falls into the Loire, near Saumur.

CHERAMIS, from xtpapoe, a hollow place, an ancient medical measure, often mentioned by Hippocrates.

CHERASCO, a fortified town and territory of Piedmont, with a

strong citadel, to which the king of Sardinia retired in 1706, during the siege of Turin. The town, which contains seven churches within the walls and three without, is one of the strongest in Piedmont : the district is about nine miles in circuit, and abounds in corn and wine. Inhabitants of the town about 8000. It is seated at the confluence of the Stura and Tanaro, upon a mountain, fourteen miles south-east of Turin.

CHERAWS, a district of South Carolina, about eighty-three miles long, and sixty-three broad. It is bounded on the north and north-east by North Carolina ; on the south-east by George-town district, and on the south-west by Lynch 's Creek, which separates it from Camden. It is divided into three counties, viz. Chester- field, Darlington, and Marlborough. This dis- trict is well watered by the river Great Pedee, and by Jeffrey's, Thomson's neck, Lynch's, and Three Neck Creeks. Grenville and Chatham are the chief towns.

CHERBOURG, a sea-port town of France, in the department of the Channel, and ci-devant province of Normandy. It contains about 14,000 inhabitants, who are employed in building small vessels, and in manufacturing woollen stuffs. It is remarkable for the engagement fought here between the English and French fleets in 1692, when the latter were defeated, and upwards of twenty of their men of war burnt near Cape la Ilogue- The British landed at Cherbourg in Aug. 1758, and took the town, with the ships in the basin, demolished the fortifications, and ruined the other works which had been long carried on for enlarging the harbour, and rendering it more safe and convenient. Immense sums have been expended since 1783, in the erection of piers, deepening and enlarging the harbour, and erect-

ing fortifications. Large conical masses of stone were sunk at one time in the sea, to break the force of the waves. They were, however, thrown down, and the work was abandoned about 1808. Buonaparte constructed at last an artificial har- bour out of the solid ground, capable of hold- ing fifty sail of the line. It is fifty miles north- west of Caen.

CHERBOURG BREAK-WATER. The history of this great undertaking is creditable to the en- terprise and perseverance, if not to the science, of our neighbours, and has become more inter- esting at the present time from our own recent and triumphant efforts of a similar description at Plymouth.

A report was made to the National Assembly in 1791, by M. Curt, in the name of the minis- try of Marine, as to the progress of the work

be- fore the Revolution.

Louis XIV. it appears, had determined, after the misfortunes of La Hogue, to strengthen his frontiers by sea, and commissioned the celebrated M. de Vauban tosurvey the coasts of Normandy, for the purpose of securing all the bays and har- bours in that direction, and suggesting any prac- ticable improvement in them. He reported that tha roadstead of Cherbourg possessed the means alike of protection, of attack, and of defence ; and that it was capable of exerting an important influence also in war, and on the commercial re- lations with the northern powers ; that it was the spot of France on which the head-quarters of the French should be established on the coast of the channel ; and was a central advance post with regard to England. He added moreover, that it might be made a port for the safe retreat of a squadron crippied by storms, or beaten by an enemy, as well as for the reception of a victo- rious fleet with prizes.

The grand Monarque, and his advisers, how- ever, remained divided in their opinions,, be- tween the ad vantages of La Hogue and Cherbourg, and it was not until after the conclusion of the American war, in 1783, that Louis XVI. issued directions to the secretary of state for the marine, to appoint a special commission to consider and report which of these roadsteads combined the most advantages, or was preferable for construct- ing a port and naval arsenal, capable of receiving and equipping from eighty to 100 vessels of war. The commissioners decided, at once, upon Cher- bourg, suggpsting at the same time, the impor- tance of a break-water, which would make it capable not only of admitting a fleet to ride se- curely at anchor, but also of affording protection against a hostile naval force. Cherbourg, it was also observed, was an admirable port for watching Portsmouth. Forts were now there- fore erected at Du Hornet, and on the island of Pelee, to protect the projected works; which were to consist of a range of truncated cones approximating at their bases, and presenting to the sea, as they rose to its surface, alternate ob- stacles and openings ; and thus interrupt and break down the waves. M. de Cessart, the au- thor of this plan, considered that, as these open- ings at the surface would not exceed seventy-two feet, a sufficient barrier would be formed against the passage of a hostile vessel ; and that if ne-

cessary, in time of war. it might be rendered still more secure by

chains of iron thrown across. It was proposed to construct these conical caissons of wood, the number of which to cover a front of 2000 toises would amount to ninety : costing 360,000 livreseach, which would cause a total expense of 32,400,000 livres. This number was afterwards reduced to sixty-four. Every cone was to be 150 feet in diameter at the base, and sixty feet at the top, and from sixty to seventy feet in height ; the depth of water at spring tides, in the line in which they were in- tended to be sunk, varying from about fifty-six to seventy feet. They were proposed to .be sunk without any bottoms in them, by which the upper resistance of the water, acting on a base whose surface was equal to 17,678 square feet, would be avoided. The caissons, floated off by casks, attached to their inner and outer circumference, being towed to the spot where they were destined to be sunk, were then to be filled with stones to the tops, and left for a while to settle; after which the upper part, commencing with the line of low water, was to be built with masonry, laid in pozzolana, and encased with granite stone. The time estimated for completing the work was thirteen years.

*The first cone was floated off and sunk, June 6th, 1784; and the second on the 7th July fol- lowing, in presence of 10,000 spectators ; but before the latter could be filled, as proposed, with stones, a storm, which continued five days of the following month, entirely demolished the upper part of it. The quantity of stones sunk this summer within the cavities of the two cones, outside their basis, and in the intermediate space, was 4600 cubic toises, or about 65,000 tons. Three more cones were completed and sunk in 1785 ; at the end of that year, the total quantity of stone sunk amounted to 17,767 cubic toises, or about 250,000 tons. In 1786 five more cones were completed and sunk ; one of them in the presence of the king; and the quantity of stones thrown within them, and de- posited on the dike connecting the coi.os, amounted, at the end of this year, to 42,862 cubic toises, or 600,000 tons. Next year five
नnore cones were sunk and filled with stones, making, in the whole, fifteen ; and the distance between the first and fifteenth cone was 1203 toises : the quantity of stones deposited within ‘ these cones and the connecting dike, at the end of this year, amounting to 71,585 cubic toises, or more than 1,000,000 tons. But the violent gales of wind, that were frequent in November and December, carried away all the upper parts of the five cones sunk. Three more were sunk in 1788, but the upper parts of the first two were also carried away as the others had been, and the height of the third so reduced, as to be level with low water. In the following year the works were suspended in despair, and the three cones, then building, sold by auction.*

The total quantity of stone sunk from the year 1784 to December 1790, being seven years, amounted it is said to 373,350 cubic toises, or about 5,300,000 tons, and occupied a line of 1950 toises in length. The distance of the first cone from the Island Pelee, on the east, was 510,

and of the eighteenth to Fort Querqueville on the west 1200 toises ; so that of the whole entrance or opening of the roadstead of Cherbourg, which was originally 3660 toises, more than one-half was now imperfectly protected by the break- water.

The entire expense of this undertaking, was never, perhaps, known. M. de Cessart esti- mates the cost of the eighteen cones at 6,231,407 livres, or about ––260,000, and the total expense incurred between the 1st of April, 1783, and the 1st of January 1791, at 21.658,420 livres, or ––900,000 sterling.

In this work were employed 250 carpenters, thirty blacksmiths, 2ˆ)0 hewers of stone, and 200 stone-masons. The quarry and carrying men were estimated at 400 workmen, assisted by 100 horses, thirty drivers, and twenty-four chasse- marees each carrying seven cubic toises, or about ninety-eight tons, with 100 seamen. To the whole establishment were attached 3000 soldiers, as supernumerary hands, and guards of the works.

The Revolution effectually stopped the com- pletion of this mighty undertaking; but between 1791 and 1803 a plan for casing over the whole length of old work, with blocks of stone, was so far carried into effect, that in the latter year, the centre of the dike had been brought above the high water mark : and here weie placed a battery and a small garrison of soldiers, the whole of which were swept away by a heavy sea, oc- casioned by a tremendous gale of wind, in the year 1809. Small spots only of the break-water are now visible above the suriace of the sea at low water of spring tides, and such spots nowhere exceed three feet in height ; the intermediate spaces are from three to fifteen feet below the sur- face ; and, taking the average, the whole dike, from one end to the other, may be about four feet below the surface of low water at the spring tides. But near the middle is about 100 yards of a shapeless mass, where the height rises to eighteen or twenty feet above high water : the greater part is about four feet below the surface at low water : it is sufficiently high, however, to break the force of the waves, and to afford tiie port of Cherbourg secure anchorage, in- some winds, for about forty sail of the largest vessels.

Buonaparte, during the whole of the last war, bestowed great personal attention on the navy of France, and his vast plans were in considerable forwardness at the period of his expedition into Russia. He had resolved to possess a fleet of 200 sail of the line, and Cherbourg formed, in his view, a grand point of security in forming a junction between his two great projected fleets of Brest and Antwerp.

Here he therefore ordered a large dock-yard to be established both for the construction of and for repairing the largest ships of war, and a basin to be dug that should contain fifty or sixty sail of the line; dry-docks and slips for building and repairing were to crown the whole, and make this a. first-rate naval port. The noble basin thus projected was finished in 1813, at an expense, as he is said to have asserted, of ►►3,000,000 British sterling. The wet-dock to communicate with it ho left in progress.

A printed description of this great work, which took ten years in carrying into execution, is con- tained in a letter from M. Pierre-Aime Lair, secretary to the Society of Agriculture and Com- merce of Caen, who was present at the ceremony of opening and consecrating the great basin, in presence of the empress Maria Louisa, the 27th of August 1813.

He describes the basin to be excavated out of a rock of granite, schist, or gneis, the density and hardness of which increased as the workmen descended from the surface. He compares it to an immense trough dug out of a single stone, and capable of containing many millions of cubic feet of water.

- *We now know, however,' says an able writer in the Supplement to the Encyclopaedia Britan- nica, article BREAK-WATER, ' that Mr. Lair is mistaken, that it is not one mass of rock, but rock and gravel mixed, that the whole of the sides are cased with a well-constructed wall of red granite, and that a noble quay, built of the same material and extending between the two forts ofGalet and Hornet, separates the basin and wet-dock from the sea.'*

The dimensions of the new basin are stated by Mr. Lair to be about 900 feet in length by 720 in width, and the average depth fifty-five feet from the edge of the quay ; and, as this edge is five feet above the high water mark of the equi- noctial spring-tides, the depth of water in the basin is then fifty feet, and the mass of water, after making allowance for a slope of the solid sides inward in an angle of forty-five degrees from the height of about twenty-five feet, amounts to about 30,000,000 cubic feet; and is calculated to contain about thirty sail of the line.

‘ We have reason to think that it is considera- bly larger, ‘ says the above writer, or ‘ about 1000 feet by 770 feet, and consequently .contains a surface of about eighteen acres, which, at three per acre, will contain fifty-four sail of the line, and the adjoining wet-dock, when finished, an equal number. The latter is at this time about two-thirds completed, and from 300 to 400 men are employed in blasting the rock and building granite walls. The dike or break-water seems to be abandoned ; the works having long been stopped, and the stone vessels going rapidly to decay. The French officers say, indeed, that it has occasioned the roadstead to become shal- lower, by the deposition of sand that has taken place.”

The canal leading from the harbour into the basin is at right angles to the latter, and its di- rection E. N. E. It is 196 feet 8 inches in width between the two moles in the direction of their axis, 308 feet 8 inches wide at its opening into the basin, and 274 feet long from the axis of the moles or piers to the line of wall forming the side of the basin. The basin is without gates, so that the swell of the road is uniformly felt with- in it.

CHERIBON, SHERIBON, or TCHERIBON, a principality of Java, in the middle of the coast, on the north side of the island. Its productions are timber, coffee, indigo, sugar, and pepper, in all of which it is very fertile. Not far from the

coast is a volcanic mountain which sometime discharges smoke. In the forests theie is a kind of speckled deer, and the rhinoceros is common on the hills. The horses are also esteemed, but small. At present there are four native powers, which divide the principality between them ; but who were voluntarily under the dominion of the British. The population has been estima’ed at 90,000.*

CHERIBON, the capital of the above princi- pality, is situated at the bottom of a bay of that name. It was made a station of some importance by the Dutch, and was well peopled on the arrival of the

British in Java, in 1812, when a pestilen- tial disease depopulated it, and it has never re- covered the calamity. Travelling distance from Batavia 178 miles east.

CHERILUS, of Samos, a Greek poet, who flourished A. A. C. 479. He sung the victory gained by the Athenians over Xerxes, and was rewarded with a piece of gold for every verse. His poem had afterwards the honor of being re- hearsed yearly with the works of Homer.

CHETIISH, v. a. ˆ Fr. cherir, from Lat. CHE'RISHEH, n. s. > chorus. To cheer, nou- CHE'RISHMENT, n, s. 5 rish, shelter; to sup- port; to comfort.

Now it fell so that Fortune list no lenger The highe pride of Nero to cherice .' For that he were strong, yet was she stronger.

Chaucer. The Monkes Tale.

This child that I tell of, Berinus was his name, Was over much cherished, which turned hym into

grame,

As yee shul here afteir when time cometh and spase ; For after swete the soure cometh full oft in many a

plase ;

For as sone as he coud go and also speke, All that he set his ey on, or after list to beke, A noon he shuld it have ; for no man hym wernyd.

Id. Merchant's Second Tale. How manie great ones may remembered be, Which in their daies most famouslie did flourish ; Of whome no vford we heare, nor signe now see, But as things wipt out with a sponge do perishe, Because they living cared not to cherishe No gentle wits, through pride or covetize, Which might their names for ever memorize.

Spenser's Ruines of Time.

One only lives her age's ornament, That with rich bounty, and dear cherishment, Supports the praise of noble poesie.

Id. Tears of the Muses. Whenever Buckingham doth turn his hate Upon your grace, and not with duteous love Doth cherish you and

yours, God punish me With hate in those where I expect most love.

Shakspeare.

Magistrates have always thought themselves con- cerned to cherish religion, and to maintain in the minds of men the belief of a God and another life.

TiUotson.

One of their greatest praises it is to be the main- tainers and cherishers of a regular devotion, a reve- rend worship, a true and decent piety. Spratt.

But still the wretched maid no comfort knows. And with resentment cherishes her woes. Gay.

CHERLERIA, in botany, a genus of the tri- gynia order, and decandria class of plants. Na-

tural order twenty-second, caryophylleae ; CAL. pentaphyllous ; nectaria, five ; bifid, and petal- like; antherae alternately barren : CAPS, trilocular and three-valved, one-celled, and many seeded. Species only one, a native of the Alps.

CHERMES, in entomology, a genus of insects belonging to the order hemiptera. The rostrum is situated on the breast ; the feelers are longer than the thorax ; the four wings are deflected ; the thorax is gibbous ; and the feet are formed for jeaping. There are twenty-four species; and the trivial names are taken from the plants which they frequent. The following are the most remark- able: ××× 1. C. abietis, the fir-tree chermes, as well as several other species, are provided at the extremity of their body with a sharp-pointed im- plement which lies concealed. This they draw out to deposit their eggs, by making a puncture in the plant ; and thus produce that enormous scaly protuberance that is to be found at the summit of the branches of that tree, and which is formed by the extravasation of the juices oc- casioned by the punctures. The young larvas shelter themselves in cells contained in the tumor. 2. C. buxi, the box tree chemies, produces no tubercle ; but its punctures make the leaves of

that tree bend and grow hollow in the shape of a cap, which, by the union of these inflected leaves, produces at the extremity of the branches a kind of knob, in which the larvae of that insect find shelter. The box chermes, as well as some others, has yet another peculiarity, viz. that the larva and its chrysalis eject at the anus, a white sweet-tasted matter, that softens under the touch, and is not unlike manna. This substance is found in small white grains within the balls, formed by the box leaves ; and a string of the same matter is often seen depending from the anus of the insect. 3. C. ficus, one of the lar- gest of the genus, is brown above and greenish beneath. The antennse, likewise brown, are large, hairy, and one-third longer than the thorax. The feet are yellowish, the wings large, twice the length of the abdomen. They are placed so as to form together an acute roof. The membrane of which they consist is thin and very transparent ; but they have brown veins, strongly marked, es- pecially towards the extremity. The rostrum of this species is black, and takes its rise from the lower part of the thorax, between the first and second pair of feet. It is an insect to be met with in great numbers upon the fig-tree.

CHERMITES, or CHERNITES, in ancient natural history, a species of very bright and white marble or alabaster, called afterwards lygdinum.

CHERNIBS, in antiquity, from xfiP> the hand, and VITTTU, to wash, a vessel wherein the people washed their hands, before they went to religious service.

CHEROKEE MOUNTAINS, a name given to a part of the ALLEGA\Y or APPALACHIAN moun- tains. See those articles.

CHEROKEES, a once famous nation of Ame- rican Indians residing on the northern parts of Georgia, and the southern parts of the state of Tennessee. The men are robust, well made, and taller than most other of the American Indians. Their complexion is also brighter. Their women

are slender, delicate, and well formed. They were formerly very powerful, but do not at pre- sent number more than 2000 fighting men.

The Western Gazetteer, or Emigrant's Di- rectory, a modern American publication now before us, speaks of the numbers of this nation as considerably greater than the above. It esti- mates the whole population at 14,500, and the warriors at 4000. They still

own an extensive district, it is stated in this work, chiefly on the south side of the Tennessee river, to the east of the Chickasaw possessions, and extending from the head branches of the Tombigbee to above the Hiwassee east, and south as far as the Es- tenaury. The following extract is from the pen of Mr. J. Meiers, sen, who has long resided in the nation as Indian agent. ‘ In the year 1809, I had a census taken of the number of the Cherokee nation, which amounted to 12,359. The number of males and females were nearly equal ••• they have considerably increased since that period, se that including a colony of Cherokees that went to settle on the river Arkansas, their number is about 14,500 souls ••• those who emigrated to Ar- kansas, as well as those on their ancient grounds, have made considerable advances in acquiring the useful arts, particularly in the manufacture of cotton and woollen cloth. They raise the cotton, and the indigo for dying their yarn ; they are good weavers, and have upwards of 500 looms : most of the looms are made by them- selves ; they have more than 500 ploughs ••• this ereatly increased the tillage of their lands ; they have large stocks of black cattle and horses, swine and some sheep ; they have domesticated poultry in plenty : and, having now an abundance of the necessaries of life, their population pro- portionably increases. By means of some schools, many of their young people read and write. A great part of the men have adopted our modes of dress ; and the females without ex- ception dress in the habits of the “white people. Some of them who are wealthy, are richly dres- sed. They are remarkably clean and neat in their persons : this may be accounted for by their universal practice of bathing in the numerous transparent streams of water which in almost every direction run through their country. Men, women and children, practise bathing, which un- doubtedly contributes to their health. All can swim, and this is often of great convenience, as no river can impede their way in travelling. When the females bathe, they are never exposed : any improper conduct towards them would be held in detestation by all. Since I have been first in that nation, a young white man solicited the hand of a young Cherokee woman. She refused his offer, and objected, as a principal reason, that he was not clean in his appearance, that he did not as the Cherokees do ••• bathe himself in the rivers. Ablution with these people was formerly a religious rite. It is not now viewed by them in this light, but it is nearly allied to a moral virtue.

‘ I have not been an inattentive spectator of these people in various situations ; in their fo- rests, in their houses, in their schools, and in their public councils. The progress of their children in their schools

has been as great as that

of any other children, in acquiring the knowledge of letters and of figures. Nature has given them the finest forms ; and can we presume that God has withheld from them correspondent intellec- tual and mental powers of mind. No man wht> has had public business to transact with them can have a doubt of the capacity of their minds. Their hospitality in their houses is every where acknowledged ; their bravery in the field is also acknowledged by those who actedwith them in the late war against the hostile Creeks. If a statuary should want models for the human figure, he will find the most perfect amongst the southern Indian tribes south of the Ohio river. About one- half of the Cherokee nation are of mixed blood by intermarriages with the white people. Many of these are as white as any of our citizens. There are some of the aboriginal Cherokees, who have never used any particular care to guard their faces from the action of the sun, who have good com- plexions. I have frequently attended at the schools for the instruction of the Indian chil- dren, and seen them by classes go through their exercises. On these occasions, I have seen tears of joy steal down the cheeks of benevolent men, men who rejoice at the diffusion of knowledge amongst this long-lost part of the human race. The Cherokees universally believe in the being of God ; they call him the Great Spirit ; they mention him with reverence ; with them his at- tributes are power and goodness. They never profane the name of God in their own language. They have no series of words that they can com- bine to profane the name of God.'

CHERON (Elizabeth Sophia), a celebrated painter in enamel, which was also her father's profession, was the daughter of Henry Cheron, born at Paris in 1648. Her father early observed her passionate fondness for his art, and for de- sign and coloring generally. She soon acquired great reputation by her performances ; particu- larly in her portraits, which, independently of their striking resemblance, were elegantly dis- posed and well-colored, and finished ; she also painted in history ; employed herself much in drawing from the antique, and excelled in copy- ing the figures on gems. Receiving early im- pressions in favor of the Catholic religion from her mother, at a mature age, she abjured her father's profession of Calvinism,

and thus facili- tated in 1676 her admission into the Academy of Painting. Her genius was considerable in music and poetry, as well as painting ; and many of her compositions in verse were esteem- ed by Rousseau. Her eminence in the fine arts obtained for her also a seat in the Academy of Ricovrati at Padua; and as she played well on the lute, and had occasional concerts, her house was frequented by many distinguished persons of taste. She married, at the age of sixty, M. Le Hay, engineer to the king, and soon after, viz. in 1711, died at Paris, aged sixty-three. There are a series of gems engraved partly from her own designs, but mostly from the antique ; of these, three were etched by heisetf, viz. Bac- chus and Ariadn-e, Mars and Venus, and Night scattering her poppies. She also engraved a Descent from the Cross, and a Drawing-book, folio consisting of thirty-six prints.

CHERON (Louis), the youngest brother of 'he foregoing, was born at Paris in 1660; and hav- ing acquired the first principles of painting in his own country, was enabled by the liberality of his sister to visit Italy, where he' remained eighteen years. His models were the works of Raphael and Julio Romano ; but though he drew correctly, and composed with facility, he never attained the grace of the Italian masters ; his heads frequently having a ferocious air. He was obliged to leave France as a Protestant, and, in 1695, sought a refuge in England, where he found a patron in the duke of Montague. Che- ron was a man of enlarged ideas and correct morals ; so that he refused, it is said, to paint for a nobleman a licentious subject. He died at London in 1713.

CHERON JEA, in ancient geography, a town of Greece, in Bceotia, on the confines of Leba- daea, formerly called Arne. On the plains of this neighbourhood are two trophies, which are said to have been erected by the Romans and Sylla, in commemoration of a victory obtained over the army of Mithridates. The Thebans who perished in their contest against Philip, were buried near Cheronsea, and over their tomb was placed a lion. The divinity of the Cheron- asans was the sceptre which Vulcan made for Jupiter, called 'the lance:' from Jupiter it was transferred to Mercury, and at length it descend- ed to Agamemnon, and is celebrated by Homer. CHE'RRY, n. s. & adj.~\ Klpa□□roc ; Lat. ce- CHE'RRY-STOHE, n. s. ˆ rasus ; Fr. cerise. A CHE'RRY-TREE, n. 5. i fruit said to be CHE'RRY-CHEEKED, adj. J brought from Cera- sus to Rome by Lucullus. It is of various spe- cies. The adjectives are used figuratively, to describe any thing that bears a resemblance to the cherry.

Her goodly eyes lyke saphyres shining bright, Her forehead yvory white,

Her cheekes lyke apples which the sun hath rudded, Her lips lyke cherries charming men to byte.

Spenser.

So her with flattering words he first assaid ; And after pleasing gifts for her purvaid, Queene-apples and red clienies from the tree, With which he her allured and betraid To tell what time he might her lady see When she herselfe did bathe, that he might secret be.

Id.

Shore's wife hath a pretty foot A clterry lip, a passing pleasing tongue.

Shakspcare.

Some ask but a pin, a nut, a cherry-stone ; but she, more covetous, would have a chain. Id.

July I would have drawn in a jacket of light yel- low, eating cherries, with his face and bosom sun- burnt. Peacliam. I warrant them cherry-cheeked country girls.

Cvngreve.

When to the brethren first, with fervent zeal, The Spirit moved thy yearnings to reveal, How did I joy thy trembling lips to see, Red as the cherry from the Kentish tree ! Guy . CHERRY, BARBADOES. See MALPIGHI. CHERRY, BIRD. See PRUNUS. CHERRY, CORNELIAN. See CORNUS. CHERRY, DWARF. See LONICEUA. CUERRY, HOTTENTOT. See CASSINE.

CHETISONESUS.

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CHERRY, LAUREL. See PRUNUS.

CHERRY OF THE ALPS. See LONICERA.

CHE'RRYPIT, n. s. From cherry and pit. A child's play, in which they throw cherry- stones into a small hole.

What, man ! 'tis not for gravity to play at cherry- pit. Shukspeure.

CHERRY TREE See PRUNUS.

CHERRY, WINTER. See PHYSALIS and So-

LANUM.

CHERSO, a considerable island in the Gulph of Venice, near Croatia. The air is good, but the soil stony; however it abounds in wine, cattle, oil, and excellent honey. Another island, Osero, is so near as frequently to be considered and described with it. A narrow channel only, over which is a bridge, separates them ; and to- gether they are about sixty miles long. Popula- tion about 10,000. The chief towns are Cherso, Lussin Great and Little, and Osero.

CHERSON, a town and government of Euro- pean Russia, on the north bank of the Dnieper, ten miles below the mouth of the Ingulec. The church and many of the houses are built in ele- gant taste. The empress Catharine II. intended it as the chief mart for all commodities exported and imported from the Euxine. It has a dock for large vessels, from which several men of war and merchant ships have been launched. It is supplied with fuel by reeds only, of which there. is an inexhaustible forest in the shallows of the Dnieper, opposite to the town. Rails and tem- porary houses are made of them, as they are tall and strong. They also afford shelter to various kinds of aquatic birds, some of which are very beautiful. In 1787 the late empress made a tri- umphant journey to this capital, where she met the emperor Joseph II. Her intention, it is said, was to have been crowned queen of Taurica, and empress of the east. But she was obliged to rest contented with inscribing over one of the principal gates of this city, ‘ Through this gate lies the road to Byzantium.’ In this city, the celebrated Mr. Howard fell a victim to fever in 1790; and prince Potemkin, the great projector of the erections here, lies buried in the great church. Cherson is fifty miles east of Ockzacow. Population about 10,000

CHERSONESUS, from xtpffoc, land, and v□□;

CHERSONESUS AUREA, the Golden Chersonese, in ancient geography, a peninsula described by Ptolemy as stretching directly from north to south, and having at its southern extremity Sa- bana Emporium, the latitude of which he fixes at three degrees beyond the line. To the east he places what he calls the Sinus Magnus, or great bay : and in the most remote part of it the station Catigara, the utmost boundary of naviga- fion in ancient times. To this he affixes 8□□□□ of southern latitude.

Beyond this latitude he declares the earth to he altogether unknown,

and asserts that the land turns thence to the westward, and stretches in

tnat direction till it joina the promontory of Prassum in Ethiopia, which terminated in his system, the continent of Africa. M. D'Anville assigns to the present peninsula of Malacca the position of the Golden Chersonesus of Pto- lemy ; but, instead of the direction which he has given it, we know that it bends some degrees towards the east, and that Cape Romania, its southern extremity, is more than a degree to the north of the line. This geographer considers the gulf of Siam as the great bay of Ptolemy ; but the position on the east side of that bay, corre- sponding to Catigara, is actually as many de- grees to the north of the equator as Ptolemy sup- posed it to be to the south of the line. Major Rennell has given the sanction of his approbation (Introd. p. 39.) to the geographical ideas of M. D'Anville, and they have been generally adopted. But M. Gosselin, in ' The Geography of the Greeks analysed, &c.' differs from M. D'Anville, with respect to many of his determinations. Ac- cording to this writer, the Magnum Promonto- rium, which D'Anville concludes to be Cape Romania, is the point of Bragu, near to which he places Zaba, supposed by D'Anville to be situated on the strait of Sincapura or Malacca. The Magnus Sinus of Ptolemy he maintains to be the same with the gulf of Martaban, and not the gulf of Siam ; and the position of Catigara corresponds, as he attempts to prove, to that of Mergui, a considerable port on the west coast of Siam. Thinse, or Sinae Metropolis, which M. D'Anville removes as far as Sin-hoa in the king- dom of Cochin-China, is situated, according to M. Gosselin, on the same river with Mergui. and now bears the name of Tana-serim. The Ibadii insula of Ptolemy, which M. D'Anville determines to be Sumatra, is, by Gosselin's ar- rangement, one of that cluster of small isles which lie off this part of the coast of Siam. Gosselin further contends, that the ancients never sailed through the straits of Malacca, had no knowledge of Sumatra, and were altogether un- acquainted with the eastern ocean. With regard to the Golden Chersonese of Ptolemy in parti- cular, he observes that what chiefly characterises it is the mouth of a large river, which there di- vides itself into three branches before it joins the sea. These channels appear so considerable that each of them bore the name of a river, the Chrysoana, the Palandar, and the Attabas. It does not appear that Ptolemy knew the source of this river, or that he had any knowledge of the interior of this country, as he does not deter- mine the position of any place. ' Without de- tailing the other arguments of this writer, we may observe,' says an able contemporary, ' that upon comparing Ptolemy's map with that of the country, there seems little

reason to doubt that the Golden Chersonese is the southern part of the kingdom of Pegu, which may be considered as insulated. In the southern part of the Ma- layan peninsula, which has hitherto been regarded as the Golden Chersonese, the river Johr is so small a stream, that it could never have supplied the three important mouths noted by Ptolemy; and his delineation of the country of the Sinae, stretching along a western sea, palpably corre- sponds with Tana-serim ; while M. D'Anville's

map so much contradicts that of Ptolemy as to place the sea on the east of the Sinae, and pro- ceeding towards the north instead of the south. Moreover, the rivers laid down by Ptolemy, be- tween the mouths of the Ganges, and the Delta of the Golden Chersonese, amount to five ; of which three appear in our maps, but we are ig- norant of the southern part of Arracan, which probably contains the other two. The three chief mouths of the Irrawaddy, in the map of Mr. Dairymple, sensibly correspond, even in the form and manner of division, with those in the Golden Chersonese of Ptolemy ; and the bay to the south of Dalla seems to be the Perimulicus Sinus of the Greek geographer, the small river to the east of which is that of Sirian or Pegu. If the Malayan peninsula had been the Golden Chersonese of the ancients, the ancient geogra- pher could not have been wholly ignorant, as he seems to have been, of the straits of Malacca and of the northern part of the great island of Sumatra.'

CHERSONESUS CIMBRICA, the modern Jutland, a peninsula of Europe to the north of Germany, supposed to have derived its appellation from the Cimbri who came from thence. It is bounded by the river Elbe on the south, by the German Ocean on the west, and by the Baltic Sea on the north and east; and hence the Cimbri came into Britain. When the Britons formed the fatal resolution of calling in foreign auxiliaries to preserve them from that destruction with which they were threatened by the Scots and Picts, they could find none besides the inhabitants of this country, who were likely to afford them ne- cessary succour and protection ; for their nearer neighbours and natural allies, the Gauls, who spoke the same language, and professed the same religion with themselves, were in no condition to give them any assistance ; having been invaded, and almost conquered, by the Franks, another German nation. This country was at that time inhabited by three nations, which were called Saxons, Angles, and Jutes ; who all sent armies to, and obtained settlements,

in Britain. The Danes and Normans afterwards mingled with them in great numbers. See ANGLES, JUTES, and SAXONS.

CHERSONESUS MAGNUS, a port of Africa, in Marmarica, near Phthia. Scylax plaoes it op- posite to the isle of Crete. The great Cherson- esus of Ptolemy is supposed by some to be the present Cape Raccallino in the kingdom of Barca : so called because it forms a peninsula. M. D'Anville places it on the coast north-west of Marmarica, at some distance south-east from the promontory Drepanum.

CHERSONESUS PARVA, a port or castle of Egypt, mentioned by Ptolemy and Strabo ; the latter says it was situated on a part of the coast which formed a small promontory, at the dis- tance of seventy stadia south-west from Alex- andria.

CHERSOTJESUS TAURICA, now the CRIMEA, a large peninsula of ancient Europe, lying be- tween the Euxine Sea, the Palus Maeotis, and the Bosphorus Cimmerius j extending, accord- ing to Sir John Chard in, sixty-one leagues from east to west, and about thirty-five from north to

south ; and joined to the continent by a narrow isthmus about a mile broad. In remote times it was governed by its own sovereigns. Its most ancient inhabitants were the Tauri, or Tauro- scythae, as Pliny and Ptolemy call them, and from them it derives its appellation. The my- thologists refer to these times the first voyage of the Greeks into Taurica. In process of time, that people certainly traded here and founded cities. Mithridates, king of Pontus, possessed the peninsula; and, it is said, drew from it annually a tribute of 220,000 measures of grain, and 200,000 talents in silver. It was conquered by the Romans, and given by them to the kings of .Bosphorus. Some of the eastern tribes of Asia, known to us by the name of Huns, esta- blished themselves here, and many of them re- mained till the time of the emperor Julian. It afterwards passed to the princes of the family of Jenghis khan. The cities of note were Taphrte or Taphrus on the isthmus, where Przekop or Precop now stands ; Chersonesus, or Cherson ; Theodosia, afterwards called CafTa, but now known by its ancient name ; Nymphseum, Lag- yra, and Charax, seated on the Euxine Sea, and Panticapaeum on the Bosphorus. See CRIMEA.
CHERSONESUS THRACI.E, or the Chersonesus of Thrace, was a peninsula enclosed on the south by the TEgean sea, on the west by the gulf of Melas, and on the east by the Hellespont, and joined on the north to the continent by a neck of land, about thirty-seven furlongs broad. In former times it was separated from the continent

by a wall, called in Greek ‘ Macrontichos.’ The isthmus, connecting with the continent, was, ac- cording to Herodotus, thirty-six stadia; according to Strabo, 400. The length of the isthmus, says Herodotus, was 480 stadia ; but Scylax says that it was 400. It contained the following cities, viz. Cardca, Agora, Panormus, Alopei .onresus, Elaeus, Scstus, Madytos, Cissa, Callipolis, Lysi- raachia, and Pactye. The Athenians held for some time- possession of this peninsula. By Cornelius Nepos, it is said, that at the counsel of the oracle of Delphos, they sent hither Miltiades, the son of Cimon, at the head of a colony. Herodotus tells us that the Dolonces, a people of Thrace, had possession of this peninsula ; but, having carried on an unfavorable war with the Absinthians, they sent to consult the oracle. The Pythian recommended their obtaining a colony under the conduct of the first person who offered them an asylum. Accordingly, having sent de- puties to Athens, where Pisistratus reigned, they were hospitably treated by Miltiades, the son of Cypselus, a rich and powerful man in that city. Upon their being thus kindly treated, they in- formed him what was the opinion of the oracle which they had consulted. Upon this, Miltiades engaged a number of the Athenians to accompany him to the Chersonesus, and the Dolonces im- mediately invested him with the sovereign power. He began his reign with erecting the wall which separated this country from the continent. At his death, he bequeathed the sovereignty to his nephew Stesagoras, who was assassinated ; and when this disastrous event occurred, the Pisistra- tides sent ,Miltiades, the son of Cimon, anˆ .brother of Stesagoras, to take possession of th.-

government of the Chersonesus. At length the Athenians lost this peninsula ; and under the kings of Macedon, after Alexander, it belonged to Thrace.

CHERT, or CHERTZ, n. s. From Germ. ouartz. A kind of flint.

Flint is most commonly found in form of rodules ; hut it is sometimes found in thin strata?, when it is called chert. Woodward.

Grind with strong arm the circling cherts betwixt, Your pure kaolins and petuntses mixed. Darwin. CHERT, PETROSILEX, lapis corneus, or the hornstein of the Germans, is classed by Cronstadt among the

silicious earths. See MINERALOGY, index, and PETROSILEX.

CHERTSEY, or CHERTZEY, a market town of Surrey, about seven miles west from Kingston upon Thames; and nineteen west by south of London. This is supposed to be the place where Caesar led his troops first over the Thames, and here is now a fine bridge of freestone thrown across the river. The town is governed by a bailiff, appointed by letters patent from the ex- chequer. The principal articles manufactured are malt, iron hoops, and brooms. The hundred of Chertsey is exempted from the jurisdiction of the high sheriff. The market on Wednesday is well supplied with corn, poultry, butchers'- meat, &c. Here is a commodious workhouse, an excellent charity-school, and five alms houses. The porch-house at Chertsey was the place where the poet Cowley ended his days.

CHE'RUB, n. s. ~) For the substantive, see CHERU'BICK, adj. > below. The adjectives sig- CHE'RUBIM, adj. j nify angelic or angelical, or relating to the cherubim.

Heavens cherubim, horsed Upon the sightless coursers of the air, Shall blow the horrid deed in every eye, That tears shall drown the wind. Shakspeare.

This fell whore of thine

Hath in her more destruction than thy sword, For all her cherubim look. Id.

Thy words

Attentive, and with more delighted ear, Divine instructor ! I have heard, than when Clierubick songs by night from neighbouring hills

(rial musick send. Milton's Paradise Lost.

When heaven, and angels, eartli and earthly things Do leave the guilty in their guiltiness ••• A cherub's voice doth whisper in a child's, There is a shrine within thy little heart, Where I will hide, nor hear the trump of doom.

Maturin's Bertram.

CHERUB, a celestial spirit, which by some in- genious writers is placed in the heavenly hierar- chy, next in order to the seraphim. All the several descriptions which the Scripture gives us of the cherubim differ from one another; as they are described in the shapes of men,

eagles, oxen, lions, and in a composition ‘ of all these figures put together. The hieroglyphical repre- sentations, in the embroidery upon the curtains of the Tabernacle, were called by Moses, Exod. xxvi.], cherubim of cunning work.

CHRRUB, in Hebrew, is sometimes taken for a calf or ox. Ezekiel describes the face of a cherub as resembling the face of an ox. The \ord in Svriac and Chaldee, signifies to till or

plough, which is the proper work of oxen. Bailey translates it fulness of knowledge. Grotius says that the cherubim were figures like that of a calf. Bochart thinks they were more like that of an ox, and Spenser is of the same opinion. Clement of Alexandria believes, that the Egyptians imi- tated the cherubim of the Hebrews in the repre- sentations of their sphinxes and hieroglyphical animals. The late learned Mr. Hutchinson be- stowed much labor to illustrate the symbolical meaning of the cherubim; which, however va- ried in their appearance, he considered as point- ing forth the Trinity in connexion with the human nature. See Parkhurst’s Lexicon, under

313.

CHE’RVIL, n. s. Lat chcerophyllum. An umbelliferous plant. ??? Miller.

CHERVIL, GARDEN. See SCANDIX.

CHERVIL, WILD. See CHˆROPHYLLUM.

CHE’RUP, v. n. From cheer; perhaps from cheer up, corrupted to cherup. To chirp ; to use a cheerful voice.

The birds

Frame to thy song their cheerful cheruping ;

Or hold their peace for shame of thy sweet lays.

Spenser.

CHESAPEAKE BAY, an extensive estuary in North America, and one of the largest and safest in the world. It reaches from 37?? 10′ to 39?? 30′ N. lat., and from 76?? to 76?? 45′ W. long, at its broadest part. It is about twelve miles broad at the entrance, which is nearly E. N.E. and S.S.W., between Cape Charles on the north and Cape Henry on the south. A sand-bank nearly closes the entrance,

leaving only a passage for the smallest vessels on the side of Cape Charles ; but on that of Cape Henry it is broad enough and sufficiently deep for ships of the largest size. The general breadth of the bay varies from six to twenty miles, its extent is about 270, and its average depth about nine fathoms. On the east- ern side it has many fertile islands, and a few solitary ones on the western shore. It is remark- able, as forming the mouth of several large and navigable rivers; as the Susquehannah, Potomac, Rappahannock, York, and James, besides other streams of minor importance. There are many excellent fisheries in this bay, particularly of herrings and shad ; several thousand barrels being annually cured at Potomac and Susquehannali rivers, for inland trade and exportation. It always abounds with excellent oysters and crabs. An incredible number of ducks, swans, and other fowl, frequent this bay ; but it is more particularly remarkable for a species of wild duck, called canvas-back, admired for the rich- ness and delicacy of its flesh, which is entirely free from any fishy flavour. It extends through part of Virginia and the greater part of Mary- land, and is of the utmost advantage in a com- mercial view, as it forms the access by water to a number of towns, the most considerable of which are Baltimore and Annapolis, and to which the ships can approach even to the very doors to take in goods.

CHESAPEAKE AND ALBEMARLE CANAL, partly in Virginia and partly in North Carolina, con- nects Chesapeake Bay with Albemarle Sound.

CITESELDEN (Wi'liam), an eminent anato- mist and surgeon, born at Burrow on the Hill, in Leicestershire, and decended from an ancient family in Rutlandshire. He received the rudi- ments of his professional education at Leicester ; and married Miss Deborah Knight, by whom he had one daughter. In 1713 he published his Anatomy of the Human Body, in one volume 8vo ; and in 1723 A Treatise on the High Ope- ration for the btone. He contributed by his writings to raise his profession to its present emi- nence. His great work entitled Osteographia was published in 1733, and it contains the most accurate delineations of the human bones in existence. In February 1737 Mr. Cheselden was appointed surgeon to Chelsea Hospital. He died at Bath, April llth, 1752.

CHESHAM, a market town of Bucks, on the borders of Hertfordshire,

twelve miles south-east of Aylesbury, and twenty-seven west by north of London. It stands in a fertile vale, and consists of three streets. The principal manufacture is lace, and wooden ware. Besides the church, in the middle of the town, there are four meeting- houses, and a charity-school. Market on Wed- nesday, chiefly for corn.

CHESHIRE, a county of England, separated on the north from Lancashire by the river Mersey, and bordering alittle or, Yorkshire to the north-east. On the east it is bounded by Derbyshire and Staffordshire, on the south by Shropshire and part of Flintshire, on the west by Denbighshire and another part of Flintshire, from which it is separated by the river Dee ; while the north-west part of the county, formed into a peninsula about thirteen miles long and six broad, by the waters of the Mersey and the Dee, touches upon the Irish Sea. It is thirty-one miles broad from north to south, and forty-two in length from east to west, exclusive of the peninsula and a narrow strip of land running up to Yorkshire, between Derbyshire and Lancashire. It contains about 1200 square miles, or nearly 700,000 acres, cul- tivated in greater proportion than most other counties in England; the wasteland forming not more than about l-25th part. It is a county pa- latine, having a chief justice of its own, and is divided into seven hundreds, containing eighty- six parishes, one city (Chester), twelve consider- able market towns, viz. Altrincham, or Altring- ham, Congleton, Frodsham, Knutsford, Maccles- field, Malpas, Middlewich, Nantwich, Northwich, Sandbach and Stockport, besides two of less note, Halton and Great Neston. By the latest surveys it has been said to contain 670 villages, 458 townships, and in 1831, 335,000 inhabitants, of whom three-fifths are employed in trade and manufactures, and the rest in agriculture.

The soil is generally rich, composed of a mix- ture of sand and clay ; towards Yorkshire, and in a few other places, the surface consists of peat moss ; in the greater part of the forest of Dela- mere a barren white sand, or gravel, forms the predominant soil. This county is not generally well wooded, though it has some extensive forests, parks, and coppices ; oak timber princi- pally abounds, from the best to the most inferior Duality in Dunham park, near Altrincham,

there are some remarkably large old oaks, while the finest beech trees are found near Alderley.

Cheshire is generally flat; there is a moun- tainous range on the east, connected with York- shire and Derbyshire, and the country is rather elevated in the district of Delamere forest and to the south of Altrincham ; there is also a bold promontory jutting out on the

Mersey near Frodsham ; but four-fifths of the whole county scarcely rise more than from 100 to 200 feet above the level of the sea. The principal rivers that water this county are the Dee, the Weever, and the Mersey, though the latter, as it forms the northern boundary- seems equally to belong to Lancashire. The source of the Dee is in Wales, and, flowing between Denbighshire and Flint- shire, it runs along the edge of the county to within five miles of Chester, when it assumes a north-east and north course, till, just on the east side of that city, it flows west and south-west, surrounding it almost like a horse-shoe. It then bends a little to the north through Flintshire, and, forming an estuary about five miles broad and ten long, it falls into the sea below Parkgate. The Mersey, in its principal branch, appears to rise in Yorkshire, from which it just skiits Lan- cashire; passing by Stockport, and receiving several small streams in its course, it forms the northern boundary, until, below Runcorn, it widens into an estuary longer than that of the Dee, though not so wide, and empties itself into the Irish Sea near Liverpool. The Weever or Weaver rises in the south of Cheshire, and flow- ing due north passes by the towns of Nantwich and Northwich, whence it takes a westerly direc- tion and falls into the estuary of the Mersey below Runcorn. This county is also intersected by the waters of the Dane, the Tame, and other smaller streams, which fall into the larger rivers in different directions. Besides these there are two large canals, one reaching across the county from Staffordshire to Runcorn, pursuing a course of about thirty miles, and, after having passed through a tunnel of 1241 yards long at Preston- on-the-hill, another at Saltersfield 350 yards long, and a third near that place of 572 yards, it joins the Mersey at Runcorn ; the other, more to the south, forms a junction between the waters of the Weever and Dee, and opens a communication between Nantwich and Chester There are also several small lakes.

Cheshire produces coal in considerable quan- tities in the north-eastern parts and in the hundred of Wirral, where there is a colliery reaching a mile and three quarters under the Dee. Copper, lead, and cobalt, are also found, but not in great abundance. The rock salt and salt springs, as they form a great part of the trade of the middle districts, deserve more particular notice. There is some reason to believe that the springs were known to the ancient Britons, but the rock salt was discovered so recently as the year 1670. The former are found at depths varying from twenty to forty yards, in the valley that is watered by the rivers Weever and Wheelock; those near the hamlet of that nntne are sixty yards deep; the strongest are found near Ander- ton. The brine is raised by a steam engine, aud

conveyed through long troughs to the pits; it is then extracted by heating it in iron pans, from twenty to thirty feet square, and about fifteen inches deep, a scum rises to the top when it boils which is taken off, and the heat of the liquor re- duced : having made ihe steam evaporate as quickly as possible, the salt collects in crystals, forming a crust on the surface, which, sinking to the bottom, is removed once or twice every twenty- four hours. The rock salt is found in different strata from twenty-eight to forly-eight yards deep, the first from fifteen to twenty-one yards thick, very hard, and brown, then an immense bed of stone, and afterwards another stratum of salt five or six yards thick, much purer, and as clear as crystal; in some places a third bed is found. It is very hard, and it is sometimes necessary to blast it with gunpowder. The most extensive pit now worked is in the township of Witton, containing an area of nearly two acres, and more than 300 feet deep. It is reckoned that not less than 100,000 tons of salt are annually made in this county, and more than 300 barges employed in conveying it down the Mersey to Liverpool, where it is re-shipped or kept for refining. The duty on this article was formerly very great, and the precautions to prevent the evasion of it ama- zingly strict; but it has now been reduced so much that salt is sold at not more than one-sixth of the price it once brought.

Another great article of trade, in Cheshire, is cheese. It is indeed mostly a dairy county, the arable land not being extensive or very produc- tive. The dairies are found wherever there is a clayey soil, ‘and nearly 11,500 tons of cheese are annually made, of which quantity almost one- half is exported. Excellent potatoes are pro- duced near Frodsham and Altrincham, and in great abundance.

This county shares a little in the cotton manu- factory with Lancashire, especially in those parts that are contiguous ; at Stockport, particularly, there are several very large mills. At Maccles- field andCongleton there are extensive silk Tnills; at Chester there are large works for white and red lead, and some gunpowder is made at Thel- wall. Tanning also is carried on very largely in the middle and lower parts.

The number of inhabitants we have stated; in 1815 the poor rates

paid in this county amounted to more than ►►125,000. The female population generally exceeds that of the male in the proportion of twenty-three to twenty-two.

Cheshire, previously to the arrival of the Ro- mans, was inhabited by the Cornavii, or Carnabii, and it continued to bear their name, the origin of which is altogether uncertain, until the decline of the Roman empire; for some of the troops of these people settled under the latter emperors, and, as they were a martial people, the Romans always kept strong garrisons in their territories, to keep them in awe. This county was in- cluded in the Roman division Flavia Caesariensis; when that people finally departed, it reverted to the Britons, who kept possession of it till about the year 607, when' it was conquered by Ethel- frith king of Bernicia, who defeated Brochmael Yscithroc near Chester. The Mercians after- wards conquered and held it about 200 year;*

when the Danes got possession of it, but held it only a few years, for king Alfred, A. D. 877, conquered them and made Cheshire a province of the West Saxon kingdom, appointing Ethel- dred duke or governor. The family of Etheldred held their dignity for six generations, when Ca- nute the Dane dispossessed them, and committed the government to the earls of Chester, three only of whom enjoyed it, as, in consequence of Wil- liam the Conqueror and his Normans subduing England, the Saxon nobility ended. William erected the county into a palatinate, and gave it to his nephew Hugh Lupus, to whom he granted the same authority in it that he himself held in the rest of the kingdom. This power continued in the family of Lupus until the reign of Henry III., when the seventh earl of the Norman line dying without issue, Hemy took the earldom into his own hands, and bestowed it on his son, who did not take the title, but conferred it on Edward of Caernarvon, his son ; and ever since the eldest sons of the kings of England have always been earls of Chester. The unbounded power of the palatinates was at last reduced by Henry VIII. All cases of crimes, however, ex- cept error, foreign pleas and foreign voucher, and high treason, are still determined within the shire. Cheshire sends six members to parliament, two for the city and four for the county.

CHESIL BANK, a remarkable bank of pebbles, extending on the coast of the county of Dorset, from the isle of Portland to the mainland at Abbotsbury, about seventeen miles in length, and HI some places nearly a quarter of a mile in breadth. It is one of the largest ridges of peb- bles known. The stones are of the size of an egg, or larger, near Portland, and gradually di- minish towards Abbotsbury, to the size

of large shot.

CHESNE (Andrew Du), styled the father of French history, was born in 1584. He wrote, ††† 1. A History of the Popes. 2. A History of England. 3. An Enquiry into the Antiquities of the Towns of France. 4. A History of the Car- dinals. 5. A Bibliotheca of the Authors who have written the History and Topography of France, &c. He was crushed to death by a cart, in going from Paris to his country house at Ver- riere, in 1640.

CHE'SLIP, n. s. A small vermin, that lies under stones or tiles.

CHESTNUT. SeeFAGus

CHESS, n. s. \ Sans, and Hind, clia

CHESS-BOARD, n. s. tturanga, the four bodies; CHESS-MAN, n. s. †† Arab, and Pers. sha- CHESS-PLAYER, n. s. 3 trang ; Ital. scucco ; Fr. echecs. Mr. Thomson observes of the appella- tion of this intricate game, that in Europe it seems to have been confounded with Arabic shekh, Pers shaft, Span, xeque, a king, a chief, because the issue of the game depends on a piece so called in the East.

*At chesse with me she gan to play ; With hire false draughtes ful divers, She state on me and toke my fees ; * * ††*

Therewith Fortune ysayd : chcke here

Ani ' mute,' iu 'he myd poyut of the chcckcrc5

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CHESS.

With a paune errant. Alas !

Ful craftyer to play she was

Than Athalus, that made the game,

First of the chesse ; so was his name.

Chaucer's Bake of the Duchesse.

William the Conqueror, in his younger yeares, playing at chesse with the prince of France (Dauphine was not annexed to that crown in those dayes), losing a mate, knocked the chess-board about his pate,

which was a cause afterward of much enmity between them. Burton. Anat. Mel.

CHESS, an ingenious and ˆscientific game? played in Europe by two persons, on a square board, containing sixty-four rectangular chequers, alternately black and white. It is not in the slightest degree dependent on chance, and there is, perhaps, no game of such high antiquity, and such general practice ; it being not confined to Europe only, but being played in every part of Asia, although with several important variations. That this game is of oriental origin there can be no doubt ; but the honor of the invention has long been a subject of dispute among several eastern nations. Sir William Jones, in a la- borious treatise on this subject, adjudges the pre- ference decidedly to Hindostan; the rules of chess being mentioned in their oldest law books, and it having boen a common game in that country time immemorial. It is there called chaturaj'i (the four kings) being played with four sets of men, and is said to have been the invention of Ravau, king of Ceylon, in order to amuse himself with a representation of a cam- paign, when his metropolis was closely besieged by Rama, about the year of the world 1500. The honorable Mr. Daines Barrington, in a paper published in the Archaeologia, and Mr. Eyles Irwin, in a letter to the Irish Academy, 1793, advocate the opinion that China was the nation that first produced this game : in support of which proposition Mr. Irwin brings for- ward the M. S. of a Chinese mandarin, giving an account of the invention by Hansing, a general of that country, in order to amuse and quiet his troops, who were unruly in their winter quarters. But as this is dated the 379th year after Confucius, about 172 years before Christ, the Brahmin account has at all events the pri- ority. But, as the common European method of playing will be probably most interesting to our readers, we shall first endeavour to give a sketch of that game, and then proceed to notice the Hindu, Chinese, and Persian methods ; these being the principal varieties, although caprice has at dif- ferent times adopted several minor distinctions.

THE EUROPEAN GAME. ××× Each player has sixteen men, which are colored black and white, red and white, or other differing colors, for the sake of distinction, and ranged at opposite ends on the first two lines of the board, which is placed with the white corner to the right hand. Of the pieces eight, are termed dignified, and have the power of retrograding ; these are the king, the queen, two bishops, two knights, and two rooks or castles ; the other eight can never retreat, and are called pawns. In order to place the men rightly on the board, let the white, red, or dark queen be set on her own color, in the first line, on the fourth square from the corner :

the king next her, in the fourth square from the opposite corner : the bishops one on each side of the king and queen : the knights one on each side, next the bishops ; and the rooks next the knights, in the corner squares of the board. The eight pawns are to be set on the eight squares of the second line. The rook on the king's side is called the king's rook, that on the queen's side the queen's rook, and the same with the bishops and knights. Each pawn also takes its name from the piece before which it is placed, as the pawn in front of the king's bishop is called the king's bishop's pawn.

The KING, the Hindu Raja or Meng, the Chinese Choohong (generalissimo), and the Per- sian Shah, is the leader of the board, and from the principles of the game is invaluable, though, for the purposes of attack and defence, supposing the pawn to be worth two, he is worth but six and a half proportionally. He can move in all directions, but only one square at a time, except in castling or closetting, as it is called, which can be effected only once in the game. It is done in a single move, by leaping the king and rook, either on his own side or that of the queen, one over the other, and placing them in any of the intermediate squares, including their own. But the king cannot castle if any other piece or pawn be between himself and the rook, or if any of the squares over which he has to leap be covered or guarded by an adverse piece, nor if either he or the rook have made any move before. It is in general better to make this move on the king's side rather than the queen's, as by that means the adversary will not have so many dis- engaged pawns to attack the position. This move, however, can never be made to cover an actual check. The king can take any piece in a square next himself, which he performs by moving the piece off the board and putting himself in its place. But he may not approach the opposite king by one square, nor move into any position where he could, if a common piece, be taken. When the adverse king is placed immediately under attack by any piece or pawn, the player is to give him notice of it, by saying ' check,' schack (king) by which he is warned to defend himself, either by removing out of check or by covering himself with one of his own pieces, or by taking that which assaults him : if he can do neither of these he is check mated, schack maat, (the king is weary) and loses the game.

The QUEEN, the Hindu mantri (prime minister), the Chinese sou, and the Persian ferz (vizier), is the second piece, and its proportional value is 23|. The queen can move all over the board (if the road is open) in the same directions as the king, thus combining the moves of bishop and rook. She takes in the same manner as she moves, and, when she is in danger, it is customary among most players to call

check, leaving the option of moving or not with the other player.

The BISHOP, the Hindu Hasli, or Chein (elephant), the Chinese Tehong, and the Persian Fil Pil, is valued at 9|. This piece moves and takes obliquely, always on the squares of the same color, as that on which it first stood, and is not limited to any number of squares if the: road is open.

CHESS.

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The KNIGHT, the Hindu Aswa (horse), the Chinese Mai, and Persian Asp, is valued at about the proportion of 10. The move of the knight is quite distinct, and peculiar to himself, leaping over any of the other pieces, whether his own or the adversary's, in an oblique manner, from black to white, and from white to black, going, as it were, two squares, one as the rook, and the other as the bishop, or the first as the bishop, and the other as the rook. The great ad- vantage of this piece is his leaping over the men in such a manner that his check cannot be co- vered, and that he can change from one color to another, so as to be useful in any part of the hoard, being able to run over all the squares, without touching any twice, in sixty-four leaps. For these reasons it is generally preferred to the bishop, although some rather choose the bishop, on account of his longer reach.

The ROOK, the Hindu Ratha (a car), the Chi- nese Tche, and the Persian Rukh, is valued at 15, to the knight's 10, and moves in straight lines, parallel to the sides or ends of the board, and can take at any distance, provided that the intermediate squares are not occupied.

The PAWNS, the Hindu Padati (foot soldier), the Chinese Paoo (artillery), and the Persian Peaday, are eight in number. Their distinct value is as two, to the rook's fifteen, and their move is always directly forward, one square at a time, except at the onset, when they move two at once. But in making a capture they take the enemy obliquely, and not in front; for ex- ample, the queen's pawn cannot take the one in front of it ; but one on either the king's or queen's bishop's file. Apawn getting to the head of the board upon the first line of the enemy, is styled going to queen, in which case it may be exchanged for any one of the pieces lost in the course of the game ; and the piece chosen must be placed on the square at which the pawn had arrived. It should be observed, that several pieces

diminish in force towards the end of the game, as the bishop and the knights, and others increase, as the rook and the pawn, which can more easily checkmate.

If the king should not be in check, but yet so situated that he cannot be moved without placing himself in check, and has no other piece on the board which can be played, this is called a stale mate, and is in Italy justly deemed a drawn or even game, but in England, France, and Germany, the king so placed is the winner.

Mr. Twiss mentions a small treatise on chess, about 400 years old ; at the end of which is a representation of a round chess board, with directions for placing the men upon it. The board is divided in the 64 parts by four concen- tric circles, each divided into 16 parts. Number 1 is placed in the outermost circle ; number 2 in the third circle counting inwards, in the divi- sion to the right hand of the former ; number 3 is placed in the outermost circle, in the division to the right hand of 2 ; 4 in the third circle, counting inwards to the right hand of three ; and thus alternately from the first to the third, and from the third to the first circle, till the round is completed by 16 on the third circle to the left hand of 1. Number 17 is then placed

on the division of the innermost circle to the right hand of 1 ; 18 on the second circle counting inwards, to the right hand of 17; and thus alter- nately from the fourth to the second, and from the second to the fourth circles, until the round is completed by 32, directly below number 1. Number 33 then is placed on the third circle, directly to the right hand of number 2 ; 34 on the fourth circle, to the right hand of 4 ; and thus alternately between the third and fourth circles, until the round is again completed by 48 on the fourth circle, directly below number 33. The numbers are now placed in a retrograde manner ; 50 on the outer circle in that division immediately to the right hand of 1 ; 51 on the third circle to to the left hand of 2 ; and directly below number 32 ; 52 is then placed on the outer circle, im- mediately on the left hand of 1 ; 53 on the third circle directly to the left hand of 16; and thus alternately on the first and third circles, until the last ground is completed by 64 between the number 3 and 5. On this round chess-board, supposing the black king to be placed in number 48 on the fourth circle, the queen stands on number 17 at his left hand ; the bishops in 33 and 2; the knights 18 and 47; the castles in 3 and 20; the pawns on 19, 4, 49, 64, and 46,51, 32, 1. The white king will then stand in 25, opposite to the black queen ; the white queen in 40 opposite to the black king, and so on. In playing on a board of this kind, it will be found that the power of the castle is double to that in the common game, and that of the bishop only one

half; the former having 16 squares to range in, and the last only 4. The king can castle only one way ; and it is very difficult to bring the game to a cqnclusion.

The principal laws of the game are as follows : 1. The first move is decided by lot, and the move is afterward alternate. 2. If any one touch a piece without saying ‘ I adjust,’ or something to explain his intention, he must move it, if pos- sible ; if not, the king ; but if that is not possible, no forfeit can be demanded. 3. If a player touch one of his adversary’s pieces, he must take it if he can ; if not, move his king as before. 4. A piece once quitted cannot be recalled ; but as long as the player has his hand on it, he may alter his move with the same piece. 5. If any one makes a false move, he must play his king, but no false move can be recalled after the ad- versary has moved. 6. If a check be given without warning, the player is not obliged to cover it, but if the other at the next turn should move some other piece, and call check, both moves must be recalled, and the king placed in safety. 7. If any one attempt to castle, when by the rules of the game, he cannot, he may be made to move either the rook or the king, at the pleasure of his opponent. 8. At all conclusions of games, when a player seems not to know how to give the difficult mates, fifty moves are ap- pointed for the end of the game, which being past, it is a drawn game. Difficult check-mates are a knight and bishop, or two bishops against a king ; a rook and bishop against a rook, and a queen against a bishop and knight. A single pawn cannot win if the adversary’s king is opposed to it ; but, if its own king is placed before it, then

the pawn may win. Two pawns against one must win in most cases ; but the player, pos- sessing the two, should avoid exchanging one of them for his adversary’s pawn. A pawn, with any piece, must win in every case, except with a bishop, when the pawn is on a rook’s tile, and the bishop does not command the square where the pawn must go to queen. Two knights, without any other man, cannot give check-mate. Two bishops may win. A knight, with a bishop, may win. A rook against either a knight or a bishop makes a drawn game ; as also does a rook and a knight against a rook. A rook with a bishop against a rook may win. A rook with either a bishop or a knight against a queen make a drawn game. A queen against a bishop and a knight may win. A queen against a rook with two pawns makes a drawn game. A rook against either a bishop or a knight with two

pawns may make a drawn game.

We shall now proceed to give a few general maxims, for the advice of persons but slightly acquainted with the game. To begin the game, the pawns must be moved before the pieces, and afterwards the pieces must bebrought out tosupport them. The king's and queen's pawns should be moved first, that the game may be well opened ; the pieces must not be played out early in the game, because the player may thereby lose his moves. It is preferable to move the pawns, in general, as far as the centre at the first move, as it allows more room for the advance of the heavier pieces. The queen should never stand in such a manner before the king, that ' the adversary, by bringing a rook or bishop, could check the king if she were not there ; as it might occasion the loss of the queen. The adversary's knight should never be suffered to check the king and queen, or king and rook, or queen and rook, or the two rooks at the same time ; especially if the knight is properly guarded ; because, in the two first cases, the king being forced to go put of check, the queen or the rook must be lost ; and, in the two last cases, a rook must be lost at least for a worst piece. The player should take care that no guarded pawn of the adversary's fork two of his pieces. As soon as the kings have castled on different sides of the board, the pawns on that side of the board should be advanced upon the adversary's king, and the pieces, especially the queen and rook, should be brought to support them ; and the three pawns belonging to the king that is castled must not be moved. The more moves a player can have in ambuscade, the better ; that is to say, the queen, bishop, or rook, is to be placed behind a pawn or a piece in such a position, that, upon playing that pawn or piece a check is discovered upon the adver- sary's king, by which means a piece of some ad- vantage is often gained. An inferior piece should never be guarded with a superior, when a pawn could answer the same purpose : for this reason, the superior piece may remain out of play ; neither should a pawn be guarded with a piece, when a pawn would do as. well. A well sup- ported pawn that is passed often costs the ad- versary a piece ; and when a pawn or any other advantage is gained, without endangering the loss of foe move, the player should make as

frequent exchanges of pieces as ne can. The advantage of a passed pawn is this : if the player and his adversary have each three pawns upon the board, and no piece, and the player has one of his pawns on one side of the board, and the other two on the other side, and the adversary's three pawns are opposite to the player's two pawns, he should march with his king as soon as he can, and take the adversary's pawns : if the adversary goes with his king to support

them, the player should go on to queen with his single pa^ns ; and then, if the adversary goes to hinder him, he should take the adversary's pawns, and move the others to queen. When the game is near finished, each party having only three or four pawns on each side of the hoard, the kings must endeavour to gain the move in order to win the game. For instance, when the player brings his king opposite to the %iversary's with only one square between, he win gain the move. If the player has greatly the disadvantage of the game, having only his queen left in play, and his king happens to be in a position to win, as above mentioned, he should keep giving check to the adversary's king, always taking care not to check him where he can interpose any of his pieces that make the stale ; by so doing he will at last force the adversary to take his queen, and then he will win the game by being in a stale-mate. We shall now notice the Hindu, Chinese, and Persian varieties of this interesting game. Of these we treat first of the Hindu, as it has appa- rently the best claims to originality.

The HINDU GAME varies principally from ours in having four distinct armies and kings each army composed of half the number of men usually employed, and the boat or car which oc- cupies the place of our castle has the power of a bishop limited to two chequers, and the pawn takes the rank of that piece, and no other, into whose square he moves in the rear line of the enemy. To determine the moves dice are made use of, when a cinque is thrown the king or a pawn must be moved, if a quatre the elephant (our queen), if a trois the knight, and if a deuce the boat. The king, elephant, and knight, slay but cannot be slain.

The CHINESE GAME varies principally from the others, in that there is a river running through the centre of the board, which the elephants, (bishops) never cross, and there is a fort, beyond the limits of which the king never moves. There are also two pieces called paoo or rocket-men. The paoo can move the whole range of both sections direct, transverse, or retrograde, like the English castle, and if any of the adversary's pieces or pawns intervene in the direct line, he takes the one immediately in the rear of it. Except that the king is supported by two sons instead of a queen, the game is in other respects like ours.

The PERSIAN GAME is but a slight variation in principle from the European, the principal dif- ference being in the move of the ferz (our queen), which, on the opening of the game, advances one step direct in front, his pawn moving with him at the same time, in order, it is said, to review and regulate the motions of the army ; afterward

he can only move diagonally, one step at a time, in advance or retreat.

CHESTER.

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There are several minor variations in different countries, as for instance the queen has in Russia the move of the knight, but too trifling and ar- hitrary to deserve much attention. The principal English writer on Chess is Philidor, 1749 and 1822. Sarratt has also published a valuable work on this game.

We conclude with the Morals ofChess by the celebrated Dr. Franklin, whose knowledge of this game introduced him to many of his most distinguished political friends. ‘ The game of chess is not merely an idle amusement. Several very valuable qualities of the mind, useful in the course of human life, are to be acquired or strengthened by it, so as to become habits, ready on all occasions. For life is a kind of chess, in which we have often points to gain, and com- petitors or adversaries to contend with, and in which there is a vast variety of good and evil events, that are, in some degree, the effects of prudence or the want of it. By playing at chess then, we may learn,

1. ‘Foresight, which looks a little into futu- rity, and considers the consequences that may attend an action : for it is continually occurring to the player, ‘ If I move this piece, what will be the advantage of my new situation ? What use can my adversary make of it to annoy me ? What other moves can I make to support it, and to defend myself from his attacks ?’

2. ‘ Circumspection, which surveys the whole chess-board, or scene of action ; the relations of the several pieces and situations, the dangers they are respectively exposed to, the several pos- sibilities of their aiding each other, the probabi- lities that the adversary may take this or that move, and attack this or the other piece, and what different means can be used to avoid his stroke, or turn its consequences against him.

3. ‘ Caution, not to make our moves too hastily. This habit is best acquired by observing strictly the laws of the game ; such as ‘ If you touch a piece, you must move it somewhere ; if you set it down, you must let it stand:’ and it is therefore best that these rules should be ob- served, as the game thereby becomes more the image of human life, and particularly of war ; in which, if you have incautiously put

yourself into a bad and dangerous position, you cannot obtain your enemy's leave to withdraw your troops, and place them more securely, but you must abide all the consequences of your rashness.

CHEST, n. s. Kiˆrf, Lat. cista; Goth, kist ; Per. kisti; Sax. cyst. A case, to contain any thing ; a box ; a coffer ; the cavity of the breast. Chests, of whatever description, derive their name from their capacity of containing.

He will seek there on my word : neither press, chest, trunk, well, vault, but he hath an abstract for the remembrance of such places. Shakspeare.

Such as have round faces, or broad cJiests, or shoul- ders, have seldom or never long necks. Browne.

But more have been by avarice opprest, And heaps of money crowded in the c/iest Dryden.

He describes another by the .argeness of his chest, and breadth of his shoulders.

Pope's Notes on the Iliad.

CHEST, or THORAX. See ANATOMY.

CHESTER,, sometimes called West Chester,

a city in England, the capital of the county of Cheshire, is situated on the western side, not far from the borders of Flintshire, and south of the peninsula formed by the estuaries of the Dee and the Mersey. It is 183 miles from London, and eighteen from the sea. Long. 3►► 3′ W., lat. 53►► 16′ N. It is a very ancient city, some antiquaries asserting that it was founded by Magus, the grandson of Japhet, 240 years after the flood, and from him was known by the name Niomagus ! It was afterwards called Caer-leon, and by the Romans Cestria, from a camp they had fixed there, and this very probably originated its present name. Some very stately remains, found in the vaults and cellars under this city, also serve to show the greatness of the Roman power here. Its form is square, with four principal streets, running towards the four cardinal points, called Eastgate, Northgate, Watergate, and Bridge streets, and a number of smaller ones forming right angles with them. Its walls are entire and surround it on all sides, rising in beautiful arches over the great streets and afford- ing a delightful promenade for the inhabitants, with a most commanding prospect of the adja- cent country. It has been the see of a bishop

since the end of the seventh century, and belongs to the province of York; it contains a cathedral, and seven parish churches within the walls, and one beyond them. Anciently it was a part of the bishopric of Litchfield ; but on the destruc- tion of the monasteries, in the reign of Henry VIII. it was made a distinc bishopric, and endowed with the revenues of the abbey of Benedictines. Its churches, particularly St. Mary's, contain many ancient monuments. In the days of king Arthur it was a celebrated school for philosophy and the learned languages ; several British and Saxon kings were crowned here, and it is said that Henry IV. emperor of Germany, who mar- ried Maude the grandaughter to William the Conqueror, lived as a hermit at Chester, un- known ; but discovered himself near his death, and was buried here. The principal streets ap- pear to have been excavated, as Mr. Pennant says, out of the earth, and sunk several feet below the surface ; rows of shops run along the sides of them in the central and higher parts of the city ; the houses have galleries or piazzas before them and frequently under the upper stories, at the backs of which the principal shops are ranged, and under these covered ways the inhabitants may walk almost over the town, sheltered both from the sun and the rain. The old Castle has been taken down and a new city gaol erected, with a fine entrance, on the model of the Acro- polis at Athens, introducing to a noble and ex- tensive area, on one side of which is a barrack for 120 men, on the other an arsenal with 27,000 stand of arms, and in the front the shire-hall, the portico of which is supported by twelve pillars, each twenty-two feet high and thirty-seven inches in diameter. The hall itself forms a semi- circle forty-four feet high, eighty feet in diameter, and fifty feet wide ; the roof being supported by twelve pillars of the Ionic order. In the con- s'ruction of the prison great attention has been paid to the health and classification of the pri- soners. It is a royal fortress The abbey court forms a pleasant square, on one side of which*

stands the bishop's palace. Adjoining to this is the market-place, where a cross stands which is thought to be the site of the Roman Pretorium, and here was once held every year a bull-bait at which the mayor and corporation used to attend. There are several chapels and meeting-houses for dissenters of different denominations, Wesleyan Methodists, Lady Huntingdon's connec- tion, Welsh Methodists, Independents, Baptists, Quakers, Unitarians, and Roman Catholics. It has two public libraries, and an elegant news- room ; a blue coat school for thirty-five boys, and another for girls ; and about thirty alms-houses in different parts of the city, some of them well endowed. The munificence of the present earl Grosvenor and his lady has lately added to the means of general instruction, by the erection of a building in which 400 boys and the same number of girls are educated at their sole ex- pense. Chester maintains its ancient reputation for education, no place abounding more in respect- able private seminaries and establishments, for both sexes. Several causes may have contributed to this ; such as the great salubrity of the air, which is so conducive to health that it is said only one in forty die annually, whereas the average of other places, both at home and in fo- reign parts, would be about one in twenty-five ; its convenient vicinity to the principality and the sister kingdom ; and the great number ot literary and scientific men, particularly of the clergy, that are found here. The city is governed by a mayor, recorder, two sheriffs, twenty-four aldermen and forty common-council-men. The only manufacture of any extent is that of gloves, made in vast quantities by women. The lead- works have, however, of late years increased considerably, and the metal here undergoes almost every process ; it is rolled out to any thickness required, drawn into pipes of every bore, cast into shot of all sizes, converted into white lead, red lead, litharge, &c. ; employing a great number of workmen, and very powerful steam-engines. The population is estimated at upwards of 15,000. Chester has two market days, Wednesday and Saturday, and three great fairs, lasting a week each, commencing Feb. 24th, July 5th and Oct. iOth, resorted to by manufactu- rers and tradesmen from all parts : the goods, chiefly woollen and linen cloths, being exposed for sale under the rows fronting the shops, or in spacious halls erected for the purpose. The river Dee surrounds the city nearly in a semi- circle, flowing under a substantial old bridge, but which is inconveniently narrow, on the south, and a more modern erection on the west, and turning a little

to the north, till it takes a W. N. W. course towards the sea. On the west side is situated the race ground, a fine plain, from which the whole extent of the course can be easily viewed. This city sends two members to parliament.

CHESTER, a county of South Carolina, in Pinkney district ; in the north-west part of the State ; with a town of the same name, bounded on the cast by Camden district ; on the north by York county ; on the vvest by Union ; and on the south by Fairfield county, in Camden dis- trict. It is forty miles from east to west, and

twenty-three from north to south, and contains nearly 10,000 white inhabitants, and more than 4000 negro slaves, with only thirty-six free blacks. It is well watered by the Watteree, Broad, and Tiger rivers. The lands are rich and well cultivated.

CHESTER, a navigable river of the United States, in the eastern shore of Maryland. Rising in New Castle county, in the State of Delaware, it runs nearly west for about fifteen miles, and thence winding south-west by south, fal's into the Chesapeake on the north-east side of Kent island, about ten miles north-west of Chester, in the same state.

CHESTER, a post town of Maryland, and the capital of Kent county, on the west side of the Chester, about fourteen miles from its confluence with the Chesapeake. It contains a church, col- lege, jail, and court house. The college is named Washington, and was incorporated in 1782. It is supported by a permanent fund, established by law. This town is thirty-seven miles north of Easton, sixty-six east by south of Baltimore, and seventy-seven south-west of Philadelphia.

CHESTER, a township of New Hampshire, Mas- sachusetts, situate in Rockingham county, on the south side of a small creek. It is compactly built, and has a congregational church. The town was incorporated in 1722. It is six miles north of Londonderry ; thirty W. S. W. of Ports- mouth ; and 394 north-east of Philadelphia, and has more than 1100 inhabitants.

CHESTER, a populous and well cultivated county of Pennsylvania, forty-five miles long and thirty broad. It is bounded on the north by Berks, on the north-east by Montgomery, on the south-east by Delaware county, and part of the State of Delaware ; on the south-west and west by Lancaster ; and on the south by Cecil county, in the state of Maryland. It is divided into thirty-three townships. In the

northern parts are mines of iron ore ; and great quantities of bar iron are manufactured annually. Its popu- lation consists of more than 41,000 whites, nearly 3000 free colored people, and only seven slaves.

CHESTER, or WEST CHESTER, a post town of Pennsylvania, and capital of the county. It is situated on the north-west side of the Delaware, fifteen miles south-west of Philadelphia. It is built on a regular plan, and has a jail and a court- house, where quarterly courts are held. The population exceeds 1000. This town is remarka- ble for being the place where the first colonial assembly was convened, on the 4th December, 1682. It was incorporated by an act of the as- sembly, in December 1795, and is governed by two burgesses, one high constable, a town clerk, and three assistants

CHESTER, a river of West Florida, falling into Pensacola Bay.

CHESTER, WEST, a county of New ––"ork, bounded on the north by Duchess county ; on the east by the state of Connecticut ; on the south by Long Island Sound, and New York county ; on the west by the Hudson, which se- parates it from Orange county and the state of New Jersey. It is divided into twenty-one town- ships, and contains 22,581 free inhabitants, and 1.419 slaves. Bedford is the chief town.

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CHESTER. See CASTOR.

CHESTER-LE-STREET, or CHESTER IN THE STREET, the Cuueacestre of the Saxons, a small thoroughfare town between Newcastle and Dur- ham, with a good church and fine spire. In the time of the Saxons, this place was greatly re- spected on account of the relics of St. Cuthbert, deposited in it, by bishop Eardulf, for fear of the Danes, who then, about A. D. 884, ravaged the country. His shrine became afterwards an object of great devotion. Along with the remains of St. Cuthbert, the bishopric of Lindesfarn was re- moved here, and endowed with all the lands be- tween the Tyne and the Were, comprehending the present county of Durham. The inhabitants had great privileges, and were free from military duty, except that of defending the body of their saint. Chester may be considered as the parent of the see of Durham; for when the saint's relics were removed thither, in 995, the see followed them. Bishop Beke, in 1286, in

honor of that saint, made the church collegiate ; established a dean and suitable ecclesiastics ; and, among other privileges, gave the dean a right of fishing on the Were, with the tythesof fish. This town is five miles north of Durham.

CHESTERFIELD, a district of South Caro- lina, United States, not far from North Carolina, in the district of Cheraws. It comprehends an area of about 850 square miles, and contains a population of nearly 4500 whites, more than 2000 slaves, and about 1 70 free blacks.

CHESTERFIELD, a populous county of Virginia, United States, not quite so large as the former. It is bounded on the north by James River, and on the south by the river Appomattox ; and con- tains a population exceeding 18,000, of whom nearly half are slaves.

CHESTERFIELD, a market town of England, in Derbyshire, the second in the county, pleasantly situated on a hill between the Iber and the Rother. It was made a free borough by king John; and in 1294 first had the privi- lege of a guild of merchants. It is governed by a mayor, six aldermen, six brethren, and twelve burgesses, and it gives the title of earl to the fa- mily of Stanhope. It is very populous, and has a considerable market for corn, and other com- modities ; with stocking and carpet manufacto- ries ; a silk and cotton mill, and several potteries, and large iron foundries. The neighbourhood produces great plenty of coal and iron ; and vast quantities of lead are sent hence by a canal, which joins the Trent below Gainsborough. The church is a handsome structure, in the form of a cross, but the spire is remarkably bent. There is a free-school, founded by queen Elizabeth. In the market-place is a neat town-hall ; there is also a work-house and a house of correction. Market on Saturday. It is twenty-two miles north of Derby, and 150 N. N. \V. of London.

CHE'STNUT, ˆ Lat. castanea; Yr. c/ms-

CHE'STNUT-TREE. $taignc; in botany. See FAG us.

Medlers, plommes, peres, chesteines. Chaucer.

A woman's tongue,

That gives not half so great a blow to the ear As will a chestnut in a farmer's fire. Sluifupeare. VOL. V.

So when two boars in wild Ytene bred, Or on Westphalia's fattening chestnuts fed, Gnash their sharp tusks, and, roused with equal fire,

Dispute the reign of some luxurious mire, In the black flood they wallow o'er and o'er, Till their armed jaws distil with foam and gore. Gay.

The name of a brown color. His hair is of a good colour.

An excellent colour : your chestnut was ever the

only colour. Shakspeare.

Merab's long hair was glossy chestnut brown.

Cowley.

CHESTNUT, HORSE. See ./ESCULUS.

CHESTNUT, INDIAN ROSE. See MESUA.

CHE'STON, n. s. A species of plum.

CHETA, a river in the north of Siberia, or Asiatic Russia, rising in 70►► 30′ lat. and 106►► E. long. It falls into the Anabora, or Charanga, near its mouth. Also a river of Asiatic Russia, running into the Enisci near Avanska, in the lat. 68►► 40′ N., long. 89►► E.

CHEVALER, in the menage, is said of a horse, when, in passaging upon a walk or trot, his oft' fore-leg crosses or overlaps the near fore- leg every second motion.

CHEVALI'ER, n. s. Fr. chevalier. A knight ; a gallant strong man.

Renowned Talbot cloth expect my aid ;

And I am lowted by a traitor villain,

And cannot help the noble chevalier. Sliakspeare.

CHEVALIER, in heraldry, signifies any cavalier, or horseman armed at all points ; now out of use, and only to be seen in coat armour.

CHEVAUX DE FRISE, in fortification, is a machine composed of a piece of timber, larger or smaller, pierced and traversed with wooden spikes, pointed with iron, five or six feet long, as in the annexed diagram, used for defending a

passage, stopping a breach, or making a retrench- ment to stop the

cavalry. These machines are sometimes mounted on , wheels, with artificial fires, to roll down in an assault. The prince of Orange used to enclose his camp with chevaux de frise, placing them one over another.

CHE'VEN, n. s. Fr. chevesne. A river fish, the same with chub.

CHE'VERIL, ►►. s. Fr. cheverau. A kid; kidleather. Obsolete.

A sentence is but a cheveril glove to a good wit : how quickly the wrong side may be turned outward.

S/uikspeare. What gifts the capacity

Of your soft cheveril conscience would receive,

If you might please to stretch it. Id.

CHEVIOT, or TIVIOT HILLS, a ridge of mountains, which runs from north to south through Northumberland and Cumberland, near which was a free chase, called Cheviot, corruptly chevy-chase ; the seat of the encounter between the Percies and the Douglasses, celebrated in tne

ballad of Chevy-chase. It lay six miles from the borders of Scotland, and eighteen south of Ber- wick. These hills are the first land discovered in coming from the east into Scotland. One of them is so high, that it is seen sixty miles off. They are famous for feeding an excellent breed of sheep, called from them the Cheviot breed.

CHE'VISANCE, n. s. Fr. chevisance. En- terprise ; achievement. A word now not in use.

Ye shuld have -warned me, or I had gon. That he you had an hundred frankes paide By redy token. And held him evil apaide For that I to him spake of chevisance. Chaucer.

Fortune, the foe of famous cJtevisance, Seldom, said Guyon, yields to virtue aid.

Spenser.

CIIEVISANCE, in law, denotes an agreement or composition, as an end or order set down between a creditor and his debtor, &c. In the statutes, this word is most commonly used for an unlaw- ful bargain or contract.*

CHEVREAU (Urban), a learned writer, bom at Loudun in 1613. He distinguished himself in his youth by his knowledge of the belles let- tres; and became secretary of state to queen Christina of Sweden. Several German princes invited him to their courts ; and Charles-Lewis, the elector palatine, retained him under the title of counsellor. After the death of that prince, he returned to France, and became preceptor to the duke of Maine. He died at Loudun, in 1701, aged eighty-eight. He published several works, particularly an Universal History, which has often been reprinted.

CHEVRETTE, an engine useful for the pur- pose of raising guns or mortars into their car- riages. It is made of two pieces of wood about four feet long, standing upright upon a third, which is square ; they are about a foot asunder, and paral- lel ; pierced with holes opposite one another, to hold a strong bolt of iron, which may be raised or lowered at pleasure ; it may be used with a common handspike, which takes its poise over the bolt, and thus raises the weight.

CHE'VRON, n. s. French. One of the honorable ordinaries in heraldry. It represents two rafters of a house, set up as they ought to stand. ??? Harris.

CHEVRONNE, or CHEVRONNY, in heraldry, the parting of a shield several times.

CHEVROTTEll, Fr. chevre, a goat; a me- taphorical expression, used when a singer, in lieu of neatly shaking alternately the two notes which form the cadence, or shake, repeats only one note with precipitation, as detached semi- quavers.

CHEW, v. a. & v. n. Teut. kieuwen, kief en; Sax. ceowan ; Fr. chlquer; Dutch kauwen. It is very frequently pronounced chaw, and perhaps properly. To grind with the teeth ; to masticate; to champ upon ; to receive into the mouth and retain there for some time, for mastication alone and not for nourishment. Metaphorically to meditate; to ruminate in the thoughts.

If little faults, proceeding on distemper, Shall not be winked at, how shall we stretch our eye, When capital crimes, chewed, Swallowed,

and digested, Appear "before us? . Sfuikspeare.

Pacing through the forest, Chewing the cud of sweet and bitter fancy. Id,

Heaven 's in my mouth, As if I did but only chew its name. Id.

I will with patience hear, and find a time ; Till then, my noble friend, chew upon this. Id.

Some books are to be tasted, others to be i-ˆvallowed, and some few to be chewed and digested ; tnat is, some books are to be read only in parts ; others to be read, but not curiously ; and some few to be read wholly, with attention. Bacon.

While the fierce monk does at his trial stand, He chews revenge, abjuring his offence :

Guile in his tongue, and murder in his hand, He stabs his judge, to prove his innocence. Prior.

CHEWING BALLS, a kind of balls made of asafoetida, liver of antimony, bay-wood, juniper wood, and pellitory of Spain ; which being dried in the sun, and wrapped in a linen cloth, are tied to the bit of the bridle for the horse to chew. They create an appetite ; and it is said that balls of Venice treacle may be used in the same man- ner with success.

CHEYNE (Dr. George), a physician of great learning and abilities, born in the parish of Methlick in Aberdeenshire, in 1671, and educated ' at Edinburgh under Dr. Pitcairn. He passed his youth in close study and great temperance, but frequenting gay company for the sake of practice in London, when about thirty, the con- sequence was, that he grew daily in bulk, be- came excessively corpulent, lethargic, and scor- butic ; so that his life was an intolerable burden. In this deplorable condition, after having in vain tried all the power of medicine, he resolved to adopt a milk and vegetable diet, the good effects of which quickly appeared. His size was reduced almost a third ; and he recovered his strength, activity, and cheerfulness. .In short, by a regu- lar adherence to this regimen, he lived to a ma- ture period, dying at Bath in 1742, aged seventy- two. He wrote several treatises that were well received ; particularly, An Essay on Health and Long Life ; and The English Malady, or a Trea- tise of Nervous Diseases.

CHIABRERA (Gabriel), esteemed the Pin- dar of Italy, was born at

Savona in 1552, and went to study at Rome. The Italian princes, and Urban VIII. gave him public marks of their esteem. He wrote a great number of poems ; but his lyric verses are most admired. He died at Savona in 1638, aged thirty-six.

CHIAN EARTH, in pharmacy, one of the me- dicinal earths of the ancients, the name of which is preserved in the catalogues of the Materia Me- dica, but of which little more than the name has been known for many ages in the shops.

CH1OSH, in the original Turkish, envoys, are officers to the number of 500 or 600 in the grand seignior's court, under the command of a chiosh baschi. They frequently meet in the grand vizier's palace, that they may be in readi- ness to execute his orders, and carry his de- spatches into all the provinces of the empire.

CHIAPA, a province of Mexico, North Ame- rica, in the audience of Guatimala ; bounded on the north by the province of Tabasco ; on the east by Vera Paz; on the south by Guatimala ; on the south-west by Sonusco ; and on tho west

by Guaxaca. It is seventy leagues long, and sixty-five broad. Its principal productions are grain and fruits, with excellent pastures, on which they feed a great number of cattle. Its hors(.s also are valuable.

CHIAPA DOS ESPAGNOLES, or CIVIDAD REAL, the capital of the above province, is the see of a bishop. It contains one parish church and three convents. Its principal commerce is in cocoa, cotton, and cochineal. It is 380 miles south- east of Mexico.

CHIAPA, or CHIAPA DOS INDIOS, a town of North America, in the province of Chiapa, con- taining about 4000 families, chiefly Indians, who are rich. During the day the heat here is vio- lent, while the nights are cool. The inhabitants raise a great deal of sugar. It is 350 miles south- east of Mexico, and thirty west of Chiapa dos Es- pagnoles.

CIIIARENZA, or CLAREXZA, a territory in the north-west coast of the Morea, subject to the Turks, anciently called Achaia.

CHIAREXZA, the capital of the above territory, and a sea-port in the Mediterranean, opposite to the island of Zante, has a good harbour, and is twenty -six miles south of Patras.

CIIIARI, a town of Italy, in the ci-devant province of Bresciano ; between Brescia and Crema, where the Imperialists obtained a victory over the French in 1701. It is seven miles west of Brescia, and twenty-seven east of Milan.

CHIARI (Joseph), a celebrated Italian painter, was the disciple of Carlo Maratti ; and adorned the churches and palaces of Rome with a great number of fine paintings. He died of an apo- plexy in 1727, aged seventy-three.

CHIAROSCURO. Ital. In painting. The art of judiciously distributing the lights and sha- dows in a picture. A knowledge of it comprises the proper gradation of lights and shades on bo- dies, placed on certain planes, and in certain positive lights ; but chiaroscuro being a science comprehending not only the mechanical action of light, shade, and reflexes, but of aerial per- spective, the proportional force of colors, or of those qualities by which they apparently advance to, or recede from, the eye, and of their various de- grees of transparency or opacity, depends en- tirely on the painter's imagination, who should, if master of this branch of art, dispose his objects to receive such lights and shades as he proposes for his picture, and introduce such accidental circumstances of light, shade, vivid or opaque colors, as he reckons most advantageous to the whole. Chiaro not only signifies the lights of a picture, but also those colors which, even in shade, are luminous ; and oscuro not only the shades, but also the dusky colors, either in light or shadow. The best treatises on the subject are to be found in the works of Sir Joshua Reynolds, the lectures of Fuseli and Opie, delivered in the Royal Academy of London, and several of the works referred to in the article painting. See PAINTING.

CHIAYENNA, a county of Switzerland, which was under the government of the Grisons, ti.l 1797, when it was formally united to the Cisalpine (afterwards the Italian) republic, in ctnsequence of the decision of Buonaparte, as

arbiter between the people of these territories and the Grisons. It now belongs to Austria. It is situated at the foot of the Rhetian Alps, to the north of the lake of Como ; is about eight leagues long and six broad. The country is for the most part fertile in wine and pastures, and the inhabitants pay considerable attention to the production of silk. Of this commodity, it is estimated that the country yields 3600

Ibs. an- nually; and, though there is generally a defi- ciency of corn for the wants of the inhabitants, they are supplied by their neighbours for cattle, wine, and silk. Also a lake in the above county, near the town.

CHIAVENNA, the chief town of the above county, is situated at the foot of a mountain, and contains about 3000 souls. Its chief support is the transport of merchandise, being the principal communication between the Milanese and Ger- many. From this town the goods are sent either by Coire into Germany, or through Pregalia and the Engadine into the Tyrol. Besides which, it is a place of very little trade; the chief articles of exportation are stone pots, called lavezzi, and raw silk. The only manufacture carried on in the town is that of silk stockings. The neigh- bouring country is covered with vineyards ; but the wine is a meagre sort, and only a small quan- tity is exported. On the summit of a rock, which overlooks the town, stands the ruins of a fortress, celebrated in the history of the Grisons for its almost impregnable strength. Chiavenna is thirty-eight miles north of Como, and thirty- five south of Coire.

CHIAUSI, among the Turks, officers employed in executing the viziers, bashaws, and other great men : the order for doing this, the grand seignior sends them wrapped up in a black cloth, on the reception of which, they immediately perform their office.

CHICA NAYAKANA HULLY, a large de- cayed town of , the Mysore, Hindostan, famous for its manufacture of white and colored coarse cotton cloth. A weekly fair is held for the sale of it and other commodities. The town was fortified about 300 years ago.

CHICA'NE, n. s. & v. n. ") Fr. chicane ; from

CHICA'NER, n. s. > Aucavog ; Lat. dica ;

CHICA'NERY, n.s. j legal disputation,

sophistry ; Arabic dig ; Span, and Port, chico ; Fr. chic. A trifling petty quibble. Petty trickery. The act of petty fogging. Perverting the law to selfish and roguish purposes, and at the expense of justice and the public; an attorney's besetting sin.

Unwilling then in arras to meet, He strove to lengthen the campaign, And save his forces by chicane. Prior.

The general part of the civil law concerns not the chicane of private cases, but the affairs and intercourse of civilized nations, grounded

upon the principles of reason. Locke.

This is the way to distinguish the two most different things I know, a logical chicaner from a man of reason.

U.

His anger caused him to destroy the greatest part of these reports ; and only to preserve such as u.s-*

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CHICANJA, or CHACANGA, a kingdom of Africa, which was formerly a part of the country of Monomotapa ; it is rich in gold mines, and is sometimes called Manica, from the principal town, which is situated on the river Sofala, in long. 28►► O'E. Greenwich, lat. 20►►15'S. The Portuguese long endeavoured to subdue this territory, but were obliged finally to limit themselves to their - establishment on the Zambeze, where they still receive the precious metals in exchange for the manufactures of Europe.

CHICACOTTAH, a fortified town on the south frontier of Bootan, frequently taken and relinquished by the British India troops. It is now in our possession. It is ninety-four miles south of Tassassudon.

CHICAS Y TARIJA, a province of Peru, bounded on the north by Porco, south by Tucu- man, and west byLipes. It is between 400 and 500 miles in circumference, and produces maize, potatoes, and European grain. There are also mines of gold and silver here, which were for- merly considered rich. The district of Tarija annexed to this is full of craggy mountains and ►►►glens, which are extremely fertile.

CHICHELE (Henry), archbishop of Canter- bury, was born in 1362, in Northamptonshire, at Higham Ferrars. He received his education at Winchester, from whence he proceeded to New College, Oxford, and was so celebrated in the civil and canon law, that Henry IV. appointed him his ambassador co the pope, and to the court of France. In 1408 he was consecrated bishop of St. David's, and sent the next year to the council of Pisa. In 1414 he was elected arch-

bishop of Canterbury, in which situation he pro- moted a contribution to enable Henry V. to carry on the war with France. The archbishop was a decided opponent of Wickliffe, and he as strenu- ously opposed the papal encroachments. In 1442 he applied to pope Eugenius for leave to resign his see, but died before any answer could be received, April 12th, 1443, and was interred in Canterbury Cathedral under a monument pre- pared by himself. He founded, in 1422, a col- legiate church at Higham Ferrars, to which he attached an hospital. He also improved the ca- thedral of Canterbury, and Lambeth palace; but his most munificent work was the foundation of All Souls College, Oxford in 1437, of which he completed the statutes but a few days before his death.

CHICHES, re. s. See CHICKPEAS.

CHICHESTER, the capital of the county of Sussex, and a city and county of itself, situated in the west part of the county, on the small river Lavant, which almost encircles it, except on the ###western side. Long, 0## 47 W., lat. 50## 50′ N. It consists of four great streets, intersecting one another at right angles, wide, handsome, and well paved. Of the ancient walls only some small portions remain, the largest on the north, and the fortified gateways which formerly ter- minated the principal streets are destroyed. These walls embraced an area of about 101 acres, enclosing six parishes, but without them are two other parishes, ### the whole containing a population, according to the latest surveys, of 8360 inhabitants, in the proportion of about*

fourteen females to eleven males. Its principal buildings consist of the cathedral, an elegant Gothic structure with a spire 300 feet high, the parish churches, an ancient nunnery, now an hospital, endowed with some valuable estates, a beautiful octagonal cross, the guildhall, in an obscure part of the city, the council-chamber, above the market-place, next to which is a subscription assembly-room, the theatre, and bishop's palace, besides several dissenting meet- ing-houses, and endowed free-schools. Here also is a national-school, allowed to be the most com- plete in England. The cathedral has a bishop, dean, two archdeacons, a treasurer, a chancel- lor, thirty-two prebendaries, a chanter, twelve vicars choral, &c., and the diocese includes the whole county, except twenty-two parishes. The site of this city was evidently a Roman station, as appears from remains found in 1727, pro- bably the foundations of a temple, and the traces of a camp in the neighborhood. After suffering various dilapidations, it was rebuilt by Cissa, the second king of the south Saxons, from whom it was called Cisa-caester, signifying the city of

Cissa. It was subsequently given by Wil- liam the Conqueror, together with Arundel and the lands adjoining both places, to Hugh de Montgomery. The trade of Chichester is small, its distance from the quay being unfavorable to it, and the river not being navigable to the city. About two hundred years ago it nearly mono- polised the trade of needle-making, but this is now at an end, being superseded by cheaper articles, though inferior in quality, from other parts. About the beginning of the sixteenth cen- tury it was famous for malt, but this trade has long "been on the decline. It has two markets in the week, Wednesday and Saturday, and is well supplied with all kinds of provision ; fish is plentiful, particularly oysters, lobsters, and mullets. Near the fish shambles, over a neat conduit of water, stands a fine figure of a Druid, Its cattle market is constantly resorted to by the butchers from Portsmouth, and frequently by those from London. This city sends two mem- bers to parliament, the right of election being vested in those that pay scot and lot, and the mayor is the returning officer. It is governed by the mayor, recorder, aldermen, and common council ; and tour justices of the peace are chosen from the aldermen. It now possesses a literary and scientific institution.

CHI'CHLING VETCH, n. s. Lat. lathyrus. In Germany they are cultivated and eaten as peas, though neither so tender nor well tasted. ††† ††† Miller.

CHICK, n. s. > Sax. cicen; Dutch kiecken.

CHI'CKEN, n. s. 5 Chicken is, I believe, the old

plural of chick, though now used as a singular

noun. The young of a bird, particularly of a hen,

or small bird.

Her here was as yelowe of hewe As any basin scoured newe ; Her flesh tender as is a chike, With bent browes both smothe and sl1ke.

Chaucer

At last him turning to his charge benight, With trembling hand his troubled pulse gan try ; Where finding life not yet dislodged quight,

CHI

He much reioyst, and courd it tenderly.

As chicken newly hatcht, from dreaded destiny.

Spenser.

All my pretty ones !

What, all my pretty chickens, and their dam, At one fell swoop ! Shahspeare.

On rainy days alone I dine, Upon a chick and pint of wine : On rainy days I dine alone, And pick my chicken to the hone. Swift. Till you grow tender as a chick I'm dull as any post;

Let us like burs together stick, And warm as any toast. Gay,

A word of tenderness.

My Ariel, chick,

This is thy charge. Shakspeare.

A term for a young girl.

Then, Chloe, still go on to prate Of thirty-six and thirty-eight; Pursue your trade of scandal-picking, Your hints, that Stella is no chicken. Swift.

CHICKASAWS, a nation of American In- dians, who inhabit the country east of the Missis- sippi, in the north-west corner of Georgia. Their country is bounded on the west by the Mississippi, on the east by the river Tombeck- bee, on the north by Kentucky, and on the south by the Chacktaw Indians. The soil is rich, and well cultivated.

CHI'CKENHEARTED, adj. From chicken and heart. Cowardly ; timorous ; fearful. Now we set up for tilting in the pit,

Where 'tis agreed by bullies, chickentiearted,

To fright the ladies first, and then be parted.

Prologue to Spanish Fryar.

CHI'CKENPOX, n. s. An exanthematous distemper, so called, from

its being of no very great danger.

CHI'CKLING, n. s. From chick. A small chicken.

CHI'CKPEAS, n. s. From chick and pea. A kind of degenerate pea. ••• Miller.

CHI'CKWEED, n.s. From chick and weed. The name of a plant.

Green mint, or chichweed, are of good use in all the hard swellings of the breast, occasioned by milk.

Wiseman.

CHICUITOS, or CUYO. See CUYO. CHIDE,u.a.&••. ˆ Preter. chid or chode, CHI'DER, n. s. } part, chid or chidden. Sax. ci'toan; Goth, kuida. To reprove, blame, scold; applied to persons and things.

If one be ful of wantonesse, Another is a chiderese.

Chaucer's Romaunt of the Rose. And fly like chidden Mercury from Jove.

Shukspeare.

Those, that do teach your babes, Do it with gentle means, and easy tasks ; He might have chid me so : for, in good faith, I am a child to chiding. Id

The business of the state does him offence, And he does chide with you. Id.

My duty

As doth a rock against the chiding flood, Should the approach of this wild river break, And stand unshaken yours. Id.

Not her that chides Sir, at any hand, I pray.••• I love no chiders, Sir. /&

Scylla wept And chid her barking waves into attention.

Milton.

Winds murmured through the leaves your long de- lay, And fountains, o'er the pebbles, chid your stay.

Dryden.

I chid the folly of my thoughtless haste ; For, the work perfected, the joy was past. Prior.

You look, as if yon stern philosopher Had just now chid you. Addison.

If any woman of better fashion in the parish hap- pened to be absent from church, they were sure of a visit from him, to chide and to dine with her. Swift.

The priest, who female frailties pityed, First chid her, then her sins remitted. Gay.

CHIEF, n. s.&adj.y Fr. chef; Ital. capo, CHI'EFLESS, adj. >from Lat. caput, the CHI'EFLY, adj. j head. It is applied to persons, to qualities, to things ; to that which is principal in value, station, or importance; to that which is first in order of time. As chiefdom it was formerly applied to sovereignty. It is a civil, a military, a technical, and a general term; always marking out and distinguishing what is pre-eminent. It is likewise always used relatively. The adjective is a superlative in itself, yet some- times it has ' most' before it, as in the liturgy, ' Yet ought we most chiefly so to do,' &c. ; and chiefest is occasionally to be met with. Chief is first in time, first in place, and first in kind.

These were the chief of the officers that were over

Solomon's works. 1 Kings.

The hand of the princes and rulers hath been chief

in this trespass. Ezra.

A froward man soweth strife, and a whisperer sepa-

ratath chief friends. Proverbs,

Ah, gentle knight ! then false Duessa sayd, Why do ye strive for ladies love so sore, Whose chiefs desire is love and friendly aid Mongst gentle knights to nourish evermore. Spenser. Zephyrus being in love with Chloris, and coveting her to wife, gave her for a dowry the chiefdom and, sovereignty of all flowers and green herbs.

*Id. Kal. Gkss^*

We beseech you, bend you to remain Here in the cheer and comfort of our eye, Our chiefest courtier, cousin, and our son.

Shakspeare..

He sometimes denied admission to the chiefest offi- cers of the army. Clarendon.

Is pain to them

Less pain, less to be fled ? or thou than they Less hardy to endure ? courageous chief! The first in flight from pain.

Milton's Paradise Lost. A sect whose chief devotion lies In odd perverse antipathies. Hudibras.

After or before were never known Such chiefs; as each an army seemed alone.

Dry den ˆ

Any man who will consider the nature of an epic poem, what actions it describes, and what persons they are chiefly whom it informs, will find it a work full of difficulty. Id.

I came to have a good general view of the apostle's main purpose in writing the epistle, and the chief branches of his discourse wherein lie prosecuted it.

Loch.*

CHI

582

CHI

But all its chief delight was still On roses thus itself to fill, And its pure virgin limbs to fold In whitest sheets of lilies cold. Marvel.

A wit 's a feather, and a chief a rod ; An honest man 's the noblest work of God.

Pope.

And chiejtess armies dozed out the campaign, And navies yawned for orders on the main. Id.

Your country, chief in arms, abroad defend ; At home, with morals, arts, and laws amend. Id,

If the blind poet gained a long renown By singing every Grecian cA►►e/"and town, Sure Lownds' his prose, much greater fame requires, Which sweetly counts five thousand knights and

squires, Their seats, their cities, parishes, and shires. Gay.

The grave shall bear the chiefest prize away, And havoc scarce, for joy, can number their array.

Byron.

CHIEF, in heraldry, is that which takes up all the upper part of the escutcheon from side to side, and represents a man's head. In chief, im- ports something borne in the chief part or top of the escutcheon.

CHI'EFRIE, n. s. From chief. A small rent paid to the lord paramount.

They shall be well able to live upon those lands, to yield her majesty reasonable chiefrie, and also give a competent maintenance unto the garrisons.

Spenser's Ireland.

Would the reserved rent at this day be any more than a small chiefrie ? Swift.

CHI'EFTAIN, n. s. From chief. Used by Chaucer in the same sense ; but now applied al- most exclusively to a military commander or the head of a clan.

*Now it is behovely to tellen which ben dedly sinues, that is to say chieftaines of sinnes, * * ******* Now ben they clcped chieftaines, for as moche as they be chiefe, and cf hem springen all other sinnes.*

Chaucer's Persones Tale.

That forced their chieftain, for his safety's sake, (Their chieftain Humber named was aright) Unto the mighty stream him to betake, Where he an end of battle and of life did make.

Faerie Queene.

It broke, and absolutely subdued all the lords and chieftains of the

Irishry. Davies on Ireland.

CHIELEFA, a strong fortress of Turkey in Europe, in the Morea. It was taken by the Ve- netians in 1685 ; the Turks afterwards retook it, with all the Morea. It is twelve miles west of Kolokithia.

CHI EM, or CHIEMSEE, an extensive lake of ˆeimany, in Bavaria,, sometimes called Baye- rische Meer, or the sea of Bavaria. It con- tains several islands, particularly Herrenwerd and Frawenwerd, the former of which is a oishop's see, and is situated twenty-two miles W. S. W. of Saltzburg. It is about thirty miles in circuit.

CHIERI, an ancient fortified town of Italy, in Piedmont, seated on the declivity of a bill, in a pleasant country, bounded on all sides by hills covered with vines. It has. manufactures of cloth and silk ; and is surrounded by an ancient wall, defended by towers, with a fosse ; and had formerly a fortress named Rochetta, which was

demolished in the sixteenth century. It has six gates and four grand squares or palaces, many churches and religious houses, though only two parishes within the walls, and one without. Near it the French defeated the Spaniards in 1639. It is eight miles east of Turin.

CHIETI, a large town of Naples, the capital of Abruzzo Citerior, with an archbishop's see. It is seated on a mountain, near the river Pes- cara, eight miles south-west of the town of Pes- cara, and contains 12,000 inhabitants.

CHIE'VANCE, n. s. Probably from Fr. achevance, purchase. Traffick, in which money is extorted ; as discount. Now obsolete.

There were good laws against usury, the bastard use of money ; and against unlawful chievances and exchanges, which is bastard usury. Bacon.

CHIGI (Fabius, pope). SeeALEXANDERVIII.

CHIHUAHUA, an important town of Mexico, in the intendancy of Durango, situated on the east side of a small stream, which discharges it- self into the Conchos. It is environed by silver mines. The public square contains the royal treasury, the church, and the town-house : the principal church is a noble building. A mile south of the town is an aqueduct, which con- veys the water round into the main stream be- low the town east, at the entrance of which is a reservoir, whence it is conducted by pipes to different parts of the city. It is estimated to contain 11,600 inhabitants. It is 180 miles

north-west of Mexico.

CHIKANGA. See CHICANGA.

CHI'LBLAIN, n. s. From chill, cold, and blain; so that Temple seems mistaken in his etymology, or has written it wrong to serve a purpose. Sores made by frost.

I remembered the cure of childblaint when I was a ooy (which may be called the children's gout), by burning at the fire. Temple.

CHILBLAIN, in medicine, a tumor affecting the feet and hands ; accompanied with an inflam- mation, pains, and sometimes an ulcer or solu- tion of continuity ; in which case it takes the denomination of chaps. Chap resembles gape, both in sound and appearance. Chilblains are occasioned by excessive cold stopping the motion of the blood in the capillary arteries. See PERNIO.

CHILD, n. s. & v. n. ~]

CHl'LD-BEARING,/jar□□. S.

CHI'LD-BED, n. s. CHI'LD-BIRTH, n. s. CHI'LDED, adj. CHI'LDHOOD, n. s. CHI'LDISH, adj. CHI'LDISHLY, ode. CHI'LDISHNESS, n. s. CHILDLESS, adj. CHI'LD-LIKE, adj.

Goth, kyld, kulld, from eld, a foetus ; Sax. cild; Goth. kylla, to beget ; Scot, chid ; Span. chula, a youth. Child is the human offspring in a state of infancy. Child- hood ceases with J youth ; the age of

youth ceases when that of manhood begins. Child is of either sex, though Shakspeare uses it as characteristic of the female. The compounds, childish, childishly, and childishness, are obvious ; and, when applied to their seniors, are expressive of trifling conduct, or weak understanding. Childhood is the infant state of existence. A pregnant woman is with child. A mother is said

to bear a child when she brings it into the world. It is then born, and hence the participle child- bearing as well as birth, or childbirth, the name of the act. To child was formerly used for to bring forth

children. Childless is having no child. The compounds, child-bed, and child- bed-linen, require no explanation. In former times the cognomen childe was prefixed to the family name by the eldest son; and the appella- tion was continued until he succeeded to the title of his ancestors, or gained new honors by his prowess. It is hence that such names as childe Horn, childe Maurice, See. are found in old romances.

The plural, 'children,' is applied to all the descendants of a particular man, or founder of a family, how remote soever their generations from the original stock ; as the children of Edom, and the children of Israel. It is also used metaphori- cally to describe some generic good or evil quality that applies to any class or division of mankind ; as children of light, and children of darkness. The metaphorical applications speak for themselves.

A I have said thurghout the Jewerie This litel child as he came to and fro, Pul merrily than, wold he sing and cry O Alma Redemptoris evermo. Cluiucer.

A litle scole of Cristen folk ther stood Down at the ferther end, in which ther were Children an hepe, comen of Cristen blood, That lerned in that scole yere by yere Swich manere doctrine as men used there j This is to say, to singen and to rede, As smale children don in hir childehede. Idf

Therein three sisters dwelt of sundry sort, The children of one syre by mothers three, Who dying whylome, did divide this 'fort To them by equall shares in equall fee. Spenser. The lion's whelps she saw how he did bear, And lull in rugged arms withouten childish fear. Id. The sons of lords and gentlemen should be trained up in learning from their childhoods. Id. on Ireland.

If it must stand still, let wives with child Pray that their burthen may not fall this day, Lest that their hopes prodigiously be crost.

Shakspeare.

"Vow I have stained the childhood of our joy With blood, removed but little from our own. Id. Mercy on 's ! a bearne, a very pretty bearne ! A boy, or child, I wonder 1 Id.

How light and portable my pain seems now, When that which makes me bend, makes the king

bow;

He childed as I fathered. Id.

The funerals of prince Arthur, and of queen Eliza- beth who died in childbed in the tower. Bacon. Learning hath its infancy, when it is hut beginning and almost childish ; then its youth, when it is luxuriant and juvenile. Id. Essays.

To thee

Pains only in childbearing were foretold, And, bringing forth, soon recompensed with joy, Fruit of thy womb. Milton's Paradise Lost.

Childless thou art, childless remain : so death Shall be deceived his glut. Id.

When I was yet a child, no childish play To me was pleasing ; all my mind was set Serious to learn and know. Paradise Regained.

As to childinrj women, young vigorous people, after ir- regularities of diet, in such it begins with haemorrhages.

Arbu'.hnoi.

Women in childbed are in the case of persons wounded. Id. on Diet.

The actions of childishness, and unfashionable car- riage, time and age will of itself be sure to reform.

Locke

Nothing in the world could give a truer idea of the superstition, credulity, and childishness of the Roman catholick religion. Addition on Italy.

She can give the reason why one died childless.

Spectator.

Let no one be actually married, till she hath the childbed pillows. Id.

Who can owe no less than childlike obedience to > her that hath more than motherly care. Hooker.

Together with his fame their infamy was spread, who had so rashly and childishly ejected him. Id. Some men are of excellent judgment in their own professions, hut childishly unskilful in any thing be- sides. Hayward.

He to his wife, before the time assigned For childbirth came, thus bluntly spoke his mind.

Dry den.

It was for a long time imagined by the Romans, that no son could be the murderer of his own father ; and they had therefore no punishment appropriated to- parricide. They seem, likewise, to have believed with equal confidence that no father could be cruel to his child, and therefore they allowed every man the su- preme judicature in his own house, and put the lives of his offspring into his hands. Johnson's Rambler.

Fret not thyself thou glittering child of pride That a poor villager inspires my strain,

With thee let pageantry and power abide, The gentle muses haunt the sylvan reign. Beattie.

Waste youth in occupations only fit For second childhood, and devote old age To sports, which only childhood could excuse.

Cotoper.

'Tisthe clime of the east ••• 'tis the land of the sun ••• Can he smile on such deeds as her children have done ? Oh ! wild as the accents of lovers' farewell, Are the hearts which they bear, and the tales which they tell. Byron.

Yet a fine family is a fine thing (Provided they don't come in after dinner) ; 'Tis beautiful to see a matron bring Her children up, if nursing them don't thin her. Id.

Her graceful arms in meekness bending Across her gently-budding breast ••• At one kind word those arms extending To clasp the neck of him who blest His child, caressing and carest, Zeleika came ••• and Giaffar felt His purpose half within him melt.

Id. Bride of A bydos.

CHI'LDERMAS DAY. From child and mass. The day of the week, throughout the year, an- swering to the day on which the feast of the Holy Innocents is solemnised, which weak and superstitious persons think an unlucky day.

To talk of hares, or such uncouth things, proves as ominous to the

fisherman, as the beginning of a voy- age on the day when childermas day fell, doth to the mariner. Carew.

CHILDERMAS-DAY, or Innocents'day, is an anniversary held, by the churches of England and Rome on the 28th of December, in comme moration of the children of Bethlehem massacred by order of Herod.

CHID-WIT, a power to take a fine of a bond- woman unlawfully gotten with child, that is, without consent of her lord. Every reputed fa- ther of a base child got within the manor of Writtel in Essex, pays to the lord a fine of three shillings and four pence, where child-wit extends to free as well as bond women. CHILE. See CHYLE.

CHILI, a large country on the western side of South America, running along the coast of the Pacific Ocean between the twenty-fourth and forty-fourth parallels of south latitude and be- tween 68►► 50″ and 74►► 20′ W. longitude from Greenwich. The reader will find an account of all its most interesting geographical and political features in our article AMERICA, SOUTH. We subjoin only what the unusual attention, excited by the rising republics of South America, may render important, by way of addition.

Chili is for" the most part a country of valleys, chiefly on the west of the Andes, from which high ridges run out to a considerable extent towards the sea, enclosing gentle eminences and delightful vales. The great ridge generally rises abruptly with many frightful precipices. The grand chain of the Andes, or Cordilleras, forming the eastern boundary of the country, is continued in an unbroken line through the whole length of the Continent, from Darien on.the north, nearly to the straits of Magellan southward. These mountains are impassable, except at particular points, and of these passes there are four in the neighborhood of Chili ; that of the Palos, opposite to the town of San Juan, now fallen into disorder, and very steep ; that of Uspallata, near Mendoza, called the Grand Pass; that of Cortillo, nearly 100 miles south of the former, where there are two chains of the Cordilleras, and that of El Planchon, opposite Conoeption, said to be pas- sable with ease by carriages. These mountains, though not the highest in the whole chain, those being situated nearer to the equatorial parts, are yet of prodigious elevation. Mr. Caldcleugh says, that an hour and a half before he reached the highest point, every trace of vegetation disap- peared except one, a new species of

fragosa, and that this was soon left behind ; when at last they arrived at the Pass, which he computes was at least 12,800 feet above the level of the sea ; still they had but reached the edge of the lower limit of perpetual snow; nothing else was to be seen above them but the white peaks towering still to an amazing height. From this situation they computed that the prospect to the east (for in every other direction it was intercepted by lofty chains) reached to a distance of not less than eighty leagues. The color of the sky was an in- tense blue. (Caldcleugh's Travels in South Ame- rica). The parallel ridges of hills, which run out towards the sea, are of considerably less elevation and have passes through them, by which the in- habitants of the enclosed valleys have a free com- munication one with another.

Many of these mountains are volcanic, and several bear decided marks of having been so, though no eruption has taken place from them within the memory of man. .The fourteen men- tioned in our previous article as in a constant stale of eruption, being encompassed by other eminences, their destructive effects never reach

the plains ; two only are found beyond the dia trict of the Chilian range of the Andes, the chief of which is the great volcano of Villarica, near the lake of that name; in the midst of perpetual snows it is constantly sending out its ashes and fiery streams, and is visible at the distance of 1 50 miles. A slight horizontal motion of the earth is the only indication of earthquakes that has been experienced since 1782, out the inhabitants have in general constructed their houses and cities with a view to a quick escape from more serious convulsions.

Very few countries in the world are so abun- dant in rivers as Chili ; an almost incredible num- ber of streams, of greater or less magnitude, roll down from the Andes, where they have their source. They are said to be not less than 123; fifty-three of them communicating with the ocean, and carrying with them the waters of all the others. We have already enumerated the most remarkable. The Laquen or Villarica, more than seventy miles, and the Nahuelgapi,eighty miles in circum- ference, are the most remarkable lakes in the country. The waters of these are fresh; but there are many others, some in the Spanish marsh, the waters of which are salt, the largest from twelve to twenty miles long. The principal islands belonging to Chili are, CHILOE and a cluster surrounding it forty-seven in number which see.

Gold is so abundant in Chili that, in some parts, there is hardly a

mountain which does not con- tain it ; it is found also in the sands washed down by the mountain torrents. In the south there were some productive mines, but since the Spa- niards have been expelled, these are not allowed to be worked. It is found in almost every kind of stone or earth, but most frequently in a brittle red clay-stone, and in small particles and bright spangles of singular forms, that may be separated with a chisel. Sometimes the pick-axe is used in working the mines, and sometimes the aid of gunpowder is called in, as circumstances may re- quire. The poorer classes only wash the sands. The quantity annually found is said to amount to four millions of dollars.

The richest silver mines are in the provinces of St. Jago, Acoucagua, Coquimbo, and Copiaco. It is sometimes found pure, and frequently mixed with various ores, with sulphur and arsenic. The mine of Uspallata produces the greatest quantity. Copper is found in all parts, but the richest mines are between the twenty-fourth and thirty-sixth degree of latitude. Between Co- quimbo and Copiapo there are as many as one- thousand, but those only that yield half the weight in refined copper. The lead is of good quality, and is not only found mixed with a por- tion of silver and gold, but it is obtained in all the silver mines. Of all the semimetals, which are abundant in Chili, none are worked except quicksilver; of this there are rich mines in the before-mentioned provinces; but the sale of it was a royal monopoly ; while this country was dependent on Spain, the digging of it was prohi- bited ; these restrictions, however, will probably be now removed. A great variety of earths, clays, bituminous substances and salts are pro- duced: one sort of clay is very fine and light and of agreeable smell, of which in some places the

monks make jars, bottles, &c. and paint them beautifully. There is a kind of lime or gra\elly chalk, which the inhabitants use in white-washing their houses; there are also the mountain green and blue native ceruse, lapis calaminaris, and ochres of different colors. The membranaceous mica, or Muscovy glass, is found here in most transparent and very large sized plates ; with this the people not only glaze their houses, but make of it artificial flowers. There are likewise different kinds of sand, black mixed copiously with parti- cles of iron, another sort of a fine blue and a ce- ment sand near Talca finer than that of Italy, and apparently of volcanic origin. Chili has exten- sive quarries of freestone, flint, rock crystal, and

plain and variegated marbles; and an almost in- finite number of spars, the most beautiful of which is one of an hexagonal form, and perfectly transparent. The mountains contain precious stones as agate, and jasper, and the rivers wash down small rubies and sapphires, evidently show- ing that the higher parts of the country produce others of greater size and value. Blocks of rock crystal are obtained in the Cordilleras, large enough for columns seven feet high. A little hill near Talca is said to consist almost entirely of amethysts, and it is supposed that Copiapo owes its name to the vast number of turquoises found near it.

Chili enjoys a rich soil, and a vigorous and abundant vegetation; beautiful evergreens cover the plains, valleys and sides of the mountains ; every season produces vegetables suited to the climate, and plants are found common both to this country and to Europe. In the northern parts tropical plants, such as the sugar-cane, the pine-apple, the cotton, the banana, the sweet po- tatoe, jalap, mechoacan, &c. thrive exceedingly well, and the most beautiful flowers are so abun- dant, that the fields look like so many gardens. The climate is so fine and the air so salubrious, that the inhabitants are liable to few infectious diseases; the domestic animals live all the year in the open fields, where, from feeding on aromatic plants, their flesh acquires a flavor unequalled in any country. The Chilians need no hay, as the herbage never fails, and in some pastures the grass grows so high as to conceal the sheep that are grazing in it. As in all countries south of the equator,spring commences here in September,sum- mer in December,autumn in March, and winter in June. In Chili the rainy season is in the winter; the north and north-west winds which most blow at that season always bringing rain, while, during the spring and summer, the south and south-west winds prevail, invariably occasioning a clear sky. In the northern provinces it seldom rains, but in the south frequent and dreadful storms are some- times experienced near the sea; in the islands it frequently rains in the summer. In those parts remote from the Andes, thunder is very seldom heard even in summer. Near the sea snow is never seen; in the vicinity of the mountains it falls sometimes once in five years, but seldom re- mains a single day. A white frost is sometimes seen, and a small degree of cold experienced in the month of August; but after sun-rise the tem- perature is like that of a fine spring day. In the Andes, on the contrary, great quantities of snow

fall from April to November, so that for the greatest part of the year the mountains are im- passable. The want of rain in summer is, how-ever, supplied by most plentiful falls of dew. On the coast it is often foggy, but it clears as the day advances.

In animals this country is not so abundant as other parts of South America; the species pecu- liar to it being only about thirty-six, though in the unexplored regions probably many more might be found. The most remarkable is, the vicunna or guanaco, in shape like a camel, but differing from it in being most vigorous in the most inclement regions, in the ice and snow of the Andes. The Peruvian sheep is found here. The wild goat, the dog, the fox, and the pagi or lion, resembling that animal in size and roaring, but without a mane, abound in this country, and all European animals thrive, and some even grow larger, when imported into Chili. There are 135 species of birds belonging to the land, and the species of sea birds are innumerable. Fish is abundant on all the coast ; seventy-six sorts differ from those found in the northern hemi- sphere; the fresh waters also swarm with them.

The manners of the inhabitants are represented as remarkably free, and very remote from that stiffness and reserve, which even to a late period prevailed in Peru, where the Americans were subject to every species of oppression from the overbearing Spaniards, and a dreadful system of espionage destroyed all the happiness of society. In Santiago mirth and gaiety, frankness and con- fidence, prevail; all ranks hail each other as countrymen, and own no master but their duty and the law. Their dress is greatly assimilated to the English and French costumes, and their domestic manners are of late much improved. Instead of sitting cross-legged at low tables, they now sit on chairs at higher tables like the Eng- lish ; no longer eating out of the same dish, their meals are served up with regularity and neatness. Scarcely an evening passes without social par- ties, balls, or concerts, and they perform the Spanish dances with peculiar elegance. There being few carriages in use among them, it is usual, at the period of the company's retiring, for the band to escort the parties home, and as the nights are so fine little" attention is paid to the shortest road. The Chilians are remarkably fond of music, and all the children, as soon as they can comprehend anything, are taught to play, usually by their mothers ; there being, it is said, no music master at St. Jago. They have greatly improved in the musical instruments they use, the jarring of the old halfstrung guitar has been exchanged for the piano, and the tasteless dance of the country has yielded to the elegant country dance.

In the neighbourhood of Conception, to the south, the natives, called Araucanos, are and ever have been an unconquered race. Valdivia the Spanish general, as has been mentioned in the article South America, could not subdue them, and at last fell by their hands. Before the late revolution these people remained per- fectly free and

used to come to the frontiers to carry on a small traffic. They supplied Ui Creoles with very superbr horses, and coarse*

Ivoollens, and in return took wheat and Euro- pean goods. They are said to be numerous, and among them has been found a tribe of European whites, whose origin is very uncertain. Their language is well known, and a dictionary of it has been made by one of the Jesuit missionaries, who had at the time of their expulsion intro- duced two establishments into the country. How ihis order contrived to do this in a nation so ini- mical to Spaniards, is wonderful ; probably their sanctity of life and manners, together with their medical skill, and insinuating manners, contri- buted much to this preference.

The Chilian language is superior in pronun- ciation and elegance to the Spanish of the Eas- tern shores of South America, and without any of those barbarisms so common in Buenos Ayres. There is no university at Santiago, but at the In- stitute there is a large school where 400 boys are educated at the public expense, besides many private seminaries. ‘ The only public library,’ says Mr. Caldcleugh, ‘ is that in the Institute, under the immediate care of Don Manuel de Sa- las, a man of much information, and very ready to communicate it to others. It consists of se- veral thousand volumes, some of which belonged to the College of Jesuits, and some MSS. many of which, relating to the early history of the country, are of a curious and interesting nature. Prior to the revolution, all books published on this side of the continent were printed at Lima, and probably no press existed at Santiago ; one press has been established since, which is chiefly exployed in printing the gazette and political pamphlets. No books, however, have been pub- lished, except some trifling elementary works. The usual dress used in attending divine wor- ship is black. When the church bell sounds, at half past six in the afternoon, the greatest silence prevails, ??? all carriages and carts stop for two or three minutes, until a change in the sound announces that the prayer is finished.’

As comparatively few foreigners have emigrated to this country, the manners of the higher classes have not been much corrupted. They are re- marked for the union that subsists in their fami- lies, and the tenderness and respect shown by children to their parents. They are exceedingly kind and hospitable to foreigners. The ladies have great

strength of intellect, accompanied with almost infantine simplicity ; they are more accomplished than in many other countries, and their acquirements are attained with very limited means, they are possessed of great per- sonal charms and sweetness of disposition, and are entitled to the highest character for delicacy and modesty. The lower classes are frequently fawning and deceitful, addicted to cheating, and fond of all sorts of gambling, at which they will spend whole days, and part with every article of their dress. On the other hand they are very compassionate ; any appearance of distress will excite their commiseration, and they will spare no pains to alleviate it. They are industrious, and divide various toils with the women, which in Buenos Ayres the men. think beneath them. The people as a whole are highly patriotic, and treat the natives of the last-mentioned state with great disdain, which is plentifully returned.

While sending the foregoing pages to press, we are favored with Mr. Myers's intelligent Tra- vels in Chili and La Plata. This gentleman embarked from England with his family in 181 9, to conduct a commercial speculation in Chili, and travelled across the country, from the eastern to the western shore of South America, compiling an excellent political and statistical account of the districts through which he passed. We can- not, at this time, better avail ourselves of the in- formation contained in his work, than by a few extracts from it under the following heads.

CLIMATE. ??? At Mendoza, a large town near the foot of the Andes, ' We spent,' says he, ' the evening with Dr. Colesberry, a physician from the United States of North America, who had left his native country laboring under a severe pulmonary affection, from which he had entirely recovered in the genial climate of Mendoza. He follows his profession, is one of the most amiable and deserving men I ever met with, and is justly admired by all the inhabitants of Mendoza. To this deserving gentleman I shall ever feel under great obligations for the kind attentions he showed to my wife during her long subsequent sojourrv- ment in Mendoza, and for the friendly assistance he rendered us at the period of our great embar- rassment at Villa Vicencio. Dr. Colesberry described the climate of Mendoza as exceedingly salubrious, especially in cases of pulmonary affec- tion, instances of which had come under his ob- servation, and which have since been confirmed by others. Dr. Gillies, a Scotch physician of great ability, now resident in Mendoza, has af- forded a no less remarkable instance of the effi- cacy of this climate ; he was obliged to leave his native country from a pulmonary affection, from which he was quickly relieved by the air of Men- doza. The population was described by Dr. Colesberry to be very healthy. I enquired par-

ticularly respecting the tendency to bronchocele, having noticed two goitres as I entered Mendoza : this affection he assured me was prevalent here, as well as in San Juan, a town 150 miles to the northward, but not so much so as in the more northern districts of Tucuman and Santiago del Estero, which are still farther removed from the elevated Cordillera, and the region of snow. These places are particularly noted for the fre- quency of bronchocele ; these towns are situated in swampy valleys, subjected to insufferable heats, surrounded by forests and stagnant lakes, which render the air extremely insalubrious : he had never observed bronchocele combined with cretinism, as we find in certain alpine districts ; he had, indeed, nowhere observed an idiot, nor had he seen an instance of mental derangement. Deformity was seldom met with, and the Men- dozinos, from the blessings of their climate, were free from numerous evils to which other countries are much subject.'

PASSAGE OVER THE GREAT CHAIN OF THE ANDES. ••• ' On leaving Mendoza, the road lies through the suburbs and cultivated grounds, which extend above a league and a half to the northward. The route is then about north by east over the same description of Travesia, as that which lies between Mendoza and the Desaguadero already described. At the distance of five leagues,

the road divides into two branches, one tending about N.N.E. to San Juan, the other about N.N.W. to Villa Vicencio. Where the road separates, a low branch of the Paramillo range of mountains juts into the plain, and approaches within one league of the road ; it is a lime-stone formation, and is quarried for the purpose of sup- plying the town of Mendoza with lime, and hence is called the Calera. Two leagues further we approach the foot of a detached low series of hills, called the los Cerrillos, and, passing to the westward of them, the road gradually leads towards the Cordillera range. Thus far the road is sandy ; but, about a league before reaching the Cerrillos, it begins to be stony, and continues more or less so till we reach the Cordillera ; for, over this part of the Travesia, the currents of water flowing from the three extensive ravines of Villa Vicencio, of the Higuera, and of Canota, have spread over its whole surface immense quantities of the sharp angular fragments of stone that accompany the alluvial matter brought down from the hills by the torrents during the rainy season. From the Cerrillos, the course tends for three leagues in a W.N.W. direction, towards an opening in the mountain

range, in which there is a small spring of water, this is at a place called El Coral Viejo. We now enter a ravine ; the hills on each side are at first of in- considerable height, but as we advance the val- ley becomes narrow and more stony ; its bed is covered with bushes of hanilla, retarno, verbena, &c. Higher up this narrow ravine, the mountain ranges are of considerable height ; and, at the distance of fifteen leagues from Mendoza, we reach the post-house of Villa Vicencio. The hills are of hornblende slate, including seams and fissures filled with sulphate and carbonate of lime. Following up the course of this lateral branch of the main ravine, to the source of the brook, we find, at the distance of a mile and a half, the hot springs of Villa Vicencio : the inter- mediate ravine is narrow, and enclosed on each side by very lofty hills ; its tortuous bed is filled by a kind of tufa, an alluvial deposit of sandy marl, indurated by a considerable admixture of the carbonate and sulphate of lime, encrusted upon twigs and bushes, washed from the hills by the mountain torrents. At the head of the ravine, the little brook falls over a cragged precipitous rock, and forms a small but picturesque cascade; it is necessary to scramble up this rock to reach the baths, which are situated in a beautiful little amphitheatre, bounded on all sides by lofty moun- tains. The baths are shallow pools, dug oxit of the tufa, about eight feet in diameter, and two feet deep ; from the bottom of each flows a small spring, so that the water of every one of them is distinct ; the quantity which flows into each is exceedingly small. There are five of these springs : �w the first and highest, in the month of October, "ˆhen the thermometer in the shade stood 'at 66ر Fahrenheit, the temperature was 96ر ; of the second it was 88ر ; of the third 92ر ; of the fourth 89ر ; of the fifth 75ر. The water of these springs has no peculiar taste or smell ; but there arises from the bottom of each basin considerable por- tions of gus, which gives them the appearance of boiling. I had with me no re-agents with

which to examine the nature of these mineral waters ; but 1 apprehend the air that arises is simply carbonic acid gas, which is tne more probable, as I observed a dead frog floating in one of the pools. At about fifty yards distant from the huts of Villa Vicencio are the ruins of old buildings, formerly the smelting works for the reduction of the silver ores of a mine in the Paramillo range : this place was selected as the nearest to Mendoza where water and fuel could be found, although it is eighteen leagues distant from the mines, whither the ore was brought on the backs of mules. The foundation walls alone exist ; they are constructed of rude fragments of stone, cemented with mud : much scoriae and refuse lies around. I

could, however, nowhere perceive the vestiges of a trapiche, or water-mill, for the pulverisation of the ores. Although there is nothing particular about this place, either as to scenery or productions, deserving of particular notice, still the change of situation is so contrasted with the unvaried country hitherto seen on the road from Buenos Ayres, that, however unin- teresting in itself, every object is viewed by the traveller with great curiosity and indescribable pleasure. The height of this place above the level of the sea is 5382 feet, and above Mendoza 2780 feet : it is extremely bleak in the winter season, and at all times very subject to storms: snow falls here generally during the winter months.

On leaving Villa Vicencio, we turn out of the ravine and enter another, which is in fact the main valley. The road continues to wind some- times north-east, at others W. S. W., along the narrow bed of the valley, which is covered with bushes of jarilla, retamo, verbenas, algarrobas, lyciums, &c., and is bounded by lofty impending rocks, partly bare, but mostly covered with soil thinly scattered over with bushes, cacti, and many plants deserving of notice. One spot on this road is remarkable for the abundant growth, on the hills as well as in the valley, of a dipsacus, which resembles our common teazel ; the spot is in consequence called the Cardal by the mule- teers : here, as well as at many intervals of a mile or two, are found on the sides of the hills a little pool of water, supplied from a diminutive though never-failing spring. These places are known only to the arrieros ; they have each their proper name, and are used as resting places for the troops of mules which are continually travelling to and from Chili. The hills are pretty well covered with pasture, which, in these mountain- ous countries, must not be supposed to mean those beautiful grassy swards with which our hills at home are everywhere covered, but to signify small plants of many kinds. Here the cattle de- vour every vegetable substance, even bushes, when all other plants fail. It is not, therefore, from the richness of the pasture that these re- cesses are of value to the Mendozinos, but from the security they offer for breeding cattle; in many places among the hills we perceive many herds. The mountains are so steep and lofty that the sun, which rises in the plains at five o'clock, does not shine in these valleys till nearly eight in the morning; they seem principally com- posed of hornblende slate. At the distance of a

league from the post-house we pass an angle, re- markable for a lofty

mountain, whose precipitous rocky face is covered with a species of lichen, which gives to it a golden hue when the sun shines on it ; hence its name El Cerro Dorado, the Golden Mountain. At the distance of another league the valley becomes more contracted, the impending rocks grow more precipitous and bare until we enter the narrow pass of the Angostura, the access to which is over barren rocks, from among which issue little springs of fresh water. The sides of Angostura are perpendicular, to the height of from 200 to 300 feet ; its length is about 250 yards, and its breadth about seven yards. The geological formation of the whole ravine is similar to that about Villa Vicencio ; and the whole length of the valley, up to its ori- gin, is in like manner filled with a similar tufa, which, in many places, is covered with a saline efflorescence. Pursuing the course of the ravine two leagues further, we reach the Alojamiento de los Hornillos, where there is a small hut, like that of Villa Vicencio, and a never-failing spring of water : here, as its name implies, existed for- merly works for reducing the ores from the San Pedro mines.

From this place we begin to ascend the Para- millo, which is the name given to a very long and narrow mountainous ridge, lying between the plain of Uspallata and Mendoza : it is evidently of very different formation from the more western, or main Cordillera, and is said to run indepen- dently of it. The path up the ascent is gradual and winding ; and, on reaching the summit of the first height, we have presented to us a beau- tiful view of the distant plains, in the midst of which Mendoza is easily distinguished at the dis- tance of above forty miles, in a straight line. The breadth of the summit is several leagues in extent, and is broken into numerous undulating risings and descents : the botanical novelties are not very numerous, nor very remarkable. I ob- served, however, a new hoffmansaggia, different from that of Mendoza or Aconcagua.

I regret that I could not determine the height of the Paramillo, being prevented by the occur- rence of a violent tempest, though in the valleys below a fine sunshine reigned. I have crossed the Paramillo four times, and on every occasion I have met with squally weather : hardly a day passes without rain, though it be but a few drops, and wind is never wanting on this inhospitable spot. The course over the Paramillo is nearly West : the descent, which is comparatively very trifling, leads to the head of a narrow ravine, the bed of which we follow ; and, at the distance of about a league, pass by the mines of San Pedro, 6etter known as the mines of Uspallata, which have been several years neglected for want of capital.' This pass of Uspallata we have before noticed as one of the principal roads across the Andes. We regret we cannot follow this gentle- man further.

Of the curious natural production called Bezoar stones, he says, ‘ A friend of mine, an in- telligent surgeon, on his return to Chili from Mendoza, over the Cordillera, brought a number of rounded stones he had collected about the springs of the Inca’s bridge, as well as at some

distance from them ; these, he supposed, were Bezoar stones, voided by the guanacos, that fre- quently came down from the mountains to drink the mineral water, which, he conjectured, must act upon them as an emetic. He therefore drank some of the water, which produced those effects on him. The fact appears confirmed by the cir- cumstance of these stones having been nowhere else discovered in the Cordillera, except at this place, and that it is known only to a few native arrieros, who have kept the secret, to profit by the sale of the calculi, which they carry to Mendoza and Aconcagua. These stones are sought after by many, who believe that, having been placed before the sacred altars, they become possessed of wonderful curative powers, in which respect they resemble the famed Bezoar stones of the east,, which, even to the present day, are highly prized for their alexipharmic virtues. The calculi my friend brought with him varied in size from that of a cherry to a ball of two inches in diameter ; externally they were somewhat globular, slightly flattened, or compressed in places, of anochreous color, having a smooth and very fine grained sur- face, and soft enough to be scratched with a. knife ; internally they appeared composed of dis- tinct laminar concretions, which are very difficult to separate. I sawed one through the middle ; its section was similar to other Bezoar stones I remember to have seen ; like them the concretions appear formed upon a blackish nucleus of ex- traneous matter ; the first lamellae are thin and scaly, the others increase in thickness as they at- tain a larger diameter ; they are too of various colors, so that the section of the stone presents an onyx-like configuration, the concentric shades being of various intermediate tints, between white- and ochreous brown : some of the layers are com- pact, and of a crystalline texture, while others are dull and porous. The calculi are composed apparently of carbonated lime, for they strongly effervesce in dilute common sulphuric acid, and I regret having no other acid at hand for a more minute examination. Their specific gravity is

2-47.’

WINTER TRAVELLING IN THE CORDILLERAS. ‘ I have hitherto spoken only of the passage over the Cordillera during the periods when the roads are clear of snow : in the months from June ta September, the passage cannot be effected with- out considerable

personal exertion, much delay, and at a far greater expense : at these times the valleys on both sides of the Cordillera, as well a& the Cumbre itself, are deeply covered with snow, so as to be impassable by mules : in this case it is necessary to travel on foot the whole way from the Punta de las Vacas to the Guardia, a distance of sixty-six miles. On these occasions it become requisite to hire peons to carry the provisions, baggage, and saddle equipage, which of course is attended with considerable expense. Since the establishment of foreign commercial houses in Chili, the passage of travellers and expresses across the Cordillera, in the winter season, has become more frequent. The courier too passes, and returns regularly every month : the Spaniards always entertained too much dread of the cold to venture upon a journey attended with so much inconvenience and personal exertion. The fatigue*

cf walking such a distance over loose snow is certaimy considerable ; but perhaps the greatest inconvenience experienced is the painful inflam- mation produced in the eye-lids from the effect of the too powerfully reflected light, proceeding from the brilliant whiteness of the snow, which, in intervals of fine weather, is generally increased by the immediate reflection of the solar rays. These effects might perhaps be prevented by the use of goggles of green glass. Should the weather threaten an approaching tempest, it is always prudent to hasten for the nearest casucha, and take advantage of that shelter till the storm has passed over, and the sun has again begun to shine in a cloudless sky. I have known persons who have been detained a week in one casucha, and a fortnight in another : this indeed frequently happens to the courier, so that the delivery of the mail is retarded for six weeks or two months in cases of very bad weather. It is, however, pos- sible to pass from the Guardia to the Punta de las Vacas in five days, should no impediment from the weather intervene, and should the snow have become tolerably firm upon the surface. Great fatigue is experienced in the ascents : the descents would perhaps be more laborious, but for a contrivance commonly practised by the couriers and peons accustomed to the journey. A sledge is formed of a piece of raw hide, upon which the man places his saddle-traps, or his load, seats himself thereon, lashing all firmly round his waist by hide thongs ; having made this adjustment on the summit of the declivity, and suffering himself to slide down by his mere weight, he guides his course, or slackens the rapidity of his descent, by plunging his large knife, which he firmly grasps in his

hand, into the snow : the resistance thus produced sufficiently retards his progress should he have acquired too much ve- locity ; or, like a rudder, it inclines his course to the right or left, as he may desire ; the labor of the journey is thus reduced. The traveller has nothing to fear from avalanches of snow, which are unknown, or are at least of trifling magnitude, and out of the reach of his track. The snow of the Cordillera does not, like that of colder lati- tudes, remain long in a soft state. Soon after it falls the sun has sufficient power to melt the sur- face of the snow, which, in this half-fluid state, niters into the porous mass beneath, and, freezing again, converts the whole into a compact hard body; and it thus becomes so consolidated as to require the heat of an almost vertical sun before it finally disappears from the surface of the moun- tains.'

COST OF THE PASSAGE. ††† 'The cost generally attending the passage of a traveller across the Cordillera, during the winter season, is 350 dol- lars, about ††70 sterling ; while at other seasons, with the same luggage, that is, no more than is necessary for his journey, the expense of his passage ought not to exceed twenty or thirty dol- lars, 51. to 7 1. 10s. He cannot set out on his journey, in winter time, without having made previous arrangements, which will detain him in Chili or in Mendoza several weeks. He will travel from Mendoza as far as the Punta de las Vacas with mules ; the intermediate space of snow, which cannot be traversed by animals, is then

performed on foot, as before described, until he reaches the termination of the icy barrier, which generally is about the Guardia or the Ojos de Agua, at which place the mules, purposely brought from Aconcagua, are in readiness to convey him to his ultimate destination.'-

We have the following spirited description of the earthquake in Chili in 1822. ††† 'The great earthquake, before alluded to, happened during my residence at Concon, at the mouth of the Quillota, or Concon river. At half-past ten o'clock on the night of Tuesday, the 19th Novem- ber 1822, as my family were retiring, the first oscillation was felt. It was very sudden and violent ; we were all alarmed, and paused for an instant, when the falling of the glasses from the sideboard, the cracking of the timbers of the roof, and the rattling of the falling tiles, caused us to rush out of the house. The earth was violently convulsed, heaving up and down in a manner hardly conceivable, and as little capable of being accurately described as our feelings. The tim- bers of a large corridor were breaking in all di- rections, and flying off in fragments, while the air

was filled with dust from the falling roof. The situation of our two children instantaneously occurred to us. I rushed into the falling building, snatched one boy from one of the front rooms, and, carrying him in my arms, ran to the back of the house, where the other boy was in bed ; my sensation in this painful situation cannot be imagined. I ran with my two boys to their mother and their aunt ; and by the time I joined them the great shock was ended ; it continued about two minutes. After a lapse of about three minutes, the agitation returned violently, and continued for about a minute, when several of the strong pillars of the corridor were shivered. During this time there was a loud rumbling noise, like the distant echo of thunder in a mountainous country. The heaving of the ground seemed not only to consist of horizontal oscilla- tions, but also of violent uplifting concussions, as if repeated explosions were exerting their force upon the roof of a hollow cavern under our feet, threatening to burst open the ground, or blow us all into the air. Our sensations were truly horrible. There was nothing remarkable in the appearance or state of the atmosphere ; the moon and stars shone with their usual resplen- dence. Anxious to ascertain the state of my mills, which were on the edge of the river, about fifty yards from the house, I proceeded towards the spot, and was met by my English workmen, who told me the building had been thrown down, that the walls on both sides had been precipitated into the mill-stream, and the roof had fallen in. While making a survey of the damage, another violent shock warned me of my danger; the mill at the time of the first shock was in action ; the miller, a young man recently arrived from Eng- land, on hearing the first noise of the earthquake, concluded that a nail, by some accident, had got between the mill-stones : he therefore shut down the sluice-gate, and raised the running-stone. At this moment the walls of the outer room fell, and caused him precipitately to quit the building. During three quarters of an hour we experienced continual and severe shocks, the intervals between

which seldom exceeded five minutes, every time shaking down portions of the buildings. Our Creole servants walked about the enclosure almost in a state of despair, thumping their breasts, and repeating their Ave Marias. Another of my English workmen, who lived in a cottage close by, soon joined us ; part of his house had been thrown down. The major-domo of the neighbouring estate, sent by his master, came to learn our fate, when we heard that his house,

as well as the chapel, had also been levelled to the ground. In the course of the night, a friend came from his residence at Cuintero, a few miles to the northward, to ascertain what had befallen us ??? his own house, like ours, had been shaken to pieces ; he informed us that the ground over which he had passed was much altered, and torn in many places in wide rents. The sand-hills had been thrown into the Quintero Lake, and the ford at the usual place across it was greatly swelled, so that the water rose above his saddle. This appears to have been caused by an influx of salt-water into the lake, during the great rise of the sea, which accompanied the first and most violent shock. At Quintero great part pf the house was destroyed, and the family, consisting of my wife's sister, her husband, child, and servants, had escaped without much serious injury; though, in the endeavour to make her escape, a large book-case fell, knocked her down with her infant in her arms, and fell upon them. She was happily extricated from this perilous situa- tion by her husband, with only a few bruises. We lighted a fire in the middle of our enclosure, and seated ourselves around it till the morning dawned, when I was better able to ascertain the damage that had been done. The house was not so much ruined as I expected ; the outer walls were rent in several places, and the partition walls thrown down. I had recently put on a new roof of good carpentry, 120 feet long and fifty wide ; and this was secured by the corridor, and strong iron ties running through the walls at proper intervals, and but for this we should probably have been all buried in the ruins of the building. The ground of the yard to which we retreated was cracked in all directions. The mill- stream in many places was filled up by the falling in and collapsion of the banks. The ground between the mill and the river offered numerous evidences of the convulsions it had undergone : clefts, above a foot wide, presented themselves at the distance of every few yards, and in several places the ground itself had sunk two feet below its usual level. On many spots were numerous hillocks of sand and mud, which had been forced through the crevices. They appeared like mud volcanoes in miniature ; some of these had again sunk, leaving in their places muddy pools. The tail course from the mill, which extended above 2000 feet towards the river, was filled up, and made level, partly by the collapsion of its bank, and partly by its bottom being forced up by the earthquake. In the course of the next day I learned the fate of the towns of Valparaiso, Quillota, Casa Blanca, and Limache ; all these towns had been destroyed, together with a great number of persons, who had been buried in the rains. For many days we had smart shocks of

earthquakes. On the Saturday and Sunday fal- lowing the

earthquake I visited Valpaniiso : on my way I found the houses at the Vina &e la Mar levelled to the ground. On entering Val- paraiso [was astonished at the extent of the ruin, and dismayed at the miserable appearance of the place, as well as at the forlorn and wretched condition of the people. The houses were nearly all unroofed ; many had been thrown to the ground, while the thick walls of sun-dried bricks which remained were split in all directions. The desolation was horrible ; the large church of the Almendral, called La Merced, presented the most remarkable ruin. The tower, built of burnt bricks and good mortar, the walls of which, up to the belfry, were six feet thick, were shivered into large blocks, and thrown to the ground. The tower was sixty feet high. The body of the church extended from north to south. The walls at both ends were thrown down, both fell towards the north ; the side walls, although much damaged, remained, and supported the ridge roof of tim- ber. The covering of the roof was entirely shaken off, and the whole body of rafters inclined con- siderably towards the north ; and the few roofs of the houses in Valparaiso which were not thrown down, all inclined in the same direction. On each side of the church of La Merced were a number of square buttresses of good solid brick-work, six feet square ; they stood at a small dis- tance from the walls. Those on the western side were all thrown down, as were all but two on the eastern side ; these two were twisted from the wall in a north-easterly direction, each presenting an angle to the wall. This twisting towards the north-east was remarked in other places. At Quintero, thirty miles to the northward of Val- paraiso, the heaviest and largest pieces of furni- ture in the houses there were turned in the same direction. The whole population of Valparaiso had fled to the hills, on which they were encamped. At the further and narrow extremity of the town, called the Port, where the houses are built upon the solid rock, the damage was not so great as in the other parts of the town. The governor's house, the two castles, and the churches, being the most substantial buildings, were all shivered to pieces, the destruction being here, as in other places, iu proportion to the thickness and solidity of the walls. It was fortunate that the earth- quake did not happen two hours later, as nearly the whole population would then have been buried in the ruins; as it was, about 150 people were killed, and many were wounded or bruised.

No bombardment could have produced such complete ruin as the earthquake effected. The desolate condition of the people was lamentable in the extreme ; and this was dreadfully increased on the night of the 27th, when, to their surprise and astonishment, it rained heavily. If any one thing more than another could add to their

wretchedness, it was this unseasonable and un- expected fall of rain.

They who had escaped from the ruin of the town, and retired to the hills with such of their property as they could save, were some of them living in tents ; the greater number were com- pelled to bivouac in the open air, and, while de- pending on the continuance of the usual dry

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weather, the rain, wlucn so unexpectedly fell, put them into a state of almost absolute despair. It ceased, however, towards the morning; had it continued for a longer period, not only would it have destroyed their property, but it would have produced famine and disease, the most horrible apprehensions of which filled the minds, and wholly occupied the thoughts, of the unfortunate and miserable people. Rain in the month of November had never been known, and its occur- rence during the continuance of the earthquakes was considered by the bigoted and ignorant Chilinos, as a mark of the divine vengeance for their own sinful lives, the conduct of the people in power, and the crime of permitting the English heretics to contaminate the country.

The extent of country over which the earth- quake was felt appears to have been very con- siderable ; Copiapo on the north, and Valdivia on the south, were shaken by it, although these towns are 880 miles apart : it was also felt throughout the whole range of the Cordillera, as far as Mendoza, and even as far as Cordova, though here the shock was comparatively weak, and the time of its occurrence an hour later than in Valparaiso. Cordova is upwards of 500 mile east of Valparaiso.*

On the important subject of mines and mining, he says, ‘ Our countrymen at home are evidently deceived in imagining that the Chilinos under- stand but little of the art of mining : they may, on the contrary, be assured that they are very skilful and efficient miners, and will not only produce the ore at the earth’s surface at a lower rate than others, but that, in their rude and eco- nomical processes, they will extract the metals at a much less cost. In the construction of the furnaces, and in other respects, many improve- ments may and will be introduced ; but any one who has made correct observations upon the country, will, at one glance, perceive that all at- tempts to introduce foreign modes, new materials, or novel processes, will cause great confusion and loss. The Chilinos cannot, will not, com- prehend any other than their old methods. Be-

fore any one attempts mining, he ought to gain sufficient experience and knowledge of the cha- racter of the people, and the resources of the country, so that he might be competent to cal- culate with certainty how far his arrangements could be adapted to the peculiar habits he will have to contend with, and the scanty materials he will be able to command. I can speak on this subject with the advantage of experience ; I was at first deceived to a great extent, and so will all foreigners be who attempt any operations in Chili : the very customs and methods which to them will appear barbarous and inefficient, will be found, on better knowledge, to be grounded upon experience and reason ; and to benefit by these observations, so as to apply them to their own particular views, they must so far exert their judgment as to trace them to their origin, and discover the necessities which have induced them. Necessity alone has been the author of national customs, and it cannot be denied that methods roust vary according to the peculiar resources of the country, and the habits of the natives. On my arrival in Chili everything appeared to be

irrationally contrived and barbarously managed; but the more I became acquainted with the people and their customs, the more I saw of the country and its productions, the better I understood the ca- pabilities of the land, the more I discovered ingenuity in that which I before considered bar- barous, and could trace a far better adaptation of those means to the condition of the people, and the present nature of the country, than our own English notions could possibly have contrived. It is the habit of an Englishman, educated in the midst of the most admirable contrivances, and used to means adapted to a highly refined, indus- trious, and intelligent community, to carry his notions of improvement to every foreign object which comes under his observation ; and it is easier, and more gratifying, to apply these notions than to unlearn his knowledge, and bring back his ideas to a state applicable to a more primitive condition of society. This difficulty will operate strongly towards the failure of the numerous adventures now directed to the vast continent of the new world, and on the mining companies, in particular, it will operate still more forcibly : in the outset, an immense portion of their capi- tal will be wasted in merely learning how they should conduct their operations to advantage, and in acquiring the necessary experience of the country. If this has been experienced by the persons who have lost their own capital in the trial, how much more certain must it happen to those who are exerting themselves with the capi- tal of others, and who cannot feel the same in- terest in economising their resources as they would if the adventure were entirely their own, and superintended by themselves on the spot. It cannot be

expected that the persons sent out from England, however competent to the prac- tical discharge of their duties at home, will be equally so in the execution of their functions abroad, with the want of local experience and the necessary adaptation of new habits to a new and uncivilized people.

‘ I employed a number of the most intelligent English workmen, but I found, in every case, the greatest difficulty in managing them. Their efforts, their knowlege and art, most valuable at home, become useless among the Chilinos, and in the absence of their habitual resources.

‘ The agents to whom I have alluded will be surrounded with difficulties on every side, and be deceived in every possible way : it is not enough that they will be assisted by the advice of Englishmen who have been resident in the coun- try, if those persons do not possess the requisite judgment to guide them; and this not one of them has. It is, indeed, incompatible with mer- cantile proceedings that a commercial agent should direct his attention to objects of research not connected with the concerns of the counting- house. I know, from experience, that many clerks, who have unfortunately manifested a dis- position to matters not immediately relating to commerce, have lost their situations ; of course there are exceptions to this rule, but it is beyond doubt generally the case. On my arrival in Chili I felt this acutely. I was surprised to find persons of considerable ability provokingly un- inquisitive, and unconscious even of the existence

of matters that had been incessantly under their observation. However distinguished for com- mercial knowledge, these deserving individuals are not those from whom may be expected any assistance in matters of speculative utility re- specting the country, or any valuable statistic information. From the natives, the mining agents will have reason to be more on their guard : the smooth-faced exterior and plausible manners of the Chilinos, his apparent sincerity and genero- sity, will at first operate powerfully on a stranger, who has not yet ascertained his true character. I will repeat here what I have elsewhere said of them,. that in treating with the best of them, as little confidence and as much caution are requi- site as it is

possible for one person to use with another.

‘ Another consideration, which will operate powerfully against the success of mining com- panies, is the absolute impossibility of employing any considerable capital in mining speculations, much less the immense sums contemplated in England. It will be seen from the modes adopt- ed in the country how little capital is actually employed therein ; and there is an evident rela- tion between the scantiness of capital, and the scantiness of population. It is clearly deducible from the simplest principles of political econo- my, that the one cannot operate without the other, and any attempt to force capital into em- ployment, so as to raise the demand for labor beyond what can be supplied, must raise wages, and lessen profits. This has been proved at the very outset in Mexico, where the suddenly in- creased demand for laborers has augmented the price of wages above ten-fold, and this advance will be increasing in proportion to the projected employment of workmen. It operates in all ways ; the demand for labor at the mines takes away the agriculturist from his operations, and the demand for produce increase? with the di- minution of hands to produce it: the same in the demand for transport, for collecting mate- rials, &c., would operate to an extent that could not have been contemplated in England. It is, however, not only certain that the capital pro- posed cannot be employed in mining operations, but it is no less certain that, whatever British capital is forced into mining speculations, will be unproductive, and that loss must take place to a considerable amount.’ Since transcribing the above, it has been proved, by reference to po- sitive experience, that the views entertained by our author are perfectly accurate, as in the whole of this immense district only one mine is really productive.

CHIL’IAD, n.s. From x^ac. A thousand; a collection or sum containing a thousand.

We make cycles and periods of years, as decads, centuries, chiliads, for the use of computation in his- tory. Holder.

CHILIA’EDRON, n. s. From Xt\ia, A figure of a thousand sides.

In a man, who speaks of a chiliaedron, or a body of a thousand sides, the idea of the figure may be very confused, though that of the number be very dis- tinct. Loc/te.

CHILIAGON, in geometry, a regular plane figure of 1000 sides and angles. Though the imagination cannot form an idea of such a figure,

yet it is asserted, we may have a notion of it i►► the mind, as we can easily demonstrate that the sum of all its angles is equal to 1996 right ones: for the internal angles of every plane figure are equal to twice as many right ones as the figure has sides, except those four which are about the centre of the figure, from whence it may be re-solved into as many triangles as it has sides. The author of 1′ Art de Penser, p. 44, has brought this instance to show the distinction between imagination and conceiving.

CHILIAUCHA, or CHILIARCHTJS, in anti- quity, an officer who had the command of 1000 men.

CHILIFA'CTIVE, adj. From chile. That which makes chile.

Whether this be not effected by some way of cor- rosion, rather than any proper digestion, chilif active mutation, or alimental conversion.

Browne's Vulgar Err ours.

CHILIFA'CTORY, adj. From chile. That which has the quality of making chile.

We should ratlw.r rely upon a chilifactory men- struum, or digs-stive preparation drawn from species or individuals, whose stomachs peculiarly dissolve lapideous bodies. Browne,

CHILIFICA'TION, n. s. From chile. The act of making chile.

There is a fourfold order of concoction ; mastica- tion, or chewing in the mouth ; chylification of this so chewed meat in the stomach ; the third is in the liver, to turn this chylus into blood, called sanguifica-tion ; the last is assimulation, which is in every part. Burton's Anatomy of Melancholy.

Nor will we affirm that iron is indigested in the stomach of the ostriche ; but we suspect this effect to proceed not from any liquid reduction, or tendency to chilification, by the power of natural heat.

Browne's Vulgar Errours.

CHILKA, a lake of the Deccan of Hindos- tan, on the sea-coast of the province of Cattack, on the north-west side of the bay of Bengal. It communicates with the sea, by a very narrow but deep opening, and is shallow within. It is forty miles long from north-east to south-west, and in general from twelve to fifteen feet wide ; having many inhabited islands in it, and only a slip of land between it and the sea.

It is bounded on the west by a part of that ridge of mountains which extend from the Mahanudy to the Godavery rivers, and shut up the Circars towards the con- tinent. It is forty miles south-west of Cattack.

CHILL, v. a., n. s., &►►rf;.-\ Goth, k'utla ;

CHI'LLINESS, n s. f Swed. kyla ; Sax.

CHI'LLY, adj. ►►cele. Shivering

CHI'LNESS, n. s. 5 with cold; hav-

ing the sensation of cold. Dull ; not warm ; re- pulsiveness of manner; cooling the warmth of affectionate approach. Metaphorically, unaffec- tionate ; depressed ; rejected ; discouraged.

If you come out of the sun suddenly into a shade, there followeth a chilness or shivering in all the body.

Bacon. And all my plants I save from nightly ill,

Of noisome winds, and blasting vapours chill.

Milton.

Oft as he in chill Esk or Seyn by night, Hardened and cooled his lynbs so soft, so white, Among the reeds to be espyed by him The nymphs would rustle, he would forward swim.

CHI 5►►

Age has not yet

So shrunk my sinews, or so chilled my veins, But conscious virtue in iny breast remains.

Dryden.

I very well know one to have a sort of chill about

his praecordia and head. Derham's Pliysico- Theology.

If the patient survives three days, the acuteness of

the pain abates, and a chilliness or shivering affects the

body- Arbuthnot.

Yet winter chilled, her feet -with cold, she pines, And on her cheek the fading rose declines. Gay.

'Tis true yon oaks with yellow tops appear, And chilly blasts appear. Id.

Alas, poor boy ! the natural effect Of love by absence chilled into respect. Cowper. Vigour from toil, from trouble patience grows, The weakly blossom, warm in summer bower, Some tints of transient beauty may disclose, But soon it withers in the chilling hour. Beattie.

Thus on the chill Lapponian's dreary land, For many along month lost in snow profound,

When Sol from Cancer sends the season bland, And in their northern cave the storms are bound.

Id.

Upon his hand she laid her own, ??? Light was the touch, but it thrilled to the bone, And shot a chillness to his heart, Which fixed him beyond the power to start.

Byron.

Chill ??? wet ??? and misty, round each stiffened limb Refreshing earth ??? reviving all but him ! Id.

CHILLAMBARAM, a town on the coast of the Carnatic, Hindostan, where there is a cele- brated pagoda, held in great veneration. It is 1332 feet long by 936, and entered by a lofty gateway, under a stone pyramid 122 feet high. The stones are, many of them, above forty feet long, and five feet square, and covered with copper. In this pagoda Sir Eyre Coote made an unsuccessful attack on a garrison of Hyder Ali's. It is distant eight miles south of Porto- Novo, and 120 S. S. W. of Madras.

CHILIAN, a town and province of Chili, bounded on the north by Mauie, on the east by the Andes, on the south by Iluilquilemu, and on the west by the province of Itata It is sixty miles in length from east to west, and about thirty in breadth. It contains fine pasturage for sheep, the wool of which is much esteemed. The capital city contains about 400 houses, a parish church, and several convents. In 1751 it was overthrown by an earthquake, but rebuilt the following

year.

CHILLINGWORTH (William), an eminent divine of the church of England, born and edu- cated at Oxford, in the early part of the seven- teenth century. He was an expert mathema- tician, an able divine, and a good poet. Study and conversation at the university turning upon the controversy between the church of England and that of Rome, Mr. Cbillingworth left the former, and embraced the Romish religion. Dr. Laud, then bishop of London, hearing of this, wrote to Mr. Chiilingworth, and a new enquiry at last determined him to return to his former faith. In 1634 he wrote a confutation of the ar- guments which induced him to go over to the church of Rome. His return to the church of England involved him in several disputes with those of the Romish persuasion. But in 1635 be engaged in a work, which gave him a better VOL. V.

opportunity to confute the principles of the church of Rome, and to vindicate the Protestant religion, entitled, The Religion of Protestants a Safe Way to Salvation. Sir Thomas Coventry offering him preferment, he refused to accept it on account of his scruples about the subscrip- tion of the thirty-nine articles. However, he at last surmounted these ; and was promoted to the chancellorship of Sarum, with the prebend of Brixworth. He was zealously attached to the royal party; and in August, 1653, was in the king's army at the siege of Gloucester, where he directed the making of certain engines for as- saulting the town. Soon after, having accom- panied Lord Hopton to Arundel Castle, he was taken prisoner by the parliamentary forces under Sir William Waller. But, being in a bad state of health, he obtained leave to be conveyed to the bishop's palace at Chichester, where he died in 1644. He left several excellent works.

CHILLIS, KHIILIS, or KLES, a town of Sy- ria, at the foot of Mount Tauris, in the pachalic of Aleppo : having fifteen mosques, several large bazaars, and a noted mart for cotton. It has a re- sident aga, and is supposed to be an ancient place from the numerous coins found. Distant ten miles S.S. W. of Antab, and fifteen north of Aleppo.

CHILMINAR, the grandest piece of ancient architecture of which there are any relics extant, being the ruins of the famous palace of Persepo- lis, which was burnt by Alexander the Great, when intoxicated with wine, at the persuasion of the courtesan Thais. See PERSEPOLIS.

CHILO.one of the seven sages of Greece, and of the ephori of Sparta, the place of his birth, flourished about A. A. C. 556. He was accus- tomed to say, that there were three things very difficult, 'To keep a secret; to know best how to employ our time ; and to suffer injuries with- out murmuring.' According to Pliny it was he who caused the sentence, Know thyself, to be written in letters of gold in the temple of Delphos. It is said that he died with joy, embracing his son, who had been crowned at the Olympic games.

CHILOE, a considerable island off the coast of Chili, giving name to an archipelego of islands in the neighbourhood. Their number has been variously stated, but is generally taken at forty- seven, of which this island, about forty leagues long from north to south, and from ten to thir- teen broad, and thirty others, are inhabited.

The groupe appears to have been formed by some volcanic convulsions, and presents, gene- rally, nothing but shapeless masses of rock, se- parated by narrow and dangerous channels. Most of them rise perpendicularly from the ocean, and are so thinly covered with soil, as to be in- capable of growing their own food. The climate is damp and stormy. The winter is never suffi- ciently cold to permit the snow to lay on the ground, but this season is extremely wet, with heavy gales from N. N. E. and N. N.W. ; southerly winds, on the contrary, are accom- panied with fair weather. The traversia is a short storm from the east. Occasionally the Aurora Australis is seen here. In midsum- mer the heat is great, but it is moderated by

sea breezes, which blow pretty regularly from ten to three o'clock.

The largest of these islands, besides Chiloe, are Ac'iiao, or Quinchau, and Lemui. None of the others are more than from one to three leagues in circumference. Of the villages on these islands, that of Calbuco is the most considerable, con- sisting of twenty straw houses, defended by a fort. The .village of St. Maria of Achao has eighteen straw houses, of Spaniards. The others are of still less consequence. They raise wheat, oats, French beans, and potatoes. The fruits cultivated here are several varieties of the apple, and strawbeiries. The most common trees with which the hills are in

general covered, are the cedar, oak, walnut, plumb, cypress, cinnamon, laurel, orange, the pelu, zenui, meter, and meli. A kind of rattan grows spontaneously, of which the natives make their cordage, and which is also employed in roofing their habitations. The archipelago is said to have neither beast of prey nor venomous reptiles. Horses and cattle are not so numerous as on the opposite continents : the do- mestic animals are pigs and sheep, of which they have great numbers ; and game and domestic fowls are abundant. The deer, otter, and a species of black fox, are found in a wild state.

Chiloe is separated from the continent on the north by the Boca de Chiloe, or Channel of Chacao, only one league wide at its entrance. On the south it has the Gulf of Chonos, and on the west, between it and the main, it forms se- veral gulfs.

Its western coast is straight, having no inden- tation of any consequence, and only a few small rivers. The east coast which faces the continent is more irregular, and nearly in the middle forms a deep gulf. The island contains two towns, Chacao and St. Carlos, and thirty-eight villages, principally on the north and east sides, there be- ing but one village on the west coast. The inte- rior is so mountainous and barren, that it is almost entirely destitute of inhabitants.

Chacao, on the north-east end, was the princi- pal part of the island until 1768, when the diffi- culty of the navigation caused it to be deserted for St. Carlos, on the Bahia de Reye, or north- west of the island, the access to which is safe. This is now the only port visited by the annual vessels from Peru. The city of San Carlos is the chief place, and contains about 200 wooden houses and some Indian huts. The town named St. Antonio de Chacao, consists only of the church, the missionary-house, and some Indian huts. Castro, on the east side of the island, has a good port, when it can be reached, but the difficulty of the navigation seldom permits it to be visited.

This archipelago was discovered by Don Gar- cia de Mendoza, governor of Chili, in 1558. In 1565 Martino Ruiz Gamboa was sent here with only sixty men, with which he subjected the inhabitants, who are said to have amounted to the number of 70,000, and founded the city of Castro and the port of Chacao. The present population amounts, perhaps, to 11,000 native Indians, and an equal number of Spaniards, or families of Spanish descent. The former are re- markably docile, and ingenious; expert ui all the

handicraft trades, and some of the best sailors of South America. In

their frail barks, which are made only of a few planks sewed together and caulked with moss, they will undertake royages to Conception. The commerce of these islands is principally carried on by a few vessels from Peru and Chili, which exchange wine, brandy, tobacco, sugar, Paraguay tea, salt and European goods, for cedar and other timber, hams, dried and salt fish, toys, ambergris, and a sort of cloak manufactured here.

CHILPANZINGO, or CHILPASTZIKCO, a town of Mexico, on the great road from Mexico to Acapulco, in the fertile plains of the Andes. It is built 2527 feet above the level of the sea, and is 150 miles north of Mexico.

CIIILTERN, a chain of chalky hills, forming the southern part of Buckinghamshire, the northern part of the county being distinguished by the name of the Vale. The air on these heights is extremely healthful : the soil, though stony, produces good crops of wheat and bar- ley ; and in many places it is covered with thick woods, among which are great quantities of beech. Chiltern is also applied to the hilly parts of Berkshire, and it is believed has the same mean- ing in some other countries. Hence the hundreds lying in those parts are called the Chfltern Hundreds.

CHILTERN HUNDREDS, STEWARDS OF THE Of the Hundreds into which many of the Eng- lish counties were divided by king Alfred for their better government, the jurisdiction was ori- ginally rested in peculiar courts; but came after- wards to be devolved to the county courts, and so remains at present; except with regard to some, as the chilterns, which have been by pri- vilege annexed to the crown. These having still their own courts, a steward of those courts is ap- pointed by the chancellor of the Exchequer, with a salary of twenty shillings and all fees, &c. be- longing to the office. This is made a matter of convenience to the minister when he wishes to accomplish the removal of any of the members of the House of Commons. He is made to ac- cept the stewardship of the Chiltern Hundreds, which vacates his seat.

CHIM7ERA, a barren territory of European Turkey, in the province of Albania. It compre- hends a chain of mountains, which divide Epirus from Thessaly; the inhabitants of which are partly independent and partly subject to the Turks.

CHIM.ERA, a port town of the above territory, seated on a rock at the entrance of the Gulf of Venice, about twenty-nine miles north of Corfu.

CHIMERA, in fabulous history, a monster, sprung from Echidna and Typhon. It had three heads ; that of a lion, a goat, and a dragon ; and continually vomited flames. The fore parts of its body were those of a lion, the middle was that of a goat, and the hinder parts were those of a dragon. It inhabited Lycia, in the reign of Jobates, by whose order Bellerophon, mounted on the horse Pegasus, overcame it. See BELLE- ROPHON. This fable is thus explained : ††† There was a burning mountain in Lycia, whose top was the resort of lions ; the middle, which was fruit- ful, was covered with goats; and at the bottom

the marshy ground abounded with serpents. Bellerophon destroyed the wild beasts on that mountain, and rendered it habitable. Plutarch explains the fable to mean the captain of some pintes, who adorned their ship with the images of a lion, a goat, and a dragon. From the union of the Chimsera with Orthos, sprung the Sphynx and the lion of Nemjea.

CIIIMB, n. s. Dut. kime ; the end of a bar- rel or tub.

For sikerly whan I was borne, anon Deth drew the tappe of lif, and let it gon ; And ever sith, hath so the tappe yronne, Till that almost all empty is the tonne. The streme of lif now droppeth on the chimbe.

Chaucer.

CHIMBO, a town and district of South Ame- rica, in the province of Quito, and jurisdiction of Riobamba. The town contains about 2000 in- habitants, and the whole is a cold district, lying very near the mountainous desert of Chim- borazo.

CHIMBCRAZO, a mountain of South Ame- rica, the most celebrated of the Andes, and once supposed to be the highest in the world ; being 21,440 feet above the level of the sea. Of this more than 2000 feet from the summit is con- stantly covered with ice and snow, though it lies almost under the line, in lat. 1†† 41′ 40″ S. In 1745 this celebrated mountain was ascended by M. Condamine and a company of French aca- demicians, with a view to the measurement of a degree; and in 1797, on the 23rd of June, Humboldt ascended it 3485 feet higher than the academicians, or to the altitude of 19,300 feet above the level of the sea. Here he w&s stopped in his progress by an immense fissure in the mountain ; and the tenacity and sharpness of the air was so great that the blood started from his lips

and various parts of his face : the fog was also very thick. He calculated the summit of the mountain to be 2140 feet above this spot.

CHIME, v. a., v. n. & n. The original of this word is doubtful. Junius andMinsheu suppose it corrupted from cimbal ; Skinner from gamme, or gamut; Henshaw from chiamare, to call, be- cause the chime calls to church. Perhaps ii is only softened from chinne, or churm, an old word for the sound of many voices, or instru- ments making a noise together. The consonant or harmonic sound of many correspondent in- struments ; the correspondence of sound ; the correspondence of proportioned relation ; the agreement either of sounds or syllables, which produce harmony ; applied especially to the striking of bells, to mark the divisions of the hours. Metaphorically, to suit with, to agree, to fall in with.

The sely tongue may wel ringe and chimbe Of wretchednesse, that passed is ful yore With olde folk, save dotage is no more. Chaucer.

We have heard the chimes at midnight.

Khal;.ipc'arc.

The sound

Of instruments, that made melodious chime, Was beard; of harp and orgin.

Milton. Paradise Lust.

CHI

Love virtue, she alone is free ; She can teach you how to climb Higher than the sphery chime. Milton.

Thus sing they in the English boat, An holy in a chearful note, And all the way, to guide their chime, With falling oars they kept the time.

Miiri'dl.

Love first invented verse, and formed the rhime, The motion measured, harmonized the chime.

Dry den.

With lifted arms they order every blow, And chime their sounding

hammers in a row ; With laboured anvils ./Etna groans below.

Dry den's Georgicks.

Any sect, whose reasonings, interpretation, and language, I have been used to, will, of course, make all chime that way ; and make an author, and perhaps the genuine meaning of the author, seem harsh, strange, and uncouth to me. Locke.

Father and son, husband and wife, and such other correlative terms, do belong one to another ; and, through custom, do readily chime, and answer one another, in people's memories. Id.

He not only sat quietly and heard his father railed at, but often chimed in with the discourse.

Arbuthnot's History of John Bull. CHIMES. To calculate the numbers for the chimes of a clock, and adapt the chime barrel, it must be observed, that the barrel must turn round in the same time that the tune it is 16 play requires in singing. The chime-barrel may be made up .'>f certain bars that run athwart it. with a convenient number of holes punched in them to put in the pins that are to draw each hammer : and these pins, in order to play the time of the tune rightly, must stand upright or hang down from the bar, some more, some less. In placing the pins, proceed by the way ot' changes on bells, viz. 1, 2, 3, 4; or rather make use of. the musical notes. Observe what is the compass of the tune, and divide the barrel ac- cordingly from end to end. Thus, for example, the 100th Psalm tune is eight notes in compass, and accordingly the barrel is divided into eight parts.

Table for dividing the Chime Barrel of the 100

These divisions are struck round the barrel ; op- posite to which are the hammer tails. We have here supposed only one hammer to each bell; but when two notes of the same sound come together in a tune, there must be two hammers to the bell to strike it. Then it must be divided round about into as many divisions as there are musical bars, semibreves, minims, &c. in the tune. Thus, the 100th Psalm tune has twenty semibreves, and each division of it is a semibreve ; the first note of it also is a semibreve ; and, therefore, on the chime-barrel must be a whole division, from five to live ; as any one may understand plainly, if he conceives the surface chime-barrel to be repre-

seated by the above figures, as if the cylindrical su- perficies of the barrel were stretched outat length, or extended on a plane : and then such a table, so divided, if it were to be wrapped round the barrel, would show the places where all the pins are to stand in the barrel ; for the dots running about the table are the places of the pins that play the tune. Indeed, if the chimes are to be complete there ought to be a set of bells to the gamut notes; so that each bell having the true sound of sol, la, mi, fa, any tune may be played with its flats and sharps ; nay both the bass and treble may thus be played with one barrel : and by setting the names of the bells at the head of any tune, that tune may easily be transferred to the chime-barrel, without any skill in music. CHIME'RA, n. s. ˆ Lat. chimara; a CHIME'RICAL, adj. >vain and wild fancy, CHIME'RICALLY, adv.j as remote from reality as the existence of the poetical chimera, a mon- ster feigned to have the head of a lion, the belly of a goat, and the tail of a dragon. Imaginary ; fanciful, wildly, vainly, or fantastically conceived ; fantastic.

In short, the force of dreams is of a piece, Chimeras all, and more absurd, or less.

Dryden's Pallet.

No body joins the voice of a sheep with the shape of a horse, to be the complex ideas of any real sub- stances, unless he has a mind to fill his hcud with chimeras, and his discourse with unintelligible words.

Locke.

Notwithstanding the fineness of this allegory may atone for it in some measure, I cannot think that persons of such a. chimerical existence are proper actors in an epic poem. Spectator.

Accustomed to indulge every chimera in politics, every frenzy in religion, the soldiers knew little of the subordination of citizens, and had only learned, from apparent necessity, some maxims of military obedience. Hume's History of England.

CHFMINAGE, n. s. From chimin, an old law word for a road. A toll for passage through a forest.

CHI'MNEY, n. s. ~\ Ko/u'voc from

*Cm'MNEY-coRNER,n.s. f Kaiw, to burn. Lat. CHI'MNEY-PIECE, n. s. I cuminus ; fi.che- CHI'M.NEY-SWEEPER, n. s. * minee. A fire-place; a passage for smoke. The subjoined nouns, in composition, bespeak at once their specific relation to these etymons. Chimney-sweeper is not only used for a cleanser of chim- neys from soot, but for any one of mean and vile occupation.*

Quoth Pandarus : ' For aught I can aspicn, This light, nor I, ne serven here of naught ; Light is not gode for sike folkis eyen. But for the love of God, sens ye ben brought In this gode plite, let now non hevy thought Ben hanged in the hertis of you twey.' And bare the candle towardes the chimney.

Chaucer.

It was a vaut [kitchen] ybuilt for great dispense, With many raunges reared along the wall, And one great chimney, whose long tonuel thence The smoke forth threw. Spenser.

The chimney

la south the chamber j and the chimney-piece, Chaste Dian bathing. Shaktpeare.

To look like her, are chimney-sweepers black ; And since her time are colliers counted bright. Id. The fire which the Chaldeans worshipped for a god, is crept into every man's chimney. Raleigh's History.

Yet some old men Tell stories of you in their chimney-corner.

Denham .

Let me thy properties explain, .

A rotten rabin dropping rain ; Chimnies with scorn rejecting smoke, Stools, tables, chairs, and bedsteads broke.

Swift.

Polish and brighten the marble hearths and chim- ney-pieces with a clout dipt in grease. Id.

But, ah, I fear thy little fancy roves On little females, and on little loves ; Thy pigmy children, and thy tiny spouse, The baby play things that adorn thy house, Doors, windows, chimnies, and the spacious

rooms, Equal in size to cells of honeycombs. Gay.

CHIMNEY, the passage through which the smoke is conducted from the fire-place. They are generally supposed to be a modern invention, as the ancients used braziers and stoves. The first creditable account of chimneys is that of De Ga- taris, 1405, who states them to have been brought to Rome from Padua, by F. de Carrara, who caused them to be constructed at the hotel where he lodged. But it is certain that the ancients had chimneys to convey the smoke from those manufactories that required the aid of fire, and also from the hypocaustum of their houses and baths. In Italy and Spain chimneys are now rarely to be met with, and in Germany the stove is preferred. For the best method of construct- ing chimneys, see ARCHITECTURE.

CHIN, n. s. Sax. cmne ; Germ. kinn. The part of the face beneath the under lip. Her face white and well coloured ; With little mouthe, and round to se A cloven chinne eke had she. Chaucer,

Her chin, like to a stone in gold inchased, Seemed a fair iewell wrought with cunning hand, And, being double, doubly the face graced.

Spenser. Britain's Ida.

But all the words I could get of her, was wrying her waist, and thrusting out her chin. Sidney.

He raised his hardy head, which sunk again, And, sinking on his bosom, knocked his chin.

Dryaen.

Smooth o'er our chin her easy fingers move, Soft as when Venus stroaked the beard of Jove.

Gay

He shews on holidays, a sacred pin That touched the ruff that touched queen Bess's chin. Young's Love of Fume.

CHI'NA, ra. 5. From China, the country where it is made. China ware ; porcelain ; a species of vessels made in China, dimly transparent, partaking of the qualities of earth and glass. They are made by mingling two kinds of earth, of which one easily vitrifies; the other resists a very strong heat ; when the verifiable earth is melted into glass, they are completely burnt.

Spleen, vapours, or small-pox, above them all ; And mistress of herself, though china fall. Pope.

After supper, carry your plate and china together in the same basket Swift.

/.am/an /ii'ifu/lrti /'> *Than,*

. :..,-ll,v.l .Shi,

*5*7*

CHINA.

CHINA, PROPER, the principal part of the large empire of that name, is situated on the south-eastern side of Asia, extending from the twentieth to the forty-first degree of north lati- tude ; and from the 101st to the 122nd degree of east longitude, being on the medium about 1450 miles long from north to south, and nearly 1300 broad from west to east. It is bounded on the north by Mongolia, and Mantchoo Tartaiy ; on the east by the Whang Hai, or Yellow Sea, and the Tung Hai or Eastern Sea, both con- nected with the Pacific Ocean ; on the south by the China Sea, and Tongking; and on the west by the Birman Empire, and Thibet. China has been reckoned to contain an area of 1,300,000 square miles.

Its population has been a matter of much con- jecture, and various accounts have been given on the subject, both by the Jesuits and more mo- dern writers. Sir George Staunton, in his Account of Lord Macartney's Embassy, has stated it, on the authority of a mandarin of high rank, at 333,000,000 on the southern side of the Great Wall ; but this account is given too much in rotind numbers, and in some instances with too much similarity in the population of the respec- tive provinces, to be entirely trusted as correct. Mr. Ellis, a more modern traveller, who attended the embassy of Lord Amherst, and had superior opportunities of observation, is disposed to rate the population much lower. He observes very justly that it cannot exceed a due proportion to the land under cultivation, and that much land capa- ble of tillage is neglected. He has been informed, he says, that the most accurate accounts (referring most probably to those of Dr. Morrison, who has resided many years at Canton), state its amount considerably below 200,000,000. It appears that a statistical account was taken by order of the iate emperor Kia-king, which makes the total population, including the Tartar-banners, to be about 145,000,000. There is reason, however, to think that this census is

drawn up in a very imperfect manner. We find that in 1743 that taken by order of Kien-lung, gives it at 142,000,000; that in 1760, at 196,837,977; and again in 1761 at 198,214,553, making an annual increase of nearly a million and a half. Perhaps Dr. Morrison's statement may be assumed as the most probable one, when he fixes the population at about 150,000,000, allowing 120 persons to each square mile, a greater proportion than prevails in many other parts ot the world. But of this we shall say more when we come to speak of the provinces.

\ hether this population is aboriginal, or derived from other countries, is very uncertain. In features the Chinese greatly resemble the Mongols, Mandshurs, and other Tartar tribes, which probably arises from the intermixture of ††† the latter with the original inhabitants. Perhaps no people have undergone so many revolutions as the Chinese ; ††† they have been conquered, and have delivered themselves, and the country has

undergone many changes in regard to its divisions; but they have still preserved their identity. From the affinity between the customs and manners of the Chinese and northern Scythians, as Herodotus describes them, as well as their antipathy to change, it is highly probable that China was first peopled by those wandering tribes.

The present name of this country appears to owe its origin to the dynasty of Tsm, whose foun- der, about 300 years before Christ, after subduing the revolted provinces and annexing them to the empire, gave it the appellation of his own family. The most ancient name, arid which is indeed still used, is Tien-sha, Under-heaven ; implying that it is inferior only to heaven. The natives call it Tchungquo, or Chung-kwo, the middle king- dom, arising, say some, from the notion that the earth is flat, and that China is situated in the middle; others affirm, that when the emperor Tchingwang established his court at Lo-yand, and gave it this name, which was afterwards used for the whole country.

From the great extent of latitude occupied by China, the climate must necessarily be very va- rious. In the southern parts the tropical heat is experienced ; but near the coast this is much tempered by the monsoons and sea breeze, while in the north the cold for two or three months is extremely severe. The snow is constantly on the ground, and the thermometer is often below 20†† at night, and beneath the freezing point all the day. All the intermediate degrees of temperature prevail in the middle parts of the country. The air of the northern seas is excessively moist, often welling like rain. In the most

southerly regions the heat, especially at mid-day, exceeds that of Bengal ; at that time all business is abandoned, and perfect silence reigns. Hurricanes are often experienced at the equinoxes ; but at other times the sky is clear, the air moist, and the vegetation beautifully exuberant. The soil differs as much as the climate, consisting of every variety, from the remains of primitive rock to the matter of decayed vegetables. In the low districts it is alluvial, and quite free from stones ; i-n other parts it is gravelly or rocky, and clay of extremely fine quality is found in some provinces.

The geneial face of this country is rial, occa- sionally varied with upland scenery ; being in few places mountainous, except towards Tartary and in some parts of the south. On this subject Mr. Ellis says, ‘ A range of mountains was visi- ble at sun-rise in the south-east, and the eyes of all were turned to them with the same decree of interest, as to high land after a sea voyage ; in- deed, what with uniformity of objects, and of level, the country since we left Tong-chow (about 550 miles) was as little interesting as the ex- panse of blue water.’ A range of mountains in latitude about 32►► runs from the 115th degree of longitude to the western boundaries of the empire, where it meets another, which extends southward to the Birman territory and Tongking ; the most level parts lie on the north a-‘d east. The most ele-

vated ridges are those on the side of Tartary, which gradually rise till their summits are lost in the table land of central Asia.

China is watered by numerous rivers, some of them large, and extending beyond its con- fines. The table land before mentioned, and the vast Himalayan chain of mountains that rise out of it, cause the accumulation of a multitude of streams, that, descending from the eastern sides of these heights, swell into noble rivers, receiving an accession of innumerable small branches in their course through China, and finally empty themselves into the China and Yellow Seas. Of these the most considerable are the Hoang-ho, and the Kiang-keou ; al- most all the minor streams falling into them. The Kiang-keou or Yangtse-kiang, meaning the Son of the Sea, has been the admiration of all travellers, for its extensive course and amazing width. It rises in the unexplored parts of northern Thibet, first running south- east, and then south, till it passes the frontiers of China Proper, in about 28►► north latitude, when it takes a direction due east for about

seventy miles ; then flowing due south to the borders of the province of Yunnan, it winds eastward, and 'thsn directly to the north for nearly 150 miles,when it turns short to the E. N. E. which direction it retains throughout the remainder of its course, watering all the central provinces, till it falls into the sea by many mouths, nearly 140 miles below Nankin. It flows through a beautiful country, thronged with people, the scenery of which is varied by woody mountains, frequently crowned with temples, and presenting a most picturesque aspect. The embassy under Lord Amherst, on its return from China, pursued the course of this river for nearly 300 miles, and the breadth of the whole course was at least two miles on the average. Numerous large and fertile islands are situated on it, and the climate of the districts through which it passes is de- lightful. Its entire course exceeds 2200 miles, and it receives many tributary streams, equalling, if not surpassing, the Thames in magnitude and importance.

The Hoang-ho, or Yellow River, also rises in the Tartarian mountains, not far from the source of the Yangtse. After approaching very near to each other, they separate to the distance of more than 1000 miles. The former making many windings to the north-east, near the boundaries of China and Tartary, sweeps far into the latter country, forming thu northern limit of the pro- vince of Ortous, then running due south, it passes through the great wall below tin; 40th degree of latitude and the 110th of longitude. It continues to flow in this direction for more than 300 miles, when it turns towards the Yellow Sea, into which it disembogues itself, after a course of more than 2000 miles. Many minor streams, some of them of considerable magni- tude, fall into this river, which is so swelled at times by them, that in many parts banks are raised to prevent its overflowing the surrounding country. Besides these there are several other independent rivers, as th'e Pei-ho, which passes by Pekin, and flows into the gulf of Pee-schee-. ice ; the Ta-schin-ho, which falls into the same

gulf on the south side, and the Kang-kiang, which enters the sea near Canton, furnishing a ready access from that city to the interior.

It will be observed, that most of the above rivers cross the country from west to east; a grand communication was therefore necessary from north to south, and this has been effected by canals, with which this country is abundantly furnished. The grand canal, extending from Pekin to the Yangtse-kiang was commenced, it is said, in the tenth century, and 30,000 men, it is asserted, were employed forty-three years in its construction. It is generally led along the beds of

rivers, sometimes conducting them to their junction with some other stream, and fol- lowing a very winding course. There are no locks, and when flood-gates are required to check the current at a descent, they are formed simply of thick planks, let down into grooves cut in projections of stone, which also serve as abutments for slight wooden bridges, which are easily removed when vessels pass. Its whole length is about 500 miles ; but though a consi- derable work, Mr. Abel thinks it has been over- rated as a specimen of art and labor; it is, however, of great importance to the empire, forming the line of communication between its northern and southern provinces, and serving as a sluice to drain the lakes and marshes, and carry off the overflowings of the great Yellow River. After passing this river, it is continued to the Yangtse-kiang, which, by means of its tributary streams, carries the navigation to the foot of the mountains that form the northern boundary of the province of Canton, across which ridge goods are conveyed by one day's land carriage, till the navigation is again opened and continued to the city of Canton. A number of smaller canals, joining most of the principal rivers, intersect the country in various directionˆ but as they are mostly cut through level dis- tricts, and an alluvial soil, there are none of those difficulties in the construction which are experienced in many parts of this country.

Numerous and extensive lakes are found in different parts of China ; but most of them con- nected with the Yangtse or its tributary branches. The best known of them is Poyang, situated near the southern winding of the Great River, about the thirtieth degree of latitude. It is embosomed in mountainous and highly pictur- esque scenery, and so covered with islands that little of the water can be seen at one time. Mr. Ellis states that the Embassy sailed about sixty miles on this lake, but it is not wide in propor- tion to its length, and it appears to form two branches. Violent storms sometimes render the navigation dangerous. The Tung-sing lake, in the same latitude, but about 250 miles more westward, is said to be much larger, not less than 300 miles in its greatest extent. North of Nankin, also, there are two considerable lakes near the part of the country where the two great rivers approach each other. The name of the province in which the great lake is situated, Hou-quang, implies the country of lakes; and it contains a great number, but generally small. The coast of this empire is very extensive, being perhaps, not less than 1400 miles from the

north of the Wanghai to the gulf of Tonquin. It contains many

indentations, and probably a number of convenient harbours, though most of them are unknown to Europeans. The most considerable is at the island of Emouy or Ampy, on the coast of Fokien, capable of containing 1000 vessels. Its principal bays, or gulfs, are those of Petche-tee on the north, and that of Ta or Canton on the south. The former is very ex- tensive, and lies on the south side of the Whang Hai ; on the north of this gulf, the Pei-ho dis- charges its waters over a bar, on which the depth at low water is only three or four feet, and the rise of the tide is but five or six feet. The latter is situated to the south of Canton, containing a cluster of numerous islands, and receiving the waters of the great river Hoan-kiang or Ta, which rises in the province of Yun-naii, and runs a course of 800 miles. Here the Ladrone islands,

about ten in number, and those of Lerna, form a chain almost in a semi-ciicie before ihe bay ; on the largest of the Ladrones is a lofty summit, with a dome that is seen at thirty miles distant. Most of these islands are rocky and barren ; but they afford water, and Chinese fishermen gene- rally take up their residence in them. The large islands of Hainan on the south of Quantang, and Tai-ouan, or Formosa, west of Fokien, are also included in China proper. See articles HAINAN and FORMOSA.

China is most commonly divided into fifteen provinces, some of which being double, they are often reckoned as eighteen. Of these, four are situated in the north, seven in the middle, and four in the south. The following list is taken from the survey made by order of the Chinese legislature, and made public in the year 1813.

Provinces.

Number of individuals.

Number of families.

Provinces.

Number of individuals.

Number of families.

Chihle

27,990,871 28,958,764 14,004,210 23,037,171 37,843,501 34,168,059 30,426,999 14,777,410 1,748 26,256,784 27,370,089 18,652,507 10,207,256 15,193,125 161,750 21,435,678

19,174,030

Brought forward Kwangse . ...

349,659,952 7,313,865 5,561,320 5,288,219 942,003 307,781

2,398 7,842

26,728

72,374 4,889 69,644 2,55 1 1,900

Shuntung ....

Honan

Kweichow .... Shing-King,Leaou-tung Kirin . ....

Keangsoo .... Ganhwuy .... Keanfse .

Hihlung-kearig, orTei- tcihar

Fuhkeen . .

Formosa (Natives) Chekeang .... Hoopih . . .

Tsinghae, or Kokonor . Foreign tribes under Kansuh .... Foreign tribes under Szechuen .... Thibetan colonies . Eleand its dependencies Turfan and Lobnor Russian border . . .

1 Total .

Hoonan .

Shense

Kansuh

Barkoul and Oroumtsi Szechuen

Kwangtung or Canton

349.659.952

369.073.l4d 188.326

Though this may appear an enormous popula- tion, the proportion does not exceed 256 persons to the square mile, which would show

China to be only peopled in proportion to England as three to two. When the nature of the climate, the variety and abundance of the productions, the proportionately small quantity of food con- sumed by the Chinese, and the few animals that tjiey keep for pleasure, are taken into consideration, it has been thought not incredible that it should support a population equal to the above. The inhabitants are very unequally spread over the country ; in some parts they are crowded to ex- cess, while others wear the appearance of a desert.

The principal cities of the empire are Pekin, Nankin, and Canton. Pekin, the metropolis, and the residence of the emperor, is situated .in the northern part cf the province of Pe-che-lee, within view of the lofty blue mountains of Tar- tary, in lat. 39►► 50′ N., and E. long. 116►► 30'. It is surrounded with high walls flanked with many bastions and towers, the outer parts of which are built with bluish sun-baked bricks on a founda- tion of granite ; the middle is filled with earth. These walls are thirty feet high, and twenty-five feet thick at the bottom, sloping towards the top ; the towers arc about seventy yards, or the dis-

tance of a bow shot, from each other. The city consists of two parts, the Lan-ching, or old city, inhabited chiefly by Chinese ; and the Sin-ching, or new city, where the Tartars chiefly reside. It is about eighteen miles in circumference, without including the suburbs. According to lord Ma- cartney's information, Pekin contains about three millions of inhabitants, but this population is cer- tainly not at all proportioned to its size, espe- cially as the houses are low, most of them not above one story from the ground ; but the Chi- nese crowd into a small compass, two or three generations frequently occupying a hut, that in England would scarcely be thought sufficient for the poorest family.

The city has two great streets, running through its whole extent, crossing one another, and di- viding it into quarters ; these are said to be 120 feet broad, and bordered with shops, but the houses are low and make a mean appearance. The rest of the streets are very narrow, most of them being mere ianes. The shops are painted and gilt in great profusion, and the goods are not only displayed within, but piled up in the streets before them ; and every shop-keeper has a painted board before his door, inscribed vrith three i►►uge characters, which he has chosen for his sign, ar.d often with a list of the articles he sells under

them, the characters pou-hou, no cheating here, being very conspicuous. Many trades are likewise carried on in the streets, so that little space is generally left in the widest of them, and this often occupied by processions of men in of- fice, or long trains of attendants on marriages and funerals. The noise arising from the buyers and sellers, mixed with that of jugglers, con- .urers, fortune-tellers, quack doctors, mounte- banks, comedians, and musicians, is very dis- cordant and frequently annoying. Among the crowd too it is no uncommon thing to behold Tartar females, riding astride, and displaying that art in managing their horses, for which that nation is so famous. A number of triumphal arches, consisting of one large gateway in the centre, with a smaller one on each side, adorn various parts of the capital ; and every art is employed in gilding, varnishing, and painting, to make them brilliant. They have large gold inscriptions, displaying the names of the individuals to whose memory they have been erected, or the remarka- ble occasion thev were designed to record. Tem- ples and pagodas distinguish this, as well as all other cities in China. The emperor's palace stands in adomain, surrounded by a quadrangular wall, about a mile in length, by three quarters in breadth, within which, Chinese art seems to have exhausted its powers, in the creation of moun- tains, rocks, ravines, woods, rivers, lakes, and islands, rapidly succeeding each other. The emperor's residences are erected on hills of va- rious elevation, while pavilions, kiosks, and other buildings for pleasure and refreshment, are raised on the loftiest summits. At a little distance from the city he has another palace, at Yuen- Ming-Yuen, the grounds around which are laid out in a similar manner, but they are far more extensive. The area of this royal demesne, it is said, exceeds ninety square miles, and includes no less than thirty residences, with every thing necessary to them. Most of them, however, would be very mean if they were divested of their gilding. The handsomest building is the hall of audience, 1 10 feet long, forty-two broad, and twenty high.

The second city in importance is Nankin, called by the Chinese, Kiang-ning-fou ; it was indeed formerly the capital. It was once very extensive, the walls, it is said, being more than forty miles round. Mr. Ellis, who had an op- portunity of viewing it from an elevation within the walls, describes it as appearing to have been encompassed with three walls, one within ano- ther, the outer and inner one being in some tolerable state of preservation, but of the middle no trace was remaining but a single archway. The present inhabited parts of the city are at some distance within the outer gate, and the

intervening space has scattered houses, hills, groves, and cultivated spots of every description. The city lies in about 32►► N. lat. and 118►► 30′ E. long. Like Pekin it has four large streets crossing each other, and a number of smaller ones running at right angles with them. The larger streets are very cleari, though not remark- ably broad; a canal appeared to flow through one of them, over which several bridges of a single arch are thrown. The great porcelain

tower rises conspicuously among all the other buildings; it is an octagon 200 feet in height, constructed on a strong brick foundation, and encompassed by a flight of twelve steps leading to the entrance. It consists of nine stories, equal in height, though diminishing in breadth as they ascend, the lowest being 120 feet in cir- cumference, or fifteen for each side of the oc- tagon. The outside is covered with porcelain slabs, and each story has a projecting roof, co- vered with highly varnished green tiles : 190 steps in the interior lead up to the different com- partments, which are filled with gilt idols fixed against the walls in different niches. This work is said to have been commenced early in the fourteenth century, in the reign of Yangloo, and to have been finished in nineteen years, at an expense equal to ►►800,000. It has the ap- pearance of having suffered by a stroke of light- ning, which the Chinese attribute to a conflict of the god of thunder with demons ; in pursuing them to the pagoda, they say, he injured the building. Nankin is reported to have been once more populous than Pekin is at the present time ; it was the residence of the emperor, the seat of the six great courts of justice, and the mart of the whole empire. Now, however, its ancient splendor is greatly obscured, and though it is so favorably situated on the south side of the great river Yangese-Kiang, which still furnishes an intercourse with all the interior, the commu- nication with the sea seems from some unknown cause to have ceased. This city has long been celebrated for the manufacture of the cotton article, so well known amongst us by its name.

Canton is the most considerable port in this empire, and indeed the only mart for Euro- pean trade. It stands on the river' Pekeang, in the province of Quantong, of which it is the capital, in lat. 23►► 10′ N. and long. 112►► 45′ E. The wall is nearly five miles in circumference, but the suburbs extend far beyond. It has several gates, and on the side next the land three forts, and some cannon mounted on the walls. All foreigners are excluded from it, and scarcely any thing is to be seen in the neighbourhood but the high wall. The streets are lomj; and straight, but few of them exceed fifteen or twenty feet in width. Along the banks of the river are si- tuated the factories of the different nations with which trade is

allowed; the British surpassing all the others in size, elegance, and accommoda- tions. Though the streets are frequently crowded to excess, few women except of the lowest class are seen in them. Great numbers of the people live in vessels on the river. The principal buildings in this city are the great pagoda and many other temples, full of the images of their idols, and the triumphal arches. The markets for all kinds of provision are plentifully supplied, and at a cheap rate. The population of this city is said to be not much inferior to that of Nankin or Pekin, but this seems hardly pro- bable, if the area within the walls be considered as any standard ; though the number may be greatly increased by the multitudes that live on the water, and the influx that is occasioned by the commerce of the place as the only free port for foreigners in the empire.

On account of the prevailing restrictions on foreign intercourse, it is impossible to gire any correct account of other cities and towns in China. They are very numerous, there being, it is said, not fewer than 4400 walled towns, many of them declared to be large, and rivalling }'ekin itself, but in these assertions no confi- dence can be placed. These towns are divided by the Chinese into two classes, distinguished by names indicative of the rank they hold, and as being of the first, second, and third order. The fron- tiers of this extensive empire, forming a line of not less than 10,000 miles, are guarded with such scrupulous attention, that no Russian, Tur- coman, AfTghan, Hindoo, Birman, orTonquinese, on the land side, nor a single European or American, of the great numbers that trade annually at Canton, has ever been able to pass the barriers, without being discovered; so that for this reason our ideas of the topography of the interior, are very indistinct. In this respect the moderns have added little to the information already given by the Catholic missionaries, who were allowed to reside in the country.

The immense population of China renders agriculture of very great importance, and much has been said of the extreme state of cultivation which the country exhibits. Sir George Staunton says, the hills and mountains that afford any slight inclination are cut into terraces one above another, supported by mounds of stone, and thus the whole surface is frequently cultivated to the summit. These stages produce abundance of pulse, grain, yams, sweet potatoes, onions, carrots, turnips, and various other plants. On the tops of the mountains are reservoirs of water, from which by different channels

it is conveyed to the terraces on the side. In the more rugged and barren parts the camellia sesanque, and different firs, especially the larch, are planted. It is a point of great importance to collect and preserve manure; and all decayed substances, both of ani- mals and vegetables, are used for this pur- pose. Mr. Abel, however, observed many hills wholly uncultivated, and large plots of ground the cultivation of which was quite neglected. These, and extensive marshes, in which no trace of husbandry could be seen, at least show that the Chinese are not very well skilled in the im- provement of land. They have no fallows. Their husbandry is neat and their implements simple; the plough is without a coulter and has but one handle ; the harrow is much finer than what is used in England, and the soil is therefore more pulverised. The southern provinces produce great quantities of rice, and grain of all kinds is raised in the north. The castor-oil plant is much cultivated, and used as a common vegetable in some parts.

The choicest vegetables are the Petsai and the tea-plant. The former is a national plant, and is consumed in such immense quantities, especially in Pekin, that some authors say, that during the months of October and November the gates of the city are from morning to night thronged with carts laden with it. It is to the Chinese what the potatoe is to the Irish; it is prized by all ranks, and they spare no pains in its cultivation. In its raw state it is something like a lettuce, and

when boiled has the taste of asparagus ; they preserve it for the winter in salt and vinegar, or by planting it in wet sand, or burying it deep in the earth, after it has been previously dried in the sun.

Tea is a great article of cultivation; it is prin- cipally raised between the twenty-seventh and thirty-first degrees of latitude, and on the sides of very elevated mountains. The soil that suits it is dry and gravelly, frequently of decomposed rocks, with little vegetable mould. The province of Kiangnan produces the green tea, and that of Fokien the black. The plants are different ; the leaves of the green tea are larger, thinner, and lighter than those of the black, though grown in the same soil and situation. When the seeds are sown in a good soil, all that is necessary is to keep the ground free from weeds. The trees do not produce leaves fit for use, till they are three years old. Early in the spring, as soon as young leaves appear, they are picked, and this is very choice, and is called the imperial tea; in May they pluck them again, some of them full grown, and others young, and this mixture con- stitutes the Bohea ; in the summer they ajjain gather them when all the leaves are full grown. Every six or eight years the

ground requires to be replanted.

China produces a variety of trees and fruits. Oaks of several species, some of 100 feet high, and twenty-four round, are said to be common ; they are used for building, dyeing, and other purposes, and the acorns as food for the pea- santry, either raw or made into cakes. The tal- low tree is one of the largest and most beautiful plants in the country, and found from the south of Nankin even to Canton. It is formed like the oak in the height of its stem, and its spreading bran- ches, with foliage green and bright, like the lau- rel, and small yellow flowers. Clusters of seeds succeed them in the winter, which, when ripe, burst and show seeds of a delicately white color. The oil plant is also a striking peculiarity; it is generally about six or eight feet in height, and bearing an abundance of white blossoms, which often look at a distance like a waste of snow, but on a nearer approach have the appearance of a vast garden.

The mineral productions of China, as a flat alluvial country, will not be expected to be abun- dant. Some writers have mentioned quicksilver, iron, tin, copper, gold, and silver, as found in the mountains ; as well as a peculiar species of white copper. Formerly the gold and silver mines were not allowed to be opened, lest the people should thereby be induced to neglect the natural riches of the soil ; and in the fifteenth century the emperor caused a mine of precious stones to be shut, which had been opened by a private person. Of late, however, the Chinese are less scrupulous, and a trade in gold is carried on. Several kinds of marble abound. Tute- nague is likewise a mineral product of China. It is principally obtained in the province Hou- quang, and quite distinct from the white copper alluded to. Coal is met with in many of the northern provinces, and is the common fuel at Pekin and several other places. The Chinese musical stone, is a species of sonorous black

marble. Various other minerals probably exist in the mountains towards the confines of Taitary, but the whole of these regions have hitherto been concealed from scientific investigation.

The government of this singular empire is a pure patriarchial despotism. The emperor is at once the only sovereign, and, on great occasions, the only priest. He is styled the ‘ Son of Hea- ven :’ the present dynasty was careful to insert in the Pekin gazette, that ‘ the

daughter of Heaven, descending on the borders of the lake Poulkouri, at the foot of the White Mountain, and eating some red fruit that grows there, conceived, and bore a son, partaking of her nature, and endowed with wisdom, strength, and beauty ; that the peo- ple chose him for their sovereign, and that from him was descended the present ‘ Son of Heaven :’ and the people are said to have the merit of im- plicitly believing this. At the Temple of the Sky (T’hyen-t’han), the emperor offers up, at the winter and summer solstice, oxen, sheep, goats, and hogs, that have been previously killed ; himself, and all who assist in the sacred rites, being enjoined rigid abstinence on the occasion, both ‘ at bed and board.’ The ceremonies are attended with the most magnificent display of gold and silver vessels ; and the emperor testifies his deep humility, as the confessor of his people, for their numerous sins. Another of the principal religious ceremonies, in which he alone can of- ficiate, is celebrated at the vernal equinox, when he marches forth in rich attire into the fields, turns up with his own plough the first earth, and scatters the first seed of the season ; concluding the ceremony with offering up a cow to the Spirit of the earth.

In his civil capacity, however, for religion is regarded with great indifference, speaking gene- rally, by the Chinese, he is still more all in all. ‘ Heaven,’ said Confucius, ‘ has not two sons ; earth has not two kings ; a family has not two masters ; and sovereign power has not two di- rectors??? one God, one emperor.’ Kia-king, the late emperor, claimed boldly, in one of his pro- clamations, now before us, to ‘ hold the univer- sal sovereignty of the earth ;’ and the reigning emperor, in his reception, or rather rejection, of lord Amherst’s embassy, was by no means back- ward in similar pretensions. He more perti- naciously than his predecessor, insisted upon the ko-tou, or ‘ three kneelings, and nine knocks of the head upon the ground,’ as a token of obe- dience and vassalship; and sent back the ambas- sador and suite in a rage, because, after travelling all night, he declined to come instanter, with the said genuflexions and knockings, into the imperial presence. In the public proclamations issued respecting the treatment of his lordship, on his return homewaids, he was duly styled the English tribute bearer ; and when the emperor, by a standing rule of Chinese policy, publicly expounded the faults that led to the non-recep- tion of the embassy, he very coolly remarked, that ‘ contempt was improper towards our in- feriors ;’ those ‘ who from an immense distance, and over vast seas, had come to present with re- spect, letters of due consideration and obedience.’ That he therefore had selected some trifling pre- sents out of those brought, and returned certain

more valuable ones, ‘ as a reward ;’ in obser- vance of the maxim of Confucius, ‘ give much, receive little.’ He adds, what we apprehend he did not consult lord Amherst in stating, ‘ that when the ambassadors received the said gifts, they became exceeding glad, and evinced their repentance.’

But this ‘ great ‘ and absolute ‘ emperor,’ the ‘ father and mother of this people,’ in whom re- sides all ‘ power, honor, and law, is himself,’ Mr. Ellis was told by one of his chief ministers, ‘ the victim of ceremony ; he is not allowed to lean back in public, to smoke, to change his dress, or in fact to indulge in the least relaxation from the mere business of representation. It would seem that while the great support of his authority is the despotism of manners, he himself is bound with the same chain that holds together the poli- tical machine ; he only knows freedom in his inner apartments, where probably he consoles himself for public privations, by throwing aside the observance of decency and dignity.’

He is made, however, in a peculiar manner, the fountain of mercy : his fatherly kindness is said to remit the rigors of the law, whenever any portion of punishment is spared : the magistrates instruct the people in his name; and all his ministers are ordered to bring to him their Com- plaints. An immense gong, or drum, is sus- pended at the door of the chief magistrate of every district in China, that none may be denied access to him, having this object in view.

He also, in a very singular way, appeals very frequently to public opinion. In no part of the world is every transaction of criminal justice more openly performed ; every instance of death must not only have the imperial edict to sanction it, but the charges and an abstract of the trial are published in the Pekin gazette, which issues daily. In the same paper is also announced all the ‘ court news ;’ whether the ‘ Son of Heaven ‘ is fasting or feasting, promoting or punishing, levy- ing or remitting taxes, feeding the hungry, clothing the naked, &c. with his reasons for the same, in respectful amplitude.

The Quarterly Review, No. L. instances the will of the late emperor Kia-king, and the pro- clamation on the accession of his son and successor Taou-kuang, as curious and convincing proofs of the extreme desire manifested by the government that the sovereign should stand well with the people. The will of Kia-king is dated 2nd Sep- tember, 1820, the day on which he died ††† sud- denly, as it would seem ††† and is, as usual, the composition of his ministers. It commences thus : ‘ The Great Emperor, who received from heaven and revolving nature the dominion of the world, hereby announces

his last will and testament to the subjects of his empire.' He then enumerates the advantages which he de- rived from the three years instruction and advice of his venerable father, after he mounted the throne from which he had retired, and continues, ' I have considered that the stability of a nation, and the grand principles of social order, consist in adoring heaven, imitating our ancestors, being active and diligent in all matters of government, and benevolent towards the people. I have borne in mind that heaven raises up princes for

tre sake of the people ; and that the duty of af- fording to the people sustenance and instruction is imposed on The One Man.'

He then goes on to remind the people, among other things, how, in conformity with these principles, he suppressed insurrections .and dis- turbances••• that he issued from time to time large sums of money to repair the banks of the Yellow River, ' which from ancient days till now has always been the scourge of China, ••• that he had frequently remitted the taxes and all arrears, in order to diffuse abundance, and create in all ranks of his subjects a general joy ••• thatwhile his heart was rejoicing in the universal plenty that the country was blessed with in consequence of an abundant harvest, he set out, in reverential obedience to the institutions of his ancestors, on a hunting excursion into Tartary, and that, to avoid the great heat, he stopped one day at a cottage on the mountain ; ' and though,' con- tinues he, ' I am advanced beyond the sixth de- cade of my life, and can mount and descend a hill without being fatigued, yet, on this occasion, the intense heat of the atmosphere affected me, so that yesterday, when I gave the whip to my horse in crossing the mountain of ' Expanded Benevolence,' I felt the phlegm rise in my throat even to suffocation, and had reason to apprehend that I had not long to live. However, in obe- dience to the rules of the departed sages of my family, I had already, in the fourth year of my reign, in the fourth month, on the tenth day, at five o'clock in the morning, previously appointed an heir to the throne ; which appointment I myself sealed and locked up in a secret casket.' This casket the great officers of state are com- manded to open without delay.

A few days after the death of Kia-king, ap- peared the proclamation of his successor, in which the virtues of his late father are enume-

rated, and the extreme reluctance set forth with which his unworthy successor was compelled to yield to the general voice and to occupy the va- cant throne. Next follows the He-cha-ou, or

First Division. Containing one book entitled . .

Second Division. Containing two books entitled .

Third Division.

Containing seven books entitled

Fourth Division. Containing two books entitled

Fifth Division. Containing five books entitled

‘ proclamation of joy,’ in which he announces his intention of holding a solemn feast in honor of heaven and earth, and of the superintending deities of the land and its produce ; and of confer- ring benefits on all ranks and descriptions of people. These marks of imperial beneficence are arranged under twenty-two different heads, and consist chiefly of gifts to the great officers of state ००० promotion of one step to all civil and military officers Tartars and Chinese ००० permis- sion to officers below a certain rank to send one of their sons to an imperial college ००० restoration of officers who have been suspended from ranker pay, or both ००० a general amnesty to all criminals except those convicted of rebellion or murder०००- and, adds the He-cha-ou, ‘if any person shall again accuse those so pardoned for their former offences, the accuser shall be punished accord- ing to the crime alleged against the accused ;’ (the Chinese must surely have a wonderful pro- pensity for bringing offenders to justice, to make a hint of this kind necessary) ००० remission of the public debts of officers in the army ००० increase of pensions to superannuated soldiers, &c. &c.

The executive government is administered by six public, or departmental boards, similar to our navy, treasury boards, &c. ; the six presiding officers of each forming, with the chief princes of the blood, a final or privy council of state. From these boards officers, are sent to every part of the empire, who forward, by express and other- wise, daily abstracts and reports of all the busi- ness, civil and military, of the provinces.

Sir George Staunton, among other important contributions, for which we are indebted to him respecting China, has lately furnished the British public with a complete copy of the penal law of this great

empire, or a translation of theTaTsing Leu Lee, the standard law autho- rity at Pekin. It is arranged under seven general divisions, comprising thirty books, and divided into 436 sections. The titles of the divisions and books are as follow

General Laws. Preliminary Regulations.

Civil Laws.

System of Government. ××× Conduct of Magistrates. Fiscal Laws.

Enrolment of the People. Lands and Tenements Marriage. Public Property. Duties and Customs. Private Property. ˆSales and Markets.

Ritual Laws. { Sacred Rites. t Miscellaneous Observances

Military Laws.

f Protection of the Palace. \Government of the Army. <ˆ Protection of the Frontier. /Military Horses and Cattle- V Expresses and Public PosU.

Sixth Division.

Containing eleven books entitled

Seventh Division. Containing two books entitled .

The grounds of mitigation and exception to these laws are of course numerous ; Sir George Staunton's general testimony, confirmed by that of Mr. Barrow and other able writers, is that, as in our own criminal jurisprudence, the denun- ciation against particular crimes is severe, the execution lenient. In 1784, according to father Amiot, the entire number of criminals who suffered sentence of death, throughout China, amounted to 1348, or one in 108,000 ; this was thought a large number at that period, and would give the proportion of 160 annually for Great Britain and Ireland.

The bamboo, in various degrees of its adminis- tration, is the general instrument of punishment, from the highest to the lowest class of offenders : it is enjoined by law to be made only of two sizes, the larger 5 feet 8 inches long, 2×× inches broad, and 2 inches thick, weighing 2$ Ibs. ; the smaller 5 feet 8 inches long, 2 inches broad, 1J

thick, and in weight only Ijj Ibs. The kia or cangur, is a portable wooden pillory which hangs on the neck, weighing 33 Ibs., and is to be 3 feet long and 2 feet 9 inches broad ; an iron chain 7 feet long, and weighing 6| Ibs., hand-cuffs and smaller fetters, are also used to secure prisoners. The question by various tortures is in use, except to certain privileged classes. We select from the work above alluded to the fol- lowing abstract of this singular code.

DIVISION I. ××× GENERAL LAWS.'

The lowest degree of punishment referred to in the Ta Tsing Leu Lee, is a moderate correction inflicted with the lesser bamboo, in order that the transgressor of the law may entertain a sense of shame for his past, and receive a salutary ad- monition with respect to his future conduct. Of this species of punishment there are five degrees. The first is ten, the fifth, fifty blows, which are, in fact reduced to four, and never exceed twenty blows. The second extends from sixty to 100 blows, of which only from twenty to forty are actually inflicted. The third division is that of temporary banishment to any distance not ex- ceeding 500 lee (about 150 miles), ' with the view of affording opportunities of repentance and amendment.' Of this there are also five gradations, extending from one to three years' banisnment, accompanied with a corporeal punish- ment, nominally from sixty to 100 blows, but ac- tually reduced as above. Perpetual banishment, the fourth degree of punishment, is reserved for

Criminal Laws. C Robbery and Theft. Homicide.

Quarrelling and fighting. Abusive Language. I Indictments and Informations. ×××\ Bribery and Corruption. Forgeries and Frauds. Incest and Adultery. Miscellaneous offences. Arrests and Escapes. ˆImprisonment, Judgment, and Execution.

Laws relative to Public Works. { Public Buildings. ' \ Public Ways.

the more considerable offences, and extends to the distance of 2000, and even 3000 lee, in ad- dition to 100 strokes of the bamboo. The fifth and ultimate punishment, which the laws ordain, is death, either by strangulation or decollation.

The following crimes are distributed under ten heads, being distinguished from others by their enormity ; they are always punished with the utmost rigor, and, when the offence is capital, it is exoepted from the benefit of any act of general pardon ; being considered, in each case, a direct violation of the ties by which

society is main- tained, they are expressly enumerated in the in- troductory part of this code, that the people may learn to dread, and to avoid the same. .1. Re- bellion, or an attempt to violate the divine order of things on earth. 2. Disloyalty, or an attempt to destroy the imperial temples, tombs, or pa- laces. 3. Desertion, or the offence of undertaking to quit or betray the interests of the empire, in order to submit or adhere to a foreign power. 4. Parricide, or the murder of a father or mother, uncle, aunt, grandfather, or grandmother. 5. Mas- sacre, or the murder of three or more persons in one family. 6. Sacrilege, or stealing from the temples any of the sacred articles, or purloining any article in the immediate use of the sovereign. 7. Impiety, or disrespect or negligence towards those to whom we owe our being, and by whom we have been educated and protected. 8. Dis- cord in families, or a breach of the legal or na- tural ties which are founded on connexions by blood or marriage. 9. Insubordination, or the rising against, or murdering a superior magis- trate by an inferior ; or any insurrection against the magistrates in general by the people. 10. In- cest, or the cohabitation, or promiscuous inter- course, of persons related in any of the degrees within which marriage is prohibited.

Sections seven and eight of this division relate to offences committed by officers of government. These, whether of a public or private nature, are punishable in ordinary cases by the infliction of corporeal chastisement ; but are commutable for fine or degradation, according to the number of blows of the bamboo to which they are nominally liable. Thus, if they offend in their public capacity, instead of receiving sixty blows, they forfeit a year's salary ; and instead of 100, lose four degrees of rank, or are removed from their situation. When the offence is of a private na- ture, the punishment is doubled ; the last de- gree is entire degradation, and d-smissal from

tTic service of government. Those who are en- rolled under the Tartarian banners, are punished with the whip instead of the bamboo ; and, in cases of banishment, they are sentenced to wear the cavgwe, or moveable pillory, for a specified number of days.

DIVISION II. ••• CIVIL LAWS. The first book is chiefly occupied in defining and describing the regulations to be observed by the great officers of state, and in pointing out their respective relations to the subordinate magistracy. It consists of fourteen sections, the first of

which says of hereditary succession, ‘ Every civil and military officer of government whose rank and titles are hereditary, shall be succeeded in them by his eldest son, born of his principal wife, or by such eldest son’s surviving legal representative, chosen according to the general rule here provi- ded.’ The second son, in case of the decease or incapacity of the eldest, is to succeed. In de- fault of sons by the principal wife, the sons of the inferior wives according to seniority. All appointments to great offices, whether civil or military, depend solely on the authority of the emperor ; any great officer of state, presuming to confer any appointment without such authority, is declared guilty of a capital offence. If an of- ficer quit his station without leave, or delay repairing to it ; if he fails to attend at court, or is found guilty of intriguing or caballing with his colleagues, he renders himself liable to very severe penalties : in the last case, if the cabal tend to impede and obstruct the measures of government, his offence is capital; his wivesand children become slaves, and his property is con- fiscated. Book II. contains fourteen sections on the conduct of magistrates.

DIVISION III. ××× FISCAL LAWS. Every master of a family is compelled to enter on the public register, an account of his taxable property, and the names and number of the male individuals of full age for service, namely, from sixteen to sixty years. The omission of such registry, or a fraudulent entry, is punishable with the bamboo, according to the nature of the offence. Families and individuals are registered according to their professions. This book also inculcates impartiality in the levy of taxes and personal services, and in the allotment of those services ; prescribes punishment and penalties for the eva- sion of personal service by concealment of de- sertion ; for abuses of the magistrates in requiring personal services beyond the legal extent, or for private purposes; and enjoins the taking care of the aged and infirm. All poor destitute widowers, and widows, the fatherless and childless, the helpless and the infirm, shall receive sufficient maintenance and protection from the magistrates of their native city or district, whenever they have neither relations nor connexions upon whom they can depend for support; any magistrates, refusing such maintenance, and protection, shall be punished with sixty blows. Also, when any such persons are maintained and protected by government, the superintending magistrate and his subordinates, if failing to afford them the legal allowance of food and raiment, shall be punished in proportion to the amount of the de-

ficiency, according to the law against an em- bezzlement of the government stores.

Book II. of this division is entitled Lands and Tenements, and consists wholly of regulations concerning the registry of lands, the payment and evasion of the land-tax, fraudulent returns respecting productive and unproductive lands ; the personal visitation of lands that have suffered from any calamity ; sales and mortgages of land, and the punishment of frauds committed therein; and a regulation by which officers of government are restricted from purchasing lands within the limits of their jurisdiction. The whole of this book is curious, and throws considerable light upon, though it does not finally settle, the doubtful question, whether the tenure of land in China is held in the nature of a freehold, or whether the sovereign is, in fact, the proprietor of the soil, while the nominal landholder is, like the zemindar in India, no more than the stewaru or collector of rents for his master. That the rich merchants purchase landed property, which is transmitted to their posterity, and continued in the family for many generations, there can be no doubt whatever ; yet it is evident from the Leu-lee, that the proprietorship of the landholder is but of a qualified nature.

Book III. of this division relates wholly to marriage : ‘ When a marriage, it enacts, is in- tended to be contracted, it shall be, in the first instance, reciprocally explained to, and clearly understood by, the families interested, whether the parties, who design to marry, are or are not diseased, infirm, aged, or under age, and whether they are the children of their parents by blood, or only by adoption. If either of the contracting families then object, the proceedings shall be carried no further ; if they still approve, they shall then in conjunction with the negociators of the marriage, if such there be, draw up the marriage-articles, and determine the amount of the marriage presents. If, after the woman is thus regularly affianced by the recognition of the marriage articles, or by a personal interview and agreement between the families, the family of the intended bride should repent having entered into the contract, and refuse to execute it, the person amongst them who had authority to give her away shall be punished with fifty blows, and the marriage shall be completed agreeably to the original contract ; although the marriage articles should not have been drawn up in writing, the acceptance of the marriage presents shall be suf- ficient evidence of the agreement between the parties.’

The remaining clauses provide, in every pos- sible way, against the infraction of a marriage- contract, whether on the part of the man or woman affianced, or of their respective relations. Lending a wife on hire is punishable with eighty blows ; lending a daughter with sixty: those who receive the wives or daughters on hire for a limited time,

are to participate equally in the aforesaid punishment, and the parties are to be separated ; the pecuniary consideration for such loan to be forfeited to government. Polygamy being allowed, it has been found necessary to settle, by law, the rank and priority among wives. The first wife is usually chosen by the

parents out of a family equal in point of rank to their own ; the ceremony is conducted with a certain degree of splendor and notoriety, and the lady is entitled to all the rights and privileges of the mistress of the family. After this the hus- band may espouse other wives, but without the same ceremony, and without consulting his friends : he may take them from any class of so- ciety, and bring them into his house as inferior wives, or concubines, or handmaids, or by what- ever name he may please to call them ; these in- ferior wives are equal in rank among themselves, hut all of them subordinate to the first wife. He ###who degrades his first wife to the condition of an inferior wife, is liable to a punishment of 100 blows ; and if, in the life-time of his first wife, he raises an inferior wife to the rank and condi- tion of a first wife, he is punished with ninety blows; in both cases the wires are replaced in their original situations: if a man takes a second principal wife, while the first is living, he incurs a punishment of ninety, blows; the marriage is void, and the woman must be returned to her parents.

‘ If any officer of government marries the wife or daughter of any person having an interest in the legal proceedings at the same time under his investigation, he shall be punished with 100 blows, and the member of the family of the bride, who gave her away, shall be equally punishable. The woman, whether previously married or not, shall be restored to her parents, and the marriage present forfeited, in every case, to government. When the marriage is a compensation for some unjust decision, on a subject under the magis- trate’s investigation, the punishment shall be in- creased as far as the law, applicable for such a deviation from justice, may authorise.’

In section 116 is the law of divorce. If a husband repudiates his first wife without her having broken the matrimonial connexion by the crime of adultery, or otherwise ; and without her having furnished him with any of the seven justifying causes of divorce ; he shall, in every such case, be punished with eighty blows. Moreover, although one of the seven justifying causes of divorce should be chargeable

upon the wife, namely, 1. barrenness; 2. lasciviousness ; 3. disregard of her husband's parents; 4. talka- tiveness ; 5. thievish propensities ; 6. envious and suspicious temper ; 7. inveterate infirmity ; yet if any of the three reasons against a divorce should exist, namely, 1. the wife's having mourned three years for her husband's parents; 2. the family's having become rich after having been poor previous to, and at the time of marriage ; 3. the wife's having no parents living to receive her back again ; in these cases, none of the seven aforementioned causes will justify a divorce, and the husband who puts away his wife upon such grounds, shall suffer punishment two degrees less than that last stated, and be obliged to receive her again. If the wife shall have broken the matrimonial connexion by an act of adultery, or by any other act which, by law, not only autho- rises, but requires that the parties should be se- parated, the husband shdll receive a punishment of eighty blows, if he retains her.

Criminal intercourse, by mutual consent, with

an unmarried woman (according to book viii. of the tenth division), shall be punished with seventy blows ; if with a married"woman, the punishment shall be eighty blows. Deliberate intrigue with a married or unmarried woman shall be punished with 100 blows. Violation of a married or un- married woman, that is to say, a rape, shall be punished with death by strangulation. An as- sault with an intent to commit a rape shall be punished with 100 blows, and perpetual banish- ment to the distance of 3000 lee. Criminal in- tercourse with a female under twelve years of age shall be punished as a rape in all cases. In cases of criminal intercourse by previous agree- ment, or by any intrigue, the man and woman shall be esteemed equally guilty ; and, if any male or female child be the fruit of such connexion, it shall be supported at the expense of the father; the mother shall either be sold in marriage or remain with her husband, according to his choice ; but if the husband is guilty of selling his wife in marriage to the adulterer, the parties shall be respectively punished with eighty blows ; the woman shall be sent back to her family, and the price paid for her, forfeited to the government. The woman on whom the rape is committed shall not be liable to any punishment. When a wo- man is found with child, she shall be liable to the penalties of this law, though the father should not be discoverable. Criminal intercourse between officers of government and females under their jurisdiction is an aggravation of the offence.

We pass now to a specimen of DIVISION V. ××× or the MILITARY LAWS OF CHINA.

Book I. of this division is entitled, Protection of the Palace, and relates wholly to the duties of the guards of the imperial palace. All persons are forbidden to approach the imperial temple, burying-ground, hall of oblations, or any part of the imperial palace or gardens. To enter any of the apartments in the actual occupation of the emperor is punishable with death ; and the most strict regulations are laid down with regard to those who are occupied in the grounds. Their names are to be inserted on a list in entering and returning through the several gates. No one is allowed to walk or ride on the roads and bridges over which the emperor is to pass. All laborers, messengers, and artificers, must be provided with personal passports before they can enter any of the gates of the imperial palace : they are not to stay after their work is done ; they are counted in going in and coming out, to ascertain that none remain behind . At the end of every month the lists are examined, to see how often any of the attendants have passed the gate. None of the relations of persons convicted of crimes can be employed about the palace. During the journeys of the emperor, the people must make way for the approach of his majesty, and not come within the lines of his guard ; when approaching a place unexpectedly, so as not to allow time for the people to retire, they are to fall prostrate until the retinue shall have passed.

Book II. is entitled Government of the Army, and may be considered as the Articles of War of this empire. The regulations on every point con- nected with it are well arranged and any neglect

or disobedience is punished with the greatest severity. If supplies of arms, ammunition, or provisions, are not regularly transmitted; if any deficiency appears ; if the commanding officers of the troops, who have received orders to co-operate lose time and wait the issue of events ; if those entrusted with the orders for assembling the troops do not execute their commissions in due time ; any error or failure that may arise from such causes shall subject the offending parties to the punishment of death.

DIVISION VI. ××× contains the CRIMINAL LAW.

Book I. is entitled Robbery and Theft. The first article is high treason ; all persons convicted of which, whether principals or accessaries, shall suffer death by ‘ slow and painful execution ;’ which, Sir

George Staunton tells us, amounts to a license to the executioner to aggravate and pro- long the sufferings of the criminal by any species of cruelty he may think proper to inflict. All the male relations in the first degree, and their sons, are indiscriminately to be beheaded; all under the age of sixteen, and the females in the first degree, to be distributed as slaves to the great officers of state : their property of every description to be confiscated to the public. Re- bellion, sacrilege, stealing the seals or stamps of office, stealing from the imperial palace, are all capital offences.

There are many nice distinctions in the law concerning robbery, and the punishment is diffe- rent for different persons, concerned in the same, robbery, according to the share each individual appears to have taken ; all are, however, guilty of a capital offenoe, when the robbery is actually committed by violence : the attempt to commit robbery is punishable by perpetual banishment. A single person if detected taking openly and by force the property of another, is sentenced only to 100 blows and three years banishment ; but if the plundered individual be wounded, the offender in that case must suffer death. An at- tempt to steal is punishable with fifty blows. Actual stealing to the amount of 120 ounces of silver is a capital offence; but there is reason to believe that this severe sentence is never enforced. Stealing from relations and connexions by mar- riage, in the first degree, incurs a punishment less by five degrees than in ordinary cases ; be- cause, as Sir George observes, this is not a vio- lation of an exclusive right, but only of the qua- lified intetest which each individual has in the share of the family property. Extorting property by threats is punishable one degree more severe- ly than in ordinary cases of theft. Swindling is punished in the same manner as theft, in ordi- nary cases, excepting that the offender is not liable to be branded. Kidnapping and selling free persons as slaves are punished with IOC blows and perpetual banishment; and where force is used, and wounds inflicted, by death. There is a very long section entitled Disturbing Graves, and this subject is evidently connected with some superstitious practices in use among the . Chinese. Entering without authority a dwelling house, by night, is punishable with eighty blows. The master is justified if, in the moment of en- tering, he puts the intruder to death ; but not so, if he kills him after having seized his person.

Book II. is entitled of Homicide, and marks the great care of the Chinese, in inflicting severe punishment. There are no fewer than five and twenty additional clauses to the section entitled Killing an Adulterer, which are so many statutes that have been adopted, from time to time, accor- ding to the differences which have taken place in

the situation and circumstances of parties.

In cases of premeditated homicide, the original contriver is to suffer death by decapitation ; the accessaries, by being strangled : accessaries, riot contributing to the act, are punishable with 100 blows and perpetual banishment. Those who commit murder for the sake of plunder are to be beheaded, without distinction between principals and accessaries. The design to commit parricide subjects all the parties, principals as well as accessaries, to the punishment of being beheaded ; if actually committed, they must all suffer death by a slow and painful execution. Slaves designing to murder, or actually mur- dering, their masters, are subject to the same degree of punishment.

If a principal or inferior wife is discovered by her husband in the act of adultery, he is au- thorised to kill the adulterer, or adulteress, or both, at the moment. The rearing of venomous animals, and the preparing of poisons, for the destruction of man, are capital offences, although it may not appear that any person has been actually killed by means of such drugs or animals. Killing or wounding in play, by error, or by accident, is liable to the same punishment as is provided in ordinary cases of killing or wounding in an affray ; but the offender is permitted to redeem himself from the capital part of the punishment, by the payment of a fine to the family of the person deceased or wounded. By pure accident is understood a case of which no sufficient previous warning could be given, either directly by the perceptions of sight and hearing, or indirectly by the inferences drawn by judg- ment and reflection ; as, for instance, when lawfully pursuing and snooting wild animals, when throwing a brick or a tile, and in either case unexpectedly killing any person ; when, slipping and falling down, so as to hurt a com- rade or by-stander ; when sailing, and being driven involuntarily by the winds ; when riding, and unable to stop or govern your horse ; or, lastly, when several persons jointly attempt to raise a great weight, and the strength of one of them fails, so that the weight falls, and kills or injures his fellow-laborers : ××× in all these cases there could have been no previous thought or intention of doing an injury, and therefore the law permits such persons to redeem themselves from the punishment provided for killing or wounding in an affray, by a fine to be paid to the family of the deceased or wounded person.

Medical men performing any operation, or ad- ministering any drugs contrary to the established rules and practice, and thereby killing the patient, are considered as guilty of homicide ; but if, on examination, it shall appear to have been simply an error, the

practitioner may redeem himself by a fine ; but must quit his profession for ever. If the patient dies, the practitioner who is convicted of designedly employing improper mw'u-

cines, or otherwise contriving to injure his patient, shall suffer death by being beheaded.

Book II. of Quarrelling and Fighting, enters into a minute and circumstantial detail of blows given under every conceivable circumstance, and takes into consideration every possible relation in point of rank or connexion between the parties. It fixes the periods of responsibility for the con- sequences of a wound. Any person who is guilty of striking his father, mother, paternal grandfather or grandmother ; and any wife, who is guilty of striking her husband's father, mother, paternal grandfather or grandmother, shall suffer death by being beheaded ; ××× but, ' if a father,

mother, paternal grandfather or grandmother, chastises a disobedient child or grandchild in a severe and uncustomary manner, so that he or she dies, the party so offending shall be punished with 100 blows.'

We are indebted to the able article CHINA from the pen of Mr. Barrow, in the supplement to the Encyclopedia Britannica, for the following table of pecuniary redemption, in cases no legally excluded from the benefit of general act? of grace and pardon They are not necessarily redeemable; but, by edict of Kien Lung, may be made so upon petition.

Rank of the party offending.

Sentence.

Pecuniary Commuta- tion.

Oz. of Silver.

An officer above the fourth rank . .^) (~ 12,000

Death by strangula- tion or de- collation.

5,000 4,000

2,500 2,000

of the fifth or sixth rank

a doctor of literature . ‘ .. ►► A graduate or licenciate . ‘ . ►►► .-

A private individual . . . .J 1

.. 1,200

An officer above the fourth rank

” 7,200

Perpetual

2,‘400

> banish- ►►►<

or a doctor of literature

ment.

1,500

A graduate or licenciate

1,200

*A private individual . ; *►►i*

720

An officer above the fourth rank . . ^.”>

Tempora- ry banish-

” 4,800 2,000 1.600

►►► of the fifth or sixth rank

ment, or ,

or a doctor of literature . . . “tn”th

1,000

A graduate or licenciate . ˆJM A private individual . . J bambo►►-

800 480

These commutation fines are said to bring con- siderable sums into the public treasury.

Practically, many curious, and doubtless many unjust and immoral cases of commutation take place. Direct bribery to pervert justice is said to be often attempted with success. Pera Amiot relates the circumstance of a master mason hav- ing been killed while under chastisement by an officer of the household of a prince. The officer bribed a laborer for ten ounces of silver, and a promise of respite, to confess himself the homi- cide ; and distributed three ounces of silver amongst other laborers to depose to a quarrel, in which the death-blow was said to be inflicted. The man was tried, and condemned to 'suffer death according to the law, on the day of public execution at the autumnal solstice : but it being customary for a principal minister of the crown to examine the criminals previously to tˆeir being turned off, his courage failed him, as to the issue, and he loudly bawled out the whole affair. The officer upon this was. tried, and his original offence being considered as aggravated by the attempt to involve an innocent person in the

consequences, he was sentenced to die by slow and painful means: while the judges and asses- sors of the court, who tried the laborer, were degraded and mulcted. We cannot help re- garding this, with the good father, as on the whole a creditable instance of Chinese justice. If in one quarter it demonstrated corruption, it also exhibits the remedy as at hand, and as very promptly and energetically applied. But that great deceit and corruption take place in the administration of the criminal law throughout China, seems to be established. A most curious modern instance is that supplied by the Quar- terly Review, May, 1810, as follows : ►►►

'In February, 1807, fifty-two seamen belong- ing to the East India Company's ship Neptune, being on shore at Canton, got into a general scuffle with some hundreds of Chinese, when one of the latter received an unfortunate blow on the head with a stick, and died in consequence of it. The Chinese merchant, who had given security for the good conduct of the ship's com- pany, being called upon by the magistrates, applied to the English factory to deliver up to

justice one of the seamen, no matter whom, engaged in the aft'ray. As it was impossible however to ascertain whether any, or which, of the Neptune's men had given the blow, the su- percargoes very properly resisted the demand. The chief of the factory was threatened with im- prisonment until a man should be given up, and the security-merchant was actually imprisoned, hˆwl-cuffed,and menaced with corporeal punish- mWt. The cargoes for the Company's ships were withheld. These measures not succeeding, the magistrates next demanded that those who were most active, who were known to be drunk, and who carried sticks, should be examined, and confession extorted from them by the application of the torture. This demand was of course rejected. After more than a month lost in threats, edicts, proclamations, and daily confer- ences, the security-merchant was allowed to send his agents to all the Company's ships in the river, to offer a reward of 20,000 dollars to any person who would point out the individual who had struck the deceased. To the honor of British seamen, they resisted the temptation, great as it was, to a man. The magistrates then assented to examine the fifty-two men in the ordinary way; the British factory was fitted up as a court of justice; the great officers of state, and the judges attended, and the result was the singling out of eleven men as having been the most active in the affray. On a re-examination of these men, they endeavoured to prevail on some one to plead guilty, under an implied promise that he should not be punished. This failing, it was suggested that the affair might be got over if the officers of the Neptune would depose, that they had seen a sailor carrying a bamboo stick over his shoulder, against which, in the hurry and confusion, a Chinese had accidentally run his head. The proposal of so ridiculous and pitiful an expedient met with the contempt it deserved. The next suggestion was, that some one of the sailors should be prevailed on to state that, find- ing an attempt made on his pocket, he had struck behind him, and might thus hare wounded the deceased. This expedient meeting with no bet- ter success, they proceeded in their examination, and dismissed all except two, Julius Caesar and Edward Sheen. It appeared that Julius Caesar had a small cane in his hand on the day of the riot, but was not outside of the factory, and that Edward Sheen was on the outside of the factory, but did not carry a stick ; he confessed however that he had a Chinese tobacco-pipe in his hand, the tube of which was of bamboo; the court therefore decided that he carried a stick, and consequently that he was the culprit. Having got thus far over the ground, a long negociation took place as to the disposal of Edward

Sheen, until the final decision on the case should be received from Pekin, and it was at length agreed that he should be left behind in charge of the supercargoes.

‘ Having thus briefly stated the leading facts, we shall now see in what manner the case was represented to the supreme court at Pekin, and its decision thereupon.

‘ The viceroy of Canton states, for trie inform- ation of the supreme court, that Edward Sheen, VOL. V.

an Englishman, being in an upper story of a warehouse which overlooked the street, and in which there was a window opening with wooden shutters, did, on the eighteenth day of the first moon, employ a wooden stick in an oblique direction to keep open the shutter, and that in doing this the wooden stick slipped and fell downwards; that Leao-a-teng, a Chinese, pas- sing at the moment, was struck and wounded by the falling of the said stick upon his left temple, and that on the evening of the following day, he died in consequence of the wound. That re- peated orders had been given to the chief of the English factory to deliver up the man to justice; that in reply it was alleged the said criminal was sick of an ague and fever, and under medical treatment; that on his recovery he was confront- ed with the relations of the deceased ; that after repeated examinations, the said criminal Edward Sheen had acknowledged the truth of all the facts here stated, without reservation; that he had consequently been proved guilty of acci- dental homicide, and ought therefore to be sen tenced to pay the usual fine, to redeem himself from the punishment of death by stranyi lation.

‘ Upon this report the supreme court observes, that the case appears to be one of those acts, of the consequences of which neither sight, hear- ing, nor reflection could have given a previous warning; that the said Edward Sheen should, therefore, be allowed to redeem himself from the punishment of death by strangulation, by the payment of a fine (amounting to about ––4. 3s. sterling), to the relations of the deceased, to defray the expenses of burial, and then be dis- missed to be governed in an orderly manner in his own country.’

The Hong merchant is said to have expended little short of ––50,000 in hushing up this affair. And, here again, we must contend, in justice to the Chinese, that a considerable and just esti- mate of the value of human life seems to have existed somewhere.

The religion of China is certainly neither a system of general public devotion or worship, nor of future rewards nor punishments. The former, the general quiet policy and jealousy of the government seem to forbid; i. e. all public assemblies of the people ; and to the latter idea no appeal is ever made, nor \vould a Chi- nese moralist allow of there being any necessity for such an appeal. Ever-present vigilance and punishment, or reward, is the boast of the im- perial administration. Here are therefore no saint or idol, feast, or sabbath days : no ordi- nances of public worship; no public offices of the priesthood; and hardly anything that can be called a public establishment of religion. The em- peror, as we have before stated, is the high priest and his state officers are at certain great feasts the assistant ministers of religion. In the ritual law, are various penalties for every species of neglect, irregularity, or disorder, which may take place previous to or during the performance of the sacred rites. The animals, precious stones, and other oblations, must be of a proper quality and quantity. An officer, having taken the oath of abstinence, must neither put on mourning, nor

visit the sick, nor take cognizance of capital offences, nor partake of a feast, nor pass the night with his family, till the sacred rites have been performed. To damage or destroy the altars, mounds, or terraces, consecrated to the sacred or imperial rites, is punishable with 100 blows, and perpetual banishment. Magicians, leaders of sects, and teachers of false doctrines> are liable to very severe penalties; and among the teachers of false doctrines are included the Roman Catholic missionaries, who, however, are caressed or persecuted as it may suit the conve- nience or the caprice of the ruling powers/

The principal sects of the tolerated priests are those of Fo (Buddho), and Tao-tse ; the number of temples dedicated to the former deity is very great, but none can be built without special license from the government, and they are treated with comparative indifference both by the rulers and the people. ‘ Religion in China,’ says Mr. Ellis, ‘ although addressed in all directions to the eye, did not appear to have much influence upon the understanding or passions of the people. It has all the looseness and vanity, with less of the solemnity and decency, of ancient polytheism. Their temples are applied to so many purposes, that it is difficult to imagine how any degree of sanctity can be attached either to the dwellings or persons of their deities. The influence of superstition is, however, general and extensive; it is displayed in acts of divination, and in propitiatory

offerings to local or patron deities. Its observances belong rather to the daily manners than to the moral conduct of the people.' In another place, he says, 'I visited a temple near our anchorage, connected with a small tank, in whfch are some sacred fish. This water is also said to be infested with evil spirits, and whatever support the temple receives from donations is probably derived from the credulity of the neighbourhood upon this point. The priests offered for sale a small pamphlet, expla-. natory of certain religious terms. It was remarked by some that the priests had all an idiotic expression of countenance; to me it seemed rather the consciousness of belonging to a degraded profession. The priests are taken from the very lowest classes, and it is scarcely possible to conceive a body more degraded, and indeed more deserving of degradation. In their indifference^) all the decencies of religion, con- trasted with the multitude of their temples and idols, the Chinese exhibit a striking peculiarity of .'national character.'

Magistrates, at their inauguration, perform public devotions to the honor of Confucius, in a hall or temple dedicated to his memory ; the usual oblation is that of a hog, as being the most useful of animals ; and the sacrifice is performed before a pedestal, bearing simply the name of that sage. At the foot a pit is dug to receive the hair and offal. Father Intorcetla, in his treatise De Cultu Sinensi, has given the whole ceremony from a Chinese author: it is said to bear a marked resemblance to the high mass of the Catholics. Libations of wine are poured out ००० solemn hymns chaunted००० grand instrumental music and the offering of incense being mingled ००० and the worshippers finally prostrating them-

selves before the tablet, and passing round the ' cup of happiness.'

The public festivals, which are both of a civil, and religious nature, are those of the New Year, the feast of Lanterns, and of the Full Moon. The last is generally confined to noisy mirth all night among the common people. But at the opening of the new year all ranks proclaim holi- day; and on New-Years' Day, all labor bapg forbidden, family visits, and compliments, are exchanged, the houses are newly painted and adorned, and every Chinese is watchful of the general aspect of its events, believing that in the occurrences of that day he has an epitome of what will befal him during the year ensuing. The feast of Lanterns commences two days be- fore, and continues two days after, the first full moon of the new year. On this occasion, every city and village, the shores of the sea, and the banks of the rivers, are hung with painted lan- terns of various shapes and sizes ; some of them being seen in the windows of the poorest houses.

No expense is spared on this occasion. The rich often lay out 8/. or 9/. sterling on one lantern ; and some of them are very large, composed of six wooden frames neatly painted or gilt, and filled up with pieces of fine transparent silk, upon which are painted flowers, animals, and human figures ; others are blue, and made of a transparent kind of horn. Several lamps, or a number of wax candles, are fixed in the inside ; to the corners of which are placed streamers of silk and satin of different colors, with curious pieces of carved work on the top. The Chinese, being acquainted with our magic lanterns, also introduce them in this festival. They have also the art of forming snakes sixty or eighty feet lon

The most creditable feature of their morals is the universal respect paid by children to their parents ; and by the young, generally, to the aged. This is in fact the basis of all moral, political, and religious duty, in the estimation of the Chi- nese, and is, it should be added, an universal principle of action. ‘ The Superior man,’ says one of their most celebrated commentators on the text of Confucius, ‘does not go out of his own house to perfect himself in the art of governing a country. It is filial veneration that he cherishes towards his sovereign, fraternal respect which he exercises towards his superiors, and fatherly com- passion that he displays towards the great body of the people.’ (See Dr. Marshman’s Clavis Sinica, ‘Ta-Hyoh,’ p. 19). All persons of a respectable rank in society build a mausoleum to the memory of their ancestors ; and rich and poor unite in the usage of visiting the tombs of

iheir parents every spring. On this occasion f□□000 or 10,000 persons will sometimes be found in one assembly ; and the only precedence in making the oblations is given to the oldest men of the groupe. So particular are the Chinese in their veneration for the dead, that should the place of their first deposit become damp or swampy, they will remove them to a drier spot.

Even the authority of the emperor is every where regarded as paternal, and that to a ludi- crous extent. ‘ I this day,’ says Mr. Ellis, ‘ saw the pantze inflicted upon one of the boatmen, and was surprised at the comparative lenity of t’le punishment ; the strokes, twenty-five in number, were inflicted on the back of the thighs with a half bamboo, six feet long, and two inches wide : so little force was used, that the suffering did not certainly exceed that of a tolerably

severe flog- ging at school. The culprit, according to the established usage, returned thanks, when the punishment was over, to the mandarin, by pros- tration. This practice, absurd in appearance, and unnatural in reality, arises from the pa- triarchal theory of the government, which sup- poses that judicial punishments are the cor- rections of paternal affection, and therefore reluctantly inflicted.'

We have noticed a Chinese superstition with regard to the new-years' day. This is extended to many other lucky and unlucky days,duly marked in the imperial calender. A board of imperial astronomers, or astrologers rather, regulates tho propitious days for the court; and on the un- lucky days no contract is expected to succeed, no marriage, and even on some of them no funeral must take place. They have also great faith in the good fortune of odd numbers : there are they say three grand kinds of luminaries, the sun, moon, and stars; three superior beings, God, angels, and man ; three essential powers, heaven, earth, and man; three grand relations of life, prince and people, father and son, husband and wife. Their chief temples have therefore three quadrangular courts, and the buildings around are said to be inhabited by three species of spirits, heavenly, earthly, and infernal. Five great vir- tues are often spoken of in their ancient books, charity, justice, good manners, prudence, and ji- delity : they reckon jive domestic spirits; jive ele- ments; jive primitive colors; jive seasons of the year, over which are five presiding spirits; Jive planets; Jive points of the compass; jive sorts of earth ; jive precious stones, and jive degrees of punishment. Seven is also distinguished. There are, they say, seven ruling heavenly powers, the sun, moon, and five planets ; nine is also a ruling and efficient number.

*Of their language we should be disposed to say but little in a work of science, did not the degree of light which has been thrown upon it of late years, reflect peculiar honor on Engli-h- men and English missionaries. The Jesuits had persuaded all Europe, to a very late period, that it was so strangely obscure as to require the de- votion of a life to understand it for any useful purpose. 'We now know,' says Mr. Barrow, * that a moderate degree of application for two or three years, with the assistance of a Chinese, will enable the student to write it with ease, to read*

and translate their most obscure books, and to transact every kind of business, commercial or political ; and that this knowledge has opened up a vast fund of literature which, in Europe, was hardly suspected to exist. To Sir George Staun- ton, in the first place, he adds, to Dr. Marshman and his son, at Serampore, to Mr. Morrison, a Missonary at Canton, and to Mr. Davis, a pro- mising youth in the

East India Company's Fac- tory at that port, we are more indebted for a true and distinct state of the laws, the language, the institutions, and literature of China, than to all the voluminous writings of the Jesuits, which, however curious and valuable in many details, are crowded with errors and exaggerations.'

We have noticed at some length, Sir George Staunton's contribution to our knowledge of Chi- nese jurisprudence. ' It was reserved ' says the Quarterly Review, July 1814, 'for the missionary of Serampore (Dr. Marshman) to favor the Euro- pean world with the first plain, simple, and intelli- gent introductory treatise of the Chinese language.' We cannot, therefore, better furnish thereaderwith a few plain ideas respecting this language than by offering him a short abstract of Dr. Marshman's Clavis Sinica, or Elements of Chinese Grammar : interspersed with an observation or two from other sources. It is a scarce 4to. volume printed at the Serampore Mission press ; and sold, we be- lieve, in this countr) for ►►5. 5s.

' That the Chinese,' says Dr. Marshman, ' is a singular language, will be readily acknowledged. But, although it differs widely in its principle from every alphabetical language, a thorough investigation of the subject will probably remove many of the mistakes hitherto entertained re- specting it, and perhaps evince, that, though totally different in its nature, it is little less re- gular in its formation, and iˆwere the means equally within our power) scarcely more dif- ficult of acquisition, than Sungskrit, Greek, or even Latin. It may assist us in forming a just idea of this language, if we first examine the nature and formation of the characters, ►►► then the sounds affixed to them; and afterwards their grammatical construction, or the manner in which they unite with each other in forming sen- tences.'

' These characters answer properly to the (written) words which compose other languages : no one of them forms a proposition ; no one in- cludes within itself the force of a noun and a verb, of a substantive and its adjunct, or an ac- tion and its object, in any other way than com- pound words in the Greek and the Sungskrit languages. However complicated any character may appear, still the compound, though it em- brace six or seven characters, like compounds 1.1 Greek and Sungskrit, expresses only one Idea, and still remains a substantive, an adjective, a verb, &c., as capable of union with other cha- racters as the simplest character in the language Nor is any difference of gender, number, or case, in the nouns; or of mood, tense, or person, in the verbs, expressed by any alteration in the cha- racter : these are all either inferred from the con- nection, or expressed, as in English, by certain auxiliary

characters.

4 The specific difference then between the

Chinese and other languages, lies wholly in the principle on which the characters or words are formed : these being formed in the latter by the union of the letters of the alphabet, in the former Ly the union of certain elementary characters, in- tended to represent the principal objects of sense.'

' These are in number 214, and consist of strong linear and angular strokes, which advance in number from one to fifty-two, and include every variety with respect to length, from the simple apex to the longest oblique stroke, as well as that variety of position, which results from the oblique, the horizontal, and the per- pendicular. It is, however, worthy of remark, that circular forms are excluded. Whatever of this nature appears in any character, is merely fancy and embellishment, and no way essential to the meaning of the character. Nor does the thickness or fineness of the stroke alter the meaning, any further than as indicating, in cer- tain cases, whether the stroke has been struck upwards or downwards : that circumstance, in several instances, forming the specific difference between two characters apparently alike in form.'

The elements then follow, in Dr. Marshman's Treatise, in the order they preservein the Impe- rial Dictionary. Atthe close of them he remarks,

' These elements enter into the composition of all the characters of the Chinese language ; every other character is said to contain at least one of these, and most of them are formed by the union of several, proceeding from one to seven or eight. Some of them, it is true, are abbreviated for the sake of facilitating their union with others, and in some of the compounds, a part of certain cha- racters alone appears : but, in the greater number, every character may be distinctly traced, either in its proper or abbreviated form.

' Relative to the origin of the elements and the other characters,' continues Dr. Marshman, ' we are left almost entirely to conjecture. The invention of twenty-four elements which, void of meaning

themselves, should yet constitute words, signifying, by compact, distinct ideas, according to Harris, has been esteemed so extraordinary, as almost to transcend the powers of the human mind. It is not easy to determine whether this mode of expressing ideas, or the imitative adopted by the Chinese, be the most ancient, but the latter seems more simple and obvious, and hence more within the reach of the human mind. However difficult it might be to invent and com- bine letters so as to form words which might convey ideas ; that, when men wished to retain or convey to each other the idea of an object, it would be natural for them to trace in some rude manner an imitation or character, which might in their opinion serve to represent it, is evident, not only from the practice of travellers and others unacquainted with the principles of draw- ing, but even from that of children, who, in their juvenile frolics, often amuse themselves in thus attempting to pourtray objects which forcibly strike their attention.'

' The first efforts of this kind were probably attempts to delineate the, objects of sense around. Whether such imitations would bear any likeness to the thing -represented, is another question : that this would be intended, seems. more than probable ; but that the resemblance should be in

many cases so exact as of itself to demonstrate the object represented, is scarcely to be ex- pected. Nor is any thing of this kind intended to be affirmed respecting the elements. They are laid before the reader simply as elements ; and every man will judge for himself respecting any real or imaginary resemblance between the head,1 the hand,1 the heart3 the mouth* and the characters by which these are represented. Thus

1234

H

However this may be determined in modern times, the Chinese historians it seems trace back the origin of these characters in successive editions of ancient books in a very remarkable way. Mr. Morrison quotes them as speaking of a person named Paou-she who compiled a work called Lah-hoo about the year of the world 2900, in which the greater part of the characters are hie- roglyphic : they were afterwards abbreviated for the sake of convenience, we are told, and thus the original forms were lost. But, in proof of the characters being at first a representation of the thing signified, the following instances have been advanced from seals, cups, vases, &c. Many of

them indeed were forwarded by father Amiot, to the Royal Society of London. Thus

(►►) jih, was the sun, now |^J Js yue, the moon, now

*►►► shan, a hill, now

i-V a field, is now also

►►►**- ►►-

Sr ►►► ^T> a sheep, now ^^

►►►<]►►>- muh, the eye, now JS3

S^2? chow, a boat, now)t)

►►►""►►►.. -x"" a mouth, now lu?

y\l/v" a cart or carriage, now n=>

bq a gap, now P^

"2^ shevuy, water now J1/^

*^J urh, the ear, now -^f~

1 The Chinese themselves,' according to Dr. Marshman, ' divide the characters into six classes, the first three of which include those characters which in a qualified sense may be termed simple; and the last three regard the compound characters. The first efforts, as al- ready observed, being unquestionably employed in attempting to form representations of visible objects, these form the first class, and are termed Syang-hhing, ' imitations or figures.' This class includes rather more than half the elements, and a few other characters which are more simple in their forms than some of the elements, though not ranked among them.'

' The second class in order points out the next step taken to extend this medium of communica- tion. It is termed by the Chinese kya- tsyea, ' feigned or made,' and is said to apply the cha

racters in a double sense. They adduce as ex- amples of this,' r A

Viang,5 long, wide, which, from signifying the length or extension of matter, was applied to denote length of time, &c. ; and ting,6 which from being originally used to denote order, command, was at length applied to sig- nify the thing ordered or appointed, as shee-lmg, the various parts of time ordered or appointed, that is, the months of the year. Of this kind is tehee,7 an arrow, which from the straight course of an arrow, was used to signify direct, right, a word spoken directly to the point ; and hence when combined with khou,8 a mouth, it forms chee,9 knowledge ; of which more hereafter. This advance seems to have created no new cha- racters, but to . have extended those already formed, by applying them in a metaphorical or figurative sense, as far as the objects they repre- sented were capable of being thus applied. This class may therefore be termed the figurative.

567 89

But this extension, though it enlarged their medium of intercourse, was in itself limited. A character which merely denoted length, could not without force be made to signify height ; nor could one denoting command, be with propriety applied to signify depth. Necessity compelled them to advance another step, and gave rise to the forming of the third class, termed Tchee-shee, ††† indicating the thing.' These characters, though not pictures of things, seem intended to suggest ideas to the mind from their form and position. As examples of this class, the Chinese adduce shyang,10 above, and hya,11 beneath, which they say were formed on this principle : admitting that y A,12 a horizontal stroke, denotes the level or medium, by placing yin,t3 a man, above it, the idea is suggested of something above or superior: this character is used therefore to sig- nify above or superior. On the other hand, by placing yin, a man, below this horizontal line, something below or inferior seemed indicated ; this then is used to indicate inferior, below, &c.

10 11 12 13

A

The next step gave rise in all probability to the Compounds, a class of characters in their prin- ciple almost entirely new, and which with its modifications has brouefu the Chinese language to its present state, i liis class, which is the fourth in the Chinese series, is teamed Hhooi-ee, ' combination of idea,' and is formed by uniting two or more significant characters to produce another idea resulting from the meaning of its component parts. This step opened an exten- sive

field to the Christian philologists, and gave birth to combinations of characters, some of them indeed simple and obvious even to us, but others arising from circumstances which at this distance of time are quite beyond our guess.

A fifth class they term Chwan-chyu, ‘ inverted in meaning,’ and form it two ways ; either by some slight alteration of a character, as the turn- ing of a stroke to the It ft instead of the right ; or

by changing the name or the sound of a character’ Chinese ingenuity advances another step, and forms another class of compounds termed Hhyai shing, ‘ meaning and sound,’ which they reckon the sixth or the last in the series. These are formed by adding to a character which denotes the genus or kind, another which denotes the imagined sound of the species or the individual signified. Of the number of the Chinese characters taken together, which the Jesuits have stated at 70,000, or 80,000, Dr. Marshmans assures us that in the Imperial Dictionary, after repeatedly examining every page, he found the sum total to stand thus Characters in the body of the work . . 3121 Added, principally obsolete and incorrect*

forms of others 642′

*Characters not before classed in any dic- tionary . 165**

Characters without name or meaning. . 4200

43496

Dr. Marshman also establishes this singular fact, that in the entire works of the celebrated Confu- cius there are scarcely 3000 different characters. Our author, in the next division of his work, discusses the nature of the colloquial medium, which, being utterly unlike any other language, ancient or modern, he infers must have been in use before the invention of their characters ††† ‘ as speech necessarily precedes writing.’ To esta- blish its claim to an original language, Dr. Marshman now examines the question how far it can be said to resemble the Hebrew and the Sanscrit, the two most ancient and only probable languages from which it could be derived. The Hebrew alphabet he finds to have five conso- nants which the Chinese have not, while the Chinese have eight not found in the Hebrew; sixteen probably may be deemed common to both. Then the Chinese language is purely monosyllabic, and the Hebrew polysyllabic ; the latter might easily spring ont of the former, but it is scarcely conceivable that a polysyllabic lan- guage could be cut down to a

language wholly composed of monosyllables. The numerous in- flections of the Hebrew verbs are totally incom- patible with the unchangeable inflexible mono- syllable, which is at once a noun indeclinable, and a verb not to be conjugated, which in itself is incapable of taking either number, case, or gender, mood, tense, or person. Not content with stating these discrepancies, Dr. M'arshman examines the speech of Judah to Joseph, in the forty-fourth chapter of Genesis, which in the Hebrew contains 206 words, sixteen of which are monosyllables ; but of these sixteen, seven only are found in the Chinese language, and these seven we apprehend, though he does not say so, are merely symphonious and not synony- mous. Another passage of the Bible, Abraham's intercession for Sodom, is found to contain 230 words, of which ten only are monosyllables, and four of these are Chinese. But lest it should be objected that the two passages are too modern for the time when the Chinese language may be supposed to have been first formed, Dr. Marsh- man goes still farther back, and taking the male- dictory prophecy of Noah, relative to his grand- son Canaan, in twenty-six words he finds only one monosyllable; and he therefore concludes, ???

if the Chinese formed their colloquial medium by selecting one word from twenty-nine, as in the first example, from fifty as in the second, or even one from twenty-six, of those they were in the habit of hearing every moment, the point is decided??? invention itself seems easy compared with this labor. But if they did not derive their colloquial medium from the language of Noah and his sons, the alternative is, that they intended it wholly themselves.

The similarity of the Sanscrit alphabet with the Chinese system of sound is now adverted to, and that affinity established between them which only leaves it a question which gave birth to the other. Into this discussion we cannot here con- duct the reader. Dr. Marshman thinks the ba- lance of probability is that the Chinese was an original system.

Dr. Marshman's Elements establish this to be a most simple and inartificial language. It is wholly destitute of inflections ; the collocation of the monosyllables determines the meaning of a sentence ; and the mood, tense, number, and per- son, are denoted by prepositions and other par- ticles in a similar way to those of our own lan- guage. Multitudes of words occur too, as in our language,

which are used both as nouns and verbs without the least change ; but the accom- panying characters define them with certainty : ††† Dr. Marshman asks in conclusion, 'And now what is there in the language, besides its being unknown to us, which has arrayed it in all those terrors hitherto associated therewith ? Does not each character convey a determinate idea as really as the words of the western languages ? Is that position which supplies the place of grammatical terminations, and which must ne- cessarily be fixed, more intricate and ambiguous than the terminations, and the inversion of sen- tences found in Latin ? I grant that the Chinese written language is not only the Latin of Ton- quin. Cochin-china, and Japan, but of China itself; and further, that it is wholly separated from conversation; for to this circumstance ††it owes that permanent perspicuity which has re- mained proof against the alterations in language arising from the lapse of ages, the revolutions of government, and the invasions of foreign ene- mies. Nay, I grant further, that a native Chi- nese studies the written language, and the ancient classics which it contains, for five or six years before he be judged qualified for public business. Still does not this last circumstance rather de- monstrate the ease with which the language can be acquired ? For, not to say that much of this time is employed in digesting the ideas contained in those ancient works, the Chinese student ac- quires the written language by study as we ac- quire Latin, yet does he apply a greater length of time to the study, than it costs an English youth to acquire a good Latin style? Would even a majority of the youth educated at our public schools, be found to have acquired a style sufficiently correct and copious for public busi- ness after studying Latin ten years ? Yet no one deems a neat Latin style an impracticable attain- ment, much less that of reading the language with ease.'

Dr. Morrison's Dictionary of the Chinese lan-

guage is another most important contribution to the stores of Oriental literature. Its ground-work is Kang-hi's Tsze-teen, the Johnson's Dictionary of China : but this indefatigable missionary (who was appointed Chinese secretary, we observe, to lord Amherst) has also added from the various works of the Chinese and the Jesuits, as well as from his own long acquaintance with the lan- guage, many important examples and explana- tions, The characters are arranged according tc the keys or radicals; immediately after the mo- dern is placed the seal, then the ancient vase character, and finally the running hand character. ' And why,' says the Quarterly Review, in a very needful tone of remonstrance, ' are the works of those learned and indefatigable missionaries not advertised in the

daily papers, like other books, that the nations of Europe may know what rapid advances have been made of late years in Ori- ental literature by our countrymen, the neglect of which had so long been their reproach ?'

Both these learned missionaries have recently crowned their other labors in this language by complete translations of the Holy Scriptures. The Serampore version, which is the work of Dr. Marshman, was commenced in the year 1806; the New Testament was finished at press in 1817, and the last portion of the Old in April, 1822 ??? the whole Bible, in five parts, 8vo., having thus occupied a period of about sixteen years. Since this great work was accomplished, the other translation we have mentioned has been completed by Drs. Morrison and Milne, in con- nexion with the London Missionary Society ; so that now the Scriptures are provided for the great numbers of Chinese who are found visiting or residing in other parts of the Eastern world for the purposes of trade, and also for Christian missionaries who may enter China itself when- ever God in his providence shall see fit to make that great empire accessible to them.

To the historical literature of the Chinese we shall have occasion to advert in the conclusion of this article. The great philosopher of the empire it is well known was Confucius, of whose works Dr. Marshman has published a translation, in a 4to. volume of 740 pages. He also gives a spe- cimen of his maxims and style in his Ta-Hyot, appended to the Clavis Sinica. We extract the Important Doctrine.

1. The path or course of learning proper for men, consists in restoring reason to its pristine lustre ; in renovating others ; and in making the summit of all virtue the only point of rest.

2. When the mind knows its point of rest, it is decided ; once fixed, it can enjoy tranquillity,- and thus at ease, view all things around with complete self-possession, thence maturely weigh their nature and value, and finally attain (per- fection in virtue).

3. Things in the vegetable world have a root, as well as branches and fruit ; actions too have a consummation, and also a source whence they spring. He then who has formed a just idea of cause and effect, has made a near approximation to the path which leads to the summit of virtue.

4. The ancients who wished to restore reason to its due lustre

throughout the empire, first re- gulated the province which they each governed ;

desirous of governing: well their own kingdoms, they previously established order .and virtue in their own houses; for the sake of establishing domestic order, they began with self-renova- tion ; to renovate their own minds, they first gave a right direction to their affections ; wishing to direct their passions aright, they previously corrected their ideas and desires ; and to rectify these, they enlarged their knowledge to the ut- most. Now this enlargement of knowledge, consists in a most thorough and minute acquaint- ance with the nature of things around us.

5. A thorough acquaintance with the nature of things, renders knowledge deep and consum- mate ; from hence proceed just ideas and desires ; erroneous ideas once corrected, the affections of the soul move in a right direction; the passions thus rectified, the mind naturally obeys reason ; and, the empire of reason restored in the soul, domestic order follows of course; from hence flows order throughout the whole province ; and one province rightly governed, may serve as a model for the whole empire.

6. From the Son of Heaven even to the com- mon people, one rule applies, that self-govern- ment is the root of all virtue.

7. That the right government of a kingdom should spring from a mind in a state of disorder, is impossible. To despise that which is most important (self-government), and esteem that alone which is light and secondary, is contrary to reason.

Nor can we forbear enriching this article with another specimen of the literature of this sin- gular people in the following beautiful passage, quoted by Dr. Morrison, on the value of letters. ‘ When letters were invented, the heavens, the earth, and the gods, were all agitated. The in- habitants of Hades wept at night, and the hea- vens, as an expression of joy, rained down ripe grain. From the invention of. letters the machi- nations of the human heart began to operate, stories false and erroneous daily increased, litiga- tions and imprisonments sprung: hence also specious and artful language which causes so much confusion in the world. It was on these accounts that the shades of the departed wept at night. But from this invention of letters polite intercourse and music proceeded, reason and justice were made manifest, the relations of so- cial life were

illustrated, and laws became fixed; governors had a rule to refer to, scholars had au- thorities to venerate ??? and hence the heavens, delighted, rained down ripe grain. The classical scholar, the historian, the mathematician, the as- tronomer, none of them can do without letters ; were there not letters to afford proof of passing events the shades might weep at noon day, and the heavens rnn down blood.'

Poetry has been cultivated in China from an early period. The emperor Yao is said to have heard in his passage through the streets of the capital the following stanza in praise of his go- vernment, which is the first specimen of Chinese verse on record : ???

Lih ngo ching inin Moh fy frr kih Pooh shlh pooh chei; Shuen leu tchcc uuh

The tranquillity we, the people, enjoy Is wholly the fruit of thine exalted virtwe ; No information or knowledge is needed ; All flows from the sovereign's wise institutions.

Another early specimen, including rhymes as well as measure, is a ko, or admonitory address to his children by the great Yu, who founded the Kya, the first dynasty of the three most ancient ones.

Nooi tsoh Suh hwang

Ngwai tsoh khin hwang

Kan tsyeu shu yin

Tsin yu tyao tsyang

Yeu y'ih yu tse

Wy hhoh pooh wang

Within to be addicted to effeminate pleasures,

Without to the sports of the field ;

To be fond of wine, of music,

Or of palaces elegantly adorned,

To delight in any one of these

Will be doubtless inevitable ruin !

In this stanza, each line contains four syllables, and the first, second, fourth, and sixth harmonise with each other.

The Shee (poetry of the highest kind), a collec- tion of odes by Confucius, contain all the chief varieties of Chinese poetry. A great part of the odes are intended for recitation at the worship of paternal ancestors : some of these were written in the rsign of Wooting, who ascended the throne B. C. 1323. Sometimes four, six, or even eight couplets in a stanza, end alike. We can only extract an Ode on Parting with a Friend.

Chhing shan kuring piih kwoh

Ise chyu yeh ury pyeh

lyen yuen yeu tsee ce

Khwy shyen tse khu

Puh shooi hyao toong chhing

Koo p'hoong wan lee ching

Lohyih koo yin tsing

Syao syao pan ma ming Where the verdant mountains encircle the city on the

north,

And the limpid stream washes it on the east, There did I once part with my beloved friend ; Now like the down of the phoong, borne by the wind*

a thousand leagues.

His desire to proceed, irresistible as the flying cloud, Mine to detain him, vain as the attempt to stay the

setting sun ;

Courteously waving the hand, he then went from me, Our parting lamentation like that of the generous steed for his mate.

It is well known that the iate emperor Kien- lung wrote a tolerable poem upon Tea : Grozius's collection, according to the supplement of the Encyclopaedia Britannica, contains the following far superior specimen of modern Chinese poetry. It might be entitled the Contented Bachelor. ' My palace is a little chamber, thrice my own length ; finery never entered it, and neatness ne- ver left it. My bed is a mat, and the coverlid a piece of felt ; on these I sit by day and sleep by night. A lamp is on one side, and on the other a pot of perfume. The singing of birds, the rustling of the breeze, the murmuring of the brook, are the only sounds which I hear. My window will

- *A plant resembling worm-wood, which produces a downy seed.*

shut, and my door open, ??? but to wise men only ; the wicked shun it. I shave not like a priest of Fo ; I fast not like the Tao-tse. Truth dwells in my heart; innocence guides my actions. Without a master, and without a scholar, I waste not my life in dreaming of nothings, and in wri- ting characters, still less in whetting the edge of satire, or in trimming words of praise. I have no views ; no projects. Glory has no more charms for me than wealth ; and all the pleasures of the world cost me not a single wish. The en- joyment of ease and solitude is my chief concern. Leisure surrounds me, and bustle shuns me. I contemplate the heavens and am fortified. I look on the eaith and am comforted. I remain in the world without being in it. One day leads on to another, and one year is followed by another ; the last will conduct me safe to port, and I shall have lived for myself.'

Lord Macartney and his companions were en- tertained with various exhibitions of the Chinese drama. They were both tragical and comic, partly recitative, partly sung, and partly in plain prose, but without music. They abounded in battles, murders, and most of the usual incidents of the drama. Mr. Ellis, however, speaks of the exhibition he saw, a kind of melo-drama, as accompanied with instrumental music, which, from its resemblance to the bag-pipe, might have been tolerated by Scotchmen, to others it was de- testable. Of the same description was the sing- ing. On a second occasion he says, ' 16th Janu- ary 1817 ; a dinner and sing-song, or dramatic re- presentation, were given this evening to the am- bassador by Chinqua, one of the principal Ilong- merchants. The dinner was chiefly in the En- glish style, and only a few Chinese dishes were served up, apparently well dressed. It is not easy to

describe the annoyance of a sing-song, the noise of the actors and instruments (musical I will not call them) is infernal, and the whole constitutes a mass of suffering, which I trust I shall not again be called upon to undergo. The play commenced by a compliment to the ambas- sador, intimating that the period of his advance- ment in rank was fixed, and would shortly arrive. Some tumbling and slight of hand tricks, forming part of the evening's amusements, were not ill exe- cuted. Our host, Chunqua, had held a situation in the financial department, from which he was dismissed formal-administration. He has several relations in the service, with whom he continues in communication. His father, a respectable looking old man, with a red button, assisted in doing the honors. With such different feelings on my part, it was almost annoying to observe the satisfaction thus derived by the old gentleman from the stage. Crowds of players were in atten- dance, occasionally taking an active part, and at other times mixing with the spectators, ??? we had both tragedy and comedy. In the former, em- perors, kings, and mandarins, strutted and roared to horrible perfection, while the comic point of the latter seemed to consist in the streak of paint upon the buffoon's nose. The female parts were performed by boys.

Their musical instruments are described as consisting of, 1. The sound of skin, produced by drums. 2. That of stone produced by the

king. 3. The sound of mettle by bells. 4. That of baked earth by the huien. 5. Of silk by the kin and che. 6. Of wood by the yu, and tchou. 7. Of the bamboo by the koan, and different flutes. 8. That of a gourd by the cheng. The drums were originally composed of a box made of baked earth, and covered at the extremities with the skin of some animal ; but on account of the brittleness of baked earth, wood was soon substituted in its stead. Great part of these in- struments are shaped like our barrels, but some are cylindric. The instruments formed of the sonorous stones are called KING, distinguished into tse-king and pien-king. The TSE-KING con- sists only of one stone, and therefore produces only one note. The PIEN-KING consists of six- teen stones suspended together, and thus formins: an instrument capable of producing all the tones admitted into the music of the ancient Chinese. They are cut into the form of a carpenter's square ; their tone is flattened by diminishing their thickness, and is made sharper by abridging their lenglh.

The bells in China have always been made of a mixture of tin and copper. They are of dif- ferent shapes, and those of the ancients were not round, but flatted, and in the lower part resem- bling a crescent. An instrument, corresponding to the king already mentioned, is

composed of sixteen bells of different sizes. Some of their bells, used on public occasions, are of enormous magnitudes. One at Pekin is described as thir- teen feet and a half in diameter, twelve feet and a half in height, and forty-two in circumference; the weight being upwards of 120,000lbs. It is used for announcing the watches of the night; and its sound, which is prodigiously loud and strong, has a most awful effect, by reverberating the echo of the surrounding country. There are several others likewise of vast size in the same city, one of which is greatly admired for the beautiful characters with which it is covered, and which are as neat and perfect as if traced out by the hand of the finest writer, or formed by a seal upon wax. F. le Comte tells, that in all the cities of China there are bells for marking the hours and the watches of the night. They generally divide the night into five watches, beginning at seven or eight in the evening. On the commencement of the first they give one stroke, which is repeated a moment after; and thus they continue for two hours till the beginning of the second: they then give two strokes, which are repeated at equal intervals till the beginning of the third watch : and thus they proceed to the fourth and fifth, ahvays increasing the number of the strokes. For the same purpose also they use enormous drums, which they heat in a similar manner. Magaillans mentions one at Pekin upwards of forty feet in circumference. The instrument called huien, which is made of baked earth, is highly esteemed by the Chinese on account of its antiquity. It is distinguished into two kinds, the great and small ; the former being of the size of a goose's egg ; the latter that of a hen's. It has six holes for the notes, and a seventh for the mouth. The kin and tchf have been known from the remotest antiquity. The former has seven strings made of silk, and is distinguished yito three kinds dif

fering only in size. The body is formed of a kind of wood varnished black, and its whole length is about five feet five inches. The tche is about nine feet in length, has twenty-five strings, and is divided into twenty-five kinds. F. Amiot says, that \ve have no instrument in Europe which deserves to be preferred to it. The in- struments which emit the sound of wood are the tchou, the, yu, and the tchoung-tou. The first is shaped like a bushel, and is beaten on the inside with a hammer ; the second, which represents a tiger squatting, is made to sound by scraping its back gently with a rod ; the third is a collection of twelve pieces of board tied together, which are used for beating time, by holding them in the right hand, and knocking them gently against the palm of the left. Other instruments are con- structed of bamboo pipes joined together, or se- parate, and pierced with more

or fewer holes.

In both the fine and useful arts the Chinese occasionally evince very superior skill. While in their paintings they seem to be wholly ignorant of perspective, and are, perhaps, only to be consi- dered at any time as skilful imitators, no Euro- pean artist, it is said, can excel their representa- tions of individual objects. A flower and a leaf has every shade and streak most faithfully copied, at whatever supposed distance in the pic- ture : their birds, fish, reptiles, and insects, are also well known to be most beautifully executed.

Their sculpture is a manufacture of godships, which is sufficiently extensive to ensure excel- lence, but in which superstition has, of course, more dominion than taste. Their human figures, (generally short and thick) are always clothed, and are better formed in wood than either in metal or porcelain. Mr. Eliis visited a small temple at Khu-shee-yoo, to the god of fire, ‘ a short figure seated on a throne,’ he says, ‘ holding a drawn sword in one hand, and a serpentine ring in the other : two dwarf like figures stood near him, each with rings : three other figures less perfect adorned the sides of the building.’ This gentleman describes a representation of the god Fo, which he saw at Sang-quen, with eight arms, as exactly similar to the idols of the Hindoos. Several colossal figures were near him, which were said to be statues of distinguished manda- rins ; one had a hammer in his hand, which would justify a conjecture, he suggests, that statues are sometimes erected here to the inventors of useful arts. At Kao-ming-zee is a miao, or tem- ple, under the special protection of the emperor, with three colossal figures of Fo, representing nis trine manifestation. ‘ The present Fo occupied the centre; his head-dress was a turban; the other two wore crowns. Immediately before these figures was a tablet bearing an inscription, praying for the eternity of the emperor’s hap- piness.’ The high priest, says our traveller, in his robe, cap, and rosary, forcibly reminded him of the priests of the catholic religion ; while his figure was singularly squat and rotund, like that of the deity he served. Fo is said to be usually represented as extremely fat.

In their architecture the Chinese are inferior to many of their Indian neighbours. Pagodas are seen to reach six, seven, or eight stories high ; but all the houses and palaces of their most

opulent cities are low, and constructed on the models of a patriarchal tent. The materials also are very slight, consisting generally of half burnt bricks and wood. The Jesuits have as- cribed this to the general horror of earthquakes, of the ravages of which

most disastrous ac- counts are given in the Chinese annals. Their bridges, of which frequent imitations are seen in Europe, are the most creditable exhibitions of their architecture. Pillars of wood roofed over, and forming a kind of triumphal arch, with a triple way beneath, are amongst the objects on the roads that also frequently strike the eye. They are gilt and varnished profusely, and are devoted to the honor of some chaste virgin, or noble warrior. We have noticed how numerous they are at Nankin.

The interior accommodations of their houses are, however, superior among the middle and lower classes : they are, perhaps, equalled in no other country of the world.

Their cooking utensils, books and furniture, are all excellent, and stoves for warming the rooms are common. The immense majority of the population are fed from tables, seated on chairs, and clothed with good cotton garments from head to foot.

The great wall which separates China fromTar- tary is said to extend more than 1500 miles in length, and was originally of such thickness that six horsemen might ride abreast upon it. Its numerous towers have no strength as fortresses ; nor is there anything of importance of this kind throughout the empire. They are always square towers about a bow-shot distance from each other. It is said traditionally that a third of the able-bodied men in the empire were employed in constructing this wall, and that they were ordered, under pain of death, to place the materials so closely, that not the least entrance mighf be afforded for any instrument of iron. This extraordinary work is carried not only through the low lands and val- leys, but over hills and mountains; the height of one of which was computed by F. Verbiest at 1236 feet above the level of the spot where he stood. According to Martini it begins at the gulf of Lea-tong, and reaches to the mountains near the city of Kin on the Yellow River ; between which places it meets no interruption except to the north of the city of Suen in Pecheli, where the country is crossed by a ridge of inaccessible mountains, to which it is closely united. It is likewise interrupted by the river Hoang-ho ; but, for others of an inferior size, arches have been constructed, through which the water passes. The foundation consists of large blocks of stone laid in mortar; but all the rest is of brick. The greater part is so strong and well built that it scarcely needs any repairs ; and, in the dry cli- mate in which it stands, may remain in the same condition for many ages. When carried over steep rocks, where no horse can pass, it is about fifteen or twenty feet; but when running through a valley, or crossing a river, full thirty feet high. The top is flat, and paved with cut stone ;

and, where it rises over a rock or eminence, there is an ascent made by an easy stair. It was completed, according to the Chinese accounts, B.C. 215, in five years ; and the materials, if they were solid

masonry, are said to be sufficient to girt the earth at the equator with a wall six feet high and four feet thick. According to the information given to the gentlemen of the first English embassy by Van-ta-Zhin, a distinguished officer, the total of the army in the pay of China, including Tartars, amounted to 1,000,000 infantry, and 800,000 cavalry. From tlie observations of the embassy, in their travels through the empire, of the garrisons in the cities of different ranks, and of the military posts at small distances from each other, there seemed nothing improbable in the calculation of the infantry ; but they observed few cavalry ; and in crediting the existence of such a number it must be supposed, that a great proportion of them were in Tartary, or on some service distant from the route. Their pay amounts to about 1\d and H measure of rice per day, though some of them have double pay. The pay of a horseman is double that of a foot soldier ; the emperor fur- nishes a horse, and the horseman receives two measures of small beans for his daily subsistence; the arrears of the army being punctually paid up every three months. The arms of a horseman are, a helmet, cuirass, lance and sabre ; those of a foot soldier are a pike and sabre ; some have fusees, and others bows and arrows. All these are carefully inspected at every review ; and if any of them are found in the least rusted, or otherwise in bad condition, the possessor is in- stantly punished ; if a Chinese, with thirty or forty blows of a stick ; or, if a Tartar, with as many lashes. Though the use of gunpowder is certainly very ancient in China, it appears to have been afterwards totally lost ; at least fire arms seem to have been almost entirely unknown some centuries ago. Three or four cannon were to be seen at that time about the gates of Nankin ; but not a single person in China knew how to make use of them ; so that, in 1621, when the city of Macao made a present of three pieces of artil- lery to the emperor, it was found necessary also to send three men to load them. The utility of these weapons was quickly perceived by the ex- ecution which the three cannon did against the Tartars, at that time advanced as far as the great wall. When the invaders threatened to return, the mandarins of arms gave it as their opinion, that cannons were the best arms they could make use of against them. They were then taught the art of casting cannon,

by F. Adam Schaal and Verbiest, two Jesuit missionaries, and their artil- lery was increased to the number of 320 pieces ; at the same time that they were instructed in the method of fortifying towns, and constructing for- tresses and other buildings, according to the rules of modern architecture. There are in China more than 2000 places of arms ; and through the dif- ferent provinces there are dispersed about 3000 towers or castles, all defended by garrisons. Soldiers continually mount guard there ; and on the first appearance of tumult, the nearest sentinel makes a signal from the top of the tower, by hois- >ng a flag in the day, or lighting a torch in the night ; when the neighbouring garrisons im- mediately repair to the place where their presence is necessary. All expresses are forwarded from post to poˆt by the soldiery, and numbers are constantly employed as police officers.

Mr. Ellis gives the following description of their recent appearance and equipments. 'A halt of our boat, opposite a party of soldiers drawn out to do honor to his excellency, gave me an oppor- tunity of examining them with a little attention ; They were, to use a military phrase, of all arms, match-locks, bows and arrows : shields, and quilted breast-plates. Their bows are shaped like the Persian bow, that is not a continued arch; but unlike the latter it requires little strength to draw them : their arrows are deeply feathered, more than three feet long, with a pointed blade at the end, not barbed. Chinese match-locks are the worst I have ever seen : originally of ill construc- tion, they are kept in such bad order that they must become perfectly useless. The swords are short and well shaped, being slightly curved, and do not seem bad weapons. The bow-string rests against the thumb, and for that purpose a broad ring of bone or some hard substance is worn to protect the skin. The appearance of the strangely drest soldiers already mentioned, who may be called the monsters of the imperial guard, is most ludicrous : the colors of the dress are such as I have before described; the dress itself is di- vided into a loose jacket and trowsers : some of the party had a colored cloth wrapped like a scanty clout round their heads : they hold their capacious shields in front, close to their breasts, and allow a few inches of their rusty blades to appear above it. The principal officer on duty wore a blue button. Such is the superiority of civil over military rank in China, that a civil mandarin with a white button often takes pre- cedence of the military coral.' In another place he says, ' the troops in each province in China are levied within it ; the government assuming as a principle that men will defend their homes with more determination than strangers. The banners of the Tartars may therefore be considered the disposable force of the empire. The

provincial troops may perhaps be considered as a military police, and the circumstance of their being levied within their respective provinces, accounts for the regulations respecting mandarins not holding office in their native province being confined to those of the civil order. Enrolment in the Chinese army is voluntary, and the pay is so good, that the service is much desired.

' At Tsong, we observed, says he, two soldiers returning to the guard house, in dresses studded with brass knobs to imitate armor; they had cui- rasses of steel, their helmets also were of polished steel, with inlaid work of a darker hue, in these were fixed plumes two feet long, red and brown, the former hair, as on the Mandarins' bonnets, and the latter fur ; their arms were swords, bows, and arrows, the dress was altogether handsome and martial.'

in their naval architecture, and tactics, the Chinese have made no progress since their first intercourse with Europeans. The commercial passage boats and barges are convenient, espe- cially those in use on the grand canal, but even to the number and capacity of their holds, they are the same kind of vessels described in the thirteenth century by Marco Paulo ; and bamboo sails and ropes, and wooden anchors .vere then, as now, their general mode of equipment. They

have a military kind of flotilla, scarcely worth mentioning, which is used to repress smuggling; a single English frigate, Mr. Barrow says, would destroy all the naval force of the empire.

We have noticed, in our article ARITHMETIC, the early proficiency of the Chinese in that science, but it clearly has never extended to its profounder parts. Their notation is accom- plished by symbols, and the common operations of commerce are performed by the use of the swan-pan, a kind of abacus. Quantity is mea- sured by reducing the surfaces and sides to square and cubic measure, and then multiplying them into each other.

In astronomy the French missionaries have loudly proclaimed the attainments of this people. But modern investigation seems to have realised little of truth in their statements. Their system closely resembles that of the Hindoos. The zodiac is divided into twelve signs, and twenty constellations or houses of the moon. The same period, a cycle of sixty years, regulates their chronology, and during

a period of 10,800 years astronomical observations are said to have been made by their ancestors. Freret describes a celestial chart, constructed in China about the sixth century of our era, on which were inserted 1460 stars, sufficiently near their proper places to be recognised; and their own annals state that, A.D. 718, an Indian astronomer of the name of Koo-tan, having brought from the west a treatise on astronomy, was employed at court to trans- late it into Chinese : they also celebrate the patronage afforded to this science by Kub-lai- Khan.

Since his reign the board at Pekin, to which is entrusted the formation of the public almanac, h;is been assisted constantly by Armenians, Hindoos, and even Christians, in their calcula- tions. Their geographical knowledge is said to be limited to the immediate borders of their own country : but Java, Sumatra, Ceylon, and liorneo, are frequently alluded to in their annals.

A public book of ceremonies directs the edu- cation of a child to commence as soon as it is born, and describes the qualities which its nurse ought to have. She must speak little, adhere strictly to truth, have a mild temper, behave with affability to her equals, and with respect to her superiors. The child is taught to use the right hand as soon as it can put its hand to its mouth, and then it is weaned. At six years of age, if a male, he is taught the numbers most in use, and made acquainted with the names of the known parts of the world ; at seven he is separated from his sisters, and no longer allowed to eat with them, nor to sit down in their presence ; at eight he is instructed in the rules of good breed- ing and politeness ; at nine he studies the calen- dar ; at ten he is sent to a public school, where he learns to read, write, and cast accounts ; from thirteen to fifteen he is taught music, and every thing that he sings consists of moral precepts. It was formerly the custom, that all the lessons designed for the Chinese youth were in verse ; and it is to this day lamented, that the same custom is not followed, as their education has since been rendered much more difficult and laborious. At fifteen, the Chinese boys are

taught to handle the bow and arrow, and to mount on horseback ; at twenty they receive the first cap, if they are thought to deserve it, and are also permitted to wear silk dresses ornamented with furs ; but before that period they are not allowed to wear any thing but cot- ton. Another method of initiating children into the principles of knowledge in this empire is, by selecting a number of characters expressive of the most common objects, engraving or painting them separately on some kind of substance, and, under the thing represented, putting the name, which points out to the children the

meaning of the word. The book first put into the hands of children is a collection of short sentences, con- sisting of three or four verses each, in rhyme ; and they are to give a regular account in the evening of what they have learned in the day. After this elementary treatise, they put into their hands the four books which contain the doctrines of Confucius. Writing is said to be taught by means of large leaves of paper, on which are written or printed, with red ink, im- mense characters ; and these are required to be covered with black ink, following exactly their shape and figure; After this they are made to trace smaller characters designed in black, and placed under the paper on which they write. Great pains is taken in forming the hands of young people. After the scholar has made him- self master of the characters, he is allowed to compose ; but the subject is pointed out to him only by one word. Competition is excited by twenty or thirty families agreeing among them- selves to send their children twice a month to the hall of their ancestors to compose. Each head of a family in turn gives the subject of this . literary contest, and adjudges the prize. A fine of about ten pence is imposed on the parent of each scholar who absents himself from superin- tending this exercise, and every student is obliged to compete at least twice a year, under the in- spection of an inferior mandarin of letters, styled Hio-kouan. The mandarins often order the students to be brought before them, to examine the progress they have made. Even the gover- nors of cities order students, who reside near them, to appear before their tribunal once a month. The author of the best' composition is honored with a prize, and the governor feasts all the candidates at his own expense. The educa- tion of the women is confined to giving them a taste Tor solitude, and accustoming them to mo- desty and silence ; if their parents are rich, they are likewise instructed in such accomplishment, as may render them agreeable to the other sex Free schools are very numerous in every pro- vince, and even in some of the villages. Private tutors are common among the better ranks.

It is remarkable that no application of me- chanics to time-keeping has been made here , and that even the common pump was never used before the Jesuits introduced it. The Persian wheel, and a large wheel having bamboo tubes on its rim, were the only hydraulic instruments known. Their medical knowledge is also mere quackery ; and their surgery is practised by the barbers.

The emperor Kaung-hee, says Mr. Barrow,

soon convinced himself that several of the Je- suits were better skilled in medicine than his own physician. At first, however, he had some scruples, upon being attacked by a fever, in fol- lowing his advice. Three of the first physicians to the court, dissuaded him from taking a medi- cine, of whose qualities they professed them- selves ignorant, and advised him to let the dis- ease go on, that they might discover its true character. The emperor, however, at last took the Peruvian bark which the Jesuits had pre- scribed, and soon recovered ; but the several officers who had similar fevers, were first ordered to take the bark, and finding it at least harmless, he then ventured upon it himself. As ignorance is a crime in the eyes of the ignorant, it is more especially so at the court of China, and made capital in those to whom the life of the sovereign isentrusted. The three physicians were therefore delivered over to the criminal court, who con- demned them to death; but Kaung-hee miti- gated the punishment to that of exile, and re- warded the Jesuits with a house in Pekin, and contributed largely towards the building of a church. The Chinese are said to be very subject to leprosy and cutaneous diseases.

They are expert engravers on silver, copper, and wood ; they are also good lapidaries ; and carve beautifully on ivory. In silver fillagree, cabinets, lacquered and plain, tortoise-shell orna- mented works, &c. they are nowhere surpassed. Their silk twisted-cords, tassels and embroidery, are also very superior, as well as their ink, paper, and printing. The last is exceedingly different from ours. The whole work which they intend to print, is engraved upon blocks of wood ; and their method of proceeding is as follows : They first employ an excellent writer, who transcribes the whole on very thin paper. The engraver glues each of the leaves of the MS. upon a piece of plank of any hard wood : he then traces over with a graver the strokes of the writing, carves out the characters in relief, and cuts down the intermediate part of the wood. Thus each page of a book requires a separate plank ; and the excessive multiplication of these is, no doubt, a very great inconvenience, one chamber being scarcely sufficient to contain those employed for a single book. But the advantages are, that the work is thus remarkably free from typographical errors, and the author (happy country !) has no occasion to correct the proofs. In this method the beauty of the work depends entirely on the skill of the writer previously employed. No press is used as in Europe, as neither their wooden planks nor their soft paper could sus- tain so much pressure. They first place the plank level and then fix it in that position. The printer is then provided with two brushes, and, with the hardest, covers the plank with ink ; and one ope- ration of this kind is sufficient for four or

five leaves. After a leaf has been adjusted upon the plank, the workman takes the second brush, which is softer than the former, and of an ob- long figure, and draws it gently over the paper, pressing it down a little that.it may receive the ink. The degree of pressure is regulated by the quantity of ink upon the plank ; and thus one man is said to be able to throw off eight or ten

thousand copies a day. The leaves are generally printed only on one side ; on which account each leaf of a book is double, so that the fold stands uppermost, and the opening is towards the back, where it is stitched. Hence the Chinese books are not cut on the edges, but on the back. They are generally bound in gray pasteboard, very neatly : those who wish to have them ele- gantly finished, have the pasteboard covered with satin, flowered taffety, or gold and silver brocade.

Dr. Marshman, at Serampore, first printed in this language with moveable types, which is a very great saving of expense, as compared with the Chinese method ; and Dr. Morrison, during his late visit to England, was very laudably en- gaged in encouraging the type-founders of the metropolis to produce specimens of these diffi- cult characters in the ordinary type metal. We are favoured by one of them (Mr. Figgins) with the following very successful attempt of this kind ; and we have before us Dr. Morrison's own handsome acknowledgment of its elegance and correctness. The characters were cut by Mr. V. Figgins, jun. under the direction of Mr. Thorns, printer of Dr. Morrison's Chinese Dic- tionary.

THE LORD'S PRAYER.

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H P H

In extracting dyes of various colors, particu- larly the brighter ones, from animal and mineral substances, no nation has equalled the Chinese. Their vermilion and blues are particularly bril- liant; and their entire porcelain manufacture, it is well known, is unrivalled in Europe. The finest is made in a village called King-te-ching, in the province of Kiang-si. Manufactories have also been erected in Fo-kien and Canton, but their produce is not esteemed ; and one which the emperor caused to be erected at Pekin, mis- carried entirely. The Chinese divide it into several classes, according to its different

degrees of fineness and beauty. The whole of the first is reserved for the use of the emperor, so that

none of it ever comes into the hands of other persons, unless it happen to be cracked or other- wise damaged. There is some doubt, therefore, whether any of the finest Chinese porcelain was ever seen in Europe. The use of glass is very ancient in China, though it does not appear that great value was ever put upon this kind of ware, the art of manufacturing it having been frequently lost and revived again. The same indifference with regard to it is still entertained. However, a glass-house is established at Pekin, where a number of vases, &c. are made ; but none are blown. This manufactory, as well as many others is considered as an appendage of the court ; and the art of manufacturing silk, according to some authorities, was communicated by the Chinese to the Persians, and from them to the Greeks. This art has been known in this empire from the re- motest antiquity ; and the breeding of silk-worms, and making of silk, was anciently one of the em- ployments of the empresses. The most beautiful silk in the whole empire is that of Tche-king, wrought in the manufactories of Nankin. From these are brought all the stuffs used by the em- peror, and such as he distributes in presents. A great number of excellent workmen are also drawn to the manufactories of Canton by the commerce with Europe and other parts of Asia. Here are manufactured ribands, stockings and buttons. The quantity of silk produced in the whole em- pire seems to be inexhaustible ; the internal con- sumption alone being incredibly great, besides that which is exported in the commerce with Europe and the rest of Asia. Ail who possess a moderate fortune wear si Ik clothes. The principal manufactured stuffs are plain and flowered gauzes of which they make summer dresses ; damasks of all colors ; striped and black satins ; napped, flowered, striped, clouded, and pinked taffeties; crapes, brocades, plush, different kinds of velvet, and a multitude of other stuffs unknown in Europe. They make particular use of two kinds ; one named touan-tse, a kind of satin, much stronger, but which has less lustre than that of Europe ; the other a kind of taffety, of which they make drawers and linings. It is woven exceedingly close, and is yet so pliable, that it may be rumpled and rubbed between the hands without any crease; and even when washed like cotton cloth, it loses very little of its lustre. They manufacture also gold brocades of such a slight nature, that they cannot be worn in clothes : they are fabricated by wrapping fine slips of gilt paper

round the threads of silk.

The public revenues, according to accounts re- ceived by Sir G. Staunton, amount to nearly 200,000,000 ounces of silver, which may be equal to about ––66,000,000 sterling. From the produce of the taxes, all civil and military ex- penses are first paid upon the spot, out of the treasuries of the respective provinces where such expenses are incurred ; and the remainder is re- mitted to the imperial treasury at Pekin. The surplus amounted in the year 1792. according to an account taken from a statement furnished by Chow-ta-zhin, to the sum of 36,614,328 ounces of silver, or ––12,204,776. The annual expenses of government are large, but they are regulated in such a manner as never to be aug- mented, except in cases of the utmost necessity ;

it even happens very often that administration makes great savings. The surplus, in such cases, encreases the general treasure of the empire, and prevents the necessity of new impositions in time of war, or other public calamities. The greater part of the taxes are paid in kind ; those, for in stance, who breed silk-worms, pay their taxes in silk, the husbandmen in grain, the gardeners in fruits, &c. and thus the servants of government are furnished with food and clothing; the re- mainder only being sold, and the produce sent to the emperor. The taxes paid in money arise principally from the customs, and the sale of salt (which belongs entirely to the emperor), from the duties paid by vessels entering any port, and from imposts on various manufactures. The taxes upon the husbandman are regulated in proportion to the extent and fertility of his lands ; and the greatest care has been taken to manage matters so that he may neither be over- charged in the imposition, nor harassed in the levying of the duties. Yet the land-tax forms a very considerable portion of the public revenue. All the receipts are subjected to the examination of the grand tribunal of finances. This revises the whole, and keeps an exact account of what is consumed, and of whatever surplus may be left. Dr. Morrison calculates from the Y-tung-che, the Chinese Encyclopaedia, that the value of the imports of China is about 36,000,000 learg, of 6s. Qd. each, or ––12,000,000 British sterling. No country upon earth is better situated for com- merce, or has more internal facilities ; but the jealousy of all the public authorities has wholly precluded the cultivation of its great resources in this respect, except through Canton. Here the English and Americans are their great customers; our trade being for the greater part a monopoly conducted by the East India Company. There is a considerable ‘ country trade,’ as it is called, between the ports of British India (direct) and Canton. The business, on the part of the

Chi- nese, is conducted entirely by certain traders, called after their warehouses, hong-merchants, to whom, on their arrival, all cargoes are consigned, and who are made responsible by the govern- ment for all the dealings and behaviour of foreign crews. They prepare also, and supply, the re- turn cargo. No foreign vessel, however, is al- lowed to approach the city nearer than Wham poo, about fifteen miles from the mouth of the river, which is here about as broad as the Thames at the Custom House : on the bank of a noble quay are here erected the hongs of each nation. The duty paid to the public treasury is here leried on each ship in the gross bulk of her cargo, and in a manner truly original. She is measured from the centre of the foremast to thatofhermizen, and the breadth is taken close abaft of the main mast. The length being now multiplied by the breadth, and the product divided by ten, this is supposed to give the size of the vessels. The articles sent to China by the East India Com- pany, are broad and long cloths, furs, camhlets, copper, tin, and lead ; but broad-cloth princi- pally, thevalueof which sometimes amounts annu- ally to ►►1,000,000 sterling. The return cargoes chiefly consist of tea, of which from 24,000,000 to 30,000,000 Ibs. are taken in here for England, We subjoin

BRITISH TRADE WITH CHINA.

We lay before our readers an Abstract, showing the amount of the principal articles of Import and Export on British account during the year ending the 31st of March, 1832.

Imports.

Piculs.

Exports.

Piculs.

Betelnut , . . Rattans . . . .

6,691 6,349

Nankin raw silk . . .

6,283 2 168

Pepper . . . . .

15 771

60 627

Sandalwood .... Saltpetre . . . .

6,338 7,068 550

Sugar candy .... Cassia lignea .... Ditto buds ....

32,279 7,096 614

Sharks' fins ....

3,010 460

Mother-of-pearl shells . – Rhubarb

2,235 763

Tish maws .....

1,075

20,476

Rice

51,496

279

38,705

Star aniseed . . . .

477

Steel . .

2,101

144

29,954

Copper (South American)

4,610

Tin

5,032

Nankeen cloth pieces .

315,570

Cotton Yarn . . . ; Tin plates, boxes . . White cotton piece goods Broad cloth ....

4,852 2,525 65,298 141,762 140 000

Treasure in broken Sycee and South American sil- ver ; to London . . Calcutta

Sp. dollars.

1,976,930 340 340

14,621

1 577,543

Cotton, Bengal . . . Ditto Bombay . . .

104,244 324,281 4 543

Sundry places . . . Total . – ...

77,000 3 971 813

An ACCOUNT of the QUANTITY of TONNAGE, the VALUE and AMOUNT of the BULLION and Cargoes IMPORTED, and of the QUANTITY and VALUE of TEAS EXPORTED, by the AMERICANS, in theii trade with the Port of CANTON, for the years 1816-19, specifying the quantity exported by them direct to the United States, and that shipped direct for Europe. ††† (From the Appendix to the Lords' Report, 1821.)

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Amount of Bullion and Cargoes

Teas exported by the

Tonnage

imported by the Americans.

Teas

Americans.

Seasons.

exported by

Value of the

by the Americans

Bullion.

Merchan- dize.

Total Value and Amount.

the

Americans.

same.

For Europe.

For the United States.

Tons.

Dalian.

Dollar.*

Dollars.

Ibs. uciy'r.t.

Dollars.

Ids. weight.

Ibs. weight.

1815-16

10,208

1,922,000

605,500

2,527,500

7,245,290

no value stated. 2 , 7 3 1 ,0 1 0

4,514,280

1816-17

1 3.096

4.545,000

1,064,600

5,609,600

8,954,100

ditto 2,880,000

6,074,100

1817-18

14,325

5,601,000

1,475,828

7,076,828

9,622,130

3,290,439 2,086,245

7,535,885

1818-19

16,022

7,414,000

2,603,151

10,017,151

11,988,649

3,457,256 3,103,651

8,884,998

1 1

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CHINA

623

The disputes concerning the limits of Russia and China, first paved the way to commerce between those countries. These disputes were settled by treaty on the 27th August, 1689, in the reign of John and Peter Alexiowitz. The chief of the embassy on the part of Russia w .;; Golovin, governor of Siberia; two Jesuits were deputed on the part of the emperor of China ; and the conferences were held in Latin, with a German in the Russian ambassador's train, who was acquainted with that language. By this treaty the Russians obtained a regular and per- manent trade with China, which they had long desired ; but in return they yielded up a larˆe territory, besides the navigation of the river Amour. The first intercourse had taken place in the beginning of the seventeenth century ; at which time a small quantity of Chinese merchan- dise was procured by some Russian merchants from the Kalmuck Tartars. The rapid and pro- fitable sale of these commodities encouraged certain Siberian Waywodes to attempt a direct and open communication with China. For this purpose several deputations were sent to the emperor ; and though they failed of obtaining the grant of a regular commerce, their attempts were attended with some consequences of im- portance. Thus the Russian merchants were tempted to send traders to Pekin ; and obtained, in

1692, leave to despatch a caravan thither. The Mogul desert, on the frontier, ultimately became the seat of an annual fair. Complaints, however, were soon made of the disorderly be- haviour of the Russians ; on which the Chinese monarch threatened to expel them from his do- minions, and to allow them neither to trade with the Chinese nor Moguls. This produced another embassy to Pekin in 1719, when matters were again adjusted. But this reconciliation was of no long duration ; for the Russians having re- newed their disorderly behaviour, an order for their expulsion was issued in 1722. The dif- ferences were once more made up in 1727, and a caravan allowed to go to Pekin once in three years, provided it consisted of no more than 100 persons ; and that during their stay their ex- penses should not, as formerly, be defrayed by the emperor of China. The Russians, at the same time, obtained permission to build a church within the precincts of the caravansary ; and four priests were allowed to reside at Pekin for the celebration of divine service ; the same indulgence being granted to some Russian scho- lars, for the purpose of learning the Chinese language, and qualifying themselves for being interpreters between the two nations. This in- tercourse continued till 1755 ; since which time no more caravans have been sent to China. It was first interrupted by a misunderstanding be- twixt the two courts; and, though that difference was afterwards made up, caravans have not been allowed to pass since. Kiackta is now the appointed mart for the commerce with Russia, regulated in a similar manner to that of Canton. The principal exports from Russia are furs of different kinds ; the most valuable of which are those of sea-otters, beavers, wolves, foxes, mar- tins, sables, and ermines ; the greater part being brought from Siberia and the newly discovered

islands ; but, as they cannot supply the demand, there is a necessity for importing foreign furs to Petersburgh, which are afterwards sent to Kiack- ta. Various kinds of cloth are likewise sent to China, as well as hardware, and live cattle, such as horses, camels, &c. The exports from China are, raw and manufactured silk, cotton, porce- lain, rhubarb, musk, &c. The government of Russia likewise reserves to itself the exclusive privilege of purchasing rhubarb. It is generally brought to Kiackta by Buckharian merchants, who have entered into a contract to supply the crown with it in exchange for furs.

Sir George Staunton has recently translated the Chinese narrative of an embassy, which his imperial majesty condescended to send to the Tourgouth Tartars, in the beginning of the last century, and in which, after instructions relative to the khan of the Tourgouths, he is directed to meet the chau-han, khan of Russia (the czar Peter), ‘ if he

should send to desire a confer- ence.' He is ordered, in that event, to ' con- form to the customs and ceremonies of that country.' Of China he is directed to say : ??? ' In our empire, fidelity, filial piety, charity, justice, and sincerity, are esteemed above all things. We revere and abide by them. They are the principles upon which we administer the empire, as well as govern ourselves. In the face of dan- ger we firmly adhere to them. We likewise make sacrifices and oblations ;'we pray for good things, and we deprecate evil things ; but if we did not act honestly, if we were not faithful, pious, charitable, just, and sincere, of what avail would be our prayers and sacrifices? In our empire, fidelity, filial piety, charity, justice, and sincerity, are our ruling principles, the objects of our veneration, and the constant guides of our conduct. In our empire, therefore, there is no hostile array of shields and spears, no severe pu- nishments are inflicted ; we have now for a long time enjoyed uninterrupted peace and tranquil- lity.' This, Sir George observes, is a summary of Chinese faith, while a satire upon their prac- tice. To any enquiries respecting the arts and productions of the empire he is to reply : ??? ' It is with us as with other countries, some districts are rich, others are poor; and he is to remark, that a report had reached China, that the king- dom of Russia was not at peace with its neigh- bours, but engaged in actual hostilities ; and if so, he is directed to inform them, that as his im- perial majesty has no designs to infringe the peace, ' they may immediately remove and em- ploy their frontier troops, if they see occasion to do so, without the least hesitation or uneasiness.' At the productions of Russia they are com- manded to express neither admiration nor con- tempt, but to say, ' whether our country pos- sesses, or not, such things as these, it is quite out of our province to determine ; some things, in- deed, there are, which we have seen and others have not seen ; but there are other things, again, which others have seen though we have not ; on these subjects, therefore, we are by no means sufficiently informed.' They are instructed to refuse the presents that may be offered to them again and again; but if closely pressed, to ac- cept a small part, alleging that they have no-

ching valuable to give in acknowledgment. They are cautioned against drinking wine immode- rately, against immodest women, and against the corrupt manners and customs of the Russians ; but at the same time admonished, that ' if while they are within the Russian territories, they should themselves chance to see any of the wo- men

of the country, or to witness any occurrence that may seem absurd in their eyes, they are nevertheless always to preserve their gravity.'

The only money anciently used in China was made of small shells, but now both silver and copper coin are met with. The latter consist of small round pieces about nine-tenths of an inch in diameter, with a small square hole in the middle, inscribed with two Chinese words on one side and two Tartar ones on the other. The silver pieces are valued only by their weight. For the convenience of commerce the metal is therefore cast into plates of different sizes ; and for want of small coin a Chinese always carries abom him his scales, weights, and a pair of scissars to cut the metal. In giving change, silver is not valued by the numerical value of copper, this being entirely regulated by the in- trinsic value of the metals. Tims, an ounce of silver will sometimes be worth 1000 copper pieces, and sometimes only 800 ; and thus the copper money of China may frequently be sold for more than it would pass for in commerce. The emperor would lose much by this recoinage, were he not the sole proprietor of all the copper-mines in China. If the value of unwrought copper exceeds that of the coin, a quantity of the latter is fixed to restore the equilibrium. To keep up a constant circulation of all the coin in the empirr, the Chinese government are atten- tive to preserve an equilibrium between the pro- portional value of the gold and silver ; that is, to regulate the intrinsic value of each in such a manner, that the possessor of silver may not be afraid to exchange it for copper, nor the possessor of copper for silver.

In all the Chinese cities, and even in some of their ordinary towns, there is an office where money may be borrowed upon pledges. Every pledge is marked with a number when left at the office, and must be produced when demanded ; but it becomes the property of the office if left there a single day longer than the term agreed on for re-payment. The whole transaction re- mains an inviolable secret ; not even the name of the person who leaves the pledge being en- quired after. Lending money upon interest has been in use in China for about 2000 years. It has often been abolished, and as often esta-blished. The interest is often thirty per cent., and the year is only lunar. A tenth part of this interest is paid monthly ; and concerning neg- lects of payment, the following laws have been enacted. ' However much the debt may have accumulated by months or years, the principal and interest shall remain always the same. Whoever infringes this law shall receive forty blows of a pant-see ; or 1,00 if he uses any arti- fice to add the principa.1 and interest together.' This law is explained by the following : Who- ever shall be convicted before a mandarin of not having paid a month's interest, shall,

receive ten

blows; twenty for two months; and thirty for three ; and in this manner as far as sixty ; that is to say, to the sixth month. The debtor is then obliged to pay the principal and interest; but those who obtain payment by using violence are condemned to receive twenty-four blows.

Great attention is said to be paid by the Chi- nese government to the conveniency of travellers. The roads are generally broad, all of them paved in the southern provinces, and some in the nor- thern. In many places valleys have been filled up, and rocks and mountains cut through, to make commodious high ways, and to preserve them as nearly as possible on a regular level. They are bordered with very lofty trees, and in some places with walls eight or ten feet high ; but openings are left, which give a passage into cross roads that lead to different villages. On all the great roads, covered seats are erected where travellers may take shelter ; temples and pagodas are also frequent, into which travellers are admitted without scruple in the day, but often meet with a refusal in the night. In these the mandarins only have a right to rest as long as they think proper. There is, however, no want of -inns on the great or even the cross roads in China ; but they are ill supplied with provisions; and those who frequent them are obliged to carry beds along with them, or to put up with a plain mat. Towers are erected at intervals, with watch boxes on the top, and flag staffs for signals. Those on the roads conducting to the court are furnished with battlements, and have also large bells of cast iron. According to law these towers should be only five lees, or about half a French league, distance from each other. There is no public post-office in China, though several private ones have been established ; but only the couriers and officers charged with despatches for the em- pire have a right to use them. This inconveni- ence excepted, travellers find conveyance very easy from one part of China to another. Por- ters are employed in every city, who are associated under the conduct of a chief, who regulates their engagements, fixes the price of their labor, receives their hire, and is responsible for every thing they carry. On the great roads in China there are also several officers of this kind, who have a settled correspondence with others ; tra- vellers therefore have only to carry to one of these officers, a list of such things as they wish to have transported : this is immediately written down, and, though there should be occasion for 200 or even 400 carriers, they are instantly fur- nished

In our account of the religion and laws of this remarkable people, we

*have anticipated much of what it might otherwise be necessary to state re- specting their morals and manners. Innovation is the great enemy dreaded, apparently,in every thing. Males and females reason, when they do exercise that faculty, converse, construct, and furnish every apartment of their houses, and every article of their dress, as did their grandsires and grandames, and great, great grandsires and grandames, 2000 years since : only the higher the station of a Chines*3 in society, the more rigorous is his con- formity to ancient rule.*

In person, the Chinese are about the middle

size ; but their general appearance is sufficiently remarkable to have obtained for them from Lin- njeus a place among the homines monstrosi. The face is triangular, having a projection of the upper jaw above the lower, and on the latter very little beard. The nose has a broad root, and the eye is peculiarly long, narrow, and feebly opened ; the eye-brow linear and finely arched. The men uniformly plait their strong black hair into a long tail, like the lash of a whip, sometimes extending below the waist to the calf of the leg : the scalp is closely shaved, and the scattered hairs of the beard pulled out till nearly the age of forty, when its growth is promoted.

We have noticed the comfortable clothing in which the great mass of the people appear : but their personal habits are far from cleanly. Mr. Ellis confirms Mr. Barrow's opinion of the Chinese, generally, as a ' frowsy people ;' filth and stench he found to pervade all ranks. ' The stench arising from the numbers on board was not sensible only but oppressive.' We transcribe his account of a bath near the temple of Kwan- yin, within one of the gates of Nankin, the old capital of China. ' Near this temple is a public vapor-bath, called, or rather miscalled, the bath of fragrant water, where dirty Chinese may be stewed clean for ten chens, or three farthings : the bath is a small room of 100 feet area, divided into four compartments, and paved with coarse marble; the heat is considerable, and, as the number admitted into the bath has no limits but the capacity of the area, the stench is excessive : altogether I thought it the most disgusting clean- sing apparatus I had ever seen, and worthy of this nasty nation.'

Rank and dignity are distinguished by certain accessory ornaments ; and the person would be severely chastised who should presume to

as- sume them without being properly authorised : but there is little ordinary distinction in China between the dress of men and women. That of the former in general consists of a long vest which reaches to the ground. The left side folds over the other, and is fastened to the right by four or five small gold or silver buttons, placed at a little distance from one another. The sleeves are wide towards the shoulder, growing narrower as they approach the wrist, where they terminate in the form of a horse shoe, covering the hands en- tirely, and leaving nothing but the ends of the fingers to be seen. Round the middle they wear a large girdle of silk, the ends of which hang down to their knees. From this is suspended a sheath, containing a knife and two small sticks which they use as forks. Below this robe is a pair of drawers, in summer made of linen, and ??? in winter of satin lined with fur, sometimes of cotton, and in some of the northern provinces of skins. These are sometimes covered with ano- ther pair of white taffety. Their shirts are always very short and wide. Under these they wear a silk net to prevent it from adhering to the skin. In warm weather they have their necks always bare ; in cold, they wear a collar made of silk, sable, or fox's skin, joined to their robe, which in winter is trimmed with sheep's skin, or quilted with silk and cotton. That of people of quality is lined with beautiful sable skins brought from VOL. V.

Tartary, or with the finest fox's skin, trimmed with sable; in spring it is lined with ermine. Above their robe they wear also a kind of sur- tout, with wide sleeves, but very shoit, and lined in the same manner.

The emperor and princes of the blood only have a right to wear yellow ; certain mandarins have liberty to wear satin of a red ground, but only upon days of ceremony ; in general they are clothed in black, blue, or violet. The inferior ranks are allowed to wear no other colors but blue or black; and their dress is always composed of plain cotton cloth. For- merly the Chinese were at great pains to preserve their hair ; but the Tartars compelled them to cut off the greater part of it, and to alter the form of their clothes after their fashion. This revolution in dress was not effected without bloodshed, though the conqueror at the same time adopted in other respects the laws, man- ners, and customs of the conquered people. In summer they wear a cap shaped like an inverted cone, lined with satin, and covered with ratan or cane neatly wrought. The top terminates in a point, to which they affix a tuft of red hair, which spreads over it and covers it to the brims. The mandarins and literati wear a cap of the same form ; only it is lined with red satin, and covered on the outside with white. A large tuft of the finest red silk is fixed over it, which hangs down or waves with the wind. People of dis- tinction

generally use the common cap on horse- back or during bad weather, to keep off rain, and shelter them from the rays of the sun. In winter they have another cap bordered with sable, ermine, or fox's skin, and ornamented with a tuft of silk like the former. These fur trim- mings have sometimes forty or fifty ounces of silver upon them. Men of rank never go abroad without boots made of satin or some other silk, and sometimes of cotton, but always dyed. They have neither heel nor top, but are made to fit the foot exactly. When on horseback, however, they have others made of the skin of a cow or a horse, and very pliable. The inferor ranks wear black slippers made of cotton cloth. The fan is also an appendage of the Chinese dress, reckoned equally necessary with the boots.

The dress of the women consists of a long robe close at top, and long enough to cover even their toes, with sleeves so long that they would hang down upon the ground did they not take care to tuck them up ; but their hands are sel- dom seen. The color of their dresses is entirely arbitrary, but black and violet are generally chosen by those advanced in life. Young ladies use paint. Their head-dress consists in arranging their hair in several curls, interspersed with tufts of gold or silver flowers. According to. Du Halde, some of them ornament their heads with the image of a fabulous bird, concerning which many stories are told. This is made of copper or silver gilt, its wings extended and pretty close to the head-dress, embracing the upper part of their temples, while the long spreading tail forms a kind of plume on the top of the head. Its body is directly over the head, and the neck and bill hang down, the former being joined to 'he body by a concealed hinge, that it may play

freely, and move aoout on the least motion of the head. The whole bird adheres to the head by the claws, which are fixed in the hair. Ladies of quality sometimes wear several of these birds made up into a single ornament, the workman- ship of which is very expensive. Young persons wear also a crown of pasteboard, the fore part of which rises in a point above the forehead, and is covered with jewels. The rest of the head is decorated with natural or artificial flowers, among which small diamond pins are inter- spersed. The head-dress of the ordinary class of women, especially when advanced in years, consists only of a piece of very fine silk wrapped round their heads.

The Chinese use white as the color proper for mourning. A son can use no other for three years after the death of his father or mother; and ever afterwards his clothes must be of one color. The law has forbidden the use of silks and furs to children.

The character of their diet is expressed by Mr. Ellis in two words, as ‘ greasy insipidity.’ Insipid however as it may be, observes the Quarterly Review, we will venture to say, that no alderman at a civic feast could possibly play off his knife and fork to better purpose, than a mandarin, at his solitary meal, his little chop-sticks : but we doubt the fact; we should rather say, that their food in general is prepared with stimulants of too pungent a nature, and that their various soups, gravies, jellies, soys, and other condiments, are too highly seasoned. The poor, it is true, feed miserably enough, and are too happy to obtain rats, cats, dogs, and other animals, which we are in the habit of considering as nauseous: nnd sometimes, we doubt not, passengers in the barges are infested, as Mr. Ellis was, by a most diabolical stench, proceeding from a choice pre- paration of stinking fish; but it might also hap- pen that his olfactory nerves would sometimes be offended by an agreeable companion in a stage- coach, even in England.

On the other hand, this gentleman bears testi- mony to their very orderly manners. ‘ In passing through the streets it was impossible not to be struck with the silence and regularity of the crowds of spectators; although every countenance ex- pressed curiosity, scarcely an observation was made ; there was no pointing with fingers ; and though the streets may be said to have been lined with soldiers at inconsiderable intervals, the exer- cise of their authority did not seem necessary to maintain tranquillity. Again, of the progress of the embassy through Tien-tieng, he says, we were two hours and a half passing from the beginning of the line of houses on the right bank of the river to our anchorage. A salute was fired from a small fort; and nearly opposite troops were drawn up. Among them were matchlock men, wearing black caps. We observed some companies dressed in long yellow and black striped garments, covering them literally from head to foot; they are in- tended to represent tigers, but certainly are more likely to excite ridicule than terror; defence, from the spread of their shields, would seem their great object. A short distance from our anchorage, we passed on. our left the branch of the river leading to the canal, and thence to Can- ton. The excess of population was here most

striking. I counted 200 spectators upon one junk, and these vessels were innumerable. The pyramids of salt were so covered with them,

that they actually became pyramids of men. Some crowds of boys remained standing above their knees in the water for nearly an hour to satiate their curiosity. A more orderly assemblage could not, however, I believe, be presented in any other country ; and the soldiers had but seldom occasion to use even threatening gestures to maintain order. I had not before conceived that human heads could be so closely packed ; they might have been by screws squeezed into each other, but there was often no possible va- cancy to be observed. All these Chinese spec- tators were exposed, bareheaded, to the rays of the mid-day sun, when the thermometer in the shade stood at eighty-eight. Females were not numerous in the crowd, and these generally old, and always of the lower orders.'

And the Chinese are, upon the whole, a very temperate people. Mr. Ellis indeed says, that drunkenness, unaccompanied with exposure, is re- garded as a venial offence; and that it is not un- usual to compliment a man upon the hardness of his head or the capacity of his stomach, by saying he has a large wine-measure; but he after- wards allows that in general he found them to prefer raspberry vinegar and water, to wines and cordials'. Tea is the universal beverage. A small quantity of bohea, sufficient to tinge the water and render it palatable (for they drink no green), is taken in the morning, and thrown into a vessel adapted to the number in the family. This stands till milk warm; in which state it is kept the whole day, and a cup is taken now and then without sugar or milk ; if a stranger call by accident, or a visit, or by appointment, the first thing presented is a small pipe filled with tobacco of their own growth, and a cup of tea with sweet- meats, &c.

Few opportunities are given to a stranger of observing much of the fair sex. Mr. Ellis found them always sent into the back ground, in fact there was a proclamation stuck up along their route, prohibiting women from appearing in the streets and exposing themselves to the gaze of the tribute-bearers. The populace on each bank of the river (it said) are not allowed to laugh and talk with the foreigners, nor are women and girls allowed to show their faces. Female curiosity, however, says Mr. E. was not to be overcome even by the apprehensions of incurring the dis- pleasure of the son of heaven. In the streets of Gan-king-foo, the women showed themselves at the doors, and from their gestures and appear- ance I should imagine that they were prouder of their beauty than their modesty.

The Chinese women carry themselves even to old age remarkably upright; and our traveller conjec- tured that, as cramping the feet is so general that no exception occurred, their uprightness may be

owing to the smallness of the base on which they stand. When lord Macartney pressed his friend, Chouta-jin, on this subject, all he could get from him was, that ‘ it was an ancient custom :’ he ad- mitted, however, that it might possibly have taken its rise in jealousy ; ‘which,’ says his lordship, ‘has always been ingenious in its contrivances for se-

curing the ladies to their owners, and might plausibly suggest, that a good way of keeping them at home was to make it very painful to them to gad abroad.’ It is a fact that every possible method is used to press the feet of young females into the almost incredible smallness of the Chinese shoe, which is so often brought into this country.

We are disposed to enter but briefly on the in- tricate subject of Chinese history. The common school-book of the young, Siao-ul-lun (Instruction for little Children), is said to contain the following remarkable passage : ‘ In remote antiquity the waters rushed in ††† the waters flowed abundantly ††† the waters became at rest ††† the waters subsided (each of these four states of the water is ex- pressed by a single symbol), and having cut off the higher or more ancient periods of time, ma- terial bodies were produced. The venerable family of heaven, great and small, were thirteen persons, each lived 18,000 years; the venerable family of earth, great and small, were eleven persons, each lived 18,000 years; the venerable family of man were nine persons, each lived 45,600 years ; the family of Yen-quo (fruit- bearing) taught men to till the ground, to plant trees and fruits, and to build houses ; the family of Lui-quin (man of fire), by the friction of wood, produced fire, instructed men to melt and forge the different metals, and to boil their vic- tuals.’

With these 18,000 and 45,600 years we really cannot encounter. Some ingenious European historians have contracted them into days, and found them thus to agree with the Mosaic ac- count. The fact is, a tradition of the flood is universal, and the confirmation of that remark- able circumstance is all the history of China is worth, until about A. A. C. 213. The inaccuracy of the Chinese annals is complained of, even by Confucius, who affirms, that, before his time, many of the oldest materials for writing such an- nals had been destroyed. Puonku was, according to these annals, the first monarch of earth, and succeeded by Tiene-hoang, which signifies the emperor of heaven. They call him also the in- telligent heaven, the supreme

king of the middle heaven, &c. According to some of their historians, he was the inventor of letters, and of the Cyclic characters. Tiene-hoang was succeeded by Ti-hoang (the emperor of the earth), who divided the day and night, appointing thirty days to make one moon, and fixed the winter solstice to the eleventh moon. Ti-hoang was succeeded by Gine-hoang (sovereign of men), who, with his nine brothers, shared the government among them. They built cities, and surrounded them Tvith walls ; made a distinction between the sovereign and subjects; instituted marriage, &c. The reigns of these four emperors make up one of what the Chinese called ki, ages, or periods ; of which there were nine before Fo-hi, whom their better informed literati acknowledge as the founder of their empire.

In the ninth period, we find the invention, or at least the origin of letters, attributed to Tsang- hie, who received them from a divine tortoise, that carried them on his shell, and delivered them into the hands of Tsang-hie. During this

period also, music, money, carriages, merchandise, and commerce, &c. were invented. There are various calculations of the length of these pe- riods. Some make the time from Puan-ku to Confucius, who flourished about A. A. C. 479, to contain 279,000 years ; others, 2,276,000 ; some, 2,759,860 years; others, 3,276,000; and some no less than 96,961,740 years. These ex- travagant accounts are by some thought to contain obscure and imperfect hints concerning the cos- mogony and creation of the world, &c. and the the ten ki, or ages, nine of which preceded Fo-hi, to-mean the ten generations preceding Noah. This may possibly be the case ; for, about A. A. C. 300, we know several Jews travelled into China, who might make known there the Mosaic writings.

The above is the substance of that part of the Chinese history which is fabulous. The Chinese historians speak of knotted cords, twisted from the inner bark of trees, being made use of to re- gister events at this period of their history ; a circumstance that only deserves notice, as Barrow remarks, from the remarkable coincidence of a na- tion (the Mexicans), having been discovered many thousand years afterwards, on a different continent, and the antipodes almost of China, who were actually in the practice of using the same means for the same purpose.

After Fo-hi followed a series of emperors, of whom nothing remarkable is recorded, except that in the reign of Yau, the seventh after Fo-hi, the sun did not set for ten days. This event the compilers of the Universal History take to be the same with that mentioned in

the book of Joshua, when the sun and moon stood still for about a day. Fo-hi they suppose to be the same with Noah : that after the deluge he re- mained some time with his descendants; but that, on their combination to build the tower of Babel, he separated himself with as many as he could persuade to go along with him ; and that, travelling eastward, he at last entered the fertile country of China, and laid the foundation of that vast empire. As the Chinese, contrary to the practice of almost all nations, have never sought to conquer other countries, their history for many ages furnishes nothing remarkable. The whole of their emperors (excluding those of the fabu- lous times) are comprehended in twenty-two dynasties, enumerated in the following table :

CHINESE DYNASTIES.

1. Hya, containing

2. Shang, or Ing .

3. Chew

4. Tsin

5. Han

6. Hew-han .

7. Tsin

8. Song

9. Tsi .

10. Lyang

11. Chin

12. Swi .

13. Twang

14. Hew-tyang

Emperors.

A. A. C.

17

2207

28

1766

35

1122

4

248

25

206

A. D.

2

220

15

465

8

220

5

479

4

502

4

557

3

A.A.C,

20

618

2

907

2 S 2

CHINA.

l.V Hew-tang

\C). llew-tsin .

1 7. Ilew-han .

18. Hew-chew

19. Song

20. Ywen

21. Ming

22. Tsing

Emperors.

4

2

2

3 18

9 16

A.A.C.

923

936

947

951

960

1280

1368

1645

The compilers of the Unirersal History make Yau contemporary with Joshua, and the dynasty of Hya to commence A. A. C. 1357 ; but, to,ac- commodate the history to their hypothesis, great alterations must be made in the duration of the dynasties. The most interesting particulars of the Chinese history relate to the incursions of the Tartars, who at last conquered the whole em- pire, and who still continue to hold the sove- reignty ; though by transferring the seat of em- pire to Pekin, and adopting the Chinese language, manners, &c. Tartary would seem rather to have been conquered by China, than China by Tartary. These incursions are said to have begun very early ; even in the time of Shun, successor to Yau. At first the Tartars were re- pulsed, and obliged to retire into their own ter- ritories. They continued, however, to threaten the empire with invasions, and the northern pro- vinces were often ravaged by them. About A.A.C. 213, Shi-whangti, having subdued all the kings of the different provinces, became sole emperor of China. He now divided the empire into thirty-six provinces; and, finding the north part much incommoded by the barbarians, he sent a formidable army against them, which drove them far beyond the boundaries of China- Proper. To prevent their return he built the famous wall which separates China from Tar- tary. After this, being elated with his own ex- ploits, he formed a design of making posterity believe that he had been the first Chinese em- peror that ever sat on the throne. For this pur- pose he is said to have ordered all the historical writings to be burnt, and caused many of ttfe learned men to be buried alive lest they should have committed to writing, from their memories, any part of the former history of the empire.

In the tenth century of the Christian era those of Kitan or Lyau got a footing in China. Having subdued the country between Korea and Kashgar, they became much more troublesome to the Chi- nese than all the other Tartars. Their empire commenced about A. D. 916, in the fourth year of Mo-ti-kyan-ti, second emperor of the four- teenth

dynasty.

In A. D. 999, they laid siege to a city in Pe- cheli ; but Ching-tsong, successor to Tay-tsong, came upon them with his army so suddenly, that they betook themselves to flight. But instead of pursuing this victory, tie bought a peace, by con- senting to pay annually 100,000 tael (about ––34,000), and 200,000 pieces of silk. The youth and pacific disposition of Jin-tsong, suc- cessor to Ching-tsong, revived the courage of the Kitan; and, in 1055, war would have been re- newed, had not the emperor concluded another shameful treaty with them. Two years after, the Tartars demanded restitution of ten cities in Pe-

cheli, which had been taken by Ko-ghey; upon which Jin-tsong engaged to pay them an annual tribute of 2(. 0,000 taels of silver, and 300,000 pieces of silk in lieu of these cities. From this time, the Kitan remained in peaceable possession of their Chinese dominions till A. D. 1117. Whey-tsong, at that time emperor, being able neither to bear their ravages, nor by himself to put a stop to them, resolved upon a remedy which at last proved worse than the disease. This was to call in the Nu-che, Nyu-che, or Eastern Tartars, to destroy the kingdom of the Kitan. Joining his forces to those of the Nu-che, the Kitan were every where defeated ; and at last reduced to such extremity, that those who re- mained were forced to leave their country, and fly to the mountains of the west.

The Tartar general, elated with his conquest, gave the name of Kin to his new dominion, as- sumed the title of emperor, and broke the treaties concluded with the Chinese, until invading the provinces of Pecheli and Shen-si, he made him- self master of the greater part of them. Whey- tsong, finding himself in danger of losing his dominions, made several advantageous proposals to the Tartars; but the Kin monarch pursued his conquest, and Whey-tsong was finally seized by the Tartars, and kept a prisoner under a strong guard until his death in 1126. He had two or three feeble successors.

In 1163 the Tartars entered the southern pro- vince with a formidable army, and took the city of Yang-chew. From this time nothing remark- able occurs in the Chinese history till 1210, when Jenghiz khan, chief of the Moguls, quar- relled with Yong-tsi, emperor of the Kin ; and at the same time the king of Hya, disgusted at being refused assistance against Jenghiz khan, threatened him with an invasion on the west side. Yong-tsi prepared for his defence; but in 1211, receiving news that Jenghiz khan was advancing southward with his whole army, he made propo- sals of peace, which

were rejected. In 1212 the Mogul general forced the great wall ; or, accord- ing to some writers, had one of the gates treach- erously opened, and made incursions as far as Pekin, the capital of the Kin empire. At the same time the province of Lyau-tong was almost totally reduced by several Kitan lords who had joined Jenghiz khan ; several strong places were taken, and an army of 300,000 Kin were defeated by the Moguls. In autumn they laid siege to the city of Taytong-su ; where, although the governor Hujaku fled, yet Jenghiz khan met with consi- derable resistance. Having lost a vast number of men, and being himself wounded by an arrow, he was obliged to raise the siege and retire into Tartary; after which the Kin took several cities. The next year, however, Jenghiz khan re-entered China ; retook the cities which the Kin had re- duced the year before ; and overthrew their ar- mies in two bloody battles, in one of which the ground was strewed with dead bodies for up- wards of four leagues. The same year Yong-tsi was slain by his general Hujaku ; and Sun, a prince of the blood, advanced in his room. After this the Moguls, attacking the empire with four armies at once, laid waste Shansi, Honan, Pe- cheli, and Shantong. In 1214 Jenghiz khan sat

down before Pekin ; but instead of assaulting the city, offered terras of peace, which were ac- cepted, and the Moguls retired into Tartary.

The emperor, leaving his son at Pekin, re- moved the court to Pyen-lyang near Kay-song-fu, the capital of Honan. At this Jenghiz khan, be- ing offended, immediateiy sent troops to besiege Pekin, which held out till May, 1215, and then surrendered. At the same time the Moguls finished the conquest of Lyau-tong; and the Song refused to pay the usual tribute to the Kin. In 1216 Jenghiz khan returned to pursue his conquests in the west of Asia, where he staid seven years, during which time his general Mu- huli made great progress in China against the Kin emperor. He was much assisted by the motions of Ning-tsong, emperor of Song; who, incensed by the frequent perfidies of the Kin, had declared war against them, and would hearken to no terms of peace. Notwithstanding this however, in 1220 the Kin, exerting themselves, raised two great armies in Shensi and Shang-ton : the former baffled the attempts of the Song and the king of Hya, who had united against them ; but the latter, though no fewer than 200,000, were entirely defeated by Muhuli. In 1221 that officer passed the Whang-ho, and died after conquering several cities. In 1224 the Kin emperor died ; and was succeeded by his sor Shew, who

made peace with the king of Hya : but next year that kingdom was entirely detroyed by Jenghiz khan. In 1226 Otkay, son to Jeng- hiz khan, marched into Honan, and besieged Kay-song-fu, capital of the Kin empire ; but was obliged to withdraw into Shensi, where he took several cities, and cut in pieces an army of 30,000 men. In 1227 Jenghiz khan died, after having desired his sons to demand a passage for their ar- my through the dominions of the Song, without which, he said, they could not easily vanquish the Kin. The war was caried on with various success, until January, 1234, the Kin having lost all his best officers, resigned the crown to Cheng-lin, a prince of the blood. The next morning, while the ceremony of investing the new emperor was performing, the enemy mounted the south walls of jMiiing-fu, and the gate being abandoned, the whole army broke in. They were opposed, however, by Hu-sye-hu, who, with 1000 soldiers continued to fight with amazing intrepidity. In the mean time Shew-fu, seeing every thing irrepara- bly lost, lodged the seal of the empire in a house, and then causing sheaves of straw to be set round it, ordered it to be set on fire as soon as he was dead. After giving this order he hanged himself, and his commands were executed by his domes- tics. Hu-sye-hu, who still continued fighting with great bravery, no sooner heard of the tra- gical death of the emperor, than he drowned himself in the river Ju; as did also 500 of his most resolute soldiers. The same day the new emperor, Cheng-lin, was slain in a tumult; and thus an end was put to the dominion of the Kin Tartars in China. The empire of China was now to be shared between the Song, or Southern Chi- nese, and the Moguls.

It had been agreed upon, that the province of Honan should be delivered up to the Song as soon as the war was finished. But they, without

waiting for the expiration of the term, or giving Oktay notice of their proceedings, introduced their troops into Kay-song-fu, Lo-yang, and other considerable cities. On this the Mogul general resolved to attack them ; and, repassing the Whang-ho, cut off part of the garrison of Lo- yang, while they were out in search of provisions. The garrison of Kay-song-fu likewise abandoned that place ; and the Song emperor degraded the officers who had been guilty of those irregula- rities, sending ambassadors to Oktay, at the same time, to desire a continuance of the peace. The event showed that Oktay was not well pleased ; for, in 1235, he ordered his second son prince Koto- van, and his general Chahay, to attack the Song in Se-chwen, while others marched towards the borders of Kyang-nan. In 1236 the Moguls made great progress in the province of Huquang, where they took several cities, and put vast num- bers to the sword. This year they

introduced paper or silk money, which had formerly been ised by Chang-tsong, sixth emperor of the Kin. Prince Kotovan forced the passages into the dis- trict of Hang-chon-fu in Shensi, which he entered with an army of 500,000 men. Here a terrible battle was fought between the vast army of the Moguls and the Chinese troops, who had beer driven from the passages they defended. The latter consisted only of 10,000 horse and foot, who were almost entirely cut off; and the Mo- guls lost such a number of men, that blood is said to have run for two leagues together. After this victory the Moguls entered the province of Se-chwen ; but still met with vigorous opposition. Though the Chinese were always beaten, being greatly inferior in number to their enemies, yet they generally retook the cities the Moguls had reduced, as the latter were commonly obliged to withdraw for want of provisions and forage. In 1259, they undertook the siege of Ho-chew, a strong city to the west of Pekin, before which fell the Mogul emperor, Meng-ko, himself. A treaty was finally concluded, by which the Song became tributary to the Moguls, but 170 of the Mogul army having staid on the other side of the river Kyang were put to death by Kya-tse-tau, the Chinese minister, who made his master be- lieve that the enemy had been defeated, and com- pelled to retreat. This proved the ruin of the empire; for, in 1260, the Mogul emperor sent Hauking to the Chinese court to execute the treaty according to terms agreed on with Kya- tse-tau. The minister, dreading the arrival of this envoy, imprisoned him near Nankin ; and took care that neither Hupilay, nor Li-tsong the Chinese emperor, should hear any thing of him. Such unparalleled conduct could not fail to pro- duce a new war. Hostilities were accordingly- renewed in 1268. The Mogul army amounted to 300,000 men ; but little progess was at first made. In the beginning of 1273 they planted their engines against Fan-ching, and presently made a breach in the walls. After a bloody con- flict the Moguls made themselves masters of the suburbs, walls, and gates of the city; but a Chi- nese officer, with only 100 soldiers, resolved to fight from street to street. This he did for a long time with the greatest obstinacy, killing vast num- bers of the Moguls; and both parties arc said U**

have been so much overcome with thirst, that they drank human blood to quench it. The Chi- nese set fire to the houses, and multitudes put an end to their own lives. In 1274, Pe-yen, an officer of great valor and humanity, was promo- ted to the command of the

Mogul army. Having taken Nanking, and some other cities, he marched towards Hang-chew-fu, the capital of the Song empire. Peace was now again proposed but re- jected ; and at last the empress was constrained to put herself, with her son, then an infant, into the hands of Pe-yen, who immediately sent them to Hupilay. This however did not yet put an end to the war. Many of the chief officers swore to do their utmost to rescue the empress and, raised an army of 40,000 men. This army attacked the city where the young emperor Kongtsong was lodged, but without success ; after which, they raised one of his brothers to the throne, who took the name of Twon-tsong. He was only nine years of age, and enjoyed it but a very short time. In 1277 he was in great danger of perishing, a ship on board which he was being cast away. Soon after he made offers of submission to Hupilay. These however, were not accepted; and in 1278 he re- tired into a desert island on the coast of Quang- tong, where he died. On this the mandarins raised .to the throne his brother, Te-ping, then only eight years of age. His army consisted of no fewer than 200,000 men ; but being utterly void of discipline, and experience, they were de- feated with 20,000 Mogul troops, and thus ended the Chinese race of emperors ; and the Mogul dynasty, known by the name of Ywen, com- menced.

*Though no race of men that ever existed were more remarkable for cruelty and barbarity than the Moguls, yet the emperors of the Ywen dy- nasty were not in any respect worse than their predecessors. On the contrary Hupilay, by the Chinese "called Shitsu, found the way of recon- ciling the people to his government, and even of endearing himself to them so much, that the reign of his family is to this day styled by the Chinese the wise government. This he accomplished by keeping close to their ancient laws and customs, by his mild and just government, and by his re- gard for their learned men. He was indeed ashamed of the ignorance of his Mogul subjects,
 ا ا when compared with the Chinese. At his first accession he fixed his residence at Tay-ywen-su, the capital of Shen-si ; but afterwards removed it to Pekin. Here, being informed that the barks which brought to court the tribute of the southern provinces, or carried on trade, were ob- liged to come by sea, and often suffered ship- wreck, he caused that celebrated canal to be made, which is at present one of the wonders of the Chinese empire.*

In the third year of his reign Shi-tsu formed a design of reducing the islands of Japan, and the kingdoms of Tonquin and Cochin China. But these enterprises ended unfortunately. Shi-tsu reigned fifteen years. The Ywen family pre- served itself on the throne till 1367, when Shun- ti, the last of the dynasty, was driven out by a Chinese

named Chu. 'After various successful conflicts with the forces, naval and military, of Shun-ti, he assumed the title of emperor at Nan-

king on the 1st of January, 1368. After this his troops entered Honan, which they presently reduced. In the third month, Chu, who had now taken the name of Hong-vu, or Tay-tsu, reduced the fortress of Tongquan ; after which his troops entered Pecheli from Honan on the one side, and Shang-tong on the other; took the city of Tong-chew; and then prepared to attack the capital, from which they were but twelve miles distant. On their approach, the emperor fled with all his family beyond the great \va\ and thus put an end to the dynasty of Ywen. In 1370 he died, and was succeeded by his son, whom the successor of Hong-vu drove beyond the Kobi, or Great Desert, which separates China from Tartary. They continued their incursions however for many years; nor did they cease their attempts till 1583, when vast numbers of them were cut off by the Chinese troops.

The twenty-first dynasty of Chinese emperors, founded in 1368 by Chu, continued till 1644, when they were again expelled by the Tartars, who established the present reigning house. The last Chinese emperor was Whey-tsong, who ascended the throne in 1628. He was a great lover of the sciences, and a favorer of the Christians; though much addicted to the super- stitions of the bonzes or priests. He found him- self engaged in a war with the Tartars, while a number of rebels rose in the different provinces. Through the treachery of one of his generals, the former advanced to Pekin, but were repulsed. In 1636 the rebels composed four great armies, commanded by as many generals; which, how- ever, were soon reduced to two, commanded by Li and Chang. These agreed to divide the empire between them; Chang taking the west- ern, and Li, the eastern provinces. The latter seized on part of Shen-si and Honan, whose capital, named Kay-song-fu, he laid siege to, but was repulsed with loss. He renewed it six months after, but without success : the besieged choosing rather to feed on human flesh than sur- render. After this Li marched into the provin- ces of Shen-si and Honan, and thought himself strong enough to assume the title of emperor. He next advanced towards the capital, which, though well garrisoned, was divided into fac- tions. The gates were opened to him the third day after his arrival, whilst the emperor was shut up in his palace, busied only with his su- perstitions. It was not long, however, before he found himself betrayed ; upon which he retired with his empress, and a princess, her daughter, into a private part of the garden, where she hung herself on a tree in a silken string : her husband stayed only to write on the border of his vest, 'I have been basely deserted by my subjects; do what you will with me, but spare my people.' He then cut off the

young prin- cess's head with his scymitar, and hanged him- self on another tree, in the seventeenth year of his reign, and thirty-sixth of his age. The empire now submitted peaceably to the usurper, except prince U-san-ghey, who commanded the impe- rial forces in the province of Lyau-tong. This brave general invited the Tartars to his assist- ance, and Tsonge-te, their king, immediately joined him with an army of 80,000 men. Upon

this the usurper marched directly to Pekin; but, not thinking himself safe there, plundered and burnt the palace, and fled with an immense treasure. The young Tartar monarch was im- mediately declared emperor ofChina; his father, Tsong-te, having died almost as soon as he crossed the frontier.

The new emperor, named Shun-chi, or Xun- chi, began his reign by conferring upon U-san- ghey the title of king; and assigned nim the city of Si-gnan-fu, the capital of Shen-si, for his residence. This, however, did not hinder U-san-ghey from repenting of his error in calling in the Tartars, or, as he himself phrased it, ''' in sending for lions to drive away dogs.' In 1674 he formed a strong alliance against them, and had probably prevailed if his allies had been faithful ; but they treacherously deserted him one after another: his projects utterly failed, and he died soon after. In 1681 Hong-wha, son to U-san-ghey, who continued his efforts against the Tartars, was reduced to such straits, that he put an end to his own life. During this space resistance had been made to the Tartars in many of the provinces. Two princes of Chinese extraction were at different times proclaimed emperors; but were overcome and put to death. In 1682 the whole fifteen provinces were so effectually subdued, that the emperor Kang-hi, successor to Shun-chi, determined to visit his native dominions of Tartary. He was accom- panied by an army of 70,000 men, and continued for some months taking the diversion of hunting. He continued to make this visit for several years; and in his journeys took father Verbeist, the Jesuit, along with him ; from whom we have a better description of these countries than could otherwise have been obtained. This prince was a great encourager of learning and of the Chris- tian religion ; in favor of which he published a decree, dated in 1692. In 1716, however, he revived some obsolete laws against the Chris- tians; nor could the Jesuits with all their art preserve the footing they had obtained. He died in 1722, and was succeeded by his son Yon-ching , who not only gave

the missionaries no encouragement, but persecuted all Christians indiscriminately. At the beginning of his reign he banished the Jesuits to the city of Canton, and from thence finally to the island of Macao. He died in 1736.

The next memorable occurrence in the history of China is the voluntary migration of a vast number of Russian Tartars into China. In 1771 the Tartars which composed the nation of the Tourgouths, left their settlements under the Rus- sian government on the banks of the Wolga, and the Yaick, near the Caspian sea, and, in a body of 50,000 families, passed through the country of the Hasacks. After a march of eight months they arrived in the plains on the frontier of Carapan, near the river Ily, and offered them- selves as subjects to Kien-lung, emperor of China, then in the thirty-sixth year of his reign. He received them graciously, furnished them with provisions, clothes, and money, and allotted to each family a portion of land for agriculture and pasturage. In 1772 there was a second emigration of about 30 000 other Tartar families,

who also quitted their settlements under the Russian government, and submitted to the Chinese. The emperor caused the history of these emigrations to be engraven on stone in four different languages.

In 1792 the British government despatched a splendid embassy to this monarch, under lord Macartney. Kien-lung was then in the eighty-fifth year of his age, and fifty-seventh of his reign. The embassy consisted of forty- four persons, besides the earl, and his secre- tary, Sir George Staunton ; having a guard of honor of fifty soldiers. The earl and his suite set sail from Portsmouth, Sept. 25th, 1792, hi the Lion, of sixty-four guns, accompanied by the Ilindostan East Indiaman, and the Jackall brig. On the 17th of August they arrived at Pekin; where, after being detained fourteen days, lord Macartney learned that the emperor was at Jehol in Tartary. He accordingly set off for that place on the 2nd of September, leaving great part of his train at Pekin ; and airived at Jehol, on the 8th, where his reception was very cool. On the 12th a part of the presents were sent to the emperor, and on the 14th, the earl had his first interview, and delivered his credentials, which were received with great formality : on the 15th and 17th he had his second and third audiences, and on the 18th his audience of leave, when the emperor refused to enter into any written treaty with his Britannic Majesty ; upon a fundamental principle in Chinese politics that innovation, of whatever kind, is pregnant with ruin. He, expressed, however, his high respect for the British nation ; his inclination to grant them

greater indulgences than any other European power, and to diminish the duties payable by them at Canton, provided it could be done without prejudice to his own subjects. He then delivered to the earl, a box, containing the miniature pictures of all his imperial pre- decessors, with verses by each, descriptive of himself; which he said, was ‘ the most valuable present his empire could furnish, as it had been transmitted through a long line of ancestors, and was the last token of affection which he had re- served for his only son.’ On the 21st of Sept. lord Macartney returned to Pekin : the emperor followed on the 28th, and the remaining presents were soon after sent to his palace. At last, on the 7th of Oct. the gentlemen of the embassy were equally surprised and mortified by a sud- den and most unexpected order to depart in two days. Our ambassador and his suit accordingly left Pekin for Tong-tchew on the 9th of Oct. and arrived at Spithead, Sep. 3rd, 1794. Thus the hopes of any great advantages resulting from this embassy were blasted, and particularly the desire of our government, that an ambassador should be permitted to reside at the imperial court.

A second effort of the same kind has been made with even less success. In 1816 lord Amherst was united with Sir George Staunton, and H. Ellis, esq. in a commission of embassy to the court of Pekin. They arrived in the Golf of Petchelee on the 25th of July. According to the precedent of lord Macartney’s embassy, two mandarins visited the ambassador on board,

and a legate received him on shore. After some questions of routine, as to the objects of the em- bassy, the number of persons it consisted of, &c. they adverted to the ko-tou, or ceremony of prostration, and observed that previous practice would be required to secure the proper perform- ance of it in the emperor’s presence. Lord Am- herst only observed, on this occasion, that what- ever was right would be done.

But so early a discussion of this delicate topic was ominous of disaster. Lord Amherst now formally took the opinion of Sir George Staunton and his coadjutors : when Sir George at once declared that the performance of the ceremony thus demanded was not

On the 12th of August they reached Tien-sing, and an entertainment being given to the embassy on the following day, in the name of the

empe- ror, he, argued the mandarins, was supposed to be present, and the ko-tou was peremptorily re- quired. Lord Amherst declared his intention of following, in every respect, the precedent established by lord Macartney. They said that lord Macartney had performed every ceremony, and especially the ko-tou, not only in the pre- sence of the emperor but at all other times ; and Soo declared that himself remembered his hav- ing performed it at Canton : they had even -the assurance to appeal to Sir George Staunton for the truth of this assertion. Nor was this all : they produced a paper, purporting to be an extract from the official records of the court of ceremonies, describing the whole ceremony as performed by lord Macartney.

Lord Amherst, however, was firm, and the utmost ceremony to which he would submit was to bow nine times to the vacant seat of the em- peror, while the mandarins performed the ko- tou. From Tong-choo, notwithstanding this, a report was forwarded to the emperor that the English tribute-bearer was daily practising the ceremony with the highest possible respect and veneration. We have noticed the haughty de- mand of his imperial majesty on the arrival of lord Amherst at Pekin. He had scarcely taken his seat, after travelling all night, when Chang, one of the first ministers of the imperial court, delivered him a message to appear with his suite, and the other commissioners, before the empe- ror instantly. Much surprise, says Mr. Ellis, was naturally expressed ; the previous arrange- ment for the eighth of the Chinese month, a pe- riod certainly much too early for comfort, was adverted to ; and the utter impossibility of his excellency appearing in his present state of fatigue, inanition, and deficiency of every neces- sary equipment, was strongly urged. Chang was very unwilling to be the bearer of this answer, but was finally obliged to consent. During this time the room had filled with spectators of all ages and ranks, who rudely pressed upon us to gratify their brutal curiosity ; for such it may be called, as they seemed to regard us rather as

wild beasts than mere strangers of the same species with themselves. Some other messages were interchanged between the koong-yay and lord Amherst, who, in addition to the reason already given, stated the indecorum and irregu- larity of his appearing without his credentials. In reply to this it was said, that in the proposed audience the emperor merely wished to see the ambassador, and had no intention of entering upon business. Lord Amherst having persisted in expressing the inadmissibility of the proposi- tion, and in transmitting through the koong-yay an humble request, to his imperial majesty, that he would be graciously pleased to wait till to- morrow, Chang and another mandarin finally proposed that his excellency should go over to the koong-yay's apartments, whence a*

reference might be made to the emperor. Lord Amherst, having alleged bodily illness as one of the rea- sons for declining the audience, readily saw that if he went to the koong-yay this plea, which to the Chinese (though now scarcely admitted) was in general the most forcible, would cease to avail him ; he therefore positively declined com- pliance : this produced a visit from the koong- yay, who, too much interested and agitated to heed ceremony, stood by lord Amherst and used every argument to induce him to obey the em- peror's commands. Among other topics he used that of being received with our own ceremony, using the Chinese words ne-muntihlee, your own ceremony. All proving ineffectual, with some roughness, but under pretext of friendly violence, he laid hands upon lord Amherst, to take him from the room ; another mandarin followed his example. His lordship, with great firmness and dignity of manner, shook them off, declaring that nothing but the extremest violence should induce him to quit that room for any other place but the residence assigned to him ; adding that he was so overcome by fatigue and bodily illness as absolutely to require repose. Lord Amherst further pointed out the gross in- sult he had already received in having been ex- posed to the intrusion and indecent curiosity of crowds, who appeared to view him rather as a wild beast than the representative of a powerful sovereign : at all events he entreated the koong- yay to submit his request to his Imperial Majesty, who, he felt confident, would, in consideration of his illness and fatigue, dispense with his im- mediate appearance. The koong-yay then pres- sed lord Amherst to come to his apartments, alleging that they were cooler, more convenient, and more private : this lord Amherst declined, saying that he was totally unfit for any place but his own residence.

They now drove to the rest of the party at Hai-tien, and hither the emperor's orders follow- ed for their immediate departure. It was in vain to plead fatigue ; no consideration could weigh against the positive imperial command ; and, at four o'clock in the afternoon, lord Amherst had the pleasure of a second night's journey round the walls of Pekin, within which he was not suf- fered to enter. The embassy was afterwards conducted nearly to Canton, and some gleams of repentance seem to have entered the imperial mind ; but the embassy was suffered to depart,

and no practical advantage seems to have re-

such as CHINESE TARTARY, comprising the

suited from it. countries of Mongolia, Mantchoo, Thibet, &c. ;

In the above article it will be found that we COREA, the Loo-cuoo Islands, Formosa, Hainan

have strictly confined ourseh-es to China Proper. &c. most of them inhabited by races of men

There are several other countries, some of them distinct in manners, customs, and language ; the

of immense extent, which are not included in description of which will more properly fall

it, but will be treated of in their proper places, under their respective heads.

CHI'NA ORANGE, n. s. From China and orange. The sweet orange ; brought originally from China.

Not many years has the China orange been propa- gated in Portugal and Spain. Mortimer's Husbandry.

CHI'NA ROOT, n. s. From China and root. A medicinal root; brought originally from China.

CHINCHOOR, a town in Hindostan, in the province of Aurungabad, between Bombay and Poonah. It is a neat place with good houses, and well supplied shops, pleasantly situated on the bank of a river, with about 5000 inhabitants, of whom there are 300 brahmin families. It is the residence of Chintamun Deo, whom the Mahrattas believe to be an incarnation of their deity, Goonputty. The present is the eighth from the first, and they alternately assume the names Chintamun Deo, and Narrain Deo. The Brahmins say, that, at the death of each, a small image of the deity arises from the ashes, which they deposit in the tomb and worship ; and the Deo worships his other self in this form. He is further described as totally unmindful of worldly affairs, and unable to hold conversation beyond the simplest question and answer. He eats, drinks, takes wives, &c. like the other brahmins. In 1809 he was a boy of twelve years old. His palace, near the Moorta, is a vast but inelegant building, having its floors co- vered with the sacred cow-dung, and near it stand the tombs of the former deos, in the form of small temples surrounded by trees. Here the pilgrims and devotees perform

their ablu- tions, but with the utmost listlessness and apathy ; the women pouring oil, water, and milk, over the images of the gods, and the children dress- ing them with flowers.

CHINCLEPUT, a town and district on the coast of Hindostan, lying betweet Madras and the Palar river. After having been subject to a native chief called the Rayeel, k was conquered at the close of the seventeenth century by the Ma hommedans, and made over by Nabob Moham- med Ali Khan in 1750, to the English East India Company, when it became more commonly known as the Jaghire district. The soil is poor and parched, but it has lately much recovered, and the district is the circuit of an English judge, collector of the company, &c. Chincleput, the capital, is situated on the north-east bank of the Palar River, thirty-nine miles from Madras, and is a fortress of some importance. It was taken by the French in the year 1751, but shortly after recovered by our forces, and, during the con- flicts with Hyder Ali, always withstood his arms, and served as a depot for stores.

GHI'NCOUGH, n. s. Perhaps more pro- perly kincough, from kinchin, Dutch, to pant,

and cough. A violent and convulsive cough, to which children are subject.

I have observed a chincmtgh, complicated with an intermitting fever. Floyer on the Humours.

CHINCH, n. s. Span, chincke ; Ital. cimice ; Lat. cimex,- A bug.

CHINE, n. s. &cv. a. Fr. echine; Ital. schien- na, from Lat. spina. The back bone ; a piece of the back of an animal. To chine, is to cut into chines.

Cut out the burly boned clown in chines of beef ere thou sleep. Shakspeare.

She strake him such a blow upon his chine, that she opened all his body. Sidney.

He presents her with the tusky head,

And chine with rising bristles roughly spread.

Dryden.

He that in his line did chine the long ribbed Apen- nine. Id.

He had killed eight fat hogs for this season, and lie had dealt about his chines very liberally among his neighbours. Spectator.

Sometimes with oysters we combine, Sometimes assist the savory chine, From the low peasant to the lord, The turkey smokes on every board.

CHING, a Chinese musical instrument, formed by cutting off the nack of a gourd, and reserving the lower part, B. To this a cover is fitted, having as many holes as are equal to the number of sounds required. In each of these holes a pipe, C,C,C, made of bamboo is fixed, and it is shorter or lon- ger according to the tone in- tended. The mouth of the instrument A, is formed of another pipe shaped like the neck of a goose ; which is fix- ed to the gourd on one side, and serves to convey the air to all the pipes it contains ; see the diagram.

CHINK, v. a. & v. n. Piobably from gingle, to sound. To sound by shaking substances to- gether, as pieces of money in a purse.

He c/im/.'.v his purse, and takes his seat of state : With ready quills the dedicators wait.

Pope'i Dunciad.

Lord Strutt's money shines as bright, and chinks as well as 'squire South's.

Arbuthnot's History of John Unit.

CHINK, n. s.) Sax. cyna ; Goth, gincu,

CHI'NKY, adj.] from gia, gina ; Sax. cinan ; Xatvw. A small opening; a" crevice; a small aperture longwise ; an opening or gap between the parts of anything. Full of holes; gaping, opening into narrow dpfo

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Fyramus and Thisbe did talk through the chink of ??? -wall. Shakspeare.

Plagues aiso have been raised by anointing the eninlts of aoors, and the like.

Bacon's Natural History.

Though birds have no epiglottis, yet they so con- tract the chink of their larinx, as to prevent the ad- mission of wet or dry indigested.

Browne's Vulgar Errours. But plaister thou the chinky hives with clay.

Dryden's Virgil.

*Grimalkin, to domestick vermin sworn An everlasting foe, with watchful eye Lies nightly brooding o'er a chinky gap, Protending her fell claws, to thoughtless mice Sure ruin. Philip's Poems^*

CHINNON or CHINON, an ancient town of France, in the department of the Indre and Loire, in the ci-devant province of Touraine ; memorable for the death of Henry II. of En- gland, for the birth of the famous Rabelais and Quillet, and for the first appearance of that celebrated heroine, Joan of Arc, in her military habit, before king Charles VII. It is seated on the river Vienne, in a fertile and pleasant coun- try, ten miles north of Richelieu, and 150 south- west of Paris. Manufactures of serges and other woollen stuffs are conducted in this place.

CHINNOR, an Hebrew musical instrument, on which David played before Saul. It con- sisted of thirty-two chords. The annexed dia- gram, from Kircher, was taken by him from an old manuscript in the Vatican ; and is supposed to exhibit the ancient form of this instrument.

CHINSURA, a Dutch town and settlement of Hindostan, in Bengal, situated on the Hoogly, between Chandernagore and the old town of Hoogly, twenty-two miles from Calcutta. It is populous and commercial, and has a fortress de- fended by four bastions and a ditch. The pas- sage of the river is defended by twenty-four cannon. This town was taken from the Dutch by the British in 1795, but restored at the late peace. The first factory of the Dutch East India Company was erected here in 1656, and the site is said to be much preferable to that of Calcutta. In 1769 Chinsura was blockaded by the nabob of Bengal's forces, to compel pay- ment of the arrears of duties due to him.

CHINTS, n. s. Cloth of cotton made in India, and printed with colors.

Let a charming chints, and Brussels lace, Wrap my cold limbs, and shade my lifeless face.

Pope.

CHIO. or CHIOS, an Asiatic island, lying near U>c coast of Natolia. opposite to Ionia. It was

also known to the ancients by the names of ./Ethalia, Macris, Pithynia, &c. According to Herodotus, Chio was originally peopled from Ionia. It was at first governed by kings ; but became afterwards a republic, which by the direction of Tsocrates was modelled after that of Athens. The people were, however, soon en- slaved by tyrants, and afterwards conquered by Cyrus, king of Persia. They joined the Gre- cians in the Ionian revolt ; but were shamefully abandoned by the Samians, Lesbians, and others of their allies ; so that they were again reduced under the yoke of the Persians, who treated them with the utmost severity. They continued sub- ject to them till the battle of Mycale, when they were restored to their ancient liberty ; which they enjoyed till the downfal of the Persian empire, when they became subject to the Macedonian princes. In the time of Vespasian, the island was reduced to the form of a Roman province ; but the inhabitants were allowed to live accord- ing to their own laws, under the superintendence of a praetor. It is now subject to the Turks, and is called Scio. See that article, and GREECE.

CHIOCOCCA, strawberry-tree, in botany, a genus of the monogynia order, and pentandria class of plants ; natural order forty-eighth, ag- gregatae : COR. funnel-shaped and equal ; the berry unilocular, dfepermous, inferior. Species two, natives of West Indies.

CHIONANTHUS, the snow-drop, or fringe- tree, a genus of the monogynia order, and di- andria class of plants ; natural order forty-fourth sepiariae: COR. quadrifid, the segments very long : the fruit is a plum. The principal species is Virginica, common in Virginia and South Carolina, where it grows by the sides of rivulets. It rises to ten feet ; the leaves are as large -as those of the laurel, but much thinner. The flowers come out in May, and are of a pure white; whence the name of snow-drop tree. They hang down in large branches, and are cut into narrow segments ; whence its other name of fringe-tree. After the flowers are fallen off, the fryit appears, which grows to the size of a sloe, having a stone in the middle. The plants are propagated from seed sown in a hot bed, and kept in a stove. Some have been raised from layers ; but this method is very precarious, and therefore the other is to be preferred. The seeds must be procured from America, for they never come to perfection in this country.

CHIONE, in fabulous history, the daughter of Dcedalion, of whom Apollo and Mercury be- came enamoured. After her commerce with the gods, she was changed by Juno into a hawk.

CHl'OPPINE, n.s. From Span, chapin. A high shoe, formerly worn by ladies.

Your ladyship is nearer heaven than when I saw

you last, by the altitude of a chioppine. Shakspeare.

The woman was a giantess, and yet walked always

in chioppines. Cowley.

CHIOZZA, or CHIOGGIA, a well built old town of the Venetian states, situated on an island of the same name in the Adriatic, not far from the mouth of the Brenta Nuova, at the southern extremity of the Lagunes of Venice. Here are three churches and eight monasteries, defended by a citadel, &c. It is built like Venice

on piles, and is the main safe-guard of that city. Population 20,000 :

fourteen miles south of Venice.

CHIP, CHEAP, CHIPPING, in the names of places, imply a market ; from the Saxon cypoan ceapan, to buy.

CHIP, v. a. & n. s.) Swed. kippa ; Teut.

CHI'PPING, n. s. } kippen. Probably cor- rupted from chop. To cut into small pieces ; to diminish, by cutting away a little at a time.

His mangled Myrmidons,

Noseless, Landless, hackt and chipt, came to him, Crying on Hector. Shakspeare. Troilus and Cressida.

To return to our statue in the block of marble, we see it sometimes only begun to be chipped; some- times rough hewn, and just sketched into an human figure. Addisun's Spectator.*

Cucumbers do extremely affect moisture, and over- drink themselves, which chaff or chips forbiddeth.

Bacon.

The chippings and filings of these jewels, could they be preserved, are of more value than the whole mass of ordinary authors. Fclton on the Ciassicks.

Chipping Norton has a market founded by one Norton. Gazetteer,

CHIPPENHAM, a borough and market town of Wiltshire, seated on the Avon. It has a handsome stone bridge, over the river, of six- teen arches ; and sends two members to parlia- ment. It was anciently a seat of King Alfred the Great, and was then one of the strongest towns in the kingdom. It has a market on Sa- turday, and four fairs. It carries on a manufac- ture of superfine woollen cloth, and lies twenty- one miles east of Bristol, and ninety-three west of London.

CHIPPEWAYS, or CHEPEWAYS, an Indian tribe in North America, who hunt on grounds surrounding the Sandy Lake, Leech Lake, Rainy Lake, Red Lake, Lake Winnipic, Otter Tail lake, the head of the Red River, and the Mississippi. Some of them are also found along the north side of Lakes Ontario and Erie, the sides of Lakes Michigan, Huron, and Superior, &c. They are said to be much attached to spirituous liquors, and to be almost at continual war with the Sioux, the most powerful native tribe of this continent ; they

would have been long ago dispersed, but the nature of the country ex- cludes the possibility of an attack on horseback, a mode of warfare peculiar to the Sioux, and that by which they are so formidable to the other tribes. Their numbers amounted lately to 11,177, of which 2049 are warriors. In 1795 they made a formal peace with the United States.

CHIPPEWAY RIVER, a river of Louisiana, which is tributary to the Mississippi, at its junc- tion with which it is about half a mile wide. It communicates through the Montreal river with Lake Superior, and on its banks are found im- mense herds of elks and buffaloes.

CHIPPEWAY, or CHEPEWYAN FORT, a strong post of the north-west company, situated on the Lake of the Hills. Here Mackenzie embarked for the Frozen Ocean in 1789.

CHIPPING, the flying off of small pieces, or breaking at the edges, of porcelain, stone, or

earthern-ware ; an accident common in these manufactures. Our earthen-wares are parti- cularly subject to it, and are spoiled by it before any other flaw appears in them. Our stone wares escape it better ; but not so well as the porcelain of China, which is less subject to it than any other manufacture in the world. The method by which the Chinese defend their wares from this accident, is this : ??? they carefully bum some small bamboo canes to a charcoal, which is very light, and very black ; this they reduce to a fine powder, and then mix it into a thin paste, with some of the varnish they use for their ware; they next take the vessels when dried, and not yet baked, to the wheel ; and turning them softly round, they, with a pencil dipt into this paste, cover the whole circumference with a thin coat of it ; after this, the vessel is again dried ; and the border made with this paste appears of a pale grayish color when it is thoroughly dry. They work on it afterwards in the common way, covering both this edge and the rest of the ves- sel with the common varnish. When the whole is baked on, the color given by the ashes disap- pears, and the edges are as white as any other part ; only when the baking has not been suffi- cient, or the edges have not been covered with the second varnishing, we sometimes find a dusky edge, as in some of the ordinary thick tea-cups. It might be a great advantage to our English manufacturers to attempt something of this kind. The willow makes a very light and black char- coal ; but the elder, though seldom used, greatly exceeds it. The young green shoots of this shrub, which are almost all pith, make the lightest and the blackest of all charcoal; this readily mixes with any liquid, and might be easily used in the

same way that the Chinese use the char- coal of the bamboo cane, which is a light hollow vegetable, more resembling the elder shoots than any other English plant. The fixed salt and oil contained in this charcoal penetrates the yet raw edges of the ware, and gives them in the subse- quent baking a somewhat different degree of vi- trification from the other parts of the vessel ; which, though, if given to the whole, it might take off from the true semi-vitrified state of that ware, yet at the edges is not to be regarded, and only serves to defend them from common acci- dents, and keep them entire. The Chinese use two cautions in this application : the first in the preparation, the second in the laying it on. They prepare the bamboo canes for burning into char- coal, by peeling off the rind. This might easily be done with our elder shoots, which are so suc- culent, that the bark strips off with a touch. The Chinese say, that if this is not done with their bamboo, the edges touched with the paste will burst in the baking. This does not seem indeed very probable ; but the charcoal will certainly be lighter made from the peeled sticks, and this is a known advantage. The other caution is never to touch the vessel with hands that have any greasy or fat substance about them ; for if this is done, they always find the vessel crack in that place.

CHIQUITOS, a tribe of native Indians, in Peru, on the west of the province of Santa Cruz de la Sierra. They inhabit a forest and un-

healthy country, extending from lat. 16►► to 20►► south. The inhabitants, after several vain attempts to subdue tlieii by armss were induced in the mid- dle of the last century by the persuasions of the Jesuits, to submit to tne restraints and usages of civilised society, and the country was divided into settlements, which they maintained until the year 1767. Hunting, fishing, and gathering wild honey and bees' wax, together with a small manu- facture of cotton, constitute the principal occu- pations of these tribes, whose trade with other countries is said to be still conducted through the medium of their catholic curates. A red and very venomous spider abounds here.

CHIRA'GRICAL, adj. From Lat. chiragra. Having the gout in the hand ; subject to the gout in the hand.

Chiragrical persons do suffer in the finger as well as in the rest, and

sometimes first of all.

Browne't Vulgar Errauars.

CHIRIQUT, or CHIRIQUITA, a town of Mexico, in the province of Veragua, on the coast of the Pacific Ocean, with a harbour about three miles from the sea, and eight miles from the town. It is thirty leagues west of St. Jago.

CHIROGRAPH, an ancient deed, which, requiring a counterpart, was engrossed twice on the same piece of parchment, counterwise ; leaving a space between, wherein was written chiro- graph ; through the middle whereof the parch- ment was cut, sometimes straight, sometimes indentedly ; and a moiety given to each of the parties. This was afterwards called dividenda, and chartae divisae ; and was the same with what we now call charter-party. See CHARTER-PARTY. The first use of these chirographs in Britain was in the time of Henry III. Chiro- graph was also anciently used for a fine : and the manner of engrossing the fines, and cutting the parchment in two pieces, is still retained in the chirographer's office.

CHIRO'GRAPHER, n. s. ˆ X►►p the hand,

CHIRO'GRAPHIST, n. s. Sand ypa0w to

CHIRO'GRAPHY, n. s. j write. He that

exercises or professes the art or business of writ- ing.

Thus passeth it from this office to the chirographer's, to be engrossed. Bacon's Office nf Alienation.

CHIROGRAPUER OF FINES,, an officer in the Common Pleas, who engrosses fines acknow- ledged in that court, into a perpetual record, (after they have been examined, and passed by other officers), and writes and delivers the inden- tures thereof to the party. He makes two in- dentures ; one for the buyer, the other for the seller ; and a third indented piece, containing the effect of the fine, and called the foot of the fine ; and delivers it to the custos brevium. This officer, or his deputy, proclaims all fines in court every term, and indorses the proclamations on the back side of the foot ; keeping the writ of covenant, and the note of the fine.

CHI'ROMANCY, n. s.) X►►p the hand,

*CHI'ROMANCER, ra. *. $ and pavnq a pro- phet. The art of*

foretelling the events of life, by inspecting the hand. '

Chiromancy hath these aphorisms to foretell melan- choly The Saturnine line going from the

rascetta through the hand, to Saturn's mount, and there intersected by certain little lines, argues melan- choly ; so if the vital and natural make an acute angle. Burton's Anatomy of Melancholy.

There is not much considerable in that doctrine of chiromancy, that spots in the top of the nails do sig- nify things past ; in the middle, things present ; and at the bottom, events to come.

Browne's Vulgar Errourtm

The middle sort, who have not much to spare, To chiromancem' cheaper art repair, Who clap the pretty palm, to make the lines more fair. Dryden's Juvenal.

CHIROMANCY. See DIVINATION. CHIRON, the son of Saturn and Phillyra, styled by Plutarch, in his Dialogue on Music, The Wise Centaur. Sir Isaac Newton places his birth in the first age after Deucalion's deluge. He is said to have been born in Thessaly among the Centaurs, who were the first Greeks that had acquired the art of breaking and riding horses ; and was represented by the ancients as one of the first inventors of medicine, botany, and sur- gery. He inhabited a grotto at the foot of Mount Pelion, which, from his great fame, be- came the most frequented schoo. throughout Greece. Almost all the heroes of his time were proud of receiving his instructions. It is pre- tended that Bacchus was the favorite scholar of the Centaur ; of whom he learned the revels,, orgies, bacchanalia, and other ceremonies of his worship. But among all the heroes who have been his disciples, no one reflected so much ho- nor upon him as Achilles, whose renown he in some measure shared. Apollodorus tells us, that he taught him music, as a bridle to the im- petuosity of his temper. One of the best re- mains of antique painting now existing, is a picture dug out of the ruins of Herculaneum, in which Chiron is teaching young Achilles to play on the lyre. The death of this philosophic mu- sician was occasioned by an accidental wound in the knee with a poisoned arrow, shot by his scholar Hercules at another. He was placed by Musaeus among the constellations, in gratitude for the great services which he had rendered the people of Greece.

CHIRONIA, in botany, a genus of the mo- nogynia order, and

pentandria class of plants ; natural order, twentieth, rotaceae : COR. wheel- shaped : PIST. declining downwards : STAM. placed in the tube of the corolla: ANTH. in their last stage spiral : SEED-CASE bilocular. There are eighteen species, of which the most remark- able is the C. frutescens, a native of the Cape of Good Hope. The root is fibrous, and spreads near the surface of the ground. The stalks round, and somewhat ligneous, but of a very soft texture. They rise from two to three feet high.

CHIROTHESIA, from Xap, the hand, and TiGtipi, to lay, the imposition of hands in con- ferring priestly orders.

CHIROTONIA, or CHIROTONY, from ˆetp and ruviit, to stretch forth, in antiquity, the stretching forth, or holding up of hands, in electing ma- gistrates, &c. This custom was first established in Greece ; as appears from an oration of De- mosthenes against Nesera, and that of JEschines

against Ctesiphon : thence it passed to the Ro- mans ; and from profane authors it passed to ec- clesiastical ones.

CHIRP,v.a.,v.□□.&n.<. } Perhaps contracted Cin'tPER, n. s. $ from cheer np. The

Dutch have circken. To make a cheerful noise, as birds when they call without singing ; to make cheerful ; the voice of birds or insects. The audible expression of happiness from the various species of the feathered tribes of crea- tion.

This frere ariseth up full curtisly, And hor embraceth in his armes narwe, And kisseth her swete : and chirketh as a sparrow With his lippes. Chaucer.

She chirping ran, he peeping flew away, Till hard by them both he and she did stay.

Sidney.

Came he right now to sing a raven's note ; And thinks he that the chirping of a wren Can chase away the first conceived sound ?

Shahspeare. No chirping lark the welkin sheen invokes.

Gay's Pastorals.

Sir Balaam now, he lives like other folks ; He takes his chirping pint, and cracks his jokes.

Pope.

Winds over us whispered, flocks by us did bleat, And chirp went the grasshopper under our feet.

Spectator. The careful hen Calls all her chirping family around.

Thomson's Spring.

To CHIRRE, v. n. Sax. ceoruan. See CHURME. To coo as a pigeon.

CHI'RURGEON, n. s.) Xtiooupyoe, from CHIRU'RGERY, n. s. \xa? ˆe hand, and CHIRU'RGICAL, adj. itpyov work. One CHIRU'RGICK, adj. ˆ that cures ailments,

not by internal medicines, but outward applica- tions. It is now generally pronounced, and as generally written, surgeon. The art of curing by external applications. This is called sur- gery. Manual in general, consisting in opera- tions of the hand. This sense, though the first according to etymology, is now scarce found.

Gynecia having skill in chirurgcry, an art in those days much esteemed. Sidney.

The chirurgical or manual part doth refer to the making instruments, and exercising particular experi- ments. Wilkins. When a man's wounds cease to smart, only because he has lost his feeling, they are nevertheless mortal, for his not seeing his need of a chirurgeon

South'i Sermons.

CHI'SEL, v.a. &□□. s. Span, sincel ; Fr. ci- seau, ciselle ; Lat. scinda. A carpenter's paring tool. To chisel, is to cut or pare with the in- strument.

What fine chisel

Could ever yet cut breath? Let no man mock me, For I will kiss her. Shakspeare.

Imperfect shapes : in marble such are seen, When the rude chisel does the man begin.

Dry den.

CHIRURGEON. See SURGEON.

CHISELS, or CHISSELS, cutting instruments, much used by carpenters and joiners, and in carving silver work, such as buckles, spoons, &c. There are chisels of different kinds ; though their

chief difference lies in their different size awl strength, as being all made of steel well sharpened and tempered ; but they have different names, according to the different uses to which they are applied. The chisels used in carpentry and joinery are, 1. The former; which is used first of all, just after the work is scribed. 2. The paring chisel ; which has a fine smooth edge, and is used to pare off or smooth the irregularities which the former makes. This is not struck with a mallet as the former is, but is pressed down by the workman. 3. The skew-former, is used for cleansing acute angles with the point or corner of its narrow edge. 4. The mortise chisel is narrow, but very thick and strong, to endure hard blows, and it is cut to a very broad basil. Its use is to cut deep square holes in the wood for mortises. 5. The gouge, is a chisel with a round edge ; one side whereof serves to prepare the way for an augre, and the other to cut such wood as is to be rounded, hollowed, &c. 6. Socket- chisels, are chiefly used by carpenters, &c. have their shanks with a hollow socket at top, to receive a strong wooden sprig, fitted into them with a shoulder. These chisels are distinguished, according to the breadth of the blade, into half- inch chisels, three-quarters of an inch chisels, &c. 7. The ripping chisel, is a socket-chisel of an inch broad, having a blunt edge with no basil. Its use is to rip or tear two pieces of wood asunder, by forcing in the blunt edge between them.

CHISHULL (Edmund), a divine of some ce- lebrity in the last century, was born at Eyworth, in Bedfordshire, and educated at Corpus Christ! college, Oxford. In 1692 he produced an elegant Latin poem, on the battle of La Hogue, and another, in 1694, on the death of queen Mary. Having obtained a travelling fellowship, he, in 1698, visited Turkey and the Levant ; and settling at Smyrna, remained there for some years, as chaplain to the English factory. In 1705 we find him again at home, publishing the Answer to Dodwell's Discourse on the Mortality of the Soul. He obtained the vicarage of Walthamstow in 1708, and became afterwards chaplain to the queen. His most important works are, Inscriptio Sigaa Antiquissima,

folio, 1721 ; A Dissertation on certain Medals struck at Smyrna in honor of Physicians, which he added to Dr. Mead's Har- veian Oration, printed in 1724 ; and Antiquitates Asiatics Christianam aeram Antecedentes, &c. folio. His death took place in 1733.

CHISLEY LAND, in agriculture, a soil of a middle nature, between sandy and clayey land, with a large admixture of pebbles.

CHISME, a sea-port of Natolia, seated on the strait that divides the continent from the Isle of Scio. It was the ancient Cyssus, and famous for the victory obtained here by the Romans over the fleet of Antiochus, A. A. C. 191. It has been no less distinguished in modern times by the total destruction of the Turkish fleet, by the Russians, in 1770. It is forty miles west of Smyrna.

CHISWICK,an extensive parish of Middlesex, comprising the hamlets of Turnham Green, Strand on the Green, and Little Sutton. It is principally noticed for the beautiful Roman villa

of the duke of Devonshire, built by the celebrated Inigo Jones. The ascent to the house is by a noble double flight of steps, on one side of which is a statue of Palladio, and on the other that of Inigo Jones. The portico is supported by six fluted Corinthian pillars, with a pediment ; and a dome at the top enlightens a beautiful octa- gonal saloon. Two wings have been added to the house from the designs of Mr. Wyatt, and fully remove the objection made by lord Hervey, who said, ' This house was too small to live in, and too large to hang to one's watch.' The gardens are laid out in the Italian style, and display all the beauties of modern planting. The 'church is a very old building; on the wall of the church-yard is the following curious in- scription : 'This wall was made at ye charges of ye right honourable and trulie pious Lorde Francis Russel, duke of Bedford, out of true zeal and care for ye keeping of this church-yard, and ye wardrobe of God's saints, whose bodies lay therein buried, from violating by swine and other profanation, so witnesseth William Walker, V. A. D. 1623.' In this cemetery is the tomb of Hogarth, bearing the following epitaph, by Garrick : ???

' Farewell, great painter of mankind,

Who reach 'd the noblest point of art ;

Whose pictured morals charm the mind,

And through the eye correct the heart !

If genius fire thee, reader, stay j

If nature move thee, drop a tear ;

If neither touch thee, turn away :

For Hogarth's honour'd dust lies here.'

It is four miles and a half west of London, and had the mingled cares and honors of giving birth to the present work/

CHIT, v. n. & n. s. 3 According to Dr.

CHI'TTY, adj. $ Hickes, from kind,

Germ, child , perhaps from Span, chico, little.

A child ; a baby. Generally used of young persons in contempt. Chitty is babyish, like a baby.

These will appear such chits in story, 'Twill turn all politicks to jest. Dryden.

The shoot of corn from the end of the grain. A cant term with malsters.

Barley, couched four days, will begin to show the chit or sprit at the root-end. Mortimer's Husbandry

A freckle ; from chick-peas. In this sense it is seldom used. The verb is used only in the sense of sprouting and shooting at the end of the grain. It is not legitimate.

I have known barley chit in seven hours after it had been thrown forth. Mortimer's Husbandry.

CHITCHAT, n. s. Corrupted by reduplica- tion from chat, says Johnson ; but it is probably from chit and chat, the talk of a chit, of a baby. Prattle; idle prate; idle talk. A word only used in ludicrous conversation.

I am a member of a female society, who call our- selves the chitchat club. Spectator.

CHITON, from xlrov, a coat of mail, in zoology, a genus of the order of vermes testacece. The shell is plated, and consists of many valves, lying upon each other transversely : the inhabitant is a species cf doris. They are common on the

shores of Scarborough, Aberdeen, and Loch- broom.

CHITORE, or CHETORE, a town and district of the province of Ajimere, Hiudostan, subject to the ancient family of the ranah of Odeypore. It is bounded on the north by Mewar, on the east by Harrowly, on the south by Jalore, and on the west by Sarowy, and situated about the twenty- fifth degree of northern latitude, and between the seventy-fourth and seventy-fifth degrees of eastern longitude. The capital is a place of great na- tural strength. The Mahommedans possessed themselves of it in 1303, during the reign of Alia aud Deen, the scourge of the Hindoos. In 1567 it was taken by the sultan Acber, and once more subdued and plundered by Azim Ushaun, son of Aurengzebe, in 1680. It was taken in 1790 by Madajee Sindia, from Bheem Singh, a rebellious subject of the Odeypore rajahs, to whom it was restored; and the family now nominally hold it, but with little real power.

CHITPORE, the name of two towns of Hin- dostan, in the province of Gujerat : one belonging to an independent chief, and situated among mountains, in long. 70►► 47′ E., lat. 21►► 20′ N. ; the other a large and flourishing place, belonging to the Mahrattas, and celebrated for its .manu- facture of very superior chintzes. It stands on the south bank of the Sursutty river, in lat. 23►► 45′ N., long. 73►► 3′ E.

CHITRO, a town of European Turkey, seated on the bay of Salonichi, in Macedonia, where the mother, wife, and son of Alexander the Great were murdered by Cassander. Near this town Perseus, the last king of Macedon, was defeated by the Romans. Long. 22►► 35′ E., lat. 40►► 20′ N.

CHITTAGONG, a large district in the south- east exremity of Bengal. The inhabitants may be comprised under two classes ; the Choomeas, and the Rookies or Lunctas ; the former are a civilised people, under a rajah, who pays an annual tribute to government; but the others are a wild, uncultivated race, of a dark com- plexion, and low stature, having broad faces, flat noses, and small eyes, like the

Tartars, or Chinese. Their only occupations are hunting and war, in which, they prefer surprise to open combat, marching in the night, and concealing themselves all day, so that some have entertained the idea, that they always lived in trees. When they succeed in taking any of their enemies villages, they put to death the males, and carry away the women and children for slaves. They are so revengeful, and so invariably require blood for blood, that if even a tiger kills one of them the whole tribe is in arms, and they never rest till they have slain him and roasted and eaten his flesh. The flesh of the elephant they consider a great dainty. The men are generally naked ; the women have a petticoat of their own manu- facture round their loins, reaching to the middle of the thigh ; but both sexes occasionally use a large sheet to protect them from the cold. Their usual arms are bows and arrows, spears, clubs, and a sort of sword, which serves also for a hatchet ; and they have shields made of the skin of the gyals, a kind of wild bull, but they have a great dread of fire-arms. Their houses are built on

the tops of high hills, upon platforms of bamboo or timber, six feet or more from the ground, and are entered by ladders, or by a stick, with notches cut in it to receive the naked foot, and their goats and poultry lie underneath. They dig their ground, and plant their seed with a sharp stick. The productions of their country are rice, in great variety, Indian corn, a number of esculent roots, and a little tobacco. Salt they obtain from the Choomeas, in exchange for ivory, wax, and honey. Their domestic animals consist of gyals, goats, hogs, dogs, and fowls ; like the Birmans, they have no sheep. The gyal is like the buffalo in shape, but much less in size, and its color is brown. The Rookies have but one wife, but concubinage prevails to a great extent ; their marriages are attended with feasting and drinking an intoxicating liquor distilled from rice, by means of two earthen pots and a bamboo. The bodies of persons dying are laid on a stage, and guarded till a certain day in the year, when they are taken down and burned on one funeral pile. They have some rude ideas of God, and of a future state of rewards and punishments, and worship an image of their mediator, called Sheem Sauk, (probably Boodh, who is sometimes called Sauki), before which they place the heads of the slain, when they return from battle. They have no priests, but the master of every family in- structs his children in his own way. Their

lan- guage is similar to the Mugg or Arracan, and tribes of them are found in Ava and Cassay. See BENGAL, vol. iv. p. 24.

CHITTENDEN, a county in the state of Ver- mont, bounded on the north by Canada, on the south by Addison county, on the east by Orange, and on the west by Lake Champlain, which sepa- rates it from New York. It is fifty-nine miles long and fifty-seven broad. On Lake Champlain it is fertile, but in the east it is mountainous It is divided into forty-four townships, and watered by the Lamoille, Michiscoui, and Onion rivers. Burlington is the chief town.*

CH1TTIM, in ancient geography, according to Le Clerc, Calmet, and others, was the same with Macedonia, peopled by Kittim, the son of Javan, the grandson of Noah. See KITTIM.

CHITTLEDROOG, a town and fortress in Hindostan, the chief place of a district belonging to the rajah of Mysore. It is built upon a rock, and so surrounded with fortifications, that it is thought by the natives to be impregnable. In 1776 Hyder Ali besieged it, but without success, until three years afterwards, when he took it by treachery, having bribed those of the garrison that were Mahommedans to deliver it up. At Tippoo's death it fell into the hands of the British, who gave it to the above mentioned rajah. The plain in its vicinity consists of a black soil, and is about ten miles in extent. Deep wells must be dug to get water, which is of a bad quality ; it therefore produces little rice. The whole sur- rounding country is unhealthy, as is the case, the natives say, wherever the black soil prevails. At the conclusion of the last Mysore war Chittle- droog was almost depopulated. Its latitude is about 14□□ N., and longitude 76□□ 30′ E., being about 115 miles north-west of Seriugapatam.

CHITTOR, a town and fortress, tne residence of a British judge and collector, in the south of India, eighty miles east of Madras. It was the capital of Tahir Khan's dominions, and well fortified, but taken in the year 1780 by Hyder Ali, and retaken the following year by Sir Eyre Coote. The garrison has long been withdrawn, and the place is not now considered strong. CHI'VALRY, n. s.) Fr. chevalerie; Ital. CHI'VALROUS, adj. $ cavalleria, hom-cheval, a horse, as eques in Latin. Knighthood ; exploit ; adventure; a military dignity; warlike; ad- venturous; daring; noble; qualities arising out of courage and danger ; magnanimity and temptation. Generosity, honor, gallantry, con- tempt of death ; devotion to chaste love and honorable arms. This is the poetry of the thing. Its reality does not read so well in his- tory. As a term in law, it is thus explained by Cowell : □□□ ' Servitium militare, of the French chevalier ; a tenure of land by

knight's service. There is no land but is holden mediately or immediately of the crown, by some service or other ; and therefore are all our freeholds, that are to us and our heirs, called feuda, fees, as proceeding from the benefit of the king. As the king gave to the nobles large possessions for this or that rent and service, so they parcelled out their lands, so received for rents and services, as they thought good ; and those services are by Littleton divided into chivalry and soccage. The one is martial and military ; the other clownish and rustic. Chivalry, therefore, is a tenure of service, whereby the tenant is bound to perform some noble or military office unto his lord ; and is of two sorts ; either regal, that is, such as may hold only of the king, or such as may also hold of a common person as well as of the king. That which may hold only of the king, is properly called sergeantry; and is again divided into grand or petit, i. e. great or small. Chivalry that may hold of a common person, as well as of the king, is called scutagium.'

This knight was comen, al newly Fro tourneying there faste by, Where he had done grete chivalry Through his vcrtue and his maistrie ; And for the love of his lemman He coste down many a doughty man.

Chaucer's Romaunt of the Rote. Tarquinius ! that art a kinges hey re, And shouldest, as by linage and by right, Done as a lorde and as a very knight ; Why hast thou done despite to chivalry ? Why hast thou done thy lady vilanie ? Alas of thce this was a vilianous dede.

Id. Legende. Lucrece. O goodly golden chayne, wherewith yfure The vertues linked are in lovely wize ; And noble mindes of yore allyed were In brave poursuit of chevalrous emprize. Speiuer.

The roiall virgin which beheld from farre, In pensive plight and sad perplexitie, The whole achievement of this doubtful warre. Came running fast to greet his victorie With sober gladnesse and myld modestie ; And, with sweet Joyous cheare, him thus bespake : Fayre braunch of noblesse, flower of chevalrie! That with your worth the world amazed make, How shall I quite the paynes ye suil'er for my sake'.

Id.

Thou hast slain The flower of Europe for his chivalry.

Shakspeure.

I may speak it to my shame, I have a truant been to chivalry. Id.

A wight he was, whose v►►ry sight would Intitle him mirrour of knighthood ; That never bowed his stubborn knee To any thing but chivalry. Butler.

Solemnly he swore,

That, by the faith which knights to knighthood bore, And whate'erelse to chivalry belongs, He would not cease till he revenged their wrongs.

Dry den,

Behold the hall where chiefs were late convened ! Oh ! dome displeasing unto British eye ! With diadem hight foolscap, lo! a fiend A little fiend that scoffs incessantly, There sits in parchment robe arrayed, and by His side is hung a seal and sable scroll, Where blazoned glare names known to cMralry, And sundry signatures adorn the roll, Whereat the urchin points, and laughs with all his soul. Byron.

CHIVALRY, Fr. chevalier, is a term not merely synonymous with the modern word cavalry, and expressive of it, as our best poets have used it to signify a body of horse soldiers ; but is descriptive of a peculiar class of persons and customs of the middle ages, that form a connect- ing link between the ancient and modern modes of warfare, as well as between the manners of the upper chisses, and indeed the whole frame-work of polished society in former and present times.

The use of the horse in military expeditions formed an obvious and important ground of dis- tinction between soldiers, at an early period. To procure and maintain that noble animal; to equip and to manage him, have been important military objects from the earliest wars of the Asiatic monarchies. In ancient Greece and Rome the horse (tiriroSopoc Eicroc, and equites), always therefore was held in a superior degree of estimation to the foot soldier; and the equites was for a long time the only regular body of cavalry, who occupied a sort of middle rank, we know, at Rome, between the senators and the plebeians. We find traces of this distinction even amongst the most barbarous tribes. To use weapons on horseback was the most important application of muscular strength, and manly vigor : and very singularly, according to Taci- tus, was this superiority connected among the ancient Germans with a peculiar degree of res-

pect for women, and enthusiastic devotion to the service of the unmarried fair. Thus, in his De Moribus Germanorum, may be traced the rudi- ments of the most refined chivalry of the middle ages. The women of these tribes, long before their incorporation into the empire, and contrary to what we find among most other rude nations, were always treated with a high degree of vene- ration. They did not vie with the men in deeds of valor, but they animated them to the com- bat ; and virgins especially were considered as endowed with prophetic powers, capable of fore- seeing future events, and of influencing the will of their deities. Hence, though domestic duties were their peculiar province, yet they were never harshly treated, nor degraded to anything like

the slavery of the east There appears indeed a striking analogy between their condition and that of the Spartan women, except that the treatment of the former was perhaps the most honorable. When those nations sallied forth from their deserts and forests, finally to overwhelm their conquerors, the change which took place in their manners was not more remarkable than advan- tageous. The great outline might still remain , the leading features of the barbarian character were not soon effaced, but they were speedily modified by their mixing among a more polished people, becoming acquainted with the luxuries of life, and acquiring extensive power and pro- perty. They aspired after more refined pleasures, and more splendid amusements, than had before satisfied them : the equestrian was distinguished by peculiar honors: and eveiy leading warrior became more cultivated and more humane. The influence of Christianity too, which, though grossly corrupted, was still favorable to the social happiness of mankind, concurred to polish their manners, and exalt their character. Hence, in the close of the tenth, and in the be- ginning of the eleventh century, we find the dignity of knighthood an object of general am- bition ; and its chief characteristics from the first were a romantic gallantry, piety, and hu- manity. At the court of every prince, count, or baron, jousts and tournaments became the favor- ite amusement : and skill in arms, devotion to the fair sex, and generous courtesy, were at once cultivated. About this period began the cru- sades; and these, to which alone some have referred the origin of chivalry, though they could not give rise to what was already in existence, yet moulded the form, and directed the spirit of the institution in such a manner as to raise it by a rapid progress from infancy, as it were, to full vigor and maturity. Its character, thus fully formed, is well described by Gibbon : ••• Between the age of Charlemagne and that of the crusades, a revolution had taken place among the Spaniards, the Normans, and the French, which was

gradu- ally extended to the rest of Europe. The ser- vice of the infantry was degraded to the plebeians; the cavalry formed the strength of the armies, and the honorable name of miles, or soldier, was confined to the gentlemen who served on horse- back, and were invested with the character of knighthood. The dukes and counts, who had usurped the rights of sovereignty, divided the provinces among their faithful barons : the barons distributed among their vassals, the fiefs, or benefices of their jurisdiction ; and these mili- tary tenants, the peers of each other and of their lord, composed the noble, or equestrian order, which disdained to conceive the peasant or burgher as of the same species with themselves. The dignity of their birth was preserved by pure and equal alliances ; their sons alone, who could produce four quarters or lines of ancestry, with- out spot or reproach, might legally pretend to the honor of knighthood ; but a valiant plebeian was sometimes enriched and ennobled by the sword, and became the father of a new race. A single knight could impart, according to ms judgment, the character which he received; and the warlike sovereigns of Europe derived more

glory from this personal distinction than from the lustre of their diadem. This ceremony was in its origin simple and profane; the candidate, after some previous trial, was invested with his sword and spurs; and his cheek or shoulder was touched with a slight blow, as an emblem of the last affront which it was lawful for him to endure. But superstition mingled in every pub- lic and private action of life ; in the holy wars, it sanctified the profession of arms, and the order of chivalry was assimilated in its rights and privileges to the sacred orders of priesthood. The bath and white ˆnrment of the novice, were an indecent copy of tha regeneration of baptism; his sword, which, he offered on the altar, was blessed by the ministers of religion ; his solemn reception was preceded by fasts and vigils ; and he was created a knight in the name of God, of St. George, and of St. Michael the archangel. He swore to accomplish the duties of his pro- fession : and education, example, and the public opinion, were the inviolable guardians of his oath. As the .champion of God and the ladies, he devoted himself to speak the truth ; to main- tain the right ; to protect the distressed ; to practise courtesy, a virtue less familiar to the ancients; to pursue the infidels; to despise the allurements of ease and safety; and to vindicate in every perilous adventure the honor of his cha- racter. The abuse of the same spirit provoked the illiterate knight to disdain the arts of industry and peace ; to esteem himself the sole judge and avenger of his own injuries ; and proudly to neglect the laws of civil society and military dis- cipline. Yet the benefits of this institution, to refine the temper of barbarians, and to infuse some principles of faith, justice, and humanity, were strongly felt, and have been often observed. The asperity of national prejudice was softened ; and the community of religion and arms spread a similar color and generous emulation over the face of

Christendom. Abroad, in enterprise and pilgrimage ; at home, in martial exercise, the warriors of every country were perpetually asso- ciated ; and impartial taste must prefer a Gothic tournament to the Olympic games of classic antiquity. Instead of the naked spectacles which corrupted the manners of the Greeks, and banished from the stadium the virgins and ma- trons, the pompous decoration of the lists was crowned with the presence of chaste and high- born beauty, from whose hands the conqueror received the prize of his dexterity and courage. The skill and strength that were exerted in ⁂wrestling and boxing, bear a distant and doubt- ful relation to the merit of a soldier, but the tournaments, as they were invented in France, and eagerly adopted both in the east and west, presented a lively image of the business of the field. The single combats, the general skirmish, the defence of a pass or castle, were rehearsed as in actual service; and the contest, both in real and mimic war, was decided by the superior management of the horse and lanre. The lauo" was the proper and peculiar weapon of the knight : his horse was of large and heavy breed' but this charger, till he was roused by the ap- proaching danger, was usually led by an attend- ant, and he quietly rode a pad o palfrey, of a VOL V.

more easy pace. His helmet and sword, his greaves and buckler, it would be superfluous to describe ; but I may remark, that, at the period of the crusades, the armor was less ponderous than in later times; and that, instead of a massy cuirass, his breast was defended by an hauberk, or coat of mail. When their long lances were fixed in the rest, the warriors furiously spurred their horses against the foe ; and the light cavalry of the Turks and Arabs could seldom stand against the direct and impetuous weight of their charge. Each knight was attended to the field by his faithful squire, a youth of equal birth and similar hopes ; he was followed by hrs archers and men at arms; and four, five, or six soldiers were computed as the furniture of a complete lance. In the expeditions to the neighbouring kingdoms, or the Holy Land, the duties of the feudal tenure no longer subsisted ; the voluntary service of the knights and their followers was either prompted by zeal or attachment, or pur- chased with rewards and promises; and the numbers of each Squadron were measured by the power, the \vealth, and the fame of each inde- pendent chieftain. They were distinguished by his banner, his armorial coat, and his cry of war; and the most ancient families of Europe must seek in these achievements the origin and proof of their nobility.

Dr. Robertson eulogises the spirit of chivalry in a similar manner, and traces it to a later period. It arose, he says, naturally from the state of society at that period, and had a very serious influence in refining the manners of the European nations. The feudal state was a state of almost perpetual war, rapine and anarchy ; during which the weak and unarmed were ex- posed to insults or injuries. The power of the sovereign was too limited to prevent these wrongs, and the administration of justice too feeble to redress them. The most effectual protection against violence and oppression was often found to be that which the valor and generosity of private persons afforded. The same spirit of enterprise which had prompted so many gentle-

men to take arms in defence of the oppressed pilgrims in Palestine, incited others to declare themselves the patrons and avengers of injured innocence at home. When the final reduction of the holy land under the dominion of infidels put an end to these foreign expeditions, the latter was the only employment left for the activity and courage of adventurers. To check the insolence of overgrown oppressors ; to rescue the helpless from captivity ; to protect or to avenge women, protect orphans, and ecclesiastics, who could not bear arms in their own defence ; to redress wrongs and to remove grievances, were deemed acts of the highest prowess and merit. Valor, humanity, courtesy, justice, honor, were the characteristic qualities of chivalry. To these were added religion, which mingled itself with every passion and institution during the middl►► ages, and, by infusing a large proportion of en- thusiastic zeal, gave them such force as carried them to romantic excess. Men were trained to knighthood by a long previous discipline ; they were admitted into the order by solemnities n> less devout than pompous ; every person of noble*

birth courted tha honor ; it was deemed a dis- tinction superior to royalty ; and monarchs were proud to receive it from the hands of private gentlemen.*

This singular institution, in which valor, gal- lantry, and religion were so strangely blended, was wonderfully adapted to the taste and genius of martial nobles; and its effects were soon visible in their manners. War was carried on with less ferocity, when humanity came to be deemed the ornament of knighthood no lessthan courage. More gentle and polished manners were introduced, when courtesy was recommended as the most amiable of knightly virtues. Violence and oppression decreased, when it was reckoned meritorious to check and. to punish them. A scrupulous adherence to truth, with the most religious attention to fulfil every engagement, became the distinguishing characteristic of a gen- tleman, because chivalry was regarded as the school of honor, and inculcated the most delicate sensibility with respect to those points. The admiration of these qualities, together with the high distinction and prerogatives conferred on knighthood in every part of Europe, inspired persons of noble birth on some occasions with a species of military fanaticism,

and led them to extravagant enterprises. But they deeply im- printed on their minds the principles of generosity and honor. These were strengthened by every thing that can affect the senses or touch the heart. The wild exploits of these romantic knights who sallied forth in quest of adventures are well known, and have been treated with proper ridi- cule. The political and permanent effects of the spirit of chivalry have been less observed. Perhaps the humanity which accompanies all the operations of war, the refinements of gallantry, and the point of honor, the three chief circum- stances which distinguish modern from ancient manners, may be ascribed in a great measure to this institution, which has appeared whimsical to superficial observers, but by its effects has proved of great benefit to mankind. The senti- ments wh:ch chivalry inspired had a wonderful influence on manners and conduct, during the twelfth, thirteenth, fourteenth, and fifteenth cen- turies. They were so deeply rooted, that they continued to operate after the vigor and reputa- tion of the institution itself began to decline.

Among our Anglo-Saxon ancestors there is little evidence of the refined chivalry of later periods : but in its less polished form of military investiture, conferred with religious ceremonies, it certainly subsisted. Ingulf, the secretary of William the conqueror thus relates an adventure in the life of liereward, an Anglo-Saxon warrior of Edward the confessor's reign. Considering, says he, that be was at the head of very brave men, and com- manded some milites, and had not yet been legally bound with the bell, according to the military custom, he took with him a very few tyros of his cohort, to be legitimately consociated with himself to warfare, and went to his uncle, the abbot of Peterborough, named Brand, a very religious man (as I have heard from my pre- decessor, my lord Ulketul, abbot, and many others), much given to charity, and adorned with all the virtues ; and having first of all made a

confession of his sins, and received absolution, he very urgently prayed that he might be made a legitimate miles. For it was the custom of the English, that every one that was to be con- secrated to the legitimate militia, should, on the evening preceding the day of his consecration, with contrition and compunction, make a con- fession of all his sins to a bishop, an abbot, a monk, or some priest ; and devoted wholly to prayers, devotions, and mortifications, should pass the night in the church; in the next morning should hear mass, should offer his sword on the altar, and after the gospel had been read, the priest having blessed the sword, should place it on the neck of the miles, with his benediction. Having communicated at the same mass with the sacred mysteries, he would afterwards remain a legitimate

miles. This custom, of consecrating a miles, the Normans regarded as abomination, and did not hold such a one a legitimate miles, but reckoned him a slothful equitem and de- generate quiritem.

Sir W alter Scott, in one of the most elegant and amusing of his prose productions, furnishes us with some striking illustrations of the enthu- siasm of this spirit. ‘ Among the earliest in- stances of the use of the English language at the court of the Norman monarchs,’ he says, ‘is the distich painted in the shield of Edward III. under the figure of a white swan, being the device which that warlike monarch wore at a tournay, at Windsor.

Ha ! ha ! the white swan, By God his soul, I am thy man. ‘ The choice of these devices was a very serious matter ; and the usurpation of such as any knight had previously used and adopted, was often the foundation of a regular quarrel, of which many instances occur in Froissart and o’.her writers.

‘ The ladies, bound as they were in honor to requite the passion of their knights, were wont, on such occasions, to dignify them by the present of a scarf, ribbon, or glove, which was to be worn in the press of battle and tournament. These marks of favor they displayed on their helmets, and they were accounted the best incentives to deeds of valor. The custom ap- pears to have prevailed in France to a late period, though polluted with the grossness so often mixed with the affected refinement and gallantry of that nation. In the attack made by the Duke of Buckingham upon the Isle of Rhe, favors were found on the persons of many of the French soldiers who fell at the skirmish on the landing.

‘ Sometimes the ladies, in conferring these tokens of their favor, clogged them with the most extravagant and severe conditions. But the lover had this advantage in such cases, that if he ventured to encounter the hazard imposed, and chanced to survive it, he had, according to the fashion of the age, the right of exacting, from the lady, favors corresponding in import- ance. The annals of chivalry abound with stories of cruel and cold fair ones who subjected their lovers to extremes of danger, in hopes that they might get rid of their addresses, bu| were, upon their unexpected success, c aught in

their own snare, and, as ladies who would not have their name made

the theme of reproach hy every minstrel, compelled to recompense the deeds which their champion had achieved in their name. There are instances in which the lover used his right of reprisals with some rigor, as in the well known fabliau of the three knights and the shift; in which a lady proposes to her three lovers, successively, the task of entering-, unarmed, into the melee of a tourna- ment arrayed only in one of her shifts. The perilous proposal is declined by two of the knights and accepted by the third, who thrusts himself, in the unprotected state required, into all the hazards of the tournament, sustains many wounds, and carries off the prize of the day. On the next day the husband of the lady (for she was married) was to give a superb banquet to the knights and nobles who had attended the tournay. The wounded victor sends the shift back to its owner, with his request, that she would wear it over her rich dress on this solemn occasion, soiled and torn as it was, and stained all over with the blood of its late wearer. The lady did not hesitate to comply, declaring that she regarded this shift, stained with the blood of her ' fair friend, as more precious than if it were of the most costly materials.' Jaques de Basin, the minstrel, who relates this curious tale, is at a loss to say whether the palm of true love should be given to the knight or to the lady on this remarkable occasion. The husband, he assures us, had the good sense to seem to perceive nothing uncommon in the singular vestment with which his lady was attired, and the rest of the good company highly admired her courageous requital of the knight's gallantry.

Sometimes the patience of the lover was exhausted by the cold-hearted vanity which thrust him on such perilous enterprises. At the court of one of the German Emperors, while some ladies and gallants of the court were looking into a den where two lions were con- fined, one of them purposely let her glove fall within the palisade which enclosed the animals, and commanded her lover, as a true knight, to fetch it out to her. He did not hesitate to obey; jumped over the enclosure ; threw his mantle towards the animals as they sprung at him; snatched up the glove, and regained the outside of the palisade. But when in safety, he pro- claimed aloud, that what he had achieved was done for the sake of his own reputation, and not for that of a false lady, who could for her sport and cold-blooded vanity force a brave man on a duel so desperate. And, with the applause of all present, he renounced her love for ever. This, however, was an uncommon circumstance. In general, the lady was supposed to have her lover's character as much at heart as hei own, and to mean, by pushing him upon enterprises of hazard, only to give him an opportunity of meriting her good graces, which she could not with

honor confer upon one undistinguished by deeds of chivalry. An affecting instance is given by Godscroft.

At the time when the Scotch were struggling to recover from the usurpation of Edward I., the castle of Douglas was repeatedly garrisoned

by the English, and these garrisons were as frequently surprised, and cut to pieces by the good lord James of Douglas, who, lying in the mountainous wilds of Cairntable, and favored by the intelligence which he maintained among his vassals, took opportunity of the slightest relaxa- tion of vigilance to surprise the fortress. At length, a fair dame of England announced to the numerous suitors who sought her hand, that she would confer it on the man who should keep the perilous castle of Douglas (so it was called) for a year and a day. The knight who under- took this dangerous task at her request discharged his duty like a careful soldier for several months, and the lady relenting at the prospect of his continued absence, sent a letter to recall him, declaring she held his probation as accomplished. In the meantime, however, he had received a defiance from Douglas, threatening him, that, let him use his utmost vigilance, he would recover from him his father's castle before Palm-Sunday. The English knight deemed that he could not in honor leave the castle till this day was past ; and on the very eve of Palm-Sunday was surprised and slain with the lady's letter in his pocket. ††† Supplement to the Encyclopedia Britannica, article CHIVALRY.

The joust and the tournament, while exercises of personal strength and schools of military discipline, were also amusements of the pri- vileged orders of society. Froissart preserves a singular challenge to ' a deed of arms,' sent by Louis, Duke of Orleans, to our Henry IV., in which he says, ' considering idleness to be the bane of lords of high birth, which do not employ themselves inarms,' he thought he could ' in no way better seek renown,' than in proposing to meet Henry at an appointed place, with on†† < hundred knights and esquires, ' and with the usual arms,' that is to say, ' lance, battle-axe, sword and dagger, each to employ them as he shall think most to his advantage, without aiding himself by any bodkins, hooks, bearded darts, poisoned needles, or razors, as may be done (this is a singular admission) by persons unless they be positively ordered to the contrary. Several of the varieties that are found in 'ancient helmets, in the structure of the lance, &c. owe their origin to their being used in the amusements of the tilt or tournament field, as distinguisha- ble from those designed for serious combat in war.

Chivalry, in its most polished forms, appears to have been first exhibited in this country in the reign of William II., and to have flourished in its maturity under the auspices of Edward the Black Prince.

But these occupations for ‘ idleness,’ being confined by the rules of chivalry to the great, burgesses and yeomen established certain imita- tions of them ; thus we have the troy game of the Roman youths performed among ‘ great crowds of Londoners,’ in the reigns of our Stephen and Henry II., both on land and water. A species of wooden shields was tilted against in boats on the bosom of father Thames, or suspended from a stake fixed on the ground. Similar sports are traced in Oxfordshire and throughout the country. It was particular)/ accounted an Easter holiday amusement.

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*The wager of battle, a legal appeal in this country w;*hH the last ten years, may be said to nave been our final relic of chivalrous justice. It was the right of persons of all degrees thus to terminate certain suits, and particularly that of a near relative of a slain man, to challenge a supposed murderer, although a jury should acquit him. In the memorable combat scene of Ivanhoe, vol. iii. p. 328, 345, our great histori- cal novelist has forcibly depicted the sincere and solemn feelings of our forefathers on many of these occasions, and Shakspeare alludes to the custom both as practised among the higher and lower ranks. The royal championship of Eng- land still rests on the foundation of this ancient appeal, and conveys the fair manor of Scrivelsby ‘ by grand serjeantry ; to wit, by the service of finding, on the day of coronation, an armed knight who shall prove by his body, if need be, that the king is true and lawful heir to the king- dom.’ So that this splendid exhibition of ancient feudal service is not likely to be soon discontinued ; although the legal wager of battle, in all other cases, was finally abolished during the regency of his present Majesty, 59 Geo. III. cap. 46.*

CHI VAS, or CHIVASSO, a strong town of Pied- mont, situated in a plain near the union of the Doria and the Po. It is defended with walls, bastions, and large fosses filled with water; it is well supplied

with artillery and a numerous gar- rison, especially in the time of war. The situa- tion is so advantageous that whoever are masters of this town are said to possess the key of the country of Turin, and of Lombardy. It has several churches and convents. It was taken by the French in 1705, and afterwards re-taken by the allies; and in 1798 it surrendered to the French republicans, though the garrison consisted of 800 men. It lies eleven miles north-east of Turin, and twelve south of Ivrea.

CHIVES, M.S. Ital. cima; Lat. cyma. The threads or filaments rising in flowers with seeds iit the end.

The masculine or prolific seed contained in the chives or apices of the stamina. Ray on the Creation.

CHIVES, n. s. Tr.cives; Lat. cepe. Very small onions.

CHIVES. See BOTANY, Index.

CHIUM MARMOR, Chian marble, in the na- tural history of the ancients, the name of a black marble, called also the lapis opsidianus. It is very hard, and of a fine black, and is well known nmong goldsmiths by the name of the touchstone; it being much used for this purpose: though the basaltes is preferable. This is a very fine and elegantly smooth marble, of a compact texture, and fine glossy black, but showing no glittering particles when fresh broken, as most of the black marbles. The ancients had it from Ethiopia and the island of Chios ; it is now found in Italy.

CHIUM VINUM, Chian wine, or wine of the growth of the island of Chios, is commended by Dioscorides as affording good nourishment, fit to drink, less disposed to 'intoxicate, endued with the virtue of restraining defluxions, and a proper ingredient in opthalmic medicines. Hence Scri-

bonus Largus directs the dry ingredients in colly ria for the eyes to be made up with Chian wine.

CHIUSI, a city of Italy, in Tuscany, anciently called Clusium, and one of the twelve ancient cities of Etruria. It is the see of a bishop, but, being unhealthy, is not populous. It is cele- brated for its marble. It lies thirty-five miles south- east of Sienna. Long. 10►► 52′ E., lat. 43►► 2′ N.

CHUTAYE, a considerable town of Asiatic Turkey the capital of Natolia Proper, situated at the foot of a mountain, in a fertile and

healthy country, defended by a castle built on a rock. It contains several mosques, and three Armenian churches. It was the residence of the grand seignior before the taking of Adrianople. Long. 30►► 47′ E., lat. 39►► 30′ N.

CHLAMYS, in antiquity, a military habit worn by the ancients over the tunica. It belonged to the patricians, and answered in time of war to the toga in time of peace. This sort of gown was called picta from the rich embroidery with figures in Phrygian work ; and purpurea, because the ground work was purple. The chlamydes ot the emperors were all purple, adorned with a golden embroidered border.

CHLOEIA, in antiquity a festival celebrated at Athens in honor of Ceres, to whom under the name XXoj;, i. e. grass, they sacrificed a ram.

CHLORA, in botany, a genus of the monogy- nia order, and octandria class of plants : CAL. oc- tophyllous: COR. monopetalous and octofid: CAP. unilocular, bivalved, and polyspermous. Five species ; chiefly natives of America, and the south of Europe; but C. perfoliata is indigenous to the pastures of our own country, and named yellow centaury.

CHLORANTHUS, in botany, a genus of plants of the class tetrandria and order monogynia : CAL. none : COR. petal three-lobed, seated by the side of the germ ; anthers growing to the petal ; SEED monospermous berry. Species one only ; a fleshy shrub, native of Japan.

CHLORIC ACID, in chemistry. This acid was first discovered by Gay Lussac in pouring weak sulphuric acid on a solution of chlorate of barytes, or, as it was originally called, hyperoxy- muriate of barytes. By adding the sulphuric acid with caution, he at length obtained a liquid entirely free both from barytes and sulphuric acid, which was the chloric acid in water. This acid has neither smell nor color ; it is decomposed by heat into oxygen and chlorine, but part is gene- rally volatilised without alteration. The muriatic and sulphurous acids, and sulphureted hydrogen, act upon it in a similar manner, but no change is produced by the application of nitric acid. When mixed with muriatic acid water is formed, and both acids are converted into chlorine. Chloric acid combines with bases, and forms thechlorites long known by the name of the hyperoxygenised muriates. They may be formed either by satu- rating the base with the chloric acid, or by the old process of transmitting chlorine through their solutions, in Woolfe's bottles. Chlorate of potash has

been long well known as hyperoxymuiiaie of potash, and is procured by introducing chlorine as it is formed, into a solution of the salt. When

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*the solution is saturated, evaporate it gently, and the first crystals produced will be the salt desired, this crystallising before the simple muriate, which is produced soon after. Its crystals are in shining hexahedral laminae, or rhomboidal plates. It is soluble in seventeen parts of cold water; and, but very sparingly, in alcohol. Its taste is cooling and rather unpleasant. Its specific gravity is 2*0. The purest oxygen is extracted from this salt, by exposing it to a gentle red heat. 100 grains yield about 115 cubic inches of gas. It consists of 9‘5 chloric acid + 6 potash ~ 15‘5, which is the prime equivalent of the salt. If this salt be combined with sulphur, it produces a strong .detonating powder, as it does with either phosphorus, common sugar, or charcoal. Phos- phorus may also be inflamed by it under water, by putting into a glass, nearly filled with that liquid, one part of phosphorus to two parts of chlorate; and pouring through a syphon immersed in the glass, three or four parts of sulphuric acid. All these experiments, however, are very dange- rous, and should never be undertaken but by those who have correct knowledge of the power of the substances employed.*

Chlorate of soda is procured in a similar man- ner to the preceding, but, on account of its easy solubility in water, is difficult to obtain separate from the muriate. Vauquelin formed it by satu- rating chloric acid with soda ; 500 parts of the dry carbonate yielding 1100 parts of crystallised chlorate. It consists of 4 soda + 9‘5 acid ??? 13-5, which is its prime equivalent. Its other proper- ties so nearly resemble chloride of potash, that they need no repetition.

Chlorate of barytes, from which the acid was first obtained, is best formed by passing chlorine through a solution of that earth in warm water, but, as this also forms some common muriate, the latter must be separated by boiling with it phos- phate of silver, which will neutralise the muri- ate, and the chlorate may then be obtained by simple evaporation. Chlorate of strontite, and the chlorate of lime, are obtained in the same manner, and are both deliquescent and cool in the mouth, and easily soluble in alcohol, as is also the chlorate of

magnesia, which is obtained by the same method. The chlorate of ammonia is formed by double affinity, the carbonate of am- monia decomposing the earthy salts of this genus, giving up its carbonic acid to their base, and combining with their acid into chlorate of ammo- nia. Chlorate of lime is now employed with great advantage as a disinfectant, and on that account becomes a powerful agent in the dissecting room.

Chlorate of alumina has never yet been obtained separate. See CHEMISTRY.

CHLORINE, in chemistry, the modern name for the oxymuriatic acid gas of the French, and given to it on account of its green-yellow color. Sir H. Davy having in vain tried every known method of decomposition on this substance pro- nounced it an element, and it was therefore thought improper to apply the term oxymuriatic to that which could contain no oxygen, and from which no muriatic acid could be extracted. In the Philosophical Transactions for 1809 first ap- peared the researches of that eminent chemist on oxymuriatic acid.

‘ In the Bakerian lectures for 1808,’ says Sir Humphry, ‘ I have given an account of the ac- tion of potassium upon muriatic acid gas, bv which more than one-third of its volume of hy- drogen is produced ; and I have stated, that mu- riatic acid can, in no instance, be procured from oxymuriatic acid, or from dry muriates, unless water or its elements be present.

‘ In the second volume of the Memoires D’Arcueil, M..M. Gay Lussac and Thenard have detailed an extensive series of facts upon muriatic acid, and oxymuriatic acid. Some of their experiments are similar to those I have de- tailed in the paper just referred to; others are peculiarly their own, and of a very curious kind : their general conclusion is, that muriatic acid gas contains about one quarter of its weight of water; and that oxymuriatic acid is not decomposable by any substances but hydrogen, or such as can form triple combinations with it.

‘ One of the most singular facts that I have observed on this subject, ard which I have before referred to, is that charcoal, even when ignited to whiteness in oxymuriatic or muriatic acid gases, by the voltaic battery, effects no change in them, if it has been previously freed from hydrogen and moisture by intense ignition in vacuo.

‘ This experiment, which I have several times repeated, led me to

doubt of the existence of oxygen in that substance, which has been sup- posed to contain it, above all others, in a loose and active state ; and to make a more rigorous investigation than had hitherto been attempted for its detection.'

*Although some envious attempts have been made to give the honor of this discovery to the French chemists, we consider the fact too well established to need any discussion. Indeed so far from the chloridic theory originating in France, it was only the researches on iodine, so admirably conducted by M. Gay Lussac, that, by their auxiliary attack on the oxygen hypo- thesis, eventually opened the minds of its adhe- rents to the evidence long before advanced by Sir H. Davy. The following are the most re- markable experiments of Sir Humphry, which we abridge from Dr. Ure : ***

If oxymuriatic acid gas be introduced into a vessel exhausted of air, containing tin, and the tin be gently heated, and the gas in sufficient quantity, the tin and the gas disappear, and a limpid fluid, precisely the same as Libavius's liquor, is formed. If this substance is a combi- nation of muriatic acid and oxide of tin, oxide of tin ought to be separated from it by means of ammonia. He admitted ammoniacal gas over mercury to a small quantity of the liquor of Li- bavius ; it was absorbed with great heat, and no gas was generated ; a solid result was obtained, which was of a dull white color : some of it was heated, to ascertain if it contained oxide of tin ; but the whole volatilised, producing dense pun- gent fumes.

He made a considerable quantity of the solid compound of oxymuriatic acid and phosphorus by combustion, and saturated it with ammonia, by heating it in a proper receiver filled with am moniacal gas, on wlvch it acted with great

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energy, producing much heat ; and they formed a white opaque powder. Supposing that this substance was composed of the dry muriates and phosphates of ammonia; as muriate of ammo- nia is very volatileˆ and as ammonia is driven off from phosphoric acid by a heat below redness, he conceived that, by igniting the product ob- tained, he should procure phosphoric acid; he therefore introduced some of the powder into a tube of green glass, and heated it to

redness, out of the contact of air, by a spirit lamp ; but found, to his great surprise, that it was not at all volatile, nor decomposable at this degree of heat, and that it gave off no gaseous matter.

He caused strong explosions from an electrical jar to pass through oxymuriatic gas, by means of points of platina, for several hours in succession, but it seemed not to undergo the slightest change.

He electrised the oxymuriates of phosphorus and sulphur for some hours, by the power of the voltaic apparatus of 2000 double plates, in which the discharge was from platina wires, and in which the mercury used for confining the li- quor was carefully boiled, and there was no pro- duction of any permanent elastic matter.

He mixed together sulphureted hydrogen in a high degree of purity, and oxymuriatic acid gas, both dried, in equal volumes. In this instance the condensation was not ˆ5 ; sulphur, which seemed to contain a little oxymuriatic acid, was formed on the sides of the vessel ; no vapor was depo- sited, and the residual gas contained about i|j of muriatic acid gas, and the remainder was in- flammable.

Sir. H. Davy used in all cases small retorts of green glass, containing from three to six cubical inches, furnished with stop-cocks. The metallic substances were introduced, the retort exhausted and filled with the gas to be acted upon, heat was applied by means of a spirit lamp, and after cooling the results were examined, and the resid- ual gas analysed.

All the metals that he tried, except silver, lead, nickel, cobalt, and gold, when heated, burnt in the oxymuriatic gas, and the volatile metals with flame. Arsenic, antimony, tellurium, and zinc, with a white flame, mercury with a red flame. Tin became ignited to whiteness, and iron and copper to redness; tungsten and manganese to dull redness; platina was scarcely acted upon at the heat of fusion of the glass.

The product from mercury was corrosive sub- limate. That from zinc was similar in color to that from antimony, but was much less volatile.

Silver and lead produced horn-silver and horn- lead; and bismuth, butter of bismuth.

In acting upon metallic oxides by oxymuriatic gas, he found that those of lead, silver, tin, cop- per, antimony, bismuth, and tellurium, were de- composed in a heat below redness, but the oxides of the

volatile metals more readily than those of the fixed ones. The oxides of cobalt and nickel were scarcely acted upon at a dull red heat. The red oxide of iron was not affected at a strong red heat, whilst the black oxide was readily de- composed at a much lower temperature ; arseni- cal acid underwent no change at the greatest lieat that could be given it in the glass retort, whilst the white oxide readily decomposed.

*In cases where oxygen was given off, it wag found exactly the same in quantity as that which had been absorbed by the metal. Thus two grains of red oxide of mercury absorbed ******, of a cubical inch of oxymuriatic gas, and afforded 0-45 of oxygen. Two grains of dark olive >xide from calomel decomposed by potash, absorbed about $**** of oxymuriatic gas, and afforded -$5 of oxygen, and corrosive sublimate was produced in both cases.*

Chlorine if taken into the lungs, even much diluted with air, occasions a sense of strangula- tion, constriction of the thorax, and a copious discharge from the nostrils. If respired in larger quantity it excites violent coughing, with spit- ting of blood, and would speedily destroy the in- dividual.

*Water condenses 1J times its own volume of this gas at 68** Fahr., which is known by the name liquid chlorine. This mixture at 40** Fahr. congeals into yellow crystals, which, if suddenly exposed to the sun's rays, detonate with considerable force ; and chlorine if mixed with nitrogen also makes a violent explosion. See CHEMISTRY, Nitrogen. The principal use of this gas, in the arts, is in bleaching, as it turns all vegetable colors of a fine white if mixed with a very small quantity of water. For euchlorate, and perchlorate, see CHEMISTRY.*

CHLORIODIC ACID. The discovery of the acid is another of the contributions of Sir H,. Davy to the progress of science. In a commu- nication from Florence to the Royal Society, in March, 1814, he gives a curious detail of its pre- paration and properties. He formed it by ad- mitting chlorine in excess to known quantities of iodine, in vessels exhausted of air, and re- peatedly heating the sublimate. For a descrip- tion of this acid, see CHEMISTRY.

CHLORIS, in botany, a genus of plants class polygamia, order monrecia : male; CAL. glume bi-valved, two-flowered and awned : COR. none ; stamens three; styles two: SEED one: female, ses- sile : CAL. two-valved glume. Species five ; all natives of the West Indies.

CHLOROCYANIC ACID, the mixture of hy- drocyanic acid with

chlorine, by which the for- mer acquires entirely new properties : first dis- covered by M. Berthollet. It formerly had the name of oxvprussic because it was supposed to have acquired oxygen, but on examination by M Gay Lussac it was found to consist of equal vo- lumes of chlorine and cyanogen, whence its new name. For a description of its properties, see CHEMISTRY, 529.

CHLORO'SIS, n. s. From xˆpoc, green. The green sickness.

CHLOROSIS, in medicine, a genus of disease in the class chachexiae, and order impetigines of Cul- len. It is a disease which affects young females, who labor under a suppression of the menses. The general characteristics of the complaint are heaviness, fatigue on the least exercise, palpita- tions of the heart, pains in the back, loins, and hip, and acidity of the stomach.

CHOAK. See CHOKE.

CHOASPES, in ancient geography, a river in the north of Persia, which, after passing Susa, falls into the gulph of Dassora. It is supposed to

be the Ulai mentioned by Daniel, chap. viii. 2. Its water is said to have been so excellent, that the Persian monarchs had it always carried along with them when they travelled.

CHOCO, a woody province of Colombia, South America, separated from the valley of the Cauca, by the western chain of the Andes. It is bounded on the north by Darien and Carthagena, on the west by the Pacific, on the east by An- tioquia, and on the south by Popayan. Here are various Negro settlements connected with the mines ; and the whole province may contain 5000 persons : but it is very unproductive, without roads, and without pasture. The first Spanish settlers came here about 1539. Platina is the most remarkable production of this and the neighbouring province of Antioquia. Here it is found only in grains and in alluvions grounds between the second and sixth degrees of north latitude. The ravine of Oro, between the towns of Tado and Nevita, yields it in great quantity. On the spot the price is about ––l. 13s. English per pound.

The Atrato, formed by the Junction of the San Juan, Quito, Angeda, and Zitara, is the principal stream. It is said that there has existed in this province, an actual communication between the Atlantic and Pacific Oceans since the year 1788 : for at that period a monk of

Zitara, in the ravine of Raspadura, caused a small canal to be dug, by which the rains are conducted across it, and unite the San Juan with the Quito, so that canoes loaded with cacao frequently pass from one ocean to the other, a distance in this direction of about seven:y-five leagues. Valuable gold washings are found in Novita, Zitara, and the river Andegada : all the ground between this river, the liver Sau J uan. the ri verTamana, and the river San Augustin, is auriferous. Twenty-five pounds was the weight of the largest piece of gold ever found in Choco ; but tie negro who discovered it did not even ob- tain his liberty. His master sent it to the king's cabinet, in hopes of obtaining a title ; but it was with difficulty that he obtained even the value of its weight. Ten thousand eight hundred gold marks are about the annual produce of the wash- ings of Choco ; the metal being about twenty-one carats fine. The principal settlements are Novita, Zitara, and Tado.

In the coast district of Biriquite is the settle- ment of Noanamas, which is situated on a river of that name 170 miles north-west of Popayan. The district contains some few of the native tribes who are independent. It was discovered by Pizarro, who called the people Pueblo Que- mado, or the burnt people.

CHO'COLATE, n. s. > Fr. chocolat;

CHO'COLATL HOUSE, n. s. $ Ital. cioccolata. A cake or mass formed of the kernel of the ca- cao nut, with other substances ; and the liquor made from it. Chocolate house is a house of entertainment where chocolate is provided as the chief beverage.

For wine and strong drink make tumults encrease, Chocolate, tea, and coffee are liquors of peace ; No quarrels or oaths are among those -who drink

'em,

Tis Bacchus and the brewer swear damn 'em and sink 'cyi. .1/,/nvM.

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In fumes of burning cltocolait shall glow, And tremble at the sea that froths below '

The Spaniards were the first who brought ch.icoL;!e into use in Europe, to promote the consumption of their cacao-nuts, achiot, and other drugs, which their West Indies furnish, and which enter the composition of cliocolate. Chambers.

Ever since that time, Lisander has been twice a day at the chocolate-house. Tatler.

CHOCOLATE, the substance made by grinding the nut of the cacao with vanillas and other herbs, to be dissolved in hot water. The Indians, in their first making of chocolate, used to roast the cacao in earthern pots ; and having afterwards cleared it of the husks, and bruised it between two stones, they made it into cakes with their hands. The Spaniards when the cacao is properly roasted and well cleaned, pound it in a mortar, to reduce it into a coarse mass, which they after- wards grind on a stone till it be of the utmost fineness : the paste being sufficiently ground, is put quite hot into tin moulds, in which it congeals in a very little time. The form of these moulds is arbitrary : the cylindrical ones, holding two or three pounds, are the most proper ; because the bigger the cakes are, the longer they will keep. These cakes are very liable to take any good or bad scent, and therefore they must be carefully wrapt up in paper, and kept in a dry place. The Spaniards mix with the cacao nuts a great quantity of cloves and cinnamon and other drugs. The grocers in Paris use few or none of these ingredients ; they choose the best nuts, which are called Caracca, from the place whence they are brought; and with these they mix a very small quantity of cinnamon, the freshest vanilla, and the finest sugar, but very seldom any cloves. In England, the chocolate is made of the simple cacao, excepting that sometimes sugar, and some- times vanilla is added. The chocolate made in Portugal and Spain is not near so well prepared as the English, depending perhaps on the machine employed, viz. the double cylinder, which seems very well calculated for exact triture. If perfectly prepared, no oil appears on the solution. London chocolate gives up no oil like the foreign ; and it also may, in some measure, depend on the thick- ness of the preparation. The solution requires more care than is commonly imagined, it is proper to break it down, and dissolve it tho- roughly in cold water, by milling it with the chocolate stick. If heat is applied, it should be done slowly: for if suddenly, the heat will not only coagulate it, but separate the oil ; and therefore much boiling after it is dissolved is hurtful. Chocolate is a common beverage witli people of weak stomachs ; but often rejected for want of proper preparation. When properly prepared, it is easily dissolved ; and an excellent food where a liquid nutrient vegetable one is required. It is less flatulent than any of the farinacea.

Choolate ready made, and cocoa paste, are prohibited to be imported from any part beyond the seas. If made and sold in Great Britain, it pays inland duty Is. 6rf. per pound avoirdu- pois : it must be

enclosed in papers containing one pound each, and produced at the excise- office to be stumped. Upon three days noticv

given to the officer of excise, private families may vnake chocolate for their own use, provided no less than half a cwt. of nuts be made at one time.

Mr. Henly, an ingenious electrician, disco- vered that chocolate, fresh from the mill, as it cools in the tin-pans into which it is received, becomes strongly electrical ; and that it retains this property for some time after it has been turned out of the pans, but soon loses it by handling. The power may be once or twice renewed by melting it again in an iron ladle, and pouring it into the tin pans as at first ; but when it becomes dry and powdery, the powder is not capable of being revived by simple melt- ing : but if a small quantity of olive oil be added, and well mixed with the chocolate in the ladle, its electricity will be completely restored by cooling it in the tin pan as before.

CHOCZIM, a town and fortress of Podolia, in European Russia, on the west bank of the Dniester ; it is near the frontier of ancient Po- land, and was formerly included in Moldavia. In 1739 a great battle was fought here between the Russians and Turks, and this town was sur- rendered to the former people. It successively passed from the one to the other for a series of years ; but was finally ceded to the Russians by a late treaty, together with part of Molda- via. It lies 110 miles N. N. W. of Jassy, and in long. 26►► 30′ E., lat. 48►► 30′ N.

CHOICE, n. s. & adj.} See To CHOOSE. CHO'ICELESS, adj. \ˆT choix. The act CHO'ICELY, adv. ►► of choosing; deter-

CHO'ICENESS, n. s.) mination between dif- ferent things proposed ; election. The power of choosing; election. The thing chosen; the thing taken, or approved, in preference to others. Care in choosing ; curiosity of distinction. The best part of any thing, that is more properly the object of choice. Several things proposed at once, as objects of judgment and election. Se- lect ; of extraordinary value.

The choice and flower of all things profitable in other books, the

Psalms do both more briefly contain, and more movingly also express. Hooker.

Choice there is not, unless the thing which we take be so in our power, that we might have refused it. If fire consume the stable, it chooseth not so to do, because the nature thereof is such that it can do no other. Id.

Thence passing forth, they shortly do arrive Whereat the Bower of Bliss was situate -, 4 place picked out by choice of best alive, That nature's work by art can imitate. Spenser.

Julius Oaesar did write a collection of apophthegms : it is pity his book is lost ; for I imagine they were collected with judgment and choice.

Bacon's Apophthegms.

Your choice is not so rich in birth as beauty ; That you might well enjoy her. Shakspeare.

A baud of men, Collected choicely from each county some. Id.

A braver choice of dauntless spirits Did never float upon the 'swelling tide. Id.

Take to thee, from among the cherubim, Thy choice of flaming warriours.

Milton's Paradise Lost,

He that is choice of his time, will also be clvniM of his company, and choice of his actions.

Taylor's Holy Li>;iw.

Far different motives yet engaged them thus, Necessity did them, but choice did us; A choice which did the highest worth express, And was attended by as high success. Maruell.

As when the sun restores the glittering day, The world late clothed in night's black livery, Doth now a thousand colours fair display, And paints itself in choice variety ; Which late one colour hid, the eye deceiving. All so this prince those shapes obscure receiving, With his suffused light makes ready to conceiving. Fletcher's Purple Island,

Neither the weight of the matter of which the cy- linder is made, nor

*the round voluble form of it, are any more imputable to that dead choiceless creature, than the first motion of it ; and, therefore, it cannot be a fit resemblance to shew the reconcileableness of fate with choice. Hammond^*

It is certain it is choicely good.

Walton's Angler.

Carry into the shade such auriculas, seedlings, or plants, as are for their choiceness reserved in pots.

Evelyn's Kalendar.

But like the birds, great Nature's happy commoners, That haunt the woods in meads, and flowery gardens, Rifle the sweets and taste the choicest fruits, Yet scorn to ask the lordly owners' leave.

Rowe's Fair Penitent. He is the happy man, whose life e'en now Shows somewhat of that happier life to come, Who, doomed to an obscure but tranquil state, Is pleased with it ; and were he free to choose, Would make his fate his choice. Cowper.

Those that lie here stretched before us, ths wise and the powerful of ancient times, warn us to remem- ber the shortness of our present state ; they were, per- haps, snatched away while they were busy, like us, in the choice of life. Johnson's Rasselas.

'Mid many things most new to ear and eye, The pilgrim rested here his weary feet, And gazed around on Moslem luxury ; Till quickly wearied with that spacious seat Of wealth and wantonness, the choice retreat Of sated grandeur from the city's noise. Byron.

CHOIR, n. s. Lat. chorus. An assembly or band of singers ; the singers in divine worship ; the part of the church where the choristers or singers are placed. Applied to songsters of every description, who unite their vocal melodies.

The choir,

With all the choicest musick of the kingdom, Together sung Te Deum. Shakspeare.

The lords and ladies, having brought the queen To a prepared place in the choir, fell off At distance from her. Id.

They now assist the choir Of angels, who their songs admire. Waller

Your voice, the sweetest of the clunr, Shall draw heaven nearer, raise us higher,

ManeU.

Hush, ye pretty warbling choir, Your thrilling strains Awake my pains, And kindle soft desire. Gay.

CHOIR, that part of the church where the choristers sing in divine service. It is separated from the chancel where the communion is cele- brated, and from the nave of the church where

the people are placed ; the patron is said to be obliged to repair the choir of the church. It ××vas in the time of Constantine that the choir was separated from the nave. In the twelfth century, they began to enclose it with walls ; but the ancient balustrades have been since re- stored, out of the view to the beauty of archi- tecture. Choir, in nunneries, is a large hall adjoining to the body of the church, separated by a grate, where the nuns sing the office.

CHOISI (Francis Timoleon de), dean of the cathedral of Bayeux, and a member of the French Academy, was born at Paris in 1644. In 1685, he was sent with the chevalier de Chaumont to the king of Siam, and was or- dained priest in the Indies by the apostolical vicar. He wrote a great number of works, in a polite, florid, and easy style; the principal of which are, 1. Four Dialogues on the Immortality of the Soul, &c. 2. Account of a Voyage to Siam. 3. An Ecclesiastical History, in two volumes, 4to. 4. Life of David, with an inter- pretation of the Psalms. 5. Life of Solomon, Sec. He died at Paris in 1724.

CHOKE, v. a. } Sax. aceocan, from ceoca,

CHO'KER, n. s. >the cheek or mouth. Ac-

CHO'KY, adj. j cording to Minshew, from

3H J whence, probably, the Spanish akogar.

To suffocate; to kill by stopping the breath; to

shut up ; to stifle; to obstruct; to block up a

passage ; to intercept the growth by pressing

contiguity ; to suppress; to extinguish from the

same cause.

But when to my good lord I prove untrue, I'll choke myself. Shakspeare.

And yet \ve ventured ; for the gain proposed Choked the respect of likely peril feared. Id.

Confess thee freely of thy sin : For to deny each article with oath, Cannot remove nor choke the strong conception That I do groan withal Id.

As a lamp is choked with a multitude of oyl, or a little fire, with overmuch wood, quite extinguished ; so is the natural heat, with immoderate heating, strangled in the body. Burton's Anat. Mel

You must make the mould big enough to contain the -whole fruit, when it is grown to the greatest ; for else you will choke the spreading of the fruit.

Bacon's Natural History.

Men trooped up to the king's capacious court, Whose porticos were choked with the resort.

Chapman.

While you thundered, clouds oi dust did choke Contending troops. Waller.

No fruitful crop the sickly fields return ; But oats and darnel choke the rising corn.

Drydcn's Past.

Or plunged in miry pounds he gasping lies, Mud choaks his mouth, and plasters o'er his eyes.

Gay.

What means yon peasant's daily toil ? From choking weeds to rid the soil. Id.

While prayers and tears his destined progress stay, And crowds of mourners choke their sovereign's way.

Tickell.

CHO'KE-PEAR, n. s. From choke and pear. A rough, harsh, unpalatable pear; any

aspersion or sarcasm, by which another is put to silence ; a low term.

Pardon me for going so low as to talk of giving chuke-pears. Clarissa.

CHO'KE-WEED, n. s. Ervangina. A plant.

CHO'LAGOGUES, n.s. XV\OQ, bile. Me- dicines which have the power of purging bile or choler.

CHOLALLAN, one of the most considerable states near the mountain of Popocatepee, in Mexico. Thi?, and the state Haexotzinco, having, with the assistance of the Tlascalans, shaken off the Mexican yoke, re-established their former aristocratical government.

CHOLEDOCHUS, from Xo\►►j, choler, and , to contain, in anatomy, a term applied to a canal, or duct, called also ductus com munis ; formed of the union of the porus bilarius and ductus cysticus. Passing obliquely to the lower end of the duodenum, it serves to convey the bile from the liver to the intestines. See ANATOMY.

CHOLESTERIC ACID, a French name for the acid formed by an union of nitric acid and the fat matter of the human biliary calculi. To ob- tain it, chemists cause the cholesterine to be heated with concentrated nitric acid of its own weight, by which it is speedily attacked and dis- solved. There is disengaged at this time much oxide of azote ; and the liquor on cooling, and especially on the addition of water, lets fall a yellow matter, which is the cholesteric acid im- pure, or impregnated with nitric acid. It is pu- rified by repeated washings in boiling water. It is better after having washed it, however, to ef- fect its fusion in the midst of hot water ; to add to it a small quantity of carbonate of lead ; to let the whole boil for some hours, decanting and renewing the water from time to time ; then to put the remaining dried mass in contact with al- cohol, and to evaporate the alcoholic solution. The residuum now obtained is the purest pos- sible cholesteric acid. Its base is treated at con- siderable

length in our article CHEMISTRY, which see.

CHO'LER, n. s. ˆ Lat. cholera, from

CHO'LEKICK, adj. > x►►-l- The bile ; the CHO'LERICKNESS, n. s. j humor which, by its super-abundance, is supposed to produce iras- cibility ; anger ; rage ; irascibility ; peevishness.*

It engenders choler, planteth anger ; And better 'twere that both of us did fast, Since, of ourselves, ourselves are cholerick, Than feed it with such over-roasted flesh.

Sliahspeare.

Another suitor I had was a very cholerick fellow ; but I so handled him, that for all his fuming, I brought him upon his knees ; if there had been an excellent bit in the market, any novelty, any fish, fruit or fowl, muskadel or malmesy, or a cup of neat wine, it was presently presented to me, though never so dear, hard to come by, yet I had it : the poor fellow was so fond of me at last, that I think if I would I might have Lad one of his eyes out of his head.

Burton's Anat. Mel.

The gall placed in the concave of the liver, extracts choler to it ; spleen melancholy ; which is situate on the left side, over against the liver, a spongy mattrr

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►►'vat draws this black choler to it by a secret virtue and l;-e

IJpcanus threaten►►th all that road him, using his confident, or rather cholerick, speech.

Raleigh's History of the World. And all with sun and choler come adust,

And threaten Hyde to raise a greater dust.

Marvell.

Our two great poets being so different in their tem- pers, the one

cholerick and sanguine, the other phleg- inatick and melancholick. Dryden.

He, methinks, is no great scholar., Who can mistake desire for choler. Prtor.

Bull, in the main, was an honest, plain-dealing fellow, cholerick, bold, and of a very unconstant tem- per Arbuthnot.

CHOLER. See BILE, GALL, and MEDICINE

CHOLERA MORBUS, in medicine, a sudden eruption or overflowing of ttie bile or bilious matters, attended with spasms and gripings in the stomach. It sometimes occurs in warm climates, without any apparent cause, but more frequently from the use of indigestible food, which irritates the stomach. In England it seldom occurred until the year 1832, when the cholera asphyxia, or malignant cholera, ravaged not only the British islands, where it carried off about 12,000 souls, but also traversed the whole conti- nent of Europe with even more fatal consequences. C HOLD LA, an ancient city and independent district of Mexico, in the present intendency of Puebla, which long resisted the Mexican power. Cortes calls it Chunultecol, and it contained, at the period of the Spanish conquest, 40,000 houses, independent of the suburbs, which were as large as the city itself. Cholula was at this time the supreme seat of the Mexican religion. Cortes mentions that he found 400 temples here, and one, more especially, erected on an artificial mountain, which attracted innumerable pilgrims from the distant provinces. Its ruins are yet seen. Humboldt says, that it has four stories all of equal height, and appears to have been constructed exactly in the direction of the four cardinal points ; but is so covered with vege- tation that it is difficult to ascertain this exactly. The perpendicular height of the edifice is 164 feet, and at the base it measures at each side 1450 feet. The platform on the top measures about 16,000 square feet. The whole is built of alternate layers of clay and bricks. It stands to the east of the city, on the road to Puebla. No remaining monuments of the ancient ecclesi- astical edifices of Mexico exceed this in splen- dor. Cholula is situated in a fine plain, about eighty miles east of Mexico. It contains about 16,000 inhabitants.

CHOMELIA, in botany, a genus of plants, class tetrandria, order rnonogynia : CAL. four- parted : COR. salver-shaped, four-parted ; drupe inferior, with a two-celled nut; stigmas two, thickish. Species, one only ; an American.

CHONDRILLA, in botany, a genus of the polygamia equalis order, and syngenesia class of plants ; natural order forty-ninth, compositae. receptacle naked : CAL. calyculated ; the pappus simple and stalked ; the florets in a manifold series ; seeds muricate. Species three, natives of Italy, Egypt, and Asia.

CIIONDROPTERYGII, in ichthyology, n term formerly applied to the order of fishes, now called amphibia nantes, by Linnaeus. See AM-PHIBIA.

CHOOSE, v.a.&v.n.) Goth, kinsa ; Teut. CHO'OSER, n. s. $ kiesen ; Swed. keca;

Sax. ceosan ; Fr. choisir. To take by way of preference of several things offered ; to select ; to pick out of a number. The neuter verb sig- nifies to have the power of a choice between dif- ferent things. It is often joined with a negative, implying an impossibility that the thing can be otherwise. It must of necessity ; it is not of choice to be different. See instances below.

How much less shall I answer him, and choose out my words to reason with him ? Job.

And there as ye of poverte me reprove, The highe God, on whom that we beleve, In wilful poverte chose to lede his lif ; And certes, every man, maiden, or wif, May understond, that Jesus heven king Ne wold not chese a vicious living. Chaucer.

Without the influence of the Deity supporting things, their utter annihilation could not choose but follow. Hooker.

Knaves abroad,

Who having by their own importunate suit Convinced or supplied thorn, they cannot choose, But they must blab. Shakspeare.

If he should offer to choote, and choose the right casket, you should refuse to perform your father's will, if you should refuse to accept him. Id.

When a favourite shall be raised upon the founda- tion of merit, than can he not choose but prosper.

Bacon.

Come all into this nut, quoth she j Come closely in, be ruled by me,

Each one may here a chooser be,

For room you need not wrestle. Drayton.

At her feet were laid

The sceptres of the earth, exposed on heaps To chitse where she should reign.

Dryden's All for Love. Threw down a golden apple in her way ; For all her haste, she could not choose but stay.

. Dryden.

Those wno are persuaded that they shall continue for ever, cannot choose but aspire after a happiness commensurate to their duration. Tillotsun.

This generality is not sufficient to make a good chooser, without a more particular contraction of his judgment. Wotton.

I never wander where the bordering reeds O'erlook the muddy stream ; whose tangling weeds Perplex the fisher ; I ne'er chuse to bear The thievish nightly net nor barbed spear.

Gay's Rural Sports.

Perhaps I loved it well : and should I lay My ashes in a soil which is not mine, My spirit shall resume it ††† if we may Unbodied choose a sanctuary. Byron.

CHOP, v. a. & v. n. ˆ Koirru; Swe-!. CHO'PPING, part. I kappa; Bel. kup-

CHO'PHOUSE, [pen; Dut. kappe ;

CHO'PPING-BLOCK, n. s. (Fr. couper. To cut CHO'PPING-KNIFE, n.s. with a quick blow. CHO'PPV, adj. J It is applied to the

quick motion of the jaws, in devouring vora- ciously; to eat rapidly, therefore, is to chop up. To mince; to cut into small pieces; to break into clefts and chasms. To do any thing with a

CHO

quick and unexpected motion, like that of a blow ; as we say the wind chops about, that is, changes suddenly. A chop is a piece chopped off, whether of meat or anything else ; but usually applied to mutton ; a crack or cleft. A chophouse is a place of entertainment, which takes its name from furnishing the guests with steaks and ––hops only. Chop also signifies the jaw, from chaw. See JAW.

What shall we do, if we perceive Lord Hastings will not yield to our complots ?

Chop off his head, man. Shakspeare.

You seem to understand me, By each at once her choppy finger laying Upon her skinny lips. Id.

Here comes Dametas, with a sword by his side, a forest bill on his neck, and a chojtping-knife under his girdle. Sidney.

Water will make wood to swell ; as we see in the filling of the chops of bowls, by laying them in water.

Bacon.

Sir William Capel compounded for fifteen hundred pounds ; yet Empson would have cut another chop out of him, if the king had not died. Id.

If the body repercussing bo near, and yet not so near as to make a concurrent echo, it choppeth with you upon the sudden. Bacon's Natural History.

Out of greediness to get both, he chops at the sha- dow, and loses the substance. L'Estrange.

By dividing of them into chapters and verses, they are so chopped, and minced, and stand so broken and divided, that the common people take the verses usually for different aphorisms. Locke.

You are for making a hasty meal, and for chopping up your entertainment like an hungry clown. Dryden.

The straight smooth elms are good for axle-trees, boards, chopping-blocks. Mortimer's Husbandry.

Old cross condemns all persons to be fops,

That can't regale themselves with mutton-c/wp.*

King's Cook.

While you and every courtly fop, Fawn on the devil for a chop, I've the humanity to hate A butcher, though he brings me meat. Gay.

I lost my place at the chop-howe, where every man eats in publick a mess of broth, or chop of meat, in silence. Spectator.

CHOP, v. a. Golh.kiop; Teut. kaup; Sax. ceap. See CHEAP. To purchase generally by way of truck ; to give one thing for another. To put one thing in the place of another; to bandy ; to altercate ; to return one thing or word for another.

The chopping of bargains, when a man buys not to

hold but to sell again, grindeth upon the seller and

the buyer. Bacon.

Let not the council at the bar chop with the judge,

nor wind himself into the handling of the cause a-

ncw, after the judge hath declared his sentence. Id.

You'll never leave off your chopping of logick, till

your skin is turned over your ears for prating.

L'Estranye.

We go on chopping and changing our friends, as ⁂well as our horses. Id.

The beast had now no time to lose Sets up communities and senses, To chop and change intelligences. Hudibris.

In chopping logic with his foes. Beattie.

Cuo'i'PiNG, (iflj. Goth, skapung ; Sax. scop- geong. A shapely child ; large, healthy, stout.

Both Jack Freeman and Ned Wild Would own the fair and chopping child. Fenton.

CHOTIN, n. s. French. A French liquid measure, containing nearly a pint of Winchester. A term used in Scotland for a quart of wine measure.

CHOPIN (Rene), a celebrated civilian, born at Bailluel, in Anjou, in 1537. He was advocate in the parliament of Paris, where he pleaded for a long time with great reputation. He com- posed many works, which have been collected, and printed in six volumes folio. He died in Paris in 1606.

CHOPS, n. s. without a singular. Corrupted probably from chaps. The mouth of a beast. The mouth of a man, used in contempt. The mouth of anything, in familiar language.

He ne'er shook hands, nor bid farewel to him, Till he unseau.ed him from the nape to th' chop.*

ShaJixpeare.

CHOPSTICKS, n. s. Two slips of, wood or ivory, used by the Chinese to eat with.

CHOPTANK, a large navigable river of the United States, which rises in Kent county, in the state of Delaware, and after running S. S.W. for about forty-three miles, through the eastern shore of Maryland, it turns suddenly W. N. W. and falls into the Chesapeak between Cook's Point and Tilghman's Island.

CHOPUNfSH, or pierced-nosed Indians, a tribe of about 3000 native Indians of North America, who inhabit the banks of the Koos-kooskee and Lewis rivers, to the west of the Rocky mountains. Captains Lewis and Clarke describe them as of amiable manners, and con- siderably advanced in civilisation. The men are generally well formed and robust ; the women small and pretty : but both sexes very dark in their complexion. In their dress they delight in ornaments made of beads, sea-shells, and feathers. In winter they wear a shirt of buffalo or elk skins dressed, long painted leggins, and a plait of twisted brass round the neck. The dress of the women is, at this season, a long shirt of ibex skin, reaching down to the ancles, with a girdle. The men also wear a cap of fox or otter skin, with or without the fur, and the women a cap without a rim, formed of bear grass and cedar bark ; the hair of both sexes rlows in rows down the front of the body. Collars of bears' claws are not uncommon. An ornament much esteemed is a breast-plate, made of a strip of otter skin, six inches wide, cut out of the whole length of the back of the animal,

and including the head ; this being dressed with the hair on, a hole is made at the upper end, through which the head of the wearer is placed, and the skin hangs in front with the tail reaching below the knee, ornamented with pieces of pearl, red cloth, or wampum shells. One of the chiefs is said to have worn a tippit of human scalps, adorned with several thumbs and fingers. They show much respect for their dead, whom they place in wooden roofed sepulchres, rolling tbem first in skins, and separating them from each other bv boards. They offer the horses and

other animals in sacrifice to their deceased friends. These American travellers found them anxious for tomahawks, kettles, blankets, and awls : and by no means ignorant of the use of fire-arms and ammunition.

CHORAGUS, in the ancient theatres, an offi- cer who superintended the chorus.

CHORAL, a person who, by virtue of the orders of the clergy, was in ancient times ad- mitted to sit and serve in the choir.

CHORASAN, or CHORASSAN. See KHO- RASSAN, and PERSIA.

CHORAX, or CHARAX, a city of Characene, in Persia, called also Alexandria, from Alexan- der the Great ; afterwards Antiochia, from An- tiochus V. king of Syria ; and lastly, Chorax Spasinse or Pasinse, i. e. the Mole of the Spa- sines; an Arabian king of that name having secured it against the overflowing of the Tigris, by a mole extending three miles, which serves as a fence to the whole country.

CHORAZIM, or CIIORAZIN, a town of Ga- lilee, the unbelief of whose inhabitants was lamented by our Saviour. It is two miles dis- tant from Capernaum, and is now desolate.

CHORD, n. a. Lat. chorda. When it sig- nifies a rope or string in general, it is written cord: when its primitive signification is pre- served, the h is retained. The string of a musi- cal instrument.

Who moved

Their stops and chords, was seen ; his volant touch Instinct through all proportions, low and high, Fled and pursued transverse the resonant fugue.

Milton.

In geometry. A right line, which joins the two ends of any arch of a circle.

CHORD, v. a. From the noun. To furnish with strings or chords ; to string.

What passion cannot musick raise and quell ? When Jubal struck the chorded shell, His listening brethren stood around. Dryden.

CHORD, in music, the union of two or more sounds uttered at the same time, and forming together an entire harmony. The natural har- mony produced by the resonance of a sounding body, is composed of three different sounds, without reckoning their octaves; which form among themselves the most agreeable and per- fect chord that can possibly be heard ; for which reason they are called, on account of their ex- cellence, perfect chords. Hence, in order to render that harmony complete, it is necessary that each chord should at least consist of three sounds. The trio is likewise found by musi- cians to include the perfection of harmony; whether because in this all the chords, and each in its full perfection, are used ; or because upon such occasions as render it improper to use them all, and each in its integrity, arts have been suc- cessfully practised to deceive the ear, and give it contrary persuasion, by deluding it with the principal sounds of each chord, in such a man- ner as to render it forgetful of the other sounds necessary to their completion. Yet the octave of the principal sound produces new relations, and new consonances, by the completion of the intervals; they commonly add this octave, to have the assemblage of all the consonances in

one and the same chord. See COXSON/JNCE. And the addition of the dissonance (see Drs- CORD), producing a fourth sound superadded to. the perfect chord, it becomes indispensably ne- cessary, to render the chord full, that we should include a fourth part to express this dissonance. Thus, the series of chords can neither be com- plete nor connected, but by means of four parts Chords are divided into perfect and imperfect or more properly, direct and reversed.

CHORD, DIRECT, or PERFECT, is that which is composed of the

fundamental sound below, of its third, its fifth, and its octave : they are like wise subdivided into major and minor, according as the thirds which enter into their composition are flat or sharp. See INTERVAL. Some au- thors likewise give the name of perfect to all chords, even to dissonances, whose fundamental sounds are below.

CHORD, IMPERFECT, or REVERSED, is that in which the sixth, instead of the fifth, prevails, and in general all those whose lowest are no, their fundamental sounds.*

CHORDS are also divided into consonances and dissonances. The chords denominated conso- nances, are the perfect chord, and its deriva- tives : every other chord is a dissonance. A table of both, according to the system of M. Rameau, may be seen in Rousseau's Musical Dic- tionary, vol. i. p. 27. After this table, he adds the following judicious and important observa- tions. 1. ' It is a capital error to imagine, that the methods of inverting the same chord are in all cases equally eligible for the harmony and for the expression. There is not one of these different arrangements but has its proper cha- racter. Every one feels the contrast between the softness of the false fifth, and the grating sound of the tritone, though the one of these intervals is produced by a method of inverting the other. With the seventh diminished, and the second redundant, the case is the same with the interval of the second in general use, and the seventh. Who does not feel how much more vocal and sonorous the fifth appears when, compared with the fourth ? The chord of the great sixth, and that of the lesser sixth minor, are two forms of the same fundamental chord : but how much less is the one harmonious than the other. On the contrary, the chord of the lesser sixth major is much more pleasing and cheerful than that of the false fifth. And only to mention the most simple of all chords, re- flect on the majesty of the perfect chord, the sweet- ness of that which is called the chord of the sixth, and the insipidity of that which is com- posed of a sixth and a fourth; all of them, how- ever, composed of the same sounds. In general, the redundant intervals, the sharps in the higher part, are proper by their severity to express violent emotions of mind, such as anger and the rougher passions. On the contrary, flats in the higher parts, and diminished intervals, form a plaintive harmony which melts the heart. There are a multitude of similar observations, of which when a musician knows how to avail himself, he may command at will the affections of tliobfc who hear him. 2. The choice of simple inter- vals is scarcely of less importance than that of

the chords, with regard to the stations in which they ought to be placed. It is, for instance, in the lower parts that the fifth and octave should be used in preference ; in the upper parts the third and sixth are more proper. If you trans- pose this order the harmony will be ruined, even though the same chords are preserved. 3. In a word, the chords are rendered still more harmonious, by being approximated and ††† only divided by the smallest practicable inter- vals, which are more suitable to the capacity of the ear than such as are remote. This is what †††we call contracting the harmony, an art which few composers have skill and abilities enough to put in practice. The limits in the natural compass of voices, afford an additional reason for lessening the distance of the intervals, which compose the harmony of the chorus, as much as possible. We may affirm, that a chorus is im- properly composed, when the distance between the chords increases ; when those who perform the different parts are obliged to scream; when the voices raise above their natural extent, and are so remotely distant one from the other, that the perception of harmonical relations between them is lost. \Ye say, likewise, that an instru- ment is in concord when the intervals between its fixed sounds are what they ought to be ; we say, in this sense, that the chords of an instru- ment are true or false, that it preserves or does not preserve its chords. The same form of speaking is used for two voices which sing to- gether, or for two sounds which are heard at the same time, whether in unison or in parts.'

CHORDS, or CORDS, of musical instruments, are strings, by the vibration of which the sensation of sound is excited, and by the divisions of which the several degrees of tone are determined.

CHORDA, in anatomy, a small nerve extend- ing over the drum of the ear.

CHORDEE, in medicine and surgery, a symptom attending a gonorrhoea, consisting in a violent pain under the frenum, and along the duct of the urethra, during the erection of the penis, which is incurvated downwards. These erections are frequent and involuntary.

CHOREA SANCTI VITI. St. Vitus's dance, so called because some devotees of St. Vitus danced themselves into fits. It is a disease ranked by Cullen in the class neuroses, order spasmi. It consists of

certain convulsive invo- luntary motions of the muscles, generally con- fined to one side. It seldom occurs after the age of puberty. See MEDICINE.

CHOREPISCOPUS, from Xo>poc, a region, and (TTiaKOTroc., a bishop. In the ancient church, an officer about whose function the learned are not agreed. The chorepiscopi were suffragan or local bishops, holding a middle rank between bishops and presbyters, and delegated to exercise episcopal jurisdiction within certain districts, when the boundaries of particular churches, over which separate bishops preside, were considerably enlarged. It is not certain when this office was first introduced ; some trace it to the close of the first century ; others tell us, that chorepis copi were not known in the east till the begin- ning of the fourth century; and in the west about A. D. 439. They ceased in both in the tenth cen-

tury. Also the name of a dignity still subsisting in some cathedrals, particularly in Germany ; signifying the same with chori episcopus, bishop of the choir.

CHOR1AMBUS, in ancient poetry, a foot compounded of a trochee and an iambus, and consisting of four syllables, whereof the first and last are long, and the two middle ones are short; such is the word nobilitas.

CHO'RION, n. s. Xwp□□v, to contain. The outward membrane that enwraps the foetus.

CHOROBATA, or CHOROBATES, a kind of water level among the ancients, of the figure of the letter T, according to Vitruvius's description. CHORO'GRAPHER, n. s. From Xwp□□j, a region, and ypa^w, to describe. He that de scribes particular regions or countries.

CHOROGRA'PHICAL, adj. See CHORO- GRAPHER. Descriptive of particular regions or countries.

I have added a chorographical description of this terrestrial Paradise. Raleigh's History of the World.
CHOROGRA'PHICALLY,a□□fo. From cho- rographical. In a chorographical manner ; ac- cording to the rule of chorography.

CHORO'GRAPHY, n. s. See CHOROCRA- PHER. The art or practice of describing particu- lar regions, or laying down the limits and boun- daries of particular provinces. It is less in its object than geography, and greater than topo- graphy.

CHOROIDES, or CHOROEIDES, from Xopiov. chorion, and ►►&>c, likeness. In anatomy, a term applied to several parts of the body, bearing some resemblance to the chorion : as, the inner membrane which invests the brain, more usually called pia mater : also the inner tunic of the eye. It is soft, thin, and black; and its inner or concave surface is very smooth and polished. See AXA- TOMY.

CHOROMETRY, from Xop►►/,and /urpsw, to measure. The art of surveying countries.

CHO'RUS, n.s. "} Lat. chorus. A con- CHO'RAL, adj. Scert, composed of a nuiw- CIIO'RISTER, n. s. j ber of singers, either sacred, dramatic, or social. ►►► Chorister is an individual of this number, and choral that which appertains to chorus, concert, or choir ; likewise singing in a choir.

And let the roaring organs loudly play The praises of the Lord in lively notes ; The whiles, with hollow throats, The choristers the joyous anthem sing. Spenser.

For supply,

Admit me chorus to this history. Shakspeare. Speak ye who best can tell, ye sons of light, Angels ; for ye behold him, and with songs And choral symphonies, day without night, Circle his throne rejoicing ; ye in heaven. On earth, join all ye creatures to extol Him first. Him last, Him midst, and without end.

Milton.

The new-born pho?nix takes his way ; Of airy choristers a numerous train Attend his progress. Dryden.

The Grecian tragedy was at first nothing but a chorus of singers : afterwards one actor was introduced.

Id.

The musical voices and accents of the aerial chi>- risters. Kay on the Creation.

In praise so just let every voice be joined,

A ad fill the general chorus of mankind ! Pope.

And choral seraphs sing the second day.

Amhurst.

Join, ye loud spheres, the vocal choir ; Thou dazzling orb of liquid fire, The mighty chorus aid. Soon as grey evening gilds the plain, Thou, moon, protract the melting strain,

And praise him in the shade. Ogilvie.

They formed a very nymph-like looking crew, Which might have called Diana's chorus ' cousin,' As far as outward show may correspond ; I won't be bail for any thing beyond. Byron.

CHORUS, in dramatic poetry, a song between the acts. Tragedy in its origin was no more than a single chorus, who trod the stage alone, and without any actors, singing dithyramhics or hymns in honor of Bacchus. Thespis, to relieve the chorus, added an actor, who rehearsed the adventures of some of their heroes ; and jEschy- lus, finding a single person too dry an entertain- ment, added a second, at the same time reducing the singing of the chorus, to make more room for the recitation. But when tragedy began to be formed, the recitative, which at first was in- tended only as an accessory part to give the chorus a breathing time, became a principal part of the tragedy. At length, however, the chorus became incorporated into the action : sometimes it was to speak; and then their chief, whom they called coryphaeus, spoke in behalf of the rest: the singing was performed by the whole company; so that when the coryphaeus struck into a song, the chorus immediately joined him. The chorus sometimes also joined the actors in the course of the representation, with their plaints and lamentations on account of any unhappy accidents that befel them ; but the proper func- tion, and that for which it seemed chiefly re- tained, was to show the intervals of the acts ; while the actors were behind the scenes, the chorus engaged the spectators ; their songs usually turned on what was exhibited, and contained nothing but what was suited to the subject, and had a natural connexion with it ; so that the chorus concurred with the actors for advancing the action. In the modern tragedies the chorus is laid aside, and the music supplies its place. M. Dacier observes, also, that there was a chorus in the ancient comedy : but this is suppressed in the new comedy, because it was used to re- prove vices

by attacking particular persons; as the chorus of the tragedy was laid aside to give the greater probability to those kinds of intrigue which require secresy.

CHOSE. The preter tense, and sometimes the participle passive, from to choose.

Yet never he his hart to her revealed, But rather chnse to dye for sorow great, Then with dishonorable terms her to entreat.

Spenser.

Our sovereign here above the rest might stand, And here be chose again to rule the land. Dryden. CHOSE, in common law, is used with divers epithets; as chose local, chose transitory, and chose in action. Chose ifi action is a tiling in- corporeal, and only a right, as an ob'igation for debt, annuity, &c. In general all causes of suit

for any debt, duty, or wrong, are to be accounted choses in action, or in suspense ; because the have no real existence, nor can properly be said to be in our possession. Chose transitory .►► a thing which is moveable, and may be taken away, or carried from place to place.*

CHO'SEN. The participle passive, from to choose.

If king Lewis vouchsafe to furnish us With some few bands of chosen soldiers, I'll undertake to land them on our coast.

Shakspeam. He tells how Hubert thither bends his course

With furious Borgio, and a desparate train, All chosen warriors of experienced force,

Drawn from the squadrons on the Brescian plain.

Gay.

CHOSROES I. surnamed the Great, king of Persia, succeeded his father Cabades, A. D. 532. He at first made peace with the Romans ; but broke it in the third year, and after a long war forced Justinian to make a disadvantageous peace. He was so puffed up with his victories, as to bid the emperor's ambassador follow him for audience to Ceesarea; on winch Tiberius sent an army under Justinian, who made himself master of the country, and put Chosroes to death.

CHOTEESGOUR, a large country, in the province of Gundwana, Hindostan, between 22►► and 23►► N. lat., and 82►► and 83►► E. long. It is often called Ruttunpore, from its chief place. It contains about 20,000 square miles, in the compass of which there are thirty-four forts. It is generally unproductive, but ou the southern part there is a fine champaign distiict, watered by numerous little rivers, and full of villages, ornamented with groves and tanks. Near Ryepoor, great quantities of wheat are grown, but rice is not plentiful, as large re- servoirs of water and a suitable declivity in the land is necessary for its cultivation. Ruttunpoor, Ryepoor, and Nowagur are its principal towns ; but its villages are numerous though poor. The country abounds in cattle, especially brood mares of the tattoo species. A few elephants, camels, and shawls, are brought for sale by foreign mer- chants, but the commerce is chiefly conducted by the brinjarries, or itinerant dealers in grain. It has been said, that in productive seasons they can employ 100,000 bullocks in exportation. Salt is imported from the Circars, and is extra- vagantly dear. The chief rivers of Choteesgour are the Hatsoo and the Caroon, both branches of the Mahanady. This district in tho reign of Aurengzebe was annexed to Allahabad, though but nominally subject to the Mogul empire ; in 1752 it was conquered by Ilagojee Bhooslah, and has ever since been held by the Mahratta rajahs of Nagpoor.

CHOUGH, n. s. Sax. ceo ; Fr. choucus. A bird which frequents the rocks by the sea-side, like a jackdaw, but bigger.

In birds, kites and kestrels have a resemblance with hawks, crows with ravens, daws and chough.*

Bacon's Natural History.

To crows the like impartial grace affords, And choughs and daws, and such rcpublick bir

Dryden.

CIIOUGH. See Couvus.

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CtlOULE, n. s. Commonly pronounced and written jowl. The crop of

a bird.

The choule or crop adhering uuto the lower side of the bill, and so descending by the throat, is a bag or sachel. Browne's Vulgar Errours.

CHOUS, in the eastern military orders, mes- sengers of the divan of janissaries. There are several degrees of honor in this post. When a person is first advanced to it, he is called cu- chak, or minor chous ; after this he is advanced to be the alloy chous ; that is, the messenger 'of ceremonies ; and from this, having passed through the office of petelma, or procurator of the effects of the body, he is advanced to be the bas chous.

CHOUSE, v. a. & n. s. The original of this word is much doubted by Skinner, who tries to deduce it from the French, gosser, to laugh at ; or joucher, to wheedle; and from the Teutonick, kosen, to prattle. It is perhaps a fortuitous and cant word, without etymology. The noun is derived by Henshaw from kiaus, or chiaus, a messenger of the Turkish court ; who, says he, is little better than a fool. It signifies a bubble ; a tool ; a man fit to be cheated ; a trick.

When geese and pullen are seduced, And sows of surking pigs are choused. Hudibras,

A sottish chottte,

Who, when a thief has robbed his house, Applies himself to cunning men. Id.

Freedom and zeal have choused you o'er and o'er ; Pray give us leave to bubble you once more. Drydeii.

CIIOWAN, a county of North Carolina, in F.denton district, bounded on the south by Albe- marle Sound, on the north-east by Perquiman's, on the north by Gates, and on the west by Har- ford counties. Edenton is the chief town.

CHOWAN, a considerable river of North Caro- lina, formed by the confluence of the Black-water, Meherrin and Nottaway rivers, which rise in Virginia and unite in North Carolina; for fifteen miles upwards to Holliday's Island it is navi- gable for small vessels.

CHOWDER BEER, a cheap and easily pre- pared drink, highly commended for preventing the scurvy in long voyages, or for the cure of it where it may have been contracted. It is pre- pared as follows :

take twelve gallons of water, in which put three pounds and a half of black spruce : boil it for three hours, and, having taken out the spruce, mix with the liquor seven pounds of molasses, and boil it up ; strain it through a sieve, and when milk warm put to it about four spoonfuls of yeast to work it. In two or three days stop the bung of the cask ; and in five or six days, when fine, bottle it for drinking.

To CHO'WTER, v. n. To grumble or mutter like a froward child

CHRABRATE, in lithology, a pellucid stone mentioned by writers of the middle age, supposed to be the common pebble crystal.

CHREMNITZ, the principal of the mine towns in Upper Hungary, ninety miles north-east of Presburg. Long-. 19►► 27′ E.'; lat. 48►► 59′ N.

CHRENECRUDA, a term occurring in writers of the middle age, and expressing a cus- tom of those times; but its signification is doubtful. It is mentioned in Lege Salica, tit. 61, which says, he who kills a man, and hath

not wherewithal to satisfy the law, or pay the fine, makes oath that he hath delivered up every thing that he was possessed of; the truth of which must be confirmed by the oaths of twelve other persons. Then he invites his next relations by the father's side to pay off the remainder of the fine, having first made over to them all his effects by the following ceremony. He goes into his house, and taking in his hand a small quantity of dust from each of the four corners, he returns to the door, and, with his face inwards, throws the dust with his left hand over his shoulders upon his nearest of kin. Which done, he strips to his shirt ; and coming out with a pole in his hand, jumps over the hedge. His relations, whether one or several, are upon this obliged to pay off the composition for the murder. And if these (or any one of them) are not able to pay, iterum super ilium chrenecruda, qui pauperior est, jactat, et ille totam legem componat. Whence it appears, that chrenecruda jactare is the same with throwing the dust gathered from the four corners of the house. Goldastus and Spelman translate it viridem herbam, green grass, from the German gruen kraut, or from the Dutch groen, green, and gruid, grass. Wendelinus thinks, that by this word is meant the proof of purification, from chrein, pure, and keuren, to prove ; so that it must refer to the oaths of the twelve jurors. King Childebert reformed this law, because it savored of pagan ceremonies, and because several persons were thereby obliged to make over all their effects.

CHRISM, n.s. Xp□□□□/ia, an ointment. Un- guent, or unction : it is only applied to sacred ceremonies.

One act, never to be repeated, is not the thing that Christ's eternal priesthood, denoted especially by his unction or chrism, refers to.

Hammond's Practical Catechism.

CHRISM, oil consecrated by the bishop, and used in the Romish and Greek churches, in the administration of baptism, confirmation, ordina- tion, and extreme unction. It is prepared on Holy Thursday with much ceremony. In Spain it was anciently the custom for the bishop to take one-third of a sol for the chrism distributed to each church, on account of the balsam that entereth its composition. Du Cange observes, that there are two kinds of chrism ; the one pre- pared of oil and balsam, used in baptism, con- firmation and ordination ; the other of oil alone, consecrated by the bishop, used anciently for the catechumens, and still in extreme unction. The Maronites before their reconciliation with Rome, besides oil and balsam, used musk, saffron, cin- namon, roses, white frankincense, and seve-a other drugs mentioned by Rinaldus, in 1541 Dandini, the Jesuit, who went to mount Libanus in quality of the pope's nuncio, ordained, in a synod held there in 1596, that chrism should be made only of two ingredients, oil and balsam ; the one representing the human nature of Jesus Christ, the other his divine nature.

CHRISM PENCE, CHRISMATIS DENARII, or CHRISMALES DENARII, a tribute anciently paid to the bishop by the parish clergy, fortheir chrism, consecrated at Easter for the ensuing year : after- wards condemned as simoniacal.

CHRISOM, n. s. See CHRISM. A child that dies within a month after its birth. So called from the chrisom-cloth.

When the convulsions were but few, the number of chrisoms and infants was greater.

Graunt's Bills of Mortality.

CHRISOM, CHRISMALE, or CHRISOM CLOTH, the face cloth, or

piece of linen, laid over the child's head when baptised.

CHRIST, n.s. "| Xpc

CHRI'STIAN, n.s. CHRISTIA'NITY, n. s.

synonymous with Mes- siah. The Christian

CHRISTENDOM, n. s. ˆ-religion derives its name CHRI'STIAN ISM, n. s. I from the official appel- CHRI'STIANISE, v. a. lation of its Divine CHRI'STIANLY, adv. j Author. Christianity is the religion of Christ. A Christian is one who professes that religion. Christendom is the lo- cal extent of its profession. Christianly is to be like a Christian. To christianise is to convert or persuade to the Christian faith, and christiauism comprehends the doctrines of Christianity and the nations that profess to have embraced.

In. all that lond, no Cristen dorste route ; All Cristen folk ben fled fro that contre, Thurgh payenes, that conquereden all aboute The plages of the North by lond and see ; To Wales fled the Cristianitee Of olde Bretons, dwelling in this isle, Ther was hir refuge for the mene while. Bnt yet ne'er Cristen Bretons so exiled, That ther n'ere som which in her privitie Honoured Crist ; and Hethen folk begiled, And neigh the castle swiche ther dwelten three.

Chaucer's Man of L/iwes Tale. Marcus Stoycus the second, so pepil him highte, That is to mene in our constent, a keeper of the

night : And so he did full trewe; for the record and the

plees,

He wrote them ever trewly, and took none other fees But such as was ordeyned to take by the yere, Now, Lord God ! in Cristendom I wold it were so clere. Id. Merchant' Second Tale.*

What hath been done, the parts of Christendom most afflicted can best testify. Id.

An older and a better soldier, none That Christendom gives out. Shakspeare.

I'll not be made a soft and dull-eyed fool, To shake the head, relent, and sigh, and yield To Christian intercessors. Id.

If the Roman church, good Christians, oblige ye To believe man and

beast to have spoken in effigie, Why should we not credit the public discourses In a dialogue between two inanimate horses. Marvell.

The good old man, too eager to dispute, Flew high, and, as his Christian fury rose, Damned all for heretics who durst oppose. Dryden. The principles of platonick philosophy, as it is now Christianised. Id,

Every one who lives in the habitual practice of any voluntary sin, cuts himself off from Christianity.

A ddison.

We Christians have certainly the best and the ho- liest, the wisest and most reasonable, religion in the world. Tillotson.

The Christian religion, according to my creed, is a Tery simple thing, .intelligible to the meanest capa- city, and what, if we are at pains to join practice to knowledge, we may maker ourselves thoroughly ac- quainted with, without turning over many books.

Beattie. CHRISTIAN (Edward), chief justice of the Isle

of Ely, and Downing professor of law in the University of Cambridge. He graduated at St. John's in 1779, having obtained the chancellor's prize medal that same year, for his classical at- tainments. He first iniquitously revived the mo- dern claim of the Universities and other public libraries to eleven copies of every work printed in the British dominions, and published Exami- nation of Precedents, &c. whereby it appears that an Impeachment is determined by a dissolu- tion of Parliament, 8vo, 1790; A Dissertation Respecting the Rules of Evidence before the House of Lords, 8vo, 1 792 ; a new edition of Blackstone's Commentaries, to which he added copious notes of his own, 8vo, 4 vols. 1795 ; a Syllabus of Lectures, delivered at Cambridge, and printed in 1797, 8vo; an Account of the Origin of the two Houses of Parliament, with a Statement of the Privileges of the House of Com- mons, 8vo, 1810; a Treatise on the Bankrupt Laws, 1812, 2 vols. 8vo; another on the Game Laws, 8vo : and a Plan for a Country Provident Bank, 8vo, both in 1816. The peculiar pomp of his manner, and his frequent allusions to the decisions of the chief justice of the Isle of Ely, as law, will not soon be forgotten by those who have heaid him lecture, with respect to constitu- tional principles, he was more than a century behind the age in which he lived. He died in Downing College, March 29th, 1823.

CHRIST-CHURCH, a borough town of England, in Hampshire,

situated on the east side of the Avon, about three miles from the sea, with a good salmon fishery, and a considerable trade in knit silk stockings and watch chains. It has a small haven which admits vessels of light burden at high water ; and there is a weekly market on Monday. This borough sends one member to parliament. It is thirteen miles east of Poole, and 102 W.S.W. of London.

CHRI'STEN, v. a.) Sax. chrurrman. To

CHRISTENING, n. s. 5 baptise; to initiate into Christianity by water. To name ; to denomi- nate. The ceremony of the first initiation into Christianity.

*The queen was with great solemnity crowned at Westminster, about two years after the marriage \ like an old christening that had staid long for god- fathers. Bacon^*

Where such evils as these reign, christen the thing what you will, it can be no- better than a mock mil- lennium. Burnet.

We shall insert the causes why the account of christenings hath been neglected more than that of burials. Graunt.

The day of the christening being come, the house was filled with gossips. Arbttthnot and Pope.

CHRISTENING. See BAPTISM.

CHRISTIAN, the name of seven kings of Den- mark. See DENMARK, HISTORY OF.

Most CHRISTIAN KING, a title of the kings of France. The French antiquaries trace the origin of this title up to Pope Gregory the Great, who, writing a letter to Charles Martel, styled him Most Christian King, a title which his successors retained.

CHRISTIANS OF ST. JOHN, a sect of Chris- tians very numerous in Balsora and the neigh- bouring towns ; they formerly inhabited along; ihe river Jordan, where St. John baptised, from

tvhom they had their name. They hold an an- niversary feast of five

days ; during which they all go to the bishop, who baptises them with the baptism of St. John. Their baptism is also per- formed in rivers ; and that only on Sundays : they have no notion of the Trinity ; or the Holy Ghost; nor have they any canonical book, but abundance of charms, &c. Their bishoprics de- scend by inheritance, though they have the ceremony of an election.

CHRISTIANS OF ST. THOMAS, a sort of Chris- tians in a peninsula of India on this side of the gulf: they inhabit chiefly at Cranganor, and the neighbouring country : they admit of no images : hut pay a great veneration to the cross : they affirm, that the souls of the saints do not see God till after the day of judgment : they acknowledge three sacraments, viz. baptism, orders, and the eucharist : they make no use of holy oils in the administration of baptism; but, after the cere- mony, anoint the infant with an unction com- posed of oil and walnuts, without any benedic- tion. In the eucharist, they consecrate with little cakes made of oil and salt, and instead of wine make use of water in which raisins have neen infused.

CHRISTIANA, a town of Delaware, seated on a creek, in Newcastle county. It is the great- est carrying place between the waters of the De- laware and Chesapeake, which are here only thir- teen miles asunder. It is four miles south-west of Newcastle, and seven south-west of Wilmington.

CHRISTIANA, or CHRISTIANIA, the capital of Norway, and seat of the government, latitude nearly 60►► N., longitude nearly ll►►E. ; 250 miles west of Stockholm. It lies in a fruitful valley, in the south of the province of Agger- huus, at the bottom of the gulf of Biornia, which runs into the interior more than fifty miles, filled with rocky islands, beautifully and romantically disposed. It is the best built place in the king- dom, though it is but small, having only 1500 neat stone houses, and about 8000 inhabitants ; it is in a very thriving condition. It is the seat of the governor of Aggerhuus, who holds a su- preme court of justice, and of a bishop, the me- tropolitan of the country. It takes its name from its founder, Christian IV. of Denmark, who built it in 1624, after a fire which destroyed the old town of Opslow, formerly occupying part of the same site. The best part is the quartal, near the harbour, inhabited by the public officers and merchants. Some of the houses, especially in the suburbs, are constructed of wood, as is like- wise the great military hospital, built in 1806, on an adjoining hill. It has a house of correc- tion, an academy (made a university in 1812), a military school, and two theatres, the Norwe- gians being very fond of these entertainments. The harbour is excellent, in which a consider- able trade is carried

on, and on the 13th of Ja- nuary a great fair is held annually. Its manu- factures are not of consequence, chiefly coarse cloth and cordage ; it exports, principally to Bri- tain, fish, tar, soap, vitriol, alum, iron, copper, and timber.

CHRISTIANA, a ˆ ery extensive bailiwic of Nor- way, in the government of Aggerhuus, contains 66,300 inhabitants.

Vor V.

CHRISTIANITY, as a system of religious truth, supposes, and indeed is altogether grounded on, the prior existence of the Jewish religion. Chris- tians, whatever their particular tenets may be, acknowledge equally the Scriptures of the Old and New Testaments as the foundation of their faith and practice. Roman Catholics indeed, unite with this the tradition of their church as a basis of the doctrines and duties of Christianity ; but they contend that such traditions are in no way contrary to the written word of God. These books, or at least particular passages in them, have, from the ambiguity of language, been va- riously interpreted by different commentators, and these diversities have given birth to a mul- tiplicity of different sects. But it cannot be ex- pected, that in giving an account of Christia- nity, we should comprehend all the opinions which have been exhibited by historical, syste- matical, or polemical authors. These, in such a work as this, can only be briefly noticed under their proper articles. The great question upon any general treatise on this subject must be, what is recognised and admitted as the common basis of their faith by the great majority of Christians ? And the answer to this is clearly, the Old and New Testaments. If asked by what authority these books claim an absolute right, to determine the consciences and understandings of men, with regard to what they should believe and what they should do? Christians answer, that all Scripture, whether for doctrine, correc tion, or reproof, was given by immediate inspi- ration from God. If again interrogated how those books, which they call Scripture, are au- thenticated ? They reply, that the Old and New Testaments are proved to be the Word of God, by evidences both external and internal. And such evidence involves the whole question o►► Revelation. We, as Christians, believe that the advantages of all the revealed will of God, are derived to us from our ‘ holy profession.’ The Old Testament must be true, or the New is false : hence we conceive that the evidences of Chris- tianity are more properly to be exhibited under the word REVELATION, and to that refer the reader.

CHRISTIANOPLE, a fortified port town of Sweden, on the Baltic Sea,

in the territory of Blecking, and province of South Gothland, thirteen miles north-east of Carlscrona.

CHRISTIANSAND, a bishopric and govern- ment of Norway, bounded on the east by Chris- tiana, on the north by Bergen, on the west by the German Ocean, and on the south by the Sca- gerrack, forms the entire south-west province of that kingdom, and contains 133,000 inhabitants. The annual importations of corn are consider- able, the soil being very barren, and the fisheries and timber trade being the chief pursuits of the population.

CHRISTIANSAND, trie capital of the above bi- shopric, is a sea-port on the south coast, close to the sea, and was founded in 1641 by Christian IV. of Denmark. It is considered the fourth town in Norway in point of importance, but the cathe- dral is the only public building worth notice. It is in general well built, and the streets, though short, are broad, arid straight, large gardens sur-

rounding many of the houses. It is the residence of the governor of the province and the bishop. The town is built on a sandy plain, quite close to the sea. The harbour is one of the best sheltered in Norway ; vessels come up to the doors of the ###warehouses, and the inhabitants carry on a brisk timber trade and ship-building.

CHRISTIANSBORG, a Danish African fort and settlement on the Gold Coast. The Danes, it is said, have set the example of first abolishing the slave trade, and have made noble exertions to introduce cultivation. They had a plantation extending fifteen miles inland, which the Ashan- tees destroyed in the late war.

CHRISTIANSBURG, a town of Virginia, and the capital of Montgomery county, seated near the west side of a branch of Little River, which falls into the Kenhawa. It has a court- house and a jail, and a court is held in it month- ly. It is 200 miles W. S.W. of Richmond, and 478 of Philadelphia : from which it lies in long. 5## 35′ W., lat. 37## 5′ N.

CHRISTIANS-OE, a group of Danish islands in the Baltic, known also by the name of Ert- Holm. But Christians-Oe is the name of the prin- cipal island, which is much frequented by vessels navigating the

Baltic. Here is a light-house and castle, constructed by Christian V., the latter of which is sometimes used as a state prison. Long. 14►► 47′ E., lat. 55►► 13′ N.

CHRISTIANSTADT, a province of Sweden, containing the northern part of Scania, and is bounded by Halland and Kronoberg on the north, Blekingen on the north-east, the Baltic on the south-east and south, Malmohus on the south- west, and the Categat on the west. It contains 2370 square miles, and a population (in 1811) of 120,547. The capital, of the same name, is situated in a marshy plain, on the Helge-a, which flows into the Baltic, about ten miles below. Population 2260. Fifty-seven miles west by south of Carlscrona, and sixty-five north-east of Copenhagen.

CHRISTIANSTED, the chief town of the the island of Santa Cruz, on the north coast of the island. It has a fine harbour, defended by a fortress. Long. 63►► 23′ W., lat. 17►► 46′ N.

CHRISTIANSUND, a town in the govern- ment of Drontheim, on the east coast of Norway, situated partly on a a peninsula, but chiefly on three small rocky islands, which surround a spa- cious harbour. Its principal privileges were granted by Christian VI. of Denmark. There are scarcely any streets regularly formed, but the communication between one part of the town and another is kept up by water. Population 1650. Thirty-six miles north-west of Dron- theim.

CHRISTINA (Alexandra), daughter of Gus- tavus Adolphus, king of Sweden, was born in 1626, and succeeded to the crown in 1633, when only seven years of age. This princess discovered even in her infancy, what she after- wards expressed in her memoirs, an invincible antipathy for the employments and conversation of women. She was fond of violent exercises, and such amusements . as consist in feats of strength and activity. She had also both ability

and taste for abstract speculations ; and amused herself with language and the sciences, particu- larly that of legislature and government. She derived her knowledge of ancient history from its source ; and Polybius and Thucydides were her favorite authors. As she was the sovereign of a powerful kingdom, many of the princes in Europe aspired to the honor of her alliance. Among her suitors were the prince of Denmark, the elector Palatine, the elector of Brandenburgh, the king of Spain, the king of the Romans, Don John of Austria, Sigismund of Rokocci, count and general of Cassovia, Stanislaus king of Poland, John Casimir his brother, and Charles Gustavus, duke of Deux-Ponts, son of the great Gustavus's sister, and

consequently her first cousin. To this nobleman, as well as to all his rivals, she rufused her hand ; but she caused him to be appointed her successor by the states. Political interests, differences of religion, and contrariety of manners, furnished Christina with pretences for rejecting all her suitors ; but her true motives were the love of independence, and a strong aversion she had conceived, even in her infancy, for the marriage yoke. ‘ Do not force me to marry,’ said she to the states. ‘ for if I should have a son, it is not more probable that he should be an Augustus than a Nero.’ An acci- dent happened in the beginning of her reign which gave her a remarkable opportunity of dis- playing the strength and equanimity of her mind. As she was at the chapel cf the castle of Stockholm, with the principal lords of her court, a poor wretch, who was disordered in his mind, came to the place with a design to assas- sinate her. This man, who was in the full vigor of his age, chose, for the execution of his design, the moment in which the assembly was perform- ing what in the Swedish church is called an act of recollection ??? a silent and separate act of de- votion, performed by each individual kneeling, and hiding the face with the hand. Taking this opportunity he rushed through the crowd and mounted a balustrade, within which the queen was upon her knees. The baron Braki, chief justice of Sweden, was alarmed, and the guards crossed their partisans to prevent his coming further; but he struck them furiously on one side, leaped over the barrier, arid being then close to the queen made a blow at her with a knife, which he had concealed without a sheath in his sleeve. The queen avoided the blow, and pushed the captain of her guards, who instantly threw himself upon the assassin, and seized him by the hair. All this happened in a moment. The man was known to be mad, and therefore nobody supposed he had any accomplices : they therefore contented themselves with locking him up, and the queen returned to her devotion with- out the least trepidation. One of the great affairs which engaged Christina’s attention while she was upon the throne was the peace of West- phalia : it was concluded in October, 1648. The success of the Swedish arms rendered Christina the arbitress of the treaty. No other public event of importance took place during the rest of Christina’s reign; for there were neither wars abroad nor troubles at home. Her reign was

that of learning and genius. She drew about her, wherever she was, all the distinguished cha- racters of her time, ??? Grotius, Pascal, Bochart, Descartes, Gassendi, Saumaise, Naude, Vossius, Heinsius,

*Menage, Lucas, Holstenius, Bayle, madam Dacier, Filicaia, and many others. The arts never fail to immortalise the prince who protects them : and almost all these illustrious persons have celebrated Christina, either in poems, letters, or other literary productions, which form a general mass of testimonials, that may be considered as a solid basis of reputation. Christina, however, may be justly censured with ***want of taste in not " properly distinguishing merit. The rapid fortune which the adventurer Michon, known by the name Bourdelot, ac- quired by her countenance and liberality, was also a great scandal to literature. He had no pretensions to learning, and, though sprightly, was yet indecent. He was brought to court by the learned Saumaise ; and. for a time, drove IH terary merit out of it, making learning the object of his ridicule, and exacting from Christina an exorbitant tribute to the weakness and incon- stancy of her sex. At last she was compelled by the public indignation to banish this unworthy minion and she immediately forgot him. This Bourdelot, during his ascendancy over the queen, had supplanted count Magnus de la Gardie, son of the constable of Sweden, who was a relation, a favorite, and perhaps the lover of Christina. M. de Motteville, who had seen him ambassador in France, says, in her memoirs, that he spoke of his queen in terms so passionate and respectful, that every one concluded his attachment to her to be more ardent and tender than a mere sense of duty can produce. This nobleman fell into disgrace because he showed some inclination to govern; while M. Bourdelot seemed to aim at nothing more than to amuse, and concealed, tinder the unsuspected character of a droll, the real ascendancy which he exercised over the queen's mind. About this time an accident hap- pened to Christina, which again displayed her presence of mind. Having ordered some ships of war to be built at the port of Stockholm, she went to see them when finished ; and as she was going on board, across a narrow plank, with ad- miral Fleeming, his foot slipping, he fell, and drew the queen with him into the sea, which in that place was nearly ninety feet deep. Anthony Steinberg, the queen's first equerry, instantly threw himself into the water, laid hold of her robe, and, with such assistance as was given him, got the queen ashore ; during the time of this accident her recollection was such that the moment her lips were above water she cried, * Take care of the admiral.' When she was got out of the water she discovered no emotion, either by her gesture or countenance ; and she dined the same day in public, where she gave a hu- morous account of her adventure. Though she was at first fond of the power and splendor of royalty, yet she began at length to feel that it embarrassed her ; and the same love of indepen- dence which had*

determined her against mar- riage, at length made her weary of her crown. At last she lesolved to abdicate; and, in 1652, communicated her resolution to the senate. The

*senate zealously remonstrated against it, and were joined by the people, and even by Charles Gustavus himself, who was to succeed her : she yielded to their importunities, and continued to sacrifice her own pleasure to the will of the public till 1654, when she carried her design into execution. The ceremony of her abdication was a mournful solemnity, a mixture of pomp and sadness, in which scarcely any eyes but her own were dry. She continued firm and com- posed through the whole ; and as soon as it was over prepared to remove into a country more favorable to science than Sweden was. Concern- ing the merit of this action the world has always been divided in opinion ; it has been condemned alike both by the ignorant and the learned, the trifler and the sage. It was admired, however, by the great Conde" : * How great was the mag- nanimity of this princess,' said he, ' who could so easily give up that for which the rest of man- kind are continually destroying each other, and which so many throughout their whole lives pur- sue without attaining'.' Christina, besides ab- dicating her crown, abjured her religion ; an act universally approved by one party and censured by another ; the Papists triumphed and the Pro- testants were offended. No prince, after a long imprisonment, ever showed so much joy upon Jbeing restored to his kingdom as Christina did in quitting hers. When she came to a little brook, which separates Sweden from Norway, then under the dominion of Denmark, she got out of her carrriage, and leaping to the other side, cried out in a transport of joy, ' At last I am free, and out of Sweden, whither, I hope, I shall never re- turn.' She dismissed her women, and laid aside the habit of her sex. ' I would become a man.' said she, ' yet I do not love men because they are men, but because they are not women.' She made her abjuration at Brussels, where she saw the great Conde, who, after his defection, made that city his asylum. ' Cousin,' said she, ' who would have thought, ten years ago, that we should have met at this distance from our coun- tries?' The inconstancy of Christina's temper appeared in her continually travelling from place to place : from Brussels she went to Rome, from Rome to France, and from France she returned to Rome* again ; after this she went to Sweden, where she was not very well re- ceived; from Sweden she went to Hamburgh, where she continued a year, and then went again to Rome ; from Rome she returned to Ham- burgh, and again to Sweden, where she was still worse received than before; upon which she ###went back to Hamburgh, and from Hamburgh again to Rome. She intended*

another journey to Sweden, but it did not take place ; she also planned an expedition to England, where Crom- well did not seem well disposed to receive her ; and after many wanderings, and many purposes of wandering still more, she at last died at Rome, in 1689. Her journeys to Sweden, how- ever, had motives of necessity, for her appoint- ments were very ill paid, though the states often confirmed them after her abdication: but to other places she was led merely by a roving disposition, and there was no event in Europe in which she was not ambitious of acting a prin-

*cipal part. During the troubles in France, by the faction called the Fronde, she wrote with great eagerness to all the interested parties, officiously offering her mediation to reconcile their interests and calm their passions, the secret springs of which it was altogether impossible she should know This was first thought a dan- gerous, and afterwards a ridiculous behaviour. During her residence in France she gave uni- versal disgust, not only by violating all the cus- toms of the country, but by practising others directly opposite. She treated the ladies of the court with the greatest rudeness: when they came to embrace her, she, being in man's habit, cried out, ' What a strange eagerness have these women to kiss me ! Is it because I look like a man ?' The murder of Monaldeschi is, to this hour, an inscrutable mystery. It is, however, of a piece with the expressions constantly used by Christina in her letters, with respect to those with whom she was offended ; for she scarcely ever signified her displeasure without threaten- ing the life of the offender. * If you fail in your duty,' said she to her secretary, whom she sent to Stockholm after her abdication, ' not all the power of the king of Sweden shall save your life, though you should take shelter in his arms.' Bayle was also threatened for having said that the letter which Christina wrote, upon the re- vocation of the edict of Nantes, was * a remain of Protestanism ;' but he made his peace by apologies and submission. She had wit, taste, parts, and learning : she was indefatigable upon the throne; great in private life; firm in mis- fortunes ; impatient of contradiction, and, except in her love of learning, inconstant in her incli- nations. The most remarkable instance of this fickleness is, that after sue had abdicated the crown of Sweden she intrigued for that of*

Poland. She was, in every action and pursuit, violent and ardent in the highest degree ; impetuous in her desires, dreadful in her resentment, and fickle in her conduct. She says of herself that ‘ she was mistrustful, ambitious, passionate, haughty, impatient, contemptuous, satyrical, in- credulous, undevout, of an ardent and violent temper, and extremely amourous ;’ a disposition, however, to which, if she may be believed, her pride and her virtue were always superior. In general her failings were those of her own, and her virtues those of the other sex.

CHRI’STMAS, n. s. From Christ and mass. The day on which the nativity of our blessed Sa- viour is celebrated, by the particular service of the church.

For their part they are true to the church, their infants are questioned and sprinkled ; ‘ their wives pay a shilling and are churched ; they are funny at a wedding, and feel no expense but the ring ; they eat cross-buns on Good Friday, they are merry at Easter, and mad at Christmas ; they pay small tythes through life, and are buried in form when they die ; and they call this the Christian religion in the best constituted church in the world, and abuse all that think other- wise, as knaves and fools, ignorant of God, and dis-loyal to the king. Robinson.

CHRISTMAS. As ‘to the antiquity of this festival, the first footsteps we find of it are in the second century, about the time of the empe-

ror Commodus. The decretal epistles indeed carry it up a little higher ; and say that Teles- phorus, who lived in the reign of Antoninus Pius, ordered divine service to be celebrated, and an angelical hymn to be sung, the night before the nativity of our Saviour. That it was kept before the time of Constantine we have a melancholy proof: for whilst the persecution raged under Dioclesian, who then kept his court at Nicome- dia, that tyrant, among other acts of cruelty, finding multitudes of Christians assembled toge- ther to celebrate Christ’s nativity, commanded the church doors where they were met to be shut, and fire to be put to it, which soon reduced them and the church to ashes.

CHRI’STMAS-BOX, n. s. From Christmas and box. A box in which little presents are col- lected at Christmas.

When time comes round, a Christmas-box they bear, And one day makes them rich for all the year.

Gay's Trivia.

CHRI'STMAS-FLOWER, n. s. Hellebore. CHRISTMAS HARBOUR is described by captain Cook as a good and safe harbour, on the north coast of Kerguelen's Island, abounding with seals and water-fowl ; but remarkably destitute of vegetation. He found here a bottle, contain- ing a parchment memorial of the place having been visited by a French vessel in 1772-3.

CHRISTMAS ISLAND, an island nearly in the centre of the Pacific Ocean, and so named by captain Cook, on account of his first landing here on Christmas-day, 1777. It is forty-five miles in circumference ; bounded by a reef of coral rocks, on the west side of which is a bank of fine sand, extending a mile into the sea, and affording good anchorage. The soil, in some places, is light and black, composed of decayed vegetables, the dung of birds, and sand : in others, nothing but broken corals and shells are to be seen. No fresh water was found by digging. The vege- table productions are only a few cocoa-nut trees, and some low trees, shrubs, and plants, such as are found on other islands of the same appear- ance, in a soil half formed. It is frequented by several sorts of birds, and plenty of fish and tur- tles are found on its coast. Long. 157 30′ W., lat. 1 59′ N.

CHRISTMAS ROSE. See HELLEBORUS. CHRISTMAS SOUND, a bay on the south coast of Terra del Fuego, thus named by captain Cook, in December, 1774. Here is anchorage in from fifteen to thirty fathoms ; and tufts of wood, fresh water, and wild fowl, near. A copious descrip- tion of it, that great navigator says, is unnecessary, as no one would be benefited by it.

CHRISTOPHERSON (John), a learned English bishop of the sixteenth century, born in Lancashire, educated at Cambridge, and one of the first fellows of Trinity College. In 1554 he was made dean of Norwich, but in the reign of Edward VI. he lived abroad in a state of exile. On the accession of Mary I. he returned, and was made bishop of Chichester. He died a short time before that bloody monarch. He translated Philo Judaeus into Latin, and the ecclesiastical histories of Eusebius, Socrates, Sozomen, Eva- grius, and Theodoret; but his translations are censured as not only barbarous in style, but as

defective, erroneous, and deranged. He is ac- cused of acting the commentator rather than the translator ; of enlarging, retrenching, and trans- posing at pleasure, and altering not only the sense, but even the chapters of his authors. Hence Baronius and others, who have trusted to his translations, have been led into great mistakes.

CHRIST, ORDER OF. 1. A military order, founded by Dionysius I. king of Portugal, to animate his nobles against the Moors. The arms of this order are gules, patriarchal cross, charged with another cross argent : they had their resi- dence, first, at Castromarin, afterwards at Tho- mar; which was near to the Moors of Andalusia and Estremadura. 2. Another military order in Livonia, instituted in 1205, by Albert, bishop of Riga, to defend the new Christians, who were daily converted in Livonia, but persecuted by Jie heathens. They wore on their cloaks a sword with a cross over it, whence they were also de- nominated brothers of the sword.

CHRISTOPHE, a ci-devant emperor and aegro of remarkable character, was born in the .sland of St. Kill's, but conveyed, in 1780, to St. Domingo as a slave, being then about twelve years old. Skilful in the art of cookery, he was much employed in a tavern at Cape Town, and took an active part among the first revolutionists. Being entrusted, by general Leclerc, with the command of a division of the French troops, he went over to the black army ; and, on the death of Dessalines, he rose to the supreme command, and shortly after assumed the title of Henry I. emperor of Hayti. He maintained a strong mili- tary force, and built the town of Sans Souci, with a splendid palace, defended by forts and re- doubts ; but at length fell by a conspiracy, the 8th of October, 1820; when, finding that his troops were not to be relied on, he shot himself through the heart. His character was that of a ferocious despot, but he learned how to play this part in the school of his former masters.

CHRISTOPHER'S, (St.) called by English sailors generally St. Kill's, is eight miles south- east of Eustalia, and conlains 43,726 acres, or almosl seventy square miles. The interior is chiefly composed of barren precipices and moun- tains. The loftiest of them, Mount Misery, rises 3,711 feet above the level of the sea, and is evi- denlly an exhausled volcano. The soil near the sea is extremely fertile, and exceeded by no part of the West Indies in the production of sugar. Particular spots have been known to yield five hhds. of sixteen cwt. each, to the acre, and a whole plantation has yielded four hhds. The island has been estimated to contain 43,726 acres; 17,000 are

devoted to sugar, 4000 to pasturage, and perhaps 2000 or 3000 to cotlon, indigo, and provisions; the rest is unfit for cul- tivation. The official value of the exports and imports amounled,

Imports. Exports.

In 1309, lo . ►►266,064 , ►►132,845

1810, . . 253,611 . 89,362

The nrincipal imports were,

Coffee. Sugar. Rum. Cotton.

cwt. cwt. galls. Ibs.

1809, 433 166,053 343,075 112,327

1810, 13t 167,943 220,886 26,853

By an estimale, in 1805, the whites and people of color amounted to 1998. More recently the population has been taken at 31,700, of whcm- about 30,000 are slaves. Basseterre, the capital, is on the south-west coast, at the mouth of a river, opening into a bay called Basseterre Road. It contains 800 houses, and has three batteries.

CHRISTOVAL, (St.) a strong sea-port town of Brasil, in the province of Bahia. Its popula- tion is not considerable, but sugar is grown in the neighbourhood in great abundance. Twenty miles north-easl of Sergippe. Long. 37►► 30′ W., lal. 12►►40'S. There are various other minor selllements of this name in different parts of South America.

CHRISTOVAL, (St.) one of five lakes at the bot- tom of a valley of Mexico, in the vicinity of the city of lhal name. A small town of this name also stands on its shores, with sixty families of Indians, besides Spaniards. Eighteen miles north of Mexico. Long. 99►► 5′ W., lat. 19►► 34′ N.

CHRIST'S THORN, n. s. So called, as Skin- ner fancies, because the thorns have some like- ness to a cross. A plant. It has long sharp spines : the flower has five leaves, in form of a rose : out of the flower-cup, which is divided into several segments, rises the pointal, which becomes a fruit, shaped like a bonnet, having a shell almost globular, which is divided into three cells, in each of which is contained a roundish seed. This is by many persons supposed to be

the plant from which our Saviour's crown of thorns was composed.

CHROASTACES, in natural history, a genus of pellucid gems, comprehending all those of va- riable colors, as viewed in different lights; of which kinds are the opal and the asteria or ocu- lus felis. See OPAL and ASTERIA.

CHROMA, in rhetoric, elegance of expres- sion.

CHROMATIC, adj. Xpaˆa, color. Relat- ing to color.

I am now come to the third part of painting, which is called the chromatick, or colouring.

DryderCs Dufremoy.

Relating to a certain species of ancient mu- sic, now unknown.

It was observed, he never touched his lyre in such a truly chromatick and enhannonick manner.

Arbuthnot and Pope.

CHROMATIC, a kind of music, which pro- ceeds by several semi-tones in succession. For this denomination several causes are assigned, of which the following appears to be the most satis- factory. Xpw/ia may signify that shade of a co- lor by which it melts into another, or what the French call nuance. It this sense it will apply to semi-tones, which, being the smallest intervals allowed in the diatonic scale, will most easily run one into another. To find the reasons assigned by the ancients for this denomination, and the various divisions of the chromatic species, the reader may have recourse to the same article in Rousseau's Musical Dictionary. At present, that species consists in giving such a procedure to the fundamental bass, that the parts in the harmony, or at least some of them, may pro- ceed by semi-tones, as well in rising as descendr

ing ; which is most frequently found in the mi- nor mode, from the alteration to which the sixth and seventh note are subjected, by the nature of the mode itself. The successive semi-tones used in the

chromatic species are rarely of the same kind; but alternatively major and minor, that is to say, chromatic and diatonic : for the interval of a minor tone contains a minor or chromatic semi-tone, and another which is major or diato- nic; a measure which temperament renders common to all tones; so that we cannot proceed by two minor semi-tones which are conjunctive in succession, without entering into the enhar- monic species; but two major semi-tones twice follow each other in the chromatic order of the scale. The most certain precedures of the fundamental bass to generate the chromatic ele- ments in ascent, is alternately to descend by thirds and rise by fourths, whilst all the chords carry the third major. If the fundamental bass proceeds from dominant to dominant by perfect cadences avoided, it produces the chromatic in descending. To produce both at once, inter- weave the perfect and broken cadences, but at the same time avoid them. As at every note in the chromatic species one must change the tone, that succession ought to be regulated and limited to prevent deviation. For this purpose the space most suitable to chromatic movements is be- tween the extremes of the dominant and the tonic in ascending, and between the tonic and the dominant in descending. In the major mode one may also chromatically descend from the dominant upon the second note. This transition is very common in Italy ; and, not- withstanding its beauty, begins to be a little too common amongst us. The chromatic species is admirably fitted to express grief and affliction : these sounds boldly struck in ascending, tear the soul. Their power is no less magical in descend- ing ; it is then that the ear seems to be pierced with real groans. Attended with its proper harmony, this species appears proper to express everything; but its completion, by concealing the melody, sacrifices a part of its expression ; and for this disadvantage, arising from the fulness of the har- mony, it can only be compensated by the nature and genius of the movement.

CHROMATIC, ENHARMONIC. See ENHARMONIC.

CHROMATICS. See OPTICS.

*CHROMIC ACID, in chemistry. This acid was discovered by Vauquelin, and was extracted from the lead ore of Siberia by means of carbonate of potash, which was afterwards separated by a more powerful acid. In this state it is a red or orange- colored powder, of a peculiar rough metallic taste, which is more sensible in it than in any other me- tallic acid. If this powder be exposed to the action of light and heat, it loses its acidity, and is con- verted into green oxide of chrome, giving out pure oxygen gas. The chromic acid is the first that *as been found to deoxygenate itself easily by the action of heat,*

and afford oxygen gas by this simple operation. It appears that several of its properties are owing to the weak adhesion of a part, at least, of its oxygen. The green oxide of chrome cannot be brought back to the state of an iicid, unless its oxygen be restored by treating it with some other acid.

The extraction of chromic acid from the French ore is performed by igniting it with its own weight of nitre in a crucible. The residue is lixiviated with water, which being then filtered, contains the chromate of potash. On pouring into this a little nitric acid, and muriate of bary- tes, an instantaneous precipitate of the chromate of barytes takes place. After having procured a certain quantity of this salt, it must be put in its moist state into a capsule, and dissolved in the smallest possible quantity of nitric acid. The barytes is to be then precipitated by very dilute sulphuric acid, taking care not to add an excess of it. When the liquid is found by trial to con- tain neither sulphuric acid nor barytes, it must be filtered. It now consists of water, with nitric and chromic acids. The whole is to be evapo- rated to dryness, conducting the heat at the end so as not to endanger the decomposition of the chromic acid, which will remain in the capsule under the form of a reddish matter. It must be kept in a glass phial well corked.

The chromic acid is soluble in water, and crystallises, by cooling and evaporation, in long- ish prisms of a ruby red. Its taste is acrid and styptic. Its specific gravity is not exactly known ; but it exceeds that of water. It powerfully red- dens the tincture of turnsole.

It readily unites with alkalis, arid is the only acid that has the property of coloring its salts, whence the name of chromic has been given it. If it be strongly heated with charcoal, it grows black, and passes to the metallic state without melting.

Of the acids, the action of the muriatic on it is the most remarkable. If this be distilled with the chromic acid, by a gentle heat, it is readily converted into chlorine. It likewise imparts to it by mixture the property of dissolving gold ; in which the chromic resembles the nitric acid.

CHROMIUM, xpw/ui, color, in chemistry and metallurgy, a metal discovered by the celebrated Vauquelin in 1797, and so called from its power of coloring all its combinations. It may be ex- tracted either from the native chromates of lead or iron. The brown chromate of iron, which is usually employed, is best acted upon by nitrate of potash. As this metal belongs more to the labo- ratory of the chemist

than to any branch of arts or manufactures, we have treated on it at length under the article CHEMISTRY, to which we therefore re- fer the reader.

CHRO'NICAL, adj. > –

CHRO'NICK. \ From XPovoc, time.

A chronical distemper is of length ; as dropsies, asthmas, and the like. Quincy.

Of diseases some are chronical, and of long dura- tion; as quartane agues, scurvy, wherein we defer the cure unto more advantageous seasons.

Rrowne's Vulgar Errours.

The lady's use of these exce'lencies is to divert the old man when he is out of the pangs of a chronical dis- temper. Spectator.

CHRO'NICLE, n. s.) Fr. chronique, from

CHRO'NICLER, n. s. $ xpovof, time. A re- gister or account of events in order of time. A history. To register ; to record. A historian ; one that keeps up the memory of things past.

This to rehearse, should rather be to chronicle times than to search into reformation of abuses in that realm.

Spenter.

CHRONOLOGY.

6G3

I do herein rely vpon these bards, or Irish chroni- cler*. Id. You lean too confidently on those Irish chronicles, which are most fabulous and forged. Id. on Ireland. This custom -was held by the Druids and bards of our ancient Britons, and of latter times by the Irish chroniclers, called rimers.

Raleigh's History of the World. If from the field I should return once more, I and my sword will earn my chronicle.

Shakspeare. Antony and Cleopatra. To suckle fools, and chronicle small beer.

Id. Othello.

I am traduced by tongues, which neither know My faculties nor person, yet will be The chronicles of my doing. Shakspeare,

Here gathering chroniclers, and by them stand Giddy fantastick poets of each land. Donne.

The bloody Scottish chronicle read o'er, Shewed him how many kings in purple gore Were hurled to hell by cruel tyrants lore.

Marvell.

Apostolizing from our arts, and us

To turn the chronicler to Sparticus. Id.

I give up to historians the generals and heroes

which croud their annals, together with those which

you are to produce for the British chronicle. Dryden.

I shall be the jest of the town ; nay, in two days,

I expect to be chronicled in ditty, and sung in woeful

ballad. Congreve.

CHRONICLES, BOOKS OF, canonical writings of

the Old Testament. It is uncertain whether the

Books of Kings or Chronicles were written first,

as each refer to the other. The latter, however, are

often more full and comprehensive than the former.

Whence the Greek interpreters call these two

books TlapaXeairoiJitva, Supplements, Additions,

because they contain some circumstances which

are omitted in the other historical books. The

Jews make but one book of the Ohrormlat. ⬛⬛-*

der the title of Dibre-Haiamim, i e. Journals, or Annals. Ezra is generally believed to be the author of these books. It is certain they were written after the end of the Babylonish captivity and the first year of the reign of Cyrus, of whom mention is made in the last chapter of the second book. They are an abridgment of all the sacred history, from the beginning of the Jewish nation to their first return from the captivity taken out of those books of the Bible which we still have, and out of other annals which the au- thor had then by him. The design of the writer was to give the Jews a series of their history. The first book relates to the rise and propagation of the people of Israel from Adam, and gives j►► punctual and exact account of the reign of David. The second book sets down the progress and end of the kingdom of Judah, to the very year of their return from the Babylonish captivity.

CIIRO'NOGRAM, n. s. Xpoj>oc time, and ypcz0w to write. An inscription including the date of any action. Of this kind the following is an example :

Gloria lausque Deo, sxCLorVM in sascFla sunto.

A chronogrammatieal verse, which includes not only this year,, 1660, but numerical letters enough to reach above a thousand years further, until the year 2867.

Howel.

CHRONOGRAMMA'TICAL, adj. From chronogram. Belonging to a chronogram. See the last example.

CHRONOGRA'MMATIST, n. s. From chro- nogram. A writer of chronograms.

There are foreign universities, where, as you prais►► a man in England for being an excellent philosopher, or poet, it is an ordinary character to be a great chro- nogrammatist. AddisoH.

CHRONOLOGY

CHRONO'LOGY, n. s. \ Xpovoc time, and CHRONO'LOGER, n. s. I Xoyof doctrine. ►►► CHRONOLO'GICAL, adj. >The science of CHRONOLO'GICALLY, adv. i computing and ad CHRONO'LOGIST, n. s. J justing the periods of time ; as the revolution of the sun and moon : and of computing time past, and referring each event to the proper year. The derivations bear so evident a relation to every part of this defini- tion, that to explain them is unnecessary.

Thus much touching the chronological account of some times and things past, without confining my- self to the exactness of years.

Hole's Origin of Mankind.

According to these chronologists, the prophecy of the Rabbin, that the world should last but six thousand years, has been long disproved.

Browne's Vulgar Errows.

And when the measure of the year not being so perfectly known to the ancients, rendered it very dif- ficult for them to transmit a true chronology to suc- ceeding ages. Holder on Time. Chronologers differ among themselves about most great epochas. Id. All that learned noise and dust of the chronologist i wholly to be avoided. Locke on EdiKation.*

*CHRONOLOGY, as the science which discourses upon time, for our assistance in the knowledge of history, might be expected to be of easy at- tainment, and to be rather a topic of useful, occasional reference, ' as men set their watches by a regulator,' than a separate study of much importance. The truth, however, is far other- wise. Upon no science ought the student to enter with a greater anticipation of difficulties : pro- portionably to its importance, we know of none so much neglected ; none in which the best autho- rities differ more among themselves. ' The answer of a great man,' quoted by Locke, * to one who asked him what time was ? Si non rogas intelligo,' which amounts to this, ' the more I set myself to think of it, the less I understand it,' might, therefore, with great propriety, be transferred to a similar question respecting chro- nology. The reason of this, perhaps, on reflec- tion, is not very difficult to divine. Until history assumed a definite and regular form, this assist- ant study was not needed ; and until astronomi- cal observations were made with some kind of accuracy, and properly recorded, it could not be pursued. In the most ancient and difficult*

*periods of history, therefore, we find the greatest
وا want of modern accuracy, and some of our most important discoveries in the arts and sciences, as a foundation of this science. Nor is it enough to say they did not exist; the observations that ववव were made must be investigated ; the best pos- sible scientific data explored and*

harmonised, and the records of all ancient nations examined and compared. Without leading points and dates, history is undistinguishable from fables ; and thus have we evinced, as we apprehend, the absolute and peculiar necessity for a systematic study of this important sister-science.

It is generally divided into two parts ; the first of which is technical, and treats of the proper measurement of time, and its divisions ; the se- cond historical, fixing the dates of the events recorded in history, and ranging them in the order in which they happened.

The ancient heathen poets, as we should expect, appear to have been entirely unacquainted with it ; neither Homer nor Hesiod mention anything like a formal calendar in any part of their writ- ings. The only measurement of time in those early periods was by the seasons, the revolutions of the sun and moon; and many ages seem to have elapsed before the mode of computation by dating events came into general use. Several centuries intervened between the era of the Olym- pic games and the first histonans ; and several more between these and the first authors of chro- nology.

When time first began to be reckoned, we find its measures very indeterminate. The succession of Juno's priestesses at Argos served Hellanicus for the regulation of his narrative ; while Epho- rus reckoned his matters by generations. Even in the histories of Herodotus and Thucydides, we find no regular dates for the events recorded. No effort appears to have been made to esta- blish a fixed era until the time of Ptolemy Philadelphus, who attempted it by comparing and correcting the dates of the olympiads, the kings of Sparta, and the succession of the priest- esses of Jnno at Argos. Eratosthenes and Apollodorus digested the events recorded by them, according to the succession of the olym- piads and of the Spartan kings. The uncer- tainty of the measures of time in the most early periods, renders the histories of those times equally uncertain ; and, even after the invention of dates and eras, we find the ancient historians rery inattentive to them, and inaccurate in their computations. Frequently their eras and years were reckoned differently, without their being sensible of it, or at least without giving the rea- der any information concerning it ; a circum- stance which has rendered the fragments of their works, now remaining, of very little use to pos- terity.

The Chaldean and Egyptian writers are gene- rally acknowledged to be fabulous ; and Strabo acquaints us, that Diodorus Siculus, and the other early historians of Greece, were ill informed and credulous.

Hence the disagreement among the ancient historians, and the extreme confusion and contradiction we meet with on comparing their works. Hellanicus and Acusilaus dis- agreed about their genealogies; the latter re-

jected the traditions of Ilesiod. Timseus accused Ephorus of falsehood, and the rest of the world accused Timaeus. The most fabulous legends were imposed on the world by Herodotus ; and even Thucydides and Diodorus, generally ac- counted able historians, have been convicted of error. The chronology of the Latins is still more uncertain. The records of the Romans were de- stroyed by the Gauls ; and Fabius Pictor, the most ancient of their historians, was obliged to borrow the greatest part of his information from the Greeks. In other European nations the chronology is still more imperfect, and of a later date ; and even in modern times, a con- siderable degree of confusion and inaccuracy has arisen from want of attention in the histo- rians, to ascertain the dates and epochs with precision.

Tt is obvious, therefore, how necessary a pro- per system of chronology must be for the right understanding of history, and likewise how very difficult it is to establish such a system. To this important point, however, several learned men have directed their attention, particularly Tulius Africanus, Eusebius of Caesarea, George Syncellus, John of Antioch, Denis Petau, Clu- vier, Calvisius, Usher, Simson, Marsham, Sir Isaac Newton, Bishops Beveridge and Clayton, Jackson, Blair, Playfair, and Dr. Hales.

*The last of these able writers has indeed but too well corroborated our introductory remarks as to the difficulties of this science, and the ge- neral uncertainty of many of its principal topics of enquiry. In every system of chronology, as he observes, the two grand eras of the Creation of the world, and the Nativity of Christ, must be the punctastantia, the fixed points, or standards, by reference to which all subordinate epoch *, eras and periods, are to be adjusted, such as those of the deluge, the exodiad of the Jews from Egypt, the reign of Sesostris, the destruction of Troy, the overthrow of Nineveh, the foundation of Solo- mon's temple, foundation of Rome, era of the olympiads, the eclipse of Thales, &c. And, to show the singular state of discordance in which the testimonies of different chronologers will be found, he subjoins in his New Analysis of Chrono- logy, vol. i. p. 3. ; a list of 1 20 different opinions of the epoch of the creation, as compared with the nativity, varying in their extremes no less than 3268 years. Dr. Hales himself fixes that event B. C. 5411, differing from the Usherian, or commonly received chronology, 1497 years.*

We insert this curious table at the close of our article : even the epochs of the nativity, as com- pared with the era of the foundation of Rome, vary according to the following celebrated systems no less than ten years.

EPOCHS OF THE NATIVITY.

u. c. B. c.

Tillemont, Mann, Priestley . . . 747 7

Kepler, Capellus, Dodwell, Pagi . 748 6

Chrysostom, Petavius, Prideaux, Play- fair, Hales ” 749 .5

Sulpitius Severus, Usher 750 4

Irenaeus, Tertullian, Clemens Alex. Eusebius,, Syncellus, Baronius,

Calvisius, Vossius 751 3

CHRONOLOGY.

f/65

tJ. C. B. C.

Epiphanius, Jerome, Orosius, Bede,

Salian, Sigonius, Scaliger ... 752 7

Chronicon Alexand. Dionysius, Lu- ther, Labbaeus 753 1

A. D.

Aerwart 754 1

Paul of Middleburgh 755 2

Lydiat 756 3

Chronology may be said to be founded : 1 . On astronomical observations, particularly of the eclipses of the sun and moon, combined with the calculations of the eras and years of different nations. 2. The testimonies of credible authors. 3. Those epochs in history, which are so well attested and determined, that they have never been controverted. 4. Ancient medals, coins, monuments, and

inscriptions. None of these, however, can be sufficiently intelligible without an explanation of the first part, which considers the divisions of time, and of which therefore we shall treat in the first place.

.PART I.

OF THE DIVISIONS OF TIME, OR TECH- NICAL CHRONOLOGY.

SECT. I. ††† OF THE COMPUTATIONS AND DI- VISIONS OF THE DAY.

The most obvious division of time is de- rived from the apparent revolutions of the celestial bodies, particularly of the sun, which, by the vicissitudes of day and night, become evident to the most barbarous and ignorant nations. In strict propriety of speech the word day signifies only that portion of time during which the sun diffuses light on any part of the earth ; but, in the most comprehensive sense, it includes the night also, and is called by chro- nologers a civil day ; by astronomers a natural, and sometimes an artificial day.

By a civil day is meant the interval between the sun's departure from any given point in the heavens and his return to it ; with as much more as answers to his diurnal motion eastward, which is at the rate of fifty-nine minutes and eight seconds of a degree, or three minutes and fifty- seven seconds of time. It is also called a solar day, and is longer than a sidereal one, insomuch that, if the former be divided into twenty-four equal parts or hours, the latter will consist only of twenty-three hours, fifty-six minutes. The apparent inequality of the sun's motion likewise, arising from the obliquity of the ecliptic, pro- duces another inequality in the length of the days : and hence the difference betwixt real and apparent time, so that the apparent motion of the sun cannot always be a true measure of duration. Those inequalities, however, are capable, of being reduced to a general standard, which furnishes an exact measure throughout the year ; whence has arisen the difference between mean and appa- rent times. See ASTRONOMY, Index.

The commencement and conclusion of the day have been very differently reckoned by different nations. The beginning of the day was counted from sunrise by the Babylonians, Syrians, Per-

sians, and Indians. The civil day of the Jews was begun from sunrise, and their sacred one from sunset ; the latter mode of computation

being followed by the Athenians, Arabs, ancient Gauls, and other European nations ; the Rev. Mr. Campbell found some native tribes of the southern regions of Africa adopting the same mode. According to some, the Egyptians began their day at sunset, while others are of opinion that they computed from noon or from sunrise ; Pliny informs us that they computed their civil day from one midnight to another. It is pro- bable, however, that they had different modes of computation in different provinces or cities. The Ausonians, the most ancient inhabitants of Italy, computed the day from midnight ; a mode adopt- ed in the second century by Hipparchus : after- wards by Copernicus, and other astronomers, and now in common use among ourselves. The Astro- nomical day, however, as it is called, on account of its being used in astronomical calculations, commences at noon, and ends at the same time the following day. The Mahommedans reckon from one twilight to another.

Dr. Hales observes, that the 133 31ˆ evening morning, of the Jews (used by Daniel to denote a civil day in his celebrated prophecy, chap. viii. 14,) was probably adopted by the Greeks. Hence Hesiod represents the occultation of the Pleiades as lasting VVKTO.G TZ Kai ijˆiara Tfffffapaicovra, forty nights and days, i. e. calendar days ; and Dr. H. regards the Greek compound voxnptpov, as denoting the same mode of reckoning. We appear also to have retained this mode from our Celtic ancestors, in the English seven-night, or se'nnight, and fortnight ; and the French in their anuit (old French), ' to-day.' ' Chro- nologers,' he adds, have generally supposed that the civil day began at sunset, according to pri- mitive usage. But this is a mistake : it did not begin till night-fall : till the end of day-light, and commencement of twilight, at the first ap- pearance of the stars after sunset ; which begins as soon as the sun has arrived at a depression of twelve degrees below the horizon ; when stars of the first magnitude begin to shine. But this does not take place till uear an hour after sunset, in the temperate zones. Nor is it full night till the sun is depressed about eighteen degrees ; when the smallest stars become visible; and star-light shines out in all its lustre, as soon as the milky way makes its appearance, at about twenty degrees of depression. The evening twi- light, therefore, or nightfall, is the natural limit between day and night; as the morning twilight, or dawn, or day-break, is, on the other hand, the natural limit between night and day.

' On this astronomical distinction was founded the Jewish law. ' From evening unto evening ye shall hallow your sabbath.' Levit. xxiii, 32. That is from evening twilight until evening twi- light again, For the most skilful commentators assure us, that 'the sabbath among

the Jews was always reckoned to begin from the first appear- ance of the stars on Friday evening, and to end at their appearance again on ti□□i day we call Saturday.' □□□ West on the Resurrection, p. 85. And this satisfactorily explains a difficult passage expressing the time when our Lord's interment

was finished.

parov

preparation-day (Friday), and the sabbath was

Kcri ly/wpa ijv irapaffKtvrt, Kai ffafi the whole of Italy, a few provinces only excepted, Luke, xxiii. 54. 'And it was notwithstanding several attempts to suppress it

The subdivisions of the day have not been less

going to dawn,' i. e. at the dawn of night, or various than the computations of the day itself.

evening twilight. Our public translation, 'and the sabbath drew on/ gives the meaning cor- rectly, but not a literal translation of the phrase.'

We add another valuable remark of the same kind from this learned author : □□□

'The Jews reckoned two evenings; the former began at the ninth hour of the natural day, or the third, afternoon ; the latter at the eleventh

The most obvious division, and which could at no time, nor in no age, be mistaken, was that of morning and evening. In process of time the two intermediate points of noon and midnight were determined ; and this division into quarters was in use long before the invention of hours.

The first subdivision of these quarters pro- bably was that of the Jews and Romans, who di- vided the day and night into four vigils or watches.

hour. Thus the paschal lamb was required to The first began at sun- rising, or six in the morn-

be sacrificed, D'D"lJ?nf3, 'between the evenings.' Exod. xii. 6; Levit. xxiii. 4; which is admira- bly explained by Josephus, Zlaff^a, ००० icaS r\v Svafft ptv airo ivvaTtjf wpac l*००X9l ^vStKarijs- The passover, ००० on which day they sacrificed from the ninth hour until the eleventh. ००० Bell.*

ing ; the second at nine ; the third at twelve ; and the fourth at three in the afternoon. In like man- ner the night was divided into four parts ; the first beginning at six in the evening, the second at nine, the third at twelve, and the fourth at three in the morning. The first of these divisions was

Jud. 6, 9, 3. p. 1291. Hence the law requiring called by the Jews the third hour of the day ; the

*_ j A| ००० .i _r _ -i_ ००० i -i_ ,०० * .1 f _i*

the paschal lamb to be sacrificed, 'at even, at the going of the sun,' Deut. xvi. 6, expressed

second the sixth ; the third the ninth ; and the fourth the twelfth,and sometimesthe eleventh. The learned

both" evenings. It is truly remarkable, that author, already quoted, however seems to prove

' Christ our passover,' expired at the ninth hour, and was taken down from the cross at the eleventh, or sun-set. Matt, xxvii. 46, 57.

There was a prophetic use of the word day among the Jews, which does not strictly, per- haps, belong to chronological science, but which

that three divisions of the day, answering to the morning, noon, and evening of the pious psalmist, Ps. liv. 17, and three watches of the night, was the primitive division. He quotes the scriptural phrases, the first or beginning of watches, Lam. xi. 19 ; the middle watch, Judges vii. 19; and the

may furnish data finally important to the under- morning watch, Exod. xiv. 24. The last, we standing of the prophecies, Ezek. iv. v. vi. God may observe is the first place of scripture in here expressly expounds the day to signify a which a subdivision of this kind is mentioned,

and was as probably an Egyptian as a Jewish division of time.

Calmet renders it the watch of day-break, which he says, as the Jews de- parted from Egypt in the vernal equinox, would answer to our four o'clock in the morning. See also 1 Sam. xi. 11. Precisely with this triple division of the night agreesthe rema rk of

year ; and commentators have thus generally interpreted the prophetic periods, Deut. viii. 14 : xii. 11, 12; and Rev. xi. 3. We lately thought also the suggestion of a learned Jew worth con- sidering, whether the threatening, Gen. xi, 17. 'In the day that thou eatest thereof, thou shall surely die,' might not intend the unique period of a thousand years, within which the life of Homer

Adam, and all the longest-lived of the human Acpa & Sr{ °^^ ,rapa.x,,⬛⬛v St TrXtwv wK, race terminated . fuv $vo uotpawv, TOITO.TI) S'tri uoipa \t\tnrTcu.

A singular method of computation takes place

in Italy. The civil day commences at some in- < The stars are now far advanced ; more than two determinate point after sunset; whence the time of parts of the night are passed ; a third part only noon varies with the season of the year. At the is left.' The introduction of the fourth watch summer solstice, the clock strikes sixteen at noon, has been ascribed to the stricter military disci- and nineteen at the time of the winter solstice, pline of later times : it was clearly adopted both

Thus the length of each day differs by several minutes from that immediately preceding or fol- lowing it. This variation occasions a considerable difficulty in adjusting their time by clocks. It is accomplished, however, by a sudden movement which corrects the difference when it amounts to a quarter of an hour ; and this it does sometimes

in the Roman and Jewish mode of dividing the night in the time of Christ, who accurately de- scribes the four watches as oty, the late watch ; fitovvKTiu, midnight; aXdcropo^ximac, the cock- crowing, and Trpwt, the early or morning watch. Mark xiii. 35. The Jews say that they have derived the hours of prayer, i. e. at morning,

at the end of eight days, sometimes at the end of noon, and evening, from the patriarchs ; the first

fifteen, and sometimes at the end of forty. In- formation of this is given by a kalendar, which announces, that from the 16th of February, for instance, to the 24th, it will be noon at a quarter past

eighteen ; from the 24th of February to the 6th of March, it will be uoon at eighteen o'clock precisely; from the 1st of June to the 13th of July, the hour of noon will be at sixteen o'clock ; on the 13th of July it will be at half an hour after sixteen ; and so on -throughout the different

from Abraham, the second from Isaac, and the third from Jacob. Vid. Ludor. Capell. in Acti iii. 1. Hence the Papists have borrowed their canonical hours.

Some learned authorities inform us, that the primary mode of dividing the day was by the measurement of the human shadow. Thus, when their shadow was of a certain length, they break- fasted ; when of a certain length they dined ; and when of a certain length they supped ; and that

months of the year. This absurd method of hence arose the use of the dial, &c. See Brown's measuring the day has long continued, throughout Antiquities of the Jews, v. xi. 387. Anothev

division in use, among these nations, as well as the Greeks, was that which reckoned the first quarter from sunset to midnight; the second from midnight to sunrise ; the third, or morning watch, from morning to noon; and the fourth from noon to sunset.

The more minute subdivision of the day into hours is a comparatively modern invention ; but at what time it first commenced is uncertain. It does not appear from the writings of Moses that he was acquainted with it, as he mentions only the morning, mid-day, evening and sunset. Hence we may conclude, that the Egyptians at that time knew nothing of it, as Moses was well skilled in their learning. According to Herodo- tus, the Greeks received the knowledge of the twelve hours of the day from the Babylonians. It is probable, however, that the division was ac- tually known and in use before the name hour was applied to it ; as Censorinus informs us that the term was not made use of in iiorne for 300 years after its foundation ; nor was it known at the time the XII. tables were constructed. In confirmation of the testimony of Herodotus, we have the first mention of hours in the Bible by the prophet Daniel, c. iii. 6, while a captive in Babylon. See also Dan. iv. 19, 33, &c.

The eastern nations divide the day and night in a very singular manner ; the origin of which is not easily discovered. The Chinese have five watches in the night, which are announced by a certain number of strokes on a bell or drum. By the ancient Tartars, Indians, and Persians, the day was divided into eight parts, each of which contained seven hours and a half. On the coast of Malabar the day is divided into six parts, called najikas ; each of these six parts is subdi- vided into sixty others, called venaigas ;. the ve- naiga into sixty birpes ; the birpe into ten keni- kans ; the kenikan into four mattires ; the mattire into eight kaunimas or caignodes; which divi- sions, according to our mode of computation, stand as follows :

Najika, 24 hours. Venaiga, 24 rain. Birpe, 4 sec. Kenikan, f sec. Mattire, -fa sec. Caignode, ˆ5 sec.

The Chinese day begins at midnight, and ends with the midnight following. It is divided into twelve hours, each distinguished by a particular name and figure. They also divide the natural day into 100 parts, and each of these into 100 minutes ; so that the whole contains 10,000 mi- nutes. In the northern parts of Europe, where only two seasons are reckoned in the year, the divisions of the day and night are considerably larger than with us. In Iceland the twenty-four hours are divided into eight parts ; the first of which commences at three in the morning ; the second at five ; the third at half an hour after eight ; the fourth at eleven ; the fifth at three in the afternoon ; the sixth at six in the evening ; the seventh at eight; and last at midnight. In the eastern part of Turkestan the day is divided into twelve equal parts, each of which is distin- guished by the name of some animal. These are subdivided into eight keh; so that the whole twenty-four hours contain ninety-six keh.

The modern divisions of the hour in use among us are into minutes, seconds, thirds, fourths, Sec. each being a sixtieth part of the former subdivi-

sion. By the Chaldaeans, Jews, and Arabians, the hour is divided into 1080 scruples : so that one hour contains sixty minutes, and one minute, twenty-eight scruples. The ancient Persians and Arabs were likewise acquainted with this division ; but the Jews are so fond of it, that they pretend to have received it in a supernatural manner. ‘ Issachar,’ say they, ‘ ascended into heaven, and brought from thence 1080 parts for the benefit of the nation.’

The division of the day being ascertained, it soon became an object to indicate in a public manner the expiration of any particular hour or division; as without some general knowledge of this kind, it would be in a great measure impos- sible to carry on business. The methods of announcing this have been likewise very dif- ferent.

Among the Egyptians it was customary for the priests to proclaim the hours like watchmen among us. The same method was followed at Rome ; nor was there any other method of know- ing the hours until A. A. C. 293, when Papirius Cursor first set up a sun-dial in the capitol. A similar method is practised among the Turks, whose priests proclaim from the top of their mosques, the cock-crowing, day-break, mid-day, three o’clock in the afternoon, and twilight, be- ing their appointed times of worship. As this mode of proclaiming the hour could not but be very inconvenient, as well as imperfect, the intro- duction of an instrument which every one could have in his possession, and which might answer the same purpose, must have

been considered as a valuable acquisition. One of the first of these was the clepsydra or water clock. See CLEPSYDRA. Various kinds of clepsydrae were in use among the Egyptians at a very early period. The in- vention of the instrument is attributed to Thoth or Mercury, and it was afterwards improved by Ctesibius of Alexandria. It was a common measure of time among the Greeks, Indians and Chaldaeans, as well as the Egyptians, but was not introduced into Rome till the time of Scipio Nasica. The Chinese astronomers have long made use of it; and by its means have divided the zodiac into twelve parts; but it is a very in accurate measure of time, varying, not only ac- cording to the quantity of water in the vessel, but according to the state of the atmosphere. The clepsydra was succeeded by the gnomon or sun-dial. This, at first, was no more than a stile erected perpendicularly to the horizon ; and it was a long time before the principles of it came to be thoroughly understood. The inven- tion is with great probability attributed to the Babylonians, from whom the Jews received it before the time of Ahaz, when we know that a sun-dial was already erected at Jerusalem.

The Chinese and Egyptians were also ac- quainted with the use of the dial at a very early period, and it was considerably improved by Anaximander or Anaximenes ; one of whom is for that reason looked upon to be the inventor. Various kinds of dials, however, were invented and used in diflf? ent nations long before their in troduction at Rome. Papirius Cursor erected the first ; and, thirty years after, Valerius Mes- sala brought one from Sicily, which was used in

Rome for no less than ninetv-nine years, though constructed for a Sicilian latitude, and conse- quently incapable of showing the hours exactly in any other place ; but at last another was con- t structed by L. Philippus, capable of measuring time with greater accuracy.

It was long after the invention of dials before mankind began to form any idea of clocks ; nor is it well known at what period they were first invented. A clock was sent by Pope Paul I. to Pepin king of France, which at that time was supposed to be the only one in the world. A very curious one was also sent to Charles the Great from the caliph Haroun Alraschid, which the historians of the time speak of with surprise and admiration : but the greatest improvement was that of Mr. Huygens, who added the pendu- lum to it. Still, however,

the instruments for di- viding time were found to be inaccurate for nice purposes. The expansion of the materials by neat, and their contraction by cold, would cause a very perceptible alteration in the going of an instrument in the same place at different times of the year, and much more if carried from one climate to another. Various methods have been contrived to correct this ; which indeed can be done very effectually at land by a certain con- struction of the pendulum ; but at sea, where a pendulum cannot be used, the inaccuracy is of consequence much greater : nor was it thought possible to correct the errors arising from these causes in any tolerable degree, until the inven- tion of Harrison's time-piece. This has since been greatly improved, and time is now very ac- curately measured at sea See CLOCK-MAKING, and WATCHES.

SECT. II ??? OF WEEKS.

We now proceed to the larger divisions of time, which more properly belong to chronology, and which must be kept on record, as no instru- ment can be made to point them out. Of these the division into weeks of seven days is one of the most ancient, and probably took place from the creation of the world. Some, indeed, are of opinion that the week was invented some time after for the more convenient notation of time ; but whatever may be in this, we are certain that it is of the highest antiquity ; being adopted in the Mosaic narrative of the creation, and that even the most rude and barbarous nations have used it. The ancient Greeks, however, were ignorant of this division ; and M. Goguet informs us that they were almost the only nation who were so. By them the month of thirty days was divided into three times ten, and the days of it named ac- cordingly : thus the fifteenth day of the month was called the second fifth, or fifth of the second tenth ; the twenty-fourth was called the third fourth, or the fourth day of the third tenth. This method was in use in the days of Hesiod, and it was not until several ages had elapsed that the use of weeks was received into Greece from the Egyptians.*

The week was likewise unknown to the ancient Persians and to the Mexicans ; the former having a different name for every day of the month, and the latter making use of a cycle of thirteen days.

But almost all other nations adopted the week of seven days ; and it is remarkable that cne day in the week has always been accounted sacred by most nations. Thus Saturday was consecrated to pious purposes among the Jews, Friday by the Turks, Tuesday by the Africans of Guinea, and Sunday by the Christians. Hence also the

ori- gin of Feriffi or holidays, frequently made use of in Systems of Chronology.

Chronologers have remarked that the week seems a natural measure of time furnished by the four principal phases or quarters of the moon. Dr. Hales, however, insists that it was derived from a divina institution, at the creation, and handed down by primitive tradition. It seems also that Noah adopted it, Gen. viii. 10 ††† 12, and that it was known to the patriarchs, Gen. xxix. 7. But our author rests the proof of it principally on the singular fact that the word sabbat or sabbata denoted a week among the Syrians, Arabians, Ethiopians, and Persians, from a very remote period ; and quotes the following ancient Syriac calendar of the week (expressed in the Chaldee alphabet) from Michaelis's Intro- duction to the New Testament, by Dr. Marsh.

One of the Sabbath Sunday.

Two of the Sabbath Monday. Three of the Sabbath Tuesday. Four of the Sabbath Wednesday.

Five of the Sabbath Thursday.

Six of the Sabbath Friday.

The SABBATH. Saturday.

All the evangelists seem, as Dr. Hales observes, to have used this calender, both in the word

The Jews had also weeks of years : a Sabba- tical year, which released all debtors, something in the manner of our statute of limitations ; and a week of seven times seven, or forty-nine years, which brought about their jubilee, or general year of return to the original inheritance of their ancestors, Lev. xxv. 8. Seventy of these weeks of years we know were assigned by the angel of God to Daniel as determined to transpire from the event of the decree of Artaxerxes, Ezra vii. 2, to the appearance of the Messiah. Christians are well aware of the importance of this pro- phecy (see onward) ; but we lately heard a re- spectable scholar of the Jewish persuasion con- tend that these were not weeks of years, but weeks of jubilees, or of fifty years ; equivalent therefore to 3500 years, which reckoned, as he stated, from the birth of Edom, the great enemy of the Jews, would bring about a period ending, according to their chronology, about twenty- three years from the present time (1826) a date at which many of them confidently look for- ward to the

appearance of the Messiah.

CHRONOLOGY

SECT. III. ††† OF MONTHS.

The next division of time is that of months, lliis appears to have been, if not coeval with the creation, at least in use before the flood. As this division is naturally pointed out by the revolution of the moon, the months of all nations were ori- ginally lunar ; a fact confirmed by ihesterms .TV iarah, signifying both the month and the full moon in Hebrew ; firiv, the month, and firjvr], the moon, Greek ; whence, according to the best lexicographers, mensis, Lat. monat, Ang.-Sax., and our English, month.

The division of the year into twelve months, as being founded on the number of full revolu- tions of the moon in that time, has also been very general. Sir John Chardin, however, informs us that the Persians divided the year into twenty- four months; and the Mexicans into eighteen months of twenty days each. The months gene- rally contained thirty days, or twenty-nine and thirty days alternately; though this rule was far from being without exception. The months of the Latins consisted of sixteen, eighteen, twenty-two, or thirty-six days; and Romulus gave his people a year of ten months, or 304 days.

Biblical months are clearly of three kinds; 1. In the time of the flood they seem to have con- sisted of thirty days each, for Moses reckons 150 days from the seventh day of the second month, to the seventh day of the seventh month, which forms an interval of exactly five months, of thirty days each The Egyptians and Greeks, it is well known, also used this month. 2. The moon takes 29 days,. 12 hours, and 44 minutes in passing from a point in which she is in a straight line with the sun, and returning to it again, or to her square or conjunction, as it is called. This odd time produced the alternate reckoning of twenty-nine or thirty days to the month above alluded to, or the mensis cava and the mensis plini. And thus Hesiod and Thales call the last day of the month rpujieaˆa, the thir- tieth ; and the year is represented by an ancient riddle of the Greeks : ‘ The father is one, the sons twelve ; to each belong thirty daughters ; half of them white, the other black ; and, though immortal, they all perish.’ 3. The first appear- ance of that luminary in the same quarter from month to month, was another mode of account- ing for the duration of this period of time : and critics are divided as to which of the last two methods of reckoning regulated the Jewish fes-

tivals. The one last-mentioned must clearly depend upon the state of the atmosphere, in part, and be therefore very uncertain.

*Ancient nations adopted various names for the
 ض ض months, and arranged them very differently. From this last circumstance arises the variety in the dates of the months ; for as the year has been reckoned from different signs in the ecliptic, nei- ther the number nor the quantity of months have been the same, and their situation has likewise been altered by necessary intercalations, which formed embolismal months, natural or civil. By the former the solar and lunar years are*

adjusted to one another ; and the latter arise from the defect of the civil year itself. The adar ot the Jews, which always consists of thirty days, i an example of the natural embolismal month.*

The Romans divided their months into kalends, riones, and ides ; which they had a singular method of reckoning backwards. See KALENDS. The 2d, 3d, 4th, 5th, 6th, and 7th of March, May, July, and October, were the nones of these months ; but in the other months were the 2d, 3d, 4th, and 5th days only. Thus tne 5th of January was its nones ; the 4th was pridie no- narum ; the 3d tertio nonarum ; and the 2d quarto. The ides contained eight days in every month, and were nine days distant from the nones. Thus the 15th day of these four months was the ides, but in the others the 13th ; the 12th was pridie iduum, and the llth tertio iduum. The ides were succeeded by the kalends; our 14th of January, for instance, being the 19th of, or be- fore the kalends of February; the 15th was the 18th of the kalends, and so on till the 31st of January, which was pridie kalendarum; and February 1st was the kalends.

In Europe the month is either astronomical or civil, i. e. measured by the motion of the heavenly bodies ; or specified by civil institutions. The astronomical months, being for the most part regulated by the motions of the sun and moon, are thus divided into solar and lunar, of which the former is sometimes also called civil. The astronomical solar months is the time which the sun takes up in passing through a sign of the ecliptic.

The lunar month is periodical, synodical, sidereal, and civil. The synodical lunar month is the time that passes between any conjunction ot' the moon with the sun and the conjunction follow- ing. It includes the motion of the sun eastward during that time ; so that a mean lunation consists of 29 d. 12 h. 44 m. 2s., 8921. The sidereal lunar month is the time of the mean revolution of the moon

with regard to the fixed stars. As the equinoctial points go backwards about 4 s. in the space of a lunar month, the moon must, in consequence of this retrocession, arrive at the equinox sooner than at any fixed star, and con- sequently the mean sidereal revolution must be longer than the mean periodical one. The latter consists of 27 d. 7 h. 43 m. 4 s., 6840. The civil lunar month is computed from the moon, to answer the ordinary purposes of life ; and as it would have been inconvenient, in the computa- tion of lunar months, to have reckoned odd parts of days, they have been composed of thirty days, or of twenty-nine and thirty alternately, as the nearest round numbers.

Twelve lunar months, being eleven days less than a solar year, Julius Caesar ordained that the month should be reckoned from the course of the sun, and not of the moon ; and that they should consist of thirty and thirty-one days al- ternately, February only excepted, which was to consist of twenty-eight days commonly, and of twenty-nine in leap years. We are indebted to Dr. Hales for the following Table of the Months of all the celebrated Ancient Nations

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SECT. IV. OF YEARS.

The highest natural division of time is into years. At first, however, it is probable that the course of the sun through the ecliptic would not be observed, but that all nations would measure their time by the revolutions of the moon. We are certain, at least, that the Egyptian year con- sisted originally of a single lunation ; though at length it included two or three months, and was determined by the stated returns of the seasons. As the eastern nations however, particularly the Egyptians, Chaldeans, and Indians, applied themselves very early to astronomy, they found, by comparing the motions of the sun and moon together, that one revolution of the former in- cluded above twelve of the latter. Hence a year of twelve lunations was formed, in every one of which were reckoned thirty days ; and hence also the division of the ecliptic into 360 degrees.

The luni-solar year, consisting of 360 days, was in use long before any regular intercalations were made; and historians inform us that the year of all ancient nations was luni-solar. Hero- dotus relates that the Egyptians first divided the year into twelve parts by the assistance of the stars, and that every part consisted of thirty days. The Thebans corrected this year by adding five intercalary days to it. The old Chaldean year was reformed by the Medes and Persians ; and some of the Chinese missionaries have informed us that the luni-solar year was also corrected in China ; that the solar year was ascertained in that country to very considerable exactness. The Latin year, before Numa's correction of it, consisted of 360 days, of which 304 were di- vided into ten months ; to which were added two private months not mentioned in the kalendar. Dr. Hales observes, more in detail, 'The primi- tive sacred year originally consisted of twelve months of thirty days each, or 360 days. This was in use before the deluge, as appears from Noah's reckoning five months, or 150 days, from the seventeenth of the second month, to the seventeenth day of the seventh month ; as ex- pressing the time of the rising of the waters ; and seven months and ten days more, till the waters were

dried up, and Noah and his family left the ark, after a residence therein of 370 days, or a year and ten days, till the seven-and-twen- tieth day of the second month of the ensuing year. Gen. vii. and viii.

This was also the original Chaldean year; for Berosus, in his History of the Antediluvian Kings of Babylonia, counted their reigns by sari, or decads of years ; and a sarus, as Alex- ander Polyhistor related (apud Syncell, p. 32), was 3600 days, or ten years, consisting each of 360 days.

'After the deluge this primitive form was handed down by Noah and his descendants to the Chaldeans, Egyptians, Phoenicians, Persians, Greeks, Romans, Indians, and Chinese; as is evident from the testimonies of the best and most ancient writers and historians.

' Diodorus Siculus relates, that, at the sepul- chre of Osiris, the Egyptian priests appointed to bewail his death, filled 360 milk-bowls every day, to denote the number of days in the primi- tive Egyptian year, used in his reign. And he

represents an ancient custom at Acanthe, neat Memphis, 'on the Libyan side of the Nile, for 360 priests to fetch water every day from the Nile, and pour it into a vessel full of holes, to represent the 360 days in continual flux or suc- cession. Diod. Lib. 1. p. 26, 109.

'The Egyptians attributed the invention of their year to the Phoenician Taaut, Thoth, or Hermes, the son of Misraim, who went with the first colony into Egypt, in the reign of Uranus, who lived in Phoenicia soon after the dispersion, and was a great astronomer, or a diligent observer of the risings and settings of the stars ; who discovered the year from the motion of the sun, and the months from the course of the moon, and was deified' after his death. Diod. Lib. 3.

' Diodorus Siculus, Plutarch, and Q. Curtius, relate that the Persian kings had 360 concu- bines, one for each day of the year; who went each in their turns to the king in the evening, and returned in the morning into the house of the women; as we learn from Herod. Lib. 3, 69; and from Scripture. Esth. ii. 12, 15.

'Harpocration, Suidas, and Julius Pollux relate, that, in the original constitution of Athens, the people were divided into four tribes, repre- senting the four seasons of the year; and these tribes into twelve wards, corresponding to the twelve months; and each ward consisted of thirty families, answering to the thirty days of each month; in all 360, as many as the days of the year. Suidas, voce

rtvvi)Tadi et Ttwˆra. This year, therefore, was introduced into Greece many ages before the arrival of Cecrops in Atti- ca, from Sais in Egypt; probably by the first settlers, the Javanians, or descendants of Ja- pheth; or by the old Pelasgi from Phoenicia.*

The first Latin and Roman year consisted of 360 days, as we learn from Plutarch, who says in his life of Numa, that, 'in the reign of Romu- lus, the months were very irregular, some not being reckoned twenty days, others had thirty- five days, and others more : the Latins not then understanding the difference between the solar and lunar year; but only providing for this one point, that the year should contain 360 days.'

' The Chinese year originally consisted of 360 days; as did also the Mexican, which they divided into eighteen months of twenty days each. Scaliger de Emend. Temp. p. 225.

' From this detail it is evident that the primi- tive year everywhere throughout the ancient world, consisted only of 360 days, for many ages after the deluge.'

The imperfection of this method of computing time is now very evident. The luni-solar year was about five days and a quarter shorter than the true solar year, and as much longer than the lunar. Hence the months could not long corres- pond with the seasons ; and even in so short a time as thirty-four years, the winter months would have changed places with those of summer. From this rapid variation, Playfair takes notice that a passage in Herodotus, by which the learned have been exceedingiy puzzled, may re- ceive a satisfactory solution, .viz. that ' in the time of the ancient Egyptian kings, the sun had twice arisen in the place where it had formerly

sot, and twice set where it had arisen.' By this he supposes it is meant, ' that the beginning of the year had twice gone through all the signs of the ecliptic ; and that the sun had arisen and set twice in every day and month of the year.' This, which some have taken for a proof of most ex- travagant antiquity, he further observes, might liave happened in 138 years only; as in that period there would be a difference of nearly two years between the solar and lunar year.

Such evident imperfections could not but produce a reformation every where ; and accord- ingly we find that there was no nation

which did not add a few intercalary days at certain in- tervals. We are ignorant, however, of the per- son who was the first inventor of this method. The Theban priests attributed the invention to Mercury or Thoth ; and it is certain that they were acquainted with the year of 365 days at a very early period. The length of the solar year was represented by the celebrated golden circle of Osymandyas, of 365 cubits circumference ; and on every cubit of which was inscribed a day of the year, together with the heliacal risings and settings of the stars. This monarch is sup- posed to have reigned in the eleventh or thirteenth century before the Christian era.

The Egyptian solar year being nearly six hours shorter than the true one, this inaccuracy, in time, produced another revolution ; some cir- cumstances attending which serve to fix the date of the discovery of the length of the year, and which, from the above description of the golden circle, we may suppose to have been made during the reign of Osymandyas. The inundation of the Nile was annually announced by the heliacal rising of Sirius, to which the reformers of the calendar adjusted the beginning of the year, sup- posing that it would remain immoveable. In a number of years, however, it appeared that their suppositions in this were ill-founded. By reason of the inequality above mentioned, the heliacal rising of Sirius gradually advanced nearly at the rate of one day in four years ; so that in 1461 years it completed a revolution, by arising on every succeeding day of the year, and returning to the ooint originally fixed for the beginning of the yeai.

This period, equal to 1460 Julian years, was termed the great Egyptian year, or canicular cycle. From the accounts we have of the time that the canicular cycle was renewed, the time of its original commencement may be gathered with tolerable certainty. This happened, ac- cording to Censorinus, A. D. 138. Reckoning backward, therefore, from this time for 1460 years, we come to A. A. C. 1322, when the sun was in Cancer, about fourteen or fifteen days after the summer solstice, which happened on July 5. The Egyptians used no intercalation till the time of Augustus, when the corrected Julian year was received at Alexandria by his order; but even this order was obeyed only by the Greeks and Romans who resided in that city ; the superstitious natives refusing to make any addition to the length pf the year, which had been sc long established among them.

At what, precise period the true year was ob- served to consist of nearly six hours more than

365 days, is quite uncertain. Though the piiestf of Thebes claim the merit of the discovery, He- rodotus makes no mention of it; neither did Thales, who introduced the year of 365 days into Greece, ever use any intercalation. Plato and Eudoxus are said to have obtained it as a secret from the Egyptians about eighty years after Herodotus, and to have carried it into Greece ; which showed that the knowledge of this form of the year was at that time recent, and confined to a few learned men.

The ancient Jewish year was luni-solar ; and we are informed by tradition, that Abraham pre- served in his family, and transmitted to his pos- terity, the Chaldean form of the year, consisting of 360 days ; which remained the same without any correction until the date of the era of Nabo- nassar. The solar year was adopted among them after their return from the Babylonish captivity ; but when subjected to the successors of Alexander in Syria, they were obliged to admit the lunar year into the calendar. To adjust this year to the course of the sun, they added at certain periods a month to Adar, and called it Ve-Adar. They composed also a cycle of nineteen years, in se- ven of which they inserted the intercalary month. This correction was intended to regulate the months in such a manner, as to bring the 15th of Nisan to the equinoctial point; and likewise the courses of the seasons and feasts in such a manner, that the corn might be ripe at the pass- over, as the law required.

The Roman year, instituted by Romulus, was evidently very imperfect when Numa undertook to reform it. To make a complete lunar year, he added fifty days to the 304 of Romulus ; and from every one of his months, which consisted of thirty-one and thirty days, he borrowed one day. Of these additional sixty days he com- posed two months ; calling the one January, and the other February.

Various other corrections were made ; but, when Julius Caesar obtained the sovereignty of Rome, he found that the months had considera- bly receded from the seasons to which Numa had adjusted them. To bring them forward to their places, he formed a year of fifteen months. or 445 days ; which, on account of its length, and the design with which it was formed, has been called the year of confusion. It terminated on the first of January, A. A. C. 45, and from this period the civil year and months were regu- lated by the course of the sun. The year of Numa being ten days shorter than the solar year, two days were added by Julius to every one of the months of January, August, and December; and one to April, June, September, and Novem- ber. He ordained likewise, that an intercalary day should be added every fourth year to the month of

February, by reckoning the twenty- fourth day, or sixth of the calends of March, twice over. Hence this year was styled bissex- tile, or twice sextile, and also leap year, from its leaping a day more than a common year.

The Julian year has been used by modern chronologers, as being a measure of time ex- tremely simple and sufficiently accurate. It is still, however, somewhat imperfect ; for as the true solar year consists of 365d. 5h. 48m. 45??s.,

it appears that in 131 years after the Julian cor- rection, the sun must have arrived one day too soon at the equinoctial point. During Caesar's reign the vernal equinox had been observed by Sosigenes on the 25th of March ; but by the time of the Nicene council it had gone backward to the 21st. The cause of the error was not then known; but in 1582, when the equinox happened on the llth of March, it was thought proper to give the calendar its last correction.

Pope Gregory XIII. having invited to Rome a considerable number of mathematicians and astro- logers, employed ten years in the examination of their several formulae, and at last gave the prefer- ence to that of Aloisius and Antoninus Lelius, who were brothers. Ten days were now cut off in the month of October, and the fifth of that month was reckoned the fifteenth. To prevent the seasons from receding in time to come, he ordained that one day should be added every fourth or bsisextile year as before; and that the 1600th year of the Christian era, and every fourth century thereafter, should be a bissextile or leap year. One day therefore is to be intercalated in the years 2000, 2400, 2800, &c. but in the other centuries, as 1700, 1800, 1900, 2100, &c. it is to be suppressed, and these are to be reckoned as common years. Even this correction, however, is not absolutely exact ; but the error must be, very inconsiderable, and scarce amounting to a day and a half in 5000 years.

The commencement of the year has been deter- mined by the date of some memorable event, such as the creation of the world, the universal deluge, a conjunction of the planets, the incarna- tion of our Saviour, &c. and of course has been referred to different points in the ecliptic. The Chaldean and the Egyptian years were dated from the autumnal equinox. The ecclesiastical year of the Jews began in the spring ; but, in civil affairs, they retained the epoch of the Egyp- tian year. The ancient Chinese reckoned from the new moon nearest to the middle of Aquarius, but, according to some accounts, the

beginning of their year was transferred (A.A.C, 1740) to the new moon nearest to the winter solstice. This likewise is the date of the Japanese year. DIemschied, or Gemschid, king of Persia, ob- served, on the day of his public entry into Per- sepolis, that the sun entered into Aries. In com- memoration of this event, he ordained the begin- ning of the year to be removed from the autum- nal to the vernal equinox. This epoch was denominated Neurez, viz. new day ; and is still celebrated with great pomp and festivity. See EPOCHS.

The ancient Swedish year commenced at the winter solstice, or rather at the time of the sun's appearance on the horizon, after an absence of about forty days. The feast of this epoch was solemnised on the twentieth day after the solstice. Some of the Grecian states computed from the vernal, some from the autumnal equinox, and others from the summer tropic. The year of Romulus commenced in March, whence the four ►►ast months September, October, November, and December, were really what their names import, the seventh, eighth, ninth, and tenth months. TVuma without altering these names, began the year in VOL. V.

January, which Caesar continued. The Turks and Arabs date the year from the 16th July ; and the American Indians reckon from the first ap- pearance of the new moon of the vernal equinox. The church of Rome has fixed new-year's-day on the Sunday that corresponds with the full moon of the same season. The Venetians, Flo- rentines, and Pisans in Italy, and inhabitants of Treves in Germany, begin the year at the vernal equinox. The ancient clergy reckoned from the 25th of March ; and this method was observed in Biitain, until the introduction of the new style (A. D. 1752); after which our year commenced on the 1st day of January.

EPACTS, or ►►}ju►►pai tTraicrai, are 'additional days', requisite to find out the moon's age. Since the lunar year of 354 days is deficient from the solar of 365 days, by eleven days, this deficiency will run through every year of the lunar cycle. Thus the epact of the first year of the cycle is 11, because eleven days are to be added to the lunar, in order to complete the solar year ; the epact of the second is 22 ; the epact of the third 33 ►►► 30~3, because the moon's age cannot exceed 30 days ; the epact of the fourth, 14; and so on till the last year of thf cycle, whose epact is 29; and the epact of the first year of the next cycle, 11, as before. Dr. Hales gives the following rules to show the use of epacts.

I. To find the year of the lunar cycle, or the golden number, in any given year of our Lord. Add one to the given year, then divide the

sum by nineteen, the remainder, if any, is the golden number; if there be no remainder, then nineteen is the golden number.

II. To find the epact in any given year. ••• If the year precede the alteration of the style, A. D. 1752, first find the golden number of that year ; mul- tiply it by eleven ; if the product be less than thirty, it will be epact ; but if greater, divide it by thirty, and the remainder will be the epact. But if the year follow A. D. 1752, because eleven days were then struck out of the calendar, the epact so found will require correction. If it be greater than eleven, subtract eleven from it ; if less, add to it thirty, and subtract eleven from the sum : the remainder, in either case, will give the epact.

III. To find the moon's age on ant/ given day in the year. ••• Add together the epact of the given year, the number of months from March inclu- sive, and the proposed day of the month ; if the sum be less than thirty, it will be the moon's age, but if greater, its remainder, when divided by thirty, will be the moon's age.

SECTION V. OF CYCLES AND OTHER PERIODI- CAL REVOLUTIONS OF YEARS.

Besides these natural divisions of time, arising immediately from the revolutions of the heavenly bodies, there are others formed from some of the less obvious consequences of these revolutions, which are called cycles, from the Greek KVK\OC, a circle. The most remarkable of these are the following : •••

1. The cycle of the s-tn is a revolution of twen- ty-eight years, in wh ch time the days of the months return again to the same days of the week ; the sun's place to the same signs and degrees of

the ecliptic on the same months and days, so as not to differ one degree in 100 years ; and the leap years begin the same course over again with respect to the days of the week on which the days of the months fall.

The cycle of the moon, or the golden number, is a revolution of nineteen years ; in which time the conjunctions, oppositions, and other aspects of the moon, are within an hour and a half of being the

same as they were on the same days of the months nineteen years before.

The indiction is a revolution of fifteen years, used only by the Romans for indicating the times of certain payments made by the subjects to the republic; it was established by Constantine, A. D. 312.

There is a remarkable prophecy, says an ex- cellent modern Treatise on Astronomy, deliver- ed to us in the ninth chapter of the book of Daniel, which, from a certain epoch, fixes the time of restoring the state of the Jews, and of building the walls of Jerusalem, the coming of the Messiah, his death, and the destruction of Jerusalem. But some parts of this prophecy (ver. 25) are so injudiciously pointed in our En- glish translation of the bible, that, if they be read according to those stops of pointing, they are quite unintelligible. But the learned Dr. Pri- deaux, by altering these stops, makes the sense very plain : and, as he seems to me to have ex- plained the whole of it better than any other au- thor I have read on the subject, I shall set down the whole of the prophecy according as he has pointed it, to show in what manner he has diˆ vided it into four different parts.

Ver. 24. 'Seventy weeks are determined upon thy people, and upon thy holy city, to finish the transgression, and to make an end of sins, and to make reconciliation for iniquity, and to bring in everlasting righteousness, and to seal up the vision and the prophecy, and to anoint the most roly. Ver. 25. Know therefore and understand, that froati the going forth of the commandment to restore and build Jerusalem unto the Messiah, the prince, shall be seven weeks and threescore and two weeks, the street shall be built again, and the wall even in troublous times. Ver. 26. And after threescore and two weeks shall Mes- siah be cut off, but not for himself, and the peo- ple of the prince that shall come, shall destroy the citj and sanctuary, and the end thereof shall be with a flood, and unto the end of the war de- solations are determined. Ver. 27. And he shall confirm the covenant with many for one week, and in the midst of the week he shall cause the sacrifice and the oblation to' cease, and for the overspreading of abominations he shall make it desolate even until the consummation, and that determined shall be poured upon the desolate.'

This commandment was given to Ezra by Ar- taxerxes Longimanus, in the seventh year of that king's reign (Ezra, ch. vii., ver. 11 ––– 26.) Ezra began the work which was afterwards accom- plished by Nehemiah ; in which they met with great opposition and trouble from the Samaritans and others, during the first seven weeks, or forty-

nine years.

From this accomplishment, till the time when Christ's messenger, John the Baptist, began to

preach the kingdom of the Messiah, sixty-two weeks, or 434 years.

From thence, to the beginning of Christ's pub- lic ministry, half a week, or three years and a half.

And from thence to the death of Christ, half a week, or three years and a half; in which half week he preached and confirmed the covenant of the gospel with many.

In all, from the going forth of the command- ment till the death of Christ, seventy weeks, or 490 years.

And, lastly, in a very striking manner, the pro- phecy foretels what should come to pass after the expiration of the seventy weeks; namely, the destruction of the city and sanctuary by the peo- ple of the prince that was to come; which were the Roman armies under the command of Titus their prince, who came upon Jerusalem as a tor- rent, with their idolatrous images, which were an abomination to the Jews, and under which they marched against them, invaded their land, and besieged their holy city, and, by a calamitous war brought such utter destruction upon both, that the Jews have never been able to recover them- selves, even to this day.

Now, both by the undoubted canon of Ptole- my, and the famous era of Nabonassar, the be- ginning of the seventh year of the reign of Ar- taxerxes Longimanus, king of Persia (who is called Ahasuerus in the book of Esther), is pin- ned down to the 4256th year of the Julian period, in which year he gave Ezra the above-mentioned ample commission : from which count 490 years to the death of Christ, and it will carry the same to the 4746th year of the Julian period.

Our Saturday is the Jewish Sabbath : and it is plain, from St. Mark, ch. xv. ver. 42, and St. Luke, ch. xxiii. ver. 54, that Christ was crucifi- ed on a Friday, seeing the crucifixion was on the day next before the Jewish Sabbath. And, ac- cording to St. John, ch. xviii. ver. 28, on the day that the passover was to be eaten, at least by many of the Jews.

The Jews reckoned their months by the Moon, and their years by the apparent revolution of the Sun : and they eat the passover on the fourteenth day of the month of Nisan, which was the first month of

their year, reckoning from the first ap- pearance of the new moon, which at that time of the year might be on the evening of the day next after the change, if the sky was clear. So that their fourteenth day of the month answers to our fifteenth day of the moon, on which she is full. Consequently, the passover was always kept on the day of full moon.

And the full moon at which it was kept, was that one which happened next after the vernal equinox. For Josephus expressly says (Antiq. B. iii. ch. 10). ‘ The passover was kept on the fourteenth day of the month of Nisan, according to the Moon, when the Sun was in Aries.’ And the Sun always enters Aries at the instant of the vernal equinox; which, in our Saviour’s time; fell on the 22nd day of March.

The dispute among chronologers about the year of Christ’s death, is limited to four or five years at most. But, as we have shown that he was crucified on the day of a pascal full moon,

and on a Friday, all that we have to do, in order to ascertain the year of his death, is only to compute in which of those years there was a pas- sover full moon on a Friday. For the full moons anticipate eleven days every year, (twelve lunar months being so much short of a solar year), and therefore, once in every three years at least, the Jews were obliged to set their passover a whole month forwarder than it fell by the course of the moon, on the year next before, in order to keep it at the full moon next after the equinox ; there- fore, there could not be two passovers on the same nominal day of the week, within the com- pass of a few neighboring years. And I find by calculation, the only passover full moon that fell on a Friday, for several years before and after the disputed year of the crucifixion, was on the 3rd day of April, in the 4746th ye,ar of ‘the Julian period, which was the 490th year after Ezra re- ceived the above-mentioned commission from Artaxerxes Longimanus, according to Ptolemy’s canon, and the year in which the Messiah was to be cut off, according to the prophecy, reckoning from the going forth of that commission or com- mandment : and this 490th year was the thirty-third year of our Saviour’s age, reckoning from the vulgar era of his birth ; but the thirty-seventh reckoning from the true era thereof.

And, when we reflect on what the Jews told him sometime before his

death, (John viii. 57), ‘ Thou art not yet fifty years old,’ we must con- fess, that it should seem much likelier to have been said to a person near forty than to one but just turned thirty. And we may easily suppose, that St. Luke expressed himself only in round numbers, when he said that Christ was baptised about the thirtieth year of his age, when he be- gan his public ministry ; as our Saviour himself did, when he said he should lie three days and three nights in the grave.

Now the 4746th year of the Julian period, con- tinues the above able author, which we have as- tronomically proved to be the year of the cruci- fixion, was the fourth year of the 202nd Olym- piad ; in which year, Phlegon, a heathen writer, tells us, there was the most extraordinary eclipse of the Sun that ever was seen. But I find by calculation, that there could be no total eclipse of the Sun at Jerusalem, in a natural way in that year. So that what Phlegon here calls an eclipse of the Sun, seems to have been the great dark- ness for three hours at the time of our Saviour’s crucifixion, as mentioned by the evangelists : a darkness altogether supernatural, as the Moon was then in the side of the heavens opposite to the Sun ; and therefore could not possibly dark- en the Sun to any part of the Earth.

The year of our Saviour’s birth, according to the vulgar era, was the ninth year of the solar cycle, the first year of the lunar cycle ; and the 312th year after his birth was the first year of the Roman indiction. Therefore, to find the year of the solar cycle, add 9 to any given year of Christ, and divide the sum by 28, the quotient is the number of cycles elapsed since his birth, and the remainder is the cycle for the given year : if nothing remains, the cycle is 28. To find the lunar cycle, add one to the given year of Christ, and divide the sum by 19; the quo-

tient is the number cf cycles elapsed in the inter- val, and the remainder is the cycle for the given year: if nothing remains, the cycle is 19. Lastly, subtract 312 from the given year of Christ, and divide the remainder by 15 ; and what remains after this division is the indiction for the given year : if nothing remains, the indiction is 15.

Although the deficiency in the lunar cycle of an hour and a half every nineteen years be but small, yet in time it becomes so sensible as to make a whole natural day in 310 years. So that, although this cycle be of use, when the golden numbers are rightly placed against the days of the months in the calendar, as in the common prayer

books, for finding the days of the mean conjunctions or oppositions of the sun and moon, and consequently the time of Easter ; it will only serve for 310 years, old style. For as the new and full moons anticipate a day in that time, the golden numbers ought to be placed one day ear- lier in the calendar for the next 310 years to come. These numbers were rightly placed against the days of new moon in the calendar, by the council of Nice, A. D. 325 ; but the anti- cipation which has been neglected ever since, is now grown almost into five days ; and therefore all the golden numbers ought now to be placed five days higher in the Calendar for the old style than they were at the time of the said coun- cil ; or six days lower for the new style, because at present it differs eleven days from the old.

In the following table, the golden numbers under the months stand against the days of new moon in the left hand column, for the new style ; adapted chiefly to the second year after leap- ††† year, which is the nearest mean for all the four ; and will serve till the year 1900. Therefore, to find the day of new moon in any month of a given year till that time, look lor the golden number of that year (which will be found by Table II. under the desired month), and against it you have the day of new moon in the left hand column. Thus, suppose it were required to find the day of new moon in September, 1798 ; the golden number for that year is thirteen, which I look for under December, and right against it in the left hand column you will find seven., which is the day of new moon in that month. N. B. If all the golden numbers, except seventeen and six, were set one day lower in the table, it would serve from the beginning of the year 1900 till the end of the year 2199.

TABLE I.

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CHRONOLOGY.

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The second table shows the golden number for 4000 years after the birth of Christ, by looking for the even hundreds of any given year at the left hand, and for the rest to make up that yeat at the head of the table ; and where the columns meet, you have the golden number for the gives, year. Thus, suppose the golden number was wanted for the year 1798, look for 1700 at the left hand of the table, and for 98 at the top of it ; then, guiding your eye downward from 98 to the angle over against 1700, you will find 13, which is the golden number for that year. But as the lunar cycle of nineteen years sometimes includes five leap years, and at other times only four, this table will sometimes vary a day from the trutli in leap years after February. And it is impos- sible to have one more correct, unless we extend it to four times nineteen or seventy-six years ; in which there are nineteen

leap years without a remainder. But even then to have it of per- petual use, it must be adapted to the old style ; because, in every centurial year not divisible by four, the regular course of leap years is in- terrupted in the new ; as was the case in the year

1800.

TABLE II.

TABLE, SHOWING THE GOLDEN NUMBER (WHICH is THE SAME BOTH IN THE OLD AND NEW STYLE\ FROM THE CHRISTIAN ERA, TO A. D. 4000.

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CHRONOLOGY.

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The cycle of Easter, or the Dionysian period, is a revolution of 532 years, found by mul- tiplying the solar cycle 28, by the lunar cycle 19. If the new moons did not anticipate upon this cycle, Easter day would always be the Sunday next after the first full moon which follows the 21st of March. But on account of the above anticipation, to which no proper regard was paid before the alteration of the style, the ec- clesiastical Easter has several times been a week different from the true Easter within this last century : which inconvenience is now remedied by making the table, which used to find Easter for ever, in the common Prayer Book, of no longer use than the lunar difference from the new style will admit of. The earliest Easter possible is the 22nd of March, the latest the 25th of April. Within these limits are thirty-five days, and the number belonging to each of them is called the number of direction ; because thereby the time of Easter is found for any given year.

The first seven letters of the alphabet are com- monly placed in the annual almanacks, to show on what days of the week the days of the months fall throughout the year. As one of those letters stands against Sunday, as it is printed in a capital form, and called the dominical letter ; the other six being inserted in small characters, to

denote the other six days of the week. As a common Julian year contains 365 days, if this number be divided by seven there will remain one day : whence the year begins and ends on the same day of the week ; arid therefore the next year will begin on the day following. Hence, when January begins on Sunday, A is the domi- cal letter for that year : then, because the next year begins on Monday, the Sunday will fall on the seventh day, to which is annexed the seventh letter G, which therefore will be the dominical letter for all that year ; and, as the third year will begin on Tuesday, the Sunday will fall on the sixth day ; therefore F will be the dominical letter for that year. Whence it is evident, that the dominical letters will go annually in a retrograde order thus, G, F, E, D,C, B, A. And in the course of seven years, if they were all common ones, the same days of the week, and dominical letters would return to (he same days of the months. But because there are 366 days in a leap year, if this number be divided by seven, there will re- main two days over and above the fifty-two weeks, of which the year consists. And therefore, if the leap year begins on Sunday, it will end on Monday ; and the next year will begin on Tuesday, the first Sunday whereof must fall on the 6th of January, to which is annexed the letter F, and not G, as in common years. From the leap year, thus returning every fourth year, the order of the dominical letters is interrupted ; and the series cannot return to its first state till after four times seven or twenty-eight years ; and then the same days of the months return in order to the same days of the week as before.

The great Julian period arises from the multi- plication of the solar cycle of twenty-eight years into the lunar cycle of nineteen years, and the Roman indiction of fifteen years. It consists of 7980 years, and had its beginning 764 years before Strauchius's supposed year of the crea-

tion (for no later could all the three cycles begin together), and is not yet completed. It there- fore includes all others, cycles, periods, and eras. There is but one year in the whole period that has the same numbers for the three cycles of which it is made up; and therefore, if histo- rians had remarked in their writings the cycles of each year, there had been no dispute about the time of any action recorded by them.

The Dionysian, or vulgar era of Christ's birth, was about the end of the year of the Julian pe- riod 4713; and consequently the first year of his age, according to that account, was the 4714th year of the said period. Therefore, if to the current year of Christ we add 4713, the sum will be the year of the Julian period. So the year 1798 will

be found to be the 6511th year of that period. Or, to find the year of the Julian period answering to any given year before the first year of Christ, subtract the number of that given year from 4714, and the remainder will be the year of the Julian period. Thus, the year 585 before the first year of Christ (which was the 584th before his birth) was the 4129th year of the said period. To find the cycles of the sun, moon, an indiction for any given year of this period, divide the given year by twenty-eight, nineteen, and fifteen; the three remainders will be the cycles sought, and the quotients the number of cycles run since the beginning of the period. So in the above 4714th year of the Julian period, the cycle of the sun was ten, the cycle of the moon two, and the cycle of indiction four; the solar cycle having run through 168 courses, the lunar 248, and the indiction 314.

The Chinese cycle of sixty years, employed certainly from an early period, is entirely of a civil nature, like the indiction of the Romans; and has no relation to their former astronomi- cal calculations.

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PART II. HISTORICAL CHRONOLOGY.

SECT. I. ??? OF ASTRONOMICAL OBSERVATIONS.

The first great foundation of historical chro- nology is astronomical observations. The eclipses of the sun and moon especially, and the aspects of the other planets, have been justly called public and celestial characters of the times, as their calculations afford chronologers infallible proofs of the precise epochs in which a great number of the most signal events in history have occurred. So that in chForiological matters we cannot make any great progress if we are igno- rant of the use of astronomical tables, and the calculation of eclipses. The ancients regarded the latter as prognostics of the fall of empires, of the loss of battles, the death of monarchs, &c. To this superstition, tin's wretched ignorance, we happily owe the vast labors that historians have taken to record so great a number of them. The most able chronologers have collected them with still greater labor. Calvisius, for example, founds his chronology on 144 eclipses of the sun, and 1 27 of the moon, which he says he had calcu- lated.

Modem chronologers have not been remiss in furnishing us with this kind of date to the greatest extent possible. Dr. Playfair and Mr.

Ferguson both supply valuable tables of eclipses ; portant.

those of the former going bacx to B. C. 753 and extending to A. D. 1900. Dr. Hales selects from the whole the following as the most ini-*

ANCIENT ECLIPSES AS CONNECTED WITH CERTAIN LEADING FACTS or HISTORY.

B. C.

753.

721. 720.

715. 621. 607. 603. 601. 597. 585.

547.

523. 502. 491. 481.

480. 478. 463. 431. 424. 413.

406. 404. 394.

331. 200.

190. 188.

168.

63. 48. 45. 31. 4.

A. D.

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M.

April 21. July 5. March 19.

*Ptolemy. February 22. Morn. 10; dig. 8**

Old calculation; the day of the foundation of Rome. Plutarch.

Aft. 4, 30; dig. 4.

Aft. 10, 34, total 1 ; first year of Mardok Empad, king of Babylon.

Aft. 11, 56; dig. Aft. 5, 12; dig. 9J; Morn. 6, 22 ; dig.

China.

; second of Mardok Empad. Ptolemy, death of Romulus. Livy. % ; fifth of Nabopolassar. Ptolemy.

Aft. 1, 55 ; dig. 8 ; supposed eclipse of Thales, according to Calvisius. Morn. 9ˆ, total ; same, Costard, Montucla, Kennedy. Morn. 10, 57; dig. 9; same, Usher.

Aft. 3 ; dig. 10, 33′ ; same, Petsevius, Marsham, Bouhier, Larcher. Aft. 3 ; dig. 11, 20’; same, Pliny, Scaliger, Newton, Ferguson, Vig-

noles, Jackson. October 22. Aft. 0, 35, total; when Cyrus took Larissa in Media. Xenophon.

Anab.

Morn. 0, 12; dig. 7□□; seventh of Cambyses. Ptolemy. Morn. 8, 21 ; dig. 2 ; twentieth of Darius Hystaspes. Morn. 0,12; dig. If; thirty-fourth of Darius Hystaspes. Aft. 2, 27 ; dig. 7 ; when Xerxes left Susa to invade Greece. He- rodotus. Aft. 2. ; dig. 8 ; soon after the battle of Salamis. Herodotus.

year after the Persian war.

Aft. 3 ; dig. 11 ; Egyptians revolt from the Persians. Aft. 5, 53 ; total ; first year of the Peloponnesian war. Thucydides. Mom. 6, 34; dig. 9; eighth year of the war. Thucydides.

March 8. May 26. April 21. July 30. May 18. Sept. 19. July 9. May 28.

July 17. Nov. 19. Aprii 25. April 19.

October 2

February 13. Aft. 2 ; dig. Hi

April 30.

August 3.

March 22.

April 15. Sept. 2. August 14.

Sept. 20. March 19. Sept. 11.

August 27. Aft. 10, 15 ; total ; nineteenth year of the war; defeat of Nicias and the Athenians at Syracuse. Thucydides.

Aft. 8, 50 ; total ; twenty-sixth year of the war.

Morn. 9, 16 ; last year of the war. Xenophon.

Morn. 9, 17 ; dig. 11 ; Conon defeats the Lacedaemonians in a sea-fight at Cnidus. Xenophon.

Aft. 6, 35 ; total ; eleven days before the battle of Arbela. Plutarch.

Morn. 2, 48 ; total.) Ptolemv

Morn. 2, 15; total. ˆ First year of the Macedonian war. March 14. Morn. 6 ; dig. 1 1 ; first year of the Syrian war. July 17. Morn. 8, 38 ; dig. lOf ; three days' supplication decreed at Rome.

Livy, 34, 36.

June 21. Aft. 8, 2 ; total ; night before the battle of Pydna, and end of the Ma- cedonian war. Livy.

October 27. Aft. 6, 22 ; total ; Jerusalem taken by Pompey this year. January 18. Aft. 10; total; battle of Pharsalia; death of Pompey this year. November 7. Morn. 2 ; total ; first Julian year. August 20. Sun-set, great eclipse ; battle of Actium, Sept. 3. March 13. Morn. 2, 45 ; dig. 6 ; before Herod the Great's death. Josephus.

M. Sept. 27. Morn. 5 ; total ; mutiny of the Pannonian legions, quelled thereby, after the death of Augustus. Tacitus, Anal. 1.

S. Nov. 24. Morn. 9J ; total; death of John Baptist this year.

M. April 25. Aft. 9; dig. 4 ; a month after the crucifixion.

S. Sept. 12. Morn. 10►► ; annular.

S. August 1. Morn. 10 ; dig. 5 ; birth day of the emperor Claudius.

M. Dec. 31. Aft. 9►►; total.

S. April 30. Aft. 1 ; central ; Nero murdered his mother Agrippina this year.

M. October 18. Aft. 10 ; dig. 11 ; night of the battle of Cremona between the armies of Vespasian and Vitellius. Dio. lib. 65. Tacit. Hist. 3, 23. The year before the destruction of Jerusalem by Titus, A. D. 70, here- by ascertained.

Again, the grand conjunction of the two su- perior planets, Saturn and Jupiter, which, ac- cording to Kepler, occurs once in 800 years, in the same point of the zodiac, and which has hap- pened only eight times since the creation (the last time in the month of December, 1603,) may also furnish chronology with incontestible proofs. The same may be said of the transit of Venus over the sun, which has been observed in our days, and all the other uncommon positions of the planets.

But among these celestial and natural charac- ters of times, there are also some that are named civil or artificial, and which, nevertheless, de- pend on astronomic calculation. Such are the solar and lunar cycles, the Roman indiction, the feast of Easter, the bissextile year, the jubilees, the sabbatic years, the Olympic games of the Greeks, and the hegira of the Mahommedans, &c. Astronomical chronology also teaches us to calculate the precise year of the Julian pe- riod, in which any remarkable epoch happened. And to these may be added the periods, eras, epochs, and years of different nations, ancient and modern. Thus the period or era of the Jews commences with the creation of the world; that of the ancient Romans with the foundation of the city of Rome ; that of the Greeks at the establishment of the Olympic games ; that of Nebuchadnezzar, with the advancement of the first king of Babylon to the throne ; the Yezde- gerdic years, with the last king of the Persians of that name; the hegira of the Turks with the flight of Mahomet from Mecca to Medina, &c. The year of the birth of Christ was the 4713th year of the Julian period, according to the com-, mon method of reckoning.

SECT. II. ❖❖❖ OF THE TESTIMONIES OF AUTHORS.

The second principal foundation of historic chronology is the testimony of authors. Though historians have not been clothed with infallibi- lity, it would be making a very unjust judg- ment of

mankind to treat them generally either as dupes or imposters : there are authors, uni- versally esteemed, who relate facts that in them- selves are worthy of belief, and whose veracity and credibility it would be irrational to doubt. The unanimous concurrence of the most respect- able historians supplies testimony to many leading facts of history that is invaluable. To avoid, however, the danger of adopting error for truth, and to be satisfied of a fact that appears doubtful in history, we may use the four following rules, as founded in reason.

1. A particular regard is due to the testimo- nies of those who wrote at the time the events happened, and that have not been contradicted by any contemporary author of known authority. Who can doubt, for example, of the truth of the facts related by Anson, in his history of his voyage round the world, although he is now known not to have written the published nar- rative of them. The admiral saw all the facts mentioned with his own eyes, and the work was published when two hundred companions of his voyage were still living in London, and could have immediately contradicted any false or exag- gerated relations. 2. After the contemporary

authors, we should give the next greatest credit to those who lived near the time the events hap- pened. 3. Those doubtful narratives, which are given by authors that are but little known, can have no weight if at variance with reason, or es- tablished facts. 4. We must distrust the truth of a narrative furnished by modern authors when they do not agree among themselves nor with ancient historians, who are to be regarded as original sources. We should especially doubt the truth of those brilliant portraits that are drawn at pleasure by such as never knew the persons they are intended for, and even made several centuries after their decease.

The most pure and most fruitful source of an- cient history is doubtless to be found in the Bible. Let us here for a moment cease to regard it as divine, and presume to treat it only as a common history. Now when we consider the writers o the books of the Old Testament, sometimes as authors, sometimes as ocular witnesses, and sometimes as respectable historians ??? whether we reflect on the simplicity of the narration, and the air of truth that is there constantly visible, or whether we consider the care that the people, the governments, and the learned men of all ages, have taken to preserve the text, or have regard to the happy conformity of the chronology of the holy Scriptures with that of profane history, as well as with that of Josephus and other Jewish writers ; and lastly, when we consider that the books of the holy Scripture alone furnish us with an

accurate history of the world, from the crea- tion, through the line of patriarchs, judges, kings, and princes of the Hebrews ; and that we may, by its aid, form an almost entire series of events down to the birth of Christ, or the time of Au- gustus, which comprehends a space of about 4000 years, some small interruptions excepted, and which are easily supplied by profane his- tory : when all these reflections are justly made, we must allow that the Scriptures form a series of books which merit the first rank among all the sources of ancient history.

It has been objected that these booKs con- tain contradictions ; but the most able interpre- ters have reconciled these seeming contradic- tions. It has been said that the chronology of the Hebrew text and the Vulgate do not agree with the chronology of the version of the Septua- gint, but the soundest critics have shown that they may be made to agree. It has been also objected that the Scriptures abound with miracles and prodigies; but all nature may be said to abound with prodigies. There are limits in every science, beyond which human knowledge cannot go, and beyond which all is miraculous. But what wise philosopher will presume to say that anything is impossible for infinite power; or that the Almighty, by giving certain laws to what we call nature, has thereby limited and circum- scribed his own omnipotence to all eternity, in such a manner, that he can in no instance de- viate from or alter them, however much particu- lar circumstances in his own moral government of the universe may require such a deviation. See our articles, MIRACLE and REVELATION

It may be further observed, that we have a new motive in modern times to the investigation

of this most usefiil science. Voltaire, Bailey, and other inferior witlings of infidelity, have thought proper to assail the Bible chronologists as 'misregulators of time ;' if it is demonstrable that a rectified system of chronology, which must include all the great events of Scripture, can form the only correct basis of general history, infidelity must have double cause to blush ; and from the attention we have been able to pay to Dr. Hales's labors in this department of science, we have no hesitation in avowing our belief of the fact.

SECT. III. ❓❓❓ OF ./ERAS OR EPOCHS.

As there are certain fixed points in the hea- vens, from which astronomers begin their com- putations, so there are certain points of time from which historians begin to reckon ; and these points or loots of time are called aeras or epochs. These form the third principal foundation of chronology. They are those fixed points in his- tory that have never been contested, and of which there can, in fact, be no doubt. Chronologers fix on the events that are to serve as epochs, in a manner quite arbitrary; but this is of little consequence, provided the dates of these epochs agree, and that there is no contradiction in the facts themselves.

The most remarkable aeras are, those of the Creation, the Flood, the Greek Olympiads, the building of Rome, the aera of Nabonassar, the death of Alexander, the birth of Christ, the Ara- bian Hegira, and the Persian Yesdegird: all which, together with several others of less note, have their beginnings fixed by chronologers to the years of the Julian period, to the age of the world at those times, and to the years before and after the birth of our Savior.

The vulgar aera of Christ's birth was never settled till the year 527, when Dionysius Exi- guus, a Roman abbot, fixed it to the end of the 4713th year of the Julian period, which was four years too late ; for our Savior was born before the death of Herod. And, according to the tes- timony of Josephus (book xvii. c. 8), there was an eclipse of the moon in the time of Herod's last illness ; which eclipse appears by our astrono- mical tables to have been in the year of the Ju- lian period 4710, March 13th, at three hours past mid-night, at Jerusalem. Now, as our Sa- vior must have been born some months before Herod's death, since in the interval he was carried into Egypt, the latest time in which we can fix the true aera of his birth is about the end of the 4709th year of the Julian period.

But we may here notice the- light that lias been thrown on some of the most important epochs by the New Analysis of Dr. Hales, un- questionably the most elaborate, and one of the most ingenious of modern works on this science.

1. Though rejecting that of the vulgar Chris- tian era, which commences with the Julian year, January 1,U.C.754, according to the Varronian computation, as incorrect, he argues for its being retained in a chronological system, ' as a long establishpd era,' commencing from a known fixed epoch, both backwards and forwards, and fur- nishing the most convenient standard of compari-

son for all others.

2. Respecting the epoch of the deluge, he contends that Usher's date, attached to our Eng- lish bibles, has been properly relinquished by the ablest chronologers of the present time, from its irreconcileableness with the rise of the primitive empires, the Assyrian, Egyptian, Indian, and Cninese ; all suggesting earlier dates of the de- luge. Hence, the authors of that great and elaborate work, the Ancient Universal History, adopted in preference thereto, the date of the deluge furnished by the Samaritan Hebrew text ; and their example has been followed by captain Wilford, in his Remarks on the Hindu Chrono- logy, published in the Asiatic Researches.

He fixes it B.C. 3155 ; and after a variety of further valuable observations of the era of the nativity, and a table of the chronology of our Lord's ministry, for which we regret we have not room ; he supplies, after a most careful review of the several systems, ancient and modern, of chronology, the following

TABLE OF REMARKABLE ERAS.

B. c.

Creation of the world . . . 5411 Julian period (January 1) . .4714

Deluge 3155

Cali yuga, Indian era of the deluge . 3102 Dispersion of mankind . . . 2614 Nimrod reigns in Assyria . . . 2554 Menes reigns in Egypt . . .2412 Tcheou, or division of the Chinese em- pire into twelve provinces . . 2277 Abraham born . . . . .2153 Settlement of the Israelites in Egypt . 1863 Exode of the Israelites from Egypt . 1 648 Cecrops reigns at Athens . . . 1558 Sesostris reigns in Egypt . . . 1308 Destruction of Troy . . . .1183 Foundation of Solomon's temple . 1027 Era of Iphitus(July 1). . . .884 Era of the Olympiads (July 19). Foundation of Rome (April 21). . 753 Era of Nabonassar (February 26). . 747 Era of Seleucidae, or Alexander's succes- sors (October 1) 312

Era C&esaria, at Antioch (September 1). 49 Era Juliana (January 1). ... 46 Era Hispanica (January 1). Viet. Actiaca (August 29). ... 30

A. D.

Vulgar Christian era. (January 1). 1 Cycle of the sun . . .10

moon . . 2

indication . . 4

Dominical letter . . . B

First year after Bissextile.

Era of Diocletian, or of Martyrs. (Sept. 17). 284

Era of Yezdegird (June 16). . . . 632

Hegira, or flight of Mahomet (July 16), . 622

Era Gelalaea (March 14). . . . 1074

Era of the Reformation.

England (Wicklifle) . . . 1360

Bohemia (Huss) .... 140..

Germany ˆLuther) . . . 1517

Switzerland (Zuinglius) . . 1519

Denmark 1521

France (Calvin) . 1529

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Protestants first so called. ††† – Sweden (Petri) 1530

Ireland (Brown) 1535

England completed (Cranmer, Bucer,

Fagius, &c. . ‘ . . .1547

Scotland (Knox) 1560

Netherlands 1566

SECT. IV. ††† OF ANCIENT MEDALS, COINS,

MONUMENTS, &c.

Medals, monuments, and inscriptions, form the fourth and last principal foundation, or as- sistant of chronology. It is scarcely more than 150 years since close application has been made to the study of these ; and we owe to the cele- brated Spanheim the greatest obligations, for the progress that is made in this method : his excel- lent work, De Praestantia et usu Numismatum Antiquorum, has shown the great advantages of it ; and it is evident that these monuments are amongst the most authentic witnesses that can be produced.

The celebrated Mr. Addison, too, wrote an express treatise on this important use of ancient medals. By the aid of medals M. Vaillant has composed his judicious history of the kings of Syria, from the time of Alexander the Great to that of Pompey : they have been, moreover, of the greatest service in elucidating all ancient his- tory, especially that of the Romans ; and even sometimes that of the middle age. Their use is more fully treated under the article MEDALS. What we here say of medals, is to be understood equally, in its full force, of ancient inscriptions, and of other similar authentic monuments of antiquity.

SECT V. OF THE UNCERTAINTY OF ANCIENT CHRONOLOGY.

We have adverted to this subject already, and while every reader of discernment will allow that these four foundations of chronology afford clear lights, and are excellent guides to conduct us through the thick darkness of antiquity, he will soon find that they are not infallible guides, nor the proofs that they afford mathematical demonstrations. In fact, with regard to history in general, and ancient history in particular, something must be always left to conjecture and historic faith. We must not therefore pass over in silence those objections, which authors of the greatest reputation have made against the cer- tainty of chronology.

1. The prodigious difference there is be- tween the Septuagint Bible and the Vulgate, in point of chronology, occasions an embarrassment, which is the more difficult to avoid, as we cannot positively say on which side the error lies. The Greek Bible counts, for example, from the crea- tion of the world to the birth of Abraham, 1 500 years more than the Hebrew and Latin Bible, &c.

2. It is extremely difficult to ascertain the years of the Judges of the Jewish nation, in the Bible, or the succession of the kings of Judah

and Israel. The Scripture never marks if the years are current or complete. We cannot suppose that a patriarch, judge, or king, lived exactly sixty, ninety, 100, or 969 years, without any odd months or days.

3. The different names that the Assyrians, Egyptians, Persians, and Greeks, have given to the same prince, have also contributed not a little to embarrass all ancient chronology. Three or four princes of Persia have borne the name of Assuerus, or Ahasuerus, though they had also other names. If we did not know that Nabuchod- nosor, Nabucodrosor, Nebuchadnezzar, and Na- bucolassar, were names of the same man, we should scarcely believe it. Sargon is Sennacherib ; Ozias is Azarais ; Sedeciasis Mattanias; Joachas is also called Sellum ; Asaraddc-n, Esarhaddon or Asarhaddon, is called Asenaphar by the Cu- thaeans ; and by an oddity, of which we do not know the origin, Sardanapalus is called by the Greeks Tenos Concoleros.

4. There remain to us but few monuments of the first mouarchs of the world. Number- less books have been lost, and many of those which have come down to us are mutilated or altered by transcribers. The Greeks began to write very late. Herodotus, their first historian, was of a credulous disposition, and believed all the fables that were related by the Egyptian priests. The Greeks were in general vain, partial, and held no nation in esteem but their own. The Romans were still more infatuated with notions of their own merit and grandeur ; and their historians were as unjust as their senate towards other nations, many of whom were far more respectable.

5. The eras, the jears, the periods and epochs, were not the same in each nation ; and they, moreover, began at different seasons of the year. All this has thrown so much obscurity over chronology, that it appears to be beyond human power totally to disperse it. Christianity itself had subsisted near 1200 years, before they knew precisely how many years had passed since the birth of our Saviour. They saw clearly that the vulgar era was defective, but it was a long time before they could comprehend, that it re- quired four whole years to make up the true period.

Dionysius the Little, who, in 532, was the first among the Christians to form the era of that grand epoch, and to count the years from that time, to make their chronology altogether Chris- tian, erred in his calculation, and led all Europe into his error. Chronologers enumerate 1 32 con- trary opinions of authors concerning the year in which the Messiah appeared. M. Vallemont names sixty-four, all

celebrated writers. Among all these, however, there are none who reckon more than 7000, or less than 3700 years from the creation. But even this difference is enormous. The most moderate fix the birth of Christ in the 4000th year of the world. The reasons, how- ever, on which they found their opinions are various and arbitrary.

Notwithstanding these uncertainties, Provi- dence has so disposed all things, that there re- main sufficient lights to enable us nearly to con- nect the series of events : for in the first 300O years of the world, where profane history is defective, we have the chronology of the Bible to diiect us; and after that period, where we find more obscurity in the chronology of the Holy Scriptures, we have on the other hand,

greater lights from profane authors. It is this period that begins the time which Varro calls historic : as, since the time of the Olympiads, the truth of such events as have happened shines clear in history. Chronology, therefore, draws its principal lights from history ; and, in return, serves it as a guide.

In final confirmation of the elementary state of this science, we subjoin Dr. Hales' curious tables of the many discordant authorities as to the epoch of the creation. It may be unjust how- ever to what has been accomplished for this science in modern times, and particularly by our learned author, not to add that : .

1. He seems to have proved with the force of demonstration, that there was originally no dif- ference between the Hebrew genealogies and those of the Greek version ; 2. That the compu- tation of Josephus was conformable to both in his time ; and consequently, 3. That either the Hebrew copies, or the Greek copies, both of the Septuagint and of Josephus, have been adulte- rated since his time ; 4. That the adulteration took place in the Hebrew copies, rather than in the Greek.

On this last point he observes, ' the Hebrew copies afforded greater facilities and opportuni- ties of adulteration than the Greek ; for in the course of the Jewish war, until the final destruc- tion of Jerusalem, and expulsion of the Jews from Judea, in the reign of Adrian, vast numbers of the Hebrew copies mnst have been lost or de- stroyed, besides those that were taken away by the conquerors

among other spoils; and the few that were left were confined, in great measure, to the Jews themselves, as the Hebrew language was not in general use, like the Greek. Where- as, of the Greek copies, even if all that were pos- sessed by the Hellenistic Jews, not only in Palestine, but throughout the world, had been destroyed, which was far from being the case, yet the copies of the Septuagint, in the posses- sion of the Christians everywhere, rendered any material adulteration of the Greek text, at least in so important a case as that of the genealogies, well nigh impossible.' Again, ' The temptation to adulteration was also greater in the Hebrew than in the Greek.' Ephrem Syrus, who died A.D. 378, at once explains the nature, and states the fact.

*' The Jews,' says he, * have subtracted 600 years from the generations of Adam, Seth, &c. in order that their own books might not con- vict them concerning the coming of Christ : he having been predicted to appear for the deliver- ance of mankind after 5500 years ; or in the sixth millenary age.*

The origin of this notion of the six millenary ages of the world, is explained by the learned Gregory, of Oxford :

' In the first verse of the first chapter of Gene- sis, the Hebrew letter K, Aleph, which in the Jewish arithmetic stands for 1000, is six times found. From hence, the ancient Cabbalists concluded that the world would last 6000 years. Because also God was six days about the cre- ation, and a thousand years with him are but as one day (Ps. xc. 4; 2' Pet. hi. 8); therefore after six days, that is 6000 years duration of the world, there shall be a seventh day, or mille ??? nary sabbath of rest.'

This early tradition of the Jews was found also in the Sibylline Oracles, and in Hesiod, as we have seen ; in the writings of Darius Hystaspes, the old king of the Medes, derived probably from the Magi'; and in Hermes Trismegistus, among the Egyptians ; and was adopted by the early Christian Fathers, Clemens, Timotheus, and Theophilus, bishop of Antioch, who observed, that ' upon the sixth day God made man, and man fell by sin ; so upon the sixth day of the Chiliad (or sixth millenary of the world), our Lord Jesus Christ came into the world, and saved man by his cross and resurrection.' ' To weaken or defend the tradition itself/ says Gre- gory, ' I have no engagement upon me. It yieldeth me this observation, that, in the opinion of those who held it, our Saviour was to come in the flesh in the sixth millenary of the world.' ' The prevalence, therefore, of this tradition throughout the Pagan, Jewish, and Christian world,

whether well founded, or otherwise,' says Dr. Hales, was a sufficient reason for the Jews to endeavour to invalidate it, by shortening their chronology.'

To archbishop Usher, bishop Lloyd, and our other able Bible chronologists, these facts could not be unknown ; but, as this learned author well remarks, 'the superstitious veneration for what was called the Hebrew Verity, or supposed im- maculate purity of the Masorite editions of the Hebrew text, which generally prevailed among the most eminent divines and Hebrew scholars of the last age, precluded all discussions of this nature.' But the inspection of various editions since, and the copious collations of the Hebrew text with a great number of MSS. collected from all parts of the world, by the laudable industry and extensive researches of Kennicot, De Rossi, and other learned men, have proved that the sacred classics are no more exempt from various readings than the profane.'

By the means, chiefly, of some genuine dates and numbers which still happily subsist in the work of Josephus, Dr. Hales has been enabled, he conceives, to restore the Scripture chronology to its original state ; and this he has done by strictly following the analytical method of inves- tigation, which, he asserts, is at least as applica- ble to chronology as to natural philosophy.

The leading elementary date, by reference to which he has adjusted the whole range of sacred and profane chronology, 'is (we quote his own words) the birth of Cyrus, B.C. 599, which led to his accession to the throne of Persia, B. C. 559 ; of Media, B. C. 551 ; and of Babylonia, B. C. 536 ; for from these several dates, carefully and critically ascertained and verified, the several respective chronologies of these kingdoms branch- ed off; and from the last especially, the destruc- tion of Solomon's temple by Nebuchadnezzar, B. C. 596, its correcter date, which led to its foundation, B.C. 1027; thence to the Exode, B.C. 1648; thence to Abraham's birth, B.C. 2153; thence to the reign of Nimrod, 2554; thence to the deluge, B.C. 3155 ; and thence to the creation, B. C. 5411. And this date of the creation is verified by the rectification of the systems of Josephus, and Theophilus, who was bishop of Antiodi A. D. 169 and the first Chris

tian chronologist. ' By the same close and and, though his system is doubtless not free from

patient investigation Dr. Hales has ascertained errors, it seems to approach so near to perfec- the genealogies of the antediluvian patriarchs to Mon, that we cannot but warmly recommend a have been very different from what they are re- mil investigation of it by every critical reader presented to have been in the present Hebrew ; of his Bible.

EPOCHS OF THE CREATION.

B.C.

Alphonsus, king of Castile, A. D. 1252 . \ Duller 6984

i Strauchms 6484

Onuphrius Panvinius 6310

‘ i Arabian records 6174

Babylonian chronology ..... Bailly 6158

Chinese chronology . . . . . Bailly 6157

Diogenes Laertius, B. C. 222 ... . Playfair 6138

Egyptian chronology ..... Bailly 6128

Diodorus Siculus, B. C. 80 . . . . . Playfair 6081

Suidas, A. D. 1090 ..... Playfair 6000

Sulpitius Severus, A. D. 420 ..... Playfair 5469

Manetho, B. C. 304 . . . . . .□□□ . Playfair 5877

Pezron ..... Playfair 5872

Lactantius. A. D. 306 ..... Univer. History 5801

Cary ... . Playfair 5708

Nicephorus, A. D. 758 ..... Univer. History 5700

Riccioli ..... Playfair 5634

Clemens Alexandrinus, A. D. 194 ..... Univer. History . 5624

Fasti Siculi ..... Univer. History 5608

Vossius ..... Univer. History 5598

Septuagint computation ..... Abulfaragi 5586

Septuagint Alexandrine, used by Constantinople, Abyssinian, and Rus- { s r e-n⬚⬚

sian cnurches \ &(

Persian chronology ..... Bailly 5507

r, i t Chevreau 5506

Cednmus, A. D. 1060 . > Strauchius 5493

Maximus Martyr, A. D. 196 5501

Julius Africanus, A. D. 218} Syncellus, A. D. 792 Eutychius, A. D. 937 3

Univer. History 5500

Chronicle of Axum in Abyssinia ..... Bruce 5500

Q. Julius Hilarion ..... Playfair 5497

T> n r,r.rv f Hales 5487

Demetrms, B. C. 220 . . . ? Jackson 5444

Eupolemus, B. C. 174 .... . Jackson 5443

Jackson 5426

f Playfair 5555

) Jackson 5481

Josephus, A. D. 94 . .. . ˆ Hales 54Q2

(.Univer. History 4698

r Gregory 5626

rru u-i r> c \ i- i A ••• 1 7 Petavins 5515

TheophausB. of Antioch, A D. 168 . VRttmicott 5507

(.Abulfaragi 5409

Hales . 5411

Indian computation .... . Megasthenes 5369

Augustin, A. D. 354 ... . Genebrard 5351

Talmudists ..... Petrus Alliaceus. 5344

Isidore, A. D. 412 ..... Univer. History 5336

Albumazer, A. D. 540 . Univer. History 5328

Rabanus Maurus, A. D. 778 ..... Univer. History 5296

Septuagint Vatican 5270

Isidorus Hispalensis, A. D. 304 ..... Strauchius 5210

Paulus de Fossembrona . ... Univer. History 5201

Eusebius, A. D. 315 . . Univer. History $ 52QO

Martyrologium Rotnanum ..... Playfair c

Bede, A. D. 673 . . . . . Strauchius 5199

Orosius, A. D. 430 . . Univer. History 5198

Philo Judaeus, A D 40 ? _ pl fair 51% Sigibertus, A. D. 1100 >

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Epiphduius, A. D. 368 . .

Justin Martyr, A. D. 140 >

Metrodorus, B. C. 170 5

*Ado, B. of Vienne, A. D. 860 '—□□□ . -**

Origen, A. D. 230

Fresnoy ....

Aurelius Cassiodorius, A. D. 463 . . □□'

Samaritan computation

Seder Olam Sutha

Odeaton Astrologus .....

Samaritan Text .....

Hebrew Text . . . . .

Jewish computation □□

*Marianus Scotus, A. D. 1080 . – . , □□□- < *-□□□ .*

Jewish computation . . .

Laurentius Codomannus . . ... .

Nicholas Vignier . . . . . .

Thomas Lidyat . . . . ” .

Ribera . . . . ►► .

Genebrard . . . . ►►► ‘ .

Arnold de Pontac . . ‘ .’ x . .

Chinese Jews . . . ...

Michael Moestlinus . . ...

Ricciolus . . ►►► ‘.

Maimonides i

Blancanus 5 ”

Salianus .....

Labbaeus . . . . ‘ . .

Spondanus > Torniellus 5

Langius . . . . . .

Pererius . . . . . .

Rheinhold . . . . ‘►►►. ”’

Playfair .....

Walker .....

Kennedy, Bedford, Ferguson .....

Capellus .....

Usher, Lloyd, Simpson, Spanheim, Calrnet, Le Chais, Blair, &c.
English Bible .....

Ilevelius i Marsham 5 Kepler .....

Petavius . . .

Bibliander .....

Krentzeim .....

Bucholtzer, Matthias . . .

Cluverius, Boxhornius, Jansenius .

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Bunting, Bardius .....

Longomontanus . . . .

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Reynoldus .....

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Lightfoot . . . . ‘

Salmeron, Picus Mirandula . 3-►► ‘ .

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Cornelius a Lapide .....

Scaliger, J. S. . . . . – .

Strauchius . . . . .

Johannes Micrelius . . ....

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CHRONO’METER,n. s. From xpovoC and pfrpov. An instrument for the exact mensura- tion of time.

According to observation made with a pendulum chronometer, a bullet, at its first discharge, flies five hundred and ten yards in five half seconds.

Derham.

CHRONOMETERS are, strictly speaking, only a more accurate

species of watches : but they are generally much larger, and, being designed to measure time with great accuracy, are sup- plied with varioas correctives in respect to the balances, escapements, &c. They are usually, for nautical purposes, hung in gimbols placed in boxes of six or eight inches square. The invention and improvement of chronometers have had various claimants ; but the ingenuity and researches of the French artists, there can he no question, have given them their modern importance and accuracy. Peter Leroy first con- structed fluid thermometers on the balance, and afterwards invented the present expansion ba- lance of brass and steel, for correcting the effects of heat and cold, to which, with the isochronism of the vibrations of the balance produced by the proper adjustment of the pendulum spring, chronometers principally owe their present per- fection. Men of war generally have one al- lowed them by government.- The rate of a chro- nometer is that number of seconds which its hands indicate more or less than twenty-four hours in a mean day, and is called plus when more is in- dicated than twenty- four hours in a day, and minus when less. Suppose, for example, the chro- nometer when set to the time at Greenwich, instead of going at mean time, had been ascer- tained to have a gaining rate of +7, 5 a day, and that it was forty days on its passage to Petersburgh ; it is evident that, on its arrival, it would have been forty times seven seconds and a half, or five minutes, too fast at Greenwich, and must, therefore, have five minutes deducted from the time it indicated to give that at Green- wich; and so much added if the rate had been losing. Public observatories having a good re- gulator furnish the best means of finding the rate of a chronometer on a voyage ; but it may be sufficiently found for practical purposes by ascertaining the error on its arrival at any port, and again on departure ; the encreased error, divided by tne number of days that have elapsed between the two observations, giving the daily error or rate. The connexion between time and longi- tude is obvious, and that the true instant of noon*

must be earlier at each place, at which we should arrive, travelling eastward, until those differences of time had amounted to a whole day, in the entire rotation of the earth. Allowing, therefore, proportionally for every smaller part, we may determine what is the difference of longitude between them. Suppose therefore, for example, a chronometer, set to the time at Greenwich, were to be carried to Petersburgh, it would indi- cate time two hours later than Petersburgh clocks, that is to say, it would show when it was noon at Greenwich, instead of when it was noon at Petersburgh. The obvious conclusion is, that the sun arrives at the meridian of Petersburgh

earlier, and, consequently, that this town lies more easterly than Greenwich ; and, as two hours are in proportion to twenty-four, so is 360°, the earth's circumference, to 30°, the longitude of Petersburgh, reckoned from Greenwich. This is supposing the chronometer to have gone at mean time, or, in other words, that its hands have passed ovet twenty-four hours on the dial plate from mean noon on one day to mean noon on the next. It is then said to go at mean time, or to have no rate. But this is not necessary to its use; for, provided its rate or daily error be known, the time at Greenwich, or the first me- ridian, may always be found by applying that rate to the time indicated. See WATCHES.

CHRONOMETER, LAMP, an ingenious contri- vance to show the hour during the night. It consists of a chamber lamp A, which is a cylin- drical vessel about three inches high, and one inch diameter, placed in the stand B. The in- side must be everywhere exactly of the same diameter. To the stand, B, is fixed the handle, C, which supports the frame D E F G, about twelve inches high, and four wide. This frame is covered with oiled paper, and divided into twelve equal parts by horizontal lines ; at the end of which are written the numbers for the hours, from one to twelve, and between the horizontal lines are diagonals that are divided into halves, quarters, &c. On the handle C, and close to the glass, is fixed the style or gnomon II. Now, as the distance of the style from the flame of the lamp is only half an inch, if the distance of the frame from the style is only six inches, then, while the float that contains the light descends, by the decrease of the oil, one inch, the shadow of the style on the frame will ascend twelve inches, that is, its whole length, and show by its progression the regular increase of the hours, with their several divisions. It is absolutely

necessary, that the oil used in this lamp be always of the same sort and quite pure, and that the wick also be constantly of the same size and substance, as it is on these circumstances, and the uniform figure of the vessel, that the regular progress of the shadow depends. See the an- nexed diagram.

CHROSTASIMA, in natural history, a genus of pellucid gems, comprehending all those which appear of one simple and permanent color in all lights ; such are the diamond, carbuncle, ruby, garnet, amethyst, sapphire, beryl, emerald, and the topaz. See DIAMOND,

CARBUNCLE, &c.

CHRUDIM, a town and circle of Bohemia, which takes its name from the town of Chrudim, between Moravia and the circles of Konigingratz, Biczow, apd Czaslau. It is woody and moun- tainous eastward, but open and fertile in the west. Its chief productions are corn, flax, and a fine breed of horses. In the towns and villages are some manufactures in a thriving state. Popula- tion 245,060.

CHRUDIM, the town, stands on the river Chru- dimka, and contains 700 houses. It is fifty miles east of Prague.

CHRYSA, in ancient geography, a town of Mysia, on the Sinus Adramyttenus ; extinct in Pliny's time. It contained a celebrated temple of Apollo Smintheus, and was the country of the fair Briseis, who was the cause of the quarrel between Agamemnon and Achilles.

CHRY'SALIS, n. s. From %pw□□roc gold, be- cause of the golden color in the nymphaeofsome insects. A term used by some naturalists for aurelia, or the first apparent change of the mag- got of any species of insects.

Another contrivance, equally mechanical, and equally clear, is the awl, or borer, fixed at the tails of various species of flies ; and with which they pierce . in some cases, plants ; in others, wood ; in others, the skin and flesh of animals ; in others, the coat of the chrysalis of insects of a different species from their own ; and in others, even lime, mortar, and stone.

Paley. Natural Theology.

CHRYSALIS, or AURELIA, in natural history, is that state of rest and seeming insensibility, which butterflies, moths, and several other kinds of insects, must pass through before they arrive at their winged or most -perfect state. In this state, no creatures afford so beautiful a variety as the butterfly kinds, all of whom pass through tiiis middle state. The figure of the aurelia or

chrysalis generally approaches to that of a cone, at least the hinder part of it is in this shape ; and the creature, while in this state, has neither legs nor wings, nor any power of walking. It seems indeed to have hardly life. It takes no nou- rishment, nor has it organs for taking any ; in- deed its posterior part is all that seems animated, this having a power of giving itself some motion. The external covering of the chrysalis is cartila- ginous, and large, it is usually smooth and glossy : but some of them have a few hairs ; some are

also as hairy as the caterpillars from which they are produced ; and others are rough, and, as it were, shagreened all over. In all these there may be distinguished two sides ; the one the back, the other the belly of the animal. On the anterior part of the latter, there may be dis- tinguished little elevations running in ridges, re- sembling the fillets wound about mummies : the part whence these have their origin, is es- teemed the head of the animal. The other side, or back, is smooth, and of a rounded figure in most ; but some have ridges on the anterior part, and sides of this part ; and these usually termi- nate in a point, and make an angular appearance on the chrysalis. From this difference is drawn the first general distinction of these bodies into two classes ; the round and the angular kinds. The first are, by the French naturalists, called feves ; from the common custom of calling the chrysalis of the silk worm, which is round, by this name. The division is continued from the fly-state: the rounded chrysalises being almost all produced by the phalenae or moths ; and the angular ones by the papilios,orday flies. There are several subordinate distinctions ; but, in general, they are less different from one another than the caterpillars from whence they are pro- duced. The head of angular chrysalises usually terminates by two angular parts, which stand se- parate, and resemble a pair of horns. On the back, eminences and marks are discovered, which imagination may form into eyes, nose, chin, and other parts of the human face. There is great variety and beauty in the figures and ar- rangement of the eminences and spots on the other parts of the body of the chrysalises of dif- ferent kinds. It is a general observation, that those chrysalises which are terminated by a single horn, afford day butterflies of the kind of those which have buttoned antennae, and whose wings, in a state of rest, cover the under part of their body, and which use all their six legs in walking, those of many other kinds using only four of them. Those chrysalises which are terminated by two angular bodies, and which are covered with a great number of spines, and have the figure of a human face on their back in the greatest perfection, afford butterflies of the day kind ; and of that class the characters of which are, their walking on four legs, and using the other two, that is, the anterior part, in the man- ner of arms or hands. The chrysalis which has two angular bodies on the head, but shorter than those of the preceding, whose back shows but a f.iint sketch of the human face, and which has fewer spines, and those less sharp,' always turns to that sort of butterfly the upper wings of which are divided into segments, one of which is so

!ong as to represent a tail, and whose under wings are folded over the upper part of the back. A careful observation will establish many more rules of this kind, which are not so perfect as to be free from exceptions ; yet are of great use, as they teach us in general what sort of fly we are to expect from the chrysalis, of which we know not the caterpillar, and therefore can only judge from appearance. Among the angular chrysalises there are some whose color seems as worthy our observation as the shapes of the others. Many of them appear superbly clothed in gold. These elegant species first obtained the name of chrysalis and aurelia, derived from Greek and Latin words, signifying gold ; and from these all other bodies of the same kind came to be called by the same name. As some kinds are thus gilded all over, so others are more sparingly ornamented with this gay appearance, having only a few spots of it in different places on their back and belly. These obvious marks, however, are not to be depended upon as certain characters of distinction : for accidents in the formation of the chrysalis may alter them ; and those which naturally would have been gilded all over, may be sometimes only so in part ; and either these or the others may, by accident, be so formed, as to show nothing of this kind at all, but be only of a dusky brown. Those, however, which have neither silver nor gold to recommend them to the eye, do not want other colors, and those beautifully variegated. Some of them are all over of an elegant green, as is the chrysalis of the fennel caterpillar ; others of an elegant yellow ; and some of a bright greenish tinge, variegated with spots of a shining black. We have a very beautiful instance of this last kind in the chrysalis of the elegant cabbage cater- pillar. The general color of the chrysalis of the common butterflies, however, is brown. Some are also of a fine deep black ; and of these many are so smooth and glossy, that they are equal to the finest Indian japan. The common cater- pillar of the fig-tree gives an instance of one of these most beautiful glossy ones ; the caterpillar of the vine affords another of these fine black chrysalises. The round chrysalises have also their marks as regular as the angular. The greater number of them have the hinder part of their bodies conical ; but the upper end, which ought to be its circular plane base, is usually bent and rounded into a sort of knee : this is called the head of the chrysalis ; but there are also some of this kind the head of which is terminated by a nearly plane surface : some of the creeping ten-legged caterpillars give chrysa- lises of this kind, having each two eminences that seem to bring them towards the angular kind. The rounded chrysalises do not afford any thing of that variety of coloring so re- markable in the angular ones ; they are usually of a dusky yellow, in different shades, and are often variously spotted with black ; but these as well

as all other chrysalises, before they arrive at their fixed color, pass through several other temporary ones. The green rough caterpillar of the cabbage has a chrysalis which is green at first; and from that gradually goes through all tr.e shades of green to a faint yellow, which is

its lasting color; and one of the oak caterpillars yields a chrysalis beautifully spotted with red at its first appearance ; but these spots change to brown for their fixed color : the third day from their formation usually fixes their lasting colors ; and if they are observed to turn black in any part after this time, it is a sign they are dead or dying.

The several species of insects, as flies, spiders, and ants, do not differ more evidently from one another in regard to appearance, than do a cater- pillar, its chrysalis, and a butterfly produced from it ; yet it is certain, that these are all the product of the same individual egg ; and nothing is more certain, than that the creature which was for a while a caterpillar, is, after a certain time, a chrysalis, and then a butterfly. These great changes produced in so sudden a manner, seem like the metamorphoses recorded in the fables of the ancients ; and indeed it is not improbable that those fables first took their origin from such changes. The parts being distinguishable in the chrysalis, we easily find the difference of the species of the fly that is to proceed from it. The naked eye shows whether it be one of those that have, or of those that have not, a trunk ; and the assistance of a microscope shows the antennae so distinctly, that we are able to discern whether it belong to the day or night class ; and often what genus, if not the very species : nay, in the plu- mose horned kinds, we may see, by the antennas, whether a male or female phalaena is to be pro- duced from the chrysalis ; the horns of the female being in this state evidently narrower, and appearing less elevated about the common sur- face of the body, than those of the male. All these parts, however, though seen very distinctly, are laid close to one another, and seem to form only one mass ; each is covered with its own peculiar membrane in this state, and all are sur- rounded by a common one ; and it is only through these that we see them : or rather we see on these the figures of all the parts moulded within, and therefore it requires attention to distinguish them. The chrysalis is soft when first produced, and is wetted on the front with a viscous liquor ; its skin, though very tender at the first, dries and hardens by degrees : but this viscous liquor, which surrounds the wings, legs, &c. hardens almost immediately ; and in consequence fastens all those limbs, 8cc. into a mass, which were before loose from one another : this liquor, as it hardens, loses its transparence, and becomes brown

; so that it is only while it is yet moist that these points are to be seen distinctly. It is evident from the whole, that the chrysalis is no other than a butterfly, the parts of which are hid under certain membranes which fasten them together ; and when the limbs are arrived at their due strength, they become able to break through these membranes, and then expand and arrange themselves in their proper order. The first metamorphosis, therefore, differs no- thing from the second, except that the butterfly comes from the body of the caterpillar in a weak state, with limbs unable to perform their offices, whereas it comes from the chrysalis perfect. M. Reaumur has given us many curious observations on the structure and uses of the

several coverings that attend the caterpillar kind in tins state. The creatures in general remain wholly immoveable, and seem to have no business in it but a patient attendance on the time when they are to become butterflies ; and this is a change that can happen to them, only as their parts, before extremely soft and weak, are capable of hardening and becoming firm by degrees, by the transpiration of that abundant humidity which before kept them soft : and this is proved byan experiment of M. Reaumur, who, enclosing some chrysalises in a glass tube, found, after some time, a small quantity of water at the bottom of it ; which could have come there no other way, but from the body of the enclosed animal. This transpiration depends greatly on the temperature of the air ; it is increased by heat, and diminished by cold ; but it has also its peculiarities in regard to the several species of butterfly to which the chrysalis be- longs. According to these observations, the time of the duration of the animal in the chry- salis state must be, in different species, very dif- ferent ; and there is indeed this wide difference in the extremes, that some species remain only eight days in this state, and others eight months. We know that the caterpillar changes its skin four or five times during its living in that state ; and that all these skins are at first produced with it from the egg, lying closely over one another. It parts with, or throws off, all these one by one, as the butterfly, which is the real animal, all this time within, grows more and more perfect in the several first changes. When it throws off one, it appears in another skin exactly of the same form; but at its final change from this appearance, that is, when it throws off the last skin, as the creature within is now arrived at such a degree of perfec- tion as to need no farther taking of nourishment, there is no farther need of teeth, or any of the other parts of a caterpillar. The creature, in this last

change, proceeds in the same manner as in all the former, the skins opening at the back, and the animal making its way out in this shape. If the caterpillar, when about to throw off this last skin, be thrown into spirits of wine, and left there for a few days, the membranes within will harden, and the creature may be afterwards carefully opened, and the chrysalis taken out, in which the form of the tender butterfly may be traced in all its lineaments, and its eyes, legs, &c. evidently seen. If one of these animals be thrown into spirits of wine, or into vinegar, even some days before that time, and left for the flesh to harden, it may afterwards be dissected, and all the lineaments of the butterfly traced out in it ; the wings, legs, antennae, &c. being as evident as in the chrysalis. It is plain from this, that the change of the caterpillar into chrysalis is not the work of a moment ; but is carrying on for a long time before, even from the very hatching of the creature from the egg. The parts of the butterfly, however, are not disposed exactly in the same manner while in the body of the caterpillar, as wheh left naked in the form of the chrysalis : for the wings are proportionally longer and nar- rower, being wound up into the form of a cord ; and the antennae are rolled up on the head ; the trunk is also twisted up and laid upon the head, but this in a very different manner from what it is

in the perfect animal, and very different from that ia which it lies within the chrysalis ; so that the first formation of the butterfly in the caterpil- lar, by time arrives at a proper change of the dis- position of its parts, in order to its being a chry- salis. The very eggs, hereafter to be deposited by the butterfly, are also to be found not only in the chrysalis, but in the caterpillar itself, arranged in their natural regular order. They are in this state very small and transparent ; but after the change into the chrysalis, they have their proper color. As soon as the several parts of the but- terfly, therefore, are arrived at a state proper for being exposed to the air, they are thrown out from the body of the caterpillar surrounded only with their membranes ; and, as soon as they ar- rive at a proper degree of strength and solidity, they labor to break through these thinner co- verings, and to appear in their proper and natu- ral form. The time of their duration in this state of chrysalis is very uncertain, some remain- ing in it only a few days, others several months, and some almost a year in appearance. But there is a fallacy in this that many are not aware of. It is natural to think, that as soon as the creature has enclosed itself in its shell, be that of what matter it will, it undergoes its change into the chrysalis state. And this is the case with the generality : yet there are some which are eight or nine months in the shell before they become chrysalises ; so that their duration in the real chrysalis state

is much shorter than it naturally appears to be. M. Reaumur carefully watched the articulated caterpillar of the oak in its several changes, and particularly from its chrysalis, which is of this last kind, into the fly ; and has given an account of the method of this as an instance of the general course of nature in these operations. The membranes which envelope the creature in this chrysalis state are at first tough and firm, and immediately touch the several parts of the en- closed animal ; but by degrees, as these parts harden they become covered, some with hairs and others with scales. These, as they continue to grow, by degrees fall off the several particular membranes which cover the parts on which they are placed to a greater distance, and gradually loosen then from the limbs. This is one reason of those membranes drying and becoming brittle. The middle of the upper part of the corselet is usually marked with a line running in a longitu- dinal direction , and this part is always more elevated than the rest, even in the conic kinds,, which are no otherwise angular. This line is in some very bold and plain ; in others, it is so faint as not to be distinguishable without glasses ; but it is always in the midst of that line, that the shell begins to open. The motion of the head of the butterfly backwards first occasions this crack; and a few repetitions of the same motion open it the whole length. The clearing itself, however, entirely, is a work of more time in this case, than is the passing of the chrysalis out of the body of the caterpillar. In that case there is a crack sufficiently large in the skin of the back, and the whole chrysalis being loose comes out at once. But in this case every particular limb, and part of the body, has its separate case ; and these are al- most inconceivably thin and tender, yet it is ne- cessary that every part be drawn out of them

before it appear naked to the open air. As soon as all this is effected, and the animal is at liberty, it either continues some time upon the remains of its covering, or creeps a little way from it, and there rests. The wings are principally admired in this creature. These are at this time so closely folded up, and placed in so narrow a compass, that the creature seems to have none : but they by degrees expand and unfold themselves ; and finally, in a quarter of an hour, or half an hour at the utmost, they appear of their fuirsize, and in all their beauty. The manner of this sudden unfolding of the wings is th.is : the small figure they make when the creature first comes out of its

*membranes, does not prevent the observing that they are at that time considerably thick. This is owing to its being a large wing folded up in the nicest manner, and with folds so arranged as to be by no means sensible to the eye, for the wing is never seen to unfold ; but, when ob- served in the most accurate manner, seems to grow under the eye to this extent. When the creature is first produced from the shell, it is everywhere moist and tender ; even its wings have no strength or stiffness till they expand themselves; but they then dry by degrees, and,
िथ्with the other parts, become rigid and firm. But if any accident prevents the wings from expand ing at their proper time, that is, as soon as the creature is out of the shell, they never afterwards are able to extend themselves ; but the creature continues to wear them in their contracted and wholly useless state ; and very often, when the wings are in part extended before such an acci- dent happens, it stops thenvin a partial extension, and the creature must be contented to pass its whole life with them in that manner. M. Reau- mur has proved that heat and cold make great differences in the time of hatching the butterfly from its chrysalis state : and this he particularly tried with great accuracy and attention, by put- ting them in vessels in warm rooms, and in ice houses : and it seemed wholly owing to the has- tening or retarding the evaporation of the abun- dant humidity of the animal in the chrysalis state, that it sooner or later appeared in the but- terfly form. He varnished over some chrysalises, to try what would be the effect of thus wholly preventing their transpiration ; and the conse- quence was, that the butterflies came forth from these two months later than their natural time. Thus was the duration of the animal in this state lengthened ; that is, its existence was lengthened ; but without any advantage to the creature, since it was in the time of its state of inaction, and probably of insensibility. M. Reaumur deduces a hint from this, respecting the preservation of eggs, that seems to be of some use. See EGGS. The third state of these insects, that in which they are winged, is always very short, and seems destined for no other action but the propagation of the species. See PA-*

PILIO.

CHRYSANTHEMUM, corn marigold; in botany, a genus of the polygamia superflua order, and syngenesia class of plants ; natural order forty-ninth, composite. Receptacle naked ; pappxis marginated, or consisting only of a border; CAL. hemispherical and imbricated, with the VOL. V.

marginal scales membranaceous. There are twen- ty-six species, of which the following are the most remarkable : ॥ 1. C.

coronarium, long cultivated in the gardens on account of the beauty of its flowers. It grows to the height of three feet, with a single upright stalk divided into numerous branches, garnished with pinnated leaves, and crowned with elegant compound flowers of different colors and properties. The varieties are, single and double flowers of a cream color ; yellow; yellow and white; brimstone-colored; fistular, or quilled ; or those with finely jagged leaves, and flowers of all the above colors and properties. All the varieties begin flowering in July ; the flowers are exceedingly numerous, and exhibit a constant succession of full bloom till November ; aud both single and double are suc- ceeded by abundance of seed. This species may be raised in abundance from seed, either in a hot- bed, or warm border, in the spring, for trans- planting ; also by cuttings and slips of their branches in autumn. 2. C. frutescens, a native of the Canary Islands. It rises with a shrubby stalk near two feet, dividing into many branches, which are garnished with pretty thick succulent leaves of a grayish color, cut into many seg- ments. The flowers come out from the wings of the leaves, growing upon naked foot-stalks singly, which greatly resemble those of chamo- mile. There is a succession of flowers on the same plant for the greatest part of the year, for which it is chiefly esteemed. This plant will perfect seeds in Britain, when the seasons are fa- vorable. 3. C. serotinum is a native of North America. The roots of this plant creep far un- der the surface, and send up strong stalks mote than four feet high, garnished with long sawed leaves ending in points. These stalks divide upward into many smaller ; each being termi- nated by a large, white, radiated flower, which appears in the end of August or September. This species multiplies fast by its creeping roots, and will thrive in any soil or situation.

CHRYSANTHEMUM, BASTARD. See SILPHIUM.

CHRYSANTHEMUM, HARD-SEEDED. See OSTE- OSPERMUM.

CHRYSES, in fabulous history, the priest of Apollo, and father of Astynome, hence called Chryseis. When Lyrnessus was taken, and the spoils divided among the conquerors, Chryses fell to the share of Agamemnon. Chryses upon this went to the Grecian camp to solicit his daughter's restoration ; and when his prayers were fruitless, he implored the aid of Apollo, who visited the Greeks with a plague, and com- pelled them to restore Chryseis.

CHRYSIPPUS, a Stoic philosopher, born at Solis, in Siciiia, was a disciple of Cleanthus, Zeno's successor. He wrote many works, seve- ral of which related to logic. None of the phi- losophers spoke in

stronger terms of the fatal ne- cessity of everything, nor more pompously of the liberty of man, than this Stoic. So consi- derable was he among them that it became a proverb, that if it had not been for Chrysippus, the porch had never been : yet the Stoics com- plained, as Cicero relates, that he had collected so many arguments in favor of the sceptical hy- pothesis, that he could not answer them himself;

and thus had furnished Carneades, their antago- nist, with weapons against them. There is an apophthegm of this philosopher preserved, which does him honor. Being told that some persons spoke ill of him, ‘ It is no matter,’ said he, ‘ I will live so that they shall not be believed.’

CHRYSIS, the golden-fly, in natural his- tory ; a genus of insects belonging to the order of hymenoptera. The mouth is armed with jaws, but has no proboscis ; the antennae are filiform, bent, and consist of twelve articulations ; the abdomen is arched, with a scale on each side ; the anus is dentated, and armed with a sting ; the wings lie plain ; and the body appears as if gilt. There are above thirty species, of which the most remarkable is the C. ignita, or flaming chrysis, beautified with the most resplen- dent colors. The fore part of its head is green and gold, and the hinder of a beautiful azure. The thorax is likewise azured over, with a mix- ture of green, and terminated at its extremity with sharp points “on both sides. The abdomen is green and gold before, and of a coppery red behind, imitating molten copper highly polished. The whole insect is dotted on its upper part, which gives it a great resplendency of color. The antennae are black, and legs green, inter- mixed with gold. This species dwells in holes of walls between the stones, and in the mortar that cements them. It is often seen issuing from such holes, where it nestles and performs its work. The larvae, which resemble those of the wasp, likewise inhabit the holes of decayed walls.

CHRYSITRIX, in botany, a genus of the dicecia order, and polygamia class of plants : HERM. glume two-valved : COR. from chaff nu- merous and bristly ; many stamina, one within each chaff: PISTIL,

one. Male no pistillura. Species one, native of the Cape.

CHRYSOBALANUS, cocoa plum in bo- tany, a genus of the monogynia order, and ico- sandria class of plants : natural order thirty-sixth, pomaceae : CAL. quinquefid, petals five; plum kernel five-furrowed and five-valved. There is only one species, viz. the C. icaco, which is a native of the Bahama Islands and many other parts of America, but commonly grows near the sea. It rises with a shrubby stalk eight or nine feet high, sending out several side branches, which are covered with a dark brown bark. The flowers are white, and are succeeded by plums like damsons ; some blue, some red, and others yellow. The stone is shaped like a pear, and has five longitudinal furrows. The plums have a sweet luscious taste, and are brought to the tables of the inhabitants, by whom they are much esteemed.

CHRYSOCOMA, goldy-locks, in botany, a genus of the polygamia aequalis order, and synge- nesia class of plants ; natural order forty-ninth, composite. Receptacle naked ; pappus simple: CAL. hemispherical andimbricated ; STYLE hardly longer than the florets. There are fifteen species, the most remarkable of which are, the linosyris, the coma aurea, and the cornua. These are herbaceous flowering perennials, growing from one to two feet high, ornamented with narrow leaves, and compound floscular flowers of a

yellow color. They are easily propagated by dividing the roots or by cuttings; but the last two require to be sheltered in the green-house in winter.

CHRYSOGONUM, in botany, a genus of the polygamia necessaria order, and syngenesia class of plants; natural order forty-ninth, compositae. Receptacle paleaceous ; pappus monophyllous, and tridented : CAL. pentaphyllous ; the seeds wrapped up each in a tetrephyllous calycuius. Species one, a native of Virginia.

CHRY'SOLITE, n. s. Xpiwroc gold, and Xt0oc a stone. A precious stone of a dusky green, with a cast of yellow.

Such another world, Of one intire and perfect chrysolite, I'd not have sold her for. Shakspearc.

If metal, part seemed silver, part silver clear, If stone, carbuncle most, or chrysolite.

Milton's Paradise Lott.

CHRYSOLITES, or yellowish-green topazes, aie found in the East

Indies, Brasil, Bohemia, Saxony, Spain, in the departments of Cantal, Puy-de-dome and Allier, in France, and in Derbyshire in England. Some are also found with volcanic lavas, as in the Vivarais, where some large lumps have been seen of twenty or thirty pounds weight ; but it is remarkable, that some of these chrysolites are partly decomposed into an argillaceous substance. All chrysolites, however, are far from being of the same kind. The oriental is the same with the peredot, and differs only by its green hue from the sapphires, topazes, and rubies of the same denomination. This becomes electric by being rubbed ; has a prismatic form of six, or sometimes of five striated faces ; and does not lose its color or transparency in the fire, which the common chrysolite often does ; becoming either opaque, or melting entirely in a strong heat. The instant it melts, it emits a phosphoric light like the basis of alum and gypseous spar : with borax it produces a thin colorless glass. Its specific gravity is between 3-600 and 3-700; ac- cording to Brisson it is 2-7821, or 2-6923; and that of the Spanish chrysolite 3-0989. The substance of this precious stone is lamellated in the direction of the axis of its primitive form : but the chrysolite from Saxony is foliated in a per- pendicular direction to the same axis. The chrysolite of the ancients was the same gem which is now called topaz, and the name of itself indicates that it ought to be so.

CHRYSOLITES, PASTE, are a kind of glass made in imitation of chrysolites, by mixing two ounces of prepared crystal with ten ounces of red-lead, adding twelve grains of crocus martis made with vinegar; and then baking the whole for twenty- four hours, or longer, in a well luted cucurbit.

CHRYSOMELA, in zoology, a genus of insects belonging to the order of coleoptera. The antennae are shaped like bracelets, and thicker on the outside, feelers six, thorax marginate, the elytra immarginate. There are no less than 340 species, principally distinguished by differ- ences in their color. They are to be found almost everywhere, in woods, gardens, &c. Their progressive motion is slow ; and some when caught, emit au oily liquor of a disagree-

able smell. The glittering colors with which several species of chrysomelae are adorned, and which seem to exhibit the brilliancy of gold and copper, have occasioned their bearing that pom- pous name. The larvae of these insects have in general an oval body, . rather

oblong and soft ; on the fore part of which are situated six feet, which are scaly, as is also the head. They prey upon the substance of leaves, rejecting the fibrous part. Those of the leaping chrysomelae infest ihe cotyledons and tender leaves of plants. Of /bis genus is that very pernicious insect called by the country people the turnip fly, which infests turnips and many crops in the garden, destroying often whole fields while in their seedling leaves. In very hot summers they abound to an amazing degree, and, in a field or garden, make a pattering like rain, by jumping on the leaves of the turnips or cabbages.

CIIRYSOPAGION, in natural history, a name by which some of the middle age writers have called the gem described by Pliny under the name of the chrysolampis. Salmasius is of opinion that it was only a foul kind of the chrysoprasius, of which Pliny says, that some of them were full of specks, and of a variable color.

CHRYSOPHYLLUM, Hie bully tree, in botany, a genus of the monogynia order, and pentmdria class of plants ; natural order forty- third, dumosse : COR. campanulated, decemfid, with the segments alternately a little patent ; fruit a ten-seeded berry. There are seven species, all natives of the West Indies. The chief are, 1. C. cainito, a Jamaica tree, rising thirty or forty feet high, with a large trunk covered with a brown bark, and dividing into many flexible slender branches, which generally hang down- ward, garnished with spear-shaped leaves, whose under sides are of a bright russet color. The flowers come out at the extremities of the branches, disposed in oblong bunches, which are succeeded by fruit of i'ie size of a golden pippin, that are very rough to the palate, and astringent; but when kept some time they mellow, and have an agreeable flavor. 2. C. glabrum never rises to the height of the cainito, nor do the trunks grow to half the size ; but the branches are slender and garnished with leaves like those of the other. The flowers come out in clusters from the sides of the branches, which are suc- ceeded by oval smooth fruit, about the size of a bergamot pear. It contains a white clammy juice when fresh ; but, after being kept a few days, it becomes sweet, soft, and delicious. En- closed are four or five black seeds of the size of a pumpion. Both species are oiten preserved in large stoves, and are propagated by seeds ; but they never bear the open air in this country.

CHRYSOPILON, in natural history, a name given by some of the ancients to a species of the beryl, which had a yellowish tinge.

CHRYSOPSIS, the golden-eye, in natural history, the name of a

species of fly, so called from the beautiful gold color of its eyes. It is a long bodied fly, with extremely thin and trans- parent wings of a silvery color, with green ribs cr nerves ; the body is green, and the antennae very slender and blackish. It is a very slow

flyer, and is common in gardens; it is fre- quently found on the elder; and has a very strong smell.

CHRYSO'PRASUS, n. s. Xpy

The ninth a topaz, the tenth a chrysoprasus. Rev.

CURYSOPRASUS, the tenth of the precious stones mentioned in the Revelation, as forming the foundation of the heavenly Jerusalem. The chrysoprasus is by mineralogists reckoned to be a variety of the chrysolite, by Cronstadt called the yellowish-green and cloudy topaz. He sup- poses it to be the substance which serves as a matrix to the chrysolite ; as those that he had seen were like the clear veined quartz, called in Sweden milk crystal, which is the first degree of crystallisation. According to Magellan, it is of a green color, deeper than the chrysolite, but with a yellowish tinge inclining to blue, like the green leek. Achard says that it is nevei found crystallised, and that it is semi-trans- parent. By others it is reckoned among the quartz, and its color is supposed to be owing to the mixture of cobalt, as it gives a fine blue glass when melted with borax, or with fixed alkali. Achard, however, found the glass of a deep yellow when the fusion was made with borax, and that it really contains some calx of copper instead of cobalt. Uutens says, that some gold has been found in this kind of stone : but this last belongs in all probability, says Magellan, to another class of substances, viz. the vitreous spars : to which also belongs most probably the aventurine. See SPAR. The chrysoprasus only differs from the chrysolite in its bluish hue.

CHRYSOSPLENIUM, in botany, a genus of the digynia order and decandria class of plants ; natural order twelfth, succulents : CAL. quadrifid or quinquefid, and colored : COR. none : CAP. birostrated, unilocular and polyspermous. Its English name is golden saxifrage.

CHRYSOSTOM (St. John), a celebrated patri- arch of Constantinople, and one of the most admired fathers of the church, was born of a noble family at Antioch, about A. D. 347. He studied rhetoric under Libavius, and philosophy under Andragathus : after which he spent some time in solitude in the mountains near Antioch ; but, th? austerities he endured having impaired his health, he returned to Antioch, where he was ordained deacon by Meletius.

Flavian, Meletius's successor, raised him to the office of presbyter five years after ; when he distinguished himself so greatly by his eloquence, that he obtained the surname of Chrysostom, or golden mouth. Nectarius, patriarch of Constantinople, dying in 399, St. Chrysostom, whose fame was spread throughout the whole empire, was unani- mously elected by both clergy and people. The emperor Arcadius confirmed his election, and caused him to leave Antioch privately, where the people were very unwilling to part with him. He was ordained bishop on the 26th of February 398; when he obtained an order from the emperor against the Eunomians and Montanists; reformed the abuses which subsisted among his

clergy ; retrenched a great part of the expenses in which his predecessor had lived, in order to feed the poor and build hospitals ; and preached with the utmost zeal against the pride, luxury, and avarice of the great. But his pious liberty of speech procured him many powerful enemies. He differed with Theophilus of Alexandrk, who prpcured his deposition and banishment, but he was soon recalled. After this, declaiming against the dedication of a statue erected to the empress, she banished him to Cucusus in Armenia, a most barren and inhospitable place ; and afterwards, as they were removing him from Petyus, the soldiers treated him so roughly, that he died in the way, A. D. 407. The best edition of his works is that published at Paris in 1718, by Montfaucon. They were well edited in 1612, by Savile, at Eton, in nine volumes folio, on which he is said to have expended ––8000; and also by Montfaucon at Paris, in 1718. Erasmus and Fronton le Due, also pub- lished Latin versions. The work of Erasmus is only a collection of the existing versions ; that of Fronton le Due is a new translation, and was subsequently adopted by Montfaucon.

CHRYSTAL. See CRYSTAL.

CHTHONIA, in antiquity, a festival kept in honor of Ceres.

CHU, emperor of China. See CHINA.

CHUB, n. s. From cop, a great head. A river fish. The cheven.

The chub is in prime from Midmay to Candlemas, but best in winter. He is full of small bones : he eats waterish , not firm, but limp and tasteless : neverthe less he may be so dressed as to make him very good meat. Walton's Angler.

CHUB, or CHUBB, in ichthyology. See CY- PRINUS.

CHUBB (Thomas), a noted polemical writer, born at East Harnham, near Salisbury, in 1679. He was apprenticed to a glover at Salisbury, and afterwards entered into partnership with a tallow-chandler. Being a man of strong natural parts, he employed all his leisure in reading; and, though a stranger to the learned languages, became tolerably versed in geography, mathe- matics, and other branches of science. His favorite study was divinity ; and he formed a little society for the purpose of debating on religious subjects, about the time that the trini- tarian controversy was so warmly agitated be- tween Clarke and Waterland. This subject, therefore, falling under the cognizance of Chubb's assembly, he drew up his sentiments on it, in a dissertation, which was afterwards published, under the title of the Supremacy of the Father asserted. In this piece Mr. Chubb showed great talents in reasoning ; and acquired so much reputation, that the late Sir Joseph Jekyl, took him into his family ; he did not, however, continue with him many years; but chose to return to his friends at Salisbury. He published afterwards a quarto volume of tracts, which Pope informs his friend Gay, he ' read through with admiration of the writer, though not always with approbation of his doctrine.' He died un- married in the sixty-eighth year of his age, and left behind him two volumes of posthumous

tracts, in which he appears to have nad littia belief in revelation.

CHUB'BED, adj. From chub. Bigheaded like a chub.

CHUCK, v. n., v. a. & n. s. ˆ If derived CHU'CK-FARTHING, >from jacto, it

OHU'CKLE, v. n. & v a. j signifies to

throw; to strike gently. If from Ital. chioccia ; or Scot, chuckie ; it is descriptive of a peculiar kind of natural sounds ; namely, to the noise cf a hen when calling her young ; to the tones of endearment and fondling. Chuckle is applied also to vehement convulsive laughter, and to a half-suppressed self-satisfied laugh of exultation over the misfortunes or sufferings of others ; or at the idea of our own schemes and plans succeed- ing.

He flew down fro thebeme, For it was day ; and, eke, his hennes all ; And with a chuk, he gan hem for to calle, For he had found a corn lay in the yerd.

Chaucer's Cant. Tale:. On his toos he rometh up and doun ; Him deigned not to set his foot to ground ; He chttkketh when he hath a corn yfound ; And to him rennen, than his wives alle. Thus real, as a prince is in his halle, Leave I this cbaunteclerее in his pasture, And after wol I tell his aventure. la.

Come, your promise. What promise, chuck ?

Shakspeare.

\ am not far from the women's apartment, 1 am sure ; and if these birds are within distance, here"., that will chuclde 'em together. Dryden .

What tale shall I to my old father tell ? 'Twill make him chuckle thou'rt bestowed so well.

Id. Then crowing, clapped his wings, the' appointed

call,

To chuck his wives together in the hall. Id. Fable. Your confessor, that parcel of holy guts and gar- bidge ; he must chuckle you, and moan you.*

Id. Spanish Friar.

She to intrigues was e'en hard-hearted ; She chuckled when a bawd was carted. Prior.

Come, chuck the infant under the chin, force a smile, and cry, Ah, the boy takes after his mother's relations. Congreve.

He made the chuck four or five times, that people use to make to chickens when they call them.

Temple.

He lost his money at chuck-farthing, shuffle-cap, and all-fours. Arbuthnot's History of John Brill.

CHUCUITO, a town and province of Peru, South America, bounded on the east by the lake of this name, north by that of Puno, and

south- east by that of Pacages, and the great chain of the Cordillera. It is seventy-five miles in length from north to south, and about fifty in breadth ; too cold generally for grain and fruits ; in some of the glens only it produces barley and pulse : but it abounds in cattle and shee^} i.nd the lama, the vicunna, and the deer, thrive in the mountains. The fleece of the vicunna forms a beau- tiful wool, and is woven into various kinds of apparel. Carpets and quilts are also made from it. Silver ores are obtained in considerable quantities in this province, from a soft porphy- ritic ridge, extending about eighteen miles, and yielding about five pounds of silver per hundred weight. There are said to be likewise some un-

worked veins of gold. The lakes abound with fish. Population about 30.000.

CHUCUITO, TITIACA, or TITICACA, a lake above alluded to, is situated in the Cordilleras of Peru, principally in the north-western part of the province of Los Charcos ; and is one of the largest inland waters of South America, being 150 miles in length from north-west to south- east, about seventy-five in average breadth, and 240 miles in circumference ; of an irregular oval figure. It is navigated by the largest ships, and in many of its bays there are from four to six fathoms of water; further from the shores, there is frequently a depth of from forty, fifty, and even seventy fathoms. It is subject to tremendous storms and gusts of wind. Several' large rivers, and a number of smaller streams, flow into it, and the water has a remarkably disagreeable taste, but it abounds in excellent fish, and water fowl ; and its banks are very picturesque, fertile, and populous. Some con- siderable islands diversify its surface. A celebrated temple of the sun 'brmerly adorued one of them.

CHUDLEIGH, a town in Devonshire, seated on the Teign, nine miles south of Exeter, and 1 82 west by south of London. It carries on a woollen manufacture, and has a market on Saturday. Here formerly was a Benedictine monastery, and a palace of the bishop of Exeter. It gives the title of baron to the Clifford family. CHU'ET, n s. Probably from to chew. An old word, as it seems, for forced meat.

As for chuets, which are likewise minced meat, in- stead of butter and fat, it were good to moisten them partly with cream, or almond or pistachio milk.

Bacon's Natural History.

CHUFF, n. s. -\ A word of uncertain

CHU'FFINESS, n. s. ˆ derivation ; perhaps cor-

CHU'FFILY, adv. (rupted from chub, or de-

CHU'FFY, adj. J rived from Welsh, kwf, a

stock; Germ, kuuf; Scot, cw/e, signifies a mean

fellow ; a churl ; a fat-headed, clownish, surly

boor.

Hang ye, gorbellied knaves, are you undone ? No, ye fat chuffs, I would your store were here.

Shaltspeare.

A less generous chuff than this in the fable, would

have hugged his bags to the last. L'Estratige.

John answered chtiffily. Clarissa.

CHUM, n. s. Armor, chom, to live together. A chamber fellow ; a term used in the universi- ties.

CHUMP, n. s. A thick heavy piece of wood, less than a block.

When one is battered, they can quickly, of a chump of wood, accommodate themselves with another.

Moxon.

CHUNAR, a district of Allahabad, Hindostan, situated about the twenty-fifth degree of north latitude. It is bounded on the north by the Ganges; on the south by the Soane; on the past by the Caramnassa; and on the west by Tarrar and Bogalecund. The northern part is fertile, but southward all is jungle and barren hills. The chief towns are Mirzapoor and Chunarghur and Bidjeeghur, now in ruins. The Boker River divides Chundail from this

district. Pasturage is here frequently common to a whole village, and the land consequently is often overstocked. In the dry season the

grass- cutters, who procure food for the horses of go- vernment or European settlers, will bring pro- vender from a field when verdure scarcely appears. A sharp instrument cuts the grass below the surface of the earth, and the roots, when cleared by washing, afford the only green food which is to be found. In the cold season turnips, cabbages, carrots, and other European greens, are raised in the gardens ; but the influ- ence of the hot winds uniformly kills them. Chu- nar was formerly part of the zemindary of Benares.

CH.UNARGHUR, a town and fortress in the district of Chunar, province of Allahabad, Hin- dostan, lat. 25►► N. long, nearly 83►► E. It lies on the south bank of the river Ganges, the navi- gation of which is completely commanded by its batteries, so that no boat can pass without inspection. The fort is very strong, and its for- tifications, according to the Indian method, con- sist of walls and towers one behind another ; it stands on a free-stone rock, several hundred feet high, advancing far into the river. A few scattered huts and European bungalows com- pose the town, which at some seasons is very hot and unhealthy. On the north a chain of low hills runs parallel to the right bank of the river, which is covered with plantations, through which the place is approached on that side. In 1530 it was the residence of the Afghan Shere Khan, who expelled the emperor Humayoon from Hindostan; in 1575 it was taken by the Moguls, and in 1 763 it was delivered up to the British, and has been in the Company's posses- sion ever since. It was formerly a place of importance, but the military depot has been transferred to Allahabad. It is 469 miles distant from Calcutta by the nearest route.

CHUPMESSAHITES, Turkish, i. e. pro- tector of Christians, a sect among the Mahom- medans, who believe that Jesus Christ is God, and the true Messiah, the redeemer of the world ; but without rendering him any public worship. Ricaut says, there are many Chupmessahites among the people of fashion in Turkey, and some even in the seraglio.

CHUPRAH, a town of Hindostan, in the Candeish country, fifty miles west of Burham- pour, and 112 S.S.W. of Indore.

CHUPRAH, a town of Hindostan, in the country of Bahar, on the north coast of the Ganges ; twenty-five miles north-west of Patna.

CHUQUISACA, or LAPLATA, a rity of Los Charcas, South America, an archbishop's see and capital of that province, was founded by Anzures, one of Pizarro's captains, in 1538. It stands in a plain, surrounded by hills. The air in summer is mild, but the winter, which

begins in September and continues till March, is at- tended with thunder-storms and rains of long continuance. The houses, except in the great squares, are of one story only ; they are tiled, roomy, and convenient. Water is scarce, though public fountains are seen in different parts, and gardens adorn many of the houses. The spacious cathedral here is of respectable architecture, and

profusely ornamented with gilding and painting: all the ecclesiastical edifices, which include two churches, five convents, two nunneries, and a conventual hospital, are respectable buildings : but Laplata is principally distinguished by its university, dedicated to St. Francis Xavier, and at one period a most nourishing institution. The professional chairs may be filled either by the clergy or laity. Some of the most ancient fami- lies of Peru reside in the beautiful villas of this neighbourhood. The river Cachimay approaches the city within two, and the Pilcomayo within about six leagues.*

CHURCH, n. s. Sax. cirtce, rvpiasq. The collective body of Christians, usually termed the Catholic Church.

The church, being a supernatural society, doth dif- fer from natural societies in this, that the persons unto whom we associate ourselves in the one, are men, simply considered as men ; but they to whom we be joined in the other, are God, angels, and holy men.

Hooker.

Catholic, in Greek, signifies universal, and the Christian Church was so called, as consisting of all nations to whom the gospel was to be preached, in contradistinction to the Jewish church, which con- sisted for the most part of Jews only.

Milton's True Religion, &c.

Any body of Christians adhering to the insti- tutes of Christian worship and voluntarily asso- ciated.

The visible Church of Christ is a congregation of faithful men, in the which the pure word of God is preached, and the Sacraments he duly ministered ac- cording to Christ's ordinance ; in all those things, that

of necessity are requisite to the same.

Articles of Religion.

The place which Christians consecrate to the worship of God.

The thridde circumstance is the place ther thou hast don sinne ; whether in other mennes houses, or in thin owen ; in feld, in chirche, or in chirchehaice,

Chaucer. The Persons Tale. Some hir churches nevir ne sie, Ne ner o penie tliider sende ; Though that the pore for hunger die, O penie on them will thei not spendr.

Id. The Plowman't Tale. He in his furie all shall over-ronne ; And holy church with faithless hands deface, That thy sad people, utterly fordonne, Shall to the utmost mountains fly apace.

Spenser.

Though you untie the winds, and let them fight Against the churches. Shakspeare.

*It is used frequently in conjunction with other words, as church-member, the members of a ***:hurch ; church power, spiritual or ecclesiastical authority ; church militant, the church in its state of warfare.*

For he was of that stubborn crew Of errant Saints whom all men gram, To be the true ck-urch militant. Hudibrus.

To CHURCH, v. a. From the noun. To per- form with any one the office of returning thanks in the church after any signal deliverance, as from the danger of childbirth.

CHURCH, GREEK, or EASTERN, comprehends the churches of all the countries anciently sub- ject to the Greek, or eastern empire, and througn

which tneir language was carried : that is, all the space extending from Greece to Mesopotamia and Persia, and thence into Egypt. This church has been divided from the Roman ever since the time of the emperor Phocas, Its principal member at this time is RUSSIA, which see.

CHURCH, LATIN, or WESTERN, comprehends all the churches of

Italy, Portugal, Spain, Afri- ca, the north, and all other countries whither the Romans carried their language. Great Britain, part of the Netherlands, of Germany, and of the North of Europe, have been separated from the great Roman Catholic body of this church, ever since the Reformation.

CHURCH OF ENGLAND, the episcopal church established by law in this kingdom, which has existed ever since the time of Henry VIII. (who, after being defender of the Roman Catholic faith, became its opposer) ; with the exception of his daughter Mary's reign. Its doctrines are chiefly Lutheran, and its form of government hierarchi- cal. The particulars of its internal government and polity belong, strictly, to the law of Eng- land, of which they form a part. See ENGLAND.

CHURCH OF ROME, or the ROMAN CATHOLIC CHURCH, claims the title of being the mother church, and is undoubtedly the most ancient of all the established churches in Christendom. See ROMAN CATHOLIC CHURCH.

CHURCH OF SCOTLAND, the presbyterian church, established by law in that kingdom, which has existed (with some interruptions during the reigns of the Stuarts), ever since the time of John Knox, when the voice of the people pre- vailed in its establishment over the influence of the crown. Its doctrines are Calvinistic, and its form of government republican.

CHURCH, REFORMED, comprehends the whole Protestant churches in Europe and America, whether Lutheran, Calvinistic, Independent, Quaker, Baptist, or of any other denomination, who dissent from the church of Rome.

CHURCH, in architecture, is defined by Davi- ler, a large oblong edifice, in form of a ship, with NAVE, CHOIR, AISLES, BELFRY, &c. See these articles. The form of the ancient Greek churches, when complete, was as follows : ××× first was a porch or portico, called irpovaoc, the vaunt-nave, this was adorned with columns on the outside, and on the inside surrounded with a wall ; in the middle whereof was a door, through which they passed into a second portico. The first of these porticoes was destined for the energumeni, and penitents in the first stage of their repent- ance ; the second was much longer, destined for penitents of the second class, and the catechu- mens, and hence called vap0;jc×× ferula, because those placed in it began be subject to the discip- line of the church. These two porticoes took up about one-third of the space of the church.

From the second portico, they passed into vaof, the nave, which took up nearly another third of the church. In the middle, or at one side of the nave, was the ambo, where the deacons and priests read the gospel, and preached. The nave was destined for the reception of the people, who here assisted at prayers. Near the entrance of ××nis was the baptistery or font. Beyond the

nave was the choir, x××P××C> set witn seats, and round : the first seat on the right, next the sanc- tuary, being for the choragus, or chanter. From the choir they ascended by steps to the sanctuary, which was entered at three doors. The sanctuary had three apsides in its length ; a great one in the middle, under which was the altar, crowned with a baldachin, supported by four co- lumns. Under each of the small apsides, was a table or cupboard, in manner of a buffet. Of the Greek churches now remaining, few have all the parts above described, most of them having been reduced to ruins or converted into mosques. Churches are variously distinguished by buil- ders. Church in a Greek cross, that where the length of the traverse part is equal to that of the nave ; so called because most of the Greek churches are built in this form. Church in a Latin cross, that wliose nave is longer than the cross part, as is most of the Gothic churches. Church in rotundo, that whose plan is a perfect circle, in imitation of the pantheon.

CHURCH-ALE, n. s. From church and ale. A wake, or feast, commemoratory of the dedica- tion of the church.

For the church-a.\e, two young men of the parish are yearly chosen to be wardens, who make collection among the parishioners of what provision it pleaseth them to bestow, Carew.

CHURCH-ATTIRE, n. s. . The habit in which men officiate at divine service. ×××

These and such like were their discourses, touching that church-attire, which with us, for the most part, is used in publick prayer. Hooker.

CHURCH-AUTHORITY, n. s. Ecclesiastical power; spiritual jurisdiction.

In this point of church-authority, I have sifted all the little scraps alleged. Atterbury.

CHURCH-BURIAL, n. s. Burial according to the rites of the church.

The bishop has the care of seeing that all Chris- tians, after their deaths, be not denied church-burial, according to the usage and custom of the place.

Aylijfe's Par ergon.

CHURCH-FOUNDER, n. s. He that builds or endows churches.

Whether emperors or bishops in those days were church-founders, the solemn dedication of churches they thought not to be a work in itself either vain or superstitious. Hooker,

CHURCHILL (Charles), a celebrated satirist, the son of Mr. Charles Churchill, curate and lecturer of St. John's, Westminster, was educated at Westminster-school. His capacity was greater than his application, so that he acquired the cha- racter of a boy that could do good if he would. For want of common attainment in the languages, he was rejected from Oxford, whither his father had sent him ; and probably this occasioned the frequent invectives we find in his works against that university. Upon his return, he applied to his studies in Westminster-school, where, at seventeen years of age, he contracted an intimacy with a lady, whom he married. Mr. Churchill afterwards obtained a small curacy of ––30 a year, in Wales, but endeavouring to better his circum- stances, by keening a cyder cellar, it involved him in difficulties, which obliged him to leave

Wales and come to London. His father dying soon after, he succeeded him ; and, to improve his income, which scarcely produced ––100 a year, he became teacher at a ladies' school. His mode of living, however, bearing no proportion to his income, he contracted many debts, and a jail threatened to complete his misfortunes : when he was relieved by the benevolence of Mr. Lloyd, father to the poet of that name. This gentleman induced Mr. Churchill to write the Rosciad. It firs; came out without the author's name : but the justness of the remarks, and the severity of the satire, soon excited curiosity. The public as- cribed it to a number of wits, and soon induced Churchill to throw off the mask, and issue the second edition with his name at full length. His next performance was his Apology to the Critical Reviewers. He now quitted his wife, commenced a complete man of the town ; and, giddy with false praise, thought his

talents a sufficient atone- ment for all his follies. He undertook at this time a poem called Night, written upon the prin- ciple, that whatever our follies are, we should never attempt to conceal them. This, and his other poems, being spoken of contemptuously by Dr. Johnson, the author retorted upon him in his next poem, of the Ghost, in which he has ex- hibited the doctor in the character of Pomposo, with some ingenuity. The poem of Night and the Ghost had not the rapid sale the author ex- pected ; but his Prophecy of Famine, in which he exerted his virulent pen against the whole Scotch nation, soon made ample amends for the late paroxysm in his fame. His Gotham, Inde- pendence, and The Times, were said by his enemies to be written by a man who desired to avail himself of the avidity of the public cu- riosity in his favor, and rather to have been aimed at the pockets than the minds of his readers ; but this assertion sprung from prejudice, as those poems contain some of his most animated pas- sages. Mr. Churchill died in 1764, of a miliary fever, with which he was seized at Boulogne", in France, whither he had gone on a visit to Mr. Wilkes. After his death his poems were collected, and printed together, in two volumes, 8vo.

CHURCHILL (John), duke of Marlborough. See MARLBOROUGH, DUKE OF.

CHURCHMAN, n. s. Church and man. An ecclesiastic ; a clergyman ; one that ministers in sacred things,

If any thing be offered to you, touching the churcl and churchmen, or church government, rely not only upon yourself. Bacoti.

A very difficult work to do, to reform and reduce a church into order, that had been so long neglected, and that was so ill filled by many weak and more wilful' churchmen. Clarendon.

Patience in want, and poverty of mind, These marks of church and churchmen he designed, And living taught, and dying left behind.

Dryden's Pallet.

I met a reverend fat old gouty friar. With a paunch swollen so high, his double chin Might rest upon 't, a true son of the church ! Fresh coloured, and well-thriving on his trade.

Id. Spanish Friar.

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CHURCH-SCOT, or CHURCHESSET,apayment or contribution, by the Latin writers frequently called primitiae feminum; being, at fust, a certain measure of wheat, paid to the priest on St. Mar- tin's day, as the first-fruits of harvest. This was enjoined by the laws of king Malcolm IV. and Canute, c. 10. But after this, it came to signify a reserve of corn-rent paid to the secular priests, or to the religious ; and sometimes was taken in so general a sense as to include poultry, or any other provision that was paid in kind to the re- ligious. See TITHE.

CHURCHWARDENS, n s. See WARDEN. Of- ficers yearly chosen, by the consent of the minis- ter and parishioners, according to the custom of each place, to look to the church, church-yard, and such things as belong to both ; and to ob- serve the behaviour of the parishioners, for such faults as appertain to the jurisdiction or censure of the ecclesiastical court. They are a kind of corporation, enabled by law to sue for any thing belonging to their church, or poor of their pa- rish.

There should likewise, church-wardens of the gravest men in the parish, be appointed, as they be here in England. Spenser.

Our church-wardens

Feast on the silver, and give us the farthings. Gay.

CHURCHWARDENS, or REEVES, in the English ecclesiastical polity, are the guardians of the church, and representatives of the parish. They are sometimes appointed by the minister, some- times by the parish, sometimes by both. They are taken, in favor of the church, to be, for some purposes, a kind of corporation at the common law; that is, they are enabled, by that name, to have a property in goods and chattels, and to bring actions for them, for the use and profit of the parish. Yet they may not waste the church goods, and may be removed by the parish, and then called to account by actions at common law : but there is no method of calling them to account but by first removing them ; for none can legally do it but those who are put in their place. As to lands or other real property, as the church, churchyard, &c. they have no sort of in- terest therein ; but if any damage is done thereto, the parson only, or vicar, shall have the action. Their office is also to repair the church, and make rates and

levies for that purpose ; but these are recoverable only in the ecclesiastical courts. They are to levy a shilling forfeiture on all such as do not go to church on Sundays and holidays ; and are empowered to keep all persons orderly while there ; to which end it has been held that a churchwarden may justify the pulling off a man's hat, without being guilty of either an assault or trespass. There are also a multitude of other petty parochial powers committed to their charge by divers acts of parliament. No person can be compelled to serve the office that is not residing in the parish, nor peers, clergymen, dissenting ministers, counsellors, attorneys, clerks in court, physicians, surgeons, or apothecaries.

CHURCH-YARD, n. s. , The ground adjoining the church, in which the dead are buried ; a ce- metery.

I am almost afraid to stand alone

Here in the church-yard, yet I will adventure.

Shahipeare.-

In church-yards where they bury much, the earth will consume the corpse in far shorter time than other earth will. Bacon.

No place so sacred from such fops is barred ; Nor is Paul's church more safe than Paul's church- yard. Pope.

With wicker rods we fenced her tomb around, To ward from man and beast the hallowed ground, Lest her new grave the parson's cattle raze, For both his horse and cow the church-yard graze.

Gay.

CHURCHYARDS are consecrated with great so- lemnity. In the church of Rome, if a church- yard, which has been thus consecrated, shall afterwards be polluted, by any indecent action, or profaned by the burial of an infidel, a heretic, an excommunicated or unbaptised person, it must be reconciled; and the ceremony of the recon- ciliation is performed with the same solemnity as that of the consecration.

CHURCHYARD (Thomas), a poet who flou- rished in the reigns of Henry VIII , Edward VI., queen Mary, and queen Elizabeth, was born at Shrewsbury ; and inherited a fortune, which he soon exhausted in a fruitless attendance on the court, where he only gained the favor of being retained a domestic in the family of lord Surrey. By his

lordship's encouragement, however, he commenced poet. Upon his patron's death, he applied to arms, and was twice made prisoner. He published twelve pieces, which he afterwards printed together in one volume, under the title of Churchyard's Chips ; also the tragedy of Thomas Mowbray, Duke of Norfolk. He died in 1570.

CHURL, n.s. -j Goth, karl; Swed.

CHU'RLISH, adj. tkarl ; Teut. kerl ; Sax.

CHU'RLISHLY, adv. ⬜⬜ceorl, eorl and ceorl,

CHU'RLISHNESS, n. s. J noble and plebeian; high and low. Tims it is applied to a rustic man; a surly fellow ; a niggard. Churlish describes his qualities Churlishly, and churlish- ness, his behaviour and disposition. The noun sometimes simply means a rustic ; a strong-bodied laborer. Churlish is also applied to things that are rugged, harsh, unyielding, and unmal- leable.

Lo, brother, quod the fend, what told I thee ? Here may ye seen, min owen dere brother, The cherl spake o thing, but he thought another.

Chaucer. The Freret Tale. Quoth Pandarus, thou hast a ful grete care,

Lest that the chorl may fal out of the mone.

Id. Troilus and Creseide. He seeing with that chorle so faire a wight,

Decked with many a costly ornament,

Much merveiled thereat, as well he might,

And thought that match a fowle disparagement.

Spenser.

He holdeth himself a gentleman, and scorneth to work or use any hard labour, which lie saith is the life of a peasant or churl. Id. State of Ireland.

A churl's courtesy rarely comes, but either for gain or falsehood. Sidney.

Poison, I see, hath been his timeless end ! O churl, drink all, and leave no friendly drop To help me after ! Shahspeare.

Will you again unknit

This churlith knot of all abhorred war? 7

A sea of melting pearl, which some call tears, Those at her father's chvrlieh feet she tendered. Id.

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The interruption of their churlish arums

Cuts off mere circumstance ; they are at band

To parly or to fighi. Id.

Spain found the war so churlish and longsome, as they found they should consume themselves in an endless war. Bacon.

If there be emission of spirit, the body of the metal will be hard and churlish. Id. Natural History,

The Cornish were become, like metal often fired and quenched, churlish and that would sooner break than bow. Id. Henry VII.

A lion in love with a lass, desired her father's con- sent. The answer was churlish enough : He'd never marry his daughter to a brute. L'Estrange.

In the churlishness of fortune, a poor honest man suffers in this world. Id.

To the oak, now regnant, the olive did churlishly put over the son for a reward of the service of his sire.

Howel.

From this light cause the infernal maid prepares The country churls to mischief, hate, and wars.

Dryden. This sullen churlish thief

Had all his mind placed upon Mully's beef. King.

In the hundreds of Essex they have a very churlish blue clay. Mortimer's Husbandry.

CHURLE, CEORLE, or CARL, in the Saxon times, signified a tenant at will, who held of the Thanes on condition of rent and service. They were of two sorts : one rented the estate like our farmers : the other tilled and manured the de- mesnes, and were called ploughmen.

CHURME, n. s. More properly chirm, from the Sax. cyjvne, a clamour or noise ; as to chirre is to coo as a turtle. A confused sound ; a noise.

He was conveyed to the tower, with the churme of a thousand taunts and reproaches. Bacon.

CHURN, n. s. & v. a. Properly chern, from Dut. kern ; Sax. cenene. The vessel in which the butter is, by long and violent agitation, coa- gulated and separated from the serous parts of the milk. To agitate or shake anything by a violent motion.

Perchance he spoke not ; but Like a full-acorned boar, a churning on, Cried oh ! Shakspeare.

You may try the force of imagination, upon staying the coming of butter after the churning.

Bacon's Natural History.

Churned in his teeth the foamy venom rose.

Addison.

The cleanly cheese-press she could never turn, Her awkward fist did ne'er employ the churn. Gay.

CHURN, COMMON, is a deep wooden vessel, of 3 conical shape ; resting on its base, and having closely fitted into its upper part a cover of wood, with a hole in its centre to admit the handle of the churn-staff. This staff consists of a long upright pole, to the bottom of which is fixed a broad kind of foot, perforated at different parts, and calculated to occasion a more universal agi- tation of the milk in churning. Many attempts have been made to improve this useful implement; but none have been accepted in our dairies, ex- cept the barrel churn, a kind of rolling barrel, with such dashers within as are calculated to quicken the process of making butter. Mr.

Harland has, in his improved barrel churn, in a great measure obviated the awkward notatory motion of the barrel churn ; which is supplied by a very easy muscular exertion, resembling in its nature that of a common pump-handle ; and by affixing a fly-wheel, A, the agitation is per- formed in a more equable manner, and on that account the butter is more perfectly separated from the whey.

B is the barrel containing tne whey, and fur- nished with dashers ; C the shutter by which the whey is put in and the butter taken out ; D the handle which lifts up and down the little cog- wheel E, and thus communicates to the fly-wheel and barrel a rotatory motion.

' In the process of churning,' says Mr. Loudon, ' great nicety is required ; a regular stroke in plunge or pump churns, and a regular motion in those of the barrel or turning kind, must, if pos- sible, never be deviated from. A few hasty ir- regular strokes or turns has been known to spoil what would otherwise have been excellent butter. Twamley, in his Essays on the Dairy, recom- mends the selection of a churner of a cool phlegmatic temper, of a sedate disposition and character; and advises never to allow any indi- viduals, especially the young, to touch the churn without the greatest caution and circumspection. To those who have been accustomed to see cream churned without being properly prepared, churn- ing may, perhaps, appear to be severe labor for one person in a large dairy : but nothing is more easy than the process of making butter, where the cream has been duly prepared. During sum- mer the best time for making butter is early in the morning, before the sun acquires much power : and, if a pump churn be used, it may be plunged a foot deep into a tub of cold water, where it should remain during the whole time of churning ; which will very much harden the butter. During winter, from the equality of temperature, which, if it be properly managed, will generally prevail in a dairy, it will very rarely, if ever, be necessary to churn near the fire. Should any circumstance, however, require this, care should be taken not to churn so near the fire as to heat the wood; as it would impart a strong rancid taste to the butter.'

CHU'RRWORM, n.s. From Sax. cyripan. An insect that turns about nimbly ; called also a fancricket.

CHUSE. See To CHOOSE. CHUWAL, a district of the province ot Gu- zerat, Hindostan, situated between the twenty-

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third and twenty-fourth degrees of north latitude, and about the seventy-second degree of east lon- gitude. It is bounded by the Banass River on the north-west, and is, particularly in this di- rection, a swampy and flat country, held by se- veral independent chiefs. Janagur is the only town of consequence.

CHYLE, n. s. ~\ From Lat. chylus,

CHYLA'CEOUS, ad), I and facio, to make.

CHYLIFA'CTION, n. s. IXvXoc and irotiw. The

CHYLIFA'CTIVE, adj. f white juice formed in

CHYLOPOE'TICK, adj. l the stomach by diges-

CIIY'LOUS, adj. ' tion of the aliment, and

afterwards changed -into blood. Belonging to

chyle ; the act or process of making chyle in the

body ; having the power or office of making

chyle; consisting of chyle.

Choler is hot and dry, bitter, begotten of the hotter parts of the chylus, and gathered to the gall : it helps the natural heat and senses. Burton. Anat. Mel.

When the spirits of the chyle have half fermented the chylaceoas mass, it has the state of drink not ripened by fermentation. Flayer on the Humours.

The chyle cannot pass through the smallest vessels.

Arbuthnot.

According to the force of the chylopoetick organs, more or less chyle may be extracted from the same food. Id.

Milk is the chylotts part of an animal, already pre- pared. Id.

Drinking excessively during the time of chylifac- tion, stops perspiration. Id. on Aliments.

The chyle enters the blood in an odd place, but perhaps the most commodious place possible, viz. at a large vein in the neck, so situated with respect to the circulation, as speedily to bring the mixture to the heart. Paley's Natural Theology.

CHYLE, in anatomy, the milk-like liquor con- tained in the lacteals, from which the bjood is formed, and is^eparated from the chyme in the process of digestion, by means of the gastric juice. By its acescent qualities it restrains the putrid tendency of the blood ; hence the dreadful state of the humors in this respect after starving. By its very copious aqueous latex, it prevents the thickening of the fluids, and thus renders them fit for the various secretions. The chyle secreted in the breasts of puerperal women forms the nu- tritious milk. The chyle, as found in the thoracic duct has no smell, but a slightly acido-saccharine taste ; yet it blues reddened litmus paper, by its unsaturated alkali. Soon after it is drawn from the duct, it separates by coagulation into a thicker and thinner matter. 1. The former, or curd, seems intermediate between albumen and fibrin. Potash and soda dissolve it, with a slight exhalation of ammonia. Water of ammonia forms with it a reddish solution. Dilute sul- phuric acid dissolves the coagulum ; and very weak nitric acid changes it into adipocire. By heat, it is converted into a charcoal of difficult incineration, which contains common salt and phosphate of lime, with minute traces of iron. 2. From the serous portion, heat, alcohol, and acids, precipitate a copious coagulum of albumen. If the alcohol be hot, a little matter analogous to the substance of brain, is subsequently de- posited. By evaporation and cooling, Mr. Brande

obtained crystals analagous to the sugar of milk Dr. Marcet found the chyle of graminivorous animals thinner and darker, and less charged with albumen, than that of carnivorous. In the former, the weight of the fluid part to that of the coagulum was nearly two to one.

CHYLEMATIS, in ancient geography, a large river of Africa, in Algiers, mentioned by Ptolemy, supposed to be the same with the Mina or Cena.

CHYME, or CHYMUS. By the digestive pro- cess in the stomach of animals, the food is con- verted into a milky fluid, called chyme, which, passing into the intestines, is mixed with pan- creatic juice and bile, and thereafter resolved into chyle and feculent matter.

CHY'MIST, n. s. -\ Derived by some trom

CHY'MISTRY, n. s. i %v/joc juice, or KVU to

CHY'MICALLY, adv. >melt; by others from

CHY'MIC, adj. i an oriental word, kema

CHY'MICAL, adj. J black. According to the supposed etymology, it is written with y or e. The art of separating the different substances in mixed bodies by fire, or otherwise ; as a science, it is now generally spelt CHEMISTRY, which see : but, thinking this mode of orthography most consistent with the etymology, we retain it here.

Should the time ever arrive, which is not perhaps to be despaired of, when we can compound ingre- dients, so as to form a' solvent which will act in a manner in which the gastric juice acts, we may be able to ascertain the chymical principles upon which its efficacy depends, as well as from what part, and by what concoction, in the human body, these prin- ciples are generated and derived.

Paley's Natural Theology.

CHYTLA, in antiquity, a liquor made of wine and oil, and sometimes used in divination.

CHYTRI, in antiquity, a festival in honor of Bacchus and Mercury, kept by the Athenians on the thirteenth of the month Anthestenon.

CHYTRIUM, in ancient geography, a place in Ionia, in which formerly stood Clazomene; the Clazomenians, through fear of the Persians, removing from the continent to an adjacent island. Alexander reduced the island, by a mole or cause- way, to a peninsula.

CIBAL.&, or CIBALIS, in ancient geography, a town of Pannonia Inferior, seated on an emi- nence, near the lake Hiulka, north-west of Sir- mium. The emperor Gratian was born in it, and was brought up to rope-making : and it was also rendered famous by the surprisal and defeat of Licinius by Constantine.

CIBA'RIOUS, adj. Lat. cibarius, from cibut food. Relating to food ; useful for food ; edible.

GIBBER (Colley), a celebrated comedian, dramatic writer, and poet-laureat, born in London in 1671. lie derived his Christian name from

his mother's family, and was intended for the church, but betook himself to the stage, for which he conceived an early inclination ; though it was some time before he acquired any degree of notice, or even a competent salary. His first essay was in the comedy of Love's Last Shift, acted in 1695, which met with success; as did his own performance of the character of the fop in it. From that time, as he says himself, ' My muse and my spouse were so equally prolific,

that the one was seldom the mother of a child, but in the same year the other made me the father of a play. I think we had a dozen of each sort between us ; of both which kinds some died in their infancy, and near an equal number of each were alive when we quitted the theatre.' The Careless Husband, acted in 1704, met with great applause, and is reckoned his best play ; but none was of more importance to him than the Non-Juror, acted in 1717, and levelled against the Jacobites. This laid the foundation of the misunderstanding between him and Pope, raised him to be the hero of the Dunciad, and made him poet laureat in 1730, on which he quitted the stage. Gibber neither succeeded in acting nor in writing tragedy ; and his odes were not thought to partake either of the genius or spirit he showed in his comedies. He died in 1757.

GIBBER (Theo.), son of the preceding, was born in 1703, and educated at Winchester. He was taken early to the theatrical profession, and fol- lowed in his father's line of character. Through- out his life he was chiefly distinguished by ex- travagance and profligacy, and was drowned in 1757, in his passage to Ireland. He altered for the stage some of Shakspeare's plays, and wrote Pattie and Peggy, a ballad opera. His name also appeared to Lives of the Poets, 5 vols. 12mo. His wife, the sister of Dr. Arne, became a tragic performer of the first eminence at Drury- lane. She translated St. Foix's Oracle, and died in 1766.

CIBDELOPLACIA, in natural history; a genus of spars debased by a very large admixture of earth. They are opaque, formed of thin crusts, covering vegetables and other bodies, by way of incrustations.

CtBDELOSTRACIA, in natural history, terrene spars, destitute of all brightness and transparence, formed into thin plates, and usually

found coating over the sides of fissures, and other cavities of stones, with congeries of them of great extent, and of plain or botroyide surfaces.

CI'BOL, n. s. Fr. ciboule. A small sort of onion used in sallads. This word is common in the Scotch dialect ; but the / is not pronounced.

Ciboules, or scallions, are a kind of degenerate onions. Mortimer.

CIBORIA, CIBORIT;M, Egypt, i. e. a cup, in antiquity, the large husk of Egyptian beans, which are said to have been so large as to serve for drinking cups ; whence the name.

CIBORIUM, in ecclesiastical writers, the co- vering for the altar. This covering is supported by four high columns, and forms a kind of tent for the eucharist, in the Romish churches. Some authors call it turris gestoria and others pyxis ; but the pyxis is properly the box in which the eucharist is preserved.

CIBUS FERIALIS, in antiquity, an entertain- ment peculiar to a funeral ; for which purpose beans, parsley, lettuce, bread, eggs, lentils, and salt were in use.

CICACOLE, the largestofthe Northern Circars, or districts of Hindostan, reaching from 17►► to 20►► north latitude, sub- divided into two por- tions, one bounded by the river Setteveram on the south, and the Poondv on the north, extend-

ing about 170 miles along the Bay of Bengal, including an area of 4400 square miles; the other, of a triangular form, extending eighty miles from Moland to Poondy near the frontier of Cuttack, and fifty miles to the north-west, con- taining about 1000 square miles. The capital is Cicacole, an ancient town, 118 miles from Ganjam. There is a mosque of great sanctity here, built in the year of the Hegira 105, by Mahommed Khan. See CIRCARS.

CICADA, the grasshopper, in zoology, a ge- nus of insects belonging to the order of hemip- tera. The beak is inflected ; the antenna; are setaceous; the four wings are membranaceous and deflected ; and the feet, in most of the spe- cies, are of the jumping kind. The larvae of sev- eral of this genus evacuate great quantities of a frothy matter upon the branches and leaves of plants, in the midst of which they constantly reside, probably for shelter against the search of other animals, to which they would become a prey. Nature has afforded this kind of defence to insects whose naked and soft bodies might otherwise very easily be injured ; perhaps also the moisture of this

foam may serve to screen them from the sultry beams of the sun. On re- moving the foam the larva appears, but it soon emits fresh foam, that hides it again from the eye. In the midst of this foamy substance the larva goes through its metamorphosis into a chry- salis and perfect insect. Other larvae, whose bo- dies are not so soft, run over plants without any manner of defence, and escape from insects that might hurt them, by nimbly running or leaping. The chrysalids, and all the larvae that produce them, differ little from each other, only that the former have the rudiments of wings, a kind of knob at the place were the wings will afterwards be in the perfect insect. The chrysalids walk, leap, and run over plants and trees ; as do the larvae which they produce. At length they throw off their teguments of chrysalids, slip their last slough, and then the insect appears in its utmost perfection. The male alone is then endowed with the faculty of singing, which it exercises not with its throat, but with an organ situated under the abdomen. Behind the legs of the male are observed two valvulas, which, raised up, dis- cover several cavities separated by various mem- branes. The middle contains a scaly triangle Two vigorous muscles give motion to another membrane, which alternately becomes concave and convex. The air, agitated by this membrane, is modified within the other cavities; and, by the help of this sonorous instrument, he amo- rously solicits his female. This insect begins its song early in the morning, and continues it during the heat of the noon-tide sun. Its lively and animated music is, to the country people, a presage of a fine summer, a plentiful harvest, and a sure return of spring. The cicadae have a head almost triangular, an oblong body, their wings fastigiated or in form of a roof, and six legs with which they walk and leap pretty brisk- ly. In the females, at the extremity of the ab- domen are two large lamins, between which is enclosed, as in a sheath, a spine somewhat ser- rated, which serves them to deposit their eggs, and probably to sink them into the substance of

tnose plants, which the young larvae are to feed upon.

CICASICA, a town and district of Peru, bounded north and north-east by the mountains of the Andes, and by the province of Larecaxa, east by the province of Cochabamba, south-east by that of Paria and Oruro, south-west by that of Pacages, and north-west by that of Omasuyos. It is eighty leagues in length from east to west, and contains 50,000 inhabitants. Vast quantities of cattle are reared in

the mountainous districts. Near the Andes the climate is very warm and humid, but fertile in fruits, sugar-cane, and cacao. The vine is also cultivated with success in these regions, and Jesuits' bark. Gold and silver mines were formerly worked, but they are at present closed.

CI'CATRICE, n. s. \ Lat. cicatrix. The CICATRI'SANT, n. s. i scar remaining after a CICATRI'SIVE, adj. V wound; an application CICATRIZA'TION, n. s. i that induces a cica CI'CATKIZE, v, a. / trice. Having the qua- lities proper to induce a cicatrice. The art of healing the wound. The state of being healed, or skinned over. To apply such medicines to wounds or ulcers, as heal and skin them over ; to heal and induce the skin over a sore.

A vein bursted, or corroded, in the lungs, is looked upon to be for the most part incurable, because of the motion and coughing of the lungs tearing the gap ###wider, and hindering the conglutination and cicatrisa- tion of the vein. Harrey. We incarned, and in a few days cicatrized it with a smooth cicatrix. Wiseman on Tumours. The first stage of healing, or the discharge of mat- ter, is called digestion ; the second, or the filling up with flesh, incarnation ; and the last, or skinning over, cicatrization. Sharp's Surgery.

CICATRICULA, in natural history, a small whitish speck in the yolk of an egg, which is the first rudiments of the future chick. Whatever way the egg is turned, that part of the yolk, which contains the cicatricula, is always upper- most, as is seen upon breaking an egg.

CICATRIX, in surgery, a little seam or eleva- tion of callous flesh on the skin, after the heal- ing of a wound or ulcer.

CICCA, in botany, a genus of the tetrandria order, and moncecia class of plants. MalecAL. tetraphyllous ; COR. none; female CAL.triphyllous; COR. none ; styles four ; CAP. quadricoccous ; SEED solitary. Species, one only, a Chinese tree, usually from thirty to forty feet in height.

CI'CELY, n. s. myrrhus. A sort ot herb.

CICER, the chick pea, in botany, a genus of thedecandriaorder,and diadelphia class of plants; natural order thirty-second, papilionaceae : CAL. quinquepartite, as long as the corolla, with its four uppermost segments incumbent on the vex- illurn : the legumen is rhomboidal, turbid, and dispermous. There are buttwo species, which pro- duce peas shaped like the common ones, but much smaller. They are much

cultivated in Spain, where they are natives, being one of the ingre- dients in their olios ; as also in France ; but are rarely known in Britain.

CICERO (Marcus Tullius), the celebrated Roman orator, was born A. U. C. 647, and A. A. C. 107. His father Marcus Tullius, who was

of the equestrian order, took great care of his education, which was directed to the bar. Young Tully, at his first appearance in public, declaimed with such vehemence against Sylla's party, that it became necessary for him to retire into Greece ; where he heard the Athenian orators and philo- sophers, and greatly improved both in eloquence and knowledge. Here he met with Titus Pom- ponius, who had been his school-fellow : and who, from his love to Athens, obtained the surname of Atticus ; and here they revived and confirmed that friendship which subsisted between them through life. From Athens he passed into Asia; and after an excursion of two years returned to Rome ; where next year he was made quaestor. The quaestors were sent annually into the pro- vinces distributed to them by lot. Lilybaeum, in Sicily, happening to fall to Cicero's share, he acquitted himself so well, that he gained the love and admiration of all the Sicilians. In a tour he made of the island before he left Sicily, he discovered at Syracuse the tomb of- Archimedes. His marriage with Terentia is supposed to have been celebrated immediately after his return, when he was about thirty years of age. By his questorship he gained ati admission into the senate for life ; and he employed himself con- stantly in defending the persons and properties of his fellow citizens. In his thirty-seventh year he was elected jEdile, by the unanimous suffrages of all the tribes. After his election, but before his entrance upon the office, he un dertook the famed prosecution of C. Verres, the late praetor of Sicily, who was charged with many flagrant acts of injustice, rapine, and cruelty, during his triennial government of that island. This was one of the most memorable transactions of his life, for which he was justly celebrated by antiquity, and will, in all ages, be esteemed by the friends of mankind. The result was, that he so confounded Hortensius, then the reigning orator at the bar, and usually styled the king of the forum, that he had nothing to say for his client. Verres, despairing of all defence, went into voluntary exile ; he is said to have been re- lieved in this miserable situation by the genero- sity of Cicero; yet was after all proscribed and murdered by Marc Antony, for the sake of those fine statues and Corinthian vessels, of which he had plundered the Sicilians. After the usual in- terval Cicero offered himself a candidate for the praetorship ; and, in three different assemblies convened for the choice, he was unanimously elected the first

praetor. He was now in the ca- reer of his fortunes, and in sight, as it were, of the consulship; and therefore, when his praetor- ship was at an end, he would not accept of any foreign province. His ambition was to shine in the city, as the guardian of its laws ; and to teach the magistrates how to execute, the citizens how to obey them. Being in his forty-third year, he declared himself a candidate for the consulship along with six competitors, of whom four were patricians, or nobles; the last two the sons o. fathers who had first imparted public honors to their families. Cicero was the only new mau among them. In this competition the practice of bribing was shamefully carried on by Anton'us and Catiline. However, as the election ap-

proached, Cicero's interest appeared superior to that of all the other candidates : for the nobles themselves, though desirous to depress him, yet from the dangers which threatened the city, be- gan to think him the only man qualified to pre- serve the republic. The people, not content with silently voting for him, loudly and universally proclaimed Cicero the first consul ; so that, as he himself says, ' he was not chosen by the votes of particular citizens, but by the common suf- frage of the city ; nor declared by the voice of the crier, buf of the whole Roman people.' He had no sooner entered upon his office than he had occasion to exert himself against P. Servilius Rullus, one of the new tribunes, who had been alarming the senate with the promulgation of an Agrarian law ; the purpose of which was to create a decenˆvirate, or ten commissioners, with abso- lute power for five years over all the revenues of the republic, to distribute them at pleasure to the citizens, &c. These laws used to be greedily re- ceived by the populace, but Cicero, in an artful and elegant speech from the rostra, gave such a turn to the inclination of the people, that they rejected this law with as much eagerness as they had ever received one. But the grand affair which constituted the glory of his consulship, and has transmitted his name with lustre to pos- terity, was the unwearied pains he took in sup- pressing that horrid conspiracy which was formed by Catiline for the subversion of the common- wealth. For this great service he was honored with the glorious title-of pater patriae, the father of his country. Cicero had no sooner quitted his office, than he began to feel the weight of that envy which is the certain fruit of illustrious merit. He was now, therefore, the common mark, not only of all the factions against whom he had declared perpetual war, but of an envious, and not less dangerous party, who determined to drive him out of the city. Cicero

sent a parti- cular account of his whole administration to Pompey, who was finishing the Mithridatic war in Asia, in hopes to prevent any wrong impres- sions there from the calumnies of his enemies, and to draw from him some public declaration in his favor. But Pompey, being informed by Metellus and Caesar of the opposition that was rising against Cicero in Rome, answered him with great coldness. About this time Cicero bought a house of M. Crassus on the Palatine hill, adjoining to that in which he had always lived with his father, and which he is now sup- posed to have given up to his brother Quintus. The house cost him nearly ►►30,000, and seems to have been one of the noblest in Rome. It ex- cited many reflections on his vanity, especially as it was purchased with borrowed money. The most remarkable event that happened in this, the forty-fifth year of Cicero's life, was the pollution of the mysteries of the Bona Dea by P. Clodius ; which, by its consequences, involved Cicero in no small calamity. Clodius had an intrigue with Cae- sar's wife Pompeia, who was celebrating in her house those sacrifices of the goddess to which no male person was ever admitted. Clodius, wishing to gain access to her in the midst of her ministry ; dressed himself in a woman's habit ; but, by some mistake between him and his guide, wheii he

came inside the house, he lost his way, and was detected among the female servants. The de- fence which Clodius made, when, by order of the senate, he was brought to trial, was to prove himself absent at the time of the fact ; for which purpose he produced two men to swear that he was then at Interamna, about two or three days' journey from the city. But Cicero being called upon to give his testimony, deposed that Clodius had been with him that very morning at his house in Rome : a species of honesty to the public which Clodius never forgave. The first trium- virate was now formed ; Pompey's chief effort was to obtain a confirmation of his acts by Caesai in his consulship, which was now coming on ; Caesar, by giving way to Pompey's glory, to ad- vance his own ; and Crassus, to gain that ascen- dancy by the authority of Pompey and Caesar, which he could not sustain alone. Cicero migh: have made what terms he pleased with the trium- virate, but he would not enter into any engage- ments with men whose union the friends of the republic abhorred. Clodius in the mean time- being chosen tribune, began to threaten Cicerc with the terrors of his office, and both Caesar and Pompey secretly favored the scheme. Caesar wanted to distress him so far as to force him to> a dependence on himself; for which end, while he was privately encouraging Clodius to pursue his plans, he proposed expedients to Cicero for his security; while Pompey gave him the strongest assurances that there was no danger,, and that he*

would sooner be sacrificed himself than suffer him to be injured. Clodius, in the mean time, was pressing on the people several new laws, that he might introduce with better grace the banishment of Cicero; and having caused a decree to be enacted, that any one who had condemned a Roman citizen unheard should him- self be banished, he soon after impeached Cicero upon that ground ; and this great orator was now in consequence banished by the votes of the people 400 miles from Italy ; his houses ordered to be demolished, and his goods setup to sale. Within three months, however, his return was moved for, and carried in so triumphant a manner, that he had reason, he says, to fear, lest it should be imagined that he had contrived his late flight for the sake of so glorious a restoration. He was at this time in his fiftieth year. But he had, about this time, domestic grievances, which touched him very nearly ; they arose chiefly from the pe- tulant humor of his wife, which began to give him frequent occasions of chagrin; and, by a series of repeated provocations, confirmed in him that settled disgust, which at last ended in a di- vorce. In the fifty-sixth year of his age, he was made proconsul of Cilicia ; where his adminis- tration gained him great honor. About this time the expectation of a breach between Caesar and Pompey engaged the general attention. Cicero clearly foresaw, that, which side soever got the better, the war must necessarily end in tyranny. The only difference, he said, was, that if their enemies conquered, they should be proscribed ; if their friends they would be slaves. He no sooner arrived at the city, than he found the war in effect proclaimed : for the senate had just voted a decree, that Caesar should disband las

*army by a certain day, or be declared an enemy; and Caesar's sudden march towards Rome con- firmed it. In the midst of this confusion, Caesar
ُ was extremely solicitous to conciliate Cicero, or at least to prevail with him to stand neuter ; but our orator embarked to follow Pompey, who had been obliged to quit Italy some time before, and was then at Dyrrhachium. After the battle of Pharsalia Cicero returned into Italy, and was received into great favor by Caesar, who was now declared dictator the second time. It appears from his letters, that Cicero was not a little dis- ُ composed at the thoughts of an interview with a ُ conqueror, against whom he had been in arms ; for though he might expect a kind reception, yet he hardly thought his life, he says, worth begging ; since what was given by a master might always l>e*

taken away at pleasure. Cicero was now in liis sixty-first year, and the want of ease and >quiet at home was no longer tolerable. In addition to his divorce h': was visited soon after by a new calamity in the death of his beloved daughter Tullia, who died in child-bed soon after her divorce from her third husband. His affliction for her death was so great, that he removed to Atti-

Upon the death of Caesar, Octavius his heir came to Cicero, with the strongest professions of being governed entirely by his direction. The orator was still prosecuting his studies with his usual application; and, besides some philosophi- cal pieces, now finished his book De Officiis, on the duties of man, for the use of his son ; a work admired by all succeeding ages as the most perfect system of heathen morality. Cicero un- willingly renewed his attention to public affairs; and all the vigor of the last measures of the re- public was entirely owing to his counsels. This appears from the memorable philippics which from time to time he published against Antony. But all was in vain; for, though Antony's army ⬚⬚⬚was entirely defeated at the siege of Modena, yet thedeath of the consuls Pansa and Hirtius in that action, gave the fatal blow to Cicero's plans, and was the immediate cause of the rum of the com- monwealth. Octavius, having brought over the senate, marched towards Gaul to meet Antony and Lepidus, who had already passed the Alps, in order to have a personal interview with him. They met in a small island formed by the Rhine, about two miles from Bononia, and spent three days in adjusting their plans, and the proscrip- tion of their enemies. Cicero was at his Tusculan villa, when he first received the news of himself being included in the proscription, upon which he set forward to the sea side and embarked ; but, the wind being adverse, he was obliged to land after he had sailed about two leagues, and spent a night on shore. Importuned by his ser- vants, he went on board a second time, but was aga.m obliged to land, and went imprudently to a country seat of his, a mile from the coast. They ftacl s⬚⬚⬚⬚r⬚⬚ely departed from this place in the

morning, when the assassins, sent by Antony, arrived ; and, perceiving him to be fled, pursued and overtook him in a wood near the shore. Their leader was one Popilius Lenas, a villain, whose life Cicero had formerly defended and saved. As soon as the soldiers appeared, the servants prepared to defend their master's life at the hazard of their own ; but Cicero commanded them to set him down from his litter and make no resistance. His head and hands were now barbarously cut off and carried to their cruel em- ployer, Antony, who is said to have received them with joy, to have rewarded the murderer with a large sum of money, and ordered the head to be

fixed upon the rostra between the two hands. Cicero's death happened on Dec. the 7th, in the sixty-fourth year of his age, about ten days from the settlement of the first triumvirate ; and with him expired the short empire of eloquence among the Romans. He is thus characterised by Dr. Blair; ' In all his orations his art is conspicuous. He begins commonly with a regular exordium ; and with much address prepossesses the hearers, and studies to gain their affections. His method is clear, and his arguments are arranged with exact propriety. In a superior clearness of method, he has an advantage over Demosthenes. Everything appears in its proper place. He never tries to move till he has attempted to convince ; and in moving, particularly the softer passions, he is highly successful. No one ever knew the force of words belter than Cicero. He rolls them along with the greatest beauty and magnificence ; and in the structure of his sentences is eminently cu- rious and exact. He is always full and flowing, never abrupt. He amplifies every thing ; yet, though his manner is generally diffuse, it is often happily varied and accommodated to the subject. When an important public object roused his mind, and demanded indignation and force, he departs considerably from that loose and decla- matory manner to which he at other times is ad- dicted, and becomes very forcible and vehement. This great orator, however, is not without his defects. In most of his orations there is too much art, even carried to a degree of ostentation. He seems often desirous of obtaining admiration rather than of operating conviction. He is some- times, therefore, showy rather than solid, and diffuse where he ought to have been urgent. His sentences are always round and sonorous. They cannot be accused of monotony, since they pos- sess variety of cadence ; but from too great a fondness for magnificence, he is on some occa- sions deficient in strength. Though the services which he had performed to his country were very considerable, yet he is too much his own panegy- rist. Ancient manners, which imposed fewer restraints on the side of decorum, may in some degree excuse, but cannot entirely justify, his vani- ty.' The most celebrated editions of Cicero's works are that of Minutianus, 1498, Milan, 4 vols. fol. ; P.Manutius, 1541, Venice, lOvols.Svo. ; R.Ste- phens, Paris, 8 vols. 8vo. 1543 ; Elzevir, Leyden, 1642, 10 vols. 8vo. ; Gronovius, 11 vols. 12mo.; and 4 vols. 4to ; Verburgius, Amsterdam, 1724, 2 vols. folio ; Ernest, Leipsic, 8 vols. 8vo., 1774; Olivet, Paris, 1740, 9 vols. 4to ; and Oxford, 10 vols. 4to; Foulis, Glasgow, 1749. 20 vols.

12mo ••• Lallemande, Paris, 1768, 12 vols. 12mo. tween these arise the stalks, which have very few CICHORIUM, Succory, a genus of the po- leaves, and those are small and entire ; the stalks Ivgamia sequalis order, and syngenesia class of are divided in forks upward, and from between plants ; natural order, forty-ninth composite. Re- them come out the flowers, which are of a pale ceptacle a little paleaceous: C^L. calculated ; blue color and are succeeded by seeds shaped pappus almost quinquedentated, and indistinctly like those of the common sorts. The ends of the hairy There are five species, the most noted smaller branches are terminated by star-like -••• ••• ••• !-L spines which are very sharp.

CICHORA'CEOUS, adj. from Lat. cichorium. Having the qualities of succory.

Diureticks evacuate the salt serum ; as all acid diureticks, and the testaceous and bitter cichora

There are five species, the most noted are, 1. C. endivia, or annual succory, with broad crenated leaves. This species may be considered both as an annual and biennial plant. If sown early in the spring, or even any time be- fore the beginning of June, the plants very com- monly fly up to seed the same summer, and perish in autumn. If sown in June and July, they acquire perfection in autumn, continue till

CICH'-PEASE, n. s. cicer. A plant.

CICINDELA, the sparkler, in zoology, a

the next spring, then shoot up stalks for flowers genus of insects belonging to the order of cole-

and seed, and soon after perish. The inner leaves Optera. The antennae are setaceous; the jaws

are the useful parts. These when blanched are prominent, and furnished with teeth : the eyes

white to render them crisp and tender, and re- are a little prominent ; and the breast is roundish

duce them from their natural strong taste to an an(j marginated. There are sixty species. They

agreeably bitter one, are then fit for use. They are in general very beautiful, and merit the atten-

are valued chiefly as ingredients in autumn and tion of the curious in their microscopic obser-

winter sal lads, and for some culinary uses. In vations ; some are minute, though not inferior in

November or December, when hard weather is ap- splendor, therefore best suited for the amuse-

proaching, let a piece of light ground, that lies njent. The larvae of all this genus live under

warm, be trenched up in one or more sharp ridges ground ; and are, as well as the perfect insects,

two or three feet wide at bottom, and nearly as fierce in their nature, attacking and destroying

much in height, sideways to the sun, making the an they can overcome. C. campestris, the field

sides as steep as possible, that the wet may rim sparkler, is one of the most beautiful of the

quickly off; then,in a dry day ,take up a quantity of genus. The upper part of its body is of a fine

the full-grown plants, with the roots entire, and di- green colour, rough, and rather bluish. The

vesting them of damaged leaves, gather each plant under side, the legs and antennae, are of a sho

close in your hand, placing them horizontally in the sunny side of the ridge of earth almost to their

color, gold and red, of a copperish cast. The eyes are very prominent, and give the head a

tops, and about six or eight inches each way distant, broad appearance. The thorax is angular, and In severe frost it will be proper to bestow some narrower than the head : which constitutes the covering on the plants. The qualities of the en- character of the cicindelae.ˆ It is rough, and of a dive are nearly of the same kind

with those of green color tinged with gold, as well as the head, the wild succory. The seeds are ranked among The elytra are delicately and irregularly dotted, the four lesser cold ones. 2. C. intybus, wild Each of them has six white spots, viz. one on the succory, grows naturally by the sides of roads, top of the elytrum, at its outward angle ; three and in shady lanes, in many places of Britain, more along the outward edge, of which the mid- It sends out long leaves from the roots, from be- tween which the stalks arise, growing to the height of three or four feet, and branching out into smaller dnes. The flowers come out from the sides of the stalks, and are of a fine blue co- lor. They are succeeded by oblong seeds covered, enclosed in a down. The roots and leaves are articles of the Materia Medica. The former have

a moderately bitter taste ; with some degree of niinent and sharp. This insect runs with great roughness ; the leaves are somewhat less bitter; swiftness, and flies easily. It is found in dry and the darker colored and more deeply jagged they are, the bitterer is their taste. Wild suc-

dlemost forms a kind of lunula ; a fifth on the middle of the elytra, opposite the lunula ; and that one is broader, and tolerably round ; and a sixth at the extremity of the elytra. There is also sometimes seen a black spot on the middle of each elytrum, opposite to the second white spot. The upper lip is also white, as is the upper side of the jaws, which are very pro-

cory is an useful detergent, aperient, and atte- nuating medicine, acting without much irritation, tending rather to cool than to heat the body ; and, at the same time, corroborating the tone of the intestines. All the parts of the plant, when

sandy places, especially in the beginning of spring. In the same place its larva is met with, which resembles a long, soft, whitish worm, armed with six legs, and a brown scaly head. It makes a perpendicular round hole in the ground, and keeps its head at the entrance of the hole to catch the insects that fall into it ; a

wounded, yield a milky saponaceous juice. This spot of ground is sometimes entirely perforated

when taken in large quantities, so as to keep up a gentle diarrhaea, and continued for some weeks,

in this manner.

CICISBEO, an Italian term, which signifies

been found to produce excellent effects in a whisperer; and has been bestowed in Italy on

scorbutic and other chronical disorders. 3. C. spinosum, with a prickly forked stalk, grows na- turally on the sea-coasts in Sicily, and the islands of the Archipelago. It sends out from the root many long leaves which are indented on their

lovers in general, but chiefly on those who at- tend on married ladies. This custom, originally Italian, is by no means confined to Italy, having gained ground not only in the effeminate conn- tries of Europe, but among the hardy Austrian,*

edges, and spread flat on the ground ; from be- and even among the Spaniards.

CICONES, an ancient people of Thrace near the Hebrus. Ulysses at his return from Troy conquered them, and plundered their chief city Ismarus. They tore to pieces Orpheus for his obscene indulgencies.

CI'CURATE, v. a.) Lat. cicuro. To tame,

CICURA'TION, n. s, \ to reclaim from wildness ; the act of taming and rendering tractable the wild and the ferocious.

Poisons may yet retain some portion of their na- tures ; yet are so refracted, cicurated, and subdued, as not to make good their destructive malignities.

Browne's Vulgar Errours.

This holds not only in domestick and mansuete birds, for then it might be the effect of cicuration or institution ; but in the wild. Ray on the Creation.

CICUTA, in antiquity, properly signifies an hollow intercepted between two knots, of the stalks or reeds of which the ancient shepherds used to make their pipes. Cicuta is also used, chiefly among the ancients, for the juice ex- pressed from the water

*hemlock, the common poison wherewith the state criminals at Athens were put to death. Some say, that this poison- ous draught was an inspissated juice compounded of the juice of cicuta and some other corrosive herbs. Socrates drank the cicuta. Plato, in his dialogue on the Immortality of the Soul, observes, that * the executioner advised Socrates not to talk, for fear of causing the cicuta to operate too slowly.' M. Petit, in his Observationes Miscellaneae, remarks, that this warning was not given by the executioner out of humanity, but to save the cicuta : for he was only allowed so much poison per annum, which, if he exceeded, he was to furnish at his own expense. This con- struction is confirmed by a passage in Plutarch ; the executioner who administered the cicuta to Phocion, not having enough, Phocion gave him money to buy more; observing by the way, ' that it was odd enough, that at Athens a man must pay for everything, even for his own death.'*

CICUTA, in botany, water hemlock, a genus of the order digynia, and pentandria class of plants; natural order forty-fifth, umbellate. Fruit sub- ovate grooved, florets uniform. There are three species; viz. 1. C. bulbifera. ' 2. C. maculata: and 3. C. virosa. This last species is the only one remarkable, and that from the poisonous qualities of its roots, which have been often known to destroy children who ate them for parsnips.

CID (Roderigo Dias le), a Castilian officer who was very successful against the Moors, under Ferdinand II. king of Castile ; but whose name would hardly have been remembered, if Corneille had not made his passion for Chimene the sub- ject of an admired tragedy, founded on a sim- ple but affecting incident. Le Cid is desperately in love with Chimene, daughter of the Count de Gomes ; but he is at variance with the count ; and being challenged by him kills him in a duel. The conflict between love and honor in the breast of Chimene, who at length pardons and marries the Cid, forms the beauty of the piece. He died ir. 1089.

CIDARIS, in antiquity, the mitre used by the Jewish high priests. The Rabbins say, that the

bonnet used by the priests in general was madft of a piece of linen cloth, sixteen yards long, which covered their heads like a helmet or tur- ban : and they allow no other difference between the high priest's bonnet and that of other priests, than that the one is flatter, and' more in the form of a turban ; whereas that worn by ordinary priests rose something more in a point.

CI'DER, n. s.) Fr. cidre ; Ital. sidro ,

CI'DERIST, n. s. > Lat. sicera ; erwclpa, ~\3iff.

CI'DERKIN, n. s. j The Latin sicera was a ge- neral name for liquor made of grain, or any fruit except the grape ; but this sense of the word cyder is now wholly obsolete. It designates liquor made of the juice of fruits pressed. The precise sense is the juice of apples expressed and fermented. Ciderist is a maker of cider ; and ciderkin, a gross and inferior liquor made of the apples after the cider is pressed out.

We had also drink, wholesome and good wine of the grape, a kind of cider made of a fruit of that coun- try ; a wonderful pleasing and refreshing drink.

Bacon. To the utmost bounds of this

Wide universe, Silurian cider born,

Shall please all tastes, and triumph o er the vine.

Philips.

A low word used for the liquor made of the murk

or gross matter of apples, after the cider is pressed

out, and a convenient quantity of boiled water added

to it ; the whole infusing for about forty-eight hours.

Id. World of Words.

Ciderkin is made for common drinking, and sup- plies the place of small beer. Mortimer.

When the ciderists have taken care for the best

fruit, and ordered them after the best manner they

could, yet hath their cider generally proved pale,

sharp, and ill-tasted. Id.

Come, let us hie, and quaff a cheery bowl,

Let cyder new wash sorrow from thy soul. Gay.

CIDER. See CYDER.

CIEL'ING, n. s. See CEILING.

CIENFUEGA, in botany, a genus of plants, class monadelphia, order dodecandria : CAL. double ; the outer of twelve setaceous leaves ; petals five ; style filiform ; stigma clavate : CAP. three-celled, three-seeded. One species only; a native of Senegal.

CIERGE, n. s. Fr. A candle carried in pro- cessions.

CIEUX, a town of France, in the department of Upper Vienne, and chief place of a canton, in the district of Bellac, containing about 2000 inhabitants. It is thirteen miles north-west of Limoges.

CIGNANI (Charles), an Italian painter, born at Bologna in 1628 ; and the disciple of Albani. He was much esteemed by pope Clement XI, who nominated him prince of the Academy of Bologna, and loaded him with favors. He died at Forli in 1719. The cupola of Madona del Focca at Forli, in which he represented Paradise, is his principal work. His finest pictures are at Rome, Bologna, and Forli.

CI'LIARY, adj. Lat. cilium. Belonging to the eyelids.

The ciliary processes, or rather the ligaments, ob- served in the inside of the sclerotick tunicles of the eye, do serve instead of a muscle, by the contraction, to alter the figure of the eye. Ray on the Creation.

CILIATED LEAF, among botanical writers, one surrounded with parallel filaments, some- what like the hairs of the eye-lids.

CILICIA, an ancient kingdom of Asia, lying between 36►► and 40►► N. lat., bounded on the east by Mount Amanus, which separates it from Syria; on the west by Pamphylia; on the north by Isauria, Cappadocia, and Armenia Minor ; and by the Mediterranean Sea on the south. It was so surrounded by steep and craggy moun- tains, particularly the Taurus and Amanus, as to be easily defended by a handful of resolute men against a numerous army. The three

nar- row passes leading into it, were called Pylse Ciliciae, or the gates of Cilicia, viz. the Pass of Mount Taurus on the side of Cappadocia ; the Pass of Mount Amanus; and the Pass of Syria. Its principal rivers were the Cydnus and the Pyramus. According to Josephus, Cilicia was first peopled by Tarshish the son of Javan, and his descendants, whence the whole country was named Tarsus. The ancient inhabitants were in process of time driven out by a colony of Phoe- nicians, who, under Cilix, first settled in the island of Cyprus, and from thence passed into the country which, from their leader, they called Cilicia. Afterwards, several other colonies from different nations settled in this kingdom, particu- larly from Syria and Greece ; whence the Cilicians in some places used the Greek tongue, in others the Syriac ; but the former greatly corrupted by the Persian, the predominant language of the country being a dialect of that tongue. We find no mention of the kings of Cilicia after their set- tlement in that country, till the time of Cyrus, to whom they voluntarily submitted, continuing subject to the Persians till the overthrow of that empire ; but governed to the time of Arlaxerxes Memnon by kings of their own nation. After the downfal of the Persian empire, Cilicia be- came a province of Macedon ; and, on the death of Alexander, fell to the share of Seleucus, and continued under his descendants till it was re- duced to a Roman province by Pompey. As a proconsular province, it was first governed by Appius Claudius Pulcher; and after him by Cicero, who reduced several strong holds on Mount Amanus, in which some Cilicians had fortified themselves, and held out against his pre- decessor. On this occasion Cilicia was divided into Trachsea and Campestris.

CILICIA CAMPESTRIS, according to Ammianus Marcellinus, was one of the most fruitful coun- tries of Asia : but the western part was very bar- ren, though famous for an excellent breed of horses. The air in the inland parts is reckoned wholesome ; but that on the sea-coast is danger- ous, especially to strangers. This part of Cilicia was made a Roman province, and called Cilicia prima. CILICIA TRACH.EA, was governed by kings appointed by the Romans, till the reign of Ves- pasian, when, the family of Tracondementus being extinct, it was made a province of the em- pire, and was divided into Cilicia Secunda, com- prehending the coast of Cilicia Trachsea, and Isauria, containing the inland parts. It is now a province of Asiatic Turkey ; and is called Cara- mania, having been the last province of the Cara- naanian kingdom which held out against the VOL. V.

Ottoman race. It was called Tpax????, aspera or stony, from its abounding with stones; and the whole province is still called by the Turks, Tas Wileieth, or The Stony Province.

CILICIA TERRA, in ancient natural history, a bituminous substance, improperly called an earth, which, by boiling, became tough like bird- lime, and was used instead of that substance, to cover the stock of the vines for preserving them from worms. It probably served in this office in a sort of double capacity, driving away these ani- mals by its nauseous smell, and entangling them if they chanced to get amongst it.

CILI'CIOUS, adj. from Lat. cilicium, hair- cloth. Made of hair.

A garment of camel's hair, that is, made of some texture of that hair ; a coarse garment, a cilicious or sackcloth habit, suitable to the austerity of his life.

Browne's Vulgar Errovrs.

CILICIUM, in Hebrew antiquity, a sort of habit made of coarse stuff, formerly in use among the Jews in times of mourning and distress. It is the same with what the Septuagint and Hebrew versions call sackcloth.

CILLEY, or ZILLI, an old town and district of Germany, in the circle of Lower Sliria, on the river Saan ; the district extends as far as Petaw, containing 1430 square miles, and 175,000 in- habitants. It was once an independent princi- pality, and governed by counts of its own. The town is said to have been founded by the Romans, but was destroyed ; it was afterwards rebuilt by the duke of Moravia. It has some trade, but does not contain above 1000 inhabitants. The Saan be- comes navigable here. Cilley lies fifty-eight miles south by west of Gratz, and 130 S. S.W. of Vienna.

CIMABUE (Giovanni), a renowned painter, born at Florence in 1240, and the first who re- vived the art in Italy. He painted, according to the custom of those times, in fresco and in dis- temper; oil colors not being then discovered. He excelled in architecture as well as in painting ; and was concerned in the building of Sancta Maria del Fior at Florence : during which em- ployment he died at the age of sixty.

CIMAR. See SIMAR.

CIMBRI, or CIMBRIANS, an ancient Celtic nation, who inhabited the northern parts of Ger- many. They are said to have been descended from the Asiatic Cimmerians, and to have taken the name of Cimbri when they changed their old habitations. When they first became known, they inhabited chiefly the peninsula, now called Jutland, and

by the ancients Cimbrica Chersone- sus. About 113 years before Christ, they left their peninsula with their wives and children ; and joining the Teutones, a neighbouring nation, took their journey southward in quest of a better country. They first fell upon the Boii, a Gaulish nation, situated near the Hercyuian forest. Here they were repulsed, and obliged to move nearer the Roman provinces. The republic being then alarmed at the approach of such multitudes of barbarians, sent an army against them under the consul Papirius Carbo. On the approach of the Roman army, the Cimbri made proposals of peace. The consul pretended to accept these ; but having thrown them into a disadvantageous situ.

tion, he treacherously attacked their camp. His perfidy was rewarded as it deserved ; the Cimbri ran to arms, and not only repulsed the Romans, but, attacking them in their turn, utterly defeated them, and obliged the shattered remains of their forces to conceal themselves in the neighbouring forests. After this victory the Cimbri entered Transalpine Gaul, which they quickly filled with slaughter and desolation. Here they continued five or six years, when another Roman army, under the consul Silanus, marched against them. This general met with no better success than his predecessor. His army was routed at the first onset; in consequence of which, all Narbonne Gaul was exposed at once to the ravages of these barbarians.

About A A. C. 105, the Cimbri began to threa- ten the Roman empire itself with destruction. The Gauls marched from all parts with a design to join them and invade Italy. The Roman army was commanded by the proconsul Csepio, and the consul Mallius : but as these two commanders were at variance, they separated and divided their forces. This proved the ruin of the whole army. The Cimbri immediately fell upon a strong de- tachment of the consular army commanded by M. Aurelius Scaurus, which they cut off to a man, and made Scaurus himself prisoner. Mallius being greatly intimidated by this defeat, desired a reconciliation with Csepio, but was haughtily refused. He moved nearer the consul, however, with his army, that the enemy might not be de- feated without his having a share in the action. The Cimbri by this movement, imagining the

commanders had made up their quarrel, sent am- bassadors to Mallius with proposals of peace. As they were obliged to pass through Caepio's camp, he ordered them to be brought before him ; but, finding they were empowered to treat only with Mallius, he could scarcely be restrained from putting them to death. His troops, however, forced him to confer with Mallius about the pro- posals sent. The deputies on their return ac- quainting their countrymen that the misunder- standing between the Roman commanders still subsisted, the Cimbri attacked the camp of Caepio, and the Gauls that of Mallius. Both were forced, and the Romans slaughtered without mercy. Eighty thousand citizens and allies of Rome, with 40,000 servants and sutlers, perished on that fatal day ; in short, of the two Roman armies only ten men, with the two generals, escaped to carry the news of so dreadful a defeat. The con- querors destroyed all the spoil, pursuant to a vow they had made. The gold and silver they threw into the Rhone, drowned the horses they had taken, and put to death all the prisoners. The Romans were thrown into the utmost consterna- tion on the news of so terrible an overthrow. They saw themselves threatened with a deluge of Cimbri and Gauls, numerous enough to over- run the whole country. They did not, however, despair. A new army was raised with incredible expedition ; no citizen whatever who was fit to bear arms being exempted. On this occasion also, fencing masters were first introduced into the Roman camp ; by which means the soldiers were soon rendered in a manner invincible. Marius, who was at that time in high reputation

on account of his victories in Africa, was chosen commander, and waited for the Cimbri in Tran- salpine Gaul ; but they had resolved to enter Italy by two different ways ; the Cimbri over the eastern, and the Teutones and other allies over the western Alps. The Roman general therefore marched to oppose the latter, and defeated the Ambrones and the Teutones with great slaughter. The Cimbri, in the mean time, entered Italy, and struck the whole country with terror. Catu- lus and Sylla attempted to oppose them ; but their soldiers were so intimidated by the terrible appearance of these barbarians, that nothing could prevent their flying before them. The city of Rome was now totally defenceless ; and, had the Cimbri only marched forwards, they had un- doubtedly become masters of it ; but they waited in expectation of being joined by their allies, not having heard of their defeat by Marius, till the senate had time to recal him to their defence. By their order he joined his army to that of Ca- tulus and Sylla. The Roman army now con- sisted cf 52,300 men. The cavalry of the Cimbri were not more than 15,000, but their foot seemed innumerable ; for, being drawn up in a square, they are said

to have covered thirty furlongs. The Cimbri attacked the Romans with the ut- most fury ; but, being unaccustomed to bear the heats of Italy, they began to lose their strength, and were easily overcome. But they had put it out of their power to fly; for, that they might keep their ranks, they are said, like true bar- barians, to have tied themselves together with cords. The battle was therefore only a most ter- rible butchery; 120,000 were killed on the field of battle, and 60,000 taken prisoners. The vic- torious Romans now marched on the enemy's camp; where they had a new battle to fight with the women, whom they found more fierce than even their husbands had been : but the greater part hanged themselves on the neighbouring trees. The country of the Cimhri, which, after this terrible catastrophe, was left a mere desert, was again peopled by the Scythians.

CIMBRICA CHERSONESUS. SeeCnERSONE- sus.

CIMBRISHAM, a decayed sea-port of Swe- den, on the Baltic, in the province of Schonen, Gothland. From this place, and the adjacent country, the ancient Cimbri emigrated. It is twenty-four miles south of Christianstadt.

CIME'LIARCH, n. t. from jcu/u/Wpxnc. The chief keeper of plate, vestments, and things of value, belonging to a church; a church-warden.

CI'METER, n. $. Span, and Port, cimitarra, from Turk, chimeteir. A sort of sword used by the Turks, short, heavy, and recurvated, or bent backward. This word is sometimes erroneously spelt scimitar, and scymiter ; as in the following examples.

By this scimitar,

That slew the sophy and a Persian prince, ††† That won three fields of sultan Solyman.

Shakspeare ,

Our armours now may rust, our idle scimiten Hang by our sides for ornament, not use. Dryden. CIM EX, the bug, in zoology, a genus of in- sects belonging to the order of hemiptera. The

rostrum is inflected. The antenna are longer than the thorax. The wings are folded together crosswise ; the upper ones are coriaceous from their base towards their middle. The back is flat ; the thoiax marginated. The feet are formed for running. This genus is divided into dif- ferent sub-divisions, as follows : i. Those without wings. 2. Those in which the esr- cutcheon is extended so far as to cover the ab- domen and the wings. 3. The coleoptrati, whose elytra are wholly coriaceous. 4. Those whose elytra are membranaceous ; these are very much depressed, like a leaf. 5. In which the thorax is armed on each side with a spine. 6. Those which are of an oval form, without spines on the thorax. 7. In which the antennas become setaceous towards their point. 8. Those of an oblong form. 9. Those whose antennae are setaceous, and as long as the body. 10. Those which have their thighs armed with spines. 11. Those whose bodies are long and narrow. Linnams enumerates no fewer than 121 species, to which several have been added by other naturalists. The larvae of bugs only differ from the perfect insect by the want of wings; they run over plants; grow and change to chrysalids, without appearing to undergo any material difference. They have only rudiments of wings, which the last transformation unfolds, and the insect is then perfect. In the first two stages they are unable to propagate their species. In their perfect state, the female, fecundated, lays a great number of eggs, which are often found upon plants, placed one by the side of another; many of which, viewed through a glass, present singular varieties of configuration. Some arc crowned with a row of small hairs, others have a circular fillet ; and most have a piece which forms a cap ; this piece the larva? pushes off when it forces open the egg. Re- leased from their prison, they overspread the plant on which they feed, extracting by the help of the rostrum the juices appropriated for their nourishment ; even in this state the larvae are voracious in an eminent degree, and spare nei- ther sex nor species they can conquer. In their perfect state they glut themselves with the blood of animals : they destroy caterpillars and flies ; and even the coleopterous tribe, whose hardness of elytra one would imagine was proof against their attacks, have fallen an easy prey to the sharp piercing nature of the rostrum of the bug, and the uncautious naturalist may experience a feeling proof of the severity of its nature.

1 . C. lectularius, the house bug, is particularly acceptable to the palate of spiders in general, and is even sought after by wood bugs ; which is not indeed surprising, when the general voracity of this genus is considered. The methods of ex- pelling house bugs are

various. See BUG, and CIMICIFUGA.

2. C. paradoxus is a very peculiar species, dis- covered by Dr. Sparrman at the Cape. He ob- served it as he sought for shelter at noon among the branches of a shrub. ‘ Though the air,’ he says, ‘ was extremely still and calm, so as hardly to have shaken an aspen leaf, yet I thought I saw a little withered, pale, crumpled leaf, eaten as it were with caterpillars, fluttering from the

tree. This appeared to me so very extraordinary, that I thought it worth my while suddenly to quit my verdant bower in order to contemplate it ; and I could scarcely believe my eyes, when I saw a live insect, in shape and color resemb- ling the fragment of a withered leaf, with the edges turned up and eaten away, as it were by caterpillars, and at the same time all over beset with prickles. Nature by this peculiar form has certainly extremely well defended and concealed, as it were in a mask, this insect from birds and its other diminutive foes; in all probability, with a view to preserve it, and employ it for some important office in the system of her eco- nomy ; a system with which we are too little acquainted, in general too little investigate, and, in every part of it, can never sufficiently admire, with that respect and veneration which we owe to the great author of nature and ruler of the universe.’

CIMICIFUGA, in botany, a genus of the polyandria order, and dioecia class of plants. Male CAL. almost pentaphyllous : COR. none : stamina, twenty in number. Female CAL. al- most pentaphyllous : COR. none : the stamina twenty and barren : CAP. from four to seven, polyspermous : species, one only. Viz. C. fcetida, bearing a thyrsis of yellow male flowers with a red villous seed, the seed vessel in form of a horn. This whole plant so re- sembles the actea racemosa, that it is difficult to distinguish them when not in flower; but in the fructification it greatly differs from it, the cimi- cifuga having four pistils, the actea but one. Jacquin says, that it is a native of the Carpathian mountains. It has obtained the name of cimi- cifuga, or bugbane, both in Siberia and Tartary, from its property of driving away those insects; and the botanists of those parts of Europe, which are infested by them, have long desired to naturalise it in their several countries. Gme- lin mentions, that in Siberia the natives also use it as an evacuant in dropsy ; and that its effects are violently emetic and drastic.

CIM MERIT, an ancient people near the Pa- lus Maeotis. ‘They invaded Asia Minor, 1284 years before Christ, and seized on the kingdom of Cyaxares. After they had been masters of the country for

twenty-eight years, they were driven back by Alyattes king of Lydia.

CIMMERII, another ancient nation, on the western coast of Italy. The country which they inhabited was supposed to be so gloomy, that, to express a great obscurity, the expression of Cimmerian darkness has proverbially been used ; and Homer, according to Plutarch, drew his images of hell and Pluto from the gloomy and dismal country where they dwelt. See CIMME- UIUM.

CIMMERIUM, in ancient geography, a town at the mouth of the Palus Masotis ; from which the Bosphorus Cimmerius is named ; that strait which joins the Euxine and the Palus Mreotis. And here stood the Promontorium Cimmerium ; and hence probably the modern appellation Crim.

Also a place near Baia% in Campania, where formerly stood the cave of the sibyl. The people lived in subterraneous habitations, from which

tliey issued in the night to commit robberies and other acts of violence, and thus never saw the light of the sun. To give a natural account of this fable, Festus says, there was a valley sur- rounded by a pretty high-ridge, which precluded the morning and evening sun.

CIMOLA, or CIMOLIA TERRA, in natural history, Fullers' earth. See CLAY and FULLERS' EARTH.

CIMOLIA ALBA, the officinal name of the earth of which we now make tobacco-pipes. Its distinguishing characters are, that it is a dense, compact, heavy earth, of a dull white color, and very close texture ; it will not easily break be- tween the fingers, and slightly stains the skin in handling. It adheres firmly to the tongue ; melts very slowly in the mouth, and is not rea- dily diffusible in water. It is found in many places. That of the Isle of Wight is much es- teemed for its color. Great plenty of it is found near Poole in Dorsetshire, and near Wednes- bury in Staffordshire.

CIMOLIA NIGRA, is of a dark lead color, hard, dry, and heavy; of a

smooth compact texture, and not viscid : it does not color the hands ; crumbles when dry ; adheres to the tongue ; diffuses slowly in water ; and is not acted upon by acids. It burns perfectly white, and acquires a considerable hardness. The chief pits for this clay are near Northampton, where it is used in the manufacture of tobacco- pipes. It is also mixed with the critche clay of Derbyshire, in the proportion of one part to three, in the manufacture of the hard reddish brown ware.

CIMOLIA TERRA, in natural history, a name by which the ancients expressed a very valuable medicinal earth ; but which latter ages have confounded with tobacco-pipe clay and Fullers' earth. The cimolia terra of the ancients was found in several of the islands of the Archipe- lago : particularly in the islands of Cimolus whence it has its name. It was used with great success in the erysipelas, inflammations, and the like, being applied by way of cataplasm to the part. They also used it, as we do Fullers' earth, for the cleansing of clothes. This earth of the ancients, though so long disregarded, and by many supposed to be lost, is yet very plenti- ful in Argentiere, Siphanto, and many of those islands. It is a marl of a lax and crumbly tex- ture, and a pure bright white color, very soft to the touch. It adheres firmly to the tongue ; and, if thrown into water, raises a little hissing and ebullition, and moulders to a fine powder. It makes a considerable effervescence with acids; and suffers no change of color in the fire. These are the characters of what the ancients called simply terra cimolia: but besides this, they had, from the same place, another earth which they called by the same general name, but distin- guished as follows :

CIMOLIA TERRA PURPURESCENS, the purple cimolia. This they describe to be fattish, cold to the touch, of a mixed purple color, and nearly as hard as a stone. And this was evidently the substance we call steatites, or the soap rock ; common in Cornwall, and also in the island of Argentiere.

CIMOLUS, in ancient geography, one of the Cyclades, now called Argentiere. See ARGES- TIERE.

CIMON, a celebrated Athenian general, the son of Miltiades and Hegesipyle. He was fa- mous for his debaucheries in his youth, and the reformation of his morals when arrived to years of discretion. He behaved with great courage at the battle of Salamis, and rendered himself popular by his munificence and valor. He de- feated the Persian fleet, took 200 ships, and to- tally routed their land army, the very same day, A. U. C. 284. In his public character he had be-

haved with unimpeached honesty, and as a private citizen he dedicated his wealth to the most excellent purposes. He demolished the enclosures about his grounds and gardens, per- mitting every one to enter and take what fruits they pleased ; he kept an open table, where both rich and poor were plentifully entertained. He did not, however, concur with every mea- sure of the commonality ; and therefore the popular party determined to put him to death. The crime laid to his charge was, that by pre- sents from the Macedonians he was prevailed upon to let slip a manifest opportunity of en- larging his conquests, after taking from the Per- sians the gold mines of Thrace : but Pericles, though appointed to accuse him, spoke in such a manner, that it plainly appeared that he did not think him guilty ; in consequence of which Cimon was only banished by the ostracism. He was afterwards recalled from his exile ; and at his return he adjusted the dispute between Lacede- mon and his countrymen; after which he totally ruined the Persian fleet, A. U. C. 304. He died as he was besieging the town of Citium in Cyprus,. He may be called the last of the Greeks whose spirit and boldness defeated the armies of the barbarians. He was such an in- veterate epemy to the Persian power, that he formed a plan of totally destroying it ; and in his wars he had so reduced the Persians, that they promised in a treaty, not to pass the Cheli- donian islands with their fleet, or to approach within a day's journey of the Grecian seas. See ATTICA.

CINALOA, or CINOLLO, a province of Mex- ico, in the southern part of the intendancy of So- nora. It is about 300 miles in length from south- east to north-west, and about 120 broad It is bounded on the east by lofty mountains, on the west by the gulf of California, and to the north by a desert native country. Humboldt says it con- tains five towns, ninety-two villages, thirty pa- rishes, fourteen farms, and 450 cottages. It has an extremely hot summer, and very cold De- cember and January ; but it seldom rains here.

CINCHONA, in botany, a genus of the mo- nogynia order, belonging to the pentandria class of plants : COR. funnel-shaped, with a woolly sum- mit : CAP. inferior : bilocular, with a parallel partition. Species twelve, the chief are.

1 . C. corymbifera, corymb-bearing cinchona, oj white Peruvian bark, with oblong lanceolate leaves and axillary corymbs. This species par- ticularly abounds in the hilly parts of Quito, growing promiscuously in the forests, and is .spontaneously propagated from its seeds.

2. C. Jamaicensis is a native of the West India islands, particularly of Jamaica. In Jamaica it is called the sea-side beech, and grows from twenty to forty feet high. The white, furrowed, thick outer bark is not used ; the dark brown inner bark has the common flavor, with a mixed taste, at first the horse radish and ginger, becoming at last bitter and astringent. It seems to give out more extractive matter than the cinchona officinalis. Some of it was im- ported from St. Lucia, in consequence of its having been used with 'advantage in the army and navy during the last war ; and it has lately been treated of at considerable length by Dr. Kentish, under the title of St. Lucia's bark. When fresh it is a considerable emetic and ca- thartic, properties which it is said to lose by drying.

C. officinalis, or colored Peruvian bark, with elliptic leaves, downy underneath, and the leaves of the corolla woolly. Both the corymbifera and officinalis are natives of Peru, where they attain the height of from fifteen to twenty feet. They are both found in the province of Santa Fe. The bark has an odor, to.some people not unplea- sant, and very perceptible in the distilled water, in which floating globules, like essential oil, have been observed. Its taste is bitter and astrin- gent, accompanied with a degree of pungency, and leaving a considerably lasting impression on the tongue. According to some, the Peruvians learned 'the use of the bark by observing certain animals affected with intermittents instinctively led to it ; while others say, that a Peruvian having an ague, was cured by happening to drink of a pool, which, from some trees having fallen into it, tasted of cinchona; and its use in gangrene is said to have originated from its curing one in an aguish patient. About 1640 the lady of the Spanish viceroy, the Comitissa del Cinchon, was cured by the bark, which has there been called cortex, or pulvis Comitissae cin- chona. The medicinal properties of this drug are very considerable. It cures intermittent, remittent, nervous, and putrid fevers, putrid sore throats, scarlatina, and dysentery ; stops ex- cessive discharges, and is in general use as a tonic and stomachic ; it is also of infinite ser- vice in local affections, as gangrene, scrofula, ill conditioned ulcers, rickets, scurvy, &c. and in most diseases where there is no inflammatory diathesis. The officinal preparations of this bark are the powder, the extract, the tincture, and the decoction.

CINCINNATI, a flourishing post town ot the United States, in the north-western territory, and the present seat, says Mr. Scott, in his

United States Gazetteer for 1795, of the Ame- rican government. It is seated on the north side of the Ohio, opposite to the mouth of Lick- ing river, and contained, at that period, about 200 houses. It has a fort, named Fort Washing- ton, which is the grand magazine of stores for the western army, and is large enough to con- tain 300 men. Cincinnati is seventy miles north of George-town, eighty-two north by east of Frankfort, and 759 west by south of Philadel phia: from which it lies in Ion. 9. 44. W., lat. 39. 7. N.

CINCINNATI, a society which was established

in the United States of North America, soon after the peace of 1783, consisting of those generals and officers of the army and navy who had fought and triumphed together in the war of independence. The institution was intended to perpetuate the memory of the revolution, the friendship of the officers, and the union of the States ; and also to raise a fund for the relief of the widows and orphans of those officers who had fallen during the war. It was subdivided into state societies, which were to meet on the 4th of July, and, with other business, depute a number of their members to convene annually in general meetings. Each member was to subscribe one month's pay to the general trea- sury, and the fund was to be augmented by pri- vate donations. The interest only of the money thus raised was to be expended in acts of charity. The members were to be distinguished by wear- ing a medal, emblematical of the design of the society. The device, a bald eagle of gold, was suspended by a deep blue riband edged with white, descriptive of the union of America and France. The emblems borne on the breast of the eagle were : the principal figure, Cincinnatus, and three senators presenting him with a sword and other military ensigns : on a field in the back ground his wife standing at the door of the cot- tage, and near it a plough and other implements of husbandry ; round the whole, ' Omnia reliquit servare rempublicam.' On the reverse, the sun rising, a city with open gates, and vessels enter- ing the port; fame crowning Cincinnatus with a wreath, inscribed ' virtutis premium ;' below, hands joining, supporting a heart, with a motto ' esto perpetua ;' round the whole, ' Societas Cincinnatorum, instituta, A.D. 1783.' The honors and advantages of this society were to be heredi- tary in the line of the eldest male heirs, and in default of male issue, in that of the collateral male heirs. Honorary members were to be ad- mitted, but without the hereditary advantages of the society, and provided their number should never exceed the ratio of one to four of the offi- cers or their descendants.

General Washington subscribed himself in October 1783 president of

the order. But con- siderable jealousy was excited against it among the stricter republicans of the union. The states of Pennsylvania, Massachusetts, and Rhode Island, publicly expressed their disapprobation of it ; and the private correspondence of Dr. Franklin, lately published, contains one of his most acute and characteristic letters on the subject. ‘ Honor worthily obtained,’ says he, ‘ is in its nature a personal thing, and incommunicable to any but those who had some share in obtaining it. Thus among the Chinese, the most ancient, and from long experience the wisest of nations, honor does not descend but ascends. If a man from his learning, his wisdom, or his valor, is promoted by the emperor to the rank of mandarin, his pa- rents are immediately entitled to all the same ceremonies of respect from the people, that are established as due to the mandarin himself; on trie supposition that it must have been owing to the education, instruction, and good example, afforded him by his parents, that he was rendered capable of serving the public. This ascending honor is therefore useful to the state, as it encou-

rages parents to give their children a goou and virtuous education. But the descending honor, to a posterity who could have no share in obtain- ing it, is not only groundless and absurd, but often hurtful to that posterity, since it is apt to make them proud, disdaining to be employed in useful arts, and thence falling into poverty, and all the meannesses, servility, and wretchedness attending it ; which is the present case with much of what is called the noblesse of Europe.

- *The absurdity of descending honors is not a mere matter of philosophical opinion, it is capa- ble of mathematical demonstration. A man’s son, for instance, is but half of his family, the other half belonging to the family of his wife. His son, too, marrying into another family, his share in the grandson is but a fourth ; in the great grandson, by the same process, it is but an eighth. In the next generation a sixteenth ; the next a thirty-second ; the next a sixty-fourth ; the next an hundred and twenty-eighth ; the next a two hundred and fifty-sixth ; and the next a five hun- dred and twelfth ; thus in nine generations, which will not require more than 300 years (no very great antiquity for a family), our present chevalier of the order of Cincinnatus’s share in the then ex- isting knight, will*

be but a 51 2th part ; which, allowing the present certain fidelity of American wives to be insured down through all those nine generations, is so small a consideration, that me- thinks no reasonable man would hazard for the sake of it, the disagreeable consequences of the jealousy, envy, and ill-will of his countrymen.' He afterwards calculated that 1022 men and wo- men will be contributors to the formation of this one future knight.

The Cincinnati, in their first general meeting convened at Philadelphia, May 3rd, 1784, new modelled the institution in regard to its here- ditary character. They annulled the descent of its honors, disclaimed all interference with political subjects, and placed their funds under the immediate cognizance of the several legis- latures, through the medium of a charter. Indeed they relinquished without hesitation every thing in their new constitution, except their personal friendships, their general meetings, and their ri- bands; together with the acts of benevolence which it was their intention should flow from them.

CINCINNATUS (Titus Quinctius), a Roman hero, whose disinterested patriotism reflects eter- nal honor on his memory, as well as on his country, which he was thrice the means of saving. On the first of these occasions, the dis- putes between the senate and the people of Rome had run to such a height about the Agra- rian law, that they were on the point of coming to an open rupture, when Cincinnatus, being elected dictator, and taken from his plough, by his wise counsels and prudent management, healed their differences and prevented the worst of calamities, a civil war. Some time after this, when the consul Minutius, with the whole Roman army, were surrounded and in danger of being cut off by the combined armies of the TEqui and Volsci, he was called forth a second time to be dictator ; he conquered the enemies of Rome, and refusing all rewards, retired again –

to his farm, after he had been dictator only six- teen days. The same circumstance occurred once more in the eightieth year of his age. He died A. A. C. 376. See ROME, HISTORY OF.

CI'NCTURE, 7i. s. Lat. cinctura. Something worn round the body. An enclosure.

Now happy he, whose cloak and cincture Hold out this tempest Shakspeare.

The court and prison being within the cincture of one wall. Bacon's Henry VIT.

Columbus found the American so girt With feathered cincture, naked else, and wild.

Milton.

He binds the sacred cincture round his breast. Pope.

In architecture, a ring or list at the top and

bottom of the shaft of a column ; separating the

shaft at one end from the base, at the other from

the capital. It is suposed to be in imitation of

the girths or ferrils, anciently used to strengthen

and preserve the primitive wood columns.

CrNDER, n.s. ˆ Lat. cinis ; Ital. ci-

CI'NDER-WENCH, n. s. >7zere;Fr. cendre, ;Goth.

CI'NDER-WOMAN, n. s.jsinder. Hot coal that

has ceased to flame ; a mass ignited and quenched

without being reduced to ashes. A trader in

cinders, or one who collects them for others. A

cinder-wench is a cinder-raker.

I should make very forges of my cheeks, That would to cinders burn up modesty. Did I but speak thy deeds ! Shakspeare.

There is in smith's cinders, by some adhesion of iron, sometimes to be found a magnetical operation.

Browne.

They fondly thinking to allay Their appetite with gust, instead of fruit Chewed bitter ashes, which the offended taste With spattering noise rejected : oft they essay eo, Hunger and thirst constraining ; drugged as oft. With hatefullest disrelish writhed their jaws With soot

and cinders filled. Milton.

So snow on ˆEina does unmelted lie, Whose rolling flames and scattered cinders fly.

Waller.

If from adown the hopeful chops The fat upon a cinder drops, To stinking smoke it turns the flame. Swift.

Tis under so much nasty rubbish laid, To find it out's the cinder-woman's trade.

Essay on Satire.

She had above five hundred suits of fine clothes, and yet went abroad like a cinder-wench.

Arbuthnot's History of John Bull, In the black form of cinder-wench she came, When love, the hour, the place, had banished shame.

Gayf

CINERATION, n. s. from Lat. cineres. The reduction of anything by fire to ashes. A term of chemistry.

CINER1TIOUS, adj. Lat. cinericius. Having the form or state of ashes.

The nerves arise from the glands of the cineritious part of the brain, and are terminated in all parts of the body. Cheyne.

CINE'RULENT, adj. from Lat. cineres. Full of ashes.

CI'NGLE, n. s. from Lat. cingulum. A girth for a horse.

CINNA (Caias Helvius), a poet intimate with Caesar. He went to attend the obsequies of Caesar, and, being mistaken by the populace for another Cinna, he was torn to pieces.

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CINNA (Lucius Cornelius), a Roman who oppressed the republic with his cruelties. He was banished by Octavius for attempting to make the fugitive slaves free. He joined with Marius, and with him at the

head of the slaves he de- feated his enemies, and got himself made consul a fourth time. He massacred so many citizens at Rome, that his name become odious ; and one of his officers assassinated him at Ancona, as he tvas preparing war against Sylla.

CI'NNABAR, TI. s. Lat. cinnabaris. Cinnabar is native or factitious : the factitious cinnabar is called vermilion. See CHEMISTRY.

Cinnabar is the ore out of which quicksilver is drawn, and consists partly of a mercurial, and partly of a sulphureo-ochreous matter.

Woodward's Met. Fossils.

The particles of mercury uniting with the particles of sulphur, compose cinnabar. Newton's Optics.

CINNABAR, FACTITIOUS, is a mixture of mer- cury and sulphur sublimed, and thus reduced into a fine red. The best is of a high color, and full of fibres like needles.

CINNABAR, NATIVE, is an ore of quicksilver, moderately compact, very heavy, and of an ele- gant striated red color. The chief use of cinnabar is for painting. Although this body is composed of sulphur, which is of a light yellow color, and mercury which is white as silver, it is nevertheless of an exceedingly strong red color. Lumps of it are of a deep brown red without brilliancy ; but when the too great intensity of its color is dimi- nished, by bruising and dividing it into small parts, the red of the cinnabar becomes more and more exalted, flame colored, and exceedingly vivid and brilliant : in this state it is called ver- milion. Cinnabar is often employed as an in- ternal medicine. Hoffman greatly recommends it as a sedative and antispasmodic : and Stahl makes it an ingredient in his temperant powder. Other intelligent physicians deny that cinnabar taken internally has any medicinal quality. Their opinion is grounded on the insolubility of this substance in any menstruum. This question concerning its internal utility cannot be decided without further experiments ; but cinnabar is certainly used with success to procure a mercurial fumigation, when that' method of cure is proper in venereal diseases. For this purpose it is burnt in an open fire on red hot coals, by which the mercury is disengaged and forms vapors, which, being applied to the body of the diseased person, penetrates through the pores of the skin, and produce effects similar to those of mercury ad- ministered by friction.

CI'NNABAR OF ANTIMONY is made of mer- cury, sulphur, and crude antimony.

CI'NNAMON, n. s. Lat. cinnamomum. The fragrant bark of a low tree in the island of Cey- lon. Its leaves resemble those of the olive, both as to substance and color. The fruit resembles an acorn or olive, and has neither the smell nor taste of the bark. When boiled in water, it yields an oil, which, as it cools and hardens, be- comes as firm and white as tallow ; the smell of which is agreeable in candles. The cinnamon of the ancients nas different from ours.

Let Araby extol her happy coast, Her cinnamon and sweet amomum boast.

Dryden's Fables.

CINNAMON is the bark of two species of laurus. The true cinnamon is from the laurus cinnamo- mum; and the base cinnamon, which is often sold for the true, is from the laurus cassia. See LAURUS.

CINNAMON, CLOVE, is the bark ot a tree grow- ing in Brasil, which is often substituted for real cloves.

CINNAMON, WHITE, or winter's bark, is the bark of a tree frequent in the isle of St. Domingo, Guadaloupe, &c. of a sharp biting^ taste like pepper. Some use it instead of nutmeg : and in medicine it is esteemed a stomachic and anti- scorbutic. See CANELLA.

CI'NNAMON WATER is made by distilling the bark, first infused in barley water, in spirit of wine, or white wine.

CINNAMUS, a Greek historian, wno wrote a History of the Eastern Empire, during the reigns of John and Manuel Comnenus, from A.D. 1118 to 1143. His style is reckoned the best of the nodern Greek authors. He died about 1 183.

CI'NQUE, n. s. Fr. A five. It is used in games alone ; but is often compounded with other words.

CI'NQUE-FOIL, n. s. Fr. cinque feuille. A kind >f five-leaved clover.

CI'NQUE-PACE, n. s. Fr. cinque pas. A kind of grave dance.

Wooing, wedding, and repenting, is a Scotch jig, a measure, and a cinque-pace. The first suit is hot and hasty, like a Scotch jig, and full

as fantastical ; the wedding, mannerly and modest, as a measure full or state and gravity ; and then comes repentance, and, with his bad legs, falls into the cinque-pace faster and faster, till he sinks into his grave. Shakspeare.

CI'NQUE PORTS, n. s. Fr. cinque ports. Cer- tain havens, or ports, on the south coast of England, for whose privileges see below.

They, that bear

The cloth of state above her, are four barons Of the cinque ports. Shakspeare.

CINQUE PORTS, five havens that lie towards France, and therefore have been thought by our kings to be such as ought most vigilantly to be preserved against invasion Cinque ports were thus called by way of eminence on account of their superior importance, as having been thought to merit a particular regard by the kings of En- gland, for their preservation against invasion. Hence they have a particular policy, and are governed by a keeper with the title of Loid Warden of the cinque ports. Camden tells us that William the Conqueror first appointed a warden of the cinque ports : but king John first granted them their privileges, upon condition they should proride eighty ships at their own charges for forty days, as often as the king should have occasion in the wars ; he being then strait- ened for a navy to recover Normandy The five ports are, Hastings, Ilomney, Hythe, Dover, and Sandwich. Thorn tells, that Hastings provided twenty-one vessels, and in each vessel twenty-one men. To this port belong Seaford, Pevensey, Hedney, Winchelsey, Rye, Hamine, Wakesboi'rn, Creneth, and Forthclipe. Ilomney provided

five ships, and in each twenty-four men. To this belong Bromhal, Lyde, Oswarstone, Dangemares, and Romenhai. Hythe furnished five ships, and in each twenty-one seamen. To this belongs Westmeath. Dover the same number as Hastings. To this belong Folkstone, Faversham, and Marge- Sandwich furnished the same number as Hythe. To this belong Fordiwic, Reculver, Serre, and Deal. The privileges granted to them in conse- quence of these services were very great. Amongst others, they were each of them to send two barons to represent them in parliament; their deputies were to bear

the canopy over the king's head at the time of his coronation, and to dine at the uppermost table in the great hall on his right hand ; to be exempted from subsidies and other aids ; their heirs to be free from personal ward- ship, notwithstanding any tenure; to be impleaded in their own towns only, and not to be liable to tolls, &c.

CI'NQUE-SPOTTED, adj. Having five spots.

On her left breast

A mole, cinque spotted, like the crimson drops I' the bottom of a cowslip. Shakspeare.

C1NTRA, a small town of Portugal, in Estre- madura, situated between the mountains of Cintra, anciently called the Mountains of the Moon, at the foot of a promontory ou the north side of the entrance of the Tajo, commonly called the Rock of Lisbon. Here was a palace built by the Moors, which was destroyed by an earthquake in 1 655, and rebuilt by king Joseph in the same style. Cintra contains four parish churches, and 1900 inhabitants. At this place was concluded, 22nd August 1808, the celebrated convention between the British forces under Sir H. Dalrym- ple, and the French army under general Junot, whereby the latter evacuated Portugal with all their ill-gotten spoil, and the British general, and British nation were, as but too often, jilted, in conditions of peace, out of every thing that had been earned by a well fought contest. Mr. Southey (History of the late war in Spain and Portugal) says that the public feeling (decidedly hostile to this convention) never was so unani- mously and instantaneously manifested. Lord Byron (see our sketch of his life) wrote a strong philippic upon it, in some suppressed stanzas of his Childe Harold. It is fifteen miles north-west of Lisbon.

CINUS, or CYNUS, a celebrated civilian of Pistoia, in the fourteenth century. His Commen- tary on the Code was finished in 1315 ; he also wrote on some parts of the digest. He was no less famous for his Italian poems, and is ranked among those who first gave graces to the Tuscan lyric poetry.

CINYRA, in the Jewish antiquities, a musical instrument. See CHINNOR.

C1NYRAS, in fabulous history,- a king of Cy- prus, son of Paphus. He married Cenchreis, by whom he had a daughter called Myrrha. Myr- rha fell in love with her father, and in the absence of her

mother she introduced herself into his bed by means of her nurse. ††† Cinyras had by her a son called Adonh; and when he knew the incest he had committed, he attempted to stab his daughter, who escaped his pursuit and fled into Arabia, where, after she had brought forth,

she was changed into a tree which still bears her name. Cinyras, according to some, stabbed himself.

CI'ON, n. s. Fr. sion, or scion. A sprout ; a shoot from a plant. The shoot engrafted or in- serted on a stock.

We have reason to cool our raging motions, our

carnal stings, our unbitted lusts j whereof I take this,

that you call love, to be a sect or don. Shakspeare.

The don over-ruleth the stock ; and the stock is but

psssive, and giveth aliment, but no motion, to the

graft. Bacon.

The stately Caledonian oak, newly settled in his

triumphant throne, begirt with dons of his own royal

stem. Hovrell.

CIONS, or CYONS, in gardening, are used in grafting ; which is performed by the application of the cion of one plant upon the stalk of another. To produce a stock of cions for grafting, planting, &c. the gardeners sometimes cut off the bodies of trees a little above the ground, and only leave a stump or root standing ; the redundant sap will not fail next spring to put forth a great number of shoots. In dressing dwarf trees, a great many cions are to be cut off.

CIOTAT, a sea-port town of France, in the department of the Mouths of the Rhone, and ci- devant province of Provence ; famous for Mus- cadine wine. It is seated on the bay of Laquez, between Marseilles and Toulon, twelve miles from the former, and sixteen from the latter place; and the harbour is defended by a strong fort. Population 5274.

CITHER, n.s., v. n. & v. a. Ital. cifra; Fr. chifre, from Ar. sifr ; Heb. sepher, numeration. The figure 0 in arithmetic; a secret character for

writing. An arithmetical mark, which, standing for nothing itself, increases the value of the other figures. An intertexture of letters engraved usually on boxes or plate. A character in ge- neral. A secret or occult manner of writing, or the key to it. The verb of course applies to each of the senses given of the noun. To cipher is to draw characters, occult or general, and to prac- tise arithmetic.

His crest was covered with a couchant hownd, And all his armour seemed of antique mould, But wondrous massy and assured sownd, And round about yfretted all with gold, In which there written was with cyphers old Achilles' arms, which Artegall did win, And on his shield, enveloped sevenfold, He bore a crowned little ent.ilin, That deckle the azure field with her faire pouldered skin.

Spenser.

In succeeding times this wisdom began to be written in ciphers and characters, and letters bearing the form of creatures. Raleigh's History of the World.

Mine were the very cipher of a function,

To find the faults, whose fine stands in record,

And let go by the actor. Sliakspeare.

If the people be somewhat in the election, you can- not make them nulls or ciphers in the privation or translation. Bacon.

This book, as long lived as the elements, In cipher writ, or new-made idioms. Donne.

He frequented sermons, and penned notes : his notes he ciphered with Greek characters. Haytoard.

As, in accounts, ciphers and figures pass for real sums, so names pass for things. Snutk

Ify.J.

CIPHERS.

Fy.2.

Ifa.-t

JVC

k

ve ah/ dyumm

CUtCUMTJERXlTTOlt.

J.Shnry. Sculp.

CIP

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CIP

He was pleased to command me to stay at London, to send and receive all his letters ; and I was fur- nished with nine several ciphers, in order to it.

Denham.

Troy flamed in burnished gold ; and o'er the throne, Arms and the Man in golden ciphers shone. Pope. You have been bred to business ; you can cipher : wonder you never used your pen and ink.

Arbuthnot.

Some mingling stir the melted tar, and some Deep on the new-shorn vagrant's heaving side To stamo the master's ciplter ready stand.

Thomson.

CIPHER, or CYPHER. See ARITHMETIC.

CIPHER is a kind of enigmatic character, com- posed of several letters interwoven, which are generally the initial letters of the person's names for whom the ciphers are intended. These are frequently used on seals, coaches, and other moveables. Anciently merchants and tradesmen were not allowed to bear arms ; in lieu thereof, they bore their ciphers, or the initial letters of their names, artfully interwoven about a cross ; of which we have various instances on tombs, &c.

CIPHERS are also certain secret characters used in writing confidential, public, and private letters. De la Guilletiere, in his Lacedsemon, ancient, and modern, endeavours to make the ancient Spartans the inventors of the art of writing in cipher. Their scytala, according to him, was the first sketch of this mysterious art; these

scytala were two rollers of wood, of equal length and thickness; one of them kept by the ephori, the other by the general of the army sent on any expedition against the enemy. When these ma- gistrates would send any secret orders to the ge- neral, they took a slip of parchment, and rolled it very exactly about the scytala which they had reserved ; and in this state wrote their intentions, which appeared perfect and consistent while the parchment continued on the roll : when taken off, the writing was maimed, and without con- nexion : but was easily retrieved by the general, upon his applying it to his scytala. Polybius says, that ./Eneas Tacticus, 2000 years ago, col- lected together twenty different manners of wri- ting, so as not to be understood by any but those in the secret ; part of which were invented by himself, and part used before his time. Trithe- mius, Bap. Porta, Vigenere, and P. Niceron, have written expressly on the subject of ciphers. Various obvious modes of arranging a secret cor- respondence of this kind, will occur to every in- genious person. The Stuarts, in their correspon- dence with their adherents in this country, since the Revolution, seem to have made the last pub- lic use of this mode of transmitting intelligence. Charles I. it is said, had a cipher consisting only of a straight line differently inclined : and there are ways of ciphering by the mere punctuation of a letter, whilst the words shall be non-signifi- cants, or sense that leaves no room for suspicion. Those who wish to see a full explanation of ci- phering, may consult Bacon in his Advancement of Learning, where they will find a cipher of his own invention ; bishop Wilkins' Secret and Swift Messenger; Falconer's Cryptomenysis Patefacta, and Kircher's Steganography. \Ve

select as a specimen .of this once important art, the following modes : ††† †††

CIPHER BY DIALS. On a piece of square pasteboard A B C D, plate CIRCUMFERENTOR, and CIPHER, fig. 1, 2, draw the circle EFGH, and divide it into twenty-six equal parts, in each of which must be wrote one of the letters of the al- phabet. On the inside of this there must be another circle of pasteboard, I L M N, moveable round the centre O, and the extremity of this must be divided into the same number of equal parts as the other. On this also must be written the letters of the alphabet, which, however, need not be disposed in the same order. The person with whom you correspond must have a similar dial, and at the beginning of your letter you must put any two letters that answer to each other when you have fixed the dial. Example. Suppose you would write as follows : ††† ' If you will come over to us, you shall have a pension, and you may still make a sham opposition.' You begin with the letters Ma, which show how the

dial is fixed ; then for If you, you write un jut., and so for the rest, as in fig. 3. The same intention may be answered by a ruler, the upper part, of which is fixed and the lower part to slide, but in this case the upper part must contain two alphabets in succession, that some letter of that part may constantly correspond to one in the lower part. The divisions standing directly over each other in a straight line, will be much more obvious than in the circumference of a circle. Or two straight pieces of pasteboard regularly divi- ded, the one containing a single and the other a double alphabet, would answer exactly the same purpose. In this case a blank space may be left at each end of the single alphabet, and one or two weights being placed on both the pieces will keep them steady.

CIPHER, MUSICAL. The construction of this cipher is similar to that given above. The cir- cle EFGH, fig. 1, is to be divided into equal parts ; in each part must be written one of the letters of the alphabet : and on the anterior cir- cle IX M N, moveable round the centre O, there is to be the same number of divisions ; the cir- cumference of the inner circle must be ruled in the manner of a music paper ; and in each divi- sion there is to be placed a note, differing either in figure or position. Lastly, within the musical lines place the three keys, and on the outer cir- cle, the figures that are commonly used to denote the time. Then provide a ruled paper, and place one of the keys, as suppose that of ge re sol, against the time two-fourths at the beginning of the paper, which will inform your correspon- dent how to fix his circle. Then copy the notes that answer to the several letters of the words you intend to write, in the manner expressed in fig. 4. A cipher of this sort may be made more difficult to discover by frequently changing the key, and that will not in the least embarrass the reader. You may likewise add either of the marks (fig. 5) to the note that begins a word, which will make it more easy to read, and at the same time give the music a more natural aspect. This cipher is preferable to that by dials, as it may be enclosed in a letter about common affairs, and pass unsuspected.

CIPPUS, in antiquity, a low column, with an inscription, erected on the high roads, or other places, to show the way to travellers ; to serve as a boundary ; to mark the grave of a deceased person, &c.

CIPRIANI (Giovanni Batista), a celebrated modem painter, was born in Tuscany, at Pis- toia, in 1727. Receiving the rudiments of his art

from an Englishman residing at Florence, tinder the name of Gabbiani, he went to Rome for three years, in 1750 ; and came afterwards to England with Sir William Chambers. When the duke of Richmond opened his gallery as a school of arts, he was appointed a visitor. At the foundation of the Rnyal Academy, in 1769, he made the design for the diploma, and re- ceived the present of a silver cup. His best paintings are at Houghton, but he has left many highly valued drawings. Bartolozzi engraved many of his designs. He died at Chelsea in

1785.

CIRC./EA, enchanter's night shade; a genus of the monogynia order, and. diandria class of plants ; natural order, forty-eighth, aggregate : COR. dipetalous : CAL. diphyllous, superior, with one bilocular seed. There are two species, one of which is a native of Britain, and the other of Germany. They are low herbaceous plants with white flowers, and possessed of no remarkable property.

CIRCARS, NORTHERN, a province reaching along the west of the Bay of Bengal, from the fifteenth to the twentieth degree of north latitude, bounded by the sea on the west, by the province of Hyderabad on the south-east, from which a range of small hills and the river Godavery se- parate it ; to the north of that river it is divided from Berar by a continued ridge of almost im- passable mountains to the Circars at Goomsur ; these then turn to the eastward, and together with the Chilka Lake form a boundary of nearly fifty miles on the north. On the south the small river Oundezama separates this country from Ongole and the Carnatic on the east of the Ghauts. It contains about 17,000 square miles, one-fifth arable land, two-fifths pasture, and the remainder woods, water, towns, barren hills, or the sandy waste that runs along the whole coast, and is about three miles broad on the average. It is divided into five districts, Guntoor, Morti- zabad, Condapilly or Mustaphabad, Ellore, Rajamundry, and Cicacole, anciently Calingas. It contains several places of consequence, as Ganjam, Calingapatam, Vizianagram, Bindipa- tam, Visagapatam, and Masulipatam. Its popu- lation amounts to two millions and a half, mostly Hindoos, but in the towns there are many Mahommedans, and a few native Christians.

This country is well watered by numerous rivers, which rise in the mountains on the north- west anJ run through it to the sea. Of these the Godavery is the only one of very great extent, reaching across the peninsula from the Ghauts, a little to the north of Bombay, and

falling into the Bay of Bengal almost at the southern extremity of the Circars. The soil is conse- quently very fruitful, and yields one plentiful crop in the year, producing grain of all kinds, especially rice, tobacco, sugar, and cotton. It

abounds also in timber for ship-building. Large ships have been built at Coringa and Narsipore, near the principal mouths of the Godavery, and the coasting trade, it is said, employs not less than 30,000 tons of a smaller description. Al- though, however, it possesses so great an extent of coast, it has not a single harbour where a large vessel can anchor, much less ride secure from the storms. Masulipatam is the only port on the coast of Coromandel at which any vessels can ride without the inconvenience of a heavy surf. The chief lake is Chilka, about thirty-five miles long by eight broad, separating the northern Circars from the province of Cuttack. Few fruits and vegetables are grown here, especially in the southern parts, it being extremely difficult to raise them, owing probably to the influence of the sea breezes.

Here, as indeed over the greater part of south- ern India, the village system prevails ; this is a political arrangement, by which a village in- cludes not only the spot that is inhabited, but that part of the adjacent country from which its subsistence is obtained. The employments, ex- cept simply the cultivation of the soil, are per- formed by public servants, who are paid by a portion of land, and a few small gratuities in harvest time. These are the potail or chief, the talia and totie, a kind of police, the boundary- man, the superintendant of the water courses, the brahmin, the schoolmaster, the astrologer, the smith and carpenter, the poet, the musician, and the dancing girl. Under this form these people have for ages retained not only their cus- toms but even their name unaltered. The hilly part of the country is in the possession of ze- mindars, who let their lands on condition of military service, according to the ancient feudal custom. These hold the chief sway over the rest of the people, being able to bring into the field more than 40,000 troops. Their power was most formidable, and altogether uncontrolled, until the year 1794, when the great zemindar of Vizianagram was punished for his oppression and expulsion of the inferior chieftains ; and to this time the administration is not properly fixed on a regular plan, so as to be truly advantageous to the country.

Owing to the great influence of the sea air, these provinces are cooler than most other parts of the world in the same latitude. At the ap- proach of summer the heat becomes excessive, especially in the tracts of sand near the coast. Among the hills and marshy jungles the pesti-

lential vapors that arise produce a disease called the hill fever, which is sometimes very preva- lent. North of the Godavery the rains set in about the middle of June, continuing gentle till the middle of August, this is called the small rain harvest ; from this time it is more abundant till November, when it is succeeded by storms and the north-easterly wind ; after this a pleasant season ensues, in the middle of which, or early in January, the rice and hajary harvest closes. The harvest for maize and the different sorts of grain, finishes at the vernal equinox; then the hot season commences, which is however moderate in the north, owing to the vicinity of the sea and the mountains.

C I R C A S S I A.

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Sheep, and the larger species of horned cattle, are found in these countries, and the adjacent sea and its numerous inlets furnish an abund- ance of fish of every kind known in India. Grain, however, is the chief production of the Circars ; in former times it was the granary of the Carnatic during the north-east monsoon, as Tanjore was during the south-west. Rice, paddy, wheat and other grains in use among the natives, are annually exported to Madras, and in the first four months of 1812, when these articles were at a high price there, the quantity sent from this country amounted to the sum of more than a million of sicca rupees. The indigo exported to the same place amounts to 45,000 rupees, and the rum from the province of Ganjam, for the use of the navy, to 87,700 rupees. These pro- vinces also send to Madras chillies, fire-wood, coriander seeds, cashew nuts, and other articles used by the natives as drugs and for their reli- gious ceremonies. The imports from Madras consistof coiled cables and cordage for the native vessels, and treasure sent for the purchase of salt, and goods for the British market. Besides these they receive quantities of Madeira, claret, and port wines, ale, brandy, oilman's stores, glass, stationary, tea, copper of different sorts, steel and every kind of hardware, with various articles from the eastward, as cloves, benjamin, pepper, tin, dammer and borax.*

Manufactures to a considerable extent are car- liecl on in the Circars. Round Nagpore. plain long cloth is fabricated, of which the best prints in Europe are made ; some of a coarser sort are made to the north and south of the river Goda- very. Cicacole is remarkable for curious mus- lins, Ellore for carpets, and Berhampore for silk? manufactured from the raw material, procured from Bengal and China. Madras is principally supplied with piece goods from the

Northern Circars ; the thread is spun by the cultivating caste, and the weavers, owing to various regula- tions made in their favor, are able to live better than the laboring class ; but they are generally more dissipated, and squander their wages in gaming and cock-fighting. The females in gen- eral prepare the thread and sell it to the weavers, and many who belong to decayed families derive their subsistence from this employment The cotton is chiefly raised in the country ; the rest is brought from the states of the Nizam and the Mahrattas. That grown in the country is pre- ferred, being cleaner, but either too much or too little rain will destroy the crop. Colored piece goods are exported from Masulipatam, not only to Madras, but to Bombay and the Persian Gulf.

The natives are divided into two nations, the Telinga and Oria or Orissa, formerly separated by the Godavery; but now much intermixed. Their dialects are different, and they have rites and customs perfectly distinguishable ; both have the four castes or subdivisions common to India, but the Orias are said to deviate least from the original institutions. The brahmins are the chief ; the rachwars, rowwars and vel- mas, of which the zemindars form a part, follow the manners of the rajpoots and profess to belong to the khetras or warriors ; the husband-

men, cow-herds, weavers, and artificers, are all sudras ; the shopkeepers belong to the vaisya or third caste.

The history of this country, while under the Hindoo governments, is like that of other parts of India, enveloped in mystery. The Mahom- medans invaded it in the fifteenth century, but it was not perfectly reduced till 1571, in the reign of Ibrahim Kootub, shah of Golconda. It fell into the hands of Aurengzebe in 1687, and under the Mogul dynasty it formed a part of the government of the Nizam of the Deccan. In the year 1752-3 it was made over to M. Bussy for the payment of the French auxiliary forces, and from that time continued in their possession till it was conquered by the British in 1759. A formal grant was made of it six years after, from shah Alum the great mogul, to lord Clive ; but the brother of the nizam was allowed to retain Guntoor, which had been settled on him, until his death, which took place in 1788, since which time the East India Company have had the entire 'possession.

CIRCASSIA, a considerable country in Asia, including a large portion of territory between the ???Black Sea and the Caspian. It is bounded, as far as its limits can be defined, by the Black Sea on the west, and the Caspian on the eas ; on the south by the northern*

declivity of the great range of Caucasus, and on the north by the rivers Terek and Cuban. The approach to it on the north is very striking, over a vast steppe, or level plain, beyond which, in the distance, is seen, rising abruptly, the great chain of the Caucasian Moun- tains ; four distinct groupes have their summits always covered with snow, and the Elboras, rival- ing Mont Blanc in magnitude, raises its lofty head above them all. The intervening ridge, called the Black Mountains, hardly more than half the height of the Elboras, is so precipitous that it has the appearance of a wall. Beneath these ranges the country extends, including many beautiful valleys, feeding vast flocks and herds, and yielding a most abundant crop of maize and millet, the sorts of grain chiefly cultivated here. It lies between thirty-seven and forty-six degrees of east longitude, and forty-one and forty-five of north latitude, but its exact boundaries can hardly be ascertained, the ancient extent having been much contracted by the Russians, who have erected the fortresses of Mozuk and Georgrewsk on the line of the Terek and Cuban, to check the inroads of the semibarbarous native tribes.

The name given to the inhabitants of this country is a corruption of the Russian, Tcherkess, orTcherkessians; but these names are not known in the region itself, which is occupied by a number of petty, independent tribes, hostile to each other, and many of them ignorant of each other's language. The principal of these are the Great and Little Kabardines, the Abasses, the Kisti, and the Assetes, but as these, with almost an indefinite number more, all agree in their ge- neral character, and are reckoned by the Rus- sians under one name, it is unnecessary to enter into their minute distinctions. They are in a very imperfect state of subjection to Russia; their dependence is indeed acknowleged in do- cuments preserved in the archives of the empire

of as early a date as the beginning of the eighteenth century ; but they have never regularly submitted to its dominion. They pay no tribute, and ren- der no military service ; they are perpetually making inroads on the Russian territory, carry- ing off booty and cattle in great quantities. At present, such is the state of the country, that travellers cannot safely go a few miles beyond the frontiers.

Of course there is no regular government among the Circassians ; the power is altogether vested in their chiefs, who have a certain number

of vassals under each of them ; and there is no country in which the pride of birth prevails to so great a degree. The chiefs, or princes, have un- controlled authority in their own dominions ; the uzdens, or nobles, attend the chiefs in war, but are otherwise independent ; these have vassals in entire subjection to them, who cultivate the ground, and are employed, as menials. Besides these there is a class of freedmen, who render mi- litary service, but are ranked in some degree as nobles. The masters, of whatever class, have the power of life and death over their vas- sals, and even sell them, but this is not counted honorable. In their marriages no mixture of ranks is ever known ; every one marries into his own class.

This pride, with respect to rank and birth, appears in contempt of those domestic ties and relations which are most cherished by other nations. The husband visits his wife only in private : it is an insult to name her in his pre- sence. The children are not indebted to their parents for their education. At the age of three or four they are committed to a friend of the fa- mily of equal rank, who, from motives of regard, is induced to undertake this task. They con- tinue under his sole care till the youths are fit for martial exercises, and the females to marry. Then it is lawful for the parents to see them. The females are confined, but less strictly than in other countries in the east. Polygamy is lawful, but is not much practised, at least as it respects the number of their wives.

The Circassians are remarkable for the ele- gance of their external appearance : the men are tall, and athletic, though slender ; their features are expressive, their air haughty and martial. The beauty of the females has been long cele- brated, and Circassian captives are particularly in request for the eastern seraglios. Every care is taken to preserve their beauty in youth, only a moderate portion of food, chiefly milk and pastry, is allowed them ; their feet are preserved by wooden clogs, and their hands carefully co- vered with gloves. It was in this country that the practice of inoculating for the small-pox was first introduced. At the age of ten or eleven a broad leathern girdle is fastenened with silver clasps round the waist : this is allowed to be re- moved only by the bridegroom after marriage.

The Circassians are most commonly employed in expeditions for war against the neighbouring tribes, or in excursions into t'ae Russian terri- tory in pursuit of plunder. At home they are mostly engaged in hunting and feasting. They take great pride in their arms and their horses; large sums, even of four or five hundred pounds;

are frequently expended in the former : they are indefatigable in

keeping them bright and clean. These consist of bow and quiver, musket, and pistols, steel helmet and arm-plates; they are mostly covered with a coat of mail, composed of polished steel rings. These are richly orna- mented with gold and silver, and often set with pearls and precious stones. In their horses they endeavour to attain both usefulness and beauty ; the former being considered essential to the light plundering expeditions in which they so much delight. Every great family has a race peculiar to itself, the genealogy of which they carefully preserve. At the birth of the foal, a mark, denoting its pedigree, is branded on the thigh, which it is a capital offence to alter or de- face. Pallas thinks, that if the Circassians could be induced to join the Russian standard, they would make excellent light troops ; but this is an object which no administration could ever ac- complish. Their wars among themselves chiefly arise from the motives of private revenge, so pre- valent in all rude societies, and which here are very strong. Notwithstanding this lawless state of things, however, the rights of hospitality are held sacred ; when a Circassian has once received a stranger under his roof, he will defend him at all hazards. If he has been allowed to suck a mouthful of milk from the wife's breast, he is from that moment regarded as one of the family. In the last century, they were converted to the Ma- hommedan faith ; but its observances, excepting that of circumcision, are little regarded. Ab- stinence from brandy, tobacco, and hogs' flesh, and more frequent polygamy, are almost the only effects of the system. There are many remains of paganism among them ; but great numbers belong to the Greek church.

The Circassians have little of that peace and security so essential to success in industrious pursuits. Men are often seen driving the plough in complete armour, ready at a moment's warn- ing to defend the land which they are cultivating. They manure the ground by burning the herb- age ; and when it is exhausted by two or three crops, it is left fallow to recover its fertility. The chief grain cultivated by them is millet, with a little barley and maize. Their sheep are valua- ble, and are the animals chiefly reared for food ; the flesh of young horses they are said to be fond of, and mare's milk is a common beverage with them. Oxen are employed in the plough and in draught. Bees are reared in great numbers, some having 200 or 300 hives. Wool and wax are exported.

CIRCE, in fabulous history, a daughter of Sol and Perseis, celebrated for her knowledge of magic and venomous herbs. She was sister to .ˆEtes, king of Colchis, and to Pasiphae, the wife of Minos. She married a Sarmatian prince of Colchis, whom she murdered to obtain the king dom. She was expelled by her subjects, and carried by her

father upon the coasts of Italy to an island called ˆEaea. Ulysses, at his return from the Trojan war, visited her coasts; and all his companions, who ran headlong into pleasure and voluptuousness, were changed by Circe's potions into swine. Ulysses, wh►►►► was fortified against all enchantments by an herb called moly,

which he had received from Mercury, went to Circe, and, sword in hand, demanded the resto- ration of his companions to their former state. She complied, and loaded the hero with plea- sures and honors. In this voluptuous retreat Ulysses had by Circe one son called Telegonus, or two, according to Hesiod, called Agrius and Latinus. For one whole year Ulysses forgot his glory in Circe's arms. At his departure the nymph advised him to descend to hell, and to consult the manes of Tiresias concerning the fate that attended him.

CIRCELLO MONTE, a hill and promontory of the Campagna di Roma, in the States of the Church. It was the famous Circseum promon- torium, or jugum, of the ancients, mentioned in the Odyssey and /Eneid as having been an island. It has six towers, each about two miles distant from the other, arid a small fortified town, called San Felice, twenty-eight miles west of Gaeta, and fifty south-east of Rome.

CIRCENSIAN GAMES, a general term under which was comprehended all combats exhibited in the Roman circus, in imitation of the Olym- pic games in Greece. Most of the feasts of the Romans were accompanied with Circensian games ; and the magistrates and other officers of the republic frequently presented the people with them, in order to procure their favor. The grand games were held five days, commencing on the fifteenth of September. See CIRCUS. CI'RCINATE, v. a.) Lat. circino. To make CI'RCINATION, n. s. $a circle; to compass round, or turn round. An orbicular motion ; a turning round ; a measuring with the compasses. CI'RCLE, 7i. s., v. a- & v. n.-\ Lat. circulus. CI'RCLED, adj. f Aline continued

CI'RCLET, n. s. ►► till it ends where

CI'RCLING, participial adj.) it begun, having all its parts equidistant from a common centre. The space included in a circular line. A line

of enclosure ; whatever has a centre and moves round it; applied variously to anything that ends where it begins ; to an assembly drawn by some attraction to a particular place ; to a par- ticular species of inconclusive argument ; cir- cumlocution, going round about. To circle is to move round a centre ; to enclose ; to sur- round. Circlet is the diminutive of circle.

It is he that sitteth upon the circle of the earth.

Isaiah.

Certes, said she, I wote not how he hight, But under him a gray steede he did wield, Whose sides with dapled circles weren dight ; Upright he rode, and in his silver shield He bore a bloodie crosse, that quartred all the field.

Spenser.

A great magician, Obscured in the circle of the forest. Shakspeare.

What stern ungentle hands

Have lopped and hewed, and made thy body bare Of her two branches, those sweet ornaments, Whose circling shadows kings have sought to sleep in ?

Id.

The inconstant moon, That monthly changes in her circled orb. Id.

There be fruit trees in hot countries, which have blossoms and young fruit, and young fruit and ripe fruit, almost all the year, succeeding one another j

but this circle of ripening cannot be but in succulent plants, and hot countries. Bacon.

The lords, that were appointed to circle the hill, had some days before planted themselves in places convenient. Id.

Has he given the lye In circle or oblique, or semicircle, Or direct parallel ? You must challenge him.

Fletcher't Queen of Corinth. As when a stone troubliug the quiet waters, Prints in the angry stream a wrinkle round, Which soon another and another scatters, Till all the lake with circles now is crowned : Also the air, struck with some violence nigh, Begets a

world of circles in the sky, All which inflected move with sounding quality.

P. Fletcher's Purple Island.

Round he surveys, and well might, where he stood So high above the circling canopy Of night's extended shade. Milton's Paradise Lost. That heavy bodies descend by gravity ; and again, that gravity is a quality whereby an heavy body de- scends, is an impertinent circle, and teacheth nothing.

Glanville's Scepsis. Let others strive to immure The circle in the quadrature. Marvell.

Regions remote, courts, counsils, The circling wiles of tyrants' treacherys He views, discerns, uncyphers, penetrates, From Charles's dukes to Europe's armed states. Id

When daring blood, his rent to have regained Upon the English diadem distrained, He chose the cassock, circingle, and gown, The fittest mask for one that robs the crown. Id. Nothing, not bogs, nor sands, nor seas, nor Alps, Separate the world so as the bishop's scalps, Stretch for the line their circingle alone, 'Twill make a more inhabitable zone. Id.

Thus in a circle runs the peasant's pain, And the year rolls within itself again.

Dryden's Vtrgil.

While these fond arms, thus circling you. may prove More heavy chains than those of hopeless love. Prior.

Unseen, he glided through the joyous crowd, WitL darkness circled and an ambient cloud. Pope.

To have a box where eunuchs sing And, foremost in the circle, eye a king. Id. Horace. Any thing that moves round about in a circle, in less time than our ideas are wont to succeed one another in our minds, is not perceived to move ; but seems to be a perfect intire circle of that matter, or colour, and not a part of a circle in motion. Locke. By a circle I understand not here a perfect geometri- cal circle, but an orbicular figure, whose length is equal to its breadth ; and which, as to sense, may seem circular. Newton's Optics.

That fallacy, called a circle, is when one of the premises in a

syllogism is questioned and opposed, and we intend to prove it by the conclusion.

Watti's Logick. Then a deeper still

In circle following circle, gathers round To close the face of things. Thomson's Summ The pale descending year, yet pleasing still A gentler mood inspires ; for now the leaf Incessant rustles from the mournful grove ; Oft starting such as studious walk below, And slowly circles through the waving air.

Id. Seatoiu.

Shall he whose birth, maturity, and age, Scarce fill the circle of one summer day, Shall the poor gnat, with discontent and rage, Exclaim, that Nature hastens to decay? Beattie

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When the light shines serene, but doth not g are, Then in this magic circle raise the dead : Heroes have trod this spot ††† 'tis on their dust ye tread.

Byron.

CIRCLE, in geometry, a plane figure, compre- hended by a single curve line, called its circum- ference, to which right lines drawn from a point in the middle, called the centre, are equal to each other. See GEOMETRY.

CIRCLE OF PERPETUAL APPARITION, one of the lesser circles, parallel to the equator ; des- cribed by any point of the sphere touching the northern point of the horizon; and carried about with the diurnal motion. All the stars included within this circle never set, but are ever visible above the horizon. See ASTRONOMY.

CIRCLE OF PERPETUAL OCCULTATION, is another circle at a like distance from the equa- tor; and contains all those stars which never appear in our hemisphere. The stars situated between these circles alternately rise and set at certain times.

CIRCLES, DIURNAL, are immoveable circles, supposed to be

described by the seven stars, and other points of the heavens, in their diurnal rotation round the earth; or rather, in the rotation of the earth round its axis. The diurnal circles are all unequal : the equator is the biggest.

CIRCLE, DRUIDICAL, in British topography, a name given to certain ancient enclosures formed by rude stones circularly arranged. These, it is now generally agreed, were temples, nnd many writers think also places of solemn assemblies for councils or elections, and seats of judgment. 'Instead,' says Mr. Borlace, 'of de- taining the reader with a dispute, whether they were places of worship or council, it may with g-reat probability be asserted, that they were used for both purposes; and, having for the most part been first dedicated to religion, naturally became afterwards the curiae and fora of the same com- munity.' These temples, though generally cir- cular, occasionally differ both in figure and magnitude : with relation to the first, the most simple were composed of one circle. Stone- henge consisted evidently of two circles and two ovals, respectively concentric; whilst that at Bottalch, near St. Just, in Cornwall, is formed by four intersecting circles. And the great tem- ple at Abury in Wiltshire, it is said, described the figure of a seraph, or fiery flying serpent, represented by circles and right lines. Some, besides circles, have avenues of stone pillars.

stones thrown together in a circular form, enclo- sing an area of about three yards diameter, without any larger circle round them, were originally places of burial. See DRIJIDISM.

CIRCLES, HORARY, in dialing, are the lines which show the hours on dials ; though these be not drawn circular, but nearly straight. See DIALING.

CIRCLES OF ALTITUDE, or almucantars, are circles parallel to the horizon, having their com- mon pole in the zenith, and still diminishing as they approach the zenith. See ALMUCANTAR.

CIRCLES OF LATITUDE, or secondaries of the ecliptic, are great circles perpendicular to the plane of the ecliptic, passing through the poles thereof, and through every star and planet. They are so called, because they serve to mea- sure the latitude of the stars, which is nothing but an arch of one of these circles, intersected between the star and the ecliptic. See LATI- TUDE.

CIRCLES OF LONGITUDE are several lesser cir- cles, parallel to the ecliptic ; still diminishing, in proportion as they recede from it. On

the arches of these circles the longitude of the stars is reckoned.

CIRCLES OF THE SPHERE are such as cut the mundane sphere, and have their periphery either on its moveable surface, or in another immove- able, conterminous, and equidistant surface. See SPHERE. Hence arise two kinds of circles, moveable and immoveable. The first those whose peripheries are in the moveable surface, and which therefore revolve with its diurnal motion ; as, the meridians, &c. The latter have their periphery in the immoveable surface, and do not revolve; as the ecliptic, equator, and its paral- lels, &c. See GEOGRAPHY.

CIRCLES, POLAR, are immoveable circles, parallel to the equator, and at a distance from the poles, equal to the greatest declination of the ecliptic. That next the north pole is called the arctic; and that next to the southern one the antarctic.

CIRCONCELLIONES, a species of fanatics, who took their rise among the Donatists in the reign of the emperor Constantine, and commit- ted the most horrible ravages and cruelties. Counts Ursacius and Taurinus were employed to quell them ; they destroyed a great number of them, of whom the Donatists made as many mar- tyrs. Ursacius, who was a good Catholic, and a religious man, having lost his life in an engage- ment with the barbarians, the Donatists did not

Most, if not all of them, have pillars or altars fail to triumph in his death, as an effect of the within their centre. In magnitude and number vengeance of heaven. Africa was the theatre of of stones there is the greatest variety ; some cir- cles being only twelve feet diameter, and formed only of twelve stones, whilst others, such as Stonehenge and Abury contained, the first 140, the second 652, and occupied many acres of ground. All these different numbers and mea- sures and arrangements had their pretended

these bloody scenes during a great part of Con- stautine's life. See DONATISTS.

CI'RCUIT, n. i. & v. n.-\ Fr. circuit ; Lat. CIRCUITED, n. s. tcircuitus, circmtio.

CIRCUI'TION, n. s. i The act of moving

*CIRCU'ITOUS, adj. * round any thing;*

the space enclosed in a circuit; space, extent,

reference, either to the astronomical divisions of measured by travelling round, applied to the the year, or some mysteries of the druidical districts visited by the judges, where they bien- religion. The writer, however, above quoted, supposes, that these very small circles, some- times formed of a low bank of eaith, sometimes of stones erect, and frequently of loose small

nially hold the assizes. It is in this sense a term of law. A ring; a diadem; that by which any thing is encircled ; a round-about, or protracted movement, whether applied to mind or action.

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Circuition is the act of going round anything ; compass ; maze of argument. To move iu a circle ; to go round.

He attributed! unto it smallness in respect of circuit.

Hooker.

To apprehend by what degrees they lean to things n show, though not in deed, repugnant one to ano- ther, requireth more sharpness of wit, more intricate circuitions of discourse, and depth of judgment, than common ability doth yield. Id.

And this fell tempest shall not cease to rage, Until the golden circuit on my head Do calm the fury' of this mad-brained flaw.

Shakspeare.

Up into the watch tower get, And see all things despoiled of fallacies ; Thou shalt not peep through lattices of eyes, Nor hear through labyrinths of ears, nor learn By circuit or collections to discern. Donne.

But if within the circuit of these walks, In whatsoever shake he lurk, of whom Thou tell'st, by morrow dawning I shall know.

Milton. He led me up

A woody mountain, whose high top was plain,

A Circuit wide inclosed. Id. Paradise Lost.

The lake of Bolsena is reckoned one-and-twenty

miles in circuit. Addison on Italy.

The circuits, in former times, went but round about

the pale ; as the circuit of the cynosura about the

pole. Davies.

Like your fellow circuiteer, the sun, you travel the

round of the earth, and behold all the iniquities under

the heavens. Pope.

Pining with equinoctial heat, unless The cordial cup perpetual motion keep, Quick circuiting. Philips.

There are four moons also perpetually rolling round the planet Jupiter, and carried along with him in his periodical circuit round the sun. Watts on the Mind.

And now the downy cheek and deepened voice Gave dignity to Edwin's blooming prime ; And walks of wider circuit were his choice, And vales more wild, and mountains more sublime.

Beatiie.

CIRCUIT signifies the journey which the judges take twice every year through the several coun- ties of England and Wales, to hold courts, and administer justice, where recourse cannot be had to the king's courts at Westminster : hence England is divided into six circuits, viz. the Home circuit; the Norfolk, Midland, Oxford, Western, and Northern circuits. In Wales there are but two circuits, North and South Wales : two judges are assigned by the king's commis- sion to every circuit. In Scotland, the judges of the supreme criminal court, or court of jus- ticiary, are divided into' three separate courts, consisting of two judges each ; and the kingdom into as many districts. In certain boroughs of every district, each of these courts by rotation, is obliged to hold two courts in the year, in spring and autumn; which are called circuit courts.

CI'RCULAR, adj. ˆ Lat. circularis,

CIRCULA'RITY, n. s. I circulus. Round

CI'RCULARLY, adv. f like a circle; cir-

CI'RCULATE, v. n. & v. a. /"cumscribed by a CIRCULATION, n. s. I circle. Succes-

*CI'RCULATORY, n. s. & adj. * sive in order ; al- ways going round and returning. Ending in itself; used of a paralogism, where the second*

proposition at once proves the first, and is proved by it : for instance ◆◆◆

One of Cartes's first principles of reasoning, after he had doubted of every thing, seems to be too circular to safely build upon ; for he is for proving the being of God from the truth of our faculties, and the truth of our faculties from the being of a God.

Baker's Reflections on Learning.

It is applied to a letter directed to several per- sons, who have the same interest in some com- mon affair ; as in the convocation of assemblies. Circular lines. Such straight lines as are divided from the divisions made in the arch of a circle ; as the lines of sines, tangents, and secants, on the plain scale and sector. Circular sailing is that performed on the arch of a great circle. Circu- larity signifies the circular form. The adverb is applied both to form and motion. The verb sig- nifies to move in a circle ; to convey intelligence, or any thing else, through or round a country. The derivative nouns are applied to motion in a circle, a course in which the motion tends to the point from which it began ; to a series in which the same order is always observed, and things al- ways return to the same state. Circulatory has a specific application. It is the name of a che- mical vessel, in which that which rises from the vessel on the fire is collected and cooled in another fixed upon it, and falls down again.

The frame thereof seemed partly circular,

And part triangular. Faerie Queene.

The heavens have no diversity or difference, but a simplicity of parts, and equiformity in motion, con- tinually succeeding each other ; so that, from what point soever we compute, the account will be common unto the whole circularity. Browne.

As for the sius of peace, thou hast brought upon ns the miseries of war ; so for the sins of war, thou seest fit to deny us the blessing of

peace, and to keep us in a circulation of miseries.

King Charles, i. e. Dr. Gauden^ If our lives motions theirs must imitate,

Our knowledge like our blood must circulate.

Denham.

Nature is a perpetual motion ; and the work of the universe circulates without any interval or repose.

L'Estrange.

Trade, which, like blood, should circularly flow, Stopped in their channels, found its freedom lost.

Dry den.

He first inclosed for lists a level ground ; The form was circular. Id. Fables.

From whence tlie innumerable race of things

By circular successive order springs. Roscommon.

The internal form of it consists of several regions, involving one another like orbs about the same centre ; or of the several elements cast circularly about each other. Burner..

As the mints of calumny are perpetually at work, a great number of curious inventions, issued out from time to time, grow current among the party, and cir- culate through the whole kingdom. Addison.

Nero's port, composed of huge moles running round it in a kind of circular figure. Id. on Italy.

In the civil wars, the money spent on both sidis was circulated at home ; no publick debts contracted.

Swift.

God, by the ordinary rule of nature, permits this continual circulation of human things.

Id. on Modern Education.

4s much blood passeth through the lungs as through all the rest of the body : the circulation is quicker, and heat greater, and their texture extremely delicate

Arbuthnot on Aliments.

The pulmonary circulation is a system within a sys- tem ; and an action of the heart is the origin of both. Paley's Natural Theology.

CIRCULAR NUMBERS, or SPHERICAL NUM- BERS, are those whose powers terminate in the roots themselves. Thus, for instance, 5 and 6, all whose powers do end in 5 and 6, as the square of 5 is 25 ; the square of 6 is 36, &c.

CIRCULATION OF THE BLOOD. See PHYSI- OLOGY.

CIRCULUS, in chemistry, an iron instru- ment in form of a ring, which being heated red- hot, and applied to the necks of retorts and other glass vessels till they grow hot, a few drops of cold water thrown upon them, or a cold blast, will make the necks fly regularly and evenly off. Another method of doing this, is, to tie a thread, previously dipped in oil of turpentine, round the place where you would have it break ; and then setting fire to the thread, and after- wards sprinkling the place with cold water, the glass will crack exactly where the thread was tied.

CIRCUMA'MBULATE, v. n.^ From Lat.

CIRCUMA'MBIENCY, n. s. \circum and

CIRCUMA'MBIENT, adj. j ambulo, and

circum and ambio. To walk round about. The act of encompassing ; surrounding ; encompass- ing ; enclosing.

Ice receiveth its figure according unto the surface it concreteth, or the circumambiency which conform- eth it. Browne.

The circumambient coldness towards the sides of the vessel, like the second region, cooling and condensing of it. Wilkins.

j?ain would we trace with reason's erring clue,

The darksome paths of destiny aright;

n vain; the task were easier to pursue

The trackless wheeling of the swallow's flight.

From mortal ken himself the Almighty shroud?,

Pavilioned in thick night and circumambient clouds. Emily on Death,

CIRCUMAGENTES MTJSCULI, in anatomy,

certain oblique muscles of the eyes, so named

from their helping to turn the eyes about.

CI'RCUMCISE, v. a.) Lat. circumcido. To

CIRCUMCI'SION, n. s. S cut the prepuce, or

foreskin, according to the law given to the Jews.

They came to circumcise the child. Luke.

They left a race behind Like to themselves, distinguishable scarce From Gentiles, but by circumcision vain. Milton. While with feigned treaties they invade by stealth Our sore new circumcised common-wealth. Marvell.

For Hebrew roots, although they're found To flourish most in barren ground, He had such plenty, as sufficed To make some think him circumcised. Butler ne is alarmed at the industry of the whigs, in aiming to strengthen their routed party by a rein- forcement from the circumcised. Sicift's Examples.

CIRCUMCISION was first enjoined upon Abra- ham when God established his covenant with him, as a sign or seal of what that covenant re- spected, and how it was to be fulfilled to ADJ&-

ham and the multitude of whom he was to become the father; viz. Messiah, the heir of all the promises, taking flesh of the seed of Abra-ham, and being cut off (put to death) in the flesh, to bring in that righteousness which was to be rewarded with the blessing, Gen. xvii. Rom. iv. 11. It was in the year of the world 2178 that Abraham, in the faith of this, was circumcised himself and all the males of his house ; and in this view circumcision became, as it were, the initiating ordinance into the Israelitish church. During the last thirty-

*eight years that the Israel- ites Wandered in the desert .he Hebrew children were not circumcised; but immediately after their passing the Jordan the institution was re- vived, all the males being circumcised ; which is called a circumcision of them the 'second *ime ;' and this was a ' rolling away of the reproach of Egypt:' God hereby declaring that they were his free people and heirs of the promised land, and removing from them what they considered the shame of the Egyptians. Josh. v. 1 ††† 10.*

When circumcision had continued a sacred institution about 1930 years its design was ac- complished in the death of the blessed seed; but like many other ordinances of the Jewish church, which were originally intended to point forth his death and resurrection, circumcision had by this time become merely a practice among the greater part of the Jews; and it is thus unmeaningly continued among the scattered remains of that people at this day. Circumcision was not, how- ever, confined to the Jews, though the high im- portance in which it was originally held by them seems best to account for such an indelicate operation being performed among other nations, who, though in a great measure ignorant of their design, practised in their own way many other institutions sacred to Israel. Herodotus and Philo Judaeus observe, that circumcision obtained among the Egyptians and Ethiopians. Hero- dotus says, that the custom was very ancient among each people ; so that there was no deter- mining which of them borrowed it from the other. The same historian relates, that the inhabitants of Colchis also used circumcision ; whence he concludes that they were originally Egyptians. He adds that the Phoenicians and Syrians were likewise circumcised, but that they borrowed the practice from the Egyptians. And lastly, that, a little before the time when he wrote, circum- cision had passed from Colchis to the people inhabiting near Thermodoon and Parthenius. Marsham is of opinion that the Hebrews bor- rowed circumcision from the Egyptians, and that God was not the first author of it ; citing Diodorus Siculus, and the fabulous Herodotus, as evidences on his side ; which shows he knew not its design. The practice of circumcision among the Hebrews differed very considerably from that of the Egyptians. Among the first it was a ceremony of religion, and was performed on the eighth day after the birth of the child Among the latter, a point of mere decency and cleanliness, and, as some will have it, of physi- cal necessity ; and was not performed till the thirteenth year, and then on girls as well as boys. The law of Moses ordained nothing with respect to the person by whom, the instrument with

which, or the manner how, the ceremony was to be performed ; the instrument was generally a knife of stone. The child is usually circumcised at home, where the father or godfather holds him in his arms, while the operator takes hold of the prepuce with one hand and with the other cuts it oft'; a third person holds a porringer, with sand in it, to catch the blood; then the operator ap- plies his mouth to the part, and having sucked the blood, spits it into a bowl of wine, and throws a styptic powder upon the wound. This ceremony was usually accompanied with great rejoicings and feasting; and it was at this time that the child was named in presence of the company. The Jews invented several super- stitious customs at this ceremony, such as placing three stools, one for the circumcisor, the second for the person who holds the child, and the third for Elijah, who, they say, assists invisibly at the ceremony, &c. The Jews distinguished their proselytes into two sorts, according as they be- came circumcised or not : those who submitted to this rite were looked upon as children of Abraham, and obliged to keep the laws of Moses; the uncircumcised were only bound to observe the precepts of Noah, and were called Noachidze. The Turks nerer circumcise till the seventh or eighth year, having no notion of its being neces- sary to salvation. The Persians circumcise their boys at thirteen, and their girls from nine to fifteen. Those of Madagascar cut the flesh at three several times ; and the most zealous of the relations present catches hold of the preputium, and swallows it. We are told that the Egyptian captive women were circumcised ; and the sub- jects of Prester John.

CIRCUMDU'CT, v.a.) Lat. circumduco.

CIRCUMDU'CTION, ►►. -s. } To contravene ; to

nullify ; to cancel ; a term of civil law. Hooker

uses the noun in its primitive and general sense ;

a leading about; or a conducting round.

By long circumduction perhaps any truth may be derived from any other truth. Hooker.

Acts of judicature may be cancelled and circum- ducted by the will and direction of the judge ; as also by the consent of the parties litigant, before the judge has pronounced and given sentence.

Aylijfe's Parergon.

The citation may be circumducted, though the de- fendant should not appear ; and the defendant must be cited, as a circumduction requires. Id,

CIRCU'MFERENCE, n. s. Lat. circumferen- tiu. The periphery ; the line including and sur- rounding anything. The space enclosed in a circle. The external part of an orbicular body. An orb ; a circle ; any thing circular or orbi- cular.

His ponderous shit-Id

Ehtereal temper, nr.assy, large and round, Behind him cast ; the broad circumference Hung on his shoulders like the moon. Milton.

So was his will

Pronounced among the gods, and by an oath, That shook heaven's whole circumference, confirmed.

Id.

Extend thus far thy bounds,

This be thy just circumference, O world '. Id.

Because the hero is the centre of the m?,in action,

all the lines from the circumference tend to him alom-.

Drydert. VOL. V.

He first inclosed lor lists a level ground,

The whole circumference a mile around. Id. Pallet.

Fire, moved nimbly in the circumference of a circle, makes the whole circumference appear like a circle of fire. Newton.

The bubble, being looked on by the light of the clouds reflected from it, seemed red at its apparent circumference. If the clouds were viewed through it, the colour at its circumference would be blue.

Id. Optics

CIRCUMFERENTOR, a mathematical in- strument used by land-

surveyors for taking angles by the magnetic needle. It is an instrument (where great accuracy is not required) much used in surveying in and about wood-lands, com- mons, harbours, sea-coasts, in the working of coal mines, &,c. &c. where a permanent direction of the needle is of the most material consequence. The index is commonly of brass, and consists of an index and circle of one piece. The index is commonly about fourteen inches Ions?, and an inch and a half broad ; the diameter of the circle is about seven inches. On this circle is made a chart, whose meridian line answers to the middle of the breadth of the index, and is divided into 360 degrees. There is a brass ring soldered on the circumference of the circle, on which screws another ring with a flat glass in it, so as to form a kind of box for the needle, suspended on the pivot in the centre of the circle. The two sights scresv on, and slide up and down the index ; the spangle and socket are screwed on the back side of the circle for putting the head of the staff in.

An improvement of this instrument has been made (see PI. VI. CIRCUMFERENTOR and CYPHER) which chiefly consists in an arm or index, G, so applied to the centre of the compass box, and within it, that at the time of observing, by only slipping a pin, p, out, the circle of degrees alone may move round, and leave the index, G, fixed. This index will remain stationary, from its being attached to the socket that screws on the head of the staffs. On the end of this index, next the degrees in the box, there is graduated a nonius scale, by which the circle of 360 degrees is sub- divided into five minutes, or less if desired. To observe the quantity of an angle by the circum-ferentor : ••• Let it be required to find the quan- tity of the angle EKG ; first place the instrument at K, with the fleur-de-lis of the chart towards you ; then direct the sights to E, and observe what degrees are cut by the south end of the needle, which let be 296 ; then, turning the in- strument about, direct the sights to G, noting then also what degrees are cut by the south end of the needle, which suppose 247. This done always subtract the lesser from the greater, as in this example, 247 from 296 the remainder is forty-nine degrees, which is the true quantity of t-hc angle EKG. To take angles of altitude or depressions the instrument is turned down on its ball and socket, into a perpendicular position, and adjusted to the level by a plumb-line, /, that is hung on a pin at the back of the box, and made to coincide with a mark thereon. Then by look- ing through the small sight holes s, purposi ly made,the angles are shown on the circle of degrees i>v the nonius as before.

CI'RCUMFLEX, n. s. from Lat. circuniflexus. An accent used to regulate the pronunciation of syllables, including or participating the acute and grave.

The circumflex keeps the voic >; in a middle tone, and therefore in the Latin is compounded of both the other. Holder.

CIRCUMFLEX, in grammar. See ACCENT. It is seldom used among the moderns, unless to show the omission of a letter which made the syllable long and open. This is much more frequent with the French than among us : thus they write pate for paste, tete for teste, fumes for fusmes, &c. They also use the circumflex in the participles; some of their authors writing conneu, peu, others connu, pu, &c. Father Buffier is at a loss for the reason of this use of the circumflex. The form of the Greek circum- flex was anciently the same with that of ours (viz. A);' being a composition of the other two accents (”") in one. But the copyists, changing the form of the characters and introducing the running hand, changed also the form of the cir- cumflex accent ; and instead of making the just angle, rounded it off, adding a dash through too much haste ; and thus produced this figure “, in- stead of this*.

CIRCU'MFLUENCE, n.s.} Lat. circum CIRCU'MFLUENT, adj. . \fluens, circum- CIRCU'MFLUOUS, adj. jjluus. An en-

closure of waters. Flowing round any thing.

He the world

Built on circumfluous waters calm, in wide ‘ Crystalline ocean. Milton's Paradise Lost.

Laertes' son, girt with circumfluous tides.

Pope's Odyssey.

I rule the Paphian race,

Whose bounds the deep circumfluent waves embrace ; A duteous people, and industrious isle. LI.

CIRCUMFORA'NEOUS, adj. Lat. circum-

joraneu. Wandering from house to house : as, a circumforaneous fiddler, one that plays at doors.*

CIRCUMFU'SE, v. a. 1 Lat. circumfusus ; CIRCUMFU'SILE, adj. / circum and fusilis. CIRCUMFU'SION, n. s. 5 To pour round; to spread every way. That which may be poured or spread round anything. The act of spread ing round ; the state of being poured round.

Men see better when their eyes are against the sun or candle, if they put their hand before their eye. The glaring sun, or candle, weakens the eye ; whereas the light circumfused is enough for the perception.

Bacon's Natural History.

His army, circumfused on either wing. Milton. Earth, with her nether ocean circumfused, Their pleasant dwelling house. Id.

This nymph the god Cephisus had abused, With all his winding waters circumfused.

Addison's Ovid.

Artist divine, whose skilful hands infold The victim's horn with circumfutile gold.

Pope's Odyssey.

CIRCU'MGYRATE; .v. a.) Lat. circum CIRCUMGYRA'TION, n. s. J and gyrus. To roll round.

The sun turns round his own axis in twenty-five days, from his first being put into such a circumgyra- tion. Cheyne.

All the glands of the body be- congeries of various sorts of vessels curled, circumgyrated, and complicated together. Ray on the Creation,

CIRCUMJA'CENT, adj. Lat. circumjacent. Lying round any thing; bordering on every side.

CIRCUMITION, n. s. from Lat. circumeo, circumitum. The act of going round.

CIRCUMLIGATION, n. s. Lat. circumligo. The act of binding round.

The bond with which any thing is encompassed.

CIRCUMLOCUTION, n. s. Lat. drcumlu- cutio. A circuit or compass of words ; peri- phrasis.

*Virgil, studying brevity, could bring these words into a narrow compass, which a translator cannot ren- der without circumlocution. Dryden^*

I much prefer the plain Billingsgate way of calling names, because it would save abundance of time, lost by circumlocution. Stoift.

The use of indirect expressions. These people are not to be dealt withal, out by a train of mystery and circumlocution. L'Estranye,

CIRCUMMU'RED adj. Lat. circum and murus. Walled round ; encompassed with a wall.*

He hath a garden circummured with bricks.

Shakspeare.

CIRCUMNAVIGATE, v. a.^ Lat. circum

CIRCUMNA'VIGABLE, adj. (and navigo.

CIRCUMNAVIGATION, n. s. {To sail round.

CIRCUMNA'VIGATOR, n. s. J That which may be sailed round. The act of sailing round. One that sails round.

The being of Antipodes, the habitableness of the torrid zone, and the rendering the whole terraqueous globe circumnavigable. Ray on the Creation.

What he says concerning. the circumnavigation of Africa, from the straits of Gibraltar to the Red Sea, is very remarkable. Arbuthnot on Coins.

CIRCUMPLICATION, n. s. Lat. circum- plico. The act of enwrapping on every side. The state of being enwrapped.

CIRCUMPO'LAR, adj. from circum and polar. Stars near the north pole, which move round it, and never set in the northern latitudes, are said to be circumpolar stars.

CIRCUMPOSITION, n. s. from circum and position. The act of

placing any thing circu- larly.

Now is your season for circumposition, by tiles or baskets of earth. Evelyn's Kalendar.

CIRCUMRA'SION, n. s. Lat. circumrasio. The act of shaving or paring round.

CIRCUMROTA'TION, n. s. Lat. circum and roto. The act of whirling round with a motion like that of a wheel ; circumvolution ; circum- gyration. The state of being whirled round. CIRCUMSCRI'BE, v. a.) Lat. circum and CIRCUMSCRIPTION, n. s. ˆscribo. To enclose CIRCUMSCRI'PTIVE, adj. jin certain lines and boundaries ; to bound, to limit, to confine. Determination of particular form or magnitude. Limitation ; boundary ; contraction ; confine- ment. Enclosing the superficies; marking the form or limits on the outside.

The good Andronicus

V/ith honour and with fortune is returned ; 3?'<;m whence he circumscribed with his sword. And brought to yoke, the enemies of Rome.

Shakspeare.

I would not my unhoused free condition Put into circumscription and confine. Id.

He formed the powers of heaven Such as he pleased, and circumscribed their being !

Milton.

He therefore circumscribes himself in rhimes, And, swaddled ill's own papers seven times. Wears a close jacket of poetic buff, With which he doth his third dimension stuff.

JUarvell.

The action great, yet circumscribed by time ; The words not forced, but sliding into rhime. Dryden.

The external circumstances which do accompany men's acts, are those which do circumscribe and limit them. StUlingfieet.

You are above The little forms which circumscribe your sex.

Southern.

Stones regular, are distinguished by their external forms : such as is circumscriptive, or depending upon the whole stone, as in the eagle-stone, is properly called the figure. Grew.

In the circumscription of many leaves, flowers, fruits, aod seeds, nature affects a regular figure.

Ray on the Creation

O could the Muse in loftier strains rehearse The glorious Author of the universe, Who reins the winds, gives the vast ocean bounds, And circumscribes the floating worlds their rounds ; My soul would overflow in songs of praise, And my Creator's name inspire my lays. Gay.

Their lot forbade ! nor circumscribed alone Their growing virtues, but their crimes confined ;

Forbade to wade through slaughter to a throne, And shut the gates of mercy oa mankind.

Gray's Elegy.

CIRCUMSPE'CT, adj. ˆ Lat. circum- CIRCUMSPE'CTION, n. s. spectus. Cau-

CIRCUMSPE'CTIVE, adj. jˆtious ; attentive

CIRCUMSPECTIVELY, adv. (to everything; CIRCUMSPECTLY, adv. watchful on all

CI'RCUMSPECTNESS, n. s. J sides. Watch- fulness on every side ; caution ; general atten- tion. Lat. circumspicio, circumspectum. Look- ing round every way; attentive; vigilant; cau- tious. Cautiously ; vigilantly ; attentively- with watchfulness every way ; watchfully.

None are for me,

That look into me with considerate eyes : High reaching Buckingham grows circumtpect.

Shakspeare.

So saying, his proud step he scornful turned, But \vitl> sly circumspection, Milton's Paradise Lost.

T'leir authority weighs more with me than the con- rurrent suffrages of a thousand eyes, who never ex- amined the thing so carefully and cireonupeetly.

Ray on the Creation.

No less alike the politick and wise. All sly slow thim s wita circitmtpectire eyes. Pope.

Let con-i -nt vi. ilan"o, thy footsteps guide, And wary circtimfpec ion guard thy side. Gay.*

*Travel forces circumspec-'ness on those abroad, who *t home are nursed in security. Walton.*

CrRCUMSTANCE,ii.►►.8O Lat. circum- CI'RCUMSTANT, adj. \y. a. I stuntia, circuin- CIRCUMSTA'NTIAL, adj. [ttans, circum-

CIRCUMSTANTIA'LITY, n. s. (stantides. CIRCUMSTANTIALLY, adv. \ Something ap- CIRCUMSTA'NTIATE, v. a. J pendant or re- lative to a fact : the same to a moral action as accident to a iiatural substance. The adjuncts of a fact, which make it more or less criminal ; or make an accusation more or less probable. Something adventitious, which may be taken away without the annihilation of the principal thing considered. Incident ; event ; generally of a minute or subordinate kind. Condition ; state of affairs. It is frequently used with re- spect to wealth or poverty ; as, good or ill cir- cumstances. To place in particular situation, or relation to the things. Surrounding; environ- ing. Accidental ; not essential. Incidental ; happening by chance ; casual. Full of small events, particularly detailed. The appendage of circumstances; the state of any thing as mo- dified by circumstances. According to circum- stance; not essentially ; accidentally. Minutely; exactly ; in every circumstance or particular. To place in particular circumstances ; to invest with particular accidents or adjuncts. To place in a particular condition, as with regard to power or wealth.

The fifth circumstance is how many times that he hath sinned (if it be in his minde), and how oft he hath fallen ; for he that oft falleth in sinne, he dcxpiseth the mercy of God and encreseth his sinne.

Chaucer. The Persones Tale. Of tXese supposed crimes give me leave, By circumstance, but to acquit myself. S/uikspeare.

This fierce abridgment Hath to it circumstantial branches, which Distinction would be rich in. Id.

To worthiest things, Virtue, art, beauty, fortune, now I see, Ivareness or use, not nature, value brings; And such as they are circumstanced, they be.

Donne.

Virtue's but anguish, when 'tis several, By occasion waked, and circumstantial. Id.

Of the fancy and intellect, the powers are only cir- cumstantially different. Glanville's Scepsis.

Tf the act were otherwise circumstantiated, it might will that freely, which now it wills freely. Bramhall

Our confessing or concealing persecuted truths, vary and change their very nature, according to dif- ferent circumstances of time, place, and persons.

South.

He defended Carlisle with very remarkable circum- stances of courage, industry, and patience. Clarendon.

Its beams fly to visit the remotest parts of the world, and it gives motion to all circumstant bodies.

Digby on the Soul.

He had been provoked by men's tedious and c/V- citmxtdjitial recitals of their affairs, or by their multi- plied questions about his own. Pri►►r'f Dctlic.

A number infinitely supcriour, and the best circum- stantiated imaginable, are for the succession of Ha nover. Sivifr.

When mm r.re easy in their circumstances, they ar►►

naturally enuiiiies to innovations

A ddisun '►► Freeh :'Mr. :s A 2

You guess each circumstance of Edwin's birth, The parents' transport and the parents' care, The gossips' prayer for wealth and wit and worth, And one long summer day of indolence and mirth.

Beattic.

And circumstance that unspiritual good, And miscrcator, makes and helps along Our coming evils, with a crutch-like rod, Whose touch turns hope to dust ††† the dust all we have trod. Byron's Childe Harold.

CIRCUMSTANTIBUS, in law, by-standers, a term used for supplying and making up the number of jurors (in case any impanelled appear not, or appearing are challenged by any party), by adding to them so many of the persons pre- sent as will make up the number, in case they are properly qualified. This mode of filling up the deficiency is called tales de circumstantibus. CIRCUMVA'LLATE, v. a.) Lat. circum- CIRCUMVALLA'TION, n. f- $ vallo. To en- close round with trenches or fortifications. The art or act of casting up fortifications round a place. The fortification or trench thrown up round a place besieged .

This gave respite to finish those stupendous circum- vallations and barricadoes, reared up by sea and land.

Howell.

When the czar first acquainted himself with mathe- matical learning, he practised all the rules of circum- vallation and contravallation at the siege of a town in Livonia. Watts,

CIRCUMVALLATION, or line of circumvallation, in fortification, a rampart of earth, consisting of a parapet and trench, made round a town in- tended to be besieged, when any attempt to re- lieve the place is threatened. This line, being a fortification opposed to an enemy that may come from the open country, ought to have its de- fences directed so as to fire from the town ; and the besiegers are to be encamped between this line and the place. The camp should be out of the reach of the shot of the place ; and the line of circumvallation ought still more to be out of the reach of its artillery. See

FORTIFICATION.

CIRCUMVENTION, n.s. Lat. circ uinvect io. The act of carrying round. ??? The state of being carried round.

CIRCUMVE'NT, v. n.) Lat. circumvenio. CIRCUMVENTION, n s. $ To deceive; to cheat; to impose upon; to delude. Fraud; impos- ture ; cheat ; delusion. Prevention ; pre-occu- pation. This sense is now out of use.

Whatever hath been thought on in this state, That could be brought to bodily act, ere Rome Uad circumvention. Shakspeare.

He, fearing to be betrayed or circumvented by his cruel brother, fled to Barbarossa.

Knolles's History of tlte Turks. As his malice is vigilant, he resteth not to circum- fent the sons of the first deceived.

Browne's Vulgar Errours. Should man Fall circumvented thus by fraud.

Milton's Paradise Lost.

The inequality of the match between him and the subtlest of us, would quickly .appear by a fatal circum- vention ; there must be a wisdom from above to over- reach this hellish wisdom. South. If he is in the city he must avoid haranguing igaiast circumvention in commerce.

Collier nf Pojndarity.

Obstinately bent

To die undaunted, and to circumvent. Dryden Nature supplied the wish she taught to crave,*

*None prowl'd for prey, none watch *d to circumoeiA. To all an equal lot Heaven's bounty gave, No vassal fear'd his lord, no tyrant feared his slave.*

Beattie.

CIRCUMVE'ST, n. s. Lat. eimmvestio. T<?? cover round with a garment.

Who on this base the earth did'st firmly found,

And madcst the deep to circumvent it round.

Wotton.

CIRCUMVOLATION, from Lat. arctiniw- lo. The act of flying round.

CIRCUMVO'LVE, v. a. Lat. circumvolvo. To roll round ; to put into a circular motion.

Could solid orbs be accommodated to phenomena, yet to ascribe each sphere an intelligence to circum- volve it, were unphilosophical. Glanville's Scepsis ,

CIRCUMVOLUTION, n.s. Lat. circumvolu- tus. The act of rolling round. The state of be- ing rolled round.

The twisting of the guts is really either a circumvo- lution, or insertion of one part of the gut within the other. Arbutfinot.

The thing rolled round another.

Consider the obliquity or closeness of these circum- volutions ; the nearer they are, the higher may be the instrument. Wttkm.*

CI'RCUS, ?i. s. } Lat. circus. An open

CI'RQUE. 1 space or area for sports,

with seats round for the spectators.

A pleasant valley like one of those circuses, which in great cities somewhere doth give a pleasant spec- tacle of running horses. Sidney.

The one was about the cirque of Flora, the other upon the Tarpeian mountain. Stillingjieet .

See the cirque falls ! the' unpillared temple nods ; Streets paved with heroes, Tyber choaked with gods.

Pope.

CIRCUS, in antiquity, a large building, oval or circular, for the exhibition of shows to the popu- lace. The Roman circus was a large oblong edifice, arched at one end ; encompassed with porticoes, and furnished with rows of seats, placed ascending over each other. In the middle was a kind of foot bank, or eminence, with obe- lisks,

statues, and posts at each end. This served them for the courses of their bigae and quadrigae. There were from a remote period no less than ten of these buildings at Rome : the largest was erected by the elder Tarquin, called Circus Maximus, between the Aventine and Palatine mounts. It was so called, either because of its vast circumference, because the great games were celebrated in it, or because it was consecrated to the superior gods, viz. to Vertumnus, Neptune, Jupiter, Juno, Minerva, and the Dii Penates of Rome. Dionysius Halicarnassensis says, that it was three stadia and a half in length, and four jugera broad. All the curije, or divisions of the people, as established by Romulus, had their proper places assigned to them. The lowet orders were separated from the rest ; the nobles, the gentry, and magistrates, were seated according to their quality. The nearest and most conve nient place to the shows was the orchestra, which -was assigned to the senators and persons of the

.noblest quality. Before it was a large platform called podium, where the throne of the emperor was usually placed, and was also appropriated to the nobles and foreigners of the highest distinc- tion, the senate, the tribunes of the people, the vestal virgins, and the person who appointed the games and paid the expenses. He was styled by the various names of Editor, Munerarius, Agonotheta, and Brabeuta ; as publisher or de- clarer of the sports and their conditions, as the giver of them at his own expense, as judge of the victors, and as distributor of the prizes. And the prize that was bestowed upon the victors was called Brabium, or Brabeum, from Bpa/3tioj/> premium. See AMPHITHEATRE.

The Romans were much attached to the games called Ludi Romani, Roman games, either on account of their antiquity, as being coeval with the Roman people, or because established by the Romans : and the games held there, the great games, ludi magni, because celebrated with more expense and magnificence than, others; and be- cause held in honor of the great god Neptunej who was their Census. Those who insist that they were instituted in honor of the sun, con- found the pompa circensis, or procession of the circus, with the games. The games of the circus were instituted by Evander, and re-established by Romulus : the pomp, or procession was only a part of the games, making the prelude thereof, and consisting of a simple cavalcade of chariots, Till the time of the elder Tarquin, they were held in an island of the Tiber ; and were called Roman games ; after that prince

had built the circus, they took their name from it. There were six kinds of exercises in the circus : viz. 1. Wrestling, and fighting with swords, staves, and pikes. 2. Racing. 3. Saltatio, leaping. 4. Disci, quoits, arrows, and cestus ; all which were on foot. 5. Horse coursing. 6. Courses of chariots, with two horses or with four. 7. Wild beast combats with dogs or men. In this last exercise, the combatants were at first divided into two squadrons; then into four; each bearing the names of the colors they wore ; factio arba, nissea, &c. Oenomaus invented this method of distinguishing the squadrons by colors. At first tliere were only white and red, then green and blue were added. The green was for those who represented the earth ; the blue for the sea, &c.

CIRENCESTER, an ancient market and oorough town of Gloucestershire. It was strongly fortified with walls in the time of the Romans, and is the Corinumof Ptolemy and the Durocornovium of Antoninus. The ruins of the walls and streets are to be seen in the adjacent meadows, where many Roman coins, chequered pavements, and inscriptions on marble, have been found. Two of the Roman consular ways cross each other at this town. The Fossewav, which comes from Scotland, passes through it to Totness in Devon- shire; and the Irmin-street comes from Glou- cester, and runs along to Southampton. Some years ago was discovered in a meadow near the town, an ancient building under ground, fifty feet io g, forty broad, and four high, supported by two brick pillars, curiously inlaid with stones of various colors, and supposed to have been a K-mian bath. Tlio Stroudvvater canal communi-

cates with the town, and is of great advantage to its trade. The church is a large fine building, the windows of which contain the remains cf some very beautiful painted glass. It is sup- ported by two rows of pillars; and the tower is forty-four yards high, having twelve bells. Here were formerly two other churches, which are now destroyed. The town is governed by two high ××× constables, and fourteen wardsmen, who govern seven distinct wards ; and has sent two members to parliament ever since the year 1568. It has a free school, a charity school, with several alms- houses ; and is seated on the river Churn, eighteen miles south-west of Gloucester, and eighty-nine west by north of London.

CIRO-FERRI, an excellent Italian painter and architect, born at Rome in 1614. He was the disciple of Peter de Cortona, whose designs he imitated with such exactness, that it is difficult to distinguish them. He was principally em- ployed by Pope Alexander VII. and his three successors, and died at Rome in 1689.

CIRRHUS, or CIRRUS, a clasper, or tendril. See BOTANY. Tendrils are either simple, i. e. composed of one fibre or chord, as in the retch, or compound, i- e. consist of two, thiee, or more, as in the everlasting pea. Bitter sweet, solanum, dulcamara, bignonia, and ivy, send forth tendrils which plant themselves like roots in the adjacent walls, or the bark of the neighbouring trees. Dr. Grew says, they are like trunk roots, a mean betwixt a root and a trunk, but a compound o. both, as may be gathered from their circumvo- lutions, in which they mutually ascend and de- scend. In the mounting of the trunk, they serve for support.

CIRRI, in ichthyology, certain oblong and soft appendages, not unlike little worms, hanging from the under jaws or mouths of some fishes : these cirri, commonly translated beards, afford marks to distinguish the different species of the fishes on which they are found.

C1RTA, in ancient geography, the metropolis and royal residence, in the inland parts of Nu- midia Proper, near the Ampsaga. It was very rich, and was called Colonia Sittianorum when in the hands of Syphax. The colony was led by one P. Sittius, under the auspices of Caesar, and was surnamed Julia. It is now called Constan- tina, and belongs to Algiers.

CISALPINE, any thing on this side the Alps. The Romans divided Gaul, and the country now called Lombardy, into Cisalpir/e and Transal- pine. That which was Cisalpine with regard to the Romans, was Transalpine with regard to us; cis signifying on this side, and trans on the farther side.

CISALPINE REPUBI-.IC, an extensive democratic state of Italy, established during the revolution in France, and destined to perish with it. It comprehended what was formerly called Austrian Lombardy, the territories of Bergamo, Bresciano, and Cremona, the town and fortress of Mantua, the territory of Peschiera, part of the ci-devant Venetian States, all the ancient territory of Mo- dena, the principalities of Mantua and Carrara, the territory of Chiavenna, and the three lega- tions of Bologna, I'enara, and Romagna, a part of the Veronese, the ci-devant duthy of Massa,

and the Valteline; being bounded on the north by Switzerland, the Tyrol, and the late maritime division of Austria ; on the east by the Adriatic and Austria Proper; on the south by the late Roman and Etruscan republics, the Mediter- ranean and Parma ; and on the west by Parma and Piedmont, lying between long. 9□□ 0′ and 14□□ E., and between lat. 43□□ and 47□□ 0′ N. The Cisalpine republic was finally established and defined by the treaty of Campo-Formio, on the 17th of October 1797; and acknowledged by the emperor, the pope, the kings of Sardinia and Spain, and the French, Batavian, and Hel- vetic republics. Buonaparte, the first consul of France, was afterwards chosen president of the republic, and the name Cisalpine abolished for that of Italian ; which, in May 1805, gave way to the more pompous title of the Kingdom of Italy.

CISLEU, in Hebrew chronology, the ninth month of their ecclesiastical, and third of their civil, year, answering nearly to our November.

CISPADANA, or the CISPADANE REPUBLIC, was a small democratic state, founded in October 1796, upon the plan of the French government. It was the first of the kind in Italy, and laid the foundation of the CISALPINE REPUBLIC, which see. . .

CISPADANA GALLIA, in ancient geography, a district of Italy, to the south of the Po, occupied by the Gauls in the time of the kings of Rome, separated from Liguria on the west, as is thought, by the Iria, running from south to north into the Po ; bounded on the south by the Appenine, and on the east by the Adriatic. The term is formed analogically with respect to Rome. Ptolemy calls the Gallia Cispadana peculiarly Gallia Togata, and describes it as extending between the Po and Appenines, to the Sapis and Rubicon.

CISSA, or CISSUM, a town of Hither Spain, in Lacetania, on the east side of the Iberus, thought to be Guissona; where the Carthaginians were first defeated by Scipio. Also a town of Thrace, situated on the river jEgos-Potamos.

CISSAMPELOS, in botatiy, a genus of the monadelphia order, and dioecia class of plants ; natural order eleventh, sarmentaceae. Male CAL. tetraphyllous : COR. none: NECTARIUM wheel-shaped : STAM. four, with their filaments grown together. Female CAL. monophyllous, and ligulated roundish : COR. none : STYLES three : SEED monospermous berry. There are five species : the chief are : 1 . C. caapeba, a native of the warmest parts of America. The root ap- plied externally, is said to be an antidote against the bites of

venomous serpents. The plant being infusefl in water, quickly fills the liquor with a mucilaginous substance, which is as thick as jelly; whence the name of freezing wyth, by which this genus of plants has been distinguished by the Brazilians : and, 2. C. pareira, also a native of the warmest parts of America ; having peltate leaves, and heart-shaped flowers.

CISSOID, in geometry, a curve of the second order, first invented by Diocles, whence it is called the cissoid of Diocles. See FLUXIONS.

CISSUS, the wild grape, a genus of the mono- gynia order, and tetrandria class of plants ; natu- ral order forty-sixth, het'eraceic. The berry 15

monospermous, surrounded by the calyx, and 3 quadripartite corolla. There are nineteen species, all natives of Jamaica, and some of the other islands in the warmest parts of America. They send out slender branches, having tendrils at their joints, by which they fasten to the neighbouring trees, bushes, and any other support, mounting to a considerable height. The fruit of some of the species are eaten by the negroes.

CIST, n. s. Lat. cista. A case; a tegument; commonly used in medicinal language for the coat or enclosure of a tumor.

CI'STED, adj. from cist. Enclosed in a cist, or bag.

CISTERTIANS, in church history, a religious order founded in the eleventh century by St. Robert, a Benedictine. They became so power- fulj that they governed all Europe, both in spirituals and temporals. Cardinal de Vitri describing their observances, says, they neither wore skins nor shirts ; nor ever eat flesh, except in sickness ; and abstained from fish, eggs, milk, and cheese ; they lay upon straw beds, in tunics and cowls : they rose at midnight to prayers ; they spent the day in labor, reading., and prayer ; and in all their exercises observed a continual silence. The habit of the cistertian monks is a white robe, in the nature of a cassock, witli a black scapulary and hood, and is girt with a wooden girdle. The nuns wear a white tunic, and a black scapular and girdle. The ruins of a famous cistertian abbey are still to be seen in the parish of New-Abbey, to which it gave name, in Kirkcudbrightshire ; founded by Dervigilla, the mother of John Baliol, king of Scotland.

CI'STERN, n. s, Lat. cisterna. A receptacle of water for domestic uses.

Tis not the rain that waters the whole earth, but that which falls into his own cittern, that must relieve him. Suvth.

A reservoir ; an enclosed fountain.

Had no part as kindly staid behind In the wide cisterns of the lakes confined, Did not the springs and rivers drench the land, Our globe would grow a wilderness of sand.

Blackmore.

Any receptacle or repository of water. So half my Egypt were submerged, and made A cistern for scaled snakes. Shakspeare.

But there's no bottom, none,

In my voluptuousness : your wives, your daughters, Your matrons, and your maids, could not fill up The cistern of my lust. Id.

CISTERN, a reservoir for the reception of water. Anciently there were cisterns all over the coun- try in Palestine. There were some likewise in cities and private houses. As the cities for the most part were built on mountains, and the rains fell regularly in Judea at two seasons in the year only, in spring and autumn, the people were obliged to keep water in cisterns in the country for the use of their cattle, and in the cities for the conveniency of the inhabitants. There are still cisterns of very large dimensions to be seen in Palestine, some whereof are 150 paces long, and fifty-four wide.

CI'STUS, 71. s. Lat. The name of a plant. The isame with roekroiu.

*CISTUS, in botany, a genus of the monogynia order, and polyandria class of plants ; natural order twentieth, rotacete: COR. pentapetalous : CAL. pentaphyllous, with two of its leaves smaller than the rest. The seeds are *nany, and contained in a capsule. There are seventy-eight species, most of them natives of the southein parts of Europe, but hardy enough to bear t>ie open air in this country. They are beautiful evergreen shrubs, generally very branchy quite from the bottom, and forming diffused heads. They are very ornamental in gardens, not only as ever- greens, making a fine*

variety at ail seasons with their leaves of different figures, sizes, and shades of green and white, but also as flowering shrubs, being very profuse in most elegant flowers of white, purple, and yellow colors'. These flowers only last for one day ; but there is a continual succession of new ones for a month or six weeks on the same plant ; and, when there are different species, they exhibit a constant bloom forneaily three months. They are propagated either by seeds or cuttings, and thrive best in a dry soil. Gum labdanum is found upon a species of cistus which grows naturally in the Levant, and is therefore called labdanifera. See LABDANUM.

CITADEL, n. s. Fr. citadelle. A fortress ; a castle, or place of arms, in a city.

As he came to the rrown by unjust means, as un- justly he kept it; by force of strangej soldiers in ci- tadels, the nests of tyranny and murderers of liberty.

Sidney. I'll to my charge, the citadel, repair. Dryden.

CITADELLA, orCiuDADELLA, a sea-port of the island of Minorca, and capital of the island, is situated on the west coast, and surrounded with walls and bastions. It has barracks for about 600 men ; and contains a cathedral, two parish churches, and four convents. The port is much exposed to west and south winds, and terminates in marshy shores. It was taken, with the whole island, by general Stanhope and the confederate fleet in 1708, and ceded to Great Britain by the treaty of Utrecht in 1713. It was taken by the French, after a brave defence, in 1756 ; but restored at the peace. In 1782 it was taken by the Spaniards, and confirmed to them at the subsequent peace. It is twenty-seven miles west of Port Marion.

CITADENESCA, in natural history, a name giVen by some writers to the Florentine marble, which is supposed to represent towns, palaces, ruins, rivers, &c. These delineations are merely accidental, and are commonly much assisted by the imagination, though the natural lines of a stone muy sometimes by chance represent the ruins of some ancient building, or the course of a river. In England there is a kind of septaria, or ludus Ilelmontii, which has sometimes beauti- ful, though very irregular, delineations of this kind. The Florentine marble, as we see it wrought up in the ornaments of cabinets, &c., owes a great deal to the skill of the workmen, who always pick out the proper pieces from the mass, and dispose them in the work so as to represent what they please.

C1TILERON, in ancient geography, a moun- tain and forest of Uoeotin, celebrated by the ancient poets. To the west it ran obliquely, a

little above the Sinus Crissaer; Diking its rise contiguous to the mountains of Megara and At- tica ; then levelled into plains, it terminates at Thebes, famous for the fate of Pentheus and Actacon ; the former torn by -the Baccha;, the latter by his dogs; as also for the orgia, or revels of Bacchus.

CITHARA, in antiquity, a musical instru- ment, the precise structure of which is not knowr ; some think it resembled the Greek A ; and otherr the shape of a half-moon. At first it had onl/ three strings, but the number was at different times increased to eight, to nine, and lastly to twenty-four. It was used in entertainments and private houses, and played upon with a plectrum or quill, like the lyre.

CITHAREXYLON, fiddle-wood: a genus of the angiospermia order, and didynamia class of plants; natural order fortieth, personate: CAL. quinquedentated, campanulated, and wheel- shaped, with its segments villous on the upper side, equal : FRUIT a dispermous berry : SEED bilocular. Species six, natives of the warmer parts of America and the West Indies, where they grow to be large trees, and are adorned with white flowers growing in spikes. In Britain they appear only as shrubs, and must be con- stantly retained in the stove, where they make a fine appearance, being beautiful ever-greens. They may be propagated either by seeds or cut- tings.

CITE, v. a. "^ Lat. cito. To summon ;

CI'TAL, n. s. \ to answer in a court. To

CITA'TION, n. s. ^enjoin; to call upon ano-

CI'TATOUY, adj. | ther authoritatively; to di-

CI'TER, n. s. J rect; to summon. To quote. Quotation ; the adduction of any passage from another author ; or of ^another man's words. The passage or words quoted ; a quotation. The derivative noun cital implies reproof; impeach- ment. In law, citation signifies the calling a per- son before the judge, for the sake of trying the cause of action commenced against him. He made a blushing cital of himself, And chid his truant youth. Shakspeare.

I speak to you, Sir Thurio j

For Valentine, I need not cite him to it. Id.

He held a late court, to whick She oft was cited by them, but appeared not. Id.

Demonstrations in scripture may not otherwise be shewed than by citing them out of the scripture.

Hooker.

Forthwith the cited dead, Of all past ages, to the general doom Shall hasten. Milton.

This power of citing, and dragging the defendant into court, was taken away. AyliffJi Parergon.

If a judge cite one to a place, to which he cannot come with safety, he may freely appeal, though au appeal be inhibited in the letters citatory. Id.

These causes effect a consumption cndcmick to this island : there remains a citation of such as may pro- duce it in any country. Harvey on Consumption.

This sad experience cites me to reveal, And what I dictate is from what I feel. Prior.

I must desire the citer henceforward to inform us of his editions too. Atierbunj.

The letter-writer cannot read these citations witnout 1'lubhiug, after the charge he hath advanced. Id-.

View the principles in their own authors, and not ia the citations of those who would confute them.

Watts.

CITERN, n. s. Lat. cithara. A kind of harp ; a musical instrument.

At what time the heathen had profaned it, even in that was it

dedicated with songs and citherns, and harps and cymbals. Mace.

CITIUM, CETIUM, or CITTIUM, in aacient geography, a town in the south of Cyprus, fa- mous for the birth of Zeno, founder of the sect of Stoics ; 200 stadia west of Salarriis. It was founded by a colony of Phoenicians, called Che- tim : and hence not only Cyprus, but the other islands and many maritime places, are called Chetim by the Hebrews.

A CITIZEN of ancient Rome was distinguished from a stranger, because the latter belonged to no certain commonwealth subject to the Rqmans. A citizen was either by birth or election ; and sons might derive the right from their fathers. To be a Roman citizen, it was necessary to be an inhabitant of Rome, to be enrolled in one of the tribes, and to be capable of dignities. Those to whom were granted the rights and privileges of Roman citizens, were only honorary citizens. It was not lawful to scourge a citizen of Rome. For modern privileges of the kind, See FREEMAN and LONDON.

CITRIC ACID, in chemistiy, the juice of lemons or limes deprived of its mucilage. For chemical purposes this acid is best obtained pure by saturating boiling lemon-juice with powdered chalk, on which the saline compound falls to the bottom, and leaves the mucilage suspended in the fluid, which must be decanted off and the precipitate washed till quite clean. Then add a quantity of sulphuric acid, equal to the chalk in weight, and diluted with ten parts of water, and boil it for a few minutes, on which the sulphuric acid combines with the earth and leaves the citric acid dissolved in the fluid. If this fluid is eva- porated to the consistence of a syrup, the pure citric acid will appear in thin needle-like crystals. For the common purposes of the table this juice may be preserved under a thin stratum of oil for a considerable time; in the East Indies it is eva- porated into a thick extract or ro-le, and kept in closed bottles, but no method seems so perfect as that of concentrating it by frost, which first sepa- rates the mucilage and afterwards the watery so- lution, till it leaves the acid with eight times its usual power, as may be proved by its requiring eight times the quantity of alkali to neutralise it. Its use in saline draughts, sauces, &c. is too well known to need any comment or remark. It is among the vegetable acids the one which most powerfully resists decomposition by fire. In a dry and warm air it seems to effloresce; but it absorbs moisture when the air is damp, and at length loses its crystalline form It is not alter- ed by any combustible substance. The most powerful acids decompose it less easily than they do other vegetable acids ; but the sulphuric evi- dently converts it into .acetic acid.

The ailimt ics of the citric acid are arranged by Vauquelin in the following order: barytes, lime, potash, soda, strontia, magnesia, ammonia, alu-

mina. Those for zircone, glucine, and the me- tallic oxides, are not ascertained.

All the citrates are decomposed by the power- ful acids, which do not form a precipitate with them, as with the oxalates and tartrates. The oxalic and tartaric acids decompose them, and form crystallised or insoluble precipitates in their solutions. All afford traces of acetic acid, or a product of the same nature, on being exposed to distillation; this character exists particularly in the metallic citrates. Placed on burning coals they melt, swell up, emit an empyreumatic smell of acetic acid, and leave a light coal. All of them, if dissolved in water, and left to stand for a time, undergo decomposition, deposit a floccu- lent mucus which grows black, and leave their bases combined with carbonic acid, one of the products of the decomposition. Before they are completely decomposed, they appear to pass to the state of acetates.

Citric acid, being more costly than tartaric, may be occasionally adulterated with it. This fraud is discovered by adding slowly to the acid dis- solved in water, a solution of subcarbonate of po- tassa, which will give a white pulverulent preci- pitate of tartar, if the citric be contaminated with the tartaric acid.

CITRINE, adj. Lat. citrinus. Lemon-co- lored ; of a dark yellow.

His nos wos high ; his eyen bright eitrin ;

His lippes round ; his colour was sanguin.

Chaucer's Canterbury Tales.

The butterfly, papilio major, has its wings painted with c'drinc and black, both in long streaks and spots.

Grew.

By citrine urine of a thicker consistence, the salt- ness of phlegm is known. Flayer on the Humours.

CI'TRINE, n. s. from Lat. citrinus.

A species of crystal of an extremely pure, clear, and fine trxture,

generally free from flaws and ble- mishes. It is ever found in a long and slender co- lumn, irregularly hexangular, and terminated by an hexangular pyramid. It is from one to four or five inches in length. This stone is very plentiful in the West Indies. Our jewellers have learned to call it citrine ; and cut stones for rings out of it, which are mistaken for topazes. Hill on Fossils.

CITRINUS, in natural history, a peculiar species of sprig crystal, which is of a beautiful yellow. Many of the common crystals, when in the neighbourhood of lead mines, are liable to be accidentally tinged yellow, by an admixture of the particles of that metal; and all these, whether finer or coarser, have been too frequently confounded together under the name of citrine : but Dr. Hill has ascertained this to be a peculiar species of crystal, different from all the others in form as well as in color; and distinguished by the name of ellipomacrostylum lucidum flavescens, pyramide brevi. It is never found colorless like the other crystals, but has great variety of tinges, from that of the deeper ochres to a pale lemon color. It is sometimes found in Bohemia. The pyramid of this crystal is always finer than the column.

CITRON-TREE, n. s. from Lat. citrus. It has broad stiff leaves, like those of the laurel. The flowers consist of many leaves, expanded like a rose. The pistil becomes an oblong, thick,

ileshy fruit, very full of juice. Genoa is the great nursery for these trees. One sort, wlui a pointed fruit, is in so great esteem, that the single fruits are sold at Florence for two shillings each.

May the sun

With citron groves adorn a distant soil.

Addison.

CITRON-TREE, in botany. See CITRTIS. CITRON-WATER, ⬛⬛⬛⬛⬛. s. Aqua-vitae, dis- tilled with the rind of citrons.

Like citron-waters matrons' cheeks inflame.

Pope.

CITRON WATER, a spirituous cordial thus made: take of fine thin lemon-peel, eighteen ounces; of orange-peel nine ounces; perfect nut-

megs three ounces; rectified spirits of wine two gallons and a half. Digest in balneo mariae for one night; draw off with a slow fire ; then add as much water as will just make the matter milky (which will be about seven quarts or two gal- lons); and, lastly, add two pounds of fine sugar. This composition may be improved by fresh elder flowers, hung in a cloth in the head of the still, sprinkled with ambergris in powder, or its essence.

CITRON WOOD, the wood of an American tree, called by the natives candle-wood ; because, being cut into splinters, it burns like a candle. The tree is frequent in the Leeward Islands, and grows to a considerable size : the leaves are like those of the bay tree, but of a finer green ; the flower is sweet and much like those of the orange; the fruit succeeding these is black, and of the size of a pepper-corn. It is of no known use in medi- cine ; but is used in France and Germany by the turners, being a fine firm grained wood, and taking a fine polish, and with age becoming of a very beautiful brown.

CITRUL, n. s. The same with pumpion, so named from its yellow color.

CITRUS, the citron-tree: a genus of the po- lyadelphia order, and icosandria class of plants: CAL. quinquefid; the petals oblong, and five in number ; the antheroe twenty, with their filaments grown together so as to form various pencils. The fruit is a nine-celled berry. There are six species; viz.

1. C. aurantium, the orange-tree, has an up- right trunk dividing upward into a branchy, re- gular head, from five to ten or twelve feet high ; oval, spear-shaped, entire leaves, having winged foot-stalks and numerous white flowers at the sides of the branches, succeeded by globular fruit compressed at both ends. The most noted varieties are, 1. the Seville orange. This is a very handsome tree and the hardiest of any; as in this country it shoots freely, produces large and beautiful leaves, flowers stronger, &c. The fruit is large, rough- riuded, and sour, of excel- lent quality for household uses. 2. The China orange. This tree has moderately sized leaves, and a smooth thin-rinded sweet fruit, of which there are several varieties in warm countries, where they grow in the open ground. 3. The great shaddock orange, or purnplemoes, grows larger and stronger than the foregoing, with large, thick, and somewhat serrated leaves, and very large fruit, having a reddish pulp. It derives the uume

of shaddock from a captain of that name that first brought it from the East Indies. 4. The forbidden fruit tree, in trunk, leaves, and

flowers, very much resembles the common orange-tree; but the fruit when ripe, is larger and longer than the orange. It has somewhat the taste of shad- dock ; but far exceeds it, as well as the orange, in its delicious taste and flavor. 5. The horned orange is a tree of moderate size, producing fruit which divides, and the rind runs out into divisions like horns. 6. The hermaphrodite orange is a moderate sized tree, producing fruit shaped partly like an orange and partly like a citron. 7. The dwarf orange tree, or nutmeg orange, has a long stem and small bushy head, growing two or three feet high; small oval leaves in clusters and numerous flowers in clusters, covering the branches, succeeded by a very small fruit.

2. C. lima, the lemon tree, has an upright smooth trunk, divided upward into a branch regular head; from twelve to fifteen feet high; large, oval, spear-shaped, pointed, slightly sawed leaves, on linear foot-stalks : and many flowers from the sides of the branches succeeded by large oval fruit prominent at the top.

3. C. medica, the citron tree, has an upright smooth trunk, divided at top into a branchy strong shooting, full head, from about five to fifteen feet high, adorned with large oval, spear-shaped, thick leaves, having linear foot-stalks, and nume- rous flowers from the sides of the branches, suc- ceeded by very large oblong oval, pointed, rough-ririded fruit. The varieties are 1. citron tree with sour fruit; 2. with sweet fruit; 3. with long fruit; 4. with warted fruit; 5. with recurved fruit; and 6. with blotched leaves. These are the most remarkable varieties of the three fore- going species of citrus : but besides these there are a great number of others ; and indeed, in those countries where they grow naturally, the varieties may be multiplied without end like those of our apples and pears. The flowers of all the species and varieties are formed each of five spreading petals, appearing here principally in May and June; and the fruit continue setting in June and July, and ripen the year following.

4. C. trifoliata, the Japanese citron, is a thorny shrub growing naturally in Japan. The trunk acquires by age and culture the thickness of a tree. The branches and shoots are unequal ; in some parts compressed, in others swelling, espe- cially about the spines. These proceed singly from the stem and branches; are straight, run out from a broad base into a very sharp point ; and are protruded from the wood, with the com- mon bark of which they are likewise invested. The wood is loose and soft ; the bark of a shining green, moist, and easily parting from the wood. The leaves are few in number, sawed on the edges, veined, placed without order, but generally grow- ing under the spines. They grow by threes, like those

of trefoil, upon the extremity of a common foot-stalk, which is furnished on each side with a membranaceoua frit ge or margin, somewhat re- sembling the pedicles of the orange. The upper siu-iuce of the leaves is of a bright lucid given, the lower dark and herbaceous. The floweis, which resemble those of ihe medlar, proceed

from tlio arm-pits of the leaves, are \hiu-,

possessed of no great degree of fragrance, and consist of five petals. The fruit is equally beau- tiful with a middle sized orange; their internal structure is also pretty much the same : only the pulp is glutinous, of an unpleasant smell, and a harsh disagreeable taste. The seeds have the same taste with the pulp, and are shaped exactly like those of the orange.

The first three species of citrus merit particu- lar attention. They are elegant evergreens, rising in this country from about five to ten feet in height ; forming full and handsome heads, closely garnished with beautiful large leaves all the year round, and putting forth a profusion of sweet flowers in spring and early in summer; which even in this climate are often succeeded by fruit. Though all the varieties were originally obtained by seed, yet the only certain method of continuing the approved varieties is by budding or inarching them on stocks raised from seed to a proper size. As the young trees however are brought in plenty from abroad, this method is seldom practised in this country : but for curiosity, it may be done by those who are so inclined, in the following manner: Early in spring procure some kernels, which may be had in plenty from rotten fruits, or others that are properly ripened, observing that for stocks, the citron, lemon, and Seville orange, as being the freest shooters, are to be preferred ; and of these the citron is the- strongest. Sow the kernels in March, in pots of rich light earth half an inch deep, and plunge them in a hot-bed under frames and glasses. Dung or tan may be used, but the latter is preferable, giving air, and frequent sprinklings of water. In two or three weeks, the plants will come up ; and, in six or eight weeks more, they will be advanced four or five inches or more in height. They must now have more air and water; and about the middle of June harden them to the full air, in which let them remain till October ; then remove them into the green-house to stand till the spring, and in March or April plant them singly in small pots; being careful to shake them out of the seed- pots with their roots entire.

They must be watered immediately after planting, and the watering must be occasionally repeated. After this they are to be treated as woody exotics of the green-house ; and in a year or two the largest of those designed for stocks will be fit for budding. The operation for budding is performed in the month of August, and is done in the common way. As soon as the operation is finished, the pots with their plants must be placed in the green- house, or in a glass case ; or where there is the convenience of a spare bark pit, where the heat of the bark is almost exhausted, the pots may be plunged therein for two or three weeks. In either case, however, the air must be admitted freely by opening the front glasses : allowing also a slight shade of mats in the middle of hot sun- shine days, and supplying them with water every two or three days during this kind of weather. In three or four weeks the buds will be united with the stock ; when it will be proper to loosen the bandages, that they may have room to swell ; the buds, however, will all remain dormant till the next spring. But the most cheap and expe- ditious method of procuring a collection of thase

kinds of trees is by having recourse to such as are imported from Spam, Italy, and Portugal. A south wall, in a dry situation, is proper for training them as wall trees ; against which may be erected wooden frame-work sloping, either fixed or moveable, for the support of glass frames for winter. For the greater protection of the trees in severe frosts, there may be a fire-place with a flue or two carried along a low wall in the fronts and ends. To have the trees as stand- ards, a more capacious and lofty glass-case should be erected against the wall, in the manner of a hot-house, but higher ; in this one or two rows of orange trees may be planted, suffering them to run up as standards, with only some ne- cessary pruning, just to preserve their regularity. In some places there are lofty moveable glass- cases, so that two or three rows of trees are planted in a conspicuous part of the pleasure-ground. In winter the frame is put over them, and in summer wholly taken away; so that they appear like a little orange grove growing in the open ground. The flowering and fruit-setting season of all the sorts of citrus is in June and July. They are often, especially the orange trees, greatly loaded with blossoms; and when these stand very thick, it is proper to thin them a little, taking off the smallest. As the trees continue blowing and setting their fruit for three months, when a full crop of fruit is set, it is of benefit to the trees and fruit to gather off the superabun- dant blossoms as they are produced ; though some permit them to remain on account of their ap- pearance.

The fruits of the citron, lemon, and orange trees, yield very agreeable

acid juices; which, besides the purposes to which they are commonly applied, are much used in medicine. The juice of lemons is very frequently used for neutralising alkaline salts for saline draughts. The citron is seldom used in this country; though its peel, as well as that of lemon, is candied and sold as a sweetmeat. The yellow peel of the lemon is an agreeable aromatic, as is also that of the orange ; and in cold phlegmatic constitutions they prove excellent stomachics and carminatives, promoting appetite, warming the habit, and strengthening the tone of the viscera. Orange-peel, however, is very considerably warmer than that of lemons, and abounds more in essential oil : to this circum- stance, therefore, due regard ought to be had in the use of these medicines. The flavor of orange- peel is likewise less perishable than that of lemons. Both are ingredients in many officinal prepara- tions. The young fruits of the Seville orange dried are used in medicine under the name of aurantia curaflaventia. They are a moderately warm bitterish aromatic, of a sufficiently agree- able flavor. The flowers of the orange tree have been for some time in great esteem as a perfume. They are highly odoriferous, of a somewhat warm and bitter taste. They yield their flavor by in- fusion to rectified spirit, and in distillation both to spirit and water. The bitter matter is dis- solved in water, and, on evaporating the decoc- tion, remains entire in the extract. The distilled water was formerly kept in the shops, but, on ac- count of the great scarcity of the flowers, is now laid aside; it is called by foreign writers acj-in

****naphae. An oil distilled from these flowers is brought from Italy under the uame of oleum, or essentia neroli.*

CITTA CASTELLANA, a town of Italy, in the patrimony of St. Peter, is twenty-three miles north of Rome. Near this town the French, un- der general Macdonald, were attacked in their encampments, December 12th, 1798, by the Nea- politans, who surrounded them on all sides, but were repulsed and completely routed, with the loss of 2400 men, 3000 muskets, their military chest, and whole baggage.

CITTA DUCALE, a town of Naples, in the pro- vince of Abruzzo Ulterior, founded in 1308, by Robert, duke of Calabria, and nearly destroyed", in 1703, by an earthquake. It is a bishop's see, and lies eighteen miles west of Aquila.

CITTA NUOVA, a town of Italy, in the marqui- sate of Ancona, containing thirty-one churches and convents. It is situated on the coast of the Adriatic, ten miles from Loretto.

CITTA VECCHIA, CITTA NOTABILE, or MALTA, is an old town in the centre, and on the highest point, of the island of Malta, once the capital. It is said to have been built by the Phoenicians before they founded Carthage, and to have been called by them Melita, the ancient name of the island, and by the Saracens, Medina. Alphonso, king of Sicily, in the fifteenth century, gave it the name of Citta Notabile. It has been, in mo- dern times, much reduced, especially since Va- letta has been the residence of the public autho- rities. It is the see of a bishop, and contains ˆbe- sides a large and handsome cathedral, several other churches and convents. From the town maybe seen the whole island, and sometimes the coasts of Africa and Sicily. Here is also an ancient pa- lace for the grand master; and near the town some ancient catacombs., and a very extensive cave, not far from the mouth of which, St. Paul is said to have been shipwrecked.

CITTERN, a musical instrument resembling the guitar, for which it has been frequently mis- taken. Anciently it was called the cistrum, and till lately was held in great contempt both in France and Britain. The practice on it being extremely easy, it was formerly the amusement of lewd women and their visitors ; insomuch, that in many of the old English dramatic writers, it is made the symbol of a woman that lived by pros- titution.

CITY, 7i. s. Scadj.) Tr.cit'e; Lat.nuite.

CI'TIZEN, n. s. ik ⬚⬚

So sick I am not, yet I am not well ; But not so citizen a wanton, as To seem to die ere sick. Shakspeare.

CITIZEN, as a noun, distinguishes an individual tranchised with the privileges appertaining to a city; a tradesman residing in a city, from a gentleman ; and sometimes it similarly designates an inhabitant, or dweller, in any place. Cit and citess are vulgar contractions of citizen and citi-

zeness. The latter is to be found only in Dryden.

By veray force, at Gaza on a night, Maugre the Philistines of that citee,

The gates of the toun he hath upplight, And on his bak ycaried them hath he,

High on a hill, where as men might hem see. O noble, mighty, Sampson, lefe and dere !

Maddest thou not told to women thy secree, In all this world ne had ther ben thy pere.

Cliaucer.

- – Running day and night From realm to realm, from city, street and town ; Why dost thou wear thy body to the bones ? And mightst at home sleep in thy bed of down, 4nd drink good ale so nappy, for the nones.

Wyalt. From thence, far off, he unto him did shew,

A little path, that wos both steepe and long, Which to a goodly city led his view ;

Whose wals and towres were builded ??? high and

strong Of peaiie and precious stone, that earthly tong

Cannot describe, nor wit of man can tell ; Too high a ditty for my simple song .

The citty of the Greate King hight it well.

Spenser.

What is the city but the people ? – – True, the people are the city.

SFiakspearc.

I do suspect I have done some oflence, That seems disgracious in the city's eye. Id.

His enforcement of the city wives. Id.

He, I accuse, The city ports by this hath entered. Id.

When he speaks not like a citizen, You find him like a soldier. Id

All inhabitants within these walls are not properly citizens, but only such as are called freemen.

Raleigh's History.

The country hath his recreation, the city his sevc- rall gymuicks and exercises, may-games, feasts, wakes, and merry-meetings, to solace themselves.

Burton. Anat. Mel. Why should'st thou here looke for perpetual good,

At every loss 'gainst heaven's face repining? Do but behold where glorious cities stood,

With gilded tops and silver turrets shining ; There now the hart fearless of greyhound feeds, And loving pelican in safety breeds : There screetching satyrs till the people's empty stedes [places], Fletcher's Purple Island.

Far from noisy Rome secure he lives,

And one more citizen to Sibyl gives. Drydcn.

Cits and citetses raise a joyful strain ;

'Tis a good omen to begin a reigK. Id.

Men seek safety from number better united, and

fuvn walls and fortifications, the use whereof is to

make the few a match for the many : this is the ori-

ginal of cities. Temple.

City, in a strict sense, means the houses enclosed

within the walls : in a larger sense it reaches to all

the suburbs. Watts.

Study your race, or the soil of your family will

dwindle into cits or squires, or run up into wits or

madmen. Taller.

Barnard, thou art a cit, with all thy worth ; But Bug and D ⁂ 1, their honours, and so forth.

The city has always been the province for satire , and the wits of King Charles's time jested upon no thing else during his whole reign. AdJisun.

Oh ! had they been of court or city breed, Such delicacy were rijht marvellous indeed.

Beattie.

CIV

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Those who attempt to level, never equalize. In all societies consisting of various descriptions of citizens, ××ome description must be uppermost. Burke.

Leave your arms ; ye have no further need

Of such : the city's rendered. And most well You keep your hands clean, or 111 find out a stream, As red as Tyber now runs, for your baptism.

Byron. Deformed Transformed.

CITY, among the Romans was called civitas, oppidum, and urbs : civitas, as being governed by a justice and order of magistracy ; oppidum, as containing a great number of inhabitants ; urbs, on account of its being surrounded with walls. According to Blount, city is a word that hath obtained ir England only since the conquest ; for, in the time of the Saxons, there were no cities, but all the great towns were called burghs; and even London was then called Lon- donburgh, ae the capital of Scotland is still called Edinburgh. And long after the conquest the word city was used promiscuously with burgh, as in the charter of Leicester, where it is both called civatas and burgus; which shows that those writers were mistaken who tell us that every city was, or is, a bishop's see. And though the word city signifies in England, such a town cor- porate as hath usually a bishop and a cathedral church, yet these are by no means necessary re- quisites to constitute a city.

The freedom of cities was first established in Italy, owing principally to the introduction of commerce. The German emperors, especially those of the Franconian and Suabian lines, as the seat of their

government was far distant from Italy, possessed a feeble and imperfect jurisdic- tion in that country. This induced some of the Italian cities, towards the beginning of the ele- venth century, to assume new privileges ; to unite together more closely ; and to form them- selves into bodies politic, under the government of laws established by common consent. The innovation soon made its way into France, where Louis the Gross, in order to create some power that might counterbalance those potent vassals who controlled the crown, first adopted the plan of conferring new privileges on the towns situated within his own domain. These privileges were called charters of community, by which he en- franchised the inhabitants, abolishing all marks of servitude, and formed them into corporations or bodies politic, to be governed by a council and magistrates of their own nomination. The practice spread quickly over Europe, and was adopted in Spain, England, Scotland, and all the other feudal kingdoms. It appears from Mariana, that in 1350, eighteen cities had obtained a seat in the Cortes of Castile. In Ar- ragon, cities seem early to have acquired exten- sive immunities, together with a share in the le- gislature. In 1 1 18 the citizens of Saragossa had not only obtained political liberty, but they were declared to be of equal rank with the nobles of the second class ; and many other immunities, unknown to persons in their rank of life, in other parts of Europe, were conferred upon them. In England, the establishment of communities or corporations was posterior to the conquest. The practice was borrowed from France, and the privileges granted by the crown were perfectly similar to those above enumerated. It is not

improbable, that some of the towns of England were formed into corporations under the Saxon kings; and that the charters granted by the kings of the Norman race were not charters of enfranchisement from a state of slavery, but a confirmation of privileges which they had already enjoyed. The English cities, however, were very inconsiderable in the twelfth century. A clear proof of this occurs in Lord Lyttleton's History of Henry II. Fitz-Stephen, a contem- porary author, gives a description of the city of London in the reign of Henry II. and the terms in which he speaks of its trade, its wealth, and the number of its inhabitants, would suggest no inadequate idea of its state at present, when it is the greatest and most opulent city in Europe. But all ideas of grandeur and magnificence are merely comparative. Tt appears from Peter of Blois, archdeacon of London, who flourished in the same reign, and who had good opportunity of being informed, that the city, of which Fitz- Stephen gives such a pompous account, contained no more than 40,000 inhabitants. The other cities were small in proportion, and in no con- dition to extort

any extensive privileges.

CITIES, IMPERIAL, an appellation given to those cities of Germany immediately subject to the emperor : they make a part of the Germanic body, are governed by their own magistrates, have the privilege of coining money, and assist at the diet of the empire.

CI'VET, n. s. Fr. civet te ; Arab, zibetta, sig- nifying scent. A perfume from the civet-cat.

Civet is of baser birth than tar ; the very unclean flux of a cat. Shakspeare.

Some putrefactions and excrements do yield excel- lent odours; as civet and musk, and, as some think, ambergrease. Bacon's Natural History.

CIVET, a perfume yielded by the civet-cat, of a clear yellowish, or brownish color ; not fluid nor hard, but about the consistence of butter or honey, and uniform throughout ; of a very strong smell, quite offensive when undiluted, but agree- able when only a small proportion of civet is mixed with a large one of other substances. It unites easily with oils both expressed and dis- tilled, but not at all with water or spirit of wine : nor can it be rendered miscible with water by the mediation of sugar. The yolk of an egg seems to dispose it to unite with water ; but, in a short time, the civet separates from the liquor, and falls to the bottom, though it does not prove of such a resinous tenacity, as when treated with sugar and spirit of wine. It communicates, however, some share of its smell both to watery and spirituous liquors : hence a small portion of it is often added in odoriferous tinctures, and suspended in the still-head during the distillation of odoriferous waters and spirits. It is rarely employed for medicinal purposes. The Italians make it an ingredient in perfumed oils, and thus obtain the whole of its scent; for oils wholly dissolve the substance of it. It is very rare, however, to meet with it unadulterated. The substances usually mixed with it are lard and butter: which, agreeing with it in its general properties, render all ciiteria for, distinguishing the adulteration uncertain . A great trade of civet was formerly carried on at Calicut, Bassora, and

other \-\rts of (lie Indies, and in Africa, where the civet-cat is found.

CIVET-CAT, in zoology. See VIVERRA.

CI'VIC, adj. Lat. civicus. Relating to civi honors or practices; not military.

With equally rays immortal Tally shone : Behind, Rome's genius waits with civick crowns, And the great father of his country owns. Pope.

For all the civic garlands due, To him our branches are but few. Maroell. My youthful bosom burns with thirst of fame, From the great theme to build a glorious name, To tread in paths, to ancient bards unknown, And bind my temples with a civic crown. Gay.

CivrcA CORONA, a crown given by the ancient Romans to any soldier who had saved the life of a citizen in an engagement. The civic crown was reckoned more honorable than any other crown, though composed of no better materials than oak boughs; because, says Plutarch, the oaken wreath being sacred to Jupiter, the great guardian of their city, they thought it the most proper ornament for him who had preserved the life of a citizen. Pliny, speaking of the honor and privileges conferred on those who had merited this crown, says, ' they who had once obtained it, might wear it always. When they appeared at the public spectacles, the senate and people rose to do them honor, and they took their seats on these occasions among the senators. They were not only personally ex- cused from all troublesome offices, but procured the same immunity for their father and grandfather by the father's side.' It is often used as a crest, in armorial bearings. The annexed diagram exhibits it from the crest of the family of Falkland.

ClVIDAD DE LAS PALMAS, Or PALMAS, the

capital of the island of Canary, with a bishop's see, and a good harbour. The seat of adminis- tration is removed to Santa Cruz in Teneriffe. The houses are well built, two stories high, and flat-roofed. The cathedral is very handsome, and the inhabitants are gay, rich, and numerous, amounting to about 10,000. The air is temper- ate, and free from extremes of heat and cold. It is defended by a small castle seated on a hill.

CIVIDAD DI FRIULT, a well built town of the late Venetian dominions of Austria, in Friuli, anciently called Forum Julii. It contains 4000 inhabitants, and is situated at the foot of the

mountains, on the river Natisona, ten miles east of Udina.

CIVIDAD REAL, a town of Spain, in New Castile, and capital of La Mancha. The inha- bitants are noted for dressing leather extremely well. Here are three churches, seven convents, three hospitals, and about 9000 inhabitants. It is fifty-seven miles south of Toledo, and ninety from Madrid.

CIVIDAD RODRIGO, a strong town of Spain, in the kingdom of Leon, with a bishop's see, suffragan of Compostella, built by Ferdinand II. as a rampart against Portugal. In the Plaza

Mayor, or principal square, are three Roman columns with inscriptions. Population 10,000. On the llth June, 1810, it was invested by the French, and surrendered on the 10th July: it continued in their possession till 19th January 1812, when it was taken by storm by lord Wel- lington, after a siege of eleven days. It is seated in a fertile country, on the river Agueda, forty- five miles S. S, W. of Salamanca.

CI'VIL, adj. -\ Lat. civilis. Relating

CI'VILLY, adv. (to the community, as

CIVI'LIAN, n. s. ►► artificial, and not natu- CIVILISA'TION, n. s.) ral; to government, as opposed to anarchy ; to what is intestine and domestic, as distinguished fro,m what is foreign ; to courts and laws of a general nature, belong- ing to the body politic, as distinguished from those which are ecclesiastical, military, or crimi- nal. It designates also the laws relating to the ancient consular or imperial government. Thus, civilian is one that professes the knowledge of the old Roman law, and of general equity ; and civi- lisation is a law, act of justice, or judgment, which renders a criminal process civil; which is per- formed by turning an information into an in- quest, or the contrary.

The professors of that law, called civilians, because the civil law is their guide, should not be discounte- nanced nor discouraged. Bacon's Advice to Villiers. A depending kingdom is a term of art unknown to all ancient civilians, and writers upon government.

Swift. No woman had it, but a civil doctor.

Sftakspeare.

Men that are civil lead their lives after one com- mon law ; for that a

multitude should, without har- mony, concur in the doing of one thing (for this is civilly to live), or should manage community of life, it is not possible. Hooker.

God gave them laws of civil regimen, and would not permit their commonweal to be governed by any other laws than his own. Id.

From a civil war God of his mercy defend us, as that which is most desperate of all others.

Bacon to Villiers.

For aught I can see, these men [lawyers] fail as often as the rest in their projects, and are as usually frustrate of their hopes ; for, let him be a doctor of the law, an excellent civilian of good worth, where shall he practice and expatiate ? Their fields are so scant, the civil law with us so contracted with prohibitions, so few causes, by reason of these all-devouring mu- nicipal laws. Burton. Anat. Mel.

Part such as appertain To civil justice ; part religious rites Of sacrifice. Milton. Paradise Lost.

When cioil dudgeon first grew high, And men fell out they knew not why. Butler.

Break not your promise, unless it be unlawful or impossible ; either out of your natural or out of youi civil power. Taylor

For rudest minds with harmony were caught, And civil life was by the muses taught.

Roscommon

But there is another unity, which would be most a.

Spratt

CI'VIL, adj. ~] From Lat. civilis.

CIVI'LITY, n.s. | Refined, instructed ;en- CI'VILISE, v. a. {Joying the benefits of a CIVILISA'TION, n. s. { community established CIVILI'SED, n.s. | on the basis of law and CI'VILLY, adv.) government, as distin- guished from every thing barbarous.

Complais- ant, gentle, well bred, elegant of manners ; not rude; not brutal; not coarse. Freedom from barbarity ; the state of being civilised. Polite- ness ; complaisance ; elegance of behaviour. The verb signifies to reclaim from savageness and brutality; to instruct in the arts of regular life. The adjective and adverb are also applied to what is grave and sober, opposed to what is gaudy, showy, and gay.

Bloud is no blemish ; for it is no blame To punish those that do deserve the same ; But they that breake bands of clviliiie And wicked customes make, those doe defame Both noble armes and gentle curtesie : No greater shame to man than inhumanitie.

Spenser.

The English were at first as stout and warlike a people as ever the Irish ; and yet are now brought unto that civility, that no nation excelleth them in all goodly conversation, and all the studies of knowledge and humanity. Id.

Art thou thus boldened, man, by thy distress ? Or else a rude despiser of good manners, That in civility thou seemest so empty. Shakspeare.

I heard a mermaid, on a dolphin's back, Uttering such dulcet and harmonious breath, That the rude sea grew civil at her song. Id.

The chambers were handsome and cheerful, and furnished civilly. Bacon's New Atlantis.

Thus night oft see me in thy pale career, Till civil suited morn appear. Milton's Poems.

I, that perceived now what his musick meant,

Asked civilly if he had eat his Lent. Manell.

He, by his great civility and affability, wroutrh1

*ve*y much upon the people. Clarendon-*

Love taught him shame ; and shame, with love at

strife, Soon taught the sweet civilities of life. Dryden.

Musaeus first, then Orpheus, civilige Mankind, and give the world their deities. Denhum.

Wheresoe'er her conquering eagles fled, Arts, learning, and eivility

were spread. Id. Poems.

We send the graces and the muses forth To civilize and to instruct the north. Waller.

I will deal civilly with his poems : nothing ill is to be spoken of the dead.

Dryden' s Preface to his Fables. I would have had Almeria and Osmyn parted civilly ; as if it was not proper for lovers to do so.

Collier of the Stage.

He thought them folks that lost fheir way,

And asked them civilly to stay. Prior.

Amongst those who are counted the civilized part

of mankind, this original law of nature still takes

place. ⬚⬚0ˆ,

The civilizers ! ⬚⬚⬚ the disturbers say ; The robbers, the corrupters of mankind !

Philips's Briton.

Straight the vain fop in ignorant rapture cries, ' Paris the barbarous world will civilize.' Gay.

For sure a civil post the house commands, Upon whose sign this courteous motto stands, ⬚⬚⬚

' This is the ancient Hand and eke the Pen ;

' Here is for horses hay, and meat for men. Id.

If besides the accomplishments of being witty and ill-natured, a man is vicious into the bargain, he is one of the most mischievous creatures that can enter into civil society. Addison.

The insolent civility of a proud man is, if possible, more shocking than his rudeness could be ; because he shows you by his manner that he thinks it mere condescension in him ; and that his goodness alone bestows upon you what you have no pretence to claim. Chesterfield.

CIVIL LAW, is properly the particular law of each state, country, or city, jus civile est, quod quisque populus sibi constituit, Just. Inst. But what is more usually meant by the civil law, is a body of Roman laws, compiled from the laws of nature and nations; and, for the most part, received and observed throughout the empire for above 1200 years. It was originally founded on the regal constitutions of their kings ; next upon the twelve tables of the Decemviri ; then upon the laws or statutes enacted by the senate or people ; the edicts of the praetor and the re- sponsa prudentum, or opinions of learned lawyers ; and lastly, upon the imperial decrees or consti- tutions of successive emperors. These laws had by degrees grown to an enormous bulk ; but this inconvenience was in part remedied, by the col- lections of the lawyers, Gregorius, Hermogenes, and Papinius ; and Theodosius the younger, by whose orders a code was compiled, A. D. 438, which Theodosian Code was the only book of civil law received as authentic in the western part of Europe, till many centuries after. ††† For Justinian commanded only in the eastern remains of the empire; and it was under his auspices that the present body of civil laws was compiled and finished by Trebonian, about the year 533. It consists of, ††† 1. Institutes; which contain the elements or first principles of the Roman law, in four books. ††† 2. Digests or Pandects, in fifty books ; containing the opinions and writings of eminent lawyers, digested in a systematical me- thod.††† 3. A New Code, or collection of impe- rial constitutions, in twelve books ; the lapse of a century having rendered the former code of Theodosius imperfect. ††† 4. Novels or new consti- tutions posterior in time to the other books, and amounting to a supplement to the code, contain- ing new decrees of successive emperors, as new questions happened to arise. ††† These form the body of the Roman law, or Corpus Juris Civilis, as published about the time of Justinian ; which however soon fell into neglect and oblivion till about the year 1 1 30, when a copy of the Digests was found at Amain in Italy ; which accident, concurring with the policy of the Roman eccle- siastics, suddenly gave a new vogue and autho- rity to the civil law, and introduced it into several nations. See LAW, Index. It was first brought over into England by Theobald, a Norman abbot, who was elected to the see of Canterbury in 1183 ; and he appointed a professor, viz. Roger, surnamed Vicarius, in the university of Oxford, to teach it to the people of this country. Ne- vertheless, it gained ground very slowly. King Stephen issued a proclamation prohibiting the study of it. And, though the clergy were attached

to it. the laity rather wished to preserve the old constitution. However, the zeal and influence of the clergy prevailed ; and the civil law ac- quired great reputation from the reign of king Stephen to the reign of king Edward III. both in- clusive. Many transcripts of Justinian's Institutes are to be found in the writings of our ancient authors, particularly of Bracton and Fleta; and judge Blackstone observes, that the common law would have been lost and over-run by the civil, had it not been for the incident of fixing the court of common pleas in one certain spot, and the forming the profession of the municipal law into an aggregate body. It is allowed that the civil law contains all the principles of natural equity ; and that nothing can be better calculated to form good sense and sound judgment. Hence, though in several countries it has no other autho- rity but that of reason and justice, it is every where referred to as authority.

But the civil law is not received at this clay in any nation without some alterations ; some- times the feudal law is mixed with it, or general and particular customs ; and often ordinances and statutes cut off a great part of it. In Turkey the basilica only are used. In Italy the canon law and customs have hitherto excluded a good part of it. In the ci-devant state of Venice, custom had almost an absolute government. In the Milanese the feudal law, and particular cus- toms, bore sway. In Naples, and Sicily, the constitutions and laws of the Lombards are said to prevail. . In Germany the civil is esteemed to be municipal ; but yet many parts of it are there grown obsolete ; and others are altered, either by the canon law or a different usage. In the northern parts of Germany, the jus Saxoni- fcum, Lubecense, or Culmense, is preferred be- fore it. In Denmark and Sweden, it has scarcely any authority at all. In France, before the late revolution, only a part of it was received, in some places as a customary law ; and, in those provinces nearest to Italy, it was received as a municipal written law. In criminal causes the civil law was more regarded in France ; but the manner of trial was regulated by ordinances and edicts. In Spain and Portugal, the civil law is connected with the jus regium and custom. In Scotland, the statutes of the sederunt, part of the regiae majestatis, and their customs, control the civil law. In England there are four species of courts in which the civil and canon law are permitted, under restriction by the common law, to be used. 1. The courts of the archbishops and bishops, and their derivative officers ; usually called in our law courts Christian, or the eccle- siastical courts. 2. The military courts, or courts of chivalry. 3. The courts of admiralty. 4. The courts of the two Universities. In all, the reception of those laws in general, and

the dif- ferent degrees of that reception, are grounded entirely upon custom ; corroborated as to the Universities, by act of parliament and their charters.

The CIVIL LIST, is a revenue awarded to the kings of Great Britain in modern times, partly in the place of their ancient hereditary income, and partly to defray certain expenses of the state. Queen Elizabeth's entire revenue did not amount

to more than ––600,000 a year; that of king Charles I. was ––800,000 ; and the revenue voted for king Charles II. was ––1,200,000, though complaints were made (in the first years at least) that it did not amount to so much. The revenue of the Commonwealth between the time of Charles I. and Charles II. was upwards of ––1,500,000.

These revenues were expected to defray all public expenses ; among which lord Clarendon, in his speech to the parliament, computed that the charge of the navy and land forces amounted annually to ––800,000. The same revenue, sub- ject to the same charges, was settled on king James II. by stat. 1 Jac. II. c, 1.; but, by the increase of trade and more frugal management, it amounted on an average to a million and a half per annum; besides o.ther additional cus- toms granted by parliament, stat. 1 Jac. II. cc. 3, 4, which produced an annual revenue of ––400,000 ; out of which his fleet and army were maintained at the expense of ––1,100,000. After the Revolution, when the parliament took into its hands the annual support of the forces, both maritime and military, a civil list revenue was settled on the new king and queen, amounting, with the hereditary duties, to ––700,000 per an- num ; the same was continued to queen Anne and king George I. That of king George II. was augmented to ––800,000 by stat. 1 George II. c. 2. ; and that of king George III. was from time to time settled and increased by the follow- ing statutes: viz. 1 Geo. III. c. 1. ––800,000; 17 Geo. III. c. 21, ––100,000; and 44 Geo. III. c. 80, ––60,000 more ; and by 52 Geo. III. c. 6, (amended by 55 Geo. III. c. 15), ––70,000 more during the king's indisposition. By the latter acts it is provided that an account of any accu- mulation of arrears shall from time to time be laid before Parliament. By 33 Geo. III. c. 34 (amended by 45 Geo. III. c. 76) a civil list of ––145,000 is made payable to his majesty out of the revenues of Ireland. By stat 47 Geo. III. st. 2, c. 24, the king is empowered to direct the execution of any trusts to which lands vested in him by escheat, &c. or in right of the crown on the duchy of Lancaster, might have been liable, and to bestow such lands, or reward discoverers. See also stats. 48 Geo. III. c. 73; 50

Geo. III. c. 65 ; and 54 Geo. III. c. 70, for improving the land revenue of the crown : and 52 Geo. III. c. 148, respecting the king's privy purse.

The expenses at present defrayed by the civil list are those that in any shape relate to civil government : as the expenses of the royal house- hold ; the revenues allotted to the judges previous to the year 1758 ; all salaries to officers of state, and every of the king's servants; the appoint- ments to foreign ambassadors ; the maintenance of the queen and royal family ; the king's pri- vate expenses, or privy purse ; and other very numerous out-goings, as secret-service money, pensions, and other bounties, which sometimes have far exceeded the revenues appointed for that purpose, and application has accordingly been made to parliament to discharge the debts con- tracted on the civil list. No part of our state-machinery seems to require more investigation and reform.

CIVIL WAR, a war between people of the

state, or the citizens of the same city. ' CIVIL YEAR, the legal year, or annual account of time, which every government appoints to be used within its own dominions. See ASTRONO- MY and CHRONOLOGY.

CIVITA DI CHIETI, or TETI, a city of Na- ples, anciently called Theati, capital of the pro- vince of Abruzzo Citra. It is the see of an arch- bishop, and contains four churches and nine con- vents, situated near the Pescara, seven miles north of Capua, and ninety-three north of Naples.

CIVITA ui PENNA, an ancient town of Naples, in Abruzzo Ulterior, and department of Pescara, with a bishop's see. It is situated near the river Salino, twenty-five miles north-east of Aquila.

CIVITA VECCHIA, a sea-port town of Italy, in the pope's territories, with a good harbour and an arsenal. Here the pope's galleys are sta- tioned; it was made a free port in 1741; but the air is very unwholesome. Population about 9000. It is thirty-eight miles north-west of Rome. Long. 1 1►► 51′ E., lat. 42►► 5′ N.

CIUS, in ancient geography, a river of Bithy- nia, which gave name to the Cianus Sinus. Hylas, the favorite boy of Hercules, is said to have been drowned in it. Also, a town of Bi- thynia, which was afterwards called Prusia, hav- ing been destroyed by Philip the father of Per- seus, and rebuilt by Prusias king of Bithynia.

CIZE, n. s., perhaps from Lat. incisa ; shaped or cut to a certain magnitude ; the quantity of any thing with regard to its external form: often written size.

If no motion can alter bodies, that is, reduce them to some other cine or figure, then there is none of itself to give them the cine and figure which they have. Crew's Cosmologia.

CLACK, n. s., v. n. & v. a. Goth, klak ; Sax. clec ; Fr. claque ; Welsh dace ; continued noise ; a mill-clapper ; a human tongue, always wag- ging, to very little purpose besides the mono- tonous din of audible nonsense; to make a chinking noise; to let the tongue run. The active verb is used in another sense, as to. clack wool is to cut off the sheep's mark, which makes it to weigh less, and so yield the less custom to the king.

Her clacking mill, driven by her flowing gall, Could never stand, but chide, rail, bark, and bawl : Her shield no word could find ††† her tongue engrossed them all. Fletcher's Purple Isltmd.

But still his tongue ran on, And with its everlasting clack Set all men's ears upon the rack. Hudibras.

Fancy flows in, and muse flies high ; He knows not when my clack will lie. Prior, Says John, just at the hopper will I stand, And mark the clack how justly it will sound.

Betterton.

Tis true, your asses and your apes, And other brutes in human shapes, And that thing made of sound and show, Which mortals have misnamed a beau, (But in the language of the sky Is called a two-legged butterfly,) Will make your very heart-strings ache With loud and everlasting clack, And beat your auditory drum TCI you grow deaf or they grow dumb. Beattie,

CLACKMANNAN, a county and town of Scot- land, between 56†† 5′ and 56†† 15′ N. lat., and 3†† 35′ and 3†† 55′ W. long., surrounded on all sides by Perthshire, except on the south and south-west, where it is bounded by the river Forth, which divides it from

Stirlingshire. It is about seven miles broad at a medium from north to south, and where longest from east to west about nine, including fifty-two square miles, or 32,280 acres. The country towards the Forth is plain and fertile, producing abundance of corn and pasture ; three-fourths of the surface being culti- vated, a greater proportion than almost anywhere else in Scotland. On the coast there are several excellent harbours for shipping, as well as creeks for the reception of boats employed in the fish- eries. From the shore the surface rises into the Ochil mountains, the highest of which, Ben-cleugh, nearly 2500 feet above the level of the sea, lies in the parish of Tillycoultry. The sides of these mountains afford excellent pasture for sheep ; but towards the summit the rocks appear quite bare, and broken by bold projections, with deep ravines, down which many streams wildly dashing, give a very romantic appearance to the scenery. These rocks protect the lower parts from the winds, and thus produce an agreeable temperature of climate. There are only two rivers of any consequence beside the Forth, these are the North and South Dovan, or Devon, the former running a course of twenty-six miles, and both falling into the Forth, which is navi- gable along the whole boundary of this county. Agriculture has been considerably improved in this county, and the first ploughing match in Scot- land, in the way of competition for premium, was instituted in the parish of Clackmannan, in 1781, by the gentlemen of the Clackmannanshire Farmer Club. In general, however, there is more attention paid to pasture than tillage ; yet considerable quantities of corn are exported. The land rent is about ––32,000 sterling, accord- ing to the valuation taken in 1811, at which time the estimated population was 12,010. Coal is found in abundance almost everywhere ; free- stone and granite are also plentiful. In the Ochils, at various times, have been wrought valuable ores of silver, lead, copper, cobalt, iron- stone, and antimony ; many beautiful specimens of septaria, or geodes (iron ore), are also found. Near Stirling the Abbey Craig, a mass of green- stone rock, crystallised internally, but exhibiting a rough column-like appearance externally, af- fords a mill-stone equal if not superior to the French burstones. Among the rubbish which is washed from the hills, pebbles, agates, and even topazes, are sometimes discovered. The inha- bitants carry on a considerable foreign trade, and export coals, pig-iron, and British spirits, nearly a million gallons of which are sent to the Eng- lish markets. They import grain for the distil- leries, sugar, timber, iron, &,c. They manufac- ture sail-cloth and coarse linen, girdles, camblets, and plaids for the Highland regiments ; they also bleach a great quantity of flue linen, manufac- tured at Dumfermline. This county contains two principal to%vns, Clackmannan and Allo;i.

Clackmannan sends a member to parliament alternately with the county of Kinross. There

are four parishes, Clackmannan, Alloa, Dollar, and Tillicoultry ; Cambuskennelh, in the county of Stirling, forms a part of this county, and a third of the parish of Logic is likewise included in it. There is no assessment for the poor, ex- cept in this parish, where, in 1812, the total number of paupers was 193, receiving annually ––643, or nearly ––3. 10. each. Among the an- tiquities of the county may be reckoned the ruins of Castle Campbell, in a very wild country above the village of Dollar. Here John Kriox found a temporary retreat. It was burned by Montrose in 1644. The tower of Alloa, erected before the year 1300, the residence of the Erskines, earls of Mar, is in good preservation. The walls are eleven feet thick, and one of the turrets is eighty- nine feet from the ground.*

CLACKMANNAN, the chief town, is pleasantly situated on an eminence 190 feet above the level of the Forth, with a gradual descent on every side but the west, where it is bold and rocky. Here the old tower of Clackmannan stands, com- manding a beautiful and romantic prospect of the mountains of Benmore, Benledi, and Ben- lomond, the town and castle of Stirling, the various windings of the Forth, the town of Alloa, &c. The great sword and helmet of king Robert Bruce, and a large two-handed sword of Sir J. Graham, [the friend of the heroic Wallace, are preserved in the tower. Clackmannan was long the seat of the chief of the Bruces, who were he- reditary sheriffs of the county before the juris- dictions were abolished ; the Bruces of Kennel still have their residence here. The town, how- ever, by no means corresponds with the beaut, of its situation. The principal street is broad", but many of the houses are mean; in the middle of the street stands the tolbooth and court- house, a heap of ruins. Here the sheriff sometimes holds his court, and the election for members of parliament takes place. The harbour was for- merly crooked and inconvenient, but was much improved in 1772. The town contains about 5000 inhabitants, and lies thirty- three miles north by east of Glasgow. Alloa is a port ot considerable commerce, with a good harbour and well-built quay, at which are cleared out annually from 900 to 1000 vessels, carrying 50,000 tons, and furnishing employ for 2500 seamen. See ALLOA.

Packets are employed between Alloa and Leith, and the late introduction of steam-boats, which pass between that and Newhaven, and various other places on the Forth, affords a convenient and speedy conveyance for passengers.

CLAD, part. pret. This participle, which is now referred to clothe, seems originally to have belonged to clogden, or some such word, like Dutch, kleeden. Clothed; invested; garbed.

He hath clad himself with a new garment. 1 Kings.

Ageynst his will, sithe it mote nedes be, This Troilus up rose, and fast him cled.

Chaucer's Canterbury Tales,

So oft in feasts with costly changes clad, To crammed maws a spratt new stomach brings.

Sidney.

Beyond

The flowery dale of Sibma, clad with vine. Milton. VOL. V.

Their prayers clad

With incense, where the golden altar fumed By their great intercessor. /J,

Then the procurers under Progers filed, Gentlest of men, and his lieutenant mild, Bronkard, love's squire, through all the field arraye/ i, No troop was better clad nor so well payed. Marvell,

But virtue too, as well as vice, is clad In flesh and blood. Waller

To her the weeping heavens become serene ; Fcr her the ground is clad in cheerful green.

Dryden. The courtiers were all most magnificently clad.

Swift.

CLAGENFURT, a town and circle of Ger- many, capital of the duchy of Carinthia, situated on the Glan, and surrounded with a good wall. It contains a castle, lyceum, university, six churches, and three convents ; is very regularly and well built, and has several good

squares. It has a manufacture of cloth, which is much esteemed. The traveller is said to find here an excellent collection of busts and paintings, to- gether with a complete and well-arranged cabi- net of all the mineralogical productions of Carinthia. This town was taken by the French, after they had defeated the Austrians, in 1797, and again in 1809. Population 10,000. It is fifty miles north of Trieste, and 132 south-west of Vienna. Not far distant is the lake of Clagen- furt, amidst very picturesque scenery.

CLAGETT (William), D.D. an eminent and learned divine, born in 1646. He was preacher to the society of Gray's Inn ; which employment he exercised until he died, in 1688, being then one of the king's chaplains. Bishop Burnet has ranked him among ' those worthy men, whose lives and labors contributed to rescue the church from the reproaches which the follies of others had drawn upon it.' Dr. Clagett's principal work is his Discourse concerning the Operations of the Holy Spirit. He was one of those divines who made a noble stand against the designs .of James II. to introduce popery. Four volumes of his sermons were published after his death by his brother Nicholas Clagett, archdeacon of Sudbury.

CL'AIM, v. a. & n. s.~\ Fr. darner; from

CLAIMABLE, adj. f Lat. clamo. To re-

CLA'IMANT, n. s. ►► quire : to demand, of

CLA'IMER, n. s. bright; not to beg or

accept as favor, but to exact as due.

A demand of any thing that is in the possession of another, or at least out of his own ; as claim by char- ter, c/atmby descent. Cawell. Amongst the rest, with boastfull vaine pretense

Slept Braggadocchio forth, and as his thrall Her claymd, by him in battell wonne long sens :

Whereto herselfe he did to witnesse call ;

Who being askt, accordingly confessed all.

Spenter.

You, in the right of lady Blanch your wife, May then make all the claim that Arthur did.

Shaktpeare.

Poets have undoubted right to claim, If not the greatest, the most lasting name.

Congreve.

If only one man hath a divine right to obedience, nobody can claim that obedience but he that can shew his right. Lockt'

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\Te must know how the first ruler, from whom any one claims, came by his authority, before we can know who has a right to succeed him in it. Locke,

Will he not, therefore, of the two evils cnuse the feast, by submitting to a master who hath no imme- diate daim upon him, rather than to another who hath already revived several claims upon him?

Swift.

The king of Prussia lays in his claim for Neuf- Chatel, as he did for the principality of Orange.

Adilisan on Italy.

His well-armed front against his rival aims, And by the dint of war his mistress claims.

Gay's Rural Sports. Oh ! that some villager, whose early toil

Lifts the penurious morsel to his mouth,

Had claimed my birth ! ambition had not then

Thus slept 'twixt me and heaven.

Brooke's Giutavus Vasa. And yet, alas ! the real ills of life Claim the full vigor of a mind prepared, Prepared for patient long laborious strife, Its guide experience, and truth its guard.

Beattie.

CLAIRAC, a town of France, in the depart- ment of the Lot and Garonne, chief place of a canton, in the district of Tonneins, and advan- tageously situated in a valley on the Lot. It contains about 5000 inhabitants. They raise tobacco, corn, wine, and brandy. Clairac is one league south-east of Tonneins, and four and a half north-west of Agen.

CLAIRAULT (Alexis), a member of the French Academy of Sciences, and one of the most illustrious mathematicians in Europe. In 1726, when not thirteen years old, he presented to the academy a memoir upon four new geo- metrical curves of his own invention ; and he supported the character of which he thus laid the foundation, by various after publications, as, Elemens de Geometric, 1741, in 8vo. ; Elemens d' Algebre, 1746, in 8vo. ; Theorie de la Figure de la Terre, 1743, in 8vo.; Tables de la Lune, 1754, in 8vo. He was concerned also in the Journal des Scavans, to which he supplied many excellent extracts ; and was one of the academi- cians who were sent into the north to determine the figure of the earth. He died in 1756.

CLAIRFAIT (N.), count de, a celebrated Austrian general, of whose birth we have learned only that he was a Walloon. He entered early

on a military life, and in the imperial service distinguished himself against the Turks. He commanded the Austrian troops against France in 1792, and in that eventful war displayed the most eminent military talents, though not accom- panied with corresponding success. When the combined armies of Austria and Prussia entered France, under the duke of Brunswick, general Clairfait, with the army under his command, joined them, and they made a very rapid progress into France ; but, after the taking of Longwy and Stenay, Clairfait returned into the Low Countries, where he lost the famous battle of Gemappe, owing to the superior numbers and impetuosity of the French, under the celebrated Dumourier ; but though the ability of Clairfait had been emi- nently evinced during this contest, his military skill was still more so in his consequent retreat across the Rhine, October 1 st, 1 794. He was next

attached to the army under the command of the prince of Cobourg, and obtained considerable advantages at Altenhoven, Quievrain, Hansen, and Famars. He commanded the left wing ot the army at the battle of Nerwinde, and decided the victory. He was afterwards appointed to the command of the army in Flanders, opposed to Pichegru, with whom he bravely disputed every foot of ground, till the inequality of his forces obliged him to abandon the country. In 1795 he obtained the command of the army of Mayence, and attacked the strong camp which the French had formed before that city. Having forced this, and .made a great number of prisoners, he was following up the victory with ardor, when he re- ceived an order to forbear. Upon this he gave in his resignation, and retired to Vienna, where he was well received by the emperor. He was after- wards made a counsellor of war, and died at Vienna in 1798. General Clairfait was a strict disciplinarian, but greatly beloved by his soldiers; and the French considered him as the ablest gene- ral among their opponents in the course of the war.

CLAIR-OBSCURE, n. s. See CLARE-OB- SCURE.

CLAM, v. a. ~) Dut. dame, to stick ;

CLA'MMINESS, n. s. > Sax. clam; Bel. clem,

CLA'MMY, adj. j wet clay ; Teut. lint ;

gelim, glue ; to glue together ; to clog with any glutinous matter ; viscosity ; viscidity ; tenaci- ty ; ropiness ; viscous ; glutinous ; tenacious ; adhesive ; ropy.

Bodies clammy and cleaving, have an appetite, at once, to follow another body, and to hold to them- selves. Bacon.

A swarm of wasps got into a honey-pot, and there

they cloyed and clammed themselves till there was no

getting out again. L'Estrange.

A greasy pipkin will spoil the clamminess of the glue.

Moron.

Neither the brain nor spirits can conserve mo- tion : the former is of such a clammy consistence, it can no more retain it than a quagmire.

Glanmlle's Scepsis.

A chilling sweat, a damp of jealousy, Hangs on my brows, and clams upon my limbs.

Dry den.

Joyful thou'lt see

The clammy surface all o'er-strown with tribes Of greedy insects. Philips.

There is an unctuous clammy vapour that arises from the stum of grapes, when they lie mashed to- gether in the vat, which puts out a light when dipped into it. Addison on Italy .

The continuance of the fever, clammy sweats, pale- ness, and at last a total cessation of pain, are signs of a gangrene and approaching death.

Arbuthnot on Diet.

CLA'MBER, v. n. Probably corrupted from climb ; as climber, clamber. To climb with difficulty, as with both hands and feet. More probably from clamp. See CLAMP.

The kitchen malkin pins Her richest lockram 'bout her reechy neck, Clambering the walls to eye him. Shabspcare.

When you hear the dram, Clamber not you up to the casements then

The men there do, not without some difficulty, elamber up the acclivities, dragging their kine with them. Ray-

They were forced to clamber over so many rocks, and to tread upon the brink of so many precipices, that they were very often in danger of their lives.

Addison's Freeholder.

CLAMECY, a town of France, in the depart- ment of the Nievre, at the conflux of the Beuvron and the Yonne. In one of the fauxbourgs of this town the nominal bishop of Bethlehem resided ; the see having been fixed here from the expulsion of the Christians out of the Holy Land. His in- come was small, and his diocese confined nearly to the place of his residence. The inhabitants, who, according to the last returns, amount to 5300, carry on a considerable hard-ware manu- facture. It is eighteen miles south .of Auxerre. CLA'MQUR, n. s. & v. n. > Lat. clamor, CLA'MOROUS, adj. } Outcry ; noise;

turbulent roaring ; exclamation continued for a length of time. Shakspeare uses the verb in an active sense ; and it seems to mean, to stop from noise.

For which oppression, was swich clamour, And swiche pursuite unto the king Artour, That damned wos this knight for to be ded By course of law, and should have lost his hed.

Chaucer. Canterbury Tales. Clamour your tongues, and not a word more.

Shakspeare.

Let them not come in multitudes, or in a tribu- nitious manner ; for that is to clamour counsels, not to inform them. Bacon's Essays.

He kissed her lips

With such a clamorous smack, that at the parting All the church echo'd. Shakspeare.

The maid

Shall weep the fury of my love decayed ; And weeping ###, follow

me, as thou dost now, With idle clamour of a broken vow. Prior,

A pamphlet that will settle the wavering, instruct the ignorant, and inflame the clamorous. Swift _

Here the loud Arno's boisterous clamours cease, That with submissive murmurs glides in peace.

Addison.

Tis hence you lord it o'er your servile senates. How low the slaves will stoop to gorge their lusts When aptly baited ! Even the tongues of patriots, Those sons of clamours, oft relax the nerve Within the warmth of favour.

Brooke's Gustavus Vasa.

And now from far the mingling clamours rise, Loud and more loud, rebounding through the skies.

Beattie.

Echoing far and wide The clamorous noru along the cliffs above The hollow murmur of the ocean-tide ; The hum of bees, the linnet's lay of love, And the full choir that wakes the universal grove.

Id.

Echoed the vale with many a cheerful note, The lowing of the herds resounding long,

The shrilling pipe, and mellow horn remote, And social clamours of the festive throng. 7

CLAMP, n. s. & v. a. Goth klauf '; Dan. klampe ; Sax. clamm ; Fr. clamp. A claw, a grapple, a brace, that which holds together and supports.

When a piece of board is fitted with the grain to the end of another piece of board cross the grain,

the first board is damped. Thus the ends of tables

are commonly damped to preserve them from warping.

Moxon's Mechanical Exercises.

CLAMP, a pile of utiburnt bricks built up for burning. They are built after the same manner as arches are built in kilns, viz. with a vacuity betwixt each brick's breadth for the fire to ascend by ; but with this difference, that instead of arch- ing, they truss over, or overspan ; that is, the end of one brick is laid about half way over the end of another, and so till both sides meet within half a brick's length, and then a binding brick at the top finishes the arch.

C LAMP, in ship-building, denotes a piece of tim- ber applied to a mast or yard, to prevent the wood from bursting ; and also a thick plank lying fore and aft under the beams of the first orlop, or second deck, and is the same that the rising tim- bers are to the deck.

CLAMP NAILS, such nails as are used to fasten on clamps in the building or repairing of ships.

CLAMPETIA, in ancient geography, a town of the Brutii, one of those which revolted from Hannibal, called Lampetia by Polybius.

CLAN, n. s. probably of Scottish original ; klaan, in the Highlands, signifies children. A family ; a race ; a community, from the Gothic kylla ; to procreate. In a sense of contempt it is sometimes applied to a body of persons united for some sinister purpose.

They around the flag

Of each his faction, in their several clans, Swarm populous, unnumbered, Milton.

Milton was the poetical son of Spenser, and Mr. Waller of Fairfax ; for we have our lineal descents and clans as well as other families. Dryden.

Partridge and the rest of his clan may hoot me for a cheat, if I fail in any single particular. Swift.

CLAN, in history, and particularly in that of Scotland, means a tribe of people of the same race, and often all of the same name. The na- tions which overran Europe were originally di- vided into many small tribes ; and, when they came to parcel out the lands which they had con- quered, it was natural for every chieftain to be- stow a portion, in the first place, upon those of his own tribe or family. "These all held their lands of him ; and, as the safety of each individual depended on the general union, these small so cieties clung together, and were distinguished by some common appellation, either patronymical or local, long before the introduction of surnames or

ensigns armorial. But when these became common, the descendants and relations of every chieftain assumed the same name and arms with him ; other vassals were proud to imitate their example ; and by degrees they were communi- cated to all those who held of the same superior. Thus clanships were formed ; and, in a genera- tion or two, that consanguinity, which was at first in a great measure imaginary, was believed to be real. An artificial union was converted into a natural one : men willingly followed a leader, whom they regarded both as the superior of their lands, and the chief of their blood ; and served him not only with the fidelity of vassals, but the affection of friends. In the other feudal kingdcms, we may observe such uniors as we

have described, imperfectly formed ; but in Scot- and, whether they were the production of chance, or the effect of policy, or strengthened by their preserving their genealogies both genuine and fabulous, clanships were universal. Such a con- federacy might be overcome; it could not be broken ; and no change of manners or govern- ment has been able, in some parts of the kingdom, completely to dissolve associations which are founded upon prejudices so natural to the human mind. How formidable were nobles at the head of followers, who, counting that cause just and honorable which their chief approved, were ever ready to take the field at his command, arid to sacrifice their .ives in defence of his person or of his fame ! Against such men a king contended with great disadvantage ; and that cold service which money purchases, or authority extorts, was not an equal match for their ardor and zeal. The foregoing observations will receive con- siderable confirmation from what Sir John Dal- rymple remarks of the Highland clans, in his Memoirs of Great Britain. ‘ The castle of the chieftain was a kind of palace to which every man of his tribe was made welcome, and where he was entertained according to his station in time of peace, and to which all flocked at the sound of war. Thus the meanest of the clan, considering himself to be as well born as the head of it, revered in his chieftain his own honor; loved in his clan his own blood; com- plained not of the difference of station into which fortune had thrown him, and respected himself: the chieftain in return bestowed a protection, founded equally on gratitude, and the conscious- ness of his own interest. Hence the Highlanders, whom more savage nations

called savage, carried, in the outward expression of their manners, the politeness of courts without their vices, and, in their bosoms, the high points of honor without its follies. In countries where the surface is rugged, and the climate uncertain, there is little room for the use of the plough ; and, where no coal is to be found, and few provisions can be raised, there is still less for that of the anvil and shuttle. As the Highlanders were, upon these accounts, excluded from extensive agriculture and manufacture alike, every family raised just as much grain, and made as much raiment, as sufficed for itself; and nature, whom art cannot force, destined them to the life of shepherds. Hence, they had not that excess of industry which reduces man to a machine, nor that want of it which sinks him into a rank of animals be- low his own. They lived in villages built in valleys and by the sides of rivers. At two seasons of the year they were busy ; the one in the end of spring and beginning of summer, when they put the plough into the little land they had capa- ble of receiving it, sowed their grain, and pre- pared their provision of turf for next winter's fuel ; the other just before winter, when they reaped their harvest : the rest of the year was all tiieir own, for amusement or for war. If not en- gaged in war, they indulged themselves in sum- mer in the most delicious of all pleasures, to men in a cold climate and a romantic country, the en- joyment of the sun, and of the summer views of nature ; never in the house during the day, even

sleeping often at night in the open air, among the mountains and woods. They spent the winter in the chase, while the san was up ; and, in the evening, assembling round a common fire, they entertained themselves with the song, the tale, and the dance : but they were ignorant of sitting days and nights at games of skill, or of hazard, amusements which keep the body in inaction, and the mind in a state of vicious activity. The want of a good, and even of a fine ear for music, was almost unknown amongst them ; because it was kept in continual practice, among the multi- tude from passion, but by the wiser few, because they knew that the love of music both heightened the courage and softened the tempers of their people. Their vocal music was plaintive, even to the depth of melancholy ; their instrumental, either lively for brisk dances, or martial for the battle. Some of their tunes even contained the great but natural idea, of a history described in music j the joys of a marriage, the noise of a quarrel, the sounding to arms, the rage of a oat- tie, the broken disorder of a flight, ??? the whole concluding with the solemn dirge and lamenta- tion for the slain. By the loudness and artificial jarring of their war instrument, the bagpipe, which played continually during the action, their spirits were exalted to a phrenzy

of courage in battle. They joined the pleasures of history and poetry .to those of music, and the love of classi'al learning to both. For, in order to cherish hign sentiments in the minds of all, every considerable family had an historian who recounted, and a bard who sung, the deeds of his clan and of its chieftain : and all, even the lowest in station, were sent to school in their youth ; partly because they had nothing else to do at that age, and partly because literature was thought the distinction, not the want of it the mark, of good birth. The severity of their climate, the height of their moun tains, the distance of their villages from each other, their love of the chase and of war, with their desire to visit and be visited, forced them to great bodily exertions. The vastness of the objects which surrounded them, lakes, moun- tains, rocks, cataracts, extended and elevated their minds : for they were not in the state of men, who only know the way from one town to another. Their want of regular occupation led them, like the ancient Spartans, to contemplation, and the powers of conversation : powers which they exerted in striking out the original thoughts which nature had suggested, not in languidly re- peating those which they had learned from other people. They valued themselves without under- valuing other nations. They loved to quit their own country to see and to hear, adopted easily the manners of others, and were attentive and insinuating wherever they went. When stran- gers came amongst them, they received them not with a ceremony which forbids a second visit, not with a coldness which causes repentance of the first, not with an embarrassment which leaves both the landlord and his guest in equal misery, but with the most pleasing of all polite- ness, the simplicity and cordiality of affection ; proud to give that hospitality which they had not received, and to humble the persons who had thought of them with contempt, by showing how

little they deserved. Having been driven from the low countries of Scotland by invasion, they, from time immemorial, thought themselves en- titled to make reprisals upon the property of their invaders ; but they touched not that of each other ; so that in the same men there appeared, to those who did not look into the causes of things, a strange mixture of vice and of virtue. For what we term theft and rapine, they termed right and justice. But from the practice of these reprisals, they acquired the habits of being en- terprising, artful, and bold. An injury done to one of a clan, was held to be an injury done to all, on account of the common relation of blood.

Hence the Highlanders were in the habitual practice of war ; and hence their attachment to their chieftain, and to each other, was founded upon the two most active principles of human nature, love of their friends, and resentment against their enemies. But the frequency of war tempered its ferocity. They bound up the wounds of their prisoners, while they neglected their own ; and in the person of an enemy, re- spected and pitied the stranger. They went always completely armed : a fashion which, by accustoming them to the instruments of death, removed the fear of death itself ; and which, from the danger of provocation, made the com- mon people as polite, and as guarded in their behaviour, as the gentry of other countries. From these combined circumstances, the higher ranks and the lower ranks of the Highlanders alike joined that refinement of sentiment, which, in all other nations, is peculiar to the former, to that strength and hardiness of body, which, in other countries, is possessed only by the latter. To be modest as well as brave ; to be contented with the few things which nature requires ; to act and to suffer without complaining ; to be as much ashamed of doing anything insolent or in- jurious to others, as of bearing it when done to themselves ; and to die with pleasure to revenge the affronts offered to their clan or their country : these they considered their highest accomplish- ments. In religion every man followed, with indifference of sentiment, the mode which his chieftain had assumed. Their dress, which was the last remains of the Roman habit in Europe, was well suited to the nature of their coun- try, and still better to the necessities of war. It consisted of a roll of light woollen, called a plaid, six yards in length, and two in breadth, wrapped loosely round the body ; the upper lappet of which rested on the left shoulder, leaving the right arm at full liberty; a jacket of thick cloth fitted tightly to the body ; and a loose short garment of light woollen, which went round the waist and covered the thigh. In rain they formed the plaid into folds, and laying it on the shoulders, were covered as with a roof. When they were obliged to lie abroad in the hills, in their hunting parties," or tending their cattle, or in war, the plaid served them both for bed and for covering ; for, when three men slept together, they could spread three folds of cloth below, and six above them. The garters of their stockings were tied under their knee, with a view to give more free- dom to the limb; and they wore no breeches,

that they might climb mountains with the grealer ease. The lightness and looseness of their dress, the custom they had of going always on foot, never on horseback ; their love of long journeys, but above all, that patience of hunger, and every kind of hardship, which carried their bodies for- ward, even after their spirits were exhausted, made

them exceed all other European nations in speed and perseverance of march. In en- campments, they were expert at forming beds in a moment, by tying together bunches of heath, and fixing them upright in the ground ; an art, which, as the beds were both soft and dry, pre- served their health in the field, when other soldiers lost theirs. Their arms were a broad sword, a dagger, called a dirk, a target, a mus- ket, and two pistols; so that they carried the long sword of the Celtes, the pugio of the Ro- mans, the shield of the ancients, and both kinds of modern fire-arms, all together. In battle they threw away the plaid and under garment, and fought in their jackets, making thus their move- ments quicker, and their strokes more forcible. Their advance to battle was rapid, like the charge of dragoons : when near the enemy, they stopped a little to draw breath and discharge their muskets, which they then dropped on the ground : advancing, they fired their pistols, which they threw, almost at the same instant, against the heads of their opponents ; and then rushed into their ranks with the broad sword, threatening, and shaking the sword as they ran on, so as to conquer the enemy's eye, while his body was yet unhurt. They fought not in long and regular lines, but in separate bands, like wedges condensed and firm ; the army being ranged according to the clans which composed it, and each according to its families ; so that there arose a competition in valor of clan witli clan, of family with family, of brother with bro- ther. To make an opening in regular troops, and to conquer, they reckoned the same thing; because in close engagements, and in broken ranks, no regular troops could withstand them. They received the bayonet in the target, which they carried on the left arm ; then turning it aside, or twisting it in the target, they attacked with the broad sword, the enemy encumbered and defenceless; and, where they could not wield the broad sword, they stabbed with the dirk.' The indissolubility of these associations has been already noticed ; and it may now be added, that though the abolition of the feudal system effected a greater alteration in the cha- racter of these people, by inspiring them with sentiments and views of independence, during the last century, than a thousand years before had effected, yet the sensibility of their nature, the hardiness of their constitution, their warlike disposition, and their generous hospitality to strangers, remain undiminished. And, though emancipated now from the feudal yoke, they still show a voluntary reverence to .heir chiefs, as well as affection to those of their own tribe and kindred: qualities which are not only \ery amiable and engaging in themselves, but which are connected with that character of alacrity and inviolable fidelity and resolution, which their exer- tions in the field have justly obtained in thewjild.

After the battle of Culloden, government, it is x well known, felt it necessary to break up these incongruous and dangerous associations. The clans were disarmed, and an act was passed for abolishing ttieir peculiarity of garb, as being supposed to keep up their strong party distinc- tions, to encourage their martial propensities, and to perpetuate too obviously the exploits of their ancestors. The heritable jurisdiction also was entirely abolished. King William's treat- ment of the Highlands has often been condemned as severe, but some of the oaths fixed upon these unhappy tribes by a British government, so late as 1747 and 1748, will ever be the disgrace of that period. The Highlander was at this peri- od required to swear 'As he would answer to God at the great day of judgment,' not only that he had not in his possession gun, sword, pistol, or any other arms whatsoever, but that he never used tartan, plaid, or any part of the Highland garb ; ••• ' If I do so,' this horrible oath continued, ' may I be cursed in my undertakings, family, and property; may I never see my wife and children, father, mother, or relations ; may I be killed in battle as a coward, and lie without Christian burial in a strange land, far from the graves of my forefathers and kindred.' Dr. Johnson, whose visit here in 1773, was not too. late to enable him to witness some of the effects of this policy, frequently mourns over the neces- sky which he contends to have dictated it. He says ' Perhaps there is no example till within a century and a half, of any family, whose estate was alienated otherwise than by violence or for- feiture. Since money has been brought amongst them, they have found, like others, the art of spending more than they receive ; and I saw with grief the chief of a very ancient clan, whose island was condemned by law to be sold for the satisfaction of his creditors.' Then follows a correct picture of the clan-system in its first exhibition : •••

'The name of highest dignity is laird, of which there are in the extensive isle of Sky only three, Macdonald, Macleod, and Mackinnon. The laird is the original owner of the land, whose natural power must be very great, where no man lives but by agriculture ; and where the produce of the land is not conveyed through the labyrinths of traffic, but passes directly from the hand that gathers it to the mouth that eats it. The laird has all those in his power that live upon his farms. Kings can, for the most part, only exalt or degrade. The laird at pleasure can feed or starve, can give bread, or withhold it. This inherent power was yet strengthened by the kindness of consanguinity, and the reverence of patriarchal

authority. The laird was the father of the clan, and his tenants commonly bore his name. And to these principles of original com- mand was added, for many ages, an exclusive right of legal jurisdiction.

'This multifarious and extensive obligation operated with force scarcely credible. Every duty, moral or political, was absorbed in affec- tion and adherence to the chief. Not many years have passed since the clans knew no law but the laird's will. He told them to whom they should be friends or enemies, what king

they should obey, and what religion they should profess. When the Scots first rose in arms against the succession of the house of Hanover, Lovat, the chief of the Frasers, was in exile for a rape. The Frasers were very numerous, and very zealous against the government. A pardon was sent to Lovat. He came to the English camp, and the clan immediately descrte'd to him.

' Next in dignity to the laird is the tacksman ; a large taker, or lease- holder of land, of which he keeps part as a domain in his own hand, and lets part to under-tenants. The tacksman is necessarily a man capable of securing to the laird the whole rent, and is commonly a colla- teral relation. These tacks, or subordinate pos- sessions, were long considered as hereditary, and the occupant was distinguished by the name of the place at which he resided. He held a mid- dle station, by which the highest and the lowest orders were connected. He paid rent and reve rence to the laird, and received them from the tenants. This tenure still subsists, with its original operation, but not with the primitive stability. Since the islanders, no longer content to live, have learned the desire of growing rich, an ancient dependent is in danger of giving way to a higher bidder, at the expense of domestic dignity and hereditary power.

'The only gentlemen in the islands are the lairds, the tacksmen, and the ministers, who fre- quently improve their livings by becoming farm- ers. If the tacksmen be banished, who will be left to impart knowledge, or impress civility ? The laird must always be at a distance from the greater part of his lands; and, if he resides at all upon them, must drag his days in solitude, hav- ing no longer either a friend or a companion; he will therefore depart to some more comfort- able residence, and leave the tenants to the wis- dom and mercy of a factor.'

*The reasoning of this great sage on the disarming act is equal to that of any part of his writings : ***

‘To disarm part of the Highlands, could give no reasonable occasion of complaint. Every government must be allowed the power of taking away the weapon that is lifted against it. But the loyal clans murmured, with some appear- ance of justice, that, after having defended the king, they were forbidden for the future to de- fend themselves; and that the sword should be forfeited, which had been legally employed. Their case is undoubtedly hard, but in political regulations good cannot be complete, it can only be predominant.

‘ Whether by disarming a people thus broken into several tribes, and thus remote from the seat of power, more good than evil has been produced, may deserve enrjuiry. The supreme power in every community has the right of de- barring every individual, and every subordinate society, from self-defence, only because the supreme power is able to defend them; and therefore where the governor cannot act, he must trust the subject to act for himself. These islands might be wasted with fire and sword, before their sovereign would know their distress. A gang of robbers, such as has been lately found confederating themselves in the Highlands, might

lay a wide region under contribution. The crew of a petty privateer might land on the largest and most wealthy of the islands, and riot without control in cruelty and waste. It was observed by one of the chiefs of Sky that fifty armed men might, without resistance, ravage the country. Laws that place the subject in such a state, contravene the first principles of the com- pact of authority : they exact obedience, and yield no protection.’ ††† Journey to the Western Islands.

CLA’NCULAR, adj. Lat. clancularius. Clan- destine; secret; private; concealed; obscure; hidden.

L†† us withdraw tall supplies from our lusts, and not by any secret reserved affection give them clan- calar aids to maintain their rebellion.

Decay of Piety.

CLANDE’STINE, adj.) Lat. clandestinus.

CLANDESTINELY, adv.] Secret; hidden; pri- vate ; in an ill sense.

Tho' nitrous tempests, and clandestine death, Filled the deep caves and numerous vaults beneath.

Blackmvre.

CLANG, v. a. <𝍐𝍐𝍐𝍐𝍐 n. s. } Lat. clango. To CLA'NGOUR, n. s. 𝍐𝍐 strike together with a CLA'NGOUS, adj. j noise ; to clatter ; to

make a loud, sharp, shrill noise.

Have I not in a pitched battle heard

Loud 'larums, neighing steeds, and trumpets' clung.

Shahspeare. We do not observe the cranes, and birds of long

necks, have any musical, but harsh and clangous,

throats. Browne.

CLANK, n. s. from clang. A loud, shrill, sharp noise, made by the collision of hard and sonorous bodies.

They were joined by the melodious clank of marrow- hone and cleaver. Spectator.

One thought alone he could not, dared not meet. ' Oh, how these tidings will Medora greet!' Then, only then, his clanking chains he raised, And strained with rage the chain on which he gazed.

Byron.

CLAP, n. s., v. a. &i>. n.~l Isl. klapp ; Dan.

CLA'PPER, n. s. >klap; Swed. klapp ;

CLA'PPING, part. J Sa.x.clapp;Be.klap;

Teut. klopp. A sudden motion ; a blow or sound of collision ; the noise of thunder. Applied not only to noise thus produced, but to hasty unex- pected or sudden action, where one thing is joined to another to effect the purpose intended. To do any thing unexpectedly , to enter upon it with alacrity and briskness. The manner of ex- pressing applause in popular assemblies, by clap- ping the hands. Clapper is the instrument that makes a noise.

There shall be horrible elaps of thunder, and Sashes of lightning, voices and earthquakes.

Hakewill on Providence.

He hath a heart as sound as a bell, and his tongue is the clapper ; for what his heart thinks, his tongue speaks. Shakspeare.

AU the best men are ours ; for 'tis ill hap

If they hold, when their ladies bid 'em clap. Id.

CLAP, Goth, klaup ; Teut. geluppe, gelauf ; Belg. geloop, a running ; Teut. gelippe, venom ; infection ; another name for the disease called gonorrhoea, not strictly venereal, yet derived in

the same manner ; a gleet ; a dripping derived from contagion.

CLAP, in medicine, the first stage of the venereal disease. See GONORRHOEA.

CLAP-NET, in birding, a sort of net contrived for the taking of larks with the looking-glass by the method called daring or doring. The nets are spread over an even piece of ground, and the larks are invited to the place by other larks fastened down, and by a looking-glass composed of five pieces, and fixed in a frame, so that it is turned round very swiftly backwards and forwards, by a cord pulled by a person at a considerable distance behind a hedge. See DORING.

To CLA'PPERCLAW, v. a. from clap and claw. To tongue-beat ; to scold.

CLAPPERTON (captain Hugh), the African traveller, was born in Annan, Dumfrieshire, in 1788. After some elementary instruction in practical mathematics, he was bound apprentice, at the age of thirteen, to the owner of a vessel trading between Liverpool and North America, in which he made several voyages. He was then pressed into his Britannic majesty's service, was soon after made a midshipman, served on the American lakes in 1815, and, in 1816, re- ceived the commission of lieutenant. Having retired to Scotland, he became acquainted with doctor Oudney, who was about to embark for Africa, and requested permission to accompany him. Lieutenant (afterwards colonel) Denham having volunteered his services, and it being in- tended that researches should be made, to the east and west, from Bornou, where doctor Oudney was to reside as British consul, his name was added to the expedition by lord

Bathurst. In the Recent Discoveries in Africa, made in 1823 and 1824, by major Denham, captain Clapperton, and doctor Oudney (Lon- don, 1826), we have accounts of an excursion from Mourzouk to Ghraat, a town of the Tuarics, by doctor Oudney; of a journey across the desert to Bornou, of various expeditions to the southward and eastward, by maj or Denham ; and of an excursion through Soudan to the capital of the Fellatahs, by captain Clapperton. The expedition set out from Mourzouk, Nov. 29, 1822, and arrived at lake Tchad, in the king- dom of Bornou, Feb. 4, after a journey of 800 miles. Six days after they entered the capital, Kouka, Clapperton, in company with doctor Oudney, who died on the way, set out on an expedition to Soccatoo, the capital of Houssa, more than 700 miles east of Kouka, which he reached in ninety days. He was not permitted to pursue his journey to the west, and returned to Kouka, and thence to England in 1825. The information which the travellers collected, in re- gard to the habits and commerce of the people of Central Africa, was important, as showing the existence in that quarter of a large population of a peaceable disposition, and possessed of a con- siderable civilization. The geographical in- formation collected was not without its value, although it left undecided the disputed questions of the course and termination of the Niger. They proceeded south from Tripoli (lat. 32►► 30”), to Musfeia (lat. 9►► 10’), being 1400 miles in*

difference of latitude, and from Zangalia, on the east of lake Tchad (long. 17►► E.), to Soccatoo (long. 6►► E.), making a difference of longitude 01 660 miles. They thus determined the position of the kingdoms of Mandara, Bornou, and Houssa, their extent, and the position of their principal cities. On his return to England, lieutenant Clapperton received the rank of cap- tain, and was immediately engaged, by lord Bathurst, for a second expedition, to start from the Bight of Benin. Leaving Badagry, Dec. 7, 1825, he pursued a north-easterly direction, with the intention of reaching Soccatoo and Bornou. Two of his companions, captain Pearce and doctor Morrison, perished a short time after leaving the coast, and Clapperton pursued his way, accompanied by his faithful companion Lander. At Katunga, he was within thirty miles of the Quorra or Niger, but was not per- mitted to visit it. Coatinuinghis journey north, he reached Kano, and then proceeded westward to Soccatoo, the residence of his old friend Bello. Bello refused to allow him to proceed to Bornou, and detained him a long time in his capital. This

conduct appears to have arisen from the war then existing between Bello and the sheik of Bornou, and to the intrigues of the pacha of Tripoli, who had insinuated that the English meditated the conquest of Africa, as they had already conquered India. This disap- pointment preyed upon Clapperton's mind, and he died, April 13, 1827, at Chungary, a village four miles from Soccatoo, of a dysentery. (See Journal of a Second Expedition from Kano to the Sea-coast, partly by a more eastern Route, Lon- don, 1829.) Clapperton was the first European who traversed the whole of Central Africa, from the Bight of Benin to the Mediterranean. We have thus a continuous line from Tripoli to Badagry, which is of great importance from the assistance which it affords to the researches of others. Clapperton was a man without edu- cation, but intelligent and impartial ; of a ro- bust frame and a happy temperament. He was capable of enduring great hardships. His know- ledge of the habits and prejudices of the Central Africans, his frank, bold, and cheerful manners, would have rendered him peculiarly useful in promoting the designs of the British government in that quarter.

They are clapperclawing one another, I'll look on.

Shakspeare.

They have always been at daegers-drawing, And one another clapperclawing. Hudibras.

CLARAMONT POWDER, a kind of earth called terra de Baira, from the place where it is found ; it is famous at Venice for its efficacy in stopping hemorrhages of all kinds, and in curing malignant fevers.

CLARE, a county of Ireland, in the province of Munster, bounded on the north by Galway, from the west part of which it is separated by the oay of that name, on the east and south by the Shannon, which divides it from the counties of Tipperary and Limerick, 'and on the west by the Atlantic Ocean. It forms a peninsula, being surrounded by the Ocean and the Shannon on all sides except part of the north, where it joins the county of Galway. Its shape is nearly triangu-

lar, the extreme~point of which is Cape Lean, o Loup Head, on the south-west ; extending abou sixty-five miles in length from east to west, and forty-two in breadth from north to south, and containing an area of about 1200 square miles, probably occupied by nearly 120,000 inhabitants. A large proportion of this county consists of mountains, bogs, and moors ; the soil is light, but the valleys are

extremely fertile. In the mountainous parts the herbage is sweet, and re- markably good for the feeding of sheep. As in most other parts of Ireland, especially near the coast, the climate is moist, but not unfavorable to health and long life ; fevers, which are some- times very prevalent, mostly originating in the dampness of the houses, and want of cleanli- ness.

The Shannon is the only river of any magni- tude, which, flowing between the counties of Sligo and Limerick, almost divides the kingdom and falls into the sea between Loup and Kerry Heads, being for some distance above its mouth about five miles in breadth, and navigable for vessels of 400 tons burden up to the quay of Limerick. The Fergus is a beautiful stream, which rising within the county, connected with a number of lakes, and passing through the Ennis, falls into the Shannon, after forming many pic- turesque little islands, about thirty miles from the ocean : vessels of 200 tons can navigate it for about eight miles, and after heavy rains it often overflows its banks to a considerable extent. A multitude of small lakes are found in the in- terior, and in many places water, either forced under ground or flowing down from the higher parts of the country, accumulates in large bodies, until the summer, when it evaporates and a rich herbage springs up, furnishing support in the dry season for vast herds of cattle and a multi- tude of sheep.

This county possesses a large extent of coast, indented with numerous bays, the principal of which, except Galway Bay and that formed by the mouth of the Shannon, is the Bay of Lisca- nor, about half way between these two points. It has also a cluster of islands called Arran, the nearest of which is about five miles from the coast. Rich arid inexhaustible mines of coal are found here, but they are not worked, which is the case also with regard to the ironstone, of which there are clearly indications ; lead is also discovered in several parts, and limestone abounds. Agriculture has made but little pro- gress in this country ; corn and potatoes are almost the only objects of attention with the farmers; turnips and other green crops being much neglected. The crops of corn frequently follow each other year after year till the soil is exhausted, and if manure, such as sea-weed and sand, cannot be obtained, it lies unproductive for years. The pasturage in the low country is rich and equal to the fattening of the largest cattle ; there is a tract of land extending for twenty miles, from Paradise to Limerick, including about 20,000 acres of rich dark colored soil, which, though in some parts it is much neglected, is so productive that it was let at ––5 per acre Irish, equal to ––3. 2s. an English acre, and even more when designed for meadow; in manT

places it is known to produce twice as much hay as any land in Great Britain.

Clare was formerly celebrated for orchards and cydei from the cockagee apple ; but of late .'ittle of it has been made, though it is still deemed excellent in quality. The inhabitants breed a great number of mules ; the poorer sort use asses ; but horses are of poor quality here. Coarse woollens or friezes, worsted stockings, a little broad cloth, a few blankets and serges, form the products of the woollen manufacture ; there are three small bleachfields, and coarse hats are ma- nufactured, and dyed with alder mixed with a little logwood. The fishery on the coast is not extensive, though it might be if properly attended to. The boats generally used are such as we read of in very remote periods, being constructed of wicker-work, and covered with hides ; they fre- quently stop a hole, if an accident happens at sea, with their wigs or any article of their dress, and sometimes with their foot, and remain with the greatest apathy, exposed to the violent surf that dashes on this shore. Oysters, crabs, and lobsters, are very abundant ; eels are plentiful in almost every small stream, and the Shannon salmon fishery is very valuable.

The great body of the people of this country live in houses built of stone, without cement; in some parts they are made of sods or turf, thatched with heath or fern, mostly without chimneys, as they think the smoke keeps them warm. Their beds are of hay or straw, on the damp and dirty ground, and the pig and the dog are tenants of the same chamber. Potatoes form their chief diet, sometimes they have a little milk and vegetables, and occasionally fish. The men are generally clad in frieze, and the women in red flannel, both made by the family ; but dimity and cotton are used by the latter on going to market or to chapel ; the men never, and the women almost never, wear shoes. A common laborer earns from eightpence to tenpence a day. There are many schools, and in summer great numbers attend them ; but they are generally ill managed.

This county was formerly called Thomond, or North Munster; the origin of its present name is not ascertained. Ennis is the chief town, and the only one of importance, containing about 90,000 inhabitants ; it sends one member to the imperial parliament, and the county two. Clare is part of the united diocese of Killaloe and Kil- fenora, having seventy-nine parishes and eighteen resident clergymen ; there

are, however, very few Protestants, the Catholics forming the far greater part of the population. The Irish is the language of the country people, but the English is gener- ally understood, and, from being used in the schools, is likely soon to become universal. Not less than 118 castles, and many Danish entrench- ments called cromlechs, made of earth or stone, are found in the county. At the island of Scat- tery, in the mouth of the Shannon, there is a tower 150 feet high, the ruins of several churches and a castle, and a monastery said to have been founded by St. Patrick more than 1200 years ago.

CLARE, an island of Ireland, on the south-west coast of Cork, about three miles long, and one

wide.. On a rock in the sea, and off the north- west point, stands a ruined castle, to the east of which is the cove of Tra Kieran, or St. Kieran's Strand, where a pillar of stone is found with a rude cross, the supposed work of that saint, and is held in great veneration, and much resorted to on the fifth of March, St. Kieran's festival. The island is subject to frequent predatory expedi- tions. Long. 9►► 23′ W., lat. 51►► 21′ N. Also an island of Ireland, near the coast of Mayo, about four miles long, and one and a half wide Long. 9►► 49′ W., lat. 53►► 49′ N.

CLARE, a market town in the county of Suffolk, situated on the river Stour, with the ruins of a castle and a monastery, founded by Richard St. Clair, earl of Gloucester, in 1248. There is a weekly market on Tuesday. It is fourteen miles south of Bury St. Edmunds, and fifty-five N.N E. of London.

CLARE (St.), LAKE, a lake of the United States, about half way between Lake Huron and Lake Erie, and is about ninety miles in circumference. It receives the water of the three great lakes Su- perior, Michigan, and Huron, and discharges them through the river Detroit into Lake Erie. This lake is of a circular form, and navigable for large vessels, except a bar of sand towards the middle, which prevents loaded vessels from pas- sing. The cargoes of such as are freighted must be taken out, and carried across the bar in boats, and re-shipped.

CLARE, (St.) NUNS OF, were founded in As- sisa, in Italy, about 1212. They observed the rule of St. Francis, and wore habits of the same color with those of the Franciscan friars, and hence were called Minoresses ; and their house, without Aldgate, the Minories, where they were settled when first brought over into England about A.D.I

293. Thisordercomprehendsnotonly those nuns who follow the rule of St. Francis, according to the strict letter, without mitigation, but those likewise who follow the same rule miti- gated by several popes. After Ferdinand Cortez had conquered Mexico for the king of Spain, Isabella, of Portugal, wife of the emperor Charles V., sent thither some nuns of the order of St. Clara, who made several settlements there.

CLAREMONT, a township of America, in Cheshire county and State of New Hampshire ; situated on the east side of Connecticut river, opposite to Ascutney Mountain in Vermont, and on the north side of Sugar river; it is twenty- four miles south of Dartmouth College, and 121 south-west by west of Portsmouth. It was incorporated in 1764, and contained 1889 in- habitants.

CLARENCIEUX, the second king at arms, so named from the duke of Clarence, to whom he first belonged : for Lionel, third son to Ed- ward III., having by his wife the honor of Clare in the county of Thomond, was afterwards de- clared duke of Clarence, which dukedom after- wards escheating to Edward IV., he made this earl king at arms. His office is to marshal and dispose of the funerals of all the lower nobility baronets, knights, esquires, on the south side of the Trent; whence he is sometimes called sur- roy or south roy, in contradistinction to norroy.

CLARENDON, a county of South Carolina, in the most southern part of Camden district. It is bounded on the east by Georgetown district, on the west by Orangeburg, on the south by Charleston, and on the north by Salem county. It is thirty miles long, and thirty broad. A court is held in it quarterly.

CLARENDON, a township of the United States, in Rutland county, Vermont, on the Otter creek. Ir the west part of the town is a curious cave, the mouth of which is not more than two feet and a half in diameter, but at a depth of thirty-one feet and a half opens into a spacious room, twenty feet long twelve and a half wide, and eighteen or twenty feet high. The floor, sides, and roof, of this room are of solid rock, very rough and uneven, and the water is continually dropping through the top, forming stalactites of various forms.

Population of the town about

2000.

CLARENDON, a village three miles east of Sa- lisbury, where Henry II. summoned a council of the barons and prelates in 1164, who enacted ††he laws called the Constitutions of Clarendon ; and here were two palaces built by king John.

CLARENDON, CONSTITUTIONS OF, certain con- stitutions made in the reign of Henry II., A.D. 1 1 64, in a parliament held at Clarendon ; where- by the king checked the power of the pope and his clergy, and greatly narrowed the total exemp- tion they claimed from secular jurisdiction. See ENGLAND, HISTORY OF.

CLARENS, or CHATILLARD, a village of Switzerland, in the Pays de Vaud, celebrated as the principal scene of Rousseau's Eloise. It is delightfully situated, not far from Vevay, on an eminence, whose gentle declivity slopes gradually towards the lake of Geneva. It commands a view of that majestic body of water, its fertile borders, and the bold rocks and Alps of Savoy. The adjacent scenery consists of vineyards, fields of corn and pasture, and rich groves of oak, ash, and Spanish chestnut trees.

CLARE-OBSCURE, n. s., from Lat. clarus, bright, and obscurus. Light and shade in painting.

As masters in the dare-obscure With various light your eyes allure ; A flaming yellow here they spread, Draw off in blue, or change in red ; Yet from these colours, oddly mixed, Your sight upon the whole is fixed. Prior.

CLA'RET, n. s., Fr. clairet ; Goth, klar, signi- fied wine, and riod, red. French wine of a clear pale red color.

Red and white wine are in a trice confounded into claret. Boyle.

The claret smooth, red as the lips we press In sparkling fancy while we drain the bowl. Thomson.

The credulous hope of mutual minds is o'er, The copious use of claret is forbid too. So for a good old -gentlemanly vice I think I must take up with avarice. Byron.

CLA'RICORD, n.s. from clarus, and Lat. chorda. A musical instrument in form of a spinette, but more ancient. It has forty-nine

or fifty keys, and seventy strings.

CLARIFICATION. The substances usually employed for clarifying liquors, art. whites of fggs, blood, and isinglass. The two first are

used for such liquors as are clarified whilst boil- ing hot ; the last for those which are clarified in the cold, such as wines, &c. The whites of eggs are beat up into a froth, and mixed with the li- quor, upon which they unite with, and entangle, the impure matters that floated in it; and pre- sently growing hard by the heat, carry them up to the surface in form of a scum no longer disso- luble in the liquid. Blood operates in the same manner, and is chiefly used in purifying the brine from which salt is made. Great quantities of isinglass are used for fining turbid wines. For this purpose some throw an entire piece, about a quarter of an ounce, into a wine cask ; by degrees the glue dissolves, and forms a skin upon the surface, which at length subsiding, carries down with it the feculent matter which floated on the wine. Others previously dissolve the isinglass, and, having boiled it to a slimy consistence, mix it with the liquor, roll the cask strongly about, and then suffer it to stand to settle. Neumann ques- tions the wholesomeness of wines thus purified ; and assures us that he himself, after drinking only a few ounces of sack thus clarified, but not set- tled quite fine, was seized with sickness and vo- miting, followed by such a vertigo, that he could not stand upright for a minute together. The giddiness continued with a nausea and want of appetite for several days.

CLA'RIFY, v. a. & n. J Fr. clarifier. To

CLARIFICATION, n. s.) purify or clear any liquor ; to separate from feculencies or impuri- ties. To brighten; to illuminate. This sense is rare. To clear up ; to grow bright.

The apothecarries clarify their syrups by whites of eggs, beaten with the juices which they would clarify ; which whites of eggs, gather all the dregs and grosser parts of the juice to them ; and after, the syrup being set on the fire, the whites of eggs themselves harden, and are taken forth. Bacon.

Whosoever hath his mind fraught with many thoughts, his wits and understanding do clarify and break up in the discoursing with another ; he marshelleth his thoughts more orderly, he seeth how they look when they are turned into words.

Bacon' Essays.*

Liquors are, many of them, at the first, thick and troubled ; as muste, and wort : to know the means of accelerating clarification, we must know the causes of clarification. Bacon.

CLARIGATIO, in Roman antiquity, a cere- mony that always preceded a formal declaration of war. It was thus performed : first four heralds, crowned with vervain, were sent to demand sa – tisfaction for the injuries done the Roman state. These heralds taking the gods to witness that their demands were just, one of them, with a clear voice, demanded restitution within a limited time, commonly thirty-three days ; which being expired without restitution made, then the pater patratus, or prince of the heralds, proceeded to the enemies' frontiers, and declared war.

CLARII APOLLINIS NANUM, a temple and grove of Apollo, situated between Colophon and Lebedos, in Ionia ; called Claros by Thucydides and Ovid.

CLA'RION, n. s. Span, clarin; from Lat. clarus, loud. A trumpet ; a wind instrument of war.

And after te his palace he them brings, With shaums, aud trumpets, and with clarions sweet j And all the way the joyous people sings. Spenter,

Then ►►traight commands, that at the warlike sound Of trumpets loud, and clarions, be upreared The mighty standard. Milton's Paradise Lost.

Let fuller notes the applauding world amaze, And the loud clarion labour in your praise. Pope. The breezy call of incense breathing morn,

The swallow twittering from the straw-built shed, The cock's shrill clarion, or the echoing horn,

No more shall rouse them from their lowly bed.

Gray. No note the clarion of renown can breathe,

To alarm the long night of the lonely grave, Or check the headlong haste of time's o'erwhelming wave. Beattie.

CLARION has its tube narrower, and its tone acuter and shriller than that of the common trumpet. It is said that the clarion, now used among the Moors, and Portuguese, who bor- rowed it from the Moors, served anciently for a treble to several trumpets, which sounded tenor and bass.

CLARISSES, an order of nuns so called from their founder St. Clara or St. Clare. See CLARE, ST.

CLA'RITY, n. s. Fr. clarte ; Lat. claritas. Brightness ; splendor.

A light by abundant clarity invisible; an under- standing which itself can only comprehend.

Sir Walter Raleigh.

Man was not onlydeceivable in his integrity, but the angels of light in all their clarity.

Browne's Vulgar Errours.

CLARK (John), a useful critic and commen- tator of the last century, was the master of a grammar-school at Hull in Yorkshire, where he died May 1734. His publications are : An Essay on the Education of Youth in Grammar- Schools ; An Essay on Study, to which is sub- ;oiued an arranged catalogue of books ; the Foundation of Morality considered ; On Moral Religion; An Examination of Middleton's An- swer to Christianity as old as the Creation; An Introduction to making Latin ; and editions of several Latin authors with Translations.

CLARKE (Samuel), D.D. a preacher and wri- ter of considerable note in the reign of Charles II. was, during the.inter-regnum, and at the time of the ejection, minister of St. Bennet Fink, in London. In November, 1660, he, in the name of the presbyterian ministers, presented an ad- dress of thanks to the king for his declaration of liberty of conscience. He was one of the com- missioners of the Savoy, and behaved on that occasion tvith great prudence and moderation. He attended the church as a hearer and commu- nicant ; and was much esteemed by all that knew him for his probity and industry. The most va- luable of his numerous works are said to be his Lives of the Puritan Divines and other persons of note, twenty- two of which are printed in his Martyrology ; the rest are in his Lives of sundry Eminent Persons in this latter Age, folio, and in his Marrow of Ecclesiastical History, ip folio and 4to. He died in 1680.

CLARKE (Samuel), D.D., a very celebrated English divine, was the sou of Edward Clarke, Esq., alderman and M.P. of Norwich. He was born at Norwich, October llth, 1675, and in-

structed in classical learning at the fiee school of that town. In 1691 he removed to Caius Col- lege, Cambridge, where his abilities soon began to display themselves. Though the Cartesian was at that time the established philosophy of the University, Clarke quickly made himself master of the new system of Newton ; and, in order to his first degree of arts, performed a public exer- cise in the schools upon a question taken from it. He contributed much to the establishment of the Newtonian philosophy by an excellent translation of Rohault's Physics, with notes, which he finished before he was twenty-two years of age. This work was first printed in 1697, 8vo. There were four successive editions of it, in every one of which improvements were made , especially in the last, in 1718, which was trans- lated by Dr. John Clarke, dean of Sarum, the author's brother, and published in two volumes 8vo. He afterwards turned his thoughts to di- vinity, and studied the Old Testament in Hebrew, the New in Greek, and the primitive Christian writers. Having taken orders, he became chap- lain to bishop Moore, who was ever after his friend and patron. In 1699 he published Three Practical Essays on Baptism, Confirmation, and Repentance, and Some Reflections on that part of a Book called Amyntor, or a Defence of Mil- ton's Life, which relates to the Writings of the Primitive Fathers, and the Canon of the New Testament. In 1701 he published A Paraphrase upon the Gospel of St. Matthew; which was followed, in 1702, by the Paraphrases upon the Gospels of St. Mark and St. Luke, and soon after by a third volume, upon St. John. They were afterwards printed together in two volumes 8vo. ; and have since passed through several editions. Bishop Moore now appointed him to the rectory of Drayton, near Norwich, and pro- cured for him a parish in that city. In 1704 he was appointed to preach Boyle's lecture, and the subject he chose was, The Being and Attributes of God. In this he gave such high satisfaction, that he was appointed to the same lecture the next year ; when he chose for his subject, The Evidences of Natural and Revealed Religion. These sermons were first printed in two distinct volumes, the former in 1705, the latter in 1706. They have since been united in one volume, under the general title of A Discourse concern- ing the Being and Attributes of God, the Obli- gations of Natural Religion, and the Truth and Certainty of the Christian Revelation, in answer to Hobbes, Spinoza, the author of the Oracles of Reason, and other Deniers of Natural and Re- vealed Religion. Clarke having endeavoured, in the first part of this work, to show

that the being of a God may be demonstrated by argu- ments, a priori, incurred the censure of Pope ir►► the Dunciad. But the merit of this work is un- doubtedly great. The defence, in particular, of the sacred original and authority of Christianity ►► is admirably conducted. In 1706 he published A Letter to Mr. Dodwell; wherein all the argu- ments in his epistolary discourse against the im- mortality of the soul are particularly answered. Clarke's letter to Dodwell was soon followed by four defences of it in four several letters to him, containing Remarks on a pretended Demonstra

tion of the Immateriality and Natural Immor- tality of the Soul, &c. They were afterwards all printed together, and the Answer to Toland's Amyntor added to them. In the midst of all these labors he found time to show his regard to mathematical and physical science ; and his ca- pacity for these studies was not a little improved by the friendship of Sir Isaac Newton, at whose request he translated his Optics into Latin, in 1706. Sir Isaac was so highly pleased with this version, that he presented him with the sum of ►►500. This year also, bishop Moore, who had long formed a design of fixing him more conspi- cuously, procured for him the rectory of St. Bennet's, London ; and soon after carried him to court, and recommended him to the favor of queen Anne. She appointed him one of her chaplains in ordinary, and presented him to the rectory of St. James's, Westminster, in 1709. Upon his advancement to this station he took the degree of D.D. when the public exercise which he performed for it at Cambridge was much admired. The questions he maintained were : 1 . Nullum fidei Christianae dogma, in sacris Scripturis traditum, est rectae rationi dis- sentaneum, i. e. No article of the Christian faith, delivered in the Holy Scriptures, is disagreeable to right reason. 2. Sine actionum humanarum libertate nulla potest esse religio ; that is, With- out the liberty of human actions there can be no religion. The same year he revised and cor- rected Whiston's translation of the Apostolical Constitutions into English. In 1712 he pub- lished a beautiful edition of Caesar's Commen- taries, adorned with elegant sculptures. It was printed in folio; and afterwards, in 1720, 8vo. It was dedicated to the duke of Marlborough. In the annotations he selected the best and most judicious in former editions, interspersed with corrections of his own. The same year, 1712, Dr. Clarke published his celebrated book entitled, The Scripture Doctrine of the Trinity, &c. divided into three parts. The first is a collection and explication, on the Arian hypothesis, of all

the texts in the New Testament, relating to the doctrine of the Trinity ; in the second the doctrine is set forth at large, and explained in particular and distinct propo- sitions ; and in the third, the principal passages of the liturgy of the church of England, relating to the doctrine of the Trinity, are considered. This work naturally made its author obnoxious to the ecclesiastical powers, and his book was complained of by the Lower House of Convo- cation. The doctor drew up a preface, and afterwards gave in several explanations, which seemed to satisfy the Upper House ; at least the affair was not brought to any issue, the members appearing desirous to prevent dissentions. But shortly afterwards his alteration of the doxology in the singing psalms at St. James's excited still more animadversion. The bishop of London prohibited the use of the altered version in his diocese. In 1715 and 171d he had a dispute with the celebrated Leibnitz, relating to the prin- ciples of natural philosophy and religion ; and a tollection of the papers which passed Between mem was published in 1717. About this time, he was presented by lord Lechmere, the chan-

cellor of the duchy of Lancaster, to the master- ship of Wigston's hospital in Leicester. In 1724 he published seventeen much admired sermons, in 1727, upon the death of Sir Isaac Newton, he was offered by the court the place of master of the mint, worth from ––1200 to ––1500 a year. But this, being a secular preferment, he abso- lutely refused. In 1728 was published, a Letter from Dr. Clarke to Mr. Benjamin Hoadly, F.R.S. occasioned by the controversy, relating to the proportion of Velocity and Force in Bodies in motion ; and printed in the Philosophical Trans- actions, No. 401. In 1729 appeared the first twelve books of Homer's Iliad, in 4to. The Latin version is almost entirely new ; and annotations are added to it. The year of this publication was the last of this great man's life. Though not robust, he had always enjoyed a firm state of health, without any indisposition that confined him, except the small pox in his youth; till, on Sunday, May 1 1 th, 1 729, going out in the morn ing to preach before the judges at Serjeant's Inn, he was seized with a pain in his side, which quickly became so violent, that he was obliged to be carried home. He went to bed, and thought himself so much better in the afternoon, that he would not suffer himself to be blooded. But the pain returning violently about two the next morning, he lingered until Saturday, the seven- teenth, when he died, in his fifty-fourth year. Soon after were published, from his original MSS. by his brother, Dr. John Clarke, An Exposition of the Church Catechism, and ten volumes of sermons, in 8vo. Few discourses are more ju- dicious or equally instructive. Three years after the doctor's

death als►► appeared in 4to. the Last Twelve Books of the Iliad. Dr. Clarke married Catharine, the daughter of the Rev. Mr. Lockwood, rector of Little Missingham, in Nor- folk, with whom he lived happy till his death ; and by whom he had seven children. His widow received a pension of ►►100 per annum from queen Caroline. As a critic, particularly upon Homer, as a classical scholar, and an acute reasoner, Dr. Clarke's name will be long revered : in private life he is said to have been a most up- right, kind, and amiable man ; but his leading theological sentiments were clearly not those of the church in which he remained.

CLARKE (William), an English divine, was born at Haghmon-abbey, in Shropshire, 1696; and after a grammar education at Shrewsbury School, was sent to St. John's College, Cam- bridge, of which he was elected fellow, January 17th, 1716; B. A. 1731, and M. A. 1735. He was presented by archbishop Wake, in 1724, to the rectory of Buxted, in Sussex, at the recom- mendation of Dr. Wotton, whose daughter he married. In 1738 he was made prebendary and residentiary of the cathedral church of Chichester. Some years before this he had given a specimen of his literary abilities, in a preface to Dr. Wotton's Leges Wallise Ecclesiasticse et Civiles Hoeli Boni, et Aliorum Walliae Principum ; or Ecclesiastical and Civil Laws of Howel Dha, and other princes of Wales. But Mr. Clarke's chief work was The Connexion of the Roman, Saxon, and English Coins ; deducing the An- tiquities, Customs, and Manners of each People

to Modern Times; particularly the Origin of Feudal Tenures, and of Parliaments ; illustrated throughout with Critical and Historical Remarks on various Authors, both Sacred and Profane. It was published in one vol. 4to. in 1767. Mr. Clarke's last promotions were the chancellorship of the church of Chichester, and the vicarage of Amport, in 1770. He died October 21st, 1771. He had resigned, in 1768, the rectory of Buxted to his son Edward. Though antiquities were the favorite study of Mr. Clarke, he was a secret, and by no means an unsuccessful, votary of the muses. Perhaps there are few better epigrams in our language than the following, which he composed on seeing the words Domus Ultima inscribed on the vault belonging to the dukes of Richmond, in the cathedral of Chi- chester :
►►► ►►►

Did he, who thus inscribed the wall, Not read, or not believe St. Paul, Who says there is, where'er it stands, Another house not made with hands ? Or, may we gather from these words, That house is not a House of Lords ?

*CLARKE (Henry), LL.D., a professor of ma- thematics, was born at Salford, near Manchester, and educated as a land surveyor. On the for- mation of the Manchester Philosophical Society, his Lecture in Natural and Experimental Philo- sophy first brought him before the public. He removed in 1802 to the Military College at Mar- low, Buckinghamshire, as mathematical professor i*iere, and published various treatises, viz. An Essay on the Usefulness of Mathematical Learning ; a Dissertation on Perspective, 8vo. ; another On Circulating Numbers, 8vo. ; and a third On Stenography ; Tabulae Linguarum, or Grammars of most of the Modern European Languages ; The Seaman's Desiderata, or Rules for Finding the Longitude at Sea; an Introduc- tion to Geography, 12mo. ; Virgil Revindicated^ in answer to bishop Horsley, 4to. ; Rules for Clearing the Lunar Distances from a Star or the Sun; and a translation from the Latin, entitled, The Summatim of Series, 4to. He died at Is- lington, April 30th, 1818.*

CLARKE (Edward Daniel,) LL.D., a cele- brated divine, and traveller of modern times, and professor of mineralogy in the university of Cambridge, was the second son of the Rev. Ed- ward Clarke, and born in 1767. He was entered at Jesus College, Cambridge, of which society he became a fellow in 1794, and took the degree of A. M. He accompanied lord Berwick soon after- wards to Italy, and in 1799 set out with his friend Mr. Cripps on a tour through Denmark, Sweden, J upland, Finland, Russia, Tartary, Circassia, Asia Minor, Syria, Palestine, Greece, and Turkey; returning in 1802 through Germany and France, and enriched the public libraries and institutions of his alma mater by a variety of contributions, among which was a MS. of Plato's works, and a noble statue of ihe Eleusinian Ceres. The British Museum was indebted to him also for the acqui- sition of the sarcophagus of Alexander the Great, which he discovered in the possession of the French troops in Egypt, and procured to be surrendered to our army. He commenced at

Cambridge, in 1806, a course of lectures on mi- neralogy, and in 1808 obtained the endowment and a professorship for the encouragement of that science. Soon after his return he was pre- sented to the rectory of Harlton in Cambridge- shire, and discharged with great assiduity hia duties as a parish priest. He became even emi- nent as a preacher and public speaker ; and was conspicuous as

a warm advocate of the esta- blishment of a Bible Society at Cambridge. His works are : Testimony of Different Authors respecting the Colossal Statue of Ceres, placed in the Vestibule of the Public Library at Cam- bridge, with an Account of its removal from Eleusis, 8vo. 1801-3 ; The Tomb of Alexander, a Dissertation on the Sarcophagus brought from Alexandria, and now in the British Museum, 4to, 1805; A Methodical Distribution of the Mineral Kingdom, folio, 1807 ; A Letter to the Gentlemen of the British Museum, 4to, 1807; A Description of the Greek Marbles brought from the Shores of the Euxine, Archipelago, and Mediterranean, and deposited in the Vestibule of the University Library, Cambridge, 8vo. 1809 ; Travels in various Countries of Europe, Asia, and Africa ; part I. containing Russia, Tartary, and Turkey, 4to, 1810; Part II. containing Greece, Egypt, and the Holy Land, section 1, 4to, 1812, section 2, 1814; and a Letter to Heibert Marsh, D. D. in Reply to Observations in his Pamphlet on the British and Foreign Bible Society, 8vo. 1811. Dr. Clarke died March 9th, 1821, in Pall Mall, and was buried on the 18th with public honors in the chapel of Jesus College; Cambridge.

CLARKE (Adam), LL. D , F. S. A., and M. R. I. A., an eminent divinity scholar, and also conspicuous for the extent of his attainments in oriental languages and literature. He was born in the town of Moyheg, in the county of Londonderry, in Ireland, in what year is not exactly known ; and, at the age of fourteen, was placed by his parents with Mr. Bennet, manu- facturer of linen, a trade the most lucrative and respectable in that part of the kingdom. The comprehensive mind of this future great man did not bear either long or patiently the restriction to a single object, however honorable ; and, returning home to the care and instruction of a pious and excellent mother, he was shortly after invited to enter as a pupil of Kingswood school, by the amiable founder of Methodism, John Wesley. This was after his own heart ; and from this date he appears to have sur- rendered himself, in the most entire manner, to the cultivation of his mind, for the sole object of pursuing his pious and then arduous ministry. Here, too, he laid the foundation of that great knowledge he subsequently erected in ancient classics and oriental languages, in which he was his own instructor ; and it was during his eon- tinuance at Kingswood that he first became possessed of a Hebrew grammar, which he pur- chased from the savings of a very slender allow- ance. His literary ambition, and the manly spirit with which he pursued the acquisition of knowledge, are strongly marked in the motto he selected for his guidance while he was yet a youth ; it was ××× " Through desire, a man;*

naving separated himself, seeketh and inter- meddleth with all wisdom." After a residence of no great length at Kingswood, he was visited by John Wesley, who examined him minutely upon doctrinal points, and plans of preaching, and, being satisfied with the account young Clarke was able to give of himself, desired him to be seated. For some minutes silence was observed by both; at length Mr. Wesley ad- dressed himself to Clarke, saying, are you willing to become an itinerant preacher ? To which he replied, " I am willing if you think me worthy." All persons again observed profound silence, while Mr. Wesley, who, for a time, sat motionless and with closed" eyes, rising up and walking over to Clarke, laid his hand upon his head, and repeated these remarkable words ??? " May God Almighty out of heaven bless thee, my dear lad, and make thee useful in thy day and generation ! Hold thyself in readiness, and in a few weeks I hope to appoint thee to a circuit." This trans- action occurred when the subject of this memoir was but nineteen years of age. Having entered upon his ministry, his abilities at once discovered themselves ; his chapels were constantly crowded to excess, and he obtained a character for per- suasiveness, clearness, and sound learning, which never suffered any abatement or detraction to the latest occasion that he ever addressed a congre- gation. In the hour of danger he was not found deficient. While on a mission to the Norman Isles, his doctrines incurred the dis- pleasure of the populace, who, savagely enough, hung a halter round his neck, and in this manner drummed him out of their town, cautioning him against any future publication of his doctrines there. But Clarke felt that he had set his hand to the plough, and, almost immediately returning to the duty of his calling, by his courage and self-devotion, converted the revilings of his enemies into admiration of his character. As a writer, he fills an honorable niche. His first essay was "A Dissertation on the Use and Abuse of Tobacco." This was followed by a work of great labour and research, called "A Bib- liographical Dictionary, in 6 vols." To these are to be added, " The Bibliographical Miscellany ;" "An Abridgment of Baxter's Christian Di- rectory ;" " Claude Fleury's History of the Ancient Israelites ;" " The Succession of Sacred Literature ;" " Shuckford's Sacred and Profane History, connected with Bishop Clayton's Stric- tures ;" " A Translation of Sturm's Reflections ;" "Clavis Biblica;" "Memoirs of the Wesley Family," and various Sermons. But the pe- destal upon which his fame, as a man of eru-

dition, is likely to find a permanent position, is his Commentary on the Bible. The variety and extent of learning accumulated and applied in Clarke's annotations excite wonder as the work of an individual ; and the commentator has some- where mentioned, in speaking of this great la- bour, " thus forty years of my life have been consumed." Dr. Clarke was associated with the public commissioners .in arranging the re- cords of our country, and to him was confided the care of bringing out a new edition of Rymer's Foedera, the publication of two parts of which he superintended. Having passed a long and useful life, in which he refused, frequently, the

good things of this world, and neglected all avenues to wealth or worldly aggrandisement ; distinguished as a preacher and scholar, and obtaining an interest even from the circumstance of being one of those who caught a spark from the bright mind of Wesley, he died at the house of his friend, Mr. Hobbs, at Bayswater, of the cholera morbus, on the 26th day of August, 1832, in the seventy-second year of his age, and was interred in the burial-ground adjoining the Wesleyan chapel, City Road, where the remains of his friend and patron, John Wesley, had been deposited.

CLARKSBURG, a town of Virginia, the ca- pital of Harrison county, seated on the east side of the Monongahela, forty miles above Morgan- town, and nine north-west of Richmond.

CLARKSVILLE, a town of the United States, in the south-western territory, and county of Tennessee, pleasantly situated on the east side of Cumberland, at the mouth of Red River. It has a court-house, in which a county-court is held quarterly. It is forty-five miles north-west of Nashville, 220 west by north of Knoxville, and 940 west by south of Philadelphia.

CLARKSVILLE, a town in the north-western ter- ritory of the United States, seated on the north side of the Ohio, within view of Louis dlle, a mile below the Rapids, and forty-five west of Frankfort.

CLARUS, in ancient geography, a town of Ionia, famous for an oracle of Apollo, thence named Clarius. It was built by Manto, daugh- ter of Tiresias, who fled from Thebes after it had been destroyed by the Epigoni.

CLA'RY, n. s. Lat. herminium. An herb.

CLARY -WATER, a cordial, composed of brandy, sugar, clary-

flowers, and cinnamon, with a little ambergris dissolved in it. This water is rendered either purgative or emetic, by adding resin of jalap and scammony, or crocus metal- lorum. Some make clary water of brandy, juice of cherries, strawberries, and gooseberries, sugar, cloves, white pepper, and coriander seeds, infused, sugared, and strained.

CLASH, v. n., v. a. fc n. s. Teut. klats ; Belg. klits ; from Lat. collido. Opposition, collision, or the sound proceeding from it. To act with opposite power or contrary direction; to con- tradict; to oppose.

CLASMIUM, in natural history, a genus of fossils, of the class of gypsums. They are of a soft texture, and of a dull opaque look, being composed, as the other gypsums, of irregularly arranged flat particles. The name is derived from the flaky small particles of which they are composed. There is only one species, of a to- lerably regular and even structure, though very coarse and harsh to the touch. . It is of a very lively and beautiful red color, and is found in thick roundish masses, which, when broken, are seen composed of irregular arrangements of flat particles, and emulate a striated texture. It will neither give fire with steel nor ferment with acids ; but calcines very easily, and affords a very valuable Paris plaster, as do all the purer gyp- sums. It is common in Italy, and is greatly es- teemed there ; it is also found in some parts of England. See FLOUR SPA.

CLASP,n.s.&u.a. \ Goth. Mas, klops; Sax.

CLA'SPER, n. s. ►► clypps, from clyppan, to

CLA'SP-KNIFE, n. s. j embrace. A hook to

hold anything close, as a book or garment. To

enfold ; to shut up ; to clina; to ; to catch, hold,

or embrace ; to enclose. Clasper, the tendrils or

threads of creeping plants, by which they cling

to other things for support. A clasp-knife is

a knife which folds into the handle.

CLASSIC, or CLASSICAL, is chiefly applied to authors read in the classes at schools. This term is said to owe its origin to Servius Tullius, who, in order to make an estimate of every per- son's estate, divided the Roman people into six bands, which he called classes. The estate of the first class was not to be under ––200, and these by way of eminence were called classici, classics : hence authors of the first rank came to be called classics, all the rest being said to be infra classem.

CLA'SSICK, n. s. & adj. \ Lat. classicus. Of

CLA'SSICAL, adj. $ the first order or

rank ; applied to literature it relates to authors

first in order of time, and therefore to the ancient,

and to first in ability and excellence.

CLASSIC UM, in antiquity, the alarm for battle, given by the Roman generals ; and sounded by martial music throughout the army.

CLA'SSIS, n. s. ˆ Lat. classis ; a rank or

CLASS, n. s. & v. a. > order of persons; a set of

CLA'SSIFY, v.) beings or things ranged

in distribution under some common denomi- nation. The verb is applied to the accomplish- ment of this ; to range according to the respective ranks of different persons or things ; or according to some stated method of distribu- tion.

He had declared his opinion of that classis of men, and did all he could to hinder their growth.

Clarendon.

Segrais has distinguished the readers of poetry, according to their capacity of judging, into three classes. Dryden.

Among this herd of politicians, any one set make a very considerable class of men.

Addison's Freeholder. Whate'er of mongrel, no one class admits

A wit with dunces, and a dunce with wits. Pope.

I considered that, by the classing and methodising such passages, I might instruct the reader.

Arbuthnot on Coins.

We shall be seized away from this lower class in the school of knowledge, and our conversation shall be with angels and illuminated spirits.

Watts on the Mind.

There is a class of men, that one has sometimes the misfortune to meet with, who affect what they call a bluntness of manners, and value themselves on speaking their minds on all occasions, whether people take it well or ill. Beattie.

By many who live within the sound of Bow bells, the internal wonders of St. Paul's or the Tower may not be thought in the least degree interesting. Yet how justly would such persons be classed with tbe in- curious of -<►►sop. Monro.

CLATTER, v. a. v. n. &c n. s. > Goth, klutr ;

CLA'TTERJNG, adj. S Svted. klutter ;

Bel. klater; Sax. kkother, cleadur. To make a tumultuous confused noise, generally by knocking two sonorous bodies frequently toge-

ther; applied to fast and idle talking, where many persons speak together; a clatter is a clash, often repeated with great quickness, and seems to convey the idea of a sound sharper and shriller than rattle.

And on the morwe, when the day gan spring Of hors and harneis noise and clattering Ther was in the hostelries all aboute ►►► And to the paleis rode ther many a route Of lordes, upon stedes and palfreis.

Chaucer. Canterbury Tale.*

The ringes on the temple dore that honge, And eke the dores, clattereden full fast, Of which Arcita somewhat him agast. Id.

Here is a great deal of good matter

Lost for lack of telling ;

Now, siker, I see thou do'st but clatter;

Harm may come of melling. Spenser.

By this great clatter, one of greatest note Seems bruited. Shukspeare.

I only with an oaken staff will meet thee, And raise such outcries on thy clattered iron. That thou oft shall wish thyself at Gath. Milton,

Draw next a pair of tables opening then The House of Commons clattering like the men.

Maroell.

Down sunk the monster-bulk, and pressed the

ground ;

His arms and clattering shield on the vast body sound.

Dryden.

Now the sprightly trumpet from afar Had roused the neighing steeds to scour the fields, While the fierce riders clattered on their shields. Id.

I have seen a monkey overthrow all the dishes and plates in a kitchen, merely for the pleasure of seeing them tumble, and hearing the clatter they made in their fall. Swift.

Beneath the clattering iron's sound The caverned echoes wake around.

Byron. The Giaour.

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CLAVARIA, club-top, in botany, a genus o the cryptogamia class of plants, and of the order of fungi. The fungus is smooth and oblong; simple or branched ; seeds dispersed over the whole surface, or collected in tubercles opening at top. Species thirty-seven, of which some are simple, and others, about a third part, branched. The chief are, 1. C. hemotades, or the oak leather club-top, exactly resembles

tanned leather, ex- cept that it is thinner and softer. It is of no determinate form. It grows in the clefts and hol- lows of old oaks, and sometimes on ash in Ireland, and in some places of England, &c. In Ireland it is used to dress ulcers, and in Virginia to spread plasters upon, instead of lea- ther. 2. C. militaris, and one or two other species, are remarkable for growing only on the head of a dead insect in the nympha sxate.

CLAVARIUM, in antiquity, an allowance made to Roman soldiers, for furnishing nails to secure their shoes with. They raised frequent mutinies, demanding largesses of the emperors under this pretence.

CLA V ATA VESTIMENTA, in antiquity, habits adorned with purple clavi, which were eithe^ broad or narrow. See CtAVUS.

CLA'VATED, adj. Lat. clavatus. Knobbed ; set with knobs.

These appear plainly to have been clarated spikes of some kind of echinus ovarius. Woodward on Fistilt.

CLAUDA, a small island near Crete, which Paul and his company passed, in their voyage to Rome. Acts xxvii. 16. It is now called Gozzo.

CLAUDE (John), a French protestant divine, born in the provine of Agenois, in 1690. Messrs, de Port Royal using their utmost endeavours to convert M. deTurenne to the catholic faith, pre- sented him with a piece calculated to that end, which his lady engaged Claude to answer ; and his performance gave rise to the most famous controversy that was ever carried on in France between the Roman Catholics and Protestants. On the revocation of the edict of Nantes, he re- tired to Holland, where he met with a kind re- ception, and was honored with a considerable pension by the prince of Orange. He died in 1687 ; and left a son, Isaac Claude, whom he lived to see minister of the Walloon church at the Hague, and who published se- veral of the excellent works of his deceased fa- ther.

CLAUDE OF LORRAIN, or CLAUDE CELEB, a ce- lebrated landscape painter, and a striking example of the efficacy of industry to supply, or call forth, genius. Claude was born in 1600, and put apprentice to

a pastry-cook ; he after- wards rambled to Rome to seek a livelihood ; but, being unacquainted with the language, no- body employed him. He at last fell in with Augustine Trasso, who hired him to grind his colors. Trasso, hoping to make him serviceable in some of his greatest works, taught him by degrees the rules of perspective and the elements of design. Claude at first did not know what to make of those principles of art; but being encouraged, and not failing in application, he came at length to understand them. He exerted his utmost industry to explore the true natural principles of painting, for which purpose he studied in the open fields ; where he often continued from sun-rise till the dusk of the evening compelled him to withdraw. It was his custom to sketch whatever he thought beautiful or strik- ing; and every curious tinge of light, on all kinds of objects, he marked in his sketches with a similar color; from which he perfected his landscapes with so much nature, and gave them such an appearance of truth, as proved superior to any artist that ever painted in that style. Whatever struck his imagination, while he observed nature abroad, it was so strongly impressed on his memory, that on his return to his work he never failed to make the happiest use of it. His skies are full of lustre, and every object is pro- perly illumined. His distances are admirable, and in every part there is a delightful union and harmony. His invention is pleasing, his coloring delicate, and his tints have such an agreeable sweetness and variety, as have been but imper- fectly imitated by the best subsequent artists, but were never excelled. He gave an uncom- mon beauty to his finished trees by glazing ; and in his large compositions, which he painted in fresco, he was so exact that the distinct species of every tree might readily be distinguished. As to his figures, they were very indifferent ; and he was so conscious of his deficiency in this respect that he usually engaged other artists who were

eminent to paint them for him, particularly Courtois and Philip Laura. His pictures are now very rare, especially such as are undamaged ; no price is thought superior to their merit. To avoid a repetition of the same subject, and to detect such copies of his works as might be in- jurious to his fame, by being sold for original it was his custom to draw, in a paper book, the designs of all those pictures which were trans- mitted to different countries ; and on the back of the drawings, he wrote the name of the per- son who had been the purchaser. That book which he titled Libro de Verita, was lately in the possession of the duke of Devonshire.

CLAUDE (St.), a town of France, in the depart- ment of Jura, and ci-devant province of Franche Compte, seated among the mountains on the river Lisson. In this town are many fine public fountains.

Population 3600. It is twenty-eight miles north-west of Geneva.

CLAUDE (St.), a high mountain of France, in the department of Jura. It forms a part of mount Jura, and affords a fine prospect of Swit- zerland and Mont Blanc, the lake and town of Geneva, and the Pays de Vaud.

CLA'UDENT, adj. Lat. claudens. Shutting ; enclosing ; confining.

CLAUDIA, a vestal virgin at Rome, who, being suspected of unchastity, is said to have been cleared from that imputation in the follow- ing manner ; the image of Cybele being brought out of Phrygia to Rome in a barge, and it hap- pening to stick so fast in the river Tyber that it could not be moved, she tying her girdle, the badge of chastity, to the barge, drew it along to the city, which a thousand men were not able to do.

CLAUDIA AQUA, or AQUA APPIA, water con- veyed to Rome by a canal or aqueduct of eleven miles in length, the contrivance of Appius Clau- dius the censor, and the first structure of the kind, in the year of Rome 441.

CLAUDIA LEX, the Claudian law, in antiquity. Of these there were several ; such as, 1 . De Comitiis, enacted by M. Claudius Marcellus, A. U. C. 702. It ordained, that at public elec- tions of magistrates no no;ce should be taken of the votes of such as were absent. 2. De Usura, which forbade people to lend money to minors on condition of payment, after the decease of their parents. 3. De Negotiatione, by Q. Clau- dius the tribune, 535. It forbade any senator, or father of a senator, to have any vessel con- taining above 3OO amphorae, for fear of their engaging themselves in commercial schemes. It also prohibited the same thing to the scribes and the attendants of the questors, as it was naturally supposed that people, who had any commercial connexions, could not be faithful to their trust, nor promote the interest of the state. 4. A law enacted A.U.C. 576, to permit the allies to re- turn to their respective cities, after their names were enrolled.. Liv. 41. c. 9. 5. Another to take away the freedom of the city of Rome from the colonists which Czesar had carried to Nori- comum.*

CLAUDIA VIA, or CLODIA VIA, a road of an- cient Rome, which, beginning at the Pons Mil- vius, joined the Flaminia, passing through

Etruria, on the south side of the Lacus Seban- tinus, and striking oft" from the Cassia, and leading to Lucca : large remains of it are to be seen above Bracciano.

CLAUDIANUS (Claudius), a Latin poet, who flourished in the fourth century, under Theo- i ;us, Arcadius and Honorius. He came to Rome A. D. 395, when he was about thirty years old ; and insinuated himself into Stilicho's favor ; who, though a Goth by birth, was so considerable a person under Honorius that he maybe said for many years to have governed the western empire. Stilicho afterwards fell into disgrace and was put to death ; and it is supposed that the poet was involved in the misfortunes of his patron ; but he rose afterwards to great favor ; and obtained several honors both civil and military. There are a few little Christian poems on sacred sub- jects, which have been ascribed by some critics to Claudian ; but St. Austin, who was contem- porary with him, expressly says that he was a Heathen.

To CLA UDICATE, v. n. Lat. claudico. To halt ; to limp.

❖❖❖ CLAUDICA'TION, n. s. from claudicate. The act or habit of halting.

CLAVE, the preterite of cleave. See CLEAVE.

CLAUDIUS (Appius), a Sabine by birth, one of the principal inhabitants of Regillum. His merit having drawn the envy of his fellow citizens upon him, he retired to Rome with all his family. He was admitted into the senate, and was made consul, with Publius Servilius Priscus, A. U. C. 258 : but he was hated by the plebeians, being an austere opposer of their cla- mors and seditions. The Claudian family con- tinued long one of the most illustrious of the patrician families in Rome ; and several in suc- cession of the name of Appius supported the same stern aristocratic character, that distinguished their first founder.

CLAUDIUS (Caius). See CARTHAGE.

CLAUDIUS I. emperor of Rome. See ROME, HISTORY OF.

CLAUDIUS II. (Flavius), surnamed Gothicus, signalised himself by his courage and prudence under Valerian and Galienus ; and on the death of the latter was declared emperor, A. D. 268* He put to death Aureolus, the murderer of Gali- enus; defeated the Germans; and in 296 marched against the Goths, who ravaged the empire with an

army of 300,000 men, which he at first ha- rassed, and the next year entirely defeated ; but a contagious disease, which had spread through that vast army, was introduced into that of the Romans ; and the emperor himself died of it a short time after, aged fifty-six.

CLA'VELLATED, adj. low. Lat. davellatus. Made with burnt tartar ; a chemical terrr-.

Air, transmitted through clavellated ashes into an exhausted receiver, loses weight as it passes through them. Arbuthnoi.

CLA'VER, n. s. Sax. cla? nert pynt. This is now universally written clover, though not so pro- perly. See CLOVER.

CLAVERACK, a populous town of NewYork, the capital of Columbia county, pleasantly seated en a large plain about six miles east of Hudson, VOL. V,

near the creek. It has a Dutch church, and a court-house, in which courts of common-pleas and general sessions are held quarterly. The township contains an area of seventy square miles, and between 3000 and 4000 inhabitants.

CLAVICHORD, and CLAVICITHERIUM, two musical instruments used in the sixteenth century. They were of the nature of the spinet, but of an oblong figure The first is still used by the nuns in convent ►► : an J, that the practitioners may not disturb the sisters in the dormitory, the strings are muffled with small bits of fine woollen cloth.

CLA'VICLE, ra.s.Lat. clavicula. The collar- bone.

Some quadrupeds can bring their fore feet unto their mouths ; as most that have clavicles, or collar- bones. Brown.

A girl was brought with angry wheals down her neck, towards the clavicle. Wiseman's Surgery.

CLAVICLE, in anatomy, the collar-bone. See ANATOMY,

►►► CLAV YC YMBALUM, in antiquity, a musical instrument with thirty strings. Modern writers apply the name to our harpsichords.

CLAVIS, Latin, properly signifies a key; and is sometimes used in English to denote an ex- planation of some obscure passage of any book or writing.

CLA VI, VESTIUM, were flowers or studs of purple, interwoven with or sewed upon the gar- ments of knights or senators ; the former used them narrow, the latter broad.

CLAVIUS (Christopher), a German Jesuit, born atBamberg, who excelled in the knowledge of the mathematics, and was one of the chief persons employed to rectify the calendar ; the defence of which he also undertook against those who censured it, especially Scaliger. He died at Rome in 1618, aged seventy-five. His works have been printed in five volumes folio ; the principal of which is his commentary on Euclid's Elements.

CLAUSE, n. s. Lat. clausula. A sentence ; a single part of a discourse ; a subdivision of a larger sense ; so much of a sentence as is to be construed together ; an article, or particular sti- rmlation.

To wise is he to doen so grete a vice j Ne als I n'il him never so cherice, That he shall make a vaunt, by juste cause ; He shall me never bind in soche a clause.

Chaucer. Troilus and Cresteide.

God may be glorified by obedience, and obeyed by performance of his will, although no special clause or sentence of Scripture be in every such action se- before men's eyes to warrant it. Hooker.

The clause is untrue concerning the bishop.

Id.

WLen, after his death, they were sent both to Jew! and Gentiles, we find not this clause in their commis. sion. South.

But when he came the odious clause to pen That summons up the parliament agen, His writing-master many times he ban'd, And wished, himself, the gout to seize his hand.

Marvdl,

CLAUSENBURG, the capital of Transyl- vania, and of a county of this name, is situated

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en Cue Little Szamos River in a beautiful valley, surrounded by mountains. It contains a noble public square, and several elegant streets and churches. The public gardens and walks are also worth notice. The Old Town was fortified by the Romans, and formed the sixth colony of the emperor Trajan, whose name is still to be seen on one of the gates. Population in 1797, 14,522. On 12th of August, 1798, the greater part of the town was destroyed by fire, but it has since been rebuilt. 145 miles N. N. E. of Bel- grade, and 225 E. S. E. of Vienna.

CLAUSTHAL, a considerable town of Han- over, in the Upper Hartz, near Zellerfeld. Here is the silver mint for the Hanoverian part of the Hartz, the value of the coinage of which is yearly ►►100,000. The mine-office, two churches, a public school, and orphan house, are respectable buildings. The population, 8000, are almost all miners, twenty-five miles north-east of Nord- heim.

CLATJSTRAL, adj. from Lat. claustrum. Re- lating to a cloister, or religious house.

Claustral priors are such as preside over monas- teries, next to the abbot or chief governour in such religious houses. Ayliffe.

CLA'USURE, n. s. Lat clamura. Confine- ment ; the act of shutting ; the state of being shut.

In some monasteries the severity of the clausure is hard to be born. Geddes.

CLAVUS, in antiquity, an ornament upon the 7obes of the Roman senators and knights ; which was more or less broad, according to the dignity of the person ; hence the distinction of tunica jingusti- clavia and lati-clavia.

CLAVUS, ANNALIS, in antiquity, the nail an- pually fixed by the Romans to mark their years. So rude and ignorant were the Romans in the beginning of their state, that the driving a nail was the only method they had of keeping a register of time. There was an ancient law or- daining the chief praetor to fix a nail every year on the ides of September ; it was driven into the right side of the temple of Jupiter Optimus Maximus, towards Minerva's temple. The Etru- rians used likewise to drive nails into the temple of their goddess Nortia with the same view.

CLAVUS, in medicine and surgery, is used in several significations : 1 . An indurated tubercle of the uterus : 2. A chirurgical instrument of gold, mentioned by Amatus Lusitanus, designed to be introduced into an exulcerated palate, for the better articulation of the voice : 3. A corn on the foot.

CLAVUS HYSTERICUS is a shooting pain in the head, between the pericranium and cranium, which affects women who are troubled with hysterics.

CLAVUS OCULORUM, according to Celsus, is a callous tubercle on the white of the eye, taking its denomination from its figure.

CLAW, n.s. &r.a. - Goth klo, kits ; Swed.

CLA'WED, adj. S klo ; Sax. claw; Bel.

klaauw. See to CLEAVE. The toe of a beast or bird armed with sharp nails ; properly a di- vision of the foot. The pincers or holders of a

shell-fish : to tear with nails or claws ; to scratch and tear in general ; to tickle ; to please, hence clawback.

The coke of London while the rere spake, For joye (him thought) he clawed him on the bak.

Chaucer. Canterbury Talcs. I saw her range abroad to seek her food, To embrue her teeth and claws with lukewarm blood.

Spenser.

Look if the withered elder hath not his poll clawed

like a parrot. Shakspeare.

I must laugh when I am merry, and claw no man

in his humour. Id.

But we must claw ourselves with shameful And heathen stripes, by their example. Hudibras.

They for their own opinions stand fast, Only to have them clawed and canvast. Id.

What's justice to a man, or laws, That never comes within their claws ? Id.

I am afraid we shall not easily claw off that name.

South.

Among quadrupeds, of all the clawed, tbe lion is

the strongest. Grew's Cosmologia.

Meanwhile they trim their plumes for length of

flight, Whet their keen beaks, and twisting claws for fight.

Beattie.

CLAW, among zoologists implies only the sharp-pointed nail of a bird or quadruped, not the whole foot.

CLA'WBACK, n. s. from claw and back. A flatterer ; a sycophant ; a wheedler.

The Pope's clawbacks. Jewel.

CLAY, n. s. & v. a.ˆ Teut. kley ; Bel. kleg ;

CLA'YEY, adj. I Sax. cloeg ; Lat. glis.

CLA'YISH, adj. [Poetically applied to

CLA'YMARL, n. s. f earth in general ; to the

CLA'Y-COLD, adj. I terrestrial elements; to

CLA'YPIT, n.s. J the human body; to

matter as opposed to mind. Strictly it signifies

a tenacious sort of earth ; such as will mould

into a certain form. Organic bodies when life

is extinct are called clay and clay-cold.

Sal tartre, alcali and salt preparat, And combust materes, 'and coagulet ; Cley made with hors and mannes here and oile Of tartre alum glos, berme, wort, and argoile.

Chaucer. Canterbury Tales. Why should our clay

Over our spirits so much sway ? Donne.

Clays are earths firmly coherent, weighty and com- pact, stiff, viscid, and ductile to a great degree, while moist ; smooth to the touch, not easily breaking be- tween the fingers, nor readily diffusible in water ; and, when mixed, not readily subsiding from it.

Hill on Fossils. Deep Acheron,

Whose troubled eddies, thick with oose and clay, Are whirled aloft. Dryden.

Some in a lax or sandy, some a heavy or clayey soil. Derham.

I washed his clay-cold corse with holy drops, And saw bim laid in hallowed ground. Rowe.

The sun, which softens wax, will harden day.

Watts.

Small beer proves an unwholesome drink ; perhaps, by being brewed with a thick, muddish, and clayish water, which the brewers covet.

Harvey on Consumptions.

Twas found in a clay-pit. Woodward on Fossils.

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dot/marl resembles clay, and is near a-kin to it; but is more fat, and sometimes mixed with chalk- stones. Mortimer's Husbandry.

Ah, whither fled ! ye dear illusions stay, So pale and silent lies the lovely clay. Beattie.

A sleep without dreams, after a rough day Of toil, is what we covet most ; and yet How clay shrinks back from more quiescent day !

Byron. No, my gallant boy ;

Death is upon me. But what is one life ?

The Bourbon's spirit shall command them still.

Keep them yet ignorant that I am but clay,

Till they are conquerors, then do as ye may.

Id. Deformed Transformed.

CLAY, in natural history, is a kind of earth to which chemists formerly gave the name of ar- gilla, or argillaceous earth, but which, in the new chemical nomenclature, is called alumina. See CHEMISTRY.

CLAYS may be easily diffused and suspended in water, but are not soluble in any sensible de- gree. The sudden application of strong heat hardens their external parts, which afterwards burst by the expansion of the moisture within. By a more gradual heat pure clay contracts very much, becomes hard, and full of cracks or fis- sures. The presence of silicious earth in com- mon clays, where it usually constitutes above half the weight, renders the contraction more uniform throughout, and prevents the cracks ; probably in no other way than by rendering them more numerous, and too small to be per- ceived. When thus baked, it constitutes all the varieties of bricks, pottery, and porcelain. These, if baked in a strong heat, give fire with steel ; a property that may be attributed to the silicious earth they contain, which cannot act on the steel unless firmly set in the hardened clay. Baked clay is no longer kneadable with water, though as finely pulverised as mechanical means can go. Hence it has been inferred, that clays owe their ductility to a kind of gluten, which is supposed to be dissipated by heat. They re- cover that property, however, by a solution in an acid and precipitation ; whence it should seem to depend either on a minute portion of acid contained in clays^ or the smallness of the particles when precipitated. Clays are of very extensive use. Some varieties of the porcelain clay become perfectly white in the fire. The indurated porcelain clay, however, cannot be easily heated without cracking ; and therefore we can go no great length in hardening it. The boles have lost their value as medicines ; but are still employed to make bricks, potter's ware, &c. Tripoli is of indispensable use in polishing, and is likewise, on many occasions, used for making moulds to cast metals in. In agriculture, clay is indispensably necessary ; excepting, however, according to Cronstadt, the white and ferment- ing clays above mentioned, for which no use has yet been discovered. By its coherence, clay re- tains humidity; on which peihaps its chief power of promoting vegetation depeuda. Dr. Black observes, that clay, when

mixed with a large proportion of water, and kneaded a little, becomes a remarkably ductile adhesive mass, which is not easily dissolved in more water, and, to render it thin and fluid, requires great trouble.

Hence it is employed for confining large quanti- ties of water, as in making canals and dykes : but the soil must either contain a great quantity of clay naturally, or some quantity of it must be spread on the bottom ; or the water itself must deposit a quantity of clay sufficient to render it tight. Hence also we see the bad effects of allow- ing cattle to tread much on clay grounds when wet ; for the clay is reduced to such an adhe- sive mass, as not to admit the roots to penetrate the soil, or the water to enter to the roots. Clay is used in the refining of sugar, for which no other property is requisite than that it may not dry too soon ; but that species used in fulling, must, if we were to judge a priori, besides the fineness of its particles, be of a dry nature, or such as attracts oils ; though this quality perhaps may not be found in all those clays that are now employed in the business. According to Fa- broni, the pure white clay, being calcined in a strong heat, acquires a phosphorescent quality.

CLAYES, n. s. Fr. clai/e. In fortification, wattles made with stakes interwoven with osiers, to cover lodgments.

CLAYTON (Dr. Robert, F. R.S.) a learned prelate of the last century, was'advanced to the bishopric of Killala, January 23d, 1 729 ; trans- lated to the see of Cork, December 19th, 1735 ; to that of Clogher, August 26th, 1745 ; and died much lamented, February 25th, 1758. His pub- lications are : 1. A Letter in the Philosophical Transactions, No. 461, p. 813, giving an account of a Frenchman seventy years old (at Inishanan, in his diocese of Cork,) who gave suck to a child. 2. The Chronology of the Hebrew Bible vindicated, &c. 1751,4to. 3. An Impartial En- quiry into the Time of the coming of the Mes- siah, 1751, 8vo. 4. An Essay on Spirit, 1751, 8vo. 5. A Vindication of the Histories of the Old and New Testament, in Answer to the Ob- jections of the late lord Bolingbroke, 1752, 8vo. reprinted in 1753. 6. A Defence of the Essay on Spirit, with Remarks on the several pretended Answers ; and which may serve as an Antidote against all that shall ever appear against it, 1753, 8vo. 7. A Journal from Grand Cairo to Mount Sinai, and back again, translated from a MS. written by the Prefetto of Egypt, in company with some missionaries de propagandfi fide at Grand Cairo ; to which are added, Remarks on the Origin of Hieroglyphics, and the Mythology of the ancient Heathen, 1753, 4to. and 8vo.

8. Some thoughts on Self-love, Innate Ideas, Freewill, Taste, Sentiments, Liberty, and Neces- sity, &c. occasioned by reading Mr. Hume's Works, and the short Treatise written in French by lord Bolingbroke on Compassion, 1754, 8vo.

9. A Vindication of the histories of the Old and New Testament, Part II. 1754, 8vo. 10. Let- ters between the bishop of Clogher and Mr. William Penn, concerning Baptism, 1755, 8vo. 11. A Speech made in the House of Lords in Ireland, on Monday, February 2d, 1756, for omit- ting the Nicene and Athanasian Creeds out of the Liturgy, &c. 1756, 8vo. 12. A Vindication, Part III. 1768, 8vo. The three parts of the Vindication, with the Essay on Spirit, were re- printed by Mr. Bowyer, in 1 vol, 8vo. 1759, with notes and an index.

CLAYTONIA, in botany, a genus of the mo- nogynia order, and pentandria class of plants , natural order thirteenth, succulentce : CAL. bi- valved : COR. pentapetalous : STIG. trifid : CAPS, trivalved, unilocular, and trispermous. Species three, natives of America. They are very low herbaceous plants, with white flowers ; and are possessed of no remarkable property.

CLAZOMENA, or CLAZOMEN.E, one of the twelve ancient cities of Ionia, situated near Co- lophon. The city was small, its port on the N.N.W. side of the island. Traces of the walls are found by the sea; and on a hill are vestiges of a theatre. A hovel or two made with stones piled, are all the present structures ; and these are chiefly frequented by fishermen, and by per- sons employed to drive away birds when the grain ripens. Clazomenae was the birth place of Anaxagoras.

CLEAN, adj., v.a.Sa adv.ˆ Sax. cloen, which CLE'ANLILY, adv. I does not appear,

CLE'ANLINESS, n. s. V says Thomson, to

CTJE'ANLY, adj. &udv. I have any cognate CLE'ANNESS, n. s. J unless it be hlam ;

Teut. Swed. and Bel. kkin, thin, slender, small ; whence Bel. kleinzen, to purify liquor ; to make it thin, in opposition to thick. Our word fine is also thin, small, pure, bright; but the Sax. word may have been confounded with gloen ; Swed. glan ; Welch, glan, bright, fair, pure, neat, cor- responding with clear. The word, in all its ap- plications and derivatives, signifies free from dirt or filth, pure. It is applied to anything that is elegant either in form or act ; to whatever is nice ; neatness in shape oj construction, and dexterity in execution, is called clean ; metapho- rically applied to the absence of moral impurity ; to what is chaste, guiltless and innocent To be clean is also to be free from the taint of any le- prous or loathsome disease. To clean anything is to underlie it. The adjectives are employed by the older writers to signify perfectly, fully, completely : but in this sense are now obsolete.

If the plague be somewhat dark, and spread not in the skin the priest shall pronounce him clean.

Leviticus. He that hath clean hands and a pure heart.

Psalms. Create in me a clean heart, O God ! Id.

They make clean the outside of the cup and of the platter, but within they are full of extortion and ex- cess. Matthew.

Therefore we mendiants we sely freres, Ben wedded to poverte and continence, To charitee, humblesse, and abstinence. To persecution for rightwisnesse, To weping misericorde, and to clenenessc.

Chaucer's Canterbury Tales. The clenenesse and the fasting of us freres, Making that Crist accepteth our praieres. Id.

Through his fine handling, and his cleanly play, All those royal signs had stole away. Spenser.

Both his hands, most filthy feculent, Above the water were1 on high extent, And feined to wash themselves incessantly ; Yet nothing cleaner were for such intent, But rather fouler. Id. Faerie Queene.

Their actions have been clean contrary unto those lefore mentioned. Hooker.

*Being seated, and domestick broils Clean overblown. SJiakspeare**

If I do grow great, I'll leave sack, and live cleanly, as a nobleman should. Id. Henry IV.

He shewed no strength in shaking of his staff, but the fine cleanness of bearing it was delightful. Sidney. The mistress thought it either not to deserve, or not to need, any exquisite decking, having no adorning but cleanliness. Id. The timber and wood are in some trees more clean, in some more knotty. Bacon's Natural History. Perhaps human nature meets few more sweetly re- lishing and cleanly joys, than those that derive from successful trials. Glanville.

Next that shall mountain 'sparagus be laid, Pulled by some plain but cleanly country maid.

Dryden.

In our fantastick climes, the fair With cleanly powder dry their hair. Prior.

An ant is a very cleanly insect, and throws out of her nest, all the small remains of the corn on which she feeds. Addition.

I shall speak nothing of the extent of this city, the cleanliness of its streets, nor the beauty of its piazza.

Id.

The cleanness and purity of one's mind is never bet- ter proved than in discovering its own faults at first view. Pope,

Pope came off deem with Homer ; but they say Broome went befoie, and kindly swept the way.

Henley.

Through winter streets to steer your course aright, How to walk dean by day, and safe by night, How jostling crowds with prudence to decline, When to assert the wall, and when resign, I sing. Gay.

Their tribes adjusted, cleaned their vigorous wings, And many a circle, many a short essay, Wheeled round and round. Thomson

Examine well

His milk-white hand is hardly clean, ??? But here and there an ugly smutch appears.

Cowper.

The dingy denizens are reared in dirt ; No personage of high or mean

degree Doth care for cleanness of surtout or shirt, Though shent with Egypt's plague, unkempt, un- washed, unhurt. Byron. Childe Harold. CLEANSE, v. a. l Sax. claenpan. To free CLE'ANSEE, n. s. i from filth or dirt, by wash- ing or rubbing ; to purify from guilt ; to free from noxious humors by purgation ; to free from cutaneous and loathsome disease ; to scour ; to rid of all offensive things.

The blueness of a wound cleanseth away evil.

Proverbs.

Show thyself to the priest, and offer for thy clean- sing those things which Moses commanded.

Mark, i. 44.

Canst thou not minister to a mind diseased, And, with some sweet oblivious antidote, Cleanse the stuffed bosom of that perilous stuff Which weighs upon the heart ? Shahspeare.

Not all her odorous tears can cleanse her crime, The plant alone deforms the happy clime. Dryden.

Cleanse the pale corps with a religious hand From the polluting weed and common sand. Prior. This oil, combined with its own salt and sugar, makes it saponaceous and cleansing, by which quality it often helps digestion, and excites appetite.

Arbuthnot on Aliments.

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If there happens an imposthume, honey, and even noney of roses, taken inwardly, is a good cleanser. Id.

Those baits will test reward the fisher's pains, Whose polished tails a shining yellow stains ; Cleanse them from filth to give a tempting gloss, Cherish the sallied reptile race with moss.

Gay's Rural Sports.

CLEANTHES, a stoic philosopher, a dis- ciple of Zeno, flourished A. A. C. 240. He maintained himself in the day by working in the night;

being questioned by the magistrates how he subsisted, he brought a woman for whom he kneaded bread, and a gardener for whom he drew water ; and refused a present from them. He composed several works, of which there are now only a few fragments remaining.

CLEAR, v. n., adj. & adv.~] French, claire ;

CLE'ARANCE, n. s. I Swedish, klar ;

CLE'ARER, n. s. [from Lat. clams.

CLE'ARLY, adv. [Bright; manifest;

CLE'ARNESS, n. s. pure; free. Very

CLE'AR-SIGHTED. J numerous are its

applications, most of them retaining the primi- tive sense ; others varying but slightly. It is opposed to whatever is dark, opaque, nebulous, or cloudy; applied to objects, it conveys the idea of pellucid, transparent, luminous, simple, unmixed, serene, unincumbered ; free, as empty space. To subjects, it signifies that which is perspicuous, unambiguous, indisputable ; evi- dent, undeniable, apparent, manifest ; free from deductions. To the human mind, it means whatever is perspicuous, sharp, acute, quick of apprehension, unprepossessed, impartial. To the disposition, cheerful ; free from distress. To the character, unspotted, guiltless, irreproach- able. Applied to sound, it signifies sounding distinctly, plainly, articulately. The verb has all these applications, and, in addition, it means to make pure ; to resolve a compound into its simple elements; to clarify, as liquors. To clear is also to grow bright, transparent, &c. &c.

Clere was the day (as I have told or this) ; And Theseus, with alle joye and blis j With his Ipolita, the fayre queen ; And Emelie, yclothed all in grene ; On hunting ben they ridden really.

Chaucer. Canterbury Tales.

Mysteries of grace and salvation, which ⬚⬚⬚were but darkly disclosed unto them, have unto us more clearly shined. Hooker.

Whereof conceiving shame and foul disgrace, Albe her guiltless conscience her cleared, She fled into the wilderness a space, Till that unweeldly burden she had reard, And shund dishonour, which as death she feard.

*Spenser**

Leucippe, of whom one look, in a clear judgment, would have been more acceptable than all her kind- ness so prodigally bestowed. Sidney.

Love, more clear than yourself, with the clearness, lays a night of sorrow upon me. Id.

Duncan has been so clear in his great office.

Shakspeare.

Think that the clearest gods, who make them ho- nours

Of men's impossibilities, have preserved thee. Id . So foul a sky clears not without a storm. Id.

My hands are of your colour ; but I shame To wear a heart so white :

A little water clears us of this deed. la

Finding ourselves too slow of sail, we put en a compelled valour, and in the grapple 1 boarded them : on the instant they got clear of our ship. Id.

There is almost no man but sees clearlier and shar- per the vices in a speaker than the virtues.

Ben Jonscxi.

By a certain day they should clearly relinquish unto the king all their lands and possessions.

Davies on Ireland.

He that doth not divide, will never enter into business ; and he that divideth too much, will never come out of it clearly. Bacon's Essays.

He that clean at once, will relapse ; for, finding himself out of straits, he will revert to his customs ••• but he that cleareth by degrees, induceth a habit of frugality, and gaincth as well upon his mind as upon his estate. /^.

Glass in the furnace grows to a greater magnitude, and refines to a greater clearness, only as the breath within is more powerful, and the heat more intense.

Id.

When the case required dissimulation, if they used it, the former opinion spread abroad, of their good faith and clearness of dealing, made them almost in- vincible. Id.

Now clear I understand

What oft my steadiest thoughts have searched in vain.

Hilton.

The hemisphere of earth, in clearest ken, Stretched out to the amplest reach of prospect lay. Id.

Michael from Adam's eyes the film removed. Which that false fruit, that promised clearer sight,. Had bred. Id.

Remained to our almighty foe Clear victory ; to our part loss, and rout Through all the empyrean. Id.

Your eyes, that seem so clear, Yet are but dim, shall perfectly be then Opened and cleared. Id.

And the clear sun on his wide watery glass Gazed hot. Id.

Mother of science, now I feel thy power Within me dear, not only to discern Things in their causes, but to trace the ways Of highest agents, deemed however wise. Id.

Sternly he pronounced The rigid interdiction, which resounds Yet dreadful in mine ear, though in my choice Not to incur ; but soon his clear aspect Returned, and gracious purpose thus renewed. Id.

Clearsighted reason wisdom's judgment leads, And sense, her vassal, in her footsteps treads.

Denham.

The stream is so transparent, pure, and clear, That, had the self-enamoured youth gazed here, He but the bottom, not his face, had seen. Id. The sun much brighter, and the sky more clear, He finds the air and all things sweeter here.

Marvell, When magpies and parrots cry, ' walk, knaves,

walk !'

It is a clear proof that birds, too, may talk. Id.

Whatever, a foreigner, who purchases land here,

gives for it, it is so much every farthing clear gain to

the nation ; for that money comes clear in, without

carrying out anything for it. Locke.

Though the peripatctick philosophy has beeu most

eminent in .ts way, yet other sects have not bceu

wholly clear of it. Id.

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Many men reason exceeding dear and rightly, who

know not how to make a syllogism. Locke.

None is so fit to correct their faults, as he who is

clear from any in his own writings. Dryden.

When, in the knot of the play, no other way is left

for the discovery, then let a god descend, and dear

the business to the audience. Id.

To dear herself,

For sending him no aid, she came from Egypt. Id. I will appeal to the reader, I am sure he will dear me from partiality. Id.

When vou are examining these matters, do not take into consideration any sensual or worldly inte- rest ; but deal dearly and impartially with youselves.

Tillotion.

How ! wouldst thou dear rebellion ? Addison. Gold is a wonderful

dearer of the understanding : it dissipates every doubt and scruple in an instant. Id. A statute lies hid in a block of marble ; and the art of the statuary only dears away the superfluous matter, and removes the rubbish. Id. Spectator. If he chances to think right, he does not know how to convey his thoughts to another with clearness and perspicuity. Id.

He dears but two hundred thousand crowns a year, after having defrayed all the charges of working the salt. Id.

I much approved of my friend's insisting upon the qualifications of a good aspect and a clear voice. Id. Our common prints would dear up their under- standing, and animate their minds with virtue.

Id. Spectator.

Multitudes will furnish a double proportion towards the clearing of that expense. Id. Freeholder.

Hark ! the numbers soft and dear Gently steal upon the ear ; Now louder and yet louder rise, And fill with spreading sounds the skies Pope. The cruel corporal whispered in my ear, Five pounds, if rightly tipt, would set me clear. Gay.

Now, sporting muse, draw in the flowing reins, . Leave the dear streams awhile for sunny plains.

Gay1 Rural Sports.*

Augustus, to establish the dominion of the seas, rigged out a powerful navy to dear it of the pirates of Malta. Arbuthnot.

Christianity first dearly proved this noble and im- portant truth to the world. Rogers.

Simplkity apace

Tempers his rage j he owns her charms divine, And clears the' ambiguous phrase, and lops the' un- wieldy line. Beattie. And her brow cleared, but not her troubled eye ; The wind was down, but still the sea ran high. Byron.

CLEARCHUS, a Lacedaemonian, who was sent to quiet the Byzantines ; but being recalled, refused to obey, and fled to Cyrus the younger, who gave him the command of 13,000 Greek soldiers. He obtained a victory over Artaxerxes, who was so enraged at the

defeat, that when Clearchus fell into his hands by the treachery of Tissaphernes, he put him immediately to death. Also a tyrant of Heraclea in Pontus, who was killed by Chion and Leonidas, Plato's pupils, during the celebration of the festivals of Bac- chus. He had enjoyed the sovereign power twelve years.

CLEAR'STARCH, v. a.;~ from clear and starch. To stiffen with starch.

He took his present lodging at the mansion-house of a tailor's widow, who washes and can clearstarch, his builds. Addition.

CLEATS, in naval affairs, pieces of wood having one or two projecting ends whereby to fasten the ropes : some of them are fastened to the shrouds below for this purpose, and others nailed to different places of the ship's deck or sides.

Belaying Cleat, fig. 1. is formed with two arms, one on each side the centre or middle part, and nailed or bolted to the side, for the purpose of belayingthe running-rigging to.

Mast Cleat, fig. 2, is made with a score, to admit a seizing, a long hole in the centre, for an under seizing, and two round holes, by which the seizing may be crossed.

fig. 1.

Shroud Cleat, fig. 3. is formed like the belay- ing cleats, having two arms, the remaining part being straight, and grooved on the edge. Jt has scores cut towards the extremity for the seizings to lie in, which are naked, and a groove in the part where the shroud lies.

CLEAVE, v.n. kv. a. ~) Pret. I clave; CLE'AVER, n. s. > Sax. eleonan ; Dut

CLEFT, n. s. & part. past, j kleven ; preter. I clove, I clave, I cleft ; part. pass, cloven or cleft r Sax. cleojtan ; Dutch, kloven. No senses can be more opposite than of these verbs. The neuter signifies to adhere; to stick; to hold to; to unite aptly; to fit; to be concomitant; to be united with ; to unite in concord and interest. The other is applied to dividing with violence ; splitting forcibly into pieces. It is also used for the act of naturally dividing; parting naturally. It is used in the neuter sense, and signifies to part asunder and to suffer division. The cleaver is the instrument used for cleaving ; a butchers' utensil for cutting animals into joints. There is a plant so called from its adhering quality. Ape rine or goose-grass. Cleft, the noun, is the

chasm made fty cleaving, or separating.

And every beast that parteth the hoof, and deaveth the deft into two claws. Deuteronomy.

He stroke so hugely with borrowed blade, That it cmpiest the pagan's burganet ; And, cleaving the hard steele, did deep invade Into his head, and cruel passage made Quite through his brayne. Spenser.

Full of ficrs fury and indignant hate To him he turned and with vigour fell, Smote him so rudely on the pannikell, That to the chin he clefte his head in twaine. Id.

We cannot imagine, that, in breeding or begetting faith, his grace doth deave to the one, and forsake the other. Uuokcr-

The apostles did conform the Christians according to the pattern of the Jews, and made them cleave the better. Hooker.

New honours come upon him

Like our strange garments, cleave not to the mould, But with the aid of use. Shakspeare.

Wars 'twixt you twain, would be As if the world should cleave, and that slain men Should solder up the rift Id.

If you shall cleave to my consent when 'tis, It shall make honour for you. Id.

The clarifying of liquors by adhesion, is effected when some cleaving body is mixed with the liquors, whereby the grosser part sticks to that cleaving liody. Bacon's Natural Ifistury.

Water, in small quantity, deaveth to anything that is solid. Id.

Fat with incense strewed On the cleft wood. Milton.

And at their passing cleave the Assyrian flood. Id.

never did on cleft Parnassus dream, Nor taste the sacred Heliconian

stream. Dryden.

The blessed minister his wings displayed,

And, like a sheoting-star, he cleft the night. Id.

Raised on her dusky wings she cleaves the sky. Id.

The fountains of it arc said to have been cloven, or burst open. Burnet's Theory of the Earth.

It cleaves with a glossy polite substance, not plain, but with some little unevenness. Newton's Optics.

Though armed with all thy cleavers, knives, And axes made to hew down lives. Hwlibras.

The cascades seem to break through the clefts and cracks of rocks. Addison's Guardian.

The extremity of this cape has a long cleft in it, which was enlarged and cut into shape by Agrippa, who made this the great port of the Roman fleet.

Id. on Italy.

Now, when the height of heaven bright ' Phoebus

gains,'

And level rays cleave wide the thirsty plains, When heifers seek the shade and cooling lake, And in the middle path-way basks the snake, O lead me, guard me from the sultry hours ! Hide me, ye forests, in your closest bowers. Gay.

You gentlemen keep a parcel of roaring bullu s about me day and night, with huzzas and hunting horns, and ringing the changes on butchers' cleavers.

Arbuthnot.

Now where the swift Rhone cleaves his way between Heights, which appear as lovers who have parted

In hate, who mining depths so intervene, That they can meet no more though broken hearted.

Byron.

CLEAVER (William), D. D. late bishop of St. Asaph, was born in 1742, at Twyford, Bucks, where his father, also a clergyman, kept a re- spectable seminary. He entered the university of Oxford, on a demyship at Magdalen College, but soon after removed, upon a fellowship, to Brazennose, and was appointed tutor to Richard, marquis of Buckingham, through whose in- terest he was presented, in 1784, with a preben- dal stall at Westminster. The following year he was chosen principal of Brazennose College ; and raised to the bench, in 1787, as bishop of Chester. In 1800 he was translated to the see of Bangor ; and six years after to that of Saint Asaph. His theological works consist of Ob- servations on Herbert Marsh's Dissertation on the Gospels of Matthew, Mark, and Luke; Directions to the Clergy on the Choice of Books ; and some volumes of occasional sermons. lie

also edited the Oxford Homer, published \i\far the auspices of the Grenville family. He died much respected in 1815.

CLECIIE, in heraldry, a kind of cross, charged with another cross of the same figure, but of the color of the field.

CLEDER, a town of France, in the depart- ment of Finisterre, and chief place of a canton., in the district of Lesneven, four miles and a quarter west of St. Pol de Leon.

CLEDGE, among miners, denotes the upper stratum of Fullers' earth.

CLEDONISMUS, or CLEDONISM, a kind of divination in use among the ancients. The word is formed from K\i]St< >v, which signifies two tilings ; a report and a bird. In the first sense cledonism denotes a kind of divination drawn from words occasionally uttered. In the second sense it is a divination drawn from birds ; the same with ornithomantia.

CLEES, n. s. The two parts of the foot of beasts which are cloven-footed. It is a country word, and probably corrupted from claws.

CLEF, n. s. from Fr. clef, key. In music a mark at the beginning of the lines of a song, which shews the tone or key in which the piece is to begin.

CLEF, in music, a mark at the beginning of the lines of a piece, which expresses the funda- mental sound in the diatonic scale, which requires a determined succession of tones and semitones, whether

major or minor, peculiar to the note whence we set out and resulting from its position in the scale. Hence, as it opens a way to this succession, and discovers it, the technical term key is used with great propriety. But clefs ra- ther point out the position of different musical parts in the general system, and the relations which they bear to one another. A clef, says Rousseau, is a character in music placed at the beginning of a stave to determine the degree of elevation occupied by that stave in the general claviary or system, and to point out the names of all the notes which it contains in the line of that clef. Anciently the letters by which the notes of the gamut were signified were called clefs. Thus the letter A was the clef of the note la, C the clef of ut, E the clef of mi, &c. In proportion as the system was extended the em- barrassment and superfluity of this multitude of clefs were felt. Gui d' Arezzo, who had invented them, marked a letter or clef at the beginning of each line in the stave ; for as yet he had placed no notes in the spaces. In process of time they marked only one of the seven clefs at the begin- ning of one of the lines only ; and this was suf- ficient to fix the position of all the rest, accord- ing to their natural order : at last, of these seven lines or clefs they selected four, which were called claves signals, or discriminating clefs, be- cause they satisfied themselves with marking one of them upon one of the lines, from which the powers of all the others might be recognis'ecl. Presently afterwards they even retrenched one of these, viz. the gamma, of which they made uso to mark the sol below, that is to say, the hypo- proslambanomene added to the system of the Greeks. Kirchcr asserts, that if we understood the characters in uhich ancient music was writ-

ten, and examined minutely the forms of our clefs, we should find that each of them represents the Better, a little altered in its form, by which the note was originally named. Thus the clef of sol was originally a G, the clef of ut a C, and the clef of fa an F.

. We have then three clefs, one a fifth above the other ; the clef of F, or fa, which is the lowest ; the clef of ut, or C, which is a fifth above the former ; and the clef of sol, or G, which is the fifth above that of ut. By an ancient practice, the clef is always placed upon a line and never in a space. The clef of fa is marked in three different ways : one in music which is printed, another in music which is written or

engraven, and a third in the full harmony of the chorus. By adding four lines above the clef of sol, and three lines beneath the clef of fa, which gives both above and below the greatest extent of per- manent or established lines, it appears that the whole scale of notes which can be placed upon the gradations relative to these clefs amounts to twenty-four ; that is to say, three octaves and a fourth from the F, or fa, which is found beneath the first line, to the si or B, which is found above the last, and all this together forms what we call the general claviary; whence we may judge that this compass has, for a long time, con- stituted the extent of the system. But as at present it is continually acquiring new degrees, as well above as below, the degrees are marked by leger lines, which are added above or below as occasion requires.

Whatever may be the character and genius of any voice or instrument, if its extent above or below does not surpass that of the general clavi- ary, in this number may be found a station and a clef suitable to it ; and there are, in reality, clefs determined for all the parts in music. If the extent of a part is very considerable, so that the number of lines necessary to be added above or below may become inconvenient, the clef is then changed in the course of the music. Jt may be plainly perceived by the figure what clef is necessary to choose for raising or depressing any part, under whatever clef it may be actually placed. It will likewise appear that, in order to adjust one clef to another, both must be com- pared by the general claviary, by means of which we may determine what every note under one of the clefs is with respect to the other. It is by this exercise repeated that we acquire the habit of reading with ease all the parts in any clef what- ever.

CLEFT, n. s. in farriery, a crack in a horse's foot.

His horse it is the herald's weft ; No, 'tis a mare and hath a cleft. Ben Jonson. Clefts appear on the bought of the pasterns, and are caused by a sharp and malignant humour, which frets the skin ; and it is accompanied with pain, and a noisome stench. Farrier's Dictionary.*

To CLF/FTGRAFT, v..a. cleft and graft. To engraft by cleaving the slock of a tree, and in- serting a branch.

Filberts may be clef/grafted on the common nut.

Mortimer.

CLEGHORN (George), a celebrated physi- cian of the last century, was born in 1716, near-

Edinburgh, where he received his education. He became a pupil of Dr. Alex. Munro, in 1731, and contracted an intimacy with Fothergill and Gumming, in conjunction with whom, and other medical students, those meetings for mutual im-

grovement were held which gave rise to the oyal Medical Society of that city. In 1736, he went to Minorca, as surgeon to the 22nd regi- ment, and resided in that island thirteen years. On his return he published a Treatise on the Dis- eases of Minorca, a work which has always been considered as an excellent model of medical to- pography. In the composition of it he is said to have been assisted by his friend Dr. Fothergill. In 1751 Dr. Cleghorn settled at Dublin, and gave lectures on anatomy. In 1784 he was elected an honorary member of the Irish College of Physicians, and anatomical professor. He was one of the earliest members of the Royal Irish Academy, and died in December, 1789.

CLELAND (John), an English writer of no- vels, was the son of colonel Cleland, the Will Honeycomb of the Spectator. He was educated at Westminster school, and went early in life as consul to Smyrna ; he afterwards sailed to the East Indies, but returned to Europe embarrassed, and wrote an infamous novel for which he only obtained twenty guineas (though the sale is supposed to have produced some thousands), and threats of a pub- lic prosecution. The late earl of Granville, in order to draw him from such pursuits, nobly- offered him a hundred a year ; after which he wrote The Memoirs of a Coxcomb ; The Man of Honor ; and an etymological work, entitled, The Way to Things by Words, and to Words by Things, 8vo. He died in 1 789, aged eighty- two.

CLEMA, in antiquity, a twig of the vine, which served as a badge of the centurion's office.

CLEMATIS, virgin's bower, in botany, a ge- nus of the polygynia order, and polyandria class ; natural order twenty-sixth, multisiliquae : CAL. none : the petals are four, rarely five ; the seeds have a train; species twelve, all of which, except two, are shrubby climbing plants, very hardy, and adorned with quadrupetalous flowers of red, blue, purple, white, and greenish colors. They are very easily propagated by layers or cuttings. One of the species, viz. C. vitis alba, is very acrid to the taste, and without any smell. It is frequently used as a caustic, and for cleansing old ulcers. The root is

said to be purgative. The leaves of all the species bruised and applied to the skin, burn it into carbuncles as in the plague; and if applied to the nostrils in a sultry day immediately after being cropped, will cause the same uneasy sensation as a flame applied to that part would occasion. Hence the title of flammula, or little flame, by which this genus of plants was formerly distinguished.

CLEMENCET (Dr. Charles), a catholic di- vine, was born in 1722, at Painblanc, in the diocese of Autun. At the age of eighteen he entered the congregation of St. Maur, ana, after teaching rhetoric with great credit, was appointed to the monastery of the Blanc-Manteaux, Paris, where he died in 1778. His works are, 1. L'Arc de Verifier les Dates, the historical ."part of which

contains the foundation and substance of uni- versal history from Jesus Christ to the present time.

CLEMENCY, M.S.) Fr. demence ; Lat. CLE'MENT, adj. j dementia. Mercy; re- mission of severity ; willingness to spare ; ten- derness in punishing; mildness; softness]; mild ; gentle ; merciful ; kind ; tender ; compassionate.

You are more clement than vile men, Who of their broken debtors take a third, Letting them thrive again on the abatement.

Shakspeare.

Then in the clemency of upward air We'll scour our spots, and the dire thunder scar.

Dryden.

I have stated the true notion of clemency, mercy, compassion, good-nature, humanity, or whatever else it may be called, so far as is consistent with wisdom.

Addison.

Then, Envy, then is thy triumphant hour, When mourns Benevolence his baffled scheme,

When Insult mocks the clemency of power, And loud Dissension's livid firebrands gleam.

Beattie.

CLEMENCY, in antiquity, was deified at Athens, and had an altar erected to her by the kindred of Hercules. A temple was also dedicated to her by the Roman senate, after the death of Ju- lius Caesar, on some of whose denarii this goddess appears. The poets describe her as the guardian of the world, and she is exhibited, holding a branch of laurel or olive, and a spear, to show that gentleness and pity ought principally to distin- guish victorious warriors. The name of asylum was given to the temples that were erected to this goddess. ' The distinguishing character of Cle- mency,' says the learned Spence, ' both in her statues and in the poets, is the mildness of her countenance; she has an olive branch in her hand, as a mark of her peaceful and gentle temper.'

When the Athenian council of thirty, esta- blished by Lysander, after having committed most execrable cruelties, had been overthrown by Thrasybulus, he proposed, after the recall of the exiles, a celebrated amnesty, by which the citizens engaged on oath that all past transactions should be forgotten. The government was now re-established upon its ancient foundation, the laws restored to their pristine vigor, and magis- trates elected with the usual forms. This, says Ilollin (Anc. Hist. vol. iii. p. 309), is one of the finest events in ancient history, worthy of the Athenian lenity and benevolence, and has served as a model to successive ages in good govern- ment. Never had tyranny been more cruel and bloody than that from which the Athenians had been rescued. Every house was in mourning ; every family bewailed the loss of some relation. It had been a series of public robbery and rapine, in which licence and impunity had authorised all manner of crimes. The people seemed to have a right to demand the blood of all accom- plices in such notorious malversations, and even the interest of the state to authorise such a claim, that by exemplary severities such enormous crimes might be prevented for the future. But Thrasybulus rising above those sentiments, from the superiority of his more extensive genius, and

the views of a more discerning and profound po- licy, foresaw, that by giving way to the punishment of the guilty, eternal seeds of discord aud enmity would remain, to weaken the republic by domes- tic divisions, which it was necessary to unite against the common enemy, and occasion a loss to the state of a great number of citizens, who might render it important services from the view itself of making

amends for past misbehaviour. Such a conduct, continues Rollin, after great troubles in a state, has always seemed with the ablest politicians, the most certain and ready means to restore the public peace and tran- quillity.

Montesquieu observes (Spirit of Laws, vol. i. p. 134), that clemency is the peculiar character- istic of monarchs. In monarchies, great men are governed by honor, which frequently requires what the law forbids, and they are so much pu- nished by disgrace, by the loss (though often imaginary), of their fortune, credit, acquaintances, and pleasures, that rigor in respect to them is needless. It can lead only to divest the subjects of the affection they have for the person of their prince, and of the respect they ought to have for public posts and employments. So many are the advantages which monarchs gain by cle- mency, such love, such glory attend it, that it is generally a point of happiness with them to have an opportunity of exercising it.

CLEMANGIS, or DE CLAMINGES (Nicholas), a distinguished divine of the university of Paris, of which he was rector in 1393. His works so decidedly reprove the corruptions of the church of Rome, that they were republished by Lydius, a protestant minister in Holland, in 1613. One of them is entitled, Of the corrupt State of the Church. His style is very much superior to the general taste of the age. He died about 1440.

CLEMENS ALEXANDRINUS, an eminent fa- ther of the church, who flourished at the end of the second, and beginning of the third centuries. He was the scholar of Pantsenus. and the instructor of Origen. The best edition of his works is that in 2 vols. folio, published in 1715, by archbishop Potter.

CLEMENS ROMANUS, or ST.' CLEMENT, was the fourth bishop of Rome, we are told, where also he is said to have been born ; and to have been a fellow laborer with the apostles Peter and Paul. We have nothing remaining of his works clearly genuine, excepting one epistle, a very valuable relic of antiquity.

Its principal design is to compose those differ- ences which appear to have subsisted in the church of Corinth, about their spiritual guides. The style is clear and simple. It is called by the ancients an ' excellent ' and ' useful,' a ' great' and ' admirable, epistle.' It is not in- deed entire; and, as there is but one authentic MS. of it remaining, we cannot expect to obtain its sense so correctly as if we had the opportu- nity of collating several copies. It appears, from expressions that occur in it, to have been written after, or at the

conclusion of, some per- secution, either that of Nero about 64, or that of Domitian in 94, or 95. Several passages seem to intimate, that it was written after the latter and not so soon as that of Nero. Irenaeus says, that

in the time of Clement, when many were alive, who had been taught by the apostles, and when there was no small dissension among the bre- thren of Corinth, the church at Rome sent a most excellent letter to the Corinthians, persuading them to peace among themselves, &c. Eusebius also bears testimony to the excellence of this

epistle, and to the dissention at Corinth which VIII ; and for the bull he published upon t'>e

occasioned it ; and he adds, that this epistle has been formerly, and is still publicly read in many churches. St. Jerome also says, that Clement wrote a very useful epistle in the name of the church of Rome to the church of Corinth, which in some places is read publicly. Upon the whole we may conclude with Dr. Lardner, that this epistle was written at the latter end of the reign of Domitian, in the year 95, or rather 96. In this epistle there is but one book of the New

Testament expressly named, which is the first appointed theological

to the suppression of the knights templars ; and was author of a compilation of the decrees of the general councils of Vienna, styled Clementines. He died in 1314.

CLEMENT VII. (pope), whose original name was Julius de Medicis, is memorable for his refusing to divorce Catharine of Arragon from Henry

king's marriage with Anne Boleyn ; which, ac- cording to the Romish authors, lost him England. He died in 1534.

CLEMENT XIV. (pope), whose family name was John Vincent Antony Ganganelli, was the son of a physician of St. Archangelo near Rimini. He was born in 1705, and educated at Rimini, whence he proceeded at the age of eighteen to enter the order of Minor Conventual Franciscans at Urbino. At thirty-five he was

professor in the Roman epistle of St. Paul to the Corinthians, and which, college of St. Buonaventure. His learning, liber- it is said, was written by the apostle Paul. But ality, and general fame, soon reached the ears of it contains frequent references and allusions to the Scriptures both of the Old and New Testa-

ment. Words of our blessed Lord, found in the

Benedict XIV., who made him counsellor of the holy office. In 1759 he was created cardinal- by Clement XIII., on the death of whom, chiefly

gospels of Matthew, Mark, and Luke, are re- through the influence of the house of Bourbon, commended with a high degree of respect, Ganganelli was chosen his successor. His though without the names of the Evangelists, election, which took place in May 1764, was There are also allusions to the Acts of the Apos- very popular at Rome; and he immediately ties, the epistle of Paul to the Romans, both the began to conciliate, though with dignity, the epistles to the Corinthians, the epistles to the offended sovereigns. The great event of his Galatians, Ephesians, Philippians, Colossians, pontificate, was the suppression of the Jesuits, the first to the Thessalonians, first and second to for which he signed a brief, July 21st, 1773. He Timothy, the epistle to Titus, the epistle to the survived this event only about two years, but it Hebrews, the epistle of James, and the first and was the means of his reconciliation with the second of Peter ; but all without any name, or courts formerly hostile to him. His final mark of citation. Mill observes, that it appears illness was attended with severe pains in the from this epistle, that Clement had in his hands bowels, which reduced him to a skeleton, and not only our first three gospels, but also the Acts the enemies of the suppressed order did not of the Apostles, and the epistle to the Romans, fail to connect the circumstances with the known both the epistles to the Corinthians, and the Jesuitical doctrines on the subject of assassination, epistle to the Hebrews : and the testimony thus and circulated a suspicion that he had been given to the antiquity, genuineness, or authority, poisoned. This seems never, however, to have of the books of the New Testament, is to be es- been substantiated, and Clement did not suspect teemed not only the testimony of Clement, but it. He died on September 22nd, 1775. This likewise of the church of Rome in his time, pontiff was distinguished for simplicity of man- Moreover, it ought to be allowed, that the Corin- ners, disinterestedness and modesty. His letters thians likewise, to whom this epistle was sent, are known to be fabrications.

were acquainted with, and highly respected, the books quoted, or alluded to. In this epistle there are not any quotations or references to any of the apocryphal gospels.

A second epistle of Clement, which some have been inclined to own, is expressly rejected by

CLEMENT (Francis), an ingenious French writer of the congregation of St. Maur, was born at Beze, in Burgundy, in 1714. His superiors called him to Paris, and employed him in continuing the Literary History of France, which Rivet had begun. He wrote the

Photius ; and Grabe has observed, that Diony- eleventh and twelfth volumes of that work, and

sius, bishop of Corinth in the second century, was afterwards engaged to continue the collection

mentions only one epistle of Clement ; that Cle- of the French historians, begun by Bouquet ; of

ment of Alexandria and Origen, who have quoted which he compiled the twelfth and thirteenth

the first, never take any notice of the second ; volumes. But the most important service he

nor yet Irenaeus, who has particularly mentioned rendered to the literary world, was the improve-

the first, and could not well have omitted to ment of the excellent work L'Art de Verifier

mention the other also, if he had known it. les Dates, designed by Dantine, and afterwards

Grabe concludes, from these circumstances, that published by Durand and Clemencet, in one ???

this piece was not written before the middle of large volume 4to. After thirteen years labor, he

the third century. The Constitutions and Re- increased it to no less than three large volumes

cognitions, ascribed to Clement, are clearly spu- folio, which were published between 1783 and

rious. 1792. He was engaged on a similar work,

CLEMENT V. (pope), the first who made a pub- under the title of L'Art de Verifier les Dates

'.ic sale of indulgences. He transplanted the holy see to Avignon in France ; greatly contributed

avant J. C. about the time of his death in 1793. CLEMENTINE, a term used among the Au-

CLEOPATRA.

gustincs, who apply it co one, who, after having been nine years a superior, ceases to be so, and becomes a private monk, under the command of a superior : pope Clement having prohibited any superior among the Augustines from continuing above nine years in his office.

CLEMENTINES, in the canon law, are the con- stitutions of pope Clement V. and the canons of the council of Vienne.

CLENARD (Nicholas), a celebrated gramma- rian of the sixteenth century, born at Diest. After having taught languages at Louvain, he travelled into France, Spain, Portugal, and Africa ; and wrote in Latin, 1 . Letters relating to his Travels, which are very curious and scarce. 2. A Greek Grammar. .He died at Grenoble, in 1542.

CLENCH. See CLINCH.

CLEOBIS and BITON, in fabulous history, two youths, sons of Cydippe the priestess of Juno at Argos. When oxen could not be pro- cured to draw their mother's chariot to the tem- ple of Juno, they put themselves under the yoke, and drew it forty-five stadia to the temple, amidst the acclamations of the multitude, who congratulated the mother on account of the piety of her sons. Cydippe entreated the goddess to reward the piety of her sons with the best gift that could be granted to a mortal. They went to rest and awoke no more ; and by this the god- dess indicated that death is the most happy event that can happen to a man. The Argives raised them statues atsDelphi.

CLEOBULUS, one of the seven sages of Greece, was the son of Evagoras of Lindus, a city of Rhodes, and famous for his personal attrac- tions. He wrote poetry and moral maxims ; and died in the seventieth year of his age, 564 B. C. or according to some writers, B. C. 584. Cleo- bulina, his daughter, is said to have composed

enigmas, which were sent into Egypt, where they excited great admiration. Some of them have been preserved ; and to her has been attri- buted the Grecian riddle respecting the months of the year, mentioned in our article CHRONOLOGY.

CLEOMBROTUS I. king of Sparta, was the son of Anaxandridas. He was deterred from building a wall across the isthmus of Corinth against the approach of the Persians, by an eclipse of the sun, and, dying in the seventy-fifth Olympiad, was succeeded by Plistarchus, the son of Leonidas, a minor.

CLEOMBROTUS II. the son of Pausanias, king of Sparta, after his brother Agesipolis I. He made war against the Boeotians ; and, lest he should be suspected of treacherous communica- tions with Epaminondas, gave battle at Leuctra, in a very disadvantageous place. He was killed in the engagement, and his army destroyed, in the year of Rome 382.

CLEOMBROTUS HI. a son-in-law of Leonidas, king of Sparta, who for a while usurped the kingdom after the expulsion of his father-in-law. When Leonidas was recalled, Cleom- brotus was banished, and his wife Chelonis, who had accompanied her father, now accompanied her husband in his exile.

CLEOME, in botany, a genus of the siliquosa order, and tetradyuamia class of plants ; natural

order twenty-fifth, putaminezD. Nectariferous glandules three, one at each sinus of the r,\i,. except the lowest ; the PET. all rising upwards : the siliqua unilocular and bivalved. Species twenty-three, all natives of warm climates. They are herbaceous plants rising from one to two feet high ; and are adorned with flowers of various colors, as red, yellow, flesh color, &c They are propagated by seeds, and require no other care than what is common to other exotics which are natives of warm countries.

CLEO M ED ES, an ancient Greek philosopher, whom Dr. Priestley supposes to have flourished about A. D. 427. He wrote a considerable treatise on astronomy and cosmology, still extant, It is divided into two books, and discourses on the dimensions of the earth, which is supposed to be the centre of the universe ; of the magni- tudes and distances of the heavenly bodies ; of the eclipses of the moon, &c.

CLEOMENES I. king of Sparta, subdued the Argives and freed Athens

from the tyranny of the Pisistratidse. By bribing the oracle he pronounced Demaratus, his colleague on the throne, illegitimate, because he refused to punish the people of ./Egida, who had deserted the Greeks. He killed himself in a fit of madness.

CLEOMENES II. succeeded his brother Agesi- polis II. He reigned thirty-four years in the greatest tranquillity, and was father to Acrotatus and Cleonymus. He was succeeded by Areus I. son of Acrotatus.

CLEOMENES III. succeeded his father Leonidas. He was of an enterprising spirit, and resolved to restore the ancient discipline of Lycurgus in its full force. He killed the Ephori, poisoned his royal colleague Eurydamidas, and made his own bro- ther Euclidas king, contrary to the express laws of the state, which ordained one of each family to sit on the throne. He also made war against the Achaeans, and attempted to destroy the cele- brated Achaean league. Aratus, the general of the Achaeans, who supposed himself inferior to his enemy, called Antigonus to his assistance ; and Cleomenes, when he had fought the unfortunate battle of Sellasia, retired into Egypt to the court of Ptolemy Euergetes. Ptolemy received him and his family with great cordiality ; but his successor, weak, and suspicious, soon ex- pressed his jealousy of this noble stranger, and imprisoned him. Cleomenes killed himself, and his body was exposed on a cross in the 140th Olympiad.

CLEON/E, in ancient geography, a town of Argolis, above Mycenae, on the road which leads from Argos to Corinth ; standing on an eminence, on every side occupied by houses.

CLEON/EUS, an epithet of Hercules, so called from his having killed the huge Nemean lion, near Cleonae, which was fabled to have been translated to the stars, and turned into the con- stellation of the lion.

CLEONIA, in botany, a genus of plants of the didynamia class, and gymnospermia order. Filaments bifid, one point having the anthers on its tip ; stigma four-cleft. Species, one only.

CLEOPATRA III. a celebrated queen of Egypt, and the last of its native sovereigns, was the daughter of Ptolemy Auletes, who left the

crown by will to this princess and her brother Pto- lemy, on cond

ition that they should mar ry and reign jointly. As they were both young, he further directed that they should be educated under the patronage of the Roman senate. Cleopatra seems to have been first acknowledged queeu in the second year of the 182nd Olympiad, or the 703rd A.U.C. and B.C. 51 ; but the early history both of her and her brother Ptolemy's affairs is obscure. He seems to have been mainly under the guidance of the Egyptian general Achillas and the eunuch Pothinus, who, ambitious to en- large their power, intrigued against Cleopatra, and compelled her to retire into Syria. Here she raised a considerable army which she led into Egypt to assert her rights. Ptolemy having also taken the field, both armies encamped between Pelusium and Mount Casius ; but seemed mu- tually unwilling to hazard an engagement. Pom- pey at this juncture, who had been appointed one of the guardians of the young king, sought, after his defeat at Pharsalia, an asylum in Egypt; but, on his reaching Pelusium was basely mur- dered: and Julius Caesar shortly after arrived at Alexandria in pursuit of him. The funeral of Pompey detaining him at first, and contrary winds afterwards, Caesar applied for the payment of the money due to him from Auletes, and en- tered warmly into the difference subsisting be- tween Ptolemy and his sister. His haughty behaviour irritated the Egyptians ; but the cause of the prince and princess was finally referred to his tribunal, and advocates were appointed to state their respective claims.

Cleopatra now resolved on that disgraceful oartering of her person for her momentary in- terests, which resulted so quickly in her own ruin and that of her country. Asking leave to appear before Caesar, or, as Plutarch says, having been invited to plead her own cause in his pre- sence, she caused herself to be secretly conveyed to his apartment in a mattrass ; being carried thither through the streets of Alexandria on the back of Apollodorus. Caesar, it is said, applauded the stratagem, and when Cleopatra presented herself, was so charmed with her person that he detained her all night. Next morning he sent for Ptolemy, and pressed him to comply with all his sister's wishes. The young prince, on finding that Caesar was become the advocate of Cleopatra on terms so disgraceful to her family, was roused to indignation, and running half frantic through the streets of Alexandria, excited an insurrection of the populace. The Roman chief, however, con- trived to appease the tumult, by showing himself from a balcony to the multitude, and promising to do whatever should be suggested for the best by their leaders. Next day he convened a gene- ral assembly of the people, and decreed between the parties, as guardian and arbitrator, that Pto- lemy and Cleopatra should reign jointly in Egypt, according to their father's will. This

decree at first gave satisfaction; but Pothinus now suggested to the people, that it was part of the Roman plan to place Cleopatra alone on the throne; and measures were again adopted for expelling the Roman army from the capital. But Caesar secured the person of Ptolemy, put Pothinus to death, and gained several successive

victories over this uohanpy people; on the las' occasion only, 20,000 Egyptians were slain, 12,000 taken prisoners, and Ptolemy drowned in the Nile, in his attempt to escape. Caesar afterwards returning to Alexandria without op- position, bestowed the crown on Cleopatra, mar- rying her to her younger brother Ptolemy, not more than eleven years of age. The revolt of Pharnaces, king of the Cimmerian Bosphorus, now finally called him away : and Cleopatra reigned undisturbed, except by her own fears of the future interference of her brother. At fifteen years of age, according to the Egyptian laws, he was to share the royal authority with her : inured to vice and blood, she caused him therefore to be poisoned, in the fourth year of his reign, and from that time became the sole sovereign of Egypt. On the death of Caesar, she declared herself in favor of the triumvirate, and sailed with a numerous fleet to join Antony and Octarianus ; but lost a number of her ships in a storm.

*We now arrive at the crisis of her fate : An- tony having received information, after the battle of Philippi, that Cleopatra had. sent succours to Cassius, required her to appear before him at Tarsus. The Egyptian queen had not forgotten her first conquest : providing herself with large sums of money, magnificent presents, and a pro- fusion of the most splendid royal attire, she em- barked in a galley, beautifully gilt and orna- mented, attended by her whole fleet : and cross- ing the sea of Pamphylia, sailed up the Cydnus, towards the Roman head quarters. Here she mounted sails of purple silk, and her oars were plated with silver. The queen herself appeared under a canopy of cloth of gold, raised on the deck, in the attitude and attire of Venus rising out of the sea. The neighbouring hills, as she sailed up the river, echoed with the enchanting melody of a skilful military band, to which the oars kept time ; while the most fragrant perfumes burning on the deck, diffused their odors on every side to a considerable distance. Shakspeare is quite historical here ***

The barge she sat in, like a burnished throne, Burned on the water : the poop was beaten gold ; Purple the sails, and so perfumed that The winds were love-sick with them : the oars were

silver ;

Which to the tune of flutes kept stroke, and made The water, which they beat, to follow faster, As amorous of their strokes. For her own person, It beggared all description ; she did lie, In her pavilion (cloth of gold, of tissue), O'er-picturing that Venus, where we see The fancy out work nature : on each side her Stood pretty dimpled boys, like smiling Cupids, With diverse-colored fans, whose wind did seem To glow the delicate cheeks which they did cool. And what they undid, did !

Antony who, as she approached the tower of Tarsus, was distributing justice in the forum, soon found himself deserted by the people. Oil her landing, he invited her to supper; but the queen, declining the invitation, requested a visit from him in her tent. The triumvir at once complied, and was entertained, it is said, with a magnificence which words cannot describe. He

was no less charmed by her conversation, and by her yet unfading beauty.

A succession of the most costly entertainments were now given by Cleopatra to the Roman officers and army. She made no hesitation at presenting Antony frequently with the gold and silver vessels which he admired ; including some- times the entire plate of her sumptuous feasts. It was on one of these occasions that she endea- voured to exhibit her contempt for riches by call- ing for two immense pearls, that have been valued by historians at the enormous sum of ––50,000 each, and dissolving one of them in vi- negar, drank it off. See PEARLS. It is pretty evident that her ambition was urging forward these sacrifices ; and she more than once ex- pressed her hopes of reigning at Rome as well as in Egypt. Her common oath was, ' As I hope to give law in fhe capitol.' One of the first exertions of her influence over her lover was to induce him to send assassins to Alexandria to despatch her sister Arsinoe. Hither she soon caused him also to repair with her. The death of his wife Fulvia, however, aroused him for a time ; and on repairing to Rome to adjust his relations with Octavianus, he married, it is well known, Octavia, the sister of the latter, and re- ceived a sort of agreed dominion over the eastern part of the empire.

But on Antony's second arrival in Syria, Cleopatra resumed her sway over him, and he bestowed on her all Phoenicia, Ccelosyria, Cyprus, and a great part of Arabia and Judaea ; a profu- sion which offended the Roman people. His disgraceful expeditions into Parthia and

Armenia followed; and when the faithful Octavia was about to join him, his more powerful mistress prevailed on him to forbid the interview, and recalled him to Alexandria to spend the winter. On the war between the two triumvirs breaking out, her influence appeared rather increased than diminished. She mainly induced the famous battle of Actium to be fought at sea, against the advice of Antony's best officers, and to display, apparently, her naval forces. Yet in the midst of the action, Cleopatra, with her fifty galleys, took flight, and Antony followed her in a small vessel. On his reproaching her for her conduct they now parted; he pursuing his course to Libya, where he had stationed a considerable body of troops, and the queen returning to Alexandria. On his arrival Antony found that his soldiers had deserted to Octavianus. Almost distracted with disappointment, he returned therefore to Egypt, and to Cleopatra. Hither his rival followed, only to find him abandoned to dissipation ; and though a successful sally was made against the invaders, the Egyptian fleet de- serted Antony's interests. Cleopatra, as he sus- pected, betrayed him, and he fell, as we have elsewhere stated, on his own sword ; hut the wound did not prove immediately mortal ; and, being drawn up by ropes, to the tower in which Cleopatra lodged, he expired in her arms in the year before Christ, 30, and was magnificently interred by her.

Alexandria now submitting to Octavianus, Cleopatra fell into his hands, having previously attempted to despatch herself with a dagger. Being introduced to him, the only favor she

asked, was leave to bury Antony. She after wards appears to have rallied her spirits and strength to attempt the new conquest of Octa- vianus ; her efforts, however, were ineffectual. His laconic answer to her most artful efforts was, Be cheerful, lady, no harm will befal you. But Cleopatra soon discovered that it was Oc- tavianus's intention to make her serve as an or- nament to his triumph : and even heard that in three days she was to be embarked for Rome : an ignominy which she resolved to escapfe. She obtained leave to pay a tribute of respect to the tomb of Antony, which she bathed with her tears and covered with flowers. She afterwards or- dered a splendid entertainment to be prepared, and appeared amongst her friends more cheer- ful than usual. Rising however from table, she delivered to Epaphroditus a sealed letter for Octavianus, and suddenly withdrew to her apart- ment, attended by two of her women. Here she dressed herself in her raost sumptuous robes, and asked for a basket of figs, in which an asp was concealed, the poison of which is said to be such as to produce a kind of lethargy, ending in death without any pain. Her letter to Octavianus only requested that he

would permit her to be buried in the same tomb with Antony. On receiving it, he despatched some of his friends in haste, to prevent, if possi- ble, her death. But on their entrance into her apartment, she was found lying dead on a golden bed in her royal robes ; one of her maids like- wise being dead at her feet, and the other dying. Octavianus in vain attempted to recover her; but granted her request as to her interment, and buried her with great pomp in his rival's tomb. At her death she was in her thirty-ninth year, and left a sou by Julius Caesar, (afterwards sacri- ficed to the political jealousy of Octavianus), and two sons and a daughter by Antony. With her reign terminated that of the family of Pto- lemy Lagus, which had held the throne of Egypt from the time of Alexander, and the country became a Roman province. Cleopatra was evidently ambitious and vain to a high de- gree : many of her personal habits, however, looking to their early corruption, were clearly the result of a wretclied education. She is said to have greatly enlarged and improved the Alex- andrian library, and to have patronised the fine arts generally. She also conversed fluently in Latin, Greek, Syriac, and all the oriental lan- guages.

CLEOSTRATUS, a celebrated astronomer, born in Tenedos, who, according to Pliny, was the first who discovered the signs of the Zodiac others say, that he only discovered the sign Aries and Sagittarius. He also corrected the errors of the Grecian year about A. A. C. 306

To CLEPE, v. a. Sax. clypian. To call.

obsolete.

Go up, quod he unto his knave, anen ; Clepe at his dore, or knocke with a ston.

Chaucer. Canterbury Tales.

Now was ther of that chirche a parish clerk. The which that wos ycleped Absolon.

Three crabbed months had sowr'd themselves to

death ,

Ere I could make thee open thy white hand. And clepe thyself my love. Shatupeare

CLEPSYDRA.

CLEPSYDRA, from K\firru, to conceal, and vSiap, water, an instrument or machine serving to measure time generally, by the fall of a certain quantity of water ; though there have likewise been clepsydrae made with mercury. The Egyptians, by this machine, measured the course of the sun ; Tycho Brache, in later days, made use of it to measure the motion of the stars, &c. and Dudley employed the same con- trivance in all his maritime observations. The clepsydras are very ancient instruments ; they were invented in Egypt under the Ptolemies; being used chiefly in the winter, as the sun-dials in the summer. But they had two great de- fects ; the one, that the water ran out with a greater or less facility, as the air was more or less dense; the other, that it ran more readily at the beginning than towards the conclusion. Ctesibius of Alexandria obviated the latter of these objections, by adding a continual supply of water, and a waste pipe to take off the super- fluous quantity.

The clepsydra, in its ancient form of an as- tronomical instrument, by the help of which the equator was divided into twelve equal parts, before the mathematical division of a circle was understood, was deemed of more value than a sun-dial, on account of its dividing the hours of the night as well as of the day. It was in- troduced into Greece by Plato, and into Rome by P. Cornelius Scipio Nasica, about 157 years B. C. Pliny says, lib. xxxvii., that Pompey brought a valuable one among his spoils from the eastern nations ; and Coesar is said to have met with an instrument of this kind in Britain, by the help of which he observed that the sum- mer nights of this climate are shorter than they are in Italy. The use which Pompey made of his instrument was to limit the speeches of the Roman orators ; which Cicero alludes to when he says, ‘ latrare ad clepsydram.’

F. Berthoud mentions another ancient clep- sydra, Histoire de la Mesure du Temps, torn. i. p. 20, which was called the anaphoric, on the dial-plate of which were projected the circles of the sphere, including the parallels of the sun’s altitude, with the semi-diurnal and semi-noctur- nal arcs, to which an adjustable bead, as the sun’s representative, pointed as an index to show the hours, parallels, &c. as the dial-plate re- volved daily by means of wheel-work, which was impelled by water. It does not seem cer- tain at what period this instrument was invented and used ; but Berthoud thinks that tables of the sun’s motion must have existed previously to its invention, and also a knowledge of projec- tions of the sphere on a plane surface, whence he fixes the date posterior to the time of Hip- parchus, who, according to Pliny, died about 125 years B. C. The name anaphoric

is evi- dently derived from anaphora, which was the second house in the heavens, according to the doctrine of astrology, which. prevailed about the time here specified.

Athenaeus describes under this name a Greek musical instrument, formed like a round altar, not having strings, but pipes, the orifices of which being turned towards water, the agitation of it impelled the air through the pipes, and

caused them to give a soft sound ; but, as he also informs us that there were a sort of levers projecting beyond the instrument, it is probable that the levers acted as keys by the pressure of the hand causing them to unclose valves placed on or in the pipes ; while the water, rising by means of some apparatus in the altar-shaped re- cipient, forced the air through these valves as they opened, and thus formed a kind of water organ.

Beckmann, in his History of Inventions, vol. i. p. 136, attributes the modern contrivance and in- troduction of a water-clock to some time between A. D. 1643 and 1663, and gives nearly the same account of one as we meet with in Bion, on Ma- thematical Instruments, and Ozanam's Recrea- tions, edited by Dr. Hutton. The last writer says, that father Timothy, a Barnabite, gave the machine all the excellence it was capable of, by constructing it so as to make it go a month at one winding up, ar.d to exhibit not only the hours on a dial-plate, but also the sun's place, day of the month, and festivals throughout the year.

How these and similar particulars are indi- cated, will appear from the following description of a water-clock of the seventeenth century.

In fig 1, of Plate CLEPSYDRA, ABCD is an oblong frame of wood, to the upper part of which two cords, A a and B b, are fixed at their superior extremities, and at their inferior, to the metallic arbor, a b, of the drum, E, which con- tains distilled water; this water is confined in cells so peculiarly constructed, that they regulate the velocity with which the drum shall descend by the force of gravity from the top to the bottom of the frame, and the ends of the arbor indicate the hours marked on the vertical plane of the frame during the time of descent. An observer, who knows riot the nature of the interior cells of the drum, is surprised to see that its weight does not make it run down rapidly, when mounted to the top of the frame by merely folding the strings round the arbor, there being apparently no me- chanical impediment to the natural action of gra- vity. To explain how this phenomenon is pro- duced, we must refer to fig. 2,

which is a section of the drum at right angles to its arbor; this circular plane we will suppose to be six inches, which is about the usual size, in diameter, and to represent the inner surface of either of the two ends of the drum, which may be made of any of the unoxidable metals; then, if we conceive seven metallic partitions, F/, Gg, II h, li, Kk, L /, and M m, to be closely soldered to both ends of the drum, in the sloping direction indicated by the figure, where the black lines are equidis- tant tangents to the small dotted circle of an inch and half diameter at the points f, g, h, &c.; it is evident, that any small quantity of water intro- duced into the drum would fall into two, or at most three, of the lower compartments, and would remain there until some external force should alter the position of the drum, supposing in this case the cords tied fast to the arbor ; but we have said that they are wound round the cir- cumference of an arbor, that has a sensible dia- meter, suppose one-eighth of an inch ; therefore, they are removed one-sixteenth of an inch, or upwards, if we take their thickness into the ac-

count, from the centre of the drum, which would also he in its centre of gravity, if it were empty, on which account it would, in that case, revolve to the left, in the direction F G II downwards, from the cord being at the remote side of the centre, as represented by N O ; but conceive the water to be included now and then, it would be elevated to the right, till its weight became a counterpoise to the gravity of the heavier side of the drum, in which situation all motion would cease, and the drum would remain, suspended, indeed, by the cords, but in a state of equilibrio. Conceive again a small hole perforated in the partition pressed upon by the water near the cir- cumference of the large circle, and also at the points F, G, H, I, K, L, M, and the consequence ⁂will be, that the water will first force its way slowly through the perforation at K, from the more elevated to the lower compartment, which effect will diminish its power as a counterpoise, and give such an advantage to the heavy side, F G H, of the drum, cdnsidered as empty, as will occasion a small degree of motion towards the left, and consequently carry the water once more towards the right ; but now the water passes through the perforation of the next partition also at I, and produces again the same effect as has been described with respect to K, and will con- tinue to do so, at the successive perforations, till all the compartments have been filled

and emptied by means of these perforations, in succession, which kind of motion of the drum, contrary to that of the water, it is now not difficult to con- ceive, will be pretty regular, if all the partitions are perforated exactly alike. The difference of the pressures of the water in cells, nearly full and nearly empty, will occasion some litfle de- viation from regularity ; but these will be pe- riodic, and must be allowed for in the hour divisions, which ought to be made by a compa- rison of the spaces fallen through, with the time indicated by a clock or watch. About nine ounces of distilled water will suffice for a clep- sydra of six inches diameter, and two inches depth, and the velocity of the fall may be limited, either by varying the quantity of water, or by hanging a small metallic cup F, to receive weights, by a cord wound in a direction contrary to the cords of suspension, to act as a counter- poise in aid of the water, if the fall be too rapid, or vice versa. It is necessary that the arbor should fit the central square hole so well as to prevent the escape of water from the drum, otherwise the instrument would continue to gain velocity, till at length it would no longer afford a true indication of time.

Sometimes a cord, cd, with a weight, P, is made to pass round a pulley fixed to an arbor at the top of the frame, with a noose passing over the axis near ††, as is seen in the same figure, which arbor, projecting through a dial-plate or face, turns round and carries a hand to indicate the hours like an ordinary clock ; when this con- struction is preferred, it is an indispensable re- quisite that the circumference of the pulley's groove be exactly of the same dimensions as the fall of the drum in twelve or twenty-four hours, accordingly as the dial is divided. This clep- sydra, it is said, goes faster in summer than in

.winter, which is owing to the drum being rela- tively heavier in rarefied than in dense air ; we can hardly suppose that any alteration in the fluidity of the water, as formerly imagined, would make any difference. The minute hand, and also the striking part of a common clock, might easily be superadded to this clepsydra.

Another, and more simple, form of the modern clepsydra is derived from that law in hydrostatics by which the efflux of water out of an orifice is influenced under different pressures, or, which is the same thing, at different depths from the sur- face, the velocity being directly as the square loot of the height of the surface from the aper- ture. If a glass vessel, like that in fig. 3, there- fore be taken, out of which all the water will flow in exactly twelve hours, from a small aperture in its lower extremity, the whole height must be divided, or supposed to be divided, into the square of 12 or 144 equal parts, of

which parts 11 x 11, or 121 measured from the bottom, or 23 measured from the top, will give the division for the hour 11, 10 x 10 or 100 from the bot- tom will give the line for 10, 81 for 9, 64 for 8, and so on down to the bottom, as represented in the figure ; which scale is in the inverted propor- tion of that according to which heavy bodies fall in free space by the sole force of gravity. Now if, instead of the vessel itself being divided by hour- lines as above directed, the stem of a floating piece like an hydrometer were to have a similar scale kept in a perpendicular direction, by pass- ing through the central hole of a cap or cover of the vessel, the indication of time would be made on the stem at the surface of the cap, which con- struction would admit of the vessel being of wood or metal.

ducn a ngure might be given to the containing ves- sel as would re- p quire the dividing marks to be equi- distant, which Dr. Hutton, in his edi- tion of Ozanam's Recreations, has asserted to be a paraboloid, or ves- sel formed by the circumvolution of <

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11

a parabola of the fourth degree, the method of describing which, he gives thus : ††† Let A B S, be a common parabola, the axis of which is P S, and the summit S. Diavv, in any manner, the line, R r T, parallel to that axis, and then draw any ordinate of the parabola A P, intersecting R T, in R ; make P Q a mean proportional be- tween P R and P A, and let p q be a mean pro- portional also between pr and pa; and so on. The curve passing through all the points Qy, Sec. will be the one required, which, being made the mould for a vessel to be cast by, will produce an instrument, which, when perforated at the apex, will have the singular property of equali- sing the scale, so as to correspond to equal times while the water is running out. Mr. ';i- rignon has given a geometrical and general me-

tlnod of determining the scale for a clepsydra, whatever may be the shape and magnitude of the vessel. (See Memoires de 1'Academie Royale des Sciences, p. 78, 1699.)

A still more simple water-clock with equidis- tant hour-lines, in any regular vessel, is con- structed by means of the syphon fixed fast in the centre of a broad piece of cork, which is floated in any regular vessel, as the cylindrical one at fig. 5 ; for, as the power of a syphon to empty any vessel filled with water, depends upon the difference of atmospheric pressures at the surface of the water and at the orifice of the longer leg, it is clear that while the shorter leg sinks with the surface of the water in the vessel during its time of emptying, the relative pressures, depend- ing on the distance from the surface of the water to the orifice of the lower leg, will continue un- altered in any state of the atmosphere ; hence equal portions of water will be discharged in equal times ; and a light cock cemented on the lower orifice would afford a means of adjusting its aperture to the size of any vessel that may be fixed upon ; or otherwise a second receiving ves- sel may be divided into equal spaces for the hours, which would in this case be indicated by the surface of the rising water.

We conclude with extracting the construction and action of a clepsydra, published in the 44th volume of the Philosophical Transactions by the Hon. Charles Hamilton.

A B and C D are two similar oblong vessels attached to a frame of wood, which may easily be conceived to surround figure 4, which shows only the interior mechanism ; a b and c d are two columns of wood so floating in water that their counterpoises, F and G, just keep their superior .ends equal with the surface of the water by means of connecting chains passing over the pulley f, and another hid by the dial-plate ; the former of these pullies, f, has a click which pushes the ratchet on the barrel, i, when the counterpoise, F, falls, but slips easily over the slopes of the teeth when the said counterpoise rises ; the latter pulley has also a similar click acting in like man- ner, with a second ratchet at the opposite end of the barrel, ††', which ratchet is also hid in the drawing, so that, whichever of the two counter- poises shall at any time be falling, the barrel, i, will move forwards in the same direction ; and carry the minute-hand along with it on the dial- plate; the hour-hand goes round by means of dial-work, as in an ordinary clock or watch, where a diminution of velocity is effected by two wheels and two pinions. The action is thus

produced by means of five syphons ard two balances.

The water enters with an unvaried influx, drawn from a reservoir, by a syphon of small bore, the longer leg of which is seen at J, into the middle of what may be called a horizontal trough, supported like a balance by a fulcrum or axis in such a way, that either end of the ba-

lance may be elevated accordingly as the long vessels A B and C D require to be alternately filled ; near the top of each of these vessels is inserted a long syphon or tantalus, / and m, the lower legs of which reach down to two small cy- lindrical vessels, n and o, which are poised by another balance at the fulcrum/?; these cylin- drical vessels have, in like manner, each a small syphon, q and r ; lastly, a silken thread tied to the upper end of the cylinder, n, is carried up round a small pulley fast to the frame at s, and fastened to the end of the trough under it, and similar thread is fastened in like manner to the cylinder o, and end of the trough under the small pulley t. Now it is easy to conceive, that when the vessel, A B, is filled to nearly the head of the tantalus, I, the bore of which is larger than of the feeding syphon J, the water will be discharged into the cylindrical vase n, which consequently will preponderate, and by means of the silken cord elevate the end of the trough higher than the horizontal line, and make its opposite end under the small pulley, t, to be depressed, which will therefore conduct the water into the other long vessel CD; during this action the coun- terpoise, F, rises, and its pulley,/, produces no effect on the ratchet by reason of the click, h, sliding over the sloping sides of its teeth, but the counterpoise, G, falls, and the click of its pulley (not seen) pushes the second ratchet forwards in the direction of the figures of the face I. II. III. &c.

When C D is nearly full, the long syphon, m, begins to discharge its water ; makes the cylin- drical vase, o, preponderate, and again elevates by means of its silken string the end of the trough under the small pulley t, and depresses the op- posite end to fill the vessel, A B, again, during which time the click, h, of the pulley, f, acts with its ratchet ; and thus the alternate increase and decrease of the water in the two vessels are continued without interruption, so long as the feeding syphon continues to supply a sufficient quantity of pure water.

CLERC (George le), count de Buffon. See

BUFFON.

END OF VOL. V.

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Sic oportet ad llbrum, pre.ertim mUcellanel generi., lepmd.m accedere lectorero, nt solet ad connvium conviva civilis

or annititur omnibu. .ati.facere ; et tamen .i quid apponitur, quod hnju, aut illiu, palato non respondeat, et hie et urbane dissimulant, et alia fercula probant, lie quid consistent convivatorem. Erasmus

A reader .hould .it down to a book, specially of the mi.cellaneou. kind, a. a well-behaved vintor doe. to a banquet. The »t exert, him«lf ,o .ati.fy hi, guem ; but if, after all hi, .care and pain., .omething ,ho,,ld appear on the table that doe. not .n,t th,. or that per.on’. ,.,u, they politely pa., it over witbo.1 notice, and commend other dishes, that they may not distress a kind host.

Translation.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPEDIA METROPOLITANˆ

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

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LONDON ENCYCLOPAEDIA.

CLERC (John le), a very celebrated writer and critic, was born at Geneva in 1657. At sixteen he could read all the celebrated Latin and Greek authors. After studying at Geneva, he went to France in 1678 ; returned in 1679, and was ordained a minister of the Genevan church. In 1682 he visited England, preaching in the Wal- loon and Savoy churches for nearly six months, and then passed over to Holland, and was ad- mitted professor of philosophy, polite literature, and the Hebrew tongue, at Amsterdam. He now published his Ars Critica; and in 1686 began, in conjunctipn with M. de la Crose, his Bibliotheque Universelle et Historique, which was continued to the year 1693, in 26 vols. In 1703 he began his Bibliotheque Choisie, and continued it to 1714, when he commenced another work on the same plan, called Biblio- theque Ancienne et Moderne, which he continued to his death. In 1691 he married the daughter of the copious Italian writer, Gregorio Leti, by whom he had four children, who all died young. Le Clerc is a divine conspicuous among those who have contended for the right of private judgment, and who, at the same time, dogmatise very freely in the use of their own. He evident- ly leans towards the Socinian school, and treats the Scriptures occasionally with little reverence. His writings, however, are valuable, and, as a whole, should not be neglected by the biblical student. In 1728 he was seized with a palsy and fever ; and, after spending the last six years of his life in a state of mental imbecility, died in 1736.

CLERC (John le), called Chevalier, an eminent historical painter, born at Nancy in 1587. He studied in Italy, where he resided twenty years, and was a disciple of Carlo Venetiano, whose style he so effectually imitated, that several of his pictures passed for the work of Venetiano.

He was highly esteemed at Venice, and, as a token of public respect, was made a knight of St. Mark. His freedom and lightness of coloring, in which he resembled his master, were the principal beauties of his paintings. He died in 1 633 .

CLERC (Sebastin le), engraver and designer to the French king, was bora at Metz in 1637. In 1672 he was admitted into the royal academy of painting and sculpture ; and in 1690 made pro- fessor of geometry and perspective. He pub- lished, besides a great number of designs and prints : 1. A Treatise on Theoretical and Prac- tical Geometry. 2. A Treatise on Architecture ; and other works. He died in 1714.

CLE'RGY, n. s. > Fr. ckrgl ; Lat, clerus ;

CLE'RGYMAN, n. s. J Greek icX»jpoc, i. e. sorte deligo, the clergy being regarded as the lot or inheritance of God. See onward. The body of VOL. VI.— PART I.

the Christian ministry. A clergyman is a man in holy orders ; set apart for the ministration in the pulpit, and at the altar.

But fame ! here as we riden bo the way,

Us nedeth net to spoken but of game

And let auctoritees, in Goddes name,

To preching, and to scole, eke, of clergie.

Chaucer. Canterbury Tales,

We hold that God's clergy are a state which hath been, and will be as long as there is a church upon earth, necessary, by the plain word of God himself; a state whereunto the rest of God's people must be subject, as touching the things that appertain to their soul's health. Hooker.

The convocation give a greater sum Than ever, at one time, the clergy yet Did to his predecessors part withal. Shakspeare. How I have sped among the clergymen, The sums I have collected shall express. Id.

Not a few years before the Normans came, the clergy, though in Edward the confessor's days, had lost all good literature and religion, scarce able to read and understand their Latin service ; he was a miracle to others who knew his grammar.

Milton, History of England.

, It seems to be in the power of a reasonable clergy- man to make the most ignorant man comprehend his duty. Swift.

CLERGY, as a general name given to the body of ecclesiastics, has been traced to every age o. the Christian Church ; and some have contended that it is sanctioned by the authority of Scrip- ture. Others conceive that it had its rise at a later period, when the desire of spiritual and secular pre-eminence, and corresponding domi- nion had perverted the minds of the professors and teachers of Christianity ; and the interests of the church became interwoven with that of the state. It is a probable opinion that it was esta- blished before the time of Tertullian, towards the close of the second century.

The distinction itself was intended, we are told, to suggest, that the former, that is, the pastors or clergy (for they appropiated the term rXjjpoc to themselves), were selected and contra- distinguished from the multitude, as being, in th* present world, by way of eminence, God's ' pe- culium,' or special inheritance. In support of this claim they allege, that God is, in the Old Testament, said to be the inheritance of the Le- vites, because a determinate share of the sacri- fices and offerings made to God was, in part, to serve them instead of an estate in land, such as was given to each of the other tribes. But it has been argued, on the other hand, that the tribe of Levi is nowhere called God's inheritance, though that expression is repeatedly used, with respect to the whole nation. Concerning the whole nation of Israel, Moses, who was himself

a Levite, says, in an address to God, Deut. ix. 29, ' They are thy people, and thine inheritance, which thou broughtest out by thy mighty power.' The words in the Septuagint deserve our parti- cular attention. "Ovroi Xaoe TVTTOI yivopfvoi TS iroifivui ; thus rendered in our version, ' Neither as being lords over God's heritage, but being ensamples to the flock.' They are part of a charge given to the presbyters, or pastors, relat- ing to their care of the people committed to them, who are called God's flock, which they are commanded to feed, of which they are to take the oversight, not the mastery, and to which they are to serve as patterns. The same persons, therefore, who, both in this and in the preceding verse are styled iroi/iviov, the flock, under the direction of God's ministers, the shepherds, are also called

eXj/pot, his inheritance, pver whom their pastors are commanded not to domineer. The distinction above mentioned, it is said, stands in direct contradiction both to the letter and to the sense of the unerring standard of Scripture. Some expositors, however, render the term cXqpot, in this passage, the church's possessions ; but this explication, as others say, ill suits the context, and annihilates the contrast between an imperious man- nerand an engaging pattern, and supposes an awk- ward ellipsis in the words themselves. Besides, it is asked what were the church's possessions in those days ? Was she so early vested with lands and hereditaments, for it is to such only that the term rXjjpoe, when denoting property or posses- sion, is applied ? In the apostolic times, the church's patrimony consisted chiefly in persecu- tion and calumny, hatred and derison, agreeably to the prediction of her Lord.

The distinction of the whole church into clergy and laity, whensoever it originated, was soon ex- tended much farther than the original intention of those who adopted it. In the time of Cy- prian, about the middle of the third century, we find that, in general, all things relating to the government and policy of the church were per- formed by the joint consent, and administration of the clergy and laity. Thus Cyprian says (Epist. vi. $ 5, cited by the author of the Enquiry into the Constitution, &c. of the Primitive Church, p. 106), ' he did nothing without the knowledge and consent of his people.' That the

letters from foreign churches were received and read by the whole church, &c.

The origin of the term laity becomes a curious matter of enquiry in this connexion. The schoolmen will not allow it to be derived from Xaoc, populus ; they deduce it from Xaac, lapis, a stone. The following specimen of the mode of reasoning adopted by some celebrated doc- tors, and cited by Altensfaig in his Lexicon The- ologicum, is possibly amusing. ' Capitur clericus pro viro docto, scientifico, perito, scientia pleno, repleto et experto. E contra, laicus capitur pro viro indocto, imperito, insipiente, et lapideo. Unde laicus dicetur a Xaac Gra?ce, quod est lapis Latine. Et sic omnis clericus, in quantum clericus, est laudabilis; laicus vero, in quantum laicus, est vituperandus. Clerici quoque a toto genere de jure proponuntur, et debent prseponi laicis.' Cardinal Bona also delivers his senti- ments in relation to the care that ought to be taken by the clergy, that laymen may not be allowed to do themselves harm by studying the profounder parts of Scripture, which their stu- pidity is utterly incapable of comprehending: and though he does not absolutely prohibit their reading some of the plainer books of Scripture, he indulges them more freely in the use of books containing

the histories, lives, and legends of the saints, and holy meditations. See more on this subject in Campbell's Ecclesiastical History, vol. i.

In the first century the clergy were distin- guished by the title of presbyters or bishops ; and some maintain that they are of equal rank and authority. See BISHOP. But towards the close of the second century, a notion prevailing that the ministers of the Christian church suc- ceeded to the character, rights, and privileges of the Jewish priesthood, this produced a subordi- nation of rank among them. The bishops as- sumed a rank and character similar to those of the Jewish high-priest ; the presbyters represent- ed the priests, and the deacons the Levites- This distinction was still farther promoted towards the end of the third century ; and a new set of ec- clesiastical officers was established, such as sub- deacons, acolythi, door-keepers, readers, exor- cists, &c. The powers of the clergy were considerably extended under Constantine, and the Romish Church attained its full, and finally intolerable, height.

In that church are two very distinct orders of clergy : one regular, comprehending all the re- ligious of both sexes, as abbots, monks, priors, &c. ; the other secular, comprehending all the ecclesiastics that do not make the monastic vows. Among the reformed churches, there are none but those of the latter.

In England the term clergy comprehends all persons in holy orders, and ecclesiastical offices : and, though their almost total exemption from the duties of civil life has been modified since the Reformation, important personal exemptions, essential to their sacred office, are still continued to them. Clergymen cannot be compelled to serve on a jury, nor to appear at a court-leet, which almost every other person may be obliged to do; but if a layman is summoned on a jury, and before the trial takes orders, he shall, not-

withstanding, appear and be sworn. Neither can he be chosen to any temporal office, as bailiff, reeve, constable, or the like ; in regard of his own continual attendance on the sacred function. Duru;g his attendance on divine service, he is privileged from arrests in civil suits. In cases also of felony, a clerk in orders shall have the benefit of clergy, without being branded in the hand ; and may likewise have it more than once ; in both which cases he is distinguished from a layman. But, as they have their privileges, so they have also their disabilities, on account of their spiritual avocations. Clergymen are in- capable of sitting in the House of Commons; and by statute 21 Hen.

VIII. c. 13. are not, in general, allowed to take any lands or tenements to farm, upon pain of £10 per month, and total avoidance of the lease ; nor, upon like pain, to keep any tap-house or brew-house ; nor engage in any trade, nor sell any merchandise, under forfeiture of the treble value ; which prohibition is consonant to the canon law.

CLERGY, BENEFIT OF, an ancient privilege, whereby one in orders claimed to be delivered to his ordinary to purge himself of felony. The old exemptions granted to the church were prin- cipally of two kinds: 1. Exemption of places consecrated to religious duties from criminal arrests , which was the foundation of sanctuaries. 2. Exemption of the persons of clergymen from criminal process before the secular judge in a few particular cases, which was the true and original meaning of the privilegium clericale. But the clergy increasing in wealth, power, number, and interest, now claimed that which they obtained by the favor of the civil government, as their inherent right, and as a right of the highest nature, inde feasible, and jure divino. By their canons, there- fore, and constitutions, they endeavoured at, and often obtained a vast extension of those exemptions; as well in regard to the crimes themselves, of which the list became universal, as in regard to the persons exempted; among whom were at length comprehended, not only every subordinate officer belonging to the church or clergy, but even many that were en- tirely laymen. In England, however, a total exemption of the clergy from secular jurisdiction could never be thoroughly effected. And, in those particular cases in which it was allowed, the custom was for the bishop or ordinary to de- mand his clerks to be remitted out of the king's courts as soon as they were indicted : concern- ing the allowance of which demand there was, for many years, a great uncertainty ; till at length it was finally settled in the reign of Henry VI. that the prisoner should first be arraigned ; and might either then claim his benefit of clergy by way of declinatory plea ; or, after conviction, by way of arrest of judgment. This latter way is most usually practised, as it is more to the satis- faction of the court to have the crime previously ascertained by confession, or the verdict of a jury; and more advantageous to the prisoner, who may possibly be acquitted, and so need not the benefit of his clergy. Originally the law was held that no man should be admitted to the benefit of clergy, but such as had the clerical habit and tonsure. But in time a much wider

criterion was established ; every one that could read (a great mark of learning in those days of ignorance) being accounted a clerk, or clericus, and allowed the benefit of clerkship, though neither initiated in clerkship, nor trimmed with the holy tonsure. But when learning became more generally disseminated, and reading was no longer a

proof of clerkship, or holy orders, it was found that as many laymen as divines were admitted to the privilegium clericale ; and there- fore by statute 4 Henry VII. c. 13, a distinction was once more drawn between mere lay scholars and clerks that were really in orders. The sta- tute directs, that no person, once admitted to the benefit of clergy, shall be admitted thereto a second time, until he produces his orders : and, to distinguish their persons, all laymen who are allowed this privilege, shall be burned with a hot iron in the brawn of the left thumb. This distinction between learned laymen and real clerks in orders was abolished for a time by the statutes 28 Hen. VIII. c. 1, and 32 Hen. VIII. c. 3, but is held to have been virtually restored by statute 1 Edw. VI. c. 12, which enacts, that lords of parliament and peers of the realm may have the benefit of their peerage, equivalent to that of clergy, for the first offence (although they cannot read, and without being burnt in the hand), for all offences then chargeable to com- moners, and also for the crimes of house-break- ing, highway-robbery, horse-stealing, and robbing of churches. After this burning, the laity, and before it, the real clergy, were discharged from the sentence of the law in the king's court, and delivered over to the ordinary, to be dealt with according to the ecclesiastical canons. Where- upon the ordinary, not satisfied with the proofs adduced in the profane secular court, set himself formally to make a purgation of the offender by a new canonical trial ; although he had been previously convicted by his country, or perhaps by his own confession. This trial was held be- fore the bishop in person, or his deputy, and by a jury of twelve clerks. And there, first the party himself was required to make oath of his own innocence : next, there was to be the oath of twelve compurgators, who swore they believed he spoke the truth ; then, witnesses were to be examined upon oath, but upon be'.ialf of the prisoner only ; and, lastly, the jury were to bring in their verdict upon oath, which usually ac- quitted the prisoner ; otherwise, if a clerk, he was degraded or put to penance.

By this purgation, the party was restored tc his credit, his liberty, his lands, and his capacity of purchasing afresh, and was treated as an entirely innocent man. This scandalous prosti- tution of oaths, and the forms of justice, in the almost constant acquittal of felonious clerks by purgation, was the occasion that, upon very heinous and notorious circumstances of guilt, temporal courts would not trust the ordinary with the trial of the offender, but delivered over to him the convicted clerk, absque purgatione facienda : in which situation the clerk convict could not make purgation, but was to be impri- soned for life, and was incapable of acquiring any personal property, or receiving thfe profits of his lands, unless the king should pardon h;m.

CLERK.

The statute 18 Eliz. c. 7, enacts, that, for avoiding such perjuries, and abuses, after the offender has been allowed his clergy, he should not be delivered to the ordinary as formerly ; but, upon such allowance, and burning of the hand, he shall forthwith be enlarged, and de- livered out of prison; with proviso, that the judge may, if he thinks fit, continue the offender in jail for any time not exceeding a year. And thus the law continued unaltered for above a century; except only, that the statute 21 Jac. 1. c. 6, allowed, that women convicted of simple larcenies under the value of 10s. should (net properly have the benefit of the clergy, for they were not called upon to read ; but) be burned in the hand, whipped, or stocked, or imprisoned for any time not exceeding a year. All women, all peers, and all male commoners who could read, were therefore discharged in such felonies absolutely, if clerks in orders ; and for the first offence upon burning in the hand, if laymen ; yet all liable (except peers), if the judge saw occasion, to imprisonment not exceeding a year. And these men who could not read, if under the degree of peerage, were hanged. At last, how- ever, it was considered, that learning was no ex- tenuation of guilt. And thereupon, by statute 5 Anne, c. 6, it was enacted that the benefit of clergy should be granted to all those who were entitled to ask it, without requiring: them to read by way o.f conditional merit. But experience having shown that so universal a lenity was an encouragement to commit the lower degrees of felony ; it was enacted that when any person is convicted of any theft or larceny, and burnt in the hand for the same, he shall, at the discre- tion of the judge, be committed to the house of correction or public work-house, to be there kept to hard labor for any time not less than six months, and not exceeding two years ; with a power of inflicting a double confinement in case of the party's escape from the first.

It was also enacted by statute 4 Geo. I. c. 11. and 6 Geo. I. c. 23. that when any person shall be convicted of any larceny, either grand or petit, who by the law shall be entitled to the benefit of clergy, and liable only to the penalties of burning in the hand, or whipping ; the court, instead of such burning in the hand, or whip- ping, may direct such offenders to be transported to America for seven years ; and if they return, or are seen at large in this kingdom within that time, it shall be felony without benefit of clergy. In this state does the benefit of clergy at present stand ; very considerably different from its ori- ginal institution ; the English legislature having converted, by gradual mutations, what was at first an unjust exemption of popish

ecclesiastics, into a merciful mitigation of the general law with respect to capital punishments. All clerks in orders are, without any branding or transport- ation, to be admitted to this privilege, and im- mediately discharged, or at most only confined for one year ; and this as often as they offend. All lords of parliament, and peers of the realm, by the statute 1 Edw. Vi.c. 12. shall be discharged in all clergyable and other felonies provided for by the act without any burning in the hand, in liie same manner as real clerks convict: but this

is only for the first offence. All the commons of the realm, not in orders, whether male or fe- male, shall, for the first offence, be discharged of the punishment of felonies, within the benefit of clersy, upon being burnt in the hand, and suffering discretionary imprisonment; or, in case of larceny, upon being transported for seven years. By statute 19 Geo. III. c. 74, burning in the hand is abolished, and instead thereof, except in cases of manslaughter, the court may order the offender to be whipped. Upon the whole, we may observe the following rules: 1. In all felonies, whether new created, or by common law, clergy is now allowable, unless taken away by act of parliament. 2. Where clergy is taken away from the principal, it is not taken away from the accessory, unless he be also particularly included in the words of the statute. 3. When the benefit of clergy is taken away from the offence (as in case of murder, robbery, rape; and burglary, &c.), a principal in the second de- gree, being present, aiding and abetting the crime, is excluded from his clergy as well as the prin- cipal in the first degree: but, 4. Where it is only taken away from the person committing the of- fence (as in case of stabbing, or committing larceny in a dwelling house,) his aiders and abettors are not excluded, through the tenderness of the law, which had determined that such sta~ tutes shall not be taken literally.

CLERK, n. s. ˆ Fr. clerc ; Lat. from cle- CLE’RICAL, adj. >r»cus, a clergyman ; a lite- CLE K5HIP, n. s. j rary man ; a scribe by pro- fession ; it received its peculiar application when the clergy were the only penmen. It is now ap- plied to a man employed under another as a wri- ter; a petty writer in public offices ; an officer of various kinds. Clerical is applied exclusively to the clergy, except when used in a legal sense to mark the literal errors of clerks and transcribers. Clerkship is the office of a clerk of any kind. It is also used in the sense of apprenticeship by lawyers. A clerk is, according to the usage of the church of England, a reader as well as a writer, one who reads the responses to lead the congregation.

A good man, ther wos of religioun, That wos a poure persons of a town, But rich he wos of holy thought and werk. He wos also a lerned

man a clerk.

Chaucer’t Canterbury Tale*.

They might talk of book-learning what they would ; but, for his part, he never saw more unfeaty fellows than great clerks were. Sidney.

My lord Bassanio gave his ring away Unto the judge ; and then the boy, his clerk, That took some pains in writing, he begged mine.

Shalupeare

In clericals the keys arc lined, and in colleges they use to line the table-men. Ba»on’i Natural Hittory.

His notions fitted tilings so well, That which was which he could not tell ; But oftentimes mistook the one For the ‘otter, as great clerht have done.

Hudibras.

All persons were styled clerks, that served in tbe church of Christ, whether they *cre bishops, priests, or deacons.

CLERK.

Take a just View, how many may remark, Who’s now a lord, his grandsire Was a clerk.

Granville.

of lieutenacy, of justices of assize, oyer and ter- miner, gaol-delivery, and of the peace ; all general pardons, granted either at the king’s

CLERK, John of Eldin, the inventor of the coronation, or in parliament. The writs of par- ttiodern British system of naval tactics, which liament with the names of the knights, citizens, is the more remarkable, as he was a country and burgesses, are also returned into his office. gentleman, not acquainted with navigation. In He likewise makes out special pardons and 1779, he imparted to his friends his new system writs of execution on bonds of statute-staple of breaking through the line of the enemy, forfeited.

Lord Rodney first made use of it in his victory CLERK OF THE ORDNANCE, an officer of the of April 12, 1782, over the French, under De king’s tower who has the registers, &c. of the Grasse, between Dominica and Les Saintes. ordnance.

Since then Clerk's principles have been applied by all the English admirals, and Lords Howe, St Vincent, Duncan, and Nelson, owe to them their most signal victories.

CLERK OF THE ERRORS, in the court of corn- mon pleas, an officer who transcribes and cer- tines into the king's bench, the tenor of the record of the action on which the writ of error, made

CLERK comes from the Greek

used out by the cursitor, is brought there to be deter-

for clergy ; but more properly signifies lot or he- mined. In the king's bench, the clerk of the er- ritage, the lot of clerks or ecclesiastics being to rors transcribes and certifies records of causes, serve God. Accordingly clems was at first used by bill, in that court, into the exchequer And

to signify those who had a particular attachment to the service of God. The origin of the ex- pression is derived from the Old Testament, where the tribe of Levi is called the lot, heritage, and God is reciprocally called their por-

the clerk of the errors in the exchequer, trans- cribes the records certified thither out of the king's bench, and to prepare them for judgment in the exchequer chamber.

CLERK OF THE ESSOINS, in the court of com- tion; that tribe being consecrated to the service mon pleas, keeps the essoins roll or enters essoins :

of God, and living on the offerings made to God without any other settled provision. Thus, Pas- quier observes, the officers of the counts were anciently stiled clerks of accompts ; and secre- taries of slate were called clerks of the secret.

he also provides parchment, cuts it into rolls, marks the number on them, delivers out the rolls to the officers, and receives them again when written.

CLERK OF THE ESTREATS, an officer in the Soclericus domini regis, in the time cf Edward I. exchequer, who every term receives the estreats was englished, the king's secretary, or clerks of out of the lord-treasurer's remembrancer's office, his council. The term was applied indifferently and writes them out to be levied for the to all who knew how to manage the pen : though crown.

originally it was appropriated to ecclesiastics. CLERK OF THE HAMPER, or HANAPER, an As the nobility and gentry were usually brought officer in chancery, who receives all money due up to the exercise of arms, none but the clergy to the king for the seak of charters, letters patent, cultivated the sciences. commissions, and writs ; also the fees due to the

CLERK COMPTROLLER OF THE KING'S HOUSE- officers for enrolling and examining them. HOLD, an officer of the king's court, authorised CLERK OF THE KING'S SILVER, an officer of to examine and pass the charges of pursuivants, the common pleas, to whom every fine is brought messengers of the green cloth, &c. to inspect and after it has passed the office of the custos brevium ; control all defects of asy of the inferior officers ; and who enters the effect of writs of covenant and to sit in the counting house with the lord into a book kept for that purpose, according to steward and other officers of the household, for which all the fines of that term are recorded in regulating such matters. the rolls of the court.

CLERK OF THE BAILS, an officer in the court CLERK OF THE MARKET, an officer of the king's of King's Bench, who files all bail pieces taken house, who has the charge of the king's measures

in that court, where he always attends.

and weights, the standard of those that ought

CLERK OF THE CHECK, an officer belonging to to be used all over England,

the king's court; who has the check and control- CLERK OF THE NICHILS OR NIHILS, an officer

ment of the yeomen that belong to the king, of the exchequer, who makes a roll of all such

queen, or prince. He likewise, by himself or sums as are nichilled by the sheriffs upon their

deputy, sets the watch in the court. There is also in the navy an officer of the same title, belonging to the king's yards.

CLERK OF THE CROWN, an officer in the King's bench, who frames, reads, and records all indict-

estreats of green wax, and delivers them in to the remembrancer of

the treasury, to have exe- cution done upon them for the king. See NIHIL. CLERK OF THE OUTLAWRIES, an officer of the common pleas, and deputy to the attorney gene-

ments against offenders there arraigned or indict- ral, for making out all writs of capias et legatum

ed, of any public crime. He is likewise termed after outlawry, to which there must be the attor-

clerk of the crown office, in which capacity he ney general's name.

exhibits information by order of the court for CLEUK OF THE PAPER OFFICE, an officer be-

divers offences. longing to the King's Bench, who makes up the

CLERK OF THE CROWN, in chancery, an officer paper books of special pleadings in that court, who constantly attends the lord chancellor in CLERK OF THE PEACE, an officer belonging to

person or by deputy ; writes, and prepares for the the sessions of the peace, who reads indictments,

great seal, special matters of state by commission enrols the proceedings, and draws the process :

both ordinary and extraordinary, viz. commissions he also certifies into the King's Bench, transcript*

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of indictments, outlawries, attainders, and con- CLERKE (Captain Charles), a celebrated victions before the justices of peace, within the English navigator, bred up to the navy from his

» • 1. .L *1* . . • _ 1 A* _ . *1* " . .1

time limited by statute, under a certain penalty. This office is in the gift of the custus rotulorum, and may be executed by deputy.

CLERK OF THE PELLS, an officer in the ex-

youth, and present in several actions during the war of 1745. In that between the Bellona and Courageux, having been stationed in the

mizen top on board the former, the mast was carried

exituum.

CLERK OF THE PIPE, an officer of the exche-

chequer, who enters every teller's bill into a overboard by a shot, and he fell into the sea parchment roll, called pellis receptorum ; and with it; but was taken up unhurt. When corn- makes another roll of payments called pelli's modore Byron made his first voyage round the

world, Mr. Clerke served on board his ship as a midshipman ; and was afterwards on the Ame-

quer, who having the accounts of all debts due rican station. In 1768 he sailed round the world to the king, delivered out of the remembrancer's1 a second time in the Endeavour, as master's office, charges them in a great roll folded up like mate ; but, during the voyage, succeeded to a a pipe. He writes out warrants to sheriffs, to lieutenancy. He returned in 1775, and was soon levy the said debts on the goods and chattels of after appointed master and commander. When the debtors; and, if they have no goods, then he captain Cook undertook his last voyage, Mr. draws them down to the treasurer's remembrancer Cleike was appointed captain of the Discovery;

to write estreats against their lands.

CLERK OF THE PLEAS, an officer of the ex-

and, on the death of captain Cook, succeeded to the supreme command. He did not, however,

chequer, in whose office all the officers of the long enjoy his new dignity, having had symptoms

court having special privilege, ought to sue or be of a consumption before his departure from

sued in any action. In his office also actions at England; notwithstanding which he persevered

law may be prosecuted by other persons, but the in search of a passage between the Asiatic and

plaintiff ought to be tenant or debtor to the king or some way accountable to him. clerks are attornies in all suits.

American continents, until all his officers were The under of opinion that it was impracticable. He died on the 22d of August, 1778, aged thirty-eight, the

CLERK OF THE ROLLS, an officefof the chan- ship being then within view of the coast of

eery, who makes search after, and copies deeds, offices, &c.

CLERK OF THE TREASURY, an officer belong-

Kamtschatka.

CLERKE'S ISLANDS, two islands in the North Pacific Ocean, between the coast of Kamtschatka

ing to the court of common pleas, who keeps the in Asia, and that of North America. They were

records of the court, makes out all records of nisi discovered by captain Cook in his last voyage,

prius, and all exemplifications of records in the and named after captain Clerke. At a distance

treasury. He has the fees due for all searches ; they appeared to be of a considerable extent,

and has an under keeper, who keeps one key of and to have several hills, connected with the

ihe treasury door. low grounds in such a manner as to make

CLERK OF THE WARRANTS, an officer of the them look like a group of islands. The little

common pleas, who enters all warrants of attorney island lies on the eastern extremity of the

for plaintiffs and defendants in suit ; and enrols large one, and is remarkable for having three

deeds of bargain and sale that are acknowledged elevated rocks upon it. Both islands are unin-

in court, or before a judge. He likewise estreats habited.

CLERKE’S RIVER, a river of North America,

that which rises on the western declivity of the Rocky Mountains, and, after a winding course round

into the exchequer all issues, fines, estreats, and amercements, due to the crown in court.

CLERKS OF THE PETTY BAG, three officers of the mountains, falls into the Columbia about the

the court of chancery, of whom the master of the forty-second degree of north latitude, 500 miles

rolls is the chief: their business is to record the above the mouth of the latter. It was named by

return of all inquisitions out of every shire ; to captains Lewis and Clarke, who first visited this

make out patents of customers, gaugers, comp- country in their journey across the American

trailers, &c. liberates upon extent of statutes continent to the Pacific.

staple; conge d’elires for bishops; summonses CLERKE’S ROCKS are a cluster of rocky

of the nobility, clergy, and burgesses to par- islets in the South Atlantic, about thirty-seven

liament; and commissions directed to knights miles south of the island of Georgia. Lat.

and others of every shire, for assessing subsidies 55° S.

and taxes. CLERKENWELL, one of the out-parishes of

CLERKS OF THE PRIVY SEAL, four officers who the city of London, in Ossulton hundred, Mid-

attend the lord privy seal, for writing and making dlesex, and included within the new borough of

out all things that are sent by warrant from the Finsbury. It comprises the parishes of St.

signet to the privy seal, and to be passed the James and St. John. St. James's church stands

great seal; and make out privy seals, upon special on the site of an ancient monastery, and is a

occasions of his majesty's affairs, as for loan of heavy structure, built partly in the Gothic and

money, or the like. partly in the Tuscan order. On the green is the

CLERKSOFTHESiGNETjfourofficerscontinually sessions-house of the county. Here is also the New

attending upon his majesty's principal secretary, Prison, built on the Howardian plan, as well as

who has the custody of the privy signet, for Clerkenwell Bridewell. In St. John's Square

sealing the king's private letters, and the grants formerly stood the famous Hospital of St. John

which pass the king's hand by bill signed. They of Jerusalem, which was destroyed by the rebels

have their diet at the secretary's table. under Wat Tyler, in the fourteenth century.

OLE

CLERMONT. a county of South Carolina, in Cambclen district, bounded on the north by Kershaw county, on the east by Salem, on the south by Clarendon, and on the west by the river Wateree, which separates it from Richland county. It is thirty-five miles long and equally broad. The chief town is Statesburg.

CLERMONT, or CLERMONT FERRAND, a po- pulous city of France, the capital of the depart- ment of Puy de Dome. Before the revolution it was the capital of Auvergne, and the see of a bishop, suffragan of Bourges. From its situation on an eminence at the foot of a lofty mountain, it was originally Clarus Mons. It is now called Clermont Ferrand, from the town of Montferrand being united to it, and forming one of the faux- bourgs. It is said to contain 16,000 inhabitants, and has a considerable commerce in corn, wine, wool, woollen stuffs, teramies, serges, linen, lace, &c. Here are also manufactures of paper,

hats, leather, pottery, and linen and woollen stuffs. There are several fine walks and public squares, but the streets are narrow, and the houses mean ; being generally built of stone of a gloomy hue. The cathedral is one of the finest in France, though in an imperfect state ; of the five towers which existed in the last century, only one has survived the revolution. The college is a fine edifice, containing a public library; here is also a cabinet of natural history, a botanic garden, a good theatre, and several hospitals. Many Ro- man antiquities have been found in the neigh- bourhood ; and there are several mineral springs)>ear : the water of a brook which passes through the fauxbourg of St. Allyre has petrified a wooden bridge to perfect stone. A council was held here in 1095, to determine on the crusade against the infidels in the Holy Land, during the pon- tificate of Urban II. It was the birth-place of Paschal ; is 233 miles south of Paris, and fifty south of Moulins.

CLERMONT, or CLERMONT, EN ARGONNE, a town of France, in the department of the Meuse, and ci-devant territory of Barrois. It is seated on an eminence surrounded with woods and pas- tures ; twelve miles W. S. W. of Verdun, and 137 north-west of Paris.

CLERMONT DE LODEVE, a town of France, in the department of Herault, and ci-devant pro- vince of Languedoc. It is the capital of a can- ton in the district of Lodeve. It has manufactures of cloth and hats, but its chief trade is in wool and cattle. It is twenty miles west of Mont- pelier.

CLERMONT MANUSCRIPT, Codex Cleromonta- nus or Regius, a Greco-Latin manuscript of St. Paul's Epistles, found in the monastery of Cler- mont in France, and used by Beza, together with the Cambridge MS., in preparing his edition of the New Testament. This copy is in the 8vo. form, and is written on fine vellum in uncial, Greek and Latin characters, with some mutila- tions. Beza supposes that it is of equal antiquity with the Cambridge copy ; and it is noted I) by Wetstein and Griesbach. As it contains the epistle to the Hebrews, which has been however added by a later hand, it is supposed to have been written in the west of Europe. Dr. Mill contended that it was the second part of the

Cambridge MS. ; but this opinion has been en- tirely refuted by a comparison of their form, size, vellum, and more particularly of their ab- breviations. The MS. itself was in the posses- sion of Morinus ; and, after his death, deposited among the MSS. of the Royal Library at

Paris. According to the accounts of Wetstein andSaba tier, thirty-six leaves were cut out of it at the beginning of the last century (by John Aymon, as it is suppose 1), and sold in England to the earl of Oxford, who however returned them in 1729. The MS. is therefore once more complete, as the covering only is wanting in which the stolen sheets had been enclosed. This is pre- served in the British Museum, and filled with the letters that passed on the occasion. The Codex Cleromontanus, together with other Gneco-Latin MSS., has been accused of having a Greek text altered from the Latin, but this charge has been entirely refuted by Dr. Seinler.

CLERODENDRON, in bo'any, a genus of plants of didynamia class, and angiospermia order: CAL. five-cleft, campanulate : COR. tube filiform ; border, five-parted and equal : STAM. very long, placed between the segments of the corolla: DRUPE four-seeded, bearing; a one-celled nut. Species eight; trees and shrubs of the East Indies ; the former having scarlet, the latter white flowers.

CLEROMANCY; from

CLERVAUT, or CLERVACX, a town of France, in the department of Vienne, and ci-devant pro- vince of Champagne, five miles north of Chatei- lerault, and as far from Bar sur Aube. Its abb;;,, seated in a valley surrounded with woods and mountains, was formerly the chief of the Cister cian order, and had the famous tun of St. Ber- nard, which held 800 tuns of wine.

CLERY, a town of France, in the department of Somme, and ci-devant province of Picardy. It is the capital of a canton inˆthe district of Pe- ronne ; and lies three miles north-west of Pe- ronne.

CLESIDES, a Greek painter, who lived about A. A. C. 276, under Antiochus 1. He revenged the injuries he had received from queen Strato- nice, byjepresenting her in the arms of a fisher- man; but she was drawn with such personal beauty, that she preserved the piece, and liberally rewarded the artist.

CLETHRA, in botany, a genus of the mono- gynia order, and decandria class of plants; natu- ral order eighteenth, bicornes: CAL. quinquepar- tite ; the PETALS five ; the STIOMA trifid ; the CAP- SULE trilocular and three-valved. Species four; the most noted is C. anifolia, a native of Virginia and Carolina, where it grows in moist places, and near the sides of rivulets, rising nearly six or ten feet high. The leaves are shaped like those of the alder, but longer ; and placed alternately

ijpon the branches : the flowers are produced in close spikes at the extremities of the blanches ; they are white, composed of five petals, and have ten stamina in each, nearly of the same length with the petals. This plant will bear the open air in Britain, and is one of the most beautiful flowering shrubs. Its season is commonly about the beginning of July ; and, if not very hot, the spikes will flourish till the middle of September. It thrives best in moist land, and requires a sheltered situation, where it may be defended from strong winds, which frequently break off the branches where they are too much exposed 10 their violence. It is propagated by layers, but they are generally two years before they take root. It may also be propagated by suckers, which are sent out from the roots ; if these are carefully taken off with fibres in the autumn, and planted in a nursery-bed, they will be strong enough in two years to transplant.

CLEVE, ˆ In composition, at the beginning

CLIF, >or end of the proper name of a

CLIVE, j piece, denotes it to be situated on

the side of a rock or hill; as Cleveland, Clifton,

Staucliff.

CLEVELAND, a district of the North Riding of Yorkshire, part of the vale of Stockton. It borders upon Durham, from which it is sepa- rated by the Tees; and is remarkably beautiful, fertile, and well cultivated. It contains 70,444 arable acres. Wheat is its staple produce ; and no other district in the neighbourhood produces so great a proportionable quantity of equally fine grain.

CLEVELAND (John), an English poet of some eminence, who, during the civil war under Charles I., engaged as a literary champion in the royal cause against the parliamentarians. He died in 1658, and was much extolled by his party. His works, which consist of poems, characters, orations, epistles, &c., were printed in 1677, in 8vo.

CLE’VER, adj. ˆ Sax. gleawra ; proba-

CLE’VERLY, adv. Cbly fromyXaˆvpoc- Dex-

CLE’VERNESS, n. s. Jterous, skilful, just; fit;

proper; intelligent; accomnlished ; handsome;

commodious.

These would inveigle rats with the scent, And sometimes catch them with a snap, As cleverly as the ablest trap. Hudibra*.

A rogue upon the highway may have as strong an arm, and take off a man's head as cleverly as the exe- cutioner. South. It was the cleverer mockery of the two.

L'Eitrange.

I read Dyer's letter more for the style than the

news. The man has a clever pen, it must be owned.

Addi.mn's Freeholder.

He can't but think 'twould sound more clever,

To me, and to my heirs for ever. Pope.

She called him gundy-guts, and he called her lousy

Peg, though the girl was a tight clever wench as any

was- Arbuthnot.

CLEVES, a duchy in Westphalia, on the north-west of Germany, near Holland, including an area of 880 square miles, being about forty miles long and ten or twelve in medium breadth. It is situated chiefly on the south bank of the

Rhine, mostly above the point where that river branches out and forms the great stream called the Waal, between 5° 45′ and 6° 25′ E. long, and 51° 35′ and 51° 53′ N. lat. It is bounded on the north by the bishopric of Munster, and the province of Overyssel, on the west by Brabant and Guelderland, on the south by part of Guelder- land, the county of Mark, and the duchy of Berg, and on the east by the county of Rechlinghausen and Munster. Since the year 1753 it has been divided into three circles, Cleves, Wesel, and Emmerid ; Duisburg, Xanten, and Rees, are also districts of some note. In some parts the country is elevated, and covered with fields, woods and forests, sometimes three or four leagues in extent, on the borders of which are

numerous towns and villages. The low grounds, especially on the banks of the Rhine, afford excellent pas- turage and a great number of cattle and horses are reared in them. Corn, pulse, fruit, flax, to- bacco and various vegetables are cultivated here. Game is abundant, and the rivers furnish salmon, pike, carp, and other fish in great numbers. This duchy contains twenty-four walled towns, the chief of which is

CLEVES, the ancient capital, situated on the river Kermisdale, more than two miles from the west bank of the Rhine. It is one of the neatest towns in the empire, standing in a pleasant situ- ation on the declivity of a hill, and in a valley be- low it. It is built after the Dutch manner ; but, though fortified, it is not very strong. In the upper part stands the castle of Schwanenburg, from which there is a beautiful prospect almost over the whole country. The side of the hill is formed into a number of terraces and alleys, which give it a beautiful appearance. This city is very ancient, having been known to the Ro- mans, the traces of whose works are very evident in the country around. It contains about 5000 people, and is twelve miles south-east of Nime- guen, and seventy from Amsterdam ; not far from the frontiers of the united provinces, to which it has a gate directly leading, called the gate of Holland. The duchy of Cleves belongs to the king of Prussia ; it was indeed ceded to the French partly in 1792, and partly in 1806; and was then included in the department of the Roer. It was afterwards conferred by Buona- parte on general Murat ; but, on the restoration of the states of Europe in 1815, it returned to its former possessor. It yields the king of Prussia a revenue of £200,000. The spinning of flax forms an important branch of industry in this country ; woollen and linen cloths are also manu- factured in several parts, and some silks. Its situation, lying along the Rhine, is extremely favorable for commerce, and the inhabitants are not backward in improving these advantages. The country people are mostly Catholics, while, in the towns, the Protestants form the greater proportion ; there are also Jews and Mennomtes, liberty of conscience being allowed to all sects. Before the French revolution there were many monasteries here ; but they are now almost all suppressed. The air is salubrious, and the cli- mate generally mild. The country is watered by several considerable streams besides the Rhine ; as the Maese the Roer the Emeser, the Lippe,

and the Yssel. This duchy forms a part of the grand duchy of the Lower Rhine.

CLEVES, a town of Virginia, is the United States, two miles from Port

Royal, in a northerly direction.

CLEW, n. s. Saxon, clype ; Dutch, klouwen. Thread wound upon a bottom : a ball of thread. A guide ; a direction ; because men direct them- selves by a clew of thread in a labyrinth.

Eftsoons untwisting his deceitful clew, He gan to weave a web of wicked guile.

Spenser.

While, guided by some clew of heavenly thread, The perplexed labyrinth we backward tread.

Roscommon.

They see small clews draw vastest weights along, Not in their bulk, but in their order, strong. Dryden.

When the only clew we have fails us, which is most reasonable, to stop short or to push forward, without arty clew at all into the labyrinth of nature.

Bolingbrolte.

This alphabet must be your own clew to guide you.

Holder.

Is there no way, no thought, no beam of light ? No clew to guide me through this gloomy maze, To clear my honor, yet preserve my faith 1 Smith.

The reader knows not how to transport his thoughts over to the next particular, for want of some clew, or connecting idea to lay hold of. Watts's Logic.

Clew of the sail of a ship, is the lower corner of it, which reaches down to that earing where the tackles and sheets are fastened.

CLEW, v. a. From clew, a sea term. To clew the sails, is to raise them, in order to be furled; which is done by a rope fastened to the clew of a sail, called the clew-garnet.

CLIBADIUM, in botany, a genus of plants of the mono3cia class and pentandria order. Male: CAL. common and imbricated. Female florets three or four ; SEED an umbilicate drupe : species but one ; a Surinam

plant.

CLICK, v. a. “} Dut. cliken ; Fr. cliqueter ;

CLIC’KER, n. s. > or perhaps the diminutive of

CLIC’KET, n. s. .) clack. To make a sharp, small, successive noise. The substantives are two low words; one desciibes the servant of a salesman who calls to customers ; the other, the knocker of a door.

The solemn death-watch clicked, the hour she died j And shrilling crickets in the chimney cried. Gay.

CLIENT, n. s. } Lat. cliens. One

CLIE’NTED, part. adv. > who applies to an ad-

CLIE’NTSHIP, n. s. j vocate for counsel and

defence. It may be perhaps sometimes used for

a defendant in a more general sense.

I do think they are your friends and clients,

And fearful to disturb you. Ben Jonson.

There is due from the judge to the advocate some

commendation, where causes are well handled ; for

that upholds in the client the reputation of his counsel.

Bacon’s Essays.

Advocates must deal plainly with their clients, and tell the true state of their case.

Taylor’s Rule of Living Holy.

This due occasion of discouragement, the worst conditioned and least cliented petivoguers do yet, un- der the sweet bait of revenge, convert to a more plentiful prosecution of actions.

Carew’v Survey of Cornwall.

Patronage and clientship among the Romans always descended : the plebeian houses had recourse to the patrician line which had formerly protected them.

Dryden.

CLIENT, among the Romans, a citizen who put himself under the protection of some great man, who in respect of that relation was called patron. He assisted his client with his protec- tion, interest, and goods ; and the client gave his vote for his patron, when he sought any office for himself or friends. The right of patronage was appointed by Romulus, to unite the rich and poor together, in such a manner as that one might live without contempt, and the other with- out envy ; but the condition of a client, in course of time, became little else but a moderate slavery. CLIFF, n.s. Lat. clivus; Sax. clip, chop. A steep rock ; a rock, according to Skinner, broken and craggy (rapes}. The name of a character in music, properly clef.

This ladie rometh by the cliffe to plaie, With her meine, endlong upon the stronde ; And findeth Jason, and this other stonde, In speking of this thing, as I you told.

Chaucer, Legend.

The Leucadians did use to precipitate a man from a high cliff into the sea. Bacon’s Nat. Hist.

Mountaineers, that from Severus came,

And from the craggy cliffs of Tetrica. Dryden.

Wherever ‘tis so found scattered upon the shores,

there is it as constantly found lodged in the cliffs

threreabouts. Woodward.

CLIFFORD (George), earl of Cumberland, a nobleman distinguished for his naval enterprises, was born in Westmoreland, in 1558, and edu- cated at Peter-house in Cambridge, under Dr. Whitgift, afterwards archbishop of Canterbury. He was particularly attentive to the study of the mathematics. He was also noted for his skill in the tournament, and all the martial exercises of his age. Queen Elizabeth, on one occasion, took off her glove and gave it to him; a mark of royal favor, which, on public occasions, he used to wear in his hat, adorned with diamonds. In 1586 he fitted out a small squadron, with which he

sailed for South America, and, after taking several vessels from the Portuguese, re- turned to England. In 1588 he took the com- mand of a ship, with which he contributed greatly to the destruction of the Spanish armada ; and was rewarded for his gallant conduct by a grant from the queen of a commission to make another voyage to the South Sea. In this, however, he was unfortunate, for, after proceeding as far as the Azores, he was obliged by tempestuous wea- ther to return ; nor was he more successful in 1591, in an expedition to the coast of Spain. Yet he next year attacked the Azores, and took the town of Santa Cruz and a rich galleon, valued at £150,000. He sailed again in 1593 and took several very valuable Spanish prizes. In 1595 he fitted out a ship of 900 tons burden, being the largest that had ever been launched by an English subject, but was prevented, by an order from the queen, from sailing in it himself. In three years after, however, he sailed with a squa- dron to the West Indies, where he took the island of Porto Rico ; but in this voyage a great num- ber of his rneii were carried off by sickness. This

intrepid nobleman died at Savoy, in 1605, and his remains were interred at Skipton in York- shire.

CLIFFORD (Anne), only daughter of the above, born in 1589 at Skepton castle, Craven, and was twice married : first to Richard lord Buckhurst, afterwards earl of Dorset, whose life she wrote, and brought him three sous and two daughters. Her second husband was Philip earl of Pem- broke. She built in the course of her life two hospitals, and erected or repaired seven churches. She also erected monuments to the poets Spenser and Daniels, the latter being her tutor. She is particularly celebrated for a spirited reply to Sir Joseph Williamson, secretary of state, after the Restoration. He had presumed to nominate a candidate for her borough of Appleby: ‘ I have been bullied,’ said she, ‘ by an usurper ; I have been neglected by a court ; but I will not be dictated to by a subject ; your man sha’n’t stand.’

CLIFFORTIA, in botany, a genus of the po- lyandria order, and dioecia class of plants ; natu- ral order thirty-eighth, tricoccaj : male CAL. tri- phyllous ; COR. none ; the stamina near thirty in number: female CAL. triphyllous, superior to the receptacle; styles two; CAPS, bilpcular; •SEED single : species nineteen, all natives of Africa. Their flowers make no very handsome appearance ; but the plants themselves are very ornamental evergreens. They grow to the height of four or five

feet, and are propagated by cut- tings, which must be young shoots of five or six inches long. If planted in pots in spring or summer, and plunged in a hot-bed, they will readily take root. They must be watered plen- tifully in summer, but very sparingly in winter.

CLIFT, n. s. The same with cliff, now dis- used.

Down he tumbled, like an aged tree, High growing on the top of rocky elift. Spenser. Lo ! where the stripling wrapt in wonder roves,

Beneath the precipice o'erhung with pine ; And sees on high, amidst the encircling groves, From clift to clift the foaming torrents shine.

Beattie.

CLIFTON, a parish of Gloucestershire, one mile west from Bristol, and 114 west from Lon- don. It stands on a cliff or hill, rising gradually from the river Avon, and has been termed, from the salubrity of its air, the Montpelier of Eng- land. Within a few years this beautiful village has been adorned with new and elegant ranges of buildings, shooting out, as a physician phrases it, almost with the rapidity of crystallisation. They are occupied generally by those who seek the aid of the Bristol waters ; or very respectable con- stant residents. It has a most charming prospect of the river, and of the western part of Bristol. The church is handsome and commodious, and on the downs are the remains of Roman military works. .

CLIMA'CTER, n. s. ~*i Gr. KXiˆaicrtjp. A CLIMACTE'RICK, adj. > certain space of time, CLIMACTE'RICAL, adj. j or progression of years, which is supposed to end in a critical and dan- gerous time, at the end of which some change is supposed to befal the body.

Elder times, settling their conceits upon climavters, differ from one another. Browne'* Vulgar Errouri.

Certain observable years are supposed to be attend- ed with some considerable change in the body ; as the seventh year; the twenty-first, made up of three times seven ; the forty-ninth, made up seven times seven ; the sixty-third, being nine times seven ; and the eighty-first, which is nine times nine ; which two last are called the grand climactericlu. Id.

The numbers seven and nine, multiplied into them- selves, do make up sixty-three, commonly esteemed the great climacterical of oar lives. Id.

Your lordship being now arrived at your great cli- macterique, yet give no proof of the least decay of your excellent judgment and comprehension. Dryden.

My mother is something bettT, though, at her ad- vanced age, every day is a climacterick. Pope.

.CLI'MATE, v.n. & n. s. > Gr. K\iua. A CLI'MATURE, n. s. $ space upon the sur-

face of the earth, measured from the equator to the polar circles. Also a region, or tract of land, differing from another by the temperature of the air.

The blessed gods

Purge all infection from our air, whilst you

Do climate here. Shak»peare.

Such harbingers preceding still the fates,

Have heaven and earth together demonstrated

Unto our climatures and countrymen. Id.

Betwixt the extremes, two happier climates hold, The temper that partakes of hot and cold. Dryden.

On what new happy climate are we thrown. Id.

This talent of moving the passions cannot be o; any great use in the northern climates. Swift.

The subject of climate should be studied and atten- tively observed by the architect ; and particularly the effects of the vicissitudes of the seasons upon its mate- rials. Elmet' Dictionary

CLIMATE, in geography, expresses : 1. A por- tion of the earth's surface contained between two circles parallel to the equator, and of such a breadth, as that the longest day in the parallel nearest the pole exceeds the longest day in that nearest the equator by some certain space of time ; and 2. The ordinary state of the atmos- phere, with regard to heat and moisture, which prevails in any given portion of the globe. Abulfeda, the great Arabian geographer, gave the names of real and apparent climates to these two acceptations of the word.

I. In the former the original acceptation of the word is traced, as we see, to the Greek word Xijta, x\ivav, to incline ; and was intended by the ancients to express the obliquity of the sphere with respect to the horizon, the causes of the inequalities of day and night. Ptolemy divided the earth's surface from the equator to the arctic circle into zones calculated to make an increase of a quarter of an hour each in the longest day. These zones would be, of course, nearly of equal breadth near the equatorial line, and become contracted in higher latitudes. It was judged, therefore, sufficient to estimate them in those latitudes by their doubles answering to half an hour's increase of time at Midsummer. The lat professor Leslie furnishes, from Ptolemy's geo- graphical work, the following table of the climates as he calculated them.

CLIMATE.

11

TABLE OF THE CLIMATES.

Climate, or Parallel.

Latitude.

Length of Midsummer day.

Breadth of zone.

Climate, or Parallel.

Latitude.

Length of Midsummer day.

Breadth of zone.

I.

0° 0

12h. 00m

4° 15′

XIV.

43° 4m

15h. 15′

1° 57′

II.

4 15

12 15

4 10

XV.

45 1

15 30

1 50

III.

8 25

12 30

4 5

XVI.

46 51

15 45

1 41

IV.

12 30

12 45

3 57

XVII.

48 32

16 00

1 32

V.

16 27

13 00

3 47

XVIII.

50 4

16 15

1 36

VI.

20 15

13 15

3 38

XIX.

51 40

16 30

1 10

VII.

23 51

13 30

3 21

XX.

52 50

16 45

1 40

VIII.

27 12

13 45

3 10

XXI.

54 30

17 00

1 30

ix.

30 22

14 00

2 56

XXII.

55 00

17 15

1 00

X.

33 18

14 15

2 42

XXIII.

56 00

17 30

1 00

XL

36 00

14 30

2 35

XXIV.

57 00

17 45

‘30

XII.

38 35

14 45

2 21

XXV.

58 00

18 00

XIII.

40 56

15 00

2 9

XXVI.

59 30

18 30

Varenius gives us a table of thirty ancient climates ; but without any regard to the refractions. Ricciolus furnishes a more accurate one, wherein the refractions are allowed for ; an abstract of which follows : —

Middle of Climate.

Longest Day.

Lat.

Middle of Climate.

Longest Day.

Lat.

Middle of Climate.

Lat.

Cont. Light

North Night.

Cont.

Light.

South

Night.

I.

12th 30

7° 18′

VIII.

letho

48° 15′

XV.

66° 53′

31d

27d

30d

28d

II.

13 0

15 36

IX.

17 0

53 46

XVI.

69 30

62

58

60

59

III.

13 30

23 8

X.

18 0

57 44

XVII.

73 0

93

87

89

88

IV.

14 0

29 49

XL

19 0

60 39

XVIII.

78 6

124

117

120

118

V.

14 30

35 35

XII.

20 0

62 44

XIX.

84 0

156

148

150

149

VI.

15 0

40 32

XIII.

22 0

65 10

XX.

90 0

188

180

178

177

VII.

15 30

44 42

XIV.

24 0

65 54

More ancient writers speak of seven climates only, confining them to what they imagined the habitable part of the earth. The first they made to pass through Meroe, the second through Sienna, the third through Alexandria, the fourth through Rhodes, the fifth through Rome, the sixth through Pontus, and the seventh through the mouth of Borysthenes.

The beginning of the climaie is a parallel circle wherein the day is the

shortest. The end of the climate is that wherein the day is the longest ; the climates being reckoned, as we have stated, from the equator to the pole. The first, at its beginning, has its longest day precisely twelve hours long; at its end twelve hours and a half; the second, which begins where the first ends, viz. at twelve hours and a half, ends at thirteen hours ; and so of the rest, as far as the polar circles, where, what the geographers call hour climates terminate, and' month climates com- mence. As an hour climate is a space com- prised between two parallels of the equator, in the first of which the longest day exceeds that in the latter by half an hour ; so the month climate is a space terminated between two circles parallel to the polar circles, whose longest day is longer or shorter than that of its contiguous one by a month or thirty days.

The breadth of the respective climates is found

by adding the logarithmic cotangent of the sun's greatest declination to the logarithmic sine of his ascensional difference; the sum of these logar- ithms being the logarithmic tangent of the lati- tude of the circle nearest the pole ; which, be- ing given in each, will determine, of course, the whole operation of forming these circles. Those between the polar circles and the poles are de- termined by the sun's declination.

The following tables contain the latitude where each climate ends, the length of the longest day at its termination, and its breadth, in degrees and minutes, from Mr. Myer's very complete System of Geography.

FROM THE POLAR CIRCLES TO THE POLES.

Climate.

End of Climate.

Length of Day.

Breadth of Climate.

Days.

1

67° 18′

30

0° 46′

2

69 33

60

2 15

3

73 05

90

3 32

4

77 40

120

4 35

5

82 59

150

5 19

6

90 00

180

7 01

12

C L I M A T E.

FROM THE EQUATOR TO THE POLAR CIRCLES.

Climate.

Bad of Climate.

Length of Day.

Breadth of Climate.

Hours.

1

8° 34′

12i

8° 34′

2

16 44

13

8 10

3

24 12

13|

7 28

4

30 48

14

6 36

5

36 31

14*

5 43

6

41 24

15

4 53

7

45 32

15J

4 08

8

49 02

16

3 30

9

51 59

161

2 57

10

54 30

17

2 31

11

56 38

17i

2 08

12

58 27

18

1 49

13

59 59

18}

1 32

14

61 18

19

1 19

15

62 26

19|

1 08

16

63 22

20

0 56

17

64 10

20J

0 48

18

64 50

21

0 40

19

65 22

21J

0 32

20

65 48

22

0 26

21

66 05

22J

0 17

22

66 21

23

0 14

23

66 29

23£

0 8

24

66 32

24

0 3

II Under the second, and more modern accep- tation of the word climate, we have to notice the leading features of that great variety of condition and temperature, which pervades the atmosphere of the globe in different regions.

These have been sometimes treated under four very obvious divisions. The cold and humid ; cold and dry ; warm and humid ; hot and dry. 1. A cold and humid climate is such as pervades the eastern shores of Canada, Newfoundland, and Siberia, where the atmosphere, lo'aded with fogs, yields little encouragement to settlers, and the few vegetable productions only seem to increase the general gloominess of the scene, being con- fined to a few hardy shrubs. The fenny districts of more temperate regions, as those of some parts of the eastern shores of England, partake of this climate in a modified degree. 2. A cold and dry climate prevails in most of the northern coun- tries of Europe and Asia, in the winters of Upper Canada, &c. and this seems not to be inimical even to delicate human constitutions, while the finest streams of water and abundant vegetation attend it. 3. Warm and humid climates pervade large districts of both the Old and New Worlds ; as, Guinea, Demerara, Panama; Hindostan, particularly Bengal, Zanguebar, and Senegal. Here vegetation luxuriates, and is, at the same time, vigorous ; the verdant plains are diversified by gigantic trees ; and, while the miasmatic vapors render the atmosphere uncongenial to man, the noblest and most ferocious of animals, reptiles of immense size, and beautiful specimens of the feathered creation abound. 4. Hot and dry cli- mates are those of the African and Arabian de- serts, where plants, animals, and man, alike lan- guish under burning suns, water is evaporated, and the earth is sand, or ' iron, and the heavens brass.'

These four climates do not, however, as Mr.

Myers observes, always exist according to the full import of the terms by which they are de- signated. They are subject to various modifica- tions, particularly of two distinct kinds. The one results from the alternation of two different climates in the same region ; the other,

from the greater or less prevalence of either of the four elements. Thus, when heat, dryness, and hu- midity are duly combined, they render the cli- mate comparatively temperate. In Egypt, for instance, the combinations of heat and humidity, during the inundation of the Nile, and of heat and dryness during the rest of the year, temper a climate, which, without these alternations, would be insupportable. In Holland the cold humidity of the autumn is succeeded by frost, which increases the salubrity of the climate, that would otherwise not be so healthy. In some places, however, the changes take place so ra- pidly, or the difference of temperature is so great, that it renders the climate more pernicious to the constitution, than though only one of the kinds existed. The inhabitants of Astrachan and some other cities experience the heats of Africa in sum- mer, and the colds of Siberia in winter. The same constitution of the atmosphere is also agree- ably modified, in some instances, by the solar heat ; for the dry heat which renders the great desert of Sahara almost inaccessible, becomes a pleasant temperature at either Madrid or Mar- seilles. The fatal effects of humid heat are less powerful as we advance from the equator ; and on the contrary the cold, either dry or humid, is more supportable as we quit the depths of the polar regions and approach towards the tropics. Bergen and Brest have the same winter constitu- tion of the atmosphere, which is rendered humid and varied by the contiguity of the western ocean, but the annual temperatures of the two places are widely different.

The varieties of season connected with this question, we cannot enter into in this place ; further than to observe, that in the torrid zone the winter is generally a wet, the summer a dry, season; and that this constitutes the great division of their year : but these are in direct opposition to those seasons, as they would result from the position of the sun in “the ecliptic. ‘ The rain always accompanies the sun, so that, when this luminary is in the northern signs of the zodiac, the countries on that side of the equator have their rainy season. The vertical rays of the sun continually rarify the atmosphere in these re- gions, the air of colder districts rushes in to re- store the equilibrium, the vapors become con- densed, and a deluge of rain is the consequence. Those parts of the torrid zone, where there is scarcely any evaporation, have no rain ; and in other places the mountains so modify the mon- soons as to produce two rainy seasons in the year.’ See SEASON.

Professor Leslie insists that all the varieties of climate are reducible to these two causes — dis- tance from the equator, — and height above the level of the «ea. ‘ Latitude and local elevation form, indeed,” says he, ‘ the great bases of the law of Climate, and any other modifications

have only a partial and very limited influence.’

The most obvious effects of latitude appear, ir the degree of obliquity given to the solar rays, a»

they fall on the surface of the earth, and the quantum of space through which they pass in reaching its surface. Each of these are the Immediate results, of course, of the relative height of the sun, and may be illustrated by the following diagram : —

A b B represents the hemisphere, and the dotted semicircle C D the upper limit of the atmo- sphere; En and E6 are the extreme rays of a pencil of light falling upon the earth at a and b. And E’a and E’c, the extreme rays of an equal pencil, when the sun has a less elevation, as at the winter solstice. It will be evident that the rays reach the surface of the earth in a much more attenuated state in the one case than in the other ; and that, as the number of rays in the two pencils is the same, their density will be inversely as the areas of the elliptic spaces they cover. These are as-the transverse axes aft, ac, since the two conjugate axes are equal. The pencil E’a has also a much greater space to pass through the terrestrial atmosphere, than E a, by which its influence is still further weakened. These causes unite, therefore, in diminishing the solar influence, as the altitude of that luminary decreases ; and as this altitude is greatest at the equator, where the sun is vertical, and decreases as the latitude increases, the propriety of the appellations given to the different zones becomes evident, as well as the effects which such a circum- stance must have upon the general temperature of the different regions upon which the sun shines. But, in addition to what we call the height of the sun, the distance of that luminary from the earth must always be taken into consideration in the estimate of different climates. The ratio of these distances at the summer and winter solstices is nearly as 30 to 29 ; and the number of rays that fall on the same space are inversely as the squares of these distances ; and, conse- quently, in this, case, as 900 to 841. — Hence the solar influence in winter is to that in summer, in reference to the distance of the sun only, as 900 to 841, or very nearly as 1-0702 to l. The length of the day, or the continuation of the sun above the horizon, certainly increases the heat of particular regions, as the shortness of the night also affords less time for a dispersion of the heat accumulated. Refraction and reflection also modify the action of the sun’s rays. M. Bouguer has calculated that of 10,000 rays which fall

perpendicularly upon the atmosphere, only 8123 reach the surface of the earth; and, if their angle of incidence be 50°, not more than 7624 fall -on Us surface ; that the number was reduced to 203J when the angle was 7° ; and to

5° only when the direction was horizontal. And the earth itself, as absorbing a number of these rays and returning them to the air by reflection, becomes a great source of heat; distance from the earth must therefore be a source of cold ; thus we find that, as you ascend in the atmosphere, the cold increases. In the vicinity of Paris, the temperature of the eaitli being 47°, at the esti- mated height of 11,084 feet it was found to be 21°, or 11° below congelation, by M Charles, who ascended in a balloon. And lord Mul grave, at the bottom of Hackluyt-hill, lat. 80°, found the temperature of the air 50° ; but on the top, at the height of 1503 feet, only 42°. Hence we find, that the highest mountains, even under the equator, have their tops continually covered with snow. M. Bouguer found the cold of Pinchina, ene of the Cordelieres, immediately under the line, to extend from 7° to 9° below the freezing point every morning before sun-rise ; and hence at a certain height, which varies in almost every latitude, it constantly freezes at night all the year round, though in the warm climates it thaws in the same degree the next day. This height M. Bouguer calls the lower term of congelation : be- tween the tropics he places it at the height of 15,577 feet, English measure. And thus while the base of these mountains rests on burning sand, about half way up, in the plains of Quito, we found a temperate zone of the most delight- ful character. As the hot winds from below ascend the sides of the mountains, they become so cooled by the expansion of the air, that they do not affect the snow on the summits ; and the cold winds which sweep over their snowy crests, and descend to the lower regions, are condensed as they proceed, and acquire a temperate warmth before they reach these fertile plains.

A great source of cold is evaporation. The same cause which makes the condensation of vapor a source of heat, makes evaporation the source of cold ; as it absorbs the fire in the latter instance, which it gives out in the former : the heat thus absorbed is called latent heat; it pro- ducing, in that state, no sensation of warmth. At a certain height above the lower term of con- gelation it never freezes, not because the cold decreases, but because the vapors do not ascend so high ; this height M. Bouguer calls the upper term of congelation, and under the equator he fixes it at the height of 28,000 feet. Kirwan has given us the following mean height of the upper and lower terms of congelation, for the latitude of every 5°, in feet.

Lat.

Alt.lower Term.

Alt.upper Term.

Lat.

Alt.lower Term.

Alt.upper Term.

0°

15,577

28,000

45

7,658

13,730

5

15,457

27,784

50

6,260

11,253

10

15,067

27,084

55

4,912

8,830

15

14,498

26,061

60

3,684

6,546

20

13,719

24,661

65

2,516

4,676

25

13,020

23,423

70

1,557

2,809

30

11,592

•20,838

75

748

1,346

35

10,664

19,169

.80

120

207

4,0

9,016

16,207

i

14

CLIMATE.

Sometimes the temperature of the upper air is higher than that of the lower air, particularly when a large mass of vapors is condensed by electrical agency ; for no part of the heat given out by that cause being lost by communication with air much colder, that which surrounds the vapors so condensed, must be heated to a consi- derable degree. The clouds, by absorbing the sun's rays, are more heated than 'the clear air would be. These, and other circumstances, render the true height of the terms of congela- tion, at any time, subject to considerable uncer- tainty.

Of evaporation, the following facts may be observed: 1. That, in our climates, evaporation is about four times as great from the 21st of March to the 21st of September, as from the 21st of September to the 21st of March. 2. That, other circumstances being the same, it is greater in proportion as the difference between the tem- perature of the air, and that of the evaporating surface is greater; and so much the smaller, as the difference is smaller; and therefore smallest, when the temperature of the air and evaporating liquor are equal. The former part of this pro- position however requires some restriction ; for, if air be more than 15° colder than the evapo- rating surface, there is scarcely any evaporation ; but, on the contrary, it deposits its moisture on the surface of the liquor. 3. The degree of cold produced by

evaporation is always much greater when the air is warmer than the evaporating surface, than that which is produced when the surface is warmer than the air. Hence, warm winds, as the Sirocco and Harmatan, are more drying than cold winds. 4. Evaporation is more copious when the air is less loaded with vapors, and is therefore greatly promoted by cold winds flowing into warmer countries. 5. Evaporation is greatly increased by a current of air or wind flowing over the evaporating surface, because unsatu rated air is constantly brought into con- tact with it. Hence, calm days are hottest, as has commonly been remarked. 6. Tracts of land covered with trees or vegetables emit more vapor than the same space covered with water. Mr. Williams (Philadelphia Transactions) found this quantity to amount to one-third more. Hence, the air about a wood or forest is made colder by evaporation from trees and shrubs, while the plants themselves are kept in a more moderate heat, and secured from the burning heat of the sun, by the vapors perspired from the leaves. Thus, we find the shade of vegetables more effec- tual to cool us, as well as more agreeable, than the shade from rocks and buildings: and from the same cause the clearing away of woods lessens the vapors, and consequently diminishes the quantity of rain, and increases the tempera- ture. Several parishes in Jamaica which used to produce fine crops of sugar canes, are now dry for nine months in a year, and are turned into cattle-pens through the clearing away of the woods. Hence again, water is most plentiful in those countries where woods abound, and the best springs are there found. Since the woods in the neighbourhood of the American towns have been cut down, many streams have become dry ; and others have been reduced so low, as to

cause great interruptions to the miller. It ap- pears probable, that the climates of European countries were more severe in ancient times than they are at present. Caesar says, that the vine could not be cultivated in Gaul, on account of its winter-cold. The rein-deer, now found only in the zone of Lapland, was then an inhabitant of the Pyrenees. The Tiber was frequently frozen over, and the ground about Rome covered with snow for several weeks together, which very rarely happens in our times. The Rhine and the Danube, in the reign of Augustus, were ge- nerally frozen over for several months of winter. The barbarians who overran the Roman empire a few centuries afterwards, transported their armies and waggons across the ice of these rivers.

Drainage of the ground, and removal of forests, however, cannot be reckoned among the sources of the increased warmth of the Italian winters. Chemical writers, says Dr. Ure, have omitted to notice an astronomical cause of the progressive amelioration of the climates of the northern hemisphere. In consequence of the apogee portion of the

terrestrial orbit being con- tained between our vernal and autumnal equi- nox, our summer half of the year, or the interval which elapses between the sun's crossing the equator in spring, and in autumn, is about seven days longer than our winter half year. Hence, also, one reason for the relative coldness of the southern hemisphere.

In the article CLIMATE (Supplement to the Encyclopaedia Britannica) the following simple rule is given for determining the change of temperature produced by sudden rarefaction, or condensation of air. Multiply 25 by the dif- ference between the density of air and its reciprocal, the product will be the difference of temperature on the centigrade scale. Thus, if the density be twice, or one half 25° X (2—ˆ) rr 37£° cent. z= 67-5° Fahrenheit, indicates the change of temperature by doubling the density or rarity of air. Were it condensed thirty times, then, by this formula, we have 749° for the ele- vation of temperature, or 25° (30° — 5',;). But M. Gay Lussac says, that a condensation of air into one-fifth of its volume is sufficient to ignite tinder; a degree of heat which he states at 300° centigrade ~ 572 Fahrenheit (J ournal of Sci- ence, vol. vii. p. 177). This experimental result is incompatible with professor Leslie's formula, which gives only 112-5° for the heat produced by a condensation into one-fifth.

The sea exercises an important equalising in- fluence on the temperature of the globe. In the tropical regions a large extent of ocean spreads coolness on every side, and affords a perpetual succession of refreshing breezes. Islands are always, comparatively, of more temperate cli- mates than continents, and those scattered ovei the expanse of the Pacific, may be said to enjoy almost a perpetual spring. The districts which are surrounded on every side by tracts of conti- nent, experience no mitigation of heat, and are often utterly consumed by the droughts of sum- mer: insular tracts also, and those situated along the sea-coast, experience much less rigor- ous winters than the interior of continents. The greatest cold in our hemisphere is said to occur

when any country has a wide extent of sea to the south, and of land to the north. Thus Greenland, in lat. 60°, exhibits a more rigorous climate than Lapland, in lat. 72°. From the like cause, the north-east extremity of Asia suf- fers a cold almost equally intense ; and the same combination of circumstances renders the climate of North America,

under the same paral- lel, much colder than that of Europe.

Nor is the influence of winds iu general, and the trade-winds in particular, here to be forgot- ten. Blowing from east to west across the sands of Africa, the latter produce, on its western coast, a most intense heat, much greater than is experienced on the eastern. In passing the At- lantic, they are considerably cooled; and though, in traversing South America, their temperature is again raised, yet, before reaching the opposite coast, they meet the tremendous snow-clad Andes, which stop their progress, and diffuse a wide coolness.

Again, the mountain ranges of the earth not only present and retain on their sides a refresh- ing coolness ; but, by the mighty rivers to which they give rise, diffuse a great amelioration of the temperature through extensive regions. They are particularly of this character, and give rise to the largest rivers in the torrid and burning climes of the earth. In the temperate climates, and those approaching to the poles, mountains are of moderate elevation, are almost always barren, and give rise to few considerable streams.

Professor Mayer, from a comparison of obserˆ vations, constructed the following empirical rule for finding the relation between the latitude and the mean temperature, in centesimal degrees, at the level of the sea. Multiply the square of the cosine of the latitude by the constant number 29, the product is the temperature. The varia- tion of temperature for each degree of latitude is hence denoted centesimally with very greal pre- cision, by half the sine of double the latitude.

Latitude.

Mean temperatures

Height of curve of congelation in feet.

Cent.

Fahr.

0°

29°

84-2

15207

5

28-78

83‘8

15095

10

28-13

82-6

14764

15

27-06

807

14220

20

25-61

78-1

13478

25

23-82

74-9

12557

30

21-75 *

71-1

11484

35

19-46

67′

10287

40

17-01

62‘6

9001

45

14-50

58-1

7671

50

11-98

53-6

6334

55

9-54

49-2

5034

60

7-25

45-0

3818

65

5-18

41-3

2722

70

3-39

38-1

1778

75

1-94

35-5

1016

80

0-86

33-6

457

85

0-22

32-4

117

90

o-o

32-0

00

As the heat is uniformly greater approaching die equator from the poles, it might be supposed

that the annual accumulation would increase tha average temperature of those regions. But this is not the case. The perpetual motion and cur- rents of the atmosphere preserve a maximum temperature, which is but little varied ; for, as the air of the equatorial regions becomes warmer, the northern winds have the greater tendency to rush in upon it with rapidity, and check the ex- cess.

‘ But within the arctic circle,’ observes an intelligent writer, ‘another powerful agent of nature is constantly tempering the inequality of the seasons. The vast beds of snow, or fields of ice which cover the land and sea in these dreary retreats, absorb, in the act of thawing or passing again into their liquid form, all the surplus heat collected during a nightless summer. The rigor of winter, when darkness resumes her tedious reign, is likewise mitigated by the warmth evolved as congelation spreads over the watery surface.’

Experiments have been made, both at home and abroad, to ascertain the comparative tem- perature of the earth below its surface, as com- pared with that of the atmosphere; and they have differed very little.

‘ In the caves below the observatory at Paris, in 49° of north latitude, and about eighty-five feet below the surface, Fahrenheit’s thermometer con- stantly stands between 52° and 54°, and scarcely ever varies 2° ; while at the surface the differ- ence of temperature, between summer and win- ter, sometimes exceeds 90°. In the salt mines at Wieliezka, near 50° of latitude, from the depth of 320 to that of 745 feet, the thermometer stands at about 50°. At Cairo, in Egypt, latitude 30°. at the bottom of Joseph’s well, the depth of which exceeds 210 feet, the thermometer stands at 70°. In the mines of Mexico, at 20° of lati- tude, the temperature at the depth of 1650 feet, was 74J°; thus it augments in approaching the equator.’ — Lacroix’s Geo. Physique.

Mr. Leslie reports some very interesting ex- periments on this subject, made in the garden of his friend, Robert Ferguson, esq. of Abbots-hall, in a gravelly soil, lat. 56° 10’, and proving how slow is the transmission of heat through the body of the earth. The thermometers were sunk to the depth of one, two, four, and eight feet, and the transmission from the surface appears to have been about an Inch per day. The first of these thermometers never sunk lower than 33°, and in- dicated a mean temperature of 45°-5, which shows that the frost seldom penetrates to that depth. The nature of the soil, however, and

external circumstances, must have a great in- fluence on this penetration, as has been proved by experiment. In the same paper it is stated that, ‘ in the neighbourhood of Edinburgh, after a long continuance of rigorous weather, the frost was found to have penetrated thirteen inches into the ground in a ploughed field, but only eight inches in one piece of pasture ground, and four inches in another. But, in some of the streets of that city, the frost had descended even below two feet, so as to begin to affect the water-pipes. The greater density and solidity of the pavement had no doubt conducted the frigorific impressions more copiously downwards, while

the loose and spongy blades of grass had mostly scattered and wasted these impressions in the open field. This consideration, it is obvious, might lead to very important practical results.’ The mean temperatures indicated by the thermo- meters, at the depth of four and eight feet, were 46J°and46J°; and the mean annual ranges of

the four, in their order from the surface, were. 25°, 20°, 15°, and 9J°. The smaller annual tem- perature of the upper thermometers, the writer thinks, is satisfactorily accounted for by the cold- ness of the summers of 1816 and 1817,especially the former. The result of the whole number of experiments was as follows : —

1816.

i

1817.

1 foot.

2 feet.

3 feet.

4 feet.

1 foot.

2 feet.

3 feet.

4 feet.

January,

33°

36-3°

40-7°

43°

35-6°

38-7°

40-5°

45-1

February, .

33-7

36

39-0

42

37-0

40-0

41-6

42-7

March, . .

35

36-7

39-6

42-3

39-4

40-2

41-7

42-5

April, . .

39-7

38-4

41‘4

43-8

45-0

42-4

42-6

42-6

May . .

44-0

43-3

43-4

44-0

46-8

44-7

44-6

44-2

June . .

51-6

50-0

47-1

45-8

51-1

49-4

47-6

47-8

July. . .

54-0

52-5

55-4

47-7

55-2

55-0

51-4

49-6

August . .

50-0

52-5

50-6

49-4

53-4

53-9

52-0

50-0

September .

51-6

51-3

51-8

50-0

53-0

52-7

52-0

50-7

October . .

47-0

49-3

49-7

49-6

45-7

49-4

49-4

49-8

November .

40-8

43-8

46-3

45-6

41-0

44-7

47-0

47‘6

December .

35-7

40-0

43-0

46-0

37-9

40-8

44-9

46-4

Mean of whole year.

43-8

44-1

45-1

46

449

45-9

46-2

466

On this subject, Mr. Leslie remarks, that, ‘ If the thermometer had been sunk considerably deeper, they would, no doubt, have indicated a mean temperature of 47-7°. Such is the perma- nent temperature of a copious spring which flows at a short distance, and about the same

elevation, from the side of a basaltic, or green-stone rock. Profuse fountains and deep wells, which are fed by percolation through the crevices of the strata, furnish the surest and easiest mensuration of the temperature of the earth's crust. The body of water which bursts from the caverns of Vaucluse, and forms almost immediately a respectable and translucid n/»r, has been observed not to vary in its temperature, by the tenth part of a degree (centigrade) tnrough all the seasons of the year. It is therefore an object highly important for scientific travellers, to notice the precise heat of springs in favorable situations, as they issue from their rocky beds. Such choice observations would accurately fix the medium temperature of the climate. It is only requisite to exclude the superficial and the thermal springs, which are not difficult to distinguish.' See the article CLI- MATE. Supplement to the Encyclopedia Britan- nica.

The mean temperature of the air, near the sur- face of the earth, has also been ascertained at various places. At Paris and Cairo it was found to correspond nearly with the numbers before stated. At St. Petersburgh in lat. 60° the mean temperature is about 39°. At Wadso, in Lap- land, in 70° of latitude, it was found to be about 36°; and in the island of Magercie, near the North Cape, the mean temperature of the year is stated, by M. Von Buch, to be nearly 32° ; the mean for every month in the same situation, is inserted at page 312 of this volume. According

to M. Humboldt, the hottest places are on the southern shores of the Caribbean sea, and the gulf of Guayaquil, in the great equinoxial ocean, between two and three degrees of south latitude. There the mean heat is 81 '5°; and the thermo- meter sometimes rises to 106°. At Belbeis, in Egypt, the thermometer has risen to more than 125* in the shade; but this was occasioned by the hot wind, denominated Sirocco. At St. Pe- tersburgh, on the contrary, the cold is sometimes so intense as to congeal mercury. It has also been observed, at the same place, to rise above 90°.

In the first number of the Edinburgh Philo- sophical Journal, some facts are stated by Mr. Bald apparently incompatible with the idea of the interior temperature of the earth being de- ducible from the latitude of the place, or the mean temperature at the surface.

The following table presents at one view the temperature of air and water in the deepest coal-mines in Great Britain.,

Whitehaven Colliery, county of Cumberland.

Degrees Fah.

. 55 . 49 . 60 . 63 . 66

Air at the surface

A spring at the surface

Water at the depth of 480 feet

Air at the same depth

Air at depth of 600 feet

Difference between water at surface and at 480 feet

11

Workington Colliery, county of Cumberland- Air at the surface . . . . .56 A spring at the surface . , . .48

Water 180 feet down

50

C L I M A T E.

17

Degrees Fall.

Wdtier 504 feet under the level of the ocean, and immediately beneath the ‘ Irish Sea 60

Difference between water at surface and bottom 12

Teem Colliery, county of Durham. Air at pit bottom, 444 feet deep . . 68 Water at same depth 61

Difference between the mean temperature of water at surface r = 49°, and 444 feet down . . . • • .12

Percy Main Colliery, county of Northum-

berland. Air at the surface 42

Water about 900 feet deeper than the level of the sea, and under the bed of the river Tyne . . . . -68

Air at the same depth 70

At this depth Leslie's hygrometer indicated

dryness = 83°.

Difference between mean temperature of water at surface ~ 49°, and at 900 feet down 19

Jarrow Colliery, county of Durham. Air at the surface . . . 49

Water 882 feet down 68

Air at same depth 70

Air at pit bottom 64

Difference between the mean temperature of water at surface ~ 49°, and 882 feet down 19

The engine pit of Jarrow is the deepest perpendicular shaft in Great Britain, being 900 feet to the foot of the pumps. Killingivorth Colliery, county of Northum-

berland. Air at the surface 48

Air at bottom of pit, 790 feet down . 51 Air at depth of 900 feet from the surface, after having traversed a mile and a half from the bottom of the downcast pit 70 Water at the most distant forehead or mine, and at the great depth of 1200 feet from the surface 74

Air at the same depth 77

Difference between the mean temperature of the water at the surface — 49°, and water at the depth of 1200 feet . . 25 Distilled water boils at this depth at . .213 Do. do. at surface . .

Saussure found the lake of Geneva, at the depth of 1000 feet, to be 42°; and below 160 feet from the surface there is no monthly variation of temperature. The lake of Thun," at 370 of depth, and Lucerne at 640, had both a tem- perature of 41°, while the waters at the surface indicated respectively 64° and 68° 30′ Fah. Bar- locci observed, that the Lago Sabatino, near Rome, at the depth of 490 feet, was only 44° 30*, '.vhile the thermometer stood on its surface at 77°. Mr. Jardine has made accurate observations on the temperatures of some of the Scottish takes, by which it appears, that the temperature continues uniform all the year round, about twenty fathoms under the

surface. In like man- ner, the mine of Dannemora in Sweden, which VOL. VI.

presents an immense excavation, 200 or 300 feel deep, was observed, at a period when the working was stopped, to have great blocks of ice lying at the bottom of it. The bottom of the main shaft of the silver mine of Kongsberg in Norway, about 300 feet deep, b covered with perpetual snow. Hence, likewise, in the deep crevices of ./Etna and the Pyrenees, the snows are preserved all the year round. It is only, however, in such confined situations that the lower strata of air are thus permanently cold. In a free atmosphere the gradation of temperature is reversed, or the upper regions are colder, in consequence of the increased capacity for heat of the air, by the di- minution of the density. In the milder climates it will be sufficiently accurate, in moderate ele- vations, to reckon an ascent of 540 feet for each centesimal degree, or 100 yards for each degree on Fahrenheit's scale of diminished temperature. Dr. Francis Buchanan found a spring at Chit- long, in the lesser valley of Nepaul, in Upper India, which indicated the temperature of 14-7 centesimal degrees, which is 81° below the standard for its parallel of latitude, 27° 3B''. Whence, 8-1 x 540 = : 4374 feet is the elevation of that valley. At the height of a mile this rule would give about thirty-three feet too much. The decrements of temperature augment in an acce- lerated progression as we ascend.

Ben Nevis, the highest mountain in Great Britain, stands in latitude 57°, where the curve of congelation reaches to 4534 feet. But the altitude of the summit of the mountain is no more than 4380 feet ; and therefore, during two or three weeks in July, the snow disappears. The curve of congelation must evidently rise higher in summer, and sink lower in winter, producing a zone of fluctuating ice, in which the glaciers are formed.

Baron Humboldt has stated, that the tem- perature of the silver mine of Valenciana in New Spain is 11° above the mean temperature of Jamaica and Pondicherry, and that this tem- perature is not owing to the miners and their lights, but to local and geological causes. To the same local and geological causes we must ascribe the extraordinary elevation of temperature observed by Mr. Bald. He further remarks that the deeper we descend, the drier we find the strata; so that the roads through the mines require to be watered, in order to prevent the horse- drivers from being annoyed by the dust. This fact is adverse to the hypothesis of the heat pro- ceeding from the chemical action of water on the strata of coal. As for the pyrites intermixed with these strata, it does not seem to be ever decomposed, while it is in situ. The perpetual circulation of air for the respiration of the miners must

prevent the lights from having any consi- derable influence on the temperature of the mines.

M. Humboldt has also published an admirable systematic view of the mean temperatures of diffe- rent places, in the third volume of the Memoirs of the Society of Arcueil His paper is entitled, Of Isothermal Lines (lines of the same tempe- rature), and the distribution of Heat over the Globe. By comparing a great number of obser- vations made between 46° and 48° N. lat., he

found, that at the hour of sun-set the tempera- ture is, very nearly, the mean of tiiat at sun-rise and two hours after noon. Upon the whole, however, hethinks that tbe two observations of the extreme temperatures will give us more correct results.

The difference which we observe in cultivated plants, depends less upon mean temperature, than upon direct light, and the serenity of the atmos- phere; but wheat will not ripen if the mean tem- perature descend to 47-6°.

Europe may be regarded, according to this distinguished traveller, as the western part of a great continent, and subject to all those influences .vhich make the western sides of all the conti- nents warmer than the eastern. The same diffe- rence that we observe on the two sides of the Atlantic, exists on the two sides of the Pacific. In the north of China the extremes of the sea- sons are much more felt than in the same lati- tudes in New California, and at the mouth of the Columbia. On the eastern side of North Ame- rica, \i have the same extremes as in China;

New York has the summer of Rome, and the winter of Copenhagen ; Quebec has the summer of Paris, and the winter of Petersburgh. And in the same way in Pekin, which has the mean tem- perature of Britain, the heats of summer are greater than those at Cairo, and the cold of win- ter as severe as that at Upsal. This analogy be- tween the eastern coasts of Asia and of America, sufficiently proves, that the inequalities of thc- seasons depend upon the prolongation and en- largement of the continents towards the pole, and upon the frequency of north-west winds, and not upon the proximity of any elevated tracts of country.

Ireland, according to Humboldt, presents one of the most remarkable examples of the combi- nation of very mild winters with cold summers ; the mean temperature in Hungary for the month of August is 71-6°; while in Dublin it is only 6O8°. In Belgium, and Scotland, the winters are milder than at Milan. The above admirable paper furnishes us with the following

TABLE OF THE ISOTHERMAL BANDS, AND DISTRIBUTION OF HEAT OVER THE GLOBE.

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*Stockholm

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*Copenhagen .

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*Kendal . .

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*Geneva . . ; 46 12

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*Manheim . .

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TABLE OF THE ISOTHERMAL BANDS, .Sec. — Continued.

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%* The temperatures are expressed in degrees of Fahrenheit's thermometer ; the longitudes are counted from east to west, from the first meridian of the observatory of Paris. The mean tempera- ture of the seasons has been calculated, so that the months of December, January, and February, form the mean temperature of the winter: The mark * is prefixed to those places, the mean tem- peratures of which have been determined with the most precision, generally, by a mean of 3000 observations. The isothermal curves having a concave sunrtnit in Europe, and two convex sum- mits in Asia and Eastern America, the climate is denoted to which the individual places belong.

Comparing the northern half of the globe with the southern, our author observes, the southern hemisphere differs considerably from the nor- thern ; but the degree of this difference has been variously stated; the coldness of the southern hemisphere, has generally been attributed to the circumstance of the sun being a shorter time on the south, than on the north side of the equator. But it probably depends more upon the greater proportion of ocean, which gives to the southern temperate zone a climate more approaching to that of a collection of islands. There is, there-

fore, a less accumulation of heat during the sum mer, and a less radiation from the land, in proportion to its less extent ; and there is con- sequently a less current of warm air flowing from the equator towards the south pole, which permits the ice to accumulate more around it. Near the equator, and indeed through the whole of the torrid zone, the temperature of the two hemispheres ap- pears to be the same ; but the difference begins to be felt in the Atlantic about 22° of latitude ; and there is a considerable difference between the mean temperature of Rio Janeiro and Havanuah,

though they are equally distant >rom the equator, that of the former being 74° 5′ and of the latter 76° 4'. The southern climates generally differ from the northern with respect to the distribution of temperature through the different parts of the year. lu the southern hemisphere, under th*> isothermal lines of 45° and 50°, we find summers, which, in our hemisphere, belong to the lines

35° 5′ and 41°. We are not accurately acquainted with the mean

temperature of any place beyond 50° of south latitude ; but there is every reason to suppose that it differs considerably from the same degree of north latitude. We extract from his Personal Narrative, the following tabular comparison on this subject, in Fahrenheit's decrees.

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Mean temp, c

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Corresponding Months.

Southern Hemisphere.

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February August

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July January

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64–76

22—26

January July

72–5

66–74

48

June December ,

44–6

63–86

September March

69–44

68–9

58

July January

43–16

56–3

34

December June

56-84

59-72

The observations employed in constructing this table were all made at sea, except those from which the mean temperature at thirty-four degrees was deduced, which were made at the Cape of Good Hope. See WINDS.

The influence of climate on the character and habits of man has, naturally, attracted the atten- tion of various modern philosophers and travel- lers. Humboldt observes, in his Researches, ‘ Although the manners of a people, the display of their intellectual faculties, the peculiar cha- racter stamped on their works, depend upon a great number of causes which are not merely local ; it is nevertheless true, that the climate, the nature of the soil, the physiognomy of the plants, the view of beautiful or savage nature, have great influence on the progress of the arts, and on the style which distinguishes their pro- ductions. This influence becomes the more perceptible, the farther man is removed from civilisation. What a contrast between the archi- tecture of a tribe that has dwelt in vast and gloomy caverns, and that of the hordes whose bold monuments recal, in the shafts of their columns, the towering trunks of the palm-trees of the desert ! An accurate knowledge of the arts can be acquired only from studying the na- ˆire of the site where they arose. The only American tribes among whom we find remark- able monuments, are the inhabitants of the mountains. Isolated in the regions of the clouds, on the most elevated plains on the globe, sur- rounded by volcanoes, the craters of which are encircled by eternal snows, they appear to have admired, in the solitude of their deserts, those objects only which strike the imagination by the greatness of their masses ; and their productions bear the stamp of the savage nature of the Cor- dilleras.

- What a striking spectacle does human genius

present, when we survey the immense disparity that separates the tombs of Tinian and the statues of Easter Island, from the monument of the Mexican temple at Mitla; and compare the shapeless idols of this temple with the master- pieces of the chisel of Praxitelles and Lysippus ! But we shall cease to wonder at the rude style, or incorrect expression, of the monuments of the American nations, when we reflect, that, cut off from the rest of mankind, wanderers in a country where man must have long struggled against na- ture in her most

savage and disordered aspect, these tribes, with no resources but in their own energy, could only emerge with tardy progress from their native barbarism.' . A recent contributor to the Classical Journal has, in his essay on the Causes of the diversity in Human Character, investigated the influence of climate on our species with considerable research and ingenuity. Extreme heat clearly darkens the skin, swells the flesh, and produces that general chnbbmess of appearance which is so remarkable in the torrid zone. The intermediate degrees of temperature produce proportional effects ; and persons born in temperate climates become gra- dually assimilated to the characters of the warmer ones in case of their migration thither. The original Portuguese and French settlers on the coast of Africa would scarcely recognise the kin- dred of their descendants, who, retaining a smat- tering of their original language, are closely assi- milated to the native tribes, both in their com- plexion and in the woolly hair that covers their heads.

' One of the most striking illustrations of tlie

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assimilating powers of climate/' says the writer just alluded to, ' is afforded in the case of the Jews. This tribe is scattered over the whole face of the earth, and, though naturalised in every soil, it is still preserved distinct from the rest of mankind. The Jews, on account of the preju- dices of religion, and other causes, never inter- marry with any but their own sect. If, therefore, they are assimilated to the people among whom they reside, this cannot be ascribed to a mixture of races. Yet it is fcund that the English Jew is white, the Portuguese brown, the American olive, and the Egyptian swarthy ; so that there are, in fact, as many different species of Jews, as there are countries in which they reside, a di- versity which can scarcely be accounted for from any other cause than the influence of climate. And climate,' as this writer further observes, 'has a direct influence in regulating the strength, or weakness of the human constitution ; in conse- quence of which it materially affects the charac- ter. The inhabitants of a hot climate are never so robust as those of a more temperate region ; extieme heat relaxes the muscular fibre, deranges the natural secretions, and enervates the whole corporeal system. This imbecility of body necessarily has a great effect on the mind ; and among such people we have reason to expect timidity and cowardice rather than valor and a capacity to endure hardship. In a climate where moderate cold occasionally prevails, the animal fibre is braced, and all the bodily functions are allowed free play. Here, therefore, we have reason to expect a strong and hardy race, equally qualified to endure

the fatigues of the field, and to brave the dangers of var.' In confirmation of this reasoning he cites the imbecile character of the Chinese, the Persians, and the Hindoos, for successive ages.

With indolence we also find the love of luxury and effeminate pleasures prevail in warm climates : together with a remarkable degradation of the female sex. Hence polygamy destroys domestic rule and domestic happiness : woman is the slave altogether of the sexual desires of the master-sex. She is jealously secluded for the sake of her tran- sient charms ; and the object of warm passion, at the best, rather than of generous and tender friend- ship or esteem. Some writers have, indeed, con- tended, that these climates are favorable to the early stages of science and the arts ; and remind us that the ' fertile plains of the south of Asia, are universally respected as the cradle of arts, and of genius.' Soon, however, have they migrated from these regions. ' There has been a continual progress northward from happier climes to those less favored by nature,' observe the same parties ; and we conclude, with the writer in the Classical Journal before adverted to, that it is in the temperate regions of the earth therefore, that we are to look for an advanced state of the arts, and there that we are to expect examples of heroic valor, transcendant genius, incorruptible patriotism, and unshaken virtue. And it will not be denied, that historical evidence affords the most direct confirmation of the truth of this doctrine.

CLI'MAX, n. s. Gr. K\iftaK- Gradation; as- cent; a fgure in rhetoric, by which the sentence

rises gradually , as, Cicero says to Catiline, Thou doest nothing, movest nothing, thinkest nothing; but I hear it, I see it, and perfectly un- derstand it.

Choice between one excellency and another is dif- ficult; and yet the conclusion, by a due climar, is pvermore the best. Dryden. Juv. Dedication.

Rome radiant Richmond every age has graced, Still rising in a climax, till the last, Surpassing all, is not to be surpast. Granville.

CLIMB, v. n. &v.a. ˆ Sax. ch-

CI.I'MBER, n. s., > man ; Dut.

CLI'MBER (from clamber), v. «..) klimmen.Tn ascend up any place; to

mount by means of some hold or footing. It implies labor and difficulty, and successive efforts.

And on the Monday, when it drew to night, He shette his dore withoute candele light, And shortly up they clomben alle three.

Chaucer. Canterbury Tales. In scaling the youngest to plucke off hi>; beckc, Beware how ye climber for breaking your neck.

Tusser,

Lowliness is young Ambition's ladder, Whereto the climber upward turns his face.

Shalispeare.

When shall I come to the top of that same hill ? — — You do climb up it now. Look, Low we labour.

Id.

Is't not enough to break into my garden, Climbing my walls, in spite of me the owner? Id.

As a thief,

Into the window climbs, or o'er the tiles, So clomb the first grand thief into God's fold.

Milton.

Thou sun! of this great world both eye and soul, Acknowledge Him thy greater ; sound his praise In thy eternal course, both when thou climb'st, And when high noon has gained, and when thou fallest. Id. Paradise Lost Here unto Latmos top I climb, How far below thine orb sublime. Marvell. Here I survey the purple vintage grow, Climb round the poles and rise in graceful row.

Gay.

The path that leads where hung sublime, And seen afar, youth's trophies bright In Fancy's rainbow-ray invite

His wingy nerves to climb. Rsattie.

Ah ? who can tell how hard it is to climb

The steep where Fame's proud temple shines afar, Ah ! who can tell how many a soul sublime Has felt the influence of malignant star, And waged with Fortune an eternal war. Id. What is the end of fame ? 'Tis but to fill

A certain portion of uncertain paper ; Some liken it to climbing up a hill,

Whose summit, like all hills, is lost in vapour.

Byron.

CLI'MBER, a plant that creeps upon other supports ; the name uf a particular herb.

Cvy, briony, honey-suckles, and other climbers, must be dug up. Mortimer.

CLIME, n. s. contracted from climate, and therefore properly poetical. Climate ; region ; tract of earth.

He can spread thy name o'er land and seas, Whatever clime the sun's bright circle warms.

Milton.

They apply the celestial description of other climes unto their own. Browne's Vulgar Errovr*.

Of beauty sing, her shining progress view, From clime to clime the dazzling light pursue.

Granville. We shall meet

In happier climet and on a safer shore. Addison.

Health to vigorous bodies, or fruitful seasons in

temperate climes, are common and familiar blessings.

A tterbury.

Heart on her lips, and soul within her eyes,

Soft as her clime and sunny as her skies. Byron.

CLINCH, v. a. & n. s. \ Sax. clynija, to

CLI'NCHER, n. s. S knock. To hold in

the hand with the finders bent over it ; to bend

the point of a nail in the other side, to confirm ;

to fix, as to clinch an argument, to contract or

double the fingers. That part of a cable which

is fastened to the ring of the anc'.or. A cramp ;

a holdfast ; a piece of iron beiu down to fasten

planks.

Such as they are I hope they will prove, without a clinch, luciferous j searching after the nature of light.

Boyle.

Pure clinches the suburbian muse affords, And Panton waging harmless war with words.

Dryden.

Simois rolls the bodies and the shields Of heroes, whose dismembered hands yet bear That dart aloft, and clinch the pointed spear. Id. Here one poor word a hundred clinches make.

Pope.

The wimbles for the work Calypso found ; With those he pierce

Id.

Their tallest trees are about seven feet hieh, the tops whereof I could but just reach with my fist clinched. Swift.

CLINCH, a navigable river of the United States, in the Tennassee government; which rises in the Cumberland mountains, Virginia, and running south-west, crosses the divisional line.; thence meandering

south-west by west for about 200 miles, unites with the Tennassee, fifteen miles below the Holstein.

CLINCHING, in sea language, a kind of slight caulking used at sea, in anticipation of foul wea- ther, about the posts : it consists in driving a little oakum into their seams, to prevent the water coming in at them.

CLING, v. n. } Dan. klynger. To hang vCn'NGY, adj. \ upon by twining round; to stick to ; to hold fast upon. To adhere, as fol- lowers or friends. To dry up; to consume; to waste ; to pine away, Eeclunjen tneop, a wi- thered tree.

The broil long doubtful stood ; As two spent swimmers that do cling together, And choak their art. Shahspeare.

If thou speakest false, Upon the next tree shall thou hang alive, Fill famine cling thee. Id. Macbeth.

Most popular consul he is grown, methinks : How the rout cling to him ! Ben Jonson's Cataline. The fontanel in his neck was descried by the cling- ing of his hair to the plaster. Wiseman's Surgery.

When they united and together clung, When undistinguished in one heap they hung.

Blachmore.

See in the circle next Eliza placed, Two babes of love close dinging to her waist.

Pope.

That they may the closer (Kng, Take your blue ribbon for a string. Swift.

CLI'NICAL, adj. > Gr. icX/vu, to lie down.

CLI'NICK. $ Those thatkeep their beds;

those that are sick, past hopes of recovery. A clinical lecture is a discourse upon a disease, made by the bed of the patient. A clinical con- vert, one that is converted on his death-bed. This word occurs often in the works of Taylor.

CLINK, v. a., v. n. & n. s. perhaps softened from clank, or corrupted from click. To strike so as to make a small sharp noise ; to uttera small, sharp, interrupted, noise. A sharp, suc- cessive noise ; a

knocking. It seems in Spen- ser to have some unusual sense. I believe the knocker of a door. ,

Though creeping clote, behind the wicket's clink, Privily he peeped out through a chink. Spenser.

I heard the dink and fall of swords.

Shahspeare.

Five years, a long lease for the clinking of pewter.

Id.

The severed bars Submissive clink against your brazen portals.

Prior.

Underneath the umbrella's oily shed, Safe through the wet on clinking pattens tread.

Gay's Trivia.

CLINOMETER, an instrument for measuring the dip of mineral strata. It was originally in- vented by R. Griffith, Esq. professor of Geology to the Dublin Society, and subsequently modi- fied by Mr. Jardine and lord Webb Seymour.

CLINOPODIUM, field-basil, a genus of the gymnospermia order, didynamia class of plants ; natural order forty-first, asperifoliae. The involucrum consists of many small bristles under the virticillus or whirl of flowers : CAL. two lipped : COR. upper lip, flat and inversely heart-shaped. There are three species, herbace- ous plants, growing from one to two feet high They are remarkable only for their strong odor, being somewhat between marjorum and basil.

CLI'NQUANT, adj. Fr. Dressed in em- broidery, in spangles, false glitter, tinsel finery.

To-day the French

All clinquant, all in gold, like heathen gods, Shone down the English. Shakspeare.

CLINTON (Sir Henry), an eminent English general, and knight of the bath, was the grand- son of Francis earl of Lincoln. He became a captain of the guards in 1758, and in July 1766 we find him a

lieutenant-general in America. He took an active part during the unfortunate war with that country ; but some misunderstanding having taken place betwixt Sir Henry and Lord Cornwallis, the general, after his return to Eng- land, published a narrative of his conduct, which was replied to by his lordship, and vindicated by the general. In 1784 he published a farther defence of his conduct; and in 1795 he was ap- pointed governor of Gibraltar, but died soon after.

CLINTON, a county of New York, in the north-east corner, bounded on the east by lake Champlain, on the north by Canada, on the west by Harkemer, and on the south by Washington. It is divided into five townships ; viz. Platts-

burg, the capital, Crown-point, Williamboiough, Peru, and Champlain. Its form is a parallelo- gram. It is ninety-six miles long from north to south, and thirty-seven broad from east to west. In 1799 Essex county was erected from the southern part of Clinton county; and, in 1808, Franklin county from the western part. Clin- ton county is now bounded, north by Canada, east by lake Champlain, or the state of Vermont, south by Essex county, west by Franklin county. Its greatest length north and south is forty miles and a half; greatest width thirty-one miles ; and the area is about 1064 square miles, including the waters of the lake, or 680,000 acres.

CLINTON, a large and populous township of New York, in Duchess county. According to the census of 1810, the inhabitants amounted to 5949, of whom 437 were senatorial electors.

CLIO, from B\£OC, glory, in pagan mytho- logy, the first of the muses, daughter of Jupiter and Mnemosyne. She presided over history. She is represented as crowned with laurels, holding in one hand a trumpet, and in the other a book. She sometimes holds a plectrum or quill with a lute. Her name implies honor and reputation, and it was her office faithfully to re- cord the actions of brave and illustrious heroes.

CLIO, in zoology, a genus of insects belonging to the order of vermes mollusca. The body is oblong and fitted for swimming ; and it has two membranaceous wings placed opposite to each other ; tentacles three and two in the mouth. The species are six, principally distinguished by the shape of their vagina, and all natives of the ocean.

CLIP, v. a. & n. ˆ Ang. Sax. clyppan ; Scot. CLIPP'ER, n. s. sclip. Thus derived, it sig- CLIPP'ING, n. s. 3 nines to embrace, to con- fine, to fold in the arms. But there is a very different meaning ascribed to it when it is traced to the Goth, klippa, and Sax. depart then it sig- nifies to cut, shear, divide.

A merry child he wos, so God me save '. — Wei coud he letcn blod, and clippe aud shave.

Chaucer. Canterbury Tales.

He kisseth hire, and clippeth hire full oft. Id.

Your sheers come too late to clip the birds' wings,

that already is flown away. Sidney.

He that before shunned her, to shun such harms, Xow runs aud takes her in his clipping arms. Id.

Here I clip

The anvil of my sword, and do contest Hotly and nobly with thy love. Shahspeare.

O nation that thou couldst remove That Neptune's arms, who clippeth thee about. Id.

It is no English treason to cut French crowns, and to-morrow the king Himself will be a clipper. Id.

All my reports go with the modest truth ; Nor more, nor dipt, but so. Id

But love had clipped his wings and cut him short, Confined with'n the purlieus of his court.

Dryden's Fables.

This design of new coinage, is just of the nature of •Hipping Locke.

We should then have as much feeling upon the clipping off a hair as the cutting off a nerve.

Bentley's Sermon:.

He spent eveiv a ay ten hours dosing, clipping pa- pers, or darning his

stockings. Kwift.

By this lock, this sacred lock, I swear, Which never more shall join its parted hair, Clipped from the lovely head where late it grew

Pope. But in man's dwellings he became a thing,

Restless and worn, and stern and wtˆrisome,

Drooped as a wild-born falcon with clipped wing

To whom the boundless air alone were home

Byron.

CLIPEUS, in natural history, a name given to the flat depressed centroniae, from their re- sembling a shield.

CLISSA, a fort of Dalrnatia, seated on a craggy mountain, near which there is a narrow valley, between two steep rocks, through which the road lies from Turkey to Dalmatia. It is six miles north of Spalatia. Long. 17° 31′ E., lat. 44° 10′ N.

CLISTHENES, a celebrated Athenian magis- trate, the author of the mode of banishing ambi- tious citizens by Ostracism.

CLITHEROE, a borough in Lancashire, at the foot of Pendil hill, thirty miles north of Manchester, 217 N. N. W. of London. It has an ancient castle built by the Laceys, now in ruins. Clitheroe is a borough by prescription, and sends one member to parliament, whose electors are the freeholders and lifeholders. It is governed by two bailiffs, who act together, and are the returning officers. Within these few years, several extensive manufactories of cotton have been established here, which, together with lime-burning, form the chief trade of the town.

CLITORIA, in botany, a genus of the de- candria order, and diadelphia class of plants; natural order 320, papilionacere. The COR. supine, or reversed with the vexillium or flag petal very large, patent, and almost covering the alae or wirg-petals. There are six species, all herba- ceous perennials, or annuals, of the kidney-bean kind, growing naturally in both the Indies. The stalk is climbing, slender, and of the height of a man. The leaves are winged, placed alternately, / and consist of two, three, or five pair of lobes, terminated by an odd one. The flowers, which are elegant, stand singly, each on its pjoper foot-stalk. They are very large, and generally of a deep blue, but sometimes of a white color. From the fruit of this plant is distilled an eye- water. The beans

reduced to powder, and taken in broth, to the quantity of two drachms, prove a gentle purge ; and Grimmius remarks, in hi.s Labor Ceyl. that the powder of the dried beans, mixed with the milk of the cocoa nut, or with broth, and administered in quantity from one to three drachms, not only, mitigates colic pains, but is very useful, and much used in Ceylon, in all disorders of the ‘stomach and bowels. These plants are propagated by seeds ; and in this country, must be kept continually in a stove.

CLITORIS, in anatomy, is a part of the external pudenda, situated at the angle which the nymphae form with each other. Like the penis it has an erection It is of different sizes in different women ; out in general it is smaU >

and covered with the labia. The preternaturally enlarged clitoris is supposed to constitute an hermaphrodite. When too large, it may be so extirpated as to remove the unnecessary part; but this requires much care, to prevent sub- •ecting the patient to an involuntary discharge of arine. See ANATOMY.

CLITUMNO, a river of Italy, which passes by Spoletto, and joins the Topino, between Spoletto and Perugia.

CLITUMNUS, in ancient geography, a river of Umbria, on this side the Apennine. Accord- ing to Pliny, it was a fountain consisting of several veins, situated between Hispellum and Spoletium; which soon after swelled into a large and navigable river, running from east to west into the Tinia, and both together into the Tiber. Virgil says, it was famous for its milk- white flocks and herds.

CLITUS, in ancient history, the foster brother and intimate friend of Alexander the great. At the passage of the Granicus, Alexander was at- tacked by Rhsesaces and Spithridates, two Per- sian officers of distinction; his helmet was cut through by the battle axe of the latter, and the next slroke would, inevitably, have killed him, had not Clitus, at that instant, rushed to his as- sistance, and thrust Spithridates through the body with his spear. But Clitus being, some time after, at a feast where some verses in ridicule of the Macedonian officers were introduced by Alex- ander, angrily expressed his resentment. Being warmed with drinking, he violently retorted on Alexander, and so

provoked him that he left the room for his sword. On this the friends of Cli- tus forced him away, but he soon returned, re- peating some insolent verses from Euripides : on which Alexander snatched a spear from one of his guards and ran him through the body. His death however so afflicted Alexander that he at- tempted his own life, and for some time shut himself up, and would see no one. See ALEX- ANDER THE GREAT.

CLIVE (Robert), lord Clive, son of Richard Clive esq. of Styche, in Salop, was born in 1725. Towards the close of the war in 1741, he was sent as a writer in the East India service to Ma- dras ; but, being fonder of the camp than the counting-house, he soon exchanged his clerk's place for a pair of colors. He first distinguished himself at the siege of Pondicherry in 1748 ; and acted under major Laurence at the taking of Devi Cotta, at Tanjore, who spoke of his military ta- lents so Highly, that he was made commissary- general. When he came over to England in 1753, he was presented, by the court of directors, with a rich sword set with diamonds, as an acknow- ledgment of his services, at the siege and in the taking of Arcot. Captain Clive returned to India in 175o, £s governor of fort St. David, with the rank of lieutenant colonel ; when, in conjunction with admiral Watson, he subdued the pirate Angria, and became master of Geria, his capital, with all his accumulated treasure. Surajah Dowla's perfidy soon produced fresh hostilities, which ended in his ruin ; he being totally defeated by colonel Clive at Plassey. The conqueror next day entered Muxadabad in tri- umph ; and placed Jassier Ally Cawn, one of the principal generals, on the throne ; the depo-

sed soubah being soon after taken, was put to death by Jaffier's son. Mr. Clive was now honored, by the Mogul, with the dignity of an Omrah of the empire ; and was rewarded by the new soubah with a jaghire, or grant of lands, producing £27,000 a year. In 1760 he returned to England, where he received the unanimous thanks of the Company, was elected M.P. for Shrewsbury, and raised to an Irish peerage by the title of lord Clive, baron of Plassey. In 1764 fresh and serious disturbances occurring in various parts of Bengal, lord Clive was again appointed to that presidency, and advanced to the rank of major- general in the army. When he arrived in India he exceeded the most sanguine expectation, by restoring tranquillity to the province without striking a blow. He returned home in 1767; and in 1769 was made knight of the bath; but in 1773 a motion was made in the house of com- mons that 'in the acquisition of his wealth, lord Clive had abused the powers with which he was entrusted.' He defended himself with great ability ; enumerating his services for his country, and quoting various letters from the directors of the East India Company,

containing the fullest and most ample commendation and approbation of all his proceedings, as well as the congratu- lation of the direction, in a full court, on his last return home. He was honorably acquitted ; the house resolving that lord Clive had rendered great and meritorious services to his country.' Lord Clive was, however, a striking instance of the inefficacy of external honors, and of great wealth, to confer happiness. After his return to England, though in possession of a splendid for- tune, and of many advantages, he often discover- ed great uneasiness of mind and could not endure to be alone. His friends represented this as the result of a depression of spirits occasioned by a nervous fever; but it was attributed by others to causes of a different nature. At last on the 22d of November 1774, he put an end to his own life when not quite fifty years of age ; and his remains were interred at Moreton-Say, the parish in which he was born. He left two sons and three daugh- ters; his eldest son, Edward, succeeding him in his title and estate. Lord Clive is said to have given away a great deal of money in acts of be- nevolence; and he at one time made a present of £70,000 to the invalids in the East India Com- pany's service. Lord Chatham called him a heaven-born general, who, without experience, surpassed all the officers of his time.

CLIVE (Catharine), a celebrated comic actress the daughter of a Mr. Raftor, was born in the north of Ireland in 1711. She was married, when young, to Mr. Richard Clive, a barrister; but, a separation taking place, she adopted the comic line of a theatrical profession, and was ever sure to fascinate her audience. Her native wit and playful humor are exemplified by the following anecdote : — She performed at Drury-lane under the management of Garrick, and one night, while playing the lady in Lethe, Mrs. Clive, turning her head towards the stage-box, chanced %to encounter the eye of Charles Townshend. That celebrated wit pointed instantly to an old belle on his left, a caricature of the ridiculous dame she was portraying. The actress paused for a moment, and burst into laughter; until th«

galleries caught the jest, and joined boisterously in the mirth. Garrick, chagrined by the inde- corum of the incident, hastened to the Green-room, to meet Mrs. Clive, 'Madam,' said he, 'your smiles are always despotic; it was those of Mrs. Clive which called down that burst of mer- riment just now; to-morrow night I hope it will be excited by those of the character she may intend to personate.' She comprehended his meaning, and sportively shutting her eyes, she

tapped them with her fan, exclaiming — ‘ I whip the truants that brought me into the scrape ; they never again shall so betray their mistress.’ Mrs. Clive at length retired to pass the latter part of her life at Little Strawberry Hill, where many persons of rank and eminence courted her soci- ety. Her death occurred in 1785.

CLIVER, n. s. Teut. & Belg. stein, claver ; stone clover. The plant melilote, more properly written cleaver. It grows wild, the seeds stick- ing to the clothes of such as pass by them. It is sometimes used in medicine.

CLOAC.ZE, in antiquity, the common sewers of Rome, to cairy off the soil of the city into the Tiber ; justly reckoned among the greatest works of the Romans. The first, called Cloaca Maxima, was built by Tarquin 1. of huge blocks of stone joined together without any cement, in the man- ner of the edifices of those early times ; consist- ing of three rows of arches one above another, which at length conjoin and unite together; mea- suring, in the clear, eighteen palms in height, and as many in width. Under these arches they row- ed in boats, which gave occasion to the remark oi Plii.y that the city was suspended in air, and

that they sailed beneath the houses. Under these arches also were ways through which carts loaded with hay could pass with ease. It began in the Forum Romanum ; measured 300 paces in length ; and emptied between the temple of Vesta and the Pons Senatorius. There were as many principal sewers as there were hills. Pli- ny concludes their firmness and strength from their standing for so many ages the shocks of earthquakes, the fall of houses, and the vast loads and weights moved over them. CLOACINA, the goddess of common sewers. CLOAK, n. s. 8cu. a.) Barb. Lat. cloca, CLOAK-BAG, n.s. $ Sax. lack. The pri- mary sense is, a garment ; its secondary, a co- vering that conceals. A cloak-bag is a bag which receives or conceals wearing apparel.

Not using your liberty for a cloak of maliciousness

Peter]

Most heavenly fair, in deed and view, She by creation was, till she did fall ; Thenceforth she sought for helps to cloak her crimes withal. Spenser.

Why dost thou converse with that trunk of humours, that stuffed cloahbag of guts ? Shakspeare.

I have a ready suit

(‘Tis in my cloahbag’) doublet, hat, hose, all That answer to them. Id.

You may bear it

Fnder a cloke that is of any length. Id.

“We will not line his thin bestained cloak with our pure honours. Id.

Their clohes were cloth of silver, mixed with gold.

Dryden.

G L O C K S.

CLOCK, n. s. -ˆGoth. hlocka; and Sax.

CLOCK-MAKER, n.s. >clecuan, to strike, to

CLOCK-WORK, n. s. J sound. The instrument

which, by a series of mechanical movements,

tells the hour by a stroke upon a bell.

Wei sikener wos his crowing in his loge, Than is a cloh, or any abbey orloge.

Chaucer. Cant. Tales.

If a man be in sickness or pain, the time will seem longer without a cloh or hour-glass than with it.

Bacon.

The picture of Jerome usually described at his study, is with a clock hanging by. Browne’s Vulgar Errours.

I told the clocks and watched the wasting light.

Dryden.

Resolve by sines and tangents straight, If bread or butter wanted weight, And wisely tell what hour of the day The clock does strike by Algebra. Hudibras.

This inequality has been diligently observed by se- veral of our

ingenious clockmakers, and equations been iuade and used by them. Derham.

So if unprejudiced you scan, The goings of this clock-work man ; You find a hundred movements made By fine devices in his head ; But 'tis the stomach's solid stroke, That tells this being what's o'clock Prior.

Within this hollow was Vulcan's shop, full of fire and clockwork. Addisrn.

You look like a puppet moved by clocKwork.

Arbuthnot,

Fate seemed to wind him up for fourscore years, Yet freshly ran he on ten winters more, Till like a clock worn out with eating time, The wheels of weary life at last stood still.

Lee's CEdipus.

CLOCK, in horology, is a machine so regulated, by the uniform action of a pendulum, as to mea- sure time by a series of vibrations in the oscil- lating body. Under this head, therefore, we propose to treat of the structure and internal mechanism of those machines which owe their property of keeping time to the continued ope- ration of a pendulum, leaving the portable chro- nometer, or WATCH, to its appropriate place in our alphabetical arrangement.

The earliest complete clock, of which there is any certain record, was contrived in the thirteenth century. It was constructed by a Saracen me- chanic, who received about £2000 for his inge- nuity. This clock is stated to have kept time very accurately, and it was afterwards presented to the emperor Frederic II. by the Sultan of Egypt, under whose direction it was made. Some time after this period, a clock was placed in a small building, erected for the purpose, in the

city of Westminster, the expense of which was defrayed by a fine imposed on one of the judges for malversation in his office. In the fourteenth century an artist, named James Dondi, a Vene- tian, constructed a clock for the city of Padua, which was long considered as the wonder of that peiiod. Besides indicating the hours, it repre- sented the motion of the sun, moon, and planets, and also pointed out

the different festivals of the year. On this account Dondi obtained the sur- name of Horologio, which became that of his posterity. About the same period William Ze- lander constructed, for the same city, a clock still more complex, which was repaired in the six- teenth century by Janellus Turrianus, the me- chanist of Charles V.

About the year 1560 Tycho Brahe was in possession of four clocks, which indicated hours, minutes, and seconds, the largest of which had only three wheels, one of which was three feet in diameter, and had 1200 teeth in it, a proof that clock-work was then in a very imperfect state. Tycho, however, observed, that there was an irregularity in the going of his clocks, which depended upon the changes in the atmosphere ; but he does not appear to have known how such effect was produced. In the year 1577 Moestlin had a clock so constructed as to make just 2528 beats in an hour, 146 of which were counted during the sun's passage over a meridian or azi- muth line, and determined his diameter to be 34′ 1 3*, so that the science of astronomy began thus early to be promoted by the assistance of clock-work ; and, as clocks first promoted the study of astronomy, it will be seen by and bye, that astronomy, in its turn, gave rise to some of the most essential improvements in clock-work ; and that, as the arts and sciences became more and more cultivated, improvements in clock- work kept pace with them, and employed the ta- lents of the most ingenious men of each suc- ceeding age.

As the construction of every modern horologi- oal machine must depend, mainly, on a judicious combination of wheel-work, it may he desirable to examine, first, the principle of a common wheel and pinion, and then to show its applica- tion to the movement of a clock.

In the wheel and axis A, B, fig. 1 plate I. c; CLOCK-MAKING, two similar chords are made to support weights attached to their lower extre- mity; the weights being placed in equipoise, although the one is twice as heavy as the other. This apparently paradoxical effect is produced, by giving a mechanical advantage to the cord B, which is twice as far from the centre, or fulcrum, as the one that supports the larger weight : the velocity of the two weights are effected also in an equal ratio. So that if the wheel be made to revolve upon its axis, the weight marked 1 will descend two feet, while the opposite side will only be raised one foot. Here then the gain in power is compensated for by a loss of time, and vice versa ; and upon this circumstance de- pends the advantageous use of a wheel and pinion.

In fig. 2, the pinion D. is support by a se- parate axis, round which it is made to -evolve ; ind the wheel B B, being three times as krge as

the pinion, the latter will make three revolutions to one of the former, or about one revolution for the portion of a circle shown in the diagram. If we consider the weight C as the maintaining power, it will be evident, that, for every revolu- tion made by its axis, there will be three revo- lutions of the next wheel in succession.

If we combine a series of wheels and pinions, a still greater increase in speed will result. This is shown at fig. 3 ; and it will be seen that there are four revolutions of the pinion c for one of the wheel that drives it; and as the wheel d is at- tached to the same axis, the pinion e will make sixteen revolutions to one of the prime mover.

A reference to this simple mode of increasing velocity in wheel-work, will readily explain why a clock, which makes but twelve revolutions at the barrel, is enabled to beat half and quarter seconds, and even to go as many days as there are turns at the prime mover.

Having determined upon the kind of clock to be made, the first thing to be done, and that in which the clock-maker is generally deficient, is, to calculate the movement, or proper number of teeth in the wheels, and of leaves in the pinions of the going part of the mechanism. Dr. Der- hatn, in his Artificial Clock-maker, has treated this subject at considerable length ; and has laid down rules which have tended more to puzzle than to assist the workman in the choice of his numbers. He proposes to take at random, a certain number of vibrations per hour for a pen- dulum of an assumed length, to represent his train, and then to find the factors or numbers, which, used as multipliers, shall

which is a good, practical number ; and as our piece is to go eight days, we will make the fusee to revolve in twelve hours, which construction will require the great wheel on its arbor to be 8 + 12, or 96, because the pinion of 8 revolves with the minute-hand on its projecting pivot, in one hour; hence if we divide 192, the number of hours in eight days, by 12, the time of one re- volution of the great wheel, the quotient 16 will be the number of effective spiral grooves

neces- sary to be cut on the circumference of the fusee, in order that the piece may go just eight days. This portion of the movement is not, however, called a part of the train, but only determines, as has been said, the time that the clock shall continue to go, after each winding up of the maintaining power ; and it is easy to conceive, that, if a fusee or a barrel, with twenty-four turns of the catgut or chain, were placed on the hour arbor, the clock would go a natural day without the large wheel , and, “also, that if an interme- diate wheel and pinion were placed on the arbor between the hour arbor and the great wheel, the time of going might be prolonged to ten, twelve, or even twenty times eight days, but then the maintaining power must be proportionably in- creased, which circumstance renders such a con- struction by no means desirable in a regulator, particularly as the auxiliary spring, now in use, will keep the piece in motion during the act of winding up.

The remaining portion of the movement is properly called the train, including those wheels and pinions only which are used for counting the vibrations made in an hour; the train is most easily ascertained by two calculations, one for the two wheels and two pinions which multiply the minutes into seconds, and the other for that wheel and pinion, or those wheels and pinions, which subdivide the seconds into vibrations; the former of these two portions of the train, like the first portion of the movement, or portion for the period of continuance, is the same for all clocks, let the time of vibration be what it may : a cir- •cumstance not usually considered. The ratios of velocity to be gained by the pinion on the arbor of the seconds’ hand, compared with the wheel on the arbor of the minutes’ hand, is required to be 60 : 1 ; which effect might be produced by one wheel of 300 teeth and a pinion of five leaves, as is done in some of the ornamental French pieces ; but the size of the wheel is cumbersome, therefore a pair of wheels, with a pair of pinions, one constituting a ratio or vulgar fraction equal in value to 8, and the other equal to 7|, making 8 X 7£ = 60, or any other two numbers making a similar product will produce the same effect with fewer teeth ; for, if the pinions be each 8, the wheels, in this case, will be respectively 64 and 60, the compound ratio, $ X $, being equal to the simple ˆ, ; and by the same process, if pinions of 10 had been chosen, the wheels would have been 8 x 10 — 80, and 10 X 7£=:75, which numbers would, indeed, have less friction than the preceding ones by reason of their teeth acting at less depth, the diameters of the wheels remain- ing the same, and would, moreover, be capable of acting more behind than before the line join- ing the centres of the wheel and pinion; in like

manner pinions of 6 would require wheels of 48 and 45, and pinions

of 12, wheels of 96 and

90.

The last portion of the movement, or second portion of the train, for a half-seconds' pendu- lum, will require only one wheel of sixty teeth on the seconds' arbor, properly shaped for the escapement ; for, as one tooth in the dead-beat and common anchor escapements escapes com • pletely at two vibrations of the pendulum, sixty teeth will escape, that is a whole revolution of the seconds' hand will be made, in 120 vibra- tions ; if, however, the pendulum had been re- quired to vibrate seconds, the wheel in question, usually called the swing wheel in opposition to tne crown wheel which requires another escape- ment, would have demanded only thirty teeth for that purpose ; and, if three vibrations had been fixed upon, the number to correspond must have been ninety, otherwise there must have been a wheel and pinion of the value of three, like 4 or $}, an addition to the usual swing wheel of thirty, or, which is the same thing, a wheel and pinion of the value of six, like ˆ or $, must have been introduced between the seconds' arbor and a pallet, or a swing wheel of 15. Thus all the variety in the calculation of trains, where se conds are indicated, is confined as we have inti- mated to the last portion of the movement, and the calculation itself so simple, that the mere altering of the numbers of the pallet-wheel will convert a clock with a seconds' pendulum into one with half-seconds, and vice versa.

The calculation of numbers suitable for an eight-days' clock, with a half-seconds' pendulum, being thus readily obtained by three simple operations, which may be had by mere inspec- tion of the three tables which we shall presently subjoin, the whole may be represented, and its value estimated again, by a compound fraction,

A -8,8 8

thus : viz. — – of -— x —

96 64 00

1

of twelve

60 X 2

hours, or, which is the same thing in effect, thus

8 8 1 512 1

44236800

— y — 96 X 64

60 60 x 2~ 44236800 64800 of twelve hours, or 86400 vibrations in twelve hours, which is the time of a revolution of the fusee, and great wheel, 96, on its arbor, and

therefore — — , or 7200 vibrations, each of

half a second in duration, in one hour, constitute the value of this train.

This mode of notation gives the value better than any other, perhaps, that has been adopted ; but the position of the wheels and pinions will be better understood from the ordinary mechan- ical method of writing them down thus : —

Great wheel 96

Pin 8 — 64 hour wheel

Pin 8 — 60 second wheel

Pin 8 — 60 swing wheel 2 pallets.

Indeed it is difficult to write down the move- ment by any one notation that shall express, at the same time, both the value and position of the wheel-work, on which account we recommend the workman to write down his numbers by both

forms, taking care, in the method by compound ratios, to put all the drivers under the line of division, and all the driven ones above; so that, when an ascending movement is represented, the wheels may be the denominators, and, when a descending one, the pinions.

The arrangements for calculating a train, and, as such, of forming a clock movement having been examined, it may now be advisable to re- vert to the mode of regulating the wheel- work by what is called an escapement. The term is derived from the French eschappement, and it is employed to illustrate the action of the pallets in connexion

with the. last wheel in the train, the teeth of which may be said to escape at each oscillation of the pendulum.

The earliest mode of forming a pair of pallets, or verge, being exactly similar to that employed in the regulation of a common watch, will be fully examined in another department of our work, and it may be enough to say, that its ap- plication to the best constructed horological ma- chines has been long since abandoned.

The swing or scape-wheel, represented at fig.

4, plate I. CLOCK-MAKING, is furnished with the pallets C, D. The wheel passing in the direc- tion of the arrow resting on the pallet C, and as the pallet's arbor, B, is connected with the pendulum by a rod or crutch, the pendulum must oscillate in the same direction. Passing down the inclined plane the tooth is now found to escape, still turning in the same direction. The wheel then rests on the pallet D, and, being aided in its operation by the tendency of gravity to bring back the pendulum, soon passes to the pallet on the opposite side, and the process is repeated as long as the train continues its im- pulse.

Having thus briefly examined the action of a common anchor escapement ; which, from its great simplicity, has been placed first in the order of arrangement, it may now be advisable to direct the reader's attention to the pallets with- out recoil, invented by the late Mr. George Gra- ham. In this escapement the seconds' hand stands still after each drop of the pallets, and hence the term dead-beat, whereas the hand of a clock regulated by the recoiling escapement is always in motion, oscillating backwards and for- wards.

Mr. Vulliamy's improved mode of constructing an escapement without recoil, is represented fig.

5, in which the pallets A A are allowed to expand or contract, by the motion of a double screw, B ; and this escapement differs from all the others in the accuracy with which the acting parts are formed, nearly the whole of the pallets with their frame being executed in the lathe.

To form the pallets a ring of steel is, in the first instance, prepared of the required size, and the arms, L, M, turned with a circular groove to receive it. The ring may then be cut in short lengths, and inclined planes formed at the proper angle. The two arms of the pallet frame are held together by the collet and screws X, Y, and the regulation is performed by the larger end of the screw B, being furnished with a coarser thread than its other extremity, so that the dispro-

portion between them is capable of producing the most delicate adjustment.

The great advantages in this mode of con- struction are, 1. That the rests of the pallets are correct portions of circles ; the centre of which circles is the centre of motion of the axis of the verge, and the pallets move in the same circles, and, consequently, there will not be any recoil in the escapement. 2. That the pallets must be of equal thickness, and consequently the drop the same on both. 3. That the pallets may be made perfectly hard, if properly treated, without risk of altering their shape : and should a pallet be spoiled by an accident in hardening, or a flaw or imperfection of any kind be discovered, another exactly similar is easily made to replace it out of the original ring. When the pallets are made out of the same piece of steel as the arms of the frame, it is difficult to preserve their shape cor- rectly in hardening, and to retain the acting part of the pallet perfectly hard. To obviate this difficulty, the pallet has sometimes been made a separate piece, with a short arm, by which it is fixed with two screws to the arm of the frame; but this is only to exchange one evil for another, as, independent of other disadvan- tages, which it is unnecessary to enumerate, it is very uncertain, with the pallets fixed in this man- ner, whether or not the rests of the pallets are concentric with the centre of the axis of the verge. The slightest deviation from its original direction in the arm of the pallet, by hardening or any other cause, has the effect of removing tne centre of the circle, forming the rest of the pal- lets, from the centre of the axis of the verpre to some other place, the consequence of which is to render the escapement a recoil escapement. 4. That the mode here recommended of construct- ing the pallets, offers a great facility for making the inclined planes rf the pallets equal to one another, or of altering them, as may be required ; and consequently the angle which the pendulum is led by one pallet, will be equal to the angle led by the other.

To a person unacquainted with the mechanism of a clock, the pendulum appears but as an appendage to a very complicated machine ; whereas, the fact is, that the series of wheels and maintaining power we have now been descri- bing, are, in reality, but appendages to the pendulum, every part of the machine being con- structed in subservience to its motion. From this then it will be seen, that it is the pendulum which is the efficient measurer of time, whilst the office of the wheels is to record the divisions marked by its oscillations ; so far, indeed, are the wheels from contributing towards the regu- larity of the pendulum, that they are mostly found to disturb it. The office then of tht wheels is to prevent the pendulum coming to a state of rest, which it effects by repeated impul- ses, at stated

periods.

The honor of first applying a pendulous body to regulate the time in horological machines, has been claimed by mechanics in almost every part of Europe . indeed the Arabians, as far back as the time of caliph Haroun Alraschid, state their claims to the invention, although it i»

more than probable, that, if tne use of the pen- dulum were known in the east prior to the seventeenth century, it was employed without the accompanying train of wheels which consti- tute a modern clock.

If the resistance arising from the friction at the moving parts, and from the motion commu- nicated to the air, were always the same, and the clock were urged by a weight, the action of the swing-wheel on the pallets would be always the same at a given place, in consequence of which, the figure of all the parts being supposed invari- able, the arc of vibration would be constantly of the same magnitude; namely, such as, that the motion lost by the resistances opposed to the pendulum should be accurately equal to the motion communicated by the pallets, and the •times would be equal ; that is to say, the clock would be perfect, and would measure time accu- rately. But these conditions are not easily obtained. It is not found, however, that the variation in the resistance of the air, arising from its change of density, occasions any sensi- ble irregularity in clocks. The most consider- able irregularities in the movement arise from the tenacity of the oil applied to the moving parts. For the oil is less fluid in cold than in hot weather; and when it is less fluid, a greater quantity of the maintaining power must be lost in overcoming its rigidity ; whence it must hap- pen, that the teeth of the crown-wheel will, in that case, act forcibly on the pallets, and the vibration will be less. If the pendulum be sus- pended on an axis, this cause, together with the constant wear, is very injurious to the perform- ance of the machine, but this defect is remedied by suspending it by a straight flexible spring, as is shown in fig. 6 to 14 of plate I.

The rod of the above pendulum should be made of straight grained yellow deal, which may be procured from the lath-maker's, it should be split down both ways ; neither the sort which is white and spongy, nor that which is of a strong grain, and full of turpentine. The rod is a cylinder of about five-eighths of an inch diame- ter, and forty-two inches long; it should be dried and gilt, and if varnished it would be

less subject to changes from moist weather. The rod being first roughed out, a brass ferrule (a, fig. 6 above), must be driven on its lower end, previously turned to receive it, the rod is then, to be put into the lathe, the ferrule turned true, and a few other places in the rod may likewise be made round ; the whole is afterwards to be planed straight, round, and smooth ; a hole is then to be drilled at the bottom of the rod, to receive the wire b along the axis. This wire should be steel, and the part which goes into the rod a little taper, and rather larger than the hole in the end of the rod, the rest of the wire cylin- drical, and the end conical ; a screw must be cut upon the cylindrical part with stocks ; the wire must be forced into the hole at the bottom «f the rod, and then cross-pinned through both ferrule and rod, as at P. The top of the rod, fig. 9, is slit along the grain with a fine spring saw, to receive the spring at X, by which the pendulum is suspended ; the two parts are

drawn together by a screw, and made to pinch the spring; this screw passes through the quar- ter part of a brass ferrule, and is tapped into the opposite quarter part; the head of the screw, with the first quarter, appears at c, fig. 9. The spring is a piece of strong watch-spring, which has not been coiled up; the upper part has two cylindrical buttons rivetted to it, opposite to each other, one of these appears at Z ; these bear the weight of the pendulum during the time of adjusting its suspension, before the screws are drawn tight. The ball of the penda- lum is made of lead, and consists of two parts screwed together upon the rod, so as to pinch it. Fig. 7 is the ball as' it appears edgeways, and shows the section down the axis of the rod where the two parts join. The shape of the ball, when the two parts are screwed together, is the middle frustrum of a globe, as is seen by the figure. These two parts should be moulded from a neat turned pattern of wood, where the hole should be left to receive the rod ; they may be cast so near their true form, as to give but little trouble in turning down in the lathe and finishing; if the pattern be made true, the axis of the rod will pass through the centre of gravity of both. Fig. 6 is the pendulum seen flatwise ; two pieces of brass are soldered to the back part of the bow, and tapped to receive the screws which fasten the two parts together; one of these pieces appears at y, fig. 12. The place of the ball upon the rod being found, it is then to be screwed fast to the rod, and not to be removed to regulate the clock. On the screw part of the wire, at the bottom of the pendulum-rod, is a cylinder of brass in two parts, the screw passing through the centre of both parts. The upper part, d, d, fig. 6, consists of a milled torus, and a plain cylindrical part, both in one piece; the cylinder has numerical figures engraven on it, in the order they are represented in the plate, the lower part consists of a

milled torus only, as at €, e. When the upper part is screwed to its proper place, it must be held fast, and the lower part screwed against it, so as to pinch the screw-wire, and secure it against any accidental turning. Whenever there is occasion to move the upper part (in order to regulate) the under part must first be detached till the adjustment be made, and then screwed close again, as be- fore. This part may be called the regulator, and will perform that office with a much greater degree of correctness than where the whole ball of the pendulum is moved.

Having thus described the pendulum-rod witk its ball, we may now describe the proper method of suspending it, which is by a project- ing cock made of brass, and is composed of three distinct pieces, fixed together with rivets and screws. It is difficult to give the exact form without giving many views of it ; but the general principle may be easily explained. Strength and steadiness are particularly sought in its formation, and the side view, fig. 9, will make it appear how these are attained in the vertical line, by the part marked a, a, above the line of suspension, and that marked c, c, below .the line, as these serve as strong brackets each

way; but the part which serves as its principal support in the horizontal line does not appear in ihe side view, but may be seen in fig. 11. The form of the part from 6 to b, is the same as that seen in the side view from the dotted line e to c. The screw marked at Z, fig. 9, appears sideways in the plan; this screw goes through the two parts, which project forward to hang the pendu- lum upon. The right angled part d. d, b, b, fig. 11, is fixed to the flat brass plate by three rivets, as large as their thickness will admit, one at the angle near the lower b, and one at each extremi- ty of the piece; the parts are put together by riveiting, that, when separate, they may be ham- mer-hardened. This cock is firmly fixed to a strong piece of wainscot, which is placed against the back of the clock-case, and the whole firmly attached to the wall. The mode of suspension should be such, that none of the lateral motion of the pendulum, as it vibrates, can be commu- nicated to the other parts of the apparatus, nor should the whole be liable to be disturbed by foreign causes. The two planes of the cock at Z, which are to receive the string between them, should be filed flat when the plate T is taken off, and thus the spring may be pinched firm between them; so also should the cheeks of the slit at the upper end of the rod, so that the spring should not have the least play at either of its

terminations; otherwise, its force will be very unequal. In placing the cock, care should be taken that the place where the spring bends, fig. 9, should be adjusted to the level of the verge or arbor of the pallets at A H.

When the pendulum is to be suspended upon the cock, take out the screw in fig. 9, and release the opposite one at 2, and hang the pendulum- spring between the two planes at Z, fig. 9, putting the cylindrical buttons, which are rivetted at the top of the spring, into the hollow made to re- ceive them at Z, then return the screw into its place, but do not tighten it ; then tighten the screw c, at the top of the pendulum-rod, and af- terwards the two screws, H Q, which will secure it in its place ; and from its having hung freely, before these screws were tightened, the several parts will have been drawn into the true perpen- dicular line ; the clock is afterwards put to it. We may now explain the contrivance by which the pendulum receives its impulses from the wheel-work. A, fig. 12, is the verge or arbor, on which the pallets are fixed ; 1 1, is a round piece of brass rivetted to the collet ; k k k is tbe stem of the crutch, seen edgeways, and in fig. 13, it appears flatways. In the centre of the upper part is a round hole, A, made to fit the verge; and at 1,2, are two circular slits. In fig. 12, at 2, 2, is another round piece of brass, fitted rather loose on the verge ; the screw at A, and another on the opposite side, go through the fixed plate marked 1 1, and also through the curved slits on fig. 13, marked 1, 2, and are tapped into the plate, marked 2 2, fig. 12, so that the crut°h has a considerable motion round the centre of the verge, and may be fixed in any position by these screws, one of which only can appear in this view, and is opposite to A, fig. 12. At the other end of the stem of the crutch, fig. 13, is a hole to receive the screw-

shank of the steel piece seen edgeways, fig. 8, and when screwed up, appears at K,L. The sides of this piece must be filed flat, and polished, or at least a fine grain given to it ; its thickness should be about ˆ of an inch ; the end of the flat part is sef>n nt fig. 14. The shoulder marked w w, at fig. 8, should be turned flat, and when the screwed shank is put through the hole B of the crutch, in order to fix it, a collet of brass should be interposed between the nut and the face of the crutch; this collet or brass plate should be turned hollow towards the crutch, and some- what round towards the nut, which will make the fitting more effectual. The flat faces of tho steel plate must be set parallel to the line A B, fig. 13. An oblong hole is pierced through the wooden rod, fig. 14, in the direction of the axis of the rod ; two fine steel screws s s, are tapped through the sides of this hole. These screws pinch the flat part of the steel piece between them ; the ends of the screws which bear against the plate are’ somewhat rounded off; the ends of

these screws, and the flat part they bear against, must be made as hard as possible. The holes for the screws must be made at right angles to the flat sides of the faces of the steel piece, and must pass through the axis of the rod. These screws are ˆ of an inch in diameter, and have eighty threads in an inch. They must be forced in so as tocut theirown threadsinthe wood, after which they must never be turned quite out. After having properly suspended the pendulum, and come to set up the clock, draw back the screws s, s, fig. 14, so as to leave room for the flat of the steei part, T, to enter clearly between them. To put the clock in beat, release the screws at A, fig. 12, and its opposite screw, (which is hidden in this view,) so as just to let the verge ir.uve stiff in the hole of the crutch. The frame containing the wheel-work must then be set into its place, care- fully directing the flat of the crutch between the screws, which pass through the sides of the rod. After having screwed down the frame of the work to the rising board as xisual, the crutch must be held fast while the pallets and verge are turned so as to bring the clock into beat. The screw at A, fig. 12, and its opposite must then be tightened, so as to set the pallets and verge fast to the crutch. The back frame must be cut so as to get at the heads of these screws with a key from the front of the clock. These screws have square heads, not slits, and are turned with a key, to prevent the thrusting forwards which is necessary when a turn-screw is used. The clock may be adjusted into beat with the greatest nicety, by releasing one of the screws, s, s, rig. 14, and screwing up the other ; taking care not to over- turn these screws so as to strip the threads in the wood. The rule to be observed is this : the artist must always hear the flat, T, strike against the screws, and if it be but heard, they cannot be too close ; these parts should be oiled. O, P, fig. 10, is a piece of steel wire, which passes through the axis of the rod in order to catch it, by means of two slips of wood properly cut and fastened to the rising board, so that this wire just keeps clear of it, in the vibrations of the pendu- lum. The ingenious clock-maker will easily perceive, that if the above work be carefully ex-

ecuted, according to the directions given, the im- pulses will be given in the axis of the pendulum- rod, and thence conveyed to the centre of gra- vity of the ball : two circumstances absolutely necessary to produce a steady and regular mo- tion of the pendulum.

Dr. Franklin contrived a clock, represented at fig. 15, to show the hours, minutes, and seconds, with only three wheels and two pinions

in the whole movement. The dial-plate, it will be seen, has the hours engraved upon it in spiral spaces, along two diameters of a circle, containing four times sixty minutes. The index A goes round in four hours, and countsthe minutes from any hour which it has passed to the next following hour. The time, therefore, in the position of the index shown in the figure, is either thirty minutes past XII, IV, or VIII ; and so in every other quarter of the circle it points to the number of minutes after the hours which the index last left in its motion. The small hand B, in the arch at top, goes round once in a minute, and shows the seconds. The wheel-work of this clock may be seen at fig. 16. A is the first or great wheel, containing 160 teeth, and going round in four hours, with the index- hand connected by a hole through its axis. This wheel turns a pinion of ten leaves, which, there- fore, goes round in a quarter of an hour. On the axis of this pinion is the wheel C, of 120 teeth, which goes round in the same time, and turns a pinion D of eight leaves round in a minute, with the seconds' hand B fixed on its axis, and also the common wheel E of thirty teeth, for moving a pendulum, by pallets, that vibrates seconds, as in a common clock.

This clock is wound up by a cord going over a pulley on the axis of the great wheel, like a common thirty-hours' clock. Many of these admirably simple machines have been con- structed, which measure time exceedingly well. It is subject, however, to the inconvenience of requiring frequent winding by drawing up the weight, and likewise to some uncertainty as to the particular hour shown by the index A. Mr. Ferguson has proposed to remedy these incon- veniencies by the following construction : in the dial-plate of the clock, fig. 17, there is an open- , ing, a, b, c, d, below the centre, through which appears part of a flat plate : on this the twelve hours, with their divisions into quarters, are en- graved. This plate turns round in twelve hours : and the index A points out the true hour, &c. B is the minutes'-hand, which goes round the large circle of sixty minutes whilst the plate a, b, c, d, shifts its place one hour under the fixed index A. There is another opening, e,f, g, h, through which the seconds are seen on a flat moveable ring, at the extremity of a fleur-de-lis, engraved on the dial-plate. The great wheel of this clock, containing 120 teeth, and turning round in twelve hours. The axis of this wheel bears the plate of hours, which may be moved by a pin passing through the small holes drilled in the plate, without affecting the wheel-work. The great wheel A, fig. 18, turns a pinion, B, of ten leaves, round in an hour, and carries the minutes'- hand B on its axis, round the dial-plate in the same time. On this axis is a wheel, C, of 120 teeth, turning round a pinion, D, of six leaves,

in three minutes ; on the axis of which theie is a wheel, E, of ninety teeth, that keeps a pendu- lum in motion, vibrating seconds by pallets, as in a common clock, when the pendulum-wheel has only thirty teeth, and goes round in a mi- nute. In order to show the seconds by this clock, a thin plate must be divided into three times sixty, or 180 equal parts, and numbered, 10, 20, 30, 40, 50, 60, three times successively, and fixed on the same axis with the wheel of ninety teeth, so as to turn round near the back of the dial-plate ; and these divisions will show the seconds through the opening, e,f, g, h, in the dial-plate. This clock will go a week with- out winding, and always show the precise hour ; but this clock, as Mr. Ferguson candidly ac- knowledges, has two disadvantages, from which Dr. Franklin's clock is free. When the minutes'- hand, B, is adjusted, the hour-plate must also be set right by means of a pin ; and the smallness of the teeth in the swing wheel will cause the pendulum-ball to describe but small arcs in its vibrations : and, therefore, the momentum of the ball will be less, and the times of the vibrations will be more affected by any unequal impulse of the pendulum-wheel on the pallets. Besides, the weight of the flat ring on which the seconds are engraved will load the pivots of the axis of the pendulum-wheel with a great deal of fric- tion, which ought, by all possible means, to be avoided. This inconvenience might, however, very easily be remedied by omitting the second plate.

The term clock, which is usually applied in- discriminately to all horological machines, be- longs in reality to those instruments alone which indicate the hour by means of a bell, and, al- though we have already shown that striking clocks are of considerable antiquity, the striking portion certainly belongs to a period long sub- sequent to the first invention of those highly useful machines.

It nay now be adviseable to examine what is termed the striking part, and for its better illus- tration we have separated that part of the train from the rest of the movement. In the annexed diagram h represents the barrel-wheel, fur- nished with a ratchet and click to prevent the return of the bar- rel. The wheel h turns a pinion of eight teeth, on the same arbor with which pinion u the wheel i, turning a similar pinion on the arbor of the wheel A. The wheel k turns another pinion of eight on the same arbor with the wheel t of 48, and this last wheel turn? a pinion of six, on the axis of which is a broad flat piece of metal called the fly, seen edgeways at

The wheel » has eight pins' projecting from it, and these, in succession, raise the tail of the ham- mer as the rotation of the wheel brings them to it When the hammer is discharged, or frees it- self from the pin, it is carried against the bell by the spring *; u is called the counter-sprng, and is employed to prevent the hammer jarrm? against the bell.

We have now to examine the connexion be- tween the going or watch part and that which is employed in regulating the hammer-work. Let A be a piece of brass cut down in twelve spiral steps in form of a snail, (from whence it takes its name) as in the figure ; let this be fixed on the socket of the hour wheel ; and B G L F the rack, with 14 teeth, turning on its centre L, having a spring H to force the end Fupon tha steps of the snail, A, when at liberty. The pin at 1 in the motion-wheel takes hold of the lifting- piece D M K ; and the end K in rising, lifts up the hook C

whicli lies in the teeth of the rack, and rises un- til the teeth are disengaged from it; the end F then falls down, and stops against the steps of the snail A, which in the figure is at two o'clock. The arbor of the third or gathering wheel k, shown in the preceding diagram, comes through the plate on which the pallet E m is fixed ; a turn of which answering to one stroke of the hammer, gathers the rack up one tooth : 12 steps of the snail answer 12 teeth in the rack ; and, when the gathering pallet E m has taken as many teeth in the rack as the number of the hour, the end E of the pallet stops against a pin in the rack at G, and is there at rest until the hook C is again lifted out of the teeth by the lifting- piece, as before.

When the hook C is lifted out of the teeth of the rack, the clock would strike continually, as the hook, being out of the teeth, prevents the rack being gathered up ; but that the end K of the lifting-piece has a small arm which goes through the plate, and a pin in the wheel t, which stops against it in such a manner, that when the lifting- piece is suffered to fall by the pin I having gone past the pin in the rim of the wheel t, it is clear of the arm at the end of the lifting piece K ; the wheel being then at liberty, the clock strikes until the gathering pallet E stops against the pin of the rack at G, as before. By putting a small string to the top-end of the spring S, or lifting- piece M, to come through the case, it may be made to strike the last hour at any time, except when on the warning.

A more simple contrivance for dividing the hours in a striking clock may now be examined ;

it may, however, be proper to state, that this apparatus is seldom resorted to in the construc- tion of a modern English clock, although the foreign mechanics still consider it well adapted for its intended purpose

The wheel A is in this case united to the bar- rel arbor, and as such revolves with it, bearing the locking-plate B. The arm C is attached to the detent D, so that when the extremity C drops into the notches in the plate, the striking train is stopped, by another arm on the detent D inter- cepting a .pin in the warning wheel. A reference to the “locking-plate will show that its divisions correspond with the hours of the day : the arm C indicating nine4 o’clock. In clocks of this descriptiot, the rack and its appendages are of course dispensed with.

In the year 1803, the Society for the En- couragement of Arts, &c. presented to Mr. John Prior of Nessfield, Yorkshire, a reward of thirty guineas on account of his contrivance for the striking part of an eight-days’ clock. As this in- vention is likely to be useful, we shall describe it here. It consists of a wheel and fly, with six turns of a spiral line, cut upon the wheel, for the purpose of counting the hours. The pins below this spiral elevate the hammer, and those above are for the use of the detent. This single wheel serves the purpose of count-wheel, pin-wheel, detent-wheel, and the fly-wheel, and has six re- volutions in striking the twelve hours. If we suppose a train of wheels and pinions used in other striking parts to be made without error, and that the wheels and pinions would turn each other without shake or play, then, allowing the above supposition to be true (though every me- chanic knows it is not), Mr. Prior’s striking part would be found six times superior to others, in striking the hours 1, 2, 5, 7, 10, and 11 ; twelve times superior in striking 4. 6, and 8 ; and eighteen times in striking 3, 9, and 12. In striking 2, the inventor purposely made an imperfection equal to the space of three teeth of the wheel ; and, in striking 3, an imperfection of nine or ten teeth ; and yet both these hours are struck per- fectly correct. The flies in clocks turn round, at a mean, about sixty times for every knock of the hammer, but this turns round only three times for the same purpose : and suppose the pivots were of equal diameters, the influence of oil on them would be as the number of revolutions in each. It would be better for clocks if they gave no warning at all, but the snail piece to raise n

weight somewhat similar to the model Mr. Prior sent for the

inspection of the Society for the En- couragement of Arts, &c.

The striking part of this clock is represented at fig. 3. plate 2, of CLOCK MAKING.

A, the large wheel, on the face of which are sunk or cut the six turns of a spiral.

B, the single worm screw, which acts on the above wheel, and moves the fly C.

D, the spiral work of the wheel A. The black spots show the grooves into which the dents drop on striking the hour.

E, the groove into which the locking piece F drops when it strikes one, and from which place it proceeds to the outward parts of the spiral in the progressive hours, being thrown out by a lift- ing piece H at each hour ; the upper detent G being pumped off with the locking piece F, from the pins on the wheel A,

In striking the hour of 12, the locking piece, having arrived at the outer spiral at H, rises up an inclined plane, and drops by its own weight into the inner circle, in which the hour 1 is to be struck, and proceeds on in a progressive motion through the different hours till it comes again to 12.

I, the hammer-work made in the common way, which is worked by thirteen pins on the face of the spiral.

Fig. 4. K, the thirteen pins on the face of the spiral, which work the hammer-work.

L, the outer pins which lock the detent

M, the pump spring to the detent.

It may now be proper to notice the late James Ferguson's machinery for exhibiting the apparent daily motions of the sun and moon, and state of the tides, &c. The dial plate of this clock is represented fig. 1, plate II, of CLOCK- MAKING. It contains all the twenty-four hours of the day and night. S is the sun, which serves as an hour index, by going round the dial-plate in twenty-four hours ; and M is the moon, which goes round in twenty-four hours, fifty minutes and a half, from any point in the hour circle to the same point again, which is equal to the time of the moon's going round in the heavens, from the meridian of any place to the same meridian again. The sun is fixed to a circular

plate, as at fig. 2, and carried round by the motion of the plate, on which the twenty-four hours are engraven, and within them is a circle divided into twenty-nine and a half equal parts, for the days of the moon's age, accounted from the time of any new moon to the next after ; and each day stands directly under the time (in the twenty-four hour circle), of the moon's corning to the meridian, the twelve under the sun standing for mid-day, arid the opposite twelve for mid-night. Thus, when the moon is eight days old, she comes to the meridian at half an hour past six in the afternoon ; and, when she is sixteen days old, she comes to the meridian at one o'cloc) in the morning. The moon M, fig. 1, is fixed to another circular plate of the same diameter with that which carries the sun ; and this moon-plate turns round in twenty-four hours, fifty minutes and a half. It is cut open, so as to show some of the hours and days of the moon's age ; on the plate below it that carries the sun, and across this opening at a and b are VOL. VI.

two short pieces of small wire in the moon-plate The wire a shows the day of the moon's age, and time of her coming to the meridian, on the plate below it that carries the sun ; and the wire 6 shows the time of high water for that day on the same plate. These wires must be placed as far from one another, as the time of the moon's coming to the meridian differs from the time of high-water at the place where the clock is in tended to serve. At London bridge it is high- water when the moon is two hours and a half past the meridian.

Above this plate that carries the moon, there is a fixed plate N, supported by a wire A, the upper end of which is fixed to the plate, and the lower end is bent to a right angle, and fixed into the dial-plate at the lowermost or mid-night twelve. This plate may represent the earth, and the dot at L, London, or any other place at which the clock is designed to show the times of high and low water.

Around this plate is an elliptical shade upon the plate that carries the moon M : the highest points of this shade are marked high-water, and the lowest points low-water; as this plate turns round below the fixed plate N, the high and low- water points come successively even with L, and stand just over it at the times when it is high or low water at the given place ; which times are pointed out by the sun, S, among the twenty- fours on the dial-plate : and, in the arch of this plate, above twelve at noon, is a plate, H, that rises. and falls as the tide does at the given place. Thus, when it is high-water (suppose at London), one of the highest points of the elliptical shade stands just over L, and the tide place, H, is at its greatest height: and, when it is low water at London, one of the lowest points of the ellip- tical shade stands over L,

and the tide place H. is quite down, so as to disappear beyond the dial-plate. As the sun S goes round the dial- plate in twenty-four hours, and the moon M, goes round it in twenty-four hours, fifty minutes and a half, the moon goes round so much slower than the sun, as only to make twenty-eight and a haHf revolutions in the time the sun makes twenty-nine and a half; and therefore the moon's distance from the sun is continually changing ; so that at whatever time the sun and moon are together, or in conjunction, in twenty-nine and a half days afterwards they will be in conjunction again. Consequently the plate that carries the moon moves so much slower than the plate that carries the sun, as always to make the wire a shift over one day of the moon's age on the sun's plate in twenty-four hours.

In the plate that carries the moon, tnere is a round hole m, through which the phase or appear- ance of the moon, is seen on the sun's plate, for every day of the moon's age from change to change. When the sun and moon are in con- junction, the whole space seen through the hole m is black ; when the moon is opposite the sun (or full) all that space is white ; when she is in either of her quarters the same space is half black and half white; and different in all other positions, so as the white part may resemble the visible or enlightened part of the moon for every day of her age.

CLOCKS.

To show these various appearances of the moon, there is a black shaded space N/, F /, on the plate that carries the sun. When the sun and moon are in conjunction, the whole space seen through the round hole is black, as at N ; when the moon is full, opposite to the sun, all the space seen through the round hole is white, as at F ; when the moon is in her first quarter, as at f, or in her last quarter, as at /, the hole is only half shaded ; and more or less according- ly for each position of the moon, with regard to her age.

Having seen that all clocks owe their motion either to a main spring, or the gravitating influ- ence of some ponderous body, it will b-j evident that the moment the power is withdrawn, as in the act of winding, the wheels will cease to ad- vance. To remedy the irregularity and variation in the time which this must of necessity produce, the annexed simple contrivance is occasionally resorted to: —

The small peg at the extremity of the lever is seen iu the one case to rest up- on the tooth of the wheel, while the dotted line repre- sents it

in its usual position. When the clock is wound the lever is raised, and, during the absence of its proper main- taining power, the pressure of a spring acting on the lever produces an equable motion in the train. There are a variety of other contrivances for this purpose ; but the great simplicity of the one we have now described, although not entirely free from defects, fits it for generalwadoption.

As the period of winding a clock propelled by weights must of necessity depend on the length of the cord to which the weight is attached, it will be evident that any contrivance by which the line may be lengthened without increasing

the fall must be advantageous to the / v

machine. This desideratum is usually effected in a common clock, by intro- ducing a pulley, represented at B, and, by means of this simple contri- vance, the time of the clock is dou- bled. It may, however, be proper to add, that the weight must be increased in an equal ratio, as ten pounds at- tached to the pulley B, can only furnish a maintaining power of five pounds, or half that weight at A, so that a clock which is usually furnished with a weight of about fourteen pounds, in reality only requires seven to give motion to the train.

In all pendulum clocks, but more especially those that are employed for astronomical pur- poses, the greatest attention should be paid to the stability of the case or frame to which they are attached. The necessity of employing care in this respect may be best shown by reference to a curious fact furnished by the late Mr. Ellicott. It occurs in the Transactions of the Royal Society;

and he states, that a very excellent regulator wa« repeatedly stopped by the motion of a pendulum attached to another clock in the same apartment. At other times its rate was materially affected, and yet no apparent motion of the clock-case was observable. On this account it is, that the best regulators are usually attached to a firm support, altogether independent of the walls of the building in which they may be placed. A very ingenious apparatus has been suggested by Mr. Hardy, and rewarded by the Society for the Encouragement of Arts and Manufactures, which appears admirably adapted to detect the slightest oscillation that may occur. It consists of an in- verted pendulum, and may be readily constructed by supporting a perpendicular wire by a slight steel spring, a movable weight being attached »o a tube sliding on the wire. Should any vibra- tion occur, the pendulum is immediately put in motion : and a graduated arc is sometimes attached to the upper part of the frame, which selves to

mark the amount of oscillation.

The setting a dock into beat is usually effected by bending the crutch till the vibrations on each side are equal. To know when this is the case, it is merely necessary to mark the exact point occupied by the lower extremity of the pendulum when the ball is at rest. If it be then moved till the pallet escape, or, in plainer terms, till the clock is heard to tick, its extreme distance at that side will then be known. This must also be marked correctly; and if, on moving it in the op- posite direction, it be found to describe a similar portion of a circle, it may then be considered as accurately in beat. If this should not be the case, the crutch must then be bent ; or, in more complete machines, an alteration made by screws. It is also an essential condition, that the centre of suspension of the pendulum shall be exactly in the same vertical plane with tbe centre of the verge ; for, if the pendulum spring happen not to coincide with a perpendicular line passing through the pivot-hole of the pallet's arbor, one half the arc of vibration will be greater than the other, even after the crutch is properly adjusted. An error of this kind must however be very obvious, and may be remedied by the eye.

In the early stages of the art clocks, as well as watches, were of very simple construction, and every artist was compelled from necessity to complete the machine he attempted to construct; but, in the present state of the business, it is di- vided into a great number of branches, and each, by devoting himself exclusively to that depart- ment, attains a greater degree of expertness and accuracy than he could possibly effect withou such a division of labor.

The invention of pendulum clocks has been claimed, more especially, by Galileo and Huy- gens, neither of whom published their discoveries prior to 1649; and it will be found, by refer- ence to the following extract, that it is to an English mechanic that we are really indebted for this valuable appendage of a modem clock :

'The clock fixed in the turret of the said church, was the first long pendulum clock iu Europe, invented and made by Richard Harris of IxHidon, A. D. 1641; although the honor of the invention was assumed by Vincenzo Galileo,

CLO 35

A. D. 1049, and also by Huygens in 1657. This plate is here affixed by Thomas Grignon, of this parish (Covent Garden), the son of the above Thomas Grignon, as a true memorial of praise

to those two skilful mechanicians, his father and Richard Harris, who to the honor of England, embodied their ideas in substantial forms that are most useful to mankind.'

CLOCK, n. s. Sax. galukan, to close ; the gusset or ornamented work of a stocking.

His stockings with silver clocks were ravished from him. Swift.

CLOD, n. s.&v.\ Goth, klode ; Swed.

CLO'DDY, adj. S klot. A lump of earth ; the ground; any thing concreted together in a cluster, as particles of earth cleave to each other. Any thing vile, base, and earthy, as the body of a man compared to his soul. The adjective is applied to whatever is muddy, miry, mean, gross, base, and stupid. To clod is to co- agulate together into concretions; and, when used in the active sense, to pelt with clods, or to cover with clods.

The glorious sun,

Turning with splendour of his precious eye, The meagre cloddy earth to glittering gold.

Shakspeare.

The earth that casteth up from the plough a great clod, is not so good as that which casteth up a smaller clod. Bacon.

Ill cut up, as plows

Do barren lands, and strike together flints And clods, the ungrateful senate and the people.

Ben Jonson. The spirit of man,

Which God inspired, cannot together perish With this corporeal clod. Milton's Paradise Lost.

Let us go find the body, and from the stream, With lavers pure, add cleansing herbs, wash off The clodded gore. Id.

Fishermen who make holes in the ice to dip up fish with their nets, light on swallows congealed in clods of a slimy substance ; and carrying them home to their stoves, the warmth restoreth them to life

and flight. Carew.

The vulgar ! a scarce animated clod,

Ne’er pleased with ought above ‘em. Dryden.

Byzantians boast, that on the clod, Where once their sultan’s horse has trod. Grows neither grass, nor shrub, nor tree. Swift.

CLODIUS (Publius), a Roman of an illus- trious family, but infamous for his licentiousness, avarice, and ambition, fie committed incest with his three sisters, and introduced himself in wo- man’s clothes into the house of Julius Caesar, whilst Pompeia, Caesar’s wife, of whom he was enamoured, was celebrating the mysteries of Ceres, at which no man was permitted to appear. He was accused of this violation of human and divine laws ; but, being made tribune, he thus screened himself from justice. Being the enemy of Cato, he procured him to be sent with prae- torian powers, in an expedition against Ptolemy king of Cyprus, that by the difficulty of the cam- paign he might ruin his reputation, and destroy

his interest at Rome during his absence ; buv Cato, by his success, frustrated these attempts. He was also the inveterate enemy of Cicero, and by his influence obtained his banishment from Rome. He then wreaked his vengeance upon Cicero’s house, which he burnt, and set his goods to sale ; which, however, to his great mortification, no one offered to buy. He was some time after murdered by Milo.

CLO’DPATE, n. s. clod and pate. A stupid fellow ; a dolt ; a thickskull.

CLO’DPATED, adj. from clodpate. Stupid, dull, doltish, thoughtless.

My clodpated relations spoiled the greatest genius in the world, when they bred me a mechanick.

Arbuihnot,

CLO’DPOLL, n. s. from clod and poll. A thickskull ; a dolt ; a blockhead.

This letter being so excellently ignorant, he will Jind that it comes from a clodpoll. Shakspeare.

CLOG, n. s. & u. n. ˆ Probably from log, CLO’GGINESS, n. s. >a load or hindrance, CLO’GGY, adj. j A wooden shoe, which

clogs or hinders in walking, while it protects the under shoe and the feet from wet. The idea of the verb is to impede motion by weight ; to encumber with shackles ; thence, to embarrass. Jt is occasionally used in the sense of coalesce, and to adhere ; but improperly, as in such cases it is only a corruption of clod or clot.

But as he sought his loggying, he happed oppon

a whelp

That lay under a stayer, a grete walssh dog, That bare about his neck a grete huge clog, Because that he was spetouse and wold sone bite •, The clog wos hongit about his nek for men shirfd not

wite,

Nothing, the dogges maister if he did eny harm, So for to excuse them both it was a wyly charm.

Chaucer. Canterbury Talei.

Alone he rode, without his paragone, For having filcht her bells, her up he cast To the wide world, and let her fly alone, He nould be clogged, so had he served many one.

Spenser.

Weariness of the flesh is an heavy clog to the will.

Hooker.

They’re our clogs, not their own ; if a man be Chained to a galley, yet the galley’s free. Donne.

Since thou hast far to go, bear not along The clogging burthen of a guilty soul.

Shakspeare. \ou’ll rue the time, That clogs me with this answer. Id.

If you find so much blood in his liver as will clog the foot of a flea, I’ll eat the rest of the anatomy.

Id.

I’m giad at soul I have no other child For thy escape would teach me tyranny, To hang clogs on them. W-

His majesty’s ships were over-pestered, and clogged with great ordnance, whereof there is superfluity.

Raleigh .

I did but prompt the age to quit their clogs, By the known rules of ancient liberty.

Milton’s Paradise Regained. ‘ As a dog committed close For some offence, by chance breaks loose, And quits his clog, but all in vain, He still draws after him his chain. Hudibras. By additaments of some such nature, some grosser and cloggy parts are retained ; or else much subtilized and otherwise altered. Boyle’s History of Firmness. In France the peasantry goes barefoot ; and the middle sort, throughout all that kingdom, makes use of wooden clogs. Harvey on Consumptions.

Gums and pomatums shall his flight restrain, While clogged he beats his silken wings in vain.

Pope.

CLOGHER, a city and bishop’s see of Ireland, in the county of Tyrone, and province of Ulster. In a very early age an abbey of regular canons, dedicated to the Virgin Mary, was founded here. St. Patrick is said to have presided over the church of Clogher; and, having appointed his successor, he resigned this government, and went to Armagh, where he founded his celebrated abbey. On the 20th of April, 1396, a dreadful fire burnt to the ground the church, the two cha- pels, the abbey, the court of the bishops, and thirty-two other buildings. In 1610 king James I. annexed this abbey and its revenues to the see of Clogher. Clogher is seventy miles from Dub- lin, and twenty west of Armagh.

CLOI’STER, n. s. & v. a. } Welsh, das ; Sax.

CLOI’STERAL, adj. S-claupcert; Germ.

CLOI’STERED, part. adj. jcloster; French, cloistre ; Lat. claus-trum. A religious retirement; a monastery ; anunnery. A peristyle ; a piazza. To shut up in a religious house ; to confine ; to immure; to shut up from the world.

Yeve me than of thy gold to make our cloistre ; Quod he, for many a muscle and many an oistre, Whan other men han ben ful wel at ese, Hath been our food, our cloistre for to rese.

Chaucer. Canterbury Tales. Cloister thee in some religious house.

Shakspeare.

Ere the bat hath flown His cloistered flight, there shall be done A deed of dreadful note. Id. Macbeth.

They have by commandment, though in form of courtesey, cloistered us within these walls for threa days- Bacon.

It was of the king’s first act to cloister the queen dowager in the nunnery of Bermondsey. Id.

Upon this ground many cloisteral men, of great learning and devotion, prefer contemplation before «<*>on. Walton’s Angler.

Near to this gloomy cloister’s gates, There dwelt the blooming virgin Thwates, Faire beyond measure, and an heir Which might deformity make fair. Marvel.

Nor in a secret cloister doth he keep The»e virgin spirits until their marriage day.

Davies.

Some solitary cloister will I choose, And there with holy virgins live immured.

Dryden.

How could he have the leisure and retiredness of the “loister, to perform those acts of devotion.

A Her bury.

The Greeks and Romans had commonly two clois- tered open courts, one serving for the women’s side, and tlie other for the men. Wotton’s Architect.

CLOISTER, in a more restrained sense, is used for the principal part of a regular monastery, consisting of a square, built around ; ordinarily between the church, the chapter-house, and the refectory ; and over which is the dormitory. The cloisters served for several purposes in the ancient monasteries. Peter of Blois observes, that it was here the monks held their lectures: the lecture or morality at the north side, next the church ; tti2 school on the west, and the chapter on the east; spiritual meditation, &c., being reserved for the church. Lanfranc says, that the proper use of the cloister was for the monks to meet in, and con- verse together, at certain hours of the day. The form of the cloister was square ; and it had its name claustrum from claudo, to close ; as being enclosed on its four sides with buildings. Hence, in architecture, a building is still said to be in form of a cloister when there are buildings on each of the four sides of the court.

CLOISTRESS, n. s. from cloister. A nun ; a lady who has vowed religious retirement.

Like a cloistress she will veiled walk, And water once a day her chamber round With eye-offending brine. Shakspeare.

CLOKE, w.s. See CLOAK CLOMB, pret. of to climb. The sonne, he said, is clomben upon heven Twenty degrees. Chaucer. Cant. Tale*,

Ask to what end they clomb that tedious height.

Spenser, So clomb this first grand thief into God’s fold.

Milton’s Paradise Lost,

CLONAKILTY, a sea-port town in the county of Cork, Ireland, situated in a bay of this name. It is built in the form of a cross ; the church, a plain structure, standing on an eminence. The bay is not convenient, and, in- deed hardly safe. It is twenty miles south-west of Cork, and has a good market for yarn.

CLONES, a town in the county of Monaghan, Ireland. Here was formerly the abbey of St. Tegernach, of royal blood, who removed to this place the episcopal seat of Clogher. In 1207 the town and abbey were destroyed by Hugh de Lacie ; but five years afterwards they were rebuilt. In, 1504 the bishopric was restored. It is ten miles south-west of Monaghan.

CLONFERT, a city or village of Ireland, in the county of Galway. An abbey was erected here in the year 553 ; the church was also a ca- thedral at that time, and constituted a bishop’s see. During the middle

ages the abbey and town were frequently plundered by the leaders of fac- tions, as well as by the Danes. It is thirty-six miles east of Galway.

CLONMELL, a borough in Ireland, in the county of Tipperary, situated on the river Suir. It is the assize town, has a barrack for two troops of horse, and is governed by a mayor, recorder,

bailiffs, and town clerk ; sending one member to parliament. The Suit is navigable from this town to Carrick and Waterford ; and some trade is carried on in the woollen branch, particularly by the quakers, who are very numerous in this neighbourhood. There is a spring here of Spa water, that issues out of the side of a rising ground, which, however, is overlooked by a pretty steep hill, on that side of the Suir which is in the county of Waterford. In this town the celebrated Laurence Sterne was born. It con- sists of four cross streets, and has a spacious bridge of twenty arches over the Suir ; the market- house is strong and well built ; and there is a charter-school for children. A Dominican friary was founded at ClonmelKin 1269, when Otho de Grandison also erected a Franciscan friary, the church of which was esteemed one of the most magnificent in Ireland. This town is very ancient, being built before the Danish invasion : it was formerly defended by a square wall. Oliver Cromwell, who found more resistance from this place than any other in the kingdom, demolished the castles and fortifications, of which now only the ruins remain. The Gothic church is still kept in good repair. Clonmell is nineteen miles south-east of Tipperary, and twenty-two W.N.W. of Waterford.

To GLOOM, v. a. corrupted from cleam. Sax. clsemian, which is still used in some provinces. To close or shut with glutinous or viscous mat- ter.

Rear the hive enough to let them in, and doom up the skirts, all but the door. Mortimer’s Husbandry.

CLOSE, n. *., v. a., adj. & adv. “J Fr. clos ;

CLOSE’ LY, adv. >Teut. klose,

CLOSE’NESS, n. s. J from Lat.

clausits. Any thing shut, as an enclosed field ; also a termination, or that which shuts or en- closes; a com ing together ; consolidation; a shut- ting up. The adjective conveys all the shades of meaning applicable to the other derivatives, we shall therefore furnish the

definitions and illus- trations of this, in addition to a few that establish the primary sense, as abundantly sufficient to explain both the literal and metaphorical applica- tions of the entire word.

Certes I have now lived too long, Sithe I may not this closer kepe. Al quick I would be dolven depe, Yf any man shal more repayre To this gardin for foul or fayre.

Chaucer. Romauntofthe Rose. Ne left he nought,

But through the verger he hath sought If he might finden hole, or trace Wherethrough that me [I] mote forth by pace Or any gap he did it close. Id.

I have a tree, which grows here in my dote, That mine own use invites me to cut down. And shortly m»st I fell it. Shahspeare.

The admirable effects of this distillation in close, which is like the wombs and matrices of living crea- tures. Bacon.

The king went of purpose into the north, laying an open side unto Pekin, to make him come to the close, and so to trip up his heels, having made sure in Kent beforehand. /,/.

CLO

The air, such pleasure loth to lose With thousand echoes still prolongs each heavenly close. Milton.

Speedy death, The close of all my miseries and the balm. Id,

At every dose she made, the attending throng Replied, and bore the burden of the song.

Dryden'» Fables.

Through Syria, Persia, Greece, she goes ; And takes the Romans in the dose. Prior.

So in the Roman forum Carteus brave, Galloping down, dosed up the gaping cave.

Marvell.

Behold the picture ! Is it like ? Like whom ? The things that mount the rostrum with a skip, And then skip down again. Pronounce a text, Cry hem, and reading, what they never wrote, Just fifteen minutes huddle

up their work, And with a well-bred whisper close the scene.

Cowper. Sweet as the downy-pinioned gale that roves,

To gather fragrance in Arabian groves ;

Mild as the melodies at dose of day,

That heard remote along the vale decay. Beattie.

In vain she seeks to dose her weary eyes, Those eyes still swim incessantly in tears,

Hope in her cheerless bosom fading dies, Distracted by a thousand cruel fears, While banished from his love for ever she appears. Mrs. Tighes' Psyche.

Close to the glimmering gate he dragged his chain. And hoped that peril might not prove in vain.

Byron,

What deep wounds ever closed without a scar, The hearts bleed longest, and but heal to wear That which disfigures it ; and they who war, With their own hopes, and have been vanquished,

bear Silence, but not submission. Id.

The adjective is thus exhibited by Johnson. We have supplied a few illustrations. Shut fast, so as to leave no part open ; as, a close box , a close house.

We suppose this bag to be tied dose about, towards the window. Wilkins.

Having no vent ; without inlet; secret; pri- vate; not to be seen through.

Nor could his acts too dose a vizard wear, To escape their eyes whom guilt had taught to fear.

Drydeii.

Confined; stagnant; without ventilation.

If the rooms be low roofed, or full of windows and doors, the one maketh the air dote, and not fresh y and the other maketh it

exceedingly unequal. Bacon's Natural History.

Compact ; solid ; dense ; without interstices or vacuities.

The inward substance of the earth if of itself an uniform mass, close and compact. Burnet's Theory.

The golden globe being put into a press, which was driven by the extreme force of screws, the water made itself way through the pores of that verv close metal.

Locke.

Viscous; glutinous; not volatile.

This oil, which nourishes the lamp, is composed of so dote and tenacious a substance, that it may slowly evaporate. Wilkint,

Concise ; brief; compressed ; without exube- rance or digression.

You lay your thoughts so dote together, that were

they closer they would be crowded, and even a due

connection would be waating. Dryden's Juvenal.

Where the original is close, no version can reach it

in the same compass. Dry den.

Read these instructive leaves, in which conspire Fresnoy's dote art, and Dryden's native fire. Pope. Joined without any intervening distance or space, whether of time or place.

But yot the cause and root of all his ill,

Inward corruption and infected sin, Not purged nor healed, behind remained still, And festering sore did ranckle yet within, Close creeping twixt the marrow and the skin.

Spenser.

Was I a man bred great as Rome herself, Equal to all her titles, that could stand Close up with Atlas, and sustain her name As strong as he doth heaven. Ben Jonson.

We must lay aside that lazy and fallacious method of censuring by the lump, and must bring things close to the test of true or false. Burnct's Theory.

Approaching nearly ; joined one to another.

Now we sit chse about this taper here, And call in question our necessities.

Shakspeare.

Nature so herself does use To lay by her wonted state, Lest the world should separate,

Sudden parting closer glews. MaroeU.

And as a child, when scaring sounds molest, Clings dose and closer to the mother's breast ; So the loud torrent and the whirlwind's roar, But bind him to his native mountain more.

Goldsmith.

Admitting small distance.

Short crooked swords in closer fight they wear.

Dryaen.

Undiscovered ; without any token by which one may be found.

Close observe him for the sake of mockery.

Clote, in the name of jesting ! like you there.

Shakspeare.

Hidden ; secret ; not revealed.

A dose intent at last to shew me grace. Spenser.

Some spagyrists, that keep their best things close, will do more to vindicate their art, or oppose their antagonists, than to gratify the curious or benefit man- kind. Boyle.

Having the quality of secrecy ; trusty.

Constant you are, But yet a woman •, and for secresy, No lady closer. Shakspeare.

Having an appearance of concealment; cloudy; sly.

That close aspect of -his Doe» show the mood of a much-troubled breast.

Sliakspeare.

Without wandering ; without deviation ; at- tentive.

I discovered no way to keep our thoughts dose to their business, but by frequent attention, getting the habit of attention. Locke,

Full to the point; home.

I am engaging in a large dispute, where the argu- ments are not likely to reach close on either side.

Dryder-.

Retired ; solitary.

He kept himself dose because of Saul. Chronicle*.

Secluded from communication ; as, a dote prisoner. Applied to the weather, dark ; cloudy; not clear. Applied to the mind, it signifies, to be reserved, impenetrable, covetous. The verb is sometimes used with an addition, as to close upon; to agree upon, to join in.

The jealousy of such a design in us would induce France and Holland to close upon some measures be- tween them to our disadvantage. Temple.

To close, with ; to close in with. To come to an agreement with ; to comply with ; to unite with.

Intire cowardice makes thee wrong this virtuous gentlewoman, to close with us.

Shakepeare. Henry IV.

It would become me better than to close, In terms of friendship with thine enemies.

Id. Julius Caesar.

There was no such defect in man's understanding, but that it would close with the evidence. South.

He took the time when Richard was deposed, And high and low with happy Harry closed.

Dry den.

Pride is so unsociable a vice, that there is no clos- ing with it Collier on Friendship . This spirit, poured upon iron, lets go the water j the acid siprit is more attracted by the fixed body ; and lets go the water to close with the fixed body.

Newton's Opticks.

Such a proof as would have been closed with certainly at the first, shall be set aside easily afterwards.

Atterbury.

These governours bent all their thoughts and ap- plications to close in with the people, now the stronger party. Swift.

To close with. To grapple with in wrestling. CLOSE-BANDED, adj. In - close order ; thick ranged ; or secretly leagued, which seems rather the meaning in this passage.

Nor in the house which chamber ambushes Close-banded, durst attack me. Milton.

CLOSE-BODIED, adj. Made to fit the body exactly.

If any clergy shall appear in any close-bodied coat,

they shall be suspended. Aylyffe's Perergon.

CLOSE-HANDED, adj. Covetous.

Galba was very close-handed. I have not read much

of his liberalities. Arbuthnot on Coins.

CLOSE-HAULED, in navigation, the general arrangement or trim of a ship's sails when she er- deavours to make progress, in the nearest direction possible, towards that point of the compass from which the

wind blows. In this manner of sailing, the keel commonly makes an angle of six points with the line of the wind; but sloops and some-other small vessels are said to sail almost a point nearer. All vessels, however, are supposed to make nearly a point of lee way when close-hauled, even when they have the advantage of a good sailing breeze and smooth water. The angle of lee way, however, increases in propor- tion to the increase of the wind and sea. In this disposition of the sails, they are all extended side- ways on the ship, so that the wind, as it crosses the ship obliquely toward the stern from forwards, may fill their ca* ities. But, a* the current of

winds also enters the sails in an oblique direc- tion, the effort of it to make the ship advance is considerably diminished : she will therefore make the least progress when sailing in this manner. The ship is said to be close-hauled, because at this time her tacks, or lower corners of the prin- cipal sails, are drawn close down to her side to windward, the sheets'hauled close aft, and all the bow lines drawn to their greatest extension to keep the sails steady.

CLOSE-PENT, adj. Shut close; without vent.

Then in some close-pent room it crept along,

And smouldering as it went, in silence fed.

Dry den.

CLOSE QUARTERS, strong barriers of wood stretching across a merchant ship in several places ; used as a place of retreat when a ship is boarded by her adversary ; they are therefore fitted with loop-holes, through which to fire the small arms ; they are likewise furnished with caissons, or powder-chests, fixed upon the deck, and filled with powder, old nails, &c., which may be fired at any time from the close quarters, upon the boarders.

CLO'SE-STOOL, n.s. close and stool. A chamber implement.

A pestle lor his truncheon, led the van j And his high helmet was a close-stool pan. Garth. CLO'SET, n. s. & v. a. from close. A small room of privacy and retirement; a private re- pository of curiosities and valuable things. To shut up, or conceal, in a closet ; to take into a closet for a secret interview.

Chamber and closet clenest of chastitie, And named her brough of the

deitie. Chaucer.

Deepe, in the closet of my parts entyre, Her worth is written with a golden quill,

That me with heavenly fury doth inspire, And my glad mouth with her sweet prayses fill,

Spenser's Sonnets.

The taper burneth in your closet. Shakspeare.

He would make a step into his closet, and after a

short prayer he was gone. Wotton.

The heat

Of thy great love once spread, as in an urn, Doth closet up itself. Herbert.

So where the neatest badger most abides ; Deep in the earth she forms her pretty cell,

Which into halls and closulets divides ; But when the crafty fox with loathsome smell Infects her pleasant cave the cleanly beast, So hates her inmate and rank smelling guest, That far away she flies, and leaves her loathed nest.

, Fletcher's Purple Island.

He knew the seat of paradise, Could tell in what degree it lies j And as he was disposed could prove it Below the moon or else above it, What Adam dreamt of when his bride Came from her closet in his side. Hudibras.

He should have made himself a key, wherewith to open the closet of Minerva, where those fair treasures are to be found in all abundance.

Dryden's Dufremoy. He furnishes her closet first, and fills The crowded shelves with rarities of shells.

Dryden's Fables.

CLOSTER SEVEN, a town of Germany, in th«» circle of Lower Saxony,

and duchy of Bremen, memorable for a convention entered into by the duke of Cumberland and the duke of Richelieu, commander of the French armies in 1758, by which 38,000 Hanoverians laid down their arms, and were dispersed. It is nineteen miles south of Stade, and twenty-four N. N. E. of Bremen.

CLO'SURE, n.s. from close.

The act of shutting up.

The chink was carefully closed up : upon which closure there appeared not any change.

Boyle's Spring of the Air.

That by which any thing is closed or shut. I admire your sending your last to me quite open, without a seal, wafer, or any closure whatever.

Pope to Swift. The parts enclosing ; enclosure.

O thou bloody prison ' Within the guilty closure of thy walls Richard the Second here was hacked to death.

Shakspeare.

Conclusion ; end. Not in use. We'll hand in hand all headlong cast us down, And make a mutual closure of our house. Id.

CLOT, n. s. & v. n. ˆ Fr. cuillet ; from Lat. CLOT'TER, v- n. \coagulatum. Probably, CLOT'TY, adj. j at hrst, the same with

clod, but now applied to different uses. Con- cretion ; coagulation ; grume. To form clots or clods, to hang together, to concrete, to coagulate ; as clotted cream ; clotted blood. Johnson says to become gross, but gives no proof or illus- tration.

The clotered blood, for any leche-craft, Corrumpeth, and in his bouke ylaft, — That neyther veine-blood, ne ventousing, Ne drinke of herbes, may ben his helping.

Chaucer.

The white of an egg, with spirit of wine, doth bake the egg into dots, as if it began to poch. Bacon.

The opening itself was stopt with a clot of grumous blood. Wiseman's Surger .

He dragged the trembling sire, Sliddering thro' clattered blood and holy mire.

Dryden's JEneid,

Where land is clotty, and a shower of rain soaks through, you may make use of a rool to break it.

Mortimer.

Huge unwiedly bones, lasting remains Of that gigantick race ; which, as he breaks The clotted glebe, the plowman haply finds. Plillips

CLOTAIRE I., king of France, was the son of Clovis and Clotilda. He began to reign in 511, and died at Compiegne in 561, aged forty- four. See FRANCE, HISTORY OF.

CLOTAIRE II., son and successor of Chilperic I. His father dying in his infancy, his mother maintained the kingdom for him, with great spirit and success, against the efforts of Childebert. After her death Theodebert and Thiuri defeated him ; but he afterwards re-united the different kingdoms of France under himself. He died in 628.

CLOTAIRE, III. king of Burgundy, after the death of Clovis II. his father, who left him a minor. His mother Batilda, governed during his minority with great wisdom. He died in 670.

CLOTH, WOOLLEN,

CLOTH, n. s.

CLOTHES, plural. CLOTHE, v. a. & n. CLO'THIER, n. s. CLO'THING, n.s.

~\ Ang.-Sax. clad, clffith. That which is woven, and now (applied to any woven (texture ot whatever

CLOTH-SHEARER, n.s. substance. The sin- CLOTH-PRESSING, n. s. \ gular is applied to CLOTH-WORKER, n. *. J denominate the ar- ticle as it comes out of the hands of the man- ufacturer. The plural is usually applied to the same article made into garments ; and to garments in general : hence to whatever is used for covering and protection from outward injuries and unsightly nakedness. The different agents whose cognomen we have given are em- ployed in the primary process of manufacturing and preparing the material ; but not in the after process of forming it into apparel. To clothe is to invest, to adorn with

dress, to furnish, pro- vide with clothes, to cover.

Better it is to cast away thin here, than to cast away the swetenesse of our Lord Jesu Crist, and therefore sayth Saint Poule, clothe you — as thtey that ben chosen of .God in herte, of misericorde debonairtee, and swiche maner of clothing of which Jesu Crist is more plesed than with the heres or ha- bergeons. Chaucer. The Persones Tale.

The third had of their wardrobe custody, In which were not rich tyres, nor garments gay, The plumes «f pride and winges of vanity, But clothes meet to keep keene cold away, And naked nature seemely to.aray ; With which bare wretched wights he daily clad, The images of God in earthly clay ; And, if that no spare clothes to give he had, His owne cote he would cut, and it distribute glad.

Spenser.

He with him brought Preyne, rich arrayed

In Claribellae's clothes. Id.

Take up these clothes here quickly ; carry them to

the laundress in Datchet mead. Shakspeare,

I answer you right painted cloth, from whence you

have studied your questions. Id.

Who fears a sentence, or an old man's saw, Shall by a painted cloth be kept in awe. Id.

Care no more to clotfte and eat. Id. Cymbelineˆ

The clothiers all, not able to maintain The many to them 'longing, have put off The spinsters, carders, fullers, weavers.

Id. Henry VIII.

My father is a poor man, and by his occupation a

cloth-shearer. Hahewill on Providence.

The king stood up under his doth of state, took the

sword from the protector, and dubbed the Lord Mayor

of London knight. Sir John Haywurd,

I'll make the very green cloth to look blue.

Ben Jonson_

If thou beest he ; but O how fallen! how changed From him, who in the happy realms of light, Clothed with transcendant brightness, did'st outshine Myriads though bright ! Milton.

At length by wonderful impulse of fate The people call him home to help the state, And, what is more, they send him money too, And cloath him from head to foot anew. Marvell.

A. costly cloth of gold. Drayton.

The Spaniards buy their linen clothi in that king- dom. Snifi- Your bread an«' clothing, and every necessary of life, entirely depen . upon it. Id.

They leave the shady realms of night. And clothed in bodies, breathe your upper light

Dry den*

Gazing on her midnight foes, She turned each way her frighted head, Then sunk it deep beneath the clothes. Prior. Let both use the clearest language in which they can clothe their thoughts. Watts on the Mind.

Nor let, like Naevious, every error pass ; The musty wine, foul cloth, or greasy glass. Pope. Embroidered purple clothes the golden bedsf

Pope's Statius.

True Witney broad-cfofA with its shag unshorn, Unpierced, is in the lasting tempest worn. tray

With superior boon may your rich soil Exuberant nature's better blessings pour O'er every land, the naked nations clothe, And be the exhaustless granary of a world.

Thomson.

Who toils for nations may be poor indeed, But free , who sweats for monarchs is no more

Than the gilt chamberlain, who clothed and fee'd , Stands sleek and

slavish, bowing at his door. Byron.

CLOTH is a cotton, linen, or woollen manufac- ture. That, indeed, which, among the inha- bitants of Otaheite, and other barbarous people, is made of the barks of trees, has been some- times treated under this term ; but it has already engaged our attention sufficiently under the word BARK, which see. On the other hand, hair, silk, and the ductile and precious metals of silver and gold have been, in highly civilised countries, wrought into cloth.

But the three divisions of this extensive species of manufacture, which we have named, will embrace its principal and more common appli- cation. For HAIR-CLOTH, see that article; for cloth made of silk, see SILK MANUFACTURE; and, for cloth of GOLD and SILVER, see those articlei-

Cotton, linen, and woollen cloths, alike under go three common processes from the raw mate- rial, to the complete and finished piece of goods. 1 . They are prepared in various ways until they form yarn. 2. They are woven into cloth ; and 3. They are bleached, dyed, printed, glazed, &c. to various stages of beauty and perfection. Under the names of the respective materials, COTTON, FLAX, and SILK, will the very distinct methods of preparing those materials he treated. Our attention in this article will be directed to the different operations by which our staple manufacture of woollen cloth is conducted after the sorting of the wool, for which see WOOL; and, with the exception of WEAVING, (an opera- tion sufficiently important to require a distinct article) this finally receiving the name of doth, in distinction from linen, cotton, and silk goods.

Cloths are of various qualities, fine and coarse. The following general criteria of the goodness of cloth, have been often given, viz, 1 . That the

•wool be of a good quality, and well dressed. 2. It must be equally spun, carefully observing that the thread of the warp be finer and better twisted than that of the woof. 3. The cloth must be well wrought, and beaten on the loom, so as to be everywhere equally compact. 4. The wool must not be finer at one end of the piece than the rest. 5. The lists must be suf- ficiently strong, of the same length with the stuff, and must consist of good wool, hair or ostrich feathers ;

or, what is still better, of Danish dog's hair. 6. The cloth must be free from knots and other imperfections. 7. It must be well scoured with fullers' earth, well fulled with the best white soap, and afterwards washed in clear water. 8. The hair or nap must be well drawn out with the feazel, without being too much opened. 9. It must be shorn close without making it thread-bare. 10. It must be well dried. 11. It must be tenter-stretched to force it to its just dimension\ i2. It must be pressed cold, not hot-pressed, the latter being very injurious to fine woollen cloth.

This manufacture we shall now more particu- larly consider in its processes. 1. Of preparing the wool, after it has been sorted for the weaver. 2. Of finishing the cloth after it is taken from the loom.

1. Of preparing the wool after it has been sorted. — The best wools for the manufacturing of white cloth, intended for dyeing, are those of England and Spain. Spanish wool, as it arrives in this country, has generally some part of the marking pitch still adhering to it in the bale, which must be carefully cut or picked off; and it is frequently so hardly pressed together in the bag, that it requires to be opened out by beating. Until recently it was the practice to beat the wool with rods, in order to shake out the dust and open the staples ; but this is now principally done by an opening machine with long coarse teeth, called a devil, or wool-mill, described farther onward. English wool is generally cleaned from pitch marks or other extraneous substances by the wool-sorter, and left by him in a proper condition to commence the process of cloth- tnaking.

In Hampshire, and the west of England, it is now most commonly scoured, by putting it into a furnace containing a liquor composed of three parts of water and one of urine ; and after it has been well stirred therein, and the grease it contains dissolved, it is taken out, drained, and washed in running water. In Yorkshire this excellent practice is said to be omitted in regard to wools intended for white cloths ; and manu- facturers who dye their own wool frequently put it into the dyeing-vat unsecured ; a process which, while it enables him to make a greater weight of cloth from his wool, injures the brightness of the colors. It also makes it needful that the oil afterwards used should be increased one- third at least ; and gives a general want of cleanliness and comfort to the whole manufacture.

Berthollet states that in this operation, pro- perly conducted, one-fourth of the previous weight of the wool is taken off; and he attri- butes to the ammonia of the putrefied urine its detergent quality. Vauquelin having analysed

the grease, or yolk, as it sometimes is called, thus discharged, found it to consist of

1. A soap, with a basis of potash, which formed

its chief parts.

2. Carbonate of potash, in small quantity.

3. A notable quantity of acetate of potash.

4. Lime.

5. A little muriate of potash.

6. An animal matter, which yields its odor.

He thinks the ammonia contained in the putre- fied urine not to be conducive to its action, and advises the use of ordinary soap as better fitted to procure the desired whiteness to wools.

When wool is dyed in the fleece, or without being spun, it is now ready to be committed to the dye-furnace ; and this is principally the case when it is to be employed for forming cloths of mixed colors ; otherwise it is dyed after being spun. But it is most commonly dyed in the form of cloth.

In the making of superfine cloths, in Hamp- shirfe(the wool, after dyeing, is again washed, well dried and beaten with rods on wooden hurdles, to free it from the dye-stuff, which still hangs about it; or this effect is produced by putting it into a wool-mill, formed of a four-flapped vane or fan thinly set with iron spikes, and swiftly revolving within a hollow cylinder of small wooden rods or staves ; sufficiently wide apart to suffer the dust to fall through, as the wool becomes separated by the motion of the fans. It is now once more carefully picked, in order to take out the locks which are unevenly dyed, and also the lint, and other filth with which wool in this state abounds. In the manufacture of mixed cloths, wool of the different colors, be- ing weighed out in their requisite proportions, are first shaken well together; they are then further mixed, by being well turned in the wool- mill, and, by being afterwards twice passed through the scribbling engine instead of once, they are generally found to be sufficiently inter- mixed.

The nature of wool, as a species of hair, has been well illustrated by M. Monge in his Ob- servations sur le Mecanisme du Feutrage, Ann. de

Chimie, torn. vi. ‘ The surface of all these objects,’ he observes, ‘ is formed of rigid plates, superposed or tiled from the root to the point, permitting progressive movement towards the root, and resisting a similar movement towards the point. This conformation is the main cause of the tendency to felting, which the hairs of all animals in general possess.’

But this conformation, it is clear, must be an obstacle to the spinning of wool, and the fabri- cation of cloth. Their fibres, therefore, are now coated with oil, which, by filling up the cavities, renders their asperity less perceptible in these operations, just as a film of oil is put upon a smooth file when we wish to render it still smoother. For fine cloths, Gallipoli, or olive oil, is principally used : and rape oil for coarse cloths. In still coarser goods, and where color is not an object, fish-oil is sometimes employed ; but if the latter remain in the wool or cloth, it is subject to a fermentation injurious to the cloth, and turns it brown. Combustion has even sometimes been known to take place from

it. Some of the Yorkshire manufacturers make use of a mixture of soap and water with oil, which answers, in moist weather, and, if the wool be immediately carded and spun, very •well ; but the mixture evaporates, if it remain some time unwashed, or the weather become hot. In oiling, the wool must be sprinkled as evenly as possible. They spread it, for this pur- pose, on a floor, in Hampshire, beating it in with heavy rods, and use, for superfine cloth, about three pounds of olive oil to twenty pounds of wool. In Yorkshire they reckon six gallons, or a peck, as the proper quantity for fine cloths, and use the wool-mill to assist in its more equal distri- bution.

This machine consists of a species of cylindri- cal drum, fiom three feet, to three feet and a half long, and two and a half to three feet diameter, enclosed with its rollers in a close box or case, in which is a door let aown by a hinge. Its cir- cumference being furnished with teeth or spikes, immediately above are five small rollers, furnished with similar teeth : and the machine is made, it is said, to revolve 300 times in a minute. The teeth of the rollers and those of the drum inter- sect each other, as they all turn round ; and the teeth of the five small rollers also intersect each other. The door being opened, or turned down into a horizontal position, about a pound weight of wool is laid upon it at once, and is brought, by its being closed, within reach of

the teeth of the cylinder, which take and carry it upwards, so as to work it between the teeth of the cylin- der, and those of the five rollers. This opens and separates the matted fibres. Close below, and fitted to the cylinder, is a grating of wooden rods, through which the dust and dirt are carried off. When the door is re-opened, the cylinder throws out the wool in an instant ; but some- times two doors are placed on opposite sides of the machine ; one to receive the raw wool, and the other to discharge it when the operation is finished. Coarse goods are passed through this mill ; to break the mats of the raw wool and render it light ; a second time after it is dyed ; a third time, to mix the different sorts together ; and lastly, after they are oiled, to spread the effects as we nave stated.

The scribbler, a kind of rough carding ma- chine, is now resorted to, to break down the longer fibres, and to lay them straight and parallel. It is the same in principle with the carding ma- chine, hereafter described ; and, like the above, consists, 1. Of a large cylindrical drum; but covered on the surface with sheets of leather stuck full of projecting wire-teeth, or card-wires, which, as the cylinder is turned, feed themselves with the wool : 2. Of several other smaller cy- linders, called workers and clearers, fixed around the great cylinder in pairs. The wool is taken by the teeth of the workers from the great cy- linder, and given to the clearers, which return it again to the great cylinder. It is then transferred to another worker, and by its clearer given back again to the great cylinder, and so on. While the teeth of the different cylinders do not actually touch each other, they revolve so near, that the fibres of the wool which the teeth of one card contains are caught by the teeth of the other

card, and drawn out a very few at a time, which renders the wool light and open. 3. When it has passed between three or four pairs of workers and clearers, it is taken up by the dojfer, a small cylinder, which turns round very slowly. 4. from it the wool is stripped off by a steel comb, which is placed parallel to its axis, and moved rapidly up and down by a crank. The comb, in ascending, does not touch thedoffer; but only as it falls down. The successive portions thus combed off, finally hang together in a thin fleece or web ; received in a basket from the machine. Scribbling is repeated twice or three times be- fore the wool is completely disentangled and fit for carding, which, as we have stated, is only an improved operation of the same kind.

But great a*tention has been bestowed on the carding engine. We shall best illustrate it by a reference to plate I. M, M, M, M is the frame work of the machine which is of wood or cast iron, the arched

part receiving the screws, which support the cylinders or workers and clearers fixed round it. The workers A are larger, and turn slower, than the clearers B ; but all work against the cards of the great cylinder, and each is worked upon its clearer. C is the large cylinder turned by an endless strap applied upon a pulley at one end of its axis. It performs 100 revolutions per minute, and is from thirty to thirty-six inches in diameter, D is a rol- bowl, as it is called, or a cylinder of wood, fluted shallow, and moved by a pulley E, con- nected with another endless strap moving round a second pulley F, on the cogged wheel G. The lower hemisphere of this roller-bowl is cir- cumscribed with a fluted shell, to catch the wool that falls from the doffer on the left of it. H is a cog-wheel receiving motion from the pinion of a pulley I, turned by an endless band moving on the central pully of G. This wheel is connected at top with a pinion fixed on the axis of the large cylinder.

The wool having been scribbled is spread upon the feeding-cloth K, an endless sheet stretched over two rollers, on the axis of one of which moves the wheel H. It is taken off the sheet, between a pair of feeding-rollers about two inches and a half diameter within the frame, and clothod with cards laid on in spiral fillets. They are moved by toothed pinions, on the axis of the cloth-roller, rather quicker than the feeding-cloth, and, in the most complete view of the machine we can give, are concealed by other parts of it. These rollers deliver the wool to the cylinder L, about nine inches in diameter, which works against and communicates it to the great cylin- der. It is now conveyed to the five workers, and clearers, embraced by the chair N passing under a wheel fixed in G, shown under the frame work, but this chain only moves the three work- ers A, which revolve once in about four revolu- tions of the great cylinder.

The clearers both card the wool on the workers, as well as that on the cylinder, and are moved by the band O passing over a wheel eigM inches and a half in diameter fixed on the extremity of each of their axes, and communicating with a wheel twenty-two inches in diameter, fixed on that of the great cylinder. The cylinder turns about

three times and a half as fast as they : this same strap moves the currier L. It also turns the fly P, moving the same way as the surface of the great cylinder, but about half as fast again. This fly is designed to raise and lighten the wool on the surface of the cylinder (not to take it

off), so that the doflfer, which we have already men- tioned, Q, may act upon it the more effectually. This is a cylinder of about fourteen inches dia- meter, covered with cards about four inches wide, and moving round at the slow rate of about one-thirtieth of the pace of the great cylinder : it is turned by a band connected with the axis of the roller-bowl : a comb which works againsf these cards cannot be seen. It is supported by rods screwed to it at each end, guided by two horizontal levers. The lower ends are jointed on small cranks formed on an horizontal axis at the lower part of the frame, and put into very quick motion by a strap, from a pulley at the bottom. Each revolution of the cranks causes the comb to rise and fall about two inches; when it descends, its edge-teeth act on the sur- face of the doffer cards, so as to take out the wool and drop it slowly into the shell of the roller-bowl. The revolutions of this bowl within its shell rolls the wool between them into a straight cylindrical shape, called a carding; these card ings are yielded from between the roller-bowl and its shell, upon a flat table R, in portions there exhibited. An endless cloth covers this table. It is stretched over horizontal rollers, and carries the cardings away to the slubbing machine or biley, by means of the motion it re- ceives from the pulley S, which is fixed on the axis of one of the rollers.

The slubbing machine is a species of spinning engine performing the preparatory operations of reducing and clensating the cardings, and giving them a slight twist They are then called ro- vings or slubbings. This was once accomplished by hand on the common hand spinning-wheel, then machines were invented, by means of which a number of slubbings could be drawn out toge- ther ; but the aid of hands being required for join- ing the rolls or cardings of wool, they were found of little service, and have universally given way to the modern machine, which we shall now endeavour to describe.

It is a wooden frame, within which passes to and fro a moveable carriage, containing a number of perpendicular spindles, put into rapid motion by a long cylinder, and a band from a pulley affixed to each spindlt. These spindles are placed perpendicularly, in a frame at about four inches from each other ; their lower extremities are pointed, and turning in sockets ; and the upper half projecting above the frame. On the lower part a small pulley or whirl is fixed, to receive the band from the horizontal cylinder (about six inches in diameter), and a little longer than the row of spindles : it is placed before them with its centre at a lower position than the row of whirls. The cylinder receives motion by a pulley at one end, with an endless band from a wheel, made like the large wheel used in spinning wool by the hand. This wheel is situated at the out- side of the frame of the

machine, and its axis supported by upright standards erected from the

carriage; the wheel is turned by the left-hand of the spinner, applied to a winch, and gives motion to the cylinder, which turns all the spindles at once. The operations of the spinning jenny are so very similar, that our plate of that machine will fully enable the reader to comprehend this. The discretion of the spinner regulates the degree of twists given to the slubbings, which depends both on the rapidity with which the wheel is turned, and the corresponding quickness with which the carriage is drawn out, as well as on the fineness of the wool and the length of its fibre.

For fine shawl yarns, a machine called the mule, similar to the cotton mule, is often employed, see COTTON MANUFACTURE, the slubbing pass- ing through rollers which assist in drawing out the thread smaller and more regularly.

In the spinning jenny the slubbings are again spun and prepared for the loom. Its parts are similar to those of the preceding machine, only differently placed. Our plate II. CLOTH, WOOL- LEN, contains a view of this important modern invention. F, F, F, is the frame work, at the end of which the spindles S,S,S, are placed, about four inches apart. As in the slubbing machine their lower ends turn in caps or sockets of the cross-rail, and near the middle they are held up by brass collars fixed on another rail. Towards the lower end they receive an endless strap round their respective pulleys, communicating with the great roller A, which is generally made of tin plate, and receives its motion from the band B, which passes the great wheel C C. The move- able cross-rail D is morticed into blocks of wood, and runs on the general frame by means of small wheels or castors. It can be moved to and fro from six to seven feet. The underside is furnished with narrow notches for the slub- bings to pass through, opposed to the projecting pieces, of a parallel cross-rail E, so as to form a clasp which confines the slubbings in the notches when the lower rail is raised up. They can how- ever pass freely through the notches when the lower rail is down. This rail is limited in its move- ments up and down a small space by staples, which project downwards from the upper rail. Its rising and falling is effected by small cords fastened to it at about every three feet, and con- ducted over small pulleys in the substance of the upper rail, which are all attached to a handle, situated over the middle of the upper rail, be- neath an arched bar G. This the spinner holds in her left hand, while the right is employed in turning the wheel ; and by the fingers of her left hand she raises up the lower rail, and draws it close to the upper. In this position it is returned at pleasure by a small spring-catch, and clasps the slubbings in the notches, through which

they pass ; when the spring-catch is pushed back the lower rail falls, and releases the slubbings. An inclined frame H, receives the cops of the slub- bings to be spun. They are rolled on iron wires, placed in two rows, each containing half as many cops as there are spindles. Each slubbing is conducted through a »iotch in the clasp, and thence it now proceeds nearly in a horizontal position to the spindles s, s, s. The yarns having been drawn out and twisted are wound on the spindles in balls.

I is a wire used for bearing down the thread from the points of the spindles, and attached to a horizontal rail, which is supported on pivots at its ends, close to the row of spindles. A pulley K receives one end of this rail, and a short lever at the other is hid by part of the framing. Be- tween the pulley K and the lever the wire is extended, and by turning round the rail the wire receives a perpendicular motion This the spin- ner can communicate when at her business by the cord L, the end being made fast to a pm at M, and the pressure of her finger on a small trigger in the handle G. A counterweight to bring it back to its first position is suspended from the pulley K.

The spinning jenny is worked by a female (generally) standing within the frame and turn- ing the wheel with her right hand, while the cross-rail D is managed by her left. We have described the manner in which the slnbbings are drawn between the upper and lower rails of this part of the machine ; they are drawn off the balls at H, when the clasp retires from the spindles, until a certain length of each is extended nearly in an horizontal position between the spindles and the clasp. The motion of the wheel then twists those parts of the slubbings which are ex- tended, and first in a contrary direction to the twist of the stubbing. They are now wound up upon the spindles, previously to drawing out a fresh portion of each stubbing, in order to spin it in the same manner. For this purpose they are pushed down upon their respective spindles, by pressing the trigger which moves the wire L; and the motion of the wheel is ap- plied while the carriage and clasp are pushed home towards the spindles. Arrived there, the thread is finished and wound up.

The art of using the jenny consists in drawing out the carriage with a movement correspondent to the rapidity with which the spindles give the twist, or rather untwist, to the slubbing ; for the principal extension of the thread is effected whilst this is going forward : as also

in giving an equal degree of twist to the whole thread. The yam that is intended for the warp, we should add, requires that the spindles be turned for a time after the thread is extended to its full length ; but for the yarn which is to be used as weft, it is different : the whole of the twist is given during the extension of tlie thread, and none afterwards ; this renders the weft softer than the warp, be- cause in the cloth the weft appears more on the surfaces than the warp, and it is principally the felting and interlacing of the fibres of the weft that will form the surface of the cloth.

Warping, which is our next process, is per- formed by mounting the yarn on wires in a frame, and drawing it off the coppings, so as to combine a number of them together. The warping-mill, •which is now generally used, is a large reel, with an horizontal axis ; the ends of the threads in fact are made fast to the reel, which is turned round, ;.nd it draws off the threads upon its own cir- cumference. To prevent them overlaying one another, they are guided through an eye or ring affixed to a slider, moved along a wooden rail, in a direction parallel to the axis of the reel, by a cord that winds round one end of the axis.

After this process the warp is scoured witr- urine to cleanse it from the unctuous matters ad- hering, and sized in a cauldron, about a dozen yards at a time : it is then dried and stretched in the open air : and when dry it is transferred from the field to the loom. The weft-yarn is wound off the jenny-cops on the quills or bobbins whhh are afterwards used by the weaver.

For the loom employed, and its most recent improvements, we refer the reader to the article WEAVING. It will be sufficient here to observe that the width of the cloth returned from that process is expected to correspond with the num- ber of the yarns, so that 3000 common threads will make a piece of coarse cloth 103£ inches wide; and 100 yards of fine cloth is expected to be produced from about 2960 threads : the weft averages about one pound per yard : and sixty- two yards of cloth is considered a fair return for sixty-five yards of yarn.

The cloth must now be scoured in the piece, preparatory to felting : and for this purpose it is taken to the fulling-mill, which ordinarily con- sists of a pair of stocks in wooden hammers, sus- pended in an inclined position, and the heads lifted up and down by cogs or tappets, fixed on the axis of a water-wheel. When the cogs are removed by its revolutions from under the ham- mers, they fall by their own weight, and strike the piece of cloth, which is contained in a wooden cistern or trough. This both causes a continual circulation or turning round of the piece of cloth in the trough, and effects the

scouring or washing it by continually bending or folding it in a fresh direction. It is now ex- tended on the well known tenter-hooks, fixed in horizontal rails, attached to vertical posts, one line of the rails being fixed and the other move- able, by means of pins and holes.

Milling is another operation performed by the action of the hammer of the fulling-mill. To a piece of cloth thirty-one yards long, three pounds of soap are allowed at this stage, and it is worked in the mill about two hours, then soaped anew twice, and returned to the mill for about the same time, so that it undergoes the operation three times.

‘ The operation of fulling woollen stuffs, has so close a relation with felting,’ says M. Monge, a writer we have before quoted, ‘ that we cannot dispense with entering into some details on this subject. The roughness with which the fibres of wool are bristled at their surface, and the dis- position which the fibres have to take a progres- sive movement in the direction of the root, is an obstacle to the spinning of wool and to the fa- brication of stuffs. In order to spin the wool, and afterwards weave it, we are obliged to coat all the fibres with a film of oil. When the piece of stuff is manufactured it must be deprived of this oil which gives it a disagreeable color, and constitutes a kind of filthiness which would be an obstacle to dyeing. For this purpose it is carried to the fulling-mills, where it is beaten with mallets in a trough filled with water, through which clay (fuller’s earth) has been diffused. The clay combines with the oil, which it ren- ders soluble in water; both are carried off by the fresh water which the machine itself brings

upon it ; and at the end of a certain time the stuff is scoured.

3ut scouring is not the only object of the fulling. The alternate compressions which the beetles exert on the piece of stuff, especially when the scouring is well advanced, produce an effect analogous to that of the hand-pressure of the hatter. The fibres of wool which compose one of the threads of the woof, or of the warp, take a progressive movement, get introduced into one of the neighbouring threads, then into those which follow, and soon all the threads both of the woof and warp are felted together. The stuff, after having suffered a narrowing in its two di- mensions, partakes of the nature both of

web and felt ; it may be cut without being liable to open out its threads, and there is no necessity for hemming the different pieces which enter into the composition of a garment. If it be ordinary knit wool, the stitch is no longer apt to run when it happens to escape. Lastly, the threads of the woof and the warp being no longer so well denned, or so distinct from each other, the stuff, which in other respects is thickened, forms a warmer clothing.'

After milling the piece is again stretched on the tenter-hooks, and only now awaits the finishing operation that forms its surface. To effect this it is generally first dressed with teasels, a species of thistle; the part used is the ball, or ear, which contains the seed of the dipsacus fullonum. Scales project from this ball, with elastic points turned downward. They are fixed in a small frame which is provided with a handle eight or ten, inches long, having a small stick, about eight inches long, passed through it at one end. This stick is split into two at each end nearly all its length. Near the middle there is another similar stick which is passed through the handle; the two split sticks being parallel to each other. The space between them is filled with teasels, jambed in very fast, as also in their split parts, where they are secured by strings extended between the ends, and twisted until they draw the sticks and bind the teasels forcibly together. The whole forms a tool resembling the curry-comb, and which is used in a" similar manner, to draw out, by scratching, all loose ends of the fibres of thQ wool. Two men hold the teasel-frame and w the cloth as it hangs up in a vertical position, drawing it down in portions as they proceed. The first time the cloth is thus dressed it is wetted, and worked three times over in that state by strokes, in the direc- tion of its length, then it is worked again three times in the other direction. But more scientific modes of accomplishing this part of the manufac-' ture have of late been adopted in Yorkshire. Plate III. CLOTH, WOOLLEN, represents a gig-mill, very commonly used in the manufactories. On F, a wooden frame is erected, a cylindrical engine C, over which the cloth is conducted, and which revolves with the pullies PP, receiving an endless band from the upper wheel W. The pullies are, one fixed and one loose for the straps to turn upon freely, that the machine may be the more readily put in motion or stopped. W, communicates with a barbed wheel X, by means of a strong iron shaft, and is moved by a great wheel, connected with any convenient first

mover. Round the cylinder, C, are teasels se- cured in boxes or frames. One end of the piece of cloth is wound over the roller R, at thoth, the nap or wool, which is to be removed by the cropping, will stand up above the edge of the lower blade, in the interval between the two edges ; then, if the blades be forced together, the edge of the upper

blade will pass or cross over that of the lower, and cut away all the wool which projects above the edge of the lower blade. The contact of the cutting-edges begins at the end nearest to the bow, and proceeds regularly to the other, because, as before mentioned, the edges are not parallel. The blades open or re-

turn to their former position by the elasticity of the bow, but in order to make the cut they are closed by means of a handle or lever, which is fitted or lodged on a round part of the stem of thfc bow, so as to play thereupon as upon a centre. A double cord is made fast to the lever or handle near to this centre, and the other end of the cord is fastened to a block of wood, which is screwed to the flat of the lower blade, and rises up to a proper height. By depressing this handle the shears are closed, and make their cut with the greatest facility, the elasticity of the bow returning the handle. The manner of cropping is : — Let the piece of cloth be laid down in folds upon a plank, or low bench, placed on the ground, and the end drawn across a table or bench, which is covered with cloth and stuffed. The cloth is stretched out flat upon the surface of the table, and is retained by hooks and weights. Two workmen are now employed who place the lower blades of their shears flat on the surface of the cloth, with the line of the edge in the direc- tion of the length of the piece; one of the shears is laid on the edge or list of the cloth, and the other exactly in the middle of the breadth of the cloth The bows and stems of the shears project over the edge of the table where the workmen place themselves. Each man guides the shears with his left hand, and makes the cut with his right. To hold the shears a short staff is lashed to the bow of the shears, and secured by a stay to the lower blade; its direction is nearly parallel to the back edge of the upper blade. The workman puts his arm through the bow as far as the elbow-joint, then lays the fore-arm flat against the staff, which he grasps with the hand ; and in this way he has a great command of the shears, leaving the right hand at liberty to work the handle which closes them. This is moved backwards and forwards with great rapidity to make cuts or clips on the cloth, and between every cut the lower blade is moved forward on the cloth. The art consists in moving the shears with proper regularity. To assist this weights arc laid on the flat of the lower blade, which press it down into the cushion on which the operation is performed. Common cloth is cut wet the first time, then dressed with teasels, dried, and cut three times in a dry state. The most common shearing-frames used in the manufactories are only intended to give the dif- ficult motion used for

cropping by the hand.

We copy the specification of a patent granted to Mr. Harmar, of Sheffield, for a machine for raising a shag on all sorts of woollen cloths, and cropping or shearing them ; which, together, come under the description of dressing woollen cloths, and also for cropping or shearing of fus- tians. This was until a late period very gene- rally used in Yorkshire ; it is said to have been since simplified. See plate IV. CLOTH, WOOL- LEN.

Fig. 1. exhibits a side and end view of shear- ing cloth from list to list. A is the frame, with its pillars, legs, and rails. B is the cushion or shear-board over which the cloth is extended. C, the cropper's shears in their situation for working, with their bobs or levers. U, the har- ness or breeches fitted to each end of the riding

blade of C ; at the near end is hollowed the bow of C, and at both ends fastened with screws pass- ing through the blade, or else is grooved to admit the blade, and is fastened with wedges. It is composed of two strong pieces of plank, with holes to admit screws through to nut- screws fas- tened to their upper surface, and square holes through which pass small pillars ; other two pieces of plank are frames for wheels turning on pins (as in drawing), situated under the pieces fastened to the riding blade ; here the lower ends of screws are rivetted to plates, but so as to turn, which plates are screwed to the wheel-frames ; also, in these lower pieces, small pillars are fixed, which, passing through the upper pieces, steady the harness ; those screws turned to right or left bring the edges of C to the angle of B. for the work of shearing. E, the inclined planes down which the wheels of D roll when the machine is working. F is the working axle, with its rods or rails ; the gudgeons of this axle rest on the cross rails of A ; the axle has the inclination of B and E, as in drawing. Its rods, fixed to the sides of it by projecting pieces, are about four inches from its centre, and the thimbles of G ride down them to keep pace with C in its progress. G is the line communicating at the lower end by a thimble with the rods of F, and at the uppei end with the bob or lever of C, as in drawing. H is an axle-tree, with its handle, cog-wheel, and stop, fixed by stops, on which it turns, to the pillars of A. I, the lines communicating with the extremities of K at one end, and the other with H. K, levers, turning on their pins, and, by the action of K and I, work against E, to raise C from B, for all necessary purposes. L, pulleys in their frames, to give a proper direction to I, that the turning of H may have the effect before named. M is a crank attached to the lower gudgeon of F ; the crank handle has an eye in it, through which a square leg passes, against which works the lower end of a screw, the

nut of which is one side of the said eye. This screw, turned to right or left, loosens or fastens the leg in the eye at pleasure. The said leg at the other extremity has a handle where the near end of the catch N is fitted on. Now, as the leg is shifted bj means of its eye and screw in that end where the handle is further from the centre of F, N works O with more speed. N is the catch that works O. O is the cog-wheel of N, with its screw pinion on its axle. P is an iron axle, with pulleys near both ends, with a cog-wheel. R is a small sword, fitted into the mortise of the projection on the lower extremity of F, and pinned, and the other end is fitted to /the crank handle of S. S is the crank axle and pulley that carries the band which goes to the power that works the machine. The situation for R, as to that end that sits on the crank of S, is directly behind the lower end of F, and under the further extremity of B, where the crank end of S rides on a stop fixed to the further rail of A; the pulley end, where the stop is, rides on X. Now the crank S being put in motion, gives R the necessary vibration, and R works F, which alternately raising or falling its rods or rails by G, C works ; and, to effect the progression of C, F being in a working state, M works N, and O works P, and C is carried forwards by T, and to

carry C forwards faster or slower, as necessary. For the due performance of shearing cloth, the handle of the leg of M, where N is fitted on, must be brought nearer to the centre of F for slacking, and more distant from the said centre to increase the speed, as then N will take more or less teeth m O.

Or the progression in this frame may be ef- fected by the method described in the progression of fig. 3, under the letters M, N, O, P. T, the lines for carrying forwards C by P. U is a pro- jection fastened to D, and works against U when C is about to stop. V is a rail and small sword passing through a mortise fixed to one of the legs of A, at nearly one end, and by a working joint, goes up to near the extremity of W. W is a lever, passing through its fulcrum, and pinned to the upper end of X ; and near the other end rests on a small notch, sunk in the inside of the upper end of one of the pillars of A, and weighted in the extremity with lead or iron. X is the step of the pully end of S, and, by a small sword, goes up to W, on the near side of one of the pil-

lars of A, through which X goes, and moves on a pin, and is the step of one end of O ; and the further side of the said pillar, where the letter X stands, is the step of the pulley end of S. Now when U or D works against U or V, W is thrown from its notch, and W sinking raises X, and slackens the band on the pulley of S ; then the machine stops, and X, raising the step of S on the further side of the pillar of A, on the near side of it sinks the step of O, and the screw-pinion is thrown out of the large cog-wheel of P. Y is a small axle on steps, fastened to D, with its handle and bands going too near the extremity of Z. Z, two small rails, with catches at their extre- mities, which fall into notches in D to fasten both the shears of C together. Now when the machine stops, by the means already described, the pressure of the handle of Y raises the catches of Z, from their notches in D, and the shears of C are at liberty, and may be driven by the hand to the necessary situation for shifting the cloth, first turning H to the right, to clear them from B. The cloth being shifted, bring the said shears of C to their proper situation, and the catches of Z will fasten them ; then turn H to the left, throw- ing back its catch, and the shears of C are brought to their work ; when lift up to its notch the ex- tremity of W, and the band on S is tightened, and the machine works.

Fig. 2 is a side and the two end views of shearing the length-way of the cloth. A, the frame, with its pillars, legs, and iails. B, a cir- cular cushion, or shear-board, formed to the angle of the cropper's shears, and at each end resting on steps fixed to the top rail of A, to be moved round, as occasion shall require. C, the crop- per's shears in its harness, or working position. D, the harness, attached to both ends of the ledger blade of the shears C, as particularly de- scribed in fig. 1, under the letter D; but this mode of shearing requires that the strong pieces, attached by screws to the ends of C, should be framed together near the back of the said ledger blade, to take the weight of the ends of the shears. When the whole width of a narrow cloth is shorn, the second shear of C is placed behind

that in drawing, and has another, B, for it to work upon, and I, to be worked by. And that part of D attached to the heel of C and letter E, are lengthened as described, fig. 3, under the letter C; so in like manner the shears are situated behind each other in taking the width of a broad cloth. Here it must be noted, as in this mode of shearing the cloth having the progression, the wheels of D are omitted, and pieces of wood, half rounded, supply their place. E is a small frame in its steps, with its arms and lines. The situation of E is seen under letter D, fig. 3 ; it is attached to the heel part of the harness, as there seen by the drawing. One of the lines of E goes down to the working-rail of E, in the aforesaid, fig. 3 ; and the other line communicates with the

lever or bob of D. F, the roller, with its handle, on which the cloth to be shorn is wound. G, the small rollers, to guide the cloth to B ; the middle one which swells riding on it, lighteneth the lists of the cloth as it rides forwards : the swells are moveable, for the purpose of suiting cloths more or less longlisted. H, the rod, cranked on every side, with the pulley for the progression, and that also which carries a band to the working power situated at the upper end of K, near Q. I is the thimble fitted on the crank, with the line going up to near the extremity of the bob working C. K, and axle, with its cog-wheel arid stop, as par- ticularly described, fig. 1, under the letters H, I, K, L, and produce a like effect, and must be fixed to this figure the same as in that. L, the cheek to F, fastened by a pin at the near end, and passing under F, being hollowed to it, the further extremity (being carried under C and B) having a weight suspended on it. M, the roller, with a cog-wheel, to which the end of the cloth is attached; and, being tightened by the handle of F, the weight on L keeps it in that tight state as it is carried through the work. N, an iron axle- tree, carrying a large pulley with one groove, and a five-groove pulley with its steps, that out of sight lies under A on a cross rail. O, an iron axletree, carrying a five-groove pulley and screw pinion on steps, as in drawing. P, bands going from the small pulley of H to the large pulley of N ; and from the five-groove pulley of N to the five-groove pulley of O.

Now these five-grooved pulleys gradually de- scend in their dimensions from fourteen inches to three inches in one, and the other may be the same dimensions, or very considerably smaller ; or it may be reduced to a pulley of three inches diameter with one groove. These five-grooved pulleys stand, in respect to each other, in con- trary directions. Now when the crank by a band on the pulley on its upper extremity is set to work, the band B, from the other pulley, puts O and P in motion, and carries forward M. That M may have different speed, the band of the five- groove pulleys must be shifted for that purpose to the different grooves, which give them more or less speed. The Stop- Frame— Q, the step where rides the upper end of H, which step at one end is tenoned into the pillar of A, and pinned. R is a small sword, at the lower end tenoned into the extremity of Q, and pinned; and at the upper end is mortised, so as to admit the further end of S. S is the lever, tenoned

into the mortise of It, and pinned, and passing through a mortise in the pillar of A. Now to stop the machine, the near extremity of the

lever S must be pressed down, and that slackens the band communicating from the acting power to the pully of H. When set a-going, the said ex- tremity of S must be lifted up, and pinned there. To work this machine, put the cloth to work as directed under letter M ; then throw back the stop of G, and the shears are brought to their work ; then raise the extremity of S, and the machine works. Fig. 3 shows a second mode of shearing cloth the length way, a side and end view. A is the frame, with its pillars, legs, and side and end rails. B, the inclined planes, as fig. 1, under E, C, the shear boards, over which the cloth is stretched from H to H ; every shear has its board, and is placed by the side of each other, so as to take the width of the cloth ; and the shears, situated for the like purpose on them, the harness H, and small working frame E, fig. 2, are lengthened accordingly. D, the cropper's shears in its harness, and bob or working lever, with E, fig. 2, in its proper situations, attached by the steps to the harness of D. E, the axle, with the line communicating with the bob at one end, and at the other with one of the axle rods, by a thimble, described under F and G, fig. 1. F, the line and thimble before named.

G, is a small axle, with its lines, levers, pul- leys, &c. particularly described under letters, H, I, K, L, fig. 1. H, rollers for the cloth, and their cog-wheels and stops. I, a lever, with its catch and stop to the wheel of H, which is on the other side of the pillar of A, near the middle of it, and falls into the cog-wheel of H, which line commu- nicates with the lower end of the catches on H and L, and passes through small pulleys, fixed under the catches, on the inside of the frame A, that, by the pressure of the upper extremity of the said lever, the catches are raised out of the cogs of their wheels, to give liberty for winding the cloth when shorn on the roller of H, situated ntar to I. K, a roller to guide the cloth, when wound forwards, that it may keep its situation on the surface of C : it is placed near the axle G, on steps, in the same direction fixed to the pillars of A. L, an axle, with its handles, cog-wheel, and stop, resting on B, with its near stop. This axle has an aperture through the middle of it lengthwise, to admit the cloth through. Now when the cloth is stretched from one of the rollers of H to the other, by turning L to the right, more regular tightness is given to the cloth, and better fits it for the action of shear- ing. For effecting the progression in shearing and working the shears, M is a small sword, fitted on the handle of the projection of E at one end, and at the other on the crank handle of N. N, a crank, with its pulley with one groove, and a small five-groove pulley. Or this may be re- duced to a small one-groove pulley, of about three inches diameter. The larger one-groove pulley carries a band to the power that drives the machine. The situation of this crˆnk is nearly the same as S, fig. 1,

and produces the like effect. O is an axle, with a large five- groove pulley and screw pinion. These pulleys of N and O have their bands, and descend in

their dimensions, as particularly described under letter P, fig. 2. P, a roller, with its cog-wheel, on which the bands wind that carry forward D,

D, with all the other shears, more or less, fastened together by a rail, at their proper distances from each other (as in drawing), that each may take its proper share of cloth, being situated as described under letter C. Bands from P to D carry for- ward the shears of D. For stopping this frame, the stop part of fig. 1, under letters U, V, W, X, must be put to it, fixed to the rails and pil- lars of A. Q is a projection attached to D, and will stop this frame when the parts above di- rected are fixed to it in the manner directed, fig. 1 . R is a line attached to the shears of D, and, passing through a small pulley fixed in the back rail of A, runs through another pulley fixed in a convenient situation over the frame of this said fig. 3. and by pulling its extremity draws back the shears of D when they have cut their board of cloth. For working this machine, the cloth is wound on the upper roller of H, and round a small roller at the upper end of A, and extended down C, and under K, and to the other roller of H, where it is attached ; the stop of the upper roller falling into its wheel, the cloth is tightened by the lower roller and the handles of the roller. L, their respective catches falling into the cogs of their wheels, which keep the cloth in a tight state, then throwing back the catch of G, the shears of D are let down to their work, when, by means of R, they are brought to their proper situation on B. Then lift up the lever of the stop-frame into its notch, as directed under letter S, fig. 2, and the machine works. When the machine stops, as before di- rected, and particularly described, fig. 1, under X, to shift the cloth for cutting another length, press down the near extremity of I of this third figure, and wind the cloth that is cut on H. When, lifting up the said extremity of I, the cloth may be tightened as above described, and the shears of D shifted to continue their work.

Fig. 4, for raising a shag on cloth prepara- tory to shearing. A, the side and end rails, legs and pillars, with its teasle frames, and cotters.

B, the frames, one open and the other shut, which turn on hinges, and, when shut ready for work, are fastened by buttons screwed loosely to

C. C is a frame mortised, to fit four sides of B, when shut ; and by projections, or sides fixed to its four corners, rides in the groove of a

third frame, fixed to the rails of F. D, a third frame in the inner grooves, or two sides of it; C rides this frame, is attached to F, its projection slides through the gutters or flutes of L, when working.

E, the double crank, with its large pulley, which by a band goes to the working power. These cranks stand in contrary directions, on the same axle, that the frame may work alternately. F» working rails, fitted on the crank handles, and fastened on by screws. Thes-e rails have a working joint near the side of G, and on the further sids of G are attached, by screws, to each end of D ; and as E works the frames of D, which carry C and B, works round L, and so raise the shag. G, the pulleys, fixed in their frames, over which F rides. H, the board for raising, in its inclined posture, with the cloth passing over it from one

roller of I to the other. I, the rollers, situated oefore and behind H, and attached to the legs of A, by screws, the gudgeons rising on steps ; and at the upper end of K is a small roller, to guide the cloth round the end of H, which swells for both lists of the cloth, after ihe manner of fig. 2, under the letter G. K, the check to the fore roller I, which at one end is attached to one of the legs of A, and near that end lies over the same roller, and hollowed to fit it, and at the other end carries a weight, as in drawing. L, two pieces of plank, situated on both sides H, at the upper termination of M. The inside of the said planks are fluted or guttered to the angles of L, which stands at the foot of A. The small pro- jection at the top of L is a pattern of the slides fixed to the sides of D, which pass through the aforesaid angle when the frames are working, which raise them to and from the cloth. To effect the revolution of the slides that carry C, the top piece of L is fastened to the side of its plank, at or near the upper end, by a screw, on which it moves, and at or near the bottom end it is fastened to its plank, but with the liberty to

play.

\V hen D, by its slides, has passed through the gutter, the lower end of the top piece of L falls, and forms a bridge, to carry the slides of L to the *op of the gutter, for the making of another revolution. M are small swords, terminating in L, and fastened with pins, and passing through sockets fixed to the rail of A, and mortised at the lower extremity into N, where they move on pins. N, a strong rail, extending along the side of A, having a joint in it, and turning on pins in a mortise fixed to the pillars of A. O, an axle, with small projections at its ends, in steps, lying on the lower rail of A, extending from one side

of the machine to the other. P, small swords, one tenoned into the projection of O, and the other admitting the near extremity of N, through a mortise where it moves upon a pin. Q, an upright leg, fastened at the lower end to the axle of O, near the lower rail of A. Now by turning this leg to right or left, it moves O, and O by its projection raises and lowers the near extremity of N, and N raises and sinks L, which has a like effect on B, C, D ; so that, by these mediums, B is brought into contact with H in all necessary degrees. R is a cog-wheel ; its situation is on the further extremity of the back roller of I. S, two catches, for carrying forwards R, attached to I at one end in mortises, and moving on pins, and the other working the cogs of C. T, the working leg, fixed to the further pillar of A by a screw, as in drawing, The upper extremity of the said leg goes through a socket, fixed to the further rail of F, near the upper part of it. Now, by the vibration of this extremity of T, in its socket, by E working F, S carries round R, and by varying the pins of S nearer to, or more dis- tant from, the centre of its motion, the said R is carried forwards either faster or slower. For shifting B and C to right and left of H, for the purpose of raising more regularly U, a cog- wheel and stop of the under side, with a handle near the periphery of the said cog-wheel, to act as a crank on the top-side. F, three rails. The rail that crosses the top of H is tenoned into the VOL. VI

extremities of those that form or lie to the right and left of it. W, the steps on which V right with pins to keep the rails of V in their place. X, bands fastened at one end to C, and the other extremity passing through nuts fixed to V, where they are fastened by the end, screws working through the side of their nuts against them. Y.. two legs, fastened together at the lower end by a working joint at the upper ends. The further is attached to the near rail of F, and that nearer works upon a pin, a little short of its extremity, with a catch falling into the teeth of W ; and, as it works U round, there is another catch on the same side, which prevents the said U from working back. Now F works Y, and Y works U, and U works by its crank V, and X shifts C from right to left by turns in the degree necessary, by tightening and slacking the band X. Z is the near step of E, screwed to a short rail at one end, tenoned into the near pillar at A, near which the step of A is situated. The other ex- tremity of thesuid rail is fixed under a pin, on a short upright leg, which at the lower is screwed to the inside of the near rail of A, near which the step of A is situated. Now to set this ma- chine to work, or to stop it when working; for the latter, move the said rail from under its pin, and by raising it, the band on E slackens, and the machine stops ; and having extended the cloth from the near roller I, on which it is wound, to that behind H, and fixed the handles

in B, with its cutters, and buttoned them down, you must then bring the extremity of Z under its said pin, and the machine works.

A perpetual shearing machine is used in the west of England, and is well adapted for narrow cloths. The shears lay crossways on the piece, which is drawn beneath them regularly in th direction of its length without interruption, and hence its name.

A complete rotatory shearing mac/tine,, for cropping cloth of any breadth, was invented by Mr. Price, of Gloucestershire, in 1815, and is described with plates in the Repertory of Arts, vol. x*xxix. This machine crops the cloth across the breadth, beginning at one end of the piece and continuing regularly to the other. The cloth for this purpose, is conducted through it by the motion of rollers, and is drawn over a bed or support which lies beneath the stationary or fixed blade of the shears or, croppers (which answers to what is called the ledger-blade in the common shears), so that the cloth passes be- tween the bed and the stationary blade. The moving blades of the shears are fixed on the cir- cumference of a cylinder situated above the fixed blade, with its axis exactly parallel to it, and capable of revolving by the power of machinery, so that the edges of the moving blades will be carried against and passed over the edge of the fixed blade, in order to cut away all the wool of the cloth which rises above the edge of the fixed blade. Several such moving blades are fixed upon the same cylinder, to act in succession against the fixed blade ; and these moving blades are placed obliquely to the axis of the cylinder, or in such a manner as to form portions of spi- rals ; but, as all parts of the cutting edges are equidistant from the axis of the cylinder, it is

manifest that, in the revolution of the cylinder, every part of each spiral edge is brought in suc- cession into contact with the fixed blade, so that in its revolution it crops off all the wool, which by the progressive motion of the cloth over its bed, is raised up against the fixed edge. The edges of the moving blades are placed at such a degree of obliquity to the axis of the cylinder, that at the same instant the end of one ceases to cut against the edge of the fixed blade, the following revolving blade will begin its action at the other end of the cylinder ; therefore, by the time that any one of the rev9lving edges has passed over and made its cut against the whole length of the fixed blade, and is ready to quit it, the succeeding revolving edge is brought into action, and, when this has passed, the next in succession begins,

so as to keep up a continued action. The cloth is stretched in width by a contrivance which he calls stretching-bands, to prevent it getting into folds or wrinkles, which would be injured by the shears, or make irregu- larities in the shearing.

These stretching-bands are endless straps or bands, each of which is extended over two wheels. The bands have sharp pins projecting from them to prick into the lists at the edges of the cloth ; and the bands being so situated that one of them lies exactly beneath each list, they will be caused to circulate round their respective wheels by the motion of the cloth. The stretch- ing of the cloth is effected by the position of the wheels on which the bands circulate, the direc- tion of the bands being slightly oblique to the lengthways of the cloth. The endless straps are so fitted into grooves or troughs, that they are firmly retained to move straight forwards in their oblique direction ; and the direction of the obli- quity is such, that the bands are nearest together at that end where their pins take hold of trie lists of the cloth ; but as the bands move forwards with the cloth, they recede from each other, and extend the cloth in breadth in consequence of their obliquity, which may be increased or dimi- nished as is found necessary. The actual width between the two bands can also be regulated according to the width of the piece of cloth. It is not usual to crop the lists of the cloth, and indeed, as the lists are usually of thicker sub- stance than the other parts of the cloth, they would bear up the fixed blade too high from the cloth to cut the nap quite close.

The bed or support on which the cloth is cut is so constructed, that it can be adapted in length to the breadth of the piece of cloth between the lists, in order that the cloth only may be suppor- ted or borne up to the edge of the fixed blade ; whilst the lists, being depressed or borne down below the level of the bed, by thin slips of me- tal called guards, will escape the action of crop- ping, and thereby remain with the long wool upon their surfaces. The bed by which the cloth is borne whilst it is cut is only a narrow ridge of metal, over which it passes, so as to be bent with a sudden curvature, and in this way the nap can be cut more close and even than upon a flat bee! or soft cushion. The operation of cut- ting ;s facilitated by a row of pieces of metal

screwed to a strong bar, to form a straight edge, very similar to the cutting edge of the fixed blade, but thin and elastic. This edge is placed close to the elevated ridge of the bed, and pres- ses the cloth gently down upon the bed, imme- diately before it comes to the edge of the fixed blade, against which the nap is to be cut off; this elastic edge being placed on one side of the ridge, and the cutting edge of the lower blade on the other side, the cloth is only exposed for a very

narrow space just where it comes to the cutting edge. By this means the cloth can with safety be brought nearer to a level with the upper surface of the fixed blade, so as to shear it closer than could otherwise be done without endanger- ing the cloth. The ends of the ridge part of the bed are composed of a number of narrow plates of metal, accurately fitted together, and placed side by side in a mortise made in the end of the solid bed; their upper ends project out of the mortise so as to line with the elevated ridge, and form a continuation of it ; but there is a sliding piece in the bottom of the mortise on which they all bear, and the point of it is of a wedge form. By removing this wedge any number of the moveable pieces may be let down, so as to dimi- nish the length of the elevated part of the bed at pleasure, according to the breadth of the cloth. The whole seems well contrived to effect the desired object.

The cloth, having been shorn for the last time, is brushed over and pressed. The former ope- ration is now generally performed by two cylin- drical machine brushes, over which a system of rollers passes the piece, brushing both the sides at the same time. Pressing gives it the final smooth coat and polish : preparatory to which it is doubled and laid in even folds, a leaf or sheet of glazed pasteboard being inserted between each fold or plait of the cloth. It is then covered with thin wooden boards or fences in the press, on which are laid iron plates properly heated, and on the whole, by means of a lever turning a screw, the top of the press is brought down with the degree of force judged necessary to give the gloss. A very high finish however is found ob- jectionable, because the slightest shower of rain marks the cloth. Coarser cloths are glossed with a large hot iron in a hollow box, suspended by tackle from the ceiling, and which two men work backwards and forwards over the surface of the cloth.

By stat. 28 Geo. III. c. 38, all the former sta- tutes respecting the exportation of wool and sheep are repealed ; and an infinite variety of regula- tions and restrictions upon the subject is conso- lidated into that statute. It is given almost at length in 4 Burn's J. title Woollen Manufacturer. The prmcipal.prohihitions are, that if any person shall send or receive any sheep on board a ship or vessel, to be carried out of the kingdom, the sheep and vessel are both forfeited ; and the person so offending shall forfeit £3 for every sheep, and suffer solitary imprisonment for three months. But wether sheep, by a licence from the collector of the customs, may be taken on board for the use of the ship's company. And every person who shall export out of the kingdom any wool

or woollen articles, slightly made up, so as easily to be reduced to wool again; or any fullers' earth, or tobacco-pipe clay ; and every carrier, ship-owner, commander, mariner, or other per- son, who shall knowingly assist in exporting or in attempting to export these articles, shall for- feit 3s. for every pound weight, or the sum of £50 in the whole, at the election of the prose- cutor, and shall also suffer solitary imprisonment for three months. But wool may he carried coastwise upon being duly entered, and security being given according to the direction of the statute, to the officer of the port from whence the same shall be conveyed. And the owners of sheep, which are shorn within five miles of the sea, and ten miles in Kent and Sussex, cannot remove the wool, without giving notice to the officer of the nearest port as directed by the statute. Much contest having arisen as to the

policy, in the present time.;, of several acts here tofore made for the regulation of the woollen manufactories ; these acts were by 43 Geo. III. c. 136 (a temporary act continued by several subsequent acts), suspended with a view to the framing of a new law on the subject. At length by stat. 49 Geo. III. c. 109. several acts, and "parts of acts (nearly forty in number), on this subject from the 2 of Edw. III. to .5 Geo. II I. are repealed: and persons having served apprenticeship to any branch of the woollen manufactories, and their wires and families, are allowed to set up and exercise that trade, or any other, in any part of Great Britain, notwithstanding the restrictions in stat. 5 Eliz. c. 4. There are other miscellane- ous woollen goods of considerable importance ; and we propose, in a history of the WOOLLEN MANUFACTURE of Great Britain, to give a sum- mary of those of each of its branches.

CLOTH, INCOMBUSTIBLE. See ASBESTOS.

CLOTH, LINEN. See LINEN.

CLOTHO, from K\w0«v, to spin, the first of the three Parcse, or Fates, daughter of Jupiter and Themis. She was supposed to preside over the time of birth. She held the distaff in her hand and spun the thread of life. She was represented wearing a crown with seven stars, and covered with a variegated robe.

CLOTPOLL, n. s. from clot and poll. Thick- scull ; blockhead.

What says the fellow, there ? call the clotpoll back.

Shakspeare. Head, in scorn.

I have sent Cloten's clotpoll down the stream, In embassy to his mother. Shakspeare. Cymbeline.

CLOUD,n.s.,«.a.&u.w.A The derivation is CLO'UDILY, adv. I not known. Min-,

CLO'UDINESS, n. s. \ shew derives it from

CLO'UDLESS, adj. I daudo to shut ;

CLO'UDY, adj. J Somner from clod;

Casaubon from ay\ve, darkness ; Skinner from kladde, Dutch, a spot. The embodied vapors of the atmosphere ; obscurity ; a stain ; a multitude of people ; an host; Goth, lyd ; Sax. leod; Teut. Hut ; Sax. ploth ; a crowd, a troop ; any- thing that spreads, variegates, obscures ; fills the air with gloom, the mind with confusion, the heart with sadness. It sometimes is applied to a den in the mountains ; a rock, a cliff. Goth. klett ; Sax. dud, pleoih, plith.

The ' derknesse of deth,' ben the sinnes that the wretched man hath don, which that distroublen him to see the face of God ; right as a derke cloud, be- twene us and the sonne. Chaucer. The Periones Tale.

O stere of steres, with thy stremes clere, Stere of the se, to shippinan light and gide !

O lustie, livin", moste pleseaunt to appere, Whose bright-bemes the cloudes maie not hide ! 0 Waie of life to hem that go or ride ; Haven after tempest, surest up to rive On me have mercie for thy joyes five. Id.

Their captaine there they cruelly found kild, And in his armes the dreary dying mayd,

Like a sweet angell twixt two clouas uphild, Her lovely light was dimmed and decayed With cloud of death upon her eyes displayed ; Yet did the cloud make even that dimmed light Seeme much more lovely in that darknesse laid, And twixt the twinckling of her eye-lids bright, To sparke out little beames, like starres in foggie night. Id.

Some had rather have good discipline delivered plainly, by way of precepts, than cloudily enwrapped in allegories. Id.

So my storm-beaten heart likewise is cheered With that sun-shine, when cloudy looks are cleared.

Spenser.

Witness my son, now in the shade of death, Whose bright outshining beams thy cloudy wrath Hath in eternal darkness folded up. Shakspeare.

Now are the clouds, that lowered upon our house, In the deep bosom of the ocean buried.

Id. Richard III.

You have such a February face. So full of frost, of storm, and cloudiness. Id.

For shedding round about his sparkling light, He clears their dusky shades, and cloudy night, Producing like himself their shapes all shining bright. Fletcher's Purple Island.

Be not disheartened then, nor cloud those looks, That wont to be more cheerful and serene. Milton.

Tho' poets may of inspiration boast, Their rage, ill governed, in the clouds is lost. Waller.

Clouds are the greatest and most considerable of all the meteors, as furnishing water and plenty to the earth. They consist of very small drops of water, and are elevated a good distance above tae surface of the earth ; for a cloud is nothing but a mist flying high in the air, as a mist is nothing but a cloud here below. Locke.

As a mist is a multitude of small but solid glo- bules, which therefore descend ; so a vapour, and therefore a watery cloud, is nothing else but a con- geries of very small and concave globules, which therefore ascend to that height in which they are of equal weight with the air, where they remain sus- pended, till, by some motion in the air, being broken, they descend in solid drops ; either small, as in a mist ; or bigger, when many of them run together, as in rain. Grew's Cosmologia.

CLOUDS.

I saw a cloudy Hungarian diamond made clearer by lying in a cold

liquor ; wherein, he affirmed, that upon keeping it longer, the stone would lose more of its cloudiness. B˚yle-

If men would not exhale vapours to cloud and darken the clearest truths, no man could miss his way to heaven for want of light. Decay of Piety.

How can I see the brave and young

Fall in the cloud of war, and fall unsung ? Addison.

The objection comes to no more than this, that,

amongst a cloud of witnesses, there was one of no very

good reputation. Atterbury.

This Partridge soon shall view in cloudless skies, When next he looks thro' Galilaeo's eyes. Pope.

The handle smooth and plain, Made of the clouded olive's easy grain. Id.

The purple clouds their amber linings show, And edged with flame rolls every wave below. day. If you content yourself frequently with words in- stead of ideas, or with cloudy and confused notions of things, how impenetrable will that darkness be !

Watts on the Mind. Now beamed the evening star, And from embattled clouds emerging slow, Cynthia came riding on her silver car, And hoary mountain cliffs shone faintly from afar.

Beattie.

The gusts of appetite, the clouds of care, The storms of disappointments all o'ercast,

Henceforth no earthly hope with Heaven shall

share This heart, where peace serenely shines at last. Id,

Lone as a solitary cloud, A single cloud on a sunny day, While all the rest of heaven is clear, A frown upon the atmosphere, That hath no business to appear When skies '.re blue, and earth is gay.

Byron. Prisoner of Chillon.

CLOUDS. That clouds are formed from the aqueous vapors, which before were so closely united with the atmosphere as to be invisible, is universally allowed : but it is no easy matter to account for the long continuance of some very opaque clouds without dissolving ; or to give a reason why the vapors, when they have once be- gun to condense, do not continue to do so till they at last fall to the ground in the form of rain or snow, &c. A general cause of the formation of clouds has been often suggested ; namely, a separation of the latent heat from the water of which the vapor is composed. The consequence of this separation, as is proved by Dr. Black, must be the condensation of that vapor, in some degree at least. In such case, it will first appear as a smoke, mist, or fog ; which, if interposed betwixt the sun and earth, will form a cloud ; and, the same causes continuing to act, the cloud will produce rain or snow. But though the sepa- ration of this latent heat, in a certain degre.?, is the immediate cause of the formation of clouds, the remote cause, or the changes produced in the atmosphere, whereby such a preparation may be induced, are much more difficult to be dis- covered. Common observation shows that vapor is most powerfully condensed by cold substances, such as metals, water, &c. But cold alone can- not in all cases cause the condensation of the at- mospherical vapors, otherwise the nights would b»> always foggy or cloudy, owing to the vapors

of the day being condensed by the superior cold- ness of the night. Great rains will happen in very warm weather, when the union of the va- pors with the atmosphere ought rather to be pro- moted than dissolved, if cold was the only agent in their condensation. The serenity of the at- mosphere, also, in the most severe frosts, abun- dantly shows that some other cause besides mere heat or cold is concerned in the formation of clouds, and condensation of the atmospherical vapors.

The electric fluid is now generally admitted as one agent in all these great operations of nature. It has been even assigned by Beccaria as the cause of the formation of all clouds whatsoever, whether of thunder, rain, hail, or snow. But though it is certain that all clouds, or even fogs and rain, are electrified in some degree, it still remains a question, whether any clouds are formed in consequence of the vapor of which they are composed being first electrified, or whether they become electrified in consequence of its being first separated from the atmosphere, and in some measure condensed. Electricity is known to be in many cases a promoter of evapo- ration ; but no experiments have yet been brought to prove that electrified air parts with its mois- ture more readily than such as is not electrified ; so that, till the properties of electrified air are farther investigated, it is difficult to lay

down any rational theory of the formation of clouds upon this principle. Instances of the descent of very highly electrified clouds have not been uncom- mon. Brydone, in his Tour through Malta, mentions a remarkable one which appeared on the 29th of October, 1757. About three quarters of an hour after midnight, there was seen to the south-west of the city of Melita, a great black cloud, which, as it approached, changed its color, till at last it became like a flame of fire mixed with black smoke. A dreadful noise was heard on its approach, which alarmed the whole city. It passed over the port, and came first on an English ship, which in an instant was torn in pieces, and nothing left but the hulk ; part of the masts, sails, and cordage, were carried to a con- siderable distance along with the cloud. The small boats and felloques that fell in its way were all broken to pieces and sunk. The noise increased and became more frightful. A sentinel, terrified at its approach, ran into his box ; but both he and it were lifted up and carried into the sea, where he perished. It then traversed a con- siderable part of the city, and laid in ruins almost every thing that stood in its way. Several houses were laid level with the ground, and it did not leave one steeple in its passage. The bells of some of them, together with the spires, were carried to a considerable distance ; the roofs of the churches demolished and beat down, &c. It went off at the north-east point of the city, and, demolishing the light-house, is said to have mounted up into the air with a frightful noise ; and passed over the sea to Sicily, where it tore up some trees, and did other damage ; but nothing considerable, as its fury had been mostly spent at Malta. The number of killed and wounded amounted to nearly 200 ; and the loss of shipping, &c., was very considerable.

The effects of thunder-storms, and the vast quantity of electricity collected in the clouds which produce these storms, are so well known, that it is superfluous to mention them. It ap- pears, however, that even these clouds are not so highly electrified as to produce their fatal effects on those who are immersed in them. It is only the discharge of part of their electricity upon such bodies as are either not electrified at all, or not so highly electrified as the cloud that pro- duces the mischief. Professor Saussure, and young Mr. Jalabert, when travelling over one of the high Alps, supply a singular instance of being caught among clouds of this kind ; to their astonishment they found their bodies so full of electrical fire, that spontaneous flashes darted from their fingers with a crackling noise, and they had the same kind of sensation as when strongly electrified by art. See

The height of clouds in general is not great ; the summits of very high mountains being com- monly quite free from them. But those which are most electrified descend lowest, their height being often not above 700 or 800 yards above the ground ; nay, sometimes thunder clouds ap- pear actually to touch the ground with one of their edges. But the generality of clouds are suspended at the height of a mile, or little more, above the earth. Some, however, have imagined them to arise to a most incredible and extravagant height.

The motions of the clouds are not always di- rected by the wind ; they seem to mov» very slowly when we have considerable gales, and often to be absolutely stationary for a time. The reason of this probably is, that they are impelled by opposite streams of air of equal strength ; by which means their velocity is retarded. In such cases both the aerial currents seem to ascend to a very considerable height ; for Messrs. Charles and Roberts, when endeavouring to avoid a thunder cloud in one of their aerial voyages, could find no alteration in the course of the cur- rent, though they ascended to the height of 4000 feet from the surface of the earth. In some cases the motions of the clouds evidently depend on their electricity, independent of any current of air. Professor Leslie, in his very able article on Meteorology, in the Supplement to the Encyclo- paedia Britannica, contends that Dr. James Hut- ton first suggested the true theory of clouds, in his paper upon the subject of Rain, in the Trans- actions of the Edinburgh Royal Society, 1787. He thus endeavours to define and complete it : —

‘ Air, in cooling, becomes ready to part with its moisture. But how is it cooled in the free atmosphere, unless by the contact or commixture of a colder portion of the same fluid ? Now, the portion of the air which is chilled, must in an equal degree warm the other. If, in consequence of this mutual change of condition, the former be disposed to resign its moisture, the latter is more inclined to retain it ; and, consequently, if such opposite effects were balanced, there could, on the whole, be no precipitation of humidity what- ever. The separation of moisture, on the mixing of two masses of damp air at different tempera- tures, would therefore prove, that the dissolving power of air suffers more diminution from losing

part of the combined heat, than it acquires aug- mentation from gaining an equal measure of if, and, consequently, this power must, under equal accessions of heat, increase more slowly at first than it does afterwards, thus advancing always with accumulated celerity.

‘ The quantity of moisture which air can hold thus increases in a much faster ratio than its temperature. This great principle in the economy of nature was traced by Dr. Hutton from indi- rect experience. It is the simplest of the ac- celerating kind, and perfectly agrees with the law of solution, which the hygrometer lias estab- lished. Suppose equal bulks of air in a state of saturation, and at the different temperatures of 15 and 45 centesimal degrees, were intermixed, the compound arising from such union will evi- dently have the mean temperature of 30°. But since, at these temperatures, the one portion held 200 parts of humidity, and the other 800, the aggregate must contain 1000 parts, or either half of it 500 ; at tire mean or resulting temperature, however, this portion could only suspend 400 parts of humidity, and consequently, the differ- ence, or 100 parts, amounting to the 200dth part of the whole weight of air, must be precipi- tated from the compound mass. As another il- lustration, let air of 15° be mixed with air at the temperature of 35°, in three different proportions, all at the point of saturation ; one part being combined with three parts, two with two, and three with one. The temperatures arising from the commixture would be 20°, 25°, and 30° ; the corresponding parts of moisture precipitated from the mass being derived from the intermediate proportions of 200 and 504, are 352 — 317‘5, or 34-5, 276—252 or 24, 352— 31 7′ 5 or 34-5, and 428—400 or 28.

‘ In these examples we have assumed the por- tions of differently heated air to be quite charged with moisture before mixing ; but it is only re- quired that they should approach to the point of humidity. The effect, however, of simple com- mixture would, in most cases, be very small. To explain the actual phenomena, we must have re- course to the mutual operation of a chill and of a warm current, driving swiftly in opposite di- rections, and continually mixing and changing their conterminous surfaces. By this rapidity, a larger volume of the fluid is brought into con- tact in a given time. Suppose, for instance, the one current to have a temperature of 50°, and the other that of 70°, by Fahrenheit’s scale ; the blending surfaces will therefore assume the mean temperature of 60°. Consequently, the two streams throw together 200 and 234-2 parts of moisture, making 567-1 parts for the compound, which, at its actual temperature, can hold only 258‘6 parts; the difference, or 8‘6 parts, forms the measure of precipitation, corresponding to the 2325th of the whole weight of the commixed air. It would thus require a column of air thirty miles in length to furnish, over a given spot, and in the space of an hour, a deposit of moisture equal to the height of an inch. If the sum of the opposite velocities amounted to sixty miles an hour, and the intermingling influence extended but to a quarter of an inch at the graz- ing surfaces, there

would still, on this supposition,

be produced in the same time a fall of rain reach- ing to half an inch in altitude.

‘These quantities come within the limits of probability, and agree sufficiently with experience and observation. But in the higher temperatures, though the difference of the heat between the op- posite strata of air should remain the same, the measure of aqueous precipitation is greatly in- creased. Thus, while the mixing of equal masses of air, at the temperatures of 40° and 60 ‘, is only 6-6, that from a like mixture at 80° and 100° amounts to 19°. This result is entirely conform- able to observation ; for showers are most copious during hot weather, and in the tropical climates. The quantity of moisture precipitated from the atmosphere thus depends on a variety of circum- stances : on the previous dampness of the com- mixed portions of the fluid ; their difference of heat ; the elevation of their mean temperature ; and the extent of the combination which takes place. When this deposition is slow, the very minute ‘aqueous globules remain suspended, and form clouds ; but if it be rapid and copious, those particles conglomerate, and produce, ac- cording to the state of the medium with regard to heat, rain, hail, or snow.’

But Mr. Luke Howard of London has fur- nished the most complete classification and ex- position of these phenomena, in his Nomenclature and Observations on Clouds, published in the 16th and 17th vols. Philosophical Magazine.

The simple modifications are thus defined : 1. Cirrus. Parallel, flexuous, or diverging fibres, extensible in any or in all directions. 2. Cumu- lus. Convex or conical heaps, increasing upwards from a horizontal base. 3. Stratus. A widely extended, continuous, horizontal sheet, increasing from below. See Plate of CLOUDS.

The intermediate modifications which require to be noticed are, 4. Cirro-cumulus. Small well- defined roundish masses, in close horizontal ar- rangement. 5. Cirro-stratus. Horizontal, or slightly inclined masses, attenuated towards a part or the whole of their circumference, bent down- ward or undulated, separate or in groups, con- sisting of small clouds having these characters.

The compound modifications are, 6. Cumulo- stratus. The cirro-

stratus, blended with the cumulus, and either appearing intermixed with the heaps of the latter, or superadding a wide- spread structure to its base.

7. Cumulo-cirro-stratus, uel nimbus, is the rain cloud. A cloud or system of clouds from which rain is falling. It is a horizontal sheet, above which the cirrus spreads, while the cumu- lus enters it laterally and from beneath.

The cirrus appears, according to this author, to have the least density, the greatest elevation, the greatest variety of extent and direction, and to appear earliest in serene weather, being indicated by a few threads pencilled on the sky. Before storms they appear lower and denser, and usually in the quarter opposite to that from which the storm arises. Steady high winds are also pre- ceded and attended by cirrus streaks, running quite across the sky in the direction they blow in

The cumulus has the densest structure, is formed in the lower atmosphere, and moves

along wit!) the current next the earth. A small irregular spot first appears, and is, as it were, the nucleus on which they increase. The lower surface continues irregularly plane, while the upper rises into conical or hemispherical heaps ; which may afterwards continue long nearly of the same bulk, or rapidly rise into mountains. They will begin, in fair weather, to form some hours after sunrise, arrive at their maximum in the hottest part of the afternoon, then go on diminishing and totally disperse about sunset. Previous to rain, the cumulus increases rapidly, appears lower in the atmosphere, and with its surface full of loose fleeces or protuberances. The formation of large cumuli to leeward in a strong wind, indicates the approach of a calm with rain. When they do not disappear or sub- side about sunset, but continue to rise, thunder is to be expected irt the night. The stratus has a mean degree of density, and is the lowest of clouds, its inferior surface commonly resting on the earth or water. This is properly the cloud of night appearing about sunset. It com- prehends all those creeping mists, which in calm weather ascend in spreading sheets, like an inun- dation of water, from the bottom of valleys, and the surfaces of lakes and rivers. On the return of the sun, the level surface of this cloud begins to put on the appearance of cumulus, the whole at the same time separating from the ground. The continuity is next destroyed, and the cloud ascends and evaporates, or passes off with the appearance of the nascent cumulus. This has long beerr experienced as a prognostic of fair weather. The cirrus having continued for some time increasing or stationary, usually passes either

tc tHe cirro-cumulus or the cirro-stratus, at the same time descending to a lower station in the at- mosphere. This modification forms a very beautiful sky ; is frequent in summer, an atten- dant on warm and dry weather. The cirro-stra- tus, when seen in the distance, frequently gives t'he idea of shoals of fish. It precedes wind and rain ; is seen in the intervals of storms ; and sometimes alternates with the cirro-cumulus in the same cloud, when the different evolutions form a curious spectacle. A judgment may be formed of the weather likely to ensue by obser- ving which modification prevails at last. The solar and lunar haloes, as well as the parhelion and paraselene (mock sun and mock moon), prognostics of foul weather, are occasioned by this cloud. The cumulo-stratus precedes, and the nimbus accompanies rain. Mr. Howard gives a view of the origin of clouds, which will be found worth consulting. The uses of the clouds are obvious ; from them proceeds the rain which re- freshes the earth, without which according to the present system of nature, the whole of its surface would be a mere desert. They are likewise of great use as a screen, interposed between the earth and the scorching rays of the sun, which are often so powerful as to destroy the grass and other tender vegetables. In the more secret operations of nature also, where the electrical fluid is concerned, the clouds bear a principal share ; and serve as a medium for conveying that fluid from the atmosphere into the earth, and from the earth into the Atmosphere.

CJLOUJDS

IXirms or Curlcl

n/ JTtamas Z~rtra.

CLOUD (St.), a town and palace of France, in the province of the Isle of France, situated on the Siene. The palace, though not the largest, is one of the most pleasantly situated, and beau- tiful, of any in the neighbourhood of Paris. It contains several beautiful specitnens of the fine arts, has a park, gardens, and cascades. The great cascade is 108 feet in width, and the same in height. The terrace affords an extensive view of Paris. Henry III. was assassinated here in 1580* and here Napoleon principally resided. It has a fine manufacture of porcelain ; five miles west of Paris.

CLO'UDBERRY, n.s. from cloud and berry, ckamamorm. The name of a plant, called also knotberry.

CLO'UDCAPT, adj. from cloud and cap. Topped with clouds, ; touching the clouds.

The cloudcapt towers, the gorgeous palaces, The solemn temples, the great globe itself, Yea, all which it inherits, shall dissolve. Shakspeare,

CLOUDCOMPE'LLING, adj. A word form- ed in imitation of v£0£ \»jyEp£rjjc, ill understood. An epithet of Jupiter, by whom clouds were sup- posed to be collected.

Health to both kings, attended with a roar Of cannons, echo'd from the affrighted shore ; With loud resemblance of his thunder prove Bacchus the seed of doudccmpelling Jove. Waller.

Supplicating move Thy just complaint to daudcompelling Jove. Dryden.

CLOVE, n. s. the preterite of cleave. See To CLEAVE.

Gyon's angry blade so fierce did play

On the' other's helmet, which as Titan shone,

That quite it clove his plumed crest in tway.

Faerie Queene.

CLOVE, ra. s. Fr. clou, a nail, from the simili- tude of a clove to a nail. A valuable spice brought from Ternate in the East Indies. It is the fruit or seed of a very large tree.

Clove seems to oe the rudiment or beginning of a fruit growing upon clove-trees.

Browne's Vulgar Errours.

CLOVE BARK {Cortex lauri culilawan) is fur- nished by a tree of the Molucca Islands. It is procured in pieces, flat, thick, fibrous, covered with a white epidermis of a reddish yellow inside, of a nutmeg and clove odour, and pos- sessing an aromatic and sharp taste. It is a substitute for cinnamon.

CLOVE-TREE. See CARYOPHYLLUS.

CLO' VEN, part. pret. from cleave. See To CLEAVE.

There is Aufidius, list you what work he makes Among your cloven army. Shakspeare.

Now heaped high The cloven oaks and lofty pines do lie. Waller.

A chap-fallen beaver, loosely hanging by The cloven helm, and arch of victory. Dryden.

CLO'VEN-FOOTED, adj.) 'Cloven and foot, or CDO'VEN-HOOFED. $ hoof. Having the foot

divided into two parts : not a round hoof; bisul-

cous.

There are the bisulcous or cloven-hoofed ; as camels and beavers. Browne's Vulgar Errours.

The cloven-footed fiend is banished from us.

Dryden.

Great variety of water fowl, both whole and cloven' footed, frequent the waters. Ray on the Creation.

Whether the serpent at the fall Had cloven feet, or none at all. Hudibras.

And for his aspect, look upon the fountain And then on me, and judge which of us twain Look likest what the boors believe to be Their cloven-footed terror.

Byron. Deformed Transformed. CLO’VER, n.s. ˆ Dutch kliver ; Sax. CLO’VER-GRASS, n. s. \ cLtfer ; from its cleft CLO’VERED, adj. j leaves, a species of tre- foil ; a rich provision for cattle ; and so great a luxury, that when an individual has all the comforts of life in abundance, he is said to live in clover.

The even mead, that erst brought sweetly forth The freckled cowslip, burnet, and green clover.

Shakspeare. Nature shall provide Green grass and fattening clover for their fare.

Dryden.

Clover improves land, by the great quantity of cattle it maintains. Mortimer’s Husbandry.

My Blouzelinda is the blithest lass, Than primrose sweeter, or the clover grass. Gay.

Flocks thick nibbling thro’ the clovered vale.

Thornton.

Well, Laureat, was the night in clover spent. Ogle. CLOVER, in botany. See TRIFOLIUM, and AGRICULTURE.

CLOUGH, n. s. Sax. dough. The cleft of a hill ; a vale between cliffs.

CL«IUGH, n. s. in commerce, an allowance of two pounds in every hundred weight for tlve turn of the scale, that the commodity may hold out weight when sold by retail.

CLOVIO (George Julius), a celebrated histo- rical and portrait painter, was born at Sclavonia in 1498. At eighteen years of age he went to Rome, where he spent three years, devoting him- self entirely to painting in miniature. His know- ledge of coloring was established by the instruc- tions of Julius Romano, and his taste of compo- sition and design was founded on the works of Michael Angelo. He thus acquired so great a degree of excellence in portrait, as well as in historical painting, that in the former he was considered equal to Titian, and in the latter not inferior to Buonaroti. He died in 1578. His works are

exceedingly valuable, and are still numbered among the curiosities of Rome.

CLO VIS I. the real founder of the French monarchy, was born in 467, and succeeded his father Childeric in 481. His first exploit was the defeat of Syagrius, the Roman governor of Gaul, after which he took Soissons, and made it his capital. His wife Clotilda prepared him for the reception of Christianity, which, however, he did not embrace till after a victory obtained over the Germans, which he attributed to the effect of his prayer to the God of the Christians before the battle. He was soon after publicly baptised with 3000 of his subjects, by St. Reni, archbi- shop of Rheims, and his fitness for the ceremony may be judged of from his declaration on hear- ing of the sufferings of Christ. ‘ Had I been there,’ said he, ‘ with my valiant Goths, how I would have avenged him!’ He was a warlike prince, and conquered the several provinces of

CLO 06

Gaul, possessed before his time by the Romans, Germans, and Goths. These he united to the then scanty dominions of France, removed the seat of government from Soissons to Paris, and made this the capital of his new kingdom. Un- der the pretext of zeal for the conversion of the Visigoths in Gaul, he invaded their territory, and killed Alaric their prince with his own hand. The Visigoths were afterwards assisted by Theo- doric, king of Italy, and Clovis was obliged to retreat with great loss, from the siege of Aries. These tribes were finally allowed by treaty to re- tain the country of Septi mania, comprising the sea-coast from the Rhone to the Pyrenees, while the country thence to the Loire was given up to Clovis. He was soon honored by the emperor Anastasius with the Roman titles of patrician, consul, and Augustus. In his advanced age, he founded several churches and monasteries, in expiation of his sins, and was very zealous for the Catholic faith. After being acknowledged king of all the Franks in Gaul, he died at Paris in 511, in the forty-fifth year of his age, after a reign of thirty years. He left four sons, for whom he founded four kingdoms. See FRANCE, HISTORY OF.

CLOUT, n. s. & t>. a.) Sax. clut ; Swed.

CLO’UTED, part. adj. > klut. A fragment or

CLO’UTERLV, adj. j small piece of cloth; a patch ; a mean fellow ; a clown ; a boobv : a cuff; a blow with the hand. To clout is to patch, to mend coarsely ; to cover with a cloth ; to join ‘awkwardly, or coarsely

together. Clouted is sometimes corruptly used for clotted. Clouterlyis louterly, that is clumsy, awkward. Anciently the mark of white cloth, at which archers shot was called a clout.

And when she of this bill hath taken hede, She sent it all to cloutes. Chaucer. Canterbury Tales.

Many sentences of one meaning clouted up together.

Ascham.

His garment nought but many ragged clouts, With thorns together pinned, and patched was.

Spenser.

A clout upon that head, Where late the diadem stood. Shakspeare.

Milk some unhappy ewe, Whose clouted leg her hurt doth shew. Sjienser.

He drew a good bow ; he shot a fine shoot ; he would have clapt in the clout at twelve score.

Shakspeare.

I thought he slept and put

My clouted brogues from off my feet, whose rudeness Answered my steps too loud. Id.

His clothes all patched with more than honest thrift, And clouted shoes were nailed for fear of wasting :

Fasting he praised, but sparing was his drift, And, when he eats, his food is worse than fasting.

Fletcher’s Purple Island. The dull swain

Treads on it daily with his clouted shoon. Milton.

The single wheel plough is a very clouterly sort.

Mortimer’s Husandry.

I’ve seen her skim the clouted cream, And press from spongy curds the milky stream. Gay.

CLOWES (William), an eminent surgeon in the English navy, in the reign of queen Eliza- beth, settled about 1573 in London, and beca:ne surgeon to Christ's and St. Bartholomew's Hos-

pitals. He went to the Netherlands in 1586, to superintend the care of the wounded in the army of the earl of Leicester. He died some time before 1631 ; and was the author of treatises On Syphilis, and On the Cure of Wounds.

CLOWN, n. s. ~\ From Lat. colonus,

CLOW'NERY, n. s. I according to Junius ; or

CLOW'NISH, adj. V/oore,a hired servant; a

CLOW'MSHLY, adv. i peasant ; an ill bred

CLOW'NISHNESS, n.s.J man; the cognomen for all that is churlish, rude, uncivil, and brutal.

He came with all his clowns, horsed upon cart-jades.

Sidney.

But with his clownish hands their tender wings He brusheth oft. Spenser's Faerie tyueene.

What if we essayed to steal The clownish fool out of your father's court ?

Shakspeare.

Height with a certain grace does bend, But low things downishly ascend. Marvell.

The fool's conceit had both clownery and ill-nature.

L' Estrange.

The clowns, a boisterous, rude, ungoverned crew, With furious haste to the loud summons flew.

Dryden.

Young Silvia beats her breast, and cries aloud, For succour from the

clownish neighbourhood. Id.

Even his Doric dialect has an incomparable sweet- ness in his clownishness. Id.

If the boy should not make legs very gracefully, a dancing master will cure that defect, and wipe off that plainness which the a-la-mode people call cluwnishness.

Locke.

With a grave look, in this odd equipage, The clownish mimick traverses the stage. Prior.

In youth a coxcomb, and in age a clown. Spectator.

A country squire, represented with no other vice but that of being a clown, and having the provincial accent. Swift.

Touched by thy rod, from Power's majestic brow, Drops the gay plume, he pines a lowly clown,

And on the cold earth stretched the son of Woe, Quaffs Pleasure's draughts, and wears a fancied crown.

Beattie.

CLOWN'S MUSTARD, n. s. An herb.

CLOY, v. a. 1 Fr. clouer., from clou;

CLOY'LESS, adj. / Lat. clavis. To stop up, to

CLOY'MENT, n. s. 5 fill at once, to spike guns, to drive a nail into lhe touch hole. Cloyment is repletion; cloyless is that of which too much cannot be had ; that which cannot cause satiety.

The length of those speeches had not cloyed Py- rocles, though he were very impatient of long delibe- rations. Sidney.

The very creed of Athanasius, and that sacred hymn of glory, are reckoned as superfluities, which we must in any case pare away, lest we cloy God with too much service. Hooker.

Who can cloy the hungry edge of appetite By bare imagination of a feast ? Shakspeare.

Alas ! their love may be called appetite : No motion of the liver, but the palate, That suffers surfeit, cloyment, and revolt. Id.

Epicurean cooks Sharpen with cloyless sauce his appetite. Id.

Wealth which all other's avarice might cloy ; But yet in them caused as much fear as joy. Marvell.

Settle, cloyed with custard and with praise, Is gathered to the dull of ancient days. Pvjn'.

He envied not, he never thought of kings, Nor from those appetites sustained annoy, That chance may frustrate, or indulgence cloy.

Beattie.

CLOYNE, a town of Ireland, in Cork, Mun- ster, one mile from the sea-coast. A church was built in it, and a bishopric erected by St. Colman, in the end of the sixteenth century ; and in 707 an abbey was founded. In 1430 the bishopric was united to that of Cork ; and the union continued till the llth of November 1638; since •which time this see has been governed by its own prelates. The cathedral is a decent Gothic building. Cloyne lies ten miles west of Youg- hall, and 125 south-west of Dublin.

CLUB. n. s. ˆ Swed. klubba ; Dan.

CLUB-HEADED, adj. \klub; Teut. klopfe ; Wei.

CLUB-LAW, n.s. jclwppa; Lat. clava. A heavy stick, a mace, a staff intended for offence. Club-headed is a thick, clumsy, oaken sort of head, like the ponderous end of a club. Club-law is the law of force, a suit of cards marked with a club, or rather with a clover leaf, bears this name. Whan I bete my knaves,

She bringeth me the great clolbed staves,

And crieth ; slee the dogges everich on,

And brek hem both bak and evey bon.

Chaucer's Canterbury Tales.

Next Hercules his like ensample shewed, Who all the west with equal conquest wonne,

And monstrous tyrants with his club subdewed, The dub of justice dread, with kingly power endewed.

Spenier ,

He strove his combred club to quit Out of the earth. Id. Faerie Queene.

They are in the very wrath of love, and they will together, clubs cannot par' them. Shakapeure.

As he pulled off his helmet, a butcher slew him with the stroke of a club. Hayward.

Small club-headed anterinae. Derham.

Armed with a knotty club another came. Dryden.

The enemies of our happy establishment seem to have recourse to the laudable method of clublaw, when they find all other means for enforcing the ab- surdity of their own opinions to be ineffectual.

, Addistm's Freeholder.

The clubs black tyrant first her victim died, Spite of his haughty mein and barbarous pride.

Pope.

CLUB,n. s.,v.n.&v.a. > Goth. Muff; Swed.

CLUB'ROOM, n. s. \klubb; Belgic kloof; Teut. klub ; Teut. clurben, kloeben. A portion or apportioning, a division, a society paying equally. An assembly, meeting under certain conditions ; a voluntary association generally for purposes of conviviality ; sometimes for mutual benefit, by contributing each to the common stock ; concurrence, contribution, joint charge ; to contribute separate powers to one end ; to pay to a common reckoning. Club-room needs no explanation.

A fuddling couple sold ale : their humour was to drink drunk, upon their own liquor : they laid down their club, and this they called forcing a trade.

L'Estrange.

What right has any man to meet in factious clubs to vilify the government. Dryden. Medul. Ded.

Till grosser atoms, tumbling in the stream Of fancy, madly met, and clubbed into a dream.

Dryden.

CLU

He’s bound to vouch them for his own,

Though’ got by’ iraplicite generation,

And general club of all the nation. Hudibras

The owl, the raven, and the bat,

Clubbed for a feather to his hat. Swift.

I shall reserve for another time the history of such club or clubs, of which I am now a talkative, but un- worthy member. Spectator.

These ladies resolved to give the pictures of their deceased husbands to the club-room.

Addison’s Spectator.

Plumbs and directors, Shylock and his wife, Will club their testers now to take your life. Pope.

CLUCK, v. n. .Welsh, cloccian ; Armorick, clochat; Sax. cloccan; Dutch, klocken. To call chickens, as a hen.

She, poor hen, fond of no second brood, Has clucked thee to the wars. Shakspeare’s Coriolanus.

Ducklings, though hatched by a hen, if she brings them to a river, in they go, though the hen cluck* and calls to keep them out. Ray on the Creation.

CLUE, the lower corner of a sail.

CLUE GARNETS, a sort of tackles fastened to the clues, or lower corners of the main sail or fore sail, to truss them up to the yard, which is usually termed cluing up the sails.

CLUE LINES are for the same purpose as clue garnets, only that the latter are confined to the courses, whereas the former are common to all the square sails.

CLUMP, n. s. formed from lump, a shapeless piece ofwood or other matter, nearly equal in its dimensions. A cluster of trees ; a tuft of trees or shrubs : anciently a plump.

CLUMPS, n.s. a numskull.

CLU'MSY, adj. ˆ This word omitted

CLU'MSILY, adv. Sin the other etymolo-

CLU'MSINESS, n. s. j gists, is rightly derived by Bailey from Dutch, lompsch, stupid. In English, lump, clump, lumpish, clumpish,clump-ishly, clumsily, clumsy. Awkward ; heavy ; artless; unhandy; without dexterity, readiness, or grace. It is used either of persons, Or actions, or things.

This lofty humour is clumsily and inartificially ma- naged, when affected. Collier on Pride.

The drudging part of life is chiefly owing to clum- siness and ignorance, which either wants proper tools, or skill to use them. Id. on Fame.

The matter ductile and sequacious, apt to be moulded into such shapes and machines, even by clumsy fingers. Ray.

He walks very clumsily and ridiculously.

Id. on the Creation.

But thou in clumsy verse, unlicked, unpointed, Hast shamefully defy'd. Dryden.

That clumsy outside of a porter,

How could it thus conceal a courtier ? Swift.

CLUNG. The preterite and participle of cling.

CLUNG, adj. Sax. clunju, wasted with lean- ness ; shrunk up with cold.

CLUNG, v. n. Sax. clunjan, to dry as wood does, when it is laid up after it is cut. See To CLING.

CLUNIA, in ancient geography, a principal town of Hither Spain, a Roman colony, with a conventus juridicus, on the Durius, to the west of Numantia, now called Corunnadel Conde.

CLUNIE, a beautiful lake in Perthshire, with an island in the centre, in which stands an an- cient castle, built about A.D. 1500, by George, bishop of Dunkeld, and now a summer residence of the family of Airly. Its walls are nine feet thick at the surface of the ground.

CLUN Y, a town of France, in the department of Saone and Loire, and ci-devant province of Maconuois, seated on the Grone. Before the revolution, it was famous for its Benedictine ab- bey, founded by William duke of Berry and Aquitain ; or, as others say, by the abbot Bern, supported by that duke, A.D. 910. This abbey was so very spacious and magnificent, that in 1245, after holding the first council of Lyons, Pope Innocent IV. went to Cluny, accompanied with the two patriarchs of Antioch and Constan- tinople, twelve cardinals, three archbishops, fif- teen bishops, and a great number of abbots ; who were all entertained, without one of the monks being put out of their places : though St. Lewis the king, queen Blanche his mother, the duke of Artois, and his sister, the emperor of Constanti- nople, the princes of Arragon and a great number of lords, with all their retinues, were there at the same time. Cluny at its first erection, was put under the immediate protection of the apostolic see. It became the head of a very numerous and extensive congregation ; and was the first congregation of various monasteries united under one chief; so as only to constitute one body, or, as they call it, one order. This order of monks was brought into England by William earl of Warren, son-in-law to William the Conqueror, who built a house for them at Lewes in Sussex, about the year 1077. There were twenty-seven priories and cells of this order in England, which were governed by foreigners, afterwards made denizens. Cluny lies ten miles north-west of Macon, and forty-six N.N.W. of Lyons. Popu- lation 4200.

CLUPEA,the herring, in ichthuology, a genus belonging to the order of abdominales. The upper jaw is furnished with a serrated mystache; the branchiostege membrane has eight rays; a scaly serrated line runs along the belly from the head to the tail; and the belly-fins have fre- quently nine rays. There are fifteen species; the most noted are,

1. C. alosa, the shad, has a forked snout, and black spots on the sides. In Great Britain the Severn affords this fish in higher perfection than any other river It makes its first appearance there in May, but in very

warm seasons in April; for its arrival sooner or later depends much on the temper of the air. It continues in the river about two months, and then is succeeded by the variety called the twaite. The old fish come from the sea into the river in full roe. In J uly and August multitudes of bleak frequent the river near Glou- cester ; some of them are as big as a small her- ring, and these the fishermen suppose to be the fry of the shad. Numbers of these are taken near Gloucester, in those months only, but none of the emaciated shad are ever caught in their return. The Thames shad does not frequent that river till the end of May or beginning of June, and is esteemed a very coarse and insipid fish.

2. C. encrasicolus, the anchovy, has its upper

jaw longer than the under one, aid is about three inches long. They are taken in vast quantities in the Mediterranean, and are brought over to Britain pickled. The great fishery is at Georgia, a small isle west of Leghorn. See FISHERY.

3. C. herengus, the common herring, has no spots, and the under jaw is longer than the upper one. A herring dies immediately after it is taken out of the water ; whence the proverb, As dead as a herring. This fish is everywhere in great esteem, being rich, soft and delicate. Herrings are found from the highest northern latitudes, as low as the northern coast of France. They are met with in vast shoals on the coast of America, as low as Carolina. In Chesapeake Bay there is an annual inundation of these fish, which cover the shore in such quantities as to become a nui- sance. We find them again in the seas of Kamtschatka, and probably they reach Japan ; Kempser mentions, in his account of the fish of that country, some that are congenerous. The great winter rendezvous of the herring is within the arctic circle : there they continue for many months to recruit themselves after the fatigue of spawning ; the seas within that space swarming with insect food in a far greater degree than those of our warmer latitudes. This mighty army be- gins to put itself in motion in the spring : we distinguish this vast body by that name ; for the word herring comes from the German heer, an army, to express their numbers. They begin to appear off the Shetland Isles in April and May ; these are only the forerunners of the grand shoal which comes in June ; and their appearance is marked by certain signs, by the number of birds, such as gannets and others, which follow to prey on them ; but when the main body approaches, its breadth and depth is such as to alter the ap- pearance of the very ocean. It is divided into distinct columns of five or six miles in length, and three or four in breadth, and they drive the water before them with a kind of rippling. The first check this army meets in its march south- ward is from the Shetland Isles, which divide it into two parts ;

one wing takes to the east, the other to the western shores of Great Britain, and fill every bay and creek with their numbers ; others pass on towards Yarmouth, the great and ancient mart of herrings ; they then pass through the British Channel, and after that in a manner disappear. Those which take towards the west, after passing the Hebrides, where the great stationary fishery is, proceed to the north of Ire- land, where they meet with a second interruption, and are obliged to make a second division : the one takes to the western side, and is scarce per- ceived, being soon lost in the immensity of the Atlantic ; but the other, which passes into the Irish sea, feeds the inhabitants of most of the coasts that border on it. These migrations are made in order to deposit their spawn in warmer seas, which mature and vivify it more certainly than those of the frozen zone. It is not from defect of food that they set themselves in motion, for they come to us full of fat, and, on their re- turn, are almost universally observed to be lean and miserable. What their food is near the Pole we are not yet informed : but in our seas they feed much on the oniscus marinus, a crustaccous

insect, and sometimes on their own fry. The young herrings begin to approach the shores in July and August, and are then from half an inch to two inches long ; those in Yorkshire are called herring file. Some of the old herrings continue on our coasts the whole year : the Scarborough fishermen never put down their nets but they catch a few, but the number that remain are not worth comparison with those that return. See FISHERIES. The Dutch are most extravagantly fond of these fish when pickled. A premium is given to the first buss that arrives in Holland with a lading of this their ambrosia, and a vast price given for each keg. Flanders had the ho- nor of inventing the art of pickling herrings. One William Beauklen of Biverlet, near Sluys, hit on this useful expedient ; from him was de- rived the name pickle, which we borrow from the Dutch and German.

4. C. sprattus has thirteen rays in the back fin. It is a native of the European seas, and has a great resemblance to the herring, only it is of a less size . They come into the river Thames be- low bridge in the beginning of November, and leave it in March; and are, during that season, a great relief to the poor of the capital. At Gravesend, and at Yarmouth, they are cured like red herrings : they are sometimes pickled.

5. C. pilcardus, the pilchard. Nose turned up; dorsal in the centre of gravity; scales firm. Appears periodically in vast shoals, on the Cor- nish coast, about July; body thicker and rounder than the herring ;

smaller ; the back more ele- vated, and the belly not so sharp nor so serrate; is more full of oil.

CLUSIA, the balsam tree, a genus of the mo- nogynia order and polygamia class of plants : CAL. tetraphyllous or hexaphyllous, leaflet oppo- site and imbricated : COR. tetrapetalous or hexa- petalous : the STAM. numerous. Nectarium of antherae or glandules coalited, including the ger- men. The capsule is quinquelocular, quinque-valved, and full of pulp. There are six species, all natives of America. The most remarkable is the C. flava. It is pretty common in the British American islands, where the trees grow to the height of twenty feet, and shoot out many branches on every side, furnished with thick, round, succulent leaves, placed opposite. The flowers are produced at the ends of the branches, each having a thick succulent cover. They are succeeded by oval fruit. From every part of these trees there exudes a kind of turpen- tine, which is called in the West Indies hog gum ; because they say, that, when any of the wild hogs are wounded, they repair to these trees and rub their wounded parts against the stem till they have anointed themselves with this tur- pentine, which heals all wounds. The plants are very tender, and, in this country, must be kept constantly in a stove and sparingly watered, especially in winter ; for they naturally grow in those parts of the islands where it seldom rains, and consequently cannot bear much moisture. They may be propagated from cuttings, which must be laid to dry for a fortnight or three weeks, that the wounded parts may be healed over, otherwise they will rot. The best time for plant- ing their cuttings is in July that they may be

well rooted before the cold weather comes on in autumn.

CLUSINA PALUS, in ancient geography, a lake of Tuscany, extending north-west between Clusium and Arretium, and communicating with the Arnus and Clanis. It. is now called Chiana Palude.

CLUSINI FONTES, baths in Tuscany, in the territory of Clusium, between Clusium on the north and Acula on the south, eight miles from each ; now called Bagni di S. Casciana.

CLUSIUM, or CAMARS, in ancient geogra- phy, a town of Tuscany, at the south end of the Palus Clusina, where it forms the Clanis ; the royal residence of Porsenna, three days' journey north from Rome. It is now called Chiusi.

CLUSIUM NovuM,in ancient geography, a tow a of Tuscany, near the springs of the Tiber, in the territory of Arretium, where lies the Ager Clu- sinus ; now called Casentino.

CLU'STER, n.s. v.n. &v.a.) Sax. clyprep,

CLU'STERY, adj. $ Dutch, klister.

A bunch ; a number of things of the same kind, growing or joined together, as grapes on the vine ; any number of creatures adhering together, as bees before they hive ; applied to numbers con- gregated, whether stars or human beings. The idea is union and connexion, by whatever at- traction, of multitudes, constituting a body. To cluster, therefore, is to grow, or to collect to- gether ; to congregate.

Grapes will continue fresh and moist all winter, if you hang them cluster by cluster in the roof of a warm room. Bacon.

His armour green might seem a fruitful vine ; The clusters prisoned in the close-set leaves ;

Yet oft between the bloody grape did shine, And peeping forth, his jailer's spite deceives.

Fletcher's Purple Island.

Forth flourished thick the clustering vine, forth crept The smelling gourd, up stood the corny reed Embattled in her field. Milton.

As bees

Pour forth their populous youth about the hive In clusters. Id. Paradise Lost.

The luscious clusters of the vine Upon my mouth do crush their wine. Marvell.

There with their clasping feet together clung, And a long cluster from the laurel hung. Dryden.

An elm was near, to whose embraces led, The curling vine her swelling clusters spread. Pope.

My friend took his station among a cluster of mob, who were making themselves merry with their betters.

Addition.

Or from the forest falls the clustered snow Myriads of gems. Thomson's Seasons

The flowering glade fell level where they moved, O'er arching high the clustering roses hung ; And gales from heaven on balmy pinion roved, And hill and dale with gradulatiou rung. Beattie

Her glossy hair was clustered o'er a brow Bright with intelligence, and fair and smooth. Byron.

CLUSTER-GRAPE, n. s., from cluster and grape.

The small black grape is by some called the currant, or cluster-grape ; which 1 reckon the for- wardest of the black sort. Mortimer's Husbandry.

CLUTCH, v. a. & n. s. Of uncertain etymo- logy. To hold in the hand ; to gripe ; to grasp ; to comprise ; to contract ; to double the hand

so as to seize and hold fast. The plural substan- tive is generally applied to paws and talons, and to hands in a sense of rapacity and cruelty.

Is this a dagger I see before me, The handle toward my hand ? Come, let me clutch thee. Shakspeare.

Not that I have the power to clutch my hand, When his fair angels would salute my palm.

Id. King John.

They

Like moles within us, heave and cast about ; And, till they foot and clutch their prey, They never cool. Herbert.

It was the hard fortune of a cock to fall into the clutches of a cat. L' Estrange.

A man may set the poles together in his head, and clutch the whole globe at one intellectual grasp.

Collier on Thought.

Your greedy slavering to devour, Before 'twas in your clutches power.

Hudibras.

Set up the covenant on crutches, ‘Gainst those who have us in their clutches. Id. I most have great leisure, and little care of my- self, if I ever more come near the clutches of such a giant. Stttlingfleet.

When suddenly (for such the will of Jov$/ A fowl enormous sousing from above The gallant chieftain clutched, and soaring higtt (Sad chance of battle) bore him up the sky. Seattle.

Her glance how wildly beautiful ! how much Hath Phoebus wooed in vain to spoil her cheek, Which grows yet smoother from his amourous clutch ! Who round the north for paler dames would seek ? How poor their forms appear! how languid, wan, and weak ! Byron.

CLUTIA, in botany, a genus of the gynan- dria order and dioecia class of plants; natural order thirty-eighth, tricoccae : male CAL. penta-phyllous : COR. pentapetalous : STYLES three : CAPS, trilocular, with a single seed. There are ten species, all natives of warm climates. They are ever-green shrubby plants, rising six or eight feet, garnished with simple leaves and greenish- white quinquepetalous flowers. They are propa- gated by cuttings in spring or summer, planting them in pots of light earth, plunged in hot-heds. The plants must always be kept in a stove. The chief is C. eleatheria. Dr. Wright, in his ac- count of the medicinal plants of Jamaica, says that this species is the same as the cascarilla and eleatheria of the shops. Other medical writers have supposed them to be distinct barks, and they are sold in the shops as different productions. Linnseus’s croton cascarilla, Dr. Wright observes, is the wild rosemary shrub of Jamaica, the bark of which has none of the sensible qualities of the cascarilla.

CLUTTER, n. s. & v. n. See CLATTER. A noise; a bustle; a busy tumult; a hurry; a clamor. A low word.

He saw what a clutter there was with huge, over- grown pots, pans, and spits. L’ Estrange.

The favourite child, that just begins to prattle, Is very humoursome and makes great clutter, Till he has windows on his bread and butter. King.

Prithee, Tim, why all this clutter ? Why ever in these raging fits. Swift.

CLUVIER, or CLUVERIUS (Philip), a cele- brated geographer, born at

Dantzic in 1589. He travelled into Poland, Germany, and the Netherlands, to study law ; but being at Leyden, Joseph Scaliger persuaded him to cultivate his taste for geography. Cluvier followed his advice, and for this purpose visited the greatest part of the European states. He was well versed in many languages : and wherever he went obtained illustrious friends and protectors. At his re- turn to Leyden he taught with great applause ; and died in 1623, aged forty-three. He wrote 1. De tribus Rheni Alveis ; 2. Germania Anti- qua; 3. Sicilia Antiqua; 4. Italia Antiqua ; 5. Introductio in Universam Geographiam. The first was written at Oxford.

CLWYD, a beautiful valley of North Wales, in Denbighshire, enclosed by high mountains, through which there are numerous gaps, and ex- tending from the sea inwards above twenty miles, and varying in breadth from five miles to eight. This delightful vale is in high cultivation, even far up the sides of the hills ; and is full of towns, villages, and gentlemen's seats. The climate is excellent, and the natives retain their vivacity to a very late period of life.

CLWYD, a river of North \Vales,which rises in the middle of Denbighshire, runs through the vale of the same name, takes a compass to the south- east, then turns north-west, and, having entered Flintshire, fl ; into the Irish Sea.

CLYDE, a river in Scotland, which rises in Annaˆidale, and running north-west through Clydesdale, by Lanark, Hamilton and Glasgow, falls into the sea a few miles below Greenock, over against the Isle of Bute. Next to the Tay, it is the largest river in Scotland ; and is naviga- ble for small craft up to Glasgow. The canal, tvhich joins the Forth, falls into it a little below that city. The cataract called the Falls of the Clyde, opposite to Lanark, is a great natural cu- riosity, and the grandest scene of the kind in Great Britain. This tremendous sheet of water, for about a mile, falls from rock to rock. At Stone- byers the first fall is about sixty feet ; the last, at Corra Lynn, is over solid rock, not less then 100 feet high. At both these places the great body of water exhibits a grander and more inter- esting spectacle than imagination can conceive. ' This great body of water,' says a traveller, 'rush- ing with horrid fury, seems to threaten destruc- tion to the solid rocks. The horrid and incessant din, with which this is accompanied, unnerves and overcomes the heart. At the distance of about a mile from this place you see a thick mist, like smoke, ascending to heaven, over the stately woods. As you advance you hear a sul- len noise, which soon after almost stuns your ears. Doubling as you proceed towards a tuft of wood, you are struck at once with the awful scene which suddenly bursts upon your astonished sight. Your organs of

perception are hurried along, and partake of the turbulence of the roar- ing water. The powers of recollection remain suspended by this sudden shock ; and it is not till after a considerable time, that you are ena- bled to contemplate the sublime horrors of this majestic scene.' The water-fall at Corehouse called Corra Lynn, is no less remarkable. The

banks of this river are adorned on both sides with woods, orchards, and elegant villas. In March 1787, and in the night beween the llth, and 12th of January 1797, a temporary subsiding or obstruction of the waters of this river took place, which occasioned no small speculation respecting the cause ; some ascribing it to a subterraneous passage, by which the waters had run off. The phenomenon, however, was found to have been occasioned solely by the sudden freezing of a considerable part of the water, at the Shallows, between Bonniton Lynn, and the Haughs opposite to the lands of Carstairs, where the river forms a vast extent of still-running water which is apt to be frozen when a very sudden and severe frost sets in, and to remain in that ob- structed state for some hours, till the water above the shallows rise to such a height as to break through, and carry down these temporary dams of ice.

CLYDESDALE, a wild district of Scotland, in the south of Lanarkshire, famous for its lead mines, which lie mostly north and east, and af- ford also a considerable quantity of silver.

CLYMENE, in fabulous history, the daughter of Oceanus: and the mother of Phaeton, Lam- petia, ˆEgle, and Phoebe, by Apollo. See PHAE- TON.

CLYPEOLA, treacle-mustard : a genus of the siliculosa order, and tetradynamia class of plants; natural order thirty-ninth, siliquosse. The sili- cula is emarginated, orbiculated, compressed, plane, and deciduous. Species, one only, a na- tive of France, Italy, and the warm parts of Europe, but hardy enough to bear the winters in this country.

CLYPEUS, in antiquity, a species of shield, of a round shape, usually formed of ox-hides, and smaller than the scutum. See BUCKLER, and the article ARMOUR.

CLYSSUS, in ancient pharmacy, an extract prepared from several bodies mixed. Among the moderns the term is applied to several extracts prepared from the same body, and then mixed together.

CLYS'TER, n. s. xXvˆtp, an injection into the anus.

I have found, saith he [Hercules de Saxonia], hy experience, that many hypocondriacall melancholy men have been cured by the sole use of clysters.

Burton's Anatomy of Melancholy.

If nature relieves by a diarrhoea, without sinking the strength of the patient, it is not to be stopt but promoted gently by emollient clysters. Arbuthnot.

CLYSTERS, injections into the anus, usually administered by the bladder of a hog, sheep, or ox, perforated at each end, and having, at dne of the apertures, an ivory pipe fastened with pack- thread. But the French sometimes use a pewter syringe, by which the liquor may be drawn in will) more ease and expedition than in the bladder, and likewise more forcibly expelled into the large intestines. This remedy should never be ad- ministered either too hot or too cold, but tepid ; for either of the former will be injurious to. the bowels. Clysters are sometimes used to nourish and support a patient who can swallow little or no aliment, by reason of some impediment in the organs of deglutition, A kind of clyster,

made of the smoke of tobacco, appears to be of considerable efficacy when other clysters prove ineffectual, and particularly in the iliac passion, in the hernia incarcerata, and for the recovery of drowned persons. See ENEMA.

CLYTEMNESTRA, in ancient history, the daughter of Jupiter and Leda. She married Agamemnon king of Argos, who, when he went to the Trojan war, left his cousin TEgysthus to to take care of his wife, his family, and domestic affairs. In the absence of Agamemnon, ./Egys- thus made his court to Clytemnestra, and so completely succeeded that they lived publicly together. The infidelity of Clytemnestra reached the ears of Agamemnon before the walls of Troy and he determined to take full revenge on the adulterers on his return. The execution of his schemes, however, were frustrated ; Clytemnes- tra, with her adulterer, murdered him on his arri- val, as he came out of the bath, or, as others say, as he sat down to a feast to celebrate his happy return. Cassandra, whom Agamemnon had brought from Troy,

shared his fate ; and Orestes would also have been deprived of his life if his sister, Electra, had not removed him from the reach of his mother. Having thus freed them- selves of Agamemnon, they were publicly married, and ./Egysthus ascended the throne of Argos. Orestes, after an absence of seven years, returned to Mycenae, determined to avenge the murder of his father. He concealed himself in the house of his sister Electra, who had been married by the adulterers to a person of mean extraction and low circumstances. His death was publicly announced; and when ˆEgysthus and Clytemnestra repaired to the temple of Apollo, to return thanks to the gods for the death of the only surviving son of Agamemnon, Orestes who, with his faithful friend Pylades, had con- cealed himself in the temple, rushed upon the adulterers, and killed them with his own hands. They were buried without the walls of the city, as their remains were deemed unworthy to be laid in the sepulchre of Agamemnon. Accord- ing to ./ Eschylus, Orestes introduced himself with his friend Pylades at the court of Mycenae, pre- tending to bring the news of the death of Orestes, and, when JLgysthus enquired of the particu- lars, he murdered him, and soon after Clytem- nestra.

CLYTIA, or CLYTE, daughter of Oceanus and Tethys, beloved by Apollo. She was deserted by her lover, who paid his addresses to Leuco- thoe ; and this so irritated her, that she disco- vered the whole intrigue to her rival's father. She at length pined away, and was changed into a flower, commonly called a sun-flower, which still turns its head towards the sun in its course, in token of her love.

CNEORUM, in botany. See CONVOLVULUS and DAPHNE.

. CNESTIS, in botany, a genus of the decandria class, and pentagynia order: c A L. five-parted ; petals five : CAPS, five, and bivalved : SEED sin- gle. Species four, natives of Sierra Leone and the west of Africa.

CNICUS, blessed thistle : a genus of the po- lygarnia aequalis order, and syngenesia class o» plants ; natural order forty-ninth, composite :

CAL. ovate, imbricated with spinous branched scales, and enriched with bractese : FLORETS, equal. Species fifty-four, of which the only re- markable one is that used in medicine under the name of carduus benedictus. This is an annual plant, cultivated in gardens. It flowers in June and July, and perfects its seed in autumn. For medical purposes

it should be gathered when in flower, dried in the shade, and kept in a very dry airy place, to prevent its rotting or growing mouldy, which it is very apt to do. The leaves have a penetrating bitter taste, not very strong or durable, accompanied with an ungrateful flavor, from which they are in a great meausure freed by keeping. Water extracts in a little time, even without heat, the lighter and more grateful parts of this plant; if the digestion be continued for some hours the disagreeable parts are taken up ; a strong decoction is very nauseous and offensive to the stomach. Rectified spirit extracts a very pleasant bitter taste, which remains uninjured by time. The virtues of this plant are little known in the present practice. The nauseous decoction is sometimes used to provoke vomiting ; and a strong infusion to promote the operation of other emetics. A stronger infusion, made in cold or warm water, if drank freely, and the patient kept warm, occasions a plentiful perspiration and promotes the secretions. The seeds of the plant are also considerably bitter, and have some- times been used with the same intention as the leaves.

CNIDIA VENUS, a principal divinity of the Cnidians. Her statue was executed by Praxi- telles ; and was esteemed one of the finest pro- ductions of his genius.

CNIDUS, in ancient geography, a Greek town of Caria; situated on a promontory of a penin- sula. It had in front a double port, and an island lying before it in form of a theatre, which, being joined to the continent by moles, made Cnidus a diopolis or double town. Eudoxus, the astronomer, had an observatory in Cnidus.

CNOSSUS, or CNOSUS, anciently called Caera- tos, a city of Crete, twenty-three miles east of Gortina. Here stood the sepulchre of Jupiter, the famous labyrinth, and the palace of king Mi- nos : its port, Heracleum, lay on the east side of the island.

COACE'RVATE, v. a. } Lat. coacervo To COERCERVA'TION, n. s. 5 heap together. The act of heaping, or state of being heaped, to- gether.

The collocation of the spirits in bodies, whether the spirits be coacervate or diffused.

Bacon's Natural History.

The fixing of it is the equal spreading of the tan- gible parts, and the close coacervatioti of them. Id.

COACH, n. s. & v.a.~\ Fr. coche; Ital. coc- COACH-BOX, n. s. j chio kotozy ; among

COACH-HIRE, n. s. [the Hungarians, a COAJCH-HOUSE, n. s. (large covered carriage. COACH-MAKER, n. s. I The French coche sig- COACH-MAN, 7i. s. J nifies also a passage- boat on a river. Bel. koetze, is a coach as well as a carriage. Kaotcht\ is said to signify with the Huns a high waggon. With us coach is a carriage of pleasure or state, distinguished

from a chariot, which is but half a coach. Stage- coaches are vehicles of a similar construction, for the use of the public, having their fixed periods of travelling, specific roads and distan- ces, and certain fares agreed upon by the pro- prietors and their employers. Hackney coaches are vehicles let out for hire, whose sphere of operation is the metropolis and places within the bills of mortality; they are subject to strict and salutary regulations ; it is imperative upon them to accept every fare that offers, and in case of dispute to yield to the first applicant.

COACH, or COUCH, is also a sort of chamber in a large ship of war near the stern. The floor of it is formed by the aftmost part of the quar- ter-deck, and the roof by the poop : it is gene- rally the habitation of the captain.

Suddein upriseth from “her stately place The roiall dame and for he coche doth call. Spenser.

So forth she comes, and to her coche does clyme, Adorned allˆwith gold and girlands gay, That seemed as fresh as Flora in her prime ; And strove to match, in roiall rich array, Great Junoes golden chayre ; the which they say The gods stand gazing on when she does ride To love’s high house through heaven’s bras-paved

way

Drawne of faire peacocks, that excell in pride, And full of Argus’ eyes their tayles dispredden wide.

Id.

Basilius attended for her in a coach, to carry her abroad to see some sports. Sidney.

Her chariot is an empty hazel-nut, Made by the joyner Squirrel, or old Grub, Time out of mind the fairies coach-makers. Shakspeare.

Take care of your wheels : get a new set brought, and probably the coach-makervill consider you. Swift.

Let him lie in the stable or the coach-house. Id,

Suppose that last week my coach was within an inch of overturning in a smooth even way, and drawn by very gentle horses. Id.

Thy nags, the leanest things alive,

So very hard thou lovest to drive ;

I heard thy anxious coachman say,

It costs thee more in whips than hay. Prior.

A better would you fix ? Then give humility a coach and six. Pope

The needy poet sticks to all he meets, Coached, carted, trod upon; now loose, now fast, And cairied off in some dog's tail at last. Id.

My expences in coach-hire make no small article.

Spectator.

Her father had two coachmen, when one was in the coach-box, if the coach swung but the least to one side, she used to shriek.

Arbuthnot's History of John Bull. Another simile we mean to broach — A new one too ! — the stage is a stage-coach — A stage-coach ! Why ? — I'll tell you if you ask it — Here some take place — and some mount the basket.

Garrick. Your late old coachman, though oft splashed by

dirt,

And out in many a storm remains unhurt ; Enjoys your kind reward for all his pains, And now to other hands resigns the reins. Id.

London! right well thou knowest the hour of

prayer ; Then thy spruce citizen, washed artizan

And snug apprentice gulp their weekly air : Thy coach of Hackney, whiskey, one-horse chair, And humblest gig through sundry suburbs

whirl To Hampstead, Brentford, Harrow.

Byron. Childe Harolde.

COACHES are suspended by leather, and moved on wheels. In Britain, and throughout Europe, they are drawn by horses, except in Spain, where they use mules. In a part of the east, especially in the dominions of the great Mogul, coaches were very lately drawn by oxen. In Denmark they sometimes yoke rein-deer in their coaches ; though rather for curiosity than use. About the beginning of the sixteenth century, according to professor Beckmarn, coaches of some kind were known ; but their use was confined to women of the first rank ; it being at that period considered disgraceful for men to ride in them. Thus the electors and princes of the empire, when they did not incline to attend the meetings of the states, made this their excuse to the emperor, that their health would not permit them to travel on horse back, and it was reckoned unbecoming to ride in carriages like women. It appears pretty evident however that about the end of the fifteenth cen- tury, the emperor, kings, and some princes, tra- velled in covered carriages ; and likewise used them on particular public occasions. The nup- tial carriage of the emperor Leopold's first wife, a Spanish princess, cost 38,000 florins, including harness. The coaches used by that emperor himself were covered over with red cloth and black nails; the harness was black, and no gold was to be seen in the whole work. The pannels were glass. On festival days the harness was orna- mented with fringes of silk. All the distinction bet-wixt the imperial coaches, and those of the la- dies in the emperor's suite, was, that the former had traces made of leather, and the latter of ropes. Carriages were early introduced into France. A statute of Philip the Fair, issued in 1294, for the suppression of luxury, prohibits the wives of citizens from the use of them. In England the oldest coaches used by the ladies were called whirlicotes, a name now sunk into oblivion. Richard II. towards the end of the fourteenth century, when obliged to fly before his rebellious subjects, travelled with all his attendants on horseback; his mother alone, who was indisposed, riding in a coach. And even this afterwards became unfashionable, the daughter of Charles VI. showing the ladies of England, with what ease she could ride on a side-saddle. Coaches first came into use in England, according to Stow, about the middle of the sixteenth century, being introduced from Germany by the earl of Arundel. In 1598 the English plenipotentiary went to Scot- land in a coach ; and about 1605 they were gene- rally used. Plenipotentiaries first appeared in coaches at the imperial commission held at Er- furth, in 1613; and in 1681 no fewer than fifty gilt coaches were to be seen at the court of Ernest Augustus of Hanover. They have since been gradually brought to

perfection. Louis XIV. of France made several sumptuary laws for restrain- ing the excessive richness of coaches, prohibiting the use of gold, silver, &c. therein.

A coach has been defined, a convenient carriage suspended on springs, and moving on four wheels

intended originally for the conveyance of per sons in the upper circles of society, but now be” come very common among other class** in almost all civilised countries. In London, upwards of a 1000 hackney coaches are daily employed for the conveyance of its citizens and residents from one place to another; and in Bristol, Liverpool, and Birmingham, coaches of the same kind are used.

The fashion with regard to the form and orna- ment of coaches and other carriages for pleasure, is perpetually changing; the chief kinds now in use, are the close coach, the landau, which can lower its roof, and part of its sides, like the head of a phaeton ; the barouche, or open summer carriage, made on the lightest construc- tion ; the chariot, which is intended only for two or three persons ; the landaulet, or chariot, whose head unfolds back; the phaeton and caravan, which have only a head and no windows, with a leather apron, arising from the foot-board to the waist. These all run upon four wheels.

Of the two-wheeled vehicles, there is the cur- ricle drawn by two horses, each bearing, on a narrow saddle, the end of a sliding bar or yoke that upholds a central pole ; the gig, chaise, or wiskey that have each only one horse, which moves between a pair of shafts, borne nearly ho- rizontally, by means of a leathern sling passing over the saddle tree. When a gig, &c. has two horses, one preceding the other in harness, the machine and its horses taken together are deno- minated a tandem, a latin word signifying, at length. This is always a very questionable sort of vehicle for safety, especially in crowded streets or ways ; but the management of it is not to be compared, certainly with another effort of noble daring which the great and scientific supplement to the Encyclopaedia Britannica records. ‘ We have seen a vehicle, says a writer in that work, called a suicide, from the extreme danger of dri- ving it; and there are some aspiring youths, who have far eclipsed all their competitors, by driving through the most crowded streets in very high carriages, drawn by two horses, the one before the other, supported on one narrow wheel ! ‘

COACHES, MAIL, are stage coaches of a parti- cular construction, carrying his Majesty’s mails, which are protected by a guard, and

subject to the regulations of the post-office. Until the year 1784, letters were conveyed from the metropolis to distant parts of the kingdom, and vice versa, by carts with a single horse to each, or by boys on horseback; in consequence of which many robberies were committed, delays occasioned, and losses sustained. At this period John Palmer, esq. afterwards comptroller general of the post- office, devised a new plan, which he recommended to government, as calculated to increase the re- venue, accommodate the public, and be highly advantageous to all parties. It was to provide a certain number of coaches of light construction ; each to be adapted to carry the various bags or packets of letters, which were destined for a par- ticular part of the country, or line of road. All the coaches, drawn by four horses, were to leave London precisely at eight o'clock in the evening, to travel 'at the rate of eight miles an hour, inclu- ding the time allowed for change of horses, &,c. and to arrive at and leave certain post-towns at

specific times. Each coach is provided with a coachman, a guard with fire-arms, an excellent time-piece set by the Post-office clock, and allowed to carry four passengers inside and two outside. The systematic regularity, punctuality, superior safety, and expedition of the mail- coaches of England render them superior to any other public conveyance in Europe. Every coach on its arrival in town is sent to the contractor's yard for inspection, as to its condition, so that no one returns to its business liable to those acci- dents througli want of examination that frequently occur to other coaches. The property and pro- fits of the post, or the conveyance of letters, are vested in government, which contracts with the proprietors of coaches for the carriage of the mail ; but these proprietors derive their chief profit from the fare of passengers, and carriage of small packets. The mail coaches are said to run above 13,000 miles daily. There is a similar establish- ment in Ireland. By 50 Geo. III. c. 48; if the coachman, or any other person having the care of the mail coach or any other carriage, shall permit any other person, without the consent of a proprietor, or against the consent of the passen- gers, to drive the same, or quit the box without reasonable occasion, or for a longer space of time than such occasion may require (though the reins be left for the time in the hands of the passenger on the box); or, if the coachman, or person having the care of the coach, shall by furious driving, or any negligence or misconduct, over- turn the carriage, or in any manner endanger the persons or property of the passengers, or the

property of the owners or proprietors of such carriage (unavoidable accidents excepted) every such coachman or person so offending, shall for every such offence forfeit not exceeding £10, nor less than £.5 If the guard of a mail coach or other carriage shall fire off his arms, except for self-defence, he shall forfeit £o.

COACHES, STAGE, in Great Britain, as underta- king the conveyance of persons and parcels from one place to another, have been made the subject of various legal injunctions and provisons. Un- der the Commissioners of Stamps they are sub- ject to certain mileage duties, 55 Geo. III. c. 185.

As carriers, stage-ooachmen (but not Hackney coachmen of London), come under the general law of ‘ all persons carrying goods for hire ;’ and are chargeable in a limited way, with all the faults and mis- carriages of their servants. But, 1 . A price must be paid, or contracted to be paid. In an action against a master of a stage- coach, the plaintiff set forth, that he took a place in the coach for such a town, and that in the journey the defendant, by negligence, lost the plaintiff’s trunk ; upon not-guilty pleading, the evidence was, that the plaintiff gave the trunk to the man who drove the coach, who promised to take care of it, but lost it ; and the question was, whether the master was chargeable; and ad- judged that he was not, unless the master takes a price for the carriage of the goods as well as for the carriage of the person, and then he is within the custom as a carrier ; that a master is not chargeable for the acts of his servants, but when they are done in execution of the authority given by the mapter, then the act of the servant

is the act of the master, 1 Salk. 282. And 2. By the custom and usage of stages, every passenger pays for the carriage of goods above a certain weight ; and there the coachman shall be charged for the loss of goods beyond such weight. 1 Com. Rep. 25. 3. In order to charge a stage-coach proprietor or carrier with the loss of goods, regard must be had to any special notice or understanding between the parties. A person delivered to a carrier’s book-keeper two bags of money sealed up, to be carried from London to Exeter, and told him that it was £200, and took his receipt for the same, with promise of delivery for 10s. per cent, carriage and risk : though it be proved that there was £400 in the bags, if the carrier be robbed he shall arawer only for £200, because there was a particular undertaking for the carriage of that sum and no more, and his reward, which makes him answerable, ex- tends no farther. Carth. 486. Or, A sends goods to B who says, he will warrant they shall go safe; he is liable for any damage sustained by them, notwithstanding A sends one of his own servants in B’s cart

to look after them. 2 B. and P. 416.

And where the owner of a stage-coach puts out an advertisement 'that he would not be an- swerable for money, plate, or jewels above the value of £5, unless lie had notice, and was paid accordingly ,' all goods received by that coach are under that special acceptance ; and if money or plate be sent by it without notice, and being paid for it, if lost, the coach owner is not liable ; Gibbon v. Paynton, 4 Burr. 2298. Izett v. Mountain, 4 East, 371. Nicholson v. Willan, 5 East, 507. Not even to the extent of the £5, or the sum paid for booking, Clay v. Willan, H. Black. Rep. 298. — In these cases a personal communication is not necessary to constitute a special acceptance. — Advertisements, notices in the warehouse, and hand-bills, which it is pro- bable the plaintiff saw, or which he might have seen, are sufficient.

For the protection of persons travelling by stage-coaches, the salutary provisions of 50 Geo. III. c. 48, are, Tha* a carriage witb four or more wheels, and drawn by fou, or more horses, shall be allowed to carry ten outside passengers and no more, exclusive of the coachman, but including the guard ; and one passenger only shall be allowed to sit upon the box with the coachman, three on the front of the roof, and the remaining six be- hind, on any part, except on the luggage, or that part of the roof allotted for the same. Carriages drawn by two or three horses shall be allowed no more than five outside passengers, exclusive of the coachman ; and all stage coaches, called long coaches, or double-bodied coaches, shall carry no more than eight outside passengers, ex- clusive of the coachman, but including the guard, if there be any, under such fines and penalties as are imposed by the act ; provided that no child in the lap, or under seven years, shall be accounted one of this number, unless there be more than one; and if more, two such children shall be accounted equal to one grown person, and so on in the same proportion ; and that no person paying as an outside passenger shall be permitted to sit as an inside passenger, unless

with the consent of one at least of the inside passengers, next to whom he shall be placed ; provided also, that when the construction is pe- culiarly wide or commodious, and being so found shall be duly licensed for that purpose, four out- side passengers shall be allowed to sit on the front of such carriage ; but outside passengers shall never exceed ten in all.

No proprietor or driver of any such carriage, travelling for hire, shall permit any luggage to be carried on the roof, or any person to go as outside passenger on or about the outside of any such caniage, the top of which shall be more than eight feet nine inches from the ground, or the bearing of which cm the ground shall be less than four feet six inches from the centre of the track of the right or off wheel, to that of the track of the left or near wheel, under the penalty of £5 for each offence. No luggage whatever, exceeding two feet in height, shall be conveyed on the roof of any carriage, if drawn by four or more horses; and, when drawn by two or three horses, such luggage shall not exceed eighteen inches above the roof, under the penalty of for- feiting £5 for every inch above two feet or eigh- teen inches respectively ; if the driver so offend- ing shall be the owner, he shall forfeit £10 for every inch above the measure above assigned, and, in default of payment, the person or per- sons so offending shall be committed tq the com- mon gaol or house of correction of the county, &c. where the offence was committed, for two months, unless such penalties be sooner paid ; provided always, tthat all packages be so placed on the roof, that no passenger shall sit on them, under the penalty of 50s. for each offence, to be paid by each such passenger ; and the division or space on the top allotted for luggage, shall be distinctly separated from the other part of the top, by some railing or otherwise. However, luggage may be carried of a greater height than two feet, if not more than ten feet nine inches from the ground.

The number of passengers permitted to be carried, shall be specified in the licence, and painted on the doors of the coach in legible characters ; and commissioners for granting licences may order a cross plate on the side of each coach, with the owner's name, &c. instead of the above inscription ; the penalty for de- facing, &c. such inscription is a forfeiture of £5, and every person offending against the pro- visions of this act, by not having a licence, by omitting the inscription, or carrying more out- side passengers than are specified in the licence and in ' ;te inscription, as above, shall for every offence forfeit £10 for each outside passenger beyond the number allowed, and double that sum if the driver or coachman be owner or part- owner. The owners of stage-coaches shall be liable to penalties if drivers cannot be found, provided that the owners cannot prove to the satisfaction of the magistrates before whom the information is laid, by sufficient evidence in- dependent of his own testimony, that the offence was committed by the driver without his know- ledge, and without any profit accruing to him- self; and the driver, when found, shall pay the penalty, or be committed to the common gaol or VOL. VI.

house of correction, for not less than three, an! not more than six

months.

The penalty on a driver for using abusive or insulting language to any passenger, or exacting more than his fare, is a forfeiture of not less than 5s. nor more than 40s., or a commitment for any time not exceeding one month, nor less than three days, at the discretion of the magistrate. Pas- sengers are empowered to require toll-collectors to count the number of passengers, and to mea- sure the height of the luggage; and the driver refusing to stop for this purpose, shall forfeit £5 for every such refusal, and if more passengers are carried than the act allows, or the luggage ex- ceed the height assigned by it, he shall forfeit double the penalty imposed by this act for such offence, one-half to the collector for his trouble and the other half to tlie passenger ; and if the toll-collector, upon being required by such pas- senger, shall refuse to make such examination, he shall forfeit £5 for every such offence ; and if any person shall endeavour to evade such examination, by descending from such carriage previously to its reaching any turnpike gate, and re-ascending after it has passed such gate, he shall forfeit £10. But stage-coaches carrying no parcels or luggage inside, or in the boots, or under their beds, having obtained special li- cence, may carry two extra passengers.

All prosecutions must be commenced in four- teen days ; persons aggrieved may appeal to the sessions. This act is a public act. And quoted in the clause respecting mail and other coaches above.

COACH-MAKING. Coach-making is an art which has, within the last fifty or sixty years, been carried to a very high degree of perfection. Coach and coach-harness makers, though of dif- ferent professions, in some respects, are privi- leged by each other to follow either or both trades. The coach-maker is generally under- stood to be the principal in the business, being the person who makes the wood-work. There are, however, but very few professions in which a greater number of artisans are necessarily em- ployed, such as wheelwrights, smiths, painters, carvers and gilders, curriers, lace- makers, wool- len cloth manufacturers, and many others. We shall therefore follow this art through its various branches with some particularity of detail.

It is a first and obvious rule, that carriages of every kind should be adapted, not only to the different uses, but also to the different places for which they are intended. The best possible car- riage fcr the paved streets of London, and other large towns, is not the most proper for country use, and one that is adapted to the excellent roads of England, would be unsuitable for the traveller on the Continent. The construction of every carriage should be as light as (he nature cf the

place it is destined for, and its necessary work will admit; superior strength can only be effected by addition in the weight of materials, which a regard to the horses will make a person very careful not unnecessarily to increase. The great art then consists in building as light as possible, yet so as sufficiently to secure the car- riage from danger. What a light carriage may lose by wearing a shorter time than one much

heavier, is more than compensated by the preser- vation of the horses.

The general form of structure in a carriage depends much on fancy, while the size must be proportioned to the intention, and regulated by the width of the seat, and the height of the roof. The timbers of the body should be of dry ash, and formed with great exactness; the pannels are made of soft straight-grained mahogany, smoothed to a fine surface, and fitted or fixed in prepared grooves, or bradded on the surfaces of the framing ; the insides are to be well secured by gluing, blocking, and canvas, to the pannels ; the roof and lining, or inner parts, are made of deal boards. As no parts of the framing of the body, if well executed, are likely to fail by use, a reparation in consequence of accidents is all that is to be expected.

The pannels generally suffer most injury, either from excessive heat, or from the bad quality ot the timber: of course great attention is required in selecting good boards for this article, which, i. not dry and well-seasoned, are sure to fail by drawing from the grooves, bulging, or cracking : Even trough the timbers are good, if the car- riage is exposed to any excess of hot weather, it is a great chance but they will fly : but no dis- credit ought to attach to the builder from that circumstance. The first summer a carriage is used will prove the sufficiency of the pannels. So soon as they begin to start from the grooves, as they mostly will, in some degree, the builder should examine and relieve them where confined, to prevent cracking. A little drawing from the grooves is to be expected, and is of no material consequence ; but, if they crack, it will he a dis agreeable object to the eye.

As sufficient room in the carriage makes the seats comfortable, its capacity should be the first object, and the width of the body ought to

be in proportion to the number it is meant to accom- modate. Open bodies have this advantage, that three can sit with tolerable ease on the same length of seat, as would accommodate two in a confined one. A full-sized seat for a close body to contain three persons, is about four feet one or two inches ; that of an open body, three feet five or six inches. This lattej: size is sufficient for two persons in a close carriage, but a seat ot from two feet seven inches, to two feet eight or ten inches, is sufficient in the open bodies. The width across the seats is never regular, but is adapted to the shape of the body. The usual width is from fourteen to eighteen inches. The height of the seat from the bottom is in general fourteen inches, and from the seat upward to the roof, from three feet six inches to three feet nine inches, without the cushion. It frequently has been found convenient to make the seat move- able, to give freedom to certain head-dresses. Few people rise above three feet from the seat, so that, allowing two inches for the cushions, there is left in the clear, without the head-dress, from four to seven inches.

The bodies of a post-chaise and chariot do not differ from each other, but the purposes for which they are intended alter their name. The chariot is distinguished from the post-chaise, by the ad- dition of a coach-box to the carriage part. The

post-chaise being intended for road work, and the chariot generally for town use. The materi- als of carriages meant for post work only, are somewhat lighter than those of a town carriage ; but, when alternately used, the strength must be sufficient for either. The framings are not re- quired to be so strong for one or two, as for three persons. If a carriage is generally used for three, the length of the seat should be from four feet to four feet one or two inches; but if only for a third person, occasionally, three feet eight inches will be sufficient, with a seat to draw out from the centre. A greater width is usually allowed at the front, than at the back of the seat, to render it more commodious for the elbows. The door-lights or windows are frequently con tracted on the seat-side, that the passengers may be more secure from outward observation, while at the same time there is a sufficient view from within. The following is a description of a body complete in all its parts, as given by Mr. Felton in his excellent work on this subject.

The upper parts, except the roofs, are gene- rally called upper quarters, that is side and back quarters. The usual mode of finishing these is by filling the vacancy with deal boardings, firmly battened on the inside, and covering the surface with leather, tightly strained on, and nailed at the inside edges ; over which a moulding goes, and is

sewed at the outside edges, making a welt, or is nailed in a prepared rabbet, and covered also with mouldings. Other quarters have the vacancy, the pillars, and rails covered with a pannel or mahogany board, finely smoothed on the outside. The leathered surface is the most secure; the pannel surface looks the best; but the brads with which they are confined, and the other nailings of the head-plates, mouldings, &c. occasion them frequently to split.

The sword-case is prepared in the same man- ner as the quarters, either with a leather or mahogany surface.

The lower side pannels are put in an im- proved rounded form. It adds considerably to the fullness of the side, and exhibits the painting thereon to a much greater advantage; this is done by the door and standing pillars being left full on the outsides, and reduced by rounding them towards the bottom.

The inside work, where the glasses are con- tained in the front and doors, is only lined or cased with the boardings, and nailed in rabbets on those pillars which form the lights or win- dows ; the other inside work is battening, block- ing, and gluing of canvas along the edges, and across the grain of the pannels, which gluing very much preserves and strengthens them. The blocking is also a material assistance to the strength, which is done by a half-square, cut across or angle-ways, cutting it also in short lengths, and gluing the square sides against the pannel and its framing.

The battens are long thin pieces of board, placed across the grain of the wood, bradded or secured by blocks or canvas, in order to strengthen or support those parts to which they are applied.

The inside work, after being thus finished, should be immediately painted all over, except

the seats, and, in particular, the door and front pannels, before the lining-boards are fixed in, so as to expose no timber to the air uncovered with paint, as the air materially affects it, particularly the wide boards or paunels. They swell in wet, and shrink in dry seasons; a proper attention, in this particular, is indispensably necessary.

It may here be observed that the coach has no fore pillar like the chariot, because it has no windows in front. The bodies of the landau and landaulet differ nothing in shape from those already mentioned. The landau is of the coach, the landaulet of the chariot form. The

weight of these is so much greater than that of the car- riages in their simple structure, that they are now but seldom used. The difference, however, excepting additional strength of timber, is only from the middle rails upward, to which height the doors open. It is usual to add a spring-bolt on that side of the door which shuts, to prevent its being opened when either the glass or shutter •s up.

In open carriages, as phaetons, curricles, &c. there is so great a variety of forms, that no gene- ral rule can be observed in building them, but they are mostly fashioned according to the fancy of their owner. Those intended for single horses are for the most part light, the length of the seat is generally adapted for two persons only, those for two horses are made of stronger timbers, and are more roomy. The method of hanging the bodies depends also on fancy, or a conception of ease : and some bodies are not hung at all, but fixed on the shaft of the carriage, depending entirely for their ease on the springs which are fixed underneath, and which support the shafts on the axletree. The heads to some open bodies are permanently fixed, and others are made to lake off, but the addition of their weight, and their great expense, frequently render their use objectionable. The gig body is principally used in a curricle, or handsome chaise carriage. The hind loops, which suspend the weight, are fixed through the corner pillars. The method of hang- ing at the fore-part varies according to the taste and judgment of the builder, or the situation of the body. The side pannels may fill the space between the two pillars, but, in conformity to the present mode of building, the side is divided at the standing pillar by a door, or an imitation thereof, preserving the same shape. In either case, whether a sham or real door, it projects above the surface of the pannels. The size of the body varies according to the purposes for which it is intended, but in general the mea- sure is from two feet ten inches to three feet two inches on the seat.

Though the word four-wheeled carriage usually implies a carriage complete, yet it is distinguish- ed among builders as the under part only, or frame with the wheels, on which the body is placed. It is the carriage which bears the stress of the whole machine, and, of course, every thing depends on its strength. It should be well nroportioned, according to the weight it is meant to support, always allowing rather an over than under proportion, to avoid the risk of accidents. A proper application of the iron work to support *he measure is p tViino- matpriaii to be attended

to, and great care should be taken that there are no flaws in it. The timbers, which are of ash, should be of young trees, of the strongest kind, free from knots, and perfectly seasoned before they are used ; as

many parts of the framing are obliged to be curved, it is best to select such timbers as are grown as nearly as possible to the shape. The workmanship must be strong and firm, and not partially strained in any cf its parts, as it is liable to much racking. The tim- bers throughout are lessened or reduced, for the sake of external appearance, which appearance is assisted also with moulding edˆes and carving.

All four-wheel carriages are divided into two parts; the upper and under carnage. The up- per is the main one on which the body is hung, the under carriage is the conductor, and turns by means of a lever, called the pole, acting on a centre pin, called the perch bolt. The hind wheels belong to the upper part, the fore wheels to the under.

Of four-wheel carriages there are two sorts, the perch and crane-neck, in which there is a material difference in the building and proper- ties, but this does not affect the bodies, as they wiil hang equally well on either. The perch carriage is of the most simple construction, and lighter than the crane-neck ; and, as the width of the streets in London gives every advantage to their use in turning, they are the most general. The crane-neck carriage has by much the superi- ority for convenience and elegance, and every grand or state equipage is of this construction ; but the weight of the cranes, and the additional strength of materials necessary for the support, make carriages of this sort considerably heavier than the other.

The track in which the wheels of every car- riage are to run is generally the same, except when intended for particular roads, in which waggons and other heavy carriages are princi- pally used : these leave deep ruts, in which liuht carriages must likewise go, or be liable to acci- dent. All four-wheel carriages should have the hind and fore wheels to roll in the same track ; the ordinary width of the wheels is four feet eight or ten inches, that of waggons or carts generally measure more than five feet, to which chaise wheels (being principally intended for the country) are adapted. It is immaterial to what width wheels are set, if used for running upon stones, but upon soft and marshy roads, if exact- nessˆ is not attended to, the draught is consider- ably increased. The different heights of the hind and fore wheels make also a difference iu the length of their axletrees, agreeably to the proportion they bear to each other, the fore wheel has the longest axletree by one or two inches between the shoulders.

The length of the carriage is regulated by the size or length of the body which it is in- tended to carry ; but it always takes its measure from the centres of the hind and fore axletrees. In general, a perch-

formed carriage measures nine feet two inches for a chariot, and nine feet eight inches for a coach ; but in a crane-necked carriage, on account of the bow for the wheels to pass under the measure, in a chariot is nine feet six inches, in a coach ten feet.

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CO AC II-M A KING.

We shall now give a more particular account of the perch described by Mr. Felton ; and af- terwards explain the nature of Mr. Edward Stracey's invention for an improved method of hanging the bodies, and of constructing the perches of four-wheeled carriages ; by which, he says, such carriages are less liable to be over- turned, and for which invention he obtained, some years since, his majesty's letters patent.

The perch is the main timber of the carriage, which extends through the hind and fore spring, transom, or bars. By it the principal part of the upper carriage is supported. The hind part is supported, and united to it, by means of hooping two extended timbers, called wings, on the side. The fore end is fixed or united to the perch by means of a strong piece hooped at the top, and framed through the fore transom, called a hoop- ing piece ; but some carriages have a horizontal wheel in the front, the same as the crane-neck carriages ; and these have no hooping piece to the perch, but are secured by means of side- plates. Those on the general principle have, at the bottom in front, a flat piece, left extended, called a tongue, which goes through a large mor- tise in the fore axletree bed, and through which the perch-bolt passes ; its use is to keep the fore axletree bed steady in its place.

Sometimes the perch is made of a bent form, called a compass perch, for the purpose of ad- mitting the body to hang low, or to form a more agreeble line to the shape thereof ; those perches are of a very ancient form, but are now revived with considerable improvement from their origi- nal shape, and are become the prevailing fashion. When the carriage is intended for a whole or ho- rizontal wheel, the perch has no hooping-piece, but is bolted by the plates at each end to the in- side of the transoms.

Plating with iron the sides of perches is a great improvement, and is now most generally done, and always must be, to those compass perches, if required to be light in their appear- ance, as the size of the timber is so much reduced by cutting them to this shape. To the straight or compass perch, iron plating on the sides is a great addition, as it will admit the timbers to be so much reduced, that a sufficient

strength is preserved, though but half the usual size ; the plates, as fixed edge-ways to the sides of the perch, will support ten times more weight than if flat-ways at the bottom, which is the method of plating a perch in the plain or common way ; and many of those carriages which are made up for sale, have even the bottom plate omitted ; but the certain consequence of this superficial method is, the sinking or settling of the perch, whereby the carriage is contracted quite out of its form, to the great injury of it, both for use and appear- ance, and there is no remedy but by a new one.'

Mr. Stracey's invention embraces four objects, 1. The constructing of the perch of a four- wheeled carriage, in such a manner, that either of the axletrees may have a vertical motion in- dependent of the other ; so that the axletrees may be in different planes at the same time. 2. The hanging of the body on the springs of such a carriage, in such a manner as will tend not only to diminish the liability of its being overturned,

but add also to the ease of its motion. 3. The forming a collar-brace, which shall almost im- mediately bring the body to an equilibrium, should the centre of gravity be moved. 4. The forming a perch-bolt, by the use of which the carriage may be more easily turned to the right or left, and the friction that now takes place, by the use of the common perch-bolts between the wheel plates, the transom bed, and the fore axletree bed, reduced almost to nothing.

The principal variation of this invention, from the common method of hanging the body on its springs, consists in the body-loops, which must be so extended, that the ends of them may come nearly under the shackles of their respective springs, and each of them so formed, as to end in a cylindrical axis of one to two inches or more in length, and of sufficient strength to sup- port the body ; and on each of these body-loop axes, a shackle, for the reception of one of the main braces, should be fitted, ending in a cylin- drical box or rocket, made so as to work and turn on the axis of the body-loop, and secured to it by a nut and pin ; and the connexion be- tween these shackles and their respective boxes should be by means of a strong joint, working towards the front and hind part of the carriage ia the direction of the perch. The body is to be hung by the main braces, attached to these shackles on the springs, in the same manner as other carriage-bodies are usually hung. When the body is thus hung, the action is as follows : should either of the hind or fore wheels descend into a low spot in the road, or ascend a raised surface, the boxes or sockets on the body-loops will turn on their axes, and keep the whole on a proper equilibrium, so as not to be overturned.

Another part of the invention is the applica- tion of a cylinder to the collar-braces of carriages, by means of which, should the centre of gravity of the body of the carriage be moved by any ine- qualities in the road or otherwise, either to the right or left, the equilibrium will be almost im- mediately restored by the motion of the cylinder, or roller on its axis, and the consequent lapping and unlapping of the straps ; for to whichever side the body is impelled, on that side will the collar-brace be lengthened, and of course the opposite collar-brace proportionally shortened ; one side is made to operate as a check upon the other, in order to bring the body to its true centre. The last part of the invention is the perch-bolt, which being properly placed, the fore axletree bed may be turned either to the right or the left, with much greater ease than if the common perch bolt were made use of, the usual friction between the beds and wheel-plates, being almost wholly removed from their being gradually separated by the lifting of the screw, in the act of turning. — See Repertory, New Se- ries, vol. xiv.

The timbers of the crane neck carriage, are of the same description as those of the last, except- ing the perch and hooping timbers, which are not used. The hind and fore ends are fixed to the cranes, which makes the bearings more steady than those of a perch carriage. The whole will be better understood by the following descrip- tion : —

COACH-M AKI NG.

Fig. 1, plate COACH-MAKING, is an elevation of a crane-necked coach complete ; fig. 2 is a front view of it, showing the fore wheels and un- der carriage ; and fig. 3 is the horizontal plan of the same, many parts of this are too evident and universally known to require any reference, as the wheels, the body, the coach-box, the boot, the springs, fee. a, a, are the two cranes which are made of iron, and answer in their use to the wooden perch of the common carriage, which is the main timber of the carriage, extending and connecting the hind and fore-spring transom D D, and E E, or cross-bars which support the springs F F and G G, and thus forming one frame called the upper carriage, in which the body is suspended. The two iron cranes a, a, form the same connexion, but in a more com- plete manner, and they have a bend or neck at b, which admits the fore wheels to pass under them when the carriage is turned short about; the cranes are united to the fore carriage, by being screwed fast into the fore spring transom D, and they are farther screwed by clipping them down to a cross timber near A, in fig 1, and marked B in fig. 3, it is called the budget bar, from the circumstance of its bearing the boot or budget, and it has two pieces A, A, called nunters, framed into it, which connect it with the fore transom, D, these pieces make a platform or frame, on which the

budget immediately rests ; the springs, F, are bolted to the transom, at the lower end, and have an iron brace F, fig. 1, called the spring stay.

The fore transom, or fore spring bar D, is the most essential part of the cross framing, it is a strong timber to which the cranes are fixed, by passing through it as before mentioned, therefore, an under carriage is attached thereto, by means of a large, round, iron pin d, fig. 3, which passes through its centre ; on the bottom is a thick flat plate ; made flush to the edges, called the transom plate, on the ends the springs are fixed, and on the top the boot, or the blocks that support it, are rested. E is the hind transom, or hind spring bar, something similar in its use to the fore transom, but not required to be of such strength ; to this the ends of the cranes are fas- tened, and the timbers called nunters, which run parallel with them, are framed into it, and unite it with the hind axle bed H, on the ends the springs G, G, are fixed ; the blocks or pump- handles, I I, are placed on the top to support the foot board K, or platform, and the footman's step-piece bolted on the outside. H is the hind axletree bed, it is a strong timber which receives the axletree, the cranes, a a, as before mentioned, are securely fastened to it, and it is connected by two pieces called nunters, as before mentioned, with the bend transom E ; the bottom is grooved to receive the axletree, which groove is called the bedding of the axletree, but is usually bedded at the ends only. At the two ends of these timbers are left projections called cuttoos, which cover the top or back ends of the wheels, to shelter the axletree arms from the dirt, which would otherwise get in behind the wheels, and clog them. I, I, are the hind blocks, which are called pump-handles ; when further extended ihan what is here represented, they are frequently

called raisers, as their use is only to heighten the platform from the hind framings, that the ap- pearance may be light, and that the footman may be sufficiently raised, according to the height of the body; they are bolted on the axletree bed and spring bar E, and, to prevent the too heavy appearance, they are often neatly ornamented with carving.

The footboard or platform K, on which the cushion for the servant stands, is a flat thick elm board, bolted on with blocks, to which it is also screwed. L, the boot, a large box made of s»rong elm board, nailed and screwed together, having a door in the front, which door should be made framed and boarded, and confined by a bolt and thumb nut; the surface of this boot should always be covered with a rugset, or japanning leather; it is bolted across the transom D, the boot or budget bar B, and fore blocks as shown in fig. 1 ; and is sometimes raised on side blocks, to lighten the appearance of the fore end of the

carriage. The parts marked M N O P, including the fore wheels, are called the fore or under carriage, united to the upper carriage by the perch bolt. M, the fore axletree bed, which is required to be a strong piece of timber, in which the fore axle- tree is bedded ; on this the upper carriage rests. In this timber the futchels, N N, are fixed ; it is also cultoved on the end, the same as the hind bed. NN, the futchels, are two light timbers, fixed through the fore axletree bed, contracted in the front, to receive the pole (), which part of the futchels is called the chaps ; but they widen towards the hind end, on the top of which the horizontal circle P C is placed, with proper blocks to raise it.

Across the fore ends of the chips of N N, the splinter board P is fixed ; the futchels are framed in a slant direction, to give a proper height to the pole; they have iron braces beneath; but sometimes the futchels are framed in a horizontal direction, and are made to rise in a cant from the front of the horizontal wheel, otherwise the pole must be compassed to raise it to a proper height. P, the splinter bar, is a long timber to which the horses' traces are attached ; on the ends are sockets, with eyes, on which the wheel-irons g are placed, and extend from thence to the ends of the axletree arms, holding the splinter-bar tightly back to oppose the strain of the draught, which is taken from the axletrees at the ends by the wheel-irons, and at the middle from the futchels, proper roller bolts, h h, being fixed at these situations to receive the traces by which the horses draw.

c c, The horizontal circle called a whole wheel front ; it consists of two equal circles, one of which is attached to the under carriage, by bed- ding it on the fore axle bed M, and the other is fixed beneath the fore transom D, the flat surfaces of these circles apply to each other, and the perch bolt, d, is in the centre of both ; their use is to preserve a steady bearing for the upper carriage to work upon while turning round, so that, in whatever direction the fore carriage may be, the steadiness is always preserved. O, the pole, is a long timber, which occasionally is placed in the futchel chaps N N, being nicely fitted therein, and is confined by two plates, the one bolted to

them at the bottom in front, and the other at the top, at the back end of the chaps ; the security is also assisted by a wooden pin k, called a gib, which is placed across the futchels, and in a staple which is in the pole ; and an iron pin also goes through the futchels and the poles at the free end ; on each side of the pole the horses are stationed, and

strapped to a loop at the fore end, called a pole ring; its use is to conduct the fore carriage, and may probably be called a carriage lever, k, The pole gib, made flat at the bottom, and rounding at the top, to fit the staple in the pole, which it keeps from using up at the fore end ; it is nailed on by a loose strap to the futchels, and kept in its place by another strap nailed on the opposite side, which is hitched on a brass or plated button.

We now come to the iron work of carriages, of which the articles are extremely numerous, and are manufactured by many different mechanics, such as spring and tyre-smiths, &c. The whole requires to be made of particularly tough metal, and to be fitted with extreme exactness, taking care that each gives its proper support without straining or twisting, and that its substance be adequate to the weight it is meant to carry. The iron-work forms the principal part of the carriage, both for value and use ; of course its properties cannot be too much attended to, we shall begin with the springs.

The springs, by which riding is made comfort- able, require the greatest attention to their pro- perties, otherwise their effect is materially injured. They should be all manufactured of well-tempered steel ; the greater the number of plates confined within the hoop the better ; and the longer the spring, the more easy and elastic its motion. Those that are the least erect, and of course that incline most to the weight which they carry, and that are also the longest, from the bearing, or stays, have superior advantages. Their forms are various, according to the purpose for which they are designed ; and they take their names ac- cording to their shape, such as the S, the C, the French horn, the scroll, the worm, the single and double elbow, or grasshopper, spring. The springs support the weight at their extremities, by means of hoops and shackles ; and their elas- ticity is from the hoops, at which parts the plates are all made thickest, gradually tapering thinner toward the extremities, and shortening about four inches in each plate, from the hoop where the bearing for the spring is fixed. Those that are placed in an erect form are supported with iron stays, which clip the spring at the hoop. Those that are placed horizontally, are supported from the middle, and play the whole length ; and those that are circular, have frequently no stays, but are well secured to the bearings; short light springs that contain few plates, have frequently no hoops, but the plates are confined with a small rivet, and the bolts with which the spring is confined to its bearings. The principle of springs has been thus stated : — To produce mo- tion when the load is fixed to the carriage, it is evident that the whole mass of the load and carriage together must be simultaneously moved; because, where all the particles of the mass are

fixed, one particle cannot move till the whole

move. It is well known how much a horse is obliged to strain himself in putting a heavy load in motion ; and the violent shocks he has to sus- tain from the jolting of the carriage, arising from the unbroken impulse of the whole mass coining upon him, are equally notorious. These disad- vantages never occur, at least to the hundredth part of the amount, when the load is supported on springs ; because, at the first impulse of the animal, the springs partly yield, and that part of the load which they sustain is momentarily left behind, while the carriage moves forward. \Vhen his load is therefore suspended in such a way as to allow of its vibrating freely backwards and forwards in the direction of the road, and the horse begins to pull, he has, in the first instance, only to move a part of his load, as the other part is for an instant left behind, and then gradually brought into motion. Hence, it is just in so far as springs allow the load to vibrate, that any ad- vantage is obtained for them in drawing. A con- siderable advantage would, it is said, be obtained by inserting spiral springs in the traces and har- ness : but, to return,

Figs. 6, 7, and 8, represent some of the varie- ties of springs in use for carriages. Fig. 6, called a double spring, is used for a coach or chariot, and has united to it, at the back plate, an ad- ditional spring, which turns the reverse way, to carry separate things, such as the budget, or hind platform ; it has a double shackle at g, one link of which carries the body, and the other the boot, or platform. The reverse spring has only to carry the hind part of the same boot, or platform. The stays and loops marked a, 6, c, d, e, f, are for the following purpose ; the stay a is rivetted within the hoop 6, and clips at bottom the fore or hind transom, and is there fixed by this bolt c, and is supported at the hoop by a stay d, which rests on the hind axletree bed, or budget bar ; stay, e, also clips or bolts through the spring at bottom, and clips or unites in a cap with the other; to oppose the pressure, it has a shackleˆ bolted loosely on the top, for the weight to hang by, and g is the shackle for the other spring. Fig. 7 is the scroll spring ; this is a peculiar formec spring for ease, and is used to various kinds ot carriages ; it rests, and is fixed on a long block for phaetons, or on the two bars only for coaches, &c., at the bearings m m ; the bottom is some- times turned up in a scroll form, for ornament only, in imitation of the upper part ; the brace is hung by a shackle, or placed round the spring, and, passing through a loop n, is fixed in a jack P at the bottom, which is a little roller, to take up the length of the brace at pleasure, by which the body hangs. Fig. 8 is a spring used to light whiskeys or chairs ; it is fixed on the axletree, by a Jew's harp staple, at o, which staple is united with the spring hoop and bolts through the

axletree ; it supports the weight at each end by one or two loops, p p, which are fixed at the bottom of the shafts ; it is mostly fixed at one end, but has room to play at the other. These springs most generally have only one loop at the hind end, in which it is fixed, and the other end bears on a thin plate, fixed to the bottom of the shafts; sometimes two such springs are combined together fora gig, in a manner as shown in fig. 4.'

The axletrees of the carriage on which the wheel revolves) are of two sorts, the one is made flat, and called a bedded axletree, it being sunk in the timbers ; the other is of an octagon form, flat only at the ends, which are bedded. The arms that pass through the wheels should be made perfectly round, and stronger at th.e shoulder than at the end, which is screwed to receive a nut ; through this and the axletree the linch-pin passes to keep all tight. The nuts are made with a collar at the face, and a temporary collar or washer is driven on to the back of the arms, which forms two shoulders for the wheel to wear against, and helps to preserve the grease from running out. The axletrees, being the principal or only support of the carriage, the greatest attention and care should be given in the selection of good iron, and in the manufacture of the ma- terial ; taking care that it is well wrought, and of sufficient strength ; making it rather stronger than necessary, to avoid risking the life of the passen- ger by the oversetting of the carriage, which mostly happens when an axletree breaks. By the bend of the axletrees the wheels are regulated to any width at .bottom, to suit the bracks of the roads in which they are to run, and are confined in the carriage by means of clips, hoops, and bolts. The shape of the axletree between the shoulders, varies according to its situation, or the form of the timber with which it is united ; those axletrees are the most firm that are flat bedded in the timber. The axletree-boxes, frequently called wheel-boxes, are long casings fitted close to the arms of the axletree, and securely fixed in the wheel stocks or naves ; they are usually made of wrought sheet iron, of a substance proportioned to the weight of the carriage. Their use is to contain a supply of grease, and to prevent the effects of friction, whereby the wheels are much assisted in their motion. There are many sorts of axletrees and boxes, either for the purpose of containing a longer supply of grease or oil ; or to be more durable, or to secure the wheels, and lessen the draught. These are all great advan- tages, and, though the expense is great, their utility must be more than adequate to it. The common axletree and box are of a conical figure, being strongest at the back or

shoulder, and re- gularly tapering to the end, through which the linch-pin is fitted ; a nut is screwed on the end of the axle to keep the wheel on ; the linch-pin passes through this nut to prevent it from turn- ing round and coming off. This axle and box is most generally used, being simple and cheap in comparison with the others ; the box is the only part which wears, and is frequently obliged to be refitted to the arms, otherwise they give the wheel an unsteady motion, and soon exhaust the supply of greaso.

Mr. Collinge, of Westminster-road, has for many years past manufactured a patent cylindri- cal axletree and box, which has very great advan- tages over the common sort. They have been a considerable time in use, and their advantages have also been fully proved, which principally lie, first, in the length of time they wear; second, in the silent and steady motion they preserve to the wheels ; third, the retaining the oil to prose- cute a journey of 2000 miles without being once

replenished ; and, fourth, they are very durable, and but little subject to be out of order. They have gone through some considerable improve- ments since their origin, and have met with such encouragement that it has induced other persons to copy them closely.

Fig. 5 is a section of this axletree and box, in which I is the axletree arm, made as perfectly cylindrical as possible, and of a peculiarly hard surface; the middle reduced to contain the oil necessary to feed the axletrees at the two bearings b b, having a shoulder c, against which the wheel- box, K K, takes its bearings ; the adjoining collar is grooved for a washer to preserve the oil, and prevent noise in its use, with a rim e e, on the collar of the axletree, to answer the use of the cuttoo. The end f is double screwed, to receive two nuts for securing the wheel ; the one screw turns the way of the wheel, the other the reverse, and is meant as an additional security. K K is the wheel-box cut through the middle, which is made of a very hard metal, nicely polished, and fitted to the arms, having a recess at the back part for containing a supply of oil. It has two shoulders c, the back one fits close to the rim of the collar, which it covers, the fore one projects without the surface of the wheel stock, and is screwed on the inside to receive the screw of the cap L, which covers the nut and receives the waste of oil, is mostly made of brass and screwed on, or in the box against the front of the wheel stock. This form of the cap is used to all but the common axletree.

The wheels to four-wheel carriages should be formed as nearly of a height as the appearance and construction will permit, and if not

required for heavy work, or bad roads, the lighter they are the better. The fixtures from whence the draught is taken, should be placed rather above the cen- tre of the largest wheel, for advantage of draught. The members of a wheel are of three descriptions, viz. the nave, the spokes, and the fellies ; the nave is the stock, made of elm, in which all the spokes are fixed, and in which the axletree or wheel-box is confined to receive the axle-arms. The spokes are straight, made of oak, firmly tenoned in the nave ; these are the support of the fellies or wheel rim. The fellies, made of ash or beech, form the rim of the wheel, and are divided into short lengths, in the proportion of one to every two spokes ; these are fixed on the spokes, and on them iron strakes are nailed. The height of the wheels regulates the number of spokes and fellies that they are to contain ; the larger the circumference of the wheel is, the greater number of spokes is required ; they should not be more to any wheel than fifteen inches distance on the fellies. The usual height of wheels extends to five feet eight inches, and are divided in four proportions, to contain from eight to fourteen spokes, and half that number of fellies ; these arc denominated eights, tens, twelves, or fourteens, which are the numbers of spokes in a wheel, or fellies in a pair. The height which regulates the number for an eight-spoked wheel, should not exceed three feet two inches ; for a ten, four feet six inches ; for a twelve, five feet four inches ; for a fourteen, five feet eight inches : these are the greatest heights for the different numbers of

spokes to eacn whee.. As the fore wheels of a four-wheel carriage receive more stress than the hind ones, the rule is, when the hind wheels are of that height to require fourteen spokes, the fore ones, if under the necessary height before stated, should have twelve, never allowing the fore wheels to have more than two spokes less than what is needful for the hind ones.

The patent, or bent timber wheel, has the rim of one piece bent to the circle, instead of being put together in short lengths, or fellies, which are hewn to the shape ; the strength of the bent tim- ber is preserved, while the other is destroyed ; besides, it is hooped with one piece of iron, in- stead of being shod with strakes, and will often last twice the time in wear that the others will, and has a much lighter and neater appearance, on which account it is often preferred. The mock patent, or hooped wheel, comes very near the others in appearance and use, particularly if made with ash fellies ; as the preservation of both lies

chiefly in the hoops that the wheels are rimmed with. It is composed partly on the pa- tent plan, and partly on common method, having the timber the same as the strake, and the iron as the patent wheel. The common sort of wheels are preferred by many, on account of their being more easily repaired than the hooped or patent wheel; but, though the repairing of them is more difficult, yet they are much less subject to need it.

Boots and budgets are mostly understood as one article, though so differently called ; they are intended for one purpose, which is that of carry- ing luggage, and are usually fixed on the fore part of the carriage, between the springs ; the principal difference lies in this ; one is made with a loose cover, and is properly the budget, being made convenient for trunks ; these sort of budgets, for travelling carriages, or common post-chaises, are, by far, the most useful, the others are boots, of a trunk form, made more square, and adapted to town carriages, but can be of no other advantage than that of carrying loose hay, horse-cloths, &c. From one or other of these boob, conveniencies are sometimes made for the substitute of a coach-box, to save labor to the horse when the carriage is used for post- work, or to preserve an uninterrupted view from within. Boots are frequently used at the fore end of phaetons, and then mostly have the fore springs fixed thereto, by means of carved blocks, which are bolted to their sides ; these usually have the step for the entrance to the body fixed or hung. Boots or budgets are sometimes used to the hind part of travelling carriages, but more frequently to the hind parts of phaetons, gigs, or curricles, and are of two sizes less than what are used to coaches or chariots. Platforms, raisers, or blocks, are added to a carriage, either as mat- ter of necessity or appearance : their use is to elevate and support the budget, boot, hind foot- board, and springs ; they are generally placed on the side of the carriage, and relieve the inside famines from being obscured by the platforms, as they are lightened and moulded, and give the carriage a moie airy appearance.

A handsome coach-box is a great ornament to a carriage Of these there aie various sorts now

introduced, to save unnecessary burden to the horse, and fatigue to the driver, which are two very material objects. The objection by many persons to a coach-box, is the obstruction it gives to the view ; but they may be so adapted as not materially to affect the sight ; and any conve- nience, however simple, is better than fatiguing both man and horse ; but, to carriages used in town, a substantial coach-box is indispensibly necessary, as it affords so material an advantage to the driver. The standard coach-box is the most general and simple in use,

as it is light, and convenient to remove ; it is preferred for those carriages that are alternately used for town and country ; these kind of boxes are simply fixed by means of plates, which clip the transom, and are stayed on the hind or boot bar, and fixed with collar-bolts.

The Salisbury boot, though bulky and of a heavy appearance, is by far the most convenient and fashionable coach-box in use ; it is boot and coach-box together : and, although it be appa- rently heavy, it is not more so than the common box or boot, together, as the inside is all a ca- vity, which is peculiarly convenient for luggage, having a large, flat bottom, which, resting on the framings or blocks, makes it more steady than coach-boxes on the common principles. This sort, however, is not so convenient to remove, and, when taken off, the vacant space must be filled by another kind of budget, such as is usually put on to post-chaises.

We have only room to notice that Mr. Birch, of Great Queen-street, London, obtained, in the year 1807, a patent for an improvement in the construction of the roofs and upper quarters of landaus, barouches, and other carriages, the upper parts of which are made to fall down : which improvement is thus described.

‘ Frame and fix in the top quarter rails to the tops of the standing pillars and slats, and fix the slats to the neck plates ; rabbet the under parts of the standing pillars, the top quarter rails and the slats, and board them with thin deals, or any other proper material. Let the crown- pieces or cornice rails be long enough to bevel or mitre into the corners of the top of the stand- ing pillars; and let in the hinges and thimble catches on the top of the crown-pieces and top of the quarter rails. Fix on the hoops-ticks and back and front rails, and board them all up, ex- cept the two hoop-sticks which are nearest to the hinges, which may be placed as close as possible, to admit of the head sticking conveniently low. Conceal or let in one or more boxed locks to the centre hoop-sticks, or at least the hoops-ticks which unite the thimble catches, and fix them so as that they may be opened by a key on the in- side of the carriage. Stretch strong canvas, or other fit material, and nail it, or otherwise fasten it, both on the inside and the outside of the slats and elbows, and stuff it between with flocks or tow, or other fit material. Likewise stretch and nail on or fasten canvas, or any other proper ma- terial, to the top hoop-sticks, on the roof which are nearest the hinges before you put on the lea- ther covering.’

The patentee says, that, in travelling, a carriage built upon this construction, will carry one or more

imperials on its roof, without interfering with the regular process of opening it, and, when in that situation, will remain without doing the least in- jury to its upper part. Another advantage is mentioned, viz. that the spring curtains to the landaus remain without being removed, whereas those on the old plan were obliged to be taken down before there was a possibility of open- ing it.

The practical workman, previously to making the body of a carriage, receives a drawing made on a square canvas ; by this the workman makes his patterns, marks out his timber, and saws it according to those patterns. The bottom which is the essential or main timber of the whole, as all the rest principally depend upon it, is of a circular form, four feet long, compassed six inches from the centre, two inches deep, five inches and a half wide in the centre, reduced at the ends to two inches. From the front of the bottom side, at the distant of two feet nine inches, close to the outer circle are framed the standing pillars, the length two feet six inches, one inch and three quarters thick, and two inches and three quarters deep, sweeping outward at the bot- tom three inches to make the side of the body of a circular form. The front pillars are two feet six inches long, and nine inches wide at the bottom, reduced by an easy sweep to two inches and three quarters at the top, and the whole is two inches and three quarters thick, framed into the front of the bottom side two inches from the point on the outer circle. The corner pillar (two feet six inches long, two inches square, compassed at the bottom five inches, to make a continuation of the sweep of the bottom side, and form a cir- cular quarter), is let into the extreme hind point of the bottom side on the outer circle. To the inside of the bottom side, is framed the front bar three feet long, two inches and a half square, at the distance of two inches from the point, the hind bar three feet four inches long, two inches and a half square, framed in the same manner three inches from the point. On the bottom of the bottom side, is fitted a wooden rocker, which continues from end to end, three inches wide, and four deep, in the centre, reduced to a point at the ends, fixed on with iron bolts, level with the inside of the bottom side. To the rocker the bottom, consisting of deal boards grooved in each other, is nailed and strengthened with iron plates, extending from back to front ; the out- side elbow is then framed, the length two feet one inch and a quarter thick, and three inches wide, in the middle reduced to an inch and a half at the ends, and turns up at the back part two inches, in an easy sweep, is fixed on the standing pillar nineteen inches from the bottom

side. In the hind pillar is framed the rail, three feet five inches long, one inch thick, four inches deep, twelve inches from the bottom side, over which, at the distance of five inches, is framed the sword case rail of the same length, one inch and a half square, compassed one inch, between the stand- ing pillars framed the seat rail, four feet long, two inches square, at the distance of six inches from the bottom side, square with that to the in- side of the corner pillars, is screwed the back seat rail. The front latten rail, three feet seven

inches long, three quarters of an inch thick, and one inch and three quarters deep, is framed in the front pillars, distant from the bottom point one foot four inches. The fence rail of the same dimensions ten inches higher. The doors are made with two upright pillars, both of the same dimensions and sweep as the standing pillars, one of which is called the hinge pillar, the other the shutting pillar, in which is framed a batten and fence rail, of the same dimensions and dis- tance as the front two feet long, each compassed one inch on the outside, making a regular sweep with the elbow. In the bottom is framed the door bottom, two feet long, two inches and a half thick, and three inches and a half deep in the centre, compassed to the top of the bottom side. The body, being now framed, is grooved out to receive the pannels and rounded off for carving : when carved the pannelling commences, which is of dry mahogany, planed thin to the grooves, the hind pannel is then cut to the size between the corner pillars ; the lower back rail and bot- tom bar being then compassed by heat to the sweep of the pillar, and fixed to the bottom sides with the pillars, through which two iron bolts are driven and screwed on the inside. The same process is observed with the front quarters, and doors; previous to which, battens are fixed to force the pannels on the sides to a circular form ; the pannels are then strengthened on the inside by small pieces of wood an inch and a half square and a quarter of an inch thick, fixed all over them with glue, which is called blocking. The sword case is then fixed in the hind part, by screwing two solid pieces of ash to the corner pillar projecting in the centre eight inches, round which is turned, by means of heat, a thin deal board strengthened inside with glue and canvas ; the doors are then hung with brass hinges, fixed in the fore pillars, and fastened, when shut, with a spring lock and dovetail catch to the standing pillars; round the bottom, and upright edges, are screwed brass rabbet plates, to give a good finish, and hide the joints. The pillars are then pre- pared for the head. In the standing pillar is fixed a strong iron joint, to which is fitted the top pillar, of two feet long and three inches square ; in the top of it is fixed the top door case with a joint and hinge, three inches from the standing pillar, full length shree feet six inches by three inches in the

centre, reduced at both ends to two inches and a quarter; the front pillar of one foot ten inches in length, and two inches and three quarters square, fastened with a double hinge joint, the front of the door case fitted at bottom, on the top of the front pillar, and fixed to that with a strong dovetail lock ; the front top rail three feet seven inches long, and two inches and a quarter square, compassed one inch, and the top and bottom is fixed to the front part of the door cases. In the centre of the fore end is fixed the middle front pillar, length four feet, two inches and three quarters wide, and an incl . and a quarter thick, in the centre of which pillar, is a hock joint, the upper part fastening with a dovetail plate and bolt. The whole of the pillars are then grooved out for the glasses and blinds ; the doors and front outside being now finished, the inside is boarded up with thin deal to receive

the lining and preserve the glasses. The seat is then finished, by fixing boards on the seat rails, from the back pannel one foot eight inches. The hind upper quarter is formed by two compass slats, fixed to a neck-plate in the standing pillar joint, two feet eight inches long, two inches at top, reduced to one inch at bottom and an inch thick ; on the top of the hind slat is fixed the back rail, three feet five inches long, by two inches square ; sweeped to correspond with the front rail, on the top of the other slat is fixed a hoop-stick of the same, sweep three feet ten inches by one inch thick and two inches wide. On the top of the door case are fixed three more hoop-sticks of the same dimensions, at the dis- tance of two inches from each other. On the back of the elbow and to the corner pillar is fixed a strong iron prop, which projects six inches from the body ; secured inside by an iron stay, as also one on the top of the standing pillar projecting an inch and a quarter, in the ends of which props the main joint is fixed ; the lower slat and top rail is then fixed up eighteen inches from the back rail ; and the upper slat and hoop-stick fixed ten inches from it; on the elbows made to the sweep are fixed two strong iron plates five inches deep. The steps are then fixed in the centre of the door way in the bottom sides with bolts, width eleven inches, depth, if treble, eleven inches, if single, sixteen inches, cased round with deal to conceal them, when the body is tummed ; the body loops are fixed on the bottom of fhe rockers, with bolts and nut headed screws, the hind body loops thirteen inches compressed to fancy ; the front body loop to the head eighteen inches, from which proceeds a horn six inches long, joined at top to a split stay, which takes the foot board at

eighteen inches distance ; the other part extending upwards to the bottom of the barouch seat eighteen inches ; there is also an iron stay fixed in a socket at the top part in front of the fore pillar, which fastens to the bottom of the seat at the distance of sixteen inches from the body ; the width of the seat fifteen inches, and length thirty-one inches, rounded at the hind corners, made of solid board, on the top of which an iron is fixed twelve inches high, level with the outside ; the foot board thirty-cfne inches long, seventeen inches deep, and from the seat to the centre eighteen inches, which finishes the body from the coach-makers' bench.

The body being completed from the coach- makers, it is usual next to cover the sword case with a piece of fine neat's leather prepared for that purpose, and put on wet with paste or white lead to keep it from rising in the hollow part. A very great improvement has lately taken place in covering the top part of coaches, and chariots, by putting the leather on whole, so as to prevent the possibility of wet penetrating, as was fre- quently the case when put on in separate pieces, and joined on each other by nails, &c. The pannels of the body are painted three or four times with oil color, and several times after with a composition of ground white lead, spruce or brown ochre, turpentine and varnish, and when hard, rubbed to a smooth surface with pumice stones and water. The color, whatever it may bey is laid a sufficient number of times to be solid,

and varnished twice, previous to arms, if any, being put on, afterwards varnished as often as required, being various according to color, 8tc. &c. The process of painting the carriage is, by giving it a sufficient number of coats to fill up the grain of the wood, rubbing it between each coat with fine sand paper, ti'/l it becomes smooth, then or- nament it by picking out, and varnish it as often as the nature of the color requires, which never exceeds four times. The inside of the body is then trimmed, the art of which consist* in filling a lining in it composed of cloth, leather lace, &c. in the most ornamental and comfortable manner. The roof, the doors, front, bollom quarters, seat-fall, and the bottom part of the cushions are usually cloth, the upper quarters, top and bottom back, elbows, and top of the cushions morocco. The process is this ; first cut out the roof and all the larger parts of the lining ; fit the pockets and falls on the front and doors, the pockets and falls are usually bound with broad lace. The morocco partof the lining, with the exception of thecushions and elbows, are made with canvas backs, and bound with narrow lace, stuffed full with curled hair, and tufted with silk or worsted. When the lining is cut out and made up, proceed to line the inside of the sword case with serge, or shal- loon of the color of the lining, paste up slips of cloth

round the lights, and paste cloth on the recess of the door left to contain the step ; nail lace all round the lights, and finish round the same with narrow lace, called parting, fix in the elbows, the bottom, back, bottom quarters, top back, and top quarters, fixing up the roof which is fastened to the hoop-sticks by narrow slips of 1 1st nailed to them, and screwed to the roof. The pillars are lined with slips of cloth, bound on each side with lace, through which the hand holders' pass, and are nailed firm to the standing pillars, fix in the front, finishing the sides with the line of lace, which forms part of the front light, fix on the door lining finishing the edges with a row of parting lace all round. The steps are mostly now very handsomely finished, one side being mo- rocco, and lined with cloth or velvet, welted all round, and the front bound with broad lace. The treads are usually carpet; and, besides a carpet fitted in the bottom, most carriages have spring cur- tains made of silk, on barrels with silvered ends, the cutting out and fixing up of which, forms a part of the inside trimming. The outside upper part is covered with oiled linen, previous to being covered with very strong-grained neat's leather, which is closed and welted together to fit the roof quarters and back, and, when fixed on, completes the trimmings of the body, the seat ; the top iron is usually platted with neats leather, and japaned, round it a squab or cushion is fitted, the back part of strong leather, the front or inside cloth puckered in full, and welted all round, stuffed and tufted, and fixed in the top iron with straps made up with buckles. Inside the iron the the cushion for the seat is fitted, and a fall is fixed along the front part, a deep valance all round the seat of very strong leather, and a leather from the foot board to the front of the seat, which is called a heel leather. Bodies are, in a greatei or less degree, ornamented with beading, of which there are three sorts, plated, brass, and

queen's metal ; by the quality of which, buckles, handles, crests, and other ornaments are guided. On the front upper pillars are fixed the lamps,

In the canon law, one who is empowered or appointed to perform the duties of another. A bishop that is unprofitable to his diocese ought

which have been much improved of late years, to be deposed and no coadjutor assigned him. Ayliffe

and are usually made to burn candles ; the body and carriage thus prepared are fixed together, by suspending the body loops to the springs of the carriage, by leather braces made of several strips, strongly sewed together with buckles fixed in them ; there are also cheek and collar braces, fixed to the upper and lower part of the body, to prevent any violent motion which it would other- wise have.

By law, the wares of coachmakers shall be searched, by persons appointed by the sadler's company. Stat. 1 Jac. I. c. 22. And makers of coaches, chariots, chaises, &c. must take out annual licences from the excise office, and pay a duty for every carriage built by them for sale.

COACHMAN. The driver of a coach, is ordi- narily placed on a seat raised before the body. A curious circumstance, connected with this subject, is mentioned in Spanish history. The duke d'Olivarez, having found that a very im- portant secret, mentioned in his coach had been overheard and revealed by his coachman, ordered that the place of the Spanish coachman should be the same with that of the French stage-coach- man and our postillion, viz. on the first horse on the left. When lord Macartney presented to one of the Chinese mandarins a very handsome English state-coach for the emperor, the man- darin supposed the elevated coach-box in front was intended for the seat of his majesty, and when it was explained that it was for the driver of the horses, he angrily said, ' that it must be altered, for that the son of heaven would never allow any one to sit above him.'

COA'CT, v. n. ˆ From con and act. Lat.

COAC'TION, n. s. > coactus. To act together ;

COAC'TIVE, adj. J to act in concert. Not used.

COADJU'VANCY, n. s. from Lat. con and adjuvo. Help; concurrent help; contribution of help; co-operation.

Crystal is a mineral body, in the difference of stones, made of a lentous percolation of earth, drawn from the most pure and limpid juice thereof, owing to the coldness of the earth some concurrence and co- adjuvancy, but not immediate determination and effi- ciency. Browne's Vulgar Errowrs.

COADUNAT./E, in botany, an order of plants in the fragmenta methodi naturalis of Linnaeus. See BOTANY.

COADUNITION, n. s. from Lat. con, ad, unitio. The conjunction of different substances into one mass.

Bodies seem to have an intrinsick principle of, or corruption from, the coadunition of particles endued with contrary qualities. Hale's Origin of Mankind. COA'GMENT, v. a.) From Lat. con and COAGMENTA'TION, n. s. } agmen. To congre- gate or heap together. I have only found the participle in use. Collection, or coacervation, into one mass; union; conjunction.

The third, part rests in the well-joining, cementing,

and coagmentation of words, wKen it is smooth, gentle,

and sweet. Ben Jonson.

Had the word been coagmented from that supposed

fortuitous jumble, this hypothesis had been tolerable.

Glanville.

COA'GULATE,7;.a.&v.w.ˆ Lat. coagulo. COA'GULABLE, adj. I To force into

COA'GULATION, n. s. V concretions ; as

COA'GULATIVE, adj. i by affusions of

COA'GULATOR, n. s. J some other sub-

stance ; to turn milk ; that which is capable of concretion ; to run into concretions, or congela-

Compulsion ; force, either restraining or impel- tions. The remaining derivatives have the same

ling. Having the force of restraining or impel- ling ; compulsory ; restrictive.

But if I tell how these two did coact, Shall I not lye in publishing a truth. Shakspeare.

The Levitical priests, in the old law, never arro- gated unto themselves any temporal or coactire power.

Raleigh.

It had the passions in perfect subjection; and, though its command over them was persuasive and po- litical, yet it had the force of

coaction and despot.ical.

South

COADJU’MENT, n. s. from Lat. con and adjumentum. Mutual assistance.

COADJUTANT, n. s. from Lat. con and adjuto. Helping; operating.

Thracius coadjutant, and the roar

Of fierce Euroclydon. Philips.

COADJUTOR, n. s. from Lat. con and adju- tor. A fellow-helper; an assistant; an asso- ciate ; one engaged in the assistance of another.

I should not succeed in a project whereof I have had no hint from my predecessors, the poets, or their seconds or coadjutors, the criticks. Dryden.

Away the friendly coadjutor flies. Garth's Disp.

A gownman of a different make,

Whom Pallas, once Vˆnesa's tutor,

Had fixed on for her coadjutor. Swift.

application, according to their respective parts of speech.

Sal tartre, alcaly, and salt puparat,

And combust materes, and coagulat.

Chaucer. Canterbury Tales. Roasted in wrath and fire, And thus oversized with coagulate gore. Shakspeare.

Vivification ever consisteth in spirits attenuate, which the cold doth congeal and coagulate.

Bacon's Natural History.

Spirit of wine commixed with milk, a third part spirit of wine, and two parts milk, coagulateth little, but mingleth ; and the spirit swims not above. Bacon.

Stones that are rich in vitriol, being often drenched with rain-water, the liquor will then extract a fine and transparent substance, coagulable into vitriol.

Boyle.

About the third part of the oil olive, which was driven over into the receiver, did there coagulate into a whitish body, almost like butter. Id.

To manifest the coagulative power, we have some- times in a minute

arrested the fluidity of new milk, and turned it into a curdled substance, only by dex- terously mingling with it a few drops of good oil of vitriol. Id.

As the substance of coagulations is not merely sa- line, nothing dissolves them but what penetrates and relaxes at the same time. Arhithnot

COAGULATION, in chemistry, the act of ren- dering a fluid body, in some degree, solid, by exposure to cold, or by the addition of some agent by which it is decomposed. Thus the white of eggs, the serum of the blood, &c. are coagulated by the addition of alcohol ; milk by mixture with acids ; the serum of the blood by exposure to heat, &c. Some writers have called crystallisation by the same name. See ALBUMEN.

COAK, a kind of charred fossile coal. For the exciting intense heats, as for the smelting of iron ore, and for operations where the acid and oily particles would be detrimental, as the drying of malt, coals are previously charred, or reduced to coak ; that is, they undergo an operation similar to that by which charcoal is made. By this operation coals are deprived of their phlegm, their acid liquor, and part of their fluid oil. Coak, therefore, consists of the two most fixed constituents parts, the heavy oil and the earth, together with the acid concrete salt, which, though volatile, is dissolved by the oil and the earth. It is used in metallurgic works all over Britain, and gives most intense heat. See below.

COAL, 7i. s. & v. a.ˆ\ Sax. col ; Lat. color ; COAL-BLACK, adj. heat. A peculiar mine- COAL-BOX, n. s. ral fossil fuel ; any

COAL-MINE, n. s. thing inflamed or igni- COAL-PIT, re. s. ˆted. Black, of the darkest species, is the

COAL-STONE, a. s. COAL-WORN”; n. s. CO’ALERY, n. s. CQ’ILY, adj.

color of the fossil-coal. Writing on a light sur- J face, with a piece of coal, Camden calls coaling; ‘ he coaled out rhimes upon the wall.’ To ccal, is to burn,or to convert into coal any substance capable of such transformation by fire.

Sered pokettes, sal peter, and vitriole ; And divers fires made of wode

and cole.

Chaucer's Canterbury Tales. Instede of cote-armure, — on his harnais, — With nayles yelive and bright as any gold, — He hadde a ceres-skin, co/e-blake for old. Id.

As burning ./Etna, from his boiling stew, Doth belch out flames, and rocks in pieces broke,

And ragged ribs of mountains molten new, Enwrapt in coal-black clouds and filthy smoke.

Faerie Queenc. You are no surer, no, Than is the coal of fire upon the ice. Or hailstones in the sun. Shakspeare.

You have blown this coal betwixt my lord and me.

Id.

Whatsoever doth so alter a body, as it returneth

not again to that it was, may be called alteratio major ;

as when cheese is made of curds, or coals of wood, or

bricks of earth. Bacon.

Charcoal of roots, coaled into great pieces, lasts

longer than ordinary charcoal. Id.

Or coaly Tyne, or ancient hallowed Dee. Milton,

Coal-black his color, but like jet it shone ; His legs and flowing tail were white alone.

Dry den.

Leave a pail of dirty water, a coal-boar, a bottle, a broom, and such other unsightly things. Swift.

Cool-stone flames easily, and burns freely ; but Holds and endures the fire much longer than coal.

Woodward.

Two fine stalactitae were found hanging from a black stone, at a

deserted vault in Benwell coalery.

Id.

A leaf of the polypody kind, found in the sinking of a coal-pit. fj,

There is a vast treasure in the old English, from

whence authors may draw constant supplies ; as our

officers make their surest remits from the coal-works

and the mines. Felton.

Springs injure land, that flow from coal-mines.

Morttmer.

Henry III. granted a charter to the town of New- castle, in which he gave the inhabitants a license to dig coal. This is the first mention of coal in England. Hume's History of Englcmd. COAL, among chemists, is synonymous with charcoal, and in the new nomenclature is styled carbon. See CHARCOAL and CHEMISTRY, Index. In the burning of charcoal one part of it exhales without decomposition, and forms a vapor, or an invisible gas, called fixed air or carbonic acid. This vapor is found to be very pernicious, and to affect the animal system in such a manner as to occasion death in a very short time. For this reason it is dangerous to remain in a close place where charcoal, or any other sort of coal, is burnt. Persons struck by this vapor are stunned, faint, suffer a violent head-ache, and fall down senseless and motionless. The best method of recovering them is by exposure to the open air, and by making them swallow or breathe the steam of vinegar.

COAL, in mineralogy, a kind of solid inflam- mable substance, supposed to be of a bituminous nature, and commonly used for fuel. Of this substance there are various species, viz.

COAL, BOVEY, XYLANTHRAX, of a brown or brownish-black color, and of a yellow laminar texture. According to the German chemists its ashes contain a little fixed alkali ; but Mr. Mills disputes this. It is found in almost all the countries of Europe. See XYLANTHRAX.

COAL, CANNEL, AMPELITES, of a dull black color. It breaks easily in all directions ; and, if broken transversely, presents a smooth con- choidal surface. It burns with a bright lively flame, but is very apt to fly in pieces in the fire ; however, it is said to be entirely deprived of

this property by immersion in water for some hours previous to its being used. It contains a con- siderable quantity of petrol in a less condensed state than other coals. Its specific gravity is about 1270. See AMPELITES.

COAL, CULM, called kolm by the Swedes, has ~a greater portion of argillaceous earth and vi- triolic acid, with a moderate proportion of petrol. It has the same appearance which the lithan- thrax, though its texture is more dull : it burns with a flame, without being consumed, but leaves behind it a flag of the same bulk with the original volume of the coal. Kirwan thus de- scribes it in the Memoirs of the Stockholm Academy : ‘ its fracture has a rougher section than the cannel coal ; its specific gravity is from 1300 to 1370. The best kind affords by distil- lation, at first, fixed air ; then, an acid liquor ; afterwards, inflammable air, and light oil of the nature of petrol ; then, a volatile alkali, and, lastly, pitch oil. The residuum is nearly three-

fourths of the whole ; and being slowly burnt, affords thirteen per cent, of ashes, which consists mostly of argillaceous earth ; and about 300th parts of them are magnetic. It is found in Eng- land and among some alluminous ores in Swe- den.’

COAL, KILKENNY, is the lightest of any; its specific gravity being only about 1400. It contains the largest quantity of asphaltum ; burns with less smoke and flame, and more in- tensely, though more slowly, than the cannel coal. The quantity of earth it contains does not exceed one-twentieth part of its weight; but this kind of coal is frequently mixed with py- rites. It is found in Kilkenny, Ireland. Its quality of burning without smoke, is proverbi- ally used as an encomium on the country.

COAL, PIT. Pit coal is a black, solid, com- pact, brittle mass, of moderate hardness, lamel- lated structure, more or less shining, but seldom capable of a good polish ; and does not melt when heated. According to Kirwan, it con- sists of petrol or asphaltum, intimately mixed with a small portion of earth chiefly argilla- ceous ; seldom calcareous ; and frequently mixed with pyrites. A red tincture is extracted from it by a spirit of wine, but caustic alkali attacks the bituminous part. ‘ The varieties of this coal,’ says Mr. Magellan, ‘ are very numerous, according to the different substances with which it is mixed/ See COAL-MINE, sect. VIII., ‘ But in regard to their economical uses, only two kinds are taken notice of by the British legisla- ture,

viz. culm, and caking coals. The caking coals, in burning, show an incipient fusion, so that their smallest pieces unite in the fire into one mass ; by which means the smallest pieces, and even the mere dust of this kind, are almost equally valuable with the largest pieces. The culm does not fuse or unite in the fiercest fire ; so that the small coal, being unfit for domestic purposes, can only be used in burning lime-stone.' See CULM.

COAL, SLATE, contains such a quantity of argillaceous earth, that it looks like common slate ; however it burns by itself with a flame. M. Magellan is of opinion that this is the bitu- minous schistus, already described under CLAY. This schistus is of a dark, bluish, rusty color ; when thrown on the fire it burns with a lively flame, and almost as readily as the oily wood of dry olive tree, or lignum vitae ; emitting the very disagreeable smell of petrol. Such large quarries of it are found near Purbeck in Dorset- shire, that the poorer part of the inhabitants are thence supplied with fuel. From the ap- pearance of this slaty coal, Cronstadt had been in- duced to suppose that the earth of all kinds of coal is argillaceous, though it is not so easy to distinguish it after being burnt. The pit coals, he says, contain more or less of the vitriolic acid ; for which reason the smoke arising from them attacks silver in the same manner as sulphur does, let the coals be ever so free from marcasite, which however, is often imbedded or mixed with them.

COAL, SULPHUREOUS, consists of the former kinds mixed with a very considerable portion of pyrites ; whence it is apt to moulder and break when exposed to the air, after which water will

act upon it. It contains yellow spots that 'ook like metal ; burns witli a sulphureous smell, leaving behind it either slag or sulphureous ashes, or both. Its specific gravity is 1500 or more.

The above are the most considerable varieties of coal commonly known ; but we must not imagine that each of them is to be met with in a homogeneous state. On the contrary, the differ- ent qualities and proportions of their ingredients make a vast number of other varieties, fit for dif- ferent purposes, according to the quality and quantity of those they contain. Some of the finer sorts generally run like veins between those of a coarser kind. M. Magellan observed in the fine coal employed in a curious button manufac- tory at Birmingham, that it produced a much clearer flame than he had ever observed from common coal ; yet, on enquiry, he found that the former was picked out from the common coal of the country, through which it ran in veins, and was easily distinguished by the manufactu- rers. Fourcroy

remarks, that this fossil bitumen, when heated in contact with a body in combus- tion, provided it has a free access of air, kindles the more slowly and wrth the greater difficulty, in proportion as it is more weighty and compact. When once kindled, it emits a strong and durable heat, and burns for a long time before it is con- sumed. The matter that is burned, and produces the flame appears very dense, and seems united to some other substance which retards its des- truction. On burning it emits a peculiar and strong smell, which is not at all sulphureous when the coal contains no pyrites. When the combustible, oily, and other volatile parts of the coal are dissipated, if the combustion be then stopped, the remainder is reduced to a true char- red state, and is called coak. It is well known, says M. Magellan, that the English method of burning pit coal into coak has been a most pro- fitable and happy acquisition for the smelting our ores, and for many other metallurgical and chemical processes in this island. But the in- genious and extensive undertaking of lord Dun- donald, by which he turns to very valuable purposes the mines of coal in his and other estates, building ovens of a proper construction for burning pit-coal into coak, and at the same time for collecting, in separate receptacles, the volatile alkali, oil, tar, and pitch, which were generally lost by the usual method, deserves to be noticed, as it affords a very remarkable instance of the great losses to mankind, for want of care- fully attending to every result from great processes of art when made on a large scale. These ovens are so contrived, as to admit an under supply of air ; and the coals, after being kindled, decom- pose themselves by a slow but incomplete com- bustion, which does not destroy the ingredients. The residuum left in the oven proves to he most excellent cinders or coaks, whilst the volatile parts which otherwise would be dissipated in the air, are separated and condensed in reservoirs or receptacles of capacious size, placed at proper distances beyond the reach of fire. M. Faujas de St. Fond, who visited these works in a trip he made to Scotland, undertook to erect a similar kind of oven in France. On subjecting

pit coal of any kind to distillation in close vessels, it first yields a phlegm or watery liquor ; then an ethereal or volatile oil ; afterwards a volatile alkali ; and lastly, a thick and greasy oil ; but it is remarkable, that, by rectifying this last oil, a transparent thin and light oil of a straw color is produced, which, being exposed to the air, becomes black like animal oils. From these and similar observations, Messrs. Magellan, Chattal, and others, have inferred, that pit coal is

originally a vegetable substance.

COAL, SMALL, is a term sometimes used for a sort of charcoal prepared from the spray and brushwood stripped off from the branches of coppice wood, sometimes bound in barns for that purpose, and sometimes charred without binding, in which case it is called coming together.

Kirwan divides carbonaceous substances into four species, of which the first two contain almost all the varieties of coal. i. Native mineral car- bon, the blende kohle of Werner, of which the coal found near Kilkenny and the culm of Wales is a species. The former he thus characterises : — Its color is black, and when fresh broken some parts of it generally display a violet color. Its lustre, 4. Metallic. • Transparency, 0. Frac- ture foliated, and the course of the lamellae variously and confusedly directed. Its fragments, from 2 to 3, often coated with whitish illinitions. Hardness, 7. Specific gravity, 1-526. Will not burn till wholly ignited, and then slowly con- sumes, without caking, or emitting flame or smoke.

ii. Mineral carbon, impregnated with bitumen, which he subdivides into three families, and thus describes : —

First Family. — Mineral carbon, impregnated with maltha ; cannel coal. — First variety. — Com- pact. This is found chiefly in Lancashire, its proper name is candle-coal, as it burns like a candle; but candles in that shire are called cannels. Its color is black. Lustre, common. Transparency, 0. Cross fracture, conchoidal. Fragments, from 2 to 3. Hardness, from 7 to 8. Specific gravity, T273 per Watson, or 1-232 by my trials. Does not stain the fingers; easily kindles, and burns with a large bright flame, but of short duration, and then leaves a sooty residuum that difficultly bums ; does not cake; 240 grains of it heated until all the coaly part was consumed, left 7‘5 of reddish-brown ashes, mostly argillaceous and siliceous ; 100 parts of it contain by my analysis 75 carbon, 21-7 mal- tha, and 312 of ashes.

Second Variety .r — Slaty. — This coal comes to us from Scotland, where it is called splent- coal. Its color is grayish-black. Lustre, 2, common. Transparency, 0. Fracture, partly slaty and partly imperfectly conchoidal. Frag- ments, 3. Hardness, from 5 to 8. Brittle. Specific gravity, 1-426, by my trials; burns as the former variety, but soon ceases to flame ; does not cake, and leaves a stony residuum ; 240 grains of it, treated as the former, left 50 grains of reddish-gray ashes; 100 parts of it contain by my analysis 47-6 carbon, 31 ‘6 maltha, and 20,8 of ashes. < I even doubt,' says this mi- neralogist '

whether it contains so much carbon,

for the best specimens discovered by the smell, when inflamed, a proportion of sulphur.'

Second Family. — Mineral carbon, impregnated with asphalt and maltha, in various proportions. Peckhole, Schiefer, kohle of Werner. — Its color is more or less perfectly black, sometimes pre- senting bright reddish-yellow illinitions, some- times variegated. Lustre, from 2 to 4, seldom common, mostly greasy or metallic. Transparency 0. Fracture various, mostly foliated, plain, or curved, large or small granularly foliated, some- times in layers of contrary directions, sometimes promiscuously directed, sometimes presenting small conchoidal distinct concretions, sometimes striated; often in the gross; slaty. Its frag- ments, 2, often oblong parallelepipeds. Hard- ness, from 4 to 6. Specific gravity, from 1-25 to 137, stains the fingers, if moist, or disinte- grating, otherwise not. Inflames more slowly, but burns longer than the former family, and cakes more or less, according to the proportion of asphalt. It is often contaminated with lumps, or veins of martial pyrites, sometimes with alum, or intersected with veins of spar. Of this family there are numerous varieties.

First Variety. — From Whitehaven. — Black. Lustre 3, greasy. Fracture plane foliated. Fragments 2. Hardness 6, very brittle. Spe- cific gravity 1*257; 240 grains of it exposed to a heat of 27° for five hours, after flaming a con- siderable time, caked, and at last left fourteen grains of reddish ashes; 100 parts of it con- tain by my analysis 56-8 carbon, and 43 of a mixture of asphalt and maltha, in which the as- phalt predominates.

Second Variety. — From Wigan. — Black. Lustre 3, greasy, often with bright yellowish illi- nitions. Fracture foliated, some laminae uni- formly, some promiscuonsly directed, in the gross slaty. Fragments 2. Hardness 6. Spe- cific gravity 1-268, burns more quickly than the former ; 382 grains of it exposed in an open crucible, like the former, to a heat of 27°, for four hours, left a residuum of 5′ 13 grains of reddish-brown ashes.

Third Variety. — From Swansea. — Black. Lustre, 2. Fracture, foliated, but from a con- trary direction of the lamellae seems in part fibrous. Fragments 2. Hardness 5, very brittle. Specific gravity 1‘357, burns more slowly than the former varieties; 240 grains of it, treated as above, left eight grains of yellowish- red ashes. One hundred parts of it contain 73-53 of carbon, 23-16 of a mixture of asphalt and maltha, in which the former appears to pre- dominate, and 5,21 of gray ashes.

Fourth Variety . — From Leitrim. — Black. Lustre 3. Fracture, foliated. Fragments, 2. Hard- ness, 6, very brittle. Specific gravity, 1,351 ; 240 grains of it exposed to heat, as before, left in three hours a residuum of 12,5 of reddish- gray ashes; one hundred pacts of it contain 71,42 of carbon, 23,37 of a mixture of asphalt and maltha, in which the latter appears to pre- dominate, and 521 of gray ashes.

Fifth Variety. — From Irvine, in Scotland. — Black. Presents layers in contrary directions, hence often called ribband-coal. Lustre of the alternate layers 3, 2. Fracture small grained

and coarse giainecl curved foliated. Hardness from 4 to 5. Specific gravity 1-259. Its com- position I have not examined. The specific gravity of good bituminous coal never exceeds 1-4, except it contains some quantity of inter- spersed pyrites.

Third Family.— Carbon bituminated, impreg- nated with a notable proportion of stony matter. Spurious Coal.— I call the proportion of stony matter notable when it exceeds 25 per cent. Its color is grayish-black. Lustre 0-1. Fracture slaty or earthy. Fragments quadrangular, 3. Hardness from 7 to 8. Specific gravity from 1-500 to 1-600. It commonly explodes and bnists when heated; generally found amidst strata of genuine coal. Buffon tells us that the coal of Alaies is mixed with such a quantity of limestone, that it is often burned for the sole purpose of obtaining lime from it. — 2 Buffon Mineralog. 8vo. p. 189.

Macquer remarked long ago that nitre deto- nates with no oily or inflammable matter, until such matter is reduced to coal, and then only in proportion to the carbonaceous matter it con- tains. Hence it occurred to Mr. Kirwan that, as coals appear in distillation to be for the most part merely compounds of carbon and bitumen, it should follow that, by the decomposition of nitre, the quantity of carbon in a given quantity of every species of coal may be discovered, and the propoition of bitumen inferred. This celebrated chemist accordingly projected on a certain por- tion of nitre in a state of fusion, successive frag- ments of various kinds of coal, till the deflagration ceased. Coal, when in fine powder, was thrown out nf the crucible. The experiments seem to have been judiciously performed, and the results are therefore entitled to as much confidence as the method permits. Lavoisier and Kirwan state, that about thirteen parts of dry wood char- coal decompose 100 of nitre.

100 parts

Char- coal.

Bitumen.

Earth.

Sp.gr

Kilkenny coal

97-3

0

3-7

1.526

Comp. cannel

75-2

21-68 maltha

3-1

1-232

Swansea

73-53

23‘14 mixt.

3-33

1-357

Lei trim

71-43

23-37 do.

5-20

1-351

Wigan

61-73

36-7 do.

1-57

1-268

Newcastle

58-00

40-0 do.

1-271

Whitehaven

57-0

41-3

17

1-257

Slaty cannel

47-62

32-52 mal.

20-0

1-426

Asphalt

31-0

68-0 bitumen

—

1-117

Maltha

8-0

—

2-07

100 parts of the best English coal give, of

coak, . . 63- by Mr. Jars. 100 do. . . . 73- Hielm, 100 do. Newcastle do. 58- Dr. Watson.

Kirwan says he copied the result, for New- castle coal, fiom D'r. Watson.

Werner, without including the beds of coal found on a sandstone or limestone basis, has as- certained three distinct coal formations.

The first, or oldest formation, he calls the inde- pendent coal formation, because the individual depositions of which it is composed, are inde-

pendent ot each other, and are not connected. The second is that which occurs in the newest floetz-trap formation ; and the third occurs in al- luvial land. Werner observes, that a fourth for- mation might be added, which would comprehend peat and other similar substances ; so that we should have a beautiful and uninterrupted series, from the oldest formation to the peat, which is daily forming under the eye. The independent formation contains exclusively coaise coal, folia- ted coal, cannel coal, slate coal, a kind of pitch coal, and slaty glance coal. The latter was first found in this formation in Arran, Dumfries-shire, Ayrshire and at Westcraigs, by Proffessor Jameson. The formation in the newest floetz-trap contains distinct pitch coal, columnar coal, and conchoidal glance coal. The alluvial formation contains al- most exclusively earth coal and bituminous wood. The first formation, besides coal, contains three rocks which are peculiar to it; these are a conglo- merate, which is more or less coarse-grained ; a friable sandstone, which is always micaceous; and lastly, slate-clay. But besides these, there occur also beds of harder sandstone, marl, lime- stone, porphyritic stone, bituminous shale, clay- ironstone; and, as discovered by Proffessor Jame- son, greenstone, amygdaloid, and graphite. The slate-clay is well characterised, by the great vari- ety of vegetable impressions of such plants as flourish in marshes and woods.

The smaller plants and reeds occur in casts or impiessions always laid in the direction of the strata ; but the larger arborescent plants often stand erect, and their stems are filled with the substance of the superincumbent strata, which seems to show that these stems are in their original position. The leaves and stems resemble those of palms and ferns. The central, northern, and western coal- mines of England ; the river coal districts of the Forth and the Clyde, and the Ayrshire, and in part the Dumfries-shire coals, belong to this for- mation, as well as the coals in the northern and western parts of France.

The most valuable and extensive beds of coal which have been found and wrought, are in Great Britain. The general form of our great indepen- dent coal-beds, is semi-circular, or semi-eHipt.hT.!!, being the segment of a great basin. The strata have a dip or declination to the horizon of from 1 in 5, to 1 in 20. They are rarely vertical, and seldom perfectly horizontal to any considerable extent. Slips and dislocations of the strata, how- ever, derange more or less the general form.

Professor Jameson has divided this most use- ful mineral into the following species and sub- species : —

Species 1. Brown coal.

Species 2. Black coal, of which there are four sub-species ; slate coal, cannel coal, foliated coal, and coarse coal.

1. Slate coal. Its color is intermediate be- tween velvet-black, and dark grayish-black. It has sometimes a peacock-tail tarnish. It occurs massive, and in columnar and egg-shaped con- cretions. It has a resinous lustre. Principal fracture slaty ; cross fracture imperfect, conchoidal. Harder than gypsum, but softer than calcareous spar. Brittle. Sp. gr. 1-26 to 1-38. It burns longer than cannel coal ; cakes more or

less, and leaves a slag. The constituents of the slate coal of Whitehaven, by Kirwan, are 56-8 carbon, with 43-2 mixture of asphalt and maltha, in which the former predominates. This coal is found in vast quantities at Newcastle ; in the coal formation which stretches from Bolton, by Al- lonby and Workington, to Whitehaven. In Scotland, in the river district of Forth and Clyde ; at Cannoby, Sanquhar, and Kirconnel, in Dum- fries-shire ; in Thuringia, Saxony, and many other countries of Germany. It sometimes passes into cannel

and foliated coal.

2. Cannel coal. Color between velvet and grayish-black. Massive. Resinous lustre. Frac- ture flat-conchoidal, or even. Fragments trapezoidal. Hardness as in the preceding sub-spe- cies. Brittle. Sp. gr. 1 23 to 1*27 It occurs along with the preceding. It is found near Whitehaven, at Wigan, in Lancashire, Brosely, in Shropshire, near Sheffield ; in Scotland, at Gilmerton and Muirkirk, where it is called parret coal. It has been worked on the lathe into drinking vessels, snuffboxes, &c.

3. Foliated coal. Its color is velvet-black, sometimes with irridescent tarnish. Massive, and in lamellar concretions. Resinous or splendent lustre ; uneven fracture ; fragments approaching to trapezoidal. Softer than cannel coal; between brittle and sectile. Easily broken. Sp. gr. 1-34 to 1-4. The Whitehaven variety consists, by Kirwan, of 57 carbon, 41-3 bitumen, and 1-7 ashes. It occurs in the coal formations of this and other countries. It is distinguished by its lamellar concretions, splendent lustre, and easy frangibility.

4. Coarse coal. Color dark grayish-black, inclining to brownish-blaok. Massive, and in granular concretions. Glistening lustre. Frac- ture imperfect, scaly. Fragments indeterminate, angular. Hardness as above. Easily frangible. Sp. gr. 1-454. It occurs in the German coal formations. To the above, Professor Jameson has added soot-coal ; which has a dark grayish- black color ; is massive ; with a dull semi-me- tallic lustre. Fracture uneven; sometimes earthy. Shining streak ; soils ; is soft, light, and easily frangible. It burns with a bituminous smell, cakes, and leaves a small quantity of ashes. It occurs along with slate-coal in West-Lothian and the Forth district; in Saxony and Silesia.

Species 3. Glance-coal, of which the Professor gives two sub-species, pitch-coal and glance-coal. 1. Pitch-coal. Color velvet-black. Massive, or in plates and botroidal branches, with a woody texture. Splendent and resinous. Fracture, large perfect conchoidal. Fragments sharp-edged and indeterminate angular; opaque; soft; streak brown-colored. Brittle. Does not soil. Sp. gr. 1‘3. It burns with a greenish flame. It occurs along with brown coal in beds, in floetz, trap, and limestone rocks, and in bituminous shale. It is found in the Isles of Sky and Faroe, in Hessia, Bavaria, Bohemia, and Stiria. It is used for fuel, and for making vessels and snuff-boxes. It is called black amber in Prussia, and is cut into rosaries and necklaces. It is distinguished by its splendent lustre and conchoidal fracture. It was formerly called jet, from the river Gaga in lesser Asia.

conchoidal, slaty, columnar, and fibrous. The conchoidal has an iron-black color, inclining to brown, with sometimes a tempered steel tarnish. Massive and vesicular. Splendent, shining and imperfect metallic lustre. Fracture flat conchoi. dal ; fragments sharp-edged. Hardness as above. Brittle, and easily frangible. In thin pieces it yields a ringing sound. It burns without flame or smell, and leaves a white-colored ash. Its constituents are 96-66 inflammable matter, 2 alumina, and 1‘38 silica and iron. It occurs in beds in clay-slate, gray-wacke, and alum-slate ; but it is more abundant in secondary rocks, as in coal and trap formations. It occurs in beds in the coal formations of Ayrshire, near Cumnock and Kilmarnock ; in the coal district of the Forth ; and in Staffordshire. It appears to pass into slaty glance-coal.

Slaty glance-coal. Color iron-black. Massive. Lustre shining, and imperfect metallic. Prin- cipal fracture slaty; coarse fracture imperfect conchoidal. Fragments trapezoidal. Softer than conchoidal glance-coal. Easily frangible; be- tween sectile and brittle. Sp. gr. 1-50. It burns without flame or odor. It consists, by Dolo- mieu, of 72-05 carbon, 13-19 silica, 3-29 alumina, 3-47 oxide of iron, and 8 loss. It occurs in beds or veins of different rocks. In Spain in gneiss ; in Switzerland in mica-slate and clay-slate; in the trap rock of the Calton-hill, Edinburgh ; in the coal formations of the Forth district. It is found also in the floetz districts of Westcraigs, in West Lothian, Dunfermline, Cumnock, Kil- marnock, and Arran ; in Brecknock, Caermar- thenshire, and Pembrokeshire, in England ; and at Kilkenny, Ireland ; and abundantly in the United States. In this country it is called blind coal.

Columnar glance-coal. Color velvet-black and grayish-black. Massive, disseminated, and in prismatic concretions. Lustre glistening, and imperfect metallic. Fracture conchoidal. Frag- ments sharp-edged. Opaque. Brittle. Sp. gr. 1‘4. It burns without flame or smoke. It forms a bed several feet thick in the coal-field of San- quhar, in Dumfries-shire ; at Saltcoats, in Ayr- shire, it occurs in beds and in green-stone; in basaltic columnar rows near Cumnock in Ayrshire.

Fibrous coal. Color dark grayish-black. Mas- sive, in thin layers, and in fibrous concretions. Lustre glimmering, or pearly. It soils strongly,. It is soft, passing into friable. It burns without flame ; but some varieties scarcely yield to the most intense heat. It is met with in the different coal-fields of Great Britain. Its fibrous concre- tions and silky lustre distinguish it from all the other kinds of coal.

It is not certain that this mineral is wood mineralised. Several of the

varieties may be original carbonaceous matter, crystallised in fibrous concretions.

Parts Charcoal. Earth.

100 Kilkenny coal, he says, contain 97-3 3-7

Anthracite . . . 90-0 10-0

Ditto 72-0 20-0

Ditto 97-25 2-7

Coal of Notre Dame de Vaux, 78-5 20-

We add, from the Philosophical Magazine, Mr. Mushet's general table of the analyses of different kinds of pit-coal, in carbonisatiou.

COAL.

81

Volatile Matter.

Carbon.

Ashes.

Specific Gravity of the Coal.

Specific Gravity of the Coke.

Welsh furnace coal . . ; . . Alfreton ditto

8-5 45-5

88-068 52-456

3-432 2-044

1-337 1-233

1-

less than

Butterly ditto ... ...

42-830

52-882

4-288

1-264

water

1-100

Welsh stone coal

8-

89-700

2-300

1-368

1-3934

Welsh slaty coal

9-100

84-175

6-725

1-409

Derbyshire cannel coal .... Kilkenny coal

47-000 4-250

48-362 92-877

4-638 2-873

1-278 1-602

1-6568

Stone coal found under basalt . . Kilkenny slaty coal

16-660 13.000

69-740 80-475

13-600 6‘525

1-445

Scotch cannel coal Boolavooneeri ditto . “1 Corgee ditto . . . > Irish Queen’s county, No. 39 j Stone wood, Giants’ Causeway . . Oak wood

56-570 13-800 9-100 10-300 33-370 80-000

39-430 82-960 87-491 86-560 54-697 19-500

4-000 3-240 3-409 3-140 11-933

•500

1-436 1-403 1-403 1-150

1-596 1-6560 1-6218

COAL-MINES, BRITISH. It is, generally agreed, that our cannel coal is the lapis ampelites of the Romans ; though it seems to have been used by them only for making toys, brace- lets, &c. But of that common fuel which we denominate coals, the native Romans were en- tirely ignorant. It is certain that they are not, as some have imagined, the lapis obsidianus of Pliny, about which there have been great disputes, and of which four statues of elephants were made, and placed in the temple of Concord by Augustus : nor the gagates, or jet, which others, again, have taken for the lapis obsidianus ; though the lightness and texture show plainly that it is not either stone or coal. In fact there are no beds of it in the compass of Italy. The great line of that fuel seems to sweep away round the globe, from north-east to south-west, not ranging at a distance even from the south-east parts of our island, as is generally imagined, but actually visiting Brabant and France, and yet avoiding Italy. The primaeval Britons appear to have used it ; and in the precincts of Manchester particularly, which are furnished with an inex- haustible abundance of it, they could not have long remained unapprised of the useful combus- tible around them. The currents there frequently bringdown fragments of coal from the mountains; and in the long and winding course of them through the parish the Britons would soon mark the shining stones in the channels; and by the aid of accident, or the force of reflection, find out the utility of them. But we can advance still nearer to a certainty. Several pieces of coal were

discovered some years ago in the sand under the Roman way to Ribchester, when both were dug up at the construction of a house in Quay- street. The number of pieces, several of them as large as eggs, was not less than forty ; and a quantity of slack was dug up with them. These circumstances show the coals to have been lodged on the spot, before the road of the Romans co- vered it. That ground being in the neighbour- hood of Mancenion, the Britons had there de- posited a quantity of coals, probably for the use of the garrison, and many of the smaller frae- Voj. VI.

ments, and some of the slack, were buried in the sand upon which they were laid. And that the Britons, in general, were acquainted with this fuel, is evident from its appellation amongst us at present, which is not Saxon, but British ; and subsists among the Irish in their O-gual, and among the Cornish in their kolan, to this day. The extensive coal-mines, therefore, with which the kingdom of England and the precincts of Manchester are so happily stored, were first noticed by the skill, and first opened by the labor, of the Britons ; and some time before the arrival of the Romans among- us. And the nearer quar- ries in the confines of Bradford, Newton, and Manchester, would naturally attract the notice, and invite the enquiries of the Britons, before any others. The current of the Medlock, which washes the sides of them, would bring down specimens of the riches within, lodge many of them about the Castlefield, and allure the Britons successively to a collection of the one and a search after the other. But, for two ages after the discovery, wood continued to compose the general firing of the nation. In 852 a grant was made of some lands by the abbey of Peterborough, under the reservation of certain boons and pay- ments in kind to the monastery ; as, one night's entertainment ; ten vessels of Welsh, and two of common ale; sixty cart-loads of wood, and twelve of pit coal ; where we see the quantity of coal was only one cart-load to five of wood. The latter naturally continued the principal article of our fuel, as long as the forests and thickets pre- sented themselves so readily to the hand : and such it continued till a very late period. The first public notice of the former is mentioned by Mr. Hume to have been in the time of Henry III. who, in the year 1272, granted a charter to the town of Newcastle, giving the inhabitants a licence to dig coals, and the first statute relat- ing to this article was in the 9 Henry V. c. 10 ; ordering all keels in the port of Newcastle to be measured by commissioners, before carriage of coals, on pain of forfeiture. They were not brought into common use till the reign of Charles I., and were then sold for about 17s. a chaldron

3n some years after the Restoration, there were about 200,000 chaldrons burnt in London ; in 1670 about 270,000 chaldrons; and at the Revo- lution, upwards of 300,000 chaldrons ; and at present, above 1,000,000 are annually consumed here. In Scotland there are coals sufficient to supply the consumption, and also to export ; but a considerable quantity of English coals are im- ported, because they are found of a stronger heat, and otherwise better adapted to several manufactures. In Ireland, though they have coal, yet they take annually to the value of £40,000 from England, and ±20,000 from Scot- land. Maliciously setting fire to coal mines is felony, by stat. 20 Geo. II. c. 32. sect. 6.

COAL-MINES, FOREIGN. There are several other countries in Europe, which possess consi- derable coal-mines ; as France, Liege, Germany, and Sweden : also on the other side of the At- lantic Ocean; in Newfoundland, Cape-Breton, Canada, and some of the states of New England. But in all these countries the coal is of a quality much inferior to the British, and entirely unfit to be used in many manufactures ; so that they are obliged to import great quantities from Bri- tain for the use of their manufactures of iron, &c.

The INLAND COAL TRADE, that is, carrying coals from Newcastle, Sunderland, Blith, and other adjacent places in the north of England, as also from the Frith of Forth to London, and the port-towns on the coast all the way, as well as on this side of Newcastle, south, as up the chan- nel as high as Portsmouth west, is an important branch of commerce, and employs abundance of shipping and seamen ; in so much that, in a time of urgent necessity, the coalery navigation alone has been able to supply the government with a body of seamen for the royal navy, able to man a considerable fleet at a very short warning, and that without difficulty. The \Vhitehaven coal- eries in Cumberland, belonging to lord Lons- dale, which furnish several counties in Ireland with coals, constantly employ upwards of 2000 seamen ; and are a noble nursery for the navy of this kingdom. And not only do the pit coals sufficiently supply all the ports, but, by those ports and the navigable rivers, all the adjacent counties very far inland. In short, coals, though not an exclusive, yet may, with propriety, be styled a peculiar blessing to Britain from their great plenty, their acknowledged excellence, and their being found in such places as are conve- niently situated for exportation. Nor is there any danger of the export trade being lessened even by the several duties that have been laid upon them; for the foreign consumption being founded in necessity, with regard to manufac- tures, and in economy, where they are used for convenience (wood and turf being dearer than coals with the duty), we need be in no fear of the markets declining.

There is as little room to be alarmed from an apprehension of their being exhausted, as the present works are capable of supplying us for a long series of years, and there are many other mines ready to be opened when these shall fail. Besides, there are known to be coals in many parts of the three kingdoms, which hitherto there has been no encourage- ment to work. Besides the value of this com-

modity as a conveniency of life, as an article of commerce, and as giving rise to a nursery of seamen for the increase of the marine, other important advantages deserve to be noticed. Coals are, in many respects, and in a very high degree, useful to the landed interest ; not only by raising exceedingly the real value, and of course the purchase, of those lands in which they are found, and those through which it is neces- sary to pass from the works to the places where they are embarked (which are styled way-leaves, and are set at as high rents as any lands in Bri- tain) ; but from the general improvements they have occasioned. Very few counties are now better cultivated than Northumberland, and the same effects have been produced, in a greater or less degree, in other places. Thousands of labo- rious people are employed in and about the mines; thousands more in conveying them to the ports, and on board the ships ; to say nothing of those that draw their subsistence from the car- riage of them by land to supply families, &c. Great numbers also live in a superior station ; as stewards, directors, factors, agents, book-keepers, &c. To these we may add the extraordinary encouragement given to ingenious artists who have invented, and the numerous workmen con- tinually employed about those several curious and costly machines, which, for a variety of pur- poses in this business, are in continual use, and of course in continual wear : we may join to these the multitudes that obtain their living from the manufactures in which they are employed, and which could not be carried on but by the help and cheapness of coals. Lastly, the pro- duce of coals exported, which amounts to a very considerable sum, besides being profitable to the owners, merchants, and mariners, is so much clear gain to the nation. It might be expected, that a trade so beneficial to individuals, and to the nation in general, and which has been gra- dually increasing for several centuries past, would have been advanced by this time to very great perfection, and reduced to a regular system. But, in one very essential respect, it is found to be quite otherwise. The art of working coal-mines in the most profitable manner is indeed highly improved, but the principles of the art, that of searching for and discovering coal in any district of country, where it has not yet been found, has never, that we know of, been treated in so systematic a manner, as in the Encyclopaedia Britannica. We shall lay, therefore, before our readers,

the following citation from that useful work : — ‘ The terrestrial matters which compose the solid parts of the earth (in coal mines) are disposed in strata, beds, or layers, the under sur- face of one bearing against or lying upon the upper surface of that below it, which last bears or lies on the next below in the same manner. These strata consist of very different kinds of matters, such as free-stone, lime-stone, metal- stone, whin-stone, coal, See. as will be particu- larly specified in the sequel. Some of these strata are of a considerable thickness, being often found from 100 to 200 feet or upwards, nearly of the same kind of matter from the superior to the in- ferior surface ; and others are found of the least thickness imaginable, one inch or less. All these

strata are divided or parted from each other late- rally, either by their even, smooth, polished sur- faces, with very thin lamina of soft or dusty mat- ter betwixt them, called the parting, which renders them easy to separate ; or else only by the sur- faces closely conjoined to each other, without any visible matter interposed betwixt them ; yet the different substance of each stratum is not the least intermixed, though sometimes they adhere so strongly together, that it is very difficult to part or disjoin them : in this last case they are said to have a bad parting. Besides this principal di- vision or parting laterally, there are, in some strata, secondary divisions or parting also late- rally, separating or approaching towards a sepa- ration of the same stratum, into parts of different thicknesses, nearly parallel to each other ; in the same manner as the principal partings divide the different strata from each other; but these secondary ones are not so strong or visible, nor make so effectual a parting, as the principal ones do ; and are only met with in such strata as are not of an uniform hardness, texture, or color, from the upper to the under surface. There are other divisions or partings called backs, in almost every stratum, which cross the former lateral ones longitudinally, and cut the whole stratum through its two surfaces into long rhomboidal figures. These again are crossed by others called cutters, running either in an oblique or perpen- dicular direction to the last mentioned backs, and also cut the stratum through its two surfaces. Both these backs and cutters generally extend from the upper or superior stratum down through

several of the lower ones, so that these backs and cutters, together with the lateral partings before- mentioned divide every stratum into innumerable cubic, prismatic, and rhomboidal figures, accord- ing to the thickness of the stratum, and the posi- tion and number of the backs and cutters. They sometimes have a kind of thin partition of dusty or soft matter in them, and sometimes none, like the first mentioned partings ; but the softer kind of strata generally have more backs and cutters than the harder kind, and do not extend through the others.'

Let A, B, C, D, E, F, G, plate COAL-MINES, fig. 1, represent the principal partings, or the upper and under surfaces of any stratum ; then a, b, c, d, e,f, will represent the secondary lateral partings nearly parallel to the principal ones : g, h, i, k, I, m, the longitudinal partings called backs ; n, o, p, q, r, s, the cross partings called cutters, crossing the last mentioned ones either obliquely or perpendicular. In all places where the strata lie regular, they are divided and subdivided in the manner above mentioned ; and sometimes in this manner extend through a pretty large district of country : though it is often other- wise ; for their regularity is frequently interrupted, and the strata broken and disordered, by sundry chasms, breaches or fissures, which are differ- ently denominated according to their various di- mensions, and the matters with which they are filled, viz. dikes, hitches, and troubles.

I. IMes are the largest kinds of fissures. They seem to be nothing but a crack or breach of the solid strata, occasioned by one part of them being broken away and fallen from the other.

They generally run in a straight line for a consi- derable length, and penetrate from the surface to the greatest depth ever yet tried, in a direction sometimes perpendicular to the horizon, and sometimes obliquely : the same kind of strata are found lying upon each other in the same order, but the whole of them as greatly elevated or de- pressed on the one side of the dike as on the other. These fissures are sometimes two or three feet wide, and sometimes many fathoms. If the fissure or dike be of any considerable width, it is generally filled with heterogeneous matter, different from that of the solid earth on each side of it. It is sometimes found filled with clay, gravel, or sand ; sometimes with a confused mass of different kinds of stone lying edgeways ; and at other times with a solid body of free-stone, or even whin-stone. When the fissure is of no great width, as suppose two or three feet only, it is then usually found filled with a confused mixture of the different matters which compose the ad- joing strata, consolidated into one mass. If the dike run or stretch north and south,

and the same kind of strata are found on the east side of the dike, in a situation with respect to the hori- zon ten or twenty fathoms lower than on the other side, it is then said to be a dip-dike, or downcast dike of ten or twenty fathoms to the eastward ; — or counting from the east, it is then said to be a rise dike or up-cast of so many fathoms west- ward. If the strata on one side are not much higher or lower with respect to the horizontal line, than those on the other, but only broken off and removed to a certain distance, it is then said to be a dike of so many fathoms thick ; and, from the matter contained between the two sides of the fissure or dike, it is denominated a clay-dike, stone-dike, &c.

II. A hitch is only a dike or fissure of a smaller degree, by which the strata on one side are not elevated or separated from those on the other side above one fathom. The hitches are deno- minated in the same manner as dikes, according to the number of feet they elevate or depress the strata. There are dikes (though they are not often met with in the coal countries) whose cavi- ties are filled with spar, the ores of iron, lead, vitriol, or other metallic or mineral matters ; and it is pretty well known, that all metallic veins are nothing else than what in the coal countries are called dikes. The strata are generally found lying upon each other in the same order on one side of the dike as on the other, as mentioned above, and nearly of the same thicknesses, appear- ing to have been originally a continuation of the same regular strata, and the dike only a breach by some later accident, perpendicularly or ob- liquely down through them, by which one part is removed to a, small distance, and depressed to a lower situation than the other. But this is not the only alteration made in the strata by dikes ; for generally to a considerable distance on each side of the dike, all the strata are in a kind of shattered condition, very tender, easily pervious to water, and debased greatly in their quality, and their inclination to the horizon often altered.

III. Troubles may be denominated dikes of the smallest degree ; for they are not a real breach, but only an approach towards ‘t which has not

taken a full effect. The strata are generally altered by a trouble from their regular site to a different position. When the regular course of the strata is nearly level, a trouble will cause a sudden and considerable ascent or descent : where they have, in their regular

situation, a certain degree of as- cent or descent, a trouble either increases it or alters it to a contrary position : and a trouble has these effects upon the strata in common with dikes, that it greatly debases them from their original quality ; the partings are separated ; the backs and cutters disjointed, and their regularity disordered; the original cubic and prismatic figures, of which the strata were composed, are broken, and the dislocation filled with heterogene- ous matter ; and the whole strata are reduced to a softer and more friable state. The strata are seldom, or never, found to lie in a true horizontal situation ; but generally have an inclination or descent, called the dip, to some particular part of the horizon. If this inclination be to the east- ward, it is called an east dip, and a west rise ; and according to the point of the compass to which the dip inclines, it is denominated, and the ascent or rise is to the contrary point. This inclination or dip of the strata is found to hold everywhere. In some places it varies very little from the level ; in others very considerably ; and in some so much, as to be nearly in a perpendicular direc- tion : but whatever degree of inclination the strata have to the horizon, if not interrupted by dikes, hitches, or troubles, they are always found to lie in the first regular manner mentioned. They ge- nerally continue upon one uniform dip until they are broken or disordered by a dike, hitch, or trouble, by which the dip is often altered, some- times to a different part of the horizon, and often to an opposite point ; so that on one side of a dike, hitch, or trouble, if the strata have an east dip, on the other side they may hare an east rise, which is a west dip ; and, in general, any con- siderable alteration in the dip is never met with, but what is occasioned by the circumstances last mentioned.

To illustrate what has been said, see fig. 2, where abed, &c. represents a course of strata lying upon each other having a certain inclination to the horizon. A B is a downcast dike, which depresses the strata obliquely to e f g h, &c. lying upon each other in the same order, but altered in their inclination to the horizon. C D represents a clay or free-stone dike, where the strata are neither elevated nor depressed, but only broken off and removed to a certain dis- tance. E F represents a hitch, which breaks off and depresses the strata only a little, but alters their inclination to the horizon. G H represents a trouble, where the strata on one side are not entirely broken oft' from those on the other, but only in a crushed and irregular situation. As some particular strata are found at some times to increase, and at other times to diminish, in their thicknesses, while others remain the same, consequently they cannot be all parallel ; yet this increase and diminution in their thicknesses come on very gradually. The strata are not found disposed in the earth according to their specific gravities :

for we often find strata of very Jense matter near the surface ; and perhaps at

fifty or even 100 fathoms beneath, we meet with strata of not half the specific gravity of the first. A stratum of iron ore is very often found above one of coal, though the former has twice the gravity of the latter ; and, in short, there is such an absolute uncertainty in forming any judgment of the disposition of the strata from their specific gravities, that it cannot in the least be relied upon.

From the foregoing sources we next give an account of the several strata of coal, and of stone and other matters, which are usually con- nected with coal, and are found to have a parti- cular affinity with it : and shall arrange them into six principal classes, which include all the varieties of strata that occur in all those districts of country both in Scotland and England where coal abounds.

I. The strata of whin-stone are the hardest of all others; the angular pieces of it will cut glass; it is of a very coarse texture, and, when broke across the grain, exhibits the appearance of large grains of sand half vitrified ; it can scarcely be wrought or broke in pieces by common tools, without the assistance of gunpowder ; each stra- tum is commonly homogeneous in substance and color, and cracked in the rock to a great depth. The most common colors of these strata are black, dark-blue, ash-colored and light-brown. Their thickness in all the coal countries is incon- siderable, from five or six feet to a few inches ; and it is only in a few places they are met with of these thicknesses. In the air it decays a little, leaving a brown powder ; and in the fire it cracks, and turns reddish-brown. Limestone, especially what is called bastard limestone, is sometimes, though rarely, met with in coaleries. It is well known, but, from its resemblance in hardness and color, is often mistaken for a kind of whin. Sometimes, particularly in hilly coun- tries, the solid matter next the surface is a kind of soft or rotten whin ; — but it may be noted, that this is only a mass of heterogenous matter disposed upon the regular strata ; and that be- neath this all the strata are generally found in as regular an order as where the heterogenous mat- ter does not occur.

II. Post-stone is a free-stone of the hardest kind, and next to the lime- stone with respect to hardness and solidity. It is of a very fine tex- ture ; and, when broken, appears as if composed of the finest sand. It is commonly found in a homogeneous mass, though variegated in color ; and, from its hardness, is not liable to injury from being exposed to the weather. Of this kind of stone there are four varieties ; the most common is white post, whicb, in appearance, is like Portland stone,

but considerably harder; it is sometimes variegated with streaks or spots of brown, red, or black. Gray post is also very common ; it appears like a mixture of fine black and white sand ; it is often variegated witli brown and black streaks; the last mentioned appear like small clouds composed of particles of coal. Brown or yellow post is often met with of different degrees of color ; most commonly of the color of light ochre or yellow sand ; it is as hard as the rest, and sometimes variegated with white and black streaks. Red post is generally

of a dull red color ; this is but rarely met with ; it is of'.en streaked with white or black. All these lie in strata of different thicknesses : but commonly thicker than any other strata what- ever : they are separated from each other, and from other kinds of strata, by partings of coal, sand, or soft matter of different colors which are very distinguishable.

III. Sand-stone is a free-stone of a coarser texture than post, and not so hard ; is so lax as to be easily pervious to water ; when broke, is apparently of a coarse sandy substance ; is friable and moulders to sand when exposed to the wind and rain ; has frequently white shining spangles in it, and pebbles or other small stones enclosed in its mass. Of this there are two kinds com- monly met with, distinguished by their colors, gray and brown, which are of different shades, lighter or darker in proportion to the mixture of white in them. It is, most generally, found in strata of considerable thickness, without many secondary partings ; and sometimes, though rarely, it is subdivided into layers as thin as the common gray slate. It has generally sandy or soft partings.

IV. Metal stone is a stratum, in point of hard- ness, next to sand-stone ; generally solid, com- pact, of considerable weight, and of an argilla- ceous substance, containing many nodules of iron ore, and yellow or white pyrite ; its partings, or the surfaces of its strata, are hard, polished, and smooth as glass. The most usual color of this stone is black ; but there are several other lighter colors, down to a light brown or gray. It lies in strata of various thicknesses, though seldom so thick as the two last mentioned kinds of stone.

V. Shiver is a stratum more frequently met with in coaleries than any other. There are many varieties of it, both in hardness and color. The

black color is most common ; it is called by the miners black shiver, black metal, or bleas. It is softer than metal stone, and in the mine is rather a tough than a hard substance, is not of a solid or compact matter, being easily separable, by the multitude of its partings, &c. into very small parts, and readily absorbing water. The substance of this stratum is an indurated bole, commonly divided into thin laminae of unequal thicknesses, which break into long small pieces when struck with force ; and, on examination, they appear to be small irregular rhomboids : each of these small pieces has a polished glassy surface ; and, when broke across the grain, ap- pears of a dry leafy, or laminated texture, like exceeding fine clay : it is very friable ; feels to the touch like an unctuous substance ; and dis- solves in air or water to a fine pinguid black clay. There are almost constantly found enclosed in its strata lumps or nodules of iron ore ; often real beds of the same. Besides black, the brown or dun shiver is frequently met with. Gray shiver is also very common. It lies in strata some- times of considerable thickness, at other times not exceeding a few feet ; they are commonly parted from each other by laminae or spar, coal, or soft matter.

VI. Coal. Referring the reader, for the scientific divisio" – f coal?, tc AMPEUTES Li-

THANTHRAX, and the preceding articles, we shall here consider them as distinguishable into three kinds, according to their degrees of inflammabi- lity. 1. The least inflammable kinds are Welsh coal, Kilkenny coal in Ireland ; and blind or deaf coal, which last is found in many parts of Scotland and England. This coal takes a con- siderable degree of heat to kindle it, but, when once thoroughly ignited, will burn a long time ; it remains in the fire in separate pieces without caking; it produces neither flame nor smoke, and makes no cinder, but burns to a white stony flagg ; it makes a hot glowing fire like charcoal or cinders, and emits effluvia of a suffocating nature, which renders it unfit for burning in dwelling-houses, its chief use being among malsters, dyers, &c. for drying their commodi- ties. 2. Open burning coal soon kindles, mak- ing a hot pleasant fire, but is soon consumed : it produces both smoke and flame in abundance ; but lies open in the fire, and does not cake to- gether so as to form cinders, its surface being burned to ashes before it is thoroughly calcined in the midst ; from this it has its name of an open burning coal : it burns to white or brown ashes very light. Of this kind is cannel coal, jet, parrot, splint, and most of the coals in Scotland. 3. Close burning coal kindles very quickly, makes a very hot fire, melts and runs together like bitumen, the very smallest culm making the finest cinders, which, being thoroughly burnt, are porous and light as a pumice stone, and when

broke are of a shining lead color; it makes a more durable fire than any other coal, and, finally, burns to brown or reddish colored heavy ashes. Of this kind are the Newcastle and several other of the English coals, and the smithy coals of Scotland. The open burning and the close burning coal mixed together, make a more pro- fitable fire for domestic uses than either of them separate. In all those districts where coal is found there are generally several strata of it: perhaps all the different kinds above mentioned will be found in some, and only one of the kinds in others ; yet this one kind may be divided into many different seams or strata, by beds of shiver or other kinds of matter interposing, so as to give it the appearance of so many separate strata. All these strata, with their several varieties, do not lie upon each other in the order in which they are described, nor in any certain or invariable order. Though there be found the same kind of strata in one coalery as in aiKrther, yet they may be of very different thicknesses. In some places there are most of the hard kinds, m others most of the softer ; and in any one dis- trict it rarely happens that all the various kinds are found ; for some kinds occur only once or twice, whilst others occur ten or twenty times before we reach the principal stratum of coal.

To explain this, suppose the strata in the pit at A, fig. 3, lie in the order a, b, c, d, Sec. they may be so much altered in their thicknesses by reason of some of them increasing and others diminishing, at the distance of B, that they may be found there of very different thicknesses; or if they are examined in a pit at D, by reason of its lower situation, and the s'.rata there not being a continuation of those

in Ihe other places, they may be very different both in their order and thicknesses, and yet of the same kinds. Though they be thus found very different in one coalery, or district, from •what they are found to be in another, with respect to their thicknesses, and the order in •which they lie upon each other, yet we never meet with a stratum of any kind of matter but what belongs to some of those above described. To illustrate how the various strata lie in some places, and how often the same stratum may oc-

cur betwixt the surface and the coal, we shal! give the following example. The numbers in the left-hand column refer to the classes of strata before described, to which each belongs. The second column contains the names of the strata ; and the four numerical columns to the right hand, express the thickness of each stratum in fathoms, yards, feet, and inches. In the following in- stance the species of sand-

stone only occurs twice, and that of post five times, whilst the shiver oc- curs no less than nine times.

No.

EXAMPLE.

F.

Y.

Ft.

1.

Soil and gravel ... . . .

0

1

1

0

Clay, mixed with loose stones ....

1

1

0

0

3

Coarse brown sand-stone, with soft partings .

3

0

2

6

2 5

White post, with shivery partings Black shiver or bleas, with iron-stone balls . / ..:

1

2

1 0

0 2

5 0

0

0

2

6

5

Soft gray shiver . . , ...-

0

1

0

7

2

Brown and gray post, streaked with black .

1

0

2

0

5

Black shiver, with beds and balls of iron-stone

0

1

2

6

4

Gray and black metal-stone . ...'..

0

1

1

9

2

White and brown post . . . * . ....

1

1

0

0

5

Black and gray shiver, streaked with white .

0

1

0

6

3

Soft gray sand-stone, with shivery partings .

0

1

1

0

2

Yellow and white post, with sandy partings .

1

0

2

0

5

Black and dun shiver, with iron-stone balls

0

1

2

6

2

White post streaked with black, and black partings

1

0

0

6

5

Gray shiver, with iron-stone balls

0

1

0

9

4

Brown and black metal stone . ..i .*.

1

1

2

6

5

Hard slaty black shiver .

I

1

0

0

g

0

0

3

6

‘ 5

Soft black shiver ... ., , .-. .

0

0

0

3

6

Coal, fine and clear -.. . . s .. ... *•

0

0

3

3

5

Hard black shiver . . .. • i

0

^_

1

0

Total fathoms .

25

0

0

0

- To apply the foregoing observations to prac- tice : suppose it be required to examine whether there be coal in a piece of ground adjoining to, or in the neighbourhood of, other coaleries. It is proper to be informed, at some of the adjacent coaleries, of the number and kinds of strata ; the order in which they He upon each other; to what point of the horizon, and in what quantity, they dip ; if any dikes, ditches, or troubles, and the couise they stretch Having learned these cir- cumstances, search in the

ground under exami- nation, where the strata are exposed to exami- nation, and compare these with the other. If they be of the same kinds, and nearly correspond in order and thickness, and by lying in a regular manner, and agree by computation with the dip and fise, it may be safely concluded that coal is there ; and the depth of it may be judged from the depth of the coal in the other coalery, below any particular stratum which is visible in this.

If. If the solid strata are not exposed to view, either in the hills or valleys of the ground under examination, then search in the adjoining grounds ; and if the same kinds of strata are found there as in the adjacent coalery, and there is reason from the dip and other circumstances, to believe that the«- stretch through the ground to be exa-

mined, it may be concluded that the coal is there, as well as these other strata. Suppose a coalery is on the side of a hill at A, fig. 3, and you would search for coal at B, on the other side of the hill, but in a much lower situation ; by observing the several strata lying above the coal at A, and the point towards which they dip, which is di- rectly towards B (if clear of dikes), you may ex- pect to find the same kind of strata on the other side of the hill, but much lower down. Accord- ingly if some of the strata are visible in the face of the precipice C, they may be compared with some of those in the pit at A. Or, if they are not to be seen there, by searching in the opposite hill, they may perhaps be discovered in the place F ; where, if* they be found in the nwrner be- fore mentioned, and there be reason to believe they extend regularly from the first place to this, it is more than probable the coal, as well as these strata, will be found in the intermediate ground. III. If the ground to be examined lie more to the rise of the coal, as at E, which being supposed to be on a flat, perhaps the solid strata there may be wholly covered by the gravel, clay, &c. of the outward surface lying upon them : “in this case, by measuring the horizontal distance and the de- scent of ground from A to F and computing the

quantity of ascent or rise of the coal in that dis- V. The proper step to be taken in such a caw,

tance : by comparing these together, it may be is to take a general view of that distnct of coun-

judged at what depth the coal will be found there, try intended toˆ be searched, in order to judge allowing that it lie regular. Thus, suppose the

Yds.

80

24

coal at A eighty yards deep, the distance from A to E 500 yards, and that the coal rises one yard in ten yards of horizontal distance : —

Then, from the depth of the pit . Deduct the descent of ground from A to E, suppose

This remainder would be the depth, if the coal was level . . . • .56

But as the coal rises one in ten feet, then deduct what it rises in 500 yards, which is 50

And the remainder is the depth of the coal at E

from the outward appearance or face of the coun- try, which particular part, out of the whole, is the most likely to contain those kinds of strata favorable to the production of coal ; and conse- quently the particular part thus found, is the most advisable to be begun with, in the exami- nation. Though the appearance of the outer sur- face give no infallible rule to judge of the kinds of strata lying beneath, yet it gives a probable one ; for it is generally found, that a chain of mountains or hills rising to a great height, and very steep on the sides, are commonly composed of strata much harder and of different kinds from those before described wherein coal is found to lie, and there- fore unfavorable to the production of coal ; and these mountainous situations are also more sub- ject to dikes and troubles than the lower grounds :

IV. Suppose that the place at B is 500 yards so that if the solid strata composing them gave

the contrary way, or to the full dip of the coal at even favorable symptoms of coal, yet the last cir-

A; if a view of the solid strata cannot be ob- cumstance would render the quality bad, and the

tained, then, by proceeding in the same manner quantity precarious. And, on the whole, it may

as before, the depth of the coal at that place may be computed. Thus,

Yds.

To the depth of the coal at the pit A . 80 Add the descent or inclination of the coal in 500 yards, which, as before, is . 50

This sum would be the depth, if the ground was level ....

But as the ground descends towards B, deduct the quantity of that, which sup- pose ……

Remains the depth of coal at B

If the place to be examined be neither to the full dip nor full rise, but in some proportion towards either, the same method may be pursued, com-

be observed, that the mountainous situations are found more favorable to the production of metals than of coal. It is likewise generally found that those districts abounding with valleys, mode- rately rising hills, and interspersed with plains,. 50 sometimes of considerable extent, do more com- — noonly contain coal, and those kinds of strata fa- vorable to its production, than either the moun- 1 30 tainous or champaign countries ; and a country so situated as this last described, especially if at some considerable distance from the mountains, ought to be the first part appointed for particular examination. Plains and level grounds of great extent, generally situated by the sides of rivers, or betwixt such moderately rising grounds as last described, are also very favorable to the produc- tion of coal, if the solid strata, and other circum- stances in the higher grounds adjoining, be con-

80

50

puling how much the coal rises or dips in a cer- formable ; for it will scarcely be found, in such tain distance in that direction. If there is known a situation, that the strata are favorable in the to be a dike in the workings of the pit at A, which rising grounds, on both sides of the plain, and elevates or depresses the strata towards the place not so in the space betwixt them. Though plains under examination, then the

quantity of the ele- be so favorable, in such circumstances, to the vation or depression must be accordingly added production of coal, yet it is often more difficult to, or deducted from, the computed depth of the to be discovered in such a situation, than in that coal at that place. Suppose there is an upcast dike before described; because the clay, soil,, and of ten fathoms or twenty yards towards B, then de- other lax matter, brought off the higher grounds duct twenty from fifty, the depth before computed, by rains and other accidents, have generally co- there will remain thirty yards or fifteen fathoms vered the surfaces of such plains to a considera- for the depth of the coal at B. But it often hap- ble der > th, which prevents the exploration of the pens that coal is to be searched for, in a part of solid strata there, unless they be exposed to view the country, at such a distance from all other by digging, quarrying, or some such operation, coaleries, that by reason of the intervention of That part of the district being fixed upon whicn hills, valleys, unknown dikes, &c., the connexion abounds with moderate hills and valleys as most or relation of the strata with those of any other suitable for the proposed examination, the frrst coalery cannot be traced by the methods last step to be taken is to examine all places where mentioned ; in which case a more extensive view the solid strata are exposed to view (which are must be taken of all circumstances than was ne- called the crops of the strata) as in precipices, cessary in the former ; and a few general rules hollows, &c. tracing them as accurately and gra- fouiided on the foregoing observations, and on dually .as the circumstances will allow, from the conclusions drawn from them, will greatly assist uppermost stratum or highest part of the ground in determining sometimes with a great degree of to the very undermost ; and, if they appear to probability, and sometimes with absolute cer- be of the kinds before described, it will be pro- tainty, whether coal be in any particular district per to note in a memorandum book their diffe- of country or not. vent thicknesses ; the order in which they lie

npon each other, the point of the horizon to which they dip or incline, and the quantity of that inclination, and whether they lie in a regu- lar state. This should be done in every part of the ground where they can be seen, observing at the same time, that if a stratum can be found in one place which has a connexion with some other in a second place, and if this other has a connexion with another in a third place; &c., then, from these separate connexions, the joint correspondence of the whole may be traced and the strata, which in some places are covered, may be known by their correspondence with those which are exposed to view. If by these means the crops of all the strata cannot be seen

(which is often the case), and if no coal be discovered by its crop appearing at the surface ; yet if the strata that have been viewed consist of those kinds before described, and are found lying in a regular order, it is sufficiently probable that coal may be in that part of the district, although it be concealed from sight by the surface of earth or other matter.

VI. Therefore, at the same time that the crops of the strata are under examination, it will be proper to take notk:e of all such springs of water as seem to be of a mineral nature, particularly those known by the name of iron water, which bear a mud or sediment of the color of rust of iron, having a strong astringent taste. Springs of this kind proceed originally from those strata which contain beds or balls of iron ore ; but, by reason of the tenacity of the matter of those strata, the water only disengages itself slowly from them, descending into some more porous or open stratum below, where, gathering in a body, it runs out to the surface in small streams or rills. The stratum of coal is the most general reservoir of this water ; for the iron-stone being lodged in different kinds of shiver, and the coal commonly connected with some of them, it therefore de- scends into the coal, where it finds a ready passage through the open backs and cutters. Sometimes, indeed, it finds some other stratum than coal to collect and transmit it to the sur- face ; but the difference is easily distinguishable : for the ochrey matter in the water, when it comes from a stratum of coal, is of a darker rusty color than when it proceeds from any other, and often brings with it particles and small pieces of coal ; therefore, wherever these two circumstances con- cur in a number of these kinds of springs, situated in a direction from each other answerable to the stretch or to the inclination of the strata, it may be certain the water comes off coal, and thfot the coal lies in a somewhat higher situation than the tpertures of the springs. There are other springs also which come off coal, and are not distinguish- abte from common water, otherwise than by their astringency, and their having a blue scum of an oily or glutinous nature swimming upon the surface of the water. These, in common with the others, bring out particles of coal, more espe- cially in the rainy seasons, when the springs flow with rapidity. When a number of these kinds are situated from each other in the direction of the strata, as above described ; or if the water does not run forth as in springs, but only forms H swamp, or an extension of stagnant water be-

neath the turf; in either case, it may be depended upon that this water proceeds from a stratum of coal.

VII. If the stratum of coal is not exposed to view, or cannot be

discovered by the first method of searching for the crop, although the appear- ance of the other strata be very favorable, and afford a strong probability of coal being there ; and if the last mentioned method of judging of the particular place where the crop of the coal may lie, by the springs of water issuing from it, should, from the deficiency of those springs or other circumstances, be thought equivocal, and not give a satisfactory indication of the coal ; then a further search may be made in all places where the outward surface, or the stratum of clay or earth, is turned up by ploughing, ditching, or digging, particularly in the lower grounds, in hollows, and by the sides of streams. These places should be strictly examined, to see if any pieces of coal be intermixed with the substance of the superior lax strata ; if any such be found, and if they be pretty numerous and in detached pieces, of a firm substance, the angles perfect or not much worn, and the texture of the coal dis- tinguishable, it may be concluded, that the stra- tum of coal to which they originally did belong is at no great distance, but in a situation higher with respect to the horizon ; and if there be also found along with the pieces of coal other mineral matter, such as pieces of shiver or freestone, this is a concurrent proof, that it has come only from a small distance. Though the two fore-mentioned methods should only have produced a strong probability, yet if this last mentioned place, where the pieces of coal, &c. are found in the clay, be in a situation lower than the springs ; when this circumstance is joined to the other two, it amounts to little less than a moral cer- tainty of the stratum of coal being a very little above the level of the springs. But if, on the contrary, these pieces of coal are found more sparingly interspersed in the superior stratum, and if the angles are much fretted or worn off, and very little of other kinds of mineral matter connected with them ; it may then be concluded that they have come from a stratum of coal situ- ated at a greater distance than in the former case ; and by a strict search, and an accurate comparison of other circumstances, that particular place may be discovered with as much certainty as the other. After the place is discovered, where the stratum of coal is expected to lie concealed, the next proper step to be taken, is to begin digging a pit or hole there perpendicularly down to find the coal. If the coal has no solid strata above and beneath it, but be found only embodied in the clay or other lax matter, it will not be there of its full thickness, nor so hard and pure as in its perfect state when enclosed betwixt two solid strata, the uppermost called the roof, and the undermost the pavement, or the coal : in such situation therefore it becomes necessary, either to dig a new pit, or to work a mine forward until the stratum of coal be found included betwixt a solid roof and pavement, after which it need not be expected to increase much in its thickness : yet as it goes deeper or farther to the

dip, it most likely will improve in its quality; for tnat part

Of the stratum of coal which lies near the surface, or only at a small depth, is often debased by a mixture of earth and sundry other impurities, washed down from the surface, through the backs and cutteis, by the rains; whilst the other part of the stratum which lies at a greater depth is preserved pure, by the other solid strata above it intercepting all the mud washed from the surface. The above methods of investigation admit of many different cases, according to the greater or less number of favorable circumstances attending each of the modes of enquiry ; and the result accordingly admits every degree of probability, from the most distant, even up to absolute cer- tainty. In some situations, the coal will be dis- covered by one method alone ; in others, by a comparison of certain circumstances attending each method ; whilst, in some others, all the cir- cumstances that can be collected only lead to a certain degree of probability. In the last case, where the evidence is only probable, it will be more advisable to proceed in the search by boring a hole through the solid strata, than by digging or sinking a pit, it being both cheaper and more expeditious ; and in every case which does not amount to an absolute certainty, this operation is necessary, to ascertain the real existence of the coal in that place. We shall now suppose, that having examined a certain district, situated within a few miles of the sea or some navigable river, that all the circumstances which offer only amount to a probability of the coal being there, and that boring is necessary to ascertain it ; we shall therefore describe the operation of" boring to the coal. Suppose that the ground A, B, C, D, fig. 4, has been examined, and from the appear- ance of the strata where they are visible (as at the precipice D, and several other places) they are found to be of those kinds usually connected with coal, and that the point to which they rise is directly west towards A, but the ground being flat and covered to a considerable depth with earth, &c. the strata cannot be viewed in the low grounds ; therefore, in this, and all similar situ- ations, the first hole that is bored for a trial for coal should be on the west side of the ground, or to the full rise of the strata as at A, where, bor- ing down through the strata 1, 2, 3, suppose ten fathoms, and not finding coal, it will be better to bore a new hole than to proceed to a great depth in that : therefore, proceeding so far to the east- ward as B, where the stratum 1, of the first hole, is computed to be ten or twelve fathoms deep, a second hole may be bored, where boring down through the strata 4, 5, 6, 7, 8, the stratum 1 is met with, but no coal ;

it would be of no use to bore farther in this hole, as the same strata would be found which were in the hole A : therefore, proceeding again so far to the eastward, as it may be computed the stratum 4 of the second hole will be met with at the depth of ten or twelve fathoms, a new hole may be bored at C ; where, boring through the strata 9, 10, 11, 12, the coal is met with at 13, before the hole proceed so deep as the stratum 4, of the former. It is evident, that, by this method of procedure, neither the coal nor any othei of the strata can be passed over, as the last hole is bored to that stratum which was nearest the surface in the former hole.

‘The purposes for which boring is used are numerous, and some of them of the utmost im- portance in coaleries. In coaleries of great extent, although the coal be known to extend through the whole grounds, yet accidental turns, and other alterations in the dip, to which the coal is liable, render the boring of three or more holes necessary, to determine exactly to what point of the horizon it dips or inclines, before any capital operation for the winning of it can be undertaken ; because a very small error in this may occasion the loss of a great part of the coal, or at least incur a double expense in recovering it. Suppose A, B, C, D, fig. 5, to be part of an extensive field of coal intended to be won or laid dry by a fire engine ; according to the course of the dip in adjoining coaleries, the point C is the place at which the engine should be erected, because the coal dips in direction of the line AC, consequently the level line would be in the di- rection C D ; but this ought not to be trusted to. Admit two holes, 1, 2, be bored to the coal in the direction of the supposed dip, at 200 yards distance from each other, and a third hole, 3, at 200 yards distance from each of them : suppose the coal is found, at the hole 1, to be twenty fa- thoms deep; at the hole 2 ten fathoms deeper; but at the hole 3 only eight fathoms deeper than at 1. Then to find the true level line and dip of the coal, say, As ten fathoms, the dip from 1 to 2, is to 200 yards the distance, so is eight fathoms, the dip from 1 to 3, to 160 yards, the difference from one, on the line 1 2, to «, the point upon a level with the hole 3. Again say, As eight fa- thoms the dip from 1 to 3, is to 200 yards the distance, so is ten fathoms, the dip from 1 to 2, to 250 yards, the distance from 1, in direction of the line 1, 3, to b, the point upon a level with the hole 2. Then let fall the perpendicular l,c, which will be the true direction of the dip of the coal, instead of the supposed line AC, and by drawing E D and D F, parallel to the other lines, the angle D, and no other place, is the deepest part of the coal, and the place where the engine should be erected. If it had been erect- ed at the angle C, the level line would have gone in the direction ch, by which means about one- third part of the field of coal

would have been below the level of the engine, and perhaps lost, without another engine was erected at D. Boring not only shows the depth at which the coal lies, but its exact thickness ; its hardness ; its quality, whether close burning or open burning, and whether any foul mixture is in it or not ; also the thickness, hardness, and other circumstances, of all the strata bored through ; and, from the quantity of water met with in the boring, some judgment may be formed of the size of an engine capable of drawing it, where an engine is necessary. When holes are to be bored for these pur- poses, they may be fixed (as near as can be guessed) in such a situation from each other, as to suit the places where pits are afterwards to be sunk ; by which means most of the expense may be saved, as these pits would otherwise require to be bored, when sinking, to discharge their water into the mine below. There are many other uses to which boring is applied. It is generally practised in England, and is brought

to great perfection ; and as the operation is gen- erally entrusted to a man of integrity, who makes it his profession, the accounts given by him of the thickness and other circumstances of the strata, are the most accurate imaginable, and are trusted to with the greatest confidence ; for as very few gentlemen choose to take a lease of a new coalery which has not been suf- ficiently explored by boring, it is necessary the accounts should be faithful, being the only guide to rule the landlord in letting his coal, and the tenant in taking it. The instruments used in boring are very simple. The boring rods are made of iron, from three to four feet long and about one inch and a half square, with a screw at each end by which they are screwed together, and other rods added as the hole increases in depth. The chisel is about eighteen inches long, and two and a half broad at the end, which being screwed on the lower end of the rods, and a piece of timber put through an eye at the upper end, they are prepared for work. The operation is performed by lifting them up a little, and let- ting them fall again, at the same time turning them a little round ; by a continuance of which motions, a round hole is fretted or worn through the hardest strata. When the chisel is blunt it is taken out, and a scooped instrument called a wimble put on in its stead ; by which the dust or pulverised matter, which was worn off the stra- tum in the last operation, is brought up. By this substance, the borers know exactly the nature of the stratum they are boring in ; and by any alteration in the working of the rods (which they are sensible of by handling them) they per- ceive the least variation of the strata. The prin- cipal part of the art depends upon keeping the hole clean, and observing every variation of the strata with care and attention. Having, by one or other of the methods above described, ascer- tained the existence of the coal mine, the next object of consideration is- the method of work- ing it.

The most remarkable coal work that we have ever had in this island, was that wrought at Bor» rowstownness, under the sea. The veins of coal' were found to continue under the bed of the sea in this place, and the colliers had the courage to work the vein nearly half way over : there being a mote half a mile from the shore, where there was an entry that went down into the coal-pit, under the sea. This was made into a kind of round key or mote as they call it, built so as to keep out the sea, which flowed there twelve feet. Here the coals were laid, and a ship of that draught of water could lay her side to the mote, and

take in the coal. This famous coalery belonged to the earl of Kincardine's family. The fresh water, which sprung from the bottom and sides of the coal-pit, was always drawn out upon the shore by an engine moved by water, that drew it forty fathoms. The coal-pit continued to be wrought many years to the great profit of the owners, and the wonder of all that saw it ; but, at last, an unexpected high tide drowned the whole at once ; the laborers not having time to escape perished in it.

It is exceedingly uncommon to meet with a stiutum of coal which is naturally dry, or whose

subterranean springs or feeders of water are so very small, as to require no other means than the labor of men to draw off or conduct them away ; for it most commonly happens that the stratum of coal, and the other strata adjacent, abound so much in feeders of water, that, before access can be had to the coal, some other methods must be pursued to drain or conduct away these feeders : therefore, after the deepest part of the coal is discovered, the next consideration is of the best method of draining it, or, in the miner's language, of winning the coal. If the coal lie in such an elevated situation, that a part of it can be drained by a level brought up from the lower grounds, then that will be the most natural method; but whether it be the most proper or not, depends upon certain circumstances. If the situation of the ground be such that the level would be of a great length, or have to come through very hard strata, and the quantity of coal it would drain, or the profits expected to be produced by that coal, should be inadequate to the expense of carrying it up ; in such case some other method of winning might be more proper. Or suppose, in another case, it be found, that a level can be had to a coalery, which will cost £2000, and require five years to bring it up to the coal, and that it will drain thirty acres of coal when completed ; yet if it be found that a fire engine, or some other machine, can be erected on that coalery for the same sum of money, in one year, which will drain fifty acres of the same coal, men this last would be a more proper method than the level ; because four years' profit would be received by this method before any could come in by the other : and after the thirty acres drained by the level is all wrought, a ma- chine of some kind would nevertheless be neces- sary to drain the remaining twenty acres : so that erecting a machine at first would be on all ac- counts the most advisable. Where a level can be driven, in a reasonable time, and at an ade- quate expense, to drain a sufficient tract of coal, it is then the most eligible method of winning; because the charge of upholding it is generally less than that of upholding fire-engines or other machines. If a level is judged most proper, after every consideration of every

necessary circum- stance, it may be begun at the place appointed in the manner of an open ditch, about three feet wide, and carried forward until it be about six or seven feet deep from the surface, taking care to secure the bottom and sides by timber-work or building ; after which it may be continued in the manner of a mine about three feet wide, and three feet and a half high, through the solid strata, taking care all along to keep the bottom upon a level, and to secure the roof, sides, and bottom, by timber or building, in all places where the strata are not strong enough to sup- port the incumbent weight, or where they are liable to decay by their exposure to the fresh air. If the mine have to go a long way before it reach the coal, it may be necessary to sink a small pit, for the convenience of taking out the stones and rubbish produced in working the mine, as well as to supply fresh air to the workmen ; and if the air should afterwards turn damp, then square wooden pipes made of deals closely join

fed, commonly called air boxes, may be fixed in the upper part of the the mine, from the pit- bottom all the way to the end of the mine, which will cause a sufficient circulation of fresh air for the workmen Perhaps in a great length it will be found proper to sink another or more pits upon the mine, and by proceeding in this manner it may be carried forward until it arrive at the coal ; and, after driving a mine in the coal a few yards to one side, the first coal pit may be sunk. If a level is found impracticable, or for particular reasons- unadvisable, then a fire engine, or some other machine, will be necessary, which should be fixed on the deepest part of the coal, or at least so far towards the dip as will drain a suffi- cient extent of coal, to continue for the time in- tended to work the coalery. See STEAM ENGINE. Whether a fire engine, or any other machine is used, it will be of great advantage to have a par- tial level brought up to the engine-pit, if the situation of the ground will admit it at a small charge, in order to receive and convey away the water without drawing it so high as to the sur- face ; for if the pit is thirty fathoms deep to the coal, and if there is a partial level, which re- ceived the water five fathoms only below the surface the enginfe by this means would be enabled to draw one-sixth part more water than without it ; and if there were any feeders of water in the pit above this level, they might be conveyed into it, where they would be discharged without being drawn by the engine. The engine pit may be from seven to nine feet wide ; and whether it be circular, oval, or of any other form, is not very material, provided it be sufficiently strong, though a circular form is most

generally approved. If any feeders of water are met within a few fathoms from the surface, it will be proper to make a circular or spiral cutting about one foot deep, and a little hollowed in the bottom round the circumference of the pit, to receive and conduct the water down, without flying over the pit and incommoding the workmen. If the strata are of so tender or friable a nature as not to bear this operation, or if the water leaks through them, then it will be necessary to insert in the foremen- tioned cutting a circular piece of timber called a crib, hollowed in the same manner, to collect the water, and a second may be inserted two or three yards below the first, with a sloping nitch down the wall or side of the pit, to convey the water from the former into it ; proceeding by some of these methods until the pit is sunk fifteen or twenty fathoms ; at which place it will be proper to fix a cistern or reservoir, for the first crupper set of pumps to stand in ; for if the pit be thirty fathoms, as supposed, it would be too great a length for the pumps to be all in one set from the bottom to top; therefore if any extraordinary feeders are met with, betwixt fifteen and twenty fathoms deep, it would be best to fix the cistern where it may receive them, and prevent their de- scending to the bottom ; observing that the upper set of pumps be so much larger than the lower one, as the additional feeders may require ; or, if there are no additional feeders, it ought then to be a little smaller. After the upper cistern is fixed, the operation may be pursued by the other

set of pumps in much the same manner as has been described, until the pit is sunk to the coal ; which being done, it would be proper to sink it six or eight feet deeper, and to work some coal out from the dip side of the pit, to make room for a large quantity of water to collect, without in- commoding the coal-pits when the engine is not working.

It would exceed the proper bounds of this ar- ticle to enumerate all the accidents to which en- gine pits are liable in sinking ; we shall therefore only recite a few which seem important. If a quicksand happen to lie above the solid strata, next the surface, it may be got through by dig- ging the pit of such a wideness at the top (allow- ing for the natural slope or running of the sand), as to have the proper size of the pit on the upper- most solid stratum ; where fixing a wooden frame or tube, as the timber work of the pit, and co- vering it round on the outside with wrought clay up to the top, the sand may again be thrown into the excavation round the tube and levelled with the surface. If the quicksand should hap- pen to lie at a considerable depth betwixt the clay and solid strata, then a strong tube of timber closely jointed and shod with iron, of such a di- amjeter as the pit will admit, may be let down into it ; and by fixing a great weight upon the top, and by working out the sand, it may be made to sink gradually,

until it come to the rock or other solid stratum below ; and when all the sand is got out, if it be lightly caulked and secured it will be sufficient. It sometimes happens that a stratum of soft matter, lying betwixt two hard solid ones, produces so large a quantity of water as greatly to incommode the operations. In such a case a frame work of plank, strengthened with cribs and closely caulked, will stop back the whole or the greatest part of it, provided the two strata which include it are of a close texture ; or let an excavation of about two feet be made in the soft stratum, quite round the circumference of the pit ; and let that be filled close up betwixt tlie hard strata, with pieces of dry fir about ten inches square inserted endways, and afterwards as many wooden wedges driven into them as they can be made to receive ; if this be well finished, little or no water will find a passage through it. There is an accident of a very dangerous nature to which all coaleries are liable, and which has ruined several, called a crush, or a fitt. When the pil- lars of coal are left so small as to yield under the weight of the superior strata ; or when the pave- ment of the coal is so soft as to permit the pil- lars to sink into it, by the great weight that lies upon them, the solid stratum above the coal breaks and falls in, crushes the pillar to pieces, and closes up a great extent of the workings, or probably the whole coalery. As such an acci- dent seldom comes on suddenly, if it be per- ceived in the beginning, it may sometimes be stopped by building large pillars of stone amongst the coal pillars : but if it has already made some progress, then the best method is to work away as many of the coal pillars adjoining to the crust as may be sufficient to let the roof fall freely down; and if it makes a breach of the solid strata from the coal up to the surface, it will very

probably prevent the crush from proceeding any farther in that part of the coalery. If the crush begin in the rise part of the coalery, it is more difficult to stop it from proceeding to the dip, than it is to stop it from going to the rise when it begins in a contrary part. It rarely happens that any suffocating damp or foul air is met with in an engine pit; the falling of water, and the working of the pumps, generally causing a suffi- cient circulation of fresh air. But that kind of combustible vapor, or inflammable air, which will catch fire at the candle is often met with. It proceeds from the partings, backs, and cut- ters of the solid strata, exhaling from some in an insensible manner, whilst from others it blows with as great impetuosity as a pair of bellows. When this inflammable air is permitted to accu- mulate, it becomes dangerous by

taking fire, and burning or destroying the workmen, and some- times by its explosion will blow the timber out of the pit, and do considerable damage. If a considerable supply of fresh air is forced down the pit by air boxes and a ventilator, or by di- viding the pit into two by a close partition of deals from top to bottom, or by any other means, it will be driven out, or so weakened, that it will be of no dangerous consequence: or, when the inflammable air is very strong, it may be safely carried off by making a close sheathing or lining of thin deals quite round the circumference of the pit, from the top of the solid strata to the bottom, and lengthening it as the pit is sunk, leaving a small vacancy behind the sheathing ; when the combustible matter, which exhales from the strata, being confined behind these deals, may be vented by one or two small leaden pipes carried from the sheathing to the surface ; so that very little of it can transpire into the area of the pit. If a candle be applied to the orifice of the pipe at the surface, the inflammable air will in- stantly take fire, and continue burning like an oil lamp until it be extinguished by some ex- ternal cause. Upon the whole, every method should be used to make the pit as strong in every part, and to keep it as dry as possible, and, whenever any accident happens, it should be as expeditiously and thoroughly repaired as possible, before any other operation be proceeded in, lest an additional one follow which would more than double the difficulty of repairing it.

Among the most splendid, because most use- ful, of the modern contributions of science to the business of life, is Sir Humphry Davy's safety lamp, designed to obviate these accidents. Previous to the year 1815 no secure preventa- tive had in fact been invented. The steel wheel striking sparks from flint (called a steel-mill) had been introduced in Cumberland, to light the miners at their work ; but this attempt singularly and unfortunately terminated in the destruction of the projector, In the course of his experi- ments on carburreted hydrogen gas, Sir Humphry found that wire gauze of a certain degree of fine- ness, interposed between two explosive gases, prevented the kindling of the one from com- municating to the other ; and hence concluded, that a lamp thus surrounded would not expose the external air to combustion. The result has

been completely successful. We exhibit a dia- gram of it.

C is the oil cistern ; B, a brass rim, around which the wire gauze cylinder is fastened at bottom by a screw; F is the feeder through which the oil is supplied to the lamp ; T, the trimmer, a wire which passes through a safe tube, for the purpose of raising and trim- ming the wick; G, the wire gauze cylinder. The gauze cylinder G is closed at

the top by a circular piece of wire gauze; above which is placed a second top, H, fitting on the cylinder as a cap. The circular top of this wire gauze cap is three-fourths of an inch above the top of the wire gauze cylin- der ; W, W, are thick wires sur- rounding the cylinder, to pre- serve it from being crushed or bent ; R is a ring to hang up the lamp, or to hold it by. The suture, where the two edges of the piece of wire gauze that forms the cylinder meet, must be well doubled and fastened with wire. If the cylinder be of twilled wire gauze, the wire should be of .iron or copper, at least of the thickness of one-fortieth of an inch ; if of plain wire gauze, the diameter should not be less than one-sixtieth of an inch. The apertures in a square inch should not be less than 784.

The entire merit of this useful invention is Sir Humphry Davy's ; and he has devoted all the powers of his great mind to render it complete. The general size of the lamp is a span, that is, from eight to ten inches high, the wire gause cy- linder being two to two and a half inches in diameter. When choaked with coal-dust the wire must be cleaned by means of a brush. Somtimes a lens of glass, or a piece of tin is placed before the light, as a reflector. The light without a reflector is about equal to that of a common miner's candle. Gunpowder, phosphorus, sulphur, and pyrites, applied to the outside of the wire gauze, would produce explosion ; but sulphur, to produce this effect, must be applied in a considerable quantity, and blown upon by a current of air. There is clearly little danger of these substances being accidentally applied to the safety-lamp in mines. Should the lamp be placed in a current of ex- plosive gas, and great heat be produced, the radiating or cooling surfaces should be increased, and twilled gauze, or a double or triple fold of wire gauze on one side of the lamp, answers this purpose. But the iron wire gauze receives a strong welding heat, a circumstance which is al- most impossible in a coalery, then the iron wire would burn, and the lamp become no longer safe tc use.

We copy, in confirmation of Sir H. Davy's claim to this invention, ' Resolutions of a meeting held for considering the fact relative to the dis- covery of the Lamp of Safety.' The names at-

tached are at once decisive of the fact of the question, as well as of its general importance.

' Soho Square, Nov. 20th, 1817. ' 3rd. — That Sir.'H. Davy not only discovered, independently of all others, and without any knowledge of the unpublished experiments of the late Mr. Tennant on Flame, the

principle of the non-communication of explosions through small apertures, but that he has also the sole merit of having first applied it to the very im- portant purpose of a safety-lamp, which has evidently been imitated in the latest lamps of Mr. George Stephenson.

(Signed) Joseph Banks, P.R.S.

William J. Brande.

Charles Hatchett.

William Hyde Wollaston.

Thomas Young.'

See the whole document in Tilloch's Magazine' vol. 50. p. 387.

The first operations, after sinking the engine pit, are the working or driving a mine in the coal, and sinking the first coal-pit. The situa- tion of this should be a little to the rise of the engine-pit, that the water which collects there may not obstruct the working of the coals every time the engine stops ; and it should not exceed the distance of twenty, thirty, or forty yards ; because, when the first mine has to be driven a long way, it becomes both difficult and expen- sive. If there be not sufficient circulation of fresh air in the mine, it may be supplied by the before described air boxes and a ventilator, until it arrive below the intended coal-pit, when the pit may be bored and sunk to the coal, in the manner before mentioned. After the pit is thus got down to the coal, the next consideration should be of the best method of working it. The most general practice in Scotland is to excavate and take away a part only of the stratum of coal in the first working of the pit, leaving the other part as pillars for supporting the roof : and after the coal is wrought in this manner, to such a dis- tance from the pit as is intended, then these pil- lars, or so many of them as can be got, are taken out by a second working, and the roof and other solid strata above permitted to fall down anc fill up the excavation. The quantity of coal wrought away, and the size of the pillars left in the first working, is proportioned to the hardness and strength of the coal and other strata adjacent, compared with the incumbent weight of the su- perior strata. The same mode of working is pursued in most parts of England, differing only as the circumstances of the coalery may require ˆ for the English coal, particularly in the northern counties, being of a fine tender texture, and of the close-burning kind, and also the roof and pavement of the coal in general not so strong as in Scotland, they are obliged to leave a larger proportion of coal in the

pillars for supporting the roof, during the first time of working ; and, in the second working, as many of these pillars are wrought away as can be got with safety. The Scots coal in general being very hard, and of the open burning kind, it is necessary to work

it in such a manner as to produce as many great coals as possible, which is best effected by taking away as high a proportion of the coal as circum- stances will allow in the first work ing; on the contrary, the English coal being very tender can- not possibly be wrought large, nor is it of much importance how small they are, being of so rich a quality; so that a larger proportion may be left in pillars in this coal than could with propriety be done in the other; and, when all circum- stances are considered, each method seems well adapted to the different purposes intended. The ancient method of working was, to work away as much of the coal as could be got with safety at one working only ; by which means the pillars were left so small as to be crushed by the weight of the superior strata, and entirely lost. As great quantities of coals were lost by this method, it is now generally exploded, and the other adopted in its place ; by which a much larger quantity of coal is obtained from the same ex- tent of ground, and at a much less expense in the end. The exact proportion of coal proper to be wrought away, and to be left in pillars a.t the first working, may be judged of by a comparison of the circumstances before mentioned. If the roof and pavement are both strong, as well as the coal, _and the pit about thirty fathoms deep, then two-thirds, or probably three-fourths, may be taken away at the first working, and one-third or one-fourth left in pillars. If both roof and pavement be soft or tender, then a larger propor- tion must be left in pillars, probably one-third or nearly one-half; and in all cases the hardness or strength of the coal must be considered. The next proper step is to fix upon such dimensions of the pillars to be left, and of the excavations from which the coal is to be taken away, as may produce that proportion.

To form a just idea of which, see a plan of part of a pit's working, fig. 6, supposed to be at the depth of thirty fathoms, and the coal having a moderate rise. A represents the engine-pit ; B, the coal-pit ; A a B, the mine from the former to the latter ; B C, the first working or excavation made from the coal-pit, commonly called the winning mine or winning headway, nine feet wide ; bbbb, &c. the workings called rooms, turned off" at right angles from the others, of the width of twelve feet; cccc, 8cc. the workings called throughers or thirlings, nine feet wide, wrought through at right angles from one room to another ; d d d, &c. the pillars of coal left at the first working for supporting the roof, eighteen feet long and twelve feet broad ; D D, two large nillars of coal near the pit bottom, fifteen or twenty yards long, and ten or

fifteen broad, to support the pit, and prevent its being damaged by the roof falling in ; e e, the level mine wrought >n the coal from the engine-pit bottom, four or five feet wide ; //, &c. large pillars of coal left next the level, to secure it from any damage by the roof falling in ; g g, a dike which depresses the coal, one fathom ; h h, &c. large pillars and barriers of coal left unwrought, adjoining to the dike where the roof is tender, to prevent its falling down. The coal taken out by the first working in this pit is supposed to be one-third

of the wnole ; and allowing the rooms twelve feet wide, and the thirlings nine feet wide, then the pillars will require to be twelve feet wide, and eighteen feet long ; for, if one pillar be in a certain proportion to its adjoining room and thirling, the whole number of pillars will be in the same proportion to the whole number of rooms and thirlings in the pit.

Suppose A B C D, fig. T, to be a pillar of coal eighteen feet long and twelve feet broad, its area will be 216 square feet; ACHE, the adjoining thirling, twelve feet by nine feet, and its area 108 square feet ; B A E F G, the adjoining room, twenty-seven feet long and twelve feet broad, and its area 324 square feet ; which added to 108 gives 432 square feet, or two-thirds wrought, and 216 square feet left, or one third of the whole area F G H D. In the prosecution of the work- ings, the rooms to the right of the winning head- way should be opposite to the pillars on the left; and the first, third, and fifth pillar, or the second, fourth, and sixth, adjoining to the said headway, should be of such a length as to overlay the ad- joining thirlings ; as, in the plan, the pillar 2 overlays the thirlings 1 and 3 ; and the pil- lar 4, overlays the thirlings 3 and 5 ; this will effectually support the roof of the main road B C, and will bring the other pillars into their regular order, by which means each pillar will be opposite to two thirlings. Also a large portion of coal should be left in all places which are intended to be kept open after the second working ; such as the pit-bottoms, air courses, roads, and water courses, or where the roof is tender, as it generally is near dikes, hitches, and troubles ; and if the roof should continue tender for a considerable space, it will perhaps be found proper to leave a few inches of coal adhering to the roof, which, together with a few props of timber fixed under it, may support it effectually for a long time. The level mine e e, and the winning headway B C, should ‘be wrought for- ward a considerable length before the other rooms, in order to be drove through any dike

that might interpose ; otherwise the progress of the work- ings might probably be stopped a considerable time, waiting until a course of new rooms were procured on the other side of the dike. Sup- pose the dike g g, fig. 6, to depress the coal six feet, or one fathom, and that it rises in the same manner on the under side of the dike as it rises on the upper side ; in such a case, the only re- medy would be to work or drive a level mine through the strata of stone from the engine level at e, over the dike, until it intersect the coal at i; and from thence to drive a new level mine in the coal at i i, and a new winning headway i k. To gain a new set of rooms, and to supply fresh air to this new operation, a small mine might be drove from the room h, and a hole sunk down upon the level room it; therefore, if the level mine e e was not drove so far forward as to have ail these operations completed before the rooms and other workings were intercepted by the dike, the working of the pit might cease until these new places were ready. If there be two or three seams of coal in the same pit, having only a stratum of a few feet thick lying between them,

‘». is then material to observe that every pillar in the second seam be placed immediately below one in the first, and every pillar in the third seam below one in the second ; and in such a situation the upper stratum of coal ought to be first wrought, or else all the three together; for it would be unsafe to work the lower one first, lest the roof should break, and damage those lying above. It sometimes becomes necessary to work the coal lying to the dip of the engine or the level ; which coal is, consequently, drowned with water, and must, therefore, be drained by some means before it can be wrought. If the quantity of water proceeding from it be inconsiderable, it may then be drained by small pumps laid upon the pavement of the coal, and wrought by men or horses, to raise the water up to the level of the engine-pit bottom : or if the feeders of water be more considerable, and the situation be suitable, the working rod of these pumps miglit be connected with those in the en- gine-pit ; by which means the water would be raised up to the level : but if the quantity of water be very great ; or if, from other circum- stances, these methods may not be applicable, then the engine-pit may be sunk as deep below the coal as may be necessary, and a level stone- mine driven from its bottom to the dip of the strata, until it intersects the stratum of coal, from whence a new level mine might be worked, which would effectually drain it.

Suppose A B, fig. 8, to be a section of the engine- pit; B C, the coal drained by the engine ; B D, the coal to the dip of the engine intended to be drain- ed ; then, if the engine-pit be sunk deeper to E, a stone mine may be wrought in the direction E D, until it intersect the coal at

D, by which the wa- ter will have a free passage to the engine, and the coal will be drained. If there be another stratum of coal, lying at such a depth below the first as the engine-pit is intended to be sunk to, the upper steam may in some situations be conveniently drained by driving a mine in the lower seam of coal, from E to F, and another in the upper one from B to D : and, by boring a hole from D to F, the water will descend to F, and, filling the mine E F, rise up to the engine-pit bottom at E, which is upon a level with D.

When it is judged necessary to work the pillars, regard must be had to the nature of the roof. If the roof be tender, a narrow room may be wrought, through the pillar, from one end to the other, leaving only a shell of coal on each side for supporting the roof the time of working. Suppose ABC D, fig. 7, to be a pillar of coal eighteen feet long and twelve feet broad ; if the roof is not strong, the room 1, 2, 3, 4, of eight feet wide, mav be wrought up through that pillar, leaving a shell of two feet thick on each side; tnd, if it can be safely done, a part of these shells may be also wrought away, by working two pla- cles through them as at 5 and 6. Thus very little of the coal will be lost ; for two-thirds of the whole being obtained by the first working, and above two-thirds of the pillar by the second work- ing, the loss upon the whole would not exceed one-tenth. But some pillars will not produce so great a proportion, and others can.iot be wrought

at all; so that, upon the whole, there may be about one-eighth, one-seventh, or, in some situa- tions, one-sixth part of the coal lost. If the roof be hard and strong, as much coal may be wrought off each side and each end of the pillar as can be done with safety, leaving only a small piece standing in the middle; and, when very strong, several pillars may be taken entirely out without any loss of coal. In all cases it is proper to begiu working those pillars first, which lie farthest from the pit bottom, and to proceed working them regularly away towards the pit ; but if there be a great number of pillars to the dip of the pit, it is the safest to work these out, before those to the rise of the pit are begun with.

We shall next advert to some of the various methods of bringing the coals from the rooms and other workings to the pit bottom. Where the stratum of coal is of a sufficient thickness, and has a moderate rise and dip, the coals are most advantageously brought out by horses, who draw out the coals in a tub or basket placed upon a sledge ; a horse

will thus bring out from 400 to 800 cwt. of coals at one, according to the quan- tity of the ascent or descent. In some coaleries they have access to the workings by a mine made for them, sloping down from the surface of the earth to the coal ; and, where that convenience is wanting, they are bound into a net, and lowered down the pit. If the coal be not of such a height as to admit horses, and has a moderate rise, men are employed to bring out the coals : they usually draw a basket of 400 or 500 cwt. of coals fixed upon a small four-wheeled carriage. There are some situations in which neither horses nor men can be properly used ; particu- larly where the coal has a great degree of descent or where many dikes occur : in such cases the coals are best brought out by women called bearers, who carry them in a kind of basket upon their backs, usually a hundred, or a hundred weight and a half at once. When the coals are brought to the pit bottom, the baskets are then hooked to a chain, and drawn up the pit by a rope to the surface, which is best effected by a machine called a gin, wrought by horses. After the coals are got to the surface they are drawn a small dis- tance from the pit, and laid in separate heaps; the larger coals in one heap, the smaller pieces called chews in another, and the culm or pan- coal in a separate place.

Foul air is very often troublesome in coaleries. Of this there are two kinds; the black damp or styth, which is of a suffocating nature ; and the inflammable or combustible damp. In whatever part of any coalery a constant supply or a circula- tion of fresh air is wanting, there some of these damps exist, accumulate, and become noxious or fatal ; and, wherever there is a good circulation of fresh air, they cannot accumulate, being carried away by die stream of air as fast as they exhale from the strata. Upon these principles are founded the several methods of ventilating a coalery.

Suppose the workings of the pits A and B. fig. 6, to be obnoxious to the inflammable damps ; if the communication were open betwixt the two pits, the air which went down the pit A would proceed immediately along the mine a, and ascend

out of the pit B ; for it naturally takes the near- est direction : so that the air in all the workings would be stagnant, and they would be utterly inacessible from the accumulation of the combus- tible damp. To expel this, the air must be made to circulate through all the different rooms by collateral air courses made in tins manner: The passage a must be closed up by a partition of deals, or by a wall built with bricks or stones to prevent the air passing that way. This building is called a stopping. There must also be stoppings made in the thirlings III, &c. betwixt the pil- lars ff, &c. which will direct the air up

the mine e e, until it arrive at the innermost thirling 2, which is to be left open for its passage. There must also be stoppings made at the side of the mine a at m m, and on both sides of the main headway BC at b b, &c. then, returning to the in- nermost thirling 2, proceed to the third row of pillars, and build up the thirlings 2 2, &c. leaving open the thirling 3 for a passage for the air; and, proceeding on to the fifth row of pillars, build up in the same manner the stoppings 3 3, &c. leaving open 4 for an air course : and, by proceeding in this manner to stop up the thirlings or passages in every other row of pillars, the current of fresh air will circulate through and ventilate the whole workings, in the direction pointed to by the small arrows in the plain, clearing away all the damps and noxious vapors that may generate. When it is arrived at C, it is conducted Across the main headway, and carried through the other part of the pit's workings in the same manner, until it return through n n to the pit B, where it ascends; and, as the rooms advance farther, other stoppings are regularly made In some of thosi stoppings, on the sides of the main headway, there must be doors to admit the passage for the bringing out coals from the rooms to the pit, as at 5 5 : these doors must be constantly shut ex- cept at the time of passing through them. If at any time the circulation of the fresh air is not brisk enough, a large lamp of fire may be placed at the bottom of the pit B, which, by rarefying the air there, will make a quicker circulation.

Most of the large coaleries send their coals to the ships for the coasting trade or exportation; and, as the quantity is generally very large, it would take a greater number of carts than could conveniently be obtained at all times to carry them; besides the considerable expense of that manner of carriage ; they therefore generally use waggons, for carrying them along waggon-ways, laid with timber; by which means one horse will draw from two to three tons at a time, when in a cart not above half a ton could be drawn. The first thing to be done in making a waggon-way is to level the ground in such a manner as to take off all sudden ascents and descents : to effect which, it is sometimes necessary to cut -through hills, and to raise an embankment to carry the road through hollows. The road should be formed about twelve feet wide; and no part should have a greater descent than of one yard perpendicular in ten of a horizontal line, nor a greater ascent than one yard in thirty. After the road is formed pieces of timber, about six feet longˆ and six inches diameter, called sleepers, are laid

across it, being eighteen or twenty-four inches dis- tant from each other. Upon these sleepers other pieces of timber called rails, of four or five inches square, are laid in a lateral direction four feet distant from each other, for the waggon wheels to run upon ; which being firmly pinned to the sleepers, the road may then be filled with gravel and finished. The waggons have four wheels, either made of solid wood, or of cast iron. The body of the carriage is longer and wider at the top than at the bottom ; and usually has a kind of trap door at the bottom, which, being loosed, permits the coals to run out without any trouble. The size of a waggon to carry 50 cwt. of coals is as follows : length of the top seven feet, nine inches : breadth five feet ; length of the bottom five feet; breadth two feet six inches; perpendi- cular height four feet three inches. Where the pits are situated at a considerable distance from the harbour, it is necessary to have a store-house near the shipping place, where the coals may be lodged, until the ships are ready to take them in. The waggon-way should be made into the store-house, at such a height from the ground as to permit the coals to run from the waggons down a spout into the vessels; or else to fall down into the store-house. This kind of store-house is well adapted for despatch, and saving expense; for a waggon load of coals may be delivered either into the store-house or vessels instantly with very little trouble : and if the coals were ex- posed to the effects of the sun and rain, they would doubtless be very greatly injured in their quality.

There is no great difference in the weight of different kinds of coals, the lightest being about

74 Ibs. avoirdupois, and the heaviest about 79 Ibs. the cubic foot; but the most usual weight is

75 Ibs. the foot, which is 18 cwt. and 9 Ibs. the cubic yard. If one coal measuring exactly a cu- bic yard, nearly equal to five bolls, be broken into pieces of a moderate size, it will measure seven coal bolls and a half. If broken very small it will measure nine bolls; which shows, that the proportion of the weight to the measure depends upon the size of the coals ; therefore it is evident that accounting by weight is the most equitable method.

We have particular personal knowledge of the general merit of the above observations. But some modern improvements in the draining and working of coal-pits may be added.

A careful survey of the real contents of a sup- posed field of coal, previous to the commence- ment of any operations, is a precaution

that cannot be too strongly recommended. Situations for a clay-level drift have been presumed upon, long leases taken, and works often erected in utter defiance of common prudence, for want of a little careful use of the methods already de- scribed for exploring the ground.

Winning or draining the field is effected by a clay-level drift (where suitable) in the following manner.

Let 1, 2, 3, 4, be the borings of the field de- signed to be won from the ravine at 4 to the crop of the seams at a. A clay-level drift is now constructed, from the ravine, until it enters the seam S, by which the strata from 3 to 5 is drained.

A pit is then sunk upon 3, «, which works the contents of S with great ease to the surface. But in the progress of the work a down-throw slip-dike 6, 6, may occur, and depress the seam S, as alf. The nature and extent of this depression is ascertained by carrying forward a horizontal stone-drift, as to g, and dropping a bore-hole ; the clay-level drift being then continued until it meet the bore-hole 2. When an up-throw slip- dike is met with, the boring is directed upwards from a horizontal drift, and the clay-level drift continued, in a similar manner.

Coals below the level of the clay-drift are won by a shaft sunk at e, and worked as at h, i, and k, by a steam engine, which lifts the water to the clay-level drift, and it works off with its water by the ravine.

This mode of operation, it will be seen, re- quires a particular situation in the field : when it is nearly horizontal, as it often is, such a plan cannot be pursued : and no small obstacles are sometimes found in sinking the pits through the springs and quicksands that are penetrated at from thirty to fifty fathoms : in one shaft, a feeder of water has been found to yield 4000 gallons a minute. In such cases, the assistance of the steam engine has been incalculable ; but there are obstacles of this kind which even that pow- erful agent cannot, at least without an extrava- gant outlay, be made to overcome. The water is in these instances stopped, or dammed back, by what is called tubbing and wedging, accom- plished by fixing water-tight cylinders of wood, or cast-iron, within the circumference of the shaft. Such proceedings being attended with great labor and cost, as much use as possible is made of each shaft, and they have been made from nine to sixteen feet in diameter.

Working is accomplished by what is called the narrow and the broad

way : the former is that described in the foregoing article. But Mr. Buddie, of Walls' End, has recently brought an improvement of it into such great perfection, that we must here briefly advert to it. It is particu- larly described by Mr. Griffith, in his Report on the Leinster District.

By this mode of working, the mine is divide:' into a convenient number of portions, or districts, each of which is wrought in its turn, and the roof then suffered to fall in : this, however, is proposed for a measure, and the effect of it qua- lified by leaving in the abandoned part certain great protecting pillars of coal. In fact, this method is a mechanical calculation on the strength of the roof, judiciously and by degrees applied ; but the issue is, that this mode of working will withdraw safely seven-eighths of the contents of a coal field, whereas, ten years ago, not above a half, and sometimes not above a third, could be taken.

COA £

By the broad way of working no pillars are left, but the coal is wrought out sometimes for 150 yards of surface at once: this mode is only adapted, however, to pits in which it lies near the surface.

As we are going to press, we find the following return has been made to the Corporation Coal and Corn Committee of the quantities of coal, culm, and cinders, imported into the port of London during the year 1825. It is the first return of the kind ever made, and will give the reader some impression of the quantity of fuel consumed in the metropolis.

QUANTITIES OF COAL IMPORTED IN EACH MONTH OF THE YEAR 1825.

Months.

Ships.

Chaldrons.

Vats.

January

359

79,750

—

February . . .

480

110,136

1

March ....

606

136,573

3

April

445

100 198

–

May

490

106 332

1

June ... .

494

103 397

1

July

578

124,896

3

August . . . .

764

97,119

2

September . . .

754

158,583

—

October ....

615

135,611

—

November . . .

639

150,673

2

December . . .

640

146,448

2

Total . .

6,564

1,449,619

3

Imported under the -v

description of f ashes, without I

65,542

2

certificate . . J

Total . . .

6,564

1,456,162

1

TOTAL IMPORT, SPECIFYING EACH SORT.

Ships.

Chaldrons.

Vats.

Newcastle coal

2,182

534,015

-

Do. called Wall’s

end ....

1,849

436,902

2

Sunderland coal .

1,009

184,546

3

Do. called Wall’s

end ....

997

198,600

?

Blythe, Scotch,

Welsh, &c. . .

429

76,368

2

Coals, as ashes . .

6,542

1

Nut and Bean coal

20

2,939

1

Screened small coal

85

16,247

1

Total . . .

6,571

1,456,162

1

COALE’SCE, v. n. ~\ Lat. coalesce. To unite COALE’SCENCE, n. s. >
in masses by a a spon- COALI’TION, n. s. j taneous approximation to
each other. To grow together ; to join ; union in one mass or body;
conjunction of sepa- rate parts in one whole.

The world’s a mass of heterogeneous consistencies, and every part
thereof a coalition of distinguishable varieties. Granville.

VOL. VI.

7 COA

In the first coalition of a people, their prospect is not great : they
provide laws for their present exi- gence. Hale.

‘Tis necessary that these squandered atoms should convene and unite
into great masses ; without such a coalition the chaos must have
reigned to all eternity.

Bentley.

When vapours are raised, they hinder not the trans- parency of the air,
being divided into parts too small to cause ‘any reflection in their
superficies ; but when they begin to coalesce, and constitute globules,
these globules become of a convenient size to reflect some colors.
Newton.

COANE, among the Greeks, a name given to a peculiar species of tutia
or tutty, which was always found in a tubular form. It had its name
from KWVT), a word used to express a kind 01 cy- lindric tube, into
which the melted brass was received from the furnace, and in which it
was suffered to cool. In cooling, it always deposited a sort of
recrement on the sides of the vessel or tube, which was the tutty
called coane.

COANGO, a river of Africa, on the west coast, which, after running
through the kingdom of Congo, changes its name to Zaire, and falls
into the ocean between Sagno and Ango.

COANZA, a large, deep, and rapid river of Africa, which rises far in the interior, and, cross- ing the kingdom of Angola, falls into the Atlantic Ocean, about lat. 9° 20′ S., thirty-six miles south of Loanda the capital of that kingdom. It is navigable for 150 miles, and abounds with a va- riety of fish. It forms several islands, has some cataracts, and one in particular which bears its name. As for its source, and the length of ground it crosses r'rom east to west before it comes to the Portuguese settlement, they are absolutely unknown, as well as the countries through which it runs. It falls into the Atlantic Ocean, thirty miles north-east of Cape Ledo.

COAPTATION, n. s. From con and apto, Lat. The adjustment of parts to each other.

In a clock the hand is moved upon the dial, the bell is struck, and the other actions belonging to the en- gine are performed by virtue of the size, shape, big- ness, and coaptation of the several parts. Boyle.

The same method makes both prose and versa beautiful, which consists in the judicious coaptation and ranging of the words. Broome.

COA'RCT, v. a. ~* Latin, coarcto. To

COA ROTATE, v. a. > straiten, to confine into

COARCTA'TION, n. s. y a narrow compass; to contract power ; to restrain ; restraint to a nar- row space ; restraint of liberty.

The wind finding the room in the form of a trunk, and coarctated therein, forced the stones of the win- dow, like pellets, clean through it. Bacvn.

If a man coarcts himself to the extremity of an act, he must blame and impute it to himself, that he has thus coarcted or straitened himself so far. Ayliff'e.

Election is opposed not only to coaction, but also to coarctation, or determination to one. Bramhall.

Straiten the artery never so much, provided the sides of it do not meet, the vessel will continue to beat, below or beyond the coarctation. Ray.

COARSE, adj. ˆ Lat. erases. Gross; not CO'ARSELY, adv. \ separated from impurities CO'ARSENESS, n.s. jor baser parts; not deli- cate; rough; inelegant; unpolished; unfinished

by art or education ; not nicely expert ; rude ; uncivil; harsh in manners; raeanjvile; repulsive from a too common vulgarity of address; what- ever is uncultivated.

First know the materials whereof the glass is made ; then consider what the reason is of the coarseness or dearness. Bacon'* Essays.

I feel Of what coarse metal ye are moulded. .

Shakspeare.

Ill consort, and a coarse perfume Disgrace the delicacy of a feast. Roscommon, A coarse and useless dunghill weed, Fixed to one spot, to rot just as it grows. Otway. From this coarse mixture of terrestrial parts, Desire and fear by turns possess their hearts.

Dryden.

The good cannot be too much honored, nor the bad

too coarsely used. Id.

Praise of Virgil is against myself, for presuming to

copy, in my coarse English, his beautiful expressions.

Id.

Be pleased to accept the rudiments of Virgil's

poetry, coarsely translated, but which yet retains some

beauties of the author. Id,

Friends (pardon the coarseness of the illustration)

as dogs in couples, should be of the same size.

L'Estrange.

A base wild olive he remains ; The shrub the coarseness of the clown retains.

Garth.

Consider the penuriousness of the Hollanders, the coarseness of their food and raiment, and their little indulgences of pleasure. Addison on the War ˆ

Practical rules may be useful to such as are remote from advice, and to coarse practitioners, which they are obliged to make use of. Arbuthnot.

Tis not the coarser tye of human law That binds their peace. Thomson.

COAST, n. s., v.n. &v.a. } Lat. costa; Fr CO'ASTER, n. s. } caste. The mar-

gin of the land next the sea; the shore. It is not used for the banks of less waters. To coast is, to sail within sight of land; to sail near the shore. A coaster is one who thus sails, and who does so from timidity, or apprehension of danger. Thus, the coast is clear, is a proverbial expression, de- noting that the danger is over, or that there is not anything to fear, and the coaster may there- fore take leave of the shore.

Stere onys into the castes as well as thou can, When our shippes be ycom, that we may pass in fere ; Lace on a bonnet or tweyn, that we mave saile nere, And when they wer the castes nygh, was noon of

them all That wist what lond it was. Chaucer's Canterbury Tales.

Nor did it then deserve a name to have, Till that the venturous mariner that way Learning his ships from those white rocks to save, Which all along the southerne sea-coast lay, Threatening unheedy wrecke and rash decay, For safety that same his sea-marke made, And named it Albion ; but later day Finding in it fit ports for fisher's trade, Gan more the same frequent, and further to invade.

Spenser.

The south-east is found to be better for ripening of

trees than the south-west ; though the south-west be

the hottest coast. Bacon.

Going out, an<5 seeing that the coast was clear, Zel-

mane dismissed Musidorus. Sidney.

Nearchus, the admiral of Alexander, not knowing the compass, was fain to coast that shore.

Browne's Vulgar Errours.

He sees in English ships the Holland coast. Dryden, In our small skiff we must not launch too far ;

We here but coasters, not discoverers, are. Id.

But steer my vessel with a steady hand, And coast along the shore in sight of land.

Id. Virgil. The royal spy, when now the coast was clear,

Sought not the garden, but retired unseen. Id

Some kind of virtue, lodged in some sides of the crystal, inclines and bends the rays towards the coast, of unusual refraction ; otherwise the rays would not be refracted towards that coast rather than any other coast, both at their incidence and at their emergence, so as to emerge by a contrary situation of the coast.

Newton's Optickt.

The greatest entertainment we found in coasting it, were the several prospects of woods, vineyards, mea- dows, and corn-fields, which lie on the borders of it.

Addison on Italy.

The ancients coasted only in their navigation, sel- dom taking the open sea. Arbuihnot on Coins ˆ Cold as the crags upon his native coast,

His mind as barren, and his heart as hard,

Is he whose head conceived, whose hand prepared

Aught to displace Athena's poor remains.

Byron's Childe Harold,

COAST, CAPE, or COAST CASTLE, CAPE, the chief British settlement on the gold coast of Guinea in Africa. The name is a corruption of Cabo Corso, the ancient Portuguese appellation. This cape is formed by an angular point vˆshed on the south and east by the sea, on which

stands the English fort. Here the Portuguese settled in 1610, and built the citadel upon a large rock that projects into the sea. A few years after- wards they were dislodged by the Dutch, to whom this place is principally indebted for its strength. In 1661 it was demolished by Admiral Holmes, and in 1665 the famous Dutch Admiral De Ruyter was ordered by the States to revenge the insults of the English. With a squadron of thirteen men of war, he attacked all the English settlements along the coast, ruined the factories, and took, burnt, and sunk, all the shipping of the English Company : however, after all his efforts, he was baffled in his attempts on Cape Coast. By the treaty of Breda it was confirmed to the English, and the king granted a new charter in 1672; on which the Company applied all their attention to the fortifying and rendering it commodious. The fort is consider- ably strengthened with high and thick walls, especially on the land side, flanked with four bastions and ten pieces of cannon ; but it is too near (he town, and even commanded by some of the houses. There are apartments in it for the governor, besides a chapel, and accommodations for different workmen and artificers. The houses in the town are built in a square form, mostly of clay, but the whole appearance very irregular and dirty. It is supposed to contain about 8000 people. The surrounding country was formerly very woody, but some improvement has taken place by the opening of roads, the laying out and planting of private grounds, the erection of man- sions, &c. With all the workmen connected with this establishment, the garrison could hardly be raised to 100 men, a force very inadequate to

t!ie importance of the place. It is situated in about 3° W. long., and 5° 15′ N. lat.

COASTING, in navigation, the act of making a progress along the sea coast of any country. The principal requisites for this part of navigation are, the knowledge of the time and direction of the tide ; of the reigning winds ; of the roads and havens ; and of the different depths of water, and qualities of the ground.

COASTING PILOT, a pilot who by long expe- rience has become sufficiently acquainted with the nature of any particular coast, and of the re- quisites mentioned above, to conduct a ship or fleet from one part of it to another.

COAT, n. s. & v. a. ‘%irS > v ; Fr. cotte. An upper garment, belonging generally to the male sex ; the outside covering of animals ; but extend- ing to any integument, tunic, or covering; to whatever is placed in the exterior to preserve it either from decay or from cold, from accident and from injury. T o coat is not merely to put on the outward garment, but it is to cover, to invest, to overspread. That, on which armorial ensigns are portrayed, is cal’ed a coat, probably because these ensigns were originally affixed to the coat, or outward apparel. Coat likewise is used to distinguish the habit or vesture, as de- monstrative of office.

He was armed with, a coat of mail, and the weight of the coat was five thousand shekels of brass.

1 Samuel,

The coat of many colors they brought to their father, and said, this have we found : know now whether it be thy son’s coat or no. Genesit.

A white cote, and a blew hode, wered he.

Chaucer’s Canterbury Tales. Ther maist thou see devising of harneis So uncouth and so riche, and wrought so wele Of goldsmithery, of bronzing, and of stele : The sheldes brighte testeres and trappures, Gold-hewen helmes, hauberkes, cote-amures. Id.

The herald of love’s mighty king, In whose coat armour richly are displayed All sorts of flowers the which on earth do spring.

Spenser.

Cropped are the flower-de-luces in your arms ; Of England’s coat one half is cut away.

Shahspeare. Henry VI. He clad

Their nakedness with skins of beasts ; or slain, Or, as the snake, with youthful coat repaid ; And thought not much to clothe l.is enemies.

Milton

Men of his coat should be minding their prayers,

And not among ladies, to give themselves airs. Swift.

The eye is defended with four coats, or skins.

Peacham.

The optick nerves have their medullary parts, ter- minating in the hrain, their teguments terminating in the coats of the eye. Derham's Physico- Theology.

At each trumpet was a banner bound, Which, waving in the wind, displayed at large Their master's coat of arras and knightly charge.

Dryden.

Amber is a nodule, invested with a coat, called rock-amber. Woodward on Fossils.

The finny brood their wonted haunts lorsake, Float in the sun, and skim along the lake, With frequent leap they range the shallow streams, Their silver coats reflect the dazzling beams. Gay.

How his eyes languish ! how his thoughts adore That painted coat which Joseph never wore.

Young's Love of Fame.

You have given us milk

In luscious streams, and lent us your own coat Against the winter's cold. Thomson's Spring.

COAT OF ARMS, in heraldry, a habit worn by the ancient knights over their arms both in war and tournaments, and still borne by heralds at arms. It was a kind of fur coat, reaching as low as the navel, open at the sides, with short sleeves, sometimes furred with ermine and hair, upon which were applied the armories of the knights embroidered in gold and silver, and enamelled with beaten tin, colored black, green, red, and blue ; whence the rule never to apply color on color, nor metal on metal. We insert a wood-cut of the coat of the earl of Chatham, as borne at his funeral.

The coats of arms were frequently open, and di- versified with bands and fillets of several colors, alternately placed, as we still see cloths scarleted, watered, &c. Hence they were called devises, as being divided, and composer] of several pieces sewed together; whence the words false, pale, chevron, bend, cross, saltier, lozenge, &c. which have since become honorable pieces, or ordina- ries of the shield. Coats of arms and banners were never allowed to be worn by any but knights and ancient nobles.

COAT OF MAIL, a kind of armour made in the form of a shirt ; consisting of iron rings woven together netways. See ARMOURS.

COATING OF PHIALS, PANES OF GLASS, &c., among electricians, is usually performed by covering the outside of the phial with tinfoil, brass or gold leaf, &c, and filling its inside with loose pieces of brass leaf, by which means it becomes capable of being charged. See ELECTRICITY.

COATZACUALCO, a navigable river of North Americo, in Mexico, which falls into the Gulf of Mexico near Onohualco.

COAX, v.a. 1 Teut. kosen. To wheedlev

CO'AXER, w.s. J to flatter, to humor; to seduce oy low arts.

The nurse had changed her note ; she was muzzling and coaxing the child ; that's a good dear says she.

L' Estrange .

I coax ! I wheedle ! I'm above it.

Farquhar's Recruiting Officer _

CO'BALT, n. s. A mineral frequent in Saxony.

Cobalt is plentifully impregnated with arsenide ; contains copper and some silver. Being sublimed, the florf s are of a blue color : these, German miner- alogists call zafBr Woodward.

Cobalt is a dense, compact, and ponderous mineral, very bright and shining, and much resembling some of the antimonial ores. It is found in Germany, Sax. ony, Bohemia, and England ; but ours is a poor kind From cobalt are produced the three sorts of arsenick, white, yellow, and red j as also zaffre and smalt.

« Hill on Fossils.

H 2

COBALT, a mineral of a gray color, classed with the semi-metals. It nearly resembles fine hardened steel, and its specific gravity is above

8. It is as difficult of fusion as copper, and, when purified, scarcely yields to iron itself in ihis respect. It is susceptible of magnetism, but in a weaker degree than either steel or nickel. Cobalt, when calcined along with the calx of arsenic in a gentle heat, assumes a red color. The same is naturally produced, by way of ef- florescence, and is then called the bloom or flowers of cobalt, It docs not mix with mer- cury by any means hitherto known, nor will it form any union with bismuth without the addi- tion of some medium. It is easi'y soluble in spirit of nitre, and the solution, either in this or any other acid, is of a red color; and it is ob- servable that the color of the acid solutions of Ihis substance, instead of fading by dilution with water, become more vivid. Cronstadt makes mention of native cobalt; but other mineralogists assure us that it has never been found perfectly pure in the bowels of the earth. That called the gray cobalt ore approaches nearest to the purity of the native metal, but always contains some quantity of arsenic and iron. It is found in Sweden, Saxony, Norway, and England, par- ticularly in the Mendip hills 'n Somersetshire and in Cornwall, where it has been dug up in large quantities. Here it is sometimes found in con- junction with bismuth and sometimes without it, resembling very much in appearance the Saxon ores of Schnuberg in misnia. An arsenicated gray cobalt ore has also been found at. Chatelaudren in France. This kind of ore is solid, heavy, and compact, sometimes dull and sometimes of a bright appearance, crystallised frequently in a tessular and sometimes in a dendritical form ; being generally hard enough to strike fire with steel, when an arsenical smell is perceived. The most common ore of cobalt is that called the black or vitreous ore, and kobalt mulm or schlaken kobalt by the Germans. It is found in a loose powdery form, sometimes resembling lamp-black, some- times of a gray color, in which state it is called cobalt ochre ; but when in scoriform half- vitrified masses it obtains the name of vitreous or glossy ore. It is frequently embodied in stones or sands of a black color ; sometimes it is con- tained in argillaceous earths of a blue or green color. Talc, chalk, and gypsum, impreg- nated with it, are called by the same name; and, by some, spiegel cobalt. Cobalt, min- eralised by the arsenical acid, is found either loose and pure, or mixed with chalk or gypsum, or indurated and crystallised in tetrahedral crystals. It is also found in a stalactitical form. It melts easily, and then becomes blue. It fiequently invests other cobaltic ores ; and is found sometimes in stone and sand. From the experiments of Bergman it appears that the ar- senical acid, and not the calx of arsenic, enters iuto this combination ; for cobalt is never red but when united to an acid. Flowers of cobalt mineralised by arsenic without any silver, and intermixed with galena, have also been discovered in France. They are often found of a red color, like

other earths, spread very thin on the cobalt ores; and, when of a pale color, are erroneously called

flowers of bismuth. The indurated flowers of cobalt are commonly crystallised in form of deep red semitransparent rays. It is found at Schnu- berg in Saxony. Cobalt, mineralised by sulphu- reted iron, is of a color nearly resembling tin or silver. It is sometimes found in large masses, sometimes in grains crystallised of a dull white color, and frequently has the appearance of mis- pickle. It has no mixture of arsenic. By cal- cination it becomes black and not red, which distinguishes it from the pyrites : and it contains so little sulphur that none can be extracted from it. When dissolved in aqua regia the solution is yellow, but becomes green when boiling ; which alteration, according to Kirwin, is peculiar to marine cobalt. A coarse grained kind of this ore, found in Sweden, becomes slimy in the fire, and sticks to the iron rods employed in stirring it while calcining. The slaggy kind contains a large' quantity of iron, and affords a very beau- tiful color as well as the former. Cobalt mine- ralised by sulphur, arsenic, and iron, has a great resemblance to the harder kinds of gray cobalt ore; but it is never hard enough to strike fire with steel, and sometimes may even be scraped with a knife. The most shining kind of this and the former species are called kobalt glantz. The great consumption of cobalt is for the permanent blue color which it communicates to glasses and enamels, either upon metals, porcelains, or earthen wares of any kind ; and for the making of smalt powder blue &c. But although cobalt is ap- plied to few other purposes, the quantities con- sumed in this way afford Sufficient profit to those who have cobalt mines in their possession. Ores of cobalt are met with, in the greatest quantities, near Schnuberg in Saxony, and at St. Andreas- berg in Upper Hartz. Formerly an iron ore only was found in this place ; but about the be- ginning of the fourteenth century, on sinking deeper, it was succeeded by a very rich ore of silver; which, also, being at length exhausted, gave place to cobalt ores. Some pieces, how- ever, are still found in these mines that contain silver and gold. It is supposed that the Chinese, and particularly the Japanese, had formerly mines of excellent cobalt, with which the fine blues of their ancient porcelains were painted ; but it appears that these mines are now ex- hausted, and that the inferior blues of their pre- sent wares are painted with the Saxon zaffre, im- ported to them by the Dutch. See CHEMISTRY.

COBALT, a name applied in Germany, and Saxony, to the damps and arsenical vapors, and their effects on the miners ; which has induced the vulgar to apply it to an evil spirit, whom they suppose to dwell in the mines.

COBB (Samuel), an English poet, was edu- cated at Christ's Hospital, whence he proceeded to Trinity College, Cambridge, and took his degree of A.M. in 1702. He afterwards became master of the grammar school at Christ's Hos- pital, but died in 1713, in the prime of life. He wrote 1. Observations on Virgil; 2. a collection of Poems, with a discourse on Criticism and the liberty of Writing, 8vo. ; 3. The Miller's Tale, from Chaucer; 4. a Translation of the Musci- pula; 5. The Oak and the Briar, a tale; 6. Tha Female Reign, an Ode.

COBB (James), a dramatic writer, was born in 1756, and became secretary to the East India Company, which office he discharged with great credit till his death in 1818. He wrote the Hu- morist, an opera ; Love in the East ; the Haunted Tower; the Siege of Belgrade; and several minor pieces, all of which obtained considerable notice.

COBBE, the principal town of the central country of Darfur, Africa. It is situated in the middle of the province, on the great road which penetrates it from north to south, and is said to be more than two miles in length, but very nar- row ; each house occupying within its enclosure a considerable space of ground, and being sepa- rated by a vacant space from the one nearest it. Here reside the principal merchants who conduct the central trade of Africa. In the town appear in great numbers the palm, the delab tree, &c. and two species, called the heglig and the nebbek, which give it an agreeable appearance. The water here, which is drawn from wells filled by .he torrents which descend here in the rainy season, though not unwholesome, is turbid, and Df an unpleasant taste ; in the dry season it often fails. A market is held twice a week for meat and other provisions. Near the town, on the east, is a high mountain of this name abounding with the African tiger and jackal. Long. 28° 8′ E., lat. 14° ll'N.

COBBESECONTE, or COPSECOOK, a small river of the United States, district of Maine, which rises from ponds in Winthrop, and falls into the Kennebeck within three miles of Nahunkeag, and fifteen from Moose Island. The name, in the Indian language, signifies the place where stur- geon are taken.

COBBING, a punishment sometimes inflicted at sea. It is performed by striking the offender a certain number of times on the breech with a

flat piece of wood, called the cobbing board. It is chiefly used as a punishment to those who quit their station during the period of the night watch. Nor are school-boys unacquainted with it as a diversion.

‘?O’BBLE, v. a.) Fr. cobler ; Lat. copulo.

CO’BBLER, n. s. J To mend a thing coarsely ; literally applied to the mending of shoes; hence, to a clumsy workman in general ; a mean and low occupation.

If you be out, Sir, I can mend you. — Why, Sir, cobble you. Shahspeare. Julius Ccesar.

What trade are you ? —

Truly, Sir, in respect of a fine workman, I am But, as you would say, a cobbler. Id.

They’ll sit by the fire, and presume to know

What’s done i’ the capital ; making parties strong,

And feeble such as stand not in their liking

Below their cobbled shoes Id. Coriolanus.

Reject the nauseous praises of the times ;

Give thy base poets back their cobbled rhimes.

Dryden

Think you the great prerogative to enjoy Of doing ill by virtue of that race ? As if what we esteem in cobblers base Would the high family of Brutus grace.

Id. Juvenal.

Not many years ago it happened that a cobbler had the casting vote for the life of a criminal.

Addisoit 011 Italy.

COBDEN (Edward), an ingenious divine and poet, born in 1684. He became rector of St. Austin in London, and of Acton in Middlesex, prebendary of St. Paul’s, and archdeacon of Lon- don. Dr. Cobden was likewise chaplain in ordi- nary to George II., but resigned that

situation some years before his death, which happened in 1764. He published a volume of poems for the benefit of his curate's widow; and, in 1757, a volume of sermons also.

COBEQUIT, or COLCHESTER, a river of Nova Scotia, which rises within twenty miles of Tata- mogouche, on the north-east coast; thence iuns south, then south-west and west, into the east end of the basin of Minas. There is a short bank at its mouth; but it has a good channel on each side, whereby vessels of sixty tons may pass. and go forty miles up the river.

COBHAM, a town of the United States in Virginia, on the south bank of James River, op- posite to James town : eleven miles north-west of Smithfield ; twenty north-west by north Oi Suffolk; nine south-west of Williamsburgh ; fifty-four east by south of Petersburgh; and forty-five south-east of Richmond.

GOBI, a desert of Tartary, called Chamo by the Chinese ; bounded on the north by the coun- try of the Kalkas ; on the east by the Moguls and Chinese Tartary ; on the south by China; and on the west by Kalranc Tartary.

CO'BIRONS, n. s. Cob and iron. Irons with a knob at the upper end.

The implements of the kitchen; as spits, ranges, cobirons, and pots. Bacon's Physical Remains.

CO'BISHOP, n. s. Con and bishop. A co- adjutant bishop.

Valerius, advanced in years, and a Grecian by birth, not qualified to preach in the Latin tongue, made use of Austin as a cobithop, for the benefit of the church of Hippo. Ayliffe.

COBITIS, the loache, in icthyology, a genus of fishes belonging to the order of abdominales. The eyes are in the upper part of the head ; the branchiostege membrane has from four to five rays ; and the body is nearly of an equal thick- ness throughout. There are six species, of which three are natives of Europe. The loache is found in several of our small rivers, at the bottom on the gravel ; and is, on that account, in some places called the groundling : it is common in the stream near Amesbury in Wiltshire, where sports- men sometimes, in frolic, swallow it alive in a glass of white wine.

COBLE, a boat used in the turbot fishery, twenty feet six inches long, and five feet broad. It is about one ton burden, rowed with three pairs of oars, and admirably constructed for en- countering a mountainous

sea

COBLENTZ, an ancient city in the grand duchy of the Lower Rhine, in Germany, in long. 7° 30′ E., lat. 50° 23′ N., about thirty-six miles north-west of Mentz, forty-ei«‘ht south-east of Cologne, and fifty-four north-east of Treves. Formerly it was included in the electorate of Treves, afterwards it was nade a part of the French republic, and the capital of the depart- ment of the Eiffel, and, finally, became subject to Prussia. It stands opposite the fortress of

Ehrenbreitstein, in a rich and fertile country, the mountains of which are covered with vine- yards, at the confluence of the rivers Rhine and Moselle. It has a bridge of free-stone over the latter river, but the former is crossed by one con- structed of boats. The city is handsome and •well built, the streets regularly laid out, the houses of stone, and the public buildings very elegant. The elector of Treves was accustdmed to reside here ; and, at the beginning of the French revolution, the emigrant princes and nobles made it their principal resort. The palace of the elector is a magnificent building on the bank of the Rhine, on the opposite side of which the old castle stands on the top of a height, with a small collection of houses round it. A ferry machine erected on two boats, in the form of a square gallery, surrounded with balustrades, passes from one side of the river to the other for the convenience of passengers ; it is moved by pulling a rope fixed to a standard on each bank. The castle completely commands the city, and seems almost inaccessible; the French, however, under general Marceau, took it after a siege of two hours on the 23id of October, 1794. For- merly there were two collegiate churches within the city, besides an archiepiscopal seminary, a Jesuit college, and several convents ; but the French suppressed most of them. Its population has been differently stated, some making it 12,000 or 13,000, and others under 1 1,000, which is the most probable calculation, even including the suburbs of Moselweis and Newendorf. This place is very favorably situated for trade, directly communicating with Germany and Switzerland by the Rhine, and with France by means of the Moselle. Great quantities of the best Moselle wine are made here, and exported to Frankfort and Holland ; and through this place the Dutch have much of their timber and iron. Wool, linen, and leather, constitute the chief articles of manu- facture, but on a small

scale. Two yearly fairs, of a fortnight each, are held here.

Coblentz has been celebrated in antiquity. It •was known to the Romans, who called it Con- fluentes, or Confluentia, from its situation ; in the year 800 a great ecclesiastical council was held in it ; and it was counted a free town for a long time before it passed into the possession of the electors of Treves. In 1249 it was fortified with •walls, but, during the thirty years' war, it passed successively into the hands of the Swedes, French, Imperialists, and German Protestants. It was besieged by the French in 1688, and almost laid in ashes by a bombardment that it suffered from the castle Ehrenbreitstein ; but it did not sur- render. It is remarkable for having been made by the Prussians their head quarters, when they were about to invade France ; and here the prince of Conde fixed the rendezvous of the emigrants that formed his army. The mineral waters of Tinstein, near this place, are noted, and the baths of Ems, in the neighbourhood of which pumice stone is found in great abundance. There are two interesting objects near this city, a Car- thusian monastery, almost in ruins, and the tomb and fort of general Marceau, who fell in the year

1796.

CO'BNUT, n. s. cob and nut. A boy> game; the conquering nut.

COBOOSE, in sea language, a sort of box, re- sembling a sentry-box, used to cover the chim- neys of some merchant ships. It generally stands against the barricade, on the fore part of the quarter-deck. It is called in the West Indies Cohre Vega. .

COBOURG, a principality in Germany, situated in the northern part of the circle of Francouia, but dependent on that of Upper Saxony. It is included between 9° 50′ and 12° 20′ E. long., and 50° 15′ and 51° 15′ N. lat., and is bounded on the south by Franconia, on the north and east by Upper Saxony, and on the west by the principality of Hesse. Formerly it belonged to the house of Henneburg, but passed by marriage to that of Saxony, and has been di- vided into four branches, viz. Saxe-Cobourg, or Saxe-Cobourg Saalfield, Saxe-Meiningen, Saxe-Gotha, and Saxe-Heilburghausen. The princi- pality of Saxe-Cobourg, properly so called, is the most southerly of the four divisions above men- tioned ; the mountainous ridge, that passes through them, forming its northern boundary, and Fran- conia being its boundary on every other side ; it lies between 10° 35′ and 11° 20′ E. long., and 50° 15′ and 50° 34′ N. lat. It comprehends about 580 square miles, and a population of 80,000 persons. It is generally a mountainous district, especially through the middle part, in- cluding a great part of the

Thuringian forest; there are, however, extensive plains, which are very fertile in corn, flax, hops, and fruit, and large pastures for cattle. The inhabitants export corn, wool, cattle, tiles, wood, pitch, and potash, which last article constitutes their chief manufac- ture ; they also make glass, leather, and gunpow- der, both forborne consumption and exportation. It is watered by several streams, the chief of which are the Itz, or Itach, and the Saale, both running into the Maine, and the Werra, after- wards known by the name of the Weser. Amongst its mineral and fossil productions, may be enumerated iron, .copper, coals, marble, alum, gypsum, and chalk. It is under an hereditary government ; and the greater part of the people are Lutherans ; free toleration, however, is en- joyed here. It supports an army of 800 men, and yields £52,000 revenue.

COBOURG, the capital, lies in a pleasant valley, through which the Itz flows. It is generally well built, and has a handsome square market-place, containing the town-hall and government offices, and a castle, where the prince usually re- sides. On a hill near the town stands the fort, a place of some strength. Various articles are made here of the petrified wood found in the neighbourhood. Six annual fairs are held, and a great trade carried on in wool. There are about 7000 people in this town, many of whom work in the quarries adjacent. Saalfield, on the Saale, is the second city, and was formerly a place of great consequence. It once possessed the mint for Upper Saxony ; it has yet some pub- lic institutions, and silk and cloth manufactures. Not far from it, on an eminence, stands Saalfield Abbey, a monastery of Benedicti'tes, the abbot of

which was always a German prince, who ad a seat in the Diet.

CO'BSWAN, n. s. Cob head, and swan. The head, or leading swan.

I am not taken

With a cobswan, or a high-mounting oull, As foolish Leda and Europa were.

Ben Jonson's Cataline.

COBWEB, n. s. Dutch, kopweb. The web . or net of a spider ; from cob,

a spider. Any snare or trap ; implying insidiousness and weak- ness.

The luckless Clarion, With violent swift flight, forth carried Into the cursed cobweb, which his foe Had framed for his final overthrow. Spenser. Is supper ready, the house trimmed, rushes strewed, and cobwebs swept ?

Shahspeare. Taming of the Shrew. The spider, in the house of a burgher, fell present- ly to her net-work of drawing cobwebs up and down.

L'Estrange.

For he a rope of sand could twist As tough as learned Sorbonist ; And weave fine cobwebs fit for scull That's empty when the moon is full. Hudibras. Chronology at best is but a cobweb law, and he broke through it with his weight. Dryden.

Laws are like cobwebs, which may catch small flies, but let wasps and hornets break through. Swift.

Drawn by a fraudful nymph, he gazed, he sighed, Unmindful of his home and distant bride ; She leads the willing victim to his doom, Through winding alleys to her cobweb room. Gay.

Laws, as we read in ancient sages Have been like cobwebs in all ages. Cobwebs for little flies are spread, And laws for little folks are made. Beattie.

COCA, a town of Spain in Old Castile, seated on the Eresma, among the mountains, near a strong castle, which is used as a state prison. It is twenty-four miles E.S.E. of Valladolid, and twenty-two north-west of Segovia. Long. 3° 28′ W., lat. 41° 29′ N.

COCCEIUS (John), a celebrated Dutch di- vine, born at Bremen in 1608. When only twenty-seven years of age, he was appointed He- brew professor in his native city ; but afterwards removed to Franeker, and lastly to Leyden, where he filled the theological chair. He dis- tinguished himself by his commentaries on the Old Testament history, which he considered as a mirror, holding forth an accurate view of the transactions and events that were to happen in the rhurch under the New Testament dispensa- tion, and unto the end of the world. The apoca- lypse was his favorite study ; and he maintained the notion of a visible reign of Christ in this world, after a general conversion of the Jews, and other people to the Christian faith. His opinions were warmly controverted ; but they had many adherents, who obtained thr

name of Cocceians. He died at Leyden in 1669. His writings make ten vols. folio.

COCCEIUS (Henry), a German civilian, born at Bremen in 1644. He was educated at Leyden, and afterwards became professor of the law of mature and nations at Heidelberg ; on the taking of which place he removed to Utrecht, and lastly

to Frankfort on the Oder. He was created a baron of the empire in 1713, and died in 1719. He published Juris Publici Prudentia Compendioseexhibita; Prodromus Justiliie Gentium; Deductiones, Consilia, &c. ; Theses, four vols. 4to ; and also an improved edition of Grotius on War and Campaigns.

COCCI'FEROUS, adj. From KOKKOQ, and fero, Lat. All plants or trees are so called that have berries.

COCCINELLA, in zoology, the lady-bivd, a genus of insects of the order of coleoptera. The antennae are subclavated ; the palpi are longer than the antennae, the last articulation heart- shaped ; the body is hemispheric ; the thorax and elytra are marginated ; the abdomen is flat. This genus is divided into sections, from the color of the elytra, and of the spots with which they are adorned. The females, impregnated by the males, deposit their eggs, which turn to small larvae, slow in their progress, and inveterate enemies to the plant-louse. Those larvae are frequently found upon leaves of trees covered with plant-lice. On the point of being metamor- phosed, they settle on a leaf by the hinder part of the body, then bend and swell themselves, form- ing a kind of hook. The skin extends, grows hard, and in a fortnight's time the chrysalis opens along the back. The insect in its perfect state receives the impressions of the air, that gives its elytra a greater degree of consistence. It seldom flies, and cannot keep long on the wing. Of all the different larvse of the coccinella, the most curious is the white hedge-hog, a name given it by de Reaumur, on account of the singularity of its figure, and the tufts of hair which render it re- markable. It seeks its food on the leaves of trees. After a fortnight it settles on one spot, and, without parting with its fur, turns to a chry- salis ; three weeks after which it becomes a coccinella. The slough appears nowise im- paired by its transformation. M. de Reaumur has observed it on a plum tree. It is likewise found upon the rose tree. When the coccinellae first arrives at the state of perfection, the colors of their elytra are very pale, nearly bordering upon white or cream color ; and the elytra are very soft and tender, but soon grow hard, and change to very lively brilliant colors. Their eggs are of an oblong form, and of the color of amber.

COCCOCYPSILUM, in botany, a genus of plants of the tetrandria class and monogynia order: CAL. four parted superior: COR. funnel-shaped : SEED an inflated, bilocular berry : STYLE semi- bifid : SPECIES three, shrubs; native of the West Indies.

COCCOLOBA, in botany, a genus of the trigynia order and octandria class of plants ; natural order twelfth, holoraceae : CAL. quinque-partite and colored: COR. none: SEED a beiry, formed of the calyx, and monospermous. There are thirteen species, of which the principal is the C. uvifera, or sea-side grape. It grows upon the sandy shores of most of the West India islands, where it sends up many woody stems, eight or ten feet high, covered with brown smooth bark, and furnished with thick, veiner' shining, orbi- cular leaves, five or six inches diameter, standing

upon short foot-stalks. The flowers come out at the wings of the stalks, in racemi of five or six inches long ; they are whitish, have no pe- tals, but each is composed of a monophyllous calyx, cut at the brim into five oblong obtuse segments, which spread open, continue, and surround seven or eight awl-shaped stamina, and three short styles, crowned with simple stigmata. The germen is oval, and becomes a fleshy fruit, wrapped round by the calyx, and includes an oval nut or stone.

COCCULUS INDICUS, the name of a poison- ous berry, too frequently mixed with malt liquors to make them intoxicating, though expressly for- bidden by act of parliament. It is the fruit of the menispermum cocculus. Fishermen have a way of mixing it with paste: this the fish swal- low greedily, and are thereby rendered intoxi- cated for a time, and float on the water.

COCCUS, in zoology, a genus of insects be- longing to the order of hemiptera The rostrum proceeds from the breast ; the belly is bristly behind ; the wings of the male are erect ; and the female has no wings. The species are forty- six in number, denominated principally from the plants they frequent. The most remarkable species are : 1. C. cacti, a native of the warmer parts of America, the famous cochineal animal, so highly valued in every part of the world for the incomparable beauty of its scarlet color, which it readily communicates to wool and silk, but with much more difficulty to linen and cot- ton. This insect is of two sexes, but exceeding- ly dissimilar in their appearance. The

emale, which alone is valuable for its color, is ill-shaped and tardy : its eyes, mouth, and autennat, are fixed so deep, and are so concealed in the folds of the skin, that it is impossible to distinguish them without a microscope. The male is very scarce; active, small, and slender, in compari- son with the female ; its neck is narrower than the head, and still narrower than the rest of the body. The male is of a bright red ; the female of a deeper color. The cochineal was formerly imagined to be a fruit or seed of some particular plant; an error which probably arose from an ignorance of the manner in which it is propa- gated. The juice of the nopal leaves on which these insects breed, is their sole nourishment. The plant is in May or June in its most vigorous state, and at this favorable season the eggs are deposited among the leaves. In the short space of two months, from an animalcule, the insect grows up to the size above-mentioned ; but its infant state is exposed to a variety of dangers ; the violent blasts of the north wind sweep away the eggs from the foliage of the plant; and showers, fogs, and frosts often destroy the leaves, leaving the careful cultivator this only resource, to make fires at certain distances, and fill the air with smoke, which frequently preserves them from the fatal effects of the inclemency of the weather. When the insects are at their full growth, they are gathered and put into pots of earthenware. When they have been confined some time in these pots, they are killed and put in bags. The Indians have three different me- thods of killing these insects; one by hot water, another by fire, and a third by the rays of the

sun ; and to these are owing the several grada- tions of the color, which in some is dark, and in others bright ; but all require a certain degree of heat ; and, it must be owned, that among the sev eral ways made use of to destroy this valuable creature, that of the rays of the sun seems to perform it in the most perfect manner. The cochineal insect may, in some circumstances, be compared to the silk-worm, particularly in the manner of depositing its eggs. The insects des- tined for this purpose are taken at a proper time of their growth, and put into a box well closed, and lined with a coarse cloth that none of them be lost; and in this confinement they lay their eggs and die. The box is kept close shut till the time of placing the eggs on the nopal, when, if any motion is perceived, it is a sufficient indica- tion that the animalcule has life, though the egg is so minute as hardly to be perceived ; and this seed is placed on the foliage of the nopal ; the quantity contained in the shell of a hen’s egg, is sufficient for covering a whoie plant. It is re- markable that this insect does not, at least in any visible manner, injure the plant, but extracts its nourishment from the most succulent juice, which it sucks by its proboscis through the fine teguments of the leaves. The principal coun- tries where the

cochineal insects are bred are New Spain and Peru ; but it is only in Oaxaca, in the former country, that they are gathered in large quantities. Though the cochineal belongs to the animal kingdom, of all others the most liable to corruption, yet it never spoils. With- out any other care than merely that of keeping in a box, it has been preserved for ages. In drying it loses about two-thirds of its weight. When dried, it is sorted into large entire grains, and small or broken ones : the first are called by the Spaniards grana, the latter granilla. This insect is said, by Dr. John, to consist of

Cochenilin ....

Jelly .....

Waxy fat ....

Gelatinous mucus Shining matter . . Salts

100-0

In medicine, cochineal has been strongly recom- mended as a sudorific, cardiac, and alexiphar- mic ; but practitioners have never observed any considerable effects from it. Its principal con- sumption is among dyers. See DYEING. C. hesperidum, or the gieen-house bug, is oval, ob- long, and of a brownish color, covered ‘ with a kind of varnish : it has six legs, with a notch and four bristles at the tail. It infests orange trees and other similar plants in green-houses. When young, it runs upon the trees ; but after- wards fixes on some leaf, where it hatches a great number of eggs, and dies. The male is a very small fly. C. ilicis, the insect that forms the kermes grains, inhabits the quercus coccifera of the southern parts of Europe. Both ancients and moderns seem to have had very confused notions concerning the origin and nature of the kermes ; some considering it as a fruit, without a just knowledge of the tree which produced it ;

others taking it for an excrescence formed by the puncture of a particular fly, the same as the common gall observed upon oaks. The kermes, however, is in reality nothing but the body of an insect transformed into the figure of a grain, berry, or husk, according to the course of nature. At the beginning of March an animalcule, no larger than a grain of millet, scarce able to crawl, is perceived sticking to the branches of the tree, where it fixes itself, and soon becomes immove-

able ; at this period it grows the most, appears 10 swell and thrive with the sustenance it draws hy degrees. This state of rest seems to have deceived the curious observer, it then resembling an excresence of the bark ; during this period of its growth it appears to be covered with a down, extending over its whole frame like a net, and adhering to the bark : its figure is con- vex, like a small sloe ; in such parts as are not quite hidden by this soft garment, many bright specks are perceived of a gold color, as well as stripes running across the body from one space to another. In April its growth is completed ; its shape is then round, and about the size of a pea : it has then acquired more strength, and its down is changed into dust, and seems to be nothing but a husk or capsule, full of a reddish juice not unlike discolored blood. Towards the end of May, sooner or later, according to the warmth of the climate, the husk appears replete with small eggs, less than the seed of a poppy. After this it soon dies, though it still adheres to its position, rendering a further service to its progeny, and shielding them from the incle- mency of the weather, or the hostile attacks of an enemy. In a good season they multiply ex- ceedingly, having from 1800 to 2000 eggs, which produce the same number of animalcules. When observed with the microscope, in July or August, we find that what appeared as dust, are so many eggs or open capsules, as white as snow, out of each of which issues a gold colored ani- malcule, of the shape of a cock roach, with two horns, six feet, and a forked tail. In the ci- devant province of Languedoc and Provence, the poor are employed to gather the kermes, the women letting their nails grow for that purpose, to pick them offwith greater facility. See KERMES. C. lacca, the gum-lac animal, is a native of the East Indies. The head and trunk form one uniform, oval compressed, red body, of the shape and magnitude of a very small louse, consisting of twelve transverse rings. The back is caranite; the belly flat ; the antennas half the length of the body, sending off two, often three, delicate, di- verging, hairs, longer than the antennae. The tail is a little white point, sending off two hori- zontal hairs as long as the body. It has three pair of limbs halfthe length of the insect. This is its description in that state in which it sallies forth from the womb of the parent, in the months of November and December. They traverse the branches of the trees upon which they were pro- duced for seme time, and then fix themselves upon the succulent extremities of the young twigs. By the middle of January they are all fixed in their proper situations ; they appear as plump as be- fore, but show no other marks of life. The limbs, antennae, and fetae of the tail, are no longer to be

seen. Around their edges they are environed with a spissid subpellucid liqu;.d, which seems to glue them to the branch. The gradual accu-

mulation of this liquid forms a complete cell for each insect, and is what is called gum lacca. About the middle of March the cells are com- pletely formed, and the insect is in appearance an oval, smooth, red bag, without life, about the size of a small cuchanical insect, emarginated at the obtuse end, full of a beautiful red liquid. In October and November we find about twenty or thirty oval eggs, or rather young grubs, within the red fluid of the mother. When this fluid is all expended, the young insects pierce a hole through the back of their mother, and walk off one by one, leaving their exuviaa behind, which is that white membranous substance found in the empty cells of the stick lac.

C. polonicus, or the scarlet grain of Poland, an insect which may properly enough be called the cochineal of the northern part of the world. As the cochineal loves only the hot climates, this creature affects only the cold ones. It is collected for the use of dyers : but the crops of it are much smaller, more difficult to be obtained, and the drug itself greatly inferior to the true cochineal It is gathered in the greatest abundance in Po- land, but is also met with in many of the nor- thern countries. It is found affixed to the root of a species of polygonum, of the mouse-car, rup- ture-wort, pimpernel, and pellitory of the wall. Towards the end of June the coccus is in a fit state for being gathered. Every one of the crea- tures is then nearly of a spherical form, of a fine violet color, and full of purple juice. Some of them, however, are not larger than poppy seeds, and others of the size of a pepper corn ; and each of them is lodged, either in part or entirely, in a sort of cup like that of an acorn. More than half the surface of the body of the animal is co- vered by this cup. The outside of the covering is rough, and oc a blackish-brown ; but the in- side is smooth, polished, and shining. On some plants they find only one or two of these, and on others more than forty ; and they are sometimes placed near the origin of the stalks of the plant. Each of these produce a six-legged worm, with two antennae. Several of them have been kept a fortnight, and showed no inclination to eat any thing. They ran about very swiftly for some time ; but then began to be more quiet, drew up their bodies shorter, and ceased to run about any longer. They were now of a purple color ; but in this state, though they did not walk about, they were subject to various contortions. At length, when wholly motionless, their bodies be- came covered with a fine white down : this formed a perfect covering, which was sometimes of a spherical, and sometimes of an irregular figure : it was always, however, very elegant ; and the downy matter, plainly enough, transpired out of the animal's body. The creatures remained in this state of rest, and covered with this down, for five or six days ; but, at

the end of that time, every one of them laid more than 150 eggs and died. A sort of very small flies, with two white wings bordered with red, produced from several of these cocci, are supposed to be the males. These flies are plainly of the same kind with the male

gall insects. Those who gather these insects, have a hollow spade with a short handle; then, taking hold of the plant with one hand, they raised it out of the ground with the tool held in the other ; after which they very quickly and dexterously detach the insects, and replace the plant in the ground where it again takes root. The coccus is then separated from the earth by a sieve ; and, to prevent them from turning into worms, they sprinkle them with very cold water, or vinegar. Lastly, they are killed by exposure to the sun, or by keeping them for some time in a warm place ; but this must be done with caution, as too hasty drying would spoil the color. Sometimes they separate the insects from the vesicles with their fingers, and form them into balls ; but by this operation their price is greatly increased. It is more expensive than cochineal, as not yield- ing one-fifth part of the color. Hence this drug is . almost entirely fallen into disuse, being scarcely known in any European cities remarkable for having good dyers.

COCCYGIS Os, in anatomy, so called from its resemblance to the bill of a cuckoo ; the rump bcne. This bone is a small appendage to the point of the sacrum, terminating in an acute point, and differently found according to the dif- ferent age of the subject. In the child we find but a mere cartilage ; in youth iointed bones ; in the full grown subject we find one conical bone, though in females the last joint is often loose till the age of sixty. See ANATOMY.

COCHABAMBA, a province of Upper Peru, bounded on the north by the Andes, south-east by the province of Misque, south by that of Charcas, south-west by Oruro, west and north- west by Cicasica. It is 120 miles in length from north to south, and thirty-two wide. Thfs pro- vince has been called the granary of Peru. Its western boundary being the Cordilleras of the coast of the Pacific, while it extends to the vast plains of Chiquitos East, sloping off toward it in an inclined plane, whose highest altitude is the summit of the Cordillera, and its base a level track which stretches across the Paraguay and Parenos

towards the Atlantic ; it may be said to contain every variety of climate and soil. In the mountains is great abundance of mineral wealth, but the gold mines of the provinces have been neglected. On their sides are bred considerable quantities of large and small cattle. The climate is generally mild ; it is watered by several small rivers, which fertilise the valleys, and among them are some magnificent and well cultivated estates. Tobacco is cultivated successfully in the district of Valle Grande, in this province. Peruvian bark, indigo, and cocoa, are also among its pro- ducts. It contains many valuable sugar planta- tions ; and is inhabited by a hardy, sober, and brave race, who have risen of late years, with their country, into a considerable state of pros- perity in the manufacture of glass, cotton, &c. with which, during the late European wars, it supplied a vast portion of the interior- 1,000,000 pounds of cotton are said to be annually con- sumed in its manufactures. Salts and all the common minerals abound ; and its forests teem w th dyeing woods and roots. The inhabitants an; princiDall" mestizos and cholos, and said to

be both taller and fairer than any of the neigh- bouring provinces. They have taken a very ac- tive part in the late revolutions, and joined the independent government of Buenos Ay res in Sep- tember 1810. Population about 70,000.

COCHAMBA, or OROPESA, the capital of the above province, with a beautiful town situated in a plain on the river Scacabo. Orchards and well cultivated gardens surround it : and ave- nues of lofty trees skirt the roads, ' resembling,' says an American writer, ' the great avenues of Versailles.'

COCHE, a low and barren island of the At- lantic, between that of Margarita and the coast of Cumana. It is nine miles in circumference, and was formerly celebrated for the pearl fishery. It is twelve miles east of Cubagua. Long. 64° 0′ W. lat. 10° 45′ N.

COCHECO, a river of the United States, in New Hampshire, which rises in the Blue hills in Stafford county, and after running S.S.E. joins the Piscataqua, five miles above Hilton's Point.

COCHIN, a small province of Hindostan, on the Malabar coast, crossed by the tenth degree of north latitude. It is bounded on the north by the district of Calicut, on the east by part of the southern ridge of the Ghauts, which separates it from Dindigull, on the south by Travancore, and on the west by the Indian Ocean. It is situated between 9° 50′ and 10° 45′ N. lat. and between 76° 4′ and 77° 10′ E. long, being about sixty-five miles broad, and seventy- four long. The

principal places in this province are, Angicaimal, Arshtamichery, Cenotta, Cea- vare, Condanada, Mullaventurutti, Naharica, Pal- licare, Perimanoor, Pucotta, Putteuchera, and Udiamper. Northwards it consists of narrow valleys, running from the foot of the Ghauts, well watered by constantly flowing streams, and yielding two crops of rice in the year. The na- tives construct their houses in the thickest parts of the groves, where they are buried amidst palms, mangoes, jacks, and plantains, at the bottom of little eminences crowned with very fine forest-trees, especially the teak-tree, and a spe- cies of black wood, called the viti. Little care, however, is taken to encourage the growth of large trees, and check the luxuriance of useless timber. The hills in the neighbourhood of Ca- cadu are not so lofty, and most of them are co- vered with grass; but though the soil is good, and the land excellent for pasture, a very small part of it is cultivated. The chief products of this country are rice, pepper, cocoa-nuts, and teak-timber. The Paniany River skirts the north- ern frontier, and several smaller streams water its central and southern parts ; but none of them are of any considerable importance. The principal port, and the capital of the province, is Cochin, said to have originated in a fort, which Albu- querque obtained permission to erect, when the Portuguese landed here in 1503. It was taken by the Dutch in 1663, who, it is said, made a warehouse of the cathedral ; it, however, became a place of great trade, and flourished much under their dominion, Jews, Hindoos, and Mahomme- dans resorting to it, and taking up their resi- dence in it for the purposes of commerce, there being a free toleration of all religious opinions.

Many of the Arab ships used to make two voyages yearly. It still carries on an extensive commerce with Surat, Bombay, the Malabar coast, Canara, Arabia, China, and many of the eastern islands? exporting pepper, cardamoms, teak and sandal wood, cocoa-nuts, coir cordage, cassia, and fish maws ; and importing chiefly al- monds, dates, pearls, gum arabic, cotton, opium, benzoin, camphor, cinnamon, spices, sugar-candy, tea, china, silks, shawls, and piece-goods. On the north-east side of this town, at the junction of the river with the sea, there is safe anchorage for vessels, and ships can be built here on very advantageous terms ; the cost, when coppered and thoroughly equipped for sea, not exceeding, in the year 1800, £14 per ton. It is called by the natives Cacha Bunder, or harbour. It stands on an island at the mouth of the Cali Coylang, is nearly a semicircle, and about a mile and a-half In circumference. It is regularly fortified, both

on the land and water sides, with bastions, a wall, and a ravelin ; a wet ditch surrounds it, and a glacis and covered way extend beyond this, so that it could withstand any sudden at- tack, though it could not abide a regular siege. The streets are wide, and it has three gates ; among its buildings, may be particularly spe- cified the church, the house of the governor, the barracks, and a public hotel. The Roman Ca- tholic bishop formerly had his residence here, but when the Dutch took possession of the place he removed to Coilan ; his jurisdiction was very extensive, including the whole southern penin- sula and the island of Ceylon, comprising more than 100 churches. The English took it in the year 1795, and under their power it still conti- nues. It is governed by a president, under whom is a civil establishment of a judge and other officers, and it has a strong military gar- rison. Lat. 9° 57′ N., long. 76° 8′ E.

The Jews are numerous in this province ; but Mattacherry is their principal residence, being almost entirely inhabited by them. Th'ere are two classes, the Jerusalem, or White Jews, and the ancient, or Black Jews ; the latter, though they have a synagogue in Cochin, chiefly live in the interior, and differ very little in appearance from the Hindoos. They are considered as an inferior race by the White Jews.

The rajah of Cochin preserved his independence much longer than most of the other Hindoo chiefs. Tippoo first exacted a tribute of him, which he paid for some years; but on January 6, 1791, the East India Company entered into a treaty with him, by which he was enabled to throw off his subjection to that prince, to recover some dis- tricts of which he had been deprived, and to transfer his allegiance to them, which he accord- ingly did, agreeing to pay them one lac of rupees annually. A treaty of perpetual friendship was concluded on the 6th May, 1809, by colonel Ma- cauley on the part of the British government, by which the friends and enemies of either party were to be considered and treated as such by both, and the British engaged to defend the ra- jah's country from all attacks ; the rajah engaging to pay an additional annual sum of 176,037 ru- pees, in order to support a battalion of native infantry, to give the British free access to his

forts and towns, and to exclude from his domi- nions and service all Europeans not approved of by the English government, to which was to be transferred the management of all his external political concerns.

COCHIN (Charles Nicholas), an excellent artist, and a man of considerable literary abilities, was born in 1715. He was made keeper of the designs in the Louvre, chevalier of the order of St. Michael, and

secretary to the academy of painting. He published Letters on the Pictures of Herculaneum ; Dissertation on the Effect of Light and Shade ; Travels in Italy, or a Collec- tion of Observations on Works of Architecture, Sculpture, and Painting ; Letters on the Lives of Slodz and Ceshays, &c. He died in 1790.

COCHIN (Henry), an eminent French lawyer, born at Paris in 1687. At twenty years of age he was admitted advocate, and two years after pleaded his first cause before the great council. It is said that at the bar, he equalled Bourdaloue in the pulpit. He died in 1747; and his works, consisting of memorials, pleadings, &c. were published at Paris in six volumes quarto, in 1751.

COCHIN-CHINA, or WESTERN CHINA, a name given to this country by the early Portu- guese navigators, who discovered it. According to the most accurate calculations, it lies between 8° 40′ and 17° N. lat., and between 106° 40′ and 109° 10′ E. long. It is very narrow in propor- tion to its length, extending along the coast not less than 500 miles ; and being bounded on the north by Tunquin, on the west by Siam, Cambo- dia, and Siarnpa, and on the other sides by the China Sea. These were its original limits, but by conquest they have been much extended, as they now include Tunquin, Cambodia, and Siampa. It is mostly a long narrow plain, enclosed within the sea on one side, and on the other by a long range of mountains separating it from the coun- tries on the west, in few places being more than seventy miles broad, and in some not more than twenty. The breezes, that regularly blow from the sea, so temper the extreme heat of the sum- mer, that the climate is very salubrious. During the months of September, October, and Novem- ber, the rains set in, and the low grounds are overflowed by torrents that come down from the mountains, and for three or four days every fort- night, deluge the country. Cold northerly winds, followed by rain, prevail during December, Ja- nuary, and February, and distinguish the winters of this country from that of all other eastern re- gions. The inundations experienced here render the soil remarkably fruitful ; in many parts, the land yields three harvests in the year, but ge- nerally two, one of which is reaped in April, the other in October. Every tropical production is found tiere, particularly rice and sugar ; the fruits of India, and many of those of China, arrive at the greatest state of perfection. Besides the rice that commonly grows in the plain, there is a par- ticular sort that flourishes on the mountains, called mountain rice. Vast woods of mulberry trees are found here, which grow amazingly fast. There are also many forests of remarkably fine timber, particularly the incorruptible tree, which never rots, and is hard enough for anchors; be- sides a great quantity of aromatic woods. On

the coast, the sharks'-fins, an animal suostance of a gelatinous nature, abound ; it is often called beech de mer : and here, also, are found a kind of btrds'nests, which are much in request in China, where they are counted a great delicacy, and used in seasoning ragouts. Here, likewise, a species of cinnamon is cultivated, which, by the Chinese, is esteemed preferable to that of Ceylon. Agula and Japan wood and ivory fur nish articles of advantageous commerce. Gold, m great quantities, is brought from the moun- tains, in dust, and almost pure, or collected in the beds of the rivers among the sand ; and sil- ver has lately been abundant. The great men have their arms frequently ornamented with the former aiticle. Among the domestic animals of this country may be enumerated bullocks, goats, swine, horses, buffaloes, elephants, and camels ; while the woods abound with the wild boar, tiger, rhinoceros, and large herds of deer : they have »lso fine poultry, and the fish that K caught in abundance on the coast, is highly delicious. The Cochin-Chinese consider the elephant's flesh a great dainty ; but, though they use bullocks for food, they do not attend much to the breed- ing of them, and, they have not the least idea ot milking their cattle. The birds'nests, men tioned above, are found in four islands near the coast, and in five other smaller ones there are prodigious numbers of turtles, the flesh of which is very delicate.

Cochin-China consists of twelve provinces, all bordering on the coast, and extending to the mountainous ridge on the west. In these moun- tains numerous rivers take their rise, and disem- bogue their waters in the Eastern Ocean, and, though they are not sufficiently large for vessels of any magnitude to navigate, their importance as to the fertility of the country and its internal commerce can hardly be overrated. The estua- ries formed by their mouths and other inlets on the coast furnish veiy convenient harbours and ports. Turon, or Hansan Bay, in the northern part, is surpassed by none in the eastern world, tor its convenience and security, and the promon- tory overlooking it, forming a peninsula similar to that of Gibraltar on the south of Spain, is not only impregnable, but forms a shelter for ships at every season of the year ; while multitudes of rivulets of clear fresh water fertilise the valleys that border the shore. Faifoo, an ancient mart for foreign commerce, sometimes regarded as the capital of the country, lies on the banks of a river about ten miles up from this bay. Here is also a considerable port on a river navigable for large ships, but it has a sand bank at the entrance. The bay and harbour of Chin-

chew, in the mid- dle division of Chang, is spacious and sheltered, but large vessels can only enter it at high water: at the head of the bay is the city of Quim-nong. Saigong, in the south, has been considered by Mrˆ Barrow, as situated in Cochin-China, but it is more properly in Cambodia ; the largest ships S'jil up to it, and it has an extensive arsenal for the navy. There is no lake mentioned in this country, but a vast sandy desert seems to stretch along the western limit of it towards Cambodia, for about 250 miles, from the twelfth to the six- teenth degree of latitude. There is no country in

the world on which the sea has made more visible and rapid advances than this ; it has been calcu- lated that from 1744 to 1749 it had encroached sixty yards. Some parts of the southern shores are perpendicular, and consist of granite rock, close to which no soundings can be obtained ; where the sandy beach is found, there is a gradual descent of sand, mud and shells. In some places the shore consists of ridges of round pebbles, and the bottom is rocky. There is a great irregu- larity in the tides on the coast ; high water con- tinuing in some parts for twelve hours. In summer the tides are lowest, and in winter they rise to the highest degree.

The Cochin Chinese are short in stature, of an olive complexion, and have similar features with the Chinese, so that there can be no doubt of their being of the same origin ; but, in some points, they differ widely as to their manners and customs. They are an intelligent, active, and lively people. In their entertainments, super- stitions, and ceremonies, they are much like the Chinese ; but, with regard to their treatment of women, they are very different. They consider women best suited to conduct the principal con- cerns of the family ; they are, therefore, entrusted with them ; and they are generally as free and unrestrained as the men. The lower classes of them are, however, condemned to the most servile labor, while the men are smoking and chewing opium or betel. Mr. Barrow says, ‘ we observed them day after day, from morning till night, standing in tho midst of pools tip to their knees occupied in the transplanting of rice. In fact all the labors of tillage, and the various employ- ments connected with agriculture, seem to fall to the share of the female peasantry ; while those in Turon add to these the superintendance of all the details of commerce. They even assist in constructing and keeping in repair their mud cot- tages, conduct the manufacture of coarse earthen vessels, manage the boats on the rivers, and in the harbours ; and do everything in the cotton manufac- ture from the drawing of the wool from the pod, to the making of it up into dresses for themselves and their families.’ Unlike the Chinese females, however, they have full liberty and the use of their lirnbs ; but they are licentious, and far from being generally

modest. They conduct almost all the commercial business, and, on the arrival of a stranger, it is not difficult for him to pro- cure a female partner, who will be devoted to his service by night and day. In Cochin China a man is not limited to any number of wives or concubines ; but the first wife always has the preference, and the chief part of the domestic management. The breaking of a pair of chop-sticks, in the presence of witnesses, is sufficient to divorce them. The women are generally dres- sed in a loose frock of brown or blue cotton, and a pair of black trowsers. They wear neither shoes nor stockings ; the higher classes sometimes use sandals. Their hair is long and ‘ lack, hanging down their shoulders, or fixed in a knot on the top of the head. When in full dress, on occasions of ceremony, they have several gowns one over \ he other; but differing in length so that the lower parts of all are visible. The men are dressed nearly in t’:e same manner with a

jacket and white short trowsers, and a handker- chief twisted like a turban round the head ; hats are sometimes worn of different shapes.

The religion of Cochin China is a form of Buddhism, but more simple, and less mysterious than the rites used in the worship of Fo in China. Like the ancient Jews they offer the first fruits of their ground, and the firstlings of everything else to the image of their protecting deity, as an acknowledgment of his goodness. Their images are generally placed in small wooden boxes, and fixed among the branches of trees in the woods, and here the artless worshipper ascends, deposits his offering, and leaves it to be removed by the priest at his leisure. The people speak a language originally derived from the Chinese ; but so much altered, that the natives of the two countries cannot understand each other. It is common to them with the people of Tonquin and the neighbouring countries, and is called the Anam. The written language is in character like the Chinese, and thus an inter- course is readily kept up between them ; and, as the government is modelled after the pattern of China, literature is indispensable for office, and of course is widely diffused.

The trade of these people is mostly with the Chinese, to whom they export a great quantity of sugar, particularly sugar-candy, said to be the best in the world, woods, canes, spices, drugs and gold. They also export gum lac, gamboge, indigo, and raw silk in large quantities. The chief article shipped to India is sugar. The French, of all European nations, are treated with most favor, probably on account of the assistance given to the king by a French missionary of the name of

Adran ; in the European improvements he has been making in his dominions. The Co- chin Chinese carry on a considerable trade also with Siam, Cambodia, Tonquin, the coast of Malacca, the Philippine and Molucca islands and Borneo, with which there is a ready com- munication by the China Sea. Every sort of import into this country pays a duty of twelve per cent., and presents also must be made to the king. Low-priced cutlery and piece-goods find a ready market ; but European commodities have not hitherto been much in demand. Tutenaque is said to be in request, dollars are much sought after, and amber and coral, if of a good quality, are saleable in this country.

The government is absolute, as in China ; but the police is not so perpetually on the watch, though it is formed upon the same model. The laws likewise are the same in character, and similar in the administration. The Cochin- Chinese are a military people, every third man, of certain ages, being exposed to be called to active service. The army and navy have been much improved during the late period of war. The former consisted of 113,000 men in the year 1800, 40,000 of whom are formed into regiments, and disciplined after the European manner. The effects of this improvement have been witnessed in the late conquest of Tonquin. A great al- teration for the better has also taken place in the navy ; formerly this consisted entirely of junks similar to those of the Chinese ; but under the direction of the French the reigning prince

has, in the course of two years, bu! t 309 gun- boats, s. lugger, and a frigate.

The history of this kingdom is little known, M. Le Poivre, a French traveller, informs us that about half a century before the French first ar- rived in these distant regions, a prince of Ton- quin, as he fled from his sovereign, by whom he was pursued as a rebel, had, with his soldiers and adherents, crossed the river, which serves as a barrier between Tonquin and Cochin-China. The fugitives, who were warlike and civilised men, soon expelled the scattered inhabitants, who wandered about without any form of government, and founded a new kingdom, which soon grew rich and populous. During the reigns of the first six kings, no nation could be happier than the Cochin-Chinese. Their monarchs governed them as a father does his family, establishing no laws but those of nature, to which they them- selves were the first to pay obedience. They honored and encouraged agriculture, as the most useful employment of mankind ; and required from their subjects only a small annual free gift to defray the expense of their defensive war against the Tonquinese, who were their enemies. This im- position was regulated by way of poll-tax, with the

greatest equity. Every man, able to till the ground, paid in to the prince a small sum pro- portioned to the strength of his constitution, and the vigor of his arm ; and nothing more. Cochin- China continued happy under these princes for more than a century ; but the discovery of gold- mines interrupted their felicity. Luxury im- mediately took place. The prince began to des- pise the simple habitation of his ancestors, and caused a superb palace to be built a league in circumference, surrounded with a wall of brick in the model of that Pekin, and defended by 1600 pieces of cannon. Not content with this, he would have three other palaces, for summer, autumn, and winter. The old taxes were by no means sufficient to defray these expences ; new ones were devised ; and oppression and tyranny everywhere took place. His courtiers, to flatter their prince, gave him the title of the king of heaven, which he still continues to assume. When speaking of his subjects, he styled them his children, but by no means behaved as if he was their father : for our author informs us, that he has seen whole villages newly abandoned by their inhabitants, who were harassed with toil and insupportable exactions ; the consequence of which was that their lands returned to their former uncultivated state.

In 1774 three brothers, one a merchant, the second an officer, and the third a priest, expelled the reigning prince from the capital. At this time the young prince Caung Sliung with his family, assisted by a French missionary of the name of Adran, fled into the forest, where they concealed themselves for some time ; after un- successfully endeavouring to make head against the usurpers, they took refuge at Pulowai, a desert island in the gulf of Siam, while Adran went to France to procure assistance, taking with him the prince's eldest son. The prince after enduring various hardships in the above island, landed on his native dominions, expelled the successors of the usurpers, and subseouentlv

conquered Tonquin. In 1797 and 1798, by the aid of Adran, who had now returned, he effected a number of improvements, opening roads, en- couraging cultivation, introducing European dis- cipline into his army and navy, &c. Adran died in 1800, and was buried with great pomp.

CO'CHINEAL, n. s. Span, cochinilla. A wood-louse An insect gathered

upon the opun- tia, and dried : from which a beautiful red color is extracted.

COCHINEAL, or COCHENEEL. See Coccus-

CACTI*

COCHLEA. See ANATOMY.

COCHLEA, in zoology. See HELIX.

COCHLEARIA, scurvy-grass : a genus of the siliculosa order, and tetradynamia class of plants ; natural order thirty-ninth, siliquosce. The sili- cula is emarginated, turgid, and scabrous; with the valves gibbous and obtuse. There are nine species; the most remarkable of which are, 1. C. angelica, or garden scurvy-grass, growing natu- rally on the sea shore, in the north of England and in Holland; but cultivated for use in the gardens near London. It has a fibrous root, from which arise many round succulent leaves, hollowed like a spoon ; the stalks rise from six inches to a foot high, and are brittle, and gar- nished with leaves which are oblong and sinuated. The flowers are produced in clusters at the end of the branches, consisting of four small white petals placed in the form of a cross ; and suc- ceeded by short, roundish, swelling seed-vessels, having two cells divided by a thin partition. In each of these are lodged four or five roundish seeds. This plant is propagated by seeds, which should be sown in July, in a moist spot of ground, and in spring they will be fit for use : those that are left will run up to seed in M?y, and perfect their see.ds in June. Scurvy-grass is a pungent stimulating medicine ; capable of dis- solving viscid juices, opening obstructions of the viscera and the more distant glands, and pro- moting the more fluid secretions. It is particu- larly celebrated in scurvies, being the principal herb employed in these disorders in the northern countries. 2. C. armoracia, or horse- radish, a plant too well known to need any description. It is propagated by cuttings or buds from the sides of old roots. The best season for this is in October or February ; the former for the dry lands, the latter for moist. The root has a quick pungent smell, and penetrating acrid taste; it nevertheless sometimes exndes on the surface. By drying it loses all its acrimony, becoming first sweetish and then almost insipid : but if kept in a cool place, in sand, it retains its qua- lities for a considerable time. Its culinary use as a stimulant needs no description : the medical effects of it are to stimulate the solids, attenuate the juices, and promote the fluid secretions : it seems to extend its action through the whole habit, and to affect the minutest glands. It has frequently been of service in some kinds of

scut- vies, and other chronic disorders proceeding from a viscidity of the juices, or obstructions of the ex- cretory ducts. Sydenham recommends it like- wise in dropsies, particularly those which follow intermittent fevers. Both water and rectified spirit extracts the virtues of this root by infusion,

and elevate them in distillations : along with the aqueous fluid an essential oil rises, possessing the whole taste and pungency of the horse-

J* t *• ° *

radish.

CO'CH LEARY, adj. 2 From cochlea, Lat. a CO'CHLEATED, adj. J screw. Screw-form ; in the form of a screw.

That at St. Dennis, near Paris, hath wreathy spires, and cochleary turnings about it, which agreeth with the description of the unicorn's horn in jElian.

Browne's Vulgar Errours.

Two pieces of stone, struck forth of the cavity, of the umbilici of shells, of the same sort with the fore- going : they are of a cochleated figure.

Woodward on Fossils .

COCHLCEUS (John), a catholic divine who early and most vigorously opposed the Refor- mation. He was born at Nuremberg, in 1479, and wrote with great acrimony against Luther, .Calvin, Melancthon, &c. especially the former, in a work entitled De Actis et Scriptis Lutheri. He also had a controversy with the English di- vines on the subject of Henry VIIl's marriage with Anne Boleyn, and published a curious his- tory of the Hussites, folio. He died at Breslaw, January 10th, 1552.

COCHRANE, POINT, the west point of a bay in Prince William Sound, on the west coast of North America. The bay is about a league and a half wide, and three miles deep, terminated by a boundary of ice and frozen snow, reaching from a compact body of lofty frozen mountains to the water's edge. Long. 212° 16′ E., lat. 60° 46'. N.

COCK, n. s. i Ang-Sax. coce ; Fr. cog ;

CO’CK-CROWING, 5 Gr. KtKicoc; alluding to the call or crowing of a cock, as Lat. gallits. A male to the hen, or indeed a male of any species of bird. It is also used to designate superiority, courage, and conquest ; whatever is first and best. Cock-crowing is rot only the note of the bird, but the note of time.

This gentil cok had in his governance Seven hennes, for to donixe his plesauce, Which were his susters «. 6 his paramoures, And wonder like to him ar nf coloures ; Of which the fairest-hewed in the throte Was clepet1 * ire Damoselle Pertelote.

Chaucer’s Canterbury Tales. And now the c ring cocke, and now the owle Lowde shrieking, him afflicted to the very sowle.

Spetuer. We were carousint * the second cock.

Shakspeare.

He begins at curfew, and goes till the first cock. Id.

Might we but hear

The folded flocks penned in their wattled cotes,

Or sound of pastoral reed, with oaten stops,

Or whistle from the lodge or village cock,

Count vhe night-watches to his feathery dames,

Twould be some solace, yet some little cheering

In this close dungeon of innumerous boughs. Milton.

Cocks have great combs and spurs ; liens, little or none. Bacon’s Natural History.

True cocks o’ the game,

That never ask for what or whom they fight ; But turn ‘em out, and show ‘em but a foe. Cry liberty, and that’s a cause of quarrel.

coc

Hi

Calves and philosophers, tygers and statesmen, cocA-sparrows and coquets, exactly resemble one another in the formation of the pineal gland.

Arbuthnot and Pope,

Sir Andrew is the cock of the club since he left us.

Addiion.

My schoolmaster called me a dunce and a fool ; But at cuffs I was always the cock of the school.

Swift.

The careful hen

Calls all her chirping family around, Fed and defended by the fearless cock.

Thomson's Spring.

COCK, n. s. Ital. galleto. A weather-cock, gnomen of a dial, &c. from the general figure. Things, says Johnson, that were contrived to turn, seem anciently to have had that form, whatever was the reason.

You cataracts and hnrricanoes, spout TiU you have drenched our steeples, drowned the cocks ' Shahspeare.

"When every room

Hath blazed with lights, and brayed with minstrelsy, I have retired me to a wasteful cock, And set mine eyes at flow. Id.

It were good there were a little cock made in the belly of the upper glass. Bacon's Natural History.

Thus the small jett, which hasty hands unlock, Spirts in the gardener's eyes who turns the cock.

Pope.

COCK, n. s. ItaL cocca; Fr. cache; fromLat. c aso. The part of a lock of a gun that strikes with a Hint ; perhaps from the action like that of a cock pecking : but it was, I think, so called, says Dr. Johnson, when it

had not its present form. The Ital. cocca signifies the notch of an arrow ; and thus cock is sometimes applied in English.

With hasty rage he snatched His gunshot, that in holsters watched j And bending cock, he levelled full Against the outside of Talgol's skull.

Hudibras.

A seven-shot gun carries powder and bullets for seven charges and discharges. Under the breech of the barrel is one box for the powder ; a little before the lock another for the bullets ; behind the cock a char- ger, which carries the powder from the box to a fun- nel at the further end of the lock. Greta.

COCK, n.s. Goth, hog; Per. kak. Small; diminutive; hence cock-boat, a little boat. Rut thou, good man, sith far in seawe bee. And the great waters gin apace to swell, That thou no more we can the mayn-land see, Have care, I pray, to guide the cock-bote well, Least worse on sea then us on land befell. Spenser.

This messager adoune him gan to hie, And found Jason and Hercules also, That iii a cogge to londe weren i'go, Him to refreshen and to take the aire. Chaucer. The fishermen that walk upon the beach, Appear like mice ; and yon tall anchoring bark Diminished to her cock; her cock, a buoy, Almost too small for sight. Shakspeare.

They take view of all sized cocks, barges, and fisher- beats hovering on the coast.

Carew's Survey of Cornwall.

This invincible armada, which having not fired a cottage of ours at land, nor taken a cock-boat of ours it sea, wandered through the wilderness of the north- ern sea. Bacvn.

Did they think k less dishonor to God to be Irke a brute, or a plant, or a cock-boat, than to be like a man 1

Stillingfleet.

COCK, n. s. KOKKOC. ', Lat. coccus. A red color. COCK, n. s. & v. a. ") The top or head of a CO'CKADE, n. s. > thing; a hat set up with CO'CKAHOOP, ad. j pertness or presumption; probably from the appearance of a cock's comb, and his mode of exhibiting it. It is used there- fore to express exultation and triumph ; hence, too, when the

brim of a hat is raised to a point, it is called a cocked hat ; and a small heap of hay is for the same reason denominated a cock.

Now I am a frisker, all men on me look j What should I do but set cock on the hoop ?

Camden's Jtiemains.

You'll make a mutiny among my guests ! You will set cock-a-hoop ! Shakspeare.

As soon as the dew is off the ground, spread the hay again, and turn it, that it may wither on the other side : then handle it, and if you find it dry, make it up into cocks. Mortimer.

For Hudibras, who thought he' had won The field, as certain as a gun, And having routed the whole troop, With victory was cock a ftoop. Hudibras.

You see many a smart rhetorician turning his hat in his hand, moulding it into several different cocks.

Addison.

COCK, v. a. & v. n. From the noun. To set erect ; to hold bolt upright as a cock holds his head ; to look big and menacing ; to raise any thing into a point, or into a round heap; to fix the cock of a gun ready for discharge. It is also used in the sense of training cocks, or using them for fighting.

Sike mirth in May is meetest for to make, Or summer shade, under the cocked hay.

Spenser's Pastorals.

Cries out 'gainst cocking, since he cannot bet.

Ben Jonson.

Some of them holding up their pistols, cocked, near the door of the house, which they kept open.

Dryden's Dedication, JEneid.

Sir Fopling is a fool so nicely writ ; The ladies would mistake him for a wit ; And when he sings, talks loud, and cocks would cry, I vow, methinks, he's pretty company. Dryden.

This is that muscle which performs the motion so often mentioned by the Latin poets, when they talk of a man's cocking his noise or playing the rhinoceros.

Addison.

Every one cocks and struts upon it, and pretends to overlook us. Id. Guardian.

An alert young fellow cocked his hat upon a friend of his who entered. Id. Spectator

Dick would cock his nose in scorn, But Tom was kind and loving. Swift.

Dick, who thus long had passive sat, Here stroked his chin and cocked his hat. Prior. But when the bully, with assuming grace, Cocks his broad hat, edged round with tarnished lace. Yield not the way ; defy his strutting pride, And thrust him to the muddy kennel's side. Chty.

Our Lightfoot barks, and cocks his ears ; O'er yonder stile see Lubberkin appears.

Id. PaatoraU

COCK, in zooiogy. See PBASIANUS.

coc

COCKATRICE, n. s. From cock, and Sax. arten, a serpent. A serpent supposed to rise from a cock's egg.

They will kill one another by the look, like cocka- tricet. Shaktpeare.

This was the end of this little cockatrice of a king, that was able to destroy those that did not espy him first. Bacon.

This cockatrice is soonest crushed in the shell ; but, if it grows, it turns to a serpent and a dragon.

Taylor.

My wife! 'tis she, the very cockatrice! Gangrene.

CO’CK-BROTH, n. s. Broth made by boil- ing a cock.

Lessius cnjoyns so much at supper ; not a little more, nor a little less, of such meat, and at such hours, a dyet drink in the morning, cock-broth, china broth, at dinner plumb broth, a chicken, a rabbit, rib of a rack of mutton, wing of a capon, merry- thought of a hen, &c. Burton’s Anatomy of Melancholy.

Diet upon spoon-meats ; as veal or cock-broths pre- pared with French barley. Harvey on Consumption!.

COCKBURN ISLANDS, a group of small islands near the north-cast coast of New Hol- land, in long. 217° 18′ W, lat. 11° 52′ S.

COCKBURN LAW, a hill of the county of Ber- wick, Scotland, about the middle of which, on the north side, are the ruins of a military station, called Edgar’s Hall. Height 900 feet.

COCKBURN (Mrs.), daughter of captain Trot- ter, of the Royal Navy, was born in 1679. At an early age she abjured protestantism for po- pery; and produced, at the age of seventeen, Agnes de Castro, a tragedy, performed with con- siderable applause. Two years after she wrote the Fatal Friendship, a tragedy, which is con- sidered her best piece. She also applied herself early in life to metaphysical pursuits, and wrote, in her twenty-second year, a Defence of Locke’s Essay on the Human Understanding. Having re-examined the controversy between popery and protestantism, she returned, in 1707, to the esta- blished church. In 1708 she married Rev. Mr. Cockhurn, a clergyman of that church. His father was a Jacobite, and, in consequence of his own refusal to take the oath of abjuration at the accession of George I., he lost all his preferments in the church, and was obliged to support his family as the usher of a small school. His eru- dite lady, in 1726, again defended Mr. Locke in a Letter to Dr. Holdsworth on the resurrection of the body; and, in 1727, wrote a further Vindi- cation of Mr. Locke, which was printed after her death. She had previously commemorated the victories of the duke of Marlborough in her poems, and written her last tragedy, entitled, the Revolution of Sweden. In 1732 her husband, having overcome his scruples, was presented to the living of Long Horseley. Mrs. Cockburn now produced Remarks upon some Writers in the Controversy concerning, the Foundation of Moral Duty and Moral Obligation, printed in «he History of the Works of the Learned, in 1743 ; and in 1747 Remarks upon the Principles and Reasonings in Dr. Rutherford’s Essay on the Nature and Obligations of Virtue, in Vindication of the contrary Principles and Reasonings en- forced in the Writings of the late Dr.

Samuel Clarke A plan was now formed of publishing

her works by subscription, but trie death of her husband threw her into a painful disease, and she died at Long Horseley in 1749, before her works could be prepared for the press.

CO'CKER, v. a. Fr. coqueliner. To cade ; U fondle; to indulge.

Most children's constitutions are spoiled by cocker- ing and tenderness. Locke on Education.

He that will give his son sugar-plums to make him learn, does but authorize his love of pleasure, and cocker up that propensity which he ought to subdue. Id. Bred a fondling and an heiress,

Dressed like any lady mayoress,

Cockered by the servantˆ round,

Was too good to touch the ground. Swift.

COCK'ER, n. s. From cock. One who fol- lows the sport of cock-fighting.

COCKER (Edward), a celebrated penman and writer on arithmetic in the seventeenth cen- tury. He was a native of London, where he was born in 1631, and died in 1677. To his fame we seem to owe the occasional proverb of speech ' According to Cocker,' and Mr. Evelyn celebrates his skill in calligraphy. He published fourteen Copy-books, engraved from his own writing: Decimal Arithmetic, and Vulgar Arith- metic, of the last of which, it is said, forty edi- tions were sold.

COCK'EREL, n. s. From cock. A young cock.

Which of them first begins to crow ? — The old cock ? — The cockerel. Shakspeare.

What wilt thou be, young cockerel, when thy spurs Are grown to sharpness. Dryden.

COCKERMOUTH, a large town of Cumber- land, irregularly built, with broad streets. It is washed by the Derwent on the west, and divided by the Cocker into two.parts, which are connected by a stone bridge of one single arch. The town, in general, is irregularly built ; but there are several modern and well-built streets, particularly the one ascending to the castle-gate, which is very sleej ; and in that which

leads to Derwent- bridge, some of the houses are handsomely buil of red free-stone. The manufactures are shal- loons, worsted stockings, and hats. It is a bo- rough town, and sends two members to parlia- ment. The right of voting is vested by burgess tenure in certain houses : the county elections are also held here. It has a castle seated on an artificial mount on a bank above the Derwent. It is a square building, and strengthened with several square towers : on each sid'^ of the inner gate are two deep dungeons capable of holding fifty persons each ; they are vaulted at top, and have only a small opening to let down the pri- soners. On the outside of each is a narrow slit with a slope, down which were dropt their pro- visions. This castle was founded by Waldof, first lord of Allerdale, and son of Gospatrick earl of Northumberland, contemporary with William the Conqueror. Waldof resided first at Pap- castle, which he afterwards demolished, and with the materials built that of Cockermouth, where he and his family long resided. Several arms over the gateway, Catnden says, are those of thu Multons, Humfranvilles, Lucies, and Piercies In 1658 it was garrisoned for the king; and

being besieged and taken by the rebels, was burnt and never afterwards repaired. Cocker- mouth is now in the possession of the Lowther family, who have here a great property in coal- works. Markets on Monday and Saturday. It is forty-four miles north-west by north of Kendal, and 305 N. N. W. of London.

COCKET, n. s. Of uncertain derivation. A seal belonging to the king's custom-house : likewise a scroll of parchment, sealed and de- livered by the officers of the custom-house to merchants, as a warrant that their merchandize is entered.

The greatest profit did arise by the cachet of hides ; for wool and wool-fells were ever of little value in this kingdom. Davies.

COCK-FIGHT, n. s. Cock and fight. A battle, or match of cocks.

In cock-fights, to make ono cock more hardy, and the other more cowardly. Bacon's Natural History.

At the seasons of foot-ball and cock-fighting, these little republicks rcassume their national hatred to each other. Addison^

COCK-FIGHTING is a cruel and inhuman mode of diversion, consisting in setting cocks of a particular kind, hence called game-cocks, to fight with steel spurs, till one or the other is beaten, and can fight no longer. Among the ancients, the islanders of Delos were great lovers of cock-fighting ; and Tanagra, a city of Bneotia, the isle of Rhodes, Chalcis in Eubcea, and the country of Media, were famous for their gene- rous race of cocks. From Persia this kind of poultry was first brought into Greece ; and, if one may judge of the rest from the fowls of Rhodes and Media, the excellency of the broods, at that time, consisted of their weight and large- ness, as the fowls of those countries were heavy and bulky, and of the nature of what our sports-men call shakebags or turnpokes. At first, cock- fighting was partly a religious and partly a political institution at Athens; and was conti-nued for improving the seeds of valor in the minds of their youth, but was afterwards per- verted both there and in the other parts of Greece to a common pastime, without any political or religious intention. The Romans were prone to imitate the Greeks, but did not, as may be ga-thered from Columella, adopt this practice very early. It is not known when this game was first introduced into England, but it was probably brought hither by the Romans. It has by some been called a royal diversion, and the cock-pit at Whitehall was erected by Charles II. for the more magnificent celebration of it. The birds are generally dieted for about a fortnight or three •weeks by regular feeders, who receive for their trouble, in general, the admission-money to the cock-pit. Cocks of a middle size are found the best fighters : the match-weights being from three pounds six ounces to four pounds eight ounces,. The place appropriated to fighting is called the pit, and consists, generally, of a mound of earth covered with sod, and surrounded by seats in circular tiers. The battle is conducted by twc setters, as they are called, who place the cocks jeak to beak.

When once the cocks are pitted, neither of the VOL. VI.

setters-to can touch his cock, so long as they continue to fight, unless their weapons are en- tangled. But if they have left off fighting, while the umpire or law-teller can count forty, each setter-to instantly handles' his cock, bringing them beak to beak in the middle of the pit, and the cock who made the last fight, with either heel or beak, is said to have the first law in his favor. When brought beak to beak, and set on their legs, if the cock who did not fight while the forty was telling, still continues to decline fighting, the umpire proceeds to tell ten ; which being done, they are again brought beak to beak; if the same cock continue still unwilling or un- able to fight, the ceremony of telling ten, and bringing beak to beak, at the conclusion of every ten, takes place, till it has been repeated ten dif- ferent times, when the

cock so refusing to fight has lost his battle. But should he fight during the enforcement of any part of the law, what has been told is of no effect, and the first ten must be begun again, whenever a fight is re- newed.

If a cock, having the law in his favor, dies before the long law *s told out, his adversary wins the battle, although he did not fight within the law ; for there cannot be a greater criterion of victory than having killed his opponent.

The following fact is recorded as authentic, in the obituary of the Gentleman's Magazine for April 1789, and is a melancholy instance of the brutalising effects of these cruel sports : ' Died, April 4th, at Tottenham, John Ardesoif, esq. a young man of large fortune, and in the splendor of his carriages and horses rivalled by few coun- try gentlemen. His table was that of hospitality, where it may be said he sacrificed too much to conviviality. Mr. Ardesoif was very fond of cock-fighting, and had a favorite cock upon which he had won many profitable matches. The last bet he laid upon this cock he lost, which so enraged him, that he had the bird tied to a spit and roasted alive before a large fire. The screams of the miserable animal were so affecting, that some gentlemen who were present attempted to interfere, which so enraged Mr. Ardesoif, that he seized a poker, and, with the most furious vehe- mence, declared that he would kill the first man who interposed ; but, in the midst of his pas- sionate asseverations, he fell down dead upon the spot.'

COCK-HORSE, adj. Cock and horse. On horseback; triumphant; exulting.

Alma, they strenuously maintain, Sits cock-horse on her throne the brain.

Prior.

CO'CKLE, n. s. Fr. coquille. A small testa- ceous fish.

It is a cockle or a walnut-shell.

Shakspenre.

We may, I think, from the make of an oyster, or cockle, reasonably conclude, that it has not so many, nor so quick, senses as a man. Locke.

Three common cot-We-shdls out of gravel-pits.

Woodward.

CO’CKLE, n. s. Sax. coccei ; Lat. lolium :i- xania ; a weed that grows in corn, the same with cornrose ; a species of poppy.

He shal no gospel glosen, here nc teach • We leven all in the gret God, quod he : He wold sowen some difncultee, Or springen cockle in our clene corn, And therefore, Host, I warn thee beforene, My jolly body slial a tale tell. And I shal clinken you so mery a bell That I shall waken all this campagnie

Chaucer1! Canterbury Tales.

In soothing them, we nourish ‘gainst our senate The cockle of rebellion, insolence, sedition.

Shakspeare.

Good seed degenerates, and oft obeys The soil’s disease, and into cockle strays. Donne.

CO’CKLE, v. a. From cockle. To contract into wrinkles, like the shell of a cockle.

Showers soon drenched the cainblet’s cockled grain.

Gay,

CO’CKLED, adj. From cockle, Shelled; or perhaps cochleate, turbinated.

Love’s feeling is more soft and sensible Than are the tender horns of cockled snails.

Shahspeare.

CO’CKLE-STAIRS, n. s. winding or spiral stairs.

COCK-LOFT, n. s. Cock and loft. The room over the garret, in which fowls are sup- posed to roost; unless it be rather corrupted from coploft, the cop or top of the house.

If the lower floors already burn, Cock-lofts and garrets soon will take their turn.

Dryden's Juvenal.

My garrets, or rather my cock-lofts indeed, are very indifferently furnished ; but they are rooms to lay lumber in. Swift.

COCK-MASTER, n. 5. Cock and master. One that breeds game-cocks.

A cock-master bought a partridge, and turned it among the fighting cocks. L'Ettrange.

COCK-MATCH, n. s. Cock and match. Cockfight for a prize.

At the same time that the heads of parties preserve towards one another an outward shew of good breed- ing, their tools will not so much as mingle at a cock- match. Addisun.

Though quail-fighting is what is most taken notice of, they had doubtless cock-matches also-

Arbuthnot and Pope.

CO'CKNEY, n. s. A word of which the original is much controverted. The French use an expression pdis de cocaigne, for a country of dainties : —

Paris est pour un riche un pais de cocaigne.

Boileau.

Of this word they are not able to settle the original. It appears, whatever was its first ground, to be very ancient, being mentioned in an old Normanno Saxon poem : —

Far in see by west Spayng, Is a lond yhote cocayng.

One of the writers of the glossary to Chaucer has the following note, explanatory of the word. That this is a term of contempt, borrowed ori- ginally from the kitchen, is very probable. A cook, in the base Latinity, was called coquinator,

and coquinarius, from either of which might easily be derived. In. p. p. fol. 3.0, 36.

And yet I say, by my soule, I have no salt bacon, Ne no cokeney (by

Christe) coloppes to make.

It seems to signify a cook. And so, perhaps, in the Turuament of Tottenham. Anc. Poet, t. ii. p. 24.

At that feast, where they served in rich array, Every five and five had a cokeney.

That is, I suppose, a cook or scullion to at- tend them. — In those rhymes ascribed to Hugh Bigot, which Camden has published, Brit. Col. 451 (upon what authority I know not) —

Where I in my castle of Bungey Upon the river of Wavesey, I would ne care for the king of Cokeney.

The author, in calling London Cokeney, might possibly allude to that imaginary country of idleness and luxury which was anciently known by the names of Cocaigne or Cocagne, a name which Hickes has shown to be derived from coquina. Gn. A. S. p. 231. He has there pub- lished an excellent description of the country of Cokaigne, in old English verse but probably translated from the French ; at kast the French have had the same fable among them, for Boileau plainly alludes to it, sat. vi : in the words already cited.

The festival of La Cocagna, at Naples, de- scribed by Keyster, v. ii. p. 369, appears to have the same foundation. It probably com- menced under the Norman goverment. There is a mock heroic poem, in the Sicilian dialect, en- titled, La Cuccagna Conquistata, by Gio Baptista Basili, Palermo, 1674, in which the description of Palma citta di Cuccagna begins thus,—

Sedi cuccagna una montagna Di furmaggiu grattatu, et havi in cima Di maccamui una caudara magna

I lie as a drap-sak in my bedde ; And when this jape is told another day I shal be balden a daffy or a cokenay : I wol arise and auntre it by my fay : Undhardy is unsely — thus men say.

Chaucer’s Canterbury Tale*

So the cockney did the eels when she put them in the pastry alive. Shahtpeare. King Lear.

I am afraid this great lubber, the world, will prove a cockney. Id. Twelfth Night.

Some again are in the other extream, and draw this mischief on their heads by too ceremonious and strict diet, being over precise, cockney-like, and curious in their observation of meats.

Burton's Anatomy of Melancholy.

For who is such a cockney in his heart, Proud of the plenty of the southern part, To scorn that union, by which we may Boast 'twas his countryman that wrote this play.

Dorset

The cockney, travelling into the country, is surprized at many common practices of rural affairs. Watts.

COCKNEY, KING OF, a title used for the king of London, in an ancient poem, ascribed to Hugh Bagot, earl of Norfolk, in the time of king Henry II. And ' king of the cockney' occurs among the regulations for the sports and shows formerly held in the Middle Temple on Childermas Day,

where he had his officers ; a marshal, constable, butler, See. See Dugdate's Origines Jurldicales, p. 247.

COCK-PIT, n. s. Cock and pit. The area

where cocks fight.

Can this cock-pit hold The vasty field of France. Shaktspeare.

And now I have gained the cock-pit of the western world, and academy of arms for many years.

Howell's Vocal Forest.

COCK-PIT, in maritime affairs, a place on the lower deck of a man of war, appropriated to the use of the surgeon and his mates, being the place where the wounded men are dressed in time of battle, or otherwise.

COCK-ROACH. See BLATTA.

CO’CK’S-COMB, n. s. Cock ana comb. A plant.

CO’CK’S-HEAD, n. s. A plant, named also sainfoin.

COCK-SHUT, n. s. From cock and shut. The close of the evening, at which time poultry go to roost.

Surrey and himself,

Much about cock-shut time, from troop to troop Went through the army. Shahspeare.

CO’CKSPUR, n. s. Cock and spur. Vir- ginian hawthorn. A species of medlar.

CO’CKSURE, adv. From cock and sure. Confidently certain ; without fear or diffidence. A word of contempt.

We steal, as in a castle, cocksure. Shakspeare.

I thought myself cocksure of his horse, which he

readily promised me. Pope’s Letters.

CO’CKSWAIN, n. s. Sax. cocaine. The officer who has the command of the cockboat. Corruptly, coxon, he sits in the stern of the boat and steersr; and has a whistle to call his men.

CO’CKWEED, n. s. From cock and weed. The name of a plant, called also dittander, or pepperwort.

COCLES (Publius Horatius), a celebrated Roman, who alone opposed the whole army of Porsena, king of the Etruscans, at the head of a bridge, while his companions were cutting oft the communication with the shore behind him. When the bridge was destroyed, Codes, though wounded by the darts of the enemy, leapt into the Tiber, and swam across it with his arms. A brazen statue was erected to him in the temple of Vulcan, by the consul Publicola, for his emi- nent services.

COCOA, n. s. Span, cacaotal ; and therefore more properly written cacao. See CACAO.

The cacao or chocolate nut is a fruit of an oolong figure ; is composed of a thin but hard and woody coat or skin, of a dark blackish colour, and of a dry V ernel, filling up its whole cavity, fleshy, dry, firm, and fattish to the touch, of a dusky colour, an agree- able smell, and a

pleasant and peculiar taste. It was unknown to us till the discovery of America. The tree is of the thickness of a man's leg, and but a few feet in height; its bart rough, and full of tubercles, and its leaves six or eight inches long, half as much in breadth and pointed at the ends. The flowers are succeeded by the fruit, which is large and oblong, resembling a cucumber, five, six, or eight inches in length, and three or four in thick-

ness ; when fully ripe of a purple colour. Within the cavity of this fruit are lodged the cocoa nuts usually about thirty in number. Hill's Materia Medico,.

Amid those orchards of the sun, Give me to drain the cocoa's milky bowl, And from the palm to draw its fresh'ning wine.

Thomson.

COCOA, in botany. See Cocos.

COCOA ISLAND, a small island, part of the group of the Poggy Islands, near the west coast of Sumatra. Long. 100° 30′ E., lat. 2° 29′ S.

COCOA-NUT JAY, a bay of the Pacific, on the west coast of Roberta's Island. Safe anchor- age and regular soundings are found from eighteen to five fathoms water; the bottom a fine clear sand ; excellent fresh water discharges itself into the bay, near a grove of cocoa-nut trees. Long. 219° 48′ E.,lat. 7° 35′ S.

COCOA-NUT ISLAND, a small island near the west coast of Sumatra. Long. 95° 35′ E., lat. 4° 38′ N. Also a small island at the en- trance of Carteret's harbour, on the south-east coast of New Ireland.

COCOA-NUT KEY, a small island in the Spanish main, near the Mosquito shore. Long. 82° 20′ W., lat. 15° 52′ N.

COCOA-NUT POINT, a cape forming the south- ern extremity of the island of Gilolo. Long. 128° 26′ E., lat. 0° 44′ S.

COCONATO, a town of Piedmont, famous for being the birth-place of Christopher Colon, or Columbus. It is four miles south of Cres- cendo, and twenty east of Turin. Long. 8° 9′ E., lat. 45° 5′ N.

COCOS, in ootany, a genus of the class mo- ncecia, order hexandria ; natural order palma?. Male, CAL. tripartite : COR. tripetalous, with six stamina : female, CAL. quinquepartite : COR. tripetalous : the stigmata three, and the plum coriaceous. Species five, the chief, C. nuoifera, the

cocoa-nut tree, is supposed to have been a native of the Maldive and some desert islands in the East Indies : and from thence to have been transported to all the warm parts of America • for it is not found in any of the inland parts, nor anywhere far distant from settlements. It fre- quently rises sixty feet high. The body of the trunk, which generally leans to one side, occa- sioned by the great weight of nuts it sustains when young, is of an equal thickness at top and at bottom, but somewhat smaller in the middle ; its color is of a pale brown throughout, and the bark smooth. The leaves or branches are often fourteen or fifteen feet long, about twenty-eight in number, winged of a yellow color, straight and tapering. The pinnae are green, often three feet long next the trunk, but diminishing in length toward the extremity of the branches ; which are fastened at top by brown stringy threads that grow out of them, of the size of or- dinary pack-thread, and are interwoven like a. web. The nuts hang at the top of the trunk, in clusters of a dozen in each. Each nut, next the stem, has three holes closely stopped, one being wider and more easily penetrated than the rest. When the kernel begins to grow, it incrysts the inside of the nut in a bluish, jelly-like substance ; as this grows harder, the enclosed liquid, distilled

into the nut from the roots, become somewhat acid ; and the kernel, as the nut ripens, becomes «till more solid ; and at length lines the whole mside of the nut for above a quarter of an inch thick, being as white as snow, and of the flavor of an almond. The quantity of liquor in a full grown nut is frequently a pint and upwards. The husky tegument of the nut consists of strong, tough, stringy filaments, which, when removed from the fruit, resemble coarse oakum. The leaves are wrought into brooms, hammocks in form of nets, mats, sacks, and other useful uten- sils. The tree is propagated by planting the nuts, which, in six or eight weeks, will come up, provided they are fresh and thoroughly ripe ; but this is what few of them are when brought into f his country ; for they are always gathered before hey are ripe, that they may keep during the pas- age. The best way, therefore, would be to gather such nuts as are thoroughly ripe in their native country, and plant them in a tub of dry jand, to keep them from the vermin during the passage. Here they will frequently sprout, which

will be an advantage, as they may then be im- mediately planted in pots of earth, and plunged in the bark-stove. 2. C .butyracea. Palm-oil-tree. A native also of South America ; unarmed : fronds pinnate : leaflets simple. It is from this species that we obtain the palm-oil of the dispen- satories. For a farther account of which see PALM-OIL.

Cocos ISLAND, an island in the Pacific Ocean, abounding, according to captain Vancouver, in fish, and having a fruitful soil. It is about twelve miles in circumference, say those who examined it, lying in a north-east and south-west direction, and about four miles long and two broad, with detached rocks and islets scattered about its shores. Those lying off its south-west part extend to the greatest distance, which is nearly two miles, but they cannot be considered as dan- gerous, because they are sufficiently high to be seen and avoided. Water abounds in every part of the island, of excellent quality, and is to be easily procured at the stations to which vessels can resort. The soil in the immediate neigh- bourhood of the streams that fall into each of the bays, is of a poor, loose, sandy nature ; but, at a little distance, behind the beach and in the fis- sures of the rocks, a rich black mould was ob- served, apparently capable of affording much vegetable nourishment. All its vegetable pro- ductions appeared to grow luxuriantly, and co- vered the island in one entire wilderness. On the rocky cliffs, near the sea side, whose uneven surface admitted the growth of vegetables, a coarse kind of grass is produced, that afforded an excellent retreat for the different kinds of sea- fowl which resort thither to roost and build their nests, or, more properly speaking, to lay their eggs, as they are at little pains to form a nest of any description.

About these cliffs grow a very particular kind of trees, something like the cloth-plant of the South Sea Islands, but much larger ; some of .ese grow to the height of about thirty feet, are jf a lightish colored bark, free from branches to the top, which is somewhat bushy. Many of the trees that composed the forest, especially in

the interior and elevated parts of the island, seemed to be of a considerable size. The cocoa- nut trees, which grow not only on the searshore, but high up on the sides of the hills, were the only trees we saw that bore any fruit, although in one of the rivulets an unripe guava was picked up, which most probably had come from the in- terior country ; in addition to these, we noticed an abundance of different sorts of ferns, some of which produced a stem nearly six inches in dia- meter, and grew to the height of nearly twenty feet ; these, as well as I recollect, were exactly of the same description as those commonly found in New Zealand. Such were the most general

vegetable productions of this island that fell under our observation; to which we further added the seeds of apples, peaches, melons, pumpkins, with beans, pease, &c. Fish were in great abundance, and sharks of large size ; no turtles were seen ; but the shores abounded with rats and land-crabs. A.11 the sea-birds common to tropical regions were found here.' In a bay on the western shore Vancouver's men found a bottle, stating, that the ship Ratler, South Sea whaler, of London, had arrived here 26th of July, 1793, and after procuring wood, water, and re- freshments, had left a breed of hogs and goats on the island. None of these articles were, how- ever, to be found. Long. 273° 6′ E., lat. 5U 35′ N.

CO'CTILE, adj. Lat. coctilis. Made by- baking, as a brick.

CO'CTION, n. s. Lat. coctio. The act ot boiling.

The disease is sometimes attended with expectora- tion from the lungs, and that is taken off by a coction and resolution of the feverish matter, and termi- nates in suppuration or a gangrene. Arbuthnot on Diet.

COCYTUS, from KUKVW, to weep ; one of the rivers of hell, according to the mythology of the poets. It. was a branch of the river Styx ; and flowed, says Horace, with a dull and languid stream.

COD, ».S.) Lat. capite ; Ital. cuvaUuu ; COD-FISH. J Belg. kabiijuuer, from Kiˆa\;j ', Scot, headock, a sea-fish with a large head.

O ! squander not thy grief, whose tears command To weep upon our cod in Newfoundland, The plenteous pickle shall preserve the fish, And Europe taste thy sorrows in a dish. Gay.

COD, n. s. Sax. coV»e. Any case or husk in which seeds are lodged.

Thy corn thou there mayest safely sow, Where in full coda last year rich pease did grow.

May.

They let pease lie in small heaps as they are reaped, till they find the hawm and cod dry.

Mortimer's Husbandry.

COD, v. n. From the noun. To enclose in a cod.

All codded grains being a destroyer of weeds, an improver of land, and a preparer of it for other props.

Mortimer,

COD, in ichthyology. See GADUS.

COD FISHERY. See FISHERY.

COD, CAPE, a promontory of the United States, on the south side of Boston Bay, in Massachu- setts, near the entrance of Bostoi harbour. It was discovered, and *hus turned, by Bartholo-

mew Gosnold, in 1602. Long. 70° 10′ W., lat. 42° 4′ N.

COD, CAPE, a peninsula of Massachusetts, so named from the above cape, which lies on its coast, extending sixty-five miles in length, from the isthmus between Barnstaple and Buzzard's Bay to Race Point, and in breadth, for thirty miles, not above three, and above half the re- mainder from six to nine miles. It is sunounded by water on all sides except the west, where it is bounded by Plymouth county.

COD'DERS, n. s. From cod. Gatherers of pease.

CODE, n. s. Lat. codex. A book. A book of the civil law. ,/

We find in the Theodosian and Justinian code the interest of trade very well provided for.

Arbuthnot on Coins.

Indentures, covenants, articles they draw, Large as the fields themselves ; and larger far Than civil codes with all their glosses are.

Pope's Satires.

CODE, in jurisprudence, is a name given by way of eminence to a collection of the laws and constitutions of the Roman emperors, made by order of Justinian. It is accounted the second volume of the civil law, and contains twelve books ; the matter of which is nearly the same with that of the digests, especially the first eight books ; but the style is neither so pure, nor the method so accurate ; and it determines matters of daily use, whereas the digests discuss the more abstruse and subtle questions of the law, giving the various opinions of the ancient law- yers. Although Justinian's code is thus distin- guished by

the appellation of code, yet there were codes before his time, such as Gregorian code, and Hermogenean code : collections of the Roman laws made by two celebrated lawyers, Gregorius and Hermogenes, which included the constitutions of the emperors from Adrian to Dioclesian and Maximinus. The Theodosian code, comprised in sixteen books, formed out of the constitutions of the emperors from Constantine the Great to Theodosius II., was observed almost over all the west, till it was abrogated by the Justinian code. There are several later codes, particularly the ancient Gothic, and those of the French kings, as the code of Euridic Louis, and Henry, code Marchande, code des.Eaux. &c., and latterly we have had the code de Napoleon. See NAPOLEON.

CODE, a considerable river of Panama, South America, on which a large contraband trade be- ing carried on formerly into the Pacific, a tower was built at its mouth. Long. 80° 25′ W., lat. 9° .5′ N., and taken by the English 1746.

CODEX, in antiquity, a book, or tables on which the ancients wrote, so called a codicibus, or caudicibus arborum, the trunks of trees ; the bark of which, being stripped off, served the an- cients to write their books on. Codex also de- noted a kind of punishment by means of a clog or block of wood, to which slaves who had offended were tied fast, and obliged to drag it along with them ; and sometimes they sat on it closely bound.

CODIA, among botanists, signifies the head of

any plant, but more particularly a poppy head ; whence its syrup is called diacodium.

CODIA, in botany, a genus of the digyma or- der, and octandria class of plants : CAL. tetraphyl- lous, with small oblong horizontal leaves : COR. consists of four very small linear petals : STAM. eight filaments, twice as long as the calyx ; an- thera roundish. Species, one only, a native of New Caledonia.

CO’DICIL, n. s. Lat. codicillus. An appen- dage to a will.

The man suspects his lady’s crying,

Was but to gain him to appoint her,

By codicil a larger jointure. Prior.

CODICIL, in law, a supplement to a will which it resembles, except that it makes no mention or' an heir or executor, and is not written with the formalities prescribed for a testament: so that a codicil is a less solemn will, of one that dies either testate or intestate, without the appointment of an heir ; testate, when he that hath made his co- dicil hath either before or afterwards made his testament, on which that codicil depends, or to which it refers : intestate, when one leaves be- hind him only a codicil without a testament, wherein he gives legacies to be paid only by the heir at law.

CO'DILLE, n. s. Fr. codille ; Span, codillo A term at ombre, when the game is won.

She sees, and trembles at the' approaching ill ; Just in the jaws of ruin and codille.

Pope's Rape of the Lock.

To CO'DLE, v. a. Lat. coquo, coctulo. To parboil ; to soften by the heat of water.

CO'DLING, n. s. From To codle. An apple generally codled to be mixed with milk.

In July come gilliflowers of all varieties, early- pears and plums in fruit, gennitings and codlings.

Bacon's Essays.

Their entertainment at the height, In cream and codlings revelling with delight.

King's Cookery,

He let it lie all winter in a gravel walk, south of a codling hedge. Mortimer's Husbandry.

A codling, ere it went his lip in, Would straight become a golden- pippin. Swift.

CODOGNO, a town of Italy, in the ci-devant duchy of Milan, situated in the department of Adda, near the confluence of the Adda and the Po. It was the head-quarters of the French ge- neral Laharpe, when he was shot by the Austrians, in May, 1796, though the French were victorious. It was also the scene of a defeat of the Austrians, fifty years before, in 1746. It lies thirty-three miles east of Pavia, and ten S.S. E.

of Udina. Lon. 10° 59′ E., lat. 45° 6′ N.

CODON, icwduv, in antiquity, a cymbal, or rather little brass bell, resembling the head of a poppy. They were fastened to the trappings and bridles of horses.

CODON, in botany, a genus of trie moriogynia order, and decandria class of plants : CAL. de- cempartite, with the segments alternately long and short: COR. campanulated, with the limb decempartite and equal; the nectarium decem- locular, of ten scales inserted into the heels of the stamina ; the seed-case bilocular ; the seeds hairy, roundish, in a dry colored pulp. Species eight, one only a C.ipe plant.

CODRINGTON (Christopher), a celebrated English officer, born at Barbadoes in 1668, and educated at Oxford ; after which he betook him- self to the army ; and, by his merit and courage, soon recommending him.;elf to the favor of king William, was made a captain in the first regiment of foot guards. He was at the siege of Namur in 1695 ; and, upon the peace of Ryswick, was made governor in chief of the Leeward and Ca- ribbee islands. In 1701, however, several articles were exhibited against him before the House of Commons ; to which he published a distinct and particular answer, and was honorably acquitted. In 1703, he showed great bravery at the attack of Guadaloupe ; but at last he lived a studious and retired life. He died at Barbadoes April 7th, 1710, and was buried there; but his body was afterwards brought over to England, and interred, in 1716, at Oxford. By his last will, he be- queathed his plantations in Barbadoes, and part of the island of Barbuda, to the Society for Pro- pagating the Gospel in Foreign parts ; and left a noble legacy to All Souls College, of which he had been a fellow. This legacy consisted of his library, which was valued at £6000, and £10,000 to be laid out; £6000 in building a library, and £4000 in furnishing it with books. He wrote some of the poems in the Musae Anglicans, printed at London in 1741.

COD ROY, a river of Newfoundland, which runs into the sea between cape Ray and cape Anguille.

CODRUS, the seventeenth and last king of Athens, son of Melanthus. When the Heraclidte made war against Athens, the oracle foretold that

the victory would be granted to that nation whose king was killed in battle. The Heraclidae upon this gave strict orders to spare the life of Codrus ; but the patriotic king disguised himself and attacked one of the enemy, by whom he was killed. The Athenians obtained the victory, and Codrus was deservedly called the father of his country. He reigned twenty-one years, about A. A. C. 1071. To pay the more honor to his memory, the Athenians enacted, that no man after Codrus should reign in Athens, under the name of king. See ATTICA.

COD'S HEAD, a cape on the south-west coast of Ireland. Long. 9° 59′ W., lat 51° 36′ N.

COECK (Peter), called also Peter Van Aelst, was a Flemish painter of the school of Bernard of Brussels. In 1531 he went to Constantino- ple, and made some admirable drawings of the Turkish costume, which he afterwards cut in wood. His historical pictures, as well as por- traits, have been much admired. He was painter to Charles V. and died at Antwerp in 1 550.

CGECUM, in anatomy, the blind gut ; so called as it has but one opening, being the first portion of the large intestine in which the small intestine ends. See ANATOMY and INTESTINES.

COE'FFICACY, n. s. Lat. con and effica- cia. The power of several things acting to- gether to produce an effect.

We cannot in general infer the efficacy of those stars, or coefftcacy particular in medications

Browne't Vulgar Errours.

COEFFI'CIENCY, n s. ; con and efficio.

Lat. ./u-operation ; the state of acting together to some single end.

The managing and carrying on of this work by the spirits instrumental coefficiency, requires that they be kept together without distinction or dissipation.

Glannille's Scepsis.

COEFFICIENTS. See ALGEBRA.

COEFFICIENT, n. s. Lat. con and efficient. 1. That which unites its action with the action of another. 2. In algebra ; such numbers, or given quantities, that are put before letters, or unknown quantities,

into which letters they are supposed to be multiplied, and so do make a rectangle or product, with the letters ; as 4 a, b x,c x x ; where 4 is the coefficient of 4 a, b of b a1, and c of c x x.

The coefficient of any generating term in fluxions, is the quantity arising by the division of that term, by the generated quantity. Chambers.

CCELIAC ARTERY. SeeANATOMY. Index.

CCE'LIAC PASSION. KotXia the belly. A diarrhoea, or flux, that arises from the indigestion or putrefaction of food in the stomach and bowels, whereby the aliment comes away little altered from what it was when eaten, or changed like corrupted stinking flesh.

CCELIAC VEIN, in anatomy, that which runs through the intestinum rectum, along with the creliuc artery.

CCELIMONTANA PORTA, one of the gates of Rome, situated at the mouth of mount Coelius, and hence its name : thought to be the ancient Asinaria by some. By this gate Alaric, with his Goths, is said to have entered and plundered Rome.

CCELIOBRIGA, in ancient geography, a town of the Bracari in the Hither Spain, south of Bra- cara Augusta, north of the Durius, and not far from the Atlantic. It was amunicipium, and is now thought to be Barcelona.

COELIUS MONS, one of the seven hills of Rome ; so called from Coeles, a Tuscan captain, who came to the assistance of Romulns against the Sabines, according to Dionysius Halicarnas- sus. It was called also Querculanus, or Quer- cetul anus, from the oaks growing on it; and Au- gustus by Tiberius. To the east it had the city walls, on the south the Coeliolus, to the west the Palatine, and on the north the Esquiline.

CCELOS PORTUS, a town of the Chersonesus, near Sestos ; where the Athenians erected a trn- phy, after a spa victory over the Lacedemo- nians.

COE'MPTION, n. s. Lat. coemptio. The act of buying up the whole quantity of anything.

Monopolies and coemption of wares for resale, where they are not restrained, are great means to en- rich. Bacon's Essay*.

COEMPTIONALES, among the Romans, an appellation given to old slaves, who were sold in a lot with others, because they could not be alone.

COEN (John Paterson), governor of the Dutch settlements in the East Indies, and founder of the city of Batavia, was born at Hoorn in 1587. He was educated in Italy for a commercial life and afterwards went to India, where he introduced the Italian mode of book-keeping. He sue-

ceeded to the governorship of Bantam in 1617, but two years after he removed the factory to Batavia, which city he planned and built. In 1623 he returned to Europe, but in 1627 he went back to Batavia, which he defended with great bravery against the emperor Java, who lost such a great number of men before the place, that the dead carcases produced a pestilence, of which Coen died in 1629.

CCENOBITE, from KOIVOG, common, and /3toc, life, a leligious who lives in a convent, or in community, under a certain rule ; in opposi- tion to a hermit, who lives in solitude. Cassian makes this diffeience between a convent and mo- nastery, that the latter may be applied to the re- sidence of a single religious or recluse ; whereas the convent implies coenobites, or numbers of religious living in common. Fleury speaks of three kinds of monks in Egypt : anachorets, who live in solitude ; coenobites, who continue to live in community ; and sarabaites, who are a kind of monks errant, that stroll from place to place. He refers the institution of coenobites to the times of the apostles, and makes it a kind of imitation of the ordinary lives of the faithful at Jerusalem ; though St. Pachomiurs is ordinarily allowed to have been the institutor of the coenobite life ; as being the first who gave a rule to any com- munity.

C(ENOBIUM,*:oivoj3iov, the state of living in a society, or community, where all things are common. Pythagoras is thought to be the au- thor or institutor of this kind of life ; his disci- ples, though some hundreds in number, being obliged to give up all their private estates, to be annexed to the joint stock of the whole. The Essenians among the Jews and Platonists are said to have Jived in xhe same manner. Many Christians also have thought this the most per- fect kind of society, as being that m which Christ and his apostles chose to

live.

COE’QUAL, adj. } From Lat. con and COE’QUAI ITY, n. s. $ equalis, equal ; being of the same rank and dignity, with another.

Henry the fifth did sometimes prophesy, If once he came to be a cardinal, He’ll make his cap coequal with the crown.

Shakspeare. Henry IV.

COE’RCE, v. a. ~\ Lat. coerceo ; to restrain ; COE’RCJBLE, adj. f to keep in order by force ; COE’RCION, n. s. £ penal restraint; check. COE’RCIVE, adj. J That which has the power and authority of restraining by punishment.

For ministers to seek that themselves might have coercive power over the church, would have been hardly construed. Hooker’s Preface.

The coercion or execution 01 the sentence in eccle- siastical courts, is only by excommunication of the person contumacious. Hole’s Common Law.

The virtues of a general, or a king, are prudence, counsel, active fortitude, coercive power, awful com- mand, and the exercise of magnanimity, as well as ;ustice. Dryden.

Government has coercion and animadversion upon such as neglect their duty ; without which coercive power, all government is toothless and precarious.

South.

COESSE’NTIAL, adj.) Lat. con and eswn- COESSENTIA’LITY, n. s. j tia. Participating of the same essence.

The Lord our God is but one God, in which indi- visible unity we adore the Father, as being altogether of himself; we glorify that consubstantial Word, which is the Son ; we bless and magnify that coessen- tial Spirit eternally proceeding from both, which is the Holy Ghost. Hooker.

COETA’NEOUS, adj. Lat. con and atas. Of the same age with another : with to.

Eve was old as Adam, and Cain their son coetane-

ous unto both. Browne’t Vulgar Errours.

Every fault hath penal effects, coetaneoui to the act.

Gov.

Through the body every member sustains another ; and all are coetaneoia, because none can subsist alone.

Bentley's Sermons.

COETER'NAL, adj. ˆ Lat. con and eternus. COETER'NALLY, adv. > Having existence from COETER'NITY, n. s. j eternity. In a state of equal eternity with another.

Arius had dishonored his coeternally begotten Son.

Hooker.

The eternity of the Son's generation, and his coe- ternity and consubstantiality with the Father, when he came down from heaven, and was incarnate.

Hammond's Fundamental!:.

Hail! holy Light! offspring of Heaven first-born, Or of the Eternal coeternal beam, May I express thee, unblamed : since God is light, And never but in unapproached light Dwelt from eternity, dwelt then in thee, Bright effluence of bright essence increate. Milton.

COE'VAL, adj. & n. s.) Lat. coavus. The COE'VOUS, adj. $ same in age ; a con-

temporary; but properly one not only living at the same time, but of the same time of life. This religion cannot pretend to be coeval with man.

Hale.

Although we bad no monuments of religion ancienter than idolatry, we have no reason to conclude that idolatrous religion was coeval to mankind.

Id. Origin of Mankind.

The monthly revolutions of the moon, or the diur- nal of the earth upon its own axis, by the very hypo- thesis, are coeval with the former. Bentley. Then it should not have been the first, as supposing some other thing coevous to it. South.

Even his teeth and white, like a young flock, Coeval, and new-shorn, from the clear brook Recent. Prior

As it were not enough to have outdone all your coevals in wit, you will excel them in good nature.

Pope,

Silence, coeval with eternity ! Thou wert, ere nature first began to be , ‘Twas one vast nothing all, and all slept fast in thee .

Id.

O my coevals! remnants of yourselves! Poor human ruins tottering o’er the grave ! Shall we, shall aged men, like aged trees, Strike deeper their vile root, and closer cling Still more enamoured of this wretched soil ?

Young’s Night Thoughts. Describe the man of whom His own coevals took but little note. And paint his person, character, and views As they had known him from his mother’s womb.

Cowper’s Task.

COEVORDEU, or KOEVORDE, a fortified own, the capital of the district of Drenthe, in the Netherlands, situated on the river Aa. It has oeen regarded as the chef d’oeuvre of the ce- lebrated Coehorn, and one of the strongest for- tresses of Holland, forming the key to Groningen, Overyssel, and Friesland. Its form is that of a regular pentagon, with high and thick ramparts, seven large bastions, seven half moons, and seven ravelins. It is farther strengthened by a fort surrounded with five other bastions, and sur- rounded by marshes. It was besieged in 1672 by Bernard Von Galen, the warlike bishop of Munster, and betrayed by the governor ; but shortly after retaken by the Dutch. In 1795 it surrendered to the French. It is thirty miles south of Groningen, thirty-six north-east of De- venter, and sixty north-east of Arnheim.

COEUR (James), an opulent French mer- chant of the fifteenth century. He is said to have had 300 agents in the Levant, and lent

200,000 crowns of gold to Charles VII. which enabled him to conquer Normandy. He was, in return, tried upon some false charges, and condemned to the loss of his estates, and the payment of an enormous fine. He himself only escaped through the management of one of his clerks, and died in the isle of Chio in 1456.

COEXI'ST, v. n. ˆ Lat. con and existo.

COEXI'STENCE, n. s. >To exist at the same time

COEXISTENT, adj. .) with another. Existence 'ogether; equal in time and duration.

The three stars that coexist in heavenly constel- lations, are a multitude of stars.

Hate's Origin of Mankind.

Of substances no one has any clear idea, farther ,lhan of certain simple ideas coexist ing together. Loclte.

It is sufficient thai we have the idea of the length of any regular periodical appearances, which we can in our minds apply to duration, with which the mo- tion or appearance never coexisted. Id.

The measuring of any duration, by some motion, depends not on the real coexistence of that thing to that iwrfian,

To the measuring the duration of anything by time, it is not requisite that that thing should be coexistent to the motion we measure by, or any other periodical revolution. Id.

at one point is either future or past, and no parts are coexistent or contemporary with it. Bentley.

We can demonstrate the being of God's eternal ideas, and their coexistence with him.

Grew'i Cosmologia.

COEXT'END, v. a. } Lat. con and extendo. COEXTE'NSION, n. s.) To extend to the same space or duration with another.

Though it be a spirit, I find it is no inconvenience to have some analogy, at least of coextension with my body. Hale.

Every motion is, in some sorst coextended with the body moved.

Grew's Cosmologia.

COFFEA, the coffee-tree, a genus of the monogynia order, and pentandria class of plants ; natural order forty-seventh, stellataa : COR. fun- nel-shaped -f the stamina above the tube : SEED, a berry inferior, dispermous, and arillated. There are ten species, but our limits confine us to the descnptiou of one only, the C. Arabica.

It seldom rises more than sixteen or eighteen feet in height ; the main stem grows upright, and is covered with a light brown bark ; the branches are produced horizontally and opposite, crossing each other at every joint; so that every side of the tree is fully garnished with them, and they form a sort of pyramid The leaves also stand opposite ; and when fully grown are about four or five inches long, and two broad in the middle, decreasing towaids each end ; the borders are waved, and the surface of a lucid green. The flowers are produced in clusters at the root of the leaves, close to the branches ; they are tubu- lous, and spread open at the top, where they are divided into five parts ; are of a pure white, and have a very grateful odor,' but are of short dura- tion. The fruit, which is the only useful part, resembles a cherry. It grows in clusters, and is ranged along the branches under the axillae of the leaves, of the same green as the laurel, but something longer. When it comes to be of a deep red, it is gathered for the mill, in order to be manufactured into coffee beans. The coffee-tree is cultivated in Arabia, Persia, the East In- dies, the Isle of Bourbon, and several parts of America. It is also raised in botanic gardens in several parts of Europe. Prince Eugene's garden at Vienna produced more coffee than was sufficient for his own consumption. It delights particularly in hills and mountains, where its root is almost always dry, and its head frequently watered with gentle showers. It prefers a western aspect, and ploughed ground without any ap- pearance of grass. The plants should be placed eight feet distant from each other, in holes twelve or fifteen inches deep. They should rise to the height of sixteen or eighteen feet, but they are generally stinted to five, for the conveniency of gathering their fruit with the greater ease. Thus dwarft, they extend their branches so, that they cover the whole spot round them. They begin to yield fruit the third year, bu,t are not in full bearing till the fifth. They are in danger of be- ing destroyed by worms, or by the scorching rays of the sun. The hills where the coffee trees are found have, generally, a gravelly or chalky bot- tom. In the last it languishes for some time, and then dies: in the former its roots, which seldom fail of striking between stones, obtain nourishment, and keep the tree alive and fruit- ful for thirty years. This is nearly the period for plants of the coffee tree. The proprietor, at the end of this period, not only finds himself without trees, but has his land reduced,

that it is not fit for any kind of culture; and unless he is so situated, that he can break up a spot of vir- gin land, to make himself amends for that which is totally exhausted by the coffee trees, his loss is irreparable. The coffee produced in Arabia is found so greatly to excel that raised in the American plantations or elsewhere, that the cul- tivation of the tree is now but seldom practised in any of the British colonies. Large planta- tions of this kind were formerly made in some of them ; and it was proposed to the parliament to give a proper encouragement for cultivating this commodity there, so as to enable the planters to undersell the importers from Arabia. Accord- ingly there was an abatement of the duty pay-

able on all coffee imported from our colonies in America, which was then supposed to be suf- ficient encouragement for this kind of commerce; but the inferiority of the American coffee to the Arabian, almost mined the project. The coffee berry is very apt to imbibe moisture, or the flavor of anything placed near it. Some years ago a coffee ship from India had a few bags of pepper put on board, the flavor of which was imbibed by the coffee, and the whole cargo spoiled. The coffee tree, when cultivated in Europe, requires a stove It makes a fine ap- pearance at all seasons of the year (being an evergreen), but especially when in flower, and when the berries are red, which is generally in the winter, as they continue long in that state. It is propagated from the berries ; but they must be planted immediately when gathered from the tiec, for they lose their vegetative quality in a very slioit time ; when sent abroad by the post, they have constantly failed when they have been a fortnight on their journey ; so that where these trees are desired, the young plants must be sent, if it be at any distance from the place where they grow. The fresh berries may be planted in small pots, and plunged into a hot-bed of tan- ner's bark. The most proper soil for them is that of a kitchen garden, which is naturally loose, and not subject to bind, especially if it has constantly been well wrought and dunged.

The mill for dressing the coffee beans is com- posed of two wooden rollers furnished with iron plates, eighteen inches long, and ten or twelve in diameter. These movable rollers are made to approach a third, which is fixed, and called the chops. Above the rollers is a hopper, in which the coffee is put, from whence it falls between the

rollers and the chops, where it is stripped of its first skin, and divided into two parts, as may be seen by the form of it, after it has undergone this operation ; being flat on one side and round on the other. From this machine it falls into a brass seive, where the skin drops between the wires, while the fruit slides over them into bas- kets placed ready to receive it; it is then thrown into a vessel full of water, where it soaks for one night, and is afterwards thoroughly washed. When the whole is finished, and well dried, it is put into another machine called the peeling mill. This is a wooden grinder, turned vertically upon its trendle by a mule or horse. In passing over the coffee it takes off the parchment, which is nothing but a thin skin that detaches itself from the berry in proportion as it grows dry. The parchment being removed it is taken out of this mill to be put into another, which is called the winnowing mill. This machine is provided with four pieces of tin fixed upon an axle, which is turned by a slave with considerable force : and the wind that is made by the motion of these plates clears the coffee from all the pellicles that are mixed with it. It is afterwards put upon a table, where the broken berries, and any filth that may remain among them, are separated by ne- groes, after which the coffee is fit for sale.

It is prepared by roasting, or giving it a just degree of torrefaction on an earthen or metal- line piate, till it has acquired a brownish hue, equally deep on all sides. As much is then

ground in a mill, as serves the present occasion. A proper quantity of water is then boiled, and the ground coffee put into it. After it has just boiled it is taken from the fire, and the decoction having stood awhile to settle, it is poured into dishes. The ordinary method of roasting coffee amon” us is in a tin cylindrical box full of holes, through the middle whereof runs a spit. Un- der this is a semicircular hearth, whereon is a larg charcoal fire : by the help of a jack the spit turns swift, and so roasts the berry, being now and then taken up to be shaken. When the oil rises, and it is grown of a dark brown color, it is emptied into two receivers made with hoops, whose bottoms are iron plates; there the coffee is shaken, and left till almost cold, and if it look bright and oily it is a sign it is well done.

CO’FFEE, 7i. s. 2 From the Arab, cahu/i ;

CO’FFEE-POT, n. s. $caffe.. The tree is a spe- cies of Arabic jessamine ; used also for the berry, and the beverage made frori it.

They have in Turkey a drink called coffee, made of a berry of the same name, as black as soot, and of a strong scent, but not aromatical ; which they take, beaten into powder, in water, as hot as they can

drink it. This drink comforteth the brain and heart, and helpeth digestion. Bacon.

To part her time ‘twixt reading and bohea, Or o’er cold coffee trifie with the spoon. Pope.

It is found to succeed as well in the Caribbee islands as in its native place of growth ; but whether the cof- fee produced in the West Indies will prove as good as that from Mocha in Arabia Felix, time will discover.

Miller.

Coffee denotes a drink prepared from the berries, very familiar in Europe for these eighty years, and among the Turks for 150. Thevenot, the traveller, was the first who brought it into France ; and a Greek servant, called Pasqua, brought into England by Mr. Daniel Edwards, a Turkey merchant, in 1652, to make his coffee, first set up the profession of cqˆfee-man, and Introduced the drink among us. Chambers.

COFFEE, the well-known beverage prepared from the berry of this tree, has now been fami- liar in Europe forupwards of 200 years. Its ori- gin is not well known. Some ascribe it to the prior of a monastery ; who, being informed by a goatherd that his ca’tle, sometimes browsing on the tree, would wake and caper all night, be- came curious- to prove its virtue. Accordingly he first tried it on his monks, to prevent their sleeping at matins. Others refer the invention of coffee to the Persians ; from whom it was received, we are told, in the fifteenth century by Gemaleddin, a mufti of Aden, who, having triad its virtues himself, and found that it dissipated the fumes which oppressed the head, and prevented sleep, recommended it first to his dervises, with whom he used to spend the night in prayer. Hence it passed to Mecca, where first the devotees, and afterwards the rest of the people, took it From Arabia Felix it passed to Cairo. It 1511 Kah:e Beg prohibited it, from a persuasion that it ine- briated; but Sultan Causon immediately after took off the prohibition, and coffee advanced from Egypt to Syria and Constantinople. The dervises declaimed against it from the Alcoran, which declares, that coal is not of the number of things created by God for food. Accordingly, the mufti ordered the coffe? houses to be shut ;

but liis successor declaring coffee not to be coal, they were again open. During the war in Can- dia, these assemblies furnishing opportunities for the discussion of politics, the grand vizier Kiu Prili suppressed the coffee-houses at Constanti- nople ; which suppression, however, did not prevent the public use of the liquor there. The word coffee is originally Arabic ; the Turks pro- nounce it it caheuh, and the Arabians caliuah ; which some authors maintain to be a general name for anything that takes away the appetite; others, for anything that promotes appetite ; and others again, for anything that gives strength and vi- gor. The Mahommedans, it is observed, dis- tinguish three kinds of cahuah. The first is wine, or any liquor that inebriates; the second is made of the pods that contain the coffee berry; this they call the sultan's coffee, from their having first introduced, on account of its heating less than the berry, as well as its keeping the bowels open ; the third is that made with the berry itself, which alone is used in Europe, the pods being found improper for transportation.

With respect to the medicinal properties of coffee, it is, in general, excitant and stimulating ; though we doubt whether it relaxes the animal fibres, as has by some authors been supposed. Its more or less wholesome effect greatly de- pends on the climate, as well as the age, con- stitution, and other peculiarities, of the indi- vidual. Hence it cannot be recommended to children, or persons of a hot choleric, nervous, or phthisical habit ; nor will it be so safe and useful in warm as in cold and temperate cli- mates; but to the phlegmatic and sedentary, a cup of coffee one or two hours after a meal, or, which is still better, one hour before it, may be of service to promote digestion, and prevent or remove a propensity to sleep. In cases of spasmodic asthma, hypochondriasis, scrofula, diarrhoea, agues, and particularly against narcotic poisons, such as opium, hemlock, &c. coffee often produces the best effects : nor is there a domestic remedy better adapted to relieve pe- riodical headaches which proceed from want of tone, or from debility of the stomach.

COFFEE-HOUSE, 3 A tavern or subscription

COFFEE-MAN. 5 meeting where refreshments are sold. A house of public entertainment; a tavern. Coffee-man is the obsolete term for tavern-keeper, or one that keeps a coffee- house-

The Turks have a drink called coffa (for they use no wine), so named of a berry as black as soot, and as bitter (like that black drink which was in use amongst the Lacedemonians, and perhaps the same), which

they sip still of, and sup as warm as they can suffer; they spend much time in those coffa-houses, which are somewhat like our ale-houses or taverns ; and there they sit chatting and drinking, to drive away the time, and to be merry tog-ether, because they find by experience that kind of drink so used helpcth diges- tion, and procureth alacrity. Burton's Anat. Mel.

At ten, from coffee-house or play Returning, finishes the day. Prior _

It is a point they do not concern themselves about, farther than perhaps as a subject in a coffee-house.

Swift. Consider your enemies the Lacedemonians • did

ever you near tna,. they preferred a coffee-man to Age. silaus ? Additon.

COFFEE TREE, in botany. See COFFEA. CO'FFER, n. s. & v. a. Sax. cofe ; Fr. of' frc. A chest; a depository for treasure ; and, by a metonomy, treasure itself.

And bad this sergeant that he prively Shulde this child, ful softe, wind and wrappe, With all circumstances tendrely, And carry it in a cofre, or in a lappe.

Chaucer's Canterbury Tales.

Treasure, as a war might draw forth, so a peace succeeding, might coffer up. Bacon' t Henry VII.

He would discharge it without any burthen to the queen's coffers, for honor's sake.

Id. Advice to Villiers Two iron coffers hung on either side, With precious metal full as they could hold.

Faerie Queene,

The lining of his coffers shall make coats To deck our soldiers for these Irish wars.

S/uikspeare's Richard It

If you destroy your govemour that is wealthy, you must chuse another, who will fill his coffers out of what is left. L'Estrange.

COFFER, in architecture, a square depressure in each interval between

the modillions of the Corinthian cornice, usually filled with some enrichment.

COFFER, in fortification, a hollow lodgment across a dry moat, from six to seven feet deep, and from sixteen to eighteen broad ; the upper part being made of pieces of timber, raised two feet above the level of the moat; which little elevation has hurdles laden with earth for its covering, and serves as a parapet, with embra- sures.

COFFER, in fortification, is nearly tne same with the caponiere, excepting that this last is sometimes made beyond the counterscarp on the glacis ; and the coffer always in the moat taking up its whole breadth, which the caponiere does not. It differs from the travers and gallery in that these are made by the besiegers, and the coffer by the besieged. The besieged generally make use of coffers to repulse the besiegers when they endeavour to pass the ditch. To save them- selves from the fire of these coffers, the besiegers throw up the earth on that side towards the coffer.

COFFER DAM, in architecture, an enclosure used in laying the foundation of the piers of bridges. It is generally constructed by driving piles in double rows, and ramming clay and rubbish between them. The water being pumped out, leaves a dry foundation for the working of the pier

COFFERER OF THE KING'S HOUSEHOLD, was a white staff officer, and always a member of the privy council. This officer is now suppressed, and the business of his office is transacted by the lord steward, and paymaster of the household. COF'FIN, n. s. & n. a. i Fr. cofin; from COF'FIN-MAKER, n. s. \ Lat. cavus. A chest for dead bodies. Technically used in farriery. Would'st thou have laughed had I come coffined

home, That weepest to see me triumph.

Shahspenre's Gcriolama.

Not a flower sweet On my black coffin let there be strown.

Id. Twelfth Night. Let me lie

In prison, and here be coffined when I die. Donne.

He went as if he had been the coffin that carried

himself to his sepulchre. Sidney.

One fate they have,

The ship their coffin, and the sea their grave. Wall.

The joiner is fitting screws to your coffin. Swift.

Coffin of a horse, is the whole hoof of the foot above

the coronet, including the coffin bone. The coffin

bone is a small spongy bone, inclosed in the midst of

the hoof and possessing the whole form of the foot.

Farrier's Dictionary.

Where will be your sextons, coffin-makers, and p.ummcrs. Toiler.

COFFIN. The sepulchral honors paid to de- parted friends in ancient times, are curious and worthy of attention. Their being put into a coffin was considered as a mark of the highest dis- tinction ; though with us the poorest people have their coffins. At this day, in the east, they are not at all made use of, either by, Turks or Chris- tians. The ancient Jews seem to have buried their dead in the same manner : neither was the body of our Lord, it should seem, put into a coffin; nor that of Elisha, 2 Kings, xiii. 21, whose bones were touched by the corpse that was let down a little after into the sepulchre. That coffins, howeven, were anciently made use of in Egypt, all agree ; and antique coffins of stone, and sycamore wood, are still to be seen in that country; not to mention those said to be of a kind of pasteboard, formed by folding or gluing cloth together a great many times, curiously plastered, and then painted with hieroglyphics. Its being an ancient Egyptian custom, and not practised in the neighbouring countries, was, doubtless, the cause that the sacred historian ex- pressly observes of Joseph, that he was not only embalmed, but also put into a coffin, Gen. 1. 26, both being customs peculiar to the Egyptians. Maillet appiehends that all were not enclosed in coffins who were laid in the Egyptian repositories of the dead ; but that it was an honor appro- priated to persons of rank.

COG, v. a., v. n. & n. s. ? Bar. Lat. coga.

CO’GGER, ». s. j A wedge ; the

tooth of a wheel. The verb is applied to the employment of a wedge, or to the fixing the teeth in a wheel. As a corruption of cocker it means to flatter; to deceive. To cog a die is to give a bias to dice ; to play unfairly. It ge- nerally signifies to obtrude by falsehood ; to lie ; to wheedle.

I’ll mountebank their loves,

Cog their hearts from them, and come home beloved Of all the trades in Rome. Shakspeare. Coriolanus. Mrs. Ford, I cannot cog; I cannot prate, Mrs. Ford : now shall I sin in my wish.

Id. Merry Wives of Windsor. But then my study was to cog the dice, And dexterously to throw the lucky sice.

Dryden’s Per. Satires. For guineas in other men’s breeches, Your gamesters will palm and will cog. Swiff.

Ye gallants of Newgate, whose fingers are nice In diving in pockets, or cogging of dice. Id.

The outcry is, that I abuse his demonstration by a falsification, by cogging in the word.

Tillotson. Preface

I have coijged in the word to serve my turn .

Stillingjleet.

Fustian tragedies, or insipid comedies, have, by concerted applauses, been cogged upon the town for masterpieces. Dennis.

Or more expert in pilfering vice,

They burn and itch to cog the dice. Gay.

COGAN (Thomas, M. D.),was born in 1736, at Rowell, in Northamptonshire. Educated at Kibworth under Dr. Aikin, he was intended for the dissenting ministry, and officiated for some time to a Presbyterian congregation at Amster- dam, where he married a lady of fortune. He now studied physic, and in 1767 took his doc- tot's degree at Leydon. Some time after we find him in London, uniting with the late Dr. Hawes in instituting the Royal Humane Seciety. He returned, however, to Holland, till the French revolution obliged him once more to come to England, where he published, in 1794, The Rhine, or a Journey from Utrecht to Frankfort ; and, in 1 795, the works of Camper. His other works are, 1. Philosophical Treatise on the Pas- sions ; 2. Ethical Questions, or Speculations in Moral Philosophy ; 3. Theological Disquisitions, 5 vols. 8vo. He was also the author of .he Life and Opinions of John Buncle,jun.; and Letters on the Doctrine of Hereditary Depravity. He died February 2nd, 1818.

CO'GENT, adj. ˆ Lat. cogens. Forcible ; re-

CO'GENCY, n. s. >sistless Convincing ;power-

CO'GENTLY, adv. j ful ; having the power to compel; conviction.

Maxims and axioms, principles of science, because they are self evident, have been supposed innate ; although nobody ever shewed the foundation of their clearness and cogency. Locke.

They forbid us to hearken to those proofs, as weak or fallacious, which our own existence, and the sen- sible parts of the universe, offer so clearly and co- gently to our thoughts. Id.

Such is the cogent force of nature. Prior.

They have contrived methods of deceit, one repug- nant to another, to evade, if possible, this most cogent proof of a Deity. Benlley.

CO'GGLESTONE, n. s. Ital. cuogolo. A little stone ; a small pebble.

CO’GITATE, v. n.-\ Lat. cogito. To think ;

CO’GITABLE, adj. (to purpose; to medi-

COGITA’TION, n. s. i tate ; to reflect ; to in-

CO’GITATIVE, adj. J dulge mental specula- tion.

Having their cogitations darkened, and being stran- gers from the life of God, from the ignorance which is in them. Hooker

The king, perceiving that his desires were intem- perate, and his cogitations vast and irregular, began not to brook him well. Bacon’s Henry VII.

On some great charge employed He seemed/ or fixt in cogitation deep.

Milton’s Paradise Lott.

The earl had the closer and more reserved coun- tenance, being by nature more cogitative. Wotton.

If these powers of cogitation and sensation are neither inherent in matter, nor acquirable to mat- ter, they proceed from some cogitative substance, which we call spirit and soul. Bentlc .

COGNAC, COGNIAC, or COIGNAC, a town of France, in the department of the Charente, and ci-devant province of Angoumois, with a castle, where Francis I. was born. It is seated on the river Charente, in a very pleasant country, abounding iu wine and remarkable for its excel- lent brandy : it trades largely in it with all the chief cities of Europe. It is 100 miles south- west of Paris.

COGNAC, a town of France, in the depart- ment of Upper Vienne, and ci-devant province of Limosin, twenty miles south-east of Conso- lent.

COGNATION, n. s. Lzl.cognatio. Kindred; descent from the same original. Relation ; par- ticipation of the same nature.

He induceth us to ascribe effects unto causes of no cognation, Browne’s Vulg. Errours.

Two vices I hall mention, as being of near cog- nation to ingratitude ; pride, and hard-heartedness, or want of compassion. South.

Let the criticks tell me what certain sense they could put upon either of these four words, by their mere cognation with each other. Watts on the Mind.

COGNISEE', n. s. In kw. He to whom a tine in lands or tenements is acknowledged.

CaGNISOUR, n. s. In law. Is he that passeth or acknowledgeth a fine in lands or te- nements to another.

COGNITION, n. s.) Lat. cognitio. Know-

CO'GNITIVE, adj.] ledge ; complete con- viction. Having the power of knowing. I will not be myself, nor have cognition

Of what I feel ; I am all patience.

Shakspeare. Troilus and Cressida.

God, as he created all things, so is he beyond and in them all ; not only in power, as under his subjec- tion j or in his presence, as in his cognition ; but in their very essence, as in the soul of their casualities. Browne's Vulgar Errours.

Unless the understanding employ and exercise its cognitive or apprehensive power about these terms, there can be no actual apprehension of them.

Sauth't Sermons.

COGNITIONIS CAUSA, in Scots law. When a creditor charges the heir of his debtor to enter, in order to constitute the debt against him, and the heir renounces the succession, the creditor can ob- tain no decreet of constitution of that debt against the heir ; but only a decreet subjecting the hsere- ditas jacens, or the estate which belonged to the debtor, to his diligence : and this is called a de- creet cognitionis causa.

CO'GNIZABLE, adj. } Fr. cognoisable, con-

CO'GNIZANCE, n. s. \ noisance. That falls under judicial notice ; liable to be tried, judged, or examined. Judicial notice ; trial; judicial authority; a badge, by which any one is known.

And at the king's going away the earl's servants stood, in a seemly manner, in their livery coats, with cognizances, ranged on both sides, and made the king a bow. Bacon's Henry VII.

These were the proper cognisances and coat-arms of the tribes. Browne's Vulgar Errours.

Some are merely of ecclesiastical cognizance ; others of a mixed nature, such as are cognizable both in the ecclesiastical and secular courts. Ayliffe'i Parergon.

It is worth the while, however, to consider how we ifl*y discountenance and prevent those evils which tht- law can take no cognisance of. V 'Estrange.

Happiness or misery, in converse with others, ds- pends upon things which human laws can take no cognizance of. South.

The moral crime is completed, there are only cir- cumstances wanting to work it up for the cognisance of the law. Addison.

COGNIZANCE OF PLEAS is an authority to call a cause or plea out of another court, which no person can do but the king, except he can show a charter for it. This cognizance is a privilege granted to a city or a town to hold plea of all contracts, &cc. within the liberty ; and if anyone is implicated for such matters in the courts at Westminster, the mayor, &c. of such franchise may demand cognizance of the plea, and that it may be determined before them,

COGNOMEN, in Roman antiquity, a family surname, such as Scipio, Caesar, Antoninus, &c., in addition to the nomen, or family name, Corne- lius, Julius, Aurelius, &c., and differing from the agnomen, such as Africauus, &c. in being heritable. See AGNOMEN.

COGNO'MINAL, , adj. > Lat. cognomen.

COGNOMINA'TJON, n. s. 5 Having the same name ; a surname ; the name of a family ; a name added from any accident or quality.

Nor do those animals more resemble the creatures on earth, than they oneaith the constellations, which pass under animal names in heaven ; nor the dog-fish at sea much more make out the dog of the land, than this cognominal or namesake in the heavens.

Broume's Vulgar Errours.

Pompey deserved the name Great ; Alexander, of the same cognomination, was generalissimo of Greece _

COGNO'SANCE, n. *. i Lat. cognoico.

COGNO'SCIBLE, adj. $ Knowledge ; the

state or act of knowing. That may be known'; being the object of knowledge.

The same that is said for the redundance of matters intelligible and cognoscible in things natural, may be applied to things artificial.

Hale's Origin of Mankind

COHA'BIT, v.a.. ˆ Lat. cohabito. To COHA'BITANT, n.s. > dwell with another in CoaABiTA'riON,n. s. 3 the same place. To live together as husband and wife.

Which defect, though it could not evacuate a mar- riage after cohabitation, and actual consummation, yet it was not enough to make void a contract.

Bacon's Henry VII.

The Philistines were worsted by the captivated ark, which foraged their country more than a conquering army j they were not able to cohabit with that holy thing. South.

The oppressed Indians protest against that heaven where the Spaniards are to be their cohabitants.

Decay of Piety.

He knew her not to be his own wife, and yet had a design to cohabit with her as such.

Fiddes's Sermons.

Monsieur Brumars, at one hundred and two years, died for love of his wife, who was ninety-two at her death, after seventy years cohabitation. Taller.

COHABITATION, in law, denotes the state of a man and woman who live together as if mar- . ried. By the common law of Scotland cohabita- tion, for a year and a day, or a complete twelvˆ- •month, is deemed equivalent to matrimony.

COIIANZY, or C.ESARIA, a small river of New Jersey, which rises in Salem county, and, after running south-east for a few miles through Cum- berland county, and afterwards S.S. W., falls into the Delaware, opposite to the upper end of 13ombay Hook. It is about thirty miles long, and navigable, for vessels of 100 tons, twenty miles from its mouth.

COHASSET, a township of Massachusetts, in Norfolk county, which was incorporated in 1770, and contains 817 inhabitants, 126 houses, and a congregational church. It is twenty-five miles south-east of Boston, but not thirteen in a direct line

COHASSET ROCKS, dangerous rocks about three miles from the coast of Cohasset, which have proved fatal to many vessels.

COH E'lll, n. s.) Lat. coheres. One of

COHE'IRESS, n. s. S several among whom an inheritance is divided : when the shares are equal. The difference of termination marks the sex.

Married persons, and widows, and virgins, are all coheirs in the inheritance of Jesus, if they live within Taylor's Holy Liv

Lat. cohtereo, To stick

the laws of their estate. COHE'RE, v. n.

COHE'RENCE, n s. COHE'UENCV, n. s. COIIE'RENT, adj. COHE'SION,M. s. COHE'SIVE, adv.

together; to hold fast one to another, as parts >of the same mass. To be well connected; to follow regularly in the

COHE'SIVENESS, n. s.j order of discourse ; to suit; to fit; to be fitted to.

It shall be no trouble to find each controversy's resting-place, and the. coherence it hath with things either on which it dependeth, or which depend on it

Hooker's Preface

Had time coJtered with place, or place with wishing

Shakspeare Instruct my daughter,

That time and place, with this deceit so lawful,

May prove coherent.

Shakspeare. All's Well that Ends Well.

In their tender years, ideas that have no natural co- hesion, come to be united in their heads. Locke

The mind proceeds from the knowledge it stands possessed of already, to that which lies next, and is coherent to it, and so in to what it aims at. Id.

Coherence of discourse, and a direct tendency of all the parts of it to the argument in hand, are most emi- nently to be found in him.

Id. Preface to St. Paul's Epistles.

The pressure of the air will not explain, nor can be a cause of, the coherence of the particles of air them- selves. Id.

Matter is either fluid or so.id ; words that may comprehend the middle degrees between extreme fix- edness and coherency, and the most rapid intestine motion. Bentley.

None want a place ; for all their centre found, Hung to the goddess, and cohered around ; • Not closer, orb in orb conglobed, are seen The buzzing bees about their dusky queen.

Pope's Dunciad.

Two pieces of marble/ having their surface exactly flat, polished, and applied to each other in such a man- ner as to intercept the air, do cohere firmly together as oaf. Woodward.

By coagulating and diluting, that is, making their oarts more or less coherent, Arbuthnot on Aliments.

Solids and fluids ditfer in the decree of cohesi'm, which, being increased, turns a fluid into a solid. Id

What cause of their cohesion can you And ? What props support, what chains the fabrick bind ?

Blackmore.

A coheient thinker, and a strict reasoner, is not to be made at once by a set of rules. Walts's Logic.

COHESION, in natural philosophy, is that pro- perty by which the parts of bodies adhere toge- ther. This power svas first considered by Sir Isaac Newton as one of the properties essential to all matter, and the cause of that variety which we observe in the texture of different terrestrial bodies. He did not, however, absolutely deter- mine that the power of cohesion was an immate- rial one ; but thought it might possibly arise, as well as that of gravitation, from the action of an ether. His account of the original constitution of matter is as follows : — It seems probable, that God in the beginning formed matter in solid, massy, impenetrable, movable particles ; of such .sizes, figures, and other properties, and in such proportion to space as most conduced to the end for which he formed them : and that these primi- tive principles, being solid, are incomparably harder than any porous bodies composed of them ; even so very hard as never to wear or break in pieces; no ordinary power being able to divide what God himself made at the first creation. While the particles continue entire they may compose bodies of one and the same nature and texture in all ages ; but should they wear away, or break in pieces, the nature of all things de- pending on them would be changed. Water and earth, composed of old worn particles and frag- ments of particles, would not now be of the same texture with water and earth composed of entire particles in the beginning; and therefore, that nature may be lasting, the changes of corporeal things are to be placed in the various separations and new associations and motions of these per- manent particles : compound bodies being apt to break, not in the midst of solid particles, but where these particles are laid together, and touch in a few points. It seems farther, that these particles have not only a vis inertiae, accompa nied with such passive laws of motion as na- turally result from that force, but also that they are moved by certain active principles, such as that of gravity, and that which causes fermen- tation and the cohesion of bodies. These prin- ciples are to be considered not as occult quali- ties, supposed to result from the specific forms of things, but as general laws of nature by which the things themselves are formed; their truth appearing to us by phenomena, though their cause is not yet discovered. The general law of nature, by which all the different bodies in the universe are composed, according to Sir Isaac Newton, is that of attraction : i. e. ' Every particle of matter has attractive force, or a tendency to every other particle ; which power is strongest in the point of contact, and suddenly decreases, in- somuch that it acts no more at the least

sensible distance, and, at a greater distance, is converted into a repellent force, whereby the parts fly from each other.

‘ Gn this principle of attraction may we account for the cohesion of bodies, otherwise inexpli-

cabie. The smallest particles may conere by the strongest attractions, and compose bigger particles of weaker virtue ; and many of these may cohere, and compose bigger particles, whose virtue is still less; and so on for divers suc- cessions, until the progression end in the biggest particles, on which the operations in chemistry, and the colors of natural bodies, depend ; and which, by cohering, compose bodies of a sensible magnitude. If the body is compact, and bends or yields inward to pressure without any sliding of its parts, it is hard and elastic ; returning to its figure with a force arising from the mutual attraction of its parts. If the parts slide from one another, the body is malleable or soft. If they slip easily, and are of a fit size to be agitated by heat, and the heat is great enough to keep them in agitation, the body is fluid ; and, if it be apt to stick to things, it is humid ; and the drops of every fluid affect a round figure by the mutual attractions of their parts, as the globe of the earth and sea affects a round figure from the mutual attraction and gravity of its parts. Since metals dissolved in acids attract but a small quantity of the acid, their attractive force reaches but to a small distance. Now, as in algebra, where affirmative quantities cease, their negative ones begin ; so in mechanics, where attraction ceases, there a repulsive virtue must succeed. That there really is such a virtue seems to follow from the reflections and inflections of the rays of light; the rays being repelled by bodies in both these cases without the immediate contact of the reflecting or inflecting body. The same thing seems also to follow from the emission of light ; a ray, as soon as shaken off from a body by the vibrating motion of the parts of the body and got beyond the reach of attraction, being driven away with exceeding great velocity : for that force which is sufficient to turn it back in reflection, may be sufficient to emit it. From the same repelling power it seems to be that flies walk upon the water without wetting their feet; that the object-glasses of long telescopes lie upon one another without touching; and that dry powders are difficultly made to touch one another so as to stick together, without melting them or wetting them with water, which, by ex- haling may bring them together. The particles of all hard, homogeneous bodies which touch one another, cohere with a great

force : to account for which, some philosophers have recourse to a kind of hooked atoms, which in effect is nothing else but to beg the question. Others imagine, that the particles of bodies are connected by rest, i. e. in effect by nothing at all ; and others, by conspiring motions, i. e. by a relative rest among themselves. For myself, it rather appears to me tl-.it the particles of bodies cohere by an at- tractive force, whereby they tend mutually to each other.'

From the above account of the formation an 1 constitution of bodies, we can conclude nothing, except that they are composed ot an infinite number of little particles, kept together by a force or power ; but of what nature that power is, whether material or immaterial, we must re- main ignorant till farther experiments are made. Some of the Newtonian philosophers, however,

have positively determined these powers to bt immaterial. In consequence of this supposition, they have so refined upon attractions and repul- sions, that their systems seem not far from down- right scepticism, or denying the existence of matter altogether. A system of this kind we find adopted by Dr. Priestley, in his History of Vision, vol. i. p. 392, from Messrs. Boscovich and Mitchell, in order to solve some difficulties concerning the Newtonian doctrine of light. ' The easiest method,' says he, ' of solving all difficulties, is to adopt the hypothesis of Mr. Boscovich, who supposes that matter is not im- penetrable, as has been perhaps universally taken for granted : but that it consists of physical points only, endued with powers of attraction and repulsion in the same manner as solid matter is generally supposed to be : provided therefore that any body move with a sufficient degree of velocity, or have a sufficient momentum to over- come any powers of repulsion that it may meet with, it will find no difficulty in making its way through any body whatever ; for nothing else will penetrate one another but powers, such as we know do in fact exist in the same place, and counterbalance or over-rule one another. The most obvious difficulty, and indeed almost the only one that attends this hypothesis, as it sup- poses the mutual penetrability of matter arises from the idea of the nature of matter, and the difficulty we meet with in attempting to force two bodies into the same place. But it is de- monstrable that the first obstruction arises from no actual contact of matter, but from mere powers of repulsion. This difficulty we can overcome ; and, having got within one sphere of repulsion, we fancy that we are now impeded by the solid matter itself. But the very same is the opinion of the generality of mankind, with respect to the first obstruction. Why, therefore, may not the next be only another sphere of re- pulsion, which may only require a greater force than we can apply to overcome it, without dis- ordering

the arrangement of the constituent particles ; but which may be overcome by a body moving with the amazing velocity of light. This scheme of the immateriality of matter, as it may be called, or rather the mutual penetration of matter, first occurred to Mr. Mitchell on reading Baxter on the Immateriality of the Soul. He found that this author's idea of matter was, that it consisted as it were of bricks cemented together with immaterial mortar. These bricks, if he would be consistent with his own reasoning, were again composed of less bricks, cemented likewise by an immaterial mortar; and so 6n, ad infinitum. This putting Mr. Mitchell upon the consideration of the several appearances of nature, he began to perceive that the bricks were so covered with this immaterial mortar, that if they had any existence at all, it could not pos- sibly be perceived ; every effect being produced, in nine instances of ten certainly, and probably in the tenth also, by this immaterial, spiritual, and penetrable mortar. Instead, therefore, of placing the world upon the giant, the giant upon the tortoise, and the tortoise upon he could not tell what, he placed the world at once upon itself.1

COHESION.

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Other philosophers have supposed the powers both of gravitation and cohesion to be material ; and to be only different actions of the ethereal fluid, or elementary fire. In support of this it 18 urged, that before we have recourse to a spi- ritual and immaterial power as the cause of any natural phenomenon, we ought to be well assured that there is no material substance with which we are acquainted, that is capable of producing such effects. In the present case, we are so far from having such assurance, that the contrary is manifest to our senses. One instance of this is in the experiment with the Magdeburg hemis- pheres. These are two hollow hemispheres of brass, exactly fitted to one another, so as to form one globe when joined together, without ad- mitting any air at the joining. In this state, if the air within them is exhausted by a pump, they will cohere with such force, if they are five or six inches diameter, as to require a weight of some hundreds of pounds to separate them. The pressure of the atmosphere, we see, is in this case capable of producing a very strong cohesion ; and if there is in nature any fluid more pene- trating, as well as more powerful in its effects, than the air we breathe, it is possible that what is called the attraction of cohesion may some- how or other be an effect of the action of that fluid. Such a fluid as this is the element of fire. Its activity is such as to penetrate all bodies whatever ; and, in the state in which it is com- monly called fire, it acts according to the

quantity of solid matter contained in the body. In this state it is capable of dissolving the strongest co- hesions observed in nature : but whatever is ca- pable of dissolving any cohesion must, necessarily, be endued with greater power than that by which the cohesion is caused. Fire, therefore, being able to dissolve cohesions, must also be capable of causing them, provided its power is exerted for that purpose. Nor will it seem at all strange that this fluid should act in two such opposite ways, when we consider the different appear- ances which it assumes. These are three, viz. fire or heat, in which it consumes, destroys, or dissolves : light, in which it seems deprived of all destructive or dissolvent power, and to be the most mild, quiet, and placid being in nature. The third is, when it becomes what is called the electric fluid ; and then it attracts, repels, and moves bodies, in a vast variety of ways, without either burning or rendering them visible by its light. In this state it is not less powerful than in either of the other two ; for a violent shock of electricity will displace and tear in pieces the most heavy and solid bodies. The seeming ca- pricious nature of this fluid, however, probably renders it less suspected as the cause of cohesion, than it otherwise would be, were the attractions regular and permanent, which we observe it to occasion. But here we must observe, that the fluid has an existence in all bodies before the ex- periments are tried which makes its effects visible to us, and was acting in them according to its established laws. While acting in this manner it was perfectly invisible; and all we can do is to produce some little infringement of these re- gular laws, according to which it commonly acts. In some cases, however, the electrical attractions produced by art are found to be pretty perma-

nent and strong. Thus, Mr. Symmer, in some experiments with silk stockings, found their at- traction so strong, that it required upwards of fifteen pounds weight to separate them from each other; and this attraction would continue for more than an hour. In plates of glass, too, he observed a remarkable cohesion when electrified. In the Philosophical Transactions for 1777 we find this hypothesis taken notice of, and, in some measure, adopted, by Mr. Henley. ‘ Some gen- tlemen,’ says he, ‘ have supposed that the electric matter is the cause of the cohesion of the particles of bodies. If the electric matter be, as I sus- pect, a real elementary fire, inherent in all bodies, that opinion may probably be well founded ; and. perhaps the soldering of metals, and the ce- mentation of iron, by fire, may be considered as strong proofs of the truth of their hypothesis.’ On this hypothesis we must observe, that if the electric, or any other fluid, is supposed to be the cause of the attraction of cohesion universally, the particles of that fluid must be destitute of all cohesion between themselves ; otherwise

we should be at as great a loss to account for the cohesion of these particles, as for that of ter- restrial matter. Philosophers, indeed, do not suppose any cohesion between the particles of the electric fluid themselves; it is generally be- lieved that the particles of this fluid are repulsive of one another, though attracted by all other matter. If this is fact, we cannot suppose the electric fluid to be the cause of cohesion. The probability or improbability of this hypothesis, therefore, must greatly depend on its being as- certained whether the particles of the electric fluid do really repel one another, and attract all other kinds of matter, or not. See ATTRACTION and ADHESION.

COHI'BIT, v. a. Lat. cohibeo. To restrain ; to hinder.

COHO'BATE, v. a.) To pour the distilled COHOBA'TION, n. s. $ liquor upon the remain- ing matter, and distil it again. A returning any distilled liquor again upon what it was drawn from, or upon fresh ingredients of the same kind, to have it the more impregnated with their virtues,

Cohobalion is the pouring the liquor distilled from anything back upon the remaining matter, and distil- ling it again. Locke.

The juices of an animal body are, as t were, co- hobated, being excreted, and admitted again into the blood with the fresh aliment. Arbuthnot on Aliments.

COHOBATION, in chemistry, the returning the distilled liquor on the substance from which it was drawn. It is one of those operations which the ancient chemists practised with great patience and zeal, and which are now neg- lected. To make this operation easier, and to prevent the trouble of frequently changing the vessels, a particular kind of alembic was constructed, called a pelican, see diagram. This vessel was made in the form of a cucurbit, with an alembic head, but had two spouts communicating with the body. As the vapor rose up into the head, it was gradually condensed, and ran down the spouts into the body of the pelican, whence it was again distilled.

COHOEZ, or the falls of the Mohawk River, in New York, are a great natural curiosity. They are ten miles north of Albany, and about *.wo and a-half above its mouth. The river, above the falls, is about 300

yards wide, and ap- proaches them from the north-west, in a rapid current between high banks, and pours the whole body of its waters over a perpendicular rock of above forty feet high, which extends like a mill dam quite across the river. The banks imme- diately below the falls are 100 feet high. See MOHAWK.

COHORN (Memnon), ± celebrated Dutch general and engineer, one of the most skilful writers on fortification that Europe ever pro- duced. He fortified Bergen-op-Zoom, which is considered a masterpiece in the art. In 1692 he commanded Namur, the defences of which he constructed with the assistance of his celebrated rival, Vauban. He d'ed at the Hague, in the seventy-fourth year of his age, July 1704.

COTIORT, n. s. Lat. colors. A troop of soldiers in the Roman armies, containing about 500 foot. In poetical language, a body of war- riors.

The Romans levied as many cohorts, companies, and ensigns, from hence, as from any of their provin- ces. Camden. The arch-angelic power prepared

For swift descent ; with him the cohort bright

Of watchful cherubim. Milton's Paradise Lost,

Here, Churchill, not so prompt To vaunt as fight, his 'hardy cohorts joined With Eugene. Philip's Blenheim.

COHORT, in Roman antiquity, a part of a Ro- man-legion, containing about 600 men. There were ten cohorts in a legion, the first of which exceeded all the rest in dignity. When the army was ranged in order of battle, the first cohort took up the right of the first line ; the third was in the centre of the ii:st line of the legion, and the fifth on the left; the second between the first and third ; and the fourth between the third and fifth ; the five remaining cohorts formed a second division in their natural order.

COHORTATION, n. s. Lat. cohortatio. En- couragement by words ; incitement.

COIF, n. s. } Fr. ceiffe ; Arab, kuekf.

CO'IFED, adj. >a head-dress generally, ap-

CO'IFFURE, n. s. * plied especially to the ser- geant's cap. •

The judges of the four circuits in Wales, although they are not of the 1

rst magnitude, nor need be of the degree of the coif, yet are they considerable.

Bacon'* Advice to Villiers.

No less a man than a brother of the coif began his suit, before he had been a twelvemonth at the Tem- ple. Addison's Spectator.

I am pleased with the coiffure now in fashion, and think it shows the good sense of the valuable part of the sex. Id.

COIGNE, n. s. An Irish term as it seems.

Fitz-Thomas of Desmond began that extortion of coigne and livery, and pay ; that is, he and his army took horse-meat and man's-meat, and money, at pleasure, Davies on Ireland.

COIGNE, n. x. IWut ; Lat. cuneus ; Fr. coigne. A corner: a wedge used by printers; a die; a stamp used in coirfing money.

No jutting frieise.

Buttress, nor coigne of 'vantage, -hut this bir

*Shakspeare't Macbeth**

See you yond' coin o' th' capitol, yond' corner stone ? Jd.

COIL, v. a. & n. s. Fr. cueiller- Lat. calli- gere ; from Gr. KVK\M. To wind up a rope in circles ; to fold round in a ring, as a snake gathers up itself, and forms a compact circle of several folds. The substantive is used in a very differ- ent sense, and is derived by Dr. Johnson from the Germ, kolleren; which signifies tumult; tur- moil; bustle; stir; hurry; confusion. It has also the primary sense of the verb.

Who was so firm, so constant, that this coil

Would not infect his reason.

Shaksor-are'i Tempest.

You, mistress, all this #»' is "long ff you.

Shahspeart

In that sleep of dearji, what dreams may come, When we have shuffled off this mortal 'v il, Must gives us pause. Id. Hamlet.

The lurking particles o\ an, so expanding them- selves, must necessarily plump out the sides of the bladder, and so keep them turgid, until the pressure of the air, that at first coiled them, be re-admitted to do the same thing again. Boyle.

From thy own smile I snatched a snake,

For there it coiled as in a brake. Byron.

COILING, on shipboard, implies a sort of serpentine winding of a cable or other rope, that it may occupy a small place in the ship. Each of the windings of this sort is called a fake ; and one range of fakes upon the same are called a tier. There are generally from five to seven fakes in a tier ; and three or four tiers in the whole length of a cable. This, however, depends upon the extent of the fakes. The smaller ropes employed about the sails are coiled upon cleats at sea, to prevent their being entangled amongst one another in traversing, contracting, or ex- tending the sails.

COIMBETTORE, or COJMBETOOR, CorAMA- TURA, a small country in the south part of Hindostan, lying between 10° and 12° of N. lat. It is bounded on the north by Mysore, on the east by Kistnagherry and Salem, on the south by the district of Dindigul, and on the west by Cochin and part of Calicut. It has two divi- sions, North and South Coimbetoor; the latter suffered much in the late war, through the de- struction of the reservoirs and aqueducts ; but the former is well supplied with water, and in a high state of cultivation. On the north-west and south-west it borders on the lofty chain of the 'Ghauts, while directly westward it extends to the more level regions round Palicaudebery, which is the only break in the continuous line of those extensive mountains. Through this opening the river Paniany, the largest stream in this district, flows, on its way to the ocean. There are three principal towns in this country, Coimbetoor, Erroad, and Carmour ; the capital, which gives name to the province, is situated on the river Noyel, at the foot of the western Ghauts, in 77° 10′ E. long., and 10″ 55′ N. lat. It is de- fended by a small citadel, and contains about 2,000 houses, with barracks for a regiment of

horse. Tippoo Saib built a handsome mosque in it, and sometimes resided here. In 1783 it was taken by the British, but restored the year following; in 1790 the British again took pos- session of it, after which its garrison under lieu- tenant Chalmers repulsed Tippoo in an attempt he made to storm it. It surrendered some time after to his general, Gammer ud Deen

Khan, who treacherously made the garrison prisoners, and detained them till a general peace was con- cluded in 1792. Seven years after, it was added to the British dominions, together with the pro- vince.

Near the town of Coimbetoor the soil of the country is good, and generally free from rocks. Soil of every variety is cultivated for gardens, and the rent varies accordingly ; but the price is greatly regulated by the depth at which water is found, being in some places eight cubits,, and in others so low as eighteen. It is common, in many parts of the north, to water the gardens by machines, called capily and yalam, and thus a small portion of ground will support many per- sons, and yield a high rent to the land-holder, the crop is also less likely to fail for want of rain. The wet cultivation in this province may be about three per cent, of the whole cultivated surface. In the south the rice grounds on the banks of the Amaravati river are in full cultivation, and very extensive ; but beyond that region the soil is rocky and poor, and very little enclosed. Mu- riatic and other salts, with nitrates, impregnate the earth throughout ˆthe whole province, and common salt and salt-petre are occasionally made. Nitre, indeed, seems to be ready formed, no addition of potash being necessary. The well water has, in many places, a flavor of these salts. Iron has been discovered in some parts of the country.

The inhabitants of Coimbetoor seem to rank very low in the scale of intellect, and the know- ledge of the arts. The only one of these that has been carried to any perfection is that of

weaving. The Vaylalar, a numerous body of the Tamul race, are counted of the pure Sudra caste. In ancient times this district was called Kanjiam; it was subjected to the rajahs of Mysore about 160 years since; but it now forms a collectorship under the presidency of Madras, It contains much uncultivated ground, and yield « no permanent revenue.

COIMBRA, a large, handsome, and celebrated town of Portugal, anciently called Colimbria, standing on a hill, near the Mondego. It is the capital of the province of Beira, a bishop's see, and has a famous university, founded in 1290, and amply endo.wed. The cathedral and the fountains are magnificent, and the country around very pleasant, abounding in vineyards, olive-trees, and fruits. Its population is about 12,000. The Mondego is here crossed by an elegant stone bridge, with a double row of arches, but the town is, in the interior, narrow, crowded, ill-paved, and dirty, and in some places the streets are very steep. The university is now the only establishment of the kind in Portugal. It consists of eighteen colleges, with very ample funds. The course of study is di- vided into six branches, viz. theology, taught by eight professors; canon law, by nine; civil law, by eight ; medicine, by six ; mathematics, by four; and philosophy, by

four. The session commences in October, and closes in May ; and the average number of students is 800. Coimbra is of great antiquity, and was formerly the resi- dence of the kings of Portugal, several of whose tombs it contains. It was fortified at an early period, and has sustained many sieges. The ancient walls and towers still remain. It suf- fered considerable damage from the earthquake which destroyed Lisbon in 1755, and a number of French soldiers, belonging to the rear of Mas- sena's army, were made prisoners here by lord Wellington in October 1810, after the action of Busaco. Sixty miles S.S. E. of Oporto, and N. N, E. of Lisbon.

COINS.

COIN, n.s. &t>. c.ˆ SeeCoiGNE. Money COIN'AGE, n. s. > legally made. Payment CO'INER, n. s. j of any kind. The verb is derived from the noun, but has a greater va- riety of applications. To mint or stamp metals for money is its primary sense. But it likewise signifies to invent; to forge in a bad sense; to pioduce; to give existence to; to impress with an image relating to the mind.

But if that they were put to swiche assays, The gold of hem hath now so bad allayes, With bras, that though the coins be faire at eye, It wolde rather brast atwo than plie.

Chaucer's Canterbury Tales.

Dyonisius, a Greek coiner of etymologies, is com- mended by Athenaeus. Camden's Remains. They cannot touch me for coining : I am the king.

Shakspeare.

My father was I know not where When I was stampt : some coiner with his tools Made me a counterfeit. /(/. Cymbeline.

VOL. VI.

My lungs

Coin words till their decay, against those measles, Which we disdain should tetter us. Id. Coriolanui.

This is the coinage of your brain ; This bodiless creation ecstacy

Is very cunning in. Id. Hamlet.

You have made your holy hat to be stamped on the

king's coin. Id. Henry VIII.

He gave Dametas a good sum of gold in ready coin,

which Menalcas had bequeathed. Sidney,

And truly to support that charge, He had supplies as vast and large, For he could coin or counterfeit, New words with little or no wit. Hudibrat.

Never coin a formal lye on't, To make the knight o'ercome the giant. Id.

These motives induced Virgil to coin his fable.

Dryden,

Unnecessary coinage as well as unnecessary revival of words, runs into affectation ; a fault to be avoided on either hand. Id. Jvnenal. Dedication.,

K

130

COINS.

This is conceived to be a coinage of some Jews, in derision of Christians, who first began that portrait.

Browne.

The loss of present advantage to flesh and blood, •is repaid in a nobler coin. Hammond's Fundamental.*

I cannot tell how the poets will succeed in the ex- •plication of coins, to which they are generally very great strangers. Addison.

It is easy to find designs that never entered into the thoughts of the sculptor or the coiner. Id. on Medals. She now contracts her vast design,

And all her triumphs shrink into a coin. Pope.

The care of the coinage was committed to the infe- riour magistrates, and I don't find that they had a oublic trial, as we solemnly practise in this country.

Arbuthnot.

COIN, in commerce, is a metallic species of money. The barter of one species of goods, or produce, for another, was doubtless the first step in commerce ; but Aristotle (Pol. lib. i. c. 6,) very well explains the early

introduction of a valuable medium of exchange. 'All useful things,' says he, ' could not, without great dif- ficulty, be carried about from place to 'place, it was resolved, therefore, by common consent, that in bartering commodities, they should reci- procally give and receive some substance, which, being in its nature applicable to the purposes of life, might, at the same time, be easily trans- ported. Cattle was an early medium of this kind : hence some have derived the Latin word pecunia from pecus a herd ; and in Homer we find Glaucus's armour valued at 100 oxen, and that of Diomede at ten.' The patriarch Abraham's purchase of his family burying place is the earliest commercial transaction on record, and this he requests to buy for ' as much money as it is worth,' and he is said to have paid or 'weighed' for it ' 400 shekels of silver, current with the merchant.' This was, no doubt silver in con- venient pieces for "iflD1? "13J7 passing to, or with the traveller. ' We have an order of Lycurgus' on record that iron money only should be used in Sparta; iron bars quenched in vinegar are mentioned as the Lacedaemonian money on other occasions; and the ancient Britons were found at the period of the Roman invasion using this metal as well as tin for the same purpose, in the shape of plates and rings. Seneca speaks of an ancient stamped money of leather, corium forma publica impressum , an expedient used by Frederic II. at the siege of Milan ; and, according to some traditions among ourselves, in the time of the barons' wars. In 1360 king John of France, having agreed to pay our Edward III. for the ransom of his person 300,000 of gold crowns, was reduced to the necessity of paying for the necessaries of his household in leather money, in the middle of which was a little nail of silver. Pasteboard was coined by the Hollanders in great quantities in the year 1574. Numa Pompilius circulated money of wood and leather,' and during the whole period of their early monarchy the Romans do not appear to have used any stamped metallic currency. Wherever commerce obtained the metals uniformly seem to have been adopted as money for their portability, neatness, durableness, and universality : there is reason to believe that they were very early used in Egypt,

and, as we have seen, in Asia ; that thence they were introduced into Carthage and Greece, and brought from Greece to Rome. Pliny states that silver was first coined at Rome, A. U.C. 480, and gold about the year 640. The first valuation of Roman money was by the ' libra gravis asris,' or pound of heavy brass.

Mr. Turner (History of the Anglo-Saxons, v. ii.) has a curious chapter on the coins of our Saxon ancestors. He ascertains that they often reckoned the whole amount of their money by pennies, as the French now do theirs by livres ; and that there were larger pennies (maerra peninga), five of which made one shilling; and smaller of twelve to the shilling. The mancus, frequently mentioned, was thirty large pennies, or six shillings. The mark,

ten shillings.

The money first mentioned, in any legal docu- ment extant, consists of shillings and scoetta, yceat, part or division, by which our author thinks that a definite piece of metal in an un- coined state is meant ; and regards these two as the general names of the Saxon money before the Roman and French ecclesiastics taught them the art of coinage. Various charters mention pennies, mancusa (of thirty pennies, the larger ones, each), pounds, shillings, and sicli, which last is sometimes said to be of gold, and sometimes of silver : on some occasions the term seems to be used as synonymous with scillinga. The pound was an imaginary value of money, or a mode of computing it, and not a coin.

‘ As no Anglo-Saxon gold coins have reached modern times,’ says this able writer, ‘ though of their silver coinage we have numerous specimens, it is presumed by antiquaries that none were ever made, yet it is certain that they had plenty o. gold, and it perpetually formed the medium of their purchases and gifts. My belief is, that gold was used in the concerns of life, in an un- coined state, and to such a species of gold money I would refer such passages as these fifty ‘ man- cussa asodenes gold,’ ‘ sexies viginti marcarurn auripondo, appensuram novem librarum puris- simi auri juxta magnum pondus Normanorum,’ ‘ eighty mancussa auri purissimi et sex pondus electi argenti, ‘ duo uncias auri.’ I think that silver also was sometimes passed in an uncoined state, from such intimations as these ‘ twa pund mere hwites seolfres,’ and the abovementioned ‘ sex pondus electi argenti.’ The expressions that prevade Domesday-book imply, in my apprehen- sion, these two species of money, the coined and the uncoined. Seventy libras pensatas, like two uncias auri, are obviously money by weight. But money ad numerum, or arsuram, interpret to be coined money ; also the pund be getale. The phrases, sex libras ad pensum et arsuram et tri- ginti libras arsas et pensatas, appear to me ex- press the indicated weight of coined money. The words arsas and arsuram I understand to allude to the assay of coin in the mint.’

He is inclined to think, also, that the monies was like the pund, a weight rather than a coin ; and says in a note that he is assured on high an- tiquarian authority, ‘that even the scyllinga was a nominal coin ; as no silver coin of that value has been found which can be traced to Saxon limes ‘.’ Coined money appears soon after the Anglo-

Saxon invasion of England, and throughout the octarchy ; but none can be

traced in their history before that event. From the laws of Ethelstan, it appears that the places at which public mints •were established were (Wilkin's Leg. Anglo- Saxons p. 59) ' at Canterbury seven mynteras,' four belonging to the king, two to the bishop, and one to the abbot. At Rochester three, two of the king's, and one the bishop's. At London eight, at Winchester six, at Lewis two, at Has- tings one, atChichesterone, and two at Hampton; Wareham, Exeter, and Shaftesbury, respectively. From Domesday-book, they also appear to have been distributed throughout all the large towns. It need hardly be added that these were evidently the small hammer mints first used, and not es- tablishments quite of equal magnitude with that over which Mr. Pole now so ably presides.

William the Conqueror seems to have adopted the plan of his coinage from France and the establishments of Charlemagne ; he retained the Saxon pound weight or Moneger's pound as it was now called, and which is ascertained to have been a sixteenth, or 5400 grains less than the troy pound ; and coined from it twenty shillings which made twenty-one one-third pounds troy. It was not until the reign of Henry VIII. (1526) that the troy pound was used at the royal mint. This we see was an increase of the Moneyer's pound, and it continued to be increased in suc- cessive reigns until the eighteenth of Charles II., when it was fixed at sixty-two shillings, and so continued until the recent alterations in 1816, which made it sixty-six shillings.

The word sterling was originally applied both to the silver penny, and to the penny-weight, which was minted with a deep cross. When this was broken across it was called the half- penny, and when into four parts, the fourth-thing, or farthing. Silver four-pennies were also coined, and called greats or groats. There were also distinct silver half-pence and farthings, but no shillings coined, according to Dr. Kelly, until the year 1504, in Henry VII. reign; and no copper money until 1665, in the reign of Charles II.

The first gold coins on record were struck by Henry III. in the year 1257, and were called gold-pennies, weighing as much as two silver pence, and passing for twenty pence. Snelling says, this coinage took place through the king's ' necessity,' and that the city of London remon- strated against the measure. Our next gold coinage was that of the florin (from Florence, where a similar piece seems to have been first struck,) in 1354, called also abroad the guelder, or golden piece, and containing twenty-three carats, three grains and a half of fine gold, with half a grain of alloy. This was called the old standard, and continued until the minting of crown pieces in 1527, when the new standard, called at first crown gold, was introduced.

It was enacted in 1266, 3 Edw. 51, ' that an English penny, called a sterling, round and with- out clippers, shall weigh thirty-two wheat corns

from the midst of the ear, and twenty pence to make one ounce, and twelve ounces one pound;' ' eight pounds, it is added, do make one gallon of wine, and eight gallons of wine do make a

London bushel, which is the eighth part of a quarter.

Of the old gold standard, the principal coins were nobles, of 6s. 8d. value ; half and quarter or farthing nobles, as they were also called ; marks, of 13s. 4rf. value; angels of 10s. and sovereigns of 20s. each. The last were first minted in Henry VII. reign, and frequently altered afterwards, until that of James I., by whom they were fixed at twenty-two carats, fine. The sovereigns of this reign were at first called unites, and thirty-three pieces and a half were struck from the troy.

Charles II. first minted guineas (so called from that part of Africa from which the gold used happened at this time to be brought), and forty- four pieces and a half were yielded from a pound troy. This coin varied in current value from twenty to thirty shillings, until the mint was placed under the care of Sir Isaac Newton ; who in 1717 induced the government to fix it at twenty-one shillings. In 1816 took place the new gold coinage of sovereigns at the proper proportion to this guinea, i.e. of 46|g pieces to the pound troy. ,

Seignorage was irregularly charged at the royal mint for both gold and silver coins, until the year 1666, when it was enacted, that all per- sons bringing in either of the previous metals to be coined, should receive back the full va ue free of expense : a law still in force as to gold, but the silver coinage is now wholly managed by govern- ment; and since 1816, gold has become the sole standard measure of value without any limitation as to the amount that may be legally tendered, but silver coin is only a legal tender to the amount of forty shillings.

Queen Elizabeth seems to have contemplated some reform in our coinage ; she ordered the avoirdupois pound to be placed in the exchequer as a standard, and that a copy of the troy pound of goldsmith's hall should be accurately made and deposited in the exchequer, but no practical measure resulted from this.

In the reign of George II., 1758, the first important enquiry of modern times respecting our coinage, was instituted by government. Mr. Bird, a distinguished optician and instrument maker, and Mr. Harris, the king's assay master of the mint, were examined, with several other able mechanics, by a committee of the House of Commons, as to the standards of English weights and measures. TJjeir report demonstrates the great care and ability employed in the proceed- ings. Speaking of the relative claims of

the pound troy and the pound avoirdupois, as a standard weight, they prefer the former ‘ Be- cause’ as the report states, ‘ it is the weight bes, known to our law ; that which has been longest in use ; that by which our coins are measured ,’ that which is best known to the rest of the world ; that to which our learned countrymen have referred, and compared ancient and modern weights; the weight which hath been subdivided into the smallest parts. On the other hand, the avoirdupois weight is of doubtful authority ; and, though unfit to be made a standard, yet the fre- quent use of it renders it necessary to ascertain and declare how many ounces, pennyweights,*

and grains, troy, the pound avoirdupois ought to weigh.’

*This committee caused the inaccurate divi- sions of the mint standard to be corrected : the following is their account of this important operation : * Your committee thought it neces- sary, in the first place, to obtain, with the utmost possible exactness, standard weights of the se- veral parts of the pound troy, in order that from thence such other combinations, or proportions, of weight might be formed, as the business or necessities of the subject should require. And Mr. Harris was employed to make these several parts, who accordingly did so, with great skill and attention, by a very curious and accurate apparatus contrived by Mr. Bird. It was adapted to rive different beams, which ascertained the weights from twelve ounces, or one pound, down to a grain inclusive; and that with so great ex- actness, as to discern any error in the pound weight to the 230,400th part of the weight, and to the 2000th part of a single grain. By these beams, the several parts of the standard pound were examined and adjusted by Mr. Harris, in the presence of your committee, and were found to be what their denominations import. These several parts were tried in every progressive combination necessary to discover their propor- tions to each other ; and appeared so exact, that no greater degree of correctness could, in the nature of the thing, be expected.’*

An authentic copy of this standard pound was delivered to the house of commons, and another to the king’s assay master of the mint, in whose office it is still carefully preserved, with Mr. Bird’s weighing apparatus. With this apparatus, the late comparisons of foreign standards have been made at the mint; but, it should be ob- served, that certain standards, which were too heavy for this beam, were weighed by a new hydrostatic

balance of great accuracy, invented by John Barton, esq. deputy-comptroller of the mint. Before the general comparison was begun, it was deemed proper to compare the parliamen- tary pound with the exchequer standard ; and, for this purpose, the latter was taken to the mint, by an order from the chancellor of the exchequer, where it was found to be one grain and a-half lighter than the parliamentary pound ; and its divisions proved to be still more inaccurate. It should be observed, that lord Carysfort's com- mittee intended to correct this standard, as ap- pears by their report; but in 1760, before their plans were completed, parliament was dissolved, and thus ended their useful labors. Since that period no alteration has been made in the stand- ards, though much attention has been paid to the subject, both in and out of parliament, especially since the adoption of the metrical system in France.

The comparison alluded to between the Eng- lish standard weights took place in the latter part of the year 1818, in the presence of the principal officers of the mint and the chamberlain of the exchequer. In the same year, at the suggestion of Dr. Kelly, of Finsbury-square, the lords of his majesty's privy council for coins, recom- mended the following letter to be despatched,

through the foreign office, to his majesty's con- suls abroad : —

COPY OF LORD CASTLEREAGH'S CIRCULAR TO THE BRITISH CONSULS ABROAD.

' SIR,

' Foreign Office, March 10th, 1818.

' His majesty's government, being desirous of obtaining every information as to the standards in use, for the various weights and measures in foreign countries, "with a view to ascertain their relative bearings to those in use here, for the be- nefit of the commercial interests of this country :

' I am to desire, that you will use your endea- vour to procure, with as little delay as may be, two sets of models, being counterparts in every respect, of the standard pound or mark used at your place of residence for weighing gold and silver, and also of other lesser weights used for that purpose.

' If, in any place within your consulate, the standard pound or mark, with its lesser weights, used for weighing gold or silver, should differ from those in use at your place of residence, you will procure also two sets of the weights so dif- fering.

' You will have the accuracy of all these weights regularly attested by the

proper authorities.

‘ You will pack up carefully, and separately, these two sets of weights complete : and you will send them to me by separate conveyances, accompanying each set by an explanatory letter, written in duplicate. In that letter you will give a list and description of the weights sent.

‘ You will state the difference and proportion between the pound which is used for weighing gold and silver, and that pound used for ordinary articles, which is generally known by the name of the commercial pound.

‘ You will state the contents of the principal measure, used at your place of residence, and at other places within your consulate, for the mea- sure of corn, and of the principal measure for wine, and also of their lesser measures.

‘ You will be so good as to describe the con- tents of these measures, by stating how many cubic inches of the place they contain, or how many English gallons, or how many French litres.

‘ You will add in your letter such other infor- mation as you can collect, or may be in possession of, for throwing light upon the general subject of this instruction.

‘ You will keep an account of the expense to which you may be subjected in the execution of this instruction, and you will send such account, made out in duplicate, in a letter marked sepa- rate, which leiter and account may accompany the weights, and the dispatch explanatory of the subject.

‘ CASTLEREAGH. ‘ To , his majesty’s consul at .’

These orders were, in due time, executed in a very correct and satisfactory manner, and the packages transmitted, contained, besides the re-

quired standards, very ample specifications of the divisions of weights and measures. They were first delivered at the foreign office, and thence sent by Joseph Planta, esq. under secretary of state, to the royal mint, through the medium of the board of trade. In the beginning of the year 1820 the intended comparisons were carried into effect. These experiments were made by Robert Bingley, esq. who had assayed the coins, as be- fore stated, and who, on every occasion, evinced the most zealous attention to scientific accuracy. Dr. Kelly attended this course of experiments at the mint; and,

having registered the results, obtained permission to remove the standards to his house, with a view of having the comparisons repeated ; and, as a farther means of verification, to compare the subordinate weights or divisions,

the units only having been compared at the mint This second course of experiments wa3 mad with a fine balance, rormerly constructed by Mr Troughton for the London institution, and witl attested standards, both French and English. These comparisons, which were repeated by se- veral competent persons, proved highly satisfac- tory as corresponding with the mint experiments. Dr. Kelly has constructed, from the experi- ments, the various tables of coins which we sliall now offer to the reader ; and for the use of which the proprietor of this work has been very happy to transmit to that gentleman a considerable re- muneration. We have had the pleasure of in- specting some of those contributions of our consuls, and of a liberal and powerful government, • to the pursuits of science, in Finsbury-square

TABLE I.

AN HISTORICAL TABLE, OF ENGLISH COINS,

Shewing the alterations they have undergone from the reign of William the Conqueror to that of George IV., with respect both to their weight and fineness. Also, a statement of the comparative value of gold and silver, at different periods.

Date.

SILVER.

GOLD.

Comparative Value of fine Gold & Silver.

Reign.

Fineness of Silver Coins.

Pound Troy of such Silver coined into

Fineness of Gold Coins.

Pound Troy of such Gold coined into

1066 1280 1344 1349 1356 1421 1464 1465 1470 1482 1509 1527 1543 1545 1546 1547 1549 1551 1552 1553 1560 1600 1604 1626 1666 1717 1816 1821

William I. . . 8 Edward I. 18 Edward III.

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Gold. Silver.

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9 Henry V. . 4 Edward IV. «j

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49 Henry VI. . 22 Edward IV. 1 Henry VIII.

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1 Edward VI.

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1 1 1 000

1 — 11,050 1 — 11,057 1 — 11,100

1 _ 10,904 1 _ 12,109

1 — 13,346 1 — 14,485 1 — 15,209 1 — 14,287 1 — 14,287

1 Mary . .

2 Elizabeth .

43

2 James I. 2 Charles I. . 18 Charles II. 3 George I. . 56 George III. 2 George IV.

By the above table, it appears, that silver coins have been diminished in value, during the las' 500 years in the ratio of ninety-nine to thirty-two, and gold coins nearly as three and a-half to one It may be remarked that, within the same period, the silver coins of Trance and Spam have been debased in the ratio of about seventeen to one.

134

COINS.

TABLE II.— NEW TABLE OF GOLD COINS.

Containing the ASSAYS, WEIGHTS, and VALUES of the principal GOLD COINS of all Countries, computed according to the Mint Price of Gold in England, and from Assays made both at London and Paris, which have been found to verify each other.

The London Assays have been made by Robert Bingley, Esq. F. R. S. the King's Assay Master of the Mint, and those at Paris by Pierre Frederic Bonneville, Essayeur du Com- merce, as published in his elaborate work on the Coins of all Nations.

Cents.

Assay.

Weight.

Standard

in pure

Value in

weight.

gold.

Sterling.

car. gr.

dwt, gr.

lwt.yr.mi.

grain.*

». d.

America (See Portugal, Spain, and United States).

Augsburg Ducat . . . .

B. 1 if

2 Si

288

52,1

9 2,64

Austrian) Souverain . ....

W 0 0£

3 14

3 13 15

78,6

13 10,92

Domin.) Double ducat .....

B 1 2f

4 12

4 20 5

106,4

18 9,97

Ducat

B. 1 2|

2 6

2 10 2

53,2

9 4,98

Ducat Kremnitz, or Hungarian .

B. 1 3

2 5|

2 10 3

53,3

9 5,91

Vaden . . Ducat .....

B. 1 2|

1 23J

232

46,9

8 3,60

Basil . . Ducat

Stand.

2 41

2 4 10

48,1

8 6,14

Pistole

W. 0 21

4 22

4 18 13

105,1

18 7,20

Bavaria . Carolin .....

W. ˆ 2

6 5J

5 5 10

115,0

20 4,23

Max d'or, or Maximilian .

W. 3 2i

4 4

3 14 0

77,0

13 7,44

Ducat

B. 1 2i

2 5f

2 19 11

52,8

9 4,12

Pistole (See Manheim).

Bern . Ducat (double, &c. in proportion)

B. 1 If

1 23

221

45,9

8 1,48

Pistole

W 0 11

4 21

4 19 0

105,5

18 7,86

Bologna . (See Rome).

Brunswick Pistole (double in proportion)

W. 0 11

4 21i

4 19 5

105,7

18 8,48

Carl d'or, before 1802 (double in prop.)

W. 0 11

4 61

4 4 15

92,5

16 4,44

Carl d'or, since 1802 (double in prop.)

W. 0 21

4 61

4 3 11

92,

16 3,38

Ducat • . • .

B. 1 01

2 5J

289

51,8

9 2,

Cologne . Ducat

B. 1 2

2 5|

298

52,6

9 3,70

Constantinople (See Turkey).

Denmark . Ducat current

W. 0 3f

2 0

1 21 19

42,2

7 5,62

Ducat specie .....

B. 1 2

2 5|

298

52,6

9 3,70

Christian d'or .....

W. 0 1

4 7

4 5 16

93,3

16 6,14

England . Guinea

Stand.

5 91

5 9 10

118,7

21 0

Half guinea .....

Stand.

2 16|

2 16 15

59,3

10 6,

Seven Shilling piece ....

Stand.

1 19

1 19 0

39,6

7 0

Sovereign . ....

Stand.

5 3i

535

113,1

20 0

Flanders . (See Austrian Dominions').

Florence . (See Tuscany).

France . Double Louis (coined before 1786)

W. 0 2

10 11

10 5 6

224,9

39 9,64

Louis

W. 0 2

5 5J

5 2 12

112,4

19 10,71

Demi Louis .....

W. 0 2

2 14|

2 13 6

56,2

9 11,38

Double Louis (coined since 1786)

W. 0 11

9 20

9 15 19

212,6

37 7,53

Louis .....

W 0 11

4 22

4 19 19

106,3

18 9,75

Double Napoleon, or piece of 40 francs

W. 0 If

8 7

830

179,

31 8,36

Napoleon, or piece of twenty francs

W. 0 If

4 31

4 1 10

89,7

15 10,5

New Louis (double, &c.) the same as the

Napoleon.

Francfort on 1 ,-, ., ,v • [Ducat

R 1 21

2 5J

2 9 14

52,9

9 4,34

the Maine . $

Geneva . Pistole, old ....

W 0 2

4 7╲

4 4 18

92,5

16 4,45

Pistole, new .....

W. 0 01

3 15J

3 15 4

80,

14 1,9

Genoa . . Doppia, or pistole (pieces of 2, 4, &c. } in proportion) . . . J

W. 0 11

4 71

4 5 14

93,4

16 6,36

Sequin .....

B. 1 3£

*2 5**

2 10 6

53,4

9 5,41

Genovina of 100 lire (1, Sec. in prop.)

W. 01

18 3

17 22 0

394,2

69 9,20

New Genovina, of 96 lire or 4 pistole,) piece of the Liguiian republic . j

W. 0 01

16 4

16 1 15

357,7

63 3,68

Ditto of 48 lire (pieces of 24 and 12 in 3

*W. 0 0**

8 2

8 0 18

178,9

31 7,95

proportion . . . . .)

Hamburgh Ducat (double in proportion)

B. 1 21

2 5f

2 9 14

52,9

9 4,35

Hanover . Goorge d'or .....

w. o 14

4 61

453

92,6

16 4,66

COINS.

Conts.

Assay.

Weight.

Standard

in pure

Talue inc

Weight.

gold.

Sterling.

car. gr.

dwt. gr.

dwt.gr. mi.

grains.

**. rf.*

Hanover . Ducat

B. I 3

2 5f

2 10 3

53, 3

9 5,1»

Gold florin (dovble in proportion)

W. 3 04

2 2

1 18 6

39,

6 10,83

Hesse Cassel Pistole .....

w. o 24

4 7J

448

92,

16 3,39

William d'or of 1815 ....

W 0 1!

4 6i

449

92, 1

IS 3,6

Hesse It n i • . ,. JCarolm Darmstadt y

W. 3 2

"5

3 3

2 15 0

58,

10 3,18

Ducat .....

B. 1 3

2 5»

2 10 0

53,2

9 4,98

Holland . Double ryder ;

Stand.

12 21

12 21 0283,2 50 1,46

Ryder .....

Stand.

6 9

6 9 0140,2 24 9,75

Stand.

3 4i

3 4 10

70, 1

12 4 87

Ducat . . . .

B. 1 2i

•$ 2 5f*

2 9 12

I VJ i

52,8

*9 4*13*

Hungary , (See Austrian Dominions).

Leghorn . (See Tuscany).

Leipsic . (See Saxony).

Liege . . Ducat .....

B. 1 14

2 54

2 8 16

52,3

9 3,or

Lorraine . Leopold .....

W. 0 1

7 5f

7 3 15157,4

27 10,28

Francis .....

W. 0 1

4 7i

461

93,6

16 6,78

Lucca . . Pistole .....

W. 0 Oi

3 13i

3 13 0

77,9

13 9,44

Malta . . Double Louis .....

W. 1 3i

10 16

9 18 18215,3 ‘38 1,25

Louis .....

W. 1 3

5 8

4 21 16108,

19 1,37

VV 1 21

2 16

2 11 3

54. 5

9 7,75

Manheim . Carolin (ˆ and \ in proportion)

W. 3 2

6 44

5 4 16114,4

20 2,96

Pistole

VV. 0 li

4 64

4 4 16

92,3

16 4,02

Ducat .....

B. 1 2i

*2 5;**

2 9 10

52,8

9 4,13

Mentz . Ducat .....

B. 1 24

2 5f

2 9 12

52,9

9 4,34

Milan . . Sequin

B. 1 3

2 5f

2 10 0

53,2

9 4,98

Doppia, or pistole ....

W. 0 1

4 li

408

88,4 15 7,74

Forty lire piece of 1808

W. 0 If

8 8

8 4 0179,7 31 9,04

Naples . Six ducat piece of 1752

W. 1 Oi

5 16

5 9 8118,7 21 0,09

Six ducat piece of 1767 and 1772 .

W. 1 2|

5 18

5 7 14116, 8 20 8,00

Six ducat piece of 1783

W. 0 2{

5 16

5 12 18121,9 21 0,89

Four ducat piece, or pistole, of 1752 .

W. 1 Oi

3 18f

3 14 6

79,2 14 0,20

Four ducat piece of 1767 and 1770 . .

W. 1 2f 3 18f

3 11 6

76,8

13 7,10

Two ducat piece, or sequin, of 1762

VV. 1 2f 1 20i

1 16 6

37,4

6 7,42

Three ducat piece, or onsetta of 1818 . Netherlands Souverain. (See Austrian Dominions)

B. 1 34

2 10i

2 15 1

58,1

10 3,40

Gold lion, or 14 florin piece

Stand.

5 7f

5 7 16

117,1

20 8,69

Ten florin piece (1820)

W. 0 11

4 7f

4 5 15

93,2

16 5,93

Nuremberg Ducat (double, &c. in proportion)

B. 1 2

2 5f

298

52,6

9 3,71

Parma. . Quadruple pistole (double in proportion)

W. 1 0

18 9

17 12 18

386, 68 3,78

Pistole or doppia of 1787 .

W. 0 3

4 14

4 10 4

97,4

17 2,85

Ditto of 1796

W. 1 Oi

4 14

4 8 14

95,9

16 11,67

Maria Theresa (1818) ....

W 0 If

4 3J

4 1 10

89.7

15 10,5

Piedmont Pistole or doppia (1741 to 1785) .

W. 0 li

i “«J

6 44

6 2 8134,2

23 9,01

Pistole, coined since 1785 (4, &c. in prop.)

W. 0 li

5 20

5 17 0125,6

22 2,75

Sequin (£ in proportion)

B. 1 24

2 5f

2 9 12

52,9

9 4,34

Carlino, coined before 1785

W 0 li

31 04

30 11 14670,8

118 8,64

Carlino, coined since 1785 (4 &c. in prop.)

W. 0 li

29 6

28 20 0634,4

112 3,33

Piece of 20 francs, called Marengo

W. 2 0

4 3i

3 18 4

82,7

14 7,63

Poland . Ducat

B. 1 24

2 5|

2 9 12

52,9

9 4,34

Portugal . Dobraon of 24,000 rees

Stand.

34 12

34 12 0759,

134 3,96

Meio Dobraon of 12,000 rees

Stand.

17 6

17 6 0379,5

67 1,98

Dob ra of 12,800 rees ,

Stand.

18 6

18 6 0401,5

71 0,70

Joannese of 6400 rees .

W, 0 Oi

9 64

9 5 16203,4

35 H,98

Half Joannese of 3200 rees .

W. 0 Oi

• V2*

4 15

4 14 12101,5

17 H,56

Moidore or Lisbonnine (£, &c. in prep.)

Staad.

6 22

6 22 0152,2

26 H,24

Piece of 16 testoons, or 1600 rees

W. 0 Of

2 6

2 5 14

49,3

8 8,70

Piece of 12 testoons, or 1200 rees .

W. 0 Of

1 16<

1 16 0

36,7

6 5,94

Piece of 8 testoons ....

W 0 Of

1 41

146

26,

4 7,21

Old crusado of 400 rees

w. o 04

*0 15**

0 14 18

13,6

2 4,88

New crusado of 480 rees

W. 0 0|

0 16ˆ

0 16 2

14,8

2 7,43

Milree, (coined for the African colo- 1

Stand.

0 19f

0 19 15

18,1

3 2,44

*nies, 1755) . * • . ‘ . . $*

I

Prussia . Ducat of 1748 , • ,

B. 1 24

2 5J 2 9 14

52,9 ! 9 4,34 1

136

COINS.

Conts,

Assay.

Weight.

Standard

in pure

weight.

gold.

car. gr.

dwt. gr.

dwt.gr. mi.

grains.

Prussia . Ducat of 1787 . . . i .

B. 1 2

2 5f

296

52,6

Frederick (double) of 1769

W. 0 If

8 14

8 9 18

185,

Frederick (single) of 1778 .

W. 0 11

4 7

454

92,8

Frederick (double) of 1800 .

W. 0 2

8 14

896

184,5

Frederick (single) of 1800 .

W. 0 2

4 7

4 4 13

92,2

R 12

8 21

9 11 0

77,2

Rome . . Doppia, or pistole, of Pius VI.

W. 0 Of

3 13

3 12 5

77,2

Ditto, of Pius VII. 1802 (1 &c. in prop.)

W. 0 11

3 13

3 11 12

76,6

Zecchino, or sequin, (coined before 1760)

B. 1 2

2 4J

280

51,4

Sequin (coined since 1760)

B. 1 3J

2 4|

290

52,2

Scudo of the Republic

W. 0 If

17 Oi

16 16 6

367,

B 1 11

2 5

284

51,5

Double ducat of St. Andrew of 1756 .

B. 1 21

4 10

4 17 16

104,4

Ducat of 1796

B 1 21

2 6

2 10 0

53,2

Ducat of 1763 . .

R 1 2

2 5|

298

52,6

Half ducat of 1785 ....

W 0 01

1 141

1 14 6

35,1

Gold ruble of 1756 .

Stand.

1 01

1 0 10

22,5

Ditto, of 1799

W. 0 OJ

0 18f

0 18 14

17,1

Gold poltin of 1777 ....

Stand.

0 9

090

8,2

Imperial (coined before 1768)

Stand.

10 16

10 16 0

234,7

Imperial of 1763

Stand.

8 9J

8 9 10

184,7

Imperial of 1772 ....

W 0 Oi

8 11

8 10 8

185,5

Half Imperial of 1780

W. 0 0ˆ

4 21

424

90,

Imperial of 1801 ....

R 1 24-

7 17i

868

181,9

Half Imperial of 1801

B. 1 2J

3 20J

434

90,9

Ditto, of 1818 ...

*B 00**

4 3i

4 3 12

. 91, 3

St. Gall . Ducat

B. 0 3

3

21 20i

22 15 2

497,9

Saltzburg . Ducat .....

B. 1 2

2 5|

298

52,6

Sardinia . Carlino (1 in proportion)

W. 0 2|

10 71

9 23 16

219,8

Doppietta .....

W. 0 2|

2 U

1 23 13

43,7

R 1 2

2 5|

298

52,6

Ducat of 1797

B. 1 21

2 5|

2 9 14

- *I v*

52,9

Augustus of 1754

W. 0 2f

4 6J

438

91,2

Augustus of 1784 ....

W. 0 If

4 6i

4 4 12

92,2

Sicily . . Ounce of 1734

W. 0 2|

2 201

2 18 14

61,2

Ounce of 1741 .....

W. 0 3

2 2Qi

2 18 4

60,7

Ounce of 1751

W. 1 21

2 201

2 15 8

58,2

Double ounce of 1758

W. 1 2

5 17

5 7 14

117,

Spain . . Quadruple pistole, or doubloon (coined > before 1772) J

W. 0 1J

17 81

17 1 8

375,3

Double pistole (before 1772, single) and half in proportion) . . j

W. 0 11

8 16i

8 12 14

187,7

Quarter pistole, or gold dollar (before) 1772) J

W. 0 2

1 3

1 2 8

24,2

Doubloon of 1772 (double and single ˆ in proportion) J

W. 0 2J

17 81

16‘21 16

372,

Half pistole of 1772 ....

W. 0 2J

2 4

2 2 10

46,3

Quarter pistole of 1772

W. 0 3

1 3′

1 2 2

23,9

Quadruple pistole of 1801 .

W. 1 1

17 91

16 9 6

360,5

Double pistole of 1801

W. 1 1

8 161

8 4 13

180,3

Pistole of 1801

W. 1 1

4 8J

426

90,1

Coronilla, gold doll, or vintem of 1801 .

W. 1 21

1 3

1 0 18

22,8

Sweden , . Ducat

B. 1 2

2 5

2 8 12

51,9

Switgerland Ducat of Lucerne ....

R 1 2

2 5|

298

52,6

Double ducat of Lucerne

W. 1 0

4 111

4 6 12

- t v

94, 1

Piece of five ducats of Lucerne

W. 0 1

11 3

10 23 18

241,9

Ducat of Schwitz ....

B. 0 2

2 5

264

49,7

Ducat of St. Gall ....

R 03

2 5f

2 7 12

51,

- *. Ducat of Uri*

B. 1 1

2 5

280

51,4

Pistole of Lucerne ....

W. 0 11

4 211

4 19 9

105,9

Pistole of Soleure ....

W. 0 1J

4 22

4 19 12

106,

Pistole of the Helvetic Republic of 1800

W. 0 11

4 21$

4 19 9

105,9

(See also Basil, Bern, Geneva, St.

Gall, and Zurich.)

Treves . Ducat

B 1 2

2 55

298

52.6

COINS

137

Cent.

”

Assay.

Weight.

Standard

in pure

Value in

weight.

gold.

sterling.

car, or.

dwt. gr.

dwt.gr. mi.

grain.*

**. d.*

Turkey Sequin fonaucli of Constantinople of 1 773

W. 2 24.

2 5f

1 23 6

43, 3

7 7,94

Sequin fonducli of 1789

W. 2 3i

2 5f

1 22 16

42, 9

7 ˆu

Double sequin mahbub of 1773

B. 1 0

3 4i

3 7 14

73, 1

12 11,26

Sequin mahbub of 1789

W. 2 3

1 12

1 7 10

28, 9

5 1,37

Sequin of Cairo of 1773

W. 3 OJ

1 15i

1 9 16

31,

5 5,83

Sequin of Cairo of 1789

W. 5 2i

1 15i

156

26, 9

4 9,13

Half misseir (1818) ....

W. 5 3£

0 18i

0 13 5

12,16

2 1,82

Sequin fonducli .....

W. 2 3

2 5

1 22 7

42, 5

7 6,26

Rubieh

W. 2 3i

0 12$

0 10 18

9, 9

1 9

Yermeebeshlek

B. 0 3£

3 If

3 4 13

70, 3

12 5,30

Tuscany Ruspone

B. 1 3J

6 17i

778

160, 8

28 5,50

Zecchino, or sequin ....

B. 1 3f

2 5£

2 10 14

53, 6

9 5,83

Ruspone of the kingdom of Etruria

B. 1 3$

6 17i

7 7 13

161,

28 5,93

*Unit . Sfates*Eagle (J and £ in proportion)*

W. o q

11 6

11 4 8

246, 1

43 6,66

Venice Zecchino, or sequin (J and J in prop.)

*B. 1 3**

2 6

2 10 10

53, 6

9 5,83

W 0 1

4 8

470

94 4

16 8,48

Scudo d'oro, or gold crown

B. 1 3£

26 23

29 6 2

J-r, 1

643, 6

113 10^87

Ducato d'oro, or gold ducat

B. 1 3i

1 9i.

1 12 6

33, 3

5 10,72

Osella d'oro

B. 1 3J

8 234.

9 17 18

214, 5

37 11,55

W 3 2

6 34.

540

113, 7

20 1 47

Ducat .....

B. 1 2

2 5

2 8 12

51, 9

9 2^22

B. 1 2

2 5|

298

52, 6

9 3,71

*Zurich Ducat (double and *. ducat in proportion)*

B. 1 2

” 4

2 5|

298

52, 6

9 3ˆ71

EAST INDIES.

East India Mohur of Shah Allum (1770)

B. 1 2i

7 22J

8 11 15

186, 8

33 0,72

Mohur of the same ....

B. 1 2|

7 23

8 13 13

188, 5

33 4,33

Mohur, half, (1787) J in proportion

B. 1 2$

3 234.

4 6 10

94,

16 7,64

Mohur sicca of Bengal, dated 19th sun.

B. 1 3|

7 23

8 15 0

189, 8

33 7,09

Mohur of Bombay, old, still in circulation

B. 0 3J

7 10J

7 17 8

170,

30 1,04

Mohur of the Dutch East India Com-) pany (1783) .]

W. 3 3i

10 2

880

183, 4

32 5,50

Mohur of ditto (1797)

W. 4 1

9 20

7 22 8

174, 5

30 10,60

Mohur, half ditto (1801)

W. 3 1J

5 34.

4 18 18

96, 2

17 0,30

W 1 2

8 204.

860

181, 5

32 1,46

Rupee, zodiac

B. 1 3|

7 0

7 14 16

167, 6

29 7,9

Rupee, Bombay (1818) '. ' .' . .

B. 0 04.

7 11

7 11 13

164, 7

29 1,78

Rupee of Madras (1818) . . .

Stand.

7 12

7 12 0

165,

29 2,42

W 3 0

2 4a

1 21 11

41, 8

7 4,77

Pagoda, with a crescent and three figures

W. 1 3i

- *^* 2 5i*

2 0 18

44, 8

7 11,14

Pagoda, with a crescent and one figure

W. 2 If

2 4

1 22 5

42, 4

7 6,04

Pagoda, Arcot, old ....

W 3 2

2 44

1 20 4

40, 5

7 2,01

Pagoda, Arcot, new ....

W 7 1

13

2 44

1 11 4

-IV, ^

32, 4

5 8,59

W 1 3J

• 13

2 44

204

44, 2

7 9,87

W 1 2J

• 15

2 44

2 0 12

T-I, ^

44, 6

7 10,72

Pagoda, Pondicherry ....

W 5 0

• *ij*

2 44

1 16 6

37, 2

6 7

Pagoda, Hyderee Hoon

W. 2 li

- **2*

2 4}

1 23 4

43, 3

7 7,96

Pagoda, Sultanee Hoon ”’ . – – .

W. 0 3i

2 4}

2 2 16

46, 6

8 2,97

Saik Sai, a Mahratta coin

W. 1 3f

6 22i

6 7 16

139, 2

24 7,63

W 1 2

2 4A

2 0 18

44, 8

7 11,14

Japan copang, old .»•..»,,• , > *•*

W. 1 2

- *-xj*

11 9

10 14 8

- *~7*

233, 2

41 3,27

Japan copang, new . . ‘ .

W. 6 0

8 9f

6 2 14

134, 5

23 9,65

- *This value of the American Eagle is taken from average assays of the coins of twelve yean.*

TABLE III.— NEW TABLE OF SILVER COINS.

Containing the ASSAYS, WEIGHTS, and VALUES of the principal SILVER COINS of all Countries, computed at the rate of 5s. Id. per ounce standard, from Assays made both at the London and Paris Mints, as stated in page 157.

Cents.

-.'. I

Assay.

Weight.

Standard

in pure

weight.

silver.

car. gr.

dwt. gr.

dwt.gr. mi.

grain.*

Aix-la-Chapelle . Rathsprasentger . . . .

W.4 2

*4 I**

2 13 9

56, 9

Double ditto

W. 2 15

6 23£

5 5 16

116, 3

America . (See Portugal, Spain, and United States). Austria . Rixdollar, constitution, before 1753

W.O 11

18 Hi

17 13 10

390,

Rixdollar, convention, coined since 1753

W.I 6

18 1

15 22 4

353, 7

Rixdollar, ditto, of Francis II. 1800 .

W.I 5

18 1

16 0 4

355, 5

Rixdollar of the kingdom of Hungary .

W.I 2

18 1

16 6 1

360, 9

Half rixdollar, or florin, convention

W.I 3

9 Qi

821

179, 6

Copfstuck, or 20 Creutzer piece .

W.4 3 W 4 8

4 6«

4 0

2 16 3 2 9 18

59, 4 53, 5

Halbe Copf, or 10 Creutzer piece.

W.5 5

2 11

1 7 1

28, 8

Baden . . Rixdollar

W.I 4

18 2

16 3 1

358, 1

Basil . . Patagon, or Ecu, old . . • '. ./? .

W 0 14

18 4

17 0 10

377, 9

Thaler, or Rixdollar, of 1763

W.I 2

14 22

13 10 10

298, 4

Patagon, or Ecu, of 1795 (double, &c.) in proportion) . . .)

*W.I 0**

16 14

15 1 5

334, 3

Piece of 10 batzen ....

W.2 2

5 13i

4 12 4

100, 1

Bavaria . Rixdollar, convention of 1780

W.I 6

18 1

15 22 4

358, 7

Rixdollar of 1800 (J in proportion)

W.I 4£

17 12

15 13 13

345, 6

Copstuck .....

W.4 3

4 6i

2 16 3

59, 4

Bern . . Patagon, or Crown (£ in proportion) .

W.O 7

18 22

18 7 14

406, 7

W 1 2

5 3

4 14 17

102, 5

W 2 2

2 15

232

47, 2

Bologna . (See Rome).

• 7 “*

Brandenburg (See Prussia).

W 2 2

11 0

8 22 1

198,

Brunswick Rixdollar, convention

W.I 3

18 1

16 4 4

359, 2

W 1 3

9 04

822

179, 6

Gulden, or piece of f , fine, of 1764

3. 0 16

**• v«|

8 10£

911

200, 8

Gulden, common, of 1764 ./; .

W.I 2

9 0

8 2 10

180,

Gulden, ditto, of 1795

W.2 2

11 li

8 23 7

199, 1

Half gulden, or piece of £, of 1764

W.I 2

4 12

415

90,

Cosset . (See Hesse Cassel).

Cologne . Rixdollar old . . ..,..(.

W. 0 15J

18 1

16 18 15

372, 5

Rixdollar, constitution « ..N . .

W.O 7

18 19

18 4 14

404,

Rixdollar, convention.

W.I 6

18 1

15 22 4

353, 7

Constantinople (See Turkey).

Jhnmark . Ryksdaler, old, of 6 marks Danish

W.I 2

17 5i

15 12 5

344, 4

Crone, or old piece of 4 marks

W.3 1

14 1

10 4 7

226,

Crone, or crown, of 1747 .

W.I 2

11 15i

10 10 16

232, 9

*Ryksdaler, specie, of 1798 . *•”..*

W.O 13

18 14

17 11 17

388, 4

New piece of 4 marks . . »- .

W 0 12

12 9

11 16 14

259, 8

Half-‘.Tlyksdaler . . . .-,.’..

W.O 13

9 7

8 17 8

194, 2

Mark, specie, or \ Ryksdaler

W.3 1

4 0

2 21 12

64, 4

Rixdaler, specie of Sleswig and Hoi-) stein (pieces of f and £ in prop.) }

W.O 12

18 13

17 12 6

389, 4

Piece of 24 skillings ....

W 4 7

*5 2**

3 2 10

68, 9

Satt Indies (See p. 144).

•

*ifwy */*

England . Crown (old) ....

Stand.

19 8£

19 8 10

429, 7

Half-crown ....

Stand.

*9 16**

9 16 5

214, 8

Shilling . ...

Stand.

3 21

3 21 0

85, 9

Sixpence .....

Stand.

1 22i

1 22 10

42, 9

Crown, (new) .....

Stand.

18 4J

18 4 7

403, 6

Stand.

9 2

924

201, 8

Shilling

Stand.

3 15i

3 15 6

80, 7

Sixpence .....

Stand.

1 193

1 19 14

40, 3

Florence . (See Tuscany).

COINS.

139

Conts.

Assay.

Weight.

Standard

in pure

Value in

Weight. Silver.

Sterling.

ot. dwt.

dwt. gr.

dwt.gr. mi. grains.

3. d.

W 0 7

18 18

18 7 16

403, 1

4 ft OQ

Demi ecu .....

W.O 7

9 9

9 1 18

201,5

- *VyjtttJ*

2 4,13

Piece of 24 sous (divisions in prop.) .

W.O 7

3 20

3 16 19

83,4

0 11,64

Piece of 30 sous (J in proportion)

W.3 8

6 12

4 12 4

100,2

1 1,99

Piece of 5 francs of the convention

WX0 10£

16 0

15 5 14

338,3

3 11,24

Piece of 5 francs (Napoleon) of 1808 .

W.O 7

16 1

15 12 4

344,9

4 0,16

Piece of 2 francs of 1808

W.O 7

6 11

662

138,8

1 7,38

Franc of 1809

W.O 7

3 5£

331

69,4

0 9,69

Demi franc

W.O 8ˆ

1 15

4 13 6

34,7

0 4,84

Franc (Louis) of 1818, same as franc of

1809

Francfort on > Rixdollar, Convention of 1772

*W.I 0**

18 1

16 8 16

363,5

4 2,75

the. Maine. 5 Rixdollar, ditto of 1796

W.I 2

18 1

16 6 0

360,8

4 2,38

Geneva . Patagon

W.I 0

17 9

15 19 8

351,

4 1,03

Piece of 21 sous

*W.2 3**

3 If

2 11 5

54,8

0 7,65

Piece of 12 florins 9 sous, called Gene- > voise, or Gros Ecu (1794) . .5

W.O 13

19 8

18 4 16

404,

4 8,41

Ditto of 1796 (£ in proportion)

W.O 14

19 15

18 9 6

408,2

4 9

Piece of 15 sous of 1794

W.2 6

2 1J

1 15 1

36,1

0 5,04

Genoa . Scudo della croce ....

B. 0 7

24 16|

25 11 8

565,5

6 6,96

Scudo di S. Giambatista, of 5 Lire

W.O 2

13 8£

13 5 12

293,8

3 5,02

Double Madonnina (single and half in > proportion) 5

W.I 2

5 19J

5 5 12

116,2

1 4,22

Scudo, of 8 lire, of 1796 (J, \, &c. in 2 proportion) 5

W.O 8

21 9

20 14 10

457,4

5 3,87

Scudo of the Ligurian Republic .

W.O 9£

21 9

20 11 2

454,3

5 3,43

W 0 10

18 18

17 21 12

397,5

4 7,49

Double mark, or 32 Schillings piece > (single in proportion) . . .5

W.2 3

11 18

9 11 8

210,3

2 5,36

W 3 12

3 8£

264

50,1

0 6,99

W 4 6

2 2

1 6 12

28,3

0 3,95

Hanover . Rixdollar, Constitution

W.O 9

18 19

18 0 14

400,3

4 7,89

Florin, or piece of f , fine

B. 0 16

8 10

9 0 10

200,3

2 3,96

Half florin, or piece of J, ditto

B. 0 16

4 4

4 11 4

99,2

1 1,85

Quarter, or piece of 6 good Groschen, do. Florin, or piece of f , base .

B. 0 16 W.2 1

2 1

11 Of

2 4 10 8 23 15

48,6 199,6

0 6,78 2 3,87

Hssse Cassel Rixdollar, Convention

W.I 6

18 1

15 22 6

353,

4 1,39

Florin, or piece of f (J in proportion) .

W.I 6

9 OJ

7 23 3

176,8

2 0,68

Thaler, or Rixdollar of account of 1778

W.2 3

15 2i

12 4 3

270,3

3 1,74

Thaler of 1789

w.o 104

12 7i

11 17 5

259,7

3 0,26

Ecu, Convention (1815)

W.I 6

17 23|

15 21 2

349,3

4 0,77

Six bon gros .....

W.4 10

8 0

2 23 0

65,1

0 0,80

W 6 14

1 4

0 11 5

10,3

0 1,43

Holland , Ducatoon ....

B03

20 22

21 4 15

471,6

5 5,85

Piece of 3 florins .,

W.O 2

20 7

20 2 12

446,4

5 2,33

Piece of 3 florins of Batavia

*»V.O 5**

20 3

19 15 0

435,7

5 0,84

Rixdollar (the assay varies)

W.O 16

18 6

16 20 8

375,9

4 4,99

Daalder, or 30 stiver piece

W.O 10

10 6

9 18 18

217,3

2 6,34

Half Rixdollar ....

W 0 16

9 0

888

185,4

2 1,89

Florin, or guilder (J in proportion)

W.O 4J

6 18

6 14 14

146,8

1 8,49

W 0 16£

4 12

4 3 18

92,4

1 0,90

Sesthalf, or 5£ stiver piece

W.4 15

3 0

1 17 4

38,1

0 5,32

8 Stiver piece ;

W.O 17

3 0

2 18 8

61,5

0 8,58

Florin of Batavia ....

*w.o 5**

6 13

692

141,6

1 7,77

Rixdollar, or 50 stiver piece of the king- > dom of Holland . . . . J

W.O 5J

17 0

16 13 18

367,9

4 3,3′

Hungary . (See Austria).

Japan . . (See East Indies, p. 144ˆ).

Leghorn . (See Tuscany).

Leipsic • . (See Saxony).

Liege . . Ducatoon of 1671 . . , ‘ »

B. 0 2

20 18J

20 22 18

465,3

5 4,97

Patagon, old

W.O. 14

17 20f

16 17 14

371,6

4 3,89

Patagon of 1792 ....

W 0 17

17 15

16 6 11

361,3

4 2,45

W 3 17

3 3J

216

45,6

0 6,36

Escalin of 1792

W 4 3

3 1

1 22 0

42,6

0 594

140

COINS.

Lorraine . Ecu, called Leopold (1704) Ecu (1710) . . . . ” .

Assay.

ox. dwt. W. 0 3 W.O 4 W.O 13

Weight.

diet. gr.

17 11

19 14|

*18 18 11 18 5 21 17 0 8 3 5 19 3 5 1 20**

19 1J

19 li

7 19

19 1|

1 2 16 16 8 8 18 1

11 1J

18 1 4 6.1

14 20|

4 0 2 10 4 17

14 21J

4 17

18 12J

5 19

18 If

14 0 16 7 14 15 17 15

17 16f 17 16| 17 18i

14 18 21 0 21 10 19 0 3 4 1 18 3 4 21 3 5 23$ 3 0 6 22 5 11 9 20 4 22 18 19 18 1 4 6$ 16 11*

16 12|

4 14

17 9£

19 3 22 14 22 14

7 20i 16 1}

Standard Weight. dwt.gr. mi.

17 5 6 19 5 10 17 15 12 9 11 8 4 17 14 16 18 10 807 5 17 2 3 3 19 1 7 14

15 4 14 17 2 2 650 17 4 3 0 19 2 17 20 6 8 22 8 16 4 3 8 23 5 16 6 0 2 16 13 14 9 10 290 294 3 11 8 14 10 4 3 11 8 17 8 9 5 17 2 12 22 12 13 17 18 15 18 12 13 7 8 16 0 18 15 22 12 15 22 12 15 23 18 13 7 0 21 9 0 20 1 12 17 19 4 1 23 8 0 21 12 1 9 18 19 21 6 5 14 9 2 18 6 6 16 6 392 8 11 0 4 5 10 18 2 15 16 4 2 2 16 13 15 18 18 16 2 18 422

17 3 12 18 20 16 22 0 10 22 1 16 7 16 13 15 11 12

Cents, in pure silver. grains.

382,3 426,9 391,9 210,3 105,1 372,3 177,9 126,8 70,3 29,3

337,4 379,3 137,9 381,3 17,7 396,7 198,3 359,0 199,1 360,8 59,8 319,6 52,8 52,9 77,2 320,2 77,2 385,2 126,8 287,4 305,2 350,3 295,4 356, 353,9 353,9 355,2 295,1 474,6 445,5 395,2 43,8 20, 31,3 441,5 124,3 61,8 148,4 75, 187,8 93,9 402,2 359,0 59,8 350,6 357,9 90,7

380,7 418,8 488,9 490,0 170,8 343,7

Double mark .....

W.2 3 W 2 3

Lucca . . Scudo Mezzo, or $ scudo .... Terzo, or $ scudo . . < . . Quinto, or J scudo '

W.O 3 W.O 3 W.O 3 W.O 3 W. 3 3

Luneburg . (See Hanover.) Malta . . Ounce of 30 tari of Emmanuel Pinto . Ounce of Emmanuel de Rohan (J in pro.) Scudo of the same (double in proportion.) Ounce of Ferdinand Hompesch 2 Tari piece . . , . Manheim . Rixdollar, fine . . ... Florin, or piece of f, fine Rixdollar, Convention . . .

W.2 5 W.I 3 W.2 5 W.I 2 W.2 19 B. 0 16 B. 0 16 W.I 3 W.2 2

W.I 2

W 4 2

Milan . . Scudo of 6 lire (£ in proportion) . : ” _ .’ Lira, new .....

W.O 7 W.4 10 W.O 3

Piece of 30 soldi, Francis II. Scudo of the Cisalpine Republic . Piece of 30 soldi of ditto Modena . Scudo of 15 lire, 1739 (double, &c in pro.) Scudo of 5 lire, of 1782 Scudo of 1796 Naples . . Ducat, old (J in proportion) Piece of 12 carlini (before 1784) . Ducat, new (4 in proportion) Piece of 12 carlini of 1791 . Ditto of 1796 Ditto of the Neapolitan Republic (1799) Ditto of 1805 (J in proportion) . Ditto of 10 carlini (1818) . Netherlands Ducatoon, old Ducatoon of Maria Theresa Crown (£, &C. in proportion) Escalin (Double in proportion) . Plaquette . . . . ” j, . ‘ . • 5 Stiver piece . . . ‘. . . Silver lion of 1790 . . “/»

W.2 18 W.O 7 W.‘2 18 W.O 14 W.O 3 W.3 3 W.O 4 W.O 7 W.I 0 W.I 0 W.I 2 W.I 2 W.I 2 W.I 2 B. 0 4 W.O 14 W.O 14 W.4 4 W.5 8 W.6 3 W.O 13

Florin of 1790 Piece of 10 stivers of 1790 . Florin of 1816 Half florin (with division in proportion/ Neufchatel Piece of 21 batzen

W.O 14 W.O 16 W.O 7J W.4 5ˆ W.I 11

W.I 11

Nuremberg Rixdollar, Constitution Rixdollar, Convention . . Copstuck . ‘ »” . ‘ • ˆ i

W.O 8 W.I 3 W.4 2

W 0 9

Ducat of 1796 (£ in proportion) .

W.O 5 W 1 4*

Persia . . (See East Indies.) Piedmont Scudo (1690)

W 0 3

Scudo (1733)

W 0 3

Scudo (1755) i, &c. in proportion Scudo (1770) £ and J in proportion Piece of 2 lire (1714) . . . ‘ . 5 Franc piece (1801) . .

W. 0 5£ W.O 5 W.O 4$ W.O 8

COINS.

141

Poland . . Rixdollar, old Rixdollar, new (1794) Florin, or gulden ....

Assay.

oss. dwt. W. 1 2 W.2 17 W.4 2

Weight.

wt. gr.

8 1

5 \Q

6 0 1 0 9 8 9 9

4 16

2 0£

9 9 9 3

2 4i

2 0

0 234

12 4|

*11 Q\ 12 4} 11 7^*

7 12 5 13 3 16

14 6J

18 1 11 2 9 11

5 8|

3 9 3 14 12 13

7 15i 4 2J

14 0 8 21

18 1

18 7i

18 81

18 17;

8 17f

18 1 20 11 5 21

1 22J

17 1

8 12J

5 2 5 2 1 17

0 20£ 3 Q]

17 1 17 1 5 2 19 0

17 OJ

18 1 17 11

18 5|

16 14' 16 12 15 10 15 12

Standard weight. 'wt.gr. mi.

16 6 0 11 11 6 3 18 16 10 19 0 910 9 1 18

4 12 10

1 22 18 8 23 16 8 23 0 228 1 22 0 1 1 4 0 22 0 12 2 2 11 2 12 11 8 14 11 19 10 10 22 18 7 4 14 5 7 12 3 12 8 9 5 11 11 9 0 16 4 2 8 22 8 7 16 0 3 20 4 1 20 10 2 19 6 10 1 6 6 2 18 3 7 16 11 6 18 7 2 14

16 4 2

11 13 2 11 9 16 12 1 6 4 8 16 16 4 2 20 2 2 5 18 2 1 21 16 16 17 13 8 8 16 500 4 23 4 1 16 4 0 20 0 3 6 12 16 13 18 16 19 8 506 17 6 18 16 21 4 14 1 8 13 23 0 13 23 4 14 6 16 14 11 16 12 12 0 12 10 6

Conts. ‘ in pure silver. grains.

360, 8 254, 3 84, 239, 2 200, 2 201, 6

100, 4

43, 4 199, 7 198, 2 46, 6 42, 5 23, 3 20, 4 268, 3 246, 6 252, 3 262, 2 243, 2 159, 8 118, 78, 1 204, 9 252, 6 359, 198, 4 170, 3 85, 3 41, 2 62, 3 223, 3 135, 9 73, 8 250, 6 158,

359,

256, 4 253, 3 267, 7 97, 359, 2 446, 127, 8 42, 4 371, 5 185, 7 111, 1 110, 3 37, 2 18, 5 72, 7 368, 1 373, 2 111, 5 383, 9 371, 5 312, 1 309, 9 310, 317, 2 321, 8 277, 5 275, 9

*Value in sterling. *. d.*

4 2,38 2 11,51 0 11,72 2 9,40 2 3,95 2 4,15

1 2,01

0 6,06 2 3,88 2 4,67 0 6,50 0 5,93 0 3,25 0 2,84 3 1,46 2 10,43 2 11,23 3 0,61 2 9,96 1 10,31 1 4,47 0 10,90 2 4,61 2 11,27 4 2,13 2 3,70 1 11,78 0 11,91 0 5,75 0 8,69 2 7,18 1 6,97 0 10,30 2 10,99 1 10,06

4 2,22

2 11,80 2 11,37 3 1,38 1 1,54 4 1,58 5 2,27 1 5,84 0 5,92 4 3,87 2 1,93 1 3,51 1 3,40 0 5,19 0 2,58 0 10,15 4 3.40 4 4,11

1 3,5(>

4 5,60 4 3,78 3 7,58 3 7,27 3 7,28 3 8,29 3 8,93 3 2,75 3 2,52

Portugal . Newcrusado (1690) ....

W.O 4

Ditto (1718) .

W. 0 6£

Ditto (1795) .

W. 0 7

Dose vintems, or piece of 240 rees) (1799) J

W.O 7

V. 0 7 W 0 9

Testoon (1799) New crusado (1802) .

Ditto (1809) .... Seis vintems, or piece of 120 rees (1802) Testoon (1802) Tres vintems, or piece of 60 rees (1802) Half testoon (1802) .... Portuguese Pataca of Brazil, old, of 640 rees Colonies Ditto of 600 rees (1755) . Ditto of 640 rees (1768) . Ditto of 640 rees (1801) £ and £ in prop. Piece of 1 2 macutas, of Portuguese Africa Ditto of 8 ditto

W.O 4 W.O 9 W.O 9 W.O 9 W.O 9 W.O 2 W.O 4 W. 0 4J- W.O 7 W.O 7 W ••) 9 W.O 9

Ditto of 6 ditto ....

Ditto of 4 ditto . . Prussia . Florin, old, of the Elector of Brandenburg Rixdollar, Prussian currency (\ in prop.)

W.O 9 W.2 2 W.2 5 W.I 3

W.2 3

Florin, of Silesia ....

W.2 2

Drittel, or piece of 8 good groschen Piece of 4 groschen Piece of 6 groschen Rixdollar, old, of Bareuth . Piece of § ditto ....

W. 3 3 W.5 0 W.2 8 W.2 4 W.2 4

Piece of 30 creutzers ditto . Rixdollar, old, of Anspach . Piece of § ditto Rixdollar of Anspach and Bareuth,) Convention j Ragusa . . Tallaro, or Ragusina (1759) Ditto (1774) Ditto (1794) . . Ducat (1797) Eflfts&on . Rixdollar, specie (J, Sec. in prop.) Rome . . Scudo, or crown, (before 1753) . Testone, old ....

W.2 2 W.2 3 W.2 4

W.I 3

W.4 2 W.4 4 W. 3 19 W.5 il W.I 8 W.O 4 W.O 4£

Paolo, old Scudo, or crown (coined since 1753) . Mezzo scudo, or half crown Testone (1770) Ditto (1785)

W.O 41 W.O 4 W.O 4 W. 0 3i W.O 5

Paolo (1785) Grosso, or half paolo (1785) Papetto (1775) Scudo of the Roman Republic (1799) . Scudo of Bologna (Pius VI.) Testone ditto Scudo of the City of Bologna Ditto of Pius VII. (1800) . ««««• • Ruble of Peter the Great . Ditto of Catherine I. (1725) Ditto of Peter II. (1727) . Ditto of Anne (1734) ....*

W.O 4 W.O 5 W.O 4£ W.O 6 W.O 3 W.O 3 W. 1 0 W.O 1 W.2 7 W.2 4 W.2 12 W.I 11*

Ditto of Elizabeth (1750) . Ditto of Peter III. <1 762) , Ditto of Catherine II. (1780)

W.I 7 W.2 2 W, 2 4

COINS.

Russia . .

St. Gall . Saltzburg .

Sardinia . Saxony . .

Sicily . . .

Sierra Leone Company

Spain . , .

Sweden . .

Switzerland

Ruble of Paul (1799) Ditto of Alexander O802) Ditto of ditto (1805) Poltin, or $ ruble of Anne Ditto of Elizabeth Ditto of Catherine II. Ditto of Paul Ditto of Alexander (i804) Polpoltin, or £ ruble, old Ditto of Paul Ditto of Alexander (1802) 20 Copeck piece (1767) Ditto (1784) 15 Copeck piece (1778) 10 Copeck piece Ditto (1798) Ditto (1802) 5 Copeck piece (1801) Rixdollar ($ in proportion) 24 Creutzer piece Rixdollar,

Convention 24 Creutzer piece Scudo or crown, ($ an Rixdollar, Convention, Old Rixdollar of Dresden Ditto of Leipsic . Piece of 16 groschei Piece of 8 groschen Rixdollar current ol

Thaler of 1804 Ditto of 1808 Ditto of Jerome Bu Scudo ($ in proportion) Piece of 40 grains Ditto of 20 grains) Piece of 10 macutas i Ditto of 5 macutas Ditto of 2 macutas Ditto of 1 macuta Dollar, old Mexican sc Half ditto . Dollar, old, called Sev Old Mexican peceta 01

reals (1736)

Real of Mexican plate (1746) Dollar, Mexican, wit

lars (1765) Peceta of two reals c Real of plate (1721) Dollar, of late coinaj under the name of I Half dollar, ditto Mexican peceta (1774) Real of Mexican plate (1775) Peceta provincial

plate (1775)

Real of new plate (1795) Rixdollar (1762) Rixdol'ar of late coinage Doub.e p.ott, or piece of f Single plott, or piece o Piece of 8 skillings Ditto of 4 skillings Ecu, or rixdollar ol

proportion (171 ;>)

Cents.

Assay.

Weight.

Standard

in pure

weight.

silver.

os. diet.

dwt. gr.

dwt.yr.mi.

grain.*

.

W.O 14

13 12

12 15 10

280, 8

J02) .

W.O 13

13 1$

17 7 2

273,

.

W.O 16

13 12

12 12 12

278, 1

nne .

W.I 10

7 21

6 19 8

151, 2

W 1 8

8 2

7 1 10

156, 8

.

W.2 4

7 18

652

W)

137, 9

WO 15

6 18

672

139, 7

504) .

W.O 14

6 13$

6 3 10

136, 5

old .

W.2 6

4 1

3 4 18

71, 1

Wo 18$

3 7

308

67,

K)2) .

W.O 13$

3 9$

3 4 10

70, 8

r) .

W.2 2

3 lOJ

2 19 0

62, 6

W 2 2

3 3

2 12 18

56, 2

j) . . .

W.2 2

2 6

1 19 18

40, 5

W 2 6

2 1

1 14 16

35, 9

W 0 14$

1 9

1 6 16

WVJ

28, 5

W 0 13

1 8$

1 6 11

- >

28, 3

W.O 13$

0 16$

0 15 10

15, 3

tion)

W.I 4

18 1

16 2 4

357, 3

. . , .

W.4 2

4 7i

2 17 2

CO, 2

W.I 2

18 1

16 6 0

360, 8

. . .

W.4 3

4 6$

2 16 4

59, 4

i J in prop.)

W.O 7

15 2$

14 15 0

324, 7

($ and J in prop.)

W. 1 3

18 0

16 3 4

358, 2

den .

W.O 94

18 19

17 23 14

399, 3

W 2 0

18 19

15 9 16

342,

f Leipsic .

W. 2 2

9 9$

7 14 16

7

169, 1

W.2 5

4 20

3 20 8

85, 6

ixe Gotha .

W.4 4i

18 1

11 4 2

248, 1

.

W.4 11

3 11

2 0 19

45, 3

W 4 114

3 5$

1 21 8

42, 1

aparte of 1809 .

W.5 4

3 17

1 23 6

43, 7

i) . . ‘.

W.I 4

17 14

15 16 6

348, 2

W.I 2

5 21

572

117, 5

.

W.I 5

3 0

2 15 18

59, 1

.

W.I 6

16 21

14 21 12

330, 8

...

W.I 6

8 13

7 12 18

167, 4

.

W.I 6

3 7$

2 22 6

65,

.

W.I 6

1 16

1 11 8

32, 5

}uare (1747)

W. 0 4$

17 7

16 22 10

376, 1

• ‘ i ; ‘. .

W.O 4$

8 15$

8 11 5

188,

illan (1731)

W.O 4$

17 7

16 22 10

376, 1

f two Mexican)

W. 0 4$

4 7*

452

93, 6

(1746)

W.O 4$

2 3$

2 2 11

46, 8

globes and pil- >

W.O 4$

17 8$

17 0 0

377, 4

plate (1721)

W.I 7

3 16$

3 5 14

71, 9

W.I 7

*1 20**

1 14 19

35, 9

, and circulated 3 3 Spanish dollar 5

W.O 8

17 8

16 17 0

370, 9

....

W.O' 8

8 16

8 8 10

185, 4

> • • •

W. 0 8

4 7$

4 3 16

92, 3

(1775) . .

W.O 8

2 3|

2 1 20

46, 1

2 reals of new)

W.I 9.1

3 18

360

72, 2

95) . ‘ .

W.I 9i

1 21

1 15 0

36, 1

WO 12

18 20

17 19 10

395, 5

ge .

W.O 14$

18 17

17 12 0

388, 5

off . .

W.O 14$

12 12

11 16 12259, 6

3f – . .*

W.O 14$

6 6

5 20 6 129, 8

.

W.2 18

3 21$

2 21 2

63, 8

W.5 2

2 15

1 14 0

31, 5

acerne, $ &c, in >

*) ‘ . . **

W.O 14J

17 8$

16 5 8

360, 1

Switzerland Old gulden, or florin of Lucerne (1714) Ecu of 40 batzen of Lucerne (1796) . Half ditto Florin, or piece of 40 schillings of Lu- > cerne (1793) ... 5 Half florin of Lucerne Piece of 10 batzen (1782) . Quarter rixdollar of Friburg Piece of J rixdollar of ditto Piece of 20 batzen of Soleure Ditto of 10 batzen of ditto Ecu of 40 batzen of the Helvetic Repub- } lie (1798), 4 in proportion . j

Assay.

oz. dwt. W.I 19 W.O 5 W.I 2

W.I 5

W.2 2 W.I 12 W.2 19 W.3 0 W.I 2 W.I 2

W.O 6 W.I 4

Weight.

dwt. gr.

8 141 19 0 9 20

4 22

2 15 4 204

6 20|

3 74 9 20 5 1

18 23

5 3 3 2 18 23

18 1 18 12 12 7

17 5i

12 7 12 0

20 7f 16 22f

8 6 4 1 10 5 10 0 6 64

15 16J 0 16|

20 2

17 10i 16 17f

17 134 17 15

17 134

17 12 25 64

12 15£

2 8

17 8

17 104 17 10 17 8 1 194

0 21|

20 44 17 12 14 6

4 18J 18 lOf 6 6f 18 10J

5 194 2 21

5 134

3 If 5 6J

Standar 1 Weight. dwt. yr.mi.

728 18 13 14 8 20 12

4 8 14

230 4 3 14 5 0 18 2 10 0 8 20 12 4 13 0

18 10 14

4 13 17 258 18 8 12

16 4 2 11 16 0 760 10 6 12 6 15 8 7 4 10 10 8 4 8 9 10 478 1 14 16 424 486 314 12 10 8 8 14 0 20 17 4 17 4 13 16 14 2 17 9 14 17 7 8

17 5 18

17 8 4 26 1 12 13 0 18 2 9 16

16 19 1C

16 21 6 16 14 0 16 16 0 1 18 14 0 21 0 20 15 8 17 22 8 12 15 8 2 0 10 16 12 16 6 9 16 16 10 16 1 12 2 0 18 7

1 11 8 0 18 8 1 8 19

Conts. in pure Silver. grains.

157, 5 412, 3 196, 7

96, 8

47, 3 92, 2 111, 9 53, 6 196, 7 101, 5

409, 5

100, 5 49, 3 407, 6

359, 259, 161, 228, 1 147, 5 159, 6 229, 7 186, 4 95, 7 35, 9 90, 9 96, 5 67, 7 276, 7, 5 460, 381, 7 368, 2 386, 4 384, 3

238, 9

385, 0 578, 7 289, 4 53, 4

373, 5

374, 9 368, 3 370, 1 39, 5 19, 5 458, 2 398, 1 280, 8 44, 9 367, 1 142, 3 365, 2 33, 4 16, 9

32, 8 17, 5 30 5

*Value in Sterling. *. iL*

1 9,99 4 9,57 2 3,46

1 1,51

0 6,60 1 0,68 1 3,62 0 7,48 2 3,46 1 2,17

4 9,18

1 2,03 0 688 4 9,18

4 2,13 3 0,16 1 10,48

2 7,85 1 8,59 1 10,28 2 8,07 2 2,03 1 1,36 0 5,01 1 0,69 1 1,47 0 9,45 3 2,54 0 1,04 5 4,23 4 5,30 4 3,41 4 5,95 4 5,06

4 5,46

4 5,76 6 8,80 3 4,41 0 7,45

4415

4 4,35

4 3,V2

4 3,68 0 5,71 0 2,7-2

5 U,(.'U

4 6,4 1 3 3,21 0 6,26 4 3,26 1 7,87

4 2,i»l >

0 4,66 0 2,35

0 4 58 0 2,44 0 4.25

Ditto of 5 batzen .... Ecu of 4franken (1801) . (See also Basil, Berne, Geneva, Neuf- ckatel, St. Gall, and Zurich.)

W.3 2 W.O 7

W.I 3

Turkey . Altmichlic of 60 paras (1757) Piastre of Mustapha III (1757) . Altmichlic of 1773 .... Piastre of Abdul-hamed (1773) Another of the same period Piece of 100 paras of Selira (1789) Double piastre of ditto Piastre of Selim of 1801 Half piastre .....

W.4 2 W.4 11 W.4 9 W.5 2 W.4 9 W.5 9 W.5 12 W.5 6 W.6 13 W.6 13 W.6 54 W.5 14 W.2 6 W.5 14 B. 0 7 W.O 3 W.O 2 W.O 2 W.O 4*

W.O 4

W.O 2 B. 0 7 B. 0 7 B. 0 7

W.O 64 W.O 7

Piastre of Crim Tartary (1778) . Piastre of Tunis (1787) Piastre (1818)

Piece of ten parahs Ttiscany . Ducatone (1676) .... Livornina (1723) Pezza della rosa (1726) Francescone (1738) 4 in proportion Leopoldone (1790) \ Piece of 10 paoli of the kingdom of 3 Etruria (1801) ... 5 Scudo

Pisa of ditto (1803) Piece of 1 0 lire of ditto (1803) . Ditto of 5 lire ditto (1803) Lira (1803) ....

State | D°llar (1795) * &C* in ProPortion Dollar (1798) ....*

Dollar (1802) ....

W.O 104

Dollar, an average of eight years Dime, or -fe dollar (1796) . Half dime (1796) .

W.O 84 W.O 4 W.O 7

Venice . Scudo della croce .... Giustina, or ducatone Ducato .....

B. 0 5 B. 0 54 W.I 5

Lirazza, or piece of 30 soldi Tallaro (4 &,c. in proportion) Osella

W.6 8 W.I 3 B. 0 44

Scudo of 10 lire (1797) Piece of 2 lire, or 24 creutzers (1800) . Ditto of 1 lire .

W.I 4 W.8 44 W.8 3

Ditto of 2 lire, called moneta provin- 3 ciale (1808) . 5 Ditto of 1 lire Ditto of 2 lire (1802) 4 and J in pro- l portion . . . J

W.8 3 W.8 5 W.8 4

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COINS.

Wtrtemberg Rixdollar, specie Copstuck .

Wurtzburg Rixdollar, specie Copstuck .

Zurich . . Rixdollar, or ecu (1753) Half rixdollar (1753) Ecu (1761) Half ecu (1761) Ecu (1773) Half ecu (1773) Ecu (1794) Half ecu (1786) Piece of 20 schillings

East India Rupee of Mohammed Shah

Rupee of Ahmed Shah • Rupee of Ailum Ghir (Rupee of Shah Allum Rupee of the same (B< Rupee of the same (1779) Rupee Benares (1818) Rupee,

*sicca, coined b_*

dia Company at Calcutta Rupee, Calcutta (1818) Rupee, Arcot (1759) . Rupee, ditto (1782) Rupee, ditto (1788) Rupee, ditto, of the 1 Rupee, Bombay, old Rupee, Bombay, nev Rupee, LucKnow Rupee, Sultanny Rupee, Madepoor, 01 Rupee, Madras Rajapoor Rupee, Jeypoor Rupee, Furruckabad (1818) Rupee, Chanderry Rupee, Oukery Rupee, Shree sicca Rupee, Halee sicca Rupee, Ougein . Rupee, Maisore, or Rupee, Indore Holkar Rupee, Chinsouree Rupee, Broach, old Rupee, Broach, new Rupee, Brodera, old Rupee, Brodera, new Rupee, Ana Sai, coin Rupee, Ana Sai, coin Rupee, Amedabad sicca Rupee, Mungull Sai Rupee, Mumo Sai Rupee, Seea Sai (c

Sing's time) Rupee, Cambay Rupee, Persian (1745) Rupee, ditto (1789) . Rupee, Madras (1818) Faflam, Cananore Fanam, Bombay, old Fanam, Pondicherry Fanam, ditto, double Larin Bussorah Crux

Cents.

Assay.

Weight.

Standard

in pure

Weight.

silver.

ox. dwt.

dwt. gr.

dwt.gr. mi.

grains.

.

W.I 3

18 1

16 14 2

359,1

.

W.4 2

4 6J

2 16 12

59,8

W 1 3

18 1|

16 4 16

359,7

W 4 3

4 61

2 16 6

59,3

53) .

W.O 14 >

18 If

16 21 8

wvy w

375,

•

W.O 19|

8 23£

8 4 12

181,8

W 1 5

17 23ˆ

15 22 14

354,

•

W.I 5

8 21i

7 21 4

«_•• *j*

175,

W 0 19

17 2

15 14 18

346,8

...

W.O 19

8 13

7 19 9

173,4

.

W.O 19J

16 6i

14 19 18

329,3

W 1 0£

8 4|

7 10 10

165,2

(1798) .

W. 3 9£

3 18|

2 14 6

57,6

1 Shah

B. 0 6£

*7 9**

7 14 9

168,7

ih .

B. 0 12

7 9i

7”18 16

172,8

r (1759) .

B. 0 13

7 ll£

7 22 0

175,8

Q (1772) .

B. 0 14

7 10

7 21 4

175,

Benares 1774) .

B. 0 8

7 6|

7 13 0

167,5

779)

B. 0 141

7 11£

7 23 8

176,8

3) ...

B. 0 li

7 7

7 14 5

168,9

by the East In-) alcutta . . J

B. 0 13

7 Hi

7 22 0

175,8

18) ...

Stand.

8 0

800

175,9

B. 0 7

7 9£

7 14 16

169,1

B. 0 8

7 6

7 12 4

166,8

.

B. 0 8

7 9i

7 15 12

169,8

atest coinages

B. 0 4i

7 8}

7 12 2

166,5

.

B. 0 13

*7 10**

7 21 4

174,9

r, or Surat (1818)

W.O OA

7 11

7 10 4

164,7

•

B. 0 8f

*7 5**

7 12 2

166,5

B. 0 3ˆ

7 9

7 12 0

166,3

• *Nowsee .*

W.O 5

7 5f

7 1 16

157,1

>oor .

B. 0 4

7 7

7 10 4

164,8

.

B. 0 12

7 7

7 16 8

170,6

(1818)

B. 0 1J

7 5

7 10 14

165,3

W 0 Of

7 5

748

159,5

W 1 Oj

7 7

6 14 0

146,9

f Poona .

W.O 1J

7 4J

736

158,5

.

B. 0 12£

7 7i

7 17 2

171, 2

.

B. 0 5

7 6J

7 10 4

164,8

lew Holkar

B. 0 7

7 5

7 10 8

165,1

r v /.. (. , .

B. 0 4i

7 5

786

163,1

B. 0 2

7 4f

766

161,2

W. 0 Oi

7 JO

7 0 10

164,3

.

W.O 10

7 10

7 1 18

157,2

V ‘ ‘ .

W.O 4J

7 10J

/ 6 17

161,8

W.O 10J

7 10)

722

157,3

ed at Caira

W.O lOf

7 8J

6 23 14

155,1

led at Pitlad

W.O 17$

7 9i

6 19 4

151,

cca

W.O 7£

7 10

7 3 18

159,1

.

W.O I0i

7 iQi

724

157,4

W 0 8J

7 9f

7 2 14

157,9

ained in Futty l

W.O 9i

7 7|

704

155,6

W 0 18J

7 10

6 19 2

150,9

5) .

B. 0 13

7 9i

7 19 10

173,5

B. 0 12J

7 10

7 20 0

173,9

3) ! '.

Gold Sta.

7 12

7 12 0

165,

W.O li

1 H|

1 11 10

32,9

, .

B 0 13

1 Hi

1 13 16

35,

‘ V

B. 0 5i

1 Oi

1 1 2

22,8

. .

W.O 3

1 18f

1 18 2

39,

•

B. 0 101

3 2£

360

72,1

W 6 Of

11 16

5 7 14118,1

E.I.Comp.(1820)

W. 0 7i

6 22

6 16 6.148,4

COINS. 145

Jn order to show tne principles on which the foregoing tables are calculated, it may be proper first to explain the manner by which the value of any coin may be determined when its weight and fineness are known. For this purpose the quantity of standard gold and silver contained in it must be first found ; and then its sterling value may be ascertained from the Mint-price of the standard ounce.

GOLD COINS — What is the sterling value of a French Double Louis d'or, the Report (per table, page i31,) being as follows :— weight 9 dwt. 20 gr. Assay W. 1 £ gr. that is, 0 car. 1 ˆ gr. worse than English standard?

car. gr.

From 22 0 the fineness of standard gold, Subtract 0 1|

21 2£

car. car. gr. dwt. gr. »rt. gr.

Then, as 22 : 21 2J ;; 9 20 : 9 16 the standard gold contained in tne piece

44 24

88 864 236

86,5

(24

88)20414,0(232 grains nearly.

176 216

281 &c. 9 dwt. 16 gr.

*oz. £ s. d. dwt. gr. £ *. d.*

Again, as 1 ; 3 17 10£ '.'. 9 16 :: 1 17 7i the value of the piece in sterling.

20 20 24

20 77 232

24 12 934i

— (12

480 934 J 48,0)21680,4(4516

192

2,0)37 7i

248 &c.

4 £l 17s. l\d.

&c.

The foregoing calculations may be considerably abridged by using a constant decimal as a multi- plier. The following is a general rule for gold coins.

Multiply the carat grains in the fineness by the troy grains in the weight, and again multiply tku product by 92182; cut off" nine decimals, which will give the answer in pounds and decimals of a pound tier ling.

Thus, in the foiegoing question of the Louis d'or,

86,5 X 236 = 20414

92182

1,881803348 20

17,636 12

&c. Answer. £l. 17. 7\d.*

*To find the i*ontents of pure gold in the above coin, say,*

car. car. gr. dwt. gr. gr.

AS 24 : 21 2i :: 9 20 : 212,6

Or, the contents in pure gold may be found by multiplying the standard weight by 1 1, and dividing by 12 ; and standard gold may be reduced to puie by reversing this operation.

SILVER COINS. — What is the value of a Spanish Dollar, the Report (per table, page 133,) being a follows : — weight, 17 dwt. 8 gr. Assay W. 8 dwt. that is, 0 oz. 8 dwt. worse than English standard •*

oz. dwt.

From 11 2 the fineness of standard silver Subtract 0 8

0 1

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146 . COIN S.

oz, dwt oz. dwt. dwt. gr. dwt. gr.

Then, as 11 2 : 10 14 ;: 17 8 : 16 17 the standard silver contained in the Dollar, •20 20 24

222 214 416 214

(24

222)89024(401

888

16 dwt. 17 gr.

224 &c.

oz. gr. s. d. dwt. gr. s. d.

Again, as 1 or 480 ; 5 2 ;: 16 17 : 4 3| the value of the Dollar in sterling.

12 24

62 401

62

(12

48,0)2486,2)51,8 2400

— 4s. 86 &c.

The foregoing operation may be thus abridged : —

RULE FOR SILVER COINS — Multiply the carat grains in the fineness by the troy grains in the weight, and again multiply this product by 5818 ; cut of seven decimals, which will give the, answer in pence and decimals of a penny sterling.

Thus, in the foregoing question of the Spanish Dollar,

214 X 416 = 89024

5818

51,7941632 4

3,1766528

Answer. 4s. 3|d.

To find the contents of the Spanish Dollar in pure silver, say —

oz. oz. dwt. dwt. gr. gr.

AS 12 : 10 14 :: 17 8 : 370,9

Or the contents in pure silver may be found by multiplying the standard weight by 37, and dividing by 40; and, on the contrary, multiplying the contents in pure silver by 40, and dividing by 37, will give the standard weight.

The precious metals in England are mostly bought and sold at so much per ounce standard. It therefore becomes necessary to determine the standard weight ; and this must be calculated from the Assay Master's Report of weight and fineness.

But it may be useful first to explain the characters which are generally used in these Reports.

ASSAYER'S MARKS. j is 1 Dwt. and occasionally as 1 oz.

£, – 5

Q — 10

Jg

fff' _ 19 —

0&> Obulus)i

The common method of finding the value of small quantities of gold and silver is by alloying, from the Assay Master's Report, at the rate of 4s. per carat, better or worse, in every ounce weight of gold ; and at the rate of 6d. per ounce, better or worse, in every ounce weight of silver. But when silver is more than 10 dwt. worse, an allowance of 2rf. per ounce must be madf> for reninn-4.

COINS.

TliE FOLLOWTNG ARE THE SCALES OF Af.l.OWANCK.

Scale for Gojd. Scale for Silver.

\ car. (4s. 1 oz. ((W.

*1 gr. (is. 15 dwt. (4*d.*

i gr. (Qd. 10 dwt. (3d.

Jgr. (3d, 5 dwt. !£

•2|- dwt. (-|rf.

Thus, to find the value of 2 oz. of gold B. 1 car. 1 gr. at £4. per oz.— To £8. (for 2 oz.) add 10. for better, which gives the value £8. 10s. — And to find the value of 12 oz. of silver, W. 10 dwts. at 5s. Qd. per oz. From £3. 6s. (for 12 oz.) subtract 3s. for worse, which gives the value £3. 3» We submit finally*

I. — RULES roR STANDARDING GOLD.

As 22 carats are to the Assay, or Report of fineness, so is the gross weight to the quantity that is to be added or subtracted from this gross weight, according as the report is better or worse. It better, the additional quantity is called (by the trade) Betterness, and if worse, the :uibt,ractional quantity is called Worseness.

Example — How much standard gold is there in an ingot of the following Report, B. 1 car 3J grains. Weight, 67 oz. 15 dwt. 8 gr. ?

oz. dwt. gr. oz.dwt.gr. oz.dwt.gr.

As 22 : 1 3J :: 67 15 8 Or thus, as 22 ; 23 3£ : : 67 15 8 : 73 10 20

4 4 20

88 7 1355

44 24

352 30 32528 X 30-:- 352 = = 2772 gr. :=z 5oz. 15 dwt. 12

oz. dwt. gr.

. To 67 15 8 Gross Weight Add 5 15 12 Betterness

73 10 20 Standard.

The following method for standarding gold may be generally used with advantage :—

oz. dwt. gr.

67 15 8 Gross Weight B. or W. 1 car. 3| gr

2 gr. zz | 33 17 16

i rr. $ 16 18 20

J = = \ 8 9 10

2)127

"• Divided by 22

11)63 10 15.)

5 15 12 Betterness or Worseness, as above.

II. RULES FOR. STANDARDING SILVER.

As 1 1 oz. 2 dwt. to the assay, so is the gross weight to the quantity which is to he added or sub- tracted, according as the report is B. or W.

Example — In 287 oz. of silver, W. 12J dwt., how much standard?

oz. dwt. dwt. oz. oz, dwt. «z, dwt. gr.

As 11 2 : 12ˆ:: 287 Or thus, as 11 2 : 10 9i :: 287 ; 2701620

20 20

222 2840

*12**

222)71750(323 dwt. 4 gr. — 16 oz. 3 dwt. 4 gr.

oz. dwt. gr.

From 287 0 0 Gross Weight Subtract 16 3 4 Worseness

270 16 20 Standard.

148 COINS.

From the last example, the reason of the following rule for standarding silver is obvious Multiply half the weight in ounces by the assay in penny weights, and divide the product 6$ 111, the quotient will be the betterness or worseness in ounces.

*Example— How much standard silver in 160 ounces of B. 18£ dwt.? Half weight 80 18 *

oz. dwt. gr. oz. dwt. gr.

111)1480(13 6 16 Jo 160 0 0 Gross

111 Add 13 6 16 Betterness

370 &c. 173 6 16 Standard

It should be observed that tv>ere are tables constructed, and sometimes used, for standarding gold and silver, as may be seen in Postlethwayt's Dictionary of Commerce, vol. 1, page 388 to 398 ; but, from the simplicity and conciseness of the foregoing examples, it is manifest that such tables cannot much shorten the operation, though they may serve to check or prove the calculation.

III. RULES FOR CONVERTING THE FOREGOING TABLES OF COINS INTO FRENCH DENOMINATIONS.

To reduce English gold coin into Francs, and the contrary.

RULE — Multiply the number of Pence by ,105 : and the number of Francs by ,9525.

Example — How many Francs in a Sovereign?

Here 240d. x ,105 =: 25 Francs 20 Centimes. And again, 25 Francs 20 Centimes X 9,525 — 240 Pence.

To reduce English sterling silver into Francs, and the contrary.

RULE — Multiply the number of Fence by ,103 : and the number of Francs by 9,709.

Example — How many Francs in 240 Pence, silver value ?

240 x ,103 — 24 Francs 72 Centimes; And this number x 9,709 — 240 Pence.

The foregoing results are the Pars, very nearly, in gold and silve; value.

To bring English grains into Grammes, and the contrary.

*RULE — Multiply the number of Grains by ,064792; and the numl*r oj Grammes by 15,434. Example — How many Grammes in a Sovereign, weighing 113,1 English grains of pure gold ?*

Answer, 7 Grammes 328 Decigrammes, nearly ; and this number, multiplied by 15,434, equals 113,1 grains.

By the application of the above rules, all the foregoing Tables of Coins may be converted into French denominations, except the first column, which contains the Assay, and which is thus re- duced : —

RULE FOR GOLD COINS — Make the Assay Report the numerator, and 24 the denominator, and this vulgar fraction, reduced to three places of decimals, will give the Milliemes, according to the French expression.

Example — To convert English standard gold into Milliemes. Thus, $ — 916 Milliemes. If the gold be 1 carat 2 grains worse than standard.

car. gr.

22 0 1 2

20 2 24

4 4

— then ˆ — 854 Milliemes. Carat grains 82 96

Milliemes are reduced to carats by multiplying by 24 and cutting off three decimals. FOR Si LVER COINS — To reduce English Assay Reports of

silver into French Reports, or Mil- liemes.

HULE — Make the number of pennyweights in the Assay Report the numerator, and 240 the dtTWnii- nator, and this reduced to a decimal fraction of three places gives the Milliemes. 'xumple — To reduce English standard silver into Milliemes.

dwt. gr.

11 2

20

222

- — zr % — 925 Milliemes.

240

To reduce Milliemes into English Assay Reports of silver.

JtuLE — Multiply by 240, and cut offthrte decimals. Thus, 891 Milliemes X 240 — 214 r: 10 dwt 14 gr., and this subtracted from 11 dwt. 2 gr. gives 8 dwt. worse than English standard.

COINS.

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Dr. Kelly's Explication of the Coins of France presents a singular picture of the modern changes of that country. We subjoin it for this, its cu- rious political bearing. He gives a very able and detailed explanation of the same kind re- specting all the modern coins of the world, in his Cambist 2 vols. 4to. London, 1626.

FRANCE.

GOLD COINS.

The Louis — Head of the reigning King, with his name and title : thus,

LUD. XVI. D. G. FR. ET NAV. REX.

tnat is, Ludoricus XVI. Dei Gratia, Francis et Navarrae Rex,

Louit XT!, by the Grace of God, King of France

and Navarre.

Reverse, the arms of France and Navarre, with a crown over them. On the Pieces coined before 1 786 there are two distinct shields ; and, on those coined since 1786, a double shield; legend,

CHRS. REGN. VINC. IMPER.

that is, Christus regnat, vincit, imperat, Christ reigns, conquers, governs ; under the arms is a letter, by which the mint where the piece was coined is known. The Double and Half Louis bear the same im- pressions.

The Pieces struck in the year 1791 have on the obverse the head of the King, with the title,

LOUIS XVI. ROI DES FRANCOIS.

Louis XVI. King of the French. and. on the reverse, the Genius of France writing the Constitution on a tablet resting on a pillar, with a cock on one side, and on the other the fasces and cap of Liberty, with the legend,

REGNE DE LA LOI,

Reign of the Law ; and at the bottom,

L AN 4 DE LA LIBERTE,

The year 4 of Liberty.

The Piece of 1793 has, instead of the head, a crown of oak-leaves, containing the words 24 LIVRES; legend,

REPUBLIQUE FRANCOISE L AN II.*

French Republic, the year 2.

Reverse, as on the Louis of 1791, except that the date is in figures only.

The Piece of 40 FRANCS, 1802— Head of Bo- naparte; legend,

BONAPARTE PREMIER CONSUL.

Bonaparte, first Consul.

Reverse, a wreath of laurel, containing the words 40 FRANCS ; legend,

REPUBLIQUE FRANfOISE AN. XI.

and, round the edge of the piece,

DIEU PROTEGE LA FRANCE,

God protect France.

In 1804, on Bonaparte's being declared Emperor, the words round the head were altered to NAPO- LEON EMPEREUR. The Piece of 20 Francs bears the same impressions, except the figures that mark its value

The Piece of 40 FRANCS, 1818— Head of the King, with name and title, thus :

LOUIS XVIII. ROI DE FRANCE.

P,everse, arms of France, and 40 F. within two branches of laurel. Round the edge of the piece,

DOMINE SALVUM FAC REGEM.

O Lord, save the King

SILVER COINS.

The Ecu of 6 LIVRES — Head of the reigning King, with name and title, as on the Louis. Re- verse, the arms of France, between two laurel branches ; legend,

SIT NOMEN DOMINI BENEDICTUM,

Blessed be the name of the Lord. and a letter denoting the place where the piece was coined. Round the edge are the words

DOMINE SALVUM FAC REGEM,

as on the 40 Franc Piece. The Ecu of three Livres, the Pieces of 24, 12, and 6 Sous, all bear the same impressions, except that the three last mentioned coins have no motto round the edge.

The Ecu of 1791— Head of the King; le- gend,

LOUIS XVI. ROI DES FRANCOIS.

Reverse, the Genius of France, &c. as on the Louis of the same period. Round the edge,

LA NATION LA LOI ET LE ROI, The nation, the law, and the King. The

Pieces of 15 and 30 Sols, coined at the same period, bear the same impressions, except that, instead of the fasces and cock, their value is marked, and that the motto round the edge is omitted.

The 6 LIVRE Piece of the Republic — The Genius of France, &c. as above. Reverse, a wreath of oak, containing the words six LIVRES ; legend,

REPUBLIQUE FRANCOISE L AN II.*

and round the edge,

LIBERTE, EGALITE,

Liberty, equality.

The 5 FRANC Piece of the Republic — Three figures, representing Hercules and two young women, joining their hands ; legend,

UNION ET FORCE,

Union and strength.

Reverse, a wreath of laurel and oak, containing the words 5 FRANCS L' AN 7 ; legend,

REPUBLIQUE FRANCOISE ;

and round the edge,

GARANTIE NATIONALS,

National guarantee.

The 5 FRANC Piece of 1803— Head of Bo. naparte ; legend as on the 40 Franc Piece. Reverse, a wreath of laurel, containing the value, 5 FRANCS; legend,

REPUBLIQUE FRANCOISE,

but, on pieces coined in 1809,

EMPIRE FRANCOIS.

Round the edge, the words

01EU PROTEGE LA FRANCE,

as Before.

The FRANC of Louis XVIII. bears the same impressions as the 40 Franc Piece of the same perk 1 ; except the mark of the value.

COIN, in architecture, a kind of die cut aiagonal-wise, after the manner of a flight of a stair-case, serving at bottom to support columns in a level, and at the top to correct the inclina- tion of an entablature supporting a vault. Coin is also used for a solid angle composed of two surfaces inclined towards each other, whether that angle be exterior as the coin of a wall, a tree, &c. or interior, as the com of a chamber or chimney.

COINAGE, as an art, has been carried to the •greatest perfection in our own country, and in

inhabited by Catholics, and the lower by Pro testants. The former contains the cathedral built in the eighth century, the bishop's resi- dence, and the town-house, containing the ar- chives of the Canton : the diet of which meets here every thiee years. The principal support of the inhabitants is the trade carried on along the Rhine to Loudon and Zurich. It was for- merly a city of Germany, and was governed by counts, but became a bishopric in the ninth cen- tury, and a part of the Orison's Republic in 1526. The government being partly aristocra-

very modern times. From the establishment of tic, partly democratic. In 1799 it was taken by the mint by act of parliament, in the reign of the French under general Massena, and annexed Edward II., to the year 1815, it is surprising to the Helvetic Republic. It is thirty-two how small were the alterations introduced by miles north of Chiavenna, and twenty-two successive masters : but at this period an en- E.S.E. of Glacis.

tirely new constitution of the mint was projected COI'STRIL, n. s. Corrupted from kestrel. and accomplished. The history, therefore, of It signifies a mean fellow ; a runaway, the British Mint and its operations, will em- He's a coward and a coitril, that will not drink to brace everything valuable in this art. See my niece. Shakspeare'a Twelfth Night.

. COIT, n. s. Dut. kote ; a die. A thing

thrown at a certain mark. See QUOIT.

The time they wear out at coitt, kayles, or the lik«

idle exercises. Carew's Survey of Cornwall.

COITION, n.s. Lat. coitio. The act by which two bodies come together. Copulation. By Gilbertus this motion is termed coition, not made

MINT.

For COINS, considered as medals, see NU- MISMATICS.

COINCI'DE,v.w. } Lat. coined. To fall

COINCIDENCE, n. s. > upon the same point, to

COINCIDENT, adj. j meet in the same point ; to concur, to agree. The state of several bodies or lines falling upon the same point ; tendency of many things to the same end. Occurrence of many things at the same time, without previous arrangement or forethought in their agents.

The very occurrence and coincidence of so wiany evidences that contribute to the proof, carry a great weight. Wife.

Christianity teacheth nothing but what i: ptr,'.°rlly suitable to, and coincident with, the ruling principles of a virtuous and well-inclined man. South.

If the equator and ecliptick had coincided, it would have rendered the annual revolution of the earth use- less. Cheyne.

These circles I viewed through a prism ; and , as I went from them, they came nearer and nearer together, and at length became coincident.

Newton's Optickx,

An universal equilibrium, arising from the coinci- dence of infinite centres, can never be naturally acquired. Bentley.

The rules of right judgment, and of goo'J ratioci- nation, often coincide with each other. WatlJ's Logic.

I venerate the man whose heart is warm. Whose hands are pure, whose doctrine and whose life Coincident, exhibit lucid pioof

That he is honest in the sacred cause. Cowper.

COINDICA'TION, n. s. From con and indr

co, Lat. Many symptoms betokening the same

c, To join with another in the same office.

Thou mayest cojoin with something, and thou dost, And that beyond commission.

Shalupeare's Twelfth Night.

COIRE, a large and handsome town of Swit- zerland, capital of the League of God's House, and of the canton of the Orisons, is seated in a valley at the foot of the Alps, abounding in vineyards and game; and said to have been founded by the emperor Constuntius. It is ii.vidtd into two parts : the upper principally

by any faculty attractive of one, but a syndrome and concourse of each. Browne's Vulgar Errours.

I cannot but admire that philosophers should ima- gine frogs to fall from the clouds, considering how openly they act their coition, produce spawn, tadpoles, and frogs. Ray on the Creation.

He is not ma-lo productive of his kind, but by co- ition with a female. Grevr's Cositwlcigia.

*COIX, .lob's-tears, a genus of the triandria order, and moncecia class of plants; natural order fourth, gramina. Male, flowers in remote spikes : CAL. abiflorous, beardless glume. Female CAL. biflorous glume : COR. a beardless glume ; the style bipartite : SEED covered with the calyx, ossified. Of this there are three species, natives of the East and West Indies. The chief is C. lachryma Jobi, an annual plant, rising two feet from a fibrous root, with two or three jointed stalks, and single, long, narrow leaves at each joint, resembling those of the reed. At the base of the leaves come out the spikes of flowers standing on short foot-stalks ; the seeds greatly resemble those of gromwell ; whence the plant has by some writers been called lithospermum. It may be propagated in this country by seeds bro6ght from Portugal, and sown on a hot-bed ; after which the young plants should be removed into a warm border, and planted two feet from each other. They require only to be kept free from weeds. In Spain and Portugal the poor grind the seeds of this plant in times of scarcity, and make a coarse kind of bread of them. The seeds are enclosed in small capsules about the bigness of an English pea, and of different colors. These are strung upon silk, and used in«*ead of bracelets by some of the poorer sort in the West Indies, particularly by the negroes. COK ALAH ISKIT, a liver of North Ame- rica, which takes its source in the Rocky Moun- tains, and, after a course of about 300 miles,*

COK

enters Clark's River, a brancli of the Columbia, in long. 113° VV., lat. 47° N. It is deep and rapid, and its average width about sixty yards. In one part of its course it approaches within sixty miles of Dearborn's Creek, a branch of the Missouri.

COKE, n. s. Lat. lignum coctum. Fuel made by burning pit-coal under earth, and quenching the cinders; as charcoal is made with wood. It is frequently used in drying malt.

COKE, or COAK, charred pit-coal, much used for smelting iron ore in malt-houses, and other places where smoke is to be avoided. It is usually prepared by putting screened coal into cylindiical ovens of brick or stone, generally about six feet by seven, and eight feet in height, and there burning it. When it is red-hot the apertures are all closed, and it is left to cool ; it is then drawn out with long iron rakes, and the mass is found to have assumed an arrange-

born at Milcham in 1549. When a student, in the Inner Temple, he distinguished himself by stating the case of a cock belonging to the Tem- ple so exactly, that all the house admired him, and the whole bench took notice of him. After his marriage with a lady of good fortune, pre- ferments flowed upon him. The cities of Nor- wich and Coventry chose him for their recorder ; the county of Norfolk for one of their knights in parliament ; and the house of commons for their speaker, in the thirty-fifth year of queen Eliza- beth. The queen appointed him solicitor- general in 1592, and attorney-general in 1593. In 1 603 he was knighted by king James I. ; and the same year, upon the trial of Sir Walter Raleigh, at Winchester, he treated that gentle- man with a scurrility of language hardly to be paralleled On June 27th he was appointed lord chief justice of the common pleas, and in 1613 lord chief justice of the king's bench, and one

ment not much unlike starch. An improvement of the privy council. In 1615 he was very has been adopted by lord Dundonald, by means vigorous in the discovery and prosecution of th« of which he receives, in a separate chamber, the persons employed in poisoning Sir Thomas' coal tar. Baron Von Haak, at Newcastle, dis Overbury in the Tower in 1612. His contes'i tilled the coal in cast-iron chambers, but he with- not long after with the lord chancellor Egerton, drew the soot for lamp black before the rise of with some other cases, hastened the ruin of his the gray ashes ; but the coak thus formed is not interest at court : so that he was sequestered from so well fitted for the iron smelting. the council table, and the office of lord

chief

COKE (Thomas), LL.D. a respectable divine justice. In 1621 he vigorously maintained, in among the Wesleyan methodists, was born Sep- the house of commons, that no proclamation is tember 9th, 1747, at Brecon, in South Wales, of any force against the parliament. The same where his father was a surgeon and a. magistrate, year, being looked upon as one of the great in- Receiving a classical education, in the public cendiaries in the house of commons, he was re- school of that place, he went, as a gentleman moved from the council of state with disgrace; commoner, to Jesus College, Oxford. In 1770 the king saying that ‘ he was the fittest instru- he took the degree of master of arts, and in 1775 ment for a tyrant that ever was in England :’ he that of doctor in civil law; became, in the inte- was also committed to the Tower, and his papers rim, a member of the corporation, and mayor of were seized. Upon the calling of a new parlia- liis native place. Soon after this he became ac- ment, in lf>25, the court party, to prevent his quainled with Mr. Wesley, and, entering into being elected a member, got him appointed •orders, obtained the curacy of South Petherton, sheriff of Buckinghamshire. To avoid the office in Somersetshire. lie was soon dismissed from he drew up exceptions against the oath ot a liLs curacy, when he preached at the church-door, sheriff, but was obliged to undertake the office, which occasioned a riot; and on this he timely In 1628 he spoke vigorously upon grievances; left Petherton to become an assistant of Mr. and made a speech, in which he affirmed, that Wesley. In 1784 the latter is said to have con- ‘ the duke of Buckingham was the cause of all secrated him as a bishop for the purpose of sn- our miseries.’ While he lay upon his death-bed perintending the methodistical societies in ‘ ‘ America. The doctor now, therefore, made several voyages to the United States and the West Indies, establishing meeting-houses, organ- ising congregations, and ordaining ministers. He also visited Ireland, where he held and

us papers and last will were seized by an order jf council. He died in 1634. He published many works ; the most remarkable are his In- stitutes of the Laws of England; the first part of which is a translation and comment of Sir

I’homas Littleton, one of the chief justices of the

presided over several conferences. About the common pleas in the reign of Edward IV. commencement of the French revolution, he at- COKESBURY COLLEGE, a college in t

tempted a mission in that country, but failed in State of Maryland, in Abington, Harford county,

his object. He next turned his attention to founded by the Methodists in 1783, and takes

the Wesleyan cause in Wales, which he lived to its name from Thomas Coke, and Francis As-

see very flourishing. He now formed an esta- bury, the American bishops of the Methoch

blishment at Gibraltar ; and on the 21st of Fe- Epi'scopal church. The edifice is of

bruary, 1814, sailed with some preachers for handsomely built, on a healthy spot, enjoying a

Ceylo'n; but on the 3d of May was found dead fine air, and a very extensive prospect. 1 1 > <

in the cabin of the vessel, having fallen on the college was erected, and is wholly suppo eel by

floor in an apoplectic fit. He published a Com- subscriptions and voluntary donations. 11

mentary on the Bible ; a History of the West students, who are to consist of the sons ot tra

Indies; and some Sermons and Tracts. veiling preachers, annual subscribers, member;

COKE (Sir Edward), lord chief justice of the of the society, and orphans, are mslructc

king's bench in the reign of James I. was de- English, Latin, Greek, logic, rhetoric, U

scended from an ancient familv in NorfoU and ireosn-an'w, natural philosophy, and astronomy.

COL

15?

COL

and they are taught the Hebrew, French, and German languages.

COL, one of the western islands of Scotland, about thirteen miles long and three broad ; con- taining above 800 inhabitants. It abounds in corn, pasture, salmon, eels and cod. It lies on the coast of Argyllshire, nine miles from Ardna- murchan, and eleven north-west of the Isle of Mull. Lon. 7° 15′ W., lat. 57° 0′ N.

COL D'ACNELLO, a passage from France, into Italy from Guillietre to Chateau Dauphin.

COL D'AREZ, a passage of the Pyrenees from Prats de Molo in France, to Campredon in Spain.

COL D'ARGENTIEUE, a passage from France into Italy between Saluce and Nice.

COL DE LIMON, a passage over the Alps, from Sospello to Coni.

COL DE PARACOLS, a passage of the Pyre- nees, from Ceret in France, to Ampardan in Spain.

COL DE PERTUIS, a passage of the Pyrenees, between Boulou and Junquera.

COL DETENDA, a well-known passage of the Alps, between Piedmont and Nice, over the mountains of Tenda, and 500 feet above the level of the sea.

COLAN, a town of South American Indians, in Peru, within the jurisdiction of Piura. The inhabitants are very industrious ; they raise much giain, and feed great numbers of cattle ; and they make large rafts of wood, with which they make voyages to ˆPanama. Their cargoes con- sist of wine, oil» sugar, soap, dressed goat skins, and Quito cloth. Their grain and cattle are disposed of at Payta and the adjacent towns. Colan is nine miles north from Payta.

CO'LANDER, n. s. Lat. colo ; to strain. A sieve either of hair, twigs, or metal, through which a mixture to be separated is poured, and which retains the thicker parts ; a strainer.

Take a thick woven osier colander, Through which the pressed wines are strained clear.

May.

All the viscera of the body are but as so many colanders to separate several juices from the blood.

Ray on the Creation.

The brains from nose and mouth, and either ear,' Came issuing forth, as through a colander The curdled milk. Dryden.

COLAPIS, or COLOPS, in ancient geography, a river of Liburnia, which, after a winding north- east course, falls into the Savus at the Insula Segestica. It is now called Culpe.

COLAPOOR, or CALAPUR, a small indepen- dent Mahratta state, on the sea coast of Beja- poor, Hindostan, sometimes called Bonsolo in the maps. It is the only one entirely indepen- dent of the British, and bounded to the south by the Portuguese territory of Goa ; to the east- ward, and northward by the Peishwa's Dominions, and to the west by the sea. Its chief towns are Colapoor, Virgorlat, and Raree, the two lat- ter being considerable ports. The rajah gained a great accession of country by conquest, during the confusion in the Mahratta Peshwa's domi- nions, after the death of Sewai Madhoorow, par- 'icularly from the Putwurdun family.

COLAR, a district in the tasjprn extremity of

the Mytore territories, between the thirteenth and fourteenth degrees of north latitude, consisting, for the greater part, of rocky mountains. Those towards the capital are very extensive. The road leading to it being flanked by high hills. The remainder of the district is largely covered with copse wood. But the mango, tamarind, and robinia matis, flourish in particular spots, and salt is made in the lower parts. The natives also plant aloes in the hedges, and use the leaves for cordage. Gold dust is said to be found in con- siderable quantity.

This district is very fruitful in rice, being well watered ; but the enmity of its different tribes to each other has been often exempli- fied. Aurungzebe overran this country, and burnt down Vingorla in 1684, a few years after it had been taken by the celebrated Sevajee from the king of Bejapore. More recently, when the father of the rajah was taken in war by Appa Saheb, one of the Putwurdun family, although he was a Brahmin, and much wounded, the barbarian captor ordered him to be cut in pieces before his face.

In 1804, when a British squadron had block- aded the ports of the rajah, in consequence of the numerous piracies committed by his subjects, that prince also gave shelter to two of his rela- tions, whom lord Wellington had found at the head of banditti. The British general, therefore, wrote to him, stating ' that he was perfectly aware of the family connexion between the ra- jah ard those brothers, and that it was not the custom of the British

government, nor his own w'sh, to perpetuate enmities, or deprive those of an asylum who were inclined to live in peace ; for which reason he did not call on the rajah to give up the brothers, but notified to him, that, as lie had given them an asylum, the British go- vernment would consider him responsible for their conduct; and if they again assembled troops,.which could only be intended to disturb the peace of other powers, he (the rajah) would be called upon to answer for the injuries they might do.' The intimation had the desired effect, and the neighbourhood is said to have enjoyed an extraordinary tranquillity in conse- quence of this interference.

COLAR, the capital of the •jbove district, has extensive mud fortifications : but in the centre is a cavalier of stone, and it is defended by a deep ditch. This place was taken by the English in the year 1768, and shortly after retaken by Hy- der Ali. His father Futteh Mahommed resided here, and began a mosque and mausoleum, which Hyder finished. The establishment is still supported at the expense of the British.

COLARBASIANS, or COLORBASIANS, a sect of Christians in the second century ; so called from their leader Colarbasus, a disciple of Va- lentinus ; who, with Marcus, another disciple oi the same master, maintained the whole pleni- tude and perfection of truth and religion to be contained in the Greek alphabet; and that it was upon this account that Jesus Christ was called the alpha and omega. This sect was a branch of the Valeutinians.

COLATION, n. s. From colo, Lat. The art of filtering or straining.

COLCHESTER.

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*CO'LATURE, n. *. From colo, Lat. The act of straining ; filtration; the matter strained.*

COLBERG, a strong handsome sea-port town of Prussia, in Farther Pomerania. It is remark- able for its salt-works, and is seated at the mouth of the river Persante, on the Baltic sea. The chief edifices are the town-house and the cathe- dral, a large and beautiful structure. The aque- duct also which supplies the town with water is a well contrived and strong building. Colberg is a fortress of some importance ; it was three times besieged by the Russians during the seven years' war, twice without success. It is sixty miles north-east of Stetin, and thirty of Camin.

COLBERT (John Baptist), marquis of Seg- nelai, one of the greatest statesmen of France, was born at Paris in 1619; and descended from a family in Rheims, no way considerable for its splendor or antiquity. His grandfather and father were merchants ; and young Colbert was bred up to

the same profession ; but afterwards became a clerk to a notary. In 1648 his rela- tion, John Baptist Colbert, lord of S. Pouange, preferred him to the service of Michael Le Tel- lier, secretary of state, whose sister he had mar- ried. Le Zellier afterwards recommended him to the service of cardinal Mazarine, and by him he was sent to Rome, to negociate the reconcilia- tion of cardinal de Rets, and other important business. So high an opinion had Mazarine of Colbert's abilities and faithful services, that, at his death, in 1661, he recommended him to Louis XIV. as the most eligible person to re- gulate the finances, which at that time stood in much need of reformation ; and Louis, in con- sequence, made Colbert intendant of the finances. This minister established the trade with the East and West Indies, from which France reaped innumerable advantages. In 1664 he became superintendent of the buildings; and applied himself so earnestly to the enlarging and adorn- ing of the royal edifices, that they became master- pieces of architecture ; as the palace of the Thuilleries, the Louvre, St. Germain, Fon- tainbleau, and Chombord attest : and he raised Versailles from the ground. It was formerly a dog-kennel, where Louis XIII. kept his hunting furniture ; he made it a palace fit for the greatest monarch. He established the Academy for Painting and Sculpture, and the Academy of Sciences, as well as the Royal Observatory at Paris. France also owes to him all the advan- tages she receives by the union of the two seas ; a prodigious work, beg\m in 1666, and finished in 1680. In 1672 he was made prime minister, and died of the stone September 6th, 1683, in his sixty-fith year, leaving behind him six sons and three daughters. His mien was low and dejected, his air gloomy, and his aspect stern. Colbert was a lover of learning, though he never applied to it himself; and conferred donations and pensions upon scholars in other countries, while he established and protected academies in his own. He invited into France eminent artists of all kinds ; thus giving new life to the sciences and making them flourish exceedingly. Upon the whole, lie was a wise, active, public- spirited minister ; ever attentive to the interests of his master, the happiness of the people, the pro-

gress of arts and manufactures, and every thin? that could advance the credit and interest of his country. He was a pattern for all ministers or state; and every nation may wish to be blessed with a Colbert.

CO'LBERTINE, n. s. A kind of lace worn by women.

Go, hang out an old frisoneer gorget, with a yard of vellow colbertine again.

Congreve's Way of the World

Difference rose between Mechlin, the queen of lace, and Colbertine.

Young.

COLCHESTER, a town of England, the ca pital of the county of Essex, pleasantly extended on the brow of a hill, on the south side of the river Colne. It is said to be the ancient Colonia Cameloduni, and that both town and river derive their names from the word Colonia It was called by the Saxons Colneceaster. There seems indeed ample proof that it flourished under the Romans, several buildings full of their bricks, and great quantities of coin, having been dug up in the town and its vicinity. A curious tesselated or mosaic pavement, three feet under the surface of the earth, was discovered in a garden in 1763.

Colchester is said to have been the birth-place of Constantino the Great, nis mother Helen being daughter of a governor of the district under the Romans ; and that, from Helen finding out the cross of Christ at Jerusalem, the arms of the town are a cross regulee between three ducal coronets, two in chief and one in base; the co- ronet in chief passing through the cross. The walls of the town were in general about nine feet thick; and on the south-east and west sides considerable remains of them appear.

Colchester, at the period of compiling the Doomsday Survey, had no less than 276 bur- gesses. It was besieged during the commotions in the reign of John, by Saher de Quincy, earl of Winchester, at the head of an army of foreigners, but was relieved by the approach of the barons, who were assembled in London, and from whom the earl retreated to Bury St. Edmunds. Saher, however, or some of his party, shortly after obtained possession of and plun- dered the town, leaving a garrison in the castle ; but of this they were not long possessed, for, being soon besieged by king John, they were forced to surrender. In the year 1218 it fell into the hands of the troops of Louis, son to Philip II. of France, who visited England with the professed intention of supporting the de- mands of the barons; but really, as it would seem from their conduct, to make conquests for themselves. The castle was not long disgraced, however, by the display of the French flag, for the submission of the barons to Henry III. soon enabled that prince to expel the faithless Louis.

During the reign of Edward III. the inhabi- tants were much harassed by the aggressions of Lionel de Bradenham, who, enraged at being foiled in his endeavours at obtaining the exclusive fishery of the Colne, which had been granted to the burgesses by Richard I. beset the ar> preaches to the town for three months, with &

1 and of daring villains, and proceeded even to an attempt at destroying it by fire.

This town warmly espoused the cause of Mary at the period of the attempt being made to place the unfortunate lady Jane Grey upon the throne. It was honored in consequence with a visit by Mary, shortly after her establishment on the throne. Here, however, she suffered the torch of bigotry to blaze. Upon the accession of Elizabeth, a different scene presented itself. A colony of Fleramings, fugitives from the perse- cutions of the duke of Alva, were admitted to settle here, and establish the baize manufacture, for which the town was long celebrated.

In 1648, towards the end of the civil war, this town sustained a siege of ten weeks ; and, making a very gallant defence, the siege was changed into a blockade, wherein the garrison and inhabitants suffered extremely for want of provisions. They were at last obliged to sur- render at discretion, when their two gallant chief officers, Sir Charles Lucas and Sir George Lisle, were shot under the walls in cold blood. Colchester was made the see of a suffragan bishop by a statute of Henry VIII.

The castle commands, from the north of the High street, a magnificent view to the north and east; the outer walls are nearly perfect, they are built of an admixture of silicious and cal- careous stones and Roman brick. By Norden the erection of this fortress is ascribed to Edward the elder; but the Saxon chronicle refers it to Eudo Dapifer, sewer or steward to William the Conqueror, and its testimony receives no small confirmation from the circumstance of its general structure being Norman; while the immense quantity of Roman bricks, not single but united into masses, would indicate it to have been erected upon the site of a more ancient Roman fortress.

The plan of the castle is a parallelogram, mea- suring upon its east and west sides 140 feet, and upon the north and south 102 feet; with project- ing square towers to the north-east and north-west angles : at the south side on the west face there is another square tower ; and a semicircular tower, having a radius of twenty feet, upon the east face. The thickness of the foundations is thirty feet; that of the lower part of the walls twelve, and of the upper nearly el-even feet. The chief entrance is beneath a strong semicircular arch, with three-quarter columns, situated near the south-west tower , here the capitals are of the Norman order of architecture. A portcullis formerly defended this entrance, within which, upon the right, the guard or janitor was sta- tioned, in a niche: not far hence is a square room, having, at its further end, a flight of stairs leading to the vaults, of which that which is situated immediately at the foot of them mea- sures twenty-six feet in length and twenty-one in breadth ; the narrow passage at its extremity is bricked up, to prevent the accidents which might arise from the

ruinous condition of the arch of the next vault into which it leads. Upon the right of this first vault, a passage has been broken through the wall into an adjacent one, from which the light is wholly excluded, and whose dimensions are similar : hence, through a

chasm at its extremity, a passage leads to a- vault of the same breadth as the others, out much longer. When first discovered, alx uc 100 years since, these vaults were found full of sand ; the original descent to them is still uu- Jiscovered.

Beyond the stairs is an entrance into a large area formerly roofed, and divided by a wall run- ning north and south. Within this space, upon its different floors, were the principal apartments of the castle : and also a gallery that runs be- tween the wall which crosses the area, and that which is demolished.

At the extremity of a wall which separates this area from a second, is a door above and be- low, which led into the apartments which filled the space between the east wall of the castle and gallery. At the south end of this space, in the south-east tower, on the ground floor is a strong arched room, with walls of an astonishing thick- ness. In the south-west tower is the grand staircase, which is circular, arched above and built of stone ; this leads to a modern room, used as a subscription library. An arcade of modern workmanship, which runs along the north wall of the library, leads to the ancient chapel, which is a venerable piece of architec- ture, the beauty of whose proportions strike the eye, notwithstanding the massiveness of its con- struction. The roof is strongly arched, and the light is admitted through five windows, of which two have been enlarged, while the rest continue nearly in their original state. This building is forty-seven feet long, nearly forty broad, and proportionably high. Prisoners are confined in the arched vault beneath it.

In the north-east and north-west towers, upon the same floor with the chapel, are various small rooms or recesses, and in the latter is also a staircase, which descends from the upper part of the tower, and terminates at the first floor. At the foot of the stairs, in the north wall of the castle, is a sally-port, now closed up, which opened upon an abutment of the north-west tower. This sally-port, which is nine feet wide, and the great gateway in the south wall, are (he only original entrances into the castle. From the principal staircase, in the north-east tower, another flight of steps leads to what was the second floor ; the walls of this story, of which but a very small part now remains, were nine feet thick. The dome which covers the stair- case, the passage formed upon the west and north wall of the castle, and the small room upon the summit of the north-east tower,' are all of modern construction. The great door- way in the north wall, and the small

port in the east wall, are likewise modern, and have Iwen formed with great labor, by the enlargement of a narrow window in each place. Several of the windows have also been, with no less labor, en- larged ; in their original state but a very scanty portion of light could have found entrance into the interior apartments. The peculiar con- struction of these windows, so entirely different from any in modern buildings, is worthy of ob- servation. An arched niche, about thrˆe fot-t deej), formed the inner opening of the window ; in the back of which niche, another of less di-

mansions, gradually decreasing in breadth, pene- trated about seven feet further, at the extremity of which a narrow aperture, only eight inches wide, lined with hewn stone, was made through the remaining thickness of the wall. From the floor of the rooms an ascent was made to the narrow aperture of the window by a flight of small steps. The outside of the building is surrounded on every part with several horizontal bands or fillets of Roman brick, which are dis- posed in perpendicular and oblique layers.

Colchester castle was granted by the empress Maud to Alberic de Vere, ancestor of the Veres, earls of Oxford ; Alberic does not however ap- pear ever to have had possession of it. Stephen Ilarengood next obtained a grant of it during pleasuie. In 1256 it was given by Henry III. to Gtiido de la Rupe Ford, or Rochford, who was, however, in consequence of disgrace, de- prived of this along with his other estates two years afterwards. From this period it has re- peatedly changed masters, one of whom, of the name of Wheeley, made an attempt at dilapi- dating it in the year 1683 ; the solidity of the building, however, proved its security, as the expense attending the demolition of a very small part was so enormous as to deter its owner from proceeding further.

*There are twelve parishes in the town and suburbs of Colchester, of which eight are within and four without the walls; several of the churches are, however, destroyed; but some that remain there are handsome structures. The ruins of St. John's Abbey in particular merit attention : this building was founded by Eudo Dapifer in 1097, and appears to have been a very magnificent structure. It was dedicated to St. John the Baptist, and occupies the site of a wooden church, dedicated to St. John the Evan- gelist, which was famous for miracles. When completed, about the beginning of 1104, it was consecrated by Maurice, bishop of London ; at which time also its endowment *.vas liberally augmented by its original founder Eudo, and other pious persons. This foundation flourished till the period of the dissolution, its privileges being the same with those of the*

abbey of St. Peter's, Westminster, and its abbot possessing a seat in parliament. At the time of the dissolu- tion its revenues were estimated at £.523. 17.?. lOrf. Beche, the last abbot, was hung for refusing to acknowledge the king's siipremacy. The gate- way which remains appears more modern than the other parts of the abbey, and is built of hewn stone and flint; the garden walls enclose an area of little less than fourteen acres.

St. Giles's church, of which only the chancel, which is employed for the celebration of divine worship, is preserved from ruin, stands near the north-west corner of St. John's garden, and was the burying place of the Lucas family ; here are interred the remains of the gallant Sir Charles Lucas, and his no less gallant, though equally unfortunate fellow sufferer, Sir George Lisle, whose melancholy fate is recorded upon their common tomb.

St. Botolph's "riory, which stands at a short distance north-eust of St. John's. Its founda- tion is commonly, though not improbably with-

out sufficient justice, ascribed to a monk of the name of Kyrnulph, or Ernulph, early in the twelfth century : some of the ruins seem, how- ever, to speak a much more remote origin. The revenues were, at the dissolution, £134. 13$. 4d. per annum ; but few traces of the monastic buildings can be now discovered. Previously to the siege, the priory church continued perfect; it was then however almost totally destioyed, each of the contending parties accusing the other of the deed. The curious specimens of brick ornaments and interlaced arches, which they present, furnish the admirer of architectural relics with much interesting contemplation. As it stood, originally, the dimensions of this church were, within the walls, 108 feet long, and, in- cluding the nave and aisles, forty-four feet broad. Its west front was richly ornamented, and con- tained the grand entrance, which still remains The door-way is formed by a fine semicircular retiring arch, with various mouldings, fumed with alternate rows of small thin brick, and hewn stone.

On the south-west side ot the town was for- merly a monastery of Croutched 1'riars, es- tablished at the first arrival of that order in this country, about the year 1244. The fabric un- derwent many changes, and became in 1407 the seat of the wealthy Guild of St. Helen, along with whose possessions not less than four chantries, founded here, and in the church ot St. Nicholas, wer- incorporated. Its revenues came, soon after the dissolution, into the hands of lord chancellor Sir Thomas Audley; and the building was in 1637 converted into ;i dwelling-house.

The principal church within the walls is St James's ; the rest are All Saints, St. Nicholas partly in ruins; the chapel of St. Helen; Tri- nity church; St. llunwald's, St. Martin's, St Peter's, and St. Mary's. The moot hall, to.

holding the court in, and transacting the public business, was founded by Eudo Dapifer, already mentioned : the town gaol adjoins, and is partly situated under this building, and the theatre behind it. There are several charitable institu- tions here for the instruction as well as relief of the poor ; and this town is one of those included in the gift of the late Sir Thomas Whichcotc.

The first charter of incorporation was granted to this town by Richard I. in the year 1198, when many valuable privileges, especially the exclusive fishery of the Colne between the north bridge and west bridge, were conferred upon the burgesses. Their charter lias received re- peated confirmations and extensions, from suc- ceeding monarchs ; the last, by which at present the government of the corporation is regulated, having been granted by his late majesty George III. in the year 1763.

The corporation now consists of a mayor, re- corder, town-clerk, twelve alderman, eighteen assistants, eighteen comriion-councilmen, and inferior servants; it returns two members to parliament ; the right of election being vested in the corporation an-i ” ic burgesses who do not receive alms ; the nui/iber of electors is es- timated at 1400. It seems to have sent bur- gesses to parliament from the ieigu of Edwurd i

Colchester enjoys an excellent market on Wed- nesday and Saturday, and, besides the manufac- – ture of baize, furnishes employment to many of its inhabitants in the oyster fishery ; the best of which are distinguished by the name of pyefleet.

The following is said to be the method of managing them. In May the oysters cast their spawn, which the dredgers call spat; this re- sembles a drop of candle grease, and equals the size of a halfpenny; it cleaves to stones, old oyster shells, &c. at the bottom of the sea, which they call cultch. It is conjectured, with some appearance of probability, that a shell begins to form upon the spat in twenty-four hours. In May the dredgers are permitted by the admiralty court to take oysters of every size. When they have taken them they raise the small breed from the cultch with a knife, and then throw in the ca’tch again to preserve the ground for the future, unless they are so newly spat that they cannot with safety be raised from the cultch : they are in such cases permitted to take the stone or shell, &c. upon which the spat is, one shell having frequently twenty spats. It is felony

to carry away the cultch after May, and punishable to take any oysters of a size less than an half-crown piece, or of such a size as to admit of a shilling fairly Tattling between the shells when closed.

Among modern improvements here are a new theatre in Queen-street, and a new market. To these may be added the erection of the new bridge over the Colne, called East Bridge ; the levelling of St. John's Green, and the wiieningthe road by St. Giles's church. There is a fine quay on the river, which has been rendered navigable, and the water flows from five to seven feet at neap, and from nine to ten feet at spring tides. Vessels of 100 tons or more can come up to it; and Colchester is considered a port, though eight or nine miles from the nearest sea. Distant fifty-one miles north-east from London, and eighteen S.S. W. of Ipswich.

COLCHESTER, a post town of Virginia, in Fair- fax county, situated on the north-east bank of Ocquoquam creek, three or four miles from its confluence with the Potowmack; where it is about 100 yards wide, and navigable for boats. It lies sixteen miles south-west of Alexandria, 106 north by east of Richmond, and 172 from Philadelphia.

COLCHESTER, the chief town in Chittenden county, Vermont, on the east hank of lake Cham- plain, at the mouth of Onion River, and north of Burlington, on Colchester Bay, which spreads north of the town.

COLCHI, in ancient geography, a town of the Hither India, mentioned by Ptolemy and Arrian ; supposed to be Cochin, on the coast of Malabar.

COLCHICUM, meadow saffron, a genus of the trigynia order, and hexandna class of plants, natural order ninth, syathacese : COR. sexpartite, with its tube radicated, or having its root in the ground: CAPS, three^ connected and inflated. There are three species, all bulbous-rooted, low, perennials, and peculiar in that their leaves ap- pear at one time, and their flowers at another ;

the former rising long and narrow at the root in spring, and decaying in June ; the flowers, which are monopetalous, long, tubulae, erect, and six-parted, rise naked from the root in autumn, not more than four or five inches high. The root of this plant is poisonous. When young and full of sap, its taste is very acrid ; but when old, mealy and faint.

COLCHIS, a country of Asia, at the south of Asiatic Sarmatia, east of the Euxine Sea, north of Armenia, and west of Iberia. It is famous for the expedition of the Argonauts, and as the birth- place of Medea. It was fruitful in poisonous herbs, and produced excellent flax. The inha- bitants were originally Egyptians, who settled there when Sesostris king of Egypt

extended his conquests in the north. It is now called Min- grelia, and belongs to the Turks.

CO'LCOTHAR, n. s. A term in chemistry. See VITRIOL.

Colcothar is the dry substance which remains after distillation, but commonly the caput mortuum of vitriol. Quincy.

Cclcotltar, or vitriol burnt, though unto a redness, containing the fixed salt, will make good ink. Drown.

COLD, adj. & n. s. } Sax. geliel. Wanting, CO'LDLY, adv. >or without heat; cold;

CO'LDNESS, n. s. J frigid; applied intellec- tually, morally, and physically. The last appli- cation embraces whatever is chilling to the sense; the second to the obscure of all passionate excite- ment; the destitution of kindness and alTcction. In a good sense to chastity, and the frigid vir- tues; the principles that subdue the appe'ites and desires. The first describes an indifferent, inactive, unconcerned state of the mind; a mind without imagination; addicted to philosophy rather than poetry ; clear, but gelid.

He knew the cause of every maladic, Were it of cold, or hote, or moist, or drie, And wher engendered, and of what humour : He was a veray parfite practisous.

Chaucer. Canterbury Tales. Upon the morve whan that it was day, To Bretaigne token they the rightc way, — Aurelie, and this magicien him beside, — And ben descended ther they wold abide : And this was as the bookes me remember, The colde frosty seson of December. Id.

So downe he tooke his lady in distresse, And layd her underneath a bush to sleepe. Covered with cold, and wrapt in wretchednesse ; Whiles he himselfe all night did nought but weepe, And wayre watch about her for her safeguard kecpe.

Spenser.

There sprung up one kind of men, with whose zeal and forwardness the rest, being compared, were thought to be marvellous cold and dull.

Hooker', Preface.*

Infinite shall be made cold in religion, by your example, that never were hurt by reading books.

Ascham.

Heat and cold are nature's two hands, whereby she chiefly worketh : and heat we have in readiness, in respect of the fire ; but, for cold, we must stay till it cometh, or seek it m deep caves, or high mountains : and, when all is done, we cannot obtain it in any great degree. Bacon's Natural History.

Cold plants have a quicker perception of the heat cf the sun than the hot herbs ; as a cold hand will sooner find a little warmth than an hot. liL

Smell this business with a sense as cold As is a dead man's nose.

Shahspeare. Winter's Tale.

You may

Convey your pleasures in a spacious plenty, And yet seem cold, the time you may so hoodwink ; We've willing dames enough. Id. Macbeth.

She made it good At the edge corner, in the coldest fault. Id.

O noble English, that could entertain, With half their forces, the full power of France ; Aad let another half stand laughing by, All out of work, and cold for action. Id. Henry V.

New dated letters these, Their cold intent, tenor, and substance thus ; Here doth he wish his person, and his power, The which he could not levy. Id. Henry IV.

We should not, when the blood was cold, have threatened our prisoners with the sword.

Id. Cymbeline.

My master's suit will be but cold, Since she respects my mistress' love.

Id. Two Gentlemen of Verona. What a deal of cold business doth a man mispend the better part of life in ? In scattering compliments, tendering visits, following feasts and plays. .

Ben Jonson. The aggregated soil

Death, with his mace petrifick, cold, and dry, As with a trident smote. Milton.

Bids us seek

Some better shroud, some better warmth, to cherish Our limbs benumbed, ere this diurnal star Leave cold the night, how we his gathered beams Reflected, may with matter sere foment. Id.

Such was the discord, which did first disperse Form, order, beauty, through the universe ; While dryness moisture, coldness heat resists, All that we have, and that we are, subsists.

Denham.

Come little infant love me now, While thy unsuspected years Clear thy aged father's brow

From cold, jealousy, and fears. Marvell. Love wisely had of long foreseen

That he must once grow old ; And therefore stored a magazine

To save him from the cold. Id.

When she saw her lord preparea to part, A deadly cold ran shivering to her heart.

Dryden's Fables.

To see a world in flames, and an host of angels in the clouds, one must be much of a stoic to be a cold and unconcerned spectator.

Burnet's Preface to the Theory of the Earth. Unhappy youth ! how will thy coldness raise Tempests and storms in his afflicted bosom.

Addlson's Cato.

Let every tongue its various ceusures chuse, Absolve with coldness, or with spite accuse. Prior.

Swift seemed to wonder what he meant, Nor would _believe my lord had sent j So never offered ones to stir, But coldly said, Your servant, Sir. Swift.

The silver stream her virgin coldness keeps, For ever murmurs, and for ever weeps.

Pope's Windsor Forest.

*The diet in the state of manhood ought to be solid ; and their chief drink water cold, because m such a state **. has its own natural spirit. Arbuthnot on Aliments.*

Cold the soft hand that soothed woe's weary head ! And quenched tho eye, the pitying tear that shed ! And mute the voice whose pleasing accents stole Infusing balm into the rankled soul. Beattie.

Restore those tranquil days that saw me still Well pleased with all, but most with human kind, When Fancy roamed through nature's works at will, Unchecked by cold distrust, and uninformed of ill. Id.

Coldness or anger, even disdain or hate Are masks it often wears, and still too late.

Byron.

COLD, n. s. A disease induced by exposure to the atmosphere in a too gelid state ; or in a state unsuited to the body at the time.

What disease hast thou? A wlioresoncoW, Sir; a cough.

Shakspeare. Henry IV. COLD, in farriery. See FARRIERY, Index. COLD, in medicine. See MEDICINE, Index. COLD, in natural philosophy, signifies, in a re- lative sense, the sensation which accompanies a transition of the fine vessels of the human body from an expanded to a more contracted state. In an absolute sense, it signifies the cause of this transition ; or, in general, the cause of the con- traction of every substance, whether solid or fluid, in nature. Great discussion has been excited in modern times as to the nature of cold, whether it be a positive or a negative quality.

Cold tends to make bodies electric which are not so naturally, and to increase the electric pro- perties of those which are. All bodies do not transmit cold equally well ; but the best conduc- tors of electricity, viz. metals, are likewise the best conductors of cold. When the cold has been carried to such an extremity as to render any body electric, it then ceases to conduct the cold as well as formerly. This is exemplified in the practice of the Laplanders and Siberians, where the cold in winter is extremely severe. In order to exclude it from their habitations the more effectually, they cut pieces'of ice, which in the winter time must always be electric in these countries, and put them into their windows ; which they find to be much more effectual in keeping out the cold than any other substance.

Cold, as well as heat, may be produced arti- ficially, though we have no

method of making cold increase itself as heat will do. The reason of this is obvious; for, if it consist in a partial cessation of motion in the elementary fluid, it is plain, that though we may partly put an end to this motion in a very small part of it, yet that of the surrounding atmosphere, extending for an immense way farther than we can extend our in- fluence, will quickly counteract our operations, and reduce the bodies to the same temperature they were of before. Though there are therefore some liquids which by mixture will produce con- siderable degrees of cold, yet, by being left to the action of the surrounding warm atmosphere, the heat is quickly communicated from it to them, and the effect of the mixture ceases. The case is very different with heat ; for this fluid, of itself naturally very much inclined to motion, no sooner finds an opportuuity of exerting its ac- tion, than vast quantities of what was for- merly at rest rush from all quarters to the place where the action has commenced, and continue

it until the equilibrium is restored. The power of producing cold belongs particularly to bodies of the saline class. In the Philosophical Trans- actions, No. 274, Mr. Geoffroy gives an account of some remarkable experiments with regard to the production of cold. Four ounces of sal am- moniac, dissolved in a pint of water, made his thermometer descend two inches and three-quar- ters in less than fifteen minutes. An ounce of the same salt put into four or five ounces of distilled water, made the thermometer descend two inches and a quarter. Half an ounce of sal ammoniac, mixed with three ounces of spirit of nitre, made the thermometer descend two inches and five lines; but on using spirit of vitriol, in- stead of nitre, it sunk two inches and six lines. In this last experiment it was remarked, that the vapors raised from tha mixture had a consider- able degree of heat, though the liquid itself was so extremely cold. Four ounces of saltpetre mixed with a pint of water, sunk the thermo- meter one inch three lines ; but a little quantity of sea-salt sunk it only two lines. Acids always produced heat, even common salt with its own spirit. Volatile alkaline salts produced cold in proportion to their purity, but fixed alkalis heat. The greatest degree of cold produced by the mix- ture of salts and aqueous fluids was that shown by M. Homberg; who gives the following receipt for making the experiment : ‘ Take a pound of corrosive sublimate, and as much sal ammoniac; powder them separately, and mix the powders very exactly; put the mixture into a phial, pour- ing upon it a pint and a half of distilled vinegar, shaking all well together.’ This composition grows so oold, that a man can scarce hold it in his hands in summer; and it happened, as M. Homberg was making the experiment, that the subject froze. The same thing once happened to M. Geoffrey in making an experiment with sal ammoniac and water, but it never was in his power to make it succeed a second time. If, in- stead of fluid water, we take it in its

congealed state of ice, or rather snow, degrees of cold will he produced vastly superior to any yet mentioned. A mixture of snow and common salt sinks Fah- renheit's thermometer to 0 ; potashes and pow- dered ice sink it 8° farther; two affusions of spirit of salt on pounded ice sunk it 14£° below 0; but by repeated affusions of spirit of nitre Mr. Fahrenheit sunk it 40° below 0. This is the ultimate degree of cold which the mercurial ther- mometer will measure; because the mercury itself begins then to congeal ; and therefore we must afterwards have recourse to spirit of wine, naptha, or some other fluid which will not congeal. The greatest degree of cold hitherto producible by artificial means has been 80° be- low 0 ; which was done at Hudson's Bay by means of snow and vitriolic acid, the thermome- ter standing naturally at 20° below 0. Greater degrees of cold than this have indeed been sup- posed. Mr. Martin, in his Treatise on Heat, relates that at Kirenga in Siberia, the mercurial thermometer sunk to 118° below 0; and profes- sor Brown at Petersburg, when he made the first experiment of congealing quicksilver, fixed the point of congelation at 350° below 0 ; but Dr. Black, as soon as the experiment was made

known in this country, observed, that in all pro- bability the point of congelation was far above this. His reasons for supposing this were that the mercuiy descended regularly only to a cer- tain point, after which it woufd descend sud- denly and by starts 100° at a time. This, he conjectured, might proceed from the irregular contraction of the metal after it was congealed ; and he observed that there was one thermometer employed in the experiment which was not frozen, and which did not descend so low by a great many degrees. Experience has since verified his conjecture ; and it is now generally known, that 40° helow 0 is the freezing point of quicksilver. Since the discovery of the possibility of producing cold by artificial means, various experiments have been made on the efficacy of saline sub- stances in this way ; all of which, when properly applied, are found to have a considerable degree of power. Dr. Boerhaave found that both sal ammoniac and nitre, when well dried in a cru- cible and reduced to fine powder, will produce a greater degree of cold than if they had not been treated in this manner. His experiments were repeated by Mr. Walker, apothecary to the Rad- cliffe Infirmary in Oxford, with the same result : but he found, that his thermometer sunk 32° by means of a solution of sal ammoniac ; when Boer- ha-ive's, with the same, fell only 28°. Nitre sunk it 19°. On mixing the two salts together, he found that the power of producing cold was con- siderably increased. By equal parts of these salts, he cooled some water to 22°, the thermo- meter standing at 47° in the open air. Adding to this some powder of the same kinif, and im- mersing two small phials in the mixture, one containing boiled and the other unboiled water, he soon found them both frozen, the unboiled water freezing first. Having observed that Glau- ber's salt, when it retains the water of crystalli-

sation, produces cold during it solutions, he tried its power when mixed with the other salts, and thus sunk the thermometer from 65° to 19°; and thus he was able to freeze water when the ther- mometer stood as high as 70°. And lastly, by first cooling the salts in water in one mixture, and then making another of the cooled thermo- meters, he was able to sink the thermometer 64°. Thus he froze a mixture of spirit of wine and water in the proportion of seven of the latter to one of the former; and by adding a quantity of cooled materials to the mixture in which this was frozen, the thermometer sunk to — 4, or €9°. Spirit of nitre diluted with water reduced the the thermometer to — 3 ; and, by the addition of sal ammoniac, to 15. but the cold was not aug- mented by the addition of sal ammoniac or nitre. The most remarkable experiment was with spirit of nitre poured on Glauber's salt, the effect of which was found to be similar to that of the same spirit poured on ice or snow ; and the ad- dition of sal ammoniac rendered the cold still more intense. The proportion of these ingredi- dients, recommended by Mr. Walker, are con- centrated nitrous acid two parts by weight, water one part ; of this mixture cooled to the tempera- ture of the atmosphere eighteen ounces, of Glau- ber's salt a pound and a half avoirdupois, and of sal ammoniac twelve ounces On adding tfi«

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Glauber's salt to the nitrous acid, the thermome- ter fell from 50° to — 1°, or fifty-two' degrees; and, on the addition of the sal ammoniac, to — 9°. Thus Mr. Walker was able to freeze quick- silver without either ice or snow, when the ther- mometer stood at 45°. For the experiment four pans were procured of different sizes, so that one might be put within the other. The largest of these pans was placed in a vessel still larger, in which the materials for the second frigorific mix- ture were thinly spread in order to be cooled ; the second pan, containing the liquor, viz. the vitriolic acid properly diluted, was placed in the largest pan ; the third pan, containing the salts for the third mixture, was immersed in the second pan likewise, and floated round the third pan : and the liquor for the third mixture was put into wide-mouthed phials, which were immersed in the second pan likewise, and floated round the third pan ; the fourth pan, which was the smallest of all, containing its cooling materials, was placed in the midst of the salts of the third pan. The materials for the first and second mixtures con- sisted of diluted vitriolic acid and Glauber's salt ; the third and fourth of diluted nitrous acid, Glauber's salt, and sal ammoniac, in the propor- tions above mentioned. The pans being adjusted, the materials of the first and largest pan were mixed : this reduced the thermometer to 10°, and cooled the liquor in the second pan to 20° ; and the salts for the second mixture which were placed underneath in the large vessel nearly as much.

The second mixture was then made with the materials thus cooled, and the thermometer was reduced to 3°. The .ingredients of the second mixture by immersion in this, were cooled to 10°, and, when mixed, reduced the thermometer to — 15°. The materials for the fourth mixture were cooled by immersion in this third mixture to about — 12°. Ou mixture they sunk the mer- cury very rapidly, and seemingly below — 40°, though the froth occasioned by the ebullition of the materials prevented any accurate observation. The reason why this last mixture reduced the thermometer more than the third, though both were of the same materials, and the latter of a lower temperature, was supposed to have been, partly, because the fourth pan had not another immersed in it, to give it heat, and partly because the materials were reduced to a finer powder. The experiments were repeated with many vari- ations ; bu only one mixture appeared to Dr. Beddoes, by whom the account was communi- cated .to the Royal Society, to be applicable to any useful purpose. This is oil of vitriol diluted with about an equal quantity of water ; which, by dissolving Glauber's salt, produces about 46° of cold, and by the addition of sal ammon.'ac becomes more intense by a few degrees. At one time, when Mr. Walker was trying a mixture of two parts of oil of vitriol and one of water, he perceived, that at the temperature of 35° the mixture coagulated as if frozen, and the thermo- meter became stationary; but on adding more Glau- ber's salt, it fell again in a short time : but less cold was produced than when this circumstance did not occur, and when the acid was weaker. The same appearance of coagulation took place with other proportions of acid and water, and*

with other temperatures. The effect of Glauber V salt in producing cold took place only when '. was possessed of its water of crystallisation; an;. thus the mineral alkali also augmented the cold of some of the mixtures : but, when the water of crystallisation was dissipated, neither of them had any effect of this kind. ' This circumstance,' says Dr. Beddoes, ' leads us to some measure of the theory of the phenomenon. Water undoubt- edly exists in a solid state in crystals ; it must, therefore, in other cases absorb a determinate quantity of fire before it can return to its liquid state. On this depends the difference between Glauber's salt and mineral alkali, in its different states of crystallisation and efflorescence. The same circumstance, too, enables us to understand the great effect of Glauber's salt; which, as far as I understand, has the greatest quantity of water of crystallisation.' On this the reviewers remark, that ' if in summer the water brought from a deep well is at 52°, in this cheap and easy way it might be reduced to 12° ; and wine placed, in it would be chilled.' These excessive degrees of cold occur naturally in many parts of the globe in the winter. It is true, we are very much unacquainted with them in this country : yet in the winter of 1780, Mr. Wilson of Glasgow ob- served, that a thermometer laid on the snow sunk to 25° below 0 ; but this was only for a short time ; and in

general our atmosphere does not admit of very great degrees of cold for any length of time. Mr. Derham however, in 1708, ob- served in England, that the mercury stood within one-tenth of an inch of its station when plunged into a mixture of snow and salt. In 1732 the thermometer at Petersburg!) stood at 28° below 0; and in 1737, when the French academicians wintered at the north polar circle, or near it, the thermometer sunk to 33° below 0; and, in the Asiatic and American continents, still greater de- grees of cold are very common.

By extreme degrees of cold, trees are burst, rocks rent, and rivers and lakes frozen several feet deep : metallic substances blister the skin like red hot iron : the air, when drawn in by respiration, hurts the lungs, and excites a cough ; even the effects of fire in a great measure seem to cease ; and metals, though kept for a considerable time before a strong fire, will still freeze water when thrown upon them. When the French mathematicians wintered at Tornea in Lapland, the external air, when suddenly admitted into their rooms, converted the moisture of the air into whirls of snow; their breasts seemed to be rent when they breathed it ; the contact of it was intolerable to their bodies ; and the spirit of wine, which had not been highly rectified, burst some of their thermometers by the congelation of the aqueous part. Extreme cold very often proves fatal to animals, in countries where the winters arc very severe. Thus 7000 Swedes perished, at once, in attempting to pass tne moun- tains which divide Norway from Sweden. It is not necessary, indeed, that the cold, in order to prove fatal to human life, should be so very intense as has been just mentioned. There is only requisite a degree somewhat below 32° of Fahrenheit, accompanied with snow or hail, from which shelter cannot be obtained. The snow

which falls upon the clothes, or the uncovered parts of the body, then melts, and hy a continual evaporation carries off the animal heat to such a degree, that a sufficient quantity is not left for the support of life. In such cases, the person first feels himself extremely chill and uneasy; then begins to grow listless, unwilling to walk or use exercise to keep himself warm ; and at last becomes drowsy, sits down to refresh himself with sleep, and wakes no more. An instance of this was seen not many years ago at Terra del Fuego, where Dr. Solander, with some others, having taken an excursion up the country, the cold was so intense, that one of their number died. The Doctor himself, though he had warned his com- panions of the danger of sleeping in that situ- ation, could not be prevented from making that dangerous experiment himself; and though he was awaked with all possible expedition, his body had so much shrunk in bulk, that his shoes

fell off his feet, and it was with the utmost diffi- culty that he was recovered. In those parts of the world where vast masses of ice are produced, the accumulation of it, by absorbing the heat of the atmosphere, occasions an absolute sterility in the adjacent countries, as is particularly the case with the island of Iceland, where the vast collec- tions of ice floating out from the Northern Ocean, and stopped on that coast, are sometimes several years in thawing. Indeed, where great quantities of ice are collected, it would seem to have a power like fire, of both augmenting its own quality and of communicating it to adjacent bodies.

The conversion of all temperatures, however low, of any liquid or solid whatever, into a vapor, is uniformly accompanied with the ab- straction of heat from surrounding bodies, or, in popular language, the production of cold ; and the degree of refrigeration will be proportional to the capacity of the vapor for heat, and the ra- pidity of its formation. The application of this principle to the uses of life, was first suggested by Drs. Cullen and Black, but it has been great- ly improved and extended by Mr. Leslie. Dr. Cullen seems to have been the first who applied the vacuum of an air-pump to quicken the eva- poration of liquids, with a view to the abstraction of heat, or the production of artificial cold and congelation. In the year 1755 he plunged a full phial of ether into a tumbler of water, and on placing it under the receiver, and exhausting the air, the ether boiled, and the surrounding water froze. Mr. Edward Nairne, a London optician, published in 1777 in the Transactions of the Royal Society, ‘ an account of some experiments made with an air-pump.’ After stating, that at a certain point of rarefaction the moisture about the pump furnished an atmosphere of vapor, which effected his comparative results with the mercurial gauge and pear gauge, he says, ‘ I now put some sulphuric acid into the receiver, as a means of trying to make the remaining contents of the receiver, when exhausted as much as pos- sible, to consist of permanent air only, unadulte- rated with vapor.’ He was thus enabled by this artificial dryness to exhibit certain electrical phenomena to great advantage. The next step which Mr. Nairne took, was to produce artificial cold by the air-pump. ‘ Having lately received

from my friend Dr. Lind,’ says he, ‘ some ethei prepared by the ingenious Mr. Woolfe, I was very desirous to try whether I could produce any considerable degree of cold by the evaporation of ether under a receiver whilst exhausting.’ Accordingly he succeeded in sinking a thermo- meter, whose bulb was from time to time dipped into the ether in vacuo, 103° below 56°, the tem- perature of the apartment. Mr. Nairne made no attempt to condense the vapor in vacuo by chemical means, and thus to favor its renewed formation frorr. the liquid surface ; which we con- sider to be the essence of professor Leslie’s capital improvement on Cullen’s plan of artificial refri- geration. After Nairne’s removing the vapor of water by

sulphuric acid, to produce artificial dry- ness, there was indeed but a slight step to the production of artificial cold, by the very same arrangement ; but still this step does not appear to have been attempted by any person from the year 1777 to 1810, when professor Leslie was naturally led to make it, by the train of his re- searches on evaporation and hygrometry.

Having in the month of June introduced a surface of sulphuric acid under the receiver of an air-pump, and also a watch glass filled with water, he found that after a few strokes of the pump, the water was converted into a solid cake of ice, which being left in the rarefied medium, continued to evaporate, and after the interval of about an hour totally disappeared. When the air has been rarefied, 250 times, the utmost that under such circumstances can perhaps be effected, is that the surface of evaporation is cooled down 120° Fahrenheit in winter, -and would probably, from more copijus evaporation and condensation, sink nearly 200° in summer. If the air be rarefied only fifty times, a depression of 80°, or even 100° will be produced.

We are thus enabled by this elegant combina- tion, to freeze a mass of water in the hottest weather, and to keep it frozen, till it gradually waste away, by a continued but invisible pro- cess of evaporation. The only thing required is, that the surface of the acid should approach tolerably near that of the water, and should have a greater extent; for otherwise the moisture would exhale more copiously than it could be transferred and absorbed, and consequently the dryness of the rarefied medium would become reduced, and its evaporating energy essentially impaired. The acid should be poured to the depth of perhaps half an inch, in a broad flat dish, which is covered by a receiver of a form nearly hemispherical; the water exposed to congelation may be contained in a shallow cup, about half the width of the dish, and having its rim supported by a narrow porcelain ring, upheld above the surface of the acid by three slender feet. It is of consequence that the water should be insulated as much as possible, or should present only a humid sur- face to the contact of the surrounding medium ; for the dry sides of the cup might receive, by radiation from the external air, such accessions of heat as greatly to diminish, if not to counter- act the refrigerating effects of evaporation. This inconvenience is in a great measure obviated, by investing the cup with an outer case, at the inter- val of about half an inch. If both the cup and

its case consist of glass, the process of congela- tion is viewed most completely ; yet when they are formed of a bright metal, the effect appears,

on the whole, more striking. But the preferable mode, and that which prevents any waste of the powers of refrigeration, is to expose the water in a saucer of porous earthen-ware. At the in- stant of congelation, a beautiful net-work of icy spiculae pervades the liquid mass.

The disposition of the water to fill the receiver with vapor, will seldom permit even a good air- pump to produce greater rarefaction than that indicated by three-tenths of an inch of mercury, beneath the barometrical height, at the time. But every practical object may be obtained by more moderate rarefactions, and a considerable surface of acid. The process goes on more slowly, but the ice is very solid, especially if the water have been previously purged of its air by distillation, or boiling for a considerable time. If we use a receiver, with a sliding wire passing down from its top through a collar of leathers, and attach to it a disc of glass ; on applying this to the surface of the water cup, we may instantly suspend the process of congelation ; and raising the disc as suddenly, permit the advancement of the process. ' In exhibiting the different modifications of this system of congelation to my pupils,' says Dr. Ure, ' I have been accustomed for many years to recommend the employment of a series of cast-iron plates, attachable by screws and stop-cocks to the air-pump. Each iron disc has a receiver adapted to it. Thus we may, with one air-pump, successively put any number of free- zing processes in action. A cast-iron drum of considerable dimensions being filled with steam, by heating a small quantity of water in it, will sufficiently expel the air for producing the requi- site vacuum. When it is cooled by affusion of water, one of the above transferrer plates being attached to the stop-cock on its upper surface would easily enable us, without any air-pump, to effect congelation by means of sulphuric acid, in the attenuated atmosphere. Suppose the capacity of the receiver to be one-sixtieth of the iron cylinder ; an aeriform rarefaction to this degree would be effected in a moment by a turn of the stop-cock ; and, on its being returned, the mois- ture below would be cut off, and the acid would speedily condense the small quantity of vapor which had ascended. This cheap and powerful plan was publicly recommended by me upwards of ten years ago, when I had a glass model of it made for class illustration.'

The combined powers of rarefaction, vapori- sation, and absorption, are capable of effecting the congelation of quicksilver. If this metal, contained in a hollow pear-shaped piece of ice, be suspended by cross threads near a broad sur- face of sulphuric acid, under a receiver ; on ur- ging the rarefaction it will become frozen, and may be kept in the solid state for several hours. Or otherwise, having introduced mercury into the large bulb of a thermometer, and attached the stem to the sliding rod of the receiver, place this over the sulphuric acid and water cup on the air-pump plate. After the air'has been rarefied about fifty times, let the bulb be dipped

repeat- edly into the very cold but unfrozen water, and VOL. VI.

again drawn -..p about an inch. In this way it will become incrusted with successive coats of ice, to the twentieth of an inch thick. The cup of water being now withdrawn from the receiver, the pendent icicle cut away from the bulb, and the surface of the ice smoothed with a warm finger, the receiver is again to be replaced, and the bulb being let down within half an inch of the acid, the exhaustion must be pushed to the utmost. When the syphon-gauge arrives at the tenth of an inch, the icy crust opens with fissures, and the mercury, having gradually descended in the tube till it reach its point of congelation, or 39° below zero, sinks by a sudden contraction almost into the cavity of the bulb. The appara- tus being now removed, and the ball speedily broken, the metal appears a solid shining mass, that will bear the stroke of a hammer. A still greater degree of cold may be produced, by ap- plying the same process to cool the atmosphere which surrounds the receiver.

When the acid has acquired one-tenth of wa- ter, its refrigerating power is diminished only one-hundredth. When the quantity of moisture is equal to one-fourth of the concentrated acid, the power of generating cold is reduced by a twentieth ; and, when the dilution is one-half, the cooling powers become one-half or probably less. Sulphuric acid is hence capable of effecting the congelation of more than twenty times its weight of water, before it has imbibed nearly its own bulk of that liquid, or has lost about one- eiglith of its refrigerating power. The acid should then be removed, and reconcentrated by heat. See CHEMISTRY

The danger of using a corrosive acid in un- skilful hands may be obviated by using oatmeal, desiccated nearly to brownness before a kitchen fire, and allowed to cool in close vessels. With a body of this, a foot in diameter and an inch deep, professor Leslie froze a pound and a quar- ter of water, contained in a hemispherical porous cup. Muriate of lime in ignited porous pieces, may also be employed as an absorbent. Even mouldering trap or whinstone has been used for experimental illustration with success.

By the joint operation of radiation and evapo- ration, from the surface of water, the natives of India are enabled to procure a supply of ice, when the temperature of the air is many degrees above the freezing point. Not far from Calcutta, in large open plains, three or four excavations are made in the ground, about thirty feet square and two feet deep, the bottom of which is covered to the thickness of nearly a foot with sugar canes, or dried stalks of Indian corn. On this bed are placed rows of small unglazed earthen pans, about an inch and a quarter deep, and somewhat po- jous. In the dusk of the evening, during the months of December, January, and February, they are filled with soft water, previously boiled and suffered to

cool. When the weather is very fine and clear, a great part of the water becomes frozen during the'night. The pans are regularly visited at sunrise, and their contents emptied into baskets which retain the ice. These are now carried to Conservatory made by sinking a pit fourteen or fifteen feet deep, lined with straw under a layer of coarse blanketing. The smsill

• sheets of ice are thrown down into the cavity, and rammed into a solid mass. The mouth of the pit is then closed up with straw and blankets, and sheltered by a thatched roof.

COLDENIA, in botany, a genus of the tetra- gynia order, the tetrandria class of plants : CAL. tetraphyllous : COR. funnel-shaped ; STYLES four; SEEDS two, bilocular. There is but one species, a native of India. It is an annual plant, whose branches trail on the ground, extending about six inches from the root. They are adorned with small blue flowers, growing in clusters, which come out from the wings of the leaves. They are propagated by seeds sown on a hot bed; when the plants come up, they may be removed each into a seperate pot, and plunged into a hot bed of tanner's bark, where they are to remain constantly.

CODDING, or HOLDING a small town of Jutland, formerly the residence of the Danish kings and a considerable sea-port, but its harbour is now so choked with sand that its navigation is completely destroyed. Its castle on a hill, is a

E lace of much importance being situated near the leswick frontier from which town it is but sixty- two miles distant. Lat. 55° 30′ N., long. 9° 29′ E.

COLDINGHAM, a parish of Scotland, in Berwickshire, nearly seven miles long and as many broad, but of a very irregular figure. It was for- merly one great common, but was divided among the proprietors, about 1773, by authority of the Court of Session.

COLDINGHAM, a town in the above parish, sup- posed to be the Colonia of Ptolemy, and called by Bede the city of Colud, Coludum and Colda- na. It was famous many ages ago for its convent which was the oldest nunnery in Scotland ; for here Ethelreda took the veil in 1670. From the ancient name, Coludum, it would seem that it had been formerly inhabited by the religious called Culdees. In 870 it was destroyed by the Danes, but its name

has been rendered immortal by the heroism of its nuns ; who, to preserve themselves inviolate from those invaders, cut off their lips and noses ; and thus rendering themselves objects of horror, were, with their abbess Ebba, burnt in the monastery by the disappointed savages. After this it lay deserted, till the year 1098, when king Edward founded on its site a priory of benedic- tines in honor of St. Cuthbert, and bestowed it on the monks of Durham. It has fairs, 25th July, and 24th of October. It is two miles and a half north-west of Eyemouth, and eight N.N. W. of Berwick.

COLDITZ, a town of Germany, in the circle of Leipsic, seated on the Mulda, ten miles north- east of Leipsic. It was several^ times pillaged by the Swedes and Hussites, during the civil wars of Germany, in the seventeenth century.

COLDSTREAM, a town of Scotland seated on the Tweed, over which it has a fine stone bridge to Cornhill in England. Here General Monk fixed his head quarters before he marched into England to restore Charles II. and raised that regiment, which is still called theColdstream regiment of Guards. Few towns are better situ- ated than Coldstream for manufactures. The banks of the Tweed are rich in corn and cattle, and coals are cheap. The roads from Berwick

to London, from Berwick to Kelso, and from Uunse to England, all pass through the town. The excellence of the wool from the neighbour- ing district, points out the woollen manufacture as being adapted to the place. No extensive trade, however, is carried on. It has fairs, 30th July and 12th November. It is 332 miles and a half north of London, and eleven south-west of Berwick.

COLE (Henry) D. D. was a native of Gad- shill in the Isle of Wight, and elected from Win- chester school to a fellowship at New College, Oxford. Having graduated as a bachelor of civil law he visited Italy, and on his return practised in the court of Arches. He obtained under Henry the Vllth, the living of Chelmsford in Essex, with a stall in St. Paul's cathedral, and an archdeaconry ; together with the wardenship of his college, to which he was elected in 1542, with the living of Newton Longueville, Bucks. In the next rei^n, however, he honestly sent in a resignation of his benefices ; from his objections to the reformed doctrine of the Church, a circumstance not forgotten by Queen Mary, who made him provost of Eton, dean of St. Paul's, and judge of the court of Arches. He preached at Archbishop Cranmer's execution, and was deprived of all his appointments by Queen Elizabeth. He died in prison in 1519.

COLE (Thomas), an eminent dissenting minis- ter of the seventeenth century. He was educated at Westminster school, from whence he was

elected student of Christ Church, Oxford, where he took his degree of M. A. In 1656 he was ap- pointed principal of St. Mary Hall, where he was tutor to Locke. At the Restoration he was ejected for non-conformity, upon which he opened an academy at Nettlebed, but afterwards removed to London, where he settled, and became one of the lecturers at Pinner's Hall. He died in 1697. He wrote a Discourse on Regeneration, Faith, and Repentance, 8vo. ; a Discourse of the Christian Religion in Sundry Points, 8vo. ; the Incomprehensibleness of imputed Righteousness by Human Reason, &c. 8vo. ; and other tracts.

COLE BROOK, a rough hilly township of the United States, on the north line of Connecticut, in Litchfield county, thirty miles north-west of Hartford city. It was settled in 1756. Here are two iron works, and several mills, on Still river, a north-west water of Farmington river. In digging a cellar in this town, in 1796, the workmen, at the depth of about nine or ten feet, found three large tusks and two thigh bones of an animal, the latter of which measured each about four feet four inches in length, and twelve inches and a half in circumference. When first disco- vered they were entire, but as soon as they were exposed to the air they mouldered to dust. This adds another to the many facts which prove that a race of enormous animals, now extinct, once inhabited North America.

COLEBROOK DALE, a winding valley in the eastern part of Shropshire, on the banks of the Severn, between two vast mountains, which di- vide in various romantic forms, and are covered with beautiful hanging woods. In making a na- vigable canal to the Severn, in 1787, several springs of excellent native tar, or petroleum, were

here discovered, which, though now much reduced, flowed so copiously at first, as to afford from se- venty to eighty gallons per day ; so that barrels could hardly be got ready fast enough to barrel it up. A spring of brine was also discovered, as strong as most of that used for making salt. A work for obtaining mineral tar, from the condensed smoke of pit-coal, has been erected, and the most extensive iron works in England are established in this dale; which, with the bridge of cast iron over the Severn, add much to the natural roman- tic scenery of the place. 'The noise of the forges, mills, &c. (says Mr. Young) with all their vast machinery ; the flames bursting from the furnaces, with the burning of coal, and the smoke of the lime kilns, are altogether horribly sublime.' The iron bridge was erected in 1779;

the road over it, made of clay and iron flag, a foot deep, is twenty-four feet wide ; the span of the arch is 100 feet six inches ; and the height from the base to the centre forty feet. The weight of iron in all is 178 tons and a half.

COLEOPTERA, or beetle, the name of Linnoeus's first order of insects, thus ordinarily characterised, wings four, the upper crustaceous: — with a straight suture : giving the appearance of being covered with crustaceous shells. See EN- TOMOLOGY.

COLERAIN, a large town of Ireland, in the county of Londonderry and province of Ulster, seated on the river Bann, four miles south of the coast. It was formerly a place of great consider- ation, being the chief town of a county erected by Sir John Perrot, during his goverment of Ireland ; whereas it is now only the head of one of the ba- ronies in the county of Londonderry ; but it is still a corporation, and sends oue member to the Imperial Parliament. It is very elegantly built. The port is indifferent, occasioned by the extreme rapidity of the river, which repels the tide, and makes the coming up to the town difficult ; so that it has little trade, except its valuable salmon fishery, which amounts to some thousand pounds a year. Colerain is twenty miles north-east of Londonderry, and 114 from Dublin.

COLERAIN, a town of the United States in Georgia, on the north bank of St. Mary's river, Camden county, about forty-five miles from its mouth. On the 29th of June, 1796, a treaty of peace and friendship was concluded at this place, between the United States on one part, and the chiefs and warriors of the Creek nation on the other.

COLES (Elisha), a native of Northampton- shire, was born about the commencement of the seventeenth century, and embarked in trade, but afterwards became manciple at Magdalen College, Oxford, under the commonwealth. The Restora- tion displaced him ; he however obtained a clerk- ship in the service of the East India Company. He published a highly Calvinistic work in favor of the doctrine of predestination, which is still held in estimation by the sect to which he be- longed. He died in 1688.

COLES (E.), nephew of the above, was born in the same county, about the year 1640, and en- tered of the college of which his relation was a retainer. After the Restoration he first supported himself by private tuition in London, then be-

came usher at Merchant Tailors' school ; but lost the situation by some alleged misconduct. Little of the particulars of his life is known ; he died in Ireland in 1 680, having compiled two dictionaries ; one of his vernacular

language, the other of Latin and English, with a correspondent rendering of English into Latin. Also The Young Scholar's best Companion ; A Hieroglyphical Bible for Youth ; A Natural Method of Learning Latin, 8vo. ; The complete English Schoolmaster, 8vo. ; A System of Stenography ; a tieatise bearing the whimsical title of Nolens Volens, or you shall make Latin whether you will or no ; and a Harmony of the Evangelists.

CCXLESEED, n. s. From cole and seed. Cabbage seed.

Where land is rank, it is not good to sow wheat after a fallow ; but coleseed or barley, aud then wheat.

Mortimer,

COLE-SEED, the seed of t le napus saliva, or long-rooted, narrow leaved rape, called in English navew, and reckoned by Linnsus among the brassicas or cabbage kind. See BRASSICA. This plant is cultivated to great advantage in many parts of England, on account of the rape oil ex- pressed from its seeds. The practice of sowing it was first introduced by those Germans and Dutchmen who drained the fens of Lincolnshire; and hence the notion has generally prevailed, that it will thrive only in a marshy soil ; but this is now found to be a mistake. In preparing the land, care must be taken to plough it in May, and again about midsummer, making the ground as fine and even as possible. It must be sown the very day of the last ploughing, about a gallon on an acre. In January, February, and March, it affords good food for cattle, and will sprout again when cut ; after which His excellent nourishment for sheep. If it is not too closely cropped, it will, after all, bear seed in July. The same caution however, is requisite with this food as with clover, till cattle are accustomed to it, as it is apt otherwise to swell them. When cultivated solely for the seed, it must be sown on deep strong land without dung, and must stand till one-half of the seeds at least are turned brown ; which will be earlier or later, according to the season. In this state it is to be cut like wheat, and with the same care. Every handful as it is cut should be regularly ranged on sheets, that it may dry leisurely in the sun, which will com- monly be in a fortnight ; after which it must be carefully threshed out, and carried to the mill for expressing the oil. The produce of cole-seed is generally from five to eight quarters on an acre.

COLES-HILL, a market town of Warwick- shire, seated on the Colne, at the side of a hill. It consists of one long street, with a smaller one branching from the middle towards the church- yard, which is on the summit of the eminence. The church is a very old structure, with a hand- some decorated Gothic tower and spire. It has a market on Wednesday. It is eleven miles north- west of Coventry, and 1 04 from London.

COLESHY, a town of Southern India, in the province of Travancore. Here is a small har- bour, where ships are secured from north and east winds, by the shelter of some rocks. The

Danes formerly had a small factory here Long. 77° 11 E., lat. 8° 12′ N.

COLET (John), D.U., dean of St. Paul's, and son of Henry Colet, knight, was born in London in 1466. He was sent to Magdalen College, Ox- ford, where he remained seven years. About 1493 he went to Paris, and thence to Italy. On his return to England in 1497 he took orders, and read lectures gratis at Oxford, on the epistles of St. Paul. At this time he possessed the rec- tory of Dennington, and was also prebendary of York, and canon of St Martin's le Grand. In 1502 he became prebendary of Sarura ; preben- dary of St. Paul's in 1505; and immediately after dean of that cathedral, having taken the de- gree of D.D. He was also chaplain to Henry VIII. He introduced the practice of preaching and expounding the Scriptures; and soon after established a perpetual divinity lecture in St. Paul's church, three days in the week ; an insti- tution which paved the way for the reformation. About 1508 dean Colet formed his plan for the foundation of St. Paul's school, which he com- pleted in 1512, and endowed with estates, which now amount to a very large sum. In his station he so labored to restore discipline as to bring upon himself the charge of heresy : the clergy, whom he attempted to reform, became his ene- mies, and bishop Fitzjames complained of him to Warham, archbishop of Canterbury, who dis- cussed him without a hearing. Being seized with the sweating sickness, he died in 1519, aged fifty-three. He wrote, 1. Rudimenta Gramma- tices ; 2. The Construction of the Eight Parts of Speech; 3. Daily Devotions; 4. Epistolae ad Erasmum ; 5. Several sermons ; and other works which still remain in MS.

CO'LE \VORT, a.s. Sax. caj>lj>yrMs. A spe- cies of cabbage.

The tlecoction of culeworte is also recommended to bathe them. Wiseman of an Erysipelas.

She took the coleworts which her husband got From his own ground (a small well-watered spot) ; She stripped the stalks of all their leaves ; the befet She culled, and then with handy care she dressed.

Dryden.

How turnips hide their swelling heads below, And how the closing coleworts upward grow. Gay.

COLEWORT. See BRASSICA.

COLFORD, a town in Gloucestershire on the borders of Monmouthshire, near which there are considerable iron-works. It has a market on Friday ; fairs, June 20th, and November 24th. It is twenty-three miles W.S.W.,of Gloucester, and 124 from London.

COLIBERTI, or COLIBERTS, in law, were tenants in soccage, and particularly such villeins as were manumitted or made freemen. But they had not an absolute freedom ; for, though they were better than servants, yet they had superior lords to whom they paid certain duties, and, in that respect, might be called servants, though they were of middle condition between freemen and sen-ants.

COLIBRI, a species of humming bird in Brasil. See TROCHILUS.

CO'LIC, n. s. & adj. Lat. colicus. It strictly is a disorder of the colon ; but loosely, anydisoider of the stomach or bowels that is at-

tended with pain. There are four sorts: 1. A bilious colic, which proceeds from an abundance of acrimony or choler irritating the bowels, so as to occasion continual gripes, and generally with a looseness ; and this is best managed with lenitives and emollients. 2. A flatulent colic, which is pain in the bowels, from flatuses and wind, which distend them into unequal and un- natural capacities; and this is managed with car- minatives and moderate openers. 3. An hyste- rical colic, which arises from disorders of the womb, and is communicated by consent of parts to the bowels ; and is to be treated with the ordinary hysterics. 4. A nervous colic, which is from convulsive spasms and contortions of the guts themselves from some disorders of the spirits, or nervous fluid, in their component fibres; whereby their capacities are, in many places, strengthened, and sometimes so as to occasion obstinate obstructions : this is best remedied by brisk cathartics, joined with opiates and emol- lient diluters. There is also a species of this distemper, which is commonly called the stone colic, by consent of parts, from the irritation of stone or gravel in the bladder or kidneys ; and this is most commonly to be treated by nephri- tics and oily diuretics, and is assisted with the carminative turpentine clysters.

Colicks of infants procted from acidity, and the air in the aliment expanding itself, while the aliment ferments. Arbuthnot.

Intestine stone and ulcer, coUch pangs. Milton.

COLICA, in medicine, the colic, a well known disease ; characterised by a pain in the belly, and a sensation like a twisting of the intestines, at- tended with vomiting and costiveness. This disease is classed by Cullen under the

class neuroses, order spasmi. It is occasioned very frequently by the poison of white lead. See MEDICINE.

COLIGNI (Gaspard De), admiral of France, was born in 1516. He signalised himself in his youth, in the reigns of Francis I. and Henry II., and was made colonel of infantry, and admiral of France, in 1552. Henry II. employed him in the most important affairs ; but, after the death of that prince, he embraced the reformed religion, and became the chief of the protestant party : he strongly opposed the house of Guise, and ren- dered this opposition so powerful, that it was thought he would have overturned the French government. On the peace made after the battles of Jarnac and Montcontour, Charles IX. deluded Coligni into security by his deceitful favors ; and, though he recovered one attempt upon his life, when he attended the nuptials of the prince of Navarre, he was included in the dreadful mas- sacre of the protestants on St. Bartholomew's Day, 1572, and his body treated with wanton brutality by a misguided popish populace. A party, headed by the duke of Guise, broke into his house, and one of the servants of the latter named Besrne, drawing his sword, the admiral said calmly, 'young man, you ought to respect my gray hairs ; but do as you please, you cai. only shorten my life a few days.' Besme stabbed him repeatedly, and throwing his body through the window, it was for three days exposed to the in-

suits of the mob, and hung by the feet upon a gibbet. It was at length taken down by his cousin Montmorency, and buried in the chapel of Chantilly. Catherine de Medicis had his head embalmed, and sent as a present to Rome.

COLIMA, a small town of Mexico, situated in a large fertile valley of the same name, which produces cocoa, cassia, and sometimes gold. Near this town is a volcano with two peaks, from both of which smoke continually issues, and it occasionally belches forth flames. According to Dampier, this mountain is in lat. 18° 54′ N., and long. 103° 24′ W. The town is included in the intendancy of Guadalacara, arid is 45 1 miles west from Mexico.

COLIN, or KOLLIN, a town of Bohemia, on the Elbe, with a castle of considerable strength. Garnets and topazes are procured in the neigh- bourhood, the polishing, &c., of which give em- ployment to many of the inhabitants. Near here is the castle of Chotzemitz, where was fought the celebrated battle of that name between the Aus- trians and Prussians, June 18th, 1757. Colin is included in the circle of Kaurzim, and is twenty- eight miles east of Prague.

COLIOURE, a small, but ancient and strong, town of France, in the department of Eastern Pyrenees, with a small port on the Mediterranean, defended by a castle on a rock. It is chiefly in- habited by fishermen. It was taken by the Spaniards in December, 1793, but surrendered to the French, with all its artillery and stores, after a siege of nineteen days, on the 26th of May, 1794. The national convention decreed that a column should be erected on the spot, in memorial that ' here 7000 Spaniards laid down their arms before the republicans.' It is five leagues south east of Perpignan, and five east of Ceret.

COLISEUM, the amphitheatre built at Rome by Vespasian. See AMPHITHEATRE and CIRCUS.

COLITES, in natural history, a name given by some writers to a kind of pebble, found in the shape of the human penis and testes, either separately or together.

COLLAERT (Adrian), an eminent engraver who flourished about 1550, born at Antwerp. After having learned the principles of engraving, he went to Italy. He worked entirely with the graver, in a firm neat style, but rather stiff and dry. The vast number of plates executed by him evince the facility with which he engraved ; but though exceedingly neat, they are seldom highly finished.

COLLAERT (John), the son of Adrian, was also an excellent artist. He drew and engraved in the style of his father ; and was equal to him in merit. He must have been very old when he died; for his prints are dated from 1555 to 1622. He assisted his father, and engraved besides a prodigious number of plates on various subjects. One of his best prints is Moses striking the rock, lengthwise, from Lambert Lombard. A great number of small figures are introduced into this print ; and they are admirably well executed : the heads are fine, and the drawing very correct.

COLLAHUAS, a province of Peru, South America, bounded on the north by that of Chum- bivilcas, east by that of Canes and Canches,

south-east by that of Latnpa, south by that of Arequipa, and west by that of Camana. It is fifty-two leagues in length, south-east and north- west, and sixteen vviJe. Being situated in the Andes, its general temperature is bleak, but that part which borders oa Camana is mild. The valleys produce wine, brandies, maize, wheat, pulse, and figs, which are preserved extensively as food. Other parts of this province feed large and small cattle, and native sheep. The whole province is very rocky, and the roads ill con- trived and

rough. It is rich, however, in silve mines, which are of great depth. Here arj also gold, tin, lead, copper, and sulphur mines. The capital is Cailloma.

COLLA'PSE, n. s. > Lat. collabor, collap- COLLA'PSION, n. s. Ssus. To fall together ; to close so as that one side touches the others. The act of closing ; the state of vessels closed.

In consumptions and atrophy the liquids are ex- hausted, and the sides of the canals collapse ; there- fore the attrition is increased, and consequently the heat. Arbuthnot on Diet.

CO'LLAR, n. s. & v. a. Lat. collate ; Fr. co- lier. Whatever encloses the neck, even the cla- vicle, the bones on each side the neck are called the collar-bone; that which surrounds the neck of whatever constructed, and for whatever pur- pose worn, is the collar. To slip the collar is to get free, to disentangle from the collar, but this applies to collar only when it is the badge or in- strument of slavery and drudgery. To collar is to seize by the collar, or the throat. But both the noun and verb are used in a different sense, as derived from Fr. Her, colier, Lat. colligare, it is applied to meat tied together to be cooked. A collar of brawn is the quantity bound up in one parcel. To collar beef, or other meat is to roll it up, and bind it hard and close with a string or collar.

The tapes of her white volupere, Were of the same suit of hire colere.

Chaucer's Canterbury Tales.

When, as the ape him heard so much to talk Of labour, that did from his liking baulk, He would have slipt the collar handsomely.

Hubberd's Tale.

Her waggon spokes made of long spinners' legs, The traces of the smallest spider's web, The collars of the moonshine's watery beams.

Shakspeare.

He bore the majesty of a mighty emperor; his crown and sceptre of pure gold, a collar of pearls about his neck, his garment of crimson velvet, em- broidered with precious stone and gold.

Milton. Hist. Mosco.

And ghostly Charles turning his collar low, The purple thread about his neck doth show.

Marcell.

Ten brace and more of greyhounds ; With golden muzzles all their mouths were bound, And collars of the same their neck surround.

Dryden's Fables.

That's nothing, says the dog, but the fretting of my collar : nay, says the wolf, if there be a collar in the case, I know better things than to sell my liberty.

L'Ei trange.

A page riding behind the coach, fell down, bruised his face, and broke his right collar-bone.

Wiseman's Surgery.

Headlong he falls, and on the rugged stone, Distorts his neck, and cracks the collar-bone. Gay.

COLLAR, in Roman antiquity, a sort of chain put generally round the necks of slaves who had run away after they were taken, with an inscrip- tion round it, intimating their being deserters, and requiring their being restored to their proper owners, &c.

COLLAR, in the modern sense, an ornament consisting of a chain of gold, enamelled, fre- quently set with ciphers or other devices, with the badge of the order hanging at the bottom, worn by the knights of several national orders over their shoulders, on the mantle, and its figure drawn round their armories. See HERALDRY and ORDERS.

COLLAR, KMGHTS OF THE, a military order in the ci-devant republic of Venice, called also the order of St. Mark, or the Medal. The doge and the senate conferred this order; the knights bore no particular habit, only the collar, which the doge put around their necks, with a medal, wherein was represented the winged lion of the republic.

COLLAR OF A DRAUGHT HORSE, a part of har- ness made of leather and canvas, and stuffed with straw or wool, to be put about the horse's neck.

COLLA'TE, v. a. ˆ Lat. confero, collatum. COLLA'TION, n. s. S To compare one thing of COLLA'TOR, n. s. J the same kind with ano- ther, as copies and manuscripts. To bestow, to confer.

Knowledge will be «-ver a wandering and indigested thing, if it be but a commixture of a few notions that are at hand and occur, and not excited from a suffi- cient number of instances, and those well collated.

Bacon's Nat. Hist.

They could not relinquish their Judaism, and em- brace Christianity, without considering, weighing, and collating both religions. South.

The significance of the sacrament disposes the re- ceiver to admit the grace of the Spirit of God, there consigned, exhibited and collated.

Taylor's Communicant.

A mandatory cannot interrupt an ordinary collator, till a month is expired from the day of presentation.

Ayliffe.

To read the titles they give an editor or collator of a manuscript, you would take him for the glory of letters. Addison.

He thrust out the invader, and collated Amsdorf to the benefice : Luther performed the consecration.

A tterbury.

Neither are we to give thanks alone for the first collation of these benefits, but also for their preserva- tion. Ray on the Creation.

In the disquisition of truth, a ready fancy is of great use ; provided that collation doth its office.

Grew'i Cosmologia.

I return yon your Milton, which, upon collation, I find to be revised and augmented in several places.

Pope.

COLLATERAL, adj. 3 Lat. con and latus.

COLLATERALLY, adv. 5 Side to side, running parallel ; diffused on either

side. In genealogy, those that stand in equal relation to some com- mon ancestor ; not direct, not immediate, con- current.

They shall hear and judge 'twixt you and me; I f by direct or by collateral hand They find us touched, we will our kingdom give To you in satisfaction. Shakspeore.

In his bright radiance and collateral light Must I be comforted, not in his sphere. Id,

Thus saying, from his radiant seat he rose

Of high collateral glory. Milton.

But man by number is to manifes His single imperfection ; and beget Like of his like, his image multiplied In unity defective, which requires Collateral love and dearest amity. Id.*

These pullies may be multiplied according to sun- dry different situations, not only when they are sub- ordinate, but also when they are placed collaterally.

Wilkins.

By asserting the scripture to be the canon of our faith, I have created two enemies : the papists more directly, because they have kept the scripture from us ; and the fanaticks more collaterally, because they have assumed what amounts to an infallibility in the private spirit. Dryden.

The estate and inheritance of a person dying intes- tate, is, by right of devolution, according to the civil law, given to such as are allied to him, ex latere, commonly styled collaterals, if there be no ascendants or descendants surviving at the time of his death.

Ayliffe's Parergon.

All the force of the motive lies within itself : it re- ceives no collateral strength from external considera- tions. Atterbury.

COLLATERAL RELATIONS, in genealogy, those who proceed from the same stock, not in the same line of ascendants or descendants, but being, as it were, aside of each other. Thus, uncles, aunts, nephews, nieces, and cousins, are col- laterals, or in the same collateral line : those in a higher degree, and nearer the common root, represent a kind of paternity with regard to those more remote.

COLLATIA, a town of the Sabines ; thought to be distant between four and five miles east from Rome ; situated on an eminence, upon the Anio. It existed in Cicero's time, but in Stra- bo's day was only a village; no trace now remains of it.

COLLATINA PORTA ; from Collatia ; a gate of Rome, at the Cullis Hortulorum, afterwards called Pinciana, from the Pincii, a noble family.

COLLATINUS (L. Tarquinius), the husband of the celebrated Lucretia, and one of the first two consuls of Rome. He was a native of Col- latia. See ROME, HISTORY OF.

CO'LLATION, n. s. In law. It is applied also to a repast ; a treat less than a feast.

Collation is the bestowing of a benefice, by the bishop that hath it in his own gift or patronage ; and differs from institution in this, that institution into a benefice is performed by the bishop at the presentation of ano- ther who '3 patron, or hath the patron's right for the time. Cowell.

COLLATION, in canon law, differs from a com- mon presentation, as it is the giving of the church to the person, while presentation is the giving of the person to the church. But collation supplies the place of presentation and institution ; and amounts to the same as institution where the bishop is both patron and ordinary. Anciently the right of presentation to all churches was m the bishop ; and now if the patron neglect to

present to a church, then this right returns to the bishop by collation : if the bishop neglect to col- late within six months after the elapse of the patron, then the archbishop has a right to do it; and, if the archbishop neglect, then it devolves to the king ; the one as superior, to supply the de- fects of bishops, the other as supreme, to supply the defects of government.

COLLATION, in common law, the comparison of a copy with its original, to see if it be con- formable ; or the report or act of the officer who made the comparison. A collated act is equiva- lent to its original, provided all the parties con- cerned were present at the collation.

COLLATION, in Scots law, that right which an heir has of throwing the whole heritable and moveable estates of the deceased, into one mass, and

sharing it equally with the others in the same degree of kindred, when he thinks such share will be more than the value of the heritage to which he had an exclusive title.

COLLATION is used among the Romanists for the meal made on a fast-day, in lieu of a supper. Only fruits are allowed in a collation : F. Lo-bineau observes, that anciently there was not allowed even bread in the collations in Lent, nor any thing beside a few comfits and dried herbs and fruits ; which custom, he adds, obtained till A.D. 1513. Cardinal Humbert observes further, that in the middle of the eleventh century there were no collations at all allowed in the Latin church in the time of Lent ; and that the cus- tom of collations was borrowed from the Greeks, who themselves did not take it up till about the eleventh century.

COLLATi'TIOUS,o$. Lat. collaticius. Done by the contribution of many.

COLLA'UD, v. a.. Lat. collaudo. To join 'n praising.

COLLEA'GUE, n. s. & v. a. Lat. collega. A partner in office and employment. To unite with, is the general sense of the verb.

Colleagued with this dream of his advantage, He hath not failed to pester us with message, Importing the surrender of those lands.

Sliakspeare. Hamlet. Easy it might be seen that I intend

Mercy colleague with justice sending thee. Milton.

The regents, upon demise of the crown, would

keep the peace without colleagues. Swift.

Lat. colligo, collec- tion, collectuneus, collectitius, collector. The primary sense, >which runs through

COLLE'CT, v. a. COLLECTA'NEOUS, adj. COLLE'CTEDLY, adv. COLLE'CTIBLE, adj. COLLECTION, n. s.

COLLECTI'TIOUS, adj. I all its multiplied de- COLLE'CTIVE, adj. rivatives, is that of

COLLE'CTIVELY, adv. \ gathering or bringing COLLE'CTOR, n.s. J together. When ap- plied to the mind, it is bringing the thoughts on any given subject to a focus; a man collects him- self when he assembles his sentiments, and reco- vers, by summoning together the powers of his mind, the self-command of which surprise or fear had deprived him. When

applied to the exercise of the reasoning faculty, it signifies to infer, as a consequence from arguments and facts, collected and brought together. It refers to the aggregate of things taken together, and never to

the detail ; to the entire body composed o parts, but not to the parts individually and se- parately. In grammar, a collective noun is a word which expresses a multitude, though itself be singular ; as, a company ; an army.*

The whole revolution of ages from everlasting to everlasting is so collectedly and presenting ly repre- sented to God. More.

It should be a weak collection, if whereas we say, that when Christ had overcome the sharpness of death, he then opened the kingdom of heaven to all be- lievers ; a thing in such sort affirmed with circum- stances, were taken as insinuating an opposite denial before that circumstance be accomplished. Hooker.

Although we cannot be free from all sin collectively, in such sort that no part thereof shall be found in us. yet distributively all great actual offences, as they offer themselves one by one, both may and ought to be by all means avoided. /

A body collective, it containeth a huge multitude.

Id.

Singly and apart, many of them are subject to ex- ception, yet collectively they make up a good moral evidence. Hale.

Be collected ;

No more amazement. Shafopeare. Tempest.

Affrighted much,

I did in time collect myself, and thought

This was so, and no slumber. Id. Winter's Talet.

This label

Is so from sense in hardness, that I can Make no collection of it Id. Cymbeline.

The reverend care I bear unto my lord, Made me collect these dangers in the duke.

Id. Henry VI.

When she, from sundry arts, one skill doth draw ; Gathering from divers flight, one act of war ;

From many cases, like one rule of law j These her collections not the senses are. Davies.

Whether thereby be meant Euphrates, is not collec- tible from the following words.

Browne's Vulgar Errours,

Antiquity has left many falsities controllable not only by critical and collective reason, but contrary ob- servations. Browne.

As when of old some orator renowned In Athens or free Rome, where eloquence Flourished, since mute, to some great cause addressed Stood in himself collected, while each part, Motion, each act won audience, ere the tongue Sometimes in height began, as no delay Of preface breaking through his zeal of right. Milton.

They conclude they can have no idea of infinite space, because they can have no idea of infinite mat- ter ; which consequence, I conceive, is very ill col- lected. Locke.

Let a man collect into one sum as great a number as he pleases, this multitude, how great soever, lessens not one jot the power of adding to it. Id.

The peers, therefore, sit in parliament in their col- lective, the commons, in their representative body.

Bollingbroke.

The three forms of government differ only by the civil administration being in the hands of one or two, called kings ; in a senate, called the nobles ; or in the people collective or representative, who may be called commons. Swift.

The best English historian, when his style grows antiquated, will be only considered as a tedious re- later of facts, and perhaps consulted to furnish mate- rials for some future collector. Id.

The commissions of the revenue are disposed of, and the collectors are appointed by the commissioner.

Swift. Volumes without the collector's own reflections.

Addison. The gallery is hung with a collection of pictures.

Id.

Here, like the bee, that on industrious wing, Collects the various odours of the spring ; Walkers at leisure, learning's flowers may spoil, Nor watch the wasting of the midnight oil. Gay. A great part of this treasure is now embezzled, la- vished, and feasted away by collectors, and other officers. Temple.

Nor perjured knight desires to quit thy arms, Fairest collection of thy sex's charms. Prior.

Tis memory alone that enriches the mind, by pre- serving what our labour and industry daily collect.

Watts.

CO'LLECT, n. s. Low Lat. collecta. A short comprehensive form of prayer, used at the sacra- ment ; any short prayer. ,

Then let your devotion be humbly to say over pro- per collecti. Taylor's Guide to Devotion.

COLLECT, in the liturgy of the church of En- gland, and the mass of the Roman Catholics, de- notes a prayer, accommodated to any particular day, occasion, or circumstance. See LITURGY, and MASS. In general, all the prayers in each office are called collects ; either because the priest spe?.ks in the name of the whole assembly, whose senti- mer.ts and desires he sums up by the word ore- mus, ' let us pray/ or, because those prayers are offered when the people are assembled together. The congregation itself is in some ancient authors called collect. The popes Gelasius and Gregory are said to have been the first who established collects. Despence, of Paris, wrote a treatise on collects, their origin, antiquity, &c. Collect is sometimes also used for a tax, or imposition, raised by a prince for any pious design. Thus, in 1166, the king of England, coming into Nor- mandy, appointed a collect for the relief of the holy land.

COLLE GATARY,n. s. Lat. con and legatum, a legacy. In the civil law, a person to whom is left a legacy in common with one or more other persons.

CO'LLEGE, n. s. Lat. collegium. A com- munity ; a number of persons living by some com- mon rules.

On barbed steeds they rode in proud array, Thick as the college of the bees in May. Dryden.

A society of men set apart for learning or re- ligion.

He is returned with his opinions,

Gathered from all the famous colleges,

Almost in Christendom. Shakspeare. Henry VIII.

I would the college of the cardinals Would choose him pope, and carry him to Rome.

Id.

This order or society is sometimes called Solomon's house, and sometimes the college of the six days' work. Bacon.

The house in which the collegians reside.

Huldah, the prophetess, dwelt in Jerusalem in the college. Kings.

A college, in foreign universities, is a lecture read in public.

COLLEGES, ANCIENT. College, among the Ro- mans, embraced, indifferently, those employed in

the offices of religion, of government, the liberal and even mechanical arts and trades; so that, with them, the word signified what we call a cor- poration or company. They had not only the college of augurs, and the college of capitolini, i.e. of those who had the superintendence of the capitoline games ; but also colleges of artificers, collegia artincum ; of carpenters, fabricatorum, or fabrorum tignariorum : of potters, figulorum ; of founders, serariorum; of locksmiths, fabrorum ferrariorum ; of engineers, tignariorum ; of butchers, laniorum ; of dendrophori, dendropho- rorum ; of centenaries, centonariorum ; of makers of military casques, sagariorum ; of tent makers, tabernaculariorum ; of bakers, pistorum ; of mu- sicians, tibicinum, &c. Plutarch observes, that Numa first divided the people into colleges ; that each consulting the interests of their colleges, whereby they were divided from the citizens of the other colleges, they might not enter into any general conspiracy against the public repose. Each of these colleges had distinct halls ; and likewise, in imitation of the state, a

treasury and common chest, a register, and one to represent them upon publ ic occasions, and statutes like acts of par- liament. These colleges had the privilege of ma- numitting slaves, of being legatees, and making by-laws for their own body, provided they did not clash with the laws of the republic.

COLLEGE, is.u,sed, in modem times, for a- public place endowed with certain revenues, where the several parts of learning are taught. An assem- blage of several of these colleges constitutes an university. The erection of colleges is part of the royal prerogative. The establishment of col- leges or universities is a remarkable period in literary history. The schools in cathedrals and monasteries confined themselves, chiefly, to the teaching of grammar. There were only one or two masters employed in that office. But, in colleges, professors are appointed to teach all the different parts of science. The first obscure mention of academical degrees in the university of Paris (from which the other universities in Europe have borrowed most of their customs and institutions), occurs A.D. 1215. We notice the most celebrated institutions of this kind in Great Britain, and a few of the more conspicuous mo- dern ones.

COLLEGE, GRESHAM, or COLLEGE OF PHILC- SOPHV, a college founded by Sir Thomas G res- ham, and endowed with the revenue of the Royal Exchange : one moiety of this endowment the founder bequeathed to the mayor and aldermen of London and their successors, in trust, that they should find four able persons to read, within the college, lectures on divinity, geometry, astro- nomy, and music; who are chosen by a com- mittee of the common council, consisting of the lord mayor, three aldermen, and eight com- moners, and allowed each, besides lodging, £50 per annum. The other moiety he left to the company of Mercers, to find three more able persons, chosen by a committee of that company, consisting of the master and three wardens, du- ring their office, and eight of the court of assis tants, to read lectures on law, physic, and rhe- toric, on the same terms ; with this limitation, that the several lecturers should read, in tern?

time, every day in the week except Sundays ; in the morning in Latin, in the afternoon the same in English ; but that in music to be read only in English. By the eighth of George III. cap. 32, the building appropriated to this college was taken down, and the excise office erected in its room. Each of the professors is allowed £50 per annum, in lieu of the apartments, &c. relin- quished by them in the college, and is permitted to marry,

notwithstanding the restriction of Sir Thomas Gresham's will. The lectures are now read in a room over the Royal Exchange ; and the City and Mercers' company are required to provide a proper place for this purpose.

COLLEGE OF CIVILIANS, commonly called Doctors' Commons; a college founded by Dr. Harvey, dean of the Arches, for the professors of the civil law residing in London ; where usually, likewise, reside the judges of the arches court of Canterbury, judge of the admiralty , of the pre- rogative court, &c. with other civilians, who all live, as to diet and lodging, in a collegiate man- ner, commoning together; whence the appella- tion of Doctors' Commons. Their house being consumed in the great fire, they all resided at Exeter-house in the Strand till in 1672 ; when their former house was rebuilt, at their own ex- pense, in a very splendid manner. To this college belong thirty-four proctors, who make themselves parties for their clients, manage their causes, &c.

COLLEGE OF HERALDS, or COLLEGE OF ARMS, is a corporation founded by king Richard III., who, by charter bearing date the 2nd of March, in the first year of his reign, made the kings, heralds, and pursuivants .of arms, one body cor- porate by the name of ' Le garter regis armorum Anglicorum, regis armorum partium australiurn, regis armorum partium borealium, regis armorum walliae, et heraldorum, prosecutorum, sive pur- sevandorum armorum ;' empowered them to have and use a common seal, and granted to them and their successors, for the use of the twelve principal officers of .the corporation a house with its appurtenances, then called Colde Arbor, and situated within the parish of All- Hallows the Less, in the city of London ; they finding a chaplain to celebrate mass daily in the said house, or elsewhere at their discretion, for the good state of health of Anne the queen, and Edward, prince of Wales, during their lives, and for their souls after their decease. In con- sequence of the act of resumption, passed in the first year of the reign of king Henry VII., this house was seized into the king's hands, because it was supposed to belong personally to John Writhe, garter, who then lived in it, and not to the officers of arms in their corporate capacity.

During the reign of Henry VII. and Henry VIII., the officers of arms frequently petitioned the throne for a grant of some house or place wherein to hold their assemblies, but without suc- cess. King Edward VI., however, in a charter dated the 4th of June, in the third year of his reign, and by authority of parliament, endea- voured to make them some amends, by confirming to them all their ancient privileges, as to be free and discharged from all subsidies, in att realms where they take their demoure ; as also from all

tolls, taxes, custom?, impositions, and demands- as well from watch and

ward, as from the election to any office of mayor, sheriff, bailiff, constable, scavenger, church-warden, or any other public office of what degree, nature, or condition soever.

Philip and Mary, by their charter bearing date the 18th day of July, in their first and second years, re-incorporatted the kings, heralds, and pursuivants of arms by their former names ; and to the intent that they might reside together, and consult and agree amongst themselves for the good of their faculty, and for the depositing and secure preservation of their records, inrolments, and other documents and papers, granted to them a messuage, with its appurtenances, called Derby House, situate in the parish of St. Benedict and St. Peter, within the city of London, and in the street leading from the south door of the cathe- dral church of St. Paul, to a place there called Paul's Wharf, and then late in the tenure of Sir Richard Sakevyle, knight, but theretofore parcel of the possessions of Edward, earl of Derby, and to be by the said corporation held in free burgage of the city of London. In the great fire of London, anno 1666, the college was en- tirely consumed : but the heralds had the good fortune to save all their muniments and books, which were deposited in the palace at Whitehall; from whence they were afterwards removed into the palace at Westminster, near to the court of requests, whereupon public notice was given in the London Gazette, that the herald's office was there kept. The college was afterwards rebuilt, and, as a regular quadrangular building, was considered one of the best designed and hand- somest brick edifices in London, particularly the hollow archway of the great gate, which is es- teemed a singular curiosity ; but the college is now removed to the neighbourhood of Charing-cross.

The corporation consists of three kings of arms, Garter, Clarencieux, and Noroy, six heralds, viz. Windsor, Chester, Lancaster, Somerset, York, and Richmond, and four pursuivants, viz. Port- cullis, Rougedragon, Bluemantle, and Rouge- Croix; who all take presidency according to the dates of their respective patents.

The arms of the college ; argent, a cross gules between four doves rising azure. Crest. On a ducal coronet, or a dove rising azure. Sup- porters. Two lions rampant guardant argent, ducally gorged or.

The COLLEGE OF HERALDS in Scotland, con- sists of Lyon king at arms, six heralds, and six pursuivants, and a number of messengers.

COLLEGE OF JUSTICE, the supreme civil court of Scotland; otherwise called the court of session, or of council and session. See SCOTLAND, LAW OF.

COLLEGE OF PHYSICIANS, a corporation of physicians in London, who by several charters and acts of parliament of Henry VIII. and his successors, have certain privileges, whereby no man, though a graduate in physic of any uni- versity, may, without licence under the said col- lege seal, practice physic in or within seven miles of London ; with power to administer oaths, fine and imprison offenders in that and several other particulars; to search the apothecaries shops, &c. in and about London, to see if their drugs, &c. be wholesome, and their compositions ao-

cording to the form prescribed by the said college in their dispensatory. By the said charter they are also freed from all troublesome offices, as to serve on Buries, be constables, keep watch, provide arms, &c. The society had anciently a college in Knight-rider Street, the gift of Dr. Linacre, physician to king Henry VIII. Since that time they have had a house built for them by the fa- mous Dr. Harvey in 1652, at the end of Amen- corner, which he endowed with his whole in- heritance in his lifetime ; but this being burnt in the great fire, in 1666, a new one was erected, at the expence of the fellows, in Warwick-lane, with a noble library, given partly by the marquis of Dorchester, and partly by Sir Theodore Mayerne. From this, as an inconvenient situa- tion, the college has been removed to Pall Mall East, where a noble building has been erected on a site given by government. Of this college there are at present a president, four censors, eight electors, a register, and a treasurer, chosen annually in October ; the censors have, by charter, power to survey, govern, and arrest, all physicians, or others practising physic, in or within seven miles of London ; and to fine, amerce, and imprison them, at discretion. The number of fellows was anciently thirty, till king Charles II. in- creased their number to forty; and James II. giving them a new charter, allowed the number of fellows to be enlarged so as not to exceed eighty ; reserving to himself and his successors the power of appointing and displacing any of them for the future. The college is not very rigorous in asserting their privileges; there being a great number of physicians, some of very good abilities, who practise in London, &c. without their licence, and are connived at by the college : yet by law, if any person not expressly allowed to practise, take on him the cure of any disease, and the patient die under his hand, it is deemed felony. In 1696 the college made a subscription, to the number of forty-two of their members, to set on foot a dispensary for the relief of the sick poor : since which they have erected two other dispensaries. COLLEGE OF PHYSICIANS, EDINBURGH, was erected on the 29th of November 1681. The design of this institution was, to prevent the abuses daily committed by foreign and illiterate impostors, quacks, &c. For this reason, king Charles

II. granted letters patent to erect into a body corporate and politic, certain phy- sicians in Edinburgh and their successors by the title of the President and Royal College of Physicians at Edinburgh, with power to choose annually a council of seven, one whereof to be president : these are to elect a treasurer, clerk, and other officers ; to have a common seal ; to sue and be sued ; to make laws for promoting the art of physic, and regulating the practice thereof, within the city of Edinburgh, town of Leith, and districts of the Canongate, Westport, Pleasance, and Potter-row ; through all which the jurisdiction of the college extends. Throughout this jurisdiction, no person is allowed to practice physic, without a warrant from the college, under the penalty of £5 sterling the first month, to be doubled monthly afterwards while the offence is continued ; one half the money

arising from such fines to go to the poor, the other to the use of the college. They are also empowered to punish all licenciates in physic, within these bounds, for faults committed against the institutions of the college; and to fine them of sums not exceeding 40s. On such occasions, however, they must have one of the bailies of the city to sit in judgment along with them, other- wise their sentence will not be valid. They are also empowered to search and inspect all medi- cines within their jurisdiction, and throw out into the street all such as are bad or unwhole- some. That they may the better attend their patients, they are exempted from watching, warding, and serving on juries. They are, how- ever, restrained from erecting schools for teach ing the art of physic, or conferring degrees on any person qualified for the office of a physician ; but are obliged to license all such as have taken their degrees in any other university, and to admit as honorary members all the professors of physic in the rest of the universities of Scotland. These privileges and immunities are not, how- ever, to interfere with the rights and privileges of the apothecary surgeons, in their practice of curing wounds, contusions, fractures, and other external operations.

COLLEGE OF SURGEONS, ROYAL, LONDON, was incorporated by charter in 1800, under a master, two governors, and eighteen assistants. Its house is in Lincoln's-Inn-Fields. There is also at Edinburgh a Royal College of Surgeons of late institution, under a president, treasurer, and honorary fellows. This college is authorised for carrying into execution a scheme for providing for their wives and children, &c. ; and for exa- mining and licencing, if found qualified, all practitioners in surgery, within certain limits.

COLLEGE PRO PROPAGANDA FIDE, was founded at Rome in 1622, by Gregory XV. and enriched with ample revenues. It consists of thirteen cardinals, two priests, and a secretary ; and was designed for the propagation of the Romish re- ligion in all parts of the world. The funds of this college have been very considerably aug- mented by Urban VIII. and

many private do- nations. Missionaries are supplied by this institution with a variety of books suited to their several appointments. Seminaries for their instruction are supported by it, as also a number of charitable establishments connected with, and conducive to, its main object. — Another college under this title was established by Urban VIII. in 1627, in consequence of the liberality of John Baptist Viles, a Spanish nobleman. This is set apart for the instruction of those who are designed for the foieign missions. It was at first committed to the care of three canons of the patriarchal churches; but ever since 1641 it is under the same government with the former institution.

COLLEGE, SIGN, or the college of the London clergy, has been a religious house time of out mind, sometimes under the denomination of a priory, sometimes under that of a 'spital or hos- pital : at its dissomtion under 31st Henry VIII. it was called Elsyn's 'Spital, from the name of its founder, a mercer, in 1329. At present it is comoosition of both, viz. a college for the

clergy of London, who were incorporated in 1630, in pursuance of the will of Dr. White, under the name of the President and Fellows of Sion College ; and an hospital for ten poor men and as many women. The officers of the cor- porations are the president, two deans, and four assistants ; who are annually chosen from among the rectors and vicars of London and are sub- ject to the visitation of the bishop. They have a good library built and stocked by Mr. Simp- son, and furnished by several other benefactors, chiefly for the clergy of the city, without ex- cluding other students on certain terms ; and a hall, with chambers for students, generally oc- cupied by the ministers of the neighbouring parishes.

COLLEGE, ROYAL NAVAL, at Portsmouth. See ACADEMY.

COLLEGE, ROYAL MILITARY, at Farnham and at Marlow. See ACADEMY.

COLLEGE, EAST INDIA, at Hertford. See HERTFORD.

COLLEGE, EAST INDIA, at Fort William, Cal- cutta, was a favorite project of the Marquis Wellesley's. It was first announced by an official minute of the governor, relative to the college of Fort William, dated the 18th August, 1800. Asiatic Register, 1800.

In this project he is supposed to have contem- plated a magnificent repository of European principles and Asiatic erudition, in which the stores

of written learning and recorded wisdom might indefinitely accumulate, and in which the sages of the east might find studious soli- tudes still more deeply attractive than the sacred shades of Benares. ‘ There certainly is no reason to question the truth of this notion,’ says an able critic of this minute. ‘ Nothing is more credible than that such prospects as these might fill up the distance of the picture which lord Wellesley had framed to himself; but the utmost injustice would be done to the views of that enlightened statesman, if it were not dis- tinctly admitted that his great object was one of a nature more pressing, more practical, and more closely congenial with that solicitude for the rights and happiness of the people, which, after all, constitutes the true sublime of legislation and government. Throughout his minute, the actual deficiencies of the civil service, and the means of supplying those deficiencies, form the grand and the solitary theme of discussion. He has no time to speak or to think of any thing else ; and his reasoning must have been sadly thrown away on those, whom it has not convinced that this subject alone might worthily exercise the united reflection and eloquence of India and of England.’

With regard to the actual state of the qualifi- cation of the civil servants before the existence of the Calcutta college, the declarations of lord Wellesley were perfectly frank and explicit. Compared with the vast disadvantages under which the service had labored, he admits that those qualifications were great and even won- derful; compared with the exigencies of the state, with the number of the servants, and with the magnitude and arduous nature of the trusts confided to them, he pronounces them decidedly inadequate.

Incited by these considerations, lord Wellesley proceeded to establish, by public regulation, the college of Fort William. It was placed under the immediate government of a provost and a vice- provost. Professorships were instituted in a great variety of departments. An attendance on the col lege for three years was made compulsory on all persons appointed to the civil service of Bengal but the junior servants at the other presidencies were also to be admissible. Degrees were in- stituted as indispensable qualifications for certain offices in the service. The branches of know- ledge for which provision was to be made were, the Oriental languages, nine in number ; the Mahommedan and Hindoo systems of law ; thp principles of ethics, jurisprudence, and the law of nations ; the English law ; the regulations and laws of British India ; the modern languages of Europe ; classical literature ; general history ; the history of Hindostan; political economy, geog- raphy, mathematics, astronomy, natural history, botany, and chemistry. But this great project did not meet with the cordial concurrence of the directors of the East India Company at home. The college of Fort William was in the first in- stance suspended, but was afterwards continued on a reduced scale, which confined it to a semi- nary

for the instruction of the Bengal civil ser- vants in the Oriental languages appropriate to that presidency. At a subsequent period, a similar establishment, but proportionably smaller, was framed at Madras.

COLLEGE is a designation which certain res- pectable Dissenting bodies have given, of late, to some of their superior academical foundations. We can only notice here

CHESHUNT COLLEGE, an institution in the con- nexion, and originally under the patronage, of the countess of Huntingdon, who first founded and supported, at her own sole expense, an institution of this kind in Wales, for the instruction and introduction of young men designed for the ministry. This building, which was situate at Talgarth in the county of Brecon, was publicly opened, and a sermon preached on the occasion, by the Rev. George Whitfield, on the 24th of August, in the year 1768 ; and from it her lady- ship had the satisfaction of seeing many eminent ministers go forth to teach and preach Jesus Christ.

Intheyear 1787 several of her friends, knowing that the aid afforded by lady Huntingdon must cease with her life (her ladyship's income being only a jointure), offered themselves to form a Society for the continuance and support of her college, when it should be deprived of he fos— tering care. This proposition being highly ap- proved by lady H., she was pleased to appoint ten persons to act as Trustees of the Institution, whenever her decease should call such a trust into exercise ; to whom she also bequeathed all her own property therein.

On lady Huntingdon's death, which happened on the 17th of June, 1791, the Trustees called together the friends of the Institution in London, and it was determined to remove the college from Wales, and to provide a suitable house and pre- mises in the neighbourhood of the metropolis : shortly after, the freehold of the premises now

occupied, situate at Cheshunt, in Hertfordshire, about fourteen miles from London, was pur- chased ; consisting of a family house, with offices, a large garden and orchard, bounded by the new river, with afield adjoining ; comprising in the whole upwards of nine acres. This house was publicly opened for the new college on the 24th of August, 1792 ; a neat chapel has subsequently been erected on the premises.

COLLEGE, HIGHBURY, was erected in 1826, and the establishment was removed from Hox- ton. Its principles and general management remain, we believe, the same ; but new and handsome accommodations are afforded ; the students, of whom there are forty, have received a new stimulus, and the whole institution a new organisation. Mr. Halley is the present head master.

COLLEGE, SERAMPORE, is a learned institution among the Baptist missionaries of that place, at present in its infancy ; but owing its foundation entirely to the noble views and designs of Messrs Carey, Marshman, and their associates in the East, who have already raised a magnificent sum of money for its establishment, and propose, by offering a superior education to the respectable classes of the natives of India, to interest that continent more effectually in their other benevo- lent and Christian enterprises.

COLLEGE, MAYNOOTH. The royal college of St. Patrick was instituted by an act of the Irish parliament, in 1795, for the education of the Irish Roman Catholic clergy. Here is also a lay col- lege, established by private subscription in 1802. The town of Maynooth is in the county of Kil- dare, twelve miles west by north of Dublin.

For the colleges of North America, see our article AMERICA, NORTH,

COLLE'GIAL, adj., from college. Relating to a college ; possessed by a college.

COLLE'GIAN, n. «., from college. An inha- bitant of a college ; a member of a college.

COLLEGIANI, COLLEGIANS, or COLLEGI- ATES, a religious sect, formed among theArmenians and anabaptists in Holland, about the beginning of the seventeenth century; so called because of their colleges, or meetings, twice every week ; where every man has the same liberty of ex- pounding the scripture, praying &c. They are said to be all either Arians or Socinians ; they never communicate in the college, but meet twice a-year from all parts of Holland at Rhins- bergh, whence they are also called Rhinsberghers, where they communicate together; admitting every one that presents himself, professing his faith in the divinity of the holy scriptures, and resolution to live suitably to their precepts and doctrines, without regard to his sect or opinion. They have no particular ministers, but each offi- ciates as he is disposed.

COLLE'GIATE, adj. Low Lat. collegiatus. Containing a college ; instituted after the man- ner of a college.

I wish that yourselves did well consider how oppo- site certain of your positions are unto the state of col- legiate societies, whereon the two universities consist.

Hooker. Preface.

A collegiate churcn was sush as was built at a convenient distance from a cathedral church,

wherein a number of presbyters were settled, and lived together in one congregation.

COLLE'GIATE, n. s., from college. A member of a college ; a man bred in a college ; an uni versity man.

These are a kind of empirics in poety, who have got a receipt to please ; and no collegiate like them, for purging the passions. Rymer.

COLLEGIATE CHURCHES have no bishop's see, yet have the ancient retinue of the bishop, the canons and prebends. Such are Westminster, Rippon, Windsor, &c. governed by deans and chapters. Of these there are two kinds, some of royal, and others of ecclesiastical foundation; each of them, in matters of divine service, regu- lated in the same manner as the cathedrals. There are even some collegiate churches that have the episcopal rights. Some of these were an- ciently abbeys, which in time were secularised. The church of St. Peter's, Westminster, was an- ciently a cathedral ; but the revenues of the mo- nastery being, by the act of 1st Eliz. vested in the dean and chapter, it commenced a collegiate church. In several causes, the styling it cathe- dral, instead of collegiate church at Westminster, has occasioned error in the pleadings.

CO'LLET, ra. s. Fr. from Lat. collum, the neck. Anciently something that went about the neck; sometimes the neck. That part of a ring in which the stone is set. A term used by turners.

COLLET, in glass-making, is that part of glass vessels which sticks to the iron instrument wherewith the meta1 was taken out of the melt- ing-pot : these are afterwards used for making green glass.

COLLI'DE, v. a. Lat. collido. To strike against each other ; to beat, to dash, to knock to- gether.

Scintillations are not the ascension of air upon col- lision, but inflammable effluences from the bodies collided. Browne.

CO'LLIER, n s.) From coal. A digger of

CO'LLIERY, n. s. S coals, who works in the coal-pits ; a coal merchant ; a ship employed exclusively in the coal trade. Colliery is the place where coals are either dug or sold. It is sometimes applied to the trade itself.

I knew a nobleman a great grasier, a great timber- man, a great collier, and a great landman. Bacon.

COLLIER is a vessel employed to carry coals from one port to another ; chiefly from the north of Eugland to the capital, and more southerly parts, though they are also sent to foreign mar- kets.

COLLIER (Jeremy), a learned English non- juraut divine, born in 1650, and educated at Caius College, Cambridge. He came to London in 1685, where he was made lecturer of Gray's Inn ; but the change of government that fol- lowed, soon rendered the public exercise of his function impracticable. He was committed to Newgate for writing against the revolution, and for carrying on a treasonable correspondence, but was released both times, without trial, by the intervention of friends. He carried his scruples so far, bs to prefer confinement to the tacit ac- knowledgment of the jurisdiction of the court, by accepting Ins liberty upon bail. Agreeably

to mese principles, he acted a very extraordinary part, with two other clergymen, at the execution of Sir John Friend and Sir William Perkins, by giving them solemn absolution, and by imposi- tion of hands; absconding for which, he conti- nued in outlawry to his death in 1726. These proceedings having put a stop to his activity, he employed his retired hours rather more usefully in literary works. In 1698 he attempted to re- form our theatrical entertainments, by publishing his Short View of the Immorality and Profaneness of the English Stage, which engaged him in a controversy with the wits of the time ; but as Mr. Collier defended his censures not only with wit, but with learning and reason, it is allowed that the decorum observed, for some time, by succeeding dramatic writers, was greatly to be attributed to his animadversions. He next un- dertook a translation of Morreri's Historical and Geographical Dictionary, a work of extraordinary labor, and which appeared in four vols. tolio. After this, he published An Ecclesiastical History of Great Britain, chiefly of England, in two vols. folio, which is allowed to be written with great judgment and impartiality. He was besides en- gaged in several controversies, to which his con- duct and writings gave rise. In queen Anne's reign he had offers of

considerable preferment, upon submission ; but, being a nonjuror upon principle, he refused to listen to any terms. He died in 1726.

CO'LLIF LOWER, n. s. Flos brassiae ; from Sax. cajjl, cabbage and flower; properly cauli- flower. A species of cabbage. See BRASSICA.

COLLIGA'TION, n. s. Lat. colligatio. A binding together.

These the midwife contrived into a knot, whence that tortuosity, or nodosity in the navel, occasioned by the colligation of vessels. Browne's Vulgar Errours.

COLLIMATION, n. s. Lat. colUmo. The act of aiming at a mark ; aim.

COLL1MATOR, FLOATING, in astronomy, an instrument invented by captain H. Kater, to supply the place of a level, or plumb-line, in astronomical observations, and to furnish a ready and perfectly exact method of determining the position of the horizontal or zenith point on the limb of a circle or zenith sector. Its principle is the invariability, with respect to the horizon of the position, assumed by any body of invariable figure and weight floating on a fluid. It consists of a rectangular box containing mercury, on which is floated a mass of cast-iron about twelve inches long, four broad, and half an inch thick, having two short uprights or Y's of equal height, cast in one piece with the rest. On these is firmly attached a small telescope, furnished with cross wires, or, what is better, crossed portions of the fine balance-spring of a watch, set flat-ways, and adjusted very exactly in the sidereal focus of its object glass. The float is browned with ni- tric acid to prevent the adhesion of the mercury, and is prevented from moving laterally by two smoothly polished iron pins, projecting from its sides in the middle of its length, which play freely in vertical grooves of polished iron in the sides of the box. When this instrument is used, it is placed at a short distance from the circle whose horizontal point is to be ascertained, on either

side, suppose the north, of its centre, and the te- lescopes of the circle and of the collimator are so adjusted as to look mutually at each other's cross wires, in the manner lately practised by Messrs. Gauss and Bessel, first of all coarsely, by trial, applying the eye to the eye-glasses of the two instruments alternately ; and, finally, by il- luminating the cross wires of the collimator by a lantern and oiled paper, taking care to exclude false light by a black screen, having an aperture equal to that of the collifnator, and making the coincidence in the manner of an astronomical ob- servation, by the fine motion of the circle. The microscopes on the limb are then read off", and thus the apparent zenith distance of the collima- ting point, intersection of the wires, is found. The collimator is then transferred

to the other (south) side of the circle, and a corresponding observation made without reversing the circle, but merely by the motion of the telescope on the limb. The difference of the two zenith distances so read off is double the error of the zenith or horizontal point of the graduation, and their semi-sum is the true zenith distance of the colli- mating point, or the co-inclination of the axis of the collimating telescope to the horizon.

By the experiments detailed in captain Rater's paper, read before the Royal Society, January, 1825, it appears that the error to be feared in the determination of the horizontal point by this instrument, can rarely amount to half a second, if a mean of four or five observations be taken In 151 single trials, two only gave an error of two seconds, and one of these was made with a wooden float.

COLLIN D'HARLEVILLE (John Francis), a French dramatist and advocate. He com- menced his dramatic career in 1786, with the comedy of the Inconstant. This was followed by some others, previous to the appearance of Le Vieux Celibataire. which is considered as his chef d'ceuvre. He afterwards produced a great variety of inferior dramas, and was the author of a poem entitled, Melpomene et Thalia, 1799, 8vo. ; and of many pieces inserted in the Al- manac of the Muses. He died at Paris in 1806, aged fifty. A collective edition of his works 'appeared in four vols. 8vo., 1805.

COLLINA, a gate of Rome, at the Collis Qui- rinalis, near the temple of Venus Erycina; called also Salaria, because the Sabines carried their salt through it, and now Salara.

COLLINEATION, n. s. Lat. collineo. The act of aiming.

COLLINGTON, a parish of Scotland, in the county of Mid-Lothian, which approaches within two miles of Edinburgh. It extends about four miles east and west, and about five in a south and north direction, and takes in part of the Pentland Ridge, and Logan House Hill, the highest point being in this parish. This hill is found, by repeated barometrical observations, to be 1700 feet above the level of the sea at Leith. The arable lands slope gently from the skirts of the hills to the level of the river, and are en- closed and highly cultivated. The river Cblling- ton, or rather the Water of Leith, abounds with much romantic scenery ; and in a course of ten miles, drives no fewer than seventy-one nulls.

COLLINGWOOD (Cuthbert), baron, was born at Newcastle-upon-Tyne, 1748, and edu- cated at the same school with lord chancellor El- don. He entered the navy in 1761, and in the action of June the 1st, 1794, was flag-captain on board the Prince, admiral Bowyer. He com- manded the Excellent, in 1 797, during the battle off CapeSt. Vincent. In 1799 was rear-admiral of the white, and promoted to the red in 1801. In 1804 he assisted in the blockade of Brest; but his most remarkable service was in the great vic- tory of Trafalgar, in which his fine manner of bringing his ship into action, and the skill and bravery with which he fought her, excited the admiration of Nelson, upon whose fall, the com- mand of the fleet devolved upon him. For his excellent conduct on this and other occasions, he was continued in the command of the fleet, and elevated to a barony. He died on board the Ville de Paris, while cruising off Minorca, the 7th of March, 1810, and was honored with a public funeral at St. Paul's.

COLLINS (Arthur), a famous genealogist, was born at Exeter in 1682. The first edition of his Peerage was published in 1708, and a se- cond in 1715, four vols. folio. The latest edition was that of 1812, published under the care of Sir Egerton Brydges. He also wrote a Baronet- age, which was first published in 1720, in two volumes, and subsequently, in 1741, in five vo- lumes. His other works are : 1. The Life of Cecil, lord Burleigh, 1732. 8vo.; 2. The Life of Edward the Black Prince, 1740, 8vo. ; 3. Let- ters and Memorials of State, collected by Sir Henry Sidney and others, 1746, two vols. folio; 4. Historical Collections of the Noble Families of Cavendish, Holies, Vere, Harley, and Oglo, 1752, folio. The private life of Collins is little known : except that George II. granted him a pension of £200 per annum, a short time before the year 1760, in which he died.

COLLINS (Anthony), a deistical writer, born at Heston, near Hounslow, in Middlesex, in 1676, was the son of Henry Collins, a gentleman of about £1500 a-year. He was first bred at Eton College, and then went to King's College, Cambridge. He was author of several curious books. His first remarkable piece was published in 1 707, An Essay concerning the Use of Reason in Propositions, the Evidence whereof depends on Human Testimony. In 1702 he entered into the controversy between Mr. Clark and Dr. Dodwell, concerning the immortality of the soul. In 1713 he published his Discourse on Free- Thinking. In 1715 he retired into the county of Essex, where he acted as a justice of peace, and published a Philosophical Essay concerning Human Liberty. In 1718 he was chosen trea- surer of the county, an office he discharged with great honor. In 1724 he published his Histo- rical and Critical Essay on the Thirty-Nine Ar- ticles. Soon after, he published his Discourse of the Grounds and Reasons of the Christian Religion ; to which is prefixed. An Apology for Free Debate and Liberty of Writing; which piece was immediately attacked by a great num- ber of writings. In 1726 appeared his Scheme of Literary Prophecy Considered, in

a View of the Controversy occasioned by a late book, en-

titled, A Discourse of the Grounds, &c. This was replied to by several writers, particularly by Dr. John Rogers, in his Necessity of Divine Revelation asserted ; in answer to which, Collins wrote A Letter to the Rev. Dr. Rogers, on Oc- casion, &c. His health began to decline some years before his death, and he was very much af- flicted with the stone, which at last put an end to his life at his house in Harley-square, in 1792. His curious library was open to all men of let- ters, to whom he readily communicated all the assistance in his power ; he even furnished his antagonists with books to confute himself, and directed them how to give their arguments all the force of which they were capable.

COLLINS (John), F. R. S. an eminent account- ant and mathematician, born in 1624, and bred a bookseller at Oxford. Besides several trea- tises on practical subjects, he communicated some curious papers to the Royal Society, which are to be found in the early numbers of the Phi- losophical Transactions ; and was the chief pro- moter of many other scientific publications in his time. He died in 1683; and about twenty- five years after, all his papers coming into the hands of the learned William Jones, Esq. F.R.S. it appeared that Mr. Collins had held a constant correspondence for many years with all the emi- nent mathematicians; and that many of the late discoveries in physical knowledge, if not actually made by him, were at least brought forth by his endeavours.

COLLINS (William), an admirable poet, born at Chichester, about A.D. 1724. He received his classical education at Winchester: after which he studied at Oxford, where he applied himself to poetry, and published his Oriental Eclogues. He was naturally possessed of an ear for all the varieties of harmony and modulation ; and was, at once, capable of soothing the ear with the melody of his numbers, of influencing the passions by the force of pathos, and of gra- tifying the fancy by the luxury of his descrip- tions. \Vith these powers he came to London, and first attempted lyric poetry. In 1746 he published his Odes, Descriptive and Allegorical : but the sale of this work not being answerable to its merit, he burnt the remaining copies in indig- nation. Being a man of liberal spirit and small fortune, his pecuniary resources were soon ex- hausted, and his life became a miserable succes- sion of necessity, indolence, and dissipation. He projected books which he was not able to execute; and became in idea an historian, a critic, and a dramatic poet, but wanted the means to carry these ideas into execution. Obliged to subsist by the repeated contributions of a friend, or the generosity of a casual acquaintance, his spirits became oppressed, and he sunk into a sullen despondence. 'While in this gloomy state of mind, his uncle, colonel Martin, died, and left him a considerable fortune. But this came too late for enjoyment ; he had been so long ha- rassed by anxiety

and distress, that he fell into a nervous disorder, which, at length, reduced the finest understanding to the most deplorable childishness. In the first stages of this disorder, he endeavoured to relieve himself by travelling, and passed into France : but the growing malady

obliged him to return; and having continued, with short intervals, in this pitiable state till 1 756, he died in the arms of his sister. The ingenious Mr. Langhorne published his poetical works, with memoirs of the author, in one volume, 12rno.

COLLINSON (Peter), F. R. S., an eminent naturalist and antiquarian, descended of an an- cient family, was born on the paternal estate called Hugal-hall, near Windermere-lake, in Westmoreland. Whilst a youth he began to make a collection of dried specimens of plants, and had access to the best gardens round Lon- don. He became early acquainted with the most eminent naturalists of his time ; Drs. Derham, Woodward, Dale, Lloyd, and Sloane, were amongst his intimate friends. Collinson was elected a fellow of the Royal Society, December 12th, 1728, and perhaps was one of its most use- ful members, not only in supplying them with many curious observations himself, but in pro- moting a most extensive correspondence with learned and ingenious foreigners in all countries, and on every useful object. He communicated to the learned in distant parts of the globe the dis- coveries and improvements in natural history in this country, and received similar information from the most eminent persons in almost every other. His correspondence with the ingenious Cadwal- laaer Golden, esq. of New York, and the justly ce- lebrated Dr. Franklin, of Philadelphia, furnish in- stances of the benefit resulting from his attention to improvements. The latter communicated his first essays on electricity to Mr. Collinson in a series of letters which were then published, and have been reprinted. The account procured of the management of sheep in Spain, published in the Gentleman's Magazine for May and June, 1764, may not be considered among the least of the benefits accruing from his extensive corre- spondence. He was the first who introduced the great variety of seeds and shrubs which are now the principal ornaments of every garden ; and it was owing to his indefatigable industry, that so many persons of the first distinction are now enabled to behold groves, transplanted from the western continent, flourishing as luxuriantly in their several domains as if they were indigen- ous to Britain. He had correspondents in almost every nation in Europe, some in Asia, and even at Pekin ; who transmitted to him

the most valu- able seeds they could collect, in return for the treasures of America. The great Linnams, dur- ing his residence in England contracted an inti- mate friendship with Mr. Collinson. Besides his attachment to natural history, he was very conversant in the antiquities of Britain, having been elected a member of the Society of Anti- quaries, April 7th, 1737; .and he often supplied them with curious articles. He died in 1768.

COLINSONIA, in botany, a genus of the mo- nogynia order and decandria class of plants: natural order fortieth, personatae : COR. unequal, under lip multifid, and the segments capillary : SEED, one and perfect. There two species, na- tives of North America.

COLLIQUAMENTUM, in natural history, an extremely transparent fluid in an egg, observ- able after two or three days incubation, contain- ing the first rudiments of the chick. It is in-

cluded in one of its own proper membranes, distinct from the albumen. Harvey calls it the oculus.

CO'LLIQUATE, v.a. kv.n.} Lat. colli-

CQ'LLIQUABLE, adj. queo, colliquai-

CO'LLIQUAMENT, n. s. tio, collique-

CO'LLIQUANT, adj. -facio. Tomelt,

COLLIQUA'TION, n.s. to dissolve, to

COLLI'QUATIVE, adj. turn from solid

COLLIQUAFA'CTION, n. s. J to fluid. This is the only sense, and therefore every derivative, is as simple in its application as its etymon.

After the incorporation of metals by simple colli- quefaction, for the better discovering of the nature and consents and dissents of metals, it would be tried by incorporating of their dissolutions.

Bacon's Physical Remains.

From them proceed rarefaction, colliquation, con- coction, maturation, and most effects of nature.

Id. Natural History.

Ice will dissolve in fire, and colliquate in water or warm oils. Browne's Vulgar Errours.

Glass may be made by the bare colliquation of the salt and earth remaining in the ashes of a burnt plant.

Boyle.

The fire melted the glass, that made a great show, after what was colliquated had been removed from the fire. Id.

A colliquative fever is such as is attended with a diarrhffia, or sweats, from too lax a contexture of the fluids. Qnincy.

It is a consequent of a burning colliquative fever, whereby the humours, fat, and flesh of the body are melted. Harvey.

Any kind of universal diminution and colliquation of the body. Id. on Consumptions.

The tender consistence renders it the more colli- quable and consumptive. Id.

The fat of the kidneys is apt to be colliquated through a great heat from within, and an ardent coiliquative fever. Id,

COLLIQUATION, in chemistry is applied to ani- mal, vegetable, and mineral substances, tending towards fusion. See FUSION.

COLLIQUATION, in physic, is applied to the solid parts, when they waste away, by the animal fluids being exhausted through the several glands, and particularly those of the skin, which occa- sion fluxes of many kinds, but mostly profuse and clammy sweats.

COLLISION, n. s. Lat. collisio. The act of striking two bodies together ; the state of being struck together ; a clash.

Or, by collision of two bodies grind

The air attrite to fire. Milton's Paradise Luti.

The flint and the steel you may move apart as

long as you please ; but it is the hitting and collision

of them that must make them strike fire. Bentley.

Then from the clashes between popes and kings, Debate, like sparks from flint's collision springs.

Denham.

The devil sometimes borrowed fire from the altar to consume the votaries ; and, by the mutual collision of well-meant zeal, set even orthodox Christians in a flame. Decay °f Pie'y-

CO'LLOCATE, v. a. i Lat. colloco, . collo-

COLLOCA'TION. n. s. J catio. To place; to station ; the act of placing ; the disposition of a thing ; the state of being placed.

If you desire to superinduce any virtue upon a per- son, take the creature in which that virtue is most

eminent ; of that creature take the parts wherein that virtue is collocate. Bacon.

In the collocation of the spirits in bodies, the coll"- cation is equal or unequal ; and the spirits coacervate or diffused. Id-

COLLOCUTION, n. s. Lat. collocutw. Conference ; conversation.

To COLLO'GUE, v. a. Probably from Lat. colluguor. To wheedle ; to flatter ; to please with kind words. A low word.

CO'LLOP, n s. Minshew derives it from coal and op, and says, it is a rasher broiled upon the coals. It is sometimes used for a slice of meat without any reference either to roasting or heating, and sometimes as a term of endearment.

Come, Sir page,

Look on me with your welkin eye, sweet villain, Most dearest, my collop. Shakgpeare. Winter's Tale. Thou art a collop of my flesh,

And for thy sake I have shed many a tear.

Id. Henry VI.

The lion is upon his deaA-bed : not an enemy that does not apply for a collop of him. L' Estrange.

Sweetbread and collops were with skewers pricked About the sides.
Dryden't Fables.

A cook perhaps has mighty things professed ; Then sent up but two dishes nicely drest : What signifies Scotch collops to a feast ?

King's Cookery.

CO'LLOQUY, n. s.) Lat. colloquium. Con-

COLLO'QUIAL, adj. S ference, conversation; alternate discourse ; talk.

My earthly, by his heavenly over-powered, •

In that celestial colloquy sublime, As with an object that excels the sense, Dazzled, and spent, sunk down.

Milton's Paradise Lost.

In retirement make frequent colloquies, or short discoursings, between God and thy own soul.

Taylor.

COLLOT D'HERBOIS (J. M.), a distin- guished French revolutionist, was born at Main- tenon, near Chartres. He was, early in life, a strolling actor, in which capacity he visited Ly- ons ; and finally Paris, at the commencement of the public commotions. He was soon noticed as a street orator, and member of the jacobin club; and in 1792 accused La Fayette of trea- son at the bar of the National Assembly. The same year he published his Almanach du Pere Gerard, in favor of a constitutional monarchy. After this he became the decided enemy of roy- alty ; was one of the members of the munici- pality on the 10th of August, 1792, who procured the dethronement of Louis XVI. ; a member of the Council of Justice, and a deputy of the Na- tional Convention. He demanded, at the first sitting, the abolition of royalty, and that death should be the punishment of emigration. As might have been expected, he voted for the execu- tion of the king ; and was soon after sent to Or- leans and Lyons, where, in the name of liberty, he committed the most horrid butcheries, having assisted in the destruction of the Girondists. He vras nominated, with other members of the ja- cobin club, to draw up the act of accusation against kings. His life was attempted in May, 1794, by a man named Admiral, who fired two pistols at him. July 18th he was appointed

president of the Convention, and joined with other members to procure the overthrow of Robespierre. On the 28th of August, Lecointre, of Versailles,

denounced him and others, as accom- plices of the tyrant they had destroyed ; and though this accusation was rejected, they were arrested in March, 1795, on fresh charges, and soon after condemned to exile. Collot, endeavouring to excite an insurrection of the negroes, was con- fined in the fortress of Sinamari, where he died in November, 1796. He wrote several dramatic pieces.

CO'LLOW, n. s. More properly colly, from coal.

Collow is the word by which they denote black grime of burnt coals, or wood. Woodward on Fossilt.

COLLU'CTANCY, n.s.) Lat. colluctor,

COLLUCTA'TION, n. s. $ colluctatio. Con-

test, struggle ; contrariety, opposition, spite.

The thermae, natural baths, or hot-springs, do not owe their heat to any colluctation or effervescence of the minerals in them. Woodward's Nat. History.

COLLU'DE, v. n. ~^ Lat. colludo, collusio.

COLLU'SION, n. s. COLLU'SIVE, adj.

COLLU'SIVELY, adv.

COLLU'SORY, adj.

To conspire in a fraud ; . to act in concert for a bad purpose; to play into each others hands.

Collusion is, in our common law, a deceitful agree- ment or compact between two or more, for the one part to bring an action against ibA other to some evil pur- pose ; as to defraud a third of his right. Cowell.

By the ignorance of the merchants, or dishonesty of weavers, or the collusion of both, the ware was bad, and the price excessive. Swift.

COLLUM, the neck. See ANATOMY.

COLLUMPTON, a neat town of Devonshire, seated on the river Columb, near its mouth. It carries on the woollen manufacture. It is ten miles north of Exeter, and 150 west by south of London.

COLLUTHIANS, a religious sect who rose about the beginning of the fourth

century, on occasion of the indulgence shown to Arius by Alexander, patriarch of Alexandria. Several people being scandalised at so much condescen- sion, Colluthus, a priest of the same city, hence took a pretence for holding separate assemblies, and by degrees proceeded to the ordination of priests, as if he had been a bishop ; pretending a necessity for this to oppose Arius. To his schism he added heresy ; teaching that God did not create the wicked, &c. He was condemned by a council held at Alexandria by Osius, A. D.

330.

CO'LLY, v. a. & n. s. From coal. To grime with coal : to smut with coal.

Brief as the lightning in the collied night,

That in a speed, unfolds both heaven and earth

And, ere a man hath pow er to say, behold,

The jaws of darkness do devour it up. Shakspeare.

Suppose thou saw her dressed in some old hirsuit attire, out of fashion, coarse raiment, besmeared with soot, colly, perfumed with opopanax.

Burton on Melancholy.

COLLYBUS, (coXXw|3oc, in antiquity, the rate of exchange.

COLLYR/E, or COLLYRIDES, in antiquity, an ornament of hair, worn by the women on their

COLOGNE.

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uecks. It was made in the form of the small roundish cakes called icoXXupai, collyrae.

COLLYRIDIANS, in church history, a sect towards the close of the fourth century, denomi- nated from a little cake, called by the Greeks roXXvpt&at, collyridia, which they offered to the Virgin Mary. They were chiefly Arabian wo- men, who, out of an extravagant veneration for the Virgin, met once a year to celebrate a so- lemn feast, and to render divine honors to Mary, as to a goddess ; eating the cake which they offered in her name. St. Epiphanius, who re- lates the history of this superstitious ceremony, ridicules it. They sprung up in opposition to the Antidico-Marianitis.

COLLY'RIUM, n. s. Lat. An ointment for the eyes.

COLMAN (George), a celebrated theatrical writer, was born at Florence about 1733. His father, Thomas Colman, esq. married a sister of the countess of Bath, being, at that time, British resident at the court of the grand duke of Tus- cany. He received the early part of his educa- tion at Westminster school, where Churchill, Lloyd, Thornton, and others, who afterwards distinguished themselves in the literary world, were his intimate companions. His poetical ge- nius appeared while at school ; and a copy of verses which he addressed to his cousin lord Pulteney, were afterwards published in the Saint James's Magazine. From Westminster he re- moved to Christ Church College, Oxford, where he gave many proofs of his lively genius; and, in conjunction with Bonnel Thornton, produced a weekly paper called the Connoisseur, which was continued from January, 1754, to September, 1756, and published afterwards in 4vols. I2mo. This work appeared about the same time with the World, the Adventurer, and the Rambler, and though it met not with an equal share of ap- probation, yet it may justly be affirmed that it contains some papers superior to any in them, for ludicrously portraying the manners of the day. After taking the degree of A. M. Mr. Colman left college, and took up his re- sidence in London. He entered at Lincoln's Inn, and was soon admitted to the bar, but he never followed that profession ; being more in- clined to the pursuit of literature. In 1760 he published a dramatic piece of great humor, en- titled Polly Iloneycombe, which was acted at Dru ry-lane with great success ; and the next year he produced the comedy of the Jealous Wife, which was thought superior to any which bad appeared for many years. By the death of lord Bath in 1754, he came to the possession of a handsome fortune, which was considerably aug- mented by that of general Pulteney in 1767. Still, however, he continued to write for the stage, and, in conjunction with Garrick, produced that excellent comedy called the Clandestine Mar- riage. He also translated the comedies of Te- rence into blank verse, which added considerably to his fame as a writer. In 1768 he became a patentee of Covent-garden theatre, but soon after sold his share, and made a purchase of the Hay- market theatre from Mr. Samuel Foote, which he supplied ennerwith original pieces or transla- tions, and for which he was at considerable VOL. VI.

pains to engage tne ablest actors, particularly in comedy. Having translated Horace's Art of Poetry, he prefixed an ingenious account of the design of its author, and added to the value of the whole by numerous critical notes. Among a number of small pieces of the humorous kind, the Genius, and the Gentleman, were both pro- ductions of his. In 1789 he had a stroke of the palsy, which greatly impaired his under- standing, in consequence of which his son was entrusted with the management of the theatre ; and he died in August, 1794.

COLMAN (St.), the founder of the church and bishopric of Cloyne in Ireland, flourished about the end of the sixth century, A well, reputed holy, to the north-west of Cloyne, is dedicated to him, and is much frequented by the Irish Catholics on his anniversary, November 24th.

CO'LMAR, n. s. Fr. A sort of pear.

COLMAR, a large and handsome town of France, capital of the department of Upper Rhine and ci-devant province of Alsace. It is situated on two small rivers, the Fecht and the Lauch, is surrounded by a wall flanked with towers, and contains 15,000 inhabitants. This town is supposed to be the ancient Argentivaria. It was fortified towards the middle of the seven-teenth century ; but Louis XIV took it in 1673, and demolished the works ; and the French have ever since retained it. It is twenty-seven miles north-west of Bale, and thirty-four S. S. W. of Strasburgh.

COLME, a river of France, which branches from the Aa, at Watte, in the department of the Straits of Calais.

COLN, a river of Essex, which rises near Clare in Suffolk, and, passing by Halstead and Colchester, runs into the German Ocean between Mersey Island and the main land. The famous Colchester oysters are bred in the salt water pools, at the mouth of this river.

COLNBROOK, a town of Buckinghamshire, seated on the river Coin, which separates this county from Middlesex. It is a great thorough- fare on the western road, and has several good inns.

COLOCYNTHIS. See CUCUMIS.

COLOGNA, a rich town in the Venetian ter- ritory, containing 6200 inhabitants, who trade in wine and silk. It lies twenty miles S. S. E. from Vicenza.

COLOGNE, an electorate of Germany, and formerly an archbishopric, but of late years se- cularised, and included in the grand duchy of the Lower Rhine, under the Prussian dominion. It is mostly situated on the left bank of the Rhine, which bounds it on the east, and separates it from the duchy of Berg ; on the north it is bounded by Gueldres and Cleves, on the west by the duchy of .luliers, and on the south by the electorate of Treves. It is about ninety miles long, by about fourteen of average breadth, and contains a population of nearly 220,000 souls. The upper part of this country is covered with large forests ; but in the lower, corn and flax are produced in great plenty. It is included between 50° 30′ and 51° 25′ N. lat , and 6° 35′ and 70 10′ E. long., extending in a direction from south-east to north-west something in tht

form of a semicircle. The Rhine, which is the principal river, is here a very considerable stream, receiving an accession of the waters of the Nethe, the Aar, the Erp, and the Neufs. The places of chief note are Cologne, the capital, Bonn, a very considerable town, once the metro- polis and the residence of the elector, Bergheim, Bruyl, and Rheinburg. Great quantities of wine are sent out of this country by means of the Rhine, which flows nearly seventy miles along its borders. There are also some lead and iron mines. The religion most prevalent is the Ro- man Catholic; but free toleration is enjoyed by the Protestants, who are also eligible to fill pub- lic offices. Formerly the dignity of archbishop and that of elector were vested in the same person, who was arch-chancellor of the empire, and oc- cupied the third place in the college.

COLOGNE, the capital of this electorate, is an ancient town, known to the Romans by the name of Colonia-Agrippin?? because it was built by Agrippina, the wife of Claudius, and Colonia Ubiorum, from the Ubii, its ancient inhabitants. So early as the year 755 it was an archbishopric, and in 1260 it entered intothellanseatic league, and was once considered one of the four principal Hanstowns. It is built in the form of a crescent, close to the Rhine, and is fortified with strong walls, flanked with thirty large towers, and sur- rounded with three ditches, the whole forming a circuit of nearly seven English miles ; but it was taken by the French under general Jourdan, on the 6th of October, 1794, not only without re- sistance, but even with demonstrations of joy. The entrances to the town are by twenty-four gates, and within the walls there are nineteen pa- rishes, two collegiate churches, two abbeys, thirty-nine monasteries, two establishments for noble ladies, an archiepiscopal seminary, and forty-nine chapels, besides some commandaries of the Teutonic order, and of the order of Malta. The French suppressed the university, which was established by pope Urban VI. in 1388, and established in its place a central school, with a library, a museum, philosophical apparatus, and botanic garden. The streets are generally nar- row and crooked, and the houses very ill built, the only square worth noticing is the Forum Novum, and the best buildings are the churches. The cathedral is vast but unfinished, in the Gothic style ; it was built about the year 1248. Here they say three kings, or wise men, who came from the east to visit the Saviour are interred ; they lay in a large purple shrine, spangled with gold, upon a pedestal of brass, in the middle of a square mausoleum, covered within and without with marble and jaspar. Formerly it was opened every morning at nine o'clock, when the kings were seen lying at full length, with crowns of gold on their heads, garnished with precious stones. Their names, which are Caspar, Mel- chion, and

Balthasar, are in purple characters on a little grate, which is adorned with an infinite number of large rich oearls and precious stones,

particularly an oriental topaz, as big as a pigeon's egg, and valued at 30,000 crowns. Over against them are six large branches of silver, with wax candles which burnt night and day. The bones of these men, we are told, were brought to Con- stantinople by Helena, mother of Constantine, from thence to Milan by Eustorpius, bishop of that see, and afterwards hither by archbishop Rainold. In the Jesuits' college are the portraits of the first thirteen generals of that order, with Ignatius Loyola at their head ; and in the church, which is the finest in Cologne, are many rich statues, with an amazing quantity of fine silver plate ; and the utensils for mass are all of gold enriched with precious stoues. In the Cordeliers' church, is the tomb of our famous countryman, Duns Scotus, surnamed Doctor Subtilis, with this epitaph, ' Scotia ir.e genuit, Anglia me sus- cepit, Gallia me docuit, Colognia me tenet.' In the church of St. Ursula they pretend to show her tomb, and the bones of the 11,000 virgin martyrs, though this arises from a mistaken in- scription ; the heads of some of them are kept in cases of silver, some of them covered with stuff of gold and velvet. The canonesses of St. Ur- sula were all countesses, and had a large revenue. They have, as they say, three of the thorns of our Saviour's crown, and one of the vessels which contained the water that he converted into wine at the marriage of Cana. The church of St. Gestian has a subterraneous church under it. The clergy are very numerous, and had formerly very large revenues; there are said to be not fewer than 2000 ecclesiastics of all ranks. Baron Poinitz said, that though Cologne was one of the greatest ci- ties, it was one of the most melancholy in Europe ; there being nothing to be seen but priests, friars, and students, many of whom begged alms with a song; and nothing to be heard but the ringing of bells. The population of this city is estimated at 50,000, the greater part of whom are papists; the Protestants were formerly obliged to repair to the neighbouring town of Mulheim, in the duchy of Berg, for public worship, but they now enjoy toleration in this respect, and have many privileges. The trade of the town is chiefly in their hands.

The principal exports are wine, timber, earth- enware, slates and several other minerals, fire- arms, and various articles of hardware and kitchen utensils. Linen, woollen, and silk stuffs, lace, and thread, are manufactured here; and great quantities of eau de Cologne, so famous through- out Europe. It was formerly governed by its own senate in civil matters ; but criminal causes belonged to the jurisdiction of the elector and his chapter, of whom the inhabitants were very jea- lous, so that they would not permit him to reside in the city ; his usual residence used, therefore, to be at Bonn. Cologne is seventeen miles east of Juliers, forty-seven from Maestricht, and ten north of Bonn. It is situated in 6° 55′ E. long, and ˆ0° 55′ N. lat.

COLOMBIA.

COLOMBIA, an extensive country, occupy- ing the greater portion of the north and north- western parts of South America, between the parallels of 5° 50′ S. and 12° 30′ N. lat, and .58° and 81° E. long. On the north and north-east it is bounded by the Caribbean Sea and the At- lantic Ocean, on the west by the river Essequibo, which divides it from Guiana, on the south by Brasil eastward, and by Peru westward, while its western coast is washed by the great Pacific Ocean for about twelve degrees of latitude from the south to the north, where it is connected by the isthmus of Darien with the province of Gua- timala in North America. In our article AME- RICA we have treated, at some length, of this interesting portion of the transatlantic world ; but, as its rising prosperity and political impor- tance as an independent state are every day be- coming more apparent, we cannot forbear adding a little to our former remarks.

Of this vast country, the eastern part was for- merly distinguished by the name of Venezuela or Caraccas, and the western was called New Granada, or Condinamarca, the name of the south-western portion being Quito; the two for- mer of these now constitute the great divisions of the republic of Colombia. For the minor di- visions of these great districts, and the popula- tion of each, we cannot do better than refer the reader to the Tables given in the description of the country of Colombia, under the article AMERICA.

The most prominent feature on the western side is the great Cordillera of the Andes, which runs through the whole extent from north to south, at an average distance of 150 miles from the Pacific Ocean. Northward, about the second degree of latitude, a branch of this immense ridge strikes off in an east and north-east di- rection, and soon after another diverges a little to the west, and then due north ; forming three different main chains, with many subordinate ones, crossing the country in all directions, while the intervening valleys are watered by the mighty rivers and smaller streams, that rise among the mountains. It is in this region that the Andes reach their greatest elevation, and the stupendous Chimborazo lifts its lofty summit to •the height of 7147 yards above the level of the sea, exceeded alone by the vast Himalayan chain in the eastern continent. This mountain towers above all the rest : but to the north and south and east, others of a height little inferior are seen ascending to the skies, and exhibiting, with their snow-clad cones, a striking and beautiful contrast with the dark blue firmament above. The chief of these are Antisana, Cotopaxi, Illi- nissa, and Pichinga, varying in elevation about 1000 feet from each other. North of the equa- for this mighty chain diminishes gradually in height, and diverges in the third degree of latitude from the river Atrato, forming a narrow ridge

at about 100 miles average distance from the coast, reaching to cape Vela ; the greatest eleva-

tion of this branch is about 16,000 feet, the plain of Caraccas in which it stands being 2660 feet above the sea. The Caraccas coast, which is of an immense extent, affords a continuation of this great table land, furnishing the most tremendous precipices in the world, and is lost in the sea nearly opposite to the island of Trinidad. The Cordillera of Caraccas, sometimes, in the west- ern part, exceeds 8,000 feet ; it includes some large and beautiful valleys. What is called the Cordillera of the Cataracts of Orinoco forms the second great branch of the Andes ; between the third and sixth degrees of north latitude it ex- tends ˆitself, forming the lofty plain of Tuquillo and St. Martin, and exhibiting the peaks of Umama and Cavanami. Here the rivers Gua- vari, Meta, Zama, and Ymerida, take their rise, and the awful cataracts of Ature and Maypurc occur. Beyond these this chain is of greater height, and stretches in a southerly direction as far as the Portuguese frontiers, where a vast and impenetrable region of forest extends, over which no European has yet passed. Here are the sources of the magnificent river Orinoco, un- known both to the Spaniards and the civilised Indians themselves. The highest point of this Cordillera is Duida, a volcanic mountain above 8,465 feet high. Three vast plains run between the bases of these branches of the Andes, open to the Atlantic Ocean ; the most northerly being that of Orindco, luxuriant in herbage, but witli comparatively few trees, and these widely scat- tered. Here an immense flat occurs, with vast savannahs, called Los Llanos (the Plains), where the residents of the towns and villages feed innu- merable herds of cattle.

The enterprising Humboldt, who penetrated farthest and made the most valuable discoveries in this country, speaking of its general aspect expresses himself thus :

‘ When a traveller, newly arrived from Eu- rope, penetrates for the first time into the forests of South America, nature presents herself to hin. under an unexpected aspect. The objects, that surround him, recall but feebly those picture-; which celebrated writers have traced on the banks of the Mississippi, in Florida, and in other tem- perate regions of the New World. He feels at1 every step, that he is not on the confines, but in the very centre, of the torrid zone; not in one of the West India islands, but on a vast conti- nent, where everything is gigantic — the moun- tains, the rivers, and the mass of vegetation. It he feel strongly the beauty of picturesque sce- nery, he can scarcely define the various emotions which crowd upon his mind ; he can scarcely distinguish what most excites his admiration— the deep silence of those solitudes, the indivi- dual beauty and contrast of forms, or that vigor and freshness of vegetable life, which characte- rise the climate of the tropics. It might be said that the earth, overloaded with

plants, does not allow them space enough to unfold themselves. The trunks of the trees are every where concealed

under a thick carpet of verdure ; and if carefully transplanted the orchidese, the pipers, and the pathos, which a single courbaril, or American fig-tree nourishes, we should cover a vast extent of ground. By this singular assemblage, the forests, as well as the flanks of the rocks and mountains, enlarge the domains of organic na- tuie. The same lianas which creep on the ground, leach the tops of the trees, and pass from one to another at the height of more than 100 feet. We walked for some hours under the shade of these arcades, that scarcely admit a glimpse of the sky, which appeared to me of an indigo blue, so much the deeper, as the green of the equinoctial plants is generally of a stronger tint, with somewhat of a brownish hue. A great fern tree, very different from the polypo- dium arboreum of the West Indies, rose above masses of scattered rocks. In this place we were struck for the first time with the sight of those nests in the shape of bottles, or small pockets, which are suspended from the branches of the lowest trees, and which attest the admirable in- dustry of the orioles, that mingle their warblings with the hoarse cries of the parrots and the ma- caws. These last, so well known for their vivid colors, fly only in pairs, while the real parrots wander about in flocks of several hundreds. A man must have lived in those climates, particu- larly in the hot valleys of the Andes, to conceive how these birds sometimes drown with their voice the noise of the torrents, which rush down from rock to rock.'

Caraccas seems to form three distinct zones from east to west ; first that of the cultivated land along the shore ; then the pasturage, or sa- vannahs; and lastly, one of forests, extending beyond the river Orinoco, penetrable only by means of the rivers that intersect them. It may be said, indeed, to exhibit the three most strik- ing Tarieties of human society ; that of the wild hunter in the woods of Orinoco, of the pastoral life in the savannahs, and the agricultural at the foot of the mountains, near the coast. Along the coasts of the Pacific, the Caribbean Sea, and the Atlantic, is a tract of country, reaching to the Cordilleras, the climate of which is hot, and most unhealthy ; in parts where it is well wa- tered the soil is luxuriant, but where the pe- riodical rains fail, or the rivers are liable to dry np in their course, it is parched, and sterile. In the province of Coro, for instance, it has some- times not rained for four years together, and seasons of similar drought, though not to so great a degree, have been experienced in other

parts near the coast. In this region most of the rivers are short in their course, inconsiderable in the volume of their waters, and so rapid, and their beds generally so rocky, as to be navigable but a little distance from their mouths. The river Magdalena alone, which descends 700 miles along the valleys of the Andes, is navigable 550 miles above its mouth, as far as the port of Honda. The Cauca, in the valley of Antioquia, and the Atracto, in Choco, are considerable streams, the banks of which are covered with forests that bespeak a soil fertile to excess ; but a burning climate renders human life highly precarious ; and innumerable insects and poi-

sonous reptiles destroy all its comfort. As you ascend the mountains the climate grows mil'l, vegetation is uninterrupted through the whole year; wheat, leguminous plants, and all the pro- ductions of the temperate zone abound, and are of excellent quality ; venomous animals are rare, and man feels the grateful salubrity of the tern perature, conducive alike to his labor and en- joyment. This temperature continues to the height of 9000 feet above the level of the sea, where the air is cold and the sky cloudy, and vegetation slow and stunted. When you reach the elevation of 15,700 feet, you find no trace of it remaining except the lichen, which is found nearly 3000 feet higher ; all is solitude, uninter- rupted by a single living creature, except the equally solitary condor, and the few human beings whom love of enterprize and discovery may lead to tempt the difficulties of so lofty an ascent. The thermometer of Fahrenheit varies from 77° to 115° as you ascend to the height of 4800 ; and beyond that, to 8000 feet of elevation, from 50° to 77°. Beyond the mountainous dis- tricts, stretching eastward and southward, is an immense tract of level plains, from the Andes to the river Amazon, and the mountainous country, near the Orinoco. Vast savannahs are watered by the above river, and the numerous streams, that compose the Meta and the Apure ; che overflow- ings of which for four months in the year con- vert the country into a great lake or inland sea, on which the villages or cattle farms appear like so many islets. These plains are extremely rich in agricultural productions, and feed immense herds of cattle. When the rivers retire within their banks, the whole country is covered with the most luxuriant pasturage. The forests on the banks of the rivers abound with the most valu- able timber, and dye-woods, and the soil is ex- cellent for the cultivation of sugar, cotton, coffee, cocoa, indigo, and tobacco. Nature teems with animal and vegetable life ; wild beasts, venom- ous reptiles, and insects, prove the torment of man, who vainly imagines all the comforts of existence designed for his sole use and conve- nience. Though the climate here is hot, it is not so unhealthy as that of the coast ; the air is purified and refreshed by the breezes that are constantly passing over this vast grassy ocean, which extends from the Orinoco to the Andes, 300 miles, in almost every direction. Vera Cruz and Carthagena are the only ports in Con- dinamarca or New Granada, that

have any con- nexion with foreign colonies, or intercourse with any part of Europe, except Spain ; the nature of its coast and the situation of its population on the Cordilleras, have few attractions for fo- reigners, and the dangerous gales of wind from the north render the Mexican Gulf, which bounds this country on the north, veiy little frequented during a part of the year. The Caraccas coasts, on the contrary, possess great advantages for foreign intercourse, from their great extent east- ward, from the number of their forts, and their safe anchorage at all seasons. The ports of Cu- mana, Barcelona, La Guayra, Porto Cabello, Coro, and Maracaibo, present facilities of inter- course so great, that it is extremely difficult to restrain an illicit trade with foreign parts. The

most favorable parts of the country for colonisa- tion are, unquestionably, the four maritime pro- vinces of Orinoco, Caraccas, Zulia, and Magda- lena, near the Gulf of Paria : in the first of these provinces the land is extremely fertile, and particularly famous for the culture of the cocoa. The district of Barcelona is not only very fruit- ful, but it is almost uninhabited. Of all these provinces, however, Caiaccas is the most beau- tiful, and unrivalled for fertility ; but a small portion only of its land is uncultivated, and there is hardly a single estate, that is not so shackled, as to involve a purchaser in endless litigations. Besides this, perhaps, emigrants would do well not to visit this province, since they might with great difficulty renounce its ce- lestial climate and its lovely valleys for the, con- fessedly, greater advantages of other parts of Columbia. In Zulia the province of Merida has most attractions for the foreign settlers ; it has a charming climate, and though its territory is mountainous it is fruitful ; all the grains and fruits of the temperate zone are produced in abundance on the high lands, while every tro- pical production, particularly sugar cane and cocoa, is yielded by the warmest valleys below. Maracaibo also, from its immense lake and gulf, possesses great advantages for agriculture and commerce ; nearly a hundred rivers discharge themselves into its basin, the banks of which are amazingly fertile ; but many of the settle- ments have been abandoned on account of their unhealthy climate. But Magdalena is the most advantageous for a foreign settlement; its lands are almost unoccupied, and produce in great abundance coffee, cocoa, cotton, sugar, rice, in- digo, tobacco, maize, and fruits and vegetables of every kind. There are also extensive pas- tures for cattle, the soil of which is excellent. The climate is generally healthy, and the settler may find a temperature suited to his constitu- tion, by ascending the mountains to a greater or less elevation. Game and fish are found in great plenty in the woods and in the adjacent seas. Two principal ports, Santa Marta on the west, and Cuidad

del Hacha on the east, tend much to forward the commercial business of this province ; the latter, especially, affording an ex- cellent market for the produce raised in the country, and for every article of consumption brought from other parts. Savinilla or Saldii- nilla, in Carthagena, is the natural port of Mag- dalena, and is destined, no doubt, by its situa- tion, to become the principal mart for the trade of the interior, though it is now closed in favor of Santa Marta, the communication between which and the river Cauca is circuitous and troublesome, whereas Savanilla lies at the very mouth of that river. The principal defect of this port is the extreme shallowness of water above it, so that even flat boats, when loaded, with dif- ficulty can reach Baranquilla, but this might be remedied were the mouth, called Boca Viega, stopped up, and the great body of the wator di- rected to the other outlet.

In common with all those countries through which the mighty chain of the Andes passes, Colombia is subject to frequent earthquakes.

There are several volcanoes in this part of that chain, particularly Cotopaxi, Pichincha, Sangai, and El Altar, or Altair, the description of which having been so fully given in the article ANDES, we forbear to enlarge. Caraccas, as well as Quito, and the central parts, is liable to very sensible shocks of earthquakes. In 1797 dreadful ra- vages were produced by them in the month of December; on the first of May, 1802, at eleven at night, there was a pretty stiong shock, with oscillation, from west to east; on the 20th of the same month, at four in the morning, another was felt in a vertical direction, and the earth did not recover its horizontal level for the space of two minutes ; on the 14th of July following, two shocks occurred at forty minutes past two o'clock in the morning, and another at thirty-five minutes past six. The causes and local origin of these earthquakes must exist in the province of Cu- mana, since they are more violent there than elsewhere.

The seasons of this part of South America are only two, winter and summer; and these are marked not so much by heat and cold as by rain and drought. In Cataccas, during the wet season, it rains for the space of three hours a day, and more commonly in the evening than in the morning. There are, however, some days in which not a drop of rain falls, and others when it rains incessantly, the country generally, plains, moun- tains, and valleys sharing its blessings and its inconveniences. It is not drizzling rain as in the northern regions ; but it descends in torrents, producing more water in a single day than that of Europe does in a week. The total quantity is ten times that of the polar regions. The rivers inundate the country during the greater part of this season, and the lands are covered to an im- mense depth, only the tops of the tallest trees being visible, and serving for land-marks. This is the case, especially, in the north plain of

Ori- noco, which extends 450 miles in length and 120 in breadth. M. de Humboldt describes the dry season in Guiana as a horrible time, and gives an excellent picture of the regeneration of nature, especially of vegetation, on the return of the rain. Crocodiles, and other reptiles, seem then to revive, and multitudes of horses, oxen, wild asses, and ferocious animals, rush, panting with eagerness, from the burning desert to quench their thirst in the marshes, plunging into them and drinking with so much avidity, that they become swollen, and often die in a few hours. The effect is different, however, in some parts ; along the coast of Cayenne, Surinam, Berbice, Demerara, and Essequibo the air is refreshed by the sea-breezes, the dry season is delightful, while, on the other hand, the rainy season is hotter and more unhealthy. The climate of Condinamarca is very various ; the lofty Cordillera of the Andes, and the snows which constantly cover its sum- mit, subject this country, though lying under the equator, to all the cold of the polar regions, while on the lower plains the heat is intense. The elevated spots between the ridges of the mountains are temperate and settled in their cli- mate, and there Europeans chiefly fix their abode.

There are many lakes in Colombia, a great

number of which are formed by the rains, and others are the reservoirs of rivers, which flow into them. The former are frequently met with in the low grounds in the neighbourhood of the Orinoco ; the greatest of the second description are Maracaibo and Valencia. The lake of Ma- racaibo has been already referred to in our article AMERICA, under the division of Colombia ; it is very deep and navigable for the largest vessels ; its waters are always fresh ; but violent storms will sometimes force those of the neighbouring gulf into it. There is generally a considerable undulation on it, and when the north wind blows hard the waves rise very high. The shores in the vicinity are unhealthy in consequence of the vapors that arise in the night ; but the richness of the soil in the western part has induced some Spaniards to take up their residence there, in order to cultivate cacao and provisions. On the south it is uncultivated, and without inhabitants ; the northern side, though hotter, is much more healthy. The Indians build their villages on the margin of the lake, deeming it the most healthy plan; to one of these the Spaniards gave the name of Little Venice, or Venezuela, which was afterwards transferred to the whole province. There are four of these villages remaining, under the superintendence of a monk. There is a mine or vein of mineral pitch on the north-west of Lake Maracaibo, used in graving vessels, which emits, during the hot weather, corruscations from its surface like frequent lightnings ; the natives call them St. Anthony's lanterns ; they make use of them in steering by during the dark nights of the torrid zone. The lake of Valencia is of much less extent, being only

forty miles long and twelve broad ; it is situated in a valley, every- where, except on the west, surrounded by lofty and steep precipices. Its banks are covered with the most luxuriant herbage. The waters of his lake are much subject to evaporation, and, being elevated more than 1300 feet above the level of the ocean, it is thought that they have some subterraneous communication. This gra- dual retreat of the waters, and some new islands appearing frequently, have given reason to be- lieve that the lake may perhaps become dry. The southern shores are desert, and a gloomy monotony prevails in consequence of their being overshadowed by a ridge of high mountains, while on the north the country is cheerful and richly cultivated. This part of the shore has the appearance of a garden, regularly laid out with borders of cestrums, azedaracs, and other shrubs always blooming, which join together the scat- tered farms. The houses are surrounded with trees ; the ceiba, with its large yellow flowers, entwines its branches with the purple erithryna ; the most vivid vegetable colors form a pleasing contrast with the unclouded uniformity of the sky ; and in the dry season artificial watering preserves the burning soil in a state of continual verdure and fertility. Here and there vast masses of granite rock break abruptly through the cultivated vegetation of the valley, nourishing on their bare and forked surfaces a few succulent plants that prepare mould for distant ages, and with their withered branches stand like signals on a high cliff. In ancient times this valley was

covered with waters, and there were probably shoals or islets in the midst of it. The lake has many islands on it, not less than fifteen, forming three clusters ; the largest of these, Burro, is two miles long, and is inhabited by Mestizoes, who rear a few goats. The fish is abundant, but there are only three sorts, the guavina, the vagra, and the sardina ; their flesh, however, is very insipid in flavor. On the southern shore tobacco is raised, and here are some of the finest plantations in the whole province. In Guiana is the lake of Parima or Paranatipinca, an oblong piece of water about 100 miles long by fifty broad ; in an island of which there is a rock of glittering mica, said to have been the site of the city of El Dorado, a supposed place, the streets of which were asserted to be paved with gold. This lake giˆes rise to the large river Rio Blanco, and is described as situated in lat. 3° 40′ N., and long 67° 20′ W.

It is difficult to find a country in the world so abundant in rivers ; every valley has them, either of the larger or smaller description, and, if they are not navigable, yet they would copiously supply all the wants of the population, were it even increased a hundred fold. Those streams which take their rise on the northern sides of the mountains in Caraccas, arid flow into the sea, are so fenced in by their rocky banks, and fa- vored by the declivity of their channels, that they seldom overflow, and never for any length of time, or with much detriment to the country ; but those which

rise on the south of the same mountains, running in smoother and shallower beds, frequently mingle their water through a great part of the year, and form an immense sea in the country. Almost all of these flow to augment the waters of the Orinoco, which is not only one of the largest, but the finest of the rivers of the southern peninsula. We have treated of it among the rivers of South America, and shall not therefore repeat our observations. Rising in the lake Ipava, it winds a circuitous course, passing through lake Parima, and after- wards receiving the Guaviare ; and more north- ward the Meta, the Apura, the Arauca, and a multitude of other streams, large and small, it issues by numerous estuaries into the Atlantic opposite to Trinidad. Seven of its mouths are navigable, but very dangerous ; the largest is eighteen miles broad. The scenery on the banks of this great river is truly magnificent, forests of aromatic trees diffuse, to a great extent, their delighful odors and agreeable shade ; birds of the most beautiful plumage are observed in every direction, and the traveller is astonished at the innumerable monkeys that are seen leaping from tree to tree, with the most surprising agility. Vast plains of the greatest verdure extend from the forests to a distance that no eye can reach. The cataracts of the Orinoco, said to be the most awful in the world, occur near the bend of the river at the villages of Maypures and Atures, in about 6° north latitude. From the end of April to October thewaters are swelled by the rains, rising to the height of forty feet above their lowest level ; they then begin to subside, and continue sinking till March, when they are at the lowest : they fluctuate in this way with constant regularity

The rains are not the only causes of this varia- tion ; the principal cause, no doubt, is the melt- ing of the snows in the mountains of Bogota. The seas that wash the coasts of Colombia are not remarkable for any great variation in the tides ; in some parts on the north and north-east, near the gulf of Paria, they rise during the equinoxes to six or seven feet; but near the mouths of the Orinoco they scarcely attain the height of ten inches. The trade winds prevail off the coasts, blowing from north-east by east ; but nearer to the shore they blow only from nine in the morning till evening, and are suc- ceeded in the night by the land breezes. All the coasts of Caraccas are exposed to rolling and monstrous billows, and there is only one port, the road of Porto Cabello, where the navy can ride securely.

The principal place on the north of this vast country is Caraccas ; its port, La Guayra, is situated in lat. 10° 36′ N. and 67° 10′ W. long. This port is singularly situated ; it is separated from the elevated valley of Caraccas by a chain of mountains descending directly into the sea, and forming a rocky

wall for the backs of the houses of the town, not much more than 140 toises from the ocean. On this account serious damage is sometimes occasioned by the stones that fall from the heights. This circumstance also occasions a striking peculiarity in the sur- rounding prospect, there being no visible hori- zon, except what the sea forms on the north. This town is built in the form of a great square, the streets cutting each other at right angles It contains two handsome cathedrals, five churches, and one college. The place is defended by batteries, of which that of Cerro- colorado is the chief; and the works on the sea- side are well disposed, and in good repair. The appearance of this town is singularly gioomy ; one seems to be on an island, rocky and desti- tute of vegetation, and except Cape Blanco and Maiquetia, where there are a few cocoa trees, the horizon, the sea, and the heavens, are the only objects that meet the eye. The climate is the most ardent in all the country, not only from the scorching rays of the sun, but from the heat retained by the almost perpendicular rocks ; and the air is considerably stagnated in the hollows of these mountains, and consequently has a more unwholesome effect upon the organs of the human frame, than the same degree of heat in the open country. By the thermometrical ob- servations of Humboldt, it appears that La Guayra is one of the hottest places in the world, that the quantity of heat there, in the course of the year, is a little more than at Cumana ; but that from November to January the at- mosphere is cooler at La Guayra: probably this may arise from its more westerly posi- tion. This port, however, was not formerly so unhealthy, nor the yellow fever so prevalent as in Porto Cabello, Carthagena, and Santa Martha ; but since the year 1797, to whatever cause it may be owing, this destructive malady has com- mitted dreadful ravages. La Guayra is not a safe anchorage for ships ; the depth of the water nearly a quarter of a league from the beach, is not more than eight fathoms ; the sea is in con- stant agitation, and the surge runs high. It is,

*consequently, difficult for vessels to take in their lading : this operation is done by the negroes and mulattoes, a remarkably strong race of men, who go up to their middles through the water; and it is particularly deserving of notice, that the sharks here, and at Santa Martha, are per- fectly harmless, and never attack any one ; while, at the opposite island, they are dangerous and blood-thirsty. The people, generally supersti- tious, attribute this to a bishop's having given his blessing to the sharks at both these places. In peaceable times the imports into this port amount to rather more than £500,000, and the exports of cacao, indigo, cotton, coffee, and hides, .are nearly £350,000. * When in the season of the great heat,' says the author of Colombia, ' we breathe the burning atmosphere of La Guayra, and turn our eyes towards the mountains, we are strongly impressed with the idea, that at the direct distance of 5,000 or 6,000 toises, a po- pulation of 40,000 souls assembled in a narrow valley, enjoys all the coolness of*

spring, of a temperature, which at night descends to 12° of the centesimal thermometer. This near ap- proach of different climates is common in the Cordilleras of the Andes ; but everywhere at Mexico, at Quito, in Peru and in New Grenada, a long journey must be made into the interior either by the plains, or by proceeding up the rivers, in order to reach the great cities, which are the centres of civilisation. The height of Caraccas is but a third of that of Mexico, Quito, and Santa Fe de Bagota ; yet among all the ca- pitals of Spanish America, which enjoy a cool and delicious climate in the midst of the torrid zone, Caraccas stands nearest to the coast. What a privilege to possess a sea-port at three leagues distance, and to be situated among mountains on a table land, which would produce a heat, if the cultivation of the coffee-tree were not preferred.' Nothing can be finer than the road from La Guayra to the valley of Caraccas ; it requires but three hours to travel it with good mules, and two to return ; it takes about four or five hours to go on foot. It is very similar to that of St. Go- thard, or of the Great St. Bernard in Switzerland ; at first you ascend by a ridge of steep rocks, afterwards the ascent is rather more easy, and the windings of the road render the declivity more easy as in the old road over mount Cenis. The leap or Salto is a crevice that is crossed by a drawbridge, and on the top of the mountain there are real fortifications. At La Venta you fir.d some most beautiful scenery; and when the clouds permit, the sea and the neighbouring coast pre- sent a magnificent prospect. You have an horizon of more than sixty-six miles in radius, the barren, white shore reflects the light in such a mass as to dazzle the beholder ; while, at your feet, you pc Cape Blanco, Maiquetia with its groves of cocoa- trees, La Guayra, and the vessels entering its port , and, when the sky is not clear, long trains of clouds, brightly illumined on their upper sur- face, present the appearance of islands floating on the ocean. Houses and trees are often seen bursting through the openings of the clouds, that are rolling one over another; and these objects thus appear at a greater depth, than when beheld through a serene atmosphere. Caraccas lies in a small valley near the lofty mountains of

Avilaaud the Silla, which give a character of gloom to its scenery, especially towards the end of the year; when the atmosphere in the evenings is thick, and when streams of vapors cling to the evergreen slopes of the hills. But in June and July the nights are delicious, the air is pure and transparent, and this is the season for enjoying the beauty of this scenery. The climate of the place is remarkably mild, the temperature in the day time being between 20° and 26° ; and at night between 16° and 18°, being favorable equally to the plantain, the orange-tree, the coffee-tree, the apple,

the apricot, and to corn. It is, however, generally, inconstant and variable, the inhab- itants complain of having several seasons in a day, and those in rapid succession These va- riations act violently on the human frame. Two winds generally prevail, one from the west, or sea side; and the other from the east or the in- terior of the country ; the first called Catia, be- cause it blows from that place through the ravine of Tipe, is loaded with humid vapors, which it deposits, as its temperature decreases ; it causes dreadful head-aches to persons of irritable nerves, and the people shut themselves up in their houses to avoid it, as they do the sirocco in Italy. The mean temperature of the air maybe about fiom 20° to 22°. Rains are frequent, and hail occurs here about every four or five years, though none falls in the low regions of the tro- pics. The comparative coolness of the climate agrees well with the cultivation of equinoctial productions. The sugar-cane thrives even on the heights above Caraccas ; but in the valley the coffee-tree is preferred, which yields little fruit ; but that little of the finest quality. Pine-apples of the highest flavor are produced at Baruto Empedrado, Buonavista, and on the way to Victoria. The traveller is surprised herewith a sight of the culinary plants of our climates, and beholds the strawberry, the vine, and all the fruit trees of the temperate zone growing by the side of the coffee and banana tree. The best apples and peaches come from Macarao on the west of the valley, and the quince, not above four or five feet in height, has become wild. Ex- cellent apples are sometimes produced from trees not grafted ; there are no cherry-trees, and the olive-trees, though luxuriant in vegetation, bear little fruit. Four small rivers water the vicinity of Caraccas, the Guayra on the south, the Anauco and the Caroata on the east, and the Ca- tucho; these, after supplying the domestic wants of the town, unite in one bed, and flowing through the valley Chacao, at length mingle with the Tuy, and under that appellation fall into the ocean about thirty-six miles east of Cape Codera. The streets are in straight lines about twenty feet wide, crossing each other at right angles, at a distance of 300 feet; there are three squares that deserve the name ; the houses are well built, and in the interior there are many storied and of fine appearance, some of brick, but the greater part of stone, with sharp roofs. The houses of the principal people are neatly and even richly furnished.

Coro is another principal town in Venezuela : it is situated on an isthmus separating the Gulf Venezuela or Maracaibo, from the Carribbean

Sea, eight leagues to the west of Caraccas. It stands in a dry sandy plain, where scarcely any- thing grows but Indian figs, and plants of the Cactus family ; the inhabitants have their fruit and vegetables from a place three leagues distant, and such is the great scarcity of water, that it is brought two miles on mules and asses into the town. It is, however, so well situated for trade with Porto Rico and St. Domingo, that the Spaniards fixed on it for their settlement on the coast of Terra Firma. Its streets are regular, but

not paved, and the houses are mean ; there are about 10,000 inhabitants, who possess little activity or enterprise, but are very proud ot being descended from those who conquered the country. There are very few negroes ; the Indians who live in the suburbs doing the laborious work ; they are paid very low wages, and live with so much parsimony that they will not accommodate each other with a bit of fire without receiving a piece of wood in return. The next place of conse- quence is Porto Cavello or Puerto Cabello, thirty leagues to the north-east of Caraccas, in a fine harbour in theGolfoTriste ; it is near Curacoa, to which island it owes its importance. About a league from Porto Cavello is Barburatae, a village and harbour, long infested by smugglers, but after- wards in the possession of the Guipuzcoa com- pany, who built a town, wharf, and forts with immense warehouses, and ejected these most troublesome inmates. Guanara, ninety-three leagues south-west of Caraccas, is situated in a fine plain towards Varinas ; the river, which gives its name to the town, affords excellent water for the inhabitants and their cattle, and irrigates their land ; while there is no impediment to prevent the free circulation of the air. This city has a number of uniform and regular streets, with well- built houses, a handsome church, and a good hospital; its population is about 12,000. It is surrounded with fertile lands and rich pastures for cattle, of which they keep great numbers, and in which, as well as mules, their chief trade con- sists. Formerly they raised good tobacco in some parts, which was a great source of riches.

The next place of importance is Barquisime- to, about 120 miles W. S.W. of Caraccas, situ- ated in an elevated plain, where it enjoys a happy temperature. It has a fine parish church, in which is a crucifix famed for working mira- cles, that is an object of devotion to the people, and yields an abundant revenue to the clergy. The town has a population of about 11,000 per- sons, who find sufficient employ in the plains, valleys, and rising grounds in the neighbourhood, in feeding cattle, and cultivating sugar and excel- lent wheat. Besides these there are Tocuyo, with about 10,000 inhabitants, who are said to be much addicted to suicide; San Carlos, a large and handsome town on the small river Aguare, with a population of 9500 persons; Araura, with about 11,000 people, who are very indo- lent, and addicted to pleasure; Maracay, a beau- tiful town, forty mile south-west of Caraccas, having three-fourths of its houses built of stone, with an industrious, cleanly, and moral popu- lation; Victoria, founded by the missionaries, in the plain of which, though very low, European corn is cultivated in large quantities by a popu-*

lation of nearly 8000 persons ; Tulmero, in a valley near that of Aragua, containing about 8000 inhabitants, many of whom are free Indians, who are active and laboripus, but much addicted to strong liquors, in which they spend in one week the produce of two months ; San Matheo, the inhabitants of which are rich and industrious; Valentia, about sixteen miles south-west of Ca- raccas, remarkable as the scene of the death of the tyiant Lopez de Aguieme, who having de- clared against Philip II., at the moment when he fell, plunged a dagger into the bosom of his only daughter, that she might not have to blush before the Spaniards at the name of the daughter of a traitor. Here the ants are so innumerable, that their excavations under the houses resemble underground canals, which fill with water in the rainy season, and cause great danger to the buildings ; San Felipe, surrounded with a fertile soil, watered by a great number of rivulets, and exposed to violent rains and excessive heats; Carora, a handsome town, having three parish churches, in a parched and thorny plain, but favored with a healthy climate; San Juan Bap- tista del Pao, a city inhabited solely by propri- etors of cattle; Calabozo, round which it is computed about 98,000 head of cattle wander in the pastures; San Luis de Cuba, San Sebastian de los Reyes, both feeding large herds of cattle; Nirgua, erected on account of the mines in its soil, but which is going to decay; and the Bay of Ocumara, five leagues east of Porto Cavello, which is an excellent port; the valleys round which contain a population of about 52,500 per- sons of different descriptions. The greater part of the inhabitants of these towns are farmers, who cultivate their lands, or |eed numerous herds and flocks in the surrounding country; the rest are priests, physicians, escrivanas (who discharge the offices of barristers, attorneys, notaries, and even bailiffs), and a few shopkeepers. The ter- ritory of one town or village is separated from that of another by forests and natural meadows, or savannahs ; and occasionally we find missions or villages of half-civilised Indians.

The government of Cumana, including New Barcelona and New Andalusia, rs bounded on the north and east by the sea, on the west by the river Unara, and on the south by the Orinoco, on the left bank of which there are some inhabi- tants in several places. It is very mountainous, the Andes running through it as far as the Gulph of Paria, and giving birth to the rivers that flow into the Caribbean Sea on the north, and into the Orinoco on the south. The Unara is navigable nearly twenty miles from the sea, up to the vil- lage of San Antonio de Clarinas, its whole course being about sixty miles. By the Neveri the port of Barcelona carries on its trade in cattle and skins ; at Cumana the small river Manganares is remarkable for having its banks Imedwith fruit- ful plantations. The soil in some parts is rather fertile; in others sandy, and presenting nothing but an inexhaustible mine of salt, both marine and mineral. In other places it is wonderfully

fruitful, producing every species of vegetation, and the most precious trees, as theguiacum,ana- cardium, Brasil, andCampeachy woods, down to the very coast of Paria. The climate varies

according to the different e\evati jns of the moun- tains, valleys, and plains, in the interior. The most flourishing part of the country is the coast on the Gulf of Paria, where there are two vil- lages, inhabited by French refugees and Spa- niards, which are rising in importance; this district promises soon to be the richest in the province. The port of Cumana is capable of receiving all the navies of Europe, and the whole Gulf of Cariaco, thirty-five miles long, and sixty- eight broad, affords very good anchorage; the ocean being calm, and hurricanes never felt here. The city, situated at the foot of a hill, is com- manded by the castle of St. Antonio, which forms a beautiful object to vessels advancing into the port, appearing as a bright object on the dark sides of the mountains that rise into the clouds. The town is only fifty-three feet above the level of the sea; the heat is very intense, and scarcely any rain ever falls in the plain, though in the neighbouring mountains it is frequent. There are no very remarkable buildings, owing to the dreadful effects of the last earthquake; on account of the frequency of these, the houses are low and slightly built, beauty and elegance be- ing sacrificed to safety. In 1530 the whole coast was shaken, and a city called New Toledo destroyed; towards the end of the sixteenth cen- tury these shocks were very frequent, the sea sometimes rising fifteen or twenty fathoms ; on the 21st of October, 1766, Cumana was over- thrown, and great numbers perished ; the t'em blings continued hourly for fourteen months. The next year the inhabitants lived in the streets, when the shocks happened only once a month ; in this earthquake the ground opened, and quan- tities of hot water were thrown out. In 1794 there was another tremendous convulsion, and in 1797 the earth heaved with frightful noises, and four-fifths of the city were destroyed. Half an hour before this there was a strong sulphureous smell, aloud noise was heard from under ground, and flames arose from the banks of the river. Though so constantly exposed to this dreadful visitation, the inhabitants of this place are very insensible to it ; they think it never happens but at certain intervals, and that the weather and other appearances indicate its approach. The population of this town, comparing all the state- ments that have been given, may be about 17,000; they are not so rich as the Caraccans, but they are inclined to business, economical, and industrious ; they trade abundantly in cat- tle, smoked meat, and salted fish; the retail trade is mostly carried on by Catalans, Biscay- ans, and Canarians, men who begin with a few dollars, and in a few years acquire fortunes by frugality and industry. These people first taught the natives to derive advantage from their local productions.

Provisions are remarkably cheap here ; ' two pounds of beef,' says the

author of Colombia, 'are sold at Cumana for twopence-halfpenny; and twenty-two pounds of salt meat at f'-otn three shillings and fourpence to four shillings and twopence. Fish is never weighed there : some days there is such a quantity caught by the fishermen, that they give ten, twelve, or fifteen, pounds weight for fivepence. The poor go to the

sea-side with maize, cakes, and eggs, and barter them for fish. Eggs are the small change in Cu- mana, Caraccas, and other provinces of Venezuela, where copper coin is unknown; the smallest piece in circulation being a medio-real in silver, worth twopence-halfpenny. If one goes into a shop to buy something worth less than twopence- halfpenny, they give as change two or three eggs; for a dozen of eggs there is worth only twopence-halfpenny. That is also the price of a measure of excellent milk, about a quart. A sheep is sold for a dollar ; a fine turkey for twenty or twenty- five pence ; a fowl for fivepence ; a fat capon for from sevenpence-halfpenny to ten pence ; a duck at the same price; game and wild- fowl are fre- quently sold cheaper than butcher's meat ; and all those articles are still cheaper in the small towns of the interior.'

' I lived,' says Lavaysse, ' at the best and dearest hotel in Cumana, at a dollar per day, in- cluding the expenses of my son and servant. They gave us for breakfast, cold meats, fish, chocolate, coffee,, tea, and Spanish wine: an ex- cellent dinner, with Spanish and French wines, coffee, and liqueurs: in the evening chocolate; I was well lodged and lighted. I should have expended but half that sum if I had gone to board and lodge in a family. In short, there is not a country in the world where one may live cheaper than in the province of Cumana. An excellent dinner may be had there for tenpence, not including wine, which does not cost more than fivepence per bottle to those who buy a quantity of it. Poor people drink punch, which is at a very low rate, for it does not cost above one penny per quart.'"

The following description of the new salt-works in the neighbourhood of Araya, from the same pen, is worthy of attention. ' The new salt- works of Araya have five reservoirs or pits, the largest of which have a regular form, and 2300 square toises surface. Their mean depth is fight inches. Use is made both of the rain waters, which by filtration collect at the lowest part of the plain, and of the water of the sea, which enters by canals, or marteUieres, when the flood-tide is favored by the winds. The situation of these salt-works is less advantageous than that of the mere. The waters which fall into the latter pass over steeper slopes, washing a greater extent of ground. The natives make use of hand-pumps to convey the sea-water

from one principal reservoir into the pits. It would nevertheless bo easy enough to employ the wind as the moving power, since the breeze always blows strong on these coasts. The earth already washed is never carried away here, as is the cus- tom from time to time in the island of Margarita; nor have wells been dug in the muriatiferous clay, to find strata richer in muriate of soda. The salt men gen°rally complain of want of rain ; and in the new salt-works it appears difficult to determine what .is the quantity of salt that is owing solely to the waters of the sea. The na- tives estimate it at a sixth of the total produce. The evaporation is extremely strong, and favored by the constant motion of the air; so that the salt is collected in eighteen or twenty days after the pits are filled. Humboldt found (the 19th of

August, 1799, at three in the morning) the tem- perature of the salt water in the pits 32‘5°, while the air in the shade was 27-2°, and the sand on the coast at six inches depth 42-5°.

The royal administration of the salt-works of Araya, dates only from the year 1792. Before that period they were in the hands of Indian fishermen, who manufactured salt at their plea- sure, and sold it, paying the government the moderate sum of 300 piastres. The price of the fanega was then four reals (eight of these reals are equivalent to a piastre, or 105 sous Frencli money, or 4s. 4%d. English) ; but the salt was extremely impure, gray, mixed with earthy par- ticles, and surcharged with muriate and sulphate of magnesia. As the manufacture or labor of the salt-makers was also carried on in the most ir- regular manner, salt was often wanted for curing meat and fish — a circumstance that has a power- ful influence, in these countries, on the progress of industry, as the lower class of people live on fish, and a small portion of tasajo. Since the province of Cumana has become dependent on the intendancy of Caraccas, the sale of salt is under the excise; and the fanega, which the Guayquerias sold at half a piastre, costs a piastre and a half. This augmentation of price is slightly compensated by a greater purity of the salt, and by the facility with which the fishermen and farmers can procure it in abundance during the whole year. The salt-works of Araya yielded the treasury in 1799 a clear income of 8000 piastres.’

The other towns of any note in this province are Barcelona, a place of growing importance, especially in a commercial view ; Cariaco, sur- rounded with extremely fertile plains, but of a hot and unhealthy climate ; Carupano, built at the opening of two fine valleys, watered by two large rivers ; Rio Caribe, whose valley is the temple of this country ; Cumanacoa, surrounded with high mountains, and of rather a cold cli- mate, though it is not more than 104 toises above the level ~of the sea; and several missionary establishments near the rivers and on the great plains, inhabited

chiefly by Indians, who live in mud-huts, and cultivate their gardens, together with a large plot of ground which is common to all, and which is generally an indigo or sugar plantation. Near Cumanacoa is the great moun- tain Tumiriquiri, a vast rocky wall, rising from the forest; in one part the chain is broken by a precipice 900 feet wide, filled with trees, whose branches entwine completely with each Qther ; through this crevice the Rio Jagua flows, and it is the abode of the jaguar, or American tiger, which is here very large and ravenous. Flames occasionally issue from two caverns in this pre- cipice that may be seen at a great distance. The mountain is about 4400 feet above the level of the sea; its paths are traversed on mules, which are so sure footed, that an accident seldom hap- pens. In a valley near this ridge is the cave of Guacharo, with a river running through it nearly thirty feet wide, and inhabited by a vast number of nocturnal birds, who build their nests in its arches. Once a-year the Indians destroy Hie young for the s?.ke of a layer of fat, which co- vers the abdomen, which is perfectly free from

smell, and will keep for twelve mouths without becoming rancid. The monks purchase this oil for the purpose of cooking. These birds, called guacharoes, utter a mournful cry, which the In- dians ascribe to the souls that are forced to go through this cave to the other world.

‘ They consider,’ says Humboldt, c that they are enabled to obtain permission to go out only when their conduct in this life has been without re- proach. If it has been otherwise, they are retained for a shorter or longer time, according to the heinousness of their offences. This dark, wretched, and mournful abode, draws from them the mourn- ings and plaintive cries heard without.

‘The Indians have so little doubt of this fable, supported by tradition, being a sacred truth, com- manding the utmost respect, that, immediately after the death of their parents or friends, they repair to the mouth of the cavern to ascertain whether their souls have met with any impediment. If they think they have not distinguished the voice of the deceased, they withdraw overjoyed, and celebrate the event by inebriety, and dances characteristic of their felicity; but, if they imagine they have heard the voice of the defunct, they hasten to drown their grief in intoxicating li- quors, in the midst of dances adapted to paint their despair. So, .whatever may be the lot of the departed soul, his relations and friends give themselves up to the same excesses : there is no difference but in the character of the dance.

‘All the Indians of the government of Cumana and Orinoco not converted to the faith, and even many of those who appear to be so, have, not-withstanding, as much respect for this opinion as their ancestors could possibly have had. It appears that it is not, like so many others of its kind, the child of imposture or fanaticism ; for it is not accompanied with any religious ceremony, the expense of which would increase the revenue of the inventor’s benefice. The cavern itself shows no vestige of superstition having at any time obtained there the least monument of the empire imposture might have wished to exercise over credulity. This prejudice then is solely the effect of fear, ever ingenious in creating phan- toms, and in imagining those things which flatter the illusion. Among the Indians 200 leagues from the cavern, to go down into Guacharo, is synonymous with to die’

The forests of this country abound in monkeys of every kind, the most remarkable of which is the araquato, about three feet high, having its whole body covered with a thick coat of fur of a reddish-brown color ; its face is rather black, and its beard long, and its eye, voice, and gait very melancholy. It is not vivacious as monkeys ge- nerally are, and the noise it makes, especially on an approaching change of weather, is singularly dismal. The valleys and banks of the rivers abound in Brasil and log-wood. The population of Barcelona and Cumana is about 100,000, one half of whom arc Indians.

The island of Margarita forms a separate go- vernment from that of Cumana ; it is situated in 10° 56′ N. lat., and 64° and 65° W. long., being about forty-eight miles long and eighteen broad. It was famous for pearls, but the fishery hasceasec for more than a century past. This island con-

sists of two parts, united by an isthmus, scarcely more than from eighty to 100 paces broad, and in some places not more than ten or twelve feet above the sea. There are three ports in the island, Pampetar, Puerto Ac la Mar, and Puerto del Norte ; the former being the most important for its trade. The population is about 16,000. It has only three rivulets, just sufficient to turn mills; the water of the little river near Assump- cion is impregnated with sulphureted iron, mag- nesia, Sec., so that the inhabitants prefer drinking water from ponds, though it is always muddy. There is scarcely enough agriculture to maintain the people. Provision is cheaper here than at Cumana.

This island is famous for panots and other rare birds ; scarcely a vessel leaves its ports without carrying away some of them. The manufactures are cotton stockings and hammocks of a pecu- liarly excellent quality ; but the fisheries are the principal objects of trade ; more than 300 Indians are employed in them ; the quantity taken is in- credible, and of innumerable kinds, the most common being the mullet, something like a her- ring. Salt is remarkably cheap ; a barrel, of about 300 pounds, selling for twelvepence-hulf- penny.

The province of Maracaibo, round the lake of that name, extends but a little way into the land : it is about 100 miles in length. The soil is un-fruitful on the east and west shores ; but, on the south, it is equal to that of the finest land in South America ; the climate is generally hot and unhealthy, except in the south, near the snowy mountains of Merida. It is peopled by about 174,000 persons, chiefly Indians ; a few whites only have settled on the borders of the lake to- wards the west. The towns on this lake are mostly built on posts of iron-wood, which be- comes like a mass of stone from the quality of the water. The city of Maracaibo stands about six leagues from the sea, in a dry hot climate and on a sandy soil. The south wind, from its insa- lubrity, is here called the Destroyer; violent storms of thunder and lightning, with deluges of rain, are prevalent ; but they are desirable, as, in failure of them, earthquakes are experienced. The town is built on the shore of a small gulf near Maracaibo Point ; many of the houses are built of lime and sand, but however cheap tiles are, the inhabitants, from an idea of greater safety, obstinately adhere to the practice of co- vering the handsomest with a kind of reed called enea, growing on the borders of the lake. This mixture of reeds and tiles has a disagreeable ef- fect, and from their combustible nature, they keep the city in constant danger. The most noble fa- milies are the descendants of the first con- querors ; of the? e there are more than thirty, but most of .them are poor, and the sense of their high extraction makes them ashamed of labor, and remarkably indolent. There are about 25,000 inhabitants, of which 5000 are negroes, who are all artisans of different descriptions.

‘ Notwithstanding the barrenness of resources which education finds at Maracaibo,’ Depons says, ‘ we there see young persons so favored by nature, that the slightest elementary instruction atoncedevelopes in them all the faculties, which

in Europe do not manifest themselves until after long study, and the care of

the best teachers. What adds to the singularity of the phenomenon is, that this excess of natural genius frequently becomes prejudicial to the tranquillity of the families of Alaracaibo ; for it is enough for many of these young men to know the conjugation and government of the verbs, in order to be qualified to write pieces, whose subtilty would appear to the knavish advocate better than the productions of the counsel who establishes his reasons on the principles of the civil law. Such suits as should never have been instituted, or which the tribunals would instantly have decided, become intermin- able and ruinous by the sophisms with which these scribblers envelope in darkness causes the most simple and clear. This disease, very preva- lent at Maracaibo, is by no means a stranger in other Spanish territories. The penal laws which the legislature has been forced to enact, to lessen the number of these imps of chicane, whom they call pendolistas (quick writers), literally prove that the evil is general enough.

' In allowing that the inhabitants of Maracaibo have activity, courage, and genius,1 says the same writer, ' we have nothing more to say in their favor. They are reproached with having very little regard to their word, and with thinking themselves not bound by their signature, until after they have in vain endeavoured to release themselves from it by law. Their reputation in this respect is so well established, that all strangers whom business draws to Maracaibo, say it is much better to form connexions of interest with the women than with the men, because they alone have there that good faith and firmness which, in every other part, is the peculiar heritage of the men.'

*' Since the course of description has led me,' he adds, * to speak of the women of Maracaibo, I ought not to let it be unknown that they are in their youth paragons of modesty ; and in mar- riage, faithful wives, and excellent mothers of families. Affection for their husbands, the cares of their household, and the education of their children, are the objects which divide all their moments, and occupy all their solicitude. They know not, however, before marriage, any other amusement than music. Their favorite instru- ment is the harp. There are few houses in which the harmonious sound of this instrument is not heard every evening, and every day of festival.'*

The other towns of this province are Truxillo, Gibraltar, Paruate, Las Barbacoas, and San Pe- dro; Truxillo is celebrated for superior woollen manufactures, and excellent cheese.

Guiana, or Guayana, is an immense province, the precise boundaries of which cannot be ascer- tained. On the east, its shore extends to the mouth of the Orinoco, about thirty leagues, and westward it reaches to the river Yapura ; besides which, it stretches along the Orinoco 400 leagues to the

Rio Portuguesa. Besides this vast river, it has the Caroni, the Aruy, and the Caura, on the north ; on the south, the Guaviare, the Yu- ritta, and the Atalapo; and, on the west, the Suapure, the Sippapu, besides a multitude of smaller streams. This province is divided into upper and lower, one east and the other west of

the Caroni. The soil is fertile in the extreme, the rivers periodically overflowing their banks, and leaving behind them a slime as prolific as the Nile ; but this fine district is nearly waste, and a harbour for a number of cannibal tribes, of which the Caribs are the most formidable. The indigenous inhabitants are about 30,000, united into missions, the rest are independent Indians, who have not embraced Christianity ; in the whole, constituting a population of 52,000 per- sons. Cattle constitute the riches of the province, in the export of which, and of a little tobacco, cotton, and indigo, their trade consists. Angos- tura is the chief place ; it is about fifty leagues west of the confluence of the Caroni ; when the water is high, the quays are frequently overflowed, and the caymans or crocodiles are sometimes seen in the streets. Notwithstanding its low situation it enjoys a mild temperature, Reaumur's thermo- meter scarcely rising to 24° in the hottest season. The province of Varinas divides the territories of the former government of Caraccas from those of Condinamarca. It is intersected by large and numerous rivers, which inundate and ferti- lise its extensive plains. In one of the moun- tainous ridges of the country the Apure rises, which, after running a course of more than 500 miles, falls into the Orinoco by several mouths, receiving on its way the waters of numerous other streams, the largest of which are the Santo Domingo and Portuguese. Here also the Aranca and the Meta are among the fine rivers that intersect this country. Its total popu- lation amounted in 1807, to 141,000. The most remarkable features are its extensive plains, covered with luxuriant herbage and feeding in- numerable herds of cattle. Its chiefs towns are Varinas, San Jayme, San Fernando de Apure, Pedraga and San Antonia.

Santa Fe lies on the west of the eastern Andes ; it is very mountainous, but none of the summits of the chain in this country reach the region of eternal snows, though they are very near it. The lake Guatavita is one of the curiosities of this province. The following description of it is from the work entitled Colombia : —

'It is situate on the ridge of the Zipaquira moun- tains, north of the capital, in a wild and solitary spot, at the height of more than 8700 feet above the sea. It is a small oval piece of water, in a deep hollow of the same form, round which are cut ranges of steps, reaching to the brink of the lake, having rerved most probably for some re- ligious ceremonies in use among the ancient possessors of this country. As it was supposed that a great quantity of treasure had been thrown into this lake, when Quesadt.

conquered the kingdom of Cundinamarca, the Spaniards at- tempted to cut a canal through the mountain ot which its banks are composed, in order to drain off the waters ; but their design does not appear to have succeeded, for, after considerable exca- vations, it has been left off at little more than half the requisite depth.'

The same work thus describes two other grand natural objects in this country : —

' The cataract of the Tequendaraa, by which the river Funza joins the great Magdalena, is the most noted object in the country near the capital.

The Funza, or Bogota, after receiving the waters of the numerous small rivers which flow through the great plain, is about 140 feet in breadth, a short distance above the fall ; approaching the crevice through which it dashes, its breadth is diminished to thirty-five, when, with accumulated force, it rushes down a perpendicular rock at two bounds, to the astonishing depth of 600 feet, into a dark and unfathomable gulf, out of which the river again issues under the name of Rio Meta, and continues its course, by an immense descent, till it joins the great river of Magdalena.

' The crevice of Icononzo is in the centre of the valley of Pandi, and appears to have been formed by some convulsion of nature, which has rent asunder the mountain. At the height of nearly 300 feet above the torrent (which forms beautiful cascades on entering and quitting the crevice) are seated these extraordinary bridges, one under the other ; the breadth of the upper one being about forty feet, and its length up- wards of fifty, composed of solid rock, in the form of an arch, seven or eight feet thick at its centre. Below this, and rather advanced on one side of it, at the depth of sixty feet, is another bridge, formed still more singularly ; for as the mountain appears to have been rent away, or drawn from the upper, the inferior one seems to have fallen from the mountain, and three enor- mous masses of rock have descended from the opposite sides of the chasm, in such a manner that the upper mass forms the key of the other two. This lower bridge cannot be visited with- out much risk, as a narrow path alone leads to it along the brink of the precipice. In the centre is a hole, through which the abyss below can be seen, and numberless flights of nocturnal birds are observed hovering over the water, which flows through so dark a cavern that the sides cannot be distinguished.'

Bogota, the capital of this province, is a large and handsome city, with

about 30,000 inhabi- tants; the plain in its neighbourhood is so fer- tile that it yields two harvests in the year. Here is one of the mints of Cundinamarca, the other is at Popayan. Besides the capital there are Tocaima, La Villa de la Purification, Honda, Mariquita, Muzo, Tunja, Leiva, Velez, San Gil, and Socorbo. This province is famed for its gold, silver, gems, salt, and coal, and for its fruitful plains, which breed numbers of horses, and mules, which are exported to Peru. The woods abound with game and wild animals, and the rivers with fish and alligators- After these, in their order, are the provinces of Merida with its capital of the same name — of Santa Marta, with its immense and rapid rivers, crossed by bridges made of the roots of plants twisted together into immense ropes and stretch- ed over them — Carthagena, of which copious men- tion has been made in the article AMERICA — Darien, on the gulf of that name — Panama, con- sisting of abrupt and broken chains of moun- tains, between two seas, being for the most part covered with thick forests — Veragua, the most northerly of the provinces of Tierra Firme, a mountainous and rugged country, with vast fo- rests, interspersed with rich and fruitful valleys — Choco, the peculiarities of which we have al-

ready mentioned — Antioquia, famous tor its gold mines, worked by 800 negroes — San Juan de Los Llanos — the large province of Popayan, in which is a pass of the Andes, 11,499 feet above the level of the sea, and not more than a foot and a half broad, where travellers can with the greatest difficulty pass each other — Quixos — Jaen de Bracamoras — Maynas — Quito — San Miguel de Ibavia — Otabalo — Latacunga — Rio- bamba — Chimbo — Guyaquil — Cuenca — and Loxa. Quito is famous for the loftiest summits of the Andes, of which we have already spoken, and for the volcanoes of Pichincha and Cotopaxi, the loftiest volcano in the world.

‘ A most singular monument is observable on the top of the dike or chain of Tiopullo, con- sisting of a tumulus, and the ruins of one of the Peruvian palaces called tambos, situate in a plain covered with pumice-stones. The tumulus, if it be one, is upwards of 200 feet high, and is supposed to have been the burying-place of a chief. The palace is south-west of this hillock, nine miles from the crater of Cotopaxi, and thirty from Quito. It is in the form of a square, each side being about 100 feet in length, with four great door-ways, and eight chambers. Its walls are more than three feet thick, formed of large stones, regularly cut and laid in courses, and the whole is in tolerable preservation. It is called the palace of Callo. The great curiosity of this edifice consists in the beauty of the workman- ship, as all the stones are cut into parallelopipe- dons, and laid in regular courses, and so nicely joined, that were it not that each stone is con- vexly and obliquely cut on the outside, their joints would not be visible.’

Quito is about 9510 feet above the level of the sea, having behind it the conical summit of Ja- rirac, immediately under that of Pichincha.

The state of society in this country is much improved, and is still ameliorating. On this sub- ject we shall make a short extract from captain Hall's concise and interesting work, and with this we must conclude, though much more might be said on so fruitful a subject.

' Under the Spanish government the political distinctions, which separated these various classes of inhabitants, were almost as numerous as, and infinitely more odious than, their physical varie- ties of features and complexion. By the laws of the Indies, the Indians were not only cut off from every civil employment or distinction, but were even denied the dignity of rational beings, being- held in a state of perpetual pupilage, under the authority, principally, of their curates, who would hardly permit them to hold any intercourse with the rest of the inhabitants; the people of color were little better treated : besides being rigidly excluded from every employment of honor or consideration in the state, they were subjected to personal distinctions, the more painful because they could have no other object than that of gra- tifying the vanity of the privileged class at the expense of their unfortunate brethren. Such was the law prohibiting the women of color from wearing the manto, or black dress used at church, or from wearing any ornament of gold or silver ; custom, besides, prohibited them the use of the alfombra, or carpet, at their devotions, and that

of an umbrella to screen them from the sun in the streets ; all these distinctions are now happily abolished : the law of the republic sees none but citizens in every class of inhabitants, whatever

officers, men whom Spanish pride and tyranny deemed unworthy to sit at a white man's table. The republic of Columbia consists of three states, formerly called " the Vice Royalty of New Gra-

may be their origin, or the tinge of their com- nada," " the Captain-Generalship of Caraccas."

*nlavinno • *Ka iiioti/ > rt r\f *Kio nj-klinir Koo Vmnn wi o»-*rl H tliO Til tt*l\f I C*rtf*V r»f £^llitr» ** TKf}2£i IXTAVA*

plexions; the justice of this policy has been re- warded by the exertions of

the people of color in aid of the independence of the country, of which Jiey have been the firmest supporters, and Co- lumbia reckons among her best and bravest

and "the Intendency of Quito." These were united in 1819 their freedom having been obtained by the wisdom and courage of Simon Bolivar. It is divided into twelve departments, forty-nine provinces, 218 Cantons : population, 2,700,000

COLOMNA (Fabius), a very learned botanist, born at Naples, about the year 1567. He became skilled in the languages, in music, designing, painting, and the mathematics ; and died about the middle of the seventeenth century. He wrote, 1. ˆvTofiaffavoG, seu Plantarum aliquot (ac pis- cium) Historia ; 2. Minus cognitarum rariorum- que Stirpium tKQpaatc ; itemque de aquatilibus, alhsque nonnullis animalibus, Libellus ; and other works.

CO'LON, n. s. KwXov, a member; a point in grammar ; see below. The greatest and widest of the intestines.

Now, by your cruelty hard bound,

I strain my guts, my colon wound. Swift.

The contents of the colon are of a sour, fetid, acid smell in rabbits. Flayer on the Humours.

COLON, in grammar. Grammarians generally assign the use of a colon to be, to mark the mid- dle of a period ; or to conclude a sense less per- fect than a dot or period. Others say, a colon is to be used when the sense is perfect, but the sentence not concluded.

COLON, in anatomy, from rotXoc, hollow, the name given to the greater portion of the large intestine. It begins where the ilium ends, in the cavity of the os ilium on the right side ; thence ascending by the kidney, on the same side, it passes under the concave side of the liver, to which it is sometimes tied, as likewise to the gall- bladder, which tinges it yellow in that place; then it runs under the bottom of the stomach to the spleen in the left side, to which it is also knit; from thence it turns down to the left kidney ; and thence passing, in the form of an S, it terminates at the upper part of the os sacrum, in the rectum. See ANATOMY.

CO'LONEL, n. s. ˆ Of uncertain etymolo-

CO'LONELLING, > gy. Skinner imagines it

CO'LONELSHIP, ra.s. J originally coloniulis the leader of a colony. Minshew deduces it from columna, a pillar : as patriae columen ; exercitus columen.

The chiefest help must be the care of the colonel that tiath the government of all his garrison.

Spenser on Ireland.

Captain or colonel, or knight in arms, Whose chance on these defenceless doors may seize, If deed of honour did thee ever please, Guard them, and him within protect from harms.

Milton.

Then did Sir Knight abandon dwelling And out he rode a colonelling. Butler't Hudibras. Whilst he continued a subaltern, he complained against the pride of colonels towards their officers ; yet, in a few minutes after he had received his com- mission for a regiment, he confessed that colonels/tip was coming fast upon him. Swift.

COLONEL, in military affairs, the commanding officer of a regiment, and next in rank to a gen- eral. A colonel of a regiment, properly so called, is the nominal head of a given number of men ; the clothing, &c. of whom is exclusively entrust- ed to him, as well as the appointment of an agent, who receives the pay and subsistence of the corps, but for whose solvency and character the colonel is responsible to the public. In the French and Spanish armies, this title is confined to the infantry and dragoons : the commander of a regiment of horse they usually call maitre de camp. A colonel may put an officer of his regi- ment in arrest, but must acquaint the general with it. He is not allowed a guard, but only a sentry from the quarter-guard. In his absence the lieu- tenant-colonel commands.

COLONEL-LIEUTENANT, the second in com- mand in a regiment, whereof the king, prince, or other person of the first eminence, is colonel. These colonel-lieutenants have always a colonel's commission, and are usually general officers.

COLONEL BY BREVET, one who has obtained the rank of colonel in the army, without having that rank in any particular regiment.

COLONIA, in ancient geography, a town of the Trinobantes, a little above Camel odunum : now Colchester in Essex, according to Camden, who supposes it to take its name from the river Coin, and not that it was a colony : though others think Antoniiie's distances agree with Sud- bury.

COLONIA EQUESTRIS, in ancient geography, a noble colony on the Lacus Lemanus. It ap- pears to have been the work of Julius Ccesar, who settled there Equites Lemitanei : and to this Lucan is thought to refer. By the Itinerary it is supposed to have stood between Lausanne and Geneva, twelve miles from the latter, by Peutinger's map ; which directs to Noyon, placed in Cavo Lemano, according to Lucan's expression, that is, a bay or cove of the 'lake. Its ancient name was Noviodunum ; hence its modern name, Noyon, or, as some suppose, Nevers.

COLONIA METELLINA, a town of Lusitania,, situated on the right or west side of the Anas or Guadiana ; but now on the left or east side, from the river's shifting its bed or channel, acd called Medelin, a town in Estremadura.

COLONIA MORINORUM, a town of Gallia Bel- gica, thought to be Tarvenna, the capital of the Morini ; now called Terrouen.

COLONIA NORBENSIS, or NORBA C.SSAREA, a town of Lusitania, south of Trajan's bridge on the Tagus : now Alcantara, in Estremadura.

COLONIA TRAJANA, a town of Pelgica, called also Ulpia, and Tricesima, from being the statioo of the thirtieth legion ; now Kellen, in Cleves

COLONIA VALENTIA, a town of Spain, on the Turias ; destroyed by Pompey, and restored by Julius Caesar ; still called Valencia.

COLONNA'DE, n. s. Ital. colonna, a'column; a series of columns disposed in a circle, and in- sulated within side ; any series or range of pillars. Here circling colonnades the ground inclose,

And here the marble statues breathe in rows.

Addison.

For you my colonnades extend their wings. Pope.

COLONNADE, POLTSTYLE, is that whose num- ber of columns is too great to be taken in by the eye at a single view. Such is the colonnade of the palace of St. Peter's at Rome, bonsisting of 284 columns of the Doric order, each above four feet and a half diameter, all in Tiburtine marble.

COLONOS, in ancient geography, an emi- nence near Athens, whither

(Edipus, after his banishment from Thebes, is said to have retired : and hence Sophocles calls the tragedy on that subject, (Edipus Coloneus. A place sacred to Neptune, and where stood an equestrian statue of him. Here also stood Timon's tower : who, for his love of solitude, and hatred to mankind, was called Misanthropes.

COLONSA, or COLONSAY, one of the Western Islands of Scotland, so named from Colon, a popish saint, lying in the Atlantic Ocean, be- tween the coast of Argyllshire and that of Ireland, four miles and a half west of Jura. It is sepa- rated from Oronsay by a narrow sound, which is dry at low water, and therefore both islands ap- pear as one. They are both flat, compared with the towering peaks of Jura and Mull, though there is a considerable number of rugged heath- covered hills in them. They measure about 8000 acres, of which 3000 are arable. The air is pure and salubrious ; the soil light and fertile. The best part of the ground maintains a fine breed of black cattle. There is a great quantity of fine coral on the banks round these islands, and a considerable quantity of kelp is annually made from the sea-weed thrown upon the coast. These islands constitute the west division of the parish of Jura and Colonsay.

COLONUS, a husbandman, or villager, who was bound to pay yearly a certain tribute, or at certain times of the year to plough some part of the lord's land ; and from thence comes the word clown.

CO'LONY, n. s.) Lat. colonia. A body of

CO'LONIZE, v.a. $ people drawn from the mo- ther country to inhabit some distant place. The place itself by a metonymy ; to plant with inha- bitants ; to settle with new planters.

There was never an hand drawn, that did double the rest of the habitable world, before this ; for so a man may truly term it, if he shall put to account as well that that is, as that which may be hereafter, by the farther occupation and colonizing of those coun- tries : and yet it cannot be affirmed, if one speak in- genuously, that it was the propagation of the Chris- tian faitJ> that was the adamant of that discovery, entry, and plantation ; but gold and silver, and tem- poral profit and glory ; so that what was first in God's providence, was but second in man's appetite and in- tention. Bacon's Holy War.

Druina hath advantage by acquest of islands, which she colonizeth and fortifieth daily. Howel's Vocul Forest.

To these new inhabitants and colonies he gave th same law under which they were born and bred.

Spenser on Ireland.

Rooting out these two rebellious septs, he placed English colonies in their room. Davies on Ireland.

The rising city, which from far you see,

Is Carthage and a Tyrian colony. Dryden't Virgil.

Osiris, or the Bacchus of the ancients, is reported to have civilized the Indians, planting colonies, and building cities. Arbuthnot on Coins.

While Chrysoloras admired the venerable beauties Of the mother, he was not forgetful of his native country, her fairest daughter, her imperial colony.

Gibbo't.

COLONY is a term that has been applied to three different kinds of emigrants, viz. 1. Those who leave their native country, when its inhabitants are become too numerous. 2. Those esta- blished by victorious princes among vanquished nations, to keep them in awe and obedience. 3. Colonies of commerce, of which the sole object is the extension of trade. I. By the first kind of colonies, some ages after the deluge, the east first, and successively all the other parts of the earth, became inhabited ; and not to mention the Phoenician and Grecian colonies, so famous in ancient history, it is notorious that it was for the establishment of such colonies, that, during the declension of the Roman empire, those torrents of barbarous nations, issuing mostly out of the north, overran Gaul, Italy, ard the other southern parts of Europe ; and, after many bloody battles, shared it with the ancient inhabitants. II. The second kind of colonies were planted by the Ro- mans more than any other people, to secure the numerous conquests they had made. The inha- bitants of many cities in France, Germany, Spain, and even England, still value themselves on their having been originally Roman colonies. There were two kinds of colonies among the Romans : those sent by the senate; and the military ones, consisting of old soldiers, disabled by the fatigues of war, who were thus provided with lands as the reward of their services. The colonies sent by the senate were either Roman or Latin, i. e. composed either of Roman citizens, or Latins. The coloniaa Latinae were such as enjoyed the jus Latii; viz. 1. that whoever was edile or prae- tor in a town of Latium, became for that reason a Roman citizen ; and, 2. that the Latins were subject to edicts of their own, and not to those of the Roman magistrates. The coloniae Romanae, were such as had the jus Romanum, but not in its full extent ; i. e. they had no right of suffrage, putting up for honors, magistracies, command in the

armies, &c. ; but the jus Quiritium only, or private right ; as rights of liberty, sacrifice, mar- riage, &c. For it was long a rule, never to grant the liberty of the city in full to colonies. There were other colonies, which had little more than the name ; only enjoying what they called jus Italicum, i. e. freedom from the taxes paid by the provinces. Such were the colonies of Tyre, Be- rytus, Hehopolus, Palmyra, &c. M. Vaillant has filled a volume in folio with medals struck by the several colonies, in honor of the emperors who founded them. III. The colonies of com- merce are those established in modern times by the English, French, Spaniards, Portuguese,

Dutch, 8cc. ; partly, certainly, for the motives already enumerated, and the peculiar condition of the mother country; but that have been makily encouraged and protected by their home govern- ments for the extension of trade.

The practice of settling commercial colonies in distant countries has been adopted by the wisest nations of antiquity, who acted systema- tically upon maxims of sound policy. This ap- pears to have been the case with the ancient Egyptians, the Chinese, the PhtEnicians, the commercial states of Greece, the Carthaginians, and even the Romans ; for though the colonies of the latter were chiefly military, it could easily be shown that they were likewise made use of for the purposes of trade. The savage nations who ruined the Roman empire, sought nothing but to extirpate and hold in vassalage those whom they overcame ; and, therefore, whenever princes en- larged their dominions at the expense of their neighbours, they had recource to strong forts and garrisons to keep the conquered in awe. Machiavel labors to show, that the settling of colonies would have been a cheaper and better method of bridling conquered countries, than building fortresses in them. John de Witt, who was one of the ablest and best statesmen that ever appeared, strongly recommended colonies ; as affording a refuge to such as had been unfor- tunate in trade ; as opening a field for such men to exert their abilities, as through want of inte- rest could not raise themselves in their own country ; and as a supplement to hospitals and other charitable foundations, which he thought in time might come to be overcharged. Some, however, have ridiculed the supposed advantages of colonies, and asserted that they must always do mischief by depopulating the mother country. The history of our American colonies undoubt- edly shows, that when colonists become nume- rous and opulent, it is very difficult to retain them in subjection to the parent state. It be- comes then a question not easily answered, how far they are entitled to the rights they had as inhabitants of the mother country, or how far they are bound by its

laws ? Judge Blackstone says, ‘ Plantations, or colonies in distant countries, are either such where the lands are claimed by right of occupancy only, by finding them desert and uncultivated, and peopling them from the mother country ; or where, when already cultivated, they have either been gained by con- quest, or ceded to us by treaties. Arid both the rights are founded upon the law of nature, or at least on that of nations. But there is a difference between these two species of colonies with re- spect to the laws by which they are bound. For it has been held, that if an uninhabited country be discovered and planted by English subjects, all the English laws then in being, which are the birthright of every subject, are immediately there in force. But this must be understood with many and very great restrictions. Such colonists carry with them only so much of the English law as is applicable to their own situation, and the condition of an infant colony : such for in- stance, as the general rules for inheritance, and of protection from personal injuries. The arti- ficial refinements and distinctions incident to the

property of a great and commercial people, the laws of policy and revenues (such especially as are enforced by penalties), the mode of main- tenance for the established clergy, the jurisdic- tion of spiritual courts, and a multitude of other provisions, are neither necessary, nor convenient for them, and therefore are not in force. What shall be admitted, and what rejected, at what times, and under what restrictions, must, in cases of dispute, be decided in the first instance by their own provincial judicature, subject to the revision and control of the king in council ; the whole of their constitution being also liable to be new modelled and reformed by the general superintending power of the legislature in the mother country. But in conquered or ceded countries, that have already laws of their own, the king may indeed alter and change those laws ; but, till he does actually change them, the ancient laws of their country remain, unless such as are against the law of God, as in an infidel country.’ Dr. Adam Smith thus argues against what ha’s been called, in modern times, the colo- nial system.

‘ The European colonies of America have never yet furnished any military force for the de- fence of the mother country. The military force has never yet been sufficient for their own de- fence ; and in the different wars in which the mother countries have been engaged, the defence of their colonies has generally occasioned a very considerable distraction of the military force of those countries. In this respect, therefore, all the European colonies have, without exception, been a cause rather of weakness than of strength to their respective mother countries.

‘The colonies of Spain and Portugal only have contributed any revenue towards the defence of the mother country, or the support of her civil

government. The taxes which have been levied upon those of other European nations, upon those of England in particular, have seldom been equal to the expense laid out upon them in time of peace, and never sufficient to defray that which they occasioned in time of war. Such colonies, therefore, have been a source of ex- pense and not of revenue to their respective mother countries.

‘ The advantages of such colonies, to ttieir re- spective mother countries, consist altogether in those peculiar advantages which are supposed to result from provinces of so very peculiar a na- ture as the European colonies of America; and the exclusive trade, it is acknowledged, is the sole source of all those peculiar advantages. In consequence of this exclusive trade, all that part of the surplus produce of the English colonies, for example, which consists in what are called enumerated commodities, can be sent to no other country but England. Other countries must afterwards buy it of her. It must be cheaper therefore in England than it can be in any other country, and must contribute more to increase the enjoyments of England than those of any other country. It must likewise contri- bute more to encourage her industry. For all those parts of her own surplus produce which England exchanges for those enumerated com- modities, she must get a better price tl an any

COLONY.

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other countries can get for the like parts of theirs, when they exchange them for the same commodities. The manufactures of England, for example, will purchase a greater quantity of the sugar and tobacco of her own colonies, than the like manufacturers of other countries can pur- chase of that sugar and tobacco. So far, there- fore, as the manufactures of England and those of other .countries are both to be exchanged for the sugar and tobacco of the English colonies, this superiority of price gives an encouragement to the former, beyond what the latter can in these circumstances enjoy. The exclusive trade of the colonies, therefore, as it diminishes, or, at least, keeps down below what they would other- wise rise to, both the enjoyments and the indus- try of the countries which do not possess it ; so it gives an evident advantage to the countries which do possess it over those other countries.

This advantage, however, will, perhaps, be found to be rather what may be called a rela- tive than an absolute advantage ; and to give a superiority to the country which enjoys it, rather by depressing the industry and produce of other countries, than by raising those of that particular country above what they would naturally rise to in the case of a free trade. The tobacco

of Maryland and Virginia, for example, by means of the monopoly which England enjoys of it, certainly comes cheaper to England than it can do to France, to whom England commonly sells a considerable part of it. But had France and all other European countries been, at all times, allowed a free trade to Maryland and Virginia, the tobacco of those colonies might, by this time, have come cheaper than it actually does, not only to all those other countries, but likewise to England. The produce of tobacco, in consequence of a market so much more ex- tensive than any which it has hitherto enjoyed, might, and probably would, by this time, have been so much increased as to reduce the profits of a tobacco plantation to their natural level with those of a corn plantation, which, it is supposed, they are still somewhat above. The price of tobacco might, and probably would, by this time, ha'e fallen somewhat lower than it is at present. An equal quantity of the commodi ties either of England, or of those other countries, might have purchased in Maryland and Virginia a greater quantity of tobacco than it can do at present, and, consequently, have been sold there for so much a better price. So far as that weed, therefore, can, by its cheapness and abundance, increase the enjoyments or augment the industry either of England or of any other country, it would probably, in the case of a free trade, have produced both these effects in somewhat a greater degree than it can do at present. Eng- land, indeed, would not in this case have had any advantage over other countries. She might have bought the tobacco of her colonies some- what cheaper, and, consequently, have sold some of her own commodities somewhat dearer than she actually does : but she could neither have bought the one cheaper nor sold the other dearer than any other country might have done. She might, perhaps, have gained an absolute, but ihe would certainly have lost a relative ad vantage.' VOL. VI.

On the first of the topics here suggested, thai the colonies are burdens, on account of the expense of the protection, &c., it has been well remarked

1. That in making up the accounts something must be allowed for the naval force necessary to be kept up in remote parts of the world, even if we had no direct interests in those of this kind.

2. That the colonies themselves, in many instan- ces, contribute materially to their own defence and protection. With Jamaica, Canada, and our East India possessions this is the case : in some instances all the civil and military expense is bon& fide, met by them; in others, as in many of the West India islands, a duty of 4£ per cent, is laid on the commerce of the colony, with this object directly in view. When the charge on the mother country shall be ascertained, making these allowances, what she also draws from them in taxes must be estimated, before the relative ad- vantages or disadvantages to her industry for the possession, can be fairly computed.

In entering upon these more fully, we avail ourselves of an able abstract of the whole ques- tion, in a late number of the Quarterly Review. The ties of intercourse between protectors and dependent states, it is suggested, give rise to the formation of multifarious commodities in a European country, to pay for the exotic produc- tions sent into it in return. If these articles equal in the value the expense of the colonies, here is a source of profit and enjoyment, not a burden, created. But on examination of the value of colonial intercourse, compared with that of inde- pendent states, it will appear that the exports made to the colonies exclusively originating in their demand, vastly exceed their real expense. Were this demand therefore to cease, so much of the labor of the producers would have to be directed to other objects, or cease also.

To this it may be added, that the very habits and prejudices of a colony, in close intercourse with the mother country, will always cause its thriving classes to imitate her manners, and to introduce the articles of her greatest profit and skill. But could we without the colonies rely on possessing the same extent of production, and consequently power to purchase of them or of other states, still the security and permanence of an intercourse under our control is an important consideration. The certainty of a home trade is acquired. The whole of the produced wealth is the property of natural born subjects. It is not on one side that of foreigners ; nor are we ex- posed to interruptions from caprice or policy, or the occurrence of hostilities between other powers. A foreign state may, by regulations, draw its sup- plies, even of the staples and manufactures in which this country is confessedly superior, from other sources: and this stability in o ir relations will repay many sacrifices.

Another object of primary importance, atten- dant upon a colonial trade, is the employment of seamen. The right to supply and manage a large portion of the conveyance has ever been accounted a source of natural strength and pro- perty. Without the possession of colonies it is difficult to say how this can be attained, unless the sources of the produce were independent states, and would forego (what no state possession

shipping ever did forego) compensating duties and favor shown to its own vessels.

Dependent possessions, again, scattered over all parts of the world, become secure marts from which commerce can be carried on with every quarter : without them,, the intercourse with many places, in an imperfectly civilised

or often disturbed state, would be precarious and hazard- ous ; and they confer, wherever situated, a local influence, upholding the character and interests of the country. Thus Jamaica and the West India Islands have been the means of our exten- sive intercourse with South America, amid all the troubles to which that quarter has been subject and in the Mediterranean, Gibraltar and Malta, although not in themselves productive, become beneficial chains of communication with Barbary, and other parts. Our East India possessions, besides the commerce actually held with them, are the means of conducting an intercourse with every shore of the Indian seas.

'The question, in fine,' says the able paper ad- verted to, 'is, whether that country is best situated which is secure of a given place where the pro- ducts of its labor can be exchanged, or that which has to seek throughout the world for permission to exchange them ? Whether the colonies are best circumstanced ,in seeking all the markets of the con- tinent, or in being sure rf the certain great mar- ket of this country ? Whether it is better on both sides, to be subject to the caprices of nations, as well as the vicissitudes of seasons, or to be dependent only on the latter? Whether to give safety to the exchanges of labor, so far as in us lies, or to commit ourselves to all the chances and windings of other states? Let those who deal with independent countries answer how far their intercourse is secure and stable, and the na- ture and extent of their vent to be foreseen. Let the traders with Russia speak to the varia- tions, not only arising from seasons but from al- tered tariffs, which every year brings forth, and tell us, whether at any period, it is possible to

take measures certain to be adapted to the custom- house regulations of that empire, and their effect upon consumption.'

We are then supplied with the following inter- esting facts respecting the colonial system of our neighbours. 'In 1699 Colbert estimated the number of French vessels engaged in foreign trade at 600. Of these not more than 100 were supposed to be employed in the commerce of the West Indies. At the revolution, France had not more than 1000 vessels engaged in distant voya- ges, or about 200,000 tons. Far the larger part of this veiy limited tonnage (compared with the great commerce of France) was owing to her West India colonies; for, from various reasons, her commerce with other parts was carried on in foreign shipping ; that with her colonies was wholly her own. The tonnage of her European trade was only 152,000 tons. So entirely did the strength of the French marine appear, at that time, to depend on the colonies, that one of the ministers, M. Arnould, to whom we are indebted for the statements we present, exclaims ; ' Quelles ressources a done la France pour entretenir une force publique maritime? Quels moyens lui restent pour Clever, instruire, et multiplier la classe preciuse des

matelots? Le commerce de 1'Amerique, — ne 1'oublions pas, le commerce de l'Amerique.'

' The following table will show the rapid pro- gress of the French West India colonies within the last century, and their importance to that country ; together with the value of the product re-export- ed, and of that which was consumed at home. It will be seen that the general export of colo- nial produce, in the seven years average ending 1733, was 50,630,000 livres. In the five years ending 1788 the average was 93,056,000 livres, being an increase of four-fifths in five years. In 1788 the annual import of sugar into France was about 2,600,000 cwt. She was supposed to ex- port about 1,400,000 cwt.; that is, more than half the quantity imported.

PERIOD.

IMPORTS.

EXPORTS.

HOME CONSUMPTION.

Value in Liv. Tour.

Value in Liv. Tour.

Value inLir.Tour.

Average.

Average.

Average.

1716 to 1725

S 11,155,000

6,361,000 –

4,794,000

Value at the time.

\ 17,211,000

9,815,000

7,396,000

Value in 1788.

1725 to 1732

< 16,609,000

14,814,000 ”

1,795,000

Value at the time.

Peace.

I 18,131,000

16,014,000

2,117,000

Value in 1788.

1733 to 1735

S 20,631,000

15,028,000

5,603,000

Value at the time.

War.

i 21,845,000

15,912,000

5,933,000

Value in 1788.

1736 to 1739

< 35,435,000

20,619,000

14,816,000

Value at the time.

Peace.

\ 37,519,000

21,832,000

15,687»000

Value in 1788.

1740 to 1748

{ 36,918,000

25,152,000

11,766,000

Value at the time.

War.

i 39,090,000

26,630,000

12,460,000

Value in 1788.

1749 to 1755

C 65,207,000

35,226,000

29,981,000

Value at the trme.

Peace.

£ 69,043,000

37,298,000

31,745,000

Value in 1788.

1756 to 1763

£ 15,463,000

12,196,000

3,267,000

Value at the time.

War.

I 16,373,000

12,913,000

3,460,060

Value in 1788.

1764 to 1776

C 111,930,000

37,696,000

74,234,000

Value at the time.

• *Peace.*

I 116,605,000

39,140,000

77,459,000

Value in 1788.

1777 to 1783 War.

? 108,710,000

50,630,000

58,080,000

Value in 1788.

1784 to 1788 Peace.

? 193,250,000

93,056,000

100,194,000

Value in 1778.

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‘ France, on the late peace, was no sooner re- possessed of colonies than her legislative body proceeded to establish her maritime commerce on a footing the first feature of which is favor to them; in a similar spirit she has granted the highest encouragement to her fisheries : thus a few years have sufficed to re-animate a marine which was nearly extinct, and which might have remained in that listless state, had she permitted those nations already in possession of the naviga- tion of the seas to become her carriers.’

The following statement of the employment of

our shipping, for which we are indebted to tliˆ same source, will exhibit the tonnage clearing outwards to the principal colonial possessions, during the year ending the 5th of January, 1821 ; and will, likewise, furnish a contrast with the shipping engaged in the intercourse with the more important independent states. It will show, too, how large a portion of our foreign intercourse is carried on by the shipping of other countries ; and how considerable a share of our navigation owes its existence to the strict colonial system.

British Tonnage.

Foreign Tonnage.

British North American Colonies . British West India Colonies . . . East Indies ... .

300,695 217,744 76,833

France ....

80,361

50,954

U lited States ... .

44,589

133,516

Holland .... . .

53,828

37,222

Germany ....

107,601

19,680

111,290

14,995

Sweden and Norway

15,641

51,102

The following .is a statement of the official value of exports to the colonies at this period, and will show that they take as much British produce as the greater part of Europe ; while again the colonial produce imported for re-exportation, forms a large portion of the exports to Europe.

British Produce.

Foreign and Colonial.

Total.

British North American Colonies . British West India Colonies . . . East Indies

£1,548,181

4,197,975 2,039,507

£452,852

292,033 382,256

£2,001,033

4,490,008 2,421,763

France

246,144

734,677

980,821

Holland

1,158,120

1,129,555

2,287,675

Germany ....

5,581,856

2,827,114

8,408,970

Russia .

1,630,047

406,016

2,036,063

United States

. 4,229,767

71,928

4,301,695

COLOPHON, m ancient geography, a town of Ionia, seated on a promontory on the ˆEgean Sea, and washed by the Halesus. It was de- stroyed by Lysimachus, in his war with Anti- gonus, in order to enlarge Ephesus : but, ac- cording to Pausanias, it was rebuilt in the neigh- bourhood, on a more comrrodious site. This is one of the cities that laid claim to the honor of giving birth to Homer, Of this town was the poet Antimachus.

COLOPHONEM ADDERE, the addition of a preponderating weight, a proverbial saying, ex- plained by Strabo, who says, that the Colopho- nian horse generally t\:ncd the scales in favor of the side on which they fought.

CO'LOPHONY, n, s. Rosin; from Colo- phon, a city, whence i . came.

Of Venetian turpentine, slowly evaporating about a fourth or fifth part, the remaining substance suffer- ed to cool, would afford me a coherent body, or a line colophony. Boyle.

Turpentines and oils leave a colophony, upon a separation of their thinner oil.

*Floyer on the Humours*ˆ

COLOQUI'NTEDA, n. s. Lat. colocynthis ; KoXoKvvOic. The fruit of a plant of the same name, brought from the Levant, about the bigness of a large orange, and often called bitter apple. Both the seed and pulp are intolerably bitter. It is a violent purgative, of considerable use in me- dicine.

COLOQUINT1DA, in botany. See Co-

CUMIS.

OS

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COLORS.

‘CO’LOR, v. a., v. n., & n. s.~) Lat. coloro,

CO’LORABLE, adj. I color. The sub-

CO’LORABLY, adv. (stantive has ap-

CO’LORED, part. adj.)> plications which

CO’LORING, n. s. I distinguish it

CO’LORIST, n. s. I from the verb,

CO’LORLESS, adj. J and these we

•must mark. The appearance of bodies to the

eye only ; hue; dye. The freshness or appearance

of blood in the face. In the plural, a standard ;

an ensign of war.

Colours ne know I non, withouten drede, But swiche colours as growen in the mede, 0r elles swiche us men die with or peinte ; Colours of rhetorike ben to me queinte ; My spirit feleth not of swich matere.

Chaucer’s Canterbury Tales. Her hair shall be of what colour it please God.

Shakspeare. He at Venice gave

His body to that pleasant country’s earth, And his pure soul unto his captain Christ, Under whose colours he had fought so long.

Id. Richard II.

Against all checks, rebukes, and manners, J must advance the colours of my love, And not retire. Id. Merry Wives of Windsor.

When on the east the morning ray, Hangs out the colours of the day, The bee through these known allies hums, Beating the dian with its drums. Marve. .

For though our eyes can nought but colours see, Yet colours give them not their power of sight.

Davies.

he lights of colours are more refrangible one than another in this order ;

red, orange, yellow, green, blue, indigo, deep violet. Newton's Optics.

My cheeks no longer did their colour boast.

Dryden.

A sudden horror seized his giddy head, And his ears trickled, and his colour fled. Id.

All in a moment throngk the gloom were seen Ten thousand banners rise into the air With orient colours waving. Milton's Paradise Lost.

Each gaudy bird some slender tribute brings, And lends the growing insect proper wings j Silks of all colours must their aid impart, And every fur promote the fisher's art.

Gay's Rural Sports.

It is a vulgar idea of the colours of solid bodies, when we perceive' them to be a red, or blue, or green tincture of the surface ; but a philosophical idea, •when we consider the various colours to be different sensations, excited in us by the refracted rays of light, reflected on our eyes in a different manner, according to the different size, or shapt, or situation of the par- ticles of which surfaces are composed. Watts.

The verb signifies to mark with some hue or dye; to palliate; to excuse; to dress in specious colors, or fair appearances belied by the reality ; to make plausible. In the neuter sense to blush. These applications are common to the substan- tive, and to all the other branches of the word; technically, to color strangers' goods, is when a freeman allows a foreigner to enter goods at the custom-house in his name, so that the foreigner

pays but single duty, when he ought to pay double.

They were glad to lay kold on so colourable a mat- ter, and to traduce him as an author of suspicious in- novation. Hooker.

We hope the mercy of God will consider us unto some mitigation of our offences ; yet had not the sin • cerity of our parents so colourable expectations.

Browne's Vulgar Errourt.

I told him that I would not favour or colour in any sort his former folly. Raleigh's Esmys.

The coloured are coarser juiced, and therefore not so well and equally

concocted.

Bacon's Natural History.

The process, howsoever colourably awarded, hath not hit the very mark whereat it was directed.

Bacon.

They have now a colourable pretence to withstand innovations, having accepted of other laws and rules already. Spenser ,

Had I sacrificed ecclesiastical government and re- venues to their covetousness and ambition, they would have found no colourable necessity of an army.

King Charles.

He colours the falsehood of ˆEneas by an express command from Jupiter to forsake the queen.

Dryden's Dedicat. JEneid.

Titian, Paul Veronese, Van Dyck, and the rest of the good colourists, have come nearest to nature.

Dryden's Dufresnoy.

The rays, to speak properly, are not coloured : in them there is nothing else than a certain power and disposition to stir up a sensation of this or that colour.

Newton's Optics.

Transparent substances, as glass, water, and air, when made very thin by being blown into bubbles, or otherwise formed into plates, exhibit various colours, according to their various thinness ; although at a greater thickness they appear very clear and colvur- less Id.

Pellucid colourless glass or water, by being beaten into a powder or froth, do acquire a very intense whiteness. Bentley.

We have scarce heard of an insurrection that was not coloured with grievances of the highest kind, or countenanced by one or more branches of the legisla- ture. Addisons's Freeholder.

But as the slightest sketch, if justly traced, Is by ill 'colouring but the more

disgraced ; So by false learning is good sense defaced. Pope.

Flowers fresh in hue, and many in their class, Implore the pausing step, and with their dyes Dance in the soft breeze in a fairy mass ; The sweetness of the violet's deep blue eyes, Kissed by the breath of heaven, seems coloured by its

skies. Byron's Cnilde Harold.

COLORS, iu the Latin and Greek churches, are used to distinguish several mysteries and feasts celebrated therein. Five colors only are regularly admitted, viz. white, green, red, violet, and black. The white is for the mysteries of our Saviour, the feast of the Virgin, those of the angels, saints and confessors ; the red is for the solemnities of the holy sacrament, the feasts of the apostles and martyrs ; the green for the time between pentecost and advent, and from epi- phany to septuagesima ; the violet in advent and Christmas, in vigils, rogations, &c. and in votive

masses in time of war ; lastly, the black is for the dead, and the ceremonies thereto belonging. In the Greek church the use of colors is almost abolished, but red was, in the Greek church, the color for Christmas and the dead, as black among us.

COLORS, in heraldry. The only colors in ge- neral use are the following :

Colors.

Precious Stones.

Planets.

Red Blue Green Purple Black Orange

ˆ fGules J Azure [« J Vert f £ | Purpure 3 Sable J LTenne*

Ruby Sapphire Emerald Amethyst Diamond Hyacinth

Mars. Jupiter. Venus. Mercury. Saturn. Drn.Head.

Gules, fig. 1, is expressed by lines perpendi- cular from top to bottom. Azure, fig. 2, by ho- rizontal lines from side to side. Sable, fig. 3, by norizontal and perpendicular lines crossing each other. Vert, fig. 4, by lines from dexter to si- nister diagonally. Purpure, fig. 5, by lines from the

sinister chief to the dexter base, diagonally ; and Tenne, tawny, fig. 6, by diagonal lines from the sinister to the dexter side of the shield, traversed by horizontal lines.

Fig. 1. Fig. 2. Fig. 3. Fig. 4. Fig. 5. Fig. 6.

COLORS, in the military art, are large silk flags fixed on half pikes, and carried by the ensign ; whence the purchase of an ensigncy is called the purchase of a pair of colors. The size of the colors, in England, should be six feet six inches flying, and six feet deep on the pike, and the length of the pike nine feet ten inches. The cords and tassels of the whole are crimson and gold mixed.

COLORS, CAMP, a small sort of colors placed on the right and left of the parade of the regi- ment when in the field : they are eighteen inches 'square, and of the color of the facing of the regi- ment, with the number of the regiment upon them.

COLOR-MAKING is the act of preparing the dif- erent kinds of colors used in painting, drawing, dyeing, calico-printing, &c. The art of 'dyeing is sufficiently important to claim our distinct notice ; the colors of calico-printing follow ; our remarks and directions in this paper are more particularly directed to the preparing of colors used in draw- ing and painting.

This art is altogether, as we have seen, a branch of chemistry ; and one of the most curious, though least understood, parts of it. The principles on which color-making depends differ greatly, how- ever, from those en which the theory of other parts of chemistry is founded ; and the practical ' part being in the hands of those who often find

it their interest to conceal their methods, it hap pens that there is not only no distinct theory of this art, but few good receipts to be obtained for making any color.

SECT. I. — GENERAL DIVISIONS or COLORS.

1. The first general division of colors is into opaque and transparent. The former compre- hends such colors as, when laid over paper, wood, &c. cover them fully, so as to efface any other painting or stain that might have been there before. The latter includes colors of such a na- ture as to leave the ground on which they are laid visible through them. Of the first kind are white lead, red lead, vermilion, &c., of the second are the colors used for illuminating maps, &c.

2. A second division is into oil colors and water colors; or such as are

appropriated to painting in oil and water. Most of those which are proper for painting in water, are also proper for being used in oil. There is, however, this remarkable difference betwixt colors when mixed with water and with oil, that such as are quite opaque in water will become perfectly transpa- rent in oil. Thus, blue verditer, though exceed- ingly opaque in water, if ground with oil, seems totally to dissolve, and will become very trans- parent. The same thing happens to such colors as have for their basis the calx of tin, alabaster, or calcareous earth. The most perfectly opaque colors in oil are such as have lead, mercury, or iron, for their basis : to the latter, however, Prussian blue is an exception ; for, though the basis of that color is iron, it proves quite trans- parent when ground with oil. In water colors, those prepared from metals, Prussian blue alone excepted, are always opaque ; from vegetables or animals, transparent. Charcoals, however, whe- ther vegetable or animal, are opaque both in water and oil.

3. Colors are farther divided into simple and compound. The simple are such as require nothing to be superadded, to make a full strong color, without regarding whether they are formed of many or few ingredients. In this view, white lead, red lead, vermilion, calces of iron, &c. are simple colors. The compounds are formed by the union of two or more coloring substances : as blue and yellow united together to form an orange, a white earth or calx mixed with the red color of cochineal or Brasil to form a lake, &c., and thus carmine, lake, rose pink, Dutch pink, English pink, &c. are compound colors.

4. The last and most important division of colors is into true and false. By true colors are meant those which retain their color under every possible variety of circumstances, without fading in the least : the false are such as do not ; but either lose their color altogether, or change to some other.

SECT. II.— OF THE CAUSES OF THE TAPING »F

COLORS.

Colors are chiefly affected by their being ex- posed to the sun in summer, and to the cold air in winter ; but to this there is one exception, viz. white lead ; which, when ground with oil, retains its whiteness if exposed to the weather, but de- generates into a brownish or yellow color if kept

close. In water this substance is very apt to lose its color, whether exposed to the air or not. The great desideratum in color-making is to pro- duce such colors as will not fade by exposure to the weather ; and, indeed, it is

to be regretted, that the most beautiful are in general the least per- manent. It may for the most part, however, be expected, that the more simple any color is, the less liable it will be to change upon exposure to the air. The principal difficulty of ascertaining whether a color will fade or not, arises from our ignorance concerning the nature of coloring sub- stances. We may hold it as a rule, however, that whatever change of color is produced in any substance by exposure to the sun and air, that color to which it changes will bid fair for being permanent, and therefore ought to be employed where it can be done.

Of such changes the instances are rare. One is in the purple of the ancients, which assumed its color by exposure to the sun, and consequently was exceedingly permanent. Another is in the solution of silver; which, being mixed with chalk, the precipitate turns to a purplish black where it is exposed to the sun. A third is in solutions of indigo by alkaline substances, which constantly appear green till exposed to the air by spreading them very thin, upon which they become almost instantaneously blue, and continue so ever after.

Sometimes, though still more rarely, a very remarkable change of color happens, upon mixing two vegetable juices together. Almost the only instance of this we have on the authority of Mr. Foster, who says that the inhabitants of Otaheite dye their cloth of a crimson color, by mixing together the yellow juice of a small species of fig with the greenish juice of a fern. But the most remarkable alterations of color are effected by different metallic and saline solutions, mixed with certain animal and vegetable substances ; and with these .the color-maker will be princi- pally conversant.

It is a fact well known in chemistry, that acids mixed with blue vegetable juices turn them red, and alkalis green. It is equally certain, though not so generally known, that acids of all kinds generally tend to heighten red colors, so as to make them approach to the scarlet or true crim- son ; and alkalis to darken, or make them ap- proach to blue or purple. Mixed with yellow colors, acids also universally tend to brighten the yellow ; and alkalis to turn it to an orange, and make it become more dull. But, though this is very generally the case, all acids are not equally powerful in this respect. The nitrous acid is found to heighten the most of any, and the ma- rine acid the least of the mineral ones. The ve- getable acids are less powerful than the mineral. Thus, if with a tincture of cochineal in water or spirit of wine, is mixed pure nitrous acid, it will change the color to an orange or flame color, which it will impart to cloth. If the vitriolic acid is used, a full scarlet, inclining to crimson rather than orange, is produced. With marine acid a true crimson color, bordering on purple, is the consequence. Alkalis, both fixed and volatile, change the color to a purple

which is brighter with the volatile than the fixed alkalis. It is obvious that, whatever colors are produced by

the mixtures of different substances together, tht permanency of these colors can only be in pro- portion to the ability of such mixtures to resist the weather. Thus, suppose a high scarlet or orange color is produced by means of spirit of nitre, it is plain that, was such a color exposed to the air, it could remain no longer than the spirit of nitre which produced it remained. In proportion, therefore, as the spirit of nitre was exhaled, or otherwise destroyed, it behoved the color to fade, and at last to be totally destroyed : and thus, in proportion to the destructibility of the substances by which colors are produced, will be the disposition of such colors to fade, or the contrary.

Alkalis are in this respect much more destruc- tible than acids, and consequently less proper for the preparation of colors. Of the acids, the nitrous seems most destructible, the vitriolic less so, and the marine least of all. From the ex- treme fixity of the phosphorine acid and sedative salt, perhaps they might be of service in preser- ving colors.

SECT. III. — OF THE FORMATION OF OPAQUE COLORS.

As all colors, whether derived from the animal or vegetable kingdom, must be extracted either by pure water or some other liquid menstruum, they cannot be used for the purposes of painting till the coloring substance is united with some earthy or solid matter, capable of giving it a body, as the workmen call it ; and, according to the nature of this substance, the color will be transparent or otherwise. This basis ought to be of the most fixed and durable nature; un- alterable by the weather, by acids, or by alkalis. It ought also to be of a pure white color, and easily reducible into an impalpable powder. For this reason all earthy substances should be avoided as being acted upon by acids ; and, therefore, if any of these were added to heighten the color, they would be destroyed, and their effect totally lost. Precipitates of lead, bismuth, &c., though exceedingly fine and white, ought also to be avoided, as being apt to turn black by exposure.

Alumina, in many instances, answers very well : but the substance to be chiefly preferred to all others, is calx of tin, prepared either by fire or the nitrous acid. This is so exceedingly refractory as not only to be unalterable by al- kalis, acids, or the sun and weather, but even by the focus of a very large burning mirror. It is besides white as snow, and capable of being reduced to an extreme degree of fineness, inso- much that it is made use of for polishing metal- line speculums. For these reasons, it is the most proper basis for all fine colors. For coarse ones, the white precipitate of lead will aniwer very well. It has a very strong body, i. e. it is very opaque, and will

cover well ; may be easily ground fine, and is much less apt to turn black than white lead ; it is besides very cheap, and may be prepared at the small expense of 3d. per per pound.

The general method of extracting colors from any vegetable or animal substance, and fixing them on a proper basis, may thus be very easily

understood. For this purpose, a quantity of calx of tin is to be procured, in proportion to the quantity of color desired. This must be well rubbed in a glass mortar, with a little of the sub- stance designed for brightening the color, as alum, cream of tartar, spirit of nitre, &c. after which it must be dried, and left for some time, that the union between the two substances may be as perfect as possible. If the color is to be a very fine one, suppose from cochineal, the coloring matter must be extracted with spirit of wine without heat. When the spirit is sufficiently impregnated, it must be poured by little and little upon the calx, rubbing it constantly, to distribute the color equally through all parts of the calx. The spirit soon operates, and leaves the calx colored with the cochineal. More of the tincture is then to be poured on, rubbing the mixture constantly as before ; and thu?. with proper management, may very beautiful colors, not inferior to the best carmine, be prepared at a moderate expense. In like manner by substituting, for the cochineal, Brasil wood, turmeric, logwood, &c. different kinds of red, yellow, and purple, will be pro- duced. For the coarser colors aqueous decoc- tions aie to be used in a similar manner ; only as these are ranch longer evaporating than the spiiit of wine very little must be poured on at a time, and the colors ought to be made in large quantity, on account of the tediousness of the process.

We have hitherto mentioned only the effects of the pure and simple salts, viz. acids and al- kalis, on different colors ; but by combining the acids with alkalis, earths, or metals, these effects may be varied almost ad infinitum ; nor is there any rule yet laid down by which we can judge a priori of the changes of color that will happen on the admixture of this or that par- ticular salt with any coloring substance. In general, the perfect neutral salts act weakly ; the imperfect, especially those formed from metals, much more powerfully. Alum and sal am- moniac considerably heighten the color of cochi- neal, Brasil, turmeric, fustic, madder, logwood, &c. The same thing is done, though in a less degree, by common salt, Glauber's salt, salt- petre, and many other neutrals.

Solutions of iron in all the, acids strike a black with each of the above-

mentioned substance ; and likewise with sumach, galls, and other astringents. Solutions of lead universally debase red colors to a dull purple. Solutions of copper change the purple color of logwood to a pretty good blue ; and, in general, solutions of this metal are friendly to blue colors. The effects of solutions of gold, silver, and mercury, are not so well known ; they seem to produce dark colors of no great beauty. The most powerful solution, however, with regard to a great number of co- lors, is that of tin, made in aqua regia. Hence we may see the fallacy of Mr. Delaval's hypothesis concerning colors, that the least refran- gible ones are produced by. the most dense metals : for tin which has the least density of any metal, has yet, in a state of solution, the most extraordinary effects upon the least refran- gible colors as well as those that are most so. The color of cochineal is changed by it into the most beautiful scarlet; a similar change is made

upon the coloring matter of gum-lac. Brasil wood is made to yield a fine purple crimson ; logwood, a beautiful dark purple ; turmeric, fustic, weld, and all yellow-coloring woods and flowers, are made to communicate colors far more beautiful than can be got from them by any other method. The blue colors of the flowers of violet, eye-bright, iris, &c. are heightened so as to equal, if not excel, the blue produced by a solution of copper in copper in volatile alkali. In short this solution seems to be of much more extensive use in color-making, when properly ap- plied, than anything hitherto thought of. It is not, however, universally serviceable. The color of madder it totally destroys, and likewise that of saf-flower, changing them both to a dull orange. It likewise spoils the color of archil ; and, what is very remarkable, the fine red color of tincture of roses made with oil of vitriol is changed by it to a dirty green.

SECT. IV. — OF THE CHOICE OF COLORING MA- TERIALS.

One of the mos important considerations in color-making is to choose such materials as pro- duce the most durable colors. If these can be procured, an ordinary color frcm them is to be preferred to a bright one from those which fade sooner. In what the difference consists between the colors that fade and those which do not, is not known with any degree of certainty. From some appearances it would seem, that those sub- stances which are most remarkable for keeping their color, contain a viscous glutinous matter, so combined with a resinous one as to be solublu in water and spirit of wine. The most durable red color is prepared from gum-lac. This is very strongly resinous, though, at the same time, so far glutinous, that the coloring matter can be extracted from it by water. Next to gum-lac arc madder roots and cochineal. The madder is an exceedingly penetrating substance, insomuch that, when given to animals along with their food, it tinges their bones of a deep red color. Its coloring matter is soluble both in water and spirit of wine. Along with the pure red, however, there is in*

madder a kind of viscous astringent substance, of a dark brown color, which seems to give the durability to the whole. The coloring matter of cochineal, though soluble both in water and spirit of wine, is very tenacious and mucila- ginous, in which it bears some resemblance to the purpura of the ancients, which kept its color exceedingly well.

Where the colors are fugitive, the tinging rub- stance seems to be too resinous or too mucilagi- nous. Thus the colors of Brasil, turmeric, &c. are very resinous, especially the latter ; insomuch that the coloring matter of turmeric can scarcely be extracted by water. Both these are perishable, though beautiful colors ; and much more the red, purple, and blut flowers, commonly to be met with. These seem to be entirely mucilaginous without the least quantity of resinous matter. The yellow flowers are different, and in general keep their color pretty well. Perhaps fugitive colors might be rendered durable, by adding a proportion of gum or resin. A process has beeiv given by' Mr. Hellot for imparting durability to

the color of Brasil. It consists only in letting decoctions of the wood stand for some time in w»oden casks till they grow stale and ropy. Pieces of woollen cloth, dyed in the liquor, ac- quired a color so durable that they were not in the least altered by exposure to the air during four months in the winter season. Whether this change in the durability of the color was effected by the ropiness following the fermentation, must be decided by future experiments.

SECT. V. — OF THE PIGMENTS COMMONLY SOLD IN THE COLOR SHOPS.

The preceding sections contain the substance of all that can as yet be depended upon for es- tablishing a general theory of color-making. We now proceed to give an account of the different pigments generally to be found in the color shops.

1. BLACK. — These are the lamp-black, ivory- black, blue-black, and Indian-black. The first is the finest of what are called the soot-blacks, •and is more nsed than any other. Its prepara- tion is described in the Swedish Transactions for 1754, as a process dependent on the making of common resin : the impure resinous juice, col- lected from incisions made in pine and fir-trees, is boiled down with a little water, and strained whilst hot through a bag : the dregs and pieces of bark left in the strainer are burnt in a low oven, from which the smoke is conveyed through a long passage into

a square chamber, having an opening on the top on which is a large sack made of thin woollen stuff: the soot or lamp-black, concretes partly in the chamber, from whence it is swept out once in two or three days, and partly in the sack, which is now and then gently struck upon, both for shaking down the soot, and for clearing the interstices betwixt the threads, so as to procure a sufficient draught of air through it. In this manner lamp-black is prepared at the tur- pentine houses in England, from the dregs and refuse of the resinous matters which are there manufactured. Dr. Lewis has some curious observations on this subject. The soot, says he, arising in common chimneys, from the more oily or resinous woods, as fir and pine, is observed to contain more dissoluble matter than that from the other woods ; and this dissoluble matter ap- pears, in the former, to be more of an oily or re- sinous nature than the latter ; spirit of wine ex- tracting it most powerfully from the one, and water from the other. The oiliness and solu- bility of the soot seeming therefore to depend on those of the subject it is made from, it has been thought that lamp-black must possess these qualities in a greater degree than any kind of common soot. Nevertheless, on examining several parcels of lamp-black, procured from different shops, I could not find that it gave any tincture at all, either to spirit or to water. Suspecting some mistake or sophistication, or that the lamp- black had been burnt or charred, as it is to fit it for some particular uses, I prepared myself some soot from linseed oil, by hanging a large copper pan over the flame of a lamp to receive its smoke. In this manner the more curious artists prepare lamp-black for the nicer purposes; and from this collection of it from the flame of a liiinj>, the pigment probably received its name.

The soot so prepared gave no tincture eitner to water or spirits, any more than the common lamp-black of the shops. I tried different kinds of oily and resinous bodies with the same event ; even the soots obtained from fish oils and tallow did not appear to differ from those of the ve- getable oils and resins. They were all of a finer color than the lamp-black commonly sold. Soot was also collected in like manner from fir, and other woods, by burning small pieces of them slowly under a copper pan. All the soots were of a deeper black color than those obtained from the same kinds of woods in a common chimney ; and very little, if at all, in- ferior to those of the oils : they gave only a just discernible tincture to water and spirit, while the soots of the chimney imparted a strong deep one to both. The soot of mineral bitumens, in this close way of burning, appears to be of the same qualities with those of woods, oils, and resins : in some parts of Germany, great quantities of good lamp-black are prepared from a kind of pit-coal. It appears, therefore, that the differences of soots do not depend altogether on the qualities of the subjects, but in a great measure on the manner in which the subject is burnt, or the soot caught. The soots produced in common chim- neys, from different kinds of wood, resinous and not resinous, dry

and green, do not differ near so much from one another, as those which are pro- duced from one kind of wood in a common chimney, and in the confined way of burning above-mentioned .

Ivory black is prepared from ivory or bones burnt in a close vessel. This, when finely ground, forms a more beautiful and deeper color than lamp-black ; but, in the common methods of manufacturing, it is so much adulterated with charcoal dust, and so grossly levigated, as to be unfit for use. An opaque deep black, for water color, is made by grinding ivory black with gum- water, or with the liquor which settles from the whites of eggs after they have been suffered to stand a little. Some use gum-water and the whites of eggs together, and say, that a small addition of the latter makes the mixture flow more freely from the pencil, and improves its glossiness. It may be observed, however, that though ivory-black makes the deepest color in water as well as in oil painting, yet it is not on this account always to be preferred to other black pigments. A deep jet black color is seldom wanted in painting ; and in the lighter shades, whether obtained by diluting the black with white bodies, or by applying it thin on a white ground, the particular beauty of the ivory-black is in a great measure lost.

Blue black is said to be prepared from the burnt stalks and tendrils of the vine. These, however, the color-makers seldom give themselves the trouble of procuring, but substitute in ks place a mixture of ivory-black and common blue useQ for clothes.

Indian ink is an excellent black for water- colors. It has been discovered by Dr. Lewis to consist of a mixture of lamp-black and common glue. Ivory-black, or charcoal, he found to answer equally well, provided they were levi- gated to a sufficient degree of fineness, which indued requires no small trouble.

2. WHITE.— The white colors commonly to be met with are, white-flake, white-lead, calcined hartshorn, pearl-white, Spanish-white, egg-shell white, and magistery of bismuth. The flake- white and white-lead are properly the same, though the preparation of the former is kept a secret. These are the only whites that can be used in oil, all the rest being transparent unless they are laid on with water. Calcined hartshorn is the most useful of the earthy whites, as being the least alkaline. Spanish white is only finely prepared chalk. Pearl white is made from oyster-shells ; and egg-shell white from the shells of eggs. All these, by their attraction for acids, must necessarily destroy such colors as have any acid or metallic salt in their

composition. The magistery of bismuth is apt to turn black, as are also flake-white and white-lead, when used in water. The white precipitate of lead is greatly superior as a water-color, to all these; being perfectly free of any alkaline quality, and not apt to lose its own color, or to injure that of other substances.

3. RED. — The red colors used in painting are of two sorts ; viz. those which incline to the purples and such as are of a full scarlet and tend rather to the orange. The first are carmine, lake, rose-pink, red-ochre, and venetian-red. The second are vermilion, red-lead, scarlet-ochre, common Indian-red, Spanish-brown, and terra di Sienna, burnt. The preparations of carmine and lake, we have noticed in section III. Re- ceipts have been delivered with the greatest con- fidence for making these fine colors ; but all of them must necessarily prove ineffectual, because an earthy basis is recommended for striking the color upon : from the principles of chemistry, we are certain, that if aqua-fortis, or solution of tin, is made use of for brightening a color made with any earthy basis, it must infallibly be des- troyed by that basis, by reason of its alkaline quality. Carmine is the brightest and most beautiful red color known ; the best comes from France. Lake differs from it in being capable of mixture with oil ; which carmine is not, unless with great difficulty. The former is also much more inclined to purple than carmine. This last quality, however, is reckoned a defect ; and, accordingly, the more that lake approaches to the scarlet or true crimson, the more it is valued. On dropping solution of tin into an aqueous tincture of Brasil wood, a beautiful pre- cipitate falls, of a purplish crimson color. This may be very well substituted in place of the dearer lakes on many occasions.

Rose pink is a very beautiful color, in- clining more to the purple than scarlet. It seems to be made of chalk, colored with a decoction of Brasil wood, heightened by an alkaline salt ; for which reason it is exceedingly perishable, and but little esteemed. The color might be made much more durable, as well as better, by employing for a basis the white precipitate of lead, and brightening it with solution of tin.

Red ochre and Venetian red differ in nothing from the colcothar of vitriol well calcined. The calces of iron may be made to appear either purplish, or inclining to the scarlet, according to the manner in which the calcination is performed.

If the matter is perfectly deprived of its phlo- giston, and subjected to an intense fire, it always tbrns out red : but the mixture of a small quan- tity of inflammable matter gives it a purplish cast. Hence various paints are sold under dif- ferent names, which yet differ from eacli other only in the slight circumstance above-mentioned : and such are the scarlet-ochre,

Spanish-brown, and terrra di Sienna burnt. It is remarkable, that the calces of iion never show their color till they become cold. Colcothar of vitriol, while hot, always appears of a very dark dusky purple.

Vermilion, the best red used in oil painting, does not answer well in water ; minium or red- lead is rather an orange ; and, like other prepa- rations of lead, is in some cases apt to turn black.

4. ORANGE. — The only true orange-coiored paints are red orpiment and orange lake. The first is a sublimate formed of arsenic and sul- phur : the other may be prepared from tur- meric infused in spirit of wine, having its color struck upon calx of tin, and brightened by a solution of that metal. All the shades of orange, however, may be extemporaneously prepared by mixing red and yellow colors together, in due proportions.

o. YELLOW. — The yellow paints most com- monly used are, king's-yellow, Naples'-yellow, Dutch-pink, English pink, massicot, common orpiment, yellow-ochre, and terra di Sienna un- burnt.

Kings' Yellow' is evidently an arsenical pre- paration. Its color is exceedingly beautiful, but apt to fade ; on which account, and its great price, it is seldom used.

Naples' yellow was for a long time thought to be a preparation of arsenic, but is now dis- covered to have lead for its basis. It is, there- fore, apt to turn black and lose its color, which makes it the less valuable. It is used in prefer- ence to king's yellow, on account of its inferiority in price, though it is particularly liable to be spoiled by iron when moist ; and therefore should never be touched by that metal unless previously ground in oil.

Dutch pink is said to be prepared by striking the colors of yellow berries upon finely levigated nhalk. But of this there is great reason to doubt; the basis of Dutch-pink seerns much more hard and gritty than chalk, and its color more durable than those struck upon that earth usually are. Very good yellow may be prepared with the white precipitate of lead, by using either yellow berries, fustic, or any other substance ca- pable of yielding that color. English pink is paler than the Dutch, and keeps its color much worse.

Masticot is not apt to change, but the color is so dull that it is seldom used either in oil 01 water.

Common orpiment is a pretty bright greenish yellow. Its nauseous smell is greatly increased by grinding in oil ; nor does it keep its color for any length of time. That kind least inclined to green is to be preferred for painting. See the difference between it and realgar, and the method of

preparing them, under CHEMISTRY

Yellow ochre, and terra di Sienna aie ferru-

ginous earths, capable of becoming red by cal- cination. Green vitriol precipitated by lime may be advantageously substituted for either of them.

Twbith mineral is little used in painting, though its fine yellow color seems greatly to recommend it. It is in all probability very durable ; and should seem therefore worthy of a preference either to king's or Naples-yellow.

Gamboge can only be used in water, and is the most common yellow made use of for color- ing maps, &c. though it is neither quite transpa- rent nor very durable.

6. GREEN. — The only simple green color that has a tolerable degree of brightness is verdigris, or preparations of it. See CHEMISTRY, Index. This however, though a very beautiful color, is far from being durable. It is improved in color, though not in durability, by dissolution and crys- tallisation in distilled vinegar ; in which state it is called distilled verdigris. A more durable water-color is made by dissolving the verdigris in cream of tartar, or rather the pure tartareous acid; but in oil this is found to be equally fugitive with the verdigris itself.

Compound greens are either made of Prussian or some other blue, mixed with yellow; but, in •whatever way these colors can be compounded, the beauty of the green produced is greatly infe- rior to distilled, or even common verdigris. The tartareous solution of verdigris, mixed with 'a little gamboge, is the best transparent green water-color we have had an opportunity of trying; and a mixture of Prussian blue and turbith mineral is probably the best opaque one. Sap green is a simple color, but exceedingly inferior to distilled verdigris, or even to the tar- tareous solution of verdigris, with gamboge. It is prepared from the juice of unripe buckthorn berries evaporated to the consistence of a gum. Its green color is greatly inclined to yellow.

A kind of compound green has been sometimes used, called Prussian green, which consists only of Prussian-blue and yellow-ochre. It has no beauty, nor is it durable. It is prepared as Prussian-blue, only not pouring on any spirit of salt to dissolve the ochreous sediment which falls at the same time.

Another green is also sometimes used, called terra verte. It is a native

earth, probably im- pregnated with copper, of a bluish-green color, of that taint called sea-green. It is gritty, and therefore must be well levigated before it is used. Its color is durable, but not very bright.

7. BLUE. — The blue colors are ultra ma- rine, Prussian blue, verditer, smalt, bice, and indigo. Of all these, ultramarine is the finest, but its great price hinders its being much used. It is a preparation from lapis lazuli ; is an ex- ceedingly bright color, and never fades with what- ever substance it is mixed. It is now, however, in a great measure superseded by Prussian blue, to the disadvantage of painting in general ; as Prussian blue, though very beautiful, is far from being durable. Prussian blue is of the best quality wl-en it is deep, bright, and not inclined to purple. It ought to be tried by mixture with white lead, as the brightness of the color will appear much more when diluted, than when concentrated in lumps.

*The preparation of blue verditet is kept * secret, and the best chemists have been puzzled to find out the method. The color is exceedingly bright, and has a considerable tinge of green. The following is a method of preparing a color equally beautiful, and agreeing in all respects with what is sold in the shops, except that of effervescing with acid : — Dissolve copper in strong caustic alkali, until the liquid has as- sumed a very deep blue color; and the deeper this color is, the finer will be the verditer. When the menstruum has dissolved as much of the metal as it can take up, it is to be poured out into a broad and well glazed earthen pan, held over a very gentle fire ; and, from the moment it is put on, the liquor is to be continually agitated with a wooden spatula, so that the liquor may be heated as equally as possible. The whole secret consists in properly regulating the degree of heat; for, if it exceed the due proportion ever so little, the verditer will turn out a dirty green. The proper degree is about 90° of Fahrenheit's thermometer. In this gentle heat the alkali slowly evaporates; and, in proportion to its doing so, the verditer falls to the bottom. After it is once formed, freed from the alkaline liquor, and dried, it can bear the affusion of boiling water without the least injury. Dr. Priestley observes, that solution of copper in volatile alkali affords a blue precipitate by heat, but without mentioning the requisites for its success. In making this preparation, it is necessary to dis- solve copper in its metallic state; for the solu- tion of any calyx will not yield a blue but a green color. This color is durable in water, but dis- solves in oil, and has then all the inconvenionces of verdigris above mentioned.*

l»nalt is a glass colored with zaffre, a prepai ra- tion from cobalt. Jt is commonly so grossly powdered that it cannot be used in painting, and its texture is so hard, that it cannot easily be levigated. Its color is exceedingly 1 and durable ; so that when finely levigated it ID used instead of ultramarine. The most proper materials for levigating this substance seem to be the plates of M. Reaumur's porcelain recom- mended by Dr. Lewis.

Rice. For the preparation and qualities of bice, see ARMENUS and BICE.

Indigo is but little used in painting either in oil or water, on account of the dulness of the color. It requires no other preparation than be- ing washed over. Its goodness is known by the darkness and brightness of the color. See IN- DIGO.

8. PURPLE. — The only simple color of this kind used at present is colcothar of vitriol. A beautiful purple lake may be prepared from .ogwood by solution of tin; but this method of preparing colors is very little known as yet.

9. BROWN. — The brown colors are bistre, brown ochre, Cologne earth, umbre, and brown pink.

Under the article BISTRE is given a process for making that color, by infusing soot in water, pouring off the tincture, and then evaporating it to an extract ; but Dr. Lewis is of opinion with Mr. Landois in the French Encyclopedic, that the foot is either boiled in water, or ground with a little liquid of some kind into a snooth paste ;

it is then diluted with more water, and after standing for about half an hour till the grosser substance of the foot has settled, the liquor is poured off into another vessel, and set by for some dayj, that the finer parts may fall to the bottom, and this fine matter is the bistre. This is a very useful color in water, being exceedingly fine, durable, and not apt to spoil any other colors with which it is mixed.

Brown pink is said to consist of chalk tinged with the coloring matter of fustic, heightened by fixed alkaline salts. It is therefore very perish- able, and is seldom used. The other browns are a kind of ochreous earths ; for a description of which, see their proper articles.

SECT. VI. — OF THE ATTEMPTS MADE TO PRODUCE LAKES OF ALL COLORS FROM VEGETABLES.

We shall conclude with noticing some attempts that have beer made to produce all the different colors from vegetables, after the manner of lakes ; which, though the methods hitherto tried have for the most part failed of success, may perhaps lead to future and more successful exertions. From infusions of astringent vegetables, mixed with green vitriol, is produced a deep black liquor of very extensive use in dyeing. See DfEiNG. The

substances which produce the deepest blacks are galls and logwood. When a decoction or infusion of the galls is dropped into a solution of the vitriol largely diluted with water, the first drops produce bluish or purplish-red clouds, which, soon mingling with the liquor, turn it uniformly of their color.

This difference in the color seems to depend on the quality of the water. With distilled water, or the common spring waters, the mixture is always blue. If we previously dissolve in the water the most minute quantity of any alkaline salt, too small to be discovered by any of the com- mon means by which waters are usually tried, or if the water is the least putrid, the color of the mixture proves purple or reddish. Rain water, caught as it falls from the clouds in an open field, in clean glass vessels, gives a blue; but such as is collected from the tops of houses grows purple, with the mixture of vitriol and galls : from whence it may be presumed, that this last has contracted a putrid tendency, or received an alkaline impregnation, though so slight as not to be sensible by other ways of trial. Both the purple and blue liquors, on adding more of the astringent infusion, deepen to a black, more or less intense, according to the nature of dilution: if the mixture prove of a deep opaque blackness, it again becomes bluish or purplish, when further diluted. If suffered to stand in this diluted state for two or three days, the coloring matter settles to the bottom in form of a fine black mud, which, by slightly shaking the vessel, is diffused again through, the liquor, and tinges it of its former color. When the mixture is of a full blackness, this separation does not happen, or in a far less degree; for though a part of the black matter precipitates in standing, yet so much remains dissolved, that the liquor continues black. This stispension of the coloring substance, in the black liquid, may be attributed in part to the gunnny matter of the

astringent infusion increasing the consistence of the watery fluid ; for the separation is retarded in the diluted mixture by a small addition of gum-arabic. If the mixture, either in its black or diluted state, is poured into a filter, the liquor passes through colored : only a part of the black matter remaining on the filter. The filtered liquor, on standing for some time, becomes tur- bid and full of fine black Hakes ; being freed from these, by a second filtration, it again puts on the same appearance ; and thus repeatedly till all the coloring parts are separated, and; the liquor has become colorless.

Dr. Lewis, from whose Philosophical Com- merce of Arts this account is taken, informs us that this coloring matter, when separated from the liquor and dried, appeared of a deep black, which did not seem to have suffered any change frorr the air by exposure for upwards of four months. Made red-hot, it glowed and burned, but did not flame, and became a rusty-brown powder, which was readily attracted by a mag- netic bar; though in

its black state the magnet had no action upon it. The vitriolic acid, di- luted with water, and digested on the black powder, dissolved the greatest part of it, leaving only a very small quantity of whitish matter. Solution of pure fixed alkaline salt dissolved very little of it: the liquor received a reddish brown color, and the powder became blackish brown. This residuum was attracted by the magnet after being red hot, though not before : the alkaline tincture passed through a filter, and mixed with a solution of green vitriol, struck a deep brownish black color, nearly the same with that which results from mixing with the vitriolic solution, an alkaline tincture of galls. It has also been attempted to produce black from a combination of other colors, as green may be produced from a mixture of blue and yellow. M. le Blon, in his Harmony of Colors, gives a method of forming black, by mixing together the three colors called primitive, viz. blue, red, and yellow ; and M. Castel, in his Optique des Coulours, published in 1740, says that this com- pound black has an advantage in painting, above the simple ones, of answering better for the darkening of other colors. Thus, if blue, by the addition of black, is to be darkened into the color called blue black, the simple blacks, ac- cording to him, if used in sufficient quantity to produce the requisite deepness, conceal the blue, while the compound blacks leave it distinguish- able.

Le Blon does not mention the proportions of the three colors necessary for producing black. Castel directs fifteen parts of blue, five of red, and three of yellow ; but takes notice, that these proportions are rather speculative than practically just, and that the eye only can be the true judge ; our colors being all very imperfect, and our pig- ments or other bodies of one denomination or color being very unequal in their degree of in- tensity. He observes, that the pigments should all be of the deepest and darkest kind ; and that, instead of taking one pigment for each color, it is better to take as many as can be got , for the greater discord there is of heterogeneous and dis- cordant drugs, the more true and beautiful, he

says, will the black be, and the more capable of uniting with all other colors, without suppressing them, and even without making them tawney.

Dr. Lewis, by mixing different blue, red, and vellow colors, has not been able to produce a perfect black ; but has often obtained from them very dark colors, such as may be called brown-blacks or gray-blacks ; such as we com- monly see in the dark part of paintings, and such as the charcoal and soot blacks appear when di- luted a little. The ingredients being of a dark deep color is a very necessary condition ; for bright blues, bright reds,

and bright yellows mixed in such a proportion that neither color prevailed produced only a gray. In effect, all compositions of this kind, physically considered, can be no other than grays, or some of the in- termediate teints between whiteness and dark- ness ; and all these grays will be so much the lighter or darker as the component colors of themselves are bright or dark. To extract the coloring matter from the different kinds of ve- getables of all colors, would certainly be a very valuable acquisition, could the colors so procured be made durable. On this subject nothing has appeared more satisfactory than what is delivered by Dr. Lewis in his notes on Neuman's Che- mistry. His observations are curious, though they do not promise much success, with regard to fixing these vegetable colors. ' Among the infinite variety of colors, (says he), which glow in the flowers of plants, there are very few which have any durability, or whose fu- gitive beauty can be arrested by art, so as to be applied to any valuable purposes. The only permanent ones are the yellow, the red, the blue ; and all the intermediate shades of purple, crimson, violet, &c. are extremely perishable. Many of these flowers lose their colors on being barely dried ; especially if they are dried slowly, as has been usually directed, in a shady, and not warm place. The colors of all of them perish on keeping even in the closest vessels. The more hastily they are dried, and the more perfectly they are secured from the air, the longer they retain their beauty. The coloring matter extracted and applied on other bodies is still more perishable : oftentimes it is changed or destroyed in the hands of the operator. The color of many blue flowers is extracted by infusion in water; but there are some from which water gains only red- dish or purplish blue. Of those that have been tried there is not one which gives any blue tinc- ture to spirituous liquors : some give no color at all, and some a reddish one. The juice pressed out from the fresh flowers is for the most part blue. The blue juices and infusions are changed red by all acids. The marine acid seems to strike the most florid red. The flowers them- selves, macerated in acid liquors, impart also a deep red tincture. Alkalis, both fixed and vo- latile, and lime water, change them to a green. Those infusions of the juices which have nothing of the native color of the flowers, suffer the same changes from the addition of acid and alkaline liquors : even when the flowers have been kept till their color is lost, infusions made from them acquire still a red color from the one, and a green from the other, though in a less degree than when

the flowers were fresh. The red color produced by acids is scarcely more durable than the ori- ginal blue : applied upon other bodies, and ex- posed to the air, it gradually degenerates into a faintish purple, and at length disappears, leaving hardly any stain behind. The green produced by alkalis changes to a yellow, which does not fad so soon. The green, by lime water, is more permanent and more beautiful : green lakes, pre- pared from*

these flowers by lime-water, have been used as pigments by the painter. The flowers of cyanus (the common blue-bottle) have been greatly recommended, as affording elegant and durable blue pigments ; but I never have been able to extract from them any blue color at all. Infusions of them in watery, spirituous, and oily liquors, are all, more or less, of a reddish cast, without ˆmy tendency to blue. Alum, which is said to heighten and preserve their blue color, changes it, like that of other blue flowers, to a purplish red ; acids to a deep red ; alkalis and lime-water to a green ; solutions of tin added to the watery infusion, turns it to a fine crimson ; on standing, a beautiful red faecula subsides, but it loses all its color by the time it is dry. The watery infusion, inspissated to the consistence an extract, appears of a dark reddish-brown ; an extract made with rectified spirits is of a pur- plish color. The color of both extracts spread thin and exposed to the air quickly fades. Red flowers readily communicate their own red color to watery menstrua : among those that have been tried there is not one exception. Those of a full red color give to rectified spirit also a deep red tincture, brighter, though somewhat paler, than the watery infusion : but the lighter red flowers, and those which have a tendency to pur- plish, impart very little color to spirit, and seem to partake more of the nature of the blue flowers than of the pure red. Infusions of red flowers are supposed to be heightened by acids, and turned green by alkalis, like those of the blue ; but this is far from being universal. Among those I have examined, the rose colors and pur- plish reds were changed nearly in the same man- ner as the blues; but the full deep reds were not. The deep infusion of red poppies is changed by alkalis, not to a green but to a dusky purple. The colors of yellow flowers, whether pale or deep, are in general durable. Many of them are as much so, perhaps, as any of the native colors of vegetables. The color is extracted both by water and by spirit. The watery infusions are the deepest. Neither alkalis nor acids alter the species of the color, though both of them vary its shade ; acids rendering it paler, arid alkalis deeper : alum likewise considerably heightens it, though not so much as alkalis. An infusion of the flowers, made in alkaline lee, precipitated by alum, gives a durable yellow lake. In some of the deep reddish-yellow, or orange-colored flowers, the yellow matter seems to be of the same kind with that of the pure yellow flowers, but the red to be of a different kind from the pure red ones ; watery menstrua take up only the yellow, and leave the red, which may after- wards be extracted by rectified spirit of wine, or by water acuted by fixed alkaline salt. Such particularly are the saffron-colored flowers of

*Carthamus. These, after the yellow matter has been extracted by water, are said to give a red tincture to lee ; from which, on standing at rest for some time, a deep bright red fecula subsides ; called, from one of the names of the plant which produces it, saf-flower; and, from the countries whence it is commonly brought to us, Spanish red, and China lake. This pigment impregnates spirit of wine with a beautiful red tincture, but communicates no color to water. I have endea- voured to separate, by the same treatment, the red matter of some of the other reddish yellow flowers, as those of garden marigold, but without success. Plain water extracted a yellow color, and alkaline lee extracted afterwards only a paler yellow : though the digestions were continued till the flowers had lost their color, the tinctures were no other than yellow, and not so deep as those obtained from the pure yellow flowers. The little yellow flosculi, which in some kinds of flowers are collected into a compact round disc, as in the daisy and corn-marigold, agree, so far as they have been examined, with the expand- ing yellow petals. Their color is affected in the same manner by- acids, by alkalis, and by alum ; and equally extracted by water and by spirit. But the yellow farina, or fine dust lodged on the tips of the stamina of flowers, appears to be of a different kind. It gives a fine bright yellow to spirit, and a duller yellow to water; the un- dissolved part proving in both cases of a dull yellowish-white. Both the watery and spirituous tinctures were heightened *by alkaline liquors, turned red by acids, and again to a deep yel- low on adding more of the alkali : I know no other vegetable yellow that is turned to red by acids.*

White flowers are by no means destitute of coloring matter. Alkaline lixivia extract from some of them a green tincture, and change their colorless expressed juices to the same color ; but I have not observed that they are turned red by acids. The flowers of the common wild convol- vulus or bind-weed, which in all their parts are white, give a deep yellow or orange tincture to plain water ; which, like the tincture of flowers that are naturally of that color, is rendered paler by acids, heightened a little by alum, and more considerably by alkaline salts. The vapors of the volatile vitriolic acid, or of burning sulphur, which whiten or destroy the color of the colored flowers, make no change in the white. The red juices of fruits, as currants, mulberries, elder- berries, morello, and black cherries, &c. gently in- spissated to dryness, dissolve again almost totally in water, and appear nearly of the same red co- lor as at first. Rectified spirit extracts the ting- ing particles, leaving a considerable portion of mucilaginous matter undissolved ; and hence the spirituous tincture proves of a brighter color than the watery. The red solutions, and the juices themselves, are sometimes made dull, and some- times more florid, by acids, and generally turned purplish by alkalis. The colors of these juices are, for the most part, perishable. They resist, indeed, the power of fermentation, and continue

almost unchanged, after the liquor has been con- verted into wine ; but when the juice is spread thin upon other bodies, exsiccated, and exposed to the air, the color quickly alters and decays :

the bright lively 'red changes the soonest ; the dark dull red stain from the juice of the black-cherry, is of considerable durability. The fruit of the American opuntia or prickly pear, the plant upon which the cochineal insect is produced, is per- haps an exception. This bright red fruit, according to Labat, gives a beautiful red dye. Some experiments, however, made upon the juice of that fruit, as brought into England, did not promise to be of any great advantage. The ripe berries of buckthorn stain paper of a green color. From these is prepared the substance called sap-green, a pigment sufficiently durable, readily so- luble in water, but not miscible in oil. It is said that the berry of the heliotropium tricoccum, which grows wild about Montpelier, stains paper of a green color, and that this green turns presently to a blue; that the common blue paper receives its color from this juice ; and that the red rags, called turnsole, employed for coloring wines and other liquors, are tinctured by the same juices, turned red by acids. According to M. Nissole, of the French Academy of Sciences, the coloring juice is obtained not from the berries, but from the tops of the plant gathered in August, ground in mills, and then committed to the press. The juice is exposed to the sun about an hour, the rags dipt in it, dried in the sun, moistened by the vapor which arises durine the slaking of quick-lime with urine, then dried again in the sun, and dipped again in the juice. The Dutch and others are said to prepare turnsole rags, and turnsole in the mass, from different ingredients, among which argil is a principal one. In some plants, peony for instance, the seeds, at a certain point of maturity, are covered withafine shining red mem- brane. The pellicles of the seeds of a certain Ameri- can tree affo'rd the red masses brought into Europe under the names of annotta, orlean, and rancou. See ANOTTA. Mr. Pott, in the Berlin Memoirs, for the year 1752, mentions a very extraoidinary property of this concrete. ' With vitriolic acid it produces a blue color of extreme beauty ; but with this capital defect, that all salts and liquors and even common water, destroy it.' The spe- cimen of annotto, which I examined, was not sensibly acted upon by spirit of vitriol ; it re- ceived no change in its own color, and commu- nicated none to the liquor. "Nor did any visible change ensue upon dropping the acid into tinc- tures of annotto made in water or in spirit. The green color of the leaves of plants is ex- tracted by rectified spirit of wine and by oils. The spirituous tinctures are generally of a fine deep green, even when the leaves themselves are dull-colored, or yellowish, or hoary. The co- lor, however, seldom abides long even in the liquor ; much less when the tinging matter is se- parated in a solid form, and exposed with a large surface to the air. The editor of the Wirtemberg Pharmacopeia observes, that the leaves of acan thus, or bear's breach, give

a more durable green tincture to spirit than those of any other herb. Alkalis heighten the color both of the tinctures and green juices; acids weaken, destroy or change it to a brownish : lime-water improves both ine color and durability : by means of lime, not in- elegant green lakes are procured from the leaves of acanthus, lilly of the valley, and several other olants. There are very few plants which corr-

municate any share of their green color to water; perhaps none that give a green of any considera- ble deepness. The leaves of many herbs and trees give a yellow dye to wool or woollen cloth that has been previously boiled with a solution of alum and tartar. Weld, in particular, affords a fine yellow, and is commonly made use of for this purpose by the dyers, and cultivated in great quantities in some parts of England. There is no color for which we have such plenty of mate- rials as for yellow. Mr. Hellot observes, that all leaves, barks, and roots, which on being chewed discover a slight astringency, as the leaves of the almond, peach, and pear trees, ash bark, the roots of wild patience, &cc. yield durable yellows; that a large quantity of alum makes these yellows ap- proach to the elegant yellow of weld ; that if the tartar is made to prevail, it inclines them to an orange ; that if the roots, barks, or leaves, be too long boiled, the yellow proves tarnished, and ac- quires shades of brown. See DYEING.

Indigo and weld are the most capital pre- parations from the leaves of plants. They are both very much used in dyeing, though the first only in painting. See INDIGO and WOAD. Both the indigo and woad plants give out their color, by proper management, to water, in form of a blue fecula or lake. Mr. Hellot supposes that a little blue fecula is procurable from many other vegetables. Dr. Lewis, however, never was able to produce the Ipast appearance of either blue or yellow from any of the plants he tried by treating them in the manner used for the preparation of indigo.

There are various mosses which, like the indigo and woad plants, promise nothing of the elegant colors that can be extracted from them by art. The most remarkable of these is ARCHIL ; see that article. Linnaeus suspects that there are several other more common mosses from which valuable colors might be extracted ; a quantity of sea moss having rotted, in heaps, on the shore, he observed the liquor in the heaps to be as red as blood ; the sea-water, the sun, and the putre- faction, having brought out the color. Mr. Kalm, in an appendix to Linnceus's paper, in 1745, mentions two sorts of mosses actually employed in Sweden for dyeing woollen red : one is the lichenoides corallifarme apicibus coccineis of Ray's synopsis ; the other the

lichenoides tarta- reum, farinaceum, scutellarum umbone fusco, of Dillenius. This last is a white substance like meal clotted together, found on the sides and tops of hills. It is shaved off from the rocks after rain, pu- rified from the stony matters intermixed among it, by washing with water, then dried in the sun, ground in mills, and again washed and dried : it is then put into a vessel with urine, and set by for a month : a little of this tincture added to boiling water makes the dyeing color.

In the Philosophical Transactions for 1754, there is an account of another moss which, pre- pared with urine, gives a beautiful and durable red or violet dye to wool and silk. This is the lichen foliaceus umbilicatus subtus lacunensis, Linnaei flora Suecica. It grows upon rocks, and is readily distinguishable from others of that class by looking as if burnt or parched, consisting of leaves as thin as paper, convex all over on" the

upper side, with corresponding cavities under neath, adhering firmly to the stones by a little root under the leaves, and coming asunder, when dry, as soon as touched. It is gathered after rain, as it then holds best together, and parts easiest from the stone. In France a crustaceous moss, growing upon rocks in Auvergne, is pre- pared with lime and urine, and employed by the dyers as a succedaneum for the Canary archil. Mr. Hellot relates that he has met with several other mosses which, on being prepared in the same manner, acquire the same color. The most expeditious way, he says, of trying whether a moss will yield an argil, or not, is to moisten a little of it with a mixture of equal parts of spirit of sal ammoniac and strong lime water, and add a small proportion of crude sal ammoniac. The glass is then to be tied over with a piece of bladder, and set by for three or four days. If the moss be of the proper kind the little liquor which runs from it, upon the inclining vessel, will ap- pear of a deep crimson color ; and, this afterwards evaporating, the plant itself acquires fhe same color.

Dr. Lewis informs us, that he has tried a good number of the common, mosses, many both of the crustaceous and foliaceous kind, and not a few of the fungi; as also the herbs chamomile and milfoil, which yield a blue essential oil; and thyme, whose oil becomes blue by digestion with volatile spirits; but never met with any that yielded a color like archil. Most of them gave a yellow or reddish-brown tincture. A few gave a deep red color to the liquor ; but, when di- luted, it showed a yellowish cast, and when applied on cloth it gave only a yellowish-red. Though, in general, the blue colors of flowers are exceedingly perishable, there seem to be at least two exceptions to this rule ; for the blue flowers of iris, or fleur-de-lis, and those of columbine, when treated with solution of tin, yielded a color tolerably permanent. Indeed, when experiments are made with a view to extract the color from any part of a vegetable, it should always be tried whether it can bear a mixture with this solution. If the color is not destroyed by it there is

a very great probability that the solution will, by proper management, preserve and give a durability to it, which could scarcely be obtained by any other method.

There are several substances, however, used ,in color-making, with which solution of tin cannot bear to be mixed. These are, principally, sugar of lead and cream of tartar, as well as all the calcareous earths and alkaline salts. With alum it may be mixed very safely, and is in many cases the better for it. The roots of plants, however, seem to promise more durability of color than the upper parts. We have seen a blue color, of considerable durability and brightness, prepared from the roots of common radishes by expressing the juice, combining it with pipe-clay, and bright- ening it with a little alum.

In preparing liquid colors for maps, &c., there can be very little difficulty, if what is above laid down is attended to. The only color with which there can be any difficulty is blue ; but the com- mon solutions of indigo in alkalis or acids may be made to ansvu-r this purpose, though, on

account of their strongly saline qualities,they are not very proper. A method of procuring a beau- tiful transparent blue color is to extract the co- loring matter from the Prussian blue, by caustic alkali. This laid upon paper appears of a dirty brown color; but, when washed over with a weak solution of green vitriol, is instantly changed to a most beautiful blue. This affords a method of procuring blue transparent colors of greater beauty than are usually met with. For further information,; on this subject, see PAINTING, and Tungri's Painters1 and Varnishers' Guide.

The following are the dye-stuffs used by the calico printers for producing fast colors. The mordants are thickened with gum, or calcined starch, and applied with the block, roller, plates, or pencil.

1 . Black. The cloth is impregnated with ace- tate of iron (iron liquor) and dyed in a bath of madder and logwood.

2 Purple. The preceding mordant of iron, diluted : with the same dyeing bath.

3. Crimson. The mordant for purple, united with a portion of acetate of alumine, or red mor- dant, and the above bath.

4. Red. Acetate of alumina is the mordant, tind madder is the dye-stuff.

5. Pale red, of different shades. The preced- ing mordant diluted with watar, and a weak mad- der bath.

5. Brown or pompadour. A mixed mordant, containing a somewhat larger proportion of the red than of the black ; and the dye of madder.

7. Orange. The red mordant ; and a bath first of madder, and then of quercitron.

8. Yellow. A strong red mordant; and the quercitron bath, whose temperature should be considerably under the boiling point of water.

9. Blue. Indigo rendered soluble and green- ish-yellow colored, by potash and orpiment. It recovers its blue color by exposure to air, and thereby also fixes firmly on the cloth. An indigo rat is also made, with that blue substance dif- fused in water with quicklime and copperas. These substances are supposed to deoxidise indigo, and at the same time to render it so- luble.

10. Golden dye. The cloth is immersed alte nately in a solution of copperas and lime-water. The protoxide of iron, precipitated on the fibre, soon passes, by absorption of atmospherical oxy- gen, into the golden-colored deutoxide.

11. Buff. The preceding substances in a more dilute state.

12. Blue vat, in which white spots are left on a blue ground of cloth, is made by applying to these points a paste composed of solution of sul- phate of copper and pipe-clay; and, after they are dried, immersing it stretched on frames, for a definite number of minutes, in the yellowish- green vat of one part of indigo, two of copperas, and two of lime, with water.

13. Green. Cloth dyed blue, and well washed, is imbued with the aluminous acetate, dried, and subjected to the quercitron bath.

In the above cases the cloth, after receiving the mordant paste, is dried, and put through a mix- ture of cow-dung and warm water. It is then put into the dyeing vat or copper

FUGITIVE COLORS.

All the above colors are given by making decoctions of the different coloring woods ; and receive the slight degree of fixity they possess, as well as great brilliancy, in consequence of their combination or admixture with

the nilro-muriate of tin.

1. Red is frequently made from Brasil and Peach wood.

2. Black. A strong extract of galls, and deuto- nitrate of iron.

3. Purple. Extract of logwood, and the deuto- nitrate.

4. Yellow. Extract of quercitron bark, or French berries, and the tin solution.

5. Blue. Prussian blue and solution of tin. Fugitive colors are thickened with gum-traga-

canth, which leaves the cloth in a softer state than gum-senegal; the goods being sometimes sent to I market without being washed.

For the modes of using the different articles used in dyeing, see them under their respective names in the order of the alphabet.

CCKLORATE, adj.~\ Lat. coloratus, COM-

COLORA'TION, n. s. >ro, colorificus. Colored,

COLORI'FICK, adj. j marked or stained with

ome color ; the art or practice of coloring ; the

state of being colored ; that which has the power

of producing dyes, tints, colors, or hues.

COLOSSIS, or COLOSSE, in ancient geogra- phy, a considerable town of Phrygia Magna, in which the Lycus falls into a gulf, and at the distance of five stadia emerges again, and runs into the Meander. Orosius says, that in Nero's time it was destroyed by an earthquake.

COLO'SSUS,) Lat. colossus, colosseus. COLO'SSAL, adj. >A statue of enormous mag- COLO'SSEAN. > nitude ; of the form, height, and bigness of such a statue ; giant-like.

COLOSSUS, the name of a celebrated statue of Apollo at Rhodes. The Rhodians having compelled Demetriu< of Macedon to raise the

siege of their city, were so grateful for vhe sup- posed assistance of Apollo, that they resolved to erect an enormous brazen statue in honor of that deity : and Chares, |the disciple of Lysippus, was entrusted with the project. Its

height, according to Strabo, was seventy cubits (about 100 English feet); but according to other writers it amounted to eighty cubits. Pliny relates that few persons could embrace its thumb, whilst its fingers were the size of ordinary statues. There was a winding staircase to go up to the top of it ; from whence one might discover Syria, and the ships that went into Egypt. Among more modern works of this nature, is the enor- mous colossus of San Carlo Borromeo at Arona, in the Milanese territory. It is of bronze, sixty feet in height, and has a staircase into its inter for the purpose of occasional repairs and resto- rations.

COLOSTRUM, the first milk of any animal after bringing forth young, called beestings. This milk is generally cathartic, and purges the me- coaium ; thus serving both as an aliment and medicine. An emulsion, prepared with turpen- tine dissolved with the yolk of an egg, is some- times called by this name.

COLSTON (Edward), an eminent philanthro- pist, born at Bristol, in 1636. His father was engaged in the business of a Spanish merchant, to which he succeeded, and which he carried on very successfully, so that he acquired a large fortune. He disposed of the greatest part of his wealth to charitable institutions; and, besides building and endowing several alms-houses and charity schools in his native city, he gave large sums during lite as well as by will at death, to hospitals and other beneficent purposes. He died in 1721, on his birth-day, and was interred in All Saints' church, Bristol, where a sermon is yearly preached to commemorate him.

COLT, n. s. & v. a.) Signifies the young of

CO'LTISH, adj. $ any animal. It is com-

monly used for the male offspring of a horse ; it is also applied to a rough, skittish, or foolish fellow. The verb not only signifies to play and frisk like young animals, but partakes, says Thomson, of the Goth, gaiita, kailta ; to wanton, to be lascivious. It is also used by Shakspeare, in the sense of to befoal.

COLT, in zoology, is peculiarly used for a young male horse; the female being called a filly.

CO'LTER, n. s. Sax. culrort; Lat. culler. The sharp iron of a plough that cuts the ground perpendicularly to the share.

COLTS-FOOT, n. s. Tussilago ; from colt and foot. It has a radiated flower, whose disk con- sists of many florets, but the crown composed of many half florets : the embryos are included in a multifid flower-cup, which turns to downy seeds fixed in a bed.

COLTS-FOOT. See CACALIA.

COLTS-TOOTH, n. s. From colt and tooth. An imperfect or superfluous tooth in young horses ; a love of youthful pleasure ; a disposition to the practices of youth.

COLTON (Rev. Caleb), an eccentric charac- ter, was a student of Eton, and afterwards of Cambridge, from whence he was promoted, in 1801, to the perpetual curacy of Tiverton, Prior's Quarter, Devonshire, in the patronage of King's College, Cambridge ; and, in the year 1818, vacated this preferment for the cura- cies of Kew and Petersham. His literary repu- tation may be dated from the year 1820, when the soundness of his judgment was questioned and his reasoning powers stretched to their utmost in consequence of his "Plain and Authentic Narrative of the Stamford Ghost." From this publication it was to be inferred that he believed in supernatural agency ; but whether he seriously thought what he boldly wrote is very problematical, his pri- vate character being duly considered. His next productions were "Hypocrisy," a satirical poem, and " Napoleon," an ode, published in the year 1812, by both of which accessions were made to his literary character. Eight years after, his genius and industry combined to obtain for him a lasting name by the production of his " Lacon

or Many Things in Few Words." This proved a remarkably popular work, went rapidly through several editions, and its success stimu- lated our author to the composition of a second volume. His career as a writer was now near its close, and a poem called the " Conflagra- tion of Moscow," is the only effort of his abilities that appeared afterwards, and even this was published the same year with " Lacon." About this period an horrible event, the murder of Mr. Weare, brought out the private character of our author in lights both new and strange. His sudden disappearance caused inquiry into the manner of his life, when it appeared that, although he neither bore a part in the barbarous transaction, nor had been immolated on the altar of false honour, yet that he had been the asso- ciate of all the parties involved in the guilt of the dark crime, and was a dissipated and abandoned character. When the public fever, occasioned by the assassination of Weare, had subsided, it was found that Mr. Colton's flight was occasioned by the activity of his creditors, who ultimately suc- ceeded in making a bankrupt of him, as a wine- merchant. In November 1827, the latest day the law allowed him, he appeared to resume his clerical duties,

but was finally removed from his sacred office in the following year. Excluded from that rank in society to which birth, edu- cation, and his profession had entitled him, and only not steeped in crime, he sought refuge where he imagined no shadow of his life had been cast. After two years spent in travelling through different parts of America, he turned at length towards France, and the recesses of the Palais Royale became his last adopted home. Here he collected a gallery of paintings, and was known at first as a lover of the arts ; but this occupation was too narrow a sphere for the exertion of his powers, and he soon returned to the absorbing vice of gambling, by which he accumulated, within the space of one year, the amazing sum of £25,000. If the life of this • eccentric man appears to overflow with wretch- edness, the consequence of misconduct, his death was even more deplorable. Unable to stop the intoxicating career of vice, upon the attainment of so much wealth, he ventured all again, and was again reduced to beggary. Mental agony engendered a disease which could only be relieved by a surgical operation ; and, not pos- sessing strength of mind to endure the pain and peril, in a fit of phrenzy he blew out his brains. COLUBER, in zoology, a genus of serpents belonging to the class amphibia. The characters are these : they have a number of scuter or hard crusts on the belly ; and scutellas or scales on the tail. Linnsus enumerates ninety-seven spe- cies under this name, distinguished solely by the number of scuta and scutellae, and Gmelin 175. The most remarkable are the following :

1. C. aestivus, or the green snake, is all over of a green color. It inhabits Carolina; where it lives among the branches of trees on flies and other insects. It is of a small size, and easily becomes tame and familiar.

2. C. annulatus,or the little brown bead snake, is always small, and is seldom found above ground, but commonly dug up, and found twist- ing about the roots of shrubs and plants. All

the back and otner parts of the body have trans- verse spots of brown and white so disposed as to have some resemblance to a string of English beads ; whence probably it takes its name. It is quite harmless, and is a native of Virginia and Carolina.

3. C. aspis, with 146 scuta and forty-six scutellae, is a native of France. It is poisonous, and is of a reddish color, with dusky spots on the back.

4. C. berus, or the common British viper, is found in many countries of Europe. It abounds in the Hebrides, and in many parts of Britain ; particulaily in the dry, stony, and chalky counties. According to Pennant, and other naturalists, they are viviparous, but proceed from an internal egg. This viper seldom grows longer than two feet ; though Pennaiit tells us he once saw a female, which is nearly a third larger than the male, nearly three feet long. The ground color of the male is a dirty yellow, that of the female deeper. Its back is marked the whole length with a series of rhomboidal black spots, touching each other at the points ; the sides with triangular ones ; the belly entirely black. It has 146 scuta and thirty- nine scnteUse. There is a variety wholly black ; but the rhomboid marks are very conspicuous, even in this, being of a deeper and more glossy hue than the rest. The head of the viper is in- flated, which distinguishes it from the common snake. Catesby says, ‘ that the difference between the vipers and snakes or other serpents is, that the former have long hollow fangs or tusks, with an opening near the point ; the neck is small, the head broad, the cheeks extending wide, scales rough, the body for the most part flat and thick ; they are slow of motion; swell the head and neck when irritated, and have a terrible and ugly aspect.’ The tongue is forked, the teeth small ; the four canine teeth are placed two on each side the upper jaw : these instruments of poison are long, crooked, and movable ; capable of being laised or depressed at the pleasure of the animal, and they instil their poison in the same manner. The vipers are said not to arrive at their full giowth till they are six or seven years old ; but they are capable of engendering at two or three. They copulate in May, and go about three months with their young. Mr. White in- forms us, in his History of Selbonie, that a viper, which he opened, had in it fifteen young ones of the size of earth worms, about seven inches long. They twisted and wriggled about with great alertness ; and, when touched, they erected them- selves, and gaped very wide, showing immediate tokens of menace and defiance, though no fangs could be perceived, even with the help of glasses : which the author remarks, as an instance among others of that wonderful instinct which im- presses young animals with a notion of the situation and use of their natural weapons, even before these weapons are formed. Mr. Pennant tells us that he has been assured of a fact men- tioned by Sir Thomas Brown, though denied by the viper-catchers, that the young of the viper, when terrified, will run down the throat of the parent, and seek for shelter in its belly, in the same manner as the young of the opossum retire into the ventral pouch of the old one ; whence

some have imagined that the viper is so unnatural as to devour its own young: but the food of these serpents is frogs, toads, lizards, and mice- It is also said that vipers prey on young birds : but whether on such as nestle on

the ground, or whether they climb up trees for them, is quite uncertain ; the fact, however, is very far fiom being recent ; as Horace mentions it, Kpod I. The viper is capable of supporting very long ab- stinence; some having been kept in a box six months without food, and yet not abating of their vivacity. They feed only a small part of the year, but never during their confinement; for if mice, their favorite diet, should at that time be thrown into their box, though they will kill, yet they never will eat them. When at liberty, they remain torpid throughout the winter; but, when confined, have never been observed to take their annual repose. The method of catching them is by putting a cleft stick on or near their head; after which they are seized by the tail, and instantly put into a bag. The viper-catchers •are very frequently bitten by them in the pursuit of their business, yet we very rarely hear of their bite being fatal. Sallad oil, applied in time, is said to be a certain lemedy. The flesh of t!ic British viper has been celebrated as a restorative, as well as that of the foreign kind.

5. C. chersea is a native of Sweden, \vl.ere it is called asping. It is a small reddish serpont, whose bite is said to be mortal .

6. C. constrictor, the black snake, is a native of several parts of America. They are very lonescaping its pursuit. Many ridiculous frights have happened from this innocent reptile. As every one in America is full of the dread of the rattlesnake, men are apt to fly at the sight of any of the serpent kind. This pur sues, soon overtakes, and, by twisting round the legs of the fugitive, soon brings him to the ground ; but he happily receives no injury.

7. C. luridus of Forster, called by Mr. Catesby the 'brown viper, is a native of Virginia and the Carolinas. It is about two feet long and large in pioportion ; very slow in its motion, even when threatened with danger. When attacked it defends itself with much fierceness, and its bite is as venomous as any. It preys chiufly upon lizards.

8. C. naja, or cobradi capello, with 193 scuta and sixty scutellae, is a native of the East Indies, and is reckoned the most poisonous of all serpents. The root of the lignum colubrinum (ophiorrhiza) is said to have been pointed out to the Indians as an antidote against the bite of this serpent by the viverra ichneumon, a creature which fights with this serpent, and cures itself, when wounded, by eating of this plant. Tho Indians, when bitten, instantly chew it, swallow the juice, and apply the masticated root to the puncture. It is killed by the ichneumon. In India it is everywhere exhibited publicly as

show, being previously deprived of its fangs; and is of course more universally known in that country than any other of the race of reptiles. It is carried about in a covered basket, and so managed by its proprietors as to assume, when exhibited, a kind of dancing motion ; raising itself up on its lower part, and alternately moving its head and body from side to side for some minutes, to the sound of some musical instru- ment which is played during the time.

9. C. prester of Linnaeus, the black viper of Catesby, is a native of Carolina and Virginia. It is short and thick, slow of motion, spreads its head surprisingly when irritated, very flat and thick, threatening with a horrid hiss. They are very poisonous; their bite being as deadly as that of the rattlesnake. They frequent the higher lands, and are of a rusty black color.

10. C. punctatus of Linnaeus, called by Catesby the water viper, is a native of Carolina. According to Linnaeus it is ash-colored, varie- gated with yellow spots. Catesby informs us that the head and back of this serpent are brown ; the belly marked transversely with yellow, and also the sides of the neck. The neck is small, the head large, and the mouth armed with the destructive fangs of the viper or rattlesnake, next to which it is reckoned the largest serpent in this country. Contrary to what is observed in most other vipers, these are very nimble and active, and very dexterous in catching fish. In summer great numbers are seen lying on the branches of trees hanging over rivers ; from which, on the approach of a boat, they drop into the water, and often into the boat on the men's heads. They lie in wait in this manner to surprise either birds or fish : after the latter they plunge with surprising swiftness, and catch some of a large size, which they bring ashore and swallow whole. The tail of this animal is small towards the end, and ter- minates in a blunt horny point about half an inch long.

11. C. vipera, the common viper of the shops, has 118 scuta, and only twenty-two scutellae. The body is very short and of a pale color, with brownish spots ; the head is gibbous and covered with small scales. It is a native of Egypt and other warm countries. It has always been remarkable for its poisonous nature ; insomuch that vipers, when numerous, have often been thought the ministers of divine vengeance, like the plague, famine, and other national calamities. A notion also prevailed, among the ancients, that few or none of the parts of a viper were free from poi- son ; for which reason they made no experiments or discoveries concerning the nature of these creatures. It is now, however, proved, by un- doubted experiments, that the poison of vipers, as well as of all other serpents whose bite is hurtful, lies in a bag at the bottom of their great teeth or fangs. These teeth are perforated ; and, when the creature bites, the compression of the bag

forces out a little drop of the poison into the wound, where it produces its mischievous effects. The purpose answered by this poisonous liquor, to the creatures themselves, is probably the de- struction of their prey; for, as serpents frequently feed upon animals of very considerable magnitude and strength, they would often undoubtedly make

their escape, did not the poisonous juice instilled into the wounds made by the serpent's teeth almost instantly deprive them of life, or at least of all power to struggle with their enemy. For an account of the symptoms produced by the bites of vipers, and other venomous serpents, in the human body, together with the best methods of cure, see MEDICINE. After the viper is de- prived of those bags which contain its poison, it is entirely harmless ; nay the flesh of it is highly autritive.

CO'LUBRINE, adj. Lat. colubrinus. Re- lating to a serpent ; cunning ; crafty.

COLUMBA, in ornithology, the pigeon, a genus belonging to the order of passeres. The characters of this genus are — the bill is straight, and descends towards the point ; the nostrils are oblong, and half covered with a soft tumid mem- brane ; and the tongue is not cloven. There are about eighty species, all natives of different countries. The following are the most remark- able : —

1. C. coronata, or great crowned pigeon, a very large species, about the size of a turkey. The bill is black, and two inches long ; the irides are red ; the head, neck, breast, belly, sides, thighs, and under tail coverts, cinereous blue ; the head is crested ; the back, rump, scapulars, and upper tail coverts, are of a deep ash-color, with a mixture of purplish chestnut on the upper part of the back and scapulars ; the wing-coverts are ash colored within, and purplish chestnut on the outside and tip ; quills deep blackish ash- color; tail the same, but of a light ash-color at the tip ; the legs are blackish. This species in- habits the Molucca Isles and New Guinea. Its note is cooing and plaintive, like that of other pigeons, only_ louder in proportion. The mournful notes of these birds alarmed the crew of Bou- gainville much, when in the neighbourhood nf them, thinking they were the cries of the human species. In France they were never observed to lay eggs, nor in Holland, though they were kept for some time ; but Scopoli says, that the male approaches the female with the head bent into the breast, making a noise more like lowing than cooing ; and that they not only made a nest on trees, in the menagerie where they were kept, but laid eggs. The nest was composed of hay and stalks. The female never sat, but stood upon the eggs ; and he supposed it was from this cause alone, that there was no produce. They are said to be kept by some, in the East Indies, in their court-yards, as domestic poultry. The Dutch at the Moluccas call them

crown-vogel, M. Sonnerat, as well as Dampier, found these in plenty at New Guinea ; and it is probable that they were originally transported from that place into Banda, whence the Dutch chiefly now pro- cure them.

2. C. Malaccensis, the Malacca pigeon de- scribed by Sonnerat is little bigger than the house sparrow. It is a most beautiful species, and the flesh is said to be extremely delicate. It has been transported into the Isle of France, where it has multiplied exceedingly.

3. C. migratoria, or pigeon of passage, is about the size of an English wood pigeon ; the bill black ; iris red ; the head of a dusky blue ; the

breast and belly of a faint red ; above the shoul- der of the wing there is a patch of feathers shining like gold ; the wing is covered like the head, having some few spots of black (except that the larger feathers are dark brown), with some white on the exterior vanes ; the tail is very long, and covered with a black feather, vinder which the rest are white ; the legs and feet are red. They come in prodigious numbers from the north, to winter in Virginia and Carolina. In these countries they roost upon one another's backs in such quantities, that they often break down the twigs of trees which support them, and leave their dung some inches thick below the trees. In Virginia Mr. Catesby has seen them fly in such continued trains, for three days successively, that they were not lost sight of for the least in- terval of time, but somewhere in the air they were seen continuing their flight southward. They breed in rocks by the sides of rivers and lakes far north of St. Lawrence. They fly to the south only in hard winters, and are never known to return.

4. C. oenas, or the domestic pigeon, and all its beautiful varieties, derive their origin from one species, the stock dove ; the English name implying its being the stock or stem from whence the other domestic birds spring. These birds, as Varro observes, take their Latin name, columba, from their voice of cooing. They were, and still are, to be found in most parts of our island in a state of nature ; but probably the Romans first taught the Britons how to construct pigeon houses, and make birds domestic. The characters of the domestic pigeon are these : — it is of a deep bluish ash-color ; the breast dashed with a fine changeable green and purple ; the sides of the neck with a shining copper color; its wings marked with two black bars, one on the coverts of the wings, the other on the quill feathers ; the back white, and the tail barred near the end with black. It weighs fourteen ounces. In the wild state it breeds in holes of rocks and hollows of trees ; for which

reason, some style it columoa cavernalis, in opposition to the ring dove, which makes its nest on the boughs of trees. Nature always preserves some agreement in the manners, characters, and colors of birds reclaimed from the wild state. This species of pigeon soon takes to build in artificial cavities, and from the temptation of a ready provision becomes easily domesticated. Multitudes of these wild birds migrate into the south of England : and, while the beech woods were suffered to cover large tracts of ground, they used to haunt them in myriads, reaching a mile in length, as they went rut in the morning to feed. They visit Britain the latest of any bird of passage, not appearing till November, and retiring in the spring. Mr. Pennant imagines, that their summer haunts are in Sweden, as Mr. Eckmark makes their re- treat thence coincide with their arrival in Britain. Numbers of them, however, breed in cliffs on the coast of Wales, and of the Hebrides. The varie- ties produced from the domestic breed are nume- rous, and extremely elegant; they are distin- guished by names expressive of their several pro- perties, as tumblers, carriers, jacobines, croppers, powters, runtf, turbites, owls, nuns, &c. The

most celebrated of these is the carrier pigeon. They are gregarious, lay only two ejrss, and breed many times in the year. They bill during their courtship ; the male and female sit, and also feed their young, by turns : they cast provi- sion out of their craw into the young one's mouth; they drink, not by sipping, like other birds, but by continued draughts, like quadru- peds, and they have plaintive notes.

5. C. palumbus, the ring dove, is ;i native of Europe and Asia. It is the largest pigeon we have, and might be distinguished from ail others by its size alone. Its weight is about twenty ounces ; its length eighteen inches, and breadth thirty. The head, back, and covers of the wings are of a bluish ash color ; the lower side of the neck and breast are of a purplish red, dashed with ash color : on the hind part of the neck is a semi- circular line of white ; above and beneath that, the feathers are glossy, and of changeable colors. This species forms its nest of a few diy sticks in the boughs of trees. Attempts have been made to domesticate them by hatching their eggs under the common pigeon in dove houses ; but, as soon as they could fly, they always took to their native haunts. In the beginning of winter they assem- ble in great flocks, and leave off' cooing, which they begin in March when they pair.

6. C. turtur, or turtle-dove, is a native of Ind ia. The length is twelve inches and a half, its breadth twenty-one; the weight four ounces. The irides are of a fine yellow, and the eye-lids encompassed with a beautiful crimson circle. The chin and forehead are whitish ; the top of the head ash- colored mixed with olive. On each side of the neck is a spot of black feathers prettily tipt with white : the back ash-colored, bordered with olive brown ; the

scapulars and coverts of a reddish brown spotted with black ; the breast of a light purplish red, having the verge of each feather yellow : the belly white. The tail is three inches and a half long ; the two middle feathers of a dusky brown; the others black, with white tips; the end and exterior side of the outmost feathers wholly white. In the breeding season these birds are found in Buckinghamshire, Gloucester- shire, Shropshire, and the west of England. They are very shy and retired, breeding in thick woods, generally of oak ; in autumn they migrate into other countries.

COLUMBA (St.), a celebrated saint, sometime., called the Apostle of Scotland, who flourished in the sixth century. He founded a cell ot monks in lona, and the first religious weie ca- nons regular, of whom Columba was the first abbot; and his. monks, till A.D. 716, differed from those of the church of Ilome, but in the observation of Easter, and in the clerical tonsure, Columba led here an examplary life, and was highly respected for the sanctity of his manners for many years. He is the first on record who had the faculty of the second sight, for he announced the victory of Aidan over the Picts and Saxons on the very instant it happened. He had the honor of burying in his island, Conval and Kin- natel, two kings of Scotland, and of cr6wning a third. At length, worn out with age. he died in lona in the arms of his disciples; was in- terred there ; but, mistaken for another Columba,

ouried in Down ; where, according to the epi- taph, his remains were deposited with those of St. Bridget and St. Patrick :—

Hi tres in Duno tumulo tumulantur in uno ; Brigida, Patricias, atque Columba pius.

COLUMBA (St.), or the CONGREGATION OF ST. COLUMBA, a society of regular canons, who formerly had ninety-eight abbeys or monasteries in the British isles.

COLUMBANUS, a saint and a poet, born in Ireland, and brought up to a religious life among the disciples of St. Columba. He made great progress in learning, and early in life com- posed a book of psalms, and a number of moral poems. He is said to have belonged originally to a monastery of the name of Benchor. Colum- banus passed from Britain into France, A. D. 589, and founded the monastery of Luxeville, near Besancon. He had been kindly received and patronised by king Childebert ; but he was afterwards

expelled France by the tyrannical queen Brunicnild, on which he retired to Lom- bardy, and founded the monastery of Bobio. The Regula Coenobialis and Penitentialis, which he. established in that monastery, have been pub- lished in the Codex Regularum compiled by the learned Holstenius.

COLUMBARIA, in ancient geography, an island on the west coast of Sicily, opposite to Drepanum ; said by Zonarias to have been taken from the Carthaginians by Numerius Fabius the consul ; now called Columbara.

CO'LUMBARY, n. s. Lat. columbarium. A dovecot ; a pigeon-house.

The earth of colwnbaries, or dove-houses, is much Desired in the artice of saltpetre.

Browne's Vulgar Errourt.

COLUMBIA, a county of New York, bounded on the north by Rensselaer, south ty Duchess, east by the state of Massachusetts, and west by Hudson River, which divides it from Albany county. It is thirty-two miles in length, and twenty-two in b.ˆadth, and is divided into eight towns, of which Hudson, Claverack, and Kin- derhook are the chief. It is said to contain an area of 594 square miles, or 380,160 acres, which gives about fifty-four persons to a square raile, and is one of the most flourishing portions of the United States. Although no part can be called mountainous, the surface is considerably diversified. On the eastern border is a hilly track, and the intermediate country to the Hudson is gently undulated, ranges of small hillocks being interspersed with extensive plains and valleys, and with many tracts of rich alluvial soil. In the southward the soil is a deep warm gravel, diversified with hill and dale, and adapted either for grain or pasture. It contains 3742 senatorial electors.

COLUMBIA RIVER, a river of North America, which, according to Mackenzie, rises in the Rocky Mountains, in about 54° 23′ N. lat., and 121° W. long., and falls into the Pacific Ocean in 46° 10′ N. lat., and 122° 45′ W. long. Its source is not more than a few miles from that of the Unijah or Peace River, whose waters com- municate with that great line of rivers and lakes which stretch across this part of the American

continent, and terminate in the St. Lawrence, Although the discovery of this river is claimed by the Spaniards, who call it Entrada de Ceta, it was first entered in modern times in 1791, by Mr. Gray, in the Columbia, and by this name it nas since been called. Lieutenant Broughton, under the orders of Captain Vancouver, after- wards explored it for about 100 miles; and on the land side it was navigated a considerable way from its source by Mackenzie, in his jour- ney across the continent. He found numerous

rapids and falls ; but as the stream enlarged the navigation was less impeded. Messrs. Lewis and Clarke entered this river at the point where it is joined by Lewis's River, in lat 46° 15′ 13 N. and descended the stream to the ocean.*

COLUMBIA, a county of Georgia, bounded on the north and east by the savannah, which sepa- rates it from the state of South Carolina, north-west of Richmond county. Its shape is very irregular.

COLUMBIA, an extensive territory, in the most centrical part of the United States, where the new city of Washington, the permanent seat of the general government, since 1800, is now finished, in a situation equi-distant from the north and south extremities of the Federal Union, and nearly so from Pittsburgh and the Atlantic Ocean. Mr. Morse styles it ' a commercial ter- ritory, probably the richest, and commanding the most extensive internal resources of any in America.'

COLUMBIA, a post town of Virginia, in Gooch- land county, on the North side of James River, at the mouth of the Rivanni. It lies forty- five miles above Richmond, thirty-five from Charlottesville, and 328 south-west of Phila- delphia.

COLUMBIA, a post town of South Carolina, the capital of Kershaw county, and the seat of government in that state. It is situated in Camden district, on the east side of the Con- garee, just below the confluence of Saluda and Broad Rivers. The streets are regular, and the town has doubled its population very rapidly. It lies 115 miles N. N.W. of Charleston, thirty-five south-west of Camden, eighty-five from Augusta, in Georgia, and 678 south-west of Philadelphia.

COLUMBIA, a town of Pennsylvania, in Lan- caster county, on the north-east bank of the Susquehanna, at Wright's Ferry, ten miles west of Lancaster, and seventy-six west by north of Philadelphia. It was laid out in 1797.

COLUMBIA, a town in the north-western ter- ritory, on the north bank of the Ohio, and on the west side of the mouth of Little Miami River, about six miles south-east by east of Fort Wash- ington, eight east by south of Cincinnati, and eighty-seven north by west of Lexington, in Kentucky. Long. 83° 34′ W., lat. 49° 20′ N.

COLUMBIA, a township in Washington county, and district of Maine, on Pleasant River, ad- joining Machias on the north-east. It was in- corporated in 1796. It is nine miles from Steuben.

COLUMBIC ACID, in chemistry, a white co- lored substance, procured

from columbium, a peculiar ore, deposited in the British Museum ;

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C O L U M B O.

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and the same with the tantalite of Ekeburgh, discovered by him in the ylbrotantalite of Swe- den. Dr. Wollaston's method of separating the acid from the mineral is peculiarly elegant. One part of tantalite, five parts of carbonate of potash, and two parts of borax, are fused toge- ther in a platina crucible. The mass, after being softened in water, is acted on by muriatic acid. The iron and manganese dissolve, Awhile the co- lumbic acid remains at the bottom. It is in the form of a white powder, which is insoluble in nitric and sulphuric acids, but partially in muriatic. It forms with barytes an insoluble salt, of which the proportions, according to Ber- zelius, are 24-4 acid, and 9'75 barytes. By oxidising a portion of the revived tantalum or columbium, Berzelius concludes the composition of the acid to be 100 metal and 5'485 oxygen.

COLUMBIERS, a town of France, in the de- partment of Aveiron, and ci-devant province of Rouergue, in the district of Sauveterre, ten miles west of Rhodez.

CCKLUMBINE, n. s. Lat. columbina. A plant with leaves like the meadow rue.

Columbinet are of several sorts and colours. They Bower in the end of May, when few other flowers shew. Mortimer.

CO'LUMBINE, n. s. Lat. columbinus. A kind of violet color, or changeable dove color.

COLUMBIUM, the metallic basis of the Columbic acid : the ore first discovered was from Massachusetts. It was of a dark brown- ish-gray externally, and more inclining to an iron-gray internally ; the longitudinal frac- ture he found lamellated, and the cross fracture had a fine grain. Its lustre was vitreous, slightly inclining, in some parts, to metallic ; moderately hard, and very brittle. The color of the streak, or powder, was dark chocolate brown. ' If the oxide of columbium, described under COLUMBIC ACID, be mixed with charcoal and exposed to a violent heat in a charcoal crucible, the metal co- lumbium will be obtained. It has a dark gray color, and when newly abraded, the lustre nearly of iron. Its specific

gravity, when in aggluti- nated particles, was found by Dr. Wollaston to be 5‘61. These metallic grains scratch glass, and are easily pulverised. Neither nitric, mu- riatic, nor nitro-muriatic acid, produces any change in this metal, though digested on it for several days. It has been alloyed with iron and tungsten.’

COLUMBO, a town on the western coast of the island of Ceylon, where the Portuguese had a settlement ; but which, after a bloody struggle, surrendered to the Dutch in 1656, from whom it was taken by the British in 1796. Columbo is the capital of the island, and the seat of go- verment, although Trincomalee occupies more ground, and, on account of its situation and harbour, is considered of more consequence to this nation. In every other respect Columbo has by far the superiority. The country round Trincomalee is mountainous, wild, and barren: but Columbo is situated in a fertile country, and the rich district depending upon it is much wider, being nearly twenty leagues in length, and ten in breadth. Though the principal har-

bours in the island be at Trincomalee and Point de Galle, at certain seasons of the year they moor securely in the roads of Columbo. The town is built on a regular plan, being nearly divided into four equal quarters by two principal streets, which cross each other, and extend from side to side, with smaller ones running parallel, and connected by lanes between them. The natives live in the old town, without the walls of the new. The fort is much larger than that of Trincomalee ; at the foot of the ramparts, on the inside, is a broad street or way, which goes round the whole fort, and communicates with the bastions and soldiers’ barracks ; and also affords, at the different angles, open spaces for their private parading. The governor’s house is a handsome structure. There is here a fine bo- tanical garden, and a school for the propagation of the Christian religion.

Columbo was the first European settlement on the island of Ceylon. The Portugusee ar- rived here in the year 1505, in the reign of Dermaprakrama-bahoo, king of Candy. The natives, who first saw the strangers, informed the king ‘ that a new people was arrived, white and beautifully made, who wore iron coats and iron caps, and drank blood and ate stones ; who gave a gold coin for a fish, or even a lime ; and who had a kind of instrument that could produce thunder and lightning, and balls which, put into these instruments, would fly many miles, and break ramparts, and destroy forts.’ ‘The king’s brother examined them in disguise, and by his advice the Portuguese were well received, and permitted to trade and establish a settlement here. ‘ During the remainder of this reign, and the whole of the next, which was a short one,’ says Dr. Davy, in his Sketch of the History of Ceyloc, ‘ the Portuguese had very little influence in the country, and they remained in their original capacity of traders. In the next

reign, that of Boowanyka-bahoo, in consequence of dissensions in the royal family, they began to gain ground and acquire political power. Engaged in a war with his brother Mihidoony, who refused to acknowledge the king's grandson as his succes- sor, he sent an embassy to Portugal, with a figure of the infant prince in wax, begged protection for the child and his kingdom, and requested aid, which was most readily granted. The young prince was christened Don Juan Dorma-pali. Troops were sent to Ceylon, with abundance of ammunition, to make good the promise that had been given. For some time, wherever the Por- tuguese appeared they were victorious. The king himself was almost one of the first to fall, by the new engines of war introduced ; he was shot through the head when going to oppose his brother. He is said, by the native historians, to have ruined his country and religion, by his un- natural policy of having recourse to the Portu- guese.

'During the life of his successor the island was in the most disturbed state ; but Rajah Singha, of Sittawakka, succeeding, carried on the war with great vigor : he overcame all the native princes who opposed him; took Cotta, and destroyed it; besieged Colombo, and reduced the Portuguese to great straits. After his death the

Portuguese were again successful ; they took Avisahavelle", possessed themselves of the whole of the maritime provinces, and of a great part of the Seven Korles, and seemed to have a fair prospect of becoming masters of the whole island. The only obstacle in the way of their ambition, was Maha-Wimmala-derma, a native prince of spirit and abilities, who, in the civil wars of the interior, when very young, had taken refuge at Colombo, from whence he was sent to Goa, and from thence, when the Portuguese were in danger of being driven out of the country by Rajah Singha of Sittawakka, he was sent back to Cey- lon, to make a diversion in the high country in favor of his friends. He accomplished this, and more than was desired ; he established himself at Singada-galla orˆKandy, as an independent mo- narch, and governed the greater part of the coun- try now included in the Kandyan provinces.'

He was succeeded by his brother Sennerat. At this time the greater part of the island had submitted to the Portuguese. But this prince made successful incursions upon the borders, and with the other native princes recovered the whole except Colombo, Galle, Jaffna, and Trincomalee.

To expel the European intruders entirely, the princes, in the middle of the

seventeenth century, formed an alliance with the Dutch. Galle surrendered to the Dutch fleet ; and, in about sixteen years after (1658), the Portuguese power in Ceylon was annihilated. We have sketched the rest of the history of its European connexion in the article CEYLON, which see.

This place lost its first three British governors within the space of one year. Colonel Petrie and general Doyle died, and colonel Bonnevaux of the Company's service was killed by the upsetting of his curricle. ' The Pettah, or black town of Columbo,' says Mr. Hamilton, ' deserves particu- lar notice on account of its extent and structure. In the street next to the sea is an excellent fish- market, well supplied from the sea, lakes, and rivers in the neighbourhood ; fish being a con- siderable part of the food of the inhabitants. On the rivers in the vicinity of Columbo there are nearly 300 flat-bottomed boats moored, with en- tire families on board, who reside permanently in them, having no other dwellings. Columbo, for its size, is one of the most populous places in India, being estimated to contain above 50,000 inhabitants, who are a great mixture of almost every race of Asiatics. The language most uni- versally spoken both by Europeans and Asiatics, who resort to Columbo, is the Portuguese of India, a base corrupt dialect, differing much from that spoken in Portugal.'

In the neighbourhood is made a considerable quantity of arrack ; and cinnamon and pepper, the staple spices of the island, are largely exported hence to Europe. The imports are grain, cotton, and calico, coarse cloths, stockings, handkerchiefs, China-ware, tin, copper, and toys. About Fe- bruary in every year arrives a ship from Macao with hams, sugar, sweetmeats, teas, silks, velvets, nankeens, earthenware, &c. Accounts are kept in rix dollars, a nominal coin, valued at a certain quantity of copper money, equal to about two shillings sterling. At this period cash is plentiful, and the whole town exhibits much of the bustle

of commerce. Beef, fish, pigs, and ducks, are generally both cheap and plentiful at Columbo. Mutton is dear, as no sheep can be reared in the vicinity ; of which the abundance of cinnamon trees constitutes a great ornament.

COLUMBO ROOT, in medicine. This root comes to us in circular pieces, from half an inch or an inch to three inches in diameter, and divided into frusta, which measure from two inches to one quarter of an inch. The sides are covered with a thick corrugated bark, of a dark brown hue on its external surface, but internally of a light yellow color. All the thicker pieces have small holes drilled through them, for the conve- nience of drying. Columbo root has an aroma- tic smell ; but is disagreeably bitter, and slightly pungent to the taste, somewhat resembling mus- tard seed, when it has lost, by long keeping, part of its essential oil. It appears to be corro-

borant, antiseptic, and powerfully anti-emetic. In the cholera morbus it alleviates the violent tormino, checks the purging and vomiting, cor- rects the putrid tendency of the bile, quiets the inordinate motions of the bowels, and recruits the exhausted strength of the patient. Its effi- cacy has also been observed in the vomitings which -attend the bilious cholic; and in such cases, where an emetic is thought necessary, aftei administering a small dose of ipecacuanha, the stomach may be washed with an infusion of Columbo root.

COLUMBUS (Christopher), the celebrated navigator, and first discoverer of the islands of America, was a native of the republic of Genoa. Neither the time nor place of his birth, how- ever, are known with certainty ; except that he was descended of an honorable family, who, by various misfortunes, had been reduced to indi- gence. His parents were sea-faring people ; and Columbus having discovered, in his early youth, an inclination for "that mode of life, was encouraged by them to follow the same profes- sion. He went to sea at the age of fourteen : his first voyages being to those ports in the Me- diterranean frequented by the Genoese : aftei which he took a voyage to Iceland ; and, pro- ceeding still further north, advanced several degrees within the polar circle. After this Columbus entered into the senrice^of a famous sea captain of his own name and family. This man commanded a small squadron, fitted out at his own expense; and by cruising, sometimes against the Mahommedans and sometimes against the Venetians, the rivals in this country in trade, had acquired both wealth and reputation. With him Columbus continued for several years, no less distinguished for his courage than experi- ence as a sailor. At length, in an obstinate en- gagement off the coast of Portugal, with some Venetian caravans returning richly laden from the Low Countries, the vessel on board which he served took fire, together with one of the ene- mies' ships to which it was fast grappled. Co- lumbus thre^v himself into the sea; laid hold of a floating oar ; and by the support of it, and his dexterity in swimming, reached the shore, though about two leagues distant. Alter this disaster, Columbus repaired to Lisbon, where he married a daughter of Bartholomew Peres-

trello, one of the captains employed by prince Henry in his early navigations, and who had discovered and planted the islands of Porto Santo and Madeira. Having obtained posses- sion of the journals and charts of that experi- enced navigator, Columbus was seized with an irresistible desire to visit unknown countries. He first made a voyage to Madeira, and con- tinued for several years to trade with that island, the

Canaries, Azores, the settlements in Guinea, and all the other places which the Portuguese had discovered on the continent of Africa. By the experience acquired in such a number of voyages, Columbus now became one of the most skilful navigators in Europe. At this time, the great object of discovery was a passage by sea to the , East Indies. This was attempted, and at last accomplished by the Portuguese, by doubling the Cape of Good Hope. The danger and tedi- ousness of the passage, however, supposing it to be really accomplished, which as yet it was not, set Columbus on considering whether a shorter and more direct passage to these regions might not be found out; and, after long considera- tion, he became thoroughly convinced, that, by sailing across the Atlantic Ocean, directly to- wards the west, new countries, which probably formed a part of the vast continent of India, must infallibly be discovered. His conjectures were confirmed by the observations of modern navigators. A Portuguese pilot having stretched farther to the west than usual, took up a piece of timber, artificially carved, floating upon the sea; and as it was driven towards him by a westerly wind, he concluded that it came from some unknown land situated in that quarter. Perestrello had found to the west of the Madeira isles a piece of timber fashioned in the same manner, and brought by the same wind ; and had seen also canes of an enormous size floating upon the waves, which resembled those described by Ptolemy, as productions peculiar to the East Indies. After a course of westerly winds, trees torn up by the roots were often driven upon the coast of the Azores ; and at one time the dead bodies of two men with singular features, which resembled neither the inhabitants of Europe nor Africa, were cast ashore there. Even the mis- takes of ancient geographers, as to the immense extent of India, as well as various other reasons, contributed to persuade Columbus, that the shortest and most direct course to the remote regions of the east, was to be found by sailing due west. Having already given a particular account of this great man's fruitless applications to the senate of Genoa, and the courts of Por- tugal and Spain, &c. as well as of his ultimate success with the latter, under the article AME- RICA, it is only necessary here to mention the chief articles of his treaty with Ferdinand and Isabella; which was signed on the 17th of April, 1492. These were, that Columbus should be constituted high admiral in the seas, islands, and continent he should discover, with the same powers and prerogatives that belonged to the high admiral of Castile within the limits of his jurisdiction. He was also appointed viceroy in all those countries to be discovered; and a tenth of the oroducts accruing from their productions

and commerce was granted to him for ever. Ah controversies or law-suits with lespect to mer- cantile transactions were to be determined by the sole authority of Columbus, or of judges to be appointed by him. He was also permitted to advance one-eighth part of the expense of the expedition, and

of carrying on commerce with the new countries; and was entitled, in return, to an eighth of the profit. But, though the name of Ferdinand was joined with Isabella in this transaction, his distrust of Columbus was still so violent, that he refused to take any part in the enterprise as king of Arragon ; and, as the whole expense of the expedition was to be defrayed by the crown of Castile,_ Isabella reserved for her subjects of that kingdom an ex- clusive right to all the benefits which might ac- crue from its success. Not to repeat the account of his long and perilous voyage, already fully narrated under AMERICA, it is sufficient to men- tion here, that, after obtaining his grand object, the discovery of the New World, he returned to Spain and arrived at the port of Palos, on the 15th of March, 1493. As soon as the ship was discovered approaching, all the inhabitants of Palos, ran eagerly to the shore, wheie they received the admiral, with royal honors. The court was then at Barcelona, and Columbus im- mediately acquainted the king and queen of his arrival. They were no less delighted than as- tonished with the unexpected event. They gave orders for conducting him into the city with all imaginable pomp. They received him clad in their royal robes, and seated on a throne under a magnificent canopy. When he approached, they stood up; and raising him as he kneeled to kiss their hands, commanded him to take his seat upon a chair prepared for him, and to give a circumstantial account of his voyage. When he had finished his oration, which he delivered with much modesty and simplicity, the king and queen, kneeling down, offered \ip solemn thanks to God for the discovery. Every possible mark of honor that could be suggested by gratitude or admiration was conferred on Columbus ; the former arrangement was confirmed, his family was ennobled, and a fleet ordered to be equip- ped, to enable him to go in quest of those more opulent countries which he still confidently expected to find. Notwithstanding all this re- spect, however, Columbus was no longer re- garded than he was successful. The colonists he carried over were to the last degree unrea- sonable and unmanageable ; so that he was ob- liged to use some severities towards them ; and malicious complaints were made to the court of Spain against him for cruelty. On this, Francis de Bovadilla, a knight of Calatrava, was ap- pointed to enquire into the conduct of Columbus; with orders, in case he found the charge of mal- administration proved, to supersede him, and assume the office of governor of Hispaniola. The consequence of this was, Columbus was sent to Spain in chains, which he indignantly wore in the royal presence, and ordered that they should be buried with him. Notwith- standing his great services, and the solemnityˆ ot the agreement between him and Ferdinand, Co- lumbus never could obtain the fulfilment of any

part of that treaty ; so that disgusted with the ingratitude of a monarch, whom he had served with so much fidelity and success, and exhausted with fatigue, he ended his active and useful life at Valladolid, on the 20th of May, 1506, in the fifty-ninth year of his age. He was grave, though courteous in his deportment, circumspect m his words and actions, irreproachable in his morals, and exemplary in his religious duties. The following anecdote, which is related of him, will give some idea of his sagacity. While his vessels lay off Hispaniola, the Indians neglected to bring the provisions he had agreed for ; on which he sent for the chiefs, and informed them that the God of the Christians was angry at their breach of faith, and as a proof of it, the fol- lowing night the moon would rise with a threat- ening and bloody aspect. He knew that there would be an eclipse that night; but the Indians made light of the prediction till they saw it veri- fied ; on which, in great terror, they supplicated his forgiveness, and ever after brought the stipulated supplies regularly. Ferdinand, notwithstanding his ingratitude during his life, buried him mag- nificently in the Cathedral of Seville, and erected a tomb over him with this inscription, ‘ A Castilia y a Leon Nuevo Mundo dio Colon;’ Columbus has given a New World to Castile and Leon.

COLUMBUS (Bartholemew), brother to Chris- topher, famous for his marine charts and spheres, which he presented to Henry VII. of England. See AMERICA. He died in 1514.

COLUMBUS (Don Ferdinand), the son of Christopher, and writer of his life. He entered into orders; and founded a library which he bequeathed to the church of Seville, to this day called the Columbine library. He died in

1560.

COLUMELLA (Lucius Junius Moderatus), a Roman philosopher, was a native of Cadiz, and lived under the emperor Claudius about A.D. 42 He wrote a book on agriculture, entitled De Re Rustica, and another De Arbo- ribus.

COLUMELLA, in botany, a genus of plants of the order polygamia superflua, class syngenesia. Receptaculum, naked and cellular : CAL. cylin- drical and imbricated ; florets undivided : SEED crowned with a toothed margin. Species one only ; a native of the Cape, having fine yellow flowers.

CO’LUMN, 7i. s. Lat. columna. A round pillar.

Some of the old Greek columns and altars, were brought from the ruins of Apollo’s temple, at Delos.

Peacltam. Round broken columns clasping ivy twined. Pope.

Where famed St. Giles's ancient limits spread, An inrailed column rears its lofty head, Here to seven, streets seven dials count the day, And from each other eatch the circling ray. Gay.

Of many a statue the place was marked by an empty pedestal ; of many a column, the size was de- termined by a broken capital. Gibbon.

Tully was not "so eloquent as thou, Thou nameless column with the buried base.

Byr oil's Childe Harold.

Any body of certain dimensions pressing ver-« tically upon its base.

The whole weight of any column of the atmosphere, and likewise the specific gravity of its basis, are cer- tainly known by many experiments. Bentley.

In the military art. The long file or row o« troops, or of baggage, of an army in its march ; an army marches in one, two, three, or more co- lumns, according as the ground will allow.

With printers, a column is half a page, when divided into two equal parts by a line passing through the middle, from the top to the bottom ; and, by several parallel lines, pages are often di- vided into three or more columns.

COLUMN. See ARCHITECTURE.

COLUMN, ASTRONOMICAL, a kind of obser- vatory, in form of a very high tower built hol- low, and with a spiral ascent to an armillary sphere placed a-top for observing the motions of the heavenly bodies. Such is that of the Doric order erected at the Hotel de Soissons at Paris by Catherine de Medicis, for the observa- tions of Orontius Fineus a celebrated astronomer of that time.

COLUMN, CHRONOLOGICAL, that which bears some historical inscription digested according to the order of time ; as by lustres, olympiads, fasti, epochas, annals, &c. At Athens there were columns of this kind, whereon were in- scribed the whole history of Greece digested into olympiads.

COLUMN, FUNERAL, that which bears an urn, wherein are supposed to be enclosed the ashes of some deceased hero ; and whose shaft is some- times overspread with tears and flames, which are symbols of grief and of

immortality.

COLUMN, GNOMONIC, a cylinder whereon the hour of the day is represented by the shadow of a stile. See DIAL.

COLUMN, HISTORICAL, is that whose shaft is adorned with a basso-relievo, running in a spiral line its whole length, and containing the history of some great personage : such are the Trajan and Antonine columns at Rome.

COLUMN, HOLLOW, that which has a spiral staircase withinside, for the convenience of as- cending to the top ; as the Trajan column, the staircase whereof consists of 185 steps, and is illuminated by forty-three little windows, each of which is divided by tambours of white marble. The monument, or fire-column, at London, has also a stair-case, but it does not reach to the top. These kinds of columns are also called columna coclidae, or cochlidese.

COLUMN, INDICATIVE, that which serves to show the tides, &c. along the sea-coasts. Of this kind there is one at Grand Cairo of marble, whereon the overflowings of the Nile are ex- pressed ; by this they form a judgment of the succeeding season ; when the water, for instance, ascends to twenty-three feet, it is a sign of great fertility in Egypt. See NILOMETER.

COLUMN, INSTRUCTIVE, that raised, according to Josephus, lib. i. cap. 3, by the sons of Adam, whereon were engraven the principles of arts and sciences. Baudelot tells us, that the son of Pi- sistratus raised another of this kind, of stone, containing the rules and precepts of agriculture.

COLUMN, ITINERARY, a column with several

faces, placed in the cross ways in large roads ; serving to show the different routes by inscriptions thereon.

COLUMN, LACTARY, at Rome, according to Festus, was a column erected in the herb-market, now the place Montanara, which had a cavity in its pedestal, wherein young children abandoned by their parents, out of poverty or inhumanity, were exposed, to be brought up at the public ex- pense.

COLUMN, LEGAL. Among the Lacedemo- nians there were columns raised in public places, whereon were engraven the fundamental laws of the state.

COLUMN, LIMITROPHOUS, or BOUNDARY, that which shows the limits of a kingdom or country conquered. Such was that which Pliny says Alexander the Great erected at the extremity of the Indies.

COLUMN, MANUBIARY, from manubitE, Latin, spoils of the enemy; a column adorned with trophies built in imitation of trees, whereon the spoils of enemies were anciently hunp. See TROPHY.

COLUMN, MEMORIAL, one raised on occa- sion of any remarkable event ; as the monument of London, built to perpetuate the memory of the burning of the city in 1666. It is of the Doric order, fluted, hollow, with a winding stair- case; and terminated at top with waving flames. There is also another of this kind, in form of an obelisk, on the banks of the Rhine, in the Palati- nate, in memory of the famous passage of that river by the great Gustavus Adolphus and his army.

COLUMN, MENIAN, any column which sup- ports a meniana or balcony. The origin of this kind of column, Suetonius and Ascanius refer to one Menias ; who, having sold his house to Cato and Flaccus, consuls, to be converted into a pub- lic edifice, reserved to himself the right of raising a column without-side, to bear a balcony, whence he might see the shows.

COLUMN, MILITARY, among the Romans, a column whereon was engraven a list of the forces in the Roman army, ranged by legions, in their order ; to preserve the memory of the number of soldiers, and of the order observed in any mili- tary expedition. They had another kind of mi- litary column, which they called columna bellica, standing before the temple of Janus ; at the foot of which the consul declared war, by throwing a javelin towards the enemy's country.

COLUMN, MILITARY, was a column of marble, raised by order of Augustus, in the middle of the Roman forum; from whence, as a centre, the distances of the several citiel, &c. of the empire were reckoned, by other military columns dis- posed at equal distances o« all the grand roads. It was of white marble, the same with that which is now seen on the balustrade of the perron of the capitol at Rome. Its proportion is massive, being in a short cylinder, the symbol of the globe of the earth. It was called militarium aureum, as having been gilt, at least the ball, by order of Augustus. It was restored by the emperors Vespasian and Adrian, as appears by the in- scriptions.

COLUMN, SEPULCHRAL, anciently was a co-

lumn erected on a tomb or sepulchre, with an inscription on its base. Those over the tombs of persons of distinction were very large ; those for the common people small : these last are called stelae and cippi.

COLUMN, STATUARY, that which supports a statue. Such was that erected by pope Paul V., on a pedestal before the church of St. Maria, at Rome, to support a statue of the virgin, which is of gilt brass. This column was dug up in the temple of Peace ; its shaft is a single block of white marble, forty-nine feet and a-half high, and five feet eight inches diameter, of the Corinthian order. The term may also be applied to Carya- tides, Persians, termini, and other human figures, which do the office "of columns, and which Vi- truvius call telamones and atlantes. See AR-CHITECTURE, Index.

COLUMN, TRIUMPHAL, a column erected among the ancients in honor of a hero ; the joints of the stones, or courses of which were covered with as many crowns as he had made different military expeditions. Each crown had its par- ticular name, as vallaris, which was beset with pikes in memory of having forced a pallisade ; muralis, adorned with little turrets or battle- ments, for having mounted an assault : navalis, of prows and beaks of vessels, for having over- come at sea; obsidionalis, or graminalis, of grass, for having raised a siege : ovans, of myrtle, which expressed an ovation, or little triumph; and triumphalis, of laurel, for a grand triumph See CROWN.

COLUMNA, a town of Russia, in the govern- ment of Moscow, with an archbishop's see- fifty miles south-east of Moscow.

COLU'MNAR, adj.) From column. Form-

COLUMNA'RIAN, adj. J ed in columns.

White columnar spar, out of a stone-pit. Woodward,

COLUMNARIUM, in Roman antiquity, a heavy tribute, demanded for every pillar of a house. It was first laid on by Julius Cssar, to put a stop to the extravagant expenses laid out on sumptuous buildings.

COLUMNIA, in botany, a genus of the class didynamia, order angiospermia : CAL. quinque- partite : COR. upper lip arched, and entire gib- bous, anthene convex : CAPS, bilocular. Species four, natives of the West Indies.

COLU'RES, n. s. Lat. coluri ; eoXovpot.

Two great circles supposed to pass through the poles of the world : one

through the equinoctial points, Aries and Libra ; the other through the sol- stitial points, Cancer and Capricorn. They are called the equinoctial and solstitial coluret, and divide the ecliptick into four equal parts. The points whero they intersect the ecliptick are called the cardinal points. Harris.

Thrice the equinoctial line

He circled ; four times crossed the car of night

From pole to pole, traversing each colure. Milton.

COLURI, or COLOURI, a small island in the gulph of Engia, in the Archipelago, formerly Sal amis.

COLURI, the capital of the above island, seated on the south side, at the bottom of the harbour, which is one of the finest in the world. The fa- mous Grecian hero, Ajax, was king of this island, and it is famous in ancient history for the defeat

of the fleet of Xerxes, by that of the Greeks, under Themistocles, in the strait. It is now, however, but a small place; its commodities consist of wheat, barley, tar, rosin, pit-coal, sponges, and pot-ashes, which they carry to Athens. It is seven miles south from Athens, and is separated from the continent by a strait about a mile over.

COLUTEA, bladder senna, in botany ; a genus of the decandria order, and diadelphia class of plant? ; natural order thirty-second, papiliona- ceae ; CAL. quinquefid ; legumes inflated, opening at the upper part of the base. There are thirteen species, all deciduous flowering shrubs, adorned with many lobed leaves, and butterfly-shaped flowers, of a deep yellow or red color. They are propagated both by seeds and layers, and are hardy plants, though they sometimes require a little shelter when the weather is very cold.

COLYBA, or COLYBUS, in the Greek liturgy, an offering of corn and boiled pulse, made in honor of the saints and for the dead. The Greeks boil a quantity of wheat, and lay it in little heaps on a plate, separated from each other by leaves of parsley, adding beaten peas, nuts cut small, and grape stones. A little heap of wheat, thus seasoned, they call roXv/3a. They have a parti- cular formula for the benediction of the colybae. Balsamon refers the institution of this superstition to St. Athanasius; but the Greek Synaxary to the time of Julian the Apostate.

COLYMBUS, in ornithology, a genus belong- ing to the order of anseres. The bill has no teeth, subulated, straight, and sharp-pointed ; the teeth are in the throat ; the nostrils are linear, and at the base of the bill ; and the legs are unfit for walking. This genus includes the divers, guillemots, and grebes, of which the following are the most remarkable species • —

1. C. arcticus, or the black- throated diver, weighs about three pounds, and measures more than two feet to the end of the tail, and about three feet and a-half in breadth. The bill and the front are black ; the hind part of the head and neck cinereous ; the sides of the neck marked with black and white lines pointing downwards; the fore part of a glossy variable black, purple, and green. The back, scapulars, and coverts of the wings are black, marked, the two first with square, the last with round spots of white ; the quill-feathers dusky; the breast and belly white; the tail short and black, legs partly dusky and partly reddish. This species is found in Eng- land, but is not common. It abounds in the northern parts of Europe, Norway, Sweden, and Denmark; in the inland lakes of Siberia; in Iceland, Greenland, the Ferroe Isles; and at Hudson's Bay. The Swedes dress their skins, which, like those of all this genus, are exceed- ingly tough, and use them for gun-cases and facings for winter caps.

2. C. auritus, the eared grebe, or dib-chick, is in length one foot to the rump; the extent is twenty-two inches ; the bill black, slender, and slightly recurvated ; the irides crimson ; the head and neck are black ; the throat spotted with white ; the whole upper side a blackish-brown, except the ridge of the wing about the first joint, imd the secondary feathers, which are white ; the

breast, belly, and inner coverts of the wings are white; the sub-axillary feathers, and some

3. C. cornutus, the horned grebe, is about the size of a teal ; weight, one pound ; length, one foot; breadth, sixteen inches. Bill, one inch, dusky ; head very full of feathers, and of a glossy deep green, nearly black ; through each eye is a streak of yellow feathers, elongated into a tuft as it passes to the hind head : the upper part of the neck and back is dusky-brown : the fore part of the neck and breast dark orange-red ; the lesser wing-coverts, cinereous ; the greater wing and quills, black ; middle ones, white ; belly, glossy-white ; legs, cinereous blue before, pale behind. It inhabits Hudson's Bay ; and first appears in May, about the fresh waters. It lays from two to four white eggs in June, among the aquatic plants ; and is said to cover them when abroad. It retires south in autumn ; appears then at New York, staying till spring, when it returns to the north. For its vast quickness in diving, it is called the water-witch. At Hudson's Bay it is known by the name of seekeep.

4. C. cristatus, the crested diver, or cargoose, weighs two poundsand a half. Its length is twenty- oneinches,the breadth thirty ; the billis two inches and a quarter long, red at the base and black at the point ; between the bill and the eye is a stripe of black naked skin ; the irides are a fine pale red ; the tongue is a third part shorter than the bill, slender, hard a, the end, and a little divided; on the head is a large dusky crest, se- parated in the middle. The cheeks and throat arc surrounded with a long pendent ruff, of a bright tawny color, edged with black; the chin is white ; from the bill to the eye is a black line, above that a white one ; the hind part of the neck and back are of a sooty hue ; the rump, for it wants its tail, is covered with a long soft down. The covert feathers on the second and third joints of the wing, and the under coveits are white ; all the other wing feathers, except the secondaries, are dusky, those being white : the breast and belly are of a most beautiful silvery white, glossy as satin : the outside of the legs and the bottom of the feet are dusky ; the inside of the legs and the toes a pale green. These birds frequent the meres of Shropshire and Cheshire, where they breed ; and the great fen of Lincolnshire, where they are called gaunts. Their skins are made into tippets, and sold at as high a price as those which come from Geneva. This species lay four eggs of a white color, and the same size with those of a pigeon. The nest is formed of the roots of bugbane, stalks of water lily, pond weed, and water violet, floating among the reeds and flags ; the water penetrates it, and the bird sits and hatches the eggs in that wet condition ; the nest is sometimes blown from among the flags into the middle of the water. It is a careful nurse of its young, and feeds them most assi*

duously, commonly with small eels. When the infant brood are tired, the parent will carry them either on its back or under its wings. It preys on fish, and is almost perpetually diving; it does not show much more than the head above water: and is very difficult to be shot, as it darts down on the least appearance of danger. It is never seen on land ; and though disturbed ever so often, will not fly farther than the end of the lake. Its skin is out of season about February, losing then its bright color ; and in the breeding time its breast is almost dark. The flesh is ex- cessively rank.*

5. C. glacialis, or northern diver, is three feet five inches in length ; the breadth four feet eight inches ; the bill to the corner of the mouth four inches long, black and strongly made. The head and neck are of a deep black ; the hind part of the latter is marked with a large semilunar white band; immediately under the throat is another ; both marked with oblong strokes pointing down : the lower part of the neck is a deep black, glossed

with a rich purple ; the whole under side of the body is white ; the sides of the breast marked with black lines ; the back, coverts of the wings, and seapulars, are black marked with white spots ; those on the scapulars are very large, and square shaped ; two at the end of each feather. The tail is very short, and almost concealed by the coverts, which are dusky, spotted with white ; the legs are black. This species inhabits several parts of the north of Europe, but is not very fre- quent on our shores ; nor ever seen southward except in very severe winters. It is seldom met with on land, being for the most part on the open sea, diving for fish, which it does with great agility, and flies high and well. It is common in Iceland and Greenland, where it breeds, and at the time fiequents the fresh waters. It is plen- tiful in Norway, and all along the arctic coasts, as far as the river Ob, in the Russian dominions. The Barabinzians tan the breasts of this and other water fowls, whose skins the women pre- pare in such a manner as to preserve the down upon them ; and sewing a number of them toge- ther, their husbands sell them, to make pellises, caps, &c. Garments made of these are very waim, never imbibing the least moisture; and are more lasting than could be imagined. They are also met with in the lakes of Hudson's Bay. The natives of Greenland use the skins for cloth- ing. The Indians about Hudson's Bay adorn their heads with circlets of their feathers, §and call the birds athinue moqua. As they are sel- dom seen on the sea-coasts, but chiefly among the lakes, they are called by the Indians inland loons.

6. C. immer, or the ember goose, is superior in to a common goose. The head is dusky ; 'the back, coverts of the wings, and tail, clouded with lighter and darker shades of the same. The primaries and tail are black ; the under side of the neck spotted with dusky spots ; the breast and belly silvery : the legs black. They inhabit the seas about the Orkneys ; but in severe win- ters visit the southern parts of Great Britain. They are also found in Iceland, and most parts < >!' northern Europe, in Kamtschatka, and Swit- ujrhnd, particularly on the lake Constance,

where it is known by the name of fluder. It is said to dive well, and to rise at an amazing dis- tance from the place where it plunged. The fe- male makes her nest among the reeds and flags, and places it in the water ; so that it is contin- ually wet. They are difficult to be taken, either on land or swimming on the water; but are often caught under the water, by a hook baited with small fish, its usual food.

7. C. niger, the grylle, or black guillemot, is in length fourteen inches, in breadth twenty-two; the bill is an inch and a half long, strait, slender, and black ; the inside of the mouth red ; on each wing is a large bed of white, which in young birds is spotted ; the tips of the lesser quill-fea- thers, and the coverts of the wings, are white • the rest of the plumage is black. In

winter it is said to change to white ; and a variety spotted with black and white is not uncommon in Scot- land. The tail consists of twelve feathers; the legs are red. These birds are found on the Bass Isle in Scotland ; in the island of St. Kilda ; on the rocks of Llandidno, in Caernarvonshire, and, as Mr. Ray imagines, in the Farn Islands off the coast of Northumberland. Except in breeding time they keep always at sea ; and are not easily shot, diving at the flash of the pan. The Welsh call this bird cascan longur, or ' the sailor's ha- tred,' from a notion that its appearance forbodes a storm. It visits St. Kilda in March ; makes its nest far under the ground ; and lays a gray egg, or, as Stellar says, whitish and spotted with rust, and speckled with ash-color.

8. C. sinensis, the Chinese diver, described by Mr.Latham. The size is uncertain, but in the draw- ing the length was fourteen inches. The bill is dusky ; irides ash color : the upper parts of the head, neck, body, wings, and tail, dusky greenish brown ; the middle of the feathers much darker: the fore part of the neck the same, but consider- ably paler : chin pale rufous : breast and under parts of the body pale rufous white, marked \v;th dusky rufous spots : the quills and tail are plain brown ; the last short : legs ash-color.

9. C. stellatus, the speckled divers, a species less than the Chinese, weighs two pounds and a half, and is twenty-seven inches in length, and three feet nine inches in breadth. The bill is three inches long, bending upwards ; and is of a pale horn color; the top of the upper mandible dusky; the head is dusky, dotted with gray : hind part of the neck plain dusky ; the sides under the eye, the chin, and throat, white ; fore part of the neck very pale ash-color ; back dusky, marked with oval spots of white ; sides of the breast and body of the same, but smaller ; the spots on the tail and rump minute; breast and under part white; quills dusky; legs brown; webs and claws pale. This bird is pretty frequent in Eng- land, on the Thames, where it is called by the fishermen sprat loon, being often seen in vast numbers among the shoals of that fish, diving after them, and often approaching very near the boats while fishing. It is common about the Baltic, the White Sea, and Kamtschatka. It lays two eggs in the grass, on the borders of lakes near the sea. They are exactly oval, the size of those of a goose, dusky, marked with a few black spots. These birds are also frequeut about the

fish ponds of France. They visit New York in winter, but return very far

north to breed.

9. C troilus, the troile, or foolish guillemot, weighs twenty-four ounces; its length is seventeen inches, the breadth twenty-seven and a half; the bill is three inches long, black, straight, and a harp pointed ; near the end of the lower mandible is a small process ; the inside of the mouth yel- low ; the feathers on the upper part of the tail are short and soft, like velvet ; from the eye to the hind part of the head is a small division of the feathers. The head, neck, back, wings, and tail, are of a deep mouse-color ; the tips of the lesser quill-feathers white ; the whole under part of the body is pure white ; the sides under the wings marked with dusky lines. Immediately above the thighs are some long feathers that curl over them. The legs are dusky. They are found in amazing numbers on the high cliffs of the British coasts, and ftppear at the same time with the auk. Though they are shot at, and see their companions killed, they will not quit the rock. They lay only one egg, which is very large ; some are of a fine pale blue ; others are white, spotted or elegantly streaked with lines crossing each other. They continue about the Orkneys the whole winter. The chief places they breed in are the isle of Priestholm, near An- glesey ; on a rock called Godreve, near St. Ives ; the Farn isles, and the cliffs about Scarborough. They are also found in most of the northern parts of Europe, at Spitsbergen, the coast of Lapland, and along the icy sea quite to Kamt- schatka.

CO'MA, n. s. 1 Kwpa. A morbid dispo-

COMATO'SE, adj. i sition to sleep ; a lethargy ; lethargic ; sleepy to a disease.

Our best castor is from Russia ; the great and prin- cipal use whereof, is in hysterical and comatose cases.

Grew.

COMA BERENICES, Berenice's hair, yi astro- nomy, a constellation of the northern hemisphere, composed of unformed stars between the Lion's tail and Bootes. This constellation is said to have been formed by Conon, an astronomer, to console Berenice, the queen of Ptolemy Evergetes for the Joss of a lock of her hair, which had been stolen out of the temple of Venus, where she had de- dicated it on account of a victory obtained by her husband.

COMA SOMNOLENTUM, is when the patient con- tinues in a profound sleep; and, when awaked, immediately relapses, without being able to open his eyes.

COMACCHIO, or COMACHIO, a town of Italy, in the ci-devant duchy of

Ferrara, and ter- ritory of the church, afterwards included in the Italian republic, and department of the lower Po. It is situated in a marshy country called the Valley of Comachio, the see of a bishop, suffragan of Ravenna. It is twenty-seven miles south-east of Ferrara, forty south of Venice, and fourteen north of Ravenna.

CO'MART, n. s. This word, which we have only met with in one place, seems to signify treaty; article; from cOn and mart, or market.

By the same contort, And carriage of the articles designed, His fell to Hamlet. Shakspeare. Hamlet.

COMARUM, marsh-cinquefoil, a genus of the polyginia order, and icosandria class of plants, natural order thirty-fifth, senticosse : CAL. de- cemfid ; the petals five, less than the calyx : receptacle of the seeds ovate, spongy, and per- sisting. There is but one species, a native of Britain. It rises about two feet high, and bears fruit somewhat like that of the strawberry. It grows naturally in bogs, and the root dyes a dirty red. The Irish rub their milking pails with it, and it makes the milk appear richer and thicker. Goats eat the herb ; cows and sheep are not fond of it ; horses and swine refuse it.

CO'MATE, n. s. Con and mate. Companion. My cornates and brothers in exile.

SftaJtspeare. As You Like It.

COMB in the end, and COMP in the begin- ning, of names, seem to be derived from the Bri- tish kum, which signifies a low situation.

COMB, in Cornish, signifies a valley, and had the same meaning anciently in the French tongue

COMB, n. s. Ang.Sax. camb; nopi). An in strument to separate and adjust the hair.

but well wist I,

It was of Venus (redily)

This temple ; — for in purtreiture

I sawe anone right, hire figure

Naked yfletyng in a se ;

And also on hire hedde parde,

Hire rosy garlande white and redde ;

And hire combe for to kembe hire hedde ;

Hire doves ; and Cupido

Hire blinde sonne ; and Vulcano,

That in his face ywas full broune.

Chaucer's House of Fame. There on a day a noble youthful knight, Seeking adventures in the salvage wood, Did by great fortune get of her the sight, As she sate carelesse by a cristal flood Combing her golden lockes, as seemed her good.

Spenter.

By fair Ligea's golden comb, Wherewith she sits on diamond rocks, Sleeking her soft alluring locks. Milton.

I made an instrument in fashion of a comb, whose teeth, being in number sixteen, were about an inch and a half broad, and the intervals of the teeth about two inches wide. Newton.

The top or crest of a cock, so called from its pectinated indentures.

Cocks have great combs and spurs, hens little or none. Bacon.

High was his comb, and coral-red withal, With dents embattled like a castle-wall. Dryden. The cavities in which the bees lodge their honey. Perhaps from the same word which makes the termination of towns, and signifies hollow or deep.

What do ye honey-com&e .' sweet Alisoun ? My faire birde ! my swete sinamome ! Awaketh lemman min ! and speketh to me.

Chaucer's Canterbury Talcs. The pretty bees, with daily paines contrive Their curioun combes, and from the flowry fields, Doe bring that pleasant sweetnesse to their hive Which nectar and ambrosiac daintees yeeld.

Geo. Witkert ~ . This in affairs of state, Employed at home, abides within the gate,

COMB- MAKING.

To fortify the combs, to build the wall, To prop the ruins, lest the fabrick fall.

Dryden's Virgil.

To COMB, v. a. From the noun. To divide, and clean, and adjust the hair with a comb.

Her care shall be To comb your noddle with a three-legged stool.

Shakspeare.

Divers with us, that are grown grey, and yet would appeariyoung, find means to make their hair black, by combing it, as they say, with a leaden comb, or the Hke. Bacon.

She with ribbons tied His tender neck, and combed his silken hide.

Dryden's Mneid

There was a sort of engine, from which were ex- tended twenty long poles, wherewith the man-moun- tain combs his head. Swift.

To lay anything consisting of filaments smooth, by drawing through narrow interstices; as, to comb wool.

COMB-BRUSH, n. s. Comb and brush. A brush to clean combs.

COMB-MAKER, n. s. Comb and maker. One whose trade is to make combs.

This wood is of use for the turner, engraver, carver, and comb-maker. Mortimer's Husbandry.

COMB-MAKING. The common sorts of combs are generally made of the horns of bullocks, or of elephants' and sea horses' teeth ; some are made of tortoise-shell ; others of box, holly, and other hard woods.

Bullocks' horns are prepared for being manu- factured into combs by the tips being sawn off, after which they are held in the flame of a wood fire, till they become nearly as soft as leather. In this state they are split open on one side and pressed in a machine between two iron plates, then plunged into a trough of water, whence they come out hard and flat. When the horn is cut to the size intended for the required combs, several pieces are laid upon a pair of tongs, adapted to the business, over a fire, made chiefly of joiners' shavings, to soften them. They are frequently turned, and, when sufficiently soft, are put into a vice and screwed tight to complete the

flattening. When this process is finished, the horns are perfectly flat and hard ; they are then given to a man who shaves, planes, or scrapes off the rough parts with a knife, similar in shane to one used by coopers, having t«u uanales, which the comb-maker works from him, across the grain of the horn, from one end of the in- tended comb to the other. When both sides are perfectly smooth, it is delivered to the person who cuts the teeth.

This workman fastens it with wedges, by that part meant for the back, into an instrument called a clam. The clam has a long handle, which the workman places under him as he sits, by which means he renders the object of his work firm and steady, and he has, at the same time, both hands at liberty to be employed in the operation. The cutting of the teeth is com- menced by a double saw, of which each blade is something like the small one with which joiners and cabinet-makers cut their fine work : with this he forms the teeth. As this instrument Leaves the work square, and rather iu a rough

state, particularly in the inside edge of each tooth, it is followed by another about the size and shape of a case knife, having teeth like a file, on each flat side. After this, two others of the same shape, but each finer cut than the other, follow. One stroke, on each side of the comb, is then given by a rasping tool, which is used to take off any roughness that may renriin on the sides of the teeth : it is now delivered to another operator, who polishes it with rotten-stone and oil, applying them with a piece of buff leather.

The process used for making ivory combs, is nearly the same as that just described, excepting that the ivory is first sawn into thin slices. That imported from Ceylon is preferred, as being less liable to turn yellow, by exposure to the atmosphere. The whiteness which ivory ac- quires, depends chiefly on the degree of dryness which it has attained. When yellow, its gelati- nous matter is altered by the air, ami appears combined with the oxygen of the atmosphere. Heat cannot be made use of for making ivory pliant, though it is rendered softer by being ex- posed to that agent. It is, as we have observed, divided by the saw, and, for very delicate work, the operation is sometimes performed under water, to prevent its being heated or rent by the action of the tool. It is polished with pumice stone and tripoli. Ivory has been said to ne- come soft by being placed in mustard, but both ivory and bone are softened by being immersed in an alkaline lee made of soda and quick-lime.

We shall now give some account of the me- thod of cutting combs adopted by Mr. William Bunday, of Camtlen town, wbxr obtained his Majesty's letters patent for the invention. The term of his exclusive privilege being complete, it is open to any manufacturer to make what use he pleases of the discovery. It appears at first sight 1o be a singular circumstance, that in

a country famous for its attention to mechanical processes, the teeth of ivory combs, should be cut one stroke, after the other, by the human hand, assisted by no other tool than a pair o saws rudely fastened in a wooden back, and kept asunder, by means of a small slip of wood, With these rough implements, however, it is, that the very delicate superfine ivory combs, containing from fifty to sixty teeth in an inch, are manufactured. It may readily be conceived, that the imaginations of mechanical men must have been employed in an attempt to solve the practical problem of constructing a machine, which, without skill in the agent or first mover, might perform all that men, converted by prac- tice into a kind of living machines, are capable of doing, but with less cost, or greater product, in proportion as it is easier to maintain the one than the other. Accordingly it is not difficult to find traces of attempts of this kind during the last forty years, in the traditions of our manu- facturing towns and counties. From what causes their failure may have arisen, since none of them have been established to supersede the old prac- tice, is not easy to discover, but it is certain that Mr. Sunday's machine is the first and only one which has yet appeared at the patent office. Its construction is as follows : — An iron fly-wheel of three feet in diameter, is

moved bv a o ank and treadle, or by any other power or means of application. On the same axis is a wheel or pulley, of fifteen inches dia- meter, which, by a gut, drives another pulley of nine inches attached to a puppet head above, and shears resembling those of a common foot lathe. An arbor is driven by this upper wheel, in the same manner as work is thrown round between centres before the mandrell in the common lathe. On the arbor are fixed a number of circular cut- ters, about two inches diameter, corresponding to the notches intended to be cut in the combs. These cutters are all of a thickness, and have brass washers between them, and also from another arbor in a frame there are steel pieces, called guiders, which stand between the cutters, and keep them regularly asunder, just above the place where the comb enters.

The comb is held, by a plate and two screws, upon the top of a block or carriage, which runs off and on by means of a platform, and dovetail upon the lathe bed. The comb moves in its own plane, right onward, to the centre or axis of the cutters, and the carriage is driven by a screw of ten threads in the inch, into which a knife edge from the cairiage falls, instead of a nut. On the extremity oi« tail of the screw is fixed a spur wheel of thirty teeth driven by au endless screw, the arbor of which last is of course parallel to the arbor of the cutters. It is driven by a pulley of six inches concentric with

the cutting arbor, and .tself has a pulley of three.

Hence if the great wheel be moved once round, per second, the arbor will revolve 'g5 times and the endless screw arbor ˆ times but from the dimensions of the screw, thirty revolutions of the endless screw make •& inch of the tooth, or 150 revolutions make £ inch. With this length of tooth, the great wheel will revolve forty-five times, and the cutting arbor seventy-five times. One side of the comb will therefore be cut in three quarters of a minute. The combs are pointed by applying them to an arbor, clothed with cutters, with chamfered edges and teeth ˆ5 inch deep : they are so applied by the hand. This arbor is driven by a wheel on the crank axis. The cutters are made of tempered steel, as are also the guides, the teeth of the cutters are set so as to clear the back or following part from the friction in the cut.

The cutters, the cutter washers, the guides, and the guide washers, are all ground flat and thin, upon a brass plate, in the same manner as optical work is ground ; during which operation the piece is retained again on an upper movable plate, of its own size, by means of a circular rim or edge which is adjustable by screws, so as to form a deeper or shallower cell, as may be re- quired. The guides are one-twentieth part thin- ner than the washers of the cutters, and the guide washers are somewhat thicker than the cutters, and there are grooves in the sides of the guides that the teeth of the cutters may pass clear, not- withstanding their side sets.

The writer had an opportunity of examining one of the cutters of this artist, which had been given by him to a friend. It was beautifully wrought, very uniform in its thickness, which was about the ˆ of an inch, and the sets of the

teeth, which seemed to have been affected by the blow of a punch on every other tooth, was ex- tremely accurate : it was not perfectly flat, but had that kind of flexure which workman call a buckle. He also saw an irory comb of forty teeth in the inch, which was very uniform, and equal to the best work done by hand, except that the cut seemed too wide.

It appears to be placed beyond a doubt, that combs may really be cut in this way ; but whe- ther to advantage must depend on the cast and durability of the cutters, which, it is to be feared, may be bended and spoiled in a course of work, by their incessant friction between the guides. It may also be remarked, that they cannot be taken off the arbor to sharpen or repair, and be put on again without changing the degree of fine- ness in the comb they will cut. For if we sup- pose an error of one- thousandth of an inch in grinding or callipering the cutters and washers, or in the different force of screwing them toge- ther on the arbor; this will

make a difference of one-third of an inch, or the breadth of seventeen teeth in a superfine comb, No. 6, which if coarser would bring it more than half way to the sort called dandriff, or, if finer, would equal the box- comb. Besides which a much less difference would totally destroy the agreement or fitting between cutting and pointing. A more parti- cular account of the patent invention, with en- gravings, may be found in the Repertory of Arts for the year 1796.

Tortoise-shell combs, as they are called, are very much used. It has, however, been pro- perly observed, that the hard strong covering which encloses tortoises, and which is used on these occasions, is improperly denominated a shell ; being of a bony contexture, but covered on the outside with scales, or rather plates of a horny substance There are two general kinds of tortoises, viz. the land and the sea tortoise; the latter is divided into many distinct species, but the testudo-imbricata of Linnaeus alone fur- nishes that beautiful shell so much admired in European countries. This consists of thirteen leaves or scales, eight of them flat, and five bent. The best tortoise-shell is thick, clear, transparent, of the color of antimony, sprinkled with brown and white.

Tortoise-shell, like horn, becomes soft in a moderate heat, as that of boiling water, so as to be pressed in a mould, into any form, the shell being previously cut into plates of a proper size. Two plates may likewise be united into one by heat and pressure, the edges being thoroughly cleaned, and made to fit close to one another. The tortoise-shell is conveniently heated for this purpose by applying a hot iron above and be- neath the juncture, with the interposition of a wet cloth, to prevent the shell from being scorched by the irons ; these irons should be pretty thick that they may not lose their heat before the union is effected.

Tortoise-shell being in so much request, many methods have been invented for the purpose of staining horn so as to imitate tortoise-shell ; of which the following is one : — The horn to be dyed, being first pressed into a flat form, is to be spread orer with a kind of paste made of two

parts of quick lime and one of litharge, brought into a proper degree of consistency with soap- lee. This paste must be put over all the parts of the horn except such as are intended to be left transparent, to give it a nearer resemblance to tortoise-shell ; the horn must remain in this state till the

paste be quite dry, when it is to be rubbed off. It requires a considerable share of taste and judgment to dispose the paste in such a manner as to form a variety of transparent parts, of dif- ferent magnitudes and figures, to look like na- ture. Some parts are, by a neat process, ren- dered semi-transparent, which is effected by mixing whitening with a part of the paste, to weaken its operation in particular places; by this means spots of a reddish-brown will be pro- duced, so as greatly to increase the beauty of the work. Horn thus dyed is manufactured into combs, which are frequently sold for real tor- toise-shell : we shall now add two or three other directions on subjects connected with this bu- siness. «

To make horn soft. — Take wood-ashes and quick lime ; of these make a strong lee, and fil- ter it clear, boil the shavings or chips of horn therein, and they will soon be reduced to a paste, this may be colored, and cast into any form required.

To prepare horn leaves in imitation of tortoise- shell. — Take of quick lime one pound, and li- tharge of silver eight ounces, mix them into a paste with urine, and make spots with it, in what form or shape you please, on both sides of the horn ; when dry, rub off the powder, and repeat this as many times as necessary. Then take ver- milion, prepared with size, lay it all over one side of the horn, as also on the wood to which you intend to fasten it. For raised work, form the horn in a mould of any shape, and when dry give it color with the aforesaid paste and ver- milion; then lay clear glue, both on the horn and the wood on which it is to be fixed, and close it together. This work is to be done in rather a warm place : it is then to stand all night ; the roughnesses are to be cut or filed off, . and the horn polished with tripoh and linseed oil. Work finished in this manner is well adapted for ladies' combs.

Another method of imitating tortoise-shell with horns. — Take of nitrous acid two ounces, and of fine silver one drachm; let the silver be dissolved, and, having spotted or marbled your horn with wax, strike the solution over it ; let it dry of itself, and the horn will be, in those places which are free from wax, of a brown or black color.

To dye ivory green, to be used as combs. — A green dye may be given to ivory, by steeping it in nitrous acid, tinged with copper or verdigris, or in two parts of verdigris and one of sal am- moniac, ground well together, with strong white wine vinegar poured on them ; and by converting the nitrous acid into aqua regia, by dissolving a fourth part of its weight of sal ammoniac in it, ivory may be stained of a fine purple color.

To dye ivory, &c. with other colors. — Ivory, bone, horn, and other substances, adapted to the manufacture of combs may be stained yellow,

by boiling them first in a solution of one pound of alum in two quarts of water, and then boiling

them in a solution of turmeric root. Ivory &c. may be stained blue, by first staining it green, and then dipping it in a solution of pearl-ashes, made strong, and boiling hot. It may be accom- plished also by boiling in the tincture of indigo, prepared by the dyers, and afterwards in a solu- tion of tartar, made by dissolving three ounces of white tartar, or cream of tartar in a quart of water.

Combs are sometimes set with brilliant stones, pearls, and even diamonds; and some are studded with cut steel. They are of various shapes, and are used to fasten up the hair, when ladies dress without caps. Of course combs may be had of all prices from a few pence to almost any sum. Journeymen comb-makers will earn form 25s. to two guineas per week.

CO'MBAT, v. n., v. a. & n. s. > Fr. combat- CO'MBATANT, n. s. J tre ; combat-

tant. To fight, generally in a duel or hand to hand, but sometimes used for battle ; it is also employed, figuratively, in the same sense with regard to matters of opinion. It is not strictly synonymous with to oppose ; it is true one always opposes in combating, but not vice versa ; a person's positions are combated, his interests are opposed.

But ere they could precede unto the place Where he abode, themselves at discord fell, With cruel combat ioyned in middle space, With horrible assult, and fury fell They heaped huge strokes the scorned life to quell.

Spenser.

The noble combat that, 'twixt joy and sorrow, was fought in Paulina ! She had one eye declined for the loss of her husband, another elevated that the oracle was fulfilled. Shakspeare .

Pardon me, I will not combat in my shirt. Id, So frowned the mighty combatants, that hell Grew darker at their frown. Milton's Paradise Lost. Two planets rushing from aspect malign . Of fiercest opposition in mid sky, Should combat, and their jarring spheres confound.

Id.

Who, single combatant,

Duelled their armies ranked in proud array, Himself an army. Id. Agonistet.

Old Waller trumpet-general swore he'd write This combat truer than the naval fight. Marvell,

He with his sword unsheathed, on pain of life, Commands both combatants to cease their strife.

Dryden.

The combat now by courage must be tried. Id.

Their oppressors have changed the scene, and com- bated the opinions in their true shape.

Decay of Piety.

Love yields at last, thus combated by pride, And she submits to be the Roman's bridt.

Granville.

But now so variously the combat bleeds That Fame, though all her tongues should give them

breath,

Could not express the bold and warlike deeds Of warriors ranging through this field of death. Gay. The trials by single combat gradually obtained su- perior credit and authority, among a warlike people, who could not believe, that a brave man deserved to suffer, or that a coward deserved to live. Gibbon.

The mariner not vainly brave Combats the storm, and rides the wave, To rest at last on shore. Beattie,

TO combat may be glorious, and success Perhaps may crown us, but to fly is safe. Cowper. COMBAT, in our ancient law, was a formal trial of some doubtful cause or quarrel, by the swords or bastions of two champions1. The last trial of this kind in England was between Donald lord Ray appellant, and David Ramsay, esq. defen- dant, when, after many formalities, the matter was referred to the king's pleasure. See BATTLE. CO'MBER, n. s. From comb. He whose trade it is to disentangle wool, and

lay it smooth for the spinner.

COMBER (Thomas), a learned English divine, born at Shermanbury, in Sussex, in 1575. He was the twelfth child of an ancient family, and, surviving all his elder brothers, inherited the es- tate. He was educated at Horsham school, from whence he removed to Trinity College Cambridge, where he made a great progress in all kinds of learning, particularly in the Oriental Languages. In 1596 he became a fellow of his college, and in 1598 took his master's degree. In 1607 he obtained leave to travel, and resided three years in France, where he contracted an intimacy with the learned Dr. Moulin. He took the degree of D. D. in 1616, and about the same time be- came chaplain to the king. Charles I. sent him to Scotland to confer with some of the presbyte- rian divines about the form of church government, and, in 1630, he was promoted to the deanery of Carlisle, and the year following appointed mas- ter of Trinity College; at which time he also served the office of vice-chancellor. As master of his college he acquired a great arid deserved reputation; but, soon after the commencement of the rebellion, he was deprived of that and of his deanery. He was also imprisoned for his loyalty and otherwise ill-treated, but bore all his suffer- ings with calm resignation. He died in 1654, and was buried in the church of St. Botolph, Cambridge.

COMBER (Thomas), an eminent divine of the same family with the preceding, born at Weslerham in Kent in 1645, educated at Cambridge; created D. D. and after several preferments in the church made dean of Durham. He was chaplain to Anne princess of Denmark, and to king William and queen Mary. He wrote 1. A Scholastical History of the Primitive and General use of Liturgies. 2. A Companion to the Altar. 3. A brief Discourse upon the offices of Baptism, Catechism, and Confirmation. He died in 1699, aged fifty-five.

COMBI'NE, v.a. &v.n.~) Lat. con and CO'MBINATE, adj. fbinus, signifies ty-

COMBINA'TION, n. s. J ing two into one. Fr. combiner. The first idea therefore is union of bodies, or qualities ; commixture ; con- junction : the next is copulation of ideas in the mind. As a term of science, combination is used in mathematics to denote the variation or alteration of any number of quantities, letters, sounds or the like, in all the different manners possible. Thus the number of possible changes or combinations of the twenty-four letters of the alphabet, taken first two by two, then three by three, &c. amount to 1,391,724,288,887,252,999, 425,128,493,402,200. Its general applications are the following : to a union or league of private

persons for some certain purpose ; it is now \ise-l in an ill sense, in those associations which re- spect the interests of the few to the injury of the many. When applied to things combination is an arbitrary action,. Thus it differs from asso- ciation. Association is a natural union, but com- binations are formed either by design or accident • nothing will associate but what harmonises; things the most opposite in their nature are com- bined together. The verb signifies to join toge- ther ; to keep in union ; to agree ; to accord ; to settle by compact ; to join words or ideas toge- ther; the opposite of analyse.

These natures, from the moment of th eir first com- bination, have been and are for ever inseparable.

Hooker. This cunning cardinal

The articles of the combination drew.

As himself pleased. Shakspeare. Henry VIII. God, the best maker of all marriages,

Combine your hearts in one, your realms in one.

Id.

Honour and policy, like unsevered friends I th' war, do grow together : grant that, and tell me In peace what each of them by th' other loses, That they combine not there ? Id. Coriolantu.*

She lost a noble brother ; with him the sinew of her fortune, her marriage dowry : with both her com- binate husband, this well-seeming Angelo.

Id. Measure for Measure.

My heart's dear love is set on his fair daughter ; As mine on hers, so hers is set on mine, And all combined, save what thou must combine By holy marriage. Id. Romeo and Juliet,

Combine together 'gainst the enemy ; For these domestic and particular broils Are not the question here. Id. King Lear

They aim to get all to their own will and power, under the disguises of holy combinations.

King Charlet.

.Let us not then suspect our happy state, As not secure to single or combined.

Milton's Paradise Lost.

Ingratitude is always in combination with pride and hard-heartedness. South.

Friendship is the cement which really combine mankind. Government of the Tongue.*

You with your foes combine,

And seem your own destruction to design.

Dryden's Aurengzebe.

They never suffer any ideas to be joined in their understandings, in any other or stronger combination than what their own nature and correspondence give them. Locke.

Resolution of compound bodies by fire, does not so much enrich mankind as it divides the bodies ; as upon the score of its making new compounds by new combinations. Boylt.

Where the tall oak his spreading arms entwines, And with the beech a mutual shade combines. Gay. Tis infamy to serve a hag,

Cats are thought imps, her broom a nag,

And boys against our lives combine

Because 'tis said your cats have nine. Id.

Wise, beauteous, good ! O every grace combined That charms the eye, and captivates the mind !

Beattie.

The cry of the people in cities, and towns though unfortunately (from a fear of their multitude and combination), the most regarded, ought in fact to bo the least regarded, on the subject of monopoly. Bvrhf,

COMBINATION.

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Before the time of Dryden those happy combina- tions of words which distinguish poetry from prose, had been rarely attempted. Johnson.

COMBINATION, in chemistry, signifies the union of two bodies of different natures, from which a new compound body results. For ex- ample, when an acid is united with an alkali, we say that a combination betwixt these two saline substances takes place ; because from this union a neutral salt results, which is composed of an acid and an alkali.

COMBINATIONS, in the mathematics, I. In all

Now the inches in a square yard being 1296, that number multiplied by 100 gives 129,600. which is the number of letters each square yard will contain ; therefore if we divide

62,044,840,173,323,943, 936,000

by 129,600, the quotient, which is

478,741, 050,720,092,160

will be the number of yards required to contain the above-mentioned number of permutations. But, as all the twenty-four letters are contained

combinations, if from an arithmetical decreasing

twenty-four times as large ; that is,

11,489,785,217,282,21 1,840.

as many terms as there are quotients to be com- w/> _ ., , e

u..j :j „!._ . i. l.-i.:_i:j :,. _. ... Wow the number of square yards contained on

-r in every permutation, it will require a space

series, whose first term is the number out of . i v .- ., . •

which the combinations are to be formed, and whose common difference is 1, there be taken

bined, and those terms be multiplied into each £U¥ ” , “‘Cl tJ T

other; and if from the series 1, 2, 3, 4, &c. the surface of the whole earth is but

there be taken the same number of terms, and 617,197,435,008,000,

they be multiplied into each other, and the , ..

first product be divided by the second, the quo- therefore it would require a surface 18,620 times

*tient will be the number of combinations required. as lar?e as ** of the ™ to write all the per-*

Therefore,if you would know how many ways mutations of the twenty-four letters in the size

four quantities can be combined in seven, multi- above mentioned III. To find how many d.f-

ply the first four terms of the series, 7, 6, 5, 4, [erecnt ways the eldest hand at piquet may take in

&c. together, and divide the product, which will bls f^e cards The eldest hand having twelve cards

be 840, by the product of the first four terms of ^t him, there remain twenty cards, any five of

the series, 1, 2, 3, 4, &c. which is 24, and the whlch mav be m tbose he takes in, consequently,

quotient 35 will be the combination of 4 in 7. we ai|e here to ffind how ma”y wa/s fiv cards ™?*

II. In all permutations, if the series 1, 2, 3, 4, be taken out, of twenty Therefore by aphor.sm

&c. be continued to as many terms as there are Lklf we multip y 20 191817, 16 into each

quantities to be changed, and those terms be mul- £the£ wbicb ^ mak0e 1086/104e80′ and tbat,num-

tiplied into each other, the product will be the ber be dmded ty, ^ 2′ 3′ 4′ 5′ multiplied into

number of permutations sought. Thus, if you each.° ‘?”• lnch,. make 120, the quotient,

would know how many permutations can be which is 15504 will be the number of ways five

formed with five quantities, multiply the terms cards maybe taken 1, 2, 3, 4, 5, together, and the product 120 will be the number of all the

permutations.

COMBINATIONS, PROBLEMS IN. I. To find the number of changes that may be rung on

From hence it

follows that it is 15,503 to 1, that the eldest hand does not take in any five certain cards. IV. To find out the number of deals a person may play at the game of whist, without ever holding the same cards twice. The number of cards played

twelve bells. It appears by the second aphorism,

that nothing more is necessary here than to mul- Wltb at whist bemg 52 and the number dealt to

tiply the numbers from 1 to 12 continually into eacb Person be,inS 13? "follows, that by tokm-j

each other, and the last product will be the num- the, same .rae[hod as m the last expenment, that

ber sought, viz. 479,001,600. II. Suppose the »' by multiplying 52 by 51, 50, &c. so on to

*whole twenty-four letters of the alphabet to be **» w*

written so small, that no one of them shall take up

more space than the hundredth part of a square

inch : to find how many square yards it would

5,954,242,643,9 1 1 ,239,680,000,

require to write all the permutations of the twenty-four letters in that size ? By following

and then dividing that sum by 1,2, 4, &c. to 13, which will make 6,227,020,100, the quotient, which is 635,013,559,600 will be the number of

the same method as in the last problem, the different ways thirteen cards may be taken out number of permutations of letters will be found to be

62,044,840,1 73,323,943,936,OOP.

VI.

the " twenty-four of fifty-two, and consequently the uumoer sougot. We add the following table of combinations, or the arithmetical triangle,

A

1 Rank 1 B

2 2. 1

3 3. 3. 1

4 4. 6. 4. 1

5 5. 10. 10. 5. 1

6 6. 15. 20. 15. 6. 1

7 7. 21. 35. 35. 21. 7. 1

8 8. 28. 56. 70. 56. 28. 8. 1

9 9. 36. 84. 126. 126. 84 36. 9. 1*

10 10. 45. 120. 210. 252. 210. 120. 55. 10. 1

11 11. 55. 165. 330. 462. 462. 330. 165. 45. 11. t

12 a 12. 66. 220. 495. 792. 924. 702. 495. 220. 66. 12. 1 t

The construction of this table is very simple. The line A a consists of the first twelve numbers. The line A b consists everywhere of units; and second term 3, of the line B c, is composed of the two terms 1 and 2 in the preceding rank : the third term 6, in that line, is formed of the two terms 3 and 3 in the preceding rank : and so of the rest; every term, after the first, being com- posed of the two next terms in the preceding rank : and by the same method it may be con- tinued to ;iny number of ranks. To find by this table how often any number of things can be combined in another number under thirteen, as suppose five cards out of eight ; in the eighth rank look for the fifth term, which is 56, and that is the number required. Though we have shown in the foregoing problems the manner of finding the combination of all numbers whatever, yet as this table answers the same purpose for small numbers, by inspection only it will be found useful on many occasions ; as will appear by the following examples. I. To find how many dif- ferent sounds may be produced by striking on a harpsichord two or more of the seven natural notes at the same time.

1. The combinations of two in seven, by the foregoing triangle, are ... 21

2. The combinations of 3 in 7 are . 35

3. The combinations of 4 in 7 are . 35

4. The combinations of 5 are ... 21

5. The combinations of 6 are ... 7

6. The seven notes all together once . 1

Therefore the number of all the sounds will be 120

II. Take four square pieces of pasteboard of the same dimension, and divide them diagonally, that is, by drawing a line from two opposite angles, as in the diagram, into eight triangles ;

may each be taken by the same rank of the trian- gle seventy times, which

makes . . . . 140 To which add the foregoing number .' . 56

And the number of the different squares } that may be formed of the eight trian- > 196 gles, will be)

III. A man has twelve different sorts of flowers, and a large number of each sort. He is desirous of setting them in beds or flourishes in his parterre. Six flowers in some, seven in others, and eight in others, so as to have the greatest variety possible ; the flowers in no two beds to be the same. To find how many beds he must have:

1. The combinations of 6 in 12, by the last rank of the triangle, are . . 924

2. The combinations of 7 in 12 are . 792

3. The combinations of 8 in 12 are . 495

Therefore the number of beds must be 2211

IV. To find the number of chances that may be thrown on two dice. As each die has six faces, and as every face of one die may be com- bined with all the faces of the other, it follows that 6 multiplied by 6, that is 36, will be the number of all the chances ; as is also evident from the following table :

paint seven of these triangles with the primitive colors ; red, orange, yellow, green, blue, indigo, violet, and let the eighth be white. To find how many chequers or regular four-sided figures, different either in form or color, may be made put of those eight triangles. First, by combin- ing two of those triangles, there may be formed either the triangular square A, or the inclined square B called a rhomb. Secondly, by com- bining four of the triangles, the large square C may be formed ; or the long square D, called a parallelogram. The first two squares consisting of two parts out of eight, each of them may, by the eighth rank of the triangle, be taken twenty- ei(jht different ways, which makes fifty-nine. And the last two squares, consisting of four pa»"ts,

Points.

No. of Chances.

No. of Points.

2

1-1

1

2

3

2-1

1-2

2

6

4

2-2

3-1

1-3

3

12

9

4-1

1-4

3-2

2-3

4

20

c,

3-3

5:1

1-5

4-2

2-4

5

30

7

6-1

1-6

,V2

2‘5

4-3

3-4

6

•J2

8

4-4

C-2

2-6

5-3

3-5

5

40

9

6-3

3-6

5-4

4-5

4

36

10

55

6-4

4-6

3

30

11

6-5

5-6

2

22

12

0-6

1

12

36

2.52

It appears by this table, 1. That the number of chances for each point continually increases to the point of 7, and then continually decreases till 12; therefore, if two points are proposed to be thrown, the equality, or the advantage of one over the other, is clearly visible. It is easy from hence to determine whether a belt proposed at hazard, or any other game with the dice, be ad- vantageous or not ; if the dice be true, which, by the way, is

rarely the case for any long time to- gether, as it is so easy for those that are pos- sessed of a dexteiity of hand to change the true dice for false. 2. The whole number of chances on the dice being 252, if that number be divided by 36, the number of different throws on the dice, the quotient is 7 : it follows, therefore, that at every throw there is an equal chance of bringing seven points. 3. As there are thirty- six chances on the dice, and only six of them doublets, it is five to one, at any one throw,

against throwing a doublet. By the same me- thod the number of chances upon any number of dice may be found ; for if 36 be multiplied by 6, that product, which ia 216, will be the chances on three dice; and if that number be multiplied by 6, the product will be the chances on four dice, &c. Among the different purposes to which the doctrine of combination may be ap- plied, those of writing in cipher, and decipher- /ng, hold a principal place. See the article CI- PHER. And, upon the same principle, those who have ingenuity and leisure, may amuse them- selves and their friends, by cards previously marked wivh letters or words; which, after shuffling and dealing in seeming confusion, and apparently by chance, surprise the company by producing a sublime sentiment, or paying a po- lite compliment to each person present.

CO'MBLESS, adj. From comb. Wanting a comb or crest.

What, is your crest a coxcomb ?

— A combless cock, so Kate will be my head.

Shakspeare.

COMB-MARTIN, a town in Devonshire, seated on the Bristol Channel, at the mouth of the Severn, from which it has an inlet that runs through the town, witn a cove for landing boats. There are lead-mines near it, which formerly produced some silver ore. It has a market on Saturday, and a fair on Whitsun-Monday. It is seven miles east of Ilfracomb, and 202 west of London.

COMBOOCONAM, a neat town of the pro- vince of Tanjore, Hindostan, twenty milesN.N.E. from the city of Tanjore. It was formerly the capital of the Cholas, one of the most ancient of the Hindoo dynasties, from which, in latter times, the whole coast of Cholamundul (Coromandel) has taken its name : it contains many vestiges of its ancient splendor, and is chiefly, at present, inhabited by brahmins. Some of the tanks and pagodas are very

fine, and the surrounding coun- try is fertile and well cultivated.

COMBU'ST, adj. •% Lat. comburo,

COMBU'STIBLE, adj. tcombustum. The COMBU'STIBLENESS, n. s. £ first adjective is COMBU'STION, n. s.) used in astronomy and in astrology, but in what sense it is rather difficult to say. Milton alludes to planets that are combust, in the sense of their being obscured and out of sight by the bnghtness of the sun ; and Chaucer represents it as synonymous with a bad aspect, or concealment from view. The general application is the same with the other derivatives, namely, having the quality of catching fire; susceptible of fire, aptness to take fire. Com- bustion is conflagration and consumption by fire. It is also used metaphorically for tumult, hurry, hubbub, bustle, hurly burly.

When a planet is not above eight degrees and a half distant from the sun, either before or after him, it is said to be eomtnut, or in combustion. Harru.

And if I had, O Venus ful of mirthe ! Aspectes badde of Mars or of Saturne ; Or thou combuste ; or let were in my birth ; Thy father pray — al thilke harm disturne, Of grace, and that I glad ain maie turne, For love of him thou lovedest in the shawe, I mene Aden that with the bore was slawe.

Chaucer Troilui and Crcsseide.

We boast onr light ; imt if we look not wisely o« the sun itself, it smites us into darkness. Who can discern those planets that are oft combust, and those stars of brightest magnitude that rise and set with the sun, until the opposite motions of those orbs brin;; them to such a place in the i.rmament where th?v may be seen evening and morning ? Milton.

Mutual combustions, bloodsheds, and wastes may en- force them, through very faintness, after the experi- ence of so endless miseries. Hooker.

Prophesying with accents terrible, Of dire combustion, and confused events, New-hatched to the woeful time.

Shakspeare. Macbeth.

Those cruel wars between the houses of York and Lancaster, brought all England into an horrible cnm- bustion. llultiyh.

Charcoals made out of the wood o f oxycedar, arc- white, because their vapours are rather sulphureous than of any other combustible substance.

Browne's Vulijar Errvurs. How much more of power, Army against army,

numberless to raise Dreadful combustion warring, and disturb, Though not destroy, their happy aacive seat !

Stttm.

Sin is to the soul like fire to combustible matter ; it assimilates before it destroys it. Svu'h.

They are but strewed over with a little penitential ashes ; and will, as soon as they meet with combus- tible matter, name out. Decay of Piety. The future combustion of the earth is to be ushered in and accompanied with violent impressions upon na- ture. Kurnet.

The flame shall still remain ; Nor, till the fuel perish, can decay, By nature formed, on things combustible to prey.

Dryden.

But say, from whence this new combustion springs ?

Id.

The comet moves in an inconceivable fury and com- bustion, and at the same time with an exact regularity. Addison's Guardian.

COMBUSTIO PECUNIˆE, the ancient way of trying mixed and corrupt money, by melting it down upon payments into the exchequer. In the time of king Henry II. a constitution wa-. made, called the trial by cumbustion ; the prac- tice of which differed little or nothing from th<; present method of assaying silver. But whether this examination of money by combustion was to reduce an equation of money only to sterling, viz. a due proportion of alloy with copper, or to reduce it to pure fine silver, does not appear. On making the constitution of trial it was con- sidered, that though the money did answer in number and weight, it might be deficient in va- lue, because mixed with copper or brass, &c.

COMBUSTION, in physic, has been defined, the operation of fire upon any inflammable substance, by which it smokes, flames, and is reduced to ashes. Dr. Ure describes it as the disengage- ment of heat and light which accompanies che- mical combination. ' It is frequently,' he says, 'made to be synonymous with inflammation,atenn which might be restricted, however, to that pe- culiar species of combustion in which gaseous matter is burned. Ignition is the incandescence of a body, produced by extrinsic means, without change of its chemical constitution.' There it no phenomenon in nature by which the attention

of philosophers has been more engaged, nor which has perplexed them more to account for, than this very common operation, To ex- plain it, the most opposite and contradictory theories have been espoused ; and, till very lately, science did not afford data sufficient to explain it in a rational manner. By former chemists it was supposed, that the parts of the combustible body itself were converted into fire. Accord- ingly, Sir Isaac Newton proposes it as a query, whether gross bodies and light are not converti- ble into one another! And many chemists of modern date, have determined this question in the affirmative, by maintaining that the light of the sun is, or contains, phlogiston. The inter- ference of the air, however, in most cases of com- bustion known to us, proved a difficulty in this theory almost, if not totally, insurmountable ; for if the fire proceed entirely from the combus- tible body, what occasion is there for any third substance distinct both from ‘ the fire and that body to produce combustion? This naturally excited a conjecture, that the fire by which the combustible body is consumed proceeds in re- ality from the air, and not from the body itself. And hence we see that Mr. Hutchinson’s system of fire and air being convertible into one another, might have passed for a rational human theory, if he had not attempted to force it upon man- kind as a divine revelation. The modern disco- veries in aerology, however, have entirely dis- proved this hypothesis with regard to our atmo- sphere considered as a whole, at the same time that they point out the true method, as far as our faculties seem capable of comprehending it, by which this mysterious operation is performed.

It is now almost universally known, that the air we breathe is composed of two kinds of elastic fluids, only one of which contributes to the support of flame, as well as of animal life ; and this part is found to be by far the least in quan- tity of the atmosphere we breathe. This kind of air, since its first discovery by Dr. Priestley, in 1774, has passed by the various names of deph- log;sticated, empyreal, vital, and pure air, and is sometimes denominated oxigenous gas. It is computed from good observations, that, among the various component parts of our atmosphere, there is about one-fourth, & according to Mr. Scheele, or, according to Mr. Cavendish, one-fifth of this pure fluid contained in it ; and to this small part alone is owing the combustion of inflammable bodies. Since the establishment of this important fact, several theories of combustion have been formed. See CHEMISTRY..

Dr. Crawford endeavours to account for com- bustion, upon the exploded doctrine of phlogiston. By a great number of ingenious experiments he has

endeavoured to show, that bodies, which con- tain a large portion of phlogiston, possess but a small share of specific heat or fire ; on the con- trary, that those with a large share of this last, contain but little phlogiston^ and lastly, those which are deprived of phlogiston, increase their capacity for specific fire. Thus, when regulus of antimony is deprived of its phlogiston, by cal- cination, it nearly trebles its specific fire. The same changes take place in crocus martis and in iron. This fact is geneially true, whatever be

the nature of the substance ; and even the aeri- form ones are in the same case, for phlogisticated air has very little specific fire, common air has more of it, and dephlogisticated air shows amost prodigious quantity. From these facts it is clear, that phlogiston and fire are distinct, and incompatible substances ; so that when one enters into the composition of any body, the other of course is expelled from it. Thus metals are calcined in consequence of a double attraction, by which the metal imparts its phlogiston to the air, while the air communicates its fire to the metallic calces, which is farther confirmed by the air found in metallic calces, whose increased weight by calcination corresponds to the air ex- pelled from them, by their reduction to a metallic state. All combustible bodies are absolutely in the same case. Thus sulphur when burned con- taminates the air, by the phlogiston it throws into it, and the produced vitriolic acid, if any, becomes impregnated with the same. In some cases the most intense heat or sensible fire is produced in the combustion ; but in others it is very mode- rate. This variation generally depends on the quantity and quality of the vapors produced during the combustion ; when these are very inconsiderable, and the residuum cannot absorb the fire emitted by the air, the remainder is pre- cipitated or diffused all around, and produces a very sensible heat. On the contrary, if the va- pors are capable of absorbing it, very little heat is produced. For instance, the vapor of waters absorbs about 800° of heat beyond that of its boiling state ; from whence it follows, that, whenever there is a quantity of watery vapors produced by combustion, very little sensible fire must be felt. So when spirits of wine are fired, the heat then produced by the combustion is very inconsiderable, the greater part being absorbed by the watery vapors that are then produced ; but, when the phosphorus of Kunkel is set on fire, the heat is very strong, there being but a small quantity of acid to carry off the specific fire that is set loose. This theory M. Magellan prefers to those of Messrs. Scheele, Fourcroy, and Lavoisier.

Combustible bodies, says M. Fourcroy, are those which have a strong attraction to unite with pure or dephlogisticated air ; and combus- tion is nothing else but the act of that combina- tion. This assertion is founded on the following facts : 1 . That no substance can be burnt without air; 2. That the purer this air is the more rapid is the combustion ; 3. That in

combustion, an absorption or waste of air always takes place ; and, 4. That the residuum contains often a very sensible quantity of that pure air which is ab- sorbed, and which may sometimes be extracted from it.

According to this eminent chemist, dephlogis- ticated air is a compound of two substances, in- timately combined ; one is called by him the oxi- genous principle, and the other specific elementary fire. During the combustion of sulphur, phos- phorus, inflammable air, or any other substance of that kind, the oxigenous principle of the de- phlogisticated air, combines with these bodies, to which it has a strong attraction, and forms new compounds of salts and other bodies ; at the

same lime that the elementary fire contained in these is set loose, and becomes sensible, pro- ducing heat and flame according to circum- stances. • Thus the h're produced in combustion does not proceed from the burned body, but from the decomposition of pure air, in which it is con- tained, in a latent and insensible state ; while its oxigenous principle combines with the sulphur, phosphorus, or inflammable air, and forms vitri- olic and phosphoric acids, or pure water.

As M . Scheele's theory, like that of Dr. Craw- ford, is founded on the ideal doctrine of phlo- giston we shall give but a brief view of it. He considers heat and light themselves as compound substances. The former, according to him, con- sists of phlogiston and empyreal air. The calces of gold, reducible by heat alone, in a retort, show that phlogiston is contained in heat ; be- cause it combines with the calces to revive them, and the dephlogisticated air is found in the re- ceiver. The precipitate per se of mercury, if re- vived in this manner, affords, he says, another instance of the truth of his doctrine : ' If phlo- giston alone,' says he, 'could pass through the re- tort, there would not be found the empyreal air in the receiver, and the ignoble metals might be revived in the same manner.' Light, according to him, is a compound, containing phlogiston and heat, from which both may separate them- selves in proper circumstances. A solution of silver in nitrous acid mixed with chalk, and ex- posed to the sun-shine, is revived into a metalic form by the phlogiston of light. Nitrous acid in a glass vessel, receives phlogiston from light, and becomes of an orange color ; but if the glass be painted black, the acid receives the heat not the phlogiston. Even the various colored rays of light contain unequal shares of phlogiston ; since the violet rays part more easily with their phlogis- ton to revive metals than any other. When light is not stopped in its passage, no heat is per- ceived ; but if stopped in its course, the oppos- ing

*body receives heat, and sometimes phlogis- ton. Light seems, therefore, to be the matter of heat, loaded with a superabundant quantity of phlogiston. That which comes out from a fur- nace produces heat on the surrounding bodies, which ascends with the rarefied air ; proceeds forward in straight lines ; and may be reflected from polished surfaces, with this peculiarity, that a concave glass mirror retains the heat, whilst it reflects the light ; for although its focus is bright, yet it is not warm. A pane of glass also put be- fore a burning mirror, retains the heat, and allows the light to pass through it. Fire is more or less heated to the luminous state of bodies, by which they are resolved into their constituent parts, and entirely destroyed. Combustion is the action of heat penetrating the pores of bodies, and destroy- ing their cohesion ; in this case the body parts with its phlogiston, provided there be a substance present which has a strong attraction for the in- flammable principle. If the heating be per- formed in open air, the empyreal part, on ac- count of its stronger attraction, unites with the inflammable principle, which is thus set at li- berty ; from which union the heat * is com- pounded ; and scarcely is this heat generated, when the combustible body is still more ex-*

panded by it, and its phlogiston more laid open. The more the heat is increased, the more minute are the particles into which tlie combustible body is dissolved. The empyreal air meets more sur- faces, comes in contact with more phlogiston, and forms an union with a greater quantity of it, which produces a radiant heat. At this moment the constituent parts of the combustible body are so much disunited by the still increasing heat, that the empyreal air, continuing to pour in upon it in streams, attracts the phlogiston in still greater quantities ; and hence the most elastic substance, light, is composed ; which, according to the quantity of combustible matter, shows va- rious colors.

All this, however, is so exceedingly contrary to the common notions of mankind, that it can scarcely ever be seriously believed. The pure light of the sun can never be supposed by any mortal to consist principally of a substance as gross as the soot of our chimneys, without a de- .gree of evidence of which the subject is quite incapable. With regard to the theory of Four- croy, it is evidently deficient in one of the es- sential requisites to produce combustion, even fire itself; for if combustion depend only on the attraction between combustible bodies and pure air, then it ought to take place on all occasions wherever pure air and combustible bodies are presented to each other. But this i> not the case ; for though we put a piece of unlighted charcoal into a jar full of dephlogisticated air, no com- bustion will ensue. To produce this it is neces- sary that the charcoal be already, in part at least, in a state of combustion, or that fire be applied to it from without. This theory, therefore, instead of explaining the matter, gives not the smallest insight into it ; since we are perpetually left to seek

for the cause of the fire, which produced that in question ; for the combination of a combusti- ble body with air is the effect of combustion, not the cause. And Dr. Crawford's theory appears evidently insufficient from the following consi- derations : The degree of specific heat contained in bodies cannot be measured by any method yet known to us ; that the phrase, quantity of heat, so frequently used by Dr. Crawford and others, is vague, inaccurate, and improper ; as express- ing only the degree of sensible heat extricated, produced, generated, or which becomes percepti- ble in certain circumstances by us, without regard to the real quantity contained in the body itself, either originally, or after it has parted with that in question. Thus all experiments founded on the quantities of specific heat contained in diffe- rent bodies, must be fallacious and inconclusive Not to insist, however, on these general argu- ments, it is contrary to fact, that ' bodies which contain a large portion of phlogiston contain but a small share of specific heat,' and vice versa, us the Doctor asserts ; which will appear from the following considerations: 1. The only methods by which we can measure the quantity of any material substance is either by its bulk or weight. 2. Whatever occupies space, and resists the touch, we have a right to call a material sub- stance, whether we can see it, and weigh it, or not. Thus air, which is invisible, and not very easily ponderable, is universally allowed to be a sub-

stance and not a quality. 3. In cases where we cannot conveniently measure the weight of any substance, its quantity must always be judged of by its bulk. Thus the quantity of air contained in a bladder, or in a bellows, is always judged of by the degree of expansion of either. 4. Heat, which is still more subtle than air, is measured in this way, as Dr. Crawford himself acknow- ledges; for the expansions of mercury are, in an arithmetical progression, expressive of the real degrees of heat. 5. Applying this rule to bodies in general, we must conclude, that the expansions of all bodies will be in proportion to the degrees of heat which they contain. Thus, if a body is expanded by heat to double its bulk, and in this state remains even when the heating cause is withdrawn, we may then say with justice, that this body contains double the quantity of latent or specific heat that it did before, and so on. 6. As the vapor of water absorbs a vast quantity of heat, and likewise becomes prodigiously expanded in comparison with the water from whence it is produced, we may conclude that the quantity of heat absorbed, or of specific heat contained in the steam, is to the specific heat contained in the wa- ter as the bulk of the steam is to that of the wa- ter. It is difficult indeed to determine how much steam exceeds in bulk the water from which it is derived ; but from some experiments, Dr. Black concludes

that it is augmented in bulk be- tween 1600 and 1700 times : and from the great quantity of heat emitted by steam during the process of condensation, which in some cases exceeds 1000° of Fahrenheit, we have reason to believe that the quantity of its expansions is proportionable to that of the heat absorbed. 7. As we have thus ascertained, by the great ex- pansion of acjueous vapor, that it has absorbed a vast quantity of heat, it follows, that from the expansion of other substances we ought also to know the quantity of heat absorbed by them. In Dr. Priestley's experiments on the conversion of charcoal into inflammable air, he found that one grain of charcoal, dispersed by the heat of the sun in vacuo, gave six ounce measures of in- flammable air. In another experiment, he found that 2J grains of charcoal gave 15£ ounce mea- sures of the same kind of air. But from a com- putation of the weight of the air so produced, it appears that at least an equal quantity of water with that of the charcoal goes to the composition of the aerial fluid. In measuring this expansion, therefore, we may allow one- half for that of the water requisite to form the inflammable air; and hence the grain of charcoal, properly speaking, absorbs only three ounce measures of fire. That this expansion was the effect of fire is evident : for there was nothing else present but fire, or the concentrated light of the sun ; the experiment being performed by a burning-glass in vacuo. It cannot be a fact then, as Dr. Crawford asserts, that a phlogistic body contains but a small quan- tity of specific heat; for here so small a quantity as one grain of charcoal was made to contain as much specific fire as is equivalent in bulk to three ounce measures. The quantity of specific fire, therefore, contained in bodies, is not deter- mined by their being combustible or not, or by their containing phlogiston or not. R. The last

part of the doctor's theory must also be errone – ous, viz. that ' In the act of combustion the dephlogisticated air communicates its fire to the combustible body.' For instead of this, when dephlogisticated and inflammable air, mixed together in due proportion, are set on fire, they shrink in a manner into nothing ; so that instead of the one communicating its fire to the other, both of them throw out almost all the fire they contain ; so that they are no longer air, but water. 9. Dr. Crawford's theory of combustion supersedes the necessity of any external cause to set on fire the combustible bodies. If dephlo- gisticated air attracts the phlogiston of the com- bustible body, and the phlogiston in the latter attracts the fire of the dephlogisticated air, the consequence of which is combustion : then, wherever dephlogisticated and inflammable air are mixed, combustion ought immediately to en- sue. But this is not the case. A candle, a spark of electricity, or, in a word, some body already in a state of combustion, must be applied before we can produce the effect in question. We must therefore seek for the cause of combustion in the burning body applied, which will be found equally inexplicable : and thus we are riot ad- vanced one step in

real knowledge, by Dr. Craw- ford's hypothesis.

The theory of Lavoisier was therefore, until a recent period, the only resort of chemists.

Dr. Robison, in his preface to Black's lectures, after tracing, with perhaps superfluous zeal, the expanded ideas of Lavoisier to ,the neglected germs of Hooke and Mayow, says, ' This doc- trine concerning combustion, the great, the cha- racteristic phenomenon of chemical nature, has at last received almost universal adoption, though not till after considerable hesitation and oppo- sition ; and it has made a complete revolution in chemical science.'

' The French theory of chemistry, as it was called,' says Dr. Ure, ' or hypothesis of combus- tion, as it should have been named, was for some time classed in certainty with the theory of gra- vitation. Alas ! it is vanishing with the lumi- nous phantoms of the day ; but the sound logic, the pure candor, the numerical precision of in- ference, which characterise Lavoisier's Elements, will cause his name to be held in everlasting ad- miration.

' It was the rival logic of Sir H. Davy,' con- tinues this writer, ' aided by his unrivalled felicity of investigation, which first recalled chemistry from the pleasing labyrinths of fancy, to the more arduous but far more profitable and progressive career of reason. His researches on combustion and flame, already rich in blessings to mankind, would alone place him in the first rank of scien- tific genius.'

We copy, by permission, Dr. Ure's able digest of these researches : — ' If Bacon were to revisit the earth,' it has been well said by another writer, ' this is exactly such a case as we should choose to place before him, in order to give him, in a small compass, an idea of the advancement which philosophy has made since the time when he had pointed oyt to her the route which she ought to pursue.

' The phenomena of combustion may be con-

veniently considered under six heads ; — 1st. The temperature necessary to inflame different bodies. 2d. The nature of flame, and the relation between the light and heat which compose it. 3d. The heat disengaged by different combustibles in burning. 4th. The causes which modify and ex- tinguish combustion, and of the safe-lamp. 5th. Invisible combustion. 6th. Practical

inferences.

‘ 1st. Of the temperature necessary to inflame different bodies. 1st. A simple experiment shows the successive combustibilities of the different bodies. Into a long bottle with a narrow neck, introduce a lighted taper, and let it burn till it is extinguished. Carefully stop the bottle, and in- troduce another lighted taper. It will be extin- guished before it reaches the bottom of the neck. Then introduce a small tube, containing zinc, and dilute sulphuric acid, at the aperture of which the hydrogen is inflamed. The hydrogen will be found to burn in whatever part of the bottle the tube is placed. After the hydrogen is extinguished, introduce lighted sulphur. This will burn for .some time ; and after its extinction phosphorus will be as luminous as in the air, and, if heated in the bottle, will produce a pale yellow flame of considerable density. Phospho- rus is said to take fire when heated to 150°, and sulphur to 550°. Hydrogen inflames with chlo- rine at a lower temperature than with oxygen. By exposing oxygen and hydrogen, confined in glass tubes, to a very dull red (about 800 F.) they explode. When the heat was about 700 F. they combined rapidly with a species of silent combustion. A mixture of common air and hydrogen was introduced into a small copper tube, having a stopper not quite tight ; the cop- per tube was placed in a charcoal fire ; before it became visibly red-hot, an explosion took place, and the stopper was driven out. We see, there- fore, that the inflaming temperature is indepen- dent of compression or rarefaction.

‘ The ratio of the combustibility of the different gaseous matters is likewise, to a certain extent, as the masses of heated matters required to in- flame them. Thus, an iron-wire l-40th of an inch, heated cherry-red, will not inflame olefiant gas, but it will inflame hydrogen gas. A wire of l-8th, heated to the same degree, will inflame olefiant gas. But a wire ˆ of an inch must be heated to whiteness, to inflame hydrogen, though at a low red heat it will inflame biphosphureted gas. Yet wire of l-40th, heated even to white- ness, will not inflame mixtures of fire-damp. Carbonic oxide inflames in the atmosphere when brought into contact with an iron wire heated to dull redness ; whereas carbureted hydrogen is not inflammable, unless the iron is heated to whiteness, so as to burn with sparks. These cir- cumstances will explain why a mesh of wire, so much finer or smaller, is required to prevent the explosion from hydrogen and oxygen from pas- sing; and why so coarse a texture and wire are sufficient to prevent the explosion of the fire- damp, fortunately the least combustible of all the inflammable gases known. The flame of sulphur, v,hich kindles at so low a temperature, will exist under refrigerating processes, which extinguish the flame of hydrogen and all carbureted gases. Let the smallest possible flame be made by a

single thread of cotton immersed in oil, and burn- ing immediately upon the

surface of the oil. It will be found to yield a flame about l-30th of an inch in diameter. Let a fine iron wire of T^ of an inch, made into a ring of 1-1 Oth of an inch diameter, be brought over the flame. Though at such a distance, it will instantly extinguish the flame, if it be cold ; but if it be held above the flame, so as to be slightly heated, the flame may be passed through it without being extinguished. That the effect depends entirely on the power of the metal to abstract the heat of flame, is shown by bringing a glass capillary ring of the same diameter and size over the fla'me. This being a much worse condncter of heat, will not, even when cold, extinguish it. If its size, however, be made greater, and its circumference smaller, it will act like the metallic wire, and require to be heated to prevent it from extinguishing the flame. Now, a flame of sulphur may be made much smaller than that of hydrogen ; one of hydrogen may be made much smaller than that of a wick fed with oil; and that of a wick fed with oil smaller than that of carbureted hydrogen. A ring of cool wire, which instantly extinguishes the flame of carbureted hydrogen, diminishes but slightly the size of a flame of sulphur of the same dimensions. By the following simple con- trivance, we may determine the relative facility of burning, among different combustibles. Pre- pare a series of metallic globules of different sizes, by fusion at the end of iron wires, and light a series of very minute flames of different bodies all of one size. If a globule l-20th of an inch diameter be brought near an oil flame of l-30th in diameter, it will extinguish it, when cold, at the distance of a diameter. The size of the sphe- rule adequate to the extinction of the particular flame, will be a measure of its combustibility If the globule be heated, however, the distance will diminish at which it produces extinction. At a white heat, the globule, in the above in- stance, does not extinguish it by actual contact, though at a dull red heat it immediately produces the effect.

'2d. Of the nature of flame, and of the relation between the light and the heat which compose it. The flame of combustible bodies may, in all cases, be considered as the combustion of an ex- plosive mixture of inflammable gas, or vapor, with air. It cannot be regarded as a mere com- bustion, at the surface of contact, of the inflam- mable matter. This fact is proved by holding a taper, or a piece of burning phosphorus, within a large flame made by the combustion of alcohol. The flame of the taper, or of the phosphorus, will appear in the centre of the other flame, proving that there is oxygen even in its interior part. When a wire-gause safe-lamp is made to burn, in a very explosive mixture of coal gas and air, the light is feeble, and of a pale color. \Vhereas the flame of a current of coal gas burnt in the atmosphere, as is well known by the phenomena of the gas-lights, is extremely brilliant. It becomes, therefore, a problem of some interest. 'Why the combustion of explosive mixtures, under different circumstances, should produce such different appearances?' In reflecting on tho circumstances of

these two species of combnstioa,

23?,

COMBUSTION.

Sir H. Davy was led to imagine that the cause of the superiority of the light of the stream of coal-gas, might be owing to the decomposition of a part of the gas, towards the interior of the flame, where the air was in the smallest quantity, and the deposition of solid charcoal, which first by its ignition, and afterwards by its combus- tion, increased in a high degree the intensity of the light. The following experiments show that this is the true solution of the problem : —

'If we hold a piece of wire-gause of about 900 apertures to tne square inch, over a stream of coal-gas issuing from a small pipe, and if we inflame the gas above the wire-gause, left almost in contact with the orifice of the pipe, it burns with its usual bright light. On raising the wire- gause so as to cause the gas to be mixed with more air before it inflames, the light becomes feebler, and at a certain distance the flame as- sumes the precise character of that of an explo- sive mixture burning within the lamp. But though the light is so feeble in this case, the heat is greater than when the light is much more vivid. A piece of wire of platina, held in this feeble blue flame, becomes instantly white-hot. On reversing the experiment, by inflaming a stream of coal gas, and passing a piece of wire- gause gradually from the summit of the flame to the orifice of the pipe, the result is still more instructive. It is found that the apex of the flame, intercepted by the wire-gause, affords no solid charcoal; but, in passing it downwards, solid charcoal is given off in considerable quantities, and prevented from burning by the cooling agency of the wire-gause. At the bottom of the flame, where the gas burned blue, in its imme- diate contact with the atmosphere, charcoal ceased to be deposited in visible quantities.

' The principle of the increase of the brilliancy and density of flame, by the production and ig- nition of solid matter, appears to admit of many applications. Thus, olefiant gas gives the most brilliant white light of all combustible gases, because, as we learn from Berth ollet's experi- ments, related under carbureted hydrogen, at a very high temperature it deposits a very large quantity of solid carbon. Phosphorus, which rises in vapor at common temperatures, and the vapor of which combines with oxygen at those temperatures, is always luminous ; for each par- ticle of acid formed, must, there is every reason to believe, be white-hot. So few of these par- ticles, however, exist in a given space, that they scarcely raise the temperature of a solid body exposed to them, though, as in the rapid com- bustion of phosphorus, where immense numbers are existing in a small

space, they produce a most intense heat. The above principle readily explains the appearances of the different parts of the flame of burning bodies, and of flame urged by the blow-pipe. The point of the inner blue flame, where the heat is greatest, is the point where the whole of the charcoal is burned in its gaseous combinations, without previous deposition.

‘ It explains also the intensity of the light of those flames in which fixed solid matter is pro- duced in combustion, such as the flame of phos- phorus and of zinc in oxygen, 5cc. and of

potassium in chlorine, and the feebleness of the light of those flames in which gaseous and volatile matter alone is produced, such as those of hy- drogen and of sulphur in oxygen, phosphorus in chlorine, &c. It offers means of increasing the light of certain burning substances, by placing in their flames even incombustible substances. Thus the intensity of the light of burning sul- phur, hydrogen, carbonic oxide, &c. is wonder- fully increased by throwing into them oxide of zinc, or by placing in them very fine amianthus or metallic gause. It leads to deductions con- cerning the chemical nature of bodies, and various phenomena of their decomposition. Thus ether burns with a flame, which seems to indicate the presence of olefiant gas in that substance. Al- cohol burns with a flame similar to that of a mixture of carbonic oxide and hydrogen. Hence the first is probably a binary compound of ole- fiant gas and water, and the second of carbonic oxide and hydrogen. When protochloride of copper is introduced into the flame of a candle or lamp, it affords a peculiar dense and brilliant red light, tinged with green and blue towards the edges, which seems to depend upon the chlo- rine being separated from the copper by the hy- drogen, and the ignition and combustion of the solid copper and charcoal.

‘ Similar explanations may be given of the phenomena presented by the action of other combinations of chlorine on flame ; and it is probable, in many of those cases, when the color of flame is changed by the introduction of in- combustible compounds, that the effect depends on the production, and subsequent ignition or combustion, of inflammable matter from them. Thus the rose-colored light given to flame by the compounds of strontium and calcium^ and the yellow color given by those of barium, and the green by those of boron, may depend upon a temporary production of these bases, by the inflammable matter of the flame. Dr. Clarke’s experiments on the reduction of barytes, by the hydroxygen lamp, is favorable to this idea. Nor should any. supposed inadequacy of heat in or- dinary flame prevent us from adopting this con- clusion. Flame, or gaseous matter, heated so highly as to be luminous, possesses a temperature beyond the white heat of solid bodies, as is shown by the circumstance, that air not luminous will communicate this degree of heat. This is proved by a simple experiment. Hold a fine wire of platinum about l-20th of an inch from the

exterior of the middle of the flame of a spirit-lamp, and conceal the flame by an opaque body. The wire will become white-hot in a space where there is no visible light. The real tem- perature of visible flame is perhaps as high as any we are acquainted with. Mr. Tennant used to illustrate this position by fusing a small fila- ment of platinum in the flame of a common candle. These views will probably offer illus- trations of electrical light. The voltaic arc of flame from the great battery differs in color and intensity, according to the substances employed in the circuit, and is infinitely more brilliant and dense with charcoal than with any other sub- stance. May not this depend, says Sir II. Davy, upon particles of the substances separated by

the electrical attractions ? And the particles of charcoal being the lightest among solid bodies, as their prime equivalent shows, and the least coherent, would be separated in the largest quantities. The heat of flames may be actually diminished by increasing their light, at least the heat communicable to other matter, and vice versa. The flame from combustion, which pro- duces the most intense heat amongst those which have been examined, is that of a mixture of oxygen and hydrogen compressed in Newmann's blow-pipe apparatus. This flame is hardly vi- sible in bright day-light, yet it instantly fuses the most refractory bodies ; and the light from solid bodies ignited in it is so vivid as to be painful to the eye. This application certainly originated from Sir H. Davy's discovery, that the explosion from oxygen and hydrogen would

not communicate through very small apertures, and he himself first tried the experiment with a fine glass capillary tube. The flame was not visible at the end of this tube, being overpowered by the brilliant star of the glass, ignited at the aperture.

3. ' Of the heat disengaged by different com- bustibles in the act of burning. — Lavoisier, Craw- ford, Dalton,'and Kumford, in succession, made experiments to determine the quantity of heat evolved in the combustion of various bodies. The apparatus used by the last was perfectly simple, and perhaps the most precise of the whole. The heat was conducted by flattened pipes of metal into the heart of a body of water, and was measured by the temperature imparted. Tin following is a general table of results : —

Substances burned, 1 Ib.

Oxygen consumed in Ibs.

Ice melted in Ibs.

Lavoisier.

Crawford

Dalton.

Kumford .

Hydrogen .... Carbureted hydrogen Olefiant gas . . . Carbonic oxide . .
Olive oil .... Rape oil .... Wax

7-5

4 3-50 0-58 3-00 3-0 3-0 3-0

2-0?

3

1-3 2-66 1-00

295-6

149

133 96

100 96-5

480

89 97

69

320 8.5 88 25 104

104 104 60 58 62

6(40 20 70

42

94-07 124-10 126-24 111-58

67-47 107-03 97-83

Tallow Oil of turpentine . .

Ether, sulphuric . . Naphtha .... Phosphorus . . . Charcoal .... Sulphur

Camphor .... Caoutchouc . . .

‘ The discrepancies in the preceding table are sufficient to show the necessity of new experi- ments on the subject. Count Rumford made a series of experiments on the heat given out during the combustion of different woods. He found that one pound of wood by burning, pro- duced as much heat as would have melted from about thirty-four to fifty-four pounds of ice. The average quantity is about forty. MM. Cle- ment and Desormes find that woods give out heat in the ratio of their respective quantities of carbon ; which they state to be equal to one- half of their total weight Hence they assign forty-eight pounds as the quantity of ice melted, in burning one of wood. In treating of acetic acid and carbon, I have already taken occasion to state, that they appear probably to overrate the proportion of carbon in woods.

‘ The preceding table is incorrectly given in several respects by our systematic writers ; Dr. Thomson, for example, states, that one pound of hydrogen consumes only six pounds of oxygen, though the saturating proportion assigned by him is eight pounds. The proportions of oxygen consumed by olive oil, phosphorus, charcoal, and sulphur, are all in like manner erjoneous. la vol. i. p. 184, of Dr. Black’s Lectures, we

have the following notes : ‘ One hundred pounds weight of the best Newcastle coal, when applied by the most judiciously constructed furnace, will convert about 1ˆ wine hogsheads of water into steam, that supports the pressure of the atmos- phere.’ 1£ hogsheads of water weigh about 790 pounds. Hence one part of coal will convert nearly eight parts of water into steam. Count Rumford says, that the heat generated in the combustion of one pound of pit-coai, would make 36ˆ pounds of ice-cold water boil. But we know that it requires fully 5J times as much heat to convert the boiling water into steam.

Therefore, -—– =: 6|, is the weight of water

O’o

that would be converted into steam by one pound of coal. Mr. Watt found that it requires eight feet surface of boiler to be exposed to fire to boil off one cubic foot of water per hour, and that a bushel, or eighty-four pounds of Newcastle coal, so applied, will boil off from eight to twelve cubic feet. He rated the heat, expended in boiling off a cubic foot of water, to be about six times as much as would bring it to a boiling heat from the medium temperature, 55°, in this climate. The mean quantity is ten cubic

fefit, which weigh 625 pounds. Hence one pound of coal

2.34

COMBUSTION.

burnt is equivalent to boil off in steam nearly 7£ pounds of water, at the temperature of 55°. In situations where wood was employed for fuel to Mr. Watt's engines, he allowed three times the weight of it, that he did of Newcastle coal. The cubical coal of the Glasgow coal district, is reckoned to have only three-fourths the calorific power of the Newcastle coal ; and the small coal or culm require to be used in double weight, to produce an equal heat with the larger pieces. A bushel of Newcastle coal is equivalent to a hun- dred weight of the Glasgow.*

' I shall now describe the experiments recently made on this subject by Sir. H. Davy, subser- vient to his researches on the nature of flame. A mercurial gas-holder, furnished with a system of stop-cocks, terminated in a strong tube of platinum, having a minute aperture. Above this was fixed a copper cup filled with olive oil, in which a thermometer was placed. The oil was heated to 212°, to prevent any difference in the communication of heat, by the condensation of aqueous vapor : the pressure was the same for the different gases ; and they were consumed as nearly as possible in the same lime, and the flame applied to the same point of the copper cup, the bottom of which was wiped after each experiment. The results were as follows : —

Substances.

Rise of ther. from 212° to

Oxygen consumed.

Ratios of heat.

Olefiant gas,

270°

6-0

9-66

Hydrogen,

238

1-0

26-0

Sulph. hydrogen,

232

3‘0

6-66

Coal gas,

236

4-0

6-00

Carbonic oxide,

218

i-o

6-00

‘ The data on which Sir. H. calculates the ratios of heat, are the elevations of temperature and the quantities of oxygen consumed conjointly. We see that hydrogen produces more heat in combustion than any of its compounds, a fact accordant with Mr. Dalton’s results in the former table ; only Sir H. Davy’s ratio is more than double that of Mr. Dalton’s, as to hydrogen, and carbureted hydrogen. On this point, however, Sir H. with his usual sagacity remarks, that it will be useless to reason upon the ratios as exact, for charcoal was deposited from both the olefiant gas and coal gas during the experi- ment, and much sulphur was deposited from the sulphureted hydrogen. It confirms, however, the general conclusions, and proves that hy- drogen stands at the head of the scale, and car- bonic oxide at the bottom. It might at first view be imagined, that, according to this scale, the flame of carbonic oxide ought to be extin- guished by rarefaction at the same degree as that of carbureted hydrogen ; but it must be remembered, as has been already shown, that carbonic oxide is a much more easily kindled, a more ascendible gas.

‘4. Of the causes which modify or extinguish combustion or flame. The earlier experimenters upon the Boylean vacuum observed, that flame

ceased in highly rarefied air ; but the degree of rarefaction necessary for

this effect has been dif- ferently stated. On this point, Sir H. Davy's investigations are peculiarly beautiful and in- structive. When hydrogen gas, slowly produced from a proper mixture, was inflamed at a fine orifice of a glass tube, as in Priestley's philo- sophical candle, so as to make a jet of flame of about l-6th of an inch in height, and introduced under the receiver of an air-pump, containing from 200 to 300 cubical inches of air, the flame enlarged as the receiver became exhausted ; and when the gauge indicated a pressure between four and five times less than that of the atmos- phere, was at its maximum of size; it then gradually diminished below, but burned above, till its pressure was between seven and eight times less ; when it became extinguished.

' To ascertain whether the effect depended upon the deficiency of oxygen, he used a larger jet with the same apparatus, when the flame, to his surprise, burned longer ; even when the at- mosphere was rarefied ten times ; and this in repeated trials. When the larger jet was used, the point of the glass tube became white-hot, and continued red-hot till the flame was extin- guished. It immediately occurred to him, that the heat communicated to the gas by this tube, was the cause that the combustion continued longer in the last trials when the larger flame was used j and the following experiments con- firmed the conclusion. A piece of wire of plati- num was coiled round the top of the tube, so as to reach into and above the flame. The jet of gas of l-6th of an inch in height was lighted, and the exhaustion made. The wire of platinum soon became white-hot in the centre of the flame, and a small point of wire near the top fused. It continued white-hot till the pressure was six times less. When it was ten times it continued red-hot at the upper part, and, as long as it was dull red, the gas, though certainly extinguished below, continued to burn in contact with the hot wire ; and the combustion did not cease until the pressure was reduced thirteen times. It ap- pears from this result, that the flame of hydro- gen is extinguished in rarefied atmospheres, only when the heat it produces is insufficient to keep up the combustion ; which appears to be when it is incapable of communicating visible ignition to metal ; and as this is the temperature required for the inflammation of hydrogen (see section 1), at common pressure, it appears that its com- bustibility is neither diminished nor increased by rarefaction from the removal of pressure.

' According to this view, with respect to hy- drogen, it should follow, that those amongst other combustible bodies which require less heat for their ascension, ought to burn in more rarefied air than those that require more heat ; and those which produce much heat in their combustion ought to burn, other circumstances being the same, in more rarefied air than those that pro- duce little heat. Every experiment since made confirms tlr,ese conclusions. Thus olefiant gas, which approaches Dearly to hydrogen, in the temperature produced by its combustion, ami which does not require a

*much higher tempera- ture for*its ascension, when its flame was made*

by a jet of gas from a bladder connected with a small tube, furnished with a wire of platinum, under the same circumstances as hydrogen, ceased to bum when the pressure was diminished between ten and eleven times. And the flames of alcohol and of the wax taper, which require a greater consumption of caloric for the volatili- sation and decomposition of their combustible matter, were extinguished when the pressure was five or six times less without the wire of plati- num, and seven or eight times less when the wire was kept in the flame. Light carbureted hydrogen, which produces, as we have seen, less heat in combustion than any of the common combustible gases, except carbonic oxide, and which requires a higher temperature for its as- cension than any other, has its flame extinguished, even though the tube was furnished with the wire when the pressure was below l-4th. The flame of carbonic oxide, which, though it produces little heat in combustion, is as ascendible as hy- drogen, burned when the wire was used, the pressure being l-6th. The flame of sulphureted hydrogen, the heat of which is in some measure carried off by the sulphur produced by its de- composition during its combustion in rare air, when burned in the same apparatus as the ole- fiant and other gases, was extinguished when the pressure was l-7th. Sulphur, which requires a lower temperature for its accen»ion than any common inflammable substance, except phos- phorus, burned with a very feeble blue flame in air rarefied fifteen times ; and at this pressure the flame heated a wire of platinum to dull red- ness ; nor was it extinguished till the pressure was reduced to l-20th. From the preceding experimental facts we may infer, that the taper would be extinguished at a height of between nine and ten miles, hydrogen between twelve and thirteen, and sulphur between fifteen and sixteen. Phosphorus, as has been shown by M. Van Marum, burns in an atmosphere rarefied sixty times. Sir H. Davy found, that phosphu- reted hydrogen produced a flash of light when admitted into the best vacuum that could be made by an excellent pump of Nairne's con- struction. Chlorine and hydrogen inflame at a much lower temperature than oxygen and hydro- gen. Hence the former mixture explodes when rarefied twenty-four times; the latter ceases to explode when rarefied eighteen times. Heat ex- trinsically applied, carries on combustion, when it would otherwise be extinguished. Camphor in a thick metallic tube, which disperses the heat, ceases to burn in air rarefied six times ; in a glass tube which becomes ignited, the flame of camphor exists under a ninefold rarefaction. Contact with a red-hot iron makes naphtha glow with a lambent flame at a rarefaction of thirty times; though, without foreign heat, its flame dies at an atmospheric rarefaction of six. If the mixture of oxygen

and hydrogen, expanded to its non-explosive tenuity, be exposed to the ig- tition of a glass tube, the electric spark will then cause an explosion, at least in the heated portion of the gases.

'We shall now, detail briefly the effects of ra- refaction by heat on combustion and explosion. We know that air, by being heated from 3° to

212° expands 3-8ths, or eight parts become eleven. Sir H. Davy justly estimates the tempe- rature corresponding to an increase of one volume of air at 212°, into two volumes and a half, (which took place when the enclosing glass tube began to soften with ignition), at 1035° Fahren- heit. Sir H. introduced into a small glass tube, over well boiled mercury, a mixture of two parts of hydrogen and one of oxygen, and heated the tube by a spirit-lamp, till the volume of the gas was increased from 1 to 2-5. By means of a blow-pipe and another lamp, he made the upper part of the tube red-hot, when an explosion instantly took place. This experiment refutes the notions of M. de Grotthus, on the non-ex- plosiveness of that mixture, when expanded by heat. He introduced into a bladder a mixture of oxygen and hydrogen, and connected this bladder with a thick glass tube of about l-6th of an inch in diameter, and three feet long, curved so that it could be gradually heated in a charcoal furnace : two spirit-lamps were placed under the tube, where it entered the charcoal fire, and the mixture was very slowly passed through. An explosion took place before the tube was red-hot. This fine experiment shows, that expansion by heat, instead of diminishing the accendibility of gases, enables them, on the contrary, to explode apparently at a lower temperature ; which seems perfectly reasonable, as a part of the heat com- municated by any ignited body, must be lost in gradually raising the temperature. M. de Grot- thus has stated, that if a glowing coal be brought into contact with a mixture of oxygen and hy- drogen, it only rarefies them, but does not ex- plode them. This depends on the degree of heat communicated by the coal. If it is red in day-light, and free from ashes, it uniformly explodes the mixture. If its redness be barely visible in the shade, it will not explode them, but cause their slow combination. The general phe- nomenon is wholly unconnected with rarefaction, as is shown by the following circumstance : when the heat is greatest, and before the invisible com- bination is completed, if an iron wire, heated to whiteness, be placed upon the coal within the vessel, the mixture instantly explodes.

' Subcarbureted hydrogen, or fire-damp, as has been shown, requires a very strong heat for its inflammation. It therefore offered a good sub- stance for an experiment on the effect of high de- grees of rarefaction, by heat, on combustion. One part of this gas, and eight of air, were mixed together, and introduced into a bladder furnished with a capillary tube. This tube was heated till it began to melt. The mixture was then passed through it

into the flame of a spirit- lamp, when it took fire, and burned with its own peculiar explosive light, beyond the flame of the lamp; and when withdrawn, though the aperture was quite white-hot, it continued to burn vividly. That the compression in one part of an explosive mixture, produced by the sudden expansion of another part by heat, or the electric spark, is not the cause of combustion, as has been supposed by Mr. Higgins, M. Bertholiet, and others, ap- pears to be evident from what has been stated, and is rendered still more so by the following facts : — A mixture of biphosphureted hydrogea

gas and oxygen, which explode at a heat a little above that of boiling water, was confined by mer- cury, and very gradually heated on a sand bath. When the temperature of the mercury was 242°, the mixture exploded. A similar mixture was placed in a receiver communicating with a con- densing syringe, and condensed over mercury till it occupied only one-fifth of its original volume. No explosion took place, and no chemical change had occurred ; for, when its volume was restored, it was instantly exploded by the spirit-lamp. It would appear then that the heat given out by the compression of gases, is the real cause of the combustion which it produces ; and that at cer- tain elevations of temperature, whether in rare- fied or compressed atmospheres, explosion or combustion occurs ; that is, bodies combine with the production of heat and light. Since it ap- pears that gaseous matter acquires a double, triple, quadruple, &c., bulk, by the successive increments of 480° Fahrenheit, 2 X 480°, 3 X 480°, &c., we may gain approximations to the temperature of flame, by measuring the expansion of a gaseous mixture at the instant of explosion, provided the resulting compound gas occupy, after cooling, the same bulk as the sum of its constituents. Now this is the case with chlorine and hydrogen, and with prussine and oxygen. The latter detonated in the proportion of one to two, in a tube of about two-fifths of an inch diameter, displaced a quantity of water, which demonstrated an expansion of fifteen times their original bulk. Hence 15 x 480° — 7200° of Fahrenheit ; and the real temperature is probably

much higher, for heat must be lost by communi- cation to the tube and the water. The heat of the gaseous carbon in combustion in this gas, ap- pears more intense than that of hydrogen ; for it was found that a filament of platinum was fused by a flame of prussine (cyanogen) in the air, which was not fused by a similar flame of hydro- gen. We have thus detailed the modifications produced in combustion by rarefaction, mechani- cal and calorific. It remains on this head to state the effects of the mixture of

different gases, and those of different cooling orifices, on flame.

‘ In Sir H. Davy’s first paper on the fire-damp of coal mines, he mentioned that carbonic acid had a greater influence in destroying the expiosrve power of mixtures of fire-damp and air, than azote ; and he supposed the cause to be its greater density and capacity for heat, in consequence of which it might exert a greater cooling agency, and thus prevent the temperature of the mixture from being raised to that degree necessary for combustion. He subsequently made a series of experiments with the view of determining how far this idea is correct, and for the purpose of ascertaining the general phenomena of the effects qf the mixture of gaseous substances upon ex- plosion and combustion. lie took given volumes of a mixture of two parts of hydrogen and one part of oxygen by measure, and, diluting them with various quantities of different elastic fluids, he ascertained at what degree of dilution the power of inflammation by a strong spark from a Leyden phial was destroyed. He found that for one of the mixture, inflammation was

Prevented

Permitted

Cooling power,

by.

with.

air, =1.

Of hydrogen

8

6

2-66

Oxygen .

9

7

1-12

Nitrous oxide

11

10

0 73 (the mean)

Subcarbureted hydrogen Sulphureted hydrogen

1 2

I

U

2-18 (coal gas)

Olefiant gas

i

i

1-6

Muriatic acid gas . .

2

14

*Chlorine ‘ ‘•. ; . ‘ **

0-66

Silicated fluoric gas

i

i

Azote ‘ .’ • .” .’ r .

1-33

*Carbonic acid . •**

0-727

The first column of the preceding table shows that other causes, besides density and capacity for heat, interfere with the phenomena. Thus nitrous oxide, which is nearly one-third denser than oxygen, and which, according to Delaroche and Berard, has a greater capacity for heat, iu the ratio of 1-3503 to 0-9765 by volume, has lower powers of preventing explosion. Hydro- gen also, which is fifteen times lighter than oxy- gen, and which in equal volumes has a smaller capacity for heat, certainly has a higher power of preventing explosion ; and olefiant gas exceeds all other gaseous substances, in a much higher ratio than could have been expected from its density and capacity.

‘ I have deduced the third column from Sir H. Davy’s experiments on the relative times in which a thermometer, heated to 160°, when

plunged into a volume of twenty-one cubic inches of the respective gases at 52°, took to cool down to 106°. Where an elastic fluid exerts a cooling influence on a solid surface, the effect must de- pend principally upon the rapidity with which its particles change their places ; but where the cooling particles are mixed throughout a mass with other gaseous particles, their effect must de- pend principally upon the power they possess of rapidly abstracting heat from the contiguous par- ticles ; and this will depend probably upon two causes, the simple abstracting power by which they become quickly heated, and their capacity for heat, which is great in proportion as their temperatures are less raised by this abstraction. The power of elastic fluids to abstract heat from solids, appears from the above experiments to be in some inverse ratio to their density j ar.d thf it,1

seems to be something in the constitution of the light gases, which enables them to carry off heat from solid surfaces in a different manner from that in which they would abstract it in gaseous mixtures, depending probably on the mobility of their parts. Those particles which are lightest must be conceived most capable of changing place, and would therefore cool solid surfaces most rapidly : in the cooling of gaseous mixtures the mobility of the particles can be of little con- sequence.

‘ Whatever be the cause of the different cooling powers of the different elastic fluids in preventing inflammation, very simple experiments show that they operate uniformly with respect to the dif- ferent species of combustion ; and that those ex- plosive mixtures, or inflammable bodies, which require least heat for their combustion, require larger quantities of the different gases to prevent the effect, and vice versa. Thus one of

chlorine, and one of hydrogen, still inflame when mixed with eighteen times their bulk of oxygen ; whereas a mixture of carbureted hydrogen and oxygen, in the proper proportions (one and two) for com- bination, have their inflammation prevented by less than three times their volume of oxygen. A wax taper was instantly extinguished in air mixed with one-tenth of silicated fluoric acid, and in air mixed with one-sixth of muriatic acid gas ; but the flame of hydrogen burned readily in those mixtures ; and in mixtures which ex- tinguished the flame of hydrogen, the flame of sulphur burned. In cases, however, in which the heat required for chemical union is very small, as in the instance of hydrogen and chlo- rine, a mixture which prevents inflammation will not prevent combination ; that is, the gases will combine without any flash. If two volumes of carbureted hydrogen be added to a mixture of one of chlorine with one of hydrogen, muriatic acid is formed throughout the mixture, and heat p-oduced, as was evident from the expansion when the spark passed, and the rapid contraction afterwards ; but the heat was so rapidly carried off by the quantity of carbureted hydrogen, that no flash was visible.

*'Experiments on combustion in condensed air, to see if the cooling power was much increased thereby, show that, as rarefaction does not di- minish considerably the heat of flame in atmos- pherical air, so neither does condensation con- siderably increase it ; a circumstance of great importance in the constitution of our atmosphere, which at all heights or depths, at which man can exijt, still preserves the same relations to com- bustion. It may be concluded from the general law, that, at high temperatures, gases not con- cerned in combustion will have less power of preventing that operation, and likewise that steam and vapor", which require a considerable heat for their formation, will have less effect in preventing combustion, particularly of those bodies requiring low temperatures, than gases at the usual heat of the atmosphere. Thus a very large quantity of steam is required to prevent sulphur from burn- ing. A mixture of oxygen and hydrogen will explode by the electric spark, though diluted with five times its volume *f steam ; and even a mixture of air and carbureted hydrogen gas, the*

least explosive of all mixtures, requires a third of steam to prevent its explosion, whereas one- fifth of azote will produce that effect. These trials were made over mercury. Heat was ap- plied to water over the mercury, and 37-5 for 100 parts — f was regarded as the correction for the expansion of the gases.*

' We shall now treat of the effects of cooling orifices on flame. The knowledge of the cool- ing power of elastic media, in preventing tilt- explosion of the fire-damp, led the illustrious English chemist to those practical researches which terminated in his grand discovery of the wire-

gause safe-lamp. The general investigation of the relation and extent of those powers, serves to elucidate the operation of wire-gause, and other tissues or systems of apertures permeable to light and air, in intercepting flame, and confirms the views originally given of this marvellous phenomenon. We have seen that flame is gas-. – ous matter, heated so highly as to be luminous, and that to a degree of temperature beyond the white heat of solid bodies ; for air not luminous will communicate this degree of heat. When an attempt is made to pass flame through a very fine mesh of wire-gause of the common temper- ature, the gause cools each portion of the elastic matter that passes through it, so as to reduce its temperature below that degree at which it is lu- minous. This diminution of temperature is pro- portional to the smallness of the mesh, and to the mass of the metal. The power of a metallic or other tissue to prevent explosion, will depend upon the heat required to produce the combus- tion, as compared with that acquired by the tis- sue. Hence, the flame of the most inflammable substances, and of those that produce most heat in combustion, will pass through a metallic tis- sue, that will interrupt the flame of less inflam- mable substances, or, those that produce littU; heat in combustion. Or, the tissue being the same, and impermeable to alt flames at common temperatures, the flames of the most combustible substances, and of those which produce most heat, will most readily pass through it when it is heated, and each will pass through it at a different degree of temperature. In short, all the circum- stances which apply to the effect of cooling mix- tures upon flame, will apply to cooling perforated surfaces. Thus, the flame of phosphureted hy- drogen, at common temperatures, will pass through a tissue sufficiently large, not to be im- mediately choaked up by the phosphoric acid formed, and the phosphorus deposited. If a tissue, containing above 700 apertures to the square inch, be held over the flame of phos- phorus or phosphureted hydrogen, it does not transmit the flame till it is sufficiently heated to enable the phosphorus to pass through it in vapor. Phosphureted hydrogen is decomposed by flame, and acts exactly like phosphorus. In like raan- mer, a tissue of 100 apertures to the square inch, made of a wire of one-sixtieth, will at common temperatures, intercept the flame of a spirit-lamp, but not that of hydrogen. But when strongly heated, it no longer arrests the flame of alcohol. A tissue which will not interrupt the flame of hydrogen when red-hot, will still intercept that of olefiant gas ; and a heated tissue, which would

communicate explosion from a mixture of olefiant gas and air, will stop an explosion from a mix- ture of fire-damp, or carbureted hydrogen. The latter gas requires a considerable mass of heated metal to inflame it, or contact

with an extensive heated surface. An iron-wire of one-twentieth of an inch, and eight inches long, red-hot, when held perpendicularly in a stream of coal gas, did not inflame it ; nor did a short wire of one- sixth of an inch produce the effect, when held horizontally. But wire of the latter size, when six inches of it were red-hot, and when it was held perpendicularly in a bottle containing an explosive mixture, so that heat was communi- cated successively to portions of the gas, pro- duced its explosion.

*'The scale of gaseous accension, given in the first section, explains why so fine a mesh of wire is required to hinder the explosion from hydrogen and oxygen to pass ; and why so coarse a texture and wire control the explosion of fire-damp. The general doctrine, indeed, of the operation of wire-gause, cannot be better elucidated, than in its effects upon the flame of sulphur. When wire-gause of 600 or 700 apertures to the square inch, is held over the flame, fumes of condensed sulphur immediately come through it, and the flame is intercepted. TheJ fumes continue for some instants, but on the increase of the heat they diminish ; and at the moment when they disappear, which is long before the gause becomes red-hot, the flame passes; the temperature at which sulphur burns being that at which it is gaseous. Where rapid currents of explosive mixtures, however, are made to act upon wire- gause, it is of course much more rapidly heated ; and therefore, the same mesh which arrests the flames of explosive mixtures at rest, will suffer them to pass when in rapid motion. But, by in- creasing the cooling surface, by diminishing the apertures in size, or increasing their depth, all flames, however rapid their motion, may be ar- rested. Precisely the same law applies tc explo- sions acting in close vessels. Very minute aper- tures, when they are only few in number, will permit explosions to pass, which a*re arrested by much larger apertures when they fill a whole sur- face. A small aperture was drilled at the bottom of a wire-gause lamp, in the cylindrical ring, which confines the gause. This, though less than one-eighteenth of an inch in diameter, trans- mitted the flame, and fired the external atmos- phere, in consequence of the whole force of the explosion of the thin stratum of the mixture in- cluded within the cylinder, driving the flame through the aperture. Had the whole ring, how- ever, been composed of such apertuies separated by wires, it would have been perfectly safe.*

'Nothing can demonstrate more decidedly, than these simple facts and observations, that the interruption of flame, by solid tissues, permeable to light and air, depends upon no recondite or mysterious cause, but on their cooling powers, simply considered as such. When a light, in- cluded in a cage of wire-gause, is introduced into an explosive atmosphere of fire-damp at rest, the maximum of heat is soon obtained : the ra- diating power of the wire, and the cooling effect of the atmosphere, more efficient from the ad-

mixture of inflammable air, prevent it from eve arriving at a temperature equal to that of dull redness. In rapid currents of explosive mixtures of fire-damp, which heat common gause to a higher temperature, twilled-gause, in which the radiating surface is considerably greater, and the circulation of air less, preserves an equable tem- perature. Indeed, the heat communicated to the wire by combustion of the fire-damp in wire- gause lamps, is completely in the power of the manufacturer. By diminishing the apertures, and increasing the mass of metal, or the radiating surface, it may be diminished to any extent. Thick twilled gause, made of wires one-fortieth, sixteen to the warp, and thirty to the weft, ri- vetted to the screw to prevent the possibility of displacement, forms a lamp cage, which, from its flexibility, cannot be broken, and from its strength cannot be crushed, except by a very violent blow. The lamp which has been found most convenient for the miner, is that composed of a cylinder of strong wire-gause, fastened round the flame by a screw, and in which the wick is trimmed by a wire passing through a safe aperture. Such have now been used for many years, in the most dangerous mines of England, without any acci- dent. Whatever explosive disasters have hap- pened since, may be imputed to the neglect, or gross and culpable mismanagement, of that almost infallible protector. See COAL and LAMP

‘ 5. We have now arrived at the most curious of all Sir H.‘s discoveries relative to fire, namely, invisible combustion. On passing mixtures of hydrogen and oxygen through tubes heated be- low redness, steam appeared to be formed with- out any combustion. This led him to expose mixtures of oxygen and hydrogen to heat, in tubes, in which they were confined by fluid fusi- ble metal. He found, that by carefully applying a heat between the boiling point of mercury, which is not sufficient for the effect, and a heat approaching to the greatest heat that can be given without making glass luminous in dark- ness, the combination was effected without any violence, and without any light; and com- mencing with 212, the volume of steam formed at the point of combination appealed exactly equal to that of the original gases. So that the first effect, in experiments of this kind, is an ex- pansion, afterwards a contraction, and then the restoration of the primitive volume. When this change is going on, if the heat be quickly raised to redness, an explosion takes place, with small quantities of gas, the invisible combustion is completed in less than a minute. It is pro- bable that the slow combination without com- bustion, long ago observed with respect to hydrogen chlorine, oxygen and metals, will happen at certain temperatures with most sub- stances that unite by heat. On trying charcoal, he found, that at a temperature which appeared to be a little above the boiling point of quick- silver, it converted oxygen pretty rapidly into carbonic acid, without any luminous appearance; and at a dull red heat, the elements of olefiant gas combined in a similar manner

with oxygen, slowly and without ˆexplosion. The effect 01 the slow combination of oxygen and hydrogen is not connected with their rarefaction by heat,

for it took place when the gases were confined in a tube by fusible metal, rendered solid at its upper surface ; and certainly as rapidly, and without any appearance of light. As the tem- perature of flame has been shown to be infinitely higher than that necessary for the ignition of solid bodies, it appeared probable that, in these silent combinations of gaseous bodies, when the increase of temperature may not be sufficient to render the gaseous matters themselves luminous, yet it still might be adequate to ignite solid matters exposed to them.

‘ Sir H. Davy had devised several experiments on this subject. He had intended to expose fine wires to oxygen and olefiant gas, and to oxygen and hydrogen, during their slow combination under different circumstances, when he was led, accidentally, to the knowledge of the fact, and at the same time to the discovery, of a new and curious series of phenomena. He was making experiments on the increase of the limits of the combustibility of gaseous mixtures of coal gas and air, by increase of temperature. For this purpose a small wire-gause safe-lamp, with some fine wire of platinum fixed above the flame, was introduced into a combustible mixture, contain- ing the maximum of coal gas. When the inflam- mation had taken place in the wire-gause cylin- der he threw in more coal gas, expecting that the heat acquired by the mixed gas, in passing through the wire-gause, would prevent the excess from extinguishing the flame. The I une con- tinued for two or three seconds after th ; coal gas was introduced ; and, when it was extinguished, that part of the wire of platinum which had been hottest remained ignited, and continued so for many minutes. When it was removed into a dark room it was evident that there was no flame in the cylinder. It was immediately obvious that this was the result which • he had hoped to attain by other methods, and the oxygen and coal gas in contact with the hot wire combined without flame, and yet produced heat enough to preserve the wire ignited and keep up their own secret combustion. The truth of this conclucion was proved by introducing a heated wire of platinum into a similar mixture. It immediately became ignited nearly to whiteness, as if it had been in actual combustion itself, and continued glowin g for a long while. When it was extinguished the inflammability of the mixture was found to be entirely destroyed. A temperature much below ignition only was necessary for producing this curious phenomenon, and the wire was repeat- edly taken out and cooled

in the atmosphere till it ceased to be visibly red ; yet, when admitted again, it instantly became red-hot. The same phenomena were produced with mixtures- of olefiant gas and air, carbonic oxide, prussic gas, and hydrogen ; and in this last case with a rapid production of water. The degree of heat could be regulated by the thickness of the wire. When of the same thickness, the wire became more ig- nited in hydrogen than in mixtures of olefiant gas, and more in mixtures of olefiant gas than in those of gaseous oxide of carbon.

‘ When the wire was very fine, as l-80th of an inch in diameter, its heat increased in very combustible mixtures, so as to explode them.

The same wire, in less combustible mixtures, continued merely bright red, or dull red, accoid- ing to the nature of the mixture. In mixtuies not explosive by flame within certain limits, these curious phenomena took place, whether the air or the inflammable gas was in excess. The same circumstances occurred with certain inflamma- ble vapors. Those of ether, alcohol, oil of tur- pentine, naphtha, and camphor, have been tried. There cannot be a better mode of illustrating the fact than by an experiment on the vapor of ether or alcohol, which any person may make in a. minute. Let a drop of ether be thrown into a cold glass, or a drop of alcohol into a warm one ; let a few coils of wire of platinum, of the l-60th or l-70th of an inch, be heated at a hot poker or a candle, and let it be brought into the glass : in some part of the glass it will become glowing, almost white-hot, and will continue so as long as a sufficient quantity of vapor and of air remain in the glass. When the experiment on the slow combustion of ether is made in the dark, a pale phosphorescent light is perceived above the wire, which is, of course, most distinct when the wire ceases to be ignited. This appearance is con- nected with the formation of a peculiar acrid volatile substance, possessed of acid properties. The above experiment has been ingeniously varied by sticking loosely on the wick of a spirit- lamp a coil of fine platinum wire, about TJ0 of an inch in thickness. There should be about sixteen spiral turns, one-half of which should suiround the wick, and the other rise above it. Having lighted the lamp for an instant, on blow- ing it out the wire will become brightly ignited, and will continue to glow as long as any alcohol remains. A cylinder of camphor may be substi- tuted for both wick and spirit. The ignition is very bright, and exhales an odoriferous vapor. With oil of turpentine the lamp burns, invisibly, without igniting the wire ; for a dense column of vapor is perceived to ascend from the wire, diffusing a smell by many thought agreeable. By adding essential oils in small quantities to the alcohol, various aromas may be made to perfume the air of an apartment. But the film of char- coal which in this case collects, on the platina coil, must be removed, by ignition over another spirit flame, otherwise the effect ceases after a certain time. The chemical changes in general, produced by slow combustion, appear worthy of

investigation. A wire of platinum introduced, under the usual circumstances, into a mixture of prussic gas (cyanogen), and oxygen in excess, became ignited to whiteness, and the yellow va- pors of nitrous acid were observed in the mixture. In a mixture of olefiant gas, non-explosive from the excess of inflammable gas, much carbonic oxide was formed. Platinum and palladium, metals of low conducting powers, and small ca- pacities for heat, alone succeed in producing the above phenomena. A film of carbon or sulphur deprives even these metals of this property. Thin laminae of the metals, if their form admits of a free circulation of air, answer as well as fine wires ; and a large surface of platinum may be made red-hot in the vapor of ether, or in a com- bustible mixture of coal gas and air.

'Sir H. Davy made an admirable practical

application of these new facts. By hanging some coils of fine platinum wire, or a fine sheet of platinum or palladium, above the wick of the safe-lamp in the wire-gause cylinder, he has supplied the coal-miner with light in mixtures of fire-damp no longer explosive. Should the flame be extinguished, by the quantity of fire- damp, the glow of the platinum will continue to guide him; and, by placing the lamp in different parts of the gallery, the relative brightness of the wire will show the state of the atmosphere in these parts. Nor can there be any danger, with respect to respiration, wherever the wire con- tinues ignited ; for even this phenomenon ceases when the foul air forms about two-fifths of the volume of the atmosphere. Into a wire-gause safe-lamp a small cage of fine wire of platinum, of l-70th of an inch in thickness, was introduced, and fixed by means of a thick wire of platinum, about two inches above the lighted wick. This apparatus was placed in a large receiver, in which, by means of a gas-holder, the air could be contaminated to any extent with coal gas. As soon as there was a slight admixture of coal gas the platinum became ignited. The ignition continued to increase till the flame of the wick was extinguished, and till the whole cylinder became filled with flame. It then diminished. When the quantity of coal gas was increased, so as to extinguish the flame, the cage of platinum, at the moment of extinction, became white-hot, presenting a most brilliant light. By increasing the quantity of the coal gas still further, the ig- nition of the platinum became less vivid. When its light was barely sensible small quantities of air were admitted, and it speedily increased. By regulating the admission of coal gas and air it again became white-hot, and soon after lighted the flame in the cylinder, which as usual, by the addition of more atmospheric air,

rekindled the flame of the wick.

‘ This beautiful experiment has been very often repeated, and always with the same results. When the wire for the support of the cage, whe- ther of platinum, silver, or copper, was very thick it retained sufficient heat to enable the fine platinum wire to rekindle in a proper mixture, half a minute after its light had been entirely destroyed by an atmosphere of pure coal gas. The phenomenon of the ignition of the platinum takes place feebly in a mixture consisting of two of air and one of coal gas; and brilliantly in a mixture consisting of three of air and one of coal gas. The greater the quantity of heat produced, the greater may be the quantity of the coal gas, so that a large tissue of wire made white-hot will burn in a more inflammable mixture (that is containing more inflammable gas) than one made red-hot. If a mixture of three parts of air and one of fire-damp be introduced into a bottle, and inflamed at its point of contact with the at- mosphere, it will not explode, but will burn like a pure inflammable substance. If a fine wire of platinum, coiled at its end, be slowly passed through the flame, it will continue ignited in the body of the mixture, and the same gaseous mat- ter will be found to be inflammable, and to be a supporter of combustion. When a large cage of wire of platinum is introduced into a very small

safe-lamp, even explosive mixtures of fire-damp are burned without flame; and, by placing any cage of platinum in the bottom of the lamp round the wick, the wire is prevented from being smoked. Care should be taken, of course, that no filament of the platinum protrude through the wire-gause. It is truly wonderful that a slender tissue of platinum, which does not cost one shil- ling, and which is imperishable, should afford in the dark and dangerous recesses of a coal-mine, a most brilliant light, perfectly safe in atmos- pheres in which the flame of the safety-lamp is extinguished ; and which glows in every mixture of carbureted hydrogen gas that is respirable. When the atmosphere becomes again explosive the flame is relighted. It is no less surprising, that thus also we can burn any inflammable va- vapor, either with or without flame, at pleasure, and make a slender wire consume it, either with a white or red heat.’

COMBUSTION, SPONTANEOUS. The sponta- neous combustion of the human body is a topic of singular interest, and great scientific curiosity. When we reflect on the great quantity of wood or coals required for the burning of a dead hu- man body, and the slowness with which this pro- cess is effected, its spontaneous occurrence, and rapid completion in the living body, at a mean temperature, and without the sensible interven- tion of any ignited material, is a circumstance not lightly to be credited. Nothing, however, is more certain than that such a phenomenon does take place ; and, to philosophy, the contempla- tion of it is highly interesting.

Accidents of this kind, indeed, involve many important questions : the character or life of an innocent person may be implicated in their investigation. Hence arises the necessity of acquiring precise know- ledge respecting their nature, so that we may not rashly attribute to premeditated crime, the con- sequences resulting from a very different cause.

This remark is illustrated by the history of a man, whose wife perished at Rheims, in 1725, by the mysterious operation of spontaneous com- bustion. Her remains were discovered in the kitchen, about a foot and a-half from the fire- place : some parts of the head and lower limbs only, with a few of the joints of the back-bone, had escaped the conflagration. A young and handsome female lived in the house, and horrible suspicions were awakened against the husband, who underwent all the rigor of a criminal pro- secution. He appealed from his first sentence ; and, in the interval, the woman's death was ascer- tained to have been occasioned by spontaneous combustion: the unfortunate man, in conse- quence, was delivered at once from infamy and the scaffold.

It is unnecessary to revert for facts demonstra- tive of spontaneous combustion, to those remote periods when the mind, credulous from its igno- rance of the physical sciences, blindly admitted the reality of appearances the most strange and incredible : later times have exhibited instances of it, sufficiently numerous and authentic to dis- sipate every doubt respecting its actual occur- rence. In attempting to explain these, it is proper to bear in view, that they take place in the liviug body ; and consequently, that we

must banish all explanations founded exclusively on the physical and chemical laws which regu- late inanimate bodies.

From the observations already on record, it appears, that almost all the victims of sponta- neous combustion were addicted to the use of strong spirits. Hence, it has been concluded, that the different parts of the bodies of such per- sons had undergone an alcoholic impregnation, and thus contracted a degree of combustibility sufficient to render them easily inflammable. This opinion seems, at first sight, to be support- ed by the dissection of persons who have died of intoxication, and whose bodies gave out a spiri- tuous odor. It has been remarked, also, that the flame m-these combustions exactly resembles burning spirits; that the individuals to whom this accident happens, were commonly very fat or very thin ; and that, in the former case, the fat supports the flame, while in the latter, com- bustion

is supported by the deficiency of mois- ture. But, on the other hand, can we, in sound physiology, admit the assimilation of any given substance, without its first undsrgoing certain changes? Vitality, or the living principle, de- stroys some combinations, and forms others. This faculty may, indeed, be modified by dis- ease; yet it never entirely ceases but with life. Wf> may even regard, as characteristic of vital action, the power it possesses of forming bodies more complicated than the products of inorganic nature. By this action are frequently modified the substances which come to it from the external world ; and it then produces bodies, regarded by chemists as incapable of decomposition. Cal- careous earth ha? been obtained from cones of pine growing upon a barren sand, which con- tained not one atom of that substance ; and ve- getables yield earthy constituents which form no part of the soil that gives them nourishment. Certain substances, nevertheless, preserve some of their properties after being assimilated, such as color and odor. Madder, when taken into the stomach, reddens the bones ; log-wood communi- cates to the urine a red, and rhubarb a yellow tinge. Agaric, with which the natives of Kamts- chatka intoxicate themselves, imparts its inebri- ating quality to their urine ; vnd, by frictions with garlic, the breath is impregnated with the smell of this vegetable. But, it may be asked, are these substances really in the same state of combination, wherein they existed previously to their being submitted to digestion or absorption? Even on the supposition that alcohol might tra- verse the animated body, as it soaks a sponge, would not its extreme affinity for water oppose an insurmountable obstacle to its combustion ? Do not, moreover, the inflammable eructations sometimes observed in gin-drinkers, show that the spirituous liquor has already undergone some modification in the stomach; since the vapor of ardent spirits is not susceptible of taking fire by simple contact with the atmosphere. Anatomi- cal inspection of dead bodies does not afford in- ferences more conclusive, provided the gin, taken abundantly a short time before death, has not penetrated their structure, when that structure could no longer offer any vital resistance to its progress. This last supposition is confirmed by You VI.

the dissection of several gin-drinkers of both sexes in whom no alcoholic odor, but inflammation of the stomach, could be detected. No weight, in fine, can be allowed to the resemblance of the flame, in human combustions, to that of burning alcohol, since it is common also to other in- flammable substances, as hydrogen gas, and its combinations with carbon and sulphur. To these objections, may be added the fact, that in- temperance cannot be imputed to all those per- sons, without exception, who have perished from spontaneous combustion. As to the state of corpulence or emaciation, it will be invariably found that the fat of the body is never suffi- ciently deprived of its aqueous part, and the wasting never sufficiently decided, to admit the supposition of a degree of dry ness

favorable to rapid conflagration.

When the different cases of spontaneous hu- man combustion have been classified, for the purpose of deducing general conditions from them, it will be found, 1. That women are much more subject to it than men ; now, it is evident, that the skin and cellular membrane of females are more tender and lax than those of man, and that women are more disposed to corpulence. 2. That spontaneous combustion has commonly occurred in aged persons, almost all those who have perished from it being past their sixtieth year. 3. That, independently of the state of de- bility proper to such age, these persons had suf- fered from particular debilitating affections, 4. That their debility must still further have been augmented by the circumstances of an inactive life. 5. That many among them were corpulent : now, corpulence, at an advanced age, almost in- variably implies a relaxed state, particularly of the system called lymphatic ; hence dropsy and constitutional infirmity are very common in such persons. 6. That the greater number of the vic- tims of spontaneous combustion, were addicted to the use of ardent spirits, 7. That, near the place of the catastrophe, has almost constantly been found an ignited body of some kind, how- ever small, as a lamp, or burning coals. 8. That the conflagration has been exceedingly rapid, and gained every part of the body ere succour could arrive. 9. That the flame was very light and unsteady, difficult of extinction by water; and only attacked the combustible substances around, when remaining for a considerable time in con- tact with them 10. That .the place where the combustion happened, exhaled a strong empy- reumatic odor ; and that the walls, ashes, and cinders, were covered with a fetid moisture and with fat. 11. That the trunk of the body, witli the exception of a few bones, was commonly consumed; and that there remained, in most cases, a portion of the head and extremities, more or less considerable : and, 12, That, in the majority of these instances, the accident has taken place at a low temperature cf the atmosphere, consequently in winter.

For a correct explanation of the singular ap- pearances now under consideration, it will be necessary, first of all, to distinguish the combus- tibility from the combustion itself, or, in other words, the cause exciting it. The combustibility of the human body becomes here, as we may

suppose, a peculiar condition; since, in the healthy state, it ranks in the class of substances most difficultly combustible. This combustibility, then, is

determined by the debility consequent upon age, diseases, bodily inactivity, and in- temperance. The abuse of strong liquors, espe- cially gin, debilitates the absorbent system in a signal degree; and this state may give rise, in certain cases, to the formation of a mass of sub- stance, alike inflammable and susceptible of ac- cumulating, in greater or less quantity, in dif- ferent parts of the body, according to their different structure. The combustible substance ought, therefore, to possess the property of pene- trating easily into the interstices of the body, and of losing nothing of its combustibility by contact with liquids. These conditions are, in no class of substances, better combined than in the inflammable gases; nor, independently of them, can the fact now claiming attention, be well explained. It is necessary, therefore, for the production of the spontaneous combustion, that an inflammable gas accumulate in the cells of the cellular membrane, as the fluid of dropsy is accumulated; and, without admitting the pre- existenc » of the whole quantity of gas requisite for the completion of the process, it may reason- ably be supposed that it terminates in giving rise to a fresh extrication of gas from those parts of the burning body surcharged with hydrogen. By this theory is obviated the objection which the absence of a previously emphysematous state in the victims of spontaneous combustion has sug- gested; with some among them, however, this state seems really to have existed.

*Hydrogen constitutes one of the principal elements of the animal body, and combinations the most various are there formed by it with ca- loric, carbon, sulphur, and phosphorus: after death, as in life, its presence is unequivocally detected. It may be useful, in this place, to review the different phenomena which, in de- monstrating that truth, connect it most intimately with the subject af spontaneous human com- bustion. A flame was observed to issue from the skin of a pig, at the moment of its being cut into with a knife ; and two eminent anatomists 'saw a vapor exhaling from the stomach of a woman whom they had just opened : it took fire on the approach of a lighted candle. A similar fact also occurred in examining the stomach of another female, who, in the four days preceding her death, had ta*en no food. In some other cases, the gas inflamed without the intervention of any ignited body, merely by contact with the atmosphere. On the opening of an ox, which had been for some time sick, an explosion took place, and flame bursting from the stomach, to the height of more than five feet, scorched the butcher, as well as a little girl who stood beside him. It lasted several minutes, and gave out a most disgusting odor. The production of hy- drogen gas, during life, cannot be doubted. It is known to be daily extricated in the bowels, and observations analagous to these just enume- rated are by no means rare. Inflammable eruc- tations frequently occur, particularly in northern regions, where persons, after an immoderate in- dulgence in gin, have been exposed to a cold*

atmosphere. Some years since, an accident of this kind befel a Bohemian peasant : he died in the presence of many witnesses, from a column of air taking fire upon its extrication from the stomach, and baffling all the ordinary means of extinction. In such cases, the decomposition of alcohol, and of animai substance contained in the stomach, has generated a quantity of phos- phureted hydrogen, which instantly inflames upon contact with atmospheric air. This pro- cess, however, extends no farther; because the other parts of the body do not possess the conditions requisite for a more general confla- gration.

Since, then, we cannot deny that the inflam- mable gases are developed in the human body, it cannot surely be going too far to admit their occasional accumulation in the cellular structure, in quantity proportioned to the laxity of that struc- ture. Hence, it happens that the softest parts, and consequently the trunk, are most subject to these gaseous accumulations. But the human body, thus rendered highly combustible, cannot yet take fire without the intervention of an in- flaming spark ; for, even admitting that part of the inflammable principle consists of phosphu- reted hydrogen gas, we are unable to explain adequately, and in all cases, the general confla- gration which ensues. By some, the presence of ignited bodies has been considered as the cause of this catastrophe ; and others even assert that, strictly speaking, what really originates in acci- dent, cannot be called spontaneous combustion. We are unable, however, from this view of the subject, to conceive how the burning should be so rapid, general, and complete, as it commonly is ; and still less, on what part of the body it is first manifested. Instances of human combustion, moreover, have occurred, in which the presence of no ignited body could be suspected. In com- paring these various considerations, with the fatal accident detailed in the subsequent history, the mind is led to regard electricity as exerting considerable influence in human combustion, or even as the occasional cause of this extraordinary phenomenon.

No one can doubt, for a moment, the ideo- electricity of many animals : and this state exists, in a very remarkable degree, with many indi- viduals of the human species. Experiments were made, during a severe frost, upon a woman whose ideo-electricity was such, that sparks issued from her hair as often as it was combed : a Leyden phial was even charged, and alcohol in- flamed, with these sparks. Sparks of electricity, indeed, have often been emitted from stockings of wool and silk, when being taken off the limbs : examples of this kind might be multiplied to an indefinite extent. Inflammable substances, ac- cumulated in the bodies of those who have pe- rished from spontaneous combustion, must, by their nature, increase the electric state. Warmth will equally favor the explosion of the inflaming sparks. Thus, the proximity of fire or a lighted candle may, in some instances, have aided the process of human combustion : in others, the

same effect may have been produced by violent exercise or other causes capable of exciting elec- tricity. The electric spark, thus developed, tra-

verses with extreme rapidity, bodies in any way impregnated with inflammable matter ; and the latter, taking fire upon every point, can no longer be quenched by the fluid parts. Thus, the ourning usually proceeds with such celerity, that the miserable victim has no time to call for as- sistance. The flame, as is proved by observa- tion, at first spreads upon the surface of the body; because there, in contact with the air of the atmosphere, it is fitted to support combustion: it is subsequently propagated to the more deep- seated parts. This theory will explain, without difficulty, the following circumstances already alluded to, and which we again detail with their reasons.

I. Women are more subject than men to spon- taneous combustion, because their more relaxed structure is favorable to gaseous accumulations.

II. Spontaneous combustion most frequently takes place in aged persons ; because such are more addicted than the young to the use of ar- dent spirits ; they employ less exercise ; and their vital energy, particularly that of the lymphatic system, is weaker.

III. The characters of the flame, its lightness, mobility, and resistance to the action of water, are those of hydrogen gas. The natural pheno- mena in the production of which this gas enjoys a principal share, as ignes fatui and certain me- teors, exhibit similar appearances.

IV. The furniture and other surrounding oc- jects are, on these occasions, little damaged ; be- cause hydrogen gas, in combustion, implicates the generality of combustible bodies, only when remaining in intimate contact with them.

V. The moisture which invariably covers the walls where the conflagration takes place, as well as the charred relics of the body, is furnished by the combustion of the hydrogen gas, and also by the evaporation of the liquids of the body itself. The oily appearance of it arises from the fat which the heat has fused ; and the foetid odor proceeds from die eiiipyreumatic oil.

VI. The trunk of the body has always suf- fered more from this kind of combustion than other parts ; this circumstance is explained by the size of its cavities, and the looseness of their cellular structure : and,

VII. Winter is the season in which spontaneous human combustion most frequently occurs ; be- cause the cold air, which is a bad conductor of electricity, favors the ideo-electric state of the animal body.

This view of its nature is founded on induc- tions afforded by many (more than 100) well authenticated histories of spontaneous human combustion, recorded by diligent and faith- ful observers, in very different eras and countries. There would be little propriety, however, in swelling the present article by unnecessary ex- tracts from these : yet there is one which posses- ses extraordinary interest, as the subject of it, having survived the accident for a time, was enabled to give an account of the various circum- stances by which it was preceded and followed. The case was published in one of the Journals of Florence, for October, 1776, by Mr. Battaglia, the surgeon who attended the unfortunate sufferer. It is related nearly in the following terms : —

‘ Gio Maria Bertholi, resiuent priest at Monte Volere, went on business to a neighbouring fair; and, having spent the day in walking about the country, arrived in the evening at Femile, in- tending to sleep at the house of his brother-in- law. Immediately on his arrival, he was conducted to his chamber at his own request, when he had a handkerchief placed between his shirt and shoulders ; and, being now left alone, he betook himself to his devotions. Scarcely had a few minutes elapsed, when an uncommon noise, mingled with cries, was heard issuing from his apartment. The people of the house were alarmed ; and rushing in, found the priest stretched upon the floor, and surrounded by a light flame, which receded as they approached, and ultimately vanished. He was instantly placed in bed, and on the following morning visited by the surgeon, who, on examination, found the skin of the right arm and fore-arm detached from the muscles, and hanging loose. From the shoulders to the thighs, the integuments were similarly injured. These detached portions of skin having been altogether removed ; and, mor- tification being perceived on the right hand, which had suffered most severely, the parts were scarified. Notwithstanding this precaution, it had fallen by the next day into a state of com- plete gangrene. On the third day, all the other scorched parts were discovered to have degene- rated into the same condition. The unhappy man complained of unquenchable thirst, and was horribly convulsed. The discharges from his bowels were putrid and bilious, and his strength was exhausted by continual vomitings, accompa- nied with delirium, and a burning fever. After lying two hours in a state of insensibility, he expired on the fourth day. While he lay in this lethargic sleep, his attendant observed, with astonishment, that putrefaction had made con- siderable progress, so that the body exhaled an intolerable odor : worms crawled from it on the bed, and the nails were spontaneously detached from the fingers of the left hand.

‘This unfortunate man informed the surgeon that first of all he had felt a blow, like that inflicted by a cudgel, upon the right arm; and that, at the same moment, he saw a light blue flame attach itself to his shirt, which was instantaneously reduced to ashes; yet his wrist-bands, at the same time, remained utterly untouched. The handkerchief, which, as formerly mentioned, had been introduced between his shoulders and shirt, was entire and free from every trace of burning. His drawers and breeches had equally escaped ; but his cap was entirely consumed, although not a hair of his head had suffered from the flame. That this flame, says Mr. Battaglia, dispersed under the form of elementary fire, had destroyed the skin, and reduced the shirt and cap to ashes, without implicating the hair of the head, is a fact which I most confidently assert. Moreover, all the symptoms of the disease were those of a severe burn. The night of the accident was calm ; the atmosphere very clear; no empyreumatic or bituminous smell ; no appearance of smoke was perceived in the chamber; but the lamp, before full of oil, was become dry, and its wick reduced to a cinder.’ Such is the outline of this very

singular history, the chief incidents of which seem quite irreconcilable with the pre-conceived views of mankind. By minds peculiarly con- structed, or habituated to peculiar modes of reflecting, it will consequently be regarded as needing a more than ordinary degree of testi- mony for its support. But it ought to be remem- bered that we have no more pre-conceived cause for doubting or believing the spontaneous com- bustion of the materials composing the human body, than of any other substances, simple or compound, in the material world around us. The reality of its occurrence, therefore, must be determined by the evidence of facts alone, and not by pre-conceived views : this, as well as all cases of the same kind have, with some minute shades of difference, been attended with the same characteristic appearances, — a fact which, inde- pendently of all other testimony, should be admitted as affording internal evidence of their authenticity.

COME, v. n., pret. came ; participle, come. Sax. coman ; Dutch, comen ; German kommen. Opposed to go, to remove from a distant to a near place; to draw near, to advance towards, to movo in any manner towards another ; implying the idea of being received by another, or of tend- ing towards

another. The word always respects the place to which the motion tends, not that place which it leaves ; yet this meaning is some- times almost evanescent and imperceptible. To advance from one stage or condition to another. After giving no fewer than sixty varieties of meaning or applications of this word, Dr. Johnson remarks : — Come is a word of which the use is various and extensive, but the radical significa- tion of tendency hitherward is uniformly pre- served. When we say he came from a place, the idea is that of returning, or arriving, or be- coming nearer ; when we say, he went from a place, we conceive simply departure, or removal to a greater distance. The butter comes ; it is passing from its former state to that which is de- sired ; it is advancing towards us. As far as each of these varieties is distinct and definite, we now present them in their proper order, with the illustrations annexed :

And troubled blood through his pale face was seen, To come and go, with tidings from the heart.

Faerie Queene. Ca°sar will come forth to-day.

Shafupeare. Julius Ceesar. •Coming to look on you, thinking you dead, I speak unto the crown as having sense.

1A. Henry IV.

The colour of the king doth come and go, Between his purpose and his conscience.

Id. King John.

By the pricking of my thumbs, Something wicked this way comas. Id. Macbeth.

Though he would after have turned his teeth upon Spain, yet he was taken order with before it came to that. Bacon.

Seditions, tumults, and seditious fames, differ no more but as brother and sister ; if it come to that, that the best actions of a state arc taken in an ill sense and traduced. /

It is reported, that if you lay good store of kernels

of grapes about the root of a vine, it will make the vine come earlier, and prosper better.

Id. Natural History. Then butter docs refuse to c;mie. And love proves cross and humoursome. Hudibras. To COME, to attain any condition or cha-

racter.

A serpent ere he comes to be a dragon, Does eat a bat. Ben Jonson's Cataline.

He wondered how she came to know What he had done and meant to do. Hudibras.

The testimony of conscience, thus informed, comes to be so authentic, and so much to be relied upon .

South. To become.

So came I a widow ;

And never shall have length of life enough To rain upon remembrance with mine eyes.

Shahspeare. Henry IV. When he returns from hunting, I will not speak with him ; say I am sick. If you come slack of former services, You shall do well. Id. King Lear.

How came the publican justified, but by a short and humble prayer ? Dupjia's Rules for Devotion.

To arrive at some act, or habit, or disposition. 'They would quickly come to have a natural abhor- rence for that which they found made them slighted.

Loche.

To become present, and no longer future.

But home he goth, he mighte not sojourne,

The day wos come that homeward he must turne.

Chaucer's Canterbury Talet. Learn to be well, or fairly make your will, You've played, and loved, and ate and drank your

fill,

Walk sober off before a sprightlier age Comes frittering on and shoves you from the stage.

Pope. In his lair,

Fixed passion holds his breath, until the hour Which shall atone for years ;

none need despair : It came, it cometh, and will come — the power To punish or forgive — in one we shall be slower.

Byron's Childe Harold.

To become present, and no longer absent. Come then, come soone, come sweetest death to me, And take away this long-lent loathed light : Sharpe be thy wounds, but sweete the medicines be That long captived souls, from weary thraldom free.

Spenser.

Come after them, for haply in my bower, Amusement, knowledge, wisdom, thou may'st gain, If I one soul improve, I have not lived in vain.

Beat tie.

Borne on the swift, though silent wings of time, Old age comes on apace to ravage all the clime. Id.

No dread of death, if with us die our foes, Save that it seems even duller than repose : Come when it will — we snatch the life of life, When lost — what recks it — by disease or strife.

Byron.

To happen ; to fall out.

The duke of Cornwall and Regan his duchess, will be here with him this night. —

— How comes that 1 Shakspeare. King Lear.

To befal as an event.

Let me alone that I may speak, and let come on me what will. Job xiii. 13.

To follow as a consequence. Those that are akin to the king, never prick their fingers but they say, there is some of the king's blood

spilt. How cornet that ? says he, that takes upon him not to conceive ; the

answer is, I am the king's poor cousin, Sir. Shakspeare. Henry IV.

To come about. To come to pass ; to fell out ; to come into being. Probably from the French vcnir a bout.

And let me speak to the yet unknowing world, how these things came about. Shakspeare.

That cherubim, which now appears as a God to the human soul, knows very well that the period will come about in eternity, when the human soul shall be as perfect as he himself now is. Addison's Spectator.

To come about. To change ; to come round.

The wind came about, and settled in the west for many days. Bacon's New Atlantis.

On better thoughts, and my urged reasons, They are come about, and won to the true side.

Ken Jonson.

To come again. To return. There came water thereout ; and when he had drunk, his spirit came again, and he revived.

Judges, xv. 19. To come after. To follow.

If any man will come after me, let him deny him- self, and take up his cross and follow me.

Matthew, xvi. 24.

To come at. To reach ; to get within the reach of; to obtain ; to gain.

Neither sword nor sceptre can come at conscience ; but it is above and beyond the reach of both.

Suckling,

Cats will eat and destroy your marum, if they can come at it. Evelyn's Kalendar.

In order to come at at a true knowledge of ourselves, we should consider how far -we may deserve praise.

Addison.

To come by. To obtain ; to gain ; to acquire. This seems an irregular and improper use, but has very powerful authorities.

Things most needful to preserve this life, are most prompt and easy for all living creatures to come by.

Hooker.

Love is like a child, That longs for every thing that he can come by.

Shakspeare.

To come in. To comply ; to yield ; to hold out no longer.

If the arch-rebel Tyrone, in the time of these wars, should offer to come in and submit himself to her ma- jesty, would you not have him received ?

Spenser on Ireland.

To come in. To become modish; to be brought into use.

Then came rich cloaths and graceful action in, Then instruments were taught more moving notes.

Rosvommon.

Silken garments did not come in till late, and the use of them in meii was often restrained by law.

Arbuthiwt on Coins.

To come in. To be an ingredient; to make part of a composition.

A generous contempt of that in which too many men place their happiness, must come in to heighten his character. A tterbury,

To come in. To accrue from an estate, trade, or otherwise, as gain.

I had rather be mad with him that when he had nothing, thought all the ships that came into the har- bour his ; than with you that, when you have so much earning in, think you have nothing. Suckling.

To come in. To be gained in abundance. Sweetheart, we shall be rich ere we depart, If fairings come thus plentifully in. Shakspeare

To come in for. To be early enough to ob- tain ; taken from hunting, where the dogs that are slow get nothing.

Shape and beauty, worth and education, wit and understanding, gentle nature and agreeable humour, honor and virtue, were to come in for their share of such contracts. Temple.

If thinking is essential to matter, stocks and stones will come in for their share of privilege.

Collier on Thought .

One who had in their rear excluded been, And could not for a taste o' th.' flesh come in, Licks the solid earth. Tale's Juvenal.

The rest came in for subsidies, whereof they sunk considerable sums. Swift.

To come in to. To join with ; to bring help.

They marched to Wells, where the lord Audley with whom their leaders had before secret intelli- gence, came in to them ; and was by them, with great gladness and cries of joy, accepted as their general. Baton's Henry VII.

To come into. To comply with ; to agree to.

The fame of their virtues will make men ready to come into every thing that is done for the public good.

Atterbury.

To come near. To approach ; to resemble in excellence ; a metaphor from races.

Whom you cannot equal or come near in doing, you would destroy or ruin with evil speaking.

Ben Jonson's Discoveries.

To come of. To proceed, as a descendant from ancestors.

Of Priam's royal race my mother came.

Dryden's jEneid.

Self-love is 89 natural an infirmity, that it makes us partial even to Jhose that come of us, as well as ourselves. L'Estrange.

To come of. To proceed as effects from their causes.

Will you please, Sir, be gone ;

I told you what would come of this.

Shakspeare. Winter's Tale.

The hiccough comes of fulness of meat, especially in children, which causeth an extension of the sto- mach. Bacon.

To come off. To deviate ; to depart from a rule or direction.

The figure of a bell partaketh of the pyramids, but yet coming off and dilating more suddenly.

Bacon's Natural History.

To come off. To escape ; to get free. I knew the foul enchanter, though disguised ; Entered the very lime-twigs of his spells, And yet came off. Milton.

How thou wilt here come off, surmounts my reach.

Id.

If, upon such a fair and full trial, he can come off, he is then clear and innocent South.

' To come off. To end an affair ; to take good or bad fortune.

Oh, bravely came we off, When with a volley of our needless shot, After such bloody toil, we bid good night.

Shaktpeare. King John.

Ever since Spain and England have had any thing to debate one with the other, the English, upon all encounters, have come off with honor and the better.

Bacon.

To come off" from. To leave ; to forbear. To come off" from these grave disquisitions, I would clear the point by one instance more.

*Felton on the Classic**

To come on. To advance ; to make progress. Things seem to come on apace to their former state.

Bacon.

There was in the camp both strength and victual sufficient for the obtaining of the victory, if they would not protract the war until winter were come on.

Knolles's History.

To come on. To advance to combat.

The great ordnance once discharged, the armies came fast on, and joined battle.

Knolles's History of the Turks.

Rhymer, come on, and do the worst you can ; I fear not you, nor yet a better man. Dryden.

To come on. To thrive ; to grow big ; to grow.

Come on, poor babe ;

Some powerful spirit instruct the kites and ravens To be thy nurses. S/ iakspeare. Winter's Tale.

It should seem by the experiments, both of the malt and of the roses, that they will come far faster on in water than in earth ; for the nourishment, is easier drawn out of water than out of earth.

Bacon's Natural History

To come over. To revolt.

They are perpetually teazing their friends to come over to them. Addison's Spectator.

A man, in changing his side, not only makes him- self hated by those he left, but is seldom heartily es- teemed by those he comes over to. Id,

To come over. To rise in distillation.

Perhaps also the phlegmatic liquor, that is wont to come over in this analysis, may, at least as to part of it, be produced by the operation of the fire. Boyle.

To come out. To be made public ; to appear upcn trial ; to be discovered.

Before his book came out, I had undertaken the an- swer of several others. Stttltngfleet.

It is indeed come out at last that we are to look on the saints as inferior deities. Id.

I have been tedious ; and, which is worse, it comes out from the first draught, and unconnected. Dryden.

To come out with. To give a vent to ; to let fly.

Those great masters of chymical arcana must be provoked, before they will come out with them. Boyle. To come to. To consent or yield. What is this, if my parson will not come to ?

Swift.

To come io. To amount to. The emperour imposed so great a custom upon all corn to be transported out of Sicily, that the very customs came to as much as both the price cf the corn ,_nd the freight together.

Knolles's History of Ihe Turks. You saucily pretend to,know More than your dividend comes to. Hudibras. Animals either feed upon vegetables immediately, or, which comes to the same at last, upon other ani- mals which have fed upon them.

Woodward's Natural History.

He pays not this tax immediately, yet his purse

will Snd it by a greater want of money than that

u-mes tc. Locke.

To corns to himself. To recover his senses.

He falls into sweet ecstacy of joy, wherein I shall

leave him till he comes to himself. Temple.

To come ic pass. To be effected ; to fall out- It cometh, \»

Boyle's History of Firmness.

To come tip. To grow out of the ground. Over-wet, at sowing-time, with us breedeth much dearth, insomuch as the corn never cometh up.

Bacon.

If wars should mow them down never so fast, yet they may be suddenly supplied, and come up again.

Id.

Good intentions are the seeds of good actions ; and

every man ought to sow them, whether they come up

or no. Temple.

To come up. To come up into use ; as a

fashion comes up.

To come up to. To rise; to advance. Whose ignorant credulity will not Come up to the truth.

Shakspeare. Winter's Tale.

Considerations there are, that may make us, if not come up to the character of those who rejoice in tribu- lations, yet at least satisfy the duty of being patient. Wake's Preparation for Death.

To come upon. To invade ; to attack.

Three hundred • horse, and three thousand foot, English, commanded by Sir John Norris, were charged by Parma, coming upon them with seven thousand horse. Bacon.

When old age comes upon him, it comes alone, bringing no other evil with it but itself. South.

To come. In futurity ; not present ; to hap- pen hereafter.

It serveth to discover that which is hid, as well as to foretel that which is to come. •

Bacon's Natural History In times to come, My waves shall wash the walls of mighty Rome.

Dryden.

COME. Participle of the verb. Thy words were heard, and I am come to thy words. Daniel.

COME. A particle of exhortation ; be quick ; make no delay.

Come, let us make our father drink wine.

Genesis xix. 32.

COME. A particle of reconciliation ; or in- citement to it.

Come, come, at all I laugh he laughs no doubt ;- The only difference is, I dare laugh out. Pope.

COME. A kind of adverbial word for when it shall come ; as, come Wednesday, when Wednesday shall come.

Come Candlemas, nine years ago she died. Gay.

COME, n. s. From tht rerb. A sprout; a cant term.

That the malt is sufficiently well dried; you may know both by the state, and also by the falling off of the come or sprout. Mortimer's Husbandry.

CO'MER, n. s. From come. One that comes.

Time is like a fashionable host, That slightly shakes his parting guest by the hand ; But with his arms outstretched, as he would fly, Grasps in the comer : welcome ever smiles. And farewel goes out sighing.

Shakspeare. Troilut and Cicssida

Co MING, n. s. From to come. The act of coming; approach.

Where art thou, Adam ! wont with joy to meet My coming, seen far off? Milton't Paradise Lost.

Sweet the coming on Of grateful evening mild. Id.

State of being come ; arrival.

May 't please you, noble Madam, to withdraw Into your private chamber ; we shall give you The full cause of our coming.

Shakspeare. Henry VIII.

Some people in America counted their years by the coming of certain birds amongst them at their certain seasons, and leaving them at others. Locke.

COMING-IN, n. s. Revenue ; income.

Here's a small trifle of wives ; eleven widows, and nine maids is a simple coming-in for one man.

Shakspeare.

What are thy rents ? what are thy comings-in ? O ceremony, show me but thy worth ? What is thy toll, O adoration ? Id. Henry V.

COMING, particip. adj. From come. Fond ; forward ; ready to come.

Now will I be your Rosalind in a more coming on disposition; and ask me what you will, I will grant it.

Shakspeare.

That very lapidary himself, with a coming stomach, and in the cock's place, would have made the cock's choice. L'Estrange.

That he had been so affectionate a husband, was no ill argument to the coming dowager. Dryden,

On morning wings how active springs the mind ! How easy every labour it pursues, How coming to the poet every muse ! Pope's Horace.

Future ; to come.

Praise of great acts he scatters, as a seed

Which may the like, in coming ages breed.

Roscommon.

CCTMEDY, n. s. ? Gr. Koˆota. A dra- COME'DIAN, n. s. Smatic representation; its avowed intention is to exhibit life and manners, and to correct the foibles and follies of mankind by a natural and ridiculous exhibition of them. It is opposed to tragedy. A comedian is a writer of comedies ; an actor of comedies ; or a player in general of either sex.

Mellissarion, pretty honey-bee, when of a comedian she became a wealthy man's wife, would be saluted Madam Pithias, or Prudence. Camden's Remains.

Your honour's players Are come to play a pleasant comedy.

Shakspeare. Taming of the Shrew. Scaliger willeth us to admire Plautus as a comedian, but Terence as a pure and elegant speaker.

Peacham of Poetry. A long, exact, and serious comedy; In every scene some moral let it teach, And, if it can, at once both please and preach.

Pope.

The whining tragic love she scarce can bear, But nauseous comedy ne'er shocked her ear. Gay.

COMEDY. The Romans made a subdivision of comedy into ancient, middle, and new, accord- ing to the various periods of the commonwealth. Among the ancient comedies were reckoned those of Livius Andronicus; among the middle, those of Pacuvius; and among the new ones, those of Terence. They likewise distinguished comedy according to the quality of the persons

represented, and the dress they wore, into togatic, prsetextatae, trabeatae, and tabernaria-, which last agrees pretty nearly with our farces. Among us comedy is distinguished from farce, as the former represents nature as she is ; the other distorts and overcharges her. They both paint from the life but with different views ; the one to make natur known ; the other to make her ridiculous. Se?i POETRY.

CO'MELY, adj. & adv. a From become ; or CO'MELINESS, n. s. Jfrom Sax. cpeman,

to please. Graceful ; decent; having dignity or grandeur of mein or look. Comeliness seems to be that species of beauty which excites respect rather

than pleasure : it signifies something less forcible than beauty, less elegant than grace, and less light than prettiness. Used of things, decent ; according to propriety.

To ride comely, to play at all weapons, to dance comely, be very necessary for a courtly gentleman.

Ascham's Schoolmaster.

The service of God hath not such perfection of grace and comeliness, as when the dignity of the place- doth concur. Hooker.

If the principal part of beauty is in decent motion, no marvel though persons in years seem many times more amiable ; for no youth can be comely but by pardon, and considering the youth as to make up the comeliness. Bacon.

Soon after them all dauncing on a row, The comely virgins come with girlondz dight, As fresh as flowres in meadow greene doe grow. When morning deaw upon their leaves doth light ; And in their hands sweet timbrels all upheld on hight.

Spenser .

Where, when the knight arrived, he was right well Received, as knight of so much worth became Of second sister, who did far excell The other two ; Medina was her name, A sober, sad, and comely courteous dame. Id.

They skilled not of the goodly ornaments of poetry,

yet were sprinkled with some pretty flowers, which

gave good grace and comeliness. Id. on Ireland.

A careless comeliness with comely care. Sidney.

Oh, what a world is this, when what is comely Envenoms him that bears it.

Sltakspeare. As You Like It. This is a happier and more comely time,

Than when these fellows ran about the streets,

*Crying confusion. /< *• Coriolanus.*

He that is comely when old and decrepit, surely was very beautiful when he was young.

Hardly shall you meet with man or woman so aged or ill-favoured, but if you will commend them for comeliness, nay and for youth too, shall take it well.

Id.

Thou art a comely, young, and valiant knight.

Dryden.

There is great pulchritude and comeliness of pro- portion in the leaves, flowers, and fruits of plants.

Ray vn the Creation A horseman's coat shall hide Thy taper shape, and comeliness of side. Prior. Now each his mistress toasts, by whose bright eyo He's fired ; Cosmelia fair, or Dulcibell, Or Sylvia, comely black with jetty eyes Piercing, or any Celia, sprightly maid.

COMENIUS (John Amos), a grammarian and Protestant divine, born in Moravia in 1592. H was eminent for his attempt to introduce a new method of teaching languages; for which purpos

he published some essays in 1616, and had pre- pared others when the Spaniards pillaged his li- brary, after having taken the city of Fulnec, where lie was minister and master of the school. Come- nius fled to Lesna, in Poland, where he became a teacher of Latin. His Janua Linguarum Re- serata, published in 1631, gained him great repu- tation, insomuch that he wasofFered a commission for regulating all the schools in Poland, and the parliament of England desired his assistance to regulate the English schools. He arrived at London in 1641 ; and would have been received by a committee to hear his plan, had not the par- liament been then engaged on other more impor- tant subjects. He therefore went to Sweden, being invited by a generous patron, who settled a stipend upon him, and he now employed himself wholly in preparing his plans for the instruction of youth. In 1657 he published the different parts of his new method of teaching. He next began to explain the prophecies, the fall of An- tichrist, and the commencement of the millennium which he fixed for 1672. He died in 1671 aged eighty.

COMESSAZZO, a town of Italy, in the ci- devant duchy of Mantua, and department of the Upper Po, two miles and a half north of Sabi- onetta.

I Lat. cometa. Literally a hairy star. For the 1 scientific description, see

CO'MET, n. s. CO'METART, adj. COME'TIC, adj. ASTRONOMY.

And wherefore gpze this goodly company, As if they saw some wondrous monument, Some tomet, or unusual prodigy ?

Shahspeare. Taming of the Shrew. Such his fell glances as the fatal light

Of staring comets. Crashaw.

I considered a comet, or, in the language of the vul- gar, a blazing star, as a sky-rocket discharged by an hand that is almighty. Addison's Guardian.

Fierce meteors shoot their arbitrary light, And comets march with lawless horrors bright. Prior.

Refractions of light are in the planetary and come- tary regions, as in our globe, Cheyne's Phil. Prin.

Hast thou ne'er seen the comet's flaming flight ? The illustrious stranger passing, terror sheds On gazing nations, from his fiery train Of length enormous, takes his ample round Through depths of ether ; coasts unnumbered worlds Of more than solar glory ; doubles wide Heaven's mighty cape ; and then revisits earth, f'rom the long travel of a thousand years.

Young's Night Thoughts. Lo ! from the dread immensity of space,

Returning with accelerated course,

The rushing comet to th<; sun descends,

And as he sinks below the shading earth,

With awful train projected o'er the heavens

The guilty nations tremble. Thomson's Seasons. The hour arrived — and it became

A wandering mass of shapeless flame,

A pathless comet, and a curse,

The menace of the universe. Byron's Manfred.

COMETS. We have devoted a sectiou of our general article ASTRONOMY

to the consideration of the different theories that have been espoused by men of science respecting the nature and orbits of these singular bodies. We know not whether we oxigbt to add to these, the astronomico-theo-

logical reverie of Whiston, who assures us that he has discovered not only the place, but the nature of the punishment of the damned, in these (no longer) heavenly bodies. Whirled from remote regions of the universe into a nearer approach to the sun than other body of the solar system, and then back again into the extremest distance from it, he conceived them to be thus exposed alternately to the most ardent heat and the most benumbing cold. Certainly his conjecture may remind us of the general improbability of such bodies being inhabited by any race of beings like men.

It is remarkable that one of the early conjec- tures of science respecting these bodies, that they were accidental assemblages of small stars, has been so far revived, or rather perhaps re- versed, in modern times, that Dr. Brewster has hazarded an opinion, that the planets Ceres and Pallas, may have derived their immense atmos- pheres from the explosion of a comet, and fixes upon that of 1770 as having been most probably the comet in question.

This comet was in that year most carefully ob- served for four months by M. Messier. M. M. Proserpin and Pingre first suspected that its orbit might be elliptical, and M. Lexell of St. Petersburgh computed its elements in an ellipti- cal orbit, and found that its period was five years and a half, and its greatest distance from the sun about that of Jupiter. It has, however, never re-appeared. This subject lately attracted the notice of the National Institute of France, at whose request Dr. Burckhardt repeated all the former calculations with great care. ‘ Here then/ says an able writer in the Encyclopaedia of Dr. Brewster, ‘ is a most singular anomaly in the mo- tion of the comet. While all the other comets which have been observed, move in orbits stretching far beyond the limits of the solar sys- tem, and revolve in periods of long duration, the comet of 1770 never wanders beyond the orbit of Saturn, and completes its revolution in the short period of five years and a half. The return of this body, therefore, was confidently expected by astronomers ; but though it must now have completed nearly eight revolutions round the sun, and though more observations have been made in the heavens during the last forty years than perhaps during the two preceding centuries, yet the comet of 1770 has never re-appeared. We are consequently entitled to conclude, that the comet of 1770 is lost, which could happen only from its uniting with one of the planets, whose orbits it crossed. Now, if such an union took place, two consequences would obviously flow from it. The planet would suffer a sensible de- rangement in its motions, and its atmosphere would receive a vast accession of that nebulous matter, of which the comets are often wholly composed. Here,

then, we have two distinc criteria to enable us to ascertain the individual planet by which thecometwas attracted. The path of the comet intersects the orbits only of Venus, the Earth, Mars, the four new planets, and Jupiter, and therefore it must have united with one of these bodies, or with their satellites. Now, since the year 1770, neither Venus, the Earth, Mars, nor Jupiter, have suffered the smallest derangement of this kind, nor have they*

Deceived any visible addition to their atmospheres. XV e must, therefore, look to the four new planets for some indication of the presence of a comet, and, if they exhibit any phenomena that are une- quivocally of this description, we must consider such a coincidence as a strong proof of the theory, or as one of the most wonderful facts in the history of science. Two of the new planets, Ceres and Pallas, exhibit, in the form and position of their orbits, evident marks of some great derangement; they are actually surrounded with atmospheres of an immense size. The atmosphere of Ceres is 675 English miles high, while that of Pallas rises to the height of 468 miles. Now the height of any of these atmospheres is greater than the united heights of the atmospheres of all the other planets, and is above a thousand times higher than they ought to have been, according to the ratio that exists between the globes and at- mospheres of the other bodies of our system.' 'Let us enquire,' continues this writer, 'from what other source these atmospheres could be de-

) Lat. bellaria arida ; S Dutch

CO'MFIT, n.s. Sav.a.

CO'MFITURE, n.s. $ Dutch konfit. It

should seem that both are formed by hasty pro- nunciation from confect. A dry sweetmeat ; any kind of fruit or root preserved with sugar, and dried.

From country grass to confitures of court, Or city's quelque-choses, let not report My mind transport.

The fruit that does so quickly waste,

Men scarce can see it, much less taste,

Thou comfitest in streets to make it last. By feeding me on beans and pease,

He crams in nasty crevices,

And turns to comfits by his arts,

To make me relish for deserts.

CO'MFORT, v. a. & n. s.~\ Low Lat. com- CO'MFORTABLE, adj. i for to. Salviacom-

CO'MFORTABLT, adv. \fortat nervos. — CO'MFORTER, n. s. i Schol. Sal. To

CO'MFORTLESS, adj. J strengthen ; to en-

liven ; to invigorate ; to sooth ; to relieve in diffi-

Danne.

Covoley.

Hudtbras.

rived, if they were not imparted by the comet of culty by assistance, by support, by consolation.

That which mitigates the pressure of calamity, allays sorrow, and diminishes agony by a posi-

mosphere, each fragment would obviously carry tive infusion of enjoyment. Comfort is the ver-

1770. If the four new planets are the fragments of a larger body, endowed with an extensive at-

off a portion of atmosphere proportioned to its magnitude; but two of the fragments, Juno and Vesta, have no atmosphere at all, consequently the atmospheres of Ceres and Pallas could not have been derived from the original planet, but must have been communicated to them at a period posterior to the divergency of the frag- ments.' We leave the reader to form his own judgment of this curious hypothesis ; certainly the facts on which this writer reasons are them- selves most extraordinary.

It appears that twenty-four cornets have passed between the Sun and the orbit of Mercury ; thirty- three between the orbits of Mercury and Venus ; twenty-one between the orbits of Venus and the Earth ; sixteen between the

orbits of the Earth and Mars; three between the orbits of Mars and Ceres ; and one between the orbits of Ceres and Jupiter : that thirty-two Comets have appeared between the months of April and September, and sixty-six between September and April :. that the greater part of the comets have their perihe- lion nearest to their ascending nodes: that fifty of the comets move from west to east and not in the opposite direction : and that the orbits of the comets are not confined to any particular region of the heavens, like the old planets, but seem to be inclined at every possible angle of the ecliptic.

COMETEAU, or COMMOTAU, a town of Bo- hemia in the circle of Saatz, with a handsome town-house. It was taken by Zisca, in 1421, and all the inhabitants, men, women, and chil- dren, were put to the sword. In 1648 it sur- rendered to the Swedes at discretion. It is seated in a fertile plain, thirty miles north-west of Prague.

COMETES, in botany, a genus of the mono- gynia order, and tetrandria class of plants. The involucrum is tetraphyllous and triflorous: CAL. tetraphyllous : CAPS, tricoccous. Species one only, a native of Surat.

bal expression of a thing which, to be understood, must be enjoyed, and it can be enjoyed only in merry England. It is the indigenous plant of our own soil, and cannot be made an exotic. ‘ Comfort, that genuine English word, describes what England only affords; we may find plea- sure in every country, but comfort is to be found in our own country only ; the grand feature in comfort is substantiality ; in that of pleasure, it is warmth. Pleasure is quickly succeeded by pain ; it is the lot of humanity, that to every plea- sure there should be an alloy : comfort is that portion of pleasure which seems to lie exempt from this disadvantage; it is the most durable part of pleasure.1 — Crabbe.

For which, this noble duk, as he we can,

Camforteth and honoureth every man ;

And made revel, all the longe night,

Unto the strange lords, as was right.

Chaucer’s Canterbury Tales.

The evidence of God’s own testimony, added unto the natural assent of reason, concerning the certainty of them, doth not a little comfort and confirm the same. Hooker.

Light excelleth in comforting the spirits of men : light varied doth the same

effect, with more novelty This is the cause why precious stones comfort.

Bacon's Natural History- He had no brother, which, though it be comfortabˆ for kings to have, yet draweth the subjects eyes aside. Shahspeare. Henry VII.

The heavens have blest you with a goodly son, To be a comforter when he is gone. Id. Richard III.

Your children were vexation to your youth, But mine shall be a comfort to your age. Id.

My lord leans wond'rously to discontent ; His comfortable temper has forsook him ; He is much out of health.

I will keep her ignorant of her good, To make her heavenly comforts of despair, When it is least expected.

Id. Measure for Meature.

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Her soul heaven's queen, whose name she bears, In comfort of her mother's fears, Hath placed among her virgin train. Ben Jonson.

We need not fear

To pass commodiously this life, sustained By him with many comfort.", till \ve end In dust, our final rest and native home. Milton.

On thy feet thou stood'st at last, Though comfortless, as when a father mourns His children, all in view destroyed at once. Id. That unsociable comfortless deafness had not quite tired me. Stvift.

Be comforted, relief is near, For all our friends are in the rear. Gay.

Upon view of the sincerity of that performance, hope comfortably and cheerfully for God's perform- ance. Hammond. As they have no apprehension of those things, so they need no comfort 'against them. Tillotson.

O false ambition !

Thou lying phantom ! whither hast thou lur'd me ! Even to this giddy height ; where now I stand Forsaken, comfortless, with not a friend In whom my soul can trust. Brown's Barbarossa.

Fancy from comfort wanders still astray ;

Ah, Melancholy ! how I feel thy power !

Long have I laboured to elude thy sway j

But 'tis enough, for I resist no more. Beattie.

Yet lingering comfortless in lonesome wild, Were Echo sleeps 'mid caver'ned vales profound,

The pride of Troy, Dominion's daily child, Pines while the slow hour stalks its sullen round. Id.

For if my desultory strain, with ruth And indignation, make thine eyes o'erflow,

Alas ! what comfort could thy anguish sooth, Shouldst thou the extent of human folly know. Id.

CO'MFORTER, n. s. The third person of the Holy Trinity ; the paraclete, paracleto.

*They were filled with the Holy Ghost, with spiritual comfort, spiritual joy and exultation. Instead of fearing and flying from their enemies, as before at the apprehension and crucifixion of their Master, they now boldly faced them, prepared to stand before rulers to speak of God's testimonies, even ' before kings, without being ashamed.' They were no longer grieved or offended at the thought of suffering for the truth ; they rejoiced in tribulation of that sort, and conceived themselves to have acquired a new dignity, when * counted worthy so to suffer.' Such was the mighty change wrought in their minds, through the power of ' the Holy Ghost, the Comforter.'*

Bishop Home's Sermons.

COMFORT, POINT, is the most south part of Eli- zabeth-city county, in Virginia, formed by James River, at its mouth in Chesapeake Bay. It lies nineteen miles west by north of Cape Henry.

CO'MFREY, 7». s. Lat. consolida ; Fr. com- frie, a plant.

CCTMICK, adj. ~\ Lat. comicus ; Fr.

CO'MICAL, adj. {ˆcomtque. Relating to

CO'MICALLY, adv. i comedy, as distinguish-

*CO'MICALNESS, n. s. * ed from tragedy. — Mirthful, merry, diverting.*

Stately triumphs, mirthful comick shows, Such as befit the pleasure. Slutlispeare. Henry VI.

I never yet the tragick muse essayed, Deterred by thy inimitable maid ; And when I venture at the comick stile, Thy scornful lady seems to mock my toil.

Waller.

A comick subject loves an humble versr . Thyestes scorns a low aud comick stile ; Yet comedy sometimes may raise her voic t .

Roscominon,

Thy tragick muse gives smiles, thy comick sle?p.

Dryden.

The greatest resemblance of our author is in the familiar stile and pleasing way of relating comical ad- ventures of that nature. Id. Fables. Preface.

Something so comical in the voice and gestures, that a man can hardly forbear being pleased.

Addison on Italy.

That all might appear to be knit up in a comical conclusion, the duke's daughter was afterwards joined in marriage to the lord Lisle. Hayward.

They deny it to be tragical, because its catastrophe is a wedding, which hath ever been accounted comical.

Gay.

For the dame, by her skill in affairs astronomical, Imagined to live in the clouds was but comical. Id.

COMINES, a town of France, in the depart- ment of the North, and ci-devant province of French Flanders, situated on the river Lis, which divides it into two parts. It has been much re- duced since the period in which it gave birth to the celebrated author below; but has still a po- pulation of

about 2000. It is five miles south- west of Menin, seven north of Lisle, and twenty-five south of Bruges.

COMINES (Philp De), an historian, born in Flanders in 1446 ; and, although of noble de- scent, his education was very limited. He lived first at the court of Charles the Bold, duke of Burgundy, where he stayed about eight years ; when Louis XI. invited him to France ; where he was highly promoted, and executed several successful negociations. But on the death of Louis he was thrown into prison by Charles VIII.; but on being brought before the parlia- ment of Paris he was released. Comines was a man of more natural abilities than learning ; he spoke several living languages, but knew nothing of the dead. He has left behind him Memoirs of his own Times that are admired. It was a saying of Catherine de Medicis, that Comines made as many heretics in politics, as Luther had done in religion.

COMINGES, a ci-devant territory of France, the east division of the late province of Gas- cony ; about fifteen leagues in length, and six in breadth, which is now included in the depart- ment of Gers. It is the see of a bishop, whose residence was at St. Bertrand, the capital.

COMITATUS, in law, a county. Ingulphus tells us, that England was first divided into counties by king Alfred ; and the counties into hundreds, and these again into tythings: and Fortescue says, that regnum Angliae per comi tatus, ut regnum Francis per bullivatus distin- guitur. Sometimes it is taken for a territory or jurisdiction of a particular place; as in Mat. Paris, A.D. 1234. See COUNTY.

COMITIA, in Roman antiquity, general as- semblies of the people, called by a magistrate for the enjoinment or prohibition of anything by their votes. They were of three sorts ; cu- riata, centuriata, and tributa; from the three grand divisions of the city and people into curiae, centuriae, and tribes.

COMITIA CALATA, from naXtw, to call, was in early times a common epithet for all the co- initia, though it was at last restrained to two sorts of assemblies; those for the creation of priests, and those for the regulation of last wills and testaments.

COMITIA CENTURIATA were instituted by Ser- vius Tullius; who, obliging every one to give a true account of what he was worth, according to those accounts divided the people into six classes, which he subdivided into 193 centuries. The first class, containing the equites and richest citizens, consisted of ninety-eight centuries. The second, taking in the tradesmen and

me- chanics, consisted of twenty-two centuries ; the third of twenty; the fourth of twenty-two; and the fifth of thirty : the sixth, being filled up with the poorer sort, made but one century; and was seldom regarded, or allowed any power in pub- lic matters. Hence it is common with the Roman authors, when they speak of the classes, to reckon no more than five, the sixth not being thought worth their notice. This last class was di- vided into two parts, or orders ; the proletarii and the capite censi. The former, as their name im- plies, were merely designed to stock the republic with men, as they could supply it with little money ; and the latter, who paid the lowest tax of all, were marshalled by their heads. Per- sons of the first rank, from their pre-eminence, had the name of classici ; whence the term classic. All others were said to be infra classem. The assembly of the people by centuries was held for the electing of consuls, censors, and praetors ; for the judging of persons accused of what they caJled crimen per duellionis, or actions by which the party had showed himself an enemy to the state, and for the confirmation of all such laws as were proposed by the chief magistrates. The place appointed for their meeting was the Campus Martius ; beause in the primitive times the people, to prevent any sudden assault from their enemies, went armed to these assemblies. But it was afterwards thought sufficient to place a body of soldiers as a guard in the janiculum, where an imperial standard was erected, the taking down of which denoted the conclusion of the comitia. By the institution of these co- mitia, Servius Tullius took the whole power from the commons : for the centuries of the first and richest class being called out first, who were three more in number than all the rest put to- gether, if they all agreed, as they generally did, the business was decided, and the votes of the other classes were needless. Accordingly the three last scarcely ever came to vote. The com- mons, in the time of the republic, to remedy this disadvantage, obtained, that, before they proceeded to voting at these comitia, that cen- tury should give their suffrages first upon whom it fell by lot, with the name of centuria prero- gativa ; the rest being to follow according to the order of their classes. The prerogative century being chosen by lot, the chief magistrates, sitting in a tent in the middle of the Campus Martius, ordered that century to come out and give their voices; upon which they separated from the rest, and came into an enclosed apartment, which they termed septa, or ovilia, passing over the

pontes, or narrow boards, laid for the occasion ; on which account, de ponte dejici signifies to be denied the privilege of voting, and persons thus dealt with were called depontani. At the hither end of the pontes stood the diribitores, a sort of under officers, so called from their marshalling the people, and delivered to every man, in the election of magistrates, as many tables as there appeared candidates, one of whose names was written upon every tablet. A proper number of chests were set ready in the septa, and

every body threw in which tablet he pleased. By the chests were placed some of the public servants, who taking out the tablets of every century, for every tablet, made a point in another tablet which they kept by them. Thus, the business being decided by most points, gave occasion to the phrase omne tulit punctum. The same method was observed in the judiciary process at these comitia, and in the confirmation of laws; ex- cept that, in both these cases, only two tablets were offered to every person, one marked a and the other u. r. See A. But though in the elec- tion of magistrates, and in the ratification of laws, the votes of that century, whose tablets were equally divided,

COMITIA CURIATA owed their origin to the division which Romulus made of the people into thirty curise ; ten being contained in every tribe. They answered in most respects to our parishes, being not only separated by proper bounds and limits, but distinguished by their different places for public worship, which was performed by priests called curiones. The power of calling these assemblies belonged at first only to the kings; but upon the establishment of the de- mocracy, the same privilege was allowed to most of the chief magistrates, and sometimes to the pontifices. The persons who voted, were such Roman citizens as belonged to the curise; 01 lived in the city, and conformed to the rites of their curiae; all those being excluded who dwell without the bounds of the city, retaining the ce- remonies of their own country, though they had been admitted free citizens of Rome. These, and the other comitia, were held only as business required. The people being met together, and confirmed by the report of good omens from the augurs, the rogatio, or business to be proposed, was publicly read; after which the people divided into their proper curiae, and consulted of the matter ; and then the curiae being called out, by lot, gave their votes man by man, in ancient times viva voce, and afterwards by tablets ; the most votes in every curise going for the voice of the whole curias, and the majority of the curia; for the general consent of the people. In the time of Cicero, the comitia curiata were so neg- lected, that they were formed only by fifty lic- tors representing the thirty curise; whence, m his second oration against Rullus, he calls them comitia adumbrata.

COMITIA TRIBUTA. The division of the peo- ple into tribes was an invention of Romulus, after he had admitted the Sabines into Rome; and though he constituted at that time only three,

yet as the state increased in power, and the city in number, they rose by degrees to thirty-five. For a long time after this institution, a tribe sig- nified only a space of ground with its inhabi- tants. But at last it was considered as no lon- ger pars urbis, but pars civitatis ; not a quarter of the city, but a company of citizens living where they pleased. This change was chiefly occasioned by the original difference between the tribes in point of honor. For Romulus having committed all mechanic arts to the care of strangers, slaves, and libertines; and reserved the labor of agriculture to the freemen and citizens, who by this active course of life might be prepared for martial service ; the tribus rus- tics were for this reason esteemed more honor- able than the tribus urbanae. And all persons being desirous of getting into the more creditable division, by adoption, by the power of censors, or the like, that rustic tribe which had the most worthy names in its roll, had the preference to all others, though of the same general denomi- nation. Hence all of the same great family, bringing themselves by degrees into the same tribe, gave the name of their family to the tribe the^ honored ; whereas at first the generality of the tribes did not borrow their names from per- sons but from places. The first assembly of the tribes we meet with, was about A. U. C. 263, convened by Sp. Sicinius, tribune of the com- mons, upon the trial of Coriolanus. Soon after, the tribunes of the commons were ordered to be elected here ; and at last, all the inferior magis- trates, and the collegiate priests. The same comitia served for the enacting of laws relating to war and peace, and all others proposed by the tribunes and plebeian officers. They were generally convened by the tribunes of the com- mons; but the same privilege was allowed to all the chief magistrates. They were confined to no place ; and therefore sometimes held in the comitium, or the capitol. This last sort of the comitia only could be held without the con- sent and approbation of the senate, which was necessary to the convening of the other two.

COMITIAL, adj. Lat. comitia. An assem- bly of the Romans. Relating to the assemblies of the people of Rome.

COMITIALIS MORBUS, an appellation given to the epilepsy, as the comitia of ancient Rome were dissolved, if any person in the assembly happened to be taken with this distemper.

COMITIUM, in Roman antiquity, a large hall in the forum, which occupied the entire space between the Palatine Hill, the Capitol, and the Via Sacra. It was separated originally from the forum by rows of steps and barriers ; and was uncovered till the memorable year that Han- nibal first entered Italy, when it was embellished and covered with a roof, supported by lofty and beautiful fluted columns of the Corinthian order. Three of them, with their architrave, are still standing in the ancient forum, near the church of Santa Maria Liberatrice. The capitals are wrought and finished on the side

next the forum, but rough on the opposite side. In this hall the comitia were usually held.

CO'MITY, n. s. Lat. comitas. Courtesy ; ei i.liy ; good breeding.

CO'MMA, n. s. Kd/t/ta. The point which notes the distinction of clauses, and order QL construction, in the sentence ; marked thus (,).

Commas and points they set exactly right. Pope,

COMMA, among grammarians, is differently used and defined by different authors. According to F. Bussier, the comma serves to distinguish those members of a period, in each of which is a verb and a nominative ; thus, That so many people are pleased with trifles, is owing to a weakness of mind, which makes them love things easy to be comprehended. Besides this, the comma is used to distinguish, in the same member of a period, several nouns substantive, or nouns adjective, or verbs not united by a con- junction ; thus, Virtue, wit, knowledge, are the chief advantages of a man. If the words are united in the same phrase with a conjunction, the comma is omitted ; thus, the imagination arid the judgment do not always agree. The ingenious author of the tract, De Ratione Interpungendi, printed with Vossius's Element. Rhetor. Lond. 1724, lays down the use of a comma to be, tc distinguish the simple members of a period or sentence ; i. e. such as only consist of one subject, and one definite verb. But this rule does not hold throughout; thesmme author instancing many particular cases not yet included herein, where yet the comma is advisable. See PUNCTUATION. It is a general rule that a comma ought not to come between a nominative and a verb, or an adjective and substantive, when these are not otherwise disjoined : thus, in the sentence, God ruleth with infinite wisdom, a comma between God and ruleth, or between infinite and wisdom, would be absurd. But to this exceptions may occur ; as when not a single word, but a sen- tence, is the nominative ; thus, in the above ex- ample, where the sentence, that so many people are pleased with trifles, forms the nominative to the verb is, a comma at trifles is proper, both for the sake of perspicuity, and as coinciding with a slight natural pause.

COMMA, in music. See INTERVAL.

COMMA'ND, v. a. v. n. & n. s.-\ Lat. mando ;

COMMA'NDER, n.s. f Fr- commond-

COMMA'NDMENT, n. s. ier. To exer-

COMMA'NDRESS, n.s. J cise the chief

authority ; to issue mandates ; to superintend ; to govern : correlative to obey ; and contrary to pro- hibit. The substantives are cognate with the verb, and but echo its various significations, with the exception of commander, which is used technically. A paving beetle, or a very great wooden mallet, with a handle about three feet long, to use in both hands : and likewise an in- strument of surgery.

The preest him besieth all that ever he can To don as this Charon, this cursed man, Commandeth him ; and faste blewe the fire For to come to the effect of his desire.

Chaucer'i Canterbury Talet.

After avarice cometh glotonie, which is experesse ayenst the commandement of God.

Id. The Personet Tale.

The glossocomium, commonly called the commander, is of use in the most strong tough bodies, and -where the taxation hath been of long continuance.

Wiseman's Surgery.

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Fine Queenn of Love ! my life thru maist command, Too slender price for all thy former grace, Which I receive at thy so bounteous hand ; But never dare I speak her name or face. Spenser.

.Thence she commanded me to prison new ; Whereof T glad did not gainesay nor strive, But suffered that same dwarfe me to her dongeon drive.

Id.

We'll do thee homage, and be ruled by thee ; Love thee as our commander and our king. Shiikspeare.

I thought that all things had been savage here, And therefore put I on the countenance Of stern commandment. Id. As you like it.

Commanded always by the greater gust ; Such is the lightness of you

common men.

Id. Henry Vf. Up to the Eastern tower,

Whose height commands as subject all tte vale,

To see the sight. Id. Troilus and Cressida.

Take pity of your town and of your people,

While yet my soldiers are in my command.

Id. Henry V.

They plainly require some special commandment for that which is exacted at their hands. Hooker.

To prescribe the order of doing in all things, is a peculiar prerogative, which wisdom hath, as queen of sovereign commandress, over all other virtues. Id.

The Romans, when commanders in war, spake to their army, and styled them, My soldiers.

Bacon's Apoplftegnu. Whatever hypocrites austerely talk

Of purity, and place, and innocence,

Defaming as impure what God declares

Pure, and commands to some, leaves free to all.

Our Maker bids increase : who bids abstain

But our destroyer, foe to God and man ? Milton. His eye might there command wherever stood

City, of old or modern fame, the seat

Of mightiest empire. Id.

Of this tree we may not taste nor touch ;

God so commanded, and left that command

Sole daughter of his voice. Id. Paradise Lost.

As there is no prohibition of it, so no command for it. Taylor.

Sir Frederick and Sir Solomon draw lots For the command of politicks and Scots : Hence fell to words, but quarrels to adjourn, Their friends agreed they should command by turn.

Marvell.

Those two commanding powers of the soul, the un- derstanding and the will. South. The steepy stand,

Which overlooks the vale with wide command.

Dryden's JEneid.

Be you commandress therefore, princess, queen Of all our forces, be thy word a law. Fairfax.

Command and force may often create, but can never cure, an aversion ; and whatever any one is brought to by compulsion, he will leave as soon as he can.

Locke en Education.

Should he, who was thy lord, command thee now With a harsh voice, and supercilious brow, To servile duties. Dryden's Pert. Sat. 5.

Charles, Henry, and Francis of France, often ad- ventured rather as soldiers than as commanders.

Hay ward.

One side commands a view of the finest garden in the world. Addison's Guardian.

And on his brow such awe majestic sate

As seemed to speak him born for high command ; Though now, for many a moon, the sport of Fate,

A willing exile from his native laud. Got/.

COMMA'NDERY, n. s. From command. A body of the knights of Malta, belonging to the same nation.

COMMANDERY, OF CoMMANDRY, a kind of be-

nefice belonging to a military order, and con- ferred on ancient knights who had done service to the order. There are regular commanderies,

obtained by merit: there are others of favor, conferred by the grand master : there are also commanderies for the religious, in the orders of St. Bernard and St. Anthony. The commanderies of Malta are of different kinds; for knights, chaplains, and brothers servitor. The knight to whom one of these is given is called commander ; which agrees nearly with the praepositus set over the monks in places at a distance from the mo- nasters. Thus, the simple commanders of Malta, are rather farmers of the order than beneficiaries, paying a certain tribute, called responsio, to the common treasure of the order.

COMMANDINE, or COMMANDING (Fred- eric), born at Urbino in Italy, in the sixteenth cen- tury, and descended from a noble family. To great skill in mathematics he added a profound know- ledge of the Greek Tongue. He translated seve- ral of the Greek mathematicians into Latin, as Archimedes, Apollonius, Euclid, &c. which no writer till then had attempted.

COMMANOES, one of the small Virgin Isles, in the West Indies, situated to the N. N. E. of Tortula. Long. 63° 0′ W., lat. 18° 25′ N.

COMMANTAWANA, a bay on the north coast of the island of St. Vincent, about a mile east of Tarrata Point.

COMMATE'RIAL, adj. i Lat. con and mu-

COMMATERIA'LITY, n. s.) teria. Resembling another thing, or consisting of the same matter.

The beaks in birds are commaterial with teeth.

Bacon.

The body adjacent and ambient is not commaterial, but merely heterogeneal towards the body to be pre- served. Id-

COMMELIN (John), a celebrated Duch bo- tanist, was born at Amsterdam in 1629. He, as well as his father, was a magistrate of that city, where he formed a well-managed botanical gar- den, and died in 1692. His works are, 1. Ca- talogus Plantarum Indigenarum Hollandise, 12mo. 2. Catalogus Plantarum, Horti Medici Amstel. Besides which he assisted in the Hortus Indicus Malabaricus.

COMMELIN (Caspar), physician and nephew of the above, was appointed professor in botany and director of the garden at Amsterdam. He pub- lished, 1. Flora Malabarica. 2. Praeludia Ana- tomica, 4to. 3. Praeludia Botanica. 4. Icones Plantarum, prsesertim ex Indiis collectarum. 5.

Botanographia Malabarica, folio.

COMMELINA, in botany, a genus of the monogynia order and triandria class of plants ; natural order sixth, ensatse :' COR. hexapetalous ; nectaria three, of a cruciform figure, and inserted into their proper filaments. Species thirteen, all natives of warm climates. They are herbaceous plants, rising from two to four feet high, and adorned with blue or yellow flowers. Their culture is the same with that of the common exotics.

COMME'MORATE, v. a.-\ Lat. con and

COMME'MORABLE, adj. 'ˆmemoro. Topre-

COMMEMORA'TION, n. s. i serve in memory

COMME'MORATIVE, adj. J that which is wor- thy to be mentioned with honor, by some public act or solemnity, which is the commemoration ; and whatever tends to preserve the recollection is commemorative.

That which is daily offered in the church, is a daily wmmemoration of that one sacrifice offered on the cross.

Taylor.

St. Austin believed that the martyrs, when the com- memorations were made at their own sepulchres, did join their prayers with the churches, in behalf of those who there put up their supplications to God.

Stillingfleet,

Such is the divine mercy which we now commemo- rate ; and, if we commemorate it, we shall rejoice in the Lord. Fiddes.

The annual offering of the Paschal lanr.b was com- inemmative of that first Paschal lamb. Atterbury.

The original use of sacrifice was com-memoratwe of the original revelation ; a sort of daily memorial or record of what God declared, and man believed.

Forbes.

But who was she, the lady of the dead, Tombed in a palace ? was she chaste and fair ? Worthy a king's — or more — a Roman's bed ? What race of chiefs and heroes did she bear ? What daughter of her beauties was the heir? How lived — how loved — how died she ? Was she not So honoured — and conspicuously there, Where meaner relics must not dare to rot, Placed to commemorate a more than mortal lot.

Byron's Childe Harold.

COMMENA (Anna), daughter of Alexius Commenus, emperor of the East; a most accom- plished princess, equally eminent for learning and virtue. She flourished about the beginning of the twelfth century, and wrote The Alexiad, a history of the life and actions of her father, .vhich is highly esteemed. It is in fifteen books, of which the first eight were published by Hes- chelius in 1610, and afterwards the whole fifteen were printed in the collection of the Byzantine historians; with a diffuse and incorrect Latin version by the Jesuit Possinus, in 1651 ; but with excellent notes by the learned Du Fresne, in

1670.

COMMENCE, v. n. & v. a. { Frxommencer.

COMME'NCEMENT, n. s. S To begin ; to

take date from, as from the beginning ; to make a beginning, as to commence a suit. Also, the taking out of a degree at the universities of Oxford, Cambridge, or Dublin.

Man, conscious of his immortality, cannot be with- out concern for that state that is to commence after this life- Rogers.

If wit so much from ignorance undergo,

Ah ! let not learning too commence its foe ! Pope.

The waters were gathered together into one place,

the third day from the commencement of the creation.

Woodward's Natural History.

But if it is probable that the first men might see the commencement of those species of animals, whose formation required longer time than their own, it is not impossible, neither, that they might see the com- "> encement of those species, whose formation required s less time. Bolinnbroke.

COMME ND, v. a. & n. s.~] Lat. commcndo,

COMME'NDAELE, adj. \ compounded of

COMME'NDABLY, adv. [com and inendo ;

COMME'NDATION, n. s. (to commit to the

COMME'NDATORY, adj. \ good opinion of

COMME'NDER, n. s. J others, and some-

times to their care; to represent as worthy of regard or kindness ; to suggest to the memory; to praise, yet praise may be given either by equals or inferiors; but commendation is the part of a superior ; it is praise coming from one above us, as a parent commends his child" for an act of charity.

Father, into thy hands I commend my spirit. Luke.

And I it hold vertuouse and right commendabill, To have very knowlech of things reprovabill.

Chaucer's Canterbury Tales.

Certes, the commendation of the peple is ful false, and brotel for to trust ; this day they praise, to-morwe they blame. Got wote, desire to have commendation of the peple hath caused deth to many a besy man.

Id.

The charge, which God doth unto me direct, Of his deare safety, I to thee commend;

Yet will I not forgoe, ne yet forget The care thereof, myselfe, unto the end, But evermore him succour and defend Against his foe and mine. Spenser.

His fame would not get so sweet and noble an air to fly in as in your breath, so could not you find a fitter subject of commendation. Sidney.

It doth much add to a man's reputation, and is like perpetual letters commendatory, to have good forms ; to attain them, it almost sufficeth not to despise them.

Bacon's Essays. V ho is Silvia? What is she, That all our swains commend her ? Holy, fair, and wise is she. Shakspeare.

Signior Anthonia

Commends him to you.

Ere I ope his letter,

I pray you tell me how my good friend doth.

Id. Merchant of Venice.

Tell her I send to her my kind commends : Take special care my greetings be delivered.

Id. Richard II. Hark you Margaret,

No princely commendations to my king !

Such commendations as become a maid,

A virgin, and his servant say to him. Id. Henry VI.

The choice of them should be by the commendation of the great officers of the kingdom. Bacon.

Order and decent ceremonies in the church, are not only comely, but commendable.

Id. A dvice to Villiers.

Old men do most exceed in this point of folly, commending the days of their youth they scarce remem- bered, at least well understood not.

Browne's Vulgar Errours.

Among the objects of knowledge, two especially commend themselves to our contemplation; the know- ledge of God, and the knowledge of ourselves.

Hale's Origin of Mankind

She guiltless damsel, flying the mad pursuit Of her enraged step dame Guendolet., Commended her fair innocence to the iood That staid her flight, with his cross-flowing course.

Milton

Some say, (and many men doe these commendˆ-. That all our deeds, and fortunes doe depend Upon the motions of celestiall spheres; And on the constellations of the slarres.

Ceorge Wither'.

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Of preachers the shire beholdeth a number, all c&mmendably labouring in their vocation.

Carew's Survey of Cornwall.

Good-nature is the most godlike commendation of a man. Dryden's Juvenal. Dedication.

Each finding, like a friend, Something to blame, and something to commend.

Pope.

Whene'er I hear a knave commend, He bids me shun his -worthy friend. What praise ! what mighty commendation ! But 'twas a fox who spoke the' oration Foxes this government may prize As gentle, plentiful and wise. Gay.

Such as a concurrence of two extremes, by most of the same commenders and disprovers. Wotton.

COMME'NDAM, low Lat. commenda.

Commendam is a benefice, which, being void, is com- mended to the charge and care of some sufficient clerk, to be supplied until it be conveniently provided of a pastor. Cowell.

It had been once mentioned to him, that his peace should be mado, if he would resign his bishoprick, and deanery of Westminster; for he had that in commendam. Clarendon.

COMMENDAM, in the ecclesiastical law, signifies also the administration of therevenueof abenefice, given to a layman , to hold by way of depositum for six months, in order to repairs, &c. Anciently the administration of vacant bishoprics belonged to the nearest neighbouring bishop ; thence called com- mendatory. This custom appears to be very an- cient. St. Athanasius says of himself, according to Nicephorus, that there had been given him in commendam, another church besides that of Alexandria, whereof he was stated bishop. When a priest is made bishop his parsonage becomes vacant ; but, if the king give him power, he may hold it in

commendam. A commendam recipere is to take a benefice de novo in the bishop's own gift, or in the gift of some other patron with his consent.

COMME'NDATARY, n.s. from commen- dam. One who holds a living in commendam.

COMMENSA'LITY, n. s. from Lat. commen- salis. Fellowship of table ; the custom of eating together.

They being enjoined and prohibited certain foods, thereby to avoid community with the Gentiles, upon promiscuous commensality. Browne's Vutyar Errours.

COMMENDATUS, oue who lives under the protection of a great man. Commendatii homi- nes were persons who, by voluntary homage, put themselves under the protection of any superior lord ; for ancient homage was either predial, due for some tenure ; or personal, which was by com- pulsion, as a sign of necessary subjection ; or vo- luntary, with a desire of protection. These last were sometimes called homines ejus commendati, as often occurs in Doomsday book. Commen- dati dimidii were those who depended on two se- veral lords, and paid one-half of their homage to each ; and sub-commendati were like sub-tenants under the command of persons who were them- selves under the command of some superior lord. There were also dimidii sub commendati, who bore a double relation to such depending lords

COMME'NSURATE, v. a. & ad}.^ Latin COMME'NSURATELY, adv. \ commen-

COMME'NSURABLE, adj. [sus, or

COMMENSURABI'LITY, n. s. (commeti-

COMME'NSURABLENESS, n. s. \ or, mea-

COMMENSURA'TION, n. s. J suring in

accordance with some other thing, being suitable in measure to something else ; that is commensu- rate which is made to rise to the same measure or degree. Dr. Johnson explains commensura- bility as the capacity of being compared with another, as to the measure ; or of being measured by another. Thus an inch and a yard are com- mensurable, a yard containing a certain number of inches; the diameter and circumference of a circle are incommensurable, not being reduceable to any common measure : proportion.

A body over great, or over small, will not be thrown

so far as a body of a middle size ; so that, it seemeth,

there must be a commensuratwn or proportion between

the body moved and the force, to make it move well.

Bacon's Natural History.

There is no commensurableness between this object and a created understanding, yet there is a congruity and connaturality. Hale's Origin of Mankind.

Some place the essence thereof in the proportion of parts, conceiving it to consist in a comely commemu- rability of the whole unto the parts, and the parts be- tween themselves. Browne.

That division is not natural, but artificial, and by agreement, as the aptest terms to commensurate the longitude of places. Id. Vulgar Errours.

They permitted no intelligence between them, other than by the mediation of some organ equally com- mensurate to soul and body.

Government of the Tongue.

All fitness lies in a particular commensuration, or proportion, of one thing to another. South.

We are constrained to make the day serve to mea- sure the year as well as we can, though not commen- surately with each other ; but by collecting the frac- tion of days in several years, till they amount to an even day. Holder on Time.

Matter and gravity are always commenturate.

Bentley.

Is our knowledge adequately commensurate with the nature of things. Glanville's Scepsis.

Those who are persuaded that they skall continue for ever, cannot chuse but aspire after a happiness commensurate to their duration. Tillotson.

COMMENSURABLE IN POWER, is said of right lines, when the squares are measured by the same space or superficies.

COMMENSURABLE NUMBERS, whether integers or fractions, are such as can be measured or di- vided by some other number without any re- mainder; such are 12 and 18 as being measured by 6 and 3.

COMMENSURABLE SURDS, those that, being re- duced to their last terms, become true figurative quantities of their kind ; and are therefore as a rational quantity to a rational one.

COM'MENT, v. n. & n. s.\ Lat. commen COM'MENTARY, n. s. f turn, from com-

*COM'MENTATOR, n. s.. tminiscor, to call COM'MENTER, n. s. * to mind ; does*

not necessarily imply what is written ; but com- mentary is never used of what is spoken. Com- mentary, says Crabbe, i« a species of remark which often loses in good nature what it gives ic

seriousness ; it is mostly applied to particular persons or cases, and more commonly employed as a vehicle of censure than of commendation. This term, when not employed in personal cases, serves for explanation only. Commentaries are minute and elaborate expositions of the text of any author ; but more especially applied to the sacred writings. It is sometimes used in the same sense with memoir, in the modern affecta- tion reminiscences, which serves so many cox- combs as the vehicle of self-gratulation and dis- gusting vanity.

In such a time as this, it is not meet That every nice offence should bear its comment.

Shakspeare.

Enter his chamber, view his lifeless corpse, And comment then upon his sudden death.

Id. Henry IV.

Forgive the comment that my passion made Upon thv feature j for my rage was blind.

Id. King John.

Vere, in a private commentary which he wrote of that service, testified that

eight hundred were slain.

Bacon.

A company of stern readers dislike the second of the kneads, and Virgil's gravity, for inserting such amorous passions in an heroical subject ; but Servius, his commentator, justly vindicates the poet's worth, wisdome, and discretion, in doing as he did.

Bvrton's Anat. Mel. Slily as any commentator goes by Hard words or sense. Donne.

Such are thy secrets, which my life makes good, And comments on thee ; for in every thing Thy words do find me out, and parallels bring, And in another make me understand. . Herbert.

All that is behind will be by way of comment on that part of the church of England's charity.

Hammond's Fundamental!.

In religion, Scripture is the best rule •, and the church's universal practice, the best commentary.

King Charles.

All this without a gloss or comment, He could unriddle in a moment, In proper terms, such as men smaller When they throw out and niias the matter.

Hudibras.

Adam came into the world a philosopher, which appeared by his writing the nature of things upon their names ; he could view essences in themselves, and read forms without the comment of their re- spective properties. South's Sermoru. Criticks having first taken a liking to one of these poets, proceeded to comment on him, and illustrate him. Dryden's Juvenal. Dedication. I have made such expositions of my authors, as no commentator will forgive me. Dryden.

All the volumes of philosophy, With all their comments, never could invent So politick an instrument. Prior

Still, with itself compared, his text peruse ; And let your comment be the Mantuan muse. Pope.

No commentator can more slily pass O'er a learned unintelligible place. Id.

They shew still the ruins of Caesar's wall, that reached eighteen miles in length, as he has declared it in the first book of his commentaries.

Addison on Italy.

Galen's commentator tells us, that bitter substances engender cLoler, and burn the blood-

Arbuthnot on Alimenti,

COMMENTITIOUS, adj. Lat. commenti- tius. Invented ; fictitious ; imaginary.

It is easy to draw a parallelism between that an- cient and this modern nothing, and make good its re- semblance to that commentitious inanity.

Glanville's Scepsit.

CO'MMERCE, n. s. & v. n.) Lat. con and COMME'RCIAL, adj. Amerces. Mer-

chandise ; traffic, literally an exchange of com modities, and generally interchange or inter- course. It can subsist only between persons. ' Commerce,' says Crabbe, 'is a species of general but close intercourse ; it may consist either of frequent meeting and regular co-operation, or in cohabitation.'

Places of publick resort being thus provided, our repair thither is especially for mutual conference, and, as it were, commerce to be had between God and us. Hooker.

How could communities, Degrees in schools, and brotherhoods in citi Peaceful commerce from dividable shores, But by degrees stand in authenlick place ?

Shakspeare. Troiliu and Cressida. Ezekiel, in the description of Tyre, and of the exceeding trade that it had with the East, as the only mart town, reciteth both the people with whom they commerce, and also what commodities every country yielded. Raleigh.

Come, but keep thy wonted state, With even step and musing gait, And looks commercing with the skies, Thy wrapt soul sitting in thine eyes. Milton. When they might not converse or commerce with any civil men ; whither should they fly but into the woods and mountains, and there live in a wild manner. Sir J. Daviet.

In any country that hath commerce with the rest of the world, it is almost impossible now to be without the use of silver coin, Locke.

Instructed ships shall sail to quick commence, By which remotest regions are allayed ; Which make one city of the universe, Where some may gain, and all may be supplyed.

Dryden.

These people had not any commerce with the other known parts of the world. Tillotson.

Now Commerce, wealthy goddess, rears her head, And bids Britannia's fleets their canvass spread.

Gay.

Good-nature, which consists in overlooking of faults, is to be exercised only in doing ourselves jus. tire in the ordinary commerce and occurrences of life.

Addison.

From the revolution to the death of queen Anne, however trade and commerce might be aided and encouraged in other respects, they were necessarily subjected to depredations abroad, and over-loaded by taxes at home, during the course of two great wars.

Bolingbroke.

I should venture to call politeness benevolence in trifles, or the preference of others to ourselves, in little, daily, and hourly occurrences in the commerce of life. Chatham.

COMMERCE, in the unrestricted sense of the term, will embrace all the proceedings whereby an exchange of commodities is effected, whether by individuals or a nation ; and whether for ie- sale or consumption by the pui chaser or receiver of a commodity : while, as a science, it is ob- viously divisible into its external and internal

branches. Practically, indeed, the word trade has often been used to express the latter. But the history and principles of the entire subject, and its politvcal bearings, have been, until recently, always discussed under the

term at the head of this article.

Our views of such a subject in the present paper must be, of course, general : and here the principles of commerce, regarding it only in theory, might seem to require consideration be- fore we enter upon its history. In point of fact, however, the only sound doctrines upon the sub- ject are the fruit of experience. Theories have been continually demolished by the new facts which have been developed in the ever-changing, and, thank heaven, the ever-improving condition of large communities of mankind. In the pre- sent age, especially, this science has been, in common with many others, entirely revolutionised and remoulded ; in part by the labors of men who have united a knowledge of its practical details with considerable scientific research and original genius, and in part by the peculiar circumstances and extraordinary political revolutions of the last thirty years. Mr. Locke and Dr. Adam Smith led the way, perhaps, to the scientific consideration which the true ' wealth of nations,' has lately re- ceived. The late Mr. Ricardo, Mr. Baring, and other practical merchants and traders, have contributed their quota of important information to the incipient system ; and we must, on the whole, fully award to the modern science of PO- LITICAL ECONOMY that prominent station that has been claimed for it. It now properly embraces the nature and principles of commercial science ; and the reader is referred to that article for every thing that is abstract or systematic in this science. Our present article will be confined to a brief sketch of the history of commerce, generally ; the actual state of the commerce-of different countries will be treated under their respective names.

There is no doubt but commerce is nearly as ancient as the world itself. It seems, however, pretty evident that the early inhabitants of Ara- bia were the first who made long voyages. Their country was most happily situated for this pur- pose ; being a peninsula washed on three sides by the famous Arabian, Indian, and Persian seas. That Arabia was very early inhabited is certain ; and the first notice we have of any con- siderable trade refers it to the Ishmaelites, settled in the higher part of that country. To them Joseph was sold by his brethren, when they were going down to Egypt with spicery, balm, and myrrh. Here they appear as inland traders; but the balm and myrrh only were productions of their country. For the spicery they must have had commerce with other nations ; and such was this commerce, that, in ancient times, the fame of Arabia for spices led many great authors of antiquity to conclude that spices actually grew there. Indeed there seems little doubt of the extent of this commerce, for in succeeding times Strabo and other authors tell us they were very great traders : they mention particularly what ports they had ; the prodigious magazines they kept of the richest kinds of goods; the great wealth they amassed; how magnificently they lived and what extravagant sums of money they VOL.

expended in carving, building and statues. It is expressly said they had spices, rich gums, sweet-scented woods, and ivory in abundance. All this not only shows that they had a large and flourishing commerce, but that they traded ex- tensively to the East, for there only were those commodities to be obtained. That the Arabians were the first discoverers of the route to India seems also very probable ; they lay nearer and more convenient than any other nation ; and, as the situation of their country would naturally incline them to navigation, so with the monsoons they could regularly sail to and from the Indies with great facility. Taking all these things to- gether, there seems good reason to contend that commerce flourished first among the Arabians ; and their history exhibits them as, at this early period, both a free and happy people ; in con- sequence.

Egyp« is celebrated among tne ancient na- tions for carrying everything to perfection ; and it is certain that no pursuit was cultivated there more early, with more assiduity, or with greater success, than commerce. We have seen that the richest commodities were transported thither by land ; and it is certain that the most valuable manufactures were invented and per- fected in Egypt, long before they were under- taken in other countries : for, as Warburton justly observes, at the time Joseph came into Egypt, the people were not only possessed of all the con- veniences of life, but were remarkable for their magnificence, their politeness, and even for their luxury, which argues a long standing traffic. Indeed, the advantages of their country, lying along the Red Sea, and the many benefits arising to them from the Nile, which they emphatically called ‘ The River,’ or ‘ The River of Egypt,’ gave them an opportunity of carrying their inland trade not only to a greater height than any other country then known, but even high- er than it has ever been carried by any na- tion, China excepted ; and it has even been thought that the Chinese received, at an early period, some of their institutions and habits from the Egyptians. ‘ By such methods, under a wise and well-regulated government, promoting a spirit of industry among the people, the Egyp- tians became numerous, rich, and powerful ; and their country, fpr large cities, magnificent struc- tures, and continual abundance, the glory and wonder of the old world.

Though the Phoenicians possessed only a nar- row slip of the coast of Asia, and were sur- rounded by powerful and warlike nations, that prevented them from extending themselves on that side, yet they rendered themselves famous by erecting the first naval power that makes any figure in history ; in raising which, they availed themselves of all the creeks, harbours, and ports of their territory ; and improved them in such a manner that they were no less remarkable for their strength, than for their convenience. Every thing that could contribute to increase their power was attended to ;

and, while they were admired for their formidable fleets and armies, they were no less so for the advantages they derived from commerce. They were also celebrated by an- tiquity as the inventors of arithmetic and astro-

romy; and the long voyages they undertook, when no other nation (except the Arabians and Egyptians) could venture farther than their own coasts, shows them to have been considerable proficients in the latter science. It was by these arts that Tyre and Sidon became the most fa- mous marts in the universe; and were the resort both of their neighbours and distant nations, as the storehouses of the world. The two cele- brated kings of Israel, David and Solomon, con- sidered their friendship and alliance as of great advantage.

It is not improbable that the latter received from the Phoenicians the first hints of the great advantages that he might derive from the pos- session of the ports of Elath and Eziongeber, and of the commerce that might from thence be carried on. It is certain that he made use of their assistance in equipping his fleets at these ports ; and from thence his vessels, manned chiefly by Phoenicians, sailed to Ophir and Tar- sish, bringing into his country various'unknown curiosities, and riches in such abundance, that ' He made silver in Jerusalem as stones, and cedar-trees as sycamores that grow in the plains.' If this appear wonderful, let us consider that the return of one voyage only to Ophir produced 450 talents of gold, equal to 51,328 Ibs. of our Troy weight, about £2,463,744 sterling, and we cannot doubt of the immense profit arising from this commerce. It also merits notice that the queen of Sheba or Saba, which lies in that part of Arabia before mentioned, having heard, with surprise, the reports that were spread of Solo- mon's magnificence, made a journey to his court on purpose to satisfy herself; and from the presents she carried with her, 120 talents of gold (£657,650), spices in great abundance, and pre- cious stones, probably the cause of her journey was an opinion that no country was so rich as her own. In confirmation of what is before no- ticed of the Arabians trading to India, as well as of their having at this time penetrated farther than any others, it is said in this part of Scrip- ture, ' neither were|there any such spices as the queen of Sheba gave to king Solomon.' While Solomon reigned he cultivated the arts of peace, kept the wheel of commerce going, and his people employed, thus providing equally for the extension of their happiness and of his own power ; while he rendered the land of Israel the glory and wonder of the East. But, under the kings that followed him, the trade of Judea sunk almost as suddenly as it rose ; and in a short time they lost those ports on the Red Sea upon which their Indian commerce

depended.

The Phoenicians and Egyptians, then becaiae, as it were, heirs of the trade of the world. Egypt monopolised that of the Indies, which, with her corn and manufactures, brought such a great balance of wealth into the country, as enabled her monarchs to accomplish those me- morable works, that, in spite of time and the devastations of war, remain the lasting monu- ments of her power. The Phoenicians drew from Egypt a great part of those rich commodities and manufactures which they exported into all the countries lying between them and the Medi- terranean Sea. For the glory and strength of

these governments, as founded on trade, we neeo only look into the sacred books of Isaiah and Ezekiel, whose accounts are abundantly con- firmed by profane history : by comparing these data we behold the industry of the inhabitants of this small country triumphing over all obsta- cles, and procuring the greatest plenty in a barren soil, and immense riches where, without industry, there must have been the greatest poverty. After the destruction of old Tyre, by Nebuchadnezzar, the spirit of its inhabitants produced a Phoenix, little inferior in beauty to its parent ; which soon became mistress of the sea, over which it held supreme dominion till subdued by Alexander the Great.

That this prince's views were far more ex- tended than his conquests, will appear to any one who considers his plan of power ; they will be- hold a greater politician than a conqueror. He framed in his own mind an idea of universal monarchy ; and though he was for making use of force to acquire, he very well knew that com- merce only could preserve, an empire, which was to have no other limits than those which nature had assigned the world. He thought of placing his capital in Arabia ; and of disposing things in such a manner, as to have commanded the most distant parts of the Indies, while he maintained a connexion with the most remote countries in Europe. Though he lived scarcely to sketch the outline of his extravagant scheme, the specimen he left in his new city of Alexandria, sufficiently shows how just and how correct his notions were. That city, which it may be said he designed with his own hand, and which was built under his eye, became, in after times, all that he expected, the glory of Egypt, and the centre of commerce.

Tyre, while in her glory as mistress of tne sea, founded her noble colony of Carthage, which, whether considered as a capital, a strong fortress, or a commodious port, was admirably situated. On the coast of Africa, equally distant from all the extremities of the Mediterranean, with a fine country behind it, and no power near it icapable of restraining its commerce or its growth, its in- habitants rose rapidly to the greatest wealth and power; and

their conquests were astonishing: yet these will not bear comparision with their navigation. Westward they stretched as far as Britain ; and the Scilly Islands, which are now so inconsiderable, were to them an India, the route to which they carefully concealed. On the other side, they discovered a great part of the African coast, the Canary Islands; and some have thought they even found the way to America. So long as they confined themselves to trade, and the arts connected with it, their power con- tinually increased ; but when luxury took the place of industry, and a spirit of ambition banished their old maxims of frugality and labor, their acquisitions ceased, and their destruction soon followed. See CARTHAGE.

In Egypt the Ptolemies, who succeeded Alex- ander, entered deeply into that monarch's scheme, and they reaped the fruit of his wise establish- ment. By encouraging trade Ptolemy Phila- delphus made his subjects immensely rich, and himself exceedingly powerful. An ancient author

jays that he had 120 galleys of war, of a large size, and above 400 other vessels, small and great ; which, were it not for the other wonders related of him, would seem incredible. He raised a new city on the coast of the Red Sea ; he opened harbours, constructed quays, built inns at proper distances on the roads, and cut a canal from sea to sea. He who comprehended the importance of commerce, so as to dare such expences as these, might have treasures, armies, and fleets, at his pleasure. Under him Alexan- dria appeared in pomp and splendor; how great this was, we may judge by what we are told was the produce of her customs, which fell little short of two millions of our money annually ; and Ptolemy, who understood trade so well, would never cramp it by high duties. If the revenue of the prince from a single port was so great, what must have been the wealth of his subjects? After Egypt became a Roman province, Alex- andria maintained her dignity ; and the Romans were struck with the majesty of her appearance. They had hitherto paid little regard to traffic, but they soon comprehended the advantages of such a port and a mart as Alexandria. They confirmed her privileges, protected her inhab- itants, and took every possible measure to pre- serve her commerce ; and such was the effect, that she preserved it longer than Rome conld preserve her power. She even maintained con- siderable importance after being made dependent on Constantinople : and under the Arabs re- covered no small share of her ancient pre-emi- nence, as the centre of the trade of the civilised world.

After the Roman empire was overrun by bar- barians, and the arts and sciences had nearly perished with that power which cultivated and

protected them, commerce was in a manner overwhelmed and lost, and individual merchants either forced by necessity, or led by inclination, took shelter in a few scattered islands lying near the coast of Italy. These would scarcely have been thought to offer a human habitation in time of peace ; being divided from each other by nar- row channels, so encumbered with shallows, that it was impossible for strangers to navigate them; but here these refugees settled in the sixth cen- tury, and finding themselves tolerably safe, they united for improving their condition, and aug- menting their security ; and became, in the eighth century, a well-settled republic. Such was the rise of the famous and potent state of Venice : her growth was quick, and the increase of her power amazing : she extended her commerce on all sides ; and taking advantage of the barbarous maxims of the Mahommedan monarchies, she drew upon herself the profits of the Indian trade, and, in some sense, made Egypt a province, and the Saracens her subjects. While her traffic thus swelled beyond conception, and she became the common mart of all nations, her naval power became also great, and she stretched her con- quests not only over Italy, but through the islands of the Archipelago ; so as to be at once mistress of the sea, of many fruitful countries, and of part of the great city of Constantinople. But ambition, and the desire of lording it over their neighbours, brought upon them those evils

which produced first a falling off in their com- merce, and then of their power.

While commerce raised Venice the Rich on the narrow, marshy, unprofitable, and unwhole- some islands in the Adriatic, she erected Genoa the Proud on the inhospitable shores of Liguria ; and though surrounded by ambitious and war- like neighbours, in a narrow and unproductive country, and disturbed by perpetual factions and successive revolutions, the trade of Genoa made her rich and great. Her merchants traded to all countries, and acquired wealth by carrying the commodities of the one to the other. Her fleets became formidable, and her conquests im- portant. She subjugated the adjacent island of Corsica, fixed a colony at Caffa, and for some time possessed the coasts on both sides of the Black Sea. The pursuit of commerce begat continual wars between her and Venice ; which, though they terminated in leaving the latter mistress of the sea, were fatal to both ; but the avarice of the Genoese may be said to have des- troyed them, by inducing them to abandon the fair profits of trade for the vile ones of usury.

In another part of the world, about the middle of the thirteenth century, a confederacy of mari- time cities was formed, solely regarding com- merce, which they extended far and wide. See HANSE TOWNS. When they had become im- mensely rich and powerful, their behaviour awakened various

princes to a more particular view of the dangers that such a league might produce, and the advantages that would natu- rally flow to their respective states, by recovering their trade, thus in some part made over to others, entirely to themselves. Though from this time the Hanseatic alliance declined, and is now totally dissolved, the cities of Lubeck, Hamburgh, and Bremen, sufficiently mark to what splendor and dignity this confederacy ar- rived.

Portugal and Spain next demand attention ; and by subjects of these states, in a space of about fifty years, such discoveries were made as changed the whole face of affairs in the commercial word. The kingdom of Portugal was small, but well cultivated, very populous, and favored with a variety of good ports ; which, with a succession of wise princes, who fostered the arts and sciences, encouraged industry, and extended the wealth and happiness of their subjects, prompted some lively spirits among them, about the beginning of the fifteenth century, to attempt discoveries in distant quarters. They were countenanced by a young heroic prince, who pushed on their endeavouis with such success, that step by step the coast of Africa, was surveyed, as far as the Cape of Good Hope, which they thus named ; and Vasquez de Gama at last happily discovered a new route to the East Indies, the point princi- pally in view. Thus, in a short space of time, Portugal, from an inconsiderable power, grew one of the richest in Europe, gaining a vast ac- cession of territory in Asia and Africa, and raising a naval power superior to any seen for ages pre- ceding.

About the same time Christopher Colon o Oi Columbus, under the patronage of Isabella neer of Castile, and wife to Ferdinand the Wise dio

covered America ; and, after Colurabus's death, the discovery of a passage to the Spice Islands, which he aimed at, was perfected by Magellan.

The consequences that naturally followed on the discovery of a passage by the Cape of Good Hope, and of a fourth part of the globe in the western hemisphere, were, as before hinted, an entire change in the state of Europe, producing not only in Portugal and Spain, but in most ether nations, a desire of visiting these remote parts, of establishing colonies and manufactures ; of exporting commodities, and of raising, set- tling, and protecting, new establishments. Thus Europe in general received a lasting and invalua- ble benefit ; and its potentates made themselves not only formidable, but even terrible, in those parts of the earth where before their fame was scarcely known.

The naval power of Portugal, which, as we have seen, was very great, received an incurable wound by falling under the power of Spain ; and this alone, it would naturally be supposed, must have raised the latter to a monopoly of commerce, and the universal dominion of the sea; yet the very pursuit of a design so injurious to the interests of mankind, quickly ruined that power. The haughty temper of the Spaniards, fostered by the boundless ambition of theii princes, obliged other nations, in their own de- fence, to pay more attention to navigation than they otherwise would have done. The English and Dutch, particularly, who had hitherto been blind to the advantages of their situation, were roused by the injuries they received ; and the spirit of revenge prompted them to enterprise In short, the pains taken by Spain to keep all the riches flowing from these discoveries to herself, and the dangerous, detestable, and destructive uses she made of those immense riches, produced effects directly opposite to those she looked for, and her enemies became rich, powerful, and happy, while her commerce dwindled away, and her naval power sunk and crumbled to pieces.

The inhabitants of the Seven Provinces, made poor by her oppression, and driven mad:by her severities, shook off her yoke, and became potent and rich. They had learned by distresses the necessity of establishing a moderate and equal government ; and the mildness of that govern- ment, with the blessings it procured to its sub- jects , increased their number, and elevated their hopes. The consequences were surprising both to friends and enemies ; in a short time every fishing vHlage was improved into a trading town ; little towns grew up into large and magnificent cities ; inland boroughs were filled with manu- factures ; and within half a century the oppressed states of Holland became high and mighty. Even amidst the danger and expenses of a war carried on against far superior forces these people attained a degree of political strength and im- portance which not only enabled them to defy the Spaniards, but made the latter glad to solicit their friendship.

None of the triumphs of commerce, either in ancient or modern history, were of so rapid or so strong a growth as this ; and it will admit of no Dispute, that the republic of the United Pro-

vinces owed her freedom, her power, and her wealth, entirely to industry and trade. The pro- ductions of their country would not support a tenth part of its inhabitants ; they were without timber or maritime storos ; without coal or lime ; and their havens, thougu commodious, were dif- ficult of entiy. Yet these provinces were soon enriched; their store-houses became full of corn; their magazines contained every earthly com- modity ; their shipping was enormous, and their naval stores abundant. And the increase of their population was equally surprising. Had their land been

pleasant and fruitful it would have been nothing strange ; but that men should force nature, lay out gardens, raise palaces, dig canals, plant woods, and ransack all quarters of the earth for fruits and flowers, to make a paradise on a dead plain or ungrateful heath, in the midst of fogs and standing lakes, appears almost in- credible.

The foreign commerce of BRITAIN, it may easily be conceived, must have been a work of time. The natives would first think of necessaries, then of conveniences, and lastly of superfluities. Such tribes as came originally from the continent might have other ideas; but as we can only think of fear or indigence driving them hither, so it is likely that succeeding generations would fall off from the manners of their ancestors; and their circumstances affecting their desires would make them another sort of people. It is clear, however, that the inhabitants of the op- posite continent, early maintained a foreign traffic, and came over and bartered their goods for the raw commodities of the Britons, till they gradu- ally taught the latter to improve their leather and wicker boats, and to venture themselves over to Gaul.

Things were in this situation when the Romans invaded Britain, and by falling under that power our ancestors caught the manners and customs of their conquerors. At that time the arts and sciences flourished throughout the empire; with learning the Romans introduced foreign com- merce everywhere, made excellent high roads, established colonies, and fixed standing camps and fortresses in proper places. These improve- ments were soon extended to Britain. They were also careful with regard to marts or empo- riums for the conveniency of traders, of which they left many, and among the rest London, not more famous for her present extensive trade, than venerable for her antiquity. The abandon- ment of this island by the Romans was followed by a new deluge of barbarity : the Saxons ef- faced almost all the improvements of our civi- lised conquerors, and, upon the establishment as it were of a new people, things were to begin a new. Yet that they were inclined to, and made some advances in, foreign commerce, is suf- ficiently evident : Alfred the Great formed pro- jects of vast discoveries to the north, and actually sent persons of great prudence and abilities into the east, who brought home various curiosities, which were preserved in the treasury of the church of Salisbury for many ages.

Though the Danes were our masters only a short time, yet from their becoming so by a ma- ritime force, and from the establishment of their

countrymen on the opposite shores of France, as well as in the other parts of , Europe, we may justly conclude that they corresponded with them, and that had their dominion continued longer it would have produced many advantages. But the Normans, men of the same race, dispos- sessed them here; and partly under color of right, partly by force, erected that monarchy, which, not without various alterations and changes, subsists even to our time.

We cannot here trace the ebbings and flowings of our commerce through every reign; but the opinioi commonly entertained, that we had little or no trade before the time of Queen Elizabeth, seems to have but feeble support from history. The reign of that princess, however, was brilliant in every point of view. At her accession the fi- nances of the nation were in a desperate condition ; the crown was in debt, the treasury empty, the cation involved in a foreign war directly against her own interests, and our coasts naked. It had no credit abroad, nor concord at home ; the great men were split into factions, and the common peo- ple distracted and dejected. In this sad situation of affairs, the first establishment of our commerce was effected. The government was compelled to act with caution, to draw assistance from every quarter, and to promote by every means the wel- fare of the people, both to support the expenses of the state, and to give a popular turn to her councils. Elizabeth encouraged her subjects to arm against the Spaniards, that they might be ac- customed to the sea, and acquire a knowledge in navigation. She erected several companies, and was attentive to their pursuing the ends for which they were designed. During her whole reign, she particularly encouraged in- dustry at home, and the honor of the country abroad ; our commodities and manufactures were improved, the art of ship-building was brought to perfection, our ports were filled with able sea- men, and English merchants were justly respected. In short, the seeds of British wealth, sown in her time, have been springing up ever since. See ENGLAND, AND TRADE.*

COMMERSONIA, in botany, a genus of the pentagynia order, and pentandria class of plants : CAL. a monophyllous, five-parted, corolliferous perianth, with sharp ovated segments ; COR. five linear petals; STAM. five very short filaments at the bases of the petals ; pericarp a globular, hard, quinquelocular nut, with two ovated seeds in each division. Species one only ; native of Otaheite and the South Sea Islands.

CO'MMIGRATE, v. n. I Lat. con and mi-

COMMIGRA'TION, n. s. J gro. To remove in a body, or by consent, from one country to another.

Both the inhabitants of that, and of our world, lost all memory of their

commigration hence.

Woodward' Natural History.*

Ct>MMINATION, n. s. ^ Jjnt.comminatio.

COMMI'NATORY, adj. }A threat; a de- nunciation of punishment ; a curse. The day of curses in the English church, otherwise called Ash-Wednesday, when the comminatory or de- nunciatory portions of the Levitical law are read, and all the eople say Amen.

Some parts of knowledge God has thought fit >»- seclude from us ; to fence them not only by precept and comminution, but with difficulty and impossibili- ties. Decay of Piety.

COMMIN'GLE, v. a. & v. n. Lat. commisceo. To mix into one mass; to unite intimately; to blend ; to unite one with another. Blest are those,

Whose blood and judgment are so well commingled, That they are not a pipe for fortune's finger, To sound what stop she please. Shatupeare. Hamlet.

Dissolutions of gum tragacanth ami oil of sweet almonds do not commingle, the oil remaining on the top till they be stirred. Bacon't Physical Remains.

Thy fanes, thy temples, to thy surface bow, Commingling slowly with heroic earth, Broke by the share of every rustic plow : So perish monuments of mortal birth, So perish all in turn, save well recorded worth.

Byron's Childe Harold.

CO'MMINUTE, v. a. ^ Lat. comminuo. To COMMINU'IBLE, adj. (grind; to pulverise; COMMINU'TION, n. s. 3 to break into small parts. It is also used in the sense of attenuation. Causes of fixation are the even spreading of the spirits and tangible parts, the closeness of the tan- gible parts, and the jejuneness or extreme comminu- tion of spirits ; of which the two first may be joined with a nature liquifiable. Jiacon.

Parchment, skins, and cloth drink in liquors, though themselves be entire bodies, and not commi- nuted, as sand and ashes. Id. Natural History. The best diamonds are comminuible ; and are so far from breaking hammers, that they submit unto pesti- lation, and resist not any ordinary pestle. Browne. This smiting of the steel with the flint doth only make a comminution, and a very rapid whirling and melting of some particles ; but that idea of flame is wholly in us. Bentley. COMMI'SERATE, v. a. ^ Lat. con and mi- COMMI'SERABLE, adj. \serior. To pity; COMMISERA'TION,

n. s. 3 to compassionate. It has relation to suffering, and more especially to suffering arising from criminality of conduct. A culprit dying under the penalty of the law excites our commiseration. Thus it is com- passion peculiarly modified. Compassion is a call, a demand of nature, to relieve the unhappy. Commiseration is the sympathy which we feel with the guilty wretch, whose offence we deplore, but whose sorrows excite us to do all we can for his relief. Commiseration is represented as the feeling which our wretchedness excites in the Supreme Being. Commiseration is also the tender- ness which we feel towards those who are below us in station or character, when they are over- whelmed with calamity.

These poor seduced creatures, whom I can neither speak nor think of but with much commiseration and pity. Hooker

Forgive a moiety of the principal Glancing an eye of pity on his losses. That have of late so huddled on his back ; Enough to press a royal merchant down, And pluck commiseration of his state From brassy bosoms, and rough hearts of flint, ˆ From stubborn Turks, and Tartars, never trained To offices of gentle courtesy. Shahspeart.

Live, and hereafter say , A mud man's mercy bade thee run away.

— I do defy thy commiseration, And apprehend thee for a felon here.

Id. Romeo and Juliet.

It is the sinfullest thing in the world to destitute a plantation once in forwardness : for besides the dis- honour, it is the guiltiness of blood of mwiy commise- rate persons. Bacon's Essays. This was the end of this noble and commiseralle person, Edward eldest son to the duke of Clarence

Id. Henry VII.

She ended weeping ; and her lovely plight Immoveable, till peace, obtained from fault Acknowledged -and deplored, in Adam wrought Commiseration. Milton's Paradise Lost.

Then we must those, who groan beneath the weight Of age, disease, or want, commiserate. Denham.

We should commiserate our mutual ignorance, and endeavour to remove it. Locke.

I prevailed with myself to go and see him, partly out of commiseration, and partly out of curiosity.

Swift.

CO'MMISSARY, n.s.) Bar. Lat. commis-

CO'MMISSARISHIP, n.s. { sarius. An officer made occasionally for a certain purpose ; a dele- gate ; a deputy. It is a title of ecclesiastical j u- risdiction, appertaining to such as exercise spi- ritual jurisdiction, at least so far as his commission permits, in places of the diocese so far distant from the chief city, as the chancellor cannot call the subjects. An officer who draws up list of the numbers of an army, and regulates the procura- tion and conveyance of provision or ammuni- tion.

The commissaries of bishops have authority only in some certain place of the diocese, and in some certain causes of the jurisdiction limited to them by the bishop's commission. Ayliffe.

A commissariship is not grantable for life, so as to bind the succeeding bishop, though it should be con. firmed by the dean and chapter. Id. Parergon.

But is it thus you English bards compose ?

With Runick lays thus tag insipid prose ?

And when you should your heroes deeds rehearse,

Give us a commissary's list in verse. Prior.

COMMISSARY-GENERAL, OF THE MUSTERS, an officer appointed to muster the army, to know the state of each regiment and company, to re- ceive and inspect the muster rolls, and to keep an exact account of the strength of the army. A new appointment has been created in the] person

perpetration ; the act of committing sin. Sins of commission are distinguished in theology from sins of omission.

Discrete he wos, and of gret reverance j He seemed swiche ; his wordes were so wise : Justice he wos ful often in assise, By patent, and by pleine commissioun. For his science, and for his high renoun.

Chaucer. Cant. Tales.

Commission is the warrant, or letters patent, that all men exercising jurisdiction, either ordinary or extraor- dinary, have for their power. Cowell.

Omission to do what is necessary, Seals a commission to a blank of danger.

Shahspeare. Troilus and Cressida.

The subject's grisf

Comes through commissions, which compel from each The sixth part of his substance, to be levied Without delay. Id. Henry VIII.

He led our powers ;

Bore the commission of my place and person ; Tbe which immediacy may well stand up, And call itself your brother. Id. King Lear.

It was both a strange commissionˆ and a strange obe- dience to a commission, for men in the midst of their own blood, and being so furiously assailed, to hold their hands contrary to the laws of nature and neces- sity. Bacon's War with Spain.

What thou canst attain, which best may serve

To glorify thy Maker, and infer

Thee also happier, shall not be withheld

Thy hearing, such commission from above

I have received, to answer thy desire

Of knowledge within bounds. Milton.

Draw no commission lest the court should lye, And disavowing treaty ask supply. Marvell.

As he was thus sent by his father, so also were the apostles solemnly commissionated by him to preach to the Gentile world, who, with indefatigable industry and resolute sufferings, pursued the charge ; and sure this is competent evidence, that the design was of the most weighty importance. Decay of Piety.

Every commission of sin introduces into the soul a certain degree of hardness. Soulh's Sermons.

He indulges himself in the habit of known sin, whether commission of something which God hath fo i, or the omission of something commanded.

Roger's Sermons. The archbishop was made one of the cvmmissionert

of the treasury.

Clarendon..

of inspector-general of cavalry, which answers Suppose itinerary commissioner-s to inspect, through- every purpose for which that of muster-master out tlle kingdom» into the conduct of men in office, general was intended, as far as regards the ca- with resPect to morals and itligion, as well as abilities.

valry.

Swift.

*COMMISSARY-GENERAL, OF PROVISIONS has * was made a colonel > th°ugh I gained my com-*

*the charge of furnishing the army in the 'field m*Mt'onby the horse's virtues, having leapt over a six-*

with all sorts of provision, forage, &c. by con bar gate" Addison's Freeholder.

tract. He has under him various commissaries He for his son a gay commission buJ"s >

store-keepers, clerks, &c. Who drinks, whores, fights, and in a duel dies.

COMMISSION, n.t.tt. v. «.} From, com-

CoMMi'ssiONATE.t-.a. \ mil, signifies

*COMMISSIONER, n. *. 3 the act of com-*

mitting, or putting into the power of another , a trust; a warrant by which any trust is held,' or authority exercised. Charge; mandate; office; employment. A number of persons may be joined togetlrer to execute a trust, and they are a commission ; and each individual is a commis- uouer. Commission is also used in the sense of

Pope.

Like are their merits, like rewards they share , That shines a consul, this commissioner ‘

Id. Dvnciad.

Tis pitiful

To court a grin when you should woo a soul j To break a jest, when pity should inspire Pathetic exhortation ; and address The skittish fancy with facetious tales, When sent wilh God’s commission to the heart.

Cuwver.

COMMISSION, m commerce. See FACTORAGE.

COMMISSION OF BANKRUPTCY. See BANK- RUPT.

COMMISSION OF LUNACY, issues out of the court of chancery, whether a person represented to be a lunatic, be so or not. See LUNACY.

COMMISSION OF TEINDS, a court at Edinburgh, which came in place of a committee of the Scot- tish parliament, for erecting new parishes, and valuing teinds for the support of the clergy. It is vested in the lords of session. See LAW.

COMMISSION, in military affairs, the situation of any officer (above a sergeant, who holds no commision) in his majesty’s service, either in the line, the volunteers, or militia ; in all of which, except the militia, the commissions must have the royal sign manual, and are issued from the war- office. Commissions in the militia do not bear the royal sign manual, but that of the lieutenant of the county, — they having previously been laid before his majesty for fourteen days to approve them.

COMMISSIONERS OF CUSTOMS. See CUSTOMS.

COMMISSIONERS OF EXCISE. See EXCISE.

COMMISSIONERS OF THE NAVY. See NAVY.

COMMISSIONERS OF THE TREASURY, LORDS. See EXCHEQUER, AND TREASURY.

COMMI'SSURE, n. s. Lat. commissura. Joint; a place where one part is joined to another.

All these inducements cannot countervail the in- convenience of disjointing the commissures with so many strokes of the chissel. Wotton's Architecture.

This animal is covered with a strong shell, jointed like armour by four transverse commissure in the mid- dle of the body, connected by tough membranes.*

Ray on the Creation.

COMMISSURE, among anatomists, is somtimes used for a suture of the cranium or skull. See SUTURE.

COMMISSURE, in architecture, &c. denotes the joint of two stones, or the application of the sur- face of the one to that jof the other. See MA- SONRY. Commissure is also used by some au- thors for the small metuses or interstices of bodies, or the little clefts between the particles, especially when the particles are broadish and flat, and lie contiguous to one another, like thin plates or lamellae.

COM'MIT, v. a.

COM'MITTMENT, n. s.

COM'MITTEE, n. s.

COM'MITTABLK, adj. af trust. It also signifies to perpetuate, ries the idea of doing something wrong.

Lat. committo ; Fr. commettre. To put to- gether; to put into a persons hands by way It ear- In the

first sense it is almost synonymous with commis- sion, as commission, in one of its acceptations, is synonymous with commit. The kind of trust to which the verb very frequently refers, is that of committing, or sending to prison. Committee bears a striking analogy to commissiories. Cowell thus explains its application : — 'Those to whotn the consideration or ordering of any matter is referred, either by some court to whom it be- longs, or by consent of parties. As in parliament, after a bill is read, it is either agreed to and passed, or not agreed to ; or neither of these, but referred to the consideration of some appointed by the house to examine it farther, who thereupon

are called a committee.' Committer is a magis- trate that sends a criminal

to jail ; or, the crimi- nal who perpetrates the offence, that renders a jail his appropriate residence.

The mighty goddess also, of nature, That under God hath the whole governaunce Of worldly things committed to her cure, — Disposed have, through her wise purveyance, To give my lady so moche suffisance Of al vertues.

Chaucer. Complaint of the Black Knight.

Thou ne shalt not also make no lesinges in thy

confession, for humilitee ; peraventure, to say, that

thou hast committed and don swich sinnes of which

that thou ne were never guilty.

Id. The Persones Tale. It is for your health, thus to commit Your weak condition to the raw, cold morning.

Shakipeare.

Here comes the nobleman that committed the prince, for striking him about Bardolph.

Id. Henry IV.

It did not appear by any new examinations or com- mittments, that any other person was discovered or im- peached. Bacon. Besides the mistakes committible in the solary com- pute, the difference of chronology disturbs his com- petes. Brown.

So, though my ankle she has quitted, My heart continues still committed ; .And, like a bailed and main-prized lover, Although at large, I am bound over. Hudihras

He'd prove a buzzard is no fowl, Arid that a lord may be an owl, A calf an alderman, a goose a justice, And rookes committe-men and trustees. Id.

A ravenous cat will punish in the mouse The very same offences in the house Which hee himselfe commits ; yea, for that vice^ Which was his own (with praise) hee kills the meic.

George Withers.

There, in a bribed committee, they contrive To give our birth-rights to

prerogative : Give, did I say ? They sell, and sell so dear, That half each tax Danby distributes there.

Maroell.

Such an one makes a man not only a partaker of other men's sins, but a deriver of the whole guilt to himself, yet so as to leave the committer as full of guilt as before. South.

All corners were filled with covenanters, confusion, committe-men, and soldiers, serving each other to their ends of revenue, or power, or profit ; and these com- mitte-men and soldiers were possest with this covenant.

Walton.

*Manchester had orders to march thither, having *. committee of the parliament with him, as there was another committee of the Scottish parliament always in that army ; there being also now a committee of both kingdoms residing at London, for carrying on the war. Clarendon.*

Letters out of Ulster gave him notice of the in- human murders committed there upon a multit ide of the Protestants.

*A creeping yoimg fellow committed matrimony with a brisk gamesome lass. * Estrange.*

'Tis policy

For son and father to take different sides ; Then lands and tenements commit no treason.

*Dryden**

Is my muse controuled By servile awe ? Born free, and not be bold .

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At least I'll dig a hole within the ground, And to the trusty earth commit the sound.

Id. Pertms.

Vexed at the charge, I to the flames commtt Rhymes, similies, lord's names,

and ends of wit.

Gay.

Whatever errours I may have committed in publick life, I have always loved my country. Bolingbroke.

Can you commit unchecked by shame What in a beast so much you blame? What is a law if those that make it Become the forwardest to break it? Beattie.

COMMITMENT, in our law, takes place where the offence is not bailable, or the party cannot find bail. It must be by proper warrant, con- taining the cause of the commitment ; and con- tinues till put an end to by a trial, or in due course of law; imprisonment being intended only for safe custody, and not for punishment.

It is said, that wheresoever a justice of peace is empowered by any statute to bind a person over, or to cause him to do a certain thing, and such person, being in his presence, shall refuse to be bound, or to do such thing, the justice may commit him to the gaol to remain there till he shall comply. 2 Hawk. P. and C. cap. 16. §. 2. It also seems agreed by the old books, that where- soever a constable or private person may justify the arresting another for a felony or treason, he may also justify the sending or bringing him to the common gaol ; and that every private person has as much authority, in cases of this kind, as the sheriff or any other officer; and may justify such imprisonment by his own authority, but not by the command of another. Id. §. 3. But in- asmuch as it is certain, that a person lawfully making such an arrest may justify bringing the paity to the constable, in order to be carried by him before a justice of peace ; and inasmuch as the statutes of 1 and 2 P. and M. cap. 13., and 2 and 3 P. and M. cap 10., which direct in what manner persous brought before a justice of the peace for felony shall be examined by him, in order to their being committed or bailed, seem clearly to suppose, that all such persons are to be brought before such justice for such pur- pose ; and inasmuch as the statute of 31 Car. II. cap. 2, commonly called the habeas-corpus act, seems to suppose that all persons who are com- mitted to prison are there detained by virtue of some warrant in writing, which seems to be in- tended of a commitment by some magistrate, and the constant tenor of the late books, practice, and opinions, are agreeable hereto; it is cer- tainly most adviseable at this day, for any pri- vate person who arrests another 'for felony, to cause him to be brought, as soon as conveniently he may, before some justice of the peace, that he may be committed or bailed by him. The privy council and secretary of state may commit : but on an enquiry made into the source of this power in cases of libels and other state crimes, •2 Wils. 275, 11 S. T.

317. 9, it appears that the king being the principal conservator of the realm, the secretary of state has so much of the royal authority transferred to him as justifies commitment for these crimes, but not the seizure of pap^- s. Respecting the manner of commit- insiit, it is enacted by 2 and 3 P and M. cap.

10, that justices of peace shall examine persons brought before them for felony, &c., or suspicion thereof, before they commit them to prison, and shall bind their accusers to give evidence against them. A justice of the peace may detain a pri- soner a reasonable time, in order to examine him ; and it is said, that three days is a reason- able time for this purpose. Every commitment must be in writing, and under the hand and seal, and show the authority of him that made it, and the time and place ; and must be directed to the keeper of the prison. It may be either in the king's name, and only attested by the justice, or in the justice's name. And it ought to set forth the crime with convenient certainty, otherwise the officer is not punishable, by reason of such mittimus, for suffering the party to escape ; and the court before whom he is removed by habeas corpus, ought to discharge or bail him.

Every such mittimus, again, ought to have a lawful conclusion, viz. that the party be safely kept till he be delivered by law, or by order of law, or by due course of law ; or that he be kept till further order (which shall be intended of the order of law), or to the like effect ; and if the party be committed only for want of bail, it seems to be a good conclusion of the commit- ment, that he be kept till he find bail : but a commitment till the person who makes it shall take further order, seems not to be good ; and it seems that the party committed by such, or any other irregular mittimus, may be bailed. 2 Hawk, P. C. cap. 16. §. 18. A commitment grounded on an act of parliament ought to be conformable to the method prescribed by the statute ; and all commitments must be to some prison within the realm.

COMMITTEE OF PARLIAMENT. At a select committee, although any member may be pre- sent, none can speak, or vote, but those named, for the committee; and the chairman has no more than a casting vote, when the parties are equal. Sometimes the whole house is resolved into a committee ; on which occasion each per- son has a right to speak and reply as often as he pleases : an expedient they usually have re- course to, in extraordinary cases, and where any thing is to be thoroughly canvassed. When the house is not in a committee, each gives his opi- nion regularly, and is only allowed to speak once, unless to explain himself. The standing committees, appointed by every new parliament, are those of privileges and elections, of religion, of grievances, of courts of justice, and of trade ; though only the former act.

COMMl'X, v. a. -\ Lat. commisceu. To

COMMI'XION, n. s. 9 mingle; to blend; to

COMMI'XTION, n. s. £mix; to unite with

COMMI'XTURE, ra. s. s things in one mass.

Union of various substances ; in corporation.

The mass formed by mingling different things

Of Cerberus whylome he wos begot, And fell Chimaera, in her darksome den, Through fowle commirure of his filly blot ; M here he wos foRtred long in stygian fen. Till he to perfect ripenesse grew •, and then Into this wicked world he forth wos sent To be the plague and scourg t of wretched men.

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A dram df gold dissolved in aqua regia, with a dram of copper in aqua fortis, commixed, gave a great colour. Bacon.

In the commixture of any thing that is more oily or sweet, such bodies are least apt to putrefy, the air working little upon them. Id. Natural History.

Fair ladies, masked, are roses in the bud, Or angels veiled in clouds, are roses blown ; Dismasked, their damask sweet commixture shown.

Shahspeare.

Were thy commixion Greek and Trojan, so That thou could'st say, this hand is Grecian all, And this is Trojan. Id. Trniltu and Cressida.

Some species there be of middle and participating natures, that is, of birds and beasts, as bats, and some few others, so confirmed and set together, that we cannot define the beginning or end of either; there being a commixtion of both in the whole, rather than adaption or cement of the one unto the other.

Browne's Vulgar Errours.

I have written against the spontaneous generation of frogs in the clouds ;

or, on the earth, out of dust and rain water commixed. Ray on the Creation.

All the circumstances and respect of religion and state intermixed together in their commixture, will better become a royal history, or a council-table, than a single life. Wotton.

Far in the sky they form their long array, And land and ocean stretch'd immense survey Deep, depp beneath ; and triumphing in pride, With clouds and winds commixed, innumerous ride.

Beattie.

COMMIXTION, in Scots law, is a method of acquiring property, by mixing or blending to- gether different substances belonging to different proprietors. See LAW.

COMMODATE, COMMODATUM, in the civil jurisprudence, the loan or free use of any thing movable or immovable for a certain time, on condition of restoring again the same individual after a certain term. There is this difference between a loan and a commodate, that the latter is gratis, and does not transfer the property ; the thing must be returned in essence, and without impairment: so that things which consume by use or time cannot be objects of accommodate, but of a loan ; in regard they may be returned in kind, though not in identity. See LAW.

COMMO'DE, n. s. The head-dress of women, French.

She, like some pensive statesman, walks demure, And smiles, and hugs, to make destruction sure ; Or under high commodes, with looks erect, Barefac'd devours, in gaudy colours deck'd.

Glanville.

COMMODIANUS, of Gaza, a Christian au- thor in the fourth century, who wrote a work in Latin verse, entitled Institutiones : M. Davies published a fine edition of it in 1711, at the end of Minucius Felix.

COMMO'DIOUS, adj. ˆ Lat. commodus, or CoMMo'mousLY, adv. \ con, and modus. Ac- COMMO'DIOUSNESS, TI. s. J cording to the mea- sure and degree required ; fit ; suitable ; accom- modate to any purpose without obstruction; contrariety, or impediment ; conveniently, easily, pleasantly.

Wisdom may have framed one and the same thing to serve commodiously for divers ends. Hooker.

If they think we ought to prove the ceremonies commodious, they do greatly deceive themselves. Id- The place requireth many circumstances ; as the situation near the sea, for the commndiourness of an in- tercourse with England. Bacon. Such a place cannot be commodious to live in ; for being so near the moon, it had been too n 'ar the sun. Raleiijh's History.

Bacchus had found out the making of wine, and many things else commodious for mankind.

Id. History of the World. He will instruct us praying, and of grace Beseeching him, so as we need not fear To pass commodiously this life sustained By him with many comforts, till we end In dust, our final rest aad native home. Milton.

At the large foot of an old hollow tree, In a deep cave seated commodiously, His ancient and hereditary house, There dwelt a good substantial country mouse.

Cuwley.

To that recess, commodious for surprise, When purple light shall next suffuse the skies, With me repair. Pope's Odyssey.

COMMO'DITY, n. s. In Latin commoditas, sig- nifies in its abstract sense convenience ; and in an extended application anything that is conve- nient or fit for use, which being also saleable, the word has been employed for things that are sold. Commodity is employed only for articles of the first necessity; accommodation, general convenience, particular advantage, are all senses in which it has been used by our best authors of the elder time. It is now more restricted in its application.

They knew, that howsoever men may seek their own commodity, yet if this were done with injury unto others, it was not to be suffered. Hooker.

There came into her head certain verses, which, if she had had present commodity, she would have re- joined as a retraction to the other. Sidney. Travellers turn out of the highway, drawn either by the commodity of a foot-path, or the delicacy or the freshness of the fields. Ben Jonson's Discoveries.

Some offer me commodities to buy, Even now a tailor called me in his shop, And showed me silks that he had bought for me, And, therewithal took measure of my body.

Sltakspearc.

Commodity, the bias of the world, The world, which of itself is poised well, Till this advantage, this vile drawing biass, This sway of motion, this commodity, Makes it take head from all indifferency, From all direction, purpose, course, intent.

Id. King John.

Commodities are movcables, valuable by money, the common measure. Locke.

CO'MMODORE, n. s. Probably corrupted from the Spanish commandador. The captain who commands a squadron of ships ; a tempo- rary admiral.

CoMMonnRE, in the British marine, is a ge- neral officer, invested with the command of a de- tachment of ships of war destined on any parti- cular enterprise, during which time he bears the rank of brigadier-general in the army, and is dis- tinguished from the inferior ships of his squadron by a broad red pendant tapering towards the outer end, and sometimes forked. Commodore is also a name given to some select ship in a

deet of merchantmen, which leads the van in time of war, and carries a light in her top to conduct the rest, and keep them together. The oldest captain in the fleet always commands.

COMMODUS (L. Aurelius Antoninus), the unworthy son of Marcus Antoninus, succeeded his father in the Roman empire, A. D. 180. His whole reign was a series of lust and folly, cor- ruption and rapacity, injustice and cruel tyv He kept 300 female concubines, and committed in- cest with all his sisters. Affecting to imitate Hercules, he wore a lion's skin, and carried a knotted club. He publicly fought with the gla- diators, and boasted of his dexterity in killing the wild beasts in the amphitheatre. He required divine honors from the senate, and they were granted. Afraid to trust himself in the hands of a barber, he burnt his beard ; but, by way of amusement, and under pretence of shaving his courtiers, he cut off their noses. Martia, one of his concubines, whom he had marked for death, poisoned him ; but, as the poison did not quickly operate, he was strangled by a wrestler, A. D. 192; in the thirty-first year of his age, and the thirteenth of his reign. The servile senate no sooner heard of his death, than they ordered that the corpse of him, whom they had so lately deified, should rot upon a dunghill.

COMMOIGNE, in old records, a brother monk, residing in the same monastery.

COMMON, n. s. ~) Lat. con

CO'MMON, n.s.Sa adv. from the adj.

andmunus;

CO'MMONABLE, adj. Fr. com-

CO'MMONAGE, n. s. mun. ' The

CO'MMONALTY, n. s. joint office

*CO'MMONER, n. *. or property*

CO'MMONLY, adv. f of many. It

CO'MMONESS, n. s. has regard

CO'MMONS, n. s. to the mul-

CO'MMON-PLACE, n. s. titude of

CO'MMONWEAL, n. s. objects,and

*CO'MMONWEALTH, n. *. J to those ob-*

jects as possessed or accessible by everybody. It signifies abundant as opposed to rare and scarce ; mean and vulgar as opposed to what is distinguished and noble : open and free as opposed to what is appropriated and enclosed ; usual and customary as opposed to what is in- frequentand singular; lower as opposed to higher, when applied to the houses of parliament. In composition, as in common-place book, it retains its general meaning, and signifies a book to be filled with a multitude of things, ranged, how- ever, under general heads— and as in "common- wealth, which signifies the public, the multitude, the general body of the people ; or a civil polity and government, in which the many are inte- rested, and which is or ought to be administered for their benefit.

This fierc arcite hath, of his helme, ydon ; And on a courser, for to shew his face, He priketh endelong the large place, Loking upward upon this emelie ; And she again him cast a frendlick eye, (For women, as to speken in commnne, They folwen the favour of fortune) And was all his in chere as his in hert.*

Chaucer's Canterbury Tales.

Tyrants, that make men subiect to their law, I will suppresse, that they ao more may raine ; And lordings curbe that commons over-aw ; And all the wealth of rich men to the poore will draw.

Spemer

Behold this ring,

Whose high respect and rich validity Did lack a parallel : yet, for all that, He gave it to a commoner o' the camp. Shakspeare

Bid him strive

To gain the love o' the commonalty ; the duke Shall govern England. Id

My good lord,

How now for mitigation of this bill Urged by the commons ? Doth his majesty Incline to it, or no ? Id. Henry VI.

Look, as I blow this feather from my face, And as the air blows it to me again, Such is the lightness of you common men. Id.

This hand of yours requires Much castigation, exercise devout ; For here's a strong and sweating devil here, That commonly rebels. Id. Othello.

I am more than common tall. Id. As you lib it. Their sons are well tutored by you : you are a good member of the commonwealth. Id. Love's Labour Lost.*

Then take we down his load, and turn him off, Like to the empty ass, to shake his ears, And graze in commons. Id. Julius Ca-sar.

Two foundations bear up publick societies ; the one inclination, whereby all men desire sociable life ; the other an order agreed upon, touching the manner of their union in living together : the latter is that which we call the law of a common-weal. Hooker.

I myself too will use the secret acknowledgment of the commonalty, bearing record of the God of Gods.

Id.

Much good land might be gained from forests and chases, and from other commonable places, so as there be care taken that the poor commoners

hive no injury.

Bacon te Viltiers.

Though life and sense be common to man and brutes, and their operations in many things alike ; yet by this form he lives the life of a man, and not of a brute ; and hath the sense of a man, and not of a brute. Male's Origin of Mankind. Flying bullets now, To execute his rage, appear too slow ; They miss, or sweep but common souls away ; For such a loss Opdam his life must pay. Watter.

Or as the man, whom princes do advance Upon their gracious »ercy-seat to sit, Doth common things, of course and circumstance, To the reports of common men commit. Dames.

As the obsequious air and waters rest Till the dear Halcyon batch out all its nest -, The commonwealth doth by its losses grow, And, like its own seas, only £bbs to flow. Marvell. The emmet joined in her popular tribes Of commonalty. Milton's Paradise Lost.

These three to kings and chiefs their scenes display. The rest Before the' ignoble commons play.

Dryden's Fables.

Is not the separate property of a thing the great

cause of its endearment? Does any one respect a

common as much as he does his garden ? South.

The Papists were the most common place, and the

butt against whom all the arrows were directed.

Clarendon.

Where no kindred are to be found, we see the pos- sessions of a private man revert to the community, and so become again perfectly common ; nor can any

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one have a property in them, otherwise than in any other things common by nature. Locke

Hipparchus was going to marry a common woman, but consulted Philander on the occasion. Spectator.

COMMON, in grammar, such verbs as signify both action and passion are called common ; as, asperno, I despise, or am despised ; and also such nouns as are both and masculine feminine, as parens.

COMMON, in geometry, is applied to an angle, iine, or the like, which belongs equally to two figures.

COMMON, RIGHTS OF. There are various kinds of rights of common recognized by the common law, namely, of pasture, of piscary or fishing, of estovers or fuel, and of turbany or of digging turf. But the phrase usually means the right of pasturing cattle, horses, &c., in a certain field, or within a certain territory. And this again is of different kinds; as, common in gross, when the grantee is not in the occupation of lands with which this right of pasturage is connected ; and appendant, where a person, occupying a certain piece of arable land (or appurtenant, where he occupies such land or a Jhouse) has the right of pasturage in a certain other piece of land; and also 'a right of common par cause de vicinage, or by reason of vicinity, — the right which the tenants of a lord in one town had of pasturing their cattle with those of the tenants of another lord in another town. These rights, in England, have been mostly determined by prescription or immemorial usage; by which also was regulated, in most instances, the kind of animals which might be turned upon the land (which were usually horses, oxen, cows and sheep, but not goats, hogs, or geese), and the number, and the time of the year when they might be turned in. • — In the United States of America, there are not wanting instances of right of, common, ap- purtenant and in gross ; but the regulations of this species of right does not occupy a great space in the laws. A law of the province of Massachusetts, of 1693, regulates the rights of common belonging to the freeholders of a town or village, by prescribing the number of cattle that each commoner might put upon the com- mon; and there are rights of ccmmon appur- tenant in New York, but these are most com- monly rights in gross, and the grant from one :ommoner to another generally specifies the mmber and kind of beasts to be pastured upon he common field, as " one cow right," or a '•ight for a certain number of sheep, and the like. Besides the articles on this subject in the abridgments, digests, and general treatises, an elaborate work on the rights of common was published in 1824, by Mr. Woolrych, in Lon- don.

COMMONALTY, the lower of the .two divisions of the civil state. See CIVIL. The commonalty, like the nobility, are divided into several degrees: and as the lords, though different in rank, are yet all peers in respect of their nobility ; so the com- moners, though some are greatly superior to

others, are all in law commonalty, in respect 'o their want of nobility. This comprehensive errn therefore, includes — knights of the garter ;

knights jannerets ; baronets ; and knights of the bath, nat being otherwise peers ; knights bache- lors; all originally ranked as inferior degrees of nobility, though now classed as commoners : es- quires ; gentlemen ; merchants ; yeomen; trades- men or artificers ; laborers.

COMMONWEALTH, in English history, the title assumed by the government after the death of Charles I. under the protectorate of Cromwell, and till the restoration of Charles II. See ENG- LAND, HISTORY OF.

COMMON COUNCIL. See COUNCIL.

COMMON DIVISOR, a quantity or number which exactly divides two or more other quan- tities or numbers, without leaving any remainder.

COMMON LAW contains those customs and usages which have, by long prescription, obtained in this nation the force of laws. It is distin- guished from the statute law, which owes its authority to acts of parliament. See LAW.

By the common law any man might dispose of his lands to any other private man at his own discretion, especially when the feudal restrains of alienation were worn away. Blackstone's Commentariet.

COMMON-PLACE-BOOK is a register of what things occur, worthy to be noted, in the course of thinking or study, so disposed as that among a number of subjects any one may be easily found. The advantages of making a common- place book are many : it not only assists a person to read with accuracy and attention, but induces him to think for himself, provided he considers it not solely as a register of sentiments that strike him in the course of reading, but as a register of his own thoughts upon various subjects. There are various methods of arranging common-place books ; that of Locke is as good as any that have hitherto been contrived. The first page is to serve as a kind of index to the whole, and to con- tain references to every place or matter therein : in the commodious contrivance of which index, so as it may admit of a sufficient variety of mate- rials, without confusion, all the art consists. For this purpose, the first page, or, for more room, the two first pages that front each other, are to be divided, by parallel lines, into twenty-five equal parts ; whereof every fifth line is to be dis- tinguished by its color or other circumstance. These lines are to be crossed perpendicularly by others, drawn from top to bottom ; and in the several spaces thereof, the several letters of the alphabet, both capital and

minuscle, are to be duly written. The form of the lines and divisions, both horizontal and perpendicular, with the man- ner of writing the letters therein, will be conceived from the annexed diagram ; in which what is to

be done in the book for all the letters of the al- phabet, is here shown in the first four, A, R, C. and D. Suppose I would enter down a passage that refers to the head beauty. B, being the initial letter, and e the first vowel, I look in the

index for the partition B, and therein the line e (which is the place for all words whose first let- ter is b, and first vowel e; beauty, blemish, bread, &c.), and finding no numbers already down to direct me to any page of the book where words of this characteristic have been entered, I turn forward to the first blank page I find (which, in a fresh book, as this is supposed to be, will be page second), and here write what I have occa- sion for under the head beauty ; beginning the head in the margin, and indenting all the other subsequent lines, that the leading word may be conspicuous. This done, I enter the page where it is, viz. 2. in the index in the space Be ; from which time, the class be becomes wholly in pos- session of the second and third pages, which are consigned to letters of this characteristic.

COMMON PLEAS. A king's court now held in Westminster Hall, but anciently movable. ' The court of common pleas,' says Tomlins, ' does not possess any original jurisdiction ; nor has it, like the court of king's bench, any mode of pro- ceeding in common cases peculiar to itself. Its authority is founded on original writs issuing out of the court of chancery : which original writs are the king's mandates for the court to proceed in the determination of the causes mentioned therein. In all personal actions, therefore, brought by and against common persons, the only way of proceeding in this court is by origi- nal. There is indeed one other way of proceed- ing in this court, in common cases, which is sometimes used : and which is called proceeding by original quare clausum fregit. This method of proceeding is grounded, in point of law, upon the same kind of original writ as the usual pro- ceeding by capias is, the only difference be- tween them being in the mesne process after the original is sued out ; or at least supposed so to be. Instead of the process to compel the appear- ance of the defendant being by capias against his person, it is in this case by summons and distress against his goods. In a word, it is the same as the ancient mode of proceeding in this court was, before the general introduction of the

capias. The advantage and use of this mode of proceeding by original quare clausum fregit, is where a defendant has effects which can be dis- trained, but he himself cannot be met with to be personally served ; the process by capias requir- ing personal service, which is not required in the process by summons. In this court are four judges, created by letters patent ; the seal of the court is in the custody of the chief justice.

COMMON PRAYER, the liturgy of the' church of England. See LITURGY. Clergymen are to use the public form of prayers prescribed by the book of Common Prayer : and refusing to do so, or using any other public prayers, are punisha- ble by stat. 1 Eliz. c. ii.

COMMOMTION, n. s. Lat. commonitio. Advice; warning; instruction.

COMMONS, n. s. } Food ; fare ; diet; so

CO'MMONER, n. s. \ called from colleges, where it is eaten in common. A student of the second rank at the university of Oxford; one that eats at the common table.

He painted himself of a dove colour, and took his e-mmoru with the pigeons. L'Ettrange.

Meanwhile she quenched her fury at the flood, And with a lenten sallad coaled her blood : Their common, though but coarse, were nothing*

scant ;

Nor did their minds an equal banquet want. ^. Dryden.

The doctor now obeys the summons, Likes both his company and common. Swift.*

COMMONS, or HOUSE OF COMMONS. See PARLIAMENT. The house of commons consists of members chosen from among such men of property in the kingdom as have no seats in the house of lords, every one of whom has thus a voice in parliament, either personally or by his representatives. In a free state, every man who is a free agent, ought to be in some measure his own governor; and therefore a branch at least of the legislative power should reside in the whole body of the people. It therefore is wisely contrived, that the people should do that, which it is impracticable for them to perform in person, by representatives chosen in a number of minute and separate districts, wherein all the voters are or maybe easily distinguished. The counties are therefore represented by knights elected by the proprietors of lands ; and the cities and bo- roughs by citizens and burgesses, chosen by the mercantile, or supposed trading interest of the nation. Each member,

though chosen by one particular district, when elected and returned, serves for the whole realm ; for the end of his coming thither is not particular but general ; not barely to advantage his constituents, but the commonwealth. The peculiar laws and customs of the house of commons relate principally to the raising of taxes, and the elections of members to serve in parliament. See ELECTIONS and TAXES.

COMMONS, DOCTORS. See COLLEGE.

COMMONTY, in Scots law, sometimes sig- nifies lands belonging to two or more common proprietors. Sometimes a heath or muir, though it should belong in property to one, if there has been a promiscuous possession upon it by pastu- rage; and the act 1695, mentions commonties belonging in property to the king and to royal boroughs. See LAW."

CO'MMORANT, adj.) Lat. commorans.

CO'MM'ORANCE, n. s. > Resident; dwelling;

CO'MMORANCY, n. s. j inhabiting.

The very quality, carriage, and place of commorance, of witnesses is plainly and evidently set forth. Hale.

An archbishop, out of his diocese, becomes sub- ject to the archbishop of the province where he has his abode and commorancy. Ayliffe't Parergon.

The abbot may demand and recover his monk, that is commorant and residing in another monastery.

Id.

COMMOTAU. See COMETEAU.

COMMOTE, an ancient term in Wales, de- noting half a cantred, or hundred ; containing fifty villages. See HUNDRED. Wales was anciently divided into three provinces; each of these sub- divided into cantreds, and every cantred into two commotes or hundreds. Silvester Girald, how- ever, tells us. in his Itinerary, that a commote is but a quarter of a hundred.

COMMOTION, n. s.) Lat. commotio. A

COMMO'TIONER, n. s. $ motion of several to- gether. Tumult; insurrection; puWic-

COM

order ; perturbation ; disorder of mind ; rest- lessness. Applied to any object in motion.

By flatt'ry he hath won the common hearts ; And, when he'll please to make commotion, Tis to be feared they all will follow him.

Shahspeare. Henry VI.

He could not debate any thing without some com- motion, when the argument was not of moment.

Clarendon.

Sacrifices were offered when an earthquake hap- pened, that he would allay the commotions of the water, and put an end to the earthquake.

Woodward. Natural History.

The people, more regarding commotioners than com- missioners, nocked together, as clouds cluster against a storm. Hayward.

COMMO'VE, v. a. Lat. commoveo. To dis- turb; to agitate; to put into a violent motion ; to unsettle. This word is now become obsolete.

Straight the sands, Commoved around, in gathering eddies play.

Thomson's Summer.

COMMUTE, v. n. ˆ Lat. com-

COMMUNICABI'LITY, n. s. I munico. To

COMMU'NICABLE, adj. I converse ; to

COMMU'NICANT, n. s. (impart senti-

COMMU'NICATE, v. a. & v. n.

ˆments mutual-

COMMUNICA'TION, n. s. ly. Commu-

COMMU'NICATIVE, adj. nicable is more

COMMUNICATIVENESS, n. s. J extended ii its meaning, it refers not only to sentiments, but to anything that may become the common posses- sion of more than one. Communicate is from the Latin communicatus, the participle of com- munico, contracted from communifico, which sig- nifies to make common property with another. To impart to others what is in our own power ; to bestow ; to confer a joint possession. It is also a term of theological application, as the Lord's Supper is the boon which the blessed Redeemer has conferred upon all the members of his mystical body indiscriminately; they have all a joint and common interest in it; and when they receive it, as they ever ought to do, in so- ciety with each other, they are said to communi- cate ; and the solemn festival is called ' The Com- munion.' It more generally means something in common to two or more, as the houses com- municate, that is, there is a passage between them, by which either may be entered from the other. Communicative is used in the sense of free, unreserved, and the quality of those who are unworthy of confidence, more from their na- tural infirmity, than any privity of will or inten- tion. Communion, likewise, is to be under- stood in the general sense of intercourse.

Contrition destroyeth the prison of helle, and maketh weke and feble all the strengthes of the devils, and restoreth the yeftes of the Holy G»>st, and of all good vertues, and it clenseth the soule of sinne, and deliverth it fro the peiue of helle, and fro the compagnie of the devil, and fro the servage of sinne, and it restoreth it to all goodes spirituel, and to the compagnie and communion of holy chirche.

Chaucer. The Personet Tale.

Consider, finally, the angels, as having with us that communion which the apostle to the Hebrews u«.teth ; and in regard whereof angels have not disdained to profess themselves our fellow servants.

Hooker.

Communicants have ever used it ; and we, by the

form of the very utterance, do show we use it as

communicants. Id.

Sith eternal life is communicable unto all, it be-

hooveth that the word of God be so likewise. Id.

Charles the Hardy would communicate his secrets

with none ; and, least of all, those secrets which

troubled him most. Bacon.

I will commune with you of such things That want no ears but yours.

Sltakspeare. Measure for Measure. Then commune, how that day they best may ply Their growing work. Milton's Paradise Lost.

The happy place

Rather inflames thy forment, representing Lost bliss, to thec no more communicable.

Id. Paradise Regained. The primitive Christians communicated every day.

Taylor.

Where God is worshipped, there he communicates his blessings and holy influences.

Id. Worthy Communicant.

Ideas, as ranked under names, are those that, for the most part, men reason of within themselves, and always those which they commune about with others.

Locke.

His majesty frankly promised, that he could not, in any degree,

communicate to any person the matter, before he had taken and communicated to them his own resolutions. Clarendon.

They resolved that the standing of the communion table in all churches should be altered. Id.

Secrets may be carried so far, as to stop the com- munication necessary among all who have the manage- ment of affairs. Swift.

We have paid for our want of prudence, and de- termine for the future to be less communicative.

Id. and Pope.

He is not only the most communicative of all beings, but he will also communicate himself in such measure as entirely to satisfy ; otherwise some degrees of communicativeness would be wanting. Norm.

A constant frequenter of worship, and a never- failing monthly communicant. Atterbury's Sermons.

The map shows the natural commwacation provi- dence has formed between the rivers and lakes of a country at so great a distance from the sea.

Addison on Italy. When one that holds communion with the skies,

Has filled his urn where these pure waters rise,

And once more mingles with us meaner things,

'Tis even as if an angel shook his wings ;

Immortal fragrance fills the circuit wide,

That tells us whence his treasures are supplied.

Cowper.

The whole body is nothing but a system of such canals, which all communicate with one another, me- diately or immediately. Arbuthnot on Aliments. Those who speak in publick are better heard when they discourse by a lively genius and ready memory, than when they read all they would communicate to their hearers. Watts.

Tis said thou boldest converse with the things Which are forbidden to the search of man ; That with the dwellers of the dark abodes, The many evil

and unheavenly spirits Which walk the valley of the shades of death, Thou communest. Byron's Manfred.

Speed to thy castle, shut thy chamber door. Bind fast thy soul by every solemn vow Never to hold communion with that object.

Matiirin'a Bertram.

COMMUNES, in botauy, the name of a class in Linnaeus's Methodis Calycina, consisting of two plants which, like teazle and dandelion, have a calyx or flower-cup common to many flowers or florets. These are the aggregate or compound flowers of other systems.

COMMUNICATING, in theology, the act of receiving the sacrament of the eucharist Those of the reformed, and of the Greek churcn, com- municate under both kinds ; the laity of the Ro- mish, under only one. The oriental communi- cants receive the wine by a spoon, and anciently drank it through a pipe.

COMMUNICATION, LINES OF, in military affairs, trenches made to continue and preserve a safe correspondence between two forts or posts ; or at a siege, between two approaches, that they may relieve one another.

COMMUNION, the celebration of the Lord's supper. The fourth council of Lateran decrees, that every believer shall receive the communion, at least, at Easter ; but they did it much oftener in the primitive church. Gratian prescribes it as a rule for the laity, to communicate at Easter, Whitsuntide, and Christmas; and the council of Trent recommended frequent communion. So late as the ninth century, the communion was still received by the laity in both kinds ; or rather the bread was dipped in the wine, as is owned by the Roman Catholics themselves. M. de Marca observes, that they received it at first in their hands, and believes the communion under one kind alone to have had its rise in the west under pope Urban II. in 1096, at the time of the conquest of the Holy Land. And it was more solemnly enjoined by the council of Constance in 1414. The twenty-eighth canon of the coun- cil of Clermont enjoins the communion to be received under both kinds, admitting only two exceptions; the first in favor of the sick, the second of the abstemious, or those who had an aversion for wine.

COMMUNION, FOREIGN, a punishment to which the canons frequently

condemned their bishops and other clerks. This was a kind of suspension from the function of the order, and a degradation from the rank they held in the church. It had its name from the communion being or.ly granted to the criminal on the footing of a foreign clerk, i. e. being reduced to the lowest of his order, he took place after all those of his rank, as all clerks, &c. did in the churches to which they did not belong. The second council of Agda orders every clerk who absents himself from the church, to be reduced to foreign communion.

COMMUNION, LAY, the communion under one kind. It was formerly a kind of canonical punishment, for clerks guilty of any crime, to be reduced to lay communion.

COMMUNION SERVICE, in the liturgy of the church of England, the office for the adminis- tration of the holy sacrament, extracted from several ancient liturgies, as those of St. Basil, St. Ambrose, &c. By the last rubric, part of this service is appointed to be read every Sunday and holiday, after the morning prayer, eveu though there be no communicants.

COMMUNITY, n. s. Lat. communitas, ano communis. Its primary sense is simply the state

of being common : it has been extended, how- ever, in its application — to those who are in a state of common possession ; to the goods pos- sessed as well as to the possessors ; to the fre- quency or commoness of intercourse, or of ob- servation. It also signifies the commonwealth, or body politic. ‘ Community in anything con- stitutes a community; a common interest; a common language ; a common government is the basis of that community which is formed by any number of individuals.’ ‘ Community has al- ways a restricted and relative sense ; in this it differs from society, which has a general and unlimited import.’ — Crabbe.

He was but, as the cuckow is in June,

Heard, not regarded ; seen, but with such eyes,

As, sick and blunted with community,

Afford no extraordinary gaze. Shakxpeare .

How could communities,

Degrees in schools, and brotherhood in cities,

But by degree stand in authentic place ?

Id. Troilus and Cressida. Sit up and revel,

Call all the great, the fair, and spirited dames

Of Rome about thee, and begin a fashion

Of freedom and community. Ben Jorann.

The undistinction of many in the community of name, or misapplication of the act of one unto the other, hath made some doubt thereof.

Browne's Vulgar Errour.*

This text is far from proving Adam sole proprietor; it is a confirmation of the original community of all things. Locke,

It is not designed for her own use, but for the whole community. Addison's Guardian.

He lives not for himself alone, but hath a regard in all his actions to the great community. Atterbury.

COMMUTE, v. a. & v. n.—, Lat. commuto.

COMMUTABI'LITY, n. s. / Literally to ex-

COMMUTA'BLE, adj. ˆ change, to put one

COMMUTATION, n. s. i thing in the place

COMMU'TATIVE, adj. j of another; to ran- som ; to alter. Commute is chiefly applied to the exchanging one mode of punishment for ano- ther ; but commutative, relative to exchange, as commutative justice, that honesty which is exer- cised in traffic, and which is contrary to fraud in bargains.

The law of God had allowed an evasion, that is, by way of commutation or redemption. Brown.

Some commute swearing for whoring ; as if forbear- ance of the one were a dispensation for the other.

L'Eitrange.

An innocent nature could hate nothing that was innocent ; in a word, so great is the commutation, that the soul then hated only that which now only it loves ; i. e. siu. South'i Sermons.

Those institutions which God designed for means to further men in holiness, they look upon as a pri- vilege to serve instead of it, and to commute for it. Id.

COMMUTUAL, adj. Con and mutual. Mutual; reciprocal. Used only in poetry.

Love our hearts, and Hymen did our hands, Unite commutual in most sacred bands.

Shakspeare. Hamlet.

There, with commutual zeal, we both had strove In acts of dear benevolence and love ; Brothers in peace, not rivals in command.

Pope's Odyttef.

COMO, a lake of Italy, in the Milanese, and on the confines of Switzerland and the Orisons. It is the largest lake in Italy, being twenty-eight miles in length from north to south, from three to six in breadth, and eighty-eight in circumfer- ence. Towards the south it is divided into two branches ; at the end of the one stands the town of Como, and at that of the other Lecco. The Adda runs through it ; and its banks are adorned with vines, chestnuts, almond-trees, and various towns and villages.

COMO, a populous city of Italy, in the depart- ment of Lario, and ci-devant province of Comas co, pleasantly situated in a valley, enclosed by fertile hills, on the south branch of the lake, near the source of the Adda. It was built by the Gauls under Brennus ; and called Novocomum. It was the birth-place of Catullus, Jovius, and Pliny the younger ; the last of whom, in his letters, speaks with rapture of its delightful situ- ation, and the adjacent romantic scenery. It is surrounded by a wall, defended by towers, and backed by a conical eminence, on which are the ruins of an ancient castle. The houses are mostly built of stone, and the cathedral is a handsome edifice of white marble, hewn from the neighbouring quarries. It is a bishop's see, and contains twelve parish churches, and 15,000 inhabitants. On the outside of one of the churches is a statue of Pliny, with a Latin in- scription, dated 1419. The inhabitants trade with the Orisons, and carry on manufactures of silks, cottons, &c. Como is twenty miles north of Milan, and eighty north-east of Turin.

COMORA, an island of Africa, HI the Indian Ocean, which gives name to the cluster, of which it makes one. It is about sixty miles long, and fifteen broad, and composed of ranges of moun- tains, forming in the centre a summit of 7500 feet elevation. It contains many villages, which are resorted to and inhabited by Madagascar pirates. Long. 43° 10′ E., lat. 11° 50′ S.

COMORA ISLANDS, a cluster of islands lying between the north end of Madagascar and the coast of Zanguebar. Authors differ greatly with regard to their number, some enumerating five, others eight, and others only three. The names of five have been given us : Angezeia, Comora, Joanna, or Hinzuan, Mayotta, and Mobilia. They all abound in cattle, sheep, hogs, and a variety of fruits and animals common in warm countries. They are said also to produce a peculiar kind of rice. The most remarkable of them, and which Europeans are best acquainted with, is Joanna. The inhabitants are here about 7000 in number, and are chiefly settled inland. They pay a religious veneration to a species of ducks, which are very numerous, and inhabit a sacred lake. Of late years they have been much harassed by bands of desperate pirates, who occupy the north-western part of Madagascar. These cross every year by the south-west, with from thirty to fifty canoes, and return by the north-east monsoon. Their depredations are said nearly to have depopulated these islands.

COMORRA, the capital of a district of Hun- gary. It is so well fortified, that the Turks could never take it. The greatest part of the inhabi- tants w> Hungarians and Russians, who are

Lat. compactus, the participle ofcompingo. Primarily to close ; to , join together with ‘firmness; to consoli-

very rich, and are of the Greek religion. It was almost destroyed by an earthquake in 1783. It is seated between the Danube and the Waag, in the island of Schut ; thirty-six miles south-east of Presburg, and seventy of Vienna. Long. 18° ‘l!> E., lat. 47° 50′ N.

CO’MPACT, n. s. Lat. pactum. A contract ; an accord; an agreement; a mutual and settled appointment between two or more, to do or to forbear something. It had anciently the accent on the last syllable.

I hope the king made peace with all of us ; And the compact is firm and true in me.

Shakspeare. Richard III.

In the beginnings of speech there was an implicit compact, founded upon common consent, that such words, voices, or gestures, should be signs

whereby they would express their thoughts. South.

Hast thou compacted for a lease of years With hell, that thus thou venturest to provoke me.

Dryden's Duke of Guise. Thou false fiend, thou liest ! My life is in its last hour, — that I know, Nor would redeem a moment of that hour ; I do not combat against death, hut thee And thy surrounding angels ; my past power Was purchased by no compact with thy crew.

Byron's Manfred.

COMPA'CT, v. a. & adj.~

COMPA'CTEDNESS, n. s. j

COMPA'CTLY, adv.

COMPA'CTNESS, n. s.

COMPA'CTURE, n. s. date; to bring close together. Thus, seconda- rily, it signifies to league with ; to bring into a system ; the derivatives have the same meanings without variation.

We see the world so compacted, that each thing preserveth other things, and also itself. Hooker.

Thou pernicious woman,

Compact with her that's gene, thinkest thou thy oaths, Though they would swear down each particular fact, Were testimonies ? Shakspeare. Measure for Measure.

And over it a fair portcullis hung, Which to the gate directly did incline, With comely compass, and compaciwe strong, Neither unseemly short, nor yet exceeding long.

Faerie Queene. A. wandering fire,

Compact of unctuous vapour, which the night

And the cold environs around condenses,

Kindled through agitation to a flame. Milton.

Sticking or compactedness, being natural to density, requires some excess of gravity in proportion to the density, or some other outward violence, to

break it.

Digby on Bodies.

Is not the density greater in free and open spaces, void of air and other grosser bodies, than within the pores of water, glass, crystal, gems, and other compact bodies. Newton's Opticks.

The best lime mortar will not have attained its utmost compactness, till fourscore years after it has been employed in building. This is one reason why, in demolishing ancient fabrics, it is easier to break the stone than the mortar. Boyle.

This disease is more dangerous, as the solids are more strict and compacted, and consequently more so as people are advanced in age. Arbuthnot on Diet.

Now the bright sun compacts the precious stone, Imparting radiant lustre like his own.

Blackmore's Creation,

COM

Latin.

27'.

A system of

COMPA'GES, «. s. many parts united.

The organs in animal bodies are only a regular campages of pipes and vessels, for the fluids to pass through. fay-

COMPAGINATION, n. s. ˆat. compago. Union; structure; junction; connexion; con- texture.

The intire or broken compagination of the magneti- cal fabrick under it. Browne's Vulgar Errours.

COMPAGNLA DEL GONFALONE, (the com- pany of the standard), a society of players estatr lished in Rome in 1624, for the sole purpose o< exhibiting, by dramatic representations, during the Easter week, the history and sufferings of Christ.

COMPA'NION, n. s. -\ French compagnon.

COMPANIONABLE,

CoMPA'NiONABLY,o. {man frequently con-

COMPA'NIOSSHIP, n. s. J verses, or with whom he shares his hours of relaxation. It differs from friend, as acquaintance from confidence. A partner ; an associate company ; train ; fel- lowship; association.

How now, lay losd ? why do you keep alone ? Of sorriest fancies your companion make ?*

Shakspeare. Macbeth.

Alcibiades, and some twenty horse, All of companionship. Id. Timon.

*Bereaved of happiness, thoumay'st partake His punishment, eternal misery ; Which would be all his solace and revenge, Thee once to gain companion of his woe. Milton^*

He had a more companionable wit, and swayed more among the good fellows. Clarendon.

With anxious doubts, with raging passions torn, No sweet companion near with him to mourn.

Prior.

Thus Nisus wandered o'er the pathless grove, To find the brave companion of his love. Gay.

While from his bending shoulder, decent hung His harp, the sole companion of his way, Which to the whistling winds responsive rung, And ever as he went some merry lay he sung.

Beattie.

*The desert, forest, cavern, breakers' foam, Were unto him companionship ; they spake A mutual language, clearer than the tome Of his land's tongue, which he would oft forsake For Nature's pages glossed by sunbeams on the lake. Byron's Childe Harold^*

CO'MPAN Y, n. s. v. a. & t- . n. } Fr. compag- CO'MPANABLENESS, n. s. > rue, either from CO'MPANIABLE, adj. J con and pa-

COM

Duk Theseus, with all his compagnic, Is comen home to Athenes, his citee,

With alle blisse and gret solempnitee.

Chaucer's Canterbury Talu As he thereon stood gazing, he might sea The blessed angels to and fro descend From highest heven in goodly companee, And with great joy into that city wend, As commonly as frend does with his frend.

Towards his queen he was nothing uxorious, but companiable and respective. Bacon's Henry VIII.

A crowd is not company ; and faces are but a gallery of pictures, where there is no love.

Id. Essays.

It is more pleasant to enjoy the company of him that can speak such words, than by such words to be persuaded to folloV solitariness. • Sidney.

1 am The soldier that did company these three.

Shakspeare. Cymbeline. Go, carry Sir John Falstaff to the Fleet ; Take all his company along with him.

Id. Henry IV.

But O my virgin lady, where is she, How chance she is not in your company. Milton. Thus, through what path soe'erof life we rove, Rage companies our hate, and grief our love. Prior. Knowledge of men and manners, the freedom of habitudes, and conversation with the best company of both sexes, is necessary. Dryden.

Shakspeare was an actor, when there were seven companies of players in the town together. Dennis. Abdallah grew by decrees so' enamoured of her conversation, that he did not think he lived when he was not in company with his beloved Balsora.

Guardian.

This emperor seems to have been the- first who in- corporated the several trades of Rome into companies, with their particular privileges. Arbuthnot on Coins. In fine, to converse with historians is to keep good company : many of them were excellent men, and those who were not such, have taken care, however, to appear such in their writings. Bolingbroke.

COMPANY, in a commercial sense, persons united in a' joint trade or partnership, \hen there are only two or three persons joined in this manner,

it is called a partnership ; the term company being applied to societies consisting of a considerable number of members, associated together by a charter obtained from the prince.

COMPANY, in commerce, is particularly appro- priated to those associations set on foot for the commerce of the remote parts of the world, and vested by charter with peculiar privileges. These associations are divided into general classes, called Joint Stock Companies, and Regulated Companies. Such companies, whether joint

gus, one of the same town ; or con and panis, stock or regulated, sometimes have, and some- one that eats of the same mess. Persons as- times have not, exclusive privileges. However sembled together. A body of people met for injurious companies with joint stock, and incor- any purpose, but more especially for the enter- porated with exclusive privileges, may, at this tamment of each other, either by conyersation, time, be reckoned to the nation in general, it is feasting, or any amusement ; also the descrip- yet certain, that they were the general parents of tive term employed to designate persons united all our foreign commerce; private traders being in a joint trade or partnership ; a numl>er of discouraged from hazarding their fortunes in some particular rank or profession united by foreign countries.

charter; a body corporate. It is likewise ap- When a company trades upon a joint-stock,

plied to a subdivision of a regiment of foot, so each member sharing in the common profit or

many as are under one captain; the adjective .oss in proportion to his share in this stock, it is

signifies social, fond of amusement and frolic. called a joint-stock company. Joint-stock com-

panics, however, established either by royal charter or by act of parliament, differ in several respects, not only from regulated companies, but from private copartneries. 1. In a private co- partnery, no partner, without the consent of the company, can transfer his share to another person, to introduce a new member into the company. Each member

however may, upon proper warn- ing, withdraw from the copartnery, and demand payment from them of his share of the common stock. In a joint-stock company, on the contrary, no member can demand payment of his share from the company ; but each member can, with- out their consent, transfer his share to another person, and thereby introduce a new member. The value of a share in a joint-stock is always the price which it will bring in the market ; and this may be either greater or less, in proportion, than the sum which its owner stands credited for in the stock of the company, 2. In a private copartnery, each partner is bound only to the extent of his share. The trade of a joint-stock company is generally managed by a court of di- rectors. The principal joint-stock companies in Great Britain are the South Sea and the East India Companies ; to which may be added, though of inferior magnitude, the Hudson's Bay Company. See HUDSON'S BAY ; INDIES, EAST, and SOUTH SEAS. The African, Turkey, and Russian Companies are rather regulated than made joint-stock companies by act of parliament. See AFRICAN COMPANY, &c. The anomalous and ephemeral projects of the last few years, we might almost say months, which have been de- signated as companies, we cannot be expected to notice. The exclusive privileges of all these associations have been thought at variance with that liberty which is the basis of fair trade ; while their exemption from many of the liabilities of ordinary partnerships have offered great pro- tection occasionally to knavish transactions. On the other hand, in the case of a public body, the capital it is said is matter of notoriety, and the responsibility of the individual partners admits of limitation, without injury to the creditors of the concern. But what say late events to this reasoning !

COMPANIES OF LONDON. See LONDON.

COMPANY, in military affairs, a small body of foot, commanded by a captain, who has under him a lieutenant and ensign. The number of private soldiers in a company is from fifty to 100; and a battalion, or regiment, consists of nine, ten, or eleven such companies, one of which is always grenadiers, and posted on the right : next them stands the colonel's company, and on the left the light infantry company. A company, moreover, has usually three or four Serjeants, three or four corporals, and two drums. In the gxiards, the companies consist of 120 men each, as in the artillery. In the Austrian service a company consists of 200 men. '

COMPANY, INDEPENDENT, or COMPANY, IR- REGULAR, a company not incorporated into a regiment.

COMPANY OF SHIPS, a fleet of merchantmen, who make a charter-party among themselves ; the principal conditions, whereof usually are that VOL. VI.

certain vessels shall be acknowleged admiral vice-admiral, and rear-admiral ; that such and such signals shall be observed ; that those which bear no guns shall pay so much per cent, of their cargo ; and, in case they be attacked, that what damages are sustained shall be reimbursed by the company in general. In the Mediterranean such companies are called conserves.

COMPANY'S ISLAND, or URIUP, an island in the North Pacific Ocean, about sixty miles in length, and thirty to forty-five in breadth. It appears to be uninhabited, and is in long. 151° 20′ E., lat. 46° N.

COMPA'RE, v. a. & «. n.ˆ Lat. compare ;

CO'MPARABLE, adj. Fr. comparaison.

CO'MPARABLY, adv. [To make one

COMPARATIVE, adj. f thing the mea-

COMPA'RATIVELY, adv. \ sure of another ;

COMPA'RISON, n. s. J to estimate the

relative goodness or badness, or other qualities of any one thing, by observing how it differs from something else. It may be observed that when the comparison intends only similitude or illustration by likeness, we use to before the thing brought for illustration ; as he compared anger to a fire. When two persons or things are compared, to discover their relative proportion of any quality, with is used before the thing used as a measure. Simile ; similitude ; illustration by comparison. In grammar, the comparative degree expresses more of any quantity in one thing than in another ; as the right hand is the stronger. It is also the formation o.f an adjec- tive, through its various degrees of signification; as strong, stronger, strongest.

This present world affordeth not any thing com- parable unto the publick duties of religion. Hooker.

There resteth the comparative, that is, granted that it is either lawful or binding ; yet whether other things be not to be preferred before the extirpation of here- sies. Bacon.

The blossom is a positive good ; although the re- move of it, to give place to the fruit, be a comparative good. Id-

As fair and as good a kind of hand in hand com- parison, had been

something too fair and too good for any lady. Sluiktpeare.

I will hear Brutus speak.

I will hear Cassius, and compare reasons. Id.

Solon compared the people unto the sea, and orators and counsellors to the winds ; for that the sea would be calm and quiet, if the winds did not trouble it.

Bacon's Apophthegm.*

As their small galleys may not hold compare With our tall ships. Waller.

Beyond compare the Son of God was seen Most glorious. Milton's Paradise Lost.

To compare

Small things with greatest. Id. Regained.

" If, wee with other things, man's age compare, His life is but a day, for, equalled are His years with houres ; his months with minutes bee Fk paralels ; and, every breathing, wee May terme a day yet, some, even at the night Of that short day, are dead, and withered quite.

George Wither.*

Our author saves me the comparison with tragedy ; for he says, that herein he is to imitate the tragick poet.

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He that has got the ideas of numbers, and hath taken the pains to compare onp, two, and three to six, cannot chuse but know they are equal. Locke.

There could no form for such a royal use be com- parably imagined, like that of the foresaid nation.

Wotton't Architecture.

Beauty is not known by an eye or nose ; it consists in a symmetry, and it is the comparative faculty which notes it. Glanvillc's Scepsis Scientifica.

The vegetables being comparatively lighter than the ordinary terrestrial matter of the globe, subsided last.

Woodward.

One can scarce imagine how so plentiful a soil should become so miserably unpeopled, in comparison of what it once was. Addison's Remarks on Italy.

There is no blessing of life comparable to the en- joyment of a discreet and virtuous friend.

Id. Spectator.

Demosthenes used to compare eloquence to a wea- pon, aptly enough ; for eloquence, like every other weapon, is of little use to the owner, unless he have the force and the skill to use it. Bolingbrohe.

And blooming Hyde with eyes so rare,

And Montague beyond compare. Gay.

The sun appears very bright and large in comparison of the fixed stars, because we keep constantly near the sun, in comparison of our immense distance from the stars. Ferguson.

The bower of bliss, the smile pf love be thine

Unlaboured ease, and leisure's careless dream, Such be their joys who bend at Venus' shrine,

And own h'.:r charms beyond compare supreme.

Beattie.

Ah, then all jollity seemed noise and folly To the pure snul by fancy's fir's refined, Ah, what is mirth, but turbulence unholy, When with the charm compared of heavenly melan- choly. Id. Are not the mountains waves and skies, a part

Of me and of my soul, as I of them?

Is not the love of these deep in my heart

With a pure passion ? Should I not contemn

All objects, if compared with these ?

Byron. Childe Harold.

COMPA'RATES, n.s. from compare. In logic, the two tilings compared to one another.

COMPARATIVE ANATOMY, or ZOOTOMY, is that branch of anatomy which has for its object the dissection and investigation of the various parts of the bodies of brutes. See ANATOMY.

COMPARATIVE DEGREE, in grammar, the de- gree between the positive and superlative. See GRAMMAR.

COMPARETTI (Andrew), an Italian phy- sician, born in Friuli in 1746. He studied at Padua, and finally settled at Venice, where he published his Occursus Medici, and became in consequence professor of medicine in the uni- versity. In 1787 he published Ohservationes de Luce Inflexa et Coloribus, 4to., and, in 1789, Observationes Anatomicas de Aure Interna Com- parata, 4to. After these appeared a Treatise on Vegetable Physiology ; another on the Moving Powers of Insects ; and several on Practical Medicine. He died, December 22nd, 1801, much respected.

COMPARISON. See GRAMMAR.

COMPARISON, in rhetoric and poetry, is a figure whereby two things are considered with regard to a third, common to both. Comparison may be employed with success in putting a sub-

ject in a strong point of view. A lively idea is formed of human courage, by likening it to that of a lion ; and eloquence is exalted in our ima- gination by comparing it to a river overflowing its banks, and involving all in its impetuous course. The same effect is produced by contrast: a man in prosperity becomes more sensible of his happiness, by contrasting his condition with that of a person in want of bread. Objects of different senses cannot be compared together ; for such objects have mo circumstance in common to admit either resemblance or contrast. Objects of hearing may be compared together ; as also of taste, of smell, and of touch ; but the chief funds of comparison are objects of sight; be- cause, in writing or speaking, things can only be compared in idea, and the ideas of sight are more distinct and lively than those of any other sense. When a nation, emerging out of bar- barity, begins to think of the fine arts, the beauties of language cannot long lie concealed ; and when discovered, they are, generally, by the force of novelty, carried beyond all bounds of moderation. Thus, in the most ancient poems of every nation, we find metaphors and similies founded on the slightest and most distant resem- blances, which, losing their grace with their no- velty, wear gradually but of repute : and

now, by the improvement of taste, no metaphor nor simile is admitted into any polite composition but of the most striking kind.

COM'PART, v. a. ~\ Lai. con and par tior;

COMPARTI'MENT, n. s. f Fr. comparter, com-

COMPAR'TITION, n. s. fpartiment. To divide;

COMPART'MENT, n. s.) to mark out a general design into its various parts and subdivisions.

I will come to the compartition, by which the authors of this art understand a graceful ar^d useful distribu- tion of the whole ground plot, both for rooms of office and entertainment. Wotton.

I make haste to the casting and comparting of the whole work. Id. Architecture.

The temples and amphitheatres needed no compar- titions. Id.

The square will make you ready for all manner of compartments, bases, pedestals, and buildings.

Peacham on Drawing.

The circumference is divided into twelve comparti- ments, each containing a complete picture. Pope.

COMPARTMENTS, in gardening, are an as- semblage of beds, plots, borders, walks, &c. disposed in the most advantageous manner that the ground will admit of.

COMPARTMENTS, in heraldry, are also called partitions.

COM'PASS, v. a. & n. s. Fr. compasser ; Ital. compassare ; Lat. passibus metiri. To encircle ; to environ ; to surround ; to inclose : it has sometimes around, or about, added. Thus to defend to attack ; to seize •, to accomplish or at- tain any object, by a circuitous or indirect man- ner, or by strenuous efforts. The noun is de- rived from the verb, and partakes of primary meaning ; it also signifies the power of the voice to express the notes of music ; the instrument with which circles are drawn ; but in this appli- cation rarely used in the singular ; whence the instrument composed of a needle and card whereby mariners steer.

COMPASS.

Of al this world, the large cotnpau. Will not in mine armes tweine ;

Who so mokel wol embrace Lite thereof shal distreine. Chaucer's Proverbs. Round wos the shape in manere of a compos Ful of degrees, the hight of sixty pos, Th-;t whan a man wos set on no degree. He letted not his felan for to see.

Id. Canterbury Talet.

What now is left, Clarinda ? what remaines, That we may ccmpatse this our enterprise. Spenser. That which by wisdom he saw to be requisite for that people, was by as great wisdom compassed.

Hooker's Preface.

O Juliet, I already know thy grief ; It strains me past the compass of my wits.

Shaktpeare.

This day I breathed first ; time is come round j And where I did begin, there shall I end : My life is run its compass. Id. Julius Ceesar.

I see thee compassed with thy kingdom's peers, That speak my salutation in their minds.

Id. Macbeth. In his hand

He took the golden compasses, prepared In God's eternal store, to circumscribe Tins universe, and all created things.

Milton's Paradise Lost. And their mount Palatine, Th«' imperial palace, compass huge, and high The structure. Id. Paradise Regained

He had a mind to make himself master of Wey- mouth, if he could compass it without engaging his army before it . Clarendon.

The knowledge of what is good and what is evil, •what ou&ht and what ought not to be done, is a thing too large to be compassed, and too hard to be mastered •without brains and study, parts and contemplation.

South.

Certain it is, that in two hundred years before (I •peak within compass') no such commission had been executed in either of these provinces.

Dames on Ireland.

He that first discovered the use of the eompass, did more for the supplying and increase of useful com- modities, than those who built workhouses. Locke.

From harmony, from heavenly harmony, This universal frame began : From harmony to harmony Through all the compass of the notes it ran, The diapason closing full in man. Dryden.

To iix one foot of their compass wherever they think tit, and extend the other to such terrible lengths, •without describing any circumference at all, is to leave us and themselves in a very uncertain state.

Swift.

The English are good confederates in an enterprize which may be dispatched in a short compass of time.

Addisoti's Freeholder.

This author hath tried the force and compass of our language with much success. Swift.

Tho' in your life ten thousand summers roll, And tho' you compass earth from pole to pole, Where'er men talk of war and martial fame, They'll mention Marlborough and Caesar's name.

Gay.

Now from the western mountain's brow Compassed with clouds of various glow, The sun a broader orb displays, And shoots aslope his ruddy rays. Seattle.

iiow must the pastor's arm his lambs defend : For Spain is compassed by unyielding foes, And all must share their all, or share subjection's woes. Byron's Childe Harold.

COMPASS, an instrument of considerable use in surveying land, dialling, &c. Its structure is the same with that of the mariner's compass, consisting, like it, of a box and needle. The principal difference is, that instead of the needle being fitted into the card, and playing with it on a pivot, it here plays alone; the card being drawn on the bottom of the box, and a circle divided in 360° on the limb. This instrument is of obvious use to travellers, to direct them in their road ; and to miners, to show them what way to dig, &c.

How to take an angle by the compass. — Suppose the angle required be DAE, apply that side of the compass, where-

on the north is marked, to one of the lines AD ; when the needle rests, observe the degrees at which its north point stands, which E suppose eighty ; so many degrees does the line decline from the meridian. In the same manner, take the declination of the

North.

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South.

line AE, which suppose 215°; subtract 80° from 215°, the remainder is 135°; which subtiacted from 180°, there will remain 45°, the quantity of the angle required. But, if the difference between the declination on the two lines exceed 180°, in that case 180° must be subtracted from that difference: the remainder then is the ansle re- quired. In measuring angles by the compass, there need not any regard be had to the varia- tion, that being supposed the same in all the lines of the angles.

How to take a plot of field by the compass. — Suppose the field A, B, C, D, E. For the greater

accuracy, let there be two sights fitted to the meridian line of the compass, place it horizontal, and through the sides look along the side A B, or a line parallel to it, applying the eye to the sight at the south point of the compass. Draw a rough sketch of the field by the eye, and on the corresponding line enter down the degree to which the needle points, which suppose 90; measure the length of the side, and enter that too, which suppose ten chains. In this manner proceed with all the rest of the sides and angles of the field ; the sides, which suppose 70, 65, 70, 44, 50 fathom ; and the angles, which suppose

30, 100, 130, 240, 300 degrees. To protract the field, set down the several angles observed, one after another, and subtract the lesser from the next greater : thus you will have the quantity of the several angles, and the

length of the lines that include them. All the angles of the figure, taken together, must make twice as many right angles, abating two, if no mistake has been com- mitted.

How to take the declination of a wall by the • compass. — Apply that side of the compass where- on the nortli is marked along the 'side of the wall; the number of degrees, over which the •north end of the needle fixes, will be the decli- nation of the wall, and on that side ; e. g. if the north point of the needle tends towards the north, that wall may be shone on by the sun at noon ; if it fix over 50°, counting from the north towards the east, the declination is so many de- grees from north towards east. But since the needle itself declines from the north towards the west with us, 13°, it must be noted that, to re- trieve the irregularity, 13° are always to be added to the degrees shown by the needle, when the declination of the wall is towards the east ; but when the declination is towards the west, the declination of the needle is to be subtracted. COMPASS, AZIMUTH. See AZIMUTH. COMPASS, MARINER'S, the instrument used at' sea by pilots, to direct and ascertain the course of their ships, consists of a circular brass box, which contains a paper card with the thirty-two points of the compass, fixed on a magnetic needle, that always turns to the north, excepting a small declination f variable at different places. See VARIATION. The needle, with the card, turns on an upright pin fixed in the centre of tlie .box. In the centre of the needle is fixed a brass co- nical locket or cap, whereby the card hanging on the pin turns freely round the centre. The top of the box is covered with a glass, that the motion of the card may not be disturbed by the wind. The whole is enclosed in another box of wood, where it is suspended by brass hoops or gimbals, to preserve the card horizontal. The compass-box is so placed in the ship, that the middle section of the box, parallel to its sides, may be parallel to the middle section of the ship along its keel. This important invention is usually ascribed to Flavio de Melfi, or Flavio Gioia, a Neapolitan, about the year 1302; and hence the territory of Principato, where he was born, has a compass for its arms. Others say, that Marcus Paulus, a Venetian, making a voyage to China, brought the invention with him in 1260. What confirms this is, that at first they used the com- pass in the same manner as the Chinese still do, i.e. they let it float on a little piece of cork, in- stead of suspending it on a pivot. It is added, that their emperor, Chiningus, a celebrated astrcn loger, had a knowledge of it 1170 years before Christ. The Chinese only divide their compass into twenty-four points. Fauchette relates some verses of Guoyot de Provence, who lived in France, A.D. 1200, which seem to make men- tion of the compass under the name of marinette, or mariner's stone ; which show it to have been used in France nearly 100 years before either the Multite or the Venetian. The Fre.nch.even lay claim

to the invention, from the fleur-de-lis, wherewith all nations still distinguish the north point of the card. With equal reason, Dr. Wailis ascribes it to the English, from its name compass, and which he observes is used in many parts of Eng- land to signify a circle.

The compass being of the utmost consequence to navigation, it is reasonable to expect that the greatest attention should be paid to its construc- tion, and every attempt to improve it carefully examined ; and, if proper, adopted.

The very great objections to which the common compass is liable, induced the ingenious Dr. Knight to contrive a new sea-compass, which is now in use on board all the ships of war. The needle, in this instrument, is quite straight, and square at the ends ; and, consequently, has only two poles, though, about the hole in the middle, the curves are a little confused. Needles of this construction, after vibrating a long time, will always point exactly in the same direction ; and, if drawn ever so little «n one side, will return to it again, without any sensible difference. We may, therefore, conclude, that a regular paralle- lepiped is the best form for a needle, as well as the simplest, the holes for the caps being as small as possible. And, as the weight should be re- moved to the greatest distance from the centre of motion, a circle of brass, of the same diameter of the card, may be added. This will serve also to support the card, which may then be made of thin paper, without anything to stiffen it. This ring being fixed below the card, and the needle above it, the centre of gravity is placed low enough to admit of the cap being put under the needle, whereby the hole in the needle becomes unnecessary. The above observations will be easily understood, from viewing the several parts of the instrument, as represented on plate COM- PASS, where fig. \ is the card, with the needle K L, and its cap M, fixed upon it, being one- third of the diameter of the real card. Fig. 2 is a perspective view of the back of the card, where AB represents the turning down of the brass edge, C the under part of the cap, D and E two sliding weights to balance the card, and F, G, two screws that fix the brass edge, &c. to the needle. Fig. 3 is the pedestal that supports the card, containing a screwing needle, fixed in two small grooves to receive it, by means of the collet C, in the manner of a port crayon. D, the stem, is filled into an octagon, that it may be the more easily unscrewed.

The compass has sometimes been observed to be disturbed by tke electricity of its glass cover ; and this from so slight an application of the finger, as was barely necessary to wipe off a little dust. The same glass, rubbed a little more witlx the finger, a bit of muslin, or paper, would at tract either end of the needle, so as to hold it to the glass for several minutes, far out of the due direction, according to that part of the glass which was most excited. And when the needle, after adhering to the glass, has dropped

loose, and made vibrations, these would not be bisected, as usual, by that point where the needle should rest, but would either be made all on one side, or be very unequally divided, by means of some remains of .electrical virtue in that part of the

COMPASSES.

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glasa wmch had attracted the needle, until, at length, after fifteen minutes or more, all the electricity being discharged, the magnetical power took place. The remedy for this inconvenience is to moisten the surface of the glass ; a wet finger will do it immediately and effectually. The ma- riner's compass, with a chart, is much less dan- gerously moved than the common compass with a bare needle ; and the deeper, or farther distant, the needle hangs below the glass, the less dis- turbance it is likely to receive.

Notwithstanding the various contrivances that rity of the magnet. have been made to prevent the card from being COMPASSES, or much affected by the motions of the ship,

an apex of the hollow cone, as upon a nxed point; and is, therefore, still less affected by the motions of the vessel. Thus, the centres of mo- tion, gravity, and magnetism, are brought almost all to the same point ; the advantages of which will be readily perceived by any person ac- quainted with mechanical principles. Experience, therefore, will ascertain the utility of this im- provement.

COMPASS HILL, a hill in the isle of Canna, Scotland, remarkable for its effect on the pola-

PAIR OF COMPASSES, a mathematical instrument for describing circles,

they have always been found too delicate to en- measuring figures, &c< The common compasses counter the shocks of a tempestuous sea. Im- consist of two sharp-pointed branches or legs of proved compasses have been constructed

compasses have been constructed by Mi. M'Culloch, and for which he has obtained a patent, that are reported to be the best of any yet used. The particulars are as follow : plate COMPASS, %. 4, is a section of the steering corn- pasts, aaaaa, the common wooden box, with its lid. b b, the brass compass-box, c c, the glass cover to ditto, dd, the hollow conical bottom, e, the prop upon which the compass is sup-

iron, steel, brass, or other metal, joined together at the top by a rivet,

whereon they move as on a centre. Those are best, wherein the pin or axle on which the joint turns, and also half the joint itself, is made of steel, as this metal wearj more equably. The perfection of them may he known by the easy and uniform opening and shutting of their legs, one of which is sometimes

made movable, for the admission of two other

ported, instead of gimbals, the spherical top of points to describe with ink, black lead, or other which is finely polished, and the apex of the materials. One of these points has a small hollow cone is fitted in a peculiar mannei to re- wheel for making dots. There are compasses of ceive it. ff, a quantity of lead run round the various kinds, accommodated to the various uses bottom and cone of the compass-box, to balance they are intended for : as, and keep it steadily horizontal, gg, the card and COMPASSES, BEAM, consist of a long branch or the magnetic needle, bent in such a manner, beam, made of brass or wood, carrying two that the point of the conical pivot, on which it brass cursors, the one fixed at one end, the other moves, and is supported, may be brought very sliding along the beam, with a screw to fasten it near to the centre of gravity, as well as to the centre on occasion. To the cursors may be screwed of motion, AA, two guards, which, by means of points of any kind, whether steel for pencils, or Iwo pins, i i, affixed to the compass-box, prevents the like. It is used to draw large circles, to take it from turning round and deceiving the steers- great extents, &c. To the fixed cursor is some- man. Fig. 5 a perspective view of the steering times applied an adjusting micrometer screw, by compass, with the lid off and the front laid open, which an extent is obtained to extreme nicety.

Mr. Jones, of Holborn, has made beam com passes to adjust to tire 5000th part of an inch.

COMPASSES, CLOCKMAKER'S, are joirjed lii.e the common compasses, with a quadrant, or U,v.r like the spring compasses; only of different u- , serving here to keep the instrument firm at any opening. They are made very strong, with tiie

h h, the guards. b, the compass-box, e, the prop, for its support. Fig. 6 is a section re- presenting another application of the magnetic needle and card, constructed by Mr. M'Culloch. aaaa, the common wood box. bb, the brass com- pass-box, cc, the brass support for the circle and pendulum, d, the pendulum, e, the agate. ff, the magnetic needle and card, gg, the brass circle. A A, the glass cover and brass ring, i, the lead weight. All the centres pf motion are

points of their legs of well tempered steel, being used to draw lines on paste-board or copper.

COMPASSES, CYLINDRICAL, AND SIMIEIUCAT.,

in the same plane. In one particular, this patent consist of four branches, joined in a centre, two

compass is considered as an improvement on the of which are circular, and two flat, a little bent

common compasses, inasmuch as the needle is on the ends. Their use is to take the diameter,

both longer and broader; hence, its magnetism thickness, or calibre of round or cylindrical

must be stronger, and of course the line of its bodies ; such as cannons, pipes, &c.

magnetic direction correspondent with the card. COMPASSES, ELLIPTIC, are used to draw

In another particular, in order to prevent the ellipses, or ovals of any kind : they consist of a

motions of the vessel from affecting the needle, beam, A, B, about a foot long, bearing three

which is the most desirable object, the patent cursors ; to one of which may be screwed points

compass-box, instead of swinging in gimbals at of any kind : to the bottom of the other two are

right angles to each other, is supported in its rivetted two sliding dovetails, adjusted in grooves

very centre, upon a prop ; and, whatever motion made in the cross branches of the beam. The

the other parts of the box may have, this centre, dove-tails having a motion everyway, by turning

being in the vertex of the hollow cone, may be about the long branch, go backwards and for-

considered as relatively at rest, and, therefore, wards along the cross ; so that when the beam

gives little or no disturbance to the needle, has gone half way about, one of these will have

Again, the pivot or centre upon which Jie needle moved the whole length of one of the branches;

turns, is so contrived as to stand always perpen- and when the beam has got quite round, the

dicular over the centre of the compass-box, same dove-tail lias got back the whole length of

me branch. It is the same with the other dove- tail. The distance between the two sliding dove- tails is the distance between the two foci of the ellipsis ; so that, by changing that distance, the ellipsis will be rounder or slenderer. Under the ends of the branches of the cross are placed four steel points to keep it fast. The use of these compasses is easy; by turning round the long branch, the ink, pencil, or other point, will draw the ellipsis reouired.

COMPASSES, LAPIDARY'S, are a piece of wood in form of the shaft of a plane, cleft at top, as far as half its length ; with this they measure the angles, &c. of jewels and precious stones, as they cut them. There is in the cleft a little brass rule, fastened at one end by a pin ; but so that it may be moved in the manner of a brass level : with this kind of square they take the angles of the stones, laying them on the shaft as they cut them.

COMPASSES OF THREE LEGS, or TRIANGULAR COMPASSES, are of the same structure with the common ones, but have an additional leg : their use is to take three points at once, and so to form triangles ; to lay down three positions of a map to be copied at once, &c.

COMPASSES, PROPORTIONAL, are those whose joint lies between the points terminating each leg ; they are eit'ier simple, or compound. In the simple, the centre is fixed, so that one pair serves only for one proportion. The compound, consists of two parts or sides of brass, which lie upon each other so nicely as to appear but one when they are shut. These sides easily open, and move about a centre, which is itself movable

in a hollow canal cut through the greatest part o their length. To this centre on each side is af- fixed a sliding piece, A, fig. l,of a small length, with a fine line drawn on it serving as an index, to be set against other lines or divisions placed upon the compasses on both sides. These lines are, 1 . A line of lines. 2. A line of superficies, areas, or planes. 3. A line of solids. 4. A line of circles, or. rathes of polygons to be in- scribed in circles. These lines are all unequally divided ; the first three from 1 to 20, the last from 6 to 20. Their uses are as follow : By the line of lines you divide a given line into any number of equal parts ; for by placing the index A against 1, and screwing it fast, if you open the compasses, then the distance between the points at each end will be equal. If you place the in- dex against 2, and open the compasses, the dis- tance between the points of the longer legs B B, will be twice the distance between the shorter ones C C ; and thus a line is bisected, or divided into two equal parts. If the index be placed against 3, and the compasses opened, the dis- tances between the points will be as 3 to 1, and so a line is divided into three equal parts ; and so you proceed for any other number of parts under 10. The numbers of the line of planes answer to the squares of those in the line of lines ; for, because superficies or planes are to each other as the squares of their like sides ; therefore, if the index be placed against 2 in the line of planes, then the distance between the small points will be the fine of a plane whose area is one ; but the distance of the larger points will be the like side of a plune whose area is two ; or twice as large. If the index be placed at 3, and the compasses opened, the distances between the points at each end will be the like side of planes whose area are as 1 to 3 ; and so of others. The numbers of the line of solids answer to the cubes of those in the line of lines ; because all solids are to each other as the cubes of their sides or diameters ; therefore, if the index be placed to number 2, 3, 4, &c. in the line of solids, the dis- tance between the lesser and larger points will be the like sides of solids, which are to each other as 1 to 2, 1 to 3, 1 to 4, &c. For example : if the index be placed at 10, and the compasses be opened, so that the small points may take the diameter of a bullet whose weight is one ounce, the distance between the large points will be the diameter of a bullet or globe of ten ounces, or which is ten times as large. Lastly, the numbers in the line of circles are the sides of polygons to be inscribed in a given circle, or by which a cir- cle maybe divided into equal parts, from 6 to 20. Thus, if the index be placed at 6, the points of the compasses at either end, when opened to the radius of a given circle, will contain the side of a hexagon, or divide the circle into six equal parts. And thus, by placing the index at 7, 8, &c. we may divide it into seven or eight parts, and^ inscribe heptagons, octagons, &c.

COMPASSES, SPRING, or DIVIDERS, those with an arched head, which by its spring opens the legs ; the opening being directed by a circular screw

fastened to one of the legs, and let through the other, worked with a nut.

COMPASSES, TRISECTING, consist of two cen- tral rules, and an arch of circles of 120 degrees,

immovable, with its radius; which is fastened with one of the central rules like the two legs of a sector, that the central rule may be carried through all the points of the circumference of the arch. The radius and rule should be as thin as possible ; and the rule fastened to the radius should be hammered cold, to attain the greater elasticity; and the breadth of the central rule should be triple that of the radius ; there must also be a groove in this rule, with a dove-tail fastened on it for its motion, and a hole in the centre of each rule. The use of this instrument is to facilitate the trisection of angles geometri- cally ; and it is said to have been invented by M. Targen.

COMPA'SSION,n.«. Stv.a.ˆ Fr. compas-

COMPA'SSIOJJ ATE, v. a. > sion ; from Lat.

COMPASSIONATELY, adv. j con and patior. Pity ; commiseration ; sorrow for the sufferings of others; painful sympathy; a call; a demand of nature to relieve the unhappy ; pitiful tender- ness.

I am your patrone, • Therefore, ye ought to have some compassions.

Chaucer. The Complaint of Man. But the wyld man, contrarie to her feare,

Came to her creeping like a fawning hound,

And by rude tokens made to her appeare

His deepe compassion of her doleful stound,

Kissing his hands, and crouching to the ground.

Spenser.

Experience layeth princes torn estates before their

O heavens ! can you hear a good man groau,

And not relent, or not compassion him ?

Shakspeare. Titus Andronicus. here never was any heart truly great and generous, (hat was not also tender and compassionate.

South' s Sermons. Their angry hands

My brothers hold, and vengeance these exact;

This pleads compassion, and repents the fact.

Dry den's Fables. Envy, stern tyrant of the flinty heart,

Can aught of Virtue, Truth, or Beauty charm? Can soft Compassion thrill with pleasing smart,

Repentance melt, or Gratitude disarm. Beattie.

The fines were assigned to the rebuilding of St. Pauls', and thought therefore to be the more severely imposed, and the less compassionately reduced and ex- cused. ˆClarendon.

The good-natured man is apt to be moved with compassion for those misfortunes or infirmities, which another would turn into ridicule. Addison'i Spectator.

CoMPASsroN, or COMMISERATION, in ethics, a mixed passion, compounded of love and sorrow, and excited by the sight or recital of distress. Hobbs makes this a merely selfish passion, and defines it, as being fear for ourselves ; Hutchin- son resolves it into instinct; but Dr. Butler more properly considers compassion as an ori- ginal, distinct, particular affection in human nature.

COMPATE'RNITY,,n. s. Lat. con and pater- nitas

Gossipred, or compaternity, by the canon law, is a spiritual affinity •, and a juror that was gossip to either of the parties might, in former time, have been chal- lenged as not indifferent by our law.

Denies' State of Ireland.*

COMPATIBLE, adj. -\ Corrupted by an COMPATIBILITY, n. s. (unskilful compliance COMPATIBLENESS, n.s. fwith pronunciation, COMPATIBLY, adv. J fromcompetible,from Lat. competo, to suit, to agree. Cornpetible is found in good writers, and ought always to be used. Crabb derives it from con and patior, which signifies fitness to be suffered together. Consistenc'y ; the power of co-existing with something else ; agreement with anything;

suit- able to; fit for; consistent with; opposed to every thing that is incongruous.

The objrct of the will is such a good as is compati- ble to an intellectual nature.

Hole's Origin of Mankind.

Our poets have joined together such qualities as are by nature the most compatible ; valour with anger, meekness with piety, and prudence with dissimulation.

Broome.

COMPATIENT, adj. from Lat. con and patior. Suffering together.

COMPA'TRIOT, n. s. from Lat. con and pa. tria. One of the same country.

The governor knew he was so circumspect as not to adhere to any of the factions of th« time, in a neutra- lity indifferently and friendly entertaining all his com- patriots. Drummond. COMPE'ER, n. s. & v.a. Lat. compar, equal ; companion ; colleague ; associate.

Therein dwelt a burgeyse, the most seliper man, Of all the town throughout ; and whatso he wan With treachery and eile, as doth some pcres, Right so must he part with his comperes.

Chaucer. Cunt, Tales. In his own grace he doth exalt himself More than in your advancement.

In my right,

By me invested, he compeers the host.

Shakspeare. King Lear. So spake the apostate angel, though in pain Vaunting aloud, but racked with deep despair, And him thus answered soon his bold compere.

Mltm.

For Bordeaux we with voice unanimous Declare such sympathy's in boon compeers. Gay,

Sesostris,

That monarchs harnessed, to his chariot yoked, Base servitude, and his dethroned compeers Lashed furiously. Philips.

COM'PEL, v.a. ˆ Lat. compello, or pello, COMPELL'ABLE, adj. > to drive for a specific COM'PELLER, n. s. j purpose, or to a point ; to urge irresistibly ; to take by force or violence ; to gather together and unite in company. A la- tinism compellere gregem; to seize ; to empower.

So him dismounted low he did compell On foot with him to matchen equall tight.

Spenser. You will compel me then to read the will ?

Shuhfpeare. Julius Ceesar.

But first the lawless tyrant, who denies To know their God, or message to regard, Must be compelled by signs and judgments dire.

Milton.'

Our men secure nor guards nor centries held, But easv sleep their weaty limbs covipelled.

Dryden,

Yet has not oft the fraudful guardian's frig'it, Compelled him to restore an orphan's right. Gay

COM

The clouds above me to the white Alps tend, And I must pierce them, and survey whate'er May be permitted, as my steps I bend To their most great and growing region, where The earth to her embrace compelt the powers of air.

COM

Compensation is a species of relation, ft is rela- tion when the defects of one part, or of one organ, are supplied by the structure of another organ.

Paley's Theology.

COMPENSATION, in law. Where the same

Byron's Childe Harold. person ;s debtor and creditor, the mutual obliga-
COMPELLATION, n. ». Lat. from com- tions, if they are for equal sums, are extinguished mllo. The style of address; the word of salu- by compensation; if for unequal, the lesser obli- gation is extinguished, and the greater dimi- nished, as far as the concourse of debt and cre- dit goes.

COMPERE'NDINATE, v. a. > Lat. COHJ- COMPERENDINA'TION, n. s. 5 perendino ; to delay; delay; dilatoriness. CO'MPETENT, adj. -

Abridge- summary;

holds much in a

tation.

The stile best fitted for all persons, on all occasions, to use, is the compellation of Father, which our Sa- viour first taught. Dvppa's Rules of Devotion.

The peculiar compellation of the kings in France, is by sire, which is nothing else but father. Temple.

COMPENDIUM, n. s. ^ Lat. compen-

CO'MPEND, n. s. j dium, compendia-

COMPENDIA'RIOUS, adj.

COMPENDIO'SITY, fl. S.

COMPE'NDIOUS, adj.

COMPE'NDIOUSLY, adv.

COMPE'NDIOUSNESS, n. s.

limited space. Mr. Crabbe has thus distinguish- ed the modes of meaning between two words that are erroneously considered to be synony- mous. ' An abridgement,' he observes, ' is the reduction of a work into a smaller compass. A compendium is a general and concise view of any science, as geography or astronomy.'

By the apostles we have the substance of Christian belief compendiously drawn into few and short articles.

Hooker.

The inviting easiness and compendiousness of this assertion, should dazzle the eyes. Bentley't Sermons.

After we are grown well acquainted with a short system, or compendium of a science, which is written in the plainest and most simple manner, it is then proper to read & larger regular treatise on that sub- ject. Watts on the

Mind.

Fix in memory the discourses, and abstract them into brief Compendi. Id. Improvement on the Mind.

They learned more compendious and expeditious ways, whereby they shortened their labours, and gained time. Woodward.

CO'MPENSATE, v. a.\ Lat. compenso*

COMPE'NSE, v. a. f compounded of com

COMPE'NSABLE, adj.

COMPENSATION, n. s.

COMPENSATIVE, adj.

pense; to make amends; to countervail; to counterbalance a loss by an equivalent. Making tip a deficiency, atoning, or satisfying for an injury.

Poynings, the better to make compensation of his service in the wars, called a parliament. Bacon.

The length of the night, and the dews thereof, do compensate the heat of the day.

Id. Natural History.

It seemeth, the weight of the quicksilver doth not compense the weight of a stone, more than the weight of the aqua fortis /,/.

All other debts may compensation find ; But love is strict, and will be paid in kind.

Dryden's Aurengzebe.

The pleasures of life do not compensate the miseries.

Prior.

Nature to these, without profusion kind, The proper organs, proper powers, assigned ; Each seeming want compensated of course, flere with degrees of swiftness, there of force.

Latin competent, n. s. /Suitable; fit; ade- CO'MPETENCY, n. s. {quate; proportion- CO'MPETENTLY, adv. J ate ; adapted to any breviate;abbrevi-

PurPose ™‘hout. de,ffct OI! superfluity Capa- ature; that which city applied to intellectual power and judicial authority. Ability equal to any given task ; official right to decide on any given question. It is also used in the sense of reasonable and moderate.

If there be any power in imagination, the distance must be competent, the medium not adverse, and the body apt and proportionate.

Bacon’ t Natural History.

To draw men from great excess, it is not amiss, though we use them unto somewhat less than is com- petent. Hooker.

For competence of life I will allow you, That lack of means enforce you not to evil.

Shakspeare. Henry IV.

The greatest captain of the English brought rather a guard, than a competent army, to recover Ireland.

Dames on Ireland.

That is the privilege of the Infinite Author of things, who never slumbers nor sleeps, but is not competent to any finite being. Locke.

I think it hath been competently proved.

Bentley.

Something of speech is to be indulged to common, civility, more to intimacies, and a competency to those recreative discourses which maintain the chearfulness Of society. Government of the Tongue.

Some places require men competently endowed ; but none think the appointment to be a duty of justice bound to respect desert. Wotton.

Reason’s whole pleasure, all the joys of sense, Lie in three words, health, peace, and competence.

Pope.

There are who deaf to mad Ambition’s call, Would shrink to hear the obstreporous trump of

Fame,

Supiemely blest if to their portion fall Health, competence and peace. Beattie.

A competency ought to secure a man from poverty ; or if lie wastes it makes him ashamed of publishing his necessities. Johnson's Life of Dryden.

COMPETENTES. See CATECHUMENS. COMPETIBLE, adj. COMPE'TIBLENESS, n. s.

Those are properties not at all competible to body or matter, though of never so pure a mixture.

Glanville.

It is not competible with the grace of God so much as to incline any man to do evil.

Hammond on Fundamental.*

• and pensatio ; pcnsus and pendo. To pay ; hence to recom-

See COMPATIBLE.

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COMPETITION, n. s. Lat. con and petitio ; and competo, the verb, which signifies to seek together the same object, with an emulous desire of success to ourselves : hence rivalry, contest. It also signifies double claim ; claim of more than one to one thing.

The ancient flames of discord and intense wars, upon the competition of both houses, would again re- turn . Bacon. Competition to the crown there is none, nor can be.

Id.

For God,

Nothing more certain, will not long defer To vindicate the glory of his name Against all competition, nor will long Endure it doubtful, whether God be Lord Or I)agon. Milton's Samson Agunistes.

Though what proauces any degree of pleasure be in itself good, and what is apt to produce any degree of pain be evil, yet often we do not call it so when it comes in competition ; the degrees also of pleasure and pain have a preference. Locke.

The prize of beauty was disputed till you were seen ; but now all pretenders have withdrawn their claims : there is no '•ompetition but for the second plaee.

Dryden.

COMPETITOR, n. s. Lat. con and petitor. An opponent ; one that has a claim opposite to another's ; a rival.

The Guilfords are in arms. And every hour more competitors Flock to the rebels. Shahspeare. Richard III.

How furious and impatient they be, And cannot brook competitors in love.

Id. Titus Andronicus.

Selymes, king of Algiers, was in arms against his brother Mechemetes, competitor of the kingdom.

Knolles's History,

COMPIEGNE, or COMPEIGNE, a handsome old town of France, in the department of Oise, and ci-devant province of the Isle of France. The heroic maid of Orleans was taken prisoner here in 1430. It is seated near a large forest, at the confluence of the Aisne and the Oise, and contains several churches, one of which possesses the first organ ever seen in France. The palace of Compiegne was a favorite hunting seat of the French monarchs. Population 1290. It is forty- eight miles north-east of Paris. Long. 2° 55′ E., Lat. 49° 25′ N.

COMPl'LE, v.a. ~\ Lai.compilo. To write;

COMPILA'TTON, n. s. f to compose ; to draw up

COMPI'LEMENT, n.s. t from various authors, to

*COMPI'LER. * collect into one body ;*

to contain; to comprise, not used. Compilation is applied generally to an assemblage or coacer- vation, as in the following instance : —

There is in it a small vein filled with spar, probably since the time of the compilation of the mass.

Woodward on Fossils.

After so long a race as I have run Through fairy land, which those six

books compile, Give leave to rest me. Spenser.

I was encouraged to assay how I could build a man ; for there is a moral as well as a natural or artificial cnmpilement, and of better materials.

*Wotton r*n Education^*

Some painful compilers, who will study old language, may inform the world that Robert earl of Oxford was high treasurer. Swift.

1 COM

In poetry they compile the praises of virtuous men and actions, and satires against vice. Temple.

COMPITALIA, or COMIMTALITA, feasts held among the ancients in honor of the Lares; so called from compitum, a cross-way ; because the feast was held in the meeting of several roads. The compitalia are more ancient than the building of R.ome. Dionysius of Halicarnassus and Pliny indeed, say, they were instituted by Servius Tullus ; but this only signifies that they were then introduced into Rome. The feast being movable, the day whereon it was to be observed was proclaimed every year. It was ordinarily .held on the 4th of the nones of February. Ma- crobius observes, that they were held not only in honor of the Lares, but also of Mania, the god- dess of madness. The priests who officiated at them were slaves and freed-men, and the sacrifice a sow. They were re-established after long neg- lect, by Tarquin II. on occasion of an answer of the oracle that they should sacrifice heads for heads ; i.e. that for the health and prosperity of each family, children were to be sacrificed : but Brutus, after expelling the kings, in lieu of those barbarous victims substituted the heads of garlic and poppy ; thus complying with the oracle by sacrificing heads. During the celebration of this feast, each family placed at the door of their house the statue of the goddess Minia. They also hung up at their doors figures of wood, representing men and women ; accompanying them with supplications that the Lares and Mania would be contented with those figures, and spare the people of the house.

COMPLA'CENCE,n.s.} Lat. complacent;

COMPLA'CENCY, n.s > low Lat. complu-

COMPLA'CENT, adj. 3 centia. Pleasure,

gratification, more especially that which is de- rived from self approbation. The cause of plea- sure ; civility ; complaisance ; softness of man- ners ; affability.

I by conversing cannot these erect

From prone, nor in their way complacence find.

Milton.

0 thou, in heaven and earth the only peace Found out for mankind under wrath ! O thou. My sole complacence! Id. Paradise Lost.

When the supreme faculties move regularly, the in- ferior affections following, there arises a serenity and complacency upon the whole soul. South.

Complacency and truth, and manly sweetness, Dwell ever on his tongue, and smooth his thoughts

Additon.

With mean complacence ne'er betray your trust, Nor be so civil as to prove unjust. Pope.

COMPLA'IN,u.n.&a.~\ Fr. complaindre,

COMPLA'INANT, n. s. icomplainte. Tomen-

COMPLA'INER, n.s. t tion with sorrow and

COMPLA'INT, n.s. Presentment; to mur- mur; to. lament; to inform against. A com- plainant is one who urges a suit, or commences a prosecution against another; a complainer is a murmurer, a larnenter; one who bewails or accuses. Complaint sometimes signifies the representation of what aggrieves ; sometimes it is used for the cause of the evil, and not unfre- quently for the evil itself.

And most of al, for this I me complains, That she hath joy t». laughen at my paine.

Chaucer. Complaint c/ the Black Knight

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Camplaineth eke ye lovers al in fere, For her that, with unfaiued humble chere, Was ever redy to do you succour ; Complaineth hire that, er, hath

bo you dere ; Complaineth beaute, fredome and manere ; Complaineth hire that endeth your labour ; Complaineth thilke ensample of al honour, That never dyd but gentilnesse ; Kytheth therefore in hire some kindenesse.

Chaucer. The Complaint of Mart. I cannot find any cause of complaint, that good laws have so much been wanting unto us, as we to them.

Hooker's Dedication. Lord Hastings,

Humbly complaining to her deity, Got my lord chamberlain his liberty.

Sltakspeare. Richard III.

Now, master Shallow, you'll complain of me to the council ? Id. Merry Wives of Windsor.

In evil straight this day I stand Before my judge, either to undergo Myself the total crime, or to accuse My other self, the partner of my life ; Whose failing, while her faith to me remains, I should conceal, and not expose to blame By my complaint. Milton.

How wisely nature did decree With the same eyes to weep and see ; That having viewed the object vain, They might be ready to complain. Maroell.

For 't has been held by many that, s Montaigne playing with his cat Complaint she thought him but an ass, Much more she would Sir Hudibras. Butler

Congreve and this author are the most eager com- plainants of the dispute. Collier's Defence.

Gaufride, who couldst so well in rhime complain The death of Richard, with an arrow slain.

Dryden's Fibles.

Philips is a complainer ; and on this occasion I told

lord Carteret, that complainers never succeed at court,

though railers do. Swift.

The poverty of the clergy in England hath been the

complaint of all who wish well to the church. Id.

To hear you prate would vex a saint j Who have most reason of complaint

? Replies the cat. Guy.

One, in a complaint of his bowels, was let blood till he had scarce any left, and was perfectly cured.

Arbuthnot.

But, if pity inspire thee, renew the sad lay j Mourn, sweetest complainer, man calls thee to mourn ; O soothe him whose pleasures like thine pass away, Full quickly they pass— but they never return.

Beattie

That I want nothing, said the prince, or that I know not what I want, is the cause of my complaint ; if I had any known want I should have a certain wish ; that wish would excite endeavour, and I should not then repine to see the sun move so slowly towards the western mountains, or lament when the day breaks and sleep will no longer hide me from myself. Johnson. Rasselas.

Loud complaint, however angrily It shapes its phrase, is little to be feared, And less distrusted Byron's Doge of Venice.

COMPLAfSA'NCE, n. s.\ Fr. complaisance, COMPLAISA'NT, adj. (complaisant. Ci

COMPLAISA'NI LY, adv. £ vility ; adulation ; COMPLAISA'NTNESS, n. s. J desire of pleasing, with desire to please ceremoniously. Easy of persuasion, bland, acquiescent.

Her death is but in complaisance to her. Dryicn

Fair Venus wept the sad disaster Of having lost her favorite dove : Tn comp laisance poor Cupid mourned ; His grief relieved his mother's pain. Prior.

There are to whom my satire seems too bold ; Scarce to wise Peter complaisant enough, And something said of Chartres much too rough.

Pope.

In plenty starving, tantalized in state, And complaisantly helped to all I hate ; Treated, caressed, and tired, I take my leave. Id.

COMPLA'NATE, v. a.) Lat. planus. To

COMPLA'NE. \ level; to reduce to

a flat and even surface.

The vertebrae of the neck and back-bone are made short and coinplanated, and firmly braced with muscles.

Dcrham.

COMPLE'AT. See COMPLETE.

CO'MPLEMENT, n.s. Lat. complemtntum. Perfection ; fulness ; completion ; completement. Complete set ; complete provision ; the full quantity or number. Adscititious circumstances ; appendages ; parts not necessary, but ornamen- tal : whence ceremony was called complement, now corrupted to compliment.

Our custom is both to place it in the front of our prayers as a guide, and to add it in the end of some principal limbs or parts, as a complement which fully perfecteth whatsoever may be defective in the rest.

Hooker.

They as they feasted had their fill, For a full complement of all their ill. Hubberd's Tale. The sensible nature, in its complement and integrity, hath five exterior powers or faculties.

Hole's Origin of Mankind. A doleful case desires a dolefull song. Without vain art or curious complements ;

And squalid fortune, into loseness flong, Doth scorn the pride of wonted ornaments.

Spenser.

Garnished and decked in modest compliment, Not working with the ear, but with the eye.

Shakspeare.

The god of love himself inhabits there, With all his rage, and dread, and grief, and care ; His complement of stores, and total war. Prior.

COMPLETE, adj. & v. a.-\ Lat. completes.

COMPLETELY, adv. I Perfect ; full ;

COMPLE'TEMENT, n. s. V having no defi-

COMPLE'TE«NESS, n. s. I ciencies ; having

COMPLE'TION, n. s. / no degrees, and

therefore not properly admiting more and most;

finished, ended, concluded.

With us the reading of scripture is a part of our church liturgy, a special portion of the service which we do to God ; and not an exercise to spend the time, when one doth wait for another coming, till the as- sembly of them that shall afterwards worship him be complete. Hooker.

When I approach

Her loveliness, so absolute she seems And in herself complete, so well to know Her own, that what she wills to do or say, Seems wisest, virtuosest, discreetest, best.

Milton's Paradise Lost. Of a tall statue and of sable hue Much like that son of Kish, that lofty Jew, Twelve years compleat he suffered in exile, And kept his father's asses all the while. Marvell

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Allow me to give you, from the best authors, the origin, the antiquity, the growth, the change, and the completement of satire among the Romans.

Dryden's Dedication to Juvenal. This course of vanity almost complete,

Tired in the field of life, I hope retreat. Prior,

This was a full entire harmony and consent of all the divine predictions, receiving their completion in Christ. South.

Whatever person would aspire to be completely witty, smart, humorous, and polite, must be able to retain in his memory every single sentence contained in this work. Swift.

If any disposition should appear towards so good a work, the assistance of the legislative power would oe necessary to make it more complete. Id.

To town he comes, completes the nation's hope, And heads the bold trained-bands, and burns a pope.

Pope.

He makes it the utmost completion of an ill cha- racter to bear a malevolence to the best men. Id.

The happy morn that shall her bliss complete, And all her rivals' envious hopes defeat. Gay.

These parts go to make up the completeness of any subject. Wattt's Lctgicki

That sabre's whirling sway, Sheds fast atonement for its first delay ; Completes his fury, what their fear begun, And makes the many basely quail to one.

Byron. Corsair.

CO'MPLEX, adj. &n.«."j Lat. complexus.

COMPLE'XED, adj. Composite ; of

COMPLE'XEDNESS, n. s. I many parts; not

COMPLE'XLY, adv. (simple; including

COMPLE'XNESS, n. s. many particulars.

COMPLE'XURE, n. s. J Complication, in- volution of many particular parts in one integral. The opposite of simplicity.

This parable of the wedding supper comprehends in it the whole complex of all the blessings and pri- vileges exhibited by the gospel. South' s Sermons.

Ideas made up of several simple ones, 1 call com- plex ; such as beauty, gratitude, a man, the universe ; which, though complicated of various simple ideas, or complex ideas made up of simple ones, yet are con- sidered each by itself as one. Locke.

From the complexedness of these moral ideas, there follows another inconvenience, that the mind cannot easily retain those precise combinations. Id.

I know that all words which are signs of complex ideas, furnish matter of mistake and cavil.

Bolingbroke.

With such perfection framed Is this complex stupendous scheme of things.

Thomson's Spring.

A secondary essential mode, called a property, sometimes goes toward making up the essence of a complex being. Watts.

COMPLE'XION, n. s. •) Latin, complexio.

COMPLE'XIONAL, adj. >The enclosure or in-

CoMpLE'xiONALLY,arfi;. J volution of one thing in another. The color of the external parts of tny body. The temperature of the body accord- ing to the various proportions of the four medical humors.

Ire sikenesse, or constellation, Win, wo, or changing of complexion, ˆauseth fill oft to don amis or speken ; On every wrong, a man may not be wreken.

Chaucer. Cant. Tales.

Amongst them all sate he which wonned there.

That hight Phantasies by his nature trew ; A man of yeares, yet fresh, as mote appere, Of swarth complexion and of crabbed hew, That him full of melancholy did shew. Spenter. Men judge by the complexion of the sky The state and inclination of the day

Shalupeare. Richard II. What see you in those papers, that you lose So much complexion ? Id. Henry V.

Men and other animals receive different tinctures from complexional efflorescencies, and descend still lower as they partake of the fuliginous and denigrat- ing humours. Browne. An Indian king sent unto Alexander a fair woman, fed with poisons, either by converse cr copulation complexionally to destroy him. Id. Vulgar Errours.

'Tis ill, though different your complexions are, The family of heaven for men should war.

Dryden's Fables.

The methods of providence, men of this complexion must be unfit for the contemplation of.

Burnet's Tlteory nf tlte Earth. Let melancholy rule supreme, Choler preside, or blood, or phlegm, It makes no difference in the case, Nor is complexion honour's place. Swift .

If I write on a black man, I run over all the emi- nent persons of that

complexion. Addison's Spectator.

Her wan completion's like the withered leek, While Katherine pears adorn my ruddy cheek.

Gay.

Though the terms of proposition may be complex, yet where the composition of the argument is plain, simple, and regular, it is properly called a simple syllogism, since the complexion does not belong to the syllogistick form of it. Watts.

COMPLEXION. Few questions in philosophy have engaged the attention of naturalists more than the diversities of the human species, among which that of color is the most remarkable. The great differences in this respect have given occa- sion to several authors to assert, that the whole human race have not sprung from one original ; but that as many different species of men were at first created, as there are now different colors to be found. It appears, indeed, a matter of no small difficulty to account for the remarkable variations of color that are to be found among different nations.- On this subject Dr. Hunter published a thesis, in which he determined abso- lutely against any specific difference among man- kind. He commences with a definition of the term species including all those animals under the same species, which produce issue capable of propagating others resembling the original stock. As in the case of plants, one species comprehends several varieties depending upon climate, soil, culture, and similar accidents ; so he considers the diversities of the human race to be merely varieties of the same species, produced by natural causes, and gives the following view of the different colors observable among mankind : I. Black: 1. Africans under the line; 2. In- habitants of New Guinea ; 3. Inhabitants of New Holland. II. Swarthy : 1. The Moors in the Northern parts of Africa; 2. The Hottentots on the Southern parts of it. III. Copper-colored : The East Indians. IV. Red : The Americans. V. Brown: 1. Tartars; 2. Persians; 3. Arabs;

4. Africans on the coast of the Mediterranean ;

5. Chinese. VI. Brownish : The inhabitants of the southern parts of Europe; as 1. Sicilians; 2. Spaniards; and 3. Turks; also 4. Samoi- edes ; 5. Laplanders ; 6. Abyssinians. VII. White : Most of the other European nations, as, 1. Swedes; 2. Danes; 3. Britons; 4. Germans; 5. Poles, &c. ; 6. Kabardinski ; 7. Georgians ; 8. Inhabitants of the islands of the Pacific

Ocean. The doctor thinks there can be no dispute as to the seat of color being placed in the skin ; that it is not even extended over the whole of this, but confined to that part named the cuticle, con- sisting of the epidermis and reticulum ; and that it chiefly occupies the latter of these.

The cuticle is much thicker and harder in black people, he observes, than in white ones ; the reticulum in the latter being a thin mucus, in the form of a thick membrane. He concludes that this seat of color in whites is transparent, and either totally deprived of vessels, or furnished with very few ; as the yellow color appearing in jaundice vanishes on the cause of the disease being removed ; which is not the case with stains in the cuticle from gunpowder, or similar causes. He next points out three causes, destroying the pellucidity of the cuticle, giving it a brown color, and rendering it thicker. These are, access of air, filthy habits, and the heat of the sun. The influence of each of these he proves by many examples ; and considers the last as by much the most powerful. Hence, he accounts for all the diversity of color observed among mankind.

This subject has been further illustrated by Mr. Clarkson, in a dissertation introduced into his Essay on the Commerce and Slavery of the Human Species. The old anatomists, he ob- serves, usually divided the skin into two parts or laminae ; the exterior and thinnest, called by the Greeks epidermis, by the Romans cuticula, and hence by us cuticle ; and the interior, called by the former derma, and by the latter cutis, or true skin.

Malpighi, an eminent Italian physician of the last century, was the first that discoved that the skin was divided into three laminae ; the cuticle, the true skin, and a certain coagulated substance, situated between both, which he distinguished by the title of rete mucosum, and which adhered so firmly to the cuticle, as, in all former anato- mical preparations, to have come off with it ; which led the ancient anatomists to believe, that there were but two divisible portions in the hu- man skin. This discovery was sufficient to as- certain the point in question; for it appeared afterwards that the cuticle, when divided accord- ing to this discovery from the other lamina, was semi-transparent ; that the cuticle of the blackest negro was of the same transparency and color as that of the purest white; and hence, the true skins of both being invariably the same, that the rete mucosum was the seat of color. This has been farther confirmed by all subsequent anato- mical experiments; by which it appears, that, whatever be the color of this coagulated substance, nearly the same is the apparent color of the upper surface of the skin. The transparency of the cuticle is a matter of ocular demonstration in white peo- pla. it is conspicuous in every blush ; for no one

can imagine, that the cuticle becomes red as often as this happens; nor is it

less discoverable in the veins, which are so easy to be discerned ; for no one can suppose that the blue streaks, which lie constantly sees in the fairest complexions, are painted, as it were, on the surface of the upper skin. From these, and other observations, no maxim is more true in physiology, than that the rete mucosum, being of a different color in dif- ferent inhabitants of the globe, and appearing through the cuticle or upper surface of the skin, gives them that various appearance which strikes us so forcibly in contemplating the human race. Whatever causes, therefore, co-operate in pro ducing this different appearance, they produce it by acting upon the rete mucosum ; which, from the almost incredible manner in which the cuticle is perforated, is as accessible as the cuticle itself. These causes are probably those various qualities of things, which, combined with the influence of the sun, contribute to form what we call climate For whoever considers, that the mucous sub- stance is found to vary in its color, as the climates vary from the equator to the poles, must be in- stantly struck with the analogy, and conclude the mucous substance to be the genuine cause of the phenomenon. The natives of many places in Asia are found to have their rete mucosum black ; those of Africa, situated near the line, of the same color; those of the maritime parts of the* same continent, of a dusky brown, nearly approaching to it ; and the color becomes lighter or darker, in proportion as the distance from the equator is greater or less.*

The only objection of any consequence that has ever been made to the hypothesis of climate, is this, that people under the same parallels are not of the same color. But it does not follow that those countries which are at an equal distance from the equator, should have their climates the same. Indeed nothing is more contrary to expe- rience. Climate depends upon a variety of acci- dents. High mountains in the neigbourhood of a place make it cooler, by chilling the air that is carried over them by the winds. Large spread- ing succulent plants have the same effect; they afford agreeable cooling shades, and a moist at- mosphere from their continual exhalations, by which the ardor of the sun is much abated. On the other hand, soil of a sandy nature retains the heat in an uncommon degree, and makes the summers considerably hotter than those which exist in the same latitude where the soil is dif- ferent. To the proximity of burning sands, and and to the sulphurous and metallic particles continually exhaling from the earth, is, therefore, to be ascribed the different degrees of blackness by which some African nations are distinguisha- ble from others, though under the same parallels To the preceding arguments, may be added one that seems incontrovertible, viz. that when the black inhabitants of Africa are transplanted to colder, or the white inhabitants of Europe to hotter climates, their children are of a different color from themselves ; that is, lighter in the first, and darker in the second instance. See our article CLIMATE.

This doctrine is adopted by professor Zimmer- man of Brunswick, in his celebrated work, Tl>c

ideographical History of Man, &c.\vho confirms it by observing, that the mountaineers of warm cli- mates, as in Barbary and Ceylon, are much fyirer than the inhabitants of the valleys : that the Saracens and Moors, who conquered the north- east part of Africa, from being brown, are be- come like the negroes near the equator ; that the Portuguese who settled at Senegal in 1400, be- came blacks ; and the Jews in Abyssinia of the dark complexion of the original natives.

Upon the whole, color ai d figure may be styled habits qf the body ; created, not by great and sudden impressions, but by continual and almost imperceptible touches. Of habits, both of mind and body, nations are susceptible as well as individuals. They are transmitted to offspring and augmented by inheritance. Long in growing to maturity, national features, like national manners, become fixed only after a suc- cession of ages. They become, however, fixed at last ; and if we can ascertain any effect pro- duced by a given state of weather or of climate, it requires only repetition, during a sufficient length of time, to augment and impress it with a permanent character. The sanguine counte- nance will, for this reason, be perpetual in the highest latitudes of the temperate zone; and we shall always find the swarthy, the olive, the tawny, and the black, as we descend to the south. The uniformity of the effect in the same climate, and on men in a similar state of society, proves the power and certainty of the cause. The fore- going observations are excellently illustrated by new facts, and enforced by additional reasoning, founded on considerable personal investigation of facts, by Dr.. Samuel Stanhope Smith, profes- sor of moral philosophy in New Jersey, in his Essay on the Causes of the Variety of Com- plexion and Figure in the Human Species; to which we refer the reader.

CO'MPLICATE, v. a. & adj. } Lat. compli-

CO'MPLICATENESS, n. ». >co. To entan-

COMPLICA'TION, n. s. J gle one with

another ; to join ; to involve mutually. To unite

by involution of pa-ts one in another. To forrr

by the union of several parts into one.

Though the particular actions .of war are complicate m fact, yet they are separate and distinct in right.

Bacon.

Dreadful was the din

Of hissing through the hall ! thick swarming now With complicated monsters, head and tail.

Milton's Paradise Lost.

There is a great variety of intelligibles in the world, so much objected to our senses, and every several ob- ject is full of subdivided multiplicity and complicate- ness. Hale's 0-ˆgin of Mankind.

Commotion in the parts may make them apply themselves one to another, or complicate and dispose ihem after the manner requisite to make then stick. Boyle's History of Firmness.

The notions of a confused knowledge are always full of perplexity and complications, aod seldom in or- der. Wilkins.

In case our offence against God hath been compli- cated with injury to men, we should make restitution.

*TUlotson**

Attachment to a private person must comprehend a £reat onccru for his character and his interest ; but

attachment to one who is or may be a king, much more ; because the character of the latter is more im- portant to himself and others ; and because his inte- rests are vastly more complicated with those of his country, and in some sort with those 6f mankind.

Bolingbroke.

When the dicase is complicated with other diseases, one must consider that which is most dangerous.

Arbuthnot on Diet,

What pleasure would felicitate his spirit if he could grasp all in a survey, as a painter runs over a compli- cate piece wrought by Titian or Raphael.

Watts on the Mind.

By admitting a complication of ideas, and taking too many things at once into one question, the mind is dazzled and bewildered. Watts' s Logiclt.

CO'MPLICE, ra. s. French, from low Lat. complex, an associate. One who is united with others in an ill design ; an associate ; a confede- rate; an accomplice.

To arms, victorious noble father, To quell the rebels and their complices.

Shakspeare. Henry VI.

Justice was afterwards done upon the offenders, the principal being hanged and quartered in Smithfield ; and divers of his chief complices executed in divers parts of the realm. Hayward.

The marquis prevailed with the king, that he might only turn his brother out of the garrison, after justice was done upon his complices. Clarendon.

{ J

ment. An act or ex-

COMPLIME'NTAL, adj.

COMPLIME'NTALLY, adv.

COMPLIME'NTER, n. s. J pression of

civility, usually understood to include some hy- pocrisy, and to mean less than it declares : this is properly complement, something superfluous, or more than enough. See COMPLEMENT.

What honour that,

But tedious waste of time, to sit and hear So many hollow compliments and lyes, Outlandish flatteries ?

Milton's Paradise Regained.

The watchman gave so very great a thump at my door, that I awaked, and heard myself complimented with the usual salutation. Taller.

She compliments Menelaus very handsomely, and says he wanted no accomplishment either of mind or body. Pope.

This falsehood of Ulysses is intircly complimental and officious. Broome.

This speech has been condemned as avaricious : Eustathius judges it spoken artfully and complimen- tally. Id.

Many women doat upon a man for his complement only, and good behaviour : they are won in an in- stant. Burton's Anatomy of MelaneMy.

Churlish despite ne'er looked from his calm eye, Much less commanded in his gentle heart : To basest men fair looks he would impart ; No could he cloak ill thoughts in complimental art.

Fletcher's Purple Mi..*

How did you praise my shape and graceful air1.

And woman thinks all compliments sincere. Gaj

The brief proclaimed, it visits every pew,

But first the squire's, a compliment but due :

With slow deliberation he unties

His glittering purse, the envy of all eyes. Cowper. CO'MPLINE, n. s. Fr. compline ; low Lat. completinum. The last act of worship at night, by which the service of the day is completed.

COM 286

At morn and eve, besides their anthems sweet

COM

Their peny masses, and their complines meet.

Hubberd'i Tale.

COMPONE, COMPONED, or GOBONY, in her- aldry. A bordure compone is that formed or composed of a row of angular parts, or chequers of two colors.

COMPONED, or COMPOSED, is also used in general for a bor- dure, a pale, or a fess, composed of two different colors or metals

If a man were but of a day's life, it is well if he lasts till even-song, and then says his compline an hour before the time. Taylor's Holy Living.

COMPLO'RE, v. n. Lat. comploro. To make lamentation together.

COMPLOT, n. s. & v. a.) Fr. from com- disposed ' alternately, separated

COMPLO'TTER, n. s.] pletum, for com- and divided by fillets, as in the

plerum, low Lat. Menage. A confederacy in diagram annexed, some secret crime; a plot; a conspiracy. To . COMPO'NENT, adj. Lat. componens. That form a plot ; to conspire ; to join in any secret which constitutes a compound body.

design, generally criminal.

I cannot, my life, my brother, like but well The purpose of the complot which ye tell.

Hitbberd's Tale. I knew their complot is to have my life.

Shakspeare. Henry VI. Jocasta too, no longer now my sister, Is found complotter in the horrid deed.

Dryden and Lee'i Oedipus.

A few lines after, we find them complotting together, and contriving a new scene of miseries to the Trojans.

Pope.

COMPLUTENSIAN POLYGLOTT, so called from Complutum, the Latin name of Alcala,

The bigness of the component parts of natural bodies may be conjectured by their colours.

Newton's Opticks.

COMP(yRT,i;.n.,i;.a.&w.s.} Fr. compor-

COMPO'RTABLE, adj. (ter; from La-

*COMPO'RTANCE, n. *. £tin porto. To*

COMPO'RTMENT, n. s. j agree ; to suit;

to behave; to carry; with the reciprocal pro-

noun. Consistent, as opposed to contradictory

behaviour; gesture of ceremony ; conduct.

Some piety's not good there, some vain disport On this side sin, with that place may comport. Donne.

So beene they both atone, and doen

in Spain, was the first polyglott ever published. Th£ir ˆvers brisht each otˆer \to f eet'

*•w * * ,y°. _ * * iTrtfinlv r.fvnvnnrtn.iiMp.p. parh fn nthpr nparˆ*

It was the work of cardinal Ximenes, and was completed in 6 vols. folio. See BIBLE and POLYGLOT.

COMPLY', v. n. -\ Skinner derives it from

COMPLIANCE, n. s. /the Fr. complaire; but

COMPLI'ANT, adj. £ probably it comes from

COMPLI'ER, n. s. t complier to bend to. Plier is still in use. To yield to ; to be obse- quious to ; to accord with ; to suit with. It has with before as well persons as things. The compliant boughs

Yielded them. Milton' Paradise Lost.*

The rising sun complies with our weak sight, First gilds the clouds, then shows his robe of light.

Waller.

He was a man of few words, and of great com- pliance ; and usually delivered that as his opinion, which he foresaw would be grateful to the king.

Clarendon.

We are free from any necessary determination of

our will to any particular action, and from a necessary

compliance with our desire, set upon any particular,

and then appearing preferable, good. Locke.

Remember I am she who saved your life,

Your loving, lawful, and complying wife. Dryden. He made his wish with his estate comply ;

Joyful to live, yet not afraid to die. Prior.

Goodly comportaunce each to other beare,

And entertains themselves with court'sies meet.

Spenser.

At years of discretion, and comport yourself at

this rantipole rate ! Congreve's Way of the World.

I shall account concerning the rules and manners

of deportment in the receiving, our comport and con-

versation in and after it.

Taylor's Worthy Communicant.

Children in the things they do, if they comport with their age, find little difference, so they may be doing

Locke.

We cast the rules and cautions of this art into some comportable method. Wotton's Architecture.

By her serious and devout comportment on these so- lemn occasions, she gives an example that is very often too much wanted. Addison's Freeholder.

COMPO'SE, v. a.

COMPO'SED, part. adj. COMPO'SEDLY, adv.

COMPO'SEDNESS, 71. S.

COMPO'SER, n.i. COMPO'SITIVE, adj. COMPO'SITOR, n. s. COMPO'SURE, n. s.

Fr. composer; Lat, compono. To form a mass by joining dif- ferent things

together , fto place anything in its proper form and method ; to put in the proper state for any

purpose ; to put together a discourse or sentence; to constitute by being parts of a whole — to calm ;

What compliance will remove dissension, while the to quiet, to adjust, and tranquilise the mind.

liberty continues of professing what new opinions we Please ? Swift.

Suppose a hundred new employments were erected on purpose to gratify compiler, an insupportable diffi- culty would remain. Id.*

Nothing can save him but divorce,

And here the wife complies of course. Gay,

He came early and departed late ; laboured to re-

commend himself by assiduity and compliance ; excited

their curiosity after new arts, that they might still

want his assistance ; and when they made any ex-

cursion of pleasure or enouirv entreated to attend

thcm- Johnston's Ratielas.

Words so pleasing to God, as those which the Son of God himself hath composed, were not possible for men to frame. Hooker.

Nor did Israel 'scape

The' infection, when their borrowed gold composed The calf in Oreb. Milton's Paradue Lost.

Now will be the right season of forming them to be able writers and composers in every excellent matter.

Milton.

Flowers dress the altars for the cloaths The sea-born amber we compose. MarveU.

He would undertake the journey with him, by which all his fears would be

composed. Clarendon.

The whole anny seemed well composed to obtain that by their swords which they could not by their pen. Clarendon.

A man was walking before the door very composedly without a hat. One crying, Here is the fellow that killed the duke ; every body asked, which is he? The man without the hat very composedly answered, I am he. Id.

Zeal ought to be composed of the highest degrees of all pious affections. Spratt.

The composer has so expressed my sense, where I intended to move the passions, that he seems to have been the poet as well as the compoter.

Dryden't Albion and Albanius, Preface. Compose thy mind ;

Nor frauds are here contrived, nor force designed.

Dryden.

Yet, to compose this midnight/noise, Go freely search where'er you please. Prior.

How doth the sea exactly compose itself to a level superficies, and with the earth make up one spherical roundness. Ray.

The Mantuan there in sober triumph sate,

Composed his posiure, and his look sedate. Pope.

Ye murmuring streams that in meanders roll, The sweet composer of the pensive soul Farewell. Gay.

Discourses on such occasions are seldom the pro- ductions of leisure, and should be read with those favourable allowances that are made to hasty compo- sures. Atterbury.

The style of Georgias of Leontium was formed into short sentences, composed generally of two members balanced against each other. The style of Isocrates, on the contrary, is swelling and full ; and he is said to be the first who introduced the method of com- posing in regular periods which had a studied music and harmonious cadence. Gibbon.

Of jarring elements composed the noise,

When Chaos from his old dominion torn,

With all his bellowing throng,

Far, far was hurled, the void abyss along. Beattie.

COMPOSING STICK, an instrument used in printing, which, from its name, appears to have been originally made of wood, but has long been made of brass or iron. See PRINTING.

COMPOSITE. See BOTANY.

COMPO'SITE, adj. Lat. compositus.

The compotite order in architecture is the last of the five orders of columns ; so named, because its capital is composed out of those of the other orders j and it is also called the Roman and Italick order. Harris.

Some .are of opinion that the composite pillars of this arch were in imitation of the pillars of Solomon's temple. Addison.

COMPOSITE NUMBERS are such as can be measured exactly by a number exceeding unity; as 6 by 2 or 3, or 10 by 5, &c., so that 4 is the lowest composite number. Composite numbers, between themselves, are those which have some common measure besides unity; as 12 and 15, as being both measured by 3.

COMPOSITE ORDER. See ARCHITECTURE. COMPOSITION, n. s. Lat. compositio. The ct of forming an integral of various dissimilar arts; a mass formed by mingling different in- gredients ; the act of bringing simple ideas into complication : opposed to analysis, or the sepa- ration of complex notions ; the arrangement of various figures in a picture ; the act of discharg-

ing a debt by paying part; the sum paid; written work; adjustment; regulation; the state of being compounded ; union ; conjunction ; combination; consistency; congruity ; compact; agreement; terms on which differences ar settled.

To take away all such mutual grievances, injuries, and wrongs, there was no way but only by going upon composition and agreement amongst themselves. And again, all publick regiment, of what kind soever, seemeth evidently to have arisen from deliberate ad- vice, consultation, and composition between men, judging it convenient and behoveful. Hooker.

There is no composition in these news, That gives them credit. .

— Indeed they are disproportioned.

SMilispeare. Othello.

A preacher, in the invention of matter, election of words, composition of gesture, look, pronunciation, motion, useth all these faculties at once.

Ben Jonson's Discoveries.

The disposition in a picture is an assembling of many parts ; is also called the composition, by which is meant the distribution and orderly placing of things, both in general and in particular. Dryden's Dufresnoy. The investigation of difficult things, by the method of analysis, ought ever to precede the method of com- position. Newton's Opticks, In the time of the Yncas reign of Peru, no compo- sition was allowed by the laws to be used in point of medicine, but only simples proper to each disease.

Temple.

When I read rules of criticism, I enquire after the works of the author, and by that means discover what he likes in a composition. Addison' i Guardian.

Jove mixed up all, and his best clay employed, Then called the happy composition Floyd. Swiff.

Contemplate things first in their own simple na- tures, and afterwards view them in composition with other things. Watts.

COMPOSITION, in commerce, a sum of money in part payment of a debt, which the creditors accept in liquidation of the whole, and for which they give a general acquittance to the debtor.

COMPOSITION, in literature, the art of forming and arranging sentiments, and clothing them with language suitable to the nature of the subject.

COMPOSITION, in logic, a method of reasoning, whereby we proceed from some general self- evident truth to other particular and singular ones. In arranging our thoughts, there are two ways of proceeding equally within our choice : for we may suppose the truths, relating to any part of knowledge, as they presented themselves to the mind in the manner of investigation ; car- rying on the series of proofs in a reverse order, till they at last terminate in first principles ; or, beginning with these principles, we may take the contrary way ; and from them deduce, by a direct train of

reasoning, all the several propositions we want to establish. This diversity in the man- ner of arranging our thoughts gives rise to the two-fold division of method established among logicians, called analytic and synthetic.

COMPOSITION, in music, is the art of inventing and writing airs ; of accompanying them with a suitable harmony ; and forming a complete piece of music in all its parts.

COMPOSITION, in music, is also applied to such oJeoes as are formed according to the rules of the nrt. Hence duettos, trios, quartetos, &c. are caHed compositions.

COMPOSITION, or COMPOSING, in printing, the arranging of several types or letters in the com- posing stick in order to form a line; and of se- veral lines ranged in order, in the galley, to make a page ; and of several pages to make a form. See PRINTING.

CO'MPOST, n. s. & v. a. > Lat. composition.

CO'MPOSTURE, n. s. $ A mixture of va-

rious substances for enriching the ground ; ma- nure ; to manure ; to enrich with soil. The earth's a thief,

That feeds and breeds by a composture stolen rom general excrements. Shakspeare. Timon.

By removing into worse earth, or forbearing to compost the earth, water-mint turneth into field-mint, and the colewort into rape. Bacon's Natural History.

As for earth, it composteth itself ; for I knew a garden that had a field poured upon it, and it did bear fruit excellently. Id.

There, as his dream foretold, a cart he found, That carried compost forth to dung the ground.

Dryden.

In vain the nursling grove Seems fair awhile, cherished with foster earth ; But when the alien caajnst is exhaust, Its native poverty again prevails.

Philips.

COMPOST, in agriculture, a mixture of manure. An oil compost is recommended in the Georgical Essays, upon a supposition that the food of vege- tables is of an oily nature. It is made as follows : Take of North American potassa 12lbs. Break the salt into small pieces, and put it into a con- venient vessel with four gallons of water. Let the mixture stand forty-eight hours; then add of coarse train oil fourteen gallons. In a few days the salt will be dissolved, and the mixture, upon stirring, will become nearly uniform. Take fourteen bushels of sand, or twenty of dry mould ; upon these pour the above liquid ingre- dients. Turn this compost frequently over, and in six months it will be fit for use. When the liquid ingredients are put to one or two hogsheads of water a liquid compost will be formed, which must be used with a water cart. This compost, however, the inventor himself owns to be inferior to rotten dung.

On the supposition that vegetables are support- ed by matters of a saline nature, composts formed of different sorts of salts have been contrived, but with little success. A famous composition of this kind was once sold by patent, under the name of Baron Van Ilaak's compost; but the Georgical Essays report it as a very poor one. The crop could not have been worse had it been left desti- tute of every assistance. Composts, made with putrefied animal substances, answer much better, in most cases, than any other kind of manure, but they are difficult to be procured. The fol- lowing is recommended by Dr. Hunter of York. 'Take a sufficient quantity of saw-dust, incorpo- rate it with the blood and offal of a slaughter- house, putting a layer of one and a layer of the other till the whole becomes a moist and fetid composition. Two loads of this conrpost, mixed

with three loads of earth will be sufficient for an acre of wheat or spring cotton. Being a kind of top dressing, it should be put on at the time of sowing, and harrowed in with the grain. As this kind of compost lies in a small compass, it seems well adapted for the use of those farmers who are obliged to bring their manures from a distance. It is besides extremely rich, and will probably continue in the land much longer than fold-yard or stable dung. I apprehend that it is capable of restoring worn out land to its original fresh- ness ; and I am induced to be oi that opinion from the appearance of the crop now growing upon land much impoverished by bad manage- ment. Mixing dung in a state of fermentation with peat, says Mr. Loudon, or forming what in Scotland are called meadow-bamc middens is a successful mode of increasing the quantity of putrescent manure. The peat being dug- and partially dried may either be carted into the farm-yard and spread over the cattle court, there to remain till the whole is carted out and laid upon a dunghill to ferment; or it may be mixed up with the farm-yard dung as carted out. If care be taken to watch the fermenting

process, as the fire of a clay kiln is watched, a few loads of dung may be made to rot many loads of peat.

COMPOSTELLA, or ST. IAGO DE COMPOS- TELLA, a considerable town of Spain, the capital of Galicia, with an archbishop's see, and a uni- versity founded in 1532. It was the Brigantium of the ancients. The public squares, and the churches, particularly the metropolitan, are mag- nificent, and it has a great number of monaste- ries for both sexes. It is pretended that the body of St. James was buried here ; and pil- grims still walk in procession to the church, and visit a wooden image of the saint. The arch- bishop is one of the richest prelates in Spain. This town is the seat of the military order of St. Jago, or St. James, having eighty-seven comman- deries, and a revenue, it is said, of 200,000 golden ducats. Some trade is carried on 'n wine, fruit, and fish ; and manufactures of silk-stockings, hats, paper, and leather. Population about 12,000. It is seated on a peninsula, formed by the rivers Tambra and Ulla, 270 miles north-west of Ma- drid.

COMPOSTELLA, NEW, a rich town of Mexico in the province of Xalisco, and intendancy of Gua- dalaxara, built in 1331. It is situated near the South Sea, 400 miles north-west of Mexico. The soil is barren and the air unhealthy ; but there are several mines of silver at St. Pecaque, and some excellent tobacco in its neighbourhood.

*COM POTATION, n. *. Lat. compotatio. The act of drinking or tippling together.*

Secrecy to words spoke under the rose, only mean, in compotation, from the ancient custom in symposiack meetings, to wear cbaplets of roses.

Browne's Vulgar Errours.

If thou wilt prolong

Dire compotation, forthwith reason quits Her empire to confusion and misrule, And vain debates ; then twenty tongues at once Conspire in senseless jargon ; nought is heard But din and various clamour, and mad rant.

Phtiipt.

COM

COS

*COMPOUND, v. a., v. n.,adj.!t,n. *.^ Lat. explosion. The compound blowpipe has been*

COMPO'UNDABLE, adj. £ compo- found Of occasional use in the arls, where an

COMPO'UNDER, n. s. j no. To intense and long-continued heat is required, mingle many ingredients together in one mass ;

to form by uniting various parts; to mingle in COMPOUND INTEREST, interest upon interest, is

different positions; to combine; to adjust a that which is reckoned not only upon the princi-

difference by some recession from the rigor of pal, but upon the interest itself; which hereby

claims; to discharge a debt by paying only part, becomes a sort of additional principal. See

To bargain in the lump ; to come to terms by INTEREST.

granting something on each side.

Here what ? quod I, ' the grete sowne (Quod he) ' that rombleth up and downe, In Fame's House, full of tidings, Bothe of faire speche and of chidings, And of false and sothe, compowned. Herken wel ; it is not rowned.

Chaucer's House of Fame.

Therefore, conspiring all together plaine, They did their counsels now in one compound, Where singled forces faile, conioynd may gaine. The Blatant Beast, the fittest meanes they found To work his utter shame, and thoroughly him con- found. Spenser.

1 would to God all stnifes were well compounded!

Shakspeare.

Here 's a fellow will help you to-morrow ; compound with him by the year. Id. Measure for Measure.

If there be any discord or suits between any of the family, they are compounded and appeased.

Bacon's New Atlanta.

Where it and Tigris embrace each other under the city of Apamia, there do

they agree of a joint and •impounded name, and are called Piso-Tigris.

Raleigh1 '» History of the World. O then let me in time compound And parley with those conquering eyes, Ere they have tryed the force to wound, Ere with their glancing wheels they drive In triumph over hearts that strive, And them that yield but more despise. Marvell. They were, at last, glad to compound for his bare commitment to the Tower. Clarendon.

Pray but for half the virtues of this wife ; Compound for all the rest, with longer life.

Dryden.

But useless all, when he despairing found Catullus then did with the winds compound.

Id. Juvenal.

COMPOUND BLOWPIPE; an instrument pro- ducing an intense heat from ˆ ˆurtioiMrf oxyaen and 1 hydrogen gases. The gases are con- tained each in a separate Bolder, and are > P

expelled by the pressure of a column ot water, not bein? allowed to mix until they arrive nearly at the aperture o/ a pipe tipped with platma, when they are inflamed The ˆ Pr«duced is sufficient to melt all the earths, and the • nati

COMPOUND NUMBERS, those which can be divided by some other number besides unity, without leaving any remainder; such are 18, 20, &c. the first being measured by the numbers 2, 6, or 9; and the second by the numbers 2, 4,

5, 10.

COMPREHE'ND, v.a. Y Lat. compre- COMPREUE'NSIBLE, adj. hendo, cempre- COMPREHE'NSIBLY, adv. \ hensibilis; Fr. COMPREHE'NSION, n.s. } comprehensible ; COMPREHENSIVE, adj. Lat. comirefien-*

COMPREHE'NSIVELY, adv. sio. To oom- COMPREHE'NSIVENESS, ra. j.J prise ; to in- clude ; to contain ; to imply. It applies parti- cularly to the mind ; thus too it signifies intelligible; conceivable by the understanding. The power of the mind to admit and contain many ideas at once. The noun is used in the sense of summary; epitome; compendium ; ab- stract ; abridgement, in which much is comprised. In rhetoric it is a trope or figure by which the name of a whole is put for a part, or that of a part for the whole, or a definite number for an indefinite.

' Sir !" quod he, ' sithens firste Frouthe Have any maner witte fro youthe, Or kindly understand inge To comprehende in any hinge What love was in mine owne wit.

Chaucer's J?oke of the Ducheste. Rome was not better by her Horace taught, Than we are here to comprehend his thought.

Waller.

In the Old Testament there is a close comprehension of the New, in the New an open discovery of the Old. Hooker.

Lest this part of knowledge should seem to any not comprehensible by axiom, we will set down some heads of it. Bacon.

It would be ridiculous to grow '.-Id in the study of every necessary thing, in an art which comprehends so Dryden's Dufresncy.

No other fear himself could comprehend, Than lest heaven fall ere thither he ascend.

Marvell.

You gentle shepherds, and you snowy sires, hat sit around, my nigged rhymes attending ;

»o auiiK." — How may I hope to quit your strong desires*

ral as well as artificial compounds which they ˆ vers/uncouth, such won

form with each other. The metals, also, ai brought by it into a state of

ebullition, and are

Fletcher's Purple Island. diffiigive> so comprehensivet so catholic a grace U

even completely volatilized. This mod » charity, that whatever time is the opportunity of any

of the oxyhydrogen blowpipe, as it has sometimes other virtue< ˆ time is tne opportunity of charity. been called, which was invented by Dr. Hare, Spratft Sermons.

of Philadelphia, is far preferable to that of YQU giye no proof of decay of your judgment, and

Newman, or rather of Brooke, who appears to comprehention of aii things, within the compass of an

have been the first inventor, since it is not at- human understanding. Dryden.

tended by any danger, whereas the original ˆ horizon getg the bound3 between the eolight-

instrument, in which the ˆases were previously pned bnd dark parts of ˆag&r between what is and

*mingled, was liable to a violent and hazardous wn..t is not compreA«wNe by u«. Loc**

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COM

His hand unstained, his uucorrupted heart, His com/re'ieiuive head; all interests weighed, All Europe saved, yet Britain not betrayed

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oore, is pressed into it. For this pressure, a screw was first used ; but, in order to produce a better application of the power, a lever was

Compare the beauty and comprehensiveness of le- gends on ancient coins

Pope's Epixtles. afterwards employed to force down the piston.

mark on the piston shows, by its distance Addison on Ancient Medals. from a iiule iedge across the cy]jnder, how far

the piston has been forced down, and, when the force subsides, how far it has been driven up. The latest experiments on the compressibility of water" we owe to Oersted (Annales de Chimie et

As when some skilful cook to please each guest. Would in one mixture comprehend a feast, With due proportion and judicious care, He fills his dish with different sorts of fare,

Fishes and fowls deliriously unite df Physique) and to Mr. Perkins, so distinguished

To feast at once the taste, the smell, and sight. Gay. „ , .J ' .' Tis he alone, whose comprehensive mind,

From situation, temper, soil, and clime, Explored a nation's various powers can bind,

And various orders in one form sublime Of policy. Beuiti .

Then farewell Horace ; whom I hated so,

Not for thy faults but mine ; it is a curse To understand, not feel thy lyric flow, To comprehend, but never love thy verse.

Byron. Childe Harold.

COMPREHENSION, in English church history, denotes a scheme proposed by Sir Orlando

Bridgman in 1667-8, for relaxing the terms of r, . r „

conformity in behalf of Protestant Dissenters, that w.e intend by matters of faith 1 Do not they, UD

and admitting them into the communion of the der disc'pline, comprise the regimen of the church?

church. A bill for this purpose was drawn up

by lord chief baron Hale, but disallowed. The

attempt was renewed by Tillotson and Stilling-

fleet in 1674, and the terms were settled to the

satisfaction of the non-conformists; but the

bishops refused their assent. This scheme was

likewise revived again immediately after the Re-

mechanical inventions.

COMPRI'NT, v.n. Lat. comprimere. To print together ; it is commonly taken, in law, for the deceitful printing of another's copy, or book, to the prejudice of the rightful proprietor.

COMPRl'SE, v. a. Fr. comprendre, compris. To contain ; to comprehend ; to include. Kome wos the whole world, and al the world wos Rome,

And if things named their names doo equalize, When land and sea ye name, then name ye Rome ;

And naming Rome, ye land and sea comprize.

Spenier

Do they not, under doctrine, comprehend the same

Id.

But with this sad news surprized, Soon she let that niceness fall, And would gladly yield to all So it had his stay comprized. Marvcll.

The wretched have no country : that dear name , kind kindred, fostering friends,

volution; the king and queen expressed their Burˆn?ortL °seaaVrˆnT;rhaanVet0n™country

desire of an union ; however the design failed Maturin' B

after two attempts, and the act of toleration was r-rnvrunrnjA TˆT,™

obtained CATION, n. s. Lat. comprob. .

COMPREHENSION, in metaphysics, is that act J |of 5 attestation.

of the mind whereby it comprehends or knows .Tliat is onlv esteemed a legal testimony, which re-

any object that is presented to it on all the sides ce.lves comProbatˆ from

the mouths of at least two

Lat. compressus,

Browne.

CO'MPROMISE, n. s. & v. a. > Lat. compro- COMPROMISSO'RIAL, adj. $ missum. Com- compresso. To Promise »s a mutual promise of two or more force into a nar- Parties at difference, to tefer the ending of their (rower compass ; controversies to the arbitrement or equity of one | to squeeze toge- or more arbitrators. A compact or bargain, in

on which it is capable of being apprehended or T known.

COMPRE'SS,t;.a.&n.sO

COMPRESSIBILITY, n. s.

COMPRE'SSIBLE, adj.

COMPRE'SSIBLENESS, n.s.

COMPRESSION, n. s. , „ _ „ . .

COMPRE'SSURE, n. s. J ther. To embrace, which some concessions are made on each side.

Compressibility is the quality of being compres- 'ne vero signifies to compound; to adjust a sible ; the quality of admitting to be brought by compact by mutual concessions. Shakspeare force into a narrow compass ; as air may be com- uses it in the simple sense of to accord, and to pressed and reduced by violence to considerably agree, less space than it naturally occupies : and com- Wars have not wasted it, for warred he hath not

•ession is the act of bringing the parts of any But basely yielded, upon compromise,' body more near to each other by violence ; the That which his ancestors atchieved with blows quality of admitting such an effect of force as may compel the body compressed into a narrower

space

COMPRESSION MACHINES; instruments fo

Shakspeare. Ricltard II. Laban and himself were compromised, That all the yearlings, which were streaked and pied, Should fall as Jacob's hire. Id. Merchant of Venice. ... COMPROVI'NCIAL, „. ,. From con and

compressiag or condensing elastic fluids. Such, provincial. Belonging to the same province tor instance, is an air-numn with cocks hv A. .v.

*which the air can be concJeJd intiˆ?vSseS – ‘ * consfcratlon of.an archbishop, all his com For the compression of liquids (for instance, water). Abich has constructed a metallic cylin- der of 21 inches Splines high, and 3£ inches*

7J lines in diameter, 1 inch 2$ lines thick. This cylinder is filled with water, and an iron piston, verb/is covered with leather and exactly fitting the ti

provincials ought to give their attendance.

Ayliffe’s Parergon,

COMPT,n.4-.&u.a.ˆ Lat. computus ; Fr. COMPTER, n. s. \compte. Account; com- t O’MPTIBLE, adj. 3 putation; reckoning. The is now spelt COUNT, which see The adjec- is employed in the sense of accountable .

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responsible; ready to give account; subject; submissive.

Good beauties, let me sustain my scorn ; I am very comptible even to the least sinister usage. Shahspeare.

Your servants ever

Have theirs, themselves, and what is theirs, in compt, To make their audit at your highness’ pleasure, Still to return your own. Id. King John.

Disdain not, Snow ! my humble verse to hear, Stick thy black pen awhile behind thy ear : M hether thy compter shine with sums untold, And thy wide-grasping hand grow black with gold.

Gay.

COMPTON (Henry), bishop of London, was the youngest son of Spencer earl of Northamp- ton, and born in 1632. After the Restoration he became cornet of a regiment of horse ; but soon after, quitting the army, was made bishop of Ox- ford in 1674; and in 1675 bishop of London. He was entrusted with the education of the two princesses Mary and Anne, whom

he afterwards married to the princes of Orange and Denmark; and their firmness in the protestant religion was in a great measure owing to their tutor, to whom, when popery began to prevail at court, it was im- puted as an unpardonable crime. He was sus- pended from his ecclesiastical functions by James II. but restored again on the prince of Orange's invasion. He performed the ceremony of the coronation of that prince ; was appointed one of the commissioners for revising the liturgy ; and labored with much zeal to reconcile dissenters to the church. His spirit of moderation made him unpopular with the clergy, and in all probability checked his further promotion. He died in 1 71 3 having published a Treatise on the Communion ; Seven Letters on Religious Subjects, and a Trans- lation of the Jesuits' Intrigues.

COMPTONITE. A new mineral found in ejected masses on Mount Vesuvius. It occurs crystallised, in oblique four-sided prisms, trun- cated. The angles of the oblique prism are probably 90° 51′ and 88° 9'. Transparent, or semi-transparent. Gelatinises with acids, and it is sometimes accompanied with acicular arrago- nite. It was first brought to this country by lord Compton, in 1818.

COMPTRO'LL, v. a. } This word is writ- COMPTRO'LLER, n. s. > ten by some authors, COMPTRO'LLERSHIP, n.s. j who did not attend to the etymology, for control ; and some of its derivatives are written in the same manner. To control ; to over-rule ; to oppose. The noun sig- nifies director; supervisor; superior intendant ; governor.

This night he makes a supper, and a great one, To many lords and ladies : I was spoke to, with Sir Henry Guilford, Thi night to be comptrollers. Shakspeare. Henry VIII. The gayle for stannary-causes is annexed to the comptrollership. Careut'i Survey of Cornwall.*

The comptrollers of vulgar opinions pretend to find out such a similitude in some kind of baboons.

Temple.

My fates permit me not from hence to fly ; Nor he, the great comptroller of the sky.

Dryden't AOneid.

COMPUL'SATORY, adj. If Lat. compulsor.

COMPU'LSATIVELY, adv. i Having the force

of compelling; co-active; with force ; by restraint.

Which is no other,

But to recover from us by strong hand, And terms compulsatory, those foresaid lands So by his father lost. Shakspeare. Hamlet

COMPU'LSION, n. s. Lat. compulsio. The act of compelling to something. Force; vio- lence of the agent; the state of being compelled; violence suffered.

Bound unto me ; but not with such hard bands Of strong compulsion and streight violence As now in miserable state he stands ; But with sweet love and sure benevolence, Voide of malitious mind or foul offence. Spenier.

Such sweet compulsion doth in musick lie, To lull the daughters of necessity. Milton.

Compulsion thus transported ! Id. Paradise Lost.

When the fierce foe hung on our broken rear, With what compulsion and laborious flight We sunk thus low. Id.

Compulsion is in an agent capable of volition, when the beginning or continuation of any action is contrary to the preference of his mind. Locke.

COMPU'LSIVE, adj. S Fr. compulser ; Lat.

COMPU'LSIVELY, adv. fcompulsus. Having the

COMEU'LSIVENESS,«.S. J power to compel; for- cible.

The Danube, vast and deep, Supreme of rivers ! to the frightful brink, Urged by compulsive arms, soon as they reached, New terror chilled their veins. Phillips.

The clergy would be glad to recover their dues by a more short and compulsive method. Swift.

COMPU'LSORY, adj. 1 Fr. compulsoire .

COMPULSO'RILY, adv. J Having the power of necessitating or compelling.

To say that the better deserver hath such right to govern, as he may compulsorily bring under the less worthy, is idle. Bacon-

He erreth in this, to think that actions, proceeding from fear, are properly compulsory actions ; which, in truth, are not only voluntary, but free actions ; neither compelled, nor so much as physically necessitated.

Bramhall against Hobbes.

Kindly it would be taken to comply with a patent, although not compulsory. Swift.

COMPU'NCTION, n.s.f Fr. componction,

COMPU'NCTIOUS, adj. Sfrom Lat. pungo,

COMPU'NCTIVE, adj. Jpuncturn, to prick. The power of pricking ; stimulation ; irritation. Applied to the mind, it signifies the throbbings of remorse.

Stop up the access and passage to remorse, That no compunctious visitings of nature Shake my fell purpose. Shakspeare. Macbeth.

This is that acid and piercing spirit, which, with such activity and compunction, invadeth the brains and nostrils of those that receive it.

Browne's Vulgar Errours.

He acknowledged his disloyalty to the king, with expressions of great compunction. Clarendon.

COMPURGATION,n.«. > Lat. compur-

COMPURGA TOR, n. f. $gatio. The prac-

tice of justifying one man's veracity by the testi- mony of another. Compurgator is the agent who yields such testimony.

The next quarry, or chalk-pit, will give abundant attestation : these are so obvious, that I need not 1 far to seek for a compurgator.

Woodward's Natural History. U 2

Lat. computo. To reckon ; to calcu- \ late ; to number ;

J vatives have this ex-

COMPUTE, u.a.&n.s. COMPUTABLE, adj. COMPUTATION, n. s

COMPU'TER, n. s. COM'PUTIST. elusive application.

My princely father Then, by just computation of the time. Found that the issue was not his.

Shakspea-e, Richfird III.

Though there were a fatality in this year, yet divers were out in their account, aberring several ways from the true and just compute ; and calling that one year which perhaps might be another.

Browne's Vulgar Errours,

CON. A cant abbreviation of the Latin contra, against. Thus abridged it means the negative side of a question ; and is always used in con-

l to count. The deri- juction with the word pro.

Of many knotty points they spoke, And pro and con by turns they took. Prior. CON, v. a. ~) Goth, cuhnan ; Swed. kunna ; CO'NNER, n. >Ang.Sax. cennan, cunnan. To Co'NNiNG,n. J have a knowledge of; to per ceive ; to study ; to commit to memory ; to learn ; to look over. The first of the nouns is seldom, if ever used, but in the compound, an ale-conner. Conning, which, as a noun, signifies knowledge, ability, is obsolete. Spenser says, 'Yet as I

number

though not easily computable by arithmetic.

Hales Origin of Mankind. And, as it works, the industrious bee Computes its time as well as we. Marvell.

I have known some such ill computers, as to imagine the many millions in stocks so much real wealth.

Swift.

We pass for women of fifty : many additional years are thrown into female computations of this nature.

Addison's Guardian.

Alas ! not dazzled with their noon-tide ray, Compute the morn and evening to the day ; The whole amount of that enormous fame, A tale that blends their glory with their shame. Pope, The treasurer was a wise man, and a strict compu- titt. Wutton.

Did man compute

Existence by enjoyment, and count o'er Such hours 'gaint years of life, — say, would he name threescore. Byron. Childe Harold.

CO'MRADE, n.s. Fr. camerade, from camera, a chamber ; one that lodges in the same chamber, contubernio fruitur. One who dwells in the same house or chamber. A companion ; a part- ner in any labor or danger.

Rather I abjure all roofs, and chuse To be a comrade with the wolf and owl.

Shaktpeare. King Lear. He permitted them

To put out both thine eyes, and fettered send thee Into the common prison, there to grind Among the slaves and asses, thy comrades, As good for nothing else. Wilton's Agonittes.*

the nature he delivers it.' It is thus exactly equivalent to the French phrase, savoir gre. See COND.

And saide, Sire Knight, here forth ne lith no way, Tell me what that ye seken by your fay, Peraventure it may the better be, These olde folk con mochel thing, quod she.

Chaucer. Cant. Tales. Now certes I woldon my diligence

To conne it all or Cristemasse he went. Id.

Ah ! Cuddy, then quoth Colin, thou's a fon, That hast not seen least part of Nature's work : Much more there is unkend than thou doest Aon.

Spenser. Colin Clout's come home again.

Each rowme she sought, but them all empty fond ;

*That all were fled for feare, but whether nether kond^*

Id. Faerie Queene ^

Pretty answers ! have you not been acquainted with goldsmiths wives, and conned them out of rings ?

Shakspeare.

Our understanding cannot in this body arrive so clearly to the knowledge of God, and things invisible, as by orderly conning over the visible and

inferiour creatures. Milton.

All this while John had conned over such a cata- logue of hard words, as were enough to conjure up the devil. Arbuthnot.

My passions, when once lighted up, raged like so many devils, till they got vent in rhyme ; and then the conning over my verses, like a spell, soothed all into Quiet. Burns.

CONARION, the pineal gland.

CONATUS, a term frequently used in philo-

A footman, being newly married, desired his com- Sophy and mathematics, defined by some to be rode to tell him freely what the town said of it. Surift. a quantity of motion not capable of being ex- His back was to the dashing spray — pressed by any time or length ; as the conatus

Behind but close — his comrades lay. — recedendi ab axemotus,is the endeavour which a

Byron. Bride of Abydos. body, moved circularly, makes to recede, or fly off from the centre of its motions .

CONAWANGO, or CONWONGA, a river of the United States, which rises in New York, and runs into the Alleghany on the north side.

CONCA (.Sir Sebastian), a celebrated histo- rical and portrait painter, born atGaetain 1679. He was a disciple of the famous Francis Soli- CON. A Latin inseparable preposition, which, mena ; who employed him to sketch after his at the beginning of words, signifies union or as- designs; and afterwards, by painting small por-

And then into a hoarser murmur grew,

An ominous, and wild and desperate sound, And when his comrades thought each other knew, 'Twas but his own, suppressed till now he found, And out they spake of lots of flesh and blood , And who should die to be his fellow's food.

Id. Don Juan.

sociation ; as concourse, a running together ; to convene, to come together. Some authors omit

traits at a low price, he obtained a considerable fortune. By this means also he acquired great

the final consonant, in various instances, as co- freedom of hand in pencilling and coloring temporary, instead of contemporary, but this His great patron was cardinal Ottoboni, who in- practice is not to be recommended. troduced him to pope Clement XL, for whom he

executed the picture of Jeremiah, in the church of St. John de Lateran, with Universal applause. This pope, in a general assembly of the academicians of St Luke, conferred on him the order of knighthood. Almost all the churches and chapels of Italy are enriched with his composi- tions. He was earnestly invited by Philip V. of Spain to visit his court, but could not be pre- vailed on to leave Rome. He painted two ad- mirable pictures for the king of Poland, with figures as large as life ; the one representing Alexander presenting Bucephalus to Philip, the other Alexander's marriage with Roxana. In 1757 Philip V. of Spain ennobled him. He was then seventy-eight, and died in 1761, aged eighty- two.

CONCA'MERATE, v. a. t Lat. concamero ;

CONCAMERA'TION, n. s. $ Gr. ica/tapa. To arch or vault over ; to bend over in a concave form. The noun signifies an arch ; a vault.

Of the upper beak, an inch and a half consisteth of one concamerated bone, bended downwards, and toothed as the other. Greta's Museum.

What a romance is the story of those impossible eoncameratioru, and feigned rotations of solid orbs !

Glanville's Scepsis,

CONG AN, a district of southern India, on the west coast of Hindostan, in the province of Bejapore. It is separated from the rest of the continent by the western Ghauts. The country declines gradually from the mountains towards the sea, and is intersected by a number of small streams. The coast is broken into a number of small bays and harbours ; and, as the land and sea breezes blow alternately on and from the coast, vessels steering along it are obliged to keep within sight of land. When the Moguls seized Hindostan they found this coast infested with pirates, and fitted out a fleet to protect their vessels. The Mahrattas armed against the Moguls, ravaged their possessions, and fitted out a fleet to protect the pirates. On this Conajee Angria, governor of Severndroog, one of the best fortresses on the coast,

formed an independent state, and in a short time extended his do- minions forty leagues along the coast, and six towards the mountains. His successors took the name of Angria, and made peace with the Mah- rattas, on paying an annual tribute. They con- tinued to make depredations on the coast, and to seize all vessels that passed that way, till 1 756, when their fleet was destroyed, and the strong fort of Gheria, where the chief resided, was taken by admiral Watson and colonel Clive. The whole country, with the exception of Ban- cote, was now restored to the Mahrattas. The principal towns are Choul, Bancote or Fort Vic- toria, Dabul or Severndroog, Gheria, Tamana, and Rajpore. Concan lies between 16° and 19° N. lat.

CONCARNEAU, a sea-port town of France, in the department of Finisterre. It is ten miles S. S. E. of Quimper, and has a castle. Inhabi- tants, who live by the pilchard fishery, about

2000.

CONCATENATE, v. a.) Old Fr. concathe-

CONCATENA'TION, n. s. \ tuition ; from Lat. catena, a chain. The old English spelling was

identical with the French. To link together; to connect in a successive order. The noun signi- fies a series of links ; an unbroken succession.

If Chapman affected the reputation of rendering line for line, the specious expedient of chasing a pro- tracted measure, which concatenated two lines together, undoubtedly favoured his usual propensity to peri- phrasis. Warton. Hint. Eng. Poetry.

The stoicks affirmed a fatal unchangeable concatena- tion of causes reaching even to the elicit acts of man's will. South.

CONCA'VE, v., n. s. & adj. ˆ Fr. concave ;

CONCAVA'TION, n. s. Sp. and Ital.

CONCA'VENESS, n. s. I concavo ; Lat.

CONCA'YITY, n. s. Y concuvus. The

CONCA'VOUS, adj. \ interior; the hol-

CONCA'VOUSLY, adv. J low of any sphe-

rical, spheroidal, or elliptical body, as of a bowl, an arch, or an egg-shell,

is concave ; the word is opposed to convex, which denotes the exterior of such a body. The derivative words, of course, follow the meaning of the primary. We use the word hollow as synonymous with deceitful; and Shakspeare uses the word concave in the same sense.

Have you not made an universal shout, That Tyber trembled underneath his banks, To hear the replication of your sounds Made in his concave shores?

Shakspeare. Julius Castor.

For his verity in love, I do think him as concave as a covered goblet, or a worm-eaten nut.

Id. As You Like ft.

The dolphin that carrieth Arion is concavously in- verted, and hath its spine depressed.

Browne's Vulgar Errours. At which the universal host sent up A shout that tore hell's concave.

Milton's Paradise Lott.

Niches that contain figures of white marble should not be coloured in their concavity too black.

WotH.n.

CONCAVE, as applied to lenses and mirror-, includes the double concave lens, botti whcne surfaces are concave ; the plano-concave lens, bounded on one side by a plane, and on the other by a concave spherical surface ; the meniscus, bounded by a concave and a convex spherical surface, which meet, if produced ; ami a concave-convex lens, bounded by a concave and a convex spherical surface, which would not meet if continued. Concave mirrors differ only in degrees of concavity. See MIRRORS, LENSES OPTICS.

CONCAVO-CONCAVE, adj. Concave or hoi low on both sides.

CONCAVO-CONVEX, adj. From concave and convex. Concave one way and convex the other.

I procured another concavo-convex plate of glast, ground on both sides to the same sphere with the former plate. Newton.

A concavo-comes pentangular plate, part of a shell that belongs to the

entrochus. Woodward on Fossilt.

CONCA'USE. From con and cause. A cause which co-operates with another.

A eoncause or instrument. Uudworth.

CONCE'AL, v. a.) Fr. celer ; Lat. COKCE'ALABLE, adj. concelo. To keep CONCE'ALEDLY, adv. hidden, secret, undi CONCE'ALEDNESS, n. s. }>- vulged ; to secrete

from search; to dis- semble. Conceal-

COXCE'ALER, ra. s. CONCE'ALING, n. s. CONCE'ALMENT, n. s. j ment is the act of hiding, of keeping secret ; the state of being hidden ; the place wherein a person or thing is concealed; a place of retirement or shelter.

I thither went, where I did long conceale Myselfe, till that the dwarf did me reveal.

Spenter't Faerie Queene. Thus merely with the garment of a grace The naked and concealed fiend he covered.

That the unexperienced gave the tempter place, Which like a cherubim above them hovered.

Shakspeare. A Lover's Complaint. Come, Catesby, thou art sworn As deeply to effect what we intend, As closely to conceal what we impart.

Id. Richard III She never told her love ; But let concealment, like a worm i' th' hud, Feed on her damask cheek.

Id. Twelfth Night. He is a worthy gentleman, Exceedingly well read, and profited In strange concealments. Id. Henry IV.

Returning a lye unto his Maker, and presuming to put off the Searcher of Hearts, he denied the omnis- ciency of God, whereunto there is nothing concealable. Browne's Vulgar Erroun.

They were to undergo the penalty of forgery, and the concealer of the crime was equally guilty.

Clarendon.

There is but one way I know of conversing safely with all men, that is, not by concealing what we say or do, but by saying or doing nothing that deserves to be concealed. Pope.

A person of great abilities is zealous for the good of mankind, and as solicitous for the concealment as the performance of illustrious actions.

Addiion's Freeholder. The cleft tree

Offers its kind concealment to a few, '1 heir food its insects, ana us uiuss their nests.

Thomson.

Quick, blushing as abashed, she half withdrew ; One hand a bough of flowering myrtle waved,

One graceful spread, where, scarce concealed from

view, Soft through the parting robe her bosom heaved.

Beat tie.

That hour arrived, his work begins ; He spins and weaves, and weaves and spins ; Till circle upon circle wound Careless around him and around, Conceals him with a veil, though slight, Impervious to the keenest sight. Cowper.

But now beneath this walnut shade, He finds his long last home,

And waits, in snug concealment laid, Till gentler Puss shall come. Id.

The London ladies were always too handsome for me ; then they are so defended ; such a circumvalla- tion of hoop, with a breast-work of whalebone, that would turn a pistol-bullet, much less Cupid's arrows, then turret on turret on top, with a store of concealed weapons, under pretence of black pins, — and above all, a standard of feathers that would do honour to a knight of the bath. Upon my conscience, I could as soon embrace an Amazon, armed at all points.

SJuridan.

Her head hung down, and her long hair, in stoop.

ing, Concealed her features better than a veil :

And one hand o'er the ottoman lay drooping, White, waxen, and as alabaster pale.

Byron's Don Juan.

CONCE'DE, v. a. \ Fr. and Span, con

CONCE'SSION, n. s. / ceder ; Ital. and Lat.

CONCESSIONARY, adj. > concedere, from Lat.

CONCE'SSIVE, adj. I con and cedere. To

CONCE'SSIVELY, adv. J concede is to give up; to admit; to allow without dispute; to relin- quish; to resign. Concession is the act of giving up ; the thing so given up. Conces- sionary signifies that which is granted not as a right, but as an indulgence. Concessive, that which implies concession ; concessively, by way of concession, granting the premises.

By expurgatory animadversions we might strike out great numbers of hidden qualities ; and, having once a conceded list, we might with more safety attempt their reasons. Browne.

Some have written" rhetorically and concessively j not controverting, but assuming the question, which, taken as granted, advantaged the illation. Id.

I still counted myself undiminished by my largest concessions, if by them I might gain the love of my people. King Charles.

The concession of these characters was in a parlia- mentary way. Hole's Common Law of England.

When a lover becomes satisfied by small compli- ances, without further pursuits, then expect to find popular assemblies content with small concessions.

Swift.

The atheist, if you concede to him that fortune may be an agent, doth presume himself safe and invulner- able. Bentley.

Hypothetical, conditional, concessive, and exceptive conjunctions, seem in general to require a subjunctive mood after them. Lowth's Grammar.

I wished you to concede to America, at a time when she prayed concession at our feet. Just as much was I »n American when I wished parliament to offer terms in victory, and not to wait the well chosen hour of defeat, for

making good by weakness, and by sup- plication, a claim of prerogative, preeminence, and authority. Burke.

CONCE'n>.n.&n.s.^ Fr. concept; Sp.

CONCE'ITED, adj. concepto ; Ital. con-

CONCE'ITEDLY, adv. [cetto ; Lat. conceptus.

CONCE'ITEDNESS, n. $. f Both the verb and

CONCE'ITIVE, adj. the noun have various

CONCE'ITLESS, adj. j shades of meaning, some of which are become obsolete. They are disused in a good sense, and are now employed only as expressive of more or less of censure. The noun formerly signified a conception; an idea ; an image formed by the mind ; under- standing ; quickness of apprehension ; a plea- sant fancy ; gaiety of imagination ; acuteness : it now generally means a fantastical notion ; a thought more brilliant than correct ; opinionative pride; self-sufficiency. The verb and the par- ticipial adjective have shared the same fate. To be conceited once denoted, to be endowed with fancy ; it is now applied to vain persons, to men who, without any good grounds, have lofty ideas of their own merit. This word is used with of before the object of conceit. Conceitedly, is fan- tastically ; whimsically. Conceitless, is stupid

devoid of thought. The phrase, out of conceit with, means to have ceased to have a liking for the thing spoken of; it implies previous regard changed into an opposite feeling.

I shall be found of a quick conceit in judgment, and shall be admired. Wisdom, viii. 11.

Seest thou a man wise in his own conceit ? There is more hope of a fool than of him.

Proverbi, xxv. 12. A foolish faune indeed,

That couldst not hold thyself so hidden blest, But wouldest needs thine owne conceit aread.

Spenser's Faerie Queene.

How often, alas ! did her eyes say unto me, that they loved ! and yet I, not looking for such a matter, had not my conceit open to understand them. Sidney. The first kind of things appointed by laws humane, containeth whatsoever is good or evil, is notwithstand- ing more secret than that it can be discerned by every man's present conceit, without some deeper discourse and judgment. Hooker.

One of two bad ways you must conceit me, Either a coward, or a flatterer.

Shakspeare. Julius Caesar. I shall not fail to approve the fair conceit The king hath of you. Id. Henry VIII.

I know not how conceit may rob The treasury of life, when life itself Yields to the theft. Id. King Lear.

His wit is as thick as Tewksbury mustard : there is no more conceit in him than is in a mallet.

Id. Henry IV.

Thinkest thou I am so shallow, so conceitlest, To be seduced by thy flattery.

Id. Two Gentlemen of Verona.

They looked for great matters at their hands, in a

cause which they conceited to be for the liberty of the

subject. Bacon.

He was of countenance amiable, of feature comely,

active of body, pleasantly conceited, and sharp of wit

Knolles.

Conceitedly dress her, and be assigned By you fit place for every flower and jewel : Make her for love fit fuel. Donne.

The strong, by conceiting themselves weak, are thereby rendered as unactive, and consequently as useless, as if they really were so. South's Sermons. Every man is building a several way, impotently conceited of his own model and his own materials.

Dryden.

Strong conceit, like a new principle, carries all

easily with it, when yet above common sense. Locke.

Not that I dare assume to myself to have put him

out of conceit with it, by having convinced him of the

fantasticalness of it. Tillotson, Preface.

When men think none worthy esteem, but such as

claim under their own pretences, partiality and con-

ceitedness make them give the pre-eminence.

Collier on Pride.

What you write of me, would make me more con- ceited than what I scribble myself. Pope.

Some to conceit alone their works confine, And glittering thoughts struck out at every line. Id.

Malbranche has an odd conceit, As ever entered Frenchman's pate. Prior.

Since by a little studying in learning, and great conceit of himself, he has lost his religion ; may he find it again by harder study, under humbler truth.

Bentley.

The conceit of Mr. Hobbes, that in the nature of things there is no distinction between just and unjust, right and wrong ; and that in civil society the will of human governors is the sole standard of duty, and

consequently of the law of nature ; this conceit, I say» we need not stop to examine. Seattle.

Philosophy, without his heavenly guide, May blow up self conceit, and nourish pride, But, while his province is the reasoning part, Has still a veil of midnight on his heart. Cowper.

Our baritone I almost had forgot, A pretty lad, but bursting with conceit — With graceful action, science not a jot, A voice of no great compass, and not sweet.

Byron's Don Juan.

CONCEIVE, v. a. & n. ˆ Fr. concevoir ; Ital. CONCE'IVER, n. concepere ; Sp. con-

CONCE'IVING, n. s. Icepire; Lat. conci-

CONCE'IVABLE, adj. Cpere. To receive CONCE'JVABLENESS, n. \ into, or form in, the CONCE'IVABLY, adv. j uterus ; to form in the mind; to comprehend; to think; to be of opinion that ; to have an idea of ; to become pregnant. Conceiving is apprehension ; under- standing. The derivatives do not stand in need of being denned.

I was shapen in iniquity, and in sin did my mother conceive me. Psalm li. 5.

Nebuchadnezzar hath conceived a purpose against you. Jeremiah.

Ther is a maner tree, as saith Seint Isidore, that whan men make a fire of the saide tree, and cover the coles of it with ashen, sothly the fire thereof wol last all a yere or more : and right so fareth it of ran- cour when it is ones conceived in the herte of som men. Chaucer's Canterbury Tales. Sorowes many hath she suffrid trewly Sith that she first conceived him and bare. Id. What comfort can I wofull wretch conceave ! Or why should ever I henceforth desyre To see faire heaven's face, and life not leave, Sith that false traytour did my honour reeve ?

*Spenser's Faerie Queene. It were a goodly storie to declare By what strange accident faire Chiysogone Conceived these infants. '< *•*

Her fickle hart conceived hasty fyre, Like sparkes of fire that fall in sclender flext. Id.

From her fayre eyes he took commandment, And ever by her lookes conceived her intent. Id.

The grieved commons Hardly conceive of me : let it be noised, That, through our intercession, this revokement And pardon comes. Shakspeare. Henry VIII.

This kiss, if it durst speak, Would stretch thy spirits up into the air : Conceive, and fare thee well. Id. King Lear,

Cadwal

Strikes life into my speech, and shews much more His own conceiving. ld-

CymbcUne.

O what avails me now that honour high, To have conceived of God ! or that salute, Hail, hizhly favoured, among women blest '.

Milton.

Though hereof prudent symbols and pious allegories be made by wisor conceivers, yet common heads will flv unto superstitious applications.

Browne's Vulgar Errourt.

This man conceived the duke's death; but what wa» the motive of that felonious conception, is m tt

. motion.

clouds.

If it were possible to contrive an invention, where- by any conceivable weight may be moved by any con- ceivable power, with the same quickness, without other instrament, the works of nature would be too much subject to art.

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The freezing of the words in the air, in the north- ern climes, is a conceivable as this strange union.*

Glanville's Scepsis.

The beauteous maid, whom he beheld, possessed ; Conceiving as she slept, her fruitful womb Swelled with the founder of immortal Rome.

Additon.

Conceive of things clearly and distinctly in their own natures ; conceive of things completely in all their parts ; conceive of things comprehensively in all their properties and relations ; conceive of things exten- sively in all their kinds ; conceive of thirigs orderly, or in a proper method. Watti'i Logick.

Faults in the life breed errors in the brain :

And these reciprocally those again.

The mind and conduct mutually imprint

And stamp their image in each other's mint :

Each, sire and dam, of an infernal race,

Begetting and conceiving all that's base. Cowper.

Nothing can be conceived more hard than the heart of a thorough-bred metaphysician. It comes nearer to the cold malignity of a wicked spirit than to the frailty and passion of a man. Burke.

Although no man can command his conviction, I have ever considered a deliberate disposition to make proselytes in infidelity as an unaccountable depravity. Whoever attempts to pluck the belief or the prejudice on this subject, style it which he will, from the bosom of one man, woman, or child, commits a brutal out- rage, the motive for which I have never been able to trace or conceive. Sheridan.

CONCE'LEBRATE. Old Fr. concelebrer; Lat. concelebro. To praise ; to celebrate together.

CONCE'NT, v. & a. -\ Ital. and Span.

CONCE'NTFUL, adj. (^concento , Lat. con-

CONCE'NTED, part. adj. i centus. The verb

CONCE'NTUAL, adj. J signifies singing to- gether; the noun, a concert of voices; harmo- ny ; concord of sounds ; and thence, figuratively, being consistent with ; being in unison with. Concentual denotes harmonious.

All which together song full cherfnlly A lay of love's delight with sweet concent.

Spenser's Faerie Queene.

Such musicke is wise words with time concented.

Id.

It is to be considered, that whatsoever virtue is in numbers, for conducing to concent of notes, is rather to be ascribed to the ante-number than to the entire number. Bacon.

Reasons boTowed from nature and the school-men, as subservient mediums, carry a musick and concent to that which God hath said in his word. Dr. Maine.

Tis in concent to his own principles, which allow no merit, no intrinsick worth, to accompany one state more than another. Atterbury.

Milton, full of these platonick ideas, has here a reference to this consummate or concentual song of the ninth sphere. Warton. Notes on Milton.

CONCE'NTRATE, v. a.) Fr. concentrer;

CONCENTRA'TION, n. s. J Lat. con and cen- trum ; Kivrpov. To compress into a small com- pass ; to impel from all points towards the cen- tre ; the opposite of expanding or dilating. The act of so compressing or impelling.

Spirit of vinegar, concentrated and reduced to its greatest strength, will coagulate the serum.

Arbuthnot on Aliments.

All circular bodies that receive a concentration of the light, must be shadowed in a circular manner.

Peacham. on Drawing.

The phenomena of chemical explosions cannot be accounted for without the supposition, that some of the -bodies employed contain concentrated or solid heat combined with them, to which the French chemists have given the name of calorique. Darwin,

Not that he was not sometimes rash, or so,

But new r in his real and serious mood ;

Then calm, concentrated, and still, and slow,

He lay coiled, like the boa in the wood ;

Byron. Don Juan. A kiss of youth and love, And beauty, all concentrating like rays Into one focus, kindled from above. Id.

CONC E'NTRE, v.a. & n.\ Fr. concentrer ; CONCE'NTRICAL adj. I Lat. con and cen-

CONCE'NTRICK, adj. \trum. The verb

CONCE'NTRICALLY, ad->. I in its active CONCE'NTRICKLY, adv.) meaning, is sy- nonymous with concentrate ; in its neuter sense it signifies, to tend to a common centre ; to have a centre in common with something else. Ben Jonson uses the word concentric as a noun, ' we are all concentricks.'

If, as in water stirred, more circles be Produced by one, love such additions take j Those, like so many spheres, but one heaven make ;

For they are all concentrick unto thee. Donne.

In the concentring all their precioas beams Of sacred influence ! Milton,

The bricks having first been formed in a circular mould, and then cut, before their burning, into four quarters or more, the sides afterwards join so closely, and the points concentre so exactly, that the pillars appear one intire piece. Wotton,

The having a part less to animate, will serve to concentre the spirits, and make them more active in the rest. Decay of Piety.

If a stone be thrown into stagnating water, the waves excited thereby continue some time to arise in the place where the stone fell into the water, and are propagated from thence into concentrick circles upon the surface of the water to great distances.

Newton' Optichs.*

Whatever turns the soul inward on itself, tends to concentre its forces, and to fit it for greater and stronger nights of science. By looking into physical causes, our minds' are opened and enlarged ; and in this pursuit, whether we take or whether we lose our game, the chase is certainly of service. Burke.

Whence in bright floods the vital air expands, And with concentric spheres involves the lands.

' Darwin.

Turn to the Virtues — how different the decree '• Formed to connect, to blend, to associate, and to co- operate ; bearing the same course, with kindred ener- gies and harmonious sympathy, each perfect in its own lovely sphere, each moving in its wider or more contracted orbit, with different, but concentering powers, guided by the same influence of reason, and endeavouring at the same blessed end — the happiness of the individual, the harmony of the species, and the glory of the Creator. Sheridan.

All heaven and earth are still : from the high host Of stars, to the lulled lake and mountain-coast, All is concentered iu a life intense, Where not a beam, nor air, nor leaf is .ost, But hath a part of being, and a sense Of that which is of all Creator and defence.

Byro'i Childe HarM.*

CONCE'PTACLE, n.s. Old Fr. conceptacle ; Lat. conceptaculum. That in which any thing is contained ; a vessel.

There is at this day resident, in that huge concepta- cle , water enough to effect such a deluge.

Woodward's Natural Hirtory, Prefact

CONCE'PTION, n. s.-\ fr.conception ; ltd.

CONCE'PTIBLE, adj. f concepimento ; Span.

CONCE PTIOUS, adj. £ conception; Lat. con-

CONCE'PTIVE, adj.) ceptio. Being received or held within, is the primary idea of the noun. With reference to the body, it means the act of becoming pregnant. As relating to the intellect, it signifies an idea; notion; purpose; the power of apprehending ; the state of being conceived. Dryden uses it in the sense of a conceit, a pointed thought ; but this meaning, even if it were ever given to the word by any one else, which is doubtful, is become obsolete. Conceptible de- notes intelligible, fit to be conceived or under- stood ; conceptions, that which is fertile, ready to conceive ; and conceptive, that which has the capability of conceiving.

I will greatly multiply thy sorrow by thy conception ; in sorrow thou shalt bring forth children.

Genesis, iii. 16.

Her berth was of the wombe of morning dew, And her conception of the ioyous prime.

Spenser's Faerie Queene. Joy had the like conception in our eyes, And, at that instant, like a babe sprung up.

Shakspeare.

Please your highness, note His dangerous conception in this point : Not friended by his wish to your high person, His will is most malignant, and it stretches Beyond you to your friends. Id. Henry VIII.

Common mother,

Ensear thy fertile and conceptions womb ; Let it no more bring out to ingrateful man.

Id. Timon.

And as if beasts conceived what reason were, And that conception should distinctly show

They should the name of reasonable bear ; For, without reason, none could reason know. Dames. In hot climates, and where the uterine parts exceed in heat, by the coldness of this simple they may be re- duced into a conceptive constitution.

Browne's Vulgar Errours.

Some of his attributes, and the manifestation thereof, are not only highly delectable to the intellec- tive faculty, but are more suitable and easily concep- tible by us, because apparent in his works.*

Hole's Origin of Mankind.

As conceptions are the images or resemblances of things to the mind within itself, in the like manner are words or names the marks, tokens, or resemblances of those conceptions to the minds of them whom we converse with. South' Sermons.*

Our own productions flatter us : it is impossible not to be fond of them at the moment of their conception.

Dry den's Dufresnoy.

He is too flatulent sometimes, and sometimes too dry ; many times unequal, and almost always forced ; and, besides, is full of conceptions, points of epigram, and witticisms ; all which are not only below the dig- nity of heroic verse, but contrary to its nature.

Dryden's Juvenal, Dedication.

Whether they will call those immediate objects of tte/r mmd in thinking

ideas or no, is perfectly in their own choice. If they dislike that name, they may call

them notion! > or conceptions, or how they piease • it matters not, if they use them so as to avoid obscurity and confusion. Locke.

I have always thought that truth and knowledge, by the ill and over eager management of controversies, lose a great deal of the advantages they might receive from the variety of conceptions there is in men's under- standings, m. The petty interests of such gentlemen, their low conceptions of things, their fears arising from the dan- ger to which the very arduous and critical situation of public affairs may expose their places ; their appre- hensions from the hazards to which the discontents of a fev popular men at elections may expose their seats in parliament ; all these causes trouble and confuse the representations which they make to ministers of the real temper of the nation. Burke.

But in his delicate form — a dream of love, Shaped by some solitary nymph, whose breast Longed for a deathless lover from above, And maddened in that vision — are exprest All that ideal beauty ever blest The mind within its most unearthly mood, When each conception was a heavenly guest.

Byron's Childe Harold.

*CONCEPTION, in physiology! the first formation of the embryo, or foetus, in the womb. See ANATOMY, par. 19—*30.*

CONCEPTION, in logic, the simple apprehension or perception which we have of anything, with- out proceeding to affirm or deny anything about it. Lord Kames justly distinguishes betwen con- ception and perception; making the latter to denote the consciousness of an object when present, or to include the reality of its object ; whereas conception expresses the forming an idea of an object whether present or absent, or with- out any conviction of its reality.

CONCEPTION, a city of South America, called also Penco, is the second city of Chili in rank, and stands on the north side of the Biobio a league from the sea. It was originally built three leagues to the north of its present position, and has been twice destroyed by earthquakes. Talcahuano, the port of the present city, is six miles distant, on the south-west side, of the bay of Conception. This is one of the largest and safest bays on the coast of the Pacific. It is ten miles long from north to south, and nine from east to west. The mouth opens towards the north, and is divided by the island of Quiriquina into two channels : the eastern and safest is two miles broad,

and the western about a mile and a half. Both have sufficient depths of water for the largest vessels. There is good anchorage undei the south side of the island of Quiriquina, but the best is at the south-west extremity of the bay, opposite the town of Talcahuano. The new city, built in 1763, is said to have once contained 20,000 inhabitants ; but the events of the late revolution have desolated it ; and Mr. ,.,iersuiu ,,o, couaiiicr it lo contain above a fourth of that population. By later returns it is found to contain 13,000. Extreme poverty, he says, was the universal appearance of the place : its cathedral, palace, and public buildings, being destroyed, and its trade annihilated.

By this name, as well as that of Penco, the en- tire province of Puchacal is sometimes called : an extremely fertile district, extending from that

of Rere on the east to the Pacific Ocean, and from the province of Itata south to the Indian territory of Arauco, from which it is separated by the Biobio. ‘ The bay of Conception, with its secure ports,’ says the above writer, ‘ its vicinity to the city of Conception, formerly the capital of Chili, the convenience of river navigation in the interior, the greater productiveness of soil in the adjacent territory, its climate more congenial to activity and industry, present much greater advantages for commercial traffic than Valparaiso, or any other port or harbour in Chili; and will, no doubt, in time become of the greatest im- portance.’

CONCEPTION, a town of North America, in New Spain, and in the audience of Guatimala. It is seated near the sea coast, 100 miles west of Porto Bello. Long. 81° 45′ W., lat. 10° 0′ N.

CONCEPTION, a town of the province and go- vernment of Paraguay, situate about ninety miles north of Assumption. Long. 57° 16′ W., lat. 23° 23′ S. — Also a small place in the island of Ita- marca, on the coast of Brasil — a settlement of South America, in New Grenada, in the province of San Juan de los Llanos, on the river Meta — and the name of a number of other minor settle- ments scattered throughout South America.

CONCEPTION, a bay in the gulf of California, North America. — Also a bay of Chili.

CONCEPTION BAY, a large bay on the east coast of Newfoundland, between Cape St. Francis on the south and Flamborough-head north. It has

numerous small harbours on the west side, where are the two settlements Carboniere and Havre de Grace.

CONCEPTION DEL PAO, a town of the province and government of Caraccas, situated near the plains of the Orinoco. It contains a population of about 2300 inhabitants, who are generally in good circumstances. There is good water near the place ; but the heat is excessive, and the inundations, occasionally, terrible. Cattle are exported in large numbers by the Guarapiche, or by the Orinoco. It is 125 mile S. S.W. of Barcelona, 165 south-west of Cumana, and eighty-four south-east of Caraccas.

CONCEPTION, IMMACULATE, OF THE HOLY VIRGIN, is a popish festival, held on the 8th of December, and established in honor of the virgin Mary, on the supposition of her. having been conceived and born immaculate, i. e. without ori- ginal sin. The immaculate conception is the great point of controversy between the Scotists and Thomists ; the former maintaining, and the latter impugning it. In the three Spanish mili- tary orders, of St. James of the sword, Calatrava, and Alacantara, the knights take a vow at their admission, to defend the immaculate conception. This resolution was first taken in 1052. Peter d'Alva has published forty-eight huge volumes in folio on the Mysteries of the Conception.

CONCE'RN, v. & n. ˆ Fr. concerner ;

CONCE'RNANCE, n. ! Ital. concernere ;

CONCE'RNEDLY, adv. [Span, concernir f

CONCE'RNEDXESS, n. \ low Lat. concemo.

CONCE'RN ING, n. &t prep, j The primary word,

COKCE'RNMENT. n. J and all its deriva- tives, imply something which excites conside- rable interest ; something which is important in a wr > rMiv r – • . • ' ,...- .t ,.f vi. -., < whether with

relation to ourselves or to those who are dear to us. To be concerned, is to be anxious; to be much affected ; to be sorry for ; to participate in. To concern himself, has a condemnatory meaning ; it indicates that the person spoken of iheddles with that which does not concern him ; that he acts intrusively. Concerning, as a pre- position, has the meaning of relating to ; as a noun, used by Shakspeare and others, it stand? for business, affairs of moment. In familiar parlance, an extensive trade or business is called a large concern.

Vouchsafe ye then, whom only it concerns, To me those secret causes to

display, For none but you, or who of you it learns, Can rightfully aread so doleful day.

Spenser. The Tears of the Mutes.

A poet thrustest into the middest, even where it

most concerneth him, and there recoursing to the

thinges forepaste, and divining of thinges to come,

maketh a pleasing analysis of all.

Id. to Sir W. Raleigh.

Exclude the use of natural reasoning about the sense of Holy Scripture, concerning the articles of our faith ; and then, that the Scripture doth concern the articles of our faith, who can assure us? Hooher. Count Claudio may hear ; for what I would speak of concerns him. Sliakspeare.

I would not The cause were known to them it most concern. Id.*

We shall write to you,

As time and our concernings shall importune. Id.

There is not any thing more subject to errour, than

the true judgment concerning the power and forces of

an estate. Bacon.

Gracious things

Thou hast revealed ; those chiefly which concern Just Abraham, and his seed.

Milton's Paradise Lost. To mix with thy concernments I desist Henceforth, nor too much disapprove my own.

Id. Agonistes.

Sir, 'tis of near concernment, and imports No less than the king's life and honour.

Denham's Sophy.

He married a daughter to the earl, without any other approbation of her

father, or concernment in it, than suffering him and her to come into his presence.

Clarendon.

They had more positively and concernedly wedded his cause, than they were before understood to have done. Id.

Providence, where it loves a nation, concerns itself to-own and assert the interest of religion, by blasting the spoilers of religious persons and places.

Soufh's Sermont.

When my concernment takes up no more room or compass than myself, then, so long as I know where to breathe and to exist, I know also where to be happy. Id.

Ah, what concerns did both your souls divide ! Your honour gave us what your love denied.

Dryden.

*While they are so eager to destroy the fame of others, their ambition is manifest in their concern- ments. *d. Being a lay man, I ought not to have concerned my- self with speculations which belong to the profession.*

, fd.

Mysterious secrets of a high concern, And weighty truths, solid convincing sense, Explained by unaffected eloquence.

Roscomtnon.

The well educating of their children is so much the duty and the concern of parents, and the welfare and prosperity of the nation so much depends on it, that I would have every one lay it seriously to heart.

Locke.

No doubt Ulysses, who was a prudentman, preached up passive obedience, and exhorted them to a quiet submission, by representing to them of what

concern- ment peace was to mankind. Id. This manner of exposing the private concerns of families, and sacrificing the secrets of the dead to the curiosity of the living, is one of those licentious prac- tices, which might well deserve the animadversion of our government. Addison'a Freeholder. Why all this concern for the ooor ? We want them not, as the country is now managed : where the plough has no work, one family can do the business of afty. Swift. Propositions which extend only to the present life, are small, compared with those that have influence upon our everlasting concernments. Watts on the Mind.

Ah, what have I to do with conquering kings, Hands drenched in blood, and breast begirt with

steel !

To those whom Nature taught to think and feel, Heroes, alas ! are things of small concern. Beattie.

He sees that this great roundabout, The world, with all its motley rout, Church, army, physic, law, Its customs, and its businesses, Is no concern at all of his,

And says — what says he ? — Caw. Cowper.

There's no more to be said of Trafalgar, "fis with our hero quietly inurned ;

Because the army's grown more popular, At which the naval people are concerned.

Byron's Don Juan.

CO'NCERT, v. a., v. n. & n. s. Fr. concerter ; Ital. concertare; Span, concertar ; Lat. concertare. To form a plan together; to make preparation together for something that is to be done. The noun, as referring to the verb, signifies the act of communicating a design ; the conjoint taking of "proper measures to accomplish some purpose. In its second sense, the connexion of which with the first is obvious, it means many persons or instruments combined in one performance. See CONSORT.

Mark how, already, in his working brain He forms the well concerted scheme of mischief.

Rowe.

All these discontents, how ruinous soever, have arisen from the want of a due communication and concert. Swift.

Will any man persuade me that this was not, from the beginning to the end, a concerted affair. Toiler, • When a number of persons, not acting in concert, having no interest to disguise what is true, or to affirm what is false, and competent judges of what they testify, concur in making the same report, it would be accounted folly to disbelieve them, espe- cially if what they testified were credible in itself.

Beattie.

Whilst 'men are linked together, they easily and speedily communicate the alarm of any evil design. They are enabled to fathom it with common counsel, and to oppose it with united strength. Whereas, when they lie dispersed, without concert, or order, or discipline, communication is uncertain, counsel diffi- cult, and resistance impracticable. Burke.

Nature, exerting an unwearied power, Forms, opens, and gives scent to every flower ; Spreads the fresh verdure of the fields, an.d leads The dancing Naiads through the dewy meads :

She fills profuse ten thousand little throats

With music, modulating all their notes ;

And charms the woodland scenes and wilds unknown

With artless airs and concerts of her own. Cowper.

CONCERTA'TION, n. s. } Lat. concertatio.

CONCE'RTATIVE, adj. \ Strife ; struggling

with ; contention ; contentious ; prone to quar- rel.

I wish to him whatever good himself desires to him- self ; these concertations between us notwithstanding.

Life of Firmin.

CONCE'RTO, Ital. concerto. A piece of music.

If that be the fashion I never will give Any grand entertainment as long as I live j For I'm of opinion, 'tis proper to cheer The stomach and bowels, as well as the ear. Nor me did the charming concerto of Abel, Regale like the muffins I saw on the table.

Anttey.

With wire and catgut he concludes the day, Quavering and semiquavering care away. The full concerto swells upon your ear •, All elbows shake. Look in, and you would swear The Babylonian tyrant with a nod Had summoned them to serve his golden god.

Cowper.

CONCERTO, a composition for a particular instrument, accompanied by an orchestra, more or less complete, for the purpose of showing oft the ability, or rather execution of the performer. CONCERTATO, signifies a piece of music composed in such a manner, as that all the parts may have their recitatives, be it for two, three or more voices or instruments.

CONCERTO GROSSO, a title given in the six- teenth century to symphonies with a violin prin- cipale, and other parts, obligato.

CONCH, ra. s. } Lat. concha ; Gr. icoyxn-

CO'NCHITE, re. s. > Conch is a sea-shell, which

CO'NCHOID, n. s. j is sometimes used as a

trumpet. Conchite is a species of petrified

shell. Conchoid is the name of a curve, so called

from the resemblance to the shell of the same name.

See CONCHOID.

He furnishes her closet first, and fills The crowded shelves with rarities of shells : Adds orient pearls, which from the concAshe drew, And all the sparkling stones of various hue.

Dryden's Fablet.

Nymphs, you adorn, in glossy volutes rolled, The gaudy conch, with azure, green and gold.

Darwin.

And how, when undeceived, the pair they bore With sounding conchs and joyous shouts to shore ; How they had gladly lived and calmly died, And why not also Torquil and his bride ?

Byron. The Island.

CONCHA, in zoology, a synonymeof the my- tilus and solen.

CONCHITES MARMOR, a name given by the ancients to a species of marble dug near Megara, and remarkable for containing a great number of sea shells, and other marine bodies immersed in it.

CONCHOID, a curve invented by Nicome- des, and much used by the ancient mathemati- cians in the construction of solid problems ; as we learn from the writings of Pappius of Alex-

andria. It is thus constructed : A P and B D,

being two straight lines intersecting each other at right angles, from P draw any number of lines P F D E, &c. on which take always D E= D F =A B or B C ; so shall the curve line drawn through the points E, E, E, be the first conchoid, or that of mcomedes ; and the curve drawn through all the other points F, F, F, is called the second conchoid, though they, in reality, be only parts of the same curve, having the same pole P, and four infinite legs, to which the line D B D is a common asymptote. Newton approves of the use of the conchoid for trisecting angles, or finding two mean proportionals, and for con- structing solid problems in general ; because we ought either to exclude all lines besides the cir- cle and right line out of geometry, or admit them according to the simplicity of their descriptions, in which case the conchoid yields to none except the circle.

CONCHOLOGY, (icofxn, a shell, and Xoyoc, a discourse), the science which treats of shells, or testaceous animals. Some writers on other branches of natural history, have considered this study as too frivolous to be termed scientific ; and cer- tainly it has not been, at present, pursued with that degree of success, nor been exhibited in such close connexion with the necessary pursuits of life, as many other portions of the natural system. Conchologists have arrived at little be- yond a lucid arrangement of shells; and the shapes that have been given to them in nature's bounty, or in her vagaries. The peculiarities of the animals inhabiting them, have never been sufficiently known to form the basis of any com- plete classification either of them, or of their bodies.

' It is not of species only that we speak,' says Mr. Donovan, 'but of whole natural families or genera, not a single species of which has been yet discovered with the animal appertaining, so little are we acquainted with the molluscous orders, or animals inhabiting the shells. Of the shells we daily see in collections few are fished up alive, the far greater number are

found on snores, dead or empty. Neither, if it were other- wise, are accurate descriptions of animals, whose parts are not easily seen, or anatomical investi- gations, which are in many cases necessary, within the capacity of every one. Many of their parts, and their respective functions, are not to be ascertained, except by comparative analogy, and which in itself presents an insur- mountable difficulty, or a field of critical enquiry so extensive and complicated that few, even with the ability to pursue it with success, could be prevailed upon to devote that attention to the sub- ject which it requires.'

The best writers on this subject, however, have not disregarded the character and structure of

the animal, as far as they have been known. Linnaeus, in particular, whose arrangement of this branch of natural history, modern authors have found it most convenient to follow, includes a description of the animal in all his general dis- tinctions.

We should here, perhaps, at once distinguish between testaceous and crustaceous animals. In England we denominate both shell-fish : but the latter, as the crab, lobster, &c. differ from ani- mals properly testaceous, by possessing a crust or defence upon each separate limb : whereas the former are entirely naked in particular parts, and defended only by one permanent calcareous co- vering. Mr. Hatchet has pointed out a further distinction in the nature of their respective crusts or coverings, finding those of testaceous animals to consist only of carbonate of lime mixed with gelatinous matter, while iu those of crustaceous animals the presence of phosphate of lime was detected. The echinus was the crustaceous body analysed.

Testaceous animals considered as a whole are composed, 1. Of a soft, molluscous body. 2. Of a hard calcareous shell, covering the body, and to which it is attached by certain muscles and ligaments. They are divided in the Lin- naean system into univalves, bivalves, and mul- tivalves/ embracing thirty-six genera ; the first two divisions being, in fact, those of Aristotle, and the last adopted from Dr. J. D. Major, a writer on this subject at the close of the seventeenth century. The genera are thus ex- hibited in the latest editions of the Systema Naturae.

DlV. I. MULTIVALVIA.

Gen. 1. Chiton.

2. Lepas, acorn shell.

3. Pholas, piddock or pierce-stone.

Div. II. — BIVALVIA. Gen. 4. Mya, Gaper

5. Solen, razor or sheath-shell

6. Tellina, double wedge-shell.

7. Cardium, cockle 01 heart-sheu.

8. Mactra.

9. Donax, Wedge-shell.

10. Venus.

11. Spondylus, spondyle.

12. Chama.

13. Area, ark-shell.

14. Ostrea, oyster.

15. flnomia, bowl-shell.

16. Mytilus, muscle.

17. Pinna, Nacre .

Div. ML— UNIVALVIA.

i. Spira regular! cochlea. Gen. 18. Argonauta, argonaut or sailor.

19. Nautilus.

20. Conus, cone-shell.

2 1 . Cypraa, gowry or cowry.

22. Bulla, dipper.

23. Votuta, rhomb-shell.

24. Buccinum, whelk.

25. Strombus, the screw.

26. Murex, the caltrop, or rock-shell. '27. Trochus, button-shell

28. Turbo, whorl or wreath.

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29. Helix, snail.

30. Nerita.

31. Haliotis, sea-ear.

ii. Absque spira regular!.

32. Patella, limpet.

33. Dentalium, tooth-shell.

34. Serpula, worm-shell.

35. Teredo.

36. Sabella.

Of these the inhabitants, as far known, have been thus classed :

ShelLs.

Animals.

1. Chiton . . Doris ˆ

2. Lepas 3. Pholas -j

5. Solen (6. Mytilus 7. Tellena

Triton ‘ Ascidia

8 Cardium

9 Mactra •

10. Donax

11. Venus 12. Spondylus 13. Chama

ˆ Tethys

14. Area

^

*15. Ostrea >. i_*

o

16. Pinna 17. Conus

s

3

18. Cypraea 19. Bulla 20. Voluta

‘1

0)

J™

21. Buccinum

o

22. Strombus ‘23. Murex

-, Limax

24. Trochus

25. Turbo

26. Helix

27. Neritas

28. Haliotis

•29. Patella

30. Dentalium }

31. Serpula \ Terebella 32. Teredo J

33. Sabella . . Nereis

The principal arrangements proposed before that of this great writer, were those of Lister (1685) ; Largius (1722) ; Bregnius (1732) ; Tournefort (1742); D'Argenville (id); Adan- 5on (1757); to several of which Linnaeus, and all modern writers, have been under considerable obligations. The earliest was a noble contribu- tion to the science of natural history, entitled, Historia sive Synopsis Methodica Conchy- liorum, folio; containing from 1050 to 1067 plates, engraved by Dr. Lister's daughters, and published in different portions from 1 685 to 1692. Dr. Lister calls it ' the basis and foundation of all good Conchology.' We do not, however, ap- prehend that the detail of their systems is suffi- ciently interesting to modern readers to occupy *he large space they would require here.

Since the Systema Naturae has been complete, Mullen, in his Zoology of Denmark, has con- siderably enlarged our acquaintance with ine inhabitants of the testacea. Of his system we may offer the following synopsis.

Div. or FAM. I. TESTACEA UNIVALVIA.

§ I. Testacea univalvia, testa pervia. Gen. 1. Echinus. Testa Crustacea, ano ver- as they are ticali» tentaculis simplicibus. 2. Spatagus. Testa Crustacea, ano infero tentaculis penicillatis. 3. Dentalium. Testa calcarea, testa rude, tentaculw nullis.

§ II. Testacea univalvia, testa patula. Gen. 4. Akera. Apertura effusa, tentaculis nullis. 5. Argonauta. Apertura profunda, ten- taculis binis. 6. Bulla. Apertura repanda, ten- taculis binis setaceis, colliculo extrinsecus oculatis. 7. Buccinum. Apertura ovata, tenta- culis binis triangularibus, angulo intrinseco oculatis. 8. Carychium. Apertura ovata, tenta- culis binis truncatis conspicuis, angulo intrinseco oculatis. 9. Vertigo. Apertura subquadrata, tentaculis binis sublinearibus, apice oculatis.' 10. Turbo. Apertura orbiculari, tentaculis binis se- taceis, conspicuis, angulo extrinseco oculatis. 11. Helix. Apertura lunari, tentaculis quatuor linearibus, apice oculatis. 12. Planorbis. Aper- tura similunari, tentaculis binis setaceis, angulo irtrinseco oculatis. 13. Ancylus. Apertura to- tali, tentaculis binis truncatis, occultis, angulo extrinseco oculatis, 14. Patella. Apertura totali, tentaculis binis setaceis, occulto angulo, extrin- seco oculatis. 15. Haliotis. Apertura repanda, poris pertusa.

§ III. Testacea univalvia, testa operculata.

Gen. 16. Tritonium. Libera, apertura canali- culata, tentaculis duobus linearibus, angulo ex- trinseco oculatis. 17. Trochus. Libera, apertura sub-

tetragona, tentaculis duobus, setaceis, colli- culo extrinseco oculatis. 18. Nerita. Libera, apertura lunari, tentaculis duobus setaceis, angulo extrinseco oculatis. 19. Valvata. Libera, aper- tura circinnata, tentaculis duobus setaceis, an- gulo postico oculatis. 20. Serpula. Adnata, apertura orbiculari, tentaculis pinnatis.

Div. or FˆM. II. TESTACEA BIVALVIA.

§ I. Testacea bivalvia cardine dentata. Gen. 1. Mya. Testa altera extremitate hiante ; cardine dente crasso solitario. 2. Solen. Testa utraque extremitate hiante; cardine dente re- flexo, saepe gemino. 3. Tellina. Siphone du- plici murico ; cardine dentibus utrinque tribus alternus. 4. Cardium. Siphone duplici, cirrato, pedeque falciformi ; cardine dentibus mediis al- ternis, remotis penetrantibus. 5. Venus. Siphone duplici, cirrata, pedeque laminaeformi, cardine dentibus tribus approximatis, lateralibus diver- gentibus. 6. Mactra. Cardine dente medio complicato, adjacente foveola. 7. Donax. Car- dine denlibus duobus lateralique solitario. 8. Area. Cardine dentibus numerosis, alternis, pe- netrantibus. 9. Terebratula. Branchiis circin- natis ; cardine dentibus alterius uncinatis, val vula supe- iore deorsum perforata.

§ II. Testacea bivalvia, cardine edentulo. Gen. 10. Anomia. Branchiis simplicibus; valvula inferiore perforata. 11. Ostrea. Bran- chiis simplicibus, pede nullo ; cardines fossula cava. 12. Pecten. Branchiis cirratis, pede juxta auriculum cardine fossula ovata byssura emittens. 13. Mytilus. Siphone duplici brevi ; fossula lineare, byssum emittens.

Div. or FAM. III. TESTACEA MULTIVALVIA.

Gen. 1. Chiton. Valvulae dorsales, tentacula nulla. 2. Lepas. Valvulae erectse, tentacula bi- partita. 3. Pholas. Valvulae ad cardinem, mi- nores.

Mr. Pennant, in his British Zoology, finished in 1777, was the first author who classed the animals of Britain according to the Linnaean ar- rangement. In the fourth volume of the above work he enumerates 163 species of testacea, of which he furnishes many good figures. To a new edition of this work his son has since added the recently discovered species.

Da Costa's arrangement, differing considera- bly, from that of Linnaeus and displaying great taste and originality, is the only other modern system for which we have room. His work ap- peared under the title of British Conchology, 4to. 1778. It contains seventeen plates, with 123 figures of

rare shells, and 'possesses,' says Dr. Turton, ' the rare, and we believe unique, excellence of giving the whole of the synonymes in the words of the respective authors them- selves.' He adopts the primary division of univalves, bivalves, and multivalves, but the univalves he divides into sixteen families, which are divided into four orders.

Order I. Simple ; consisting of four families. 1. Patella. 2. Haliotis. 3. Vermiculi. 4. Den- talia.

Order II. includes but one family, 5. Poly- thamia.

Order III. Revolved. 6. Turbinata involuta.

Order IV. Turbinated. 7. Cymbium. 8. Auris cochlea. 9. Cyliudri. 10. Voluta. 11. Globosa. 12. Cassides. 13. Trochi. 14. Coch- leae. 15. Buccini. 16. Murex.

II. The BIVALVES include three orders.

Order I. With unequal valves, and shut close. Fam. 1. Pecten. 2. Spondylus. 3. Ostreum. 4. Anomia.

Order II. With equal valves, and shut close, is divided into three sections. Sect. 1. Multar- ticulate. Fam. 5. Pectinoides. 6. Pectunculi. 7. Area. Sect. 2. Articulate. Fam. 8. Pec- tunculus. 9. Tellina. 10. Placenta. Sect. 3. Inarticulate. Fam. 11. Margaritifera. 12. Mus- culus.

Order III. With valves that never shut close. Fam. 13. Chama, gapers.

III. The MULTIVALVES contain one order. Fara. 14. Pholas. 15. Anatiferae. 16- Balani.

We have noticed the important work of Dr. Lister. To complete our sketch of British con- chology we may further observe that several local descriptions of shells have been given to the public from the commencement of the eighteenth century, which exhibit great clearness of conception and correctness of arrangement.

Among these are the accounts given of testaceous animals in Dr. Wallace's Description of the Orkney Islands, published in 1700; by Mr. Plot, in his History of Staffordshire and Oxford- shire ; by Mr. Morton, in his Natural History of Northamptonshire; and Dr. Pulteney, in his Catalogue of the Shells of Dorsetshire, pub- lished in Hutchinson's History of that county.

In 1784 Messrs. Boys and Walker discovertˆ many new and curious minute testacea on the shores of our island, and published a small quarto volume,

entitled, Testacea Minuta rariora nu- perrime detecta in Arena Littoris Sandvicencir containing several beautiful microscopic species

In 1795 Berkenhout published his Synopsis of the Natural History of Great Britain and Ireland, containing a correct list of the British testacea then known.

Mr. Donovan's work on British Shells, five volumes, was completed in the year 1804. It contains short descriptions, with well executed figures, of the different species, excluding most of the microscopic subjects. Dr. Turton cha- racterises it as containing ' beautiful and correct colored portraits of nearly the whole of the British shells.' Of Montagu's Testacea Britan- nica, or a Natural History of British Shells, and Supplement, in 3 vols. 4to. with thirty plates, 1803, he says, ' To this laborious and lyncean naturalist, who that bf late has studied this elegant department of the Fauna of these islands, is not indebted for the greater part of his know- ledge?' In the thirty plates and vignettes are figured about 230 species of the more rare and minute shells, all drawn and engraved under his immediate inspection, from original subjects in his own possession, and generally of his own collection. His cabinet of the natural history of the British islands is now in the British Museum.

A descriptive Catalogue of the British Testacea, by W. G. Maton, M. D. V. P. L. S. &c. and the Rev. Thomas Rackett, M. A. F. L. S. &c. in the eighth volume of the Linnaean Transactions; with six colored plates, is a valuable recent addition to the works on British conchology, as well as Mr. Wood's General Conchology, 8vo. ; and Dr. Turton's own neat little volume, entitled, A Conchological Dictionary of the British Islands.

We ought not here, perhaps, to omit all notice of the arrangements that have been proposed by some celebrated modern French naturalists, among which that of Bosc, in his Histoire Na- turelle des Coquilles des Vera et des Crustaces ; and in the Dictionnaire d' Histoire Naturelle ; and that of Lanark, in the Systeme des Ani- maux sans Vertebres, are conspicuous. The last writer includes all the animals of the classes in- secta and vermes of Linnaeus in his system, and divides the mollusca into two orders; the first termed cephalous, from possessing a head, in- cludes the univalves ; the second, termed aceph- alous, from the absence of a head, includes the bivalves. An abridgment of his plan is contained in his Extrait du Cours de Zoologie, Paris,

1812.

Having thus placed the principal systems and literary history of this study before the reader, we proceed to offer a short description of the

parts of shells, as they are generally classed : fol- lowing the Linnaean arrangement,

i. The parts of multivalves, as they are gene- rally described, are, 1. The valves (valvulae), which are said to be more or less articulated, as they seem to form one shell. 2. The ligaments, which are membraneous substances, connecting the valves, or lining the cavities. 3. The base, which is the extremity, or part opposite to the apex, and is often fixed to other bodies by a tu- bular fleshy substance, called the peduncle. There are also, 4. Accessary valves, sometimes called the operculum, which close the principal entrance, or unite themselves with the primary valves, and act with them.

ii. The parts of bivalves are, 1 . The hinge, upon which as a fulcrum the two sides of the shell move. In some shells this part is smooth, in others the inner surface is furnished with teeth. 2. Beaks, or umbones, on each side of the hinge, which are reflex, divaricate, or spiral. 3. The ligaments, a strong cartilaginous membrane, which connects the valves. 4. A groove, called a chink, generally situated towards the beak. 5. The base of bivalves, situated in the beak. 6. The margin of the shell which occupies the cir- cumference of the valves, and is divided into four parts. The inferior margin, or margin of the hinge ; the anterior margin, or margin next to the ligament ; the posterior margin, or margin on the side of the beaks opposite the ligament. There is usually in this last a small depression, or lunule. The superior margin occupies a portion of the shell between the ligament and posterior margin. But in some species, the valves being unconnected in part, are said to have the margin gaping. 7. The valves of bi- valves are divided into right and left, equal and unequal, equilateral and inequilateral, the shell being supposed to rest on its hinge, with the li- gaments behind. The length of a shell is a line drawn from the beaks to the superior margin. When the longitudinal line divides the valves into two equal parts, then the shell is said to be equilateral ; if into unequal parts, it is considered inequilateral. 8. The cicatrix is a mark on the inside of the valves, where the muscles adhered. 9. The beard, byssus, a collection of threads, by which some shells adhere to rocks, stones, &c.

iii. The parts of univalves are, 1 . The aperture, or mouth, through which the animal protrudes itself. This is one of the principal distinctions of univalve shells, and differs very much in shape, some being bimarginate, i. e. having a lip with a double margin; bilabiate, i. e. with a double lip; gaping, the lower part of the lip distended; coarctate, i. e. straight; effuse, i.

e. having the lips separated by a sinus or gutter; reflex, spreading, resupinate, &c. To the aperture belong, 2. Labium, the lip, or the internal margin of the aperture. This is, in respect to position, exterior, anterior, or posterior; in respect to form coarctate, digitate, disengaged, cloven, mucronate, &c. 3. The canal, which is the con- tinuation or prolongation of the aperture along the beak, and foims a gutter from its commence- ment to the extremity. The mouth of univalves also sometimes possesses an operculum, or lid. 4. The apex, or summit, in a univalve shell, is

the extreme point of the spire : in bivalves it is the most elevated point of that part of the shell in which the hinge is placed. 5. The base, is the extremity or part opposite to the apex. In shells with a rostrum or beak, it implies the lowest part of the beak. In shells without a beak, it is the lowest part, or that which is next the aperture. 6. The whorl, is a wreath or convolution of the shell, sometimes bifid, at others, channelled, keeled, leafy, crowned, imbricate, lamellate, striate, lineate, &c. The contractions of the whorls are called geniculations. 7. The spire is a term used to describe all the whorls collectively, except the lower one, which is often called the body. The spire is a prominent feature of the univalve shell, and is either con- vex, crowned, capitate, or obtuse; attenuated, pointed, flattened, retuse, elevated, or depres- sed. 8. The suture of the spire is a fine spiral line, which separates the wreaths or whorls. 9. The venter, or belly, is the most prominent part of the body, generally situated in the vicinity of the lip, and formed by the convexity of the aperture. 10. The umbilicus is a circular per- foration in the base of the body of many uni- valves. 11. The columella, or pillar, runs through the centre of the shell in the inside, from the base to the apex, in most univalve shells, and appears to be the support of the spire, and to form that part of the shell. It is either abrupt, i. e. truncate at the base; elongated, i. e. so as to project beyond the body; flat; or plaited.

For the peculiarities of the inhabitants of shells, as far as they are known, see MOL- LUSCA.

CONCHUCOS, a province of Peru, running along the centre of the Cordilleras. It is bounded on the north by Guamachucos, on the south by Caxatambo, east by Guamiles, and west by Hu- aillas, being of irregular shape, and very various climate. Conchucos produces fruit, grain, &c. and excellent pasture for cattle. Here are also some mines of silver, which were formerly very rich, and some washing places for gold of the standard weight of twenty-three carats.

CONCHUCOS, a river of Peru, running south in the same province, and entering the Amazons.

CONCHYLIA, a general name for all petrified shells, as lympets, cochlea, nautili, conchae, le- pades, &c.

CONCIATOR, in glass-making, is, for the crystal glass, what the founder is at the green glass-houses. He weighs and proportions the salt on ashes and sand, works them with a strong fire till they run into lumps and become white ; and if the metal be too hard, and consequently brittle, he adds salt and ashes, and if too soft, sand ; still mixing them to a fit temper, which is only known by the working.

CONCIE'RGE, old Fr. consierge ; low. Lat. consergius. A palace, castle, or house, keeper. The word is used by Buck, Aubrey, and per- haps some other of our old writers; but is become obsolete. In the French language it still maintains its ground.

CONCI'LIABLE, old Fr. ctmciliabuU. A conventicle ; a small assembly. This word is now become obsolete.

CON

Uome have sought the truth in the conventicles and conciltables of heretics and sectaries. Bacon.

CONCI'LIAR, adj. > Lat. concilium. That CONCI'LIARLY, adv. $ which relates to a coun- cil ; that which has been decided by a council.

Having been framed by men of primitive simplicity, in free and conciliar debates, without any ambitious regards. Baker.

CONCILIATE, v. a.~\ Lat. concilia. One CONCILIATION, n.s. of our etymologists, CONCI'LIATING, n. ! who finds in the Greek CONCI'LIATOR, n. (the root of almost CONCI'LIATORY, adj. every English word, CONCI'LIABLE, adj. J thus derives and de- fines conciliate and its derivatives. ' Ka\iu, foXui, voco ; to call ; unde concilium, concilio ; to invite, or call to council ; to unite in opinion, affection ; also to acquire, to procure, or win favor.' His definition may be admitted, what- ever may be thought of his derivation.

To the conciliation of sleep, it is required that there

be a moderate repletion. Gregory's Posthuma,

It was accounte4 a nitre, or plants that conciliate

affection. Broione'i Vulgar Errours.

The very same tender, benevolent, feeling, liberal

mind, which in the internal relations of life conciliate

the genuine love of those who see men as they are

rendered him an inflexible patriot. Burke.

In a great cause I should certainly wish, that my agent should possess conciliating qualities ; that he should be of a frank, open, and candid disposition, soft in his nature, and of a temper to soften animosi- ties and to win confidence . Id.

They would act towards them in the most con- ciliatory manner, and would talk to them in the most gentle and soothing language. Id.

You call these men a mob, desperate, dangerous, and ignorant ; and seem to think that the only way to quiet the ‘ Bellua multorum capitum,’ is to lop off a few of its superfluous heads. But even a mob may be better reduced to reason by a mixture of conciliation and firmness, than by additional irritation and re- doubled penalties.

Byron. Speech on the Frame-breaking Bill.

CONCFNNATE, v. a. & adj. } Lat. conc’in CONCI’NNITY, n. «. V no, concinni-

CONCI’NNOUS, adj. 3 tos. Concin-

nate, as a verb, means to make fit ; as an adjec- tive it signifies neat; trim; fit; compact. Concinnity is decency; fitness. Concinnous, that which is becoming; agreeable; pleasant. These words, however, are of rare occurrence in modern writers.

There a man would commend in Correggio deli- cateness, in Parmesano concinnity. Wotton.

CO’NCIONATOR, n.s.) Lat. concio,con- CO’NCINNATORY, adj. S cionarius. A prea- cher. That which is used at public assemblies, whether religious or civil.

Their comeliness unbeguiled the vulgar of the old opinion the loyalists had formerly infused into them by their concionatory invectives. Ifowell.

CONCINO CONSINI (marshal d’Ancre), of France, a court favorite, who, with his wife Leo- nora Galigai, accompanied Maryde’ Medici, into France in 1600. He rose during the regency of that princess, to become first

gentleman of the bea-chamber, governor of Normandy, and mar- shal of France, without ever having seen a battle.

CON

The French nobility, however, fawned on him, and he administered all the public favors. At length the young king (Louis XIII.), influenced by his favorite Luynes, gave an order for his ar- rest, and the captain of the guard, Vitry, de- manding his sword, as he passing the drawbridge of the Louvre, upon bis hesitation, shot him dead. His body, after his funeral, we are told, was dug up by the Parisian mob, and treated with the most brutal indignity ; one wretch even tore out the heart, broiled, and ate it ! His wife, being brought to trial, and interrogated as to what sorcery she had employed to bewitch the queen? replied, ‘ That of a strong mind over a weak one.’ She was executed in 1617.

CONCI’SE, adj. ~\ Fr. concis ; Ital. and

COXCI’SELY, adv. f Sp. conciso ; Lat. con-

CONCI’SENESS, n. s. tcisus. Short; pithy;

CONCI’SION, n. s. J brief; compressed ; bro- ken into short periods ; expressed in few words; the opposite of diffuse. Concision signifies cut ting off ; destroying.

Beware of dogs, beware of evil workers, beware of the concision. Philippians iii. 2.

The concise stile, which expresseth not enough, but leaves somewhat to be understood.

Ben Jonson’i Ducoeeriei.

Giving more scope to Mezentius and Lausus, that version which has more of the majesty of Virgil has less of his conciseness. Dry den.

Where the author is obscure, enlighten him ; where he is too brief and concise, amplify a little, and set his notions in a fairer view. Watts on the Mind.

Ulysses here speaks very cottcisely, and he may seem to break abruptly into the subject.

Browne on the Odyssey.

This book, de Rerum “Natura, is concise and me- thodical, and contains no

very contemptible abstract of the physics which were taught in the decline of the Roman empire. Burke.

A man, once young, who lived retired As hermit could have well desired, His hours of study closed at last, And finished his concise repast, Stoppled his cruise, replaced his book Within its customary nook, And, staff in hand, set forth to share The sober cordial of sweet air. Cowper.

This necessity of generally placing the accusative case after the verb is inconvenient in poetry ; though it adds to the conciseness and simplicity of our lan- guage, as it saves the intervention of a preposition, or of a change of termination. Darwin.

CONCTTE, v. a.) Fr. conciter ; Lat.

CONCITA'TION, n. s. $ concito. To stimulate; to urge on ; to provoke. The act of stirring up. Both obsolete.

The revelations of heaven are conceived by im- mediate illumination of the soul ; whereas the de- ceiving spirit, by concitation of humours, produces conceited phantasmes. Browne.

CONCITIZEN, Fr. concitoyen. Knox and Stirling use this word as a synonyme for fellow- citizen.

CONCLAMATION, Lat. conclamatio. A simultaneous shouting, or calling out of many persons.

The Romans used conclamation, or a general out- cry, set up at equal intervals before the corps, by persons who waited there on purpose. GretnhiU.

CON

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CON CLAM ATIO, in antiquity, a shout raised by those present at burning the dead, before they set fire to the funeral pile. The word was also applied to the signal given to the Roman soldiers to decamp, whence the expression conclamare vasa; and conclamare arma, was a signal for battle. It was likewise used for a practice of calling to a person deceased three times by his name ; and, when no reply was returned, they thus expressed his decease, by ' conclamatum est.' Whence the same term was afterwards applied to the cessation of the Roman empire.

CO'NCLAVE, n. s. > Fr. conclave-, Ital.

CO'NCLAVIST, n. s. $ conclave, conclavi; Sp. conclave; from Lat. con and clavis; because locked up. The assembly of cardinals to elect a pope ; the room in which they are shut up ; any private or secret assembly. Conclavist is the person who attends a cardinal during his abode in the conclave. See the next article.

I thank the holy conclave for their loves ; They have sent me such a man I would have •wished for. Shakxpeare.

Still they cut their way, Till to the bottom of hell's palace diving, They enter Dis' deep conclave. P. Fletcher.

The great seraphick lords and cherubim In close recess and secret conclave sat. Milton,

It was said of a cardinal, by reason of his appa- rent likelihood to step into St. Peter's chair, that in two conclaves he went in pope and came out again cardinal. Smith's Sermoni.

Forthwith a conclave of the godhead meets, Where Juno in the shining senate sits. Garth.

To the vestry indignant, he then stalked away, Where churchwardens and sidesmen sat ranged in

array,

And so grim did he look that their conclave astounded

Thought they saw Hamlet's ghost, or Don Quixote

dismounted. Huddeiford.

CONCLAVE, the place in which the cardinals meet for the despatch of public business. The conclave is in the pontifical palace of the Vatican, and consists of a suite of grand halls or corridors, with rows of cells formed on each side of equal dimensions, being five feet long and four wide. Two are allotted to each cardinal ; one for his emi- nence, and the other for his officer, called the conclavist, and his valet de chambre. They are all painted green, except those of the cardinals who were created by the deceased pope, whose cells are painted violet color, and the insides are lined with serge of the same color. On the elec- tion of a pope, the cardinals, after having heard all the bulls read which relate to the subject, the manner of living in conclave, &c. which they are all sworn to observe,

are then kept in close con- clave till they have decided upon which cardinal the election has fallen. The conclave is very strictly guarded by troops : neither the cardinals, nor any person shut up in it, are spoken to but at certain hours, even the provisions are examined, liest any letters should be conveyed from the mi- nisters of foreign powers, or others, who might nave an interest in influencing the issue of the election.

VOL. VI.

a.&v.n.ˆ Fr. conclure; CONCLU'DENCY, n. s. Ital. concludere ';

CONCLU'DENT, adj. Span, conclui- ;

CONCLU'DER, n. s. J,at. concludere'

CONCLU'DINGLY, adv. from con and c/a-

CONCLU'SIBLE, adj. > dere. To shut up ;

CONCLU'SION, n. s. to bring to a close;

CONCLTJ'SIONAL, adj. to place beyond

CONCLUSIVE, adj. the reach of fur-

CONCLU'SIVELY, adv. ther change ; to

CONCLU'SIVKNESS, n. s. J draw to a decisive point; to comprehend in; to terminate; are the ideas conveyed by this whole class of words. The various shades of meaning will be rendered obvious by the authorities quoted below.

God hath concluded them all in unbelief, that he

might have mercy upon all. Roman xi. 32.*

Let us hear the conclusion of the whole matter :

Fear God and keep his commandments ; for this it

the whole duty of man. Eccles. xxii. 13.

Unto a tent prince and princes Me thought brought me and my maistres, And said we werin at full age There to conclude our marriage. Chuut.er.

For whan that he himself concluded had, Him thought eche other mannes wit so bad, That impossible it were to replie Again his chois : this was his

fantasie

Id. Cant. Tales.

And shortly to concluden, swiche a place Was never in erthe in so litel a space. Id.

For many times when she woll make A full gode syllogisme, I drede That aftirward there shall in dede Folowe an ill conclusion.

Id. Rwnaunt of the Rose.

Ways of peacable conclusion there are but these two certain ; the one a sentence of judicial decision, given by authority thereto appointed within ourselves ; the other, the like kind of sentence given by a more universal authority. Hooker.

The very person of Christ, therefore, for ever and the self-same, was only, touching bodily substance, concluded within the grave. Id.

They humbly sue unto your excellence, To have a goodly peace concluded of Between the realms of England and of France.

SJuikspeare.

Is it concluded he shall be protector ? It is determined, not concluded yet ; But so it must be, if the king miscarry.

Id. Richard III. Her physician tells me, She has pursued conclusions infinite Of easy ways to die.

Id. Antony and Cleopatra.

The king would never endure that the base multi- tude should frustrate the authority of the parliament, wherein their votes and consents were concluded.

Bacon's Henry VII.

This I speak only to desire Eupolis not to speak peremptorily, or conclusively, touching the point of possibility, till they have heard me deduce the means of the execution. Bacon.

For why should we the busy soul believe, When boldly she concludes of that and this,

When of herself she can no judgment give, Nor how, nor whence, nor

where, nor what she i».

Danes.

Thus doth the wit, admitting all for true, Build fond conclusions on those idle grounds.ˆ Id.

A

CON

1 can spenk no longer ; yet I will strain myself to

oreathe out this one invocation, which shall be my

conclusion. Howel.

Judgment concerning things to be known, or the

neglect and concludency of them, ends in decision.

Hale.

Consideration of things to be known, of their se- veral weights, conclitsivenesi, or evidence.

Id. Origin of Mankind.

Though these kind of arguments may seem more obscure, yet, upon a due consideration of them, they are highly consequential and concludent to my purpose.

Id.

Examine whether the opinion you meet with, re- pugnant to what you were formerly embued with, be concludingly demonstrated or not. Digby.

The last dictate of the understanding is not al- ways absolute in itself, nor conclusive to the will, yet it produces no antecedent nor external necessity.

Bramhall's Answer to Hobbes.

Tis as certainly conclusible from God's prescience, that they will voluntarily do this, as that they will do it all. Hammond.

Those that are not men of art, not knowing the true forms of syllogism, cannot know whether they are made in right and conclusive modes and

figures.

Lock.*

If the'consent of the majority shall not, in reason, be received as the act of the whole, and conclude every individual, nothing but the consent of every in- dividual can make any thing to be the act of the whole : but such a consent is next to impossible ever to be had, if we consider the infirmities of health, and avocations of business, which in a number, though much less than that of a commonwealth, will neces- sarily keep many away from the public assembly.

Id.

Youth, ere it sees the world, here studies rest ; And age, returning thence, concludes it best.

Dryden

These are my theme, and how the war began, •And how concluded by the godlike man. Id. JEneid.

And all around wore nuptial bonds, the ties Of love's assurance, and a train of lyes, That, made in lust, conclude in perjuries.

Id. Fables.

The providences of God are promiscuously ad- ministered in this world ; so that no man can con- clude God's love or hatred to any person, by any thing that befals him. filiation.

Can we conclude upon Luther's instability as our author has done, because, in a single notion, no way fundamental, an enemy writes that he had some doublings? Atterbury.

There is something infamous in the very attempt : the world will conclude I had a guilty conscience.

Arbuthnot's History of John Bull. He granted him both the major and the minor ; but denied him the conclusion. Addison's Freeholder.

I have been reasoning, and, in conclusion, have thought it best to return to what fortune hath made my home. Swift.

It might furnish matter conclusive in argument, and instructive in policy : but with all due submission to high authority, and with all decent deference to su- perior lights, it does not seem quite clear to a discern- ment no better

than mine, that the premises in that wiece conduct irresistibly to the conclusion. Burke. Give me the lonely valley,

The dewy eve, and rising moon Fair beaming, and streaming,

Her silver light the boughs ainang ; While falling, recalling,

The amorous thrush concludes his sang. Burnt.

CON

CONCOA'GULATE, v. a) Fr. coaguler ; CONCOAGULA'TION, n. s. $ Lat. cuaˆulntus To curdle or congeal one thing with anothei The coagulating together of different bodies. CONCO'CT, v. a."\ Lat. can and coquere. CONCO'CTES, n. s. 9 To convert food into nu- CONCO'CTION, n. s. Diriment by the stomach; CONCO'CTIVE, adj.) to perfect or sublime by heat ; to bring to maturity or ripeness. Concoc- tion is the act of so doing. Concoctive is that which possesses the power of performing those , operations.

CONCO'LOR, adj. Lat. concolor. Of one color ;. without variety.

CONCO'MITATE, v. a. ˆ Lat con, and CONCO'MITANT, n. s. & adj. j comitam. The CONCO'MITANCE, «. s. {_ verb, which is

CONCO'MITANCY, n. s. [unusual, signi-

CONCO'MITASTLY, adv. \ fies to be con- CONCO'MITATION, n. s. J nected with any thing collaterally ; to come and go with it. Sub- sisting in concurrence with another thing, is denoted by concomitance and concomitancy. A concomitant is a person or thing which is col- laterally connected with another.

CO'NCORD, v. n. & n. s. ~] Fr. concorder ; CONCO'RDABLE, adj. Lat. concordia,

CONOO'RDANT, n. s. 5e adj. concors. Con- CONCO'RDANTLY, adv. Vcord, as a verb,

CONCO'RDANCE, n. signifies to agree,

CONCO'RDANCY, n. | but is not now in

CONCO'RDLY, adv. J common use/The

noun is of perpetual recurrence. It denotes peace ; union ; acting harmoniously together ; suitableness ; agreement between persons and

things ; harmonious combination of sounds ; the principal grammatical relation of one word to another, distinct from regimen. The words de- rived from it do not require definition, with the exception of concordance and concordate ; the former of which, in addition to its obvious sense, has also that of a grammatical concord, and of a book, showing in how many texts of Scripture any word occurs ; while concordate means a compact, a convention.

CONCORD, in grammar, that part of syntax, or construction, by the rules of which nouns are put in the same gender, number, and case ; and verbs in the same number and person with nouns and pronouns. See GRAMMAR.

CONCORD, in music, the relation of two sounds that are always agreeable to the ear, whether ap- plied in succession or consonance.

CONCORD, a large and flourishing post town of Massachusetts, situated on the river Concord, in Middlesex county, eighteen miles north-west of Boston, and seventeen east of Lancaster. Its Indian name was Musquetequid ; and it owes its present designation to the peaceable manner in which it was obtained from the natives. The first settlers have fairly purchased the spot, before they obtained an act of incorporation. This was on September 3rd, 1635; and they are said never to have had any contest with the In- dians. For thirteen years previous to 1691, the average number of deaths was seventeen ; one in four of whom was seventy years old and upwards. The public buildings are very respectable. Over the river are three convenient bridges, one of which is 208 feet long, and eighteen feet wide,

supported by twelve piers built after the manner of that over the Charles. This town is famous in the history of the revolution, having been the seat of the provincial congress in 1774, and the spot where the first opposition was made to the British troops on the memorable 19th of April, 1775. The general court frequently held their sessions here, when contagious diseases prevailed in the capital. It is 357 miles north-east of Philadelphia.

CONCORD, a flourishing post town of New Hampshire, is pleasantly situated on the west bank of the Merrimack, in Rockingham county, eight miles above Hookset falls. The legis- lature have often held their sessions here ; and much of the trade of the upper country centres in it. A handsome toll bridge across the Merrimack connects this town with Pembroke. Its Indian name was Penacook. It is fifty-five miles W. N.W. of Portsmouth, fifty-eight south-west of Dartmouth College, and seventy north from Boston.

CONCORD, FORM OF, in ecclesiastical history, a standard book among the Lutherans, composed at Torgaw, in 1576, and thence called the book of Torgaw. It was reviewed at Burg, by six Lutheran doctors of Germany, the principal of whom was James Andreas. It was first imposed on the Saxons by Augustus, and occasioned great opposition. The dispute was revived in Swit- zerland in 1718. when the magistrates of Bern published an order for adopting it as the rule of faith ; the consequence of which was a contest, that reduced its credit and authority.

CONCORDANCE is a term that has generally been restricted to dictionaries or indexes of the Bible, wherein all the leading words are ranged alphabetically ; and the books, chapters, and verses wherein they occur referred to. Cardinal Hugh de St. Charo is said to have employed 500 monks at once in compiling a Latin con- cordance. There are various concordances in that language ; one, in particular, called the Con- cordance of England, compiled by J. Darling- ton, of the order of Predicants ; another, more accurate, by the Jesuit Zamora. In 1523 Rabbi Mordecai Nathan first published a Hebrew con- cordance, at Venice ; but the best and most use- ful Hebrew concordance is that of Buxtorf, printed at Basil, in 1632. Calasius has given us concordances of the Hebrew, Latin, and Greek, in two columns : the first, which is He- brew, is that of Rabbi Mordecai Nathan, verba- tim, and according to the order of the books and chapters ; in the other column is a Latin inter- pretation of each passage of scripture, quoted by Rabbi Mordecai ; this interpretation is Cala- sius's own ; but in the margin he adds that of the LXX.and theVulgate, when different from his. The work is in four volumes, folio, Rome, 1621.

Dr. John Taylor published, in 1754, a He- brew concordance, in two volumes, folio, adapted to the English Bible, and disposed after the manner of Buxtorf. The Greek concordances are only for the New Testament ; except one by Conrad Kircher, on the old, containing all the Hebrew words in alphabetical order; and underneath all the interpretations of them in the LXX., and, in each interpretation, all the places where they occur in that version. In 1718

Trommius published his Greek concordance for the LXX., at Amsterdam, in two volumes, folio ; and Schmidius, improving on a similar work of II. Stephen, has given an excellent Greek con- cordance for the New Testament, the best edi- tion of which is that of Leipsic, anno 1717. V\ e have several very copious concordances in Ena- lish, as Newmann's, Butterworth's, &.C., but the last, and best esteemed, is that by Alexander Cruden, M.A.

CONCORDANT VERSES, such as have several words in common ; but which, by the addition of other words, convey a different meaning.

CONCORDATE. A convention between the bishop of Rome, as head of the church, and any secular government, for the settling of any eccle- siastical relations. Treaties, which the pope, as a secular sovereign, concludes with other princes respecting political concerns, are not called con- cordates. One of the most important of the earlier concordates is that of Worms, called, also, the Calixtine concordate, made in 1122. be- tween Pope Calixtus II. and the emperor Henry V., in order to put an end to the long contest on the subject of investiture, and which has since been considered a fundamental ordinance in respect to the relations between the Catholic church and the government in Germany. Most of the concordates have been extorted from the popes by the different nations or governments. This was done as early as the fifteenth century ; for, when the council of Con- stance urged a reformation of the papal court, Martin V. saw himself obliged, in 1418, to con- clude concordates with the Germans,, and soon afterwards, also, with other nations. The popes, however, succeeded, even in the 15th and 16th centuries, in concluding concordates for their advantage. This was the case with the concord- ates of Aschaffenburg. That, also, which was made by Leo X. and Francis I. of France (1516) was chiefly to the advantage of the pope. In later times, in particular towards the end of the eighteenth century, the papal court could not any longer maintain a struggle with the spirit of the times and with the secular powers, and was obliged to resign many privileges by con- cordates. Buonaparte, when first consul of the French republic, concluded a concordate with pope Pius VII., July 15, 1801, which went into operation in April, 1802. It re-established the catholic church in France, and has become the basis of the present ecclesiastical constitution of that country. The government obtained by it the right to appoint the clergy ; the public treasury gained by the diminution of the large number of metropolitan and episcopal sees to sixty ; the pope was obliged to give up the plan of restoring the spiritual orders and the influ- ence which he exercised by means of delegates, but retained the right of the canonical investi- ture of bishops and the revenues connected with this right. The interests of religion suffered by this compact, inasmuch as most of the dioceses became now too large to be properly adminis- tered ; and the lower clergy, the very soul (the church, who were in a poor condition before, .were made entirely dependent on the govern- ment. Louis XVIII. concluded, at Rome, with Pius VI 1. (July 11, 1817), anew concordate, by

which that of 1J1G, so injurious to the liberties of the Galhcan church, was again revived ; the date of 1801 and the urlidts organiques of 1802 were abolished ; the nation subjected to an enor- mous tax by the demand of endowments for forty-two new metropolitan and episcopal sees, with their chapters and seminaries ; and free scope afforded to the intolerance of the Roman court by the indefinite language of article 10, which speaks of measures against the prevailing obstacles to religion and the laws of the church. This revival of old abuses, this provision for the luxury of numerous clerical dignitaries at the expense of the nation, could please only the ultra-royalist nobility, who saw in it means for providing their sons with benefices. The nation received the concordate with almost universal disapprobation ; voices of the greatest weight were raised up against it (Grˆgoire, Essai his- torique sur les Liiertcs de I' Egtise Gallicane, Paris, 1818 ; Lanjuinais, Appreciation du Projet de Loi rel. aux trois Concordats, 5th ed., Paris, 1818; De Pradt, Les qvatre Concordats, Paris, 1818, 3 vols.); and the new ministers saw them- selves obliged to withdraw their proposition. The pope was more fortunate in the concordate made with Naples (Feb. 16, 1818) at Terracina, in which stipulations were made for the exclusive establishment of Catholicism in this kingdom ; for the independency of the theological semi- naries on the secular power; the free disposal of benefices to the value of 12,000 ducats, in Naples, in favor of Roman subjects ; the rever- sion of the revenues of vacant places to the church ; unlimited liberty of appeal to the papal chair ; the abolition of the royal permission, formerly necessary for the pastoral letters of the bishops ; the right of censorship over books ; besides many other highly important privileges. The king obtained the right to appoint bishops, to tax the clergy, to reduce the number of the epis- copal sees and monasteries, which existed before Murat's reign. The quiet possession of the estates of the church, which had been alienated, was also secured to the proprietors. In the con.ordate concluded with Bavaria, July 5, 1817, two archbishoprics were established for the 2400,000 catholics in Bavaria. These were Munich (with the bishoprics of Augsburg, Passau, and Ratisbon) and Bamburg (with the bishoprics of Wurzburg, Eichstadt and Spire.) Seminaries, moreover, were instituted and pro vided with lands ; the nominations were left to to the king, with the reservation of the papal right of confirmation ; the limits of the civil and ecclesiastical jurisdiction were precisely settled, and the erection of new monasteries was promised. This concordate was published in May, 1818, together with the new political con- stitution, by which all apprehensions for the protestant church in Bavaria were allayed. The other German princes have formed a plan for a common concordate with the pope. On the whole, the coolest which has been carried on for tnore than 800 years between the secular power and the church is as little

settled as it was in the times of Gregory VII., and the emperor Henry IV., and the concordates are to be con- sidered only as temporary agreements, which are followed as long as either party is obliged or

thinks it best to observe them. In fact, it is vain to think of putting an end to the dispute which secular governments maintain that it rests with them to appoint the officers and instructers of the people, and the pope maintains that the authority of the church is prior in time and su- perior in degree to any other. The light in which the Roman court views the cessions made in concordates appears from a letter of pope Innocent I, in 1416: Ergo quod pro remedio necessitas reptrit, cessante necessitate debet utique censure quiu alias est ordo legitimus, alia usur- patio, quam ad pr&sens tantum fieri te-mpus im- pellit. The governments, on the contrary, add reservations to the concordates, as in the case of the articles which the French government pre- fixed to the concordate of 1801, before it was promulgated. Against the appeal to a divine institution, on which the pope founds his autho- rity, the sovereigns maintain the following claims : — 1 . The sovereign of the state is, at the same time, the secular head of the church, and all the power of the church to make regu- lations and appoint clerical functionaries has been given by him, and remains under his su- perintendency ; 2. the temporal possessions ot the church are properly subject to the state, which has a right to prevent them from becoming excessive; 3. the secular government can pro- hibit such acts of worship as are opposed to the interests and peace of the state, and interfere with the rights of other religious societies ; 4. the state has the right of protecting new sects ; 5. the civil rights of subjects (even with regard to the validity and consequences of marriage) are to be exclusively regulated by the laws of the state. It is easily understood that no such contest between church and state can take place where the church does not claim any political authority, and the sovereign does not consider religion as an instrument for state purposes. Of course there is no such contest in the United States of America.

CONCORDIA, in ancient geography, a town of Lusitania, on the Tagus, north-west of Trajan's bridge, mentioned by Ptolemy. 2. A town o? the Nemetes, in Belgica, on the west side of the Rhine ; a Roman fortress, situated between Brocomagus and Noviomagus; now called Dru- senheim. 3. A town of the Veneti, situated at the confluence of the rivers Romatinus Major and Minor, thirty-one miles west of Aquileia. It was a Roman colony, and surnamed Julia, but destroyed by Attila. It is still called Con- cordia, and though ruinous, is the see of a bishop. It lies in the province of Friuli, and ci-devant territories of Venice, ceded to the emperor by the French, in 1797.

CONCORDJA, in the Roman polytheism, the goddess of concord. She had

temples on the de- clivity of the capitol, in the portico of Livia, and on Mount Palatine. This last was built of brass by Cneius Flavius, on reconciling the senate and people. She was drawn with a cup in her right hand, and in her left a sceptre or cornucopiae. lier symbols were two hands joined, as is seen in coins of Nero and Aurelius Verus : also two serpents twisting about a caduceus.

CONCO'llPORAT£,v.a.&v. n. \ Lat. con

CONCO'RPORATION, n. s. S and corpus

To unite «nto one mass or substance. The union thus produced.

When we coneorporate the sign with the significa- tion, we conjoin the word with the spirit.

Taylor! Worthy Communicant. Thus we chastise the god of wine With water that is feminine, Until the cooler nymph abate His wrath, and so coneorporate. Cleaeeland.*

Concorporation with the mundane spright. More.

CCXNCOURSE, n.s. Fr. contours; Ital. con- corso ; Span, concurso ; Lat. concursus. Many persons or things congregated together ; the con- gregating of numerous persons or things; the point at which two bodies join or intersect.

Do all the nightly guards, The city's watches, with the people s fears, The concourse of all good men strike thee nothing ?

Ben Jonson.

The coalition of the good frame of the universe was not the product of chance, or fortuitous concourse of particles of matter. Hide's Origin of Mankind.

The prince with wonder hears, from every part, The noise and busy concourse of the mart.

Dryden'i Virgil.

So soon as the upper glass is laid upon the lower, so as to touch it at one end, and to touch the drop at the other end, making with the lower glass an angle of about ten or fifteen minutes ; the drop will begin to move towards the concourse of the glasses, and will continue to move with an accelerated motion, till it arrives at that concourte of the glasses. Newton.

But why should I his childish feats display ? Concourse, and noise, and toil, he ever fled j Nor cared to mingle in the clamorous fray Of squabbling imps. Beattie,

CONCRE'ATE, v. a. old Fr.concreer; Lat. con and creo. To create simultaneously.

Upon loving God above all, and our neighbour as ourselves, hang all the law and all the gospel. And this, as a rule concreated with man, is that which the apostle calls the royal law ; which if we fulfil, we do well. Feltham.

CONCRE'DIT. Lat. concredo. To entrust with ; to confide to the keeping of.

Hath the most celestial and important matters con- credited to him. Barrow.

CONCREMATION. Lat. concremo. The burning of several things together.

CONCRETE, v. a. & n.^\ CO'NCRETE, n. s. & adj. CONCRE'TELY, adv. CONCRE'TENESS, n. s. CONCRE'TION, n.s. CW'NCRETIVE, adj. CO'NCKETIVELY, adv. CO'NCREMENT, CONCRE'SCENCE, n. s. CONCRE'TURE, n.s.

TcT.concret ; Ital. and Sp. concreto ; Lat. concretus. To concrete is to unite into one mass ; to f" coalesce ; to harden into a solid sub- stance. Concre- tion is the act of

J the concretive power in forming this union ; and likewise the mass. Concrete, concrement, or concreture, so formed. In logic, concrete is opposed to ab- stract, and concretely to abstractly. Concrescence is the act or quality of being concreted.

A kind of mutual commutation there is, whereby those concrete names, God and man, when we speak of Christ, do take interchangeablyone another's room ; so that, for truth of speech, it skilleth not whether we say that the son of God hath created the world, and the son of man by his death hath saved it ; or else that the son of man did create, and the son of God died to save the world. Hooker.

Seeing it is neither a substance perfect, nor in ehoate, how any other substance should thence take concrescence, hath not been taught.

Raleigh's History of the World.

Some plants, upon the top of the sea, are sup- posed to grow of some concretion of slime from the water, where the sea stirreth little.

Bacon's Natural History _

When wood and other bodies petrify, we do not ascribe their induration to cold, but unto salinoui •pint, or concretive juices. Browne's Vulgar Errours.

That there are in our inferior world divers bodies, that are concreted out of others, is beyond all dispute : we see it in the meteors. Half's Origin of Mankind.

There is the cohesion of the matter into a more loose consistency, like clay, and thereby it is prepared to the concrement of a pebble or flint. Id.

The first concrete state, or consistent surface of the chaos, must be of the same figure as the last liquid 8tate- Burnet.

Sin, considered not abstractedly for the mere act of obliquity, but concretely, with such a special de- pendance of it upon the will as serves to render t'«e agent guilty. Norris.

Heat, in general, doth not resolve and attenuate the juices of a human body : for too great heat will produce concretiom. Arbuthnot on Aliments.

If gold itself be admitted, as it it must be, for a porous concrete, the proportion of void to body, in the texture of common air, will be so much the greater. Bentley's Sermons

Concrete terms, while they express the quality do also either express, or imply, or refer to, some subject to which it belongs ; as white, round, long, broad, wise, mortal, living, dead : but these are not always noun adjectives, in a grammatical sense ; for a knave, a fool, a philosopher, and many

other concretes, are substantives, as well as knavery, folly, and philo- sophy, which are the abstract terms that belong to them. Watts' s Logick.

It is shrunk into the polished littleness of modern elegance and personal accommodation : it has evapo- rated from the gross concrete, into an essence and rectified spirit of expense, where you have tuns of ancient pomp in a vial of modern luxury. Burke.

The impatient Senses, goaded to contract, Forge new ideas, changing as they act ; And, in long streams dissevered, or concrete In countless tribes, the fleeting forms repeat.

Darwin.

Many are the opinions both of ancient and mo- dern writers concerning the production of pearls. Mr. Reaumur thinks they are formed like the hard concretions in many land animals, as stones of the bladder, gall stones, and bezoar, and hence conclude them to be a disease of the fish. W»*

CONCRETE, in natural philosophy and chemis- try, signifies a body made up of different princi- ples, or any mixed body : thus soap is a facti- tious concrete, mixed together by art ; and anti- mony is a natural concrete, or a mixed body compounded in the bowels of the earth.

CONCRE'W. Lat. concresco. To grow en- tangled. I know of no other authority but Spen- ser for this word; and he seems to have coined it for the sake of a rhyme. He says, of the squire of prince Arthur, that his locks, which were wont ' to sweat out dainty dew, he let to grow ami iriieslv to concrew.'

CON

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CON

CO'NCUBINE, n. s.

CCNCI/BINACY, H. S. CONCI/BINATE, 71. S.

-\ Fr. concubine; I Ital. Span, and . Lat. concubina ;

CONCU'BINAGE, n. s. I from con and

CONCU'BINARY, n. s. & adj.J cumbere. A fe- male who lives as a wife with a man, without being married to him. The state of being a con- cubine.

fie wolde suffre for a quart of wine, A good felaw to have his concubine A twelvemonth, and excuse him at the full.

Chaucer. Cant. Tales. I know I am too mean to be your queen, And yet too good to be your concubine.

Shakspeare. Henry VI.

When his great friend was suitor to him to pardon an offender, he denied him : afterwards, when a concubine of his made the same suit, he granted it to her ; and said, Such suits were to be granted to whores. Bacon.

Or like some strange disguised Messaline,

Hires a night's lodging of his concubine. Hall.

He caused him to paint one of his concubines, Cam- paspe, who had the greatest share in his affection.

Dryden.

The wife, though a bright goddess, thus gives

place To mortal concubines of fresh embrace. Granville.

*Adultery was punished with death by the ancient heathens : concubinage was permitted. *}roome.*

CoNctiBTNAGE, in the Roman law, was called licita consuetudo, an allowed custom. This ex- pression, in the constitutions of the Christian emperors, signifies what we now call a marriage in conscience. Inheritances descended to chil- dren, which sprung from such a tolerated coha- bitance. This concubinage they looked on as a kind of marriage, and even allowed it several privileges ; but it was confined to a single per- son, and was of perpetual obligation as much as marriage itself. Hottoman observes, that the lioman laws had allowed of concubinage long before Julius Caesar made that law, whereby every one was allowed to marry as many wives as he pleased. Valentinian allowed every man two. Cujas observes, that the ancient laws allowed a man to espouse, under the title of concubine, persons esteemed unequal to him, on account of the want of some qualities requisite to sustain the full honor of marriage. Though concubinage was beneath marriage, both as to dignity and civil effects ; yet concubine was a reputable title, very different from that of mis- tress among us. The commerce was esteemed so lawful that the concubine might be accused of adultery in the same manner as a wife. This kind of concubinage is still in use in some coun- tries, particularly in Germany, under the title of half

marriage, morgengabic marriage, or mar- riage with the left hand ; alluding to the manner of its being contracted, viz. by the man's giving the woman his left hand instead of his right. The children are not reputed either legitimate or bastards, but natural children, and capable only of donations. They retain the low rank of the mother ; and are on this ground disqualified for inheriting the effects of the father.

CONCU'LCATE, v. a. i Fr. conculquer ;

CONCDLCA'TION, n. s. 5 Ital. conculcare; Sp.

conculcar; Lat. conculcare. To tread down; to tread under foot ; to lay waste.

Conculcating and trampling under foot whatsoever is named of God. Montagu.

CONCU'PISCENCE, n. s.) Fr. concupis CONCU'PISCENT, adj. t cence; Ital. con-

CONCUPISCE'NTIAL, adj. £ cupiscenza ; Sp. CONCUPI'SCIBLE, adj. J concupiscentia ;

Lat. concupiscere. An eager, earnest desire ; a longing for ; coveting after ; libidinous desire ; lechery. Concupiscible signifies exciting de- sire ; eager to gain anything.

*This concupiscence, when it is wrongfully disposed or ordained in man, it maketh him coveit by coveitise of flesh, fleshly sinue by sight of his eyen, as to erth- ly thinges, and also coveitise of highnesse by pride of herte. Chaucer. Cant. Talet**

What thihge is the plesure of swetness. And most bitter in final succession ? Or what thing giveth man occasion In tender age to be concupiscent ? Chaucer.

Of just Davide by perfite penitence, Where rulers may see in a myrrour clear, The bytter fruite of false concupiscence, How Jewry bought Una's death ful deare.

Earl of Surrey.

We know even secret concupiscence to be siii ; and are made fearful to offend, though it be but in a wandering cogitation. Hooker.

He would not, but by gift of my chaste body To his concupiscent

intemperate lust, Release my brother. Shakspeare. Measure for Measure

In our faces the evident signs Of foul concupiscence ; whence evil store, Even shame, the last of evils.

Milton's Paradise Lost.

The schools reduce all the passions to these two heads, the concupiscible and irascible appetites.

South' s Sermons.

What then! — are appetites and lusts laid down With the same ease that man puts on his gown ? Will avarice and concupiscence give place, Charmed by the sounds — Your Reverence or your Grace ? Cou-per.

CONCU'R, v. n. "} Fr. concourir ;

CONCU'RRENCE, n. s. I Ital. concurrere; CONCURRENCY, n. s. [Span, concourrir; CONCI/RRENT, 7i. & adj. f Lat. coHcwrcre. The CONCURRENTLY, adv. meaning which the CONCU'RSIONS, n. s. j Latin root has, is easily to be discovered in all the modern deriva- tives from it. Conjoint action is always ex- pressed or implied. To concur, therefore, sig- nifies to unite in one point ; to agree in opinion or actions ; to be in unison with ; to be a joint contributor to any effect or event. Concur takes to before the effects to which the agent contri- butes ; and with before the person with whom the agent agrees. The secondary follow closely the sense of the primary words.

It is not evil simply to concur with the heathens, either in opinion or action ; and that conformity with them is only then a disgrace, when we follow them in that they do amiss, or generally in that they do without reason. Hooker.

Their concurrence in persuasion, about some mate- rial points belonging to the same polity, is not strange.

Id. Preface.

There is no difference oetween the concurrent echo and the iterant, but the quickness or slowness of the return. Bacon.

I conjoin with these laws the personal presence of the king's son, as a concurrent cause of this reforma- tion. Davies on Ireland. Struck with these great concurrences of things.

Crashaw.

For, without the concurrent consent of all these

three parts of the legislature, no such law is, or can,

be made. ' Hale.

The concurrence of the peers in that fury, can be

imputed to the irreverence the judges were in.

Clarendon.

Their affections were known to concur with the most desperate counsels. Id.

To have an orthodox belief, and a true profession, concurring with a bad life, is only to deny Christ with a greater solemnity. South.

To all affairs of importance there are three neces- sary concurrents, without which they can never be dispatched ; time, industry, and faculties.

Decay of Piety.

We have no other measure but our own ideas, with the concurrence of other probable reasons, to per- suade us. Locke. Though reason favour them, yet sense can hardly »llow them ; and, to satisfy, both these must concur.

Temple. All combined

Your beauty, and my impotence of mind ; And his concurrent flame, that blew my fire ; For still our kindred souls had one desire.

Dryden's Fables.

When outward causes concur, the idle are soonest seized by this infection. Collier on the Spleen.

Extremes in nature equal good produce, Extremes in man concur to general use. Pope.

He views our behaviour in every concurrence of affairs, and sees us engage in all the possibilities of action. Addison's Spectator.

Acts which shall be done by the greater part of my executors, shall be as valid and effectual as if all my executors had concurred in the same.

Swift's Last Will.

*A bishop might have officers, if there was a con- currency of jurisdiction between him and the arch- deacon. Ayliffe. Their omnifarious concursions, and combinations, and coalitions. Bentley. Governments of all kinds are administered only by men ; and great mistakes, tending to inflame these discontents, may concur. Burke. He far exceeded all other statesmen in the art of drawing together, without the seduction of self-in- terest, the concurrence and co-operation of various dispositions and abilities of men, whom he assimilated to his character and associated in his labours. Id. CONCU'SS, v. n. ~\ Lat. concutio ; con- CONCUSSA'TION, n. s. tcussio. The verb is of CONCU'SSION, n. s. frare occurrence, and CONCU'SSIVE, adj. * appears to he now dis- used. Daniel, the poet, says, ' concussed with uncertainty.' Concussation, which denotes vio- lent agitation, or shaking, is also not frequent. Concussion signifies the act of shaking abruptly and violently ; the state of being so shaken. A concussive cower is possessed by the agent who performs the act.*

It is believed that great ringing of bells, in popu- lous cities, hath dissipated pestilent air ; which may be from the concussion of the air.

Bacon's Natural Hiitory.

There want not instances of such an universal con- cussion of the whole globe, as must needs imply an agitation ot the whole abyss.

Woodward't Natural History.

The strong concussion of the heaving tide Rolled back the vessel to the island's side.

Pope's Odystey.

The vast structure of superstition and tyranny, which had been for ages in rearing, and which was combined with the interest of the great and of the many ; which was moulded into the laws, the man- ners, and civil institutions of nations, and blended with the frame and policy of states ; could not be brought to the ground without a fearful struggle ; nor could it fall without a violent concussion of itself and all about it. Burke.

Winds from all quarters agitate the air, And fit the limpid element for use, Else noxious : oceans, rivers, lakes, and streams, All feel the freshening impulse, and are cleansed By restless undulation ; e'en the oak Thrives by the rude concussion of the storm. Camper.

Palsy's cold hands the fierce concussion own, And life clings trembling on her tottering throne.

Darwin.

COND, v. a. \ Goth, kunde. To guide or CO'NDER, n. s. J conduct a ship ; to give no- tice. Cond seems to be a maritime corruption of the verb to conn, or con. A conder is a person who stands before the compass, and gives direc- tion to the helmsman how to steer ; it is also the name of a man employed in the manner described in the following quotation. Some etymologists, and not implausibly, derive conder from the French, conduire. ' Such as stand upon high places near the sea coast, at the time of herring fishing, to make signs to the fisher which way the shoal passeth, which may better appear to such as stand upon some high cliff, by a kind of blue color that the fish causeth in the water, than to those in the ships. These be like- wise called huers, by likelihood of the French, huyer, exclamare, and balkers.' Cowell.

CONDAMINE (Charles Marie de la), a ce- lebrated traveller and natural philosopher, was born in 1701, at Paris. His father, who was receiver- general of the taxes for the province of Bourbonois, first procured him a situation in the army, but his desire of knowledge soon induced him to travel. In the year 1731, having resigned the military profession, he left his native country to visit the shores of the Mediterranean. He surveyed many parts of the coast of Africa and Asia, resided some time at Constantinople, and returned to Paris after nearly two years absence, where he published an account of his travels. This account was first read to the Academy of Sciences, as a member of which he had been ad- mitted before his departure. By the same body he was appointed as one of their commissioners, in the splendid undertaking of measuring a de- gree of the meridian and of the equator in Peru ; and on the sixteenth of May, 1735, he and his philosophic companions set sail from Rochelle for this destination. This undertaking was at first suggested by Condamine, and its difficulties and dangers suited his zealous and enterprising spirit. It is well known what success attended the labors of the academicians both in Lap- land and Peru ; and nothing but the share that Condamine had in bringing them to a happy termination could give them any place in this narrative. After the instructions of the academy were fulfilled, one of the greatest of Conda- mine's adventures commenced. Having been

stimulated, by his curiosity and spirit of enter- prise, to attempt a passage across the American continent, along the river Amazons, he com- mitted himself to the stream of that river with a single servant, and after encountering various dangers, and surmounting numerous obstacles, he arrived at Cayenne, where he was obliged to wait more than five months for a vessel to carry him to Europe. This delay, amid the anxious desires that he must have felt to communicate the result of his labors and observations to his countrymen, and to enjoy in return their surprise and their admiration, produced a depression of spirits that sensibly affected his health. He re- covered, however, when the opportunity at last occured of his returning to Europe ; and, in a vessel provided for him by the governor of Su- rinam, he was conveyed to Holland, and from thence hastened to Paris, where he was received with such universal applause as to excite the jealousy of his colleage, Bougier, a man of more science and knowledge, but of retired and unassuming habits and manners. In 1757, se- veral years after his return from South America, he undertook a journey to Italy for the benefit of his health ; and, during his stay at Rome, pro- cured from the church a dispensation to marry his niece. He afterwards published an account of several interesting observations he had made during this tour, in a book, entitled, Extract d'un Journal de Voyage en Italie. Inoculation for the small pox had been introduced about this time from Turkey into England ; and in a visit which our traveller made to this country, he had observed the beneficial effects of the practice ; on his return, therefore, he published in two vo- lumes Lettres et Memoires sur 1′ Inoculation, stating what had been done, and what might be expected from doing more. While he was in London he was admitted a member of the Royal Society, an honor to which he had been elected several years before. He was also elected a member of many other learned societies, as those of Petersburgh, Berlin, and Bologna. He died in 1774 in consequence of an operation for hernia. His peculiar propensities and habitual character may be collected from the foregoing brief account of his life. His reputation as a philosopher does not rank very high, although he had amassed extensive information, and was by no means destitute of science. Posterity will regard him rather as a man of brilliant parts and general knowledge, who, by his ardent and unremitted exertions, contributed to diffuse the light of science, than one who could add to its splendor, or bring new regions within its sphere.

CONDAPILLY, one of the northern Circars of Hindostan extending between the sixteenth and seventeenth degrees of north latitude, and some- times

called Mustapha Nagur ; the entire district, occupies an area of 3400 miles, exclusive of the mountains on the west. It is on the whole well cultivated ; but the diamond mines have long ceased to be productive. It is well watered by the Krishna and some minor streams. The principal towns are Condapilly, Masulipatam, and Tron- taviloor.

CONDAPILLY, the capital of the above province, is situated on a hill and was formerly esteemed

a place of much strength; but the fortifications have of late been neglected. Th° principal officers of the government reside at Masulipatam. Condapilly, according to Mr. Hamilton, was first conquered from the Hindoo princes, about the year 1471, by the Bhamenee sovereigns ot the Deccan, and it came into the British possession, along with the northern Circars, in 1765. Tra- velling distance from Hyderabad, 142 miles ; from Madras 306 ; and from Seringapatam 444 miles.

CONDATCHY, a bay and town of the island of Ceylon, where is carried on a very extensive pearl fishery. The banks on which the oysters are found, extend about forty miles along this coast. See our article CEYLON. In the town reside the polishers and drillers of the pearls. The neighbourhood is distinguished for nothing else.

CONDE, a strong town of France, in the de- partment of the North. It first came into the possession of France at the peace of Nimeguen, in 1679, when the works were strengthened. It was one of the French fortresses occupied by the allies of the second treaty of Paris, in 1815, and is now regarded as one of the strongest barrier-fortresses on this side the Netherlands. It was taken by the allies, July 10th, 1793, but retaken in October, 1794, and its name changed for a time, by a decree of the convention, to Nord Libre, or North Free. It is seated at the confluence of the Scheld and the Haisne, twelve miles south-east of Tournay, containing about 6000 inhabitants ; thirteen miles west of Mons , seven N.N.E. of Valenciennes ; and 117 north by east of Paris.

CONDE .(Lewis de Bourbon, prince of), one of the greatest generals of his age, was born at Paris, September 7th, 1621. He was styled Duke d' Enghien, till by his father's death, in 1646, he succeeded to the title of prince of Conde. Three years previous to this event, at the age of twenty-two, the king, by the advice of cardinal Mazarine, gave him the command of the army destined to cover Champagne and Picardy ; and in this station he soon established his repu- tation, by defeating the Spaniards at Rocroi, and by the siege and capture of Thionville. Having covered Alsace and Lorrain from the enterprises of the imperialists, he returned to Paris, and ob- tained the government of Champagne, and of the city of Stenai. In

1644, 1645, and 1646, he distinguished himself in the three battles of Fri- bourg; and by the taking of Philipsbourgh mak- ing himself master of the palatinate, and of the whole course of the Rhine, by the siege and conquest of Dunkirk, and by the siege of Lerida, from which though he was obliged to rise, he kept the Spaniards in awe, and cut to pieces their rear-guard. During the civil wars, arising out of the administration of cardinal Ma- zarine, and the conduct of the queen-mother, he joined the maˆontents, for which conduct he was arrested and detained a year in prison. In the civil war which ensued, he was opposed by Turenne, and would probably have been de- feated, but for the assistance of mademoiselle, the daughter of the duke of Orleans, who caused the cannon of the bastile to be fired at the kind's troops. On the restoration of peace ne

went into the Low Countries, where he joined the Spaniards. In 1659, on the peace of the Pyre- nees, the prince was re-established in France, and afterwards employed in Flanders against the prince of Orange. He «vas wounded at the passage of the Rhine, but he continued the war, notwithstanding, with activity, and reduced the whole of Franche-Comte. Succeeding Turenne in the command of the French army, he was sent in 1675 into Alsace to check the progress of the imperial general Montecuculi. He obliged the enemy to cross the Rhine, and then closed his military career. He now retired to Chantilly to combat with the gout, and passed the rest of his life in cultivating the fine arts, in which he had considerable taste. He died in 1686, at Fontainebleau, leaving two sons.

CONDE'MN, v. a. } Fr. cowfemner ; Ital. CONDE'MNABLE, adj. \ condannare, conden- CONDEMNA'TION, n. s. nare ; Sp. condenar ; CONDE'MNATORY, adj. ˆLat.corufeffmare.Tooke CONDE'MNEDLY, adv. ! considers the Ang.- CONDE'MNER, n. s. I Sax. deman, to deem, CONDE'MNING, n.s. j as being the root of the English word. To condemn is to pronounce criminal; to pass sentence; to censure; to repre- hend ; to inflict a fine ; to show guilt by contrast.

The righteous that is dead shall condemn the un- godly which are living. Wisdom iv. 16. And the king of Egypt put him down at Jerusalem, and condemned the land in an hundred talents of sil- ver. 2 Chronicles xxxvi. 3. The son of man shall be betrayed unto the scribes, and they shall condemn him to death. : Matt. xx. 18. There is therefore now no condemnation to them.

Horn. viii. 1.

Who is he that condemneth? It is Christ that died, yea rather, that is risen again. Rom, viii. 34.

But 0 vaine Judgment, and conditions vain,

That which the prisoner points unto the free ; The whiles I him condemns, and deeme his paine, He where he lists goes loose, and laughs at me.

Spenser's Faerie Qtieene. Condemned to that dongeon mercilesse, Where they should live in wo, and dye in wretched- nesse Id.

One while she blamed herselfe, another whyle She him condemned as trustlesse and untrewe. Id.

My conscience hath a thousand several tongues, And every tongue brings in a several tale, And every tale condemns me for a villain.

Shakgpeare. Richard III.

Is he found guilty ! — •

Yes, truly, is he, and condemned upon't.

Id. Henry VIII.

And if we dare to judge our Maker's will,

He can condemn us, and himself can clear. Davies.

He commands to deface the print of a cauldron in

ashes ; which strictly to observe, were condemnable

superstition. Browne,

Since thou determines! weakness for no plea, In man or woman, though to thy own condemning, Hear what assaults I had. Milton. Samson Agonistes. The poet, who flourished in the scene, is condemned in the nielle. Dryden's JEneid, Preface.

He who was so unjust as to do his brother an injury, will scarce be so just as a condemn himself for it.

Locke.

He that passes the farst cvndemnattrry sentence, is like the incendiary in a popular tumult, who is charge- able with all those disorders to which he gave rise.

Government of the Tongue.

Some few are the only refusers and condemneri of this catholick practice. Taylor's Worthy Communicant

They who approve my conduct in this particular, are much more numerous than those who condemn it.

Spectator.

i Considered as a judge, it condemns where it ought to absolve, and pronounces absolution where it ought to condemn. Fiddes's Sermons.

Escaped the dungeon, does the slave complain, Nor bless the friendly hand that broke the chain ? Say, pines not Virtue for the lingering morn, On this dark wild condemned to roam forlorn ! Beattie.

The laws in many countries to condemn require more than a mere majority ; less than an equal number to acquit. In our judicial tribunals we require unanimity either to condemn or absolve. Burke.

When the trial is by friends, if the decision should happen to be favourable, the honour of the acquittal is lessened ; if adverse, the condemnation is exceedingly embittered. It is aggravated by coming from lips pro- fessing friendship, and pronouncing judgment with sorrow and reluctance. Id.

Condemns the injurious deed, the slanderous tongue. The thought that meditates a brother's wrong : Brings not alone the more conspicuous part, His conduct, to the test, but tries his heart. Cowper. Your sneaking water drinkers all

I utterly condemn 'em, He that would write like Homer,

Must drink like Agamemnon. Huddesfvrd.

CONDE'NSEjU.a.&n.&m/;.ˆ Fr. conden-

CONDE'NSATE, v. a. & n. & adj. ser ; Ital. con-

CONDEKSA'TION, n. cfensare;Span.

CONDE'NSABLE, adj. ˆcondensar; Lat.

CONDE'NSATIVE, adj. \condensare. —

CONDE'NSER, n. s. The verbs con-

CONDE'NSITY, n. s. J dense and con-

densate are synonymous. Both mean to thicken ; to compress into a na'rrower space ; to be thick- ened ; to be compressed into a narrower space. The kindred words do not require definition ; with the exception of the scientific term con- denser, which denotes an apparatus for compressing the air into a strong metallic vessel. See the next article.

If by natural arguments it may be proved, that water, by condensation, may become earth ; the same reason teacheth that earth, rarefied, may become water. Raleigh's History.

By water-glasses the account was not regular ; for, from attenuation and condensation, the hours were shorter in hot weather than in cold.

Browne's Vulgar Errowi.

Moving in so high a sphere, he must needs, as the sun, raise many envious exhalations ; which, con- densed by a popular odium, were capable to cloud the brightest merit. King Charles.

This agent meets with resistance in the moveable ; and not being in the utmost extremity of density, but condensable yet further, every resistance works some- thing upon the mover to condense it.

Digby on the Soul.

Water by nature is white ; yea, thickened or con-

nsate, most white, as it appeareth by the hail and

Peacham.

They colour, shape, and size Assume, a» likes them best, condense or rare

Milton.

The water falling from the upper parts of the cave, does preset fly there ttndense into little stones.

BouU'r Scept. Chym

densa snow.

Some lead their youth abroad, while some condense 7 heir liquid store, and some in cells dispense.

Dryden's Virgil.

All vapours, when they begin u- co-uienn and coalesce into small parcels, become first « t jhat h > g-iiess whereby azure must be reflected, before they can con- stitute ether colours. Newton's Opticits.

Such dense and solid strata arrest the vapour at the surface of the earth, and collect and condense it there .

Woodward.

The supply of its moisture is by rains and snow, and dctcs and condensation of vapours, and perhaps by subterraneous passages. Bent lei/.

They might be separated without consociating into the huge condense bodies of planets. Id. Sermons.

For them the rocks dissolved into a flood,

The dews condensed into angelic food,

Their very garments sacred, old yet new,

And Time forbid to touch them as he flew.

Cowper.

O'er those blest isles no ice-crowned mountains

towered,

No lightenings darted, and no tempests loured ; Soft fell the vesper drops condensed below, Or bent in air the rain-refracted bow. Darwin.

When heaven's high vault condensing clouds de- form,

Fair Amaryllis flies the incumbent storm, Seeks with unsteady step the sheltered vale, And turns her blushing beauties from the gale. Id.

It is also well known, that the thinner the glass is, (which is thus coated on both sides so as to make a Leyden phial), the more electricity can be condensed on one of its surfaces, till it becomes so thin as to break, and thence discharge itself. Nor is it possible that the quantity of electricity condensable on one side of a coated phial, may increase in some high ratio in respect to the thinness of the glass. Id.

CONDENSATION, is commonly applied to the conversion of vapor into water, by distilla- tion, or naturally in the. clouds. Vapor com- monly condenses by the application of some cold substance. On touching it the vapor parts with its heat which it had before absorbed, im- mediately loses the proper characteristics of vapor, and becomes water. But though this is the most common and usual way in which we observe vapor to be condensed, nature certainly proceeds after another method : since we often oLserve the vapors most plentifully condensed when the weather is really warmer than at other times. See CLOUDS.

A CONDENSER is a pneumatic engine by which an uncommon quantity of air may be forced into a small space ; so that sometimes ten atmos- pheres, or ten times as much air as there is at the same time in the same space, without the engine, may be thrown in by means of it, and its egress prevented by valves properly disposed. It consists of a brass cylinder, wherein is a move- able piston, which being drawn out, the air rushes into the cylinder through a hole provided on purpose ; and, when the piston is again forced into the cylinder, the air is driven into the re- ceiver through an orifice, furnished with a valve to hinder its getting out. The receiver, or vessel containing the condensed air, should be made very strong, to bear the force of the air's spring thus increased ; for which reason they are gene- rally made of brass : its orifice is fitted with a frim;ile screw to receiˆ the male screw at the

end of the condenser. Some condensers are made of glass for ejyperimenˆ but they cannot Dear much condensation. See PNEUMATICS.

CONDESCE'ND, v. n.

CONDESCE'NCE, n. ST

CONDESCE'NDENCE, n. s.

CONDESCE'NDENCY, n. s.

Co'NnESCE'NDING, H. S.

CONDESCE'NDINGLY, adv. CONDESCENSION, n. s. CONDESCE'NSIVE, adj. CONDESCE'NT, n. s.

Fr. condcscen- dre; It. condescen- dere ; Span, con- descender ; Latin cundescendere. The primary idea ok all these words is voluntarily abating j of, or yielding up,

something that is due ; gracefully descending- from superiority; putting ourselves partly on a level with those who have no claim to be con- sidered as our equals. Condescent, condes- cendence, and condescence, are old synonymes with condescension.

Alas, my lorde ! take fro me this dommage ; To my desire for mercy condiscende, For none but thou may my grievance amende.

Chaucer.

They, rather to gratify Herodias, made way for so slight and easy a candescent. Hall.

By the warrant of St. Paul's cnndescendence to the capacities he wrote unto, I may speak after the man- ner of men. Montague

This queen of most familiar condescendings is con- tent to be our every week's prospect. Hammond.

Can they think me so broken, so debased, With corporal servitude that my mind ever Will condescend to such absurd commands. Milton Nor shall my resolution

Disarm itself, nor condescend to parly

With foolish hopes. Denham't Sophy.

Spain's mighty monarch,

In gracious clemency does condescend,

On these conditions, to become your friend.

Dryden's Indian Emperjr.

He did not primarily intend to appoint this way; but condescended to it, as accommodate to their pre- sent state. Tillotson.

It forbids pride, and ambition, and vain glory •, and commands humility, and modesty, and condescension to others. Id.

Raphael, amidst his tenderness, shews such a dig- nity and condescension in all his behaviour, as are suitable to a superior nature. Adduon.

We condescendingly made Luther's works umpires in the controversy. A tier bury.

Courtesy or, condescension is an happy quality, which never fails to make its way into the good opi- nion, and into the very heart ; and allays the envy which always attends a high station. Id. Sermons.

This method carries a very humble and condescend- ing air, when he that instructs seems to be the en- quirer. Wattt

There is, indeed, this difference from the Saxon times, that as in the itinerant exhibitions of the stage, for want of a complete company, they are obliged to throw a variety of parts on one performer, so our so- vereign condescends himself to act, not only the prin- cipal, but all the subordinate parts of the play. He condescends to dissipate the royal character, and to trifle with those light subordinate lacquered sceptres, in those hands that sustain the ball, representing the world, or which wield the trident that commands the ocean. Burke.

If guards, mechanically formed in ranks, Playing at beat of drum their martial nranks,

Shouldering and standing as if stuck to stone,

While condescending majesty l«oks on j

.[f monarchy consist in such base things,

Sighing, I say again, I pity kings ! Cowper.

If ever I should condescend to prose,

I'll write poetical commandments, which

Shall supersede beyond all doubt all those -That went before ; in these I shall enrirh

My text with many things that no one knows, And carry precept to the highest pitch.

Byron's Don Juan.

CONDI'GN, adj. ~\ Fr. condone; Ital. con-

CONDI'GNNESS, n. s. f degno ; Span, condigno ;

CONDI'GNITY, n. s. £ Lat. condignus. Worthy;

CONDE'GNLY, adv.) merited. When used in conjunction with the word punishment, to which it is almost confined, it implies a degree of se- verity. Johnson says that it is always applied to something deserved by crimes. This assertion Mr. Todd controverts, and refers to our old writers for proofs of the contrary. Johnson, however, is in the right, as far as regards the present time ; the adjective being now never used but in the manner which he specifies. Con- dignity is equivalent to merit ; desert.

Herself of all that rule she deemed most condigne.

Spenser's Faerie Queene. Unless it were a bloody murtherer, I never gave them condign punishment.

Shakspeare. Henry VI.

Such a worthiness of condignity, and proper merit of the heavenly glory, cannot be found in any of the best, most perfect, and excellent of created beings.

Bishop Bull.

As Mercury has turned himself into me, so I may take the toy into my head to turn myself into Mercury, . that I may swinge you off condignly.

Dryden's Amphitryon.

Consider who is your friend, he that would have brought him to condign punishment, or he that has saved him. Arbuthnot.

CONDILLAC (Stephen Bonnet de), was an eminent French metaphysician, who attained great distinction by his writings on the most ab- struse subjects. The work by which he first became known to the public, and which will probably constitute his best passport to fame among posterity, was a metaphysical treatise which he published in 1746, entitled an Essay on the Origin of Human Knowledge. Six years afterwards he published a Treatise on Sensation, which is regarded as more ingenious and more original, if possible, than his first work. In the following year he published a Treatise on the Nature of Animals. His object is to show that the actions they perform, and the faculties they manifest, cannot be explained on the principles of Descartes, of their being merely machines of more delicate

construction. His most extensive work is entitled, A Course of Study, drawn up for the Instruction of the Prince of Parma. This was published in the year 1776, and consists of sixteen volumes. His last work was entitled, Commerce and Government considered rela- tively to each other. He died in 1780, a short time after the publication of the treatise above mentioned, and left behind him a reputation for talents of the first order, extensive general know- ledge, and great metaohysical penetration.

CO'NDIMEJVT, n. s. Ital. condimento ; Lat. condimentum. Seasoning ; sauce ; that which ex- cites the appetite by a pungent taste.

As for radish and the like, they are for condimentt and not for nourishment. Bacon's Natural History.

Many things are swallowed by animals rather for condiment, gust, or mendicament, than any substantial nutriment. Browne.

CONDISCI'PLE, n. s. Lat. condiscipulus. A schoolfellow ; a fellow disciple.

- A condisciplc of his, or one that had been, hearing so much of the man, went to him. M. Catuubon.

CONDI'S E, n.s. A conduit. The word is used by Chaucer, and the spelling was probably altered by him to make it chime with the ending of the preceding line.

CO'NDITE, v. a. & adj. ^ Ital. and Lat. con-

CO'NDITEMENT, n. s. Vdire. To pickle; to CO'NDITING, n. s. J preserve by salt,

sugar, or aromatics ; to season. Conditement signifies a composition of conserves, powders, and spice, blended together, by means of syrup, into an electuary.

The most innocent of them are but like condited or pickled mushrooms, which, carefully corrected, may be harmless, but can never do good.

Taylor's Rule of Holy Living.

ScolUij would fain have them use all summer the condite flowers of succory, strawberry water, Sec.

Burton. Anatomy of Melancholy. Much after the same manner as the sugar doth, iu the conditing of pears, quinces, and the like.

Grew's Museum.

CONDITION, v. a. v. n.. & n. s.ˆ Fr. con- CONDI'TIONAL, n. s. & adj. ! dition ; It.

CONDITIONA'L[TY, n. s. condizione;

CONDITIONALLY,.ˆ. (Sp COTldl-

CONBI'TIONARY, adj. f cion ; Lat

CONDI'TIONATE, v. a. & adj. conditus.

CONDI'TIONED, adj. The lead-

CONDI'TIONLY, adv. J ing idea of

condition is, the state, make, or disposition, of any thing. The applications are numerous. The noun denotes quality, whether good or bad, moral or physical ; distinctive property or attribute; external circumstances; rank; terms of agree- ment ; the writing in which those terms are con- tained. The verb signifies to stipulate ; to enter into terms. Conditional and conditionally mean that the act is done under some condition, the non-performance of which voids the contract. Sidney uses conditionly in the sense of the latter word. A condition is that which limits or res- tricts what otherwise would be unconfined in its operation. To conditionate is to qualify ; to regulate. Conditioned is the having proper- ties, whether good or bad. Johnson denominates conditionary an adjective, and defines it, stipu- lated ; but, in the sentence which he quotes, unless we suppose a harsh ellipsis, the word is equivalent to condition, and, consequently, is a noun.

For trewliche I holde it a grete deinte, A kinge's son in armis wel to do, And be of gode condicions therto, For grete power and moral vertue here Is selde isene in one person ifere.

Chaucer. Troilw and Creteide.

Bat half so well beloved a man as he, Ne was ther never in court of his degre. He was so gentil of condition, That thurghout all the court was his renoun.

Id. Canterbury Tale. Bli'hely, (quod he) come, sit the doun ; I tel the on*

condiciaun, Thou shalte wholly with all thy wit Dy thyne entente to herlion it. Id.

Hardie thing it is to weene by might That man to hard condition! to bind, Or ever hope to match in equal fight, Whose prowcsse paragone saw never living wight.

Spenter. Faerie Quecne. Every substance is conditioned To chaunge her hew, and sendry forms to don, Meet for her temper and complexion. Id.

The child taketh most of his nature of the mother, besides speech, manners and inclination, which are agreeable to the condition of their mothers.*

Id. on Ireland.

For the use we have his express commandment, for the effect his conditional promise ; so that, without obedience to the one, there is of the other no as- surance. Hioher.

A rage, whose heat hath this condition, That nothing can allay, nothing but blood.

Shakspeare. King John. To us all,

That feel the bruises of the days before, And suffer the condition of these times To lay an heavy and unequal hand Upon our humours. Sliakspeare. Henry IV.

I am, in my condition, A prince, Miranda. Id. Tempest.

I here entail

The crown to thee, and to thine heirs for ever ; Conditionally, thai here thou take an oath To cease this civil war. Id. Henry VI.

The dearest friend to me, the kindest man. The best conditioned. Merchant of Venice.

I yield upon condititms. — We give none To trauors : strike him down.

Ben Jonson's Cataline.

Jupiter is hot and moist, temperate, modest, honest, adventurons, liberal, merciful, loving, and faithful ; that is, givine these inclinations : and therefore those ancient kings, beautified with these condition, might be called thereafter Jupiter.*

Raleigh's History of the World It was conditioned between Saturn and Titan, that Saturn should put to death all his male children. Id. It seemed to us a condition and property of Divine Powers and Beings, to be hidden and unseen to others. Bacon.

He said, if he were sure that young man were king Edward's son, he would never bear arms against him. This case seems hard, both in respect of the condi- tional, and in respect of the other words.

Id. Henry VII.

Many are apt to believe remission of sins, but they believe it without the condition of repentance. Taylor.

Small towns, which staud stiff till great shot Enforce them, by war's law condition not. Donae. That ivy ariseth but where it may be supported, we cannot ascribe the same unto any science therein, which suspends and conditionates its eruption.

Browne's Vulgar Errours.

A false apprehension understands that positively, which was but conditionally expressed. Id.

The king himself met with many entertainments, at the charge of particular men, which had been rarely practised till then by the persons of the best condition. Clarendon.

That which is mistaken to be particular and abso line, duly understood, is general, but conditionate • and belongs to none who shall not perform the con- dition. Hammond.

Estimate the greatness of this mercy by the con- dition it finds the sinner in, when God vouchsafes it to them. South' Sermon*.*

Many scriptures, though as to their formal terms they are absolute, yet as to their sense they are con- ditional. Id.

We see large preferments tendered to him, but conditionally, upon his doing wicked offices : con- science shall here, according to its office, interpose and protest Id.

Tis one thing, I mast confess, to condition for a good office, and another thing to do it gratis.

L' Estrange.

Though uselessness, which is one of the conditions that makes punishments just, when it is away, may hinder punishments from being lawful in any body's hands ; yet uselessness, when present, being but one of those conditions, cannot give the other, which is a commission to punish j without which also punish- ment is unlawful. Locke.

Not to be endured (a lie) in any one, who would converse with people of condition, or have any esteem or reputation in the world. Id.

And as this clear proposal of the promises may inspirit our endeavours, so is the conditionally most efficacious to necessitate and engage them.

Decay of Piety.

Would God in mercy dispense with it as a condi tionary, yet we could not be happy without it, as a natural qualification for heaven. Norrit.*

Did we perfectly know the state of our own con- iition, and what was most proper for us, we might have reason to conclude our prayers not heard, if not answered. Wake's Preparation.

They will be able to conseive their properties un- changed in passing through severa mediums ; which is another condition of the rays of light.*

Newton' Optickt. Condition, circumstance, is not the thing j*

Bliss is the same in subject as in king.

Pope's Essay on Man.

Some desponding people take the kingdom to be in no condition of encouraging so numerous a breed of beggars. Swift.

The great inconvenience of public education arises from its being dangerous to -norals; and, indeed, every condition and period of human life is liable to temptation. Bcattie.

In considering any complex matter, we ought to examine every distinct ingredienc in the composition, one by one ; and reduce everything to the utmost simplicity, since the condition of our nature binds us to strict law and very narrow limits. Burke.

CONDITION, in the civil law, a clause of ob- ligation, stipulated as an article of a treaty, or a contract ; or in a donation of a testament, legacy, &c. in which last case a donee does not lose his donative if it be charged with any dishonor or impossible conditions.

CONDITIONAL CONJUNCTIONS, in grammar, are those which serve to make propositions con- ditional : as if, unless, provided, &c.

CONDITIONAL PROPOSITIONS, in logic, such as consist of two parts connected together by a con- ditional particle.

CONDITIONAL SYLLOGISM, a syllogism where the major is a conditional proposition. Thus, ‘ If there is a God, he ought to be worshipped. —

But there is a God ; — therefore he ought to be worshipped.”

CONDO’LE, v.n. -\ Fr. se condouloir ; It.

CONDO’LEMENT, n. s. I condolersi ; Sp. condo- • CONDO’LENCE, n. s. S lerse ; Lat. condolere,

CONDO’LING, n. s. i froin con and dolere.

CONDO’LER, n. s. / To sympathise with ; to express concern for the misfortunes or sorrows of others ; to offer consolation ; to lament or be- wail with another. It has with before the person who is the object of our pity. Condolence is the opposite of congratulation.

Amongst the which there was a nymph that hight Molanua, daughter of old father Mole, And sister unto Mulla, faire and bright, Unto whose bed false Bregog whylome stole, That shepheard Colin Jearely did condole.

Spenser. Faerie Queene. To persevere

In obstinate condolement, is a course Of impious stubbornness, unmanly grief.

Shakspeare. Hamlet. I come not, Sampson, to condole thy chance,

As these perhaps ; yet wish it had not been,

Though for no friendly intent. Milton’s Agonistes.

Why should I think that all that devout multitude, which so lately cried Hosanna in the streets, did not also bear their part in these public condolingi t

Bishop Hall.

Why should our poet petition Isis for her safe de- livery, and afterwards condole her miscarriage ?

Dryden.

Your friends would have cause to rejoice, rather than condole with you. Temple.

I congratulate with the beasts upon this honour done to their king ; and must condole with us poor mortals, who are rendered incapable of paying our respects. Addison.

The reader will excuse this digression, due by way of condolence to my worthy brethren. Arbuthnot.

We are still in the old cut ; and have not so far conformed to the new Parisian mode of good-breed- ing, as to think it quite in the most refined strain of delicate compliment (whether in condolence or congra- tulation) to say to the most humiliated creature that crawls upon the earth, that great public benefits are derived from the murder of his servants, the attempt- ed assassination of himself and his wife, and the mor- tification, disgrace, and degradation, that he has personally suffered. Burke.

CONDOM, a town of France, in the depart- ment of Gers, and ci-devant province of Gas- cony, containing about 7000 inhabitants, who manufacture wax and wool : the trade, princi- pally with Bourdeaux, is in corn, wine, brandy, leather, and the above manufactures. Condom was once a bishop's see, and filled by the cele- brated Bossuet before he became bishop of Meaux. The neighbourhood is very fertile and delightful. It is seated on the Baize and the Gelisse, twenty-eight miles south-east of Bour- deaux.

CONDOMA, in zoology. See CAPRA.

CONDONATION. Lat. condonatio. A forgiving of transgression. The word is now obsolete, except in the ecclesiastical court, when it is still in use, to express the forgiveness of a wife by a husband, after she has been unfaithful to his bed.

CONDOR, in ornithology. See VUI.TUR.

CONDORCET (John Antony Nicolas), Caritat, marquis of, a celebrated French author, philosopher, and politician. He was born at Ribemont in Picardy, in 1743, and educated at the college of Navarre, where he distinguished himself by his attachment to the study of the mathematics and physical science. On entering into public life, he became intimate with

Vol- taire, D'Alembert, and the literati of their school. As a mathematician Condorcet first attracted public attention by a treatise on Integral Calcu- lations, composed when he was twenty-two yearg of age. His solution of the problem of the Three Bodies appeared in 1767, and the first part of his Essay on Analysis in 1768. He was admitted a member of the Academy of Sciences in 1769, and contributed greatly to enrich its memoirs by various papers on the most abstruse branches of mathematical science. Turgot soon after this united him with D'Alembert and Bos- suet, in constructing the various financial calcula- tions of his administration. Meanwhile he was indefatigable in the study of politics and metaphysics, and published a defence of the sect with which he was connected, from an at- tack upon them in the Trois Siecles ; as well as a reply to M. Neckar's Essay on the Corn Laws. In 1773 he was appointed secretary to the Aca- demy of Sciences. In 1783 he pronounced an oration before the Academy on the influence of philosophy, and was received into that body. D'Alembert dying this year, Condorcet suc- ceeded to his place of secretary to the Academy, and rendered himself conspicuous by the publi- cation of eulogies on different eminent charac- ters; particularly by that on his predecessor. In his encomium on the famous Euler, he en- tered into a circumstantial account of the specific improvements in science and the mathematics suggested by that individual ; a species of me- moir for which Condorcet had a peculiar taste. In 1787 he published his labored Life of Vol- taire. His last biographical sketch was an eulogy on the celebrated Dr. Franklin, which appeared in 1790.

We now come to a somewhat more active part of the life of Condorcet. When the French revolution took place, he was the chief conductor of La Bibliotheque de 1'Homme, designed to analyse the writings of the most eminent politi- cians ; and of a newspaper entitled La Chro- nique de Paris, full of declamation against royalty ; as well as an assistant in the Journal de Paris. About the time the unfortunate Louis XVI. fled to Varennes, he proposed a paper called Le Republican, and became an active member of the Jacobin club. When the constituent na- tional assembly was dissolved, he was chosen representative for Paris, and adhered to the Brissotine party. He was now employed in drawing up a plan for public instruction, which he completed in two elaborate memoirs. He also drew up the manifesto addressed to the European powers by the people of France, on the approach of war, and became president of the national assembly.

In this capacity he wrote a letter of expostu- lation to the king, and is said to have vindicated the populace in insulting that unfortunate prince,

Amidst this degradation of royalty, it is also sajd, that he secretly solicited the office of tutor to the dauphin ; but was decidedly rejected by the king, on account of his infidelity. When the trial of the king was agitated, Condorcet gave it as his opinion that he could not be bronght to judgment in a legal manner; though his conduct in regard to the final sentence appears ambiguous. Madame Roland says ‘ the genius of Condorcet is equal to the comprehen- sion of the greatest truths ; but he has no other characteristic besides fear. It may be said of his understanding, combined with his person, that it is a fine essence absorbed in cotton.’ After the death of the king, Condorcet was em- ployed by the Girondists to frame a new consti- tution, which was approved by that party; though not by the people at large. Condorcet’s native timidity prevented him from taking part with either the Gironde or mountain parties, during the struggle between them; and he escaped the general massaore of the Brisso- tines ; but he fell under the invincible displea- sure of the blood-thirsty Robespierre, and a decree of arrest ttas passed against him in July

1793. He concealed himself m Pa-ris for about nine months ; but a rumor of a domiciliary visit led him to quit his place of abode, and passing through the barriers without being noticed, he went to the house of a friend at Mont-Rouge, who unfortunately happened to be then in Paris, and was not to return for three days. He was thus obliged to pass two dreary nights in the open fields, and venturing to a small inn at Calmars, the keenness with which he devoured what he ordered and his meagre appearance, attracted the attention of an officer, through whom he was thrown into a dungeon, to be carried to Paris next day ; but in the morning, 28th of March,

1794, was found dead; as it is supposed by poison, as he generally carried it about him. Thus terminated the life of Condorcet, after thirty years of study, consecrated to the sciences and his country, or rather to all Europe ; and after laboring for yearsexclusively for the revolution and liberty. Not long after his death, appeared his Sketch of an Historical picture of the. Progress of the Human Mind. He also left behind him in MS. a Treatise on Calculation, and an Ele- mentary Treatise on Arithmetic ; and published, besides the works already noticed, Letters to the King of Prussia, with whom, as well as with Catharine, empress of Rusia, he kept up a correspondence. Although Condorcet was pro- fessedly hostile to revealed religion, he was, in a prrilosophical sense, a man of integrity and virtue.

CONDORE, or PULO CONDORE, an island in the Indian Ocean, near the coast of Cochin China. It has an excellent harbour ; which in- duced the English East India Company to form a settlement here in 1702, but a

quarrel hap- pening, most of the factory were murdered by the Cochin Chinese, and the rest expelled in 1705. This and the neighbouring cluster of islands abound with mangoe trees. See MAN- GIFERA. Thˆ natives are of a dark olive color; short, but well shaped ; their faces are long and their hair long and black ; they have small black

eyes, high noses, thin lips, white teeth, and little mouths. The women arp said to be licentious in their manners. The island is about twelve miles long and two broad.

CONDORMIENTES, Lat. in church history, religious sectaries, so named from lying all to- gether, men and women, young and old. They arose in the thirteenth century, near Cologne ; where they are said to have worshipped an image of Lucifer, and to have received oracular answers from him.

CONDRIEU, or CONDRIEUX, a flourishing town of France, in the department of the Rhone and Loire, remarkable for its wines. It is seated at the foot of a hill seventeen miles south of Lyons, and contains 4050 inhabitants.

CONDRUSII, in ancient geography, a people of Belgica, originally Germans, dwelling about the Maese, in the country, now CONDROZ.

CONDU'C E, v. a. & v. n. ~\ Lat. conducere.

COXDU'CEMENT, n. s. The verbfollowed

CONDI/CENT, adj. by to, signifies to

CoNDUciBi'Lif Y, n. s. further some pur-

CONDU'CIBLE, n. s. & adj.)>pose ; to contri-

CoNDu'ciBLY,o

CONDU'CIELEXESS, n. s. about. By our

CONDU'CIVE, adj. old writers it was

CONDU'CIVENESS, n. s.) used in the sense of to conduct, but t!iis is become obsolete. Conducement means tendency. Hale employs conducible as a noun, ' the conducibles there- unto.' The adjective conducible takes to after it.

The boring of holes in this kind of wood, and then laying it abroad, seemeth to conduce to make it shine.

Bacon.

The means and preparations that may conduce unto the enterprize. Id. Holy War.

To both, the medium which is most propitious and conducible, is air. Id. Natural History.

He was sent to conduce hither the princess Hen- rietta Maria. Wotton.

I give you free and full power to move the heads, or to do any other act fitting, or conducent to the good success of this business. Archbishop Laud.

Which two contemplations are not inferior to any for either pleasantness in themselves, or conducible- nesi for the finding out of the right frame of nature.

H. More.

Those motions of generations and corruptions, and of the conducibles thereunto, are wisely and admira- bly ordered and contemporated by the rector of all things. Hale.

None of these magnetical experiments are sufficient for a perpetual motion, though those kind of qualities seem most conducible unto it.

Wilkin's Mathematical Magick.

I mention some examples of the conduciveness of the smallness of a body's parts to its fluidity. Boyle.

An action, however conducive to the good of oui country, will be represented as prejudicial to it.

Adduon's Freeholder.

Every man does love or hate things, according as he apprehends them to conduce to this end, or to con- tradict it. Tillotton.

They may conduce tar farther discoveries for com- pleting the theory of light. Newton.

Our Saviour hath enjoined us a reasonable service ; all his laws are in thfciselves conducible to the tem- poral interest of them that observe them. Bentley.

CON

CONDU'CT, v. a. ^ Fr. conduire ; Ital. CO'NDUCT, n. s. conduire ; Span, condu-

CONDU'CTING, n. s. | cir ; Lat. conducere. CONDU'CTION, n. s. V- To lead; to direct; to CoNDUCTi'Tious,ad . I guide ; to have the ma- CONDU'CTOR, n. s. I nagement of ; to com- CONDU'CTRESS, n. s. J mand troops ; to usher in. Conduct signifies the management of an af- fair ; course of action ; regularity of behaviour ; the act of escorting or guarding; a guide; and, with the addition of the adjective saje, a written order to ensure protection from being injured. Conductitious means hired. Conduction is an obsolete word for the act of training up. In ad dition to its obvious senses, conductor denotes a surgical instrument, and a body capable of trans- mitting the electric fluid. See ELECTRICITY and SURGERY.

I was ashamed to ask the king footmen and horse- men, and conduct for safeguard against our adversaries,

Esdras 1.

So having all things well about her dight, She on her way cast forward to proceede, And they her forth conducted.

Spenser's Faerie Queene. Pray receive them nobly, and conduct them Into our presence. Shahspeare. Henry VIII.

Some three or four of you, Go, give him courteous conduct to this place. Id.

His majesty,

Tendering my person's safety, hath appointed This conduct to convey me to the Tower.

Id. Richard III. Who is conductor of his people ? As 'tis said, the bastard son of Gloucester.

Id. King Lear.

Young men, in the conduct and manage of actions, embrace more than they can hold, stir more than they can quiet, and fly to the end without consideration of the means. Bacon.

I shall straight conduct you to a hill side, where I will point you out the

right path.

Milton on Education. Conduct of armies is a prince's art. Waller.

O may thy power, propitious still to me, Conduct my steps to find the fatal tree, In this deep forest. Dryden's JEneid.

How void of reason are our hopes and fears ! What in the conduct of our life appears So well designed, so luckily begun, But when we have our wish, we wish undone ?

Id. Juvenal.

Shame of change, and fear of future ill :

And zeal, the blind conductor of the will. Id.

Every man must, some time or other, be trusted

to himself and his own conduct ; and he that is a

good, virtuous, and able man, must be made so within.

Locke.

If he did not entirely project the union and re- gency, none will deny him to have been the chief conductor in both. Addison.

Though all regard for reputation is not quite laid aside, it is so low, that very few think virtue and con- duct of absolute necessity for preserving it. Swift.

The persons were neither titularies nor perpetual curates, but entirely conductitioiu, and removeable at pleasure. » Ayliffe.

There are even a sort of splendid, impositions so ircll contrived, that, at the very time the path of rec- titude is quitted for ever, men seem to be advancing into some higher and nobler road of public conduct.

Burke.

If an inquiry hus carefully conducted should fail at last of discovering the truth, it may answer an end perhaps as useful, in discovering to us the weakness ot our own understanding. If it does not make us know- ing, it makes us modest. Id.

His fable is well conducted, and for the most part consistent with itself, and

connected with probable circumstances. Beattie.

Instead of advising their king to consult his own and his peoples' dignity, by making the law the rule of his conduct, they have used him much more cruelly than our Charles I. was used ; they have made him a prisoner and a slave. Id.

Thou withered sibyl, my sage cnnductrets (Frugal- ity), usher me into the refulgent, adored presence. The power (Wealth), splendid and potent as he now is, was once the puling nursling of thy faithful care and tender arms. Burnt.

Here Ouse, slow winding through a level plain Of spacious meads, with cattle sprinkled o'er, Conducts the eye along his sinuous course Delighted. Cowper.

The air, like all other bad conductors of electricity, is known to be a bad conductor of heat. Darwin.

CONDUCTORS, in electrical experiments, bodies that receive and communicate electricity.

CONDUCTORS, in surgery, are used in laying up sinuses and fistulas.

CO'NDUIT, n. Fr. conduit. A water course ; the pipe whence the water obtains egress. It is derived from conduct, the water being conducted to the spot where it is wanted. The figurative use of the word is obvious.

The diode out of the wounde as brode asterte, As watir, whan the conduite broken is. Chaucer.

But all the liquour, which was foule and waste ; Not good nor serviceable elles for ought,

They in another great rownd vessel plaste, Tell by a conduit pipe it thence was brought.

Spenser. Faerie Queene. This face of mine is hid

In sap consuming winter's drizzled snow,

And all the conduits of my blood froze up.

Shakspeare.

I charge and command, that the conduits run no- thing but claret wine. Id. Henry VI.

These conduit pipes of knowledge feed the mind ; But the other three attend the body still. Davies.

These organs of the nerves, which are the conduits to convey them from without to their audience in the brain. Locke.

God is the fountain of honour ; and the conduits, by which he conveys it to the sons of men, are virtu- ous and generous practices. South. Wise nature likewise, they suppose,

Has drawn two conduits down our nose. Prior.

CONDUITS are, in general, made of either lead or iron; those of stone being expensive and massy. The ancients, however, never used any other : the Romans excelled all other na- tions in the beauty of these works, above which a great part of their city stood. The cement of the stone works, beneath the water, soon became as hard as the stones which they joined, and the cloacinae of Rome are yet among its most celt brated antiquities. In Cheapside, London, there were once two celebrated conduits, the Great and the Little. The Great conduit was the first cis- tern of lead erected in the city : it was built in 1285, and constructed principally of castellated stone. At the procession of Anne Boleyn it was repaired, and ran with white and claret wine all the afternoon.

> Lat. condupli- J co, conduplicatio.

CONDU'PLICATE, v. a. CONDUPLICA'TIOX, n. s. To double, doubling.

CONDYLE, or the CONDYLOID PROCESS. ?«e AJCATOMY.

CONDYLOMA, in medicine, a tubercle, or callous eminence, which arises in the folds of the anus, or rather a swelling or hardening of of the wrinkles of that part.

CONDYLLJS, in anatomy, a knot in any of

the joints, formed by the epiphysis of a bone.

CONE,n. s. "] Fr. cone; Ital. and

CONICK, adj. Span, cono ; Lat. conus ;

CO'SICAL, adj. Kwvof. A solid body,

CO'NICALNESS, n. s. I the base of which is cir-

CO'NICALLY, adv. ' cular, and which gra-

CONI'FEROUS, adj. dually diminishes in

CONO'ID, n. s. • diameter, till it ends in

CONO'IDICAL, adj. J a point; also the fruitof

the fir tree. Conoid signifies a figure which

bears a resemblance to a cone. Coniferous is

defined in the quotation from Quincy. The

meaning of the kindred words is obvious. See

CONIC SECTIONS.

Now had night measured with her shadowy cone Half way up hill this vast sublunar vault.

Paradise Lost.

The tympanum is not capable of tension as a drum : there remains another way, by drawing it to the cen- tre into a. conoid form. Holder.

In a watering pot, shaped conically, or like a sugar- loaf, filled with water, no liquor falls through the holes at the bottom, whilst the gardener keeps his thumb upon the orifice at the top.

Boyle'i Spring of the Air.

The cones dependent, long, and smooth, growing from the top of the branch. Evelyn.

Tow'ring firs in conic forms arise,

And with a pointed spear divide the skies. Prior.

A brown flint of a conic figure : the basis is oblong.

Woodward.

They are conical vessels, with their bases towards the heart ; and, as they

pass on, their diameters grow still less Arbuthnot.

Such trees or herbs are coniferous, as bear a squa- mose scaly fruit, of a woody substance, and a figure ap- proaching to a cone, in which are many seeds ; and when they are ripe, the several cells in the cone open, and the seeds drop out. Of this kind are the fir, pine, and beech. Quincy.

Burst from each pyramid expiring groans, And darker shadows stretched their lengthened cones.

Darwin.

In the West Indies the sea rises like a cvne in the whirl, and is met by black clouds produced by the cold upper air and the warm lower air being rapidly mixed ; whence are produced the great and sudden rains called water-spouts ; while the upper and lower airs exchange their plus or minus electricity in per- petual lightnings. Id.

But, as these are necessarily more or less of a cy- lindrical or cone form, the nodules or globular flints above described, cannot have been constructed in this manner. Id.

CONE, in botany. See CONUS.

CONE, in geometry. See CONIC SECTIONS.

CONE, MELTING, in chemistry, is a hollow cone formed of copper or brass, with a handle, and with a flat bottom adjoining to the apex of the cone, upon which it is intended to rest. Its use is to receive a mass of one or more metals

melted together, and cast into it This mass, when cold, may be easily shook out of the vessel, from its figure. Also, if a melted mass con- sisting of two or more metals, or other sub- stances not combined together, be poured into this vessel, the conical figure facilitates the sepa- ration of these substances according to their re- spective densities. The cone ought to be well heated before the melted mass is thrown into it ; that it may not contain any moisture, which would occasion a dangerous explosion. It ought also to be greased internally with tallow, to pre- vent the adhesion of the fluid matter.

CONE OF RAYS, in optics, includes all the several rays which fall from any radiant point upon the surface of a glass.

CO'NEY. See CONY.

CONFA'BULATE, v. n. > Old Fr. confa ' CONFABULA'TION, n. s.

>buler; Lat. confa-

CONFA'BULATORY, adj.) bvlo. To talk fa- miliarly together ; to narrate tales ; prattling ; familiar talk ; belonging to such talk.

I was going on in my confabulation, when Tranquil- lus entered. Tatler.

I shall not ask Jean Jacques Rousseau

If birds confabulate or no ;

Tis clear that they were always able

To hold discourse at least in fable.

And even the child, who knows no better

Thau to interpret by the letter

A story of a cock and bull,

Must have a most uncommon skull. Cowper.

CONFAMI'LIAR, adj. Compounded of con and familiar. Glanville uses it to signify that which has an intimate connexion with.

CONFARREATION, n. s. Lat. confarreatw. from far, corn. The solemnisation of marriage by eating bread together.

By the ancient laws of Romulus, the wife was by confarreation joined to the husband. Ayliffe't Par.

CONFARREATION, among the ancient Romans, was used in the marriage of persons whose children were destined for the priesthood. It was the most sacred of their three modes of marrying. The pontifex maximus and flamen dialis joined and contracted the man and woman, by making them eat of the same cake of salted bread: whence the term far, signifying meal or flour. Ulpian says, it consisted in the offering up of some pure wheaten bread, and rehearsing a certain formula, in presence of ten witnesses. Dionysius Halicarnassus adds, that the hus- band and wife did eat of the same.

CONFATED, adj. From con and fate. The word is of rare occurrence. In Search's Freewill, &c., it is used to signify synonymously decreed ; decreed at the same time with something else. CO'NFECT, v. a. kn.s.^ Fr. confection ; CONFE'CTION, n. s. Ital.con/ezione; Sp.

CONFE'CTIONED, ad. I confeccion; Lat.con- COSFE'CTIONARY, n. s. \ficere. To confect CONFE'CTIONER, n.t. \ is, to make sweet- CO'NFECTOUY, adj. J meats with sugar; or to preserve by means of that substance. Con- fect, now corrupted into comfit, is a sweetmeat, generally solid, and in the shape of small spheres or eggs. Confection signifies, primarily, a sweet- meat, or fruit preserved with sugar ; and, secon- darily, an assemblage of various ingredients.

Tbe confectioner, or confectionary, is the person whose trade it is to make sweetmeats, desert cakes, and other delicacies of a similar kind.

Spices belonging to thv potiquanes, With many wholsome swete confections. Henderson.

Hast thou not learned me to preserve ? yea so, That our great king himself doth woo me oft For my confection ? Shakspeare. Cymbeline.*

Of best things then, what world shall yield con.

fection To liken her? Shikspeare.

Myself,

Who had the world as my confectionary, The mouths, the tongues, the eyes, the hearts of men At duty, more than I could frame employments. Id. There will be a new confection of mould, which perhaps will alter the seed. Bacon.

At supper eat a pippin roasted, and sweetened with sugar of roses and carraway confects.

Harvey on Consumptions. Nature's confectioner, the bee, Whose suckers are moist alchimy, The still of his refining mold Minting the garden into gold. Cleaveland.

Confectioners make much use of whites of eggs.

Boyle.

He saw him devour fish and flesh, swallow wines and spices, confections, and fruits of numberless sweets and flavours. Addison.

Thy morning bounties ere I left my home. The biscuit, or confectionary plum ; The fragrant waters on my cheeks bestowed By thy own hand, till fresh they shone and glowed j All this, and, more endearing still than all, Thy constant flow of love, that knew no fall.

Cowper.

CONFECTOR, among the ancient Romans, a sort of gladiator, hired to fight in the amphithe- atre against beasts ; thus called a conficiendis bestiis, from their despatching and killing beasts. The Greeks called them 7rapa/3o \oc, q.d. daring, rash, desperate; whence the Latins borrowed the appellations parabolani and parabolarii. The Christians were sometimes condemned to this sort of combat.

CONFE'DER, v. a. "I Fr. con-

CONFE'DERATE, v. a., n., n. s., adj. \federer ; CONFE'DERATING, n. s. ! Ital. con-

CONFEDERA'TION, n. s. \federare;

CONFEDERACY, n. s. Sp. con-

CONFE'DERATOR, n. s. Jfederar;

Lat con Scfadus. To confederate is, to league together; to combine for the purpose of mu- tually supporting, or conjointly attacking. A confederation, or confederacy, is the league or alliance so formed ; and a confederate, or con- federator, is one of the members of that alliance. To confeder is obsolete.

For they have consulted together with one con- sent : they are confederate against thee.

Psalm Ixxxiii. 5.

Judas sent them to Rome, to make a league of amity and confederacy with them. 1 Mace, viii. 17.

About her herse there stodin lustily Withoutin any mo as thoughtin me, Bountie, perfitely well armed and richely, And freshe Beaute, and Lu«t, and Jolite, Assurid Manir, Youthe, and Honeste, Wisdome, Estate, with Drede and Govirnaunce, Confedrid both by bonde and aliaunce. Chaucer.

All the swords

In Italy, and her confederate arms. Could not havti made this peace.

Shakspeare. Coriolanm

Sir Edmond Courtney, and the haughty prelate, With many more confederates, are in arms.

Id. Richard HI. What confederacy have you with the traitors ?

Id. King Lear.

While the mind of man looketh upon second causes scattered, it may sometimes rest in them, and go no farther ; but. when it beholdeth the chain of them confederate and linked together, it must need fly to providence and deity. Bacon.

(The three princes enter into some strict league and confederation amongst themselves.

Bacon's Henry VII. They were confederated with Charles's enemy.

Knollet.

With these the Piercies them confederate, . And as three heads conjoin in one intent. Daniel. Nor can those confederation or designs oe durable, when subjects make bankrupt of their allegiance.*

King Charles.

By words men come to know one another's minds ;

by those they covenant and confederate. South.

This is a principle which is thought to extend itself

to the dens of thieves, and the confederacies of the

greatest villains. Locke.

Virgil has a whole confederacy against him, and I

must endeavour to defend him. Dryden.

We still have fresh recruits in store, If our confederates can afford us more. Id. JEneid. It is a confederating with him to whom the sacrifice is offered. A tier bury.

In a confederate war, it ought to be considered which party has the deepest share in the quarrel.

Swift.

An avaricious man in office is in confederacy with the whole clan of his district, or dependance ; which, in modern terms of art, is called to live and let live.

Id.

The siendships of the world are oft Confederacies in vice, or leagues of pleasure.

Addison.

Oh race confederate into crimes, that prove Triumphant o'er the eluded rage of Jove !

Pope's Statius.

But there is yet a liberty, unsung By poets, and by senators unpraised, Which monarchs cannot grant, nor all the powers Of earth and hell confederate take away. Cowper Bad men, profaning friendship's hallowed name, Form, in its stead, a covenant of shame : A dark confederacy against the laws Of virtue, and religion's glorious cause. Id.

The minister, however, takes no strong ground of defence. I will not say he dare not take it. There he sits, to receive the attack of the new confederacy, who are not great in numbers, but in talents. The ex-minister is mounted on a kind of hill-fort, to fire down on the assailants, but the garrison is all manned with deserters from the principles of the war !

Sheriiitm.

CONFEDERACY, in law. See CONSPIRACY.

CONFEDERATION OF THE RHINE. In the war of 1805, which turned out so unfortunately foi Austria, several of the princes of the south of Germany were obliged to ally Uiemselves to France, or did it voluntarily. The peace of Presburg, (Dec. 26, 1805) cave the first impulse to the entire dissolution of the German empire by conferring crowns on the electors of Bavaria an"1 Wurteniiburg, and on both, as well as on

Baden, complete sovereignty, such as had been already exercised by the other great German states. Soon after (May 28, 1806) the first German elector, arch-chancellor of the empire, announced to the diet that he had appointed cardinal Fesch, uncle of Napoleon, his coad- jutor and successor, — an act inconsistent with the constitution of the empire. Ultimately, sixteen German princes made a formal declaration of their separation from the emperor and the empire, in the act of confederation signed at Paris, July 12, 1806, by the kings of Bavaria and Wurtemberg, the elector arch-chancellor of the empire, the elector of Baden, the new duke of Cleves and Berg (Joachim Murat) the land- grave of Hesse-Darmstadt, the princes of Nas- sau-Usingen and Nassau-Weilburg, Hohenzol- lern-Hechinghen, and Hohenzollern-Sigmaringen of Salm-Salm and Salm-Kyrburg, the duke of Ahremberg, the princes of Isenburg-Birstein and of Liechtenstein, and the count Von der Leyen. This was communicated to the diet, Aug. 1, 1806. They assigned, as the reason foi this separation, the deficiencies of the consti- tution of the German empireˆ and invited the other members of the empire to join their con- federation. The French ambassador, Bacher, announced on the same day that his sovereign would no longer acknowledge a German empire. The emperor, Francis II., resigned his dignity as head of the German empire, Aug. 6, being in- duced to take this step, according to his decla- ration, by the demands contained in several articles of the peace of Presburg, and the new confederation of the German states, which he considered inconsistent with his rank as head of the empire. After the signing of the act of confederation, to which the name of the prince of Liechtenstein was attached without his know- ledge, the elector or arch-chancellor received the title of prince primate ; the elector of Baden, ˆhe landgrave of Hesse-Darmstadt, and the duke of Berg, received each the title of grand-duke, with the royal privileges and rights : Nassau-Usingen was raised to a duchy, and Von der Leyen to a principality. The emperor of France adopted the title of protector of the confede- ration of the Rhine. By the establishment of this confederation, the following states lost their political independence : — the imperial free city of Nuremburg, which was ceded to Bavaria ; Frankfort, to the prince-primate ; the principality of Heitersheim, belonging to the order of the knights of St. John, which became subject to Baden ; and the burggravate of Friedberg, to Hesse-Darmstadt. Furthermore, by mediat- isation, the princes of Nassau and Orange- Fulda, of Hohenlohe, Schwarzenberg, and many others ; the land of Hesse-Homburg, the dukes of Corswarem-Looz, and of Croy, many counts of the empire, and all the former knights of the empire were subjected to the princes of the con- federation of the Rhine. These mediatised members of the empire only kept possession of their patrimonial estates and private property, the jurisdiction in the first and second instances, the feudal rights and mining privileges, &c. ; but the power of legislation, essential to sove- reignty, the supreme jurisdiction, the right of

declaring war and peace, of forming, alliances, of regulating the police and taxation, &c., de- volved on the princes of the confederation, to whom these mediatised princes became subject. The object of this confederation was to secure external and internal peace. France and the members of the confederation were to be closely allied ; and, if one of them was threatened with war, or attacked, all the other confederates were to take up arms at the call of the protector, without further consultation, to assist the party threatened or attacked. AlthoiO. by the act of confederation, Napoleon was calleu protector of the confederation of the Rhine, he was not recognized as a chief to whom the rulers of the several states were to be subject. To deliberate on the mutual affairs of the confederates, a con- federate diet was to be established at Frankfort on the Maine, with two divisions — the royal, in which the grand-dukes were likewise to have seats, and that of the princes. The prince- primate was to be general president of the diet, and particularly of the royal chamber; in that of the princes, the duke of Nassau was to pre- side. At the death of every prince-primate, his successor was to be appointed by the pro- tector of the confederation of the Rhine. No member of the latter was to be allowed to enter the service of any state not included in the confederacy, or allied with , the same ; nor was any member to be allowed to cede his sove- reignty in favour of any but a confederate. The disputes of the confederate princes were to be decided at the diets, and, for the sake of ad- justing complaints against the members of the confederacy, two courts of justice were to be established. But neither these, nor the meeting of the confederacy, ever took place. Finally, catholics and protestants were to enjoy equal rights in all the confederated states. Thus, in the place of the German empire, which had existed nearly 1000 years, at least in name, a confede- ration was formed, which, transitory as it may seem in many respects, nevertheless brought about a total and lasting revolution in the political relations of the former German states of the empire and their subjects and is errone- ously judged, if it is considered as merely the offspring of foreign ambition, and not as the inevitable consequence of the internal disso- lution of the ancient constitution of the empire. Sept. 25, 1806, the elector of Wurtzburg joined the confederacy as a grand-duke. Prussia, on the other hand, to limit the increase of the power of France by the further extension of this confederacy, had formed the project of a similar union, under her protection, to be com- posed of the northern German princes. But an end was put to this project by the war of 1 806 — 7; and, during this war, the elector of Saxony, after having separated from Prussia, and assumed the title of king at the peace concluded between Saxony and France at Posen (Dec 11, 1806), entered the confederacy. His example was fol- lowed (Dec. 15, 1806) by the five Saxon dukes; and, by the treaty signed at Warsaw, April 1 3, 1807, the two princes of Schwarzburg, the three dukes of the house of Anhalt, and many other smaller princes, were admitted into

racy. The kingdom of Westphalia, formed out of the provinces conquered from Prussia and other states, and assigned to Jerome Buonaparte, was likewise added to the confederation of the Rhine, by the constitution, confirmed by the emperor of France, Nov. 15, 1807. Finally, the duke of Mecklenburg-Strelitz (Feb. 18, 1808) the duke of Mecklenburg-Schewin (March 22, 1808), the duke of Oldenburg and prince of Lubeck (Oct. 14, 1808), were admitted as mem- bers; so that the confederacy extended over a space of 125,160 square miles, with 14,608,877 inhabitants ; and the confederate forces were increased from the originally stipulated number of 63,000 to 119,180. But the protector of the confederacy of the Rhine, who had established the league, for the maintenance of internal and external peace, thought himself authorized to make inroads on the security and independence of his confederates, and, by a decree of Dec. 10, 1810, by which the rivers Scheldt, Meuse, Rhine, Ems, Weser, and Elbe were added to France, deprived the following princes of the confederacy of their political existence, and of the independence secured to them by the act of confederacy: — 1. The duke of Oldenburg, on whose dukedom he seized, leaving him only the principality of Lubeck; 2. The duke of Ahrem- berg, of whose possessions a part were added to France, and the remainder to the grand-duchy of Berg; 3. the possessions of the prince of Sulm-Salm and Salm-Kyrburg were likewise added to France. Of the grand-duchy of Berg, and the kingdom of Westphalia, considerable portions were likewise joined to France. The territories thus appropriated amounted to 11,278 square miles, with 1,133,057 inhabitants; so that 114,140 square miles, and 13,475,826 in- habitants, remained to the confederacy. The year 1813 put an end to its existence. The present grand-dukes of Mecklenburg-Schwerin and Mecklenburg-Strelitz, the last, who, com- pelled by their situation, had joined the con- federacy of the Rhine, were the first that re- nounced it, immediately on the alliance of Prussia with Russia against Napoleon. They were soon followed by the kings of Bavaria and Wurtemberg, besides several less powerful princes. Others hesitated longer, prevented partly by the situation of their countries, partly by other considerations, from making a free declaration. Among these were the king of Saxony, as also the grand-duke of Frankfort, the president of the confederacy. The former lost half of his country, the latter, all. The king of Westphalia and the grand-duke of Berg (son of the ex-king of Holland) shared the same fate. For the same reason, by the resolutions arbitra- rily passed at the congress of

Vienna, the do- minions of the prince of Isenburg and of the prince Von der Leyen, who, as princes of the con- federacy of the Rhine, were sovereigns, were me- diatised. The other members of the confederacy of the Rhine, with the exception of the duke of Ahremburg and the prince of Salm, have joined the German confederacy as sovereigns.

CONFE'R, v. a. & n.ˆ Fr.cow/erer; li.con- CO'NFERENCE, n. s. {ferire , Sp. conferir; CONFE'RREK, n. s. I Lat, conferre . Todis- CONFB'RRING, n. s. ' course seriously, dis-

cuss, or advise, together; to compare opinions and sentiments; to give; to bestow; and Chut not of common use) to contribute or conduce to any thing. Conference signifies conversin" or discussing seriously; a formal meeting con- vened for the purpose of discussing some im- portant point; collation and comparison of things. Byron uses the verb in the sense of in- flicted, which is, at least, unusual. When taken in the sense of to bestow, confer has on before the receiver of the gift ; when it means to contribute it has to.

CONFE'SS, v. a. fy v. n.~\ Fr. confesser ; CONFESSING, n. s. It. confessare ; Sp

CONFESSEDLY, adv. confesar ; Lat. con-

CONFE'SSION, n. s. fitere. To disclose ;

CONFE'SSIONAL, n. s. to acknowledge ;

CONFE SSION ARY, n. s.) > to own; to show; to CONI-E'SSIONIST, n. s. attest; to shrieve ; CONFE'SSOR, n. s. to admit to be

CONFE'ST, adj. true. Such are

CONFE'STLY, adv. the meanings of

CO'NFITENT, n. s. j the verb. Confes-

sion signifies the acknowledgment of a crime ; avowal ; a formulary, containing articles of faith. Confessor has the threefold meaning of one who boldly avows his faith at the risk of life or for- tune ; a priest who shrieves a penitent ; one who owns his crimes. The confessional and con- fessionary denote the box in which the priest sits to hear the penitent. Confest, a poetical word for confessed, has the sense of open ; acknow- ledged ; undisputed ; apparent. A confessary or confitent, is he who confesses any thing.

Never at our vesper prayer, Nor e'er before confestion chair Kneels he, nor recks he where arise Incense nor anthem to the skies, But broods within his cell alone, His faith and race alike unknown.

Byron. The Giaour.

CONFESSION, among the Romish divines, has been advanced to the dignity of a sacrament. It is made to the priest, and is private and auricular. The priest is not to reveal what he hears in confession, under pain of the highest punishment. Catholics quote from the fathers, ' If the serpent, the devil, secretly bite a man, and thus infect him with the poison of sin, and this man still remain silent, and not do penance, nor be willing to make known his wound to his brother and master : the master who has a tongue that can heal, cannot be of service to him.' To which Protestants object that the priest is neither mas- ter nor physician in this case ; and is not com- petent to heal. The Romanists however add. 'The confession of sin is profitable [only] if amendment follow. For where is the use of showing the wound, if the medicine be not ap- plied ?'

CONFESSION, in our law, is never to be di video, but always taken entire. A criminal is never condemned on his simple confession, without other collateral proofs ; nor is a voluntary extra- judicial confession admitted as any proof. A person is not admitted to accuse himself, accord- ing to that rule in law : Nemo auditur perire volens.

CONFESSIONAL, or CONCESSIONARY, was also a place in churches under the great altar,

where the bodies of deceased saints, martyrs, and confessors, were deposited.

CONFESSOR, in ecclesiastical history, the word is frequently used for martyr; in after times it was confined to those who, after having been tormented by the tyrants, were permitted to live and die in peace. And at last it was also used for those who, after having lived a good life, died under an opinion of sanctity.

CONFESSOR, in the Romish church, also gives absolution. The church c.ills

him in Latin con- fessarius, to distinguish him from confessor, a name consecrated to saints. The confessors of the kings of France, from the time of Henry IV. were constantly Jesuits : before him the Domini- cans and Cordeliers shared the office between them.

CONFI'CIENT, adj. Lat. confident. That which causes or brings about ; having efficacy.

CONFIDE, v. n. & a. ~\ Fr. confier ; Ital.

CO'NFIDENCE, n. s. CO'NFIDENT, n. s. & adj.

confidarsi; Sp. con- fiar. To put faith jn ; to trust impli-

CONFIDE'NTIAL, adj.

CONFIDENTIALLY, adv. Vcitly, is the primary CONFIDENTLY, adv. I idea of to confide, CO'NFIDENTNESS, n. s. and of all the words CONFI'DER, n. s. \ belonging to the

CO'NFIDANT, n. s. J same stock. Con-

fidence, confident, and confidently, in some in- stances, are expressive of censure : they signify qualities, in themselves praiseworthy, carried to an excess ; pushed into the limits of overbearing- ness or impudence. Confidential and confiden- tially, which imply an obligation to keep secret, are words of modern introduction ; but are com- pletely naturalised. A confidant is one who is entrusted with the secrets of the confider, and chiefly with those relating to love. Thus spelled, it is derived from the French, confidant. The English word confident has the same meaning.

Beloved, if our heart condemn us not, then have

we confidence towards God. 1 John iii. 21.

Be merciful unto them which have not the :onfi-

dence of good works. 2 Etd. vhi. 36.

Be not confident in a plain way. Keel, xxxii. 21,

Submit you to high Providence,

And ever in your noble hart prepence, That all the sorrow in the world is lesse Than vertue's might, and value's confidence.

Spenser. Faerie Queene. Yet stirred not at all for doubt of more, But kept

her place with courage confident. Id. Sith only God surmounts all time's decay, In God alone my confidence do stay.

Id. Vision of Ballay.*

The fervent reprehenders of things established by public authority, are always confident and bold-spirited men ; but their confidence, for the most part, riseth from too much credit given to their own wits, for which cause they are seldom free from errors.

Hooker. Dedication.

Both valiant, as men despising death ; both confi- dent, as unwonted to be overcome. Sidney.

Alas, my lord,

Your wisdom is consumed in confidence, Do not go forth to-day.

Shakgpeare. Julius Ceesar.

Douglas and the Hotspur, both together, Are confident against the world in arms.

Id, Henry IV.

It is strange how the ancients took up experiments upon credit, and yet did build great matters upon them : the observation of some of the best of them, delivered confidently, is, that a vessel filled with ashes will receive the like quantity of water as if it had been empty ; this is utterly untrue. Bacon.

Just confidence and native righteousness, And honor. Milton's Paradise Lost.

He had an ambition and vanity, and a confidence in himself, which sometimes intoxicated, and trans- ported, and exposed him. Clarendon. I am confident that very much may be done towards the improvement of philosophy. Boyle. People forget how little they know, when they grow confident upon any present state of things. South. Society is built on trust, and trust upon confidence of one another's integrity. Id. Every fool may believe, and pronounce confidently, but wise men will conclude firmly. Id. It is preposterous, therefore, to sacrifice his inno- cency to the attaining of confidence, and some little skill of bustling for himself among others, by his con- versation with ill-bred and vicious boys ; when the chief use of that sturdiness, and standing upon his own legs, is only for the preservation of his virtue.

Locke.

Aristotle was certainly a knowing man, but nobody

ever thought him so, because he blindly embraced,

and confidently vented, the opinions of another. Id.

Confidence is a plant of slow growth in aged bosoms.

Lord Chatham. He alone won't betray, in whom none will confide.

Congreve.

Martin composed his billet-deux, and entrusted it to his confidant. Arbuthnot and Pope.

We shall not be ever the less likely to meet with success, if we do not expect it too confidently.

A tier bury.

He may sacrifice the royalists of France, whom he had called to his standard, as a salutary example to those who shall adhere to their native sovereign, or shall confide in any other who undertakes the cause of oppressed kings and of loyal subjects. Burke.

It is an erect countenance ; it is a firm adherence to principle ; it is a power of resisting false shame and frivolous fear, that assert our good faith and honour, and assure to us the confidence of mankind.

Id.

The man I trust, if shy to me, Shall find me as reserved as he j

No subterfuge or pleading Shall win my confidence again, I will by no means entertain

A spy on my proceeding. Cowper

Sweet moralist1, afloat on life's rough sea, The Christian has an art unknown to thee. He holds no parley with unmanly fears; Where duty bids he confidently steers, Faces a thousand dangers at her call, And, trusting in his God, surmounts them all. Id. SIR BENJ. — To say truth, ma'am, 'tis very vulgai to print; and, as my little productions are mostly satires and lampoons on particular people, I find they circulate more by giving copies in confidence to the friends of the parties. Sheridan. School for Scandal.

CONFI'GURATE, v. n. ˆ lia.configurare ;

CONFI'GURE, v. a. > Sp.conjigurar ; Fr.

CONFIGURATION, n. s. j configuration; Ital. configurazione ; Sp. configuration ; Lat con and fgura. To configure is to adapt to a form ; to configurate is to show like the mutual aspects of the planets. Configuration signifies the figure of the parts of anything ; the outline of a thing ;

and also the conjunction, or mutual aspects of stats.

He that was sharp-sighted enough to see the confi- guration of the minute particles of the spring of a clock, and observe upon what peculiar structure and impulse its elastic motion depends, would no doubt discover something very admirable ; but if eyes so framed could not view at once the hand and the cha- racters of the hour-plate, and thereby at a distance see what o'clock it was, their owner could not be much benefited by that acuteness • which, whilst it disco- vered the secret contrivance of the parts of the ma- chine, made him lose its use. Locke.

The different effects of fire and water, which we call heat and cold, result from the so differing configuration and agitation of their particles. Glanville's Scepsis.

No other account can be given of the different ani- mal secretions, than the different configuration and action of the solid parts. Arbuthnot on Aliments.

There is no plastick virtue concerned in shaping them, but the configurations of the particles whereof they consist. Woodward,

Mother earth brought forth legs, arms, and other members of the body, scattered and distinct, at their full growth ; which coming together, cementing and so configurating themselves into human shape, made lusty men. Bentley's Sermons.

Ideas consist of synchronous motions or configurations of the extremities of the organs of sense. Darwin.

CONFI'NE, v.a.&n. CO'NFINE, n. s. & adj. CONFI'NEDNESS, n. s. CONFI'NELESS, adj.

Fr. confiner ; Ital. confinare; Span, con- finar ; Lat. c

S» w. . '!_•

CONFINEMENT, n.s. f ing, retaining withm CONFI'NER, n. s. certain bounds, is the

CONFI'NABLE, 1 master idea in all

CONFI'NITY, n. s. J this class of words. "To confine, therefore, is to enclose, to restrain within a definite space ; to immure ; to fasten to or up. A confiner is one who lives on the confines or frontiers of a country ; or who is a near neigh- bour; also one who puts another into confine- ment ; and it is applied to things as well as to persons. Confinity signifies proximity.

111 not over the threshold,

• Fy, you confine yourself most unreasonably :

Come, you must go visit. the good lady.

Shakspeare. Coriolanut. I had been

As broad and general as the casing air ; But now I'm cabined, cribbed, confined, bound in.

Id.

Here in these confines slily have I lurked, To watch the waining of mine enemines.

Id. Richard III.

But that I love the gentle Pesdemona, I would not my unhoused, free condition, Put into circumscription and confine, For the sea's worth. Id. Othello.

The senate hath stirred up the confiners.

Id. Cymbeline.

Esteem him as a lamb, being compared With my confineless harms. Id. Macbeth.

The participles or confiners between plants and liv- ing creatures are such as have no local motion ; such as oysters. Bacon.

Half lost, I seek

What readiest path leads where your gloomy bounds Confine with heaven. Milton's Paradise Lost.

All bodies are confined within some place, But she (the soul) all place within herself confines.

Davies.

Happy confiners you of other lands, That shift your soil. Daniel's Civil Warm

Where honour or where conscience does not bind,

No other tie shall shackle me ;

Slave to myself I will not be ; Nor shall my future actions be confined By my own present mind. Cowley.

Though gladness and grief be opposite in nature, yet they are such neighbours and confiners in art, that the least touch of a pencil will translate a crying into a laughing face. Wotton.

Make one man's fancies, or failings, confining laws to others, and convey them as such to their succeeders.

Bnyle.

The idea of duration, equal to a revolution of the sun, is applicable to duration, where no motion was ; as the idea of a foot, taken from bodies here, to dis- tances beyond the confines of the world, where are no bodies. Locke.

He is to confine himself to the compass of numbers, and the slavery of rhyme. Dryden.

Full in the midst of this created space, Betwixt heaven, earth, and skies, there stands a place Curfining on all three. /•/.

Our hidden foes, Now joyful from their long confinement rose.

Dryden's Virgil.

Twas ebbing darkness, past the noon of night, And Phosphor on the confines of the light.

Id. Fables.

The mind hates restraint, and is apt to fancy itsr If under confinement when the sight is pent up. Addison.

No subtile nor superfluous lore he sought. Nor ever wished his Edwin to pursue, ‘ Let man’s own sphere,’ said he, ‘ confine his view Be man’s peculiar work his sole delight.’ Beattie. Even to those persons whose powers of observation are confined within a narrow circle, the exercise of the necessary arts may open inexhaustible sources of amusement, to alleviate the cares of a solitary and laborious life. Id.

After six weeks confinement I am beginning to walk across the room. They have been six horrible weeks ; anguish and low spirits made me unfit to read, write, or think. Burns.

Peace may be the lot of the mind

That seeks it in meekness and love : But rapture and bliss are cortfined

To the glorified spirits above. Cowper.

Yet Lesbia ! like thy lute though Orpheus strung

His lyre to strains divine, its amorous lord For thee had left Eurydice unsung,

And Pluto’s gloomy confines unexplored.

Huddeiford.

CONFI’RM, v. a. ~\ Fr. confirmer ; It.

CONFORMABLE, adj. ‘ confirmare ;_ Span.

CONFI’RMABLANCE, n. s

cottfirmar ; Lat. con-

CONFIRMATION, n. s.

CONFIRMATIVE, adj,

*CONFIRMA’TOR, n, *.*

CONFIRMATORY, adj.

CONFI'RMEDNESS, n. s.

CONFI'RMER, n. s.

CONFI'RMINGLY, adv. _, _., firm. These meanings are attached to all its kindred words, which, therefore, it is needless to define. See CONFIRMATION.

I confirm thee in the high priesthood, and appoint thee ruler. l Macc- xi- 57'

The testimony of Christ was confirmed m yon.

1 Cor. i . 6.

jirmare. To make stable; to fix be- yond doubt ; to strengthen; to set- tle; to perfect; are the ideas conveyed J by the verb to con-

Ye that have not chosen in humble wise, Without repentyng, cheseth now your make, Yet at the lest renoveleth your service, And ye that have full chosen, as I devise, Confermeth it perpetually to dure. Chaucer.

I consent, and confirme every del Your wordes all, and your opinion.

Id. Cant. Tale. And to confirmin my resonne Thou wotist Tvel that speche is sowne, Or ellis no man might it here.*

Id. House of Fame. So settled he his kingdome, and confirmed his right.

Spenser's Faerie Queene. Confirm the crown to me and to mine heirs.

Sliakspeare. Henry VI. He only lived but till he was a man : The which no sooner had his prowess confirmed, But like a man he died. Id. Macbeth.

Be these sad sighs confirmers of thy words ? Then speak again. Id. King John.

Embrace and love this man. —

With brother's love I do it. —

And let heaven

Witness how dear I hold this confirmation!

Id. Henry VIII.

The sea-captains answered, that they would per- form his command ; and in confirmation thereof pro- mised not to do any thing which beseemed not valiant men. Knolles's History.

So was his will

Pronounced among the gods, and by an oath, Which shook heaven's whole circumference, confirmed.

Milton.

Confirmed then I resolve,

Adam shall share with me in bliss or woe. Id.

There wants herein the definitive confirmator, and

test of things uncertain, the sense of man. Browne.

Wanting frequent confirmation in a matter so con- formable, their affirmation carrieth but slow persua- sion. Id.

It may receive a spurious inmate, as is conformable by many examples. Id.

What is prepared for in catechising, is, in the nex place, performed by confirmation; a most profitable usage of the church, transcribed from the practice of the apostles. Id.*

The arguments brought by Christ for the confirma- tion of his doctrine, were in themselves sufficient.

South.

If the difficulty arise from the confirmedness of ha- bit, every resistance weakens the habit, abates the difficulty. Decay of Piety.

These divisions also have given occasion to the

reading these epistles by parcels, and in scraps,

which has farther confirmed the evil arising from such

partitions. Locke.

Whilst all the stars that round her burn,

And all the planets in their turn,

Confirm the tidings as they roll,

And spread the truth from pole to pole.

Addison'i Spectator.

That treaty, so prejudicial, ought to have been re- mitted rather than confirmed. Swift.

But martyrs struggle for a brighter prize, And win it with more pain. Their blood is shed In confirmation of the noblest claim, Our claim to feed upon immortal truth, To walk with God, to be divinely free, To soar, and to anticipate the skies. Cowper.

Chained to the chariot of triumphal Art,

We stand as captives, and would not depart.

*Away ! — there need no words, nor terms precise. The paltry jargon of the marble mart, Where Pedantry gulls Folly — we have eyes : Blood — pulse — and breast, confirm the Dardan shep. herd's prize. Byron. Childe Harold^*

CONFIRMATION, in law, a conveyance of an estate, or right in esse, from one man to another, whereby a voidable estate is made sure and una- voidable, or a particular estate is increased, or a possession made perfect.

CONFIRMATION, in the established church, is the ceremony of laying on of hands. In the primitive church it was administered, we are told, after baptism, if the bishop happened to be present. Throughout the East, it still accom- panies baptism; but the Romanists make it a distinct independent sacrament ; and the person to be confirmed, has a god-father and god- mother appointed him, as in baptism.

CONFISCATE, v. a. & adj.\ Fr. confis CONFISCA'TION, n. ». tquer; It. con-

CO'NFISCATOR,W. s. tjfiscarc; Span.

CONFI'SCATORY, adj. J confscar. To

confiscate is for the prince to seize, to his own use, the property of the subject, as the penalty of some crime, really or pretendedly committed. It is a common resource of tyrants, and numer- ous modern examples of it have been afforded by Spain, under the dominion of the worthless Fer- dinand. The origin of the word is thus traced by Cowel. ‘ Confiscare, confisquer, i. e. in pub- licum addicere ; from fiscus, which originally signifieth a hamper, pannier, basket, or freil ; but metonymically the emperor’s treasure, be- cause it was anciently kept in such hampers. ‘ Shakspeare uses the adjective, confiscate, with the accent on the first syllable.

Thy lands and goods Are, by the laws of Venice, confiscate Unto the state of Venice.

Shakspeare. Merchant of Venice.

II was judged that he should be banished, and his whole estate confiscated and seized, and his houses pulled down. Bacon,

It was in every man’s eye, what great forfeitures and confiscations he had at that present to help him- self. Id. Henry VII. Whatever fish the vulgar fry excel,

Belong to Caesar, wheresoe’er they swim,

By their own worth confiscated to him.

Dryden’s Juvenal.

So that no constitution fancier may go unsuited from his shop, provided he loves a pattern of pillage, oppression, arbitrary imprisonment, confiscation, exile, revolutionary judgment, and legalised premeditated murder, in any shapes into which they can be put.

Burke.

I see the confitcators begin with bishops, and chap- ters, and monasteries; but I do not see them end there. Id.

Those terrible confiscatory periods. Id.

He fished For wandering merchant vessels, now and then,

And sometimes caught as many as he wished ; The cargoes he confiscated, and gain

He sought in the slave-market too, and dished Full many a morsel for that Turkish trade, By which, no doubt, a good deal may be made.

Byron. Don JIMH.

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CO'NFIT, «. s.) Fr. confit ; Ital. con- Cb'NFiTURE, n. s. \fetta ; Sp. confite ; Lat. confectura. A comfit ; a sweetmeat ; a con- fection.

It is certain, that there be some houses wherein

confitures and pies will gather mould more than in

others. Bacon.

We contain a confiture house, -where we make all

sweetmeats, dry and moist, and divers pleasant

•wines. Id.

Would you not use me scurvily again, and give me

possets with purging •confits in't?

Beaumont and Fletcher.

CONFI'X, v. a. > Lat. configo, conjixum. CONFI'XURE, n. s. i To fix down ; to fasten ; the act of fastening.

As this is true,

Let me in safety raise me from my knees j Or else for ever he confixed here, A marble monument!

Shakspeare. Measure for Measure.

CONFLA'GRANT, adj. (Fr. conflagration ;

CONFLAGRATION, n. s. S It. conflagrazione ; Sp. conflagration ; Lat.con/ Zagrans, conftagratio. Conflagration signifies a widely extended fire ; conflagrant, burning together ; being involved in a general fire.

The opinion deriveth the complexion from the de- viation of the sun, and the conflagration of all things under Phaeton. Browne's Vulgar Errours.

Then raise

From the conflagrant mass, purged and refined,

New heavens, new earth. Milton's Paradise Lost.

Next o'er the plains, where ripened harvests grow, The running conflagration spreads below.

Addison's Ovid.

Mankind hath had a gradual increase, notwith- standing what floods and conflagrations, and the re- ligious profession of celibacy, may have interrupted.

Bent ley's Sermons.

A conflagration, or a wintry flood, Has left some hundreds without home or food : Extravagance and avarice shall subscribe, While fame and self complacence are the bribe.

Cowper.

CONFLAGRATION OF THE WORLD. The ancient Pythagoreans, Platonists, Epicureans, and Stoics, appear to have had a notion of the general con- flagration : though whence they should have derived it, unless from the sacred books, it is difficult to conceive ; except, perhaps, from the Phoenicians, who had it from the Jews. Seneca says expressly, Tempus advenerit quo sidera sideribus incurrent, et omni flagrante materia uno igne, quicquid nunc ex deposito lucet arde- bit. This general dissolution the Stoics call (Kirvpiaaig, ecpyrosis. Mention of the conflagra- tion is also made in the books of the Sybils, Sophocles, Hystaspes, Ovid, Lwcan, &c. Dr. Burnet says, the Siamese believe that the earth will at last be parched up with heat ; the moun- tains melted down; the earth's whole surface reduced to a level, and then consumed with fire. And the brahmins of Siam not only hold that the world shall be destroyed by fire, but also that a new earth shall be made out of it. Various are the sentiments of authors on the subject of the conflagration ; the cause whence it is to ariie, and the effects it is to produce.

CONFLATE, adj. > Lat. conflatum. ' The CONFLA'TIQN, n. s. 5 act of blowing many in- struments together ; also casting of metal.

*The sweetest harmony is, when every part or in**

strument is not heard by itself, but a conflation of

them all. Bacon-

CONFLE'XURE, n. s. Lat. conftexura. A

bending or turning.

CONFLl'CT, v.n. ^ Fr. conflit; Ital. CO'NFLICT, n. s. fconflitto; Span, con-

CONFLICTA'TION, n. s. Jflicto ; Lat. confligo, conflictus. To fight ; to contend ; to strive ar- dently ; to dash together. Violent collision ; combat ; strife ; pangs of body or mind. Con- flictation is synonymous with conflict ; but it is obsolete.

And each one jtaking part in other's aide, This cruell conflict raised thereabout Whose dangerous successe depended yet in doubt.

Spenser's Faerie Queens O ! what a sight it was wistly to view How she came stealing to the wayward boy j

To note the fighting conflict of her hue, How white and red each other did destroy.

Shakspeare. Venus and Adonis. Bare unhoused trunks, To the conflicting elements exposed, Answer mere nature. Id. Timon,

No assurance touching victories can make present conflicts so sweet and easy, but nature will shrink from them. Hooker.

You shall hear under the earth a horrible thunder- ing of fire and water conflicting together.

Bacon's Natural History.

Pour dephlegmed spirit of vinegar upon salt of tar- tar, and there will be such a conflict or ebullition, as if there were scarce two more contrary bodies in nature. Boyle.

A man would be content to strive with himself, and conflict with great difficulties, in hopes of a mighty reward. Tillotson.

He perceived

The unequal conflict then, as angels look On dying saints. Thomson.

Lashed into foam, the fierce conflicting brine Seems o'er a thousand raging waves to burn. Id.

He said no more, for in his breast Conflicting thoughts the voice suppressed : The fire of vengeance seemed to stream From his swol'n eyeballs' yellow gleam. Beattie. These opposed and conflicting interests, which you considered as so great a blemish in your old and in our present constitution, interpose a salutary check so all precipitate revolutions. Burke.

He that wrestles with us, strengthens our nerves, and sharpens our skill. Our antagonist is our helper. This amicable conflict with difficulty obliges us to an intimate acquaintance with our object, and compels us to consider it in all its relations. It will not suffer us to be superficial.

Every speck

Seen in the dim horizon turns thee pale With conflict of contending hopes and fears. But comes at last the dull and dusky eve, And sends thee to thy cabin, well prepared, To dream all night of what the day denied.

Cowper.

Hark ! heard you not those hoofs of dreadful note ? Sounds not the clang of conflict on the heath ? Saw ye not whom the reeking sabre smote ; Nor saved ycur brethren ere they sank beneath Tyrants am yrant's slaves ? Byron't Childe Harold.

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Fr. confluent ; It. con fluent e ; Sp. con- Jiuir, conftuencia ; ˆLa.l.confluere. Hol- land, the translator, astheEncyclopaedia

CO'NFLOW, v. n.

CO'NFLUX, n. s.

CO'NFLUENT, adj.

CO'NFLUOUS, adj.

CO'NFLUESCE, n. s.

CONFLUXIBI'LITY,TI. s.

CONFLU'XIBLENESS, n. s.) Metropolitana ob- serves, seems to be the

only writer who has used the verb conflow ; it was probably coined by him ; and it deserves a place in our language. Confluence and conflux signify the junction of streams ; the crowding of people to one spot ; the multitude so formed ; the concurring together of several circumstances to one end. Confluent and con- fluous mean running one into another. Boyle employs the word confluxibility to express a ten- dency to form a junction by flowing together.

You see this confluence, this great flood of visitors.

Shakspeare.

Knots, by the conflux of meeting sap. Infect the sound pine and divert his grain. Id.

Nimrod, who usurped dominion over the rest, sat down iu the very confluence of all those rivers which watered Paradise. Raleigh' i History of the World.

Some come to make merry, because of the con- fluence oi all sorts. Bacon.

You had found by experience the trouble of all men's confluence, and for all matters to yourself.

Bacon to Villiers.

To the gates cast round thine eye, and see What conflux issuing forth, or entering in. Milton.

He quickly by the general conflux and concourse of the whole people, streightened his quarters.

Clarendon.

We may there be instructed how to rate all goods by those that will concentre into the felicity we shall possess, which shall be made up of the confluence, perfection, and perpetuity of all true joys. Boyle.

This will draw a confluence of people from all parts of the country. Temple,

At lengtn, to make their various currents one, The congregated floods together run : These confluent streams make some -great river's

head, By stores still melting and descending fed.

Blackmore.

In the veins, innumerable little rivulets have their confluence into the great vein, the common channel of the blood. Bentley.

Thus where the veins their confluent branches bend, And milky eddies with the purple blend ; The chyle's white trunk, diverging from its source, Seeks through the vital mass its shining course.

Darwin.

CONFO'RM, v. a. & n., & adj. ~\ Fr. confor-

CONFO'RMABLE, adj. mer ; It. con-

CONFO'RMABLY, adv. \formare; Sp.

CONFORM A'TION, n.s. \conformar;

CONFO'RMER, n. s. Lat. confor-

CONFO'RMIST, n. s. mare. Min-

CONFO'RMITY, n. s. J s-heu, (No.

2294), gives the radical meaning with great clear- ness. ' To conforme,' says he, ' Lat. conformare, a con andformare, q. eandem formam rei ahcui imponere.' Accordingly, to conform signifies, in its active senses, to reduce to a similar appearance, shape, manner, or opinion, with something else ; and in its neuter sense ; to give way ; to comply with. That which has been so reduced becomes conformable to or with ; acts conformably to, or

in conformity with, the agent by which the re- duction has been effected. Conform, as an adjective, means having a similarity to; being in consonance with. Conformation indicates the act of fashioning, or ordering a thing; the par- ticular texture and consistence of the parts of a body; and the act of producing suitableness to anything. A conformer, or conformist, is one who conforms, who submits to ; the words are particularly used with reference to the established church.

And then conforming it unto the light, Which in itself it hath remaining still, Of that first sun, yet sparkling in his sight.

Spenser.

Demand of them wherefore they conform not them- selves unto the order of the church? Hooker.

For all the kingdoms of the earth to yield them- selves willingly

conformable, in whatever should be re- quired, it was their duty. Id.

By the knowledge of truth, and exercise of virtue, man, amongst the creatures of this world, aspireth to the greatest conformity with God. Id.

I've been to you a true and humble wife.

At all times to your will conformable.

Shakspeare'i Henry VIII.

Then followed that most natural effect of conforming one's self to that which she did like. Sidney _

Variety of tunes doth dispose the spirits to variety of passions conform unto them.

Bacon's Natural History. Judge not what is best

By pleasure, though to nature seeming meet ;

Created as thou art to nobler end,

Holy and pure, conformity divine !

Milton's Paradise Lost.

Conformity in building to other civil nations, hath disposed us to let our old wooden dark houses fall to decay. Graunt.

Whatsoever should thus be universally useful, as a standard to which men should conform their manners, must have its authority either from reason or revela- tion. Locke,

Printers, binders, sellers, and others that make a trade, and gain out 'of them (books), have universally so odd a turn and corruption of mind, that they have a way of dealing peculiar to themselves, and not con- formed to the good of society, and the general fairness that cements mankind. /'/.

Such a law of morality Jesus Christ hath given us in the New Testament, but by the latter of these ways, by revelation. We have from him a full and sufficient rule for our direction, and conformable to that of reason. Id

So a man observe the agreement of his own imaginations, and talk conformably, it is all certainty.

Id.

The dissenting congregations are supposed by their teachers to be more accurately instructed in the matters ot idith, and better to understand the Christian religion, than the vulgar conformists, who are charged with great ignorance — how truly I will not here de- termine. Id.

Among mankind so few there are. Who will conform to philosophic far^,.

Dryden's Juvenal.

We cannot oe otherwise happy but by our conformity to God. Tillotson.

Many instances prove the conformity of the essay with the notions of

Hippocrates.

Arbuthnot on Aliments

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Where there happens to be such a structure and con- formation of the earth, as that the fire may pass freely 'into these spiracles, it then readily gets out.

Woodward' Natural History.*

The productions of a great genius, with many lapses, are preferable to the works of an inferior author, scrupulously exact, and conformable to all the rules of correct writing. Addison.

The fragments of Sappho give us a taste of her way of writing, perfectly conformable with that character we find of her. Id.

I have treated of the sex conformably to this defini- tion. Id.

This metaphor would not have been so general, had there not been a conformity between the mental taste and the sensitive taste. /(/.

Virtue and vice, sin and holiness, and the confor- mation of our hearts and lives to the duties of true re- ligion and morality, are things of more consequence than the furniture of understanding. Watts.

It is not your fond desires or mine that can alter the nature of things ; by contending against which, what have we got, or shall ever get, but defeat and shame ? I did not obey your instructions : no, I con- formed to the instructions of truth and nature, and maintained your interest against your opinions, with a constancy that became me. Burke.

Through the same plan of a conformity to nature in our artificial institutions, and by calling in the aid of her unerring and powerful instincts, to fortify the fallible and feeble contrivances of our reason, we have derived several other, and those no small benefits, from considering our liberties in the light of an inheri- tance. Id.

CCWFORT, v. a. -\ Fr. conforter; low

CONFORTA'TION, n. s. ^ Latin, conforto. To

CONFORTA'TIVE, adj. I strengthen; to comfort;

*CONFORTA'TORY, n s. * to act as a corrobora- tive. Obsolete.*

For corroboration and confortation, take such bodies

as are of an astringent quality, without manifest cold.

Bacon's Natural History,

CONFO'UND, v. a. -\ Fr. confondre;

CONFO'UNDED, part . adj. I Ital. confondere;

CONFO'UNDEDLY, adv. S. Sp. confuTidir ;

CONFO'UNDEDNESS, n. s. 4 Lat. conj'undere.

CONFO'UNDER, n.s. J ' k con and fun-

dere, to powre out, i. e. to powre out one with another,' says Minsheu. To commingle things in such a manner that the separate parts can no longer be distinguished, is here the primary idea. Hence, to confound, means, to render indistinct, or unintelligible ; to involve in per- plexity ; to deprive of the power of distinguish- ing ; to astonish ; to throw into consternation ; to destroy ; to subvert. Confounded and con- foundedly are low words, never used but in familiar speech, or ludicrous composition. They indicate that which is hateful or shameful.

Let us go down, and there confound their language, that they may not understand one another's speech.

Gen. xi. 7.

Let them be confounded in all their power and might, and let their strength be broken. Daniel, xxi. O scathful harm, condition of poverte,

With thirst, with cold, with hunger so confounded. Chaucer's Cant. Tales.

O fcined woman all that may confound Vertue and innocence, thurgh thy malice Is bred in thee, as nest of every vice.

Id.

So gan he to disclose the whole debate, Which that straunge knight for him sustained had. And these two Sarazins confounded late.

Spenter's Faerie Queene. But soone the knights with their bright burning

blades Broke their rude troupes, and orders did confownd.

Id.

The gods confound thee ! dost thou hold there still ?

Shaktptare. The sweetest honey Is loathsome in its own deliciousness, And in the taste confounds the appetite. Id.

Crooked eclipses 'gainst his glory fight, And time, that gave, doth now his gift confound.

Id. Sonnet Ix.

Wrapt and confounded in a thousand fears, Like to a new-killed bird she trembling lies.

Id. Rape of Lucrece.

A thousand sparkling stars about her shone ; But she herself did sparkle more alone Than all those thousand beauties would have done, If they had been confounded all in one. Davlet.

So deep a malice to confound the race Of mankind in one root. Milton.

Two planets rushing from aspect malign, Of fiercest opposition, in mid sky Should combat, and their jarring spheres confound.

Id.

So spake the Son of God ; and Satan stood A while as mute, confounded what to say

Id. Paradise Regained.

I am yet to think, that men find their simple ideas agree, though, in discourse, they confound one another with different names. Locke.

They who strip not ideas from the marks men use for them, but confound them with words, must have endless dispute. Id.

A most confounded reason for his brutish concep- tion. Grew. Thy speculations begin to smell confoundedly of woods and meadows. Addison's Spectator.

Now with furies surrounded, Despairing, confounded, He trembles, he glows, Amidst Rhodope's snows. Pope's St. Ceeilia.

Sir, I have heard another story : He was a most confounded Tory ; And grew, or he is much belied, Extremely dull before he died. Sunft.

Sighs from a breaking heart my voice confound ; With trembling step, to join yon weeping train 1 haste, where gleams funereal glare arouad, And mixed with shrieks of woe, the knells of death resound. Beattie.

Under misfortunes it often happens that the nerves of the understanding are so relaxed, the pressing peril of the hour so completely confounds all the faculties, that no future danger can be properly provided for, can be justly estimated, can be so much as fully seen.

Burke.

Cold, temperate, and torrid clime Sees her infuriate lust of crime Burst every social bond, confound Order, spread insurrection round.

Huddesford.

But haughty still, and loth himself to blame. He called on Nature's self to share the shame, And charged all faults upon the fleshly form She gave to clog the soul, and feast the worm j Till he at last confounded good and ill, And half mistook for fate the acts of will.

Byron. Lara.

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CONFRA'CT,parf. ~LsA.confractum. Broken.

CONFRATE'RNITY, n. s. Lat. con and fraternitas. A brotherhood; a body of men united for some religious purpose.

We find days appointed to be kept, and a confra- ternity established for that purpose, with the laws of it. Stillingjteet.

CONFRICATION, n. s. Lat. con and/nco. The act of rubbing against anything.

It hath been reported, that ivy hath grown out of a stag's horn ; which they

suppose did rather come from a eonfrication of the horn upon the ivy, than from the horn itself. Bacon.

CONFRI'ER, n. t. Fr. confrere. One of the same religious order.

CONFR'ONT, v. a. ˆ Yr.confronter; Ital.

CONFRONTA'TJON, n. s. > confrontare ; Sp. con-

CONFRO'STER, n. s. jfrontar. To stand, or cause to stand, face to face ; to oppose one evidence to another in open court ; to compare one thing with another. The act of bringing two evidences face to face. The person who con- fronts.

The East and West churches did both confront the Jews, and concur with them. Hooker.

Blood hath bought blood, and blows have answered

blows,

Strength matched with strength, and power confronted power. Shaksptare. King John.

We began to lay his unkindness unto him : he, seeing himself confronted by so many, went not to de- nial, but to justify his cruel falsehood. Sidney.

He spoke, and then confronts the bull ; And on his ample forehead, aiming full, The deadly stroke descended. Dryden's Virgil.

When I confront a medal with averse, I only shew you the same design executed by different hands.

Addison on Medals.

The argument would require a great number of com- parisons, confrontations, and combinations, to find out the connexion between the two manners. Swinburne.

CONFUCIUS, or CONG-FU-TSE, the greatest of the Chinese philosophers, whose memory is cherished as that of a saint, was born in the kingdom of Lu, now the province of Chang- tong, about 550 years before the birth of Christ : by which he seems to have been prior to Socrates, and contemporary with Pythagoras and Solon. At a very early period of life he gave proofs of uncommon talents ; and being a descendant of the imperial family of the Chang dynasty, he was put under the ablest tutors, for cultivating and improving them. He had scarcely arrived at the years of

maturity, when he evinced his acquain- tance with all the literature of that era, particu- larly the canonical and classical books, ascribed to the legislators Yao and Chun. He had natu- rally an agreeable temper; and was distinguished for humility, sincerity, and disinterestedness; moderating his appetites, and contemning riches. He embraced, we are told, every opportunity afforded by the important station which he occu- pied in the kingdom of Lu, to estimate exactly the state of morals among his countrymen, and though he found them extremely vicious, formed and succeeded in the idea of a general reformation of morals. The torrent of corruption and depiavity however returned; or Confucius became like many other reformers unreasonable and impatient in his expectations. At any rate he left Lu, in

the hopes of succeeding better in some distant kingdom ; but, finding virtue everywhere over- whelmed by vice, he adopted the more humble employment of a teacher of youth, and trained, it is said, above 3000 scholars. He divided his doctrines into four parts, and his disciples into four classes : 1 . Those who studied the moral virtues; 2. Those who studied the art of reason ing and public speaking; 3. Those who studied law and government ; 4. Those who studied eloquence. He terminated his career in the seventy-second year of his age. His works are, 1. Tay-hio, i.e. The Grand Science, or school of adults, inculcating the duties of self-govern- ment, and obedience to the laws of right rea- son ; 2. The Chong-yong, or the Immutable Medium ; 3. Lung-yu, or Moral and Pithy Dis- courses; 4. Meng-tse, or the Book of Mencius; so named from one of the disciples, who is said to have completed it from his master's writings. There are also Hyau-king, treating of the respect due from children to their parents ; and lastly, The Syau-hys, sentences, maxims, and examples, extracted from ancient and modern authors. His religion appears to have been that of pure theism. Numerous structures are raised to his honor in China : his books are regarded by the Chinese as the fountain of wisdom, and his descendants enjoy to this day the title of mandarins of the first order. See our article CHINA.

CONFU'SE, v. a. & adj. ˆ Fr. confus ; It. CONFU'SED, adj. I and Sp. confuso ,

CONFU'SEDLY, adv. Lat. confusus. —

CONFU'SEDNESS, n. s. ˆ-Confuse is from CONFU'SELY, adv. I the same root as

CONFU'SION, n. s. confound, and is

CONFU'SIVE, adj. j closely allied to it

in meaning. To confuse is to throw into dis- order ; to perplex ; to render intricate ; to de- prive of the power of discerning and discrimin- ating. Confusion signifies disorderly mixture; disarray ; tumult ; want of clearness in the ideas ; hurry of ideas ; amazement; distraction of mind ; overthrow; destruction. The sense of the con- generous words is too obvious to, require being defined.

Min herte may min harmes not bewrey ; I am so confuse that I cannot say.

Chaucer. Cant. Tales.

Alas ! ybrought is to confusion The blood real of Cadme and Amphion.

Id.

A rout of people they before them hend, Flocking together in confwde array, As if that there were some tumultous affray.

Spenser. Faerie Qneene.

Where when confusedly they came, they fownd Their lady lying on the sencelesse ground. Id.

God is not a God of sedition and confusion, but of order and of peace. Hooker. Preface.

These four nations are every whore mixed in the Scriptures, because they dwell confusedly together.

/laleigh's History.

This is a happier and more comely time, Than when these fellows ran about the streets Crying confusion. 8/mkspeare. Coriolamts.

The strength of their illusion, Shall draw him in to his canfit.t'hiit.

[.I. .1/.-/.W'/,.

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God only -wise, to punish pride of wit, Amongst men's wits hath this confusion -wrought,

As the proud tower whose points, the clouds did hit, By tongues confiuion was to ruin brought. Davies.

Thus roving on

In confused march forlorn, the adventurous bands Viewed first their lamentable lot, and found No rest. Milton.

He confusedly and obscuredly delivered his opi- nion. Clarendon. The confusion of two different ideas, which a cus- tomary connexion of them in their minds hath made to them almost one, fills their heads with false views, and their reasonings with false consequences. Locke. The propriety of thoughts and words, which are the hidden beauties of a play, are but confusedly judged in the vehemence of action. Dryden, Confusion dwelt in every face,

And fear in every heart, When waves on waves, and gulphs in gulphs,

O'ercame the pilot's art. Spectator.

I viewed through a prism, and saw them most confusedly defined, so that 1 could not distinguish their smaller parts from one another.

Newton's Optics.

The cause of the confusedness of our notions, next to the natural inability, is want of attention. Norris. We may have a clear and distinct idea of the existence of many things, though our ideas of their intimate essences and causes are very confused and obscure. Watts' Logic.*

Can mortal strength presume to soar so high ! Can mortal sight, so oft bedimed with tears, Such glory bear ! — for lo, the shadows fly From Nature's face ; confusion disappears, And order charms the eye, and harmony the ears !

Beattie.

And now the tumults of the war,

Mingling confusedly from afar. Id.

The nobility and the clergy, the one by profession,

the other by patronage, kept learning in existence,

even in the midst of arms and confusions, and whilst

governments were rather in their causes than formed.

Burke. I saw thee gaze upon my face,

Yet met with no confusion there : One only feeling couldst thou trace —

The sullen calmness of despair. Byron.

CONFUSION, in a logical sense, is opposed to distinctness, or perspicuity ; and may happen either in words, as when misconceived or mis- applied ; or in ideas, as when the idea of any thing presents something along with it, which does not properly belong to that thing. See IDEA and NOTION.

CONFUSION, in a physical sense, is a sort of union or mixture by mere contiguity. Such is that between fluids of contrary natures, as oil and vinegar, &c.

CONFUTE, v. a.&cn.s

CONFU'TEMENT, n. s.

At the last day, that inquisitor shall not present to God a bundle of calumnies, or confutable accusa- tions ; but will offer unto his omniscience a true list of our transgressions. Browne.

Now that the confutant may also know, as he desires, what force of teaching there is sometimes in laughter. Muton.

An opinion held by some of the best among re- formed writers, without scandal or confutement. Id.

We have promised that their own dearest doctors and divines should be their confuters. Bishop Morton.

He could on either side dispute ; Confute, change hands, and still confute. Hudibras.

For a man to doubt whether there be any hell, and thereupon to live as if there were none, but, when he dies, to find himself confuted in the flames,

South.

CONFU'TER, n. s. CONFU'TABLE, ad . CONFU'TANT, n. s. COKFUTA'TION, n. s. CONFUTA'TIVE, ad . sertions of an antagonist.

must be the height of woe.

Man, 'tis true,

Smit with the beauty of so fair a scene, Might well suppose the Artificer divine Meant it eternal, had he not himself Pronounced it transient, glorious as it is, And, still designing a more glorious far, Doomed it as insufficient for his praise. These therefore are occasional, and pass ; Formed for the confutation of the fool, Whose lying heart disputes against a God ; That office served, they must be swept away. Cowper.

CONFUTATION, in rhetoric, &c. part of an oration, wherein the orator strengthens his cause by destroying the opposite arguments of his antagonist ; by denying what is apparently false, by detecting some flaw in the reasoning of the adverse party, by granting his argument, and showing its invalidity, or retorting it upon the adversary.

CONGAREE, a considerable river of South Carolina, formed by the confluence of the Saluda and Broad Rivers. Its junction with the Wa- teree forms the Santee, after a south-east course of ten miles.

CO'NGE, v. n. & n. s. Fr. conge; Ital. con- gedo; Mid. Lat. comiatus. To take leave. Act of reverence ; bow ; courtesy. The word is sometimes written congie.

Where taking congee, each one by and by Departed to his home in dreadful awe.

Spenser. Mother Hubberd's Tale.

I have congeed with the duke, and done my adieu with his nearest. Shahspeare. All's Well.

Or make a Spanish face with fawning cheere,

With the island conge like a cavalier. Hall.

The captain salutes you with conge profound, And your ladyship curtsies half-way to the ground.

Swift.

CONGES, in architecture, are rings, or ferrels. formerly used in the extremities of wooden pn- lars, to keep them from splitting, afterwards imitated in stone-work.

CO'NGE D'ELIRE is French ; and signifies, in common law, the king's permission royal to a ˆconfutare. To dean and chapter, in time of vacation,

to choose ‘ convict of error ; a bishop. The king, as sovereign patron of all to disprove the archbishoprics, bishoprics, and other eccle- arguments or as- siastical benefices, had in ancient times the free The confuter, or con- appointment of all ecclesiastical dignities ; m-

Fr. confuter ; It. confutare ; Sp. confutar ; Lat.

futani, is the person who accomplishes the con- vesting them first per baculum et annulum,

***‘ _ • i A. 11 ‘ I ,,.., >_,-. «.itn**-if In Ttrstnaao*

filiation, or confutement, of the confutable as- sertions. Confutative signifies that which con- futes.

and afterwards by his letters patent. In process of time he made the election over to others, under certain forms and conditions ; as, that they

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should, at every vacation, before they choose, de- mand of the king a conge” d’elire, that is, licence to proceed to election.

A woman, when she has made her own choice, for form’s sake, sends a conge d’elire to her friends.

Spectator.

CONGE’AL,v.a.&n.} Fr. congeler; It.

CONGE’ALMENT, n. s. f cowge/are ; Sp. co»-

CONGE’LABLE, adj. fgelar; Lat congelare.

CONGELA’TION, n. s. } To convert into ice ; to fix into a substance by cold ; to concrete. Congelation signifies the act of congealing ; the state of being congealed. Congelable that which may be congealed ; and congealment the con- cretion produced.

Litle she weend that love he close conceald ; Yet still he wasted as the snow congeald, When the bright suune his beames theron doth beat. Spenser. Faerie Queene.

Oh, gentlemen, see ! see ! dead Henry's wounds Open their congealed mouths, and bleed afresh.

Shakspeare. Richard III.

Too much sadness hath congealed your blood. Id, Enter the city, clip your wives, your friends ; Tell them your feats, whilst they with joyful tears • Wash the congealment from your wounds.

Id. Antony and Cleopatra.

In the midst of molten lead, when it beginneth to congeal, make a little dent, into which put quick- silver wrapt in linen, and it will fix and run no more, and endure the hammer. Bacon.

The consistencies of bodies are very divers : dense, rare, tangible, pneumatical, fixed, hard, soft, con- gelable, not congelable, liquefiable, not liquefiable. Id.

Many waters and springs will never freeze ; and

many parts in rivers and lakes, where there are

mineral eruptions, will still persist without congelation.

Browne's Vulgar Erruurs.

When water congeals, the surface of the ice is smooth and level, as the surface of the water was before. Burnet's Theory.

Th°re are congelations of the redundant water, pre- cipitations, and many other operations.

Arbuthnot on Air.

The chymists define salt, from some of its proper- ties, to be a body tixable in the fire, and congelable again by cold into briitle glebes or crystals.

Id. on Aliments. In whose capacious womb A vapoury de.luge lies, t» snow congealed.

Thomson. Winter.

If the moon had no atmosphere at the time of its elevation from the earth, or if its atmosphere was . afterwards stolen from it by the earth's attraction, the water on the moon would rise quickly into vapour ; and the cold produced by a certain quantity of this evaporation would congeal the

remainder of it.

Darwin.

Mr. Hunter by very curious experiments discovered that the living principle in fish, in vegetables, and even in eggs and seeds, possesses a power of resisting congelation. Id.

And if we now and then a sigh must heave At quitting even those we quit in strife, No doubt we weep for those the heart endears — That is, till deeper griefs congeal our tears.

Byr'jn. Don Juan. How long in his damp trance young Juan lay,

He knew not, for the earth was pone for him, And time had nothing more of night nor day

For his congealing blood, and senses dim. Id.

CONGELATION is applicable to metals, wl.en they resume their solid form after being heated ; to water when it freezes, to wax, spermaceti, &c. when they become solid after having been ren- dered fluid by heat ; and, in general, to all pro- cesses, where the whole substance of the fluid is converted into a solid : but it differs from crys- tallisation ; because, in the latter process, though the salt passes from a fluid to a solid state, a considerable quantity of liquid is always left. The process of congelation, in all cases, depend? upon, or is at least accompanied with, the emis- sion of heat, as has been evinced by experiments made not only in water, but on spermaceti, wax, &c. ; for in all these, though the thermometer immersed in them continued, while fluid, to de- scend gradually till a certain period, yet it was as constantly observed to remain stationary, or even to ascend, while the congelation went on. The most difficult metal, of which the congela- tion has been actually ascertained, is mercury. This was long thought capable of resisting any degree of cold whatever ; and it is only within these few years that its congelation, by artificial means, was known, and still more lately, that some climates were found to be so severe as to congeal this fluid by the oold of the atmosphere. See COLD.

CONGEMINA'TION, n. s. old Fr. congemi- tion ; Lat. congeminatio. A doubling ; a fre- quent repeating.

CONGE'NERATE, v.a.ˆ Fr. congenere, CO'NGEXER, n. s. / adjective,used only

COXGE'NERACY, n. s. V in anatomy and bo- CONGE'NEROUS. adj. 1 tany ; Ital. adj. CONGE'NEROUSNESS. J congenere; Latin, congenerare.

The verb, which is little used, sig- nifies to beget ; to cause. Congener, which is adopted, without alteration, from the Latin, means that which is of the same kind or stock.

The cherry-tree has been often grafted on the lau- rel, to which it is a congener. Miller. Those bodies, being of a congenerous nature, do rea- dily receive the impressions of their nature.

Browne's Vulgar Errours.

From extreme and lasting colds proceeds a great run of apoplexies, and other congerterous diseases.

Arbuthnot on Air.

CONGE'NIAL, adj. -\ Lat. con and genus.

CONGENIA'LITY, n. s. (Partaking of the same

CONGE'NIALNESS, n.s. £ nature or disposition;

CONGE'NIOUS, n. s. J similar in feelings and habits ; suitable, beneficial, adapted to. Conge- nious, which means being of the same kind, is obsolete.

He sprung, without any help, by a kind of congenial composure, as we may term it, to the likeness of our late sovereign and master. Wotton.

You look with pleasure on those things which are somewhat congenial, and of a remote kindred to your own conceptions. Drydeh's Dedicat. of Juv.

In the blood thus dropped there remains a spirit of life congenious to that in the body. Hales,

Smit with the love of sister arts we came,

And met congenial, mingling flame with flame.

Pope.

*He acquires a courace, and stiffness of opinion, not at all congenial with him. Swift**

CONGE'NITE, adj. Lat. congemtus. Of the same birth ; born with other ; connate ; begot- ten together.

CO'NGER, n. s. Lat. congrut ; Gr. yoyypoc. The sea-eel.

CONGER, in Zoology. See MURJENA.

CONGER EEL'S HEAD is a charge borne in heraldry ; as ar- gent, a conger's head couped on a pale, name Gascoigne, a fa- mily from the Isle of Ely.

CONGE'RIES, n. s. Lat. A mass of small bodies heaped up together.

CONGE'ST, v. a. \ Lat. congerere, con-

CONGE'STABLE, adj. 1 gestum. To heap up; to accumulate ; to collect together ; to bring into one mass.

CONGESTION, (Lat. congestio) the act of accu- mulating or carrying together. The different parts of the human body do not always receive the same quantity of blood, but sometimes more, sometimes less. Thus, for instance, during digestion, it flows towards the stomach and the liver ; during violent or long-continued speaking, singing or running, it collects in the lungs and the heart ; during close thinking, in the brain. In general, the blood flows in greater quantities into any part in proportion to the action of that part •, but, in a state of health, it flows off with as much rapidity as it collects. Sometimes, however, too much blood accumulates in an organ and remains too long in it: and this injures the structure and the function of such an organ. This accumulation of blood arises from a diseased state of the system, and is called congestion. Congestion may be caused by whatever, in general, accelerates the circulation of the blood, and causes it to tend to a par- ticular part; thus, for instance, among the causes of congestion are the different periods of de- velopement of the human .body, each of which renders some particular organ unusually active ; the crisis of disease ; and, lastly, the accidental exertions of certain organs. Under such cir- cumstances, congestion is caused by an excited state of the arteries in general, and of some par- ticular ones especially. Secondly, if the current of blood to one organ is checked, it accumulates in another. Hence colds, caught through ex- posure of the feet, also the suppression of the secretions. &c., so cfteu cause congestion. Thirdly, the vessels which bring back the blood — the veins — are sometimes in a condition unfit to answer their destination ; as, for instance, if they are already too full, if their power to re- ceive the blood and to propel it is lost or dimi- nished, or if they are prevented from performing their function by external pressure, or by tu- mors. Hence congestions are divided into active and passive ; those of the

arteries and those of the veins. Where the blood accumulates, the part becomes red and hot, the pulse beats more vio- lently, and the veins expand ; the part swells, and a feeling of sickness, pain, pressure, &c., comes on. The functions of the part change ; if the congestion is slight, they become more active. In higher degrees of congestion, and if it is continued for a long time, the functions are

checked, weakened, and sometimes entirely de- stroyed. Now, as every organ has its peculiar function, it follows that the symptoms of con- gestion, resting on these grounds, must be very different, according to the different organs in which it takes place. During the congestion of blood in one organ, the other organs exhibit symptoms of want of blood, viz., coldness, pale- ness diminution of size, and weakness. Con- gestion generally lasts but a short time ; but, if not early cured, and its return, which would otherwise be frequent, prevented, it is only the beginning of other diseases. Sometimes it ter- minates in bleed in<;, which is a remedy for it; sometimes it increases into inflammation ; some- times it becomes a chronic disease ; that is, the blood accumulates for a long time, and expands the veins; the" expansion becomes permanent, and the original excitement is succeeded by a state of torpidity and weakness, which is called stagnatio, or infarctus.

CONGIARUM, in antiquity, a largess or bounty of money given by the Roman emperors to the people, upon certain occasions, by the hands of certain officers called sequesters, or di- visores. Tiberius, Caligula, and Nero, stand in history among the most profuse in their congiarii to the people. Nero was the first who comme- morated his corruption by stamping the money with which he bribed the slaves of Rome with the image and superscription of baseness. The type of the medals or coins which represented, and were struck for the congiarii, exhibited the tyrant seated upon his suggestum, or chair, borne up by men, giving a tessara, or ticket.

CO'NGIARY, n. s. Lat. congiarium from con- gius, a measure of corn. A gift distributed to the Roman people or soldiery, originally in corn, afterwards in money.

CONGIUS, a liquid measure of the ancient Romans, containing one quarter of the amphora, one quarter of the urna, or six sextarii. The congius, in English measure, contains 2,070,676 solid inches; that is, seven pints 4942 solid inches.

CONGLA'CIATE, v. n. I Lat. conglaciare. CONGLACIA'TION, n. s. } To convert into ice; to effect congelation. The act of being converted into, the act of converting into, ice.

CONGLETON, a market-town of Cheshire, seated on the Dane. It has considerable manu- factories of silk, cotton, and leather gloves; with a market on Saturday. The town is go- verned by a mayor and six aldermen, and is ex- tremely clean and neat in its appearance. There is also a small but elegant chapel of ease. It is seven miles south of Macclesfield, and 164 north- west of London.

CO'NGLOBATE v. a. if adj.\ Lat. conglo CONGLO BE, v. a. I ˆre, from con

CO'NGLOBATELY, aav.] > and globus, a

CONGLOBA'TION, n .s. \ball. To col-

CONGLO'BULATE, v. n. J lect into a glo-

bular mass ; to aggregate into a hard ball ; to come together into around mass. Ine act < forming such a mass ; the mass itself. Dryden uses the adjective conglobate, with the accent on the second syllable : « were fixed congio bate v, his soul.'

Fluid are separated from the blood in the liver, and the other conglobate and conglomerate glands.*

Cheyne't Pliitosnphical Principles. For all their centre found, Hung to the goddess, and cohered aronnd : Not closer, orb in orb conglobed, are seen The buzzing bees about their dusky queen.

Pope's Dunciud.

Compressed and conglobated into one gross and gene- ral idea. Johnson. A number of them conglobulate together, by flying round and round. Id. CONGLOBATE GLANDS. See ANATOMY. CONGLO'MERATE, v. a. & adj.) Lat. con- CONGLOMERA'TION, n.s. $ glomerdre, from con and glomerare. To wind round, to form a bottom of thread, is the idea conveyed by the root of these words. The English verb also signifies to collect into a ball ; to intertwine sepa- rate fibres into one spherical mass ; to gather into masses. The meanings of the adjective and noun are obvious.

The beams of light, when they are multiplied and conglomerate, generate heat. Bacon's Natural History. The multiplication and conglomeration of sounds doth generate rarefaction of the air. Id.

The liver is one great conglomerated gland, com- posed of innumerable small glands, each of which con- sisteth of soft fibres, in a distinct or separate convolu- tion. Grew's Cosmologia. Fluids are separated in the liver, and the other con- globate and conglomerate glands.

Ckeyne's Philosophical Principles.

CONGLOMERATE FLOWERS are those growing on a branching foot-stalk, to which they are irre- gularly but closely connected. This mode of inflorescence is opposed to that in which the flowers are irregularly and loosely supported on their foot-stalks, hence termed a diffuse panicle. See PANICLE. The term is exemplified in se- veral species of the poa, fescue grass, and agrostis.

CONGLOMERATE GLANDS. See ANATOMY.

CONGLU'TIN ATE, v. a., v. n., & adj.~\ French

CONG LUTINA'TION, n.s. Iconglu-

COKGLU'TI NATIVE, adj. i finer ;

*CONGLUTINA'TOR, n.s. * It. con-*

glutinare ; Span, conglutinar ; Lat. conglutinare. The original meaning of conglutinale is, to glue together ; whence, to effect a reunion of parts ; to cause to adhere; to cement; to heal wounds; to unite by the intervention of a callus. Congluti- native remedies are conglutinators ; that is, reme- dies capable of making wounds unite, of pro- ducing conglutination.

Starch, which is nothing but the flower of bran, will make a clinging paste, the which will conr/lutinate some things. Sir W. Petty.

The cause is a temperate conglutination ; for both bodies are clammy and viscous, and do bridle the de- flux of humours to the hurts. Bacon's Natural History.

To this elongation of the fibres is owing the union or conglutination of parts separated by a wound.

Arbuthnot on Aliments.

The osteocolla is recommended as a conglutinator of broken bones. Woodward on Fossils.

CONGO, an extensive country in the south- west of Africa : it is bounded on the north by the river Zaire, or Ccngo, which separates it from Loango ;

and on the west by the Atlantic. The

interior limits of the country are, at present, un- certain ; the observations of our modern travellers having been, .principally, directed towards the exploration of the river Zaire, rather than to the extent of the country. It is supposed, however, to extend several hundred miles in every direction.

Angola and Benguela are situated to the south ; whilst the eastern frontier is stated to be com- posed of lofty and rugged mountains, inhabited by the savage tribe of the Giagas, who frequently make desolating incursions into the territory of Congo.

Before the expedition to explore the river Zaire, undertaken by captain Tuckey in 1816, we could scarcely be said to have any certain knowledge respecting the general appearance of the country. The missionaries, sent by the church of Rome, were, prior to this expedition, our only authorities, and their reports of the great splendor and civilisation of Congo have since been discovered to be much exaggerated. Cap- tain Tuckey found the country far from being highly cultivated. He states that the alluvial banks, indeed, as far up as Embomma are covered with luxuriant verdure ; but this is the effect of nature and not of cultivation. Higher up the river Zaire, he found bare mountains from 2000 to 3000 feet in height, composed chiefly of mica slate, sienite, and quartz ; the villages and culti- vated spots are, for the most part, situated in the ravines and tops of these mountains. Farther up still, the mountains open, and allow the river to flow in a wider channel. They are composed here of limestone and clay, and the greater part of the surface is fit for cultivation.

The vegetable productions of Congo appear to be ample, and, for several of the most valuable, it seems to have been indebted to the Portuguese. The large trees are only found in the valleys, or thinly sprinkled over the sides and summits of the hills ; those which principally characterise the landscape, and appear to be very general along the whole extent of the shores, are the adansonia, bombax pentandrum, anthoaleista, masanga of the natives (the genus related to cecropia), elseis Guiniensis, raphia rinifera, and pandanus coade- labrum. On the alluvial banks, the mangrove, mixed with the palm, the adansonia, and the bombax, with occasional clusters of the Egyptian papyrus, forms the grand feature of vegetation. The principal articles of food are maize, cassava, both sweet and bitter, two kinds of pulse, the cytisus cajaa, and a species of phaseolas, and ground nuts (arachis hypogaea). The common yam, and another species of dioscoxia, so bitter as to require four days boiling to free it from its pernicious qualities ; sugar-cane, capsicum, and tobacco, are among the alimentary plants of secondary importance. The principal fruits are the plantain, pine-apples, — the first a native of the East and the other of the

West Indies, pump kins, the papaw, limes, oranges, the tamarind, and a fruit about the size of a plum, called safa. The plant, however, of the most importance to the natives, is the elseis Gtriniensis, or oil-palm, which flourishes here as in all parts of Western Africa, and is, to the inhabitants of Congo, what the cocoa-tree is to many of the Asiatic islanders. From the juice of this tree they make their best

palm wine, a beverage which is found extremely pleasant and refreshing.

The fruits indigenous to Congo, are the anona Senegalensis, sarcocepholas, a species of cream- /ruit, chrysobolaras icaca, a species of ximenia, and another of antidesiva. Professor Smith, the celebrated botanist attached to the expedition already alluded to, enumerates 620 species and genera of plants, in his Herbarium, which he had collected in Congo ; of these only about 250 are absolutely new ; nearly an equal number flourish in other parts of equinoctial Africa : and about seventy are found in other regions within the tropics. No natural order, that is absolutely new, exists in Professor Smith's Herbarium, nor has one family been found peculiar to equinoctial Africa.

Like all other parts of this mighty continent, Congo abounds in wild animals ; among which may be enumerated lions, elephants, leopards, buffaloes, antelopes, wild-hogs, porcupines, and a great variety of monkeys, the principal species of which are of a large size, and have black faces. The rivers abound with those monsters, the hip- popotamus and the crocodile. The lower part of it contains also plenty of excellent fish. Domes- tic animals are but of few species and scarce. Those chiefly used for food, are hogs, goats, fowls, Muscovy ducks, and pigeons. They have also a few sheep, for the most part spotted, and having hair instead of wool.

Congo is exempted from many of the noxious insects, &c. which generally swarm in hot cli- mates. Their principal pests of this sort are bugs, fleas, and ants.

The vast and overwhelming armies, spoken of by the Catholic missionaries, Carli, Merolla, &c., have been discovered by captain Tuckey, to have existed only in the fertile brains of their histo- rians, unless we can conceive, that in the space of two centuries, pestilence, famine, and the slave trade, have swept not only them, but even their very memory away from their native shores. In- stead of the hosts of warrior s, which could be counted only by hundreds of thousands, the prince who can now rally to

his standard 200 troops, and furnish even half of these with mus- kets, becomes an object of terror and consterna- tion to all this part of Africa. According to the statements put forth by the missionaries already mentioned, the population of Congo would place it on a level with the most prosperous countries of Europe. Captain Tuckey, however, found the country but very thinly inhabited : the most considerable banza, or town, he visited, was Cooloo, which did not contain above 100 huts, and the population did not exceed 600. Em- bomma, another town, consisted of sixty huts, and 500 inhabitants ; and Inga, of seventy huts and 300 inhabitants. The principal town of the country is called Congo, and is situated about six days' journey in the interior.

The villages and towns of Congo are, gene- rally, placed amidst groves of palm, and the beautiful adansonia. Their huts are constructed with large mats, woven togethe\ by the fibres of plants, or a reedy kind of grass which flemishes here in great abundance. An habitation of this kind can be erected in the course of a few minutes,

and at so moderate an expense, that a few fowls or ducks are generally considered an equivalent for a house composed of six pieces. The dwel- lings of the chenoo or chief, are, however, more elaborately formed ; they consist of palm leaves very ingeniously matted together, and are, some— times, enclosed within a fence of reeds. Their household furniture, like that of all uncultivated tribes, is extremely simple. Their beds and baskets are formed solely from the leaves and fibres of the palm : gourds and calabashes form their bowls and bottles. They manufacture rude earthen vessels for cooking their food, and wooden spoons for eating it. Their only clothing is a piece of baft, or grass matting, bound round their loins; the women use rings of brass or iron, bracelets of beads, cowries, seeds of plants, or lions' teeth by way of ornament ; and so great is their love of finery, that but very few females are seen without having their arms, legs, or necks, graced with one or more of these articles.

The state of society in Congo, appears to be nearly the same as that which prevails amongst all negro nations ; though, in their moral and physical character, they ought perhaps to be .placed low in the scale of African civilisation. The Congoese maybe divided into five classes : — • the chenoo, and his family ; the mafooks, or col- lectors of the revenue; the foomoos, or yeomanry ; the fishermen and laborers; and, lastly, the slaves. The sovereignty of the chenoo is hereditary in the female line ; thus no son of the chenoo can suc- ceed his father unless his mother be of royal blood. The affia is little distinguished either by dress or accommodations from that of the subject :— a small staff of black wood, inlaid with lead or copper, is the official ensign of the chief. The daughters of the chenoo are allowed to choose their own husbands, over whom they become most absolute

mistresses, and can even extend their prerogative to the selling of a refractory spouse to slavery ; it will, therefore, be easily believed, that the honor of a royal alliance is a matter but of little emulation amongst the gallants of the Congoese court. There is a vast number of petty chiefs scattered throughout the territory, but all of these acknowledge a supremacy to the Blindy N'Congo, or general sovereign of the coun- try, who resides at Congo, which is most probably the St. Salvador of the Portuguese : — this city, however, has not been visited by any recent traveller.

The Congoese are of middle size ; their fea- tures are not so strongly marked, nor their color so deeply dyed, as those of the more northern tribes of negroes; and their physiognomy is said to express great openness, simplicity, and innocence. On Captain Tuckey's party first en- tering the river Zaire, they discovered a quantity of burnt human bones and sculls, hanging on the branches of some trees, which naturally led to the suspicion of the inhabitants being canni- bals ; it was subsequently found, however, that this was their place of public execution, and that nothing could be more abhorrent from their prac- tice than the disgusting enormity of eating human flesh ; it fact, it is a matter of great doubt, whether a negro cannibal at the present day exists. Indolence, the besetting vice of the

continent of Africa, appears to be their greatest hindrance to improvement. They make but little use of domestic animals for draught and agricul- ture. The women alone cultivate the land, carry the produce to market, range the forests to provide food and firing, and oftentimes, in their canoes, formed from the excavated trunks of the cotton-tree or bombax, skim the bosom of the most dangerous lakes to procure fish for their unnatural masters, while they supinely recline under the shade of the wide-spreading adansonia, the monarch of the forest wearing out the lazy hours stringing cowrie shells, or strumming on some musical instrument : or if they exert them- selves at all, it is in dancing by moonlight, or in- dolently sauntering about their habitations. They are represented, however, as lively and good natured, hospitable, and at all times ready to share their miserable pittance with the stranger or passing sojourner. They are also said to be very honest ; the rights of property are strictly observed, and the division is sometimes carried to so fine a point, that three, four, or six persons occasionally claim a right in a single fowl or pig. Every man in Congo has wives according to his degree or rank in society. The chenoo has as many as fifty, and some of

the mafooks from ten to twenty. The females belonging to the highest dignitaries were offered to captain Tuckey's party on terms, and in language the most dis- gustingly obscene, for the most trifling considera- tion. The ch'enoo himself estimated the virtue of any of his wives or daughters, simply at the rate of a few beads or a glass of rum. The females, on their part, did not appear averse to these arrangements, but manifested much indig natjon when the offers of their husbands or fathers were despised or rejected by the Europeans. It is but justice to presume, however, that this dis- regard of modesty is unknown in those parts where the European slave merchant has not in- truded ; for, as captain Tuckey advanced farther up the river, he met with no recurrence of this offensive custom. Adultery amongst the natives is punished by the slavery of both the offenders ; and, if one of the parties be the wife of a chenoo, the paramour is liable to suffer death. An atro- cious crime, singular from the simple form of their society, prevails amongst the Congoese ; it is that of poison ine. Amongst a people so little en- lightened, it is matter of no wonder that super- stition should be sp prevalent. The Portuguese missionary Carazzi, a Capuchin friar, staled the principal body of the natives to be good Ca- tholics ; but the English who have lately visited Congo, found but few or no vestiges of the benefits of that civilisation and conversion so much extolled by the Romish church.

At Loando, the natives exhibited their relics, rosaries or crosses ana Agnus Deis, jumbled to- gether with their domestic fetiches. The fetiche may,indeed,be said to form theironly religion, and there is nothing so vile in nature or art, that is not regarded by the negroes as fit for this potent charm against evil. The horn-hoof, hair, teeth, or bones, of the most savage animal that prowls through the forest; the feathers, claws, beaks, skulls, and bones, of the meanest bird that flies in the air; the shells and fins of fishes; the

heads or skins of the filthiest snakes or reptiles that crawl on the earth ; pieces of old copper? iron, wood, seeds of plants, are severally used to form a fetiche, and sometimes it consists of a mixture of them all. The priests are the usual artificers of these fetiches, and are said to derive considerable emolument from the sale of them. These charms are considered by the negroes as a protection against every danger ' flesh is heir to ;' and if it should so happen that the wearer perish, through the very means against which the fetiche had been adopted ; it is not for want of protective potency in the charm, but for some offence, real or imaginary, of which the pos- sessor has been guilty. See AFRICA.

CONGRATULATE, v. a. & n.v Fr. con

CONGRATULA'TION, n. s. I grutuler ,

CONGRA'TULANT, adj. \ Ital. con-

CONGRA'TULATOR, n. s. i gratulare ;

CONGRATULATORY, adj. J Span, con-

gratulor ; Lat. congratulari. To express joy to another that he has experienced any thing which contributes to his welfare ; to compliment on any fortunate event ; to rejoice in conjunction with ; to felicitate ones' self. It is the opposite of con- dole. Sometimes, says Johnson, it has the accusative case of the cause of joy, and to before the person. He might have added, that tins usage is obsolete.

He sent Hadoram his son to king David, to con- gratulate him , because he had fought against Hadare- zcr, and smitten him. 1 Chron. xviii. 10.

Nothing more fortunately auspicious could happen to us, at our first entrance upon the government, than such a conqratulator. Milton.

Forth rushed in haste the great consulting peers, Raised from the dark divan, and with like joy Congratulant approached him. Id. Paradise Lost.

I think the little I have enough, and do not desire to live higher, or die richer, than I am ; and there- fore you have reason rather to pity the folly, than congratulate the fortune, that engages me in the whirl- pool. Locke.

An ecclesiastical union within yourselves, I am rather ready to congratulate to you.

Spratt'i Sermons.

The subjects of England may congratulate to them- selves, that the nature of ˆur government, and the clemency of our king, secure us.

Dryden's Preface to Aurengzcbe.

I cannot but congratulate with my country, which hath outdone all Europe in advancing conversation.

Swift.

I congratulate our English tongue, that it has been enriched with words from all our neighbours.

Watts't Logick.

I must be tolerably sure, before I venture publicly to congratulate men upon

a blessing, that they have really received one. Burke.

The effect of liberty to individuals is, that they may do what they please ; we ought to see what it will please them to do, before we risque congratulations which may be soon turned into complaints. Id.

To iny inexprpssible surprise, I found them in a

sort of public capacity, by a congratulatory address,

giving an authoritative sanction to the proceedings of

the national assembly in France. Id.

Madam, a stranger's purpose in these lays

Is to congratulate and not to praise.

To give the creature the Creator's due

Were sin in me, and an offence to you. Cowpcr.

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Peace ensues,

But spurious and shortlived ; the puny child Of self-congratulating Pride, begot On fancied Innocence. Again he falls, And fights again ; but finds his best essay A presage ominous, portending still Its own dishonour by a worse relapse. Id.

With all my follies of youth, and, I fear, a few vires of manhood, still I congratulate myself on hav- ing had, in early days, religion strongly impressed on

The means of reduction by the fire, is but by con- gregation of homogeneal parts. Bacon.

Where the matter is most congregate, the cold is the greater. Id. Natural History.

The dry land, earth ; and the great receptacle Of congregated waters, he called seas ; And saw that it was good. Milttm'x Paradite Loit

Tis true (as the old proverb doth relate) Equals with equals often

congregate. Denham.

The practice of those that prefer houses before

my mind.

Burnt, churches, and a conventicle before the ccngregatimi.

All the cities you have taken, all the armies which retreated before your leaders, are but paltry subjects of self-congratulation, if your land divides against it- self, and your dragoons and executioners must be let loose against your fellow citizens.

Byron. Speech on the Frame-breaking Bill.

CONGRE'E. Fr. gre. To agree together; to unite harmoniously. Not in use.

For government,

Put into parts, doth keep in one consent, Congreeing in a full and natural close.

Shakspeare. Henry V.

To CONGRE'ET, v. n. From con and greet. To salute reciprocally. Not in use.

My office hath so far prevailed, That face to face, and royal eye to eye, You have congreeted. Shakspeare. Henry V.

CO'NGREGATE,v.a.,t;.n.& adj.~\ French CONGREGA'TION, n. s. {congreger;

CONGREGA'TIONAL, adj. £ Ital. con-

CONGRE'GATIOMSTS, n. s. J gregare ;

Span, congregar; Lat. congregare, from con and grex, a flock. To collect into one spot; to as- semble m numbers ; to meet. Congregation sig- nifies the act of collecting together; a collected mass of persons or things ; an assemblage of

South.

Heat congregates homogeneal bodies, and separates

heterogeneal ones. Newton's 0/iticks.

If those preachers who abound in epiphonemas

would look about them, they would find part of their

congregation out of countenance, and the other asleep.

Swift.

Every parish has a congregational or parochial pres- bytery for the affairs of its own circie. Warton. My subject is only general congregational psalmody.

Mason.

Ill fares the traveller now, and he that stalks In ponderous boots beside his reeking team. The wain goes heavily, impeded sore By congregated loads adhering close To the clogged wheels •, and in its sluggish pace Noiseless appears a moving hill of snow. Cowper. Compared with this, how poor religion's pride,

In all the pomp of method, and of art, When men display to congregations wide

Devotion's every grace, except the heart. Burn.*

Explore the caverns dark and drear Mantled around with deadly dew,

Where congregated vapours blue, Fired by the tapjr glimmering near, Bid dire explosion the deep realms invade.

Hudduford. CONGREGATION, in the Romish church, isprin-

persons who are met for the public worship of cipally used for assemblies of cardinals, ap-

God. Congregate is collected; compact; pointed by the pope, and distributed into cham-

closely pressed together. Congregational is bers, for the discharge of certain functions and

public; general; and, more commonly, apper- jurisdiction.

taining to an assembly of such Christians as hold CONGREGATION is also used for a society of

every congregation to be a separate and inde- religious cantoned out of an

order; and making

pendent church.

a subdivision of it. Such are the congregations

Take ye the sum of all the congregation of the chil- of the oratory of Cluuy> &c' amonS the Bene'

dren of Israel, after their families, by the house of their fathers, with the number of their names, every male by their polls. Numbers i. 2.

dictines.

CONGREGATIONALISTS, in ecclesiastical his- tory, is a name sometimes given to those Pro-

Than by conseil of his wife Prudence, this Meli- testants who reject all church government, ex- cept that of a single congregation, under the direction of one pastor, with deacons, assistants, or managers. It is equivalent to the modern term independents. CONGRESBURY, an ancient town of So-

beus let Gallon a great congregation of folk.

Chaucer. Cant. Tales.

Any multitude of Christian men congregated, may be termed by the name of a church. Hooker.

The words which the minister first pronounceth, mersetshire, situated under the Mendip Hills

ld- six miles from Axbridge, and 134J from London. It is said to derive its name ftom St. Conger, the son of an eastern emperor, who founded in this place a cell for twelve canons. It was for- merly a market town, but now ranks only as a village.

CO'NGRESS, 7i. s. } Lat. congressus. A CONGR'ESSION, n. s. £ coming together ; shock ; CONGR'ESSIVE, arfj. 5 conflict; a meeting of diplomatists, to settle affairs between different nations ; the legislature of the North American

the whole congregation shall repeat after him

He rails,

Even there where merchants most do congregate, On me, my bargains.

Shakspeare. Merchant of Venice. This brave overchauging firmament appears no other thing to me, than a foul and pestilent congrega- tion of vapours. Id Tempests themselves, high seas, and howling

winds,

The guttered rocks and congregated sands, As having sense of beauty, do omit Their mortal natures.

*lKLllVJlJr> « lilt iv^»o*i**.u« * _*

Id. Othello, states. Congression is synonymous with con

These waters were afterwards congregated, and gress, in the first of the forcing senses. Con- called the sea. Raleigh's Hlttnry of the World, gressive denotes coming togemer. VOL. VI

If it be understood of sexes conjoined, all plants are female ; and if of disjoined and congressive gene- ration, there is no male or female in them.

Browne's Vulgar Errours.

Here Pallas urges on, and Lausus there ; Their congrest in the field great Jove withstands, Both doomed to fall, but fall by greater hands.

Dryden'i JEnnd.

We sent out a solemn embassy across the Atlantic Ocean, to lay the crown, the peerage, the commons of Great Britain, at the feet of the American con- gress. That our disgrace might want no sort of brightening and burnishing, observe who they were that composed this famous embassy. Burke.

SIR BENJ. In short, her face resembles a table d'hote at Spa — where no two guests are of a nation.

CRAIST. Or, a congress at the close of a general war — wherein all the members, even to her eyes, ap- pear to have a different interest, and her nose and chin are the only parties like to join issue.

Sheridan. School for Scandal.

There is, therefore, no absurdity in believing that the most simple animals and vegetables may be pro- duced by the congress of the parts of decomposing organic matter. Darwin,

CONGRESS, AMERICAN, the legislative power of the United States, consisting of a senate and house of representatives. See AMERICA.

CONGREVE (William), a younger brother of an ancient family in Staffordshire. His father was steward of the earl of Burlington's estate in Ireland, where our author was born in 1672. When he first came to England he began to study the law, but his bias was tc"°ards polite li- terature and poetry. His first performance was a novel, entitled Incognita, or Love and Duty Reconciled. He soon afterwards began his co- medy of the Old Bachelor, the composition of which had been his amusement during a slow recovery from a fit of illness. When brought on the stage, in 1693, it met with such universal approbation, that Congreve, though only nine- teen years of age, was hailed as the support of the declining stage, and obtained the decided patron- age of lord Halifax. In 1694 he produced the Double Dealer; which, however, did not meet with so much success as his former play. In 1695, when Betterton opened the theatre in Lincoln's-Inn- Fields, Congreve, joining with him, gave him his comedy of Love for Love, which was so well received, that Betterton immediately of- fered the author a share in the management of the house, on condition of his furnishing to it one play yearly. This offer he accepted ; but, whe- ther through indolence or fastidiousness, his Mourning Bride did not come out till 1697, nor his Way of the World till 1699. The indifferent success this last met with, completed that disgust to the theatre, which a long contest with Jeremy Collier, who had attacked the immoralities of some of his pieces, had begun, and he determined never more to write for the stage. It is pro- bable, however, that he might not so soon have given way to this disgust, had not the easiness of his circumstances rendered him totally indepen- dent of the caprice of the town. The earl of Halifax had made him one of the commissioners far licensing hackney-coaches; and soon after, irtistowed on him a post in the customs worth £600 per annum. In 1718 he was appointed

secretary of Jamaica; so that his income, at this period, was upwards of £1200 a-year, and the last twenty years of his life were spent in ease and retirement. When Voltaire was in England, he waited upon Mr. Congreve, and passed some compliments upon the merit of his works. Con- greve tbauked him ; but said that he did not choose to be considered as an author, but only as a private gentleman. Voltaire, with the rea- diness so peculiar to him, replied, that if he had never been anything but a private

gentleman, in all probability he had never been troubled with that visit. He died January 19th, 1729, aged fifty-seven ; and, on the 26th following, was bu- ried in Westminster Abbey.

CONGRU'E, v. n. & adj.ˆ Lat. congruere.

CONGRU'ENCE, n.s. I ' Tipavoc, grus ; a

c

CONGRU'ENCY, n. s. CONGRI/ENT, adj.

CoNGRU'lTY, n. S.

CO'NGRUOUS, adj. CO'NGRUOUSLY, adv. CO'NGRUMENT, n.s.

crane ; unde con- \gruo; a gruibus rtractum ; quae se nonsegregant, sive cum volent, sive J cum pascantur; to

come together in flocks, like cranes, who never separate ; also to agree ; to unite.' The verb, which is not in use, means to be in agreement, or consistent with; suitable to. Congruity is fitness; correspondence; consistency. The same idea is common to all the kindred words. Con- grument, which Johnson has admitted into his dictionary, Mi. Todd believes, and apparently with reason, to be a press error in some of the editions of Ben Jonson's works. He agrees with Mr. Whalley in reading congruent, and this reading undoubtedly improves the passage.

With what congruity doth the church of Rome deny, that her enemies do at all appertain to the church of Christ ? Hooker.

A whole sentence may fail of its congruity by want- ing one particle. Sidney. Our sovereign process imports at full,

By letters congruing to that effect,

The present death of Hamlet. Shahspeare. Hamlet.

The congrument (congruent) and harmonious fitting of periods in a sentence, hath almost the fastening and force of knitting and connexion.

Ben Jonson's Discovery. For humble grammar first doth set the parts

Of congruent and well-according speech ;

Which rhetoric, whose state the clouds doth reach,

And heavenly poetry, do forward lead. Dacies.

This conjecture is to be regarded, because, con- gruously unto it, one having warmed the bladder, found it then lighter than the opposite weight.

Boyle's Spring of the Air.

*Congruity of opinions to our natural constitution, is one great incentive to their reception. Glanoille^*

The existence of God is so many ways manifest, and the obedience we owe him so congruous to reason t that the light of a great part of mankind give testi mony lo the law of nature. Locke ^

Wit lying most in the assemblage of ideas, and putting those together with quickness and variety wherein can be found any resemblance or congruity, thereby to make up pleasant pictures, and agreeable visions, in the fancy : judgment, on the contrary, lies quite on the other side, in separating carefully, one from another, ideas wherein can be found the least diiterence, thereby to avoid being misled by simili- tude, and by affinity, to take one thing foi another.

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Motives that address themselves to our reason, are fittest to be employed upon reasonable creatures : it is no ways congruous, that God should be always fright- ening men into an acknowledgement of the truth.

A tterbury.

The faculty is infinite, the object infinite, and they infinitely congruous to one another.

Cheyne's Philosophical Principles.

These planes were so separated as to move upon a common side of the congruent squares, as an axis. Id

It is an act of reasoning of which we are uncon- scious, except by its effects in preserving the congruity of our ideas. Darwin.

CONI, a considerable town of Italy, in Pied- mont, and a bishop's see ; seated at the con- fluence of the Gesso and the Stura. It is said to have

been first founded in 1520, during the pontificate of Celistus II. The inhabitants being divided into two factions, it surrendered to the French in 1641, but restored to Savoy soon after. It was again besieged by them in 1744, without being taken; but, on the 26th April,

1796, it surrendered to the republican troops under Buonaparte, previous to the peace with the king of Sardinia. It is strong by nature and art, and its trade is considerable, being the re- pository for all the traffic between Turin and Nice, and Lombardy, Switzerland, and Germany. Its principal articles of commerce are corn and hemp ; but silk is the only manufacture. It lies thirty-five miles south of Turin, and thirty-four north of Nice, and has a strong citadel. Po- pulation about 10,000.

CONICA SCABRITIES. See BOTANY.

CONICHTIIYODONTES, or PLECTRO- NIT.S, in natural history, the fossile teeth of fishes, so called from their resembling a cock's spur. They are of an oblong conic figure, broad at the base, narrow at the point, and a little crooked, and from one-tenth of an inch to two inches long. They are often found in Eng- land, in strata of stone or clay, with part of the jaw-bones ; but it is not certain to what fish they belong.

CONIC SECTIONS.

INTRODUCTION.

CON re SECTIONS are the figures formed by cutting a cone by a plane. They are five in number, corresponding to the different positions of the cutting plane ; viz. a triangle, a circle, an ellipse, a parabola, and an hyperbola. The last three of these only are peculiarly called conic sections.

The more ancient mathematicians, before the time of Apollonius Pergaeus, admitted only the right cone into their geometry, and they supposed a section made of it by a plane perpendicular to one of its sides ; and as the vertical angle of a right cone may be either right, acute, or obtuse, this method of cutting these several cones pro- duced all the three conic sections. The parabola was called the section of a right angled cone, the ellipse the section of the acute angled cone, and the hyperbola, the section of the obtuse angled cone. But Apollonius, who, on account of his writings on this subject, obtained the title of the Great Geometrician, observed that these sections might be obtained in every cone, both oblique and right, and that they depended on the dif- ferent inclinations of the section to the cone itself.

There have been two methods employed in treating of the conic sections : by the one they are considered as cut out of the solid cone, which is the

method of the ancients, and of some of the most elegant writers of the moderns ; and by the other method certain curves are defined, either from some property by which any number of points may be found in them, or else by which they may be described mechanically upon a plane ; or they are defined by means of an alge- braical equation, and in either case these curves are shown to have the very same properties as those which are formed by the intersections of a plane and coue. Each of these methods bus its

advantage ; although some of the demonstrations of writers who have treated the subject geome- trically, by the latter, be short and perspicuous, yet there are others, upon which depend some of the principal properties, that are tedious and dif- ficult. The demonstrations of writers who have pursued the first method are free from this objec- tion, being generally plain and concise ; but they have been obliged to introduce so many previous propositions concerning the properties of lines touching and cutting conical surfaces, in order to arrive at the principal properties of the three sections, that it requires a considerable portion of time and resolution for a beginner in mathema- tical studies to go through them.

Some writers, who have treated the subject al- gebraically, have reduced the whole into a nar- rower compass ; but, in their eagerness to avoid prolixity, they have fallen into another more ex- ceptionable fault. The method in which they have deduced some of the properties, particularly the relations of the abscissae and ordinates, is extremely operose and inelegant ; each step in the process is so little connected with the pre- ceding one, that it is scarcely possible to retain them in the memory.

The conic sections are of great use in physical, and plane, astronomy, as well as in all the phy- sico-mathematical sciences, and, therefore, they have been much cultivated ever since their great importance in these sciences was known. The abbe Boscovich has deduced the properties of the conic sections in a very elegant manner from a property common to them all, and the same method has also been followed by the Rev. T. Newton, of Jesus College, Cambridge, in a very neat treatise upon the subject, published in 1794. We shall now proceed to demonstrate some of the most material properties o» these figures, availing ourselves chiefly of the work of the last mentioned ingenious writer.

‘L 1

SECT.). — OF THE RELATION BETWEEN THE ABSCISS.S AND ORUINATES IN ALL THE SEC- TIONS. PROPERTIES OF TANGENTS DRAWN TO THE CURVES, &c.

DEFINITIONS. See plate I. fig. 1, 2.

I. Let a point, S, be assumed anywhere with- out a straight line DX, given by pos'tion, and let a point P be supposed to move always in such a manner, that PS, its distance from the given point, may be to P E, its distance from the line D X, in a given ratio, the curve described by the point P is called a conic section ; which will be a parabola, an ellipse, or an hyperbola, according as PS is equal to, less, or greater than PE.

II. The indefinite straight line, DX, is called the directrix.

III. The point S is called the focus.

IV. The given ratio of S P to P E, is called the determining ratio.

V. If a line S D be drawn through the focus, perpendicular to the directrix, which is produced indefinitely, it is called the axis of the conic sec- tion.

VI. The point A, where the axis meets the curve, is called the vertex.

VII. A straight line LST, drawn through the focus parallel to the directrix, and terminated by the curve in the points L and T, is called the principal parameter, or the latus rectum.

COROLLARY 1. Fig. 2. S P being greater than PE in the hyperbola, two curves will be des- cribed, one on each side of the directrix ; which are called opposite hyperbolas.

COR. 2. When the line S P comes into the position SAD, S P P E will be equal to S A, AD; therefore S A is to AD in the determining ratio.

COR. 3. When S P comes into the position S L, or ST, the distance of P from the directrix will be equal to SD, and SL or ST will be to SD in the determining ratio, therefore LS — ST.

COR. 4. The latus rectum in the parabola is equal to twice the distance of the focus from the directrix, or to four times its distance from the vertex. For S L = S D, and S A = AB, there- fore LT = 2 S D = 4 S A.

PROPOSITION I. Fig. 3, 4, 5.

If two straight lines, DQ, I)q, be drawn from the point D, where the axis meets the directrix, through L and T, the extremities of the latus rectum,

which are produced both ways in the hyperbola ; and through any point P in the conic section, a line Q Pp be drawn parallel to the directrix, meeting DL and DT in Q and q ; the segment QN, which is intercepted between either of the lines and the axis, will be equal to S P, the distance of P from the focus.

The triangles D N Q, D S L, are similar, there- fore NQ ; ND :: SL ; SD, (that is Cor. 3. Def.) : ; S P i N D. Hence N Q = S P, and in the same manner it may be proved that N q = Sp.

COR. 1. If K AG be drawn through the vertex, parallel to the directrix, S A will be equal to AK or AG.

COR. 2. The lines DQ, Dq, touch the conic section lu the points L and T. For the triangle SN P being right angled, S P or Q N, is always

greater than PN, except when P is at L, where they coincide, therefore DQ meets the curve only in one point L. In like manner it may be shown that D q touches the curve at T.

PROP. II. Fig. 3, 4, 5.

If from the point G, where the straight line K G, which is drawn through the vertex, parallel to the directrix, meets either of the tangents D Q, D q, a line G R be drawn through the focus S, and produced both ways in the hyperbola, it will be parallel to the other tangent D Q in the para- bola ; it will meet it somewhere in g in the di- rection G S g in the ellipse, and in the opposite direction in the hyperbola.

Let SG meet the directrix in X. The triangles SAG, SDX,are similar, now S A — A G, Cor. 1. Prop. 1, therefore S D — DX, but in the para- bola, fig. 3, S L •=. D S, therefore S L is equal and parallel to D X ; and consequently X S is equal and parallel to D L. In the ellipse, fig. 4, S L is less than SD or DX, and therefore the lines DL, XS, must meet when produced in the di- rection XGS. In the hyperbola, fig. 5, SL is greater than SD or DX, and therefore the lines must meet when reduced in the direction SGX.

COR. 1. Because the triangles GAS, SNR, are similar, S N will be equal to N R.

COR. 2. Fig. 4, 5. Hence where Q coincides with g, in the ellipse or opposite hyperbola, QN will be equal to g M or S M ; therefore S P will be equal to SN ; and therefore SP will coincide with S N, and the curve will meet the axis in the point M.

COR. 3. Hence the whole ellipse, fig. 4, is con- tained between the lines G K, g k, on one side of the directrix.

COR. 4. In the parabola, fig. 3, N Q being always greater than N R, except at the vertex, S P is greater than S N ; therefore the curve will meet the axis only in one point A, and it will extend without limit on one side of the directrix.

COR. 5. In the hyperbola, fig. a, N Q being greater than NR, except at A and M, SP is greater than S N, and the two curves will be ex- tended without limit, on opposite sides of the directrix.

DEFINITIONS. Fig. 4, 5.

VIII. The tangents DLQ, DT?, which are drawn through the extremities of the latus rectum, are called focal tangents.

IX. The straight line AM, in the ellipse and hyperbola, is called the transverse axis, or the axis major.

X. If the transverse axis be bisected in C, the point C is called the centre of the ellipse or hy- perbola.

XI. If a line BC 6, which is bisected in C, be drawn perpendicular to the transverse axis, and C B, C b, be each a mean proportional between SA, SM, the segments of the axis between the focus and the vertices, BC6 is called the conju- gate axis, or axis minor.

XII. A line PNp, drawn through any point N, in the axis parallel to the tangent KG, or per- pendicular to the axis, and terminated by the curve at P and p, is called an ordinate to the axis.

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XIII. And AN the segment of the axis, inter- cepted between the ordinate

and the vertex, in all the sections, as also the other segment N M in the ellipse and hyperbola, is called an abscissa.

XIV. Any line passing through the centre of an ellipse or hyperbola, and terminated both ways by the curve in the former, but by the op- posite curves in the latter, is called a diameter.

XV. A line drawn through any point in the parabola parallel to the axis, is called a diameter of the parabola.

XVI. Any point where the diameter meets the curve is called a vertex to that diameter.

PROP. III. Fig. 3, 4, 5.

The axis bisects all its ordinates, and divides the conic section into two equal and similar parts.

Let P N p be any ordinate, meeting the axis in N. Join SP, Sp. Because SP = Sp, Prop. I. and S N is common to the two right angled tri- angles S N P, S N p, therefore N p r= N P. And because all the ordinates are bisected, if the curve A.T p be turned round upon the axis AN, and placed upon ALP, all the points p will coincide with the points P, and the curve ATp with the curve ALP.

PROP. IV. Fig. 3.

The square of the semi-ordinate to the axis in the parabola, is equal to the rectangle under the latus rectum and the abscissa.

Because the line Q q is bisected in N, Q R. R9 + RN'=QN2 = (by Prop. I.) PS2=: PN' + NS'rz: (Cor. 1, Prop. II.) PN2-f NR'. Therefore QR-R9 = P Nz. But QR = SL, and R? = RN + Ng = (Because S N = NR, and ND? is half a right angle) SN +ND = 2NA. Therefore QR-R 9 = 2 A N-SL= AN- LT, and therefore P W — AN LT.

COR. 1. The latus rectum being constant, the abscissa varies as the square of the ordinate.

COR. 2. The parabola recedes from the axis without limit. For the abscissa, and therefore the square of the semi-ordinate, increases with- out limit.

COR. 3. Any line which is drawn parallel to the axis of the parabola, can meet the curve in one point only. For, if it were supposed to meet the curve in more points than one, the semi- ordinates drawn through the points of intersection would be equal, when the abscissae are unequal, which is

impossible.

LEMMA I. Fig. 6.

If four straight lines be proportionals, and any other fo'ur proportionals, the rectangle under tne first and fifth is, to the rectangle under the second and sixth, as the rectangle under the third and seventh to the rectangle under the fourth and eighth.

LetAB: CD::EF:GH

and BI : DK::FL: HM, and let AI, C K, EL,GM, be rectangles, then A I : CK : : EL : G M. For in D K, H M, produced if necessary, take DN, HO, such, that AB : CD : : DN : BI, and EF : GH : : HO : FL, and complete the rectangles CN, GO, then CN = Aland GO= EL ButAB : CD : : EF: GH :: DN : BI, therefore DN : BI : : EF : GH : :

H () : F L. But BI : D K : : F L : II M ; there- fore D N : D K :: H () : H M. Because C N : CK :: DN : D K, and GO : GM :: IK) : H M ; therefore, C N : C K : : G O : G M, and therefore, A I : C K : : E L : G M.

COK. If A, B, C, and D, be four straight lines, and A : B : : C : D, then A2 : B2 : : C : D*.*

PROP. V. Fig. 4, 5.

The square of the semi-ordinate to the axis in the ellipse and hyperbola is, to the rectangle under the abscissae, as the square of the conjugate axis to the square of the transverse axis.

Through the point G, draw GVW in the ellipse, and V G W V in the two hyperbolas par- allel to AM. Then, because the lines K A G, Q Ny, g M/c, are parallel.

QR : KG::gR:gG: : VW:GW-.:NM: AM, and R N-N M : A M2. But it may be proved, as in the last proposition, that Q R-Rˆ•=. P N2, and because G K — 2 S A, and g k — 2SM, therefore KG-/cg = 4 AS'S M — (by Def. 11.) 4 B C» = B62. Therefore, P N» : Bb : : AN'N M : A M2, and alternately, P N» : A N-N M : : B 6′ : A M2.*

COR. 1. Because AM, Eb, are bisected in C,

PNS : AN-NM::BC' : AC2.

COR. 2. The square of the semi-ordinate varies as the rectangle under the abscissae.

COR. 3. The conjugate axis in the ellipse is terminated by the curve; for, when the ordinate passes through the centre, the rectangle under the abscissae is equal to the square of half the trans- verse axis, and therefore the square of the semi- ordinate is equal to the square of half the conjugate axis, and the ordinate is equal to the conjugate axis.

COR. 4. The two hyperbolas recede from the axis without limit ; for the abscissae, and there- fore the square of the ordinate, increase without limit.

COR. 5. Those ordinates which are at equal distances from the centre of the ellipse, and the two hyperbolas are equal ; and those which are nearer to the centre are greater in the ellipse, and less in the hyperbola, than those which ate more remote.

COR. 6. Any line which is drawn parallel to the axis of the hyperbola will cut each of the opposite curves only in one point ; for, if it be supposed to cut either of the curves in more points than one, the ordinates which are drawn through the points of intersection would be equal, when the distances from the centre are unequal.

PROP. VI. Fig. 4, 5.

The latus rectum of the ellipse and hyperbola is a third proportional to the transverse and con-

Co, 1, Prop. V. AC' I BC« .' AS-SM, or BC» : SL'; therefore A C : B C ••BC • SLandAM : B6'.:B6 ! LT. "CoR. Hence A N-N M : PN2 : : AM : IT, for AM : LT : : AM2 : A62 • : AN'NM : PN»

PROP. VII. Fig. 7, 8.

The square of half the conjugate axis, in the ellipse and hyperbola, is equal to the difference of the squares of half the transverse axis, and the distance of the focus from the centre.

Because A M is bisected in C, the difference of the squares of AC and S C is equal to the rectangle ASM, that is, (Def. 11,) to the square of BC.

COR. 1. Fig. 7. If a line, S B, be drawn from the focus of the ellipse to the vertex of the con- jugate axis, it will be equal to A C, half the trans- verse axis.

COR. 2. Fig. 8. If a line, A B, be drawn joining the vertices of the axes of a hyperbola, it will be equal to C S, the distance of the focus from the centre.

PROP. VIII. Fig. 9, 10.

The conjugate axis bisects all lines drawn parallel to the transverse axis, which are termi- nated by the ellipse, and by the opposite hyper- bolas. Those lines which are equally distant from the centre are equal ; and those which are nearer to the centre are greater in the ellipse, and less in the hyperbola, than those which are more remote.

Take C N any distance from the centre, between C and A in the ellipse, and in C A produced in the hyperbola. Take C R =. C N, and draw the ordmates PNˆ, QRg; join PQ, pq, meeting B b in n and r. Because Pp and Q q are equal, Cor. 5, Prop. V., and they are bisected in N and R, the lines P Q, N R, p q, are equal and parallel, and because P n pr are equal to N C, and Q n q r equal to R C, or N C, P Q, p q, are bisected in n and r, and they are at equal distances from the centre, because Cn Cr are equal to P N N/>. Lastly, as Cn decreases P N decreases, and there- fore C N, Cor. 5, Prop. V., increases in the el- lipse, and decreases in the hyperbola; but Pn is equal to C N, P n therefore increases in the former and decreases in the latter, as C n, its distance from C, decreases.

COR. 1. The conjugate axis divides the ell.pse into two equal and similar parts ; the two jppo- site hyperbolas are equal and similar : and the ellipse and hyperbola have each of them another focus and directrix, which have the same proper- ties as the former. Take CHzrCS, andCrfn C D ; through d draw x de perpendicular to C d, meeting P Q, p q, in e and x, and join II Q. Then if the whole figure, n Q M q r, be turned round upon the axis B 6, and placed upon nP Apr, 7iQ rq will coincide with n P rp, and all the points Q q in the curve Q M q, with all the points P p in PA. p. The straight line xde will also coincide with XDE, the point H with S, and the lines H Q, Q e with the lines S P, P E : therefore H Q is always to Qe in the ratio of S P toPE.

COR. 2. Suppose P Q, fig. 9, which is always parallel to A M, to move from the centre towards B, the points P, Q, will coincide at B, and the line E P Q will become a tangent to the ellipse ; tnerefore the ordinates to the con- jugate axis are parallel to the tangent at its vertex.

PROP. IX. Fig. 9.

The square of the semi-ordinate to the conjugate axis, in the ellipse, is to the rectangle under the abscissae as the square of the transverse axis to the square of the conjugate axis.

For PnQ, being parallel to AM, is perpen- dicular to B 6, and it is bisected in n ; by the last Prop, it is therefore an ordinate to B b, and by Prop. V. PN2, or CN' : BC2 : : AN'NM

: A C2, and by division B n-n b : B C2 : : C N2 or P N2 : AC2, and by alternation and in- version Pna : En-nb : : AC2 : BC2 : : AM : B62.*

PROP. X. Fig. 9, 10.

The transverse axis, in the ellipse and hyper- bola, is to the distances between the directrixes in the determining ratio.

For S A : A D : : S M : M D, and alternately S A : S M : : A D : M D, therefore, by composition in the ellipse and division in the hyperbola,

AM : SA : : Dd : A D, and alternately, AM : Dd : : SA : AD, that is in the determining ratio.

COR. 1 Hence AC is to CD in the deter- mining ratio.

COR. 2. The distance between the foci is to the transverse axis in the determining ratio.

For S M : M D : : S A : A D : : H M : A D, and alternately, S M : H M : : M D : A D, and by division in the ellipse and composition of the hyperbola, S H : H M : : A M : A D, and alternately, S H : AM : : HM : AD : : SA : AD.

COR. 3. Hence C S, C A, and C D are con- tinual proportionals.

PROP. XI. Fig. 7, 8.

All the diameters of an ellipse or hyperbola are bisected in the centre.

From any point, P, in the curve draw PC to the centre, and P N perpendicular to the axis. Take C n — C N ; and draw n G parallel to N P, but on the other side of the axis, let it meet the curve in G, and join C G. Then, because Cn — C N, the semi-ordinates G n, P N, will be equal, Cor. 5, Prop. V., and the angles at N and n are right angles, therefore the triangles C N P, C n G, are equal, therefore CG— CP, and the angle n C G is equal to N C P, hence it follows that G C P is a straight line which is bisected at C. PROP. XII. Fig. 17, 18, Plate XVII.

If, from any point in the ellipse or hyperbola, two straight lines be drawn to the foci, the sum of these lines in the ellipse, and their difference in the hyperbola, is equal to the transverse axis.

Let P be any point in the ellipse or hyperbola, and let S and H be the two foci. Join PS, PH, and through P draw E P e, parallel to the axis, meeting the directrixes in E and e. Then S P will be to PE, and HP to PC, in the deter- mining ratio, and alternately S P : H P : : P E : Pe, therefore, in fig. 17, S P + H P, and SP — HP, in fig. 18, is to SP as Ee or Ddis to PE; and alternately, SP ± PH : Dd : : SP:PE::AM:Drf, Prop. X., therefore in the ellipse S P + P H, but in the hyperbola S P — P H — A M, the transverse axis.

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DBF. XVII. Fig. 11, Plate II. If from the cenfe C, at the distance C A, half the transverse axis, a circle be described, cutting the directrix of the hyperbola in the points H, h, and lines be drawn from the centre through the points of intersection, these lines are called the asymptotes.

PROP. XIII. Fig. 11.

If lines S H, SA, drawn from the focus S to the points H, h, in which the asymptotes cut the directrix, they will be perpendicular to the asymptotes; and these lines, as also A G, A a, the segments of the tangents at the vertex, which is intercepted between the asymptotes, are each equal to half the conjugate axis.

For, Cor. 3, Prop. X., CS : C A : : C A : CD, that is, CS : CH :: CH : CDjnowthe angle H C S is common to the two triangles C H D, C S H, therefore these triangles are similar and the angle CHS = CDHna right angle. In the same way it may be proved that CAS is a right angle.

Again, SH2 = SC2 — CH8 — SC2 — CA — CB2 by Prop. VII ; therefore S H = C B, in the same way it may be proved that S h = C B ; and because C H — C A, and C H S, C A a, are right angles, and the angle H C S is common to the triangles SHC, a AC, these triangles are equal, and Aa = SH = BC.*

COR. 1. Radius is to the sine of the angle contained by the asymptote and directrix in the determining ratio ; for C A or C H is to C D in the same ratio, and C II : CD : : radius : sine CHD.

COR. 2. If a line P G, fig. 12, be drawn from any point P in the nyperbola,

or in the opposite curve, parallel to the asymptote, meeting the directrix in G, P G will be equal to PS. Draw P E perpendicular to the directrix ; and because the angle P G E r: C H D, P G is to P E in the determining ratio, or as S P to P E, therefore PG = PS.

PROP. XIV. Fig. 12.

The asymptotes never meet the curve, but any other line drawn parallel to an asymptote will meet one of the hyperbolas.

For if it be possible, let the asymptote meet the curve in the point R. Join R S, and draw R N perpendicular to the directrix. Then by Cor. 1, last Prop., H R is to R N in the determining ra- tio or as S R to R N, therefore R S = R H, and the angle R S H = R H S ; which is impossible, for by last Prop. R H S is a right angle. In the same way it may be proved that it cannot meet the opposite curve. Let any other line G P be drawn parallel to the asymptote ; and first let it be nearer to the focus. Join S G, and produce it to meet the asymptote C H in I ; then the angle S G P = S I H, which is less than S H R, a right angle ; therefore, if G S P be made equal to S G P, S P G P will meet somewhere in P, which is a point in the curve. For draw P E perpendicular to the directrix, and the angle P G E being equal to C II D, P G is to P E in the determining ratio; therefore SPis to PE ia the same ratic, and P is a point in the hy- perbola.

Secondly, let gp be drawn parallel to the asymptote, at a greater distance from the focus. Join Sg, meeting HC in i; the angle Sgp = S»H, which is less than a right angle; if there- fore gSp be made equal to Sgp, the lines Sp, gp, will meet when produced in some point, p, which is in the opposite hyperbola ; for the angle pg e being equal to C H D, p g is to p e, or S P is to pe in the determining ratio, therefore p is a point in the curve.

COR. Hence, if any line be drawn through the centre of an hoperbola within the angle con- tained by the asymptotes, it will meet both the curves.

DEFINITIONS. Fig. 11.

XVIII. If A M be the transverse axis and B b the conjugate axis of two opposite hyperbolas, and other two hyperbolas be described, of which the transverse axis is B b, and conjugate axis AM, these hyperbolas are said to be conjugate to the former.

XIX. When the two axes are equal, the hy- perbolas are said to equilateral.

PROP. XV. Fig. 11.

The asymptotes are diagonals of the rectangle, which is made by drawing

tangents through the vertices of the four hyperbolas.

Let the tangents G A a, I M i, which are drawn through the vertices of the transverse axis, meet the asymptotes in G, a, and I, i. Join I B, G B, as also a b, i b. The triangles M C I, A C a, are equal, for A C = C M, the angle M C I = A C a, and C M I = C A a, therefore M I = A a, which is equal to C B, Prop. XIII. In like manner it may be proved that M i = C 6 = C B ; therefore I B, B G, are equal and parallel to M C, C A, the angles I B C, G B C, are each a right angle, and IBG is one straight line, which is equal and parallel to MA. For the same reason iba is one straight line, which is equal and parallel to M A ; and because the lines IBG, iba, are perpendicular to the axis B C 6, they are tangents to the conjugate hyperbolas, and I G a i is a rect- angle of which the asymptotes I a, G i, are the diagonals.

COR. 1. The asymptotes G C i, I C a, are also asymptotes to the conjugate hyperbolas. For B I — B G zz C A, which is the semi-conjugate axis to the hyperbolas L B R, Ibr.

COR. 2. If the hyperbolas be equilateral, the asymptotes will be perpendicular to each other. PROP. XVI. Fig. 13, 14, 15.

If a straight line P p, which cuts a conic sec- tion, or opposite sections, into two points P,p, meets the directrix in H, and a right line H ST be drawn through the focus, and S P, Sp, be joined ; the angle P S H will be equal to pS T.

Draw pT parallel to P S, and let it meet H S in T ; and draw P E, p e, perpendicular to the directrix. The triangles H P E, Hpe, are similar, asalsoHSP,HTp,andSP:PE::Sp:pe;and alternately SP : Sp : :PE :pe : : HP : Up : j jSP :pT, therefore Sp = Tp, and the angle pb 1 = pTS = PSH.

COR. 1. When P and p coincide, fig. 13, lo, or when II P becomes a tangent to the conic sec- tion, S P will coincide with Sp, and the angles P S H, p S T will be right angles.

COR. 2. Hence if a line S P be drawn from the focus to any point P in a conic section, fig. 16, and S H be drawn perpendicular to S P, meeting the directrix in H, and H P be joined, it will touch the conic section in P.

COR. 3. It is evident from this proposition, that a straight line cannot cut a conic section in more points than two.

PPO?. XVII., Fig. 16.

If a tangent be drawn to any point in the para- bola, it will bisect the angle contained by the two straight lines drawn from the point of con- tact, one to the focus, and the other to the direc- trix.

Let P H which touches the parabola at P meet the directrix in H. Join S P, S H, and draw P E perpendicular to the directrix. The angle S P E is bisected by P H. For S P = P E and P H is common to the triangles P S H, E P H ; and P S H, PEH are right angles, therefore the triangles SPH, EPH, are similar, and the angles SPH — EPH.

COR. 1. Hence if a straight line PH bisects the angle S P E, it will be a tangent to the para- bola at the point P.

COR. 2. Let PS meet the curve again in p, and let HI he drawn parallel to the axis, it will bisect Pp in I, and HI will be bisected by the curve inA. For angle IH P=z HPE = H PI, therefore I P i= I H, and if p H be joined, the line pH will be a tangent, and therefore for the same reason Ip — I H, therefore I P — I p. Secondly, because SA = AH, the angle ASHzrAHS, and the complements of these angles are equal, that is A S I = A I S, therefore AI = AS=AH.

PR,OP. XVIII., Fig. 17, 18.

If a tangent be drawn to any point in an ellipse or an hyperbola, and two lines be drawn from the point of contact to the foci, the angles contained by each of these lines and the tangent are equal. Let PT touch the ellipse or hyper- bola at any point P, let it meet the directrices in T and t. Through P draw a line parallel to the axis A M meeting the directrices in E and e, draw PS, PH, to the foci, arid join ST, Hi. Because the triangles T P E, t Pe, are similar, P E : PT : : Pe: Pt, and by Sect. I., def. 1. S P : P E : : H P : Pe, therefore S P : PT : : H P : P t, and the angles P ST, P HT,are right angles, Cor. 1., Prop. XVI. therefore the triangles SPT, H P t, are similar, and the angle S PT = H P t.

PROP. XIX., Fig. 19, 20.

The tangents at any vertices of any diameter of an ellipse or an hyperbola are parallel.

Let PC G be any diameter of an ellipse, or hyperbola ; draw the tangents P Q, G R, and join SP, PH, SG, GH. Because SC = CH, and CP = CG, and the angle SCPiz GCH, the triangle SCPzzHCG, and the angle SPCr: H G C, also S P is equal and parallel to G H, therefore PH is equal and paral'el to SG, and SPHG is a parallelogram, therefore the angle SP/7 — SGH, and

the halves of these angles, fig. 20, or the halves of their supplements, fig. 19, will be equal, that is the angle SPQ =

II G R, and if these be added to the equal angles S PC, CGH, in the ellipse, and subtract ed from them in the hyperbola, C P Q r= C G R therefore PQ is parallel to GR.

DEFINITIONS. Fig. 17, 18.

X'X. The straight line P R, which is drawn from the point of contact perpendicular to the tangent, intercepted between the tangent and the axis of a conic section, is called a normal.

XXI. The segment of the axis N R, which is intercepted between the ordinate and the nor- mal, is called a subnormal.

XXII. If a straight line be drawn through any point in the diameter of a conic section, parallel to a tangent at the vertex, and terminated both ways by the curve, it is called an ordinate to the diameter.

XXIII. The segment of any diameter of a conic section, which is intercepted between an ordinate and the vertex, is called an abscissa.

XXIV. A diameter which is parallel to the tangent at the vertex of any diameter of the ellipse, or hyperbola, is called a conjugate dia- meter.

XXV. A line which is a third proportional to any diameter of the ellipse or hyperbola, and its conjugate, is called a parameter of that diameter.

XXVI. If a line be drawn through the focus of a parabola parallel to the ordinates of any diameter, terminated both ways by the curve, it is called a parameter to that diameter.

PROP. XX. Fig. 21, 22, 23. Plate III.

If two straight lines Pp, Q?, which meet each other in any part L, and are inclined to the directrix at any given angles LHX, LAX, cut a conic section, or opposite sections, in the points Ppand Qy; the rectangles LP'Lpand LQ'Lˆ will be in a constant ratio to each other.

Let S be the nearest focus. Join HS, and produce it if necessary ; also join S P, Sp, draw LX, P E, perpendicular to the directrix, and draw LT,L t, parallel to S P, Sp, meeting II S in T and t, because (prop. XVI.) the angle PS H — pST, fig. 21 and 23, and— pSW, fig. 22, the angle LT t — L HPE, HLX, are similar, as alsoHPS,HLT, LT:SP ::LH: PH : : LX: PE ; and alternately LT : LX : : S P : P E, that is in the determining ratio, therefore

the radius of the circle is given, when the distance of L from the directrix is given, whatever be the po- sition of the line Pp. And because LT is parallel to PS, and Lt to pS,

*LP:TS::LH:IIT. and p L : S £ : : L H : * H, therefore Lemma 1 ,*

P L-Lp : T S-S / : : L H2 : H Tt H. But TS-S=DS-Sd, andTH-H£=MH-H7B = LH2 — LM2, fig.21,22, or = LM2 — LH2, fig. 23. Therefore PL-Lp: DS'Sd: : LH1: LH2— LM2, orLM2 — LH2. ButLH2:LT» or L M2 : : P H2 : P SJ, and by division L H : : LH2 — L M2, or LM2 — LH2 : : P H2 : P H».— PS2, or P;SS— PH2; which ratio depends only*

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apon the determining ratio and the angle LHX, S P being to PH in a ratio, which is compound- od of the ratios of S P to P E, and P E to P II, or of the determining ratio, and of the sine of the angle LUX to radius. In the same manner it may be proved that the rectangle QL'L^ is to D S'Sc/ in a ratio depending only on the deter- mining ratio and the angle LAX, therefore PL Lp is to QL-Ly in a constant ratio, whatever be the distance of L from the directrix.*

COR. 1. If either of the lines Pp, Qq, or both of them become tangents to the conic section, or opposite sections, the squares of the tangents must be substituted for the rectangles PL-Lp, QL-Lq. For let LP touch the section in P, fig. 24, 25. Then QL being parallel to SP, by the preceding Prop. LP:QS::LH:HQ; and LP2:QS2::LH2:HQ2; but QS2 = DS'Sd, and QH2 = MH-Hm = LH2 — LM2, there- fore LP2:DS-Sd::MIi!LH2— LM2, which was proved to be a constant ratio; therefore L P is to Lp* or QL-L§, fig. 22, in a constant ratio.*

PROP. XXI. Fig. 27.

If two right lines Q L, Pp, meeting each other at any point L, one of which is parallel to the axis, and the other is inclined to the directrix in a given angle, cut a parabola in the points Q, p, and P, the rectangle under QL,

and the latus rectum will be to the rectangle PL-Lp in a constant ratio.

Draw LX perpendicular to the directrix ; and from the centre L, at the distance LX, describe a circle, join QS, X S, let X S meet the circle in T, and join LT. Draw SO perpendicular to LX, take OI = OX, and join SI, then SI = S X, now LT = L X, and Q S = Q X, therefore LT is parallel to Q S, and because the angle Q S X = SXQ = SIX, the triangles QXS, SXI, are similar, and XI:XS::XS:XQ::ST:QL, therefore the rectangle IX-QL= XS'ST = DS'Sd, which by the preceding proposition is to P L-Lp in a constant ratio, and because I X = QOX, the distance of the focus from the directrix, therefore IX = latus rectum, therefore the rectangle under Q L, and the latus rectum is to P L'Lp in a given ratio.

LEMMA II. Fig. 27.

If a straight line be divided in two points C and U- such, 'hat the rectangle CA'AD = D B-BC, or AC-CB = BD-DA, the part AC will be equal to B D. First, let CA-AD = DB-BC. Bisect CD inE; and CA-AD + E C = A E2, also DB-BC + ED2=EB2,but E Da = = E C2. therefore B E1 = A E2, and B E = AE:ana tnerefore BD = AC. Secondly, let AC-C B = B D A, by bisecting A B in E, it may be shown as above, that E D = E C, and therefore BD = AC.*

PROP. XXII. Fig. 28, 29.

All lines parallel to any diameter of the ellipse or hyperbola, which are terminated both ways by the ellipse, or opposite hyperbola, are bisected by the conjugate diameter.

Let A C B be any diameter of an ellipse, or hyperbola. Through the vertices A, B, draw the

tangents AL, BM; and through the centre C draw the diameter D C K parallel toAL or BM, which will be the conjugate diameter. Thiough N, any point in D K, draw L N M parallel to A B, meeting the ellipse or opposite hyperbolas in I' and Q, and the tangents A L, B M, in L and M. Then AL being parallel to CN and BM, and L NM parallel to ACB, AL = BM, and LN = N M ; and Cor. 1, Prop. XX, LA1 : PL-LQ : : BM2:QM-MP, therefore PL-LQ = QM- M P, therefore Lem. 2, P L = Q M, and, because LN = NM,PN = NQ.

COR. 1. If the diameter DK bisect all lines parallel toAB, it will be the conjugate diameter AB.

COR. 2. Fig. 28. If a straight line RDT be drawn through D the vertex of the conjugate parallel to AB, it will touch the curve in the point D.

PROP. XXIII.

Every diameter of a conic section bisects all its ordinates.

1st. If the section be an ellipse, it is evident from the last proposition; for the ordinates of any diameter are parallel to the conjugate diameter.

2dly. If the section be an hyperbola, fig. 29, of which ACB is any diameter; in the tangent RAL take AR = AL, through L and II draw PLQ, FRG, parallel to A B, meeting the oppo- site hyperbolas in P, Q, and F, G, and the lan- gent at B in M, T. Join P F, cutting the diameter in V : then P F will be an ordinate which is bisected at V : for by last Prop. P L = M Q and F,R = TG; and Cor. 1, Prop. XX. FR-RG: R A2 : : P L-LQ : L A2, but LA2 = R A", there- fore FR-RG = PL-LQ, that is, RF-FT = L P-P M ; therefore Lem. 2, R F = P L, and P L R F is a parallelogram, and therefore P F is parallel to R A L, and P V = VF.

Lastly, let the section be a parabola, fig. 30, of which A N is any diameter, and P N Q an ordi- nate; through the vertex A draw the tangent LAM; and draw P L, Q M, parallel to N A, then PL = QM, but the rectangle under LP and the latus rectum is to L A2 as the rectangle under M Q and the latus rectum to M A2, there- fore L A2 = M A2, and L A = M A, and therefore QN = PN.

PROP. XXIV. Fig. 31. Plate IV.

If a straight line cutting the hyperbola, or op- posite hyperbolas, meet the asymptotes in two points ; the segments between the hyperbola or hyperbolas, and asymptotes will be equal.

Let P Q cut the hyperbola, or the opposite hyperbolas in P and Q, and meet the asymptotes in R, T ; the segments P R, Q T, will be equal. For if P R be not equal to Q T, let one of them as Q T be the greater ; take Q O~ P R, join C O, which, being produced, will meet the curve in some point q, Cor. Prop. XIV. Through q draw qpr parallel to Q P meeting the curve in p and asymptote in r, bisect P Q in N, and draw the diameter C N n, and P Q,p q, will be ordinates to that diameter. Because N Q := N P and Q O = P R, therefore NOnNRandON.fntiCN : Cn : : N R : n r, therefore n q •=. n r ; but n q = n p, therefore n p — n r, which is absurd; there- fore QT is not greater than P R.

COR. If the line T N R be supposed to move from N to At the points P Q

will coincide in A, and I A will be equal to A G ; therefore, when a line touches an hyperbola, the segments between the point of contact and the asymptotes are equal.

PROP. XXV. Fig. 32.

If from any point P in the hyperbola P Q two straight lines P L, P H, be drawn to the asymp- totes, and from any other point Q, in the same or in the opposite curve, there be drawn other two straight lines Q E, Q F, parallel to the two former lines P L, P H. The rectangle Q E-Q F will be equal to the rectangle P L, P H.

Join P Q, and let it meet the asymptotes in R and T ; and because the triangles T Q F, T P H, are jimilar, as also the triangles R P L, R Q E, QF:PH: :TQ:TP: :RP:RQ: :PL: Q E ; therefore the rectangle Q F-Q E is equal to the rectangle P H-P L.

COR. Hence if from any two points P, Q, in the same or in the opposite hyperbolas, two straight lines P L, Q E, be drawn to the same or todifferent asymptotes paralle\ to the other asymp- tote; the rectangles C L'L P, C E-EQ, will be equal ; also the parallelogram C L P H will be equal to the parallelogram C E Q F ; and the triangle C L P to the triangle C E Q.

PROP. XXVI. Fig. 54.

If, from any point R in the asymptote of a hyperbola, there be drawn a straight line RT cutting the hyperbola, or opposite hyperbolas, in P or Q, and the other asymptote in T ; the rect- angle PR, R Q, is equal to the square of the semidiameter which is parallel to RT.

Let A M, B b be the two axes, join A B meet- ing the asymptote in N. Draw the tangent I A a meeting the asymptotes in I and a. Because A a is equal and parallel to B C, Prop. XIII. A B is equal and parallel to a C, and I A : la: : AN : aC, or A B ; now I A is half of I a, therefore A N is half of A B and AN = N B.

Let C F be the semidiameter parallel to the line cutting the opposite hyperbolas, draw the tangent L F H meeting the asymptotes in L and H,draw F E parallel to C H, meeting the asymp- tote in E, and the conjugate hyperbola in D, and join C D. Because the rectangle C N-N A or C N-N B = C E'E F, Cor. Prop. XXV. and CN-NBrzCE-ED, therefore CE-EF = CE- EDand EF = ED,and F E is half of F D, but because L F is half of L H, Cor. Prop. XXIV. and F E is parallel to C H, F E is also half of C H, therefore F D — C H,and they are parallel, therefore C D is equal and parallel to F H, and C D is a conjugate diameter to C F. Let the line which cuts the hyperbola P F Q be parallel to C D or L H. Take any point t in the

asymp- tote, and draw t r parallel to T R, cutting the curve or opposite curves in p and q, and the other asymptote in r. Draw P Y, P Z, py, pz parallel to the asymptotes. Because the trian- gles P Y R, pyr are equiangular.

PR: P Y: : pr:py, and in like manner,

PT:PZ:: pt: pz:, therefore Lem. 1.

RP-PT:YP-PZ::rn>ryp-p;butYP-PZ*

—yp.p i.Cor. Prop. XXV. ; therefore R P-P T=

rp-f. t ; or since R P — QT, Prop. XXIV. PR RQ~pr.rR-R Q becomes F Ls or F H which is equal to CD2; and when P in the opposite hyperbola is at M, the rectangle P R-R Q becomes equal to G C 3.*

PROP. XXVII.

If two right lines, meeting each other, cut or touch a conic section, or opposite sections, the rectangles under the segments between the points of concourse and the points of intersection, or the squares of the tangents, will be to each other as the squares of the semidiameters to which the lines are parallel.

If the lines are parallel to any of the diameters of the ellipse, or of the opposite hyperbolas, the proposition is evident from Prop. XX., because the lines which meet each other make the same angles with the directrix as those which pass through the centre, and the latter are bisected in the centre. But if either of the lines P L Q, L R T, or both the lines P L Q, N L M, be paral- lel to some of the conjugate diameters of the hy- perbola, fig. 34, produce Q L P till it meet the asymptote in G, and through G, draw F G H parallel to L R T, meeting the opposite curves in F and H. Let C B, C D, C A, be the semidiameters which are parallel to Q P, MN, RT. Then Prop. XX. PL-LQ:RL'LT : : PG'GQ: F G'G H : : C B2 : CAa, by Prop. XXVI. In the same manner it may be proved, that R L-LT : N L-L M : : C A2 : C D2 ; there- fore P L-L Q : N L-LM : : C B2 : C D2.

If the lines touch the conic section, or opposite sections, the squares of the tangents will be to each other as the rectangles under the segments of any two lines drawn parallel to them, which meet each other, and cut the section or opposite sections ; and therefore they are as the squares of the semidiameters to which they are parallel.

COR. fig. 33, 34. If two right lines I Q, I N, meeting each other in I, touch an ellipse or hy- perbola in Q, N, and are parallel to two other lines V T, V

N, which meet each other in V, and touch the ellipse or opposite hyperbola, or hy- perbolas, in T, N ; I Q : IN : : VT : V N ; for I Q2, I N2, are to each other as the square of the semidiameters to which they are parallel, and V T2, V Na, are in the same ratio.

PROP. XXVIII. Fig. 35, 36

If an ordinate be drawn to any diameter of an ellipse or an hyperbola, the rectangle under the abscissa will be to the square of the semi-ordinate as the square of the diameter is to the square of its conjugate.

Let ACM be any diameter of an ellipse or hyperbola, to which P N Q is an ordinate, and let D C K be the conjugate diameter, which is parallel to P N Q. Then by the preceding pro- position A N-N M : P N-N Q (or P N2) : : C A2 : CD2::AM2:DK2.

COR. 1. Because the parameter is a third pro- portional to the diameter and its conjugate, the rectangle under the abscissa is to the square of the semi-ordinate as the diameter is to the para- meter.

J. Shu rv sculp .

COR 2. The two conjugate diameters being constant, the rectangle under the abscissae will vary as the square of the ordinate.

PROP. XXIX. Fig. 37.

If an ordinate be drawn to any diameter of a parabola, the square of the semi-ordinate is equal to the rectangle under the abscissae and the parameter.

Let A N be any diameter of the parabola to which P N Q is an ordinate. Draw the parame- ter T S V, cutting the diameter in F ; join S A, and" let the diameter meet the directrix in D. Because T F is half of T V, Prop. XXIII. and A F is half of D F or T F, Prop. XVII. Cor. 2, AF:ET: : FT : T V, and AF-T V=FT; but AF-TV: AN-TV: :TF»: PN», Prop. XXL, therefore A N-TV=PN».

COR. Because TV — 2 T F = 4 S A, 4 S A- A N — P N.*

PROP. XXX. Fig. 38.

If two tangents be drawn at the extremities of any right line which is terminated by a conic section, and which does not pass through the centre of an ellipse, they will meet each other in the diameter which bisects that right line.

Let P Q meet the curve in P and Q ; bisect P Q in N, and through N draw the diameter C N T. Through P draw the tangent P T, meet- ing the diameter in T, and join T Q which will touch the conic section in Q. For draw any other line DCS parallel to'P N Q, meeting T P, T Q, in L and M. The triangles T N P, T C L, are similar, as also T N Q, T C M, therefore,

NP:CL::TN:TC: :QN : MC, and al- ternately NP:NQ::CL:CM, therefore C M •=. C L, which is greater than C D or C B, therefore M is without the section, and the line T Q meets the curve only in one point Q.

Con. If two right lines which touch a conic section meet each other, a right line drawn through the point of concourse, bisecting the line which joins the points of contact, will be a dia- meter of the section.

PROP. XXXI. Fig. 39.

If a tangent to any point in the parabola meet a diameter, and an ordinate be drawn to that diameter from the point of contact, the segment of the diameter between the vertex and the tan- gent will be equal to the abscissa.

Let T P, which touches the parabola in any point P, meet the diameter N A in T, and draw the ordinate P N. N A, will be equal to A T. Draw the tangent A I meeting PT in I; join A P, and draw the diameter I G cutting A P in F and PN in G; then AF — F P, Cor. Prop. XXIX. Therefore A I or N G = P G ; and A I is half of NP; but AI : N P : : TA : TN, therefore T A is the half of T P.

PROP. XXXII. Fig. 40, 41.

If a tangent to any point in an ellipse, or an hyperbola, meet a diameter, and from the point of contact an ordinate be drawn to that diame- ter, the semidiameter will be a mean proportional between the segments of the diameter, which are intercepted between the centre and the ordinate,

Let P T touch the ellipse or hyperbola in any

point P, and meet the diameter M A in T ; draw P N Q an ordinate to the diameter M A, C N : C A : : C A : C T. Through the vertices A, M draw the tangents A I, M L, meeting P T in I and L, take C O = C N. Then Cor. Prop. XXVI. I P : I A : : L P : L M, and alternately IP:: L P : : I A : : L M, and because A I, N P, M L, are parallel, A N : N M : : T A : T M, and by

comp. fig. 41, or by div. fig. 40, O N : A N : : A M : T A ; and by taking the halves of the an- tecedents C N : AN : : C A : AT, and by comp. fig. 40, or by div. fig. 41, C A : C N : : CT : CA and by inversion CN:CA::CA:CT.

SECT. II. OF THE DESCRIPTIONS OF THE CO- NIC SECTIONS; AND OF DRAWING TANGENTS Tr> THE CURVES.

PROP. XXXIII. PROBLEM. Fig. 3, 4, 5. Plate I.

The focus, directrix, and determining ratio be- ing given, to find any number of ooints in the conic section.

Let D X be the directrix and S the focus, draw S D perpendicular to D X, which produce indefinitely. Draw L S T perpendicular to D S ; and take S L and S T to S D in the determining ratio. Then LST, Cor. 3, def. is the latus rec- tum. Join D L, D T, and produce them indefi- nitely. Take D X =: D S and join X S meeting DTinG, which Prop. II. will be parallel to D L in the parabola, it will meet it in some point g in the direction D L in the ellipse, and in the opposite direction in the hyperbola. Through G and g draw KAG, gM k, parallel to the direc- trix, meeting D L, D T, and the axis in K, G, A andg, k M ; the points A, M, will therefore be the vertices of the axis. Through any point N, in the axis, between A and M in the ellipse, and anywhere on the same side of A with S in the parabola, and anywhere except between A and M in the hyperbola, draw QNˆ parallel to the directrix, and from the centre S, with a radius equal to Q N, describe a circle cutting Q q in the points P, p ; and join S P, S p, which are each equal to QN ; therefore P and p are points in the curve by the first proposition ; and in this way may any number of points be found

PROP. XXXIV. PROBLEM. Fig. 42. Flate V.

Two unequal straight lines being given, which bisect each other at right angles, to describe an ellipse, of which the given lines shall be the axes.

Let AM, Eb, be the given lines of which AM is the greater. From the centre B, with a radius equal to AC, describe a circle meeting A M in S and H, which will be the foci, Prop. VII. Cer. 1. Take a string equal in length to AM, and fix the extremities of it at the points S and II, and by means of a pin let the string be stretched, and let the pin be carried round, till it return to the same point, the point M will describe an ellipse, of which AM, Eb, are the axes, as is evident from Prop. XII.

PROP. XXXV. PROBLEM. Fig. 43.

Two straight lines being given, which bisect each other at right angles, to describe an hyper- bola, of which these lines shall be the axes.

Let AM, Bfc, be the given lines, bisecting each other at right angles m C. Join AB, and take C S and C H, in A M produced both ways, equal to H B. At the point H let one end of a ruler be fixed, so that it may move round this point as a centre ; and let a string be taken, the length of which exceeds that of the ruler by a line equal to AM; let one end of the string be fixed at L, and the other at the point S; apply the string by means of a pin at P, to the side of the ruler LH ; and let the ruler be moved about the centre H, while the string is constantly applied, and kept close to the ruler by the pin at P. Then- the dif- ference between the whole length of the string SPL and the ruler HL being equal to AM, the difference between H P and P S will be equal to AM; and the point P will describe one of the opposite hyperbolas of which AM, B6, are the jutes, as is evident from Prop. XII.

PROP. XXXVI. PROBLEM. Fig. 44.

Two right lines being given, one of which is bisected by the other at right angles, to describe a parabola, in which the right line bisected shall be an ordinate, and the other line the axis.

Let AC, B 6, be the two given lines, one of which B6, which is perpendicular to AC, is bi- sected iu C. Find a third proportional to AC, CB ; and produce C A to D, so that AD may be a fourth part of that third proportional ; take A S ~ A D, and draw D X perpendicular to D C. Let a ruler, the sides of which, HE, EL, are perpendicular to each other, be placed in the plane C D X, so that the side E L may be applied to D X ; and take a string equal in length to the side H E, one extremity of which must be fixed at H, and the other at S ; and let part of the string be applied, by means of the pin P, to the side of the ruler H E ; and whilst the side E L, moves along D X, let the string be stretched by the pin, and constantly applied to H E. Then, because the whole length of the string II PS is equal to H E, the part S P will always be equal to P E ; therefore the point P will describe a pa- rabola, by the first definition, of which AC is the axis, S the focus, and D X the directrix ; and BC/> will be an ordinate, .because it is perpen- dicular to the axis, and C B is a mean proportional between the abscissa AC and 4 AS, or the latus rectum.

PROP. XXXVII. PROBLEM. Fig. 24, 25. Plate III.

it to meet S P in P, which is in the conic sec- tion, and the line H P touches the curve at P. For the triangles H Q L, II S P, are similar, as also LHX,

PHE, therefore SP : PH : : QL : LH and PH : PE : : LH : LX ; therefore, SP : PE : : QL : LX, that is in the deter- mining ratio ; therefore P is a point in the curve, and because P S H is a right angle, P H is a tan- gent, Cor. 1, Prop. XVI. Cor. Because two lines SQ, Sg, may be drawn from the point S to touch the circle; two tangents LP, Lp, may be drawn from L to the conic section.

SECT. III. OF THE CURVATURE OF THE CONIC SECTIONS.

DEFINITIONS.

XXVII. A circle is said to touch a conic section in any point, when the circle and conic section have a common tangent in that point.

XXVIII. If a circle touch a conic section in any point, so that no other circle can be drawn between the conic section and that circle, it is said to have the same curvature with the section in the point of contact, and it is called the circle of curvature.

PROP. XXXVIII.

If a circle touch a conic section, and cut off from the diameter, which passes through the point of contact, a segment equal to its para- meter, the conic section is of the same curvature with the circle at the point of contact.

First, let a tangent D M be drawn to any point D in the parabola, fig. 45 ; draw also the diameter DF, and the perpendicular DL; through any point Q in the curve, near to D, let the circle DQO be described to touch D M in D, and meet D F in P; join PQ, DQ, and draw QN parallel to M D, meeting DF in N. Then because the angle DPQizMDQir: DQN, the triangles D N Q, PDQ, having a common angle at D are equi-angnlar ; hence, PD : DQ :: DQ : DN, and PDDN = DQ2 ; also PD2 : PQ : : DQ2 : QNS, there- fore PD2:PQ3 : : PD-DX : P-DN, where P ~ parameter of D F. Now, it is evident, that the nearer the point Q is to the point D, the nearer will the circumference of the circle be to a coincidence with the curve at that point; and, therefore, as no portion of these curves, however small, can be the same, the circumference of the*

circle will have approached the nearest possible to a coincidence with the curve at D, when the To draw a tangent to a conic section from any point Q falls upon it; in which case, the last given point without it, which is not the centre of analogy becomes P D2 : P Ds : : P D : P,therefore, the hyperbola. P D — P, the parameter of D F ; therefore, the

If the given point H be in the directrix, draw proposition in the case of the

parabola is ma- H S to the focus which is nearest to the direc- nifest.

trix ; draw SP perpendicular to SH, meeting the curve in P, and join H P, which will touch the conic section in P, Cor. 1. Prop. XVI.

If the given point be in any other situation, as at L, join LS, and draw LX perpendicular to the directrix. Take LD to LX in the determin- ing ratio, and from the centre L, at the distance LD, describe a circle DM*

Next let DM bs a tangent at any point in the ellipse or hyperbola., fig. 46; D F, EG, conju- gate diameters ; and D H O a perpendicular to the two parallels DM, EG.

Through any point Q in the curve, near to tht point D, let the circle D QO be described to touch DM in D, and meet DF in P. Let PQ, QD. be joined, and Q N drawn parallel to D M, to meet D F in N. The triangles D N OP Q D be- ing similar,D N : D Q : : DQS: DP whence DN : D P : : DQ2 : D P2 ; but D P : P (parameter) : :

FN-ND:QNJ; hence DF-DN:DP-P:: VN-N DD-Q2 : DP2-QNa. Or DF : P : : F N-D Q2 : D P-Q N. But when Q and D co- incide D Q ana Q N become equal, whence this analogy gives DF : P : : DF : D P, or D P = P as before.*

COR. If, from any point D in an ellipse or hyperbola, a diameter D F be drawn, and a per- pendicular D H to its conjugate E G, the radius of curvature at the point D is a third propor- tional to the perpendicular DH and the semi- conjugate diameter EC.

For since DH : DC : . DP : DO,

and DC : EC : : EG : P or D P

therefore DH : EC : : EG : DO : : EC : D R, the radius of curvature.

SECT, IV. OF THE CONE AND ITS DIFFERENT SECTIONS.

DEFINITIONS. Fig. 47. Plate V.

XXIX. If any indefinite straight line passing through any fixˆd point A, without the plane of the circle C G B, oe carried round the whole circumference of the circle, each of the surfaces generated by the motion is called a conical sur- face.

XXX. The solid contained by the conical sur- face and the circle C G B is called a cone.

XXX [. The point A is called the vertex of the cone.

XXXII. The circle CGB is called the base of the cone.

XXXIII. The right line A D passing through the vertex and the centre of the base is called the axis.

XXXIV. A right cone is that whose axis is perpendicular to the base.

XXXV. A scalene cone is that whose axis is inclined to the base.

PROP. XXXIX. Fig. 47.

If a cone be cut by a plane passing through the vertex, the section will be a triangle. ,

*Let ABGC be a cone of which AD is the axis ; let G B be the common section of the base and cutting plane ; join A B, A G. When the generating line comes to B and G, it will concide with AB, AG; they are, therefore, in the sur- face of the cone, and they are in the plane which passes through the points A, B, G ; therefore, *he triangle ABG is the common section of the cone and the plane which passes through the vertex.*

PROP. XL. Fig. 47.

If a cone be cut by a plane parallel to its base the section will be a circle, the centre of which is in the axis.

Let H F K be the section made by a plane pa- rallel to the base of the cone, and let AC B, A D G, be the two sections of the cone, made by any two planes passing through the axis AD; let K H, E F, he the common sections of the plane HFK and the triangles AC B, AD G. Then, because the planes HFK, BGC, are parallel, EH EF will be parallel to D B, DG, and EH : DB:: EA : AD : EF : DG; but DB = DG, therefore, EH=EF;and for the

same reason E F — E K, therefore, II F K is a circle of which E is the centre.

PROP. XLI. Fig. 48.

If a scalene cone A B D C he cut through the axis by a plane perpendicular to its base, mak- ing the triangle ABC, and from any point L iu the straight line A C, L M, be drawn in the plane of the triangle, so that the angle A L M — A B C, and the cone be cut by another plane passing through L M,

perpendicular to the triangle ABC; the common section L P M Q of this plane and the cone will be a circle.

Take any point N in the straight line LM; draw FNG parallel to C B ; and let FPGQ be a section parallel to the base, passing through FG; then the two planes FPGQ, LPMQ, being perpehdicular to the plane ABC, their common section P N Q is perpendicular to F N G ; therefore, P N = N Q and P N2 =: F N-N G, but the angle ALM = = ABC = AGF, and the angles at N being vertical, the triangles FLN, M G N, are similar, and MN:NG : : FN-.NL; therefore, the rectangle M N-N L r= F N-N G = PNa, therefore, the section L P-MQ is a circle, of which LM is a diameter. This section is called a subcontrary section.

PROP. XLII. Fig. 48, 49, 50.

If a cone be cut by a plane which does not pass through the vertex, and which is neither parallel to the base, nor to the plane of a sub- contrary section ; the common section of the plane and the surface of the cone will be an el- lipse, a parabola, or an hyperbola, according a.« a plane passing through the vertex parallel to the cutting plane, falls without the cone, touches it, or falls within the cone.

Let A B D C be any cone ; and let S T V be the common section of a plane passing through its vertex and the plane of the base, which will fall without the base, will touch it, or will fall within it ; let P M Q be a section made by a plane parallel to ASV, through 0 the centre of the base OT draw perpendicular to S V, meeting the circumference of the base in B and C ; let a plane pass through A, B, and C, meeting the plane AS V in the line AT, the surface of the cone in AB,'AC, and the plane of the section PMQ in LM; then LM will meet the side A B in M, and it will meet the other side A C, fig. 48, in L, within the cone, it will be parallel to it, fig. 49, and it will meet it in fig. 50, pro- duced beyond the vertex in K.

Take any point N in the line L M ; let F P G Q be a plane passing through N parallel to the base ; and let FNG, PNQ, be the common sections of this plane and the planes A BC, P M Q ; then PNQ will be the parallel to S V, and G F pa- rallel to BT: and BT being perpendicular to S V, FNG is perpendicular to PNQ, therefore PN = NQ,andPN'= EN-NG. First, if the line STV be without the base, fig. 48, through M and L draw MHLK parallel to CB ; then because the triangles LNF, LM H, are similar, alsoMNG, MLK,

LN :FN :: LM : HM, and NM:NG::LM:LK; therefore LN-N M : FN-NG or PN» : : LMa : HM LK, which ratio is the same wherever the point N

taken ; the section L P M Q is therefore an el- linear area AF P B ; therefore area AF P N : area iipse of which L M is a diameter and PN Q an AF P B : : 2 : 1, and the area P AQ is to the

parallelogram P B C Q as 2 to 3.

PROP. XLIV. Fig. 52, 53. If two ellipses or two hyperbolas have a common axis, and an ordinate be drawn through the same point in the axis to each of the curves ; the areas included between the common abscissa, the ordinates, and the two curves, also the whole areas of the ellipses will be to each other as the

ordinate.

Secondly, if the line STV, fig. 49, touch the circumference of the base in C ; let D L E be the common section of the base and the plane P M Q, which is parallel to PN, and perpendi- cular to BLC; and BL-LC — DL2, therefore PN2 : DL2 : : FN-NG : BL'LC (or because NG = LG)::FN:BL;butthetrianglesMNF, MLB, being similar, FN : BL : : MN : M L, therefore P N2 : D L2 : : M N : M L ; and the section D M E is a parabola, of which M L is a diameter, and P N Q an ordinate.

Lastly, fig. 50, let the line STV fall within the

GF; and because the triangles MJMF, MHA, are similar, as also KNG, K H A, M N : N F : : M H : H A and KN:NG::KH:HA; therefore MN-NK:FN-NG,orNP2:: MH-HK:HA2 that is in a constant ratio, therefore the section D M E is a hyperbola, of which M K is a diam- eter and P N Q an ordinate.

SECT. V. OF THE AREAS OF THE CONIC SECTIONS.

PROP. XLIII. Fig. 51.

If any ordinate and abscissa of a parabola be completed into a parallelogram ; the area of the

, be two ellipses or two hyperbolas take AN whfch is not ter than

ha,f ˆ &xis of ˆ du and draw the ordi.

natesNPjNQ. Let the abscissa AN be divided to any number of equal parts, AE EF FG GN, &c.; draw the ordinates ERI, FSK, GTL, and complete the

parallelograms AR, A I, ES, EK, &c. ; also draw !•», K/c, L J, parallel to AN. Then it is evident that the difference between the circumscribed parallelograms A I, E K, F L, G Q, and the inscribed parallelograms Ei, F/ c, Gl, is equal to GQ; and if p^arahelo grams be inscribed in the same manner in the figure A PN, the difference between these and the circumscribed parallelograms would be equal to G P, therefore the difference between each series of parallelograms, and the areas A Q N, A P N, will be less than the parallelograms G Q, G P, and because GP:GQ::NP:NQ and

parabola, included between the ordinate and the each parallelogram in the figure A P N is to the

corresponding parallelograms in the figure A Q N in the same ratio, the sum of all those in A P N is to the sum of all those in A Q N as N P is to N Q, which is the same ratio with that of the conjugate axes. Conceive the breadths of the

curve, is to the parallelogram as 2 to 3.

Let A N be1 the abscissa, and P Q the ordinate ; let the parallelogram P Q C B be completed ; and let AN be divided i; to indefinitely small equal parts, of which N D is one ; through D draw

HI parallel to PQ, cutting the parabola in F parallelograms to be now diminished, and their

and G, and through F draw K E parallel to N A ; take K R = K P, and draw R L parallel to K E. By Prop. XXI. IIF-HG : PN : : HP : NA, but because DN is indefinitely small, PQ or 2PN maybe taken for HG; and PK = HF, also NA — PB, therefore 2PK-PN : PNS : : HP : PB; hence 2 PK, or PR : PN : : HP : PB, and as the parallelograms RB, PD, are also equiangular, they are equal, and the paral- lelogram PD : KB : : 2 : t, and the sum of all the parallelograms in A P N is to the sum of all those in A P B in the same ratio of 2 to 1 ; but the sum of all the parallelograms in A P N ap- proaches indefinitely near to the curvilineal area APPN, when their breadths are continually di- minished ; and in like manner the sum of all the parallelograms in APB approaches to the curvi-*

number increased, ad infinitum, and the paral- lelograms A P N, A Q N, will be ultimately equal to the areas A P N, A Q N, for the parallelo- grams G Q, G P, will now vanish, therefore the areas A P N, A Q N, are to each other as their conjugate axes ; and if the sections be ellipses their whole areas are to each other in the same ratio.

COR. t. If a gircle be described about an ellipse, the area of the circle is to

the area of the ellipse as the transverse axis is to the con- jugate.

COR. 2. The area of an ellipse is equal to that of a circle whose diameter is a mean proportional between the two axes.

COR. 3. The areas of two ellipses are to each other as the rectangles under their axes.

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CONJE'CT, v. n. ~] Fr. conjecturer ;

CONJE'CTURE, v. a. & n. s. Ital. conghiettu- CONJE'CTOR, n. s. rare ; Span, con-

CONJE'CTURABLE, adj. [jeturar ; Lat. con- CONJE'CTURAL, adj. \jicere. To conjec-

CONJECTURA'LITY, n. s. ture is, to guess ; CONJE'CTURALLY, adv. to divine ; to form CONJE'CTURER, n. s. j a supposition. It implies that evidence is either imperfect, or en- tirely wanting. To conject has the same mean- ing, and also that of to cast together. But this verb is ot solete in both senses. Conjecture, as a noun, had formerly the additional meaning of idea; notion; conception. Conjector and con- jecturer are synonymous, but the latter of these words is that which is in general use.

The knight at his great boldnesse wondered ; And though he scornd his yolle vanitee, Yet mildly him to purpose answered, For not to grow of nought he it coniectured.

Spenser. Faerie Queene.

Whatsoever may be at any time, out of Scripture, but probably and conjecturally surmised. Hooker.

I intreat you then,

From one that but imperfectly conjects, Your wisdom would not build yourself a trouble.

Shakspeare.

Now entertain conjecture of a time, When creeping murmur, and the poring dark, Fills the wide vessel of the universe. Id. Henry V. They'll sit by the fire, and presume to know Who thrives and who declines, side factions, and

'give out

Conjectural marriages. Id. Coriolanut.

It were a matter of great profit, save that I doubt it is too conjectural to venture upon, if one could dis- cern what corn, herbs, or fruits, are likely to be in plenty or scarcity. Bacon.

If we should believe very grave conjecturers, carni- vorous animals now were not flesh devourers then.

Browne.

They have not recurred unto chronology, or the records of time, but taken themselves unto probabi- lities, and the conjeeturality of philosophy.

Id. Vulgar Errours.

When we look upon such things as equally may or may not be, human reason can then, at the best, but conjecture what will be. South.

For so conjectors would obtrude, And from thy painted skin conclude Swift.

And darkness and doubt are now flying away,

No longer I roam in conjecture forlorn. So breaks on the traveller, faint,

and astray, The bright and the balmy effulgence of morn.

Beattie.

How much that honourable gentleman was con- sulted in the original frame and fabric of the bill, commonly called Mr. Pitt's Indian bill, is matter only of conjecture, though by no means difficult to divine.

Burke.

The cause, though worth the search, may yet elude Conjecture and remark, however shrewd. They take perhaps a well directed aim, Who seek it in his climate and his frame. Cowper. He, entering at the study door, His ample area 'gan explore ; And something in the wind Conjectured, sniffing round and round, Better than all the books he found,

Food chiefly for the mind. Cowper.

The land appeared a high and rocky coast,

And higher grew the mountains as they drew, Set by a current towards it : they were lost

In various conjectures, for none knew To what part of the earth they had been tost, So changeable had been the winds that blew.

Byron. Don Juan.

COJNJEE, or CANCHI, a district of the Car- natic, Hindostan, in the collectorship of Arcot. The face of the country is flat and sandy, but interspersed with fruitful spots and watered by the Palar. Towards the Ghauts it is thinly in- habited. The villages have, generally, the re- mains of a rampart and stone bastions around them ; which were, formerly, necessary to protect the inhabitants from the predatory troops of Tip- poo, and other tyrants, who devastated the coun- try. This district has its chief supply of water from tanks and reservoirs, which are well managed here, and adapted to all the agricultural purposes of the inhabitants.

CONJEVERAM, or the Golden City, a con- siderable town in the Carnatic, is forty-six miles south-west from Madras. The streets are wide, and cross each other at right angles, with a range of cocoa-nut trees on each side ; but the houses are of mud. The tanks, however, are lined with stone, and generally in good order. Here is a famous pagoda dedicated to Mahadwa. The chief entrance is imposing : on the left, after passing through it, is a large edifice which, the

Sp. conjuntar ; Lat. conjungere. To yoke together is the "idea here conveyed. Hence, to conjoin is, to unite ; to form into one ; to con- nect with ; to link

CON

brahmins assert, contains 1000 carved pillars. Many of the groupes of deities are composed with great skill. The sides of the steps leading up to it are formed by two well carved elephants draw- ing a car. The inner court, being considered of great sanctity, is not suffered to be inspected by strangers. The country around is a barren sand.

To CONJOB'BLE, v. a. From con, together, and jobbernol, the head. To concert; to settle; to discuss. A low cant word.

What would a body think of a minister that should conjobble matters of state with tumblers, and confer politicks with tinkers ? L' 'Estrange.

CONJO'IN, v. a. & n. ˆ Fr. conjoindre ;

CONJOI'NING, n. Ital. congiungere ;

CONJO'INT, adj.

CONJO'INTLY, adv.

CONJU'NCT, adj.

CONJUNCTION, n. s.

CONJUNCTIVE, adj.

CONJU'NCTIVELY, adv.

CONJU'NCTIVENESS, n. s.

CONJU'NCTURE, n. x. firmly together; to unite in marriage; to league with. Conjunction signifies union ; association; the meeting of two planets in the same degree of the zodiac; a word that connects together the clauses of a period, and signifies the relation which they bear to each other. Conjunctive formerly meant closely united ; but it now only means the mood of a verb which is used subse- quently to a conjunction. Conjuncture is, coin- cidence or co-operation of many circumstances or causes ; a critical period ; and, though seldom used in these senses, connexion ; consistency.

And furthermore, no men shulde knowe his owen engendrure, ne who shuld

have his heritage, and the woman sbuld be the lesse beloved for the time that she were conjunct to many men. Chaucer. Cant. Tales.

They did their counsels nor in one compound, Where single forces faile, conioynd may gaine.

Spenser. Faerie Que?ne.

He -will unite the white rose and the red ; Smile heaven upon his fair conjunction, That long hath frowned upon their enmity. Shakspeare.

She is so conjunctive to my life and soul, That, as the star moves not but in his sphere, I could not but by her. Id.

This 'part of his Conjoin with my disease, and helps to end me.*

Id. Henry IV.

If either of you know any inward impediment. Why you should not be conjoined, I charge You on your souls to utter it. Id. Much Ado.

It pleased the king, his master, to strike at me ; When he, conjunct, and flattering his displeasure, Tript me behind. Id. King Lear.

God, neither by drawing waters from the deep, nor by any conjunction of the stars, should bury them under a second flood. Raleigh.

The treaty gave abroad a reputation of a strict conjunction and amity between them. Bacon.

I never met with a more unhappy conjunc ure of affairs than in the business of that earl. King Charles.

I was willing to grant to presbytery what with leason it can pretend to, in a conjuncture with epis- copacy. Id.

Such censures always attend such conjunctures ; and find fault for what is rot done, as with that which is done. Clarendon.

CON

These are gojd mediums conjunctively taken, :hat is, not one without the other. Brown.

Common and universal spirits convey the acti'ni of the remedy into the part, and conjoin the virtue of bodies far disjoined. Browne' t Vulgar Errours.

A gross and frequent error, commonly committed in the use of doubtful remedies, conjointly with those that are of approved virtues. Id.

Men of differing interests can be reconciled in one communion ; at least, the designs of all can be conjoined in ligatures of the same reverence, and piety, and devotion. Taylor.

Let that which he learns next be nearly conjoined with what he knows already. Locke.

Herein, I think, lies the chief, if not the only, reason, why the male and female in mankind are tied to a longer conjunction than other creatures, viz; be- cause the female is capable of conceiving, and de facto is commonly with child again, and brings forth to a new birth, long before the former is out of a dependency for a support on his parents', help, and able to shift for himself, and has all the assistance that is due to him from his parents. Id.

Thou wrongest Pirithous, and not him alone ; But, while I live, two friends conjoined in one.

Dry den.

The parts of the body, separately , make known the

passions of the soul, or else conjointly one with the

other. Id.

Man can effect no great matter by his personal

strength, but as he acts in society ami conjunction with

others. South.

He is quick to perceive the motion of articulation,

and conjunctures of letters in words.

Holder's Elements of Speech.

Every virtue requires time and place, a proper ob- ject, and a fit conjuncture of circumstances.

Addison's Spectator.

Pompey and Caesar were two stars of such a mag- nitude, that their conjunction was as fatal as their op- position. Swift.

Silently as a dream the fabric rose ; No sound of hammer or of saw was there : Ice upon ice, the well adjusted parts Were soon conjoined, nor other cement asked Than water interfused to make them one.

Cowper.

Conjoined, like birds of the same feather, Swear that you'll live and die together.

Huddesford.

CONJOINT, or CONJUNCT, in heraldry, is used of charges when joined together ; as gules, two lions rampant, conjoined under one head, gard- ant, argent, name Kellum. Or as, argent, seven mascles, conjunct three, three and one.

CONJOINT TETRACHORDS, two tetrachords o. fourths, where the same chord is the highest of one and the lowest of the other.

CONJOINED IN LURE, is two wings with the points downward and joined at the top, as in the diagram.

CONISSAUE, in mineralogy, a class of fossils naturally and essentially compounded, not in- flammable, nor soluble in water, found in de- tached masses, and formed of crystalline matter debased by earth. Of this class there are two orders, consisting of only one genus each. Those of the first

are found in form of a naturally re- g-ular and uniform powder ; all the genuine par- ticles of which are nearly of one determinate shape, appearing regularly concreted, and not fragments of others once larger. Connissalae of the second order are found in form of a rude, irregular, and shapeless powder, the particles of which are never of any determinate figure, but seem broken fragments of once larger masses. To the former genus belong the different species of sand ; and to the latter the saburras, or grits.

CO'NJUGATE, v. a., n. s., adj.} Lat. con CONJUGA'TION, n. s. I jugure, from

CO'NJUGAL, adj. \con and ju-

CONJUGA'LITY, n. s. [gum. These

CO'NJUGALLY, adv. -/words are

closely allied with conjoin and its congeners ; both classes having the sense of to yoke together. To conjugate is to join together ; to unite in mar- riage ; to live together : but the verb thus ap- plied seems to be nearly disused. Its most com-

Their conjugal affection still is tied, And still the mournful race is multiplied.

Dryden.

He marked the conjugal dispute, Nell roared incessant, Dick sat mute. Swift. All the various mixtures and conjugations of atoms do beget nothing. Beuiley.

t And seems it nothing in a father's eye, That unimproved those many moments fly ? And is he well content his son should find No nourishment to feed his growing mind, But conjugated verbs and nouns declined ?

Cowper.

Dick heard, and tweedling, ogling, bridling, Turning short round, strutting and sidling, Attested, glad, his approbation Of an immediate conjugation. Id.

Indignant she answered , ' No chin-scraping sot Shall be fastened to me by the conjugal knot : No — to Tyburn repair, if a noose you must tie, Other fish I have got, Mr. Tonser, to fry.'

Hnddesford.

CONJUGATE Axis, bee CONIC SECTIONS. CONJUGATE HYPERBOLA. See CONIC SEC- TIONS.

CONJUGATION, in grammar. See GRAMMAU and LANGUAGE.

CONIUM, in botany, hemlock, a genus o the digynia order, and pentandria class of plants*

*«****• «JVˆVJ.**U .\J *J\J »4ˆV*l»J VAIUU.OV.V4 • -M.~ 111VSOL ˆUlll— I J ft n e* 1 , I, ,.., ‘*

mon meaning is, to inflect verbs ; to repeat all naural order forty-fifth, umbellatae. The par-

the various terminations of verbs. The noun, ˆ “»vpl«cra are halved, and mostly triphylloug

which signifies agreeing in derivation with ano- the frult sub-globose and qumque-stnated, the

ther word, is also of rare occurrence. In geome- try, the conjugate diameter is, a right line which

strias crenated on each side. The three principal species are, 1. C. Africanum, with prickly seeds,

bisects the transverse-diameter. Conjugal is that a nat.ive of, the CaPe of Good. ˆP6′ a”d rarely

which relates to matrimony. Conjugation means a couple ; the act of uniting things ; union ; and, more commonly, the form of inflecting verbs through their series of terminations. The quo- tation from Cowper will show, however, that there is modern authority for using this noun in the sense of an union.

The general and indefinite contemplations and no- tions of the elements, and their conjugations, are to be set aside, being but notional ; and illimited and indefinite axioms are to be drawn out of measured in- stances. Bacon.

Those drawing as well marriage as wardship, gave him both power and occasion to conjugate at pleasure the Norman and the Saxon houses. Wvtton.

The supper of the Lord is the most sacred, mysteri- ous, and useful conjugation of secret and holy things and duties. Taylor.

The heart is so far from affording nerves unto other parts, that it receiveth

very few itself from the sixth conjugation or pair of nerves. Browne.

growing above nine inches high. 2. C. rnacu- latum, or the greater hemlock, grows naturally on the sides of banks and roads in many parts of Britain. It is a biennial plant which perishes after it has ripened its seeds. It flowers in June, and the seeds ripen in autumn. This species is sometimes applied externally, in the form of de- coction, infusion, or poultice, as a discutient. 3. C. tenuifolium, with a striated seed, differs from the last in having taller stalks, which are not so much spotted. The leaves are much narrower, and of a paler green ; and this difference is con- stant. It is a biennial plant, and grows naturally in Germany.

CONJU'RE, v. a.

'Co'NJURE, V. n.

*CO'NJURER, n. s. CO'NJURING, n. *. CONJURA'TION, n.s. CO'NJURATOR, n.s. CONJU'REMENT, n.s.*

Fr. conjurer ; It.

Icongiurare ; Sp. eon- jurar; L&t.conjurare. To swear in concert ; to conspire ; to bind by an oath to some design common to

His grammatical argument, grounded upon the de- all the parties ; to summon in a sacred name ;

to adjure solemnly ; to evoke ; to influence by enchantment ; to practise charms or magical ce- remonies. When the verb is used in the last two senses it has the accent on the first syllable. Conjuration is the form of solemnly summoning ; an incantation; a conspiracy; but this last meaning is disused. A conjurer is one who uses enchantments ; an imposter who pretends to be versed in magic. The word is also used ironically. Conjurement signifies a demand, or injunction, made with great earnestness. Nece, I conjure and highly you defende, On his beholfe whiche that soul usall sende,

2A

rivation of spontaneous from sponte, weighs nothing : we have learned in logick, that conjugates are some- times in name only, and not in deed.

BramJiall's A nswer to Hobbei.

Have those who have writ so much about declen- sions and conjugations, about concords and syntaxes, lost their labour, and been learned to no

purpose ?

Locke.

The father, who is bound to take care for those he hath begot, is under an obligation to continue in con- jugal society with the same woman longer than other creatures, whose young being able to subsist of them- selves, before the time of procreation returns again, the conjugal bond dissolves of itself. Id.

And in the vertue of corounis twaine,

Slea nat this man that hath for you this paine.

Chaucer. Troilus and Creseide. Let us go now to that horrible swering of adjura- tion and conjuration, as don those false enchantours and nigromancers in hasins full of water, or in a bright swerde, in a cercle, or in a fire, or in a sholder bone of a shepe. Id. Cant. Tales.

Ye wyndes I you conjure in chief est of your rage, That ye my lord safely send my sorrowes to ass wage.

Earl of Surrey. There was she faine To call them all in order to her ayde, And them conjure, upon eternall paine, To counsel her, so carefully dismayed, How she might heale hear sonne, whose senses were decayed. Spenser. Faerie Queene.

Your conjuration, fair knight, is too strong for my poor spirit to disobey. Sidney.

What black magician conjures up this fiend, To stop devoted charitable deeds ?

Shakspeare. Richard III. What is he, whose griefs

Bear such an emphasis ? whose phrase of sorrow Conjures the wandering stars, and makes them stand Like wonder-wounded hearers ? Id. Hamlet.

What drugs, what charms, What conjuration, and what mighty majick, For

such proceeding I am charged withal , I won his daughter with. Id. Othello.

Good doctor Pinch, you are a conjurer; Establish him in his true sense again.

Id. Comedy of Errori. He in proud rebellious arms Drew after him the third part of heaven's sons, Conjured against the Highest.

Milton. Paradise Lost.

I should not be induced but by your earnest in-

treaties and serious conjurements. Milton,

I thought their own fears, whose black arts first

raised up those turbulent spirits, would force them to

conjure them down again. King Charles.

He concluded with sighs and tears to conjure them,

that they would no more press him to consent to a

thing so contrary to his reason. Clarendon.

I conjure you ! Let him know, Whate'er was done against him, Cato did it.

Addison't Cato.

You have conjured up persons that exist no where else but on old coins, and have made our passions and virtues visible. Addison.

Our palaces are vast inhospitable halls. There the bleak winds — there ' Boreas, and Eurus, and Caurus, and Argestes loud/ howling through the vacant lob- bies, and clattering the doors of deserted guard-rooms, appal the imagination, and conjure up the grim spec- tres of departed tyrants — the Saxon, the Norman, and the Dane, &c. Burke.

Great skill have they in palmistry, and more To conjure clean away the gold they touch, Conveying worthless dross into its place ; Load when they beg, dumb only when they steal.

Cowper. And now, quoth poor unthinking Ralph,

Tis over, and the brood is safe

(For ravens, though as birds of omen

They teach both conjurers and old women,

To tell us what is to befall,

Can't prophesy themselves at all). Id.

It is by the majesty, by the form of that justice, that I do conjure and implore your lordships to give your minds to this great business. Slteridan.

CONJURATION properly implies magic words characters, or ceremonies, whereby evil spirits, tempests, &c. are supposed to be raised, or driven away. The Romish priests formerly affirmed that they could expel devils, by preparing holy water in a particular manner, and sprinkling it over the possessed, with a number of conjurations and exorcisms. Some authors make the differ- ence between conjuration and witchcraft to con- sist in this, that the former effects its end by prayers and invocation of God's name, &c. to compel the evil spirit to do what is desired ; whereas the latter attains its end by an immediate supplication to the devil himself. Both these, again, differ from enchantment and sorcery ; in that these latter operate secretly and slowly by spells, charms, &c. without invoking infernal aid.

CONNARUS, Ceylon sumach, in botany, a genus of the decandria order, and monodelphia class of plants. The STIG. is simple : CAPS. bivalved, unilocular, and monospermous. The principal species is C. monocarpus, a native of India. It rises with a ligneous stalk eight or ten feet high, which is hard, rigid, and covered with a black bark, and divides upward into two or three branches with trifoliate leaves, having long foot-stalks placed alternate. It is propagated by cuttings, and is treated like other exotics.

CONNATE, adj. i Lat. con and natus.

CONNA'SCENCE, n. s. 5 Brought into existence along with another; being of the same birth. Common birth ; production at the Same time ; being produced together with another being.

Christians have baptized these geminous births and double connascencies, as containing in them a distinc- tion of soul. Browne's Vulgar Erroun.

Symphysis denotes a connascence, or growing to- gether. Wiseman.

Many, who deny all connate notions in the specula tivc intellect, do yet admit them in this. South

Their dispositions to be reflected, some at a greater, and others at a less thickness, of thin plates or bubbles, are connate with the rays, and immutable.

Newton's Optics.

*CONNATURALIZE, v. a.- CONNA'TURAL, adj. CONNATURA'LITY, n.t. CONNA'TURALLY, adv. CONNA'TURALNESS, n. *.*

Fr. connatural ; It. connaturare, connaturale;Sp. connaturalizarse, connatural ; Lat.

con and nascor. The verb signifies to render con- sonant to ; to unite by similarity of nature ; to make natural to. It is seldom used. Connatural is, participating in the same nature ; linked with the being ; united by nature ; natural in common to all.

First in man's mind we find an appetite

To learn and know the truth of every thing, Which is co-natural, and born with it,

And from the essence of the soul doth spring.

Daviet.

There is a connaturality and congruity between that knowledge and those habits, and that future estate cf the soul. Hale

Some common notions seem connaturally engraven in the soul, antecedently to discussive ratiocination.

Id.

CONNECTICUT.

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Is there no way, besides These painful passages, how we may come To death, and mix with our connatural dust ? Milton.

Whatever draws me on, Or sympathy, or some connatural force, Powerful at greatest distance to unite With secret amity. Id.

Sucn is the connaturalness of our corruptions, except we looked for an account hereafter.

Pearson on the Creed.

How often have you been forced to swallow sick- ness, to drink dead palsies and foaming epilepsies, to render your intemperances familiar to you, — before ever you could connaturalixe your midnight revels to your temper. Scott.

These affections are connatural to us, and as we grow up, so do they. L'Estrange.

CON NAUGHT, the most western of the four provinces of Ireland, bounded on the east by that of Leinster, on the west by the ocean, on the north and north-west by part of the ocean and province of Ulster, and on the south and south-east by Munster. It is 130 miles long and eighty-four broad ; and was a distinct king- dom till the reign of Henry II. It has no rivers of note besides the Shannon, but possesses several convenient bays and creeks; and the soil is fer- tile in many places. It formerly contained many dangerous bogs, overrun with wood, now in some measure cleared ; and produces abundance of cattle, sheep, and deer : it is, however, still the least cultivated of all the four provinces. It contains five counties, one archbishopric, five bishoprics, forty-two Baronies, and 276 parishes and unions. The distinction of Ireland into provinces is said not to have been of late regarded in any public documents.

CONN E'CT, v. a. & n.ˆ Ital. connettere ; CONNE'X, v. a. Lat. connectere, from

CONNE'CTTON, or I con and nectere. To

CONNE'XION, n. s. '.link together ; to knit

CONNECTIVE, or [together; to conjoin;

CoNNE'xivE,n. s.&cadj. to bring into union; CONNE'CTIVELY, adv. \ to be coherent ; to CONNE'XING, n.s. J produce a consistent whole from the parts. Connexion is the state of being conjoined; the act of joining; just rela- tion to. something which precedes or follows ; co- herence of parts. Connective, as a noun, signi- fies a conjunction. In common parlance, a man's connexions mean his relations and friends ; and to form a connexion with, is, to become very intimate with ; to join in business or politics with ; to enter into an immoral alliance with a female.

My heart, which by a secret harmony Still moves with thine, joined in connexion sweet.

Milton.

Contemplation of human nature doth, by a neces- sary connexion and chain of causes, carry us up to the Deity. Hale.

Those birds who are taught some words or sentences, cannot conrtex their words or sentences in coherence with the matter which they signify.

Id. Origin of Mankind.

The natural order of the connecting ideas must di- rect the syllogisms ; and a man must see connexion of

each intermediate idea with those that it connects, be- fore he can use it in a syllogism. Locke.

We are all short-sighted, and very often see but one side of the matter : our views are not extended to all that has a connexion with it. From this defect I think no man is free. Id.

The people's power is great and indisputable, when- ever they can unite connectively, or by deputation, to exert it. Swift.

They fly,

By chains connexed, and with destructive sweep Behead whole troops at once Philips.

There must be a future state, where the eternal and inseparable connexion between virtue and happiness shall be manifested. Atterbury.

The predicate and subject are joined in a form of words by connexive particles. Watts't Logich.

The diversified but connected fabric of universal jus- tice is well cramped and bolted together in all its parts ; and depend upon it, I never have employed, and I never will employ, any engine of power which may come into my hands to wrench it asunder. Burke.

Paul Benfield's associate and agent was held up to the world as legislator of tndostan. But it was neces- sary to authenticate the coalition between the men of intrigue in India, and the minister of intrigue in Eng- land, by a studied display of the power of this their connecting link. Every trust, every honour, every distinction, was to be heaped upon him. Id.

Some legislators went so far as to make neutrality in party a crime against the state. I do not kno\» whether this might not have been rather to overstrain the principle. Certain it is, the best patriots in the greatest

commonwealths have always commended and promoted such connexions. W-

It does not, however, appear that in things so inti- mately connected with the happiness of life, as mar- riage, and the choice of an employment, parents have any right to force the inclinations of their children.

Beattie.

I formed several connexions with other younkers who possessed superior advantages, the youngling actors, who were busy in the rehearsal of parts in which they were shortly to appear on the stage of life, where, alas ! I was destined to drudge behind the scenes.

Burns.

No friendship will abide the test, That stands on sordid interest.

Or mean self love erected ; Nor such as may a while subsist Between the sot and sensualist,

For vicious ends connected. Cotvper.

With many a sob, amid a thousand fears, The beauteous wanderer pours her gushing tears ; Each soft connection rends her troubled breast.

Darwin.

CONNECTICUT, or as it was called by the ancient inhabitants, Quinnikticut, one of the United States of North America, is situated be- tween 40° 58′ and 42° 2′ N. lat., and 3° 16′ and 5° 10′ E. long. It is seventy-two miles broad and 100 miles long; and bounded on the north by Massachusetts, on the east by Rhode Island, on the south by Long Island Sound, and on the west by the state of New York; containing about 4674 square miles, or a computed area of 2,991,360 acres. The following table contains a list of its counties, population, and chief towns.

2A2

Counties.

Towns.

Pop. in 1810.

Pop. in 1820.

Chief Towns.

New London

15

34,707

35,943

New London.

Middlesex

7

20,723

22,405

Middleton.

Litchfield

22

41,375

41,267

Litchfield.

Tolland

10

13,779

14,330

Tolland.

Windham

15

28,611

31,684

Brooklyn

Fairfield

18

40,950

42,739

Fairfield

Hartford

18

44,733

47,264

Hartford

Newhaven

17

37,064

39,616

Newhaven

122

261,942

275,248

The population in 1800,251,002; in 1810, 261 942; in 1820,275,248; and in 1830,297,711 With the exception of Massachusetts, Connecti- cut was the most populous state in the United States, having an average of fifty-nine persons to each square mile. Several other states since 1820 have

increased in greater ratio.

Connecticut contains five incorporated cities ; namely, Hartford, Newhaven, Middleton, New London and Norwich. The capitals of the state Rre Hartford and Newhaven ; the sessions of the legislature are held alternately at these places. The counties are divided and sub-divided into townships and parishes, and every township has a corporation invested with sufficient power for its own internal regulation.

This state, upon the whole, enjoys a favorable climate ; although for a few weeks during the summer the weather is excessively hot, and the winters are very severe. The maximum of heat may be quoted, however, at 91°, and the greatest cold 10° below 0 ; but the heat seldom exceeds 85° and the cold is rarely below 0. The winter generally sets in in November and ends in April. The spring is backward, but the summer and autumn are exquisitely beautiful. Near the sea coast the inhabitants suffer much from variable weather ; in advancing farther inland, however, the sea breezes have less influence on the air, and the weather is, consequently, more equable. The north-west winds, which prevail duripg the winter solstice, acquire a piercing keenness from their passage over dreary wastes of ice and snow ; but, as a compensation, the sky presents one un- clouded expanse of cerulean blue, and the winter is considered favorable to health and longevity.

The face of the country is much diversified, presenting to the traveller a continual succession of mountains, hills, and valleys, on the whole, fertile, yet interspersed with portions of thin and barren land. Much of the soil has been under cultivation for nearly a century, and still retains its original strength. Its principal productions are Indian corn, wheat, rye, oats', barley, buck- wheat, flax in great quantity, hemp, potatoes of various kinds, &c. The Connecticut farmers reap great advantage also from their crops of pumpkins, onions, turnips, and beans. There is scarcely a farm in the country which has not one or more orchards attached to it, from the produce of which excellent cider is made in large quantities. The soil is in general very well cal- culated for t!ie purpose of pasturage, which enables the farmers to feed great numbers of cat-

tle and horses ; a considerable quantity of grass is also cultivated. Various kinds of ores and minerals are found in the different parts of the state, as iron, copper, silver, lead, and antimony ; they have also coal, free-stone, serpentine marble, limestone, &c.

In Connecticut a larger proportion of the po- pulation is engaged in manufactures than in any other of the United States, Rhode Island alone excepted. The manufacture of tin into culinary vessels is carried on to a

great extent. The ware thus made is sold by pedlars in all parts of the United States and Canada. Here are also Rianu- factories of hemp and cotton ; and, of late, im- proved machinery has been introduced. The manufacture of gin is carried to a very great ex- tent in Hartford county. Litchfield county is celebrated for its iron works, in which goods sufficient for the supply of the whole state are manufactured. Large quantities of guns arc made at Hamden and Newhaven. Glass-worki and tanneries have been introduced in various parts, and paper, hats, candles, leather, boots and shoes, nails, wooden dishes, and various articles of turnery are also made in many of the towns. A sail-cloth manufactory and a powder-mill have likewise been established. An oil as mild as sweet oil, and equally agreeable with salads, or for medicinal purposes, and of great use in paints and varnishes, is extracted from the seeds of the sun flower : oil-mills of a peculiar con- struction are used to extract it, and it is estimated that every bushel of seed will produce a gallon of oil, so that the cultivation of the flowers yields, in many instances, a greater profit than that of any other produce. There are large orchards of mulberry trees ; and silk-worms have of late been so successfully reared, that a promise is held out of their not only producing a suffici- ent supply for the purposes of the inhabitants, but also a surplus for exportation.

The foreign trade of Connecticut is principally carried on with the West Indies, but the coasting trade to the southern States is considered more valuable. The amount of shipping belonging to the State was, in 1815, 50,358 tons, and it has increased of late years. The value of the exports for the years ending September 30th, 1820, was 421,931 dollars. Their exports consist princi pally of horses, oxen, mules, oak-staves, pine- boards, oak planks, hoops, Indian corn, beans beef, pork, fish, butter, cheese, cider, &c. A large number of coasting-vessels ars employed for the conveyance of produce from this to thf

neighbouring States. To Massachusetts^ Rhode Island, and New Hampshire, they carry pork, corn, wheat and rye ; to Georgia, North and South Carolina, butter, cheese, salted beef, pota- toes, cider, apples, hay, &c., and receive in re- turn, rice, indigo, and money. Considerable quantities of the produce of the eastern divisions of the State are sold at Providence, Norwich, and Boston. But as New York is nearer, and the state of the markets well known, this city has become the principal mart for the produce of Connecticut, especially the western parts of the State.

The value of land and houses in Connecticut, as established by the

assessors' books, was in 1814, 86,550,033 dollars. There are ten banks established in the State, the aggregate amount of whose capital is upwards of three millions and a half of dollars.

The size of the farms in Connecticut is from fifty to 400 acres, held in fee-simple. The far- mers and their families are mostly clothed in home-spun cloths. Their woollens and linens are also of domestic manufacture, and, although coarser, are generally of a stronger texture than the produce of the European loom. The annual value of the flaxen goods made in families, was, in 1810, estimated at 2,303,078, and of woollen at 1,098,241 dollars. Linen and woollen ma- nufactories have now, however, been introduced, and they will probably every day become more common.

The principal towns and cities are Hartford, .New Haven, New London, Norwich, Mid- dleton, Windsor, Weathersfield, Farmington, Milford, Stratford, Guildford, Stamford, Suffield, and Enfield. The houses in the smaller towns are generally constructed of wood, but the sides are neatly clap-boarded and painted white. They are seldom above two stories high. The roofs are slanting, covered with shingles, and painted of a slate color. Sash windows, with green Ve- netian blinds, are however, very common. The places of worship are built of similar materials as the houses ; but generally surmounted by a spire, having one or two bells. The chief rivers are the Thames, the Connecticut, and the Housatonick, with their tributary streams. The whole range of the coast is indented with harbours, many of which are commodious and safe. The principal mountains are, the Lyme range ; the Mount Tom range ; tbe Green Mountain range, and the Taghcorac range, and these in most instances extend in a southerly direction the whole extent of the State. The inhabitants are almost entirely of English descent; the original stock from which they sprung consisted of 3000 souls, who settled in the towns of Hartford, Newhaven, &c., about the years 1635—1636. The inhabitants of Con- necticut have long been celebrated for their in- dustry, sobriety, and strict piety. It is said, that an instance of capital punishment does not oc- cur above once in every nine or ten years. There is a law to prevent travelling on a Sunday; but strangers contravene it, although the elders go about to the different inn-keepers to forbid them to let out their horses. If a traveller arrive, he can generally find a saddled horse, and has only to mount and pursue for some short distance a.

bye road. A great desire for improvement ma- nifests itself in every town. Every district has its public school. The law requires, that a gram- mar-school be kept in every county town throughout the whole State. Yale College, which was founded in 1700, has been long cele- brated as an eminent seat of learning. The li- brary of this college contained, in 1820,7000 vo- lumes, and the students, amounting to 412, had libraries

containing 2000 more. The conse- quence of this state of society is, a continued in- crease of population, so that although there have been more emigrated from this than from any other of the United States, it is at present full of inhabitants. Other causes concur doubtless in this effect : the greater proportion of the inhabi- tants are laborious husbandmen ; their farms fur- nish them with all the necessanes, and many of the conveniences, but with few or none of the luxuries of life. They are temperate and indus- trious, and their subsistence does not depend on mere accidental circumstances. Here is no ne- cessity for a long apprenticeship to fit them for a business, or a large stock of money required for them to commence with advantage, all which circumstances combined, operate as a never-fail- ing inducement for early marriages. The people of Connecticut are remarkably well informed with respect to their rights ; and, as is invariably the case in parallel circumstances, are tenacious to an excess of the least incroachment on them. This disposition frequently degenerates, in pri- vate life, into a litigious spirit, which unhappily affords ample employment to a numerous body of lawyers.

The Congregationalists are the most numerous religious denomination at present in Connecticut. Next to them are the Episcopalians and Baptists. There are very few of any other sect. In 1818 the former had 213 congregations, the Episcopa- lians sixty-nine, and the Baptists about seventy. Until the year 1818, Connecticut was governed by the charter of Charles II., granted in 1662, and which conveyed ample privileges to the people. The powers of the present government are vested in the three departments, the legisla- tive, executive, and judicial. The first consists of a senate and house of representatives; the members of both of these bodies are elected an- nually, and meet once in each year, alternately at Newhaven and Hartford. The executive go- vernment consists of a governor and lieutenant- governor, who are elected by the people every year. All bills must be presented to the gover- nor, but he has no vote upon legislative acts : if he disapprove of them, he returns them with his objections. The legislature may pass them, however, but in such cases the votes must be determined by the yeas and nays, and the names of the members entered on the Journals. The lieutenant-governor is the ex-officio speaker of the senate. The judicial power of Conrecticut is vested in a supreme court of Errors, a supe- rior court, and such inferior courts as the legisla- ture may from time to time please to establish. The assembly appoint the judges and justices of the peace, and the judges hold their offices during good behaviour. Justices of the peace are elected annually. No judge or justice is allowed to re-

tain his office after he has arrived at seventy years of age. Every white male citizen of the United States, who has a settlement in the State, who is twenty-one years of age, of good moral character, and has paid a state tax within a year, is eligible as an elector. No person is hound to support or be a denizen of any particular religi- ous sect. The governor and all the officers are liable to impeachment, which must be prosecuted by the house of representatives, and tried by the senate. No law can pass without the con- currence of both houses. Connecticut has ever been a republic, and may perhaps be cited as the most perfect and happy one that has ever existed in any time or in any country.

CoNNECTictix, a large river of North America, the most considerable one in the eastern part of the United States. It rises in the high lands, which \ separate the states of Vermont and New Hampshire from Lower Canada, and has been surveyed about thirty-five miles beyond the forty-fifth degree of latitude, to its northern head spring ; from which, to its mouth, is upwards of 300 miles, through a thick settled country; having upon its banks a great number of the most flourishing and pleasant towns in the United States. It is from eighty to 100 roods wide, at a distance of 130 miles from its mouth. Its course between Vermont and New Hampshire, as well as through Massachusetts, and part of Connecticut, is generally S. S.W. until it reaches the city of Middleton ; after which it runs a S. S. E. course to its mouth. The navigation of this beautiful river, which fertilises the land through which it runs, is much obstructed by falls. Two of these are between New Hamp- shire and Vermont; the first are called the Fifteen-miles falls. Here the river is rapid for twenty miles. The second remarkable fall is at Walpole, formerly called the Great Fall, but now named Bellows Falls. Above these, the breadth of the river is, in some places, twenty-two, in others not above sixteen, roods. The depth of the channel is about twenty-five feet, and com- monly runs full of water. In September, 1792, however, owing to the severe drought, the water of the river, it is said, passed within the space of twelve feet wide and two and a half deep. A large »ock divided the stream into two channels, each about ninety feet wide.

When the river is low, the eastern channel is dry, being ernssed by a solid rock ; and the whole stream falls into the western channels, where it is contracted to the breadth of sixteen feet, and flows with astonishing rapidity. There are several perpendicular falls one above another, within the length of half a mile, the largest of which is that where the rock divides the stream. Notwithstanding the velocity of the current at Bellows Falls, the salmon pass up the river, and are taken many miles above ; but the shad pro- ceed no farther. On the steep sides of the island rock, at the fall, hang several arm chairs, secured by a counterpoise ; in these the fishermen sit to catch salmon with fishing nets. In the course of the river through

Massachusetts are falls at South Hadley, around which locks and canals were completed in 1795, by an enterprising com- pany, incorporated in 1792 by the legislature of

Massachusetts. In Connecticut the river is ob- structed by falls at Enfield ; to render which navigable in boats, a company has been incor- porated, and a sum of money raised by lottery, but nothing effectual is yet done. The average descent of this river from Weathers field in Ver- mont, 150 miles from its mouth, is two feet to a mile, according to the barometrical observations of J. Winthorp, Esq. made in 1786. The rivers and streams .which fall into the Connecticut are numerous. At its mouth is a bar of sand, which considerably obstructs the navigation ; it has ten feet water on it at full tides, and the same depth to Middleton, from which the bar is thirty-six miles distant. Above Middleton there are shoals which have only six feet water at a high tide ; and here the tide ebbs and flows only about eight inches. Three miles above that city the river is contracted to about forty roods in breadth by two high mountains. On almost every other part the banks aie low, and spread into fine extensive meadows. In the spring floods, which generally happen in May, these meadows are covered with water. At Hartford the water sometimes rises twenty feet above the common surface of the river, and, having no other outlet but the above- mentioned strait, it is sometimes two or three weeks before it returns to its usual bed. These floods add nothing to the depth of water on the bar at the mouth of the river, as it lies too far off in the sound to be affected by them. This river is navigable to Hartford city, upwards of fifty miles from its mouth ; and the produce of the country, for 200 miles above it, is brought thither in boats. These boats are flat-bottomed, long, and narrow, and of so light a make as to be portable in carts. Before the construction of locks and canals on this river, they were taken out at three different carrying places, all of which made fifteen miles. Sturgeon, salmon, and shad, are caught in great plenty in their seasons, from the mouth of the river upwards ; but the sturgeon cannot ascend the upper falls ; besides a variety of small fish, such as pike, carp, perch, &c.

CONNICTATION, n. s. Lat. conniveo. A winking.

CONNI'VE, v. n. ~\ Fr. conniver; Lat. con-

CONNI'VENCY, n. s.l ntvere. To wink at a

CONNI'VENT, adj. > fault, that is, to pretend

CONNI'VER, TI. s. i not to see it ; to acqui-

CONNI'VANCE, 7i. s.J esce in wrong doing,

which it is our duty to prevent. This meaning

runs through all the kindred words. Connivent,

however, is applied by Milton in the sense of

dormant; inattentive; and, as will be seen in the

quotation, the Spectator gives to the verb its

primary sense of to wink. But neither of these

meanings is now in use.

It is better to mitigate usury by declaration, than to suffer it to rage by connivance. Bacon.

Disobedience, having gained one degree of liberty, will demand another : every vice interprets a conni- vance, an approbation. South. The licentiousness of inferiours, and the remissness of superiours, the one violates, and the other con- nives. Decay of Piety. This artist is to teach them how to nod judiciously, to connive with either eye. Spectator.

With whatever colours he persuades authority to connive at his own vices, he will desire its protection from the effects of other mens'. Rogers.

For the amusemeut of a few young soldiers, two or three thousand poor unarmed and innocent men may be murdered in one night, with the connivance, nay, and by the authority, of the law. Beattie.

Ye knew at least, by constant proofs addressed To ears and eyes, the vices of the rest.

But ye connive at what ye cannot cure,

And evils, not to he endured, endure,

Lest power exerted, but without success,

Should make the little ye retain still less. Cowper.

It has been stated that the persons in the tempo- rary possession of frames connive at their destruction j if this be proved upon inquiry, it were necessary that such material accessaries to the crime should be prin- cipals in the punishment.

Byron. Speech on the Frame-breaking Bill.

CONNIVENTES VALVULJL, CONNIVENT VALVES, in anatomy, wrinkles, cellules, and vascules, in the inside of the ..ilium and jejunum. See ANATOMY.

CONNOISSEU'R, n. s. J French. A judge ; CONNOISSEU'RSHIP. J a critic. It is often used of a pretended critic.

Reason the connoisseur, and bright load star In this world's sea to avoid the rock of chance.

Davies.

Your lesson learnt, you'll be secure To get the name of connoisseur. Swift.

SIR. BENJ. Nay now, Lady Sneerwell, you are severe upon the widow. Come, come, 'tis not that she paints so ill — but when she has finished her face, she joins it so badly to her .neck, that she looks like a mended statue, in which the connoisseur sees at once that the head 's modern, though the trunk 's antique. Sheridan. School for Scandal. I leave to learned fingers, and wise hands, The artist and his ape, to teach and tell How well his connoiseurship understands The graceful bend and the voluptuous swell : Let these describe the undescribable.

Byron. Childe Harold.

CONNOR, an ancient village of Antrim in Ireland, from which the bishopric of Down and Connor receives its latter name. On the bank of the Kells-water, are the ruins of a very an- cient round tower, the origin and use of which are involved in the same obscurity which conceals the date of other similar structures, in Ireland, amounting to about 100. About 1200 silver pence of Edward I. were dug up here in 1820, which are supposed to have been brought over by some of the soldiers of that prince in 1318. It is 132 miles from Dublin.

CONNOR (Bernard), M.D. and F.R.S. was born in Kerry, Ireland, about A.D. 1666. He studied physic in the university of Montpelier; and afterwards went to Paris. From thence he travelled to Venice, and through great part of Germany, to Warsaw, where he was made phy- sician to king John Sobieski. In 1695 he came to England, read lectures in London,

Oxford, and Cambridge, and became a member of the Royal Society and College of Physicians. He wrote a singular philosophical and medical treatise in Latin, entitled Evangelium Medici ; tending to explain the miracles performed by Christ as natural events, upon the principles of natural philosophy. He wrote also a History of

Poland ; Dissertations on Mount Vesuvius, &c. and died in 1698, aged thirty-two.

CO'NNOTATE, v. a.-) Sp. connotar ; Lat. CONNO'TE, v . a. > con and notarc. To

CONNOTA'TION,, n. s. .J connotate is to desig- nate something besides itself; to imply ; to in- fer. To connote signifies, to imply ; to betoken ; to include ; and now, more frequently, to de- note. Connotation is implication of something more than itself; inference; illation.

By reason of the co-existence of one thing with another, there ariseth a various relation or connotation between them. Hole's Origin of Mankind.

God's foreseeing doth not include or connotate pre- determining, any more than I decree with my intel- lect. Hammond.

Good, in the general notion of it, connotes also a certain suitableness of it to some other thing. South.

Plato by his ideas means only the divine essence •with this connotation, as it is variously imitable or par- ticipable by created beings. Norris.

CONNU'BIAL, adj. Lat. connubialis. Matri- monial ; nuptial ; pertaining to marriage ; con- jugal.

Should second love a pleasing flame inspire, And the chaste queen connubial rites require.

Pope's Odyssey.

So years successive, from perennial roots, The wire or bulb with lessened vigor shoots, Till curled leaves, or barren flowers, betray A waning lineage, verging to decay ; Or till, amended by connubial powers, Rise seedling progenies from sexual flowers. Darwin. He left to his vizier all state affairs,*

And showed but little royal curiosity : I know not if he had domestic cares — No process proved connubial animosity.

Byron. Don Juan.

CONNUMERATION, n. s. Lat. con and nu- merare. A reckoning together.

CONOCARPUS, in botany, the button tree, a genus of the monogynia order and pentandria class of plants, natural order forty-eighth, aggregate : COR. pentapetalous : the seeds naked, solitary, inferior; the flowers aggregate. There are three species, of which the best known are, C. freca and C. procumbens, both natives of the West Indies. They rise to about sixteen feet, but are of no beauty, nor is the wood of them used for any mechanical purpose in the countries where they grow naturally. They are, however, pre- served in some botanic gardens in Britain for the sake of variety.

CONOID is a figure generated by the revolu- tion of a conic section about its axis; there are, consequently, three kinds, answering to the three conic sections, viz. the elliptical conoid, or spheroid, the hyperbolic conoid, and the parabolic conoid. If a conoid be cut by a plane in any position, the section will be of the figure of some one of the conic sections ; and all pa- rallel sections of the same conoid are like and similar figures.

CONON, a renowned Athenian general and admiral, who flourished about A.. A. C. 395. After his defeat by Lysander, (see ATTICA,) he fled to Evagoras king of Cyprus : after which he put himself under the protection of Artax- erxes king of Persia ; with whose army he de- livered Athens from its oppressors, and rebuilt

its walls. In the 360th year of Rome, he over- came the Lacedemonians in a sea-fight near Cnidus upon the coast of Asia, depriving them of the sovereign rule they had on sea ever since the taking of Athens, but falling into the hands of Teribazus, a Persian, he was put to death.

CONOPS, in zoology, a genus of insects be- longing to the order diptera. The characters are these : the rostrum is porrected, and jointed like a knee. The antennae terminate by a flat and solid articulation, resembling the bowl of a spoon, with a lateral bristle, which, when closely examined, appears to be very hairy. Of this genus there are twelve or thirteen species ; but our limits only allow us to notice, 1. C. calci- trans is to be found every where, especially in autumn, when it harasses the horses, and draws blood from them with its sting. 2. C. macro- cephala might at first sight be mistaken for a species of wasp. It is smooth; the forepart of the head is lemon-color, as are the poisers ; the feet are dun-colored. The thorax is variegated with black and reddish dun. The same takes place with respect

to the segments of the abdo- men ; some of which are edged with lemon-color, chiefly the second, and part of the third, towards the sides. The wings are brown, watered, and clouded. This beautiful conops is found in meadows.

CONOVIUM, in ancient geography, a town of the Ordovices, in Britain. From its ruins arose, at the distance of four miles, Aberconway, a town on the mouth of the Conway, in Caer- narvonshire ; and on the spot where Conovium stood is a hamlet, called Caerhean, the old citadel.

CONQUA'SSATE, v. n.) It. and Lat. con-

CONQUASSA'TION, n. s. $ quassare. To shake; to agitate violently ; to dash to pieces. Agita- tion ; concussion.

Vomits do violently conquassate the lungs.

Harvey,

CO'NQUER, tj.o.&ra.^ Fr. conqueris ; It. CO'NQUEROR, n. s. conquistare ; Sp.con-

CO'NQUERESS, n. s. quistar ; Lat. conqui-

CO'NQUERABLE, adj. Were. To overcome; CO'NQUERMENT, n. s. to bring under sub- CO'NQUEST, n. s. jection ; to surmount ;

CO'NQUESTOR, n. s. J to master ; to win. A conqueror is too frequently a sanguinary and un- principled being, at once the scourge and the dis- grace of mankind ; though he has been dignified with the name of a hero by the folly of some, and the knavery of others. It is to be hoped that, in time, the human race will become enlightened enough to see the necessity of putting an early stop to the career of such pestilent ravagers.

And I saw, and beheld a white horse ; and he that sat on him had a bow ; and a croWn was given unto him : and he went forth conquering and to conquer.

Rev. vi. 2.

Ther was a duk that highte Theseus ; Of Athenes he .was lord and govemour. And in his time swiche a conqueror, That greater was ther non under the sonne ; Ful many a rich contree had he wonne. What with his wisdom and his chevalrie, He conquerd all the regnc of Feminie. '

Chaucer, Canterbury Tales.

Til on a time befel there suche a caas, That out of Rome was sent a senatour To conqverin rclmis, and bring honour Unto the toune of Rome. Id.

And eke Mercuries his message hath presented, That nedis to the conquest of Itaile My destinie is sone for to saile. Id.

He lettes me to pursue a conquest welnere wonne, To follow where my paynes were lost, ere that my sute begunne. Earl of Surrey.

With conqueror's hands for bathde in their owne

blood, And Cesar weeping over Pompeye's head. Sachcille.

Lo the infernall powres, Covering your foe with cloud of deadly night,

Have borne him hence to Plutoe's balefull bowres : The conqueit your's, I yours's, the shield and glory your's. Spenser. Faerie Queene.

So those which whilom wont with pollid cheeks, The Roman triumphs' glory to behold, Now on these ashie tombs shew boldness vain, And conquerd dare the conqueror disdain.

Id. The Ruint of Rome. Bonduca ! the victorious conqueress.

Id. The Ruins of Tine.

Put him to choler straight ;• he hath been used Ever to conquer and to have his word of contradiction. Shakspeare. Coriolanus. Both tugging to be victors, breast to breast ; Yet neither conqueror nor conquered. Id. Henry VI.

I'll lead thy daughter to a conqueror's bed ; To whom I will retail my conquest won, And she shall be sole victress. Id. Richard III.

A perfect conquest of a country reduces all the people to the condition of subjects. Davie» on Ireland.

Welcome, great Stagirite, and teach me now All I was born to know ; Thy scholar's victories thou dost undo ; He conquered the earth, the whole world you.

Cowley.

The conquered also, and inslaved by war, Shall, with their freedom lost, all virtue lose And fear of God. Milton.

Deserving freedom more Than those their conquerors, who leave behind Nothing but ruin wheresoe'er they rove.

Id. Paradise Regained. More willingly I mention air, This oar old conquest; than remember hell, Our hated habitation. Id.

While the heap is small, and the particulars few, he will find it easy and conquerable. South.

We conquered France, but felt our captive's charms ; Their arts victorious triumphed o'er our arms. Pope. A critick that attacks authors in reputation, is as the slave who called out to the conqueror, Remember, Sir, that you are a man. Addison's Guardian.

The difference in favour of the first conquerors is this ; the Asiatic conquerors very soon abated of their ferocity, because they made the conquered country their own. They rose or fell with the rise or fall of the territory they lived in. Fathers there deposited the hopes of their posterity ; and children there be- held the monuments of their fathers. Here their lot was finally cast, and it is the natural wish of all that their lot should not be cast in a bad land. Burke.

Though conquest on my banner wait, And triumph make my battles great, Yet, 'tis not love of power or might That arms me for the clashing fight, But love of her, whose blessed smile Approves my strength, o'erpays my toil.

u Leptley.

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Her's are the willing cnains o' love By conquering beauty's sovereign law ; And aye my Chloris' dearest charm. She says she lo'es me best of a'. Burnt.

Give me the line that ploughs its stately coarse Like a proud swan, conquering the stream by force ; That, like some cottage beauty, strikes the heart, Quite unindebted to the tricks of art. Cowper.

Laurels may flourish round the conqueror's tomb, But happiest they who win the world to come : Believers have a silent field to fight, And their exploits are veiled from human sight. Id.

Of all tke trophies gathered from the war, What shall return ? The

conqueror' broken car ! The conqueror't yet unbroken heart ! Again The horn of Poland sounds, and not in vain. Lutzen, where fell the Swede of victory, Beholds him conquer, but, alas '. not die.*

Byron. The Age of Bronse.

CONQUEST, in history, the name given to the invasion of England by William of Nor- mandy ; who, overcoming Harold at the battle of Hastings, founded the Norman dynasty, and was hence called William the Conqueror. See ENGLAND, HISTORY OF.

CONRAD II. emperor of Germany, was elected in 1004. He was obliged to take the field against most of the German dukes who had re- volted from him ; and put Ernest duke of Suabia under the ban of the empire, being one of the earliest instances of such a proscription. He died in 1039.

CONRAD III. emperor of Germany in 1 138. The duke of Bavaria opposed his election, who being put under the ban of the empire, and de- prived of his duchy, could not survive his dis- grace. The margrave of Austria was ordered by the emperor to take possession of Bavaria ; but Welsti, uncle to the deceased dvlke, attacking him, was defeated near the castle of Winsburgh. The battle fought upon this occasion is famous in history, as having given rise to the party names of Guelphs and Gibbelines, afterwards assumed in Italy. The parole of the day with the Bavarians was Welsti, from the name of the general ; that of the Imperialists Werblingen, from a small village where Frederic duke of Suabia, their commander, had been nursed : by degrees these names served to distinguish these two parties ; and the Italians, who could not accus- tom themselves to such rough words, formed from them Guelphs and Gibbelines. Conrad died in 1152.

CONRAD JUNIOR, or CONRADIN, son of Con- rad IV., was acknowledged emperor by the Gibbelines, who received him in triumph at Rome : but pope Alexander IV. had published a crusade against this orphan ; and Urban VII., his successor, gave the empire to Charles of Anjou, brother to Louis IX. king of France ; and the unfortunate youth, though powerfully supported even by the Turks, lost a battle, in which he was taken prisoner, and was publicly beheaded, by order of his base opponent, at Naples in 1229, in the eighteenth year of his age. In him ended the race of the dukes of Suabia, which had produced several kings and emperors.

CONSANGUI'NEOUS, adj. 3 Lat. consan-

CONSANGUI'NITY, n. s. iguineus con-

sanguinitas. Being near of kin ; of the same blood. Relationship by blood ;

by common de- scent, and not merely by marriage.

Am I not consanguineous ? Am I not of her blood ? Shakspeare. Twelfth Niyht. I've forgot my father ;

I know no touch of consanguinity.

Id. Troilui and Cressida.

There is the supreme and indissoluble consangui- nity and society between men in general ; of which the heathen poet, whom the apostle calls to witness, saith, We are all his generation. Bacon' Holy War.*

The first original would subsist, though he out- lived all terms of consanguinity, and became a stranger unto his progeny. Browne' Vulgar Errourt.*

Christ has condescended to a cognation and consan- guinity with us. South.

It would (among public misfortunes) be an evil more natural and tolerable, that the house of com- mons should be infected with every epidemical phrensy of the people, as this would indicate some consanguinity, some 'sympathy of nature with their constituents, than that they should in all cases be wholly untouched by the opinions and feelings of the people out of doors. By this want of sympathy they would cease to be a house of commons. Burke.

Let a man read Virgil with attention, and with taste, and then be a cruel parent, or an undutiful child, if he earn. And let him ask his own heart this question, whether human nature would not be de- prived of many of its best affections, and human so- ciety of its best comforts, if the ideas of those projec- tors were to be realised, who propose to improve the political art, by annihilating the attachments of con- sanguinity. Beattie.

CONSANGUINITY, in English law, is kindred, either lineal or collateral, by blood or birth ; as affinity is kindred by marriage. In the descent of land it is important to ascertain who shall take it as next of blood, and who, in administra- tion of other property, is next of kin.

Lineal consanguinity is that which subsists between persons of whom one is descended in a direct line from the other, as between a man and his father, grandfather, and great-grand- father, and so upwards, in the direct ascending line : or between a man and his son, grandson, great-grandson, and so downwards in the direct descending line. Every generation, in this lineal direct consanguinity, constitutes a different degree, reckoning either upwards or downwards : the father is related in the first degree ; and so

likewise is the son, grandsire, and grandson, in the second ; great-grandsire and great-grand- son in the third. This is the only natural way of reckoning the degrees in the direct line, and therefore universally obtains, as well in the civil and canon as in the common law.

Collateral kindred, or consanguinity, answers to the same description : collateral relations agreeing with the lineal in this, that they descend from the same stock or ancestor; but differing in this that they do not descend one from the other. Collateral kinsmen are such then as lineally spring from one and the same ancestor, who is the stirps, or root, the stipes, trunk or common stock, from whence these relations are branched out. As if a man has two sons, who have each a numerous issue ; both these issues are lineally descended from him as their com- mon ancestor ; and they are collateral kinsmen

to each other, because they are all descended from this common ancestor, and all have a por- tion of his blood in their reins, which denomi- nates them consanguineous.

The very being of collateral consanguinity consists in this descent from one and the same common ancestor. Thus Titus and his brother are related, because both are derived from one father. Titus and his first cousin are related, because botli descend from the same grandfather; and his second cousin's claim to consanguinity is, that they are both derived from the same great-grandfather. In short, as many ancestors as a man has, so many common stocks he has from which collateral kinsmen may be derived. It appears that each person, at the twentieth de- gree, or the distance of twenty generations, has above a million of ancestors ; and if a similar calculation be made of collateral kindred at the distance of twenty degrees forward, on the sup- position that each couple of ancestors leave, one with the other, only two children, the number will be 274,877,906,944 : as by the following tables :—

TABLE I.

TABLE II. Collateral Degrees. Number of Kindred.

Lineal Degrees.

Number of Ancestors.

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It is evident that each person has two ances- tors in the first degree, and that the number is doubled at every remove, because each of his ancestors has also two immediate ancestors of his own. In order to find the number of an- cestors at any particular degree, we need only to find a power of 2, the index of which is the number of degrees; e. g. 2}5, 2)", sK &c. will give the corresponding number respectively. Or the number of ancestors at any even degree may be had by squaring the number of ancestors at half that number of degrees: thus 16, the num- ber of ancestors at four degrees, is the square of 4, the number of ancestors at two ; 256 is the square of 16; 65536 of 256; and the number of ancestors at forty degrees would be the square of 1048576, or upwards of a million of millions. These powers are easily found by means of loga- rithms

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1024

4096

16384

65536

262144

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. 4194304

. 16777216

. 67108864

268435456

1073741814

4294967296

17179869184

68719476736

274877906944

This calculation may also oe made by squar ing the couples, or half the number of ancestors, at any given degree ; which will furnish us with the number of kindred we have in the same degree, at equal distance with ourselves from the common stock, besides those at unequal dis- tances. Thus, in the tenth lineal degree, the numbei of ancestors is 1024 ; its half, or the couples, amounts to 512 ; the number of kindred hi the tenth collateral degree amounts therefore to 262144, or the square of 512. And, if we will be at the trouble to recollect the state of the several families within our own knowledge, and observe how far they agree with this account ; that is, whether, on an average, every man has not one brother or sister, four first-cousins, six- teen second cousins, and so on, we shall find, that the present calculation is very far from being overcharged.

CONSARCINATION, n. s. From Lat. con- sarcino. To piece. The act of patching together.

CONSCIENCE, n. s. CO'NSCIENCED, adj. CONSCIENCELESS, adj. CO'NSCIENT, adj. CONSCIENTIOUS, n. s. CONSCIENTIOUSLY, adv.

Fr. conscience ; Ital. conscicnze ; Sp. consciencia ; Lat. cowcientia, fromomandi-cire. In its most obvi-

CONSCIE'NTIOUSNESS, n. s. (ous and extended CO'NSCIONABLE, adj. f sense, conscience

CO'NSCIONABLENESS, n. s. means that inter- CO'NSCIONABLY, adv. nal monitorwhich

CO'NSCIONARY, adj. heaven has pla-

CO'NSCIOUS, adj, ced in the human

CO'NSCIOUSLT, adv. breast, to warn

CONSCIOUSNESS, n. s. J against the com- mission of crime, or to punish the criminal by the severity of its reproaches. In its secondary senses, all of which have more or less of refer- ence to the primary idea, it signifies equitable conduct ; consciousness ; the real sentiments , scruple ; principle of action ; and, in familiar and ludicrous style, reason ; that which is rea- sonable. The conscientious man is he who acts strictly according to the dictates of a good con- science. Conscious denotes, having the power of thinking ; being able to know one's own thoughts

and actions; being aware of a thing; being ad- mitted to the knowledge of (in which case it has to before the noun); bearing witness by the dictate of conscience to anything, because we know that we have been a participator in it. Consciousness, Locke defines to be, the percep- tion of what passes in a man's own mind; thence, its secondary application, to an internal sense of criminality or innocecce. Bacon uses conscient in the sense of conscious. Conscionary, which is of rare occurrence, indicates that which relates to conscience.*

This is thank-worthy, if a man, for conscience toward God, endure grief. 1 Peter ii. 19.

But for to speken'of hire conscience,

She was so charitable and so pitous

She wolde wepe if that she saw a mous

Caughte in a trappe if it were ded or bledde.

Chaucer. Cant. Tales.

He that trosteth him so muckel in his good con- science that he aespiseth and setteth at nought his good name or los, and recketh not though he kepe not his good name, n' is but a cruel cherl. Id.

When a people have no touch of conscience, no sense of their evil doings, it is bootless to think to restrain them. Spenser.

What hevens, what altars, what enraged hetes, { Here heaped up with termes of love unkynd) My conscience cleare with guilty bands would bind ?

Id. Faerie Queene.

The reason why the simpler sort are moved with au- thority, is the conscience of their own ignorance.

Hooker.

A knave very voluble ; no farther conscionable than in putting on the mere form of civil and humane seeming. Shakspeare.

Why dost thou weep ? Cau'st thou the conscience

lack, To think I shall lack friends ! Id. Timon.

Dost thou in conscience think, tell me, jEmilia, That there be women do abuse their husbands In such gross kind ? Id. Othello.

Now is Cupid a child of conscience ; he makes res. titution. Id. Merry Wives of Windsor >

Yet though these men against their conscience strive,

There are some sparkles in their flinty breasts, Which cannot he extinct, but still revive ;

That, thou they would, they cannot quite be beasts.

Davies.

We must make a conscience in keeping the just laws of superiours. Taylor's Holy Living.

A prince must be used conscionably as well as a com- mon person. I/I.

What you require cannot, in conscience, be deferred beyond this time. Milton.

Who against faith and conscience can be heard Infallible? Id. Paradise Lost.

They did in their consciences know, that he was not able to send them any part of it. Clarendon.

The queen had been solicitous with the king on his behalf, being conscious to herself that he had been en- couraged by her. Id.

Children are travellers newly arrived in a strange country ; we should therefore make conscience not to mislead them. Locke.

It will be a wonderful c.'itdentiousness in them, if they will content themselves with less profit than they can make. Id.

Since consciousness always accompanies thinking, and it is that which makes every one to be what he calls self, and thereby distinguishes himself from all other thinking things j in this alone consists personal identity, i, e. the sameness of a rational being. Id.

If these perceptions, with their consciousness, always remained in the mind, the same thinking thing would be always consciously present. Id.

Lead a life in so conscientious a probity, as in thought, word, and deed, to make good the character of an honest man. L' Estrange.

*There is the erroneous as well as the rightly in- formed conscience; and, if the conscience happens to be deluded, sin does not therefore *:ease to be sin, be- cause a man committed it conscientiously. South.*

The rest stood trembling, struck with awe divine; JEneas only, conscious to the sign, Presaged the event. Dryden's Mneid.

Hector was in an absolute certainty of death, and depressed with the conscience of being in an ill cause.

Pope.

An honest mind is not in tne power of a dishonest : to break its peace, there must be some guilt or con- sciousness. Id.

Conscience signifies that knowledge which a man hath of his own thoughts

and actions ; and because, if a man judgeth fairly of his actions by comparing them with the law of God, his mind will approve or con- demn him ; this knowledge or conscience may be both an accuser and a judge. Swift.

Among substances, some are thinking or conscious beings, or have a power of thought. Watts's Logich.

ff spirit be without thinking, I have no idea of any thing left ; therefore consciousness must be its essential attribute. Id.

A conscientious person would rather doubt his own judgment, than condemn his species. He would say, I have observed without attention, or judged upon er- roneous maxims ; I trusted to profession, when I ought to have attended to conduct. Burke.

What is the moral law of nature is a question that has often been proposed. That (I would answer) is incumbent on us by the law of our nature, which, after candid inquiry, our reason and conscience declare to be right. Seattle.

How blest the youth in yonder valley laid !

Soft smiles in every conscious feature play, While to the gale low-murmuring through the glade

He tempers sweet his sprightly-wtrbling lay. Id.

Guilt, still by sleepless Conscience bayed, Feasts fearful on his ill-got spoils, While Honesty incessant toils, By Poverty way-laid. Leftley.

Curse on his perjured arts ! dissembling smooth :

Are honour, virtue, conscience, all exiled ? Is there no pity, no relenting ruth,

Points to the parents fondling o'er their child ? Then paints the ruined maid, and their distraction wild ? Burns.

The cause is Conscience — Conscience oft

Her tale of guilt renews : Her voice is terrible though soft,

And dread of death ensues. Cowper.

My mother ! when I learned that thou wast dead, Say, wast thou conscious of the tears I shed ? Id.

Throned in the vaulted heart his dread resort. Inexorable Conscience holds his court, With still small voice the plots of Guilt alarms, Bares his masked brow, his lifted hand disarms ; But, wrapped in night with terrors all his own, He speaks in thunder, when the deed is done.

Darwin.

Pale shoot the stars across the troubled night, The timorous moon withholds her conscious light.

Id.

Perhaps the recollection of the deed my confcictice cannot justify, may haunt me in such gloomy ami tin- social fits, that I shall hate the tenderness that woul.l

believe mp, break from you arms, and quarrel with your fondness ! Sheridan.*

Her very smile was haughty, though so sweet ; Her very uod was not an inclination ;

There was a self-will even in her small feet, As though they were quite conscious of her station.

Byron. Don Juan.

CONSCIENCE, COURTS OF, are courts of reco- very of small debts, constituted by act of parlia- ment in London, Westminster, &c. and other populous and trading districts.

CONSCIU'BE, v.a. ˆ Lat. conscribere,

CO'NSCRIPT, n. & adj. >from con andscribere.

CONSCRI'PTION, n.s. j To enroll; to call to- gether for military service. The Roman sena- tors were called conscript fathers, from their names being written on a register. Conscript has of late years been well known as the appella- tion of the French recruits ; and conscription as that of the operation by which they have been obtained .

CO'NSECRATE, v. a. & adj.~\ Tr.consacrer ;

CGNSECRA'TION, n. s. f It. consacrare ;

CONSECUA'TOK, n. s. | consagrare ;

CONSECRA'TOUY, adj. J Sp. conxagrar;

Lat. consecrare, from con and sacrare. To ren- der sacred ; to hallow; to set apart for religious uses ; to devote to the service of; to canonise. Rendered sacred ; devoted, dedicated to. The rite by which a person or thing is dedicated to the service of God, or devoted to any purpose; the act of canonising. The person who performs the rite.

He shall consecrate unto the Lord the days of his separation, and shall bring a lamb of the first year for a trespass offering. Numbers vi. 12.

The consecration of his God is upon his head.

Id. vi. 7.

Enter into the holiest by the blood of Jesus, by a new and living way, which he hath consecrated for us.

Hebrews x. 20.

At the erection and consecration, as well of the ta- bernacle as of the temple, it pleased the Almighty to give a sign. Hooker.

When thou reviewest this, thou dost review

The very part was consecrate to thee.

Shakspeare. Sonnet Ixxiv.

His-words of consecration, which you yourself in your letter do rightly term true consecratory words.

Bis/top Morton. Shall I abuse this coiuecrated gift

Of strength, again returning with my hair ?

Mttton.

The calendar swells with new consecrations of saints.

Hale.

We must know that consecration makes not a place sacred, but only solemnly declares it so ; the gift of the owner to God makes it God's, and consequently sacred. South.

Whether it be not against the notion of a sacra- ment, that the consecrator alone should partake of it.

Atterbury.

A bishop ought not to consecrate a church which the patron has built for filthy gain, and not for true devotion. Ayliffe.

Those forms of bright perfection, which the bard, While boundless hopes and boundless views inflame, Enamoured consecrates to never-dying fame. Beattie.

What says the prophet ? Let that day be blessed \Vith holiness and consecrated rest. Pastime and business, both it should exclude, And bar the door the moment they intrude ;

Nobly distinguished above all the six

By deeds in which the world must never mix.

Cowpar.

The lover too shuns business and alarms, Tender idolater of absent charms. Saints offer nothing in their warmest prayers, That he devotes not with a zeal like theirs : 'Tis consecration of his heart, soul, time ; And every thought that wanders is a crime. Id.

CONSECRATION is used for the benediction of the elements in the eucharist.

CONSECRATION, in Jewish antiquity. The Mo- saical law ordained, that all the first born, both of man and beast, should be sanctified or con- secrated to God. We find, also, that Joshua consecrated the Gibeonites, as David and Solo- mon did the Nethinims, to the service of the temple ; and that the Hebrews sometimes con- secrated their fields and cattle to the Lord, after which they were no longer in their own power.

CONSECRATION, among antiquaries, is the re- presentation on models of the apotheosis of an emperor, or his translation among the gods. On one side is the emperor's head, crowned with laurel, sometimes veiled ; and the inscription gives him the title of divus : on the reverse is a temple, a bustum, an altar, or an eagle taking its flight towards heaven, either from

off the altar, or from a cippus. Sometimes the emperor is seen in the air, borne up by the eagle ; the inscription always consecratio. These are the usual symbols : yet on the reverse of that of Antonius is the An- tonine column. In the apotheoses of empresses, instead of an eagle there is a peacock. As to the honors rendered these princes after death, they were explained by the words consecratio, pater, divus, ad deos. Sometimes around the temple or altar are put rhemoria felix, or memoriae aeter- nae : for princesses aeternitas, and sideribus re- cepta ; on the side of the head, dea or 6t«.

CONSECUATION of churches, &c. Among the ancient Christians, the consecration of churches was performed, it is said, with much solemnity. In what manner it took place for the first three ages, however, is uncertain ; the authentic ac- counts reaching no higher than the fourth century. Some assert the consecration to have consisted in setting up the sign of the cross, or in placing a communion table in the church ; others, that a panegyrical sermon only, was preached in com- memoration of the founder, and that they then proceeded to prayers ; one of which was com- posed on purpose. The Roman Catholics be- stow the ceremony of a formal consecration on almost every utensil, as well as building, used for sacred purposes, &c. In England, churches have been always consecrated with particular cere- monies, the form of which is left to the discretion of the bishop. That observed by Archbishop Laud, in the beginning of the seventeenth cen- tury, in consecrating St. Catherine Creed church, in London, gave great offence. The bishop came attended with several of the high commission, and some civilians. At his approach to the west door of the church, which was shut, and guarded by halberdiers, some that were appointed for that purpose, cried with a loud voice. — ‘ Open, open, ye everlasting doors, that the king of glory inay come in !’ Presently the doors were opened, and

Laud, with some doctors and principal men, en- tered. As soon as they were within the place, his lordship fell down upon his knees ; and, with eyes lifted up, and his arms spread abroad, said, This place is holy ; the ground is holy : in the name of the Father, Son, and Holy Ghost, I pronounce it holy. Then, walking up the mid- dle aisle towards the chancel, he took some of the dust, and threw it into the air several times. When he approached near the rail of the com- munion table, he bowed towards it five or six times ; and, returning, went round the church, with his attendants in procession ; saying first the hundredth and then the

nineteenth Psalm, as prescribed in the Roman Pontifical. He then read several collects, in one of which he prays God to accept of that beautiful building, and concludes thus : We consecrate this church, and separate it unto thee as holy ground, not to be profaned any more to common use. In another he prays, That all who should hereafter be buried within the circuit of this holy and sacred place, may rest in their sepulchres in peace, till Christ's coming to judgment, and may then rise to eter- nal life and happiness. Then the bishop, sitting under a cloth of state, in the aisle of the chancel, near the communion table, took a written book in his hand, and pronounced curses upon those who should hereafter profane that holy place by musters of soldiers, or keeping profane law courts, carrying burdens through it : and at the end of every curse he bowed to the east, and said, Let all the people say, Amen. When the curses were ended, he pronounced a like number of blessings upon all that had any hand in framing and building that sacred and beautiful church ; and on those that had given or should hereafter give, any chalices, plate, ornaments, or other utensils ; and at the end of every blessing, he bowed to the east, and said, Let all the people say, Amen. After this came the sermon, then the sacrament, which the bishop consecrated and administered in the following manner : As he approached the altar, he made five or six low bows, and coming up to the side of it, where the bread and wine were covered, he bowed seven times. Then, after reading many prayers, he came near the bread, and, gently lifting up the corner of the napkin, he retreated hastily a step or two, and made three low obeisances ; his lord- ship then advanced, and, having uncovered the bread, bowed three times as before. Then he laid his hand on the cup, which was full of wine, with a cover upon it ; which, having let go, he stepped back, and bowed three times towards it; then he came near again, and lifting up the cover of the cup looked in it ; and seeing the wine, let fall the cover again, retired back, and bowed as before. Then the elements were consecrated ; and the bishop, having first received, gave it to some principal men in their surplices, hoods, and tippets ; after which, many prayers being said, the solemnity of the consecration ended. The performance of this ceremonial was one of the crimes urged against Laud by the Commons.*

CONSE'CTARY, n. s. & adj. L&i.consectarius. A consequence deduced from premises ; a cor- rollary. Consequent; following as a natural consequence.

From the inconsistent and contrary determinations thereof, consectary impieties and conclusions may arise.

Browne.

These propositions are consectaries drawn from the observations.

Woodward'i Nat. Hist.

*CONSE'CUTE, v. n.ˆ Lat. cotuequi; con- CONSECU'TION,TI.S. Igecutio, The verb, CONSE'CUTIVE, adj. t which signifies to fol- CoNSE'cuTivELY,odu. * low close, to' come up with, is not in use. Consecution is a chain of consequences ; a series of deductions ; a con- nected chain of propositions ; succession; follow- ing in regular sequence. In the school of philo- sophy, consecutively is opposed to antecedently, and, in some instances, to effectually or caus- ally.*

The month of consecution, or, as some term it, of progression, is the space between one conjunction of the moon with the sun unto another.

Browne's Vulgar Erroun.

Some consecutions are so intimately and evidently connexed to or found in the premises, that the conclu- sion is attained, and without any thing of ratiocina- tive progress. Hale.

The moon makes four quarterly seasons within her little year, or month of consecution. Holder.

In, a quick consecution of colours, the impression of every colour remains in the sensorium.

Newton's Optic/a.

That obligation upon the lands did not come into disuse but by fifty consecutive years of exemption.

Arbuthnut on Coins.

CONSELVE, a considerable town and dis- trict of the Venetian territory, Italy, in the Paduan, containing forty-one villages, and 40,000 souls. The town has 5,700 inhabitants and a fine cathedral.

To CONSE'MINATE, v. a. Lat. consemino. To sow different seeds together.

CONSE'NSION, n. s. Lat. concert tio. Agree- ment; accord.

A great number of such living and thinking particlts could not possibly, by their mutual contact, and pros- sing and striking, compose one greater individual ani- mal, with one mind and understanding, and a vital consemion of the whole body. Bentley.

CONSE'NT,».o.&n.s. ") Fr. consenter , CONSE'NTEE, n. s. I It. contentire ; Sp.

CONSENTING, n. s. I consentir , ;Lat. con-

CONSEKTA'NEOUS, adj. ˆsent ire,from con and CoNSENTA'NEOiJSLY,odp. sentire. To agree CONSENTA'NEOUSNESS, | to ; to be of the CONSE'NTIENT, adj. J same mind ; toco- operate ; to allow that a thing shall be done. The act of yielding ; of giving permission ; unity of action or opinion ; relation to; correspondence or coherence with ; tendency to one end ; joint acting together ; one part of the body being sym- pathetically affected by action on some other part. Consentaneous signifies agreeable to ; consistent with. Consentient is conrurring in; being of one opinion.

In this we consent unto you, if ye will be as we be.

Genesis.

Ye ban yourselves shewed here to-day So high sentence, so holily, and well, That I consent, and coufirme every del Your wordes all, and your opinion.

Chaucer. Cant. TMU.

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Also a nuin shuld sorrow, for all that ever he hath desired ayenstthe la we of God, with parfite contenting of his reson. Id.

Then all that evening (welcomed with cold And cheareless hunger) they together spent ; Yf.t found no fault, but that the hag did scold And rayle at them with grudgefull discontent, For lodging there without her own content.

Spenser. Faerie Queene. And all her sister nymphes with one consent Supplide her sobbing breaches with sad complement.

Id.

Ye comets scourge, the bad revolting stars That have consented unto Henry's death.

Shakspeare. Henry VI.

I am far from excusing or denying that compli- ance ; for plenary consent it was not. King Charles. The authority due J. > the consentient judgment and practice of the universal church.

Oxford Reasons against the Covenant. It will cost no pains to bring you to the knowing, nor to the practice ; it being very agreeable and con- sentaneous to every one's nature.

Hammond. Pract. Cat.

The fighting winds would stop there and admire, Learning consent and concord from his lyre.

Cowl. Davideit.

What in sleep thou didst abhor to dream, Waking thou never wilt consent to do. Milton.

Demons found

In fire, air, flood, or under ground, Whose power hath a true consent With planet or with element. Id.

Paracelsus did not always write so consentaneously to himself, that his opinions were confidently to be collected from every place of his writings, where he seems to express it. Boyle.

Nor can such an usurper, or any deriving from him, ever have a title, till the people are both at liberty to consent, and have actually consented, to allow and con- firm him in the power he had till then usurped.

Locke.

Nobody doubts but an express consent, of any man entering into any society, makes him a perfect mem- ber of that society, a subject of that government. Id.

When thou canst truly call these virtues thine, Be wise and free by heaven's consent and mine.

Dry den's Pen.

Such is the world's great harmony, that springs From union, order, full consent of things. Pope.

Children are not consenting to their relation, but their relation, without their actual consent, binds them to its duties ; or rather it implies their consent, be- cause the presumed consent of every rational creature is in unison with the predisposed order of things.

Burke.

Thither with one consent they bend, Their sorrows with their lives to end , While each, in thought, already hears The water hissing in his ears. Beattie.

LlECT. Upon my word the army is very much obliged to him. Well, then, I must marry the girl first, and ask his consent afterwards.

Sheridan. St. Patrick's Day. CONSENTES, in Roman antiquity, the twelve superior gods, or Dii majorum gentium. The word signifies as much as consentientes ; that is, who consented to the deliberations of Jupiter's council. Ennius has briefly expressed their names in these lines,

Juno, Vesta, Minerva, Ceres, Diana, Venus, Mars, Mercurius, Jovi, Neptunus, Vulcanus. Apollo.

CONSENZA, a town of Naples, in Calabria Citerior, anciently called Consentia, sixteen miles from the coast, -it is an archbishop's see, with a considerable revenue.

CO'NSEQUENCE, n. s. ˆ Fr. consequence ; CO'NSEQUENCY, n. s. lta. consequent ;

CONSEQUENT, n. s. & adj. \ Span, consequen- CO'NSEQUENTLY, adv. [da ; Lat. conse.-

CONSEQUE'NTIAL, adj. [quentia. That CONSEQUENTIALLY, adv. which follows in CONSEQUE'NTIALNESS, n. s. sequence ; the re- CONSEQUE'NTNESS, n. s. J suit of a cause; a deduction from premises ; the last member of a syllogism; consecution ; that which can exer- cise an influence over; that which is of import- ance. Consequent, as a noun, is synonymous with consequence ; as an adjective, it signifies regularly deduced ; arising out of a cause. Con- sequential means necessarily springing from a certain cause ; justly deduced from the premises. Of late years it has been perverted to the sense of conceited, pompous ; but this use of it is at once an absurdity and a vulgarism. The ideas conveyed by consequentially, are, with correct inference ; with a just connexion of thoughts ; as a consequence of; eventually ; in a regular series. Consequently denotes, in consequence of; necessarily; of course. Consequentness is regular connexion of propositions ; coherence and just arrangement of discourse.

Doth it follow that they, being not the people of God, are in nothing to be followed ? This consequent were good, if only the custom of the people of God is to be observed. Hooker.

The instruments of darkness Win us with honest trifles, to betray us In deepest consequence. Shakspeare. Macbeth.

Spirits that know All mortal consequences have pronounced it. Id.

But things of weight and consequence indeed Himself doth in' his chamber then debate ;

Where all his counsellors he doth exceed, As far in judgment, as he doth in state. Davies. They were ill paid ; and they were ill governed, which is always a consequent of ill payment.

Id. on Ireland

Let them examine the consequentness of the whole body of the doctrine I deliver.

Digby on the Soul, Dedication.

Asserted without any colour of scripture-proof, it is of very ill consequence to the superstructing of good life. Hammond.

Though these kind of arguments may seem ob- scure ; yet, upon a due consideration of them, they are highly consequential and concludent to my pur- pose. Hole's Origin of Mankind.

Shun the bitter consequence; for know, The day thou eatest thereof, thou shah die.

Milton's Paradise Lost.

Sorrow being the natural and direct offer of sin, that which first brought sin into the world, must, by necessary consequence, bring in sorrow too. South.

This satisfaction, or dissatisfaction, consequent upon a man's acting suitably or unsuitably to conscience, is a principle not easily to be worn out. Id.

He could see consequents yet dormant in their prin- ciples, and effects yet unborn. Id.

There ts consequently, upon this distinguishing principle, an inward satisfaction or dissatisfaction in the heart of every man, after good or evil. South. This relation is so necessary, that God himself can- not discharge a

rational creature from it ; although consequentially indeed he may do so, by the annihila- tion of such creatures. Id. The little, or almost insensible, impressions on our tender infancies have very important and lasting con- sequences : and there it is, as in the fountains of some rivers, where a gentle application of the hand turns the flexible waters, into channels that make them take quite contrary courses. Locke. It was not a power possible to be inherited, because the right was consequent to, and built on, an act per- fectly personal. Id. In the most perfect poem a perfect idea was re- quired, and consequently all poets ought rather to imi- tate it. Dryden.

Can syllogism set things right? No, majors soon with minors fight. Or, both in friendly consort joined, The consequence limps false behind. Prior. We sometimes wrangle, when we should debate ; A consequential ill which freedom draws ; A bad effect, but from a noble cause. Id.

The anger of Achilles was of such consequence, that it embroiled the kings of Greece. Addison's Spectator. Nobody writes a book without meaning something, though he may not have the faculty of writing conse- quentially, and expressing his meaning.

Id. Whig Examiner.

Their people are sunk in poverty, ignorance, and cowardice ; and of as little consequence as women and children. Swift.

If such persons can answer the ends of relief and profit to themselves, they are apt to be careless enough about either the means or the consequences. Burke. To enable men to act with the weight and charac- ter of a people, and to answer the ends for which they are incorporated into that capacity, we must suppose them (by means immediate or consequential) to be in that state of habitual social discipline, in which the wiser, the more expert, and the more opulent, con- duct, and by conducting enlighten and protect the weaker, the less knowing, and the less provided with the goods of fortune. . Beattie.

This once believed, 'twere logic misapplied, To prove a consequence by none denied, That we are bound to cast the minds of youth Betimes into the mould of heavenly truth. Cowper.

Beware of too sublime a sense

Of your own worth and consequence. Id.

Dangle, I have brought you two pieces, one of

which you must exert yourself to make the managers

accept, I tell you that : for 'tis written by a person of

consequence. Sheridan.

When a proposal is made to emancipate or relieve,

you hesitate, you deliberate for years, you temporise

and tamper with the minds of men ; but a death-bill

must be. passed off hand, without a thought of the

consequences. Byron. Speech on the Frame-breaking Bill.

CONSERANS, a ci-devant territory of

France, being the south-west division of the late

piovince of Gascony. It was bounded on the

east by Poix, on the south by Catalonia, and on

the north-west by Cominges. It is now included

in the department of Gers.

CONSE'RTION, n. s. Lat. consero. Fit- ness , adaptation.

What order, beauty, motion, distance, size, Comertion of design, how exquisite ! Young.

Fr. conserver , Ital . conservare ; Sp. conservar; Lat. conservare, from con an J sernare. To keep safe; to protect; to candy fruit. A conserve j is a sweetmeat

CONSERVE, v. a. & n.

CONSE'IIVER, n. s.

CONSE'RVANT, adj.

CONSE'RVABLE, adj.

CONSE'RVANCY, rt. «.

CONSERVATION, n. s.

CONSE'RVATIVE, adj.

CONSERVA'TOR, n. s.

CONSERVATORY, n. s. _, _ _ „„

made of fruit; but this meaning is now princi pally used with reference to those preparations with which apothecaries make up their medicines into pills or boluses ; a place in which anything is kept : this last meaning also is obsolete. Con- server and conservator is he who keeps ; who preserves. Conservation is the act of preserving. ' A conservatory,' says Johnson, ' is a place where anything is kept in a manner proper to its pe- culiar nature, as fish in a pond, corn in a granary.' The word, however, except when used figura- tively, is now rarely applied to anything but a building in which tender and exotic plants are protected from the inclemency of the weather. As an adjective, its application is obvious. Courts of conservancy are courts held by the lord mayor of London, for the preservation of the fishery, and the prevention of nuisances, on the river Thames ; he being, ex officio, conservator of the river.

Geffray, thou wottist full wel this, That every kindely thinge that is Yhath a kyndely stede, there he May best in it conserved be.

Chaucer. House of Fame. And this place of whiche I the tel, There as Fame doth yliste to dwell, Is sette amidtlis of these thre, Heven, and erthe, and eke the se, As moste conservatife of soun.

Conservature of kinges, dukes, and relmes

Will't please your honour to taste of these con- serves? Shakspeare.

They have in Turkey and the East, certain confec- tions, which they call servets, which are like to can- did conserves, and are made of sugar rind lemons.

Bacon's Natural History.

It is an enquiry of excellent use, to enquire of the means of preventing or staying of putrefaction ; for therein consisteth the means of contervation of bodies. Id.

A conservatory of snow and ice, such as they use for delicacy to cool wine in summer. Id.

For that you declare that you have many sick amongst you, he was warned by the conservator of the city, that he should keep at a distance.

Id. New Atlantis.

He hath been most industrious, both collector and conserver of choice pieces in that kind. Hat/ward.

The spherical figure, as to all heavenly bodies, so it agreeth to light, as the most perfect and conservative of all others. Peacham.

The lords of the secret council were likewise made conservators of the peace of the two kingdoms, during the intervals of parliament. Clarendon.

Nothing was lost out of these stores, since the art of conserving what others have gained in knowledge is easy. Temple.

In the Eastern regions there seems to have been a general custom of the priests having been the per- petual cowcrver of knowledge and story. Id.*

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Id.

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Tuberoses will not endure the wet of this season ; therefore set the pots into your conserve, and keep them dry. Evelyn's Kalendar.

You may set your tender trees and plants, with the windows and doors of the greenhouses and conserva- toriet open, for eight or ten days before April. Id,

Though there do indeed happen some alterations in the globe, yet they are such as tend rather to the be- nefit and conservation of the earth, and its productions, than to the disorder and destruction of both.

Woodward's Natural History.

The water dispensed to the air and atmosphere by the great abyss, that subterranean conservatory, is by that means restored back. Id.

They will be able to conserve their properties un- changed in passing through several mediums ; which is another condition of the rays of light.

Newton's Opticks.

If wealth is the obedient and laborious slave of vir- tue and of public

honour, then wealth is in its place, and has its use ; but if this order is changed, and ho- nour is to be sacrificed to the conservation of riches, riches which have neither eyes nor hands, nor any- thing truly vital in them, cannot long survive the be- ing of their vivifying powers, their legitimate masters, and their potent protectors. Burke.

All your sophisters cannot produce any thing bet- ter adapted to preserve a rational and manly freedom than the course that we have pursued, who have chosen •ur nature rather than our speculations, our breasts rather than our inventions, for the great conservatories and magazines of our rights and privileges. Id.

We next inquire, but softly and by stealth. Like conservators of the public health, Of epidemic throats, if such there are, And coughs, and rheums, and phthisic, and catarrh, That theme exhausted, a wide chasm ensues, Filled up at last with interesting news, Who danced with whom, and who are like to wed, And who is hanged, and who is brought to bed.

Cowper.

Then her skin, smooth and white as a gallipot; her mouth as round < >ncl not larger than the mouth of a penny phial ; her lips conserve of roses ; and then her teeth — none of your sturdy fixtures — ache as they •would, it was but a small pull, and out they came, I believe I have drawn half-a-score of her poor dear pearls. Sheridan.

CONSERVATOR, an officer ordained for the preservation of the privileges of some cities and communities, having a commission to judge of, and determine, the differences among them. In most Catholic universities there are two conserva- tors ; the conservator of royal privileges, or those granted by kings ; and the conservator of apos- tolical privileges, or those granted by the Pope. The first takes cognizance of personal and mixed causes between the regents, students, &c. and the latter or spiritual matters between ecclesiastics. Sometimes there were appointed, anciently, conser- vators of treaties of peace between princes ; who were judges of the infractions made on the treaty, and charged with procuring satisfaction to be made.

CONSERVATOR OF THE PEACE, in the ancient English customs, was a person who had a special charge, by virtue of his office, to see the king's peace kept. Till the erection of justices of the peace by Edward III. there were several persons who by common law were interested in keeping the same ; some having that charge af incident to

other offices ; and others simply, or of itself, called custodes, or

conservators of the peace. The chamberlain of Chester is still a conservator in that county ; and petty constables are, by the common law, conservators, Sec. in the first sense, within their own jurisdiction : so are also the coroner and the sheriff within their own county. The king is the principal conservator rf the peace within all his dominions : the lord chancellor, lord treasurer, lord high steward, lord marshall, lord high constable, all the justices of the court of king's bench, by their office, and the master of the rolls, by prescription, are ge- neral conservators of the peace through the whole kingdom, and may commit breakers of the peace, and bind them in recognisances to keep it.

CONSERVATOR OF THE TRUCE, AND SAFE CONDUCTS, was an officer appointed in every sea- port, under the king's letters patent. His charga was to enquire of all offences committed against the king's truce, and safe conducts upon the main sea, out of the franchises of the cinqua ports, as the admirals were wont to do, and such other things as are declared, anno 3 Henry V. cap. 6.

CONSERVATORY, in gardening, is distin- guished from the greenhouse by the circumstance of its affording protection only to the plants ; while the greenhouse is used for the rearing of them. The conservatory is also often attached to the house as an apartment for the display of scarce and valuable plants during the time of their greatest beauty and perfection, which are removed from the greenhouse, stove, and hot- house, to the conservatory for such temporary exhibition.

CONSERVE, in pharmacy, a form of medi- cine contrived to preserve the flowers, herbs, roots or fruits of several simples, as near as possible to what they were when fresh gathered. See PHARMACY.

CONSE'SSION, n. s. > Lat. conscessus. A

CONSESSOR, n. s.) sitting together. One

that sits with others.

CONSI'DER, -o. a. & n. "

CONSIDERABLE, adj.

CONSI'DERABLENESS, n.s.

CONSIDERABLY, adj.

CONSI'DERANCE, n.s.

CONSIDERATE, adj.

CONSIDERATELY, adv.

CONSI'DERATENESS.

n s.

Fr. conslderer ; Ital. considerare ; Span, considerar ; Lat. considerare. Etymologists are at variance with re- spect to the origin ^of the rest of these verbs. Some de- rive it from star- gazing ; others from sitting fixed in thought, in con- templation. The

CONSI'DERATIVE, adj.

CONSIDERA'TOR, n. s.

CONSI'DERB.R, n.s.

CONSIDERING, n. s.

CONSI'DERINGLY, ado.

latter seems to be the most natural. To consider is, to meditate seriously on ; to weigh the reasons on each side; to ex'amine carefully; to turn in the mind ; to pay a proper degree of attention or respect to ; to reward for service. That which is worthy of consideration, above mediocrity, important, is considerable. lie who goes pru- dently to work ; who makes a proper allowance for the failings of others, is considerate, acts considerately. Consideration signifies the act of considering ; deliberate weighing of reasons ,

prudence ; worthiness of being regarded ; an equivalent ; a compensation ; motive of action ; the ground CD which a conclusion is formed. Considering, as a noun, denotes hesitation; in its other sense, that of making allowance for ; taking a'£ things into consideration. Johnson classes it with the conjunctions.

None coruidtreth in his heart, neither is there know

ledge nor understanding. Isaiah xliv. 1

Let us consider one another to provoke unto love

and to good works. Hebrews x. 24.

Consider all this, and red upon my vore, As wisely as I shall evermore Emforth my might thy trewe servant to be.

Chaucer. Cant. Tales, The Lord hath of his high discretion Considered that it were destruction To gentil blood to fighten in the gise Of mortal battaile now in this surprise. Id.

Well seemd the ape to like the ordinaunce • Yet well considering the circumstance, As pausing in greet doubt awhile he staid.

Spenser. Mother Hubberd's Tale.

The consideration, in regard whereof the law for-

biddeth these things, was not because these nations

did use them. Hooker.

Let us think with consideration, and consider with

acknowledging, and acknowledge with admiration.

Sidney.

Widow, we will consider of your suit ; And come some other time to know our mind.

Shaltspeare. Henry VI

Take away with thee the very services thou hast done, which if I have not enough considered^ to be more thankful to thee shall be my study.

Id. 'Winter's Tale.

At our more considered time we'll read, Answer, and think upon this business.

Id. Hamlet.

Many mazed considerings did throng, And pressed in with this caution. Id. Henry VIII. After this cold considerance, sentence me ; And as you are a king, speak in your state What I have done that misbecame my place.

Id. Henry IV.

I will converse with iron-witted fools, And unrespective boys : none are for me, That look into me with considerate eyes.

Id. Richard III.

The breath no sooner left his father's boay, But that his wildness mortified in him j Consideration, like an angel, came, And whipt the offending Adam out of him,

Shakspeare. Henry V. I'll not dissemble, sir ; where'er I come, I love to be considerative. Ben Jonson.

Circumstances are of such force, as they sway an ordinary judgment of a wise man, not fully and con- siderately pondering the matter.

Bacon's Colours of Good and Evil.

Consider,

Thy life hath yet been private, most part spent

At home. Milton's Paradise Regainen,.

He had been made general upon very partial, ana

not enough deliberated, considerations. Clarendon.

Many brought in very considerable sums of money.

Id.

We must not always measure the considerableness of things by their most obvious and immediate useful- ness, but by their fitness to make or contribute to the discovery of things highly useful. Boyle.

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The consideration of human frailty ought to check this vanity : but since it does not, but that, with a sort of allowance, it shows itself in almost all religious so- cieties, the playing the trick round sufficiently turns it into ridicule. Locke.

As to present happiness and misery, when that alone comes in consideration, and the consequences are removed, a man never chooses amiss. Id.

Foreigners can never take our bills for payment, enough they might pass as

valuable considerations among our own people. Id.

It is considerable, that some urns have had inscrip- tions on them, expressing that the lamps were burning.

WUhins.

A vain applause of wit for an impious jest, or of reason for a deep considerer.

Government of t/ie Tongue.

He was obliged, antecedent to all other considera- tions, to search an asylum. Dryden. In painting, not every action, nor every person, is considerable enough to enter into the cloth.

Dryden's flufresnoy.

'Twas grief no more, or grief and rage were one Within her soul : at last 'twas rage alone ; Which burning upwards, in succession dries The tears that stood considering in her eyes.

Id. Fables.

It seems necessary in the choice of persons for

greater employments, to consider their bodies as well

as their minds, and ages and health as well as their

abilities. Temple.

Eternity is infinitely the most considerable duration.

Tillotson.

I grant it to be in many cases certain, that it is such as a considerate man may prudently rely and proceed upon, and hath no just cause to doubt of.

Id.

Lucan is the only author of consideration among the Latin poets, who was not explained for the use of the dauphin ; because the whole Pharsalia would have been a satire upon the French form of government.

Addison'i Freeholder.

Many can make themselves masters of as conside- rable estates as those who have the greatest portions of land. Addiion.

*It is not possible to act otherwise, considering the weakness of our nature. Spectator**

I desire no sort of favour so much, as that of serving you more considerably than I have been yet able to do. Pope.

Such a treatise might be consulted by jurymen, before they consider of their verdict. Swift.

These speculations, however erroneous, were still useful ; for though men err in assigning the causes of natural operations, the works of nature are by this means brought under their consideration ; which can- not be done without enlarging the mind. Burke. I do not say, sir, that all these establishments, whose principle is gone, have been systematically kept up for influence solely : neglect had its share. But this I am sure of, that a consideration of influence has hindered any one from attempting to pull them down.

Id.

The direct power of the king of England is con- siderable. His indirect, and far more certain power, is great indeed. He stands in need of nothing to- wards dignity ; of nothing towards splendour ; of nothing towards authority f of nothing at all towards consideration abroad. Id.

The fabulist and the novel-writer deceive nobody ; Because, though they study to make their inventions prooable, they do not even pretend that they are true ; at least, what they may pretend in this way is ci>n-

lidered only as words of course, to which noOody pays any regard. Beattie.

Resigned

To sad necessity, the cock foregoes His wonted strut; and, wading at their head With well considered' steps, seems to resent His altered gait and statcliness retrenched.

Cotoper.

Ar.s. Mild, gentle, considerate father — I kiss your hands ! What a tender method of giving his opinion in these matters Sir Anthony has ! I dare not trust him with the truth. I wonder what old wealthy hag it is that he wants to bestow on me ! yet he married himself for love ! and was in his youth a bold in- triguer, and a gay companion ! Slieridan.

CONSI'GN, v. a. & n.~\ Fr. consigner ; Lat. CONSIGNATION, n s. {consignare, from con CONSIGNMENT, n. s. iandsignare. To make CONSI'GNATURE, n. s. J a formal transfer of anything ; .to send ; to entrust ; to appropriate ; to submit to the same terms with another ; to consent to : the last two meanings are obsolete. Consignation is the act of consigning, and also of signing. A consignment is, the act of con- signing ; the thing consigned ; the writing by which the thing is consigned. Consignature sig- nifies, say ' Cotgrave and Sherwood,' a full stamping or absolute signature of.

Thou hast finished joy and moan ; All lovers young, all lovers must Consign to thee, and come to dust.

Shakspeare. Cymbeline.

A maid yet rosed over with the virgin crimson of modesty : it were a hard condition for a maid to con- tign to. /;/

At the hope of salvation is a good disposition to wards it, so is despair a certain consignation to eternal ruin. Taylor.

Jf we find that we increase in duty, then we may look upon the tradition of the holy sacramental sym- bols as a direct consignation of pardon.

Taylor's Worthy Communicant.

The French commander consigned it to the use f9r •which it was intended by the donor.

Dry den's Fables, .Dedication.

Men, by free gift, consign over a place to the Divine worship. South.

Ask all the merchants who act upon consignments, where is the necessity (if they answer readily what their correspondents draw), of their being wealthy themselves. Tatler.

At the day of general account, good men are then to be consigned over to

another state, a state of ever- lasting love and charity. Atterbury.

The four evangelists consigned to writing that his- tory. Addison.

Atrides, parting for the Trojan war, Consigned the youthful consort to his care.

Pope's Odyssey.

A posterity, which, if this nefarious robbery under the fraudulent name and false colour of a government, should in full power be seated in the heart of Europe, must for ever be consigned to vice, impiety, barbarism, and the most ignominious slavery of body and mind.

Burke.

What lost a world, and bade a hero fly? The timid tear in Cleopatra's eye. Yet be the soft triumvir's fault forgiven — By this — how many lose not earth — but heaven ! Coruitjn their souls to man's eternal foe, And seal their own to spare some wanton's woe.

Byron. The Corsair

CONSIGNIFICA'TION, n. s. Similar signifi- cation.

CONSIGNMENT, in lavr, the depositing any sum of money, bills, papers, or commodities, in good hands; either by appointment of a court of justice, in order to be delivered to the persons to whom they are adjudged ; or voluntarily, in order to their being ; anitted to the persons they belong to, or sent to the places they are designed for.

CONSIGNMENT or Goons, in commerce, is the delivering or making them over to another; thus, goods are said to be consigned to a factor, when they are sent to him to be sold, &c. or when a factor sends back goods to his principal, they are said to be consigned to him.

CONSI'MILAR, adj.-) Lat. consimilis. The

CONSI'MILARLY, adj. ˆadjectives are synony-

CONSIMI LITUDE, n. s. i mous, and signify hav-

CONSIMI'LITY, n.s, 'ing one common re- semblance; being alike. The nouns denote likeness, resemblance.

By which means, and their consimility of disposi- tion, there was a very conjunct friendship between the two brothers and him Aubrey.

CONSFST, v. n. \ Fr. comister ; It. con

CONSI'STENCE, n. s. I sistere ; Span, consister;

CONSI'STENCY, n. s. \ Lat. consistere, from con

CONSISTENT, adj. i and sistere. To exist in

CONSISTENTLY, adv.J consequence of; to re- main undissipated ; to be comprised in ; to be composed of; to co-exist ; to agree with. Consistence and consistency signify state with relation to material existence; degree of den- sity or rarity ; substance ; durable stale ; con gruity with self or with something else ; uncharige- ableness of principle or conduct. Consistent is, not contradictory to; acting uniformly ; firm, as opposed to fluid.

He is before all things, and by him all tilings con- sist. Culossians.

None alive may salve the sore But only she that hurt me so, In whom my lyfe doth now consist, To save or slay me as she lyst.

Sunges ana Sonettee. Yet wisely moderated her owne smart, Seeing his honor, which she tendred chiefe, Consisted much in that adventure's pricfe.

Spenser. Faerie Queene.

Flame doth not mingle with flame, as air doth with air, or water with water, but only remaineth conti- guous ; as it cometh to pass betwixt consisting bodies. Bacon's Natural History.

There is the same necessity for the Divine influence and regimen, to order and govern, conserve and keep together, the universe in that consistence it hath re- ceived, as it was at first to give it, before it could re- ceive it. Hole's Origin of Mankind.

Meditai.on will confirm resolutions of good, and give them a duiable consistence in the soul.

Hammond.

Pestilential miasius insinuate into the humoral and consistent parts of the body. Harvey on Consumptions.

Necessity and election cannot consist together in the same act. Bramhail against Hobbes.

His majesty would be willing to consent to any thing that could consist with his conscience and honour.

Clarendon.

With reference to such a lord, to serve, and to be free, are terms not consistent only, but equivalent.

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Ills friendship is of a noble make, and a lasting consistency. Id.

If in having our ideas in the memory ready at hand, consists quickness of parts ; in this of having them unconfused, and being able nicely to distinguish one thing from another, where there is but the least difference, consists, in a great measure, the exactness of judgment, and clearness of reason, which is to be observed in one man above another. Locke.

Arbitrary absolute power, or governing without set- tled standing laws, can neither of them consist with the ends of society and government. /'/.

If the holy Scriptures were but laid before the eyes of Christians, in their connexion and consistency, it would not then be so easy to snatch out a few words, as if they were separate from the rest, to serve a purpose, to which they do not at all belong, and with which they have nothing to do. Id.

Nothing but what may easily consist with your plenty, your prosperity, is requested of you.

Spratt's Sermons.

I pretend not to tie the hands of artists whose skill consists only in a certain manner which they have af- fected. Dry den.

You could not help bestowing more than is con- sisting with the fortune of a private man, or with the will of any but an Alexander.

Id. Fables, Dedication.

The land would consist of plains, and valleys, and mountains, according as the pieces of this ruin were disposed. Burnet.

I carried on my enquiries farther, to try whether this rising world, when formed and finished, would continue always the same, in the same form, structure, and consistency. Id.

A great part of their politicks others do not think consistent with honour to practise. Additon on Italy. On their own axis as the planets run,

Yet make at once their circle round the sun ;

So two consistent motions act the soul,

And one regards itself, and one the whole.

Pope's Essays.

It cannot consist with the Divine Attributes, that the impious man's joys should, upon the whole, exceed those of the upright. Atterbury.

Let the expressed juices be boiled into the consis- tence of a syrup. Arbut limit on Aliments.

The sand, contained within the shell, becoming solid and consistent, at the same time that of the stratum without it did. Woodward's Natural History.

The only way of securing the constitution will be by lessening the power of domestic adversaries, as much as can consist with lenity. Swift.

One advantage is as little as possible sacrificed to another. We compensate, we reconcile, we balance. We are enabled to unite into a consistent whole the various anomalies and contending principles that are found in the minds and affairs of men. From hence arises, not an excellence in simplicity, but one far su- perior, an excellence in composition. Burke.

We see, then, that our liberty does not consist either in the power of doing what we please, or in being governed by laws made by ourselves. Beattie.

Time was, he closed as he began the day

With decent duty, not ashamed to pray ;

The practice was a bond upon his heart,

A pledge he gave for a consistent part ;

Nor eould he dare presumptuously displease

A power, confessed so lately on his knees.

Cowper. Can glory's lust

Tcuch the freed spirit or the fettered dust ?

Small care hath he of what his tomb consult —

Nought if he sleeps — nor more if he exists ;

Alike the better-seeing shade will smile

On the rude cavern of the rocky isle,

As if his ashes found their latest home

In Rome's pantheon, or Gaul's mimic dome.

Byron. The Age of Bronze.

CONSISTENTˆ, in church history, a kind of penitents who 'vere allowed to assist at prayers, but who could not he admitted to receive the sa- crament.

CO'NSISTORY, n. s. } Fr. coruutoire; It.

CONSISTO'RIAL, adj. Sand Sp. consistorio ;

CONSISTO'RIAN, ad}, j Lat. consistorium. Po- etically, consistory is applied to any solemn as- semblage of persons. Shakspeare makes it also signify a place of residence. In its restricted, and more usual sense, it means the tribunal, or place of justice, in the spiritual courts ; the as- sembly of cardinals ; the assembly of the minis- ters and elders of the reformed church, espe- cially that of the French Protestants. Consistorial is that which belongs to, or emanates from, a consistory, as a consistorial decree. Dr. Grif- fiths, in his sermon, which was animadverted upon by Milton, denominates the Presbyterians 4 consistorian schismaticks.'

To speke thei shull not be so bold, For sompning to the consistory, And make hem saie withe mouthc I lie.

Chaucer. Canterbury Tales.

An offer was made, that, for every one minister, there should be two of the people to sit and give voice in the ecclesiastical consistory. Hooker. Preface.

How far I've proceeded, Or how far further shall, is warranted By a commission from the consistory, Yea the whole consistory of Rome.

Shakspeare. Henry VIII.

My other self, my counsel's consistory, my oracle, I, as a child, will go by thy direction.

Id. Richard III. In mid air

To council summons all his mighty peers Within thick clouds, and dark, tenfold involved, A gloomy consistory. Milton's Paradise Regained.

Christ himself, in that great consistory, shall deign to step down from his throne. South.

A late prelate, of remarkable zeal for the church, were religions to be tried by lives, would have lived down the pope and the whole consistory. Atterbury.

At, Jove's assent, the deities around In solemn state the consistory crowned.

Pope's Statiui.

An official, or chancellor, has the came consistorial audience with the bishop himself that deputes him. Ayliffe's Par ergon.

CONSISTORY is particularly used for the pope's senate and council, before whom judiciary causes are pleaded at Rome. This consistory, or college of cardinals, never meets but when the pope pleases to convoke it: he presides in person mounted on a magnificent throne, and habited in his pontificalia ; on the right sit the cardinal bishops and priests, and on the left the cardinal deacons. The other prelates, prothonotarics, auditors of the rota, and other officers, are seated on the steps of the throne : the courtiers on the ground : ambassadors on the right, and consis- torial and fiscal advocates behind the cardinals.

Besides the public consistory, there is also a private one, held in a retired chamber, called the chamber of papegay ; the pope's throne being only raised two steps. Nobody is admitted but the cardinals, whose opinions are collected, and called sentences. Here are first proposed and passed all bulls for bishoprics, abbeys, &c. Hence bishoprics and abbeys are said to be consistorial benefices ; as they must be proposed in the consistory, the annates be paid to the pope, and bis bulls taken. Anciently they were elec- tive ; but by the concordate, which abolishes elections, they are appointed to be collated by the pope alone, on the nomination of the prince. Consistory was also used, among the reformed, for a council or assembly of ministers and elders, to regulate their affairs, discipline, &c.

CONSISTORY, or COURT CHRISTIAN, in theEn- glis!) laws, is a council of ecclesiastical persons, or the place of justice in an ecclesiastical or spiritual court. Every archbishop and bishop has a consistory court, held before his chancellor or commissary, either in his cathedral, in some chapel, aisle, or portico, or in some other con- venient place of his diocese, for ecclesiastical causes. The spiritual court was anciently, in the time of the Saxons, joined with the county or hundred court; and the original of the con- sistory court, as divided from those courts, is found in a law of William I. quoted by Lord Coke. From this court, there lies an appeal to the archbishop of each province.

CONSO'CIATE, v.a.v.n.,kn.s. ˆ Lat. con-

CONSOCIA'TION, n. s. S sociare. To

confederate with ; to associate with ; to join ; to cement; to coalesce. A confederate ; a partner. Alliance ; fellowship ; intimacy.

Patridge and Stanhope were condemned as conso- ciates in the conspiracy of Somerset. Hayward.

There is such a consociation of offices between the prince and whom his favour breeds, that they may help to sustain his power, as he their knowledge.

Ben Jonson's Discoveries.

The ancient philosophers always brought in a su- pernatural principle to unite and contociate the parts of the chaos. Burnet.

By so long and so various consociation with a prince, he had now gotten, at it were, two lives in his own fortune and greatness. Wotton.

If they cohered, yet by the next conflict with other

atoms they might be separated again, without ever

ionsociating into the huge condense bodies of planets.

Bentley's Sermon.*

CONSO'LE, v. a. "\ Fr. consoler;

CO'NSOLATE, t;. a. 1 It. consolare ; Sp.

CONSOL'ABLE, adj. [cotisolar ; Lat.

CONSOLA'TION, n. s. fconsolari. To

CONSOLA'TOR, n. s. \ soothe ; to cheer ;

CONSO'LATORY, n. s. & adj. J to comfort ; to al- leviate mental anguish ; to restore cheerfulness to the wretched. Consolatory, as a noun, sig- nifies that which, either verbally or in writing, contains something capable of comforting. The meaning of the other derived words is sufficiently obvious.

I will begone,

That pitiful rumour may report my flight,

To consulate thine ear.

Shakspeare. All't well that endt well.

We, that were in the jaws of death, were no\v brought into a place where we found nothing hut «»•- tolations. Baro-n.

What may some what consolate all men that honour virtue, we do not discover the latter scene of his misery in authors of antiquity.

Browne's Vulgar Errour. Against such cruelties, With inward consolations recompensed ; And oft supported so, as shall amaze Their proudest persecutors.*

Milton's Paradise Lost. Consolatories writ

With studied argument, and much persuasion sought, Lenient of grief and anxious thought. Id. Ayonistes.

Others the syren sisters compass round, And empty heads console with

empty sound.

Pope's Dundad.

Pride once more appears upon the stage, as the great consoler of the miseries of man.

Commentaries on Pope's Essay on Man.

Let the righteous persevere with patience, sup- ported with this consolation, that their labour shall not be in vain. Rogers.

They have a right to the acquisitions of their parents ; to the nourishment and improvemen of their offspring ; to instruction in life, and to consolation in death. Bur lie.

Our groves were planted to console at noon The pensive wanderer in their shades. At eve The moonbeam, sliding softly in between The sleeping leaves is all the light they wish, Birds warbling all the music. Cowper.

Ah, where can sympathy reflecting find One bright idea to console the mind ? Darwin.

And she would have consoled, but knew not how —

Having no equals, nothing which had e'e Infected her with sympathy till now.

Byron. Don Juan.

CONSO'LE, n. s. in architecture, is a part or member projecting in manner of a bracket, or shoulder-piece, serving to support a cornice, bust, vase, beam, and frequently used as keys of arches.

CONSO'LIDATE, v. a., v. n., Sc aclj.^ Fr.con- COXSOLIDA'TION, n. $. , f solider ;

CONSO'LIDATIVE, adj. fit. con-

CONSO'LIDANT, adj. J solidare;

Sp. consolidar; Lat. consolidare. To compact into a solid body ; to render hard ; to make stable ; to combine two parliamentary bills into one ; to unite two benefices ; to become hard ; to acquire stability. Consolidation is the act of uniting into a solid mass ; the act of giving con- firmation to a thing. Consolidant and consoli- dative signify that which is capable of healing wounds; of effecting the union of severed parts.

In hurts and ulcers in the head, dryness maketh them more apt to consolidate.

Bacon's Natural Hixtorii.

The word may be rendered, either he stretched, or he fixed and consolidated, the earth above the waters.

liurnet's Thriny.

The effect of spirits in stopping hemorrhages, and consolidating tAe hores, is well known to chirotgeoni

Arbvtltfiiit

The consolidation of the marble, and ol the stone, did not fall out at random.

Woodward's Natural Hist ˆry.

The toiling steeds expand the nostril wide, While every breath, by respiration strong Forced downward, is consolidated soon Upon their jutting chests. Cuwper.

CONSOLIDATION, in law, is borrowed from the civil law ; where it properly signifies an union of the possession, or occupation, with the pro- perty. Thus, if a man have by legacy usum fructum fundi, and afterwards buy the property, or fee-simple, of the heir ; this is called a con- solidation.

CONSOLIDATION, in medicine and surgery, the action of uniting broken bones, or the lips of wounds, by means of consolidating remedies, which, cleansing with a moderate heat and force, taking corruption out of the wounds, and pre- serving the temperature of the parts, cause the nourishment to be fitly applied to the part af- fected. Among the many instances of the conso- lidating power of blood and flesh, we have a very remarkable one in Bartholine's Medical Observa- tions. A man being condemned to have his nose cut off by the hand of the common executioner, the friends, who were to be present, provided a new loaf of warm bread, which was cut in the middle, and the nose received in it as it fell from the face : tlie nose was after this nicely placed on the face again ;

and, beingsewed on, the whole in time con solidated, and left no other marks of the ignominy than the scar. Mr. Carpue, the surgeon, has lately performed the operation in this country, and a plate illustrative of the process has been published. CO'NSONANCE, n. s. ˆ Fr. consonance ; CO'NSONANCY, n. s. Ital. comonanza;

CO'NSONANT, n. s. & adj. I Sp. consonancia; CO'NSONANTLY, adv. | Lat.constmans. Ac- Co' SONANTNESS, n. s. cordance of sound ; CO'NSONOUS, adj. J consistency ; con-

gruity with ; concord ; friendship : the latter sense is obsolete. Consonant signifies, agreeable to ; conformable to ; according with. As a noun, it means a letter which requires to be united with a vowel before it can be sounded. Consonous is, agreeing in sound ; symphonious.

Were it consonant unto reason to divorce these sen- tences, the former of which doth shew how the latter is restained. Hooker.

This as consonantly it preacheth, teacheth, and de- li vereth, as if but jne tongue did speak for all. Id.

Let me conjure you by the rights of our fellowship, by the consonancy of our youth. Shakspeare. Hamlet.

Such decisions held consonancy and congruity with resolutions and decisions of former times.

Hole's Law of England.

Ourselves are formed according to that mind which frames things consonantly to their respective natures.

Glanville's Scepsis.

That where much is given there shall be much re- quired, is a thing consonant with natural equity.

Decay of Piety.

Religion looks consonant to itself. Id.

Every one may observe a great many truths which he receives at first from others, and readily assents to, as consonant to reason, which he would have found it hard, and perhaps beyond his strength, to have dis- covered himself. Native and original truth is not so easily wrought out of the mind as we, who >-ave it delivered and already dug and fashioned into our

bands, are apt to imagine. L^ckc.

In all vowels the passage of the mouth is open and free, without any appulse or an organ of speech to another : but in all consonants there is an appulse of the organs, sometimes (if you abstract the consonant from the vowels) wholly precluding all sound ; and, in all of them, more or less checking and abating it.

Holder's Elements of Speech.

He discovers how consonant the account which

Moses hath left of the primitive earth, is to this from

nature. Woodward.

The two principal consonances that most ravish the

ear, are by the consent of all nature, the fifth and the

octave. Wotton.

He considered these as they had a greater mixture

of vowels or consonants, and accordingly employed

them as the verse requires a greater smoothness.

Pope's Essay on Homer. And winds and waters flowed n consonance. Thomson's Spring.

CONSO'PIATE, v. a. \ Lat coruopire. To CO'NSOPITE, v. a. & adj. Mull to sleep. The CONSOPIA'TION, n. s. j act of lulling to sleep.

The adjective signifies quieted ; calmed.

The masculine faculties of the soul were for a while

•well slaked and contopited. More.

Its clamorous tongue thus being consopite. Id.

One of his maxims is, that a total abstinence from

intemperance is no more philosophy than a total con-

topiation of the senses is repose. Diyby ta Pope.

CONSO'RT, v. a. & ».ˆ Fr. consorts ; Ital.

CO'NSORT, n. s. I and Span, comorte ;

CONSO'RTABLE, adj. \Lai. omsors. Toas-

CONSO'RTION, n. s. i sociate with ; to join

CO'NSOUTSHIP, re. s. J with; to marry : and,

in our old writers, to accompany. Consort is a

companion ; a wife or husband ; an assembly ;

a number of instruments playing together; con-

juction with. It had formerly the accent on the

second syllable. Consortable is, comparable

to; ranking with; suitable. Consortion signifies

partnership ; fellowship ; society.

A consort of music in a banquet of wine, is as a signet of carbuncle set in gold. Ecc/w. xxxii. 5.

But Condon durst not with him consort, Ne durst abide behind, for dred of worse effort.

Spenser. Faerie Queene. Then all the people, as in solemne feast, So him assembled with one full contort, Rejoicing at the fall of that great beast. So forth they pas, a -well-consorted payre, Till that at length with Archimage they meet. To this sweet voice a dainty music fitted Its well tuned strings, and to her notes consorted.

Id. Britain's Ida. What will you do ? Let's not consort with them.

Shakspeare.

I'll meet with you upon the mart, And afterward consort you till bed time. Id.

Fellowship,

Such as I seek, fit to participate All rational delight ; wherein the brute Cannot be human contort. Male he created thee, but thy consort Female for

race ; then bless'd mankind, and said, Be fruitful, multiply, and fill the earth.

Id. Paradise Lost. Ho with his contorted Eve,

The story heard attentive. !•*

Thy Bcllona, who thy contort came Not only to thy bed, but to thy fame

Id.

Id.

Milton.

' Denham.

CON

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CON

He begins to consort himself with mm, and thinks himself one. Locke im Education.

Which of the Grecian chiefs consorts with thee ?

Dryden.

He single chose to live, and shunned to wed, Well pleased to want a contort of his bed.

Id. Fables.

He was contortaUe to Charles Brandon under Henry VIII. who was equal to him. Wotton.

His warlike amazon her host invades, The' imperial consort of the crown of spades. Pope. Take it singly, and it carries an air of levity ; but, in contort with the rest, has a meaning quite different.

Atterbury. So thou, with sails how swift ! hast reached the

shore

' Where tempests never beat nor billows roar' And thy loved consort on the dangerous tide Of life, long since has anchored by thy side. Cowper.

Sweet fruits and kernels gathers from his hoard, With milk and butter piles the plenteous board ; While on the heated earth his consort bakes Fine flour, well kneaded, in unleavened cakes.

Darwin.

Emperors are only husbands in wives' eyes, And kings and consorts oft are mystified, As we may ascertain with due precision, Some by experience, others by tradition.

Byron. Don Juan.

CONSPE'CTABLE, ««#.•} Lat. conspectus.

CONSPE'CTION, n. s. >That which may

CONSPECTU'ITY, 7i. s. 3 easily be seen. A seeing ; beholding ; sight ; sense of seeing. Con- spectuity, says Johnson, is, I believe, peculiar to Shakspeare, and perhaps corrupt.

What harm can your bisson conspectuities glean out of this character ? Shakspeare. Coriolanus.

CONSPE'RSION, Lat. conspersio. A sprink- ling about.

CONSPI'CUOUS, adj. -\ Ital. conspicuo ;

CONSPICUOUSLY, adv. tcospicuo; Sp. con-

COUSPI'CUOUSNESS, n. s. tspicuo; Lat. con-

CONSPICU'ITY, n. s. J spicuus. That

which is obvious; capable of being seen from

far ; eminent for virtue, crime, talent, or rank ;

placed in a prominent situation. Conspicuity is

brightness ; favorableness to the sight.

Or come I less conspicuous 1 Or what change Absents thee ? Milton's Paradise Lost.

Looked on with such a weak light they appear well proportioned fabricks ; yet they appear so but in that twilight, which is requisite to their conspictwusness.

Boyle's Proem Essay.

Such a patriot, formed in this happy way of im- provement, cannot fail, as we see, to give notable de- cisions upon the bench of quarter-sessions, and emi- nent proofs of his skill in politics, when the strength of his purse and party have advanced him to a. more conspicuous station. Locke.

If this definition be clearer than the thing defined, midnight may vie for conipicuity with noon.

Glanrille's Scepsis.

He attributed to each of them tlm virtue which he thought most conspicuous in them.

Dryden't Juvenal, Dedication Thy father's merit points thee out to view, And sets thee in the fairest point of light, To make thy virtues or thy faults conspicuous.

Additon't Cato. The house of lords, scene ' Pope's Epiat. of Horace.

Fr. conspirer ; Ital. conspirare; Sp. con- I spirar ; Lat. conspirare, [from con and spirare. (Etymologists have la- bored very hard to find some other root

These methods may be preserved conspicuously, ar.d entirely distinct. Watts's Logic.

I have a hundred times wished that one could re- sign life as an officer resigns a commission; for I would not take in any poor, ignorant wretch, by sell- ing out. Lately I was a sixpenny private, and, God knows, a miserable soldier enough j now I march to the campaign, a starving cadet : a little more conspi- cuously wretched. Burns.

Inscribed above the portal, from afar Conspicuous as the brightness of a star, Legible only by the light they give, Stand the soul-quickening words — BELIEVE AND LIVE.

Cowper.

*CONSPI'RE, v. n. * CONSPI'RER, n. s. CONSPIRACY, n. s. CONSPI'RATOR, n. s. CONSPI'RANT, n. s. CONSPIRA'TION, n. s. CONSPI'REMENT, n. s. CONSPI'HINGLY, adv.] than the Latin con and spirare ; but their labors do not appear to have been very successful. To act together, as if all had but one breath, is the meaning indicated by the Latin, and it certainly appears to be tha which is found in the derivatives. To conspi»c is, to league together closely for criminal pur- poses ; to plot ; to*

form base, felonious, or trea- sonable plans ; in an innocent sense, it means to act in conjunction ; to agree together. A con- spirary is a concert of persons to commit a crime ; a concurrence of circumstances ; a tendency of several causes to one event. The law always uses the word in an evil sense.

When shapen was all her conspiracie From point to point. Chaucer. Cant. Tales. The Temones shall backe returne in her fountaine, And where he rose the sunn shall take his lodging, Ere I in this finde peace or quietness, Or that love, or my lady right wisly, Leave to conspire against me wrongfully. Wyat.

*As two broad beacons, sett in open fieldes, Send forthe their flames far off to ever shyne. And warning give, that enemies conspyre With fire and sword the region to invade, So flamed his eyne with rage and rancorous yre. Spenser. Faerie Queene. Where they in secret counsel close conspired How to effect so hard an enterprize. /< *

Tell me what they deserve, That do conspire my death with devilish plots Of damned wichcraft. Shakspeare Richard III.

What was it That moved pale Cassius to conspire ?

Id. Antony and Cleopatra. O consjiiracy !

Shamest thou to show thy dangerous brow by night, When evils are most free ? Id. Julius Ceesar.

Take no care,

Who chase, who frets, and where cojispirers are • Macbeth shall never vanquished be. Id. Macbeth.

Stand back thou manifest conspirator, Thou that contrivest to murder our dread lord.

Id. Henry VI. Thou art a traitor, Conspirant 'gainst this high illustrious prince.

Id. King Leat

When the time now came that misery was ripe fo» him, there was a conspiracy in all heavenly and earthly things, to frame fit occasions to lead him unto it Sidney.

CON

Let the air be excluded ; for that wndermineth the

body, and conspireth with the spirit cf ffee body to

dissolve it. Bacon.

There is in man a natural possibility to destroy the

world ; that is, to conspire to know no we man.

Broume't Vulgar Errours.

Either violently without mutual consent for urgent reasons, or conspiringly by plot of lust

When scarce he had escaped the blow Of faction and conspiracy,

Death did his promised hopes destroy. Dry den. One would wonder how, from so differing premises, they shou'd infer the same conclusion, were it not that the consptration of interest were too potent for the di- versity of judgment. Decay of Piety.

The press, the pulpit, and the stage, Conspire to censure and expose our age.

Roscommon,

So moist and dry, when Phoebus shines, Conspinnij give the plant to grow. Heigh.

Vehement passion does not always indicate an in- firm judgment. It often accompanies and actuates, and is even auxiliary to a powerful understanding ; and when they both conspire and act harmoniously, their force is great to destroy disorder within, and to repel injury from without. Burke.

The very elements, though each be meant The minister of man, to serve his wants, Conspire against him. With his breath he draws A plague into his blood ; and cannot use Life's necessary means, but he must die. Coieper. In the vices, on the other hand, it is the discord that ensures the defeat — each clamours to be heard in its own barbarous language ; each claims the exclu- sive cunning of the brain ; each thwarts and reproaches the other ; and even while their fell rage assails with common hate the peace and virtue of the world, the civil war among their own tumultuous legions defeats the purpose of the foul conspiracy. Sheridan.

CONSPIRACY, in English law, was once used almost exclusively, for an agreement of two or more persons falsely to indict one, or to procure nim to be indicted of felony ; who, after acquittal, shall have writ of conspiracy. Now, it is no less commonly used for the unlawful combination of journeymen to raise their wages, or to refuse •working, except on certain stipulated conditions; •>in offence particularly provided for by stat. 2 & 3 E. VI. c. 15 (revised, continued, and confirmed uy stat. 22 & 23. Car. II. c. 19, now expired) : •which enacts among other things, that ' if any artificers do conspire, they shall not do their works but at a certain price, or shall not take upon them to finish that another hath begun, or shall do but a certain work in a day, or shall not work but at certain times, every person so con- •H-iring, sh-ill forfeit for the first offeree £10, or bo imprisoned twenty days, for the second £20, or be pil'oried, and for the third £40, or be pilloried, lose an ear, and become infamous.' — This stat 2 & 3 E. VI. c. 15, appears to be yet in force, th mgh not frequently resorted to for re- medy in this case ; the proceeding being usually by indictment for conspiracy. Journeymen con- federating and refusing to work unless for certain wages, may be indicted for a conspiracy; not- withstanding the statutes which regulate their

work and wages do not direct this mode of pro- secution ; for this offence consists in the conspir- ing and not in the refusal, and all conspiracies are illegal, though the subject matter of them may be lawful. The fact of conspiring may be col- lected by the jury from collateral circumstances. Black. Rep. 392, Stra. 144. And if the parties concur in doing the act, although they were not previously acquainted with each other, it is con- spiracy. Unlawful combinations of workmen were prohibited and punished by the act 39 G. Ill, c. 81, which was repealed, and more effectual provision enacted by 39 and 40 G. III. c. 106. By this latter act all contracts (except those be- tween masters and men) for obtaining advance of wages, altering the usual time of working, de- creasing the quantity of work, &c. are declared illegal. — Workmen making such illegal contracts are punishable by imprisonment : and the like punishment is inllicted on workmen entering into combinations to procure advance of wages, or preventing other workmen from hiring them- selves, or procuring them to quit their employ, &c. — All meetings and combinations for effect- ing such illegal purposes are punishable in like manner : and offenders giving evidence against each other are indemnified. This act also pro- vides for settling all disputes between masters and workmen by arbitration, with an appeal to the quarter sessions.

CONSPIRATORS are, by statute, defined to be such as bind themselves by oath, covenant, or other alliance, to assist one another falsely and maliciously to indict persons, or falsely to main- tain pleas, or to any treason.

CONSPI'RING POWERS, in mechanics, all such as act in a direction not opposite to one an- other.

CONSPISSA'TION, n. s. Thickness.

CO'NSPURCATE,u.a.) Latin, conspurco.

CONSPURCA'TION, n. s. J To defile. Defile- ment; pollution.

CO'NSTABLE, n. s. -\ Fr. connetable; Ital.

CO'NSTABLESS, n. s. I conestabile; Sp. con-

CO'NSTABLERIE, n. s. > dcstuble. Dr. John-

CO'NSTABLESHIP, n. s. I son refers to the Lat.

CO'NSTABLEWICK, n. s.J comes stabuli, as the original of constable ; Verstegan traces the word from Ang.Sax. caning, abbreviated into king and stable, i. e. the prop or stay of the king. Johnson's derivation seems, however, to be the true one. Cowel and Chambers have well de scribed the office of constable, and the change which time has effected in it. (Sec also the next article.)

The constable of the castle doun is fare,

To seen this wrecke, and al the ship he sought,

And fond this very woman ful of cars.

Chaucer. Cant. Tales. Till Jesu hath converted thurgh his grace

Dame Hermegild, constablesse of that place. Id.

Than Drede had in her baillie The keping of the constablerie.

Id. Romaunt of the Rose.

When I came hither, I was lord high conttable, And duke of Buckingham ; now peor Edward Bohun.

Shakspeare.

The knave constable had set me in the stocks, in the common stocks, for a witch.

Id. Merry Wives of Windsor.

CONSTABLE.

This keepershlp is annexed to the constableship of the castle, and that granted out in lease.

Carew'f Survey of Cornwall. He cannot drink five bottles, bilk the score,

Then kill a constable, and drink five more ;

But he can draw a pattern, make a tart,

And has the ladies' etiquette by heart. Cowper.

To over-run the CONSTABLE. Perhaps from Fr. conte stable, the settled, firm, and stated account. To spend more than what a man knows himself to be worth ; a low phrase.

CONSTABLE is derived from comes stabuli, an officer anciently well known in the empire ; so called because, like the great constable of France (an office suppressed by Louis XIII.), as well as the lord high constable of England, he was to re- gulate all matters of chivalry, tilts, tournaments, and feats of arms, which are performed on horse- back.

CONSTABLE, LORD HIGH, OF ENGLAND, is the seventh great officer of the crown ; and he, with the earl marshal of England, was formerly judge of the court of chivalry, called in king Henry IV's time curia militaris, and now the court of honor. It is the fountain of the martial law, and anciently was held in the king's hall. The power of the lord high constable was formerly so great, and of which so improper a use was made, that so early as the 13th of king Richard II. a statute passed for regulating and abridging it, together with that of the earl mar- shal of England ; and, by this statute, no plea could be tried by them or their courts, that could be tried by the common law of the realm. The office of constable is said by some to have existed before the conquest. After the conquest, the office went with inheritance, and by the tenure of the manors of Harlefield, Newham, and Whi- tenhurst, in Gloucestershire, by grand serjeanty, in the family of the Bohuns, earl of Hereford and Essex, and afterwards in line of Stafford as heirs general to them ; but, in 1521, this great office became forfeited to the king in the person of Edward Stafford, duke of Buckingham, who was that year attainted for high treason ; and in con- sideration of its extensive power, dignity, and large authority, both in war and peace, it has never been granted to any person, otherwise than hoc vice, to attend at a coronation, or trial by combat.

CONSTABLE, LORD HIGH, OF SCOTLAND, is an officer of great antiquity and dignity. The first upon record is Hugo de Morvelle, in the reign of David I. He has two grand prerogatives, viz. 1 . The keeping of the king's sword, which the king, at his promotion, when he swears fealty, delivers to him naked. Hence the badge of the constable is a naked sword. 2. The unlimited command of the king's armies in the field, in the absence of the king ; but this command did not extend to castles and garrisons. He was like- wise judge of all crimes committed within two leagues of the king's house, which precinct was called the chalmer of peace ; though his juris- diction came at last to be exercised only as to crimes during the time of parliament, which some extended likewise to all general conventions. This office was conferred heritably upon the noble family of Errol, by king Robert Bruce ; and

with them it still remains, being expressly re- served by the treaty of union.

CONSTABLES, in the ordinary meaning of the word, are, 1. The Constable of the Hundred, or the High, Chief, or Head Constable (as he is otherwise called). By the statute of Winton or Winchester, 13 Ed. I. c. 6, it is ordered that in every hundred or franchise there shall be chosen two constables to make the view of armor, and to present the defaults of armor, and of the suits of towns and of highways, &c. Lombard, on Constables, p. 3, Coke 4 Inst. 267, and Hale 2 P. C. 96, all agree in declaring that constables of the hundred were first introduced by this statute.

2. The Constable of the Vill, or Petty Con- stable, as he is frequently called, to distinguish him from the officer last mentioned, is generally understood by the term constable, when men- tioned without any peculiar addition. This constable has been repeatedly acknowledged by the law, to be ' one of the most ancient officers in the realm for the conservation of the peace,' Poph. 13. 4 Inst. 265. It must be confessed, however, that no mention of him by this identical name, is anywhere found to occur anterior to the reign of king Henry III. when it was pro- vided that, in every village or township, there should be constituted a constable or two, accord- ing to the number of the inhabitants. But it is pretty certain that Lord Coke's idea is right, and that this officer is actually owing to the institu- tion of the fraukpledge, usually attributed to king Alfred, and was, in fact, originally the senior or chief pledge of the tithing or decima. The powers and duties of this officer are very extensive, and are considered by Sir T. Tomline under the follow- ing heads. I. 1. His quality ; and 2. qualifica- tions. II. 1. His election ; and 2. Who are ex- empted. III. His power and authority. IV. His duty. [These two are in many instances co- extensive, and are therefore carefully to be com- pared together]. V. His protection, indemnity, and allowances ; and lastly, VI. His respon- sibility and punishment. We must refer to his elaborate Law Dictionary for the full exhibition of these topics ;

and are indebted to it for the following brief abstract of them.

‘ 1. The constable was ordained to repress fe- lons and to keep the peace, of which he is a con- servator by the common law. His office is, therefore, first, original or primitive as conser- vator of the peace ; and secondly, ministerial and relative to justices of the peace, coroners, sheriffs, &c. whose precepts he is to execute. He is, however, an officer only for his own pre- cinct, and cannot execute a warrant directed to the constable of the vill, or to all constables, generally, of that particular jurisdiction : for he is constable no where else ; nor is he compellable to do it, though the warrant be directed to him by name ; but he may, if he will, and so indeed may any other person.

2. The common law requires, that every con- stable should be idoneus homo, i. e. apt and fit to execute the said office ; and he is said in law to be idoneus, who has these three things, honesty, knowledge, and ability.

3. He must be an inhabitant of the place for which he is chosen. But he ought not to be the

keeper of a public house. This is made an ex- press disqualification in Westminster, by stat. 29 Geo. III. c. 25.

4. The objects of his power, authority, and duty, may be thus classed in alphabetical order ; viz.

Affray

Ale-houses

Armed going

Bawdy-houses

Bridges

Burglary

Customs

Distress, for rent

Drunkenness

Escape

Felons

Fires

Fishing, unlawful

Forcible entry

Game acts

Gunpowder

Malt

Measures

Militia

Night Walkers

Physicians, College of

Plague

Poor's Rate

Postage

Presentments

Riot

Robbery

Scavengers

Scolds

Servants

Soldiers

Statutes

Hawkers and pedlars Sunday

Highways Swearing

Horses Thieves, petty

Hue and Cry Turnpikes

Husbandry Vagrants

Innkeepers Warrants of Justices

Juries Watch

Laborers Weavers

Land-tax acts Weights

Lead. See THIEVES. Wreck. Lottery Offices illegal

CONSTABLE OF THE TOWER, a general officer who has the chief superintendance over the tower, and is lord lieutenant of the tower ham- lets. He holds his appointment by letters patent from the king, and is not removable at pleasure. The tower, being a state prison, is also con- sidered as a garrison, of which the constable is governor.

CONSTANCE, a city belonging to the grand duchy of Baden, situated on the Upper Lake of Constance. It is very ancient, and was erected into a bishopric in 750, the see being removed from Windish, a place in Switzerland, about six miles distant. It has a handsome bridge, and several fine structures. It formerly carried on a brisk trade in watches and printed linens, and was well fortified ; but has much declined of late.

It is famous for the council held here from 1814 to 1818, when there were three popes ; who were all deposed, and Martin V. was elected. This body of so named divines, caused John Huss and Jerome of Prague to be burnt, though the em- peror Sigismund had given them a safe conduct, pursuant to the disgraceful maxim, ‘ that no faith is to be kept with heretics.’ See Huss. The dungeon of the convent where Huss was con- fined, which is only eight feet long, six broad, and seven high, and the stone to which he was chained, are still shown. His head carved in stone is erected upon the house where he was seized, and his statue serves for a pillar on which the pulpit of the cathedral stands. Constance was formerly in alliance with the cantons of Basil and Zurich, with whose assistance the in- habitants expelled the bishop, and embraced the doctrines of the reformation ; but the Protestan

cantons being defeated in 1631, the emperor Charles V. compelled them to re-admit the bishop and the popish religion. The majority of the people, however, still continued Protestants ; and Joseph II. in 1785, restored the free exercise of that religion with many other privileges, which in 1787 encouraged 350 emigrants from Geneva to settle in it. The population, however, is little more than 4000. At the congress held in 1802 for determining the indemnifications to those princes who had suffered by the cessions to France, this bishopric, vith the exception of the convents and chapters, was transferred to Baden. It is thirty miles north-east of Zurich.

CONSTANCE, one of the largest lakes of Swit- zerland, which separates it from Germany. On its banks, between Aberlingen and Moersponjy, the French, under general Ferino, engaged the left wing of the Austrians, under the Archduke Charles, and completely routed them, 21st and 22nd of March, 1799. The extensive sheet of water consists properly of two lakes ; viz. 1 . Constance, Lower, or Zeller Zee, a lake between Germany and Switzerland, sixteen miles long and ten broad. 2. Constance, Upper, or Boden Zee, a large lake between Germany and Swit- zerland, thirty-five miles long, and twelve broad. The Rhine connects both lakes, and they are often treated as one. At the eastern extremity is a considerable island, on which stands the town of Lindau, once a free imperial city. It is said to be 350 fathoms deep near Mersbourg. Owing to the melting of the snow from the adjacent mountains, it is deeper in summer than in winter. There are several towns on its banks, which ex- hibit the most charming landscapes. It is fa- mous for trout.

CO'NSTANT, adj. \ Fr. constant ; It. cos CO'NSTANTLY, adv. I tante ; Sp. constants ; CO'NSTANCE, n. s. sLat. constans Fixed; CO'NSTANCY, n. s. I firm ; unalterable ; not CO'NSTANCENESS, n.s. } to be shaken ; resolute ; consistent ; steady ; faithful in love and friend- ship. These meanings of the adjective are to be found in the adverb and the nouns. Shakspearc uses constancy in the sense of veracity ; reality .

— Ho so often hadde hire don offence And she aye sade and constant as a wall Continuing ever hire innocence over all.

Chaucer. Cant. Tales.

Shamefast she was in maiden's shamefastnesse, Constant in herte out of idel besincsse To drive hire out of idel slogardie. Id

With fawning words he courted her awhile, And looking lovely, and oft sighing sore, Her constant hart did tempt with diverse guile.

Spenser. Faerie Queene

The laws of God himself no man will ever deny tc be of a different constitution from the former, in re- spect of the one's constancy, and the mutability of the other. Hooket

Both loving one fair maid, they yet remained con- stant friends. Swfat;/.

Some shrewd contents

Now steal the colour from Bassanio's cheek ;_ Some dear friend dead ; else nothing in the world Could turn so much the constitution Of any constant man.

Shakspeare. Merchant of Venice.

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CONSTANTINE.

But all the story of the night told over,

More witnesseth than fancy's images,

And grows to something of great constancy,

But, however, strange and admirable. Shakspeare. Rocks, pillars, and heaven's axle-tree,

Exemplify her constancy ;

Great changes never change her. Davies.

The world's a scene of changes, and to be Constant, in nature were inconstancy. Cotoley.

If you take highly rectified spirit of wine, and de- phlegmed spirit of urine, and mix them, you may turn these two fluid liquors into a constant body.

Boyle's History of Firmness.

Constancy is such a stability and firmness of friendship, as overlooks and passes by lesser failures of kindness, and yet still retains the same habitual good-will to a friend. South.

This seems to me to be that beauty, which shines through some men's actions, sets off all that they do, and takes with all they come near ; when by a con- stant practice they have fashioned their carriage, and made all those little expressions of civility and re- spect, which nature or custom has

established in con- ersation, so easy to themselves, as they ssr-m not artificial or studied, but naturally to follow from a sweetness of mind and a well-turned disposition.

Locke.

Now through the land his care of souls he stretch'd, And like a primitive apostle preached ; Still cheerful, ever constant to his call ; By many followed, loved b most, admired by all.

Dryden.

It is strange that the fathers should never appeal ; nay, that they should not constantly do it. Tillotson.

In a small isle, amidst the widest seas, Triumphant constancy has fixed her seat ; In vain the syrens sing, the tempests beat. Prior. For the attainment of these ends, his policy con- sisted in sincerity, fidelity, directness, and constancy.

Burke. I'll pu' the budding rose, when Phoebus peeps in

view,

For it's like a baumy kiss o' her sweet honnie mou ; The hyacinth's for constancy, wi' its unchanging

blue,

And a' to be a posie to my ain dear May. Burns, Thump after thump resounds the constant flail, That seems to swing uncertain, and yet falls Full on the destined ear. Wide flies the chaff, The rustling straw sends up a frequent mist Of atoms, sparkling in the noonday beam. Cowper. 3. SURF. O, madam, punctuality is a species of constancy, a very unfashionable quality in a lady.

Sheridan. School for Scandal. His heart was one of those which most enamour us,

Wax to receive, and marble to retain. He was a lover of the good old school, Who still become more constant as they coo..

Byron. Beppo. She was all which pure ignorance allows,

And flew to her young mate, like a young bird • And never having dreamt of falsehood, she Had not one word to say of constancy.

Id. Don Juan.

CONSTANTIA, a district at the Cape of Good Hope, consisting of two farms, which pro- duced the well known wine once much prized in Europe, by the name of Cape dr Constantia wine. See CAPE OF GOOD HOPE.

CONSTANTINA, or CONSTANTIA, a consi- derable province of the territory of Algiers,

bounded on the north by the Mediterranean, on the east by Tunis, on the south by the desert, and on the west by Algiers Proper, or Titterie. IT is 230 miles in length, and 100 in breadth, being the most fertile and best cultivated portion of the Algerine states. Its principal internal produc- tions are grain, hides, and wax ; but the coral fishery on its shores has been the chief attraction to European nations. It is governed by a bey, half independent of the Algiers despot, who col- lects his tribute from the southern districts every two or three years, assisted by a chosen body o't troops.

CONSTANTINA, the capital of the above territory, is the largest and strongest town in the eastern part of Algiers, and is seated on the top of an immense rock. It is only to be reached by steps cut out of the rock ; and the usual way of punishing criminals is to throw them down this precipice. Here are many Roman anti- quities, particularly a triumphal arch in fine pre- servation. The neighbourhood is very fruitful and watered by the Rummel, a river which flows through the rock for upwards of a quarter of a mile. It is seventy-five miles from the sea-coast, and 210 east by south of Algiers.

The French formerly established the settlements of Bona, La Callee, Cullu, and Tabarea, on this coast, for which they agreed to pay a tribute of £4000 a year to the bey ; but these places were wrested from them by Great Britain in the late war, and finally ceded to that power by the treaty with Algiers in 1806: we agreeing to pay £11,000 annually to the bey.

CONSTANTINE I., surriamed the Great, the first emperor of the Romans who embraced Christianity. Dr. Anderson, in his Royal Ge- nealogies, makes him not only a native of Bri- tain, but the son of a British princess. It is certain that his father, Constantius Chlorus, was at York, when, upon the abdication of Diocle- sian, he shared the Roman empire with Galerius Maximinus in 305, and that he died in York in 306, having first caused his son, Constantine, to be proclaimed emperor by his army, and by the Britons. Galerius at first refused to admit Constantine to his father's share in the imperial throne ; but, after having lost several battles, he consented in 308. Maxentius, who succeeded Galerius, opposed him ; but, being

defeated, he drowned himself in the Tiber. The senate then declared Constantine first Augustus and Lici- nius his associate in the empire in 313. These princes published an edict, in their joint names, in favor of the Christians ; but soon after, Lici- nius, jealous of Constantine's renown, conceived an implacable hatred against him, and renewed the persecutions against the Christians. This brought on a rupture between the emperors, and a battle, in which Constantine was victo- rious. A short peace ensued ; but Liciniu having shamefully violated the treaty, the wai was renewed ; when, Constantine totally defeat ing him, he fled to Nicomedia, where he was taken prisoner, and strangled in 323. Constar. tine, now become sole master of the whole em- pire, immediately formed the plan of establishing Christianity as the religion of the state ; for wluc^ purpose, he convoked several ecclesiastical cour.*

cils; but, finding he was likely to meet with great opposition from the pagan interest at Rome, he conceived the design of founding a new city, to be the capital of his Christian empire. See CONSTANTINOPLE.

The glory Constantine had acquired, by esta- blishing the Christian religion, was tarnished by the part he took in the persecutions carried on by Uie Arians, towards the close of his reign, against theii Christian brethren who differed from them. Seduced by Eusebius, of Nicomedia, he banished several eminei.t prelates ; soon after which he died, A. D. 337, in the sixty-sixth year of his age, and thirty-first ot his reign. Con- stantine was chaste, pious, laborious, and indefa- tigable ; a great general, successful in war, and deserving his success by his valor and genius ; a protector of the arts, and an encourager of them by his beneficence. If we compare him with Augustus, we shall find that he ruined idolatry by the same address that the other used to de- stroy liberty. Like Augustus, he laid the foun- dation of a new empire; but less skilful, he could not give it the same stability; he weakened the body of the state by giving it a second head at Constantinople; and transporting the centre of motion and strength too near the eastern ex- tremity, he left without heat, and almost without life, the western parts, winch soon became a prey to the barbarians. The pagans were too much his enemies to do him justice. Eutropius says, that in the former part of his reign he was equal to the most accomplished princes, and in the latter to the meanest. The younger Victor, who makes him to have reigned more than thirty-one years, pretends, that in the first ten years he was a hero; in the twelve succeeding ones a robber; and in the ten last a spendthrift. It is easy to perceive, with respect to these two reproaches of Victor's, that the one relates to the riches which Constantine

took from idolatry, and the other to those with which he loaded the church. A mo- dern historian, of infidel principles, has fol- lowed this mode of depicting the character of Constantine very singularly. ‘ In the life of Augustus,’ says Gibbon, ‘ we behold the tyrant of the republic, converted, almost by impercep- tible degrees, into the father of his country and of human kind. In that of Constantine, we may contemplate a hero, who had so long inspired his subjects with love, and his enemies with terror, degenerating into a cruel and dissolute monarch, corrupted by his fortune, or raised by conquest above the necessity of dissimulation.’

The reality of the miracle by which Constan- tine is said to have been converted to Christianity, is the great ‘ historical doubt ‘ of his life ; and his domestic conduct, perhaps, his greatest reproach. At the instigation of his second wife, Fausta, he is said to have listened to the most improbable accusations against his eldest son, Crispus, a very amiable prince. Not only was he described as plotting secretly against his father’s authority, but his mother-in-law is stated to have charged him with an attack upon her honor. On this he was suddenly apprehended, and put to death,, without even the form of a trial, on the twen- tieth anniversary of the emperoi’s reign. His grandmother, Helena, convinced of his inno-

cence, resolved, it is added, to bring his accuser’s motives to light, and found means of convicting her of an adulterous connexion with a slave of the palace, for which she was suffocated in the steam of a vapor-bath. The part which the em- peror took in these proceedings is not exactly defined by historians ; but, as he has not wanted eulogists, we may presume, that as it has never been offered, nothing like an honorable exculpa- tion of him is to be found.

Eusebius’s account of the miracle alluded to, is thus abridged by M. Milner : — ‘ While he was marching with his forces in the afternoon, previous to his great battle with Maxentius, A.D. 312, the trophy of the cross appeared very luminous in the heavens, higher than the sun, with this in- scription, Tovro) Vina, ‘ conquer by this.’ He and his soldiers were astonished at the sight ; but he continued pondering on the event till night. And Christ appeared to him when asleep, with the same sign of the cross, and directed him to make use of the symbol as his military ensign. Constantine obeyed, and the cross was henceforward displayed in his armies.’ — History of the Church of Christ, vol. ii. p. 41. Eusebius adds, that Constantine communicated this svon- derful circumstance to his friends in the morning, and sending for ingenious workmen, gave them a description of the sign, and saw them make one like it in gold and precious stones; which, says he, ‘ we have seen.’

This imitation of the visionary cross was after- wards the labarum of the

*army, and consisted of a cross, surmounted by the figure ˆ or ˆ., and encircled with a crown of gold ; this being, ac- cording to the Greek orthography, the initial letters of the name of Christ. ‘ The victorious emperor himself having told it to us,’ says Eu- sebius, who wrote this history a long time after, * when we had the honor of his acquaintance and conversation, and having likewise confirmed it with an oath, who can refuse his assent to it, especially when following events have borne tes- timony to the truth of it?’ To which, in effect, the judicious Lardner answers, 1. This relation is delivered by Eusebius upon the so.e credit o-. Constantine ; whereas a thing of so public a na- ture could not have rested upon his credit and authority only, if it had been true. Other wit- nesses might have been called to vouch for the truth of an event, so surprising and so recent, i. e. tw.nty years before Eusebius wrote the life of C&ftitantine ; and the historian, from dutiful affection for the emperor, and from a just concern for his own honor would not have failed to add something to thb purpose. 2. The oath or oaths of Constantine upon this occasion, rather bring his relation into suspicion. 3. Eusebius renders this whole account suspicious, by not mentioning the place of this wonderful sight ; and this defect renders it probable that Eusebius himself did not believe this story, nor intend to vouch for the truth of it. 4. There are other things con- cerning the standard, related by Eusebius, which he also had from Constantine, and which are very unlikely, if not altogether incredible. Wherever the standaid was, says the historian, the enemies fled . and this is not improbable, because it might animate Constantino’s soldier*,*

and terrify the enemy. But it is added, that the salutary trophy was a safeguard to him who bore it, and there never was any one wounded in this service. This relation, for which Eusebius does not make himself answerable, surpasses all credible accounts of miracles ; that when many darts were thrown, none should strike the bearer, nor yet light x.pon the upper part of the stand- ard, where were the cross and the motto, but only, and always, upon the narrow circumference of the spear, or pole of the standard. 5. Lac- tantius, or the author of the book Of the Deaths of Persecutors, who wrote a few years after this appearance in the heavens is supposed to have happened, says nothing of it, but only mentions Constantine’s dream or vision in his sleep.

Dr. Lardner’s doubts on this subject are the more entitled to consideration, as he is far from forming an unfavorable opinion of Constantine’s general character. ‘ We should be willing,’ says lie, ‘ to make allowances in favor of princes, and especially of long reigns. It is next to impos- sible for human

wisdom and ‘ discretion, in the course of many years filled with action, not to be surprised into some injustice, through the bias of affection, or the specious suggestions of artful and designing people. Though, therefore, there may have been some transactions in this reign which cannot easily be justified, and others that must be condemned, yet we are not to consider Constantine as a cruel prince or a bad man.’

For ourselves, we apprehend, that neither the object nor the evidence of the miracle in ques- tion are worthy the Christian cause. How the emperor should identify the person of Christ, in the vision which is thought the more credible part of the narrative, seems difficult to conceive ; and to us it is perfectly incomprehensible, that the Saviour should thus commission the symbol of his peaceful and holy religion to become, at once, that of the destruction of mankind.

CONSTANTINOPLE, the capital of the Turkish empire, called by the ancients By- zantium, and by the modern Turks Stampol or Istampol, is situated on the western shore of the Bosphorus. No situation can combine greater advantages : the Euxine Sea on the north, and the Mediterranean on the south, open to its commerce easy communications with the most fertile and important nations of the three conti- nents ; and nothing can be more superb than the view presented by the adjacent country, as the traveller approaches it. The city seems to rise from the bosom of the sea, like the vision of an enchanter’s wand, the seven hills upon which it is built successively presenting themselves, crowned with glittering kiosks, gilded domes, and tapering minarets, intermixed with innumerable cypress trees, a green hill, beautifully sloping upwards from its walls, terminating the prospect. It is of a triangular form, its obtuse angle extending into the sea of Marmora, and the base facing the west, and has a wall from fourteen to twenty feet in height, running along the side towards the sea, surmounted at intervals with towers, and contain ing six gates. Its fortifications have suffered much from the effects of time, and many parts of them are in ruins. On the land side facing the west, is the celebrated wall built by Theodosius, ex-

tending five miles in length, and a fosse twenty- five feet wide. This wall, though it has stood the shock of so many attacks, is still in a state of amazing preservation : it is flanked with lofty towers, and has five gates, with stone bridges over the fosse. The Porta Sancti Romani, where the emperor Constantine Paleologus fell covered with glorious wounds, is associated with the most interesting recollections. The remaining wall of the triangle is formed of alternate courses of free- stone and bricks, and has thirteen gates All the angles were originally surmounted with towers, having conical roofs, but of these one was destroyed by an earthquake in 1768, and another is rapidly mouldering into decay. The whole area surrounded

by these walls is 2000 acres and their circumference about fourteen Eng.ish miles.

The interior of Constantinople, however, pre- sents a widely different appearance from the splendid coup d'ceil, afforded by its exterior. Mr. Sandys remarks, ' I think there is not in the world any object that promiseth so much afar off, and entered, that so deceiveth the expecta- tion.' It is indeed an assemblage of slanting, gloomy, and dirty streets, bearing no names, and so infested with filth and ordure, that one would suppose that the office of cleaning them is left entirely to the dogs and vultures which prowl about in great numbers, and the rain of heaven. The houses are very low (none of them being allowed to exceed twenty feet in height), and for the most part composed of wood or earth, and few of them boasting of the luxuries of glazed windows or chimneys. Owing to the combustible materials of which the houses are composed, and the proverbial improvidence of the Turks, fires are of very frequent occurrence ; nay, it is said, that one would find it a matter of difficulty to point out the site of a single house in Constantinople where a fire has not been seen. Of the streets, the one leading from the seraglio to the Atmej- dan is by far the most imposing ; but if the Turks may, with any degree of justice, claim for their city the proud name of ' New Rome,' it must be attributable to the gloomy grandeur which is diffused over it, by its numerous pa- laces, mosques, bagnios, bazaars, and caravan- sarais.

The seraglio, however, is the most celebrated of all the buildings of Constantinople. It is situated on the eastern promontory, and, with its gardens, covers one of the seven hills. This palace was originally built by Mahomet II. but has been much eri.fged and beautified by succeeding sul tans, who have occupied it not merely for their women and their retinues, but with all the pomp and pageantry of the court, and avast crowd of the officers attached to the government. It is supposed to contain upwards of 10,000 inhabitants. The grand entrance is on the west, through a marble portico, called, the Baba-hoomajin, or Sublime Porte ; and from this entrance it is supposed the Ottoman Court took its title of Porte or Sublime Porte, affixed at present to all its public trans- actions and records. It is in this place that state delinquents are beheaded, and their heads are dis- played for three days after their execution. The first court contains the mint, the principal

mosque (St. Sophia), and the officers of the vi- zier's divan. At the first two gates guards are always stationed. At about a thousand paces distance

from the other gate, is situated the Ba- ba-Salem (gate of health), which conducts to the second court. Through this gate none but the sultan can enter on horseback. The court contains the grand audience chamber, in which the sultan receives the ambassadors of foreign courts. The throne on which he reclines on these occasions, has been much admired for its great magnificence ; it has the shape of a bed, and is covered with precious stones, and embroideries of pearls and jewels. The gate which leads to the third court is called Baba-Saadi, or the Gate of Happiness. Into this those only who compose the sultan's suite, being Mahommedans, are allowed to enter ; ambassadors from foreign courts, and others who are favored with an audience, are conducted to the presence chamber by a covered passage. Beyond this court are situated the various apart- ments of the Haram, which generally contain about 500 unhappy females. From the elevated position of many of these abodes they may be seen from the city, but none of them can be visited, excepting those devoted to the summer residence of the females, during the time they are in their winter apartments. The furniture of the palace is said to be very magnificent. The audience chamber, in which the sultan and sultan-mother receive the visits of ceremony from the sultanas, is wainscotted with jasper, inlaid with ivory and mother of pearl, and has a kind of sofa which extends round the room ; the walls are decorated with a profusion of mirrors, and the costly presents received from foreign powers ; and the hangings are composed of cloth of gold, richly • embroidered with fringes strung with pearls. The palace library contains several important Greek, Latin, and Oriental manuscripts; but as no Christian is permitted to enter this apartment, the ex- act number and value of its contents is entirely conjectural. According to Dr. Clarke, the gar- ders display nothing of refined taste in their ar- rangement, or of great curiosity in their contents, but the prospect from them is unrivalled.

Constantinople contains 130 public baths, and scarcely a street is to be found that has not its fountains. Many of these baths are very ele- gant structures, formed of hewn stone, and having the floors of their inner apartments paved with marble. The manner in which they are used by the Turks resembles the lustrations of the Greeks rather than our mode of bathing. The fountains are for the most part low square buildings, roofed with lead, and profusely decorated with gilding and paint, and inscribed with verses from the Koran, and favorite Mahommedan doc- tors. According to the most accredited state- ments the city altogether contains upwards of 300 mosques. The most celebrated, both for its an- tiquity and splendor of architecture, is, as we have already stated, St. Sophia. This magnifi- cent building, said to be more extensive than St. Peter's at Rome, stands near the principal gate to the seraglio. It was originally built by Constantine the Great, but during a popular sedi- tion, which took place in the reign of Justinian,

was burnt to the ground ; in the same reign,

however, arose the present sumptuous edifice. It is built in the form of a Greek cross ; the length from east to west being 270 feet, and the breadth from north to south 243. It is orna- mented by a dome of so imperceptible a curve, that the perpendicular concavity is not more than one-sixth of the diameter. The principal vesti- bule is on the west side, and is twenty-eight feel wide, having nine doors of bronze ornamented with a variety of subjects in alto relievo. The dome rests on pillars composed of the finest marble. Andronicas added two immense but- tresses to it in 1317, and the Turkish emperor, Selim II., four minarets, so that the exterioi beauty of the building is greatly marred by the heterogeneous nature of its component parts. The interior of the church has been much de- facsd by the Turks. Its grand dome rests upon four arcades, which are connected with a like num- ber of cupolas, and the whole blending together form an amazing expanse of roof: The spacious pavement is completely covered with the richest carpets. Nothing can exceed the splendor of the interior during the celebration of a Turkish festival; from the roof are suspended an innu- merable quantity of lamps, composed of colored glass, globes of crystal, ostrich eggs, and orna- ments of gold and silver, which reflect their ra- diance from the green jasper and porphyry pil- lars, with which the stupendous concave is thronged, ' and glitter,' as the Turkish writeis say, ' like the stars in the firmament.' Tin. whole interior of the dome was originally orna- mented with rich Mosaic work upon a golden ground; but the Turks have obliterated all its beauty by covering it with white-wash. The re- venues of St. Sophia, which amount to nearly £3000 per annum, principally arise from Line held under a species of tenure, called vacuf which is somewhat analogous to our church lands: they are expended in keeping the mosqut in repair, and in paying the officiating imams. Of the mosques, several were originally Greek churches. The most celebrated, built by the Turkish sultans, are those of Mahomet II., si- tuated on one of the seven hills, and of the sul- tan Achmet I., which has six minarets of amaz- ing height and extraordinary beauty. There is also one, erected by Bajazet, in which are ten columns of verd antique, four of jasper, and six of Egyptian granite.

Most of these mosques are situated in squares or public places, and are generally surrounded by lofty colonnades of marble, having gates of brass. In the centre of the area is placed a fountain of polished marble. The remains of the founders of each mosque are deposited with such reliques as are supposed worthy of pre- servation, in a chapel attached to the principal building. The Greeks have twenty-three churches in Constantinople ; there are also six Roman Catholic convents, several Jewish synagogues, and a Swedish church. The Christian churches hare the appearance of private houses ; no spires or bells being permitted to any religious edifice, excepting

the mosques. The Protestant envoy viz. the English, Swedish, and Dutch have chap- lains attached to their respective suites.*

Amongst the most curious and useful esta-

blishments of Constantinople may be mentioned the bazaars. They generally consist of immense square stone buildings, lighted by domes, and are admirably adapted to the exigencies of the climate. Almost every trade is carried on in its own particular quarter, and quite separated from all others. In one street nothing is to be pur- chased but arms and military accoutrements; another is devoted to the exclusive sale of jewels, diamonds, and precious stones ; in a third you meet with nothing but silks, generally worn by the Turks, and in the manufacture of which the Armenians employ 10,000 looms. Whole streets are set apart for the sale of books, Arabic, Per- sian, and Turkish MSS. ; for pipe-makers, shoe- makers, farriers, confectioners, &c. One of the most noted bazaars is appropriated to the sale of drugs, the spices of the east, and medicines, amongst which opium holds the foremost place. The bazaars are closed at an early hour every evening.

The numerous khans, situate in different parts of the city, afford ample accommodation for the merchants who frequent Constantinople from all quarters of the Turkish empire. The woman- market is held every Friday morning, in a large enclosed court, surrounded with numerous apart- ments. Hither the unhappy female-slaves are brought to be sold, some of them from an immense distance. The Egyptian and Abyssinian women are generally bought for domestic purposes, whilst the Georgians and Circassians are devoted to the harams of the wealthy, or. the seraglio of the sultan. Some of these sell for several thou- sand piastres.

Constantinople is rich in antiquities. The most conspicuous is perhaps the Grecian Hippo- slromus, which is still in a state of excellent preservation. It is an enclosure, extending about 250 paces in length and 150 in breadth, and was used for the exhibition of public games, &c. During the time of the Greek empire the circus was ornamented with numerous statues, obelisks, &c. but few of these have escaped the successive ravages of the Turks, the French, and the Vene- tians. There are still remaining, however, many fragments of Greek and Roman sculpture, in different quarters of the city. The Atmedoa is to this day used by the Turkish noblesse as the place where they exercise themselves in their mili- tary game, called dijirit. This game consists in darting a white wand, of about four feet in length, at each other,

whilst on horseback ; in avoiding the darts of their antagonists ; in stopping their horses when in full gallop, &c. The suc- cessful exercise of it requires great strength and agility.

Nothing can be more contradictory than the statements of different travellers, with respect to the population of Constantinople. Habesci says it amounts to 1,500,000, whilst on the other hand Eton reduces it to less than 300,000, and alleges, in proof of the correctness of his computation, that it does not occupy so large a site as the city of Paris, and that the buildings are smaller, and more open. It is impossible to ascertain pre- cisely the number of inhabitants, as the Turks Keep no registers : most modern travellers, how- ever, concur in estimating the number at about

400,000. This population is of a very mixed character ; scarcely one-half are Turks, the rest Greeks, Jews. Armenians, and Franks. These latter, when they appear in the streets and public places, present a singular contrast in their timid and circumspect behaviour, to the haughty, superb gait, and supercilious appearance of the Turks.

The walking costume of the females has in it something graceful ; it consists of a mantle which covers the whole body, the eyes alone being vi- sible, so that it is impossible to distinguish the age of the fair perambulator ; and to address a lady in the streets is considered a great violation of good manners. What gives a very picturesque appearance to a Turkish crowd is the custom which prevails of every different trade and nation being habited in the costume of his res- pective country or profession. This produces an almost endless variety of color and pattern in their dress, and presents groupes and combi- nations of effect which painters in all countries have delighted to transfer to their canvas.

The Greek nobility, resident at Constantinople, principally occupy the Phonar, a northern dis- trict of the city. Their sole ambition appears to be directed to the obtaining some paltry place under the Turkish government, such, for in- stance, as that of interpreter, or provincial governor.

The most terrific enemy to the inhabitants of Constantinople is the plague. From the year 1783 to 1785, it is said, upwards of 100,000 children and young persons fell victims to this awful visitation. Most authors have concurred in attributing the great ravages committed by this evil, rather to the perverse carelessness and total inanity of the Turks, than to any peculiar disadvantage of the climate. This, however, is by no means healthy, being subject to continual transitions from excessive heat to the piercing blasts of the north-east. Pooquerille estimates the average of the climate in ordinary years at sixty-six days of rain, four of snow, six of fog, twenty cloudy, forty variable, and fifteen thun- dery thus, according to this

calculation, 214 days of uniform serenity remain. This city is occasionally visited by tremendous thunder-storms, and earthquakes are not unfrequent. To these inconveniences may be added the scarcity of pure water in many parts, and the confined, crooked, and filthy state of the streets in every quarter.

The harbour of Constantinople in respect both to its security and the accommodation it in capable of affording to ships, is said to be one of the finest in the world. It separates the European quarters, Galata and Pera, from the north of the city, and is formed of a branch of the Bosphorus. it is about seven miles in length, and its breadth at the entrance is 500 yards. It is capable of containing 1200 ships. From its curved outline and the rich galleys which occa- sionally ride at anchor upon its waters, it, at an early period, obtained the appellation of the Golden Horn, which it still retains. Ships can approach close to the shore, and unload their cargoes with the utmost facility, owing to the steepness of the banks and the little influence

the tides have in these seas. The greatest in- convenience attending the harbour is said to be produced by a considerable current, which pre- vails along the south side, and which it requires some precaution to avoid in putting out to sea, lest the vessel be driven on the projecting point of the seraglio, where there is a tremendous torrent,

The commerce of Constantinople is insig- nificant; Dr. Clarke says, 'The ships which crowd its ports have no connexion with its wel- fare ; they are for the most part French, Venetian, Ragusan, Sclavonian, and Grecian vessels, to and from the Mediterranean, exchanging the produce of their own countries for the rich harvests of Poland ; the salt, honey and butter of Ukraine ; the hides, tallow, hemp, furs and metals of Russia and Siberia ; the whole of which exchange is transacted in other parts without any inteife- rence on the part of Turkey.' Thus with almost the finest situation, and some of the greatest fa- cilities of any country in the world, Turkey is comparatively unknown as a commercial nation ; and the manufactories do not, at the present day, iroduce a sufficient supply of goods for their own consumption. They generally pay their im- ports either in specie, or in gold and diamonds.

The intelligent traveller,ˆust quoted, gives alto- gether a most gloomy picture of the trade and habits of this metropolis. ' We landed at Galata,' says he, ' in the midst of dunghills, on which a number of large, lean, and mangy dogs with their whelps, wallowing in mire, and all covered with filth

and slime were sprawling or feeding. The appearance of a Frank (the name applied to every Christian in the Levant, of whatever nation,) in- stantly raises an alarm among the animals, who never bark at the Turks; and, as they were roused by our coming on shore, the noise became so great that we could not hear each other speak. To this clamour were added the brawlings of a dozen porters, vociferously proffering their servi- ces, and beginning to squabble with each other as fast as any of them obtained a burden. At length we were able to move on, but in such con- fined, stinking, and yet crowded lanes, that we almost despaired of being able to proceed. The swarm of dogs, howling and barking, continually accompanied us, and some of the largest attempted to bite. When we reached the little inn of Pera, where a few small rooms, like the divisions in a rabbit-hutch, had been prepared 'for our re- ception, we saw at least fifty of these mongrels collected round the door of the yard, like wolves disappointed of their prey. The late storms had unroofed several of the houses in Pera ; that in which we lodged was among the number; one corner of it had been carried away with the wind, so that, without climbing to the top for a view of the city, we commanded a fine prospect of the Golden Horn, and part of Constantinople, through the walls of our bed-rooms, which were open to the air. Pera had recently suffered in consequence of a conflagration which had nearly consumed every house in the place. There was reason to believe some improvement would take place during its restoration; but we found it rising from its ashes like a new phoenix, without the slightest deviation from the form and appear-

ance of its parent. Ttie exception only of one or two houses formerly of wood and rebuilt with stone might be noticed ; but all the rest were as ugly, inconvenient, and liable to danger as before ; and were it not for a few workmen, em- ployed in fronting the houses of the merchants, no stranger could discover that any accident had taken place.

' Considering the surprising extent of the city and suburbs of Constantinople, the notions en- tertained of its commerce, and the figure it has long made in history ; all the inconveniences if not the luxuries of life, might be there expected Previous to an arrival, if any enquiry is made of merchants and other persons who have visited the place, as to the commodities of its markets, the answer is almost always characterised by ex- aggerations. They will affirm that everything a stranger can require may be purchased in Con- stantinople as in London, Paris, or Vienna ; whereas, if truth be told, hardly any one article good in its kind can be procured. Let a foreigner visit the bazaars, properly so called, he will see nothing but slippers, clumsy boots of bad leather, coarse muslins, pipes, tobacco, coffee, cook- shops, drugs, flower-roots, second-hand pistols, poniards, and the worst manufactured wares in the world. In Pera, where Greeks and Italians are supposed to supply all the necessities of the Franks,

a few pitiful stalls are seen, in which everything is dear and bad. Suppose a stranger to arrive from a long journey, in want of clothes for his body; furniture for his lodgings; books or maps for his instruction and amusement ; paper, pens, ink, cutlery, shoes, hats; in short, those articles which are found in almost every city of the world ; he will find few or none of them in Constantinople, except of a quality so inferior as to render them incapable of answering any purpose for which they were intended. The few commodities exposed for sale are either exports from England, unfit for any other market, or, which is worse, German and Dutch imitations of English manufactui e. The woollen cloths are hardly suited to cover the floor of their own counting- houses; every article of cutlery and hardware is detestable ; the leather used for shoes and boots is so bad that it can scarcely be wrought ; hats, hosiery, lip°n, buttons, buckles, are all of the same character ; of the worst quality, and yet of the highest price. But there are other articles of merchandise, to which we have been accustomed to annex the very name of Turkey, as if they were the peculiar produce of that country; and these at least a foreigner expects to find ; but not one of them can be had. Ask for a Turkish car- pet, you are told you must send for it to Smyrna ; for Greek wines, to the Archipelago; for a Turkish sabre, to Dam? :us; for the sort of stone expressly denominated turquoise, they know not what you mean ; for red leather, they import it themselves from Russia or from Africa ; still you are said to be in the centre of the commerce of the world ; and this may be true enough with reference to the freight of vessels passing the straits which is never landed. View the exterior of Constantinople, and it seems the most opulent and flourishing city of Europe ; examine its in- terior, and its miseries and deficiences are so

striking, that it must be considered the meanest and poorest metropolis of the world.

‘ Never was there a people in possession of such advantages, who either knew or cared so little for their enjoyment. Under a wise govern- ment, the inhabitants of Constantinople might obtain the riches of all the empires of the earth. Situated as they are, it cannot be long before other nations, depriving them of such important sources of wealth, will convert to better purpose the advantages they have so long neglected.’

The police of Constantinople is perhaps un- equalled by that of any other city in the world, and certainly exceeds the celebrated system adopted by Louis XIV7. of France. By the Ma- hommedan law, theft is constituted a capital offence, yet the Government have found it ex- pedient in some

measure to connive at its com- mission : with this view they have a separate officer of police to superintend this particular class of criminals. He is styled zyndan hasse- kisi (keeper of the prison) and is in fact no other than the captain, or chief of thieves. He is, or was lately, selected from the servants of the Aga of the Janissaries, and his office is held so long as he is considered capable of discharging its du- ties ; his incapacity being deduced from his ina- bility to apprehend any particular thief, whose person is sought after. The moment an offender is caught, his whole interest is put in requisition, presents are sent, and the friends of the delin- quent have immediate communication with the zyndan hassekisi, who on his part (should he es- pouse the culprit's cause) employs all his interest •with the higher powers to save his life, and to get him transferred to the Bagnio, or great prison of the Arsenal, from whence after a few weeks incarceration he manages to procure his discharge. In the meantime the name of the new thief, every minutia characteristic of his person, and his most favorite modes of carrying on his profession, are noted down with the most punctilious accuracy in the books of the zyndan, and from this mo- ment he becomes a member of the fraternity. A thief who has not thus propitiated the favor of this officer, is sure to be executed the first time he is convicted. The protege's of the zyndan hassekisi, are of both sexes, and of every age and country. Every disguise, from that of a man of rank to a mendicant, is assumed by them, and they exercise their professional talents with little or no hazard. Their gains, however, are taxed; for not only is he who has actually committed robbery obliged to give a portion of the effects stolen, but he against whom an information is laid, and who is apprehended on suspicion, cannot procure his release without handsomely paying for it. The zyndan, from the circumstance of his being selected from the corps of the Mumgi, is neces- sarily a person of some experience in the preda- tory profession; and every thief being known to excel in some particular branch of it, one for in- stance in forcing a door, another for his dexterity in picking locks, a third in inventing a feasible pretext for entering a house, &c. when any per- son lodges a complaint at the police office, he is minutely interrogated as to all the particulars of the case ; the zyndan hassekisi summonses before mm those who are known to pursue that particu-

lar line of the profession, ana the guilty person is speedily detected. The sloven property is now soon recovered; notwithstanding which, if the owner of it do not handsomely fee the zyndan, it is divided amongst the thief and some few persons in office. The city guard is com- posed of a troop appointed to each gate ; besides three or four men to most of the streets. These keep continually parading the city day and night. The gates are regularly closed one hour after sunset.

The suburbs of Constantinople are very thickly inhabited, and extend from

the north of the city, near the harbour. The names of the principal of these, are Galata, Pera, and Scutari; Galata is chiefly peopled by the merchants and sea-faring men of all nations. Pera occupies a lofty hill immediately to the westward of Galata ; and is built almost exclusively of wood and unburnt bricks. The streets are confined and badly paved, but the air and water are salubrious, and the prospects it affords from its elevated situation are exceedingly beautiful. Scutari lies on the Asiatic side of the Bosphorus, but is considered as be- longing to the suburbs of Constantinople. It is built on the site of the ancient Chrysopolis and presents a remarkably picturesque appearance from the city. This suburb is the general ren- dezvous for the Asiatic caravans, and is princi- pally remarkable as containing the finest cemete- ries in the Ottoman Empire, some of them ex- tending for many miles to the east and south of the town.

A belief entertained by the Turkish noblesse, that their capital will one day be re-taken by the Christians, has constituted this their most fashion- able place of residence, as being farthest re- moved from the European side. To these may be added the suburb of St. Demetri, which is crowded with Greeks, and Tophana (the Iron foundry) situated on the north side of the har- bour, and separated from Galata, by one of the cemeteries of which we have spoken above. There is also a village, in the immediate vicinity of the city, called Eyub from Eyub or Job, the name of one of Mahomet's standard-bearers ; Mahomet II. having in a revelation discovered the burial place of this man (who was killed by the Saracens in their first siege of Constantinople) caused a splendid mausoleum and mosque to be raised over his ashes.

The environs of the capital exhibit but a me- lancholy appearance. A few Greeks did indeed cultivate a portion of the land, and are amply re- paid for their toil by plentiful crops, but the Turks often devastate and pillage them, unchecked by the interference of the Government. Along the line of coast, however, numerous splendid palaces, with beautiful hanging gardens, are to be met with ; and a few vineyards are scattered about the neighbour- hood of Pera. Of the character of the inhabi- tants of this capital we shall speak more particu- larly under the head TURKEY. We may add, however, that the excessive indolence of the Turks, and the wretched policy of their Govern- ment, are seen nowhere beside in such striking colors. E. long, of the mosque of St. Sophia 28° 55′ 15″ N. lat. 41° 1′ 27".

CONSTAT, in law, a. certificate which the

clerk of the pipe and auditors of the exchequer make at the request of any person who intends to plead or move in that court for the discharge of anything ; and the effect of it is, the certify- ing what does constare upon record, touching the matter in question. A constat is held to be superior to a certificate ; because this may err or fail in its contents; that cannot, as certifying nothing but what is evident upon record. The exemplification, under the great seal, of the en- rolment of any letters patent, is also called a constat.

CONSTE'LLATE, v. a. & n. t Fr. constel-

CONSTELLA'TION, n. s.) lation ; Ital.

consteliatione ; Sp. constellation ; Lat. constel- lattts. To shine with conjoint lustre ; to unite the splendor of several lucent bodies. The ac- cent was formerly on the first syllable. Constel- lation signifies several stars forming one cluster, and known by a particular name ; also, figura- tively, any assemblage of excellencies.

For the stars of heaven, and the constellations thereof, shall not give their light. Isaiah xiii. 10. Fortune yeven hath this adversite :

Som wikke aspect or disposition

Of Saturue, by som constellation,

Hath yeven us this, although we had it sworn.

Chaucer. Cant. Tales.

The earth, the air, resounded ; The heavens and all the constellations rung.

Milton's Paradise Lost.

Great constitutions, and such as are constellated into knowledge, do nothing till they outdo all.

Browne's Vulgar Errours.

The condition is a constellation or conjuncture of all those gospel graces, faith, hope, charity, self-de- nial, repentance, and the rest.

Hammond's Pract. Catechism.

The several things which engage our affections do, in a transcendent

manner, shine forth and constellate in God. Boyle.

A constellation is but one ; Though 'tis a train of stars. Dryden.

If every polished gem we find, Illuminating heart or mind,

Provoke to imitation ; No wonder Friendship does the same, That jewel of the purest flame,

Or rather constellation, L/owper.

CONSTELLATION, in astronomy, is a system of several stars near one another. Astronomers not only mark out the stars, but, to bring them into order, they distinguish them by their situa- tions and positions in respect to each other ; and distribute them into constellations, allowing several stars to make up one constellation. For the better distinguishing them, they reduce these constellations to the forms of animals, as men, bulls, bears, &c. ; or to the images of some things known, as of a crown, a harp, a balance, &c. ; or give them the names of those, whose memories they wish to transmit to future ages. The division of the stars by images and figures is of great antiquity, for, in the Book of Job, Orion, Arcturus, and the Pleiades are mentioned; and we meet with the names of many constella- tions in the writings of Homer and Hesiod. The ancients, in their division of the firmament, took in only so much as came under their notice. VOL. VT.

distributing it into forty -eight constellations ; but the modern astronomers comprehend the whole starry firmament, dividing it into three regions, viz. the zodiac, the region above, and that below it. See ASTRONOMY.

CONSTERNATION, n. s. Fr. consternation ; Ital. consternazione ; Span, consternation; Lat. consterno. Excessive surprise ; dismay ; won- der ; utter helplessness arising from fear.

They find the same holy consternation upon them- selves that Jacob did at Bethel, which he called the gate of heaven. South.

The natives, dubious whom They must obey, in consternation wait Till rigid conquest will pronounce their liege. Philips.

The nature of courage is, without a question , to be conversant with danger ; but, in the palpable night of their terrors, men under consternation suppose, not that it is the danger, which, by sure instinct, calls out the courage to resist it, but tbat it is the courage which produces the danger. Burke.

CO'NSTIPATE, v. a. > Fr. const iper; Ital.

CONSTIPA'TION, n. s. jcostipare; Span, con- stipar; Lat. constipare. To render thick; to compress into little space. The act of compress- ing or condensing ; stoppage from fulness ; cos- tiveness of the intestines. Both the verb and the noun are now chiefly used in the latter sense.

Of cold, the property is to condense and constipate.

Bacon.

This worketh by the detention of the spirits, and constipation of the tangible parts. Id. Natural History.

Omitting honey, which is laxative, and the pow- der of some loadstones in this, doth rather constipate and bind, than purge and loosen the belly.

Browne's Vulgat Errours.

It may, by amassing, cooling, and constipating of waters, turn them into rain. Ray on the Creation.

The inactivity of the gall occasions a constipation of the belly. Arbuthnot on Aliments.

There might arise some vertiginous motions or whirlpools in the matter of the chaos, whereby the atoms might be thrust and crowded to the middle of those whirlpools, and there constipate one another into great solid globes. Bentley.

It requires either absolute fulness of matter, or a pretty close constipation and mutual contact of its par- ticles. Id.

CONSTITUTE, v. a. &n.s.ˆ Fr. consti- CO'NSTITUTER, n. s. tuer; Ital.cos-

CONSTITU'TION, n. s. tituire ; Span.

CONSTITUTIONAL, adj. constituir;Lsii.f

CONSTITUTIONALIST, n. s. -constituere. To CONSTITUTIONALLY, adv. I constitute is, CONSTITU'TIONIST, n. s. to make to be ;

CONSTITUTIVE, adj. to give regular

CONSTITUENT, n. s. & adj. J existence to ; to set up ; to fix ; to ordain ; to depute ; to ap- point to office. The constituter is, the person who performs these acts; and the power by which he performs them is denominated consti- tutive. The noun, constitute, of old meant an established law. As an adjective, constituent signifies that which makes

anything what it is ; that which is an essential, integral part of. As a noun, it denotes the person or thing which per- forms the act of constituting ; an indispensably necessary part of; he who deputes another to act for him. Constitution has several meanings

*The two prominent are, form of government ; tne state of the body with relation to strength *nd weakness, health and disease. It also de- notes the act of constituting; mode of being; particular textuie of parts ; natural qualities ; disposition with respect to temper; particular law; established usage. Constitutional, is that which is inherent in the corporeal constitution ; in conformity with the civil constitution. Consti- tutionally means done 'egally; done according to the rules of the constitution. A constitu- tionist is one who is zealous for the constitution under which he lives; a constitutionalist, one who adheres to, or who has assisted in forming, a constitution. The last of these words is chiefly applied to those who formed, or defended, the French constitution of 1791.*

We lawfully may observe the positive constitutions of our own churches. Hooker.

Dametas, according to the constitution of a dull head, thinks no better way to show himself wise than by suspecting every thing in his way. Sidney.

Some dear friend dead ; else nothing in the world Could turn so much the constitution Of any constant man.

Shakspeare. Merchant of Venice. The Norman conquering all by might,

Mixing our customs, and the form of right.

With foreign constitutions he had brought. Daniel.

Although it be placed among the non-naturals, that is, such as, neither naturally constitutive nor merely destructive, do preserve or destroy.

Browne's Vulgar Errouit.

vVe must obey laws appointed and constituted by lawful authority, not against the law of God .

Taylor's Holy Living.

Their first composure and origination requires a higher and nobler constituent than chance.

Hole's Origin of Mankind.

He defended himself with undaunted courage, and less passion than was expected from his constitution.

Clarendon.

The elements and constitutive parts of a schismatick, being the esteem of himself, and the contempt of others. Decay of Piety.

The obstruction of the mesentery is a great impedi- ment to nutrition : for the lymph in those glands is a necessary constituent of the aliment.

Arbuthnot on Aliment.

fl mongst many bad effects of this oily constitution,

**re is one advantage •, such who arrive to age, are not subject to stricture of fibres. Id.*

Nothing can be more reasonable than to admit the nominal division of constitutionists, and anti-constitu- tionists. Bolingbroke.

It is impossible that the figures and sizes of its constituent particles should be so justly adapted, as to touch one another in every point. Bentley's Sermons,

This is more beneficial than any other constitution.

Id.

This light being projected through the parallel prisms, if it suffered any change by the refraction of one, it lost that impression by the contrary refraction of the other : and so, being restored to its pristine con- stitution, became of the same condition as at first.

Newton's Opticks.

It is not probable any constitutional illness will be communicated with the small-pox by inoculation.

Sharp's Surgery.

Fierce licentiousness begets violent restraints. The military arm is the sole reliance ; and then, call your constitution what you please, it is the sword that

governs. The civil power, like every other that call ; in the aid of an ally stronger than itself, perishes by the assistance it receives. Burke.

A true natural aristocracy is not a separate interes} in the state, or separable from it. It is an essential integrant part of any large body rightly constituted. i Id.

By a constitutional policy, working after the pattern of nature, we receive, we hold, we transmit our government and our privileges, in the same manner in which we enjoy and transmit our property and lives.

Id.

I could wish, undoubtedly, (if idle wishes were not the most idle of all things,) to make every part of my conduct agreeable to every one of my constituents. Id.

I have often observed, in the course of my experi- ence of human life, that every man, even the worst, has something good about him ; though very often nothing else than a happy temperament of constitution inclining him to this or that virtue. Burns.

But will sincerity suffice ? It is indeed above all price,

And must be made the basis ; But every virtue of the soul Must constitute the charming whole,

All shining in their places. Cowper.

Patient of constitutional control, He bean it with meek manliness of soul. Id. There are valetudinarians in reputation as well as in constitution ; who, being conscious of their weak part, avoid the least breath of air, and supply their want of stamina by care and circumspection.

Sheridan, School for Scandal.

CONSTITUTIONS, APOSTOLICAL, a collection of regulations attributed to the apostles, and sup- posed to have been collected by St. Clement, whose name they likewise bear. It is the general opinion, however, that they are spurious, and that St. Clement had no hand in them. They appeared first in the fourth century, but have been much changed and corrupted since. They are divided into eight books, consisting of a great number of rules and

precepts, relating to the duties of Christians, and particularly the cere- monies and discipline of the church.

CONSTRAIN, v. a. ~\ Fr. contraindre ; CONSTRA'INABLE, adj. IteLcostrignere ; Sp. CONSTRA'INEDLY, adv. ! constrenir ; Lat.con- CONSTRA'INER, n. s. \stringere, from con CONSTRAINT, n.s. \ and stringere. To CONSTRA'INTIVE, adj. J compel ; to prevent by force ; to violate ; to embrace closely ; to tie together ; to constringe ; to produce in opposi- tion to nature ; to withhold. Overpowering force ; compulsion ; act of restraining the desire ; confinement.

But all for nought, the end is this, that he Constrained was he nedes must her wed, And taketh this olde wif, and goth to bed.

Chaucer. Canterbury Tales.

Save I, alas ! whom care of force doth so con-

strayne,

To wale the day, and wale the night continually in

payue. Earl of Surrey.

Wherewith he gript her gorge with so great paine,

That soon to loose her wicked bonds did her conttraine.

Spenser. Faerie Queene.

His limbs were waxen weak aud raw, Thro' long imprisonment, and hard constraint. Id.

Whereas men before stood bound in conscience to do as reason teacheth, they are now by virtue of hu- man law constrainable ; and, if they outwardly trans- gress, punishable. Hooker. What occasion it had given them to think, to their greater obduration in evil, that through a froward and wanton desire of innovation we did constrainedly those things, for which conscience was pretended. Id.

Thy sight, which should Make our eyes flow with joy, Constrains them

weep. Shakspeare. Coriolanus I did suppose it should be on constraint ; But, heaven be thanked, it is but voluntary.

Id. King John. Her spotless chastity, Inhuman traitors ! you constrained and forced.

Id. Titus Andronicus.

Not through any constraining necessity, or constrain- tive vow. Carew's Cornwall.

The soft weapons of paternal persuasions, after mankind began to forget the original giver of life, be- came overweak to resist the first inclination of evil ; or after, when it became habitual, to constrain it.

Raleigh.

Love must freehearted be, and voluntary, And not inchanted, or by fate constrained. Dames.

Bitter constraint, and sad occasion dear, Compels me to disturb your season due.

Milton. Lycidas.

In this northern tract our hoarser throats Utter unripe and ill constrained notes. Waller.

My sire in caves constrains the winds, Can with a breath their clam'rous rage appease ; They fear his whistle, and forsake the seas. Dryden.

Namur subdued, is England's palm alone ; The rest besieged, but we constrained the town. Id.

Constrained him in a bird, and made him fly With party -colored plumes, a chatt'ring pye. Id.

Like you, a man ; and hither led by fame, Not by constraint, but by my choice, I came. Id.

The constant desire of happiness, and the constraint it puts upon us to act for it, nobody, I think, accounts an abridgment of liberty. Locke.

Every one's natural genius should be carried as far as it could, but to attempt the putting another upon him will be but labour in vain ; and what is so plas- tered on will at best sit but untowardly, and have al- ways hanging to it the ungracefulness of constraint and affectation. Id

When to his lust jEgysthus gave the rein, Did fate or we the adult'rous act constrain ?

Pope's Odyssey How the strait stays the slender waist constrain.

Gay. Sweet bird, whom the winter constraint —

And seldom another it can — To seek a retreat while he reigns,

In the well-sheltered dwellings of man. Cowper. CONSTRFCT, v. a.\ Fr. constriction; It. CONSTRUCTIVE, adj. (costrizione ; Span, con CONSTRI'CTION, n. s. Istriccion ; Lat. con- CONSTRI'CTOR, Ti. s. J stringerc, constrictum. To bind ; to press tight together ; to contract ; to cause to shrink. Contraction ; shrinking to- gether; compression produced by some inter- nal quality. Having the power of causing to contract ; the agent in the act of so causing.

The air, which these receive into the lungs, may serve to render their bodies equiponderant to the wa- ter ; and the constriction or dilatation 'of it may pro- bably assist them to ascend or descend in the water. Ray on the Creation.

Such things as constrict the fibres, and strengthen the solid parts. Arbuthnot on Diet.

He supposed the constrictors of the eyelids must be strengthened in the supercilious membrane.

Id. and Pope's Mart. Scrib.

CONSTRI'NGE, v. a. { Fr. constringent; It.

CONSTRI'NGENT, adj. $ coslringcnte ; Lat. con-

stringens, constringere. To compress, or bind

together, the particles of a substance ; to force

anything to contract itself. Having a binding

quality. See CONSTRAINT, and CONSTRICT.

The dreadful spout, Which shipmen do the hurricano call, Constringed in mass by the almighty sun.

Shaltspeare. Troilus and Cressida. Try a deep well, or a conservatory of snow, where the cold may be more constringent.

Bacon's Natural History.

Strong liquors, especially inflammatory spirits, in- toxicate, constringe, harden the fibres, and coagulate the fluids. Arbuthnot.

Winter binds

Our strengthened bodies in a cold embrace Constringent. Thomson's Winter.

CONSTRU'CT, v. a. j Fr. and Ital. con- CONSTRUC'TER, n. s. struirc; Span, con-

CONSTRTJ'CTION, n. s. struir ; Lat. con- CONSTRU'CTIONAL, adj. ˆstruere. To build; CONSTRUCTIVE, adj. I to frame; to form ; CONST KU'CTI VELY, adv. to put together. The CONSTRU'CTURE, n. s. J act of building ; the form of a building, construction: disposition of parts; grammatical arrangement of words; in- terpretation ; meaning ; mental representation ; manner of describing a geometrical figure or pro- blem ; manner of reducing a known equa- tion into lines and figures. See the next arti- cle. Constructive and constructively signify, by construction.

In which sense although we judge the apostle's words to have been uttered, yet hereunto .we do not require them to yield, that think any other construc- tion more sound. Hooker.

There's no art To show the mind's construction in the face

Shakspeare.

This label, whose containing Is so from sense in hardness, that I can Make no collection of it ; let him shew His skill in the construction.

Shakspeare. Cymbeline.

It cannot, therefore, unto reasonable constructions seem strange, or savour of singularity, that we have examined this point. Browne's Vulgar Errours.

Let there be an admiration of those divine attributes and prerogatives, for whose manifesting he was pleased to construct this vast fabrick.

Boyle's Usefulness of Natural Philosophy.

Some particles constantly, and others in certain constructions, have the sense of a whole sentence con- tained in them. Locke.

They shall the earth's constructwe closely bind, And to the centre keep the

parts confined.

Blackmore.

The ways were made of several layers of flat stones and flint : the construction was a little various, according to the nature of the soil, or the materials which they found. Arbuthnot

Religion, in its own nature, produces good will towards men, and puts the mildest construction upon every accident that befals them Spectator.

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He that would hve at ease, should always put the best construction on business and conversation.

Collier on the Spleen.

They have a power given to them, like that of the evil principle, to subvert and destroy ; but none to construct, except such machines as may be fitted for further subversion, and further destruction. Burke.

The precept given by a wise man, as well as a great critic, for the conttruction of poems, is equally true as to states : — Non satis est pulchra esse poema- ta, dulcia sunto. Id.

Such constructive whole, residing in a part only, is one of the most violent fictions of positive law, that ever has been or can be made on the principles of artificial incorporation. //.*

If shrewd, and of a well constructed brain, Keen in pursuit and vigorous to retain, Your son come forth a prodigy of skill ; As, wheresoever taught, so formed, he will ,• The pedagogue, with self-complacent air, Claims more than half the praise as his due share.

Cowper,

But man is a carnivorous production,

And must have meals', at least one meal a day !

He cannot live, like woodcocks, upon suction, But, like the shark and tiger, must have prey :

Although his anatomical construction Bears vegetables in a grumbling way.

Byron' Don Juan.*

CONSTRUCTION, in algebra, a method of re- ducing a known equation into lines and figures. An equation may be formed, or the roots determined, by the intersections of a straight line with another line or curve, of equal dimensions with the equation to be constructed; for the roots of the equation are the ordinates of the curve at the points of intersection with the right line; and it is generally understood, that a curve may be cut by a right line in as many points as its dimensions amount to. In this manner, therefore, a simple equation will be constructed by the intersection of one right line with another; a quadratic equation, or an af- fected equation of the second rank, by the inter- section of one right line with a circle, or any of the conic sect'ons, which are all lines of the se- cond order, and which may be cut by the right line in two points, and so produce the two roots of the quadratic equation. A cubic equation may be constructed by the intersection of the right line with a line of the third order, &c. &c. If, however, some other line of a higher order be made use of instead of the right line, then the second line, by whose intersections with the former the roots of the equation are to be de- termined, may be taken as many dimensions lower as the former is taken higher ; and. whatever be the height of an equation, it will generally be constructed by the intersections of two lines, whose dimensions, when multiplied together, make up the dimensions of the given equation. Thus, the intersections of a circle with the conic sections, or of these with each other, will con- struct the biquadratic equations, or those of the fourth power, because 2 X 2 n: 4 ; and the in- tersections of the circle or conic sections with a line of the third order, will construct the equa- tions of the fifth and sixth powers, &c. &c.

CONSTRUE, v. a. Fr. construirc ; Ital. cos- truire ; Span, construir ; Lat. cfnstrucre. To show the signification of; to explain ; to inter- pret.

*If she give ic me I force not, ' And if she take it again she cares no**

Conster what this is and tell not, For I am faste sworne, I may not. Wyat.

That much she muzd, yet could not construe it, By any ridling skill or commune wit.

Spenser. Faerie Queene.

I must crave that I be not so understood or cun- itrued, as if any such

thing, by virtue thereof, could be done without the aid and assistance of God's most blessed Spirit. Hooker.

Yet at my parting sweetly did she smile. In scorn or friendship, nill I construe whether

Shakspcart The Passionate Pilgrim. Construe the times to their necessities, And you shall say, indeed, it is the time, And not the king, that doth you injuries.

Id. Henry IV.

Virgil is so very figurative, that he requires (I may almost say) a grammar apart to construe him.

Dry den.

Thus we are put to construe and paraphrase our own

words, to free ourselves either from the ignorance or

malice of our adversaries. Stilling fleet.

When the word is construed into its idea, the double

meaning vanishes. Addison on Ancient Medals.

*CONSTU'PRATE, v. a. 3 Fr. constuprer; CONSTUI'RA'TION, n. s. 5 Span. con*trupar ; Lat. constuprare. To ravish ; to debauch ; tu defile. Violation; defilement*

Their wives and loveliest daughters constuprated.

Burton. The very sight is a kind of constupration.

Bp. Hall.

CONSUBSI'ST, v. n. To exist at the same time with.

There are some who hold two consubsisting wills, an active and an elective, the latter continually di- recting the former. Ab. Tucker.

CONSUALIA, in antiquity, feasts held in honor of the god Census, or Neptune. They were introduced with a magnificent cavalcade, because Neptune was reputed to have first taught men the use of horses. Evander is said to have first instituted this feast ; it was re-established by Romulus, because some god, under the denomi- nation of Census, suggested to him

the rape of the Sabines. To this feast all his neighbours were invited ; and, to draw the greater concourse of people, he gave out that he had found an altar hid under the ground, which he intended to consecrate, with sacrifices to the god to whom it had been originally erected. Taking advantage of the confidence of the people who had as- sembled, and who were then engaged in the solemnities and sacrifices of the festival, he for- cibly seized and carried away all their women. The ;consualia were of the number of sacred feasts. Originally, they were not distinguished from those of the circus; whence Valerius Maximus says, the rape of the Sabine women was effected at the games of the circus. Plutarch observes, that during this solemnity, horses and asses were ex- empted from all labor, and were led through the streets adorned with crowns and garlands, &c.

Festus says, the cavalcade was performed with mules ; it being an opinion, that this was the first animal used to draw the car. Servius places the consualia on the 13th August; Plutarch on the 18th, and the old Roman calendar on the 21st of that month.

CONSUBSTA'NTIATE,v.a.,n.s. N Fr. con- CONSUBSTANTIA'TION, n. s. [Saadj.f substan- CONSUBSTA'NTIAC, adj. " .tiel; Sp.

CONSUBSTA'NTIALITY, n. s. I consub-

CONSUBSTA'NTIALIST, n. s. J stancial ;

Lat. consubttantialis. To unite in one common substance or nature; to profess consubstantia- tion. Consubstantiate, as an adjective, means united. Consubstantial is, having the same es- sence ; being of the same nature. Consubstan- tiality signifies, existence of more than one in the same subject ; participation in the same nature. A Lutheran is a consubstantialist.

The Lord our God is but one God ; in which indi- visible unity, notwithstanding we adore the Father, as being altogether of himself, we glorify that consub- stantial Word, which is the Son ; we bless and mag- nify that co-essential Spirit, eternally proceeding from both, which is the Holy Ghost. Hooker.

It continueth a body Consubstantial with our bodies ; a body of the same, both nature and measure, which it had on earth. Id.

In their conceits the human nature of Christ was not contubstantial to ours, but of another kind.

Brerewood.

He might almost caTuubstantiate and unite himself to his Saviour. Hammond.

The eternity of the Son's generation, and his co- eternity and consubstantiality with the Father, when he came down from heaven. Id. on Fundamentals.

Transubstantiation, con/substantiation, real presence, articles and distinctions set up by men without autho- rity from Scripture, and other less differences, which good Christians may differ about without endangering their salvation. Locke.

The consubstantiatinrf church and priest, Refuse communion to the Calvinist. Dryden. In the point of consubstantiation, towards the latter end of his life, he changed his mind. Atterbury.

CONSUBSTANTIATION, o/ios

CONSU'ETUDE, n. s. Lat. consuetudo. Custom or usage.

CO'NSUL, n. s. s Fr. Ital. Span. Lat. CO'NSULAR, adj. I consul. The chief magis CO'NSULARY, adj. Strate of the Roman re- CO'NSULATE n, s. I public, and, for a short CO'NSULSHIP, n. s.) period, of the French ; an officer commissioned to reside in a foreign port, to protect the commerce of his nation. In Rome, consular man was one who had filled the office of consul. Consulate and consulship sig- nify, the office of consul. See the next article.

Or never be so noble as a contul, Nor yoke with him for tribune.

Shakxpeare. Coriolanui.

Rose not the consular men, and left their places, So soon as thou sat'st down ? Ben Joruon's Catiline.

The patricians should do very ill, To let the consulship be so defiled. li.

Consuls of moderate power in calms were made ; When the Gauls came, one sole dictator swayed.

Dryden.

His name and consulate were effaced out of all pub- lick registers and inscriptions. Addisnnon Itnli/.

The consular power had only the ornaments, with, out the force, of the royal authority. Spectator _

CONSULS, in Roman history, were two magis- trates invested with supreme authority for one year, and annually chosen in the Campus M-\r- tius. Brutus and Collatinus, the two first con- suls, were elected A.U.C. 244. For 144 years afterwards the consuls were always chosen from patrician families, but the people, A. U. C. 388, obtained the privilege of electing one of the con- suls from their own body, and sometimes both were plebeians. The first consul among the ple- beians was L: Sextius. The legitimum tempus, the time fixed by law for the consulship, was forty-three years of age. The candidate was always to appear at the election as a private man, without a retinue, and it was requisite before he canvassed for the office, that he should have dis- charged the functions of a quaestor, oediie, and praetor. Sometimes these qualifications were disregarded. Valerius Corvinus was made a consul in his twenty-third year, and Scipio in his twenty-fourth. Young Marius, Pompey, and Augustus, were also under the proper age when they were invested with the office, and Pompey had never been quaestor or praetor.

The power of the consuls was unbounded, and they knew no superior but the gods and the laws ; but, after the expiration of their office, their conduct was minutely scrutinised by the people, and their misbehaviour often punished. The badge of their office was the praetexta, a robe fringed with purple, afterwards changed for the toga picta or palmata, They were preceded by twelve lictors, carrying the fasces, or bundle of rods, in the middle of which appeared an axe. The axe, as being the characteristic rather of ty- ranny than of freedom, was taken away from the fasces by Valerius Publicola, but it was restored by his successor. They took the fasces by turns monthly, preceded by the lictors, while at Home, lest the appearance of two persons with the badges of authority, should raise apprehensions in the multitude. While one appeared publicly in state,, only a crier walked before the other and the lictors followed behind without the fasces. Their authority was equal, yet the \ a-

lerian law gave the right or priority to the elder, and the Julian law to him

who had most chil- dren ; and he was generally called consul-major or prior. As their power was absolute, they presided over the senate, and could convene and dismiss it at pleasure. The senators were their counsellors ; and among the Romans, the manner of reckoning their years was by the names of the consuls. By M. Tullio Cicerone et L. An- tonio Consulibus, for instance, the year of Rome 689, was always understood. This custom lasted from A. U.C. 244, till A.U. C. 1294, or 541 of the Christian era. In public assemblies the consuls sat in ivory chairs, and held in their hand an ivory wand, called Scipio eburneus, which had an eagle on its top as a sign of dignity and power. When they had drawn by lot the pro- vinces over which they were to preside during their consulship, they went to the capitol to offer their prayers to the gods, and to entreat them to protect the republic ; after this, they departed from the city arrayed in their military dress and preceded by the lictors. Sometimes the provinces were assigned them by appointment of the se- nators. At their departure they were provided by the senate with whatever was requisite during their expedition. In their provinces, they were both attended by the twelve lictors, and equally invested with legal authority. They were not permitted to return to Rome without the special command of the senate ; and they always re- mained in the province till the arrival of their successor. At their return they harangued the people, and solemnly protested that they had done nothing against the laws or interest of their country, but had faithfully and diligently endea- voured to promote the greatness and welfare of the state. No man could legally be consul two years successively, yet this institution was some- times broken, and we find Marius re-elected consul after the expiration of his office during the Cimbrian war. The office of consul, so dig- nified during the times of the commonwealth, became a mere title under the emperors, and re- tained nothing of its authority but the useless ensigns of original dignity. E'en the duration of the office, which was originally annual, was reduced to two or three months by Julius Cae sar ; but they who were admitted on the first of January, denominated the year, and were called ordinarii. Their successors during the year were distinguished by the name of suffecti. Tiberius and Claudius abridged the time of the consul- ship ; and the emperor Commodus made no less than twenty-five consuls in one year. Constan- tine the Great renewed the original institution, and permitted them to be a whole year in office.

CONSULS, in trade, are officers appointed by the king at different foreign ports, to protect the commerce of our merchants. They are to keep up a correspondence with the British ministers residing in the courts whereon their consulate depends. They are to attend to the interests of the nation ; to dispose of the sums given, and the presents made, to the lords and principals of places, to obtain their protection, and prevent insults of the natives on the merchants of the nation. It was stipulated by the treaty of Utrecht, between Great Britain and Spain, that

the consuls residing in the dominions of the king of Spain, should take inventories of the estates of the English dying intestate in Spain ; and that such estates should be entrusted to two or three merchants, for the security and benefit of the heirs and creditors. And it is enacted, by the statute 9th George II., that it shall be lawful for persons appointed by the consuls at the ports of Cadiz and St. Mary's in Spain, with the majority of the British factors and merchants there, to re- ceive from all English and Irish ships trading there, any sums of money not exceeding two rials plate per ducat on the freight of goods and merchandise there imported, and on all tonnage goods, not exceeding two rials plate per ton, and all their bills of lading shall specify to pay the same, under the denomination of contribu- tion. And that all British and Irish commanders, trading to the said ports, and delivering there, shall, within ten days after their arrival, deliver a manifesto, upon oath, specifying the particulars of the cargo, and to whom consigned ; which oath is to be administered by the consul, or by a person appointed by him ; and the clearances shall be detained till payment of the money is made ; and, should any depart without his clearances, the consul, on the return of any such master to any port in the king's dominions, may have an action at law against him for the said money. All monies raised to be applied to the relief of shipwrecked mariners, or other distressed persons, his majesty's subjects, and such other benevolent uses as the consul shall appoint.

CONSU'LT, v.a.,v.n.&n.s.~\ Fr. consul-

CONSULTA'TION, n. s. I ter ; Ital. cora-

CONSULTA'TIVE, adj. \sultare; Sp.

CONSU'LTER, n. s. i consultar ; Lat.

CONSU'LTIVE, adj. J consulere. To

deliberate together; to ask advice of; to act with a reference to ; to debate on ; to contrive. Consult and consultation are synonymous ; but the latter is most in use in prose, the former in poetry. They sigrify the act of consulting ; a determination ; an assembly of persons met to deliberate on something. Consultative is, having a power of consulting.

There shall not be found among you a charmer, or a consulter with familiar spirits, or a wizard.

Deut. xviii. 11. Consult not with the slothful for any work.

Ecclus. xxxvii.

Thou hast consulted shame to thy house, by cutting off many people. Hob. ii. 10.

A senate-house, wherein three hundred and twenty men sat consuLting always for the people.

1 Mac. viii. 15.

The chief priests held a consultation with the elders and scribes. Mark xv. 1.

Every man,

After the hideous storm that followed, was A thing inspired ; and, not consulting broke Into a general prophecy, that this tempest, Dashing the garment of this peace, aboded The sudden breach on't.

Shakspeare. Henry VIII.

Divers meetings and consults of our whole number, to consider of the former labors. Bacon.

He sent for his bosom friends, with whom he most confidently consulted, and showed the paper to them, the contents whereof he could not conceive. Clarendon.

We arc, in the first place, to commit the necessities of life, rather than matters of ornament and delight.

L' Estrange,

A consultation was called, wherein he advised a sali- vation. Wiseman of Abscesses.

Yourself in person head one chosen half, And march to oppress the faction in consult With dying Dorax. Dryden's Don Sebastian.

He said, and rose the first ; the council broke ; And all their grave consults dissolved in smoke.

Id. Fables.

The senate owes its gratitude to Cato, Who with so great a soul consults its safety, And guards our lives, while he neglects his own.

Addism.

A consult of coquets below Was called, to rig him out a beau. Swift. They (neutrals) are generally chosen, because they have no opinion of their own ; and as far as they can be got in good earnest to embrace any opinion, it is that of whoever happens to employ them (neither longer or shorter, narrower or broader), with whom they have no discussion or consultation. The only thing which occurs to such a man when he has got a business for others into his hands, is how to make his own fortune out of it. Burke.

Consult life's silent clock, thy bounding vein ; Seems it to say — Health here has long to reign ?

Cowper.

CONSULT A, (ltd.;. A branch of the ad- ministration in the Italian Republic, and the kingdom of Italy which succeeded. It corre- sponds to a council of state. It consists of eight persons, and has chiefly the direction of foreign affairs and diplomacy.

CONSU'ME, v. a. Sf n. > ˆ.consumer; Ital.

CONSU'MABLE, adj. fconsumare; Sp. con-

CONSU'MER, n. s. j sumlr ; Lat. consu-

mere. To destroy by fire; to waste; to destroy; to waste away. Consumable is that which is capable of being destroyed ; that which may be worn out or spent. See CONSUMPTION.

I dye though not incontinent, By processe yet conswningly, Is waste of fire which doth relent, If you as wilfull will deny. Wyat.

His face was leane, and sumdeale pyned away, And eke his hands consumed to the bone. Sackville.

For Heven itselfe shall their successe envy, And them with plagues and murrins pestilent Consume, till all their warlike puissance be spent.

Spenser. Faerie Queene. His warlike shield all closely covered was, Ne might of mortall eye be ever seene ; Not made of steele, nor of enduring bras, (Such earthly mettals soon consumed beene), But all of diamond perfect pure and cleene It famed was. Id.

Where two raging fires meet together, They do consume the thing that feeds their fury.

Shakspeare.

Fair flowers, that are not gathered in their prime, Rot and consume themselves in little time.

Id. Venus and Adonis.

Our growing rich or poor depends only on, which is greater or less, our importation or exportation of consumable commodities. Locke.

Money may be considered as in the hands of the canrumer, or of the merchant who buys the commo- dity, when made to export, Id.

Thus in soft anguish she consumes the day, Nor quits her deep retirement. Thomson's Sprtny.

He sleeps in dust. Ah, how shall I pursue My theme ! To heart-consuming grief resigned, Here, on his recent grave I fix my view, And pour my bitter tears. Ye flowery lays, adieu

Beottie.

To joys forbidden man aspires, Consumes his soul with vain desires ; Folly the spring of his pursuit, And disappointment all the fruit. Cuwper.

I have a silent sorrow here, A grief I'll ne'er impart ; It breathes no sigh, it sheds no tea

But it consumes my heart ! Sheridan.

And, Oh ! that pang where more than madness

lies !

The worm that will not sleep — and never dies . Thought of the gloomy day and ghastly night, That dreads the darkness, and yet loaths the light, That winds around, and tears the quiveiing heart ! Ah ! wherefore not consume it — and depart !

Byron. The Bride of Afydos.

CONSUMMATE, v. a. & adj.) Pr. con-

CONSUMMATELY, adv. \sommcr; It.

CONSUMMATION, n, s. j consumare ;

Ital. consumar ; Lat. consummare. To perfect ;

to bring to a conclusion ; to crown the whole.

Completion; accomplishment; the end of the

world ; the end of life.

From the first beginning of the world unto the last consummation thereof, it neither hath been, nor can be, otherwise. Hooker.

I do but stay till your marriage be consummate.

Shakspeare.

There shall we consummate our spousai rites. Id. Yourself, myself, and other lords, will pass To consummate this business happily. Id. King Jr/in.

Ghost, unlaid, forbear1 thee ! Nothing ill come near thee ‘ Quiet consummation have,

Unremoved be thy grave. Id. Cymbeline.

The person was cunning enough to begin the de- ceit in the weaker, and the weaker sufficient to con- summate the fraud in the stronger.

Browne’s Vulgar Erroun. Earth, in her rich attire Consummate, lovely smiled. Milton’s Paradise Lost.

Last the bright consummate flower

Spirits odorous breathes. Id.

He had a mind to consummate the happiness of the

day. Taller.

Gratian, among his maxims for raising a man to

the most consummate greatness, advises to perform

extraordinary actions, and to secure a good historian.

Additon’s Freeholder.

That just and regular process, which it must be supposed to take from its

original to its consummation.

Id. Spectator.

Under the conduct of Felix Ragusinus, a Dalma- tian, consummately learned in the Greek, Chaldaick, and Arabic languages. Warton. II. E. Poetry.

Howe'er ingenious on his darling theme A sreptic in philosophy may seem, Reduced to practice, his beloved rule Would only prove him a consummate fool. Cowper.

There was the consummation and the crown, The flower of Israel's infamy full blown; Thence date their sad declension and then- fall, Their woes, not yet repealed, thence date them all.

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CONSU'MPTION, n.s.} Fr. consomption;

CONSUMPTIVE, adj. fltal. consumazione ;

CONSU'MPTIVELY, adv. £Span. consuncion,

GONSU'MPTIVENESS, n.s. Jconsumptio. The act of wearing out, or applying to the purpose of subsistence ; waste ; the state of wasting away ; a disease of the lungs, accompanied by hectic fever, and gradual loss of flesh. Destructive ; exhaust- ing ; diseased by consumption. Consumptively, and consumptiveness, always refer to the disease, and signify tendency to it.

Consumption sow

In hollow bones of man. Shakspeare. Timon.

fhe stoppage of -women's courses, if not looked to,

sets them into a consumption, dropsy, or other disease.

Harvey.

Nothing taints sound lungs sooner than inspiring the breath of consumptive lungs. Id.

The lean, consumptive wench, with coughs decayed, Is called a pretty, tight, and slender maid. Dryden.

In commodities, the value rises as its quantity is less and vent greater ; which depends upon its being preferred in its consumption. Locke.

The essential and distinguishing character of a con- firmed consumption, is a wasting of the body by reason of an ulcerated state of the lungs, attended with a cough, a discharge of purulent matter, and a hectick fever. Blackmore.

Etna and Vesuvius have sent forth flames for this two or three thousand years, yet the mountains them- selves have not suffered any considerable diminution or consumption; but are, at this day, the highest moun- tains in those countries. Woodward.

A long consumptive war is more likely to break this grand alliance than disable France.

Addison on the War.

By an exact regimen a consumptive person may hold out for years. Arbuthnot on Diet.

Consumption near ; a joyless meagre wight, Panting for breath, and shrinking into shade, Eludes the grasp : thin as the' embodied air, Which erst deceived Ixion's void embrace, Ambitious of a goddess ! scarce her legs Feeble she drags, with wheezing labour on, And motion slow : a willow wand directs Her tottering steps, and marks her for the grave.

W. Thompson.

The balance between consumption and production makes price. The market settles, and alone can settle, that price. Burke.

A more uniform quantity of heat may be serviceable to consumptive patients than can be met with in this country, as the lungs cannot be clothed like the exter- nal skin, and are therefore subject to greater extremes of heat and cold in passing in winter from a warm room into the frosty air. Darwin.

A puny consumptively disposed mother. Beddoes.

CONSUMPTION, in medicine, is of very exten- sive signification, implying all disorders that bring any decay upon the constitution ; but is most commonly used for the phthisis pulmonalis. See MEDICINE.

CONSUMPTION, in farriery. See FARRIERY.

CONS US, a name of Neptune, the pagan god of counsel. He had an altar under ground in the great circus at Rome, to show that counsel ought to be kept secret. See CONSUALIA.

CONSUTILE, adj. Lat. consutilis. That is sewed together.

CONTA'BULATE,v.a.) Lat. contabulare.

CONTABULA'TION, n. s. J To floor with boards. Joining of boards together ; flooring. Both words are obsolete, and never were much in use.

CO'NTACT, n. s.) Fr. contact; Ital. con-

CoNTA'cTiON,n.s. } tatto ; Span, contacto; Lat. contactus. Touch ; close union; juncture of two bodies. The act of touching.

The Platonists hold, that the spirit of the lover doth pass into the spirits of the person loved, which causeth the desire of return into the body ; whereupon fol- loweth that appetite of contact and conjunction.

Bacon's Natural History.

That deleterious it may be at some distance, and destructive without corporal contaction, there is no high improbability. Browne's Vulgar Errourt.

When the light fell so obliquely on the air, which in other places was between them, as to be all re- flected, it seemed in that place of contact to be wholly transmitted. Newton's Opticki.

The air, by its immediate contact, may coagulate the blood which flows along the air-bladders.

Arbuthnot on Diet.

The emphatic speaker dearly loves to' oppose, In contact inconvenient, nose to nose, As if the'gnomon on his neighbour's phiz, Touched with a magnet, had attracted his. Cowper.

The surface of the earth nearer the pole i ves slower than it does in our latitude ; whence the re- gions of air brought from thence, move slower, when they arrive hither, than the earth's surface with which they now become in contact ; that is, they acquire an apparently easterly direction, as the earth moves from west to east faster than this new part of its atmosphere. Darwin.

CONTA'GION, re. s. } Fr. contagion ; CONTA'GIOUS, adj. Vital, contagio, conta-

CONTA'GIOUSNESS, n. s. j gione ; Span, con- iagio, contagion ; Lat. contagio. The effluvia by which diseases are propagated ; infection ; propagation of disease or mischief; pestilential emanations; plague. Infections caught by ap- proach or contact ; figuratively, caught by sym- pathy ; venomous ; pestilential. The quality of being contagious.

And of thy light my soule in prison light, That troubled is by the contagion Of my body, and also by the wight Of earthly lust and false affection.

Chaucer. Cant. Tales.

Or that the charme and veneme which they dronck. Their blood with secret filth infected hath, Being diffused thiough the senceless tronck, That through the great contagion direful deadly stonck. Spenser. Faerie Qucene.

But being growen strong, it forth doth bring Sorrow, and anguish, and impatient pa;ne In the inner parts, and lastly, scattering Contagious poyson close through every vaine, It never rests till it have wrought his finall bane. Id.

If we two be one, and thou play false, I do digest the poison of thy flesh, Being strumpeted by thy contagion.

S/ialtspeare. Comedy of Errrvi.

Will he steal out of his wholesome bed, To dare the vile contagion of the night ?

Shakspeare. Julius Cccwir.

The jades,

That drag the tragic melancholy night, From their misty jaws Breathe foul, contagious darkness in the air.

Shakrpeare. Henry VI.

In infection and contagion from hody to body, as the plague and the like,

the infection is received many times by the body passive ; but yet is, by the strength and good disposition thereof, repulsed. Bacon.

Nor will the goodness of intention excuse the scan- dal and contagion of example. King Charles, Down fell they,

And the dire hiss renewed, and the dire form

Catched by contagion. Milton. Paradite Lott.

An excellent preservative against the contagioiu- nest of sin. Mountague.

But when thou seest a single sheep remain In shades aloof, or couched upon the plain ; Or listlessly to crop the tender grass ; Or late to lag behind, with truant pace ; Revenge the crime, and take the traitor's head, Ere in the faultless flock the dire contagion spread.

Dryden. Georgic III.

We sicken soen from her contagious care, Grieve for her sorrows, groan for her despair. Prior.

Wide o'er the human field, the body, spreads Contagious war, and lays its beauties waste.

W. Thompton.

Fra-. .ic with fear, they sought by flight to shun The fierce contagion. O'er the mournful land The infected city poured her hurrying swarms.

Armstrong.

Men in this deplorable state of mind find a comfort in spreading the contagion of their spleen. They find an advangc too ; for it is a general popular error to imagine the loudest complainers for the public to be the most anxious for its welfare. Burke.

Long may the hardy sons of rustic toil Be blest with health, and peace, and sweet content ! And, oh ! may Heaven their simple lives prevent

From luxury's contagion, weak and vile Burnt.

Excess, the scrofulous and itchy plague, That seizes first the opulent, descends To the next rank contagious, and in time Taints downward all the graduated scale Of order, from the chariot to the plough.

Cowper.

You meet contagion issuing from afar, And dash the baleful conqueror from his car ; \Vhen, guest of Death ! from charnel vaults he steals, 4nd bathes in human gore his armed wheels.

Darwin.

CONTAGION, in some diseases, is only conveyed by immediate contact, as the venom of the pox ; in others, by infected clothes, as the scabies ; and in others it is transmitted through the air at a considerable distance, by effluvia arising from the sick, as in the plague and other pestilential disorders ; in which case the air is said to be contagious, though this has been disputed. Al- though no attempt to investigate the nature of contagion, or to ascertain the properties of con- tagious matter, has hitherto proved successful, yet the means which have been effectually em- ployed, either to abate its virulence or to destroy it entirely, afford a pretty fair inference that this matter is of a chemical nature. In 1773 the of muriatic acid were successfully used by

Morveau in purifying the cathedral of Dijon ; and it was doubtless f-om this that Dr. Carmi- chael Smyth was led to propose the fumes of ni- tric acid.

In November, 1795, this was tried on boa.d several ships then lying at Sheeraess ; and, being found to answer the purpose of destroying the contagion which prevailed among the mer, go vernment afterwards liberally rewarded Dr. Smyth for his discovery. The wards of the Union hospital ship were at this time very much crowded with patients ; and of 200 sick persons on board, three-fourths were in different stages of a malignant contagious fever, which made a very rapid progress, and produced very fatal ef- fects on the attendants and ship's company. Here the experiments were begun, conducted by Mr. Menzies, surgeon of the Discovery, and Mr. Bassan, surgeon of the Union. The following were the materials and apparatus employed in the process : A quantity of fine sand, twenty-four earthen pipkins, twenty-four common tea-cups, some long slips of glass for spatulas, a quantity of concentrated sulphuric acid, and a quantity of salt- petre (nitrate of potassa). Having then shut up all the ports and scuttles, the sand, previously heated in iron pots, was scooped out into the pipkins with an iron ladle, and in this heated sand, in each pipkin, a small tea-cup was im- mersed, containing about half an ounce of sul- phuric acid, to which, after it had acquired a proper degree of heat, an equal quantity of ni- trate of potassa in powder was gradually added, and the mixture stirred with a glass spatula till the vapor irose from it in considerable quantity. Tbe pipkins were then carried through the wards by the nurses and convalescents, who kept walk- ing about with them in their hands, occasionally putting them under the cradles of the sick, and in every comer where any foul air was suspected to lodge. They continued this fumigation

*till the whole space between decks, fore and aft, was filled with vapor, appearing like a thick haze. At first the vapor excited a tickling cough among the patients ; but this generally ceased as the wards became more generally filled ; and perhaps even this might be partly owing to the in- attention of those who carried the pipkins, coming too close to the faces of the sick, and causing *hem to inhale the strong vapor arising from the cups. During the fumigation the bed-clothes and body-clothes of the sick were exposed as much as possible to the nitrous vapor ; and all the foul linen removed from them was instantly immersed in a tub of cold water, afterwards carried on deck, rinsed out, and hung up till nearly dry, and then fumigated before it was taken to the washers: a precaution extremely necessary in every case of infectious disorder. Cleanliness and ventilation were likewise carefully attended to. This first experiment took up three houis ; and about an hour after, the vapor having com- pletely subsided, the ports and scuttles were opened to admit fresh air. After this first fumi- gation the air of the hospital was very sensibly sweetened ; and the process was .repeated rext morning; when the people employed, being now more expert, finished the wl-ole in about an*

hour; and, the vapor subsiding in an hour, the fresh air was freely admitted. In the even- ing fumigations fewer pipkins were used, as the fresh air could not be afterwards so freely ad- mitted as in the morning. The offensive and disagreeable smell arising from so many sick crowded together being by the fumigation perceptibly destroyed, even to the attendants, they were led to confide in its efficacy, to throw off the dread with which they had for- merly approached the cradles of the diseased, and t

‘ The principal diseases excited by poisonous miasmata,’ says Dr. Hooper, ‘ are intermittent, remittent, and yellow fevers, dysentery, and ty- phus. The virus of the last is generated in the human body itself, and is sometimes called the ty- phoid fomes. The other miasmata are produced from most vegetable matter, in some unknown state of decomposition. The contagious virus of the plague, small-pox, measles, chincough, cynanche maligna, and scarlet fever, as well as of typhus and the jail fever, operates to a much more limited distance through the medium of the atmosphere, than the marsh miasmata. Contact of a diseased person is said to be neces- sary for the communication of plague ; and ap- proach within two or three yards of him, for that of typhus. The Walcheren miasmata extended their pestilential influence to vessels riding at anchor, fully a quarter of a mile from the shore.

‘ The chemical nature of all these poisonous effluvia is little understood, according to this wri- ter. They undoubtedly consist, however, he adds, of hydrogen, united with sulphur, phosphorus, carbon, and azote, in unknown proportions, and unknown states of combination. The proper neutralisers or destroyers of these gasiform poi- sons, are nitric acid vapor, muriatic acid gas, and chlorine. The last two are the most effica- cious; but require to be used in situations from which the patients can be removed at the time of the application. Nitric acid vapor, may, how- ever, be diffused in the apartments of the sick, without much inconvenience. Bed-clothes, par- ticularly blankets, can retain the contagious fomes in an active state, for almost any length of time. Hence, they ought to be fumigated with peculiar care. The vapor of burning sulphur or sulphureous acid is used in the East, against the plague. It is much inferior in power to the other antiloimic re- agents. There does not ap- pear to be any distinction commonly made be- tween contagious and infectious diseases.’ See INFECTION and QUARANTINE.

CONTAIN, v. a. &n.-\ Fr. contemr ; Ital.

CONTAINABLE, ad;’. t contenerc ; Span.con-

CONTAI’NER, n. s. ftenir ; Lat. continere.

CONTE’NT, n. t.) To include within,

as a vessel ; to comprehend in ; to restrain ; to keep within bounds ; to live continently. The content, or contents, signify that which is con- tained in any thing. When the word is used with reference to that which is contained in a writing, the plural is always used. In other cases, au- thorities vary, some using the singular, and some the plural.

There are many other things which Jesus did, the which if they should be written every one, I sup- pose that even the world itself could not contain the books that should be written. John xxi. 25.

Wherefore also it is contained in the scripture.

1 Pet. ii. 6.

But that if God him grauntin grace That he may, er he hennis pace,
Contein undir obedience Through the vcrtue of pacience

Chaucer. Romaunt of the Rote. How can they all in this so narrow verse
Contayned be, and in small compasse held 1

Spenser’s Faerie Queene.

Seven hundred princes, which maintaynd

With mightie deedes their sondry governments, That were too long their infinite contents Here to record, ne much materiall. Id.

Their king's person contains the unruly people from evil occasions. Id.

I tell you, sirs,

If you should smile, he grows impatient.

— Fear not, my lord, we can contain ourselves.

Shahspeare.

Though my heart's content firm love doth bear, Nothing of that shall from mine eyes appear. Id.

I have a letter from her,

Of such contents as you will wonder at. Id.

Some place it (the soul) in the root of life, the heart ;

Some in the river, fountain of the veins ; Some say, she's all in all, and all in every part ; Some say she's not contained, but all contains.

Davies.

This island had then fifteen hundred strong ships of great content. Bacon.

Gently instructed I shall hence depart, Greatly in peace of thought, and have my fill Of knowledge what this vessel can contain. Milton. What seemed fair in all the woild, seemed now Mean, or in her summed up, in. her contained. Id. The air, containable within the cavity of the eoli- pile, amounted to eleven grains. Boyle.

I shall prove these writings not counterfeits, but authentick ; and the contents true, and worthy of a divine original. Grew's Cosmoloyia.

The contents of both books come before those of the first book, in the thread of the story.

Adiison's Spectator.

Experiments are made on the blood of healthy ani- mals : in a weak habit serum might affordj other con- tents. Arbuthnot. I felt the ardour of my

passion increase, till I could no longer contain. Arbuthnot and Pope.

At thy firmest age

Thou hadst within thy bole solid contents, That might have ribbed the sides and planked the

deck Of some flagged admiral. Cowper.

The morn is up again, the dewy morn, With breath all incense, and with cheek all bloom, Laughing the clouds away with playful scorn, And living as if earth contained no tomb, — And glowing into day. Byron. Childe Harold.

CONTA'MINATE, v. a. & adj. > Fr. conta- CONTAMINA'TION, re. s. \ miner; Ital.

contaminare ; Sp. contaminar ; Lat. contaminare. To pollute ; to defile ; to stain ; to corrupt by base mixture; to render vile and degraded. Pol- lution; defilement.

Shall we now Contaminate our fingers with base bribes ?

Shakspeare. Julius Caesar. A base pander holds the chamber door, Whilst by a slave, no gentler than a dog, His fairest daughter is contaminated

Id. Henry V.

Do it not with poison j strangle her in her bed, Even in the bed she hath contaminated. Id. Othello.

I quickly shed

Some of his bastard blood, and in disgrace Bespoke him thus ; contaminated, base And misbegotten blood I spill of thine.

Id. Henry VI.

The sons of idiots, of ignoble birth, Contaminate, and viler than the earth. Sandys.

Though it be necessitated, by its relation to flesh, to a terrestrial converse ; yet 'tis, like the sun, without contaminating its beams. Glanville's Apol.

He that lies with another man's wife, propagates children in another's family for him to keep, and con- taminates the honor thereof as much as in him lies.

Ayliffe's Parergon.

The only two openings by which I could enter the temple of Fortune, was the gate of niggardly economy, or the path of little chicaning bargain-making. The first is so contracted an aperture, I never could squeeze myself into it; the last I always hated — there was contamination in the very entrance. Burns.

CONTE'CK, n. s. The derivation is uncer- tain. Tyrrwhit conceives the word to be from the Saxon ; Skinner supposes it a corruption of contest; and Mr. Todd is disposed to think that we are indebted for it to the French, and points out attaquer as the parent. It means quarrel ; contention ; but has long been obsolete. Spenser seems to be the latest authority for the use of it

What now ? seide Gamelyn ; brother, Evil mote ye the ; Wolle ye beginnin contek, And than so sone fle ? Chaucer. Cant. Tales.

— A fterwards they gan with fowle reproch To stirre up strife, and troublous contecke broch.

Spenser. Faerie Queene.

CONTE'CTION. Lat. contego, contectum. A covering.

CONTE'MERATED, adj. Lat. contemeratus. Violated; defiled.

CONTE'MN, v. a. } Ital. contennere ; Lat.

CONTE'MNER, re. s. ? contemnere ; Gr. T«/ivo>.

CONTE'MNING, re. s. 5 Seco, to cut off; whence temno, contemno To despise ; to set at nought ; to neglect ; to defy.

So much the more was Calepine offended,

That him to no revenge he forth could call,

But both his challenge and himself contemned.

Spenser. Faerie Queene.

What am I that thou shouldst contemn me thut T Or what great danger dwells upon my suit ?

Shakspeare. Venus anH Adonis. Yet better thus, and known to be contemned, Than still contemned and flattered. Id. King Lear. O ye sweet nymphs that beauty's loss do fear, Contemn the drugs that physic dqth devise, And learn of love this dainty exercise (dancing).

Dames.

Eve, thy contempt of life and pleasure seems To argue in thee something more sublime And excellent than what thy mind contemns. Milton. He counsels him to persecute innovators of wor- ship, not only as contemncrs of the gods, but as dis- turbers of the state. Snuth.

Pygmalion then the Tyrian sceptre swayed, One who contemned divine and human laws : Then strife ensued. Dryden. Virgil's Mneid.

Such worth the Laurel could alone repay, Profaned by Cibber, and contemned by Gray ; Yet hence its wreath shall new distinction claim, And, though it gave not, take from Warton fame.

Huddesford. There is many a pang to pursue me :

They may crush, but they shall not contemn — They may torture, but shall not subdue me — "Tis of thee that I think — not of them. Byron.

CONTE'MPER, v. a. -\ It. contemperare,

CONTE'MPERATE, v. a. I contemprart ,- Span.

COMTE'MPERAMENT, n. s. V contemperar ; Lat.

CONTEMPERA'TION, n. s. i contemperare. To

CONTE'MPERING, n. s. J temper ; to mode- rate; to diminish the strength or virulence of, by admixture ; the act of tempering or dimi- nishing any quality; a due mixture; proportion. Contemperament is the degree of any

quality. Contempering, as a noun, is mixing; blending with.

The mighty Nile and Niger do not only moisten and contemperate -he air, but refresh and humectate the earth. Browne.

The use of air, without which there is no continua- tion in life, is not nutrition, but the contemperation of fervour in the heart. Id. Vulgar Erroun.

There is not greater variety in men's faces, and in the contemperations of their natural humours, than there is iu their fantasies. Bale's Origin of Mankind.

There is nearly an equal contemperament of the warmth of our bodies to that of the hottest part of the atmosphere. Derham.

The leaves qualify and contemper the heat, and hin- der the evaporation of moisture. Ray on the Creation.

If blood abound, let it out, regulating the patient's diet, and fontemperating the humours.

Wiseman's Surgery.

CONTE'MPLATEjU.a.&n.^ Fr. contem-

CONTEMPLA'TION, n. s. pier ; Ital. con-

CONTE'MPLATIST, n. s. \Jtemplare ; Sp.

CONTE'MPLATIVE, adj. f contemplar ;

CONTE'MPLATIVELY, adv. | Lat. contem-

CONTEMPLA'TOR, n. s. J plare. The root

of contemplate is referred, by Vossius and others,

to templum, because temples were so situated as

to be seen from all sides. The verb means, to

think deeply and deliberately; to muse; to

study ; to meditate. Contemplation is studious

thought; devout meditation; the faculty of

study. The meaning of the kindred words is

obvious.

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Yct'note their hongry vew be satisfide But seeing, still the more desird to see, And ever firmly fixed did abide

In contemplation of divinitee. Spenser. Faerie Queene. How now ? what serious contemplation are you in ?

Shakspeare.

So many hours must I take my rest ; So many hours must I contemplate. Id. Henry VI.

I have breathed a secret vow To live in prayer and contemplation, Only attended by Nerissa here.

Id. Merchant of Venice.

In the Persian tongue the word magus imports as much as a contemplator of divine and heavenly science.

Raleigh's History.

I am no courtier, nor versed in state affairs : my life hath rather been contemplative than active. Bacon.

The Platonick contemplators reject both these de- scriptions, founded upon parts and colours.

Browne's Vulgar Errours.

Sapor had an heaven of glass, which he trod upon, contemplating over the same as if he had been Jupiter.

Peacham. And these three powers three sorts of men do make ;

For some, like plants, their veins do only fill ; And some, like beasts, their senses' pleasures take ; And some, like angels, do contemplate still. Davies.

Fixt and contemplative their looks, Still turning over nature's books. Denham.

There are two functions, contemplation and practice, according to that general division of objects ; some of which entertain our speculation, others employ our actions. " South.

The same idea, when it again recurs without the operation of the like object on the external sensory, is remembrance : if it be sought after by the mind, and with pain and endeavour found, and brought again in view, it is recollection : if it be held there long under attentive consideration, it is contemplation. Locke.

We should make greater progress in the discovery of rational and contemplative knowledge, if we sought it in the fountain, in the consideration of things them; selves ; und made use rather of our own thoughts, than other men's, to find it. Locke.

So many kinds of creatures might be to exercise the contemplative faculty of man. Ray on the Creation.

How can I consider what belongs to myself, when I have been so long contemplating on you.

Dryden's Juv. Preface.

There is not much difficulty in confining the mind to contemplate what we have a great desire to know.

Watts.

He had from the beginning of his malady a distinct view of his dissolution, which he contemplated with that ontir .; composure which nothing but the innocence, integrity, and usefulness of his life, and an unaffected submission to the will of Providence could bestow.

Burke.

They who consider with what infinite attention, by what a disregard of every perishable object, through what long habits of piety and contemplation it i«, any man is able to attain entire love and devotion to the Deity, will easily perceive, that it is not the lirst, the most natural, and the most striking effect, which proceeds from that idea. Id.

If God vouchsafes to reveal himself to mankind, can we suppose that he chooses to do so in such a manner as that none but the learned and contempla- tive can understand him ? Id.

See where he sits contemplative and fixed. Pleasure and wonder in his

features mixed j His passions tamed, and all at his control, How perfect the composure of his soul ! Cowper.

If in the course of such a life as was At once adventurous and contemplative,

Men who partake all passions as they pass, Acquire the deep and bitter power to give

Their images again as in a glass,

And in such colors that they seem to live. —

Byron. Don Juan.

CONTE'MPORISE, v. a. ˆ Fr. contem- CONTE'MPORARY, n. s. & adj. I porain ; It. & CONTE'MPORARINESS, n. s. >Span. contem- CONTE'MPORANEOUS, adj. poraneo ; Lat. CONTEMPORANEITY, n. s. J contemporalis, from con and tempos. To contemporise is used by Sir Thomas Browne, in the sense of to render contemporary. He seems to be the only person who has employed it. Contemporary, as an ad- jective, signifies existing at the same period; brought into existence at the same time with ; of the same standing with ; coeval. As a noun, it means the person or thing to which the adjec- tive applies. It is sometimes, but incorrectly, written cotemporary; a practice which is well ridiculed by Bentley. See the quotation.

The indifferency of their existences, contemporised into our actions, admits a farther consideration.

Broicne's Vulgar Erroun. A grove born with himself he sees,

And loves his old contemporary trees. Cowley,

It is impossible to make the ideas of yesterday, to- day, and to-morrow, to be the same; or bring ages past and future together, and make them cttntemporary.

Locke.

As he has been favorable to me, he will hear of his kindness from our contemporaries; for we are fallen into an age illiterate, censorious, and detract- ing. Dryden's Juv. Preface.

Albert Durer was contemporary to Lucas.

Id. Dufresnoy.

The active part of mankind, as they do most for the good of their contemporaries, very deservedly gain the greatest share in their applauses.

Addison's Freeholder.

The Latins never use co for con, except before a vowel, as co-equal, co-eternal ; but, before a conso- nant, they either retain the n, as contemporary, con- stitution, or melt it into another letter, as collection, comprehension ; so that the word cotemporary, is a word of his own composition, for which the learned world will congratulate him. Bentley.

Contemporaries all surpassed, see one ;

Short his career, indeed, but ably run;

Churchill, himself unconscious of his powers,

In penury consumed his idle hours ;

And, like a scattered seed at random sown,

Was left to spring by vigour of his own. Cowper.

CONTE'MPT, n. s. CONTE'MPTIBLE, adj. CONTE'MPTIBLENESS, n. s. CONTE'MPTIELY, adv. CONTE'MPTUOUS, adj. CONTE'MPTUOUSLY, adv. CONTE'MPTUOUSNESS, n. s.

Old Fr, con- tempt ; Lat. con- temptus. Scorn ; slighting ; the state of being scorned ; the state of being

degraded ; offence against the authority of courts of law. For the latter sense, see the next article. Contemptible is that which is worthy of bcinp

despised; that which is despised ; and formerly, but this meauing is become a vulgarism, apt to treat with contempt. In this latter sense, con- temptuous is the proper word. See CONTEMN.

It was neither in contempt nor pride that I did not bow. Esther,

She lightly to him leapt, and in his neckc Her proude foote setting, at his head did levell, Weening at onc°. her wrath on him to wreak, And his

contempt, that did her judgment breake.

Spenser. Faerie Queene. I throw my name against the bruising stone,

You should never bestow pity on those who take pains for your contempt: pity those whom nature abuses, never those who abuse nature. Sheridan.

Lone, wild, and strange, he stood alike exempt From all affection, and from all contempt: His name could sadden, and his acts surprise ; But they that feared him dared not to despise.

Byron. The Coriair

CONTEMPT, in law, is a disobedienc^ to the rules and orders of a court, which hath power to punish such offence; and as this is sometimes a greater, and sometimes a lesser offence, so it is

Trampling contemptuously on thy diadem. Shakspcare. punished with greater or less punishment by

If she should make tender of her love, 'tis very possible he'll scorn it ; for the man hath a contempti- ble spirit. Id.

To neglect God all our lives, and know that we ne- glect him ; to offend God voluntarily, and know that we offend him, casting our hopes on the peace which we trust to make at parting, is no other than a rebel- lious presumption, and even a contemptuous laughing to scorn and deriding of God, his laws, and precepts. Raleigh's Hist, of the World.

Some much averse I found, and wond'rous harsh, Contemptuous, proud, set on revenge and spite.

Milton's Agonistes. Knowest thou not

Their language, and their ways ? They also know, And reason not contemptibly. Id. Paradise Lost.

The shame of being miserable Exposes men to scorn and base contempt, Even from their nearest friends. The apostles and most eminent Christians were poor, and used contemptuously. Taylor's Holy Living.

fine or imprisoment. CONTE'ND,t;.a.&n. CONTF.'NDENT, n. s. CONTE'NDER, n. s. CONTE'NDING, n. s. CONTE'NTION, n.s. CONTE'NTIOUS, adj. CONTE'NTIOUSLY, ,

Fr. contendre ; It. contendere ; Sp. con- tender ; Lat. lonten- dere. tiivia. jKol. f~rivvu), whence the ancient Latin, tenno. \ To stretch, to extend,

CONTE'NTIOUSNESS,W.S.J is the primary idea. To contend is, then, to stretch the faculties, or the strength, in a struggle with any one ; to strive against any person ; to vie with ; to act emulously ; to dispute any thing ; to have a struggle for ; to insist positively. Contend takes with, and some- times against, before the opponent ;for, and some- times about, before the cause of contention. Contendent, and contender, signify an antago- Denham n'St ' a cnampi°n : tne nrst of these meanings is disused. Contention is, quarrel ; emulation ; ardor ; strenuousness of endeavour. He who is contentious is of that troublesome and disagree-

There is no action in the behaviour of one man abie dass of Qns who are e to °el .

:rarn« annthpr. nr whirh human Tiatnrp la mnrf im_ /*.«». * **

towards another, of which human nature is more im- patient than of contempt ; it being an undervaluing of a man, upon a belief of his utter uselessness and in- ability, and a spiteful endeavour to engage the rest of the world in the same slight esteem of him. South.

Nobody of any credit can bear the imputation of a lie ; a mark that is judged the utmost disgrace, which debases a man to the lowest degree of a shameful meanness, and ranks him with the most contemptible part of mankind, and the abhorred rascality. Locke,

If he governs tvrannically in youth, he will be treated contemptuously in age ; and the baser his ene- mies, the more intolerable the affront. L' Estrange.

His friend smiled scornful, and with proud con- tempt Rejects as idle what his fellow dreamt.

Dryden's Fables.

Who, by a steady practice of virtue, comes to dis- cern the contemptMeness of baits wherewith he al- lures us. Decay of Piety.

Rome, the proudest part of the heathen world, en- tertained the most contemptuous opinion of the Jews.

Atterbury.

Nothing, says Longinus, can be great, the con- tempt of which is great. Addison.

*From no one vice exempt, nd most contemptible to shun contempt. Pope'**

Ep,

Thus to administer the opiate potion of amnesty, powdered with all the ingredients of scorn and con- tempt, is to hold to his lips, instead of ‘ the balm of hurt minds,’ the cup of human misery full to the brim, and to force him to drink it to the dregs. Burke.

Yet life still lingers in thee, and puts forth Proof not contemptible of what she can, Even where death predominates. Cowper.

fond of dispute ; perverse

Distress not the Moabites, neither contend with them in battle ; for I will not give thee of their land.

Deut. ii. 9.

Avoid foolish questions and genealogies, and con- tentions and strivings. Tit. iii. 9.

Her lying tongue was in two parts divided, And both the parts did speake, and both contended.

Spenser. Faerie Queene.

Thereto the blatant beast, by them set on, At him began aloud to barke and bay With bitter rage, and fell contention. Id.

But being aged now, and weary too Of warres delight and world’s contentious toyle, The name of knighthood he did disavow. Id.

Can we with manners ask -what was the difference ?

Safely, I think ; ‘twas a contention in publick.

Shakspeare,

His wonders and his praises do contend Which should be thine or bis

Id. Macbeth.

Thus art with arms contending was victor of the day, Which by a gift of learning did bear the maid away.

Id. The Passionate Pilgrim. Thou thinkest much that this contentious storm Invades us to the skin. Id. King Lear.

None are so gross as to contend for this,

That souls from bodies may traduced be j Between whose natures no proportion is, When root and branch in nature still agree.

Danes.

We shall not contentiously rejoin, or only to justify our own, but to applaud and confirm his maturer as- sertions. Browne.

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The question which our author would contend for, if he did not forget it, is, what persons have a right to be obeyed. Locke.

The contenders for it look upon it as undeniable. Id.

Your own earnestness and contention to effect what you are about, will continually suggest to you several artifices. Holder.

Their airy limbs in sports they exercise,

And on the green contend the wrestler's prize.

Dryden's sEneiil.

In all notable changes and revolutions, the con- tendents have been still made a prey to the third party. L' Estrange

Rest made them idle, idleness made them curious, and curiosity contentious. Decay of Piety.

The ancients made contention the principle that reigned in the chaos at first, and then love ; the one to express the divisions, and the other the union of all parties in the middle and common bond.

Burnet'i Theory of the Earth.

Do not contentiousness, and cruelty, and study of revenge, seldom fail of retaliation? Bentley's Sermons.

Those disputes often arise in good earnest, where the two contenders do really believe the different pro- positions which they support. Watts on the

Mind.

Others corrupting religion, as these have perverted philosophy, contend, that Christians are redeemed into captivity ; and the blood of the Saviour of mankind has been shed to make them the slaves of a few proud and insolent sinners. Burke.

Thrice happy they whom kindred souls unite,

By virtue chastened, yet alive to love j Whose sole contention is to give delight,

Whose pleasures few can feel, but all approve.

Leftley.

Men deal with life, as children with their play, Who first misuse, then cast their toys away j Live to no sober purpose, and contend That their Creator had no serious end. Cowper.

Then — with each feature working from the heart, With feelings loosed to strengthen — not depart : That rise — convulse — contend — that freeze, or glow, Flush in the cheek, or damp upon the brow.

Byron. The Corsair.

CONTE'NT, v. a., n. s. & adj.ˆ Fr. content- CONTENTA'TION, n. s. er; Ital. con-

CONT'ENTED, part. adj. tentare ; Sp.

CONTE'NTEDLY, adv. contentar; Lt.

CONTE'NTEDNESS, n. s. \contentus. To

CONTE'NTFUL, adj. [render satis-

CONTE'NTFTILLY, adv. I fieri; tobesa-

CONTE'NTLESS, adj. tisfied with ;

CONTE'NTLY, adv. I to remove a

CONT'ENTMENT, n. s. J cause of com-

plaint; to please; to gratify Content is mode- rate happiness ; the temperate point of life ; equally remote from elevation and depression; acquiescence

in any thing. In parliamentary language the contents are those members who vote on the affirmative side of a question. Contenta- tion, which signifies satisfaction, content ; is out of use. Contentment signifies, being satisfied, but without feeling any lively pleasure ; gratification.

For as we thought we had our travaile spent In sochc wise as we held in us content ; Then eche of us toke othir by the sieve, 4nd forth withal as we shulde take our leve.

Chaucer.

Contented with thine owne estate, Ne wish for death, ne feare his might.

Earl of Surrey.

Alas howe harde and steely hartes had they, That not contented there to have thee dye, With fettred gyves in prison where thou laye, Increast so far in hateful crueltye, That buryall to thy corps they eke denye. Sackviilc.

Among good thinges I prove and finde, The quiet lyfe doih most abound, And sure to the contented mynde There is no riches may be founde.

Songes and Sonnetes. That them repented much so foolishly To come so far to seek for misery, And leave the sweetness of contented home, Though eating hips, and drinking watry fome.

Spenser. Mother Hubberd's Tale. The noblest mind the best contentment has.

Id. Faerie Qneene.

Content thyself with this much, and let this satisfy hee, that I love thee. Sidney.

I seek no better warrant than my own conscience, nor no greater pleasure than mine own contentation.

Id.

Submit you to the people's voices, Allow their officers, and be content To suffer lawful censure.

Shakspcare. Coriolanus. Is the adder better than the eel, Because his painted skin contents the eye ? Id.

Best states, contentless,

Have a distracted and most wretched being,

Worse than the worst, content. Id. Timon.

If a man so temper his actions, as in some one of

them he doth content every faction, the musick of

praise will be fuller. Bacon.

She cannot in this world contented be, For who did ever yet, in honor, wealth, Or pleasure of the sense contentment find ?

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So when the soul finds here no true content,

And, like Noah's dove, can no sure footing take, She doth return from whence she first was sent.

Davies

Dream not of other worlds, Contented that thus far has been revealed, N(it of earth only, but of highest heaven.

Milton's Paradise Lost.

Angling was, after tedious study, a calmer of un- quiet thoughts, a moderator of passions, a procurer of contentedness. Walton's Angler.

One thought content the good to be enjoyed ; This every little accident destroyed. Dryden.

Great minds do sometimes content themselves to threaten, when they could destroy. Tillotson.

Foe to loud praise, and friend to learned ease, Content with science in the vale of peace.

Pope's Epistles.

Some place the bliss in action, some in ease ; Those call it pleasure, and contentment these.

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The shield was not long after incrusted with a new rust, and is the same, a

cut of which hath been en- graved and exhibited, to the great contentation of the learned. Arbuthnot and Pope.

Having no spirit of order, he never looked for- ward ; content by any temporary expedient to extri- cate himself from a present difficulty. Burke.

From labour health, from health contentment

springs ;

Contentment opes the source of every joy. Beat tic. He that holds fast the golden mean, And lives contentedly between

The little and the great, Feels not the wants that pinch the poor, Nor plagues that haunt the rich man's door,

Imbittering all his state. Cowper.

CONTE'RMINABLE, adj. } Ital. contcr- CONTE'RMINATE, adj. >mmare, conter-

CONTE'RMINOUS, adj. Jminale; Span.

contermino; Lat. conterminus. Conterminable is, capable of the same bounds. Conterminate, that which has a common boundary with ano- ther. Conterminous, that which has the same bounds with ; that which borders on.

Love and life are not conterminable.

Sir H. Wotton.

A strength of empire fixed

Conterminate with heaven. B. Jonson.

This conformed so many of them, as were confer –

minoui to the colonies and garrisons, to the Roman

laws. Hale.

CONTERRA'NEAN, adj. > Ital. and Sp.

CONTERRA'NEOUS, adj. 5 conterraneo ; Lat. conterraneus. Of the same soil or country.

I hold that of the orator to be a wild extravagant speech, that if women were not conterranean and mingled with men, angels would descend and dwell among us. Howell.

CONTESSERATION, n. s. Lat. con and tesseratus. An assemblage ; a variety.

That person of his which afforded such a contessera-, tion of elegancies. Oley.

CONTE'ST, v. a. & n. ˆ Fr. contester ; Ital. CO'NTEST, n. s. contestare ; Sp. con-

CONTESTA'TION, n. s. CONTE'STABLE, adj. CONTE'STABLENESS, n. s. CONTE'STINGLY, adv. CONTE'STLESS, adj.

Contestation, which signifies debate, strife, Barrow uses in the sense of proof, testimony — ' by a solemn contestation ratified on the part of God.' Contestless means indisputable. Contestingly, in a disputing manner. But these words are not of frequent occurrence.

I do contest

As hotly and as nobly with thy love, As ever in ambitious strength I did Contend against thy valour.

Shakipeare. Coriolamu. This of old no less contests did move, Than when for Homer's birth seven cities strove.

Denham.

After years spent in domestick, unsociable con- testations, she found means to withdraw. Clarendon.

Tis evident upon what account none have pre- sumed to contest the proportion of these ancient pieces. Dryden's Dufremoy.

These native propensities, these prevalencies of constitution, are not to be cured by rules, or a dhect contest, especially those of them that are the humbler and meaner sort, which proceed from fear and low- ness of spirit ; though with art they may be much mended, and turned to good purpose. Locke.

The difficulty of an argument adds to the pleasure of contesting with it, when there are hopes of victory.

Burnet.

Doors shut ; visits forbidden, and, which was worse, divers contestations even with the queen herself.

Wotton.

testar ; Lat.c ontesta-

) > n. To dispute ; to

strive against ; to

strive with ; to liti-

j gate; to emulate.

texto ; Lat. contex- tum, past participle of contexere. Cot-

Of man, who dares in pomp with Jove contest, Unchanged, immortal, and supremely blest ?

Pope's Odyssey.

Leave all noisy contests, all immodest clamours, and brawling language. Watts.

Henry the Second, during his contest with the church, had the address to preserve the barons in his interest. Afterwards, when the barons had joined in the rebellion of his children, this wise prince found means to secure the bishops and ecclesiastics.*

Burke.

Between Nose and Eyes a strange contest arose, The spectacles set them unhappily wrong ;

The point in dispute was, as all the world knows, To which the said spectacles ought to belong.

Cowper.

A bumper of good liquor Will end a contest quicker Than justice, judge, or vicar : So fill a cheerful glass, And let good humour pass. Sheridan.

CONTE'X, v. a. Fr. contexe ; Ital-

CONTE'XT, v. a. & adj. I contesto ; Span, con-

CO'NTEXT, n. s.

CONTE'XTURAL, adj.

CONTE'XTURE, n. s. grave, and after him Sherwood, defines the noun very satisfactorily : ' A context ; a whole web, composition, worke ; or, an interlacing, ioyning, or weaving together ; also the forme or stile of a proces, booke, or discourse.' To which, how- ever, may be added that, with references to a book, context means the general tenor of; the parts which come before and after any passage quoted ; and that, as an adjective, it denotes firmly knit together ; closely interwoven. Asa verb it signifies, as does also context, to knit or weave together ; to form a junction between the parts of. Both verbs are obsolete ; though it is not easy to perceive why they have fallen into disuse. Contextural is that which has relation to the human frame. Contexture, Johnson fully and perspicuously describes to be the disposition of parts, one amongst others ; the composition of any thing out of separate parts ; the system ; the constitution ; the manner in which any thing is woven or formed.

That chapter is really a representation of one, which hath only the knowledge, not practice, of his duty, as is manifest from the context.

Hammond on Fundamentals.

Nature may contex a plant, though that be a per- fectly mixt concrete, without having all the element previously presented to her to compound it of. Boyle.*

The fluid body of quicksilver is contexed with the salts it carries up in sublimation. Id.

If the quotation in the verse produced were con- sidered as a part of a continued coherent discourse, and so its sense were limited by the tenour of the context, most of these forward and warm disputants would be quite stripped of those, which they doubt not now to call spiritual weapons ; and they would often have nothing to say, that would not show their weak- ness, and manifestly fly in their faces. Locke.

Every species, afterwards expressed, was produced from that idea, forming that wonderful contexture of created beings. Dryden's Dvfremoy.

He was not of any delicate contexture ; his limbs rather sturdy than dainty.

Wotton.

Hollow and thin, for lightness ; but withal context and firm, for strength. Derham's Physico-Theology.

Hence 'gan relax

t nc ground's contexture ; hence Tartarian dregs, Sulphur and nitrous spume, enkindling fierce, Bellowed within their darksome caves. Philips.

CONTIGNATION, n. s. Lat. contignatio. A frame of beams joined together ; a story. The act of framing or joining a fabric of wood ; the act of laying rafters together.

We mean a porch, or cloister, or the like, of one eontignat'um, and not in storied buildings.

Walton's Architecture.

Where more of the orders than one shall be set in several stories or contignations, there must be an ex- quisite care to place the columns one over another.

Wotton.

They were easily led to consider the flames that vere consuming France, not as a warning to protect their own buildings, (which were without any party- wall, and linked by a contignation into the edifice of France), as a happy occasion for pillaging the goods, and carrying off the materials of their neighbour's house. Burke. Let. on Reg. Peace. Let. ii.

CONTI'GUOUS, adj.-\ Fr. contigu; Ital.

CONTI'GUOUSLY, adv. (and Span, contiguo ;

CONTI'GUOUSNESS, n, s. fLat. coutiguus, from

CONTIGU'ITY, n. s. J contingere. Meeting, with actual contact; being nigh, without actual contact; being in the immediate vicinity of; bordering upon. Contiguous sometimes has with after it.

.ame doth not mingle with flame as air doth with air, or water with water, but only remaineth contigu- ous ; as it cometh to pass betwixt consisting bodies. Bacon's Natural History.

Water, being contiguous with air, cooleth it, but moisteneth it not. Id.

The loud misrule

Of chaos far removed ; lest fierce extremes, Contiguous, might distemper the whole frame.

Milton.

lie defined magnctical attraction to be a natural imitation and disposition conforming unto contiguity.

Browne.

The immediate contiguity of that convex was a real space. • Hole's Origin of Mankind.

The East and West, Upon the globe a mathematick point Only divides : thus happiness and misery, And all extremes, are still contiguous.

Denham's Sophy.

Distinguish them by the diminution of the lights and shadows, joining the contiguous objects by the participation of their colours. Dryden's Dufresnoy.

Thus disembroiled, they take their proper place, The next of kin contiguously embrace, And foes are sundered by a larger space.

Dryden's Ovid.

When I viewed it too near, the two halves of the paper did not appear fully divided from one another, but seemed contiguous at one of their angles.

Newton's Opticks.

Often, when we do not immediately call to mind what we wish to remember, we set ourselves, as it were, to search for it ; we meditate on other things or persons, that seem to be like it, or contrary to it, or contiguous, or to bear any other relation to what we are in quest of; and thus, perhaps, we at last re-

member it. This continued effort of voluntary re- membrance is called

recollection. Beattie. O for a lodge in some vast wilderness,

Some boundless contiguity of shade,

Where rumour of oppression and deceit,

Of unsuccessful or successful war,

Might never reach me more ! Cowper.

Called by thy voice, contiguous thoughts embrace

In endless streams, arranged by time or place ;

The muse historic hence in every age

Gives to the world her interesting page. Darwin.

CO'NTINENT, n. s. & adj.—. Fr. continent ; CONTINE'NTAL, adj. I It. and Sp. con-

CO'NTINENTLY, adv. \ tinente ; Lat.

CO'NTINENCE, n. s. i continens, past

CO'NTINENCY, n. s. } part, of conti-

nere. As an adjective, continent signifies hav- ing the power of forbearing ; the power of con- taining our own passions within due bounds. He is continent who, to use the words of Min- sheu, ' contains or bridles himself from plea- sures, either in covetousness, gluttony, or revelry.' The adjective has also, in some old writers, the meanings of continuous ; opposing. The noun formerly meant not only a vast tract of conti- nuous land, as Europe, but likewise that which contains anything. In the latter sense it is ob- solete. Continence, in the sense of continuity, is equally disused. It now means self-com- mand ; mastery over the passions

Virginitee is great perfection, And continence eke with devotion.

Chaucer. Cant. Tola,

Such power it had that to no woman's wast By any skill or labour it would sit, Unlesse that she were continent and chast But it would lose or break, that many had disgrast.

Spenser. Faerie Queene.

A harder lesson to learn continence In ioyous pleasure than in grievous paine ; For sweetnesse doth allure the weaker sence So strongly, that uneathes it can refraine From that which feeble nature covets faine. Id.

Thou God of windes, that raigncst in the seas, Thou raignest also in the continent. Id.

Where is he ? —

In her chamber, making a sermon on continency to her, and rails, and swears, and rates.

Shahspeare. Taming of the Shrew

Suffer not dishonour to approach The' imperial seat; to virtue consecrate, To justice, continence, and nobility.

Id. Titus Andronicus. Life

Hath been as continent, as chaste, as true As I am now unhappy. Id. Winter's Tale.

I pray you, have a continent forbearance, till the speed of his rage goes slower. Id. King Lear.

My desire

All continent impediments would o'erbear, That did oppose my will. Id. Macbeth.

O cleave, my sides !

Heart, once be stronger than thy continent ; Crack thy frail case. Id, Antony and ineopatra.

The north-east part of Asia, if not continent with the west side of America, yet certainly is the least disjoined by sea of all that coast of Asia.

Brerewood on Language.*

Whether this portion of the world were rent By the rude ocean from the

continent, Or thus created, it was sure designed To be the sacred refuge of mankind. Waller.

Chastity is either abstinence or continence : absti- nence is that of virgins or widows ; continence, of mar ried persons. Taylor.

Content without lawful venery, is continence ; with- out unlawful, chastity. Greta's Cotmologia.

He knew what to say ; he knew also when to

leave off, a continence which is practised by few writers.

Dryden's Fables. Preface.

Answers ought to be made before the same judge, before whom the depositions were produced, lest the continence of the course should be divided ; or, in other terms, lest there should be a discontinuance of the cause. Ayliffe't Parergon.

The declivity of rivers will be so much the less, and therefore the continents will be the IPSS drained, and will gradually increase in humidity.

Bentley's Sermons.

No continental power was willing to lose any of its continental objects for the increase of the naval oower of Great Britain. Burke.

High towering palms, that part the southern flood, With shadowy isles, and continents of wood. Darwin.

CONTI'NGE, v.n. ~\ Fr. contingent;

CONTINGENT, 7i. s.Scadj. I Ital. and Span, con-

CONTI'NGENTLY, adv. [tingente ; Lat. con-

CONTI'NGENTNESS, n. s. rtingens, pres. part.

CONTI'NGENCE, n. s. |. of contingere. The

CONTINGENCY, n. s. J verb continge, whi. means to touch, to reach, to happen, is obsolete. Nor does it appear ever to have been in general use. That which is contingent, is that which oc- curs fortuitously ; that which may happen, but cannot be reckoned upon as certain. A contin- gent is a thing under the dominion of chance, a proportion which each person is to furnish, in a certain case : thus, the quota of troops, or money, supplied by

a German prince, in time of war, is denominated his contingent. Contingence, and contingency, signify the quality of being fortui- tous; a circumstance that may happen. Contin- gently is, accidentally; not regularly.

Their credulities assent unto any prognosticks, wb>ch, considering the contingency in events, are only in the prescience of God. Browne's Vulgar Errours.

Aristrtle says, we are not to b»ild certain rules upon the contingency of human actions. South.

Hazard naturally implies in it, first, something' future -, secondly, something contingent. Id.

His understanding could almost pierce into futui contingents, his conjectures improving even to pro- phecy. Id

For once, O heaven ! unfold thy adamantine book If not thy firm, immutable decree,

At least the second page of great contingency, Such as consists with wills originally free. Dryden.

By contingents we are to understand those things which come to pass without any human forecast.

Grew's Cosmologia.

I first informed myself in all material circumstances of it, in more places than one, that there might be nothing casual or contingent in any one of those cir- cumstances. Woodward.

It is digged out of the earth contingently, and indif- ferently, as the pyritae and agates,

Id. Natural History.

No theatric audience in Athens would bear what has been borne, in the midst of the real tragedy of

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this triumphal day ; a principal actor weighing, as it were in scales hung in a shop of horrors, — so much actual crime against so much contingent advantage, — and, alter putting in and out weights, declaring that the balance was on the side of the advantages. Burke.

Could chance

Find place in his dominion, or dispose One lawless particle to thwart his plan ; Then God might be surprised, and unforeseen Contingence might alarm him, and disturb The smooth and equal course of hu» affairs.

Cowper.

CONTFN U ATE, v. a. & adj. CONTI'NUE, v. a. & n. CONTI'NUER, n. s. CONTI'NUATENESS, n.a.

CONTI'NUATELY, adv.

CONTI'NUAL, adj. CONTI'NUALLY, adv. CONTI'NUALNF.SS, n.s CONTI'NU-ANCE. n. s.

CONTINUATION, n.s. CONTI'NUATIVE, n. s. CONTIKUA'TOR, n. s. CONTI'N UEDLY, adv.

CONTINUITY, n. S.

CONTINUOUS, adj. CONTINUOUSLY, adv

Fr. eontinuer ; Ital. continuare ; Span, continuar ; Lat. continuare. Uninterrupted action; unbrok- en succession of ! time, space, or >matter;unchang- ing, or unceas- in°- existence ; are the primary ideas of all the words under this head. To con- J tinuc is, to pro-

ceed incessantly ; to have no stop or break ; to remain in the same state, or place ; to last ; to protract ; to persevere ; to perpetuate. To con- tinuate is to connect closely together. Formerly, continuous and continual were used synony- mously ; but now, as Johnson observes, con- tinual is used of time, and continuous of space. Continuative is an expression indicating perma- nence ; a grammatical conjunction, under which head Harris classes, if, because, therefore, &c Thy kingdom shall not continue.

I Samuel xiii. 14. O continue thy loving kindness unto them.

Psalms xxxvi. 10.

In thy book all my members were written, which in continuance were fashioned. Id. cxxxix. 16.

He that is of a merry heart hath a cmtinual feast.

Prwerbs xv. 15.

The multitude continue with me now three days,

and have nothing to eat. Matthew xvi. 32.

If ye continue in my word, then are ye my disciples

indeed. John viii. 31.

To them who, by patient continuance in well doing,

seek for glory, and honour, and immortality, eternal

]jfe- Romans ii. 7.

For here we have no continuing city, but we seek

one to come. Hebrews xiii. 14.

God give thee goode chance, And in vertue send thee continuance.

Chaucer's Canterbury Tales.

Lo see myne eyes flow with continual tearcs, The body still away sleepless it weares.

Styl to the death sortossed with the wave Of restless woe, in terror and dispcyre, They lead a lyef continually in feare. Sackville.

All that same evening she in flying spent, And all that night her course continewed.

Spenser's Faerie Queene.

There sate a man of ripe and perfect age, Who did them meditate all his life long, That through continuall practise and usage He now was grown right wise and wondrous sage.

For who sees not, that Time on all doth prey ? Bat times do change and more continually, So nothing here long standeth in one stay. Id.

• *through long continuance of his course, Me seeraes the world is runne quite out of square From the first point of his appointed source. Id.*

We are of him and in him, even as though our very flesh and bones should be made continuate with his. Hooker.

You either fear his humour, or my negligence, that you call in question the continuance of his love.

Shakspeare. Twelfth Night. Old woes, not infant sorrows, bear them mild ; Continuance tames the one. Id. Rape of Lucrece.

A most incomparable man, breathed, as it were, To an untirablc and continuate goodness. Id. Timon. I would my horse had the speed of your tongue, and so good a continuer. Id. Much ado about Nothing. The drawing of boughs into the inside of a room where fire is continually kept, hath been tried with grapes. Bacon.

Wool, tow, cotton, and raw silk, have, besides the desire of continuance in regard of the tenuity of their thread, a greediness of moisture. /'/.

It is certain, that in all bodies there is an appetite of union, and cvitation of solution of continuity. Id. They imagine that an animal of the longest duration should live in a continued motion, without that rest whereby all others continue.

*Browne's Vulgar Errours**

It seems injurious to Providence to ordain a way of production which should destroy the producer, or con- trive the continuation of the species by the destruction of the continuator. Id.

The popular vote

Inclines here to continue, and build up here A growing empire. Milton.

The dark abyss, whose boiling gulph Tamely endured a bridge of wond'rous length, From hell continued, reaching the utmost orb Of this frail world. Id.

Other care perhaps

May have diverted from continual watch Our great forbidder. Id.

The water ascends gently, and by intermissions . but it falls continuately and with force. Wilhin»f

These Romish casuists speak peace to the conscien- ces of men, by

suggesting something which shall satisfy their minds, notwithstanding a known avowed continuance in sins. South.

Here Priam's son, Deiphobus, he found, Whose face and limbs were one continued wound j Dishonest, with lopped arms, the youth appears, Spoiled of his nose, and shortened of his ears.

Dryden's JEneid.

After the great lights there must be great shadows, which we call reposes ; because in reality the sight •would be tired, if it were attracted by a continuity of glittering objects. Dryden.

Moderate punishments that are continued, that men find no end of, know no way out of, sit heavy, and become immoderately uneasy. Locke.

As the breadth of every ring is thus augmented, the dark intervals must be diminished, until the neigh- bouring rings become continuous, and are blended.

Newton's Opticks.

That pleasure is not of greater continuance, which arises from the prejudice or malice of its hearers.

Addison's Freeholder.

You know how to make yourself happy, by only continuing such a life as you have been long accus- tomed to lead. /'•./.,•.

By perseverance, I do not understand a continucdly uniform, equal course of obedience, and such as is not interrupted with the least act of sin. Nurris.

To these may be added continuatwes : as, Rome remains to this day ; which includes at least two propositions, viz. Rome was, and Rome is.

Watts's Logick.

That texture, or cohesion of the parts of an animal body, upon the destruction of which there is said to be a solution of continuity. Quincy .

To whose dread expanse,

Continuous depth, and wond'rous length of course,

Our floods are rills. Thomson'! Summer.

He (king John) was indolent, yet restless in his disposition ; fond of working by violent methods, without any vigour j boastful, but continually betraying hi» fears ; showing, on all occasions, such a desire of peace as hindered him from ever enjoying it. Burke.

Though civil society might be at first a voluntary act (which in many cases it undoubtedly was), its continuance is under a permanent standing covenant, co-existing with the society ; and it attaches upon every individual of that society, without any formal act of his own. Id.

All critics would agree that a Freinshemius would have been thought to have managed the supplemen- tary business of a continuator most unskilfully, and to have supplied the hiatus most improbably, if he had not filled up the gaping space in a manner somewhat similar, though better executed. Id.

All thou couldst have of mine, stern Death ! thou

hast;

The parent, friend, and now the more than friend . Ne'er yet for one thine arrows flew so fast ; And grief with grief continuing still to blend, Hath snatched the little joy that life had yet to lend. Byron. Childe Harold.

CONTINUED BASS, in music, thus called, says Rousseau, because it is continued through the whole piece. Its principal use, besides that of regulating the harmony, is to support the voice and preserve the tone.

CONTINUED PROPORTIONS, in aritnmetic, is that where the consequent of the first ratio is the same with the antecedent of the second ; as 4 : 8 : : 8 : 16 ; in contradistinction to discrete proportion.

CONTINUITY is defined by some scnoolmen the immediate cohesion of parts in the same quantum ; by others, a mode of body whereby its extremities become one ; and by others, a state of body resulting from the mutual impli- cation of its parts. There are two kinds of con- tinuity, mathematical and physical. The first is merely imaginary, since it supposes real or phy- sical parts where there are none. The other or physical continuity, is that state of two or more particles, in which their parts are so mutually implicated as to constitute one uninterrupted quantity.

CONTINUO, or BASSO CONTINUO, in music, is the continual or thorough bass, which is some- times marked in music books by the letters B. C.

CONTOBADITES, a sect which appeared in the sixth century. Their first leader was Severus of Antioch; who was succeeded by John the

grammarian, surnamed Philoponus, and one Theodosius, whose followers were also called Theodosians. Part f them, who received a book composed by Theodosius on the Trinity, formed

a separate body, and were called Contobabdites, from some place where they held their assem- blies. The Contobabdites allowed of no bishops; which is the only peculiar circumstance recorded concerning them.

CONTO'RT, v. a. i Fr. contorsion ; Ital. con-

CONT'ORTION, n. s. J torsione ; Sp. contortion; Lat. contortus, from contorquere. To twist ; to turn awry; to wring; to writhe. A bending; twisting; distorting of ; grimace.

CONTOUR, n. s. Fr. The outline; the line by which any figure is denned or terminated.

CONTOURNE, in heraldry, is used when a beast is represented standing or running with its face to the sinister side of the escutcheon, they being always supposed to look to the right, if not otherwise expressed.

CONTOURNIATED, a term among antiqua- ries applied to medals, the edges of which ap- pear as if turned in a lathe. This sort of work seems to have had its origin in Greece ; and to have been designed to perpetuate the memories of great men, particularly, those who had borne away the prize at the solemn games. Such are those remaining of Homer, Solon, Euclid, Pytha- goras, Socrates, and several athletae.

CONTRA. A Latin preposition, used in com- position, which signifies against.

CONTRABAND, v. a. I Fr. contre-

CO'NTRABANDIST, n. s. fy adj. S bande ; It. con- trabbando ; Sp. contrabando. That is, contrary to proclamation. Contraband, as a verb, is not in use ; smuggle, which is synonymous with it, being always employed. Prohibited goods ; goods which have not paid the custom-house duty. Prohibited ; illegal ; unlawful. Contra- bandist, is a smuggler.

CONTRABAND, in commerce; all goods and wares exported from or

imported into any coun- try, against the laws of said country. There are, also, a number of articles termed contraband of war, which neutrals may be prevented by one belligerent from carrying to another. What is to be considered contraband of war depends upon existing treaties. These, however, have not settled, with much precision, the articles embraced under this term. Indeed, before the Consolato del Mare of the Italian mercantile states, the subjects of many powers were forbid- den to furnish their enemies with arms. The rule was afterwards established, that a belligerent power might prevent neutrals from supplying its enemy with munitions of war ; hence the name contraband (contra bannum) was introduced. Subsequently, the term contraband was extended so as to embrace articles out of which munitions of war were made. All other articles, however, even such as might be useful to the enemy, such as grain, wine, provisions, money, &c., were al- lowed to pass free, a few only being excepted, by particular treaties (as, for instance, in the compact between France and Spain, in 1604, in the treaty between England and Holland, in 1654, &c.), until very lately, when the number of articles styled contraband of war has been prodigiously increased. Many belligerent powers, in the war which broke out near the end of the last century, gave a partial and arbitrary con- struction to the term ; for instance, England and

Russia, in 1794, who wished to prevent neutral powers from supplying France with corn ; and the might of England enabled her to enforce her own construction, which made such articles, for example, as salted meat contraband, under the pretext that it could only be intended for the ships' crews. " The catalogue of contrabands," says Sir William Scott (now Lord Stowell), " has varied very much ; sometimes in such a manner as to make it difficult to assign the rea- son of the variations, owing to particular cir- cumstances, the history of which has not accom- panied the history of the decisions. The king is bound to watch over the safety of the state ; he may, therefore, make new declarations of contraband, when articles come into use as im- plements of war, which were before innocent. This is not the exercise of discretion over con- traband. The law of nations prohibits contra- band, and it is the usus bellici, which, shifting from time to time, make the law shift with them. The greatest difficulty seems to have occurred in the instance of provisions, which have not been held, universally, contraband, though Vattel ad- mits that they become so on certain occasions, when there is an expectation of reducing the enemy by famine. In modern times, one of the principal criteria, adopted by the courts for the decision of the question, whether any particular cargo of provisions be confiscable as contraband, is to examine whether those provisions be in a rude or a manufactured state. Articles are treated with greater indulgence in their native condition than when they are wrought up for the convenience of the enemy's immediate con- sumption." Of late, the

practice of treating provisions as contraband of war, when asserted at all, has been undoubtedly less strict ; a proof that the belligerent was not entirely confident of his right to confiscate. The belligerent has ex- ercised the right of preemption only — a right of purchase with a reasonable compensation to the individual whose property has been diverted, by the act of the belligerent, from its original desti- nation. Every state determines for itself what articles shall be deemed contraband in the way of trade; for the most part, on the principle that nothing shall be imported which the country itself produces in abundance, and nothing ex- ported but that which exceeds its own con- sumption.

CONTRACT, v. a., v. n., $• ~) Fr. contracter; CO'NTRACT, n. s. [adj. Ital. contrarre,

CONTRACTA'TION, n. s. contraere ; Sp.

CONTRA'CTEDLY, adv. contratar ; Lat.

CONTRA'CTEDNESS, n. s. contrahere,hom

CONTRACTIBI'LITY, ra. s. Wow and trahere. CONTR.A'CTIBLE, adj. To contract is,

CONTRA'CTIBLENESS, n. s. to reduce with- CONTRA'CTILE, adj. in smaller di-

*CONTRA'CTIVE, n. *. mensions ; to*

CONTRACTION, n. s. lessen ; to cor-

CONTRA'CTOR, n. s. J rugate ; to draw

together ; to make a bargain ; to betroth ; to ac- quire; to incur; to shorten; to epitomise; to shrink up ; to bargain for. A contract signifies an agreement between two parties ; a compact ; the act which betroths a man and woman. Con- traction is, the act of contracting ; of shrinking ;

state of being contracted; reduction of two vowels or syllables into one: any thing in its state of abbreviation. Contractor is, generally, the party who contracts ; in its restricted sense, it means a person who undertakes to supply the government with provisions, money, or other ar- ticles of

necessity. Thus applied, the word has sometimes been synonymous with knave. Con- tractile is, possessing the power of contracting, of shrinking up. The meaning of the kindred words is obvious.

Justice, and keeping of contracts, is that which most men seem to agree in. Id

The agreement upon orders, by mutual contract, with the consent to execute them by common strength, they make the rise of all civil governments. Temple. He that but conceives a crime in thought,

Contracts the danger of an actual fault.

Dryden's Juvenal.

On him thy grace did liberty bestow ; But first contracted, that, if ever found, His head should pay the forfeit. Id. Fables.

Comparing the quantity of contraction and dilata- tion made by all the degrees of each colour, I found it greatest in the red. Newton's Opticks.

She was a lady of the highest condition in that country, and contracted to a man of merit and quality.

Tatlcr.

Oil of vitriol will throw the stomach into involun- tary contractions. A rbuthnot on A liments.

Small air bladders, dilatable and contractible, are capable to be inflated by the admission of air, and to subside at the expulsion of it. Id.

By this continual contractibility aud dilatability by different degrees of heat the air is kept in a constant motionˆ /ˆ

The arteries are elastick tubts, endued with a, con- tractile force, by which they squeeze and drive the blood still forward. /j%

Like friendly colour, found them both unite, And each from each contract new strength and light.*

Pope.

Shall Ward draw contracts with a statesman's skill ? Or Japhet pocket, like his grace, a viill ? Id.

The main parts of the poem, such as the fable and sentiments, no translator

can prejudice but by omis- sions or contractions. Id. Essay on Homer.

Neither he, nor any man, nor number of men, Lave a right (except what necessity, which is out of and above all rule, rather imposes than bestows) to free themselves from that primary engagement which every man born into a community as much contracts by his being born into it, as he contracts an obligation to certain parents by his having been derived from their bodies. Bwke

As they who live retired are disconcerted at the sight of a stranger ; as he whose body has never been made pliant by exercise cannot perform new motions either gracefully or easily ; so the man, who has con- traded a habit of ruminating upon a few things and overlooking others, is fluttered, and at a loss, when- ever he finds himself, as he often does, in unexpected circumstances. £ˆ

An Italian writer asserts, that if the top of the floret be touched, all the filaments which support the cylindrical anther will contract themselves, and thus by raising or depressing the anther, the whole of the prolific dust is collected on the stigma. Darwin.

Contractile earths in sentient forms a >nge, And life triumphant stays their chemit change.

Id.

Straight all subscribed — Kings, Gods, Mutˆs.

Singer, Actor, —

A Flanders figure-dancer our contractor. But here, I grieve to own, though it be to you, He acted — even as most contractors do ; Sold what he never dealt in, and the amount Being first discharged, submitted his account.

Sheridan.

CONTRACT, an agreement, written, or verbal, which serves as a proof of the consent granted, and the obligation passed between two parties. Among the ancient Romans contracts, and all voluntary acts, were written, either by the parties themselves, or by one of the witnesses, or by a domestic secretary of one of the parties, whom they called a notary, but who was no public person as among us. The contract, when finished, was carried to the magistrate, who gave it a pub- lic authority by receiving it inter acta, into the number of acts under his jurisdiction ; giving each of the parties a copy thereof, transcribed by his clerks or domestic registers, and sealed with his seal. This practice passed into France, where it continued long. An express

contract is where the terms of the agreement are openly ut- tered, as to pay a stated price for certain goods. An implied contract is such as reason and justice dictate, and which the law therefore supposes every man will perform: thus, if a man takes up wares from a tradesman, without any agreement of price, the law concludes that he contracted to pay their real value. In law these are good con- tracts, because there is one thing in consideration for another ; but if a person promises to give or pay a certain sum, which afterwards, being de- manded, he refuses to pay, no action lies to recover it ; because such a promise does not amount to a contract, being only a simple promise, termed in lawnudum pactum. But if any thing was given in consideration of such a promise, though only to the value of a penny, it is esteemed a good con- tract, and of course will be binding. Regard should be had to the time in, and from, which contracts are made ; and there is a difference where a day of payment is fixed, and where there is not; for when a day is fixed, the contract is good immediately, and an action lies on it fail- ing payment ; but it is otherwise where the time of payment is not fixed.

CONTRACTS, NuLL,are,those prohibited by law : such are all contracts between persons incapable of contracting, as minors, religious, lunatics, wives without consent of their husbands, &c. CONTRADI'CT, v. a. ˆ Fr. centre-

CONTRADI'CTER, n. s. dire; Ital. con-

CONTRADI'CTION, n. s. troddire ; Sp.

CONTRADI'CTIONAL, adj. contrudecir ;

CONTRADI'CTIOUS, adj. Lat. contradi-

CONTRADI'CTIOUSNESS,K.S. . cere, from con- CONTRADI'CTIVE, adj. C tra and dicere.

CONTRADICTORY, n. s. & adj. To assert the CONTRADICTORILY, adv. contrary to

CONTRADI'CTORINESS, n. s. what has been CONTRADI'CTORIOUS, adj. affirmed ; to

CORTRADI'CTORIOUSLY, adv. J deny ; to be in opposition to ; to gainsay. Contradiction is de- nial of the truth of; attempt to refute; inconsis- tency; incongruity; contrariety, in thought or effect. Contradictory signifies in opposition to ; not consistent with ; in logic, that which is in

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the fullest opposition, where both the terms of one proposition are opposite to those of another. Contradictious is, replete with contradictions ; prone to cavil. The meaning of the other words of the same class is obvious.

But when the Jews saw the multitudes, they were filled with envy, and spake against those things which were spoken by Paul, contradicting and blaspheming.

Acts xiii. 45.

And without all contradiction the less is blessed of the better. Hebrews vii. 7.

Laws human must be made without contradiction unto any positive law in scripture. Hooker.

All contradictions grow in those minds, which nei- ther absolutely climb the rock of virtue, nor freely sink into the sea of vanity. Sidney.

I contradict your bans : If you will marry, make your loves to me.

Shakspeare. King Lear.

It is common with princes to will contradictories; for it is the solecism of power to think to command the end, and yet not to endure the means. Bacon.

That tongue,

Inspired with contradiction, durst oppose A third part of the gods. Milton's Paradise Lost.

Can he make deathless death ? That were Strange contradiction, which to God himself Impossible is held ; an argument Of weakness, not of power. Id.

Such as have discoursed hereon, have so diversely, contrarily, or contradictorily delivered themselves, that no affirmative from thence can be reasonably de- duced. Browne.

To ascribe unto him a power of election, not to chuse this or that indifferently, is to make the same thing to be determined to one, and to be not deter- mined to one, which are contradictories.

Bramhall's Answer to Hobbes.

When fashion hath once established what folly or craft began, custom makes it sacred, and it will be thought impudence, or madness, to contradict or question it. Locke.

It would be a direct contradiction, for any one to enter into society with others for the securing and re- gulating of property ; and yet to suppose his land,

whose property is to be regulated by the law of the f society, should be exempt from the jurisdiction of that •* '*

This objection, from the contradictories of our dreams, sounds big at first, and seems very unpromis- ing to be accounted for. Baxter.*

The best of men appear sometimes to be strange compounds of contradictory qualities : and, were the accidental oversights and folly of the wisest man, — the failings and imperfections of a religious man, — the hasty acts and passionate words of a meek man ; — were they to rise up in judgment against them, — and an ill-natured judge be suffered to mark, in this manner, what has been done amiss, — what character so unexceptionable as to stand before him ? Sterne. Patient of contradiction as a child,

Affable, humble, diffident, and mild ;

Such was Sir Isaac, and such Boyle and Locke :

Your blunderer is as sturdy as a rock. Cowper.

Nothing simple, nothing unmixed : all affected plainness, and actual dissimulation ; a heterogeneous mass of contradictory qualities ; with nothing great but his crimes, aud even these contrasted by the little- ness of his motives, which at once denote both his baseness and his meanness, and mark him for a trai- tor and a trickster. Sheridan.

CONTRADISTINGUISH, v. a.v Ital. con

CONTRADISTI'NCT, adj. _traddistin-

CONTRADISTI'NCTION, n. s. Lguere; Lt.

CONTRADISTI'NCTIVE, adj. J contra and

distinguere. To distinguish on the other side ; to distinguish not simply by differential, but by opposite qualities ; to mark evidently the differ- ence or

opposition of qualities.

That there are such things as sins of infirmity, in aontradistinction to those of presumption, is a truth not to be questioned. South.

The primary ideas we have peculiar to body, as con- tradistinguished to spirit, are the cohesion of solid, and consequently separable, parts, and a power of com- municating motion by impulse. Locke.

We must trace the soul in the ways of intellectual actions, whereby we may come to the distinct know- ledge of what is meant by imagination, in contradis- tinction to some other powers. Glanville's Scepsis.

This pleasure arising from the activity of the sys- tem, is supposed to constitute the happiness of exis- tence, in contradistinction to the ennui, or tedium vitae.

Darwin.

CONTRAFI'SSURE, n. s. From contra and

Contusions, when great, do usually produce a fis- sure or crack of the skull, either in the same part where the blow was inflicted, and then it is called fissure ; or in the contrary part, in which case it ob- tains the name of contrafissure. Wiseman.

CONTRA'HENTS, n. s. Lat. contrahens. Contracting parties.

CONTRAI'NDICATE, v. a.} Lat. contra

CONTRAI'NDICANT, n. s. >and indicare.

CONTRAINDICATION, n. s. 3 These words, If truth be once perceived, we do thereby also per- in their priraarv English application, belong to

government, to which he himself, the proprietor of the land, is a subject. Id.

It is not lawful to contradict a point of history which is known to all the world, as to make Hannibal and Scipio contemporaries with Alexander. Dryden.

The Jews hold, that in case two rabbies should hap- pen to contradict one another, they were yet bound to believe the contradictory assertions of both.

South's Sermons.

ceive whatsoever is false in contradiction to it.

medical science. See MEDICINE. To contra-

GrewsCosmologta. jndicate ig tQ manifest symptoms, which show for its absurdity am! I contra- h d commonl ˆ in a disease must

ˆ in ˆ ˆ fee ˆˆ tQ Rafk ˆ ˆ

The rules of decency, of government, of jutke for ˆstance are usually given in fevers; but if itself, are so different in one place from what they are there be inflammation, or difficulty of breathing, in another, so party-coloured and contradictious, that those symptoms are contraindications, which for-

This opinion was dtct.ousness, unworthy of the refined spirit of Plato

one would think the species of men altered according to their climates. Collier.

If a gentleman is a little sincere in his representa- tions, he is sure to have a dozen contradictors.

Swift's View of Ireland.

bid the administration of acids and bark.

Vomits have their use in this malady ; but the age and sex of the patient, or other urgent or contraindi- catiny symptom?, must be observed.

Harvey on Consitmpttont

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I endeavour to give the most simple idea of the dis- temper, and the proper diet : aostracting from the complications of the first, or the contraindications to the second. Arbuthnot on Aliments.

Throughout it was full of contraindicants. Burke. CONTRAMU'RE, n. s. Fr. contremur-.. In fortification, is an out-wall built about the main wall of a city.*

CONTRANATURAL, adj. From contra and natural. Not accordant with nature ; unnatural. To be determined and tied up, either hy itself, or from

abroad, is violent and ctmtranatural.

Bishop Rust.

CQNT RANITENCY, n. s. From Lat. con- tra and nitens. Reaction ; a resistency against pressure.

CONTRAPOSITION, n. s. From contra and position. A placing over against ; placing in opposition to. In logic, 'a changing of the whole subject into the whole predicate, and the contrary ; keeping both the same quantity and quality, but altering the terms from finite to infi- nite.'

CONTRAPUNTIST: itai.

One who has skill in counterpoint.

Counterpoint is certainly so much an art, that to be •what they call, a learned contrapuntist, is with harmo- nists a title of no small excellence. Mason.

CONTRAREGULA'RITY, n. s. From con- tra and regularity. Contrariety to rule.

It is not only its not promoting, but its opposing, or at least its natural aptness to oppose, the greatest and best of ends ; so that it is not so properly an irre- gularity as a contraregularity. Norrit.

CONTRARIENTS. In the reign of king Edward II. Thomas earl of Lancaster, taking part with the barons against the king, it was not thought fit, in respect of their great power, to call them rebels or traitors, but contrarients ; and hence we have a record of those times, called Ro- tulum Contrarientium.

CONTRARY, v. a. n. s. & adj.ˆ

CONTRA'RIANT, adj.

COKTRA'RIES, n. s.

CONTRARI'ETY, n. s.

CONTRA'RILY, adv.

*CONTRA'RINESS, n. *.*

CONTRA'RIOUS, adj.

CONTRA'RIOUSLY, adv.

CONTRA'RIWISE, adv.

CO'NTRARY-MINDED, adj. trary, as a substantive, signifies that which is of opposite qualities ; a proposition opposed to some other ; a fact which is at variance with the allegation. Chaucer uses it in the sense of a rival ; an opponent. Diametrically opposite to, of an entirely different nature, quite inconsistent with, are the meanings of the adjective. On the contrary, is on the other side. To the contrary, is to an opposite intent. In logic, contraries are, propositions which are inter-destructive, but the one of which being proved to be false, the truth of the other does not follow as a consequence. Contrariant means inconsistent; contradictory; repugnant to. Contrariwise is conversely ; op- positely ; on the contrary. The rest of the words of this class do not require explanation.

Fr. con- trarier ; It. contrariare; Lat. contra- rius. To cross ; to thwart ; to contradict ; toruncoun- ter to. Con-

But the ship was now in the midst of the sea> tossed with waves : for the wind was contrary.

Matthew xiv. 24.

Then said Paul unto him, God shall smite thee, thou whited wall; for sittest thou to judge me after the law, and comoiandest me to be smitten contrary to the law? Act» xxiii. 3.

So that contrariwise ye ought rather to forgive him, and comfort him, lest perhaps such a one should be swallowed up with overmuch sorrow.

2 Corinthians it. 7.

In all the court ne was ther wif ne maide, Ne widowe, that contraried that he saide, But said he was worthy to han his life.

Chaucer. Cant. Tales. They live contrary to Christes life, In hie pride against mekenesse, Against suffiaunce they usin strife, And angre ayenst sobrenesse. Id.

This is to sayn, that whether he or thou May with his hundred, as I spake of now, Sle his contrary, or out of listcs drive, Him shall I yeven Emelie to wive. Id.

Others rejoice to see the fire so bright, And wene to play in it, as they pretend, But fynd contrary of it, as they entende. Wyat.

When I came to court, I was advised not to con- trary the king. Latimer.

He which will perfectly recover a sick, and restore a diseased, body under health, must not endeavour so much to bring it to a state of simple contrariety, as of fit proportion in contrariety unto those evils which are to be cured. Hooker.

Finding in him the force of it, he would no fur- ther contrary it, but employ all his service to medicine it. Sidney.

Made no resistance, nor could her contraire, But ready passage to her pleasure did prepare.

Spenser. Faerie Qiteene.

That s» -d, her rownd about she from her turnd, She turnet her contrary to the sunne ; Thrise she • ˆr turnd contrary and returnd ; All contrary ; for she the right did shunne. Id.

But this coy damsell thought contrariwise, That such proud looks would make her praised more.

Id.

No contraries hold more antipathy, Than I and such a knave.

Shakspeare. King Lear. He pleaded still not guilty : The king's attorney, on the contrary, Urged on examinations, proofs, confessions, Of diverse witnesses. Id. Henry VIII.

He will be here, and yet he is not here ; How can these contrarieties agree ?

Id. Henry IV.

Many things, having full reference To one consent, may work contrariously.

Id. Henry V.

But what can be contrary to the mind, Which holds all contraries in c< ncord still ? Davies. God of our fathers, what is mau ! That thou towards him, with hand so various, Or might I say contrarious, Temperest thy providence through his short course ?

Milton.

The various and contrary choices tnat men make in the world, do not

argue that they do not all pursue good ; but that the same thing is not good to every man alike. Locke.

God has stamped certain characters upon men's minds, which, like their shapes, may perhaps be a

little mended, but can hardly be totally altered and transformed into the contrary. Id.

Though all men desire happiness, yet their wills carry them so contrarily, and consequently some of them to what is evil. Id.

There is a contrariety between those things that con- science inclines to, and those that entertain the senses.

South.

He that believes it, and yet lives contrary to it, knows that he hath no reason for what he does.

TUlotson.

They did it, not for want of instruction to the con- trary. Stillingfleet. If justice stood on the side of the single person, it ought to give good men pleasure to see that right should take place ; but when, on the contrary, the common- weal of a whole nation is overborn by private interest, what good man but must lament? Swift. Every thing that acts upon the fluids, must, at the same time, act upon the solids, and contrariwise,

Arbuthnot on Aliments.

If two universals differ in quality, they are con- traries ; as, every vine is a tree, no vine is a tree. These can never be both true together, but they may be both false. Watts' 's Logick.

The very depositions of witnesses themselves being fa.se, various, contrariant, single, iuconcludent.

Aylijfe's Parergnn,

We know that over-labouring a point of this kind, has the direct contrary

effect from what we wish.

Burke.

Nor need we wonder, that each nation should be affected most agreeably with its own wit and humour. For, not to mention the prejudice that one naturally entertains in favour of what is one's own, a native must always understand, better than foreigners can, the relations, contrarieties, and allusions, implied in what is ludicrous in the speech and writings of his countrymen. Beattie,

Thy senate is a scene of civil jar, Chaos of contrarieties at war ; Where sharp and solid, phlegmatic and light, Discordant atoms meet, ferment, and fight.

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CO'NTRAST, v . a. & n. s. Fr. contraster ; Ital. contrastare ; Span, contractor ; Lat. contra and stare. To place in opposition to, for the purpose of making a comparison between, or heightening the effect of one of the things compared.

The figures of the groups must not be all on a side, that is, with their faces and bodies all turned the same way ; but must contrast each other by their several po- sitions. Dryden. We ought to compare our subject with things of a contrary nature ; for discoveries may be, and often are, made by the contrast, which would escape us on the single view. Burke. He personates a sea-faring man, and with wonder- ful propriety supports the plainness and simplicity of the character : and this gives to the whole narrative an air of truth, which forms an entertaining contrast, when we compare it with the wildness of the fiction.

Beattie. Hard was the task, and painful to forbear,

When every social charm at once invited ; And sad the contrast of such social fare,

To sit alone in the mind's gloom benighted.

leftley.

Here also grateful mixture of well matched And sorted hues (each giving each relief, And by contrasted beauty shining more) Is needful. Cowper.

Attend all ye who boast — or old or young— The living libel of a slanderous tongue ' So shall my theme as far contrasted be, As saints by

fiends, or hymns by calumny .

Sheridan.

Thick leaves shall form our coronal, like springs ; And round our necks shall glance the Hooni strings : So shall their brighter hues contrast the glow Of the dusk bosoms that beat high below.

Byron. The Island.

CONTRAST, in painting and sculpture, expres- ses a difference of position, attitude, &c. of two or more figures ; as where, in a groupe of three figures, one is shown before, another behind, and another sideways, they are said to be in contrast. The contrast is not only to be observed in the position of several figures, but also in that of several members of the same figure : thus, if the right arm advance furthest, the right leg is to be hindermost ; if the eye be directed one way, the arm to go the contrary, &c. Contrast must be pursued even in the drapery.

CONTRATE'NOR. From contra and tenor. In music, the middle part ; the counter tenor.

CONTRATE WHEEL, in watch-work, that next to the crown-wheel, the teeth and hoop of which lie contrary to those of the other wheels ; whence its name.

CONTRAVALLA'TION, n. s. From Lat. contra and vallo. The fortification thrown up by the besiegers, round the city, to hinder the sallies of the garrison.

When the late czar of Muscovy first acquainted himself with mathematical learning, he practised all the rules of circumvallation and contravallation at the siege of a town in Livonia. Watts's Logick.

CONTRAVALLATION, in military affairs, a line of fortifications formed to protect the be- siegers of a place from any sallies of the garrison, as the line of circumvallation does from any out- ward attack. As the ancient garrisons included every man able to bear arms in a fortified town, these lines were more frequent than at present, and are to be found in every ancient work on fortification, since the time of Homer.

CONTRAVE'NE, v. n. j Fr. contravenir ;

CONTRAVE'NER, n. s. f Ital. contraovenire ;

CONTRAVE'NTION, n. t. 3 Span, contravenir; Lat. contra and venire. To

oppose ; to hinder ; to baffle; to disobey. Opposition; disobe- dience.

It was observed by one of the chiefs of Sky, that fifty armed men might, without resistance, ravage the country. Laws that place the subjects in such a state, contravene the first principles of the compact of autho- rity ; they exact obedience, and yield no protection.

Johnson.

If Christianity did not lend its name to stand in the gap, and to employ or divert these humours, they must of necessity be spent in contraventions to the laws of the land. Swift.

CONTRAVER'SION, n. s. Lat. contra and vertere. A turning the opposite way.

CONTRE, in heraldry, an appellation given to several bearings, on account cf their cutting the shield contrary and opposite ways . thus we meet with contre-bend, contre-chevron, contre- pale, &c., when there are two ordinaries of the same nature opposite to each other, so as color may be opposed to metal, and metal to color.

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CONTRECTATION, n. $. Lat. contrecta- tio. Touching; handling; dalliance.

CONTRE'MBLING, adj. From con and trem- bling. Vibrating ; shaking ; quivering.

CONTRIBUTE, v. a. & «0 Fr. contri- CONTRIBU'TION, n. s. \ buer ; It. con-

CONTRI'BUTIVE, adj. \ tribuire ; Span.

CONTRI'BUTER, 7». s. ˆcontribuir ; Lat.

CONTRI'BUTOB, n. s. I contribuere. To

CONTRIBUTORY, adj. \ giveinconjunc-

CONTRI'BUTARY, n. s. & adj. j tion with others; to furnish a share to some common stock ; to as- sist in furthering some end ; to hear a part. He

who does this is a contributer, or contributor, and the share "which he supplies is his contribu- tion, and is contributive, or contributory, to some purpose. Contribution, in a military sense, is the money paid for the support of an army lying in a country. Contributary is, paying tribute to the same sovereign; a fellow-tributary.

It hath pleased them of Macedonia to make a cer- tain contribution for the poor saints. Rom. xv. 26.

The people 'twiit Philippi and this ground Do stand but in a forced affecfion ; For they have grudged us contribution.

Shakspeare. Julius Caesar. I promised we would he contributors, And bear his charge of wooing, whatsoe'er.

Shakspeare.

Thus we are engaged in the objects of geometry and arithmetick ; yea, the whole mathematicks must be contributary , and to them all nature pays a subsidy.

Glanville's Scepsis.

Beggars are now maintained by voluntary contribu- tions. Graunt's Bills of Mortality.

As the value of the premises renders them most proper incentives to virtue, so the manner of propos- ing we shall find also highly contributive to the same end. Decay of Piety.

Art thou a true lover of thy country ? zealous for its religious and civil liberties ? and a cheerful contri- butor to all those public expences which have been thought necessary to secure them ? Atterbury.

Whatever praises may be given to works of judg- ment, there is not even a single beauty in them to which the invention must not contribute.

Pope's Essay on Homer

His master contributed a great sum of money to the Jesuits' church, which is not yet quite finished.

Addison on Italy.

This happy sensibility to the beauties of nature should be cherished in young persons. It engages them to contemplate the Creator in his wonderful works ; it purifies and harmonizes the soul, and pre- pares it for moral and

intellectual discipline ; it sup- plies an endless source of amusement ; it contributes even to bodily health. Beattie.

He travels and expatiates ; as the bee

From flower to flower, so he from land to land ;

The manners, customs, policy, of all

Pay contribution to the store he gleans ;

He sucks intelligence in every clime. Coieper.

He need not remind us, that there is no great dan- ger of our chancellor of the exchequer making any such experiment, any more than of the most zealous supporters of the war in this country, vying in their contributioni with the abettors of republicanism in that.

Slier idan.

Although truth exacts

These amiable descriptions from the scribes,. As most essential to their hero's story, They do not much contribute to his gl«ry.

Byron. Don Juan,

CONTRI'STATE, v. a. \ Fr. contrister ; It.

CONTRISTA'TION, n.s. J contristare; Sp. con- tristar ; Lat. contristare ; to make sad ; to inspire with sorrow. The act of making sad ; dejection; gloominess ; trouble ; discontent ; melancholy. Both words are out of use.

Blackness and darkness are but privatives, and therefore have little or no activity : somewhat they do contristate, but very little. Bacon's Nat. Hist.

Incense and nidorous smells, such as were of sacrifices, were thought to intoxicate the brain, and to dispose men to devotion ; which they may do by a kind of sadness and contristation of the spirits, and partly also by heating and exalting them. Id.

CO'NTRITE, adj. } Fr. contrit ; Ital. and

CONTRI'TENESS, n. s. >Sp. contrito ; Lat. con-

CONTRI'TION, n. s. r tritus. Bruised; much worn ; thence, worn with woe ; harassed and humbled with the sense of guilt ; repentant. In the books of

divines, contrite is sorrowful for sin, from the love of God and desire of pleas- ing him ; and attrite is sorrowful for sin, from the fear of punishment. The same distinction holds good ir the nouns, contrition and attrition. Contrition also signifies the act of grinding ; but this, as well as contrite in the sense of bruised, is obsolete.

[f ther be a confessour to whom he may shrive him, and that he be first veray contrite and ropontant.

Chaucer. Cant. Tales.

Now shall thou understond what is hehoveful and

necessary to every parfit penance ; and this stont on.

three thinges, contrition of herte, confession of mouth,

and satisfaction. Id.

‘ Here in this bottle,’ sayd the sory mayd,

I put the tears of my contrition,

Till to the brim I have it full defrayd.

Spenser’s Faerie Queene.

Her contrite sighs unto the clouds bequeathed Her winged spright. S/ iakspeare. Rape of Lucrece. With tears

Watering the ground, and with our sighs the air

Frequenting, sent from hearts contrite, in sign

Of sorrow unfeigned, and humiliation meek.

Milton.

Fruits of more pleasing favour, from thy seed Sown with contrition in his heart, than those Which, his own hand manuring, all the trees Of Paradise could have produced.

Id. Paradise Lost.

What is sorrow and condition for sin ? A being grieved with the conscience of sin, not only that we have thereby incurred such danger, but also that we have so unkindly grieved and provoked so good a God. Hammond’s

Practical Catechism.

Your fasting, contrition, and mortification, when the church and state appoints, and that especially in times of greater riot and luxury. Spratt's Sermons.

My future days shall he one whole contrition; A chapel will I build -.vith large endowment, Where every day an hundred aged men Shall all hold up their withered hands to heaven.

Dry den.

Some of those coloured powders, which painters use, may have their colours a little changed, by being very elaborately and finely ground ; where I SPO not what can be justly pretendt J for those changes,

besides the breaking of their parts into less parts by that contrition. Newton's Opticks.

The contrite sinner is restored to pardon, and, through faith in Christ, our repentance is entitled to salvation. Rogers.

CONTRIVE, v. a. & n. ~\ The derivation CONTRI'VER, n. s. I of contrive is thus

CONTRI'VEMENT, n. s. 1 traced by Skin-

CONTRI'VANCE, n. s. j ner : ' Tent, tref-

CONTRI'VABLE, adj. \fon, at linger e ;

CONTRI'VING, n. s. J antreffen, offen-

dere, invenire ; to invent ; find out ; unde Gall. controuver ; excogitare ; extundere.' To con- trive is to imagine ; to frame ; to manage cle- verly ; to design ; to complot ; to wear away the time ; but the last of these meanings is obsolete. Contrivance is the act of contriving ; manage- ment ; the thing coiutrived ; plan ; plot ; arti- fice; disposition of parts or causes; making use of scanty materials to the best advantage. Cori- trivement is invention.

Three ages, such as mortal men contrive.

Faerie Queene.

Please ye, we may contrive this afternoon, And quaff carouses to our mistress health. Shakspeare.*

One that slept in the contriving lust, and waked to do it. Id. King Lear.

I, the mistress of your charms, The close contriver of all harms, Was never called to bear my part. Id. Macbeth. It will hence appear how a perpetual motion may seem easily contrirable. Wilkins's Daedalus.

There is no work impossible to these contrivances, but there may be as much acted by this art as can be fancied by imagination. Id. Mathematical Magic.

What more likely to Contrive this admirable frame of the universe than infinite wisdom? Tillotson.

Our poet h.is always some beautiful design, which he first establishes, and then contrives the means which will naturally conduct him to his end. Dryden.

Have I not managed my contrivance well, • To try your love, and make you doubt of mine ? Id.

Is it enough

That masking habits, and a borrowed name, Contrive to hide my plenitude of shame ? Prior.

Scenes of blood and desolation, I had painted as the common effects of those destructive machines ; whereof, he said, some evil genius, enemy to man- kind, must have been the first contriver.

Swift's Gulliver's Travels.

Ill would our ancestors at the revolution have deserved their fame for wisdom, if they had found no security for their freedom, but in rendering their government feeble in its operations, and precarious in its tenure ; if they had been able to contrive no better remedy against arbitrary power than civil con- fusion. Burke.

When I hear the simplicity of contrivance aimed at and boasted of in any new political constitutions, I am at no loss to decide that the artificers are grossly igno- rant of their trade, or totally negligent of their duty. The simple governments are fundamentally defective, to say no worse of them.

Id.

Some, more acute, and more industrious still, Contrive creation ; travel Nature up To the sharp peak of her sublimost height, And tell us whence the stars ; why some are fixed, And planetary some ; what gave them first Rotation ; from what fvintain flowed their light.

Cowper.

To prove at last my main intent Needs no expense of argument,

No cutting and contriving — Seeking a real friend we seem To adopt the chymist's golden dream,

With still less hope of thriving. /rf.

They made a fire, but such a fire as they

Upon the moment could contrive with such Materials as were cast up round the bay,

Some broken planks, and oars, that to the touch Were nearly tender, since so long they lay A mast was almost crumbled to a crutch.

Byron. Don Juan.

CONTR'OL, v. a. & n. s. ~] Fr. controler CONTRO'LLABLE, adj. j Cotgrave and

CONTRO'LLER, re. s. (_ Sherwood refer

CONTRO'LLERSHIP, w. s. Tthe orgiin of con- CONTRO'LLING, n. s. \ trol to contre-

CONTRO'LMENT, n. s. j rolle, 'acontrole-

ment, or contrarolement ; the copy of a roll (of account,' &c.) To control, therefore, in its primitive sense, is to check by means of the roll. Skinner says, ' rota, rotula, unde Fr. Gall, contre-rolle, contra-dicere, to contradict ; gainsay; reprove; an inspector; ruler; di- rector. The verb now bears the meaning of, to exercise authority over ; to restrain ; to oversee ; to regulate ; sometimes, though seldom, to over- bear; to confute. The noun control, in addi- tion to its obvious meanings, signifies a register, or account, kept by another officer, that each may be checked by the other. Controlment is, the act of superintending, or restraining ; the state of being controlled ; opposition ; hostility.

Who shall control me for my works ? Eccl. v. 3-

Authority to convent, to control, to punish, as far as

with excommunication, whomsoever they think worthy.

Hooker.

Were it reason that we should suffer the same to pass without controlment, in that current meaning, whereby every where it prevaileth. Id.

Give me a staff of honour for mine age ; But not a sceptre to control the world.

Shakspeare. Titus Andronicw.

— Art made tongue-tyed by authority, And Folly (doctor-like) controling skill.

Id. Sonnet Ixvi.

Here have we war tor war, and blood for blood, Controlment for controlment. Id. King John.

He does not calm his contumelious spirit, Nor cease to be an arrogant controller.

Id. Henry VI.

As for the time while he was in the Tower, and the manner of his brother's death, and his own escape, she knew they were things that a very few could con- trol. Bacon's Henry VII. They made war and peace with one another, with- out controlment. Domes on Ireland.

Let partial spirits still aloud complain, Think themselves injured that they cannot reign ; And own no liberty, but where they may, Without control, upon their fellows prey.

Passion is the drunkenness of the mind, and there- fore, in its present workings, not controllable by reason.

South.

If the sinner shall win so complete a victory over his conscience, that all those considerations shall be able to strike no terrour into his mind, lay no restraint upon his lusts, no control upon his appetites, he tainly too strong for the means of grace. Id. Sermont.

The great controller of our fate Deigned to be man, and lived in low estate.

Dryden,

I feel my virtue struggling in my soul : But stronger passion does its power control.

Id, Aurengzebe.

No legislator, at any period of the world, has wil- lingly placed the seat of active power in the hands of the multitude : because there it admits of no controul, no regulation, no steady direction whatsoever. The people are the natural controul on authority ; but to exercise and to controul together is contradictory and impossible. Burke.

If yru set them to transact with such persons, they axe instantly subdued. They dare not so much as look their antagonist in the face. They are made to be their subjects, not to be their arbiters or controllers.

Id.

Reader, attend — whether thy soul Soars fancy's flights beyond the pole, Or darkling grubs this earthly hole,

In low pursuit ; Know, prudent, cautious, self-control,

Is wisdom's root. Burns.

Roll on, thou deep and dark blue orean — roll ! Ten thousand fleets sweep over thee «n vain ; Man marks the earth with ruin — his control Stops with the shore. Byron. Childe Harold.

CONTROLLER, an officer appointed to control or oversee the accounts of other officers ; and, on occasion, to certify whether things have been controlled or examined. In Britain we have several officers under this title ; as controller of the navy, the customs, the mint, besides the fol- lowing : —

CONTROLLER OF THE HANAPER, an officer who attends the lord chancellor daily, in term and in seal time, to take all things sealed in leather bags from the clerks of the hanaper, and to mark the number and effect thereof, and enter them in a book, with all the duties belonging to the

king, and other officers for the same, and so charge the clerk of the hanaper with them.

CONTROLLER OF THE HOUSEHOLD, the second officer under the lord steward. His office is to control the accounts and reckonings of the Green Cloth, of which board he is always a member. He carries a white staff, and is always one of the privy council.

CONTROLLERS OF THE PELLS, two officers of the exchequer, who are the chamberlain's clerks, and keep a control of the pell of receipts, and going out.

CONTROLLER OF THE PIPE, an officer of the exchequer, that makes out a summons twice every year, to levy the farms and debts of the pipe. See PIPE and EXCHEQUER.

CO'NTRO VERSE, v. a. & n. s.ˆ Fr. contro- CONTROVE'RSAL, adj. verse ; Ital.

CONTROVERSIAL, adj. controverte-

CONTROVE'RSIALIST, n. s. re ; Sp. con-

CONTROVE'RSION, n. s. trovertir;

CO'NTROVERSER, n. s. Lat. contro-

CO'NTROVERSOR, n. s. ˆversus, from

CONTROVERSY, n. s. \ con and ver-

CO'NTROVERSY-WRITER, n. s. tere. Coii- CO'NTROVERT, v. a. troverse is

CONTROVE'RTER, n. s. obsolete in

CONTROVE'RTIBLE, adj. both its

CONTROVE'RTIST, n. s. J forms : it is

synonymous with controvert and controversy.

To controvert is to debate ; to dispute ; to deny the truth of; to call in question. Controversy is the written maintaining of conflicting opinions; a lawsuit ; a quarrel ; opposition. The last two senses are unusual. Controversialist is a modern word for controverser, controversor, controvert- er, controvertist, and controversy-writer. It is scarcely necessary

to say that it signifies a dis- putant; one who engages in controversy. Formerly, this kind of being was too apt to disregard decorum, and almost reduce literary and theo- logical contests to a level with the contests of Billingsgate. In this instance, modern refine- ment has produced not merely a change, but an amendment.

If there be a controversy between men, and they

come unto judgment, that the judges may judge them.

then they shall justify the righteous, and condemn

the wicked. Dent. xxv. 1.

The Lord hath a controversy with the nations.

Jer. xxv. 31.

Without controversy great is the mystery of godli- ness. 1 Timothy.

Persuasion ought to be fully settled in men's hearts, that, in litigations and controversed causes of such quality, the will of God is to have them to do what- soever the sentence of judicial and final decision shall determine. Hooker.

How cometh it to pass that we are so rent with mu- tual contentions, and that the church is so much troubled? If men had been willing to learn, all these controversies might have died the very day they were first brought forth. Id,

So fitly now here commeth next in place,

After the proofe of prowesse ended well,

The contravene of beauties soveraine grace.

Spenser, Faerie Queene But this good Sir did follow the plain word,

Ne medled with their controversies vain.

Id. Mother Hubberd's Tale.

And controversy hence a question takes, Whether the horse by him became his deed, Or he his manage by the well-doing steed.

Shakspeare. A Lover's Complaint. The torrent roared, and we did buffet it, With lusty sinews ; throwing it aside, And stemming it with hearts of

controversy.

Id. Julius Caesar.

Discoursing of matters dubious, and many contro- vertible truths, we cannot without arrogancy intreat a credulity, or implore any farther assent than the pro- bability of our reasons, and verity of our experiments, Browne's Vulgar Errouri.

This left no room for controversy about the title, nor for encroachment on the right of others. Locke.

It happens in controversial discourses, as it does in the assaulting of towns, where, if the ground be but firm wherein the batteries are erected, there is no far- ther enquiry whom it belongs to, so it affords but a fit rise for the present purpose. Id.

Controversial writing is not wholly unprofitable ; and book-merchants of whatever kind or degree, undoubt- edly receive no small advantage from a right improve- ment of a learned scuffle. Shaflesbury. Who can think himself so considerable as not to dread this mighty man of demonstration, this prince of controvertistSf this great lord and possessor of first principles. Tillotson, If any person shall think fit to controvert them, he he may do it very safely for me.

Cheyne'i Philosophical Principles.

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Raillery and wit were never made to answer our inquiries after truth, and to determine a question of rational controversy. Watts.

They, strangers to the controversial field, Where deists, always foiled, yet scorn to yield, And never checked by what impedes the wise, Believe, rush forward, and possess the prize. Cowper.

CONTRU'SION, 72. s. Latin, contrudere. Thrusting against ; pressing together.

CO'NTUMACY, n. s ~\ Fr. contumace ;

CONTUMA'CIOUS, adj. f It. Sp. and Lat.

CONTUMA'CIOUSLY, adv. tcontumacia. The

CONTUMA'CIOUSNESS, n. s. ' French have the verb contumacer, which now signifies to cast for non-appearance ; to non-suit ; to out-law. Its meaning was formerly far more extensive. Sher- wood defines it, ' to deale stubhornely, be per- verse ; follow his own will ; disobey, or rebel against his superiours ; to make a contempt ; also to iudge, or proceed against, as disobedient, ob- stinate, rebellious ; to punish or censure, a con- tempt.' In the English words are retained those meanings which the French verb has lost. All of them convey the idea of obstinacy ; per- verseness ; contempt of superior authority. In law, contumacy is a wilful disobedience to any lawful summons or judicial order.

Contumacie, presumption, irreverence, pertinacie, vaine glorie, and many other twiggcs that I cannot declare. Chaucer. Cant. Tales.

There is another very efficacious method for sub- duing of the most obstinate contumacious sinner, and bringing him into the obedience of the faith of Christ. Hammond's Fundamentals. Such acts

Of contumacy will provoke the Highest To make death in us live. Milton. Par. Lost.

From the description I have given of it, a judg- ment may be given of the difficulty and contumacious- ness of cure. Wiseman.

These certificates do only, in the generality, men- tion the party's contumacies and disobedience.

Ayliffe's Parergon.

He is in law said to be a contumacious person, who, on his appearance afterwards, departs the court with- out leave. Id.

CO'NTUMELY, n. s. ˆ Fr. contumelie ;

CONTUME'LIOUS, adj. f It. Sp. and Lat.

CONTUME'LIOUSLY, adv. ? contumelia. Rude-

CONTUME'LIOUSNESS, n.s. J ness ; contemptu- ousness ; insolence or scurrility of language ; taunt; reproach. Contumelious is, aifrontive; reproachful ; inflicting ignominy ; brutal.

Than stondeth the sinne of contumelie, or strif and cheste, and battereth and forgeth by vilain's repre- vinges. Chaucer. Cant. Tales.

If the helm of chief government be in the hands of a few of the wealthiest, then laws, providing for con- tinuance thereof, must make the punishment of con- tumely and wrong, offered unto any of the common sort, sharp and grievous, that so the evil may be pre- vented. Hooker.

The people are not wont to take so great offence, when they are excluded from honours and offices, as when their persons are contumeliously trodden upon.

Id.

The oppressor's wrong, the proud man's contumely, • The pang of despised love, die law's delay.

Shahspeare't Hamlet.

With scoffs and scorns, and contumelious taunts, in open market-place produced they me To be a public spectacle. Id. Henry VI.

Fie, lords ! that you, being supreme magistrates, Thus contumeliously should break the peace. Id.

It was undervalued and depressed with some bit- terness and contumely. Clarendon.

Why should any man be troubled at the contumelies of those, whose judgments deserve not to be valued ?

Tillotson.

As it is in the highest degree injurious to them, so it is contumelious to him. Decay of Piety.

Eternal contumely attend that guilty title, which claims exemption from thought, and arrogates to its wearers the prerogative of brutes. Addison. Guirdian.

In all the quarrels and tumults at Rome, though the people frequently proceeded to rude contumelious language, yet no blood was ever drawn in any popu- lar commotions, till the time of the Gracchi. Swift.

This business was not ended, because our dignity was wounded, or because our patience was worn out with contumely and scorn. We had not disgorged one parti- cle of the nauseous doses with which we were so li- berally crammed by the mountebanks of Paris, in or- der to drug and diet us into perfect tameness. Burke.

CONTU'ND, v. a. Fr. contondant ; It. & Sp. contundente ; Lat. contundere. To bruise ; to beat violently ; to pound.

CONTURBA'TION, n. s. Lat. conturbatio, from con and turba ; Tvpfir).

Disturbance ; con- fusion; disorder.

CQNTU'SE, v. a.) Fr. contus, contusion;

CONTU'SION, n. s. S Ital. contuso, contttsione ; Span, contuso, contusion; from Lat. contundere. To beat together ; to bruise without breaking the flesh. The act of bruising or pounding ; the state of being bruised or pounded ; a bruise.

That winter lion, who in rage forgets Aged contusions, and all bruise of time.

Shakspeare. Henry VI.

Of their roots, barks, and seeds, contused together, and mingled with other earth, and well watered with warm water, there came forth herbs much like the other. Bacim.

The bones, in sharp colds, wax brittle ; and all con- tusions, in hard weather are more hard to cure. Id.

Take a piece of glass, and reduce it to powder, it acquiring by contusion a multitude of minute surfaces, from a diaphanous, degenerates into a white body.

Boyle on Colours.

The ligature contuses the lips in cutting them, so that they require to be digested before they can unite.

Wiseman.

Adjoining close to Kilwick's echoing wood, Where oft the bitch fox hides her hapless brood, Reserved to solace many a neighbouring squire, That he may follow them through brake and brier, Contusion hazarding of neck or spine, Which rural gentlemen call sport divine. Cowper.

CONVALE'SCE, v. n.} Lat. convalesce™.

CONVALESCENCE, n. s. f The verb, which is

CONVALE'SCENCY, n. s. f now obsolete, signi- CONVALF/SCENT, adj. } fies to be returning to health. Convalescence and convalescency mean restoration to health ; recent recovery from dis- ease. Convalescent is, being in a recovering state ; free from disease, but not yet having re- covered strength.

Being in a place out of the reach of any alarm she recovered her spirits to a reasonable convalescence.

Clarendon.

And every morn jis colour freshlier came, And every day helped on his convalescence ;

Twas well, because health in the human frame Is pleasant, besides being true love's essence.

Byron. Don Juan.

CONVALLARIA, the lily of the valley, in botany, a genus of the monogynia order, and hexandria class of plants ; COR. sexfid : BERRY spotted and trilocular. There are twelve species, of which three are natives of Britain, viz. : — C. Maialis, May lily. C. multiflora, Solomon's seal ; and C. polygonatutn, sweet-smelling Solo- mon's seal. They are all plants of considerable beauty, and may easily be propagated by their creeping roots.

CONVENE, an ancient people of Gallia Nar- bonensis, said by Pliny to have been originally robbers and slaves, whom Pompey compelled to settle at the foot of the Pyrenees, after the Ser- torian war.

CONVENE, v. a.&cn. ~} Fr. convenir ; CONVE'NT, v. a. j It. tonvenire; Sp.

CONVE'NER, n. s. convenir; Latin

CONVE'NING, n. s. convenire, from

CO'NVENT, n. s. con and venire.

CON VE'NTICLE, v. a. & n. s. To come together, CONVE'NTICLER, n. s. is the primary

CONVE'NTION, n. s. I idea in all this

CONVENTIONAL, adj. [class of words.

CONVE'NTIONARY, adj. f To convent, says CON VE'NTION IST, n. s.

Johnson, is to cal 1

CONVE'NTUAL. n. s. & adj. before a judge or CONVE'NABLE, adj. judicature ; and

CONVENIENT, adj. this is, undoubt-

CONVE'NIENTLY, adv. edly, one of its

CONVE'NIENTNESS, n. s. meanings. But, CONVENIENCE, n.s. in our old writers,

CONVE'NIENCY, n. s. J it has also the sense of convene, an instance of which we have given from Spenser. To convene is, to summon together; to convoke; to cite judicially; to come together; to assemble. Hence convent, conven- ticle, convention, mean aggregates of persons ; persons collected together. Convent is the resi- dence of a body of monks, or nuns. Conven- ticle is, in its general sense, an assembly ; a meeting; but, in its customary sense, an assem- bly for religious worship, consisting of persons who do not belong to the church establishment ; the bigotry of some of our ancestors induced them to attach to it a disgraceful idea, and to persecute those who composed it. See CONVEN- TICLE. Convention is the act of coming toge- ther ; union ; a contract ; something settled by common consent; a provisional agreement; an assembly of persons. In this latter sense, the word has received a blot, from the conduct of the French legislature which bore the name of the convention. Conventional is, stipulated ; agreed on by compact ; settled by common con- sent, and not inhering in the nature of the thing. Convenience and conveniency denote, fitness ; propriety; commodiousness ; ease; accommo- dation ; fitness of time and place ; — that is, a concurrence, a coming together, of circumstances favorable to doing or enjoying something. Con- venient, which is suitable, commodious, takes to or for before the following noun ; and John- son justly observes that ' perhaps it ought gene-

rally to have for before persons, and to befoie things.' Convenable is, consistent with; agree- able to. It is obsolete.

Give me neither poverty nor riches, feed me with food convenient for me. Prov. XXK. 8.

I have none Englishe convenient and digne, Myne herte's hele lady ! the with to honour.

Chaucer.

Yet maugre love, and all his gods beside, I do possesse the world's most

regiment, As if ye pleese it into parts divide, And every part's inholders to convent, Shall to your eyes appeare incontinent.

Spenser. Faerie Queene. But what straunge fortunes unto him befell, Ere he attained the point by him intended, Shall more conveniently in other place be ended. Id.

He is so meek, wise, and merciable, And with his word his work is convenable

Id. Pastorals.

It behoveth, that the place where God shall be •erved by the whole church be a publick place, for the avoiding of privy conventicles, which, covered with pre- tence of religion, may serve unto dangerous practices.

Hooker.

In things not commanded of God, yet lawful, be- cause permitted, the question is, What light shall shew us the conveniency which one hath above another ? Id.

He with his oath

By all probation will make up full clear. Whenever he's convented.

Shikspeare. Measure for Measure. He came to Leicester ;

Lodged in the abbey, where the reverend abbot, With all his convent, honourably received him.

Id. Henry VIII.

Ay, 'all of you have laid your heads together (Myself had notice of your conventicles) And all to make away my guiltless life.

Id. Henry VI. Use no farther means ; But, with all brief and plain conveniency, Let me have judgment.

Id. Merchant of Venice. I this morning know Where we shall find him most conveniently.

Id. Hamlet.

They sent forth their precepts to attach men, and convent them before themselves at private houses.

Bacon's Henry VII.

No man was better pleased with the convening of this parliament than myself. King Charles.

Conventional services reserved by tenures upon grants, made out of the crown or knights service.

Hale's Common Law.

The ordinary covenants of most conventionary tenants are, to pay due capon and due harvest journeys. Careiv's Survey.

All the factious and schismatical people would fre- quently, as well in the night as the day, convene them- selves by the sound of a bell. Clarendon.

They are to be reckoned amongst the most general affections of the conventions, or associations, of several particles of matter into bodies of any certain denomi- nation. Boyle.

There are settled periods of their convening, or a liberty left to the prince for convoking the legislature.

Locke.

God, who hath given the world to men in common, hath also given them reason, to make use of it to the best advantage of life and convenience. Id.

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As to his meals, I should think it best that, as much as it can be conveniently avoided, they should not be kept constantly to an honr. For when custom hath fixed his eating to certain stated periods, his stomach will expect victuals at the usual hour, and grow peevish if he passes it. Locke.

*Every man must want something for the conveniency ot * is life, for which he must be obliged to others.*

Calamy's Sermons.

Who far from steeples and their sacred sound, In fields their sullen conventicles found. Dryden.

Another crop is too like to follow ; nay, I fear, it is unavoii)ar 1

In short-sighted men, whose eyes are too plump, the refraction being too great, the rays converge and convene in the eyes, before they come at the bottom.

Newton' Opticks.*

*I have read a sermon of a conventual, who laid it down that Adam could - * laugh before the fall.*

Addison's Spectator.

If he revoked this plea to 'twas because he found the expected council was dwindling into a conventicle, a packed assembly of Italian bishops ; not a free con- vention of fathers from all quarters. Atterbury.

Health itself is but a kind of temper, gotten and preserved by a convenient mixture of contrarieties.

Arbuthnot on Aliments,

Public conventions are liable to all the infirmities, follies, and vices of private men. Swift.

There was a pair of spectacles, a~pocket perspective, and several other little conveniences, I did not think myself bound in honour to discover.

Swift's Gulliver's Travels.

And now the' almighty father of the gods

Convenes a council iu the blest abodes. Pope's Stat.

They are commanded to abstain from all conventicles «f men whatsoever ; even, out of the church, to have nothing to do with publick business. Id.

Those are called conventual priors, that have the chief ruling power over a monastery. Id.

What organ it is that shall declare the corporate mind is so much a matter of positive arrangement, that several states, for the validity of several of their acts, have required a proportion of voices much greater than that of a mere majority. These proportions are so entirely governed by convention, that in some cases the minority decides. Burke.

Mild was the morn, the sky serene,

The jolly hunting band convene,

The beagle's breast with ardour burns,

The bounding steed the champaign spurns,

And Fancy oft the game descries,

Through the hound's nose, and huntsman's eyes.

Beattie. Thy parliaments adored on bended knees

The sovereignty they were convened to please ;

Whate'er was asked, too timid to resist,

Complied with, and were graciously dismissed.

Cowper.

I seek divine simplicity in him, "Who handles things divine ; and all besides, Though learned with labour, and though much ad- mired

By cuiious eyes and judgments ill informed. To me is odious as the nasal twang Heard at conventicle, where worthy men, Misled by custom, strain celestial themes Through the pressed nostril, spectacle-bestrid. Id.

Then first necessity invented stools, Convenience next suggested elbow chairs, Aad Luxury the accomplished sofa last." Id.

And this example well may prove That nought's so eloquent as love : For oft had orators, whose style was Mellifluent as the seers of Pylos, Convened, debated, and returned — While still the rage of battle burned. But Cupid's sweeter elocution Brought matters quick to a conclusion. Sheridan,

The horrid crags, by toppling convent crowned,

Byron's Childe Harold.

Nothing but sound, as is manifest, can perfectly be represented hy sound ; and beyond this, the re- semblance, between the flow of a verse and the idea excited by the words, must be wholly conventional, and not in any degree actual and self-existent.

Symmons. Pref. to the JEneis.

CONVENER, the title given to the prases of the fourteen deacons of the incorporations, or trades of Edinburgh, from his power of convening the deacons, or the whole incorporations, upon ;my emergency. He is elected by the fourteen dea- cons, and the two trades counsellors ; wears a gold chain, and is a governor of the Trades Maiden Hospital ; but is not ex-officio a member of the ordinary town council ; though the magis- trates generally appoint him one.

CONVENTICLE is a diminutive of convent ; denoting, properly, a secret assembly of a part of the monks of a convent, to make a party in the election of an abbot. Hence the word stands for any seditious, or irregular assembly. F. Doucine observes, the occidentals always esteemed the fifth general council an unlawful conventicle. The term is said to have been first applied in England to the schools of Wickliffe, and has been since used to signify the religious assemblies of all who do not conform to the established doc- trines and worship of the church of England. By 22 Car. II. cap. 1, it is enacted : that if any persons of the age of sixteen years, subjects of this kingdom, shall be present at any conventicle, where there are five or more assembled, they shall be fined 6s. for the first offence, and 10s. ‘ for the second : persons preaching incur a penalty of £20. Suffering a meeting to be held in a house, is liable to £20 penalty. Justices of the peace have power to enter such houses, and seize persons assembled, &c. And if they neglect their duty, they forfeit £100. And if any constable, &c. know of such meetings, and do not inform a justice of peace, or chief magistrate, he shall forfeit £5. But the 1st W. & M. cap. 18, “ordains, that Protestant dissenters shall be exemp- ted from penalties : though if they meet in a house with the doors locked, barred, or bolted, such dissenters shall have no benefit from that statute. Officers of the government, &c. present at any conventicle, at which there shall be ten persons, if the royal family be not prayed for in express words, shall forfeit £40, and be disabled. 10 Anne, cap. 2.

CONVENTION is also a name given to an extra- ordinary assembly of parliament, or the estates of the realm, held without the king’s writ. Of this kind was the convention parliament which restored Charles II. This parliament met above a month before his return, and sat full seven months after his restoration, and enacted several laws still in force, which were confirmed by stat. 13,

Car. II. c. 7, and c. 14. Such also was the con- vention of estates in 1689, who, upon the retreat of king James II., came to a conclusion that he had abdicated the throne, and that the right of succession devolved to king William, and queen Mary ; whereupon their assembly expired as a convention, and was converted into a parliament.

CONVENTION OF ESTATES, in Scotland, was partly of the nature of a parliament; but differ- ing in this, that the former could only lay on taxes, while parliament could both impose taxes and make laws

CONVENTION OF FRANCE, NATIONAL, the representatives of the French people, who met on the 20th of September, 1792, and among their first acts abolished monarchy in that king- dom. See FRANCE, HISTORY OF

CONVENTUS JURIDICI, in Roman antiquity,

ourts of justice established in the provinces ;

with jurisdictions circumscribed within certain

limits, whither all who were within the limits of

these courts were to repair for justice.

CONVE'RGE, v. n, -\ Lat. convergere. To CON VE' RGENCY, n. s. (tend to one point; to CoNVE'RGENT,od/'. £one common centre. CONVE'RGING, adj. J Tendency to one point. Tending to one point.

Where the rays from all the points of any object meet again, after they have been made to converge by reflexion or refraction, there they will make a picture of the object upon a white body. Newton's Opticks.

Ensweeping first

The lower skies, they all at once converge High to the crown of heaven. Thomson's Autumn.

Converge reflected light with nicer eye The midnight owl, and microscopic fly. Darwin.

When a fly inserts its proboscis between these an- thers (of the apocynum and rossemifolium), to plunder the honey, they converge closer, and with such vio- lence as to detain the fly, which thus generally pe- rishes. Id.

CONVE'RSE, v. n. CO'NVERSE, n. s. CONVE'RSIBLE, adj. CONVE'RSABLY, adv.

Fr. converscr ; It. conversare ; Sp. conversar ; Latin, conversari. To con-

CONVE'RSABLENESS, n.s. f verse is, to hold CONVERSANT, adj. I intercourse with ;

CONVERSATION, n. s. to be acquainted CONVE'FSATIVE, adj. } with ; to talk with ; to discourse familiarly, in which case it has on before the thing; to have commerce with one of the opposite sex. Converse is, talk; acquaintance; familiarity. Converse is a word of a more poetical order than conversation, and implies somewhat less of familiarity than the latter. Easy talk, chit-chat, may be called con- versation ; but can scarcely be dignified with the name of converse. Conversation has the addi- tional meanings of behaviour; mode of living; knowledge by long acquaintance with. Conver- sant signifies, having a thorough knowledge of ; having intercourse with, in which case it is fol- lowed by among or with ; relating to, in which sense it has about, and formerly had in, after it. Conversable is, having talent for conversing ; be- ing communicative. Conversative indicates, re- lating to social commerce ; to public life ; not contemplative.

All that Moses commanded, Joshua read before all

the congregation of Israel, with the women, and the

little ones, and the strangers that were conversant

among them. J0s. viii. 35.

Having your conversation honest among the Gentiles.

1 Peter.

She went to Pamela's chamber, meaning to joy her thoughts with the sweet conversation of her sister.

Sidney.

Whiles thou now in Elysian fields so free, With Orpheus, with Linus, and the choice Of all that ever did in rimes rejoyce, Conversest, and doost hear their heavenly lays.

Spenser. The Ruines of Time. Let them make some towns near to the mountain's side, where they may dwell together with their neigh- bours, and be conversant in the view of the world.

Spenser's State of Ireland.

The matters wherein church polity is conversant, are the publick religious

duties of the church.

Hooker.

I will converse with iron-witted fools, And unrespective boys : none are for me, That look into me with considerate eyes.

Shakspeare. Richard III. His apparent, open guilt ; I mean his conversation with Shore's wife. Id.

Never to be infected with delight, Nor conversant with case and idleness

Id. King John.

Old men who have loved young company, and been conversant continually with them, have been of long 1'fe. Bacon.

I set down, out of long experience in business, and much conversation in books, what I thought pertinent to this business. Id.

Go therefore half this day, as friend with friend, Converse with Adam. Milton's Paradise Lost.

Gabriftl, this day by proof thou shall behold, Thou, and all angels conversant on earth With man, or men's affairs, how I begin To verify that solemn message.

Id. Paradise Regained.

Men then come to be furnished wi

simple ideas from without, according as the objects

they converse with afford greater or less variety. Locke.

Is is easy to observe, that many young men continue

longer in the thought and conversation of schoolboys

than otherwise they would, because their parents kept

them at that distance, and in that low rank, bv all

their carriage to them. Id,

To such a one, an ordinary coffee-house gleaner of

the city is an arrant statesman, and as much superior

too, as a man conversant about Whitehall and the court,

is to an ordinary shopkeeper. Id.

We had conversed so often on that subject, and he

had communicated his thoughts of it so fully to me,

that I had vot the least remaining difficulty. Dryden.

The kno "edge of men and manners, the freedom

of habitudes, and conversation with the best company.

Id.

Those who are) conversant in both the tongues, I leave to make their own judgment of it.

Id. Dufresnoy.

Though it be necessitated, by its relation to flesh, to

a terrestrial converse; yet it is, like the sun, without

contaminating its beams. Glanville's Aval.

Finding him little studious and contemplative, she

cho$e to endue him with conversative qualities of youth.

Wotton.

Being asked by some of her sex, in how long a time a woman might be allowed to pray to the gods, after

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having conwrtea witn a man ? If it were a husband, •ays she, the next day ; if a stranger, never.

Guardian.

That fire and levity which makes the young scarce conversible , when

tempered by years, makes a gay old age. Addison.

By experience and conversation with these bodies, a man may be enabled to give a near conjecture at the metallic ingredients of any mass. Woodward.

Formed by thy converse happily to steer From grave to gay, from lively to severe. Pope.

For him who lonely loves To seek the distant hills, and there converse With nature. Thomson's Summer.

In a small degree, and conversant in little things, vanity is of little moment. When full grown, it is the worst of vices, and the occasional mimic of them all. It makes the whole man false. It leaves nothing sin- cere or trust-worthy about him. His best qualities are poisoned and perverted by it, and operate exactly as the worst. Burke

Blest be the day I 'scaped the wrangling crew ; From Pyrrho's maze, and Epicurus' sty ; And held high converse with the godlike few, Who to the enraptured heart, and ear, and eye, Teach beauty, virtue, truth, and love, and melody.

Beat tie.

In conversation too, let us always mind what is say- ing and doing around us, and never give the company ground to suspect, that our thoughts are elsewhere. Attention is a chief part of politeness. Id

Words learned by rote, a parrot may rehearse, But talking is not always to converse ; Not more distinct from harmony divine, The constant creaking of a country sign. Cowper. MARIA. Oh, he has done nothing; but 'tis foi what he has said — his conversation is a perpetual libel on all his acquaintance. Sheridan.

To climb the trackless mountain all unseen, With the wild flock that never needs a fold ; Alone o'er steeps and foaming falls to lean ; This is not solitude ; 'tis but to hold Converse with Nature's charms, and view her stores unrolled. Byron. Chtide Harold

Even at the holy altars as they stood, His impious weapon shed Sichaeus' blood. Then, conversant with fraud, he tries his coiles ; And long his sister's anxious love beguiles.

Symmons's Virgil.

CONVERSI, a title formerly given to Jews, who were converted to Christianity in England. Henry III. built them a house in London, and allowed them a competent subsistence for their lives.

CONVERSION, in war, a military motion, whereby the front of a battalion is turned where the flank was, in case the battalion is attacked in the flank.

CON VE'RT, v. a. & n. ~] Fr. convertir ; It.

CO'NVERT, n. s. CONVE'RTER, n. ». CONVERTIBLE, adj. CONVERTIBILITY, adj. CONVE'RTIBLY, adv. CO'NVERTITE, n. s. CONVERSE, n. s. CONVE'RSELY, adv. CONVE'RSIBLE, adj. CONVE'RSION, n. s.

convert ire ; Span. convertir ; Lat. con- vertere, from con and vertere, to turn > accordingly; to turn to or from,to change, is the primary idea conveyed by all these words. To convert, is to turn

from infidelity or paganism, to the true faith ; from vicious to virtuous courses ; from one use,

state, or substance, to another ; to change one proposition for another; to undergo a change. The agent in any of these acts is the converter ; the patient is the convert or convertite ; and the change which he has undergone is his conversion. In algebra, conversion of equations is the reduc- ing of a fractional equation into an integral one. Convert and convertite are, however, applied only to persons. Convertible signifies, capable of being changed ; transmutable ; so much alike that one is used for the other. In geometry, a proposition is said to be the converse of another, when, after drawing a conclusion from some- thing first proposed, we proceed to suppose what had been before concluded, and to draw from it what had been supposed. Thus, if two sides of a triangle be equal, the angles opposite to those sides are also equal ; the converse of the propo- sition is, that if two angles of a triangle be equal, the sides opposite to those angles are also equal. Conversely means, with change of order; in a contrary order; reciprocally.

Then will I teach transgressors thy ways, and sin- ners shall be converted unto thee. Psalm li, 13. The abundance of the sea shall be converted unto thee, the forces of the Gentiles shall come unto thee.

Isa. Ix. 5.

They passed through Phenice and Samaria, declar- ing the conversion of the Gentiles. Acts xv. 4. He which converteth the sinner from the error of his way, shall save a soul from death, and shall hide a multitude of sins.

James v. 20.

And so ferforth she gan our lay declare, That she the Constable, er that it was eve, Converted, and on Crist made him beleve.

Chaucer. Cant. Tales. What maketh this but Jupiter the king, The which is prince and cause of alle thing, Converting alle unto his proper wille, From which it is derived soth to telle ? fd

For theft and riot they ben convertible, Al can they play on giterne or rihible. Id.

At last, when long she struggled had in vaine, She gan to stoup, and her proud mind concert To meeke obeysance of Love's mighty raine.

Spenser. Faerie Queene. The love of wicked friends converts to fear : That fear, to hate. Shakspeare. Richard II.

He thence departs a heavy convertite ; She there remains a hopeless cast-away.

Id. Rape of Lucrece.

Artificial conversion of water into ice, is the work of a few hours ; and this of air may be tried by a month's space. Bacon.

As fire converts to fire the things it burns ; As we our meats into our nature change. Davies.

Nor would I be a convertite so cold, As not to tell it. Donne.

They rub out of it a red dust which converteth into worms, which they kill with wine. Sandy's Travel. Crystal will callify into electricity, and convert the needle freely placed. Browne's Vulgar Errours.*

Minerals are not convertible into another specie, though of the same genus ; nor reducible into another genus. Harvey.*

*The papists cannot abide this proposition converted : all sin is a transgression of the law ; but every trans- gression of the law is sin. Halt. When Platonism prevailed, the converts to Chris- tianity of that school interpreted Holy Writ according to that philosophy. Lock**

Though it be not the real essence of any substance, it is the specifick essence, to which our name belongs, and is convertible with it. Id.

There never was any person ungrateful, who was not also proud ; nor, convertible/, any one proud, who was not equally ungrateful. South's Sermons.

If the whole atmosphere was converted into water, it would make no more than eleven yards water about -the earth. Burnet.

The gall is not an alkali ; but it is alkalescent, con- ceptible and convertible into a corrosive alkali.

Arbuthnot on Aliments.

The conversion of the aliment into fat, is not pro- perly nutrition. , /*.'.

Many, that call themselves Protestants, «ook upon our worship to be idolatrous as well as that of the Pa- pists ; and put prelacy and popery together, as terms convertible. Swift.

Water converted into ice occupies a greater space than it did before, as appears by the bursting of bot- tles filled with water at the time of their freezing. . Darwinˆ

Whimsical enough, faith ! My father wants to force me to marry the very girl I am plotting to run away with ! — He must not know of my connexion with her yet a while. He has too summary a method of pro- ceeding in these matters. — However, I'll read my in- cantation instantly. — My conversion is something sud- den, indeed — but I can assure him it is very sincere.

Sheridan.

CONVERT, in a monastic sense, a lay friar, or brother, admitted for the service of the house ; without orders, and not allowed to sing in the choir. The word was anciently used for persons who embraced the monkish life at the age of dis- cretion. But in the eleventh century, when they began to receive into monasteries illiterate per- sons, incapable of being clerks, and only destined for bodily labor, the signification of the word was necessarily changed.

CO'NVEX,n.s.&«#.

CONVE'XED, adj.

CONVE'XEDLY, adv.

CONVE'XITY, n. s.

CONVE'XLY, adv.

CONVE'XNESS, n. s.

CONVE'XO-CONCAVE, ad,

tical form. Convex, as an adjective, means, the opposite of concave ; swelling externally into a spherical or elliptical form. A convexo-concave body is, that of which the internal surface cor- responds with the outward protuberance. The remaining words it is unnecessary to define.

Dolphins are straight ; nor have they their spine

convexed, or more considerably embowed than either

sharks, porpoises, whales, or other cetaceous animals.

Browne's Vulgar Errours.

They be drawn convexedly crooked in one piece ; yet the dolphin, that carrieth Arion, is concavously inverted, and hath its spine depressed. Id.

In circuit to the uttermost convex Of this great round. Milton.

Almost all, both blunt and sharp, are convexly coni- cal ; they are all along convex, not only per ambitum, but between both ends. Grew's Museeum.

It is the duty of a painter, even in this also, to imi- tate the convex mirrour, and to place nothing which glares at the border of his picture.

Vryden's Dufretnoy.

Fr. convex; It.

and Sp. convexo ;

Lat. convexus. A

ˆconvex is, a body

which swells ex-

I ternally into a

J spherical or ellip-

These are the phenomena of thick convexo-concave plates of glass, which are every where of the same thickness. Newton.

Convex glasses supply the defect of plumpness in the eye, and, by increasing the refraction, make the rays converge sooner, so as to convene distinctly at the bottom of the eye if the glass have a due degree of convexity. Id. Opticks.

A comet draws a long-extended blaze ; From east to west burns thro' the ethereal frame, And half heaven's convex glitters with the flame.

Ticket.

If the eye were so piercing as to descry even opake and little objects a hundred leagues off, it would do us little service ; it would be terminated by neighbouring hills and woods ; or, in the largest and evenest plain, by the very convexity of the earth. Bentley.

The stem of the bamboo is not hollow till it rises more than one foot from the earth ; the divisions be- tween the cavities are convex downwards. Darwin. CONVEXITY is of particular import in catop- trics and dioptrics, where it is applied to mirrors and lenses. A convex mirror represents its images smaller than the objects ; as a concave one represents them larger : a convex mirror reflects the rays from it, diverging ; and therefore disperses and weakens their effect : as a concave one reflects them converging, so as they concur in a point, and have their effect increased : and by how much the mirror is a portion of a smaller sphere, by so much does it diminish the objects, and disperse the rays the more. A convex lens is either convex on both sides, called a convexo- convex ; or it is plain on one side and convex on the other, called a plano-convex ; or concave on one side, and convex on the other, called a con- vexo-concave, or concavo-convex, as the one or the other surface prevails, i. e. as this or that is a portion of a smaller sphere. All convex lenses inflect the rays of light in their passage, i. e. send them out from their convex surface converging, so as that they concur in a point or focus : hence burning lenses. Convex lenses magnify, i. e. represent their images larger than their objects ; and this the more as they are portions of smaller spheres.

CONVE'Y, v. a. ~\ Lat. convehere, from CONVE'YANCE, n. s. tcon and vehere. To CONVE'YANCER, n. s. £ remove from one place CONVE'YER, n. s. J to another ; to hand from one to another; to remove furtively; to transmit ; to transfer ; to impart ; to manage with privacy. Conveyance is,

the act of removing or carrying from one place to another ; the road by which is conveyed ; the means of removal ; transmission from one to another ; the method of secretly removing something from a place; the act of transferring property ; the writing by which property is transferred ; secret management ; juggling artifice. A conveyancer is a lawyer, who draws up the convey ances, or deeds, by which property is transferred. A conveyer is, a person who conveys ; but is never used in the sense of conveyancer, and vice versa.

Let letters be given me to the governour beyond the river, that they may convey me over till I come into Judea. Neh. ii. 7.*

I will convey them by sea, in floats, unto the place thou shalt appoint me. 1 Kings, v. 9.

CONVEYANCE.

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She hath the trashld without wene ; The god of love had they nat sene, Ne had Idilnesse the conveide Within the verge where mirthe him pleide.

Chaucer. Romaunt of the Rose. For by this wretch I being stray t betrayed, To one John Milton, sheriffe of Shropshire then, All sodaynely was taken, and convayed To Salisbury, wyth rout of harnest men. Sacboille. It cometh herein to pass with men, unadvisedly fallen into error, as with them whose state hath no ground to uphold it, but only the help which, by sub- tile conveyance, they draw out of casual events, arising from oay to day, till at length they be clean spent.

Hooker.

His blessed body, spoiled of lively breath

Was afterward, I know not how, convaid,

And fro me hid. Spenser. Faerie Qite&ne.

The earl of Desmond, before his breaking forth into

rebellion, conveyed secretly all his lands to feoffees in

trust. Id.

Doth not the act of the parents, in any lawful grant

or conveyance, bind their heirs for ever thereunto ? Id.

There was one conveyed out of my house yesterday

in this basket. Shakspeare. Merry Wives of Windsor.

I will convey the business as 1 shall find means, and

acquaint you withal. Id. King Lear.

We powt upon the morning, are unapt To give or to forgive ; but when we've stuffed These pipes, and these conveyances of blood, With wine and feeding, we have suppler souls.

Id. Coriolanus.

I ell her thou mad'st away her uncle Clarence, Her uncle Rivers ; ay, and for her sake, Mad'st quick conveyance with her good aunt Ann.

Id. Richard III.

I am this day come to survey the Tower ; Since Henry's death, I fear, there is conveyance.

Id. Henry VI.

Nay, call the Cynic but a wittie foole, Thence to abjure his handsome drinking bowl, Pecause the thirstie swain with hollow hand Conveid the stream to wet his drie weasand. Hall. The conveyers of waters of these times content them- selves with one inch of fall in six hundred feet.

JBrerewood on Languages.

This begot a suit in the Chancery before the lord Coventry, who found the conveyances in law to be so firm, that in justice he must decree the land to the earl. Clarendon.

Can they not juggle, and with slight Conveyance play with wrong and right ?

Hudibras.

Some single imperceptible bodies must come from them to the eyes, and thereby convey to the brain some motion which produces those ideas. Locke.

A divine natural right could not be conveyed down, without any plain, natural, or divine rule concerning it. Id.

Our author has provided for the descending and conveyance down of Adam's monarchical power, or paternal dominion, to posterity. Id.

Iron works ought to be confined to places where there is no conveyance for timber to places of vent, so as to quit the cost of the carriage. Temple.

Those who stand before earthly princes, in the nearest degree of approach, who are the dispensers of their favours, and conveyers of their will, to others, do, on that very account, challenge high honours to themselves. Atterbury.

Verbal descriptions infusing sublime horror, are such as convey lively ideas of the objects of supersti- Voi.. VI.

tion, as ghosts and enchantments ; or of the thoughts that haunt the imaginations of the guilty ; or of those external things which are pleasingly terrible, as storms, conflagrations, and the like. Beattie.

I admire,

None more admires, the painter's magic skill, Who shows me that, which I shall never see, Conveys a distant country into mine, And throws Italian light on English walls.

Caicfter.

Ghostly counsel, if it either fall Below the exigence, or be not backed With show of love, at least with hopef al proof Of some sincerity on the giver's part ; Or be dishonoured in the exterior form And mode of its conveyance by such tricks As move derision, or by foppish airs And histrionic mummery, that let down The pulpit to the level of the stage ; Drops from the lips a disregarded thing. Id.

A conveyancer he is — employ him who list : Forbidding his aspect, and close is his fist ; With more coin in his pocket than brains in his hrail, Yet a book he has written that nobody read.

HudJcufurd.

But taking him into her father's house Was not exactly the best way to save,

But like conveying to the cat a mouse, Or people in a trance into their grave.

Byron. Don Juan.

CONVEYANCE, in English law. The most com- mon conveyances are deeds of gift; bargain and sale ; lease and release ; fines and recoveries ; and settlements to uses. For the following out- line of the common law, upon this curious sub- ject, we are indebted to Tomlin's Dictionary.

Feoffments andgrants were the two chief modes used in the common law for transferring property. The most comprehensive definition that c;:n be given of a feoffment seems to be, a conveyance of corporeal hereditaments, by delivery of the possession, upon, or within view of, the heredita- ments conveyed. This delivery was thus made, that the lord and the other tenants might be witnesses to it. No charter of feoffment was necessary ; it only served as an authentication of the transaction ; and when it was used, the lands were supposed to be transferred, not by the char- ter, but by the livery which it authenticated Soon after the conquest, or perhaps towards the end of the Saxon government, all estates were called fees ; the original and proper import of the word feoffment is, the grant of a fee I came afterwards to signify a grant with livery of seisin of a free inheritance to a man and his heirs , more respect being had to the perpetuity, than to the feudal tenure, of the estate granted In early times, after the conquest, charters of feoff- ment were various in point of form. In the time of Edward I. they began to be drawn up in a more uniform style. The more ancient of them generally run with the words dedi, concessi, or donavi. It was not till a later period that feoffavi came into use. The more ancient feoffments were also usually made in consideration of, or for the homage and service of the feoffee, and to hold of the feoffor and his heirs. But after the stat. quia emptores (18 Edward I. stat. 1) feoff- ments were always made to hold to the chief lords of the fee, without the words pro homagio et servitio. See 1 Inst. 6 a : 271 b.*

The proper limitation of a feoffment is to a man and his heirs ; but feoff m en ts were often made of conditional fees (or estates tail as they are now called), and of life estates ; to which may be added, feoffments of estates given in frank -marriage and frankalmoigne. To make the feoffment complete, the feoffor used to give the feoffee seisin of the lands ; this is what the feudists call investiture. It was often made by symbolical tradition, but it was always made upon or within view of the lands. When the king made a feoffment he issued his writ to the sheriff, or some other person to deliver seisin : other great men did the same ; and this gave rise lo powers of attorney.

A grant, in the original signification of the word, is a conveyance or transfer of an incorporeal hereditament. As livery of seisin could not be had of these, the transfer of them was always made by writing, in order to produce that noto- riety, which in the transfer of corporeal heredita- ments was produced by delivery of the pos- session. But in other respects a feoffment and a grant did not materially differ. Such was the original distinction between a feoffment and a grant ; but from this real difference in their sub- ject matter only, a difference was supposed to exist in their operation. A feoffment visibly operated on the possession ; a grant could only operate on the right of the party conveying. Now as pos- session and freehold were synonymous terms, no person being considered to have the possession of the lands but he who had at least an estate of freehold in them, a conveyance which was consi- dered as transferring the possession, must neces- arily be considered as transferring an estate of freehold ; or, to speak more accurately, as trans- ferring the whole fee. But this reasoning could not apply to grants ; their essential quality being that of transferring things which did not lie in possession; they therefore could only transfer the right ; that is, could only transfer that estate which the party had a right to convey. It is in this sense the expressions are to be uuderstood, that a feoffment is a tortious and a grant a right- ful conveyance. The introduction of uses pro- duced a great revolution in this part of our laws. Uses at the common law, were, in most respects, what trusts are now. When a feoffment was made to uses, the legal estate was in the feoffee. He filled the possession, did the feudal duties, and was in the eye of the law the tenant of the fee. The person to whose use he was seized, called the cestuy que use, had the beneficial pro- perty of the lands ; had a right to the profits ; and a right to call upon the feoffee to convey the estate to him, and to defend it against strangers. This right at first depended on the conscience of the feoffee ; if he withheld the profits from the cestuy que use, or refused to convey the estate as he directed, the feoffee was without remedy. To redress this grievance the writ of subpcena was devised, or rather adopted from the common law courts, by the court of chancery, to oblige the feoffee to attend in court and disclose the trust; and then the court compelled him to exe- cute it. Thus uses w.ere established : they were not considered as issuing out of, or annexed to the land, as a rent or condition, or a right of

common ; but as a trust reposed in the feoffee, that he should dispose of the lands at the discre- tion of the cestuy que use, permit him to receive the rents, and in all other respects to have the beneficial property of the lands.

A conveyance cannot be fraudulent in part, and good as to the rest : for if it be fraudulent and void in part, it is void in all, and it cannot be divided. 1 Lib. Abr. 311. Fraudulent convey- ances to deceive creditors, defraud purchasers, &c. are void, by stats. 13 Eliz. cap. 5, 27 Eliz. cap. 4. See

FRAUD.

CO'NVICIATE, v. a.) Old Fr. convice ;

CO'NVITIOUS, adj. S Lat. convicior. To rail at ; to clamor at ; to raise an outcry. These words are both obsolete. So is the French noun, convice, which Sherwood defines ' a reproach, railing word, biting tearme, spightfull scoff, despightful gird, or glaunce, malicious taunt.'

CONVICI'NITY, n. s. Lat. con and vicinus. Nearness ; proximity.

CONVTCT, v. a. & adj. \ Lat. convincere, j from con and vin-

\cere. To prove the

CO'NVICT, 71. s.

CONVI'CTION, n. s.

CONVI'CTIVE, adj. I guilt of; to detect in

CONVI'CTIVELY, adv. J a. criminal act; to confute; to show by proof; to destroy ; but this last meaning is obsolete. The adjective means convicted ; detected in the fact. A convict is one why has been convicted. Conviction is detection of guilt ; the act of convicting ; the act of convincing ; full belief; assent of the mind to the truth of any thing; state of being convinced. Convictive signifies that which has the ability to convince.

A nd they which heard it, being convicted by their own conscience, went oat one by one. John viii. 9.

If there be no such thing apparent upon record, they do as if one should demand a legacy by virtue of some written testament, wherein there being no such thing specified, he pleadcth that there it must needs be, and bringeth arguments from the love which always the testator bore him ; imagining that these proofs will convict a testament to have that in it, which other men can no where by reading find. Hooker.

When therefore the apostle requireth ability to con- vict hereticks, can we think he judgeth it a thing un- lawful, and not rather needful, to use the principal instrument of their conviction, the light of reason ? Id.

Before I be convict by course of law, To threaten me with death, is most unlawful.

Sfiakfpeare. Ricluird III.

Things, that at the nrst shew seemed possible, by ripping up the performance of them, have been con- victed of impossibility. Bacon's Holy War.

Although not only the reason of any head, but ex- perience of every hand, may well convict it, yet will it not by divers be rejected. Browne's Vulyar Errows. The third best absent is condemned,

Convict by flight, and rebel to all law ;

Conviction to the serpent none belongs.

Milton's Paradise Lost.

We see generally that numbers of them exactly jump in a whole large collection of doctrines, consisting of abundance of particulars, as if their notions were, by one common stamp, printed on their minds, even to the least lineament. This is very hard, if not impos- sible, to be conceived of those who take up their opinions only from conviction. Locke

The manner of his conviction was designed , not as a peculiar privilege to him, but as a standing miracle, a lasting argument for the conviction of others, to the very end of the world. Atterlwy.

Convict a papist he, and I a poet.

Pope's Epistle of Hvace.

By the civil law, a person convict, or confessing his

own crime, cannot appeal. Ayliffe's Parergon.

He that accuses all mankind of corruption, ought to

remember that he is sure to convict only one. Bwke.

Once on a time an emperor, a wise man, No matter where, in China or Japan, Decreed, that whosoever should oifend Against the well known duties of a friend, Convicted once, should ever after wear, But half a coat, and show his bosom bare. Cowper. The police, however useless, were by no means idle : several notorious delinquents had been detected ; men liable to

conviction, on the clearest evidence, of the capital crime of poverty ; men, who had been ne- fariously guilty of lawfully begetting several children, whom, thanks to the times! — they were unable to maintain. Byrvn. Speech on the Frame-breaking Bill.

*CONVICTION, in law, is either where a man is outlawed, or appears and confesses, or else is found guilty by the inquest. Cromp. Inst. 9. In the summary proceedings directed by acts of parliament for the conviction of offenders, and inflicting the penalties imposed by those acts, there is no intervention of a jury, but the person accused is acquitted or condemned by the suffrage of such person only as is appointed by the statute for his judge. It is implied in law that there must be a conviction before judgment, though not so mentioned in the statute ; and where by any statute a second offence is made felony, or subjected to a heavier penalty than the first, it is always implied that such second offence should be committed after a conviction of the first. 1 How. 13-107. Judgment amounts to a convic- tion, though it does not follow that all are ad- judged who are convicted. Horn. 14. A convic- tion ought to be in the present tense, not in the time past. Ld. Raym. 1376. Str. 608. A con- viction ought to be on an information or claim precedent. Ld. Raym. 510. When the convic- tion of offenders before justices of the peace, &c. is ordered by act of parliament, it must be intend- ed after summons to bring them in, that they may have an opportunity of- making their defence ; and if it be otherwise the conviction shall be quashed. Of the summary convictions warranted by the law, are, 1. Those for offences and frauds against the laws of excise, and for the protection of other branches of the public revenue : which are to be enquired into and determined by the commissioners of the respective departments, or by justices of peace in the country. Some wri- ters have the ultra-loyalty to plead for these as * a species of mercy to the delinquents, who would be ruined by the expense and delay of frequent prosecutions by action or indictment.' 2. Those had before justices of the peace, in order to inflict divers petty pecuniary mulcts, and corporeal penalties, denounced by act of par- liament, for various offences against ' the good order of 'society; such as common swearing, drunkenness, vagrancy, idleness, &c. See JUS- TICE OF PEACE, and titles of various offences.*

convincere ; Lat.con- vincere. To compel any one to assent to the truth of a dispu-

These used formerly to be punished by the ver – diet of a jury in the court leets, and sheriffs tourn, the king's ancient courts of law. These convictions proved very promptly : but the law requires a party to be summoned before the pro- ceedings can commence : but if the summons be neglected, a magistrate may proceed by examining witnesses upon oath, and make his conviction of the offender in writing. He then usually issues his warrant,

either to apprehend the offender, in case corporeal punishment is to be inflicted ; or to levy the penalty incurred by distress and sale of his goods. Magistrates, it is said, ought to state in the conviction the whole of the evidence for and against the defendant. 8 T. R. 220. But where power of conviction is by statute given to a magistrate, he is the sole judge of the weight of the evidence given before him, and the higher court will not examine whether or not he has drawn a right conclusion from the evidence.

CONVI'NCE, v. a. ~\ Fr. convaincre ; It

*CONVI'NCEMEXT, n. s. *

CONVI'NCER, n. s. {

CONVI'NCIBLE, adj. !

CONVINCINGLY, adv.

CONVINCINGNESS, n. s.) ted proposition; to prove the guilt of ; to evince ; to overpower ; to surpass. The last meanings are obsolete. The other words, of the same stock, closely resemble the verb in the senses which they bear.

To convince all that are ungodly among them, of all their ungodly deeds. Jude 15.

It was a famous present for a prince, And worthy work of infinite reward, That treasons could bewray, ju&tae&jsanoince.

Spenser. Faerie Queene.

Your Italy contains none a accomplished a cour- tier, to convince the honor of my mistress.*

Shakspeare. Cymbeline. There are a crew of wretched souls That stay his cure ; their malady convincet The great essay of art. Id. Macbeth.

When Duncan asleep, his two chamberlains Will I with wine and wassel so convince, That memory, the warder of the brain, Shall be a fume. H.

Knaves, be such abroad, Who having, by their own importunate suit, Or voluntary dotage of some mistress, Convinced or supplied them, they cannot chuse But they must blab. fd. Othello.

Thevdiscovery of a truth, formerly unknown, doth rather convince man of ignorance, than nature ot

Upon what uncertainties, and also convinc'Me falsi- ties, they often erected

such emblems, we have deliv-

ered.

This he did so particularly and convincingly, th. those of the parliament were in great confusion.*

Clarendon.

Convince a man ever so much, that plenty has an advantage over poverty; make him see and own, that the handsome conveniences of life arc better than nasty penury ; yet as long as he is content with the latter, and finds no uneasiness in it, he moves not.

Locke.

If that be uot conoitu-ement enough lot him weigh the other also. Decay of P«ty >

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0 seek not to convince me of a crime, Which I can ne'er repent, nor can you pardon.

Dryden.

But, having shifted every form to 'scape, Convinced of conquest, he resumed his shape.

Id. Virgil.

That which I have all this while been endeavour- ing to convince men of, and to persuade them to, is no other hut what God himself doth particularly recom- mend to us, as proper for human consideration.

Tillotson.

The resurrection is so convincingly attested by such persons with such circumstances, that they who con- sider and weigh the testimony, at what distance soever they are placed, cannot entertain any more doubt of the resurrection than the crucifixion of Jesus.

Atterbury. LADY T. Why, if my understanding were once

convinced

JOSEPH S. O, certainly, madam, your understand- ing should be convinced. Yes — yes — heaven forbid I should persuade you to do any thing you thought wrong. No, no, I have' too much honour to desire it.

Sheridan.

Oh ! too convincing, — dangerously dear In woman's eye the unanswerable tear ! That weapon of her weakness she can wield, To save subdue — at once her spear and shield.

Byron.

CONVI'VE, v. a. ~\ Lat. convivere. To CONVI'VAL, adj. (entertain; to feast; to CONVI'VIAL, adj. £ feast together. The verb CONVIVIA'LITY, n.s. 3 is obsolete, though the act of which it is expressive was never more common. Convivial is relating to an entertain- ment ; festal ; jovial. Convivial men too often are men who, as Shakspeare says, ' put an ene- my into their mouths, to steal away their brains,' and this folly is covered with the name of con- viviality.

First, all you peers of Greece, go to my tent, There in the full convive you.

Sltakspeare. Truilus and Cressida.

1 was the first who set up festivals ;

Not with high tastes our appetites did force, But filled with conversation and discourse Which feasts, convivial meetings we did name.

Denham.

Your social and convivial spirit is such, that it is a happiness to live and converse with you.

Dr. Newton.

The plump convivial parson often bears The magisterial sword in vain, and lays His reverence and his worship both to rest On the sarme cushion of habitual sloth. Cowper. As for vulgar fellowships and connexions, where a man is to act the pleasant fellow and set the table in a roar, if he has not the spirit and discretion to decline them, he will soon find his professional talents sacri- ficed to his convivial ones. Cumberland.

CONU'NDRUM, n. s. A low jest; a quib ble ; a mean conceit ; a cant word.

Mean time he smokes, and laughs at merry tale, Or pun ambiguous, or conundrum quaint. Philips.

CO'N VOCATE, v. a. ˆ Fr. convoquer ; Ital.

CONVO'KE, v. a. ˆconvocare; Span, con-

CONVOCA'TION, n. s. j vocar ; Lat. convocare.

To call together; to summon to an assembly;

to convene. The verb convoke is the most in

use. Convocation is, the act of summoning to

an assembly ; an assembly ; an assembly of the clergy for consultation upon matters ecclesiasti- cal, in time of parliament : and, as the parlia- ment consists of two distinct houses, so does this ; the one called the upper house, where the archbishops and bishops sit severally by them- selves; the other the lower house, where all the rest of the clergy are represented by their de- puties. See the next article.

On the eighth day shall be an holy convocation unto you. Lev. xxiii. 20.

This dolie dreme, this ugly visioun, Brought till an ende, Creseide fro it awoke, And all that court and convocacion Vanished awaie.

Henderson. Testament of Creseide.

Diaphantus, making a general convocation, spake to

them in this manner. Sidney.

I have made an offer to his majesty, Upon our spiritual convocation, As touching France, to give a greater sum Than ever at one time the clergy yet Did to his predecessors part withal.

Shakspeare. Henry IV.

Assemblies exercise their legislature at the times that their constitution, or their own adjournment, ap- points, if there be no other way prescribed to cimr.-itie them. Locke.

This is tke declaration of our church about it, made by those who met in convocation. Stillinijjieet.

When next the morning warms the purple cast,

Convoke the peerage. Pope's Odyssey.

The senate originally consisted all of nobles, the

people being only convoked upon such occasions as fell

into their cognizance. Swift.

Stamp with charmed foot, convoke the alarmed

Gnomes From golden beds and adamantine domes. Darwin.

CONVOCATION, an assembly of the clergy of England, by their representatives, to consult of ecclesiastical matters. It formerly sat for business during the session of parliament, and con- sists of an upper and a lower house. In the up- per sit the bishops. In the lower the inferior clergy are represented by their proctors : it con- sists of all the deans and archdeacons, of one proctor for every chapter, and two for the clergy of every diocese. The lower house chooses its prolocutor, who is to take care that the members attend, to collect their debates and votes, and to carry their resolutions to the upper house. The convocation is summoned by the king's writ, directed to the archbishop of each province, re- quiring him to summon all bishops, deans, arch- deacons, 8cc.

The power of the convocation is limited by a statute of Henry VIII. They are not to make any canons, or ecclesiastical laws, without the king's licence ; nor, when permitted, can they put them in execution, but under several restric- tions. They have the examining and censuring of all heretical and schismatical books and persons, &c. but there lies an appeal to the king in chan- cery, or to his delegates. The clergy in convo- cation, and their servants, have the same privileges as members of parliament. In 1665 the convo- cation of the clergy gave up the privilege of tax- ing themselves to the house of commons, in con- sideration of their being allowed to vote at elec-

tions of members for that house. Since that period they nave seldom been allowed to do any business ; and are generally prorogued from time to time till dissolved, a new convocation being called along with a new parliament.

CONVO'LVE, v. a. j Ital. convolgere;

CO'NVOLUTED, part. adj. > Lat. convolvere. To

CONVOLUTION, n. s. 3 roll or enfold toge- ther ; to roll one part upon another ; to twist to- gether in knots. Convolution is, the act of con- volving ; the state of being convolved. Convo- luted signifies, twisted together; rolled upon itself.

He writhed him to aud fro convolved. Milton.

It is a wonderful artifice how newly hatched mag- gots, not the parent animal, because she emits no web, nor hath any textrine art, can convolve the stubborn leaf, and bind it with the thread it weaves from its body. Derham.

Observe the convolution of the said fibres in all other glands, in the same or some other manner.

Grew's Cosmoloyia.

A thousand secret, subtle pipes bestow, From which, by numerous convolutions wound, Wrapped with the attending nerve, and twisted round.

Blackmore.

This differs from Muscovy-glass only in this, that the plates of that are flat and plain, whereas these are convoluted and inflected. Woodward on Fossils.

And tossed wide round,

O'er the calm sea, in convolution swift

The feathered eddy floats. Thornton's Autumn.

Used to milder scents, the tender race By thousands tumble from their honey'd domes Convolved and agonizing in the dust. Id.

Where with vast convolution Draco holds The ecliptic axis in his scaly folds, O'er half the skies his neck enormous rears, And with immense meanders parts the Bears.

Darwin.

CONVOLUTION, in botany, a winding motion, proper to the trunks of some plants, as the con- volvulus ; the claspers of vines, bvyony, &c.

CONVOLVULUS, in botany, bind-weed, a genus of the pentandria order,

and the monogy- nia class of plants ; natural order twenty-ninth, campanaceae : COR. campanulated and plaited ; STIG. two ; CAPS, bilocular, and the cells disper- mous. Of this genus there are 120 species. The most remarkable are the following : — 1. C. bat- tatas, or Spanish potato, has esculent roots, re- sembling the potato, which are annually imported from Spain and Portugal, where they are greatly cultivated for the table ; but they are too tender to thrive in the open air in Britain. 2. C. Cana- riensis, with soft woolly leaves, is- a native of the Canaries, but has long been preserved in the British gardens. It has a strong fibrous root, from whence arise several twining woody stalks, which, where they have support, will grow more than twenty feet high, garnished with oblong heart-shaped leaves, which are soft and hairy. The flowers are produced from the wings of the leaves, several standing upon one foot-stalk. They are for the most part of a pale blue ; but there is a variety with white flowers. 3. C. jalappa, or jalap, used in medicine, is a native of Haleppo in Spanish America, situated between Vera Cruz and Mexico. It has a large root of an oval form,

which is full of a milky juice ; from which come out many herbaceous twining stalks, eight or ten feet high, garnished with variable leaves ; some of them being heart-shaped, others angular, and some oblong and pointed. They are smooth, and stand upon long foot-stalks : the flowers arc shaped like those of the common greater bind- weed, each foot-stalk supporting only one flower. This species does not thrive in this country, un- less constantly kept in a stove. The roots are purgative. See JALAP. 4. C. nil, or blue bind- weed, rises with a twining stalk eight or ten feet high, garnished with heart-shaped leaves, divided into three lobes, which end in sharp points. These are woolly, and stand upon long foot- stalks. The flowers also come out on long foot- stalks, each sustaining two flowers of a very deep blue color, whence their name of anil or indigo. This is one of the most beautiful plants of the genus : it flowers all the latter part of the sum- mer, and in good seasons the seeds ripen very well in the open air. 5. C. purpureus, or major, is an annual plant growing naturally in Asia and America, but has long been cultivated in the British gardens. This species, properly supported, will rise ten or twelve feet high in warm summers. There are three or four lasting varieties : the most common has a purple flower ; the others have a white, a red, or a whitish-blue flower, which last has white seeds. They flower in June, July, and August, and their seeds ripen in autumn. They are propagated by seeds sown on a hot-bed in spring, and towards the end of May they should be planted in warm borders, and supported by stakes. 6. C. sepium, or large white bind-weed. 7. C. tricolor, or minor, is a native of Por- tugal ; but has been long cultivated in the gar- dens of this country. It is an annual plant, which has several thick herbaceous stalks growing about two feet high, which do not

twine like the other sorts, but decline towards the ground, upon which many of the branches lie prostrate ; they are garnished with spear-shaped leaves, which sit close to the branches : the foot-stalks of the flowers come out just above the leaves of the same joint, and at the same side of the stalks. They are about two inches long, each sustaining one large, open, bell-shaped flower, which in some is of a fine blue color with a white bottom ; in others they are pure white, and some are beauti- fully variegated with both colors. The white flowers are succeeded by white seeds, and the blue by dark colored seeds ; which difference is pretty constant.

CONVO'Y, v. a. ~\ Fr. convoyer ; Ital. can-

CO'NVOV, n. $. > vogliare ; Span, convoyat ;

CO'NVOYING, -n. s.) low Lat. conviare. To act

as a guide, a protection, an escort. A convoy is,

that which escorts for the purpose of protecting ;

the thing protected ; the act of attending as a

protector ; conveyance : but this last sense is

obsolete. Both the verb and the noun are most

commonly used with reference to protection

afforded by sea.

Sister, as the winds give benefit, And convoy is assistant, do not sleep, But let me hear from you.

Shafupeare. Hamlet.

Such fellows will learn you by rote where services were done ; at such a breach, at such a convoy.

Sliakspeare. Henry V. Swift, as a sparkle of a glancing star, • I shoot from heaven to give him safe convoy.

Mdton's Paradise Regained.

Had not God set peculiar value upon his temple, he would not have made himself his people's convoy to secure them in their passage to it. Smith's Sermons.

My soul grows hard, and cannot death endure ; Your convoy makes the dangerous way secure.

Dryden's Aurengzebe.

Convoy ships accompany their merchants, till they may prosecute the voyage without danger.

Dryden's Pref Dvfresnoy. But hark ! a rap comes gently to the door ;

Jenny, wha kens the meaning o' the same, Tells how a neebor lad cam o'er the moor, To do some errands, and convoy her hame.

Burns.

CONVOY, in military affairs, a detachment of men employed to guard any supply to a town or army, and prevent its falling into the hands of the enemy. As the conducting of a convoy is one of the most important and most difficult of all military operations, the officer who com- mands a convoy must take all possible precau- tions for its security, and endeavour, before its march, to get himself well informed concerning the out parties of the enemy. And as the com- manding officer of the place from which the convoy is to march, and those of such other places as he is to pass by, are most likely to afford him proper assistance, he should take every measure in his power to secure a commu- nication with them.

CONUS, a cone, in botany, a species of fruit, or scaly seed-vessel, so termed by Tournefort and other botanists. Linnaeus substituted stro- bilus in its place.

CO'NUSANCE,n.s.ˆ Fr. connoissanc e. Cog-

CO'NUSABLE, adj. >nizance; notice; know-

CO'NUSANT, adj. Pledge of. Conusableis, liable to be tried. Conusant is, knowing ; ac- quainted with. They are all law terms.

CONVU'LSE,u.a. ~j Fr. convulsion; Ttal.

CONVU'LSION, n. s. f convulsione ; Span, con-

CONVU'LSIVE, adj. fvulsar; Lat. convellere,

CONVULSIVELY, adv. J vulsum. To give an ir- regular spasmodic motion to the muscles ; to dis- tort; to throw into disorder. In its medical sense, convulsion is a diseased action of muscular fibres, known by alternate relaxations, with vio- lent and involuntary contractions of the muscular parts, without sleep. See MEDICINE. In its •wider sense, it signifies motion that is irregular and violent; tumult ; commotion ; disturbance.

They are irregular and convulsive motions, or strug- glings of the spirits. Hole's Origin of Mankind.

If my hand be put into motion by a convulsion, the indiffierency of that operative faculty is taken away.

Locke.

All have been subject to some concussions, and fall under the same convulsions of state, by dissensions or invasions. Temple.

Her colour changed, her face was not the same, And hollow groans from her deep spirit came ; Her hair stood up; convulsive rage possessed Her trembling limbs, and heaved her lab 'ring breast.

Dn-den.

Follows the loosened, aggravated roar, Enlarging, deepening, mingling peal on peal, Crushed horrible, convulsing heaven and earth.

Thomson.

No wizard mutters the tremendous spell, Nor sinks convulsive in prophetic swoon ; Nor bids the noise of drums and trumpets swell, To ease of fancied pangs the labouring Moon, Or chase the shade that blots the blazing orb of noon.

Beattie.

Earth yawns ! — the crashing ruin sinks ! — o'er all Death with black hands extends his mighty pall ; Their mingling gore the fiends of Vengeance quaff, And Hell receives them with convulsive laugh.

Darwin.

Here roams the wolf, the eagle whets his beak, Birds, beasts of prey, and wilder men appear, And gathering storms around convulse the closing year. Byron. Childe Harold.

Thus much she viewed an instant and no more — Her struggles ceased with one convulsive groan ; On her sire's arm, which until now scarce held Her writhing, fell she like a cedar felled.

Id. Don Juan.

CONVULSION, a diseased action of muscular fibres, known by alternate relaxations, with violent and involuntary contractions of the mus- cular parts, without sleep. Cullen arranges convulsion in the class neuroses, and order spasmi. See MEDICINE.

CONWAY, a town of North Wales in Caer- narvonshire, called ajso ABERCONWAY, which see.

CONWAY, a river of North Wales, which rises from a lake where the counties of Caernarvon, Denbigh, and Merioneth meet ; and after flow- ing through the vale, along the east border of Caernarvonshire, which it separates from Den- bighshire, falls into the Irish sea at Conway. ,This river, though its course from the lake to its mouth is only twelve miles, yet is so deep, in consequeneeof the many brooks it receives, that it is naviganle by ships of good burden for eight miles. Small pearls are occasionally found in large black muscles taken in this river.

CONWAY, a valley of Caernarvonshire, equally beautiful and romantic. It is a long narrow tract, abounding in corn-fields, pasture, and groves, and forming a fine contrast to the bleak chain of mountains above it.

CONWAY, a township of Nova Scotia, in the province of New Brunswick, Sudbury county/ on the western bank of St. John's River. It has the bay of Fundy on the south, and a pretty good harbour called Musquash Cove, at the west point.

CONWAY, a township of the United States, in the north-east corner of Stafford county, New Hampshire, on Saco river, incorporated in 1765. It contains 575 inhabitants, and was called Pigwacket by the Indians.

CONWAY, a thriving township in Hampshire county, Massachusetts, incorporated in 1767, and containing 2092 inhabitants. It lies thir- teen miles north-west of Northampton, and 115 north-west by west of Boston.

CO'NY, n.'js. ~\ Fr. connin, connil ;

CO'NY-BURROW, re. s. t Ital.conig/io; Span.co-

CO'NY-CATCH, v. n. tnejo; Dutch konijn;

CO'NY-CATCHER, n. s.) Ger. kaninehen ; Sw. kaning ; Lat. cuniculus. A rabbit; an animal

that lives in holes called cony-burrows ; figura- tively, a simpleton. To cony-catch is an old verb, now obsolete, signifying to trick ; to cheat; to make a dupe of; and a cony-catcher is. of course, a swindler ; a cheat ; a trickster ; a rascal.

Connis there were also playing, That comin out of ther clapers.

Chaucer. Cant. Tales.

For none I trow, that hath a witte so badde, To set his hay for conies over rivers, Nor yet set not a clragge nette for an hare. Wyat.

Sometime he runs among the flocks of sheep,

To make the cunning hounds mistake their smell ; And sometime, where earth-delving conies keep,

To stop the loud pursuers in their yell.

Shakspeare. Venus and A donis.

I have matter in my head against you, and against your cony-catching rascals.

Id. Merry Wives of Windsor. With a short-legg'd hen,

Lemons and wine for sauce ; to these a cony

Is not to be despaired of, for our money.

Ben Jonson's Epigrams,

The husbandman suffers by hares and conys, which eat the corn and trees. Mortimer's Husb.

CONY. See LEPUS.

CONY, AMERICAN. See CAVIA.

CONY, BRASILIAN. See CAVIA.

CONYBEARE (John Josias), a modern divine and geologist, was the son of Dr. William Conybeare, r?«? -a: of St. Botolph, Bishopsgate, and grandson ~ >f Dr. Conybeare, bishop of Bristol. He wa. ˆoni in 1779, and educated at Westminster school; from whence, in 1797, he was elected to a studentship of Christ Church, Oxford. Here afterwards he gained, in two years, the undergraduate's prize for a Latin poem, entitled Religio Brahm'«e. He took the degree of M.A. in 1804, and became usher of Westminster school; but in 1807 returned to college, and was elected to the Anglo-Saxon professorship of the university, a station for which his antiquarian taste and knowledge par- ticularly qualified him. In 1812 he was chosen poetry professor, and preached in 1824 the Bampton Lecture. To the Annals of Philosophy he made some valuable communications on some scientific subjects, particularly on the mineralogy of Devon, Cornwall, and Wales. He has also some valuable papers in the Archaeologia, on the Saxon poetry. He succeeded to the stall

CONZA, a town of Naples, in the province of Principato Ultra, of which it is considered the capital. It is situated at the foot of the Apennines, on the river Oanto ; and is the see of an archbishop. Its principal commerce is in marble. It suffered greatly by an earthquake in 1694. Conza lies fifty-eight miles south-east of Naples. Long. 15° 39′ E., lat. 40° 50′ N. COO, v. a. & n. s. } To make the same COO'ING, n. s. $ sound as a dove or pi- geon. The word is imitative of the sound. Cooing is the note of the dove; invitation.

Let not the cooings of the world allure thee : Which of her lovers ever found her true ? Young.

The stock-dove only through the forest cooes Mournfully hoarse. Thomson's Summer.

Those ears that are offended by the sweetly wild notes of the thrush, the blackbird, and the nightin- gale, the distant cawing of the rook, the tender cooing of the turtle, the soft sighing of reeds and osiers, the magic murmur of lapsing streams, will be regaled and ravished by the extravagant and alarming notes of a squeaking fiddle, extracted by a musician who has no other genius than that which lies in his fingers : they will even be entertained with the rattling of coaches, the rumbling of carts, and the delicate cry of cod and mackerel. Smollet.

The timorous hare,

Grown so familiar with her frequent guest, Scarce shuns me ; and the stock

dove unalarmed Sits cooing in the pine-tree, nor suspends His long love-ditty for my near approach. Cowper.

COOCH-BAHAR, or COOCH-BEHAR, a dis- trict of Hindostan, in the province of Bengal, lying between the twenty-sixth and twenty- seventh degrees of northern latitude. It is bounded on the north by Bootan, on the east by Rungamutty, on the south-west by Rungpore, and contains an area of 1300 square miles. It was formerly independent, and the rajah stamped coins called Naraing, in his own name, some of which are still current in Bootan. In 1772 the rajah, being invaded by the rajah of Bootan, applied for British assistance, and became in consequence our ally and tributary. The amount of his tribute annually is 72,000 rupees. Parts of the country still under his sway are very un- productive ; but those annexed to Rungpore are as singularly fertile, producing great quantities of indigo and cotton. Cooch-bahar is in the col- lectorship of Rungpore. ‘ The lower ranks in

which his father had held in the cathedral of the northern quarter,’ says Mr. Hamilton, ‘ are

York; and in 1812 obtained the college living so extremely indigent, that some years ago it

of Batheaston in Somersetshire. Mr. Cony- was their custom to dispose of their children

beare died at Blackheath, in June 1824 ; having for slaves, without scruple, to any purchaser for

again preached the Bampton Lectures for the a trifling consideration. It was quite common

year, which he published.

to see a mother dress up her child, with a view

CONYZA, fleabane, a genus of the poly- to enhance the price, and bring it to market, gamia superflua order, and syngenesia class of Although so little is necessary for the subsistence plants ; natural order forty-ninth, compositae. of a peasant, and food compared with other dis- Pappus simple : CAL. imbricated and roundish : tricts is cheap, yet their poverty and wretch- COR. of the radius trifid. There are ninety-one edness are extreme.

COOK, v. a. & n. s. Old Fr. keux ; Fr. CO’OKERY, n. s. y cuisinier ; It. cuoco ;

CO'OKLY, adv. f Span, c&cinero ; Ang.-

/Sax. coc ; Ger. koch; \ Dut. kok ; Swed. kock ; ' Lat. coquus.

species.

CONZ, or CONSARBRUCK, a town of Ger- many, in the ci-devant territory of the Electorate of Treves, now annexed to France. It is in- cluded in the department of the Sarre and Moselle, and seated at the confluence of these rivers.

COOK-MAID, n. s. COOK-ROOM, n. s.

COOK-SIIOH, n. s. Lat. coquus. To dress

victuals ; figuratively, to prepare for any purpose

One who dresses victuals. The art of dressing victuals.

And he will take your daughters to be confectiona- ries, and to be cooks, and to be bakers. 1 Sam. viii. 13.

Awake, thon coke, quod he ; God geve the sorwe, What aileth thee to slepen bj the morwe ?

Chaucer. Cant. Tales.

One mistress Quickly is in the manner of his nurse, or his dry-nurse, or his cook, or his laundry, his washer, and his wringer.

Shakspeare. Merry Wines of Windsor.

Hanging is the word, Sir j if you be ready for that, you are well cookt. Shakspeare. Cymbeline.

Some man's wit

Found the art of cook'ry to delight his sense : More bodies are consumed and killed with it, Than with the sword, famine, or pestilence. Davies.

The commodity of this newcooA-room the merchants having found to be so great, as that in all their ships the cook-rooms are built in their fore-castles, contrary to that which had been anciently used.

Raleigh's Essays.

The new-bora babe by nurses overlaid, And the cook caught within the raging fire he made.

Dryden.

Had either of the crimes been cooked to their pa- lates, they might have changed messes.

Decay of Piety.

Their cooks could make artificial birds and fishes, in default of the real ones, and which exceeded them in the exquisiteness of the taste.

Arbuthnot on Coins.

These are the ingredients of plants before they are prepared by cookery. Id. on Aliments.

A friend was complaining to me, that his wife had turned off one of the best cook-maids in England.

Addison.

Not but that cookt and poets still were free To use their power in nice variety ; Hence, mackerel seem delightful to the eyes, Though dressed with inconsistent gooseberries ; Crabs, salmons, lobsters, ar- with fennel spread, Who never touched that herb till they were dead ; Yet no man lards salt pork with orange peel, Or garnishes his lamb with spitchcocked eel.

King. Art of Cookery.

My guts ne'er suffered from a college cook, My name ne'er entered on a buttery book.

Bramston. The Man of Taste.

In general, mankind, since the improvement of eookery, eat about twice as much as nature requires. Suppers are not bad, if we have not dined ; but rest- less nights naturally follow hearty suppers, after full dinners. Franklin.

And, while the hallowed mixture thickens,

Signing death-warrants for the chickens ;

Else greatly pensive poring o'er

Accounts her cook had thumbed before. Sheridan.

COOKERY, in its simple and ordinary modes, is an art sufficiently familiar to every house- keeper; and, in its luxurious refinements, too copiously detailed in directories published for the purpose, to require any enlargement here, were it even to merit consideration in a work of this nature.

COOK, or 1 To make the note of the

COOK, v. n. S cuckoo. The word is imitative of the sound produced by the bird. It is found in both old English and Scottish poetry, but is now obsolete.

COOK (James), the most celebrated of modern navigators, was the son of James Cook, a peasant

of Marton, in the North Riding of Yorkshire, where he was born October 27th, 1728. He was one of nine children, and was first sent to school by Mr. Skottow, his father's employer, where he was instructed in writing and the elements of arithmetic. Before the age of thirteen he waS bound apprentice to a shopkeeper at Straith, ten miles from Whitby ; but, some disagreement ari- sing, the indentures were cancelled, and he bound himself apprentice to Messrs. Walkers of Whitby, who had several vessels in the coal trade. After serving them several years he entered, during the war of 1775, as a volunteer on board the Eagle, a king's ship of sixty guns, to which vessel'Sir Hugh Palliser was soon after appointed. This officer perceived Cook to be an active and dili- gent seaman ; and his promotion was forwarded by a letter of recommendation from Mr. Osbal- deston, M. P. for Scarborough. On the 15th of May, 1759, he was appointed master of the Mercury, which sailed to America, and joined the fleet under Sir Charles Saunders at the siege of Quebec. On this occasion he was recommended by captain Palliser to take the soundings of the St. Lawrence, between the island of Orleans and the north shore, which he performed in the most complete manner; and soon after to survey the most dangerous parts of the river below Quebec. These were his first efforts with the pencil. On the 22nd of September he was ap- pointed master of the Northumberland, stationed at Halifax, where he first read Euclid, and studied astronomy and other branches of science. In 1762 he was with the Northumberland, assist- ing at the recapture of Newfoundland. The same year he returned to England, and married Miss Elizabeth Batts, of Barking in Essex. Early in 1763, when captain, afterwards admiral, Greaves was appointed governor of Newfound- land, Mr. Cook went out with him to survey the coasts of the island. In the beginning of 1764, Sir Hugh Palliser being appointed go- vernor of Newfoundland and Labradore, Cook accompanied him as surveyor, and had the Grenville schooner to attend

him ; in which situation he continued till 1767. \Vhile thus occupied he gave a specimen of his, progress in astronomy, in a short paper, printed in the 57th volume of the Philosophical Transactions, entitled Observation of an Eclipse of the Sun at the island of Newfoundland, August the 5th, 1766, with the longitude of the place of observation deduced from it : this was one of the Burgeo Islands near Cape Ray, in N. lat. 27° 56′ 19′. In the mean time the spirit for geographical dis- covery, which had gradually declined since the beginning of the seventeenth century, began to revive. Two important voyages had been per- formed in the reign of George II. under captains Middleton, More, and Smyth, to discover a north- west passage through Hudson's Bay to the East Indies. Two others, under captains Byron, VVallis, and Carteret, had been undertaken by order of his late Majesty ; and, before the return of these navigators, another voyage was resolved upon for astronomical purposes. Towards the end of the year 1767, the Royal Society desiring to send astronomers into the Pacific to observe the transit of Venus over the sun's disk, which it

was calculated would take place in 1769, a me- morial was presented to his Majesty on the sub- ject, and he directed a vessel to be fitted out for the purpose. Otaheite being fixed on for the place of observation, the command of the vessel, named the Endeavour, was given to Mr. Cook, now made a lieutenant, and he sailed from Eng- land in 1768.

After accomplishing the astronomical part of his instructions at Otaheite, lieutenant Cook traced the eastern coast of New IIolland,which he named New South Wales, from the thirty-eighth degree of la- titude to -its northern extremity ; and proved, if he did not first discover, that it was separated from New Guinea, by passing through the channel which he named after his ship, Endeavour Strait. In this, voyage he also visited New Zealand, which Tasman had but barely discovered; and, by ascertaining its extent, and division by a strait, which bears his name, chased the advocates for the southern continent from one of their strong holds. Cook likewise added several new islands among the group, to which he gave the name of Society Islands.

Mr. Green, an assistant in the observatory at Greenwich, went out with Cook, as astronomer, and he was likewise accompanied by Mr. (after- wards sir Joseph) Banks, and the Swedish natu- ralist, Dr. Daniel Solander. To the report of the commander on his return to England, re- specting New Holland, may be attributed the subsequent colonisation of Botany Bay. The conduct of this expedition, as well as its results, was so

creditable to Mr. Cook, that on his return in July 1771, he was raised to the rank of master and commander in the navy. An account of the voyage, drawn up by Dr. Hawkesworth, was speedily published, and became very popular.

A second voyage was planned for him in the course of the following year; and his majesty's ship Resolution being appointed to the service, he sailed from the Thames accompanied by the Adventure, captain Furneaux, on the most en- larged plan of discovery ever attempted. He was directed to circumnavigate the globe in the high southern latitudes, and to make such traverses into every corner of the great Southern Ocean, as might finally and effectually resolve the grand question of a southern continent accessible to navigation; and this interesting point his re- searches decided in the negative, beyond the possibility of doubt. The other fruits of this voyage were the correct knowledge of the land discovered by La Roche, in 1675, to which Cook gave the name of New Georgia ; the discovery of the eternally frozen Sandwich Land, the near- est known land to the south pole ; the ascertain- ing the extent of the Archipelago of the New Hebrides, which Quiros discovered, and Bou- gainville looked at; the discovery of New Cale- donia, and of many islands of the division which, in this voyage, he named Friendly Islands.

This expedition was important, not only for its various contributions to the sciences and to navigation, but as exhibiting a method of preserving the health of seamen, and especially oi guarding against the attacks of that fatal enemy

to sailors, the scurvy. Captain Cook so successf jl'y combated the causes and symptoms of this and other general disorders among seamen, that only one man was cut off by it during the expedition. Having communicated his plans in this respect to the Royal Society, and the success which had attended them, he was chosen a fellow of that body, and his experiments were thought worthy of being rewarded by the Copleian gold medal. Government also recognised the value of his ser- vices by promoting him to the rank of post-cap- tain in the navy, and a captainship in Green- wich Hospital.

Cook drew up his own narrative of the se- cond voyage,, but Dr. Douglas, afterwards bishop of Salisbury, superintended its passage through the press.

In 1776 this great navigator sailed on his third and last voyage, in the Resolution, accompanied by the Discovery, captain Clerk. In this voyage captain Cook was directed to examine the land in the southern ocean recently discovered by Kerguelen, and then to proceed through the Pa- cific to the coast of New Albion, from whence he was to proceed to the north

along the coast of America to the latitude 65°, where he was to commence his search for a passage into the At- lantic, and particularly to examine all rivers or inlets pointing towardsHudson's and Baffin's Bays. In the event of not finding such passage, he was directed to seek one through the Frozen Ocean, either round Asia or America. As an encour- agement to his crews, the reward of £20,000 for the discovery of a northern passage, which by the letter of the act of parliament was confined to the ships of his majesty's subjects, was now ex- tended to those of his majesty, and £5000 were at the same time voted to any vessel that should first approach the pole within one degree.

Though the main object of this voyage was unsuccessful, that is, the discovery of a northern passage, it produced a vast addition to maritime geography. Kerguelen's Land was examined and its extent determined, several new islands were discovered in the South Pacific, former disco- veries revisited, and many new lights thrown on the manners of the natives. The group of the Sandwich Islands in the North Pacific were like- wise discovered, and a considerable portion of the. western coast of North America.

The principal interest of this voyage, however, arises from the disastrous event that terminated the life of this great commander. He returned from the North Western coast of America to pass the winter of 1778 at Owhyhee, one of his recent discoveries. During his continuance here the crews of the ships were treated with the ut- most hospitality and kindness by the natives, and their wants being liberally supplied, the na- tives were well remunerated. Early in February captain Cook sailed for Kamtschatka, but was compelled by an accident to revisit his winter quarters. And a boat having been at this time stolen by one of the islanders, the captain went on shore to seize the person of the king, as a hostage till it was restored. The whole affair seems to have been ill managed on the part of the British commander and his officers.

He penetrated the country with an insufficient force, and the officer commanding his boat pushed off suddenly, when the life of captain Cook was dependent upon his being able to reach it. He was compelled to fire more than once on the natives, who struck him to the ground with a club, and despatched him afterwards with their spears.

His death took place February 14th, 1779 ; and his remains were recovered without difficulty. On the tidings of his fate reaching Europe, the highest public honors were paid to his memory not only at home, but by foreigners. A medal commemora- tive of his discoveries was struck by the Royal Society ; his eulogy was pronounced in the Flo- rentine Academy, and was made a prize subject by one of the French scientific societies : and the government bestowed pensions on his widow and three sons. Many designs were proposed to the Royal Society on this occasion ; but the following was preferred and struck. On one side was the head of captain Cook in profile, with this inscription round it, JAC. COOK OCEANI INVESTIGATOR ACERRiwtus; and on the exergue, REG. Soc. LOND. socio suo. On the reverse is a representation of Britannia holding a globe, with this inscription round her, NIL INTENTA- TUM NOSTRI LTQTJERE; and on the exergue, Au- SPICIIS GEORGII III.

Captain Cook may be ranked among the few popular men who have not been over-rated by an admiring country. Neither in his attachment to his profession, nor his nautical skill, has any Bri- tish commander ever exceeded him. His per- sonal intrepidity, his perseverance, his prompti- tude, and his humanity and equanimity of temper, were also remarkable : while in addition to these important qualities he possessed a respectable fund of general scientific knowledge, was unas- suming but frank in his manners, and of a most excellent private character. The more detailed results of his voyages have become, of course, matter of history, and will be found in our de- scriptions of the various portions of the globe which he visited.

COOKA, OAR, a country of central Africa, supposed to be the same described by the Ara- bian geographers under the name of Cauga, and situated on or near the banks of the Bahr el Fittre.

COOKE (George Frederick), a popular the- atrical performer, was born in Westminster, April 17th, 1756. His father was an officer in the army, who, dying young, left his wife in difficulties. Removing to Berwick -upon-Tweed, she apprenticed her son to a printer; but his genius spurned the trammels of business, and he was perpetually engaging his companions to assist in theatrical performances. His inden- tures in consequence of this were soon cancelled ; and he was now tried in the navy ; but from this he also broke away to join an itinerant company of actors. He became the hero of the scene at York, Newcastle, Chester, Manchester, and Liverpool, successively ; acquired so much no- tice, that in 1794 he was engaged by the manager of the Dublin theatre, with which he continued connected until October 1800, when

he first appeared in London at Covent Garden theatre, in the character of

Richard III. His reputation was at once established, and after several times repeating the part of Richard III. he acted Iago, Macbeth, Shylock, Sir Giles Overreach, Sir Pertinax Macsycophant, Kitely, &c., with at least equal applause. Intem- perance, however, ultimately destroyed his po- pularity. He became the plague and terror of English managers, and removed to the United States, where he displayed the same powerful abilities, and the same vicious weakness, until death, accelerated by intemperance, put an end to his career, March 25th, 1812. He married Miss Daniels, a singer of considerable talents, whom he is said to have treated with great cru- elty, and from whom he was separated in July 1801, by the ecclesiastical court.

COOK'S BAY, a bay on the west coast of Easter Island, in the Pacific Ocean. Long. 109° 35′ W., lat. 27° 11′ S.

COOKS' COMPANY, one of the companies of the city London, in- corporated in 1481. Their coat of arms is emblazoned argent, a chevron engrailed, sable, between three columbines.

COOK'S RIVER, now Cook's Inlet, an exten- sive arm of the sea, which penetrates into the north-west coast of North America, between Cape Elizabeth and Point Banks, that is, be- tween long. 207° 9', and 207° 45′ E. of Green- wich, lat. 58° 42', and 59° 10′ N. Captain Cook sailed up this inlet seventy leagues without finding any termination, (see COOK), which in- duced him to think it was a river ; and it was long described as such by geographers. But the error was ascertained by the expedition of captain Vancouver in 1794, who explored it to its extremity, which he found to be in long. 148° 43′ W., lat. 61° 29′ N. The shores on both sides of this bay are regular and unbroken, and near the coast is a border of low land, covered with wood, which continues to grow some dis- tance up the mountains of the interior, which are wrapt in perpetual snow. West of the inlet, about seventy miles from its entrance, is a volcano, observed by Vancouver to emit large columns of pale smoke. As he advanced into this inlet his progress, in the month of May, was much impeded by ice. The inhabitants were similar in their manners and general appear- ance to those of Prince William's Sound.

COOK'S STRAIT, the strait which divides the two islands of New Zealand" in the South Pa- cific Ocean.

COOL, v. a. v. n.f n. s. & adj.] Anglo-Saxon, COOL-CUP, n. s. celan ; Germ.*

COOL-HEADED, adj. • kulen ; Dutch,

CO'OLER, n. s. -koelen; Swed.

CO'OLISH, adj. kyla. To cool

CO'OLLY, adv. is, to reduce

CO'OLNESS, n. s. J the quantity of

heat in any substance. Thence, metaphorically, to appease passion ; to moderate z«al ; to become less pleased with ; less anxious to obtain or accomplish some object. When used with reference

coo

to the diminution of temperature, cool implies, the presence of a small remaining portion of warmth ; that the substance approaches to cold- ness, but is not positively cold. Figuratively, it signifies, luke-warm; wanting in zeal ; having entire self-possession. Cooler is, that which can reduce the heat of the body ; a vessel in which any thin? is cooled, particularly a vessel in which wort is cooled by the brewer. Coolness is, moderate cold ; incipient rupture of friend- ship. Coolly is, without passion or violent emotion. The vulgar phrase of to cool the heels, means, to keep waiting.

And they heard the voice of the Lord God walking in the garden in the cool of the day. Genesis iii. 8. And he cried and said, Father Abraham, have mercy on me, and send Lazarus, that he may dip the tip of his finger in water, and cool my tongue ; for I am tormented in this flame. Luke xvi. 24.

Sittith thou there, my brother John, Tho seide Gamelyn, Fo to colin thy hotte bodie ,

As I did cote myn. Chaucer. Cant. Tales.

Why takest not of that same fruit of gold ? Ne sittest downe on that same silver stoole To rest thy weary person in the shadow coole ?

Spenser. Faerie Queene. My lord Northumberland will soon be cooled.

Shakspeare. Henry IV.

My humour shall not cool ; I will incense Ford to di'al with poison ; I will possess him with yellowness.

Shakspeare. Merry Wives of Windsor.

This difference consisteth not in the heat or coolness

of spirits ; for cloves and other spices, naptha, and

petroleum, have exceeding hot spirits, hotter a great

deal than oil, wax, or tallow, but not inflamed.

Bacon's Natural History.

The toad loveth shade and coolness. Id.

In dogs or cats there appeared the same necessity

for a cooler as in man. Harvey on Consumptions.

They parted with such coolness towards each other,

as if they scarce hoped to meet again. Clarendon.

Yonder the harvest of cold months laid up, Gives a fresh coolness to the royal cup ; There ice, like crystal, firm and never lost. Tempers hot July with December's frost. Waller. You never cool while you read Homer. Dry den. The sheep enjoy the coolness of the shade.

Id. Virgil.

He set his leg in a pail-full as hot as he could well endure it, renewing it as it grew cool. Temple.

Snow they use in Naples instead of ice, because, as they say, it cools or congeals any liquor sooner.

A ddison on Italy.

He will keep his jealousy to himself, and repine in private, because he will be apt to fear some ill effect it may produce in cooling your love to him.

Id. Spectator.

Philander was enjoying the cool of the morning,

among the dews that lay on every thing about him,

and that gave the air a freshness • Id. on Med.

Jelly of currants, or the jelly of any ripe subacid

fruit, is cooling, and very agreeable to the stomach.

Arluthnot on Diet. Acid things were used only as coolers.

Id. on Aliments.

Motives that address themselves coolly to our reason, are fittest to be employed upon reasonable creatures.

Atterbury.

I'm impatient till it be done ; I will not give my- self liberty to think, lest I should cool.

Conyreve'i Old Bachelor.

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Had they thought they had been fighting only other people's quarrels, perhaps it might have cooled their zeal. Swift.

Your first wort being thus boiled, lade off into one or more coolers, or cool-backs, in which leave the sul- lage behind, and let it run off fine.

Mortimer' Husbandry.*

Coolers are of two sorts ; first, those which produce an immediate sense of cold, which are such as have their parts in less motion than those of the organs of feeling ; and secondly, such as, by particular viscidity, or grossness of parts, give a greater consistence to the animal fluids than they had before, whereby they can- not move so fast, and therefore will have less of that intestine force on which their heat depends. The former are fruits, all acid liquors, and common water ; and the latter are such as cucumbers, and all sub- stances producing viscidity. Quincy.

She in the gelid caverns, woodbine wrought, And fresh bedewed with ever-spouting streams, Sits coolly calm. Thomson's Summer.

These are the sober, in whose cooler brains Some thought of immortality remains ; The rest too busy or too gay to wait On the sad theme, their everlasting state, Sport for a day, and perish in a night, The foam upon the waters not so light. Cowper.

Green balks and furrowed lands, the stream that

spreads

Its cooling vapour o'er the dewy meads, Downs that almost escape the' inquiring eye, That melt and fade into the distant sky, Id.

COOM, n. s. Fr. ecume. Soot that gathers over an oven's mouth ; that

matter that works out of the wheels of carriages ; it is used in Scotland for the useless dust which falls from large coals.

COOMB, or COMB, n. s. Fr. comble ; Lat. cumulus. A heap ; a measure of corn containing four bushels.

COOMB, n. s. Ang.-Sax. comb. A narrow valley enclosed on either side with hills.

COOM BE (William), a miscellaneous author of respectable powers, was born at Bristol in 1741. His father was a considerable merchant, and in 1777 stood candidate for the city, but died during the canvas. Mr. Coombe was educated at Eton and Oxford ; after which he is said to have dissipated a handsome fortune iu fashionable pursuits. His first publication was a satire entitled the Diaboliad ; but he did not affix his name to this performance ; nor indeed to any of his numerous publications. His next and most voluminous work was The Devil upon Two Sticks in England, 4 vols. 12mo., published in 1790, and reprinted 1810. In 1810 also ap- peared Dr. Syntax's Tour in Search of the Pictur- esque. It was inserted in the Poetical Maga- zine, then in course of publication at Mr. Ackermann's; and written, as the writer of this paper has heard the ingenuous author declare, according as the fancy of the artist (Rowlandson), who supplied the decore-.ions, suggested topics to his mind. Mr. Coombe regularly pinned up the sketch against a screen of his apartment in the king's bench, and wrote off his verses as the painter wanted them. The second part of the Diabolic1 now made its appearance, and two further ex pi ditions of Dr. Syntax ; but they were the efforts of a jaded muse. In 1812 Mr. Ackermann published a history of Westminster A!>bry, in

2 vcvs. 4to, by Mr. Coorabe, who also was a principal contributor of essays, short pieces, illustrative of engravings, &c. to many of his miscellanies. He also claimed the authorship of the Letters that pass under the name of Lord Littleton.' His last poem was the History of Johnny Quae Genus. Mr. Coombe, as we have noticed, was fashionable and dissipated in youth; and became an inmate, in consequence, of the king's bench prison and its rules for upwards of twenty years, we believe. He stated indeed that a portion of this restraint was voluntary, and with a view to secure some property to a younger branch of his family. But he was always cheerful, gentlemanly, and interesting in his conversation. During the last years of his life, literature was his principal support. His death took place in his eighty-second year, at his lodgings in Lambeth-road, June 18th, 1823.

COOP, v. a. & n. s. } Icel. kuppa; Swed.

CO'OPER, n. s. > kopp ; Dutch kuype ;

CO'OPERAGE, n. s. J Ang.Sax. cyf. That which keeps or holds : a barrel ; a cage ; a pen for animals. To coop, therefore, is to pen up ; to circumscribe ; to enclose. It is mostly used with the intensitive particle up, and generally implies somewhat of close restraint. A cooper is a man who makes that sort of coops called bar rels, casks, &c. ; and a cooperage is a place in which he carries on his trade; also the price paid for his work.

That pale, that white-faced shore, Whose foot spurns back the ocean's roaring tides, And coops from other lands her islanders.

Shakgpeare. King John.

The Englishmen did coop up the lord Ravenstein, that he stirred not ; and likewise held in strait siege the town. Bacon.

Gracchus was slain the day the chickens refused to eat out of the coop ; and Claudius Pulcher underwent the like success when he contemned the tripudiary augurations. Brown,

The contempt of all other knowledge, as, if it were nothing in comparison of law or physick, of astrology or chymistry, coops the understanding vp within nar- row bounds, and hinders it from looking abroad into other provinces of the intellectual world. Locke.

They are cooped in close by the laws of their coun- tries, and the strict guards of those whose interest it is to keep them ignorant. Id.

There were a great many crammed capons together in a ooop. L' Estrange.

In the taking of a town the poor escape better than the rich ; for the one is let go, and the other is plun- dered and cooped up. Id.

Twice conquered cowards, now your shame is

shown,

Cooped up a second time within your town ! Who dare not issue forth in open field.

Dryden's JEneid.

The Trojans cooped within their walls so long, Unbar their gates, and issue in a throng. Id.

What ! coop whole armies in our walls again ?

Pope.

Societies of artificers and tradesmen, belonging to gome towns corporate, such as weavers and coopers, by virtue of their charters, pretend to privilege and jurisdiction. Child.

Tis the cruel gripe, That lean, hard-handed Poverty inflicts,

The hope of better things, the chance to win, The wish to shine, the thirst to be amused. That at the sound of winter's hoary wing Unpeople all our counties of such herds Of fluttering, loitering, cringing, begging, loose And wanton vagrants, as make London, vast And boundless as it is, a crowded coop. Cowper.

COOPE'E, n.s. Fr. coupe. A motion in dancing.

COOPER (Anthony-Ashley), first earl of Shaftes- bury. See SI! AFTESBURY.

*COOPER (John Gilbert), a celebrated author of the last century, was born in 1723; and de- scended from an ancient family in Nottingham- shire. He resided at Thurgarton priory, which was granted by king Henry VIII. to William Cooper, one of his ancestors. After studying under Dr. John Nicoll, at Westminster school, he became in 1743, a Fellow Commoner of Trinity College Cambridge ; but quitted the university on his marriage with Susanna the daughter of William Wright, Esq., recorder of Leicester. In 1745 he published the Power of Harmony, a poem in4to; and in 1746, and 1747, several essays and poems, signed Phila- lethes, in Dodsley's museum. With the assis- tance of the Rev. John Jackson of Leicester, he published w ith his name, The Life of So- crates, collected from the Memorabilia of Xeno- phon and the Dialogue of Plato, and illustrated by Aristotle, Diodorus Siculus, Cicero, &c. 1749, 8vo. In 1754 appeared his Letters on Taste, 8vo ; an elegant volume, on which no small share of his reputation is founded ; and in 1755, The Tomb of Shakspeare, a Vision, 4to. In 1756 he assisted Moore in the publi- cation of The World ; and attempted to rouse the indignation of his countrymen against the Hessians, then brought over to defend the na- tion, in a poem called the Genius of Britain, addressed to Mr. Pitt. In 1758 he published Epistles to the Great, from Aristippus in Re- tirement, 4to. ; and The Call of Aristippus, Epistle IV., to Mark Akenside, M.D. Also, A Father's Advice to his Son, in 4to. In 1759 followed Ver Vert; or, the Nunnery Parrot ; an Heroic Poem, in four cantos, inscribed to the abbess of D * * *, 4to ; and, in 1764, Poems on Several Subjects, by the author of the Life of Socrates ; with a prefatory Advertisement by Mr.*

Dodsley. He died at his father's house in May-fair, after a long and excruciating illness arising from the stone, April 14th, 1769.

COOPER (Samuel and Alexander), two emi- nent English miniature painters. Samuel was born in 1609, and bred under his uncle John Hoskins. He derived, however, his principal excellence from studying the works of Van- dyke. His pencil was chiefly confined to the head, in which, with all its dependences, espe- cially the hair, he was inimitable. He died in 1672; and his pieces are universally admired all over Europe, selling for incredible prices. His brother, Alexander, became limner to Christina queen of Sweden.

COOPER, in geography, a large navigable river of the United States, which joins the Ashley, below Charleston city in south Carolina. These form a spacious and convenient harbour,

*which communicates with the ocean, just below Sullivan's Island, which it leaves on the north seven miles south-east of the city. In these rivers the tide rises six feet and a half. T*he Cooper is a mile wide at the ferry, nine miles above Charleston.*

COOPER, KING'S, an officer in every custom- house and excise office.

COOPERS, COMPANY OF THE MASTERY OF, was incorporated in 1530. Their coat of arms is emblazoned ; party per palegu/e and or a chevron between three hoops in a chief azure.*

COO'PERATE, v. a.ˆ Fr. coopere r ; Ital.

COO'PERATION, n. s. t coopcrare ; Sp. coupe-

COOPERATIVE, ad;. \rar; Lat. cooperare.

COO'PERATOR, n. s. i To labor in conjunc-

COO'PERANT, adj. J tion with to the same

end ; to concur with another person or thing in

producing the same effect. It has with before

the agent, and to before the end. Conjunct

labor employed to one purpose.

It puzzleth and perplexeth the conceits of many, that perhaps would otherwise cooperate with him, and makes a man walk almost alone to his own ends.

Bacon.

We might work any effect without and against matter ; and this not holpen by the cooperation of angels or spirits, but only by the unity and harmony ••f nature. Id. Natwal History.

COOPERATIVE SOCIETIES. For several years there has been a society in London for the pur- pose of encouraging the formation of working communities among the labouring classes ; they published the Cooperative Magazine, and, about three years ago, a few intelligent and industrious workmen at Brighton formed the Brighton co- operative society. " Wages," say the coopera- tives, "have been and are continually diminish- ing. The independent day-labourer has almost ceased to exist ; the country labourer can seldom live without parish aid ; the mechanic begins to find himself in the same situation. Machinery, which multiplies the products, has diminished the demand for workmen, and, in consequence, tlieir wages. The whole secret of the remedy lies in this, that the labourers do not work for themselves, but for the capitalists : if they could work for themselves, they would get the whole produce of their labour, of which they now get only an eighth, or, at most, a fourth. To do this, they must have capital, which must be ob- tained by union and saving. Societies may be formed, each member of which pays a small periodical subscription. Instead of putting this out in savings-banks, or investing it in different securities, which yield a small interest, because the capital is employed by others, who must have their profits from it, let the workmen employ themselves on this capital, and thus obtain the whole produce of it themselves."

COOPERING is the art of manufacturing and keeping in repair casks and other vessels used for manufacturing, containing, and transporting vari- ous kinds of liquids. It must have been a trade almost coeval with the dawn of history, it being of the very first necessity ; for, humble as it seems,

the art of coopering has enabled .mn .0 possess and retain the richest viands of foreign climes : it promotes and facilitates the export and impoit of the 'produce of distant countries : it has, there- fore, enriched the merchant, supplied the wants and luxuries of the people, augmented the public revenue of all civilised countries, and given spirit to navigation. It is impossible, in reflect- ing on the utility of this trade, not to feel that it contributes a much greater quota of the neces- saries and comforts of life,

than it at first appears to do.

The trade in London is divided into several ramifications, and the persons carrying it on, as well as the journeymen, are confined to their res- pective departments. 1. The butt-cooper is en- gaged in manufacturing all kinds of casks for breweries, &c. also puncheons and hogsheads for distilleries. His working tools are but few in number ; the first, an adze, similar to the same tool made use of by carpenters,, except that the handle is shorter, being only about ten inches long : he has also an axe, and, with this and the adze, he reduces the staves to the form he wishes. He has also a bench, consisting of a piece of simple plank, and generally four or five feet long, and one foot wide, standing on four feet, raised to about two feet high at one end, and eighteen inches at the other, forming an in- clined plane on its top. There are a stop and two upright keeps at each end of the top of the bench, which serve the purpose of keeping the stave firmly on it, in the operation of jointing. Their planes consist of two or three only, called join- ters, similar to the same kind of tool used by joiners. The butt-cooper's is from three to four feet long, with which he makes all his joints ; it requires to be kept in good order, and to be ex- actly true on its face, the mouth of the plane small, and the iron thin and sharp.

The shave, a machine similar to a tool called a spoke-shave, is of rather larger dimensions ihan the common one used by carpenters. But coopers use them of various sizes. It is a shar- pened piece of hardened metal, with two legs let into a small block of beech wood, rounded on the face, and shaped at the ends so as to be held in the hand by the workman ; the iron is sharpened as planes are, and it is fixed in the stock by two small wedges. With this tool the cooper smooths and finishes the inside and outside of all his casks, rounds and shapes their edges, and, in fine, finishes his work for use. The tool called a tooth, commonly, the old woman's tooth, is made not unlike the shave, except the iron which is in fact the tooth. It is very narrow and sharp, approaching an arris, and is used for making grooves round the top and bottom of the staves, to receive the ends of the cask. They use also a series of bits, called centre and doweling bits ; the former for making perforations to insert cocks and other conveniences for filling or empty- ing casks ; the latter for boring the edges of two opposite joints, in the tops and bottoms of ves- sels requiring to be doweled together.

Doweling is no more than fixing oaken pins in the joints ; and is made use of only in large vessels, to prevent the joints from swaggingfrom their places ; it is of the greatest utility, and a

good cooper never neglects it ; it is con- fined to the tops and bottoms only. A hoop, technically, is to the cooper a model, into which he fits all his staves ; this model or hoop is of ascertained dimensions, and is as various as the numerous different vessels made use of: for in- stance, they have a hoop for butts, hogsheads, puncheons, barrels, and all other casks required for the different quantities of liquids to be vended at a butt-coopery, on a large scale. These are laid down, and the work is divided among the most expert in their several ways.

Some men are employed in hewing the staves, and reducing them to their lengths ; others in jointing and fitting them into the hoop; and some in preparing the tops and bottoms ; while others are cleaning and smoothing the staves to receive the ends and final hooping. The staves made use of by the butt-cooper, are invariably of oak, and until very lately were wholly imported from the Baltic, and sold in the market by a mer- chant, called the stave merchant. The staves are imported in the several lengths required, and sold by the thousand, under the following designations, viz. pipe staves about five feet six inches long, two inches thick, and six inches wide ; hogshead staves four feet long ; barrel staves three feet six inches long. There are also to be met with, long and short headings ; the former run about thirty inches in length, and the latter from twenty to twenty-four inches ; these various staves are found to meet most of the required purposes of coopery. The retail dealer sorts and divides them for the consumer into the best pipe staves, seconds, &c. and the same to the hogshead, and barrel staves. The headings are sold generally as imported ; Dantzic and Hamburgh staves are considered the best; although great quantities are imported from Riga, Memel, and Konigs- berg. When all communication with the Baltic was stopped in the late war, staves rose as high as £500 per thousand, and the smaller in proportion. This gave rise to the introduction of staves from Canada f which soon superseded the necessity of the importation from the Baltic; and there is now in the market, from our own possessions in Ame- rica, abundance of all descriptions, sold at two- thirds the price of those from the Baltic : they ate, however, not found to be so durable, but they work better, and make a neater article.

Iron, the cooper is not in need of, because its place can be supplied with other materials, ex- cept for his working tools. But England abounding in iron, it is found economical to make our hooping of that metal. Iron hoops are ob- viously the best for the butt-cooper, whose staves are usually ef good substance ; but in cases in which the staves are thin, iron hoops should be avoided, or at least but partially employed. The oxide of iron, of which these hoops supply abun- dance, commonly known as rust, eats away and destroys the wood with which it comes in contact, as well as the hooping itself. Foreign casks are seldom bound by iron ; not always from

the want of the metal, but from fancy- ing that it may be injurious to their contents ; it is particularly avoided in France, and in- deed, in all wine countries : in France the best cooperv is practised. The hooping is sold,

as most iron work usually is, by the hundred, in various lengths, previously wrought in a mill at the furnaces, of great variety of thickness. It is cut by the cooper to the length he requires to hoop his butts, or other vessels, punched at the lap, and cold ri vetted. Previously to putting on the hooping, the staves are dried, either by being exposed to an open fire, or in kilns ; the latter is now the most approved in large manufactories.

2. The rundlet-cooper carries on a second branch of this trade ; he makes use of all the tools used by the butt-cooper, except that his collection may be on a smaller scale. This manufacturer makes the bottles of various small contents for the use of the distiller, who sends out his spirits in them, consisting of bottles, from one gallon and upwards to twenty gallons ; he uses the long and short headings, which he rends into two or more in thickness, according to the substance required in his bottles. This is an ex- tensive branch of business,

3. The dry-cooper finds his employment in manufacturing hogsheads, and casks for contain- ing every kind of dry produce : the leading fea- ture of the employment in his line, is the making of hogsheads for sugar. His tools are of the same description as before named, but he works the staves out of all kinds of wood, and is not obliged to be so neat in his fittings, as the butt rundlet coopers. It is an extensive line of business at all sea-ports, in which great exports are constantly making : he supplies casks to pack the supplies in, of all dry articles, for both army and navy, as clothing and hats; besides military stores, which are, for convenience, usually packed in casks. His business is also extensive in supply- ing suitable and secure vessels for the apothe- cary general to the army, whose medicines are forwarded in a dry state, securely enclosed in casks, prepared by the dry-cooper.

4. The white-cooper manufactures all such domestic utensils as are used in private brewing, washing and dairies ; such as churns pails, and every convenience required for the multiplied purposes of our domestic economy. At the white-coopers is to be fouud the most extensive employment of the staves called long and short headings. He proceeds in the manufacturing of his goods in a similar way to the butt-cooper; but rends his staves into several thicknesses, in order to make his articles lighter, and better adapted to their required purposes. He makes use of many different kinds of hoops ; buying the iron hoops by weight, ready milled and fit for use; he having only to fit and cold rivet them on all his vessels bound by iron hooping. Many of the articles manufactured by this tradesman, are secured by wooden hoops ; for instance, all tubs used in laundries and dairies; these,

known to the trade by the name of white hoops, are gene- rally rended out of ash wood. The white-cooper, to accommodate the housekeeper, usually keeps a shop, at which may be found exposed for sale, various articles required in domestic con- cerns. In London, to this branch of coopery, is sometimes added turnery, which, in a retail shop, supplies all kinds of brushes and baskets, with many other articles both tonvenient and useful.

5. The wine-cooper is a person employed in

drawing off, bottling, and packing wine, spirits, or malt liquor. In tendon, many persons follow this business only, and keep in their employ se- veral assistants. It is common for persons of the first consequence to employ the wine-cooper to take charge of their wines. He has stipulated prices for all he does, charging his bottling off by the pipe, half-pipe, or as it may happen; he keeps a working butt-cooper in his employ to re- pair and job in the upholding, and supporting, the several casks in which wine and spirits are contained.

Under the trade of the Cooper, may also be included the manufacture of canteens, or those small vessels of wood in which soldiers, when on their march, or in the field, carry their liquor. These were formerly made of tin, but the use of wooden canteens has for some time been general in the British armies. They are made, in shape, very like barrels, cylindrical, seven inches and a half in diameter, and four inches long on the outside, holding three pints- These vessels have for several years been manufactured on a large scale at the Ordnance Wharf, Westminster Bridge. The wood made use of is the best foreign oak, and Mr. Smart, of the above wharf, has obtained his majesty's letters patent, for an improved me- thod of preparing timber, so as to prevent its shrinking.

*The manufacturing of backs and vats for brewers and distillers does not necessarily belong to coopering, it being a distinct branch of trade, and performed by persons called back and vat- makers : they work in English oak commonly, and take care to select that which is "soundest and freest from knots, and saw it out into two inch, two and a half, and three inch planks, which are laid by for seasoning. We *dd a few particulars of this art as having grown out of that of which we have just treated. Carpenters work at this business, as the machines are of all shapes ; for instance, the coolers for breweries are commonly oblong squares, and are made by this*

tradesman. The only particulars required in making good coolers, is that the sides be adequately strong, the joints well fitted, and the whole not too deep. The sides of a cooler of ordinary dimensions, should be at least two inches and a half thick; the joints should be well ploughed and tongued ; the bottoms should be jointed in a similar way, and these will require doweling ; the ends are grooved into the sides ; and the whole is spilled together with iron pins. These vessels are some- times scorched or charred in their insides, for the double purpose of preventing their decay, and also the too rapid acidity of the liquor exposed to cool in them. Mash-tuns, the under and jack backs, working tuns, and store vats, for the still and brewhouse, are best manufactured at the back-makers, as every thing he does is on a large scale. He keeps materials better adapted to the purpose than can be found at the butt-coo- pers. The above vessels are usually made round ; and they are prepared in a similar man- ner to those of the butt-maker, except that their staves are generally of English oak. Some of these vats are immense, particularly those called store vats, containing from twenty to thirty butts and upwards; the hoops are necessarily of iron, very

strong, and frequently joined by a nut and screw rivet, which allows of removal in case of repair and accident.

COOPER'S ISLAND, one of the lesser Virgin Isles, in the West Indies, situated south-west of Ginger Island, and uninhabited. It is five miles long and one broad. Lat. 18° 5 N., lono- 63° 57′ W.

COOPER'S TOWN, a post-town of New York, in Otsego County, and the chief town of the country round Otsego. It is pleasantly situated at the south-west end of the lake, twelve miles north-west of Cherry Valley, and seventy-three west of Albany. It is built on a plan regularly laid out in squares.

COOPER'S TOWN, a town of Pennsylvania, situated on the Susquehanna. Water is brought here from West Mountains, by a conduit of 470 pipes.

COO'PTATE, v. a. i Fr. coopter ; Lat. coop-

COOPTA'TIOV, n. s.) tare. To choose ; adop- tion ; assumption.

Dubication is the beginning of all knowledge : I confess this is true in the first election and cooptation of a friend, to come into the true knowledge of him by queries and doubts. Howel.

COO'RDAIN, v. a. ~\ Lat. con and ordi-

COO'RDIXATE, adj. I nare. To keep within

COO'RDINATELY, n.s. Vthe same limits, class,

COO'RDINATENESS n.s. I rank, or station. Co-

COO'RDINATION, n. s. J ordinate is holding

the same rank ; not being subordinate. Thus,

shell-fish may be divided into two coordinate

kinds, crustaceous and testaceous ; each of which

is again divided into many species, subordinate

to the kind, but coordinate to each other The

meaning of the kindred words is obvious.

In this high court of parliament there is a rare co- ordination of power, a wholesome mixture betwixt monarchy, optimacy, and democracy.

Hotcel'i Pre-eminence of Parliament. When these petty intrigues of a play are so ill ordered, that they have no coherence with the other, I must grant that Lysidius has reason to tax that want of due connexion ; for coordination in a play is as dangerous and unnatural as in a state.

Dryden on Dramatic Poesy.

The word Analysis signifies the general and particu- lar heads of a discourse, with their mutual connec- tions, both coordinate and subordinate, drawn out into one or more tables. Watt,*

COORG, a district of Southern India, in the Western Ghauts, situated between the province of Mysore and Malabar. Its chief produce is spices, sandal-wood, teak-timber, and rice. The woods abound with elephants and wild beasts. Considerable importations of rice have lately been made from this district into the Mysore. Here the river Cauvery has its source, but Coorg contains scarcely any towns. The rajah and his family reside in the fortress of Mercara. The rajahs are mentioned as independent princes by Ferishta in 1583, and the present family have reigned since the year 1632. They are of the Nair caste, and the sovereign is termed the Vir Rajah. One of the rajahs formerly made a hedge and ditch along his whole eastern boun- dary ; and they retained their independence till the year 1773, when Hyder Ali subjugated them.

COP

Tippoo ordered the royal family lo be removed from Bednore to the fort of Periapatam ; whence the rajah escaped in the year 1788, and, by the assistance of a few brave subjects, expelled the armies of Tippoo from Coorg. Opportunely for this prince the British, in the year 1791, declared war against Tippoo, and, as he enabled general Abercrombie's army to reach Mysore, lord Corn- wallis insisted, as one of the articles of peace with Tippoo, that he should relinquish all so- vereignty over Coorg, and include it in the ceded territories. The rajah of Coorg afterwards co-operated with the British army under general Staart; and, on t-he downfal of Tippoo, was guaranteed the free and uncontroled management of his territory.

COOT, n. s. Fr. cotee ; Dut. maer-koet. A small black water-fowl, seen often in fens and marshes.

A lake, the haunt Of coots, and of the fishing cormorant*

Dryden's Fables,

COOTE (Sir Eyre), an eminent British ge- neral, was born in 1726. In 174,5 he served in Britain against the rebels ; and, in 1756, went out to the East Indies, where he distinguished himself in many important actions, particularly at the siege of Pondicherry, for which he was presented with a diamond-hilled sword by the directors of the East India Company. In 1769 he was made commander-in-chief of the Com- pany's forces ; but about the end of the following year he quitted Madras, and returned to England, where he was appointed governor of Fort St. George, and made knight of the Bath. In 1781 he went again to India, as commander-in-chief, and, in the following year, with 10,000 men, de- feated Hyder AH at the head of 150,000. Sir Eyre Coote died at Madras in 1783, and his body was brought to England, and interred at Rockwood, in Hampshire. The East India Company erected a fine monument to his me- mory in Westminster Abbey.

COOTS, or COOTSTOWN, a town of Pennsyl- vania, in Berks county, situated on a branch of Sauhoca Creek, seventeen miles N.N. E. of Reading, and north-west by north of Phila- delphia.

COP, n.s. Ang-Sax. cop; Dut. kop ; Ger. kopf; Wei. coppa ; Ital. copo ; Lat. caput . The head; the top of any thing; any thing rising to a head ; as a cop, vulgarly cock, of hay ; a cob- castle, properly cop-castle, a small castle, or house on a hill ; a cob of cherry-stones, for cop, a pile of stones

one laid upon another; a tuft on the head of birds.

Tho gan I on this hill to gone, And found upon the coppe a wone.

Chaucer. The House of Fame. His bcrd as any sowe or fox was rede, And thereto brode as though it were a spade, Upon the cop right of his nose he hade. A wert, and thereon stode a tufte of heres Rede as the bristles of a sowes eres.

Id. Prol. to Cant. Tales.

COPAIBA, or balsam of copaiba, a liquid resinous juice, flowing from incisions made in the trunk of the copaifera balsamum. It is

transparent, of a whitish or pale-yellowish color, an agreeable smell, and a bitterish pungent taste. It is usually about the consistence of oil, or a little thicker : when long kept, it becomes nearly as thick as honey, retaining its clearness; but does not grow dry or solid, as most other resinous juices do. There is, indeed, a thick sort of balsam of copaiba, which is not transparent, and generally has a portion of turbid water liquor at the bottom. This sort is probably either adul- terated by the mixture of other substances, or has been extracted by coction from the bark and branches of the tree: its smell and taste are much less pleasant than those of the genuine balsam. Pure balsam of copaiba dissolves en- tirely in rectified spirit, especially if the men- struum be previously alkalised : the solution has a very fragrant smell. Distilled with water, it yields a large quantity of a limpid essential oil ; and in a strong heat, without addition, a blue oil. The balsam of copaiba is a useful corro- borating detergent medicine, accompanied with a degree of irritation. It strengthens the nervous system; in large doses proves purgative, pro- motes urine, and cleanses and heals exulcerations in the urinary passages. Fuller observes, that it gives the urine an intensely bitter taste, but not a violent smell as the turpentines do. This balsam has been principally celebrated in gleets and the fluor albus, and externally as a vulne- rary. The dose rarely exceeds twenty or thirty drops, though some direct sixty or more. It may be taken in the form of an elaeo-saccharum, or in that of an emulsion, into which it may be reduced by triturating it with almonds, or rather with a thick mucilage of gum arabic, till they are well incorporated, and then gradually adding a proper quantity of water.

COPAIFERA, in botany, a genus of the mo- nogynia order, and decandria class of plants. There is no calyx ; there are four petals ; the le- gumen ovate ; one seed with an arillus. We know but of one species, viz. C. balsamum. This tree grows near a village called Ayapel, in the province of Antiochi, in the Spanish West Indies, about ten days journey from

Carthagena. Great numbers of these trees grow to the height of fifty or sixty feet. Some of them do not yield any balsam ; those which do, are distinguished by a ridge which runs along the trunks. They are wounded in the centre, and calabash shells, or other vessels, are placed at the wounded parts to receive the balsam, which flows wholly out in a short time. One of these trees will yield five or six gallons of balsam : but though they will thrive well after being tapped, yet they never afford any more balsam.

COPAL, gum copal, is a gum of the resinous kind, brought from New Spain, being the con- crete juice of the rhus copallinum, which grows in these parts. See RHUS. It comes to us in irregular masses, some of which are transparent, and of different shades, from a light yellow to a deep brown. Some pieces are whitish and semi- transparent. To the smell it is more agreeable than frankincense; but has neither the solubility in water common to gums, nor in spirit of wine common to resins. By these properties it re- sembles amber; which has induced some to

think it a mineral bitumen resembling that sub- stance. In distillation it yields an oil, which is indissoluble in spirit of wine. Copal itself is soluble in the essential oils, particularly in that of lavender, but not easily in the expressed ones. It may, however, be dissolved in linseed- oil by digestion, with a heat very little less than is sufficient to boil or decompose the oil. This solution, diluted with spirit of turpentine, forms a beautiful transparent varnish, which, when properly applied, and slowly dried, is very hard and durable. This varnish is applied to snuff-boxes, tea-boards, and other articles. It preserves and gives lustre to paintings, and greatly restores the decayed colors of old pictures, by filling up the cracks, and rendering the surfaces capable of reflecting light more uni- formly .

COPA'RCENER, n. s.\ Lai. con and par

COPA'RCENERY, n. s. I tlceps. Coparcener

COPA'RCENY, n. s. \ is denned in the

COPA'IITNER, n. s. I quotation from Cow-

CO'PA'RTNERSHIP, n. s. y ell. Coparcenery is

joint succession. Coparceny, an equal share of

coparceners. A copartner is a joint partner ; one

who is in partnership with others.

Coparceners are otherwise called parceners ; and, in common law, are such as have equal portion in the inheritance of the ancestor. dwell.

This great lordship was broken and divided, and partition made between the five daughters : in every of these portions, the coparceners severally exercised the same iurisdiction royal, which the earl marshal and his sons had used in the whole province.

Davics on Ireland.

In descent to all the daughters in coparcenery, for

want of sons, the chief house is allotted to the eldest

daughter. Hate's History of Common Law.

In casq the father left only daughters, the daughters

equally succeeded to their father, as in copartnership.

Id.

So should I have copartners in my pain ; And fellowship in woe doth woe assuage.

Shakspeare. Rape of Lucrece. Our faithful friends, TV associates and copartners of our loss.

Milton's Paradise Lost.

Shall I to him make known As yet my change, and give him to partake Full happiness with me ? Or rather not ; But keep the odds of knowledge in my power, Without copartner ? Id.

Rather by them

I gained what I have gained, and with them dwell Copartner in these regions of the world.

Id. Paradise Regained.

CO'PATAIN, adj. From cop. High raised ; pointed.

Oh, fine villain ! a silken doublet, a velvet hose, a scarlet cloke, and a copatain hat.

Shakspeare. Taming of the Shrew,

COPE, v. a., v. n. & n. s. 2 Ang.-Sax. coappe.

CO'PING, n. s. 5 Cope, as a noun,

means any covering for the head, but this sense is obsolete ; a sacerdotal cloak ; any thing which is expanded over the head ; as the concave of the skies. The verb, in the sense of to contend, to struggle, to strive, says Johnson, ' is a word of doubtful etymology. The conjecture of Junius VOL. VI.

derives it from koopen, to buy, or some other word of the same import : so that to cope with, signifies to interchange blows, or any tiling else with another.' It ha also been derived from KOTTTto ; coedo, percutio. Mr. Todd, however, observes, that ' it may, with as much propriety, be referred to cop, the head ; and so imply, to make head against ; like the French expression, faire tote a quelqu'un.' Cope has, besides, the various meanings, to cover, as with a cope ; to reward; to interchange kindness with ; to em- brace. In the last three senses it is disused. Coping is the upper tier of masonry which covers the wall ; that is, the cop, or head of the wall. See COP.*

All these were of costly stones, even from the foundation unto the coping. 1 Kings vii. 9.

For there was he nat like a cloisterere, With threadbare cope, as is a poure scolcre, But he was like a maister or a pope.

Cliaitcer. Prol. to Cant. Tales, All these things that are contained Within this goodly cope, both most and least, Their being have, and daily are increast. Spenser.

Know my name is lost,

*By treason's tooth bare gnawn, and canker-bit; Yet am I noble as the adversary I come to c< *pe. Shakspeare. King Lear.*

I and iny friend

Have, by your wisdom, been this clay acquitted Of grievous penalties ; hi lieu whereof, Three thousand ducats due unto the Jew, We freely cope your courteous pains withal.

Id. Merchant of Venice. Let our trains

March by us, that we may peruse the men We should have coped withal. Id. Henry I V.

It is likely thou wilt undertake A thing, like death, to chide away this shame, That copes with death itself, to 'scape from it.

Id. Romeo and Juliet. Thou fresh piece

Of excellent witchcraft, who of force must know The royal fool thou cnpest with. Id. Winter's Tale

Thou art e'en as just a man, As e'er my conversation coped withal.

Id. Hamlet.

I will make him tell the tale anew ; Where, how, how oft, how long ago, and when, He hath, and is again to cope your wife.

Id. Othello. But Eve was Eve ;

This far his over-match, who, self-deceived, And rash, beforehand had no better weighed The strength he was to cope with, or his own.

Milton's Paradue Lost. Over head the dismal hiss Of fiery darts in flaming volleys flew, And flying vaulted either host with fire ; So, under fiery cope, together rushed Both battles main. Ia-

The scholar believes there i no man under the cove of heaven, who is so knowing as his master.*

Dryden.

They perfectly understood both the hares and the

enemy they were to cope withal. L' Estrange.

A very large bridge, that is all made of wood,

and coped over head, Addison on Italy.

Their generals have not been able to cope with the

troops of Athens, which I have conducted.

Id. Whig Examiner. 2 B

The coping, the modillions, or dentils, make a noble shew by their graceful projections.

Id. Freeholder.

Host coped with host, dire was the din of war.

Philips.

If the mind apply itself first to easier subjects, and things near a-kin to what is already known ; and then advance to the more remote and knotty parts of know- ledge by slow degrees, it will be able, in this manner, to cope with great difficulties, and prevail over them •with amazing and happy success. • Wattt on the Mind.

Such here the rage of Mars ; as, danger proof, The Greeks rushed on beneath their tortoise roof T» gam the wall : while some their ladders plant, Fenced by their lifted shields ; and climb, and pant, And grasp the battlements : the Trojans there Fight with the soul and weapons of despair. Beneath the cope of death, their hands employ Whatever chance affords them to destroy.

Symmons' JEneia.

COTEMAN, n. s. I Ang.-Sax. ceapman ;

CO'PESMATE, n. s. S Dutch koopman. Cope- man is a chapman. Copesmate is a companion; a friend : ' perhaps,' says Dr. Johnson, ' for cups- mate a companion in drinking, or one that dwells under the same cope, for house/ Mr. Todd suggests that it is rather from cope in the sense of exchange ; one who interchanges kindness with another.

Ne ever staid in place, ne spake to wight,

Till that the fox his copesmatc he had found.

Hubberd's Tale.

For ceapman we now say chapman, which is as much as to say, a merchant or copeman. Verstegan.

COPENHAGEN, formerly Kiobmandsharn, the merchant's harbour. The principal city in the Danish monarchy, is situated on the east 'coast of the isle of Zealand, in lat. 55° 41′ 4″ N., and long. 12° 34′ 15′ E. It is one of the best built cities in the world, and decidedly the handsomest in the north of Europe ; being about five miles in circumference, and fortified towards the land with regular ramparts and bastions. A broad, deep fosse surrounds the city, and on the sea-side it is defended by the Crown Battery. The citadel is situated on the north-east ex- tremity, and completes the fortifications of the town.

The first mention of Copenhagen in history occurs about the year 1048. At that time it was an insignificant place, principally occupied by fishermen. In 1168 the king of Denmark pre- sented this town to the celebrated bishop Ab- salon or Axel, who fortified the harbour, and built the castle of Axelhuus, to defend the coast against the bands of pirates who at that time infested the Baltic. On account of the protection which was thus afforded to the inhabitants, and the great convenience of its harbour, many other Zealanders were induced soon after to make it the place of their residence. It thus gradually increased, and in 1254 the city records represent it as surrounded by ditches, and well fortified. In 1284 it received new privileges; and, in 1443, was fixed upon as the place of residence by the Danish court. Like many other towns situate in a vicinity where timber is abundant, it was for many ages of its history constructed entirely of wood. In consequence of this, de-

structive fires were of very frequent occurrence ; in 1728, and 1794, 2600 private houses, besides churches, public buildings, &c. were consumed to ashes by dreadful conflagrations. From this latter period the erection of wooden houses was prohibited, and the great regularity of the city is chiefly attributable to this circumstance. Since the attack of the British in 1807 the fortifications have been greatly improved.

Copenhagen consists of the Old Town, the New Town, and Christian's Haven. Some of the streets are broad and well paved, whilst others are narrow and very inconvenient. The build- ings are chiefly composed of brick, or white cal- careous stone, but the public edifices of freestone or Norwegian marble. The city is in many parts intersected by canals which afford great facilities for the conveyance of goods. The division called the Old Town, which is in fact the most modern, having been built since the disastrous fires mentioned above, occupies the western divi- sion of the city, north of the harbour. It contains the ruins of the magnificent palace of Christians- burg, built by Christian VI., and is said to have cost him 6,000,000 of dollars. This superb structure was nearly destroyed in the fire of 1794, but enough of it remains to convey an idea of its stupendous

extent, and great magnificence. One of the wings remains entire, and is appropriated to the purposes of a national museum. It con- tains many very curious and interesting collections of animals, shells, minerals, paintings, antiquities, medals, dresses, and warlike and husbandry implements used by the Laplanders : it is well worthy the attention of the traveller. Nearly in the centre of the old town is situated the kon- gens nye torn, or king's new market : it is an irregular enclosure of great extent. A fine equestrian statue of Christian V. in bronze, deco- rates the centre of the area, and on one of its sides is the castle of Charlottenberg, formerly the residence of the queen, but now appropriated to the academy of the fine arts. This quarter con- tains also the observatory erected by Frederick V. for one of the disciples of Tycho Brahe. This building is particularly worthy of observation : it is constructed in a cylindrical form, and has a spiral carriage road, made of brick, to within twenty or twenty-five feet of the summit. The view of the city from one of the rooms, where the astronomical apparatus is kept, is said to be remarkably fine. Here also are the dock, the exchange, the theatres, the university, the artillery house, besides many other stately buildings, and churches ; but the most interesting object is, per- haps, the pillar erected in honor of the late king, and of his having granted freedom to the peasants on the crown lands. The pillar is made of Nor- wegian granite, having the four corners of its base ornamented with four figures, representing oeace, plenty, content, and industry.

The New Town, at least that part of it called Amalienburg, was built by Frederick V. It consists chiefly of an octagon, known by the name of Frederick's Square, opening into four rectangular streets, which have a very imposing effect. The grand entrance to this square is through a gate composed of double rows of Co- rinthian pillars. The enclosure is adorned by

four elegant palaces ; one occupied by the king, another by the crown prince, a third by the king's brother, and the fourth is appropriated to the Ma- rine Academy. An equestrian statue of Fre- derick V. occupies the centre of the square : it is said to have cost the Danish East Company, at whose expense it was erected, £80,000. One of the streets leading from this square conducts to the harbour, and another to Frederick's church, the monument of Danish pride and poverty. This building was begun many years ago, but, for want of funds to carry on the design, at present remains in an unfinished state. It was originally intended to have been the greatest ornament to Copenhagen, as indeed it would be were it finished.

The palace of Rosenberg, a small Gothic edifice, said to have been built by Inigo Jones, stands near the rampart; it contains the state apartment in which the king holds his annual bed of justice. The gardens attached to this palace are very extensive, and are the favorite promenade of the fashionable inhabitants.

Christian's Haven is situated on the small island of Amack, and is connected with the old town by two bridges. This quarter supplies Copenhagen, almost exclusively, with butter, cheese, fruit, and all kinds of vegetables. See AMACK.

Mr. M' Donald, in speaking of the general mode of building in Copenhagen, says, l Instead of the usual right angles formed by the corners of the houses, at the extremities or divisions of the streets, the builders of Copenhagen have squared them off in a semi-octangular form, and thereby secured various advantages. Carriages and horses cannot so frequently run foul of each other, or run down persons on foot at the turn- ings of the streets ; the space gained gives a free circulation to the air, and the look of as many handsome squares as there are street divisions in the city.' The houses of Copenhagen are for the most part spacious, consisting of four stories, and cellars sunk under ground ; those of the nobility are particularly splendid, the light and elegant architectureof the modern Italians beingmost used. The tradesmen of this capital appear to have but little idea of setting off their commodities to the best advantage ; their shops, as usual, are con- fined to the ground floor, and they make but little display in their windows.

Copenhagen contains twenty churches, and several synagogues, exclusive of its -cathedral, which was destroyed during the late disastrous siege. The bishop of Zealand resides principally in this capital, where he has a splendid palace. The city also contains twenty-two hospitals, of which the most interesting, both as it regards its utility and regulations, is the lying-in-hospital ; a school of midwifery, and a foundling are attached to this establishment. The University was founded in 1479. Divinity, law, medicine, and philosophy, are here taught by able masters ; the average number of students is about 700, 168 of whom are maintained from the public funds. The library contains a considerable num- ber of books, but few of them are of recent date ; it also possesses a collection of Icelandic MSS. Tl.e Roval Library is a superb collection of up-

wards of 250,000 volumes ; a few years ago it was enriched by the Arabic MSS. of Niebuhr.

The harbour of Copenhagen is formed by the straits of Kellebae, which separate Amack from Zealand, and though the entrance is so narrow that

only one ship can pass at a time, the depth is sufficient to admit vessels of the largest size. Upwards of 500 ships can anchor at a time in this harbour ; and the canals are so formed that merchantmen can come close to the warehouses that line the quays, to load and unload their cargoes. Every ship of war has its particular station, and is separated from the merchantmen by a kind of gallery. When the Danish navy was in its prosperity, this harbour presented a beautiful spectacle.

The trade of Copenhagen was very consider- able at the commencement of the last century ; it gradually increased until the war of the French revolution, which involving Holland and other maritime countries, a large transfer of business was made to the Danish capital, not only for the navigation of the European seas, but for remote voyages to India, &c. This branch of commerce carried on under the Danish name, but princi- pally on the account of Great Britain, was mutually advantageous to both parties. Not a vestige of it, however, now remains ; it received its death-blow at the bombardment of the Eng- lish in 1807. The principal trade of Copenhagen is at present with Norway, Iceland, and the Faroe Isles. From Norway it receives all its cannon, shot, anchors, and iron work. Russia supplies it with flax, masts, sail-cloth, hemp, and cordage ; Sweden with pitch and tar ; and Germany with oak. The shipping belonging to this port may be averaged at 400 vessels, manned by 6000 seamen. The chief manufactures are woollen stuffs, sail-cloth, cotton stuffs, leather, spirituous liquors, and porcelain. There are also anchor foundries, roperies, and extensive dock-yards.

The bank of Copenhagen was established in 1736, by Christian VI. Accounts are kept in rix- dollars, marks, and schillings. The popu- lation of Copenhagen in 1769 amounted to 71,000, in 1801 to 90,000, and at present it is computed at 105,000. It is 170 miles north- east of Hamburgh, 315 south-west of Stockholm, and 600 north-east of London.

COPERNICUS, or KOPERNIK (Nicholaus), an eminent astronomer, who led the way to the modern establishment of the new system of the universe, was born at Thorn, now subject to Prussia, then a town of Poland, according to some accounts, in January, but more correctly, we believe, according to others, February 19th, 1473. Frederick the^Great boasts, in his CEuvres Posthumes, rather prematurely, that he could reckon Copernicus amongst the great names of his country. Thorn was not seized by Prussia until 1793, and did not become a settled part of her dominions until 1814.

Such was the singular state of astronomical science, prior to the appearance of this great man, that the limits of vision are truly said to have been taken for the boundaries of the uni- verse. As far back as the middle

of the second centuiy, Ptolemy had digested all the elements of ancient astronomy into his system, adding to

them his own observations. This was so far fortunate for the science, as the burning of the Alexandrian library annihilated almost all the labors of antiquity, and would doubtless have retarded the progress of astronomy in Europe for ages, had not the works of Ptolemy escaped that destruction. This is not the place to enter into any details of his system. Taking the heavens for a real sphere, and the stars for so many bo- dies attached to its vault, he believed that a uniform and circular motion tended to the per- fection of nature's works, and thought that the earth was the centre of that notion ; that the en- tire starry heavens, therefore, turned round it in twenty-four houis, from east to west. Besides this general and daily revolution, he made the sun and planets more round the earth, in their periodical courses ; and, fixing the order of the respective position of these stars, he placed Mer- cury immediately after the moon — still further Venus, and after that the sun. He laid it down in his works, as a first principle of astronomy, that the earth could not have any motion.

Long-established observations, as well as his own, led him to perceive a particular movement of the sun and planets, sometimes direct and accelerated, and sometimes retarded. In order to account for these inequalities upon one uniform principle, and to explain all these changes of di- rection, Ptolemy conceived, with Apollonius, that circles more or less great and numerous were so disposed, that the centres of the one re- volved on the circumference of the other : he furnished the orbits of the planets with these circles ; and changing them at pleasure, on en- countering new difficulties and embarrassments, he thus vainly hoped to account for the irregula- rities and phenomena of the movements of the sun and planets. This led Alphonso of Castile, eleven centuries afterwards, to exclaim : ' Had I been consulted at the creation, the uni- verse would have been arranged in a more simple and rational manner.' He had no other mean- ing, probably, than that Ptolemy's world could not be the creation of eternal wisdom.

It was when these fancifu. dreams had obtain- ed universal credence, and no other mode of accounting for the phenomena of the universe was current, that Copernicus was born to arouse the human mind from their influence. His pa- rents were Nicholas Coperricus, and Barbe of W?tzelrod,

sister of the bishop of Varmie. Be- ing sent to the university of Cracow to pursue bis studies, he was in the list of pupi'.s in 1492. He applied himself to the culture of Grecian and Latin literature, and particularly of mathematics. The school of Cracow, then the only one in Po- land, was become very celebrated and flourish- ing in these three departments of learning. Jacob of Kobylin, Nicholas Szadek, Martin of Olkusz, afterwards eminent professors of mathe- matics, were school-fellows of Copernicus — the four were scholars of Albert Brudzewski, in astronomy and mathematics. When Brudzew- ski went into Lithuania to fill the post of secre- tary to the grand duke Alexander, afterwards king of Poland^ Copernicus quitted .his country for Bologna, where he pursued astronomical observations, not as a pupil, but according to the

testimony of Rheticus, as assisting and confirm- ing the labors of Dominick Marie of Ferrara. He had been already instructed in astronomy and mathematics on leaving Poland. He acquired such a name for knowledge in Italy, that being called to Rome at twenty-seven years of age to profess the mathematics, his public lectures drew from all sides a numerous concourse of scholars. All his activity was not, however, absorbed by his public teaching ; for, continuing his astrono- mical pursuits, he observed the eclipse of the moon in 1500. At his return to Poland, he passed through Padua, where he sustained a public examination in anatomy, and was deemed worthy of being received as doctor in medicine. In 1504 he was inscribed as member of the uni- versity of Cracow ; and it appears that his design was to establish himself there, had not his uncle recalled him to Varmie, by making him a tire- bendary in his cathedral.

As soon as he was settled at Frauenbu.&, he devoted himself entirely to the observation of the heavens, and to perfecting the means and obtaining the assistance necessary to this object ; applying particularly (as he declares in his epistle to Paul III. the sovereign pontiff), to thp rigorous and profound examination of all the principles and hypotheses — in a word, to the entire doctrine of the astronomy of his own time. ' Let us figure to ourselves,' says Copernicus in this epistle, ' an assemblage of detached mem- bers of the human body, belonging to indivi- duals of different heights and conformations. If one thought, out of these, to form one perfect, the disposition of the parts, and their different configurations, would present, in a discordant connexion, the hideous appearance of a monster, rather than of the regular human form. This is,' continues Copernicus, ' the aspect that the edifice of ancient astronomy offers to my view. The explanation of the celestial movements pre- sents quicksands to me, on which opinions gene- rally received are wrecked. Suppositions favor- able in certain cases, and not capable of applica- tion in others — sometimes adopted, sometimes forcibly interpreted, sometimes abandoned, far from illuminating the progress of reasoning, pro- duce as much confusion as obscurity.'

Copernicus, in fact, carried into the examina- tion of astronomy, that profound and concen- trated attention, that severe and scrupulous exactitude, which, while he compared, connected, or discussed previous notions, allowed him to take nothing for granted, and soon elicited those great outlines of his system : that the sun is a fixed star, surrounded by planets that revolve round him, and of which he is the centre and the great luminary ; that, besides the principal planets, there are others of a secondary order that circulate as satellites round their principals, and, with these, round the sun ; that the earth is a princi- pal planet, subject to a triple movement; that all the phenomena of daily and annual movement, the periodical return of the seasons, all the vicis- situdes of light, and temperature of the atmos- phere which accompany them, are the results of the rotation of the earth round its axis, and of its periodical movement round the sun ; that the apparent course of the stars is but an optical il-

lusion, produced by the real motion of the earth, and the oscillations of its axis — that, in fine, the movements of all the planets give place to a doub'e order of phenomena, which it is essential to distinguish, and of which the one is derived from the earth's motion, and the other from the motions of these planets round the sun. Such are the eternal and immutable truths of the science of the stars, that Copernicus revealed and announced in his immortal work, Revolu- tions of the Celestial Orbs. ' In reading this master-piece,' says an able modern essay on the labors of this great man, ' to the perfection of which, the writings of the ancients was no as- sistance, and to which modern knowledge has added nothing, it would seem as if nature had unveiled to him the wonders of her simplicity. The principles of mechanism, or of the science of motion, were yet to be brought forth. They were waiting for Galileo, Kepler, Huygens, and Newton, to be conceived and revealed. They were waiting for Euler, Clairaut, d'Alembert, Lagrange, and Laplace, to be applied, developed, and understood. Why, then, does Bailly seek to reproach Copernicus with being ignorant of the parallel movement of the earth's axis, not being a third movement, distinct and separate, but only the result of the first two, considered under certain conditions? We know that this knowledge is the fruit of the century that has just closed. Copernicus, without knowing the laws of motion, discovered the result of general principles; and by the force of his genius he triumphed over those beautiful and profound combinations from which it is derived. Two centuries of intellectual exertions, were necessary to create a new science, which confirmed this original and happy conception.' The tenth chapter of his first book, contains an exposition of the arrangement of the celestial bodies. There Copernicus, in a manner, sketches out the gene-

ral plan of the creation ; assigns their classes to the celestial bodies, and ranges the planets in their movements round the sun. He asserts boldly in this connexion, that the distance of the fixed stars was almost infinite ; insomuch, that all the distance between the earth and the sun, would appear to the eye, placed at the dis- tance of those stars, as an insensible point. This assertion, since confirmed by the most delicate observations, demonstrates his extended views of the universe; and removing to a greater distance the boundaries of space, has finally indicated, in the immensity of the heavens, where the earth is lost, innumerable groups of suns and worlds, similar to our solar system. Bailly had there- fore good reason for affirming, that the mathema- tics owe to Copernicus the first notion of in- finity, which has since become the source of new sciences, and of the most astonishing discoverier. The principles of geometry being of essential use in astronomy, Copernicus, in following Ptolemy's work, gives the explanation of the right lines in a circle, and the method of estimating, by their means, the arcs and angles. A complete treatise of Trigonometry, particularly spherical, is placed at the end of the book. This was published se- parately, it setms some years before, and offers some very important problems in geometry, re-

solved by Copernicus, of \vhich the history of mathematics has not, even to this day, rendered him the honor, in the erroneous supposition that he had drawn them from the work of Muller r»f Franconia, surnamed Regiomontanus, printed in

1533.

- *The third book/' says the ingenious essayist we have adverted to, ' is a repository of the finest discoveries of which the sagacity of man can boast.' Copernicus ' satisfied himself that the fixed stars, preserving the same distance from the ecliptic, vary in their longitudes, or their distance from the equinoctial points; and as those stars never change position among them- selves, he thence concluded, that their change in longitude was not the effect of their own move- ment, but that of the retrograding from east to west of the equinoctial points, known in astro- nomy under the name of precession of equinoxes. Combining afterwards the observations of Aris- tarchus of Samos, and those of Ptolemy and of the Arabians on the inclination of the ecliptic to the equator, with those which he had followed himself during thirty years, he deduced therefrom a change in this inclination. He confirmed two important phenomena ; the one, which was first remarked by Hipparchus, and since known by all subsequent astronomers, that the equinoctial points had a retrograde movement ; the other, the discovery of which is solely his own, that the movement was unequal, and that the obliquity of the*

ecliptic was subject to variations.' In this book he lays down in principle, that the axis of the earth, however it may be regarded as parallel to itself for explaining the seasons, is also found subjected to two movements of an extreme slow- ness : that, in the first place, the extremity of this axis, or the earth's pole, turns insensibly round that of the ecliptic, from east to west, in a period of about 26,000 years ; and, as the movement of the axis necessarily affects that of the equator, the equinoctial points, gliding on the ecliptic, retrograde annually an arc of about fifty seconds : that, in the second place, this axis balances it- self, like a lever that oscillates in its infinitely slow movement, sometimes elevating, sometimes lowering itself towards the ecliptic ; and, as the inclination of these axes regulates that of their circles and of their planes, it follows that the balancing of the earth's axis brings a necessary alteration into the inclination of the equator from the ecliptic : from which it results, that the retro-gradation of the equinoctial points, and all the changes in the position of the stars, are derived from two movements, to which the axis of our globe is, as will be presently shown, subjected in the annual revolution ; that those two movements are so dependent one upon the other, that they are mutually influential on their respective ac- celerations and retardations ; that, in fine, the trifling inequalities that affect them, are periodi- cal— having a limit marked which they could not pass, and where they renew themselves, in order to accomplish the same revolution in a certain number of years or of ages.

Copernicus first asserted in this work the im- portant theory of attraction. ' Gravity,' says he, ' is a tendency, that the author of nature has im- printed on all parts of matter, for uniting and

forming them into a mass. This property is not peculiar to the earth only ; it belongs equally to the sun, to the moon, and to all the planets. It is thereby that the molecules of matter that compose those bodies, are united and rounded into globes, and preserve their spherical form. All the substances, placed at the surface of the celestial bodies, press equally towards the cen- tres of those bodies ; and this, without hindering those bodies from circulating in their orbits. Why should this constancy be any obstacle to the movement of the earth ? Or, if we suppose that the centre of gravity ought, necessarily, to be that of all the movements, why place this centre in the earth, whilst the sun and all the planets have also their centres of gravity, and whilst the sun, by reason of its infinitely preponderating mass, would

merit this preference ? This choice is the more reasonable, inasmuch as all the phe- nomena, and all the appearances in the move- ments of the stars and planets, are deduced from it, in a manner at once simple and easy.

Science is in no small degree indebted to car- dinal Schonberg, and Tydeman Gisius, bishop of Culm, whose pressing solicitations forced the work, On the Revolutions of the Celestial Orbs, into publication. Gassendi says, it was not fi- nished before 1530; and several years more elapsed before the author could summon resolu- tion to commit it to the press. He in fact but just lived to see a complete copy of it a few hours before his death, which took place atFrauenberg, in consequence of the rupture of a blood-vessel, and palsy, May 24, 1543. The account of his having been imprisoned for his discoveries, which we often see in print, is wholly without foundation. He was evidently too cautious and too orthodox to expose himself to that danger. In his epistle to the pope, alluded to in the be- ginning of this article, he says, ‘ If there be some who, though ignorant of mathematics, presume to judge concerning them, and dare to condemn this treatise, because they fancy it is inconsistent with some passages of scripture, the sense of which they have miserably perverted, I regard them not, and even despise their rash censure. It is notorious that Lactantius, a celebrated au- thor, but an indifferent mathematician, only shows his own ignorance and folly when he derides those who hold that the earth has the form of a globe ; and it ought not to give offence if we laugh in our turn. Mathematics are de- signed for mathematicians ; who will, if I am not mistaken, consider our labors of some service to the ecclesiastical republic. For not long since, when in the Lateran council, under Leo X. the question about the emendation of the calendar was debated, it remained undetermined, because the lengths of the years and months, and the mo- tions of the sun and moon, were not accurately measured. What I have done in this matter I submit principally to your holiness, and then to the judgment of all learned mathematicians.’

Copernicus appears to have occasionally acted in the direction of the civil affairs of his chapter and of the neighbourhood. He was administra- tor of the possessions of the prince in Allenstein ; superintended some exertions of the government to establish a uniform coinage ; and is ”’^ to

Have left a MS. work on the management of the mint. He was often entrusted, in the absence of his diocesan, with the administration of the bishopric of Emerland, and nominated as a can- didate for the see, in 1537, by king Sigismund. The election, however, was in favor of one of his competitors.

He seems also to have amused himself occa- sionally as an engineer, and constructed, half a mile up the river, an oblique dam fifteen ells and a half

long, and a mill on the top of it by which water was raised for the supply of the town of Frauenburg. It was conveyed by a wheel to the top of a tower, from which it was carried by pipes to the house of each canon. This is said to have been the model of the great hydraulic machine at Marly, and the tower formerly bore the following inscription : —

Hie patiuntur aquae sursum properare coactae, Ne careat sitiens Incola mentis ope,

Quod natura iiegat tribuit Copernicus arte, Unum pro cunctis Fama loquatur opus

Some travelleis in the district that gave birth to this illustrious philosopher, arrived ‘ at Frauen- berg, 12th August, 1B02, and entered the church, where the ashes of Copernicus reposed. Near the altar, belonging to the prebend of Coperni- cus, was a sepulchral stone, partly enclosed by a marble balustrade, that was carried round the great altar. Spheres, rudely graven, and the letters Nicol, pointed out the place where the remains of this illustrious man were deposited. The worthy chapter, who attach as much ve- neration to the memory of Copernicus, as zeal for whatever interests the common glory of a nation, gave the most obliging assistance. On washing the stone, one could distinguish the let- ters Nicol. ...Cop. ...us ; and in th« second line,

Obiit AN. M The rest of the letters were

effaced. Having raised the stone, we caused the opening to be digged, because, before the eigh- teenth century, the prebendaries of Varmie had no particular tombs. We were present at the work. Only a few half decayed bones were dis- covered. The chapter retained a sixth part of those mortal remains of Copernicus, and we brought away the rest,’ they say, ‘ with a regu- lar certificate, signed by the first prelates of the chapter. We sent to the church of Pulawy, one third of tnese precious relics, and kept the other two for the Society.’ These gentlemen were members of the Literary Society of Warsaw, and communicated the above interesting facts to M. Sniadechi, to whose essay we have been much indebted for this paper.

COPERNICUS, the name of an astronomical in- strument invented by Mr. Whiston, to exhibit the motions and phenomena of all the planets, accord- ing to the Copernican system.

COPIAPO, a district of South America, in the north of Chili, which abounds in minerals of all kinds, and particularly load-stone, lapis lazuli, saltpetre, sal gem, and pure sulphur. Gold also has been found here ; and some silver mines have been recently worked. The province is bounded on

the north by the Peruvian deserts ; on the east by the Andes ; south by Coquimbo ; nnrl west by the Pacific Ocean; being about 100

leagues in length from north to south, and forty- four broad from east to west. Its rivers are the Copiapo, Salado, Castagno, Totorel, Quebrada-ponda, Guasco, and Chollai. The grain and fruits are excellent, but the pastorage noor for want of rain. The temperature is mild, but the country thinly peopled ; not containing, altoge- ther, above 5000 inhabitants.

COPJAPO, a town of Chili, and one of its most important sea-ports, is situated immediately at the mouth of the river of the same name, in lat. 27° 15′ S. The harbour affords good anchorage, is easy of access for vessels of any size, and, as it opens towards the west, is protected from the northerly and southerly winds.

COPIATA ; from KOTTT-W, to cut ; a grave dig- ger. In the first ages of the church clerks were destined for this employment. A. D. 357 Con- stantine made a law in favour of the priests copi- atse, i. e. of those who had the care of inter- ments ; whereby he exempted them from the lus- tral contribution. Before that time they were called decani and lecticarii, because they were divided by decads, each of which had a bier for the carriage of the dead bodies. They had pre- cedence of the chantors.

COPINSHA and CORNHOLM are two of the Orkney Islands, united by a reef, dry at half- tide. They are together not more than two miles in length, and two miles south-east of Mairland. The rocks are covered with sea-fowl.

CO'PIOUS, adj. } Fr. copieux ; It. Sp.

CO'PIOUSLY, adv. > and Lat. copia. Lavishly

Co PIOUSNESS, 7i. s. j bestowed ; abundant ; exuberantly plentiful ; flowing freely ; abound- ing in words or images. Copiously signifies abundantly ; diffusely ; at large. Copiousness is abundance ; exuberance of style.

GOTLAND, n. s. A piece of ground in which the land terminates with an acute angle.

COPLA'NT, v. a. From con and plant. To plant together.

COPLEY, John Singleton, a self-taught and distinguished painter, was born

in 1738, in Bos- ton, Massachusetts, and died in London, in 1815. Copley began to paint at a very early age ; and pieces, executed by him in Boston, before he had seen any tolerable picture, and certainly before he could have received any instruction in the art of painting, show his natural talent, and, in fact, were unsurpassed by his later produc- tions. He did not visit Italy till 1774. In 1776, he went to England, where he met his wife and children, whom he had left in Boston. As the struggle between England and America had begun in 1775, there was neither a good opportunity for Mr. Copley to return to his native land, which he always seems to have had in view, nor was there much hope of success for an artist in the convulsed state of the country. He therefore devoted himself to portrait painting in London, and was chosen a member of the royal academy. His first picture, which may be called historical, was the Youth Rescued from a Shark ; but the picture styled the Death of Lord Chatham, which represents the great orator fainting in the House of Lords, after the memo- rable speech in favour of America, and contains,

at the same time, the portraits of all the leading men of that house, at once established his fame. In 1790, Copley was sent, by the city of Lon- don, to Hanover, to take the portraits of the four Hanoverian officers, commanders of regiments associated with the British troops under General Eliot (afterwards lord Heathfield), at the defence of Gibraltar, in order to introduce them in the large picture which he was about making for the city, of the siege and relief of Gibraltar, which was afterwards placed in the council-chamber of Guildhall. Mr. Copley pursued his profession with unabated ardour, until his sudden death in 1815. Besides the pictures already mentioned, and a number of portraits, including those of several members of the royal family, the most distinguished of his productions are Major Pier- son's Death on the Island of Jersey ; Charles I. in the house of commons, demanding of the speaker Lenthall the five impeached members, containing the portraits of the most distinguished members of that house ; the surrender of admiral de Winter to lord Duncan, on board the Vene- rable, off Camperdown ; Samuel and Eli, &c.; of all of which engravings exist, some extremely rare. His eldest and only surviving son was created baron Lyndhurst in 1827.

COPO'RTION, n. s. From con and portion. Equal share.

COPPA, in law, a cop or cock of grass, hay, or corn, divided into titheable portions, as the tenth cock, &c. This word denotes laying up the corn in cops or heaps, not bound up, that it may be the more fairly tithed ; and in Kent they still retain the word, a cop or cap of hay, straw, &c.

CO'PPED, adj. From cop. Rising to a top or head.

CO’PPEL, 71. s. \ This word is variously

COPPLE-DUST, n. s. S spelt; as copel, cupel, cuple, and cupple ; but I cannot find its etymo- logy, says Dr. Johnson. It may, however, be traced to the Italian eopello, or the Teutonic, ke- pel. See CUPEL.

CO’PPER, v. a., n. s. fy adj.

Co’PPER-COLORED, adj. Co’PFER-MINE, U. S.

CO’PPER-NOSE, n. s.

Co’PFER-PLATE, U. S. CO PPER-WIRE, n. S.

CO’PPER- WORK, n. s. CO’PPEUAS, n. s.

Co’PPERAS-WORK, H. S. Co’PPERSMITH, n. S.

CO’PPERWORM, n. s.

CO’PPER isu,adj.

CO’PPERY, adj. per, and of greater magnitude than a boiling pot. The verb signifies, to cover with thin plates of copper. The compound requires no explana- tion; except, perhaps, copper-nose, which means a red, carbuncled nose ; copper-work, which is a place where copper is manufactured ; and cop- per-worm, which denotes a little worm in ships; a worm that gnaws garments ; and a worm that breeds in the hand. Copperas is a name given, in common parlance, to the sulphates of copper iron, and zinc. See CHEMISTRY.

Fr. cuivre ; Ital. cupro ; Sp. cobre ; Dutch, koper ; Germ. kopfer ; Latin, cuprum ; from KvirpoQ, Cyp- rus. Pliny calls it, as Cyprium. A well-known metal; a large vessel to boil in, made of cop-

COPPER.

He went his way, and with the coper he came, And this chanon it in his hondes name.

Chaucer. Cant. Tales.

And more for rank despight, than for great paine, Shakt his long locks, colourd like copper-wyre.

Spenser. Faerie Queene.

He having colour enough, and the other higher, is too flaming a praise for a good complexion : I had as lieve Helen's golden tongue had commended Troilus for a copper-nose. Sfiakspeare.

They boiled it in a copper to the half ; then they poured it into earthen vessels.

Bacon's Natural History.

It may be questioned, whether, in this operation, the iron or copperas be transmuted, from the cognation otcopperas with copper, and the iron remaining after conversion. Browne.

Gutta rosacea ariseth in little hard tubercles, affect- ing the face all over with great itching, which being scratched, looks red, and rises in great welks, render- ing the visage fiery ; and makes copper-noses, as we generally express them. Wiseman.

Salmoneus, as the Grecian tale is, Was a mad coppersmith of Elis ; Up at his forge by morning peep. Swift.

This is like those wrought at copper-works.

Woodward.

Some springs of Hungary, highly impregnated with vitriolick salts, dissolve the body of iron put into the spring, and deposit, in lien of the irony particles car- ried off, coppery particles brought with the water out of the neighbouring copper-mines. Id. On Fossils.

Copper is heavier than iron or tin ; but lighter than silver, lead, and gold. Hill on Fossils.

Copper is the most ductile and malleable metal, after gold and silver. Of a mixture of copper and lapis calaminaris is formed brass ; a composition of copper and tin makes bell-metal ; and copper and brass, melted in equal quantities, produces what the French call bronze, used for figures and statues.

Chambers.

Hence glow, refulgent tin, thy crystal grains, And tawny copper shoots her azure veins. Darwin,

COPPER, one of the six primitive metals, so called because the island of Cyprus formerly furnished great quantities of this metal, which, in the days

of Homer, was the one principally used. The discovery and use of copper preceded that of iron. Yet it is probable that iron was known in the days of Homer's heroes ; for in speaking of polished iron and copper, he calls the first white and the other red. Some authors attribute the discovery of copper to Cadmus; but, according to Strabo, it was first found at Chalcis, a city in Euboea, now called Negro- pont, whence its Greek name. Other authors say it was first dug in the island of Cyprus, and thence obtained its Latin appellation. The color of this metal when pure is pale red, its specific gravity from 8-7 to 9'3, which depends not only on its degree of purity, but also on its con- densation by hammering. The specific gravity of Japan copper is to water as 9000 to 1000 ; but that of the Swedish kinds only as 8784 or 8843. The color, when clean, is very brilliant, but it is extremely liable to tarnish. Its elasti- city is superior to that of any other metal except steel. From this last quality masses of the metal emit a loud and lasting sound when struck ; es- pecially when cast into such a form as may

make the metal vibrate in the most simple man- ner possible. Thus, if cast into the hollow form of a bell, without any cracks or imperfections, a uniform tone will be produced by it ; or at least the tones produced by the stroke will consist of a single predominant one, and of others that have an agreement with it. When broken, by often bending backward, it appears internally of a dull red color, without any brightness, and of a fine granulated texture, resembling some kinds of earthenware. It continues malleable in a red heat, and in this state extends much more easily than when cold. In a heat far below igni- tion, the surface of a piece of polished copper becomes covered with various ranges of pris- matic colors ; the red of each order being nearest to the end which has been most heated. Copper rusts in the air ; but the corroded part is very thin, and preserves the metal beneath from far- ther corrosion. It is remarkably impatient of moisture when in a state of fusion ; and the contact even of a very small quantity of water will cause a vast mass of melted metal to be thrown about with incredible violence, to the im- minent danger not only of the bystanders, but even of the strongest furnaces and buildings. Effects of this kind are said to have been pro- duced by so slight a cause as the workmen spit- ting in a furnace full of melted copper. For an account of the combinations of this metal with salts, earths, and other metals, see CHEMISTRY.

Brunswick or Friezland green is prepared by pouring a saturated solution of muriate of am- monia over copper filings or shreds in a close vessel, keeping the mixture in a warm place, and adding more of the solution from time to time, till three parts of muriate and two of cop- per have been used. After standing a few weeks, the pigment is to be separated from the urioxi- dised copper, by washing through a sieve ; and then it is to be well washed and dried slowly in the shade. This green is almost always adul- terated

with ceruse.

Verdigris, and other preparations of copper, act as virulent poisons, when introduced in very small quantities into the stomachs of animals. A few grains are sufficient for this effect. Death is commonly preceded by very decided nervous disorders, such as convulsive movements, tetanus, general insensibility, or a palsy of the lower ex- tremities. This event happens frequently so soon, that it could not be occasioned by inflam- mation or erosion of the primse vise ; and, in- deed, where these parts are apparently sound. It is probable that the poison is absorbed, and, through the circulation, acts on the brain and nerves.

The only chemical antidote to cupreous solu- tions, whose operation is well understood, is water strongly impregnated with sulphureted hy- drogen. The alkaline hydrosulphurets are acrid, and ought not to be prescribed.

But we possess, in sugar, an antidote to this poison, of undoubted efficacy, though its mode of action be obscure. M. Duval introduced into the stomach of a dog, by means of a caoutchouc tube, a solution in acetic acid, of four French drachms of oxide of copper. Some minutes af • tewards he injected into it four ounces of strong

syrup. He repeated this injection every half hour, and employed altogether twelve ounces of syrup. The animal experienced some trem- blings and convulsive movements. Bu,t the last injection was followed by a perfect calm. The animal fell asleep, and awoke free from any ailment.

If we boil for half an hour, in a flask, an ounce of white sugar, an ounce of water, and ten grains of verdigris, we obtain a green liquid, which is not affected by the best tests of copper, such as ferroprussiate of potash, ammonia, and the hydrosulphurets. An insoluble green carbo- nate of copper remains at the bottom of the flask.

We extract the following abridged view of the ores of copper from Dr. Ure's excellent Chemical Dictionary : —

1. Octahedral or native copper. Color copper- red, frequently incrusted with green. Massive, imitative, and crystallised ; in the perfect cube ; the cube truncated, on the angles, on the edges, and on the edges and angles ; the garnet dodeca- hedron ; perfect octohedron ; and rectangular four-sided prism. Lustre glimmering, metallic. Fracture hackly. Streak splendent. Completely malleable. Flexible, but not elastic. Difficultly frangible. Specific

gravity 3-4 to 8′ 7. It con- sists of 99-8 of copper, with a trace of gold and iron. It occurs in veins, in granite, gneiss, &c., and is found chiefly in Cornwall.

2. Octahedral red copper ore.

a. Foliated red copper ore. Color dark co- chineal-red. Massive, and crystallised, in the perfect octohedron, which is the primitive form; in the octohedron, truncated on the angles ; on the edges, with each angle acuminated with four planes ; bevelled on the edges, and each angle acuminated with eight planes. Lustre adaman- tine, inclining to semi-metallic. Cleavage four- fold. Translucent on the edges, or translucent. Streak muddy, tile red. Hardness between cal- careous and fluor-spar. Brittle. Specific gra- vity 5-6 to 6-0.

b. Compact red copper ore. Color between lead-gray and cochineal-red. Massive and reni- form. Lustre semi-metallic. Fracture even. Opaque. Streak tile red. Brittle.

c. Capillary red copper ore. Color carmine- red. In small capillary crystals. Lustre ada- mantine. Translucent.

The whole of these red ores are deutoxides of copper, and are easily reduced to the metallic state before the blow-pipe. They dissolve with effervescence when thrown in powder into nitric acid ; and a green nitrate results. In muriatic acid no effervescence takes place. They occur principally in veins that traverse primitive and transition rocks; abundantly in the granite of Cornwall. The earthy red copper ore, which is rare, is a sub-species of the preceding.

d. Tile ore. The earthy tile ore has a hya- cinth red color. It occurs massive and incrust- ing copper pyrites. It is composed of dull dusty particles. It soils slightly, and feels meagre. It occurs in veins, as at Lauterberg in the Hartz. The indurated tile ore has an im- perfect flat conchoidal fracture ; a streak feebly shining ; and is intermediate between semi-hard and soft. It is an intimate combination of red

copper ore and brown iron ochre, containing from 10 to 50 per cent, of copper.

3. Jilac k copper, or black oxide, of copper. Co- lor between bluish and brownish-black. It occurs massive, and thinly coating copper py- rites. It is composed of dull pasty particles, which scarcely soil. Streak slightly shining. Before the blow-pipe it emits a sulphureous odor, melts into a slag, and communicates a green color to borax. It is said to be an oxide of copper with oxide of iron. It occurs at Car- harrac and Tincroft mines, in

Cornwall.

*4. Emerald copper or dioptase. Colo, eme- rald green. It occurs only crystallised. The primitive form is a rhomboid of 123° 58'. The only secondary form at present known, is the equiangular six-sided prism. Lustre shining pearly. Cleavage three-fold. Fracture small conchoidal. Translucent. As hard as apatite. Brittle. Specific gravity 3-3. It becomes a chestnut-brown before the blow-pipe, and tinges the flame green, but is infusible ; with borax it gives a bead of copper. Its constituents are, oxide of copper 28-57, carbonate of lime 42-83, silicia 28*57. — Vauquelin. By Lowitz, it consists of 55 oxide of copper, 33 silica, and 12 water, in 100. It is found in the land of Kirguise, 125 leagues from the Russian frontier, where it is as- sociated with malachite and limestone.*

5. Blue copper, or prismatic malachite, of which there are two kinds, — the radiated and earthy.

The radiated has an azure-blue color. Mas- sive, imitative, and crystallised. Its primitive form is an oblique prism. The secondary forms are, an oblique four-sided prism, variously be- velled, and a rectangular four-sided prism, or eight-sided prism, acuminated with four planes. Lustre vitreous. Cleavage threefold. Fracture imperfect conchoidal. Translucent. Color of the streak, lighter. Harder than cal- careous spar. Brittle. Specific gravity 3-65. It is soluble with effervescence in nitric acid. With borax it yields a metallic globule, and colors the flux green. Its constituents are, copper 56, carbonic acid 25, oxygen 12-5 water, 6-5. — Vauquelin. It is found at Lead- hills, in Dumfries-shire, and Wanlockhead in Lanarkshire, and at Huel Virgin and Carharrack, in Cornwall, and in many places on the continent.

b. Earthy blue copper. Color smalt-blue. Massive. Friable. Specific gravity 3-354. It is found in Norway, &c.

The velvet-blue copper belongs to the same species. Lustre glistening and pearly. It has been found only at Oravicza, in the Bannat, along with malachite and the brown iron stone.

6. Malachite ; of which there are, the fibrous and compact.

*a. Fibrous malachite. Color perfect emerald- green. Imitative, and crystallised, in oblique four-sided prisms, variously bevelled or trun- cated ; and in an acute-angular three-sided prism. Crsytals short, capillary, and acicular. Lustre pearly or silky. Translucent, or opaque. Softer than blue copper. Streak pale green. Brittle. Specific gravity 3*66. Before the blow-pipe it decrepitates, and becomes black . Its constituents are, copper 58,*

carbonic acid 18, oxygen 12‘5. water \-5.ˆ-Klaproth. It occurs principally in

veins. It is found at Sandlodge in Mainlaind, one of the Shetlands; at Landidno in Caer- narvonshire ; and in the mines of Arendal in Norway.

*b. Compact malachite. Color emerald-green. Massive, imitative, and in four-sided prisms. Glimmering and silky. Fracture small grained uneven. Opaque. Streak pale green. Specific gravity 3-65. In veins, which traverse different rocks in Cornwall, Norway, &c. Brown copper, from Hindostan, is placed after this mineral by professor Jameson. Its color is dark blackish – brown. Massive. Soft. Specific gravity 2‘62. It effervesces in acids, letting fall a red powder. Its constituents are, carbonic acid 16-7, deut- oxide of copper 60-75, deutoxide of iron 19*5, silica 2-1. — Dr. Thomson.*

7. Copper-green.

Common copper-green, or chrysocolla, con- tains three sub-species.

*a. Conchoidal copper-green. Color verdigris- green. Massive, imitative, and incrusting. Glistening. Fracture conchoidal. Translucent. Harder than gypsum. Easily frangible. Specific gravity 2‘0 to 2*2. It becomes black and then brown before the blow-pipe, but does not fuse. It melts and yields a metallic globule with borax. Its constituents are, copper 40, oxygen 10, car- bonic acid 7, water 17, silica 26. It accompanies malachite. It is found in Cornwall, &c.*

Silicious copper, or kieselkupfer, is a variety of the above. Color asparagus-green. In crusts. Glistening. Fracture even or earthy. Opaque. Soft. Its constituents are, copper 37-8, oxygen 8, water 21-8, silica 29, sulphate of iron 3.

b. Earthy iron-shot copper-green. Color olive- green. Massive, and in crusts. Friable. Opaque. Sectile.

c. Slaggy iron-shot copper-green. Color blackish-green. Massive. Glistening. Fracture conchoidal. Opaque. Soft. Easily frangible. It is probably a compound of conchoidal copper- green and oxide of iron. Both occur together, and pass into each other. It occurs in Cornwall, along with olivenite.

8. Prismatic vitriol, blue vitriol, or sulphate of copper. Color dark sky-blue. Massive, imita- tive, and crystallised. The primitive figure is an oblique four-sided prism, in which the lateral edges are 124° 2’, and 55° 58’; with

*edges and angles often truncated. Shining. Cleavage double. Fracture conchoidal. Translucent. Harder than gypsum. Specific gravity 2*1 to 2-2. Taste nauseous, bitter, and metallic. Its solution coats iron with metallic copper. Its constituents are, oxide of copper 32*13, sulphuric acid 31'57, water 36′ 3. — Berzelius. It occurs along with copper pyrites, in Parys-mine in Anglesea, and in Wicklow.*

9. Prismatic olivenite, or phosphate of copper. Color emerald-green. Massive, and in oblique four-sided prisms of 110°. Cleavage double oblique. Glistening. Fracture splintery. Opaque. Streak verdigris-green. As hard as apatite. Brittle. Specific gravity 4 to 4-3. Fuses into a brownish globule. Its constituents are, oxide of copper 68-13, phosphoric acid 30-95. It is-found at Virnebirg on the Rhine, along with quartz, red copper ore, &c.

1 0. Diprismatic olivenite, or lenticular copper Color sky-blue. Massive, but generally crystal- lised. In very oblique four-sided prisms. Be- velled. In rectangular double four-sided pyra- mids. Shining. Fracture uneven. Translucent. Harder than gypsum. Brittle. Specific gravity 2'85. Converted by the blow-pipe into a black friable scoria. Its constituents are, oxide of copper 49, arsenic acid 14, water 35. — Chenevix. Found in Cornwall.

11. Acicular olivenite. a. Radiated or cu- preous arseniate of iron. Color dark verdigris- green. Massive, imitative, and in flat oblique four-sided prisms, acuminated or truncated. Lustre glistening pearly. Translucent on the edges. As hard as calcareous spar. Brittle. Specific gravity 3-4.

b. Foliated acicular olivenite, arseniate of copper. Color dark olive-green. In angulc- granular concretions, and in small crystals; which are oblique four-sided prisms ; and acute double four-sided pyramids. Glistening. Frac-ture conchoidal. Translucent. Streak olive- green. As hard as calcareous spar. Brittle. Specific gravity 4-2 to 4-6. It boils, and gives a hard reddish-brown scoria before the blow- pipe. Its constituents are, oxide of copper 60, arsenic acid 39-7. — Chenevix. In the copper- mines of Cornwall.

c. Fibrous acicular olivenite. Color olive- green. Massive, reniform, and in capillary and acicular oblique four-sided prisms. Glistening and pearly. Opaque. As hard as calc-spar. Brittle. Fibres sometimes flexible. Streak brown or yellow. Specific gravity 4-1 to 4-2. Its constituents are, oxide of copper 50, arsenic acid 29, water 21. It occurs in Cornwall.

d. Earthy acicular olivenite. Color olive- green. Massive, and in crusts. Dull. Fracture fine earthy. Opaque. Very soft. It is found in Cornwall.

12. Atacamite or muriate of copper.

*a. Compact. Color leek-green. Massive, and in short needle-shaped crystals, which are oblique four-sided prisms, bevelled or truncated. Shining and pearly. Translucent on the edges. Soft. Brittle. Specific gravity 4‘4 ? It tinges the flame of the blow-pipe of a bright green and blue, muriatic acid rises in vapors, and a bead of copper remains on the charcoal. It dissolves without effervescence in nitric acid. Its consti- tuents are, oxide of copper 73-0, water 16-9, muriatic acic 10*1. — Klaproth. It occurs in veins in Chili and Saxony.*

b. Arenaceous atacamite, or copper-sand. Color grass-green. In glistening scaly particles. It does not soil. It is translucent. Its consti- tuents are, oxide of copper 63, water 12, mu- riatic acid 10, carbonate of iron l^rnixed sili- cious sand 11. It is found in the sand of the river Lipes, 200 leagues beyond Copiapu, in the Desert of Atacama, which separates Chili from Peru.

13. Copper pyrites.

a. Octahedral copper pyrites. On the fresh fracture, its color is brass-yellow ; but it is usually tarnished. Massive, imitative, and crystallised ; in a regular octohedron, perfect, truncated or bevelled ; and in a perfect or truncated tetrahe-

dron. Glistening, Fracture uneven. Hardness from calcareous to fluor spar. Brittle. Specific gravity 4-1 to 4‘2. Before the blow-pipe, on charcoal, it decrepitates, emits a greenish-colored sulphureous smoke, and melts into a black glo- bule, which assumes metallic lustre. It tinges borax green. Its constituents are, copper 30, iron 53, sulphur 12. — Chenevix. It contains sometimes a little gold or silver. It occurs in all the great classes of rocks. It is found near Tynedrum in Perthshire ; at the mines of Ecton; at Pary’s mountain ; abundantly in Cornwall ; and in the county of Wicklow in Ireland. The rich ores are worked for copper ; the poor for sulphur.

b. Tetrahedral copper pyrites; of which spe- cies there are two sub-species, gray copper and black copper.

Gray copper. Color steel-gray. Massive and crystallised ; in the tetrahedron, truncated or bevelled ; and in the rhomboidal dodecahedron. Splendent. Fracture uneven. Hardness as cal- careous spar and fluor. Brittle. Specific gravity 4-4 to 4-9. Its constituents are, copper 41, iron 22-5, sulphur 10, arsenic 24‘1, silver 0-4. — • Klaproth. It occurs in beds and veins in Corn- wall, and many other places.

Black copper. Color iron-black. Massive and crystallised ; in the

tetrahedron, perfect, bevelled, or truncated. Splendent. Fracture conchoidal. Brittle. Specific gravity 4-85. Its constituents are, copper 39, antimony 19-5, sulphur 26, iron 7‘5, mercury 6‘25. — Klaproth. The mercury is accidental. It occurs in veins iji the Hartz, and in Peru.

14. While copper. Color between silver-white and brass-yellow. Massive and disseminated. Glistening and metallic. Fracture uneven. Serni- hard. Brittle. Specific gravity 4‘5. It yields before the blow-pipe a white arsenical vapor, and melts into a grayish-black, slag. It contains 40 per cent, of copper ; the rest being iron, arsenic, and sulphur. It occurs in primitive and transi- tion rocks. It is found in Cornwall and Saxony.

15. Copper-glance, or vitreous copper. Rhomboidal copper-glance.

§ 1. Compact. Color blackish lead-gray. Massive, in plate: and crystallised. Primitive form, a rhomboid. Secondary forms, a low equi- angular six-sided prism, and a double six-sided pyramid. Glistening, metallic. Harder than gypsum. Perfectly sectile. Rather easily fran- gible. Specific gravity 5-5 to 5*8. Its consti- tuents are, copper 78-05, iron 2‘25, sulphur 18-5, silica 0-75. — Klaproth.*

§ 2. Foliated. Its constituents are, copper 79‘5, sulphur 19, iron 0-75, quartz 1. — Ullmann. It occurs in primitive rocks. It is found also in transition rocks, at Fassney-burn in East Lo- thian ; in Ayrshire ; at Middleton Tyas in York- shire ; in Cornwall, &c.

*16. Variegated copper. Color between copper- red and pinchbeck-brown. Massive, in plates, and crystallised in six-sided prisms. Glistening metallic. Soft. Easily frangible. Specific gravity 5. It is fusible, but not so easily as copper-glance, into a globule, which acts pow- erfully on the magnetic needle. Its constituents are, copper 69‘5, sulphur 19, iron 7*5, oxygen 4.*

COP

— Klaproth, it occurs in gneiss, mica slate, &c It is found in Cornwall.

There are seventeen places in Britain in which, according to Dr. Campbell, copper-mines are found. See 2d vol. p. 44, of his Political Sur- vey of Britain. These are, Cardiganshire, Cheshire, Cornwall, Cumberland, Derbyshire, Devonshire, Lancashire, Isle of Man, Northum- berland, Shropshire, Somersetshire, Staffordshire, Yorkshire, Wales, Warwickshire, Westmoreland, and North Britain.

CO’PPICE, n. s. ~\ Fr. coupeaux, from

COPSE, v. a. & n. s. tcouper, to cut or lop;

CO'PSY, adj. £ Kbirrit). Coppice and

CO'PSE-WOOD, 7i. s. J copse are synonymous ;

the latter being only a contraction of the former.

Both signify a wood, composed of underwood

and small trees, which at stated times are cut for

fuel. To copse is to preserve underwood.

A land, each side whereof was bounded both with high timber trees, and copses of far more humble growth. Sidney.

Upon the edge of yonder coppice, A stand, where you may have the fairest shoot

Shaksjteare,

In coppice-woods, if you leave staddles too quick, they run to bushes and briars, and have little clean underwood. Bacon.

The willows, and the hazel copies green, Shall now no more be seen Fanning their joyous leaves to their soft lays.

Milton.

The east quarters of the shire are not destitute of copse-woods. Carew't Survey of Cornwall.

Oaks and brambles, if the copse be burned, Confounded lie, to the same ashes turned. Waller, The rate of coppice lands will fall upon the discovery of coal-mines. Locke.

But in what quarter of the copse it lay, His eye by certain level could survey.

Dryden's Fables.

The neglect of copsing wood cut down, hath been of very evil consequence.

Swiff's Address to Parliament.

Raise trees in your seminaries and nurseries, and you may transplant them for coppice ground, walks, of hedges. Mortimer's Husbandry.

Beneath a copse of various hue In barbarous luxuriance grew. No knife had curbed the rambling sprays, No hand had wove the implicit maze. Seattle.

It chanced then on a winter's day, But warm and bright, and calm as May, The birds, conceiving a design, To forestall sweet St. Valentine, la many an orchard, copse, and grove, Assembled on affairs of love, And with much twitter, and much chatter. Began to agitate the matter. Coieper.

CO'PPLE-DUST, n. s. Probably for coppel, or cupel-dust. Powder used in purifying metals, or the gross parts separated by the cupel.

It may be also tried by incorporating powder of steel, or copple-dust, by pouncing into the quicksilver.

Bacon.

CO'PPLE- STONES are lumps and fragments o. stone or marble, broke from the adjacent cliffs, rounded by being bowled and tumbled to and again by the action of the water.

CO'PPLED, adj. From cop. Rising in a conic form ; rising to a point.

Tfcsra if some difference in this shape, some being flatter on the top, others more coppled.

Woodward on Fossils.

COPTS, or COPHTS, in ecclesiastical history, a name given to those Egyptian Christians who are of the sect of Jacobites. Critics differ respect- ing the orthography, as well as the etymology of this word. It is sometimes written Cophti ; at others Copti, Cophtitse, Coptites, &c. Scaliger once thought the name derived from Coptos, an ancient town of Egypt, the metropolis of the Thebaid. Kircher mentions, that the word ori- ginally signifies cut or circumcised ; and was given them on account of their practising circum- cision; Scaliger finally and more probably de- rives it from AiywTrroc, the ancient name of Egypt, by retrenching the first syllable. The Malchese Christians are clearly a distinct race.

The Copts are of native Egyptian descent, and have partly on that account,

as well as for their supposed heresies, been depressed and per- secuted by both their Christian and Mahommedan masters. Their ancient language, in which a valuable version of the New Testament is extant, appears to have been vernacular in the seven- teenth century. They have a patriarch who re- sides at Cairo, but he takes his title from Alexan- dria ; and has under him their few remaining bishops. The rest of the clergy, whether secular or regular, are composed of the orders of St. Antony, St. Paul, and St. Macarius, who have each their monasteries. Besides the orders of priests, deacons, and sub-deacons, the Cophts have likewise Archimandrites, a dignity which they confer with all the ceremonies of ordination. This, besides the authority it gives them with regard to the religious, comprehends the functions of archpriests. By a custom of 600 years stand- ing, if a priest elected bishop be not already ar- chimandrite, that dignity must be conferred on him before episcopal ordination. The second person after the patriarch, is the titular patriarch of Jerusalem, who generally resides at Cairo, and poes to Jerusalem every Easter. To him belongs the government of the Coptic church, during the vacancy of the patriarchal see. To be elected patriarch, it is necessary that the person have lived all his life in continence. He confers the bishoprics. To be elected bishop, the person must be either in die cel;bate, or not have been married more than once. The priests and infe- rior ministers are allowed to be married before ordination. They have a great number of dea- cons, and are said to confer that order even on children. They have three liturgies, which they vary occasionally, and very long offices. The monastic life is in great esteem among the Copts. Divorce is said to be very frequent among them ; with the church of Rome they have seven sacraments, viz. baptism, the eucharist, confirmation, ordination, faith, fasting, and prayer. They deny the Holy Spirit to proceed from the Son ; and only allow of three oecume- nical councils; those of Nice, Constantinople, and Ephesus. They are also considered as mo- nophysitic in their sentiments respecting the icrson of Christ, or to acknowledge but one na- ture and will in him ‘ after the union of the deity and humanity.’ To these peculiarities may be

added, 1. Their practice of circumcising theiT children before baptism. 2. Their ordaining deacons at five years of age. 3. Their allowing of marriage in the second degree. 4. Their belief of a baptism by fire, which they are said sometimes to endeavour to confer literally. 5. Their forbearing to eat blood.

la the time of pope Paul IV. a Syrian was des- patched to Rome from the patriarch of Alexan- dria, with letters to that pope ; wherein he is said to have acknowledged his authority, and de- sired a person to be despatched to Alexandria, to treat about a union. Pursuant to which, Pius IV. successor to Paul, sent E. Roderic, a Jesuit, in 1561, in quality of apostolical nuncio; and forwarded, through the Venetian consul, a sum of

money to the patriarch ; but the Jesuit, upon a conference with two Copts deputed by the patriarch, was told, that the titles of father of fathers, pastor of pastors, and master of all churches, which he had bestowed on the pope in his letters, were only matters of compliment; and that since the council of Chalcedon, and the establishment of several patriarchs independent of one another, each was master of his own church. Here the negociation of course termi- nated. At present it is supposed that the Copts are about 500,000 in number.

COTULA, n. s. Lat. The word which unites the subject and predicate of a proposition; as books are. dear.

The copula is the form of a proposition ; it repre- sents the act of the mind, affirming or denying.

Wutts's Logich.

CO'PULATE, v. a., v.n. & adj. It. copu COPULA'TION, n. s. > lore ; Sp*

COPULA'TIVE, n. s. & adj. j copular ;

Lat. copulare. To conjoin; to link together; to come together as different sexes. Copulation is, the congress of the opposite sexes. Copulative is fully defined in the quotation from Watts.

Sundry kinds, even of conjugal copulation, are pro- hibited as unhonest. Hooker. If the force of custom, simple and separate, be great, the force of custom copulate, and conjoined, and collegiate, is far greater. Bacon. Not only the persons so copulating are infected, but also their children. Wiseman's Surgery. Copulative propositions are those which have more subjects or predicates connected by affirmative or ne- gative conjunctions : as, riches and honours are temp- tations to pride ; Caesar conquered the Gauls and the Britons ; neither gold nor jewels will purchase im- mortality. Watts's Logick. CO'PY, v. a. & v. n., n. s. ") Fr. copier ; Ital. CO'PY-BOOK, n. s. copiare ; Span, co- CO'PY-HOLD, n. s. piar ; Dutch ko- CO'PY-HOLDER, n. s. ^piercn ; Low Lat. CO'PY-MONEY, n. s. (copia. ' Junius in- CO'PY-RIGHT, n. s. I clines, after his CO'PIER, n. s. manner,' drily ob- CO'PYIST, n. t. J serves Dr. John- son, ' to derive it from KOTTOC, labor ; because, says he, ' to copy another's writing is very pain- ful and laborious.' Another lexicographer also justly remarks, that ' perhaps this is rather too distant a derivation to be the right one; because many copies are taken with pleasure instead of \vearisomeness.' To copy is, to transcribe; to

COPYHOLD.

imitate ; to strive to resemble. A copy is, a transcript from, or imitation of, an original ; the original itself; an individual book ; one of several books ; an instrument by which any conveyance is made in law. Copier and copyist are synony- mous, and signify a transcriber ; an imitator ; a plagiary. The compound words are most of them of obvious meaning. Copyright and copy- hold are fully described onwards.

The very having of the books of God was a matter of no small charge, as they could not be had other- wise than in written copies. Hooker.

It was the copy of our conference ; In bed he slept not, for my urging it ; – At board he fed not, for my urging it.

Shakspeare. Comedy of Errours.

Thou knowest that Banquo and his Fleance lives ;

But in them nature's copy's not eternal. Id. Macbeth.

If virtue's self were lost, we might From your fair mind new copies write. Waller.

I have not the vanity to think my cujiy equal to the original. Denham.

Let him first learn to write, after a copy, all the letters in the vulgar alphabet.

Holder's Elements of Speech.

The first of them I have forgotten, and cannot easily retrieve, because the copy is at the press.

Dryden.

Set the examples, and their souls inflame To copy out their great forefathers' fame.

Dryden's King Arthur.

Without invention a painter is but a copier, and a poet but a plagiary of others. Dryden's Dufresnoy. Some imagine, that whatsoever they find in the picture of a master, who has acquired reputation, must of necessity be excellent ; and never fail, when they copy, to follow the bad as well as the good things.

Id.

When a painter copies from the life, he has no pri- vilege to alter features and lineaments, under pretence that his picture will look better. Dryden.

He stept forth, not only the copy of God's hands, but also the copy of his perfections, a kind of image or representation of the I)eitv in small.

South's Sermons.

He that borrows other men's experience, with this design of copying it out, possesses himself of one of the greatest advantages. Decay of Piety.

Several of our countrymen, and Mr. Dryden in particular, seem very often to have copied after it in their dramatic writings, and in their poems upon love. Adtiison's Spectator.

A coin is in no danger of having its characters altered by copiers and transcribers. Id. on Coins.

If a customary tenant die, the widow shall have what the law calls her free bench in all his copyhold lands. Addison.

The Romans having sent to Athens, and the Greek cities of Italy, for copies of the best laws, chose ten legislators to put them into form. Swift.

To copy her few nymphs aspired,

Her virtues fewer swains admired. Id.

He who hurts a harmless neighbour's peace, Who loves a lie, lame slander helps about, Who writes a libel, or who copies out. Pope's Epist.

Let the faint copier, on old Tiber's shore, Nor mean the task, each breathing bust explore ; Line after line with painful patience trace, This Roman grandeur, that Athenian grace. Tickel.

Whatever be the emotion the poet intends to raise in his reader, whether admiration or terror, joy or sorrow ; and whatever be the object he would exhibit, whether Venus or Tisiphone, Achilles or Thcrsites, a palace or a pile of ruins, a dance or a battle, he gene- rally copiet an idea of his own imagination ; consider- ing each quality as it is found to exist in several indi- viduals of a species, and thence forming an assem blage more or less perfect in its kind, according to the purpose to which he ineanc to apply u. Beattie.

I threw off six hundred copies, of which I had got subscriptions for about

three hundred and fifty.

Burns.

Her memory was a mine : she knew by heart All Calderon and greater part of Lope, So that if any actor missed his part, She could have served him for the prompter's copy.

Byron. Dun Juan.

COPYHOLD, in English law, a tenure for which the tenant hath nothing to show but a copy of the rolls made by the steward of his lord's court ; for the steward, as he enrols other things done in that court, registers such tenants as are admitted to any parcel of land or tenement belonging to the manor ; and the transcript of this is called the court-roll, the copy of which the tenant takes from him, and keeps as his only evidence. This is called a base tenure, because it holds at the will of the lord : yet not simply, but according to the custom of the manor ; so that if a copyholder break not the custom of the manor, and thereby forfeit his tenure, he cannot be turned out at the lord's pleasure. These customs of manors vary in one point or other almost in every manor. Some copyholds are finable at an uncertain rate, and some certain ; that which is finable uncertain, the lord rates at what fine or income he pleases, when the tenant is admitted : that which is cer- tain is a kind of inheritance, and called in many places customary : because the tenant dying, and the hold being void, the next of blood pay- ing the customary fine, as two shillings for an acre, or so, cannot be denied his admission. Some copyholders have, by custom, the wood growing upon their own land, which by law they could not have. Some hold by the verge in an- cient demesne ; and though they hold by copy, yet are they, in account, a kind of freeholders : for if such a one commit felony, the king hath annum, diem, and vastum, as in case of freehold. Others again hold by common tenure, called mere copyhold ; and they committing felony, their land escheats to the lord of the manor.

Copyhold land cannot be made at this day ; for the pillars of a copyhold estate are, That it hath been demised time out of mind by copy of court-roll ; and that the tenements are parcel of, or within, the manor. (1 Inst. 58. 4 Rep. 24.) Nor can a copyhold be created by operation of law : and therefore where wastes are severed from the manor, by a grant of the latter, with the exception of the former, though the copy- holders continue to have a right of common in the wastes by immemorial usage ; yet if afterwards a grant of the soil of those wastes be made to trustees for the use of the copyholders in free so- cage, the lands when enclosed, will be freehold, and not copyhold.

If the lord refuses to admit he shall be com- pelled in Chancery, 2 Cro. 368. And if the

lord refuse to admit a surrenderee, on account of a disagreement about the fine to be paid, the court of B. R. will grant a mandamus to compel the lord to admit without examining the right to he fine. 2 Term Rep. 484.— But that court will not grant a mandamus to admit a copyholder by descent. A copyholder, so long as he doeth his services, and doth not break the custom of the manor, cannot be ejected by the lord : if he be, he shall have tresspass against him : but, if a copyholder refuses to perform his services, it is a breach of the custom, and forfeiture of his estate.

Customs ought to be time out of memory, to be reasonable, &c. And a custom in deprivation or bar of a copyhold estate, shall be taken strictly ; but when for making and maintaining, it shall be construed favorably. An unreasonable cus- tom, as for a lord to exact exorbitant fines ; for a copyholder for life to cut down and fell timber- trees, &c. is void. A copyholder for life pleaded a custom, that every copyholder for life might, in the presence of two other copyholders, appoint who should have his copyhold after his death, and that the two copyholders might assess a fine, so as not to te less than had been usually paid ; and it was adjudged a good custom. 4 Leon. 238. But a custom to compel a lord to make a grant, is said to be against law ; though it may be good to admit a tenant.

A copyholder may surrender in court, by letter of attorney, and out of court by special custom, 9 Rep. 75, 76. A copyholder being in Ireland, tne steward of a manor here made a commission to one to receive a surrender from him there, and it was held good. 2 Danv. 181. The in- tent of surrenders is, that the lord may not be a stranger to his tenant, and the alteration of the estate. As a copyholder cannot transfer his es- tate to a stranger by any other conveyance than surrender; so if one would exchange a copy- hold with another, both must surrender to each other's use, and the lord admit accordingly. Comp. Cop. s. 39.

With respect to the devising of copyholds, the law formerly was, that no such devise could be made without a surrender to the use of the par- ty's will ; and that the lands did not then pass by the will but by the surrender, the will being con- sidered only as declaratory of the uses of the surrender. Many evils were found to result in the cases of creditors wives, and children, from this necessity of a surrender to a will, and the courts of equity were astute in finding reasons for supplying the surrender, with due

precaution in favor of the claims of the several parties. See 3 P. Wms. 98 in n. All these questions are now set at rest by a statute passed for that purpose, 55 Geo. III. c. 192, by which it is enacted, That in all cases where, by the custom of any manor in England [or Ireland, though instances of co- pyhold are rare there], any copyhold tenant of such manor may by will dispose of, or charge land, surrendered to the use of the will, every disposition or charge of any such copyhold, made by the will of any person who shall hereafter die, shall be as valid and effectual, although no sur- render shall have been made to the use of the will, as if such surrender had been actually made. On admissions under testamentary dispositions,

the steward is allowed to charge his fees, as in cases of surrender to the use of the will. But the act is not to affect the validity of devises.

Fines are paid to the lord on admittances : and may be due on every change of the estate by lord or tenant. The lord may have an action of debt for his fine : or may distrain by custom. 4 Rep. 27. 13 Rep. 2. A covenant made by a copyholder with a stranger to assign and surren- der his copyhold to him, which covenant is af- terwards presented by the homage, does not give the lord any right to a fine before admission. 2 T. R. 484. The lord may recover from a co- pyholder the fine assessed by him on admittance, not exceeding two years' value of the tenement, although there be no entry of the assessment of such fine on the court rolls, but only a demand of such a sum for a fine, after the value of the te- nement had been found by the homage, 6 E. R. 56.

An heriot is a duty to the lord, rendered at the death of the tenant, or on a surrender and alie- nation of an estate : and is the best beast or goods, found in the possession of the tenant de- ceased, or otherwise, according to custom. And for heriots, reliefs, &c. the lord may distrain, or bring action of debt. Plowd. 96. It seems that a custom for the homage to assess a compensa- tion in lieu of heriot, to be paid by an in-com- ing copyholder on surrender or alienation, is not good. 1 Bos. & Pul. 282.

Relief is a sum of money which every copy- holder in fee, or freeholder of a manor, pays to the lord on the death of his ancestor ; and is generally a year's profits of his land.

Services signify any duty whatsoever accruing unto the lord from tenants ; and are not only annual and accidental ; but corporeal, as homage, fealty, &c. Comp. Court. Keep. 7, 8, 9, &c. 31 Geo. 2. c. 14, provides that no person hold- ing by copy of court-roll should be entitled, from that property, to vote at the election of knights for the shire. See Cruise, Scriven, and Walker on Copyholds.

COPYING MACHINES are amongst the useful modern inventions of which it is proper that we should offer some account.

Dr. Franklin proposed to use the common copperplate-printers' rolling press as a machine for copying letters. He directs the letter to be written with gummed ink, and then sanded over with emery powder. Thus prepared, it is to be laid on a smooth plate of pewter, and passed through the press. The impression of the emery is left on the pewter, and printing-ink being applied to the plate, an impression may be taken, which is a copy of the letter. In 1 780 Mr. Watt of Birmingham proposed and obtained a patent for the following method of copying recent manu- scripts. A sheet of unsized patent paper, very thin, is wetted and laid between two woollen cloths, to absorb the redundant moisture. Being laid on the manuscript, the two are passed to- gether through a rolling or screw-press ; when the thin paper it found to have received a reverse impression of the letter, legible when read through the transparent substance of the paper. Mr. Watt says that the thin paper may be wetted ad- vantageously with a mixture of water, vinegar, oyster shells, boracic acid, and g?ll-nuts.

Mr. Ralph Wedgwood has obtained two pa- tents for inventions of this kind. The first was in 1806. In this he proposes to employ, 1st, A sheet of paper, over both sides of which printer's ink is spread ; this is allowed to dry during six weeks, between leaves of blotting paper ; 2dly, A smooth pewter, or copper plate. 3dly, On the metal plate is laid a leaf of letter paper ; over it the blackened paper before mentioned ; and over this a leaf of thin paper, previously oiled, that it may be the more transparent. 4thly, On the paper thus disposed, the writing is performed by a style of agate, ground and polished to a smooth round point. The effect is, that the letter paper receives an impression from the blackened paper, and this impression is in the right direction, and constitutes the letter to be used as the original.

The upper oiled paper receives an impression which is inverted, but may be read in the right direction by looking through the paper. This constitutes the duplicate or copy. The apparatus, for which he obtained a patent in 1808, consists of a certain disposition of two Teaves of paper, by folding or rolling. The part of the sheet on which a line of the original is written, is brought close to the part of the other sheet on which the corresponding line of the duplicate is written. The line of the original and of the duplicate are formed at the same time, by two pens fixed in the socket of one handle. The handle is held like a pen in the usual way. See Repertory of Arts, vol. xxvii. and xxxi. For Mr. Hawkins' and Mr. Brunei's polygraphs, see

POLYGRAPH.

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PART I. OF THE TERM OF COPYRIGHT.

SECTION I. — BY THE COMMON LAW.

It is only since the invention of printing that any question as to the extent or duration of co- pyright could be expected' to occur in the courts of justice. To take an author's manuscript with- out his consent was, of course, a criminal act, and punishable in proportion to the amount of the offence ; according as the circumstances might constitute a fraud or theft. A single copy was then of much more value than after printing had multiplied the. number of copies. The great manual labor necessarily bestowed on each copy, and the few readers at that time, rendered the publication of insignificant importance com- pared with what it has since become. We are not, therefore, to look for any very ancient re- cords of the legal recognition of literary property, or of remedies against its infraction.

Printing was first introduced in England about the year 1471. During the arbitrary reigns which succeeded its establishment, the works which issued from the press naturally became the immediate subject of state regulations. The earliest evidence which occurs on the subject is to be found in the decrees of the Star Chamber. The authority of that arbitrary tribunal we are quite willing should be estimated as low as pos- sible ; but, in adducing the authorities which support the right in question, we are justified in pointing out that even the Star Chamber re- spected the rights of authors, and prohibited the printing of works without the consent of their owners.

Of the judges in recent times, before whom the title to perpetual copyright has been dis- cussed, the majority have decided that by the

common law of England an author is entitled to the exclusive enjoyment of his copyright in per- petuity. The judges, however, were not una- nimous, either on the point of common law, or on that of the legal effect of the statute of Anne, and we cannot deem it sufficient merely to describe the actual state of the law; especially as the sub- ject is one of literary interest, and the glaring injustice of the existing regulations can scarcely be permitted long to continue.

We purpose, therefore, to relate briefly the pro- gressive stages of the law ; to consider the ques- tion according to the best legal authorities; to examine the meaning of the statute of Anne; the decisions of the various courts of justice ; the objections to a perpetuity of the right; and its general policy and justice.

1. — Recognition of the Right by Ac ts of State.

In 1556, by a decree of the Star Chamber, it was forbidden to print against the force and meaning of any ordinance, &c. in any of the sta- tutes or laws of the realm. By another decree in 1585, every book, &c. is to be licensed ; ‘ nor shall any one print any book, &c. against the form or meaning of any restraint contained in any statute or laws of the realm, or contrary to any allowed ordinance set down for the good government of the Stationers’ Company.’ In 1623, by a proclamation reciting the above de- cree, and that the same had been evaded ‘ by printing beyond sea such allowed books, &c. as have been imprinted within the realm by such to whom the sole printing thereof by letters pa- tent, or lawful ordinance or authority, doth ap- pertain.’— And then the proclamation enforces the decree. Again, in 1637, by another decree, no person is to print or import any book or copy which the Company of Stationers, or any other person, hath or shall by any letters patent, order, or entrance in the register book, or otherwise, have the right, privilege, authority, or allowance solely to print. This decree evidently supposes a copyright to exist ‘ otherwise’ than by patent, &c. which clearly could be by no other autho- rity than the common law.

These appear to be all the acts of state relative

to the matter. Most of the judicial proceedings of the Star Chamber being lost or destroyed, no case of prosecution for printing without licence, or pirating another man’s copy, has been found. But it is certain that, down to the year 1640, copies were protected and secured from piracy by a much speedier and more effectual remedy than actions at law or bills in equity. No licence could be obtained ‘ to print another man’s copy ;’ not from any prohibition, but because the thing was immoral, dishonest, and unjust, and he who printed without a licence was liable to great pe- nalties.— (4 Burrow, 2313). In 1640 the Star Chamber was abolished, and afterwards all regu- lations of the press by proclamations or decrees were deemed illegal. The licentiousness of the press, however, induced the two houses to make an ordinance which prohibited printing, unless the book was first

licensed and entered in the register of the Stationers' Company. Copyrights, ia their opinion, then could only stand upon the common law — both houses take it for granted. The ordinance, therefore, prohibits printing without consent of the owner, or importing (if printed abroad) upon pain of forfeiting the same to the owner or owners of the copies of the said books, fee. This provision necessarily supposes the property to exist ; it is nugatory if there was no owner, and an owner could not at that time ex- ist but by the common law. — (Ibid). In 1644 Milton published his famous speech for the li- berty of unlicensed printing against this ordi- nance, and among the glosses which he says were used to color the ordinance and make it pass, he mentions ' the just retaining of each man his several copy; which God forbid should be gainsaid !' As one of the judges remarked on the argument in Miller v. Taylor, the authority of Milton, an enthusiast for liberty, is worth all the abstruse reasoning deduced from the rules of property in a supposed state of nature.

2. Recognition of the Right by Acts of Par- liament,

In 1649 the long parliament made an ordi- nance which forbids printing any book legally granted, or any book entered, without consent of the owner, upon pain of forfeiture, &c. In 1662 the act of 13th & 14th Charles II. (the licensing act) prohibits printing any book unless first licensed and entered in the register of the Stationers' Company. It also prohibits printing without the consent of the owner, upon pain of forfeiting the book and 6s. 8d. each copy ; half to the king and half to the owner ; to be sued for by the owner in six months. The act therefore supposes an ownership at common law, and the right itself is particularly recognised in the latter part of the third section of the act, where the universities are forbid to meddle with any book or books, the right of printing whereof doth solely and properly belong to any particu- lar person or persons.

The various provisions of this act effectually prevented piracias.without actions at law or bills in equity by owners.

The licensing act of Charles II. was continued by several acts of parliament, but expired in

1679. Soon after which there is a case in Lilly's Entries, Hilary term, 31 Charles II., of an action brought for printing the Pilgrim's Progress ' of which he was and is the true proprietor, whereby he 'ost the profit and benefit of his copy. ' But it does not appear that the action was proceeded in.

The licensing act was revived by 1 James II., cap. 7, and continued by 4 W. & M., cap. 24, and finally expired in 1694. Such is the state of the

evidence as deduced from the acts of govern- ment and the legislature in the most despotic and unsettled times, and the inference is obviously strong, that if at those periods the rights of litera- rature were respected, when, if ever, they were liable to abuse, they ought much more to be regarded and protected in an age like the present, which owes its improvements to the diffusion of knowledge.

We have next to turn to the only other source from which any public testimonials can be derived of the ancient usages and regulations which bear on the question, namely

3. Ancient Custom of Entries in the Registry Books of the Stationers' Company.

It appears there is no ordinance or by-law re- lative to copies till after 1 640 ; and yet from the erection of the Company, in 1556, copies were entered as property and pirating was punished. In 1568_ and down from that time, there are entries of copies for particular persons. In 1559, and subsequently, there are persons fined for printing other men's copies. In 1573 there are entries which take notice of the sale of the copy, and the price. In 1582 there are entries with an ex- press proviso 'that, if it be found any other has right to any of the copies, then the licence, touching such of the copies so belonging to another, shall be void.'

Before the reign of queen Anne it was usual to purchase from authors the perpetual copyrights of their works, and to assign them from hand to hand for valuable considerations ; and to make them the subject of family settlements. Thus we find that, by the by-law of the Stationers' Com- pany made in 1681, it is stated that divers of the members of the Company had great part of their estates in copies, and that, by the ancient usage of that company, when any books or copies were entered in their register to any of tr e members of that company, such persons were a ways reputed the proprietors of them, and oupnt to have the sole printing of them. By ano.her by-law in 1694, after the above recitals, a id stating that the copies were constantly bargained and sold amongst the members of the c jmpany as their property, and devised to their ch .Idren and others for legacies and to their widov s for their main- tenance, it is ordained that, whan any entry shall be made of any book or copy, by or for any member of the company, in such case if any other member shall, without licence or consent of the member for or to or by whom the entry is made, print, import, or expose to sale, fee., they shall for every copy forfeit twelve pence. Such is the legal and historical evidence down to the time of the act of 8 Anne.

COPYRIGHT.

SECT. II. — BY THE STATUTES. It is evident from the preamble of the act passed in the year 1710, 8 Anne cap. 19, that the act was not introduced on the part of the public to restrain the duration of copyright. The imaginary evil of its perpetuity (which will be presently investigated) was not then suggested. It is manifest, on the face of the act, that it originated with the aggrieved authors and pub- lishers. The important 'effects of the art of printing had become generally felt. The great demand for literary works excited the exertions of the booksellers and publishers, and it appears that all the members of the fraternity did not confine themselves to their own productions, but to sapply the increased demand committed de- predations on the literary property of their con- temporaries. It was natural that the greater part, if not all, of these dishonorable transactions should be committed by the lowest class of publishers, who were incompetent to pay any damages that might be recovered against them. The proof of the extent of the damage was also difficult, and it was therefore desirable that penalties and forfeitures should be inflicted, to protect the growing importance of literary property.

The act recites that printers, booksellers, anc other persons, had of late frequently 'taken the li- berty' [not claimed the right] of printing and pub- lishing books and other writings without the consent of the authors or proprietors, to their very great detriment, and too often to the ruin of them and their families. ' For preventing, therefore, such \mal\ practices for the future, and for the encou- ragement of learned men to compose and write useful books, it was enacted that the authors of books already printed who had not transferred their rights, and the booksellers who had pur- chased copies, should have the sole right of printing them for the term of twenty- one years, and no longer ; and the authors of books there- after printed, and their assigns, should have the sole right for fourteen years, and no longer. But it was provided that, after the expiration of that term, the right should return to the author, if then living, for another fourteen years. And then it enacted the forfeiture of all books printed without the consent of the proprietor, and in- flicted a penalty of one penny for every sheet : half the penalty to the crown, and the other to the informer. In 1801, by the 41st Geo. III. cap. 107, the penalty is increased to threepence per sheet. And, that ' persons may not through ig- norance offend against the act, ' the forfeitures and penalties do not attach unless the title to the copy of the book be entered in the register of the stationers' company. By the 15th Geo. III. cap. 53, sect 6, the title to the whole book and every volume thereof must be so entered. It was provided by 8 Anne that the act should not extend either to prejudice or confirm any right that the universities or any person had, or claimed to have, to the printing or reprinting any book or copy already printed or thereafter to be printed.

The act authorised the archbishop of Canter- bury and other dignitaries to settle the prices of books, upon complaint made that they were un- VOL. VI.

reasonable. This clause was repealed by 12 Geo. II. cap. 36, which at the same time prohibited the importation of books reprinted abroad which had been first composed and printed in Great Britain.

In 1814, by t!,e 54th Geo. III. cap. 156, the tenn was extended from twenty-eight years con- ditionally on the life of the author, to the same term absolutely ; with a further extension in favo» of the author till his death, if he survived th& twenty-eight years ; and the advantage is given to the authors then living of books published before the act. We confine the statement of the statu- tory provisions in this place, to those which re- late to the duration of the copyright, and refer to their appropriate sections the other enactments. The great question which has been discussed in the courts of justice regarding the limits of lite- rary property depended on the construction of the 8lh Anne. Before adverting to the grounds of the interpretation which was put upon it, we deem it appropriate, in ihe order of time, to no- tice the legal decisions which took place from the passing of the act in question down to the year 1774, when, contrary to all the previous decisions, it was for the first time determined by the house of lords that the common law right was merged in the statute.

SECT. III. — LEGAL DECISIONS ON THE QUES- TION OF PERPETUITY.

1. The earliest decisions on the general ques- tion of literary property occurred in the courts of equity, which were resorted to as affording a more speedy remedy against invasions of copy- right by an immediate injunction, than could be obtained by an action at law for damages. Numerous decisions took place, founded upon the principles of the common law, and on the supposition that a perpetual copyright belonged to authors and their assigns. The question upon the common law right to old copies of works could not arise till twenty-one years from the 10th of April, 1710, consequently the soonest it could arise was in 1731. In 1735 an injunc- tion was granted by Sir Joseph Jekyll to restrain the printing of the Whole Duty of Man, the first assignment of which had been made seventy- eight years before that time. In the same year lord Talbot restrained the printing of Pope's and Swift's Miscellanies, though many of the pieces were originally published prior to the act, namely in 1701-2 and 1708. In 1736 Sir J. Jekyll granted another injunction for printing Nelson's Festivals and Fasts, though printed in 1703 in the life-time of the author, and he died in 1714. In 1739 an injunction was ordered by lord Hardwicke against printing Milton's Panidiso Lost, the title to which was derived by an as- signment of the author seventy two years ante cedently. And in 1752

another injunction issued in favor of Milton's Paradise Lost, with his Life by Fenton, and the notes of all the former editions. It was an injunction to the whole, so that printing the poem, or the life, or the notes, would have been a breach of the order. It has been urged in objection, that these injunction cases were only preliminary decisions, and that nomi of the suits were brought to a final hearing

Great caution, however, has been always exer- cised in granting injunctions at the commence- ment of a suit, because, if on further investigation it should be found erroneous, the loss of a de- fendant does not admit of reparation. The judg- ment therefore has been invariably given with great deliberation, and lord Mansfield said ' he looked at the injunctions which had been granted or continued before hearing as equal to any final decree ; for that such injunction never is granted upon motion unless the legal property is made out, nor continued after answer unless it remains clear. The court of chancery never grants injunc- tions in cases of this kind when there is any doubt.' (4 Burrow, 2303). And lord Eldon, in Hogg v. Kirby, referring to the view taken by lord Mansfield, says that ' in these cases a court of equity takes upon itself to determine as well as it can the right in this period, and with a con- viction that, if then the cause was hearing, they would act upon the same rule. The court takes upon itself that which may involve it in mistake, to determine the legal question. It is the de- cision of a judge sitting in equity upon a legal question, and therefore not having all the au- thority of a decision of a court at law, but giving an opinion, and pledged to maintain it, unless there should be occasion to alter it.' (8 Vesey, 224). So in the case respecting the publication of Lord Melville's Trial, lord Erskine observed that 'he was so much convinced by the argu- ments for the defendant as to the effect of an in- junction, that unless he had a strong impression that at the hearing he should continue of the same opinion, and should grant a perpetual in- junction, he would not grant the injunction then; which he only did as there was no probability that new facts would appear by the answer.' (Gurney v. Longman, 13 Vesey, 505). There are several cases reported upon questions regard- ing infringements of copyright within the period protected by the statutes : to these of course it is unnecessary to advert, as the general principle was not in any way included in the determina- tion.

2. The general question was first argued in a court of law in the case of Tonson v. Collins, in the year 1762, relative to the copyright in the

Spectator. It appears from the best authority, that so far as the court had formed an opinion, they all inclined to the plaintiff; but having received information that although the argument was conducted bona fide by the counsel, it was a collusive proceeding between the parties for the purpose of obtaining a judgment, which might be set up as a precedent, they refused to pronounce any decision. (1 Blackstone's Reports, 301, 321. 4 Burrow, 2327.) In the year 1769 the subject was discussed at great length with respect to Thomson's Seasons, in the case of Millar v. Taylor (4 Burr. 2303.) There was a difference of opinion in the court. Lord Mans- field and judges Aston and Willes were in favor of the right, and judge Yates against it. Judg- ment was of course given according to the opinion of the majority. In 1774 the subject came before the house of lords in the case ot Donaldson v. Beckett, when it was finally deter- mined that an author has no property in his

copyright, otherwise than according to the terms of the statute. The majority of the judges were of opinion that there was a right at common law, namely, judges Ashurst, Blackstone, Willes, As- ton, Gould, Adams, the lord chief baron, and the lord chief justice of the common pleas, besides lord Mansfield. Of the opposite opinion were lord Camden, barons Eyre, Perrott, and Adams, and judge Yates. But there was a majority of seven to four that the right was restrained, or taken away by the statute which prescribed the term of fourteen years, and no longer.

SECT. IV. — CONSTRUCTION OF THE ACT OF 8

ANNE.

1 . It is remarkable in the constructions put on the statute of Anne, which it was contended had the effect of merging the common law right, that such right is admitted and recognised by providing a remedy for the injury, although at common law we are told there is no injury whatever. The statute professed to encourage learning, and to prevent ' the printing of books without the consent of the authors or proprietors, to their detriment,' &c. Its object was avowedly not to limit the right, but to facilitate the reme- dy ; yet it has been construed to reduce a per- petuity to a short term of years ! In giving an additional protection to literary property, by inflicting a penalty, there might be some reason for limiting that species of punishment to a defi- nite period. The penalty is not reserved to the author, but given to any one who may sue for it ; and it is obvious therefore that it was designed as an act of public justice, independently of the private right to compensation at common law. 2. It should be recollected also that it was a remedial statute, and ought to have been con- strued liberally ; instead of which, the contrary principle was adopted, as if the object of the act, as well as justice and policy, had required the suppression of literature, rather

than its en- couragement. 3. It is important to observe that the bill on which the act was founded, went to the committee as a bill to secure the undoubted property of copies for ever. By the law and usage of parliament, a new bill cannot be made in a committee : a bill to secure the property of authors, could not be turned into a bill to take it away. What the act gives, with a sanction of penalties, is for a term : the words ‘ and no longer’ add nothing to the sense. Besides which, the proviso is express that the act shall not ex- tend, to prejudice any right, not only of the universities, but of any person. 4. It is admit- ted that there is a perpetual right in a literary work before publication, and that such right exists according to the common law. Various cases in equity have been decided on this point, all of which are allowed by the opponents of perpetual copyright to be correctly determined. It is evidently most inconsistent to deny the right after publication, which is admitted to exist before it. A man it is granted may main- tain trover or trespass for taking his manuscript; but how are the damages to be estimated ? Surely not by the price of the paper, but the profit of the publication ; and yet we are told he can.nct appropriate to himself the advan-

tage of publication. Whilst the work con- tinues in manuscript, it can be of little or no value to him, and of none to the commu- nity. During that time he is welcome to it, but so soon as he is enabled to derive a profit for his laboi, he is then told, ‘ it belongs to the public.’ Such are the inconsistencies of injustice.

5. It has been also granted that the king’s copyright continues after publication, and is in fact perpetual according to the common law. There are several cases reported in the law books for violating patents for prerogative copies after the expiration of the period limited by the sta- tute (2 Shower’s Reports, 258. — Modern Reports, 256). These cases prove that a copyright was a thing acknowledged at common law ; since if the king had not the right, he could not grant it to the patentee. It is clear that the king by his prerogative has no power to restrain printing, which is a trade and manufacture ; or to grant an exclusive privilege of printing any book whatso- ever, except as a subject might, by reason of the copyright being his property. It is settled then that the king is owner only of the copies of all books or writings which he had the sole right originally to publish ; as acts of parliament, orders of council, proclamations, and the common prayer book. These, and such like, are his own works, as he represents the state. So likewise where by purchase he had the right originally to publish ; as the Latin Grammar, the year books, &c. ; and in the last cases the property of the crown stands exactly on the same footing as pri- vate

copyright : as to the year books, because the crown was at the expense of taking the notes ; and the Latin Grammar, because it paid for the compiling and publishing it.

6. The right of the two universities in England, and the four in Scotland, with the colleges of Eton, Westminster, and Winchester, and Trinity College, Dublin, to a perpetuity in their copies, is now founded upon the statute law ; but it is evident they were as much astonished at the de- cision in Donaldson v. Beckett, as any private author or publisher. After that decision they flew to parliament to reinstate them in their rights, and the act, which was immediately passed in 1775, is a virtual overthrow of the principle on which the house of lords had pro- ceeded. There can be neither sense nor justice in allowing to these wealthy corporations a right which is denied to individuals. The universities, in their corporate capacity, have done nothing to merit the exemption. They are collectively be- hind the literary and scientific world in modern improvement. Nothing nationally great has originated from them to justify the granting of peculiar exemptions, and they are better able to bear the wrong which the laws inflict than indi- viduals. The act obtained by the universities (15 Geo. 3, c. 53,) commences by reciting ' that authors may bequeath or give the copies of books composed by them to these universities and col- leges, and may direct that the profits shall be applied as a fund for the advancement of learn- ing, and that such useful purposes will frequently be frustrated, unless the sole printing and re- printing be secured to them in perpetuity.' Now « it not manifest that if the universities, as the

LEGATEES of authoi-s, OB entitled to this protection, the authors themselves are on every principle still more entitled to it ? We admit of course that the universities are in possession of no more than their just and legal rights ; but we main- tain that private individuals, as well for their own sakes as for the interests of science and literature, are at least equally, if not in a higher degree, en- titled to legal protection.

SECT. V. — OBJECTIONS TO THE PERPETUITY

CONSIDERED.

1. The opponents of copyright insist that there is no authority at common law to support the claim of a perpetuity, and that the custom of exercising the right (if it ever existed) is not im- memorial. The evidence on the first part of the objection has already been detailed in the first section, and the custom has been shown to exist ever since the invention of the art which gave value to the property in question. The claims of justice do not depend on antiquity. The principles of the unwritten law are indeed of the highest antiquity ; but the objects to which they are applicable may be recent.

There are many things, the uses of which were unknown in igno- rant times, that have now become valuable, and it is as monstrous to shut out from legal protec- tion the intellectual labors of ingenious men, as it wouli be to declare that the mariners' compass and gunpowler, which were inventions within the period of legal memory, cannot be included in the laws of property. The absence of judi- cial authority can form no objection to the claim. It was not decided till the year 1732 that a title to literary property could be maintained prior to publication ; yet it is admitted, on all hands, that it was correctly determined (according to the principles of the common law) that no distance of time, however great, could authorise a publi- cation without the consent of the author ; as in the cases of Lord Clarendon's History and the Letters of Pope. Many points of law have been decided in recent times, for which there is no precedent. For instance, it is not many years since it was held actionable at common law to give knowingly a false character, on the faith of which credit had been given and loss sustained. The great maxim of the common law is, that there is no injury ivithout a remedy.

2. Ideas, it is said, cannot be an object of property. Without entering into the abstract argument of the origin of property, it may be sufficient for all rational purposes to observe, that there is no real distinction between the rights of literary and landed property. Mr. Justice Blackstone classes literary compositions amongst the species of property acquired by occupancy, since they are grounded on labor and invention. On the question of the right to an exclusive enjoyment of the profit of the publication, he says, ' When a man by the exertion of his rational powers has produced an original work, he seems clearly to have a right to dispose of that identical work as he pleases ; and any attempt to vary the disposi- tion he has made of it, appears to be an invasion of that right.' (2 Commentaries 406.) The dis- tinction cannot depend upon the degree of labor bestowed in the acquisition of land, for that is

often possessed without labor, and originally acquired as often by good fortune as by merit. The property in a literary work may be acquired in the same way. The first thought may have been accidental, and labor has enlarged and im- proved it. Wherefore is it that the posterity of those who have produced intellectual treasures should not inherit them, as well as the descend- ants of the accumulators of land or money? To say that the definition of property in the old legal authorities does not include the

property in ques- tion, is nothing to the purpose. If it does not include it, the definition is a bad one, because it is not sufficiently comprehensive. Besides, if it possesses none of the usual characteristics of property, let it form a class of itself. Injustice should not be done for the sake of preserving consistency in verbal or metaphysical distinctions.

‘ Nothing is more erroneous (says professor Christian) than the practice of referring the origin of moral rights, and the system of natural equity, to that savage state, which is supposed to have preceded civilised establishments ; in which litp- rary composition, and of consequence the right to it, could have no existence. But the true mode of ascertaining a moral right is to enquire, whether it is such as the reason, the cultivated reason of mankind, must necessarily assent to. Un- der whatever denomination of rights literary pro- perty may be classed, it seems founded upon tlie same principle of general utility of society which is the basis of all other moral rights and obliga- tions.’ 2 Comm. 407. Notes.

It is granted that an author possesses a legal property in his literary labors whilst they remain in manuscript. But what real distinction can there be in the nature of the property; as it respects either the sentiments or tne language, be- fore publication and after ? The law prohibits the publication, of his manuscripts without his consent, why should it not also protect the printed copy, and prevent the appropriation of the profit by any other person than the author ?

3. But it is said, others may arrive at similar conclusions. It would be difficult to ascertain the right owner, and it would inconveniently in- crease litigation.

There is here an unfounded assumption. It is impossible for any two men to compose a work precisely similar, for no two minds are alike. They may arrive, indeed, at the same ‘ conclu- sions.’ Thinking upon the subject, the truth may be apparent to both ; but each will proceed by different methods, and those who are skilled in criticism would have no difficulty in determining which of the two was the plagiarist ; and an in- telligent jury, aided by competent witnesses, by the learning of the bar, and by the assistance of the bench, would surely be able to determine whether the work was colorably pirated from another, or an original and bondjide production.

But admitting that there might be occasional difficulty in identifying the works of one author from another, snch cases would be rare. Are we to abandon the property in general, because it sometimes maybe troublesome to ascertain it? There is frequent difficulty in identifying other species of property, nay, even in identifying persons ; but no one has yet been wild

enough

to propose the abolition of the laws of property, because the evidence of ownership is often doubtful. We do not conceive the difficulty would be greater in this, than in many other kinds of property. There are no insuperable obstacles in identifying a literary work within the time already limited by the statute, and the same rules might be applied if the time were extended.

That it will give rise to litigation, so long as men are dishonest, cannot be doubted ; but the same occasional evil prevails in every kind of property. He who prints and publishes another man's copy, or makes such voluminous extracts from it as to injure its sale, knows, as well as the depredator of any thing else, that it is not his own; and if he has no sense of rectitude, he should be taught by the law that it is wrong, and punished either in purse or person for his transgression. There would be no greater de- gree of litigation than in proportion to the num- ber of violations of the law of copyright, and the inclination of the injured to seek redress. Let the experiment be tried, and there will be no difficulty in providing remedies for any evil that may casually arise in the execution of the law.

4. The composition is the property of the writer whilst in manuscript, but the act of pub- lishing gives it to the world. If there be any force as to mere legal reasoning in this objection, there is none as to reason or common sense. By the publication the author gives nothing whatever. He sells each copy for its price, and the pur- chaser may do what he pleases with the copy, except printing other copies. He may make use of the language and sentiments it contains in any way he thinks proper, except to the injury of the author. He may quote or abridge pas- sages to improve his own works, provided the extracts be not of unreasonable length, or have not the effect of injuring the sale of the original. He may also lend or sell his copy, and may make a profit by the loan or sale. But he can- not appropriate to himself the projit derivable from the sale of other copies, the right to print which was never sold. The purchase he has made is for his own use, not the use of the pub- lic, and he must abide by the reasonable con- ditions of his bargain. It may be compared to the case of a proprietor of a theatre, who grants for a certain price a ticket of admission, which, if transferable, the purchaser may lend or let on hire ; but who ever supposed that he had a con- sequent right to multiply copies, and sell them to the injury of the proprietor ? So in the in- stance of a public water company, the contract includes the unlimited use by the person who pays for it, but conveys no right to vend the smallest portion. By analogy, therefore, to other kinds of limited sale, as well as from the reason of the case, it is clear that the act of publishing is no dedication to the public, so as to make the property common to all.

5. Another objection is, that the patentees of mechanical inventions possess but a limited term, and therefore, that the authors of literary or scientific works should be satisfied with the same measure of legal protection.

We shall not entet into the argument of the distinction between the superior and immediate profit derivable from machinery compared with literary improvement, for we are not satisfied it is well founded. ' It would be difficult,' said Mr. (afterwards lord) Thurlow, ' to confine this right merely to books, and not to extend it to other inventions. A learned author (bishop Warburton) has endeavoured at it, and brangled it and made sad stuff of it, he attempts a dis- tinction between the labors of the head and of the hand ; but in some machines the labor of the head is greater than that of the hand. Sir Isaac Newton had no other property in his Principia than lord Orrery had in his machine. If the labor of the head gives the right, the property is just the same; and it is possible that the inven- tion of the mouse-trap cost its author the same labor of the head, that the Orrery did its nobler contriver ; so that this ground of property de- pends entirely upon the difference of heads.' Tonson v. Collins, (Bl. Rep. 301.) But we rest on this — if there is a distinction m fact, we are glad the patentees suffer less wrong. If not, they are common sufferers, and should take part in seeking redress. It is a proof of the straits to which our opponents are driven, when they excuse one act of injustice by another.

6. It is objected, that it would prolong the power of the owner to deal with the public as he chose, and that he might either suppress a va- luable work, or put an exorbitant price upon it; in both of which events 'the public would be injured.

The fear of suppression may be easily pro- vided against. If the proprietor does not reprint the work when required, within a reasonable time, there would be no injustice in considering the copyright as abandoned. It is replied, that there would be a difficulty in proving an aban- donment. We do not perceive the difficulty, at least in the majority of instances; and regula- tions, which experience would suggest, might be adapted to circumstances. Generally speak- ing, if it were worth while to reprint a work, the copies of which were exhausted, it would not be abandoned. Where it was out of print, notice might be given to the last publisher, and entered in the registry of the Stationer's Company; and if at the expiration of a certain length of time, (perhaps proportioned to the magnitude of the work,,) it were not reprinted, it might then be- come common property.

There is no probability that the price of litera- ture will be enhanced more than the price of land. Some ages ago a large price might have been required, and, as the demand was then limited, a high price was not unjustifiable. But since the development of the true principles of trade, there can be no apprehension of such a result. Every publisher now knows that the cheaper he sells his books, the greater is the sale, and that a small profit upon a rapid and extensive sale is ultimately more advantageous than a larger profit upon a slow and limited one. The more valuable the work, the cheaper it might be sold, on account of the greater number of pur- chasers. It is only of indifferent works which

are little demanded, that a high price could be necessary. So that the evil cures itself, and both the cause of literature and the interest of the public would be promoted, by enabling the pro- prietors of this kind of property to deal with it as unreservedly as with any thing else. Surely if the principle of free trade should any where be acted upon, it ought to prevail in favor of the press, that great instrument of national knowledge and improvement, and by which all other improvements are so much extended and promoted. Besides, the price might be restrained by a jury. Compensation for property is settled on many occasions under acts of parliament for roads and canals. It would be competent for an author or proprietor to prove the capital in- vested, and learned men might be called to estimate the sA-j7//and publishers to prove what would be a fair or liberal remunerating price.

But then it is said if there be an actual right, it is improper to restrain it. We have no wish that it should be restrained : we do not apply for the restraint; we think it not only needless, but objectionable and unjust. We conceive that every man's own interest will be the best protec- tion to the public for the fair exercise of the right. It is so in all other arts and trades, and why should it not be the same in those of print- ing and publishing? But if we cannot hare the right without the restraint, we will submit to it. It is an odd objection that denies a right, because if exercised it may be injurious, and then rejects the restraint, because all restraints are reprehensible.

7. Glory (say the advocates of limited copy- rights) is the reward of science, and those who deserve it scorn all meaner views. It was not for gain that Bacon, New ion, Locke, &c. instructed the world. There are various unan- swerable replies to this piece of rhetoric. First. The question is not what are the motives of an author, glory or gain? but what is due injustice from the public to those who have conferred benefits upon it. What is right ? If the benefit be perpetual, why should not the reward ? If Shakspeare has left us volumes of intellectual gratification, which can die only (nay not even then) with the language in which they are writ- ten, why should not his descendants (long reduced to poverty) derive the benefit

*which justice demands, and which gratitude would cheerfully pay ? Granting that Nelson and Wel- lington were stimulated to their immortal t*er- tions by glory alone, do we owe them nothing because they have their reward? Were the titles and the wealth that were bestowed upon them needless ? Besides, it may be asked, how do the national rewards of substantial property act in the way of excitement upon the conduct of others ? Has the perpetual entailment of Blen- heim had no influence upon the minds of subse- quent warriors ?*

Secondly. Different men are compounded of different materials. The objection supposes all men alike; that all are influenced by the pre- dominant passion of ambition. It is an ob- jection founded in utter ignorance of human nature. A very large class certainly are desirous of renown. But there are other classes besides

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the ambitious: many men love their parents, wives, children, and kindred, and to that intense degree, that they will exert their powers more emi- nently forthem than for the empty buzz of strangers or of distent posterity. Do these lawyer-like rea- soners suppose that all men of warm affections are dolts, and that the stern and cold man of am- bition is the only inheritor of genius and great- ness ? Now a man of this kind may care but little for 'gain' so far as he is personally con- cerned ; but, for the sake of those who are dearer to him even than ' glory,' he may bestow more labor than the merely ambitious man, and where- fore should he not be permitted to receive that which the public would readily and gladly pay ? Who is there that reads the Paradise Lost, that would not be delighted to know that, in paying its price, he had contributed his mite to avert the penury in which had died the last descendant of its author? It is any thing but philosophical to talk of men in general as exerting themselves disinterestedly, and as ' scorning all mean views.' Small must be the knowledge of human nature which ventures upon such declamation. There are men of the strictest integrity, who far surpass the generous and the ambitious in acts of justice, and yet are influenced by motives of gain. Are all men who desire to be paid for the services they perform, mean?'

Authors are not a peculiar race of men, able to live on the air, ' glory- crammed.' Neither, we suspect, were the judges who reasoned with such loftiness, able to live on the renown of ad- ministering the laws with impartiality !

There is yet another class, the most numerous of all, who are not actuated

by any simple pre- dominant motive, to whom neither glory, nor gain, are master passions, but who are influenced by mixed motives, and would bestow greater exertions if their social as well as their selfish feelings were gratified. Why should we not use all the means which justice permits, to incite men to the exertion of their best faculties ? He who can by his works obtain not only the prospect of future fame, but the substantial advantage of im- mediate recompense, with a provision for his family after his death, will labor with greater diligence than those who are incited only by the desire of posthumous renown.

The reward of glory may indeed stimulate the production of works of pure genius, and the more especially as the exercise of the imagination is so peculiarly delightful ; but this cannot be the case in an equal degree in the department of philosophy. Great, persevering, and often pain- ful labor, is necessary to the accomplishment of many works of science, and therefore every pos- sible inducement should be added, instead of being diminished, that may tend to encourage the prosecution of such labors.

Besides, an author, who wished for no other reward than ' renown,' might still exercise nis liberality, and either present his labors gratui- tously to the public, or bestow them on some meritorious object. He caw do so now in favor of the universities, and the glory of the bequest would be the greater, because it would be more rare and generous.

SECT. VI. — OP THE JUSTICE AND POLTCY op UNLIMITED COPYRIGHT.

1. In examining the objections to a perpetuity of the right, we have stated several arguments, which prove both the justice and policy of placing literary on the same footing as other kinds of pro- perty. Referring to those statements, we have now to point out some general considerations, which could not appropriately be introduced in any other place. It is boasted of the laws of England, that they provide a remedy for every injury ; and wherefore, we demand, should the wrongs of literary men be the only exception to this wide rule of general relief? The labor of the mind surely deserves as much protection as that of the body. Whatever may be suggested by the subtlety of legal reasoning, or the abstract definitions of the origin of property, no just (not to say liberal) man would deny that protection to the fruits of literary labor, which is given to those of every other kind. The same principle which establishes the policy as well as the justice, of guarding from invasion the accumulations made by manual industry, must confirm the right to the acquirements of intellectual industry. If property be not protected, it will not be acquired. The interest, the very existence of society, is in- separably connected with the encouragement of industry. And, as national wealth depends upon national

labor, so does knowledge depend on in- tellectual exertion. But neither the corporeal nor the mental powers will be freely or fully exerted, unless they receive without restraint the beneficial produce of their exertion. Above all, this great principle should always be remembered that whatever is the most just will ultimately be the most beneficial. Honesty is at all times the best policy.

2. It is always a ˆreat evil that laws, if just, should be evaded ; for there is not only the imme- diate injury to justice of the specific violation, but a general weakening of the salutary reverence which is entertained for national laws when founded on principles of reason and equity. Now both authors and the publishers to whom they have assigned their works, have a strong feeling that the limitation of copyright to the pe- riod of twenty-eight years is inconsistent with the regulations of all other arts and professions, at variance with the commonest principles of free trade, and equally injurious to authors and publishers; without any correspondent benefit to the public. It is natural, therefore, that every effort should be made to elude the consequences of that which they correctly think is an arbi- trary and irrational infringement of their own rights, and of the property of their families : of a patrimony often earned at the expense of health and of the abridgment of life. And whilsi acting under such feelings, there are few even of the coldest-hearted legislators, who would visit with much censure the plan of ingenuity and contrivance which has been resorted to by the parties interested, in saving themselves as much as possible from injury or diminishing its mag- nitude.

The proprietor of the copyright prior to its ex- piration takes care to prepare a new adition with

notes, and though the original work becomes common property, the notes are protected, on the ground of their constituting an original compo- sition. By a sort of combination also amongst the principal booksellers, these new editions ‘ with notes/ receive a preference over others. The in- terpretation which the judges have put on this mode of publication, is exceedingly liberal; but, if it be right that publishers should resort to these expedients to protect their property, the law should allow it to be done openly instead of surreptitiously. An honorable man must revolt against a system, which subjects him to lose his property, or to practise devices and evasions which out of respect to the laws of his country he must dislike. And although by these means the mischief is somewhat practically diminished, much of it unavoidably remains. The work may not really require any notes, either of

explana- tion or addition, or they may be such as the hum- blest talents can supply. There are, it is true, some subjects which are undergoing continued change, and the publications which treat of them require proportionate alterations. But if not so, 'the work is encumbered with useless comments, or the name of some eminent author is appended to a new edition, which the commonest writer might equally well supply.

3. On the policy of perpetual copyright, it has been demanded, What good would it produce to the public? The question ought to be, 'What evil?' for if there be no evil, there ought to be no restraint. But it is obvious that justice and po- licy are here (as they always are upon the whole) inseparable. By the extension of copyright the public would have superior and cheaper publica- tions. By the present system, authors are dis- couraged from undertaking works which would become of standard usefulness, because such works demand the labor of a large portion of life ; and, as that labor is not now rewarded in a sufficient degree, they apply their talents to the hasty composition of publications of merely temporary interest. Instead of selecting the im- portant and useful, they consult the fashion of the age, and write to gratify some peculiar excite- ment which is productive of immediate profit, but generally terminates with the novelty of the occasion. The labor and expense of a work of great utility or magnitude, and the research and care which it demands, cannot be encountered in many instances so long as the law remains in its present state. We do not here speak of the works which are costly in their embellishments and illustrations, but of the purely scientific and literary labor which they demand ; of the investi- gation of ancient records and scarce and ab- struse works ; of the comparison of conflicting documents, and the task of judicious selection from large masses of materials; of the accuracy with which all these things should be done, in collecting the materials, in adopting the best arrangement, and in selecting the most appro- priate language ; for all which much time and lei- sure most be allowed, or with the greatest talents the work will be imperfectly executed. We have here supposed a production chiefly of learning, research, and judgment. But if it be one of striking originality, the invention of a new sys-

tem, the task of experiment and induction may require a still wider range of exertion and longer continued perseverance, which it is not reasonable to suppose will be often bestowed without supe-~ rior recompense. Now it is manifest that, if the period were extended, publishers could afford to pay a larger price to authors for their copyright in works of this valuable, kind, because their in- terest in them would be of an enduring nature ; and though the profit might not be rapid, its per- petuity would encourage them to undertake it. Furthermore, an author who possessed capital as well as talent might choose to embark it, and re- tain the entire copyright to himself and transmit it to his family.

The cheapness of a work would also be pro- moted, since the proprietor would not depend upon a sudden return for his capital, but might proportion his gain to the extent of its duration. As he would ultimately receive a better remu- neration, he could afford to diminish its present amount. In order, however, to effect a sufficient reduction in the price of books, correspondent with that which they bear on the continent, the imposition of the presentation copies, the tax upon paper, and the duty on advertisements, should be abolished or greatly moderated ; still the extension of copyright would be a commence- ment of a better state of things, and afford en- couragement to effecting other improvements. Supposing, however, that nosensiblediminution in the price of literary works should take place, it is evident at all events that the price would not be increased. And it is clear also that both the author and publisher would gain by it. The former would naturally obtain a superior price for that which was assigned for ever, compared with the limited period of twenty-eight years. And surely no one would object to the increase of the pittance which authors are in the habii of receiving, even if it should in a small degree enhance the price of literature; an effect, however, which we conceive would not take place; for the price is now as high as it can possibly be carried, and every means should be adopted to enable the booksellers to reduce it.

Not only individual publishers would gain by the extension, but it would promote the interest of publishers in general, if the property in a work were vested in the author and his assigns. Sup- pose that the moment a valuable book were pub- lished, every one had a right to pirate it, the effect would be that a general scramble would ensue to reprint cheaper editions than the origi- nal. A great number of persons would be en- gaged in doing the same thing ; the market would be overstocked ; none would be suffi- ciently remunerated ; and all would be more or less injured. It would be analogous to per- mit the land of a deceased person to be re- tained by any one who could by stratagem or force obtain possession. Now something of the same kind must take place, though in a le?

4. The consequences of the injustice falls on the most useful authors, whom it is the interest

of the public, in the highest degree, to protect and recompense. The best and most original works make the slowest advances in general cir- culation. Smith's Wealth of Nations, the labor of half a life, passed only through two editions in eight years. Hume's History, as well as his early philosophical

works, fell dead-born from the press : and every one knows the obscurity in which Milton's immortal poem remained for many years. Before critics have passed their judgment, the public attention is not excited. Re- viewers are not always impartial, nor always cor- rect. Some of them may condemn from malice and prejudice ; some from mistake and igno- rance. The judgment of the public, therefore, may be misled, and it often requires many years to correct its erroneous impressions. Such will more particularly be the case with productions of a novel and original character. Discoveries, however important, are not always encouraged, particularly if they attack existing systems. Long time is often necessary to obtain even a candid hearing on some subjects, still more to render the works which treat of them sufficiently popu- lar to recompense the author. It is a fact proved by indisputable evidence before a committee of the house of commons, that many important works of an expensive nature have not been published, owing to the hardships imposed by the Jaw. A great part of that hardship is attributa- ble to the heavy tax of the eleven presentation copies for the public libraries, which we shall presently examine ; but much also of disadvantage arises, even as regards these costly publications, from the limitation of time, because the splendid engravings, which occasion the chief expense of many of these works, are equally doomed to common depredation after the end of twenty-eight years,

5. No doubt it is wise to provide against evils; and if there were any good grounds for appre- hending that the extension of the period would be productive of mischief to the public, it should certainly be refused. But we are not without experience on the subject.

It is now upwards of fifty years since the uni- versities, by the 15 Geo. III. c. 53, obtained a confirmation of their right to the perpetual print- ing and publishine of their copies, and no disad- vantage to the public, that we can learn, has yet arisen from its exercise ; and to those fifty years must be added all the antecedent time during which they possessed the same undisturbed right. We, therefore, conclude that it may now be safely granted to the persons who were originally, and most naturally entitled to it; namely, the authors, from whom the universities themselves derived the advantage, and to whom they still look for similar donations.

6. The state of the law in other countries af- fords not only an additional and strong argu- ment in favor of the policy of extending the rights of authors ; but shows what other nations must think of the injustice of our regulations.

In France, the term of copyright is extended to twenty years after the author's decease. In Germany, it is perpetual. What is the conse- quence to literature and the public of this juster system? DC authors and publishers

abuse the

power they possess ? Do they suppress valuable works, or limit their usefulness by exorbitant prices? No! In France, as Dr. johnson ob- served, they have a book on every subject. In Germany, the abundance of literary works is still more extensive. In both countries, the price of books is beyond all proportion lower than in Great Britain. Compare also the literature of France and Germany, where the one is limited (though not to the contracted period of twenty- eight years), and the other is free. Does the per- petuity of German copyrights render the writers less original or profound than those of France ? Does it tend to superficiality ? No ! We believe there are of late years more great and original works of enduring excellence published by the German press than by that of any other country.

Let it be recollected also that most of the great works which constitute the glory of English literature were published prior to the interpreta- tion of the law in 1774. True it is that, it spite of that interpretation, some additions of a standard nature have been made to the stock of national learning, but these have been encouraged by other means than acts of parliament ; by the evasions of their exactions, and the irrepressible energy of a few of our distinguished country- men.

SECT. VII. — OF THE TERM OF COPYRIGHT IN PRINTS, ETCHINGS, ENGRAVINGS, MODELS> STATUES, AND BUSTS.

The 8th Geo. II., cap. 13, is an act intended for the encouragement of the arts of designing, engraving, and etching historical and other prints, and vests the sole right and liberty of printing them for fourteen years from the time of publica- tion, the date to be engraved, with the name of the proprietor, on each plate and print ; but it seems doubtful whether the name and date are essential to the recovery of damages in an action for piracy, though it is clear they are necessary in actions for penalties under the statute. 5 Term Rep. 41 ; 1 Campbell 94. The act is not con- fined to inventions, strictly, but comprises the designing or engraving anything that is already in nature. 2 Atkins 293. The degree of originality which entitles the inventor to the pro- tection of the statute has been well defined by lord Ellenborough, who states the question thus : 'Whether the defendant has copied the main de- sign ? Whether there be such a similitude and con- formity between the prints, that the person who executed the one set must have used the others as a model ? In that case he is a copyist of the main design. But if the similitude can be sup- posed to have arisen from accident, or necessarily from the nature of the subject, or from the artist having sketched his designs merely from reading the letter-press of the plaintiff, the defendant is not answerable.' Roworth v. Wilkes, 1 Camp- bell 94.

The act inflicts a forfeiture for pirating either the whole or a part, and a penalty of five shillings for every print. By the 7th Geo. III., cap. 38, the right is extended to twenty-eight years. (Sect. 1 .) And it includes the prints of any portrait, conversation, landscape, or architecture,

map, chart, plan, pr any other print.' By the 2nd section, engravings, etchings, or works taken from 'any picture, drawing, model, or sculpture, either ancient or modern,' are entitled to the protection of the act. By the 17th Geo. III., cap. 57, an action for damages and double costs is given for engraving, etching, or printing any historical print, or print of any portrait, &c., without the consent of the proprietor, within the time limited by the former acts. The 38th Geo. III., cap. 71, vests in the same manner the sole right and pro- perty of making models, copies, or busts, for fourteen years, provided the name and date of publication be put thereon ; and persons making copies without the written consent of the propri- etor may be sued for damages. These provisions were rendered more effectual by the 54th Geo. III. cap. 56, by which double costs were given, and an additional term of fourteen years in case the maker of original sculptures, models, &c., should be living, except he should have divested himself of the right previous to the passing of the act.

PART II.

OF THE COPIES TO BE DELIVERED TO THE PUBLIC LIBRARIES.

SECT. I. — OF THE LAW.

The 8th Anne, cap. 19, which professed to en- courage learning, and to prevent invasions upon the rights of authors, revived the tax of the three copies for the king's library, and for the univer- sities of Oxford and Cambridge (originally im- posed by the 13th and 14th Charles II., and re- vived at intervals, but discontinued about six years after the Revolution), and imposed six ad- ditional copies, namely, one for Sion College, one for the Faculty of Advocates at Edinburgh, and one for each of the four Scotch universities, making in all nine copies, to be delivered to the warehouse keeper of the Company of Stationers before publication. By the 41st Geo. III. cap. 107, in addition to the nine copies, one other copy was imposed for Trinity College, Dublin, and one also for the society of the King's Inn, Dublin. The 54th Geo. III. cap. 156, directs the eleven copies to be delivered within one month after de- mand, and such demand to be made within twelve months after publication. The penalty for neglect is £5 for

each copy not so delivered. Such penalty to be recovered on the part of the library to which the delivery ought to have been made.

Second and subsequent editions are exempted, unless they contain- additions or alterations. And the additions may be printed and delivered sepa- rately, if done in a uniform manner with the former edition. The copy for the British Mu- seum must be on the best paper on which the work shall be printed ; the other copies upon the paper on which the largest number or im- pression shall be printed for sale, together with maps and prints belonging thereto. It seems that the University of Cambridge is en- titled to a copy oti the best paper (16 East, 317); but, though it is stated in the report as the result of the decision, the quality of the paper is not any where noticed in the judg- ment pronounced by the court.

The title to the copy of erery book, and the name and place of abode of the publisher, must be entered in the Stationers' Register, within one month for the bills of mortality, and three months for other parts, and in case of default the penalty on each book is £5, and eleven times its price. It is sufficient for magazines, reviews, and other periodical publications, to make the entry within one month after the publication of the first number or volume. The publishers, at their option, may deliver the copies to the libra- ries which are entitled to them, instead of the warehouse keeper of the Stationers' Company.

SECT. II. — OF BOOKS NOT REGISTERED AT STA- TIONERS' HALL. 1. Analysis of the Acts of Parliament.

It was for a long series of years considered as the sound and unquestionable interpretation of the statute of 8 Anne, that the universities were entitled to copies of such books only as were re- gistered at Stationers' Hall, and to no others. It is, by the second section of the 8th Anne, that the entry at Stationers' Hall is directed to be made. The object of the provision is recited to be, that persons may not, through ignorance, offend against the act ; but that the property in the book may be ascertained. And the penalties do not attach for printing without the consent of the proprietor, unless the title to the book shall be entered before publication in the registry of the Company.

It has been contended that this provision, as to the registry, is confined to the penalties men- tioned in the first section of the act; and that in the fifth section, by which the nine copies are given, there is no reference to the prevention of persons being unwarily led into the penalties given by the first section. For the intention of the legislature, we ought, however, to look at the preamble of the act, which, after reciting the invasions upon the rights of authors and pro- prietors, ' to their very great detriment and ruin,'

proceeds to enact the remedies contained in the statute ; and the whole object of the act is to pre- vent the injuries in future, and to encourage learned men to compose and write useful books. The tax of the copies surely cannot, by possibi- lity, be construed as a protection to literary pro- perty, or to prevent the ruin of authors. It is evidently a payment, exacted for the supposed benefits conferred by the statute, and a condition precedent to any claim on the remedies it pro- vides.

The first section (after stating the general ob- ject of the act) secures the copyright for a tern: of years by certain penalties. The second pro- vides that the work shall be registered. The third imposes a penalty on the Stationers' clerk for breach of his duty. The fourth regulates the price of books (since repealed). The fifth con- tains the proviso that nine copies shall be deli- vered to the warehouse keeper for the use of the university libraries, &c. Now it is true that the words ' provided always,' which commence the sections of many acts of parliament, are not in- variably to be taken as referring to all the pre- vious enactments ; and sometimes these words very absurdly introduce an enactment perfectly

distinct from any thing that precedes it : yet here the common sense of the whole statute stands thus : — ' Authors have sustained very great detri- ment : to prevent which, in future, and to encou- rage the composition of useful books, we (the le- gislature) inflict certain penalties on the invasion of your rights provided you register your books, and provided also that you present nine copies to the public libraries/ Although there are two intervening sections on other subjects, the first, second, and fifth, are, in all fair construction, one enactment. It is impossible that the fifth section can be connected with either the third or fourth, which relate to the stationers' clerk, and the price of books. If the conditions of registry and delivery are not complied with, the party cannot avail himself of the remedies afforded by the act. They are conditions precedent, and he has no claim under the act unless he performs them ; but if he is satisfied with the remedy at common law, and chooses to abandon the pro- tection of the statute, there seems no ground for imposing on him the tax inflicted by the statute, when he seeks no benefit under its provisions.*

It was the understood practice for nearly a cen- tury, that the entry was necessary for no other purpose than to enforce the penalties against pirating the copyright. In the majority of cases no entry was made, because it is only in relation to some peculiar works that the remedy under the statute for the penalties is preferable to the ordi- nary action for damages.

It appears that the books entered in the registry of the Stationers' Company, during a period of fifty years subse- quent to the statute of Anne, were not altogether at the rate of fifty annually. And it was the in- variable custom to deliver to the libraries those works only which were so entered. Such was not only the understanding of the publishers and the Stationers' Company, but of those who, acting for the libraries, were the most interested in a contrary construction. Until the case of the Cam- bridge University v. Bryer (which was decided in November 1812) it was never pretended that the statute entitled the universities to copies of unregistered books. Nay, further, it appears by the journals of the house of commons in 1775 (p. 351), that the house ordered, ' That the com- mittee make provision in the bill,' then pending in parliament, ' for enforcing the execution of a clause in the act of Anne, which provides that the several copies of each book printed and regis- tered under the direction of the act, be delivered to the warehouse-keeper of the Stationers' Com- pany for the use of the several libraries therein described.'

Then the act 15 Geo. III. cap. 53, sect. 6, re- cites, that the provision relative to the delivery of the copies had not proved effectual, but had been eluded by tlie entry only of the title to a single volume, or of some part of the book ; and enacts that no person should be subject to the penalties, unless the title to the copy of the whole book, and every volume, should be entered, and unless nine copies of the whole should be actually de- livered for the use of the several libraries, &c. Here it is evident that the delivery of the presen- tation copies was a mere condition attached to the remedy, by way of penalty, given by the

statute against pirating. So also the 41st Geo. III., cap. 107, directs that in addition to the nine copies required by law to be delivered 01 each book, which should be entered into the regis- ter book of the Stationers' Company, one other copy should be delivered for Trinity College, and one for the King's Inns, Dublin, of all books which should thereafter be printed and published, and the title io the copyright whereof should be entered in the register book of the Company. It is clear" therefore that before the right of the universities could attach, the entry must be made. There is nothing in the act to compel the entry. It was necessary only that those who sought pro- tection under the statute should conform to its conditions : the one was to enter the book, the other to deliver certain copies. If the protection was not needed, the entry was not made, and consequently the copies ought not to have been required.

2. Legal Decisions.

It was decided by the court of king's bench, in the case of Cambridge University v. Bryei (16 East. 31 7), that it is necessary to deliver a copy to

the warehouse-keeper of the Stationers' Com- pany, although the book was not entered in the registry. This determination was founded on the construction put by the court on the 8th Anne, cap. 19, and is admitted to be a construction op- posed to the provisions of the subsequent statutes of 15 Geo. III. and 41 Geo. III. Besides this conflict of legislative enactment, it also appears that lord Ellenborough, before whom the cause was tried, observed that he would reserve his opinion, as it might very fitly be made the sub- ject of discussion elsewhere, and perhaps in some ulterior court of appeal, to which it might not un- fitly be carried. On the argument of the case in the court of king's bench, the court held, that though there arose some difficulty in the construc- tion arising out of the two statutes of 15 and 41 Geo. III., the construction which was to be col- lected from those statutes, as being intended by the legislature at subsequent periods, was not sufficiently strong and cogent to overturn what the court understood to be the clear distinct sense of the statute of 8 Anne, in which the court was of opinion there was nothing ambiguous.

The court having decided in favor of the uni- versity, some discussion took place as to the de- fendant's right to take the case into the court of exchequer chamber ; and lord Ellenborough ob- served, that thequestion affected a great quantity of interest, and that no person could blame the defendant for having it further considered. It ap- pears, however, that the defendant did not avail himself of the opportunity afforded him. On a question which seems to depend rather on the technical constructions of lawyers, than on the rational grounds oi the subject, it may not be un- important to state (on the authority of Mr. Sha- ron Turner) that when the action was brought by the university of Cambridge, the opinion of the attorney general was taken on behalf of the printer, and he thought that the 15th Geo. III., and 41st Geo. III., were legislative expositions of the statute of Anne, and showed that the nine copies directed to be delivered, were nine copies

of such books as should be entered at Stationers' Hall. And on a view of all the statutes taken together, and on the reason of the thing, he was of opinion that the universities, and other public libraries mentioned in the statutes, were not en- titled to have copies of such books as were not entered in the register books of the Stationers' Company.

SECT. III. — INVESTIGATION or THE GROUNDS OF THE LIBRARY-TAX OF ELEVEN COPIES.

That ‘ the law is beneficial to the universities’ need not be disputed. The gratuitous contribu- tions to their several libraries save their funds. But is the saving necessary or just? Have they not sufficient means to purchase every useful publication ? Do they really make use of the current literature of the age? It cannot be re- quisite that every work that issues from the fer- tility of the press should be deposited in all the libraries. The works which are esteemed in these ancient colleges are those which have long maintained their rank as standard productions. The great bulk of modern publications are not introduced, and cannot, perhaps, with propriety, be introduced into the course of study pursued at the universities. A large part of the system of education is confined to ancient authors, and to subjects which do not admit of modern improvement. Indeed, the general plan of in- struction is opposed to whatever is novel and speculative. Nothing is H ‘opted but that which has been long tried and established ; and we cannot conceive, therefore, what the heads of col- leges have to do with those valuable but modern works, which they do not permit to be used.

Even if it were necessary to the welfare of the universities that each should possess a copy of every publication, it is iniquitous to exact them at the expense of individual authors or pro- prietors. The colleges, of which they are com- posed, are in general richly endowed, and if each college could not afford to possess itself of the modern publications, their united funds would certainly be amply sufficient. It may be true, that some of the Scottish colleges have but little surplus wealth to dispose of in the pur- chase of every kind of publication ; but, what- ever a few individuals may think to the contrary, we are persuaded that the intelligent people of Scotland in general possess too much just pride to plead the poverty of their universities as a ground for unjust exactions.

It is said, that ‘ the universities cannot pur- chase the splendid editions of great and expensive works, and yet they are works of which they stand in the greatest need. They give a uni- versity dignity and respectability ; and, in some departments of liberal education, accurate draw- ings and engravings are essentially requisite.’ Now, however agreeable to the eye are ‘ splendid editions,’ and however suited to the taste of the affluent, we exceedingly question their utility not only to the student but to the professed au- tnor. Fine plates and bindingsare adapted to the literary idler and looker-on, but can scarcely stimulate any one to intellectual exertion. These splendid trappings are for holidays, and not for days of learned labor. They tend, like great luxuries in general, more to enervate than invi-

gorate. That the welfare of a college is at all dependent on splendid editions, we, therefore, altogether deny. If they should be rich enough to purchase these luxuries, there can be no ob- jection ; for though not necessary to the real stu- dent and man of letters, they are agreeable. The 4

respectability' of the establishment surely cannot be promoted by robbing an author of any portion of his fair-earned reward, and drawing down upon itself the odium of the whole republic of letters. And its ' dignity ' can scarcely be in- creased by any other means than the opportunity it affords to attain sound, comprehensive, and accurate knowledge in the highest departments of philosophy and literature. It is beneath its real dignity to owe any of its attractions to the splendid decoration of its library; in which, in- deed, there should be as little as possible ad- dressed to the external sense, and every thing adapted to excite the intellect.

It is true, that the student may be assisted in his pursuits' by occasional engravings, but those which are useful, are of a very different class to the splendid drawings which render some works so costly. Even in architecture, we apprehend, it is not necessary that the plates, for purposes of study, should be very costly ; and besides, it is not in a college, that the education of an ar- chitect can be completed. Antiquarian works are of course expensive, but we are not aware that the universities profess to induct their pupils in the knowledge of antiquities, the study of which may safely be left to the Antiquarian So- ciety. So also botany and zoology may be ef- fectually studied without the aid of magnificent plates, which, indeed, are rather calculated to excite a taste for drawing, and to encourage a love of show and splendor, than to induce phi- losophical and studious habits.. We can see no advantage to public education in attracting the pupil to quit the hard study, which can alone render him eminent in society, for the purpose of gratifying his taste in examining splendid folios, and admiring the productions of the arts of drawing and engraving.

' But the law is said to be beneficial to general literature, by affording to men of literary talents and industry the means of information, and enabling them to accomplish works of the highest merit and utility.' This is too barefaced an ex- cuse for injustice ; it is robbing Peter not to pay Paul, but to enable him dishonestly to live at the expense of Peter. The men of ' literary talents and industry,' who have accomplished works of merit and ability, are to be deprived of a large part of their profit, where any exists, in order that others may avail themselves of the results of their industry gratuitously. Surely, the fellows of the learned universities who favor the world with their collegiate lucubrations, and who set their own price upon them, should stand on the same footing as other literary men, and purchase the materials which they require in the course of their labors. It may be very conve- nient, but it cannot be just, that by the aid of these universities a writer should possess him- – self of the property of bis predecessors, for which no remuneration whatever has been made. And, after all, there is not the plea of necessity

in favor of the injustice. For it is the common piactice of an author, who is engaged on a work in the preparation of which he has occasion to refer to a variety of books, to obtain them from his publisher, and it is a part of the understand- ing between them, that all the books which are necessary should be lent him. Of course, there is of all others the least difficulty in supplying the modern publications. And we presume no one who is tolerably acquainted with the history and circumstances of literature, can believe that it has been or is likely to be benefited or im- proved by the doctrine, for the first time laid down in 1812, that the universities are entitled to copies of every publication. We may venture to say, that if not the best authors of the present age, at least as good as any others are uncon- nected with the universities, and derive no advan- tage whatever from the accumulations which have been made in their libraries, either since 1812 when every book has been supplied, or prior to that time when the registered books only were delivered. Indeed it is absurd to sup- pose that the intellect of the country is to be advanced by such paltry means, and the true friends of academical learning are no doubt as much ashamed of the folly of such an argument as of the dishonesty of its principle. Supposing, however, all these considerations set aside, let us enquire what is really the use of the single copy given to any one university? In general the books are of no use whatever, to any one of the colleges. Of the far greater portion not a single page is ever read. It either is utterly useless, or is so considered for all collegiate purposes. Indeed how can it be otherwise when the libraries indis- criminately demand their copies of every pub- lication ? Of all the trash, folly, and obscenity, which find their way out of the press ? But sup- pose the work to be really valuable, either for its profound philosophy or learning, or for the popu- larity of the subject, and the talent it indicates ; then every one becomes desirous to read it ; thousands of students apply for it. And what is the consequence? As but few can possibly obtain it, the book is either purchased, or bor- rowed from the common circulating libraries, and the copy in each of the eleven libraries has pre- cisely the effect of preventing purchases from the author, for the sole benefit of a few individuals who can either do without the book, or afford to pay for it.

Another benefit of the law, however, is said to consist in preserving the books from the danger of loss, some of which are valuable, and others will to future times prove curious. The really valuable works there is no probability will ever be destroyed. The art of printing has disposed of all reasonable apprehension of that contin- gency ; and we think it bad morality, even on the coldest application of the doctrines of expe- diency, to do an act of positive injustice for the sake of preserving something which may become curioc.s. Certainly many a production, intrinsi- cally

worthless, may, from its extreme rarity or antiquity, obtain an artificial value in the esti- mation of those who are pleased with such things; but it is not politic (to say nothing of honesty) to injure and discourage the writers of the pre-

sent age, in order that a biblical antiquary may, some centuries hence", feed his idle vanity with the possession of a specimen of unique absur- dity ! To meet, however, the object of preserving a copy of every kind of publication, whether the offspring of the talented or the foolish ; the moral or the vicious ; it would be sufficient to deposit a single copy in the British Museum, or rather in a national library. To this, we are sure, no author or publisher would offer an ob- jection, and this copy, so deposited, would serve the purpose, and render unnecessary the extra copy which every printer by the 39th Geo. III. cap. 79, sect. 27. 29, is obliged to reserve of every work he prints.

SECT. IV. — MISCHIEFS AND IMPOLICY OF THE TAX.

1. Injury to Literature.

The law has the effect of preventing the pub- lication of expensive and valuable works. There are some books, so costly in the execution, and of which there are naturally so few purchasers, that a very small number only are published. However valuable of themselves, on account of the talent and expense bestowed on them, their scarcity increases the value. It is important that as few as possible should be printed, in order to afford an adequate and reasonable re- muneration for the skill and capital embarked. To exact eleven copies of these is, in many in- stances, to take away the whole profit.

From the following list some judgment may be formed of the effect of the tax on this class of publications. It amounts almost to a prohi- bition.

No. of Copies Price of Printed. 11 Copies.

£. «. d.

Lord Valentia's Travels . . 50 577 10 0 Bloomfield's Norfolk . . .120 254 2 0 Sir R. Hoare's Wiltshire . 60 207 18 0 Pallas's Travels .... 50 78 13 0 Morier's Travels .... 75 46 4 0 Nichols's Hogarth .... 250 184 16 0 Dihden's Bibliomania . . 18 92 8 0 Johnes's Froissart 26 335 10 0

Monstrelet ... 26 335 10 0

Philosophical Transactions . 150 605 0 0 Boke of St. Albans . . . 150 55 0 0 Dilletanti specimens . . . 350 165 0 0

In some of these instances it will be observed that the eleven copies amount to a tax of upwards of £40 per cent. In others of £20, and the aver- age of the whole exceeds £10 per cent. So that part of the works must have occasioned a great loss, and none of them would afford an adequate profit. The consequence will be, that such un- dertakings must generally be abandoned. There may indeed be a few enterprising publishers who may continue to embark their capital amidst such disadvantages, but the probability of course is that they will sustain a loss, and it is surely contrary to every principle of policy to continue . such a system. It has been contended that ' the university libraries cannot purchase expensive books, and therefore the tax does not injuie tlie

sale.' But the fact is not so : their ample funds enable them to patronise, and they have often purchased such publications. As instances, it may be mentioned that the public library at Cambridge, and the British Museum, both sub- scribed for Mr. Dibden's Typographical Anti- quities, and Mr. Nichols's Leicestershire. And the library of the Faculty of Advocates at Edin- burgh also subscribed for the former work. And the Bodleian Library and Trinity College, Dub- lin, for the latter. Such instances of encourage- ment were formerly numerous, and tended to increase the number of such undertakings ; but the present law has obviously an opposite ten- dency. The names of these eminent libraries in the list of subscribers formed a strong recom- mendation, and probably produced an extension of the list. No such recommendation can now exist; in addition to which there is the loss of profit on the copies which they were accus- tomed to take. It is asserted that ' the law fa- vors the sale of valuable publications, by afford- ing an opportunity of seeing such works, and thus awakening a relish for them ! ' Can any thing be more ridiculous or unfounded in fact? If the public knew nothing of books but from their being deposited in the eleven libraries, we suspect few would be sold. It is unnecessary to say, that one single advertisement in a newspaper or review, has a better effect than if the work were deposited in every college in the kingdom. There .s no want of relish for such publications if they could be obtained at a cheap rate ; and the only true way to increase the demand is to remove all the imposts and burdens on literature so that the price may be reduced. The opportunity of seeing such works is afforded far more conve- niently than in the university libraries : they may be seen in the shops of every respectable bookseller.

2. Injury to Authors and Proprietors.

The consequences of the tax upon expensive publications have already been pointed out. They are so injurious as to prevent many publi- cations that might otherwise be prepared. Even in ordinary publications the tax is very burden- some. The publisher makes the most accurate computation he can of, the number of copies which will probably be sold. According to the long established custom of the printing trade, the charge of the printing is made on each 250 co- pies, and therefore the loss on the eleven copies is precisely the whole price for which they would sell ; or if eleven extra copies were printed, the expense would be of equal amount, because the charge for printing the eleven would be the same as for 250. Thus, supposing a work of forty sheets, the press-work at 4s. a sheet would be £8; and if the price were 16$. a copy, eleven copies would be £8 16s., whilst the printing of »he eleven copies would cost £8 exclusive of the pa- per. But then it is said, ‘ the tax does not affect the authors or proprietors ; it may be charged to the public.’ It is not enough to tell us that the tax, whatever it is, may be charged in the price of the publication : will the public pay it ? It need scarce- ly be replied that the smaller the price, the more extensive the sale. If the tax upon paper and

advertisements, as well as this library imposition were removed, and the period of copyright ex- tended, so that books might be published and made known fcr two-thirds of the present ex- pense, the sale of them would increase not only in the proportion of that third which is now con- sumed in preliminary expense, but in a much greater degree ; for not only the same sum would naturally be expended which has been applied in the purchase of literary works, and therefore the sale increased upwards of thirty per cent; but the reduced price would as naturally induce a still greater number to become purchasers, who are now deterred by the heavy amount of the present price. ‘The tax is also alleged to be of trifling amount, and it is urged that where the work is popular, and a great num- ber of copies are sold, the deduction of ele- ven can scarcely be felt. And when the work does not sell, the eleven copies may as well be placed in the public libraries as in the lumber-room of the publisher.’ Will the uni- versities be content to take copies of successful works only, and let the criterion of success be the sale of 1000 copies? It is true, that the far lar- ger proportion of books are unsuccessful, and this fact should induce the legislature to give every possible encouragement. Out of the large profit on a few very fortunate publications, the pro- prietor may well afford to make a donation of eleven copies. But the question is a general one. To proceed on principle, the tax should be cal- culated on the general result. It is a cruel mockery to say that when all the copies are not sold , some of them may as well be placed in a li- brary as in a lumber-room. They may be sold for something, and at the worst will always sell as waste paper. Besides, the argument is falla- cious iu itself; if the work will only sell for waste paper,

it can be of no value to the uni- versities; it can only ‘ lumber ‘ their shelves in the same way that it is supposed to fill the pub- lisher’s warehouse : and though it has been insi- nuated, we presume it cannot be true, that the universities make a profit by the sale of their useless books. On the other hand, if the publi- cation be really valuable, and tend to promote the great objects for which colleges were endowed, it is a wretched, and despicable, and bad spirit that will not remunerate the talent and industry by which they are benefited. Books are either good, bad, doubtful, or indifferent. The good (which perhaps are not extremely numerous) they ought to pay for; the bad they should of course reject ; and the doubtful and indifferent no uni- versity can require, for the time of youth is va- luable, and should not be thrown away in the perusal of questionable or idle productions.

SECT. V. — STATE OF THE LAW IN OTHER COUN- TRIES, AND ANALOGY OF OTHER TAXES. 1 . In America, Prussia, Saxony, and Bavaria, only one copy is required at the hands of authors and proprietors. In Austria, the imposition is extended to two copies ; and, in the Netherlands, the libraries are entitled to three copies. In France, prior to the revolution, the law required two copies for the king’s public library, one for the Louvre, and two for the chancellor and the

keeper of the seals. The wo latter were evi- dently required with a view to the supervision of the police. Subsequently to the revolution, the number of copies has been reduced, and two only are now required for the use of the national library. But in all these cases the tax applies only where the copyright is reserved; and in these countries the duration of the right of exclusive printing is either perpetual, or considerably more extensive than the term allowed in Great Britain. 2. Nothing can be more unprincipled than this anomalous taxation of literary property. No other class than the literary was ever proposed to be so taxed. There is, indeed, no instance in which any art, profession, or trade, is subjected to such an imposition. It is a direct tax upon industry, and an odious restraint upon the press. It has been said that authors of literary works ought not to be better protected, or to Have a longer term of exclusive property, than the in- ventors of new machines. For the purpose of the present argument, be it so. But if the period of protection be the same, let the author also stand on the same footing in other respects. What would be the feeling of those who -possess mechanical genius, if the law compelled mem to present eleven copies of every machine which they invented or improved ? What, indeed, would the

intelligent people of England think, if it should be suggested to parliament that it was expedient to deliver to the Royal Society, the Societies of Arts and Antiquaries, and other

scientific institutions, eleven specimens of every engine, however expensive, that ingenuity de- vised ? What would have been the public feel- ing, if any one had possessed the audacity to propose that Mr. Watt should not be permitted to sell any of his steam engines, until he had deposited eleven of them gratuitously in the warehouse of the Royal Society ?

*3. We trust the time is not far distant when this disgrace to the government of a free and civilised country will cease to exist. WTe ask only that our literary brethren may be placed on equal footing with the fabricators of the com- monest merchandise. If the tax on the raw mute- rial of paper must be still continued, at least the impost on the manufactured article of books, on every principle of trading policy and even-handed justice, ought immediately to be removed. If our literature be equal to that of the continental states, let us imitate their example ; let us cease to in- jure, and really encourage, those to whom we are indebted for our eminence. If it be inferior, let us lose no time in removing every impediment from its *»' ;, and introducing every means that can facfiftdte its improvement and promote its rise. Let not Great Biitain be the country in which literary property is burdened more op- pressively, in a six-fold degree, than every other nation of the civilised world ; rather let her abo- lish the imposition altogether, and surpass even the republics of the new world, as she un- doubtedly might the monarchies of the old.*

COQUET, v. a.y v. n., n. s. & adj.~

9 queter. Dr.

Fr. co-

*COQUE'TTE, ». *.*

COQUE'TRY, «. s. £ Johnson

COQUE'TTISH, adj. J refers the

origin of coquet to cocquart, a prattler, which latter word Mr. Todd thinks may be from co- queter, tattle. Skinner, from the French coque- ter, i. e. to chuck, as a cock among hens. Cot- grave, however, to whom this derivation and definition belonged, seems to have overlooked the most obvious circumstance of similarity, — the cock's extension of his notice to more than one. Thomson says ' coqueter, queter, from Lat. qu

it is almost unnecessary to add, a jilt. The de- rivatives require no explanation.

I was often in company with a couple of charming women, who had all the wit and beauty one could desire in female companions, without a dash of co- quetry, that from time to time gave me a great many agreeable torments. Aadison'x Spectator

The light coquettei in sylphs aloft repair, And sport and flutter in the fields of air. Pope. A coquette and a tinder-box are spark-led.

Arbuthnot and Pope.

Coquet and coy at once her air,

Both studyed, though both seem neglected ; Careless she is with artful care,

Affecting to seem unaffected. Congreve.

You are coquetting a maid of honour, my lord look- ing on to see how the gamesters play, and I railing at you both. Swift.

Phyllis, who but a month ago Was married to the Tunbridge beau, I saw coquetting t' other night, In publick, with that odious knight. Id

Such is your cold coquette, who can't say ' No,'

And won't say ' Yes,' and keeps you on and off-ing On a lee shore, till it begins to blow —

Then sees your heart wrecked, with an inward scoffing. Byron. Don Juan ,

Nine times in ten 'tis but caprice or fashion,

Coquetry, or a wish to take the lead ; The pride of a mere child with a new sash on,

Or wish to make a rival's bosom bleed. Id.

COQUIMBO, a jurisdiction or intendancy of Chili, forming the entire northern division of

Chili Proper, and containing the provinces of Copiapo, and Coquimbo Proper. For the for- mer, see COPIAPO.

Coquimbo, Proper, is mountainous, extending from the Cordillera to the Pacific, and from the Guasco north, to the Chuapa south; being about seventy miles from east to west, and 190 miles from north to south. It is watered by the three small rivers Coquimbo, Limari, and Chuapa; the latter alone having any constant flow of water, even in the summer, and being then incapable of navigation, from its rapid descent, bad bottom, and insufficient depth. The sides are nearly perpendicular ; a hanging lasso bridge serves for the passage of loaded mules and travellers, at times when it would be dangerous to ford the river. The chief places of this province are the towns of Coquimbo and Illapel. The chief cop- per mines of this province are situated in the Cuestas or ranges of Combalamba, of Llam ban- gui, of Huamalata, and of Las Vacas : those in the southern parts are copper and gold. Its population is estimated at about 15,000 souls. The most fertile part of the province is the small valley of Elque, watered by a branch of the Limari ; and on the road between Illapel and Coquimbo. It is divided into several farms, which cultivate corn, the vine, fruit, and vege- tables. The most important mines are in the in- terior, near the central Cordillera. A short dis- tance to the north-east of the town of Coquimbo are some small copper mines, one of which called Cerro ore is worked. Illapel is also a mining town of some consideration, situated on a branch of the Chuapa, about eight leagues from its mouth.

The copper prepared at the mines of Illapel for sale, Mr. Miers informs us, is not suffered to be exported from any of the bays upon the bor- dering coast, nor even to be conveyed in small craft, either to Coquimbo or Valparaiso, but must be carried on the backs of mules to one of these

places : Valparaiso at eighty leagues distance is the nearest of the two, and, as the road is better than that to Coquimbo, nearly all the copper produced is carried to that port. This is a great discouragement to the working of the mines : other circumstances during the revolution have also militated greatly against the success of mining, so as to cause many who have hitherto employed their capital, to withdraw it and em- ploy it in agricultural occupations. Hence the cultivation of land in the valley of the Chuapa, as well as in the ravines leading into it, has some- what increased. From the disadvantageous sit- uation of Illapel with respect to the two sea-ports, the increasing demand for labor in Chili, and the consequent rise of wages, greatly enhanced as these will become from the influx of British ca-pital and competition about to be attempted there, we may conclude that before long the mines of Illapel will cease to be worth working. Little indeed can be reasonably expected in the way of profit from any attempts by foreigners to carry on mining operations in Chili.

Coquimbo, the residence of the Governor In- tendent, is situated on the south bank of the river of that name near its estuary, and is watered by a canal brought from the river at a b'fher level,

and distributed by artificial channels through tlie houses and gardens. It is a small place but its houses generally of brick, and of a neat appear- ance, being arranged in squares or quadras ; the plaza or public square being at the southern ex- tremity. The commerce of Coquimbo consists of the export of copper and a small quantity of the precious metals : the imports are, clothing, provisions, and other necessaries. The harbour of Coquimbo, twelve miles distant from the town, is of considerable size, well sheltered on the southern and western sides, and, though open towards the north, is secure at most seasons of the year, as the northerly tempestuous winds do not prevail at Coquimbo. It is formed by a promontory running into the sea about two miles. There are nine fathoms 300 yards off, and near three fathoms close in shore. To the southward of the promontory of the harbour is another bay, of a circular form, two miles in diameter, entered by an opening to the west three quarters of a mile broad, called La Herradura, Horse-shoe Bay ; it possesses a good clay bottom, sixteen fathoms water in the middle, twenty-eight fathoms in the entrance, and five fathoms 250 yards off. But it is rocky on the north and south sides. A hill forming a promontory to the south of this bay is named the Cerra de La Gloria, and here copper was formerly worked.

COR. Lat. corns. A Hebrew measure

Ye shall offer the tenth part of a bath out of the cor, which is an homer of ten baths. Esck. xlv. 14.

CORACHIE. A sea-port town of Afghaunis- taun, in the district of Tatta, and province of Sinde, fifty-seven miles from the city of Tatta, in lat. 24° 51', long. 67° 16′ E., and supposed to be the Sangada of ancient history.

The bay affords shelter for vessels of 300 or 400 tons burden, from the beginning of Septem- ber to the end of May. The entrance is narrow, and the deepest water about 200 yards from the western point, which is defended by a castle. On the eastern side are six rocky isles, and the water is shoal. At low water there is not more than one fathom and a half fine hard sand on the bar; but the tide rises twelve feet. The town contains 3000 houses, and is surrounded by a mud wall flanked with towers of no strength. The inhabitants, who are principally Hindoo mer- chants and traders, carry on a considerable trade, (this being the only sea-port in the province), in the export of saltpetre, rice, cotton, butter, oil, horses, and many other valuable commodities, brought from Cabul and the northern provinces. Its im- ports are metals, ivory, tea, sugar, spices, and the manufactures of India and Europe. During the rainy season a considerable intercourse is maintained with Tatta, by means of a creek na- vigated by dhingies or flat-bottomed boats. They import thence black pepper and spices, tin, iron, lead, steel, elephants' teeth, cochineal, quicksilver, sandal, and scented woods. The vicinity is level and sandy, covered with brush-wood and other hardy plants, on which a number of camels are reared. The place belongs to the Ameers of Sind, who reside at Hyderabad, and are tributary to the king of Cabul. There is a constant communication kept up between Co-

rachie and Muscat, a journey of about twenty days.

CORACIAS, the roller, in ornithology, a genus of birds of the order of picae : the charac- ters are these : — The bill is straight, bending to- wards the tip, with the edges cultrated ; the nostrils are narrow and naked ; the legs for the most part short ; the toes placed three before and one behind, and divided to their origin. One or other of the different species may be met with in all quarters of the globe. Ornithologists enu- merate twenty-five species, though some of these are supposed to be only varieties. The following are the most remarkable : —

C. garrula, the garrulous roller, is about the size of a jay, the bill black, and at the base beset with bristles, but which do not cover the nostrils ; the

head, neck, breast, and belly, are of a light bluish green ; back and scapulars reddish-brown ; coverts on the ridge of the wing rich blue, beneath pale green ; upper part and tips of the quills dusky ; the lower parts and rumps of a fine deep blue ; tail forked of a light blue ; the outer feathers tipped with black above, and be- neath with deep blue, as is the case with such part of the quill-feathers as is black above ; the other tail feathers are dull green : the legs are short, and of a dirty yellow. Mr. Pennant ob- serves that these birds are common in several parts of Europe, in most parts of which it is a bird of passage. They are found in Sweden and Denmark on the one hand, and as far as Africa on the other. Willoughby tells us, that in Germany, Sicily, and Malta, they are sold in the markets.

C. Sinensis, the Chinese roller, is of the size of a jay : The bill and irides are red : the head, hind part of the neck, back, rump, and upper tail coverts, are green : through the eyes on each side is a black stripe : the under parts of the body, from chin to vent, are yellowish-white, tinged with green; but the thighs are gray: the wing- coverts are olive brown ; the quills the same, with a mixture of chestnut in some ; and others, nearest the body, tipped with white ; the tail is five inches in length, and wedge-shaped, the outer feathers shortening by degrees, like that of a magpie ; all of them are more or less green, verging to black near the ends ; the tips white • the logs and claws are of a pale red, and longei than in other rollers. It inhabits China, and is called at Canton sauta hoang, but is not very common.

CO'RACLE, n. s. Welsh civrwgle, probably from Lat. corium, leather. A boat used in A ales, and some of the adjoining counties, by fishers, made by drawing leather or oiled cloth upon a frame of wicker work. It is nearly of an oval shape, from five to six feet long, and four feet broad, and is guided by a paddle. It is not capable of carrying more than one person conveniently, and can be managed only by those who are accustomed to this sort of conveyance.

CORAH, or Jehanabad, a district of the pro- vince of Allahabad, Hindostan, situated in the Dooab, or country between the Jumna and Ganges. It is enclosed in the collectorship of Cawnpore. It is a level fertile country, well watered, and producing abundance of grain,

sugar-cane, tobacco, and cotton ; having also good roads, and navigable rivers east and west, it offers good mercantile advantages. The British first obtained an influence in this pro- vince in the middle of the last century, when it was a condition of the treaty of peace with the Mahrattas, that Corah should be made over to the emperor Shah Alum ; who regranted it to that power, in violation of the treaty, in 1771. After this it was tributary to the British for many years, at the rate of fifty lacks of rupees annually, and

was finally transferred to them by Saadub Ali Khan in 1801.

CORAH, the capital of the district, is situated on the high road between Lucknov and the Deccan, about half way between the two rivers. Most of the houses are of mud, and have flat roofs, and the town is .surrounded with a mud wall. Some of the better houses are of brick, and, as the residence of the collector, it is a large and flourishing town, and carries on a good trade in cotton and grain. It had formerly a mint, the rupees of which were inferior to those of Lucknow, but formed the general currency, both in the Dooab and Bundelcund.

CORATR, a district of the province of Gund- waneh, Hindostan tributary to the Mahrattas, lying between the twenty-third and twenty-fourth degrees of north latitude, and about the eighty- third degree of east longitude. It is a poor country, but abounds in game. It is tributary to the Mahrattas. The inhabitants are called Chohans ; the present capital is Sonehut.

CO'RAL, 71. s. & adj -\ Lat. corallium ; CO'RALLINE, n. s & adj. f jcopaXXtov. For a CO'RALLOID, adj. £ description of coral,

Co' R ALLOT DAL, adj. J and the means of ob- taining it, see the next article. Coral is also the name of an ornamented piece of coral, which in- fants wear round their necks when cutting their teeth. Coralline is, consisting of coral ; approach- ing to coral ; likewise one species of coral. See CORALLINE. Coralloid, and coralloidal, signify, having a resemblance to coral.

Ful fetise was hire cloke : as I was ware, Of smal curall about hire arm she bare A pair of bedes gaudcd all with grene.

Chaucer. Prol. to Cant. Tales.

My mistress' eyes are nothing like the sun, Coral is far more red than her lips' red.

Sluikspeare. Sonnet cxxx.

In the sea, upon the south-west of Sicily, much coral is found, It is a submarine plant ; it hath no leaves ; it brancheth only when it is under water. It is soft, and green of colour ; but, being brought into the air, it becometh hard and shining red, as we see. Bacon's Natural History.

This gentleman, desirous to find the nature of coral, caused a man to go down a hundred fathom into the sea, with express orders to take notice whe- ther it were hard or soft in the place wberi: it groweth. Browne's Vulgar Errours.

Now that plants and ligneous bodies may indurate under water, without approachment of air, we have experiment in coralline, with manj coralloidal concre- tions. Browne.

He hears the crackling sound of coral woods, And sees the secret source of subterranean floods.

Dryden's Virgil.

CORALLINA.

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A turret was inclosed Within the wall, of alabaster white. And crimson coral, for the queen of night, Who takes in Sylvan sports her chaste delight.

Dry den.

Or where's the sense, direct or moral. That teeth are pearl, or lips are coral ? Prior. Her infant grandame's coral next it grew ; The bells she gingled, and the whistle blew.

Pope.

At such time as the sea is agitated, it takes up into itself terrestrial matter of all kinds, and in parti- cular the coralline matter, letting it fall again, as it . becomes calm. Woodward.

The pentadrous, columnar, coralloid bodies, that are composed of plates set lengthways of the body, and passing from the surface to the axis of it.

Id. on Fossils.

Coralline is a sea plant used in medicine ; but much inferior to the coral in hardness, sometimes greenish, sometimes yellowish, often reddish, and frequently white. Hill.

In Falmouth there is a sort of sand, or rather co- alline, that lies under the owse. Mortim. tliisb.

Trim you the morning's lonely star, Or do you guide pale Cynthia's car ? Pour you the runnels rippling wave, Or sleep you in a coral cave 1 Leftley

Then, Lesbia ! wake thy beauties, fresher far

Than Galatea boasted when she laved In the smooth deep her coraZ-axled car,

And the stern heart of Neptune's son enslaved !

Huddesford.

Unknown to sex the pregnant oyster swells, And coral insects build their radiate shells. Darwin. These perpendicular coralline rocks make some parts of the Southern Ocean highly dangerous. Id. The granite, or moorstone, or porphyry, consti- tute the oldest part of the globe, since the limestones, shells, coralloids, and other sea productions, rest upon them ; and upon these sea productions are found clay, iron, salt, and silicious sand or grit stone. Id.

CORAL. See CORALLINA. There are pro- perly but three kinds of coral ; red, white, and black : the black is the rarest, and most esteemed. The red was formerly used in medicine, but is now scarcely ever prescribed by any intelligent practitioner, having no virtues superior to the common testacea. When coral is newly taken up out of the sea, the small protuberances on its surface are soft, and yield, on being pressed, a milky juice which effervesces with acids. The cortical part with which the coral is all over covered, is not near so compact as the internal, and may easily be taken off whilst fresh ;. and from this part it is usually freed before it comes to the market. The greatest coral trade is in Genoa and Leghorn. Coral is often imitated by artificial compositions, some of which are made to resemble it exactly; but the fraud may be discovered by fire, the counterfeit not affording alkaline earth like the genuine coral. The color- ing ingredients in the artificial coral are cinnabar and minium, which are easily discovered. The natural coral seems to receive its color from iron ; for spirit of vitriol acquires from it a ferruginous taste ; and on calcining the coral, some particles are found among the ashes that are attracted by the magnet. According to Neumann, sixteen ounces of coral, distilled in an open fire, yield about six scruples and a half of volatile, alkaline VOL. VI.

spirit, with two or three grains of an empyreu- matic oil: from the caput mortuum calcined five scruples and a half of fixed salt may be extracted.

CORAL FISHERY. Red coral is found in the Mediterranean, on the coast of the ci-devant Provence, from Cape de la Couronrie to that of St. Tropez ; about the isles of Majorca and Mi- norca ; on the south of Sicily ; on the coasts of Africa; and in the Ethiopic Ocean, about Cape Negro. The divers say, that the little branches are found only in the caverns whose situation is parallel to the earth's surface, and open to the south. The manner of fishing is nearly the same wherever coral is found. The method used at the bastion of France, under the direction of the company established at Marseilles, is to send out seven or eight men in a boat, and when the net is thrown by the caster, the rest work the vessel, and help to draw the net in. The net is com-

posed of two rafters of wood tied cross wise, with leads fixed to them : to these they fasten a quan- tity of hemp twisted loosely round, and inter- mingled with some large netting. This instru- ment is let down where they think there is coral, ana" pulled up again when the coral is strongly intangled in the hemp and netting. For this purpose, six boats are sometimes required ; and if in hauling in, the rope happens to break, the fishermen run the hazard of being lost. Before the fishers go to sea, they agree for the price of the coral, which is sometimes more, sometimes less, a pound ; and they engage, on pain of coi- poral punishment, that neither they nor their crew shall embezzle any, but deliver the whole to the proprietors. When the fishery is ended, which amounts one year with another to twenty- five quintals for each boat, it is divided into thirteen parts ; of which the proprietor has four, the casters two, and the other six men one each ; the thirteenth belongs to the company, to whom the boat belongs.

COKAL RIVER, a river in New Mexico, which runs a course west by south, and falls into the head of the gulf of California, close by the mouth of the Collerado.

CORAL-STONE, a kind of red and white agate, found in Italy and some parts of Saxony, which breaks in veins. That of Rochlitz in Saxony is the most celebrated, and is found in globules which have a kind of crust about them.

CORAL-TREE, n. s. Lat. corallodendron. See ERYTHRINA.

It is a native of America, and produces very beauti- ful scarlet flowers ; but never any seeds in the Euro- pean gardens. Miller.

CORALLINA, or CORAL, in zoology, a genus belonging to the order of vermes zoophyta. The trunk is radicated, jointed, and calcareous. The species are thirty-eight, distinguished by the form of their branches, and are found in the ocean adhering to stones, bones, shells, &c. The corals were formerly believed to be vegetable sub- stances hardened by the air; but are now known to be composed of congeries of animals, which are even endued with the faculty of moving spontaneously. The islands in the South Sea are mostly coral rocks covered over with earth.

The little creatures, which have scarce sensation enough to distinguish them

from plants, build up a rocky structure from the bottom of that sea, too deep to be measured by human art, till it reaches the surface. Some of these coralline islands ap- pear to be of a much older date than others ; particularly ihe Friendly Islands : and it is probable that as these submarine works are still going on, new islands may by that means frequently be produced. M. be Peyssonnel of Marseilles, in consequence of a series of experiments, from 1720 to 1750, seems to have been the first who threw a proper light upon 'the nature and pro- duction of coral and similar marine substances. Those bodies, which the count de Marsigli ima- gined to be flowers, this ingenious naturalist dis- covered to be insects inhabiting the coral ; for upon taking branches of it out of the water, the flowers, which proceeded from a number of white points answering to the holes that pierced the bark, and the radiation of which resembled the flower of the olive tree, entered into the bark and disappeared ; but upon being again restored to the water, they were some hours after percep- tible. These flowers spread on white paper lost their transparency, and became red as they dried. The holes in the bark correspond to small cavi- ties upon the substance of the coral ; and when the bark is removed, there may be seen an infi- nite quantity of little tubes connecting the bark with the inner substance, besides a great number of small glands adhering to them; and from these tubes and glands the milky juice of coral issues forth : the holes in the bark are die open- ings through which the insects that form the sub- stances for their habitation come forth ; and those cavities which are partly in the bark and partly in the substance, are the cells which they inhabit. The organs of the animal are contained in the tubes, and the glandules are the extremities of its feet, and the milky liquor is the blood and juice of the animal, which are more or less abun- dant in proportion to its health and vigor. When the insects are dead, they corrupt, and commu- nicate to the water the smell of putrid fish. This juice or liquor runs along the furrows perceived upon the proper substance or body of coral, and stopping by little and little becomes fixed and hard, and is changed into stone ; and being stopped in the bark, causes the coral to increase proportionahly and in every direction. In form- ing coral, and other marine productions of this class, the animal labors like those of the testa- ceous kind, each according to his species ; and their productions vary according to their several forms, magnitudes, and colors. The coral in- sect, or polype, M. Peysonnel observes, expands itself in water, and contracts itself in air, or when it is touched with the hand in water, or acid liquors are poured upon it : and he actually saw these insects move their claws or legs, and ex- pand themselves, when the sea water containing coral was placed near the fire, and keep them in their expanded state when separated from the coral in boiling water. Broken branches of coral have been observed to fasten themselves to their branches, and have continued to grow ; and this is the case when they are connected with de- tached pieces of rock and other

substances, from

which no nourishment could be derived. The coral insects in their cells, not having been in- jured, continue their operations; and as they draw no nourishment from the stone of the coral, they are able to increase in a detached and sepa- rate state. Coral was found to be equally red in the sea as out of it : it was more shining when just taken out of the water than even when it is polished ; and the bark by being dried becomes somewhat pale. M. Peyssonnel found that it grows in different directions, sometimes perpen- dicularly downwards, sometimes horizontally, and sometimes upwards ; and in the caverns of the sea, open to every exposure. This system was little regarded, when first communicated to the Academy of Sciences at Paris in 1727, till Mr. Trembley's discovery of the fresh water po- lype ; but since that time, it has been confirmed by the observations of M. Bernard de Jussieu on the sea coasts of Normandy, and those of M. de Reaumur near Rochelle. Mr. Ellis distributes corallines into four kinds : viz. corallines, articu- lated, consisting of short pieces of a stony or cre- taceous brittle matter, whose surface is covered with pores or cells, which are joined by a tough, membranous., flexile substance, composed of many small tubes of the like nature compacted together. The stony part is soluble in vinegar, and the other part remains entire. It is fixed to rocks and shells by stony joints, which, as they rise, are united to others by extremely fine and slender tubes : these may be discovered by the eye, or a common magnifier. As the stems ex- tend themselves, they become pennated by side branches which come out opposite to each other, and are jointed in the same manner; the joints of this species are like the upper part of an in- verted cone, but a little compressed : the whole surface is covered over with very minute circular- shaped cells like pores. If a branch of this co- ralline is put into vinegar, these cells are dis- solved \vith the whole cretaceous surface; instead of which there appear rows of minute ramifica- tions, which seem to have communicated with each of these cells. Upon some specimens of this coralline, are seen small figures like seed vessels, with which the branches frequently ter- minate : they are also found on the sides. We frequently find these corallines of different colors, as red, green, ash, and white; but all of them, when exposed to the sun and air on the shore, become white. Corallines, celliferous, those which appear, when magnified, to be fine thin cells, the habitations of small animals connected together, and disposed in a variety of elegant forms like branches. These effervesce with acids. Corallines, tubular, are composed of a number of simple tubes, growing up nearly together ; or of such branched ones as have neither denticles nor vesicles. These are horny and elastic, and recover their original form in water. Some of them appear wrinkled like the wind-pipe, and others like the intestines of small animals. Co- rallines, vesiculated, are distinguished by their horny hollow ramifications ; most of them are

furnished with little denticles on their branches, like leaves on mosses ; and at certain seasons of the year they have small bodies like bladders, proceeding from their stems and branches, and

differing in form according to the different spe- cies. Their color, when dry, is of a yellowish or pale brown, and their nature is elastic. They are found adhering to rocks, shells, and fucuses, by small root-like tubes : they recover their form in water, after having been dried-; and when put into vinegar, they cause no effervescence.

CORALLODENDRON. See ERYTHRINA.

CORALLOIDES FRUTICES. See ESCHARA and KERATOPHYLUM : also POLYPUS and SPON- CIA.

CORAM (Captain Thomas), was born about 1668, and spent the early part of his life in the station of master of a vessel trading to the colo- nies. Afterwards residing in the eastern part of London, among seafaring people, where business often obliged him to come early into the city and to return late, he frequently saw young children exposed in the streets, through the indigence, or cruelty of their parents. This excited his com- passion, and induced him to project the founda- tion of an hospital for foundlings. In this humane design he labored with indefatigable diligence for seventeen years; and by his application pro- cured a number of the nobility and gentry to patronise and carry the scheme into execution, and at length obtained the royal charter for it. He was also highly instrumental in promoting1 the trade of America, by procuring a bounty upon naval stores imported from our colonies. He was likewise eminently concerned in founding the colonies of Georgia and Nova Scotia. His last charitable design, in which he lived to make some progress, was a scheme for uniting the North American Indians more closely to the British interest, by an establishment for the edu- cation of Indian girls. In short, he spent the greatest part of his life in laboring for the public, and experienced a fate too common with those who devote their talents to such purposes; being at last indebted for subsistence to the voluntary subscriptions of some public-spirited persons, at the head of whom was the late Frederic Prince of Wales. He died in 1751 ; and was interred, at his own desire, in a vault under the chapel of the Foundling Hospital.

GORAN. See ALCORAN, and M AHOMETANISM.

CORANICH, among the Scotch and Irish, the custom of singing at funerals, anciently pre- valent in those countries, and still practised in several parts. Mr. Pennant having assisted at a funeral in the south of Ireland, gives the follow- ing account of it. ‘ The cries are called by the Irish uloghone and hullulu, two words very ex- pressive of the sound uttered on these occasions ; and being of Celtic stock, etymologists would swear to the origin of the oXoXrjywv of the Greeks, and the ululatus of the Latins. Virgil is very fond of using the last whenever any of his females are distressed ; as are others of the Roman poets, and generally on occasions similar to this.’ ‘ It was my fortune to arrive at a certain town in Kerry at the time that a person of some distinc- tion departed this life ; my curiosity led me to the house, where the funeral seemed conducted in the purest classical form. The conclamatio was set up by the friends, in the same manner as Virgil describes that consequential of Dido’s death. Immediately after this followed another

ceremony, fully described by Cainden in his ac- count of the manners of the ancient Irish ; the earnest expostulations and reproaches given to the deceased for quitting this world, where she enjoyed so many blessings, so good a husband, and such fine children. But when the time ap- proached for carrying out the corpseˆhe cry was redoubled, Tremulis ululatibus aethera complent : a numerous band of females waiting in the oute court to attend the hearse, and to pay in chorus the last tribute of their voices. The habits of this sorrowing train, and the neglect of their per- sons, were admirably suited to the occasion ; their robes were black and flowing, resembling the ancient pallia; their feet naked, and their hair long and dishevelled. The corpse was carried slowly along the verge of a most beau- tiful lake, the ululatus was continued, and the whole procession ended among the venerable ruins of an old abbey.’ A custom similar to this prevailed among the Hebrews, and bishop Lowth has given a beautiful description of it in his justly celebrated Lectures on the Sacred Poetry of the Hebrews.*

CORA’NT, -I French courant. A lofty

CORA’NTO, or > sprightly dance, says John-

COURA’NTO,W.S. j son. Sir John Hawkins, however, remarks that the coranto is the most solemn of all dance tunes. Corant, or courant, was also a name formerly given to a newspaper.

He like a maid the better while I have a tooth in my head ; why he is able to lead her a coumnto.

Shakspeare. All’s Well. After _this they danced galliards and corantoi.

Ben Janson.

Coranti, avises, correspondences. Id.

The weekly courants with Paul's seal. Id.

It is harder to dance a corant well than a jigg ; so in conversation, even, easy, and agreeable, more than points of wit. Temple.

I would as soon believe a widow in great grief for her husband, because I saw her dance a corant about his coffin. Walsh.

Here Mermaids press their liquid pillows. And sing to sleep the growling billows ; Or make the ravished whales they chant to In the churned ocean dance coranto. Huddesford.

CORAX. See CORVUS.

CORBACH, a town of Germany, in the late circle of the Upper Rhine, and principality of Waldeck, of which it is the capital. It was for- merly imperial. It is divided into the Old and New town, the latter of which contains an aca- demy ; and near it on a high mountain is the castle of Eissenberg. The Hanoverians were defeated by the French near this town, in 1760. It lies twelve miles N. N.W. of Waldeck, and seventy east of Cologne.

CO'RBAN, n. s. An alms-basket ; a recepta- cle of charity ; a gift ; an alms. See below.

They think to satisfy all obligations to duty by their corban of religion. King Charles.

CORBAN, in Hebrew pip, a gift or offering, made on the altar, and also the treasury of the temple where the offerings of money, &c. were deposited. Corban was also, 'applied to those offerings which had life, in opposition to the minchab, or those which had not. It is derived from the word karab, which signifies to approach ; because the victims were brought to the door of

the tabernacle. Corban is also a ceremony which the Mahommedans perform at the foot of mount Ararat in Arabia, near Mecca. It consists in killing a great number of sheep, and distributing them among the poor.

CO'RBE, n. s. & adj. Fr. courbe. Corbe, a diminutive of corbel, signifies, as a noun, an architectural ornament. The adjective means crooked.

It was a bridge ybuilt in goodly wize With curious corbes and pendants graven faire.

Spenser, Faerie Queene

For siker thy head very tottie is, So thy corbc shoulder it leans amiss.

Id. Pastorals,

CORBEIL, a town of France, in the Depart- ment of the Seine and Oise, arid ci-devant pro- vince of the Isle of France. Its chief trade is in tanned leather. It is seated on both sides of the Seine, at its conflux with the Juine. Population 3500. Nine miles N.N. W. of Melun, and seven- teen south of Paris.

CO'RBEILS, n. t. Little baskets used in for- tification, filled with earth, and set upon the parapet, to shelter the men in firing upon the besieger:.

CO'RBEL, n. s. In architecture, the represen- tation of a basket, sometimes placed on the heads of the caryatides.

CO'RBEL, or CO'RBIL, n. s. A short piece of timber sticking out six or eight inches from a wall, sometimes placed for strength under the semigirders of a platform ; a niche or hollow left in walls for figures or statues.

CORCHORUS, in botany, a genus of the monogyynia order and polyandria class of plants ; natural order thirty-seventh, columneas : COR. is pentapetalous : CAL. pentaphyllous and deciduous : CAPS, many-valved and many-celled. There are fourteen species ; of which the most remarkable is the C. olitorius, an annual, found in Asia, Africa, and America. It rises wth a round, striated, upright, branched stalk, near two feet, furnished with leaves differing in shape ; some being oval, some cut off straight at their base, and others almost heart-shaped. They are of a deep green color, and have a few teeth on the margins of their base, that, end in bristly, re- flexed, purplish, filaments. The flowers come out at the sides of the branches opposite to the leaves. They stand singly on very short peduncles ; are composed of five small yellow petals, and a great number of stamina surrounding an oblong germen, whicli becomes a long, rough, sharp- pointed capsule, opening in four parts, each filled with greenish

angular seeds. This plant is sown by the Jews about Aleppo, and is there- fore called Jews' mallow. The leaves are a fa- vorite salad among these people, which they boil and eat with their meat.

CORCYRA, in ancient geography, an island in the Ionian Sea, opposite to Thesprotia, a dis- trict of Epirus, called Scheria and Phaeacia by Homer. By Callimachus it is called Drepane ; its most ancient name, according to the Scho- liasts from its curved figure. It was famous for the shipwreck of Ulysses and the gardens of Al- cinous and is now called Corfu.

CORCYRA, a town in the above island, formerly powerful ; situated about the middle of the east side, called the Town of the Phaeacians by Homer ; and now Corfu, from the Kopv0« of the middle age, the name of the citadel. It was a colony of Corinthians.

CORCYRA NIGRA, an island in the Adriatic, on the coast of Dalmatia; called Melasna by the Greeks to distinguish it from the above island. The epithet Nigra was added, from its woods of tall trees with which it is almost covered. It is now named Curzola.

CORD,v.a.&n.s. ˆ Fr. corde; Ital. cardu CO'RDAGE, n. s. 5 Span, cordel ; Dut. kardc , CO'RDED, adj. j Welsh cort ; Lat. cltordn. A rope ; a string composed of several strands or twists, commonly of hemp ; a quantity of wood for fuel, supposed to be measured with a cord ; a pile eight feet long, four high, and four broad. Cordage is a quantity of cords; the ropes em- ployed in rigging a ship. To cord is, to fasten with ropes ; to tie up a package ; to close by a bandage. Corded signifies that which is formed of ropes ; secured with ropes.

She let them down by a cord through the window.

Jushuti ii. 5.

Thine eyes shall see Jerusalem a quiet habitation, a tabernacle that shall not be taken down ; none of the stakes thereof shall ever be removed, neither shall any of the cords thereof be broken. Isaiah xxxiii. 20.

He set him up withouten wordes mo, And with his axe he smote the eorde atwo, And down goth all. Chaucer. Cant. Tales

Nor in this worlde there is none instrument Delicious through winde or touch on corde, As ferre as any wight hath er iwent. That tonge tell or herte maie record, But at that fest it was well herd accorde.

Id. Troilru and Cresei'le In depe dispayre as did a wretch go, With reedy corde out of his life to spede, His stumbling foot did fynde an boorde. Wyat

She bore before her lap a dolefull squyre, Lying athwart her horse in great distresse, Fast bounden hands and feet with cordes of wire.

Spenser. Faerie Queene. Fair Sthenobaa that herself did choke With wilfull chord, for wanting of her will. Id. This night he meaneth, with a corded ladder, To climb celestial Silvia's chamber window.

Shakspeare. Our cordage from her store, and cables, should be

made, Of any in that kind most fit for marine trade.

D.-uyicn.

They fastened their ships, and rid at anchor with cables of iron chains, having neither canvas nor cor- dage. Raleiyh.

Formed of the finest complicated thread, These numerous cords are through the body spread.

Blackmore.

Spain furnished a sort of rush called spartum, use- ful for cordage and other parts of shipping.

Arbuthnot on Coint

*Redoubling cords the lofty canvas guide, And through inextricable mazes glide. Falconer. Each lofty yard with slackened cordage reels, Rattle the creaking blocks, and ringing wheels. Id**

Such he appeared as when, in battle slain. The % ictor's chariot rapt him o'er the plain.

Black bloody dust his lineaments defaced ; And through his wounded feet the cords were braced.

Symmons' sEneis.

Thus by acclaim the public sentence known. The walls we sever, and unfold the town. All labour : some the encircling cordage tie ; Some the wheel's motion to the feet supply. Id.

CO'RD-MAKER, n. s. From cord and make. One whose trade is to make ropes; aropemaker.

CO'RD-WOOD, n. s. From cord and wood. Wood piled up for fuel, to be sold by the cord.

CORDAGE, ANCIENT. The naval cordage of the earlier ages was, in all probability, only thongs of leather. These primitive ropes were retained by the Caledonians in the third century. The nations north of the Baltic had them in the ninth or tenth centuries : and the inhabitants of the western isles of Scotland still use them ; cutting the skin of a seal, or the raw and salted hide of a cow, into long pieces, and fastening the plough to their horses with them, or even twisting them into strong ropes of twenty or thirty fathoms length. But these, in the south of our island, and on the continent, were early superseded by the use of iron chains. The Veneti, who were so intimately connected with the Belgae of Britain, used iron chains for their cables in the days of Czesar. But in the more refined countries of the south, both thongs and these had long given place to vegetable threads. The Greeks appear to have used the common rushes of their country, and the Carthaginians the spartum, or broom of Spain. And as all the cordage of the Romans was made of these materials at their last descent on our island, so the art of manufacturing them would necessarily be introduced, with the Roman settlements, among the Britons. Under the direction of Roman artists their thongs of leather would naturally be laid aside, and the junci, or rushes of the plains, worked up into cordage. And what remarkably coincides with this opinion is, that the remains of old cables and ropes are still dis- tinguished among the British sailors by the name of old junk. The Roman sails, which were composed of flax in the days of Agricola, were afterwards made of hemp ; and our own are therefore denominated cannabis or canvas by our mariners at present. And doubtless about the same period did the junk of the British cordage give way to the same materials; the use of hempen ropes upon land, and of hempen nets for hunting, being very common among the Romans in the first century. See ROPE- MAKING.

CCTRDATE, adj. Lat. cor, cordis. Heart- shaped.

CORDATED, an appellation frequently given by naturalists to things somewhat resembling a heart.

CORDA Y D'ARM ANS,Marie Ann Charlotte, a celebrated heroine during the French revolution, was born in 1768, of a good family near Seez, in Normandy, and lived chiefly at Caen, where she was greatly admired for her beauty 3:>;1 spirit. She is described by J.Baptist Louvet as "a stout, handsome young woman, of a most engaging air —gentle, yet noble,

modest, and beautiful ; in her face and carriage, which were those of a fine and handsome woman, there was a mixture of gen-

tleness and majesty, which indicated the strength of her mind. Among the many officers who were massacred by the soldiery at the instigation of Marat, there was one Belsunce, a major, for whom Charlotte Cordc had a particular regard ; and the melancholy fate of this man animated her with sentiments of vengeance against the incendiary, whom she considered as the chief cause of all the bloodshed and anarchy that then distracted her country. Regardless of her own life, and determined to avenge the death of her lover, and rid the nation of a tyrant, she has- tened to Paris, was introduced to the presence of Marat, to whom she presented a paper to read, and while he was thus employd, she stabbed him to the heart with a dagger, July 12th, 1793. Far from attempting to escape, she confessed the action ; and from the conclusion of a letter which she wrote to her father on the occasion, ' Crime begets disgrace, and not the scaffold,' she seems to have considered it no crime nor disgrace. She was guillotined on the 16th of July, 1793 ; mani- festing at her execution, as she had also done at her trial, the most undaunted courage. The ex- traordinary conduct of this woman was accom- panied with conduct no less extraordinary ; for as she was conveyed to the scaffold, a deputy of the city of Mayence, named Adam Lux, a young man, was so transported with admiration of her beauty, that he hastened to the tribunal and de- manded to suffer death under the same instru- ment ; and he was accordingly condemned and executed.

CORDED, in heraldry, a cross wound about with cords as in the annexed diagram. He beareth, argent a St. George's cross, corded, azure, name Wilkinson.

CORDELFER, n. s. A Franciscan friar : so named from the cord which serves him for a cincture.

And who to assist but a grave cordelier. Prior.

CORDELIERS, or Franciscan friars, are clothed in thick gray cloth, with a little cowl, a chaperon, and cloak, of the same ; having a girdle of cord tied with three knots, whence the name. Their original name was Minor friars. The denomi- nation Cordelier is said to have been first given them in the war of St. Louis against the infidels ; wherein the Friars Minor having repulsed the barbarians, and that king having enquired their name, it was answered, they were people cor- deliez, ' tied with ropes.' They are professed Scotists.

CORDEMOI (Gerald de), a learned Car- tesian philospher and historian,

born at Paris. Being appointed reader to the dauphin, he in- structed that prince with great assiduity ; and in 1675 was received into the French Academy. He wrote a general history of France during the first races of the French Kings, in 2 vols. ; and six Discourses on the Distinction between Body and Soul, which were printed together in 1702, in 4to. He died in 1684.

CORD1A, in botany, a genus of themonogynia order, and pentandria class of plants ; natural

orderforty-first, asperifoliae : cou. funnel-shaped: STYLE dichotomous or divided into two threads, and each of these divided into other two. There are eighteen species, of which the principal are,

1. C. myxa, the Assyrian plum, native of Assyria, Egypt, and the coast of Malabar. It rises to the height of a middling plum-tree ; and its branches are furnished with oval, woolly leaves, standing without order. The flowers are produced in bunches, are white, and consist of one tubular petal, and a like calyx, nearly of an equal length, and both are cut into five parts at their brims. In their centre are five very small stamina, and one slender style crowned with an obtuse stigma. The germen is roundish, and swells to a plum of the same form, and about the size of a damson, of a dark brown color, a sweet taste, and very glutinous. These plums were formerly kept in die shops ; and were accounted good for ob- tunding acrimony, and thereby stopping de- fluxions of rheum upon the lungs : but they are now little used. In some parts of Turkey they cultivate this tree in great abundance, not only for the sake of the fruit, but to make birdlime.

2. C. sebestena, the rough-leaved sebesten, grows naturally in both the Indies, and sends forth several shrubby stalks eight or ten feet high. The young leaves are serrated, but the full grown ones are not. They are of an oblong oval form, rough, of a deep green on the upper side, and stand alternately on short foot-stalks. The flowers terminate the branches in large clusters, are nearly of the shape and color of those of the marvel of Peru, and make a most beautiful appearance. Each has five stamina and one bifid style. The plums are much of the shape of those of the myxa, and are eaten in the same manner. The fruit of this tree is less valuable than the wood, a small piece of which thrown upon a clear fire will perfume a room with a most agreeable odor.

CO’RDIAL,n..&a\ Fr. cordial; Ital. CO’RDIALLY, adv. Icordiale; Span, cor*

CORDIA’LITY, n. s. {dial; Lat. cor. A CO’RDIALNESS, n. s. J medicine to increase the strength, or raise the spirits; that which com- forts or exhilarates a person ; that which puts him in heart. The adjective signifies reviving ; strength-restoring; sincere; warm, as a cordial friend, a cordial reception. Brown uses cordiality to denote, relating to the heart; but its common meaning is sincerity ; friendliness of intercourse ; heartiness. Cordialness is synonymous with it. Cordially is sincerely ; heartily.

Many restoratives of vertues rare, And costly cordialles, she did apply, To mitigate his stubborn malady.

Spenser. Faerie Queene. It is a thing I make, which hath the king Five times redeemed from death : I do not know What is more cordial. Sltakspeare. Cymbeline

If nor a dramme of treacle soveraigne, Or aqua vitae, or sugar candian. Nor lutchen cordials can it remedie, Certes his time is come, needs mought lie die.

Hell.

Cordial of pity give me now, For I too weak for purges grow.*

Cowley.

He, with looks of cordial love,

Hung over her enamoured. Milton.

That the antieuts had any such respects of cordiality, or reference unto the heart, will much be doubted.

Browne.

Doctrines are infused among Christians, which are apt to obstruct or intercept the cordial superstructing of Christian life of renovation, where the foundation is duly laid. Hammond.

Where a strong inveterate love of sin has made any doctrine or proposition wholly unsuitable to the heart, no argument, or demonstration, no nor miracle whatsoever, shall be able to bring the heart cordially to close with, and receive it South’s Sermon,*

Your -warrior offspring that upheld the crown, The scarlet honour of your

peaceful gown, Are the most pleasing objects I can find, Charms to my sight, and cordials to my mind.

Dry den.

He only took cordial waters, in which we infused sometimes purgatives. Wiseman's Surgery.

A cordial, properly speaking, is not always what increaseth the force of the heart ; for, by increasing that, the animal may be weakened, as in inflamma- tory diseases. Whatever increaseth the natural or animal strength, the force of moving the fluids and muscles, is a cordial : these are such substances as bring the serum of the blood into the properest con- dition for circulation and nutrition ; as broths made of animal substances, milk, ripe fruits, and whatever is endued with a wholesome but not pungent taste.

Arbuthnot on Aliments. If Heaven a draught of heavenly pleasure spare,

One cordial in this melancholy vale, 'Tis when a youthful, loving, modest pair,

In others' arms breathe out the tender tale, Beneath the milk-white thorn that scents the ev'ning gale. Burns.

We must take human nature as it is : and, if a rude multitude cannot readily comprehend a moral or po- litical doctrine, which they need to be instructed in, it may be as allowable to illustrate that doctrine by a fable, in order to make them attend and understand it, as it is for a physician to strengthen a weak sto- mach with cordials, in order to prepare it for the business of digestion. Beattie.

That cordial thought her spirits cheered,

And through the cumbrous throng, Not else unworthy to be feared.

Conveyed her calm along. Cowpcr,

Tnen was the cordial poured, and mantle flung

Around his scarce clad limbs ; and the fair arm Raised higher the faint head which o'er it hung.

Byron. Dim Juan. CORDILLERAS. See ANDES. CO'RDINER, n. s. Fr. cordonmer. A shoe- maker. It is so used in divers statutes.

CO'RDON, n. s. French. In fortification, a row of stones jutting out before

the rampart and the basis of the parapet.

CORDONNIERS, FRERES, Fr. i. e. Brothers Shoemakers, the title of two pious societies, which existed in Paris before the revolution. They were established by authority about the middle of the seventeenth century; the one under the protection of St. Crispin, the other of St. Crispianus, two saints who had formerly honored the profession. They lived in community, and under fixed statutes and officers ; by which they were directed both in their spiritual and secular concerns. The produce of their shoes was put into a ronrsrnon stockˆ, to fur-

nish necessaries for their support ; the rest to be distributed among the poor.

CORDOVA, a small but fertile province of Spain, in Andalusia, formerly an independent kingdom. After the fall of the Roman empire it was subjected to the dominion of the Goths ; but in the eighth century it was raised by the Moors to a state of unequalled splendor. In 755 Abdelrahman, the heir male of the Omniad line, having passed over from Africa, at the head of a few desperate followers, raised a rebellion in Spain ; when, after a battle fought on the banks of the Guadalquiver, in which he overthrew the lieutenant of the caliph of Damascus, he be- came king of all the Moorish possessions in the south of Spain, and fixed, in 759, his royal resi- dence at Cordova. Then began those flourishing ages of Arabian gallantry and magnificence, which rendered the Moors of Spain superior to all their contemporaries in arts and arms, and made Cordova one of the most splendid cities in the world. Agriculture and commerce prospered under the happy sway of this hero ; and the face of the country was changed from a scene of de- solation, which the long wars and harsh govern- ment of the viceroys had brought on, into a most populous and flourishing state, exceeding in riches, number of inhabitants, activity, and in- dustry, any prior or subsequent era of the Spanish history. He added new fortifications to the town, built a magnificent palace with delightful gardens, laid causeways through the marshes, made ex- cellent roads to open ready communications be- tween the great towns, and in 786 began the great mosque, which he did not live to finish. During two centuries, this court continued to be the re- sort of all professors of polite arts, and of such as valued themselves upon their military accom- plishments : whilst the rest of Europe was buried in ignorance, debased by brutality of manners, or distracted by superstitious disputes. England, weakened by its heptarchy, was too inconsider- able even to be mentioned in the political history of the times ; France, though it had a gleam of reputation under Charlemagne, was still a bar- barous, unpolished nation ; and Italy was in utter confusion

; the frequent revolutions and change of masters rendered it impossible for civilisation to acquire a permanent footing in so unstable a soil. Twelve caliphs succeeded to the throne of Abdelrahman at Cordova, but its repose was disturbed, and the power of the monarchs shaken, by those repeated insurrections to which despotic governments are exposed. In the reign of Abdalla, Suar Alcaisi, and afterwards Said, a native of Syria, raised the standard of revolt in the mountains of Alpujarras, between Cordova and Granada, and though joined by numbers of the discontented, was, after numerous conflicts, quelled by the general of Abdalla. The calm which succeeded these revolts was disturbed by Mahomed ben Abdallatiph, of a Persian family, established in Alhama, who, supported by a body of insurgents, proclaimed Himself caliph, and maintained a long and doubtful war with his sovereign ; but was conquered, and finally met the fate of a traitor, during the reign of Abdelrahman the Third, in the year 924 of the Christian era. For nearly a century after

this period the sovereigns of Cordova enjoyed an undisturbed repose, till Soliman ben Alhaken, an adventurer from Africa, led a numerous army of Moors into Spain, where he was joined by the discontented Arabs ; and, after a rapid career, entered the city of Cordova, seated himself on the throne of the caliphs, and transmitted to his son Almanzor the power of the Mahommedans, who transferred the royal residence to Granada, in 1013, and whose successors made it their capital till its final subjugation by the Christians.

The modern province is divided into two na- turally distinct districts by the Guadalquiver; west of which the countrv is mountainous, and a perfect plain to the east. It is bounded on the north by Estremadura and La Mancha, on the east by Jaen and Granada, south by Seville, and west by Seville and Estremadura ; and oc- cupies a space of about 4580 square miles. The entire population is between 250,000 and

260,000.

The valleys between the mountains, as well as the plain districts, are very productive in wine, oil, grain, and figs ; on the hills is the finest pas- turage. The Guadalquiver is fed by several streams of less note. The chief towns besides Cordova, are Lucina and Montilla.

CORDOVA, or CORDUBA, an ancient city of Spain, the capital of the above province, is seated on the Guadalquiver, (over which it has a fine stone bridge), in a very extensive plain. The circumference is large, and the river winds round it very beautifully ; but it is not peopled in pro- portion to its extent, there being many orchards and gardens within the walls. There are many superb structures, palaces, churches, and religious houses.

The bridge was built by the Moors, and is supported by sixteen arches. The ancient palace of the Moorish kings was large and beau- tiful, but has long since been converted into stables.

This city had anciently a university in which all the sciences were cultivated, and" in which the elder Seneca, who wrote the Art of Persuasion ; Seneca, preceptor to Nero ; Gallio, the orator ; Lucan, author of the Pharsalia ; Seneca, the tragedian ; Seneca, the historian, and many other eminent men, prosecuted their studies : this university likewise flourished under the Moors. Cordova is the see of a bishop ; and contains, basides the cathedral, sixteen parish churches, forty convents, twenty-one hospitals, and two colleges. The cathedral church was built by the Moors for a mosque, out of the ruins of an ancient Roman temple, and it stiH retains the name of mezquita, or the mosque. This building is 334 feet in length, and 387 wide. It stands in an insulated position at the head of four of the principal streets. It is very rich in plate. Apart from the rest of the building is a square chapel in which the Moors preserved the book of the law. It is adorned with fine marbles, the entablature being supported by twelve columns, placed upon the shafts of other twelve, with a handsome dome. This building adjoins another square one, which has a cupola supported by eighty four columns of fine marble, and eight windows with sky-lights in alabaster ; and this last leads to a magnificent octagon building,

thirteen feet in height and width, and ornamented with marbles like the other buildings. In 1528 the cathedral was formed into a cross, by building a chapel in the middle, forming as it were a second church. The ancient church of the Martyrs is also a handsome building, containing several fine paintings, and a beautiful marble monument of Ambrosio Moralez; it belongs to the Dominican convent. The church of the Capuchins, and that of St. Francis also, contain several excellent paintings. The royal palace resembles a citadel, and is encircled with walls. The episcopal palace formerly occupied by the Inquisition, is a large building with a noble marble staircase, spacious garden, and an orchard of orange trees. It contains various paintings of respectable masters. But the college of St. Paul is, perhaps, the finest public edifice in this noble city. Its entire front and magnificent staircase are of marble. The cloisters consisting of two ranges of porticoes one above the other, and supported by eighty marble columns, are also much admired. The library contains many rare books and pictures. The whole belongs to the Dominicans. The square called the Plaza Major is surrounded wjth very fine houses, under which are piazzas. The silk and gold lace ma- nufactures arc gone to decay, but a tolerable trade (for

Spain) is carried on in gold and silver articles, and the staple manufactures of lace, ribbands, hats, Cordova leather, and baize. Though the art of softening leather and giving it a fine polish was invented at Cordova, the town possesses few tan yards. In the neighbourhood are vast numbers of orange and lemon trees, which render their fruits exceedingly cheap. The best horses in Spain come from^Jience. Population about 40,000. This city is seventy- five miles north-east of Seville, and 180 S.S. W. of Madrid.

*CORDOVA, a province of La Plata, South America, formerly belonging to the vice-royalty of La Plata, or Buenos Ayres, but now ranking among the independent provinces. It is about 300 miles in length, and 210 broad, being bounded by the province of Tucuman to the north, by Buenos Ayres to the east, vast Indian plains or pampas south, and Cuyo west. It is traversed throughout its whole length by an im- mense chain of mountains, known as the Sierra de Cordova, the Campachin, or Achelan chain, and covered with perpetual snow. It is watered by the Torcera, which joins the La Plata, and some minor streams. This province is cele- brated for its numerous herds of cattle, its horses, mules, and woollen manufactures : the young women of all ranks unite in the labors of the loom, and dye the wool themselves, according to Mr. Caldcleugh, most durably. * The yellow color,' says this writer, < is produced by the roots of the romeiro, or rosemary, and the blue by anil or indigo; the red is obtained from anotto. The ink and all the black dyes are produced by bruising the pods of the algora- billa, and mixing them with warm water and native sulphate of iron, which is carried a greit distance as an article of trade ; it is termed ca- parrosa, whence perhaps our copperas is derived. The algoraba, which is I believe, an acacia, is*

a tree of great value, particularly the algaroba blanca. The pods are made by fermentation into a kind of chicha or drink, and it serves as well to fee"d cattle when the maize crop is defi- cient.' The looms he often found at work under the shade of trees. Cordova joined early in the late revolutionary movements, and a general congress of the then United Provinces was held in its capital in 1821 ; but it imbibed a jealousy of the preponderance obtained in the new re- public by Buenos Ayres, and became detached from the Union. Its population is reckoned at 44,000. Its chief towns, beside the city of Cordova, are Mendoza, San Juan de Jasban, and San Luis de la Punta. The whole country has been frequently disturbed of late by incur- sions of the Indians from the south.

CORDOVA, or CORDUBA, a city of South Ame- rica, the capital of the foregoing province, is said, proverbially, to be situated, en un pozo, in a well, and the site has the appearance of having been once a considerable depository of water, which has escaped in the direction of the river Primere, or Pune, near which it stands, in lat. 31° 30′ S., and long. 63° 15′

W. It was founded by the Spanish governor Carbera, in 1573. The streets are regular, and the houses built of brick are higher than the usual style of Spanish towns ; most of them are adorned with balconies ; but the ground on three sides of the town overtops the highest of them. The great square has one side covered with a neat cabildo, and the other with a cathedral. There are fourteen other churches. The population is estimated at 14,000. The neighbourhood is marshy, but very fertile in grain, fruits, and pasturage. A trade in the woollen manufactures and mules of the province was once very nourishing, but the revolution has almost entirely suspended the latter. The uni- versity, which comprises the ancient college of the Jesuits, is perhaps one of the finest remnants of the former magnificence of the order. It con- tains still about 100 students. The church is superb, rich enough, says a late traveller, to show the wealth of the founders, and sufficiently elegant to prove that men with enlightened minds, even without the assistance of models and designs, can possess a chastened and cor- rect taste. The rooms are conveniently arranged, spacious, and numerous. One of the upper apartments was filled with the most expensive physical apparatus, all rapidly going to decay, and the names and purposes of which are now unknown to every inhabitant of the city. Another smaller apartment, in the rear of the pile, had been occupied by the printing press, the only one for a century which existed in this part of the world. The press remained concealed in this retreat for many years after the expulsion of the company.' The climate is intensely hot during summer, and ripens some fine grapes. The mountains of the vicinity contain veins of silver, lead, and copper; and a gold mine is said once to have been worked at Punilla, a short distance off. Old DobrizhofTer speaks with his usual accuracy of a curious phenomenon yet observed here. ' Lofty rocks rise in every part of the Corduban district. I heard terrible noises like the explosion of cannon ; but the natives as-

sured me, that these sounds were common to the neighbouring rocks, and happened perpetually. The air confined in the cavities of the mountain, and attempting a forcible passage through the chinks, when stopped by opposing rocks, and re- verberated by their windings, bellows after this fearful manner. In the city of Corduba itself, a hollow murmur, resembling the knocks of a pestle in a wooden mortar, is frequently heard by night. This low mournful sound runs from one street to another, and is called by the Spa- niards, el pison, or the paving hanimer. ' The vulgar,' he adds, ' believe it to be the tramp of some spectre-horsemen riding through the city.'

Captains Lewes and Clarke tell us of the same noises being heard by them in the rocky moun- tains of North America. Mr. Caldcleugh says he listened for it the three evenings he passed here in vain, but heard of it from, respectable inhabi- tants, and by no means discredits, though he could not account for, the alleged sounds.

CORDOVA, or CORDOBA, a large and old city of Mexico, in the intendancy or state of Vera Cruz. Its structures, both public and private, are surmounted by numerous handsome domes and towers, and there is a large square in the centre with Gothic arcades. The cathedral of the town, surrounded on three sides, occupies the fourth, and a fountain of water runs in the middle. The cathedral is considered as one of the most splendid structures in Mexico. All the streets are wide, straight, and well paved, and the houses mostly of stone. The vegetation around is extremely luxuriant, producing all the fine tropical fruits ; but the inhabitants are said to be very indolent, and insensible of these advan- tages . A considerable trade is here carried on in sugar, which, as well as tobacco, flourishes in this neighbourhood. Cordova is 150 miles E. N.E. of .Mexico. Inhabitants about 4000.

CORDON AN, n.s.} Fr. cordovan; Ital.

CO'RDWAIN, n.s. > cordovano ; Span, cor-

CORDWA'INER, n. s. J doban ; Swed. kardo- wan; Dut. kordewaine. A Spanish leather. It is generally supposed to derive its name from Cordova. Thomson, 'however, seems disposed to look for the origin of it in two Spanish words, which he states to mean sheep's leather. But to this there are two objections, namely, that his Spanish is incorrect, and that cordovan is not made from sheep skins. Cordwainer is a shoe- maker.

His here, his berde, was like safroun, That to his girdle raught adovra ; His shoon of cordewane. Chaucer. Cant. Tales.

Buskins he wore of costliest cordwayne, Pircht upon gold and paled part per part, As then the guize was for each gentle swayne.

Sfienser. Faerie Queene.

CORDWAINERS, Or CoRDINERS, is Still the title

of the incorporation of shoe-makers in Edin- burgh. The first of the above etymologies is best warranted ; for, the French workmen who prepare the corduas are still called corduan- niers.

CORDUBA, in ancient geography, an illus- trious city of Baetica, on the

right or north side of the Baetis. It was the first colony sent into

those parts by the Romans, aid named Colonia Patricia, because at first inhibited by principal men, both of the Romans aid natives. It is mentioned by Silius Italicus fa the second Punic war ; and hence it is probablethe first Marcellus, and not the second, was the fcunder. It was fa- mous for the birth of the two 5enecas and Lucat), and for its rich produce in oi. See CORDOVA.

CORDUROY, corde du oi (Fr.), in manu- factures, a stuff originally fcrmed of silk cloth, but now extensively imitatec in cotton in our clothing districts. Thickset, velveret, and vel- veteen, are varieties of it ; md '.he comfortable clothing made from it for the poorer classes, are proofs that kingly garments Ike all others, change their owners. See COTTON MABUFACTURE.

CORDUS (Valerius), a teamed botanist, the son of Etricius Cordus, a physician and poet of Germany. In the prosecution of the study of botany, he examined the mountains of Germany, and travelled into Italy ; but being wounded in the leg by the kick of a horse, died at Rome in 1544. He wrote Remarks on Dioscorides, and other works.

CORE, n. s. Fr. ccevr; Lat. cor. The heart; the central part of any thing ; the capsules which contain the kernels in some fruits, as in the ap- ple and pear ; the pus in a boil. Bacon also uses it, corruptly from the French corps, to signify a body or collection.

Give me that man

That is not passion's slave, and I will wear him

In my heart's core ; ay, in my heart of heart.

Shakspeure. Hamlet.

It is reported that trees, watered perpetually with warm water, will make a fruit with little or no core or stone. Bacon.

He was more doubtful of the raising of forces to re- sist the rebels, than of the resistance itself ; for that he was in a core of people vhose affections he sus- pected. Id. Henry VII.

In the core of the square she raised a tower of a furlong high, Raleigh's History of the World.

Launce the sore,

And cut the head ; for, till the core be found, The secret vice is fed, and gathers ground.

Dryden'i Virgil.

Dig out the cores below the surface. Mori. Htub.

They wasteful eat, Through buds and bark, into the blackened core.

Thomson.

Never was this one unextinguishable truth destroyed from the heart of man, placed, as it is, in the very core and centre of it by his Maker, that man was not made the property of man -, that human power is a trust for human benefit ; and that when it is abused, revenge becomes justice, if not the bounden duty of the injured. Bwhe.

Alas ! our young affections run to waste, Or water but the desert ; whence arise The weeds of dark luxuriance, tares of haste, Rank at the core, though tempting to the eyes.

Byron. Childe Harold.

And if she met him, though she smiled no more, She looked a sadness sweeter than her smile,

As if her heart had deeper thoughts in store

She must not own, but cherished more the while

For that compression in its burning core.

Id. Don Juan.

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COR

COREA, a pennsula north-east of China, between 99° and 09° of E. long., and between 32° and 46° of N. at., said by the Jesuits to be divided into eight provinces, which contain forty cities of the first -ank, fifty-one of the second, and seventy of tht third. The capital is Han- dling, where the ling resides. They add that the people are wel: made, of a sweet and trac- table disposition, bnd of learning, music, and dancing; and in general resemble the Chinese; but they have littlesilk, and make use of linen cloth in its

room. Their trade consists in paper, pencils, gold, alv

COREIA, in antiquity, a festival in honor of Proserpine, named Core, Kop»», which in the Molossian dialect signifies a beautiful woman.

CO-RE'IGNERS, n. s. Those who rule or reign in conjunction.

COREL!!, (Archangelo), a famous Italian musician and composer, born at Fusignano, in Bologna, in 1653. About 1672 his curiosity led him to visit Paris, but, notwithstanding the character which he brought with him, he was driven back to Rome by Lully, whose jealous temper could not brook so formidable a rival. In 1680 he visited Germany, and met with a re- ception suitable to his merit from most of the German princes, particularly the elector of Ba- varia ; in whose service he was retained, and

continued for some time. After about five years stay abroad he returned to Rome. His profi- ciency on the violin was so great, that his fame soon spread throughout Europe. He was highly favored by that great patron of poetry and music cardinal Ottoboni, and regulated the musical academy held at his palace. Here Handel be- came acquainted with him ; and a serenata of Handel's, entitled 11 Triomfo del Tempo, being performed, the overture was in a style so new and singular, that Corelli was confounded in his first attempt to play it. While Corelli resided at Rome, many persons from other countries were ambitious of becoming his disciples. Of these it is said the late lord Edgcumbe was one. Corelli died at Rome in 1717; and was buried in the church of the Rotunda. A monument with a marble bust was erected to his memory by Philip William, count palatine of the Rhine, under the direction of cardinal Ottoboni. For many years after his death, he was commemo- rated by a solemn musical performance in the Pantheon ; where some of his concertos were performed by those who had been his pupils, in the same slow, distinct, and firm manner, with- out graces, in which they were played by the author himself. He was a passionate admirer of pictures, and lived in an unhHerrupted friend- ship with Cignani and Carlo Marat ; who pre- sented him at times with pictures, both of their own painting, am] by other masters : whereby he became possessed of a valuable collection of original paintings ; all which, together with about £6000 sterling, he left to his friend Ottoboni ; who, reserving the pictures to himself, generously distributed the rest among the relations of the testator.

COREOPSIS, tick-seeded sunflower, a genus of the polygamia frustanea order, and syngenesia class of plants, natural order forty- ninth, composite. Receptacle is paleaceous ; pappus two-horned : CAL. erect and polyphyllous, surrounded with patent radiated leaflets at the base. There are twenty-five species, most of them herbaceous perennials. They are very flowery, and rise from three to eight feet, ter- minating by clusters of

compound radiated flowers of a yellow color. They have all peren- nial fibrous roots, and annual stalks, which rise in the spring, flower from July to October, and decay to the root in November. The flowers are all shaped like sun-flowers, but smaller, and arf very ornamental. They are easily propagated by slipping or dividing the roots in autumn, when the stalks decay ; planting the slips at once where they are to remain ; after which they require only to be kept free from weeds, and to have the decayed stalks cut annually in autumn.

CORFE-CASTLE, a port and market town of England, in the county of Dorset, situated in the centre of what is called the Isle of Pur- beck, governed by the mayor and barons, who claim the same privileges as the Cinque ports. It takes its name from a castle, said to have been built by king Edgar, but now in ruins. Here Edward, king of England, called the Martyr, was murdered by order of Elfrida, to obtain the throne for her son Ethelred. It once sent

two members to parliament. The town is built on a rising ground that declines to the east, and consists of two streets. The houses are mean, but built of stone. It is the only town in the island ; and its parishes are very extensive. Its only trade is in stone, and knit stockings. It is separated from the castle by a stately bridge of four very high arches over a deep dry ditch. It has a market on Thursday, nearly disused ; and fairs on May 12th, and Oct. 10th. It is eighteen miles S.S.W. of Poole, and 116 west of London.
CORFU, an island of the Mediterranean, at the mouth of the Adriatic, near the coast of Al- bania, about fifteen leagues long, and eight broad ; anciently known under the names Scheria, Phseacia, Corcyra, and Drepane. In the best days of Greece, the Corcyrians formed a powerful republic ; in succeeding times it be- longed to the king of Naples ; and was after- wards sold for 30,000 ducats to the Venetians, who maintained a fleet of galleys in the port, and a strong garrison, to defend this and the neighbouring islands. It was ceded to the French republic in Oct. 1797, by the treaty of Campo Formic ; but was surrendered by capitula- tion to the united forces of the Turks and Russians on the 3rd of March, 1799. The island contains above 50,000 inhabitants, and is divided into four bailiwics, or governments. The air is healthy, the land fertile, and the fruit excellent. Citrons, oranges, and the most delicious grapes, honey, wax, and oil, are exceedingly abundant. Some places are mountainous and barren, and good water scarce. The manufacture of salt is a source of great wealth, as well as employment to the inhabitants. The religious establishment is said to partake partly of the Greek, and partly of the Roman Catholic rites.

The latter are followed by the members of the government, Under the Venetians an archbishop, named by the senate, was appointed by the pope. The population of Corfu generally profess them- selves of the Greek church, at the head of which is a protopapa, chief priest, or bishop, chosen by an assembly of the clergy and noblesse. He is of a noble family, and distinguished from the chief priests of the other Ionian islands by his title of great protopapa. On his election, he generally gives an elegant and expensive enter- tainment to the higher order of the islanders, who will not scruple, we are told, to carry away part of the feast. He remains in office five years, and then returns to the ordinary class of papas.

Superstition and unaccountable vanity predo- minate in the character and manners of the Cor- fiotes. On the slightest provocation any one, it is said, may obtain the dreaded anathema of the protopapa, who, on receiving a sufficient bribe, will appear before the house of the victim at the head of his clergy, habited in black, and preceded by a crucifix and black flag, to pronounce the sentence. Sometimes the anathematized person obtains, at considerable expense, a counter-ex- communication from the same ecclesiastic ; and sometimes retaliates by the use of the poniard.

Marriages and funerals, in Corfu, are cele- brated according to the Greek ritual. To pre- pare for the former a table is spread in the best apartment, on which a Bible is laid between two

wax tapers ; having a salver at one side with a glass or small phial of wine and a little bread, and on the other a salver containing rose-colored garlands. The ceremony being performed, a crown is made, by interlacing the two tapers, and is placed over the nuptial bed. The bride is now seen dissolved in tears in order to express her modesty; but if, at the moment of consent, any byestander shall cast three knots on a cord and throw it in the fire, it is confidently be- lieved that the husband will be completely ener- vated.

Preparations for burial are made the instant a person expires, and scarcely two hours elapse before it takes place. The body is clothed in the best apparel it ever wore, and on this occa- sion nothing but the head and hands are left ex- posed. It is now laid on carpeted tressels, with a cushion under the head and a crucifix in the hands; the whole being covered, if the person was unmarried, with artificial flowers. At the church, after the funeral service, all the friends kiss the deceased, at the same time muttering over him in a low whisper : it is thought a great token of regard to a stranger to invite him to pay this tribute of respect. The graves are frequently visited and crowned with flowers for the first three months after interment.

CORFU, the capital of the above island, the seat of a bailiff, a proveditor, a captain, &c. and the see of an archbishop, is four miles in cir- cumference ; and seated on the east coast. It is strongly fortified, and usually defended by a garrison of about 10,000 men. A number of excellent brass and iron cannon are mounted on the different forts ; and the works have been much improved by major-general Paterson. In the last war between the Venetians and the Turks, this town was attacked by an army of 80,000 men, and attempted to be stormed several times by the enemy ; but the garrison, which consisted of 12,000 men, under the command of count Schulenburg, made so gallant a defence, that they obliged them to raise the siege with consr- derable loss. For this service a magnificent statue was erected in memory of the count. In the city are many handsome Greek churches, the principal of which is that of St. Speridione, or the cathedral ; it is embellished with some excel- lent paintings, and is most superbly ornamented. The body of the saint is preserved entire in a rich shrine within the church. It is deposited in a silver coffin ornamented with precious stones ; and is in high preservation, though the saint died at Cyprus above 700 years ago. The Greeks, under the Venetian government, were most of them such fanatics, as to be continually offering their devotions at this shrine, believing that through the intercession of the saint,they would ob- tain all their wants, and that by offerings of money their sins would be forgiven them; by which means the church had amassed an immense trea- sure. Corfu has a good harbour,and a considerable traffic. The chief diversions of this place in winter are operas. By an accidental explosion of one of the powder magazines in the fortifications, towards the earlier part of the eighteenth century, not less than 2000 persons were killed and wounded ; and by a similar catastrophe, in 1 789,

and many houses shattered. The inhabitants have erected a most excellent lazaretto, and are

600 individuals lost their lives, four galleys and from the bottom, and forms a bushy head three several other vessels were sunk in the harbour, or four feet over, thickly garnished with oblong,

pointed, bright green leaves, having small spikes of whitish flowers at the ends of the branches.

very particular in their precautions against the It is easily propagated by suckers from the root plague N lat. 39° 40', E. long. 19° 48'. In which it affords plentifully, and may be taken off the year 1818, an university was*

founded here, with fibres every autumn or winter. It may be

under the auspices of the British government, -1”” “>ˆ»™ ‘— – -”• «

by the earl of Guild ford, who was appointed chancellor, and nominated Greeks of the first abilities to the different chairs. The number of students speedily amounted to one hundred and

fifty.

CORIA’CEOUS,a

*CORIA’NDEIl, n. *. Lat. coriandrum. A plant.*

The species are, I. Greater coriander ; 2. Smaller t-sticulated coriander. The first is cultivated for the seeds, -which are used in medicine : the second sort is seldom found. Miller.

CORIANDRUM, CORIANDER, a genus of the digynia order, and pentandria class of plants; natural order forty-fifth, umbellatae : COR. radiated ; the petals inflexed-emarginated ; the in- volucrum universal and monophyllous ; the par- tial involucra halved ; the fruit spherical. There are only two species, both herbaceous annuals, the leaves of which are useful for the kitchen, and the seeds for medicine. Both species have divided small leaves, somewhat resembling pars- ley. The species most generally cultivated is the C. sativum : it has a small fibrous white root, crowned by many parted leaves, having broadish segments; and in the centre an upright, round, branchy .stalk, two feet high, having, all the branches terminated by umbels of flowers, which are succeeded by globular fruit. It is propa- gated by seeds, which ought to he sown in March, either in drills a foot asunder, or by broad cast, and then raked in. When the plants are an inch or two high, they should be hoed to six or eight inches distance. The seeds when fresh have a strong disagreeable smell, which improves by drying, and becomes sufficiently grateful : they are recommended as carminative and stomachic. They are also much used by the brewers both in England and Holland, to give a flavor to their strongest beer. The ancients had an idea, that

also propagated by layers in autumn, which will take root in a year. It is much used in the south of France, where it naturally grows, for tanning of leather, whence its name of tanners’ sumach. It also dyes a beautiful black color. The berries are dangerous, and when eaten generally occasion vertigoes and epilepsies. The old leaves have the same effect upon cattle that eat them, but the yaung leaves are innocent.

CORIDOR, Italian and Spanish, in architec- ture, a gallery or long aisle

round a building, leading to several chambers at a distance from each other, sometimes wholly enclosed, and some- times open on one side.

CORIDOR, or CORRIDOR, in fortification, a road or way along the edge of the ditch, with- out side, about twenty yards broad, encompass- ing the whole fortification. It is also called the covert way, because covered with a glacis, or esplanade, serving as a parapet.

CORINNA, a celebrated Theban poetess, who is said to have gained the prize in competition with Pindar himself, five different times. She flourished about A. A.C. 450, and wrote fifty books of epigrams.

CORINGA, a sea-port in the Northern Circars of Hindostan, district of Rajahmundry, on the western side of the bay of Bengal. It is reckoned a very safe port for middling-sized vessels during the south-west monsoon, and has lately been improved by a wet dock. It carries on a considerable trade with Bengal and Pegu in teak wood, salt, and piece goods. The French were first established here, and part of their fac- tory remains, but the English obtained posses- sion of the place, together with the district in 1759, and established a factory at Ingeram, five miles to the south. In 1787 the greater part of the town, and nearly the whole of the inhabi tants wete swept away by a dreadful inundation from the sea.

CO'RINTH, re. s. \ From the city of that

CoRi'NTHiAK,arf. i name in Greece. A small

the juice of coriander would deprive people of fmit> commoniy caned currant: that which be-

their senses, and even of life. The leaves are sometimes used for culinary purposes in soups, and as an ingredient in salads ; but as they are of a fetid smell, they are not esteemed in this country.

CORIARIA, the tanners', or myrtle-leafed sumach, a genus of the decandria order, and dicecia class of plants. Male, CAL. pentaphyll- ous : COR. pentapetalous, very like the calyx, and united with it; the antherae bipartite. Female, CAL. pentaphyllous ; the STYLES five, SEEDS five, covered with five succulent petals, forming alto- gether the resemblance of a berry. There are three species : C. foemina, and C. myrtifolia, are both natives of the south of 1 ranee, but the latter is most commonly cultivated in this coun- try. It is a pretty ornamental plant, with a shrubby pithy brown stem, closely branching

longs to, or is derived from, Corintb ,

Now will the corinths, now the rasps, supply Delicious draughts. Philips,

The chief riches of Zant consist in corinths, which

the inhabitants have in great quantities. Broome,

CORINTH, a celebrated city of antiquity, for some time the most illustrious of all the Greek cities. It is said to have been founded 1514 years before Christ, by Sisyphus the son of ˆEolus, and grandfather of Ulysses. Various reasons are given for its name, but most authors derive it from Corinthus, the son of Pelops. It was situated in the south part of the Isthmus which joins the Peloponnesus to the continent. As the genius of the Corinthians led them to com- merce rather than martial exploits, their city be- came the finest in all Greece. It was adorned

with the most sumptuous buildings, as temples, palaces, theatres, porticoes, &c. all enriched with a beautiful kind of column, which was called Corinthian, from this city. But though the Cor- inthians seldom or never engaged in a war with a view of enlarging, but rather of defending their little state, they did not forget to cultivate a good discipline both in time of peace and of war. Hence many brave and experienced generals have been furnished by Corinth to the other Grecian cities, and it was not uncommon for the latter to prefer a Corinthian general to any of their own. This city continued to preserve its liberty till A.A.C. 146, when it was pillaged and burnt by the Romans. It was at that time the strongest place in the world; but the inhabitants were so disheartened by a preceding defeat, and the death of their general, that they had not the presence of mind even to shut their gates. The Roman consul, Mummius, was so much sur- prised at this, that at first he could scarce believe it; but afterwards, fearing an ambuscade, he advanced with all possible caution. As he met with no resistance, his soldiers had nothing to do but destroy the few inhabitants who had not fled, and plunder the city. The men who had staid, were all put to the sword, and the women were sold for slaves. After this the city was ransacked by the greedy soldiers, and the spoils were said to have been immense. There were more vessels of all sorts of metal, more fine pic- tures and statues, done by the greatest masters, in Corinth, than in any other city in the world. All the princes of Europe and Asia, who had any taste in painting and sculpture, furnished them- selves here with their richest movables : here were cast the finest statues for temples and palaces, and all the liberal arts brought to their greatest perfection. Many inestimable pieces of the most famous painters and statuaries fell into the hands of the

ignorant soldiers, who either destroyed them, or parted with them for trifles. Polybius, the historian, was an eye witness to this bar- barism of the Romans. He had the mortifica- tion to see two of them playing at dice on a fa- mous picture of Aristides, which was accounted one of the wonders of the world. The piece was a Bacchus, so exquisitely done that it was proverbially said of any extraordinary per- formance, ' It is as well done as the Bacchus of Aristides.' This masterly piece of painting, however, the soldiers willingly exchanged for a more convenient table to play upon ; but when the spoils of Corinth were put up to sale, Attalus king of Pergamus offered for it 600,000 sesterces, near £5000 of our money. Mummius was sur- prised at the high price offered for it, and ima- gined there must be some magical virtue in it. He therefore interposed his authority and carried it to Rome, notwithstanding the complaints of Attalus. Here this famous picture was lodged in the temple of Ceres, where it was at last destroyed by fire, together with the temple. Another extraordinary instance of the stupidity of Mummius is, that when the pictures were put on board the transports, he told the mas- ters of the vessels very seriously, that if any of the things were either lost or spoiled, he would oblige them to find others at their own

cost ; as if any other pieces could have supplied the loss of those inestimable originals, done by the greatest masters in Greece. When the city was thoroughly pillaged, fire was set to all the corners of it at the same time. The flames grew more violent as they drew near the centre, and uniting there made one prodigious conflagration. At this time the famous metalline mixture is said to have been made, which could never afterwards be imitated by art. The gold, silver, and brass, which the Corinthians had concealed, were melted, and ran down the streets in streams; and, when the flames were extinguished, a new metal was found, composed of several different ones, and greatly esteemed in after ages. Corinth lay desolate until Julius Caesar settled there a Roman colony : when, in removing the rubbish and digging, many vases were found of brass, or earth finely embossed. The prices given for these curiosities excited industry in the new in- habitants. They left no burying-place unex- amined ; and Rome, it is said, was filled with the furniture of the sepulchres of Corinth. Strabo was at Corinth soon after its restoration by the Romans, and describes the Acrocorinthus, and its surrounding wall, as including a circuit of nearly eleven miles ; the temple of Venus, &c. Strabo saw likewise Cleona? from thence. Cen- chrea was then a Tillage. Lechaeum had some inhabitants.

Corinth had flourished 217 years when it was visited by Pausanias. It had then a few antiqui- ties, many temples and statues, especially about the Agora, or market place, and several baths. The emperor Adrian introduced water from a famous spring at Stymphalus in Arcadia ; and it had various fountains alike copious and orna- mental. The stream of one issued from a

dol- phin, on which was a brazen Neptune ; of another, from the hoof of Pegasus, on whom Bellerophon was mounted. On the right hand, coming along the road leading from the market-place towards Sicyon, was the odeum and the theatre, by which was a temple of Minerva. The old gymnasium was at a distance. Going from the market-place towards Lechasum was a gate, on which were placed Phaeton and the Sun in gilded chariots. Pirene entered a fountain of white marble, from which the current passed in an open channel. They supposed the metal called Corinthian brass to have been immerged while red-hot in this water. On the way up to the Acrocorin- thus were temples, statues, and altars ; and the gate next Tenea, a village with a temple of Apollo, sixty stadia or seven miles and a half distant, on the road to Mycenae. At Lechaeum were a temple and a brazen image of Neptune. At Cenchreee were temples; and by the way from the city a grove of cypress trees, sepulchres, and monuments. Opposite was the Bath of Helen, tepid and salt water, flowing plentifully from a rock into the sea. Mummius had ruined the theatre of Corinth, and the munificence of the great Athenian, Atticus Herodes, was displayed in an edifice with a roof inferior to few of the most celebrated structures in Greece. The Ro- man colony was destined to suffer the same cala- mity as the Greek city, and from a conqueror more terrible than Mummius, Alaric the savage

destroyer of Athens and all Greece. In a country harassed with frequent wars, as the Peloponnesus has since been, the Acrocorinthus was a post too consequential to be neglected. It was besieged and taken in 1549 by Mahomet II. ; the lords of the Morea, brothers of Constantine XIII. re- fusing payment of the arrears of the tribute, which had been imposed by Anmrath II. in 1447. The country now became subject to the Turks, except such maritime places as were in the pos- session of the Venetians ; and many of the prin- cipal inhabitants were carried away to Constan- tinople. Corinth, with the Morea, was yielded to the republic at the conclusion of the war in 1698, and again by it to the Turks in 1715.

Corinth, now called Corantho and Gerame, is of considerable extent, standing on high ground, beneath the Acrocorinthus, with an easy descent towards the gulph of Lepanto; the houses being scattered, or in groups, except in the bazaar or market-place. Cypresses, among which tower the domes of mosques, with corn-fields, and gardens of lemon and orange trees, are inter- spersed. The air is reputed bad in summer, and in autumn exceedingly unhealthy. A modern traveller relates that, from the top of the

Acro- corinthus, he enjoyed one of the most agreeable prospects which the world can afford. He con- jectured the walls to be about two miles in compass, enclosing mosques, with houses and churches mostly in ruins. An hour was consumed in going up on horseback. It was a mile to the foot of the hill ; and from thence the way was very steep, with many traverses. The families living below were much infested by corsairs. Dr. Clarke represents it as a straggling place. Above the bazaar are some beautiful relics of a temple, supposed to have been erected in honor of Octavia, the sister of Augustus. The Doric order pervades the building, which, in the time of Sir G. Wheler, had eleven pillars; but the governor of the fortress had blown up four of them a short time before Dr. Clarke visited Co- rinth. Five out of the remaining seven support an entablature, and each consists of one entire piece of stone ; but their dimensions are not ac- curately Doric. This distinguished traveller con- jectures that he found the site of Schccnus, where the ancient Isthmian games were celebrated, near the spot where the Isthmian wall makes a sudden turn from the Corinthian (or Crissiean) to the Saronic Gulf, bearing away towards Mount Oneus and embracing the whole of the port of Schcenus. The ruins of the temple, stadium, Theatre, and wells, and other indications of the Isthmian town, surround this port, and are for the most part situated upon its sides, sloping towards the sea. The remains of the temple of Neptune are to the west end of the Isthmian wall ; and a Greek chapel, also in a ruined state, now stands upon the area of the temple. It is built of white limestone, and the workmanship of its ornamental parts is extremely beautiful. It ap- pears to have been of the Corinthian order ; but all its columns and entablatures have fallen. To the south wall of its area adjoined the theatre ; the coilon of which, almost filled and over- whelmed by the ruins of the temple, yet re- uiains, facing the port. West of «he theatre is

the Stadium, at right angles to the Isthmian wall, it has very high walls, and the stone front work, and some of its benches, remain at the upper end. It extends east and west, parallel to one side of the area of the temple. Just at the place where the Isthmian wall joins Mount Oneus, there is a tumulus, which is, perhaps, that supposed to con- tain the body of Melicertes, in honor of whom the Isthmian Games were celebrated, above 1 300 years before the Christian era. It stands on a very conspicuous eminence above the wall, which here passes towards the S.S.E. quite to the port. Travels, vol. vi.

CORINTH, THE ISTHMUS OF, is a neck of land in the Morea, which joins the Morea to Greece and reaches from the Gulf of Lepanto to that of Egina. The narrowest part of it is six miles over.

CORINTHIA, the daughter of Dibutas, a native of Sicyon or Corinth, and daughter of a potter there. She is said to have sketched tb« profile of her

sleeping lover on a wall, by lamp- light, and afterwards to have made a model of clay. This incident, said to be the origin of the arts of design among the Greeks, is thus beauti- fully alluded to by Montgomery : —

Trembling with extacy of thought,

Behold the Grecian maid, Whom love's enchanting impulse taught

To trace a slumberer's shade. Sweet ar« the thefts of love ; — she stole

His image while he lay, Kindled the shadow to a soul,

And breathed that soul through clay.

Corinthia lived six or seven centuries before the Christian era.

CORI'NTHIAN, n. s. & adj. A native of C«- rinth; a licentious person. Relating to Corinth, or the licentious manners of Corintli. For the order, see ARCHITECTURE.

0 ye Corinthians, our mouth is open to you, our heart is enlarged. 2 Cor. vi. 11.

1 am so proud, Jack, like Falstaff, but a Corinthian, a lad of metal.

Shakspeare. King Henry IV. Part 1.

The sage and rheumatick old prelatess, with all her young Corinthian laity. Milton.

Behind these figures are large columns of the Co- rinthian order, adorned with fruits and flowers.

Dry den.

CORIO (Bernardine), an Italian historian, of an illustrious family, born at Milan, in 14GO. He was secretary of state to that duchy ; and the D. Lewis Sforza appointed him to write the history of Milan. He died in 1500. The best edition of his history is that of 1603, in folin. It is printed in Italian, and is very scarce.

CORIOLANUS (Caius Marcius), a famous Roman general; who took Corioli, whence his surname : but who, at last, was banished from Rome by the tribune Decius. He went to the Volsci, and persuading them to take up arms against the Romans, they encamped within four miles of the city. He would not listen to pro- posals of peace till he was prevailed upon by his wife Veturia, and his mother V'olumnia, who were followed by all the

Roman ladies in tears.

CORK.

479

He was put to death by the Volsci as a traitor that had made them quit their conquest; upon which the Roman ladies went into mourning; and in the same place where his blood was shed a temple was consecrated to Feminine Virtue. See ROME.

CORIS, in botany, a genus of the monogynia order and pentandria class of plants : COR. rao- nopetalous and irregular: CAL. prickly: CAPS. quinquevalved ; superior. There is only one species, viz. the C. Monspeliensis, or blue mari- time coris of Montpelier. There are two va- rieties, one with a red, and the other with a white flower; bat these are only accidental, and arise from the same seeds. They grow wild in most places in the south of France ; they seldom exceed six inches high, and spread near the sur- face of the ground like heath ; in June, when full of flowers, they make a very pretty appear- ance. They may be propagated by sowing their seeds in a bed of fresh earth, and afterwards re- moving the young plants, some into pots, and others into a warm border.

CORISPERMUM, tickseed, a genus of the digynia order, and monandria class of plants ; natural order twelfth, holoraceae : CAL. none : PET. two : SEED one, oval and naked. There are two species; neither of them remarkable for beauty.

CORITANI, an ancient people of Britain, who possessed the inland parts now included in the counties of Northampton, Leicester, Rutland, Lincoln, Nottingham, and Derby.

CORI'VAL, -\ Lat. rivalis.

CORRI'VAL, v. a., n. s. & adj. f to assume an

CORRI'VALEY, n. s. £ equality with;

CORIU'VALSHIP, n.s. J to endeavour to

attain the same object. A competitor; that which rivals or competes with.

Where's then the saucy boat, Whose weak untimbered sides but even now Corivalled greatness.

Shakspeare. Troilus and Cresiida. And many more corrimils, and dear men

Of estimation and command in arms.

Id. 1 Henry IV.

Not thinking, perhaps, that this would be to erect a power equal and corrival with that of God.

Bishop Fleetwood.

CORK, v. a. & 7i. s."} Span, corcho ; Dut.

CO'RKY, adj. >korch ; Ger. kork ; Lat.

CO'RKING PIN. 3 cortex. The tree de- scribed in the next article ; a stopper for a bottle made from the exterior bark of the cork-tree. To stop with, or elevate upon, cork. Consisting of, or resembling, cork. A corking-pin is a pin of the largest size ; so called, perhaps, from its being used for the purpose of fastening up any thing securely.

I pr'ythee take the cork out of thy mouth, that I may drink thy tidings. Shakspeare. As You Like It.

Bind fast his corky arms. Id. King Lear.

And tread on corked stilts a prisoner's pace,

And make their napkin for their spitting place.

ˆHall. Be sure, nay very sure, thy cork be good 5

Then future ages shall of Peggy tell,

That nymph that brewed and bottled ale so well.

King.

Nor stop, for one bad cork, his bugler's pay.

Pope.

When you put a clean pillow-case on your lady's pillow, be sure to fasten it well with three curkiny- pms, that it may not fall off in the night.

Swift's Directions to the Chambermaid.

The cork tree grows near the Pyrenean hills, and in several parts of Italy, and the north of New Eng- land. Mortimer.

So the cold rill from Ciutra's sleepy sides, Headlong, abrupt, in barren channels glide ; Round the rent cliffs the bark-bound Suber spreads, And lazy monks recline on corky beds. Darwin,*

Young Juan wandered by the glassy hrooks, Thinking unutterable things ; ho threw

Himself at length within the leafy nooks

Where the wild branch of the cork forest grew. Byron. Don Juan.

CORK, the largest county in Ireland, is situated in the province of Munster, and has in it a city of the same name, with the united sees of Cork and Ross. It is bounded on the north by Li- merick, on the west by Kerry, on the south by the Atlantic Ocean, and on the east by Water- ford, Its greatest length is 108, and its average breadth fifty-six, English miles. It contains 269 parishes, twenty-two baronies, and three boroughs ; and returns seven members to parlia- ment. . Anciently the principality of the M'Car- ty's it was converted into a shire by king John, the first English lord of Ireland : and it abounds in military and ecclesiastical antiquities, as well as natural curiosities. The surface of the country is finely diversified ; in one place presenting the boldest pictures imaginable, as at Glengariff and Gougane Barra; in another, a continuous plain. The rivers are the Lee, Blackwater, Ouvain, Antreg, &c. The harbours are the deepest and best sheltered in Ireland. Within a compara- tively short period, this county has undergone considerable change in its magisterial or civil government, and also in statistical improvement. It has been divided into two ridings, east and west, and subjected to the judicial authority of two barristers ; an obvious advantage to the speedy administration of justice ; and its inac- cessible districts, which were many and wide- spread, have been brought within a few hours reach of the principal towns in the county. The road, for instance from Listowel to Cork, sixty- seven English miles, through the beautiful and romantic scenery of the Bogra mountains? saves thirty-six miles, passes through a region hitherto inaccessible, and reaches a summit level of 900 feet, by an ascent of only one foot in sixty. The road from Newmarket to Charleville, fourteen English miles, also through a hitherto unexplored country, is also a great improvement, as is the projected road from Tralee to Cork, by Castle Island, to fall in with the Bogra road at Bantyre Bridge, being only sixty-one miles, while the present road measures seventy-eight English miles.

The mineral productions of Cork are con- siderable; amongst the valuable districts of this class is Dromagh, the property of N. P. Leader, Esq., a coal-field of great extent. Here culm and coal are raised by 360 laborers, supporting

thereby aoout 1000 souls : 20,000 horse loads are sold annually at the pit mouth. This coal is chiefly used for agricultural purposes, and upwards of 40,000 acres of land, in that neigh- bourhood, derive the advantage of its vicinity. Potters' clay abounds here, and good coarse pot- tery is now manufactured, and finds a speedy sale at Mallow and elsewhere. In 1826 bolting mills were erected, and a distillery is building contiguous to the colleries. Dromagh is distant from Cork thirty miles ; from Mallow twelve ; from Killaraey twenty-five ; from Tralee thirty- five, and liei on the direct road from Cork to Tralee. The mines of Cappagh, six miles south- west of Skibborean, have been leased by lord Audley to the Mining Company of Ireland, and have been found singularly productive ; the dres- sed ore shipped from Roaring- Water Bay con- tiguous to the mine, having brought a higher price at Swansea, than the copper ore of Corn- wall. A second copper mine, of even greater promise, lies four miles west of Beerhaven, from this mine (in 1826) £10,000 worth of ore was exported to Swansea. There is a slate quarry at Glandore, now at full work, leased to the Im- perial Mining Company. The pier erected in this little harbour by the Fishery Board, has proved peculiarly advantageous, as an export quay for the Glandore slates. The principal coast improvements are the piers erected by the Fishery Board, the most useful of which are those at Castlehaven, Clonakilty, and Dunwor- ley. At the first of these stations a breakwater and pier have been constructed, affording shelter and safe lying, in fourteen feet depth at low water. There is nine feet of water at Clonakilty pier, at a place called Ring, and sometimes Faugheen; the safest approach is between the east side of Inirdoney and Arundel Castle. At Dunworley Cove, besides a pier, there is also an inner basin, formed from a noxious morass, where vessels may now float in safety at high water, and lie securely on the strand at ebb, when they are also conveniently disposed for repair- ing. The ebb current from this basin forms the channel of communication between it and the Cove.

CORK, a city of Ireland, the second in that country, and the capital of the county of this name, stands partly on an island in the river Lee, and is said to be coeval with the foundation of its cathedral (St. Finhar's), i. e. in the sixth century. The ancient city stood entirely on the island ; was approached by two bridges, one at either end, and was intersected by canals, or rather branches of the river, somewhat resemb- ling a Dutch town. These canals are now filled up, the town extends along the opposite banks : there are Parliament, Patrick's, New, and Clarke's bridges, thrown across the Lee, and a grant has lately been made for the erection of an additional bridge, having one arch of cast metal, turning on a swivel, so as

not to impede the navigation. Wide and handsome streets are now erected, where formerly were unwholesome marshes. The county of the city of Cork con- tains twenty-two parishes and parts. It is under the surveillance of a corporation,whose charter was

granted by Charles Land consisting of a mayor, two sheriffs, a recorder, several aldermen, and an unlimited number of freemen. Cork abounds in charitable foundations, hospitals, poor-schools and literary associations. There are 4000 chil- dren in the city deriving the benefit of educa- tion at schools supported by voluntary subscrip- tion solely. Several of the public buildings are of a respectable class : the commercial build- ings, and Chamber of Commerce in particular. The Exchange, the design of an Italian artist, was a handsome elevation, but it is miserably situated. The appearance of the cathedral is venerable, as well as that of the deanery house adjacent to it. The new city gaol, built in the castellated style, is probably the most architectural edifice in Cork. The custom-house, a massive structure, stands on a piece of ground formerly called Lapp's Island, but now united to the main land, as well as Grafton Law, the spot on which the unfortunate duke of Grafton fell in 1690, which has long since lost its insular ap- pellation. There are, also, a spacious market-house, built in the Tuscan order ; a linen hall ; a new market, under cover ; an extensive bar- rack capable of accommodating 4000 infantry, and 1000 cavalry; several very elegant churches, Roman Catholic chapels, and religious meeting- houses for all classes of Christians. The most valuable, perhaps, of the public associations, is the Royal Cork Institution, incorporated in 1807, for scientific and literary objects, having a bo- tanic garden, mineralogical collection, models of agricultural implements, &c. &c. Though the cessation of hostilities, upon the deposition of Napoleon, checked for a while the very rapid progress of city improvement, yet that interrup- tion has been followed by a slow, and perhaps more wise, system of melioration in all civic and statistic matters. The erection of the new cus- tom-house, in front of which vessels of 200 tons burden can discharge. The facing of the quay- wall from the custom-house to parliament bridge ; the deepening of the river and levelling the bottom, so as to permit colliers of 150 tons burden to reach Parliament Bridge, and lie there at low water without liability to damage; and, lastly, the continuation of the magnificent quay- wall on the north side of the river, for a distance of one mile and a half, faced with hewn stone, are improvements, the result of good taste in the first instance ; but, secondly, the consequence of an union of the most creditable description between two useful public bodies, the Harbour and Wide-street Commissioners, for the best in- terests of this promising city. Though the trade of Cork has diminished, it is still considerable ; and owing to the spirited conduct of its inhabi- tants in river improvements, must of necessity increase. The chief trade here is victualling, which is still

carried on with vigor and with ad- vantage. The principal manufactures are glass, paper, glue, and sail-cloth. The West India fleets generally put into Cove for sea stores, and the British navy was once victualled from this place. See COVE.

CORK is the bark of a species of quercus. See QUERCUS. To take off the bark an incision is

made from the top to the bottom of the tree, and at each extremity another round the tree, perpendicular to the. first. When stripped from the tree, which does not, therefore, die, the bark is piled up in a pond or ditch, and loaded with heavy stones to flatten it, and reduce it into tables : hence it is taken to be dried ; and, when sufficiently dry, put in bales for carriage. If care be not taken to strip the bark, it splits and peels off of itself; being pushed up by another bark formed underneath. The bark of cork, as well as the acorn, is of some use in medicine; both being reputed astringents, after being burnt and powdered when used externally ; but the chief use of the former is, to put in shoes, slip- pers, &c. and to stop bottles. The Spaniards burn it to make that kind of light black we call Spanish-black, used by painters. Cups made of cork, are said by some to be good for hectical persons to drink out of. The Egyptians made coffins of cork ; which, being lined with a resi- nous composition, preserved dead bodies un- corrupted. The Spaniards line stone walls with it, which not only renders them very warm, but corrects the moisture of the air.

CORK, FOSSIL, a name given to a kind 01 stone. It seems to be a species of amianthus, consisting of flexible fibres loosely interwoven, and somewhat resembling vegetable cork. It is the lightest of all stones ; by fire it is fusible and forms a black glass. It possesses the general qualities of AMIANTHUS. See that article.

CORK JACKET, or CORK WAISTCOAT, an in- vention of one Mr. Dubourg, a gentleman very fond of swimming, but subject to the cramp, which led him to consider of some method by which he might enjoy his favourite diversion with safety. The waistcoat is composed of four pieces of cork, two for the breast and two for the back : each pretty near, in length and breadth, to the quarters of a waistcoat without flaps ; the whole is covered with coarse canvas, with two holes to put the arms through : there is a space left between the two back pieces, and the same between each

back and breast piece, that they may sit the easier to the body. Thus the waist- coat is only open before, and may be fastened on the wearer with strings, or, if it should be thought more secure, with buckles and leather straps. It does not weigh above twelve ounces, and may be made up for about five or six shillings. Mr. Dubourg tried his waistcoat in the Thames, and found that it not only supported him on the water, but that two men could not sink him, though they used their utmost efforts for that purpose. This invention is calculated to be of vast service to those who, for the sake of health, bathe in the sea ; and even the most delicate and timorous young lady might, by the help of one of these jackets, venture into a rough sea. Dr. Wilkinson of Woodfordhas improved this jacket, and rendered it much more accommodating to the motions of the body in swimming, by cutting the cork into small pieces, and quilting them between two waistcoats of canvas. A cork spencer has lately been invented, to save from drowning in cases of shipwreck ; which consists of a belt, containing refuse pieces of cork, or old bottle-corks enclosed in any kind of light VOL. VI

stuff, and fastened round the body with tapes. See AIR-JACKET,

CORMAC M'CULINAN, king and archbishop of Cashel, in Ireland, was a prince greatly cele- brated by the Irish historians for his learning, piety, and valor. He wrote, in his native lan- guage, a history rjf Ireland, commonly called the Psalter rff Cushel, which is now lost, but con- tained the most authentic account we had of the annals of the country to that period, about A. D.

900.

CORMANLINE, a native town on the Gold Coast of Africa, containing the Dutch fort of Am- sterdam. This was originally built by the En- glish ; but as early as 1663 it was taken by admiral De Ruyter, and has ever since remained a Dutch possession. It is said to be airy and salubrious, but it has suffered dreadfully in the late wars with the Ashantees. It is three miles east of Anamaboa.

COR-MASS, a ci-devant grand procession annually made at Dunkirk, on St. John's day, June 24th ; and said to have been established under king Charles V. After the celebration of high mass, the procession, consisting of the tradesmen of the town, began. Each person had a burning wax taper in his hand ; and, after each company came a pageant, followed by the patron saint, usually of solid silver richly wrought and adorned. The companies were followed by mu- sic ; next the friars in the habits of their order, the secular priests, and then the abbot magnifi- cently adorned, and preceded by the host. Machines of various fantastical forms and devices, and as variously accoutred, formed a part of the show on this occasion.

COR-MEILLE, a noted plant common in the Highlands of Scotland. Its roots when dried are the support of the Highlanders in long journeys, amidst the barren hills, and a small quantity, like the alimentary powders, will for a long time repel the attacks of hunger. Infused in liquor it is an agreeable beverage, and like the nepenthe of the Greeks, exhilarates the mind. From the similitude of sound in the name, it seems to be the same with chara, the root discovered by the soldiers of Caesar at Dyrrhachium, which steeped in milk was such a relief to the famished army. Perhaps it may have been the Caledonian food described by Dio, of which the quantity of a bean would prevent both hunger and thirst and which, he says, they had ready for all occa sions.

CO'RMORANT, n. s. Fr. cormoran ; either from Lat. corvus marinus, or corvus vorans. A bird that preys on fish ; a glutton ; one who is rapacious.

The hote cormorant, full of glutonie.

Chaucer. The Assembly of Fovlet. To which nor fish nor fowle di d once approch, But yelling meawes , with sea guiles hoars and bace, And cormoyrawKts, with birds of ravenous race.

Spenser. Faerie Queene

Let fame, that all hunt after in their lives, Live registered upon our brazen tombs ; When, spite of cormorant devouring time, The' endeavour of this present breath may buy That honour which shall 'bate his scythe's keen edge.

Shakspearc. 2 I

Those called birds of prey, as the eagle, hawk, puttock, and cormorant. Peachum on Drawing.

Thence up he flew, and on the tree of life Sat like a cormorant. Milton's Paradise Lost.

Not far from thence is seen a lake, the haunt Of coots, and of the fishing cormorant.

Dryden't Fables.

CORMORANT. See PELICANUS.

CORN, v. a. & n.s.) Maes. Goth, kaurno;

CORNY, ad;'. $ Dan. Swed. Ger. korn ;

Ang.Sax. corn; Dut. koorn. Martinius and Skinner consider the Lat. granum to be the pa rent word. Junius contends that it is derived from the Greek, Kopew, icoptvvvp, sat io, saturo, to satisfy or fill. Much may be said on both sides. Corn is the seeds which grow in ears, as wheat, barley, &c. ; unreaped grain ; unthreshed grain ; any minute particle. To corn is to salt meat; to form into small grains. Corny signifies pro- ducing grain or corn ; containing, or made from, com.

Thou shalt not muzzle the ox when he treadeth out the corn. Deut xxv. 4.

Thou shalt come to thy grave in a full age, like as a shock «f corn cometh in his season. Job v. 26.

Except a corn ot wheat fall into the ground and die, it abideth alone. . John xiii. 25.

Wei coude he stelen corns und tollen thries ; And yet he had a thomb of gold parde, A white cote and a blew hode wered he.

Chaucer. Prol. to Cant. Tales. He wolde sowen som difficultee, Or springen cockle in our clene corne.

Id. Cant. Tales.

By corpus Domini but I have triacle, Or elles a draught of moist and corny ale, Or but I here anone a mery tale, Myn herte is lost for pitce of this maid. Id.

*The people cry you mocked them ; and, of late, When corn was < *iven them gratis, you repined.*

Shahspeare.

All the idle weeds that grow In our sustaining corn. Id. King Lear.

Landing his men, he burnt the corn all thereabouts, which was now almost ripe.

Knolles' History of the Turks. They lodge in habitations not their own, By their high crops and corny gizzards known.

Dryden.

Tell me why the ant,

'Midst summer's plenty, thinks of winter's want j By constant journeys careful to prepare Her stores, and bringing home the corny ear. Prior.

Still a murmur runs Along the soft inclining fields of corn.

Thornton. Autumn.

Through rustling corn the hare astonished springs ; Slow tolls the village-clock the drowsy hour ; The partridge bursts away on whirring wings ; Deep mourns the turtle in sequestered bower, And shrill lark carols clear from her aerial tower

Beattie. Come let us stray our gladsome way,

And view the charms of nature ; The rustling corn, the fruited thorn,

And every happy creature. Burns.

And hills all rich with blossomed trees, And fields which promise corn and wine, And scattered cities crowning these, Whose far white walls along them shine.

Byron. Childe Harold,

To strive too with our fate were such a strife

As if the corn-sheaf should oppose the sickle. Men are the sport of circumstances, when The circumstances seem the sport of men. Byron, In fight or chace accomplished to prevail, Her foot outstripped the pinions of the gale : Light o'er the standing corn could urge its speed, Nor in its flying passage bend the reed.

Symmons' Mneis.

CORN, INDIAN, or maize. See ZEA. CORN, EARLIEST ACCOUNTS OF THE CULTURE OF. Authors differ much with regard to the first discovery and culture of corn. A very gene- ral opinion is, that in the first ages men lived on the spontaneous fruits of the earth; as acorns, and the nut or mast produced by the beech ; which, they say, took its name, fagus, from the Greek 0ayw, to eat. It is added, that they had neither the use of corn nor the art of preparing it. Ceres has the credit of being the first who taught the use of corn ; others give that honor to Triptole- mus ; others share it between the two, making Ceres the first discoverer, and Triptolemus the

first cultivator, of corn. Many of the learned, however, maintain that it was in Egypt the art of cultivating corn first began ; and it is certain there was corn in Egypt and the East long before the time of Ceres.

CORN, METHODS OF PRESERVING. Corn is very different from fruits, with respect to the manner of its preservation. It is capable of being preserved in public granaries, for pressing occa- sions, and of being kept for several centuries. — A short time after the siege of Metz, under Henry II. of France, in 1578, the duke of Espernon laid up vast stores of corn in the citadel, which was preserved in good plight to the year 1 707, when the French king and his retinue, passing that way, eat bread baked thereof. The chief thing that contributes to the preservation of com is, a crust which forms on its surface, by the germi- nation of the grain next underneath, to the thick- ness of an inch and a half. On that at Metz people walked without its giving way in the least. At Sedan was a granary cut in a rock, wherein a heap of corn was preserved 110 years : it was covered with a crust a foot thick. For the pre- servation of corn, the first method is to let it re- main in the spike; the only expedient for con- veying it to the islands and provinces of America. The inhabitants of those countries save it in the ear, and raise it to maturity by that precaution : but this method of preserving it is attended with several inconveniencies among us : corn is apt to rot or sprout, if the least moisture is in the heap ; the rats likewise infest it, and our want of straw also obliges us to separate the grain from the ear. The second is to turn out and winnow it frequently ; or to pour it through a trough or mill-hopper, from one floor to another. Being thus moved and aired every fifteen days, for the first six months, it will require less labor for the future, if lodged in a dry place : but if, through neglect, mites should be allowed to slide into the heap, they will soon reduce the corn to a heap of dust. This must be avoided by moving the corn anew, and rubbing the places adjacent with oils and herbs, whose strong odor may chase them away ; for which garlic and dwarf elder are

very effectual : they may likewise be exposed to the open sun, which immediately kills them. When the corn has been preserved from all im- purities for the space of two years, and has ex- haled all its fires, it may be kept for fifty or even 100 years, by lodging it in pits covered with strong planks, closely joined together : but the safer way is to cover the heap with quicklime, which should be dissolved by sprinkling it over with a small quantity of water ; this causes the grains to shoot to the depth of two or three fin- gers, and encloses them with an incrustation, as above mentnned, through which neither air nor insects can penetrate.

CORN, in farriery. See FARRIERY.

CORN-CHANDLER, n.s. From corn and chand- ler. One that retails corn.

CORN-FIELD, n. $. A field where corn is grow- ing- It was a lover and his lass, That o'er the green corn-field did pass.

Sluihspeare. As You Like It.

You may soon enjoy the gallant sights of armies, encampments, and standards waving over your bro- ther's corn-fields. Pope.

CORN-FLAG, n. s. From corn and flag. A

plant. Miller enumerates eleven species of this plant, some with red flowers, and some with white. See GLADIOLUS.

CORN-FLOOR, n. s. The floor where corn is stored.

Thou hast loved a reward upon every corn-floor.

Hot. ix. 1.

CORN-FLOWER, n. s. From corn and flower. See CENTAUREA.

There be certain corn-flowers, which come seldom or never in other places, unless they be set, but only amongst corn ; as the blue-bottle, a kind of yellow marygold, wild poppy, and furmitory.

Bacon's Natural History,

Corn-flowers are of many sorts : some of them flower in June and July, and others in August. The seeds should be sown in March : they require a good soil.

Mortimer.

CORN-HEAP. Store of corn.

CORN-LAND, n. s. From corn and land. Land appropriated to the production of grain.

Pastures and meadows are of such advantage to husbandry, that many prefer them to corn lands.

Mortimer's Husbandry.

CORN LAWS. This is a topic which some of our readers, we apprehend, may be disposed to consider as wholly speculative ; while others will imagine that the practical details connected with it can only be interesting to a small portion of the community. We would not attempt to dis- turb these conclusions, were not the amplest proof to the contrary pressing upon us. In one sense, the laws and the trade in corn involve speculative questions enough, no doubt; that is, they have become respectively, and in the different spheres of Parliament and Mark Lane, the spe- culations of interested law-makers and law- breakers, in the price of every Englishman's loaf, and, we might add, of every laboring man's pint of beer. For while the state of the wheat market determines the former, that of the barley market is, in its own peculiar way, the regulator of the latter. But this topic, for these very reasons, is, to the furthest possible degree, re- moved from being a mere abstract question.

Nor are the agriculturists, wl ether landlords or tenants, the only parties interested in its de- tails. Corn laws are designed to make corn dear ; a large portion, the major part, of the community, we contend, are always interested in having corn cheap : it becomes exceedingly im- portant, therefore, to this part of the community, to enquire why it is thought necessary to uphold a system that is meant to secure its general dearness; and which, in aiming at a price that shall always be relatively higher than an equally good article can be procured for abroad, is princi- pally felt in producing a perpetual fluctuation of price, that perplexes all the calculations of busi- ness, and disorganises every relation of society con- nected with the production or sale of that article.

The community at large, we are happy to be-

lieve, begin to feel the importance of this plain view of facts. The manufacturer, the tradesman, the merchant, and the banker, unite with many re- spectable agriculturists, both tenants and landlords, in calling for a full and final examination of the question. It is expected to be fully examined in the ensuing session of parliament, and the public are highly indebted to his majesty's ministers for the manly method of their proceedure in prepa- ration for the pending enquiry. We allude par- ticularly to the measure adopted in the close of last year of employing Mr. Jacob on a mission to the continent to obtain accurate information as to the present state and resources of the corn coun- tries of Europe, and the well-timed appearance of his Report on Foreign Corn and Agriculture. This is proceeding with the candour and confi- dence of a good cause; and if the public do not sufficiently watch over and secure their own in- terests in the issue, it cannot be from information being withheld from them by government in this instance.

Assisted by this important document, and the valuable labors of many predecessors, we shall offer a few observations in the present paper, on the origin and history of our corn laws ; on the probable consequences of their entire repeal ; and on that practical measure which may at once and for a time secure those interests which would be effected by an entire repeal of them.

The landlords having been the legislators, our corn laws exhibit three several efforts on their part to obtain and maintain high rents. For, as it has been well and plainly said : —

‘ Whatever raises the average price of corn, raises rent. A rise in the price of corn must evidently redound to the benefit either of the far- mer or the landlord. But the farmer is effectu-

ly prevented, by the competition of other capitalists, from obtaining more than the ordinary profits of stock. The benefit, therefore, of the increase of price, can belong to nobody but the landlord. Or, more shortly, rent is all that portion of the produce of the soil which remains after replacing the capital expended, together with the ordinary profit : and this surplus must ob- viously be greater when corn is dear, the quantity of corn being the same, than when it is cheap.’

The three efforts of oui legislators alluded to are those of encouraging and rewarding exporta- tion; of discouraging and even forbidding all trade in corn; and of prohibiting its importa- tion ; — measures equally enlightened, and equally efficacious, in producing immense public evils, without even any considerable private good. By an act of the 14th Henry VI. exportation was per- mitted without license when the price of wheat did not exceed 6s. 8d. per quarter, and barley 3s. 4d. ; the pound sterling of silver being then, according to Dr. Kelly, worth about £l. 18s. 9d. of our present money, and therefore, these prices about equal to 12s. lid and6s.5|

In the enlightened reign of Edward IV. occurs the first of our statutes against importation, which was prohibited whenever the price of corn in England should be under the exportation price. The political agitations of these periods pre- vented the rigid execution of those enactments, but here is the nucleus of the system against which the whole power of administration, and the interests and common sense of nine-tenths of the people, have to contend in the reign of George IV. In the 5th and 6th of

Edward VI. cap. 14, it was enacted, That whoever should buy any corn or grain, with intent to sell it again, should be reputed an unlawful engrosser, and should, for the first fault, suffer two months imprison- ment, and forfeit the value of the corn ; for the second, suffer six months imprisonment and for- feit double the value ; and for the third, be set in the pillory, suffer imprisonment during the king's pleasure, and forfeit all his goods and chattels. By the same law no person could transport corn from ore part to another, without a license, aseertaining his qualifications as a man of probity and fair dealing. Neither could corn be purchased to be laid up in granaries for home sale, until the quarter of wheat was at or under 6s. Qd. and oats at 2s. money of the time. The authority of three justices of the peace was ne- cessary in order to grant a license. By 5 Eliz. cap. 12, no person might buy corn to sell again without license from the justices, at the quarter sessions. ,

'Our ancestors seem to have imagined,' says Dr. Smith, ' that the people would buy their corn cheaper of the farmer than of the corn mer- chant, who, they were afraid, would require, over and above the price which he paid to the farmer, an exorbitant profit to himself. They endea- voured, therefore, to annihilate his trade altoge- ther. They even endeavoured to hinder as much as possible any middle man of any kind from coming in between the grower and the consumer; and this was the meaning of the many restraints which they imposed upon the trade of those whom they called kidders or carriers of com.'

The periods of the civil wars and the early part of the reign of Charles II. were distinguished by high prices of corn, and great fluctuations in the price. By several successive statutes, therefore, an intermediate and regulated trade in corn was allowed, as when the price of wheat should not exceed 20s., 24s., 32s. and 40s. per quarter. Un- til by the 15th Car. II. cap. 7, the engrossing or buying of corn in order to sell it again, as long as the price of wheat did not exceed 48s. per quarter, and that of other grain in proportion, was declared lawful to all persons not being forestallers, that is, not selling again in the same market within three months. ' All the freedom which the trade of the inland corn dealer has ever yet enjoyed,' adds the author of the Wealth of Nations, ' was bestowed upon it by this statute.'

By the 12th of Charles II. cap. 4, the expor- tation of corn was permitted whenever the price of wheat did not exceed 40s. the quarter, and that of other grain in proportion. BylhelSth of the same prince, this liberty was extended till the price of wheat exceeded 48s. the quarter ; and by the 22nd to all higher prices. A poundage, indeed, was to be paid to the king upon such exportation. But all grain was rated so low in the book of rates, that this poundage amounted only upon wheat to a shilling, upon oats to

four pence, and upon all other grain .o six-pence tlie quarter. By the 1st of William and Mary, the act which established the bounty, this small duty was virtually taken off whenever the price of wheat did not exceed 48s. the quarter ; and by the llth and 12th of Will. III. cap. 20, it was expressly taken off at all higher prices.

The BOUNTY act alluded to remained in force, in its substance and spirit, to the fifty-fourth year of the reign of George III. The bounty payable under it at first amounted to 5s. for every quarter of wheat exported, while the price continued at or below 48s. ; 2s. 6d. for every quarter of bar- ley or malt, while their price did not exceed 24s ; and 3s. 6d. for every quarter of rye, when the price did not exceed 32s. It was importantly modified and enforced, however, by the llth and 12th Will. III. cap. 20.

A further important modification of this act took place in the year 1773. The old bounty of 5s. upon the exportation of wheat was to cease by the statute now introduced, so soon as the price rose to 44s. the quarter, instead of 48s., the price at which it ceased before ; that of 2s. 6d . upon the exportation of barley ceased so soon as the price rose to 22s. instead of 24s., the price at which it ceased before ; and the bounties upon other grain in like manner. It is remark- able that at this time a bounty of 2s. per quarter was allowed on the exportation of oats, a species of grain that had never before been thus dis- tinguished.

The exportation of wheat was prohibited by this statute so soon as the price rose to 44s. per quarter ; that of rye so soon as it rose to 28s. that of barley so soon as it rose to 22s. ; and that of oats so soon as they rose to 14s.

To trace the history of the bounty system to its close: By the statutes 31 Geo. III. cap. 30, and 33 Geo. III. cap. 65, bounties were granted on exportation at certain prices, and the exportation

prohibited at higher prices. The quantity of corn to be exported was also settled by these acts, and 34 Geo. III. cap. 71, and 53 Geo. III. cap. 38. The maritime counties of England were divided into districts, and the exportation as well ˆs importation of corn was to be regulated in Lon- don, Kent, Essex, and Sussex, by the prices at the Corn Exchange. The proprietors of this estab- lishment were to appoint an inspector of corn returns, to whom weekly returns were to be nade; and by whom, weekly accounts were to be transmitted of the average price to the re- ceiver of the

returns, and inserted in the London Gazette. The exportation in Scotland and other districts, was to be regulated by the prices at different appointed places, for which mayors, justices, &c. were to elect inspectors. By 44 Geo. III. cap. 100, and 45 Geo. III. cap. 86,, this most extraordinary mode of ascertaining the ave- rage price, to regulate the importation and expor- tation of corn to and from Great Britain, is further provided for ; and such average is to result from the prices in the twelve maritime districts of England and Wales.

By several subsequent acts made from time to time with a view to relieve the public against the scarcity or dearness of corn, and too numerous to particularise, the exportation and importation of corn and provisions are allowed to be prohi- bited and regulated by order of the king, or lord-lieutenant of Ireland, and council ; until, by 54 Geo. III. cap. 69, grain, meal, malt, and flour, from any part of the United Kingdom, are per- mitted to be exported without payment of duty or receiving of bounty, all duties and bounties on the exportation of corn being repealed ; and it is enacted, that it shall be lawful for any person to export at all times from any port of the United Kingdom, any corn, &c. without the payment of any duty of customs thereon.

The bounty system was clearly introduced, like all the other expedients of our legislators,with regard to corn, to raise its price, which had been gradually falling from 1649 to 1688, the period of its first adoption. In the preamble it is stated, 'that the exportation of corn and grain into foreign parts, when the price thereof is at a low rate in this kingdom, hath been a great ad- vantage, not only to the owners of land, but to the trade of this kingdom in general.'

' The bounty, by extending the foreign market, contributed, no doubt,' as the able writer on this subject in the Supplement to the Encyclopedia Britannica argues, ' materially to the extension of cultivation ; although, by forcing recourse to be had to worse soils in order to obtain the addi- tional supplies of corn, it must have raised prices. In the period from 1740 to 1751, the cheapest in the last century, the bounties paid on exporta- tion amounted in all to £1,515,000; and u 1749 alone they somewhat exceeded £324,000, The bounty, however, had by this time been much

too long in operation to permit the growers or exporters to realise any but the common and or- dinary profits of stock ; and, therefore, if it had never been granted, not only the quantity of corn exported, but the home price, which must hav« been regulated by the expense necessary to pro- duce the increased supply required hy the bounty on the poorest soils in cultivation, \vould have been reduced. But it is of importance to re- mark, how much this forced exportation must have raised the real price of corn.'

‘ That system of laws, therefore, which is con- nected with the establishment of the bounty,’ says Dr. Smith, ‘ seems to deserve no part of the praise which has been bestowed upon it. The improvement and prosperity of Great Britain, which has been so often ascribed to those laws, may very easily be accounted for by other causes. That security which the laws in Great Britain give to every man, that he shall enjoy the fruits of his own labor, is alone sufficient to make any country flourish, notwithstanding these and twenty other absurd regulations of commerce ; and this security was perfected by the Revolution, much about the same time that the bounty was esta- blished. The natural effort of every individual to better his own condition, when suffered to exert itself with freedom and security, is so powerful a principle, that it is alone, and with- out any assistance, not only capable of carrying on the society to wealth and prosperity, but of surmounting a hundred impertinent obstructions with which the folly of human laws too often incumbers its operations ; though the effect of these obstructions is always more or less either to encroach upon its freedom, or to diminish its security. In Great Britain industry is perfectly secure ; and, though it is far from being perfectly free, it is as free or freer than in any other part of Europe. Though the period of the greatest prosperity and improvement of Great Britain has been posterior to that system of laws which is connected with the bounty, we must not upon that account impute it to those laws. It has been posterior likewise to the national debt. But the national debt has most assuredly not been the cause of it.’ We cannot turn from the history of this one absurdity in our system to its close, without hoping that the other and remain- ing factitious stimulants to price may be destined soon to follow its fate.

To return to the progress of the laws respect • ing importation. By the 22d of Charles II. cap. 13, the importation of wheat, whenever the ˆrice in the home market did not exceed 53s. 4d. the quarter, was subjected to a duty of 16s. the quarter ; and to a duty of 85. whenever the price did not exceed £4. Prior to the act of the 13tb of the reign of Geo. If I, the fol- lowing were the duties payable upon the impor- tation of the different sorts of grain, as collected by Dr. Smith :—

Duties.

19s. lOd. after till 40s. 32s.

Grain.

Beans to 28s. per quarter.

Barley to 28s 19s. Wd.

Malt is prohibited by the annual Malt-tax bill.

Oats to 16s ‘ 5s. Wd. aftei

Peas to 40s. ” . . . • 16. Od. after Rye to 36s. ‘•’•. . . • 19s. lOd. till*

Wheat to 44s 53s. 9d. till

till £4. and after that about Is. 4d. Buck wheat to 32s. per quarter, to pay 16s.

40s. 53s.

Duties. Duties.

16s. 8d. then 12d- 16s. . 12d.

16s. 8d. then 12s. 17s. 8s.

These diflerent duties were imposed, partly by the 22d of Charles II. in place of the Old Sub- sidy, partly by the New Subsidy, by the One-third and Two-thirds Subsidy, and by the Subsidy,

1747.

‘By the memorable statute, 13th Geo. III. a new system, in some respects better than the ancient one, was established,’ says the great author we have just quoted : ‘ with all its imper- fections we may perhaps say of it what was said of the laws of Solon, that though not the best in itself, it is the best which the interests, prejudices, and temper of the time would admit of. It may perhaps in due time prepare the way for a better.’ By this statute the high duties upon importa- tion for home consumption were taken off so soon as the price of middling wheat rose to 48s. the quarter ; that of middling rye, peas or beans, to 32$.; that of barley to 24s.; and that of oats to 16s.; and instead of them a small duty was imposed of only sixpence upon the quarter of wheat, and upon that of other grain in proportion This statute also originated our warehousing system with regard to corn. It permitted, at the lowest prices, the importation of corn for expor- tation duty free; provided it was lodged in warehouses appointed in twenty-five of the. dif- ferent ports of Great Britain, under the joint- locks of the king and the importer.

By an act of the 31st Geo. III. the price, when importation could take place

from abroad, at the duty of six-pence, w;as raised to 54s., under 54s. and above 50s. a middle duty of 2s. 6d., and under 50s. a prohibitory duty of 24s. 3J. was to be paid. It was also enacted, that foreign wheat might be imported, stored under the king's locks, and again exported free of duty ; but, if sold for home consumption in the kingdom, it became liable to a warehouse duty of 2s. fid.

In 1804 a clamor was raised by the farmers respecting the low price of corn : it resulted in the act of the 44th of the late king, which actually imposed a. prohibitory duty of 24s. 3d. per quar- ter on all wheat imported when the home price was at or below 63s.; between 63s. and 66s. a middle duty of 2s. 6d.; and above 66s. the no- minal duty of 6d. The price at which bounty was allowed on exportation was extended to 40s. and importation without bounty to 54s. We are happy to record the miscarriage of a second bill of this kind in 1814, by which foreign wheat im- ported when the home price was at or under 64s. was to pay a duty of 24s. ; when at or under 65s. a duty of 23s. and so on, till the home price should reach 86s. when the duty was reduced to It., at which sum it became stationary. Corn imported irom Quebec, or from the other British

colonies in North America, was to pay only half the duties on other corn.

The Resolutions respecting the corn trade, sub- mitted to the house of commons, February 17th, 1815, by Mr. Robinson, the present chancellor of the exchequer, became, after much opposition, the basis of the 55th Geo. III. cap. 26. They were as follows : —

1st, That it is the opinion of this committee, that any sort of foreign corn, meal, or flour, which may by law be imported into the United King- dom, shall at all times be allowed to be brought to the United Kingdom, and to be warehoused there, without payment of any duty whatever.

2d, That such corn, meal, and flour, so ware- housed, may at all times be taken out of the warehouse, and be exported, without payment of any duty whatever.

3d, That such corn, meal, or flour, so ware- housed, may be taken out of the warehouse, and be entered for home consumption in the United Kingdom, without payment of any duty what- ever, whenever foreign corn, meal, or flour, of the same sort, shall be admissible into the United Kingdom for home consumption.

4th, That such foreign corn, meal, or flour, shall be permitted to be imported into the United Kingdom, for home consumption, without pay- ment of any duty, whenever the average prices of the several sorts of

British corn, made up and published in the manner now by law required shall be at or above the prices hereafter specified,

Wheat

Rye, peas, and beans

Barley, bere, or bigg

Oats

Per Quarter. 80s. 53s. 40s.

26s.

But that whenever the average prices of British corn shall, respectively, be below the prices above stated, no foreign corn, or meal, or flour, made from any of the respective sorts of foreign corn above enumerated, shall be allowed to be imported or taken out of warehouse for home consumption, nor shall any foreign flour be at any time importable into Ireland.

5th, That the average prices of the several sorts of British corn, by which the importation of foreign corn, meal, or flour, into the United Kingdom is to be regulated and governed, shall continue to be made up and published in the manner now required by law ; but that hereafter, if it shall at any time appear that the average prices of British corn, in the six weeks immediately succeeding the 15th February, 15th May, 15th August, and 15th November in each year,

shall have fallen below the prices at which foreign corn, meal, or flour, are by law allowed to be imported for home consumption, no such foreign corn, meal, or flour, shall be allowed to be imported into the United Kingdom, for home consumption, from any place between the rivers Eyder and Garonne, both inclusive, until a new average shall be made up and published in the London Gazette, for regulating the importation into the United Kingdom for the succeeding quarter.

6th, That such corn, meal, or flour, being the produce of any British colony or plantation in North America, as may now by law be imported into the United Kingdom, may hereafter be im- porfed for home consumption without payment of any duty, whenever the average prices of British corn, made up and published as by law required, shall be at or above the prices

hereafter speci- fied, viz.

Per Quarter.

Wheat 67s.

Rye, peas, and beans . . 44s.

Barley, here, or bigg . . 33s.

Oats 22s.

But that whenever the prices of British corn, re- spectively, shall be below the prices above spe- cified, corn, or meal, or flour, made from any of

the respective sorts of com above enumerated, the produce of any British colony or plantation in North America, shall no longer be allowed to be imported into the United Kingdom for home consumption.

7th, That such corn, meal, or flour, the pro- duce of any British colony or plantation in North America, as may now by law be imported into the United Kingdom, shall at all times be per- mitted to be brought there and warehoused, without payment of any duty whatever.

8th, That such corn, meal, or flour, so ware- housed, may at all times be taken out of the warehouse and exported, without payment of any duty whatever.

9th, That such corn, meal, or flour, so ware- housed, may be taken out of warehouse, and entered for home consumption in the United Kingdom, whenever corn, meal, or flour, of the like description, imported direct from any such colony or plantation, shall be admissible for home consumption, but not otherwise.

By the 3d of Geo. IV. cap. 60, the Act of 1815 was repealed, and importation was per- mittee1, when, for three months preceding the 15th of February, May, August, or November, the average prices exceeded the rates stated be- low, at the rates of duty affixed, viz.

When the average prices rate as below :

Description of Grain.

From British Possessions in America.

From all other parts.

Kate of Duty p. Quar.

Extra for the first 3 Months.

Wheat <

If at 59s. per Quarter, but under 67s.

If at 70s. but under 80s.

12s.

5s.

*Ditto **

67s 71s.

80s. . 85s.

5s.

5s.

If at or above 71s.

or if at or above 85s.

Is.

Beans, peas,

< 39s. . : . . . 44s.

44s. . 53s.

8s.

3s. 6d.

or rye

(44s 46s.

53s. . 55s.

3s. 6d.

3s. 6d.

If at or above 46s.

or if at or above 55s.

8d.

Barley,bere,

{ 30s. . . . . 33s.

33s. . 40s.

6s.

2s. 6d.

or bigg

(33s 35s. 6d.

40s. . 42s. 6d.

2s. 6d.

2s. 6d.

If at or above 35s.

or if at or above 42s. 6d.

6d.

Oats c

20s 22s. 6d.

25s. . 28s.

4s.

2s.

Ditto • i

22s. 6d. 24s.

26s. . 30s.

3s.

2s.

If at or above 24s.

or if at or above 30s.

4d.

Wheat Meal' or Flour, and Oatmeal, are admitted for Consumption,ˆ \yheatMeal C 3j- 3d. either from British Possessions in America or from any other part, j Qr plour at \ Is- 7d

ls.7d. Is. 7d

at the rates of duty hereunto affixed, when the average prices of 1 £ˆt 4d Wheat and Oats respectively correspond with the Rates abo'-e | Qatmeal pr. C4s'10rf specified. — Peas, when prohibited as corn, are admitted for seed BQJJ F | 2s. 2d or any other purpose at ... 7s. per Bushel. J ' C 6d

2s. 2(/. 2s. Zd.

By 7 Geo. IV. cap. 70. foreign corn, meal, and flour warehoused, were permitted to be taken out for home consumption, until the 16th day of August, 1826, at the following rates of duty, viz.

Wheat

Beans , peas or rye

Barley, bere, or bigg

Oats

Wheat meal or flour

1 2s. per quarter. 8s. ditto. 6s. ditto. 4s. ditto. 3s. 3d. per cwt.

7 Geo. IV. cap. 71, an Act to empower his Majesty to admit foreign corn for home con- sumption, under certain limitations, until the 1st of January, 1827, or for six week? after the com- mencement of the next ensuing session of par-

liament, if parliament shall not then be sitting. The following is the detail,

viz.

‘ Whereas it may become expedient, for a time to be limited, to admit a further quantity of corn or flour for home consumption, in addition vo the foreign corn, grain, meal or flour, which had been warehoused, or reported inwards to be warehoused, on or before the 2d day of May, 1826: Be it therefore enacted, by the King’s Most Excellent Majesty, by and with the advice and consent of the lords spiritual and temporal, and commons, in this present parliament as- sembled, and by the authority of the same, that at any time after the end of the present session of parliament, and until the 1st day of January.

1827, or for six weeks after the commencement of the then ensuing session of parliament, if par- liament shall not then be sitting, it shall be law- ful for his Majesty, by any order or orders to be by him issued, by and with the advice of his privy council, to admit to entry for home con- sumption any quantity of warehoused wheat or wheat flour not exceeding 500,000 quarters in the whole, on payment of such duty as shall be declared in any such order to be payable upon the entry of the same : provided always that no such order in council shall continue in force for more than two calender rrfonths from the day of the date thereof; ‘and provided, also, tfiat no such order shall extend to admit to entry any wheat or wheat flour which had been warehoused, or re- ported inwards to be warehoused, before the said second of May.

‘ Provided always, that the duty so to be de- clared in any such order shall not in any case exceed the duty enacted by 3 Geo. IV. cap. 60.’*

We should, perhaps, add that by the 12th Geo. III. c. 71, forestalling and regrating are declared to be offences at common law, and not done away by the repeal of the statute of 5 & 6 Ed. VI. c. 14, viz. Forestalling the market being considered an offence against public trade, and described by the said statute 5 fcc 6 Ed. VI. c. 14, as the buying or contracting for any cattle, mer- chandise, or victual coming in the way to the market, or dissuading persons from bringing their goods or provisions there; or persuading them to enhance the price when there : and regrating the buying of corn, or other dead victual, in any market ; and selling it again in the same market, or within four miles of the place. Such is a brief, but we believe pretty complete, view of the history and present state of our corn laws.

We look forward confidently to their entire repeal, that is, ultimately ; for we advocate a pre- paratory measure, as we shall proceed to show. Altho'igh we have not the happiness to believe all that Dr. Smith asserts, in support of the fol- lowing observation, there is great weight in it. 'The laws concerning corn may every where be compared to the laws concerning religion. The people feel themselves so much interested in what relates either to their subsistence in this life, or to their happiness in a life to come, that govern- ment must yield to their prejudices, and, in order to preserve the public tranquillity, establish that system which they approve of. It is upon this account, perhaps, that we so seldom find a reasonable system established with regard to either of those two capital objects.' The sup- position of an entire final repeal of the corn laws enables us best to meet the question, Who would be injured by it ?

1. Not the laborer, or any consumer. The former certainly would not be so suddenly or largely benefited by it, as some declaimers flatter him. The principal mischief of high prices being in his case, the perpetual disarrangement of his relations with his employer : the ' changing of his wages ten times,' (as the Scripture phrases it, no slight evil however), when the peaceable and natural state of those relations might not re- quire them to be changed at all. That is, he must receive, speaking generally, the same real wages

under all the changes of price : he must receirc that which shall support him ; or the lowest pos- sible wages for producing the corn, or commodity' on which he labors. His money-wages therefore rise and fall perpetually in value, when his real wages remain the same. But he would be be- nefited by not being deceived. The institutions of society, in the case of steady wages being af- forded him, would no longer invite him to settle in this spot and marry in that : we add, — to be extravagant (often through being misled) at one season, while they compel him to beg, to receive parish allowance, or starve at another. None of the consumers of corn would be injured by the repeal of all the corn laws ; all would Lt bene- fited : and who are not consumers ? The land- lord, as well as the farmer and laborer, belongs to this class ; the banker, the merchant, the trader, the manufacturer, and all the professions. A'arious opinions have been offered as to the practical effects of an unrestricted importation of corn, in respect to its price. We shall attend to them again before we close this paper : but as the only classes opposing this measure do it avowedly in fear of a low price of corn, and we are arguing in hope of it, we may take it at 8s. 10s. 12s., or any supposed permanent diminu- tion. Now the consumption of wheat in Great Britain only, in 1814, is estimated by Mr. Weston to have been 9,170,000 quarters; of barley, 6,335,000 : if an unrestricted importa- tion allowed us to receive the former at only 5s. a quarter cheaper, here would be a clear gain of £2,292,500 to the consumersˆ on wheat only, — to say nothing of

the difference in regard to barley, which would more rapidly and steadily affect the price of all malt liquors and spirits distilled from malt. But,

2. Would the farmer be injured by an entire repeal of the corn laws ? Not at all we contend. He is a capitalist. His interests are entirely confined to the amount of profit on his capital; and this is more uniformly increased by low wages and a quick return than from any other sources. As a consumer of corn he is positively and directly injured by its high price; and as a considerable employer of laborers still more. If, indeed, he is possessed of a lease, taken at a low rental, and continued through the period of high prices, he is so far benefited by that state of the markets ; but at its termination will he not be raised accordingly, — his own improvements valued to him, — or his removal be made expedient?

3. It is quite clear that the manufacturer and tradesman must suffer by high prices of corn in their own consumption of it, and in the higher rate of wages they must pay — consequently in diminished profits, with regard to their home trade, and in the cu. ..ing or extinguishing their power to meet foreign manufactures in the market. With these claims the banker and the wholesale merchant suffer in the same direct and almost incalculable way. There remains, therefore,

4. But the isolated class of landlords who could by any possibility be injured by a repeal of the statutes in question. They are estimated, according to some able modern writers, as owning one-fifth of the value of the produce of the land. That is, the entire rental they receive is equal to

about one-fifth of the value of the annual produce. Let us suppose it to be a fourth : the rest of the produce belongs to those who farm their own land, or to the actual cultivator of the soil. Here then are three-fourths of the produce of the whole country taxed at the rate of millions per annum, to ensure the greater rental of those interested in the remaining one-fourth! Or rather, the corn of the whole countiy, including that which belongs to them, is thus raised in price to the who le country.

It is of great moment here to consider the quantity of grain that would probably be import- ed into this country, in case of the restrictions of importation being removed, and its relative pro- portion to the consumption of the country. Dr. Colquhoun's estimate of that consumption in 1812 and 1814, concurs with the one we have before alluded to, i. e. Mr. Western's, and is as follows : —

I

Estimated

Species of Grain.

Average of the Population of Great Britain

Each person averaged.

Consumed by man.

Consumed by Animals.

Used in Beer and Spirits.

Used in various Manufac-

Total of Quarters.

and Ireland.

Quarters.

Quarters.

Quarters.

Quarters.

Quarters.

Wheat

9,000,000

1

9,000,000

170,000

9,170,000

Barley

1,500,000

H

1,875,000

210,000 14,250,000

6,335,000

Oats

4,500,000

»i

6,750,000

10,200,000

16,950,000

Rye

500,000

U

625,000

59,000

1,000 ! 63,3,000

Beans and i Peas 5

500,000

i

500,000

1,360,000

1,860,000

Totals

16,000,000

18,750,000

11,829,000

4,250,000

171,000

35,000,000

But here, as the Edinburgh "Reviewer, No. 88, has observed, is no allowance for seed ; and there can be no doubt that Dr. Colquhoun has under- rated the consumption of oats by at least one- half quarter in the consumption of each of the 4,500,000 individuals he supposes fed on them, or by 2,250,000 quarters. 'Adding, therefore, says this writer, to Dr. Colquhoun's estimate 5,500,000 of quarters for seed, and 2,250,000 for the deficiency of oats, it will bring it to 42,750,000 quarters. And, taking the increase of

population since 1813 into account, it does not appear to us that the annual average con

On the basis of this estimate, or assuming 12,000,000 quarters of wheat to be the annual consumption of the empire, that consumption by a very simple calculation may he thus exhibited, in regard to smaller portions of time : —

The Consumption of

Wheat.

Other Grain.

Total.

Quarters.

Quarters.

-

Quarters.

A year

12,000,000

36,000,000

48,000,000

Six months

6,000,000

18,000,000

24,000,000

Three months

3,000,000

9,000,000

12,000,000

Six weeks

1,500,000

4,500,000

6,000,000

One month

1,000,000

3,000,000

4,000,000

Two weeks

500,000

1,500,000

2,000,000

One week

250,000

750,000

1,000,000

One day

35,714

107,143

142,857

Let us now see what proportion the largest importations that have taken place, bear to this the total consumption of the empire. The total im- ports of wheat from all parts of the world, from the year 1800 to 1820, both inclusive, according to papers printed by order of the house of com- mons, amounted to only 12,577,029 quarters, giving an annual average" of 589,906 quarters.

These were . years of high, unprecedentedly high, prices : the whole commercial world, as the Reviewer observes, was ransacked with a view to the supply of the British market ; yet sucb is the magnitude of our consumption, that the whole supply obtained did not amount, according to the official statements, to one-thirteenth part of it, or that of one month ! This statement is of

itself, surely, as this writer triumphantly insists, ' sufficient to show that nothing can be more per- fectly futile than the fears and apprehensions entertained by the agriculturists with respect to the excessive importations of foreign corn that would take place, were our ports thrown open.'

We are very happy to see Sir James Graham's able tract on ' Corn and Currency in an Address to the Land Owners,' confirm much of our forgoing reasoning. 'Since the year 1815,' he says to this important body, ' when the prohi- bition of the importation of foreign corn, ex- cepting at a fixed price, was first substituted for a protecting duty, your constant and avowed object has been to raise the price of agricultural produce in this courtry greatly above the level

of the continental market; the obvious effect of this has also been to raise the rate of wages, and to reduce the rate of profits. By the rise of •wages the laborer gains nothing, because, when corn is dear, all the articles of

first necessity are also dear. Therefore, though his wages be in- creased, his real reward is no greater ; but by the diminution of profits, every class of pro- ductive industry is deeply injured. For on all hands it is allowed, that profits fall as wages rise, and the capital of a nation is but the accu- mulation of the profits of its inhabitants. Rents, however, are raised by high prices, which force inferior soils into cultivation ; since the lower the degree of fertility of the worst land in tillage, which yields no rent, but only reimburses the cultivator — the higher, on all land of superior quality, is the extra profit beyond the ordi- nary return of capital, when expended on the worst. This extra profit is rent; or, in the •words of Mr. Mill, ‘ rent increases in proportion as the effect of the capital successively bestowed upon land decreases.’ High prices, therefore, by increasing rents, benefit the landlords, but they confer no advantage on the laborer; they are an injury to the productive, and a tax on the unproductive, classes of the community.

‘ It may be doubted even whether the existing system of prohibition be so entire a benefit to the land owner himself, as he would seem to imagine ; for, in the variety of seasons, it is im- possible that the land cultivated within these islands can, year by year, from one harvest to another, produce a supply of corn exactly com- mensurate with the demand. At one time the prohibitory system is unjust to the grower ; at another, to the consumer. The grower is in- jured, when, after a harvest somewhat deficient, the ports are opened by a sudden rise of price, and a large accumulation of foreign corn is poured at once into this country ; bringing on the farmer the losses incident to over-production, and ultimately on the landlord a correspondent decline of rent. The consumer is injured, in the interval between the rise of price and the importation of foreign grain; he is even ex- posed to the horrors of famine ; for, in propor- tion as the demand for foreign grain is unusual, the supply in case of emergency must be pre- carious. Thus the alternate evils of redundancy and scarcity, unsteady prices and uncertain rents, are the inevitable consequences of the present system of our Corn Laws.’

But the peculiar burdens of the agriculturists have been often dwelt upon in this discussion, and should be, in fairness, estimated. They are said to consist of all the tithes, the far greater proportion of the poor rates, and the land tax. With regard to the first of these burdens it is a rental paid by the landlords, in point of fact, we presume to the state, rather than the church, for specific purposes ; that is, it is a part of the tenure on which all existing landholders have entered upon their property for the last ten or twelve centuries, and the method of its appro- priation by the state, however obnoxious and objectionable, on some grounds, renders the supposed burden no more a hardship on land- lords than other peculiarities of the respective tenures. Their deeds never conveyed to them

more than the value of nine-tenths of their es- tates, and other deeds or laws secure the other tenth to the state in trust for the church. But it seems that about a third part of the land in England and Wales, large tracts in Ireland and the whole of Scotland are tithe free. This im- post is therefore by no means universal.

To the land-tax, as an ancient impost, some portion of these remarks may also be applied. Estates have been acquired under it ; and all the existing relations of landlord and tenants (for it is in fact a tax on the rent) have grown up ; it was originally imposed, we believe in the year 1693, at the rate of one shilling in the pound, on an ascertained rental, and has since been increased to four shillings. We do not, however, perceive the force of a distinction drawn by the Edinburgh Reviewer between a tax on rent, as the excess, or value of the excess, of produce obtained from the superior lands of a country over that portion of their produce, or value that is required to defray the expenses of cultivation, and to yield the farmer his profit — and a tax that should be laid more directly on the pro- fits of the grower of corn. If the land-tax be imposed on the rents as an excess, so as to reduce that excess below the fair expectation of the land- lord from his land, is he not entitled to require the farmer or the community to bear it with him ? And, in point of fact, will he, and does he, not require the farmer to bear it with him in the shape of greater rent than he would otherwise pay? As far, therefore, as the land-tax is a species of impost on the agricultural interests, (whether falling on the landlord or tenant, which amounts to an excess of duties not laid on other raw produce, it is entitled we apprehend to consideration at the present time, and to com- pensation in the project of finally opening the ports. The poor-rates is the only other burden stated to fall peculiarly on this class of society ; and the Reviewer, to whom we have more than once adverted, admits it to fall at the rate of one per cent, ad valorem heavier on this than on other parts of the community. We should rate the land-tax as equal to an ad valorem duty of five per cent. more. At this stage of our enquiry, therefore, we admit a claim for protecting duties of seven per cent.

But one evil consequence affecting the whole community has been loudly predicted as likely to follow from the free importation of corn. The placing our subsistence at the mercy of foreigners in the case of war : an argument, as Mr. Mills has well said, which ‘ implies an ignorance, both of history and of principle ; of history, because, in point of fact, those countries which have de- pended the most upon foreign countries for their supply of corn, have enjoyed, beyond all other countries, the advantage of a steady and invariable market for grain ; of principle, because it follows unavoidably, if what in one country is a favorable is in other countries an unfavorable season, that nothing but obtaining a great part of its supply from various countries can save a nation from all the extensive and distressing

fluctuations which the variety of seasons is cal- culated to produce. Nor is the policy involved in this argument better than the political eco- nomy. It sacrifices a real good to escape the

chance of a chimerical evil ; an evil so much the less to be apprehended, that the country from which another derives its supply of corn is scarcely less dependent upon that other country for a vent to its produce, than the purchasing country is for its supply. It will not be pre- tended that a glut of corn in any country, from the loss of a great market, with that declension of price, that ruin of the farmers, and that de- pression of rents, which are its unavoidable con- sequences, is an immaterial evil.' 'Upon this subject however,' says Mr. Whitmore, ' we may proceed upon proof and experience, and need not, therefore, trust to general reasoning. It is well known that this country constantly imports nearly all the hemp it uses ; it is equally clear that, if deprived of it, the consequences to us, a maritime and commercial people, would be to the last degree injurious. If there be one article more than another, of which a hostile country would wish to deprive us, it would be this very article of hemp, which may fairly be considered the sinews of naval warfare. But were we ever deprived of it? Was there ever any serious ob struction, either to our naval armaments or to our commercial speculations, arising from a de- ficiency of this important article ? If not, it is chimerical to imagine that we shall ever be de- prived of the corn we are in the habit of importing.' We feel that we have bestowed sufficient atten- tion on the ordinary objections to a repeal of our present corn laws. Mr. Whitmore, one of the most sensible writers on this subject, concurs with Mr. Ricardo in recommending a duty of 10s. per quarter as a sufficient compensation for the excessive taxes on agriculture to which we have adverted. But the latter gentleman advised, as a measure of indulgence to the agriculturists, to give them time for gradually withdrawing their capital from the land, or that the duty should be originally fixed at 20s., and lowered Is. every year until reduced to 10s. This we must con- sider a plea for excessive indulgence. The Edinburgh Reviewer has expressed our opinion that an ad valorem duty of ten per cent would be sufficient, or, what is prefeiable, a fixed duty of five or six shillings per quarter. ; for an ad valorem duty, as it has been often remarked, in- creasing with the price, falls heaviest in dear years, when it is of the greatest consequence that it should be least felt ; and lightest in plentiful years, when the burden would be of little com- parative consequence. Sir James Graham asks in behalf of the land owners for a fixed protect- ing duty of 15s. per quarter ; and adds, with no slight appearance of justice, ' Since we must have a free trade in corn, let us have

also a free trade in money, and destroy that fatal connexion between the government and a single chartered bank, which facilitates the prodigality of the ministers, and invests an irresponsible body with the most delicate and important function of the state — the control over the circulating medium. Nor will it be wise to stop even at this point ; if the land owner is to give up his monopoly, for the public good, shall the East India Company and the West India proprietor be suffered, for one day, to retain the full enjoyment of their ex- clusive privileges? Shall the consumer be forced to pay an exorbitant price for his tea and for his*

sugar, that particular interests may be benefited ; and shall the nobility and gentry of these realms the owners of the native soil, alone be sacrificed ? On the contrary, let us adopt the sound princi- ples of free trade; but let us not limit their application to the staple produce of our land. Let us destroy the heavy duties on timber, which, at the expense of every man building a ship or a house in the mother country, are at best a paltry premium to our colonies; and since we are bent on establishing an open competition with the foreign manufacturer, let us at once reduce largely those taxes which affect both the com- merce and manufactures of our country. It is not the price of bread alone, which is a check to our industry ; on the contrary, I am well con- vinced that its effect is insignificant, compared with the weight of taxation to which I have here alluded ; and every notion of free trade is worse than visionary, unless accompanied by a large reduction of taxes and of duties. It is clear that the government itself so considers it; for, not- withstanding the boasted triumph of principles termed liberal, it has been deemed necessary, in the recent example of the silk trade, to protect the British manufacturer by a duty of thirty per cent on foreign silks imported, although he is subject to no direct tax on the raw material which he uses ; but his claim for compensation, in the shape of this large protecting duty, is founded and admitted distinctly on the ground that com- petition with the foreigner must be ruinous, while in this country taxes on consumption are enforced to an extent unknown abroad ; and oppressive, not to the manufacturer alone, but equally to the agriculturist and every member of the commu- nity. The experiment of the destruction of monopoly in one branch of industry, while it is suffered to continue with unabated force in others, is an outrage even of the semblance of justice ; it is a shifting of the burthen from the protected to the unprotected, from the strong to the weak ; and the landed interest is lost indeed, if it allow for one moment an experiment of this nature to be made on its property. The course, therefore, to be adopted by them, is to consent to a revision of the corn laws, to consent to free importatation with a moderate protecting duty, but to force also at the same time a revision of all other monopo- lies, and to carry a reduction of taxes to a very large amount.'

On the whole our views embrace, as we are happy to believe those of the

government and most modern writers do, not a great alteration, but a greater steadiness of price as the result of a free importation of corn. The details of Mr. Jacob's Report support this view of the subject in every page. He makes it evident that the resources of Poland, and the North of Europe, for furnishing any considerable supply of corn, have been vastly overrated. He found little of agricultural science and much less corn than he expected every where. The soil of the provinces near the sea is thin, sandy, and unproductive ; while the more distant fertile provinces of Poland incur an ex- pense, attending the carriage of their produce to Dantzic, amounting on an average to from 12s. to 18s. per quarter. Dantzic is clearly the principal foreign port from which we could obtain any regular supply. On its capabilities and past

history this intelligent gentlemai. therefore be- stowed his principal attention.

'The commerce of corn generally,' he observes, 'in the countries whose connexion with the sea is maintained by the river Vistula, has been extensive during a long series of years. The ship- ment to foreign countries was, during a long period, almost exclusively confined to the city of Dantzic.

' The government of Prussia viewed with some jealousy the trade of that city, which was then one of the independent Hanse Towns, and, hav- ing the land on both sides the river, from the boundaries of Poland to those of Dantzic, endea- voured, by forming the city of Elbing into a free mart, to draw the trade through that place and its port of Pillau.

'Some success attended this plan, and the trade was carried on through the two rival chan- nels, with a competition which has been con- tinued to the present time ; for though Dantzic has been since added to the Prussian territories, and the preference given to Elbing consequently withdrawn, the latter city seems to have re- tained its proportionate share of the export of corn.

'Attempts are at this time making by Russia, to divert the corn trade of Poland, but especially of the provinces of that country which have been separated from it, and are now comprehended iu Russia, to the port of Riga as the place of ship- ment. For this purpose canals are now con- structing, which are intended to facilitate the conveyance of goods to the river Duna. It is not however probable, that a very great propor- tion of the trade will

be drawn into that channel. The port of Riga is closed by frost a much longer time than that of Dantzic ; the passage from it to the countries where corn is wanted is longer ; the climate is less favorable for drying the grain, after removing it from the barges pre- paratory to shipment; and it, at present, has not those spacious and well-adapted warehouses for the secure deposit of corn, by which Dantzic is eminently distinguished. Some portion of the corn is at present brought down to the sea-shore by the river Neimen, and after paying a transit duty to Prussia at the town of Schmaleningken, is conveyed to Memel. This branch of the trade is, however, but small, as it appears that in the three years 1816, 1817, and 1818, a period when the general trade was the greatest, the whole quantity that paid the transit duty was only 49,596 quarters of wheat, 21,830 quarters of barley, 185,292 quarters of rye, and 108,482 quarters of oats.

‘ From the southern provinces of Poland, viz. Sandomir and Cracow, in which the greatest quantity of the best wheat is produced, a portion is annually sent into the neighbouring Prussian province of Silesia, by land, where a part of it is consumed by the few inhabitants of Breslaw, and the other cities, who eat wheaten bread. The greater part is, however, conveyed by the river Odo, and then by the canal which unites that river with the Havel, to the city of Berlin. It forms an article in the weekly returns of the corn-market of that capital ; and, by the white- ness of its flour, is preferred for pastry and con- fectionary. In those years when the prices of grain have been the most raised in England, some of it has been sent here from Stettin, whilst those

of the inhabitants of that neighbourhood who used wheat, were supplied with an inferior kind of their own growth. Those other channels by which the surplus corn of Poland is distributed, bear however but a small proportion to that which pass- es by the mouths of the Vistula, at Danczic and Elbing ; and the manner in which the trade by these places is carried on may deserve detailed notices.

‘ On the banks of the Vistula there are many warehouses well adapted for preserving corn at the places whence it is most convenient to embark it. The crops are generally removed from the farms of the proprietors as speedily as possible, and remain there in the power of the creditor, who either allows for it a stipulated price, or un- dertakes to convey it to Dantzic, to be sold at the risk of the debtor ; but with the proceeds to be received by the creditor. The charges for ware- housing, shipping, freight, tolls, commission, and other demands, have been lately so high, in pro- portion to the prices, that rery small sums have been carried to the credit of the landholder ; and, where estates are mortgaged, they have been generally insufficient in amount to keep under the growing interest.

‘There are two modes of conveying wheat to Dantzic by the Vistula. That which grows near the lower parts of the river, comprehending Polish Prussia, and part of the province ofPlock and of Masovia, in the kingdom of Poland, which is generally of an inferior quality, is con- veyed in covered boats, with shifting boards that protect the cargo from the rain, but not from pil- fering. These vessels are long, and draw about fifteen inches water, and bring about 1 50 quarters of wheat. They are not, however, so well calcu- lated for the upper parts of the river. From Cracow, where the Vistula first becomes naviga- ble, to below the junction of the Bug with that stream, the wheat is mostly conveyed to Dantzic in open flats. These are constructed on the banks, in seasons of leisure, on spots far from the ordi- nary reach of the water; but which, when the rains of autumn, or the melted snow of the Car- pathian mountains, in the spring, fill and overflow the river, are easily floated.

‘ Barges of this description are about seventy- five feet long, and twenty broad, with a depth of two feet and a half. They are made of fir, rudely put together, fastened with wooden treenails, the corners dovetailed, and secured with slight iron clamps, the only iron employed in the construc- tion. A large tree, the length of the vessel, runs along the bottom, to which the timbers are se- cured. This roughly cut keelson rises nine or ten inches from the floor, and hurdles are laid on it which extend to the side. They are covered with mats made of rye-straw, and serve the pur- pose of dunnage ; leaving below a space in which the water that leaks through the sides and bottom is received. The bulk is kept from the sides ard ends of the barge by a similar plan. The water, which these ill constructed and imperfectly caulked vessels receive, is dipped out at the end and sides of the bulk of wheat. Vessels of this description draw from ten to twelve inches of water, and yet they frequently get aground in de scending the river. The cargoes usually consist of from 180 to 200 quarters of wheat.

‘ The wheat is thrown on the mats, piled as

high as the gunwale, and left uncovered, exposed to all the inclemencies of the weather, and to the pilfering of the crew. During the passage, the barge is carried along by the force of the stream, oars being merely used at the head and stern, to steer clear of the sand-bank’s, which are numerous and shiftingˆanil to direct the vessel in passing under the several bridges. These vessels are conducted by six or seven men. A small boat precedes with a man in it, who is employed in sounding, in order to avoid the shifting shoals. This mode of navigating is necessarily very slow ; and during the

progress of it, which lasts several weeks, and even months, the rain, if any falls, soon causes the wheat to grow, and the vessel as- sumes the appearance of a floating meadow. The shooting of the fibres soon forms a thick mat, and prevents the rain from penetrating more than an inch 01 two. The main bulk is protected by this kind of covering, and, when that is thrown aside, is found in tolerable condition. The vessels are broken up at Dantzic, and usually sell for about two-thirds of their original cost. The men who conduct them return on foot.

‘ When the cargo arrives at Dantzic or Elbing, all except the grown surface is thrown on the land, spread abroad, exposed to the sun and air, and frequently turned over till any slight moisture that it may have imbibed is dried. If. a shower of rain falls, as well as during the night, the heaps of wheat on the shore are thrown to- gether in the form of the steep roof of a house, that the rain may run off, and are covered with a linen cloth. It is thus frequently a long time after the wheat has reached Dantzic before it is lit to be placed in the warehouses. The ware- houses are very well adapted for storing corn. They consist, generally, of seven stories, three of which are in the roof. The floors are about nine feet asunder. Each of them are divided by per- pendicular partitions, the whole length about four feet high, by which different parcels are kept distinct from each other. Thus the floors have two divisions, each of them capable of storing from 150 to 200 quarters of wheat, and leaving sufficient space for turning or screening it. There are abundance of windows in each floor, which are always thrown open in dry wea- ther, to ventilate the corn. It is usually turned over three times a week. The men who perform the operation throw it with their shovels as high as they can, and thus the grains are separated from each other and exposed to the drying influence af the air.

‘ The whole of the corn warehouses now left (for many were burnt during the siege of 1814) are capable of storing 500,000 quarters of wheat, supposing the parcels to be large enough to fill each of the two divisions of the floors, with a se- parate heap ; but as, of late years, it has come down from Poland in smaller parcels than for- merly, and of more various qualities, which must of necessity be kept distinct, the present stock of about 280,000 quarters is found to occupy nearly the whole of those warehouses which are in re- pair, or are advantageously situated for loading the ships. Ships are loaded by gangs of porters with great despatch, who will complete a cargo*

of 500 quarters in about three or four hours. It is seen by Table No. 19, that within the last five or six years the whole quantity that has been brought down has been diminishing ; but I was told that no sensible decrease had been observed in the number of the separate bulks, only that each bulk, or the growth of each estate, or of each consignor, was smaller.

*‘ The trade in wheat from Poland and Prussia, through Dantzic, is said to have been attended with most ruinous losses to all the persons who have been engaged in it. The growers asserted that none, for the last eight or nine years, had yielded sufficient to cover the expenses of culti vation, and that it has been regularly getting worse and worse ever since the year 1818. The Jews, who have taken the crops from the growers, have found the decline of the prices such, that if they sold on their arrival at Dantzic, it was at- tended with loss ; and if they were in a condition to withhold from selling, and placed it in ware- houses, the loss was eventually much greater. The trade of Dantzic, which is chiefly confined to corn, has been for several years in a very dis- tressed state. The commodity in which the traders have dealt has of late so vastly declined in value, that what was purchased cheap at one pe- riod, became in a short time, dear ; the advances they made on what was consigned to them for sale, with the expense of conveyance, and of storing and preserving, soon amounted to more than the value of *he wheat ; and the consignors, in Poland, seldom united the ability and the dis- position to make payments to indemnify them. The corn now in the warehouses has cost the merchants much more than the present value. The royal bank of Prussia, which has branches in the different cities of the kingdom, has advanced, on the security of the wheat now in store, half of what was the value at the time the several advances were made ; and, as the price has declined, has required additional security.’ We subjoin the Table adverted to.*

An account of the quantities of grain shipped down the Vistula, through the city of Thorn, from Russia and Poland, to Dantzic and El- bing, from the years 1816 to 1825.

FROM RUSSIA.

Wheat

Rye

Barley

,Peas

Oats

Qrs.

Qrs.

Qrs.

Qrs.

Qrs.

1816

62,221

115

252

1817

81,733

51,267

1535

535

1818

100,750

22,281

1744

4

27)

1819

139,325

51,566

1306

378

17,656

1820

122,860

37,611

717

599

3819

1821

31,277

15,541

850

291

2027

1022

14,013

. .

• •

8

1823

20,684

5

. .

• •

17

1824

25,137

1367

62

.’ .

25

1825

13,352

1471

309

137

611,352

181,224

6775

1409

24,358

494

CORN LAWS.

FROM AUSTRIA.

Wheat

Rye

Barley

Peas

Oats

Qrs.

Qrs.

Qrs.

Qrs.

Qrs.

1816

2048

12

1817

2108

3526

1143

186

1818

3895

51

51

23

1819

1841

1695

101

107

669

1820

3305

804

58

188

104

1821

1057

305

70

48

88

1822

646

. .

. .

1823

1976

67

581

1824

8278

5

. .

17

1825

240

1

25,394

6386

1502

344

1668

Brought forward 608,503 In ports in the North Sea, as ascertained :

Hamburgh 105,000

Bremen 27,970

FROM POLAND.

Wheat

Rye

Barley

Peas

Oats

Qrs.

Qrs.

Qrs.

Qrs.

Qrs.

1816

60,173

3856

264

4 58

1817

111,542

66,418

2687

13

721

1818

143,395

44,663

3590

12

5472

1819

141,166

53,261

1734

482

18,326

1820

126,164

38,415

775

932

3922

1821

32,335

15,846

920

339

2115

1822

16,328

5185

64

12

1267

1823

34,943

5108

7

4

384

1824

93,968

4009

65

17

1825

176,215

7528

487

496

27

936,229

244,289

10593

2296

32,390

I do herewith duly certify, that the quantities, as above stated (scheffel anzahl in the original German account), have been extracted from authentic papers, and the registers of the custom- house. MELLIN, Burgomaster.

Thorn, Aug. 23rd, 1825.

The stock of wheat in Dantzic and Elbing, at the period of his visit (Aug. 1825), was fur- nished to him as follows :

Dantzic . . 288,000 quarters. Elbing . . . 73,500 quarters. The whole stock in the provinces connected with the Vistula, he afterwards brings into one point of view as consisting of

Quarters.

Pomerania 67,103

Dantzic and Elbing .... 361,500 Lubeck 29,900

Conjectural :

Denmark

Rostock and Wismar . . . Petersburg!), Riga, and Memel

458,503

25,000

25,000

100,000

Total

741,473

Carried forward 608,503

- *Of the wheat to which we have referred, as accumulated in the several ports, I was assured,' says he, ' nearly one-fourth part is of so bad a quality, as to find no market in this country, ex- cept in seasons of uncommon dearth. If, then, out of the whole 741,473 quarters, 556,330 quar- ters were to be sent to England, it would not be more than the consumption of ten days.'*

His exhibition of the general agricultural dis- tress of these provinces is very singular and af- fecting.

' An estimate" was made by a person eminently skilled in the value of land, who formed it upon actual sales made in the last four years. He divided it into three classes, according to their fertility. The lowest land in a state of cultiva- tion, with good buildings and a competent number of peasants, he stated to be worth 1000 florins the huff. Valuing the florins at sixpence, though worth a fraction less, and taking the huff of thirty Magdeburg morgens, as equal to twenty- two English acres, the estimate would be a fi action less than 22s. sterling the English acre. The other kinds of arable land, of su- perior qualities, vary. The great mass is of the second class, or worth about 30s. but some is esti- mated at 5000 florins the huff, or £5. 10s. but little, however, is in this class, and that little is in the vicinity of the cities on the banks of the great rivers, or in some favored spots in the southern provinces. This estimate was rather founded on the state of affairs three or four years ago, than on their present condition ; for I was told that such a number of estates had lately been offered for sale, that no price could be obtained for the greater part. All the en- quiries I was enabled to make, in various parts of the country, led me to the belief, that the estimation here stated was, in the main, as correct as could be expected to be framed.

‘ The Jews are almost exclusively the dealers in money. They are precluded from becoming landed proprietors, and their exclusion from the market tends to depress the prices in a very great degree. Though some of the richer individuals of that people pass through the ceremony of baptism, especially when they have mortgages on large estates, and mean to foreclose ; the whole number of those who thus become quali- fied to purchase bears a small proportion to that of the properties that are offered for sale. I was assured from so many, and such various quarters, that I have no reason to doubt of the report, that almost every estate is deeply involved in debt. The fact is so notorious, that few pro- prietors feel any delicacy in acknowledging themselves to be partakers of the common lot of their neighbours. More than one, without any reserve, spoke to me on the sum annually required to pay interest on his mortgages, with as much coolness as an English farmer would speak of his rent, tithes, and taxes.

< Among the mortgagees, the king of Prussia and some of his monied subjects are by far the greatest, in that part of Poland which was in- cluded in his dominions, till Poland was erected into a Grand Duchy by Buonaparte, under the government of the king of Saxony. It had long been the practice of the court of Berlin to assist agriculture, by loans to the proprietors of estates. This practice began under Frederick the Great, and was continued to the disastrous period that followed the battle of Jena. This assistance was extensively afforded to the newly acquired subjects of the part of Poland, which, in the division of that unfortunate country, fell to the share of Prussia. Though the king of Prussia has lost the government, his claims, and those of his subjects, on the individuals indebted to them, have been recognised ; and though in many in- stances the interest has gone on increasing, the claims have not been rigidly enforced. It was rumoured in Warsaw, but not on any authority, that the emperor Alexander, in his character of king of Poland, was negociating a treaty with the court of Berlin, which had for its object the relief of the Poles, by purchasing the claims of the Prussians and assuming the debts to himself. The amount of the claims of Prussia was stated to me to be two millions of Prussian dollars, or £300,000 sterling, secured on various estates extending over near 1,500,000 acres.

‘ A more numerous class of mortgagees com- prises the corporations of cities and towns, the trustees of hospitals, schools, colleges, monasteries, convents, and charitable institutions. Whatever capitals these may possess is lent on land ; and the difficulty of obtaining the interest as it ac- crues, and, in some instances, of getting any, causes those establishments to

languish, and de- crease in their capacity to relieve distress.

‘ Family settlements are mostly made on the se- curity of land : for a long period there was no other means of making provision for the young and the helpless ; and, in the nourishing periods of agriculture, the interest was paid with punc- tuality. Of late, however, the widows and orphans, whose incomes were deemed free from risk, have become victims to the general depression of the value of the produce of the soil. The Jews, with” all their characteristic shrewdness and sa- gacity, have become, in many instances, from mere necessity, mortgagees. When the debts of proprietors accumulated, and the price of pro- duce fell, the monied men were often induced to secure themselves, as well as they could, by accepting mortgages where no payment could be obtained. The representation here given, is abundantly confirmed by the proceedings adopted in the diet when assembled in May last. The two houses, consisting almost exclusively of landed proprietors, settled a plan to administer relief, which received the emperor’s sanction.

‘ A national bank is to be established, in which land-owners who are in debt, whether on mortgage or on simple contracts, may deposit a schedule of their estates, and a valuation of them : this valuation is to be made by themselves, and it is calculated it will not be made too high, because, as the present land tax is collected on the income, and future imposts are to be levied according to

this valuation, few will be induced to gi/e in more than the true value. On the valuaticn, an annual interest is to be paid to the bank, at the rate of six per cent, for twenty-eight years. This is to be considered as interest at the rate of four per cent. ; and two per cent, is to form the means of discharging, by compound interest, the principal in twenty-eight years. The bank, on receiving the documents, is to deliver to the proprietors its debentures or certificates ; which, twenty per cent, being deducted from them, are made a legal tender for the payment of all debts ; and on which four per cent, interest is to be paid by the bank. When the instalment of the first year is paid, the two per cent, is to be divided among all the holders of the bank debentures, by a lottery. The drawers of the fortunate numbers will then be paid in full. The others will receive their interest, at the rate of four per cent, till their numbers are drawn prizes, some of which must, of course, wait till the expiration of the twenty-eighth year; at which period, upon this plan, if it should work well, all the debts will be liquidated. I have only noticed this project as a corroboration of the accounts I collected of the general state of embarrassment in which the land-owners in Poland are involved.’

We are particularly struck with the coincidence between the following

remarks derived from an actual survey of the facts, and the previous reasoning of many able writers.

' If we calculate that the consumption of wheat in Great Britain is one quarter for each person for food, and about a seventh part more for seed and minor purposes, it will appear that in the first of the series we have been comparing, the quantity of wheat exported from Dantzic and Elbing would, with the then amount of our population, 11,000,000, be equal to twelve days consumption. In fact, however, out of the 5,059,163 quarters of wheat, which Dantzic ex- ported, 1,000,014 were despatched to other countries. As we have only the gross exports from Elbing, without distinguishing what was sent to Great Britian from what was sent elsewhere, it may not be incorrect to assume, that one-fourth as from Dantzic was not sent to our markets ; and then there will be a further reduc- tion of 299,205 quarters. This will leave the whole quantity really furnished to us in the eleven years, 3,459,944 quarters, or an annual quantity of 314,540 quarters, being equal to about nine days of our consumption.

' At the second series our population had ad- vanced, as numbered in 1821, the middle year of that series, to 14,000,000. The quantity of wheat sent to us from the Vistula had declined, and during the eleven years had been 1,252,271 quarters, or 113,842 annually. This would be equal to the whole of our consumption for be- twixt two and three days.

' In the Appendix, No. 24, is shown the whole export of corn from Dantzic, for the last 166 years. By those tables, it appears that the wheat exported from that city, during that long period, was 19,581,947 quarters, or 117,963 quarters on the annual average of the period. In fact, the whole that Dantzic has exported in 166 years is not equal to the consumption of this kingdom,

with its present population, for more than fifteen or sixteen months. The annual importation •would not now amount to two days and three quarters' consumption.'

We may now we think dismiss all fear of an overwhelming supply of corn from this part of the world.

Mr. Jacobs afterwards endeavoured to ascer- tain the quantity of corn conveyed by the Niemer to Memel ; and by the Duna to Riga. He considers that the larger share of the produce of the fertile Russian provinces of this neighbourhood finds its market in the latter direction ; and fur-

nishes an account of the exportation of wheat from Riga for the last twelve years, which make it to average 21,381 quarters only annually; that of rye 134,822 quarters. He speaks of the fertility and comparative prosperity of Moravia. Wheat was selling last yeai for 20s. per quarter at Olrnutz, while, on one side of the province, at Cracow, it only obtained 14s. and at Vienna 14s. Id.

In France, through which he passed on his return, our traveller had not time to make minute observations.

*' I was assured, however,' he says, * that, for several years past, every cultivator of grain has been selling at far less than it has cost him. Some of the best judges of the subject have cal- culated that wheat, in the four classes of districts formed of the departments for the purposes of regulating the importation and exportation of corn, costs to the grower, on an average from twenty to twenty-two francs the hectolitre, or from 6s. 4d. to 6s. lid. the Winchester bushel.*

' How far this calculation may be correct, it would be presumption in me to assert. The corn laws of France are, however, founded on a supposition of this being the price necessary to secure a profit to the farmer. The kingdom is divided, for the purposes of the corn law, into four districts, each including departments in which the prices of grain are nearly alike. When wheat is below eighteen francs the hectolitre, or 5s. l\d. the bushel in the cheapest of those dis- tricts, twenty francs or 6s. 4£d. in the next, twenty-two francs or 7s. 0£rf. in the next, and twenty-four francs or 7s. Qd. in the highest, the importation of foreign wheat is prohibited. As the whole of the four districts form the regulating price, the average of wheat throughout the whole kingdom most rise to 6s. 8d. per bushel, before any foreign wheat can be introduced. The laws which regulate the corn trade of France, were

Eassed in 1019 and 1821 ; and the price of corn as not, since the end of the year 1818, ever risen so high as to effect the opening of their ports. Since that year the price has been fluc- tuating, but declining at the following ratio.

Average of the whole of France.

1820 1821 1822 1823 1824 1825

d.

*3**

' Your lordships,' adds Mr. Jacob in the conclu- sion of his able report, ' have been pleased, in my instructions, to direct me ' to consider, with refer-

ence to the provinces communicating with the Baltic Sea by the Vistula, from the view I take of the country, what increase of cultivation would be likely to take place in consequence of such a stimulus being constantly in action, as would be applied, if an alteration were made in our laws, so as to leave our markets at all times accessible to the corn grown in Poland ;' and further, I have been instructed, ' that, as it may be ne- cessary to assume some given price in this country, in forming such an estimate, it was thought desirable to proceed upon' a supposition of an average price of wheat at home, of 60.?. to 64s. per quarter.

'This question involves so many considerations, depending not only on the present condition of the country, but on the political regulations to which it may hereafter be subject, that any rea- sonings applied must be in a great measure hy- pothetical and speculative ; and any conclusions we may arrive at, must be liable to be affected by changes which cannot now be contemplated, or taken into calculation. The utmost that can be done is to approximate to a result, by a con- sid°ration of the principal circumstances on whicn it will depend, by reference to the fluc- tuations in past periods, and by an examination into the causes from which those fluctuations have proceeded.

- *In obedience to this direction, I presume, with the diffidence which must be always felt in an- ticipating the effects of untried, and consequently doubtful experiments, to state my views on the subject. The effect of the stimulus here pro- posed must depend, in a great measure, on the assurance of its duration. The market for wheat which England presents, is the great object of attention to the cultivators in Poland, and to the merchants at the ports from whence its corn must be exported. Those persons have been accustomed to observe such frequent alterations in our laws relative to the corn trade, that any new enactments would, at first, be thought tem- porary and mutable, like those of former periods. .This uncertainty has been the cause of heavy losses to them, and would therefore have the effect of causing the cultivators to pause before they made any great changes in their rotation of crops, or in the kinds of corn they would sow.*

' The statements which are given in the part of this report more immediately relating to the kingdom of Poland, will show that the want of capital among the cultivators has proceeded to such an extent, from the losses they have sus- tained, that they must, in a great degree, be disabled from making any considerable improve ment in cultivation, or raising any very large increase of produce in a short period. The great deficiency of live stock, which indeed may be resolved into a deficiency of capital, would be an impediment in the way of a rapid exten- sion of the growth of wheat.

Without ma- pure, wheat cannot be grown beneficially, and without a stock of cattle, in some degree com- mensurate to the extent of the land, manure

cannot be obtained ; and though to a certain degree the profit arising from the wool, and not from the meat, enables the landowners to sup- port some few sheep, yet the want of a class of consumers, who can afford to make animal food their subsistence, must operate to prevent any great increase in the stocks of cattle. Such a class is not to be expected there, till a great im- provement, or an increase of manufacturers, shall have taken place. The greater portion of the population of Poland is too poor to allow of their using animal food; the want of it is scarcely felt by persons always accustomed to live, with very little variation of diet, on rye bread.

‘ The labouring?cl asses, too, being assured of a supply of the bare necessaries of life, are little disposed to any great changes in their mode of work, or any exertion of strength or skill beyond that to which they have been accustomed. They have been, perhaps not without some reason, always represented as indolent, unskilful, filthy, and drunken, and averse to the improvements which their vriser and better superiors have at- tempted to introduce.

‘ Whilst the present low price of corn continues, and the corresponding low rate of wages, and the markets of Russia are open to the woollen cloths of Poland without duty, the profit of capital employed in that branch of industry must offer to it temptations that agriculture does not present. But if by any alterations the cloths of Poland should in the Russian custom- houses be placed on the footing of the cloths of other countries, or if a rise of corn and of wages should take place to such an extent as to make the Polish cloths dearer than those which are charged with duty, the effects might be to drive the capital from the cloth trade to the business of cultivation. The present want of capital may possibly be supplied by influx from other countries, but this must depend in a great mea- sure on the internal government and political regulations of the country. The increase of manufactories in Poland, and the augmented population which they usually induce, might produce such a number of internal consumers as to leave much less surplus corn to export to other countries. It is true that wheat would beˆ but little eaten by the manufacturers, but the in- creased demand for rye might make that kind of grain the most profitable to the grower ; and he would then devote to the cultivation of it some portions of the land which, under different cir- cumstances, would have been appropriated to the growth of wheat. The manufacturers in Poland are

however of too little importance, at present, to make it desirable to hazard any con- jectures on what the effects of their increase or diminution would be on the surplus quantity of exportable grain.

‘ A view of the past exportation from the Vis- tula, at different periods and under different circumstances, will perhaps give some assistance in forming an idea of what may be the result of future changes.’

He then shows, from a consideration of the returns of 166 years, the little variation that has taken place in the actual quantity of corn ex- ported.

VOL. VI.

When divided into periods of about twenty- five years, the returns from Uantzic, exhibit the following annual exportatioa of wheat and rye from that port.

YEARS.

WHEAT.

RYE.

TOTAL.

1651 to 1675

Quarters.

81,775

Quarters.

225,312

Quarters.

307,087

1676 to 1700

124,897

227,482

352,379

1701 to 1725

59,795

170,100

229,895

1726 to 1750

80,624

119,771

200,395

1751 to 1775

141,080

208,140

349,220

1776 to 1800

150,299

103,043

253,344

1801 lo 1825

200,330

67,511

267,841

Giving an annual quantity of wheat and rye, of 279,794 quarters.

'During the ten years, from 1791 to 1801, there was a constant demand in France for foreign corn; several deficient harvests had been ex- perienced at the beginning of the revolution. The agents of France were employed, both in Europe and America, in purchasing corn and hiring neutral vessels to convey it to France ; paying but little regard to the price they gave for it, or to the rate of freight at which it could be transported. Holland, which scarcely has ever grown corn sufficient for its own consump- tion, felt a great want, owing to its internal sources of supply from Germany and

Flanders being diverted from the usual channels by the circumstances of the war.

‘ Sweden for many years had looked for some supply from Prussia, not, indeed, of wheat to any extent, but chiefly of rye. During the period we are now considering, that country had been afflicted with several successive deficient harvests ; and such was the distress from want of corn, that a large part of the population had been compelled to use the bark of trees as a substitute for rye. That kingdom thus became a market which could take as much as her poverty could find the means of paying for. In addition to these external circumstances, the hind in Poland was less bvmhened with taxes than it is at present. The tenth Groschen war-tax was not then enacted. Some other taxes, then im- posed, have not been since abandoned. In Prussia, likewise, taxation is higher now than from 1801 to 1805.

‘ These combined circumstances gave to the agriculture of Poland and Prussia a portion of capital, and motives to exertion, which produced the vast surplus that was exported from 1801 to 1805. Ten years of unexampled prosperity were, however, needed to reach the point which those years exhibit, and it was only by gradual steps that it was attained.

‘ The impulse given by the open markets, and by the high prices which had opened them, acted with accumulated force in the next five years, and raised the surplus, as we have seen, some- what higher.

‘ If the same powerful stimulus could now be applied to excite the cultivators in Poland and in Prussia, to increase their supplies of corn, as

was experienced from 1791 to 1801, it would be reasonable to conclude that the result might be the same as is exhibited in the quantities of wheat exported from 1801 to 1805. It might produce, with ten years’ increased exertion, and with the application of the capital created in those ten years of prosperity, a quantity equal to that which was exported in the years jf the greatest surplus. I was told, when in Poland, that during those prosperous years, wheat was brought by land carriage to the Vistula, from distances far too great to bear the expenses without the enormous prices which it bore in the markets of England and France. It was sent, not only from the farthest parts of Gallicia, but even from the vicinity of Brunn and Olmutz, in Moravia. It was said, that some of the wheat of Hungary was conveyed over the Carpathian mountains to Cracow, and there shipped in

flats for Dantzic and Elbing, whilst Volhynia and Podolia were emptied of their stores.

‘ Whether these reports are true, or to whatever extent they are true, it is natural to suppose that the very high price which wheat had reached, in the years under consideration, must have vastly extended the limits of the circle from which it would be collected, and would induce the in- habitants to despatch to the high markets what- ever could ‘be spared by the exercise of the most rigid economy.

‘ By the constant application of all these power- ful stimuli, which were in operation during ten years, we have seen that at length the surplus of wheat, which the Vistula and its borders ex- tended to unusual dimensions, could yield, amounted to 550,000 quarters annually, or about sufficient, supposing the whole to be sent here, for the consumption of this kingdom, with its present population, during the space of twelve days.

‘ It is scarcely to be calculated that the same recurrence of circumstances, propitious to the agricultural prosperity of the lands on the border of the Vistula, should again present itself. Neither the demands of France or England are likely to be so great, or to continue for so long a period, as at that time. It is scarcely to be calculated upon, that any future wars will be so long in duration, or spread over so extensive a field of operations, as those which rose out of the revolution of France; and it is therefore not likely that the quantity exported will ever rise to so great an amount. Whatever stimulus may be applied to excite the agricultural im- provement of the banks of the Vistula, its effect must be weak and powerless, when compared with the excitementit received from 1791 to 1805.

‘ If we suppose the cost of wheat to the grower in the vicinity of Warsaw, to be about 28s. per quarter, and all the expenses of conveyance to our markets to be 20s. more, and that it could be sold here for 60s. or 64s. we may presume that such a stimulus would produce great ex- ertions, and a correspondent increase of supply; some abatement in the force of that stimulus would be probably felt in an increase of freight, and other charges, but the prospect of a profit of 12s. or 14s. would give a powerful impulse to cultivation. What is here stated, is upon the supposition, of course a mere sup- position, that no duty would be imposed on foreign wheat on its introduction into this king- dom. Supposing a duty should be imposed, it will of course weaken the force of the stimulus ; and if it should be so high, as, when added to the costs and charges, to raise it above the price at which it could be sold in our markets, it would become a repellent instead of a stimulus, especially if it should be viewed as a permanent enactment.*

‘ If a duty in this country of 10s. or 12s. per quarter was imposed, it would

not allow of such a profit, on the supposition of the price being from 60s. to "Ms. as to induce any great exertions to increase cultivation in the bordering districts on the Vistula. The chance of a rise occasioned by war, by a winter so severe as to injure vege- tation, or by a rainy harvest season, might induce those of a speculative turn to increase their growth of wheat ; but those who have that turn, and have the means of indulging it, are so few, that they would produce no sensible increase in the general surplus.

' I see no reason to believe, that with such a duty as I have mentioned for England, and a price from 60s. to 64s. and with some similar regulation in France, that the surplus corn pro- duced in Poland, including all the countries near enough to the Vistula to send their corn to that stream, would materially increase in common seasons, or very much, if at all, exceed the average produce of that country ; the greater part of this might probably be wheat, and if the duty were alike on all the various qualities of that grain, none would be sent here but that part which is the driest, heaviest, and whitest. The inferior descriptions would not pay for im- portation, unless the average in England was much more than 64s.'

We subjoin the following documents respect- ing the modern prices of grain in all the great corn markets of Europe, from the Appendix of Mr. Jacob, and other sources.

TABLE I. No. 1. — Account of the Average Prices of IRISH WIIEAT per quarter since 1792.

£. s. d.

£. s. d.

£. s. d.

1792

1 17 5

1799

314

1806

377

1793

2 4 11

1800

4 19 2

1807

379

1794

219

1801

481

1808

3 16 7

1795

3 1 0

1802

2 12 1

1809

3 18 2

1796

308

1803

294

1810

3 18 5

1797

227

1804

2 18 0

1811

3 10 5

- *1798*

252

1805

392

1812

583

CORN LAWS.

499

No. 2.— An Account of the Average Prices of BRITISH CORN per Quarter, and of OATMEAL pe: Boll, of 140 fes. Avoirdupois, in England and Wales, since 1792, as ascertained by the Receiver of Corn Returns :

YEARS.

Wheat.

Rye.

Barley.

Oats.

Beans.

Peas.

Oatmeal.

*£ *. d.*

£ s. d.

£ t. d.

*£ *. rf.*

£ ». d.

£ .. d.

£ ». d.

1792

2 2 11

1 10 8

169

0 17 10

1 11 7

1 12 8

1 13 0

1793

2 8 11

1 15 11

1 11 9

113

1 17 8

1 18 4

1 18 11

1794

2 11 8

1 17 9

1 12 10

120

226

268

1 18 1

1795

3 14 2

285

1 17 8

149

268

2 13 4

236

1796

3 17 1

270

1 15 7

1 1 9

1 18 10

236

229

1797

2 13 1

1 11 11

179

0 16 9

1 7 6

1 13 5

1 13 10

1798

2 10 3

1 10 11

1 9 1

0 19 10

1 10 1

1 13 11

1 16 8

1799

376

239

1 16 0

177

247

252

250

1800

5 13 7

3 16 11

300

1 19 10

393

375

3 12 1

1801

5 18 3

3 19 9

379

1 16 6

328

378

3 10 0

1802

375

233

1 13 1

107

1 16 4

1 19 6

1 19 3

1803

2 16 6

1 16 11

1 4 10

113

1 14 8

1 18 6

1 18 7

1804

301

1 17 1

1 10 4

139

1 18 7

2 0 10

208

1805

4 7 10

2 14 4

248

180

275

284

238

1806

3 19 0

274

1 18 6

158

239

236

242

1807

3 13 3

276

1 18 4

1 8 1

273

2 15 11

243

1808

3 19 0

2 12 4

221

1 13 8

308

367

289

1809

4 15 7

309

273

1 12 8

309

302

2 11 4

1810

562

2 19 0

2 7 11

194

2 13 7

2 15 9

2 11 11

1811

4 14 6

2 9 11

2 1 10

1 7 11

2 7 10

2 11 6

286

1812

655

3 15 11

366

240

3 12 8

3 13 7

298

1813

589

3 10 7

2 18 4

1 19 5

3 16 5

2 18 6

235

1814

3 14 0

246

1 17 4

166

267

2 10 0

1 13 0

1815

344

1 17 10

1 10 3

1 3 10

1 16 1

1 18 10

1 10 0

1816

3 15 10

232

1 13 5 ! 1 3 6

1 18 4

1 18 4

1 8 4

1817

4 14 9

2 16 6

283

1 12 1

2 12 0

2 11 5

1 19 3

No. 3. — An Account of the Average Prices of BRITISH CORN per Quarter, and of OATMEAL per Boll, of 140 fcs. Avoirdupois, in Scotland since 1792, as ascertained by the Receiver of Corn Returns :

YEARS.

Wheat.

Rye.

Barley.

Oats.

Beans.

Peas.

Oatmeal.

£ -. d.

£ *. d.

£ «. d.

£ f. d.

£ s. d.

£ *• d.

£ «. d.

1792

1 19 4

1 4 11

131

0 16 6

171

1 6 10

0 14 6

1793

237

167

156

0 18 6

1 12 8

1 12 9

0 16 10

1794

254

175

150

0 18 10

1 12 5

1 12 7

0 16 11

1795

364

167

196

106

1 14 0

1 13 9

0 17 1

1796

3 11 5

1 10 9

1 9 11

120

1 18 2

1 17 9

0 19 6

1797

260

1 6 f

1 3 4

0 16 6

183

1 8 1

0 14 6

1798

235

1 6 9

123

0 17 7

1 9 8

1 10 1

0 15 9

1799

2 18 1

1 10 10

1 8 9

137

1 16 9

1 15 11

101

1800

4 11 2

2 18 3

2 11 4

225

3 13 7

3 14 11

1 18 9

1801

5 1 8

362

2 12 10

1 18 4

363

3 7 1

1 13 9

1802

346

1 13 10

1 9 6

0 19 5

1 13 3

1 13 2

0 16 10

1803

2 10 4

1 13 4

1 4 3

0 19 10

1 14 9

1 15 1

0 18, 0

1804

2 13 3

1 18 8

1 7 4

123

1 16 1

1 15 9

0 19 2

1805

2 13 7

1 18 7

1 6 8

1 2 4

1 15 3

1 14 6

0 19. 3

1806

3 16 4

1 14 4

1 17 0

140

1 16 5

1 16 2

100

1807

365

1 15 6

1 11 6

1 4 3

1 17 0

1 16 8

104

1808

367

1 19 0

1 14 7

1 7 1

279

2 7 1

1 2 11

1809

3 11 7

2 13 5

210

1 13 10

317

328

190

1810

456

2 11 6

201

1 12 1

2 15 8

2 16 6

187

1811

3 18 10

2 1 10

200

185

298

2 10 5

140

1812

3 11 9

2 0 10

1 16 6

146

217

222

1 1 0

1813

5 7 10

2 16 11

2 13 6

207

3 7 11

3 8 10

1 13 1

1814

4 16 2

366

2 12 8

1 17 9

3 2 10

346

1 12 4

1815

325

209

1 18 2

1 5 10

1 19 5

1 19 9

110

1816

2 13 6

1 19 2

178

129

Tl3 2

1 13 0

0 18 6

1817

383

1 18 4

198

1 3 8

1 15 5

1 15 8

0 18 11

London, Aug. 14, 1818. (Signed)

WM. DOWDISG, Receiver of Corn Returns.

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CORN LAWS.

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„ 1806. War with England, and the blockade by Sweden. On the 16th Sep*. 1805, all export of Cora was prohibited. — 1807, 1809. No trade on account of the prohibitions and exactions of the French.

CORN LAWS.

501

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V 1810. The prices of corn were only noted till the month of July. -18 11. The French, and prohibited in 1812. At the end of the year 1813 the prices rose considerably

‘ f

scarcity during the siege*

502

CORN LAWS.

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CORN LAWS.

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CORN LAWS, TABLE VII.

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Retains of the Prices of Wheat, of the best quality, in the different markets of Europe and

America, during the year 1825.

Barcelona Santander France, average Palermo Livorno / . Genoa . Nizza Antwerp – Amsterdam Ditto New York Rotterdam Dantzic Ditto £, . Ditto Ditto Naples Konigsberg Hamburgh Riga Bremen Ditto Embden Triest . Civita Vecchia Groningen Wismar Rostock . . Kiel Lubeck Warsaw Vienna Munich . ,. Stettin , Berlin Odessa Mayence Archangel Copenhagen . . Ditto

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Per Quarter.

New Zealand Wheat. Konigsberg ditto.

New Zealand ditto. Very fine. Fine high mixed. Good mixed. Mixed red.

Best Brunswick. Lower lands.

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CORN-LOFT. A granary.

CORN-MASTER, n. s. From corn and master. One that cultivates corn for sale. Not in use.

I knew a nobleman in England, that had the great- est audits of any man in my time ; a great grasier, a great sheep-master, a great timber-man, a great col- lier, a great corn-master, and a great leadman.

CORN-METER. One who superintends the measuring of corn.

CORN-MARIGOLD, n. s. From corn and mari- gold. A flower. See CHRYSANTHEMUM.

CORN-MILL, n. s. From corn and mill. A mill to grind corn into meal.

Save the more laborious work of beating of hemp, by making the axle-tree of the corn-mills longer than ordinary, and placing pins in it to raise large ham- mers. Mortimer.

CORN-PIPE, n. s. From corn and pipe. A pipe made by slitting the joint of a green stalk of corn.

Now the shrill corn-pipes, echoing loud to arms, To rank and file reduce the straggling swarms.

Tichel.

CO'RN-ROCKET, n. s. From corn and rocket. A plant. A species of bunias.

CO'RN-ROSE, n. s. A species of poppy. See PAPAVER.

CO'RN-SALLAD, n s. From corn and sallad. See VALERIANA.

Corn-sallad is an herb, whose top-leaves are a sallet of themselves. Mortimer's Husbandry.

CORN, n. s. CO'RNY, adj. CO'RN-CUTTER, n. s. CO'RNEOUS, adj. CO'RNICLE, n.s.

Lat. cornu. A hard and painful excrescence, of a horny substance, on the feet; which excres- Vcence it is the profession

CORNI'CULATE, adj. of the corn-cutter to CORNI'FICK, adj. eradicate. Milton uses CORNI'GEROUS,O< #. | corny to signify stiff and

*CO’RNAGE, n. s. _) hard as horn. Corneous is, horny ; like horn : cornicle, * little horn : corni-*

fick, horn-making: cornigerous, horn-bearing. The definition of corniculate will be seen in the quotation from Chambers. Cornage is, a tenure by which a landholder is bound to blow a horn, in order to give notice of an invasion ; also a mode of transferring property.

Ladies, that have your feet Unplagued with corns, we’ll have a bout with you.

Shakspeare. Romeo and Juliet. The man that makes his toe What he his heart should make,

Shall of a corn cry woe, And turn his sleep to wake.

Id. King Lear.

Even in men, aches, and hurts, and corns, do en- grieve either towards rain or towards frost.

Bacon’s Natural History.

Such as have corneous or horny eyes, as lobsters, and crustaceous animals, are generally dimsighted.

Browne.

There will be found, on either side, two black fila- ments, or membranous strings, which extend unto the long and shorter cornicle, upon protrusion. Id,

Nature, in other cornigerous animals, hath placed the horns higher, and reclining ; as in bucks. Id.

Up stood the corny reed, Embattled in her field.

Milton’s Paradise Lost.

The hardest part of the corn is usually in the mid- dle, thrusting itself in like a nail ; whence it has the Latin appellation of clavis. Wiseman.

The nail was not loose, nor did seem to press into the flesh ; for there had been a corncutter, who had cleared it. Id,

I have known a corncutter, who, with a right educa- tion, would have been an excellent physician.

Spectator.

He first that useful secret did explain, That pricking corns foretold the gathering rain.

Gay's Pastorals,

It looks as there were regular accumulations and gatherings of humours, growing perhaps in some peo- ple as corns. Arbuthnot.

Thus Lamb, renowned for cutting corns, An offered fee from Radcliff scorns. Swift.

The various submarine shrubs are of a corneous or ligneous constitution, consisting chiefly of a fibrous matter. Woodward.

Corniculate plants are such as produce many dis- tinct and horned pods ; and corniculate flowers are such hollow flowers as have on their upper part a kind of spur, or little horn. Cltambers.

CORNS, in surgery, consist of indurations of the skin arising on the toes, and sometimes on the sides of the feet, where they are much exposed to the pressure of the shoes. By degrees they press farther down between the muscular fibres of these parts, and by their irritation occasion extreme pain. Many cures have been prescribed, but the total removal of them is always found to be attended with great difficulty. It has been recommended to soften them with plasters, and then to pull them up by the roots, to apply caus- tic, &c. A muscle laid on, by way of plaster, is also said to be effectual ; but the best cure is to bathe them frequently in warm water, and pare away as much as possible of the indurated skin without drawing blood ; taking care to remove the tightness of the shoe.

CORNAGE was very frequent in the northern

countries near the Picts' wall; and the horn was blown when any invasion of the Scots was ob- served. By stat. 12 Car. II. all tenures are converted into free and common socage. An old rental calls cornage, newt-geldt, q. d. neat- geld. Lord Coke says, in old books it is called horngeld.

CORNARIUS (John), a celebrated German physician, born at Zwickow, in

Saxony. His original name was Haguenbot, but he is best known by that of Cornarius. At twenty years if age he taught grammar, and explained the Greek and Latin classics to his scholars ; and at twenty-three was licentiate in medicine. lie objected to most of the remedies provided by th.e apothecaries ; and observing that the greatest part of the physicians taught their pupils only what is to be lound in Aviceuna, llasis, and the other Arabian physicians, he carefully sought for the writings of the best physicians of Greece, and employed about fifteen years in trans- lating them into Latin, especially the works of Hippocrates, Aetius, Eginetes, and a part of those of Galen. He meanwhile practised phy- sic with reputation at Zwickow, Frankfort, Mar- purg, Nordhausen, and gena, where he died of an apoplexy in 1558, aged fifty-eight. He also wrote several medicinal treatises ; published editions of many poems of the ancients on medi- cine and botany ; and translated some of the works of the fathers, particularly those of Basil, and a part of those of 'Epiphanius.

CORNARO (Helena Lucretia), a learned Ve- netian lady, daughter of John Baptist Cornaro. She not only acquired a complete knowledge of the languages and sciences, but went through the philosophy of the schools ; and at last took her degree at Padua, being the first lady that ever was made a doctor. She made a vow of perpe- tual virginity, and devoted her time entirely to study. The fame of her learning attracted the attention of Louis XIV. who ordered the cardi- nals Bouillon and D'Etrees to wait on her ; and they reported that her talents had not been exag- gerated. She died in 1685.

CORNARO (Lewis), a Venetian noble, memo- rable for having lived in health and activity to above 100 years of age, by a rigid course of tem- perance. By the ill conduct of some of his rela- tions he was deprived of the dignity of a Vene- tian noble ; and, seeing himself excluded from all employments under the republic, he settled at Padua. In his youth he was of a weak consti- tution, and by irregular indulgence reduced him- self, at about forty years of age, to the brink of the grave, under a complication of disorders ; at which extremity he was told, that he had no other chance of his life, but by becoming sober and temperate. Being wise enough to adopt this counsel, he reduced himself to a regimen of which there are very few examples. He allowed himself no more than twelve ounces of food and fourteen ounces of liquor each day ; which be- came so habitual to him, that when he was about seventy years of age, the experiment of adding too ounces to each by the advice of his friends, mid nearly proved fatal to him. At eighty-three he wrote a treatise which has been translated into English, and often printed, entitled, Sure and

Certain Methods of Attaining a Lotig and Health- ful Life ; in which he relates his own story, and extols temperance to a degree of enthusiasm. At length the yolk of an egg became sufficient for a meal, and sometimes for two, until he died with much ease and composure, at Padua, in 1566. The Spectator, No. 195, confirms the fact from the authority of the then Venetian ambas- sador, who was a descendant of the Cornaro family.

CORNAVII, an ancient people of Britain, who dwelt in the country, beginning in the heart of the island, and extending to Chester: now divided into the counties of Warwick, Worcester, Salop, Stafford, and Cheshire.

CO'RNEA, Lat.- The horny coat of the eye.

There is a bright spot seen on the cornea of the eye, when we face a window, which is much attended to by portrait painters ; this is the light reflected from the spherical surface of the polished cornea, and brought to a focus, Darwin.

CORNEILLE (Michael), a celebrated painter, born at Paris in 1642, and instructed by his father, who was himself a painter of great merit. Having gained a prize at the Academy, young Corneille obtained, a pension from Louis XIV. and was sent to Rome, where that prince had founded a school for young artists of genius. Having studied there some time, he gave up his pension, and applied to the antique with great care. He is said to have equalled Caracci in drawing, but in coloring he was deficient. Upon his return from Rome, he was chosen professor in the Academy at Paris ; and was employed by Louis in all the great works he was carrying on at Versailles and Trianon, where are still to be seen some noble efforts of his genius.

CORNEILLE (Peter), a celebrated French poet, born at Rouen in 1606. He was brought up to the bar, which he attended for some time ; but, being formed with a genius too elevated for such a profession, he soon deserted it. An affair of gallantry occasioned his writing his first piece, entitled Malite ; which had prodigious success. Encouraged by the applause of the public, lie wrote the Cid, and other tragedies that have im- mortalised his name. In his dramatic works he discovers a majesty, a strength and elevation of genius, scarcely to be found in any other of the French poets ; and like our immortal Shakspeare, seems more acquainted with nature, than with the rules of critics. Corneille was received into the French Academy in 1647, and died dean of that academy in 1684, aged seventy-

eight. Be- sides his dramatic pieces, he wrote a translation in French verse, of the Imitation of Jesus Christ, &c. The best edition of his works is that of 1682, in four volumes 12mo.

CORNEILLE (Thomas), brother of the above, was a member of the French Academy, and of that of Inscriptions. He discovered in his youth a great inclination to poetry; and published se- veral dramatic pieces in 5 vols. 12mo, some of which were applauded by the public, and acted with success. He also wrote, 1. A Translation of Ovid's Metamorphoses, and some of Ovid's Epistles. 2. Remarks on Vaugelas. 3. A Dic- tionary of Arts, 2 vols. folio; and 4. A Univer-

sal, Geographical, and Historical Dictionary, in 3 vols. folio.

CORNE'L,n..&odj.) Old Fr. cornille ;*

CO'RNELIAN-TREE,M.S. j from Lat. cornus. A species of tree. See CORNUS.

The cornel-tree beareth the fruit commonly called the cornel or cornelian cherry, as well from the name of the tree, as the cornelian stone, the colour whereof it somewhat represents. The wood is very durable, and useful for wheel-work. Mortimer.

Take a service-tree, or a cornelian-tree, or an elder- tree, which we know have fruits of harsh and binding juice, and set them near a vine c» fig-tree, and see whether the grapes or figs will not be the sweeter.

Baccfii't Natural History. A huntress issuing from the weed, •Reclining on her cornel spear sLe stood. Dryden.

On wildings and on strawberries they fed j Cornel and bramble-berries gave the rest, And falling acorns furnished out a feast.*

Dryden't Ovid. Mean time the goddess, in disdain, bestows

The mast and acorn, brutal food ! and strows

The fruits of cornel, as they feast around.

Pope's Odyssey.

A mount stood near : thick cornets shagged its head j And there, with tall straight shoots, a myrtle spread.

Symmons' JEneit.

Two cornel javelins armed with steel they bear ; And some, bright quivers o'er their shoulders wear.

Id.

CORNEL TREE, in botany. See CORNUS.

CORNELIA, daughter of Scipio Africanus, and the mother of Tiberius and Caius Gracchus. She was courted by a king, but she preferred being the wife of a Roman citizen to that of a monarch. When a Campanian lady once made a show of her jewels at Cornelia's house, and intreated her to favor her with a sight of her own, Cornelia produced her two sons, saying, ' These are the only jewels of which I can boast.'

CORNELIA LEX, Cornelian law, in antiquity, a name given to sixteen Roman laws : viz. 1. De civitate, enacted A. U. C. 670, by Sylla; confirming the Sulpician law, and requiring the citizens of the eight newly elected tribes to be divided among the thirty-five ancient tribes. 2. De judiciis, in 673, ordaining, that the praetor should always observe the same invariable method in judicial proceedings, and that the process should not depend upon will. 3. Desumptibus, limiting the expenses- of funerals. 4. De religione, in 677, "restoring to the college of priests the privi- lege of choosing the priests, which by the Dorm- tian law had been lodged in the hands of the people. 5. De municipiis, revoking all the pri- vileges which had been granted to the towns that had assisted Marius and Cinna in the civil war. 6. De magistratibus, giving the power of bearing honors, and being promoted before the legal age, to those who had followed the interest of Sylla ; while the sons and partizans of his enemies, who had been proscribed, were deprived of the pri- vilege of standing for any office of the state. 7. De magistratibus, in 673, ordaining that no person should exercise the same office within an interval of ten years, or be invested with two different magistracies in one year. 8. De magistratibus, in 673, divesting the tribunes of the privilege of

making laws, interfering, holding assemblies, and receiving appeals. All such as had been tri- bunes were incapable of holding any office in the state by that law. 9. De majestate, in 670, making it treason to send an army out of a pro- vince, or engage in a war without orders, to influ- ence the soldiers to spare or ransom a captive general of the enemy, to pardon the leaders of robbers or pirates, or for the absence of a Roman citizen to a

foreign court without previous leave. The punishment was aquae et ignis interdictio. 10. Giving the power to a man accused of mur- der, either by poison, weapons, or false accusa- tions, and the setting fire to buildings, to choose whether the jury that tried him should give their verdict palam viva voce, or by ballot. 11. Mak- ing it aquae et ignis interdictio to such as were guilty of forgery, concealing and altering of wills, corruption, false accusations, and the debasing or counterfeiting of the public oath. All who were accessary to this offence were deemed as guilty as the offender. 12. De pecuniis repetun- dis; by which a man convicted of peculation or extortion in the provinces was condemned to suffer the aquae et ignis interdictio. 13. A law giving power to such as were sent into the pro- vinces with any government, of retaining their command and appointment, without a renewal of it by the senate. 14. Another ordaining that the lands of proscribed persons should be com- mon, especially those about Volaterrae and Fesulae in Etruria, which Sylla divided among his sol- diers. All the above were enacted by Sylla. 15. A law by C. Cornelius tribune of the people, in 686 ; it ordains that no person should be exempt- ed from any law acording to the general custom, unless 200 senators were present in the senate ; and no person thus exempted could hinder the bill of his exemption from being carried to the people for their concurrence. 16. Another by Nasica, in 582, to make war against Perseus, son of Philip king of Macedonia, if he did not give proper satisfaction to the Roman people. CORNE'LIAN-STONE. See CARNELIAN. The seal a sunflower ; ' Elle vous suit paitout/ The motto, cut upon a white cornelian ; The wax was superfine, its hue vermiUion.

Byron. Don Juan.

CO'RNEMUSE, or) French cornemuse. A

CO'RNAMUTE, n. s. $ kind of rustic flute,

says Johnson; but this definition is incorrect.

Cornemuse signifies the bagpipe. Both words

are obsolete.

CO'RNER, n. s. -\ French corniere. An CO'RNERED, adj. (angle; the point at CO'RNER-STONE, n.s. £ which a perpendicular CO'RNERWISE, adv. J line cuts a horizontal ; a secret or remote place ; the utmost limit : thus every corner is, the whole, or every part. Cor- ner-stone is the principal stone; the stone which unites the two walls at the corner. Cornered is, having corners. Cornerwise is, with the angle placed in front.

The stone which the builders refused is become the head stone of the

corner. Psalm cxviii. 22.

It is better to dwell in a corner of a house top, than with a brawling woman and in a wide house.

Prwerbs xxv. 24.

I am persuaded that none of these things are hidden from him ; for this thing was not done in a corner.

Acts xxvi. 26»

And are built upon the foundation of the apostles and prophets, Christ himself being the chief corner- stone. Ephesians ii. 20.

And eke about at the corner Men seinen ovir the walle stonde Gret engins, which ywere nere honde.

Chaucer. Romaunt of the Rose.

All these together in one heape were throwne, Like carcases of beastes in butchers stall ; And in another corner wide were strowne The antique ruins of the Romanes fall.

Spenser. Faerie Queene,

Thou in dull corners doest thyself inclose, Ne tastest princes pleasure. Id .

There's nothing I have done yet, o' my conscience. Deserves a corner. Shakspeare. Henry VIII.

Might I but through my prison, once a day, Behold this maid, all corners else o' the' earth Let liberty make use of. Id. Tempest.

See you yond' coign o' the' capitol, yond corner- stone? Id. Coriolanvi.

All the inhabitants, in every corner of the island, have been absolutely reduced under his immediate subjection. Davies.

A mason was fitting a corner-stone.

Howel's Vocal Forest.

I turned, and tried each corner of my bed, To find if sleep were there ; but sleep was lost.

Dry den,

Those vices, that lurk in the secret corners of the soul. Addisom'.

The cattle mourn in corners, where the fence Screens them, and seem half petrified to sleep In unrecumbent sadness. There they wait Their wonted fodder ; not like hungering man, Fretful if unsupplied ; but, silent, meek, And patient of the slow-paced swain's delay. Cotcper,

I should like to support the present minister on fair ground ; but what is he ? a sort of outside passenger — or, rather, a man leading the horses round a corner, while reins, whip, and all, are in the hands of the coachman on the box ! Sheridan,

CORNER-TEETH OF A HORSE, are the fore-teeth between the middling teeth and the tushes ; two above and two below, on each side of the jaw, which shoot when the horse is four years and a half old.

CO'RNET, n.s. ~\ Fr. cornet, cornette; It,

CO'RNETCY, n. s. >cornetto, from Lat. cornus.

CO'RNETTER, n.s.J Cotgrave and Sherwood give a full definition of the word cornet. 'A cornet, a trumpe ; a little home ; also a sea-cut, or cuttle-fish ; a bugle, hutchet, or little home ; also a doctor's tippet ; also a cornet of horse ; and, the ensigne of a horse companie ; also a fashion of shadow, or boone grace, used in old time, and at this day, by some old women ; also the tuft, or tipping, of a hawkes hood.' A cornet of paper is, ' the cornet, or coffin of paper, wherein a grocer makes up his retailed parcel of spice ;' so called from its being twisted into a horn-like form. ' The shadow or boone grace' was a sort of head- dress, which appears to have entirely veiled the face ; for Surrey, in the sonnet quoted below, complains that it kept the face of his mistress always 'hydden from him,' so that he lost 'the lyghte of her fayre looks.' Cornetcy is the com-

mission of a cornet. Cornetter is one who blows the cornet.

Israel played before the Lord on psalteries, and on timbrels, and on cornets. 2 Sam. vi. 5.

I never sawc my lady laye apart Her cornet blackc, in colde nor yet in heate, Sith fyrst she knewe my griefe was grovn so great.

Surrey.

These noblemen were appointed, with some cornet of horse and bands of foot, to put themselves beyond the hill where the rebels were encamped. Bacon.*

Other wind instruments require a forcible breath ; as trumpets, cornets, and hunters' horns.

Bacon's Natural History.

Seventy great horses lay dead in the field, and one cornet was taken. Hayward.

So great was the rabble of trumpetters, cornet ten, and other musicians, that even Claudius himself might have heard them. Hakewill on Promd.

They discerned a body of five cornet of horse very full, standing in very good order to receive them.*

Clarendon.

Cornet and trumpets cannot reach his ear ; Under an actor's nose, he 's never near.*

Dryden't Juvenal.

COENET, in the ancient mili- tary art, a musical instrument, much in the nature of a trum- pet, as in the diagram. When it only sounded, the ensigns were to march alone without the soldiers; whereas, when the trumpet only sounded, the soldiers were to move without the ensigns. Cornets and buc- cinae gave the signal for the charge and retreat; and the cornets and trumpets sounded during the battle.

CORNET, in the modern military economy, is the third officer in the company, and commands in the absence of the captain and lieutenant. He takes his title from his ensign, which is square; and is s-upposed to be called by that name from cornu, because placed on the wings, which form a kind of points or horns of the army. Others derive the name from coicxnet; alleging that it was the ancient custom for these officers to wear coronets or garlands on their heads. Cornette was likewise the term used to signify the standard peculiarly appropriated to the light cavalry. Hence, cornettes and troops were synonymous terms to express the number of light-horse attached to an army. The stand- ard so called was made of glazed silk, eighteen inches square, upon which the arms, motto, and cypher of the general who commanded the ca- valry were engraved. A scarf, of white silk, was tied to the cornette whenever the cavalry went into action, in order to render the standard con- spicuous.

CORNET OF A HORSE, is the lowest part of his pastern, that runs round the coffin, and is dis- tinguished by the hair that joins and covers the upper part of the hoof.

CORNET-STOP, on an organ, is a compound treble stop, in the use of which, each finger-key acts upon, and occasions five pipes to sound at the same time, viz. one in unison witli the note proper to that finger-key, and also with the same note in the stop, called diapason ; another which is tuned a true major third above it ; another a fifth, another an eighth, and the uppermost a true major seventeenth above the note.

CORNHERT (Theodore), an enthusiastic se- cretary of the States of Holland. He wrote at the same time against the Catholics, Lutherans, and Calvinists. He maintained that every reli- gious communion needed reformation ; but, he added, that no person had a right to engage in accomplishing it, without a mission supported by miracles. He was also of opinion, that a person might be a good Christian without being a'mem- ber of any visible church.

CO'RNICE. Fr. corniche ; Ital. cornice ; Span, corniga, cornisa, icopwviQ. The highest projection of a wall or column.

The cornice of the Palazzo Farncse, which makes so beautiful an effect below, when viewed more nearly, will be found not to have its just measures.

Dryden's Dufresnoy.

The walls were massy brass, the cornice high Blue metals crowned, in colours of the sky.

Pope's Odyssey.

But lo ! from high Hymettus to the plain, The queen of night asserts her silent reign. No murky vapour, herald of the storm, Hides her fair face, nor girds her glowing form ; With cornice glimmering as the moon-beams play, There the white column greets her grateful ray.

Byron. The Corsair.

CO'RNICE RING, in gunnery, the next ring from the muzzle backwards.

CORNICULARIUS, in antiquity, an officer in the Roman army, whose business wus !o assis' the military tribune in quality of lieutenant. The cornicularii went the rounds in lieu of the tribune, and visited the watch. The name was given them from a little horn, called corniculum, which they used in giving orders to the soldiers ; though Salmasius derives it from corniculum, the crest of a head-piece ; it being an observation of Pliny, that they wore iron or brass horns on their helmets ; and that these were called corfii- cula. In the Notitia Imperii we find a kind of secretary or register of

this title. His business was to attend the judge, and enter his decisions. The critics derive the word, in this sense, from corniculum, a little horn to put ink in.

CORNICULUM, in ancient geography, a town of the Sabines, east of Crustumentum, to- wards the Anio. It was burnt by Tarquin ; but restored again after the expulsion of the kings. It is now in ruins, and called II Monte Gennaro.

CORNICULUM. See CORNICULARIUS.

CORNISH, a town of New Hampshire, in Cheshire county, on the east bank of the Con- necticut, between Claremont and Plainfield, about fifteen miles north of Charlestown, and sixteen south of Dartmouth College. It was in- corporated in 1763.

CORNU AMMONIS, in natural history, a spe- cies of fossile shells, called also serpent stones, or snake stones. They are found of all sizes,

from the breadth of a sixpence to more than two ‘ feet in diameter ; some of them rounded, others greatly compressed, and lodged in different strata of stones and clay ; some again are smooth, and others ridged in different manners, their striae and ridges being either straight, irregularly crooked, or undulated.

CORNU CERVI. See HARTSHORN.

CORNUCO’PIA, n. s. Latin. The horn of plenty ; a horn topped with fruits and flowers in the hands of a goddess.

In the honeysuckle the petal terminates in a long tube, like a cornucopia, or horn of plenty ; and the •honey is produced at the bottom of it. Darwin.

*Ct»*N ucopi.fi, among the ancient poets, a horn out of wfcich proceeded abundance of all things, by a particuhw privilege which Jupiter granted his nurse, the goat Amalthea. The fable is thus interpreted : that in Lybia there is a little ter- ritory shaped like a bullock’* horn, exceedingly fertile, given by king Ammon to his daughter Amalthea, whom the poets feign to have been Jupiter’s nurse. See JEois and AMALTHEA.*

CORNUCOPIA, in botany, a genus of the digy- nia order, and triandria class of plants ; natural order fourth, gramina. The involucrum is mo-

nophyllous, funnel-shaped, crenated, and multi- florous : CAL. bivalved : COR. one valved. Spe- cies two ; natives of the East Indies and of the south of Europe.

CORNUS, cornel-tree, cornelian cherry, or dog-wood, a genus of the monogynia order, and tetrandria class of plants ; natural order forty-seventh, stellatae. The involucrum is most fre- quently tetraphyllous ; the petals above the re- ceptacle of the fruit four ; the fruit itself a bilo- cular kernel. Of this genus there are twelve species ; the most remarkable are the following :

1. C. Florida, or Virginian dog-wood, has a tree-stem branching twelve or fifteen feet high, and fine red shoots, garnished with large heart- shaped leaves : and the branches terminated by umbellate white flowers, having a large involu- crum succeeded by dark red berries. Of this species there are several varieties, chiefly distin- guished hy the color of their berries, which are red, white, or blue.

2. C. mas or cornelian cherry-tree, has an upright tree-stem, rising twenty feet high, branch- ing, and forming a large head, garnished with oblong leaves, and small umbels of yellowish- green flowers at the sides and ends of the branches, appearing early in the spring, and suc- ceeded by small, red, cherry-like, eatable, acid, fruit.

3. C. sanguinea, bloody tvfig, or common dog-wood, has an upright tree-stem, branching ten or twelve feet high, having blood-red shoots, garnished with oblong pointed nervous leaves two inches long ; and all the branches terminated by umbellate white flowers succeeded by black berries ; of this there is a kind with variegated leaves. All the species may be propagated by seeds, which ought to be sown in autu mn, otherwise they will lie a year on the ground. When the plants come up, they should be duly watered in dry weather, and kept clean irom weeds. The fol- lowing autumn they may be transplanted into

the nursery; and, having remained there two or three years, they may then be removed to the places where they are to remain. They may also be propagated by suckers, of which they pro- duce great plenty, or by laying down the young branches.

CORN'UTE, v.a.ˆ Lac. cornutus. To be- CORNU'TED, adj. f stow horns; to cuckold; CORNU'TO, n. s. £ horned; cuckolded. A CORNU'TOR, n. s. J cuckold. A cuckold- maker.

The peaking cornuto, her husband, dwelling in a continual larum of jealousy.

Shakspeare. Merry Wives of Windsor.

A barber's wife in ArisUenetus threatened to cornute

him. Burton.

He that thinks every man is his wife's suitor, Denies his bed, and proves his own cornu/ur.

Jordanˆ

I hope he cannot say that ever I gored any of my superiors, or that my being cornuted has raised the price of posthorns, lanthorns, or pocket ink-horns.

L' Estrange' s Qtievedo.

CORNUTIA, in botany, a genus [of the an- giospermia order, and didynamia class of plants; natural order fortieth, personatae ; CAL. quinque- dentated ; STAM. larger than the corolla : STYL. very long : the berry monospermous. There are two species, viz.

C. pyramidata, with a blue pyramidal flower, and hoary leaves, which grows plentifully in se- veral islands in the West Indies; at Campeachy, and at La Vera Cruz. It rises to the height of ten or twelve feet, with rude branches, the leaves being placed opposite. The flowers are pro- duced in spikes at the end of the branches, and are of a fine blue color. They usually appear in autumn, and will sometimes remain in beauty for two months or more. The plantˆis propa- gated either by seeds or cuttings, and makes a fine appearance in the stove ; but is too tender to bear the open air in this country : and C. punctata, a shrub with axillary trichotomous co- rymbs, opposite, ovate, painted slightly ; serrate leaves ; blue flowers, with small white dots.

CORNWALL, the most westerly county of England, and extending also farther to the south than any other part of Great Britain, is bounded by the sea on its north, west, and south sides, and on the east by the river Tamar, which sepa- rates it from Devonshire except in a few places. Its general shape resembles a cornucopia. The Bristol Channel washes it on the north, and the British Channel on the south ; the Land's End being the point where these two seas appear to unite. It is situated in the diocese of Exeter, and belongs to the western circuit. Its extreme length from its north-eastern angle to the Land's End is about ninety miles ; and from the Land'sEnd to the Ram's Head seventy miles. Its greatest breadth, from Moorwinstow to the Ram's Head, is a little more than forty-three miles. It rapidly contracts, however, towards its south-western promontory; so that its medium breadth

between Padstow and Fowey does not exceed eighteen miles, and in its narrowmost part, between Mount's Bay and the Heyle River, it is not more than four miles. Its circuit is estimated at 200 miles, and its extent has been found by actual

survey to contain 758ˆ484 statute acres ; a little more than 1 185 square miles.

Cornwall is divided into nine hundreds, 206 parishes, and twenty-three market towns, and contains about 253 inhabitants to each square mile, ov one to every three acres and a half. The climate is on the whole healthy, although as in all other peninsular situations, especially those lying to the south-west, the weather is very in- constant. The south and west with their inter- mediate winds, sweeping over the waves of the Atlantic, collect in the passage huge bodies of clouds, which being rent by the hills discharge their contents in torrents of rain in the interior of the county. There is an adage, founded on the frequency of rain in this county, which says, that ' Cornwall will bear a shower every day of the week, and two upon a Sunday.' The storms around the coasts are frequently very vio- lent ; the damages they occasion, however, are principally confined to vessels at sea. Fogs are of very rare occurrence in this county, the con- stant circulation of adverse currents of air not allowing them time to arrive at any considerable degree of condensation.

Notwithstanding this mutability in the weather, the seasons are more equal in Cornwall than in almost any other county in England. The cold in winter is generally very moderate ; snow sel- dom lying on the ground more than a few days ; and the heat of the summer is rarely in- tense. In the southern part of this county the temperature is so mild, that myrtles, the balm of Gilead, hydrangea, geraniums, and many other tender plants flourish in the open air. Fruit- trees are very plentiful and productive, and even the fruit of the mulberry ripens in these quarters. On the coasts, however, the hardiest trees will not thrive. The tamarisk is the only shrub which seems capable of bearing the sea spray ; it sometimes grows to the height often or twelve feet in the course of seven years, and forms an admirable shelter. Till quite lately, every attempt to raise plantations had proved abortive ; but the more tender trees being now protected by rows of the pineaster fir, they are beginning to assume a more promising appearance.

The general surface of this county is remark- ably dreary. — A ridge of bleak and rugged hills rising to the height of from 1000 to 1300 feet

extends through its whole length ; and the roads winding over these hills, or across rude and un- cultivated moors and commons, impress upon the traveller's mind an idea of the excessive sterility of the soil. Yet amidst this dreary waste, some beautifully picturesque valleys, smiling in a ro- mantic diversity of corn, woods, coppices, orch- ards, meandering rivulets, and verdant meadows, burst upon the sight ; while the stupendous rocks, particularly about the Lizard and the Land's End, which form the mighty barriers to the fertile plains on the one hand, and frown defiance to the chafing of the angry ocean on the other, im- press the mind with the sublimest and most agreeable sensations. The soil is extremely va- rious in Cornwall :— in the higher lands it consists of a blackish earth, intermixed with gravel, and small particles of granite (or growan as it is cal- led by the Cornish men), and bedded in a stratum of quartz. A light loam, mixed with

slaty matter, prevails principally oil the low lands and banks of rivers. Various qualities of claj are found in different places ; one kind is made into bricks, which are in great request for the erection of furnaces and smelting houses ; and another is much valued when formed into moulds for casting metals. The mixture of the clayey loam, with the gravel on the surface, forms a very fine and productive soil.

Agriculture being but a subordinate concern in Cornwall, and the fines paid for the long leases, to which the farmers are subject, depriving them of that capital which ought to be invested in the improvement of the soil, it is not surpris- ing that most of their farming operations should be conducted in a rude mariner. In the eastern districts more grain is raised than is sufficient for the maintainance of the inhabitants, but in the less fertile parts the produce is by no means adequate to the consumption. The crops com- monly cultivated are wheat, barley, and oats; a large proportion of the arable land, however, is appropriated to the production of potatoes, for which Cornwall is very celebrated. In the neighbourhood of Penzance two crops of this valuable vegetable are produced every year. Sea-wrack, sea- weed, damaged pilchards, and the refuse salt used in curing them, mixed with lime and sea-sand, is the principal manure used in this county. Nearly 200,000 acres of the interior are unenclosed arid wastelands, affording scarcely sufficent pasturage for a miserable breed of goats and sheep. The best cattle found here are of the Devonshire breed, and are much used in labor. The true Cornish breed of sheep, now nearly extinct, is one of the worst descriptions in England. Of late years many different breeds have been introduced. Few horses are kept for ostentation, or live in idleness in this county ; they, with mules, being more frequently used for transporting of burdens than carts or wag- gons.

Springs are every where abundant, and, unit- ing into rivulets and streams, form some .not in- considerable rivers, the principal of these are the

Tamar, the Lynher, the Looe, the Fowey, the Camel or Alan, and the Fale. The Tamar rises on the summit of a moor, in the parisli of War- minster, the most northern in the county ; and hence taking a southerly direction, it is aug- mented by many tributary streams ; and, after winding a course of forty miles, at length empties itself into a spacious basin called the Hamoaze. The farms are, for the most part, very small, seldom letting for more than from thirty to fifty pounds per annum, even in the most fertile parts of the county. What are denominated the duchy lands, however, are very extensive; the in- come derived from them, and the duty on the tin ore, being the only remaining parts of those immense hereditary revenues, which were anciently appropriated as a provision for the heir apparent to the crown. This provision was in the first instance made by Edward III. for his son Edward, the Black Prince, whom he created duke of Cornwall, with special limitation to the eldest son of him and his sons, kings of England for ever. The lands are at present let off under lease granted by the duchy ; the consideration being a fine paid.-ajr the grant, and a reserved

rent during the lease. They are generally pur- chased for three lives.

The principal wealth of Cornwall arises from its mineral productions, which have been cele- brated in all periods of its history. By an ac- curate survey of the mines, made in 1800, it was found that there were then forty-five of copper, twenty-eight of tin, eighteen of copper and tin, two of lead, one of lead and silver, one of cop- per and cobalt, one of tin and cobalt, and one of antimony; and since that time, especially during the late speculating mania, great num- bers more have been opened. Such is the variety of minerals in Cornwall, that indications of almost every known metal have been traced here. By far the most important ores, however, are tin and copper.

The strata in which they are found extend from the Land's End to the Dartmoor Hills, Devonshire, in a direction from east to west, and consisting of granite and a variety of the grau- macke, called by the miners killas. The prin- cipal mines at present in course of working are situated in the neighbourhood and to the west- ward of' St. Austel, from which place, as far as the Land's End, they extend along the northern coast, embracing a breadth of about seven miles. They extend also to Kemyn, Gwennap, Sti- thians, Wendron, and Breage on the south, and to St. Agnes, Redruth, Illogan, Cambourne, Guinear, in a straight line through Lelant, Senor and Moroas, to the parish of St. Just on the north. The metals are found in veins or fissures called lodes : many lesser veins branch from the main

lode, terminating in threads. There are various criteria by which experienced miners can immediately detect the existence of a lode of metal, such, for instance, as scattered fragments of ore, called shades, the metallic taste of the springs, and the presence of parti- cular herbs. The course of the metals being from west to east, many rich lodes have been discovered by working drifts across the country in an opposite direction, that is, from north to south. Tin is nowhere found native ; it occurs sometimes collected and fixed, and at others loose and dilated. In its fixed state it is either found in an horizontal layer of earth, or interspersed in grains or small masses in the natural rock. In its dispersed form, it is found either in a pul- verised state, in stones called shades, or in a continued course of shades, called a stream. These streams extend, in many parts, to a considerable length, seldom less than a fathom in breadth, and from one to ten feet in depth. One of the tin-mines, in the neighbourhood of St. Austle, produced the amazing quantity of 2500 blockg per annum. The Poldue mine has also yielded as much as 1000 blocks yearly. When the ore is raised, it is divided into us many shares, or doles, as the miners call them, as there are ad- venturers and lords engaged in the undertaking. It is generally beaten into small pieces on the spot, and when it will pass through the holes of an iron grate, fixed in every mine, to one end of a box, in which the lifters work, it is carried by a stream into pits, and thence into vats, where it is washed and rendered sufficiently clear for the purposes of smelting. The tin is cast into blocks, weighing from 2£ cwt- to 3| cwt.

they are not saleable, however, until assayed by the proper officers, and stamped with the duchy seal ; this operation is called coining. Since the reign of Henry VIII. coinages have been held four times every year, namely, at Lady-Day, Midsummer, Michaelmas, and Christmas. Tiie original towns for this purpose were, Launceston, Lestwithiel, Truro, and Helston. Charles II. added Penzance to the number, as affording greater facilities to the miners of the westerr. districts.

The duke of Cornwall receives 4s. for every cwt. of white tin that is coined ; and it is calcu- lated, that the present average of the tin-mines amounts, annually, to 25,000 blocks, earn block worth from £8 to £10 : so that, accoiding to this calculation, the income of the duchy of Cornwall, arising from the tin-mines alone, is not less than £10,000. The mining business is entirely regulated by a code, called the stannary laws, enacted by a court of slannators, or pro- prietors. These acts divide the tin-men into four divisions, under the superintendence of one warden : they have an appeal, however, from his decisions, in all suits of law and equity, to the duke of Cornwall in council ; or in case this title should be in abeyance, to the crown. A vice- warden is appointed every month, whose office is to decide all stannary disputes ; he also con- stitutes a steward for each precinct, who holds his court, called a stannary court (from the Latin word

stannum, tin), every three weeks, when a jury, composed of six persons, decide disputes with a progressive appeal, however, to the vice-warden, lord-warden, and lords of the duke of Cornwall's council. The mines are under no other jurisdiction, excepting in suca cases as affect land or life. See MINING.

The copper-mines of Cornwall are very nu- merous, producing, on the average, 4700 tons annually, which, on a moderate calculation, are worth £350,000. The most productive copper- mines now working are Crennis and Huel Al- fred, the former near St. Austle, and the other in the parish of Hayle. Veins of copper are not unfrequently found in cliffs, that are left bare by the sea, and sometimes in the fissures of rocks, in thin films, deposited by the impreg- nated water, running from the lodes of the copper ore. The most encouraging sign of a rich ore is the gossan, an earthy ochreous stone, of a red color, which crumbles like the rust of iron. The lodes of copper ore generally lie deeper than those of tin, and are chiefly of the pyritous and sulphureted kinds, with a small proportion of arsenic. The process of refining it is the same as that employed for the tin ; when sufficiently refined, the scoria is removed, and it is emptied with ladles, coated with clay, into oblong moulds, containing about 150 pounds weight.

There are also a few lead-mines in this county ; the kind of ore most frequently found is deno- minated galena, or pure sulphuret of lead, which is met with both in crystallisations, and in masses of a bluish-gray color, and foliated tex- ture. The principal lead-mines are, Huel Pool and Huel Rose, in the neighbourhood of Heis- ton. Gold has been found in Cornwal., but iu such small quantities as not to warrant any ex- pensive operations to procure it. The miners

are in the habit of carrying a quill about their person, in which they put the particles which are frequently found among the stream tin, and when full, sell it to the goldsmiths. The largest quantity ever found together, weighed fifteen penny-weights and sixteen grains. Silver is found in larger quantities, and the mine of Huel Mexico and the Herland copper-mine produced considerable returns of this metal. A particular account of this latter mine is published in the Transactions of the Royal Society for 1801. It is said, that this metal was found in such abun- dance, during the reigns of Edward I. and III., as to furnish the means for these monarchs to undertake their warlike enterprises.

Iron-mines are also common in Cornwall. Sulphuret of iron, called by

miners mundic, of the different colors of green, blue, purple, gold, silver, and copper, are often blended with the copper and tin lodes. Great abundance of the semi-metals, bismuth, zinc, antimony, cobalt, molfram, menachanite, arsenic, manganese, mo- lybdena, or the sulphuret of molybdenum, are also found here. The number of meu, women, and children employed in the different processes of mining, and deriving their sole subsistence therefrom, has been estimated at 14,000-

Besides the metals enumerated, the county of Cornwall abounds in fossil substances of great value. Amongst these, the moor-stone, or gra- nite, is of the first consequence. Slate and snap- rock, swimming-stone, Cornish diamonds, and China-stone may also be mentioned. This last- mentioned stone is the principal ingredient in the Staffordshire pottery. The Cornish diamonds are supposed to be the finest in England, con- sisting of beautifully crystallised and transparent quartz, in six-sided pyramids.

The fish which frequent the Cornish coast, are the pilchard, the blomer, or fin-fish (the physeta of the ancients), the grampus, the blue shark, the monk, or angel-fish, the sea adder, the sun- fish, &c. &c.; but of all these the most abundant and valuable is the pilchard. In size and form this fish very much resembles the common her- ring; immense shoals of them appear during the summer and autumn months, generally making their appearance at the Land's End in July. The number of persons employed in the pilchard fisheries, and in the different processes of salting the fish, &c., is about 5000, and the capital in- vested in the trade at least £300,000. From 40,000 to 60,000 hogsheads of these fish are caught in a season. Each hogshead, on the average, contains 3000 fish, and forty-eight hogsheads are computed to produce a ton of 252 gallons of oil, the price of which, some few years ago, was from £24 to £27. The principal fisheries on the southern coast are Mount's Bay, thence eastward to Devonshire ; and on the northern, at St. Ive's. Besides the fish already mentioned, mackarel are caught in great plenty ; also, the red mullet, and John Dories. Conger eels, of a most extraordinary size, weighing from sixty to 120 pounds are frequently caught; and oysters are in great abundancs.

Cornwall can boast of but few manufactories, if we except those connected with the prepara- tion of metals. There is a cloth manufactory at VOL VI.

Callington, a manufactory of crucibles at Ca- lenio ; at Truro a carpet-manufactory ; at Penryn extensive paper-mills, and breweries that supply Falmouth ; at Hayle there are extensive works for making copper spikes and nails for ship-build- ing ; and at Launceston, St. Austle, Bodmin, &c. coarse woollen-cloths are made. The chief exports of Cornwall are tin, copper, moor-stone, China-stone, fish, cattle, pigs, and potatoes. The chief trading ports are Padstow, Boscastle, Portrieth, the river Hayle, St. Ive's,

Falmouth, Penzance, Fowey, Looe, and Truro.

The ancient Roman name of this part of Bri- tain is Cornubia, the inhabitants were called Cornubii, both names probably originating iu the circumstance of the land terminating in a point or promontory. Cornwall abounds in an- tiquities supposed to be Druidical, the most re- markable of which are, cairns, circles, and cromlechs. The celebrated loggan-stones consist of immense blocks of granite, one of them upwards of ninety tons in weight, so critically poised on the top of high rocks, that the slightest force is sufficient to stir them. Cornwall returned no less than forty-four members to the house of commons. It possessed more boroughs than any county in England ; of these, thirteen have been disfranchised by the reform bill, and the represen- tation of four of the remaining has been reduced from two to one member. The assizes are held at Launceston and Bodmin alternately. The population, in 1832, amounted to 302,440 souls.

CORNWALL, a township of the United Statts, in Addison county, Vermont, on Lake Cham- plain. Population 1000. Also, a township of the United States, in Orange county, New York; and the name of another township in Connec- ticut.

CORNWALL, CAPE, a cape on the west coast of Cornwall, at the extremity of England. Long. 5° 55′ W., lat. 50° 10′ N.

CORNWALL, CAPE, the south-west point of land on the north-west of the passage of Endea- vour Straits, New Holland. Long. 141° E., lat. 10°43'S.

CORNWALL, CAPE, a cape on the south-west side of an island near the north coast of New Holland. Long. 219° W., lat. 10° 43′ S.

CORNWALL, NEW, a country in the western part of North America, bordering on the Pacific and situated N. N. W. of New Hanover. It extends from Gardner's canal, lat. 53° 15′ to Fre- derick's Sound, 57° 5′ N. On this coast are the Prince of Wales's Archipelago, Queen Charlotte's Islands, Pitt's Archipelago, Duke of York's Island, Island of Revilla Gigedo, and various other smaller ones.

CORNWALLIS (Charles), marquis of, the eldest son of Cha/les, first earl of Cornwallis, was born in 1738, and received his education at Eton and St. John's College, Cambridge. In 1765 he was appointed aid-de-camp to the king, and colonel of foot. After passing through various promotions, he obtained, in 1793, the rank of general, and represented the borough of Eye, in parliament. In 1762 he succeeded to the peerage, but did not distinguish himself in parliament. He accepted, in 1776, a command in America, and distinguished himself at the

battle of Brandywine the following year, and at the siege of Charlestown. Being made, soon after, governor of South Carolina, he obtained the victories of Camden and Guildford, and formed a plan of invading Virginia, in which he failed, and was made prisoner, with his whole army. Pamphlets were published, on this occa- sion, in which lord Cornwallis blamed Sir Henry Clinton for not coming up to his aid in time ; but, soon after his return to England, he was re- moved from his place of governor of the Tower. He was re-appointed, however, in 1784. In 1786 lord Cornwallis was sent out to India with the appointment of commander-in-chief and go- vernor-general ; and, not long after, the govern- ment of Bengal found it necessary to declare war against the sultan of the Mysore, for an at- tack upon the rajah of Travancore, the ally of the English. The first campaign was indecisive. In March, 1791, his lordship invaded Mysore, and in the year after besieged Seringapatam, and obliged Tippoo Saib to sue for peace ; to give up part of his dominions ; to pay a large sum of money, with a promise of a more considerable portion of treasure ; and as hostages for the per- formance of this treaty, to entrust two of his sons to the care of the British. On the conclu- sion of the peace, lord Cornwallis returned to England, and was created a marquis, appointed master-general of the ordnance, and admitted a member of the privy-council. In 1798 he was appointed lord-lieutenant of Ireland, which office he filled until 1801, conducting himself with great firmness, judgment, and conciliation. In the same year he was sent to France, and signed the peace of Amiens. In 1804, on the recall of marquis Wellesley, lord Cornwallis was again appointed governor-general of India, and died the following year at Ghazepore, in the province of Benares. Lord Cornwallis, as a military man, was active, vigilant, and persever- ing; his personal character was amiable and unassuming ; and, if his talents were not bril- liant, his good sense, aided by a just ambition, effected much. He married Jemima, the daughter of James Jones, Esq. by whom he had one son, Charles, the late marquis, who has since died without issue.

CORO, a sea-port of the province and govern- ment of Venezuela, South America, situated in a dry sandy plain. The inhabitants, who amount to 10,000, carry on some commerce in mules, hides, goats, sheep-skins, &c., which are shipped at the port. The town has no aqueducts, and little water. That used by the inhabitants is ‘ brought to them and sold in barrels, on the

backs of asses. The seat of government, civil and ecclesiastical, has been removed hence on ac- count of its unfavorable situation. It is a league distant from the sea, and 240 miles west of Caraccas.

COROLLARY, n. s. Fr. corollaire ; Lat. corollarium, from corolla ; finis coronat opus. A conclusion from premises; something which follows in addition to the proposition demon- strated ; formerly surplus, something more than was absolutely necessary.

Now since we have considered the malignity of this sin of detraction, it is but a natural corollary, that •we enforce our vigilance against it.

Government of the Tongue.

Bring a corollary Rather than want. Slia/upeure. Tempeit.

As a corollary to this preface, in which I have done justice to others, I owe somewhat to myself.

Dryden's Fables. Preface.

COROMANDEL, or CHOLAMANDA, is a line of coast extending along the east side of the bay of Bengal, from the Point Calymere to the mouths of the Krishna River, or about 350 miles. Its proper name is Chola Mandala, which signifies, in the Sanscrit language, the orbit or circle ; though, probably, it received its name from the Chala dynasty, the ancient sovereigns of Tanjore. It is written Choramandel in the records of Madras, up to the year 1779. The coast of Coromandel is, for the most part, open roadstead; and, although it contains a number of flourishing towns, it does not possess a single harbour. Con- siderable difficulty is experienced in landing, on account of the surf, except in the bay of Coringa, and in those places where proper boats are pro- vided. During the period the northerly wind, or monsoon, prevails here, a southerly wind reigns on the coast of Malabar, and vice versa. The northerly winds blow on this coast from about the middle of October till April, and such is their violence during the first months, that it is dangerous for any ships to be near the coast ; the government's and company's are consequently ordered to quit it by the 15th of October. This period is called the great monsoon. The souther- ly winds set in about the middle of April, and continue till October; durins: these months Co- romandel may be approached with perfect safety. Parching hot winds prevail in the course of these latter months, which wither up every trace of vegetation, and even check respiration ; but when the rains fall, the plants revive, and the whole face of nature is restored to a beautiful verdure. It is an observation of the natives, which has been confirmed by the experience of many Europeans, that the longer these hot

land winds blow, the more healthy are the following months, as they serve to purify the air.

Coromandel being situated within the tropics, has two rainy seasons ; the first when the sun passes it in going to the north, and the other on the sun's return to the south. The climate, not- withstanding its fluctuations of temperature, is considered, on the whole, healthy, at least to those who do not expose themselves too much to the influence of the sun, or sleep in the dew.

CORON, a strong sea-port of the Morea, in the province of Belvedere, situated on a penin- sula in the gulf to which it gives name. It was anciently called the gulf of Messene, and has a secure harbour, and some trade in corn and oil. In the middle of the peninsula is a high rock, which commands the fortifications ; and on the opposite side stands a small suburb. It is the see of a Greek archbishop : sixteen miles south of Modon, forty south-west of Misitra, and eighty S.S.W. of Corinth.

CORO'NA, n. s. Latin. A large flat mem- ber of the cornice, so called because it crowns the entablature and the whole order. It is called by workmen the drip.

In a cornice the gola or cymatium of the corona, the coping, the modillions or dentelli, make a noble shew by their graceful projections. Spectator

CORONATION.

CORONA, in anatomy, denotes that edge of the glans penis where the preputium begins.

CORONA, in architecture. See ARCHITEC- TURE.

CORONA, in botany, a name given by some to the circumference or margin of a radiated com- pound flower. It corresponds to the radius of Linnaeus ; and is exemplified in the flat, tongue- shaped petals, which occupy the margin of the daisy and sun-flower.

CORONA, in antiquity, acrownof which there were several kinds, as corona civica, muralis, &c. See their respective articles.

CORONA, in natural history and optics, a lu- minous circle surrounding the sun, moon, pla- nets, or stars. See ANTHET.ION, HALO,, and PAR-HELION.

CORONA f MPERIALIS, in conchology, a name given by some to a species of voluta, differing from the other shells of that family, by having its head

ornamented with a number of points, form- ing a sort of crown. See VOLUTA.

CORONA, MONTE, an important place of Aus- tria, in Tirol, to which the French retreated on the 24th February 1757, after being repulsed from Saluro by the Austrians, who soon after dislodged them also from this place.

CORON.ZE, in ancient geography, the name of two towns : 1. In Bceotia near mount Helicon, famous for the defeat of the Athenians and Boeo- tians by Agesilaus : 2. In Thessaly, having Nar- thacium on the east, and Lamia, near the Sper- chius, on the north.

CO'RONAL, n. & adj.-

CO'RONALLY, adv.

CO'RONARY, adj.

CORONA'TION, n. s.

CO'RONET, n. s.

relating to the top of the head. Coronally is circularly ; in a crown-like manner. Coronary signifies, relating to a wreath or crown ; placed on the head like a crown; it is also applied to arteries, which are fancied to encompass the heart like a garland. See ANATOMY. Corona- tion is the act of crowning a king ; the assembly present at that act ; likewise the name given by some of our old writers to a species of flower, but the modern appellation of which I am un- able to ascertain. Coronet is an inferior kind of crown, worn by peers ; poetically, any orna- mental head-dress. See HERALDRY.

And all should be within a terme, Without more excusation, Both feste and coronation. Chaucer's Dream.

And crowne your heades with heavenly coronall, Such as the angels wear before God's tribunall.

Id. Faerie Queene. And on his bed like to a coronet He wore, what seemed strange to common view

Id.

Bring coronations, and sops in wine, Worn of paramours.

Spenser. Shepfterd's Calendar. Fortune smiling at her work therein, that a

scaffold of execution should grow a scaffold of coronation.

Sidney.

The rest was drawn into a coronet of gold, richly set with pearl. fd.

Fr. and Sp. coro- nal ; Lat. corona. A. . coronal is a crown ; a garland. As an adjective, it means

Willingly I came to Denmark, To shew my duty in your coronation.

Shakspeure. Hamlet.

A cough, Sir, which I caught with ringing in the king's affairs upon his coronation day. Id. Henry IV.

In his livery Walked crowns and coronets • realms and islands

were As plates dropt from his pocket.

Id. Antony and Cleopatra. All the rest are countesses

Their coronet! say so.

Id. Henry VIII. The pomp of coronation Hath not such power my fame to spread, As this my admiration. Davies.

Under a coronet his flowing hair, In curls, on £ither cheek played-

Milton. Paradise Lust.

The basilisk of elder times was a proper kind of serpent, not above three palms long, as some account ; and differenced from other serpents by advancing his head, and by some white marks, or coronary spots, upon the crown. Browne.

Now empress fame had published the renown Of Shad well's coronation through the town.

Dryden's Macfl.

Nor could our nobles hope their bold attempt, Who ruined crowns, would coronets exempt.

Dry den.

A man of about forty-five years of age came to me, with a round tubercle

between the sagittal and coro- nal suture. Wiiemun.

Peers and dukes, and all their sweeping train, And garters, stars, and coronets appear. Pope.

In pensive thought recal the fancied scene,

See coronations rise on ev'ry green. Id.

The substance of the heart itself is most certainty

made and nourished by the blood, which is conveyed

to it by the coronary arteries. Bentley's Sermons.

If there is an evil in this world, 'tis sorrow and

heaviness of heart. The loss of goods — of health —

of coronets and mitres, are only evil, as they occasion

sorrow ; — take that out — the rest is fancy, and dwel-

leth only in the head of man. Sterne.

We boast some rich ones, whom the gospel sways,

And one who wears a coronet and prays ;

Like gleanings of an olive-tree they show,

Here and there one upon the topmost bough. Cowper.

The flesh (of the sturgeon) was so valued at the time

of the emperor Seveius, that it was brought to table

by servants with coronets on their heads, and preceded

by music. Darwin.

Courtiers for coronets their conscience pawn ; Clerks in prunello crawl, then soar in lawn.

Huddesford.

Thick leaves shall form our coronal, like Spring's, And round our necks shall glance the Hooni strings. Byron. The Island.

CORONALE Os, the os frontis. See ANA- TOMY.

CORONARY ARTERIES. See ANATOMY.

CORONARY STOMACHIC, a vein inserted into the trunk of the splenic vein, which, by uniting with the mesenteric, forms the vena porta.

CORONARY VEIN, a vein diffused over the exterior surface of the heart.

CORONATION CEREMONIES, speaking histori- cally, seem to appertain to monarchical govern- ment, in every form of it, and abound with political, feudal, and national peculiarities, that

throw considerable light on history. Our French neighbours have their Historical Treatises on the subject by M. Merlin and others : and we have often pored over the splendid folio of Mr. Sand- ford, describing, with great exactitude, the co- ronation of James II. We cannot here enter very minutely into the subject ; but the corona- tion of our monarchs presents too wide a field of meditation to an intelligent age to be wholly overlooked.

A brief account of the entire regalia, royal vestments, and principal offices of the splendid scene, is what we shall endeavour to furnish to the reader.

SECT. I. — OF THE REGALIA AXD ROYAL

VESTMENTS.

I. The Regal Chair. —The regalia of England are the symbols of a monarchical authority that has been transmitted by coronation ceremonies for upwards of ten centuries. But the incorpo- ration of England, Scotland, and Ireland, into one united kingdom, was an event peculiar to the coronation of George IV. to have recognised. The history of the Fatal Stone, called also by the Irish the Stone of Fortune, is very curious ; and has induced the learned Toland to call it ‘ the ancientest respected monument in the world.’ It is to be traced, on the best authorities, into Ireland; whence it had been brought into Scot- land, and had become of great notoriety in Ar- gyleshire, some time before the reign of Kennith, or A. D. 834. This monarch found it at Dun- staffnage, a royal castle; enclosed it in a wooden chair, and removed it to the abbey of Scone, where for 450 years ‘ all kingis of Scotland war crownit’ upon it ; or quhil ye tyme of Robert Bruse.

In quhais tyme, besyde mony othir crueltis done be kyng Edward Lang Schankis, the said chiarof merbyll wes taikin be Inglismen, and brocht out of Scone to London, and put into Westmonistar, quhaer it remains to our dayis.'

An ancient Irish prophecy, quoted by Mr. Taylor in his learned ' Glory of Regality,' as- sures us, that the possession of this stone is essen- tial to the preservation of regal power. It runs literally, ' The race of Scots of the true blood, if this prophecy be not false, unless they possess •the Stone of Fate, shall fail to obtain regal power.' King Kennith caused the leonine verses follow- ing to be engraved on the chair : —

Ni fallat fatum

Scoti quocunque locatum

Invenierrt lapidem

Regnare teneutur ibidem." Thus given by Camden,

Or Fate is blind,

Or Scots shall find,

Where'er this stone

A royal throne.

A prophecy which is said to have reconciled many a true Scot to the Union in queen Anne's time; and which, since the extinction of the Stuart family, is remarkably fulfilled in the claims of the house of Brunswick,— George IV. being now the legitimate heir of both lines

Among the northern nations, the practice ' was to form a circle of large stones, commonly twelve m number, in the middle of which one was set

up, much larger than the rest : this was the royal seat ; and the nobles occupied those surrounding it, which served also as a barrier to keep off the people who stood without. Here the leading men of the kingdom delivered their suffrages, and placed the elected king on his seat of dig- nity.' From such places, afterwards, justice was frequently dispensed.

The old man early rose, walked forth, and sate On polished stone, before his palace gate ; With unguent smooth the lucid marble shone, Where ancient Neleus sate, a rustic throne.'

Homer's Odyss. Pope's Tr. 1. 496 — 10

Thus arises the name of our court of king's bench.

At the coronation of our kings, the royal chair is now disguised in cloth of gold : but the wood- work, which forms its principal parts, is sup- posed to be the same in which Edward I. recased it, on bringing it to England.

1. Of the Crowns — We can only speak to the growth and antiquity of their present ' fashion,' none of those now used being of older date than the reign of Charles II. This monarch issued a commission for the ' remakeing such royall or- naments and regalia' as the rebellious parliament of his father had destroyed, in which ' the old names and fashions' were directed to be carefully sought after and retained. Upon this authority., we still have the national crown with which our monarchs are actually invested, called St. Ed- ward's, although the great seal of the Confessor exhibits him wearing a crown of a very different shape.

.Whether the parent of our present crowns was the eastern fillet, in the tying on of which there was great ceremony, according to Selden, —the Roman or Grecian wreath, a ' corruptible crown' of laurel, olive, or bay,— or the Jewish diadem of gold, — we shall leave to antiquarian research.

' This high imperial type of [England's] glory' has slowly advanced, like the monarchy itself, to its present commanding size and brilliant ap- pearance. From the coins and seals of the re- spective periods, several of our Anglo-Saxon princes appear to have worn only a fillet of pearl, and others a radiated diadem, with a crescent in front, /tthelstan's crown was of a more regular shape, resembling a modern earl's coronet. On king Alfred's there was the singular addition of ' two little bells ;' and the identical crown worn by this prince seems to have been long preserved at Westminster, if it was not the same which is described in the Parliamentary Inventory of 1642, as ' king Alfred's crowne of gould wyer worke, sett with slight stones.' Sir Henry Spel- man thinks, there is some reason to conjecture that ' the king fell upon the composing of an im- perial crown. ;' but what could he mean by this accompaniment?

Gradually the crown grew from ear to ear, and then from the back to the forehead ; some- times it is represented as encircling a cap or helm, and sometimes without. William the Conqueror and his successor wore it on a cap adorned with points, and with ' labels hanging at each ear;' the Plantagenets, a diadem orna-

inented with fleurs-de-lis or strawberry leaves ; between which were small

globes raised, or points rat er lower than the leaves ; Richard III. or Henry VII. introduced the crosses; about the same time (on the coins of Henry VII.) the arches first appear; and the subsequent varieties of shape are in the elevation or de- pression of the arches. The maiden queen wore them remarkably high. Blood's exploit with the new crown of Charles II. is told to all the young visitors at the Tower. It is only.won- derful that, in that age of plots, no political ob- ject or accusation was connected with it.

3. The Sceptre is a more ancient symbol of royalty than the crown. Homer speaks of ' sceptred kings' — (TJMJTTT-OVXOI /SaertXrjef ; and the book of Genesis, ' of far elder memory,' of a sceptre, as denoting a king or supreme gover- nor. There is a very early form of delivering this ensign of authority preserved in the Saxon coronation services ; and the coins and seals of succeeding reigns usually place it in the hand of our monarchs. Very anciently, too, our kings received at their coronations a sceptre for the right hand, surmounted by a cross ; and for the left, sometimes called the verge, one that termi- nated in a globe, surmounted by a dove. The two great symbols of the Christian religion are thus professedly embraced ; but the monarch never appears with two sceptres except on this occasion.

4. The Ampulla, or Golden Eagle, and the ' holy oil' which is poured from it, are connected, like the royal chair, with some of the miracles that no one now believes, and with some inter- esting historical facts.

Amongst the honors bestowed by the Virgin on St. Thomas a Becket (according to a MS. in the Cotton Library), he received from our Lady's own hands, at Sens, in France, a golden eagle, and a small phial of stone or glass, containing an unction, on whose virtues she largely expatiated. Being then in banishment, he was directed to give them in charge to a monk of Poictiers, who hid them in St. Gregory's church at that place, where they were discovered in the reign of Ed- ward III., with a written account of the vision ; and, being delivered to the Black Prince, were deposited safely in the Tower. Henry IV. is said to be the first prince anointed with these vessels.

*' Holy oil' still retains its use, if not its virtue, in our coronations. The king was formerly anointed on the head, the bowings of the arms, on both shoulders, and between the shoulders, on the breast, and on the hands ; but the cere- monials of the last two coronations only prescribe the anointing of the head, breast, and hands. In these, too, nothing is said of the * consecration' of the oil, which seems anciently to have been performed on the morning of the coronation.*

With the spread of Christianity, or rather of the papal domination, over the kingdoms of western Europe, came the adoption of this rite into the

coronation ceremonies of its princes. It at once increased the influence of the church, and surrounded the monarch with a popular ve- neration. The three distinct anointings yet re- tained, (i. e. on the head, breast, and hands or

arms,) were said by Becket to indicate glory, holiness, and fortitude : another prelate, one of the greatest scholars of his age, assured our Henry III., that as all former sins were washed away in baptism, ‘ so also by this unction.’ Richard IT. is made to say, by Shakspeare, on the invasion of Bolingbroke,

Not all the water in the rough rude sea Can wash the balm from an anointed king.

Sir Walter Scott, in his notes to Marmion, speaks of a singular ancient consecration of the kings at arms in Scotland, who seem to have had a regu- lar coronation down to the middle of the six- teenth century, — only that they were anointed with wine instead of oil.

5. The Royal Swords are named, Curtana, or the Sword of Mercy ; the Sword of Justice to the Spirituality ; the Sword of Justice to the Tem- porality; and the Sword of State. Of these the last alone is actually used in the coronation, being that with which the king is girded after his anointing ; the rest are only carried before him by certain great officers. But Curtana has been honored with a proper name since the reign of Henry III., at whose coronation it was carried by the earl of Chester. It is a flat sword, with- out a point ; looking to which circumstance, and to its being also entitled the Sword of Mercy, some etymologists have traced it to the Latin curto, to cut short ; while other writers, among whom is the learned Mr. Taylor, would transfer our researches to the scenes of ancient chivalry, and the exploits of Oger the Dane, or Orlando, as affording the title to this appendage of the mo- narchy. ‘ The sword of Tristan,’ says this writer, ‘ is found (ubi lapsus !) among the regalia of king John; and that of Charlemagne, Joyeuse, was preserved to grace the coronation of the kings of France. The adoption of these titles was, in- deed, perfectly consonant with the taste and feel- ing of those ages, in which the gests of chivalry were the favorite theme of oral and historical celebration ; and when the names of Durlindana, of Curtein, or Escalibere, would nerve the warˆ rior’s arm with a new and nobler energy.’

The Sword of Justice to the Spirituality is ob- tuse, that of Justice to the Temporality sharp at the point. ‘ Henry VIII.,’ says a writer in a respectable periodical publication for July, ‘ seems to have exercised his taste in endeavour- ing to abolish this discrepancy.’

6. Of the Ring, Spurs, and Orb ; and St. Ed- ward's Staff". — In the book of Genesis we read of Pharaoh's ring being given by him to Joseph, as a method of investing him with power : and thus the Persian monarch Ahasuerus transferred his authority to Haman and to Mordecai. What is added in the Scripture narration of one of these latter cases ; (Esther, iii. 10. and viii 2,) will illustrate the significancy of this mode of in- vestiture.

By the exact mode that we have quoted from Scripture, do we find Offa, king of the East Angles, appointing Edmund as his successor; and with the ring, it is notice^, with which he had been invested at his own promotion to the royal dignity. On the detention of James II. by the fishermen of Sheerness, in his first attempt

at escape from this country, in 1688, it is parti- cularly noticed in his Memoirs, ' The king kept the diamond bodkin which he had of the queen's, and the coronation ring, which for more security he put into his drawers.'

This is said to have been originally a favor- rite ring of the beautiful but unfortunate Mary queen of Scots ; to have been sent by her, at her death, to James I. ; through whom it carne into the possession of our Charles I., and on his ex- ecution, was transmitted by bishop Juxon to his son. It lately came into the possession of his present Majesty, through the channels by which he has obtained all the remaining papers of the house of Stuart.

Richard II. resigned the crown to Henry IV. by transferring to him his ring. A paper was put into Richard's hands, from which he read an acknowledgment of being incapable of the royal office, and worthy, from his past conduct, to be deposed ; that he freely absolved his sub- jects from their allegiance, and swore by the holy Gospels never to act in opposition to this surren- der : adding, that if it were left wholly to him to name the future monarch, it should be Henry of Lancaster, to whom he then gave his ring.

The Spurs are a very ancient emblem of knight- nood ; in later coronations, the abundance of ce- remonies has only allowed time for the king's heel to be touched with them. At the battle of Crecy, when Edward III. was requested to send reinforcements to his son, his reply was: ' No; tell Warwick he shall have no assistance. Let the boy win his spurs.'

The Orb, or Mound (Fr. monde), is an emblem of sovereignty, said to be derived from imperial Rome; and to have been first adorned wi A the cross by Constantine, on his conversion to Chris- tianity. It first appears among

the royal insignia of England on the coins of Edward the Confes- sor; but Mr. Strutt authenticates a picture of Edgar, ‘ made in the year 996,’ which repre- sents that prince kneeling between two saints, who bear severally his sceptre and a globe sur- mounted by a cross. This part of the regalia being indicative of supreme political power, has never been placed in the hands of any but kings or queens regnant. In the anomalous case of the coronation of William and Mary as joint so- vereigns— the ‘ other world,’ that Alexander wept for, was created ; and the spare orb is still to be seen among the royal jewels of England !

The only remaining member of the regalia now in use is St. Edward’s Staff; hu-t whether so called irom any of the pilgrimages of the Confessor — from its being designed to remind our monarchs of their being but pilgrims on earth — or simply from its being offered with the other regalia at that monarch’s shrine, on the coronation of our kings, we have not the means of determining. All the regalia are supposed, indeed, to be in the custody of the dean, as the successor of the abbot of Westminster, at the period of each coronation.

7. The Royal Vestments, of England, are amongst the most gorgeous ‘ makings of a king’ known to history. In the robes ordinarily de- signed to be worn in parliament; and consisting of a surcoat of the richest crimson velvet, and a mantle and hood of the same, furred with ermine,

and bordereo with gold lace, the king first makes his appearance on the coronation day , (on which he wears a cap of state, of the same materials, and at this time only). These are, therefore, called his Parliament Robes, in distinction from the Robes of Estate, for which he exchanges them in the abbey, at the close of the coronation, and which only differ from the former in being made of purple velvet.

These sumptuous external robes are of course laid aside during the anointing, and other parts of the coronation service.

The Armil, or Stole, is the only ecclesiastical symbol now retained in the investiture of our kings. In ‘ MS. W. Y. in the College of Arms,’ quoted by Mr. Taylor, Henry VI. is said to have been ‘ arrayed at the time of his coronation as a bishop that should sing mass, with a dalmatic like a tunic, and a stole about his neck. (Glory of Regality, p. 81). This writer insists that the conductors of our English coronations since Henry VII’s time (at the least) have very singu- larly mistaken the stole for the armil of more ancient times, and tranferred to the latter the form of delivery originally designed for ‘a brace- let or royal ornament of the wrist.’ It is singu- lar that the form in question should appear, as it certainly does, to suit either symbol. ‘ Receive this armil as a token of the divine mercy em- bracing thee

on every side.' The ornament at present in use embraces the neck.

SECT. II. — OF THE ASSISTANT OFFICES.

1. Of the Prelate who crowns the King. — As early as the Norman Conquest, this privilege of the see of Canterbury is spoken of as well established ; and but two subsequent instances occur of its being overlooked or denied : both remark- ably associated with the history of the papal power in this country. In the first, that of the coronation by the archbishop of York of prince Henry, son of Henry II., may be traced the in- cipient cause of the assassination of archbishop Becket, whose martyrdom became conducive to the highest triumphs of that power : in the se- cond, queen Elizabeth's coronation by Ogle- thorpe, bishop of Carlisle, and the refusal of all the other prelates to assist in the ceremony, we behold its dying struggles for a dominion never more to be renewed.

2. The Lord Great Chamberlain's office com- mences with carrying the king his shirt on the morning of the coronation, and assisting trie chamberlain of the household to dress his ma- jesty. Queens regnant depute this office to some of the ladies of the household : we are told that the celebrated duchess of Marlborough last en- joyed it, at the coronation of queen Anne.

The office gives a claim to all the furniture of the royal chamber, in which its duties begin. The lord chamberlain is official governor of the palace for the time being, and the principal per- sonal attendant of the king.

3. The Lord High Constable also attends the royal person, assists at the reception of the rega- lia from the dean and chapter of Westminster, and, together with the earl marshal, ushers the champion into the hall.

4. Of the Royal Championship.— .Whether we

consider its uninterrupted exercise, and that by one family, for so many centuries, its feudal im- port, or its present splendid and imposing effect, the office of champion certainly eclipses all the other services of the coronation.

Since the coronation of Richard II. A. D. 1377 (of which there is in Walsingham a de- tailed account) this office has been performed by a Dymoke, the head of the family of that name, who have held the manor of Scrivelsby in Lin- colnshire, worth about £1200 per annum, by the tenure of this service. During the reigns of Edward II. and III. the right was in

dispute : prior to that period, and from the days of the Conqueror it was vested in the far-famed family of Marmion, whose chief, as

Lord of Fontenay,

Of Lutterworth and Scrivilbaye, Of Tamworth tower aad town,

came from Normandy with William, and is there supposed to have held the first of these posses- sions, on condition of performing the service of champion to the successive dukes.

The championship is connected also with a remarkable feature of ancient jurisprudence, the wager of battle, recently abolished. This was regarded as an appeal to the judgment of God ; and succeeded, at the Conquest, the fires and other ordeals of our ancestors, which the Nor- mans affected to despise. The reader, however, may be disposed to conjecture, that as much of the divine interposition might be expected to decide the healing of a burn or scald, as the issue of a battle.

The wager of battle was certainly of more splendid pretensions, and was introduced at first with these stipulations. If the opposite parties were countrymen, they were to follow their na- tional customs, whatever they were ; if the ap- pellee were a foreigner, or of foreign descent, he might offer wager of battle, and on its being de- clined, purge himself by his own oath and that of his witnesses, according to the Norman law ; or, if a native of the country, he might have his choice of the trial by ordeal or by battle.

The solemn feelings and great religious sin- cerity with which our forefathers regarded com- bats of this description, cannot be more power- fully or more accurately depicted, than in the memorable combat-scene of Ivanhoe.

An inquisitio post mortem, dated the se- venth of Edward III., speaks of the tenure of the manor appertaining to the royal champion as follows : ‘ That the manor of Scrivelsby is holden by grand sergeanty, to wit, by the service of find- ing, on the day of coronation, an armed knight, who shall prove by his body, if need be, that the king is true and rightful heir to the kingdom.’

It is remarkable that this important document neither prescribes the absolute appearance of the lord of the manor as knight, but only that he is bound to ‘ find an armed knight ‘ if required ; nor does it describe the office as hereditary. With regard to the latter point, it would seem that possession is the entire law of the case, and we suppose the office would pass with the pro- perty by sale ; with respect to the former, the ho- nor seems to have called forth the valor of every

successive lord, and princes have seldom ima gined that their subjects can in such a cause overstep their duty.

Anciently, the champion rode with the royal procession from the hall to the abbey, and pro- claimed the challenge on his way, as well as at the feast : some instances have occurred of its being repeated also in the city, as at the corona- tion of Henry IV. At his predecessor's corona- tion it is remarked by Walsingham, that Sir John Dimmock, being armed according to custom, came to the door of the Abbey with his attend- ants before the service was concluded, and that the earl marshal of the day went out to him and said, he should not have made his appearance so soon.

The fate of our recent and future champions has become of late duly regarded by law. To challenge all who should dispute the pretensions of the king is rightly enough a post of honor ; to accept the challenge would always, we know, have been still more bold ; but an act of parlia- ment passed during the regency (59 Geo. III. cap. 46.) abolishes altogether the trial and actual battle ; so that the champion's lands, after being held with manifest peril for centuries, have at last become a peaceable possession ; and all dispute respecting the crown is of course as fully disposed of. It no longer rests on the valor of a single arm — not even on that of a Marmion, or a Dymoke.

5. There was another office, that of the Lord High Steward of England, to which in former times much authority was attached, He pos- sessed a kind of vice-regal power on the demise of the crown and until the coronation of the rightful heir, and was a governor o" the. kingdom immediately under the reigning monarch, so as to be able to control or remove the judicial ser- vants of the crown, at any time. What was once the importance of this office is still indicated by the temporary guardianship of St. Edward's crown being committed to an officer bearing this title on the day of the coronation, and his honorable place of walking immediately before the king in procession. The earls of Leicester once enjoyed this great dignity hereditarily; through them it descended to the De Montford family, until, on the attainder of the last earl, it was granted by Henry III. to his younger son Edmund, by whom it became transmitted to John of Gaunt, and eventually to Henry IV. while duke of Lancaster; since which period it has been prudently suffered to merge in the crown.*

6. The hereditary Grand Almoner of England is an honor attached to the barony of Bedford. Its duties are to collect and distribute certain monies at the coronation from a silver dish ; which the almoner claims for his fee, together with all the cloth on which the king walks in procession from the door of the hall at West- minster to the abbey church.

7. The Chief Butlership is traced by authentic records into the hands of William de Albini, who came to England with William the Con- queror, and has been exercised by some of the noblest families in the country since. It is now an hereditary right of the duke of Norfolk as

carl of Arundel, and entitles the possessor to the best gold cup and cover, with all the vessels and wine remaining under the bar, and all the pots aud cups, except those of gold and silver, which shall be in the wine cellar after dinner.

8. The Dapifer or Sewer, who, ‘ in his sur- .»te, with tabard, sleeves, and a hoode about his neck, and his towell above all, served the messes,’ or arranged the dishes on the table of the coro- nation feast of Elizabeth, Henry VII.‘s queen, is an ancient worthy of the royal day, whose of- fice has become extinct. If the dishes are not become more tractable, or the royal observation less nice, royal feasting has become, perhaps, less rare in modern times, and this kind of skill, therefore, more common.

• 9. The Grand Carver — Grand Panniter, or provider of bread, and the Royal Napier, are offices that have also become extinct, while good carving and good living have been still found at the royal table ; and while the Chief Cup- bearer has retained his office and the possession of the manor of Great Wymondley, in Hertford- shire, as his reward.

10. The Chief Lardiner is also still entitled to notice, as having the care and management of the royal larder, and being duly careful of ‘ the remainder of beef, mutton, venison, kids, lard, and other flesh : as also the fish, salt, &c. remaining in the larder,’ which fall to his share of the feast. This office has been attached to the manor of Scoulton, in Norfolk, from the reign of Henry II.

11. Nor should we omit to notice that the Lord Mayor and Citizens of London claim a snug ‘ seat next the cupboard, on the left side of the hall,’ iu virtue of their right to assist the chief butler in his duties at the coronation feast ; or that his lordship serves the king after dinner with wine in a gold cup, having the cup and its cover for a fee. It is remarkable that the city claims a right to perform the same service, and to receive a similar fee, at the coronation of our queens : but as this escaped her majesty’s law officers in the late argument for her coronation, we will not suppose it had any connexion with the strong desire for that event at the Mansion House.

The mayor, bailiffs, and commonalty of Oxford also claim to assist in the office of butlery, and receive the humbler reward of three maple cups. With other presents — of grout or gruel, maple cups and napkins, to the king, gentle reader, we will suppose thou hast of late been sufficiently acquainted ; but the conspicuous duty of the Barons of the Cinque Ports must not pass unnoticed.

12. These ports claim to furnish sixteen sup- pcrters of the royal canopy, in the following pro- portion, i. e. Hastings 3 ; Dover 2 ; Hithe 2 ; Rye 2; Sandwich 3; Romney 2; ˆVinchelsea 2. It is called in an account of the coronation of Richard I. «a silk umbraculum, borne on four lances:' but is now generally composed of cloth of gold, having a gilt silver bell at each of the four corners, which are supported by four staves o < " silver. The origin of this claim is involved in such remote antiquity, that a charter of Charles II. spL-aks of ' the time of the contrary being liwer remem'jertd to have been.'

CORONE, in ancient geography, a iown of Messenia, situated on the sea. Pausanias takes it to be theApea of Homer; but Strabo, Thuria, and Pliny, Pedasus. It is now called Coron. See CORON.

CORONELLI (Vincent), a famous geogra- pher, born at Venice. His skill in the mathe- matics brought him to the knowledge of the count d'Estre'es. who employed him in making globes for Louis XIV. With this view Coronelli spent some time at Paris; and left a great number of globes there, which are esteemed. In 1685 he was made cosmographer to the state of Venice : and four years after, public professor of geogra- phy. He founded an academy of cosmography at Venice, and died in that city in 1718. He published above 400 geographical charts, an abridgment of cosmography, several books on geography, and other works.

CO'RONER, n. s. From Lat. corona, an of- ficer whose duty is to enquire, on the part of the king, how any violent death was occasioned ; for which purpose a jury is empannelled.

Go thou and seek the coroner, and let him sit o' my uncle ; for he 's in the third degree of drink ; he 's drowned. S/iakspeare.

CORONER, an ancient officer in England, so called because he has principally to do with pleas of the crown, or such wherein the king is more immediately concerned. And in this light the lord chief justice of the king's bench is the prin- cipal coroner in the kingdom ; and may, if he pleases, exercise the jurisdiction of a coroner in any part of the realm. But there are also par- ticular coroners for every county of England ; usually four, sometimes six, and sometimes fewer. This officer is of equal authority with

the sheriff; and was ordained, together with him, to keep the peace when the earls gave up the wardship of the county. He is chosen by all the freeholders of the county court; and by the statute of West- minster : 1. It was enacted that none but lawful and discreet knights should be chosen ; but it seems now sufficient if a man have lands enough to be made a knight, whether he be really knighted or not ; for the coroner ought to have an estate sufficient to maintain the dignity of his office, and answer any fines that may be made upon him for his misbehaviour ; and, if he has not enough to answer, his fine shall be levied upon the county, as a punishment for electing an insufficient officer. Now, indeed, through the culpable neglect of gentlemen of property, tli.> office has been suffered to fall into disrepute, and get into low and indigent hands; so that although formerly no coroners would be paid for serving their country, and they were by the afore- said statute of Westminster, 1. Expressly for- bidden to take A reward under pain of great for- feiture to the king ; yet for many years past they have only desired to be chosen for the sake of their perquisites; being allowed fees for their attendance by the stat. 3 Henry VII. cap, 1. which Sir Edward Coke complains of heavily, though since his time those fees have been much en- larged. The coroner is chosen for life, but may be removed, either by being made sheriff or chosen verderer, which are offices incompatible with the other; and by the stat. 25 Geo. II. cap

29, extortion, neglect, or misbehaviour, are also with the other ; and by the stat. 25 Geo. II. cap. 29, extortion, neglect, or misbehaviour are also made causes of removal.

His powers, like those of the sheriff, are either judicial or ministerial, but principally judicial. This is in a great measure ascertained by statute 4 Edward I. De officio coronatoris ; and con- sist, first, in enquiring when any person is slain, or dies suddenly, or in prison, concerning the manner of his death. And this must be super visum corporis ; for if the body is not found, the coroner cannot sit. He must also sit at the very place where the death happened. And his en- quiry is made by a jury from four, five, or six, of the neighbouring towns, over whom he is to preside. If any be found guilty, by this inquest, of murder, he is to commit to prison for farther trial, and is also to enquire concerning their lands, goods, and chattels, which are forfeited thereby : but whether it be murder or not, he must enquire whether any deodand has accrued to the king, or the lord of the franchise, by this death ; and must certify the whole of this inqui- sition to the court

of king's bench, or the next assizes. Another branch of his office is to enquire concerning shipwrecks ; and certify whether wreck or not, and who is in possession of the goods. Concerning treasure trove, he is also to enquire concerning the finders, and where it is, and whether any one be suspected of having found and concealed a treasure; ' and that may well be perceived,' saith the old statute of Edward I., 'where one liveth riotously, haunting taverns, and hath done so of Ions; time ; whereupon he might be attached and held to bail upon this suspicion only. The ministerial office of the coroner is only as the sheriff's substitute. For when just exception can be taken to the sheriff, for suspicion of partiality (as that he is interested in the suit, or of kindred to either plaintiff or defendant), the process must then be awarded to the coroner, instead of the sheriff, for execution of the kind's writs.

CO'RONET. An inferior crown worn by the nobility. The coronet of a duke is adorned with strawberry leaves; that of a marquis has leaves with pearls interposed ; that of an earl raises the pearls above the leaves ; that of a viscount is surrounded with only pearls; that of a. baron has only four pearls. See CROWN.

CORONILLA, jointed podded « olutea, a genus of the decandria order, and di.tdelphia class of plants; natural order thirty-second, papilionacese : CAL. is bilabiated, with two seg- ments above coalited ; the vexillum scarce any longer than the alae ; the legumen much con- tracted between the seeds. To this genus Lin- naeus also joins the emerus, or scorpion senna, though Mr. Miller makes it a distinct species. There are twenty-five species,, all plants of con- siderable beauty, with very bright yellow flowers ; but rather too tender for this climate, except the C. emerus. This species rises with a shrubby stem, branching numerously six or eight feet high, closely garnished with winged leaves of three pair of lobes, terminated by an odd one ; and, at the sides of the branches, numerous long flower-stalks, each supporting two or three large

yellow flowers of the papilionaceous kind, suc- ceeded by longish pods; it is easily propagated by seeds, and likewise by layers or cuttings. The leaves of this plant are esteemed laxative, and used as a substitute for common senna in some parts of Europe. A dye is procured by fermen- tation from the leaves like that of indigo.

CO'RPORAL. Fr. caporal • Ital. caporale ; Span, caborai ; probably from Lat. caput. A non-commissioned officer of infantry ; the lowest in rank, whose office it is to place and ren&uVe sentinels.

The cruel corporal whispered in my ear, Five pounds, if rightly tipt, would set me clear.

Gay.

CORPORAL, an inferior officer, under a serjeant, in a company of foot, who has charge over one of the divisions, places and relieves sentinels, and keeps good order in the corps de garde; he also receives the word from the inferior rounds 'which passes by his corps de garde : there are generally three corporals in each company.

CORPORAL, COR-PORALE, is also an ancient church term, signifying the sacred linen spread under the chalice in the eucharist and mass, to receive the fragments of the bread. Some say pope Eusebius first enjoined the use of the cor- poral ; others ascribe it to St. Silvester. It was the custom to carry corporals to fires, and to heave them solemnly against the flames, in order to extinguish them. Philip de Comines says, ' the pope made Louis XI. a present of the cor- porale, whereon my lord St. Peter sung mass.'

CORPORAL OF A SHIP. An officer that hath the charge of setting the watches and sentries, and relieving them ; who sees that all the sol- diers and sailors keep their arms neat and clean, and teaches them how to use them. He has a mate under him.

A CORPORAL OF A SHIP OF WAR is under the master at arms, and is employed to teach the of- ficers the exercise of small arms, or of musquetry ; to attend at the gang-way, on entering ports, and observe that no spirituous liquors are brought into the ship, unless by express leave from the officers. He is also to extinguish the fires and candles at eight o'clock in winter, and nine in summer, when the evening gun is fired ; and to walk frequently down in the lower decks in his watch, to see that there are no lights but such as are under the charge of proper sentinels. CO'RPORATE, v. n. & adj. ˆj Fr. corpo- CO'RPORATELY, adv. rel; Ital. cor-

CORPORA'TION, «. s. porale ; Span-

CO'RPORATURE, n. s. ish corporal;

CO'RPORAL, n. s. & adj. Lzt.corporalis,

CORPORA'LITY,TI. s. from corpus,

CO'RPORALLY, adv. > the body. The

CO'RPORAS, n. s. verb, to cor-

CORPO'REAL, adj. porate, which

CORPO'REALIST, n. s. meansto unite,

CORPO'REALLY, adv. to incorpo-

CORPO'REOUS, adj. rate, is obso-

CORPORE'ITY, n. s. j lete. Corpo-

rations will be found fully described in the quo- tation from Cowell, and under the separate article which relates to them. The word^ is vulgarly used to signify great fatness. The corporal, corporate or corporas, is the fine 'inen

cloth in which the eucharist is deposited, and which is looked upon with great reverence by the members of the Romish and Greek churches. Corporeal is relating to the body ; belonging to the body ; material, as distinguished from spiri- tual. ' In the present language,' says Johnson, 'when body is used philosophically in opposi- tion to spirit, the word corporeal is used as a corporeal being ; but otherwise corporal. Cor- poreal is having a body ; corporal, relating to the body. This distinction seems not ancient.' Corporality and corporeity denote materiality; the quality of being embodied ; corporature the state of being embodied ; corporally, bodily ; corporeous, bodily, having a body ; corporeally, in a material or bodily manner ; and corporate- ly, in a corporate capacity ; unitedly. A cor- porealist is one who denies the existence of spiritual substances.

A corporation is a body politick, authorized by the king's charter to have a common seal, one head of- ficer or more, and members, able, by their common consent, to grant or receive, in law, any thing within the compass of their charter : even as one man may do by law all things, that by law he is not forbidden ; and bindeth the successors, as a single man binds his executor or heir. Cowell.

Breaking forth like a sudden tempest, he overrun all Munster and Connaught, defacing and utterly sub- verting all corporate towns that were not strongly walled. Spenser on Ireland.

Of angels we are not to consider only what they are, and do, in regard of their own being ; but that also which concerneth them, as they are linked into a kind of corporation amongst themselves, and of so- ciety with men. Hooker.

They answer in a joint and corporate voice, That now they are at fall. Shakspeare Timon.

Whither are they vanished ? Into ths air ; and what seemed corporal Melted, as breath, into the wind. Id. Macbeth.

To relief of lazars and weak age, Of indigent faint souls past corporal toil, A hundred alms-houses right well supplied.

Id. Henry V.

Render to me some corporal sign about her, More evident than this. Id. Cymbeline.

That God hath been otherwise seen, with corporal eyes, exceedeth the small proportion of my under- standing. Raleigh. If this light be not spiritual, yet it approacheth nearest unto spirituality ; and if it have any atrpora- lity, then, of all other, the most subtile anJ pure. Id.

Of this we find some footstep in our law,

Which doth our root from God and nature take ; Ten thousand men she doth together draw,

And of them all one corporation make. Dame.*

And from these corporal nutriments, perhaps, Your bodies may at last turn all to spirit.

Milton's Paradise Lost. The swiftness of those circles attribute, Though numberless, to his omnipotence, That to corporeal substances could add Speed almost spiritual. /'/.

Since philosophy affinneth, that we are middle sub- stances between the soul and the body, they must admit of some corporeity, which supposeth weig -it or gravity. Browne.

The sun is corporally conjoined with basiliscus.

Id.

Corporal punishments must necessarily lose that effect, and wear out the sense of shame, where they frequently return. Shame in children has the same place that modesty has in women ; which cannot be kept, and often transgressed against. Locke.

He would come nearer to the discovery of the tex- ture and motion of the minute parts of corporeal things ; and in many of them, probably, get ideas of their internal constitutions :but then he would be in a quite different world from other people ; nothing would appear the same to him and

others : the visi ble ideas of every thing would be different. Id.

It is the saying of divine Plato, that man is nature's horizon, dividing betwixt the upper hemisphere of immaterial intellects, and this lower of corporeity.

Glanville't Scepsis.

The one attributed corporeity to God, and the other shape and figure. StiUingfleet.

God being supposed to be a pure spirit, cannot be the object of any corporeal sense. Tillotson.

The course is finished which thy fates decreed, And thou from thy corporeal poison freed.

Dryden's Fables.

Beasts enjoy greater sensual pleasures, and feel fewer corporal pains ; and are utter strangers to all those anxious and tormenting thoughts, which per- petually haunt and disquiet mankind. Atterbury.

The nobles of Athens being not at this time a cor- porate assembly, therefore the resentment of the com- mons was usually turned against particular persons.

Swift.

When men, therefore, break up the original com- pact or agreement which gives its corporate form and capacity to a state, they are no longer a people ; they have no longer a corporate existence ; they have no longer a legal coactive force to bind within, nor a claim to be recognized abroad. They are a number of vague loose individuals, and nothing more. Burke. The Corporation worshipful

He valued not an ace, But swallowed the Mayor, asleep in his chair,

And picked his teeth with the mace. Huddesford. I leave Don Juan, for the present — safe —

Not sound, poor fellow, but severely wounded ; Yet could his corporal pangs amount to half

Of those with which his Haidee's bosom bounded ! Byron. Don Juan.

This noble personage began to look A little black upon this new flirtation ;

But such small licences must lovers brook,

Mere freedoms of the female corporation. I /.

CORPORATION ACT is that which, prevents any person being legdly elected into any office re- lating to the government of any city or corpora- tion, unless he has within a twelvemonth pre- viously received the sacrament of the Lord's Supper, according to the rites of the church of England; and which enjoins him to take the oaths of allegiance and supremacy when he takes the oath of office ; otherwise his election is void. This act was abolished in 1828.

CORPORATIONS. The first general division of corporations is into aggregate and sole. Another division of corporations, either sole or aggregate, is into ecclesiastical and lay.

CORPORATIONS, AGGREGATE, consist of many persons united together into one society, and are kept up by a perpetual, succession of members, so as to continue for ever : of which kind are the mayor and commonalty of a city ; the head and

fellows of a college ; the dean and chapter of a cathedral church.

CORPORATIONS ECCLESIASTICAL, are where the members that compose it are entirely spiri- tual persons ; such as bishops ; certain deans and prebendaries ; all archdeacons, parsons, and vicars ; which are sole corporations : deans and chapters at present, and formerly prior and con- vent, abbot and monks, and the like, were bo- dies aggregate. These are erected for the fur- therance of religion, and perpetuating the rights of the church.

CORPORATIONS, LAY, are of two kinds ; civil and eleemosynary,

CORPORATIONS, CIVIL, are such as are erected for a variety of temporal purposes. The king, for instance, is made a corporation to pre- vent the possibility of an interregnum or va- cancy of the throne, and to preserve the posses- sions of the crown entire ; for, immediately upon the demise of one king, his successor is in full possession of the regal rights and dignity. Some corporations are erected for the good government of a town or particular district, as a mayor and commonalty, bailiff and burgesses, or the like ; some for the advancement and regulation of manufactures and commerce, as the trading com- panies of London, Edinburgh, &c. and others for the

better carrying on of divers special pur- poses, as churchwardens for conservation of the goods of the parish ; the College of Physicians and Company of Surgeons in London, for the im- provement of the medical science ; the Royal Society for the advancement of natural know- ledge ; and the Society of Antiquarians for pro- moting the study of antiquities.

CORPORATIONS, ELEEMOSYNARY, are such as are constituted for the perpetual distribution of the free alms, or bounty, of the founder, to such persons as he has directed. 'Of this kind are all hospitals for the maintenance of the poor, sick, and impotent; and all colleges; which last are founded for two purposes : 1 . For the pro- motion of piety and learning by proper regula- tions and ordinances. 2. For imparting assist- ance to the members of those bodies, in order to enable them to prosecute their devotion and studies, with greater ease and assiduity. And all these eleemosynary corporations are, strictly speaking, lay, and not ecclesiastical, even though composed of ecclesiastical persons, and although they in some things partake of the nature, pri- vileges, and restrictions of ecclesiastical bodies.

CORPORATIONS, SOLE, consist of one per- son only and his successors, in some particular station, who are incorporated by law, to give them some legal capacities and advantages, particularly that of perpetuity, which in their natural persons they could not have had. In this sense the king is a sole corporation ; so is a bishop ; so are some deans and prebendaries, distinct from their several chapters ; and so is every parson and vicar. And the use of this institution will be apparent, if we consider the case of a parson of a church. At the original endowment of parish churches, the freehold of the church, the church- yard, the parsonage-house, the glebe, and the tithes of the parish, were vested in the then par- son by the bounty of the donor, as a temporal

recompence to him for his spiritual care of the inhabitants, and with intent that the same emo- luments should ever afterwards continue as a recompence for the same care. But how was this to be effected ? The freehold was vested in the parson ; and, if we suppose it vested in his natural capacity, on his death it might descend to his heir, and would be liable to his debts and incumbrances ": or at best the heir might be com- pellable, at some trouble and expense, to convey these rights to the succeeding incumbent. The law, therefore, has wisely ordained that the par- son, quatenus parson, shall never die, any more than the king, by making him and his succes- sors a corporation. By which means all the original rights of the parsonage are preserved entire to the successor : for the present incum- bent, and his predecessor, who lived seven cen- turies ago, are in law one and the same person; and what was given to the one, was given to the other also.

The first of these political constitutions were introduced, as Plutarch says, by Numa, who find- ing, upon his accession, the city torn to pieces by the two rival factions of Sabines and Ro- mans, thought it a prudent and politic measure to subdivide these two into many smaller ones, by instituting separate societies of every manual trade and profession . They were afterwards con- sidered by the civil law (in which they were called universitates), as forming one whole out of many individuals; or collegia, from being gathered to- gether : they were adapted also by the canon law for the maintenance of ecclesiastical discipline ; and from them our spiritual corporations are de- rived. But our laws have considerably refined and improved upon the invention, according to the usual genius of the English nation ; parti- cularly with regard to sole corporations, con- sisting of one person only, of which the Roman lawyers had no notion, their maxim being that tres faciunt collegium : though they held, that if a corporation, originally consisting of three per- sons, be reduced to one, si universitas ad unum red it, it may still subsist as a corporation, et stet nomen universitatis.

Corporations, by the civil law, seem to have been created by the mere act and voluntary as- sociation of their members ; provided such con- vention was not contrary to law, for then it was illicitum collegium. It does not appear that the prince's consent was necessary to be actually given to the foundation of them ; but merely that the original founders of these voluntary and friendly societies (for they were little more than such) should not establish any meetings in oppo- sition to the laws of the state. But in England the king's consent, either impliedly or expressly given, is absolutely necessary to the erection of any corporation. The king's implied consent is to be found in incorporations which exist by force of the common law, to which our former kings are supposed to have given their con- currence ; common law being nothing else but custom arising from the universal agreement of the whole community. Of this sort are the king himself, all bishops, parsons, vicars, church- wardens, and some others ; who by common law have ever been held (as far as our books can

show us) to have been corporations, virtute officii : and this incorporation is so inseparably annexed to their offices, that we cannot frame a complete legal idea of any of these persons, but we must also have an idea of a corporation, capable to transmit his rights to his successors, at the same time. Another method of implication, by which the king's consent is presumed, is as to all cor- porations by prescription, such as the city of London, and many others, which have existed as corporations, time

whereof the memory of man runneth not to the contrary; and, therefore, are looked upon in law to be well created. For, though the members of them can show no legal charter of incorporation, yet in cases of such high antiquity the law presumes there once was one ; and that, by the variety of accidents which length of time may produce, the charter is lost or destroyed. The methods by which the king's consent is expressly given are either by act of parliament, or by charter. By act of parlia- ment, of which the royal assent is a necessary ingredient, corporations may undoubtedly be created : but it is observable, that most of those statutes, which are usually cited as having cre- ated corporations, do either confirm such as have been before created by the king ; as in the case of the college of physicians, erected by charter 10 Henry VIII., which charter was afterwards confirmed in parliament; or they permit the king to erect a corporation in future, with such and such powers; as is the case of the bank of E»gland, and the society of the British fishery. So that the immediate creative act is usually per- formed by the king alone. All the other methods, therefore, whereby corporations exist, by com- mon law, by prescription, and by act of parlia- ment, are for the most part reducible to this of the king's letters patent, or charter of incorpora- tion. The king's creation may be performed by the words creamus, erigimus, fundamus, incor- poramus, or the like. Nay it is held that if the king grants to a set of men to have gildam mer- catoriam, ' a mercantile meeting or assembly,' this is alone sufficient to incorporate and establish them for ever. The king, it is said, may grant to a subject the power of erecting corporations, though the contrary was formerly held : that is, he may permit the subject to name the persons and powers of the corporation at his pleasure ; but it is really the king that erects, and the sub- ject is but the instrument ; for though none but the king can make a corporation, yet qui facit per alium facit per se. In this manner the chan- cellor of the university of Oxford has power by charter to erect corporations ; and has actually often exerted it in the erection of several matricu- lated companies, now subsisting, of tradesmen subservient to the students. When a corporation is erected, a name must be given to it ; and by that name alone it must sue and be sued, and do all legal acts.

When a corporation is formed and erected, it acquires many powers and rights. Some of these are necessarily and inseparably incident to every corporation ; which incidents, as soon as a cor- poration is duly erected, are tacitly annexed of course. As, 1. To have perpetual succession. This is the very end of its incorporation ; for

there cannot be a succession fo» ever without an incorporation ; and, therefore, all aggregate cor- porations have a power necessarily implied of electing members in the room of such as go off. 2. To sue or be sued, implead or be impleaded, grant or receive, by its corporate name, and do all other acts that natural persons may. 3. To purchase lands, and hold

them, for the benefit of themselves and their successors. 4. To have a common seal ; for a corporation, being an invi- sible body, cannot manifest its intentions by any personal act or oral discourse : it therefore acts and speaks only by its common seal. For though the particular members may express their private consents to any act, by words, or signing their names, yet this does not bind the corporation ; it is the fixing of the seal, and that only, which unites the several assents of the individuals who compose the community, and makes one joint assent of the whole. 5. To make by-laws or private statutes for the better government of the corporation : which are binding upon themselves unless contrary to the laws of the land, and then they are void. But no trading company is allowed to make by-laws which may affect the king's prerogative, or the common profit of the people, under penalty of £40, unless they be ap- proved by the chancellor, treasurer, and chief justices, or the judges of assize in their circuits : and even though they be so approved, still if contrary to law, they are void. These five powers are inseparably incident to every corporation ag- gregate. Corporations have a capacity to purchase lands for themselves and successors ; but they are excepted out of the statute of wills ; so that no devise of lands to a corporation by will is good ; except for charitable uses, by statute 43 Eliz. c. 4, which exception is again greatly narrowed by the statute 9 Geo. II. c. 36. ; and their privilege even of purchasing from any living granter is much abridged ; so that now a corporation, either eccle- siastical or lay, must have a licence from the king to purchase, before they can exert thart capacity which is vested in them by the common law : nor is even this in all cases sufficient. These statutes are generally called the statutes of mortmain. See MORTMAIK. The general duties of all bodies politic, considered in their corporate capacity, may, like those of natural persons, be reduced to this single one ; that of acting up to the end or design, whatever it be, for which they were created by their founder.

As any members may lose place in the corpo- ration, by acting contrary to its laws or the laws of the land, so the body politic may also itself be dissolved in several ways ; which dissolution is the civil death of the corporation : and in this case their lands and tenements revert to the per- son, or his heirs, who granted them to the corpo- ration ; for the law annexes a condition to every such grant, that, if the corporation be dissolved, the granter shall have the lands again, because the cause of the grant faileth. The grant is in- deed only during the life of the corporation, which may endure for ever ; but when that life is determined, by the dissolution of the body politic, the granter takes it back by reversion, as in the case of every other grant for life. The debts of a corporation, either to or from it, are

totally extinguished by its dissolution ; so that the members of it cannot recover, or be charged with them, in their natural capacities : agreeably to that maxim of the civil Jaw, si quid universi- tati debetur, singulis non debetur; nee, quod debet universitas, singuli debent. A corporation •nay be dissolved, 1. By act of parliament. 2. By the natural death of all its members, in cases of an aggregate corporation. 3. By surrender of its franchises into the hands of the king, which is a kind of suicide. 4. By forfeiture of its charter through negligence or abuse of its franchises ; in which case the law judges that the body politic has broken the condition upon which it was in- corporated, and thereupon the incorporation is void. And the regular course is to bring an in- formation in the nature of a writ of quo warranto, to enquire by what warrant the members now exercise their corporate power, having forfeited it by such and such proceedings. The exertion of this act of law, for the purposes of the state, in the reigns of king Charles and king James II., particularly by seizing the charter of the city of London, gave great and just offence ; though perhaps, in strictness of law, the proceedings in most of them were sufficiently regular ; but the judgment against that of London was reversed by act of parliament after the Revolution ; and by the same statute it was enacted, that the franchises of the city of London shall never more be for- feited for any cause whatsoever. And because by the common law corporations were dissolved, in case the mayor or head officer was not duly elected on the day appointed in the charter or established by prescription, it is now provided, that for the future no corporation shall be dissolved upon that account; and ample directions are given for appointing a new officer, in case there be no election, or a void one, made upon the charter or prescriptive day.

Two modern provisions of the law, with regard to corporations, are worth noticing here. 1. To prevent improper conduct in trading corporations in elections, and in disposing of the joint stock, it is by stat. 7 Geo. III. c. 48, enacted, that no member of such corporations shall be admitted to vote in the general courts, until he shall have been six months in possession of the stock ne- cessary to qualify him : unless it comes to him by bequest, marriage, succession, or settlement ; and only one half-yearly dividend is to be made of the profits of stock.

2. To facilitate the proceedings in cases of mandamus and quo warranto, and to prevent any undue advantage on either side, the stat. 12 Geo. III. c. 21, provides that, where any person shall be entitled to be admitted a freeman, &c., of any corporation, &c., and shall apply to the proper officer to be admitted, and shall give no- tice of his intention to move the court of

king's bench for a mandamus, in case of refusal the officer shall pay all the costs of the application. And the same statute enacts, that the proper officer shall, on the demand of two freemen, permit them and their agents to inspect the en- tries of admission of freemen, and to take copies and extracts, under penalty of £100.

CORPOREITY is the quality of that which is corporeal, or is body ; or that which constitutes

or denominates it such. The corporeity of God was the capital error of the Anthropomorphites. Some authors reproach Tertullian with admitting a corporeity in the Deity ; but it is manifest that, by body, he means no more than substance. The Mahommedans reproach the Samaritans at this day, with a belief of the corporeity of God.

CORPO'RIFY, v. a. > Fr. corporifier ; Lat.

CORPORIFICA'TION. J corpus. To embody; to thicken into a body; to attribute body to spi- ritual beings. The act of embodying.

A certain spirituous substance, extracted out of it, is mistaken for the spirit of the world corporified.

Boyle.

CORPOSANT, or CORPO SANTO, Ital., a name given to the volatile meteor, or ignis fatuus, often seen in a dark tempestuous night about the decks or rigging of a ship, but particularly at the extremities, as the mast-heads and yard-arms, and is most frequent in heavy rain accompanied with lightning. This appearance, which is nothing more than the electric fluid passing silently from the clouds to the water, or the contrary, by means of the humidity on the masts and rigging, was, in the dark ages of superstition, esteemed by some a good omen and by others an evil one ; but modern philosophy has so happily explored its cause, that none but the most ignorant are now intimidated by it. The best ancient opinion is that of Varenius, who says that ' they usually wander, with uncertain motion, from place to place, sometimes appearing to cleave close to the sails and masts : but they frequently leap up and down with intermission, affording an obscure flame, like that of a candle burning faintly. They are produced by some sulphureous and bitumin- ous matter, which being beat down by the motion of the air above, and gathering together, is kin- dled by the agitation of the air, as butter is gathered together by the agitation of the cream. And from this appearance we may infer, that storms come from sulphureous vapors that rarefy the air and fuel into motion.'

CORPS, n. s. l Fr. corps ; Lat. corpus. A

CORPSE, n. s. /body ; a body, in contempt ;

CORSE, n. s. .' a dead body. Corps also means a body of troops ; a number of persons acting together. In this sense some lexicogra- phers contend that it is derived, through the French, from the Lat. cohors.

Spright Emelie, and houleth Palamon, And Theseus his sister toke anon Swonniug, and bore her from the corps away.

Chaucer. Cant. Tales. But al to late comith the lectuarie When men the corse unto the grave carie.

Id. Troilia and Creseide. Honour the place that such a jewel tred, And kisse the ground wheras the corps doth rest.

Surrey.

That lewd rihauld

Laid first his filthy hands on virgin cleene, To spoil her dainty corse, so fair and sheene, Of chastity and honour virginal.

Spenser. Faerie Queene. His corps was carried downe along the lee, Whose waters with his filthy blood it stayned. Id.

O how great sorrow my sad soule assaid ! Then forth I went his woeful curse to find. Id.

Not a friend

Greet my poor corps, where my bones shall be thrown.

Shakspeare.

Cold numbness straight bereaves Her corps of sense, and the' air her soul receives.

Denham.

Though plenteous, all too little seems To stuff this man, this vast unhide-bound corps.

Milton.

He looks as man was made, with face erect. That scorns his brittle corps, and seems ashamed He's not all spirit. Dryden's Don Sebastian.

There was the murdered corps in covert laid, And violent death in thousand shapes displayed.

Id. Fables.

See where the corps of thy dead son approaches.

Addison.

The corpse was laid out upon the floor by the empe- ror's command : he then bid every one light his flam- beau, and stand about the dead body. Id. Guardian.

Naturally men so formed and finished are the first gifts of Providence to the world. But when they have once thrown off the fear of God, which was in all ages too often the case, and the fear of man, which is now the case, and when in that state they come to understand one another, and to act in corps, a more dreadful calamity cannot arise out of hell to scourge mankind. Burke.

Yon ruins sable from the wasting flame But mark the once resplendent dome ; The frequent corse obstructs the sullen stream, And ghosts glare horrid from the sylvan gloom.

Beattie.

O'er his pale corse their pearly sea-flowers shed, And strewed with crimson moss his marble bed ; Struck in their coral towers the pausing bell, And wide in ocean tolled his funeral knell. Darwin. Not so Haidee : she sadly tossed and tumbled,

And started from her sleep, — and, turning o'er, Dreamed of a thousand wrecks,o'er which she stumbled,

And handsome corpses strewed upon the shore.

Byron, Don Juan.

CORPS, in architecture, a term borrowed from the French, signifying any part that projects or advances beyond the naked wall; and which serves as a ground for some decoration or the like.

CORPS DE GARDE, a post in an army, some- times under corert, sometimes in the open air, to receive a body of soldiery, who are relieved from time to time, and are to watch in their turns, for the security of a quarter, a camp, station, &c. The word is also used for the men, who watch therein. It is usual to have also a small corps de garde, at a good distance before the lines ; to be the more readily advertised of the approach of the enemy.

CORPULENCE, n. s. } Fr. corpulence ; It.

CO'RPULENCY, n. s. > corpulenza ; Sp. cor-

CO'RPULENT, adj. j pulencia ; Lat. corpu- lentia. Johnson defines corpulence, and corpu- lency, to be, bulkiness of body ; fleshiness; fulness of flesh ; spissitude ; grossness of matter. Corpu- lence, however, is now much more commonly used to express increase of size from fat, rather than from muscle.

We say it is a (fleshy stile, when there is much periphrasis, and circuit of words ; and when, with more than enough, it grows fat and corpulent.

Ben Jonton'i Discoveries.

Excess of nourishment is hurtful ; for it maketh the child corpulent, and growing in breadth rather than in height. Bacon.

To what a cumbersome unwieldiness, And burdenous corpulence, my love had grown.

Donne.

It is but one species of corpulency ; for there may be bulk without fat, from the great quantity of muscu- lar flesh, the case of robust people.

Arbuthnot on Aliments.

The musculous flesh serves for the vibration of the tail ; the heaviness and corpulency of the water re- quiring a great force to divide it.

Roy on the Creation.

CORPULENCY is the occasion of various diseases, and particularly of the apoplexy. It was held infamous among the ancient Lacedaemonians. Sennertus mentions a man that weighed 600 pounds, and a maid, thirty-six years of age, who weighed 450. Bright of Maiden, who died at the age of twenty-nine, in 1750, weighed 616 pounds. Chiapin Vitelli, marquis of

Cerona, a noted Spanish general in his time, from an excessive corpulency, is said to have reduced himself, by drinking vinegar, to such a degree of leanness, that he could fold his skin several times round him. Castile soap, in the form of a bolus, an electuary, pills, or dissolved in a gill or more of soft water, from one to four drachms, taken at bed-time, is strongly recommended with a view of reducing corpulency, in a Discourse on its Nature, Causes, and Cure, by Malcolm Flemyng, M. D. London, 1760. See MEDICINE.

CORPUS, i.e. a body, Lat. is used in matters of learning, for several works of the same nature collected and bound together. Thus Gratian made a collection of the canons of the church called corpus canonum. The corpus of the civil law is composed of the digest, code, and institutes. We have also a corpus of the Greek poets ; and another of the Latin poets.

CORPUS CHRISTI, a festival of the church of England, kept on the Tuesday after Trinity- Sunday, instituted in honor of the eucharist ; to which also one of the colleges in Oxford is de- dicated.

CO'RPUSCLE, n. s. } Lat. cor-

CORPU'SCULAR, adj. spusculum. A

CORPU'SCULARIAN, n. s. & adj. 3 diminutive body ; an atom ; a small fragment. Corpuscu- larian, as an adjective, signifies relating to bo- dies; comprising bodies. ' It is,' says Johnson, ' the distinguishing epithet of that philosophy, which attempts the rational solution of all phy- sical appearances by the action of one body upon another.' A corpuscularian is a philosopher of that sect of philosophy.

As to natural philosophy, I do not expect to see any principles proposed, more comprehensive and in- telligible than the corpuscularian or mechanical.

Boyle.

This may be said, that the modern corpuscularian talk, in most things, more intelligibly than the peripa- teticks. Bentley.*

The mechanical or corpuscular philosophy, though peradventure the eldest, as well as the best in the world, had lain dead for many ages in contempt and oblivion. Wi

It will add much to our satisfaction, if those cor- puscles can be discovered with microscopes.

Newton's Opticks.

CORPUS DELICTI, an expression used to de- note those external marks, or facts, or circum- stances, which accompany a crime, and without the proof of which the crime is not supposed to be established. We have no correlative term in English, and the preceding exposition is peculiar to the civil law of continental Europe.

CORPUSCULARIAN PHILOSOPHY is that way of philosophising which endeavours to explain things,, and to account for the phenomena of nature, by the motion, figure, rest, position, &c. of the corpuscles, or the minute particles of matter. Mr. Boyle sums up the chief principles of the corpuscular hypothesis, which now flou- rishes under the mechanical philosophy, in these particulars : 1 . They suppose that there is but one catholic or universal matter, which is an ex- tended, impenetrable, and divisible substance, common to all bodies, and capable of all forms. 2. That this matter, in order to form the vast variety of natural bodies, must have motion in some or all its assignable parts; and that this motion was given to matter by God, the Creator of all things, and has all manner of directions and tendencies. 3. Matter must also be actually divided into parts, and each of these primitive particles, fragments, or atoms of matter, must have its proper magnitude or size, as also its peculiar figure or shape. 4. They suppose also, these differently fixed and shaped particles may have as different orders and positions, whereof great variety may arise in the composition of bodies.

CORRA LINN, a grand cataract of the Clyde, in Lanarkshire, which is thus described by William Lockhart, Esq. of Baronald : ' The old castle of Corra, with Corra House, and the rocky and woody banks of the Clyde, form of them- selves a beautiful and grand coup d' ceil ; but nothing can equal the striking and stupendous appearance of the fall itself, which, when viewed from any of the different seats placed here and there along the walks, must fill every unaccus- tomed beholder with awe and astonishment. The tremendous rocks around, the old castle upon the opposite bank, a corn-mill in the rock below, the furious and impatient stream foaming over the rock, the horrid chasm and abyss underneath your feet, heightened by the hollow murmur of the water, and the screams of wild birds, form at once a spectacle, both tremendous and pleasing. A summer-house is situated over a high rocky bank, that overlooks the Linn, built by Sir James Carmichael, of Bonniton, in 1708. From its uppermost room, it affords a

very striking pros- pect of the fall ; for, all at once, on throwing your eyes towards a mirror, on the opposite side of the room from the fall, you see the whole tre- mendous cataract pouring, as it were, upon your head. The Corra Linn, by a late measurement, is found to be eighty-four feet in height. The river does not rush over in one uniform sheet, like the Bonniton Linn, but in three different, though almost imperceptible, precipitate leaps. On the south bank, when the sun shines, a rain-

bow is perpetually seen forming upon the mists and fogs, rising from the violent dashing of the waters.' On a pointed rock, overhanging this stupendous scene, stands a solitary tower. It was lately inhabited, but is now in ruins. In floods, the rock and tower have been observed to shake in such a manner as to spill water in a glass standing on a table. A path leads to the top of the fall, into which projects a high rock, in floods insulated by the water ; and from the top is a tremendous view of the furious stream. In the cliffs of this savage retreat the brave Wallace is said to have concealed himself, me- ditating revenge for his injured country.

To CORRA'DE, v. a. Lat. corrado. To rub off; to wear away by frequent rubbing ; to scrape together.

CORRADIA'TION, n. s. Lat. con and ra- dius. A conjunction of rays in one point.

The impression of colour worketh not but by a cone of direct beams, or right lines, whereof the ba- sis is in the object, and the vertical point in the eye ; so as there is a cerradiation, and conjunction of beams. Bacon's Natural History.

CORRADINI DE SEZZA (Peter Marcellinus), a learned civilian and cardinal, born at Sezza in 1658. He acquired the esteem and confidence of Clement XL, and died at Rome in 1743. He was the author of a learned and curious work, entitled, Verum Latium Profanum et Sacrum, 2 vols. folio, and a History of Sezza, in 4to.

CORRADO (Sebastian), an Italian gram- marian of the sixteenth century, who taught Greek and Latin at Reggio, where he formed an academy of polite literature ; and at length re- moved to Bologna, to be professor of those languages. He wrote several works, the most esteemed of which are, Quaestnra in qua Ciceronis Vita refertur, an excellent performance ; and De Lingua Latina. He died in 1556.

CORRE'CT, v. a. & adj. ˆ Fr. corriger ; CORRECTABLE, adj. Ital. corregere ;

CORRECTION, n. s. Span, corregir ;

CORRECTION ER, n. s. Lat. corrigere,

CORRECTIVE, n. s. & adj. }>from con and re- CORRE'CTLY, adv. gere. To punish;

CORRECTNESS, n. s. | to amend ; tore-

CORRE'CTOR, n. s. I move error in

CO'RRIGIBLE, adj. J writings, life, or

things ; to add something which removes some bad quality in another. Correction is punish- ment ; the act of removing faults ; amendment ; that which is substituted in the place of anything wrong ; reprehension ; abatement of noxious qua- lities by the addition of something contrary: Corrective, as a noun, means that which has the power of amending ; limitation : as an adjec- tive, it denotes having the power of amending ; the power of producing correctness. Correc- tioncr seems to be used by Shakspeare to express, a jail-bird ; one who has been in the house of correction. So says Johnson ; but, as the speech which he quoted is made to an officer of justice, the word appears rather to denote a corrector ; one who punishes. Corrigible is that which may be amended; that which deserves punishment. Shakspeare employs it in the sense of having

power to correct ; which, as Johnson observes, is neither proper, nor used.

To sclander you is no thing min entcnt, But to correcten that is mis I ment.

Chaucer. Cant. Tales.

Al so as a wise man sayth, that the judge that cor- recteth not the sinner, commaundeth and biddeth him do sinne. Id.

I do vengeance and pleine correction While I dwell in the signe of the Leon. Id.

When this childe sawe the yerde, he sayd to his maister, What thinke you to do ? I wol bete thee, »ayd the maister, for thy correction. Forsoth, sayd the childe, ye ought first correct yourself, that have lost all patience for the offence of a childe. Id.

O happy mixture ! wherein things contrary do so qualify and correct the one the danger of the other's excess, that neither boldness can make us presume, as long as we are kept under with the sense of our own wretchedness ; nor, while we trust in the mercy of God through Christ Jesus, fear be able to tyrannize ever us. Hooker.

An offensive wife,

That hath enraged him on to offer strokes, As he is striking, holds his infant up, And hangs resolved correction in the arm That was upreared to execution.

Shakspeare. Henry IV.

Our bodies are our gardens, to the which our wills are gardeners ; so that, if we will either have it steril with idleness, or manured with industry, the power and corrigible authority of this lies in our will.

Id. Othello.

1 will have you soundly swinged for this, you blue- bottled rogue ! you filthy famished correctioner !

Id. Henry IV. To make ambitious, wholesome, do not take

A dram of country's dullness ; do not add

Corrections, but as chymists purge the bad.

Donne.

He was taken up very short, and adjudged corri- gible for such presumptuous language.

Howel's Vocal Forest.

Sad accidents, and a state of affliction, is a school of virtue ; it corrects levity, and interrupts the con- fidence of sinning. Taylor.

There seems to he such an instance in the regiment which the human soul exerciseth in relation to the body, that, with certain correctives and exceptions, may give some kind of explication or adumbration thereof. Hate's Origin of Mankind,

They proceed with judgment and mgeuuity, esta- blishing their assertions not only with great solidity, bnt submitting them also unto the correction of future discovery. Browne.

He that thinks absolute power purifies men's blood, and correets the baseness of human nature, need read but the history of this or any other age to be convinced of the contrary. Locke.

There are ladies, without knowing what tenses and participles, adverbs and

prepositions are, speak as properly and as correctly as most gentlemen who have been bred up in the ordinary methods of grammar schools. id.

Humanly speaking, and according to the method of the world, and the little correctives supplied by art and discipline, it seldom fails but an ill principle has its course, and nature makes good its blow.

South' Sermons.*

What verse can do, he has performed in this, Which he presumes the most correct of his.

Dry den's Aur. Prol.

Too much labour often takes away the spirit, by adding to the polishing ; so that there remains no- thing but a dull correctness, a piece without any con- siderable faults, but with few beauties.

Id. Dufresnoy.

Another poet, In another age, may take the same liberty with my writings ; if, at least, they live long enough to deserve correction. Id. Fables. Preface. This is a defect in the first make of some men's minds, which can scarce ever be corrected afterwards, either by learning or age. Burnet's Theory. Preface. No man's body is as strong as his appetites, but heaven has corrected the boundlessness of his volup- tuous desires by stinting his strength and contracting his capacities. Tillotson.

I writ, because it amused me ; I corrected, because it was as pleasant to me to correct as to write.

Pope's Preface.

Such lays as neither ebb nor flow, Correctly cold, and regularly low.

Id. Essay on Criticism.

Mulberries are pectoral, corrective of bilious alkali.

Arbuthnot.

I remember a person, who, by his style and litera- ture, seems to have been the corrector of a hedge- press in Little-Britain, proceeding gradually to an author. Swift.

Those pieces have never before been printed from the true copies, or with any tolerable degree of cor- rectness. Id.

We are all but children here under the great master of the family ; and he is pleased, by hopes and fears, by mercies and corrections, to instruct us in virtue.

Watts.

In making a medicine, such a thing is called a cor- rector, which destroys or diminishes a quality that could not otherwise he dispensed with ; thus turpen- tines are correctors of quicksilver, by destroying its fluxility, and making it capable of mixture. Quincy.

It is difficult for the most wise and upright govern- ment to correct the abuses of remote delegated power, productive of unmeasured wealth, and protected by the boldness and strength of the same ill-got riches.

Burke.

Our Indian government is in its best state a griev- ance. It is necessary that the correctives should be uncommonly vigorous ; and the work of men sanguine, warm, and even impassioned in the cause- Id.

To correct a child when one is in a passion, gives him an example of two vices at once, rage and re- venge ; for all correction of this kind is likely to bo, and to the sufferer will appear to be, excessive ; and seem to have, and perhaps really has, something vin- dictive in it. Beattie. Candid, and generous, and just, Boys care but little whom they trust ;

An error soon corrected — For who but learns in riper years That man, when smoothest he appears,

Is most to be suspected ? Coutper.

CORRECTION, in printing, the act of retrenching the faults in a work ; or the reading which the corrector gives the proofs ; to point out and amend the faults, to be rectified by the compo- sitor. The corrections are placed on the margin of each page, against the line where the faults are found. There are different characters used to express different corrections, as D or S, dele, for any thing to be effaced or struck out. When any thing is to be inserted, the place is marked in the line with a caret (A), and the insertion added in the margin. When a word, syllable, &c. is

to be altered, it is erased out of the proof, and that to be put in its room

written in the margin ; always observing, if there be several mistakes in the same line, that the corrections in the margin be separated by little bars or strokes, I . If a space be omitted, its place is marked with a caret, and the margin with JJ. If a space be wrong placed, as in the middle of a word, the two parts are connected with a curve, and the same character put in the margin. If a letter be inverted, it is expressed in the margin thus, O. If any thing be transposed it is marked thus : the shortest (are the jfolliesj best : for, the shortest follies are the best : and in the margin is added trs. in a circle. If Roman characters are to be changed for Italic, or vice versa, a line is drawn under them, thus, and Roman or Italic added in the margin ; if to small capitals, a double line ; and if to capitals a treble line. If a word or sen- tence is entirely omitted, the place is marked with a caret, and in the margin is inserted the word, out. If the letters of a word stand too far asunder, a line is drawn under them, and in the margin is put a crooked line or hook, thus, ˆ.

CORREGIO, a town of Italy, in the prin- cipality of the same name, and department of Crostolo, with a castle, eight miles north-west of Modena, nine south-east of Reggio, and twenty-five south of Mantua. Long. 11° 12′ E., lat. 44° 46′ N.

CORREGIO (Antonio), an eminent historical painter, born in 1494, whose original name, Al- legri, was changed to that of his birth-place. Being descended of poor parents, and educated in an obscure village, he enjoyed none of those advantages which contributed to form the other great painters of that illustrious age. He studied none of the statues of ancient Greece or Italy ; nor any of the works of the established schools of Rome and Venice. But Nature was his guide ; and Corregio was one of her favorite pupils. The agreeable smile, and the profusion of graces which he gave to his madona-, saints, and chil- dren, have been said to be sometimes unnatural ; but they are still amiable and pleasing. An easy and flowing pencil, a union and harmony of colors, and a perfect intelligence of light and shade, give an astonishing relief to all his pic- tures, and have been the admiration both of his contemporaries and his successors. Annibal Ca- racci, who flourished fifty years after him, studied and adopted his manner in preference to that of any other master. From want of curiosity, or of patronage, Corregio never visited Rome, but remained his whole life at Parma, where the art of painting was little esteemed, and poorly re- warded. This concurrence of unfavorable cir- cumstances occasioned, at last, his premature death at the age of forty. He was employed to paint the cupola of the cathedral at Parma, the subject of which is an Assumption of the Virgin ; and having executed it in a manner that has long been the admiration of every person of taste, for the grandeur of design, and especially for the boldness of the fore-shortenings, an art which he first and at once brought to the utmost per- fection, he went to receive his payment.

canons of thf. church, either through ignorance or baseness, found fault with his work ; and although the price originally agreed upon had been very moderate, they alleged that it was far above the merit of the artist, and forced him to accept of the paltry sum of 200 livres; which, to add to the indignity, they paid him in copper money. To carry home this unworthy load to his indigent wife and children, poor Corregio had to travel six or eight miles from Parma. The weight of his burden, the heat of the weather, and his chagrin at this villanous treatment, im- mediately threw him into a pleurisy, which, in three days, terminated his life and his misfortunes, in 1534. For the preservation of this mag- nificent work the world is indebted to Titian. As he passed through Parma, in the suite of Charles V. he went instantly to see the chef d'ceuvre of Corregio. While he was attentively viewing it, one of the principal canons of the church told him that such a grotesque perform- ance did not merit his notice, and that they intended soon to have the whole defaced. ' Have a care of what you do,' replied the other ; ' if I were not Titian, I would certainly wish to be Corregio.'

CO'RRELATE, v. n. & n. s.-\ Lat. con and CORRE'LATIVE, adj. trelatus. To

CORRE'LATIVENESS, n. s. £ stand in a re- CORRE'LATIVELY, adv. J ciprocal rela-

tion to each other, as father and son, man and woman, prince and subject. Correlative is, hav- ing a reciprocal relation ; a relation in which one state cannot exist without the other, they being mutually dependent. A correlate is one who stands in the opposite relation.

It is one thing for a father to cease to be a father, by casting off his son ; aud another for him to cease to be so, by the death of his son : in this the relation is at an end for want of a correlate. South.

Father and son, husband and wife, and such other correlative terras, seem nearly to belong one to ano- ther. Id.

Giving is a relative action, and so requires a cor- relative to answer it ; giving, on one part, transfers no property, unless there be an accepting on the other.

Id.

CORRE'PTION, n. $. Lat. corripio, correp- tum. Objurgation; chiding; reprehension; reproof.

If we must be talking of otner people's faults, lei it not be to defame, but to amend them, by converting our detraction into admonition and fraternal correp- tion. Government of the Tongue.

CORRESPO'ND, v. n. } Fr. corres-

CORRESPO'KDENT, 71. s. & adj. pondre ; Ital. CORRESPONDENCE, n. s. correspondere ;

CORRESPO'N.OENCY, n. s. ˆ Sp. correspon- CORRESPO'NDENTLY, adv. der ; Lat. con

CORRESPONDING, adj. axidrespcmdere.

CORRESPO'NSIVE, adj. J To fit ; to suit;

to match ; to be adapted to ; to be adequate to ; to keep up an intercourse by letters. Correspon- dent is, suitable ; adapted : a correspondent is one who keeps up a mutual intercourse with another by letters ; one who transacts mercantile affairs for or with another residing in a different country. Correspondence and correspondency

the first is the most in use) signify, reciprocal re- lation of one thing to another; intercourse; friendship ; interchange of offices or civilities. Corresponding and corresponsive mean, answer- able ; adapted to ; proportioned to.

Between the law of their heavenly operations, and the actions of men in this our state of mortality, such correspondence there is as maketh it expedient to know in some sort the one, for the other's more perfect di- rection. Hooker.

What good or evil is there under the sun, what action correspondent or repugnant unto the law which God hath imposed upon his creatures, but in or upon it God doth work, according to the law which himself hath eternally purposed to keep 1 Id.

Priam's six gates i' the' city, with massy staples, And corresponsive and fulfilling bolts, Spurre up the sons of Troy.

Shakspeare. Troilus and Cressida.

Let such military persons be assured, and well re- puted of, rather than factious and popular ; holding also good correspondence with the other great men in the state. Bacon.

I had discovered those unlawful correspondencies they had used, and engagements they had made to embroil my kingdoms. King Charles.

Sure the villains hold a correspondence With the enemy, and thus they would betray us.

Dunham.

He was pleased to command me to send to him, and receive from him all his letteis from and to all his correspondents at home and abroad. • Id.

Words being hut empty sounds, any farther than thfcy are signs of our ideas, we cannot but assent to them, as they correspond to those ideas we have, but no farther than that, Locke.

Whatever we fancy, things keep their course ; and their habitudes, correspondencies, and relations keep the same to one another. Id.

The days, if one be compared with another succes- sively throughout the year, are found not to be equal, and will not justly correspond with any artificial or mechanical eaual measures of time. , Holder on Time.

And as five zones the' etherial regions bind,

Five correspondent are to earth assigned .

Dryden. Ovid.

It happens very oddly, that the pope and I should have the same thought much about the same time : my enemies will be apt to say that we hold a corres- pondence together, and act by concert in this matter.

Addison.

You might, if you pleased, have profited of our example, and have given to your recovered freedom a correspondent dignity. Your privileges, though dis- continued, were not lost to memory. Burke.

Our political system is placed in a just correspon- dence and symmetry with the order of the world, and with the mode of existence decreed to a permanent body composed of transitory parts. Id.

I returned home very considerably improved. My reading was enlarged with the very important addi- tion of Thomson's and Shenstone's Works ; I had seen human nature in a new phasis ; and I engaged several of my school-fellows to keep up a literary correspondence with me. Burns.

Reasoning is that operation of the sensorium by which we excite two or many tribes of ideas, and then re-excite the ideas in which they differ or correspond.

Darwin.

These all assume, as circumstances require, the various forms of letter to the editor, occasional anec- dote, impartial critique, observation from correspon- dent, or advertisement from the party.

Sheridan. The Critic.

DAN. And not a week but I receive fifty letters, and not a line in them about any business of my own.

SNEER. An amusing correspondence. Id.

Discussed the fashion which might next prevail,

And settled bonnets by the newest code, Or crammed twelve sheets into one little letter, To make each correspondent a new debtor.

Byron. Don Juan

CORREZE, a department of France, bounded by those of Upper Vienne and Cruise on the north, Puy de Dome on the east, Cantal on the south-east, Lot on the south, and Dordogne on the west. It includes the ci-devant province of Limousin, and contains 255,000 inhabitants. It is divided into the arrondissements of Tulle (the capital), Brives, and Ussel. This department is watered by the Correze, the Dordogne, and the Upper and Lower Vezere, but none of them are well fitted for navigation. Northward it is mountainous, but the low grounds produce buck- wheat, rye, chestnuts, hemp, wine, and mush- rooms. There are extensive heaths of juniper, and meadows which support many thousand sheep and cattle. The minerals are pit-coal, slate, free-stone, lime-stone, iron, lead, copper, and antimony ; and the chief towns contain ma- nufactures of wool, cotton, silk, brandy, paper, and oil.

CORREZE, a river of France, which rises about twenty miles north-east of Tulle, and passing by that town, Brives, &c. joins the Vezere, three miles below Brives. It gives name to the above department, through which it

passes.

CO'RRIDOR, n. s. French. In fortifica- tion, the covert way lying round the whole com- pass of the fortifications of a place. In archi- tecture, a gallery or long aisle round about a building, leading to several chambers at a dis- tance from each other.

There is something very noble in the amphitheatre, though the high wall and corridors that went round it are almost entirely ruined. Addison on Italy.

*He passed the portal — crossed the corridore , And reached the chamber as the strain gave o'er : * My own Medora ! sure thy song is sad.' ' In Conrad's absence would'st thou have it glad ?'*

Byron. The Corsair.

CORRIE (James), M. D. a young physician of very promising abilities, born at Ayre, October 20th, 1770. He was educated at Ayre; studied three years at the university of Edinburgh, where he was elected president of the Chirurgo-Physi- cal and Chirurgo-Obstetrical Societies ; and took his degrees of A. M. and M. D. at Glasgow, in 1791. He afterwards went to London, where he was admitted a member of the corporation of surgeons ; and published his Essay on the Vita- lity of the Blood ; a doctrine for which he was a zealous advocate. This work was dedicated to the late celebrated anatomist, John Hunter, esq. by whose recommendation, Dr. Corrie obtained an appointment in the service of the East India Company, at Condalore ; but the climate proving

too severe for his constitution, he died in 1794, whiie he was collecting materials For several other works on medicine and natural history.

CORRIGIOLA, in botany, a genus of the triffynia order and pentandria class of plants ; natural order fifty-fourth miscellanea : CAL. pen- tiphyllous ; the petals five ; and one three-cor- nered seed. Species two; one common, on our own sea-coast ; the other a poor Cape plant with green flowers.

CORRI'VAL, v. n. n.s. &adj.-) Lat. rivahs

CORRI'VALRY, n. s. >To vie with;

CORRI'VALSHIP, n. s. J to emulate ; to

contend with for any thing. A corrival is a com- petitor; corrival is contending with.

They had governours commonly out of the two fa- milies of the Geraldines and Butlers, both adversa- ries and corrivals one against the other.

Spenser on Ireland.

He, that doth redeem her thence, might wear Without corrival all her dignities.

Shakspeare. Henry IV.

But with the sunne corrivaling in light.

Fitzgeffry.

CORRI'VATE,u.a. > Lat. corrivate. To

.CORRIVA'TION, n. s. 3 draw into one stream.

The running of waters together into one stream.

Rare devices to corrivate waters. Burton.

Corriaations of waters to moisten and refresh barr?n grounds. Id.

CORRO'BORATE, v. a. & adj. \ Fr. corro

CORRO'EORANT, adj. (borer; Ital.

CORROBORA'TION, n. s. t corroborare ;

CORRO'BORATIVE, n. s. & adj. J Span, corro- borar ; Lat. corroborare, from con and robur. To confirm ; to give support to ; to establish ;

CORRO'DE, v. a. ~] Tr.corroder,

CORRO'DIATE, v. a. It. corrodere;

CORRO'DENT, n. s. Span.corroer ;

CORRODIBI'LITY, adv. Lat. corrodere,

CORRO'DIBLE, adj. from core and

CORRO'SIBLE, adj. I roderc. To de-

CORROSIBI'LITY, n. s. j , stroy by slow

CORRO'SIBLENESS, n. s. destruction of

CORRO'SION, n. s. the surface;

CORRO'SIVE, v. a., 71. s. & adj. to eat into ; to CoRRo'siv£LY,ae/t>. waste away;

CORRO'SIVENESS, ?i. s. J to consume

gradually. Corrodiate is obsolete, as is also cor- rosive, used as a verb. Corrosive, as a noun, denotes that which has the quality of wasting any thing away, or of fretting or giving pain. As an adjective, its meanings are obvious. The kindred words are all closely allied in sense to the root whence they spring.

He meant his corrosives to apply, And with strict diet tame his stubborn malady.

Faerie Queene.

If the maintenance of ceremonies be a corrosive to such as oppugn them, undoubtedly to such as main- tain them it can be no great pleasure, when they be- hold that which they reverence is oppugned. Hooker.

Such speeches savour not of God in him that useth them, and unto virtuously disposed minds they are grievous corrosives. Id.

Cars is no cure, but rathor corrosive, For things that are not to be remedied.

Shakspeare. Henry VI. Away ! though parting be a fretful corrosive, It is applied to a deathful wound. Id.

A kind of poison worketh either by corrosion, or by a secret malignity and enmity to nature.

Bacun'x Natural Hittory, Statesmen purge vice with vice, and may corrode

*. . i . .. * DMWOMUCU UU1HC Vlt_C W1L11 V1V/C. ailU 1.*

to give strength. A corroborative, or corroborant, The bad witl/bad6> a apidcr with a toad .

is that which increases strength. Corroborative testimony is that which confirms or strengthens other testimony. Corroboration is the act of strengthening or confirming ; additional confir- mation ; additional strength.

To fortify imagination there be three ways ; the authority whence the belief is derived, means to quicken and corroborate the imagination, and means to repeat it and refresh it. Bacon.

Machiavel well uoteth, though in an ill-favoured instance, there is no trusting to the force of nature, nor to the bravery of words, except it be corroborate by custom. Id.

The lady herself procured a bull, for the better corroboration of the marriage. Id.

There he divers sorts of bracelets fit to comfort the spirits ; and they be of three intentions, refrigerant, corroborant, and aperient. Id.

In the cure of an alcer, with a moist intemperies, as the heart is weakened by too much humidity, you are to mix corroboratives of an astringent faculty ; and the ulcer also reouireth to be dried.

Wiseman's Surgery.

It was said that the prince himself had, by the sight of foreign courts, and observations on the dif- ferent natures of people, and rules of government, much excited and awaked his spirits, and corroborated his judgment. Wotton.

As any limb well and duly exercised grows stronger, the nerves of the body are corroborated taerety. Watts.

For so ill thralls not them, but they tame ill, And make her do much good against her will.

Donne.

We do infuse, to what he meant for meat, Corrosiveness , or intense cold or heat. Id.

Metals, although corrodible by waters, yet will not suffer a liquation from the powerfullest heat commu- nicable unto that aliment. Browne's Vulgar Errours.

The nature of mankind, left to itself, would soon have fallen into

dissolution, without the incessant and corroding invasions of so long a time.

Hole's Origin of Mankind.

Gold, after it has been divided by corrosive liquors into invisible parts, yet may presently be precipitated, so as to appear again in its own form-

Grew's Cosmologia.

Fishes, which neither ehew their meat, nor grind it in their stomachs, do by a dissolvent liquor there pro- vided, corrode and reduce it into a chylus.

Ray on the Creation.

We know that aqua-fortis corroding copper, which

is it that gives the colour to verdigrease, is wont to

reduce it to a green-blue solution. Boyle.

At first it tasted somewhat corrosively. Id.

Saltpetre betrays upon the tongue no heat nor cor-

rosiveness at all, but coldness, mixt with a somewhat

languid relish retaining to bitterness. Id.

Hannibal the Pyreneans past, And steepy Alps, tlie mounds that nature cast ; And with corroding juices, as he went, A passage through the living rock he rent.

Dryden's Juvenal. 1 M2

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That corrosion and dissolution of bodies, even the most solid and durable, which is vulgarly ascribed to the air, is caused merely by the action of water upon them; the air being so far from injuring and preying upon the bodies it environs, that it contributes to their security and preservation. Woodward.

The blood turning acrimonious, corrodes the vessels, producing almost all

the diseases of the inflammatory kind. Arbuthnot.

Should jealousy its venom once diffuse, Corroding every thought, and blasting all Love's paradise. Thomson's Spring.

Ths sacred sons of vengeance, on whose course Corrosive famine waits, and kills the year. Id.

The anodyne draught of oblivion, thus drugged, is well calculated to preserve a galling wakefulness, and to feed the living ulcer of a corroding memory. Burke. The life-blood streaming through my heart, Or my more dear immortal part,

Is not more fondly dear ! When heart-corrodin

Deprive my soul of rest, Her dear idea brings relief

And solace to my breast. Burns.

Like them, abandoned to ambition's sway, I sought for glory in the paths of guile ; And fawned and smiled, to plunder and betray, Myself betrayed and plundered all the while : So gnawed the viper the corroding file. Beattie.

The cankered spoil corrodes the pining state, Starved by that indolence their mines create. Cowper.

A fretful temper will divide

The closest knot that may be tied,

By ceaseless sharp corrosion ; A temper passionate and fierce. May suddenly your joys disperse

At one immense explosion. Id.

And dost thou ask, what secret woe

I bear, corroding joy and youth ? And wilt thou plainly seek to know

A pang, even thou must fail to soothe ? Byron.

CORROSIVE MURIATE, or CORROSIVE SUBLI MATE. See MEDICINE.

CORROSIVES, in surgery, are chiefly burnt alum, red and white precipitates of mercury, white vitriol, butter of antimony, lapis infernalis, &c. See ESCHAROTICS.

CO'RKODY, n. s. from Lat. corrodo. A de- falcation from an allowance or salary, for some other than the original purpose.

Besides these floating burgesses of the ocean, there are certain flying citizens of the air, which prescribe for a corrody therein. Carew.

In those days even noble persons, and other meaner men, ordered corrodies and pensions to their chap- lains and servants out of churches. Ayliffe's Parergon.

CO'RRUGATE, v. a. & adj. } Fr. corruga-

*CORRUGA'TION, n. *. >fton; Lat. cor-*

CO'RRUGANT, adj. J rugare, from

con and rugare. To draw up into wrinkles or

furrows ; to contract ; contraction into wrinkles ;

having the power of causing to wrinkle.

The cramp cometh of contraction of sinews : it cometh either by cold or dryness ; for cold and dry- ntK do both of them contract and corrugate.

Bacon's Natural History.

The pain of the solid parts is the corrugation or v'«- lent agitation of the fibres, when the spirits are irri- tated by sharp humours. Flayer on the Humours.

Extended views a narrow mind extend ; Push out its corrugate, expansive make. Young.

CORRU'PT, v. a., n. & adj.} Fr. corrom- CORRU'PTER, n. s. pre ; Ital. cor-

CORRU'PTFUL, adj. rompere ; Sp.

CORRUPTIBILITY, n. s. corrumpir ; La-

CORRU'PTIBLE, n. s. &• adj. tin,cojTumpere, CORRUPTIBLY, adv. from con and

CORRU'PTIBLENESS, 7i. s. \rumrjert,. To CORRU'PTING, n. s. mar; to de-

CORRU'PTION, n. s. bauch; to de-

CORRU'PTIVE, adj. file ; to per-

CORRU'PTLESS, adj. vert ; to de-

CORRUPTLY, adv. prave; to taint;

CORRU'PTNESS, n. s. J to become pu-

trid ; to bribe. These are the meanings of the verb, and they run through all the kindred words. For the legal sense attached to corrup- tion, see CORRUPTION OF BLOOD.

We have dealt very corruptibly against thee, and

have not kept the commandments. Nehemiah i. 7.

I fear lest by any means, as the serpent beguiled

Eve through his subtilty, so your minds should be

corrupted -from the simplicity that is in Christ.

2 Corinthians xi. 3. Kvil communications corrupt good manners.

1 Corinthians xv. 33.

So when this corruptible shall have put on incor-

ruption, and this mortal shall have put on immmorta-

lity, &c. Id. v. 54.

Let no corrupt communication proceed out of your

mouth, but that which is good to the use of edifying.

Ephesians iv. 29.

What they know naturally, as brute beasts, in those things they corrupt themselves. Jitde 10.

The clotered blood for any leche-craft, Corrumpeth and is in his bouke ylef.

Chaucer. Cant. Tales.

For Nature hath not taken his beginning Of no partie ne cantel of a thing,

But of a thing that parfit is and stable, Descending so till it be corrumpable. Id.

A maner Latin corrupt was hire speche, But algate therby was she understond. Id.

Corrupt was all this world for glotonie. Id.

Her breath corrupt, her keepers every one Abhorring her, her sickness past recure. Sackville.

After that they againe retoumed beene, That in that gardin planted be agayne,

And grow afresh, as they had never scene Fleshly corruption, nor mortal payne.

Spenser. Faerie Queene. Superfluous flesh did rot, Amendment ready still at hand did wait, To pluck it out with pincers fiery hot, That soon in him was left no corrupt jot. Id.

Throw thyself down, with trembling innocence, Nor dare look up with corruptible eye On the dread face of that great Deity.

Spenser. Hymn of Heavenly Beauty.

Our corruptible bodies could never live the life they

snail live, were it not that they are joined with his

body which is incorruptible, and that his is in ours as

a cause of immortality. Hooker.

Corrupt, corrupt, and tainted in desire. Shakspeart.

But stay, I smell a man of middle earth ; With trial fire touch me his finger-end ; If he be chaste, the flame will back descend, 4nd turn him to no pain ; but if he start, It is the flesh of a corrupted heart.

Id. Merry Wives of Windsor.

After my death I wish no other herald, No other speaker of my living actions, To keep mine honour from corruption, But such an honest chronicler as Griffith.

Id. Henry VIII.

These kind of knaves I know, which in this plain- ness

Harbour more craft, and more corrupter ends, Than twenty silky ducking observants. Id. King Lear.

It is too late ; the life of all his blood Is touched corruptibly. Id.

Peace, thou rude bawd ! Thou studied old corruptreit, tye thy tongue up.

Beaumunt and Fletcher.

From the vanity of the Greeks, the corrupters of all truth, who without all ground of certainty vaunt their imtiquity, came the errour first of all.

Raleigh's History of the World _

The region hath by conquest, and corruption of other languages, received new and differing names. Id.

The aptness or propension of air or water to corrupt or putrefy, no doubt, is to be found before it break forth into manifest effects of diseases, blasting, or the like. Bacon.

We have corruptly contracted most names, both of men and places. Camden's Remains.

But though corruption cannot touch the mind, By any cause that from itself may spring,

Some outward cause fate has perhaps designed, Which to the soul may utter quenching bring.

Darwin.

It is a devouring corruption of the essential mix- ture, which, consisting chiefly of an oily moisture, is corruptible through dissipation. •

Harvey on Consumptions

Language being the conduit whereby men convey their knowledge, he that makes an ill use of it, though he does not corrupt the fountains of

knowledge, which are in things, yet he stops the pipes. Locke.

Be the cause what it will, our Saviour found man- kind under a corruption of manners and principle, •which ages after ages had prevailed, and must be confessed was not in a way or tendency to be mended.

Id.

It should be endued with an acid ferment, or some corruptive quality, for so speedy a dissolution of the meat and preparation of the chyle.

Ray on the Creation.

Some, who have been corrupt in their morals, have yet been infinitely solicitous to have their children piously brought up. South's Sermons.

All around

The borders with corruptless myrrh are crowned.

Dryden.

The several parts of which the world consists being

in their nature corruptible, it is more than probable,

that, in an infinite duration, this frame of things

would long since have been dissolved. Tillotson.

The wise contriver, on his end intent,

Careful this fatal errour to prevent,

And keep the waters from corruption free,

Mixed them with salt, and seasoned all the sea.

Blackmore.

Those great corrupters of Christianity, and indeed of natural religion, the Jesuits. Addison.

Precepts of morality, besides the natural corruption of our tempers, which makes us averse to them, are so abstracted from ideas of sense, that they seldom get an opportunity for descriptions and images.

Addison on the Georgickt.

Hear the black trumpet through the world pro- claim,

That not to be corrupted is the shame. Pope.

Amidst corruption, luxury, and rage,

Still leave some ancient virtues to our age. Id.

As Rochefoucault his maxims drew From nature, I believe them true ; They argue no corrupted mind In him ; the fault is in mankind. Swift.

The corruptions of the country are closely allied to those of the town, with no further difference than what is made by another turn of thought and method of living. Burke.

No revenue, no, not a royal revenue, can exist under the accumulated charge of ancient establish- ment, modern luxury, and parliamentary political corruption. Id.

These charms shall work thy soul's eternal health,

And love, and gentleness, and joy, impart. But these thou must renounce, if lust of wealth

E'er win its way to thy corrupted heart. Beattie.

Thou polished and high finished foe to »ruth, Gray beard corrupter of our listening youth, To purge and skim away the filth of vice, That so refined it might the more entice, Then pour it on the morals of thy son ; To taint his heart, was worthy of thine own ! Cowper.

Would it not be right, then, to pull down this fabric of corruption, to recall the government to its original principles, and to re-establish the constitution upon its true basis ? Sheridan.

CORRUPTION. See PUTREFACTION.

CORRUPTION OF BLOOD, in law. This is one of those notions which our laws have adopted from the feudal constitutions at the time of the Nor- man conquest. It was unknown in those tenures which are indisputably Saxon, or Gavel-kind, wherein, though by treason, according to the an- cient Saxon laws, the land is forfeited to the king, yet no corruption of blood, no impediment of de- scents, ensues ; and on judgment of mere felony, no escheat accrues to the lord. But, by the law of England, derived as above, a man's blood is so universally corrupted by attainder, that his sons can neither inherit to him nor to any other ancestor, at least on the

part of their attainted father. Sec ATTAINDER. This corruption of blood cannot be absolutely removed but by au- thority of parliament. The king may excuse the public punishment of an offender ; but cannot abolish the private r'ght which has accrued, or may accrue, to individuals as a consequence of the criminal s attainder. He may icmit a for- feiture in which the interest of the crown is alone concerned ; but he cannot wipe away the corrup- tion of blood; for therein a third person hath an interest, the lord who claims by escheat. If, therefore, a man has a son, and is attainted, and afterwards pardoned by the king ; this son cannot inherit to his father, or father's ancestors ; be- cause his paternal blood, being once corrupted by his father's attainder, must continue so ; but if the son has been born after the pardon, he may inherit; because, by the pardon, the father i made a new man, nnd may convey new inherita-*

ble blood to his after-born children. This cor- ruption of blood has been long considered as a peculiar hardship ; because the oppressive parts of the feudal tenures being now in general abo- lished, it seems unreasonable to reserve one of their most inequitable consequences. And there- fore in most, if not all, of the new felonies treated by parliament since the reign of Henry VIII. it is declared that they shall not extend to any cor- ruption of blood ; and by the statute 7 Anne, cap. 21, the operation of which is postponed by the statute 17Geo. II cap. 39, it is enacted, that after the death of the late Pretender and his sons, no attainder for treason shall extend to the disin- heriting any heir, nor the prejudice of any person, other than the offender himself.

CORRUPTICOLJE, a sect who rose out of the Monophysites in Egypt, about A. D. 519, un- der their chief Severus, the pretended patriarch of Alexandria. Their distinguishing doctrine was, that the body of Jesus Christ was corrupti- ble ; and that to deny it was to deny the truth of our Saviour's passion. On the other hand, Ju- lian of Halicarnassus, another Eutychian, a refugee as well as Severus, in Alexandria, main- tained that the body of Jesus Christ had been always incorruptible ; that to say it was corrupti- ble was to make a distinction between Jesus Christ and the Word, and by consequence to make two natures in Jesus Christ. The people of Alex- andria were divided between the two opinions ; the partisans of Severus were called Corrupticolae, q.d. worshippers of something corruptible; and sometimes Corruptibiles ; and the adherents of Julian Incorruptibiles, or Phantasiastae. The clergy and secular powers favored the first; the monks and the people the latter.

COR'SAIR, n. s. A pirate, or sea-robber ; the vessel of a pirate.

He left a corsair's name to other times, Linked with cne virtue, and a thousand crimes.

Byron.

CORSAIR. The name is commonly given to the piratical cruisers of Barbary, who had their rise about the beginning of the sixteenth century. A corsair is distinguished from a privateer in this, that the latter has a commission, and only attacks the vessels of those at war with the state whence his commission his derived. The pu- nishment of a corsair is to be hanged, without remission ; whereas privateers are to be treated as prisoners of war. All corsair vessels are good prizes.

CO'RSELET, v. a. & n. s. Fr. corselet. A light armor for the forepart of the body. To encircle as a corselet does.

Some shirts of maile, some coats of plate put on, Some doned a cuirace, some a corslet bright. Fairfax.

Her arms,

Able to knock Jove from a synod, shall By warranting moonlight corslet thee.

Beaumont and Fletcher.

They lash, they foin, they pass, they strive to bore Their corslets, and their thinnest parts explore.

Dryden.

But heroes, who o'ercome or die, Have their hearts hung extremely high ; The strings of which, in battle's heat, Against their very cortlett beat. Prior.

CORSELETS were light breast-plates made to cover the whole body, anciently worn by the pike-men, who were usually placed in the front and flanks of the battle. Corselet also denotes a little cuirass.

CORSE PRESENT, n. s A funeral present; a mortuary.

CORSET, n. s. French. A pair of boddice for a female.

CORSIIAM, or COSHAM, a market town of England, in Wiltshire, where king Ethelred had anciently a palace, which the earls of Cornwall afterwaids made their chief residence. It is now considerable for its woollen

manufacture; and has a weekly market on Wednesday. The town is well built, and consists chiefly of a single street, in which stands a handsome market-house. The church is a fine ancient building. It is five miles south-west of Chippenham, and ninety- six west of London.

CORSICA, one ef the largest islands in the Mediterranean, is situate between the territory of Genoa and the island of Sardinia, or between 41° and 42° of N. lat. and 8° and 10° of E. long. Its length is about 110 miles; its breadth very unequal; being in some places only a few French leagues. On account of the numer- ou.5 gulfs and creeks which indent the coasts of this island, it is extremely difficult to ascertain its precise extent; it cannot, however, be less than 120 leagues round, and its superficies may be computed to contain 527 square leagues.

Corsica abounds in mountains ; a vast range of which, in the shape of a cross, completely traverses the island, the summits of many of them glittering with perpetual snow. The two most celebrated for their height are Monte Rotondo (the Mons Aureus of the ancients), and Monte d' Oro, the former 9900 feet above the level of the sea, and the other 8720 feet. Fertile valleys extend on all sides of these mountains, reaching even to the coasts. The principal lakes are the Ino and the Creno, both situated in the interior of the island. The chief river is the Golo, which takes its rise from the lake Ino, and has a course of upwards of seventy miles. The Tarignano is also a considerable river, rising from the Lake Creno, and extending through the most unculti- vated tract of the island. The Restonica may be mentioned, not so much on account of its size, as for the singular property it possesses of whitening every thing over which its waters flow. Besides these, there are many more of minor im- portance, which at once enrich and beautify the island.

The climate of Corsica is on the whole salu- brious, instances of longevity being by no means unfrequent. The cold proceeding from the mountains is tempered by the sea-breezes, whilst, on the other hand, the piercing winds which blow over them considerably moderate the intensity of the summer's heat. The winters have been thought severe, and are not unfrequently accom- panied by tremendous storms, yet, excepting in the neighbourhood of the stagnant pools, the air is for the most part clear and serene. The soil produces wheat, rye, barley, and millet, excellent wine, oranges, lemons, figs, and a variety of other fruits ; but the chief wealth of the island consists

in its oil, chestnuts, and timber. The forests are particularly valuable, and

very extensive. At the time this island came into the possession of the French, in the year 1768, it was ascertained that 160 square leagues of its surface were covered with forests. The most considerable at present is that of Vico. Among the resinous trees found in the Corsican forests, the pine and larch stand pre-eminent, both as respects the beauty of their form and foliage, and the excellence of their timber. Its agriculture is in a very rude state. The Corsican sheep are in general black or tawny; the mutton, however, is exceedingly delicate, and yields a very rich juice. The horned cattle are of a very inferior quality, and give but very little milk. Oil, as in Italy and all hot countries, supplies the place of butter. The muffoli, a kind of wild ram, covered with hair instead of wool, is an inhabitant of the loftier mountains ; it is scarcely possible to approach it in a wild state, but, being taken young, it is easily tamed. Vast numbers of goats, deer, and wild boars, are also found in this island. Hunting the wild boar is one of the most favorite sports of the inhabitants; to pursue which they breed a peculiar race of dogs, between the mastiff and the shepherd's dog. Bees abound here, but the honey is somewhat bitter, owing, it is supposed, to the free access which the bees have to the box-wood and yew. Foxes, of a very large size, and extremely ravenous disposition, are also abundant on this island ; but there are no wolves, and but very few venomous animals. The fisheries on the coast are very pro- ductive.

Among the mineral productions of Corsica may be mentioned silver, copper, lead, iron, antimony, granite, alum, porphyry, and jasper ; serpentine stone, talc, saltpetre, rock-crystals, and asbestos. The silver mines are also rich, and the iron is said to equal the prepared ores of Spain in dura- bility. The manufactures are coarse linen and woollen cloths and stuffs (goods of a finer descrip- tion being imported), leather, lamp oil, wax and tallow candles, guns, and pistols.

The trade of this island is very inconsiderable, although it enjoys great commercial capabilities, both as it respects its natural productions and situation. The coast affords excellent anchorage to shipping ; and there are numerous ports, into which the largest vessels can enter, and remain perfectly secure from storms. Its population amounted in 1740 to only 120,389, and in 1831 to 184,702. The intestine wars which have ha- rassed this island for ages, will serve to account for its paucity of inhabitants. Pliny mentions no less than thirty-three large towns of Corsica ; at present they are reduced to nine. By an enu- meration which took place in the year 1740, this island was found to contain 133 parishes, 427 villages, and 26,854 hearths.

The literature of Corsica is at a very low ebb ; since the island came last into the possession of the French, however, the education of their youth has been conducted on a much more liberal prin- ciple. In religion the

Corsicans are Roman Ca- tholics, and profess great zeal. There are five bishops in the island, who are suffragans of the archbishop of Pisa ; about sixty-five convents of mendicant friars, who depend entirely on the

charity of the people for their support ; two col- leges of Jesuits; two convents of Dominicans; five of Servites ; and one of missionaries ; all of which have good possessions. There are no nun- neries in the island.

Strabo describes the ancient Corsicans as bru- tal, ferocious, and stupid, but at the time he wrote, they were under the yoke of a tyrant. Pliny speaks of them whilst they enjoyed the protection of a more equitable master, as just, generous, valiant, and humane. In modern times the Genoese have painted them in the blackest colors, but they were at the very time ruling them with a rod of iron. Frederick the Great and Rousseau have praised them for their love of liberty and courage. Corsica has been successively conquered by the Carthaginians, the Romans, the Vandals, the Goths, the Lom- bards, the Saracens, the Franks, the Pisans, and the Genoese. Till the year 1736 it had groaned under an accumulating weight of misery : the imposition of another tax at this period, how- ever, at once aroused their dormant courage, and the intrepid Stephen Theodore, baron de Neu- hoff, arriving on the island at this juncture, they chose him for their leader, and proclaimed him king of Corsica and Capraia. He devoted him- self with assiduity to their service, and procured supplies of money, arms, and provisions ; and at tacked, with great intrepidity, the fortresses held by the Genoese. In the moment of enthusiasm, he succeeded in expelling the enemy from the island. But his triumph was of shoit duration ; for the Genoese, having secured the assistance of France, again compelled the Corsicans to submit to their yoke; the baron was taken and thrown into pri- son, where he died, in extreme indigence, in 1755. In 1753 the Corsicans had chosen the cele- brated Pascal Paoli for their general. He en- rolled all the inhabitants capable of bearing arms, disciplined his troops, caused money to be coined, and made his administration at once feared and respected. He waged a success- ful war with the Genoese, for the space of four years. Theyon their side, having become tired of the protracted contest, sold, in 1768, the sove- reignty of the island to France. Hereupon the French invaded Corsica, with an army of 5000 men, under the command of the marquis de Cliauvelin, supported by a naval force consisting of two ships 01 the line, two frigates, and six armed brigantines. Paoli defended his country to the last, but on the French receiving a reinforce- ment, under the command of the count de Vaux in 1769, he was obliged to seek an asylum in England. Paoli returned to Corsica in 1792, after having taken the oath of fidelity to the na- tional assembly of France. He was elected mayor of Bastia, commander in chief of the na- tional guard, and president of the department ; but the execution of Louis XVI. at Paris, holding out every prospect of a civil war in France, Paoli embraced

this opportunity to revolt, and called in the aid of England. After a violent struggle, the towers of Marsella, Fornelli, and San Fiorerizo were taken by the British troops, commanded by lieutenant-general Dundas, and shortly afterwards Corsica was declared united with Great Britain. On the 19th of

June, 1794, Sir Gilbert Elliot, the present lord Minto, was invested with the dignity of vice- roy. Corsica did not, however, remain an ap- pendage to the British crown for a long time ; mutual jealousies arose between the English viceroy and Paoli, and the latter embarked for England, but not till he had exhorted his coun- trymen to maintain their allegiance to Great Britain. The dazzling splendour of the victories of their countryman, Buonaparte, made them forget the exhortations of Paoli, however, and they once more returned to their allegiance to France. The English troops finally evacuated the island in 1796. Corsica is at present a depart- ment of the French empire: the revenue drawn from it amounts to only 500,000 francs, while the administration costs 3,000,000.

CORSNED, or morsel of execration, a species of trial, or purgation, anciently in use. It consisted of a piece of cheese or bread, about an ounce in weight, which was consecrated with a form of exorcism ; desiring of the Almighty that it might cause convulsions and paleness, and find no passage if the man was really guilty, but might turn to health and nourishment if he was innocent ; as the water of jealousy among the Jews was, by God's especial appointment, to cause the belly to swell, and the thigh to rot, if the woman was guilty of adultery. This corsned was given to the suspected person, who, at the same time, received the sacrament. Historians assure us, that Godwin, earl of- Kent, in the reign of King Edward the Confessor, abjuring the death of the king's brother, at last appealed to his corsned, which stuck in his throat and killed him. This custom has long been abolished, but the remembrance of it still subsists in certain phrases of abjuration ; as, ' I will take the sa- crament upon it ,' ' May this morsel be my last,' &c.

CORSOER, a town of Denmark, on the west coast of Zealand, in a small peninsula, which extends into the Great Belt, that separates Zea- land from Funen. It has a good harbour fit for light vessels, and is defended by a fort. It lies fifty-two miles south-west of Copenhagen.

CORT (Cornelius), a celebrated engraver, born at Hoorn, in Holland, in

1536. He went to Italy to complete his studies, and at Venice was courteously received by Titian, and engraved several plates from his pictures. He at last settled at Rome, where he died in 1578, aged forty-two. Bafan says, he was ‘ the best engraver with the buriu, or graver only, that Holland ever produced.’

CORTEMIGLIA, a town of Italy, in Pied- mont, and late duchy of Montserrat, seated on the Bormida. Part of the town is defended with a wall and ancient towers : the other part, which is built at the foot of a hill, is surrounded by the river. It had anciently a beautiful castle, now fallen to decay. It is four miles north of Gor- zegno, and sixteen east of Cherasco.

CORTES, the ancient assembly of the estates in Spain and Portugal. The cortes of Castile, consisting of the nobility, the superior ecclesias- tics, the knights of the orders of St. James, Calatrava, and Alcantara, held the first rank during the united Spanish monarchy. The crown

was dependent upon them, and they possessed the power of making war. Their power was overturned, and their assembly dissolved by Charles, in the year 1538. Napoleon attempted to restore this ancient converition, and subse- quently they assembled, independent of any regal interference ; but gradually dissolved again. In 1822, Don Miguel convened the cortes, in order to obtain their sanction upon his violent usurpation of the crown of Portugal.

CORTEZ (Ferdinand), a Spanish general, born in Estramadura in 1485. In 1511 he accom- panied Velasquez to Cuba, and was chosen to conduct the troops sent for the conquest of Mex- ico. He first landed at Tabasco ; soon after which he destroyed his vessels, that his soldiers might have no retreat. After reducing the pro- vince of Tlascala, Cortez marched directly to Mexico, which he conquered, and made the em- peror Montezuma prisoner. In the mean time, Velasquez, being jealous of his success, sent a fleet against him, but without any effect ; and Cortez completed the reduction of the Mexican empire in 1531, though not without committing the most horrible cruelties on the vanquished, without regard to rank, age, or sex. It probably was on this account he was coolly received on his return to Europe by Charles V. It is even said, that the emperor asked him who he was ; to which Cortez replied, ‘ I am the man who has given you more provinces than your ances- tors left you towns.’ He died in 1554, aged 63. CO’RTEX, n. s. \ Lat. cortex. The rind CO’RTICAL, adj. for bark of planks; a CO’RTICATED, adj. £ cover. Barky; belong CO’RTICOSE, adj. J ing to the rind. Resem- bling the rind of a tree. Full of bark.

CORTLANOT, a township of New York, in the northern part of the county of West Chester, on the east bank of Hudson river.

CORTONA, a town of Italy, in Tuscany, with a bishop's see and a celebrated academy. It contains seven churches, built with taste, and adorned with beautiful paintings ; and several convents. It is thirty miles south-east of Sienna. CORTUSA, bear's ear sanicle, a genus of the monogynia order, and pentandria class of plants, natural order twenty-first, precise : COK. wheel- shaped, with its throat like an elevated ring : CAP. unilocular, oval, quinquevalved at the top. There are two species, both very low, flowery, herbaceous perennials, crowned by umbels of monopetalous wheel-shaped flowers, of a fine red color. Being natives of mountainous rocky parts abroad, they must have a dry lean soil ; or they may be kept in pots of dry sandy earth in the shade, and in summer duly watered. Their propagation here is by slipping the roots in Oc- tober.

CORVE'E, from cura viae, Lat. i. e. care of the road ; in the ci-devant French customs, a kind of duty similar to that of our statute labor, but much more oppressive. Individuals were called upon to furnish both labor and materials for the construction and reparation of the roads ; and, upon this iniquitous system, all the roads in France were made and repaired, as there were no turnpikes. It was abolished in 1774, by the celebrated M. Turgot.

CORVETTE, n. s. French. A vessel of war, having fewer than twenty guns.

CORVE'TTO, n. s. The curvet.

You must draw the horse in his career with his manage, and turn, doing the corvetto and leaping.

Peacham on Drawing.

CORVEY, a small principality of Germany, in the circle of Westphalia, twelve miles long, and twelve broad, with a town so named, and a celebrated abbey, founded A.D. 822. In the treaty of indemnification to those princes who had suffered by the cessions to France at the treaty of Luneville, this principality was trans- ferred to Nassau Dillenburg. It lies on the west bank of the Weser, twenty-four miles east of Paderborn.

CORUNNA, a sea-port town of Spain, in the province of Gallicia, of which it is called the capital, from being the seat of a royal resi- dence, of a governor-general, and the intendant of the province. It is divided into the upper and lower towns. The former is seated on the side of a hill, surrounded with walls, and de- fended by a castle ; the latter, called also

the Paxeria, is situated at the bottom of a hill, on a tongue of land, washed on three sides by the Atlantic Ocean. The town is of a circular form, fortified in the ancient manner, and contains one collegiate, and four parish-churches, and four convents. The harbour is large and safe, and defended by two castles. The objects of inte- rest are the royal arsenal, and an ancient tower, admired for its elevation and solidity. The po- pulation is about 4000, exclusive of the military. The harbour is spacious and secure, and pro- vided with a handsome quay. On a high mountain, about three miles from it, is a light- house, which is discerned at sea for twenty leagues round Covunna. It is on the whole a commer- cial place ; its principal articles of export being pilchards and cattle. A packet sails hence every month for the Havannah, touching at Porto Rico; another was usually despatched every two months to Buenos Ayres, Chili, Peru, and the Philippine Isles. The intercourse likewise be- tween Spain and England, is chiefly kept up by packets from Corunna to Falmouth.

We must indulge ourselves by transferring to our pages, with some slight alteration, Dr. Sou- they's spirited narrative of the celebrated modern battle which takes its name from this town : —

' A British division, under general Hope, oc- cupied a hill on the left, commanding the road to Betanzos ; the height decreased gradually to the village of Elvina, taking a curved direction. At this village general Baird's division com menced, and bent to the right; the whole formed nearly a semicircle. On the right of Sir David Baird, the rifle corps formed a chain across a valley, and communicated with general Fraser's division, which was drawn up about half a mile from Corunna, near the road to Vigo. The re- serve, under general Paget, occupied a village on the Betanzos road, about half a mile in the rear of general Hope. Outside of these posts was a magazine of 4000 barrels of gunpowder. It wi< now necessary to blow it up : the explo- sion shook the town like an earthquake , and a village near was totally destroyed.

' The French made their appearance on the morning of the 12th of January, 1809 ; but the British preparations for embarking were conti- nued until the morning of the 16th, and the ge- neral gave notice that he intended, if the French did not move, to begin embarking the reserve at four in the afternoon.

' This was about mid-day. He mounted his horse, and set off to visit the out-posts; before he had proceeded far, a messenger came to tell him that the enemy's line were getting under arms ; and a deserter arriving at the same mo- ment, confirmed the intelligence. He spurred forward. Their light troops were pouring ra- pidly down the hill on the right wing of the British, and the advanced picquets were already beginning to fire. Lord William

Bentinck's bri- gade, consisting of the 4th, 42d, and 50th regi- ments, maintained this post. The guards were in their rear. General Paget was ordered to advance with the reserve, and support lord Wil- liam. The enemy opened a cannonade from eleven heavy guns, advantageously planted on the hills. Two strong columns, one advancing from a wood, the other skirting its edge, directed their march towards the right wing. A third column approached the centre ; a fourth ad- vanced slowly upon the left; a 'fifth remain?;! half way down the hill, in the same direction. Both in number and weight of guns they harl a, decided superiority ; and they fired with grf-at effect from their commanding situation. Sir David Baird had his arm shattered with a grape- shot as he was leading on his division. The two lines of infantry advanced against enc'i other ; they were separated by stone walls and hedges which intersected the ground; but as they closed, it was perceived that the French line extended beyond the right flank of the British, and a body of the enemy was observed moving up the valley to turn it. Marshal Soult's in- tention was to force the right of the British, and thus to interpose between Corunna and the army, and cut it off from the place of embarka- tion. Failing in this attempt, he was now endeavouring to outflank it. Half of the 4th regiment was, therefore, ordered to fall back, forming an obtuse angle with the other half. This manoeuvre was excellently performed, and they commenced a heavy flanking fire : Sir John Moore called out to them, that this was exactly what he wanted to be done, and rode on to the 50th, commanded by majors Napier and Stan- hope. They charged the enemy most gallantly, and drove them out of the village of Elvina. The general now proceeded to the 42d. ' High- landers,' said he, ' remember Egypt !' They rushed on, and drove the French before them till they were stopped by a wall ; Sir John ac- companied them in this charge. He now sent captain Hardinge to order up a battalion of guards to the left flank of the 42d. The officer commanding the light infantry conceived, at this, that they were to be relieved by the guards, because their ammunition was nearly expended, and he began to fall back. The general, disco- vering the mistake, said to them, ' My brav 42d, join your comrades ; ammunition is coming and you have your bayonets !' Upon this, the/

instantly moved forward. Captain Hardinge returned, and pointed out to the general where the guards were advancing. The enemy kept up a hot fire, and their artillery played inces- santly on the spot where they were standing. A cannot-shot struck Sir John, and carried away his left shoulder, and part of the collar-bone, leaving the arm hanging by the flesh. He fell from his horse on his back, his countenance did not change, neither did he betray the least sen- sation of pain. Captain Hardinge, who dis-

mounted, and took him by the hand, observed him anxiously watching the 42d, which was warmly engaged, and told him they were ad- vancing ; and upon that intelligence his counte- nance brightened. Colonel Graham, who now came up to assist him, seeing the composure of his features, began to hope that he was not wounded, till he perceived the dreadful laceration. From the size of the wound, it was in vain to make any attempt at stopping the blood ; and Sir John consent-ed to be removed in a blanket to the rear. In raising him up, his sword, hang- ing on the wounded side, touched his arm, and became entangled between his legs; captain Hardinge began to unbuckle it, but the general said, in his usual tone and manner, and in a distinct voice, ' It is as well as it is ; I had rather it should go out of the field with me.' Six sol- diers of the 42d and the guards bore him. Hardinge, observing his composure, began to hope that the wound might not be mortal, and said to him, he trusted he might be spared to the army, and recover. Moore turned his head, and look- ing steadfastly at the wound for a few seconds, replied, 'No, Hardinge, I feel that to be im- possible.'

' As the soldiers were carrying him slowly along, he made them frequently turn round, that he might see the field of battle, and listen to the firing, and he was well pleased when the sound grew fainter. A spring-waggon came up, bear- ing colonel Wynch, who was wounded : the co- lonel asked who was in the blanket, and being told it was Sir John Moore, wished him to be placed in the waggon. Sir John asked one of the Highlanders whether he thought the waggon or the blanket was best? and the man said the blanket would not shake him so much, as he and the other soldiers would keep the step, and carry him easy. So they proceeded with him to his quarters at Corunna, weeping as they went.

' General Paget, meantime, hastened with the reserve to support the right wing. Colonel Beckwith dashed on with the rifle corps, repelled the enemy, and advanced so far as nearly to carry off one of their cannon; but a corps, greatly superior, moved up the valley, and forced him to retire. Paget, however, attacked this body of the enemy, repulsed it, and pressed on, dispersing every thing before him, till the enemy, perceiving their left wing was now quite exposed, drew it entirely back. The French then advanced upon generals Manningham and Leith, in the centre, and there they were more easily repelled, the ground being more elevated, and favorable for artillery. The position on the left was strong, and their effort there was una- vailing; but a body of them took possession of

COR

a village on the road to Betanzos, and continued to fire from it, till lieutenant-colonel Nicholls at- tacked il, and beat them out. Night was now closing in, and the French had fallen back in all parts of the field. The

firing, however, was not discontinued till it was dark. Never was any battle gained under heavier disadvantages. The French force exceeded 20,000 men, the British were not 15,000. The superiority in artillery was equally great. The enemy had met English guns on the way, sent off, thus late, to the pa- triotic armies, and these they had turned back, and employed against the English.' It is twenty- eight miles north of Compostella, and thirty north- west of Lugo.

CORVO, the smallest island of the Azores, being only twelve miles in circumference. It abounds in crows, whence the name.

CO'RUSCATE, v. n. } Lat. coruscare. To CORUSCA'TION, n. s. > glitter ; to dart forth Co RUSCANT, adj. J flashes or sparkles of light. A flash ; a rapid darting forth, or vibra- tion, of light. Glittering by flashes.

We see that lightnings and coruscations, which are near at hand, vield no sound. Bacon's Natural Hist. We may learn that sulphureous steams abound in the bowels of the earth, and ferment with minerals, and sometimes take fire with a sudden coruscation and explosion. Newton's Opticks.

How beat and moisture mingle in a mass, Or belch in thunder, or in lightning blaze j Why nimble coruscations strike the eye, And bold tornadoes bluster in the sky

Garth's Dispensatory.

A.3 flaming fire was more coruscating and enlighten ing than any other matter, they invented lamps to hang in the sepulchres of the rich, which would burn oerpetually. Greenhill.

The line of lights, too, up to Charing Cross, Pall Mall, and so forth, have a coruscation Like gold as in a comparison to dross,

Matched with the continent's illumination, IVhose cities Night by no means deigns to gloss.

Byron. Don Juan.

CORUSCATIONS, ARTIFICIAL. There is a method of producing artificial coruscations or sparkling fiery meteors, which will be visible not only in the dark but at noon-day, and that from two liquors actually cold. Fifteen grains of solid phosphorus are to be melted in about a drachm of water ; when this is cold, pour upon it about two ounces of oil of vitriol ; let these be shaken together, and they will at first heat, and afterwards they will throw up fiery balls in great numbers, which will adhere like so many stars

*to the sides of the glass, and continue burning for a considerable time ; after this, if a small quan- tity of oil of turpentine is poured in, without shaking the phial, the mixture will of itself take fire, and burn very furiously. The vessel should be large, and open at the top. Artificial corus- cations may also be produced by means of oil of vitriol and iron, in the following manner : take a glass body capable of holding three quarts ; put into it three ounces of oil of vitriol and twelve ounces of water; then warming the mix- :ure a little, throw in, at several times, two ounces, or more, of clean iron filings ; upon this an ebullition and white vapors will aiise; then present a lighted candle to the month of *Iie*

vessel, and the vapor will take fire, and will afford a bright fulmination or flash like light- ning. Applying the candle in this manner se- veral times, the effect will always be the same ; and sometimes the fire will fill the whole body of the glass, and even circulate to the bottom of the liquor; at others, it will only reach a little way down its neck. The great caution to be used in making this experiment is in making the vapor of a proper heat ; for, if too cold, few vapors will arise ; and, if made too hot, they will arise too fast, and will only take fire in the neck of the glass, without any remarkable coruscation.

CORVUS, in antiquity, a military engine, or rather gallery, moveable at pleasure by means of pulleys ; chiefly used by the Romans in boarding the enemy's ships to cover the men. The con- struction of the corvus was as follows : they erected, on the prow of their vessels, a round piece of timber, about a foot and.a-half diameter, and about twelve feet long ; on the top of which they had a block or pulley. Round this they laid a platform of boards, four feet broad, and about eighteen long, well framed and fastened with iron. The entrance was long-ways, and it was moved about on the upright piece of timber as on a spindle, and could be hoisted up within six feet of the top ; around this was a sort of parapet, knee-high, defended with upright bars of iron, sharpened at the end ; and, towards the top there was a ring, by the help of which, and a pulley or tackle, they raised or lowered the engine at pleasure. With this moveable gallery they boarded the enemy's vessels (when they did- not oppose side to side), sometimes on their bow and sometimes on their stern. When they had grappled the enemy with these iron spikes, if they happened to swing broadside to broadside, then they entered from all parts ; but, in case they attacked them on the bow, they entered two and two by the help of this machine, the foremost defending the fore parts, and those that followed, the flanks, keeping the boss of their bucklers level with the top of the parapet.

CORVUS, in ornithology, the raven or crow, a genus of birds of the order of picae, the distin- guishing characteristics of which are these : the beak is convex and cultrated; the nostrils are covered with bristly feathers ; the tongue is forked and cartilaginous ; and the feet are of the walking kind. There are above forty species. The following are the most remarkable.

1. C. caryocatactes, the nut-cracker, is some- what less than the jack-daw ; the bill is strong, straight, and black ; the color of the whole head and neck, breast and body, of a rusty brown ; the crown of the head and rump are plain ; the other parts marked with triangular white spots ; the wings black; the coverts spotted like the body ; the tail rounded at the end, black tipt with white ; the vent feathers are white ; the legs dusky. These birds are scattered in many parts of Europe, but nowhere so numerous as in Germany. They are also found in North America, but not near the sea-coasts, and seldom visit England. In manners, this bird resembles the jay, laying up a store of acorns and nuts.

2. C. corax, the raven of English authors, weighs three pounds, and is about two feet two

inches in length; the color is black, finely glossed with a rich blue, the belly excepten, which is of a dusky color. They are very do- cile, and may be trained up to fowling like hawks ; to fetch and carry like spaniels ; to speak like parrots ; and may even be taught to imitate, in a great degree, the human voice, in singing. They have a great propensity to pilfer, often hiding things of value. They frequent the neighbourhood of great towns, where they are useful in devouring the carcases and filth which would otherwise prove a nuisance. They also destroy many living animals ; such as rabbits, ducks, chickens, and even lambs, which have been dropped in a weak state. In clear weather they fly in pairs to a great height, making a deep loud noise, different from the common croaking. Their scent is remarkably good, and they are very long lived. They make their nests early in spring, laying five or six eggs, of a pale, bluish-green color, spotted with brown. With us they build in trees ; but in Greenland and Iceland in the holes of rocks, composing theii nests of roots, twigs, and bones, and lining them with hair, moss, &c. Their flesh is eaten in Greenland by the natives, who use the skins as a warm under-covering.

3. C. cornix, the hooded crow, pretty much resembles the rook, feeding on insects, and flying together in great flocks. In England it is a bird of passage, visiting it in the beginning of winter, and leaving it with the woodcocks. In the ma- ritime parts they feed on crabs and shell-fish. They are very common in Scotland : in many parts of the Highlands, and in all the Hebrides, Orkneys, and Shetland, it is the only species of genuine crow, the carrion and rook being un- known there. They breed and continue in

those parts the whole year.

4. C. corone, the carrion crow, agrees with the raven, in the form of its body, as well as in its food, whence it was formerly distinguished from the rook, which feeds entirely on grain and in- sects, by the name of the gor, or gor-crow. Virgil says, that its croaking forebodes rain. It was also thought a bird of bad omen. England breeds more of this species than any other coun- try in Europe. In the 24th of Henry VIII. they were grown so numerous that they were considered as an evil worthy of parliamen- tary redress ; an act was passed for their de- struction, in which rooks and choughs were in- cluded. Every hamlet was to provide crow- nets for ten years ; and all the inhabitants, at certain times, during that space, were obliged to assemble, to consult of the proper means for extirpating them. But, though the crow abounds thus in Britain, it is so rare in Sweden, that Linnaeus speaks of it only as a bird that he once knew killed there. It lays the same number of eggs as the raven, and of the same color; im- mediately after deserting their young they go in pairs. Both these birds are often found white or pied ; an accident that befals black birds more frequently than any others. Pennant says, he has seen one entirely of a pale brown color, not only in its plumage, but even in its bill and feet. The crow weighs about twenty ounces. Its length is eighteen inches ; its breadth two feet two inches.

These birds have an instinctive propensity to plant trees in autumn ; great numbers of them being seen employed in digging holes in the earth, and then dropping in acorns and other seeds, and covering them with earth and moss.

6. C. frugilegus, the rook, is the corvus of Vir- gil ; no other species of this genus being grega- rious. It differs not greatly in its form from the carrion crow ; the most remarkable variation is in the nostrils and root of the bill ; which in the crow are well clothed with feathers, but in the rook are bare, or covered only with some bristly hairs. This arises from its thrusting the bill into the earth, after the worms and erucae of insects, on which it feeds ; for it does not live on carrion. It feeds on all sorts of grain, with some loss to the husbandman, but which is doubly repaid by the good done him in extirpating the maggots of the chafer beetle, which in some seasons destroy whole crops of corn. The rook is a gregarious bird, sometimes being seen in immense flocks, so as almost to darken the air. These flights they regularly perform morning and evening, except in breeding time, when the daily attendance of both male and female is required for the use of incubation, or feeding the young; for they do both by turns. As they form themselves

into societies, such places as they frequent during the breeding time are called rookeries ; and they ge- nerally choose a large clump of the tallest trees for this purpose. The eggs are like those of crows, but less, and the spots larger. They be- gin to build in March, and after the breeding season forsake their nest trees, to roost elsewhere, but return to them in August : in October they repair their nests. In Britain they remain the whole year : yet both in France and Silesia they are birds of passage. Linnaeus says they build in Sweden. The young birds are accounted good eating, especially if put in a pie.

7. C. glandarius, the jay, is one of the most beautiful of British birds. The weight is between six and seven ounces : the length thirteen inches. The forehead is white streaked with black ; the head covered with long feathers, which it can erect at pleasure into the form of a crest ; the whole neck, back, breast, belly, and covert feathers of the wing, are faint purple dashed with gray. The first quill-feather is black ; the exterior webs of the nine next are ash-colored ; the interior webs dusky ; the six next are black, but the lower sides of their exterior webs are white tinged with blue; the two next wholly black ; the last a fine bay color tipt with black. The lesser coverts are a light bay : the greater covert feathers most beautifully barred with a lively blue, black, and white : the rest are black : the rump is white. The tail consists of twelve black feathers. The feet are pale brown ; the claws large and hooked. Jays build chiefly in woods, making their nest of sticks, fibres of roots, and tender twigs ; and lay five or six eggs, of the size of a pigeon's, cinereous olive, marked with pale brown. The young keep with the old ones till the next pairing time in spring; when they choose each his mate to produce their future pro- geny. In general they feed on acorns, nuts, seeds, and fruits of all kinds; but sometimes destroy young chickens and eggs, and even take

away birds that have been caught in a trap, or entangled with birdlime. They are often kept in cages, and will talk pretty well ; but lose all their beauty, so conspicuous in a wild state.

8. C. graculus, the red-legged crow, is but thinly scattered over the northern world ; no mention is made of it by any of the Faunists : nor do we find it in any other part of Europe except Britain and the Alps. It is produced in the island of Candia, and visits Egypt towards the inunda- tions of the Nile. It affects mountainous and rocky places ; builds its nest in high cliffs or ruined towers ; and lays four or five eggs, white spotted with a dirty yellow. It feeds on insects, and also on new-sown corn. It commonly flies high, makes a shriller noise than the jackdaw, and may be taught to speak. It is a very tender bird, and unable to bear very severe weather ; is of an elegant slender make; active, restless, and thieving. There are instances of houses being set on fire, by its picking up lighted sticks ; on which account

Camden calls it incendiaria avis. It is found in Cornwall, Flintshire, Caernarvon- shire, and Anglesey, in the rocky cliffs along the shores ; in Scotland as far as Strathnaver, and in some of the Hebrides. Its color is black, beau- tifully glossed over with blue and purple : the legs and bill are a bright orange inclining to red : the tongue is almost as long as the bill, and a little cloven : the claws are large, hooked, and black.

*9. C. monedula, the jackdaw, generally*weighs about nine ounces ; and is thirteen inches long, and twenty-eight broad.*

10. C. pica, the magpie, in length about eigh- teen inches, and weighs eight or nine ounces : both too well known to need particular description.

CORYATE (Thomas), a person who made himself famous by his whimsical extravagancies, was the son of a clergyman, and born at Old- combe in Somersetshire in 1577. He acquired Greek and Latin at Oxford ; and, coming to London, was received into the household of Henry prince of Wales, where he became ac- quainted with the wits of that age. In 1608 he took a long journey on foot ; and, on his return, published his travels under the following strange title : Crudities Hastily Gobbled up in Five Months' Travels, in France, Savoy, Italy, Rhetia, Helvetia, some parts of High Germany, and the Netherlands, London, 1611, 4to. lie wrote several other works. In 1612 he set out again with a resolution to spend ten years in travelling: he went first to Constantinople ; and after tra- velling over a great part of the East, died of a flux at Surat in the East Indies. Some of the accounts of his peregrinations are to be found in Purchas's Pilgrimages.

CORYBANTES, in antiquity, priests of Cy- bele, who danced and capered to the sound of flutes, drums, &c. Catullus, in his poem called Atys, gives a beautiful description of them re- presenting them as madmen. Maximus Tyrius says, that those possessed with the spirit of the Corybantes, as soon as they heard the sound of a flute, were seized with an enthusiasm, and lost the use of their reason. And hence the Greeks used the word Kopv/ Savmv, to corybantise, to signify a person's being possessed with a devil. See ENTHUSIASM. Some say that the Cory

bantes were all eunuchs : and that hence Catul- lus, in his Atys, always uses feminine epithets in speaking of them. Diodorus Siculus says, that Corybas, son of Jason and Cybele, passing into Phrygia with his uncle Dardanus, there instituted the worship of the mother of the gods, and gave

his own name to the priests,

CORYBA'NTICK, adj. From corybantes. In- flamed with a mad fury, like the priests of Cybele.

The divine zeal is no corybantick fury, but a calm and regular heat, guided and managed by light and prudence.

CORYCOMACHIA, among the ancients, was a sort of exercise in which they pushed forwards a ball, suspended from the ceiling, and at its return either caught it with their hands, or suf- fered it to meet their body.

CORYLUS, the hazel, a genus of the poly- andria order, and monoecia class of plants ; na- tural order fiftieth, amentacese. Male CAL. monophyllous, scale-like, trifid, and unitlorous : COR. none : STAM. eight. Female CAL. diphyl- lous and lacerated : no COR. two styles ; and an egg-shaped nut. Mr. Miller reckons three species, other botanists only two They are all of the large shrub kind, hardy and deciduous ; and have several varieties valuable for their nuts, as also for their variety in large wildernesses and shrubbery works. They prosper in any soil or situation, and turn out to good account in cop- pices to cut as underwood, and as poles for various uses, as hoops, spars, hurdles, handles to husbandry implements, walking sticks, fishing rods, Sac. for which purposes they may be cut every fifth, seventh, or eighth year. The best method of propagating them is by layers, though they may also be raised from the nuts.

CORYMBIUM, in antiquity, an ornament of hair worn by the women.

CORYMBIUM, in botany, a genus of the mo- nogamia order, and syngenesia class of plants ; natural order forty-ninth, composite : CAL. diphyllous, uniflorous, and prismatical : COR. monopetalous and regular : there is one woolly seed below each floret. Species, four; natives of Africa.

CORY'MBUS, n. s. ˆ Lat. ' Amongst tha

CORY'MBIATED, adj. > ancient botanists,'

CORYMBI'FEROUS, adj. j says Quincy, ' co- rymbus was used to express the bunches or clus- ters of berries of ivy ; amongst modern botanisfcj it is used for a compounded discous flower, whose seeds are not pappous, or do not fly away in down; such are the flowers of daisies, and common marygold.' CorymbiateH signifies gar- nished with branches of berries. ' (>rymbiferous, plants are distinguished into such as have a ra- diated flower, as the sun-flower; and such as have a naked flower, as the hemp-agrimony, and mugwort : to which are added those a-kin here- unto, such as scabious, teasel, thistle, and the like.' See BOTANY.

CORYNOCARPUS, in botany, a genus of the monogynia order, and pentandria class of plants : CAL. a pentaphyllous perianth : COR. five roundish, erect, and hollow petals : STAM. five subulated filaments arising from the base of the petals : ANTH. erect and oblong : FERICARP.

a monospermous, turbinate clavated nut. Spe- cies, one only ; a native of New Zealand,

CORYPHA, mountain palm, or umbrella tree, in botany, a genus of plants of the order of palmas : COR. tripetalous : STAM. six, with one pistil : the fruit a monospermous plum. There are two species ; the chief is C. umbracula, a native of the West Indies, where it is called codda- pana. It rises to a considerable height, and produces at the top many large palmated, plaited leaves, the lobes of which are long, and placed regularly round the end of a long spiny foot-stalk, in a manner representing a large umbrella. The flowers are produced on a branched spadix, from a compound spatha; they are hermaphrodite, and each consists of one petal, divided into three oval parts, and contains six awl-shaped stamina, surrounding a short slender style, crowned with a simple stigma. The germen is nearly round, and becomes a large globular fruit of one cell, including a large round stone. These plums having a pleasant smell are esteemed by the Indians.

CORYPH/ENA, in ichthyology, a genus be- longing to the order of thoracici. The head is declined and truncated ; the branchiostege mem- brane has six rays ; and the back fin runs the whole length of the back.

There are nineteen species, most of them natives of foreign seas. The most remarkable are the blue and parrot £shes.

CORYPH/EUS, from KopvQr), the top of the head, in the ancient tragedy, was the chief or leader of the company that composed the chorus. Hence coryphaeus became a general name for the chief of any company, corporation, sect, opinion, &c. Thus Cicero calls Zeno the cory- phaeus of the stoics ; and Eustatius of Antioch is called the coryphaeus of the council of Nice.

CORYVREKAN, a dangerous whirlpool on the west coast of Scotland, between the isle of Scarba and the north point of Jura. Its vortex extends about a mile in circuit, and at full tide its numerous eddies form watery pyramids, which rist to a great height in the air, and, bursting with the noise of thunder, overwhelm all small vessels that come within the sphere of its attraction.

COS, or Coos, in ancient geography, an island on the coast of Caria, in Asia, fifteen miles west of Halicarnassus, and seventy in compass, called also Meropis ; and hence Thucydides joins both names together, Cos Meropis. It was fruitful and produced good wine. It was the birth- place of Hippocrates, Apelles, and Philetas. The vestes Coae, made of silk, were famous for their fineness and color.

Cos, a town in the above island, mentioned by Homer, and originally called Astypalaea.

COSCFNOMANCY, n s. KOGKIVOV, a sieve, and fiavrtia, divination. The art of divination by means of a sieve, &c.

COSCINOMANCY, or divination by a sieve, was used, as appears from Theocritus, to discover the secrets of known persons, as well as %o find out the unknown. The sieve being suspended, after rehearsing a formula of words, it was taken between two fingers only ; and the names of the parties suspected repeated : he at whose name

the sie/e turned, trembled, or shook, was re- puted guilty of the evil in question. It was sometimes also practised by suspending the sieve by a thread, or fixing it to the points of a pair of shears, giving it room to turn, and naming the parties suspected.

COSE'CANT, n. s. in geometry, the secant of an arch, which is the complement of another to ninety degrees.

COSENAGE, in law, a writ that lies where the tresail, that is, the tritavus, the father of the besail, or great-grandfather, being seized in fee at his death of certain lands or tenements, dies ; a stranger enters, and abates ; then shall his heir have writ of cosenage.

COSENING, in law, an offence whereby any thing is done deceitfully, in or out of contracts, which cannot be fitly termed by any especial name. In the civil law it is called stellionatus.

COSENZA, a town of Naples, the capital of Calabria Citra, and sometimes giving name to that province, is built on seven small hills at the foot of the Apennines. It is the residence of a royal governor, an archbishop's see, and has a fort. The metropolitan is the only church within the walls; but there are three parish churches in the suburbs, and twelve convents in the town. The environs are beautiful, populous, and well cultivated, producing abundance of corn, fruit, oil, wine, and silk. Cosenza has often suffered by earthquakes, particularly in 1638. It is seated on the river Crate, ten miles from the sea coast, and 150 south east of Naples. Population about 12,000.

CO'SHERING, n. s. Irish.

Cosherings were visitations and progresses made by the lord and his followers among his tenants j wherein he did eat them (as the English proverb is) out of house and home. Dames.

CO'SIER, n. s. Old Fr. cousu, from couldre, to sew. A botcher, says Johnson ; but Minsheu defines it a cobbler.

Do you make an alehouse of my lady's house, that ye squeak out your cotters' catches, without any miti- gation or remorse of voice ? Shakspeare. Twelfth Night.

COSIGNI'FICATIVE, adj. from con and sig- nificative. Having the same meaning.

CO'SINE, n. s. in geometry, the right sine "of an arch, which is the complement of another to ninety degrees.

COSMETIC, n. s. & adj.) Fr. cosmetique ;

COSME'TICAL, adj. \ co<7/«jriie6c, from

Koffutu, to adorn. A preparation to improve beauty. Having the power of improving beauty ; beautifying.

No better cosmeticks than a severe temperance and purity, modesty and humility, a gracious temper and calmness of spirit ; no true beauty without the signa- tures of these graces in t>»e very countenance.

Ray on the Creation.

First robed in white, the nymph intent adores, With head uncovered, the cosmetick powers. Pope.

LIEUT. Oh, hang fortune, — let that take its chance ; there is a beauty in Lauretta's simplicity, so pure a bloom upon her charms.

DoCT. So there is, so there is. You are for beauty as nature made her, hey! No artificial graces, no stimetic varnish, no beauty in grain, hey ! Sheridan.

CO'SMICAL, adj. \ Koff/ioc. Relating tn CO'SMICALLY, adv. $ the world ; rising or set- ting with the sun; not acronycal with the sun; not acronycally.

The cosmiral ascension of a star we term that, when it ariseth together with the sun, OP in the same degree of the ecliptic wherein the sun abideth.

Browne's Vulgar Errour/s.

From the rising of this star not eosmically, that is, with the sun, but heliacally, that is, its emersion from the rays of the sun, the ancients computed their cani- cular days. Id.

COSMO'GONY, n. s. > Koer/xoc and yovr,.

COSMO'OONIST, n. s. 3 The birth of the world ; the creation. He who gives an account of the creation.

The world is in its dotage, and yet the c-umoyony Dr creation of the world has puzzled philosophers of all ages. Goldsmith.

The relation seems to have been in some mea- sure approved by the sacred cosmogonist himself,

Coventry.

COSMO'GRAPHY, n. s.\ Koauos and ypa

COSMO'GRAPHER, n. s. tii>. A description

COSMOGRA'PHICAL, I of the visible

COSMOGRA'PHICALLY, adv. J world ; a science

showing the frame of the universe, distinct from

geography, which lays down the situation and

boundaries of particular countries. A cosmo-

grapher is one who is skilled in cosmography ;

one who writes a cosmographical description of

the world.

Tli3 ancient coitnographers do placs the division of the east and western hemisphere, that is, the first term of longitude, in the Canary and Fortunate Is- lands, conceiving these parts the extremcst habitations westward. Browne's Vulgar Errours.

The terrella, or spherical magnet, cosinographically set out with circles of the globe. Id.

Here it might see the world without travel ; it being a lesser scheme of the creation, nature contracted, a little cosmography, or map of the universe. Smith.

COSMO LABE, from Koer/iog, world, and \au,- PO.VW, I take ; an ancient mathematical instrument, serving to measure distances, both in the heavens and on the earth. The cosmolabe is in great measure the same with the astrolabe. It is alse called pentacosm, or the universal instrument, by L. Morgard, in the treatise upon it, printed in 1612.

COSMOPLA'STICK, adj. jcoopoc, andTrXa- rticoc. Relative to the formation of the world.*

He being no better than a cosmoplastick atheist.

Hallywett.

COSMOPO'LITAN, n.s.\ Gr. /eocr/zoc and

COSMO'POLITE, n. s. S TroXirije. A citi

zen of the world ; one who is at home in every place.

COSNE, a town of France, in the department of Nievre, and ci-devant province of Nivernois, seated at the confluence of the Loire and Noain, 110 miles south of Paris. Anchors for ships are made here ; and its cutlery wares and gloves are much esteemed. Population 4700.

COSSPORE,atown and small district of Hin- dostan, tributary to the Birmans, bounds the dis- trict of Selhat in Bengal on the east. Gold is

found in some of its mines. Great part of the trade between Bengal and Assam formerly passed through this place. The inhabitants are Hindoos, governed by their own rajah.

COSSACKS. See DON and RUSSIA, SOU- THERN.

CO'SSET, n. s. A lamb brought up without the dam.

And if thou wilt bewail my woeful teen, I shall thee give yon cosset for thy paine.

Spenser. Shepherd's Calendar,

COSSIMBAZAR, a considerable manufac- turing town of Bengal, adjoining the southern suburbs of Moorshedabad. It is situated on the south-east bank of the Bhagarutty, and has both English, Dutch, and French factories. Silk and cotton stockings are its staple articles. Early in the eighteenth century the East India Company paid 25,000 rupees for the liberty of forming their establishment here; but it was not till 1742, that they obtained permission to fortify it. It was taken and plundered in 1756 by the nuwab Suraje Addouleh. The vicinity abounds with mulberry trees and game, and is watered by the Bhagarutty, Jellingy, and Ganges rivers.

COSSOVA, an extensive plain between Bul- garia and Rascia, memorable for two great battles fought on it , viz. 1st. between Lazarus prince of Servia and Amurath I. ; and, 2d. between John Huniades and Mahomet II. ; in both of which the Turks were victorious.

OST, v. n. & n. s.-\ Arm. const ; Welsh,

Co'STLESSj Co'STLINESS,

adj.

consto. To be purchased for or with a price, The price of a thing ; luxury ; expense ; detri- ment. In law, used in the plural, the expense of a suit. Costly is high priced ; expensive ; sump- tuous.

Have we eaten at all of the king's cost ; or hath he given us any gift? 2 Samuel xix. 42.

And of a mirthe I am right now bethought,

To don you ase, and it shall coste you nought.

Chaucer. Prol. to Cant. Tales.

And thoughc it have costed me, yit wol I do my

For to pike hir purs to nyghte, and win my cost ageyn.

Id. Cant. Tales.

For living wit, I weene, cannot display The roiall riches and exceeding cost, Of every pillour and of every post, Which all of purest bullion framed were.

Spenser. Faerie Queene. And all the floore was underneath their feet Bespreddwith costly Scarlett of great name. Id.

*While he found his daughter maintained without his cost, he was content to be deaf to any noise of in- famy. Sidney. Though not with curious costliness, yet with cleanly sufficiency, it entertained me. Id**

Why dost thou pine within, and suffer dearth, Painting the outward walls so costly gay ? Why so large cost, having so short a lease, Dost thou upon thy fading mansion spend ?

Shakspeare. Sonnet cxlvi. I shall never hold that man my friend, Whose tongue shall ask me for one penny cost To ransom home revolted Mortimer.

Id. Henry IV.

OST, v. n. & n. s.~\ Arm. const ; Welsh, CO'STLESS, adj. f cost ; old Fr. coreste ; CO'STLINESS, n.s. £ Ital. costo ; Ger. & Dut. CO'STLY, adj. J host ; Swed. kosta ; Lat.

What they had fondly wished, proved afterwards to their costs over true. Knolles' History of the Turk.*

And wilt thou, O cruel boast ! Put poor nature to such cost? O '. 'twill

undo our common mothe To be at charge of such another. Crashavo.

Let foreign princes vainly boast The rude effects of pride and cost Of vaster fabricks, to which they 'Contribute nothing but the pay, Waller.

Nor have the frugaller sons of fortune any reason to object the costliness; since they frequently pay dearer for less advantageous pleasures.

Glanville's Scepsis.

It is strange to see any ecclesiastical pile, not by ecclesiastical cost or influence, rising above ground ; especially iu an age in which men's mouths are open against the church, but their hands shut towards it.

South's Sermons.

It is to be remembered, that no man borrows mo- ney, or pays use, out of mere pleasure ; it is the want of money drives men to that trouble and charge of bor- rowing ; and proportionably to this want, so will every one have it, whatever price it cost him. Locke.

The dagger and poison are always in readiness ; but to bring the action to extremity, and then recover all, will require the art of a writer, and cost him many a pang. Dryden.

He whose tale is best, and pleases most, Should win his supper at our common cost. Id.

Leave for awhile thy costly country-seat ; And, to be great indeed, forget The nauseous pleasures of the great. id.

Fourteen thousand pounds are paid by Wood for the purchase of his patent ; what were his other visible costs, I know not ; what his latent, is variously conjec- tured. Swift. The chapel of St. Laurence will be perhaps the most costly piece of work on the earth, when completed.

Addison.

He is here speaking of Paradise, which he represents as a most charming and delightful place ; abounding with things not only useful and convenient, but even the most rare and valuable, the most costly and de- sirable. Woodward's Nat. Hist.

Thee could no costly gem ensnare, No trinket to adorn thy hair : No Carian slave didst thou request, No precious chain, no Tyrian vest. Sheridan, An ivory inlaid table spread with state

Before them, and fair slaves on every side ; Gems, gold, and silver, formed the service mostly, Mother-of-pearl and coral the less costly

Byron. Don Juan.

COSTS, in law, imply the expenses of a suit recovered by the plaintiff, together with damages. Costs were not allowed by the common law, the amercement of the vanquished party being his only punishment ; but they are given by statute. Costs are allowed in Chancery for failing to make answer to a bill exhibited, ,or making an insufficient answer ; and if a first answer be certi- fied by a master to be insufficient, the defendant is to pay 40s. ; £3. for a second insufficient an- swer; £4 for the third, &c. But if the ar.swer be reported good, the plaintiff shall pay the de- fendant 40.?. costs.

COST, n. s. } Old Fr. coste ; Lat. costa. CO'STAL, adj. $ A rib or side. Belonging to the ribs. .

Betwixt the costs of a ship. Ben J~

COS

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COS

Hereby are excluded all cetaceous and cartilagi- nous fishes ; many pectinal, whose ribs are rectilineal ; and many costal, which have their ribs embowed.

Browne's Vulgar Err ours.

COSTA (Christopher), a celebrated botanist of the sixteenth century, born in Africa. His father was a native of Portugal. Christopher, to perfect himself in the knowledge of simples, went into Asia, where he was taken prisoner, but found means to make his escape, and after seve- ral voyages, practised physic at Burgos. He wrote, 1 A Treatise on Indian Drugs and Medi- cines. 2. Mis Voyages to the Indies. 3. A book in praise of Women; and other works.

COSTA FITRTACO DE MENDOCA (Hippolyto Joseph da), a Portuguese freemason, and latterly charge" d'affaires for Brasil in England, was ba- chelor of divinity and doctor of laws in the uni- versity of Coimbra. He fl,ed to England from the prison of the inquisition, and published in Itttl, a work in 2 vols. 8vo, containing A Nar- rativi of the Persecution of the Author, a native of Colonia da Sacramento, on the River La Plata, imprisoned and tried at Lisbon, by the Inquisi- tion, for the pretended crime

of Freemasonry. His book comprises the statutes of the holy office ; but, though frequent allusions are made to his escape from captivity, the singular mode in which it was effected is omitted. This has been thus supplied : — ‘ The door of the cell in which Da Costa was confined opening into a hall, which was the centre of the prison, he had oppor- tunities for remarking that the daily labors of his jailors terminated with throwing a bundle of keys on a table where a lamp was left burning. By patience and perseverance with abundant ex- ercise for circumspection, in the consciousness of spies, by daylight, through apertures in the walls and ceiling of his cell, he succeeded in forming, out of an old pewter plate, a key which would unlock its door. Upon making his final attempt, the bundle of keys proved to be a pro- per collection for threading the entire labyrinth, not excepting the outer gate. Besides the keys and lamp, there was a book, containing, among other records, the minutes of his own repeated examinations. This he took with him, and carefully closing and locking every door after him, he made his way, without interruption, to the outside of the prison walls. It was necessary for him to remain six weeks secluded and dis- guised in the neighbourhood, before he could venture to take shipping, as every bark in the port and on the neighbouring coasts was sub- jected to the unremitting scrutiny of the offi- cers of the inquisition ; and in the course of their victim’s rides on horseback, he frequently recog- nised these his old acquaintance engaged in their search after him. At length he took his depar- ture from Portugal, and reached England in safety, bringing with him the book and keys of the inquisitors, as trophies of his success.’ M. da Costa published also in London, the Correio Brazil iense, a monthly magazine in the Portu- guese language, and a small ingenious tract on the Origin of Building. He died in the begin- ning of 1824, at Kensington.

COSTA RICA, i. e. the rich coast, a province of the new state of Guatimala, in what was formerly

Span sh Nortl America, bounded on the south- east by Veragua, and extending from the Spa- nish Main to the Pacific Ocean, east and west. It is a very mountainous district, and but little known to Europeans ; but is said to contain some considerable mines of the precious metals, and to be very fertile in some parts in cocoa and pasturage. The commerce consists of cattle, hides, wax, and honey. The capital is Carthage, and it has several good ports on the Pacific.

COSTANZO (Angelo di), an Italian historian and poet, lord of Catalupo, was born in 1507, of a noble and ancient family of Naples, and died about 1591. He wrote, 1. A History of Naples, from 1250 to 1489 ; the best edition of which is that of Aquila, in 1582, in folio, very scarce. 2. Italian Poems, which are esteemed, and have had several editions.

CO'STARD, n. s. j From coster, a

CO'STARD- MONGER, n.s. >head, says John-

CO'STER-MONGER, n. x. J son, in which he follows Skinner. The Ency. Met. however, affirms, that there is no authority for the word coster. Costard is the head ; an apple round and bulky, like the head. Costard-monger, with which coster-monger is synonymous, is a dealer in apples; a fruiterer.

Take him over the costard with the hilt of thy sword. Shakspeare. Richard Iff.

The wilding, costard, then the well-known pom- water. Drayton. He'll rail like a rude coster-monger.

Beaumont and Fletcher.

Many country vicars are driven to shifts ; and if our greedy patrons hold us to such conditions, they will make us turn costard-mongers, grasiers, or sell ale. Burton on Melancholy.

COSTARD (George), a clergyman of the church of England, and author of several learned works, was bom about 1710. He was educated at Wadham College, Oxford; and took the de- gree of M. A. in 1733. He was first appointed curate of Islip, in Oxfordshire, and published, in 1747, some Observations on the Book of Job, 8vo. In 1750, Two Dissertations: 1. On the meaning of Job, chap. xlii. ver. 11. 2. On the Signification of the Word Hermes. In 1762 he published, in 8vo, at Oxford, Dissertationes II. Critico-Sacrae, quarum primS, explicatur, Ezek. xiii. 18. Alteravero, 2 Reg. x. 22. In 1755 he wrote a letter to Dr. Birch, which is preserved in the British Museum, respecting the meaning of the phrase sphsera barbarica. Some time after, he published a second edition of Dr. Hyde's Historia Religionis veterum Persarum, eorum- que Magorum; which was printed under his in-spection at the Clarendon Press. Mr. Costard's extensive learning having now recommended him to the notice of lord Chancellor Northington, he obtained in 1764, the vicarage of Twickenham in Middlesex, in which situation he continued till his death. In 1767 he published, in one vol. 4to. The History of Astronomy, with its applica- tion to Geography, History, and Chronology ; occasionally exemplified by the Globes. In 1778 he published, in 8vo, a Letter to Nathaniel Bras- sey Halhead, esq. containing some Remarks on his Preface to the Code of Gentoo Laws. This appears to ha>e been the last of his separate pub-

lications ; but he wrote several papers in the Phi- losophical Transactions, on astronomical and chronological subjects. Mr. Costard died Janu- ary 10th, 1782. He was a man of extensive learning, and eminently skilled in Grecian and oriental literature.

CO'STIVE, adj. > Fr. constipe ; Lat. con- CO'STIVENESS, n. s. Sstipatus. Having the in- testinal excretions hardened and obstructed ; backward in speech or composition ; apt to be- come bound up; stiff; formal. Costiveness is, an obstructed state of the intestinal canal ; cold- ness; formality; tardiness of expression, either oral or written.

When the passage of the gall becomes obstructed, the body grows costive, and the excrements of the belly white. Browne.

Costiveness has ill effects, and is hard to be dealt with by physick ; purging medicines rather increasing than removing the evil. Locke on Education

While faster than his costive brain indites, Philo's quick hand in flowing letters writes ; His case appears to me like honest Teague's, When he was run away with by his legs. Prior. Clay in dry seasons is costive, hardening with the sun and wind, till unlocked by industry, so as to admit of the air and heavenly influences.

Mortimer's Husbandry.

You must be frank, but without indiscretion ; and close, but without being costive. Chesterfield.

A reverend disputant of the same costiveness in pub- lic elocution with myself. Wakefield

CO'STMARY. A herb. See TANACETUM.

The purple hyacinth, and fresh costmary.

Spenser. Virgil's Gnat.

CO'STREL, n. s. Supposed to be derived from coster. A bottle.

CO'STUME, n. s. Old Fr. and It. costume; low Lat. costuma. Distinctive dress, habit, or character.

COSTUS, in botany, a genus of the monogy- nia order, and monandria

class of plants; natu- ral order eighth, scitamineae : COR. interior, in- flated and ringent, with the under slip trifid. There is but one species, viz. C. Arabicus, a na- tive of the Indies. The root was formerly in some esteem as an attenuant, and serviceable in venereal complaints ; but it is now rarely pre- scribed, or met with in the shops.

CO-SUFFERER, n. s. from con and sufferer. A companion in suffering.

Should as co-sufferers commiserate. Wycherly.

CO-SUPREME, n. s. from con and supreme. One who shares in supremacy.

The phenix and the dove, Co-supremes and stars of love.

Shakspeare. Pass. Pilgrim.

COT, n. s. -) Goth, hot; Ang.-Sax.

COTE, n. s. cot, cote ;. Welsh, cwt. A

CO'TLAND, n. s. small dwelling; a hut; a CO'TSWOLD, n. s. mean habitation ; a place CO'TTAGE, n. s. (for sheep or doves to live CO'TTAGED, adj. j in. In the last sense, cote CO'TTAGE LY, adj. is the word commonly CO'TTAGER, n. s. used. Cottage is syno- CO'TTER, or nymous with cot, except

CO'TTIER, n. s. VOL. VI.

in as far as relates to doves

and sheep. A cottager, cotter, or cottier, is one who resides in a cot, or cottage.- Gotland is land attached to his dwelling. . In law, however, cottager is the technical description of one that lives on the common without paying rent, and without any land of his own. Cotswold, from Ang.Sax. cote, a cottage, and pold, a place void of wood, signifies sheepcotes in an open country, and from this the Cotswold hills, in Gloucester shire, have their name.

Hezekiah made himself stalls for all manner of beasts, and cots for flocks. 2 Chronicles xxxii. 28.

The sea coast shall be dwellings ami cottages for shepherds, and folds for flocks. Zejih. ii. 6.

Wher ther was swiche a congregatioun Of peple, and eke so strait of herbergage, That they ne founde as moche as a cotage Tn which they bothe might ylogged be.

Chaucer. Cunt. Tales.

Which hardly doen, at length she gon them pray, That in their cotage small that night she rest her may. Spenser. Faerie Queenc

To things of riper season self applyd, And learned of timber lighter cotes to frame, Such as might save my sheep and me from shame. Id. Shepherd's Calen'lar.

They were right glad to take some corner of a poor cottage, and there to serve God upon their knees.

Hooker.

The self-same sun that shines upon his court Hides not his visage from our cottage, but Looks on both alike. Shakspeare. Winter's Tale.

Besides, his cot, his flocks, and bounds of feed Are now on sale ; and at our sheep cot now, By reason of his absence, there is nothing That you will feed on. Id. As You Like It.

The husbandmen and plowmen be but as their work- folks and labourers ; or else mere cottagers, which are but housed beggars. Bacon's Henry VII.

Let the women of noble birth and great fortunes nurse their children, look to the affairs of the house, visit poor cottages, and relieve their necessities.

Bishop Taylor.

They envy others whatever they enjoy of estates, houses, or ornaments of life, beyond their tenuity or cottagely obscurity. Id.

Himself goes patched like some bare cottyer, Lest he might ought the future stock appeyre.

Hall.

It is difficult for a peasant, bred up in the obscuri- ties of a cottage, to fancy in his mind the splendors of a court. South.

Is it reasonable, that the eldest brother, because he has the greatest part of his father's estate, should thereby have a right to take away any of his younger brothers' portions? or that a rich man who possessed a whole country, should from thence have a right to seize, when he pleased, the cottage and garden of his poor neighbour? Locke.

A stately temple shoots within the skies ; The crotchets of their cot in

columns rise ; The pavement, polished marble they behold ; The gates with sculpture graced the spires and tiles of gold. Dryden. Baucis and Philemon.

Beneath our humble cottage let us haste, And here, unenvied, rural dainties taste.

Pope's Odyssey _

The most ignorant Irish cottager will not sell his cow for a groat. Stoift's Address to Parliament.

2N

Id.

COT

As Jove vouchsafed on Ida's top, 'tis said, At poor Philemon's cot to take a bed. Fenton.

Even humble Harling's cottaged vale Shall learn the sad repeated tale,

And bid her shepherd weep. Collins.*

The cottage-curs at early pilgrim bark ; Crowned with her pail the tripping milk-maid sings ; The whistling ploughman stalks afield, and, hark ! Down the rough slope the ponderous waggon rings.

Beat tie

Our humble cot, and namely fare, Ye freely shall partake it,

That gallant badge, the dear cockade, Ye're welcome for the sake o't. Bvrrni,

The power, incensed, the pageant will desert,

The pompous strain, the sacerdotal stole ; But haply, in some cottage far anart,

May hear, well pleased, the language of the soul ; And in his book of life the inmates poor enrol. Then homeward all take off their several way ; The youngling cottagers retire to rest.

Yon cottager, who weaves at her own door, Pillow and bobbins all her little store ; Content though mean, and cheerful if not gay, Shuffling her threads about the livelong day, Just earns a scanty pittance, and at night Lies down

secure, her heart and pocket light.

Cowper.

The poorest peasant of the poorest soil, The child of poverty, and heir to toil, Early from radiant Love's impartial light, Steals one small spark to cheer his world of night : Dear spark ! that oft through winter's chilling woes, Is all the warmth his little cottage knows. Sheridan.

And from the sheep-cote in the dell, Soft tinkling chimes the wether's bell ; Accordant to the cheerful strain Of milk-maid blithe, and whistling swain.

Huddetford. The roofless cot decayed and rent,

Will scarce delay the passer by ; The tower by war or tempest bent, While yet may frown one battlement

Demands and daunt the stranger's eye : Each ivied arch, and pillar lone, Pleads haughtily for glories gone.*

Byron. The Giaour.

COT, or COTT, n. s. Old Fr. coete, coite, A small bed ; a child's cradle ; a hammock.

Their beds are cot of two feet height, on four low posts, strengthened with girth-web. Sir T. Herbert.*

COT, or COTT, n. s. Low Lat. cota. A little boat.

Divers discourse in their way they spent ; Mongat which Cymochles of her questioned Both what she was, and what that usage ment, Which in her cott she daily practized ?*

Spenter. Faerie Queene.

COT, n. s. An abridgment of cotquean. See COTQUEAN ; also a cade lamb.

COT, ˆ At the end of the names of places,

COTE, Scome generally from the Sax. cor, a

COAT. 3 cottage.

COT

bred numerous herds of cattle ; and wheat, maize, and pulse are abundant. A plant is found here, from the tendrils of which are fabricated cords, and very strong ropes. Population 10,000.

COTA'NGENT, n. s. in geometry, the tan- gent of an arch which is the complement of ano- ther to ninety degrees.

COTE, v. a. Fr. cote. It seems to signify, says Johnson, the same as to leave behind ; to over- pass. And so it does in some instances. But it appears also to have the meaning of going side by side with ; for in the Return from Parnassus we find, ' Marry, we presently coted and out- stript them ;' which implies, first, equalling, and then overpassing.

Words her worth had proved with deeds, Had more ground been allowed the race, and coted far his steeds. Chapman't Iliad.

We coted them on the way, and hither are they coming. Shahspeare. Hamlet.

COTE, v, a. The ancient mode of spelling, to- quote.

COTE, in coursing, the advantage one grey- hound has over another, when he runs by the side of it, and, putting before it, gives the hare a turn.

COTE D'OR, a department of France, bounded oy those of Aube on the north, Upper Marne on the north-east, Upper Saone on the east, Jura on the south-east, Saone and Loire on the south, and Nievre and Yonne on the west. It is chiefly formed out of the ci-devant province of Burgundy. Its form is an irregular oval, sixty-five miles long from north to south ; and from twenty-five to fifty broad from east to west. Dijon is the capital.

COTELERIUS (John Baptist), fellow of the Sorbonne, and Regius Greek professor, was born atNismes in 1627. He made a collection of the fathers who lived in the apostolic age, which he published at Paris in two volumes folio, in 1672, reviewed and corrected from several MSS. He also published the first volume of Monumenta Ecclesia? Gracse ; a collection of Greek tracts out of the libraries of the king and M. Colbert, which had never been published before : to both these works he added a Latin translation and notes. He intended a farther prosecution of this work ; but his intense studies broke his constitution, and deprived him of life in 1686.

COTE'MPORARY, n. s. & adj. Lat. conˆnd tempus. One who lives at the same period. Living at the same time ; coetaneous ; contem- porary. See CONTEMPORARY.

What would not, to a rational man, cotemporary with the first voucher,

have appeared probable, is now used as certain, because several have since, from him, said it one after another. Locke.

We now find so much artifice among our cotempo- rariet who only follow rude and untaught nature.

Sprat.

COTABAMBA, a province of Peru, bounded

on the north by the province of Abancay, south COTERELLUS, and COTA RIDS, both signify,

by that of Chilques y Masques, west by that according to Spelman and Du Fresne, a servile

of Chumbivilcas, and north-west by that of Aima- tenant ; but in Doomsday and other ancient MSS.

raez, being seventy-five miles long east and west, there appears a distinction, as well in their tenure

and twenty-five wide from north to south. It and quality as in their name : for the cotarius

is of cold temperature, being largely occupied by had a free soccage tenure, and paid a stated firm

mountains covered with snow. In the valleys are or rent in provisions or money, with some occa-

sional customary services ; whereas the coterellus seems to have held in mere villenage, and his person, issue, and goods, were disposable at the pleasure of the lord.

COTER'IE. Fr. coterie. This word has altered strangdy in its meaning. Cotgrave and Sherwood define it to be, ' Companie, societie, association of countiy people.' It now means a select party, particularly of ladies ; a fashionable select assembly; and the word is often used sarcastically.

But for the children of the ' mighty mother's,'

The would-be wits and can't-be gentlemen, I leave them to their daily ' tea is ready,' Snug coterie, and literary lady. Byron. Beppo.

Why then I'll swear, as poet Wordy swore,

(Because the world won't read him, always

snarling)

That taste is gone — that fame is but a lottery, Prawn by the blue-coat misses of a coterie.

Id. Don Juan.

COTES (Roger), an excellent mathematician of the eighteenth century. At seventeen years of age he was admitted a pensioner of Trinity College Cambridge. In 1706 he was appointed professor of astronomy in the professorship founded by Dr. Plume, being the first in that chair. In 1713 he published at Cambridge in 4to, a second edition of Newton's Principia, with all the author's improvements ; to which he prefixed an excellent Preface. He prepared several useful books for the public ; and wrote A Description of the Great Meteor which appeared on the 6th March 1716, published in the Philosophical Transactions. He died in 1716.

C<»TES DU NORD, or the NORTH COASTS, a de- partment of France, so named from its situation ; being bounded on the north by the British Chan- nel, on the east by the departments of Isle and Vilaine, and on the south and east by those of Morbihan and Finisterre. It contains part of the ci- devant Brittany; and extends sixty-five miles from east to west, and between twenty-seven and forty-five from north to south. The super- ficial extent is about 2800 square miles, and the population 520,000. Its chief productions are hemp, flax, maize, and apples. The breed of cattle is excellent, and the butter much better than in the interior of France, but there are many barren spots. The mineral productions are lead and iron, and the manufactures linen and woollen stuffs, leather, thread, and hardware. St. Brieux is the capital.

COTHURNUS, a species of boot or buskin worn by hunters, and also by actors of tragedy, when they represented the characters of gods and heroes. They differed from the sandal, which was a mere sole tied about the toes and ancles with thongs and straps of leather, while the cothurnus covered the foot and leg as high as the calf, and was ornamented with gold, gems, and ivory. It is said to have been invented by .ˆEschylus.

COTICE, or COTISE, in heraldry, is the fourth part of the bend ; which with us is seldom or never borne, but in couples, -with abend between them.

A bend thus bordered is said to be co tised.*

COTI'LLON. Fr. cotillon, a petticoat. A lively dance, usually danced by eight persons.

And, wow! Tarn saw an unco sight! Warlocks and witches in a dance ; Nae cotillion hrent new frae France, But hornpipes, jigs, strathspeys, and reels. Put life and mettle in their heels. Bwnn.

COTOPAXI. See ANDES.

COTQUEAN, n. s. Probably from Fr. co- quin, says Johnson; but this does not seem a very happy derivation. It is a corruption of cuch- quean, a woman whose husband is unfaithful to her bed, says Mr. Gifford. This guess, however, is more unfortunate than Dr. Johnson's. A cot- quean is one who meddles too much with what is woman's peculiar business ; and it is not easy to see what this has to do with cornuting, unless Mr. Gifford means to insinuate that a wife would be tempted to violate her faith to such . husband. Skinner is, perhaps, nearer to the truth, who thinks that it means a cook-quean, one who meddles with the cookery. The quota- tion from Shakspeare lends support to this sup- position.

Look to the baked meats, good Angelica ;

Spare not for cost.

" Go, go, you c.otquean, go ; Get you to bed. Shafupeare. Romeo and Juliet.

And make a drudge of their uxorious mat Who, like a cot-quean, freezeth at the rock While his breecht ilume dotli man the forren stock.

Hall.

' You havo given us a lively picture of husband' hen-pecked : but you have never touched upon one of the quite different character, and who goes by the name of cotqucun. Addison.

COTRONE, a town of Naples, in Calabria Citerior, on the site of the ancient Croton, though not occupying the same extent of ground. It is fortified with walls, and a castle erected by Charles V. The streets are dismal and narrow. Cheese and corn are the principal commodities. The annual export of com is considerable.

COTT, a sort of be'd-frame, suspended from the beams of a ship for the officers to sleep in be- tween the decks. It is much more convenient at sea

than either the hammocks or fixed cabins ; being a large piece of canvas sewed into the form of a chest, about six feet long, one deep, and from two to three wide. It is extended by a square wooden frame with a canvas bottom, equal to its length and breadth, to retain it in an horizon- tal position.

COTTAGE, in law, is properly a little house or habitation without lands belonging to it ; stat. 4 Edw. I. I3y a later statute, 31 Eliz. c. 7, no man might build a cottage unless he laid four acres of land thereto ; except in market towns or cities, or within a mile of the sea, or for the habitation of laborers in mines, sailors, foresters, shepherds, &c. This remained in force until 15 Geo. III. c. 32, by which it is repealed.

COTTIVVAR, or CATTIVAD, a district in the province of Gujerat, Hindostan. The inhabitants called Catties are Hindoos, who adore the sun. They are governed by independent chiefs, fre- quently at war with each other ; but all of whom are tributary to the Mahrattas. Their breed of cattle and horses is highly esteemed.

COTTON, v. n. & n. s.”) Fr. cofon. Cotton CO’TTONY, or > is the down of the

CO’TTONOUS, adj. j cotton tree ; the

cloth made from that down. See the following article and GOSSIPIUM. To cotton means to rise vith a nap ; and, in familiar speech, to agree well with. Cottonous and cottony are, like cot- ton, full of cotton.

The pin ought to be as thick as a rowling-pin, and covered with cotton, that its hardness may not be of- fensive. Wisentan. A quarrel will end in one of you being turned otf, in which case it will not be easy to cotton with another.

Swift.

Round, and round, and round they go : Mundell- sox, that drives his cotton-mill, is their exact proto- type— without an idea or wish beyond their circle ; fat, sleek, stupid, patient, quiet, and contented. Burns.

So Arkwright taught from cotton pods to cull And stretch in lines the vegetable wool ; With teeth of steel its fibre knots unfurled, And with its silver tissue clothed the world. Darwin. COTTON. In our examination of

this impor- tant subject, we shall, in the first instance, briefly notice its botanical character, and then proceed to a practical examination of its general proper- ties and usefulness as anjiJ.rticle of commerce.

The plant, or tree, tha(produces this important material, appears to be generally indigenous in the tropical regions. In the Linnsean classifica- tion of plants it is denominated gossipium, a genus of the class monadelphia; order polyan- dria ; CAL. double ; and of which there are ten species. It seems to have been unknown in Eu- rope till a comparatively recent period, none of the Latin vocabularies giving any definition of its nature or properties. It is adverted to by Herodotus, as growing in India. It was found in Mexico and in Peru at the time of the Spanish invasion, and its manufacture among the Peru- vians was carried on to some extent.

The generality of the native West India spe- cies of the plant are annuals ; whilst those of Asia are perennial, both in root and branch, rising in a straight line about eight feet high, with leaves in five palmate lobes; but the plants chiefly propagated are of the herbaceous species. The origin and progress of its culture in Asia is involved in great obscurity; but it was, doubtless, coeval with the origin of those ancient dynasties which excited the cupidity of Alexander of Macedon, and its manufacture pro- gressively extended from the Indus to Cape Comorin.

*Pliny describes the cotton-shrub as growing in the higher parts of Egypt, and ' of which,' he says, ' the Egyptian priests were wont to have surplices made, in which they took a singular delight.' He also tells us, that vestments of cotton were worn by the ancient Egyptians, and that too, more than a thousand years before the commencement of the Christian era. Moses speaks of robes of linen, and commands his people * not to wear a garment of divers sorts,*

as of woollen and linen together.' The dress of the ancient Babylonians consisted of a tunic of lawn, which they wore next to their skin. It descended, in the eastern mode, to their feet, and the Athenians wore long robes of fine cotton.

Three species of cotton ate cultivated in Malta ; one natural to the country, another from Siam, and the third of a cinnamon color, called Antilles cotton. These are all sown in the month of April, and the top of the plant is cut in the beginning of September, that the fruit may increase in size. It is gathered in October, when it begins to open, which is a sign that it is then sufficiently ripe. It is sown in the follow- ing manner : a hole, some inches deep, is made in the ground, which is afterwards filled with water, and when it is sufficiently soaked, the seed is put into it, and covered over, without being watered again until it begins to shoot out of the ground. The

plant, when in perfection, grows to the height of from ten to fifteen in- ches, and blooms in the month of August.

In the year 1790 the planters, in the southern States «f America, began to turn their attention to the raising of cotton-wool ; and, besides car- rying the cultivation of the article to a great extent, they produced qualities of cotton before unknown. In the year 1792 the quantity of cotton exported from the United States was only 138,328 pounds. At present, the annual export is supposed to be not less than 60,000,000 of pounds, and the amount is yearly increasing.

The American cotton-wool first brought to this country was very ill cleaned ; and, in con- sequence, was for some time indiscriminately applied to the manufacture of the coarser spe- cies of goods. It was soon, however, perceived, that the cotton grown upon the coast, termed Sea Island cotton, had a finer and longer staple than that grown farther back in the country, and known by the name of upland cotton. But it was not for several years, and after a succession of trials, that this wool was ascertained to be of a quality, in every respect, superior to the cotton of the Isle of Bourbon. Indeed, it was not be- fore the year 1796, that the finest description of it was applied to the purposes for which Bourbon wool had till then been used, and which it soon entirely supplanted ; the second quality of it, in like manner, supplanting the Brasil wool in many kinds of goods for which it had been em- ployed.

The upland cotton is a different species trom the Sea Island, and is separated with such diffi- culty from the seed, that the expense of cleaning this wool must have put a stop to its farther cul- tivation, had not Mr. Whitney, a gentleman of the State of Massachusetts, in the year 1795, in- vented a machine by which the operation could be easily and successfully accomplished. There are two qualities of this cotton, the one termed upland Georgia, grown in the States of Georgia and South Carolina, and the other, a superior

quality, raised upon the banks of the Mississippi, and distinguished in the market by the name of New Orleans cotton. There was at first a strong prejudice against this wool; it was supposed that it was of an inferior quality, and did not re- ceive a good color in dyeing ; but being found suitable to different coarse fabrics, its cultivation was so rapidly extended, that, in the year 1807, 55,018,448 Ibs. of upland cotton were export- ed from the United States.

Previous to the extended culture in North America, a very considerable

portion of the annual supply was derived from Smyrna — say 6,000,000 to 7,000,000 Ibs. The culture in Asia Minor, as well as Macedon and other parts of Turkey in Europe, is still considerable, but consumed chiefly for domestic purposes, and in the eastern parts of Europe; but the little that is now brought to England is used chietly for candle-wicks. The quality cultivated in Egypt is good, and may be regarded as a new and im- portant feature, should the career of the present enterprising pacha remain uninterrupted for a few years. In addition to the several kinds or growths already enumerated, the Isle of Bour- bon, in the Indian Ocean, produces a very supe- rior kind, limited in quantity, but equal in value, though somewhat different, to the American. It is probable also, from the delicacy of some of their fabrics, that a very superior kind is pro- duced in India to any that is imported thence. China also, it is believed, produces a sort pecu- liar to itself, from which the nankeen cloths are supposed to be made.

But neither the extent of its growth in Ame- rica, nor of its manufacture in England, is so much an object of surprise, as the very short pe- riod in which both have been accomplished. In point of extent, the comparison with the growth and manufacture of India, could it be ascer- tained, would probably be found trilling; the export of the raw material from Bengal and Bombay, in 1818, exceeded 600,000 bales, chiefly to China, or about 230,000,000 to 240,000,000 of Ibs., whilst the internal consumption pro- bably equalled, if not exceeded, that quantity.

It-should be noticed, however, that the culture in the West Indies has not decreased in propor- tion to the apparent decrease of importation. It is true that the culture is very limited there, and the greater portion included under that head is from Demerara ; it might also be inferred, from Portugal being included with the Brasils, that some plants are cultivated in Portugal, which is not the case; under the colonial regime the whole of the produce of the Brasils was carried to Portugal, and from thence re-exported : at the present time, however, nearly the whole growth comes direct to England from the Bra- sils; a comparatively trifling proportion goes direct to France and other parts of Europe. France is, however, the only other part of Europe where the spinning of cotton is carried on to any extent, being in that country about one- third what it is in England, with this difference, however, that whilst England indicates an in- crease, France indicates a decrease; the number of bags in France, in 1822, having been 190,000,

and only 166,000 in 1823; whilst the quantity in England, in 1822, was 541,000 bags, and 576,000 in 1823; the quantity spun in all the rest of Europe, collectively, not amounting to 60,000 bags.

Till within these few years the finest cotton, that was brought from India and the Isle of Bourbon, was comparatively of no use in Eng- land. Owing

to its extreme delicacy and pecu- liarity of fibre, the carding engines then in use could not be brought to work it into a state fit for spinning. But the late improvements in that series of machinery which spinners call ‘ the preparation,’ have obviated this difficulty, and, by enabling us to spin that cotton to the degree of fineness of which it is susceptible, have ren- dered our manufacture the wonder and envy of our rivals.

We shall now, however, proceed to our examination of the earliest stages of its manu- facture.

The cotton, when collected from the pod, con- tains the seed, and pieces of the husk by which it was enveloped attached to it ; it has, there- fore, preparatory to being subjected to the ope- ration of spinning, to undergo a process that will divest it of these superfluous parts. The ancient mode of effecting this was by what is termed bowing it ; that is, exposing it to the action of a bow, about four feet long, such as is used at the present day by hatters. The pro- cess consisted merely in placing the cotton upon a square table, with horizontal crevices cut through it, and submitting it to the repeated action of the bow, until the dust, seeds, and superfluous parts had separated and fallen through the open- ings. This inconvenient and desultory mode has in modern times been superseded by a far more effectual and expeditious one, by the ap- plication of a machine called a gin. Gins are of two kinds, the one called the roller-gin, the other the saw-gin.

The roller-gin is represented in the annexed diagram. It consists of two shallow fluted rollers, a and b, placed so near to each otber, that when the cotton is thrust against the line where they enter into contact, they immediately seize hold of it and draw it in between them, while the seeds and other par- ticles, not being able to pass through, fall into the box K, and are, by the slanting direction of its bottom, deli- vered on one side. The motion is communi- cated by means of the treadle and crank, C D, and is equalised by the fly-wheel E. The cotton is presented to the rollers over the board fg, and is drawn between them, and delivered at I, H. In South America this kind of gin is much used, and a negro working with one of them can clean from 30 Ibs. to 40 Ibs. weight of cotton per day, which, however, is considered heavy workv

apart,

The saw-sin is given in section in the annexed figure. The cotton is thrown

into the receptacle A B, on that side marked C D, which is formed of strong wires placed parallel to each other, to ad- mit the circular saws E, fixed on the axis F, behind the grating, about an eighth of an inch to pass between them. By this means, the teeth of the saws seize hold of the cotton, and draw it through the bars ; and the seeds and other superfluous parts being too bulky to pass through, remain behind, and eventually full through the aperture G. The cotton is brushed from the saws by a circular brush H, made to revolve rapidly on its axis. The motion is com- municated by manual, or any other power applied to the axis F, upon one end of which is the wheel K, acting in a pinion, fixed to one end of the axis of the brush. When the cotton arrives in this country, it is again submitted to the action of machinery, for the further separation of the extraneous matter, unless it is to be spun into coarse yarn.

The first process the cotton undergoes in this country, is effected by means of an instrument called a picker ; as represented in the annexed diagram : —

A and B are two rollers, having an endless cloth C D, stretched over them. This cloth is called the feeding-cloth, and its upper surface is, by the revolution of the rollers, always carried towards D. E and F are two fluted rollers, which nearly touch each other, and revolve, so that their touching surfaces pass towards G H. G H I K are cylinders, covered on their outer surfaces with long blunt pins, making about 250 revolu- tions, in the direction of the letters, per minute. L L is a grating of wires for the seeds to fall through, when the cotton carried by the feeding- cloth is delivered by the small rollers upon the face of G H. By the rapid revolution of G H, the cotton is thrown against the top O P, and is carried forward and delivered upon the cylinder I K, which in like manner carries it rapidly round, draws it over the grating, and delivers it back upon the lower face of G H, which after having drawn it over the remainder of the grating, and divested it of the remainder of the seeds and particles of dust, deposits it in the box RR.

This machine is liable to injure the staple of the cotton, and is therefore superseded by another called a batter, represented in fig. 1., plate I, COTTON MANUFACTURE. In this machine, the feeding-cloth upon the rollers A and B carries

forward the cotton to the rollers c and e, which deliver it upon the curved rack or grating de, while a scotcherg h, revolving rapidly on its axis, strikes the cotton with its two edgesg and A, and divides it; at the same time a draught of air, created by the revolution of the fan I, blows the cotton forward over the grating K K, divests it of the superfluous parts, and ultimately deposits it in a box at the end.

Having thus described the process of batting, we may now furnish a brief outline of the mani- pulations through which the material passes, and then examine the engines in detail.

Carding is that operation in which the first rudiments of the thread are formed. It is per- formed by cylinders covered with wire cards, revolving with considerable swiftness in opposite directions, nearly in contact with each other, or under a kind of dome or covering, the under sur- face of which is covered with similar cards, whose teeth are inclined in a direction opposite to those of the cylinders. By this means the separation of almost every individual fibre is effected, every little knotty or entangled part disengaged, and the cotton spread lightly and evenly over the whole surface of the last, or finishing cylinder.

For jenny-spinning, which is still in use for the coarser kinds of thread, the cardings are stripped off in separate lengths. The finishing cylinder is covered with the ordinary cards, nailed on in stripes across, and the cotton con- tained between the margins or intervals of each stripe, forms one carding, whose length of course depends on the width of the engine, or cylinder. When stripped off by the crank and comb, it forms a loose and shapeless film, which falling on the surface of a plain wooden cylinder, the lower half of which revolves within a hollow shell or casing, the cotton in its passage is rolled up and delivered at the other side in perfect and cylindrical cardings. For mule or water-spin- ning, the finishing cylinder is covered with spi- ral, or fillet-cards; and the cotton being taken off in one continued fleece, and contracted by passing through the funnel and rollers, forms one endless and perpetual carding, which is inter- rupted only, or broken, when the tin can that receives it is completely filled. In the jenny-carding, the fibres of the cotton are disposed across, or at right angles to the axis of the card- ing ; in the perpetual carding they are disposed longitudinally, or in the direction of its length, and it is this circumstance which renders the carding destined for mule or water-spinning, inapplicable to the jenny, and vice versa.

Drawing and doubting is one of the prepara- tory processes for which we are indebted wholly to Sir Richard Arkwright, and belongs exclusively to the mule, or water-spinning. The doubling, or passing three or four cardings at once through a system of rollers, by which they are made to coalesce, is intended to correct any inequalities in the thickness of the cardings, and also to admit of their being frequently drawn out or extended, by passing through the rollers. The effect of this frequent drawing is to dispose the fibres of the cotton longitudinally, and in the most perfect state of parallelism. The operation of carding effects this in a certain degree; yet the fibres,

though parallel, are not straight, but doubled, as may easily be supposed from the teeth of the cards catching the fibres sometimes in the mid- dle, which become hooked or fastened upon them. Their disposition is also farther disturbed by the taker-off, or comb, which strips them from the finishing cylinder; and though the general arrangement of the fibres of a carding is longi- tudinal, yet they are doubled, bent, and inter- laced in such a way, as to render the operation we are now speaking of absolutely necessary. When the earnings have been passed four or five times through the drawing-frame, every fibre is stretched out at full length, and disposed in the most even and regular direction ; and though the average length of a fibre of cotton is not two inches, yet the finished drawing, as these pre- pared cardings are now termed, has all the appearance of a lock of Jersey wool, whose fibres, six or eight times as long as those of cot- ton, have been carefully and smoothly combed.

Roving is that operation by which the prepared cotton, as it comes from the carding-engine, or tirawing-frame, is twisted into a loose and thick thread, and wound upon a spindle or bobbin. In mule, or twist-spinning, the prepared carding or drawing, as it is termed, is again passed through a system of rollers, and is twisted, either by a rapidly revolving can, into which it is delivered from the rollers, or by a fly and spindle similar to those of the flax-wheel ; in the latter case it is wound on the bobbin by the machine ; in the former it is received in the conical can in which it acquires the twist, and is afterwards wound upon bobbins by children. Sir Richard Arkwright always employed the revolving can, and it is still employed in many of the first mills in the country. The roving-frame, with fly and spindle, which is in fact nothing more than the twist-frame of Sir Richard, is now however very generally in use, especially since later improve- ments have removed objections to the machine, which rendered its use previously inconvenient. The operations through which the thread passes after it has received the first twist are Carious, and depend greatly on the use it is intended for. The finer it is required, the oftener it is drawn out and twisted, till by degrees, as in the process of wire-drawing, it is brought down to the fine- ness required. The rovings are therefore distin- guished into first, second, and third, according to the number of operations they have gone through.

Spinning is the last operation which the thread undergoes in the series of processes employed in converting it into thread, and is that in which it receives the final extension and twisting.

Carding, as we have already stated, is per- formed by two kinds of engines, one of which is called the breaker, and operates upon the cotton preparatory to its being submitted to the ope- ration of the other, called the finisher. A card is a kind of brush, formed by making wires into the form of staples, as represented in fig. 4. The two legs of the staples are placed through holes in a flexible piece of leather, and present to the side view a form similar to that shown in the figure, where A B is the leather, and C D the wires <"~ced through it. Cards are formed in

two ways; the one called sheet-card is made about four inches wide, and eighteen inches long, or of a length corresponding with the width of the main cylinder, which they have to cover- the other, called fillet-card, is made in one con- tinuous band or fillet, and is used for covering the doffer cylinder. The teeth of the fillet-card are placed pointing in the direction of the length of the fillet, and completely cover the cylinder to which they are applied; whereas in sheet-cards a space is left behind every sheet.

Fig. 5 represents a sectional view of the im- mediate working parts of a breaker carding- engine. A is the main cylinder, covered with sheet-cards; B the doffer cylinder, covered with fillet-cards; C C C are the tops ; eg is the feed- ing cloth supplied with cotton, which has been previously weighed, moving forward over the roller/, by means of the roller g, and delivering the cotton between the feeding-rollers H H, which carry it to the main cylinder. The main cylinder revolves rapidly in the direction of the dart, and carries the cotton upward between itself and the tops, which are covered with sheet- cards, about one inch and three-quarters to two inches wide, so that they may, as nearly as pos- sible, follow the curve of the main cylinder. I is the lapping-cylinder, having wooden rollers li, lying upon its upper surface; and K is the doffer, or taker-off, having attached to it the steel comb called the doffing-plate.

The main cylinder, by its revolving motion, is soon covered with cotton, and is divested of it by the doffer-cylinder, which is placed so as nearly to touch it, and which moves at a much slower speed, in the direction of the dart. The effect of this engine would therefore be to distribute the cotton equally over the main cylinder, the top cards, and the doffer cylinder ; but the doffing- plate, by the action already described, is continu- ally clearing the doffer cylinder, whose points are consequently left bare to receive a fresh sup- ply from the main cylinder. The doffing-plate continually strips the doffer cylinder of the carded cotton, which it delivers upon the lapping cylinder in one continuous web of about eighteen inches wide, which is the usual width of tlie engines for fine work. When the top cards are covered with cotton, an attendant is appointed to take them off, and to divest them of the loose cotton by means of a card nailed on a board, which he carries in his hand for that purpose. The quantity of work delivered to the engine

is ruled by the speed of the cylinders, and quality of the cotton. When it has passed through the engine, and is wound upon the lapping cylinder (which is so adjusted as to contain about twenty laps), the attendant lifts up the large roller, makes a division in the circular web, and takes it off the roller. In this operation we are pre- sented with the first act of plying or doubling, which is introduced in the process of spinning, in order to obtain equality in the strength and thickness of the yarn.

The cotton is in this state called a lap, and is immediately taken to a finisher- engine, which, in general, is disposed back to front, immediately after the breaker-engine, as may be seen in fig. 6. The construction of the finisher-engine is

exactly similar to that of the breaker-engine, except that instead of having a lapping cylin- der, the cotton, when it leaves the doffer, is drawn through a mouth-piece R, formed like the end of a trumpet, by means of the rollers s and t, and is delivered into the can W. The rollers s and t are seen in section in this figure. Previ- ously, however, to leaving this process, we shall make a few remarks, as it is, with much propri- ety, considered the very foundation of all good spinning. The breaker-engine for spinning fine cotton is generally covered with cards of a fine- ness that will admit 225 teeth, or 450 points in a square inch; and the finisher 275, or 550. But spinners are much divided on this subject, and in some mills the same work is performed with cards one-fifth coarser than it is in others. The top cards are in general one-tenth coarser, and those of the doffer cylinder one-tenth finer than those on the main cylinder : .and in some manufactories, at the back part of the engines, where the cotton first arrives, coarser top-cards have been introduced, with a view of divesting the cotton of the largest particles of extraneous matter, and in some instances have been again laid aside as superfluous. Cards must be set easy in the leather, which should be thin and strong. The card-engine is driven by a strap passing from a drum over a fast and loose pulley, fixed on the shaft of the main cylinder.

The cotton having been transferred to the can from the card-engines, in the form of a sliver, is next submitted to the process of drawing, repre- sented in fig. 7. In this process three or four card-ends are brought in tin cans, and passed between the rollers A B and C D, which revolve with different velocities ; that is, the rollers C and D revolve much quicker than A B, and the top rollers A and C are made to press upon B and D, by means of the weight e. Now, suppos- ing four slivers to be placed together, and passed through the rollers A B and C D, and that C D revolve so much quicker

than A B, that the sliver will become four times its original length, the cotton will, by such elongation, be reduced in thickness three-fourths, that is, to the same thickness as the single sliver when first brought to the rollers. By this process the fibres of the cotton are laid more parallel to each other, in the direction of the length of the sliver, and the operation is repeated by plying the slivers which have passed the rollers, and passing them through a similar set. ThB sliver, when thus plied and reduced, is drawn through the mouth-piece G, by the rollers E and F, and delivered into another can. After the cotton has been plied and drawn as many times as the spinner, from the quality of the cotton, and the intended quality of the yarn, considers necessary, it is carried to the roving-frame.

This ingenious piece of apparatus, which is much used in mills where mule-spinning is car- ried on, is represented in fig. 8, and is termed the can roving-frame. A B, are two rollers, moving at a slower speed than C D ; A and C, are pressed upon the tollers B and D, by the weignt E, as may bt seen in the accompanying section.

The cans are represented, the one shut and the other open ; the latter opens by means of hinges, after raising the ring g. The cans are capable of revolving upon their spindles h h, and are supported in an upright position by the collars 1 1, and have at their upper extremities funnel-shaped pieces, kk. If two slivers of cotton are brought from the drawing-frame, and passed between the rollers A B, and C D, the processes of plying and drawing will again take place ; and the rollers C D, will feed the end thus introduced into the can through the mouth- piece at fc, which, by revolving rapidly upon its axis, will impart to the end, or sliver, a slight degree of twist. When the can is filled, the rollers are thrown out of geer, and the motion ceases; the can is then opened, and the cotton, or as it is now called, the roving, is taken out and wound upon a bobbin, and in that state is carried to a machine called a stretcher. Some objections exist against this species of roving; first, from the necessity of taking the roving out of the can for the purpose of winding it upon a bobbin, during which it is liable to sustain much damage from the fibres being in a very slight state of adhesion ; and secondly, from the roving receiving its twist solely from the revolution of the can in which it rests, and by which the twist is not equally diffused over the whole length of the roving. The first objection was attempted to be obviated, by placing the can in a frame, and drawing the roving out through the mouth- piece at which it entered ; and a remedy for the second was somewhat unsuccessfully attempted by Mr. Arkwright, who tried to introduce a pair of rollers upon the top of the roving-can, to seize hold of, and feed the roving into the can as fast as it was received from the drawing-rollers. This, undoubtedly, would have perfectly equalised the twist throughout ; but the machinery necessary to produce the double rotatory motion was found to be inconvenient, and the plan was in conse- quence

abandoned.

A roving-frame of a different construction, which obviates the preceding objections, and which in consequence, has received more general adoption, is represented at fig. 9. It is called the bobbin and flier roving-frame, The rollers for stretching are similar to those before described ; and the plied and drawn roving is represented as coming from the rollers at A, whence it passes through an eye at C, over the top of the spindle D, and down one of the legs of the flier B B, which is for that purpose formed tubular. By the revolution of the spindle D, generated by a strap acting upon the pulley F, the fliers are carried swiftly round, and twist and deliver the thread upon the bobbin E, which is moved upwards upon the spindle by raising the board G G, upon which it rests, descending again as the board descends. The roving is, by this means, slightly twisted and wound upon a bob- bin, in a fit state to be immediately carried to the stretching-frame, which, being very similar in its construction to the mule, we consider it necessary only to give a side view of one of the spindles of a mule.

It is shown in the annexed figure. A, is the place where the bobbin from the rovirig-frama

(not shown in this figure), would have been situate; and ccc, are three pairs of rollers, re- volving at different speeds, for the future drawing of the roving. The roving, when it has been thus drawn, is brought to the spindle B, which is formed of polished steel, ground slightly tapering to the end, which is a round blunt point. The spindle receives its motion at the pulley D, by means of a band passing round a drum in the box E E E ; which drum has bands passing in the same manner to several other spindles. When the motion commences, the carriage E E E, passes backwards to the position shown by the dotted lines, and carries with it the spindles to the position BZ, during which the spindle revolves rapidly on its axis, and gives a certain degree of twist to the roving, which already has undergone a reduction in diameter by passing through the rollers CCC. The extent to which the frame recedes is about three yards, and when the spin- dles have given the requisite degree of twist to the yarn, it returns to its former place ; while the attendant, by moving the bar H, upon its axis, presses the yarn downwards, by means of a piece of wire K, which causes it to be wound upon the spindles, so as to form a figure that may be rep- resented by two cones, one having a more acute angle than the other, placed base to base as

shown at A B, and B/. This form is termed a cop, and the act of so distributing the yarn, by the movement of H K, the building of the cop. It may here be observed, that although this is called the stretching-frame, the yarn is not stretched, but merely undergoes a further pro- cess of drawing and spinning, and that the stretching is not performed till the next opera- tion, which is performed upon the mule, and termed spinning.

The yarn, delivered from the stretching-frame in the form of a cop, is taken to the mule, which is, though much lighter, both in form and action of the parts, very similar to the stretching-frame. The spindles also are of a smaller size, and are situated nearer to each other. The mule spinning-frame, differs from that of the stretching-frame insomuch as the act of stretching is added to the other operations ; for when the frame E E E, (see diagram) has receded a certain distance, generally about one yard, the rollers CCC, cease to move, and the frame still continuing to recede, stretches the yarn. During this process the spindles on the frame E E E, move conside- rably quicker, in order to save time. The stretching is performed with a view to elongate and reduce those places in the yarn which have a greater diameter, and are less twisted than the other parts, so that the size and twist of the yarn may be more uniform throughout. When the cops are full, they are taken from the moving

spindles, and placed on stationary parts of other mules, as at A, and the yarn is again submitted to the same process until it is reduced and spun to the proper fineness, both as respects the diameter and the twist; during the whole of which pro- cess, the yarn can be continually joined, so that the cops, which are in separate pieces, can be added to each other in parts, or otherwise, as the continual elongation of the yarn in the course of the different operations of each mule may re- quire. The pC-2-ces are joined by children, called piecers, who are in attendance on each mule, to join any yarn that may be broken in the act of stretching or twisting. The drums, which drive the spindles in those parts of the mule that re- cede, receive their motions from bands com- municating with the moving power ; but the ad- vancement and recession of the carriage, for the purposes of receiving and stretching the yarn, as before described, is performed by means of a wheel moved by hand-labor. A spinner is enabled by experience to judge of and regulate both these operations, as also the building of the cop, which is a matter of very great nicety ; for if the cop is not well built, the yarn will not run off even when it is to be used. The number of spindles on a mule amounts frequently to 300. The yarn produced by mule-spinning, being by far the most perfect, is employed in the fabrication of the finest articles, such as lace and hosiery ; and when it is twisted in two, four, or six plies, is used for sewing-thread.

We may now briefly examine the process called jenny-spinning. This is of a

much earlier date, and is on the whole a less perfect process than mule-spinning ; consequently it is but little used, except in the manufacture of yarn for coarse goods. In this spinning, the cotton, after having been cleansed by some of the processes already described, is, preparatory to being ex- posed to the action of the jenny, immersed in a solution of soap and water, to divest it of the glutinous matter generally found on the surface of this and other vegetable fibres ; it is then, after the soap and water has been pressed from it, put into a warm stove, and when dry is con- sidered to be in a fit state to be exposed to the operation of the carding-engine. The carding- engine used in jenny-spinning is different in its construction to the one before described ; for in mule and water spinning there is a breaker and a finisher engine ; but the engine used in this process is called the double-engine ; the first part, or breaker, is in the same frame with the second part, or finisher, and the doffer from the first part delivers the cotton upon the main cy- linder of the second part, which, in like manner, delivers it upon the second doffer. The second doffer, instead of being covered with fillet-cards, as the doffer of the single engines, is covered with sheet-cards, like the main cylinder, but being of smaller dimensions, has generally only twelve cards upon it ; therefore the web of cotton combed from such doffei by the dofnng-plate is not in one continuous piece, but in several pieces or portions, equal to the quantity attached to each sheet-card upon the doffing cylinder. As the several small portions are delivered by the comb, they fall into the concave part of a smooth

arc that is e< jne-third of a circle. In this

arc a cylinder . – smooth mahogany slowly re- volves in such direction that the lower surface in the arc passes from the engine. This cylinder has small cavities or flutes on its surface, in a parallel direction to its axis ; the angles on the projections between the flutes are taken off, so that the several portions of web which fall from the doffer into the arc are seized by the flutes, and carried forward on the concave face of the arc, and formed into a sliver, about half an inch in diameter, and of a length corresponding with the breadth of the carding-engines, which is about front twenty-four to thirty-four inches. The portions thus rolled are called rows, rolls, or i owans.

In this state, the cotton may be considered in the same relative state of progress as a card-end in mule or water spinning; but it is evident that this mode of spinning is very deficient for the purposes of fine yarn, inasmuch as in the rowans the fibres of the cotton are laid across the longi- tudinal

direction in which they are to be spun, so that the advantage derived in the other pro- cess of carding, from the fibres being placed in a direction parallel to the intended length of the yarn, is entirely lost. In this process, also, the advantage of plying, which we have noticed as taking place on the lapping cylinder is lost.

When the rowans are perfected by the ma- hogany cylinder, they are taken up by children, and placed upon the feeding-cloth of a machine called the billy, or roving-billy, the operation of which is called roving or slubbing; but the latter expression is now but seldom used, except in the manufacture of woollen. This machine is in its construction and action very similar to the mule, as is the feeding-cloth, to that described in the machine called the picker and batter.

The feeding-cloth lies in a slanting position, and the rowans are placed upon it so that they can pass lengthwise in the direction of its action, and be delivered over the upper roller between two pieces of board which possess a capability of clasping and again relieving them. The rowans are then attached to revolving spin- dles, which have an advancing and receding motion similar to the mule or drawing-frame. By this revolution and recession the spindles perform the operation of spinning and stretching ; and at such intervals as the spindles are stretching and twisting, the feeding-cloth stops, and the clasps seize hold of the roving, and detain it till sufficiently spun and twisted, when it is relieved in order to allow a further portion of the rowan to be fed. The roving having by this means re- ceived a certain degree of twist, is built on the spindle in the form of a cop, as in mule-spin- ning, and is then taken to the machine called the jenny. The operation of the jenny is nearly the same as the roving-billy ; the only material dif- ference is, that the cops of roving to be spun are fixed upon a moving carriage, which has clasps to hold the roving while in the act of being stretched and spun into yarn.

Water-spinning differs both from the mule and jenny spinning; but the carding and drawingma- chines are the same as those used in the process of mule spinning. When the cotton has passed

through the carding and drawing machines, it is carried to the spinning-frame, which is upon a different principle to the mule, and, indeed, is more closely allied to the bobbin and flier roving frame. One of the spindles is represented in the engraving, fig. 10. A, the bobbin, brought from the roving-frame ; B C, and E, guides for the yarn to pass through ; G G G, three pairs of rollers to perform the office of drawing ; and H, a flier, formed solid, and having at the end of one arm a small twist like a cork-screw, through which the yarn passes. By the revolution of the flier the yarn receives the requisite degree of twist, and is wound upon the bobbin,

which, by the movement of the seat 1 1, on which it rests, has an upward and downward motion, in order that the yarn may be received upon it regularly. The guide C has a slow reciprocating motion in the direction of the axes of the rollers G G G, by which the roving is moved over the surfaces of the rollers, so that the parts wear uniformly.

In water twist-spinning, the operation of stretching is not introduced. The motion is transmitted from the first mover to the drawing and roving frames by means of bevel-wheels, placed on the end of the frame. These wheels communicate motion to the rollers, which have spur-wheels upon their shafts, adapted to give motion to each other by intermediate wheels which give to the lower rollers motion in the proper direction. The spindles receive their mo- tion from bands communicating with the drum K, represented by the dotted lines. This con- struction of a water spinning-frame is called a throstle, and the difference which characterises it from that properly called the water-frame is, that the cylinder K runs through the whole length of the frame, and gives motion to all the spindles at once; whereas in the water-frame the spindles are moved by an upright pulley, communicating motion to only one set of six spindles,which is an advantage, as the motion of one set can be stopped without stopping the motion of the whole. But as the water-frame is far more expensive than the other, it is a matter of doubt which ought to be preferred.

*The several sorts of yarn have each their peculiar destination. The yarn from mule autl jenny spinning is taken from the frame in the form of a cop ; that from water-twist is wound upon a bobbin. The yarn from water-frames possesses much regularity and strength, and is mostly used for the warps of heavy good*1, such as fustians and strong calicoes. If the yarn has to be packed for the market, it is reeled upon a frame consisting of six horizontal bars, supported on an axis parallel to each other.*

The frame is represented in the accompanying diagram, AAAAAA the horizontal bars, B the axis, and C the bobbin from the water-frame. The dotted lines represent the direction of the twist. These reels are of a sufficient breadth to wind off about fifty cops or bobbins, at the same time.

When the reel has made eighty revolutions, a small bell that is connected with the machinery rings, and warns the attendant to stop the mo- tion of the reel. The portion thus wound is called a lay, and seven of these lays wcund

upon the same reel constitute a hank, which is taken from the reel by causing one of the hori- zontal bars, supplied with a hinge, to fall in- wards. The circumference of the reel is a yard and a half, consequently the hank measures 840 yards. The size of the twist is expressed by stating how many hanks go to the pound weight : thus, the yam called No. 100, is that which takes 100 hanks 840 yards each to weigh an avoirdu- pois pound. Yarn can be spun upon mules as fine as 200 hanks to the pound ; but in water- twist and jenny-spinning it seldom exceeds sixty or seventy.

The last operation that we shall have occasion to describe, is that of warping. The machine on which this is performed is an octagonal prism, five or six feet high, and somewhat less in dia- meter, revolving vertically, and put in motion by a band and pulley placed under the seat of the warper. The bobbins which furnish the thread are suspended horizontally in a frame on one side. Twenty-eight or thirty threads, forming together a system called a half beer, are wound round the prism in a spiral form from top to bot- tom. The machine is then turned the contrary way, and the thread wound round the prism upwards from bottom to top, and this is repeated backwards and forwards till a sufficient number of half beers have been wound to form a web of the breadth required. When finished, and the ends properly secured, the whole is wound off, and coiled upon the hand into a round ball, called the warp. If the thread has been pre- viously sized in the hank, it is now ready for the loom ; but if the warp is made of cop twist, that operation is next performed. The warps are boiled several hours in water till they are thoroughly penetrated and softened; after draining some time they are then uncoiled and worked in the size till fully impregnated, after which the superfluous size is squeezed out, and they are suspended on poles to dry : the warp is then ready for the loom

Without this operation of sizing, which, as we have before observed, gives strength and tenacity to the thread, it would not support the friction of the loom. Two threads aie passed between each dent of the reed, and at each stroke of the treadle one ascends whilst the other descends. There is, therefore, a constant friction of the threads upon each other, as well as against the teeth of the reed. The motion of the reed itself

also backwards and forwards, and of the healds up and down, is very severe upon the warp, and unless it has been well penetrated by the size, and its fibres well cemented or glued toge- ther, this continual rubbing is sufficient to destroy its texture. Good sizing prevents this, but it is still further aided by another operation called dressing, which is performed by the weaver himself after the warp has got into the loom.

This consists first in applying with a brush a kind of paste made of wheat- flour well boiled, to which is often added a small portion of com- mon salt,

sometimes of potash, and sometimes even a little tallow. It is in fact a repetition of the operation of sizing, with this difference, that the dressing is applied chiefly to the surface of the thread, which is slightly coated with the paste, and brushed uniformly in one direction from the healds to the beam, by which means the loose fibres are all disposed evenly one way and firmly glued fast to the thread.

In summer the waip is dried simply by fan- ning it, but in winter, and in damp cold weather, a hot iron is lightly passed over it. It is then dressed again with a brush dipped in tallow or butter, with which it is slightly greased. This gives suppleness and smoothness to the thread, and greatly diminishes the friction of the healds – and reed. As such a portion of the warp as is extended between the healds and beam can alone be dressed at one time, this is woven, and the dressing repeated again upon another portion, and so on alternately dressing and weaving, till the whole of the web is finished.

Messrs. Ratcliffe and Ross dress the whole ot the warp before it is wound upon the beam ; the labor of the weaver is therefore uninterrupted, and his attention directed solely to one object. This alone is a great point gained, but it is at- tended also by other, not less important, advan- tages. Great part of the intellectual skill required in weaving, is in the dressing and beaming of the warp ; the mere mechanical part of throwing the shuttle, &c. is soon acquired, even by a boy. A more accurate division of labor, by reducing the beaming and dressing to a system by which they are better, more economically, and more expeditiously performed than before, has re- moved the great difficulty in the art of weaving, and rendered it in a great measure the employ- ment of children. From what we have already said, it will appear that the object in dressing and sizing is nearly the same, and Messrs. Rat- cliffe and Ross, by an improved mode of dress- ing, have succeeded in reducing these operations to one. They have gone still further ; they have done away with the necessity of warping, by forming the web at once from the bobbin, and thus reduced the warping, sizing, dressing, and beaming, to one operation. A thousand bobbins and upwards supply the materials for the warp, which in its progress is properly disposed and arranged, sized, dressed, and finally wound upon the beam. See WEAVING.

Messrs. Hall's experiments on the stoving of cotton goods with sulphur, are of a new charac- ter, and well worthy of notice. To stove goods in the most advantageous way, they should be

exposed lo the vapor of burning sulphur in a moistened state. But they are then rendered less saleable by the appearance of the spots or iron-moulds. The object of the experiments about to be detailed, was at once to combine the pood effects, with regard to the appearance and feel of the goods, resulting from stoving, and to obviate the appearance of the spots. The probable conclusion from these experiments is, that small portions of iron are derived from the sul- phur, as held in solutipn in the sulphureous acid gas formed, and are at length deposited in dis- tinct nuclei on the goods exposed to its action, so as to form the spots above mentioned. With the view of preventing this formation of spots, the following experiments were made : —

The clearest and purest sulphur of commerce, called virgin sulphur, &c. was first employed. The spots produced were less numerous than those occasioned by the common Rinds qf sul- phur ; but the benefit was partial and inconsi- derable only. Flowers of sulphur were then taken and sublimed to the third time ; but still the experiment yielded no results of a decisive character. Sulphur precipitated from the alka- line and earthy sulphurets by means of pure acids, still induced the same appearance of spots as before. The same thing may be observed of sulphur purified by means of phosphorus; the phosphorus was first united under water with the sulphur, and then converted into phosphoric acid by continued boiling; much ferruginous matter was separated, and this experiment seemed to promise success ; but the result, al- though the most favorable of all, was far from being perfect. Sulphurous acid gas, produced by the decomposition of sulphuric acid, by means of charcoal and of mercury, still induced the spots, in the same manner as when it resulted from the combustion of sulphur. Sulphurous acid gas expelled from the sulphates of the alkalis or earths, produced the same appearance of spots as before. Sulphurous acid gas passed through acids still retained the same property of spotting.

The usual mode of stoving, consists in burn- ing sulphur in a close chamber, in which the goods to be stoved are hung. Beside this mode of experiments, many trials were made by ex- posing a little of the material of the goods to the action of the sulphurous acid in a glass jar, containing about six or eight pints of the gas. The cotton, in these experiments, was moistened with a decoction of galls. Rather more than the requisite quantity of sulphur was placed on a bit of tile, brought to a red heat, and placed within the jar. At first the sulphur burnt with its usual blue flame, but at length the flame became extinguished, and the sulphur was seen to sublime, the oxygen of the air being exhausted. After the cotton had remained about an hour exposed to the sulphurous acid gas, it was taken out free from spots; but the spots gradually began to make their appearance during an ex- posure to the aii of about five or ten minutes.

The mode of bleaching cotton in Suabia is worth notice, especially as it is peculiar to that country. This operation is performed in two days, and does not require extensive premises.

An alkaline caustic ley is prepared, by taking two measures of quick-lime, and covering them with ten measures of good ashes ; the heap is then to be sprinkled with water, and when the lime is slaked and the mass cooled, it is fit for making the lee, by the addition of cold soft water. The skeins of cotton, being untwisted and tied in parcels, are to be immersed in the ley in which they are to be left six hours, and to be occasonally turned. They are then to be washed in a river, and afterwards boiled twelve hours in a bath of the same kind of ley, in which, for every sixty-six pounds of cotton thread, six pounds of soap have been dissolved. They are then to be boiled the same length of time in a solution of soap and water only, according to the former proportion ; after which, they are to be again washed in the river, and hung up in the air, or laid on the grass to dry as quick as possible. The process for the hosiery is similar. The boiler must be made of copper, and always well cleaned after it has been use'd.

The manufacture of Bandanas has now be- come a very important branch of our cotton trade ; and we cannot do better than furnish our readers with an account of the great Bandana gallery of Messrs. Monteith and Co. at Glasgow. This establishment has been long celebrated in the commercial world for the excellence and beauty of its cotton fabrics. Their madder-reds rival in brilliancy and solidity any ever produced at Adrianople; and the white figures distributed over the cloth, surpass, in purity, elegance, and precision of outline, the original Bandana designs.

Their new arrangement of hydrostatic presses was completed in 1818, under the direction of Mr. George Ilidger, sen., manager of the works. It consists of sixteen of these engines beautifully constructed, placed in one range in subdivisions of four ; the spaces between each set serving as passages to admit the workmen readily to the back of the press. Each subdivision occupies twenty- five feet; whence the total length of the apparatus is 100 feet. To each press is at- tached a pair of patterns in lead (or plates, as they are called,) the manner of forming- which will be described in the sequel. One of these plates is fixed to the upper block of the press. This block is so contrived that it turns on a kind of universal joint, which enables this plate to apply more exactly to the under plate. The latter rests on the moveable part of the press, commonly called the sill. When this is forced up, the two patterns close on each other very nicely, by means of guide-pins at the corners, fitted with the utmost care. The power which impels this great hydrostatic range, is placed in a separate apartment, called the machinery-room. This machinery consists of two cylinders of a peculiar construction, having cylindric pistons accurately

fitted to them. To each of these cylinders three little force-pumps, worked by a steam engine, are connected. The piston of the larger cylinder is eight inches in diameter, and is loaded with a top-weight of five tons. This piston can be made to rise about two feet through a leather stuffing or collar. The other cylinder has a piston of only one inch in diameter, which

is also loaded with a top-weight of five tons. It is capable, like the other, of being raised two feet through its collar. Supposing the pistons to be at their lowest point, four, of the six small force-pumps are put in action by the steam engine, two of them to raise the large piston, and two the little one. In a short time, so much water is injected into the cylinders, that the loaded pistons have arrived at their highest points. They are now ready for working the hydrostatic discharge presses, the water pressure being conveyed from the one apartment to the other under ground, through strong copper tubes of small caliber.

Two valves are attached to each press, one opening a communication between the large prime-cylinder and the cylinder of the press, the other between the small prime-cylinder and the press. The function of the first is simply to lift the under-block of the press into contact with the upper-block ; that of the second is to give the requisite compression to the cloth. A third valve is attached to the press, for the pur- pose of discharging the water from its cylinder, when the press is to be relaxed, in order to re- move or draw through the cloth. From twelve to fourteen pieces of cloth, previously dyed Tur- key red, are stretched over each other, as par- allel as possible, by a particular machine. These parallel layers are then rolled round a wooden cylinder, called by the workmen a drum. This cylinder is now placed in its proper situation at the back of the press. A portion of the four- teen layers of cloth, equal to the area of the plates, is next drawn through between them by nooks attached to the two corners of the webs. On opening the valve connected with the eight- inch prime-cylinder, the water enters the cylin- der of the press, and instantly lifts its lower block, so as to apply the tinder plate with its cloth close to the upper one. This valve is then shut, and the other is opened. The pressure of five tons in the one inch prime-cylinder is now brought to bear on the piston of the press, which is eight inches in diameter. The effective force here, will therefore be 5 tons X 82 — 320 tons; the areas of cylinders being to each other, as the squares of their respective diameters. The cloth is, therefore, condensed between the leaden pattern-plates, with a pressure of 320 tons.

The next step, is to admit the blanching or discharging liquor (aqueous

chlorine, obtained by adding sulphuric acid to solution of chloride of lime,) to the cloth. This liquor is contained in a large cistern, in an adjoining house, from which it is run at pleasure into small lead cisterns attached to the presses, which cisterns have graduated index tubes, for regulating the quantity of liquor according to the pattern of discharge. The stop-cocks on the pipes and cisterns con- taining this liquor, are all made of glass. From the measure-cistern, the liquor is allowed to flow into the hollows in the upper lead-plate, whence it descends on the cloth, and percolates through it, extracting in its passage the Turkey red dye. The liquor is finally conveyed into the waste pipe, from a groove in the under block. As soon as the chlorine liquor has passed through, water is admitted in a similar manner, to wash

away the chlorine, otherwise on relaxing the pres- sure, the outline of the figure discharged would become ragged. The passage of the discharge liquor, as well as of the water through the cloth, is occasionally aided by a pneumatic apparatus or blowing machine ; consisting of a large gaso meter, from which air, subjected to a moderate pressure, may be allowed to issue, and act in the direction of the liquids, in the folds of the cloth. By an occasional twist of the air stop-cock, the workman also can ensure the equal distribution of the discharging liquor, over the whole excava- tions in the upper plate. When the demand for goods is pressing, the air apparatus is much em- ployed, as it enables the workman to double his product.

The time requisite for completing the dis- charging process in the first press, is sufficient to enable the other three workmen to put the re- maining fifteen presses in play. The discharger proceeds now from press to press, admits the liquor, the air, and the water ; and is followed, at a proper interval, by the assistants, who relax the press, move forwards another square of the cloth, and then restore the pressure. Whenever the sixteenth press has been liquored, &c., it is time to open the first press. In this routine, about ten minutes are employed ; that is, 224 handkerchiefs (16 x 14), are discharged in ten minutes. The whole cloth is drawn succes- sively forward, to be successively treated in the above method. When the cloth escapes from the press, it is passed between two rollers in front, from which it falls into a trough of water placed below. It is finally carried off to the washing acd bleaching departments, where the lustre of both the white and the red is considerably brightened. By the above arrangement of presses, 1600 pieces, consisting of 12 yards each =z 19,200 yards, are converted into Bandanas in the space of ten hours, by the labor of four workmen.

The patterns, or plates, which are put into the presses to determine the white figures on the cloth, are made of lead, in the following way : — a trellis-frame, of cast-iron, one inch thick, with turned-up edges, forming a trough rather larger than the intended lead pattern, is used as the solid

ground-work. Into this trough, a lead plate, about half an inch thick, is firmly put by screw-nails passing up from below. To the edges of this lead plate, the borders of the piece of sheet-lead are soldered, which covers the whole outer surface of the iron frame. Thus, a strong trough is formed, one inch deep. The upright border gives at once great strength to the plate, and serves to confine the liquor. A thin sheet of lead is now laid on the thick lead plate, in the manner of a veneer on toilette-tables, and is soldered to it, round the edges. Both sheets must be made very smooth beforehand, by ham- mering them on a smooth stone table, and then finishing with a plane ; the surface of the thin sheet, now attached, is to be covered with draw- ing-paper pasted on, and upon this the pattern is drawn. It is now ready for the cutter. The first thing which he does, is to fix down, with brass pins, all the parts of the pattern which are to be left solid. He now proceeds with the little tools generally used by block-cutters, which

COTTON.

are fitted to the different curvatures of the pat- tern, and he cuts perpendicularly quite through the thin sheet. The pieces thus detached are easily lifted out ; and, thus the channels are formed, which design the white figures on the red cloth. At the bottom of the channels, a sufficient number of small perforations are made through the thicker sheet of lead, so that the discharging liquor may have free ingress and egress. Thus, one plate is finished, from which

commenced its operation in August, and the te- sult lias been most satisfactory. It commences by enacting that no person, being under the age of sixteen years, shall be employed in any de- scription of work whatsoever, in spinning cotton wool into yam, or in the previous preparation of such wool, or in the cleaning of any mill, manu- factory or building, for more than twelve hours in any one day, exclus've of the necessary time for meals, such twelve hours to be between the

an impression is to be taken by means of prin- hours of five of the clock in the morning, and

tcr's ink, on the paper pasted on another plate, eight of the clock in the evening. And no per-

The impression is taken in the hydrostatic press, son under the aˆe above- mentioned shall be

Each pair of plates constitutes a set, which may worked more than nine hours on a Saturday ;

be put into the presses, and removed at plea- such nine hours to be

completed between the

Fig. 1, plate II, is an elevation of one press ; A, the top, or entablature ; B B, cheeks of ditto,

hours of five of the clock in the morning, and four of the clock in the afternoon.

There shall be allowed to every person, in tne

or pillars; C, upper block for fastening upper course of every day, not less than half an hour pattern to; D, lower, or movable block; E, the to breakfast, and not less than one full hour for cylinder; F, the sole, or base ; G, the water for dinner; such half hour for breakfast to be be-

the discharged cloth to fall into ; H, cistern, or liquor-meter; dd, glass tubes for indicating the

tween the hours of eight of the clock, and nine of the clock, in the morning ; and such hour for

quantity of liquor in the cistern ; e e, glass stop- dinner to be between the hours of twelve of the

cocks for admitting the liquor into the cistern ; clock in the forenoon, and two of the clock in

ff, stop-cocks for admitting water ; gg, the pat- the afternoon. If at any time, in any such mill,

templates; nn, screws for setting the patterns manufactory, or buildings, time shall be lost in

purallel to each other; mm, stuffs perfoiated consequence of the want of a due supply, or of

with a half-inch drill. The lower iron frame an excess of water, or any accident happening

has corresponding pins, which suit these perfo- to the steam engine, water-wheels, or mill-geer-

rations ; so that the patterns are guided into ing, then it shall be kwful for the proprietors of

exact correspondence with each other ; h h, rol- any such mill to extend the before-mentioned

time of daily labor, after the rate of one addi- tional hour in any one day during the week (except on Saturdays), in which it is lost, but no longer. The ceilings and interior walls of every such mill, manufactory, or building, shall

lers which receive and pull through the discharged cloth, from which it falls into, the water-box; k, stop-cock for filling the trough with water ; Hi, waste tubes for water and liquor.

The plan of the buildings in which the cotton be washed with quicklime and water once in spinning machinery is placed, is generally in the every year.

form of a parallelogram, of a length proportion- Every person, whether proprietor, occupier, ate to the extent of the manufacture carried on or foreman, of any such cotton mill, who shall therein, and about thirty feet wide. In the best offend against any of the provisions of this act, constructed mills, the carding and other prepara- shall for every such offence forfeit and pay any tory machines are placed on the lowest floor; sum not exceeding £21), nor less than £10, at the mules and stretching frames on the next; the discretion of the justices before whom such and so on progressively as the machines improve offender shall be convicted

the fineness of the yarn. The mules, jennies, We may now turn to the foreign trade as re- and water-frames are placed with their line of gards the manufacture of this important article, spindles across the building; and the card en- In the year 1806, 21,734,000 Ibs. of cotton gines have the axes of their cylinders parallel to were imported into France, and manufactured the long wall of the building. Four or six rows, into the following articles: — About 1,000,000 breakers, and finishers, are placed alternately. Ibs. into velveteens ; about 925,000 Ibs. into The steam engine, or first mover, is pkced at nankeens, nankinets, crapes, and other small one end of the building, and the motion is com- stuffs; about 1,155,000 into dimities; about municated by a horizontal shaft running the 14,880,000 into fustians, calicoes, coverlets, si- whole length of the building, which transmits the moises, and muslins. In twenty-two of the motion to vertical shafts with bevel-wheels, departments in France, in which this manufac- which wheels transmit the motion to horizontal ture was carried on, there were, in 1806, 7,450 shafts in the upper floors. A better idea, how- spinning mules, containing 800,724 spindles, ever, may be procured of one of these mills by and employing 28,460 persons ; and there were reference to plate II, COTTON MANUFACTURE, in in these departments 28,634 looms employed in which we furnish a view of the fire-proof pre- weaving cotton fabrics, giving occupation to mises erected by Messrs. Strutt. 31,107 persons. The number of machines, and

The most important legislative enactment con- of people engaged in this manufacture in the nected with the cotton manufacture, relates other parts of the country are not stated. to the regulation of the mills, and is especially In the same year France imported (contra- intended to preserve the health of the persons band) from England 2,000,000 of pieces of employed in those extensive works. The act nankeen, 1,000,000 of pieces of cotton cloth for VFM passed in the month of June, 18?5, and printing, and about 300,000 pieces of other de-

scriptions of cotton goods, such as muslins, cambrics, dimities, &c. valued at £3,000,000 sterling.

The cotton manufacture of Switzerland, what- ever may have been the date of its commence- ment, has not proceeded so rapidly as the French. It was even many years after Sir Richard Arkwright's improvements before it began to make any considerable advance. It was not until the year 1798, that the Swiss had any spinning by machinery, at which time their first mill was erected at St. Gall. Before that period all their yarn was spun upon the one- thread wheel ; and even still, about a tenth part of what they produce is spun in this manner. After the introduction of machinery, however, this article of manufacture made rapid advances, and spinning works were erected in all the manufacturing cantons of the republic. In these they now spin watei-twist up to No. 40, and mule yam up to No. 80; but they import from this country all the higher numbers required in their manufacture. A considerable proportion of their machinery is worked in the same man- ner as a part of the spinning machinery of France; that is, in small systems; and in Switzerland these little establishments are scat- tered over the country. In the manufacture of the goods, the weaver, in general, provides him- self with the yarn, and sells the cloth, when woven, at the nearest weekly market, or ex- changes it for anew supply of yarn.

The cotton manufacture is carried on also in Prussia, and there is in the temperament and habits of that people, what leads us to expect that they may become a manufacturing nation. At present, however, like the Austrians, Saxons, and other nations upon the continent who have attempted to carry on this manufacture, they are far behind in the knowledge of the means of economising labor, and in that readiness and precision of execution which the workmen of this country possess. But these they will soon acquire if the business continues to be prosecuted by them. In the mean time they have laborat a cheaper price than that at which we can ge- nerally command it; and in manufacturing for markets which lie near

to themselves, they can, better than we at a distance, adapt the fashion and fabric of the goods to the changes of taste, and Accommodate the supply to the exact mea- sure of the demand. In Russia they have begun to manufacture cotton upon a small scale. At St. Petersburg! there is one spinning work, car- ried on by the emperor, of course at a great ex- pense. They also spin some cotton yarn upon the distaff. In addition to these supplies, they import annually from this country about 3,000,000 Ibs. of yarn, of numbers from No. 18 to No. 46. The weaving is carried on in Mos- cow and its neighbourhood ; and, latterly, along that line of country stretching towards the Cas- pian Sea, particularly about Sarepta, where a colony of Moravians has for some time been es- tablished. The goods produced are used chiefly for the garments of the peasantry.*

The amazing increase that has taken place in the quantity of cotton goods manufactured in the United States, may be conceived by the follow-

ing facts connected with a district which had not previously a manufacturing character.

In 1810 there existed in New Hampshire, al- together, twelve manufacturing establishments, which produced in a twelve-month, between 4,000,000 and 5,000,000 yards of cotton cloth. Whereas now there are, in the same county, no less than fifty manufactories, making up about 30,000,000 yards ! Here there has been a direct increase of more than 500 per cent. It may be added, that the whole surrounding country has now put on a manufacturing aspect; that villages of sixty or seventy habitations have sprung up, where, a short time back, there were but one or two. And that at Lowell a company was incor- porated in January 1825, with a capital of 600,000 dollars (£125,000 sterling), for jean, dimity, and twilled goods.

The piogress of the Irish in the same line of industry must not be overlooked ; and the lauda- ble and spirited exertions of captain Robert Biooke deserve to be particularly noticed. In the year 1780 that gentleman established a cotton manufactory on his lands, situated on the great canal, about eighteen miles west of Dublin. ID 1782 the government of Ireland, understanding that some of the manufacturers of Manchester in tended to remove to America, and carry their machinery with them, found means to persuade them to go to Ireland, and gave captain Brooke about £3000 for settling them in his houses upoti his lands; and they afterwards advanced him £32,000 upon interest and security, that he might give employment to a great number of weavers, who were then starving and riotous for want of employment in Dublin. By means of these, and other acquisitions of inhabitants, the manufacturing village, which was called ‘ Pros- perous,’ consisted afterwards of several hundred houses, erected on a spot where, in

the year 1780, there stood one single hut; and the manufacture gave employment to about 3000 men, women, and children. Besides captain Brooke's, which was the principal one, there were at this time several other manufactures of cotton established in vari- ous parts of Ireland by the spirited exertions of individuals, and the liberal encouragement of parliament.

The quantity of cotton wool exported from Great Britain to Ireland, is very considerably in- creased during the past five years, as appears from the following parliamentary statement, printed in 1826.

Ibs.

1821 . . . 1,386,564

1822 . . . 1,716,395

1823 . . . 1,950,288

1824 . . . 2,177,703

1825 . . . 2,598,893.

The lightness, as well as cheapness, of the ca lico, has rendered it a chief article of dress amongst all classes of people, and annihilated the manufacture of many of the lighter kinds of woollen and worsted stuffs, formerly so much in demand. The trade of Halifax, and the surround • ing country, which consisted almost wholly in such stuffs, has gone entirely to decay, and been re- placed by the manufacture of calicoes and other

cotton goods : and such are the quantities now manufactured, more especially in the country round Colne, and thence to Bradford, that from 16,000 to 20,000 pieces are brought weekly to the Manchester market; the produce of those districts which adjoin or are included between these towns.

To the same improvements in spinning which gave birth to the manufacture of calicoes, we are indebted for that of muslin, a branch not less important to the country than honorable to our pride and industry as manufacturers. For this elegant article of dress all Europe had long been tributary to India, where the manufacture has, through the lone lapse of ages, arrived at the greatest perfection. Muslins were first intro- duced into this country by the

East India Com- pany, about the year 1670, before which time cambrics and Silesia lawns were worn, and such fine linens from Flanders and Germany, as were brought back in exchange for our woollen manu- factures of various kinds exported thither in consi- derabl e quantities. The manufacture was attempted at Paisley as early as the year 1700. A few looms were employed, but this trade was soon annihi- lated by the introduction of the goods of India. Eighty years afterwards a more successful rival- ship commenced. British muslins were first suc- cessfully introduced in the year 1781, but were carried to no great extent till 1785, since which period their progress has been rapid beyond all example. In the year 1787 it was computed, that not less than 500,000 pieces of muslin, in- cluding shawls and handkerchiefs, were annually made in Great Britain. The manufacture has, from that time to the present, continued pro- gressively to increase and improve, and bids fair to become the most lucrative and extensive of any in this country. The rapidity with which it approaches to perfection, and its surprising extent in the short space of twenty years, are amongst the many important consequences that have resulted from the improvements in the art of spinning. By the cheapness and superior quality of our yarn, we are enabled to employ thousands of looms in the production of this ele- gant and useful article of dress, to keep in this country millions of specie which was heretofore sent to the east to purchase this commodity, and to clothe ourselves with this fabric at one- third of the expense formerly required.

Some curious data connected with the state of the cotton trade in Manchester are furnished in the MS. notes of a tour made by their imperial highnesses the archdukes John and Lewis of Austria. They say, ‘ It is calculated, that 1,500,000 Ibs. of raw cotton are worked up every week in the manufactories of Manchester ; and in the same space of six days, a single house

pays £10,000 tor tlie purchase of raw cotton. One single manufactory pays £1500 a week for wages. From these facts an idea may be formed of the active industry of this place, and of the riches which commerce must bring into it. The manufactories use so great a number of thermometers, that an Italian whom we know, (a Mr. Zanetti), who is settled in Manchester, sells ten or twelve dozen every week. Three hundred steam engines in constant motion produce all these wonders.’

The rapid increase of the cotton trade appears to have been owing, in a great measure, to the more liberal introduction of machinery into every branch of it, than into any other of our staple manufactures. The utility and policy of employ- ing machines to shorten labor, has been a sub- ject which has exercised the pens of several in- genious writers ; while their introduction into almost every branch of manufacture has been attended,

in the outset, with much riot and dis- order. They are, undoubtedly, most wonderful productions of human genius, the progressive exertions of which neither can nor ought to be stopped: they enable the manufacturer to pro- duce a better article than can be made by the hand, in consequence of the uniformity and cer- tainty of their operations ; and at a much lower price, in consequence of the vast quantities of goods they are capable of performing. They thus support the credit of our manufactures abroad ; and enable us, under the vast load of taxes, and consequent increase in the price of every necessary of life, to meet our foreign compe- titors with advantage at market. They can even allow the goods to furnish, in their passage, a considerable revenue to the government. And although they do, undoubtedly, on their first in- troduction, throw some persons out of employ, by changing the nature and course of business, they almost immediately make up for the incon- venience by astonishingly multiplying the abso- lute quantity of employment. If they take away their work from carders and spinners, they return it them back ten-fold as winders, warpers, weavers, dressers, dyers, bleachers, printers, &c. &c.

We shall conclude our present article by sub- joining a summary of the rise and progress of this important branch of British manufacture.

From 1770 to 1780 the importation of cotton wool averaged 5,735,575 Ibs. per annum. From 1781 to 1790 about 18,000,000 Ibs. weight, and from 1791 to 1801 about 32,000,000 Ibs. weight; and the following is a statement of the quantity imported in each of the twenty-two years 1802 — 1823, distinguishing the several countries from whence imported, and the number of bags and bales from each respective country

COTTON.

COTTON WOOL, IMPORTED FROM

561

Years.

United States of America.

Brasils and Portugal.

East Indies.

West Indies, &c.

Total No. of Bags and Balˆs.

Total in Ibs. weight.

I o >-

"" a g ^i*

01 ^

1802

107,494

74,720

8,535

90,634

281,383

77,393,600

a _c

1803

106,831

76,297

10,296

45,474

238,898

59,921,990

*"bo ** ^*

1804

104,103

48,588

2,661

86,385

241,637

70,506,355

‘Z ~^ K

1805

124,279

51,242

1,983

75,116

252,620

72,229,537

^T

1806

124,939

51,034

7,787

77,678

261,738

75,157,530

OT U *O

1807

171,267

18,981

11,409

81,010

282,667

86,206,870

1—1

1808

37,672

50,442

12,512

67,512

168,138

22,676,740

.5 ° ^

1809

135,000

166,107

35,764

103,511

442,382

117,775,530

>•»»

1810

240,516

149,535

79,382

92,186

561,173

136,570,735

•2.2

1811

128,192

118,514

14,646

64,789

326,141

91,662,535

1812

95,331

98,714

2,617

64,563 \ 261,215

63,027,570

&'&•

1813

37,721

137,168

1,421

73,218

249,503

49,820,530

CO

1814

48,000

151,500

13,500

74,500

287,500

59,745,373

1815

201,000

91,200

24,300

54,900

371,400

96,720,370

90,537,350

1816

166,000

124,000

31,000

49,000

370,000

94,140,330

90,350,230

1817

195,560

114,490

117,955

49,155

477,160

125,132,230

110,532,210

1818

219,950

160,200

247,300

57,850

660,300

177,257,375

112,235,750

1819

212,250

125,450

178,300

31,070

545,070

150,735,728

110,235,570

1820

301,200

179,700

57,300

31,950

577,150

143,637,325

128,735,235

1821

300,100

121,050

29,700

37,250

488,100

128,573,275

128,527,725

1822

330,000

143,200

19,300

40,650

533,150

139,797,735

140,795,375

1823

1

448,070

148,070

38,650

33,610

668,400

180,233,795

150,325,795

The following is an account of the official value The official values imply a fixed value as- of the cotton wool imported ; the number of bags signed by the government, in 1694 ; and may and bales, and the official value thereof re-ex- or may not have a relation to the real value ported; and the official and declared real value of the present tirne^; but they are important of the quantity of cotton yarn and of cotton ma- nufactures exported to all parts of the world (ex- cept Ireland), in each of the ten years 1814-1823.

and interesting as denoting an increase or de- crease of quantity.

EXPORTED.

Years.

Official Value of Raw

Raw.

Value of Yarn.

Value of Manufactures.

Imported.

Bags.

Value.

Official.

Real.

Official.

Real.

1814 1815 1816 1817 1818 1819 1820 1821 1822 1823

2,030,862 3,335,564 3,160,075 4,161,824 5,767,547 4,871,513 4,957,057 4,347,258 4,731,252 6,241,561

30,000 22,700 60,000 65,800 27,500 51,000 58,700 39,700

366,270 397,664 343,768 721,430 1,245,781 1,085,536 370,610 1,062,302 1,279,263 707,312

1,110,850 808,853 1,380,486 1,125,257 1,296,776 1,585,753 2,022,153 1,898,695 . 2,353,217 2,425,419

,2,791,248 1,674,021 2,628,448 2,014,181 2,385,305 2,516,783 2,826,643 2,307,830 2,700,437 2,625,947

16,690,366 21,699,505 16,335,124 20,357,147 21,627,936 16,876,206 20,704,600 21,639,493 24,566,920 24,117,549

17,393,796 . 19,124,061 13,072,758 14,178,021 16,643,579

12,388,833]

13,843,569 13,786,958 14,534,253 13,751,415

‘

By the first of the above statements it appears that the total quantity of coUon wool imported, in the nine years 1814—1823, has amounted to about 1,235,000,000 of Ibs. weight, and the stock on hand at the close of the year 1814, having been about 24,000,000 of Ibs. it makes a total quantity of 1,260,000,000 Ibs. weight in VOL. VI.

the nine years to be accounted for : which has been disposed of in the following manner, viz. 1,062,000,000 of Ibs. weight taken for spinning: 105,000,000 Ibs. re-exported in a raw state ; and 92,000,000 of Ibs. remaining on hand at th« close of the year 1823.

COTTON GRASS. See ERIOPHOP.UM.

COTTON, LAVENDER. See SANTOLINA.

COTTON, PHILOSOPHIC, a name given to the flowers of zinc, on account of their resemblance to cotton.

COTTON, SILK. See BOMBAX.

COTTON WEED, a species of filago.

COTTON (Charles), a burlesque poet, was de- scended from a good family, and lived in the reign of Charles II. and James II. His most celebrated piece is Scarronides, or Travestie of the first and fourth books of the jEneid. He also parodied several of Lucian's dialogues, in the same manner, under the title of the Scoffer Scoff'd ; and published another poem of a more serious kind, entitled the Wonders of the Peak. An anecdote is told of him, that in consequence of a single couplet in his Virgil Travestie, wherein he made mention of a peculiar kind of ruff worn by a grandmother of his, he lost an estate of £400 per annum, which would otherwise have been left to him by that lady.

COTTON (Sir Robert), an English antiquarian, was descended from an ancient family, and born in 1570. In his eighteenth year he began to collect records, charters, and other MSS. Cam- den, Selden, and Speed acknowledged their obli- gations to him in their respective works. He was highly distinguished by queen Elizabeth, and also by James I. who created him a baronet. At his death in 1631 he left his valuable library, consis- ting of curious MSS. &c. to his family for public use. A large accession was made to it by pri- vate benefactions before the death of the founder, and afterwards by the purchases of his heirs, until in 1709 an act of parliament was obtained, at the request of Sir John Cotton, for preserving it to the public after his decease, under the denomina- tion of the Cottonian Library, for public use. It is now in the British Museum.

COTTON (Nathaniel), M.D. also, an ingenious English poet, of the last century, studied medicine under the celebrated Boerhaave, at Leyden, and settled finally at St. Alban's ; where for many years he kept an asylum for lunatics. The poet Cowper was under his care, and mucn attached to him. He died in 1788, aged eighty-one. He wrote, Visions in Verse, for the Instruction of Younger Minds.

COITUS, the bull-head, in ichthyology, a ge- nus of fishes belonging to the order of thoracici. The head is broader than the body, and the gill

membrane has six rays. There are ten species, the most remarkable are — 1. C. cataphractus, the armed bull-head, or pogge, very common on most of the British coasts. 2. C. gobio, the river bull-head, also very common in all our clear brooks . 3. C. scorpius, the father-lasher, is common on the rocky coasts of this island ; it lurks under stones, and will take a bait. It seldom exceeds eight or nine inches in length. The head is large, and has a most formidable appearance, being armed with vast spines, which it can oppose to any enemy that attacks it, by swelling out its cheeks and gill-covers to a large /iizQv This spe- cies is also common in the Newfoundland seas, where it is called scolping ; and on the coast of Greenland, in deep water near the shore. It is a principal food of the natives, and wholesome soup is said to be made of it.

COTULA, in botany, May-weea; a genus of the polygamia superflua order, and syngenesia class of plants. The receptacle is almost naked ; the pappus marginated ; the florets of the disc quadrifid ; of the radius frequently none. There are twenty-two species, all herbaceous annuals, rising six or eight inches high, and adorned with yellow flowers. None of them are natives of Britain, and most of them require artificial heat.

COTULA, or COTYLA, a liquid measure m use among the ancients. Fannius says, the cotyla was the same thing with the hemina, which was half a sextaiy. Chorier observes, that the cotyla was used as a dry measure as well as a liquid one ; from the authority of Thucydides, who in one place mentions two cotylse of wine, and in another two cotyla of bread.

COTYLA, or > Fr. coytle ; KOTv\t. The

CO'TYLE, n. s. 5 socket in which the head of a bone moves ; a liquid measure used by the ancients.

COTYLEDON, navelwort, a genus of the pentagynia order, and decandria class of plants ; natural order thirteenth, succulentae: CAL. quin quefid : COR. monopetalous : there are five necta- riferous scales at the base of the germen, and five capsules. There are twenty-four species, most of them hardy succulent perennials ; though some require to be kept in a stove, being natives of warm climates. They rise from half a foot to a yard and a half high, and are adorned with yellow flowers growing in umbels. They are easily propagated either by seeds or cuttings. Two species are found in Britain: 1. C. umbilicus, common navelwort. 2. C. lusea, yellow navel-wort.

COTY'LEDONS, n.s. Lat. cotyledon; KOTV\S. Seed lobes (see BOTANY,

Index); glandular bodies which adhere to the chorion of some animals.

Many are of opinion that even the placenta of the human fetus, and cotyledons of quadrupeds, are re- spiratory organs rather than nutritious ones. Darwin.

COTYTTO, the goddess of debauchery. Her festivals were celebrated by the Athenians, Co- rinthians, Thracians, &c. during the night. Her priests were called baptae, and nothing but de- bauchery and wantonness prevailed at the cele- bration. See BAPT.E. A festival was observed in Sicily, where the votaries of the goddess carried about boughs hung with cakes and fruit which it was lawful for any person to pluck off. It was a capital punishment to reveal whatever was seen or done at these sacred festivals. The goddess Cotytto is supposed to be the same as Proser pine.

COUCH, v. a., v. n., &n. s.ˆj Fr. coucher ;

CO'UCHANT, adj. Dutch, koets.

CO'UCHEE, n. s. ˆJunius supposes

CO'UCHER, n. s. fit to be derived

COUCH-FELLOW, n.s. | ' a Gall, couche ;

CO'UCHING, n. s. j Belg. koetse, de-

sumptum ex Ital. colcare, pro collocare ; nam colcarsi in Italis est, conferre se in cubitum, col- locare se in lecto.' Skinner says, ' a Fr. Gall. coucher ; Ital. coricare, colcare, cubare ; u Lat. culcita, q. d. culcitare, i. e. in culcitam se con- dere.' To couch is, to lie down to rest ; to lie down on the knees, as a beast does when it rusts;

cou

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COU

tn lie hidden ; to lie in a bed or stratum ; to Before each van

stoop • to repose ; to lay any thing in a layer or Prick forth the aery knights, and couch their spears,

layers ; to bed in ; to bend under ; to include ; Till thickest legions close. Milton' Parodist Lo**

to hide ; to lay close to another ; to fix the spear Dire was the tossing, deep the groans ! despair

in the rest, in order to attack ; to perform the Tended the sick, busiest from couch to couch.

operation for removing a cataract from the eye. AS a tiger, who by chance hath spy'd

A couch is a seat of repose ; a sofa ; a bed ; a in some purlieu, two gentle fawns at play,

layer or stratum. Couchant signifies, lying Straight couches close ; then rising, changes oft

down ; squatting. Couchee is, bed time ; the His couchant watch.

time of visiting late at night. Coucher is, a None of her sylvan subjects made their court ;

bedrfellow ; a person who removes a cataract ; Levees and couchees passed without resort. Dryden.

a register book in monasteries. A couch-fellow When ,ove,s fair goddess

is, one who shares the same bed; a familiar Couched with her husband in his golden bed-

companion. Couching, as a noun, is the act of id, MntAd.

bending or bowing. The former waved in air

Issachar is a strong ass couching down between two His flaming sword ; . (Eneas couched his spear. Id.

Id.

Id.

burdens. Genesis xlix. 14.

Blessed of the Lord be his land, for the dew, and for the deep that coucheth beneath. Deut. xxxiii. 13.

Grand mercy, quod the preest, and was ful glad, And couched the coles as the chanon bad.

Trees bent their heads to hear him sing his

wrongs,

Fierce tygers couched around, and lolled their fawn- ing tongues. Id,

The foundation of all parables is some analogy or

Let take a cat, and foster hire with milke And tendre flesh, and make hire cotiche of silke, And let hire see a mous go by the wall, Anon she weiveth milke and fleshe and all. Id,

The goddesse strayt he knew, and by and by e peaste and couched, while that we passed by.

Sachville.

And over all with brazen scales was armed, Like plated coat of steel, so couched near, That nought might pierce. Spemer. Faerie Queene.

The knight of the Red Crosse, when him he spide Spurring so hot with rage dispiteous, Gan fairly couch his speare, and towards ride. Id.

And him beside an aged squire there rode, That seemed to couch under his shield three-square, As if that age badd him that burden spare. Id.

About their lady first they flockt arownd, Whom having laid in comfortable couch, Shortly they reard out of her frozen swownd. Id. His crest was covered with a couchant hownd. Id.

Chaucer. Cant. Tales, similitude between the topical or allusive part of the

parable, and the thing couched under it and intended by it. South.

That great argument for a future state, which St. Paul hath couched in the words I have read to you.

Atterbury's Sermons.

O ye immortal powers, that guard the jast, Watch round his couch, and soften his repose !

Addiion's Cato.

^— — Subtile wights (so blind are mortal men, Though satire couch them with her keenest pen) For ever will hang out a solemn face, To put off nonsense with the better grace ; As pedlars with some hero's head make

bold, Illustrious mark! where pins are to be sold. Young. Whether the cataract be wasted by being sepa rated from its vessels, I have never known posi- tively, by dissecting one that had been couched.

Sharp.

If the weather be warm we immediately coucb malt about an. inch thick ; but if a hotter season re • quire it, we spread it on the floor much thinner.

Mortimer's Husbandry

This heap is called by maltsters a couch, or bed, oi

Id.

I have grated upon my good friends for three re- prieves for you, and your couchfellow , Nim j or else you had looked through the grate like a geminy of raw ma]t.

baboons. Shakspeare. Merry Wives nf Windsor. ,T , .11

J Nor less the alarm that shook the world below,

If I court more women, you'll couch with more wˆg marched in pomp of war the' embattled foe :

*men' * Othello, where mannikins with haughty step advance,*

Doth not the gentleman And grasp the shield, and couch the quivering lance.

Deserve as full, as fortunate a bed, Beattie.

As ever Beatrice shall couch upon ? Go, prince, be virtuous, and be blest. The throne

Id. Much Ado about Nothing. Rears not its state to swell the couch of Lust ;

We'll couch i' th' castle-ditch, till we see the light of our fairies. Id. Merry Wives of Windsor.

Let not the royal bed of Denmark be A couch for luxury and damned incest.

Id. Hamlet.

T' o'erwhelm his humbler brethren of the dust. Id. Yes — thou mayst eat

thy bread, and lick the hand

That feeds thee ; thou mayst frolic on the floor At evening, and at night retire secure To thy straw couch, and slumber unalarmed. Cowper. When all did sleep, whose weary hearts did borrow

One hour from love and care to rest, Lo ! as I pressed my couch in silent sorrow,

My lover caught me to his breast. Sheridan.

Let him who crawls enamoured of decay.

from the top, and to pass it down in spouts into cling to his couch> and sicken years awayj rooms- Bacon's Natural History. Heave his tllick breath, and shake his palsied head ;

A sentence well couched takes both the sense and the Ours — the fresh turf, and not the feverish bed. understanding. I love not those cart-rope speeches While gasp by gasp he faulters forth his soul, that are longer than the memory of man can fathom. Ours with oae pang — one bound — escapes control.

Feltham. Byron. Bride of Alt/dot.

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These couchings, and these lowly curtesies, Might stir the blood of ordinary men.

Id. Julius Caesar.

It is at this day in use at Gaza, to couch potsherds, or vessels of earth, in their walls, to gather the wind

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COUCHANT, in heraldry, is un- derstood of a lion, or other beast, when lying down, but with his head raised, as in the diagram ; which distinguishes the posture of couchant from dormant, where- in he is supposed quite stretched out and asleep.

COUCHE' in heraldry, denotes any thing lying side-ways, with the two ends on each side of the shield, which should properly rest on the base as or, a chevron couched azure.

CO'UCHGRASS, n. s. A weed.

The couchgrass, for the first year, insensibly robs most plants in sandy grounds apt to graze.

Mortimer't Husbandry.

COUCHING, in surgery, is a mode of curing a cataract 5n the eye. This disease is an affection of the crystalline lens, or of its capsule, by which the rays of light are prevented from falling upon the retina. The cure has been generally per- formed, either by couching, that is, removing the lens from its capsule, or by extracting it. It was long a matter of doubt which of these me- thods deserved the preference ; but Sir Astley Cooper gives the preference to the former. He says, ' It is applicable to every species of the malady ; it produces subsequently symptoms far less severe and dangerous, than those which fre- quently happen after extraction: it may be suc- cessfully repeated, when any accidental circum- stance has rendered the primary attempts fruitless ; that it is much the most easy operation of the two ; that it is not so liable as extraction to be followed by the secondary membraneous cata- ract; and that Pott, Callisen, Lucas, Scarpa, Hey, Latta, and many other eminent and unbi- assed surgeons have given it the preference.'

The best needles for couching, according to this great surgeon, are those employed by Scarpa, or Hey, the former in 1 2

fig. 1, and the latter fig. 2, of the annexed diagram.

• If the curved couching-needle be made use of,' he says, ' it is to be held with the convexity of its cur- vature forward, its point back- ward, and its handle parallel to the patient's temple. The surgeon, having directed the patient to turn the eye towards the nose, is to introduce the instrument boldly through the sclerotic coat, at the distance of not less than two lines from the margin of the cornea, in order to avoid the ciliary processes. The exact place, where the point of the needle should next be gui- ded, is between the cataract and ciliary processes, in front of the opaqueJens and its capsule; but, as tht attempt to hit this delicate invisible mark borders upon impossibility, and might even en- danger the iris, it seems safer to direct the extre- mity of the instrument immediately over the opaque lens, and, in the first instance, to depress it a little downward with the convex flat surface

COUCHING.

of the end of the needle. Thus room is made for the safe conveyance of the instrument, be- tween the cataract and ciliary processes, in front of the diseased crystalline and its capsule. Care must be taken, in this latter step

of the opera- tion, to keep the marked side of the handle for- ward, so as to have the point of the instrument turned away from the iris. The needle will now be visible in the pupil, and its point is to be pushed in a transverse direction as far as the inner edge of the lens. Then the operator is to incline the handle of the instrument towards himself, by which means, its point will be di- rected through the capsule into the substance of the opaque lens; and, on inclining the needle downward and backward, the former will be la- cerated, and conveyed, with the latter, deeply into the vitreous humor. It is deemed of great importance to lacerate the front layer of the capsule in the operation ; for this plan renders the absorption of the opaque lens more certain and quick afterwards, and the occurrence of a secondary membraneous cataract almost impos- sible. Such is Scarpa's excellent plan of oper- ating for a firm cataract.'

' When the case is a fluid or milky one, the con- tents of the capsule flow out as soon as the little membraneous sac is pierced with the needle, and they sometimes completely conceal the iris, the pu- pil, and the instrument, from the operator's view. The object is now to lacerate the capsule as much as possible. Both the fragments and the extravasation of the milky fluid in the two cham- bers of the aqueous humor are gradually ab- sorbed after the operation, so as to leave the eye in a transparent state. When the cataract is soft, the particles of which it is composed will frequently elude all efforts made with the needle to depress them. This, however, is quite unne- cessary. The operator may either be content with a free laceration, and disturbance of them, or he may imitate Scarpa in pushing the frag- ments of the capsule, and the particles of ca- seous matter, into the anterior chamber. In this cavity, absorption seems to be carried on with more vigor than behind the pupil. When the cataract is a secondary membraneous one, the surgeon is to turn the point of the needle cau- tiously towards the pupil, and pierce the opaque capsule. This is to be broken, as far as it is practicable, at every point of its circumference ; and the fragments may either be left in their situation, or pushed forward, through the pupil, into the anterior chamber, in the way which Scarpa practises. When the capsule is adherent to the iris, it may often be separated by skilful and delicate movements of the needle.

' If the operator should prefer the straight needle, he must be careful to depress the cataract a little in the first instance, before making any attempt to place the instrument in front of the cataract, in order to be able to depress it, down- ward and backward, in the most convenient manner. As the point of a curved needle is turned backward, it may evidently be brought forward with more safety than a straight one, which has a tendency to run directly against the iris. Whenever an operator prefers lacerating the front layer of the capsule, and pushing the

particles of soft and membraneous cataracts forward, he will accomplish his objects with far greater safety by means of Scarpa's needle, than it is possible to effect with a straight one, pro- vided he is well acquainted with the anatomy of the eye, the scientific mode of using the in- strument, and has a tolerably steady hand, and a good eye of his own.' First Lines of the Practice of Surgery.

Under the article BLINDNESS, we referred our readers, for ' the first effects of sight on those who have been couched,' to the present article. The cases which we there had in view, and which are at once the best attested and the most interesting, are those recorded by Mr. Cheselden and Mr. Ware. The former is stated in the Philosophical Transactions, No. CCCCIII. p. 477. The youth on whom the operation was performed, seems to have been unusually intelli- gent. * When he saw the light for the first time,' says the operator, 'he knew so little how to judge of distances, that he believed the objects which he saw touched his eyes (and this was his ex- pression) as the things which he felt touched his skin. The objects which were most pleasant to him were those whose form was regular and smooth, though he had no idea of their form, nor could he tell why they pleased him better than the others. During the time of his blind- ness he had such an imperfect idea of colors, that he was then able to distinguish, by a very strong light, that they had not left an impression sufficient by which he could again recognise them. Indeed, when he saw them, he said the colors he then saw were not the same as those he had seen formerly ; he did not know the form of any object; nor could he distinguish one ob- ject from another, however different their figure or size might be : when objects were shown to him which he had known formerly by the touch, he looked at them with attention, and observed them carefully in order to know them again; but as he had too many objects to retain at once, he forgot the greater part of them, and when he first learned, as he said, to see and to know objects, he forgot a thousand for one that he recollected. It was two months before he discovered that pictures represent solid bodies; until that time he had considered them as planes and surfaces differently colored, and diversified by a variety of shades ; but when he began to conceive that these pictures represented solid bodies, in touch- ing the canvas of a picture with his hand he ex- pected to find in reality something solid upon it, and he was much astonished when, upon touching those parts which seemed round and unequal, he found them flat, and smooth like the rest; he asked, which was the sense that deceived him, the sight or the touch ? There was shown to him a little portrait of his father, which was in the case of nis mother's watch ; he said that he knew very well it was the resemblance of his father

; but he asked, with great astonishment, how it was possible for so large a visage to be kept in so small a space, as that appeared to him as impossible as that a bushel should be contained in a pint. He could not support much light at first, and every object seemed very large to him ; but after he had seen larger things, he considered the

first smaller. He thought there was noth ing beyond the limits of his sight. The same operation was performed on the other eye about a year after the first, and it succeeded equally well. At first he saw objects with his second eye iruch larger than with the other, but not so large, however, as he had seen them with the first eye ; and when he looked at the same object with both eyes at once, he said that it appeared twice as large as with the first eye; but he did not see double, at least it could not be ascertained that he saw objects double, after he had got the sight of the second eye.'

The second case also is recorded by Mr. Ware in the Philosophical Transactions, and was read to the Society June llth, 1801. It varies somewhat from Mr. Cheselden's. It was the case of a young gentleman, who, by a surgical operation, recovered his sight when seven years of age ; after having been deprived of it by cataracts be- fore he was a year old. Mr. Ware gives the fol- lowing account of the facts in question : ' I per- formed the operation on the left eye, on the 29th of December last, in the presence of Mr. Cham- berlayne, F.A.S., Dr. Bradley of Baliol College, Oxford, and Mr. Platt, surgeon in London. It is not necessary in this place, to enter into a de- scription of the operation. It will be sufficient to say, that the child, during its performance, neither uttered an exclamation, nor made the smallest motion either with his head or hands. The eye was immediately bound up, and no en- quiries made on that day with regard to his sight. On the 30th, I found that he had experi- enced a slight sickness on the preceding evening, but had made no complaint of pain, either in his head or eye. On the 31st, as soon as I en- tered his chamber, the mother with much joy informed me that her child could see. About an hour before my visit, lie was standing near the fire with a handkerchief tied loosely over his eyes, when he told her that under the handkerchief, which had slipped upward, he could distinguish the table by the side of which she was sitting : it was about a yard and a half from him ; and he ob- served that it was covered with a green cloth (which was really the case), and that it was a little far- ther off than he was able to reach.]\7o further questions were asked him at that time; as his mother was much alarmed, lest the use thus made of his eye might have been premature and injurious. Upon examination I found that it was not more inflamed than the other eye; and the opacity in the pupil did not appear to he much diminished. Desirous, however, to ascer- tain whether he was able to distinguish objects, I held a letter before him, at the distance of about twelve inches, when he told me, after a short he- sitation, that it was a piece of paper ; that it was square,

which he knew by its corners; and that it was longer in one direction than it was in the other. On being desired to point to the corners, he did it with great precision, and readily carried his finger in the line of its longest diameter. I then showed him a small oblong band-box covered with red leather, which he said was red and square, and pointed at once to its four cor- ners. After this, I placed before him an oval silver box, which he said had a shining appear-

ance; and, presently afterwards, that it was round, because it had not corners. The obser- vation, however, which appeared to me most re- markable, was that which related to a white stone mug; which he first called a white basin, but, soon after, recollecting himself, said it was a mug, because it had a handle. These experi- ments did not give him any pain ; and they were made in the presence of his mother, and of Mr. Woodford, a clerk in his majesty's treasury. I held the objects at different distances from his eye, and enquired very particularly if he was sen- sible of any difference in their situation ; which he always said he was, informing me, on every change, whether they were brought nearer to, or carried further from him. I again enquired, both of his mother and himself, whether he had ever before this time, distinguished by sight any sort of object; and I was assured by both that he never had on any occasion ; and that when he wished to discover colors, which he could only do when they were very strong, he had always been obliged to hold the colored object close to his eye, and a little on one side, to avoid the pro- jection of the nose. No further experiments were made on that day. On the 1st of January I found that his eye continued quite free both from pain and inflammation, and that he felt no un- easiness on the approach of light. I showed him a table knife; which at first he called a spoon, but soon rectified the mistake, giving it the right name, and distinguishing the blade from the handle, by pointing to each as he was desired. He afterwards called a yellow pocket- book by its name, taking notice of the silver lock in the cover. I held my hand before him which he knew, but could not- at first tell the number of my fingers, nor distinguish one of them from another. I then held up his own hand, and desired him to remark the difference between his thumb and fingers ; after which he readily pointed out the distinctions in mine also. Dark-colored and smooth objects, were more agreeable to him than those which were bright and rough. On the 3rd of January he saw, from the drawing-room window, a dancing bear in the street; and distinguished a number of boys that were standing round him, noticing par- ticularly a bundle of cloths which one of them had on his head. On the same evening I placed him before a looking-glass, and held up

his hand : after a little time he smiled, and said he saw the shadow of his hand, as well as that of his head. He could not then distinguish his features ; but, on the following day, his mother having again placed him before the glass, he pointed to his eyes, nose, and mouth, and seemed much grati- fied with the sight.'

COVE, v. a. & n. s. Fr. couver ; Ital. covare ; Lat. culare ; Arm.cauf; Isl. kofe ; Ang.Sax. cofe ; Teut. kove. To cove is used by Holland, in his translation of Plutarch, Vi the sense of to incu bate ; but it now means to arch over. Cove is a small creek ; a shelter ; a cover ; but the first of these meanings is the most in use.

The mosques and other buildings of the Arabians are rounded into domes and coned roofs. Swinburne.

Or with fair Hope the brightening scenes improve, And cheer the dreary wastes at Sidney cove, Darwin.

And many a summer flower is there,

And many a shade that love might share,

And many a grotto, meant for rest,

That holds the pirate for a guest ;

Whose bark in sheltered cove below

Lurks for the passing peaceful prow.

Byron. Bride of Abydos. As the fleet dove, who, on the mossy breast

Of a coved rock, broods fondling o'er her nest,

Scared by some sudden foe, in tumult springs

From her loved home, and loudly claps her wings. Symmons' JEneu.

COVE, or Coax HARBOUR, the town of Cove, in the parish of Great Island, and in the barony of Barrymore, is about eight English miles south-west of Cork. During the last French war this village, from its local advantages, grew from com- parative insignificance into its present importance ; having now a population of 6,500 persons in the town alone, besides 3000 in the remaining part of the parish. The cove or harbour of Cork is probably the noblest natural basin in Europe : its entrance is deep, free, and open, and the har- bour inside, where the whole British navy might ride at anchor, completely land-locked. There are three fortifications,

one on Spike, one on Hawlboline Island, beside Carlisle Fort. Cove Town stands directly opposite to Hawlboline Is- land, has a southern aspect, enjoys a mild atmos- phere, and is much frequented by invalids. The importance of Cove harbour to a nation like England, decidedly commercial, and exposed by her insular situation to foreign invasion, has long been acknowledged. There are at present steam vessels plying from Cork to Bristol, to Liver- pool, to Dublin, and to London.

CO'VENABLE, adj.) Fr. convenable. Suit-

CO'VENABLY, adv. ji able ; fit ; proper. Suit- ably; fitly.

As yet unto this time ye han wel and convenably taught me. Chaucer. Cant. Tales.

The covenable joyning of every of the sayd partes one •with another. Palsgrave.

CO'VENANT, v. a. & n. s.-\ Fr. and Span.

COVENANTED, n. s. j convenir ; Ital.

COVENA'NTER, n. s. \ and Lat. conve-

CO'VENOUS, adj. i nire, from con

CO'VENT, n. s. J and venire. To

agree ; to stipulate ; to bargain ; to contract ; to enter into an agreement with. A covenant, in law, is a contract; a stipulation; an agreement; the writ- ing which contains the terms of an agreement. Covenantee signifies one who is a party to a co- venant ; one who bargains. He who takes a co- venant, who makes himself a party to a covenant, is a covenanter. The word is chiefly applied to those who took the covenant in the reign of the misguided Charles I. Covenous is, fraudulent ; collusive; trickish. Covent is the old spelling of convent

They covenanted with him for thirty pieces of silver.

Matthew.

And by his covenant yave he rekening, Sin that his lord was twenty yore of age.

Chaucer. Prol. to Cant. Tales.

So wele kepeing the covenaunt in Southwork that was made. Id. Cant.

Tales'

His lord used commonly so to covenant with him which if at any time the tenant disliked, he might freely depart at his pleasure. Spenser's State of Ireland.*

COVENTRY.

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I shall but lend my diamond till your return ; let there be covenants drawn between us.

Shakspeare. Cymbeline

I wish some means devised for the restraint of these inordinate and covenous leases of lands, holden in chief, for hundreds or thousands of years.

Bacon's Office of Alienation.

It had been covenanted between him and the king of England that neither of them should treat of peace or truce with the French king.

Hayteard on Edward VI,

A covenant is a mutual compact, as we now consi- der it, betwixt God and man ; consisting of mercies on God's part, made over to man ; and of conditions* on man's part, required by God.*

Hammond's Practical Catechism. He makes a covenant never to destroy The earth again by flood ; nor let the sea Suipass his bounds. Milton. Par. Lost.

The covenanters shall have no more assurance of mutual assistance each from other, after the taking of the covenant, than they had before.

Oxford Reasons against the Covenant.

By words men come to know one another's minds ; by these they covenant and confederate. South.

Jupiter covenanted with him, that it should be hot or cold, wet or dry, calm or windy, as the tenant should direct. L'Estrange.

Some men live as if they had made a covenant with hell : let divines, fathers, friends, say what they will, they stop their ears against them. Id.

Pointing to a heap of sand, For every grain, to live a year demand ; But ah ! unmindful of the effect of time, Forgot to covenant for youth and prime.

Garth's Ovid.

Both of them were respective rites of their admis- sion into the several covenants, and tbe covenantees be- come thereby entitled to the respective privileges.

Ayliffe's Parergon.

COVENANT, in ecclesiastical history, denotes particularly a contract or convention agreed to by the Scots in 1638 for maintaining their religion free from innovation. In 1581 the general as- sembly of Scotland drew up a confession of faith, or national covenant, condemning episcopal go- vernment, which was signed by James I., and which he enjoined on all his subjects. It was again subscribed in 1590 and 1596. The sub- sciiption was renewed in 1638, engaging the subscribers by oath to maintain religion in the same state as it was in 1580, and to reject all in- novations introduced since that time. This oath annexed to the confession of faith received the name of the covenant ; as those who subscribed it were called covenanters.

The Solemn League and Covenant was estab- lished in the year 1643, and formed abond of union between Scotland and England. (See ENGLAND.) It was sworn and subscribed by many in both nations, who thereby solemnly abjured popery and prelacy, and combined together for their mutual defence. It was approved by the parlia- ment and assembly at Westminster, and ratified by the general assembly of Scotland in 1645. The Encyclopaedia Metropolitana, in its high- church zeal, calls this transaction ' a compound of hypocrisy and fanaticism, to which may be justly charged much of the tragedy of the

succeeding years.' We are not the advocates of religious covenants imposed by the sword ; but this writer seems to have no doubt of the sincerity of the prince and his ministers of whom the following facts are recorded.

King Charles II. disapproved of it when he surrendered himself to the Scots' army in 1646; but in 1650 he declared his approbation both of this and the national covenant, by a solemn oath ; and in August of the same year macfe a farther declaration at Dumferline to the same purpose, which was also renewed on occasion of his coro- nation, at Scone, in 1651. The covenant was ratified by the parliament of Scotland in this year, and the subscription of it required by every member, without which the constitution of the parliament was declared null and void. But it produced a series of distractions in the subse- quent history of that country, and was voted ille-

fal by parliament, and provision made against it. tat. 14, Car. II. cap. 4. Clarendon gives, at length, the document that was subscribed at Westminster in his History, book vii.

COVENANT, in law, is the agreement of two or more persons to do, or not do, some act or thing contracted between them. Also it is the decla- ration the parties make, that they will stand to such agreement, relating to lands or other things ; and is created by deed in writing, sealed and ex- ecuted by the parties, or otherwise it may be im- plied in the contract thereto. And if the persons do not perform their covenants, a writ or action of covenant is the remedy to recover damages for the breach of them.

COVENANT, in theology, is much used in con- nexion with other terms; as, the covenant of grace, of redemption, &c. These phrases gene- rally describe peculiar theological views of the ways of God, rather than any doctrine simply scriptural.

COVENANT, See SOLEMN LEAGUE.

COVENTRY, a city of great antiquity in Warwickshire, whose origin is involved in much obscurity : some suppose its name to have been derived from a convent which was destroyed by Edric the Traitor in 1016. It is more certain that, about the year 1043, Leofric, earl of Mercia, founded and endowed a convent of Benedictine monks here. It is said, however, that Leofric, re- ceiving some provocation from the inhabitants of the town, loaded them with heavy taxes; and being importuned by his lady, Godiva, to remit them, he consented, upon condition that she should ride naked on horseback from one end of the town to the other. This condition, as it was stipulated by her husband, she is said to have complied with ; and having enjoined the citizens not to venture out, or become the spectators of her progress on pain of death, proceeded through the city, concealing her person as well as possi- ble with her fine hair. One citizen only, the le- gends state, a certain tailor, could not refrain from peeping : the lady's horse neighed, and the tailor paid dearly for his curiosity, being instantly struck blind ! A figure of ' peeping Tom ' is still preserved and to be seen in an opening at the upper part of a bouse at the coiner of Hertford-street, adjoining the King's Head Inn. There was formerly a portrait of the countess and

Leofric exhibited in one of the windows of Tri- nity Church; the earl being represented as holding out a scroll or charter, inscribed, ' I, Luoricke, for

the love of thee, Do make Coventry toll-free.'

In commemoration of the circumstance above detailed, a most splendid procession occasionally takes place on the first day of the great fair, Friday in Trinity week, in which a female clad in a close dress of silk or linen of flesh color, and with long and flowing hair, rides through the citv, preceded by guards in armor, arid followed by the mayor, sheriffs, and corporation, in their robes, together with the masters of various trading companies, their followers, and magnifi- cent streamers : several hands of music are inter- spersed through the procession. Its popularity is unabated, and thousands are attracted to wit- ness the pageant whenever it takes place. The procession, as now conducted, commenced in the reign of Charles II. South of the town stood anciently the monastery of Gray Friars, celebrated for the mysteries performed in it on the day of Corpus Christi.

After the conquest, the lordship of Coventry devolved on the earls of Chester ; subsequently it came into the hands of Henry III. and William de Albany, earl of Amndel ; then of Robert de Montalt, and was granted, in default of issue, to Isabel, queen mother of Edward III. with re- mainder, first, to John of Eltham, afterwards earl of Cornwall, and then to king Edward II. and his heirs for ever. Soon after, 1337, Coven- try was annexed to the earldom of Cornwall, and had various immunities granted to it. In 1344 the town was incorporated by Edward III. when a mayor and two bailiffs were chosen. In 1355 the building of the wall round the town com- menced, which was not completed until forty years afterwards. Richard II., in 1377, confirmed privileges formerly granted, and in 1385 ratified the charter of Edward III. for building the stone walls, and permitted stone to be taken from his quarry at Cheylesmore for that and other pur- poses. Two parliaments have been held in this city, one in the great chamber of the priory in 1404, the other in 1459 by Henry VI.; the former acquired the name of parliamentum indoctorum, vn consequence of its excluding all lawyers, or persons skilled in the laws : the latter was held in the chapter-house of the priory, and called par- liamentum diabolicum, the parliament of devils, owing to the numerous attainders passed therein. Coventry had at one time to boast a splen- did cathedral, adorned in the most costly man- ner, and supposed to have been built on a similar plan to Litchfield cathedral, having two spires at the west end and one in the centre. The city then possessed a matchless group of churches, all standing within one cemetery. St. Michael's church is at this time, and most justly, the boast of Coventry ; its fine tower and spire are scarcely to be equalled in Europe, and are choice exam- ples of English ecclesiastical architecture: the tower is 136 feet three inches high, from which ascends the spire 130 feet nine inches in height. Sir Christopher Wren is said to have spoken of it in the highest terms of admiration. The body of the church is worthy of its superb spire, and is

supposed to have been erected in »he time of Henry VI.

Trinity Church is both handsome and capa- cious, but, being situated so near to St Michael's, its importance and effect are lost in a great de- gree. St. Mary Hall is a building of singular interest, especially to the antiquary : it is si- tuated in the immediate vicinity of St. Michael's Church, and was erected in the reign of Henry VI. as a place of meeting for the Trinity guild ; it is now chiefly used for civic purposes. The Great Hall is a fine old room seventy-six feet six inches long, thirty feet broad, and thirty- four feet high. In consequence of a thorough reparation being necessary, it has very lately been restored, and judiciously altered in some respects, close attention having been paid to preserving its original character.

A handsome and very celebrated cross, consi- dered one of the stateliest in England, stood in Cross-cheaping, and was taken down in 1771. The free-school was founded in the reign of Henry VIII. by John Hales, esq. and liberally endowed by him. Sir William Dugdale and other very eminent men received their education in this place. Coventry contains several hospi- tals, and many other buildings of considerable interest and antiquity. This city has, besides its churches, a Roman Catholic place of worship, two Independent chapels, a meeting-house for the Society of Friends, a Unitarian, a Baptist, and a Methodist chapel.

The trade of Coventry and the neighbourhood it chiefly confined to the manufacture of ribands and watches ; 3000 looms, and 20,000 manufac- turers are supposed to be employed in the former. It is governed by a mayor, ten aldermen, and twenty common-council men, and sends two members to parliament. The right of voting is vested exclusively in persons having served seven years apprenticeship to one and the same trade, within the city and county : the number of free men is nearly 4000. The population of Coventry has latterly very much increased, and is supposed to amount to 24,000. It lies eighteen miles south-east of Birmingham, forty-nine north-west of Oxford, and ninety-one north- west of London.

COVENTRY. There are five townships so called in the United States ; one in Connecticut, one in Rhode Island with 2447 inhabitants, a third in New Hampshire, a fourth in Vermont, and a fifth in Pennsylvania.

CO'VER, v. a. &n. s.^) Fr. couvrir; It.cop-

CO'VERCLE, n. s.

Co'VERER, n. S. COVERING, n. S. Co'VERLET, n. S.

CO'VERT, n. s. & atlj. CO'VERTLESS, adj. CO'VERTLY, adv. CO'VERTXESS, n. s.

Co’VERTURE, H.S. Co’VER-CHIEF, H. S. Co’vER-SHAME, n. S.

CO’VER-SLUT, n. s.

Co’vERT-BARON, n. S. Co’VERT-FEME, n. S. Co’vERT-WAV, n. 5.

nre ; Span, cubrir ; Lat. co-operire. SoJu- nius positively affirms it to be. Yet we may, perhaps, be allowed to look to the north for the etymon ; and there we •“shall find, Isl.& Goth. kqfe, caverna ; Sueth, kofwa, kyjfc, latibu- lum. A thing, then, that is covered is as though it were hidden in a den or cave. To cover is, to spread one

thing over anotner ; to conceal under a covering; to overwhelm with ; to shelter, by interposing something above; to incubate; to couple with a female ; to wear a hat as a privilege. Cover is any thing laid over another ; a concealment ; a shelter; a defence; a place where the fox or hare is supposed to be. As a noun, covert signi- fies a shelter ; a thicket, or hiding place : as an adjective, sheltered ; secret ; insidious ; and, in legal parlance, the state of a woman in marriage. The last of these meanings attaches to the word coverture ; which also denotes shelter ; defence. Covertly is secretly ; underhandedly. Covercle is a lid. Cover-chief, which is obsolete, is the name of a covering for the head. For covert- way, see FORTIFICATION; for covert-baron and covert-feme, see LAW. Cover-shame and cover- slut are contrivances to conceal infamy and slut-tishness.

The women took and spread a covering over the well’s mouth. 2 Sam. xvii. 19.

The pastures are clothed with flocks ; the valleys also are covered over with corn. Pial. Ixv. 13.

Let mine outcasts dwell with thee, Moab ; be thou a covert to them from the face of the spoilers.

Isaiah xvi. 4.

There shall be a tabernacle for a shadow in the day-time from the heat, and for a place of refuge, and for a covert from the storm and rain. Id. iv. 6.

Charity shall cover the multitude of sins.

1 Peter iv. 8.

This false Arcite somwhat must he nede faine When he was false to coveren his traitourie.

Chaucer. Annelide and false Ardte.

A man sliuld also think that God seeth and know- eth al his thoughtes, and al his workes, and to him may nothing be hid ne covered. Id. Cant. Tales.

A large coverchief of threde She wrapped all about her hede.

Id. Romaunt of the Rose. Wei woste thou it will make anone A lityl roundil as a circle, Para'venture as brode as a covircle.

Id. The House of Fame.

Some pleasant hourcs thy wo may wrap, and the de. fend and cover. Wyat.

At last he came unto a gloomy glade, Covered with boughs and shrubs from heaven's high light. Spenser. Faerie Queene.

Enforst to seeke some covert nigh at hand, A shadie grove not farr away they spide, That promist ayde the tempest to withstand. Id.

Loe, loe ! how brave she decks her bounteous

boure With silken curtens and gold coverletts. Id.

Yet still Aragnol (so his foe was hight) Lay lurking covertly him to surprise.

Id. Muiopotmos.

Go to thy fellows, bid them cover the table, serve in the meat, and we will come in to dinner.

Sliakspeare. Merchant of Venice. Towards him I made ; but he was 'ware of me, And stole into the covert of the wood.

Id. Romeo and Juliet.

Bring some covering for this naked soul, Whom I'll intreat to lead me. Id. King Lear.

How can'st thou cross this marriage ? — Not ho- nestly my lord ; but so

covertly, that no dishonesty shall appear in me. Id. Much Ado about Nothing.

Without the bed her other fair hand was, On the green coverlet, whose perfect white Shewed like an April daisy on the grass.

Id. The Rape of Luervx.

The secundiuc is but a general cover, not shaped according to the parts ; the skin is shaped according to the parts. Bacon.

You are of either side the green to plant a covert alley, upon carpenter's work, about twelve foot in height, by which you may go in shade into the gar- den. Id.

It may be it is rather the shade, or other cover- ture, that they take liking in, than the virtue of the herb. Id.

The infancy of king Edward VI. and the cover- ture of queen Mary, did, in fact, disable them to accomplish the conquest of Ireland. Davieson Ireland.

His calm and blameless life Does with substantial blessedness abound, And the soft wings of peace cover him round. Cowley.

Thence to the coverts, and the conscious groves. The scenes of his past triumphs and his loves.

Denham.

Cover me, ye pines ! Ye cedars with innumerable boughs Hide me, that I may never see them more. Milton.

The flaming mount appeared In Dothan, covered with a camp of fire. Id.

It was the hour of night, when thus the Son Communed in silent walk, then laid him down Under the hospitable covert nigh Of trees thick interwoven. Id.

By what best way

Whether of open war, or covert guile, We now debate. Id.

He saw their shame, that sought Vain covertures. Id.

In the mean time, by being compelled to lodge in the field, which grew now to be very cold whilst his army was under ewer, they might be forced to retire. Clarendon.

Sometimes Providence casts things so, that truth and interest lie the same way ; and when it is wrapt up in this covering, men can be content to follow it.

South.

Or lead me to some, solitary place, And cover my retreat from human race.

Dry den.

That king had conferred the honour of grandee upon him, which was of no other advantage or sig- nification to him, than to be covered in the presence of that king. Id-

*'Orestes' bulky rage, Unsatisfied with margins closely writ, Foams o'er the covers and not finished yet. Id. Amongst the poets, Persius covertly strikes at Nero ; some of whose verses he recites with scorn and indig- nation. *d. Instead of her being under covert baron, to be under covert feme myself! to have my body disabled, and my head fortified. fd-*

This done, the host produced the genial bed, Which with no costly coverlet they spread. Id.

Does he put on holy garments for a cover-shame of lewdness ? 'd-

Whilst the hen is covering her eggs, the male gene- rally takes his stand upon a neighbour bough within her hearing, and by that means amuses and diverts her with his songs during the whole time of her sitting. Addison't Spectator.

The deer is lodged ; I've tracked her to her covert, Be sure ye mind the word ; and when I give it, Rush in at once, and seize upon your prey.

Id. Cato.

Together let us beat this ample field, Try what the open, what the covert yield.

Pope' i Essays.

Raillery and wit serve only to cover nonsense with shame, when reason has first proved it to be mere nonsense. Watt.*

The fox is a beast also very prejudicial to the hus- bandman, especially in places that are near forest- woods and covert places. Mortitn. Husb. By mixing with the concerns of state, he (Lanfranc) did not lose his religion and conscience, or make them the cover or instruments of ambition ; but, temper- ing the fierce policy by the mild lights of religion, he became a blessing to the country in which he was promoted. Burke. Great Britain was not there. Almost in despair, I hope she will never, in any rags and coversluts of in- famy, be seen at such an exhibition. Id.*

Reason now

Takes part with Appetite, and pleads the cause Perversely, which of late she so condemned ; With shallow shifts and old devices, worn And tattered in the service of debauch, Covering his shame from his offended sight.

Coteper.

I had been for gome days sculking from covert to covert, under all the terrors of a jail ; as some ill-ad- vised people had uncoupled the merciless pack of the law at my heels. Burns.

In &hort, she was a walking calculation,

Miss Edgeworth's novels stepping from their covers, Or Mrs. Trimmer's books on education,

Or ' Calebs' Wife/ set out in quest of lovers.

Byron. Don Jvan.

COVERDALE (Miles), a celebrated English divine and reformer, was educated at Cambridge, and became a canon of the order of St. Augus- tine. On becoming a Protestant he went abroad, and in 1532 assisted Tindale in his translation of the Bible. The first complete English trans- lation of the Scriptures appeared in 1535, with his name in the title-page. A second version of the New Testament was published by him in 1538. Queen Catherine Parr made him her almoner; and in 1551 he was promoted to the see of Exeter. He went to Denmark on the ac- cession of

queen Mary, and afterwards to Geneva, where he joined the other English refugees in their celebrated version of the Bible. He came home on the accession of queen Elizabeth, but, instead of resuming his see, accepted the rectory of St. Magnus, London Bridge. This he resigned in 1566, and died May 20, 1567, and lies buried in St. Bartholomew's church, by the Exchange. Bishop Coverdale was also the author of The Christen State of Matrymonye, wherein Hus- bands and Wyfes maye lerne to keep House to- gether with Love ; and other tracts.

CCXVET, v. a. & rO Fr. convoiter. Skin- COVETABLE, adj. ner, Junius, and Me- CO'VETING, n. s. . nage, agree in deriving CO'VETINGLY, adv. I these words from low CO'VETISE, n. s. f Lat. convctare. Under CO'VETOUS, adj. the word covetous, Le-

CoVE-rousLY, adv. mon, who refers every- Co'vETOusNE8s,n..J thing to the Greek, says, OTTVIU, coeo, cupidus ; under Ital. covidigiaj quati*

cupidigia ; greedy, eager, desirous : unless we should prefer aveo, to covet ; like the avaricious man.' To covet is, to have an inordinate desire of. Covetise, which is obsolete, is synonymous with covetousness, in the sense of avarice ; lust of money; eagerness of gain. Shakspeare uses covetousness with the meaning of eagerness, de- sire, as will be seen in the quotation ; but in this application of the word, I believe that he stands alone. He also uses covetous in a good sense, to express a laudable anxiety for ; and he is not singular in so doing ; but this meaning is nearly, if not quite, disused ; the general use of the word being confined to inordinate, and con- sequently, improper desire.

But covet earnestly the best gifts. 1 Cor. xii. 31. The love of money is the root of all evil, which while some coveted after, they have erred from the faith. 1 'Jim. vi.

*An heart they nave exercised *ith covetuus prac- tices. 2 Peter ii. 14. Coveties is for to covet swiche thinges as thou hast not, and avarice is to withhold and kepe swicho thinges as thou hast without rightful nede. ,*

Chaucer. Cant. Tales. And if that she be foul, thou sayst that she Coveteth every man that she may see. /

His blinde lust was all his coveting.

Id. Legende of Lucrece. The charge thereof unto a covetous spright, Commanded was, who thereby did attend, And warily awaited day and night, From other covetous fiends it to defend.

Spenser. Faerie Queene.

Most wretched wight, whom nothing might suffice, Whose greedy lust did lack in greatest store ; Whose need had end, but no end caeetite. Id.

All things coveting as much as may be to be like unto God in being ever ; that which cannot hereunto attain personally, doth seek to1 continue itself another way, by offspring and propagation. Hooker.

If it be a sin to covet honour, I am the most offending man alive.

Shakspeare. Henry VI. I am yet

Unknown to woman ; never was forsworn ; Scarcely have coveted what was mine own ; At no time broke my faith. Id. Macbeth.

If he care not for't, he will supply us easily ; if he covetously reserve it, how shall 's get it T

Id. Timon of A tliens.

When workmen strive to do better than well, They do confound their skill in covetousness.

Id. King John. Sheba was never

More covetous of wisdom and fair virtue, Than this fair soul shall be. Id. Henry VIII. Then this desire of nature is not vain

She covets not impossibilities ; Fond thoughts may fall into some idle brain,

But one assent of all is ever wise. Davles. He that is envious or angry at a virtue that is not his own, at the perfection or excellency of bis neighbour, is not covetous of the virtue, but of its reward and re- putation ; and then his intentions are polluted.

Taylor' Rule of Living Holy.*

He that takes pains to serve the ends of covetousness, or ministers to another's lust, or keeps a shop of im- purities or intemperance, is idle in the worst sense.

Id.

Let never so much probability hang on one side of a covetous man's reasoning, and money on the other, it is easy to foresee which will outweigh. Locke.

Covetovmess, and the desire of having in our pos- session, and under our dominion, more than we have need of, being the root of all evil, should be early and carefully weeded out ; and the contrary quality, or a readiness to impart to others, implanted. Id.

Covetousnes debaseth a man's spirit, and sinks it into the earth. Tillotson,*

O father 1 can it be, that souls sublime Return to visit our terrestrial clime ? And that the generous mind, releast by death, Can covet lazy limbs and mortal breath ?

Dryden. Mneid.

While cumbered with my dropping clothes I lay, The cruel nation, covetout of prey, Stained with my blood the unhospitable coast. Id. Whence has the world her magic power ?

Why deem we death a foe ? Recoil from weary life's best hour,

And covet longer woe 1 Cowper.

O evenings worthy of the gods ! exclaimed The Sabine bard. O evenings, I reply, More to be prized and coveted tiian yours, As more illumined, and with nobler truths, That I, and mine, and those we love, enjoy. Id.

Whate'er she saw and coveted was brought ;

Whate'er she did not see, if she supposed It might be seen, with diligence was sought,

And when 'twas found straightway the bargain closed. Byron. Don Juan.

CO'VEY, n. s. Fr. couvee ; Ital. covata; Span. covada ; Lat. cubo. A hatch ; an old bird with her young ones ; a number of birds together.

A flight of wasps and a covey of partridges went to a farmer, and begged a sup of him, to quench their thirst.

L'Estrange.

A covey of partridges springing in our front, put our infantry in disorder. Addison's Freeholder.

There would be no walking in a shady wood, with- out springing a covey of toasts. Id. Guardian.

These are expensive joys, fit for the great, Of large domains possessed ; enough for me To boast th« gentle spar-hawk on my fist, Or fly the partridge from the bristly field, Retrieve the covey with my busy train, Or with my soaring hobby dare the lark.

Someroille.

The thundering guns are heard on every side, The wounded coveys, reeling, scatter wide ; The feathered field-mates, bound by Nature's tie, Sires, mothers, children, in one carnage lie. Burns.

COUGH, v. n., v. a. & n. s.) Arab, qubhu ;

CO'UGHER, n. s. S Hin. kuf; Goth.

huef,kof; Swed.quaf; Dut. kuch. It has also been derived from esˆow, leva, allevo. To lighten or ease the breast and lungs by expectoration. Minsheu and Skinner are of opinion that the word, like some others, is imitative of the sound pro- duced by the act of coughing. Cough is a sono- rous concussion of the thorax, produced by the sudden expulsion of the air through the fauces. It is occasioned by a violent aud generally invo- luntary motion of the respiratory muscles. Tc cough is to have the lungs convulsed ; to eject by a cough.

Ye shuld have coughed when ye com. Wher lern you curtesy ? Clutucer. Cant. Tales.

And still he slant under the shot window; Unto his breast it rought, it was so low j And soft he cougheth with a semisoun. Id

The harbinger of death, To me I see him ride,

The cough, the cold, the gasping breath Doth byd me to provyde. Songes and Sonettet.

Thou didst drink

The stale of horses, and the gilded puddle Which beasts would cough at.

Shahspeare. Antony and Cleopatra.

In consumptions of the lungs, when nature cannot

expel the cough, men fall into fluxes of the belly, and

then they die. Bacon's Natural History.

If any humour be discharged upon the lungs, they have a faculty of casting it up by coughing.

Ray on the Creation.

If the matter be to be discharged by expectoration, it must first pass into the substance of the lungs -, then into the aspera arteria, or weasand ; and from thence be coughed up, and spit out by the mouth.

Wiseman's Surgery. I cough like Horace, and tho' lean, am short.

Pope's Epistles.

For his dear sake long restless nights you bore, While rattling coughs his heaving vessels -tore. Smith.

A frame so steeled

Dreads not the cough, nor those ungenial blasts That breathe the tertian or fell rheumatism.

Armstrong.

Love's a capricious power ; I've known it hold Out through a fever caused by its own heat, But be much puzzled by a cough and cold, And find a quinsy very hard to treat.

Byron. Don Juan.

COUGH, in medicine, a convulsion of the lungs, generally occasioned, as a disease, by catarrh. As an accident, a drop of cold water, or a crumb of bread, passing to the tender coat of the wind- pipe, is sufficient to throw the muscles into the most violent agitation : but in catarrh it is gene- rally the acrid serum collected in the lungs that is the immediate cause. See CATARRH and ME- DICINE.

CO'VIN, or 3 Old Fr. covm. A deceitful

CO'VINE, n. s. 5 agreement between two or more, to the hurt of another.

Wickid Tonge, whiche that the covine Of every lovir can devine Worste. Chaucer. Romaunt of the Rose.

One covyn followeth another, and deceit is met with die lyke. Knight.

CO'VING, n. s. from cove. A term in build- ing, used of houses that project the ground-plot, and the turned projecture arched with timber, lathed arid plastered.

COULD. The imperfect preterite of can. See CAN. Was able to ; had power to.

And if I have done well, and as is fitting the story, it is that which I desired; but if slenderly and meanly, it is that which I could attain unto.

2 Mac. xv. 38.

Wei coude he sitte on hors, and fayre ride ; He coude songes make, and wel endite.

Chaucer. Prol. to Cant. Taiet. Well mote ye wonder how that noble knight. After he had so often wounded beene, Could stand on foot now to renew the fight.

*Spenser. Faerie Queen**

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COU

What if he did not all the ill he could? Am I obliged by that t' assist his rapines, And to maintain his murders ?

Dryden's Spanith Friar,

COULOMB (Charles Augustus), an eminent French philosopher, was born at Angouleme in 1736. He was sent to Paris at an early age for his education, and, acquiring a partiality for the mathematical sciences, made great proficiency in his favorite study. The profession which his friends or his taste pointed out to him as the most eligible was that of the army; and the branch of the military service in which his pre- vious acquirements could be employed to the greatest advantage, and could lead to the greatest distinction, was that of the engineers. He there- fore entered that corps, and was sent out to the West Indies. After an absence of nine years, the unhealthiness of the climate compelled him to return to France, where he soon began to acquire celebrity by his philosophical labors. Before he was admitted into the Academy he submitted a memoir entitled Sur les Moyens d' executer sous 1′ eau toutes sortes de Travaux Hydrauliques, sans employer aucun Epuise- ment, which procured for him the title of corre-

sponding member. His next memoir was on the theory of simple machines. Coulomb had divided with Sivinden the prize for the best construction of the magnetic needle; and, in the discussions to which some questions connected with the subject led him, his attention had been directed to the effects of torsion, or the resistance which is opposed to the force of magnetism, by the stiffness of the suspended wire. He applied himself, therefore, to the examination of this point, and invented an ingenious machine for measuring with precision the force of torsion. In 1781 he arrived at Paris ; and the value of his works being already appreciated by the Acade- my, he was immediately elected a member. Be- fore the era of the revolution Coulomb was ap- pointed commissary to the king in Brittany, and was employed in examining all the canals and public works in that province. When the regal government was overthrown, and the civil troubles commenced in France, our author re- tired to an estate which he possessed near Blois. In 1798 he read to the national institute, which succeeded to the Academy, a paper containing the result of many experiments he had made, to determine the different quantities of work which the labor of a man can execute, according to the different modes in which his force is em- ployed. In 1800 he contributed to the Trans- actions of the institute a valuable paper, entitled Determination Theorique et Experimentale des Forces qui ramenent Differentes Aiguilles Ai- mente"es a Saturation, a leur Meridien Mag- netique. His next, and his last paper of any importance, had for its object to determine the cohesion of fluids : it was" published in the same volume of the memoirs of the institute with the preceding, and is reckoned among the most in- genious of his numerous speculations. After the elevation of Buonaparte to the head of the French government, Coulomb was recalled to Paris, and appointed one of the inspectors-general of studies; an office which, though undertaken with

reluctance, he filled with credit and usefulness. He died on the 23rd of August 1806.

CO'ULTER, or } Fr. ccultre ; Ital. cultro ;

CU'LTER, n. s. $Ang.-Sax. cultor; Dutch, kultor ; Lat. culler. The sharp iron of the plough, which cuts the earth perpendicular to the share.

The Israelites went down to sharpen every man his share, and his coulter, and his ax, and his mattock.

1 Samuel xiii. 20.

He shoke of shere, and coulter off drove, And hanged his Lames on a pinne.

Chaucer. Cant. Tale.*

A smith man called Dan Gerveis, That in his forge smithed plow harneis j He sharpeth share and cultre besily. Id,

Like damask roses' bud Cast from the stalk, or like In field to purple flowre, Which languisheth, being shred By culler as it past.

Spenser. The Mourning Muse. Literature is the grindstone to sharpen the coulten, to whet their natural faculties.

Hammond on Fundamental.*

The plough for stiff clays is long and broad : and the coulter long, and very little bending, with a very large wing. Mortimer.

With coulters bright the rushy sward bisect, 4nd in new veins the gushing rills direct. Darwin.

CO'UNCIL, n. s. ~\ Fr. concile ; It.

CO'UNCILIST, »• «• and Sp. concUii) ;

CO'UNCIL-BOARD, n. s. Latin, concilium. CO'UNCIL-BOOK, n. s. ˆ Council signifies, COUNCIL-CHAMBER, n. s. fa body of persons CO'UNCIL-HOUSE, n. s. j met together to CO"UNCIL-MAN, n. s. j consult and deli-

CO'UNCIL-TABLE, n. s.) berate ; the act of public deliberation ; the body of privy coun- sellors. The council-board and council-table are synonymous, and mean the board, or table, in the council-chamber, or house, at which sit the persons in council, whose proceedings and resolves are entered in the council-book. Coun- cil-man is a member of a council. Milton uses the word councilist to denote a person well read in the acts of the councils. Our older writers used council and counsel indiscriminately ; but the latter is now applied only to the advice given.

The chief priests, and all the council, sought false witness. Matthew xxvi. 59.

Thus art thou of my conseil out of doute, And now thou woldest falsly ben aboute To love my lady whom I love and serve.

Chaucer. Cant. Talcs.

Without the knowledge Either of king or council, you made bold To carry into Flanders the great seal.

Shakspeare. Henry VIII.

He hath commanded, To-morrow morning to the council-board, He be convened. Id.

They being thus assembled, are more properly a council to the king, the great council of the kingdom, to advise his majesty in those things of weight and difficulty, which concern both the king and the people, than a court. Bacon's Advice to ViUiers.

The sceptered heralds call To council in the city gates : anon Grey-headed men and grave, with warriors mixed, Assemble, and harangues are heard. Milton.

Wherewith he wont at heaven's high council-table To sit the midst of Trinal Unity. Id.

When ship-money was transacted at the council- board, they looked upon it as a work of that power they were obliged to trust. Clarendon.

Soon after, by my advice, he was put to the banker in Lombard Street ; is now a common-cowicil-man, will shortly be deputy of the ward, and may in time bid fair for the chair. Taller,

In histories composed by politicians, they are for drawing up a perpetual scheme of causes and events, and preserving a constant correspondence between the camp and the council-table. Addison's Spectator.

And Pallas, if she broke the laws, Must yield her foe the stronger cause ; A shame to one so much adored For wisdom at Jove's council-board. Swift.

Some borrow all their religion from the fathers of the Christian church, or from their synods or councils.

Watts.

We see the dame, in rustic pride, A bunch of keys to grace her side, Stalking across the well-swept entry, To hold her council in the pantry. Sheridan.

COUNCIL AND SESSION, LORDS OF, the supreme judges of the highest

court in Scotland. See SCOTLAND.

COUNCIL, AULIC. See AULIC.

COUNCIL, COMMON, in the city of London, is a court wherein are made all by-laws which bind the citizens. It consists, like the parliament, of two houses ; an upper one composed of the lord mayor and aldermen, and a lower of a number of common-council-men, chosen by the several wards, as representatives of the body of the citi- zens. See LONDON.

COUNCIL, OECUMENICAL, or GENERAL, is an assembly supposed to represent the universal church. The Romanists reckon eighteen of them ; Bullinger, in his treatise De Conciliis, six ; Dr. Prideaux, and Bp. Beveridge, eight, which he says are all the general councils which have ever been held since the time of the first Christian emperor. They are as follows: — 1. The council of Nice, held in the reign of Constantine the Great, on account of the heresy of Arius. 2. The council of Constantinople, called under the reign and by the command of Theodosius the Great, for much the same end that the former council was summoned. 3. The council of Ephesus, convened by Theodosius the younger, at the suit of Nestorius. 4. The council of Chalcedon, held in the reign of Martianus, which approved of the Eutychian heresy. 5. The second council of Constantinople, which was assembled by the emperor Justinian, and condemned the three chapters taken out of the book of Theodoras of Mopsuestia, having first decided that it was law- ful to anathematise the dead. Some authors tell us, that they likewise condemned the several errors of Origen about the Trinity, the plurality of worlds, and the pre-existence of souls. 6. The third council of Constantinople, held by the command of Constantius Pogonatus, in whicb they jeceived tie definitions of the first five

general councils, and particularly that against Origen and Theodoras of Mopsuestia. 7. The second Nicene council. 8. The fourth council of Constantinople, assembled when Louis II. was emperor of the West. Their regulations are contained in twenty-seven canons, the heads of which are set down by M. Dupin, to whom the reader is referred.

COUNCIL OF WAR, an assembly of principal officers of an army or fleet, occasionally called by the general or admiral to concert measures for their conduct, with regard to sieges, retreats, en- gagements, &c.

COUNCIL, PRIVY. See PRIVY-COUNCIL.

CO-UNDERSTA'NDING, ra.i. from con and understanding. Mutual understanding.

Provided there be a reciprocal knowledge and co- understanding between

the parties. Hovell.

CO-U'NE, v. a. > From con and

CO-UN T'TE, v. a. & adj. J unite. To unite. United.

CO'UNSEL, v. a. & n. s. ~\ Fr. conseiller ; CO'UNSELLABLE, adj. Lat. consUior. To

COUNSELLING, ra s. counsel is to give

CO'UNSELLOR, n. s. j>advice. Counsel

CO'UNSELLORSHIP, n. s. is, advice; consul- Co' UNSEL-KEEPER, n. s. tation ; delibera- CO'UNSEL-KEEPING, n. s. j tion ; prudence ; secresy ; formerly, purpose, design ; a person who pleads a cause in court for another. A counsellor signifies, an adviser ; confidant ; one of the king's privy council; one who gives ad- vice arid pleads in law cases. Counsellorship denotes the office of a privy counsellor. He who is willing to receive advice, or counselling, is counsellable ; and he who keeps a secret that is confided to him is a counsel-keeper. Persons of these two classes are less numerous than could be wished. That which preserves secresy is counsel-keeping.

His mother was his counsellor to do wickedly.

2 Chron. xxii. 3.

The counsel of the Lord standeth for ever, the thoughts of his heart to all generations.

Psalm xxxiii. 11.

O how comely is the wisdom of old men, and un- derstanding and counsel to men of honour.

Ecclus. xxv. 5.

There is no wisdom, nor understanding, iwicoutuel,

against the Lord. Prov. xxi. 30.

She would be a counsellor of good things, and a

comfort in cares. Wisdom viii. 9.

Men may conseille a woman to ben on, But conseilling is no

commandement.

Chaucer. Cant. Tales.

For troste wel that communly these conseillours ben flaterers, namely the cunseillours of grete lordes, for they enforcen hem alway rather to speken plesant wordes, enclining to the lordes lust, than wordes that ben trewe or profitable. Id.

They all confess, therefore, in the working of that first cause, that counsel is used, reason followed, and a way observed. Hooker.

Truth shall nurse her ; Holy and heavenly thoughts still counsel her.

Shakspeare. Henry VIII. I hold as little counsel with weak fear As you, or any Scot that lives. Id. Henry IV.

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COU

The players cannot keep counsel , they'll tell all.

Id. Hamlet.

Your hand, a covenant ; we will have these thing set down by lawful counsel. Id. CymbeLne.*

Death of thy soul ! Those linen cheeks of thine

Are counsellor to fear. Id. Macbeth.*

And, look, whether the fiery Trigon, his man, be

not lisping to his master's old tables ; his note-book,

his counsel-keeper. Id. 2 Henry IV.

Curtained with a counsel- keeping care .

Id. Titus Andronicus.

There is danger of being unfaithfully counselled, and more for the good of them that counsel than for him that is counselled. Eacon.

There is as much difference between the counsel that a friend giveth, and

that a man giveth himself, as there is between the counsel of a friend and of a flat- terer. Id. For the advocates and counsel that plead, patience and gravity of learning is an essential part of justice ; and an overspeaking judge is no well-tuned cymbal.

Id.

Of the great offices and officers of the kingdom, the most part are such as cannot well be severed from the counsellor ship. Id.

He supports my poverty with his wealth, and I counsel and instruct him with my learning and experi- ence. Taylor.

In such green palaces the first kings reigned. Slept in their shades, and angels entertained ; With such old counsellors they did advise, And by frequenting sacred groves grew wise.

Waller.

Bereave me not,

Whereon I live, thy gentle looks, thy aid,

Thy counsel, in this uttermost distress. Milton,

Very few men of so great parts were more counsel-

Idble than he ; so that he would seldom be in danger

of great errours, if he would communicate his own

thoughts to disquisition. Clarendon.

The less had been our shame,

The less his counselled crime which brands the Grecian name. Dryden's Fables.

A counsellor bred up in the knowledge of the muni- cipal and statute laws, may honestly inform a just prince how far his prerogative extends.

Dryden's Juvenal, Dedication.

If in a multitude of counsellors there is safety, we ought to think ourselves the securest nation in the world. Most of our garrets are inhabited by states- men, who watch over the liberties of their country, and make a shift to keep themselves from starving, by taking into their care the properties of

their fellow- subjects. Addison. Spectator. What says my counsel learned in the law ?

Pope.

There waiter Dick, with Bacchanalian lays, Shall win his heart, and have his drunken praise, His counsellor and bosom friend shall prove, And some street-pacing harlot his first love.

Cowper.

Unknown to me the object of her grief — I dare not counsel, did she ask relief ; Tet may the wish no vain intrusion prove, Tc share her grief, for all who shared her love.

Sheridan.

He died : and most unluckily, because According to all hints I could collect From counsel learned in those kind of laws,

(Although their talk's obscure and circumspect) His death contrived to spoil a charming cause.

Byron, Don Juan.

COUNSEL, or ADVOCATES, in English courts 01 law, are of two degrees, BARRISTERS, and SERJE- ANTS. See those articles. From both these degrees some are usually selected to be his majesty's counsel, learned in the law ; the two principal of whom are called his attorney-general, and so-licitor-general. It is now customary to grant letters patent of precedence to such barristers as the crown thinks proper to honor with that mark of distinction : whereby they are entitled to such rank and pre-audience as are assigned in their respective patents ; sometimes next after the king's attorney-general, but usually next after his majesty's counsel next being. These, as well as the queen's attorney and solicitor-general, rank promiscuously with the king's counsel ; and, together with them, sit within the bar of their respective courts. The first king's counsel, under the degree of serjeant, was Sir Francis Bacon, who was made so, honoris causa, with-out either patent or fee. And all other ser- jeants and barristers, indiscriminately (except in the court of common pJeas, where only Serjeants are admitted,) may take upon them the protec- tion and defence of any suitors, whether plaintiff or defendant, who are therefore called their clients, — like the dependents on the ancient Roman orators. These, indeed, practised gratis, for honor merely, or at most for the sake of gaining influence ; and so likewise it is esta- blished that a counsel can maintain no action for his fees, which are given not as locatio vel con-

ductio, but as quiddam honorarium; not as a salary, or hire, but as a mere gratuity, which a counsellor cannot demand without doing wrong to his reputation, — as is also laid down with re- gard to advocates in the civil law, whose hono- rarium was directed, by a decree of the senate, not to exceed in any case 10,000 sesterces, or about £80 of English money. And in order to encourage due freedom of speech in the lawful defence of their clients, and at the same time to check the unseemly licentiousness of prosti- tute and illiberal men, it has been holden that a counsel is not answerable for any matter by him spoken relative to the cause in hand, and suggested in the clients instructions, although it should reflect upon the reputation of another, and even prove absolutely groundless; but if he mentions an untruth of his own invention, or even upon instructions, if it he impertinent to the cause in hand, he is then liable to an action from the party injured. And counsel guilty of deceit and collusion are punishable by the sta- tute Westm. 13 Edw. I. cap. 28, with impri- sonment for a year and a day, and perpetual silence in the courts ; a punishment still some- times inflicted for gross misdemeanors in practice.

COUNSELLOR AT LAW, a person retained by a client to plead his cause in a public court of judicature. See ADVOCATE, BARRISTEE, COUN- SEL, and SERJEANT

COUNSELLOR, PRIVY. See PRIVY-COUN- SELLOR.

COUNT, v. a., v. n., & n. s.-\ Fr. compter ;

CO'UNTABLE, adj. I It. contare ; Sp.

CO'UNTLESS, adj. s contar ; Latin

CO'UNTER, n. s. 1 computare,fTom

CO'UNTING-HOUSE, n. s. J con and putare.

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To manner up ; to preserve a reckoning ; to cal- culate ; to compute ; to place to an account ; to estimate ; to found an account or scheme, in which case it takes upon after it. Count is, number ; the number summed up ; estimation : in law, a charge in an indictment, or a declara- tion in pleading. As a noun, counter signifies an imitative piece of money, used in reckoning ; contemptuously, money ; the long table on which goods are*

sold in a shop ; the part of a horse's fore hand that lies between the shoulder and under the neck ; the name of some prisons in London ; an auditor ; an abbreviation of en- counter. For the adverb, see COUNTER. Count- ing-house is a room appropriated by merchants and traders to their books and accounts, and to the transaction of their business when they are at home.

He believed in the Lord, and he counted it to him for righteousness. Genesis xv. 6.

Count not thine handmaid for a daughter of Belial.

1 Sam. i.

And let no wyght thy woe seeke to withholde : But coumpt thee wurthy (wretche !) of sorrowes store.

Sachville.

For from the day that he thus did it leave. Amongst all knights he hlotted was with blame, And counted but a recreant knight with endless shame. Spenser. Faerie Queene. he to his closet went, where all his wealth Lay hid ; thereof she countleste summes did reare, The which she meant away with her to beare. Id.

4.nd fully setteth his felicity, Counting it fairer than it is indeed, And yet indeed her fairness doth exceed.

Id. Hymn in honor of Beauty. That we up to your palaces may mount, Of blessed saints for to increase the count.

Id. Epithal.

The evils which you desire to be recounted are very many, and almost countable with those which were hidden in the basket of Pandora. Id. Ireland. When once it comprehendeth any thing above this, as the differences of time, affirmations, negations, and contradictions in speech, we then count it to have some use of natural reason. Hooker.

Here thro' this grate I can count every one, And view the Frenchmen. Shakspeare. Henry VI.

By my count, I was your mother much upon these years.

Id. Romeo and Juliet. When Marcus Brutus grows so covetous, To lock such rascal counters from his friends, Be ready, gods ! with all your

thunder-bolts Dash him to pieces. Id. Julius Caesar.

Ay, tear for tear, and loving kiss for kiss, Thy brother Marcus tenders on thy lips : O were the sum of these that I should pay Courtliest and infinite, yet would I pay them.

Id. Titus Andronicui. Bear the sea's sand in memory, Earth's grass, and the stars in sky, The little moats which mounted Hang in the beams of Phoebus' eye, And never can be counted. Dames.

Nor shall I count it heinous to enjoy The publick marks of honour and reward Conferred upon me. Milton's Agonistes.

Some modern zealots appear to have no better knowledge of truth, nor better manner of judging it, Ihan by counting noses. Shaftesbury.

Not barely the plowman's pains is to be cowntolmt the bread we eat ; the labour of those who hioke the oxen, must d'u' be cnarged on the account of labour.*

Locke.

Men in trade seldom think of laying out money upon land, till their profit has brought them in more than their trade can well employ ; and their idle bags, cumbering their counting-houses, put them upon emptying them. /d.

All the virtues that have been ever in mankind are to he counted upon a few fingers ; but his follies and vices are innumerable, and time adds hourly to the heap. Swift.

I think it a great error to count upon the genius of a nation, as a standing argument in all ages. Id.

You would not wish to count this man a foe ! In friendship, and in hatred, obstinate

Philips's Briton.

In half-whipt muslin needles useless lie, And shuttlecocks across the counter fly. Gay's Trivia.

And man, whose heaven-erected face

The smiles of love adorn, Man's inhumanity to man

Makes countless thousands mourn ! Burnt.

Nor deems he wiser him, who gives his noon To miss, the mercer's plague, from shop to shop Wandering and littering with unfolded silks The polished counter, and approving none, Or promising with smiles to call again. Id.

A king sate on the rocky brow

Which looks o'er sea-born Salamis ; And ships, by thousands, lay below,

And men in nations ; — all were his ! He counted them at break of day — And when the sun set where were the

Byron. Juan.

COUNT, n. s. ") Fr. comte ; Ital. CO'UNTESS, n. 5. >Sp. conde ; Lat. comes. A CO'UNTY, n. s. .7 foreign title of nobility, equivalent to that of earl. County was the old designation of a nobleman, as may be seen in our old writers ; but the term has long been ob- solete. Countess is the feminine of count.

Wost thou (quod he) wher this be wife or maide, Or quene or countesse, or of what degree ?

Chaucer. Legend of Good Womeni Princes and counties ! surely a princely testimony, a goodly count comfect !

Shakspeare. Much Ado about Nothing. The gallant, young, and noble gentleman, The county Paris. Id. Romeo and Juliet.

I take it, she that carries up the train,

Ts that old noble lady, the duchess of Norfolk.——

It is, and all the rest are countesses. Id. Henry VIII.

He made Hugh Lupus county palatine of Chester,

and gave that earldom to him and his heirs, to hold

the same, ita libere ad gladium, sicut rex tenebat

Angliam ad coronam. Dames.

It is the peculiar happiness of the countess of

Abingdon to have been so truly loved by you while

she was living, and so gratefully honoured after she

was dead. Dryden.

Shire is a Saxon word, signifying a division; but

a county, comitatus, is plainly derived from comes,

the count of the Franks. Blachstone.

COUNT, as a title, properly signifies a noble- man who possesses a domain erected into a county. See VISCOUNT. English and Scottish counts we distinguish by the title of earls ; fo- reign ones still retain their proper name. The dignity of a count is a medium between that

of a duke and a baron. At one period, most plenipotentiaries and ambassadors assumed the title of counts; and anciently, all generals, coun- sellors, judges, and secretaries of cities under Charlemagne were called so ; the distinguish- ing character of a duke and count being this, that the latter had but one town under him, but the former several. A count has a right to bear on his arms a coronet, adorned with three pre- cious stones, and surmounted with three large pearls, whereof those in the middle and extremi- ties of the coronet advance above the rest.

Counts were originally lords of the court, or of the emperor's retinue, and had their name comites, a comitando, or a commeando : hence those who were always in the palace, or at the emperor's side, were called counts palatine, or comites a latere. See PALATINE. In the times of the commonwealth, comites, among the Ro- mans, was a general name for all those who ac- companied the proconsuls and propraetors into the provinces, there to serve the commonwealth ; as the tribunes, prefects, scribes, &c. Under the emperors comites were the officers of the palace. The origin of what we now call counts seems owing to Augustus, who took several se- nators to be his comites, as Dion observes, i. e. to accompany him in his voyages and travels, to assist him in the hearing of causes, which were to be judged with the same authority as in full senate : but this title was rather a mark of office than of dignity ; and Constantine was the first who converted it into an honorary name. The Franks, Germans, &c. passing into Gaul and Germany, did not abolish the form of the Ro- man government ; and as the governors of cities and provinces were called comites, (counts), and duces, (dukes), they continued to be called so. Under the last or the second race of French kings, their dignity was made

hereditary, and when Hugh Capet came to the crown his autho- rity was not sufficient to oppose their encroach- ments. By degrees most of the counties were re-united to the crown. William the Conqueror, as Camden observes, gave the dignity of counts in fee to his nobles, annexing it to this or that county or province, and allotting for their main- tenance a certain proportion of mouej, arising from the prince's profits in the pleadings and forfeitures of the provinces. In France at first, there was no clause in the patent of erection, in- timating the reversion of the county to the crown in default of heirs male; but Charles IX., to prevent their becoming too numerous, ordained that duchies and counties, in default of heirs male, should return to the crown. The point of precedence between counts and marquises has been formerly much controverted : the reason was, that there were counts who were peers of France, but no marquises. But the point is now given up, and marquises take precedence ; though anciently, when counts were governors of pro- vinces, they were on a level even with dukes.

COUNT, in law, denotes the original declara- tion in a real action; as the declaration is in a personal one : the libellus of the civilians an- swers to both. — Yet count and declaration are sometimes confounded, and used for each other; as count in debt, count in appeal, &c.

COUNT- WHEEL, in the striking part of a clock, a wheel which moves round once in twelve or twenty-four hours. It is sometimes called the locking-wheel. See CLOCK.

CO'UNTENANCE, v. a. & n. s. ~\ Fr. conte-

CO'UNTENAXCER, n. s. £ nance ; Ital.

COUNTENANCING, n. s. J contenenza;

Span, contintnte ; Lat. continere. To encou- rage; to support; to patronise. The cast of the features; the look ; composure of face; in which case it is preceded by the verb to keep ; confi- dence of mien, generally with in or out of before it, as, in countenance, out of countenance ; expres- sion of the feelings, as visible on the face ; sup- port; patronage; superficial appearance; resem- blance. Countenancer is one who affords coun- tenance to ; countenancing is the act of afford- ing countenance to.

Neither shalt thou countenance a poor man in his

cause. Exodus xxiii. 3.

A man came unto me, and his countenance was

like the countenance of an angel of God, very terrible.

Judges xiii.6.

As I may best I wol my wo endure : Ne make no countenance of hevinesse , That folk of you may demen harme or gesse.

Chaucer. Cant. Tales.

But yet her countenance was so gled, And she so fewe yeris hed, As any ladie that was there.

Id. Dream.

Each to these ladies love did countenance, And to his mistress each himself strove to advance .

Spenser. Faerie Queene.

Yet the stout fairy, 'mongst the middest crowd, Thought all their glory vain in knightly view And that great princess too, exceeding proud, That to strange knight no better countenance allowed.

Id.

The salvage nation feele her secret smart, And read her sorrow in her countenance sad. Id. The election being done, he made countenance of great discontent thereat. Aicham's Schoolmaster.

The church of Christ, which held that profession which had not the publick allowance and countenance of authority, could not use the exercise of the Chris- tian religion but in private. Hooker. The night • beginning to persuade some retiring place, the gentlewoman, even out of countenance before she began her speech, invited me to lodge that night with her father. Sidney.

Malcolm : Banquo !

As from your graves rise up, and walk like sprites, To countenance this horrour. Shakspeare. Macbeth.

Well, Suffolk, yet thou shalt not see me blush, Nor change noy countenance for this arrest : A heart unspotted is not easily daunted.

Id. Henry VI. Bianca's love

Made me exchange my state with Tranio, While he did bear my

countenance in the town.

Id. Taminy of the Shrew. Now then we'll use

His countenance for the battle ; which being done, Let her who would be rid of him devise His speedy taking off. Id. King Lear.

We will not make your countenance to fall by the answer ye shall receive. Bacon's New Atlantis.

So spake our sire, and by his countenance seemed Entering on studious thoughts abstruse. Milton.

This conceit, though countenanced by learned men, is not made out either by experience or reason.

Browne.

Their best friends were out of countenance, because they found that the imputations which their enemies had laid upon them, were well grounded. Clarendon.

It is plain, that shaking off a power, which force, and not right, hath set over any one, though it hath the name of rebellion, yet is no offence before God, but is that which he allows and countenances, though even promises and covenants, when obtained by force, have intervened. Locke.

I do not remember that, in all my conversation with him, I ever saw him once angry, or to be so far provoked as to change colour or countenance, or tone of voice. Id.

To whom, with countenance calm, and soul sedate, Thus Turnus. Dryden's JEneid.

She smiled severe ; nor with a troubled look, Or trembling hand, the funeral present took ; Even kept her countenance, when the lid removed Disclosed the heart unfortunately loved. Id. Fables.

If the outward profession of religion and virtue were once in practice and countenance at court, a good treatment of the clergy would be the necessary conse- quence. Swift.

If those preachers would look about, they would find one part of their congregation out of countenance , and the other asleep. Id.

The two great maxims of any great man at court are, always to keep his countenance, and never to keep his word. Id.

This national fault, of being so very talkative, looks natural and graceful in one that has grey hairs to countenance it. Addison.

This is the magistrate's peculiar province, to give countenance to piety and virtue, and to rebuke vice and profaneness. Atterbury.

Oppressed by thee (Poverty), the son of genius, whose ill-starred ambition plants him at the tables of the fashionable and polite, must see, in suffering silence, his remark neglected, and his person despised, while shallow greatness, in his idiot attempts at wit, shall meet with countenance and applause. Burns. A father, whose authority, in show

When most severe, and mustering all its force,

Was but the graver countenance of love. Cowper.

The allies of ministry (those I mean who supported some of their measures, but refused responsibility for any) endeavoured to undermine their credit, and to take ground that must be fatal to the success of the very cause which they would be thought to counte- nance. Sheridan.

CRABT. O to be sure ! she has herself the oddest countenance that ever was seen; 'tis -a collection of features from all the different countries of the globe.

Id.

CO'UNTER, adv. Fr. contre .; Lat. contra. Contrary to, in which case it generally has the verb run before it ; the wrong way ; contrariwise ; the face, but this sense is obsolete. Counter is much used, both before nouns and verbs, to signify opposite to, as counter-plea, counter- petition.

How cheerfully on the false trail they cry, Oh, this is counter, you false Banish dogs !

Shakspeare. Hamlet.

They hit one another with darts, as the other do with their hands, which they never throw counter, but at the back of the flyer. Sandys' Journal.

A man, whom I cannot deny, may oblige me to use persuasions to another,

which, at the same time I am VOL. VI.

speaking, I may wish may not prevail on him : in this case, it is plain, the will and the desire run counter. Locke.

That design was no sooner known, but others of an opposite party were appointed to set a counter-petition on foot. Clarendon.

Shall we erect two wills in God's, and make the will of his purpose and intention run counter to the will of his approbation ? South.

The profit of the merchant, and thn gain of the kingdom, are .so far from being always parallels, that frequently they run counter one to the other.

Child on Trade.

COUNTERA'CT, v. a.) From counter and

COUNTERA'CTION, n. s. S act. To hinder any tiling from its effect by contrary agency.

In this case we can find no principle within him strong enough to counteract that principle, and to re- lieve him. South.

The counteraction of a false principle, or a stubborn partiality. Johnton.

Liberal, not lavish, is kind Nature's hand -, Nor was perfection made for man below.

Yet all her schemes with nicest art arc plannnd, Good counteracting ill, and gladness woe. lieattie.

Hence in respect to moving to the right or left these percussions counteract each other, but they coincide in respect to the progression of the fish. Darwin.

COUNTER-ATTRA'CTION, «.. From coun- ter and attraction. Opposite attraction.*

Attractions of either kind are less perspicuous and less perceptible, through a variety of counler-attraclions that diminish their effect. Shenstone.

COUNTERBALANCE, v.a. & n. s. To weigh against ; to act against with an opposite weight; to reduce to an equilibrium. Opposite weight ; equivalent power ; that which holds another thing in equilibrium.

There was so much air drawn out of the vessel, that the remaining air was

not able to counterbalance the mercurial cylinder. Boyle.

Few of Adam's children are not born with some bias, which it is the business of education either to take off or counterbalance. Locke.

Money is the counterbalance to all other things pur- chaseable by it, and lying, as it were, in the opposite scale of commerce. Id

But peaceful kings, o'er martial people set, Each other's poise and counterbalance are.

Dryden's An. Mirab.

It may be asked, — whether the inconveniences and ill effects which the world feels, from the licentiousness of this practice, are not sufficiently counterbalanced by the real influence it has upon men's lives and conduct ? that if there was no evil-speaking in the world, thou- sands would be encouraged to do ill, and would rush into many indecorums, like a horse into the battle, were they sure to escape the tongues of men.

Sterne.

The English owed to the virtue of this stranger (Lanfranc), and the influence he had on the king, the little remains of liberty they continued to enjoy ; and at last such a degree of his confidence, as in some sort counterbalanced the severities of the former part of his reign. Burke.

COUNTER-BOND, n. s. From counter and bond. A counter security.

COUNTER-BU'FF, v.a. & n. s. From counter and buff. To impel a direction contrary to that which was given by the original impulse ; to

strike hack. A blow in an opposite direction ; a stroke which makes an object recoil.

He at the second gave him such a counterbuff, that,

because Phalantus was not to be driven from the

saddle, the saddle with broken girths was driven from

the horse. Sidney.

Go, captain Stub, lead on, and show

What house you come of, by the blow

You give Sir Quintin, and the cuff

You scape o' the sandbags counterbuff. Ben Jonson.

The giddy ship, betwixt the winds and tides Forced back and forwards, in a circle rides, Stunned with the different blows ; then shoots amain, Till counterbuffed she stops, and sleeps again.

Dry den.

CO'UNTERCAST, n. s.) From counter, a CO'UNTERCASTER, n. s. J sham piece of mo- ney, and cast, to devise. Countercast is a con- temptuous designation of an arithmetician ; a book-keeper ; a keeper of accounts ; a reckoner.

So as they past together on their way, He gan devise this countercast of slight.

Spenser. Faerie Queene. I, of whom his eyes had seen the proof At Rhodes, at Cyprus, must be led and calmed By debtor and creditor, this counter caster.

Shakspeare. Othello.

CO'UNTERCHANGE, v. a. & n. s. From counter and change. To give reciprocally. Ex- change ; reciprocation.

She, like harmless lightning, throws her eye On him, her brothers, me, her master, hitting Each object with a joy. The countercJumge Ts severally in all. Id. Cymbcline.

That hearts can easily countcrchanged be. T. Hall.

COUNTERCHA'RM, v. a. & n. s. From counter and charm. To disenchant; to destroy the effect of a charm. That which has the power of dissolving a charm.

Like a spell it was to keep us invulnerable, and so countercharm all our crimes, that they should only be active to please, not hurt us. Decay of Piety.

Now touched by countercharms they change again, And stand majestick, and recalled to men.

Pope's Odyssey.

COUNTERCHECK, v. a. & n. s. From counter and check. To oppose ; to stop with sudden opposition. Stop ; rebuke.

To countercheck that sword, else like to conquer all.

Dray ton.

If again I said his beard was not well cut, he would say I lye : this is called the countercheck quarrelsome.

Shakspeare.

COUNTERDISTI'NCTION, n. s. From counter and distinction. Contradistinction.

I call it moral in counter distinction to philosophi- cal or physical. ff. More.

COUNTERDRA'W, v. a. From counter and draw. With painters, to copy a design or painting by means of a fine linen cloth, an oiled paper, or other transparent matter, whereon the strokes, appearing through, are traced with a pencil.

COUNTER-ERMINE, in heraldry, is the contrary of ermine, being a black field with white spots. See HERALDRY.

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COUNTERE'VIDENCE, n. s. From coun- ter and evidence. Test.moriy by which the de- position of some formei witness is opposed.

Sense itself detects its more palpable deceits by a counter-evidence, aud the more ordinary impostures seldom outlive the first experiments. Glanv. Seeps.

We have little reason to question his testimony in this point, seeing it is backed by others of good credit ; and all because there is no counter-evidence, nor any witness, that appears against it.

Burnet's Theory of the Earth.

*COUNTERFEIT, v. a., n., n. s. *\ Fr. contre-*

CO'UNTERFEITER, n. s. [St. adj. I fairt ; Ital.

CO'UNTERFEITLY, adv. \contrufarre;

COUNTERFA'ISANCE, or i barb. Lat.

CoujiTERFE SAXCE, n. s. J controfac-

tus. To copy with an intent to pass off the copy as an original ; to forge ; to imitate ; to re- semble ; to feign. A counterfeit is a person or thing which, with intent to deceive, takes the semblance of another; a forgery; formerly a likeness ; a picture ; a copy. The meanings of counterfeiter and counterfeitly are obvious. Counterfaisance and c ounterfesance signify the act of counterfeiting; forgery; but they are both obsolete.

And peined her to contrefetan cherc Of court and ben estatelich of manere, And to ben holden digne of reverence.

Chaucer. Cant. Tales. And contrefeted was ful subtilly Another lettre, wrought ful sinfully. Id.

And all soche other counter faitours, Chanons, canons, and soche disgised, Ken Goddis enemies and traitours. Id.

Yet was not that same her owne native hewe, But wrought by art and counterfeited shew.

Spenser, Faerie Queene. Such is the face of Falshood, such the sight Of fowle Duessa, when her borrowed light Is laid away, and counterfeasaunce knowne. Id.

What art thou, That counterfeits the person of a king ?

Shakspeare. Henry IV.

And, oh, you mortal engines ! whose rude throats The' immortal Jove's dread clamours counterfeit, Farewell Id. Othello.

I am no counterfeit ; to die is to be a counterfeit ; for he is but the counterfeit of a man, who hath not the life of a man. Sftakspeare. 1 Henry IV.

Since the wisdom of their choice is rather to have my cap than my heart, I will practise the insinuating nod, and be off to them most counterfeitly.

Id. Coriolanut.

A man of easy profession never counterfeits, till he lays hold upon a debtor, and says he rests him ; for then he brings him to all matmer of unrest.

Ben Jonson. Every Man in his Humour. Henry the Second altered the coin, which was cor- rupted by counterfeiters, to the great good of the com- monwealth. Camden. There have been some that could counterfeit the distance of voices, which is a secondary object of hearing, in such sort, as, when they stand fast by you . you would think the speech came from afar off in a fearful manner. Bacon. This priest, being utterly unacquˆnted with the true person, according to whose pattern he should shape his counterfeit, yet could think it possible for him to instruct his player, either in gesture or fashions,

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t»r in fit answers to questions, to come near the resem- blance, fa

O Eve ! in evil hour thou didst give ear To that false worm, of whomsoever taught To counterfeit man's voice Milton.

I learn

Now of my own experience, not by talk, How counterfeit a coin they are, who friends Bear in their superscription ; in prosperous days They swarm, but in adverse withdraw their head.

Id.

I think every one ought to contribute to the common stock, and to have no other scruple, or shyness, about the receiving of truth, but that he be not imposed on, and take counterfeit, and what will not bear the touch for genuine and real truth. Locke'.

There would be no counterfeits but for the sake of something real ; though pretenders seem to be what they really are not, yet they pretend to be something that really is. /

But trust me, child, I'm much inclined to fear

Some counterfeit in this your Jupiter.

Addition's Ovid.

It happens, that not one single line or thought is contained in this imposture, although it appears that they who counterfeited me had heard of the true one.

Swift.

The counterfeited smile of pleasure in disagreeable company soon brings along with it a portion of the reality, as is well illustrated by Mr. Burke. Darwin. True modesty is a discerning grace,

And only blushes in the proper place ;

But counterfeit is blind, and skulks through fear,

Where 'tis a shame to be ashamed to appear ;

Humility the parent of the first,

The last by vanity produced and nursed . Cowper.

COUNTERFE'RMENT,n.s. From counter and ferment. Ferment opposed to ferment.

What unnatural motions and count erf erments must a medley of intemperance produce in the body! When I behold a fashionable table, I fancy I see in- numerable distempers lurking in ambuscade among the dishes. Addison's Spectator

COUNTER-FLORY, in heraldry, is said of a tressure whose fleurs-de-lis are opposite to others.

COUNTER-FOIL, or COUNTER-STOOK, in the exchequer, that part of a tally which is kept by an officer of the court.

CO'UNTERFORT, n. s. From counter and fort.

Counterforts, buttresses, or spurs, are pillars serving to support walls or terrasses subject to bulge.

Chambers.

COUNTERGA'GE, n. s. From counter and gage. In carpentry, a method used to measure the joints, by transferring the breadth of a mor- tise to the place where the tenon is to be, in order to make them fit each other.

COUNTERGUA'RD, n. s. From counter and guard. A small rampart, with a parapet and ditch, to cover some part of the body of the place.

COUNTER-I'NFLUENCE, v.a. From coun- ter and influence. To prevent any thing by means of a counteracting influence.

COUNTER-ITERATION, n. s. In astrono- my, opposite libration.

COUNTERING HT, n.s. From counter and light. A window or light opposite to any thing, which makes it appear to a disadvantage.

*COUNTERMAND, v. a. & n. *. Fr. contra- mander. To order the contrary of that which has been ordered ; to revoke a command ; to contradict orders given by another; to prohibit. Countermand is a contrary order.*

For us to alter any thing, is to lift up ourselves against God, and, as it were, to countermand him.

Hooker. Have you no countermand for Claudio yet,

But must he die to-morrow?

Shahspeare. Measure for Measure.

Avicen countermands letting blood in cholcrick bodies, because he esteems the blood a bridle of the Kal]' Harvey.

In states notoriously irreligious, a secret and irre- sistible power countermands their deepest projects, and smites their policies with frustration and a curse.'

CO-UNTERMARCH, v. n. &n.s. from courTter and march. To marck back; to march in indi- rect ways. Retrograde march ; march in a new direction ; change of measures.

How are such an infinite number of things placed with such order in the memory, notwithstanding the tumults, marches, and countermarches of the animal sPirits ? Collier on Thought.

They make him do and undo, go forward and back- wards by such countermarches and retractions, as wo do not willingly impute to wisdom.

Burnet's Theory of the Earth. His host of wooden warriors to and fro

Marching and countermarching, with an eye

As fixed as marble, with a forehead ridged

And furrowed into storms, and with a hand

Trembling as if eternity were hung

In balance on his conduct of a pin. Cuwper.

COUNTER-MARCH, in military affairs, a change of the face or wings of a battalion, by which means those that were in the front come to be in the rear.

COUNTERMA'RK, v. a. & n. s. From counter and mark. For a definition of the verb, see the quotation from the Farriers' Dictionary. The noun has the following meanings. A second or third mark put on a bale of goods belonging to several merchants, that it may not be opened but in the presence of them all. The mark of the goldsmiths' company, to show the metal is stan- dard, added to that of the artificer. An artificial cavity made in the teeth of horses that have outgrown their natural mark, to disguise their age. A mark added to a medal a long time after it is struck, by which the curious know the several changes in value which it has under- gone.

*A horse is said to be countermarhed , when his corner teeth are artificially made hollow, a false mark being made in the hollow place, in imitation of the eye o*f a bean, to conceal the horse's age.*

Farrier's Dictionary.

COUNTERMI'NE, v. a. & n. s. From counter and mine. To form a mine for the purpose of destroying that of the enemy ; to counteract ; to defeat by secret measures. A mine made to destroy an enemy ; any thing that is calculated to defeat a hostile project.

He thinking himself contemned, knowing no coun- ter mine against contempt but terror, began to let no- thing pass, which might bear the colour of a fault, without sharp punishment. Sidney.

After this they mined the walls, laid the powaer, and rammed the ir.ouths ; but the citizens made a countermine, and thereinto they poured such a plenty of water, that the wet powder could not be fired.

Hayward.

The matter being brought to a trial of skill, the countermine was only an act of self-preservation.

L'Eitrange.

Thus infallibly it must be, if God do not miracu- iously countermine as, and do more for us than we can do against ourselves. Decay of Piety.

COUNTERMOTION, n. s.) From counter COUNTERMO'VEMENT, n. s. } and motion. Opposition of motion ; motion in a contrary di- rection. The second of these words is prin- cipally used with reference to military ma- noeuvres.

That resistance is a countermotion, or equivalent to one, is plain by this, that any body which is pressed, must needs press again on the body that presses it.

Digby on ttie Soul.

If any of the returning spirits should happen to fall foul upon others which are outward bound, these ctntntcrmotions would overset them, or occasion a later arrival. Collier.

CO'UNTERMURE, v. a. & n. s. Fr. contre- mur. To fortify with a second wall. Counter- mure is a wall erected behind a breach or weak place.

Couniermurcd with walls of diamond. Kyd.

The great shot flying through the breach, did beat down houses ; but the countermure, new built against the breach, standing upon a lower ground, it seldom touched. Knolles.

COUNTERNATURAL, adj. From counter and natural. Contrary to nature.

A consumption is a counternatural hectick extenua- tion of the body. Harvey on Consumptions.

COUNTERNO'ISE, n. s. From counter and noise. A sound by which any other noise is overpowered.

They endeavoured, either by a constant succession of sensual delights, to charm and lull asleep, or else by a cottnternoite of revellings and riotous excesses to drown, the softer whispers of their conscience.

Calamy's Sermons.

COUNTERO'PENING, n. s. From counter and opening. An aperture or vent on the con- trary side.

A tent, plugging up the orifice, would make the matter recur to the part disposed to receive it, and mark the place for a counteropening. Sharp's Surgery.

COUNTERPA'CE, n. s. From counter and pace. Contrary measure ; attempts in opposi- tion to any scheme.

When the least counterpaces are made to these reso- lutions, it will then be time enough for our malecon- Sents. Surift.

COUNTER-PALED, in heraldry, is when the escutcheon is divided into twelve pales parted per fesse, the two colors being counter- changed ; so that the upper are of one color and the lower of another.

CO'UNTERPANE, n. s. Fr. contrepoint. A coverlet for a bed, or any thing else woven in squares. It is sometimes written, according to etymology, counterpoint. I also formerly meant*

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one part of a pair of deeds, but this sense is be- come obsolete, and is replaced by counterpart.

Read, scribe ; give me the counterpane.

Ben Jonson.

COUNTERPART, n. s. From counter and part. The correspondent part; the part which answers to another, as the two papers of a con- tract ; the part which fits another, as the key of a cypher.

In some things the laws of Normandy agreed with the laws of England ; so that they seem to be, as it were, copies or counterparts one of another.

Hole's Law of England.

An old fellow with a young wench, may pass for a counterpart of this iable. L'Estrange.

Oh counterpart

Of our soft sex ; well are you made our lords : So bold, so great, so god-like are you formed, How can you love so silly things as women ?

Dry den.

He is to consider the thought of his author, and

his words, and to find out the counterpart to each in

another language. Idf

In the discovery, the two different plots look like

counterpart and copies of one another.*

Additon's Spectator.

COUNTER-PART, in music, denotes one part to be applied to another. Thus the base is said to be a counter-part to the treble.

COUNTER-PASSANT, in heraldry, is when two lions are in a coat of arms, and the one seems to go the contrary way from the other.

COUNTER-PETITION, v. n. & n. s. To petition against another petition, or against that which is prayed for by another petition. A pe- tition in opposition to another.

The gentlemen and others of Yorkshire, who had counter-petitioned. Raresby.

That design was no sooner known, but others of an opposite party were appointed to set a counter-petition on foot. Clarendon.

CO'UNTERPLEAD, v. a. > From counter CO'UNTERPLEA, re. s. 5 and plead. To

put in a counter-plea ; to oppose. A counter- plea, says Cowell, in law, is a replication : as, if a stranger to the action begun desire to be ad- mitted to say what he can for the safeguard of his estate, that which the demandant allegeth against this request is called a counterplea.

That as to counterplede them, though ye wer my

brother, I wolde gyve yew no counsaill.

Chaucer. Cant. Tales.

And she answerde, Let be thine arguing,

For Love ne will not counterpledid be

In right ne wrong. Id. Legende of Good Women.

COUNTERPLOT, v. a. & w. s. > From coun-

COUNTERPLO'TTING, n. s. > ter and plot.

To oppose plot by plot. One artifice opposed to another. «

The wolf that had a plot upon the kid, was con- founded by a counterplot

of the kid's upon the wolf ;

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and such a counterplot as the wolf, with all his saga- city, was not able to smell out. L'Estrange. Prudentia had counterplotted us, and had bespoke on the same evening, the puppet show of The Creation of the World. Taller.

CO'UNTERPOINT, n. s. A coverlet woven in squares, now called a counterpane ; an oppo- site point or course ; a trick ; a contrivance ; the art of composing harmony.

No counterpoint of cunning policy.

Spenser. Mother Hubbard's Tale.

In cypress chests, my arras counterpoints.

Shakspeare. Taming of the Shretc.

Fell suddenly into the very counterpoint of justifying bestiality. Sir E. Sandys.

COUNTER-POINT, in music, from Lat. contra against, and pungere, to point, is so named be- cause the musical characters by which the notes in each part are signified are placed in such a manner, each with respect to each, as to show how the parts answer one another. See COM- POSITION.

COUNTER-POINTED, contre- pointe, in heraldry, is when two chevrons in one escutcheon meet in the points, the one rising, as usual, from the base, and the other inverted, falling from the chief; so that they are counter to one another in the points, as in the diagram. They may also be counterpoised when they are founded upon the sides of the shield, and the points meet that way, called counter- pointed in fesse.

CO'UNTERPOISE, v. a. & n. s. From coun- ter and poise. To keep in equilibrium ; to act against with equal weight ; to manifest an equal degree of power. Equiponderance; 'equiva- lence ; the state of being placed to counterba- lance something else ; a counterbalance to.

It shall do us mochil gode, And to our herte as moche availe The cauntirpeise, ese and travaile.

Chaucer. The House of Fame.

An huge great pair of ballance in his hand, With which he boasted, in his surquedrie, That all the world he would weigh equallie, If ought he had the same to counterpoise.

Spenser. Faerie Queene.

So many freeholders of English will be able to beard and to counterpoise the rest. Spenser on Ireland.

Our spoils we have brought home Do more than counterpoise a full third part The charges of the action. Shakspeare. Coriolanus.

Take her by the hand,

And tell her she is thine ; to whom I promise A counterpoise, if not in thy estate, A balance more replete.

Id. All's Well that Ends Well.

The second nobles are a counterpoise to the higher nobility, that they grow not too potent. Bacon.

The Eternal hung forth his golden scales, Wherein all things created first he weighed, The pendulous round earth, with balanced air In counterpoise. Milton. Par. Lost.

The force and the distance of weights counterpoising one another, ought to be reciprocal.

On the Suul.

The heaviness of bodies must be counterpoised by a plummet fastened about the pulley to the axis.

Wilkins ,

Fastening that to our exact balance, we put a metal- line counterpoise into the opposite scale.

Boyle's Spring of the Air

Their generals, by their credit in the army, were, with the magistrates and other civil officers, a sort of counterpoise to the power of the people. Swift.

But royalty, nobility, and state,

Are such a dead preponderating weight,

That endless bliss (how strange soe'er it seem),

In counterpoise, flies up and kicks the beam. Cowper.

COUNT ERPO'ISON, n. s. From counter and. poison. Antidote ; medicine by which the effects of poison are obviated.

Count erpoisons must be adapted to the cause ; for ex- ample, in poison from sublimate corrosive, and arse- nick. Arbuthnot.

COUNTER-POTENT, centre potence, in heraldry

is reckoned a fur as well as vair and ermine ;

but composed of such pieces as represent the

tops of crutches, called in French potences, and

in old English potents.

COUNTERPRA'CTICE, n. s. From counter

and practice. Practice in opposition to.

COUNTEPRE'SSURE, n. s. From counter

and pressure. Opposite force; powar acting in

contrary directions.

Does it not all mechanick heads confound, That troops of atoms from all parts around, Of equal number, and of equal force, Should to this single point direct their course ; That so the counter-pressure every way, Of eq.ial vigour, might their motions stay, And by a steady pause the whole in quiet lay ?

Bluckmore.

COUNTERPRO'JECT, n. s. From counter and project. Correspondent part of a scheme.

A clear reason why they never sent any forces to Spain, and why the obligation not to enter into a treaty of peace with France, until that entire monar- chy was yielded as a preliminary, was struck out of the counterproject by the Dutch. Sxift.

To COUNTERPRO'VE, v. a. From counter and prove. To take off a design in black lead, or red chalk, by passing it through the rolling-press with another piece of paper, both being moist- ened with a sponge.

COUNTER-QUARTERED, centre ecartele, in he- raldry, denotes the escutcheon, after being quar- tered, to have each quarter again divided into two.

COUNTER-REVOLUTION, n. s. > From

COUNTER-REVOLUTIOXA'RY, adj. $ counter and revolution. A revolution which reverses the effects of a preceding revolution. That which tends to bring about a counter-revolution.

COUNTERRO'L, v. a. » From counter and

COUNTERRO'LMENT, n. s. } roll. To preserve the power of detecting frauds by another account. This spelling is obsolete, and control is substi- tuted instead. A counter account ; controlment.

This manner of exercising of this office, hath many testimonies, interchangeable warrants, and cowtierrol- ments, whereof each, running through the hands, and

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resting in. the power of many several persons, is suffi- cient to argue and convince all manner of falsehood.

Bacon.

COUNTER-SALIANT, in heraldry, is when two beasts are borne in a coat leaping from each other directly the contrary way.

CO'UNTERSCARP, n. s. Sometimes written counterscarf by our old authors, from counter and scarp. That side of the ditch which is next the camp, or properly the talus that supports the earth of the covert-way ; although by this term is often understood the whole covert-way, with its parapet and glacis ; and so it is to be under- stood when it is said the enemy lodged themselves on the counterscarp. See FORTIFICATION.

COUNTER-SCU'FFLE, n.s. From counter and scuffle. Mutual opposition.

A terrible counter-scuffle between them and their lusts. Hewyt.

CO'UNTERSEAL, v. a. From counter and seal. To seal with others.

You shall bear

A batter witness back than words, which we, On like conditions, will .have counter sealed.

Shakspeare. Coriolanus.

COUNTERSECU'RE, v. a. To give addi- tional security to any thing.

What have the regicides promised you in return, in case you should show what they call dispositions to conciliation and equity, whilst you are giving .that pledge from the throne, and engaging parliament to countersecure it. Burke.

CO'UNTERSENSE, n.s. Contrary mean- ing.

There are some words now in French which are turned to a countersense. Howell.

COUNTERSI'GN, v. a. & n. s. From counter and sign. To sign an order or patent of a superior in quality of secretary, to render it more authen- tic. Thus charters are signed by the king, and countersigned by n secretary of state, or lord chancellor. In military affairs, the countersign signifies, the watch word of the day.

CO'UNTERSIGNAL, n.s. From counter and signal. A signal which answers to, or corres- ponds with, another.

CO'UNTERSNARL, n. s. From counter and snarl. A snarl in return.

If he bristle himself up and stand to it, give but a countersnarle, there is not a dog that dares meddle with him. Burton.

COUNTERSTATUTE, n. s. From counter and statute. A contradictory statute.

His own antinomy or counterstatute. Milton.

CO'UNTERSWAY, n. s. From counter and sway. Influence or power exercised in opposi- sition to.

By a cmmtersway of restraint curbing their wild ex- orbitance. Milton.

CCXUNTERSTROKE, n. s. A stroke given in return.

He met him with a counterstroke so swift, that quite smit off his arme as he it up did lift.

Spenser. Faerie Queene.

COUNTERSU'RETY, n.s. From counter and surety. A coun \>ond to a surety.

CO'UNTERTALLY, n. s. From counter and tally. One of two tallies, on which any thing is scored ; a check-tally.

COUNTERTA'STE, n. $. From counter and taste. Vicious taste.

There is a kind of csuntertaste, founded on surprise and curiosity, which maintains a rivalship with the true. Shenstone.

COUNTERTE'NOR, n. s. From counter and tenor. One of the mean or middle parts of music; so called, as it were, opposite to the tenor.

I am deaf : this deafness unqualifies me for all company, except a few friends with countertenor voices.

Swift.

COUNTERTI'DE, n. s. From counter and tide. Contrary tide ; fluctuations of the water.

Such were our counter/idea at land, and so Presaging of the fatal blow, In your prodigious ebb and flow. Dryden.

COUNTERTI'ME, n. s. From counter and time ; Fr. contretemps. The defence or resis- tance of a horse, that intercepts his cadence, and the measure of his manage. Defence ; op- position.

Let cheerfulness on happy fortune wait,

And give not thus the countertitne to fate.

Dryden's Aurengxebe.

COUNTERTU'RN, n. s. From counter and turn.

The catastasis, called by the Romans status, the height and full growth of the play, we may call properly the counterturn, which destroys that expecta- tion,ˆ embroils the action in new difficulties, and leaves you far

distant from that hope in which it found you. Dryden on Dramatic Poesy.

COUNTERVAIL, v. a. & n. s. To be equal to ; to have equal influence. Equipoise ; equal weight or value with something else.

Yet he (poor soule !) with patience all did beare, For nought against their wills might countervaile.

Spenser. Faerie Queene.

In some men there may be found such qualities as are able to countervail those exceptions which might be taken against them, and such men's authority is not likely to be shaken off. Hooker.

The outward streams, which descend, must be of so much force as to countervail all that weight whereby the ascending side does exceed the other.

Wilkins's Deedalus.

We are to compute that, upon balancing the ac- count, the profit at last will hardly countervail the inconveniences that go along with it. L' Estrange.

Surely, the present pleasure of a sinful act is a poor countervail for the bitterness of the review, which begins where the action ends, and lasts for ever.

South's Sermons

CO'UNTERVIEW, n. s. From counter and view. Opposition ; confronting ; contrast.

Mean while, ere thus was sinned and judged on

earth,

Within the gates of hell sat Sin and Death, In counterview. Milton's Paradise Lost.

I have drawn some lines of Linger's character, on purpose to place it in counterview or contrast with that of the other company. Sicift.

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CO'UNTERVOTE, v. a. From counter and vote. To vote against; to outvote.

The law in our minds being countervoted by the law in our members. Scott.

*CO'UNTERWEIGH, v. n. From counter and weigh. To weigh equal *vith ; to weigh against.*

If Wright had ten fellowships of St. John's, it would not counterweigh with the loss of this occasion.

Aicham.

CO'UNTERWHEEL, v. a. & n. s. From counter and .wheel. To wheel in an opposite direction ; to wheel so as to oppose other move- ments. The movement made for that purpose.

Whose shoots the wary Heron beat With a well counterwheeled retreat. Lovelace.

CO'UNTERWIND, n. s. A contrary wind.

Is met of many a counterwinde and tyde.

Spenser.

To CO'UNTERWORK, v. a. From counter and work. To counteract ; to hinder any effect by contrary operations.

But heaven's great view is one, and that the whole : That counterworks each folly and caprice ; That disappoints th' effect of every vice. Pope.

They were then only passengers in a common vehicle. They were then carried along with the general motion of religion in the community, and, without being aware of it, partook of its influence. In that situation, at worst, their nature was left free to counterwork their principles. Burhe.

COTJNTRY, n. s. & adj. } Fr. contree ; It. CO'UNTRYMAN, n. s. > contrada ; Dutch,

CO'UNTRIFIED, adj. J kont reye ; low Lat.

contrata. A legion ; the parts of a region dis- tant from cities and courts ; the place of a man's residence or birth ; the inhabitants of any region. As an adjective, country signifies rustic ; rural ; of an interest in opposition to that of the court ; peculiar to a region or people ; rude ; untaught. Countryman denotes, one born in the same country; a rustic; a husbandman. See COUN- TRY-DANCE. Countrified, which means rustic, country-like, is a word of recent introduction into our language, and is not yet used in elegant composition or conversation.

She laughing the cruel tyrant to scorn, spake in her country language. 2

Maccabees vii. 27.

And wedded the freshe quene Ipolita, . And brought hire home with him to his contree With mechel glorie and great solempnitee.

Chaucer. Cant. Tales. Full many countreyes they did overrunne, From the uprising to the setting sun.

Spenser. Faerie Queene. Yet was she certes but a country lasse, Yet she all other country lasses farre did passe. Id. Send out more horses, skirre the country round, Hang those that talk of fear. Sliakspeare. Macbeth.

See, who comes here ? My countryman ; but yet I know him not Id.

A 11 the country, in a general voice, Cried hate upon him ; all their prayers and love Were set on Hereford. Id. Henry IV.

Tis the trial of a man to see if he will change his side j and if he be so weak as to change once, he will change again. Your country fellows have, a way to

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try a man if he be weak in the hams, by coming be- hind him and giving him a blow unawares ‘, if he bead once, he will bend again. Selden.

They require to be examined concerning the des- criptions of those countries of which they would be informed. Spratt.

A countryman took a boar in his corn. L’ Estrange .

Homer, great bard ! so fate ordained, arose ; And, bold as were his countrymen in fight,

Snatched their fair actions from degrading prose, And set their battles in eternal light. Prior.

I see them hurry from country to town, and then from the town back again into the country. Spectator.

I never meant any other, than that Mr. Trot should confine himself to country-dances. Id.

To live deprived of one’s country is intolerable. Is it so ? how comes it then to pass that such numbers of men live out of their countries by choice. Bolingbroke.

I fancy the proper means of increasing the love we bear our native country, is to reside some time in a foreign one. Shenstone.

We may have the same geographical situation, but another country ; as we may have the same country in another soil. The place that determines our duty to our country is a social, civil relation. Burke.

In a free country, every violation of law is an attack upon the public liberty. The laws of God and our country are our best and only security against oppres- sion ; and therefore liberty can exist amongst us no longer than while those laws are obeyed. Beattie.

There lived in Gothic days, as legends tell, A shepherd-swain, a man of low degree ; Whose sires, perchance, in Fairyland might dwell, Sicilian groves, or vales of Arcady ; But he, I ween, was of the north countrie. Id.

Can he love the whole,

Who loves no part ? He be a nation's friend,ˆ Who is in truth the friend of no man there ? Can he be strenuous in his country's cause, Who slights the charities, for whose dear sake That country, if at all, must be beloved ? Cowper. Or should the vulgar grumble now and then, The Prompter might translate for country gentlemen.

Sheridan. Did not the Italian Musico Cazzani

Sing at my heart six months at least in vain ? Did not his countryman, Count Corniani, Call me the only virtuous wife in Spain ?

Byron. Von Juan.

COUNTRY DANCE, Fr. from contre, against, or opposite, a dance of English origin,, though now transplanted into almost all the countries and courts of Europe. There is no established rule for the composition of tunes to this dance, be- cause there is in music no kind of time what- ever which may not be measured by the motions common in dancing; and there are few song tunes of any note within the last century, that have not been applied to country dances.

CO'UNTY, n. s. Old Fr. counte; mod. Fr. comte ; Lat. comitatus. A shire, says Cowell, is a circuit or portion of the realm, into which the whole land is divided, for the administration of justice; so that there is no part of the kingdom but what lieth within some county. See COUNT.

Discharge your powers unto their several counties, As we will ours. Shaksjieare. Henry I V.

He caught his death the last county sessions, where he would go to see justice done to a poor widow – woman, and her fatherless children.

Additon's Spectator.

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Leaving far behind him even Lord Camelford's generous design of bestowing Old Sarum on the bank nf England, Mr. Benfield has thrown in the borough of Cricklade to reinforce the county representation.

Burke.

As petty-foggers' dirty wiles Set John a Nokes on Tom a Stiles, To prove, by desperate course of law, His title to a barley straw ; Reckless of a whole county's curses, So they can drain the loobies' purses.

Huddesford,

COUNTY, in geography, originally signified the territory of a count or earl, but now it is used in the same sense with shire. For the ex- ecution of the laws in the several counties, ex- cepting Cumberland, Westmoreland, and Dur- ham, sheriffs are appointed every Michaelmas. Other officers of counties are, a lord lieutenant, who has the command of the militia ; custodes rotulorum, justices of peace, bailiffs, high con- stable, and coroner. See SHERIFF.

COONTY CORPORATE is a title given to several cities, or ancient boroughs, on which our mo- narchs have thought fit to bestow extraordinary privileges ; annexing to them a particular territo- ry, land, or jurisdiction; and making them coun- ties of themselves, to be governed by their own sheriffs and magistrates.

COUNTY COURT, in English law, is a court in- cident to the jurisdiction of the sheriff. It is not a court of record, but may hold pleas of debt or damages under the value of 40s. Over some of which causes these inferior courts have, by the express words of the statute of Gloucester, a jurisdiction totally exclusive of the king's supe- rior courts. For in order to be entitled to sue an action of trespass for goods before the king's jus- ticiaries, the plaintiff is directed to make affidavit, that the cause of action does really and bona fide amount to 40s. which affidavit is now, however, disused, except in the court of exchequer. The statute also of 43 Eliz. c. 6. which

gives the judges in many personal actions, where the jury assess less damages than 40s. a power to certify the same, and abridge the plaintiff of his full costs, was also meant to prevent vexation by litigious plaintiffs ; who, for purposes of mere oppression, might be inclinable to institute such suits in the superior courts for injuries of a trifling value. The county court may also hold plea of many real actions, and of all personal actions to any amount, by virtue of a special writ called justicies ; which is a writ empowering the sheriff for the sake of despatch to do the same justice in his county court, as might otherwise be had at Westminster. The freeholders of the county are the real judges in this court, and the sheriff is the ministerial officer. The great conflux of freeholders, which are supposed always to attend at the county court (which Spelman calls forum plebeise justitiae et theatrum comitivaj potestatis), is the reason why all acts of parliament at the end of every session were wont to be there pub- lished by the sheriff; why all outlawries of ab- sconding offenders are there proclaimed ; and why all popular elections, which the freeholders are to make, as formerly of sheriffs and conser- vators of the peace, and still of coroners, verderers,

and knights of the shire, must ever be made in pleno comitatu, or in full county court. By the statute 2 Edw. VI. c. 25, no county court shall be adjourned longer than for one month, consist- ing of twenty-eight days. And this was also the ancient usage, as appears from the laws of king Edward the elder : prepositus (that is the sheriff) ad quartam circiter septimanam frequentem po- puli concionem celebrato ; cuique jus dicito ; litesque singulas dirimito. In those times the county court was a court of great dignity and splendor, the bishop and the ealdorman, or earl, with the principal men of the shire, sitting there to administer justice both in lay and ecclesiasti- cal causes. But its dignity was much impaired, when the bishop was prohibited, and the earl neglected to attend it. And, in modern times, as proceedings are removeable from hence into the king's superior courts, by writ of pone or re- cordare, in the same manner as from hundred courts and courts baron ; and as the same writ of false judgment may be had, in nature of a writ of error ; actions are rarely brought there.

COUNTY PALATINE. Of 'all the counties pa- latine Durham alone remains in the hands of a subject ; for the earldom of Chester was united to the crown by Henry III. and has ever since given title to the king's eldest son. And the county-palatine or duchy of Lancaster, in the reign of Henry IV. was, by act of parliament, vested in the king and his heirs, kings of Eng- land, for ever. 1. Blackst. 118. There is a court of chancery in the counties palatine of Durham and Lancaster, over which there are chancellors; that of the latter is called chancellor of the duchy ; and there is a court of exchequer at Chester, of a mixed nature, for law and equity, of which the chamberlain of Chester is judge. There is also a chief justice of Chester, and the other counties palatine have their justices, to determine civil

actions and pleas of the crown. In none of these are the king's ordinary writs of any force ; and the judges of assize, who sit within these franchises, sit by virtue of a special commission under the great seal of England. 3 Blackst. 79.

COUNTY-RATE. By the 12th Geo. II. c. 29, the justices at their general or quarter sessions, or the greater part of them (and by the 13th Geo. II. c. 18, justices of liberties and franchises not subject to county commissioners) shall have power to make one general county-rate, to answer all former distinct rates, which shall be assessed on every parish, &c. and collected and paid by the high constables of hundreds to treasurers ap- pointed by the justices, which money shall be deemed the public stock, &c. ; but appeal lies by the church-wardens and overseers against the rate of any particular parish, 22 Geo. III. c. 17. This rate is to be applied for the repairing of bridges and highways thereto adjoining, and to salaries for the surveyors of bridges; for building and repairing county gaols; for repairing shire-halls; for the salary of the master of the house of cor- rection, and relieving the weik and sick in hi? custody ; for the relief of the prisoners in the king's bench and marshalsea prisons, and of poor hospitals in the county, and of those who shall sustain losses by fire, water, the sea, or other ca- sualties, and other charitable purposes tor the

relief of the poor, as the justices in sessions shall think fit ; for the relief of the prisoners in the county gaol; for the preservation of the health of the prisoneis ; for the salary of the chaplain of the county gaol ; for setting prisoners to worK •, for salaries of persons making returns of the prices of corn ; for charges attending the removal of any of the said general county-rates by certiorari ; for money for purchasing lands at the ends of county bridges ; for charges of rebuilding or repairing houses of correction, and for fitting up and fur- nishing the same, and employing the persons sent thither ; for charges of apprehending, con- veying, and maintaining, rogues and vagabonds ; for charges of soldiers' carriages over and above the officer's pay for the same, by the several yearly acts against mutiny and desertion, and by the militia act ; for the coroner's fee of 9rf. per mile for travelling to take an inquisition, and 20s. for taking it; for charges of carrying persons to the gaol or house of correction ; for the gaoler's fees for persons acquitted of felony or discharged by proclarrfation ; for charges of prosecuting and convicting felons; for charges of prosecuting and convicting persons plundering shipwrecked goods; for charges of maintaining the

militia-men's fa- milies by the several militia acts ; for the charges of bringing insolvent debtors to the assizes, in order to their discharge, if themselves are not able to pay ; for the charges of transporting fe- lons, or conveying them to the places of labor and confinement ; for charges of carrying parish ap- prentices, bound to the sea service, to the port to which the master belongeth.

By the 12th Geo. II. c. 29, the church war- dens and overseers shall, in thirty days after de- mand made, out of the money collected for the poor, pay the sums so assessed on each parish and place ; and if they shall neglect or refuse so to pay, the high constable shall levy the same by distress and sale of their goods, by warrant of two or more justices residing in or near such parish or place. Where there is no poor-rate, the jus- tices, in their general or quarter sessions, shall by their order, direct the sum assessed on such pa- rish, township, or place, to be rated and levied by the petty-constable, or other peace-officer, as money for the relief of the poor is by law to be rated or levied. The high constables, at or be- fore the next session respectively after they have received the money, shall pay the same to the treasurer; and the money so paid shall be deemed the public stock : and the said high constables shall deliver in a true account on oath, if re- quired, of the money by them received, before the said justices at their general or quarter ses- sions. The treasurer shall pay so much of the money in his hands to such persons, as the jus- tices in session shall from time to time appoint, for any uses and purposes to which the public stock of any county, city, division, or liberty, is or shall be applicable ; and shall deliver in a true account on oath, if required, of his receipts arid disbursements to the justices at every gene- ral or quarter session, and also of the proper vouchers for the same, to be kept amongst the re- cords of the sessions : and the discharge of the said justices, by their order at the general or quar- ter session, shall be a sufficient discharge to the

treasurer : and no new rate shall be made until it appears by the treasurer's accounts or otherwise, that three-fourths of the money collected have been expended for the purposes aforesaid. If the church-wardens and overseers of any parish or place shall think such parish or place is over-rated, they may appeal to the next general or quarter sessions. A subsequent statute, 52 Geo. III. c. 110, amends 12 Geo. II. c. 29, and remedies de- fects in the laws relating to the repairing of county bridges, &c. By this the quarter sessions are empowered to appoint, annually at Easter, &c. two or more justices to superintend the re- pairs of bridges ; who may incur any expendi- ture not exceeding £20 for such repairs, which shall be paid by the sessions on certificate of the justices. Justices at sessions may also contract with commissioners of turnpike roads Tor repair of bridges, 8cc. for any term not exceeding seven years.

Justices are also empowered, by 43 Geo. III. c. 59, amended by 54 Geo. III. c. 90, and 55 Geo. III. c. 143, to purchase land, houses, &c. for the widening, altering, and improving of county bridges ; and also of bridges repaired by hundreds or general divisions of counties.

By 55 Geo. III. c. 51, additional provisions are made for the more equally and effectually making and levying the county rates. By this act, justices in general or quarter sessions are empowered to make a fair and equal county-rate in any county, whenever circumstances appear to require it. For this purpose they may require church-wardens and overseers of the several pa- rishes to make returns to the justices of the re- spective divisions in petty sessions, of the annual value of all rateable property, which such justices must certify to the quarter sessions, who may make the county-rate thereon. By this act the treasurers of counties are required to publish an abstract of their receipts and expenditure yearly, as audited by the justices. And the high-constable employed in levying the rates, may be required by the quarter sessions to give security; and if he foils, the rates shall be paid directly to the treasurer. By 56 Geo. III. c. 49, extra parochial places are made rateable, and the sessions are empowered to ascertain boundaries, &c ; 57 Geo. III. c. 94, regulates the mode of appeal against rates, which are to remain in force until quashed on such appeal, &c.

COVOLO, a fortress and village of the Tyrol, formerly an important pass in the road from Germany to Italy. Here Buonaparte defeated the Austrians under general Wurmser, Septem- ber 8th, 1796. It lies near the Brenta, on the borders of the Veronese, twenty miles north of Vicenza, and twenty-three east of Trent. . COVORDEN. See COEVORDEN.

COUP-DE-MAIN, Fr. In military affairs, a sudden and violent attack, for the purpose of carrying a post. The phrase is applied to any prompt measure.

COUP-D' CEIL, TZ. s. The first view ; the first glance. In military affairs, a general who can instantly see in what manner the peculiari- ties of the ground may be turned to advantage is said to have a good coup-d' ceil. Napoleon possessed this quality in perfection.'

COUPED, in heraldry, is used to express the head, or limb, of an animal, cut out from the trunk, smooth, as in the diagram : distinguish- ing it from that which is called erased, that is, forcibly torn off, and therefore is ragged

and un- even, it is also applied to such crosses, bars, bends, chevrons, &c. as do not touch the sides of the escutcheon, but are, as it were, cut off from them.

COUPE'E, n. s. Fr. A motion in dancing, when one leg is a little bent and suspended from the ground, and with the other a motion is made forwards.

CO'UPLE,v.a., v.n., &n.s.\ Fr. coupler,

CO'UPLEMENT, n. s. i accoupler ; Ital.

CO'UPLABLE, adj. .accopiare ; Lat.

CO'UPLING, n. s. Ccopulare. To

CO'UPLE-BEGGAR, n. s. 1 link together ;

CO'UPLET, n. s. J to conjoin ; to

join in wedlock ; to unite sexually. Couple sig- nifies a chain by which dogs are held together ; a pair; male and his female. Couplable is fit to be coupled with. Couplement is union ; but both these words are disused; junction, sexual union, are the meanings of coupling. A couple- beggar is one who marries beggars. A couplet denotes a pair of rhymes ; a pair, as of doves.

Put the laches into the loops, and couple the tent together that it may be one. Exodus xxvi. 11.

To the artificers and builders gave they it, to buy hewn stone, and timber for couplings.

2 Chron. xxxiv. 11.

They behold your chaste conversation coupled with fear. 1 Peter iii. 2.

Love that yhuittith lawe and companie, And couplis doth in vertue for to dwel.

Chaucer, Troilus and Creseide.

There myght I see how ver hed every blossome

kent, And eke the new betrothed byrdes y coupled how

they went. Surrey.

A schoolmaster, who shall teach my son and your, 1 will provide ; yea, though the three do cost me a couple of hundred pounds. Ascham.

One day, as he forepassed by the plaine With weary pace he far away espied A couple seeming well to he his twayne.

Spenser. Faerie Queen e.

After all which up to their steedes they went, And forth together rode, a comely couplement. Id.

I shall rejoice to see you so coupled as may be fit both for your honour and your satisfaction. Sidney.

He was taken up by a couple of shepherds, and by them brought to life again. Id.

Then would they cast away their pipes, and hold- ing hand in hand, dance by the only cadence of their voices which they would use in singing some short couplets, whereto the one-half beginning, the other half should answer. Id.

Huntsman, I charge thee, tender well my hounds j And couple Clowder with the deep-mouthed Brach. Shakspeare. Introduction to Taming of the Shrew.

The orator, to deck his oratory, Will couple my reproach to Tarquin's shame.

Id. The Rape of Luerece.

Ill keep my stable-stand where I lodge my wife ; I'll go in couples with her, Than when I feel and see no further trust her.

Id. Winter's Tale. Oh! alas!

I lost a couple, that 'twixt heaven and earth Might thus have stood, begetting wonder, as You gracious couple do. Id.

Anon, as patient as the female dove, Ere that her golden couplets are disclosed, His silence will sit drooping. Id. Hamlet.

Waters in Africa being rare, divers sorts of beasts come from several parts to drink ; and so being re- freshed, fall to couple, and many times with several kinds. Bacon.

I have read of a feigned commonwealth, where the married couple are

permitted, before they contract, to see one another naked. Id. New Atlantis.

That great variety of brutes in Africa, is by reason of the meeting together of brutes of several species at water, and the promiscuous couplings of males and fe- males of several species. Hole's Origin of Mankind.

By adding one to one, we have the complex idea of a couple. Locke.

It is in some sort with friends as it is with dogs in couplet ; they should be of the same size and humour.

L'Eitrange. After this alliance,

Let tigers match with hinds, and wolves with sheep, And every creature couple with his foe.

Dryden's Spanish Friar.

He said : the careful couple join their tears,

And then invoke the gods with pious prayers. Id.

That man makes a mean figure in the eyes of

reason, who is measuring syllables and coupling chimes,

when he should be mending his own soul, and securing

his own immortality. Pope.

I am just going to assist with the archbishop, in degrading a parson who couples all our beggars, by which I shall make one happy man. Swift.

No couple-beggar in the land E'er joined such numbers hand in hand. / :'.

In Pope I cannot read a line, .But with a sigh I wish it mine ; When he can in one couplet fix More sense than I can do in six, It gives me such a jealous fit, I cry, Pox take him and his wit. Id.

Round her strewed room a frippery chaos lies, A chequered wreck of notable and wise ; Bills, books, caps, couplets, combs, a varied mass, Oppress the toilet, and obscure the glass. Sheridan.

While seated after dinner at his ease,

Beside his mistress in some soft abode, Palace, or garden, paradise, or cavern, Which serves the happy couple for a tavern.

Byron. Don Juan.

CO'URAGE, v. a. & n. s.-\ Old Fr. corage;

COURA'GEOUS, adj. f mod. Fr. courage ;

COURA'GEOUSLY, adv. £it. coraggio; Sp.

COURA'GEOUSNESS, n. s. J corage ; low Lat. coragium, from cor, the heart. The verb, which has the same meaning with to encourage, is, as Mr. Todd truly observes, unjustly slighted and for- gotten. The noun signifies, bravery; active fortitude ; spirit of enterprise ; and formerly it was used in the sense of heart or mind. Shaka- peare ludicrously uses the word courageous ia the sense of outrageous.

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COU

And be that is courageous among the mighty, shall flee away naked in that day. Amos. ii. 16.

Nicanor, hearing of the manliness and the coura- geousness that they had to fight for their country, durst not try the matter by the sword.

2 Maccabees, xiv. 18.

In Southwerk at the Tabard as I lay, Redy to wenden on my pilgrimage To Canterbury with devoute courage.

Chaucer. Prol. to Cant. Tales.

No length of time or deth may this deface, Ne change my courage to an other place.

Id. Cant. Tales.

This Diomede, as bokis us declare, Was in his nedis prest and corageous.

Id. Troilus and Creseideˆ And kind with cm-age so my corps had blent, That lae on whom but me dyd she most smyle ?

Sackmlle.

Whose warlike provesse and manly courage, Tempred with reason and

advizement sage, Hath fild sad Belgicke with victorious spoile.

Spenser.

Did counterfeit hynd pittie where was none, For where's no courage there's no ruth nor mone.

Id. Faerie Queene. The king-becoming graces, Devotion, patience, courage, fortitude, I have no relish of them. Shakspeare. Macbeth.

Their discipline Now mingled with their courage. Id. Cymbeline.

He is very courageous mad about his throwing into the water. Id.

The king the next day presented him battle upon the plain, the fields there being open and champaign : the earl courageously came down, and joined battle with him. Bacon's Henry VII.

Courage, that makes us bear up against dangers that we fear, and evils that we feel, is of great use in an estate as ours is in this life, exposed to assaults on all hands : and, therefore, it is very advisable to get children into this armour as early as we can. Locke.

All courageous animals are carnivorous, and greater oourage is to be expected in a people, such as the English, whose food is strong and hearty, than in the half -starved commonalty of other countries.

Sir W. Temple.

True courage has so little to do with anger that there lies always the strongest suspicion against it, where this passion is highest. The true courage is cool and calm. The bravest of men have the least of a brutal bullying insolence ; and in the very time of danger are found the moat serene, pleasant, and free.

Shaftesbury.

Hope arms their courage ; from their towers they

throw Their darts with double force, and drive the foe.

Dryden.

Courage, that grows from constitution, very often forsakes a man when he has occasion for it ; and, when it is only a kind of instinct in the soul, it breaks out on all occasions, without judgment or discretion. That courage which arises from the sense of our duty, and from the fear of offending him

that made us, acts always in an uniform manner, and according to the dictates of right reason. Addison's Guardian.

Nothing but the want of common courage was the cause of their misfortunes. Swift.

fhere is a courageous wisdom : there is also a false reptile prudence, the result not of cantjon but of fear,

Burke.

But, more distinguished than the rest, Was seen a wether ready drest, That smoking, recent from the flame, Diffused a stomach-rousing steam. Our wolf could not endure the sight, Courageous grew his appetite : His entrails groaned with tenfold pain, He licked his lips, and licked again. Beattie,

Now from the dust of ancient days bring forth The sober zeal, integrity, and worth ; Courage, ungraced by these, affronts the skies, Is but the fire without the sacrifice. Cowper.

But now with pleasant pace a cleanlier road I mean to tread. I feel myself at large, Courageous and refreshed for future toil, If toil await me, or if dangers new. Id.

Let your courage be as keen, but at the same time as polished, as your sword. Sheridan.

COURANT, in music, is a piece in triple time: the air of the courant is ordinarily noted in triples of minims ; the parts to be repeated twice. It begins and ends when he who beats the measure falls his hand; in contradistinction from the saraband, which ordinarily ends when the hand is raised.

COURANT, in heraldry, an epi- thet for any beast represented in a running attitude, as in the diagram : —

COURAYER (Peter Francis), a Roman Ca- tholic clergyman, born at Vernon, in Normandy, 1601. While canon regular and librarian of the abbey of St. Genevieve, at Paris, he addressed a letter to arcbishop Wake in defence of the epis- copal succession in England, and the validity of the English ordinations. This was afterwards published in Holland in 1727, and drew upon him the formal censures of the French church. Taking refuge in England, he was well received, and pre- sented by the university of Oxford with the degree of D. D. In 1736 he translated into French, and published, Father Paul's History of the Council of Trent, in 2 vols. fol. dedicated to queen Caro- line; who augmented to £200 a pension of £100

a year, which he had obtained before from the court. His works are numerous, and all in French ; into which language he also translated Sleidan's History of the Reformation. He at- tended the service both of his own church and that of the church of England regularly. He died in 1776, after two days illness, at the age of ninety- five ; and was buried in the cloister of Westmins- ter Abbey.

COURB, v. n. & adj. To bend j to bow to; stoop in supplication ; crooked.

Her neck is short, her shoulders courb. Gower.

In the fatness of these pursy times, Virtue itself of vice must pardon beg, Yea, courb and woo, for leave to do it good.

Shakspeare. Hamlet.

CO'URIER, n. s. Fr. courier; Ital. corriere; Sp. correo ; from Lat. currere, to run. A mes- senger sent in haste ; an express ; a runner, generally ; a messenger.

I met a courier, one mine ancient friend.

Sltahspeatc. Timon.

This thing the wary Bassa well perceiving, by speedy courier advertised Solyman of the enemy's purpose, requesting him with all speed to repair with his army to Tauris. . Knolles' History.*

COURIER PIGEON. SeeCoLUMBA.

*COURIERS, ANCIENT. The ancients had two kinds of couriers, viz. 1. Those who ran on foot, called by the Greeks, Hemerodoromi, q.d. couriers of day. Pliny, Corn. Nepos, and Caesar, mention some of these who would run twenty, thirty, thirty-six, and in the circus even forty leagues per day. 2. Cursores equitantes, who changed horses, as modern couriers do. Xenophon attri- butes the first couriers to Cyrus. Herodotus says they were very common among the Persians, and that there was nothing more swift than these kind of messengers. * That prince,' says Xeno- phon, ' examined how far a horse would go in a day, and built stables at such distances from each other, where he lodged horses, and persons to take care of them ; and*

at each place kept a per- son always ready to take the packet, mount a fresh horse, and forward it to the next stage : and thus throughout his empire.' But it does not appear that either the Greeks or Romans had any regu- lar fixed couriers till the time of Augustus : un- der that prince they travelled in cars ; though it appears from Socrates they afterwards went on horseback. Under the western empire they were called viatores; and under that of Constan- tinople, cursores : whence the modern name. See POST-OFFICE.

COURLAND, a duchy of Poland, situated between 21° and 60° E. long., and between 56° 30′ and 57° 30′ N. lat. It is bounded by the gulf of Riga and the river Dwina, which divide it from Livonia on the north; by Lithuania on the east ; by Samogitia on the south ; and by the Baltic Sea on the west : being 250 miles long and forty broad. It was formerly inde- pendent, but incorporated with the Russian empire in 1795. This country rises in gentle hills, and is fertile in corn, hemp, and flax. It also abounds in pine, fir, oak, and other timber, and has many neat villages and good inns. It is divided into Courland Proper and Semigallia. The chief towns are Mittau the capital, Goldengen, Gro- ben, Libau, Winday, and Tacibstadt. It is said to contain 11,200 square miles, and 580,000 inhabitants.

COURSE, v. a., v. n. & n. s.~\ Fr. course ;

CO'URSER, n. s. > Latin, cursus,

CO'URSING, n. s. j from currere.

The shades of meaning in the verb and noun, particularly in the latter, are numerous. The verb signifies to hunt; to pursue; to chase with dogs that keep the game in sight ; to compel to run ; to run ; to rove about. The noun denotes race ; career ; race ground ; progressive motion ; running in the lists ; a ship's track ; certain sails of a ship ; process ; order of succession ; regular method, manner, or series of ; conduct; manner of proceeding ; method of life ; train of actions ; natural bent; catamenia; orderly structure; a continued layer of bricks or stones in a building; series of consequences ; number of dishes set at once upon the table ; settled rule; empty form. Of course, implies something that fo lows as a natural consequence from some other thing.

Courser is, a swift horse ; a war horse ; one who courses hares. Coursing is hunting with grey- hound. See COURSING.*

And when we had finished our course from Tyre,

we came to Ptolemais. Acts xxi. 7.

If any man speak in an unknown tongue, let it be

by two, or at the most by three, and that by course,

and let one interpret. 1 Cor. xiv. 27.

The tongue defileth the whole body, and setteth on

fire the course of nature. James iii. 6.

When Zephirus eke with his sote brethe Enspired hath in every holt and hethe The tender croppes, and the yonge sonne Hath in the Ram his halfe cours yronne.

Chaucer. Pro/, to Car. Tales. Ther was the hart ywont to heve his flight, And over a brooke, and so forth on his wey, This duk wol have a cours at him or twey With houndes, swiche as him lust to commaunde.*

Id.

Wher as she many a ship and barge sie Sailing hir cours wher as hem list to go. Id.

This gentil duk down from his c1 urser sterte With herte piteous when he herd hem speke. Id.

So fareth love when he hath tane a course, Rage is his rayne, resistance vayleth none. Wy»t.

So as they coursed here and there, it chaunst That in her wheeling round, behind her crest So sorely he her strooke, that thence it glaunst Adowne her backe. Spenser. Faerie Queene.

He proudly pricketh on his courser strong, And Atin ay him pricks with spurs of shame and

wrong. Id.

But this hot knight was cooled with a fall, which, at the third course, he received of Phalantus. Sidney.

A woman of so working a mind, and so vehement spirits, as it was happy she took a good course; or otherwise it would have been terrible. Id.

The big round tears

Coursed one another down his innocent nose In piteous chase. Shakspeare.

As You Like it.

The king is hunting the deer ; I am coursing myself. Id. Love's Labour Lost.

The blood, before cold and settled, left the liver white and pale, which is the badge of pusillanimity and cowardice ; but the sherris warms it, and makes it course from the inwards to the parts extreme.

Id. Henry IV. The duke cannot deny the course of law. Id.

Worthy Sir, thou bleedest, Thy exercise hath been too violent For a second course of fight. Id. Coriolanus.

He that is respectless in his courses, Oft sells his reputation at cheap market.

Ben Jonson.

To the courses we have devised studding-sails, sprit- sails, and top-sails. Raleigh's Essays.

It would be tried also in flying of hawks, or in cour- sing of a deer, or hart, with greyhounds.

Bacon's Natural History.

That worthy deputy, finding nothing but a common misery, took the best course he possibly could to estab- lish a commonwealth in Ireland. Davies on Ireland.

And some she arms with sinewy force, And some with swiftness in the course. Cowley.

When they have an appetite To vencry, let them not drink nor eat, And coarse them oft, and tire them in the heit.

May's Virgil.

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COU

Rhyme the rudder is of verses,

With which, like ships, they steer their courses.

Butler.

But if a right course be taken with children, there will not be so much need of common rewards and punishments. Locke.

With a mind unprepossessed by doctors and com- mentators of any sect, whose reasonings, interpreta- tion, and language, which I have been used to, will of course make all chime that way ; and make ano- ther, and perhaps the genuine meaning of the author, seem harsh, strained, and uncouth to me. Id.

It is best to leave nature to her course, who is the sovereign physician in most diseases. Temple.

Men talk as if they believed in God, but they live as if they thought there was none ; their vows and promises are no more than words of course.

L'Estrange.

The stoppage of women's courses, if not suddenly looked to, sets them undoubtedly into a consumption, dropsy, or some other dangerous disease.

Harvey on Consumptions. Give willingly what I can take by .force ; And know, obedience is your safest course.

Dry den's Aurengzebe, Then with a second course the tables load, 4nd with full chargers offer to the god.

Dryden's Mneid.

Then to his absent guest the king decreed A pair of coursers, born of heavenly breed ; Who from their nostrils breathed etherial fire, Whom Circe stole from her celestial sire. Id.

Ten brace and more of greyhounds, snowy fair, And tall as stags, ran loose, and coursed around his chair. Dryden.

I am continually starting hares for you to course ; we were certainly cut out for one another ; for my temper quits an amour just where thine takes it up.

Conyreve's Old Bachelor. Men will say,

That beauteous Emma vagrant courses took, Her father's house and civil life forsook. Prior.

Sense is of course annexed to wealth and power ; No muse is proof against a golden shower. Garth.

The senate observing how, in all contentions, they were forced to yield to the tribunes and people, thought it their wisest course to give way also to time. Swift.

When the state of the controversy is plainly de- termined, it must not be altered by another disputant in the course of the disputation. Watts.

A leash is a leathern thong, by which a falconer holds his hawk, or a courier leads his greyhourid.

Hanmer. All at once

Relapsing quickly, as quickly re-ascend And mix, and thwart, extinguish, and renew, All ether coursing in a maze of light.

Thomson's Autumn. Though vain the Muse, and every melting lay,

To touch thy heart, unconscious of remorse ! Know, monster, know, thy hour is on the way, I see, I see the years begin their mighty course.

Beattie.

Is there a man, whose judgment clear Can others teach the course to steer, Yet runs himself life's mad career,

Wild as the wave ; Here pause — and through the starting tew,

Survey this grave. Burns.

History, not wanted yet,

Leaned on her elbow, watching Time, whose course, Eventful, should supply her with a theme. Cowper.

O Love ! — tormentor ! — fiend ! — whose influence, like the moon's acting on men of dull souls, makes idiots of them, but meeting subtler spirits, betrays their course, and urges sensibility to madness !

Sheridan.

The morning watch was come ; the vessel lay Her course, and gently made her liquid way ; The cloven billow flashed from off her prow In furrows formed by that majestic plouph ; The waters with their world were all before ; Behind the South Sea's many an islet shore.

Byron. The Island.

COURSES, a name applied to the principal sails of a ship, viz. the main-sail, the fore-sail, and the mizen ; the mizen-stay sail and fore-sail are also sometimes comprehended in this denomina- tion ; as are the main-stay sails of all brigs and schooners. When a ship sails under the main- sail and fore-sail only, without lacing on any bonnets, she is then said to go under a pair of courses.

iNG, among sportsmen. There aio three several sorts of courses with grey-hounds: 1. At the hare; 2. At the fox; and 3. At th— deer. The best method of coursing the hare, i ; to go out and find a hare sitting; which is easily done in summer, by walking across the lands, either stubble, fallow, or corn grounds, and cast- ing the eye up and down ; for in summer thev frequent those places for fear of the ticks, whic'i are common in the woods at that season ; and in autumn they dislike the shade of trees on account of the drops falling in time of rain. At other sea- sons it will be necessary to beat the bushes ami thickets to rouse them, and oftentimes they wii'l lie so close that they will not stir till the pole al- most touches them ; the sportsmen are always pleased with this, as it promises a good course. If a hare He near any close or covert, and with her head that way, it is always

to be expected that she will take to that immediately on being pi.t up; all the company are therefore to ride up ami put themselves between her and the covert be- fore she is put up, that she may take the other way, and run upon open ground. When a hare is put up it is always proper to give her ground, or law as it is called, that is to let her run twelve score yards, or thereabouts, before the greyhounds are slipped at her, otherwise she is killed too soon, the greater part of the sport is thrown away, and the pleasure of observing the several turnings and windings that the creature will make to get away is lost. A good sportsman had rather see a hare save herself after a fair course, than see her murdered by the greyhounds- as soon as she is up. In coursing the fox no other art is required than standing close, in a clear wind, on the outside of some grove where it is expected he will come out ; and when he comes out he must have head enough allowed him, otherwise he will return back to the covert. The slowest greyhound will be able to overtake him, after all the odds of distance necessary ; and the only danger is the spoiling the dog by the fox, which too frequently happens. For this reason no greyhound of any value should be run at this course, but the strong,

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hard, bitter, dogs, that will seize any thing. For the deer, there are two sorts of courses; the one in the paddock, the other either in the forest, or the purlieu. For the paddock course there must be the greyhound and the terrier, and mongrel grey- hound, whose business is to drive away the deer before the greyhounds are slipped ; a brace or a leash are the usual number slipped at a time, sel- dom more than two brace. In-coursing the deer in the forest or purlieu, there are two ways in use ; the one is coursing them from wood to wood ; and the other upon the lawns close by the keeper's lodge. In the coursing from wood to wood, the way is to throw in some young hounds into the wood to bring out the deer; and if any deer come out that is not weighty, or a deer or antler which is buck, sore, or sorrel, then you are not to slip your greyhounds, which are held at the end of the wood, where the keepers, who can guess very well on these occasions, expect that the deer will come out. If a proper deer come out, and it is suspected that the brace or leash of grey- hounds slipped after him will not be able to kill him, it is proper to waylay him with a couple of fresh greyhounds. The coursing upon the lawn is more agreeable than any of the other ways. When the keeper is warned before hand, he will lodge a deer for the course ; and then, by com- ing under the wind, the greyhounds may be brought near enough to be slipped for a fair course.

The laws of coursing established by the duke of Norfolk in the reign of queen Elizabeth are still held binding. 1. He that is chosen few- tercr, or letter loose of the dogs, shall receive the greyhounds matched to run together into his leash as soon as he comes into the field ; he is to march next to the hare-finder, or him who is to start the hare, until he come to the form : and no horse- man or footman is to go before or sideways, but all straight behind, for the space of about forty yards. 2. A hare ought never to be coursed with more than a brace of greyhounds. 3. The hare- finder is to give the hare three sohoes before he puts her up from her form or seat, to the end that the dogs may be prepared and attend her starting. 4. If there be not a particular danger of losing the hare, she should have about twelve score yards law. 5. The dog that gives the first turn, if after that there be neither cote, slip, or wrench, wins the wager. 6. A go-by, or bearing the hare, is counted equivalent to two turns. 7. If neither dog turn the hare, he that leads to the last co- vert wins. 8. If any dog turn the hare, serve himself, and turn her again, it is as much as a cote, and a cote is esteemed as much as two turns. 9. If all the course be equal, he that bears the hare shall win ; and if he be not borne, the course shall then be judged dead. 10. If a dog take a fall in his course and yet perform his part, he may chal- lenge the advantage of a turn more than he gave. 1 1 . If a dog turn the hare, serve himself, and give divers cotes, and yet in the end stand still in the field, the other dog, if he turn home to the co vert, although he gives no other, shall be adjudged to win the wager. 12. If by misfortane a dog be ridden over in the course, that course shall be adjudged void, and he that did the mischief is to make reparation to the owner. 13. If a dog give

the first and last turn, and there be no advantage betwixt them, he that gives the odd turn wins. 14. A cote is. when a greyhound goes end ways by the side of his fellow, and gives the hare a turn. 15. A cote serves for two turns, and two trippings or jerkings for a cote ; and if the hare turns not quite about, she only wrencheth in the sportsman's phrase. 16. If there be no cotes given by the greyhounds, out one serve the other at turning, then he that gives the most turns wins the wager. 17. Sometimes a hare does not turn, but wrenches, for she does not turn except she turns as it were round ; in these cases two wrenches stand for one turn. 18. lie that comes in first at the death of the hare takes her up, and saves her from breaking; he cherishes the dogs, and cleanses their mouths from the wool ; he is adjudged to have the hare for his pains. 19. Finally, those who are judges of the leash, must give their judgment before they depart out of the field, or else it is not to stand as valid.

Old French, court ; mod. Fr. cour ; Goth. hurt, civility of man- ners. Ang.Sax. cunt ; Dut.koert; Lat. curt is. To solicit ; to flatter ; >to woo a woman. Court signifies a prince's residence : the retinue of a prince ; the place where justice is ad ministered ; any ju-

COURT, t>.n. & H.S/ CO'URTEOUS, adj.

Co'URTEOUSLY, (ldl

CO'URTEOUSNESS, n. s. CO'URTESY, v.n.&n.s.

Co'uRTEZAN, n. S. Co'uRTIER, U. S. CO'URTING, n. S.

*CO'URTLIKE, adj. CO'URTLY, adij. ge adj**

'Co't'RTUVESS, 7J. S. Co'URTLIXG, 71. 4'.

CO'URTSHIP, n. s.

risdiction, military, civil, or ecclesiastical; the art of insinuation ; flattery ; an open space before a house ; a small opening enclosed with houses and paved with broad stones, through which, in general, carriages cannot pass. Cour- tier is one who follows the court; one who soli- cits a favor from another; but the latter mean- ing is disused. Courtly and courtliness mean, having the manner of a court ; being of gracious manners. Courtling is a contemptuous syno- nyme of courtier. Courtezan was formerly used in an inoffensive sense, but it is now confined to prostitutes. Courtesy denotes elegance of man- ners ; an act of civility ; the reverence made by women; a tenure, not of right, but by the favor of others. Courteous is elegantly mannered ; polite ; well bred. Courtlike is, refined ; polite. Courting and courtship are the act of soliciting favor, chiefly that of a woman in order to ob- tain her hand. Donne uses the latter word in the sense of elegance of manners.

It shall be an habitation of dragons, and a courl for owls. Isaiah xxvi. 13.

Friendship is more than is cat ell, For friend e in cowrie aie better is Than peny is in purse certis.

Chaucer. Romaunt of the Rose.

His stede, which that shonne as sunne bright, Slant in the court as stille as any ston.

Chaucer. Cant. Tales.

For, brother min, take of me this motif I have now ben a court-roan all my lif. Id.

Deus hie, quod he ; O Thomas, frend, good day, Sayde this frere all curtisly and soft. Id •

Cwteis he was, lowly and eervisable, And carf before his father at the table.

Id. Prol. to Cant. Tales.

A knight there was, and that a worthy man, That fro the time that he firste began To riden out, he loved chivalrie ; Trouthe and honour, fredom and curtesie. Id.

Creseide fro it awoke And all that court and conuocacioun Vanished awaie.

Henderson. On Test, of Creseide. A tong, that served in forein realmes his king, Whose courteous talk to virtue did inflame Each noble hart. Surrey .

Myne owne John Poynes, sins ye delight to know The causes why that homeward I me draw, And flee the prease of courts. Wyat.

The neat courtier

So serves for lesse, than do these fatted swine. Id. Him the prince with gentle court did board.

Spenser. Faerie Qucene. Forthwith to court of Gloriaue I sped, Of Gloriane, great queene of glory bright. Id.

What needes of dainty dishes to devize, Of comely services, or courtly trayne ? Id.

That nyght they pass in ioy and iollity, Feasting and courting both in bowre and hall. Id. And in the midst thereof, upon the floure,

A lovely bevy of faire ledies sate, Courted of many a jolly paramour. Id.

‘ The first which then refused me,’ said hee, ‘ Certes was but a common courtisane,’ Id.

But to Duess’ each one himself did payne, All kindnesse and faire courtesie to shew, For in that court whylome her well they knew. Id. Here do you keep a hundred knights and squires, Men so disorderly, so debauched and bold, That this our court, infected with their manners, Shews like a riotous inn ; epicurism and lust Make it more like a tavern or a brothel, Than a

graced palace. Shakspeare. King Lear.

The archbishop

Of Canterbury, accompanied with other Learned and reverend fathers of his order, Held a late court at Dunstable.

Shakspeare. Henry VIII.

He hath been a courtier, he swears.

If any man doubts that, let him put me to my purga- tion. I have trod a measure ; I have flattered a lady ; I have been politick with my friend, smooth with mine enemy ; I have undone three taylors ; I have had four quarrels, and like to have fought one.

Id. As You Like It.

You spurned me such a day ; another time You called me dog ; and, for these courtesies, 111 lend you thus much money.

Id. Merchant of Venice. Be merry, and employ your chiefest thoughts To courtship, and such fair ostents of love, As shall conveniently become you there. Id.

He hath deserved worthily of his country ; and his ascent is not by such easy degrees, as those who hare been supple and courteous to the people.

‘ Id. Coriolanus.

Sweet Cytherea, sitting by a brook, With young Adonis, lively, fresh, and green, Courted the lad with many a lovely look, Such looks as none could look but beauty’s queen. Id. The Passionate Pilgrim.-

Courtling, I rather thou shouldest utterly Dispraise my work, than praise it frostily.

Ben Jonson.

Follow a shadow, it flies you ; Seem to fly it, it will pursue : So court a mistress, she denies yon ; Let her alone, she will court you. Id. Forest. But when the cause itself must be decreed,

Himself in person in his proper court, To grave and solemn hearing doth proceed

Of every proof, and every bye report. Dames.

You must have, before you come to the front, three courts: a green court plain, with a wall about it; a second court of the same, but more garnished, with little turrets, or other embellishments, upon the wall j and a third court, to square with the front, not to be built but inclosed with a naked wall. Bacon.

With them there are no stews, no dissolute houses, no courtesans, nor any thing of that kind ; nay, they wonder, with detestation, at you in Europe, which permit such things. Id. New Atlantis.

Our English tongue is, I will not say as sacred as the Hebrew, or as learned as the Greek, but as fluent as the Latin, as courteous as the Spanish, as courtlike as the French, and as amorous as the Italian.

Camden's Remains.

There was not among all our princes a greater cour- tier of the people than Richard III. ; not out of fear, but wisdom. Suckling.

The slightest part that you excel in, is courtliness.

Lord Digby to Sir Kenetm Digby.

Their wisdom was so highly esteemed, that some of them were always employed to follow the courts of their kings, to advise them. Temple.

Whilst Christ was upon earth, he was not only easy of access, he did not only courteously receive all that addressed themselves to him, but also did not disdain himself to travel up and down the country.

Calamy's Sermons.

Hast thou been never base ? Did love ne'er bend Thy frailer virtue to betray thy friend ? Flatter me, make thy court, and say it did ; Kings in a crowd

would have their vices hid.

Dryden'-s Aurengaebe.

They can produce nothing so courtly writ, or which expresses so much the conversation of a gentleman, as Sir John Suckling. Id. on Dramatich Poetry.

In short, a mere courtier, a mere soldier, a mere scholar, a mere any thing, is an insipid, pedantic character, and equally ridiculous. Spectator.

Every man, in the time of courtship, and in the first entrance of marriage, puts on a behaviour like my correspondent's holiday suit. Addison's Guardianˆ

If I should meet her in my way, We hardly court'sy to each other. Prior.

Ev'n now, when silent scorn is all they gain, A thousand court you, though they court in vain.

Pope.

It is but to venture your lungs, and you may preach against pride and dissimulation and bribery at White- hall : you may expose rapine and injustice in the inns of court ; and in a city pulpit be as fierce as you please against avarice, hypocrisy, and extortion Tis but a ball bandied to and fro, and every man carries a racket about him to strike it from himself among the rest of the company. Swift.

A courtier's dependant is a beggar's dog. Shenstone.

Vanity bids all her'sons to be generous and brave — and her daughters to be chaste and courteous. — But why do we want her instructions ? Ask the comedian who is taught a part he feels not. Sterne.

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When was it that a king of England wanted where- withal to make him respected, courted, or perhaps even feared, in every state in Europe ? Burke.

Though blest with wisdom and with wit refined, She courts not homage, nor desires to shine ; In her each sentiment sublime is joined

To female sweetness, and a form divine. Beattie.

Admiring multitudes shall trace Each patrimonial charm combined — The courteous yet majestic mien, The liberal smile, the look serene, The great and gentle mind. Id.

Nymphs were Dianas then, and swains had hearts, That felt their virtues ; innocence, it seems, From court dismissed, found shelter in the groves.*

Cowper.

Courtier and patron cannot mix There heterogeneous politics,

Without an effervescence, — Like that of salts with lemon juice Which does not yet like that produce

A friendly coalescence. Id.

There shall no vain pretender be, To court thy smiles and torture me ; No prowJ superior there be seen ; But nature's voice shall hail thee queen. Sheridan. YoDNG F. Hey-day ! What the devil have we here? — Sure my gentleman's grown a favorite at court, he has got so many people at his levee ! Id. SNEER. Yes; and our prudery in this respect is just on a par with the artificial bashfulness of a courtesan, who increases the blush upon her cheek in an exact proportion to the diminution of her mo- desty. Id. And now, Hidalgo ! now that you have thrown

Doubt upon me, confusion over all, Pray have the courtesy to make it known —

Who is the man you search for ? how d'ye call Him? What's his lineage? let him but be shown.

Byron. Don Juan. However, present remedy was none,

And no great good seemed answered if she staid ; Regarding both with slow and sidelong view, She snuffed the candle, curtsied, and withdrew. Id.

COURT, in law. As by our excellent constitu- tion, the sole executive power of the laws is vested in the person of the king, it follows that all courts of justice, which are the medium by which he administers the laws, are derived from the power of the crown. For, whether created by act of parliament or letters patent, or subsisting by prescription, the only methods by which any court of judicature can exist, the king's consent in the two former is expressly, and in the latter impliedly, given. In all these courts the king is supposed, in contemplation of law, to be al- ways present; but, as

that is in fact impossible, he is there represented by his judges, whose power is only an emanation of the royal prerogative. For the more speedy, universal, and impartial ad- ministration of justice between subject and sub- ject, the law has appointed a great variety of courts, some with a more limited, others with a more extensive jurisdiction : some constituted to enquire only, others to hear and determine : some to determine in the first instance, others upon appeal and by way of review. See LAW, and the respective articles in the order of the alphabet. One distinction runs throughout them all; viz. that some of them are courts of record, others not of record.

A court of record is that where the acts and judicial proceedings are enrolled in parchment for a perpetual memorial and testimony ; which rolls are called the records of the court, and are of such high and supereminent authority, that their truth is not to be called in question. For it is a settled rule and maxim, that nothing shall be averred against a record, nor shall any plea oreven proof be admitted to the contrary. And if the ex- istence of a record be denied, it shall be tried by nothing but itself; that is, upon bare inspection whether there be such record or not ; else there would be no end of disputes. But if there appear any mistake of the clerk in making up such record, the court will direct him to amend it. All courts of record are the king's courts, in right of his crown and royal dignity, and therefore no other court hath authority to fine or imprison ; so that the very erection of a new jurisdiction with power of fine or imprisonment, makes it instantly a court of record. A court not of record is the court of a private man, whom the law will not intrust with any discretionary power over the for- tune or liberty of his fellow-subjects. Such are the courts baron, and other inferior jurisdictions; where the proceedings are not enrolled or re- corded, but as well their existence as the truth of the matters therein contained, shall, if dis- puted, be tried and determined by a jury. These courts can hold no plea of matters cognizable by the common law, unless under the value of 40s. nor of any forcible injury whatsoever, not having any process to arrest the person of the defendant. In every court there must be at least three con- stituent parts, the actor, reus, and judex ; the actor, or plaintiff", who complains of an injury done ; the reus, or defendant, who is called upon to make satisfaction for it; and the judex, or ju- dicial power, which is to examine the truth of the fact, to determine the law arising upon that fact, and if any injury appears to have been done, to ascertain, and by its officers to apply the remedy. It is also usual in the superior courts to have at- torneys and advocates, or counsel, as assistants. See ATTORNEY, and COUNSEL.

COURT, ARCHES. See ARCHES COURT.

COURT BARON, in English law, a court inci- dent to every manor in the

kingdom, to be holden by the steward within the said manor. This court baron is of two natures : the one is a cus- tomary court, appertaining entirely to the copy- holders, in which their estates are transferred by surrender and admittance, and other matters transacted relative to their tenures only. The other is a court of common law, and it is the court of the barons, by which name the freehold- ers were called : for that it is held before the freeholders who owe suit and service to the manor, the steward being rather the registrar than the judge. These courts, though in their nature distinct, are confounded together. The freehold- ers' court was composed of the lord's tenants, who were the pares of each other, and were bound by their feudal tenure to assist their lord in the dispensation of domestic justice. This was formerly held every three weeks ; and its most important business is to determine, by writ of right, all controversies relating to the right of lands within the manor. It may also hold plea

of any personal actions, of debt, trespass on the case, or the like, where the debt or damages do not amount to forty shillings. Which is the same sum, or three marks, that bounded the jurisdiction of the ancient Gothic courts in their lowest instance, or fierding courts, so called be- cause four were instituted within every superior district or hundred. But the proceedings on a writ of right may be removed into the county court by a precept from the sheriff, called a toll, quia tollit atque eximit causam e curia baronum. And the proceedings in all other actions may be removed into the superior courts by the king's writs of pone, or accedas ad curiam, according to the nature of the suit. After judgment given, a writ also of false judgment lies to the courts at Westminster, to rehear and review the cause, and not a writ of error; for this is not a court of record : and therefore, in some of these writs of removal, the first direction given is to cause the plaint to be recorded, recordari facias loquelam.

COURT OF KING'S BENCH. See BENCH.

COURT MARTIAL, a court appointed for the punishing offences in officers, soldiers, and sai- lors, the powers of which are regulated by the mutiny-bill.

COURT-CHAPLAIN, n. s. From court and chaplain. One who attends the king to celebrate the holy offices.

The maids of honour have been fully convinced by a famous court-chaplain. Swift,

COURT-DAY, n. s. From court and day. Day on which justice is solemnly administered.

The judge took time to deliberate, and the next court-day he spoke. Arbuthnot and Pope.

COURT-DRESSER, n. s. From court and dresser. One that dresses the court, or persons of rank ; a flatterer.

There are many ways of fallacy ; such arts of giving colours, appearances, and resemblances, by this court-dresser, fancy. Locke.

COURTENAY (John), an Irish gentleman, descended from the Devonshire family of this name; was originally in the army, and first ap- peared in public life as secretary to the marquis Townsend, lord-lieutenant of Ireland. He was returned at the general election in!780, M. P. for Tamworth, and re-elected for that borough in 1784 and 1790. He came into administration with the whig party in 1783, as surveyor of the ord- nance, and secretary to the master-general. Dur- ing their administration in' 1806 he was appointed one of the commissioners of the treasury. He sat in parliament for Appleby from 1796 to 1812. His speeches and conversation were always ad- mired for their wit. His works are, 1. A Tract on the Duke of Richmond's Plan of Fortifications, 8vo. 2. A Poetical Review of Dr. Johnson's Character, 8vo. 3. Reflections on the French Revolution. 4. Poetical Epistles on the Man- ners of France, Italy, &c. 8vo. He died in 1816, aged seventy-five.

COURTESY OF ENGLAND. A tenure (says Cowell) by which, if a man marry an inheri- trix, that is, a woman seized of land, and getteth a child of her that comes alive into the world, though both the child and his wife die forthwith, yet, if she were in possession, shall he keep the VOL. VI.

land during his life, and is called tenant per legem Angliae, or by the courtesy of England.

COURT-FAVOR, n. s. From court and favor. Favors or benefits bestowed by princes.

We part with the blessings of both worlds for pleasures, court-favmtrs, and commissions ; and at last, when we have sold ourselves to our lusts, we grow sick of our bargain. L'Estrange.

COURT-HAND, n. s. From court and hand The hand or manner of writing used in recordi and judicial proceedings.

He can make obligations, and write court-hand.

Shakspeare.

COURT-LADY, n. s. From court and lady. A lady conversant or employed in court.

The same study, long continued, is as intolerable to them, as the appearing long in the same clothes or fashion is to a court-lady. Locke.

COURTRAI, or COURTRA.Y, a town of the Netherlands, with a castle; seated on the Lys. It is famed for its manufactures of woollen cloths, lace, diaper, and damask linens, &c. It was taken by the French under general Jarry, in the spring of 1792, but was soon after evacuated, and the suburbs burnt. It was retaken by them in 1792, and again evacuated in the spring of 1793 : but surrendered a third time on the 28th of April, 1794, to general Pichegru; and was retained by France until the peace of 1814. Population 14,000. It lies fourteen miles east of Ypres, twenty-three south-west of Ghent, and twenty- four south of Bruges.

CO'USIN, n. s. & adj. \ Fr. cousin ; Ital.

CO'USINAGE, n. s. i cugino ; Lat. consan-

gineus. Any one collaterally related — more re- motely than a brother or sister. It is also a title of honor given by the king to noblemen, particu- larly to those of the council. Cousinage is an old word for kin.

Who was so welcome as my Lord Dan John, Our dire cousin, full of curtesie ? Chaucer. Cant. Talei.

Eke Plato sayetb, whoso can him rede, The wordes most ben cosin to the dede.

Id. Prol. to Cant. Tale.*

By him lay heavy slepe, the cosin of death, Flat on the ground, an«l still as any stone. Sackville,

Macbeth unseamed him, Oh valiant cousin! worthy gentleman!

Shakspeare.

Tyhalt, my cousin ! O my brother's child ! Unhappy sight! alas, the blood is spilled Of my deal kinsman. Id. Romeo and Juliet.

Thou art, great lord, my father's sister's son, And cowsiw-german to great Priam's seed.

Id. Troilus and Cretsida,

Your friends all wearie, and your spirits spent, Ye may your fortunes seek, and be forwent, Of your kind cousins and your churlish sires, Left there alone, midst the fast folding briers. Hall.

Well, [never will join in ridiculing a friend ; and so I constantly tell my covsin Ogle, and you all know what pretensions she has to be critical on beauty.

Sheridan.

They formed a very nymph-like looking crew

Which might have called Diana's chorus ' cousin,' As far as outward show may correspond ; I won't be bail for anything beyond.

Byron. />«•» Juan. 2Q

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COW

COUSIN is a term of relation between the children of brothers and sisters, who in the first generation are called cousins-gerraan, in the second generation second cousins, &c. Theodo- sius the Great prohibited cousins from marrying under pain of death ; on pretence that they were, in some sort, brothers and sisters to each other. Also a title often given to the nobility, particu- larly to those of the privy council, by the king.

COUSIN (John), a celebrated French painter, who excelled in painting on glass. His picture of the Last Judgment, in the vestry of the minims of the Wood of Vincennes, is much admired. He was also a good sculptor. He wrote several works on geometry and perspective; and died about 1689.

COUSU, in heraldry, signifies a piece of another color or metal, placed in the ordinary, as if it were sewed on, as the word imports.

COUTANCES, an old town of France, in Lower Normandy, having a population of 10,000. It is situated on the west coast of the department of La Manche, on the river Soule, five miles from its influx into the English channel, and contains several fine churches. Its manufactures are linen and lace; and its other articles of trade corn, flax, and wool. It is fifty miles west of Caen.

COUTANTIN, COTANTIN, or COTENTIN, a ci-devant territory of France, in Lower Nor- mandy, containing the towns of Coutances, Car- entan, Cherburg, Barfleur, Granville, St. Sauveur, Valogne, Ville-Dieu, &c. It is now included in the department of the Channel

COUTH, adj. Ang.-Sax. cu1. Known.*

COUTH, COUD, or COULD. This is the past participle of conne, to know ; to be able ; but has long been obsolete in the original sense. Could is new used as a grammatical auxiliary.

Nor need he guide ; the way right well he could. Which leads to shady plains of Gaza old.

Fairfax. Tasso.

COUTHON (George), a French revolutionist of the wildest character, was born in 1756 at Orsai, in the department of Puy de Dome. Brought up to the law, he practised as an advo- cate, and became president of the court of justice at Clermont. In September, 1791, he was cho- sen deputy from his native department to the Legislative Assembly; and in 1792 became a member of the National Convention. He spoke violently in the convention against the measure of granting the king a negative on public mea- sures, and was one of the first to propose the trial of Louis XVI., for whose execution he voted. He wavered awhile between the parties of Bris- sot and Robespierre, but perceiving the latter to be the more powerful, closely connected himself with it, and all its atrocities. Being sent as com- missioner from the convention to Lyons, and the deformity of his lower limbs rendering him incapable of walking, he ordered himself to be carried in a chair to the square of Belle-cour, where he gave a blow with a silver hammer to one of the buildings, exclaiming, ‘ I strike in the name of the law.’ This was the signal for com- mencing the work of destruction ; and the noblest edifices of the city were reduced to heaps of ru- ins Couthon was most justly involved in the

fate of his party. When arrested, he is said to have exhibited the greatest pusillanimity; and his execution, which took place July 28th, 1794, was attended with great suffering, the distortion of his frame rendering it impossible to place him under the guillotine in the usual posture.

COUTTS (Thomas), a London banker, who, from a small commencement, raised himself to high rank in the mercantile class, was the fourth and youngest son of John Coutts, a merchant of Edinburgh ; and in early life a junior partner in a house in St. Mary Axe, in correspondence with the firm to which his father belonged. He afterwards joined his brother’s banking-

house in the Strand, of which he became sole proprietor. He is remarkable principally for his matrimonial speculations, having married, first, Susan Star- kie, a female servant of his brother's, by whom he had three daughters — Susan, married in 1796 to lord Guilford ; Frances, who married in 1800 John, marquis of Bute ; and Sophia; married in 1793 to sir Francis Burdett, bart. He entered a second time into the marriage state in 1815, about three months after his first wife's decease, with Miss Mellon, an actress of some celebrity, whom he constituted at his death the sole legatee of his large fortune, sworn to be under £600,000 personals 'in the diocese of Canterbury,' besides real estates. He died February, 1821, aged 87. His widow married the duke of St. Alban's. COUVERT, in heraldry, a piece of hanging, or a pavilion falling over the top of a chief or other ordinary, so as not to hide, but only to be a covering to it.

COW, v. a. J Dr. Johnson unhesitatingly COWISH. adj. J derives this verb from coward, of which he declares it to be a contraction. Mr. Tooke, with perhaps more plausibility, refers its origin to cower. Other lexicographers, however, trace it to the Swed. kufwa, to check, to curb, to suppress, to subjugate ; meanings which also belong to the Isl. kuga. To cow signifies, to de- press with fear ; to break the spirits so as to ren- der habitually timid. Cowish is timorous ; mean ; pusillanimous.

Macduff was from his mother's womb

Untimely ripped.

Accursed be that tongue that tells me so,

For it hath cowed my better part of man.

Shakspeare. Macbeth. It is the cowish terrour of his spirit, That dares not undertake : he'll not feel wrongs Which tie him to an answer. Id. King Lear.

By reason of their frequent revolts, they have drawn upon themselves the pressures of war so often, that it seems to have somewhat cowed their spirits.

Howel's Vocal Forest For when men by their wives are cowed, Their horns of course are understood. Hudibrai.

Cow, n. s. CO'W-BOY, n. s.

Co'w-HERD, n. S.

CO'W-HOUSE, n. s.

Co’w-KEEPER, Tl.S.

CO’W-LEECH, v. n. & n. s. CO’W-LIKE, adj. CO’WSLIP, n. s.

\ Per. gau; Sans.

Igaa; Goth, ku ; Ang.Sax.Eu;Dut. (ˆ koe ; Ger. kuhe ; f Swed. ko. Junius supposes, ‘ KVIW vel KVM’ to be the pa j rent word. The

female of the bull. A cow-leech is one who professes to cure cows. Cowslips, says Dr. John-

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son, are so called, ‘ as some think, from the re- semblance of scent to the breath of a cow ; per- haps, from growing much in pasture grounds, and often meeting the cow’s lips.’ Others sup- pose they derive their name from cows delighting in them, or from their similitude to the lips of a cow.

If that this bone be washe in any well, If cow, or calf, or shepe, or oxe, swell That any worm hath ete, or worm ystonge, Take water of that well and washe his tongue 4nd it is hole anon. Chaucer, Cant. Tales.

How often would she flowers twine,

How often garlands make Of cowslips and of columbine,

And all for Corin’s sake. Songes and Sonnettes. Streight downe she ranne, like an enraged cow That is berobbed of her youngling dere.

Spenser. Faerie Queene. And for her sake a cowheard vile became, The servant of Admetus, cowheard vile, Whiles that from heaven he suffered exile. Id.

Show me the ground with daffadowndillies, And cowslips, and king cups, and loved lillies.

Id. Shepherd’s Calender.

Where the bee sucks, there suck I ;

In a cowslip’s bell I lie. Shakspeare. Tempest.

We see that the horns of oxen and cows, for the

most part, are larger than the bull's ; which is caused

by abundance of moisture, which in the horns of the

bull faileth. Bacon.

Then, leaving in the fields his grazing cows, He sought himself some hospitable house, Good C re ton entertained his godlike guest.

Dryden's Fables.

The terms cowkeeper and hogherd are not to be used in our poetry ; but there are no finer words in the Greek language. Broome.

Thy little sons

Permit to range the pastures : gladly they Will mow the cowslip posies, faintly sweet. Philips. You must house your milch-cows, that you give hay to, in your cow-house all night. Mortimer.

Though there are many pretenders to the art of farriering and cow-leeching, yet many of them are /ery ignorant, especially in the country. Id.

Cowslip is also called pagil, grows wild in the mea- dows, and is a species of primrose. Miller.

Mourn, Spring, thou darling of the year ! Ilk cowslip cup shall kep a tear: Thou, Simmer, while each corny spear Shoots up its head, Thy gay, green, flowery tresses shear,

For him that's dead. Bums. Who glide unseen, on printless slippers borne, Beneath the waving grass, and nodding corn ; Or lay your tiny limbs, when noon-tide warms, Where shadowy cowslips lay their golden arms.

Darwin.

In the Adventurer, a periodical paper, published by the ingenious Dr. Hawkesworth, I remember, indeed, a sort of humorous account of a dog that bit a hog in the streets ; the hog bit a farmer, and the farmer bit a cow ; and, what is very extraordinary, each con- veyed his peculiar quality to the other ; for the hog barked like a dog, the farmer grunted like a hog, and the cow did its best to talk like the farmer.

Sheridan.

Cow, in zoology. See Bos. Cow, n.s. A moveable top to a chimney, to prevent it frcm smoking. The word is supposed to be corrupted from cowl,

Cow, SEA. See TRICHECUS. CO'VVARD, v. a., n. s. & adj ~\ Fr. couurd ; CO'WARDICE, n.s. Ital. codardo';

CoVARDiZE, v. a. Sp. cobardia;

CO'WARDLIKE, adj. Etymylo

CO'WARDLINESS, re. s. Vdiffer greatly

CO'WARDLY, adj. & adv. as to thederi-

CO'WARDOUS, adj. vation of cow-

CO'WARDSHIP, re. s. ard. Junius

CO'WARDNESS, «. a. J and Skinner

refer it to cowherd; though why a man who watches cows should necessarily be a dastard, it is not easy to divine. Yet the mariner in which some of our old writers speak the word, seems to afford some ground for this conjecture. Twisden, Somner, and Tyrwhitt consider it to be a corruption of culum vertere, to turn tail. Home Tooke maintains, that coward is the past participle of the verb to cower; and with him agrees the Encyclopaedia Metropolitana. Cow- heart or cow-hearted have also been supposed to be the parent stock. Mr. Todd, however, reasons forcibly in favor of the derivation from the old Fr. couard, which itself springs from cove, Lat. cauda, a tail; allusively to animals depressing the tail between the legs when they are frightened. A coward is, a poltroon ; a dastard ; one who is habitually under the dominion of fear. The verb to cowardize, to make cowardly, is obso- lete. The meaning of the subordinate words is obvious.

I cannot love a coward by my faith.

Chaucer. Cant. Tales. Alas ! she saith, that ever I was yshape To wed a milksop or a coward ape, That wol ben overledde with every wight. Id.

This compasse well marke

Not aye with full sailes the hye seas to beate,

Ne by coward dred, in shonning stormes darke,

On shallow shores thy keel in perill fret. Surrey.

But loe my souldiers cowardly shrank away. For such is fortune when she lyst to frowne.

Sacknlle.

That I alas in this calamitie Alone was left, and to myself mought playne This treason, and this wretched cowardlye. Id. ‘

Why losest thou thy strokes

Cowardes among, turn thee to me, in case Manhood there be so much left in thy heart.

Uncertain Authors,

Vile cowheard Dogge ! now do I much repent That ever I this life unto thee lent, Whereof thou, Caytive ! so unworthy art !

Spenser. Faerie Queene, For all he taught the tender yonge was but To banish cowardixe and bastard feare. Id.

Pyrocles did such wonders, beyond belief, as waa able to lead Musidorus to courage, though he had been born a coward. Sidney.

Having more man than wit about me, I drew ; He raised the house with loud and coward cries.

Shakspeare. King Lear, I do find it cowardly and vile, For fear of what might fall, so to prevent The time of life. Id. Julius Ceesar .

A very paltry boy, and more a coward than a harp i his dishonesty appears in leaving his friend here it) necessity, and denying him ; and for his cowardshifi, ask Fabian. Id. Twelf h Niqkf

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He sharply reproved them as men of no courage, who had most cowardly turned their backs upon their enemies. KnoUet.

*There was a soldier that vaunted, before Julius C*sar, of the hurts he had received in his face. Czsar, knowing him to be but a coward, told him, You*

were best take heed, next time you run away, how you look back. Bacon.

An Egyptian soothsayer made Antonius believe that his genius, otherwise brave and confident, was in the presence of Octavius poor and cowardly.

Bacon's Natural History.

Gallant and fearless courage will turn into a native and heroick valour, and make them hate the coward- ice of doing wrong. Milton on Education.

Some are brave one day, and cowards another, as great captains have often told me, from their own ex- perience and observation. Temple.

Let all such as can enlarge their consciences like hell, and style a cowardly silence in Christ's cause discretion, know, that Christ will one day scorn them.

South.

None was disgraced ; for falling is no shame, And cowardice alone is loss of fame . The vent'rous knight is from the saddle thrown, But 'tis the fault of fortune, not his own.

Dryden's Fables.

9 Invading fears repel my coward joy, And ills foreseen the present bliss destroy.

Prior.

Tremble ye not, oh friends ! and coward fly. Doomed by the stern Telemachus to die !*

Pope's Odyssey.

Rage, we know, can make a coward forget himself and fight. But what is done in fury or anger, can aever be placed to the account of courage. Were it otherwise, womankind might claim to be the stoutest sex ; for their hatred and anger have ever been allowed the strongest and most lasting. Shaftesbwy.

To tell a man he lies, though but in jest, is an affront I bat nothing but blood can expiate. The rea- son, perhaps, may be because no other vice implies a want of courage so much as the making of a lie ; and therefore telling a man he lies, is touching him in the most sensible part of honour, and indirectly calling him a coward. Addifon.

It might, methinks, somewhat abate the insolence of human pride to consider, that it is but increasing or diminishing the velocity of certain fluids in the animal machine, to elate the soul with the gayest hopes, or sink her into the deepest despair ; to depress the hero into a coward, or advance the coward into a hero. Melmoth.

The loose improvidence, the cowardly rashness of those who dare not look danger in the face, so as to provide against it in time, and therefore throw them- selves headlong into the midst of it. Burke. O shun th' annoyance of the bustling throng,

That haunt with zealous turbulence the great ; There coward Office boasts th' unpunished wrong, And sneaks secure in insolence of state. Beattie.

Wha will be a traitor knave ? Wha can fill a coward' t grave ? Wha sae base as be a slave ? Traitor! coward! turn and flee.

Burns.

•Wher

Thy sons are in the lowest scale of being,

Slaves turned o'er to the vanquished by the victors ;

Despised by coward for greater cowardice,*

And scorned even by the vicious for such vice

As in the monstrous grasp of their conception Defy all codes to image or to name them.

Byron. The Doge of Venice.

COWARD, in heraldry, a term given to a lion borne in an es- cutcheon with his tail doubled, or turned in between his legs, as in the annexed diagram : —

COW EL (Dr. John), a learned and eminent civilian, born about 1554. In 1607 he com- piled a Law Dictionary, which gave great of- fence to Sir Edward Coke and the common lawyers : so that they first accused him to James I. as asserting that the king's prerogative was in some cases limited ; and when they failed in that attempt, they complained of him to the house of commons, as a betrayer of the rights of the people, by asserting that the king was not bound by the laws ; for which he was committed to custody, and his book publicly burnt. He also published Institutiones Juris Anglicani,

in the manner of Justinian's Institutes ; and died of the operation for the stone, in 1611.

CO'WER, v. a. & n. Yr.couver; Ital.cwore ; Lat. cubare; Goth, kura; Welsh, cwrrian. To sink by bending the knees ; to stoop ; to shrink from ; to cherish carefully : the latter meaning is obsolete.

Kingis mete to him knele and coure. To the apostles that Christ frebede.

Chaucer. Cant. Talet. Where finding life not yet dislodged quight.

He much rejoyest, and courd it tenderly,

As chicken newly hatcht, from dreaded destiny.

Spenser. Faerie Queene.

The splitting rocks cowered in the sinking sands, And would not dash me with their ragged sides.

Shakspeare. 2 Henry VI.

Let the pail be put over the man's head above wa- ter, then he cower down, and the pail be pressed down with him. Bacon.

As thus he spake, each bird and beast beheld, Approaching two and two ; ˆhese cowering low With blandishment, each bird stooped on his wing,

Milton.

Our dame sits cowering o'er a kitchen fire, I draw fresh air, and nature's works admire.

Dryden.

Lo '. where the Giant on the mountain stands, His blood-red tresses deepening in the sun, With death-shot glowing in his fiery hands, And eye that scorcheth all it glares upon ; Restless it rolls, now fixed, and now anon Flashing afar, — and at his iron feet Destruction cowers to mark what deeds are done.

Byron. Childe Harold.

A band of children, round a snow-white ram, There wreathe his venerable horns with flowers ;

While peaceful as if still an unweaned lamb, The patriarch of the flock all

gently cowers

His sober head, majestically tame. Id. Don Juan.

COWES, a sea-port town on the north coast of the Isle of Wight ; situated on the river Me- den, which divides it into East and West Cowe each of which has a castle built by Henry VIII. It is a place of considerable trade, and much re- sorted to as a bathing place. The buildings,*

rising one above another on the brow of the hill, command delightful views. The harbour is one of the safest and most commodious in the British Channel. During war large fleets of mer- chant ships are to be found waiting here for convoy or favorable winds. Genteel private lodgings abound, and there are two excellent inns. Pas- sage boats ply regularly between Cowes and Southampton, a distance of sixteen miles, and afford, in favorable weather, a most charming sail. Distance from London eighty-four miles south-west, and from Portsmouth twelve W. S. W. COWL, n. s. } Old Fr. coule; Ital. cu- CO'WLED, adj. >culla; Sp. cagulla ; Wei. COWL-STAFF, n. s. jcwl; Ang.-Sax. cul, cugle ; Sw. kufi ; Per. koolah ; Lat. cucullus. A monk's hood ; a vessel in which water is carried on a pole between two persons. Cowl-staff, usually written cole-staff, is the pole on which the vessel is suspended.

You may imagine that Francis Cornfield did scratch his elbow, when he had sweetly invented, to signify his name, saint Francis, with his friery cowl in a corn- field. Camden.

Mounting him upon a cowl-staff, Which (tossing him something high) He apprehended to he Pegasus. Suckling.

What differ more, you cry, than crown and cowl? I'll tell you, friend, a wise man and a fool. Pope.

Here the cowled zealots with united cries,

Urged the crusade. Shenstone.

They will tell you that they see no difference be-

tween the idler with a hat and a national cockade,

and an idler in a cowl or in a rocket. Burke.

Dark and unearthy is the scowl That glares beneath his dusky cowl.

Byron. The Giaour.

COWLS, worn by the Bernardines and Bene- dictines, are of two kinds ; the one white, very large, worn in ceremony, and when they assist at the office ; the other black, worn on ordinary occasions, in the streets, &c. F. Mabillon main- tains the cowl to be originally the same thing in its origin with the scapular. The author of the Apology of the Emperor Henry IV. distinguishes two forms of cowls : the one a gown reaching to the feet, having sleeves, and a capuchin, used in ceremonies ; the other a kind of hood to work in, called also a scapular, because it only covers the head and shoulders.

COWLEY (Abraham), an eminent poet, born at London in 1618. His father, who was a grocer, dying before he was born, his mother procured him to be admitted a king's scholar, at Westminster. His first inclination to poetry arose from his perusal of Spenser's Fairy Queen, when but just able to read : and he began at the age of thirteen to write poems; a collection of which was published in 1633. In 1636 he was elected a scholar of Trinity College, Cambridge, und removed to that University. He had taken Ms degree of M. A. before 1643, when, in con- sequence of the turbulence of the times, he, among others, was ejected from the college ; and retiring to St. John's Oxford, published a satire, called the Puritan and the Papist. But he did not remain long at Oxford : his zeal for the royal cause engaging him in the kind's service, whom he attended in many of his expeditions. During

one part of the civil war, he was settled in the earl of St. Albans' family ; and when the queen mother retired into France, he accompanied her; labored strenuously in the affairs of the royal family, undertook several very dangerous jour- neys on their account, and was the principal in- strument in maintaining an epistolary corres- pondence betvveen the king and queen, whose letters he decyphered. His poems were pub- lished at London in 1647 ; and his comedy called the Guardian, (afterwards altered under the title of Cutter of Coleman-street), in 1650. In 1656 he came over to England, and, under pretence of retirement, gave information to lord Ormond of the posture of the public affairs. During his stay in England he wrote his Two Books of Plants, published first in 1662; to which he afterwards added four books more ; all of which, with his other Latin poems, were printed in London, in 1678. lie was created M. D. at Ox- ford, DPC. 2nd, 1637. Soon after the Restoration he became possessed of a very competent estate, through the favor of the duke of Buckingham and the earl of St. Albans ; and, being now above forty years of age, he resolved to pass the re- mainder of life in studious retirement. His first rural residence

was at Barn Elms; but he afterwards removed to Chertsey, where he died on the 28th of July, 1667, in the forty- ninth year of his age. He was interred in West- minster Abbey, near the ashes of Chaucer and Spenser. He was a man who united a very amiable character, with admirable genius. Charles II. on the news of his death, declared ‘ that Cowley had not left a better man behind him in England.’ A monument was erected to his memory by George Villiers, duke of Buckingham, in 1675. Cowley’s other works were, A Pro- position for the Advancement of Experimental Philosophy ; A Discourse by way of Vision con- cerning the Government of Oliver Cromwell ; and several Discourses by way of Essays in prose and verse. A spurious piece, entitled The Iron Age, was published under his name during his absence from England, and, in Mr. Dryden’s Miscellany Poems, we find a Poem on the Civil War, said to be written by him, but not extant among his works. An edition of his works was published by Dr. Spratt, afterwards bishop of Rochester, who prefixed to it an account of the author’s life. Cowley’s character as a pout has been variously estimated. Lord Clarendon has said he made a flight above all men; Ad- dison, in his account of the English poets, that he improved upon the Theban bard. Dr. John- son observes of his poetry, that ‘ he wrote with abundant fertility, but negligent or unskilful se- lection ; with much thought, but with little imagery ; that he is never pathetic, and rarely sublime, but always either ingenious or learned, either acute or profound.’ Of his prose he says, ‘ no author ever kept his verse and his prose at a greater distance from each other. His thoughts are natural, and his style has a smooth and placid equability, which has never yet obtained its due commendation. Nothing is far-sought or hard labored ; but all is easy without feebleness, and familiar without grossness.’ He adds, ‘that he was the first who imparted to English numbers the

enthusiasm of the greater ode and the gaiety of the less; that he was among those who freed translation from servility; and that, if he left versification yet improveable, he left likewise from time to time such specimens of excellence, as enabled succeeding poets to improve it.’

*COWLEY (Hannah), a dramatic writer, was born at Tiverton in Devonshire in 1743. At the age of twenty-five she married Mr. Cowley, an officer in the East India Company’s service, who died in 1797. She produced as her first play the comedy of the Runaway in 1776, which was followed the year after by the Belle’s Stratagem, and some other popular pieces. Her best poems are the Maid of Arragon and the Siege of Acre. She died at Tiverton in 1809, and her works were published in 1813 in 3 vols**

8vo. with a memoir of her life.

CO-WO'RK, v. n. } From con and worker.

CO-WO'RKER, n. s. > A fellow-workman.

The power of God co-working within us. Goodwin.

And therefore in all acquired gifts and habits, such as are those of philosophy, oratory, or divinity, we ire properly rvvepyoi, co-workers with God. South.

COWPER (William), one of the most dis- tinguished of modern English poets, was the son of Dr. Cowper, rector of Berkhamstead, Herts, where he was born November 26th, 1731. His grandfather, Spencer Cowper, was a judge of the court of Common Pleas, and brother to lord Chancellor Cowper. From infancy his con- stitution was remarkably delicate, and his mind of a tender and timid cast. At six years of age he lost his excellent and ' most indulgent ' mo- ther, and was sent immediately to a large school in Bedfordshire. ' Here,' he says. ' I had hard- ships of different kinds to conflict with, which I felt more sensibly, in proportion to the tender- ness with which I had been treated at home. But my chief affliction consisted in my being singled out from all the other boys, by a lad about fifteen years of age, as a proper object upon whom he might let loose the cruelty of his temper. I choose to forbear a particular recital of the many acts of barbarity, with which he made it his business continually to persecute me : it will be sufficient to say, that he had, by his savage treatment of me, impressed such a dread of his figure upon my mind, that I well remember being afraid to lift up my eyes upon him, higher than his knees ; and that I knew him by his shoe-buckles, better than any other part of his dress. The cruelty of this boy, which he had long practised in so secret a manner that no creature suspected it, was at length discovered. He was expelled from the school, and I was taken from it.'

He was now placed for a year in the family of a surgeon and oculist, being in danger of losing one of his eyes, and from thence trans- ferred to Westminster school. He praises its religious discipline at this time, and particularly the manner in which the boys were ' prepared for confirmation :' but here he imbibed that strong aversion to public education, which he after- wards expressed so forcibly in one of his best poems, the ' Tirocinium.'

At the age of eightpen he was removed from

Westminster. ' being tolerably furnished,' as he informs us, 'with grammatical knowledge, but as' ignorant of all points of religion as the

satchel at my back;' a curious result of the aforesaid discipline. Having spent about nine months at home, he was articled to an attorney of the metropolis, until he came of age, passing his leisure time ('pretty near all his time' he says) at an uncle's in Southampton-row. At twenty- one years of age he took possession of a set of chambers in the temple, with a view to the future practice of the law, as a barrister, but was soon afterwards attacked seriously with that wretched ' dejection of spirits,' which was the bane of his life. Its causes were evidently constitutional, and he mentions an early but short • attack of the kind at Westminster school. Among the predisposing circumstances of this calamity, however, particularly at this period, we cannot but reckon the long continued idle- ness of his youth and early manhood. Had he been either by authority, by necessity, or by a sense of duty impelled to a real and steady ex- ertion of his considerable powers for business, during the important years he trifled away at Southampton-row, the result we must believe would have been most salutary.

We shall not be expected to trace the ebbmgs and flowings of this unhappy complaint. He at first looked into Herbert's Poems, and books of devotion ; was then advised to try a change of scene, and finding it relieve him, threw all his religious books aside, and renewed his school acquaintance with the profligate Churchill, with Lloyd, Thornton, and Colman ; for the latter of whom he wrote two papers in the Connoisseur His little patrimony being now well nigh spent, and a marriage being projected for him with a sis- ter of Lady Hesketh's, he gladly accepted the offer of the places of reading clerk, and clerk of the committees to the house of lords. This satisfaction, however, was but momentary. In the course of a week his apprehensions of his own incompetence, and of his being publicly exposed before the assembled peerage, were over- whelming to his mind, and he wrote to the friend who had given him the choice of three places of this kind, relinquishing the two that were most profitable. His powers completely failed him, even in preparing for the less arduous post of clerk of the Journals. His agitation produced a nervous fever. ' The feelings of a man when he arrives at the place of execution,' he says, ' are probably much like mine, every time I set my foot in the office, which was every day for more than half a year together.' He in vain left London for a short refreshment of his health and spirits: on his return, the scene of prepara- tion, and the idea of his public appearance be- fore the house, became intolerable. ' To this di- lemma was I reduced,' says he, ' either to keep possession of the office to the last extremity, and by so doing, expose myself to a public re- jection for insufficiency; (for the little know- ledge I had acquired, would have quite forsaken me at the bar of the house;) or else to fling it up at once, and by this means run the hazard of ruining my benefactor's right of appointment, by bringing his discretion into question

this situation, such a fit of passion has some- times seized me, when alone in my chambers, that I have cried out aloud, and cursed the hour of my birth ; lifting up my eyes to heaven, at the same time, not as a suppliant, but in the hellish spirit of rancorous reproach and blasphemy against my Maker. A thought would sometimes come across my mind, that my sins had perhaps brought this distress upon me, that the hand of divine vengeance was in it; but in the pride of my heart I presently acquitted myself, and thereby implicitly charged God with injustice, saying, ‘ What sins have I committed to deserve this?’

He hoped for madness, he tells us afterwards, and resolved on suicide; not, as some of his biographers have stated, in consequence of any distortion of some peculiar religious sentiments which he had now imbibed ; but in a state of evident scepticism as to all religion. ‘ Perhaps, thought I, there is no God ; or if there be, the Scriptures may be false ; if so, then God has no where forbidden suicide.’ His Calvinistic sentiments were clearly not imbibed until the latter part of his residence with Dr. Cotton. We will not transcribe the dismal narrative of his various wretched efforts to rid himself of life ; he bought laudanum, took a coach resolving to throw himself into the Thames, and at last, on the morning on which he was to appear at the bar of the house of lords, hung himself over his bed-chamber door until he was totally insensible ; but his garter providentially break- ing, he was restored to the world at the very point of strangulation. His kinsman arriving was ‘ pointed to the broken garter in the middle of the room, and apprised of the attempts which he had been making.’ Certainly, he observed, the office could not be held at that rate, asked for the deputation, and took it away with him ; and thus ended all our poet’s connexion with the house of lords.

*His intellects completely sunk under the sub- sequent pressure of remorse and the fear of death, and in 1763 he was placed under the care of Dr. Cotton, with whom he remained eighteen months. His despair, according to Mr. Great- head, was at the latter part of this period * ef- fectually removed by reading in the sacred Scrip- tures that God hath set forth Jesus Christ to be a propitiation through faith in his blood, to declare his righteousness for the remission of sins that are past, through the forbearance of God. While meditating on this passage, he ob- tained a clear view of the gospel, which was at- tended with unspeakable joy. His subsequent days were (for awhile) chiefly occupied with praise and prayer,*

and his heart overflowed with love to his crucified Redeemer. The transports of his joy, which at first interrupted his necessary sleep, having subsided, were followed by a sweet serenity of spirit, which he was enabled to re- tain, notwithstanding reviving struggles of natural and habitual corruption.'

Cowper's own Memoirs of his Early Life prepare us in part for what may be called this sudden conversion, by a narrative of some con- versation which he had with the Rev. Martin Madan prior to his illness. He also dwells on

the transports of joy with which it was accom- panied. Its best effects were the serenity whicn seems to have followed, and which lasted for a period of upwards of eight years. A writer in the Quarterly Review (No. 59) presumes to pronounce without 'doubt', that the whole was ' the mere natural consequence' of.high wrought feelings ; and speaks of the- ' flood of light which burst upon his mind as the false fire of insanity.' But Dr. Cotton was sure.'.y somewhat of a judge of this question, and his brother who concurred in his removal from that gentleman's care, was of different religious sentiments to those which Cowper now imbibed. What these were he thus informs us in a letter to a relative, dated October 20th, 1766 :— ' That Jesus is a present Saviour from the guilt of sin by his most precious blood, and from the power of it by his Spirit ; that corrupt and wretched in ourselves, in Him, and in Him only, we are complete ; that being united to Jesus by a lively faith, we have a solid and eternal interest in his obedience and suffer- ings, to justify us before the face of our hea- venly Father, and that all this inestimable treasure, the earnest of which is in grace, and its consum- mation in glory, is given, freely given to us of God ; in short, that he hath opened the kingdom of heaven to all believers ; — These are the truths, which, by the grace of God, shall ever be dearer to rne than life itself; shall ever be placed next my heart as the throne whereon the Saviour him- self shall sit, to sway all its motions, and reduce that world of iniquity and rebellion to a state of filial and affectionate obedience to the will of the Most Holy.'

He declined to return to London, he says, as the scene of his former dissipation, and resigned from the conscientious motive of being thus unable to fulfil its duties, the office of a commissioner of bankruptcy, worth about £60 per annum. His brother procured for him a retreat at Hunting- don, where in November, 1765, he became an inmate in the family of the Rev. Mr. Unwin. On that gentleman's decease, in 1767, he con- tinued to reside with his widow.

Some of the best fruits of the nine happy years of his life that followed, arc preserved in his Private Correspondence, published in 1824, by his cousin, Dr. Johnson of Yaxley. We ex- tract a playful letter of his, written at this

period; and another containing one of the best gentle admonitions on a common, but serious topic, which we have ever seen.

TO THE REV. JOHN NEWTON

‘ March 19th, 1785. ‘ My dear Friend,

‘You will wonder no doubt when I tell you that I write upon a card table; and will be still more surprised when I add, that we breakfast, dine, and sup, upon a card table. In short, it serves all purposes except the only one for which it was originally designed. The solu- tion of this mystery shall follow, lest it should run in your head at a wrong time, and should puzzle you, perhaps, when you are on the point of ascending your pulpit.

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C O W P E R.

The round table, which we ‘formerly had in use, was unequal to the pressure of my super- incumbent breast and elbows. When I wrote upon it, it creaked and tilted, and by a variety of inconvenient tricks disturbed the process. The fly-table was too slight and too small ; the square dining table too square and too large, occupying, when its leaves were spread, almost the whole parlour; and the side-board table, having its station at too great a distance from the fire, and not easily shifted out of its place and into it again, by reason of its size, was equally unfit for my purpose. The card table, therefore, which had for sixteen years been banished as mere lumber ; the card table which is covered with green baize, and is therefore, preferable to any other that has a slippery sur- face ; the card table, that stands firm and never totters, is advanced to the honor of assisting me upon my scribbling occasions ; and because we choose to avoid the trouble of making frequent changes in our household furniture, proves equally serviceable upon all others. It has cost us, now and then, the downfall of a glass ; for when covered with a table cloth, the fish ponds are not easily discerned ; and, not being seen, are sometimes as little thought of. But having nu- merous good qualities which abundantly com- pensate that single inconvenience, we spill upon it our coffee, our wine, and our ale, without murmuring, and resolve that it shall be our table still, to the exclusion of all others. Not to be tedious, I will add but one circumstance more upon the subject, and that only because it will impress upon you as much as any thing that I have said, a sense of the value we set upon its escri- torial capacity. Parched and penetrated on one side by the heat of the fire, it has opened into a large fissure, which pervades not the moulding of it only, but the very substance of the plank. At the mouth of this aperture, a sharp splinter presents itself, which, as surely as it comes in

contact with a gown or apron, tears it. It hap- pens, unfortunately, to be on that side of this excellent and never-to-be-forgotten table, which Mrs. Unwin sweeps with her apparel almost as often as she rises from her chair. The con- sequences need not, to use the fashionable phrase, be given in detail ; but the needle sets all to rights, and the card table still holds possession of its functions without a rival,' &c. voL 1, p. 349.

TO JOSEPH HILL. ESQ

'Jan. 21st, 1769. ' Dear Joe,

' I rejoice with you in your recovery, and that you have escaped from the hands of one from whose hands you will not always escape. Death is either the most formidable, or the most comfortable thing, we have in prospect, on this side of eternity. To be brought near to him, and to discern neither of these features in his face, would argue a degree of insensibility, of which I will not suspect my friend, whom 1 know to be a thinking man. You have been brought down to the sides of the grave, and you have been raised again by Him who has the keys of the invisible world ; who opens, and none can shut,

who shuts, and none can open. I do not forget to return thanks to Him on your behalf, and to pray that your life, which He has spared, may be devoted to his service. ' Behold ! I stand at the door and knock,' is the word of Him, on whom both our mortal and immortal life depend ; and, blessed be his name, it is the word of one who wounds only that he may he.al, and who waits to be gracious. The language of every such dispensation is, 'Prepare to meet thy God.' It speaks with the voice of mercy and goodness, for, without such notices, whatever preparation we might make for other events, we should make none for this. My dear friend, I desire and pray, that when this last enemy shall come to execute an unlimited commission upon us, we may be found ready, being established and rooted in a well-grounded faith in His name, who conquered and triumphed over him upon his cross.

Yours ever,

W. CJ

But we deeply lament, with the Christian Ob- server, the injudicious application of his time at this important period. It seems to have been wholly occupied with devotional exercises, and writing a few hymns and letters. It partook too much of the religion of the cloister to preserve a sound mind in a healthy state ; but with his unhappy tendency to derangement it was most injudiciously associated. In 1773, the death of his

brother brought on another paroxysm of his complaint, which rendered the following five or sis years of his life an absolute blank. During its continuance he became highly indebted to the affectionate attention of Mrs. Unwin. On his recovery his friends engaged him as much as possible in literary composition. At the sugges- tion of the Rev. Mr. Bull, a dissenting minis- ter of Newport-Pagnell, he produced his beautiful translation of Madame Guion's poems ; and pre- pared for press in the same year (1780), his first volume of poems, containing Error, Truth, Ex- postulation, Hope, Charity, Retirement, and Conversation. The latter, published by Johnson, 1782, was declared by the sages of the Critical Review to be devoid of all poetry, and attracted little general attention.

In 1781 lady Austen came to reside at Olney. Her sprightly conversation and general accom- plishments made her a most suitable and salutary companion at the vicarage ; and, as Hayley, we believe, has said,

Sent the freed eagle in the sun to bask, And from the inind of Cowpnr drew the Task.

The poet consulted' her respecting a subject for his muse : ' You can write upon any thing,' she replied, 'write upon this sofa.' He adopted the suggestion, beginning, as it would seem, a spe- cies of mock heroic description of the origin of that useful and elegant seat, and led on by his genius into the most exquisite natural and moral associations. This piece appeared, accompanying the Tirocinium, as a second volume of his poems in 1783. His character as a genuine and highly favored son of the muses was now established. Dr. Johnson spoke highly of his poetic powers, and Mr. Fox quoted him in the house of com-

mons. Unhappily for his future life and occu- pations, his gratitude to Mrs. Unwin, to whom, though much his senior in years, he had pro- mised marriage, induced him to resign in the fol- lowing year the friendship of lady Austen.

At about this period he commenced his trans- lation of Homer, which appeared in 1791, in 2 vols. 4to ; and, immediately on its completion, accepted an engagement with Mr. Johnson to translate the Italian poetry of Milton, and write a commentary on all his works. He also pro- jected a new original poem, called The Four Ages, a fragment of which appeared in Mr. Hay- ley's biographical volumes. But in 1792 a pa- ralytic seizure,

which Mrs. Unwin experienced, gave a fatal shock to his mind, and all his literary undertakings were relinquished the year fol lowing. In 1794, by the good offices of earl Spencer, a pension of £300 per annum was settled upon him by the crown ; he manifested, however, no visible satisfaction at the communi- cation of this fact. At this period, in the feeble state of Mrs. Unwin's Jhealth, his cousin lady Hesketh kindly undertook the management of his domestic concerns.

He was removed from Olney in 1795, together with Mrs. Unwin, to the house of his relative the Rev. Mr. Johnson, of Tuddenham, Norfolk. On the journey he walked with his young kins- man in the church-yard of Eaton, near St. Neot's, by moon- light, and talked of the poet Thomson with some composure. Soon after he visited another relation at Mattishall, where, seeing his own portrait by Abbot, he clasped his hands in an agony of grief, wishing that his present sensa- tions could be what they were at the period when he sat to the artist.

He had short lucid intervals in the summer of 1796, and in the course of 1799 ; but the death of Mrs. Unwin once more threw him back into gloom at the close of the former year ; and in the latter, he only made a few insignificant translations, and composed his Castaway. Symp- toms of dropsy appeared in the beginning of 1800, and brought him to the grave the 25th of April in that year, at Dereham.

Few authors have had the facts of their history more amply detailed than Cowper. Mr. Hayley announces and spins them out to absolute tedi- ousness; but he performed the great service to the public of establishing the claims of our poet to be also one of our ablest English letter-writers. In the choice selection of words he has been held to equal Pope ; in wit and humour, Gray, and oven Swift ; while he is as free from all vulgarity as irom all affectation, and utters the language of the heart in the most spirited and easy style. Of the influence of his peculiar religious sentiments on the latter part of his life, our readers will arrive at very different conclusions, perhaps, according to their own respective sentiments. As a poet he will rank to the latest posterity, we cannot doubt, with the first of our painters after na- ture ; and, as eminently, the bard of social life. As a translator of Homer he is rugged, cold, and often repulsive ; but faithful and correct. As com- pared with Pope, he has been well said to have all in this respect that his predecessor wants, and to want all that grace and spirit which he possesses.

COWRIES, the name of a species of cyprea, whose shell is of a fine white color and crimped, bearing a high polish. It is extensively used as money in India and Africa.

COWRY. The small shell commonly known by the name of blackamoor's tooth. See CY- PR.&A.

It is curious that some of the most common fossil shells are not now known in their recent state as the eornua ammonis ; and on the contrary, many shells which are very plentiful in their recent state, as lim- pets, sea-ears, volutes, cowries, are very rarely found fossil. Darwin.

COWSLIP. See PRIMULA.

COW-WHEAT. See MELAMPYRUM.

COX (Richard), a learned prelate, was born at Whaddon in Buckinghamshire, in 1499. He obtained a scholarship at King's College, Cam- bridge, of which he became a fellow in 1519 : he was thence invited to Oxford by cardinal Wol- sey, and made one of the junior canons of Car- dinal College. In 1525 he was incorporated B. D. and in 1526 took the degree of M.A. But his attachment to the opinions of Luther soon rendered him hateful to his superiors, who threw him into prison on a suspicion of heresy. Being, however, soon released, he was chosen master of Eton school, which flourished under his care. In 1537 he took his degree of D.D. at Cambridge; in 1540 was made archdeacon, and in 1541 prebendary of Ely. In 1546 he was made dean of Christ Church, Oxford. By the recommendation of archbishop Cranmer, he was chosen preceptor to prince Edward ; on whose accession to the throne he was sworn of the privy council, and made king's almoner. In 1547 he was elected chancellor of Oxford; in 1548 canon of Windsor ; and 1549 dean of Westminster. Being appointed one of the com- missioners to visit the University of Oxford, his .zeal for reformation was so little under the gui- dance of knowledge, that he destroyed a number of curious and valuable books, because they were written by Roman Catholics. On the ac- cession of queen Mary, he was stripped of all his preferments and committed to the Marshal- sea. Being released, he immediately left the kingdom, and resided at Strasburg with his inti- mate friend Peter Martyr. On the death of queen Mary he returned to England, wa-s ap- pointed, with other divines, to revise the liturgy. In 1559 was preferred to the see of Ely, which he enjoyed upwards of twenty- one years. He died 22d of July 1581, aged eighty-one. His works are, 1. Two Latin Orations on the Dis- pute between Dr. Tresham and Peter Martyr, London 1549, 4to. 2. Liturgy of the Church of England ; in compiling, and afterwards cor- recting which, he was principally concerned. 3. The Lord's Prayer in verse, commonly printed at the end of David's Psalms by Sternhold and Hopkins. 4. Translation of flie four Gosoels, the Acts of the Apostles, and the Epistle to tue Romans, in the new translation of the Bible in the reign of Elizabeth. 5. Resolutions of some Questions concerning the Sacrament, in the Col- lection of Records at the

end of Burnet's History of the Reformation. 6. Several Letters to the

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queen and others, published in Strype's Annals of the Reformation.

CO'XCOMB, -\ From cock and

CO'XCOMBLY, adj. I comb. The top of the

COX'COMICAL, adj. vhead; the distinctive

COX'COMICALLY, arfv.i ornament which li-

COX'COMBRY, n. s. J censed fools formerly

wore in their cap ; a fop ; a superficial pretender

to knowledge or accomplishments; a kind of red

flower. Coxcombly is foolish ; vain ; in the

manner of a coxcomb. Coxcomical is, foppish;

conceited. A low word, unworthy of use, says

Johnson ; but in spite of his censure, the word

is still in use, as well as its relation, coxcomically.

As the cockney did to the eels, when she put them

i' the pasty alive ; she rapt them o" th' coxcombs with

a stick, anil cried, Down, wantons, down !

Shakspeare. King Lear.

There, take my coxcomb ; why, this fellow has ba- nished two of his daughters, and did the third a bles- sing against his will : if thou follow him, thou must needs wear my coxcomb. Id.

I sent to her,

By this same coxcomb that we have i' th' wind, Tokens and letters which she did resend. Shakspeare.

I scorn, quoth she, thou coxcomb sil'y, Quarter or council from a foe. Hudibras.

It is a vanity for every pretending coxcomb to make himself one of the party still with his betters.

L'Estrange.

They overflowed with smart repartees, and were only distinguished from the intended wits by being called coxcombs, though they deserved not so scanda- lous a name. Dryden.

She is a most engaging creature, if she were not so fond of that damned corcombly lord of hers.

Congreve.

Some are bewildered in the maze of schools, And some made coxcombs, nature meant but fools.

Pope.

Because, as he was a very natural writer, and they were without prejudice, without prepossession, with- out affectation, and without the influence of corcomi- col, senseless cabal, they were at liberty to receive the impressions which things naturally made on their minds. Dennis.

We should not deem a man a coxcomb for his dress, till, by frequent conversation, we discover a flaw in his title. If he was incapable of uttering a bon mot, the gold upon his coat would seem foreign to his cir- cumstances. A man should not wear a French dress, till he could give an account of the best French au- thors ; and should be versed in all the oriental lan- guages before he should presume to wear a diamond.

Shew tone.

LORD F. Now, by all that's good and powerful, thou art an incomprehensive coxcomb — but thou mak- est good shoes, and so I'll bear with thee. Sheridan.

You haven't been here, I believe, since I fitted up this room. Books, you know, are the only things in which I am a coxcomb. fa

One hates an- author that's all author, fellows In foolscap uniforms, turned

up with ink.

So very anxious, clever, fine, and jealous,

One don't know what to say to them, or think,

Unless to puff them with a pair of bellows ; Of coxcombry's worst coxcombs e'en the pink,

Are preferable to these shreds of paper,

Thes»unquenched snuffings of the midnight taper.

Byron. Bejipo.

COY, v. a. & adj. -\ Old Fr. coy or quay, a CO'YISH, adj. i corruption of Lat. quietus.

CO'YING, n. s. \ The verb, which is now Co'YLY,adu. i little, if at all in use, sig—

CO'YNESS, n. s. J nines, to behave reserved- ly; to make difficulty ; to allure; to caress ; to pat or stroke. The adjective coy means, mo- dest ; reserved ; shrinking from notice ; receding from familiarities. Coying, as a noun, is fond- ling , petting. The rest of the secondary words do not require elucidation.

Ther was also a Nonne, a prioresse, That of hire smiling was ful simple and coy, Hire gretest othe n'as but by Seint Eloy.

Chaucer. Prol. to Cant. Tales. Sire clerk of Oxenforde, our hoste said, Ye ride as stille and coy as doth a maid, Were newe spoused, sitting at the bord.

Id. Cant. Tales.

Of Bialacoil she toke aie hede, That er he liveth in wo and drede, lie kept him coye and eke prive.

Id. Romaunt of the Rose.

A fairer beaste, of fresher hue, beheld I never

none,

Save that her lookes were coy, and froward eke her

grace. Surrey.

Wherefore I woulde you wiste, that for your coyed

lookes,

I am no man that will be trapt, nor tangled with such hookes. Id.

So forth they rode, he feining seemly merth, And she coy lookes. Spenser. Faerie Queene.

For my sake hith learned to sport and dance,

To coy, to wanton, dally, smile, and jest.

Shakspeare. Venus and Adonis. Oh pity, gan she cry, flint-hearted boy ! 'Tis but a kiss I beg, why art thou coy ? Id.

I'll mountebank their loves,

Coy their hearts from them, and come home beloved Of all the trades in Rome. • Id. Coriolanvs.

If he coyed To hear Cominius speak, I'll keep at home, Id.

— In love, scorn is bought with groans ; coy looks, With heart-sore sighs; one fading moment's mirth, With twenty watchful, weary, tedious nights :

Id. Two Gentlemen of Verona.

This said, his hand he coyly snatched away From forth Antinous' hand. Chapman's Odyt,s;y.

When the sun hath warmed the earth and water, three or four male carps will follow a female ; and she putting on a seeming coyness, they force her through weeds and flags. Walton.

Like Phtebus sung the no less am'rous boy : Like Daphne she as lovely, and as coy. Waller.

When the kind nymph would coyness feign, And hides but to be iound again. Dryden.

What, coying it again ! "No more ; but make me happy to my gust, That is, without your struggling. Id. King Arthur.

Retire ! I beg you, leave me. —

Thus to coy it !

With one who knows you too '.

Roive's Jane Shore.

At this season every smile of the sun, like the smile of a coy lady, is as dear as it is uncommon.

Pope The NileV coy source. Granger

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So pure, so soft, with sweet attraction shone £air Psyche, kneeling at the ethereal throne ; Won with coy smiles the admiring court of Jove, And warmed the bosom of unconquercd love,

Darwin.

In vain delighted memory tries to raise My doubtful song, and aid my will to praise ! In vain ! nor fancy strike, nor memory knows Those little springs from whence those joys arose. Yet come, coy fancy, — sympathetic maid ! Yes — I will ask, I will emplore thy aid : —

Sheridan.

COYPEL (Anthony), an excellent French painter, born at Paris in 1661. Noel Coypel, his father, being chosen by M. Colbert to be the director of the academy at Rome, he took An- thony with him into Italy, where he formed his style on the works of the greatest masters, and on his return to France was made first painter to the duke of Orleans ; who employed him in painting the grand gallery of the royal palace, and allowed him a pension. In 1714 he was director of the academy of painting and sculp- ture. In 1715 he was made first painter to the French king, and was ennobled. He died in 1722. M. Coypel, his son, also excelled in the same art.

CO'YSTREL, n. s. A species of degenerate hawk.

One they might trust, their common wrongs to

wreak :

The musket and the coystrel were too weak, Too fierce the falcon. Dryden's

Hind and Panther.

COZ, n. s. A cant or familiar word, contrac- ted from cousin.

Be merry, cox ; since sudden sorrow Serves to say thus, some good thing comes tomorrow.

Shalupeare.

CO'ZEN, v. n. \ Minsheu says, ' to de E, n. s. f ,n. s. f

CO'ZENING, n. s. J dred.' This derivation

v. n. ~

CO'ZEN AGE, n. s. f ceive or beguile under the CO'ZEN ER, n. s. {name or show of kin-

seems to be more ingenious than solid. It is rather too Swiftean. Junius refers to the Dutch koosen, to fawn upon, to sooth, or flatter. The Encyclopaedia Metropolitana says, ' the primi- tive is probaby Ang.Sax. costnian, to try, to tempt. Perhaps we may be allowed to go farther north, for the authority of Serenius, who says Goth, and Sueth. kjusa, fascinari ; kosen, fasci natur.' It will hardly be denied, that many of those who have been cozened, seem to have been fascinated, bewitched, by the cozener. To cozen is, to cheat; to trick; to defraud; to impose upon. Cozenage and cozening signify, fraud ; trick ; cheat ; fallacy ; the practice of cheating ; the profession of a cozener.

For he was scholed by kind in all the skill Of close conveyance, and each practice ill Of coosinage, and cleanly knavery, Which oft maintained his master's bravery. Besides he used another slippery sleight, In taking on himself in common sight False personages, fit for every sted, With which he thousands cleanly coosined.

Spenser. Mother Hubbard's Tale.

Let the queen pay never so fully, let the muster- itiastcr view them never so diligently, let the deputy

or general look to them never so exactly, yet they can cozen them all. Id.

Her lilly hand her rosy cheek lies under,

Cozening the pillow of a lawful kiss.

Shakspeare. The Rape of Lucrece.

Indeed, Sir, there are cozeners abroad, and there- fore it behoves men to be wary. Id. Winter's Tale.

They say this town is full of cozenage, As nimble jugglers that deceive the eye, Disguised cheaters. Id. Comedy of Errors.

Wisdom without honesty is meere craft and cozenage ; and therefore the reputation of honesty must first be gotten, which cannot be but by living well : a good life is a main argument. Ben Jonson's Discoveries.

There's no such thing as that we beauty call, It is mere cozenage all ; For though some long ag Liked certain colours mingled so and so, That doth not tie me now from chusing new.

Suckling.

Imaginary appearances offer themselves to our im- patient minds, which entertain these counterfeits, without the least suspicion of their cozenage.

Glanville's Scepsis.

Goring loved no man so well but that he would cozen him, and expose him to publick mirth for having been cozened. Clarendon.

Ua that suffers a government to be abused by care- lessness or neglect, does the same thing with him that maliciously and corruptly sets himself to cozen it.

L'Estrange.

Children may be coxened into a knowledge of the letters, and be taught to read, without perceiving it to he any thing but a sport. Locke on Education.

What if I please to lengthen out his date A day, and take a pride to cozen fate.

Dryden's Aurengzebe.

Strange cozenage ! none would live past years again, Yet all hope pleasure in what yet remain ! And from the dregs of life think to receive What the first sprightly running could not give. Id.

But all these are trifles, if we consider the fraud And cozenage of trading men and shopkeepers. Swift.

COZUMEL, a fertile island of North America, forty miles long and from three to ten wide, near the east coast of Yucatan. It is inhabited by native

Indians ; and abundant in fowl and cattle. Cortes touched here in 1519 on his ex- pedition to Mexico, and was the means of li- berating Aguilar, a Spanish dean, who, in going from Darien to Hispaniola, had been taken pri- soner a few years before by the Indians. He became the interpreter of this chief.

COZY, or COSY, adj. Snug; comfortable. The word is common in the Scotch dialect ; and is sometimes used in the English, in familiar speech.

Thou saw the fields laid bare an' waste,

An' weary winter coming fast

An' cossie here, beneath the blast, Thou thought to dwell,

Till crash ! the cruel coulter past,

Out-thro' thy cell. Burns.

CRAB, v. a., n. s., & adj. ^ CEA'BBED, adj. CRA'BBEDLY, adv. CRA'BBEDNESS, n. s. CRA'BBY, adj. CRA'BS'-EYES, n. s, CRA'BER, ra. s.

Fr. crabe ; Arm. crab ; Ang-Sax. crabba ; Dut. and • Germ, krabbe;

Swed. krabba;

Lat. carabus ;

capa/3o£. The

verb si nifies to sour ; to render peevish or me-

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CRAB.

rose. Crab is, a well-known crustaceous fish ; a wild apple; a peevish morose person; an engine for lifting heavy weights ; a sign of the zodiac. As an adjective it is expressive of some- thing worthless or degenerate. Crabbed and crabby are, peevish; unpleasing; difficult; per- plexing. Crabbedness is, sourness of taste, of countenance, of manners ; difficulty. For CRABS' EYES and CRABS' CLAWS see the following ar- ticles.

For thin husbond armed be irf ir.aille, The armes of thy crabbed eloquence Shal perce his brest and eke his aventaille.

Chaucer. Cant. Tales. And first of al Saturae gave his sentence, Which gave to Cupide litel reverence, But as a boistous chorle in his roanere Came crabbidly with austrine loke and chere.

Henderson. Testament of Creteide. Therin a camcred crabbed carle does dwell, Thot has no skill of court nor courtesie, Ne cares what men say of him, ill or well.

Spenser. Faerie Queene. A man of years, yet fresh as mote appear, Of swarth complexion, and of crabbed hue, That him -full of melancholy did shew. Id.

Noble stock Was graft with crab tree slip, whose fruit thou art.

Shakspeare.

When roasted crabs hiss in the bowl, Then nightly sings the staring owl. . Id.

Fetch me a dozen crab tree staves, and strong ones ; these are but switches. Id. Henry VIII _

O, she is

Ten times more gentle than her father's crabbed ; And he's composed of harshness. Id. Tempest.

That was when

Three grabbed months had soured themselves to death, Ere J could make thee open thy white hand, And clepe thyself my love. Id. Winter's Tale.

Crabbed age and youth Cannot live together ; Youth is full of pleasure, Age is full of care. Id. The PassionmtePilgrim.

Thus have I writ, in smoother cedar tree, So gentle satires, penned so easily. Henceforth I write in crabbed oak tree rynde, Search they that mean the secret meaning find. Hall.

Those that cast their shell are, the lobster, the crab, the crawfish, the hodmandod or dodman, and the tor- toise. The old shells are never found ; so as it is Ike they scale off and crumble away by degrees.

Bacon's Natural History. How charming is divine philosophy ! Not harsh and crabbed, as dull fools suppose, But musical as is Apollo's lute, And a perpetual feast of nectared sweets, Where no crude surfeit reigns. Milton.

Beside, he was a shrewd philosopher, And had read every text and gloss over j Whate'er the crabbedest author hath, He understood b' implicit faith. Hudibras.

The poor fish have enemies enough, beside such unnatural fishermen as otters, the cormorant, and the craber. which some call the water-rat.

Walton's Angler.

Several persons had, in vain, endeavoured to store themselves with crabs' - eyes. Boyle.

Then parts the Twins and Crab, the Bog divides, And Argo's keel, that broke the frothy tides. Creech.

Bettei gleanings their worn soil can boast Than the crab vintage of the neighbouring coast.

Dryden. Lucretius had chosen a subject naturally crabbed.

Id. Your crabbed rogues that read Lucretius

Are against gods, you know. Prior.

The Heaven-taught Bards of whom I speak When time was young, in crabbed Greek, Th' achievements of celestial legions Detailed among these lower regions. Huddesfvrd.

But if more deep the quarrel, Why sooner drain the barrel Than be the hateful fellow That's crabbed when he's mellow. Sheridan.

CRAB, of the genus Cancer, Linnaeus, is thus described. Mouth usually furnished with six feelers ; mandibles thick and horny ; eyes two, distant, elongated, moveable, and commonly placed on peduncles ; antenna; four, short, and filiform, or setaceous, the inner pair (or some- times both) bifid at the last joint ; legs eight or six, and two chelate claws ; body somewhat ovate ; tail short. The species are very nu- merous, and have been subdivided into three sections.

SECT. I. — Thorax smooth, sides very entire. These species are, 1. Grapsus.— Front retuse, deflected, and armed with four lobes ; body va- riegated. (Fabricius, fee.) A native of the West India Islands, where it is not very common. The color whitish, most elegantly varied with red. The hand- claws are comparatively small and rough. 2. Mutus. — Thorax chestnut- brown transversely on the anterior margin. (Fabricius.) A native of the Mediterranean Sea. The pos- terior part of the body truncated; hand-claws

smooth; arms denticulated beneath. 3. Quo- dratm. — Thorax square ; sides crenated ; hand- claws scabrous ; Banksian Cabinet. (Fabricius.) A native of Jamaica. Size large. 4. Ruricola. — First joint of the legs spinous ; second and third with tufts of hair.

This great land-crab of the Bahama Islands, the history of which has been largely detailed by Sloane, Catesby, and others, may be thus abridged. These animals regularly march from the mountains, their usual abode, to the sea-side in the months of April and May. At that time the whole ground is covered with this band of adventurers ; and they direct their march with the utmost precision, never turning to the right or left for any obstacles they can possibly pass over. They are said to be commonly divided into three battalions, of which the first consists of the strongest and boldest males ; but the main body of the army is composed of females, which never leave the mountains till the rain is set in, and then descend in regular order, being formed into columns of fifty paces broad, and three miles deep. Three or four days after this, the rear guard follows, a straggling, undisciplined tribe, consisting of males and females, but neither so robust nor so vigorous as the former. The night is the chief time of proceeding, and if it rains by day they do not fail to profit by the oc- casion ; but when the sun shines they halt. When they are terrified, they march back in a confused disorderly manner, holding up, and

clattering thwr nippers together, as if to threaten those that disturb them. They most commonly subsist on vegetables ; but if any of them by accident are maimed in such a manner as to be incapable of proceeding, the rest foil upon and devour them upon the spot, and the'i pursue their journey.

After a march of sometimes two, or perhaps three months in this manner, they arrive at their destined spot on the sea-coast, on which they rush eagerly to the edge of the water, and let the waves wash over their bodies two or three times. This has been thought necessary by some to ripen the spawn in the ovaria, as the crab, ap- pearing satisfied with this slight bathing, imme- diately retires, and seeks a lodging on the land. Before the last time the spawn may be seen under the tail in bunches the size of a hen's egg, which they shake off into the water, leaving them to the chance of fortune and accident to bring them to maturity. The eggs that escape the shoals of fishes gathered round the shore are hatched under the sand ; and soon after the little crabs are seen slowly travelling up to the mountains. The old ones, however, have become so feeble and lean that they can hardly crawl along, and are obliged to continue in the flat parts of the

country til they recover, making holes in the earth, which they cover at the mouth with leaves and dirt. They there throw off their old shells, and r«main almost without motion, for six days to- gether, when they become so fat as to be delicious food. It is said they have then under their sto- machs four large white stones, which gradually decrease in proportion as the shell hardens, and when they come to perfection are not to be found. This animal, when in the mountains, subsisting only on vegetables, seldom ventures out ; and its habitation being in the most inaccessible places, it remains for a great part of the season in perfect security. But when they descend into the flat country, the natives destroy thousands; disre- garding their bodies, they only seek for the small spawn which lies on each side of the stomach, within the shell, of about the thickness of a man's thumb. They are much more valuable on their return, after they have cast their shells, for, being covered with a skin resembling soft parchment, almost every part except the stomach may be eaten. They are taken in the holes, by feeling for them with an instrument, and are sought after by night, when on their journey, by flambeaux light. Sometimes also they are caught when they take refuge in the bottoms of holes in rocks by the sea-side, by stopping up the mouth of the hole, and then the tide coming enters the hole, and the animal is drowned in its retreat. These crabs are of various colors ; but those of a light color are esteemed most, and when full in flesh are well tasted. In some of the sugar islands they form no inconsiderable part of the food of the poor negroes. 5. Paderus. — Thorax oblong, with three teeth in front ; eyes large and kidney- shaped. (Herbst.) Body size of a horse-bean, yellowish, with a ferruginous spot in the middle of the thorax. 6. Residuus. — Thorax subro- tund ; front on both sides emarginate. (Herbst.) Mus. Casar Viennens, fyc. 4-c.

SECT. II. — Thorax smooth and cut at the

sides. The principal species ;ire, 1. Coralli- nus. — Thorax obovate, one toothed ; front di- vided into three lobes. A native of India, and the largest known, being considerably bigger than C. pagurus, the great English crab. 2. Xaiva. — Thorax tridentate, front truncated, body hemis- pherical and about two inches and a half in breadth. A native of Chili. 3. Strigosus. — Thorax smooth, and streaked transversely on the sides ; behind the eye a single tooth ; snout de- flected, with four tubercles before the tip. 4. Pa- gurus. — Thorax with nine plaits on each side, pincers of the claws black at the tip. Found on most of the rocky shores of Europe, and is in perfection at Christmas. The flesh is more pa- latable and wholesome than that of any other crab.

SECT. III. — Thorax spinous at the back. The chief species worthy of notice are, 1. Germa- nus. — Thorax rough, with a spine in the front and on the tail. Found in the German sea, and is very minute. 2. Auritus. —

Thorax one spine in front, the back soft. Found in Iceland.

CRAB, in ship building, a sort of wooden pil- lar, whose lower end A, being let down through a ship's decks, rests upon a socket B, like the capstern ; and having in its upper end three or four holes, at different heights, through the middle of it, into which long bars are thrust, whose length is nearly equal to the breadth of the deck. It is employed to wind in the cable or to raise any other weighty matter which requires a great mechanical power. This differs from a capstern, as not being furnished with a drum head, and by having the bars to go entirely through it, reaching from one side of the deck to the other ; whereas those of the capstern, which are superior in number, reach only about eight or twelve inches into the drum head, ac- cording to the size thereof.

CRABS' CLAWS, in the materia medica, are the tips of the claws of the common crab broken off at the verge of the black part, so much of the extremity of the claws only being allowed to be used in medicine as is tinged with this color. The blackness, however, is only superficial ; they are of a grayish-white within, and when levi- gated furnish a tolerably white powder. Crabs' claws are of the number of the alkaline absor- bents; but they are superior to the generality of them in some degree, as they are found on a chemical analysis to contain a volatile urinous salt.

CRABBE (Rev. George), one of the most ad- mired British poets, was born at Aldborough, in Suffolk, on the 24th day of December, 1754; and, with the exception of Lord Stowell, was the last survivor of the eminent men mentioned by Boswell in his life of Johnson. At an early age he was sent to the village school, with the

*prospect of obtaining for him a slender educa- tion; and, when circumstances admitted, was removed to a seminary, where classics formed part of the course of instruction. His father was in the employment of the Commission of Customs, and his limited means suggested the choice of a profession in which little capital would be required ; the pursuit of medicine seemed to correspond with this view, and George was bound apprentice to the art. Having ful- filled his articles, he then began to reflect, and, finding that his temperament was not adapted to the species*of intercourse and collision with society which a diligent attention to extensive practice would demand, he immediately aban- doned this course of life, and set out for*

London in 1779, after the manner of Johnson, to live by his literary labours. For some time after his arrival, he found an occupation of some advan- tage as poetical contributor to the Lady's Maga- zine ; and, acquiring confidence from success, presented a copy of his poems to the bookseller for publication ; but in vain. His next literary effort was a , pamphlet called the Candidate, which met with abundant admirers, and would have improved his slender circumstances ; but the unexpected bankruptcy of his publisher again dissipated his bright prospects. The prin- cipal incidents in the subsequent life of Crabbe are thus told by the biographer of Edmund Burke. In 1781, the kindly feelings of Mr. Burke were excited by a young and friendless literary adventurer, who, buoyed up with the praises bestowed on his verses in the country, with the hope of bettering his fortune and adding to his fame, ventured a journey to London, where he had neither friend nor useful acquaintance, and with no more than three pounds in his pocket. This fund being speedily expended — his literary prospects darkened, no patron to recommend his efforts, and deceived by his publisher, the deepest distress awaited him. Remembering that a wealthy peer, whose seat was in his native country, was then in London, he proposed to dedicate his little volume to him, which offer was accepted ; but, upon requesting a few pounds to usher it into the world, was treated with silence and neglect. In this painful situation, occasioned by want, debt, and perplexity, he applied to his relatives, but they were unable to assist him. His poverty had become apparent to the persons with whom he resided ; the pri- son-door stood open to receive him ; he had not on earth a friend to whom he could turn round for shelter and assistance. In this extremity of destitution, he ventured an application to Mr. Burke, of whom he had not previously the slightest personal knowledge ; having no recom- mendation but his distress, and stating in his application, "that he had heard he was a good man, and he presumed to think him a great one." The address was attended with a success he could not have anticipated, however well posterity are now aware that it was deserved. Mr. Burke held forth the hand of aid, soon warmed into that of friendship ; he employed his family to canvass for the sale of his young friend's work ; and, as Crabbe's genius deve- loped itself, he introduced him to that rank and

class of society to which he felt that he Was en- titled. In 1781, the Library, his next produc- tion, met with unlimited success ; and this was soon followed by the Village, a poem which established his reputation, and obtained for him the valuable acquisition of Johnson's praise. The tender feeling his great patron manifested for the helplessness of the poet became every day warmer, and he now directed him to enter Cam- bridge University, under the patronage of the learned Watson, bishop of Llandaff, and pre- pared to take upon him holy orders. Shortly after his ordination, he accepted the curacy of Aldborough ; and, upon the recommendation of

Mr. Burke, was appointed domestic chaplain to the duke of Rutland, and appointed to the curacy of Strathern ; and, after several removals, became rector of Trowbridge, in Wiltshire, in which in- cumbency he continued till his death, on the 30th day of September, 1832- Besides the poems already mentioned, Mr. Crabbe was the author of " The Newspaper ;" a " Volume of Miscellane- ous Poetry ;" " The Borough ;" " Tales in Verse ;" " Tales of the Hall" fyc. His prose works con- sist of a Sermon on the death of the duke of Rutland, and an Essay on the natural history of the Vale of Belvoir.

CRAB TREE, in botany. See PYRUS.

CKACATOA, the most southern of a cluster of islands lying in the entrance of the straits of Sunda, in the East Indies. Its whole circum- ference does not exceed nine miles ; and off its north-east extremity is a small island forming a road, in which Captain Cook anchored, when visiting this island on his last voyage. The road where the Resolution anchored is in lat. 8° 6′ south, and by observation, in 105° 36′ long, east, by the time-keeper in 104° 48'. The varia- tion of the compass 1° west. On the full and change days it is high water at seven o'clock A.M., and the tide rises three feet two inches perpendicular.

CRACK, or

CRAKE, v. a. 4′ n. s.

CRA'CKER, n. s.

CRA'KER, n. s.

CRA'CKLE, v. n.

CRA'CKLING, n. s.

CRA'CKNEL, n. s.

CR'ACK-BRAINED, adj.

CRA'CK-HEMP, n. s.

CRA'CK-ROPE, n. s. emit a loud sound suddenly ; to boast of; to brag : in the last two senses it was formerly written crak. Crack is an abrupt disruption, in which the parts recede but a little ; the chink so produced ; the sound made by a falling, or bursting body; any sudden and quick sound; the change of the voice on entering into the state of puberty ; breach of chastity ; craziness ; a crazy man ; a boast, vulgarly, a boaster and a

prostitute ; out of hand, quickly, as, I will do it in a crack ; a lad. Crackle signifies to make slight cracks ; to decrepitate. Cracker, a noisy boaster ; a kind of firework ; that which makes any thing crack. Cracknel is a hard brittle cake, so called from the sound which it makes in being broken. Crack-brained denotes crazy; and crack- hemp and crack-rope deserving of the gallows.

Fr. craquer ; Ital.

crocchiare ; Sp. crux-

ir ; Dut. kracken ;

Ger. kracken ; Goth. lˆkreckia ; Ir. crac. To f break into chinks ;

to split ; to flaw ; to

do any thing quickly ;

to destroy : to craze ;

to fall to ruin ; to

CRACOW, a city and republic of Poland, situated at the confluence of the Vistula and Ru- dowa. Its castle, and the wide space covered by its buildings, convey to a stranger the impression of an extensive city ; but the place is thinly in- habited, the streets crooked, and the pavements wretched. It has three suburbs, one of which lies on the opposite bank of the Vistula. It is the see of a bishop, who formerly bore the title of duke of Sivaria. The cathedral once con- tained the crown and regalia of Poland, and still possesses the tombs of the ancient Polish kings. This city was founded in the thirteenth century, and is said to have had in former times no less than 70,000 inhabitants : in 1810 only 25,736. The richer classes are principally German Jews. It is well situated for trade, the principal objects of which at this time are, wood, fish, Hungarian wine, honey, wax, and linen cloth. It is 128 miles S. S. W. of Warsaw, and 264 south of Koningsberg.

The latest British traveller who has given us any account of this neighbourhood is Mr. Jacob. He arrived in this part of Poland, in the latter part of 1825, with a view to ascertaining its re- sources as a corn-country. See our article CORN LAWS.

Around the city of Cracow, he found an in- dependent republic of this name, very fertile, and extending on the Vistula about twenty miles. The •whole territory contains above 500 square miles, or 320,000 English acres, with 100,000 inhabi- tants. The land is a clayey loam, requiring three or four horses to plough it, and yielding when well managed crops of excellent wheat and oats. Where they have adopted the practice of sowing clover between the corn crops, the produce is very abundant. Cracow is its capital.

CRA'DLE, v. a., n., & n. s.~) Ang.-Saxon, CRA'DLE-CLOTHES, n. s. Scradel. To lay CRA'DLE-TIME, n. s. J in a cradle-, to

rock in a cradle ; to lodge as in a cradle. A moveable bed for children ; infancy ; a case for a broken bone; a frame to assist in launching a ship; an instrument used by mezzotinto engra- vers; a part added to a scythe for the purpose of gathering the corn into swathes. Cradle- clothes are, the bed clothes of a cradle ; cradle- time is, infancy.

The sow freting the child right in the cradel ; The coke yscalled for all his long ladel.

Chaucer. Cant Tales.

— — Or that the earth had rent in twaye, And swallowed thee in cradle as thou laye. Sackmlle.

There she beholds, with high aspinng thought, The cradle of her own creation, Emongst the seats of angels heavenly wrought.

Spenser' Colin Clout*

He knew them to be inclined altogether to war, and therefore wholly trained them up, even from their cradles in arms and military exercises.

Spenser's Ireland.

Hercules ; whose famous acts

We orderly shall tell, Whereof the first, but not the least,

In cradle-time befel. Warner.

Sao had indeed, Sir, a son for her cradle, ere she had a husband for her bed. Shakspeare. King Lear.

O could it be proved

That some night-lripping fairy had exchanged. In cradle-cloaths, our children, where they lay, And call mine Percy, bis Plantagenet ; Then would I have his Harry, and he mine. Id.

His birth, perhaps, some paltry village hides, And sets his cradle out of fortune's way. Dryden.

The tears steal front our eyes, when in the street With some betrothed virgin's hearse we meet ; Or infant's funeral, from the cheated womb Conveyed to earth, and cradled in a tomb. Id.

If they are suffered from their cradles to treat men ill and rudely, because, by their father's title, they think they have a little power over them ; at best it is ill-bred, and, if care be not taken, will, by degrees, nurse up their natural pride into an habitual contempt of those beneath them : and where will that probably end, but in oppression and cruelty ? Locke.

The cradle and the tomb, alas, so nigh !

To live is scarce distinguished from to die. Prior.

Me let the tender office long engage, To rock the cradle of reposing age ; With lenient arts extend a mother's breath, Make languor smile, and smooth the bed of death.

Pope.

He shall be cradled in my ancient shield, so famous through thg universities. Arbuthnot and Pope.

No gaudy wreath of flowers she weaves, But twines with oak the laurel leaves, Thy cradle to adorn. Beattie.

Ah ! what avails the cradle's damask roof, The eider bolster, and embroidered woof ! — • Oft hears the gilded couch unpitied plains, And many a tear the tasselled cushion stains !

Darwin.

Her brood delighted stretch their callow wings, As poised aloft their pendent cradle swings, Id.

Fast by h?s hand one lisping boy she led ; And one fair girl amid the loud alarm Slept on her kerchief, cradled by her arm. Id.

I pity kings, whom worship waits upon

Obsequious from the cradle to the throne ;

Before whose infant eyes the flatterer bows,

And binds a wreath about their baby brows ;

Whom education stiffens into state,

And death awakens from that dream too late.

Cowper.

Alas ! my babe, if thou wouldst peaceful rest, Thy cradle must not be thy mother's breast.

Sheridan.

CRADLE, in engraving, is the name of an in- strument used in scraping mezzotintos and pre- paring the plato. It is formed of steel, resem- bling a chissel, with one sloping side, upon which are cut hollow lines very near each other and at equal distances. The acting part of this tool is made circular, and the corners are rounded. After being properly tempered, it must be sharpened on the whetstone. There are various sizes of this instrument.

CRADLE, in ship-building, is a frame of tim- ber, as in the diagram, raised along the outside of a ship by the bulge, and is used to support the ship's weight, while she slides down the descent or sloping passage called the ways, which are for this purpose covered with soap a»id tallow.

CRA

CRAFT, v. n. & n. «."| Ang.-Sax. craft ; CR'AFTILY, adv. Ger. and Swed. kraft.

CR'AFTINESS, n. s. The idea conveyed by CR'AFTLESS, adj.)-the root of all these CR'AFTY, adj. I words is that of power,

CR'AFTSMAN, n. s. | strength, excellence, CR'AFTSMASTER, n. s. J and, formerly, craft and its congeners were used in a good as well as in a bad sense; they signified strength, skill. The verb, which is obsolete, means to play tricks ; to practise artifice. Craft is, manual art, trade ; ability ; fraud ; cunning ; deception ; cheating; small Tessels employed in trade. Craftily and craftiness have now invariably a sinistei meaning ; they imply cunning ; a want of fairness. Craftsman is, an artificer ; a me- chanic; craftsmaster one who is skilful in his trade.

He taketh the wise in his own craftiness. Job.

For craft is all, who so that don it can.

Chaiicer. Cant. Tales.

Though he can but lewdely

On metres and on riming craftily. Id.

A prentis whilom dwelt in our citie, And of a craft of vitaillers was he. Id.

How coud ye wepin so by craft ? (quod she) Maie there soch teris evir fained be ?

Id. Legende of Phyllis. o dearly had I boughte my grene and youthful

yeres,

If in myne age I coulde not fynde, when craft for love appeares. Surrey.

What man so wise, what earthly witt so were, As to descry the crafty cunning traine By which deceipt doth maske in visour faire ?

Spenser. Faerie Queene.

The bashfull blood her snowy cheekes did dye, That her became, as polisht yvory, Which cunning craftsman hand hath overlay d, With fayre vermilion or pure castory. Id.

You've made fair hands, Yon and your crafts ! You've crafted fair.

Shahspeare. Coriolamts.

The offence is holy that she hath committed ; And this deceit loses the name of craft, Of disobedience, or unduteous title. Id.

Nay, you may think my love was crafty love, And call it cunning. Id. King John.

What reverence he did throw away on slaves, Wooing poor craftsmen with the craft of smiles. Id. He is not his crafttmaster, he doth not do it right.

Id.

A poem is the work of the poet ; poesy is his skill or craft of making the very fiction itself of the work.

Ben Jonson.

Long as the crafty cuttle lieth sure, In the blacke cloude of his thick e vomiture, Who list complaine of wronged faith or fame, When he may shift it to another's name. Hall.

One would think that all mankind had bound them- selves by an oath to do all the wickedness they can ; that they had all (as the scripture speaks) " sold themselves to sin :" the difference only is, that some are a little more crafty (and but a little, God knows) in making of the bargain. Cowley,

Before he came in sight, the crafty god His wings dismissed, but still retained his rod.

Dryden,

No body was ever so cunning as to conceal their be- ing so j and every body is shy and distrustful of crafty men. Locke.

CRA

There is art in pride : a man might as soon learn a trade. Those who were not brought up to it, seldom prove their craftmaster. Collier on Pride,

What a resemblance this advice carries to the ora- tion of Demetrius to his fellow craftsmen.

Decay of Piety. May he not craftily infer The rule of friendship too severe, Which chain him to a hated trust; Which make him wretched to be just ? Prior. This gives us a full view of wonderful art and crift in raising such a structure of power and iniquity.

Ayllffe.

But say, in country life can craft be learned, Where knowledge opens, and exalts the soul ?

Beattie.

There sit, involved and lost in curling clouds, Of Indian fume, and guzzling deep, the boor, The lackey, and the groom : the craftsman there Takes a Lethean leave of all his toil. Cowper.

CRAG, n. s. -\ Wei. & Celt, craig;

CRA'GGED, adj. I Ang.-Sax.cpeag,which

CRA'GGEDNNESS, n. s A mean a rock; Swed.

CBA'GGINESS, n. s. i kroge , a collar. Crags

CRA'GGY, adj. J are, in the first place,

rough, steep, rocks ; the rugged protuberances

of rocks, in which case, the Welsh seems to be

the parent word. Crag, in the second place,

denotes the neck, and here we may derive it from

the Swedish and the kindred dialects. In the

latter sense, however, it is now applied only to a

neck of mutton, which is familiarly known by

the name of a crag or scrag. All the derivatives

from crag imply steepness; ruggedness; being

filled with prominences.

Upon the whiche also stode Of squarid stone a sturdy wall, Which on a cragge was found in all.

Chaucer. The Romaunt of the Rote.

Under craggy rocks they have barren plaines.

Wyat.

Ere long they come where that same wicked wight His dwelling has, low in an hollow cave, Far undeneath a craggy cleff ypight.

Spenser. Faerie Queens.

They looken bigge as bulls that been bate, And bearen the crag so stiff ond so state.

Id. Shepherd's Calender.

And as mount Etna vomits sulphur out, With clifts of burning crags and fire and smoke.

Fairfax.

It was impossible to pass up the woody and craggy hills, without the loss of these commanders.

Raleigh's Essays.

On a huge hill,

Cragged and steep, truth stands. Crashaif. Who hath disposed but thou, the winding way, Where springs down from the steepy crags do beat.

Wotton.

The craggedness or steepness of that mountain, maketh many parts of it in a manner inaccessible.

Breretaooi.

A lion spied a goat upon the crag of a high rock.

L'Ettrange.

Mountaineers that from Severus came, And from the craggy cliffs of Tetiica. Dry den.

The town and republic of St. Marino stands on the top of a very high and craggy mountain.

Addiion on Italy.

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CRA

Oft did the cliffs reverberate the sound Of parted fragments tumbling from on high ; And from the summit of that craggy mound The perching eagle oft was heard to cry, Or on resounding wings to shoot athwart the sky.

Beattie.

Round the dark crags the murmuring whirlwinds

blow, Woods groan above, and waters roar below. Darwin.

And thus a moon rolled on, and fair Haidee

Paid daily visits to her boy, and took Such plentiful precautions, that still he

Remained unknown within his craggy nook.

Byron. Don Juan.

CRAIG (John), a Scotch mathematician who settled at Cambridge about 1680, and about 1685 held a dispute with the celebrated Bernouilli on the method of the quadrature of curved lines, and curvilinear figures. He had afterwards another contest with that great mathematician on a question in algebra, but discovering that he was wrong, he candidly acknowledged it in the Phi- losophical Transactions. He wrote several able pieces on mathematical subjects; but the most ex- traordinary one is entitled, Theotogiae Christiana Principia Mathematica, first printed in 1699, at London, and at Leipsic, with a learned preface, in 1756, 4to. The design of this singular tract is to apply mathematical calculation to the gospel history ; and he maintains, on this principle, that the Christian religion must end, according to the doctrine of chances A. D. 3150, when our Lord will make his second appearance to judg- ment. The abb

CRAIL, or CARYLE, an ancient royal borough in the parish of the same name, situated on the Frith of Forth, near Fifeness, with a small har- bour. This town is mentioned by historians so early as the middle of the ninth century ; and a battle was fought here between the Danes and the Scots. It received a charter from king Robert I. which was confirmed by new grants from Robert II., queen Mary, James VI., and Charles I. Tnthe beginning of the eighth century, it was the great rendezvous for the herring fishery, but for fifty years past has gradually declined. It consists of two parallel streets extending east and west along the shore; which is here steep and high. The houses are fallen into decay, and the whole town bears evident marks of having seen better days. It lies seven miles south-east of St. Andrews.

CRAM, v. a. & n. Goth, and Swed. krama ; Dan. kramme ; Ang-Sax. cramman. To stuff; to force in too large a quantity ; to thrust in by force ; to eat to excess.

With boxes crammed ful of lyes, As evir vessel was with lies.

Chaucer. The House of Fame.

As much love in rhyme, As would be crammed up in a sheet of paper, Writ on both sides the leaf, margent and all.

Shukspeare.

Thou hast spoke as if thy eldest son should be a fool, whose skull Jove cram with brains.

Id. Twelfth Night. VOL. VI.

You craw, these words into mine ears, against the stomach of my sense. Id. Tempest.

Cram not in people by sending too fast company after company ; but so as the number may live well in the plantation, and not by surcharge be in penury.

Bacon.

Yet must he haunt his greedy landlord's hall With often presents at each festival : With crammed capons every new year's morn. Hall.

Buffer, quoth Hudibras, this sword Shall down thy false throat cram that word. Hudibrat.

Reading furnishes the mind only with materials of knowledge : it is thinking makes what we read ours. We are of the ruminating kind, and it is not enough to cram ourselves with a great load of collections ; unless we chew them over again, they will not give us strength and nourishment. Locke.

Fate has crammed us all into one lease, And that even now expiring. Dryden's Cleomenei.

You'd mollify a judge, would cram a squire ; Or else some smiles from court you may desire.

King.

But Annius, crafty seer, Came crammed with capon from where Pollio dines.

Pope.

As a man may be eating all day, and, for want of digestion, is never nourished ; so these endless readers may cram themselves in vain with intellectual food.

Watts on the Mind.

When the whole trading interest of this empire, crammed into your lobbies, with a trembling and anxi- ous expectation, waited, almost to a winter's return of light, their fate from your resolutions. Burke.

Where it [emulation] is wanting, in vain shall we preach up to children the dignity and utility of know- ledge i the true appetite for knowledge is wanting ; and, when that is the case, whatever is crammed into the memory will rather surfeit and enfeeble, than im- prove the understanding. Beattie.

CRAMBE, or CRAMBO, n. x. A cant word, prouably without etymology. A play at which one gives a word, to which another finds a rhyme; a rhyme.

So Maevius, when he drained his skull To celebrate some suburb trull, His similies in order set, And every crambo he could get. Swift.

CRAMBE, sea cabbage, sea-beach kale, or sea colewort, in botany : a genus of the siliquosa order, and tetradynamia class of plants ; natural order thirty-ninth, siliquosae. The four longer filaments are forked at top, with an anthera only on one point of each ; the fruit a dry, globose, and deciduous berry. There are eight species, all herbaceous esculents with perennial roots, producing annually large leaves resembling those of cabbage, spreading on the ground, with strong flower-stalks and yellowish flowers. Only one of these is a native of Britain. It grows wild on the shores of many of the maritime counties of England, but is cultivated in many gardens as a choice esculent. Its principal season for use is in April and May.

CRAMER (John Andrew), a celebrated me- tallurgist, born atQuedlinburgh, in 1710. He is said to have been the first who formed the art of assaying into a system ; and he composed an in- genious work on the subject, entitled Elementa Artis Docimasticae, published in 1739, 8vo. He also wrote an introduction to the care and tna-

pagement of Forests, with a particular descrip- tion of the method of Burning Charcoal, 1766. fol. and the Elements of Metallurgy, in two parts fol. He died near Dresden, in 1777.

CRAMER (John Andrew), a German divine of some celebrity, was born in 1713. He studied at Leipsic, where he became a lecturer, and pub- lished a weekly paper, entitled The Guardian Spirit. He commenced preacher in 1748, and was removed to Copenhagen, as chaplain to the court, in 1754, where he was appointed professor of theology in 1765; but was deprived of his places upon the disgrace of Struensee, after which he retired to Lubec. In 1774 he was re-esta- blished in Denmark, and received the appoint-

ment of divinity professor at Keil: at which place he died in 1788. He translated into Ger- man several of Chrysostom's works ; also Bossuet's Universal History, with Dissertations. He likewise published an animated poetic version of the Psalms; besides sermons, odes, the life of Gillert, and various miscellaneous pieces. His poems are held in great estimation.

CRAMERIA, in botany, a genus of the mo- nogynia order, and tetrandria class of plants : CAL. none: COR. four petals; the superior nectary is trifid, the inferior biphyllou? : SEED, is a dry, mo- nospermous,-and echinated berry. Species one, a native of Japan.

CRAMP, v. a., n. s. & adj.~\ Fr. crampe ;

CRAMP-FISH, n. s. (Goth. krdm;

CRAKP-IRON, n. s. tˆDan. krarnpe ;

CRAMP-RINGS, n. s. J Swed. & Ger.

kramp. To pain with cramps or twitches ; to restrain ; to obstruct ; to compress into uncom- fortably narrow bounds; to fasten with cramp- irons. Cramp is, a spasm or sudden contraction of the muscles of the limbs ; a restriction ; a hindrance ; a piece of iron bent at each end, for holding together two bodies, called also a cramp- iron : as an adjective, it signifies, difficult ; hard to be understood. Cramp-fish is the torpedo. Cramp-ring is a ring worn as a remedy for the cramp. The kings of England were formerly believed to have the power of blessing these rings on Good Friday, so as to give to them me- dicinal virtue !

But wel he felte about his herte crepe, For every tere which that Creseide asterte, The cramp of deth to straine him by the herte.

Chaucer. Troilus and Creseide.

Or beem thy bagpipes ren far out of frame 1 Or hath the cramp thy joints benumbed with ache 1 Spenser. Shepherd's Calender.

The aged man that coffers up his gold, Is plagued with cramps, and gouts, and painful fits ; And scarce hath eyes his treasure to behold.

Shakspeare. The Rape of Lucrece.

The cramp cometh of contraction of sinews ; which is manifest, in that it cometh either by cold or dry- ness. Bacon's Natural History.

It is impossible to conceive the number of inconve- niencies that will ensue,

if borrowing be cramped.

Bacon.

To the uppermost of these there should be fastened a sharp grapple, or cramp of iron, which may be apt to take hold of any place where it lights. Wilkint.

There arc few hut find that some companies benumb and cramp them, so that in them they can neither speak nor do any thing that is handsome.

Glanville's Sceptis.

A narrow fortune is a cramp to a great mind, and lays a man under incapacities of serving his friend.

L' Estrange.

When the contracted limbs were cramped, even then A waterish humour swelled, and oozed again.

Dryden's Virgil.

The antiquaries are for cramping their subjects into as narrow a space as they can, and for reducing the whole extent of a science into a few general maxims.

Adiliscm on Italy. No more

The expansive atmosphere is cramped with cold, But full of life, and vivifying soul. Thomson' Spring.*

The diversified but connected fabric of universal jus- tice is well cramped and bolted together in all its parts. Bur&e.

O that unwelcome voice of heavenly love, Sad messenger of mercy from above ! How does it grate upon his thankless ear, Crippling his pleasures with the cramp of fear !

Cowper.

SERJ. What's here '. — a vile cramp hand ! I can- not see Without my spectacles.

ATT. He means his fee.

Nay, Mr. Serjeant, good sir, try again. [Gives money.

Sheridan.

CRAMPONEE, in heraldry, an epithet given to a cross which has at each end a cramp or square piece coming from it ; that from the arm. in chief towards the sinister angle, that from the arm on that side downwards, that from the arm in base towards the dexter side, and from the dexter arm upwards.

CRANE, v.a.& n.s.) Anglo-Sax, craen ;

CRA'NAGE, J Dut. kraan ; Sw. kran ;

A bird. See ARDEA. An instrument made with ropes and pullies, for raising great weights ; a syphon for drawing liquor out of a cask. Cran- age, from low Lat. cranagium, signifies a liberty to use a crane for drawing up wares from the vessels, at any creek of the sea or wharf, unto the land, and to make profit of it. It signifies also the money paid and taken for the same.

Like a crane, or a swallow, so did I chatter. Isaiah.

The crane, the geant, with his trompis' soune.

Chaucer. The Assemble of Foulet.

And stalking stately like a crane did stryde At every step uppon the tiptoes hie.

Spenser. Faerie Queene.

That small infantry warred on by cranes. Milton.

In case the mould about it be so ponderous as not to be removed by any ordinary force, you may then raise it with a crane. Mortimer.

Then commerce brought into the public walk The busy merchant, the big warehouse built, Raised the strong crane. Thornton's Autumn.

Meanwhile they trim their plumes for length of

flight,

Whet their keen beaks, and twisting claws, for fight ; Each crane the pigmy power in thought o'erturns, And every bosom for the battle burns. Beuttie.

CRANE, in ornithology, see ARDEA.

CRANES, in practical mechanics, are con- nected with their entire history.

What other name can we give to those early Jriumphs of scientific mechanism, the engines of Archimedes ? To him

has been attributed the theory of the inclined plane, the pulley, and the screw : while the machines alluded to, by which he annoyed the Roman army, astonish modern mechanics with regard to their power. Polybius represents them as composed of a balance and powerful levers, but we have no detailed description of them. In the ancient theatres the gods descended in clouds by means of some contrivances of this kind. Vitruvius is the earliest explicit writer on the subject. He mentions a 'species of crane used for the lading and unlading of vessels, as well as for raising the heavier stones of a building, which was moved by men walking within a wheel, to which were attached pulleys, and on some occasions the aid of the capstan was employed ; but the jib, or arm of the modern crane, seems to have been wanting.

Until a comparatively recent date all the cranes in ordinary use in this country were constructed nearly as follows : — The princi- pal member was a strong upright beam or arbor, firmly fixed in the ground, and sus- tained by eight arms, coming from the extre- mities of four pieces of wood laid across, through the middle of which passes the foot of the beam. About the middle of the arbor the arms met, and were mortised into it ; its top ending in an iron pivot, which bore a transverse piece, advancing out to a good distance, something after the man- ner of a crane's neck, whence indeed the machine had ks name. This projecting piece was com- monly called the jib or gibbet. The middle and extremities of this were again sustained by arms from the middle of the arbor : and over it came a rope or cable, to one end of which the weight was fixed ; the other was wound about the spindle of a wheel, which when turned (commonly by means of men walking upon the inside of the rim of the wheel) drew the rope, and that heaved up the weight; which might afterwards be applied to any side or quarter by the mobility of the transverse piece on the pivot.

These cranes were usually of two kinds : in the first, called the rat-tailed crane, the whole machine with the load, turned upon a strong axis; in the second kind, the gibbet alone moved on its axis. In both kinds, when the machinery

this is drawing up, the ratch-teeth of a wheel slip round below a catch that falls into them, pre- vents the crane from turning backwards, and detains the weight in any part of its ascent, if the man who works at the winch

should accidentally quit his hold, or wish to rest himself before the weight is completely raised. Making a due allowance for friction, a man may raise by such a crane, from three times to twelve times as much in weight as would balance his effort at the winch, viz. from ninety to 360 Ibs., taking the average labor.

All cranes in which chains are used should be provided with barrels with a spiral groove cut in them, and the lower half of the chain run in the groove. This was applied in 1789 by Mr. John Smeaton, to a crane designed by him, and executed at the Wool-quay, Custom-house, and found to be a great advantage.

In 1792 Mr. James White, of Chevening, Kent, invented a crane for wharfs, for which he received the premium of the Society of Arts, and which was a decided improvement upon the walking crane. See plate CRANES, fig. 1. Its properties are these : — 1. It is simple, consisting of a mere wheel and axle. 2. Its only friction, exclusive of the pulleys, is that on the two gudgeons of the shaft ; and one of these supports the weight of the wheel, and of the man who works it, nearly in the direction of its point. 3. It is durable. 4. It is safe, for it cannot work but during the pleasure of the man, and while he is actually pressing on the gripe lever. 5. It admits of an almost infinite variety of different powers; and this variation is obtained without the least alteration of any part of the machine. If in unloading a vessel, there should be found goods of every weight, from a few hundreds to a ton and upwards, the man who does the work will be able so to adapt his strength to each, as to raise it in a time inversely proportionate to its weight; he walking always with the same velocity, as nature and his greatest ease may teach him. It is a great disadvantage in some cranes, that the smallest weight must be as long in raising as the largest, unless the man turn or walk on with a greater velocity, which tires him in proportion. In other cranes two or three

was put in motion by men walking within the different powers may be procured, to obtain

wheel, as was the almost universal practice, the laborers employed were exposed to extreme danger, and frequently met with the most shock-

which, some pinion must be shifted, or fresh handle applied. But in this crane, if the laborer find bis load so heavy as not to permit him to

ing and fatal accidents. From this principle of ascend without turning, let him only move a step

their first movement, these machines have been generally called walking

cranes.

The late Mr. Ferguson invented a crane, which has three trundles, with different numbers

or two towards the circumference, and he will be fully equal to the task. Again, if the load be so light as scarcely to resist the action of his feet, and thus oblige him to run through so much

of staves, that may be applied to the cogs of a space, as to tire him beyond necessity, let him

horizontal wheel with an upright axle; round which is coiled the rope that draws up the weight. This wheel has ninety-six cogs ; the largest trundle twenty-four staves, the next twelve, and the smallest six ; so that the largest

move laterally towards the centre, and he will soon feel the place, where his strength will suffer the least fatigue, by raising the load in question. If left alone, this crane will reduce itself to a state of rest, even though a weight were sus-

revolves four times for one revolution of the pended to it. The means are, the gripe or brake wheel, the next eight, and the smallest sixteen, at the top, and its lever, which stretches across A winch is occasionally fixed on the axis of the diameter of the wheel, at the height of a either of these trundles for turning it; and is man's breast, when in an attitude of treading the applied to the one or the other, according as the wheel. The frame of the crane may be con- weight to be raised is smaller or larger. While sidered as part of the house in which it is placed,

and is almost unnecessary where such a crane is to be erected in a house already built. In ware- houses this crane would be extremely simple and cheap; as the wheel, though of considerable diameter, occupies but little room, from its thin- ness and inclination. A slit in a floor about two feet wide, with a support above and below for the axis, is all that is necessary to constitute and contain the crane : for goods may be stowed both under the whole wheel, and above nearly half of it; and there would be ample room to stow a large quantity of goods properly sheltered from the weather. Hence, the house would diminish the wharf room much less than many others. One man's weight alone, applied at the extremity of the

wheel, would raise upwards of a ton ; and a single-sheaved block would double that power: and this wheel will give as great advantage, at any point of its plane, as a common walking wheel of equal diameter; as the inclination can be varied at pleasure. A represents a circular inclined plane, moving on a pivot underneath it, and carrying round with it the axis E, A person walking on this plane, and pressing against the lever B, throws off the gripe D, by means of an iron rod C, and thus admits the plane and its axis to move freely, and raise the weight G, by the coiling of the rope F round the axis E. To show more clearly the construc- tion and action of the lever and gripe, a plan of the circular inclined plane is added, fig, 2 ; where B represents the lever, D the spring or gripe. In this plan, when the lever B is in the situation it now appears in, the spring or gripe D presses against the periphery of the plane, as shown by the double line; and the machine cannot move but when the lever B is pressed out to the dotted line H. The gripe is also thrown off to the dotted line I, and the whole machine left at liberty to move. One end of a rope of a proper length is fixed near the end of the lever B, and the other end made fast, to one of the uprights, serving to prevent the lever from moving too far, when pressed by the man.

In 1805 Mr. Gilbert Gilpin received the silver roedal of the Society of Arts for the invention, in fact, of Mr. Smeaton, above alluded to; the society appearing ignorant that it had been used before. The pulleys were in this machine grooved to receive the lower half of the alternate links of the chain in the same manner as in Mr. Smeaton's. But Mr. Gilpin farther proposes, that the lower pivot on which the vertical arbor of the crane turns, instead of being fixed to that shaft, and turning in a bush or socket fastened in the nether block, shall be fixed in that block, while a socket in the lower part of the shaft shall be made to fit it, and turn about it.

Many practical and scientific men have thought highly of Mr. D. Hardie's crane, of St. James's Street. It will be seen to be on the very principle of the modern tread-mill.

This crane is in fact the same kind of walking- wheel as is used in China for working at the chain-pump, in raising water to the higher grounds employed in the culture of rice. The wheel is six feet in diameter, and may vary in length from six to twelve or more feet, according to the number of men intended to be employed

in working it; on the outside of the wheel are placed twenty-four equidistant steps, after the manner of float-boards in a mill water-wheel ; these are for the men to tread upon, where the steps are found at a height rather exceeding that of the axis, or just above the position where the plane of the steps becomes horizontal. At one end of the wheel, and upon its axle, is the crane- rope barrel, of a diameter suited to the draft of goods, and the

number of men generally allowed. The men ascend by a flight of steps to a platform on the same horizontal plane as the axle of the wheel, and which reaches to within a few inches of its rim ; on this platform is a seat, on which the men may rest themselves at the intervals between the operations. On the general frame- work which supports the wheel, there are placed above it, at suitable distances and convenient heights, both vertical and horizontal handles for the men to take hold of with both hands, when treading on the steps ; sometimes both hands are applied to the vertical handles ; at others, one hand to a vertical, and the other to a horizontal handle; at others, both hands to the horizontal handles ; thus producing by either pushing or lifting, or both, a variety in the action, and, when necessary, a considerable augmenta- tion to the force. There is a pawl which drops in at every step to prevent the wheel and its in- cumbent weight from overpowering the men at any time; it has at its lower part a cord with a loop to pass over one of the horizontal handles, near the extremity of which there is a notch suf- ficiently deep to retain the loop when drawn into it, for the purpose of raising the pawl to disen- gage it from the wheel preparatory to any ope- ration of lowering. It is obvious, that by treading on the steps as they arrive at the position just above the horizontal plane passing through the axis, the men both ascend and descend nearly in the same vertical direction, of consequence the greatest possible velocity is produced without any unproductive labor ; and the men are ena- bled to maintain the action by means of a hold of an upright handle in each hand, or occasionally to augment the action by pushing at these handles. Further, by taking hold of the hori- zontal handles, each man can, by an act similar to that of lifting, augment the force arising from his weight through all the degrees from about 150 to 300 Ibs.; so that the same number of men can perform many operations of raising greater drafts than usual : such as with the common walking wheel or most other cranes could not be accomplished without additional men ; and the pawl which drops in each step provides in the most effectual manner for the safety of the men ; besides, that the distance between the edge of the platform and the revolving wheel is by no means large enough for a man to fall through.

Mr. Hardie has likewise contrived a method of operating without a gibbet, in which he places the crane at the top of the warehouse so as to allow the crane-rope to drop directly down from the barrel of the crane in front of the loop-holes; and at the upper floors, where the shortness of the rope diminishes the swing of the goods in or out of the loop-hole, he has provided a sliding floor immediately under the floor of the ware-

fcouse, which one man draws out or in, by pull- ing a cord, with the greatest ease, to receive or deliver me goods by a truck at the loop-hole. The part of the warehouse floor which is imme- diately above the sliding-floor, consists of a thin plate of cast iron, which allows the truck to run off the one on the other, without any sensible ob- struction. Thus more than one man's labor in five or six is saved by getting quit of the friction* of the pulley of a gibbet; and a still greater saving of labor is effected by accelerating all the movements at the loop-holes.

Mr. Hardie's lowering regulator is invented for the special purpose of removing the evils and dangers attendant upon the usual practice of lowering goods by the brake and brake-wheel. The part essential to this invention is a cast-iron box, fixed firmly to a floor, and divided into two cylindrical compartments ; each ten inches long, one of four inches diameter, and the other of two inches diameter : these are both filled with oil, a liquid not subject to any- material change by frost ; or they may be filled with water in summer and mild weather, and some spiritu- ous liquor (gin for instance) in frosty weather. These two cylinders communicate by apertures at their top and bottom ; the smaller compart- ment having a cock with its axle passing through the side of the iron box, guarded by a stuffing- box, and a quadrant with equidistant notches fixed at its end, to receive an iron claw which retains the cock in any proposed situation, and shows the extent of its apertures when opened. The larger compartment has a piston, with its rod passing through the top of the iron box (guarded here also by a stuffing-box), and pass- ing through a guide ; this rod is connected with a joint moved by a crank, which is turned by a pinion of about six teeth, and this pinion is •moved by a wheel of a size suited to the diame- ter of the barrel of the crane, and the weight of the goods commonly lowered : this latter wheel is fixed to the axle of the crane by a simple mode of connexion, which admits of its being disengaged during the operation of raising ; it is also pro- vided with the barrel-rope and counter-weight, which are commonly used for the purpose of winding up the slack crane-rope on the barrel of the crane, to be ready to repeat the operation of lowering.

Now if the cock were quite shut, the oil or other liquid confined between it and the piston would prevent the piston from moving, and of course hinder the goods hanging from the wheel, &c. connected with the pinion from descending : but, if the cock were opened a very little, the oil would pass slowly through it, and would therefore allow the piston to move up and down slowly, and the goods to descend slowly also ; and in like manner a

farther opening of the cock, will permit the load to descend with a greater velocity ; thus the cock, by being more or less opened, gives the precise velocity desired to the descent of the goods, whatever their weight may be. The advantages resulting from these inventions are too obvious to require our dwelling upon them. Although the crane is a walking-crane, yet it is free from the dangers and disadvantages of the common walking-wheel ; for as the men

walk on the outside of the wheel instead of in- side of the rim, they are, in consequence of the adjoining platform, and the use of the pawl, free from danger ; while, during the whole time of their labor, they can walk in an upright posture, well suited to free respiration ; and farther, as they act at the extremities of horizontal levers, their weight and occasional muscular force act with all the advantages they can have ; while the modifications they can make at pleasure in their action, will frequently supersede the necessity of calling in any more men, even when a double load is to be raised. Indeed, there can be no doubt that with a crane of this construction, any given number of men will raise at least twice as muchina day, as they could in a common walk ing wheel, or working at a capstan, or at a wheel and pinion. And as to the lowering apparatus, it possesses a much higher degree of perfection in lowering than any of the other cranes. The means afforded of regulating it to lower either small or great weights with facility, expedition, and safety, and without depending during the operation on the precarious attention and ma- nagement of a man, render it in our opinion far preferable to the hazardous and limited mode of lowering goods by the brake ; while, with respect both to safety and great saving of labor, it obvi- ously surpasses the modes of lowering by the capstan and the walking-wheel, which require nearly' the same number of men to lower that they take to raise any weight.

It appears that Mr. Ferguson, the late popular lecturer on mechanics, first suggested the appli- cation of the vertical rollers above the axis or upper gudgeon of the jib. These ought so to be placed, that, if the rope be stretched close by their outermost sides, the half thickness of the rope may be perpendicularly over the upper gudgeon of the jib; for then the length of the rope, be- tween the pulley in the jib and the axle of the great wheel of the machine, will be always the same, in all positions of the jib ; and the jib will consequently remain in any po- sition to which it may be turned ; and they thus let the rope bend upon them as the jib is turned to either side. Almost all the jibs of the London warehouse cranes are constructed in this manner, the wheel-work being in the interior of the premises.

A useful crane, connected with the action of a capstan is in much use; and has been thus de- scribed. At the extremity of abeam, supported horizontally ten or twelve feet from the ground, is the upper pivot of a jib

supported, the lower pivot resting on a post fixed in the ground. The jib is formed of a triangular frame and perpen- dicular sides, moving upon pivots on a vertical axis of motion. At an angle of about 90° or upwards, a beam is projected from near the up- per end of the perpendicular part of the jib, and forming the upper side of the triangle. The third side is formed by a strong brace projected from near the foot of the perpen- dicular post, towards the extremity of the upper beam. From this extremity the weight is suspended by a rope passing over a pulley : the other end of the rope is wound round a vertical roller or capstan tnrning on pivots, one of which

is supported by the horizontal beam first menti- oned; the other on a post. Horizontal levers move this capstan capable of receiving as many men or horses as may be thought proper. The power is sometimes increased by the application at the jib of additional pulleys or blocks. For Mr. Heriot, of the Thames police office, has been claimed the original suggestion of applying the hydrostatic principle to cranes. Mr. Bramah, however, it is clear, first carried it into practice. The hydrostatic paradox, in fact, on which his machine is constructed, has been known for ages.

The simplest form of it is a machine to raise a heavy weight to a small height. A metallic cy- linder, sufficiently strong, and bored cylindrical within, has a solid piston fixed into it, which is made perfectly watertight, by a leather or other packing, round its edge. In the bottom of the cylinder is inserted the end of a smull tube, by means of which water, or any other fluid, may be introduced from a forcing pump. This pump is of course provided with valves to prevent the re- turn of the water. If we suppose the diameter of the cylinder to be six iuches, and the diameter of the piston of the small pump or injector only one quarter of an inch ; the proportions between the two surfaces or ends of the pistons will be as the squares of their diameters, which are as 1 to 24 ; therefore the areas will be as 1 to 576 ; and supposing the intermediate space between them to be filled with water, or any other dense and incompressible fluid, any force applied to the small piston will operate on the other in the pro- portion of 1 to 576. Suppose the small piston, or injector, to be forced down, with a weight of 20 cwt., which can easily be done by means of a long lever, the piston of the great cylinder would then be moved up with a force equal to 1 ton multiplied by 576.

Figure 2, plate CRANES, represents a crane constructed upon the

hydrostatic principle ; that is by the injection of water from a small pump into a large cylinder, which is fitted with a pis- ton, having a rack attached to it for the purpose of turning a pinion upon the axis of a large drum-wheel or barrel, round which the rope is coiled, and from thence passes to the jib. A re- presents the jib, made of iron, and supported upon two brackets «, a, projecting from the wall of the warehouse in which the crane is supposed to be erected. The rope passes over the pulley S, and down through holes in the brackets a, a, then turns under the pulley b, and comes to the lower side of the great drum-wheel B. The pinion C is fixed on the same axis with this, and its gudgeons turn in small iron frames d, bolted down to the floor of the warehouse. The pinion C is actuated by the teeth of the rack D ; and a small roller, whose pivot is shown at e, presses against the back of the rack, to keep its teeth up to the pinion. The rack is attached to the piston D, of the cylinder E, in which the power for working the crane is obtained. The piston passes through a tight collar of leather on the top of the cylinder E, which does not admit of any leakage by the side of it ; and, therefore, if any water is forced into the cylinder, it must protrude the piston from it. The cylinder is supported in a wooden frame F, F, and has a small copper pice f, p, proceeding from the lower end of it.

communicating with a small forcing pump at h • this stands in an iron cistern, H, which contains the water, and sustains the standard i, for the cen- tre of the handle G, with which the pump is worked by one or two men. The upper extre- mity of the standard, i, guides the piston rod of the pump to confine it to a vertical motion; / is a weight to balance the handle, G, of the pump. From what we have said before, the operation of this machine is evident ; the power of the cy- linder D, is in proportion to its size, compared with the size of the pump ; but, as it only acts through short limits, the pinion and drum B are necessary to raise the weight a sufficient height. The operation ot lowering goods by this crane is extremely simple, as it is only necessary to open a cock at m, which suffers the water to escape from the cylinder into the cistern H, and the weight descends, but under the most perfect com- mand of the person who regulates the opening of the cock ; for, by diminishing the aperture, he can increase the resistance at pleasure, or stop it altogether. See MECHANICS.

CRANES-BILL, n. s. From crane and bill. An herb. See GERANIUM. A pair of pincers terminating in a point, used by surgeons.

CRANGANORE, a town and district of India, in the country of Cochin, situated on the coast of Malabar, with an irregular fortress, built by the Portuguese. Jews are said to have been found in good circumstances at Cranganore so early as A. D. 490. In 1505 the Portuguese erected a fortress here, of which the Dutch ob- tained possession in 1663. The diocese of the Roman Catholic archbishop of Cranganore, ex- tends from

Mount Dilly towards Cochin. Most of the inland churches, formerly belonging to the Nestorian community, are included in it, and the see comprehends eighty-nine churches. In 1789 the Dutch sold Cranganore to the rajah of Tra- vancore. But Tippoo disputing their right to dispose of it, a war ensued between him and the rajah ; who being powerfully supported by the British and their allies, the nizam of the Deccan, and the Mahrattas, Tippoo was reduced to the necessity of ceding one half of his dominions to the confederate powers, and to pay, in 1792, above three crores of rupees towards the expenses of the war. Cranganore is twenty-four miles north by west of Cochin, and fifty-eight S. S. W of Calicut.

CRANIOLARIA, in botany, a genus of the angiospermia order, and didynamia class of plants ; natural order fortieth, personatae : CAL. double, the under one tetraphyllous, the upper one a monophyllous spatha : COR. of the tube very long : CAPS, almost the same with that of the mar- tynia. There are two species, both natives of hot climates.

CRANIOLOGY. See PHRENOLOGY, its more modern, and said to be its more proper name. We only fear that, before the period of our ar- riving at that article, the science will have evaporated .

CRA'NIUM, n. s. Lat. The skull.

In wounds made by contusion, when the cranium is a little naked, you ought not presently to crowd in dossils ; for if that contused flesh be well digested, the bone will incarn with the wound without much difficulty. Wiseman's Surgery

CRANMER.

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CRANIUM, the skull. See ANATOMY. The word comes from the Gieek gpamov, of Kpavoc, galea, a helmet : because it serves to defend the brain like a head-piece. Pezron, however, de- rives icpavtov from the Celtic cren, because of its roundness. See PHRENOLOGY.

CRANK, v. n.y n. s. & adj.~\ Etymologists CEA'NKLE, v. n. & w. s. /differ greatly as CRA'NKLES, n. s. £ to the etymon of

CRA'NKNESS, n. s. J crank, and some

of their guesses are abundantly absurd. Per- haps the root of crank and crankle may be found in the Swedish verb kranka, to violate ; to in- fringe. To crank and to crankle signify, to run in and out; to run into windings ; to break into unequal surfaces or angles, which may be con- sidered as a

violating, or infringing upon, the circumjacent parts. Shakspeare makes Hotspur say,

See how this river comes me (ranking in, And cuts me from the best of all my land A huge half moon, a monstrous cantle out,

Shakspeare. Henry IV.

A crank is, any bending or winding passage; a conceit, formed by twisting a word in any manner ; the end of an iron axis turned square down, and again turned square to the first turning down ; so that on the last turning down a leather thong is slipt, to tread the treadle- wheel about. As an adjective, crank is, healthy ; sprightly ; from the Dutch onkrank, says Skinner, which means not sick, but Serenius refers it to Goth, kranger, bold, daring. A ship is also said to be crank, when by the form of its bottom, or from being too much loaded above, it is liable to be overset. Crankles are, inequalities ; an- gular prominences.

And for the house is crenclid to and fro, And hath so quente wayis for to go, For it is shapin as the mase is wrought, Therto have I a remedy in my thought.

Chaucer. The Legende of Ariadne.

So many turning cranhes these have, so many crookes. Spenser. Faerie Queene.

They looken bigge, as bulls that ben bate,

And bearen the crag so stiff and so state

As cocke on his dunghill crowing cranke. Spenser.

I send it through the rivers of your blood, Even to the court, the heart to the seat o' the brain ; And through the cranks and offices of man, The strongest nerves, and small inferiour veins, From me receive that natural competency, Whereby they live. Shakspeare. Coriolanus.

Haste thee, nymph, and bring with thee

Jest and youthful jollity,

Quibs and cranks, and wanton wiles,

Nods and becks, and wreathed smiles,

Such as hang on Hebe's cheek,

And love to live in dimple sleek. Milton.

Old Vaga's stream,

Forced by the sudden shock, her wonted track Forsook, and drew her humid train aslope, Crankling her banks. Philips.

In plying down the river, the Resolution was found to be very crank, which made it necessary to put into Sheerness in order to remove this evil, by making some alteration in her upper works. Cook's Voyage.

CRANMER (Thomas), a celebrated reformer and martyr of the Reformation, was the son of Thomas Cranmer, Esq., of Aslacton, in Notting-

hamshire, where he was born in 1489. At the age of fourteen he was admitted a student of Jesus College, Cambridge, of which he afterwards be- came fellow; but vacated his fellowship, and quitted the college, on his marriage. On the death of his wife he was re-admitted. In 1523 he took the degree of D.D. and was made theologi- cal lecturer and examiner. The plague being now at Cambridge, he retired to the house of a rela- tion at Waltham Abbey, where, meeting with Fox the king's almoner, and Gardiner the secre- tary, he expressed an opinion concerning the great question of Henry VIII/s marriage, which was reported to the king. This was, that, instead of disputing about the validity of the marriage with

Catharine, they should reduce the matter to this simple question, ‘ Whether a man may marry his brother’s wife or not?’ When the king was told of it, he exclaimed, ‘ This fellow has got the right sow by the ear;’ sent for him to court, and made him one of his chaplains. He was also di- rected to compose a vindication of the intended divorce ; and sent to France, Italy, and Germany, to dispute the matter with the divines of those countries. At Nuremberg Cranmer married a second wife. Returning to England in March 1533, he was consecrated archbishop of Canter- bury ; in May following he pronounced the sen- tence of divorce between the king and queen ; and soon after married the amorous monarch to Ann Boleyn. Being now at the head of the church, he exerted himself in the business of the Reformation. The Bible was translated into English, and monasteries were dissolved princi- pally by his means. In 1536, the royal conscience again requiring his assistance, he divorced the king from Ann Boleyn. In 1537 he visited his diocese, and endeavoured to abolish the super- stitious observation of holidays. In 1539 he and some of the bishops fell under the king’s displea- sure, because they would not give their consent in parliament that the monasteries should be sup- pressed for the king’s sole use. He also strenu- ously opposed the act for the six articles in the house of lords, speaking three days against it; and, upon its passing, sent away his wife into Germany. In 1540 he was one of the commis- sioners for inspecting into matters of religion, and explaining some of its chief doctrines. The result of their commission was the book entitled A Necessary Doctrine and Erudition for any Christen Man. After Lord Cromwell’s death (in whose behalf he had written to the king) he retired and lived in great privacy. In 1541 he gave orders for taking away superstitious shrines ; and, exchanging Bishopsbourn for Bekesbourn, united the latter to his diocese. In 1542 he pro- cured the ‘ Act for the advancement of true re- ligion and the abolishment of the contrary,’ which moderated the rigor of the six articles. The king continued afterwards to protect him from his enemies ; and at his death appointed him one of the executors of his will, and one of the regents of the kingdom. In 1546 he crowned Edward VI. during whose short reign he pro- moted the Reformation to the utmost of his power ; and was particularly instrumental in composing, correcting, and establishing the liturgy. He assisted also in compiling the thirty

nine artic.es. In 1553 he opposed the settlement of the crown upon lady Jane Grey, though at last, through importunity, he was prevailed upon to consent to it. Upon queen Mary’s accession, he was committed to the Tower ; partly for his connexion with the attempt of lady Jane, and partly for the public offer he had made of justi- fying openly the late religious

proceedings. Some of his friends advised him to fly, but he refused. In the ensuing parliament (November 3) he was attainted, and found guilty of high treason. In April, 1554, he was removed with Ridley and Latimer to Oxford, for a public disputation with the papists ; in which, as in most similar cases, it was already decided by the higher powers who was to obtain the victory. On the 20th of April, two days after the close of these disputations, Cranmer and the two others were brought before the commissioners, and asked, Whether they would subscribe to popery? which they unani- mously refusing, were condemned as heretics. From this sentence the archbishop appealed to the just judgment of the Almighty ; and wrote to the council, giving them an account of the dispu- tation, and desiring the queen's pardon for his treason, which it seems was not yet remitted. Some of his friends petitioned the queen in his behalf; reminding her that he had once preserved her in her father's time, by his earnest interces- sions. All solicitations, however, were ineffectual ; and the archbishop being degraded and most ig- nominiously treated, was at last flattered and terrified into an insincere recantation and renun- ciation of the Protestant faith. But this triumph was not sufficient to gratify the pious vengeance of the Romanists. On the 24th of February, 1556, a writ was signed for his being burnt at the stake; and, on the 24th of March, he was brought to St. Mary's church, and placed on a kind of stage over against the pulpit, where Dr. Cole was appointed to preach a sermon on the occasion. While Cole was haranguing, Cranmer evinced great inward emotion ; frequently lifting up his hands and eyes to heaven, and shedding tears. At the end of the sermon, when Cole de- sired him to make an cpen profession of his faith, as he had promised he would, he first prayed in the most fervent manner; then made an exhorta- tion to the people present, not to set their minds upon the world, to love each other, and to be charitable. After this he made a confession of his faith, beginning with the creed, and concluding with these words : ' And I believe every word and sentence taught by our Saviour Jesus Christ, his apostles and prophets, in the Old and New Testa- ments.— And now,' added he, ' I come to the great thing that so much troubleth my conscience, more than any thing I ever did or said in my whole life ; and that is, the setting abroad a writing contrary to the truth, which I here now renounce, as things written with my hand con- trary to the truth which I thought in my heart ; and written for fear of death, and to save my life if it might be : that is, all such bills and papers which I have written or signed with my hand since my degradation, wherein I have written many things untrue. And forasmuch as my hand offended, writing contrary to my heart, my hand shall first be punished ; for, may I c me to

the fire, it shall be first burned. As for the pope I refuse him, as Christ's enemy and antichrist' with all his false doctrine. And^as for the sacra-

ment, I believe as I have taught in my book against the bishop of Winchester.' Thunder- struck with this unexpected declaration, lord Williams and the papists around admonished him not to dissemble. ' Ah !' replied he, ' since I lived hitherto, I have been a hater of falsehood, and a lover of simplicity, and never before this time have I dissembled,' and wept again. On this the party round the stage, being admonished by Cole from the pulpit to stop the heretic's mouth and take him away, pulled him down, and hurried him to the place of execution, near Baliol College. Here, being fastened with his shirt to the stake, and pressed to agree to his former re- cantation, he answered, stretching forth his right hand, ' This is the hand that wrote it, and there- fore it shall first suffer punishment.' Fire being applied to him, he plunged his right hand into the flame, and held it there unmoved (except that he wiped his face with it once) till it was con- sumed ; crying with a loud voice, ' This hand hath offended ;' and often repeating, ' This un- worthy right hand.' The fire increasing, he soon expired, never moving or crying out; but keep- ing his eyes raised towards heaven, and repeating more than once, ' Lord Jesus, receive my spirit.' His heart is said to have been found nnconsumed among the ashes. Mr. Gilpin says, 'he left be- hind him a widow and children ; but as he al- ways kept his family in obscurity for prudential reasons, we know little about them. They had been kindly provided for by Henry VIII ; who, without any solicitation from the primate, gave him a considerable grant from the abbey of Wai- beck, which his family enjoyed after his decease. King Edward VI. made some addition to his private fortune ; and his heirs were restored in blood by an act of parliament in the reign of Elizabeth.' The same writer well observes, ' The character of the archbishop has been equally the subject of exaggerated praise, and of undeserved censure. The most indefensible parts of it are, the readiness with which he sometimes concurred in the unjustifiable proceedings of Henry VIII., and the instances wherein he showed himself to be actuated by intolerant principles. But the cause animated him. With the illegality of the king's marriage, he endeavoured virtually to es- tablish the insufficiency of the pope's dispensa- tion ; and the latter was an argument so near his heart, that it seems to have added merit to the former. We cannot indeed account for his em- barking so zealously in this business, without supposing his principal motive was to free his country from the tyranny of Rome, to which this step very evidently led. So desirable an end would in some degree, he might imagine, sanctify the means.' One of the most honorable actions of his life was the firm stand that he made against the six articles. This act was so strongly supported by the king, that even the Protestants in parliament made little opposition to it. But Cranmer opposed it with great zeal and steadi- ness. ' The good archbishop,' says Mr. Gilpin, ' never appeared in a more truly Christian light than on this occasion. ID the midst of so general

a defection, he alone made a stand. Three days he maintained his ground, and baffled the argu- ments of all opposers. But argument was not their weapon, and the archbishop saw himself obliged to sink under superior power. Henry ordered him to leave the house. The primate refused : ‘ It was God’s business,’ he said, * and not man’s.’ And when he could do no more, he boldly entered his protest. Such an instance of fortitude is sufficient to wipe off many of those courtly stains which have fastened on his memory.’ His behaviour in the case of the duke of Norfolk also was truly magnanimous. He was indeed remarkable for the placability of his tem- per, and for showing kindness to those by whom he had been greatly injured. Hence it is men- tioned in Shakspeare’s Henry VIII., as a com- mon saying concerning him :

‘ Do my Lord of Canterbury

But one shrewd turn, and he’s your friend for ever.’

Of the learning of archbishop Cranmer, Mr. Gilpin remarks that ‘ it was chiefly confined to his profession. He had applied himself in Cam- bridge to the study of the Greek and Hebrew languages ; which, though esteemed at that time as the mark of heresy, appeared to him the only sources of attaining a critical knowledge of the Scriptures. And he had so accurately studied canon law, that he was esteemed the best cano- nist in England. He was a sensible writer, rather nervous than elegant. His writings were entirely confined to the great controversy which then subsisted, and contain the whole sum of the theological learning of those times.’

Dr. Southey says of his death, ‘ Of all the martyrdoms during this great persecution, this was in all its circumstances the most injurious to the Romish cause. It was a manifestation of in- veterate and deadly malice towards one who had borne his elevation with almost unexampled meekness. It effectually disproved the argument on which the Romanists rested, that the con- stancy of our martyrs proceeded not from confi- dence in their faith, and the strength which they derived therefrom; but from vain glory, the pride of consistency, and the shame of retracting what they had so long professed. Such deceitful rea- soning could have no place here : Cranmer had retracted ; and the sincerity of his contrition for that sin was too plain to be denied ; too public to be concealed ; too memorable ever to be for- gotten. The agony of his repentance had been seen by thousands ;

and tens of thousands had witnessed how, when that agony was past, he stood calm and immoveable amid the flames ; a patient and willing holocaust ; triumphant, not over his persecutors alone, but over himself, over the mind as well as the body, over fear, and weakness, and death.'

CRA'NNY, n. s.) Fr. cren; Latin crena ;

CRA'NNIED, adj. j Kpr\vrj. A chink; slit; fissure. Full of chinks.

Revealing day through every cranny spies, And seems to point her out where she sits weeping. Shakspeare. The Rape of Lucrece.

h. wall it is, as I would have you think, That had in it a crannied hole or chink.

Id. Minsummer Nights Dream.

The eye of the understanding is like the eye of the sense ; for as you may see great objects through small crannies or holes, so you may see great axioms of nature through small and contemptible instances.

Bacon's Natural Hittory.

A very fair fruit, and not unlike a citron j but somewhat rougher chopt and crannied, vulgarly con- ceived the marks of Adam's teeth.

Browne's Vulgar Errowt. And therefore beat and laid about, To find a cranny to creep out. Hudibrat.

In a firm building the cavities ought not to be filled with rubbish, but with brick or stone, fitted to the crannies. Dryden.

Within the soaking of water and springs, with streams and currents in the veins and crannies.

Burnet's Theory.

He skipped from room to room, ran up stairs and down stairs, from the kitchen to the garrets, and he peeped into every cranny. Arbuthnot'i John Bull.

The light of the moon may gleam unexpectedly through a cranny, and, where it falls on the broken pavement, form an appearance not unlike a human face illuminated, or a naked human body, which the peasant, whose chance it is to see it, may readily mis- take for a ghost, or some other tremendous being.

Beattie.

For 'tis a truth well known to most, That whatsoever thing is lost, We seek it, ere it come to light, In every cranny but the right. Cowper.

CRANTARA, among the ancient Britons, was a sort of military signal used for collecting the distant and scattered warriors to the standard of their chief. It was generally a stick burnt at the end and dipped in the blood of a goat, which was sent by a swift messenger to the nearest hamlet, where, being delivered in silence, it was undersrood to denounce destruction by fire and sword to all who did not obey the summons, and was carried with great rapidity from village to village.

GRANTOR, a Greek philosopher and poet, born at Solos in Cilicia. He left his native country and went to Athens, and there studied with Polemon under Xenocrates. He was con- sidered as one of the chief supporters of the Pla- tonic sect; and was the first who wrote com- mentaries upon Plato's works. He flourished about A. A. C. 270.

GRANTS, n. s. Icel. krans; Swed. krans ; Dutch krants; Ger. kranz. Garlands carried before the coffin of a maiden, and suspended over her grave.

Yet here she is allowed her virgin crants, Her maiden strewments, and the bringing home Of bell and burial. Shakspeare. Hamlet.

CRAPE, 7i. s. Fr. crespe, crlpe ; Ital. crispo ; low Lat. crepa. A thin stuff, loosely woven, of which the dress of the clergy is sometimes made, and which is also used in mourning dresses. In the quotation from Cowper, it signifies the mask, generally a piece of crape, worn by robbers, to prevent their being recognised.

And proud Roxana, fired with jealous rage, With fifty yards of crape shall sweep tie stage.

Swift.

To thee I often called in vain, Against that assassin in crape. Id.

Tis from high life high characters are drawn ; A saint in crape is twice a

saint in lawn. Pope.

O innocent, compared with hearts like these, Crape, and cocked pistol, and the whistling ball Sent through the traveller's temples ! Cuwper.

CRAPE is made of raw silk gummed and twisted on the mill ; woven without crossing, and much used in mourning. Crapes are either craped (i. e. crisped), or smooth. The silk destined for the first is more twisted than that for the second ; it being the greater or less de- gree of twisting, especially of the warp, which produces the crisping given it when taken out of the loom, steeped in clear water, and rubbed with a piece of wax for the purpose. Crapes are all dyed raw. The invention of this stuff came originally from Bologna ; but Lyons was long said to have had the chief manufacture of it. History tells us, that St. Bathilda, queen of France, made fine crape (crepa) of gold and silver, to lay over the body of St. Eloy. Binet says, this crepa was a frame to cover the body of the saint ; but others, with reason, take it to have been a transparent stuff, through which the body might be seen ; and that this was the crepa whence our word crape was formed.

CRATLE, n. s. Ger. krappeln, to seize ; Ang.- Sax. grip-an, to gripe. An obsolete word, of the same family with grapple, signifying a claw.

Soone as they did the monstrous Scorpion vew, With ugly craples crawling in their way, The dreadfull sight did them so sore affray, That their well knowen courses they forwent.

Spenser. Faerie Queene.

CRA'PULA, n. s. ~\ Lat. crapula ; KpanraXrj. CRA'PULENCE, n. s. > Intoxication ; sickness, CRA'PULOUS, adj. 3 produced by intemper- ance. Drunken ; sick from drunkenness.

The drunkard now supinely snores, His load of ale sweats through his pores, Yet when he wakes, the swine shall find A crapula remains behind. Cotton.

CRASH, v. a., v. n. & n. s.) Fren. ecraser ;

CRA'SHING, n. s. & adj. S Ger. rauschen ; Goth, kressa. Dr. Johnson supposes the word to be formed from the thing, in which he agrees with Skinner. To make a loud, sharp, compli- cated noise, as if many things were falling or breaking at once; to break or bruise. Crash, and crashing, are loud sudden mixed sounds, as of many things broken at the same time. Abrupt and dissonant sound is always implied by these words.

There shall be a great crashing from the hills.

Zeph. i. 10.

Senseless Ilium,

Seeming to feel this blow, with flaming top Stoops to his base ; and, with a hideous crash, Takes prisoner Pyrrhus' car. Shahspeare. Hamlet.

Moralizing sat I by the hazard-table : I looked upon the uncertainty of riches, the decay of beauty, and the crash of worlds, with as much contempt as ever Plato did.

When convulsions cleave the labouring earth, Before the dismal yawn appears, the ground Trembles and heaves, the nodding houses crash.

Smith.

When sudden, darting down the depth of heaven. Pierce on th' expecting foe the cranes are driven. The kindling frenzy every bosom warms, The region echoes to the crash of arms. Seattle.

Now they reach thee in their anger : Fire, and smoke, and hellish clangor Are around thee, thou World's Wonder ! Death is in thy walls and under. Now the meeting steel first clashes ; Downward then the ladder crashes, With its iron load all gleaming, Lying at its foot blaspheming !

Byron. The Deformed Transformed.

CRASHAW (Richard), an English poet, the son of the Rev. William Crashaw ; was educated at the Charter-House, London, and afterwards sent to Pembroke Hall and Peterhouse, Cam- bridge. He was fellow of the latter college, and in both distinguished himself for his Latin and English poetry. He was afterwards ejected from his fellowship, with many others, for deny- ing the covenant ; and, at last, became a Roman Catholic. He went to Paris, in hopes of re- commending himself to some preferment there ; but, being a mere scholar, fell into great dis- tress, which the poet Cowley relieved in 1646, and recommended him to queen Henrietta Ma- ria, then residing at Paris. Obtaining her pa- tronage, he travelled into Italy, became secretary to a cardinal at Rome, and at last one of the canons of the rich church of Loretto, where he died about 1664. Before he left England, he wrote some poems, entitled, Steps to the Temple, 8cc. ; afterwards others, called The Delights of the Muses, Carmen Deo Nostro, &c. He is said to have excelled in five languages, besides his mother tongue, viz. Hebrew, Greek, Latin, Italian, and Spanish.

CRA'SIS, n. s. Kraffig. Temperature ; con- stitution arising from the various properties of humors.

The fancies of men are so immediately diversified by the individual crasis, that every man owns some- thing wherein none is like him. Glanville.

A man may be naturally inclined to pride, lust, and anger ; as these inclinations are founded in a peculiar crasis and constitution of the blood and spirits. South.

CRASS, adj. -\ Old Fr. crasse; Lat.

CRA'SSIMENT, re. s. f crassus. Gross; coarse;

CRA'SSITUDE, n. s. I heavy ; thick; dull;

CRA'SSNESS, n. s. ./ stupid. That which is gross ; thick ; dull.

They must be but thin, as a leaf, or a piece of paper or parchment ; for, if they have a greater cras- situde, they will alter in their own body, though they spend not. Bacon,

The Dead Sea, which vomiteth up bitumen, is of that crassitude, as living bodies, bound hand and foot, cast into it, have been borne up, and not sunk.

*Bacon's Natural History^*

Iron, in aquafortis, will fall into ebullition, with noise and emication ; as also a crass and fumid exha- lation, caused from the combat of the sulphur of iron with the acid and nitrous spirits of aquafortis.

Browne's Vulgar Err ours.

Now, as the bones are principally here intended, so also all the other solid parts of the body, that are made of the same crassiment of seed, must be here in- cluded. J. Smith.

The ethereal body contracts crossness and impurity by the same degrees as the immaterial faculties abate in their exercise. Glam-illc.

The terrestrial matter carried by rivers into the sea, is sustained therein partly by the greater crassitude and gravity of the sea-water, and partly by its con- stant agitation. Woodward.

Metals are intermixed with the common terrestrial matter, so as not to be discoverable by human indus- try ; or, if discoverable, so diffused and scattered amongst the crasser and more unprofitable matter, that it would never be possible to separate and extract it. Id. Natural History.

CRASSULA, lesser orpine, a genus of the pentagynia order, and pentandria class of plants ; natural order thirteenth, succulentae : CAL. pen- taphyllous : the petals five, with fire nectarife- rous scales at the base of the germen : CAPS. five. There are sixty-nine species, all natives of warm climates. Several of them are culti- vated in this country, but require the assistance of artificial heat for their preservation. They rise from one foot to six or eight ; and are orna- mented with oblong, thick, succulent leaves, and funnel-shaped pentapetalous flowers of a scarlet, white, or greenish color. They are propagated by off-sets, or cuttings, and must be potted in light sandy compost, retained in a sunny part of the green-house all winter, and very sparingly watered. In summer they may be placed in the full air in a sheltered place, and in diy wea- ther watered twice a-week.

CRASSUS (M. Licinius), a celebrated Ro- man, surnamed the Rich, on account of his opulence, which he is said to have obtained by educating slaves and selling them at a high price. The cruelties of Cinna obliged him to leave Rome, and he retired to Spain for eight months. After Cinna's death he passed into Africa and Italy, where he ingratiated himself with Sylla. When the gladiators, with Spartacus at their head, had spread universal alarm in Italy, and defeated some of the Roman generals, Crassus was sent against them. A battle was fought, in which he slaughtered 12,000 of the slaves, put an end to the war, and was honored with an ovation at his return. He was soon after made consul with Pompey, A. U. C. 682, and in this high office displayed his opulence, by entertain- ing the populace at 10,000 tables. He was af- terwards censor, and formed the first triumvirate with Pompey and Caesar. Crassus never imitated the ambitious conduct of his colleagues, but was satisfied with the province of Syria, which pro- mised to be an inexhaustible source of wealth. He crossed the Euphrates, and hastened to make himself masttr of Parthia, but was betrayed in his march by the delay of Artavasdes, king of Armenia, and the perfidy of Ariamnes. Surena, the Parthian general, met him in a large plain, and a battle was fought, in which 20,000 Ro- mans were killed, and 10,000 taken prisoners. The darkness of the night favored the escape of the rest; and Crassus, force'd by the mutiny and turbulence of his soldiers, and the treachery of his guides, trusted himself to the general of the enemy, on pretence of proposing terms of accom- modation, and was killed. His head

was cut off, and sent to Orodes, who poured melted gold

down his throat. Though avaricious, he was at- tached to philosophy, and his knowledge of his- tory is said to have been extensive.

CRASTINATION, n. s. From Lat. eras, to- morrow. Delay.

CRAT#,GUS, wild-service tree, hawthorn, &c., in botany, a genus of the digynia order, and icosandria class of plants ; natural order thirty- sixth, pomaceae : CAL. quinquefid : the petate five; the berry inferior, dispermous. There are twenty-three species, all of the tree and shrub kind, hardy and deciduous. Those most valuable for economical and ornamental pur- poses in gardening are the following: 1. C. aria theophracti, the white-leaf-tree, is a native of most of the cold countries of Europe. It grows to about twenty feet, and has, even in winter, though naked of leaves, a fine straight stem, with smooth branches, spotted with white. At the end of them are the buds, swelled for the next year's shoot. In spring, the oval leaves look delightfully, having their upper surface green, and the lower white. They are unequally ser- rated, about three inches long, and half as wide. Several strong nerves run from the mid-rib to the border, and they are placed alternately on the branches, which appear as if powdered with the finest meal. The flowers are produced at the end of the branches in May ; they are white, grow in large bunches, having mealy foot-stalks, and are succeeded by red berries, which are ripe in autumn. 2. C. coccinea, the Virginian aza- role, is a native of Virginia and Canada, and of about equal height. The stem is robust, and covered with a light-colored bark. Each sepa- rate flower is large, but, as few of them grow together, the umbels they form are rather small. They come out in May, and are succeeded by large dark-red-colored fruit, which ripens late in the autumn. The varieties of this species are, the pear-leaved thorn ; the plum-leaved thorn, with very long strong spines, and large fruit ; the plum-leaved thorn, with short spines and small fruit. 3. C. eras galli, the cockspur thorn, also a native of Virginia and Canada, and of similar appearance; rises with an upright stem, irregularly sending forth branches, which are smooth, and of a brownish color, spotted thinly with small white spots. It is armed with thorns that resemble the spurs of cocks. In winter the leaf-buds appear large and turgid. In summer the leaves are oval, angular, serrated, smooth, and bend backwards. The flpwers are succeeded by a large bright-red fruit. The prin- cipal varieties are, the cockspur hawthorn with many thorns ; the cockspur hawthorn with no thorns; the cockspur with eatable fruit. 4. C. oxycanthus, the hawthorn, or white-thorn, grows naturally all over Europe. In the state in which we usually see it, it is nothing better than a tall, uncouth, irregular shrub ; but trained up as a standard, it swells to a large timber size, with a tall stem and a full spreading head. The standard hawthorn, whether we view its flowers in the spring, its foliage in the

summer, or its fruit in the autumn and winter, is one of the most ornamental plants, standing singly, .that can be scattered over a park or lawn. Of this species there are the following varieties : the

large scarlet, the yellow, the white, the maple- leaved, and the double-blossomed hawthorns : and the Glastonbury thorn. The scarlet haw- thorn is exceedingly large, oblong, perfectly smooth, and of a bright scarlet. The yellow haw is a fine plant. The buds are of a fine yellow, and the fruit is of the color of gold. The tree retains its fruit all winter. It was originally brought from Virginia, is greatly admired, and no collection of hardy trees should be without it White hawthorn hardly ever grows to the height of the common hawthorn, and the fruit is small. Maple-leaved hawthorns grow to nearly twenty feet high, and have very few thorns. The leaves are large, resembling those of the maple, and are of a whitish-green. The flowers are produced in large bunches in June, and are succeeded by remarkable fruit, of a shining red, which looks beautiful in winter. Double-blos- somed hawthorn produces a full flower, and is one of the sweetest ornaments in the spring. These beautiful double flowers come out in large bunches in May, and the tree often appears covered with them. Glastonbury thorn differs in no respect from the common hawthorn, ex- cept that it sometimes flowers in winter. It is said to have been originally the staff of Joseph of Arimathea, who, according to tradition, at- tended by eleven companions, came over into Bri- tain, and founded the first Christian church in this isle. As a proof of his mission, he is said to have stuck his staff into the ground, which immediately shot forth and bloomed. This tree is pretended to have blossomed on Christmas – day ever since ; but Hanbury says, in fine sea- sons they will sometimes be in blow before Christmas, sometimes they afford their blossoms in February, and sometimes it so happens that they will be out on Christmas-day. 5. C. to- mentosa, the gooseberry-leaved Virginia haw- thorn, grows to about seven or eight feet. The branches are slender, and closely set with sharp thorns. The leaves are cuneiform, oval, ser- rated, and hairy underneath. The flowers are small, and of a white color ; they are produced from the sides of the branches about the end of May, afld are succeeded by yellow fruit, which ripens late in autumn. There is a variety of this called the Carolina hawthorn, which has longer and whiter leaves, larger flowers and fruit, and no thorns. 6. C. viridis, the green-leaved Vir- ginia hawthorn, has the stem and branches al- together destitute of thorns. The leaves are lan- ceolate, oval, nearly trilobate, serrated, smooth, and green on both sides. The flowers are white,

moderately large, come out the end of May, and are succeeded by a roundish fruit, which ripens late in autumn. All the different species are propagated by sowing the seeds in beds of fresh, light, rich earth ; and the varieties are continued by budding them upon stocks of the white thorn. This latter method is generally practised for all the sorts ; though, when good seeds can be procured, the largest and most beautiful plants are raised that way.

*CRATCH, n.s. FT. crtche ; Lat. crates. The palisaded frame in which hay is put for cattle. The children's game called cratch-cradle, cor- ruptlv * < "••» trh-cradle, is meant to represent, by a*

piece of string interwoven like hurdles, the cradle of our Saviour.

Begin from first, where he encradled was In simple cratch, wrapt in a wad of hay.

Spenser. Hymn of Heavenly Lane.

When, being expelled out of Paradise by reason of

sin, thou wert held in the chains of death ; I was

inclosed in the virgin's womb, I was laid inthecrofcA,

I was wrapped in swathling-cloaths.

Hakewill on Providence.

CRATCH, v. a. Welsh crach, scabies. To scratch ; to tear. This is our old verb for scratch.

Cratching of chekes, rending eke of here.

Chaucer. Cant. Tales.

CRATCHES, in the manage, a swelling on the pastern, under the fetlock, and sometimes under the hoof; for which reason it is distin- guished into the sinew cratches, which affect the sinew, and those upon the coronet called quitter- bones.

CRATE, n. s. Germ, kraet. A pannier, or vessel made of wicker, in which things are con- veyed on a horse ; a sort of case in which crockery ware is packed.

I have seen a horse carrying home the harvest on a crate. Johnson.

CRATER, n. s. Lat. crater ; rparijp. A vent or aperture. It is chiefly used to designate the mouth of a volcano.

CRATES, a famous philosopher of Thebes, a disciple of Diogenes the Cynic. It is said that he threw all his money into the sea, that he might the more freely apply himself to the study of philo- sophy. Others assert that he placed it in his brother's hands, with orders to give it to his chil- dren if they should happen to be fools: for, said Crates, if they should be philosophers, they will have no need of it ; in which case it was to be given to the people. He flourished about A.A.C. 328. — Also the name of a famous academic phi- losopher, the disciple and friend of Polemon. He had Arcesilaus and other celebrated philosophers for his disciples ; and flourished about A. A. C.

300.

CRATEVA, the garlic pear, in botany, a genus of the monogynia order, and dodecandria class of plants ; natural order twenty-fifth, pu- taminea?: COR. tetrapetalous : CAL. quad rind : BERRY inferior dispermous. There are five spe- cies ; natives of India, and chiefly distinguished by their fruit. All the species may be propa- gated in this country by seeds sown upon a hot- bed in the spring ; and when the plants come up, they are to be treated in the manner directed for the annona.

The chief is C. tapia, the garlic pear, which has a smooth round fruit, about the size of an orange, with a hard brown shell or cover, which encloses a mealy pulp, filled with kidney-shaped seeds. It has a strong smell of garlic, and com- municates the same to such animals as feed upon it. The tender buds from the young branches being bruised, and applied to the naked skin, will blister as effectually as cantharides. It rises to about thirty feet.

CRATINUS, an ancient comic poet, men- tioned by Quintilian, Horace, and Persius, along

with Eupolis, and Aristophanes, as the three great masters of the ancient comedy. It is said that he died in the 87th Olympiad. Suidas tells us that he wrote twenty-one plays.

CRATIPPUS, a celebrated peripatetic phi- losopher, was a native of

Mitylene, where he taught philosophy ; but at length went to Athens, where Brutus and the son of Cicero were his disciples. Pompey, after the battle of Pharsalia, proposed to him some difficulties respecting the belief of a Providence, which he answered. He wrote some pieces respecting divination : and is supposed to be the Cratippus whom Tertullian, in his book De Anirn&, has ranked among the writers upon dreams.

CRA VAN, or CRAVANT, a town of France, in the department of Yonne and ci-devant province of Burgundy, remarkable for its good wine, and for a battle between the English and French, in 1423. It is seated near the confluence of 'the rivers Cure and Yonne, nine miles south-east of Auxerre.

CRAVAT. Fr. cravate. Menage says, the word is derived from an appellation of the Croats, who were usually called Cravates ; but Serenius deduces it from Goth krafwa for krage, the neck. Cravat is a neck-cloth ; any thing that is worn round the neck.

Less delinquents have been scourged,

And hemp on wooden anvils forged ;

Which others for cravats have worn

About their necks, and took a turn. Hudibras.

When you draw him to do any thing that is fit by the offer of money, or reward the pains of learning his book by a precious morsel j when you promise him a lace cravat, or a fine new suit, upon performance of some of his little tasks ; what do you by proposing these rewards, but allow them to be the good things he should aim at, and thereby encourage his longing for them, and accustom him to place his happiness in them ? Locke.

The restrictives were applied, one over another, to her throat : then we put her on a cravat.

Wiseman's Surgery.

CRAVE, v. a. } Goth, krefa ; Dan. kr ve ; Swed. krafwa ; Welsh,
CRA'VING, n. s. Jcrefu; Ang.Sax. crafian. To ask earnestly ; to ask submissively ; to beg ; to entreat ; to have an inordinate or unreasonable desire for ; to be insatiable. Graver is an insa tiable asker ; and craving, an unreasonable de- sire.

Waste, what thing we may nat lightly have. Thereafter wol we cry all day and crave.

Chaucer. Cant. Tales.

Such is the fortune that I have,

To love them most, that love me best,

And to my payne to seek and crave,

The thing that others have possest, Wyatt.

*To which the damzel, full of doubtfull thought, Her mildly answered ; ‘ Beldame, be not wroth With silly virgin by adventure brought Unto your dwelling, ignorant aad loth, That crave but roome to rest while tempest overblo’th, Spenser. Faerie Queene^*

What one petition is there found in the whole Li- tany, whereof we shall ever be able at any time to say, that no man living needeth the grace or benefit therein craved at God’s hands ? Hooker

As for my nobler friends, I crave their pardons ; But for the mutable rank-scented many, Let them regard me as I do not flatter.

Shakspeare. Coriolanut.

Bid him with speed prepare to carry it, The cause crwtes haste, and it will soon be writ.

Skakspeare . The Rape of Lucreee. The poor people, not knowing where to hide them- selves from the fury of their enemies, nor of whom to crave help, fled as men and women dismayed.

KnoOet.

Once one may crave for love. But more would prove This heart too little, that too great. Suckling.

The subjects armed, the more their princes gave. The advantage only took the more to crave. Denham.

I would crave leave here, under the word action, to comprehend the forbearance too of any action pro- posed. Locke.

I will not say, high interest was the cause of it. For I rather think that our thriving trade was the cause of high interest, every one craving money to employ in a profitable commerce. Id.

Levity pushes us on from one vain desire to ano- ther, in a regular

viscissitude and succession of crav- ings and satiety. L'Estrnnge.

He is actually under the power of a temptation, and the sway of an impetuous lust ; both hurrying him to satisfy the cravings of it by some wicked action.

South.

Him dost thou mean, who, spite of all his store, Is ever craving, and will still be poor ? Who cheats for half-pence, and who doffs his coat To save a farthing in a ferry-boat ? Dryden. Pertiut.

Each ardent nymph the rising current craves, Each shepherd's prayer retards the parting waves.

Prior.

Many a long-lingering year, in lonely isle, Stunned with the eternal turbulence of waves, Lo, with dim eyes, that never learned to smile, And trembling hands, the famished native craves Of Heaven his wretched fare. Beattie.

CRA'VEN, v. a., n. s. & adj. Skinner, Home Tooke, and Whiter, consider craven to be de- rived from the verb to crave, implying that the per- son bearing it has craved or craven his life from his antagonist. Dr. Johnson suggests, that ' per- haps it comes originally from the noise made by a conquered cock.' Mr. Todd, however, agrees with Dr. Jameson in deducing it from the old French, creant ; a term of feudal jurisprudence, which was a promise of fealty. ' By the use of it therefore," says Dr. Jameson, ' the vanquished person merely did homage to the victor as his superior.' A craven is a defeated and spirit- broken cock ; a coward ; a recreant ; a chicken- hearted fellow ; as an adjective, the word means cowardly; base; degraded. The verb, which seems to be a coinage of Shakspeare's, signifies to make recreant or cowardly.

In mighty armes he was yclad anon, And silver shield ; upon his coward brest A bloody crosse, and in his craven crest A bounche of heares discoloured diversly.

\ter. Faerie Queene.

Yet if the innocent some mercy find, From cowardice, not ruth, did that proceed ;

His noble Iocs durst not his craven kind Exasperate by such a bloody deed. Fairfax.

'Gainst self-slaughter There is a prohibition so divine, That cravens my weak hand.

Shakspeare. Cymbeline.

What, is your crest a coxcomb ?

A combless cock, so Kate will be my hen.

— No cocke of mine ; you crow too like a craven. Id. Taming of tlte Shrew. Is it fit this soldier keep his oath ?

He is a craven and a villain else.

Id. Henry V. Whether it be

Bestial oblivion, or some craven scruple, Of thinking too precisely on the event ; A thought which, quartered, hath but one part wisdom, And ever three parts coward. Id. Hamlet.

CRAUNCH, or) But. scransen. To crush CBANCH, v. a. J between the teeth.

She cannot shoot at butts, Or manage a great horse ; but she can cranch A sack of small coal, rat you lime and hair.

Ben Jons on.

She would craunch the wing of a lark, bones and all, between her teeth. Swift.

CRAW, n. s. Ger. kragen; Swed. krage ; Dan. kroe. The crop or first stomach of birds.

In birds there is no mastication or comminution of the meat in the mouth ; but, in such as are not car- nivorous, it is immediately swallowed into the crop or craw, or at least into a kind of ante-stomach, which I have observed in many, especially piscivorous birds. Ray on the Creation.

CRA'WFISH, n. s. Sometimes written cray- fish, properly crevice ; in Fr. ecrevisse. A small crustaceous fish found in brooks ; the small lobster of

fresh water. See CANCER.

Those that cast their shell are the lobster, the crab, the crawfish, the hodmandod or dodman, and the tor- toise. Bacon.

Let me to crack live crawfish recommend. Pope.

The common crawfish, and the large sea crawfish, both produce the stones called crab's eyes. Hill.

CRAWFORD (Adair), M. ,D., a medical writer of considerable eminence, was born in 1749, and became physician to St. Thomas's Hospital, London; professor of chemistry at Woolwich; and fellow of the Royal Society. His principal work is Experiments and Observa- vations on Animal Heat, of which a second and enlarged edition was published in 1784, 1 vol. 8vo. It was translated into German by L. F. F. Crell, and into Italian by Vasalli; with Morgan's Answer and Notes. Dr. Crawford also made experiments on the matter of cancer, and was the first writer who recommended muriate of barytes as a remedy for scrofula. He died at Lyming- tqn, July 29th, 1795. A posthumous tract of his appeared in 1816, entitled An Experimental En- quiry into the Effect of Tonics and other medici- nal Substances on the Cohesion of the Animal Fibre, 8vov

CRAWFORD, or CRAUFURD (David), a Scottish historian, born at Drumsoy, near Glas- gow, in 1665, is principally to be noted as a wilful falsifier of history. Holding the place of historiographer royal of Scotland to queen Anne, he published, in 1706, Memoirs of Scotland during the times of the Four Regents : a work which had gone through two editions, had been

quoted by both Hume and Robertson and was held in considerable estimation, until Mr. Laing pub- lished, from the original MS., The Historic and Life of King James Sext, when it was dis- covered that Crawford had wretchedly interpo- lated and mutilated it, in all his alleged quotations from it, to support his particular opinions as to the character of Bothwell and queen Mary. He was the author also of the two plays entitled Courtship a la Mode, and Love at First Sight, and died in 1726.

CRAWL, v. n. ^ Goth, krqfta ; Sw. krala ; CRA'WLER, n. s. > Dutch krielen. The Dutch CRA'WLING, adj.) etymon Junius and Skinner trace to the Lat. grallari, pro gradulari, i. e. gra- datim seu pedetentim ire. To crawl is, to creep ; to move with a tardy motion ; to move with the lower parts on the ground like a worm ; to proceed onward tardily or timorously; to ad- vance slowly and slily ; to move about hated and despised. The meanings of the noun and ad- jective are obvious.

And whylome by false Fairies stolen away, Whyles yet in infant cradle he did crall.

Spenser. Faerie Queene. Tis our first intent

To shake all cares and business from our age, While we unburthened crawl tow'rd death.

S/takspeare. King Lear.

Cranmer

Hath crawled into the favour of the king, And is his oracle. Id. Henry VIII.

They like tall fellows crept out of the holes ; and secretly crawling up the battered walls of the fort, got into it. Knottei,

I saw them under a green mantling vine, That crawls along the side of yon small hill.

Milton.

Unarmed of wings and scaly oare, Unhappy crawler on the land. Lovelace.

For the fleets of Solomon and the kings of Egypt,

it is very apparent they went with great leisure, and

crawled close by the shore-side. Heylin.

A worm finds what it searches after, only by feeling,

as it crawls from one thing to another.

Grew's Cosmologia.

That crawling insect, who from mud began ; Warmed by my beams, and kindled into man.

Dry den. The streams, but just contained within their

bounds,

By slow degrees into their channels crawl ; And earth increases as the waters fall. Id.

The vile worm, that yesterday began To crawl ; thy fellow-creature, abject man. Prior.

Man is a very worm by birth,

Vile reptile, weak and vain ! Awhile he crawlt upon the earth,

Then shrinks to earth again. Pope.

He was hardly able to crawl about the room, far less to look after a troublesome business.

Arbuthnot's John Bull.

It will be very necessary for the threadbare gown- man, and every child who can crawl, to watch the fields at harvest-time. Swift.

An inadvertent step may crush the snail, That crawls at evening in the public path ; But he that has humanity, forewarned, Will tread aside, and let the reptile live. Coiaper.

Dark blinded hairs, in bristling ranks, behind, Rise o'er his back, and rustle in the wind ; Clothe his lank sides, his shrivelled limbs surround, And human hands with talons print the ground. Silent in shining troops the courtier throng Pursue the monarch, as he crawls along. Darwin.

CRAX, in ornithology, the curassou, a genus of birds belonging to the order of gallinae. The base of the beak of each mandible is covered with wax; and the feathers of the head are curled. There are five species, viz. 1. C. alector, the In- dian hen of Sloane, is found in Berbice,Essequibo, Demerara, Brasil, and the warm parts of Ame- rica. It is about the size of a small turkey, and is black, with a white belly. A yellow wax covers about one-half of each mandible; the tongue is entire ; the temples are bare and black ; the tail is roundish, and consists of fourteen prime feathers ; the legs are strong and of a dusky brown color. These birds are common in Guiana; and are called powese by the natives from their cry; are pretty numerous in the woods, and make no small part of the food of the planters, who are supplied by the Indian hunters : their flesh is reckoned as delicate as that of a turkey. They are easily brought up tame. 2. C. globi- cera, has a yellow protuberance between the nostrils, and is of a bluish-black color : the lower part of the belly is white. It is a native of Brasil. 3. C. pauxi, the Mexican pheasant of Brissonius, is of a bluish color, with blue wax, and the tip of the tail and belly white : it is a native of Mexico. 4. C. rubra, the Peruvian

hen, is red, with a bluish head. These birds are natives of Mexico and Peru, They feed on fruits, and perch on trees : the flesh is white, and esteemed good food. They are frequently kept tame in our menageries in England, and readily mix with other poultry.

CRAY, CRATER, or CRARE, n. s. Old Fr. oraier ; Sw. krejare ; low Lat. crayera. A small maritime vessel ; a bark.

Oh melancholy !

Whoever yet could sound thy bottom ? find The ooze, to show what coast thy sluggish crare Might easiliest harbour in ? Shahspeare. Cymbeline,

GRAYER (Caspar de), an eminent painter, born at Antwerp in 1585. He was a disciple of Raphael Coxis, whose father had studied under Raphael; but he soon far surpassed his master, and formed for himself a style that was exceed- ingly pleasing. The first work which established him in the favor of the court at Brussels, was a portrait of cardinal Ferdinand, brother to the king of Spain. Rubens, who went to Antwerp on purpose to visit him, after examining atten- tively his picture of the Centurion, in the abbey of Affleghem, declared that no painter could surpass Grayer. He had somewhat less fire in his compositions than Rubens, but his design is frequently more correct. There is a remarkable variety and simplicity in his draperies ; and his coloring is admirable.

CRATFISH, n.s. See CRAWFISH. The river lobster.

The cure of the muriatick and annoniack saltness requires slimy meats ; as snails, tortoises, jellies, and frayfithet. Flayer.

CRAYFORD, or CRECANFORD, a town of England, in Kent, seated on the small river Cray, which serves to work a mill for slitting and rolling iron, and another for a cotton manufac- ture. This place is memorable for a great battle fought here in 457, between Hengist the Saxon, and Vortigern the British king ; in which the latter lost 4000 men and four of his chief com- manders. The rout was so general and decisive, that they left Hengist from that time in quiet possession of his Kentish kingdom. This town is two miles west of Dartford and fourteen E.S.E. of London.

CRA'YON, v. & n. s. Fr. craye, crayonner. To delineate in dry colors; to sketch out the first lines of any thing. A kind of colored pen- cil ; a drawing done with a crayon.

Let no day pass over you without drawing a line ; that is to say, without working, without giving some strokes of the pencil or the crayon.

Dryden's Dufresnoy.

I wonder how any one can read the king's speech at the opening of that session, without seeing in that speech both the repeal and the declaratory act very sufficiently crayonned outi Burke.

CRAYON is a general name for all colored stones, earths, or other minerals and substances used in designing or painting in pastel ; whether they have been beaten and reduced to a paste, or are used in their primitive consistence, after sawing or cutting them into long narrow slips. In this last manner are red crayons made of bloodstone, or red chalk, and black ones of charcoal and black lead. Crayons of all other colors are compositions of earths reduced to paste.

CRAYON-PAINTING. See PAINTING. CRAZE, v. a. ~\ Fr. ecraser. In this CRA'ZEDNESS, n. s. f etymology Ihre, Lye, CRA'ZINESS, n. s. £ Skinner, and Dr. Johnson CRA'ZY, adj.) agree. Minsheu on the contrary derives craze from icpaffif, temperamen- tum. To craze is, to break ; to debilitate ; to impair; to reduce to powder; to impair the intellect. Crazy signifies, broken down; decre- pit; weak; shattered; broken-witted. Crazed- ness, and craziness, indicate the state of being weak, decrepit, or crazy.

I am right siker that the pot was erased. Be as be may, be ye no thing amased ; As usage is, let swepe the flore as swithe ; Plucke up your hertes, and be glad and blithe. Chaucer. Cant. Tales.

For els my feeble vessel craned and cracht Through thy strong buffets and outrageous blowes, Cannot endure. Spenser. Faerie Queene.

In this consideration, the answer of Calvin unto Farel, concerning the children of Popish parents, doth seem crazed. Hooker.

The nature, as of men that have sick bodies, so likewise of the people in the craxedness of their minds, possessed with dislike and discontentment at things present, is to imagine that any thing would help them.

Id,

Relent, sweet Hermia; and, Lysander, yield Thy erased title to my certain right.

Shakspeare. Midsummer Night's Dream.

CRA 624

T loved him, friend,

No father his son dearer, true, to tell thee, That grief hath crazed my wits. Id. King Lear.

Come, my lord,

We will bestow you in some better place, Fitter for sickness and for crazy age.

Id. Henry VI.

For no crazed brain could ever yet propound,

Touching the soul, so vain and fond a thought, But some among these masters have been found, Which in their schools the self same thing have

taught. Davits.

Like the vain bubble of Sherian pride, That overcroweth all the world beside, Which reared to raise the crazy monarch's fame, Strives for a court and for a college name. Hull. The tin ore passeth to the erasing mill, which, between two grinding stones, bruiseth it to a fine sand.

Carew's Survey.

Touching other places, she may be said to hold them as one should do a wolf by the ears ; nor will I speak BOW of the eraxiness of her title to many of them. Howel's Vocal Forest. Till length of years, And sedentary numbness, erase my limbs.

Milton.

Then through the fiery pillar, and the cloud, God looking forth, will trouble all his host, And cruse their chariot wheels. Id.

The queen of night, whose large command Rules all the sea, and half the land, And over moist and cragy brains, In high spring-tides, at midnight reigns. Hudibras.

Physick can but mend our crazy state, Patch an old building, not a new create. Dryden. When people are crazy and in disorder, it is natu- ral for them to groan. L' Estrange.

Wickedness is a kind of voluntary frenzy, and a chosen distraction ; and every sinner does wilder and more extravagant things than any man can do that is crazed and out of his wits ; only with this sad differ- ence, that he knows better what he does. Tillotson. Were it possible that the near approaches of eter- nity, whether by a mature age, a crazy constitution, or

a violent sickness, should amaze so many, had they truly considered ? Wake.

How drooping, woeful wan, like one forlorn, Or crazed with care, or crossed with hopeless love !

Gray.

It was in vain to think of doing any more good at school. The remaining week I staid, I did nothing but craze the faculties of my soul about her, or steal out to meet her ; and the two last nights of my stay in the country, had sleep been a mortal sin, the image of this modest and innocent girl had kept me guiltless.

Burns.

The noblest friendship ever shown, The Saviour's history makes known,

Though some have turned and turned it ; And whether being crazed or blind, Or seeing with a biassed mind,

Have not, it seems, discerned it. Cowper. Ne'er may the crazy hand of pining care Thy mirth and youthful spirits break ! Never come sickness, or love-crossed despair, To pluck the roses from thy cheek ! Sheridan.

CRAZE-MILL, or CRAZING MILL, a mill in all respects like a grist mill to grind corn, and so called by the tin-miners, who use it to grind their tin, which remains too great after trembling.

CRE

CREAGIIT, v. n. & n. s. Irish. To mature cattle. A herd of cattle.

It was made penal to the English to permit the Irish to creaght or graze upon their lands, or present them to the ecclesiastical benefices. Davies on Ireland.

In these fast places, they kept their creaghts, or herds of cattle, living by the milk of the cow, without husbandry or tillage. Id.

CREAK, v. n. & n. s. \ Old Fr. criquer ;

CRE'AKING, n. s. $ Dut. kricken ; Kpt/co».

To make a stridulous protracted sound, such as is made by dry shoes and unoiled hinges ; to make a sharp cry, like some birds and animals.

Let not the creaking of shoes, nor the rustling of silks, betray thy poor heart to women.

Shukspeare. King Lear.

No door there was the unguarded house to keep, On creaking hinges turned, to break his sleep.

Dryden.

The creaking locusts with my voice conspire, They fried with heat, and I with fierce desire. Id.

In a large and uninhabited building, like a church, the wind may howl ; the doors and windows may clap ; the creaking of rusty hinges may be heard : a stone, or a bit of plaister, may drop with some noise from the mouldering wall. Beuttie.

Words learned by rote, a parrot may rehearse, But talking is not always to converse ; Not more distinct from harmony divine, The constant creaking of a country sign. Cuwper.

So Juan stood, bewildered on the deck :

The wind sung, cordage strained, and sailors swore, And the ship creaked, the town became a speck,

From which away, so fair and fast they bore.

Byron's Don Juan.

CREAM, v. a., v. n. & n. s.~\ Fr. creme ; CRE'AMY, adj. I li.crema ; Goth.

CREAM-BOWL, n. s. \kreima; Ang.-

CREAM-FACED, adj. I Sax. ream ; Lat.

CRE'AMING-PAN, n. s. J cremor ; ;

To cream is to skim off the cream ; to take the quintessence of any thing; to gather on the sur- face. Cream is the unctuous part of milk ; the best part of any thing.

• thee doth draine

Her creaming pannes, and frustrate all her paine. Spenser. Faerie Queene.

There are a sort of men whose visages Do cream and mantle like a standing pond j And do a wilful stiffness entertain, With purpose to be drest in an opinion Of wisdom, gravity, profound conceit.

Shakapeare. Merchant of Venice, It is not your inky brows, your black silk hair, Your bugle eye-balls, nor your cheek of cream, That can entame my spirits to your worship.

Id. As You Like It. Thou cream-faced lown, Where got'st thou that goose-look ?

Id. Macbeth. I am as vigilant as a cat to steal cream.

Id. Henry IV.

Cream is matured and made to rise speedily, by putting in cold water ; which, as it seemeth, getteth down the whey. Bacon's Natural History,

How the drudging goblin swet, To earn his cream-bowl duly set ; When in one night, rre glimpse of morn, His shadowy flail batn threshed the corn. Milton.

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Let your various creams incircled be With swelling fruit, just .ravished from the tree.

King.

Milk, standing some time, naturally separates into an oily liquor called cream ; and a thinner, blue, and more ponderous liquor, called skimmed milk.

Ar but knot on Aliments,

We skim, from abstracted and translation, The cream of classic information : Like cream from London cows translated, Or butter-milk sophisticated. Huddesford.

And the small ripple split upon the beach

Scarcely o'erpassed the cream of your champagne, When o'er the brim the sparkling bumpers reach,

That spring dew of the spirit ! the heart's rain !

Byron.

CREAM OF LIME is that part of the lime which had been dissolved in the water in its caustic state, but, having again attracted some fixed air from the atmosphere, becomes incapable of solution, and therefore separates from the water in the mild state of chalk or lime- stone.

CREAM OF MILK. Being naturally only mixed, and not dissolved in the rest it soon separates, being specifically lighter ; after which it collects on the surface, from which it is generally skimmed, to complete the disengagement of the oily from the caseous and serous parts. Cream is not only an agreeable aliment when recent, but is also useful in medicine as a lenient, when applied to tetters and erysipelas, at- tended with pain and proceeding from an acrid humor.

CREAM OF TARTAR, the crystals of tartar pul- verized. It is well known as a mild purgative, and of late years has been employed largely with ad- vantage in dropsies.

CRE'ANCE, n. s. Fr. is, in falconry, a fine small line, fastened to a hawk's leash when she is first lured. •

CREASE, v. a. & n. s. From Lat. creta, chalk, say Skinner and Dr. Johnson; but it is rather, as Herne suggests, from the old world creysed, crossed. To make a mark by doubling any thing. The mark made by a fold in something stiff.

Men of great parts are unfortunate in business, be- cause they go out of the common roart : I once de- sired lord Bolingbroke to observe, that the clerks used an ivory knife, with a blunt edge, to divide paper, which cut it even, only requiring a strong hand ; whereas a sharp penknife would go out of the crease, and disfigure the paper. Swift.

GREAT, in the manage, an usher to a riding master ; or a gentleman bred in the academy, with an intent of making himself capable of teaching the art of riding the great horse.

CUE

CREA'TE, v. a. & adj. CREA'TION, n.s. CRE'ATIVE, adj. CREATOR, n.s. CREA'TRESS, n.s. CREA'TRIX, n. s. CRE'ATU»E, n.s. CRE'ATURELY, adj. CRE'ATURESHIP, n. s.

Fr. creer ; Ital. creare ; Sp. criar ; Latin creare. To create is, to form out •of nothing ; to cause to exist; to pro- duce; to beget; to invest with a new character or title ; to

give new qualities to any thing. As an adjective, create signifies, begotten ;

composed of; but it is

obsolete. Creation means, the act of calling into existence, or investing with new qualities or titles ; the universe ; any thing produced or caused. The power which does these acts is creative. Creator is the being that confers ex- istence, especially the Supreme Being. A creature is, a being not self-existent ; any created thing ; an animal ; a general term for man ; a word of contempt or of endearment ; a person who is indebted to another for his rise or fortune; or who acts the part of dependent or sycophant to another. Creaturely denotes having the qua- lities of a creature ; and creatureship, the state of being a creature. Both these words are of unfrequent occurrence.

In the beginning God created the heaven and the earth. Gcnetit.

And al be it so that God hath create all thing in right ordre, and nothing withouten ordre.

Chaucer. Cant. Tales. No creative saw he that bare lif, Save on the grene he saw sitting a wif, A fouler wight ther may no man devise. Id.

I think nature hath lost the moulde

Where she her shape did take ; Or else I doubt if nature could So fair a creature make.

Songes and Sonnettes.

For since the day that they created beeue, tSo many heavenlie faces were not seene Assembled in one place. Spenser. Faerie Queene. Yet crime in her could never creature find. Id.

Him long she so with shadowes entertained, As her creatress had in charge to her ordained. Id.

And the issue there create

Ever shall be fortunate. Shakspeare.

Arise, my knights o the battle : I create you Companions to our person, and will fit you With dignities becoming your estates. Id. Cymbeline.*

Art thou not, fatal vision, sensible To feeling as to sight? Or art thou but A dagger of the mind, a false creation, Proceeding from the heart-oppressed brain ?

Id. Macbeth.

In many looks the false heart's history Is writ, in moods and frowns and wrinkles strange, But heaven in thy creation did decree, That in thy sweet face love should ever dwell.

Id, Sonnet xciii.

I've heard that guilty creatures, at a play, Have, by the very cunning of the scene, Been so struck to the soul, that presently They have proclaimed their malefactions.

Id. Hamlet.

And then, Sir, would he gripe and wring my hand ; Cry, Oh sweet creature ! and then kiss me hard. Idm The best British undertaker had but a proportion of three thousand acres for himself, with power to create a manor, and hold a court-baron.

Davies on Ireland.

Open, ye heavens, your living doors ; let in The great Creator, from his work returned Magnificent ; his six days' work, a world. Milton, His abilities were prone to create in him great con- fidence of undertakings, and this was like enough to betray him to great errours and many enemies.

King Charles.

He sent to colonel Massey to send him men, which he, being a creature of Essex's, refused.

Clarendon.

as

CREATION.

We having but imperfect ideas of the operations of our minds, and much imperfecter yet of the opera- tions of God, run into great difficulties about free created agents, which reason cannot well extricate itself out of. Locke.

Imperfect the world, and all the creatures in it must be acknowledged in many respects to be.*

Tillotson.

Such was the saint, who shone with every grace, Reflecting, Moses-like, his master's face : God saw his image lively was expressed, And his own work as his creation blessed.

Dryden's Fables.

The several parts of relatives, or creaturely infi- nite, may have finite proportions to one another.*

Cheyne's Philosophical Principles.

A good poet no sooner communicates his works, but it is imagined he is a vain young creature given up to the ambition of fame. ˆPope.

The design was discovered by a person whom every body knows to be the creature of a certain great man,

Swift.

Long abstinence is troublesome to acid constitu- tions, by the uneasiness it creates in the stomach.

Arbuthnot.

But come, ye generous minds, in whose wide

thought,

Of all his works, creative beauty burns With wannest beam. Thomson's Spring.

Next to that which is due to the Creator, children owe to their parents the highest love, reverence, and gratitude ; for to a good parent, in all ordinary cases, his child is more obliged than to any other fellow ereature. Beattie.

By thee inspired, O Virtue, age is young, And musick warbles from the faltering tongue j Thy ray creative cheers the clouded brow, And decks the faded cheek with rosy glow. Id.

Me oft has Fancy ludicrous and wild Soothed with a waking dream of houses, towers, Trees, churches, and strange visages, expressed In the red cinders, while with'poring eye I gazed, myself creating what I saw. Cowper.

So erst in Paradise creation's Lord, As the first leaves of holy writ record, From Adam's rib, who pressed the flowery grove, And dreamt delighted of untasted love, B To cheer and charm his solitary mind, Formed a new sex, the mother of mankind.

Darwin. Before Creation peopled earth,

Its eye shall roll through chaos back ; And where the furthest heaven had

birth, The spirit trace its rising track.

Byron. Hebrew Melodies.

CREATION, in its primary import, signifies the bringing into being something .which did not before exist. The term is therefore most gene- rally applied to the original production of the materials of which the visible world is composed. It is also used, in a secondary or subordinate sense, to denote those subsequent operations of the Deity, upon the matter so produced, by which the whole system of nature and all the primitive genera of things received their form, qualities, and laws.

It is certain that none of the ancient philoso- phers had the smallest idea of its being possible

without materials. Hence some rof them, par- ticularly Aristotle, asserted that the world was eternal, both as to its matter and form. Others, though they believed that the gods had given the world its form, yet imagined the materials of which it is composed to have been eternal. Indeed the opinions of the ancients, who had not the benefit of revelation, were on this head so confused and contradictory, that no thing of any consequence can be deduced from them.

Plato, in his Critias, mentions Atlantis as having been buried in the ocean about 9000 years before the age in which he wrote. He as- serts it to have been well known to the Egyptian priests and to the contemporary inhabitants of Attica. But the learned generally agree in re- garding his account of that island as a fiction, which the author himself did not design to be understood seriously. The Chinese represent the world as some hundreds of thousands of years older : and we are also told that the astro- nomical records of the ancient Chaldeans carried back the origin of society no less than 473,000 years. The Egyptian priests reckoned between Menes and Sethon 341 generations. But these accounts are so discordant, and so slenderly sup- ported by evidence, that we cannot hesitate to reject them as false ; the fables of historians scarcely merit so much attention as the hypotheses of phi- losophers.

From sacred history we may reasonably ex- pect more accurate information concerning the antiquity of the globe; but it is evidently only a secondary object of the Scriptures to establish the era of creation. We need not. therefore, be surprised that they do not fix it with accuracy ; or that they leave us at a loss whether to extend what they say concerning that era 'to the whole contents of space, or to confine it to our solar system, or to the earth and its immediate de- pendencies. Great varieties of dates have been assigned by close students of the Hebrew Bible as the epoch of the

creation. The Samaritan Pentateuch fixes it at 4305 years before the birth of Christ. And the Greek translation known by the name of the Septuagint version gives — in the Vatican copy 5270, and injthe Alexandrine 5508, as the number of the years which intervened be- tween those two periods. See CHRONOLOGY. Archbishop Usher, on the other hand, makes out from the Hebrew Bible 4004 years as the term between the creation and the birth of Christ; and Josephus, according to Dr. Wills and Mr. Whiston, makes it 4658 years. We have entered, however, so much at large into the leading data of chronology under that article, that we feel it

quite here.

unnecessary to repeat our observations

Some difficulties occur in comparing the Mo- saic account of the creation with the laws which appear at present to regulate the system of nature. It seems strange, for instance, to conceive how the earth, while yet a stranger to the influence of the sun, could experience the vicissitude of day and night. The condition of matter when the earth was without form and void, and the

to produce a substance out of nothing, or that operation of the Spirit of God on the face of even the power of the Deity himself could work the waters, are equally mysterious. Some

ingenious men have eagerly labored to remove these difficulties. Among these is Dr. Thomas Burnet, who supposes all the celestial bodies, even the sun and all the other planets of the solar system, to have existed long before the earth. The chaos on which the spirit of God moved consisted, according to him, of the first principles from which all terrestrial bodies have been formed. When those laws by which the material world is regulated first began to operate on the mass, he supposes that its grosser and heavier parts would sink towards the centre, and there form a solid ball. Around this solid [ball two species of particles would still float together in confusion. Of these he thinks one, being more volatile, would by degrees make its escape from the other, would leave it still recumbent on the solid centre, and spread around it in an at- mosphere. The middle stratum he composes of aqueous and oleaginous fluids; and he makes no doubt, that after the air had made its escape, the levity of the oleaginous fluids would enable them to rise above the aqueous, and dispose themselves next the surface of the liquid mass. On them he supposes the impure

atmosphere to have then deposited a quantity of terrene parti- cles, sufficient to form, by intermixture with the oils, a thick crust of rich earth for the produc- tion of plants and herbage, and to afford an habitation to animals. This delicate shell he was careful not to furrow with seas or load with moun- tains ; either of these would have reduced all to confusion. Such is his earth ; and after mould- ing it with so much ingenuity, and into so happy a form, he contents himself, without venturing to use the same freedoms with the remaining part of Moses's account of the creation. We need not attempt to refute a theory which has long been justly condemned as equally unsupported by scripture and philosophy.

Whiston treats both the Scriptures and the laws of nature with greater reverence. Yet he certainly involves himself in no small difficulties in attempting to solve those of Moses. He sup- poses the sun, moon, and stars to be all more ancient than the earth. The chaos from which the earth was formed, he represents as having been originally the atmosphere of a comet. The six days of the creation he would persuade us to be equal to six of our years : for he is of opinion that the earth did not revolve daily round its axis, but only annually round its orbit, till after the fall. On the first day or year, therefore, the more pon- derous parts of the chaos were according to this theory conglomerated into an orb of earth, the chinks and interstices over that orb filled up with water, and the exterior part or atmosphere rare- fied, so as to admit some faint glimmering of the rays of the sun. On the second day, the atmos- phere was diffused to its due extent around the earth, and reduced to a degree of rarity and pu- rity which rendered it still more suitable for the transmission of light; the earth was still more consolidated ; and the waters, being almost en- tirely excluded from the interstices which they before occupied, were partly spread over the sur- face of the earth, and partly raised in vapor into the atmosphere or firmament. On the third day the earth's surface became so -irregular, in one

place rising into hills, in another sinking into valleys, as to cause the waters, which were be- fore equally diffused, to collect into seas and lakes, leaving large tracts of ground unoccupied. And no sooner was a part of the earth's surface left bare by the waters, than the general influence of the sun produced on it a rich covering of her- bage, and all the different species of vegetables. On the fourth day, the earth was rendered subject to the regular influence of the sun, moon, and stars. On the fifth day, or year, things were so far advanced, that fishes and fowls were now pro- duced from the waters. On the sixth day the earth was furnished with animals ; and the lord of all the other animals, man, was now created. Such is Mr. Whiston's account of the phenomena of the Mosaic creation. But he likewise assumes so much more than can be reasonably granted, that we need not attempt a formal refutation of his system. What appears to us the most natu- ral way of understanding Moses's account of the creation is, that it was neither

confined to the earth alone, nor extended to the whole universe. The relation which all the planets of the solar system bear to the same illuminating body coun- tenances the conjecture, that they, together with the luminary by which they are enlightened, were all created at one period ; but it would be- conceiving too meanly of the benevolence, wis- dom, and active power of the Deity, to suppose that before that period these had never been ex- erted in any work of creation. On the supposi- tion, that the whole solar system was created at once, whick has at least the merit of doing no violence to the narrative of Moses, the crea- tion of the- sun and the other planets may be un- derstood to have been carried on at the same time with the creation of the earth. In that case, even in the course of the first day, though not longer than our present days, those bodies might be reduced to such order, and their relative mo- tions so far established, as to begin the distinction between light and darkness, day and night. On the second day, we may naturally understand from Moses's narrative, that the atmosphere was purified, and the specific gravities of aqueous vapor and atmospheric air so adjusted, as to render the latter capable of supporting the for- mer. On the third day the waters were first col- lected into lakes and seas ; but in what manner, we cannot determine. Some call in the opera- tion of earthquakes ; others that of specific gra- vity, &c. But these are mere fancies ; and we have not facts to offer iri their stead. On the latter part of this day vegetables were caused to spring up over the earth. This growth must have been much more rapid than we ever behold it now ; but by what supernatural power that might be effected, we should in vain enquire. On the fourth day, the sun, moon, and stars, were made to appear. But, according to the conjecture which we have mentioned as plausible, those heavenly bodies might be created before this day; though they had not till now begun to exert their full influence on the earth, as they have since continued to do. The creation of the inanimate world was now finished, and the earth prepared for the reception of animals. On the fifth day, therefore, were the living inhabitants

of the air and the waters created. On the sixth day the inferior animals inhabiting the earth were first created ; and, after that, the whole work was crowned by the creation of a male and fe- male of the human species. To the account of the creation of the animals, nothing can be added in explanation of Moses's narrative. As only one pair of the human species

were at first created, the same economy might possibly be ob- served in the creation of the inferior animals.

St. Barnabas in the first century, speaking of the works of creation being finished by God in six days, says, 'This signifies that the Lord God will finish all things in six thousand years ; as he himself testified, saying, Behold this day shall be as a thousand years. Therefore, in six days, that is, in six thousand years, shall all things be consummated. And he rested on the seventh day : this signifies, that when his Son shall come, and shall abolish the season of the wicked one, and shall judge the ungodly, and shall change the sun, and the moon, and the stars, then shall he rest gloriously on the seventh day.' And that the seventh day rest was symbolical, has been con- tended by many learned men since St. Barnabas, This is, however, purely a theological specula- tion, and we must be contented with suggesting it to our readers.

CREBILLON (Prosper Joliot de), a French tragic writer, usually ranked, in point of merit, after Corneille and Racine, was born at Dijon in 1674. He was originally destined to the law, and placed at Paris with that view ; but he soon relinquished the bar for the drama. He at last obtained a place in the French Academy, and the employment of censor of the police, in which post he continued till his death. Being asked one day in company, which of his works he thought the best ? ' I don't know,' replied he, ' which is my best production ; but this (point- ing to his son) is certainly my worst.' To this the son is said to have replied, ' That is, because no Carthusian had a hand in it,' alluding to a re- port that Crebillon was indebted to a monk of that order for some of his finest passages. His best works are, 1. Idomeneus, a tragedy ; 2. Atreus ; 3. Electra ; and 4. Rhadamistus. He produced many other pieces, but they are all ge- nerally thought inferior to these. He was re- markably enthusiastic in his devotion to his task while composing. On one occasion some person entering his room during the concoction of a tra- gic plot, he cried out, ' Do not disturb me — I am just going to hang a knavish minister, and turn out a stupid one.' On another, while in his favorite retreat, the Jardin du Roi at Paris, his friend Duvernet, the naturalist, who had given him a key of admission, was called out by the gardener, and told, that some maniac had made his escape, and was ranging the walks of the garden. The naturalist hastened to the place, and found his friend Crebillon without his coat, filled with poetical furor ; and writhing like the Sybil, about to pour forth her predictions. He died at Paris, 1762.

CRE'BROUS, adj. > Lat. creber. Frequent ;

CRE'BRITUDE, n. s. > frequentness.

CBEDE'NDA, n. s. Lat. Things to be be-

lieved ; articles of faith : distinguished in theo- logy from agenda, or practical duties.

These were the great articles and credenda of Christianity, that so much startled the world. South. CRE'DIT, v. a., & n. s.^] Lat. credere. To CRE'DITABLE, adj. credit is, to believe ;

CRE'DITABLENESS, n. s. to confide in; to CRE'DITABLY, adv. procure credit or

CRE'DITOR, n. s. honor to; to admit

CRE'DITRIX, n. s.)-as a debtor. Credit

CRE'DULENCY, n. s. is, belief; reputa-

CREDU'LITY, n. s. tion ; good opinion ;

CRE'DULOUS, adj. the correlative to

CRE'DULOUSLY, adv. debt; influence;

CRE'DULOUSNESS, n. s. J promise given. Cre- ditor signifies, he to whom a debt is owed ; one who credits what he hears : but this last sense is obsolete. Creditable denotes, reputable ; esti- mable : creditably, without disgrace : credulous, too apt to believe, or give credit to : and credu- lity, easiness of belief; readiness of credit.

When the people heard these words, they gave 110 credit unto them, nor received them. 1 Mac. x. 46. The things which we properly believe, be only such as are received upon the credit of divine testimony.

Hooket .

The poor Plangus, being subject to that only disad- vantage of honest hearts, credulity, was persuaded by him. Sidney.

Many sought to feed The easy creditors of novelties, By voicing him alive. Shakspeare.

"Now I change my mind, And partly credit things that do presage.

Id. Julius Ceeiar.

There came divers of Antonio's creditors in my com- pany to Venice, that

swear he cannot chuse but break. Id. Merchant of Venice. 0 hard believing Love ! how strange it seems Not to believe, and yet too credulous !

Id. Venus and Adonis.

There is no decaying merchant, or inward beggar, hath so many tricks to uphold the credit of their wealth, as these empty persons have to maintain the credit of their sufficiency. Bacon.

Who now enjoys thee credulous, all gold, Who always vacant, always amiable, Hopes thee, of flattery gales Unmindful ? hapless they, T' whom thou untried seemest fair. Milton.

May here her monument stand so,

To credit this rude age ; and show

To future times, that even we

Some patterns did of virtue see. Waller.

They sent him likewise a copy of their supplication

to the king, and desired him to use his credit that a

treaty might be entered into. Clarendon.

Credit is nothing but the expectation of money

within some limited time. Locke.

If you can once get into children a love of credit,

and an apprehension of shame and disgrace, you have

put into them the true principle, which will constantly

work, and incline them to the right. Id,

At present you credit the church as much by your

government, as you did the school formerly by your

wit. South.

Many will chuse rather to neglect their duty safely

and creditably, than to get a broken pate in the

church's service, only to be rewarded with that which

will break their hearts too. Id.

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The contemplation of things, that do not serve to promote our happiness, is but a more specious sort of idleness, a more pardonable and creditable kind of ig- norance. Tillotson.

Among all these snares, there is none more en- tangling than the creditablenest and repute of cus- tomary vices. Decay of Piety.

Some secret truths, from learned pride concealed, To maids alone and children are revealed : What though no credit doubting wits may give, The fair and innocent shall still believe. Pope.

Yes, while I live, no rich or noble knave Shall walk the world in credit to his grave.

Id. Horace.

He settled him in a good creditable way of living, having procured him by his interest one of the best places of the country. Arbuthnot's John Bull.

The prejudice of credulity may, in some measure, be cured, by learning to set a high value on truth.

Wattt's Loglck.

The most trifling actions that affect a man's credit are to be regarded. The sound of your hammer at five in the morning, or nine at night, heard by a credi- tor, makes him easy six months longer ; but if he sees you at a billiard-table, or hears your voice at a tavern, when you should be at work, he sends for his money the next day ; demands it before he can receive it in a lump. Franklin.

If this state of his country had been foretold to him, would it not require all the sanguine credulity of youth, and all the fervid glow of enthusiasm, to make him believe it ? Fortunate man, he has lived to see it ! Fortunate indeed, if he lives to see nothing that shall vary the prospect, and cloud the setting of his day. Burke.

Not e'en the Sun, desirable as rare, Could bend one knee, engage one votary there ; They were, what base credulity believes True Christians are, dissemblers, drunkards, thieves.

Cowper.

There's monie a creditable stock O' decent, honest, fawsont fo'k, Are riven ˆoutbaith root and branch, Some rascal's pridefu' greed to quench, Wha thinks to knit himsel the faster In favour wi' some gentle master. Burns.

Sir Peter, I do not expect you to credit me — but the tenderness you expressed for me, when I am sure you could not think I was a witness to it, has penetrated so to my heart, that had I left the place without the shame of this discovery, my future life should have spoken the sincerity of my gratitude. Sheridan.

As for that smooth-tongued hypocrite, who would have seduced the wife of his too credulous friend, while he affected honourable addresses to his ward — I be- hold him now in a light so truly despicable, that I shall never again respect myself for having listened to him. Id.

She hoped he would improve — perhaps believed ; A letter too, she gave (he never read it) Of good advice — and two or three of credit.

Byron. Don Juan.

CREDIT was anciently a right which lords had over their vassals ; consisting in this, that during a certain time they might oblige them to lend them money. In this sense, the duke of Britanny had credit during fifteen days on his own sub- jects, and those of the bishop of Nantes ; and the bishop had the same credit of right among his subjects and those of that prince.

CREDIT, LETTERS or, are those given to per- sons in whom a merchant, &c. can trust, to take money of his correspondent abroad, in case he happens to need it.

CREDITON, or KIRKTON, a town of England, in the county of Devon, formerly the see of a bishop, removed to Exeter in the year 1050. In the reign of Edward I. it sent members to the parliament then sitting at Carlisle. It was once a very flourishing town, but has suffered severely by fire. In 1743 no fewer than 460 houses were burnt down, besides the market-house, wool chambers, and other public buildings. The whole loss was estimated at between £50,000 and £60,000; and again, in 1772, the conse- quences of fire were nearly as disastrous. It is governed by a magistrate called a Portreeve. The principal manufacture is that of serges,

which is carried on to a great extent. The church, which was the cathedral, is a noble Gothic struc- ture, 150 feet long and forty-four wide ; the altar-piece is a most exquisite piece of painting ; the tower is 100 feet high, standing in the centre of the church, in a semicircular arch, supported by four pillars of uncommon magnitude ; and con- taining eight bells, and a clock with chimes. The market is on Saturdays for provisions, wool, and yarn. It is eight miles south-east of Exeter ; and 180 west by north of London.

CREE, a rive" of Scotland, which rises in the northern parts of the county of Wigton, and the stewarty of Kircudbright. It is very small for several miles, and runs through a bleak and dreary country ; but is soon considerably in- creased by tributary streams. It now changes its appearance ; and, instead of rocks and moors, it holds its course nearly south through a beauti- ful valley, till it empties itself ;nto the bay of Wigton. It forms the boundaries between the counties of Wigton and Kircudbright. It abounds with salmon, and is navigable for vessels for several miles.

CREECH (Thomas), a translator of ancient authors, was born near Sherborne in Dorsetshire, in 1659. He was educated at Sherborne, and after- wards entered a commoner of Wadham College, Oxford. In 1683 he took the degree of M.A. and not long after was elected probationer fellow of All-souls College ; to which his translation of Lucretius recommended him. He took the de- gree of B. D. on the 18th March 1696. In 1699, having taken holy orders, he was presented by his college to the living of Welwyn in Hertford- shire ; but this he had not long enjoyed before he put an end to his own life. A letter presented to the Bodleian Library seems to prove that having frequently borrowed money of a fellow collegian, and repeating his applications too often, he met one day with such a cold reception, that he retired in a fit of gloomy disgust, and three days after was found hanging in his study Creech's principal performances are, 1 . A Trans- lation of Lucretius. 2. A Translation of Horace ; in which, however, he has omitted some few odes. 3. The Idylliums of Theocritus, with Rapin's Discourse of Pastorals. 4. A Translation of Manilius's Astronomicon. Besides translations of several parts of Virgil, Ovid, and Plutar printed in different collections.

CREED, n. s.

CR'EDENCE, v. a. & n. s. CRE DENT, adj. CREDENTIAL, n.s. & ad/'. CREDIBILITY, «. s. CHE'DIBLE, adj. CHE'IHBLENESS, n. s. CRE'DIBLY, adv. CREED-MAKER, n. s.

An.-Sax.

from Lat. credo. A creed is a form of words which ˆcomprehends the articles of faith ; any solemn pro- fession of princi- J pies or opinion ;

*any thing which a person firmly believes. See the next article. Credence signifies, belief; credit ; that which entitles to be credited or believed, as letters of credence, which are synony- mous with credentials. As a verb, credence is out of vse ; it means to believe. Skelton has, *in credencing his tales.' Credent is, believing; unquestionable. Credible is that which is wor- thy of belief; credibleness, credibility, and credibly, of course participate in the same meaning.*

Such that can nat ysay ther crede With prayer shul be made prelates ; Nothir can thei the gospell rede, Such shul now weldin high estates.

Chaucer. Cant. Tales.

For Solomon sayth, hereth me and yeveth credence to that that I shall say. Id.

Ne let it seem that credence this exceeds, For he that made the same was known right well

To have done much more admirable deeds ; It Merlin was. Spenser. Faerie Qveene.

No leasing new, nor grandames fable stale, But antient truth, confirmed with credence old.

Id. Colin Clout.

Things are made credible, either by the known con- dition and quality of the utterer, or by the manifest likelihood of truth in themselves. Hooker.

For me, my lords, I love him not, nor fear him ; there's my creed.

Shakspeare. Love and wisdom,

Approved so to your majesty, may plead

For ample credence. Id.

Then weigh what loss your honour may sustain,

If with too credent ear you list' his songs. Id. Hamlet.

They did not only underhand give out that this was

the true earl ; but the friar, finding some credence in

the people, took boldness in the pulpit to declare as

much. Bacon.

This, with the loss of so few of the English as is

scarce credible ; being , as hath been rather confidently

than credibly reported, but of one man, though not a

few hurt. Id.

Having now showed their credential letters on both

sides. Camden.

The larger and fuller view of this foundation is set

down in the creeds of the church.

Hammond on Fundamentals.

Thus we see how, amongst other good effects, creed- making always has, and always will necessarily produce and propagate ignorance in the world, however each party blame others for it. Locke.

The credibleness of a good part of these narratives has been confirmed to me by a practiser of physick.

Boyle.

None can demonstrate to me, that there is such an island as Jamaica ; yet, upon the testimony of credible persons, I am free from doubt. Tillotson.

The first of those opinions I shall shew to be alto- gether incredible, and the latter to have all the credi- bility and evidence of which a thing of that nature is capable. Id.

A few persons of an odious and despised country could not have filled the world with believers, had they not shewn undoubted credentials from the

Divine Person who sent them on such a message.

Addison on the Christian Religion.

I never heard of a man of learning, sense, or ob- servation, that was favoured with any of them ; a strong presumption against their credibility. Burke.

My creed (whatever some creed-makers mean By Athanasian nonsense, or Nicene) My creed is, he is safe that does his best, And death's a doom sufficient for the rest.

Cuwper. [Satirically]

There stands the messenger of truth : there stands The legate of the skies ! — His theme divine, His office sacred, his credentials clear. By him the violated law speaks out Its thunders ; and by him, in strains as sweet As angels use, the Gospel whispers peace. Id,

Oh Love ! how perfect is thy mystic art,

Strengthening the weak, and trampling on the

strong, How self-deceitful is the sagest part

Of mortals whom thy lure hath led along — The precipice she stood on was immense,

So was her creed in her own innocence.

Byron. Don Juan.

CREED, APOSTLES'. See APOSTLES.

CREED, ATHANASIAN, and NICENE. These two, with the Apostles' Creed, are the most universal. They are used in the public offices of the church of England ; and subscription to them is re- quired of the clergy. See ATHANASIAN, and NICENE. Other ancient creeds are, 1. The form of apostolical doctrine, collected by Origen. 2. A fragment of a creed preserved by Tertullian.

3. A remnant of a creed in the works of Cyprian.

4. A creed composed by Gregory Thaumaturgus, for the use of his own church. 5. The creed of Lucian the martyr. 6. The creed of the aposto- lical constitutions. Besides these scattered re- mains of the ancient creeds, there are extant some perfect forms, as those of Jerusalem, Cesarea, Antioch,

&c.

To CREEK, v. a. To make a harsh noise See To CREAK.

Shall I stay here, Creeking my shoes on the plain masonry ?

Shakspeare.

CREEK, n.s. > Ang.-Sax. crecca; Dutch CRE'EKY, adj. 5 kreke. A prominence in a winding coast ; a small port ; a cove ; familiarly, any turn or alley. Creek of day, from Teut. krieke, signifies the commencement of the dawn, Creeky is, full of creeks ; unequal ; winding.

Who, leaning on the belly of a pot, Poured forth a water, whose outgushing flood

Run bathing all the creeky shore a-flot, Wheron the Trojan prince spilt Turnus' blood

Spenser.

A back-friend ; a shoulder clapper; one that com. mauds the passages of alleys, creeks, and narrow lands.

Shakspeare. As streams, which with their winding banks do

PlaY>

Stopped by their creeks, run softly through the plain.

Damn.

A law was made here to stop their passage in every port and creek. Id. on Ireland.

They on the bank of Jordan, by a creek, Where winds with reeds and oziers whispering play, Their unexpected loss and plaints outbreathed.

Milton.

They have a petty traffic with known correspondents in some little creek:

within that they confine them- selves, and are dexterous managers enough of the wares and products of that corner with which they content themselves ; but will not venture out into the great ocean of knowledge. Locke.

The wriggling fry soon fill the creeks around, Poisoning the waters where their swarms abound ; Scorned by the nobler tenants of the flood, Minnows and gudgeons gorge the' unwholesome food.

Cowper. It was a wild and breaker-beaten coast,

With cliffs above, and a broad sandy shore ; Guarded by shoals and rocks as by an host,

With here and there a creek. Byron. Don Juan.

CREEKS, or MUSEOGEES, a nation of native Indians, inhabiting the territory now included in the Strait of Alabama in the neighbourhood. They are reduced to about 20,000 in number. See ALABAMA.

CREEP, v.n. \ Goth, kriepa; Swed CRE'EPER, n. s. tkrypa; Ang.Sax. creo CRE'EPINGLY, adv. £ pan; Dan. krye ; Wei. CRE'EPHOLE, n. s. J croppian ; Lat. repere ; epirw. To move like a worm; to grow along the ground, or on supports; to move forward with regularly slow progression; to move clandes- tinely; to proceed timorously; to steal upon unawares ; to act with servility. A creeper is, a plant that needs other support, like the ivy ; an iron to slide along a kitchen grate ; a kind of clog worn by women ; an insect ; a small bird, called also the ox-eye ; a small grapnel or drag, used to recover things that have fallen into the sea. A creephole is, a hole into which an animal may creep to avoid danger; a subterfuge. Creepingly signifies tardily ; after the manner of a reptile. To creep and to crawl are generally nsed syno- nymously, and Johnson seems to sanction the practice ; but though both verbs denote slowness of motion and proximity to the earth, creep, when used with reference to animals, ought, perhaps, in strictness, to be applied to such creatures as have legs, and crawl to those which have none.

Of this sort are they which creep into houses, and

lead captive silly women. 2 Timothy, iii. 6.

Thou makcst darkness, and it is night, wherein all

the beasts of the forest do creep forth. Psalm civ. 20.

An hole he fond ful low upon the bord, Ther as the cat was wont in for to

crepe, And at that hole he loked in ful depe.

Chaucer. Cant. Tales.

The flames upspring, and cruelly they crepe Prom wall to roofe, til all to cinders waste. Sackville.

And the old woman carefully displayed The clothes about her round with busy ayd, So that at last a little creeping sleepe Surprised her sence. Spenser. Faerie Queene.

like as a beare,

That creeping close emongst the hives to reare

An honey comb, the wakeful dogs espy. Id.

By those gifts of nature and fortune he creeps, nay

he flies, into the favour of poor silly women. Sidney.

The joy, which wrought into Pygmalion's mind,

was even such as, by each degree of Zelmane's words,

creepingly entered into Philouta:' Id.

To-morrow, and to-morrow, and to-morrow, Creeps in this petty pace from day to day, To the last eyllable of recorded time.

Shakspeare. Macbeth,

I'll creep up into the chimney. •

— There they always used to discharge their birding • pieces : creep into the kiln-hole.

Id. Merry Wives of Windtor. It seems, the marriage of his brother's wife

Has crept too near his conscience.

No, his conscience

Has crept too near another lady. Id. Henry VIH That jealousy itself could not mistrust False creeping craft and perjury should thrust Into so bright a day such black-faced storms.

Id. The Rape of Lucrece.

Plants that put forth their sap hastily, have bodies not proportionable to their length ; therefore they are winders or creepers, as ivy, briony, and woodbine.

Bacon,

Tken like the coward after neighbours ‘ fray, They creep forth boldly, and ask, Where are they ?

Hall. And every creeping thing that creeps the ground.

Milton.

It is not to be expected that every one should guard his understanding from being imposed on by the so- phistry which creep into most of the books of argu- ment. Locke.*

The grottos cool, with shady poplars crowned,

And creeping vines on arbours waved around. Dryden.

Ambition often puts men upon doing the meanest

offices ; so climbing is performed in the same posture

with creeping. Swift.

They that creep and they that fly

Shall end where they began. Gray.

If we have deserved this kind of evil fame from any thing we have done in a state of prosperity, I am sure that it is not an abject conduct in adversity that can clear our reputation. Well is it known that am- bition can creep as well as soar. Burke.

Thus Heaven enlarged his soul in riper years, For nature gave him strength, and fire, to soar On Fancy’s wing above this vale of tears ; Where dark cold-hearted sceptics, creeping, pore Through microscope of metaphysic lore. Beatlie.

Error has no place ;

That creeping pestilence is driven away ; The breath of heaven has chased it. Cowper.

A gentle slumber, but it was not deep,

For ever and anon a something shook Juan, and shuddering o'er his frame would creep. Byron. Don Juan.

CREEPER, in ornithology. See CERTHIA.

CRE'EPLE, n.s. Ang.Sax. crtypel. Dut. krepel. A cripple. This was the usual way of spelling cripple till about the close of the seven teenth century.

A crepill he saw comyng with grete spede and haste Oppon a stilt onder his kne bound wondirfest.

Chaucer. Cant. Talet.

She to whom this world must itself refer As suburbs or the microcosm of her, She, she is dead, she's dead when thou knowest this, Thou knowest how lame a creeple this world is.

Donne.

CREIGHTON (Robert), D.D., son of a bishop of Bath and Wells of this name, was born in 1648. He accompanied Charles II. into his exile, and prosecuted the study of music with great success. An anthem of his, ' I will arise and go

to ray fatha, and a seme .1 the key of E, are much admired, and constantly performed to this day in the cathedrals of England. Dr. Creighton died at Wells, 1736.*

CRELLIUS (John), a celebrated Socinian writer, was born in 1590, in a village near Nuremberg. In 1612 he went into Poland, where the Unitarians had a school, in which he became professor of divinity, and minister at Cracow, where he died in 1632, aged forty-two. He was the author of, 1 . A Treatise against the Mystery of the Trinity. 2. Commentaries en a part of the New Testament ; and other works which are now very scarce.

CREMA, a town of Italy, a bishop's see, the ci-devant capital of Cremasco; and afterwards the biennial capital, alternately with Lodi, of the department of Adda. It is a fortified town, is well built, populous and commercial ; containing five parisli churches, several fine palaces, hospi-

tals, and squares ; and 8800 citizens. It now belongs to Austria, and is situated on the Serio, twenty miles north of Placentia, and twenty-two E.S.E. of Milan.

CREMASCO, a country of Italy, in the late Venetian territories, which took its name from Crema, the capital. It is seventy-four miles long, forty-six broad, and 230 in circumference ; and contains one city, four vi .' Ages, and fifty- three parishes Its surface, except the Casta, is level, fertile i" corn, wine, flax, and hemp.

CREMATION Lat. crematio. A burning

And the Chinois, without cremation or urnal inter- ment of their bodies, make use of trees and much burning, while they plant a pine-tree by the grave.

Browne.

CREMATION is particularly applied to the ancient custom of burning the dead. This cus- tom is well known to have prevailed among most eastern nations, and continued with their descen- dants after they had peopled the different parts of Europe. It prevailed in Greece, Italy, Gaul, Britain, Germany, Sweden, Norway, and Den- mark, till Christianity abolished it.

CREMONA, an ancient city of Italy, the ci-de- vant capital of the Cremonese, and now capital of the department of Upper Po, situated in a delight- ful plain, watered by the Oglio, about a quarter of a mile from the Po, over which is a bridge of boats protected by a fort. A Roman colony, with mu- nicipal rights, settled beyond the Po, below the confluence of the Addua, on the report of Hanni- bal's march into Italy. It was an opulent and mercantile city ; but suffered greatly in the civil wars of Augustus. In the war with Vitellius, it was destroyed by the partisans of Vespasian ; but was soon after rebuilt by the munificence of the citizens, by order of Vespasian. It is about five miles in circumference, and is defended by a cas- tle. A canal passes through it which forms a communication between the Oglio and the Po. Its principal streets are broad and straight. It has forty churches, several squares, and a uni- versity. The population is about 30,000. The city with its fort was surrendered to Buonaparte, on the 12th May, 1796, and it has followed the fate of Lombardy in its ultimate subjection to the Austrians, during the late revolutionary wars; I

is thirty miles north-west of Parma, and thirty- eight south-east of Milan.

CREMONESE, a ci-devant territory of Italy, in the duchy of Milan, afterwards included in the department of the Upper Po. It was boun- ded on the east by the duchy of Mantua, on the north by Bresciano, on the west

by Cremasco, and the Lodesan, and on the south by Parma. It is fertile in wine and fruit.

CREMO'R, n. s. Lat. A milky substance ; a soft liquor resembling cream.

*The food is swallowed into the stomach, where, mingled with dissolvent juices, it is reduced into a chyle or cremor. H**!/-*

CRE'NATED, adj. From Latin, crena. Notched ; indented.

The cells are prettily crenated, or notched, quite round the edges ; but not straited down to any depth.

Woodward.

CRENATUM FOLIUM. See BOTANY.

CRENELLE', inheraldry, one of the lines of partition repre- senting the embattlements of tow- ers, &c. as in the diagram, argent, party per fesse gules.

CREOLES, a name given to the families de- scended from the Spaniards, who settled at Mex- ico, in America. These are much more nume- rous than either the Spaniards properly so called, or the Mulattoes; which two other species of inhabitants are excluded from all considerable employments. The name throughout the rest of the West Indies is applied to all the natives who are descended from European parents.

CREON, king of Corinth, in fabulous history, the son of Sisyphus. He promised his daughter Glauce to Jason, who had repudiated Medea. To revenge the success of her rival, Medea sent her, as a present, a gown covered with poison. (Jlauce put it on, and was seized with sudden pains. Her body took fire ; the house also was consumed with Creon and his whole family.

CREON, king of Thebes, in fabulous history, the son of Menoetius, and father of Jocasta, the mother and wife of Oedipus. On the death of Laius, who had married Jocasta, Creon ascended the vacant throne of Thebes. As the ravages of the Sphinx were intolerable, Creon offered his crown and daughter in marriage to him who could explain the enigmas which the monster proposed. Oedipus explained the riddles, ascen- ded the throne, and married Jocasta, without knowing she was his mother ; and by her he had two sons, Polynices and Eteocles, and two daughters. The two sons agreed after their fa- ther's death to reign each a year alternately. Eteocles reigned first by right of seniority ; but when once in power he refused to resign, and his brother led against him an army of Argives to support his

right. The war was decided by sin- gle combat between the two brothers. They killed each other, and Creon again ascended the throne, till Leodamus the son of Eteocles should be of a sufficient age to assume the reins of government. He commanded that the Argives, and particularly Polynices, who was the cause ot all the bloodshed, should remain unburied. Creon

was afterwards killed by Theseus, who made war upon him because he refused burial to the Argives.

CRE'PANCE, n. s. With farriers. An ulcer seated in the midst of the forepart of the foot.

CREPIS, hawk-weed, in botany, a genus of the polygamia superflua order, and syngenesia class of plants; natural order forty-ninth, com- positae. The receptacle is naked ; CAL. calycu- lated with deciduous scales ; the pappus feathery and stalked. There are thirty-one species, most of them herbaceous annuals, rising to twelve or eighteen inches, and having their branches termi- nated by ligulated compound red and yellow flowers. These are very large, and consist of many flat florets spread over one another irnbri- catim, and when fully blown appear as if radiated. They are very beautiful ; and appear in June, July, and August. They are succeeded by plenty of seeds, which, if permitted to scatter on the ground, will produce a number of young plants without further trouble.

CRE'PITATE, v. a. > Lat. crepitare. To

CREPITA'TION, n. s. 5 make a small crackling noise.

CREPITATION, in chemistry, the noise which some salts make over the fire in calcination.

CREPITATION, in surgery, the noise made by the ends or pieces of bones, when the surgeon moves a limb to assure himself by his ear of the existence of a fracture.

CREPT, part, of creep.

There are certain men crept in unawares. Jude.

Soone as that uncouth light upon them shone, Into her mouth they crept,

and suddain all were gone. Spenser. Faerie Queene.

This fair vine, hut that her arms surround Her married elm, had crept along the ground. Pope.

CREPU'SCULE, n. s.\ Fr. crepuscle ; Lat. CREPIJ'SCULAR, adj. tcrepusculum. Twi CREPU'SCULINE, adj. t light. Crepuscular CREPU'SCULOUS, adj. J is, relating to the cre- puscule : crepusculous, and crepusculine, denote glimmering ; belonging to the twilight ; in a twi- light kind of state; imperfectly elucidated.

A close apprehension of the one, might perhaps af- ford a gliicmering light and crepusculous glance of the other. Browne.

The beginnings of philosophy were in a crepusculous obscurity, and it is yet scarce past the dawn.

Glanville's Scepsis.

He has made apertures to take in more or less light, as the observer pleases, by opening and shutting like the eye, the better to fit glasses to creptaculine ob- servations. Sprat.

The creputcular atmosphere, or the region where the light of the sun ceases to be refracted to us, is es- timated by philosophers to be between forty and fifty miles high. Darwin.

CRE'SCENT, t/. a., n. «.,&<«#.•) Lat. cres- CRE'SCENCE, n. s. ˆcens, pr. part.

CRE'SCIVE, adv.) of cresce'-e. —

The verb is of modern introduction, and signi- fies to form into a crescent. The noun denotes the moon in her increasing state ; any thing that :esembles the moon in that state ; the distinguish- ing emblem or sign of Mahommedanism : as an «djective, it means increasing ; growing ; in a

state of increase. Crescence is, the state of growing ; and crescive, increasing ; growing.

My power 's a crescent, and my auguring hope Says it will come to the' full.

Shakspeare. Antony and Cleopatra I have seen him in Britain , he was then of a cres cent note. Id. Cymbeline.*

So the prince obscured his contemplation Under the veil of wildness, which

no doubt Grew, like the summer grass, fastest by night, Unseen, yet crescive in his faculty. Id. Henry V.

Or Bactrian sophy, from the horns

Of Turkish crescent, leaves all waste beyond

The realm of Aladule, in his retreat. Milton.

With these in troop

Came Astoreth, whom the Phoenicians called

Astarte, queen of heaven, with crescent horns. Id.

Jove in dusky clouds involves the skies, And the faiut crescent shoots by fits before their eyes.

Dryden. And two fair crescents of translucent horn

The brows of all their young increase adorn.

Pope's Odystey.

From west to east by equal influence tend, And towards the moon's attractive crescence bend.

Broo/te. Now gliding remote, on the verge of the sky,

The Moon half-extinguished her crescent displays : But lately I marked, when majestic on high

She shone, and the planets were lost i?i her blaze.

Beattie.

There, shall broad streets their stately walls extend, The circus widen, and the crescent bend. Darwin. With the far mountain crescent half surrounded

On one side, and the deep sea calm and chill Upon the other, and the rosy sky, With one star sparkling through it like an eye.

Byron. Don Juan

CRESCENT, in heraldry, is the figure of a half moon with the horns turned inwards toward the chief of the shield, in which latter respect it differs from decrescent and increscent. It is the prevailing badge among the

followers of Mahomet, as the cross among Christians, but is sometimes borne in European shields, as azure, a crescent, argent, name Lucy. It is also the badge of the second son when on the crest, the second son of the second house when on another crescent, &c. See HOUSE, in heraldry.

CRESCENTED, in heraldry, a term applied to a cross that has at each end a crescent, as ar- gent, a cross crescented gules, name, Wilkins.

CRESCENTIA, in botany, the calabash-tree, a genus of the angiospermia order, and didynamia class of plants ; natural order twenty-fifth, puta-minea?. CAL. bipartite and equal; COR. gibbous; the BERRY pedicellated or stalked, unilocular, and polyspermous ; the SEEDS bilocular. There are two species, viz. — 1. C. cujete, with oblong nar- row leaves and a large oval fruit, a native of Ja- maica and the Leeward Islands. 2. C. laiifolia, the broad-leaved calabash, seldom rises more than fifteen or twenty feet high, witn an upriglii trunk, covered with a white smooth bark, sending out many lateral branches at the top, garnished with leaves three inches in length, and one and a quarter broad, ranged alternately. The flowers

are small, and of a deep yellow color. The fruit of this sort is sometimes round, sometimes oval, but of very unequal sizes. Both these species are easily propagated by seeds ; but the plants are too tender to live in this country, unless they are constantly kept in a stove. The shells of calabashes are used for various purposes. The pulp is seldom eaten, except by cattle in time of drought. The wood, which is hard and smooth, is made into stools, chairs, and other furniture.

CRESCIMBENI (John Mario), an Italian poet, born at Macerata in Ancona, in 1663. He was the founder of the Arcadian Society, of which he was appointed director in 1690, and in which post he remained till his death, in 1728. He wrote, 1. A History of the Italian Poetry ; much esteemed, and reprinted in 1731, at Venice in 6 vols. 4to. It is accompanied with a commen- tary, containing anecdotes of Italian poets. 2. A History of the Academy of Arcadia, together with the Lives of the most Illustrious Arcadians. He published also many other works, in prose and verse.

CRESS, n. s. Fr, cresson ; Ital. crescione ; Ang.-Sax. carse or cerse; Dut. kerse ; Ger. kresse ; Sw. krassa. Menage and Johnson give, as the etymon, Lat. crescere, to grow. A herb. See the following article.

His court, with nettles and with cresses stored, With soups unbought, and sallads, blest his board.

Pope.

CRESS, a species of lepidium. –

CRESS, INDIAN. See TROP.KOLUM.

CRESS, SCIATIC. See IBERIS.

CRESS, SPANISH. See VELLA.

CRESS, WALL. SeeTuRRixis.

CRESS, WATER. See SISYMBRIUM.

CRE'SSET, n. s. Fr. croissette. Because bea- cons had crosses anciently on their tops. So says Johnson ; but Minsheu derives the word from the Dutch kearsc, candela. A great light set upon a beacon, light-house, or watch-tower; also, a torch or lamp. ' They still raise armies in Scotland by carrying about the fire-cross/ says Johnson. Happily, they have now lost this dangerous habit.

At my nativity

The front of heaven was full of fiery sparks,

Of burning cressets. Shakspeare. Henry IV.

From the arched roof. Pendent by subtle magick, many a row Of starry lamps, and blazing cressets, fed With naphtha and asphaltus, yielded light As from a sky. Milton's Paradise Lost.

CRESSY, or CRECY, a town of France, in the department of Somme, and in the ci-devant pro- vince of Picardy ; memorable for a great victory obtained over the French by Edward III. of England, in 1346. Edward having Encountered and overcome many difficulties in his expedi- tion, was at last so closely followed and ha- rassed by the French army, commanded by Philip VI. king of France in peiˆon, that he determined to make a stand at this place, and to give his pursuers a check. The king of France, dreading nothing so much as the escape of the English, began the march of his great army from Abbeville early in the morning, August 26, and

continued it several hours with great eagerness till he received intelligence that the English had halted at Cressy, and were prepared to give him battle. He was advised at the same time not to engage that day, when his troops*

were fatigued with their march, and in great disorder ; and he was disposed to have taken this advice. But the discipline of these times was so imperfect, that the orders given for halting were not obeyed ; and one corps of this mighty host impelling ano- ther, they continued advancing tilll they came into the presence of their enemies in much con- fusion. Edward had employed the forenoon of this important day in drawing up his army in the most excellent order, in three lines. The first line or battail was thus composed. The archers, 4000 in number, were drawn up in an oblong of about 200 in front and forty deep, at the bottom of which stood the prince of Wales among his men at arms drawn up in a solid square, and having on his left the earls of Arundel and Northampton commanding the second line, com- posed of 800 men at arms, 4000 halberdiers, and 2400 archers. The last line, or body of reserve, in which were 700 men at arms, 5300 billmen, and 6000 archers, was ranged along the summit of the hill, and conducted by the king in person, attended by the lords Moubray, Mortimer, and others. When the army was completely formed, Edward rode along the lines, and by his words and looks endeavoured to inspire his troops with the most ardent hopes of victory. He then com- manded the cavalry to dismount, and the whole army to sit down upon the grass, in their ranks, and refresh themselves. As soon as the French army came in view, they sprung from the ground, full of strength and spirit, and stood ready to receive them. The king of France, assisted by the kings of Bohemia, and Majorca, the dukes of Lorraine and Savoy, and several other sove- reign princes, with the flower of the French no- bility, labored to restore some degree of order to his prodigious army, and drew it up also in three lines, but very indistinctly formed. The first line was commanded in chief by the king o Bohemia ; the second by the earl of Alencon, the French king'? brother ; and the third by Philip in person ; and each of these lines contained a greater number of troops than the whole English army. The battle was begun about three o'clock in the afternoon, by a great body of Genoese cross-bowmen, in the French service, who let fly their quarrels at too great a distance to do any execution, and were presently routed by a shower of arrows from the English archers. The earl of Alencon, after trampling to death many of the flying Genoese, advanced to the charge, and made a furious attack on that corps commanded by the prince of Wales. The earls of Arundel and Northampton advanced with the second ling to sustain the prince, and Alencon was supported by as many troops as could crowd to his assist- ance. Here the battle raged for some time with uncommon fury ; and the king of Bohemia, the earl of Alenpon, and many other nobles, being slain, the whole first and second lines of the French army were put to flight. Philip, undis- mayed, advanced to the charge with the line under his immediate command. But this body soon

fhared the same fate with the other two; and Philip, after having been ui horsed, and wounded in the neck and thigh, was carried off the field hy John de Hainault, and fled with no more than five knights and about sixty soldiers in his company of all his mighty army, which at the beginning of the battle consisted of more than 120,000 men. Such was the famous victory of Cressy, the greatest ever previously gained by England. Edward continued with his army at Cressy three days, numbering and burying the dead. The French had left on this bloody scene the king of Bohemia, eleven other princes, eighty bannerets, 1200 knights, 1500 gentlemen, 4000 men of arras, and 30,000 other soldiers.

CRESSY (Hugh Paulin, or Serenus), a catholic divine, born at Wakefield, in Yorkshire, in 1605. He studied at Merton College, Oxford, where he became fellow, and took his degrees in arts. He afterwards became chaplain to lord Falkland, whom he attended to Ireland, and ob- tained the deanery of Leighlin, to which was added a canonry of Windsor. In 1644 he went to Rome, where he publicly renounced the Pro- testant religion ; and afterwards entered among the Benedictines at Douay, on which occasion he changed his Christian name to Serenus. He re- turned to England at the Restoration, and was honored as chaplain to the queen of Charles II. He died at East Grinstead, in Sussex, in 1674. He was the author of several controversial pieces in defence of the Catholic faith, one of which lord Clarendon answered in an able manner. He also wrote The Church History of Britanny, fol. 1668; a work of great labor and learning, but abounding with legendary fables.

CREST, v. a. & n. $.^ Fr. crate ; Ital. and cresta ; Lat. crista. mark with streaks; serve as a crest for. The plume or tuft on a helmet ; the helmet itself; the comb of a cock ; any tuft or ornament on the head ; the ornament of the helmet in heraldry ; figuratively, pride; spirit; loftiness of men. Crested is, adorned with a crest; wearing a comb. Crestless signifies, not having coat ar- mour; not being of an eminent family. Crest- fallen is, spirit-sunk ; cowed ; degraded ; out of heart.

Like as the shining sky in summer’s night. What time the days with scorching heat aboun d, Is creasted all with lines of fierie light.

Spenser. Faerie Qiteene,

Long tho it be, at last I see it gloom, Aiid the bright evening star, with golden crest A ppear out of the east. Id. Epitlialamion.

When horses should endure the bloody spur, They fall their crests. Shukspeare.

His grandfather was Lionel duke of Clarence, Third son to the third Edward king of England, Sprung crestless yeomen from so deep a root. Id.

Over my altars hath he hung his lance, Bis battered shield his uncontrolled crest.

Id. Vefaa and Adonis _ The horn ;

It was a crest ere thou wast bom : lly father's fathei wore it.

Id, As You Like It.

I warrant you, they would whip me with their fine wits, till I were as crest-fallen as a dried pear.

*Id. Merry Wires of Wind**.*

Of what esteem crests were, in the time of king Edward the Third's rsign, may appear by hig giving an eagle, which he himself had formerly borne, for a crest to William Montacute, earl of Salisbury.

Camden's Remains.

Nor hath some bribed herald first assigned His quartered arms and crest of gentle kind. Hall.

The bold Ascalonites

Then grovelling soiled their crested helmets in the dust. Milton.

They prolate their words in a whining kind of que- rulous tone, as if they were still complaining anj crest-fallen. Howel.

At this, for new replies he did not stay ; But laced his crested helm, and strode away.

Dry den.

The crested bird shall by experience know, Jove made not him his master-piece below. Id.

Their crests divide, And, towering o'er his head, in triumph ride.

Id. Virgil. No foe to man

Lurks in the serpent now : the mother sees, And smiles to see, her infant's playful hand Stretched forth to dally with the crested worm.

Ctneper.

Quick darts the scaly monster o'er the plain, Fold, after fold, his undulating train ; And bending o'er the lake his crested brow, Starts at the crocodile that gapes below. Darwin.

CREST, in heraldry and armour, denotes the uppermost part of the armour; or that part rising over the casque or helmet. The ancient war- riors wore crests to strike terror in their enemies, as the sight of the spoils of animals they had killed; or to give them the more formidable mien, by making them appear taller, &c. In the ancient tournaments, the cavaliers had plumes of leathers, especially those of ostriches and herons, for their crests ; these tufts they nailed plumarts, and were placed in tubes, on the tops of high caps or bonnets. Some had their crests of leather; others of parchment, pasteboard, &c. painted or varnished, to keep out the weather ; others of steel, wood, &c. on which were some- times represented a member or ordinary of the coat ; as, an eagle, fleur-de-lis, &c. but never any of those called honorable ordinaries, as pale, fesse, &c. The crests were changeable at pleasure ; being reputed no other than as an ar- bitrary device or ornament. Herodotus attributes the rise of crests to the Carians, who first bore feathers on their casques, and painted figures on their bucklers; whence the Persians called them cocks. The Etruscans were also celebrated for their lofty crests, and modern artists have given similar additions to the helmets of the three Ho- ratii. The mane of horsehair which was ap- pended to the crest, was called by the Greeks \60oc, and by the Romans crista and juba, and the part which upheld it, or the metallic crest, was called (puXoc, by the Greeks, and conus by the Romans. Antique helmets were sometimes di- vided from the base, spreading like two horns, while the interval was filled with the flowing mane of a horse, and a plume arose on either side . Such is the crest of Minerva on Mr. Hope's

fine antique vase, which has a painting of the expiation of Orestes.

CREST, in heraldry, is a figure placed upon a wreath, coronet, or cap of maintenance, above both helmet and shield, as for instance the crest of a bishop is the mitre. See HERALDRY. The crest is esteemed a greater criterion of nobility than the armour generally, as being borne at tournaments ; to which none were admitted till they had given proof of

their nobility. Some- times it serves to distinguish the several branches of a family. It has also served, on occasion, as the distinguishing badge of factions. Sometimes the crest is taken from the device ; but more usually it is formed of some piece of the arms : thus, the emperor's crest is an eagle ; that of Castile, a castle, &c. Families that exchange arms, as the houses of Brunswick and Cologne have done, do not change their crests ; the first still retain the horse, and the latter the mermaid.

CREST, in the menage, the upper part of a horse's neck.

C REST-FALLEN, in the menage, a fault of a horse, when the crest hangs to one side. The cure is to place it upright, clipping away the spare skin, and applying plasters to keep it in a proper position.

CRETA'CEOUS, adj. 1 Lat. creta. Chalk-

CRETA'TED, adj. J like; chalky; abound-

ing in chalk. Cretated signifies, rubbed with chalk.

What gives the light, seems hard to say ; whether it be the cretaceuus salt, the nitrous salt, or some ig- neous particles. Greta. Nor from the sable ground expect success,

Nor from cretaceous, stubborn and jejune. Philip.*

CRETE, in ancient geography, one of the largest islands in the Mediterranean, according to Strabo 287 miles in length ; according to Pliny 270; and according to Scylax 312. As to its breadth, it is not, as Pliny observes, above fifty- five miles where widest ; whence it was styled, as Stephanus observes, the Long Island. It has the Archipelago to the north, the African Sea to the south, the Carpathian to the east, and the Ionian to the west. Anciently it was known by the names of Aeria, Chthonia, Curete, Idsea, Ma- caris, &c. ; but its most common name was Crete. It is now called CANDIA, which see.

Homer, the celebrated Grecian bard, describes Crete, as it stood in his time, as an ' extensive island in the midst of the stormy main. The soil is rich and fertile : it contains an immense number of inhabitants: it is adorned with 100 cities, and its inhabitants speak in various lan- guages.' The Cretan mythologists, quoted by Diodorus Siculus, relate that the first inhabitants of the island were the Dactyli Idaei, who dwelt around mount Ida ; they were regarded as magi- cians, because they possessed a variety of know- ledge, and were particularly skilled in religious mysteries. Orpheus, who distinguished himself so highly in poetry and music, was their disciple. They discovered the use of fire, iron, and brass, and invented the art of

working these metals in Berecynthius, a mountain near Aptera. These discoveries procured them divine honors. One of them, named Hercules, rendered himself fa- mous by his exploits. The Dactyli Idaei were

the ancestors of the Curetes, who at first inha- bited the forests and caves of the mountains. They afterwards entered into domestic life, and taught men to collect flocks of sheep, to tame the ferocity of wild animals for domestic pur- poses, and to invite bees into hives, and gather their honey. They excited men to chase, taught the use of the bow, and were the inventors of swords and of military dances. The noise which they made by dancing in armour, hindered Sa- turn from hearing the cries of J upiter, whose education Rhea had entrusted to them. With the assistance of the nymphs, they brought up that god in a cave in mount Ida, feeding him with the milk of the goat Amalthea, and with honey. To this period mythology assigns the origin of the Titans; their abode near Gnossus, where stood the palace of Rhea; their travels over the whole earth ; their war against Animon, and his defence by Bacchus ; the nuptials of Ju- piter and Juno, celebrated near the river The- renus in Crete ; the gods, goddesses, and heroes, who descended from them. The most illustrious of those heroes were Minos and Rhadamanthus. They are said to have been the sons of Jupiter and Europa, who was conveyed into the island on a bull. Minos, becoming king, built several cities; the most considerable of which were Gnossus, on that side of the island which faces Asia, Phcestus on the southern shore, and Cydon on the western, facing Peloponnesus. Rhada- manthus distinguished himself by the impartiality of his judgments, and by the inflexible severity with which he inflicted punishment on the im- pious and wicked. His empire extended over the chief isles of the Archipelago, and the inha- bitants of the adjacent coasts of Asia submitted to him on account of his high reputation for pro- bity and justice. Mythologists constituted him judge in the regions below, to determine the fu- ture state of the righteous and the wicked. They conferred on him the same honors which were bestowed on Minos, the justest of kings. Thus far have been followed the Cretan traditions as they are related by Diodorus; but historians differ about the truth of them.

Leaving mythology for the more certain re- cords and monuments of history, we find that Crete received its name from Cres, the first of its monarchs ; and, to distinguish the true Cretans from strangers, they were named Eteocretes. A number of colonies, from different parts of Greece, settled on the island. Among the successors of Cres we find two Jupiters, and two of the name of Minos ; but most writers confound them, and ascribe to one those transactions and exploits which should be shared between the two. Mi- nos was esteemed the wisest legislator of anti- quity. The office assigned him in the regions below, is a clear proof of his having gained an exalted reputation by his justice. His laws were engraven on

tables of brass; and Talos, his chief minister, visited all the towns and cities in the island, three times a year, to observe in what manner they were executed and obeyed. The second Minos was the first of the Greeks who appealed in the Mediterranean at the head of a naval armament. He conquered the Cyclades, expelled the Carians, established Cretan colonies

in those islands, and committed the government of them to his son. Being informed, at Paros, that his son Androgeus was slain at Athens, he declared war against ./Egeus, and imposed on him a disgraceful tribute ; from the payment of which Theseus delivered his country. He took arms against Nisus, king of Megara, made him prisoner by the treachery of his daughter Scylla, and put him to death, together with Megarus, the son of Hippomanes, who had brought some forces to his assistance. Daedalus, who had in- curred his displeasure, despairing of pardon from so severe and inflexible a prince, employed the resources of his inventive genius, to escape from his power. He fled to Sicily, gained the pro- tection of king Cocalus, and obtained an asylum in his court. The Cretan monarch did not, however, give up his prey. He equipped a fleet, pursued the fugitive to Sicily, and fell before the walls of Camicum. But these two princes, are often confounded by the poets, and the epithets of the former applied to the latter. — See Ovid. De Arte Amat. lib. ii. The last king of Crete was Idomeneus, who conducted twenty-four ships (or according to Hyginus forty) to the assistance of Agamemnon ; and at his departure from Crete committed the government to Leucus his adopted son. He having seduced the people from their allegiance, and gained over the nobles, sacrificed the wife and daughter of Idomeneus in the temple, and when Idomeneus, crowned with lauiels, landed on the coasts, he attacked him with an armed force, and obliged him to reim- bark. But the usurper did not long enjoy the fruit of his crimes, for soon after the departure of Idomeneus, monarchy was abolished, and Crete became a republic.

Soon after the expulsion of Idomeneus, the Cretan government became partly aristocratical. The power was divided between the nobles and the people : yet as the chief employments were occupied by the nobles, they directed the admi- nistration of affairs. Ten magistrates were an- nually elected by a majority of voices, in the national assembly. These were named costnoi, and their public office and character were the same with those of the ephori at Sparta. They were the generals of the republic in time of war, and directed all affairs of any importance," and they had the right of choosing certain elders for coun- sellors, who, to the number of twenty-eight, com- posed the Cretan senate. They were chosen from among such as

had discharged the office of cosmoi, or had distinguished themselves by extraordinary merit and blameless probity. These senators continued in office during life, possessed a weighty influence, and were con- sulted in every affair of importance. This body was a barrier against the ambition of the ten chief rulers, and another restraint on their power was the limiting of their administration to one year. All the Cretans were subjected to the power of their magistrates, and divided into two classes, the adults and the youth. Men arrived at maturity were admitted into the first. The second consisted of all the young men who were jiot below the age of seventeen. The society of «dults eat together in public halls. There rulers, magistrates, poor and rich, seated together, par-

took, without distinction, of the same simple far. A large bowl, filled with wine and water, which went round the company from one to another, was the only drink that they were allowed. None but the old men had a right to call for more wine. A female was appointed to preside at each table, who openly distributed the most exquisite meats to those who had distinguished themselves by their valor or wisdom. Near where the citizens sat, two tables were laid, which they named Hospitable: all strangers and travellers were entertained at these : and there was also a par- ticular house set apart by the public, in which they might spend the night. To supply the public expenses, every citizen was obliged to bring a tenth part of his annual income into the treasury, and the chief magistrates took care that every person contributed his proportion. The Cretans were also celebrated throughout Greece for the education of their youth. At the age of seven the boy was permitted to handle the bow ; from that time he was admitted into the society of the adults, where he continued till the age of seventeen. There, sitting on the ground, and clothed in a plain and coarse dress, he served the old men, and listened with respectful silence to their advice. He was early accustomed to arms and to fatigue, that he might learn to en- dure excessive heat or cold, to clamber and leap among hills and precipices, and to bear manfully the blows and wounds he might receive, amid the gymnastic exercises or in battle. He was also taught to sing the laws, which were written in verse, with a certain species of melody ; that the charms of music might dispose him to learn them with pleasure, and might impress them deeply on his heart. He next learned hymns in honor of the gods, and poems in praise of heroes. When he reached his seventeenth year, he retired from the society of the adults, and became a member of that of the young men. Here his education was still carried on. He exercised himself in hunting, wrestling, and fighting with his companions. The lyre played tunes of mar- tial music ; and he learned to follow the measures of the musician. One dance, in which the youth aspired most ardently to excel, was the Pyrrhic, originally invented in Crete. The performers in that dance' were arrayed in complete armour : they wore a*

light short coat, which did not fall below the knee, and was bound with a girdle twice round the waist: on their feet and legs were buskins; above these they bore their arms, and performed various military evolutions to the sound of musical instruments. When the youth had finished their exercises, and attained the legal age, they became members of the class of adults ; were permitted to vote in the national assemblies, and were entitled to stand candidates for any public office. They were then obliged to marry ; but did not take home their wives till they were capable of managing their domestic concerns. Friendship was in high esti- mation among the Cretans; but, says Strabo, the manner in which they conducted the inter- course of friendship was extraordinary. He who conceived an affection for a young man of his own age, formed a scheme for carrying him off by violence ; which having effected, he loaded

his young friend with favors, carried him from feast to feast, procured him the pleasures of the chace, &c. and after using all possible means to gain his heart for two months, brought him back to the city, and gave him up to his parents ; with presents of a suit of armour, an ox, and a drink- ing cup. The young man sacrificed the ox to Jupiter, and gave an entertainment to those who had assisted when he was carried off. He then declared his sentiments concerning a connection with his friend. If he had reason to complain of the treatment which he had received, the law allowed him to forsake a friend so unworthy of the name, and to demand his punishment. Those who had been thus carried off received public honors. Theirs were the fir«t places in the halls and at the race. They were permitted to wear, during the rest of life, those ornaments which they owed to the tenderness of friendship ; and that mark of distinction testified to all who saw them, that they had been the objects of some fond attachment.

Under these wise regulations, the republic rose to glory, opulence, and power ; and was honored with the panegyrics of the most cele- brated philosophers of Greece. It served Ly- ourgus as a model for the form of government which he established at Sparta, and continued to flourish till the age of Julius Casar ; and it is very remarkable, that from the period at which that state assumed a republican form, till the time when they were attacked by the Romans, the nation was not once known to send an ho- stile force into the territories of any of their neighbours. But though the independent cities which flourished in Crete did not unite their arms to subjugate the neighbouring islands, yet they were not so wise as to live in peace among themselves. Gnossus and Grotynia sometimes marched with social banners against their neigh- bours, levelled their fortresses, and

subjected them to their power ; at other times they attacked each other with hostile violence, and saw their bravest youth perish amid the horrors of civil war. Lyctos and Cydon opposed an invincible barrier to their ambition, and preserved their own liberty. The last of these cities had acquired such strength and influence, that she held the balance between the rival powers of the island ; but these insessant wars destroyed a number of the cities, and drenched the native country of Jupiter with blood. At length the time arrived when the warlike and victorious Romans would suffer none but their subjects or slaves to inhabit within the reach of their arms. ‘ If any person wish to know the reasons which induced us to attack Crete,’ says Florus, ‘ the true reason was our desire to subdue so celebrated an island. The Cretans had appeared to favor Mithridates, and the Romans thought proper to declare war against them on that pretext. Marc Antony, father of the triumvir, attacked them with strong hopes of success, but was severely punished for his presumption and imprudence. The Cretans took a great part of his fleet, hungr up his soldiers and sailors on the masts amid the sails and cord- age, and returned in triumph into their harbours.’ The Romans never forgot nor forgave a defeat. As soon as the Macedonian war was brought to

a conclusion, they took up arms against the Cre- tans to revenge their ignominy and loss ; and Q. Metellus was sent to Crete with a powerful ar mament. He met with an obstinate and vigorous resistance. Panarus and Lasthenes, two expe- rienced leaders, collecting a body of 40,000 young warriors, all eager for battle, and of de- termined courage, employed their arms success- fully against the Romans, and protracted the fate of Crete for three years. Those conquerors, indeed, could not make themselves masters of the island till they had destroyed all its bravest war- riors. They lost a great number of troops, and bought a bloody victory at the price of many a danger and much fatigue. However, their usual good fortune at length prevailed. The first care of the conqueror was to abolish the laws of Minos, and to establish those of Numa. Strabo complains of this act of severity, and informs us that, in his days, the original laws of Crete were no longer in force, because the Romans compelled the conquered provinces to adopt their civil code. To secure themselves still more fully in the pos- session of the island, they sent a oowerful colony to Gnossus.

Since the conquest of Crete by the Romans, the Cretans have no longer formed a separate na- tion, nor made any figure among the states and kingdoms of the world : their noble and ingenuous manners, their arts and sciences, their valor and their virtues, are no more. The island of Crete joined with the small kingdom of Cyrene, on the Lybian coast, formed a Roman province. It was at first governed by a proconsul ; a quaestor and an assistant Were afterwards sent there ; at last, it was put under the government of a con- sul. It was one of the first islands that were fa- vored

with the light of the gospel. St. Paul in- troduced the Christian faith into it ; and his dis- ciple Titus, whom he left there to cultivate that precious plant, became the first bishop of the island. In the reign of the emperor Leo it had twelve bishops, all subject to the patriarch of Constantinople. Constantine separated Crete from Cyrene, in the new division which he made of the provinces of the empire; and left Crete, with Africa and Illyria, to his third son, Constans. In the reign of Michael II., emperor of Con- stantinople, a rebellion, which lasted three years, caused him to neglect the other parts of the em- pire. The Saracens, who had conquered the finest provinces of Spain, seized that opportunity. They fitted out a considerable fleet, plundered the Cyclades, attacked the island of Crete, and made themselves masters of it without opposition. To secure their conquest, they built a fortress which they named Khandak, i. e. entrenchment. From that citadel they made inroads into the in- terior parts of the island, carrying havock and devastation wherever they appeared. By re- peated attacks, they subdued all the cities in Crete except Cydon. Michael made some ineffectual efforts to expel them from Crete. The emperor Basinius I. was not more successful. They defeated him in a bloody battle ; hut being vanquished by one of his generals, they were subjected to the payment of an annual tribute. At the end of tea years the Arabians refused the tribute. It was reserved for Nicephorus Phocas, afterwards era-

peror, to deliver this fine island from the yoke of the infidels. He landed on it with a numerous army, boldly attacked them, and routed them in various engagements. The Saracens, no longer daring to meet so formidable a general in the field, fled for protection to their fortresses. Pho- cas, being plentifully supplied with all the warlike machines necessary for a siege, levelled their walls, took their cities and fortresses, and drove them into Khandak, their metropolis. In nine months he subdued th« whole island, took their king Curup, and his lieutenant Aremas prisoners, and reunited to the empire a province which had been 127 years in the hands of the infidels. It remained under the dominion of the Romanstill the time when Baldwin earl of Flanders, being raised to the throne, liberally rewarded the ser- vices of Boniface marquis of Montserrat, by making him king of Thessalonica, and adding the island of Crete to his kingdom. That lord sold it to the Venetians, A. D. 1194; under whom it assumed the name of CANDIA. See that article.

CRE'TIC, 7i. s. Kpjjrticoc. A foot used in Greek and Latin verse ; it consists

of a short syllable between two long ones : e. g. Castltas.

CRETIO, in antiquity, a certain number of days allowed the heir, to consider whether he would act as heir to the deceased or not; after which time, if he did not act, he was excluded from the estate.

CREVELT, a town of Germany in the ci- devant duchy of Cleves, annexed to France, in December, 1797, and included in the depart- ment of the Roer, but since returned to Prussia. It was taken in October, 1794, by the French under general Jourdan. Near this town, the French were defeated by the Hanoverians, in 1758. It is ten miles south of Meurs; and has a manufacture of fine linen. Population 7450.

CRE'VICE, v. a. & n. s. Old Fr. crevis, from crever ; Lat. crepare. To split into cracks ; to make daws in. A cleft; a chink; a crack; a Tery narrow opening.

The same harme do somtime the smal dropes of •water that enteren thurgh a litel crevis in the thurroh, and in the bottom of the ship, if men ben so negli- gent that they discharge hem not by time.

Chaucer. Cant. Talet.

Till at the last I spide within the same, Where one stood peeping through a crevis small.

Spenser. Faerie Queene.

I pried me through the crevice of a wall, When for his hand he had his two sons heads.

Shahspeare. Titus Andronicus.

So laid, they are more apt in swagging down to pierce with their points, than in the jacent posture, and so to crevice the wall. Wotton't Architecture.

I thought it no breach of) good manners to peep at a crevice, and look in at people so well employed.

Addison's Spectator.

CREVIER (John Baptist Lewis), a native of Paris, trained under the celebrated Rollin, and afterwards professor of rhetoric. Upon the death of that author, in 1741, he finished his Roman History. His death happened in 1765, at a very advanced age. Besides the continuation of

Rollin, he published, l.An edition of Livius cum Notis, in 6 vols. 4to, 1748 ; and afterwards another for the use of his pupils, in 6 vols, small 8vo. 2. La Histoire des Empereurs do Romains Jusqu' a Constantin, 1749, 12 torn. 12mo. 3. Histoire de 1'Universite de Paris, 7 torn. 12mo.

4. Rhetorique Francoise, a just and useful work.

5. Observations sur 1'Esprit des Loix. CREUSA, a daughter of Priam, king of Troy,

by Hecuba. She married ./Eneas by whom she had Ascanius. When Troy was taken, she fled in the night with her husband ; but they were separated in the confusion, and ./Eneas could not recover her. Some pretend that Cybele saved her, and carried her to her temple, of which she became priestess.

CREUSE, a department of France, so named from the river. It is bounded by those of Allier and Puy de Dome on the east ; Correze on the south, UppenVienneon the west, and Indre on the north. It contains the ci-devant province of Marche. Gueret is the capital.

CREUSE, a river of France, which rises 'eight miles south of Felletin, crosses the department, and that of Indre ; and separates that of Indre and Loire from that of Vienne, till it falls into the river Vienne, five miles east of Have.

CREUTZENACH, CREUTZNACH, or KREUTZ- NACH, a town of the Prussian states, in the circle of the Upper Rhine. It is situated on the Nahe, which divides it into the Old and New Tjwn. The ancient kings of the Franks had a palace here; and it was defended by a castle, which stood on an adjoining mountain, but which was destroyed by the French in 1689. This town was taken by the French in October, 1794, and annexed to their dominions in December, 1797. The inhabitants carry on a trade in wine, salt, corn, wood, and tobacco. Population 3200. A quarter of a league from the town are two salt mines, said to let for £10,000 per annum. It lies six miles south of Bingen, twenty south-west of Mentz, thirty N. N. W. of Worms, and thirty- eight north of Deux Fonts.

CREUX, a promontory in Catalonia, which was fixed on as the boundary between France and Spain in 1660. Long. 3° 20′ 50". Ev lat. 42° 19′ 35″ N.

CREW. Goth, grua ; Per. guruh, 'kurah ; Ang.Sax. cjiud, cnead. Minsheu and Mr. Todd are disposed to derive it from old Fr. crue, or creue, growth, accession, augmentation. Skin ner refers it to the Dutch .kroeghen, to carouse, to drink. A number of people associated for any purpose ; the

company of a ship. Except in the latter sense, it is now generally used to signify an improper or despicable assemblage, though its inoffensive meaning is not entirely obsolete, as we still hear of a jovial crew, &c.

If all the world to seek I overwent, A fairer crew, yet no where could I see, Than that brave court did to the eye present.

Speiuer.

Care we for all these bugs of idle feare : For Tigel's grinning on the theatre ? Or scarce-babe threatening of the rascal erne 1 Or wind-spent verdicts of each ale-knight't viewt

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One of the banished crew, 1 fear, hath ventured from the deep, to raise New troubles. Milton's Paradise Lost.

He, with a crew, whom like ambition joins With him, or under him to tyrannize, Marching from Eden towards the west, shall find The plain. W«

The anchors drooped, hig crew the vessels moor.

Dryden's JEneid.

The last was he, whose thunder slew The Titan race, a rebel crew. Additon.

There was no light in heaven but a few stars, The boats put off ere crowded with their crews ; She gave a keel, and then a lurch to port, And going down head foremost sunk in short.

Byron. Don Juan. CREW, preterite of crow. Immediately the cock arew. Matthew xxvi. 74,

It was about to speak when the cock crew.

Shakspeare. Hamlet.

CREW OF A SHIP. The sailors who are to work aud manage a ship are regulated by the number of lasts it may carry ; each last making two tons. The crew of a Dutch ship, from forty to fifty lasts, is seven sailors and a swabber; from fifty to sixty lasts, the crew consists of eight men and a swabber ; and thus increases at the rate of one man for every ten lasts ; so that a ship of 100 lasts has twelve men, &c. English and French crews are usually stronger than Dutch ; but always in about the same proportion. In a ship of war there are several particular crews, or gangs ; as the boatswain's crew, the carpenter's crew, the gun- ner's crew, &c.

CREWE (Nathaniel), an English bishop, the son of John lord Crewe was born at the family seat in Northamptonshire, in 1633. He was educated at Lincoln College, Oxford, where he took his degrees in arts, and joined the presbyte- rian party ; but at the Restoration he took orders in the established church, and in 1669 was made dean of Chichoster. He was preferred to the bishopric of Oxford in 1671, from whence he was translated to Durham in 1674, for which prefer- ment he was indebted to James duke of York ; upon whose accession to the throne the bishop supported all his measures, and was one of the commissioners appointed in the ecclesiastical commission in 1686. When, however, the prelate saw his master's ruin approaching, he began to change his conduct ; and in the convention par- liament, he gave his vote with others, that James had abdicated the throne; he was, however, ex- cepted by name out of the pardon granted by William and Mary ; and found it necessary to abscond for some time. But he at last, not only received his pardon, but the indulgence of re- taining his dignity ; and on the death of his bro- ther, in 1691, he succeeded to the family title. He died in 1721, having held the see of Durham forty-seven years, a circumstance unparalleled in its history till the time of the late Hon. Shute Barrington, who held the same bishopric fifty-six years.

CRErWEL,w.s. Dutch klewel. Yarn twisted, and wound on a knot or ball.

Take s/lk or crewel, gold or silver thread, and •take these fast at the beat of the hook.

Walton's Angler.

CHI

CREW KERNE, a market town on the borders of Dorsetshire, a mile from the Parret. It contains about 3000 inhabitants who manufacture dowlas, sail-cloth, girth-web, and stockings. It has a mar- ket for corn and provisions on Saturday. It is twenty miles south-east of Taunton, and 132 west by south of London.

CRIB, v. a. & n.s. Ang.-Sax. crybbe ; Dutch krippe, krebbe ; Ger. krippe, kruppe. To shut up in a narrow or inconvenient space ; to confine ; to circumscribe. A rack or manger ; the stall or cabin of an ox ; a small habitation ; a hut.

Now I am cabbined, cribbed, confined, bound in To saucy doubts and fears. Shakspeare. Macbeth.

Let a beast be lord of beasts, and his crib shall stand at the king's messe. Id. Hamlet.

Why rather, sleep, lest thou in smoaky cribs, Upon uneasy pallets stretching thee, Than in the perfumed chambers of the great? – Id. The steer and lion at one crib shall meet,

And harmless serpents lick the pilgrim's feet.

Pope. In measure, as by force of instinct drawn,

Or by necessity constrained, they live

Dependent upon man ; those in his fields,

These at his crib, and some beneath his roof.

Cowper.

CRIB, v. a. Fr. gripptr ; Ger. krippen. To pilfer ; to steal slily. A low word.

CRIB, in the English salt-works, a name given to a sort of case, used in some places instead of the drab, to put the salt into as it is taken out of the boiling pan.

CRI'BBAGE, n.s. A game at cards. See the next article.

A man's fancy world be summed up in cribbidge.

J. Hall.

CRIBBAGE, a popular game at cards. In this game the set must be sixty-one, and no cards are to be thrown out. It being an advantage to deal, on account of the crib, it is common to cut for it, and he that has the least cards deals. At this game there are only two players, and the cards are dealt out one by)ne, the dealer giving his an- tagonist the first, keeping the second to himself, and so on till each have five, when the rest are laid down in view upon the table. After this the dealer lays out the two best cards he can for his crib; and his antagonist lays down other two, the very worst he can, the crib being the property of the dealer. A card from the parcel left after dealing is then turned up, after which the game is counted thus : any fifteen by the cards is two ; as king aud five, ten and five, nine and six, eight and seven, &c. A pair is also two ; a pair-royal, or three aces, kings, &c. six; a double pair- royal, or four aces, &c. twelve. Sequences of three cards, as four, five, and six, is three ; se- quences of four, four ; five, five, &c. and the same holds of a flush. Knave-noddy, or of the suit turned up, is one in hand, and two to the dealer. If, after the cards for the crib are laid out, there remain in hand a nine and two sixes, that makes six, because there are two fifteens and a pair; and if a chance

be turned up, then you have twelve in your hand, viz. the pair-royal and three fifteens. These are to be marked with pegs, counters, or otherwise. Should you hapoen to have sequents, as of four, five, and six, in your

hand, and six is the turned up card, they are counted thus : first the sequents in your hand make three; and the sequents of the four and five in your hand, added to the six turned up, make other three; there are likewise two fifteens, counting first with the six in your hand, and then with that turned up. After this the antagonist to the dealer plays first, suppose six ; and if the dealer can make it fifteen, by playing nine, he gains other two; otherwise they play on, and whoever reaches thirty-one exactly or comes nearest under it gains two or one. Here also, in playing the cards you may make pairs, pairs- royal, flushes, &c. The crib being the dealer's, he may make as many as he can out of it, toge- ther with the card turned up, counted as above ; if he can make none, he is said to be bilked. In this manner they play and deal by turns, till the game of sixty-one is up ; and if this be reached by one gamester before the other reach forty-five, the latter is said to be lurched, and the former gains a dotfble game.

CRTBBLE, v. a. & n. s. > Old Fr. crible ;

CRIBRA'TION, n. s. $ Lat. cribrum. To

sift through a sieve. A corn sieve ; coarse meal, a degree better than pollard. The act of sifting.

CRICELASIA, the driving a ring or hoop. Driving a hoop was one of the ancient gymnas- tics : this hoop was as high as the breast of the person who used it. It was commended for ren- dering the limbs pliable, and for strengthening the nerves.

CRICHTON (James), a Scots gentleman who lived in the sixteenth century, and who, on account of his extraordinary endowments of body and mind, obtained the appellation of the admirable Crichton. He was descended of the blood royal ; and is said to have received his gram- matical education at Perth, and to have studied philosophy in the university of St. Andrew's. In his seventeenth year he went to Paris, where he caused placards to be fixed on all the gates of the schools, halls, and colleges, belonging to the university, inviting those who were well versed in any art or science, to dispute with him in the college of Navarre, that day six weeks, by nine o'clock in the morning, where he would attend them, and be ready to answer to whatever should be proposed to him, in any art or science ; and

in any of these twelve languages, Hebrew, Syriac, Arabic, Greek, Latin, Spanish, French, Italian, English, Dutch, Flemish, and Sclavonian : and this either in verse or prose, at the discretion of the disputant. During the time appointed he attended the various places of amusement, rather than the colleges or seats of learning, which so provoked the students, that under the placard which was fixed on the Navarre gate, they caused the following words to be placed ; ‘ If you would meet with this monster of perfection, make search for him either in the tavern or stews.’ Neverthe- less when the day appointed arrived, Crichton appeared in the college of Navarre, and acquitted himself so well in the disputation, that he was presented by the president, with a diamond ring, and a purse full of gold, as a testimony of esteem. It is added, that he was so little fatigued with the dispute, that he went on the very next day to the VOL. VI.

Louvie, where lie had a match of tilting, and in the presence of some of the French princes, and many ladies, carried away the ring twenty-five times successively. About two years after this we find him at Rome, where he affixed a placard upon all the eminent places in the city, in the fol- lowing terms: Nos Jacobus Crichtonus Scotus, cuicumque rei propositae ex improvise responde- bimus ; and in the presence of the pope, many cardinals, bishops, doctors of divinity, and pro- fessors in all the sciences, he displayed such wonderful proofs of his universal knowledge, that he excited no less surprise than he had done at Paris. From Rome lie went to Venice; where he contracted an intimate friendship with Aldus Manutius, Laurentius Massa, Speron Speroniu?, Johannes Donatus, and other learned men, to whom he presented several poems in commenda- tion of the city and university. He held, like- wise, disputations on theology, philosophy, and mathematics, before the most eminent professors, and multitudes of people. He next went to Padua, the university of which city was at that time in great reputation. Amidst the discourses which were occasioned by our young Scotchman’s exploits, and the high applauses that were be- stowed upon his genius and attainments, some persons endeavoured to detract from his merit. For ever, therefore, to confound these invidious impugners of his talents, he caused a paper to be fixed on the gates of St. John and St. Paul’s church, wherein he offered to prove before the university, that the errors of Aristotle, and of all his followers, were almost innumerable ; and that the latter had failed both in explaining their master’s meaning, and in treating on theological subjects; this he engaged to do, either in the common logical way, or by numbers and mathe- matical figures, or in 100 sorts of verses, at the pleasure of his opponents. According to Manu- tius, Crichton sustained this contest, without fatigue for three days; during which time he sup- ported his credit, and maintained his propositions, with spirit and energy, and with the highest ap- plause from an unusual concourse of people. From Padua, Crichton set out for

Mantua ; where there happened to be at that time a gladiator, who had foiled in his travels, the most famous fencers in Europe, and had lately killed three who had entered the lists with him in the city. This man Crichton challenged and slew, and divided the prize with the widows of the three whom the fencer had previously killed ; in consequence of this and his other wonderful performances, the duke of Mantua appointed him preceptor to his son Vincentio di Gonzaga, who is represented as having been of a riotous temper and a dissolute life. One night, during the time of carnival, as he was walking along the streets of Mantua, and playing upon his guitar, he was attacked by six men in masks. In the issue, the leader of the company being disarmed, pulled off his mask, and begged his life, telling him that he was the prince his pupil. Crichton immediately fell upon his knees, and expressed his concern for his mistake; alleging that what he had done was only in his own defence, and that if his highness had any design upon his life, he might always be master of it. Then taking his own sword by

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the point, he presented it to the prince, who was so irritated by the affront he had sustained, in being foiled with all his attendants, that he in- stantly ran Crichton through the heart. Thus died this celebrated man, in a drunken frolic, in the fifty-second year of his age. The following is the list of his works according to Dempster. 1. Odre ad Laurentium Massam plures. 2. Lau- des Pataviure, Carmen extempore efTusmr., rum in Jacobi Aloysii Cornelii domo experimentum ingenii, coram tola Academise frequentia, non sine multorum stupore, faceret. 3. Igr.orationis Laudatio, extemporale Thema ibidem rˆdditutn, post sex horarum disputationes, ut, praesentes somnia potius fovere quam rein se veram vidˆre affirmarint, ait Manutius. 4. De Appulsu suo Venetias. 5. Odae ad Aldum Manutium. 6. Epistolae ad Diversos. 7. Prsefationes solemnes in omnes Scientias Sacras et Profanas. 8. Judi- cium de Philosophis. 9. Errores Aristotelis. 10. Aima an Literae prastant? Controversia Ora- toria. 11. Refutatio Matberaaticorum. 12. A Comedy in the Italian language.

CRICK, n. s. ˆ Ital. cricch ; Ang.-Saxˆ. CRI'CKET, n. s. > cnyce; Dutch krekel. Crick CRI'CKETER, n. s. j is the noise made by a door, in which case it is derived from the Italian ; unless, indeed, both words may be supposed to be imitative of the sound. It also means, a painful stiffness in the neck ; and in that sense Junius thinks the Anglo-Saxon word for a stick or staff is the parent, because the neck is as stiff as a staff. Cricket is a

noisy insect that haunts warm places (see GRYLLUS) ; a well-known game, (see the next article) ; and a low seat or stool. Cricketer is one who plays at cricket.

Didst thou not hear a noise ?

— I heard the owl scream, and the crickets cry.

Shakapeare. Macbeth. Far from all resort of mirth, Save the cricket pn the hearth. Milton,

The solemn death-watch clicked the hour she died, And shrilling crickets in the chimney cried. Gay.

The judge, to dance, his hrother Serjeant call ; The senator at cricket urge the ball. Pope.

But come, thou genial son of spring, Whitsuntide ! and with thee bring Cricket, nimble boy and light, In slippers red and drawers white. Heddesford,

‘ Yet, tho’ ‘tis too rural, — to come near the mark,

We all herd in one walk, and that nearest the Park ;

There with ease we may see, as we pass by the wicket,

The chimneys of Knightsbridge, and footmen at

cricket. Sheridan.

There’s something cheerful in that sort of light,

Even as a summer sky’s without a cloud : I’m fond of fire, and crickets, and all that, A lobster-salad, and champaigne, and chat.

Byron. Don Juan.

CRICKET, in zoology. See GRYLLUS.

CRICKET, the name of a manly English game in which one party endeavours to strike down one wicket with a ball thrown from the other, and which the other endeavours to strike in its course, with sufficient force to give time to change wickets before the ball can be again brought to them. Every change of wickets constitutes a notch, and the game is decided by the greatest number of

notches on either side. Tno full complement of players is twelve on each side and two umpires. The following are the principal laws of the game, as settled by the Mary-le-benne club, and are uni- versaiiy acknowledged.

The ball must weigh not less than five ounces ami a half, and not more than five ounces and three quarters.

The bat must not exceed four inches and a quarter in the widest part.

Thd stumps, which are three, must be twenty- ftrnr inches out of the ground, the bail seven in- c?»es in length.

The bowling mark must be in a line with the stumps, three feet in length, with a return mark. The popping crease must be three feet ten incf'es from the wicket, and parallel to it.

The wickets must be opposite to each other, at the distance of twenty-two yards.

The wicket-keeper must stand at a reasonable distance behind the wicket, and not move till the ball is out of the bowler's hand.

The bowler must deliver the ball with one foot behind the bowl ing-crease, and within the return- crease, and bowl four or six balls before he changes wickets, which he is allowed to do but once in the same innings.

The striker is out ; 1. if the bail be bowled off, or the stump bowled out of the ground ; 2. if the ba\l, from a stroke over or under his bat, or upon Iris hand (but not wrists), is held before it touches tiie ground ; 3. if in striking, or at any other time whiit the ball is in play, both his feet are over the popping-cr?ase, and his wicket put down; except his bat be grounded within it; 4. if in striking the bail he hit down his wicket; 5. if the ball be struck up, and either wilfully strike it again; 6. if in running a notch, the wicket is struck down by a throw, or with the ball in hand, before his foot, hand, or bat, is grounded over the popping-crease ; 7. if he stop the ball with his foot, when it would have hit the wicket.

If the players have crossed each other, he that runs for the wicket which is put down, is out ; if they have not crossed , he that has left the wicket which is put down, is out.

When a ball is caught, cr when a striker is run out, the notch run for is not to be reckoned. When the ball has been in the bowler's, or wicket- keeper's hand, it is considered as no longer in play, and the strikers need not keep within their ground till the umpire has called play ; but, if the player go out of his ground with an intent to run before the ball is delivered, the bowler

may put him out.

In single wicket matches, if the striker move out of his ground to strike the ball, he shall be allowed no notch for such stroke.

Not out if the striker hit the opposite wicket, and his partner be off his guard.

CRI'CKETING APPLE, n. s. A. small species of apple.

CRICKHEATH, or CRICKIETH, a town of North Wales, in Caernarvonshire, on the coast of the Irish sea, with a castle said to have been built in the reign of king John, twenty-one miles south of Caernarvon, and 233 N. W. of London. It has a weekly market on Wednesday, and three fairs; and is a tributary borough to Caernarvon.

CRIME.

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CRICKHOWELL, a town of South Wales in Brecknockshire, situated near the Usk, much re- sorted to by invalids, for the purpose of drinking goats' milk and whey. The ruins of an ancient castle are yet visible. There is a weekly market on Thursday, well supplied with fish and pro- visions. It is six miles W. N. W. of Aberga- venny, thirteen E. S. E. of Brecknock, and 154 W. N. W. of London.

CRICKLADE, a borough of Wiltshire, si- tuated on the river Thames, anciently a place of considerable consequence. It contains about 250 houses, and sends two members to Parliament ; but the electors having been convicted of cor- ruption, the freeholders of several adjacent places were added to the number of voters. The river Thames is navigable to this town, and a canal is now made between the Thames and the Severn, which joins the former at this place. It has a weekly market on Saturday ; and is thirty miles west of Oxford, and eighty-four W. N W. of London.

CRICOIDES, in anatomy, a cartilage of the larynx, called also the annular cartilage. It oc- cupies the lowest part by way of base to the rest of the cartilages, and to the lower part of it the aspera arteria adheres. See ANATOMY.

CRILLON (Louis de Berthon), a knight of Malta celebrated for his bravery, was born of a noble family in the court at Venaissin, in 1541. At the age of fifteen he served at the siege of Calais, and afterwards, in the battles of Dreux and Jarnac, distinguished himself against the Huguenots. He was also at the battle of Le- panto, and assisted in 1573 at the siege of Ro-

chelle. Henry III., proposing to him to assassi- nate the duke of Guise, he resolutely refused but ottered to fight him. In the reign of Henry IV. he repulsed the leaguers from before Boulogne, and in 1592 successfully defended Milleboeuf against the army of Villars. He was found, while able to keep the field, in every service of danger. The bad state of his health obliged him to retire early from active life, and he died at Avignon in 1615, in his seventy-fifth year.

CRIME, n. s.

CRI'MEFUL, adj.

CRI'MELESS, adj.

CRI'MINAL, n.s. & adj.

CRIMINA'LITY, n.s.

Fr. crime ; It., Sp. &Lat.crmen. Crime is, an act which is contrary to divine or human law ; a hein- ous offence ; an act •of wickedness. It is also used by old wri- ters to signify merely reproach; in which sense it is a Latin – ism. Criminal, as a noun, means, an ac- cused person ; a guilty person. As an adjective, it denotes, contrary to right, to duty, to law; tainted with crime; relating to penal as distin- guished from civil legal proceedings. Crimeful, and criminous, indicate, a high degree of crime ; enormous guilt. To criminate is to accuse of crime. The kindred words are so closely allied in meaning, that it is unnecessary to explain them.

I shal him tellen which a gret honoar, It is to be a flattering limitour,

CRI'MINALLY, adv. CRI'MINALNESS, n. s. CRI'MINATE, v. a. CRIMINA'TION, n. s. CRI'MINATORY, adj. CRI'MINOUS, adj. CRI'MI;TOUSLY, adv. CRI'MINOUSNESS, n. s.

And eke of many another manor crime, Which nedcth not rchcrscn at this time.

Chaucer. Cant. Tali'i.

Nath 'lesse most hcvcnly fairc in deed and vew She by creation was, till she did fall, Thenceforth she sought for helps to cloke her crime withall. Spenser. Faerie Queene.

The tree of life, the crime of our first father's fall.

Id.

For on his backe a heavy load he bare Of nightly stelths and pillage sevcrall, Which he hed got abroad by purchase criminall. Id.

Devise extremes beyond extremity, To make him curse this cursed crimeful night.

Shahspeare. The Rape of Lucrecc. My foes could not procure me any scathe, So long as I am loyal, true, and crimeless.

Id. Henry VI.

All three persons that had held chief place of authority in their countries ; all three ruined, not by war, or by any other disaster, but by justice and sen- tence, as delinquents and criminals. Bacon.

Of what is bad, a little's a great deale, Better is more': but best is nought at all, Lesse is the next, and lesser criminal. Hall.

I could never be convinced of any such criminota- ness in him, as willingly to expose his life to the stroke of justice, and malice of his enemies. King Charles.

Undergo with me one guilt, one crime

Of tasting. Milton.

The punishment that belongs to that great and

criminous guilt, is the forfeiture of his right and claim

to all mercies, which are made over to him by ChHst.

Hammond.

Some particular duties of piety ana charity, which were most criminously omitted before. Id.

Was ever criminal forbid to plead ? Curb your ilVmannered zeal.

Dry den's Spanish Friar.

No crime was thine, if 'tis no crime to love. Pope.

The neglect of an}' of the relative duties, renders us

criminal in the sight of God. Rogert.

As our thoughts extend to all subjects, they may be

criminally employed on all. Id.

Embracing in their arms the carcases of base crimi- nals, and promoting their relations on the tit'e of their offences, they drive hundreds of virtuous persons to the same end, by forcing them to subsist by beggary or by crime. Burke.

Lord Coke, the oracle of the English law, conforms to that general sense, where he says that ' those things which are of the highest criminality, may be of the least disgrace.' Id.

It is no slight authority which shall persuade us (by receiving as proofs of loyalty the mistaken princi- ples lightly taken up in these addresses) obliquely to criminate, with the heavy and ungrounded charge of disloyalty and disaffection, an uncorrupt, independent, and reforming parliament. Id.

Shall he, nurst in the Peasant's lowly shed, To hardy Independence bravely bred, By early Poverty to hardship steeled, And trained to arms in stern Misfortune's field ; Shall he be guilty of their hireling crime, The servile, mercenary Swiss of rhymes. Burnt. If killing birds be such a crime,*

(Which I can hardly see,) What think you, sir, of killing Time,

With verse addressed to me ? Cowper.

Hear him, ye Senates ! hear this truth sublime, ' He who allows oppression, shares the crime.'

Darwin, 2T2

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CHIMES.

If he has transgressed the constitution with impu- nity, if his criminality is suffered to pass even with- out rebuke, — this is nothing less than a radical change of system. Sheridan.

If now and then there happened a slight slip,

Littlo was heard of criminal or crime — The story scarcely passed a single lip — The sack and sea had settled all in time.

Byron. Don Juan.

CRIMES. The cognizance and admeasurement of crimes and punishments form, in every coun- try, 'he code of criminal law ; or, as it is more usually denominated in England, the doctrine of the pleas of the crown : so called, because the king, in whom the majesty of the whole community centres, is supposed, by the law, to be the person injured by every infraction of the public rights belonging to that community ; and is, therefore, in all cases, the proper prosecutor for every public offence. However important this branch of jurisprudence may appear, either from the peculiar admixture of human passions, and its topics and subjects ; from giving a lasting efficacy to sanctions that were intended to be temporary, and made, as lord Bacon expresses it, merely upon the spur of the occasion ; or, lastly, from too hastily employing such means as are greatly disproportionate to their end, in order to check the progress of some very prevalent of- fence ; from some, or from all of these causes, it has happened, that the criminal law is, in every country of Europe, more rude and imper- fect than the civil. The student of law will find the general inhumanity and mistaken policy in the local constitutions of other nations, sufficiently pointed out by

Montesquieu, Beccaria, and other ingenious foreign writeis. In our own country, Mr. Bentham, Mr. Montague, Sir Samuel Ro- milly, and numerous modern authors, have called the public attention to this subject. Sir William Blackstone observes, b. iv. ch. 1, 'It is a melancholy truth, that among the variety of actions which men are daily liable to commit, no less than one hundred and sixty have been declared, by act of parliament, to be felonies, without benefit of clergy; or, in other words, to be worthy of instant death. So dreadful a list, instead of diminishing, increases the number of offenders.' And Mr. Wilberforce is reported to have said, in his place in the house of commons, ' that he well remembered, that a great and la- mented public character, Mr. Pitt, at an early period of his life, had intended to have a digest made of the whole of our criminal code, with a view of lessening, in a.great degree, the number of capital punishments which it contained, and the objections to which it was impossible to con- fute.' In England, indeed, we seem to have been, of late, imbibing better and more humane views of this interesting subject, while, on the continent, they have boldly carried into effect some striking and very admirable innovations. We have here only room to present the reader with the substance of the new Bavarian and French codes; hoping that our remaining article on the same subject, the PUNISHMENT OF CRIMES, may yet enable us to record some d ecided improve- ments in our own system.

The former was drawn up by M. Bexon, by

direction of the king of Bavaria, and published at Paris, in folio, in 1807. It professes to con- tain a complete system of criminal law, includ- ing punishments and police.

M. Bexon begins with a digest of police-laws, under the title of Legislation de la Surete. In the subdivisions of his work, the principal heads are, 1. Principes generaux. 2. Des auteurs, des complices et des fauteurs, des delits et des crimes. 3. Des peines en general, et du mode de leur execution. 4. De la recidive, de 1'in- fluence de 1'age sur le caractere et la duree des peines. 6. De 1'autorite paternelle et de fa- mille. 7. Du devoir des juges, dans 1'applica- tion et la graduation des peines, de circum- stances excusantes, attenuantes, et aggravantes. 8. Des actions et de leur prescription. 9. Des absens ou contumaces, et de la prescription des condemnations. 10. Des frais des proces cri- minels, et des dommag-es inter&t. 11. De la grace. 12. De la diminution de la duree des peins, pendant leur cours, ou de la remission que le coupable peut obtenir par son travail et son repentir. 13. De la rehabilitation. The arrangement of the matter of this part of the work is certainly neither clear nor convenient. Crimes, punishments, tribunals, and procedure, are mixed together, instead of being kept sepa- rate and distinct, as they ought to be.

In the penal code itself this writer has adopted the old classification of offences under the heads of, 1. Crimes against the public. 2. Crimes against persons. 3. Crimes against things. What is new in his work, is the distribution of these into three distinct classes, according to their supposed delinquency, and which he calls, 1. Contraventions et fautes. 2. Delits. 3. Crimes.

The modern French penal code was decreed the 12th February, 1810, and promulgated the 22nd of the same month. The whole penal code, including punishments, is comprised in 114 octavo pages. It begins by declaring, that a violation of the law, cognizable by the police, is a contravention ; that a violation of the law, that is visited by correctional punishment, is an offence ; and that a violation of the law, that is visited by an afflictive and infamous punishment, is a crime. The several species of punishments employed are, 1. Death. 2. Hard labor for life. 3. Transportation. 4. Hard labor for li- mited periods. 5. Seclusion. 6. The carcan, similar to our pillory. 7. Banishment. 8. Civil degradation. 9. Imprisonment, during a limited period, in a house of correction. 10. Suspen- sion, temporary, of certain civil rights. 11. Making satisfaction to the party injured. To these are added, in specified cases, the drawing a ball, to be attached to the feet ; imprinting on the right shoulder, by means of a red-hot iron, certain letters ; standing on the carcan, having af writing, in large and legible characters, affixed to the head, &c. Some of the punishments are also attended with certain temporary, and others with perpetual, civil disabilities. Forfeiture of property, it is declared, shall not attach, in any case, as the necessary consequence of conviction, but is to have place only when expressly pro- nounced as part of the punishment, and, in the few instances in which it is used, the property

remains Ihble to all just incumbrances, and to the obligation of furnishing children, or other descendants, a half of such part of their portion as the criminal could not have deprived them of.

Offences are divided into two classes: 1. Those affecting the public. 2. Those affecting individuals. Under the first, the principal of- fences that are comprised are, offences against the exterior and interior of the state, levying war, counterfeiting the coin, and malversation on the part of public functionaries, ecclesiastical and civil. Under the second head, offences af- fecting particular assignable persons, such as murder and other personal injuries, perjury, and offences against property.

In the section relating to the administrative and judicial authority, it is declared, that, when- ever any judge shall, after it has been notified to him

that a cause has been removed before a su- perior tribunal, proceed to pronounce judg- ment notwithstanding, he shall be punished by a fine of not less than sixteen francs, nor greater tlian 1,50 francs; so again, wherever any judge shall enter the house of a citizen, in cases in which the law shall not have invested him with authorty so to do, or in a manner not prescribed by the law, he shall be punished by a fine of not less than sixteen francs, nor greater than 200 francs ; and there are several other cases in which the misconduct of judges renders them subject to penalties.

*CRIMEA (The), a peninsula of European Russia, is situated between the parallels of 44° 40′ and 46° 5′ N., and the meridians of 32s 45′ and 36° 39′ E. It is of an irregular rhomboid shape, surrounded on all sides by the Black Sea and the Sea of Azof, except at its northern angle, where the isthmus of Perekop connects it with *he continent. Its extent from north to south is about 124 English miles, and from west to east 208 English miles. Its superficies is computed at about 3,500,000 English statute acres, the greater proportion of which consists of desert plains, or steppes. This peninsula has been known under a variety of names ; the ancients called it Taurica Chersonesus, also Chersoriesus Scythica, and Chersonesus Magna ; in the middle ages it was sometimes called the Island of Caffa; and, in more modern times, it has been known under the appellations of Crim Tartary and the Crimea.*

The Crimea is naturally divided into three parts; Crimea Proper, the eastern subordinate peninsula of Kertsh, and the Isle of Tamar. Upwards of three-fourths of Crimea Proper, towards the north, is composed of steppes, and totally devoid of trees ; but affording excellent pasturage, and; abounding in salt lakes and marshes. The soil in this division is partly of a white sandy clay, and partly of black vegetable loam, mixed in some parts with chalk and lime- stone. The vast quantities of petrifactions and marine productions which are found in this dis- trict, have given rise to the supposition that it was originally submerged by the Black Sea. The salt marshes are so productive, that upwards of 200 vessels are annually laden with salt from the single port of Caffa, besides which vast quanti- ties are transported by land, to Poland and Rus-

sia, even as far as Petersburgli and Riga. The southern portion of the Crimea is mountainous : the principal ridges extending from east to west. Some of these mountains are said to be 1200 feet above the level of the Black Sea, and are covered with snow the greater part of the year. From the summit of Ischaclir-daghi, or the pa- vilion mountain, the prospect stretches nearly over the whole peninsula. The union of the sublime and beautiful is nowhere more manifest than in the southern portion of Crimea Proper ; where, while from a stupendous height the tops of the mountains glitter with silvery snow, their sides are covered with wide-spreading

forests, and their bases with the blushing vine, the olive, the fig-tree, and the pomegranate. These mountains also enclose innumerable corn-fields, and verdant plains, refreshed with natural fountains and cas- cades.

The peninsula of Kertsch (anciently the king- dom of Bosphorus) presents a widely different aspect from the Crimea Proper. Its extent from west to east is about eighty-four English miles.; its medium breadth from north to south twenty- four English miles. The isthmus which connects it with the Crimea, is a level plain, ten miles broad. The shores, both of the Euxine and the sea of Azof, which encircle this peninsula, are very steep and difficult of access. The interior is almost entirely destitute of wood, but abounds with fruit-trees ; and the soil, excepting in the immediate neighbourhood of the salt-marhes, is very fertile. The strip of land which separates the Mud Sea from the Sea of Azof, is composed of sand and shells, and for the most part affords excellent pasture. On the leaves and stems of vegetables growing near a salt-marsh in this peninsula, is found what is supposed to be sul- phur, or sulphuret of soda. Salt-springs, a spring of petroleum, or rock-oil, a mineral said to be prussiate of iron, and petrified shells, com- pose the remaining natural curiosities of this strip of land.

Tamar is included under the same government as the Crimea. This island is surrounded by the seas of Azof and the Black Sea ; its length is forty miles, and its breadth twenty-six. The shores are remarkable for their steepness. The soil in some parts is fertile ; but, owing to the preva- lence of thick fogs, its humidity, and the bad quality of its water, the climate is unhealthy. In this island are found large quantities of petro- leum, some saline springs, and many springs of fresh water, but no running streams. On the western extremity is a mud volcano, which the Tchernomorski, the present inhabitants, call Prekla (hell) ; its eruptions consist of disjecti- tions of vast masses of viscous mud, accompanied by smoke and fire. The Salghir is the only river of any importance in the Crimea. The Bolbeck, Alna, Byak, Aithaddr, Badraka, Balganack, Katsha, &c., are small streams, which are so very rapid after heavy falls of rain, as to be excessively dangerous; in the dry season, however, they are nearly destitute of water.

The climate of the Crimea is very variable. The winters are occasionally severe, whilst the springs are moderate and serene. The summer, for the most part, is very hot ; and the autumn

sultry, moist, and unhealthy. Tertian fevers are the most prevalent complaints of the inhabitants. The Crimea is subject to the plague of

locusts. Two species, the gryllus tartaricus and migrato- rius, are found here, which at certain seasons devastate the fields, the gardens, and the vine- yards. Dr. Lyall mentions having seen as many as 200 Tartars, armed with branches of trees tied together, and clubs, occupied in destroying them, by beating them against the ground. Tarantulas, black, and of a tremendous size, in- fest this peninsula; also the phalangium arach- noides, a species of spider of a smaller size, the bite of which Pallas declares to be fatal. The scolopendra morsitans, or centipede, is likewise very common ; the bite of this insect is very ter- rible. In the mountainous districts, scorpions are not unfrequently found. A small kind of caterpillar, which is very destructive to the vines, is regarded by the celebrated Pallas as peculiar to this peninsula.

The present capital of the Crimea is Sym- pheropol, called by the Tartars Ak-metchet (white mosque) from an edifice of this description built by Ibrahim Bey. It is reported, that on the oc- casion of the Russian conquest, prince Potemkin threw up coin with his principal officers for the decision of a place for the seat of government, and it fell on this town. It is situated in a val- ley, watered by the Solghir, and presents a very picturesque appearance in summer, from the number of gardens, clumps of trees, and extensive fields, with which it is surrounded. It is 963 miles from Moscow, and 1408 from St. Peters- burgh. Like all Tartar towns, it consists ot nar- row unpaved streets, intersecting each other at irregular angles; the whole city is excessively dirty and confined. It contains no public build- ings worthy of notice, with the exception of its cathedral, which Dr. Lyall considers the hand- somest ecclesiastical structure in the Russian em- pire. There are within its compass four mosques, with minarets, an Armenian church, a Roman Catholic church, and a synagogue. Its popula- tion, consisting of Tartars, Greeks, Armenians, Moldavians, and Jews, is about 2000. This city was long the place of residence of the celebrated professor Pallas.

Bakhtchiserai (garden palace), the ancient f capital, is situated thirty versts from Sympheropol. The view presented to the traveller, as he jour- neys to this city, is said to be very beautiful. The houses rise in terraces along the declivities of the hills, and are interspersed with vineyards, gardens, and clumps of Lombardy poplars, watered by numerous fountains and canals. The innumerable minarets, the ruins of the ancient palace of the khans, and a profusion of white chimneys rising amidst the richest foliage, pro- duce a tout-ensemble of the most picturesque ef- fect. The interior of the town, however, is no way corresponding with its external beauty. It is said to contain three churches, thirty-two mosques, a synagogue, and seventy- four foun- tains. The population in 1822 is stated by Dr. Lyall to have amounted to 10,212 souls, of whom 8200 were Mahommedans.

About four versts distance from this city is the Jewish colony of Ichufaut Kala (Jew's castle).

It contains about 200 houses and 1200 inhabi- tants, who so far differ from the usual character given to their brethren in other countries, that Dr. Clarke says their honesty in the Crimea is proverbial, the word of a Karaite Jew being con- sidered equal to a bond. Adjoining to this vil- lage is a cemetery, called the field of ftie dead ; a place, we are informed, most admirably calcu- lated to inspire holy meditation. It is said the Jews hold this valley in such veneration, that when the khans wished to extort a contribution, they had only to threaten them with the destruc- tion of these sacred trees, under the pretence of wanting timber or fuel, to ensure a speedy com- pliance.

Ak-yar, or Serastopol, is situated upon a neck of land interposed between two bays. Its har- bour is one of the finest in the world ; the largest vessels being able to lie within cable's length of the shore; it extends nearly four miles inland, and is only 200 yards wide at the entrance, which is well defended, and nine or ten fathoms deep. The houses in this town are extremely good, built principally after the Italian style of architecture; and the streets are wide, though not paved. Its principal public edifices are three churches, the admiralty, the hospital, the arsenal, the magazines, the barracks of the garri- son, and the marine barracks. Its population was estimated at 22,000 in the year 1822 ; the num- ber of its houses is said to be 1750. It is a rising town. Ak-yar is described by Dr. Clarke as the very .centre of the most interesting antiquities of the Crimea; the Russians, however, have la- bored daily to annihilate every vestige of them. Within a short distance of this town stood the cities of Old and New Chersonesus, Eupatorium, the temples of Diana, and the promontory Par- thenium, celebrated as the scene of the story of Iphigenia; the famous Chersonesan wall, with innumerable ramparts, tombs, canals, and other works, the memory of which has been embalmed in the writings of classical authors. The most remarkable curiosity in the Crimea is also situated in the neighbourhood of Ak-yar. The ruins of In-kerman (the town of caverns), consisting of innumerable chapels, cells, monasteries, sepul- chres, and a variety of works, which, by their in- tricacy, astonish and confound the beholder. (See Dr. E. D. Clarke's Travels, vol. ii. p. 203). Bellaclara is situated to the south of the Hera- cleotic Chersonesus ; it contains about 1200 Greek inhabitants, and is particularly remarkable for its beautiful port (Bella Clara), from which it lakes its name. This harbour is most accurately described by Strabo; it is about a mile in length, 200 fathoms in breadth, and from fifteen to twenty fathoms in depth in its shallowest part.

Karassa-bazaar (black water market), is the principal mart for the sale of fruit, wine, horses, and cattle, on the peninsula. The town is a straggling

mass of mean buildings, containing about 5000 inhabitants. It is noted, however, for its tanneries, tile-works, candle and soap manufactories, and its manufactures of red and yellow morocco, and silks.

Sudak is built amongst the vineyards and groves of the vale which bears its name. This place was of such commercial celebrity at one

or.

period of its history, that all the Greek posses- sions in the peninsula were denominated Sugdania (Us ancient name). It is at present noted for its wines.

Caffa, in Crimea Proper, was once the most splendid city in the peninsula ; at present it pre- sents but a few irregular streets, and the wrecks of its former magnificence. Whilst in the pos- session of the Genoese, it was termed Krim Stambol, or the Constantinople of the Crimea, and contained, inclusive of its suburbs, 44,000 houses ; in 1800, fifty Tartar families formed the whole of its population ! Taman is a fortress of considerable strength, and the only town worthy of mentioning in the island which bears its name.

Before the Crimea came under the power of the Russians, it is said to have contained a population of 1,500,000, consisting of Turks, Greeks, Armenians, and Tartars. At present there are no Turks ; not many Armenians ; and vast numbers of the Tartars have re- moved with their families and flocks to the steppes of the continent. Professor Pallas, whom we have already mentioned, divides the Tartars of the Crimea into three classes. The Nogays, the least mixed of the Mongolian race, devote their whole attention to agriculture and the rearing of cattle. A second race resembling the first, but not of so pure a descent from the Mongolians, who are chiefly scattered over the undulating steppes, from the borders of the moun- tainous country to the isthmus of Perecop. The third class occupy the valleys of the moun- tains; they are of a distinct physiognomy from the preceding two, having stronger beards and lighter colored hair ; they are always stationary, and devote their whole attention to the cultivation of flax, hemp, and tobacco.

The native Tartars are divided into three dis- tinct grades : — viz. the moorzas, or noblemen ; the mullahs, or priests ; and the peasantry. A mullah is always at the head of every settlement, and no measure is undertaken, which is likely to be important in its results, without first

consult- ing with him. The moor/as amount to about 250 ; their dress for the most part resembles the Circassians; their manners are elegant, and they are excellent equestrians. The cottages even of the poorer sort of peasants are extremely clean ; and the meanest Tartar has a double dwelling, one for himself and his guests, and the other for his wives. To every cottage is attached a garden, in which, the mulberry, the fig, the vine, the olive, the pomegranate, the peach, the apricot, and the walnut, abound. These latter trees grow to a most amazing size. Pallas mentions one which annually produced from 80,000 to 100,000 nuts. The old Tartar nobles allow their beards to grow, whilst the young wear only whiskers. The general covering for the head in summer, ia a turban ; those who have been a pilgrimage to Mecca or Medina, wear white ones, as a badge of honor ; in winter they wear a kind of helmet made of wool ; and beneath both, at all times, even within doors, is worn a skull-cap. The peasants have the legs and feet bare in summer; but bandaged, after the manner of the Russians, during the winter. Their shirts are made very wide in the sleeves, and hang over their fingers'

ends. They wear a jacket of silk or cotton, with a small pocket, in which they keep the steel and flint for lighting their pipes. Their trowsers are large and loose, bound tight below the knee, but falling in thick folds round the legs. The women are generally diminutive, wearing drawers or long wide trowsers, shirts open before, an open silk gown with long narrow sleeves, ornamented according to the station of the wearer; and, over all, a great coat with short sleeves, and a band round the waist. They plait their hair, which is usually covered with a small cap ; a long piece of cloth hangs down behind from the top of their heads, and tresses of hair, stained of a red color, fall clown on their cheeks. They paint the nails of their hands and feet red, and stain their eye- brows black. Many of their customs display a taste for finery ; thus, their pillows are covered with colored linen ; the napkins which they use for their ablutions are fringed and gaily em- broidered ; and the stool which is used for sup- porting a tray during their meals, is often inlaid with mother-of-pearl. The food consists of mut- ton and lamb, boiled or roasted, eg^s, butter, honey, milk, fruits, vegetables, &c. Their ordi- nary drink is water, or sour milk mixed with water, and a kind of beer called barsa. In every house is to be found one or more copies of the koran, which they teach their children to read and copy at a very early age. Like other oriental nations, they are excessively fond of ablutions, using them repeatedly during the day. The highest points of excellence, in the Tartar charac- ter, are their hospitality, sobriety, and chastity ; for all of which they are universally distinguished. The Tartar law in cases of infidelity is very curious ; the offender is placed in a grave, and the whole number of inhabitants for many versts round being assembled, each one fli'ngs a stone at the delinquent, who is thus at once

stoned to death and buried. Since they have been go- verned by the Russian laws, however, they are no longer able to exercise their own customs, and this, like many others, is fast sinking into desuetude. The Cimmerians, a tribe of the Thracians, are the most anciently known inhabitants of the Taurica Chersonesus. This warlike tribe, for a long time, defended the peninsula against the Scythians, but were at length driven into the mountainous parts by their more powerful ad- versaries, about 665 years before the birth of Christ. About 100 years after this, the Greeks formed colonies, and carried on a flourishing commerce on the southern shores ; and the eas- tern peninsula was raised into the Greek kingdom of Bosphorus. About a century before the Christian era, Mithridates, king of Pontus, re- duced the whole of the Chersonesus under his power. After the ruin of Mithridates, by the Romans under Pompey, who took possession of the Crimea, the kingdom of Bosphorus subsisted till the Christian era as a dependent power. The Alani, the Goths, the Huns, and other bar- barous nations, successively overran the Cherso- nesus. The Crimea became a province of the western Tartar empire iu 1237. But it is prin- cipally indebted to the Venetians and Genoese for its recovery from the desolated and impoverished state to which it was reduced under so many mas-

ters. The Genoese established large commercial cities on the coast of the Black Sea, and also opened a lucrative trade with China and the East Indies. In 1441 the Crimea, for a short period, became an independent monarchy ; but the Turks destroyed this, and expelled the Genoese from the peninsula. In 1774 the em- press, Catherine II. of Russia, stipulated for the independence of the Crimea under its own khans. In 1781 a civil war broke out, in which the Russians interposed ; and, in 1783, Sahim Gheray, the reigning khan, abdicated his throne, and transferred his power to Russia. This ac- quisition was confirmed to the czar, by a treaty with the sultan, in 1784, since which time the Crimea has remained a province of the Russian empire.

*CRIMP, v. a., n. *. & adj.) Ang.-Saxon CRI'MPLR, v. a. J ge-crympt;Ger.*

krampen ; Dut. krimpen ; Swed. krimpa. To crimp is to curl the hair, but this sense is obso- lete ; to cut fish while alive or very fresh, in or- der to render the flesh firm ; in cant phraseo- logy, to decoy persons to serve in the army. To crimple is, to contract; to corrugate; to cause to shrink up. Crimp formerly was the name of a game at cards ; it is now the appellation

of those who enlist men by unfair means. That which is friable, brittle, easily pulverisable, is crimp. The adjective is also used to signify, not consis- tent or forcible ; but this usage was never ele- gant, and is now obsolete.

Laugh and keep company at gleek or crimp.

Ben Jonson.

He passed the cautery through them, and accord- ingly crimpled them up. Wiseman's Surgery.

Now the fowler, warned

By these good omens, with swift early steps, Treads the crimp earth, ranging through fields and glades. Philips.

The evidence is crimp ; the witnesses swear back- wards and forwards, and contradict themselves ; and his tenants stick by him. Arbuthnot's John Bull.

From turkey poults transfixed, and sirloins slashed, From marrow puddings mauled, and custards quashed, Crimpt cod, and mutilated mackarel, And desolation of the turtle's shell, Some alderman of giant appetite, A surfeit sweeps to everlasting night. Huddesford.

CRI'MSON, v. a., n. s. & adj. Fr. cramoisi ; It. cramesioro ; Sp. cremesin, cremesino ; Dutch, \armesun ; Per. kermesy, kurmesy ; Ar. kermez. It was formerly written crimosin and cremosin. Crimson is red, with a tinge of blue ; poetically, red in general. To crimson is to tinge or dye with crimson.

Upon her head a cremosin coronet, With damask roses and daffodillies set.

Spenser. Shepherd's Calender.

Still is he sullen, still he lowers and frets, Twixt crimson shame, and anger ashy pale.

Shaktpeare. Venus and Adonis,

Can you blame her, then, being a maid yet rosed over with the virgin crimson of modesty, if she deny the appearance of a naked blind boy, in her naked seeing ielf ? Id. Henry V.

Pardon me, Julius. Here wast thou bayed, brave

hart!

Here didst thou fall ; and here thy hunters stand Signed in thy spoil, and crimsoned in thy lethe.

Shaktpeare.

As crimson seems to be little else than a very deep red, with an eye of blue ; so some kinds of red seem to be little else than heightened yellow.

Boyle on Colours.

The crimsitn stream distained his arms around; And the disdainful soul came rushing through the wound. Dryden's JEneiA.

Why does the soil endue The blushing poppy with a crimson hue ? Prior,

Mark, where Ambition leads the adverse band,

Each feature fierce and haggard, as with pain ' With menace loud he cries, while from his hand He vainly strives to wipe the crimson stain.

Beat tit

Tinged by the crimson sun, vast columns rise Of eddying sands, and war amid the skies, In red arcades the billowy plain surround, And whirling turrets stalk along the ground. Darwin.

Her cheek with native crimson glows, But crimson softened by the rose : 'Twas Hebe's self bestowed the hue ! Yet Health has added something too : But if an over-tinge there be,

Impute it to her modesty. Sheridan.

And she was chill as they, and on her face

A slender streak of blood announced how near Her fate had been to that of all her race ;

For the sarce blow which laid her mother here Had scarred her brow, and left it? crimson trace

As the last link with all she had held dear.

Byron. Don Juan.

CRI'NCUM, n.f. A cant word. A cramp; a contraction ; whimsy.

For jealousy is but a kind Of clap and crincum of the mind. Hudibras.

CRINGE, v. a., v. n., & n. s.) Ger. kricchen.

CRI'NGER, n. i. $ To bow servile-

ly; to fawn; to flatter; to act the sycophant; to draw together ; to contract : but in the last two senses the verb is unusual. Cringe is servile civility. A cringer is one who will bow to and fawn upon another for the sake of interest, who will even submit to a kicking if it will forward the attainment of his purpose.

Whip him, fellows,

Till, like a boy, you see him cringe his face, And whine aloud for mercy.

Shakspeare. Antony and Cleopatra.

Flatterers have the flexor muscles so strong, that

they are always bowing and, cringing. Arbuthnot.

The cringing knave, who seeks a place Without success, thus. tells his case. Swift,

Let me be grateful ; but let far from me Be fawning cringe, and false dissembling looks.

Philips.

Purblind to poverty the worldling goes, And scarce sees rags an inch beyond his nose, But from a crowd can single out his grace, AnA'cringe and creep to fools who strut in lace.

Churchill.

The pride of no person in a flourishing condition is more justly to be dreaded, than that of him who is mean and cringing under a doubtful and unprosperous fortune. Bvrkt.

Horatio's servant once, with bow and cringe, Swinging the parlour door upon its hinge, Dreading a negative, and overawed Lest he should trespass, begged to go abroad.

Coroper.

CRINGLE, a small hole made in the bolt rope of a sail, by intertwisting one of the divi- sions of a rope, called a strand, alternately round itself and through the strands of the bolt-rope, till it becomes threefold, and assumes the shape of a wreath or ring. The use of the cringle is generally to contain the end of some rope, which is fastened thereto for the purpose of drawing up the sail to its yard, or of extending the skirts by the means of bridles, to stand upon a side wind.

CRINI'GEROUS, adj.ˆ Lat. crinis. Cri- CRI'NET, n. s. I nigerous, crinose,

CRI'NITE, adj. \and crinite, signify,

CRI'NOSE, adj. i hairy; abounding

CRINO'SITY, n. s. J with hair. Crino-

sity is hairiness. Gascoigne gives the appella- lion of crinet to a lock of hair, and, as the word is pithy and well sounding, it deserves to be re- tained in the language.

How coraete, crinite, caudate, stars arc framed.

Fairfax.

CRI'NKLE, v. a., v. n., & n. s. \ Dut kron- CRI'NKLING, n. s. & adj. J kelen. To run

into bendings ; to wind in and out ; to mould into inequalities. Crinkle, and crinkling, denote a wrinkle ; a sinuosity ; something moulded into small prominences, like the edge of a pie-crust. See CRANKLE.

Unless some sweetness at the bottom lie, Who cares for all the crinkling of the pie ?

King's Cookery.

CRINUM, asphodel lily, in botany, a genus of the monogynia order, and hexandria class of plants ; natural order ninth, spathaceae : COR. funnel-shaped, monopetalous, and sexpartite, with three alternate segments having hooked ap- pendages ; the germen is covered in the bottom of the corolla, the stamina standing asunder. They are very beautiful green-house plants, rising two or three feet, each crowned by a large um- bellate cluster of spathaceous, monopetalous, long funnel-shaped flowers blue, white, or striped, having a very fragrant smell. They are pro- pagated by off-sets.

CRl'PPLE, v. a., n s. & adj.) Goth, krypil;

CRI'PPLENESS, n. s. J Ang.Sax. cry

pel ; Dut. krepel. Mr. Whiter derives cripple from grapple, and Junius from KpanraXri ; but Mr. Todd justly observes, that the root is clearly to be found in creep ; and, indeed, our old au- thors wrote it in conformity with this derivation. See CREEPLE. A cripple is a man lame either by nature or by accident ; a man who is obliged to creep, because he has not the full use of his limbs. To cripple is to deprive of the use of the limbs; figuratively, to deprive of the power of exertion. Crippleness is the state of being a cripple.

He, poor man, by your first order died, And that a winged Mercury did bear ; Some tardy cripple had the countermand, That came too lag to see him buried.

Sliaktpeare. Richard III.

But perhaps justice is denied, or I am crippled and cannot stir, robbed and have not the means to do it, If GodTias taken away all means of seeking remedy, there is nothing left but patience. But my son, when able, may seek the relief of the law, which I am de- nied : he or his son may renew his appeal, till he recover his right. Locke.

I am a cripple in my limbs ; but what decays are in my mind, the reader must determine. Dryden.

Knots upon his gouty joints appear, And chalk is in his crippled fingers found. Id.

See the blind beggar dance, the cripple sing, The sot a hero, lunatick a king. Pope.

Tettyx, the dancing-master, threw himself from the rock, but was crippled in the fall. Additon.

For he has wings, that neither sickness, pain. Nor penury can cripple or confine, No nook so narrow but he spreads them there With ease, and is at large. The' oppressor holds His body hound ; but knows not what a range His spirit takes, unconscious of a chain. Cowper.

CRI'SIS, w. s. Fr. crise ; Ital. crisa, crisi ; Span, and Lat. crisis ; icpiffij;. The critical mo- ment at which a disease either becomes mortal, or changes to the better ; the decisive point of time in any affair.

Wise leeches will not vain receipts obtrude j Deaf to complaints, they wait

upon the ill, Till some safe crisis authorize their skill. Dryden.

This hour's the very crisis of your fate ; Your good or ill, your infamy or fame, And all the colour of your life, depends On this important now. Id. Spanish Friar.

The undertaking, which lam now laying down, was entered upon in the very crisis of the late rebellion, when it was the duty of every Briton to contribute his utmost assistance to the government, in a manner suitable to his station and abilities.

Addison's FreeJwlder

Such men are raised to station and command, When Providence means mercy to a land. He speaks, and they appear ; to him they owe Skill to direct, and strength to strike the blow ; To manage with address, to seize with power The crisis of a dark decisive hour. Cowper.

Ts there nothing that whispers to the right honour- able gentleman that the crisis is too long, that the times are too gigantic, to be ruled by the little hack- neyed and every-day means of ordinary corruption? — or are we to believe, that he has within himself a conscious feeling that disqualifies him from rebuking the ill-timed selfishness of his new allies 1 Sheridan.

CRISIS, in medicine, is used in different senses, both by the ancient and modern phy- sicians. With some it means frequently no more than the excretion of any noxious sub- stance from the body. Others take the word for a secretion of the noxious humors made in a fever. Others use it for the critical motion itself; and Galen defines a crisis in fevers, the point at which it changes finally for better or worse.

CRISP, v. a. & adj. ˆ Old Fr. crespe; Ital. CRISPA'TION, n. s. and Sp. crespn ; Ang.- CRI'SPNESS, n. s. ! Sax. cipbsian ; Latin, CRI'SPY, adj. \crispus. To curl ; to

CRi'spiNG-iRON,n.s. twist; to indent; to CRI'SPING-PIN, J make wavy. Crispatkm is, the act of curling ; the .state of being curled.

Crisp signifies, curled ; indented ; brittle; brisk, like liquor that sparkles. Crispy, and crispness, mean curled ; curledness. Crisping-iron, and crisping-

pin, are the ancient names of curling- irons.

The changeable suits of apparel, and the mantles, and the wimples, and the crispiny-piiis. Isaiah iii. 22.

His critpe here like, ringes was yronne, And that was yelwe, and glitered as the sonne.

Chaucer. Cant. Tales.

Her tress also should be of crisped gold. Wyatt. Her yellow lockes, crisped like golden wyre, About her shoulders weren loosely shed.

Spenser. Faerie Quecne.

You nymphs, called Naiads, of the winding brooks, With your s«dged crowns, and ever harmless looks, Leave your critp channels, and on this green land Answer your summons ; Juno does command.

Shakspeare. The Tempest. Severn, affrighted with their bloody looks, Ran fearfully among the trembling reeds, And hid his crisped head in the hollow bank.

Id. Henry IV.

So are those critpy snaky locks, oft known To be the dowry of a second head.

Id. Merchant of Venice. Young I'd have him too ; Yet a man, with crisped hair, Cast in thousand snares and rings, For love's fingers, and his rings.

Ben Jonsen. Friar, you must have Your neat crisp claret.

Beaumont and Fktclier.

In frosty weather, musick within doors soundeth

better ; which may be by reason, not of the disposition

of the air, but of the wood or string of the instrument,

which is made more crisp, and so more porous and

hollow. Bacon.

Some differ in the hair and feathers, both in the

quantity, crispation, and colours of them ; as he lions

are hirsute, and have great manes j the she's are

smooth, like cats. Id.

The Ethiopian black, flat-nosed, and crisp-haired.

Hale.

Along the crisped shades and bowers Revels the spruce and jocund spring. Milton.

From that saphire fount the crisped brooks, Rolling on orient pearl and sands of gold, Ran nectar, visiting each plant. Id.

Spirit of wine is not only unfit for inflammations in general, but also crisps up the vessels of the dura mater and brain, and sometimes produces a gangrene.

Sharp's Surgery.

There, ranged in reverend majesty, The taper shafts ascending high To decorate the crisped roof Their mingling branches shoot aloof : Where, blazoned in projecting gold, Flame the proud crests of Barons' bold.

Huddesford.

CRISPIANUS, and CRISPINUS, two legen- dary saints, whose festival is on the 25th of Octo- ber. They are said to have been brethren, born at Rome ; whence they travelled to Soissons in France, about A. D. 303, to propagate the Christian religion ; and, that they might not be chargeable to others for their maintenance, they exercised the trade of shoemakers ; but the go- vernor of the town, discovering them to be Chris- tians, ordered them to be beheaded ; from which

time the shoe-makers have claimed them as thei" tutelar saints.

CRISPISU'LCANT, adj. Lat. crispuuicans. Waved, or undulating, as lightning is repre- sented.

CRISTA GALLI. See ANATOMY. This pro- cess is so named from its figure, which resembles a cock's comb. To it is fastened that part of the dura mater which divides the brain, called falx. In adults this process appears of a piece with the septum narium.

CRITE'RION, n. s. Kpirˆptov. A mark by which any thing is judged of, with

respect to its badness or goodness.

Mutual agreement and endearments was the badge of primitive believers j but we may be known by the contrary criterion. Glanville's Scepsis.

We have here a sure infallible criterion, by which every man may discover and find out the gracious or ungracious disposition of his own heart. South.

By what criterion do you eat, d'ye think, If this is prized for sweetness, that for stink ?

Pope's Horace.

To proceed in this manner, that is, to proceed with a presiding principle, and a prolific energy, is with me the criterion of a profound wisdom. Bvrke.

Saws of experience, sage and sound. Say, man's true, genuine estimate, The grand criterion of his fate, Is not, Art thou high or low ? Did thy fortune ebb or flow ? Did many talents gild thy span ? Or frugal nature grudge thee one 1 Burns.

Can any thing be of more consequence to man, than to know what is his duty, and how he may ar- rive at happiness ? It is from the examination of his own heart that he receives the first intimations of the one, and the only sure criterion of the other. Beattie.

CRITHE, in surgery, commonly called the stye, a sort of tubercle that grows on the eye- lids. See SURGERY.

CRITHMUM, samphire, in botany, a genus of the digynia order and pentandria class of plants ; natural order forty-fifth, umbellata. The fruit is oval and compressed, the florets equal. There are two species, the principal of which is C. maritimum, the common maritime samphire, produced naturally on the sea-coast among the gravel and rocks. Its leaves are an excellent pickle for sauces, and are by many eaten raw in salads.

CRITHOMANCY, from KpiGn., barley, and fiavrtta, divination, a species of divination, by consi dering the dough or matter of the cakes offered in sacrifice, and the meal strewed over the vic- tims to be killed. Barley meal was commonly used ; whence the name.

Fr. critiquer ; KoirtKOf. To cri- tic and to criti- [cise are synony- fmous; but the former verb is now nearly su- j perseded by the

CRI'TICAL, adj. CRI'TICALLY, adv. CRI'TICALNESS, n. s. CRI'TICISE, v. n. CRI'TICISER, n.s. CRI'TTCISM, n. s. CRITI'QUE, n.s.

latter. They signify, to examine; to investigate; to point out defects or beauties ; to write re- marks on any work ; to play the critic. Critic,

criticism, and critique, are also equivalent terms, denoting critical remarks ; the science of criti- cism ; but the first of these words is disused in these senses. It now designates a man whose profession it is to judge of literary works ; a man skilled in any art or science; a criticiser; a snarler ; a censurer. Critical is, nicely judicious ; relating to criticism ; captious ; important ; mo- mentous. Critically means, in a critical manner; at the exact point of time.

What wouldst thou write of me, if thou shouldst

praise me? —

O, gentle lady, do not put me to 't ; For I ana nothing, if not critical.

Shalispeare. Othello.

The moon is supposed to be measured by sevens, and the critical or decretory days to be dependent on that number. Browne's Vulgar Errours.

This settles truer ideas in men's minds o£ several things, whereof we read the names in ancient authors, than all the large and laborious arguments of critichs.

Locke.

If ideas and words were distinctly weighed, and duly considered, they would afford us another sort of logick and critick than what we have hitherto been ac- quainted with. Id.

Nor would I have his father look so narrowly into these accounts, as to take occasion" from thence to cri- ticise on his expences. Id.

What you say about critichs and critical interpreta- tions, particularly of the Holy Scriptures, is not only in my opinion very true, but of great use to be ob- served on reading learned commentators, who not sel- dom make it their business to show in what sense a word has been used by other authors ; whereas the proper business of a commentator is barely to show in what sense a word has been used by the author in that place. Id.

They do but trace over the paths that have been beaten by the ancients ; or comment, critick, and flourish upon them. Temple.

Virgil was so critical in the rites of religion, that he would never have brought in such prayers as these, if they had not been agreeable to the Roman customs.

Stillingjleet.

I should be glad if I could persuade him to continue his good offices, and write such another critick on any thing of mine. Dryden.

Criticism, as it was at first instituted by Aristotle, was meant a standard of judging well. Id.

They who can criticise so weakly, as- to imagine I have done my worst, may be convinced, at their own cost, that I can write severely with more ease than I can gently. Id.

Difficult it is to understand the purity of English, and critically to discern good writers from bad, and a proper stile from a corrupt one. Id.

Nor shall I look upon it as any breach of charity, to criticise the author, so long as I keep clear of the per- son. Addison.

There is not a Greek or Latin critick, who has not shewn, even in the style of his criticisms, that he was a master of all the eloquence and delicacy of his na- tive tongue. Id.

Now learn what morals critichs ought to show, For 'tis but half a judge's task to know. Pope.

What is every year of a wise man's life, but a cen- sure and critique on the past ? Id. Not that my quill to critickt was confined ;

My veise gave ampler lessons to mankind. Id.

Thence arts o'er all the northern world advance. But critick learning flourished most in France. Id.

Know well each ancient's proper character ; Without all this at once before your eyes, Cavil you may but never criticise. Id.

Criticism, contrary to all other faculties of the intel- lect, is ever held the truest and the best, when it is the first result of the critic's mind ; as fowlers reckon the first aim for the surest, and seldom fail of missing the mark, if they stay not for the second. Swift.

The people cannot but resent to see their apprehen- sions of the power of France, in so critical a juncture, wholly laid aside. Id.

Where an author has many beauties consistent with virtue, piety, and truth, let not little critickt exalt themselves, and shower down their ill-nature. Watts.

Gulliver's Travels are a sort of allegory, but rather satirical and political than mora'l. The work is in every body's hands, and has been criticised by many eminent writers. Beattie.

This folio of four pages, happy work ! Which not e'en critics criticise ; that holds Inquisitive Attention, while I read, Fast bound in chains of silence, which the fair, Though eloquent themselves, yet fear to break ; What is it, but a map of busy life, Its fluctuations, and its vast concerns ? Coiaper.

Attend, ye virgin critics, shrewd and sage,

Ye matron censors of this childish age,

Whose peering eye and wrinkled front declare

A fixed antipathy to young and fair ;

By cunning, cautious, or by nature, cold,

In maiden madness, virulently bold ! Sheridan.

DAN. Well, Sir Fretful, I wish you may be able to get rid as easily of the newspaper criticisms as you do of ours. Id.

They cannot read, and so don't lisp in criticism! ; Nor write, and so they don't affect the muse.

Byron. Beppo.

CHITICJSM, is the art of judging with pro- priety, concerning any object or combination of objects. In a more limited sense, the science of criticism is confined to the fine arts. The prin- ciples of the fine arts are best unfolded by studying the sensitive part of our nature, and by learning what objects are naturally agreeable and what are naturally disagreeable. But the man who aspires to be a critic in these arts, must pierce still deeper : he must clearly perceive what objects are lofty, what low, what are pro- per and improper, what are manly, and what are mean or trivial. Hence a foundation for judg- ing of taste, and for reasoning upon it ; where it is conformable to principles, we can pronounce with certainty that it is

correct ; otherwise, that it is incorrect, and perhaps whimsical. Thus the fine arts, like morals, become a rational science ; and, like morals, may be cultivated to a high degree of refinement. See BEAUTY.

CRITO, an Athenian philosopher, who flou- rished A.A.C. 400. He was one of the most zealous disciples of Socrates, and supplied him with whatever he wanted. Several pupils of his proved eminent men, and he composed some dialogues which are lost.

CRITOLAUS, a citizen of Tegea in Arcadia, who, with his two brothers fought against the three sons of Demostratus of Pheneus, to put an end to a long war between their respective

nations. The brothers of Critolaus were both killed, and he alone remained to withstand his three antagonists. He conquered them ; and when at his return his sister deplored the death of one of his antagonists, to whom she was be- trothed, he killed her in a fit of resentment. The offence deserved capital punishment ; but he was pardoned on account of the services he had rendered his country. He was afterwards general of the Achaeans ; and is said to have poi- soned himself because he had been conquered at Thermopylae by the Romans, about A. A.C. 146.

CROAK, v.n. &n. s. “) Old Fr. croaquer ;

CEO’AKING, n. s. & adj. > modern Fr.croosser;

CIIO’KER, n. s. j Ital. crocidare, cro-

cifure ; Ang.Sax. crocettan ; Lat. crocitare ; Sw. kroaka ; rpawye. To make a hoarse dissonant noise, like a frog ; to caw or cry, as a raven or crow ; figuratively to make any unpleasant hoarse sound. Croak is the cry or voice of a frog or raven. A croaker is one who is perpetually complaining, starting difficulties, and anticipat ing evil.

Yeeld me an hostry mongst the crohing frogs, A,nd harbour here in safety from those ravenous dogs. Spewer. Faerie Queene. The raven himself is hoarse, That croaks the fatal entrance of Duncan Under my battlements. Shakspeare. Macbeth.

The subtle swallow flies about the brook, And querulous frogs in muddy

pools do croak.

May's Virgil.

Their understandings are but little instructed, when a'l their whole time and pains is laid out to still the croaking of their own bellies. Locke.

The hoarse raven on the blasted bough, By croaking from the left, presaged the coming blow.

Dryden.

The swallow skims the river's watry face ; The frogs renew the croaks of their loquacious race.

Id.

Was that a raven's croak, or my son's voice ? No matter which, I'll to the grave and hide me. Lee.

At the same time the walk of elms, with the croak- ing of the ravens, looks exceeding solemn and venera- ble. Addison.

So when Jove's block descended from on high, Loud thunder to its bottom shook the bog, And the hoarse nation croaked. Pope

Blood, stuffed in skins, is British Christian's food ; And France robs marshes of the croaking brood.

Gay.

The raven croaks forlorn on naked spray : And hark ! the river, bursting every mound, Down the vale thunders, and with wasteful sway Uproots the grove, and rolls the shattered rocks away.

Beattie.

Thus kings were first invented, and thus kings W ere burnished into heroes, and became The arbiters of this terraqueous swamp ; Storks among frogs, that have but croaked and died.

Cowper.

The croaking nuisance lurked in every nook ; Nor palaces, nor even chambers, scaped : And the land stank, so numerous was the fry. Id.

There the hoarse stag his croaking rival scorns, And butts and parries with

his branching horns.

Darwin.

CROATIA, a country of Europe, and part of the ancient Illyricum, bounded on the east by

Sclavonia and Bosnia, on the south and south- west by Morlachia, on the west by Carniola, and on the north by the Drave, which separates it from a part of Sclavonia. It is about 160 miles long, and from sixty to 100 broad. In the eleventh century, Croatia and Dalmatia devolved to the king of Hungary ; and has ever since continued under the dominion of that monarchy, except a small part subject to the Turks. It is divided into two parts, viz. that under, and that beyond the Save. In the wars between the em- press queen and Frederic the Great, of Prussia, above 50,000 men were raised out of this small territory. Both horse and foot are good soldiers, especially the former. The soil, where cultivated is fruitful in wine and oil, &c. but being a frontier country, it is not so well cultivated as otherwise it might be. Carlosladt is the capital. Austrian Croatia is thus distributed.

1. The Banat, or civil de- partment, composed of the counties of Zagrao, Waras- din, and Creutz ....

2. The Generalat, or mili- tary division, comprising the districts of Carlstadt, Waras- din, and the Banalgranze .

3. The Littorale (other- wise called Hungarian Dal- matia), being the maritime tract between Fiume and Carlopago .....

Total

The first of these divisions has a government ar.d provincial states similar to those of Hun- ga< y ; the constitution of the second is entirely military ; and the third has a separate governor. That part of Croatia, which belongs to the Turks, is seated on the Unna, and is about forty miles long and twenty broad.

CROATS, light irregular troops from Croatia. Their method of fighting is the same as the Pan- dours. They wear a short waistcoat, and long white breeches, with light boots, and a cap greatly resembling the hussar cap. Their arms are a long firelock with rifled barrel, and short bayonet, a crooked hanger, and a brace of pistols. The late empress queen of Austria had 5000 of these troops, the greatest part of which had no pay, but lived by plunder.

CRO'CEOUS, adj. Lat. croceus. Consist- ing of saffron ; like saffron.

CROCITA'TION, n. s. Lat. crocitatio. The croaking of frogs or ravens.

CROCK, n.s. > Isl. kro ; Swed. kruka;

CRO'CKERY, n. s. 5 Ang.-Sax. crocca; Germ. krug ; Welsh, crochan. A cup ; any vessel made of earth ; a little stool -, the soot on a kettle, or chimney stock. Crockery is earthenware.

And when that dronken was all in the crouhe, To bedde went the daughter right anon.

Cftaucer. Cant. Talet.

Therefore the vulgar did about him flocke, And cluster thicke unto his leasings vaine, Like foolish flies about an honey crocke.

Spenter. Faerie Queene,

Sq. Mi.

Pop.

3927

370,000

5340

380,000

154

50,000

9421

800,000

CRO

I bid her come out of the crowd, and seated her upon a little crock at my left hand. Taller,

CRO'CKET, n. s. Fr. croc. An, ornament with which, in Gothic architecture, the edges of gable ends, the angles of pinnacles, and other parts, are adorned.

CRO'CODILE, n. s. From icpoieoe, saffron, and SuXwv, fearing ; because the animal was sup- posed to dislike or fear saffron. An amphibi- ous and voracious animal, in shape resembling a lizard, and found in Egypt and the Indies. See LACERTA.

By muddy shore of broad seven-mouthed Nile, Unweeting of the perillous wandring wayes, Doth meet a cruell craftie crocodile.

Spenser. Faerie Queene. Gloster's show

Beguiles him ; as the mournful crocodile With sorrow snares relenting passengers.

Shakspeare. Henry VI.

Crocodiles were thought to be peculiar unto the Nile. Broivne's Vulgar Errours.

Enticing crocodiles, whose tears are death ; Syrens, that murder with enchanting breath.

Glanville.

Caesar will weep, the crocodile will weep. Dryden.

Crocodile is also a little animal, otherwise called stinx, very much like the lizard, or small crocodile. It lives by land and water ; has four short small legs, a v,ery sharp muzzle, and a short small tail. It is pretty enough to look at, being covered all over with little scales of the color of silver, intermixed with brown, and of a gold color upon the back. It always remains little. Trewnuc,

In silent herds the wandering sea-calves lave, Or nod their slimy foreheads o'er the wave j Poised on still wing attentive vultures sweep, And winking crocodiles are lulled to sleep. Darwin.

CROCODILE, in zoology. See LACERTA.

CROCODILE, in rhetoric, a name sometimes given to a captious and sophistical kind of ar- gumentation, contrived to seduce the unwary, and draw them speciously into a snare. It has its name fiom the following fable, invented by the poets. A poor woman, begging a crocodile, that had caught her son walking by the river side, to spare and restore him, was answered, that he would restore him, provided she should give a true answer to a question he should pro- pose ; the question was, Will I restore thy son or not ? To this the poor woman, suspecting a deceit, sorrowfully answered,

Thou wilt not : and demanded to have him restored, because she had answered truly. Thou lyest, says the crocodile; for if I restore him thou hast not answered truly; I cannot, therefore, restore him without making thy answer false. Under this head may be re- duced the propositions called mentientes or in- solubiles ; which destroy themselves.

CRO'CODILINE, adj. Lat. crocodilinus. Like a crocodile.

CRO'CUS, n. s. A flower.

Fair handed Spring unbosoms every grace, Throws out the snow-drop and the crocus first.

Thomson.

CROCUS, in botany, saffron, a genus jf the monogrynia order, and triandria class of plants ; natural order sixth, ensatae : COR. sexpartite and

CRCE

equal ; stigmata convoluted or rolled spirally inwards. Species three ; of these C. sativus has a small roundish, brown, bulbous root, com- pressed at the bottom. Directly from the root issue many long narrow leaves, of a deep green color ; and amidst them the flowers are pro- truded from a thin univalvular radical spatha; the tube of the flower is long, standing on the root, and serving as a foot-stalk to the limb or upper part, which is erect, six-parted, widens gradually upward, and grows from about three to five or six inches high. The varieties of the first are the crocus officinalis, or saffron of the shops ; for the properties of which and its cul- tivation for sale, see SAFFRON. It has a long- tubed bluish-purple flower, with three stigmata of a fine golden color. Other varieties are the autumnal small blue crocus; deep blue, sky- blue, whitish blue, many flowered whitish blue, purple, large rush-leaved purple, autumnal white crocus, and autumnal yellow crocus. 2. C. vernus, the varieties of which are, the small and large, and golden yellow crocuses, and the yellow black striped, the yellow purple-striped and double cloth of gold ones ; the white, white purple-striped, white purple-bottom, white black- striped, whitish cream-colored, whitish ash-co- lored, little narrow-leafed white, and white blue- striped crocuses. Besides these there are a great many others of a blue and purple color finely variegated. The autumnal crocuses flower about the beginning of October, but never ripen their seeds in this country. They are very beautiful if sown in patches in the front of borders, or in beds by themselves, and very proper ornaments for gardens of every extent, as coming up at a time when most other flowers are on the decay. They grow

freely in any kind of soil, and may be propagated by off-sets. The vernal kinds flower in February, March, and April. They are also very ornamental, and are so hardy that they will grow almost any where. They are propagated by seeds, which are produced in plenty. 3. C. nudiflorus with three-cleft stigma enclosed in the corolla.

CROCUS, in chemistry, denotes any metal cal- cined to a red or deep yellow color.

CROCUS OF ANTIMONY. See ANTIMONY. CRCESUS, the last king of Lydia, remarkable for his riches, his conquests, his temporary pros- perity, and his sad reverse of fortune. He sub- dued the Phrygians, Mysians, Paphlagonians, Thracians and Carians ; amassed together im- mense riches ; and became one of the most powerful and magnificent princes in the world. Thales of Miletus, Pittacus of Mitylene, Bias of Priene, Cleobulus of Lindus, and most of the other wise men, as they are emphatically styled, who lived in that age, as well as ./Esop the fa- bulist, and the elegant Greek poets of the times, were bountifully received at the court of Crnesus. There is still on record a memorable conversa- tion between that prince and Solon, which seemed to predict the subsequent events of his reign, and which had a late but important influence on the character and fortune of the Lydian king. Croesus having entertained his Athenian guest, according to the ancient fashion, for several days, ostentatiously showed him the magnificence 'of

his palace and particularly the riches of his treasury. After all had been displayed to the best advantage, the king asked him, Whom of all men he esteemed most happy ? expecting flattery rather than information. But Solon re- plied with manly freedom, ' Tellus, the Athenian, who was not conspicuous for his riches or his grandeur, being only a simple citizen of Athens; but was descended from parents who deserved the first honors of the republic, and was equally fortunate in his children.' Crcesus had little encouragement after this answer, to ask Solon, in the second place, Whom next to Tellus, he deemed most happy ? Such, however, is the illusion of vanity, that he still ventured to make this demand ; and still entertained hopes of being favorably answered. Solon replied with the same freedom as before, ' the brothers Cleobis and Biton ; two youths of Argos, whose strength and address were crowned with repeated victory at the Olympic games.' ' And is the happiness of a king, then,' said Croesus, ' so little

regarded, that you prefer to it the mean condition of an Athenian or Argive citizen ?' — ' The life of man,' replied Solon, ' consists of seventy years, which make 25,550 days; an immense number: yet in the longest life, the events of any one day will not be found exactly alike to those of ano- ther. The affairs of men are liable to perpetual vicissitudes ; and all human life, if not con- demned to calamity, is at least liable to accident. Whoever has uninterruptedly enjoyed a pros- perous tide of success may justly be called for- tunate : but he cannot before his death be entitled to the epithet of happy.' The events, which soon followed this conversation, proved but too decidedly the wisdom of the sage. Victorious in war, unrivalled in wealth, and supreme in power, Crcesus felt his warmest affection cen- tered in his son Atys, who had often fought and conquered by his side, and who was slain by a dart aimed at a boar, by Adrastus, a Phrygian prince, then in the court of his father. Croesus had remained two years disconsolate for the loss of this son, when the growing greatness of Persia threatened the safety of his dominions. Being told by the Delphian oracle that if he crossed the Halys, a river between his country and that of Cyrus, it would be the destruction of a great empire, he marched against Cyrus with a vast army, but was defeated ; and retreat- ing to his capital Sardis, was there besieged ; thus fulfilling in himself the double answer of the Pythian priestess. The city was taken by assault ; and as a Persian soldier was going to kill Croesus, that prince's only surviving son, who had hitherto been dumb, terrified at his danger, cried, ' Stop, soldier, and touch not Crcesus.' He seemed, however, only to be re- served for a harder fate. Dragged into the pre- sence of his conqueror, he was loaded with irons; and the stern Cyrus ordered him, with his Lydian attendants, to be committed to the flames. An immense pile of wood and other combustibles was erected in the most spacious part of the city. The miserable victims, bound hand and foot, were placed on the top of the pyre. Cyrus, surrounded by his generals, wit- nessed the dreadful spectacle. Hearing his un-

fortunate captive, oppressed by the intolerable weight of his calamity, utter with a deep groan the name of Solon, Cyrus enquired by an interpreter, 'Who he was ?' 'He', replied Croesus, 'whose words ought ever to speak to the hearts of kings.' Being desired to explain himself, he related the important discourse of Solon, of which his fate was the great moral. The words of a dying man make a strong im- pression on the heart. Those of Crcesus deeply affected the mind of Cyrus, who considered the speech as addressed to himself, and at once re- lenting in his intended cruelty towards Croesus, gave orders that he should be seated by his side, and thenceforth treated him as a king. The kingdom of Lydia terminated in the person of this prince, the manner of whose death is un- known.

CROFT, n. s. Swed. kraft ; Ang.-Sax. craft.

A little close joining to a house, that is used for

corn or pasture.

This have I learned,

Tending my flocks hard by, i' the hilly crofts That brow this bottom glade. Milton.

CROIA, or CROJA, a town of European Tur- key, in Albania, anciently the capital of the Albanian kings. It was fortified in the time of the celebrated Scanderbeg, who greatly ha- rassed the Turks from it. They have since de- molished the fortifications. It is a bishop's see, and seated near the Gulf of Venice ; thirteen miles north-east, and thirty south of Scutari. CROISA'DE, or^ Fr. croisade; Ital. cro- CROISA'DO, n. s. >ciata; Sp. cruzadu, from CROI'SES, n. s. J crux, a cross. A holy war; a war carried on, under the banner of the cross, against infidels. Croises signify, pilgrims who carry a cross ; soldiers who, under the banner of the cross, combat with infidels. See CRUSADE.

See that he take the name of Urban, because- a pope of that name did first institute the croisado ; and, as with an holy trumpet, did stir up the voyage for the Holy Land. Bacon.

The conquests of the Croises, extending over Pa- lestine and a part of Syria, had been erected into a sovereignty, under the name of the kingdom of Je-

rusalc

Burke.

CROISES, or CROIZES, the. knights of St. John of Jerusalem, instituted for the defence and pro- tection of pilgrims, were particularly so called from a cross they wore as a badge.

CROISIERS, a religious order, founded in honor of the discovery of the cross by the em- press Helena. They were, till of late, dispersed in several parts of Europe, particularly in the Netherlands, France, and Bohemia. Those in Italy were suppressed even before the late revo- lutions. These religious follow the rule of St. Augustine. They had in England the name of crouched friars.

CROIX. See PETIS.

CROIX (St.), LAKE, a lake of North America, commencing about 500

yards from the mouth of a river of this name, and is from one and a-half to three miles wide, and thirty-six miles in length. The river St. Croix communicates with Lake Superior by the Burnt River, by a reach of half

& mile only, and is by far the roost preferable communication that can be had witli that lake and the surrounding countries.

CROMACK WATER, a romantic lake of Cum- berland, between Buttermere and Lowes-water, with both of which it is connected by the Cocker. It is four miles long, nearly half a mile broad, and has three small isles.

CROMARTY, from Crom-Ba, Gaelic, i. e. Crooked Bay, a county of Scotland, which com- prehends part of a peninsula, bounded on the north by the bay of Cromarty ; on the east and south by the Moray Frith, and on the west by Rosshire. It is only twelve miles long from east to west, and not above four broad. It is veil cultivated and fertile. In the reign of James V. it was a forest, and abounded witn wolves. It sends a member to parliament in conjunction with Ross.

CRCMARTY, the capital of the above county, seated on a narrow neck of land, which stretches out into the Moray Frith, at the mouth of Cro- marty Bay. It has a considerable coasting trade in corn, thread, yarn, fish, and skins ; and a good harbour. A manufacture of hempen cloth is carried on in it.

CROMARTY FRITH, a bay of Scotland, ex- tending between the county of Ross on the north and west, and Cromarty and Ross on the south and east, nearly twenty miles. Its entrance is between the Sutor promontories, distant from one another about a rnile and a half. It expands to more than four miles in breadth, but again contracts to less than two. This frith affords a good depth of water almost close to the shore, and the constant shelter of the surrounding country, renders it a most commodious resort for vessels from the northern and eastern seas.

CROMER, a town of England, on the north- east coast of Norfolk, chiefly inhabited by fisher- men. It was formerly much larger, and had two churches ; but one of these, together with many houses, were overflowed by tht sea, which has encroached much on this coast. It has a har- bour for fishing vessels, and considerable sums

have been expended, at different times, in at- tempting to raise a pier, but without success, the sea always washing it away. It is a place of resort for

sea-bathing, and has a weekly market on Saturday. It lies twenty-three miles north of Norwich, and 129 N.N.E. of London.

CRO'MLECH. Welsh crwmlech; Cornish cromleh. Celtic monuments, common in various parts of Europe, particularly in Great Britain. See the next article.

CROMLECH, or CROMLEH, in British an- tiquity, huge, broad, flat stones, raised upon other stones set up on end. They are common in Anglesey. See ANGLESEY. These monu- ments are described by Mr. Rowland, Dr. Bor- lase, &c. under the name of Arae, or altars. Mr. Rowland, however, is divided in his opinion, supposing them to have been originally tombs, but that in after times sacrifices were performed upon them to the heroes deposited within. Mr. Keiller preserves an account of king Harold having been interred beneath a tomb of this kind in Denmark, and Mr. Wright discovered in Ireland a skeleton deposited under one of them. Mr. Toland mentions a cromlech in Ne- vern parish in Pembrokeshire, South Wales, having the middle stone eighteen feet high, and nine broad towards the base, but narrowing up- wards : and by it there lay a broken piece ten feet in length, which seemed to be of a weight heavier than twenty oxen could draw. But at Poitiers in France, there is one supported by five lesser stones, much exceeding all in the British islands, as it is fifty feet in circumference. This he conceives to have been a ' rocking- stone.' At Bodouyr, in Anglesea, there is a noble cromlech ; many of the stones being thirty tons in weight. The following is the appearance of some of the cromlechs of Anglesey.

CROMWELL.

CROMWELL. If we are not absolute con- verts to the opinion of a respectable modern writer, that ' there is no portion of history in which it so much behoves an Englishman to be thoroughly versed as in that of Cromwell's age,' we attach great importance to this part of our annals, and shall be found, in the article ENG- LAND, to have considered the relative pretensions of every respectable narrative of its occurrences. The life and character of the Protector himself certainly occupy a large moral and political space, and they have had, therefore, a propor- tionable degree of attention bestowed upon them by writers of various parties, down to the pre- sent time. We shall fully avail ourselves of all the conflicting accounts of this great man with which we are acquainted.

The pedigree of his family is traced to Gloi- thyan, lord Powys, who lived in the eleventh

ceatury, and married Morveth, the daughter and heiress of Edwyn ap Tydwell. William ap Ye- van, the head of the family in the fifteenth cen-

tury, was in the service first of Jasper duke of Bedford, Henry VIL's uncle, and afterwards in that of the king himself. His son, Morgan Williams, married a sister of the celebrated Thomas Cromwell, earl of Essex. (See CROM- WELL, THOMAS.) The eldest son of this marriage was Richard Cromwell, alias Williams : the alias was long retained by the family in their deeds and wills. He was one of the six chal- lengers who held a tournament in 1540 at West- minster against all comers, and who entered the field richly accoutred, and their horses trapped in white velvet ; the knights and gentlemen who rode before them being apparelled in velvet and white sarsnet, and their servants in white doub- lets, and ' hosen cut in the Burgonian fashion.'

C R O M W E L L.

Sir Richard was knighted on the second day, and pel-formed his part so well that the king cried out to him, ' Formerly thou wast my Dick, but hereafter thou shall be my diamond ;' and bade him bear a diamond ring in the fore gamb of the demy lion in his crest.

This Sir Richard Cromwell, being appointed one of tne visitors of the religious houses, re- ceived for his reward upwards of £30,000 a year out of the church lands, besides which he had great estates in the counties of Cambridge, Bedford, Northampton, and Rutland.

Henry, his eldest son and heir, was knighted by queen Elizabeth, who esteemed him highly, and slept once at his seat, the Nunnery, at Hin- chinbrook. From his wealth and liberality he was called the Golden Knight. The death of a second lady Cromwell being charged upon cer- tain witches of Warboys, they were convicted and executed ; their property, amounting to £40, being forfeited to Sir Henry, as lord of the manor ; who gave it to the corporation of Hun- tingdon, on condition that a doctor or bachelor of divinity should be procured to preach annually in that town against the sin of witchcraft ; a con- dition regularly fulfilled about thirty years ago.

Robert Cromwell, the father of the protector, was one of his younger sons, and left with an estate of about £300 a year, near the town of Huntingdon. The house in which he resided was either part ol the original hospital of St. John, or built upon the site. He married Mrs. Elizabeth Lyne, formerly Steward, of the city of Ely, of a family said to be allied to the royal house of Stuart. Oliver Cromwell was the second of ten children, and the only one of three boys who lived to maturity. His father was in the commission of the peace, and member for the borough of Huntingdon in the parliament of the 35th of Elizabeth : he also entered into a con- siderable brewing business.

The protector was born 25th April, 1599; when an infant his life was endangered by a monkey kept at his grandfather's, who took him out of the cradle, and carried him upon the leads of the house, to the dreadful alarm of the family (who made beds and blankets ready, in the hope of catching him), but who, at last, brought him safely down. He was also saved from drowning in his youth by the Rev. Mr. Johnson, a curate in the neighbourhood.

During his education, at the grammar-school of his native town, he is said to have been an active and resolute boy, fond of exploits, and little inclined to study. Yet, according to the tradi- tions respecting his youth, he was once excited to uncommon emotion in playing the part of Tactus, who finds a royal robe and a crown, in the old comedy of Lingua. In the height of his fortune he is said to have mentioned a gigantic figure which, when he was a boy, opened the curtains of his bed, and told him he should be the greatest person in the kingdom. There is another tale concerning his childhood ; that being at his uncle's house at Hinchinbrook when the royal family rested there on their way from Scotland in 1604, he was brought to play with prince Charles, then duke of York, quarrelled with him, beat him, and made his nose bleed,

which was remembered as a bad omen for the king when Cromwell first began to distinguish himself. Mr. Noble relates this only as the tra- dition of the place, but adds that Hinchinbrook was well known as one of the royal resting- places on the north road. Cromwell was re- moved in his seventeenth year to Sydney Sussex College, Cambridge, where, though he acquired the name of ' a roister,' he seems to have made a respectable proficiency in the learning of the day. He had not been there more than a year when his father died, and he was placed at Lin- coln's Inn. Why, specifically, he went thither seems to be as obscure a matter as when he left ; but it seems he was but a short time ; thus en- gaged, and, returning to reside upon his paternal property, is said to have led a low and dissolute life. He certainly offended his uncle, Sir Thomas Steward, by his conduct at this time ; and wish- ing, we are told, to get possession of his estate, he petitioned for a commission of lunacy against him, which was refused. But he soon reformed his conduct, for Sir Thomas was reconciled to him, and left him his estate. When he came of age, he married Elizabeth, daughter of Sir James Bourchier, of Essex, a woman who was through- out life of irreproachable character. She brought him a small fortune, and, in the year 1625, he was returned for Huntingdon to king Charles's first parliament. He sate for the same borough in the parliament of 1628, and spoke severely against the promotion of Dr. Manwaring; corn- plaining at thf same time of persons who ' preached flat popery.' About this time he openly quitted the church of England, and, becominga dissenter, occasionally preached among the puritans. A house was recently standing

at Huntingdon, where he often ‘ exercised,’ as it was called. Three years afterwards he stocked a grazing farm at St. Ives, and removed thither from Hunting- don. The barn which he built there was stand- ing, and bore his name, when Mr. Noble pub- lished his Memoirs of the Protectoral House. His sheep-marking irons, having O. C. upon them, were also then in the farmer’s possession who held the property. At this period lie re- turned the sums of £30 and £120, which he had won some time before by gaming, thinking it sinful to keep them. The death of Sir Thomas Steward placed him, in 1635, in affluence; and he removed very soon after to the city of Ely. Taking an active share in the local business of the neighbourhood, he opposed an unpopular scheme for draining the fens of Lincolnshire and the Isle of Ely : a work, however, which proceeded when he was protector, and received his patronage.

But Cromwell became suddenly discontented and unsettled in his disposition ; and the lords Say and Serle, and Brooke, with Mr. Pym and other distinguished persons, resolving to establish a colony in New England, he joined, after some hesitation, in the scheme. They had freighted eight vessels with emigrants and property, and were ready to sail from the Thames, when the king, by an order in council, forbade their de- parture, and compelled the intended passengers to come on shore ; among these were Hampden, and Cromwell with all his family. We shortlv

after find him re-settled in a quiet and pious life at Ely.

His appearance in the Long Parliament, to which he was returned for Cambridge, is thus described by Sir Philip Warwick. ‘ The first time,’ says he, ‘ that ever I took notice of him, was in the beginning of the parliament held in November 1640, when I vainly thought myself a courtly young gentleman, for we courtiers valued ourselves much upon our good clothes. I came one morning into the house well clad, and per- ceived a gentleman speaking, whom I knew not, very ordinarily apparelled, for it was a plain cloth suit, which seemed to have been made by an ill, country taylor. His linen was plain, and not very clean ; and I remember a speck or two of blood upon his little band, which was not much larger than his collar: his hat was without a hat-band ; his stature was of a good size ; his sword stuck close to his side, his countenance swoln and reddish, his voice sharp and untun- able, and his eloquence full of fervor.’ On one occasion upon which he spoke in this parlia- ment, in opposition to lord Kimbolton, he be- haved so in temperately, according to lord Clar- endon, that the chairman of the committee found himself obliged to reprehend him, and to tell him ‘

if he proceeded in the same manner, he would presently adjourn the committee, and the next morning complain to the house of him.' On the question of the ' Remonstrance,' he declared to lord Falkland, that if it had not been carried, he would the next morning have sold all he had, and seen England no more.

One day when Cromwell had spoken warmly in the house, lord Digby asked Hampden who he was ; the latter is said to have replied, ' That sloven whom you see before you, hath no orna- ment in his speech ; that sloven, I say, if we should ever come to a breach with the king (which God forbid !) in such a case I say, that sloven will be the greatest man in England.'

Cromwell took no leading part during the pro- ceedings which provoked the war, but was only one of those upon whom the leaders of the dis- affected party could rely. He was at this time more sincerely a puritan than a politician : but when the war commenced, in 1642, he received a captain's commission, and raised in his own county a troop of horse. And now it was that he gave the first proof of that sagacity which afterwards governed him in every thing, and made him ultimate master of three kingdoms. ' I did labor as well as I could,' he said, ' to dis- charge my trust, and God blessed me as it pleased him. I had a very worthy friend then, and he was a very noble person, and I know his memory is very grateful to all, Mr. John Hamp- den. Your troops, said I, are most of them old decayed serving men, and tapsters, and such kind of fellows ; and (said I) their troops are gentle- men's sons, younger sons, and persons of qua- lity : do you think that the spirits of such base and mean fellows will ever be enabled to en- counter srentlemen that have honor and courage, and resolution in them? Truly, I presented him in this manner conscientiously ; and truly I did tell him, You must get men of spirit, and, take it not ill what I say (I know you will not), of a VOL. Vi. '

spirit that is likely to go on as far as gentlemen will go, or else I am sure you will be beaten still ; I told him so, I did truly. He was a wise and worthy person, and he did think that I talked a good notion, but an impracticable one. Truly I told him I could do somewhat in it ; I did so ; and truly I must needs say that to you, I raised such men as had the fear of God before them, and made some conscience of what they did ; and from that day forward, I must say to you, they were never beaten, and wherever they were engaged against the enemy, they beat continu- ally.'

Cromwell's troop, in fact, were mostly free- holders and freeholders' sons, thoroughly im- bued with his own religious opinions, and en- gaging in the war ' upon .natter of conscience/ they invited the celebrated llichard Baxter to be their chaplain. His first military exploit was to take possession

of Cambridge for the parliament; and to secure the university plate. At the same time Cromwell paid a visit to his uncle and god father, Sir Oliver Cromwell, and took away his arms and plate ; but behaving towards him with the greatest personal respect. He also kept down the loyal party in Suffolk and Norfolk with great vigilance. At Peterborough his troop occupied themselves with demolishing the painted win- dows of the cathedral, breaking the organ, de- facing tombs and statues, and destroying what they called superstitious books. In other places where the spirit of the party, as religionists, was not called forth, their conduct was more orderly than that of any other of the parliamentary troops. ' No man swears but he pays his twelvepence,' says one of the journals of the day ; ' if he be drunk, he is set in the stocks, or worse; if one calls the other round-head, he is cashiered ; in- somuch that the countries where they come leap for joy of them, and come in and join with them.'

- *But the relief of Gainsborough,' says White- lock, * was the beginning of his great fortunes.' Cromwell speaks of having had ' the execution of the enemy' two or three miles, and that some of his soldiers killed two or three men each. When part of the marquis of Newcastle's army was defeated this year near Horncastle, he com- manded under lord Manchester ; his horse was killed under him, and as he rose he was again knocked down by the cavalier who charged him ; he was, however, soon remounted, and by a good fortune, that never forsook him, without a wound. At the close of the year he took Hils- don House by assault, and alarmed Oxford. The battle of Marston Moor occurred soon after. The Scotch, who were in the right wing, were completely routed by the royalists, and, flying in all directions, were taken or knocked on the head by the peasantry ; but the fortune of the day was decided by the English horse under Fairfax and Cromwell. The troop" of the latter in particular so distinguished themselves on this occasion, as to be afterwards surnamed ' iron- sides.'*

Cromwell was now the object of envy and jealousy with the other parliamentary leaders, and not a little elated with his own splendid suc- cess. Proposing something to lord Manchester, to which his lordship replied that the parlia-

ment would never approve it, he made answer, 1 My lord, if you will stick

firm to honest men, you shall find yourself at the head of an army that shall give the law to king and parliament.' A mutual dislike seems after this to have arisen between them. After the second battle of Newbury, Cromwell would have attempted to bring the conflict to a decided issue, by charging the king's army in their retreat ; but Manches- ter thought the hazard too great, and that the evil consequences of a disappointment would be far greater than the possible advantage of a victory ; ' for,' said he, ' if they should be routed before Essex's army is reinforced, there would be an end of their pretences ; and they should be all rebels and traitors, and executed as such by law.' Cromwell repeated this to the parlia- ment as a proof of lord Manchester's cowar- dice, when Manchester in return charged Crom- well with the above advice which he had given him, to despise both the king and parliament. This dispute occasioned considerable debate and alarm in the house, and Manchester soon re- treated out of the storm. But Essex, the com- mander-in-chief, thought so fair an opportunity of displacing Cromwell was not to be slighted. To meet his hostile efforts, the self-denying Ordi- nance, as it was called, was proposed by Crom- well and his partisans. Essex was removed, and Fairfax appointed lieutenant-general. He was now induced to request that the Ordinance might be dispensed with in Cromwell's behalf, first for a limited, and then for an indefinite time.

The king had, at this period, struck a great blow by the taking of Leicester, and his fortunes began to appear still retrievable, when, after some unwise movements, the celebrated bat- tle of Naseby drew on. Prince Rupert, who commanded the royal forces, was, as usual, in the onset irresistible, and Ireton was borne wounded from the field ; on this the prince, having broken and routed the wing of the ene- my opposed to him, pursued them as if the vic- tory were secure. Charles, in person, was now about to charge Cromwell's horse, at the head of his reserve, when lord Carnewaith suddenly seized his bridle, and exclaimed, ' Will you go upon your death in an instant ?' A cry ran through the troops from this interruption, that they should march to the right, in which direction the king's horse had been turned, and which, in the present situation of the battle, was bidding them shift for themselves. In vain the king, with great personal efforts, endeavoured to rally them. All was lost. On the royal side 700, it is said, were killed, and 5000 were taken pri- soners together with all the artillery, the king's cabinet, and the baggage.

Cromwell wrote to the speaker of the house of commons : ' Sir, this is none other but the hand of God, and to him alone belongs the glory, wherein none are to share with him. The gene- ral served you with all faithfulness and honor; and the best commendation I can give him is, that I dare say he attributes all to God, and would rather perish than assume to himself, •which is an honest and a thriving way ; and yet as much for bravery may be given to him in this

action, as to a man. Honest men served you faithfully in this action. Sir, they are trusty, I beseech you in the name of God not to discour- age them. I wish this action may beget thank- fulness and humility in all that are concerned in it. He that ventures his life for the liberty of his country, I wish he trust God for the liberty of his conscience, and you for the liberty he fights for : so thus he rests who is your humble ser- vant, Oliver Cromwell.' During the siege of Bristol, which followed, Fairfax and Cromwell narrowly escaped being killed by the same ball, when the latter declared none but an atheist could deny that their success was the work of the Lord. Cromwell next took Devizes, Win- chester, and Basing House, and dispersed the club-men in Hampshire ; after which he rejoined Fairfax in the west.

The king, it is well known, now fled towards the north, and delivered himself to the Scotch army, before Newark. In the bargain that afterwards resulted for the possession of his per- son, Cromwell was conspicuous as a commis- sioner. In the subsequent division of the public spoils, he received £2500 a year, charged on the estates of the marquis of Worcester.

Of the AGITATORS who rose to power at this time, we have already given some account. See that article. They were Cromwell's devoted crea- tures. Speaking of the parliamentarians, and the ascendant star of the lieutenant-general, Hollis says ' We fell as low as dust ; all was dash't : instead of a generous resistance to the insolen- cies of perfidious servants, vindicating the honor of the parliament, discharging the trust that lay upon them to preserve a poor people from being ruined and enslaved to a rebellious army, they deliver up themselves and kingdom to the will of their enemies ; prostitute all to the lust of heady and violent men ; and suffer Mr. Crom- well to saddle, ride, switch, and spur them at his pleasure.'

It is generally agreed that Cromwell was, at this period, desirous of making terms with the king, and that he stipulated for the title of the earl of Essex, now vacant by the death of the late general, to be made first captain of the guards, and vicar-general of the kingdom. He declared, with tears, that the interview between Charles and his children, was ' the tenderest sight that ever his eyes beheld ; that never man was so abused as he in his sinister opinion of the king, who, he thought was the most upright and consciencious of his kingdom ; and that he only wished that God would be pleased to look upon him according to the sincerity of his heart to- wards the king.' The republican party, how- ever, prevailed ; all he could actually do for the king was, as it seems, to instigate his escape from Hampton Court, with a view, it is probable, to his getting out of the kingdom ; though others have supposed that he was directed to Caris- brook only because Cromwell knew he could rely on Hammond as a jailor. The zealots op- posed to him, asserted that monarchy was in it- self an evil ; that the Jews

had committed a great sin against the Lord in choosing it ; and now, for the first time, avowed a desire of putting the king to death, and establishing a common-

wealth. Cromwell professed to be undecided ; he concluded a conference on this solemn topic by flinging a cushion at Ludlow's head, and then running down stairs : the next day he told Lud- low he was convinced of the desirableness, but not of the practicability, of what his party pro- posed. He was soon, however, compelled to act a more decided part. An accusation was preferred against him in the house of lords by major Huntington, as having instigated the army to disobey and resist the parliament, and as

with a kind of exultation. ' I do not believe,' he says, ' neither do 1 hear, that any officer es- caped with his life, save only one lieutenant, who, going to the enemy, said he was the only man that escaped of all the garrison. The enemy were filled upon this with much terror, and truly I believe this bitterness will save much effusion of blood, through the goodness of God. I wish that all honest hearts may give the glory of this to God alone, to whom, indeed, the praise of this mercy belongs, for instruments they were very in-

having pledged himself to make the king the considerable the work throughout.' Lord Cla- most glorious prince in Christendom. The rendon accuses him of instigating all manner of charges passed off, but the general.was evidently cruelty here, and Ludlow says the slaughter con- decided by them to proceed in the diligent way tinued two days, and that ' such extraordinary he now did in suppressing the insurrections that severity was used to discourage others.' It had

arose in favor of the king in Wales, and to re- sist the Scotch invasion. After defeating the

at any rate this effect : he marched into Munster to receive the keys of Cork, almost without resis-

Scotch, he passed to Edinburgh, (where he was tance, and in less than six months extinguished hailed as a deliverer, and settled the administra- all the hopes of the Irish royalists. He returned tion of that kingdom, for the parliament, in the to fight successively, and with his usual good hands of the duke of Argyle. fortune, the battles of Dunbar and Worcester ; The part which Cromwell took in the ensuing by the latter of which the Commonwealth was tragedy of the death of the king, was, doubtless, left

without disturbance in its sovereignty. Crom- like many of his later measures, forced upon him well called it his ‘ crowning mercy.’ by others, to whom, and with whom, however, he The Long Parliament had now made themselves had first voluntarily committed himself. On the odious by their undisguised tyranny and desire second debate in the house of commons respect- to perpetuate their power, by the war which ing appointing the high court of Justice (January they had provoked with the Dutch, and the seve- 4th, 1649), he said, ‘ Should any one have vo- rities which they exercised in their high court of luntarily proposed to bring the king to punish- justice. Cromwell assembled certain members ment, I should have regarded him as the greatest of parliament, and some of the chief officers, at the traitor ; but since Providence and necessity have speaker’s house, and told them it was necessary cast us upon it, I will pray to God for a blessing to come to a settlement of the nation, delivering on your counsels ; though I am not prepared to his own opinion in favor of a settlement in ‘some- give you any advice on this important occasion, what of a monarchical power.’ The lawyers pre- Even I myself (said he), when I was lately sent were for a mixed monarchy ; and some offering up petitions for his majesty’s restoration, proposed choosing the duke of Gloucester king, felt my tongue cleave to the roof of my mouth, Cromwell soon spoke out more plainly: ‘ Their and considered this preternatural movement as pride,’ said he to Whitelock, ‘ and ambition and the answer which heaven, having rejected the self-seeking, ingrossing all places of honor and

king, had sent to my supplications.’

We see in this speech neither the ‘ levity’ nor

profit to themselves and their friends ; and their daily breaking forth into new and violent parties

‘ hypocrisy’ with which Cromwell has been and factious ; their delays of business, and design often said to have acted on this occasion. He to perpetuate themselves and to continue their appears never to have fully approved the mea- power in their own hands ; their meddling in sure of the king’s death ; yet all the moral re- private matters between party and party, contrary

to the institution of parliaments ; and their injus- tice and partiality in those matters, and the scan-

sponsibility and guilt of the transaction he clearly partook, and that he felt it is as clear. We

doubt, however, whether for that reason, it was dalous lives of some of the

chief of them, — these

ever a topic of levity with him, and whether, on things do give too much ground for people to

this occasion he was not too entirely deluded by open their mouths against them and to dislike

the canting habit of the times and of- his associ- them. Nor can they be kept within the bounds

ates, to be found chargeable within sincerity. He of justice and law or reason, they themselves being

was deceived, we believe, far too much, and per- the supreme power of the nation, liable to no

haps judicially, (because he loved the wages of account to any, nor to be controlled or regulated

the deceit), to be a hypocrite. It is remark- by any other power; there being none superior

able to what a point he had screwed up his con- or co-ordinate with them.' Whitelock, acknow-

science at this time ; that he went to look at ledging the evil, said it would be hard to find a

the decollated king; opened the coffin himself; remedy. What, said Cromwell, if a man should

put his finger to the neck where it had been take upon him to be king ? To this Whitelock

severed ; and even, inspecting the inside of the replied, that this remedy would be worse than the

body, observed in how healthy a state it had disease ; that being general he had less envy and

been, and how well made for long life.

less danger than if he were called king, but no

It is well known that Cromwell accepted the less power and real opportunities of doing good, command in Ireland at a critical period, but he

He further represented to him that he was envi- reduced that kingdom to submission with more roned with secret enemies ; that his own officers than his usual energy. Of the battle of Drogheda, were elated with success ; ‘ many of them,’ said which was garrisoned with 1500 men, he writes he, ‘are busy and of turbulent soirits, and are

not without their designs how they may dismount your excellency, and some of themselves get up into the saddle, — how they may bring you down and set up themselves.’ The memorable scene now followed (20th April, 1653), when Cromwell turned out the parliament, and locked the doors of the house of commons. To this succeeded the calling of Bare-bones’ parliament : then the re- newed dominion of the council of officers, and finally their declaration, called an Instrument of Government, by which they ordained that the government of the Commonwealth should reside in the single person of Oliver Cromwell, with the title of Lord Protector of the Commonwealth of England, Scotland, and Ireland, and a council of one-and-twenty to assist him.

It was further ordained, that the Protector should call a parliament once in every three years, and not dissolve it till it had sat five months ; that the bills which were presented to him, if he did not confirm them within twenty days, should become laws without his confirmation ; that his select council should not be more in number than twenty-one, nor less than thirteen ; that with their consent, he might make laws which should be binding during the intervals of parliament; that he should have power to make peace and war ; that immediately after his death, the council should choose another protector, and that no protector after him should be general of the army. He now addressed himself in good earnest to the business of the chief magistracy; made peace with the Dutch and with Portugal, upon terms highly advantageous to England, and caused his friend- ship to be courted by France and Spain. His first parliament assembled Sep. 3, 1654, and though orders were given that no persons should be cho- sen who had borne arms on the king’s part, nor the sons of any such, and care was taken to re- turn such members as were believed to be the best affected to his government, yet, in the first debate, his authority was questioned ; and the assembly was dissolved Jan. the 22nd, 1655. He called his next parliament at the juncture when a war with Spain had made him master of Jamaica, and two well laden treasure-ships had been taken. Most of the members took ‘the test of declared allegiance to the protector ; an act was passed

binding all men to renounce Charles Stuart and his family ; they declared it high treason to attempt the life of the lord pro- tector, and granted him larger supplies than had ever before been raided. Finally, they offered him the title of king. There was great opposition, however, to this ; one member applied to him in the house the words of the prophet to Ahab, ‘ Hast thou killed, and also taken possession?’ and after a long and painful struggle in the bosom of his own family, and with himself, he refused -the crown on a plea of conscience.

He would now have governed constitutionally, mildly, and even liberally, if he could have done it in his situation. But self-preservation compelled him to a suspicious and severe system, and he was haunted by ten thousand fears. He wore armour under his clothes ; would hardly ever sleep two nights together in one chamber ; he went abroad surrounded by his guards, and never suffered it to be known which way he was going till he was

in his coach. His last were most miserable days. His final feelings of religion implied a misgiving:, concerning his condition in the world on which he was about to enter — we mean the question proposed to his preachers, ‘ if the doctrine were true, that the elect could never finally fall ? ‘ Upon receiv- ing a reply, thai nothing could be more certain ; ‘ Then am I safe,’ said he, ‘ for I am sure that once I was in a state of grace.’ He told his physicians boldly that he should not die, what- ever they might think from the symptoms of his disorder, for ‘ God was far above nature, and had promised his people his recovery.’ Thanks were even publicly given for the undoubted pledges of his recovery, which had been vouchsafed ! His disease was a slow fever, which terminated in an intermittent, and he died in a lethargic state, 3d September, 1658.

The character of him drawn by lord Cla- rendon will never be exceeded for truth or beauty ; and we transcribe it as most singularly the portrait also of a fortunate modern usur- per. Posterity will often compare them. ‘ He was,’ says this great writer, ‘ one of those men, quos vituperare ne inimici quidem possunt, nisi ut simul laudent ; whom his very enemies can- not condemn without commending him at the same time : for he could never have done half that mischief without great parts of courage, in- dustry, and judgment. He must have had a wonderful understanding in the natures and hu- mors of men, and as great a dexterity in applying them; who from a private and obscure birth (though of a good family), without interest or estate, alliance or friendship, could raise himself to such a height, and compound and knead such opposite and contradictory tempers, humors, and interests into a consistence, that contributed to’ his designs, and to their own destruction; whilst himself grew insensibly powerful enough to cut off those by whom he had climbed, in the instant that they projected to demolish their own building. What was said of Cinna may very justly be

said of him, ausum eum, quae nemo auderet bonus ; perfecisse, quae a nullo, nisi fortissimo, perfici possent. He attempted those things which no good man durst have ventured on ; and achieved those in which none but a valiant and great imn could have succeeded. Without doubt, no man with more wickedness ever attempted any thing, or brought to pass what he desired more wickedly, more in the face and contempt of religion, and moral honesty: yet wickedness as great as his could never have accomplished those designs, without the assistance of a great spirit, an admi- rable circumspection and sagacity, and a most magnanimous resolution.' To this should be ad- ded, that as a chief magistrate, like Napoleon, he was generally inclined to be tolerant, and was liberal in his conduct to different religious par- ties ; that he was a protector of literature and the arts; that his private character, unlike his, i seems without a blemish ; that he was a faithful husband and a good father ; and that he boldly and consistently aided the persecuted Pro- testants of France.

CROMWELL (Richard), eldest son of Oliver, was by his father appointed succgssor to the pro- tectorship, but soon deposed by the army, who

discharged his debts, and gave him a protection for six months, on which he retired. On the Restoration he went abroad ; but returned in 1680 under the assumed name of Clark, and settled at Cheshunt in Hertfordshire, where he lived privately, and died in 1712, aged 80; leaving several children.

CROMWELL (Oliver), a gentleman recently deceased, was the great-grandson of Henry Crom- well. He practiced as a solicitor in Essex-street, London, for several years, and was clerk to St. Thomas's hospital. He succeeded to the estate of Theobalds, which descended to him through the children of the above Richard Cromwell ; and died at Cheshunt Park, Hertfordshire, May 31st, 1821, aged seventy-nine. He wrote the Memoirs of the Protector, Oliver Cromwell, and his sons Richard and Henry, illustrated by Ori- ginal Letters, and other Family Papers, 4to.

CROMWELL (Thomas), earl of Essex, was the son of a blacksmith at Putney, and born in 1498. Without a liberal education, but endowed with a strong natural genius, he became by degrees the confidential favorite, and prime minister of Henry VIII. and from the moment he acquired any authority in the cabinet, employed it in pro- moting the Reformation, to his zeal for which he became a victim ; for, the more firmly to secure the Protestant cause, he contrived to marry the king to Anne of Cleves, whose

friends were all Lutherans. Unfortunately Henry took a dis- gust to this lady, which brought on Cromwell's ruin : the king, with his usual cruelty and ca- price, taking the opportunity to sacrifice this minister to the Roman Catholic party, to whom he seemed desirous of reconciling himself, when he had Catharine Howard in view. Cromwell was a great politician, and a good man ; but, in his zeal for the new religion, he introduced the unjustifiable mode of attainder in cases of trea- son and heresy : and his enemies, who were numerous, having preferred many complaints against him, availed themselves of his own law. He was attainted of treason and heresy, convicted unheard, and beheaded in 1540. He was the chief instrument of the suppression of the abbeys and monasteries, and the destruction of images and relics ; to him also we are indebted for the institution of parish registers of births, marriages, and burials.

CRONE, n. s. > Anglo-Sax, crone; Dutch

CRO'NY, n. s.) kronie. Crone signifies an old ewe ; contemptuously, an old woman. Crony, which is a word of familiar parlance, is one who is an old acquaintance ; one with whom a person is very intimate.

Fresh herrings plenty Michel brings, With fatted crimes, and such old things. Tusser.

Take up the bastard, Take 't up, I say ; give 't to thy crane.

Shakspeare. Winter's Taleˆ So when the Siots, your constant cronies, The espousers of your cause and monies.

Htidibrat.

The crone being in bed with him on the wedding night, and finding his aversion, endeavours to win his affection by reason. Dryden.

To oblige your crony Swift, Bring our dame a new year's gift. Swift.

CRO

Strange an astrologer should <]!• Without one wonder in the sky Not one of all his crony stars To pay their duty at his herse ! Your sage Belgic cronies*

Won't in this weighty point mislead ye,

Consult them and expcrto crede. Huddesford.

CRONEL, or CORONEL, in heraldry, the iron head of a tilting spear, often

borne in coat armour, as sable, a chevron, ermine, between three cronels, argent ; name, Wiseman.

CRONENBURG, or CRONBORG, a strong fortress of Denmark, in the isle of Zealand, si- tuated on a point of land, on the west coast of the Sound, a little to the east of Elsineur and opposite to Helsinborg, in Sweden. It was built in 1577 by Frederick II. on piles of oak, and pillaged by the Swedes in 1658, who took away among the spoils, some statues of massy silver. It was restored to Denmark in 1660. Queen Matilda was imprisoned in it, before she was removed to Zell. About half a mile from it is a garden called Hamlet's Garden, which, tradition says, is the spot where that prince's father was murdered by his brother. It is flanked with four towers; contains extensive barracks ; and is accounted one of the keys of the king- dom, being intended to guard the passage of the Sound; but the British fleet passed it on, 29th March, 1801. Criminals are confined in this fortress. In the neighbourhood is a government manufactory of fire-arms. It is twenty-four miles north of Copenhagen.

CRO'NET, or CORONET, n.s. Tr.couronne; Dutch /croon. The hair which grows over the top of a horse's hoof.

CRONIUS, or CHRONIUS, in chronology, the ancient name of the Athenian month ILecatom- bseon; which was the first of their year, and answered to the latter part of our June and be- ginning of July.

CRONSTADT, or the Crown City, a sea- port town of Russia, situated on the island of Retusari, in the gulf of Finland. It was founded by Peter I. on account of its safe har- bour, and as forming a strong bulwark by sea lor the defence of his new metropolis. The greatest part of the Russian fleet usually lies here. The only passage by which ships of burden can ap- proach Petersburg lies on the south side of Retusari, through a narrow channel ; one side of which is commanded by Cronstadt, and the op- posite by Cronslot and the citadel. All large vessels must sail between Cronstadt and these two fortresses, exposed to the fire of the oppo- site batteries ; for the other parts of the gnlf are only from one to eleven feet in depth. All tliese fortifications, when first built, were esteemed places of considerable strength ; but they would offer feeble resistance to the attack of a power- ful fleet. Cronstadt is built upon the south-east extremity of the island, and is defended towards the sea by wooden piers projecting into the water and towards the land by ramparts and bastions. It is a very straggling place, and occupies, like all the Russian towns, a larger space of ground than the number of inhabitants seems to require ; their houses are mostly of wood, excepting a few fronting the harbour,

which are of brick stuccoed white. Among the latter are the imperial hospital for sailors, the barracks, and the academy for marines and officers of the navy. Cronstadt has a separate haven appropriated to the men of war, and ano- ther to merchant ships. The largest is the mer- chants' harbour, which is fitted to contain 600 vessels, and is touched at by most ships going to St. Petersburg, but is exposed, as well as the middle harbour, to the west wind. The war harbour, which is designed for ships of war which are on service, or stand in need of repairs, is of small size and depth, and the brackishness of rlie water often produces rot. The man of w-?r's mole, as it is called, is a structure, enclosed by a strong rampart of granite, built in the sea, and containing a foundry for casting cannon, and a rope-work for manufacturing cables of all sizes, naval stores, &c. Close to the merchants' harbour is a canal, with several dry docks, begun in 1719 by Peter I. for the purpose of refitting the men of war. This useful work was neglected under his successors, and was not completed until the reign of his daughter Elizabeth. It has since been further improved, and is now u«ed for building as well as careening ships of the line. At the extremity of these docks is a reservoir, constructed of granite, 568 feet in length, which contains water more than sufficient to supply all the docks, and is pumped into them by a steam engine. The length of this work, from the beginning of the canal to the end of the last dock, is 4221 feet. The sides of the docks are faced with stone, and the bottom is paved with granite. They are forty feet deep, and 105 broad ; and are capable of containing nine men of war upon the stocks. A few miles below Cronstadt lie the guardships for the protection of th-.! revenue, and the examination of passports. The number of vessels that entered the Neva, (and of course passed by Cronstadt), in 1817, was about 2000, and the departures were nearly us many. The principal exports are iron, rlax, hemp, linseed, oil, and tar. Cronstadt is twenty miles west of Petersburg, and contains a population of about 60,000.

CRONSTEDT (Axel-Frederick), a Swedish mineralogist, born in 1722, and educated at the university of Upsal, where he paid particular attention to the study of natural history. In 1742 he was admitted into the college of mines, and in 1744 he was employed to inspect the mines of Sweden. In 1753 he became a mem- ber of the Royal Academy of Sciences at Stock-holm; and in 1758 he was appointed inspector of all the western mines of the Kingdom. He published An Attempt towards an Arrangement of Minerals, or of the different substances of the mineral kingdom; and several other tracts on mineralogy. He died in 1745, aged forty-three.

CROOK, v. a., v. n. & n. s.^\ Fr. crocher ;

yRO'OKED, adj.

CRO'OKEDLY, adv. CRO'OKEDNESS, n. s. CRO'OKEN, v. a. CRO'OKBACK, n. s. CRO'OK-BACKED, adj. CRO'OK-KNEED, adj.

Cno'OK-SHOULDERED, adj.

Goth, and Swed.

krok, kroka ;

Welsh crwcca ; VDut. krook. To I crook is to curve;

to be curved ; to | deflect from the J proper line.

Crook signifies, any crooked instrument; a sheep- hook ; a meander ; an artifice ; a gibbet. To crooken is an obsolete verb, meaning, to make crooked. Crooked, crookedly, and crookedness, in their direct sense, of course denote curvature : and from this ilows naturally the metapho- rical sense, of perverse ; obstinate ; bad-tem- pered.

They have corrupted themselves : they are a per- verse and crooked generation. Deut. xxxii. 5.

He made the peple pitously to sing, For er the bishop hent hem with his crook, They weren in the archedekens book.

Chaucer. Cant. Tales. Ful crokid were her hondis two, For covetise is evir wode To gripin other folkis gode.

Id. The Romaunt of the Rose To grounde as ded she fallith as a stone, She crampisheth her limmis crokidly.

Id. Annelida and False Arcite. For beauty with her band

These crofted cares hath wrought, And shipped me into the land From whence I first was brought.

Songes and Sonnettes. His tyreling jade he fiersly forth did push Through thicke and thin, both over banck and bush, In hope her to attaine by houke or crooke.

Spenser. Faerie Queene.

At last, with creeping crooked pace forth came An old, old man, with beard

as white as snow, That on a staffe, his feeble steps did frame. Id.

Whence he with crooked clawes so long did crall, That at the last he found a cave with entrance small.

Id.

There fall those saphire-coloured brooks, Which conduit-like, with curious crookt, Sweet islands make in that sweet land. Sidney, He that knoweth what is straight, doth even thereby discern what is crooked ; because the absence of straightness, in bodies capable thereof, is crookedness.

Hooker.

Being moved, he strikes whatever is in his way, And whom he strikes his crooked tushes slay. •

Shakspeare. Venus and Adonis. Hence, heap of wrath ; foul, indigested lump ! As crooked in thy manners as thy shape.

Id. Henri/ VI.

Ay, crookback, here I stand to answer thee, Or any he the proudest of thy sort. Id.

Whatsoever affairs pass such a man's hands, he crooketh them to his own ends ; which must needs be often eccentrick to the ends of his master or state.

Bucun.

Their shoes and pattens are snouted and piked more than a finger long, crooking upwards. Camden.

When the heathens offered a sacrifice to their false gods, they would make a severe search to see if there were any crookedness or spot, any uncleanness or de- formity, in their sacrifice.

Taylor's Worthy Communicant.

If we walk perversely with God, he will walk

crookedly towards us. Id. Rule uf Living Haly.

I sing the mau who Judah's sceptre bore In that right hand which held the crook before.

Cowley.

A man shall never want crooked paths to walk in, if he thinks that he is in the right way, wherever he has the footsteps of others to follow. Locke.

There are millions of truths thot a man is not, or may not think himself, concerned to know ; as whe- ther our king Richard III. was croikhacked or uo. Id,

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We were not born crooked ; we learned those wind- ings and turnings of the serpent. South.

A bell or a cannon may be heard beyond a hill

which intercepts the sight of the sounding body -, and

sounds are propagated as readily through crooked

pipes, as through straight ones. Newton's Optickt,

He left his crook, he left his flocks.

And wandering through the lonely rocks,

He nourished endless woe. Prior.

She that would raise a noble love, must find Ways to beget a passion for her mind ; She must be that which she to be would seem ; For all true love is grounded on esteem : Plainness and truth gain more a generous heart, Than all the crooked subtleties of art. Buckingham.

It is highly probable, that this disease proceeds from a redundant acidity, because vinegar will soften and crook tender bones. Arbuthnot on Diet.

Among the crooked lanes on every hedge, The glow-worm lights his gem. Thomson's Summer. Unhappy they, confiding in the length

Of horny beak, or talon's crooked strength.

Who durst abide his rage ; the blade descends,

And from the panting trunk the pinion rends.

Beattif.

Yet is thy root sincere, sound as the rock, A quarry of stout spurs, and knotted fangs. Which crooked into a thousand whimseys, clasp The stubborn soil, and hold thee still erect. Cowper.

Thus men go wrong with an ingenious skill ; Bend the straight rule to their own crooked will ; And with a clear and shining lamp supplied, First put it out, then take it for a guide. I

CROOKED ISLAND, or rather a cluster of islands of the Bahama group, is known as, North Crooked Island, South Crooked Island, com- monly called Acklin's Island, and Long Key, or Fortune Island. Castle Island is very small, and situated at the south end of Acklin's, which is the largest of the group, being about fifty miles in leugth. North Crooked Island is about twenty-one miles long, and from two to six broad ; Long Key is about two miles in length, and very narrow. It contains a valuable salt pond. Long, of the middle of Crooked Island 74° W., lat. 22° 30′ N.

CROOKED LAKE, a lake of North America, in the state of New York, eighteen miles in length. Forty miles south of Lake Ontario.

CROOKED LAKE, one of the chain of small lakes which connect the lake of the Woods with Lake Superior, on the boundary line between the United States and Upper Canada, remarkable for its rugged cliffs, in the cracks of which are a number of arrows sticking.

CROOKED REACH, a channel in the straits of Magellan, between the South American shore and an island in the strait. It is about four miles broad, and extends between Elizabeth Bay and Cape Quod.

CROOKED RIVER, a river of the United States a. Camden county, Georgia, which runs into the opposite Cumberland Island, twelve or four- teen mi!os north from the mouth of St. Mary's. Its banks are well wooded, and its course is east by north.

CROP, n. s. ~\ Swed. kropp ; Dut. krop,

CRO'PFUL, adj. f kroppe ; Ang.-Sax. crop.

CRo'psicK,a

CRO'PPER, n. s. J of a bird. Cropful is,

filled perfectly ; cropsick, sick from repletion ; cropper, a kind of pigeon which has a large crop.

He, stretched out all the chimney's length, Basks at the fire his hairy strength ; And crop-full, out of door he flings Ere the first cock his matin rings. Milton.

There be tame and wild pigeons; and of tame there be croppers, carriers, runts. Walton's Angler.

In birds there is no mastification or comminution of the meat in the mouth ; but in such as are no Car- nivorous, it is immediately swallowed into t!,e crop or craw. Ray.*

But fluttering there they nestle near the throne, And lodge in habitations not their own, By their high crops and corny gizzards known.

Dryden. Strange odds ! where crop-sick drunkards must

engage A hungry foe, and armed with sober rage.

Tate's Juvenal.

So, stooping down from hawthorn top, He thought to put him in his crop. The worm, aware of his intent, Harangued him thus, right eloquent. Cowper.

CROP, v. a., v. n. & n. s.~\ Ang.Sax. crop CRO'PPING, n. s. {from ripan, gery

CRO'P-EAR, n. s. t pan, to reap. In

CRO'P-EARED, adj. J its primary sense

the noun crop means, that which is the highest part of any thing, as an ear of corn, the top of a tree ; thence, the harvest ; whatever is cut off. To crop, therefore, is to mow, reap, or lop the top off any thing ; to gather a thing before it falls ; and, in its neuter sense, to yield har- vest. Cropping, as a noun, is the act of put- ting the future crop into the soil ; the act of cut- ting off any thing. Crop-ear signifies a horse whose ears are cropped ; and crop-eared that of which the ears have been cropped, or which is cut short about the ears.

I will crop off from the top of his young twigs a tender one, and will plant it upon an high mountain.

Exehiel, xvii. 22.

When Zephirus eke with his sweete brethe Enspired hath in every holte and hethe The tendre croppes. Chaucer, Prol. to Cant. Tales.

Or like the hell-borne hydra, which they faine The greate Alcides whilome overthrew, After that he had laboured long in vaine To crop his thousand heads. Spenser. Faerie Queene.

Whose shady boughs sharp steele did never lop, Nor wieked beastes their tender buds did crop. Id.

And this of all my harvest hope I have, Nought reaped but a weedy crop of care.

Id. Pastorals.

All the budding honours on thy crest I'll crop, to make a garland for my head.

SJuikspeare. Henry IV.

Cropped are the flower-de-luces in your arms ; Of England's coat, one half is cut away.

Id. Henry VI.

He upon whose side

The fewest roses are cropped from the tree, Shall yield the other in the right opinion. Id.

Royal wench '

She made great Czsar lay his sword to-bed ; He ploughed her, and she cropt.

Id. Antony and Cleaputru,

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What horse ? a roan, a crop-ear, is it not ?

Id. 1 Henry IV.

A crop-eared scrivener this. B. Jonson.

Age, like ripe apples, on earth's bosom drops, While force our youth, like fruits, untimely crops.

Denham.

Lab'ring the soil, and reaping plenteous crop, Corn, wine, and oil. Milton's Paradise Lost.

O fruit divine ! Sweet of thyself, but much more sweet thus cropped.

Id.

No more, my goats, shall I behold you climb The sleepy cliffs, or crop the flow'ry thyme !

Dryden's Virgil.

Guiltless of steel, and from the razor free, It falls a plenteous crop preserved for thee.

Id. Fables. Death destroys The parent's hope», and crops the growing boys.

Creech.

The fountain which from Helicon proceeds, That sacred stream, should never water weeds, Nor make the crop of thorns and thistles grow.

Roscommon.

Nothing is more prejudicial to your crop than mow- ing of it too soon. Mortimer's Husbandry.

The richest genius, like the most fertile soil, when uncultivated, shoots up into the rankest weeds ; and instead of vines and olives for the pleasure and ˆuse of man, produces to its slothful owner, the most abundant crop of poisons. Hume.

The first year, from unfortunately buying seed, the second, from a late harvest, we lost half our crops. This overset all my wisdom, and I returned, ' like the dog to his vomit, and the sow that was washed to her wallowing in the mire.' Burns.

I saw him with that lily cropped

Impatient swim to meet My quick approach, and soon he dropped

The treasure at my feet. Cowper.

Shaggy, and lean, and shrewd, with pointed ears And tail cropped short, half lurcher and half cur, His dog attends him. Close behind his heel Now creeps he slow ; and now, with many a frisk Wide-scampering, snatches up the drifted snow With ivory teeth, or ploughs it with his snout ; Then shakes his powdered coat, and barks for joy. Id.

Each young Hour its sickle fine employs,

And crops the sweet buds of domestic joys. Darwin.

Tombstones and monuments he took

For pills to cool his palate ; And- cropped the church-yard yew-trees all —

They served him for a sallad. Huddesford.

Make lords and crop-eared petit maitres

Their prowess prove on tavern waiters j

Challenge their corn-cutter and taylor

To arms, and catch contagious valour

From contact with each raggamumn. • Id.

Alas, thou hast no wings, oh Time ! It was some thoughtless lover's rhyme, Who, writing in his Chloe's view, Paid her the compliment through you. For had he, if he truly loved, But once the pangs of absence proved, He'd cropped thy wings and in their stead, Have painted thee with heels of lead. SAen'dan. Then the full flaxen wig, spread o'er the shoulders,

Concealed the shallow head from the beholders !

But now the whole's reversed — each fop appears,

Cropped and trimmed up, exposing head and ears. Id.

CRO'SIER, n. s. Fr. crosse; barbarous Latin, crocia, from crux, a cross. The pastoral staff of a bishop, which is surmounted by a cross.

When prelates are great, there is also danger from them ; as in the times of Anselmus and Thomas Becket, who, with their crosiers, did almost try it with the king's sword. Bacon.

Grievances there were, I must confess, and some incongruities in my civil government ; wherein some say the crosier, some say the distaff, was too busy.

Howel's England's Tears.

Her front erect with majesty she bore, The crosier wielded, and the mitre wore.

Drgden.

Crosiers for lordly priests provide, Let warriors wield the truncheon ;

I ask no implement beside

A tankard and a luncheon. Huddesford.

CROSIER, in astronomy, four stars in the southern hemisphere, in the form of a cross, serving those who sail in south latitudes to find the Antarctic Pole.

CROSIER, or CROZIER, the shepherd's crook, is a symbol of pastoral authority, consisting of a gold or silver staff, crooked at the top, carried occasionally before bishops and abbots, and held in the hand when they give the solemn benedic- tions. The custom of bearing a pastoral staff before bishops is very ancient, as appears from the Life of St. Caˆsarea, of Aries, who lived about A. D. 500. Among the Greeks, none but the patriarchs had a right to the crosier. The cro- siers were, at first, only simple wooden staves, in form of a T, used to lean upon. By degrees they were made longer, and at length arrived to their present form.

CROSLET, in heraldry, is when a cross is crossed again at a small distance from each of the ends. According to Lucholm, ' it is an honorable bearing, and is gene- rally distributed at large in the field,' as gules, a saltire argent, between twelve cross-croslets, counter-changed, name, Pinkney.

CROSS, v.a.,v.n.,n.s.,adj. &cprep.\ Fren. CRO'SSING, n. s. croix ;

CRO'SSLY, adv. [Italian,

CRO'SSNESS, n. s. r croce ;

CRO'SSWISE, adv. ! Gothic,

CRO'SLET, n. s. j kross ;

Sw. kors ; Ang.Sax. cors ; Wei. croes ; Lat. crux. The meanings of the

noun, verb, and ad jective are multifarious. A cross is primarily an instrument of punishment, composed of one straight body laid over another at right angles, on an instrument of which kind our Saviour suf- fered, and which thence became the ensign of the Christian religion. It also denotes a monument with a cross on it, to excite devotion ; a line drawn through another ; any thing that thwarts us, or puts our patience to the trial ; intermix- ture of breed ; figuratively, money, from its bearing the mark of a cross; Irish church lands. Cross, and pile, is a play, in which a piece of money is spun round into the air, and the player who has called 'cross' wins, in case of the cross

falling uppermost. The adjective signifies, trans- verse ; falling athwart something else ; oblique ; adverse to ; untractable ; fretful ; ill-humored ; contrary to wish or expectation ; unfortunate ; interchanged. As a preposition it stands for athwart ; over ; from side to side. It forms com- pounds with many other words, as the succeeding articles will show. Crossing is, the act of signing with the cross ; opposing ; frustrating. Crossly, and crossness, are transversely ; adversely ; transverseness ; peevishness. Cross-wise is in the manner of a cross. To cross is, to lay a body, or draw a line athwart another; to make the sign of the cross ; to cancel ; to pass from one side to the other; to pass from one place to another ; to thwart ; to defeat any purpose ; to be inconsistent with ; to contradict ; to debar; to lie athwart another thing. A croslet is a small cross. The word is chiefly used in heraldry ; but Chaucer employs it to designate a crucible.

He had a cms of laton ful of stones, And in a glas he hadde pigges bones.

Chaucer. Prol. to Cant. Tales. Of gentilwomen faire there were also Disporting hem everiche aftir her gise, In crosse aleis walking by two and two.

Id. The Assemble of Ladies, Men's actions do not always cross with reason.

Sidney.

Wishing unto me many crosses and mischances in

my love, whensoever I should love. Id.

Still do I cross this wretch, whatso he taketh in

hand. Hooker.

In all this there is not a syllable which any ways

crosseth us. Id.

And on his brest a bloodie crosse he wore, The deare remembrance of his dying Lord.

Spenser. Faerie Queene. But he them spying, 'gan to turn aside, For fear, as seemed, or for some feined loss j More greedy they of news, fast towards him do cross.

Id.

Then Una 'gan to ask, if aught he knew, Or heard abroad, of that her champion true, That in his armour bare a croslet red. Id.

No governour is suffered to go on with any one course, but upon the least information he is either stopped and crossed, or other courses appointed him from hence. Spenser. On Ireland.

It may make my case dangerous, to cross this in the smallest. Shakspeare, Measure for Measure.

Was this a face,

To stand against the deep dread-Jbolted tBunder, In the most terrible and nimble stroke Of quick cross lightning ? Id. King Lear.

From his loins no hopeful branch shall spring, To cross me from the golden time I look for.

Id. Richard III. Thou ceaseless lacky to Eternity , With some mischance cross Tarquin in his flight.

Id. The Rape of Lucrece. She doth stray about

By holy crosses, where she kneels and prays. Id. From many men I do not bear these crossings.

Id. 1 Henry IV.

Heaven prepares good men with crosses ; but no ill can happen to a good man. Ben Jonson's Discoveries. Cross marriages, between the king's son

and the archduke's daughter ; and, again, between the arch- Joke's son and the king's daughter.

Bacon's Henry VII.

The lighter sort of malignity, turneth but to a cross- ness or aptness to oppose ; but the deeper sort, to envy, or mere mischief. Bacon.

It is certain, howsoever it cross the received opinion, that sounds may be created without air.

Id, Natural History.

They make a little cross of a quill, longways of that part of the quill which hath the pith, and crossways of that piece of the quill without pith. Id.

The enemy had, in the woods before them, cut down great trees cross the ways, so that their horse could not possibly pass that way. Knolles.

The absolute palatines made their own judges, so as the king's writ did not run in those counties, but only in the church lands lying within the same, which were called the cross ; wherein the king made a sheriff; so in each of these counties palatines there was one sheriff of the liberty, and another of the cross.

Sir J. Daviei.

How his enraged ghost would stamp and stare, That Caesar's throne is turned to Peter's chayre j To see an old shorne lozell perched on high, Crossing beneath a golden canopy. Hall.

Your magical exorcisms ; your clerical shavings j your uncleanly unctions ; your crossings. Id.

You are first to consider seriously the infinite love of your Saviour, who offered himself for you as a sacrifice upon the cross.

Taylor's Guide to the Penitent.

A great estate hath great crosses, and a mean for- tune hath but small ones. Id. Rule of Living Holy.

He was said to make soldiers spring up out of the very earth to follow him, though he had not a cross to pay them salary. Howell's Vocal Forest.

This forced the stubbornest, for the cause, To cross the cudgels to the laws ; That what by breaking them 't had gained, By their support might be

maintained. Hudibras.

Whacum had neither cross nor pile ; His plunder was not worth the while. Id.

He was so great an enemy to Digby and Colepeper, wh» were only present in debates of the war with the officers, that he crossed all they proposed. Clarendon.

Then their wills clash with their understandings, and their appetites cross their duty. Locke.

They must not be crossed, forsooth ; they must be permitted to have their wills in all things ; and they being in their infancies not capable of great views, their parents think they may safely enough indulge their little irregularities, and make themselves sport with that pretty perverseness, which they think well enough becomes that innocent age. Id.

A fox was taking a walk one night cross a village.

L' Estrange, Friars

Resort to farmers rich, and bless their halls,

And exorcise the beds, and cross the walls. Dryden.

Betwixt the midst and these, the gods assigned Two habitable seats of human kind ; And cross their limits cut a sloping way, Which the twelve signs in beauteous order sway.

Id. Virgil.

*He conquered this proud Turk as far as the Helles- pont, which he crossed, and made a visit to the Greek emperor at Constantinople. Temple^*

The mind brings all the ends of a long and various hypothesis together; sees how one part coheres with, and depends upon, another ; and so clears off all the appearing contrarieties and contradictions, that seemed to lie cross and uncouth, and to make the whole unin- telligible. South.

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All crow and distasteful humours, and whatever else may render the

conversation of men grievous and uneasy to one another, must be shunned. Tillotson.

He that provides for this life, but takes no care for eternity, is wise for a moment, but a fool for ever ; and acts as untowardly and crossly to the reaspn of things, as can be imagined. /

The loxia, or cross-bill, whose bill is thick and strong, with the tips crossing one another, with great readiness breaks open fir-cones, apples, and other fruit, to come at their kernels ; as if the cruising of the bill was designed for this service.

Derham's Physico-Theology.

Whatsoever penumbra should be made in the cir- cles by the cross refraction of the second prism, that penumbra would be conspicuous in the right lines which touch those circles. Nticton.

They help us to forget the crossness of men and things, compose our cares and our passions, and lay our disappointments asleep.

Collier of the Entertainment of Books.

I shall most carefully observe, not to cross over or deface the copy of your papers for the future, and only to mark in the margin. Pope.

Here an unfinished diamond croslet lay, To which soft lovers adoration pay. Gay's Fab.

Her boly faith and Christian cross opposed Against the Saxon gods. Rowe.

This I humbly conceive to be perfect boys' play ; cross, I win, and pile, you lose ; or, what's your's is mine, and what's mine is my own. Swift.

The ships must needs encounter, when they either advance towards one another in direct lines, or meet in the intersection of cross ones. Bentley.

Will ye one transient ray of gladness dart Cross the dark cell where hopeless Slavery lies ? To ease tired Disappointment's bleeding heart, Will all your stores of softening balm suffice ?

Beattie.

O Henderson ! the man ! the brother ! And art thou gone, and gone for ever ! And hast thou crost that unknown river, Life's dreary bound ! Like thee, where shall I find another.

The world around ! Burns. By our blood in Afric wasted,

Ere our necks received the chain ; By the miseries that we tasted,

Crossing in your barks the main. Cowper.

Shrill cats, whom fierce domestic broils delightˆ Cross cats, who nothing want but teeth to bite.

Hvddssford.

See ! through the grove a narrow lake extends, Crosses each plot, to each plantation bends ; And while the fount in new meanders glides, The forest brightens with refreshing tides. Sheridan.

Thou hast done a fearful deed In falling away from thy father's creed : But dash that turban to earth, and sign The sign of the cross, and for ever be mine j Wring the black drop from thy heart, And to-morrow unites us no more to part.

Byron. Siege of Corinth. This heathenish cross restored the breed again,

Ruined its blood, but much improved its flesh ; For, from a root, the ugliest in Old Spain Sprung up a branch as beautiful as fresh.

Id. Don Juan.

CROSS. The ancient cross was made with two pieces of wood, placed crosswise,- either crossing

at right angles at the top, like a T, or in the middle of their length, like an X. The cross to which our Saviour was fastened is thus repre- sented on old monuments, coins, &c. ; and St. Jerome compares it to a bird flying, and a mau swimming, or praying, with his arms extended. The punishment of the cross was common among the Syrians, Egyptians, Persians, Africans, Greeks, Romans, and Jews. It was the most dreadful of all others, both for the shame and pain of it; and so scandalous, that it was in- flicted as the last mark of degradation upon the vilest of people. It was the punishment of rob- bers and murderers, provided that they were slaves too ; for if they were free, and had the privilege of the city of Rome, it was thought too infamous a punishment for them, whatever might be their crimes. The body of the cri- minal was fastened to the upright piece, naked, by nailing the feet to it, and on the other trans- verse piece, generally by nailing the hands on each side. Sometimes he was fastened with cords to the fatal tree, with his head downwards. Nonnius thinks that our Saviour's arms were bound fast to the cross with chains ; and St. Hi- lary speaks of the cords

wherewith he was tied to it. Sometimes they who were fastened upon the cross lived a long time in that condition. St. Andrew is said to have continued three days alive upon it. Eusebius speaks of certain mar- tyrs in Egypt who were kept upon the cross till they were starved to death. Pilate was sur- prised, we see, at our Saviour's dying so soon. Among some nations they were suffered to re- main upon the cross a long time, even until they were devoured alive by birds and beasts of prey. Guards were appointed to observe that none of their friends or relations should take them down and bury them. The Roman soldiers, who had crucified Jesus Christ and the two thieves, thus continued near the crosses till the bodies were taken down and buried.

Crosses were usually, in former times, erected on the tops of houses, by which tenants pretended to claim the privileges of the Templars Hos- pitallers, to defend themselves against their rightful lords. This was condemned by the sta- tute William II. cap. 37. It was usual also, in those days, to set up crosses in places where the corpse of a nobleman rested as it was carried to be buried, that passengers might pray for his soul. Crosses, &c. are forbidden to be brought into England by 13th Eliz. cap. 2, on pain of a praemunire. &c.

Fables, in abundance, are connected with the alleged history of the true cross. An ancient feast was solemnised on the 3rd of May, in me- mory of the true cross of Christ being found by St. Helena, the mother of Constantine, deep in the ground on Mount Calvary, where she erected a church for the preservation of part of it, the rest being brought to Rome, and deposited in the church of the Holy Cross of Jerusalem. Theodoret mentions the finding of three crosses ; that of Jesus Christ, and those of the two thieves ; and that they distinguished between them by means of a sick woman, who was immediately healed by touching the true cross. The place is said to have been pointed out to her by St.

Quiriacus, then a Jew, afterwards converted and canonised.

The adoration of the cross appears to have been practised at a remote period ; inasmuch as the Heathens, particularly Julian, reproach the primitive Christians with it; and we do not find that their apologists disclaimed the charge. Mornay, indeed, asserted, that this had been done by St. Cyril, but could not support his al- legation at the conference of

Fontainbleau. St. Helena is said to have reduced the adoration of the cross to its just principle, as she adored in the wood, not the wood itself, but him who had been nailed to this wood. With such modifi- cations some Protestants have been induced to admit the adoration of the cross. John Huss admitted of the phrase, provided it were ex- pressly added, that the adoration was to the person of Christ. Imbert, the good prior of Gascony, was severely prosecuted, in 1683, for telling the people, that in the ceremony of ado- ring the cross, practised in that church on Good Friday, they were not to adore the wood, but Christ, who was crucified on it. The curate of the parish told them the contrary : it was the wood ! the wood ! they were to adore. Imbert replied, it was Christ, not the wood : for which he was cited before the archbishop of Bourdeaux, suspended from his functions, and even threatened with chains and perpetual imprisonment. It little availed him to cite the bishop of Meaux's distinction; it was answered, that the church allowed it not.

CROSS, in coins, the right side or face, the other being called the pile, or reverse. It has been a common error that the reverse was meant by the cross ; because at this time, with us, it is marked with figures disposed in that form ; but the stamping the head of the prince in these kingdoms on the right side of the coin, was pre- ceded by a general system of striking on that part the figure of a cross ; while the pile con- tained the arms, or some other device.

CROSS, in heraldry, is defined by Guillim, an ordinary composed of fourfold lines ; whereof two are perpendicular, and the other two trans- verse ; for so we must conceive of them, though they be not drawn throughout, but meet by cou- ples, in four right angles, near the fess point of the escutcheon. See HERALDRY. This bearing was first bestowed on such as had performed, or at least undertaken, some service for the Chris- tian profession ; and is held by many to be the most honorable charge in all heraldry. It came into frequent use from the ancient expeditions into the Holy Land; the ensign of that war be- ing the cross. In those wars, says M'Kenzy, the Scots carried St. Andrew's cross ; the French^ a cross argent , the English, a cross or ; the Ger- mans, sable ; the Italians, azure ; the Spaniards, gules. Leigh mentions forty-six several crosses ; Sylvanus Morgan, twenty-six; Upton, thirty; Johannes de Bado Aureo, twelve. Upton owns he dares not presume to ascertain all the various crosses used in arms, for that they are at present almost innumerable ; and, therefore, he only takes notice of such as he had seen used in his ow- time. See HERALDRY.

CROSS, in law, instead of a signature to a deed, &c., is derived from the Saxon practice of

affixing the sign of the cross, whether they could write or not.

CROSS (Michael), an English artist, famous for copying paintings in the reigns of Charles I. and Charles II. Of this talent, there is a story current, _more to the honor of his skill than of his probity. He is said to have been employed by Charles I. to copy the celebrated Madona of Raphael, in St. Mark's church, at Venice; and that, having obtained leave of the state for that purpose, he executed his piece so well, as to bring away the original, and leave the copy in the place of it.

CROSS, MAIDS OF THE, a ci-devant community of young women, instituted in 1265, at lloye, in Picardy, and afterwards dispersed to Paris and other towns of France. They instructed young persons of their own sex. Some took the vows of poverty, chastity, and obedience ; others retained their liberty. They were under the di- rection of a superior.

CROSS, ORDER OF THE, or CROISADE, an order of ladies instituted in 1668, by the empress Eleonora de Gonzagna, wife of the emperor Leo- pold I., dn occasion of the miraculous recovery of a little golden cross, wherein were enclosed two pieces of the true cross, out of the ashes of part of the palace. The fire is said to have burnt the case wherein it was enclosed, and melted the crystal, yet the wood remained un- touched !

CROSSARMED, adj. From cross and arm. With arms folded across ; melancholy.

Yet neither will I vox your eyes to see A sighing ode, nor cross-armed elegie. Donne.

CRO'SSARROW, n. s. From cross and arrow. The arrow of a cross-bow.

Why I was run twice through the body, and shot

i' the head with a cross-arrow, and yet am well again.

Beaumont and Fletclter,

CRO'SS-BARRED, adj. From cross and bar. Barred with transverse bars.

Substantial doors, , Cross-barred and bolted fast.

Milton's Paradise Lost.

CROSS-BAR SHOT, balle ramee, Fr. ; shot, with iron bars crossing through them, sometimes standing six or eight inches out at both sides ; they are used at sea for destroying the enemy's rigging. At a siege they are of great

service in demolishing the enemy's palisading, &c.

CROSS-BEARER, porte-croix cruciger; in the Romish church, the chaplain of an archbishop or primate, who bears a cross before him on so- lemn occasions. The pope used to have the cross borne before him everywhere; a patriarch any where out of Rome ; and primates, metropo- litans, and those who have a right to the pal- lium, throughout their respective jurisdictions. Gregory IX. forbade all patriarchs and prelates to have it borne in presence of caidinals. A prelate bears a single cross, a patriarch a double cross, and the pope a triple one on their arms.

CROSS-BEARERS also denote certain officers in the inquisition, who make a vow before the in- quisitors, or their vicars, to defend the Catholic faith, though with the loss of fortune and life. Their business is to provide the inquisitors with necessaries.

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CROSS-BILL, a t . A bill brought by a de- fendant against the plaintiff in chancery. CROSS-BTLL, in ornithology. See LOXIA. CROSSBITE, t?. a. & n. s. From cross and bite. To circumvent by deception. A decep- tion ; a cheat.

The fox, that trusted to his address and manage, without so much as dreaming of a cross-bite from so silly an animal, fell himself into the pit that he had digged for another. L" Estrange.

No rhetorick most be spent against cross-biting a country evidence, and frighting him out of his senses.

Collier.

*That many knotty points there are, Which all discuss, but few can clear ; As nature slily had thought fit, For some by-ends, to cross-bite wit. Prior. CRO'SSBOW, *. *. 1 From cross and bow. CRO'SSBOWER, n. s. S A. missive weapon, form- ed by placing a bow athwart a stock, which has a groove for the reception of the arrow. One who shoots with a crossbow.*

The master of the cross-bows, lord Rambures.

Shakspeare.

The French assisted themselves by land with the oross-botcers of Genoa against the "English.

Raleigh's Estays.

Gentlemen suffer their beasts to ran wild in their woods and waste ground, where they are hunted and lulled with cross-bows and pieces in the manner of deer.

Carew of Cornwall.

Testimony is like the shot of a long bow, which owes its efficacy to the force of the shooter ; argument M like the sho. of the cross-bow, equally forcible whe- ther discharged by a giant or a dwarf. Boyle.

CROSS-BOW. See BALISTA, and ARTILLERY. CRXySSBUN, n. t. From cross and bun. A bun marked with the figure of the cross, which is sold on Good Friday.

CROSS-COUNTRY, adj. From cross and country. That which crosses the country. These carpets, so soft to the foot,

Caledonia's traffic and pride ! Oh spare them ye knights of the boot,

Escaped from a cross-country ride ! Coirper.

CRO'SSCUT, v. a. From cross and cut. To cut across.

CROSS EN, a town, and duchy of Germany, in Upper Saxony, ceded in 1746 to the king of Prussia. It abounds in wine and fruits. The town was burnt down in 1708, and taken by Russia in 1757. It contains about 3500 in- habitants, and is sixty-eight miles £. S.E. of Berlin.

CROSS-EXAMINE, v. a. l From cross and

*CROSS-EXAMINATION, n. *. 5 examine. To ex- amine a witness, by putting catch inj and difficult quastions to him. The act of cross-examining.*

If we may but crost-examme and interrogate their actions against their words, these will soon confess the invalidity of their solemnest confessions.

Decay of Piety.

The judges shall, as they think fit, interrogate or cross-examine the witnesses. Spectator.

CROSSFLOW, v. a. From cross and flow To flow in an opposite direction.

The flood That staid her fiigh with his cross-flouring course*

Corniu.

CRO'SSGRAINED, adj. From cross and grain. Having the fibres transverse or irregular ; perverse; bad tempered; fond of giving vexa- tion.

If the stuff proves crossgrained in any part of its length, then you must turn your stuff to plane it the contrary way, so far as it runs crossgrained. Moron.

We find in sullen writs, And crossgrained works of modern wits, The wonder of the ignorant. Hudibrat.

The spirit of contradiction, in a cross-grained woman, is incurable. L'Es'.range.

She was none of your cross-grained, termagant, scolding jades, that one had as good be hanged as live in the house with. Arbuthnot's John Bull

But wisdom, peevish and cross-grained, Must be opposed, to be sustained. Prior.

Sad strife arose, for they were so cross-grained,

Instead of bearing up without debate, That each pulled different ways with many an oath, ' Arcades ambo,' — id est — blackguards both.

Byron. Don Juan.

CROSSLE'GGED, n. s. From cross and leg. Having the legs crossed, like tailors at work.

Crosslegged, and yet ungartered, hath been seen.

Messenger.

CROSSOSTYLUS, in botany, a genus of the polyandria order, and monadelphia class of plants : CAL. a quadrangular, quadrifid, turbi- nated perianthium ; COR. consists of four ellip- tical petals : STAM. are twenty filiform filaments, almost the length of the calyx ; antherae small and roundish : PERICARP, an hemispherical, unilocular berry, with many striae on its upper part : SEED numerous and roundish.

CROSS-PIECE,a rail of timber extended over the windlass of a merchant- ship, from the knight- heads to the belfry. It is stuck full of vrooden pins, which are used to fasten the running-rig- ging as occasion requires. See WINDLASS.

CROSSPU'RPOSE, n. s. From cross and purpose. A kind of riddle; a contradictory system.

I see an eye of comfort in her case, and will take all proper measures to extricate her out of this un- happy game of crosspurposes. Taller.

To allow benefit of clergy, aad to restrain the press, seems to have something of crosspurpose in it.

Shaftesbury.

*CROSSPO'ST, re. *. From cross and post. A post across the country, by the cross roads.*

Mr. Allen rose to great consideration by farming the crossposts. Warburton.

CROSSQUE'STION, v. a. To cross-ex- amine ; to embarrass by questions.

CROSSREA'DINGS,n. ». From cross and reading. Ludicrous sentences produced by read- ing across the newspaper, instead of from top to bottom.

Then strew all around it (you can do no less), Crossreadinai, ship news, and mistakes of the press.

Goldsmith .

CROSSROAD, n. $. From cross and road. A road across the country • a road connecting the main roads.

Be the plain track from henceforth mine,

Crossroads to Allen I resign. CtotrcHX.

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*CRO'SSROW, n. *. From cross and row. Alphabet ; so named because a cross is placed at the beginning, to show that the end of learning is piety.*

He hearkens after prophecies and dreams, And from the crosrrow plucks the letter G ; And says a wizard told him, that by G His issue disinherited should be.

Shakspeare. Richard III.

CROSS-STAFF, n. s. From cross and staff. An instrument commonly called the fore-staff, used by seamen to take the meridian altitude of the sun or stars.

*CRO'SSWAY, n. *. From cross and way. A small obscure path intersecting the chief road.*

Neither shouldst thou have stood in the crotncay.

Obadiah v. 14.

Damned spirits all,

That in crosswayi and floods have burial. Already to their wormy beds are gone.

Shakrpeare.

CROSSWIND, n. s. From cross and wind. Wind blowing from the right or left.

When lo

A violent crossu-ind from either coast Blows them transverse ten thousand leagues away Into the devious air. Milton.

The least unhappy persons do, in so fickle and so tempestuous a sea as this world, meet with many more either crouwmds or stormy gusts than prosperous gales. Boyle.

CRO'SSWORT, n. s. From cross and wort. A plant.

It hath soft leaves, like the ladies bedstraw, from which it differs in the number of leaves that are pro- duced at every joint ; which in this are only four, disposed in form of a cross. Miller.

CROTALARIA, rattle-wort, in botany, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, pa- pilionaceae. The legume is turgid, inflated, and pedicellated ; the filaments are coalited with a fissure on the back. There are eleven specieSj all natives of warm climates. They rise from eighteen inches to five feet in height, and are adorned with flowers of a blue or yellow color. The most remarkable species is the C. retusa, with simple oblong wedged leaves. It is a native of the island of Ceylon, and some other parts of the East Indies. The flowers are yellow, the pods smooth, cylindrical, inflated, and placed horizontally : they are filled with seeds, which when dried, and shaken by the slightest

wind, emit a rattling noise : and this, by the rude inhabitants of the countries where the plant is a native, is attributed to the devil, who is thought to deliver his oracles in this whimsical manner.

CROTALO, an instrument in modern mili- tary music, resembling the ancient crotalum. The Turks were the first, among the moderns, who introduced the use of it for their troops. It has only one tone ; but its effect in marking time may be distinctly heard through the noise of forty drums. It is the same with the ancient cymbalum.

CROTALUM, an ancient kind of musical instrument, found on medals, in the hands of the priests of Cybele. It differed from the sistrum, though authors frequently confound the two. It consisted of two little brass plates or rods, which were shaken in the hand, and in strikin? aeainst each other made a noise. It was sometimes also made of a reed split lengthwise, one part whereof they struck against the other; and, as this made a noise somewhat like that of a crane's bill, they called that bird crotalystria, a player on the crotala : and Aristophanes calls a srreat talker a crotalum. Clemens Alexandrinus at- tributes the invention to the Sicilians; and forbids the use of it to the Christians, because of the indecent motions and gestures that accom- pany it.

CROTALUS, the rattle-snake, in zoology, a genas belonging to the order of amphibia ser- pentes; the characters of which are these: the belly is furnished with scuta, and the tail has both scuta and scales ; but the principal charac- teristic of this genus is the rattles at the end of the tail. These rattles consist of several articulated, crustaceous, or rather horny bags, which make a considerable rattling noise when the creature moves, and serve to warn people of its ap- proach. There are five species, and the bite of all of them is so highly poisonous, that it gene- rally kills in a short time. Of these, the chief is C. horridus, the American rattle-snake. It grows sometimes to the length of eight feet, and weighs between eight and nine pounds. The color of the head is brown, and the eye red ; the upper part of the body of a yello\vish-brown color, transversely marked with irregular bread black lists. The rattle is of a brown color, composed of several horny, membraneous cells, of an, undulated pyramidal figure. These are articulated within one another in such a manner that the point of the first cell reaches as far as the basis of the protuberant rinse of the third, and so on ; which articulation, being very loose, gives liberty to the parts of the cells that are en- closed within the outward ring, to strike against the sides of them, and so to cause the rattling noise which is heard when the snake shakes its tail. This is the most inactive and slow moving of all the snakes, and is never the aggressor ex- cept in what it preys upon. Catesby is of opinion that no remedy is yet discovered for the biteof this animal. He had frequently access to see Indians bitten by it, and always thought that those

who recovered were cured more through the force of nature, or by reason of the slightness of the bite, than by the remedies used. He says, the Indians know their destiny the moment they are bit ; and if the bite happens to be on any of the large veins, they apply no remedies, knowing them to be entirely useless.

CROTCH, n. s. -} Fr. croc, crotchet.

CRO'TCHET, v. n.San.t. > A crotch is a hook

CRO'TCHETED, part. adj. > or fork. Crotchet signifies, one of the notes in music ; a support or prop ; [hooks in which words are included] ; an instrument used in midwifery ; a conceit ; a whim ; an odd fancy. To crotchet is to play in a measured time of music ; crotcheted -s marked by musical notation.

Save elme, ash, and crab tree for cart and for

plough , Save step for a style of the crotch and the bough.

Timer.

There is a tradition of a dilemma that Moreton used to raise the benevolence to higher rates ; and some called it his fork and some his crotch.

Bacon's Henry VII.

As a good harper stricken far in years,

Into whose cunning hands the gout doth fall,

All his old crotchets in his brain he bears,

But on his harp plays ill or not at all. Dames.

All the devices and crotches of new inventions, which crept into her, tended either to twitch or en- large the ivy. Howel.

CROTON OIL is expressed from the seeds of an East Indian plant, the croton tiglium, and is one of the most valuable of the late additions to the

materia medica. It is so strongly purga- tive, that one drop is a full dose ; and half a drop will sometimes produce a powerful effect. It is found efficacious when rubbed on the tongue, or even upon the skin.

CROTO, or CROTON, in ancient geography, a city of the Brutii, in Italy, built by the Acheans ; 150 stadia to the north of Lacinium, and in the neighbourhood of Metapontum. It was twelve miles in compass before the arrival of Pyrrhus in Italy ; but, after the desolation produced by the war, scarcely half of it was in- habited. The citadel, on one side, hung over the sea, on the other towards the land. It was na- turally strong from its situation, but afterwards walled round. It was taken by Dionysius, how- ever, by stratagem, by means of the rocks behind it. Pythagoras, after his long peregrinations in search of knowledge, fixed his residence in this place, which some authors think his native one, or at least that of his parents. Of all the colo- nies sent out from Greece, this alone furnished succour to the mother-country when invaded by the Persians. By its avenging arms the Syba- rites were punished for their shameful degeneracy ; but victory proved fatal to the conquerors, for riches, and all their pernicious consequences, soon contaminated the purity of the Crotonites. Long after the Locrians, who were less cor- rupted, defeated them on the banks of the Sagra, and reduced the republic to distress and penury. This restored the remaining Crotonites to their pristine vigor of mind, and enabled them to make a brave, though unsuccessful resistance, when attacked by Dionysius of Syracuse. They suf- fered much in the war with Pyrrhus ; and, by repeated misfortunes, decreased in strength and numbers, from age to age, down to that of Han- nibal, when they could not muster 20,000 inha- bitants. This small population being incapable of manning the extensive works erected in the days of its prosperity, Croton was taken by the Carthaginians, and its citizens transported to Locri. The Romans sent a colony hither 200 years before Christ. In the Gothic war, this city was conspicuous for its fidelity to Justinian, and Totila besieged it long in vain.

CROTON, in modern geography, a river of Connecticut, which rises in New Fairfield, and, running through Dutchess county, falls into

Tappan Bay. A bridge is thrown over the river three miles from its mouth, on the great road to Albany. It is a solid substantial bridge, 1400 feet long, piercing through a slate hill, and sup- ported by sixteen stone pillars. Here is an ad- mirable view of Croton Falls, where the water precipitates itself between sixty and seventy feet perpendicular, with high slate banks, in some places 100 feet, and the river spreading into three streams, as it enters the Hudson.

CROTON, in botany, wild ricinus, a genus of the monadelphia order and moncecia class of plants; natural order thirty-eighth, tricoccae. Male, CAL.

cylindrical and quinquedentated ; COR. pentapetalous ; the stamina from ten to fifteen. Female, CAL. polyphyllous ; three bifid styles: CAPS, trilocular; one seed. There are twenty-one species, of which the most remark- able are, 1. C. aromaticum, with heart-shaped serrated leaves, and an arborescent stem. The bark of the tree is the same as the cascarilla and eluteria, though these have been consi- dered by some as distinct barks, and sold in the shops as different productions. It is a hot, acrid, aromatic bitter, resembling in appearance the Peruvian bark, but more bitter and pungent, though not so rough and astringent. It was first introduced into Europe about the end of the seventeenth century. 2. C. sebifera, the tallow- tree, with rhomboidal egg-shaped leaves, pointed, smooth, and very entire. The Chinese make their candles of it, which would, doubtless, be as good as those in Europe, if they knew how to purify their vegetable tallow, as we do our animal kind, and to make their wicks as well. 3. C. tinctorium, the plant from which the French turnsole is made. See TURNSOLE. It grows naturally in the south of France ; is an annual plant, rising about nine inches, with an herbaceous branching stalk, garnished with irre- gular or rhomboidal figured leaves, near two in- ches long and one and a quarter broad in their widest part. These stand upon slender foot- stalks near four inches long. The flowers are produced in short spikes from the sides of the stalks, at the end of the branches; the upper part is composed of male flowers, having many stamina, which coalesce at the bottom; the lower part has female flowers, which have each a roundish three-cornered germen. This afterwards becomes a roundish capsule, with three lobes, having three cells, each including one roundish seed. It flowers in July; but, unless the plants are brought forward on a hot-bed, they do not ripen seeds in this country.

CROTONA, an ancient city of Naples, in the province of Calabria Ultra, originally built by the Greeks. It is seated upon the mouth of the Essaro, at its influx into the gulf of Tarento, on the coast of the Ionian Sea, fifty miles east of Cosenza, and fifteen south-east of St. Se- verina.

CROTOPHAGA, in ornithology, a genus of birds belonging to the order of picae ; the cha- racters of which are, the bill is thin, compressed, greatly arched, half oval, and cultrated at top ; the nostrils are round; the tongue flat, and pointed at the end ; the tail consists of ten fea- thers ; and the toes are placed two and two.

Thp most remarkable species are, 1. C. ani, about the size of a blackbird ; the color of the whole bird is black, in some parts glossed with purple, and about the neck faintly tinged with green on the margins ; the base of the bill is fur- nished with black bristles, which turn forwards ; the eye-lids have long hairs like eye-lashes ; the tail is six inches long, and much cuneated ; and the legs are black. This species is found in Jamaica, St. Domingo, and other islands in the West Indies ; also, at Cayenne, and other parts of South America. Contrary to all other birds, they have the singularity of many laying in the same nest; to make which, they all unite in concert, and, after laying their eggs, sit on them close to each other in order to hatch them, each unanimously striving to do the best for the ge- neral good ; and when the young are hatched, the parents, without reserve, do the best to feed the whole flock. It generally has two broods in a year, except accidents happen ; in which case it has been known to make three nests. The eggs are about the size of those of a pigeon. of a sea-green color, spotted at the ends. Their food is various ; worms, insects, fruits, and grain, according to the season. 2. C. ani major, is about the size of a jay, and is by some rec- koned only a variety of the former, differing merely in size.

CROUCH, v. a. & n. s. ˆ Fr. crochu ; Isl.

CRO'UCHED, adj. \kreika ; Ger. kau-

CRO'UCHING, n.s. &adj, fchen. Itisproha-

CRO'UCH-BACK, n. s. J bly, says the Ency.

Met. by the common change of k into ch, merely.

To crouch signifies to stoop low ; to lie with the

belly to the ground, as some beasts do ; to cringe ;

to act servilely ; anciently, to sign with the cross.

Crouch-back is synonymous with crook-back.

Every one that is left in thine house, shall come and crouch to him for a piece of silver and a morsel of bread. 1 Sam. ii. 26.

I crouche thee from elves and from wightes, Therwith the nightspel said he anon rightes On foure helves of the hous aboute And on the threswold of the dore withoute.

Chaucer. Cant. Talei.

I cannot crouche nor knele to such a wronge, To worship them like God on earth alone, That are as wolves these sely lambes among. Wyatt.

Kissing his hondes and crouching to the ground. For other language had he none nor speech.

Spenter. Faerie Queene. At his heels,

Leasht in like hounds, should famine, sword, and fire, Crouch for employment. Shahspeare. Henry V.

The crowching client, with low bended knee, And manie worships and faire flatterie, Tells on his tale as smoothly as him list, But still the lawyer's eye squints on his fist. Hall.

They fawn and crouch to men of parts, whom they cannot ruin ; quote them when they are present ; and, when they are absent, steal their jests. Dryden.

Too well the vigour of that arm they know ; They lick the dust, and crouch beneath their fatal foe.

Id.

When lo ! the self-same lion from his cage Flies to devour him, famished into rage. He flies, but viewing in his purposed prey The man, his healer, pauses on his way,

And, softened by remembrance into sweet

And kind composure, crouches at his feet. Camper,

He knew himself a villain — but he deemed The rest no better than the thing he seemed, And scorned the best as hypocrites who hid Those deeds the bolder spirits plainly did. He knew himself detested, but he knew The hearts that loathed him, crouched and dreaded toe- Byron. Corsair.

CROUP, n. s. Fr. croupe. The rump of a fowl; the buttocks of a horse. See CRUPPER.

The carter thakketh his hors upon the croupe.

Chaucer. Cant. Tales.

Away thou heedless boy ! prepare the spear : Now is thy time, to perish, or display The skill that yet may check his mad career. With well-timed croup the nimble coursers veer ; On foams the bull, but not unscotched he goes ;

Streams from his flank the crimson torrent clear.

Byron. Childe Harold

CROUPA'DES, n. s. From croup. Higher leaps than those of corvets, that keep the fore and hind quarters of the horse in an equal height, so that he trusses his legs under his belly with- out yerking.

CROUSAZ (John Peter de), a learned philo- sopher and mathematician, born in 1663. Hav- ing made great progress in the mathematics and the philosophy of Des Cartes, he travelled to Geneva, Holland, and France ; was successively professor in several universities, and at length was chosen governor to prince Frederick, of Hesse Cassel, nephew to the king of Sweden. He wrote many works ; the most esteemed of which are, 1. his Logic, in six vols. 8vo. in 1741. 2. A Treatise on Beauty. 3. A Treatise on the Education of Children, two vols. 12mo. 4. Several Treatises on Philosophical and Ma- thematical Subjects, 8cc. He died at Lausanne in 1748.

CROUTE, SOUR CROUTE, or KROUTE, saur kraut, German, i. e. sour herb ; a preparation of cabbage, which has been found of sovereign efficacy as a preservative from the sea-scurvy in long voyages. The process for making it is as follows: the soundest and most solid cabbages are selected, and cut very small, commonly with an instrument made for this purpose, resembling the plain for slicing cucumbers. A knife is used when the preparation is made with great nicety. The cabbage, thus minced, is put into a barrel, in layers, hand high, and over each is strewed a handful of salt and carraway-seeds ; in this manner it is rammed down with a rammer stratum super stratum, till the barrel be full, when a cover is put over it, and pressed down with a heavy weight. After standing some time in this state it begins to ferment, and it is not till the fermentation has entirely subsided, that the head is fitted to it, ,and the, barrel is finally shut up and preserved for use. There is not a drop of vinegar employed in this preparation.

CROW, v. n. & n. t.-\ Goth, krukjan ; Ger.

CRO'WING, n.s. {ˆkraehen ; Ang.-Saxon,

CROWS-FEET, n. s. i crawan ; for the verb.

CROW-KEEPER, n. s. 3 For the noun, Per. kro ; -Swed. kraka ; Ang.Sax. crawe ; Latin, corvus ; icopa$. To crow is, to make the noise which a cock makes for the purpose of express

CRO

ing pleasure or defiance ; to vaunt ; to bluster ; to swagger; to express triumph over. Crow is, a large black bird, that feeds on carcases. See CORVUS ; the voice of the ˆock ; a bar of iron with a beak, used as a levei1. To pluck a crow with, is a trivial expression, which means, to

CRO

His fiddle is your proper purchase, Won in the service of the churches j And by your doom must be allowed To be, or be no more, a crowd. Hudibras.

CROWD, v. a., v. n., & n. s.) Ang.-Sax.cruth ;

CRO'WDING, n. s. J Dutch kruyden.

have a dispute with ; to reprimand for some of- To thrust in confusedly ; to press into an incon- fence. It is_generally used with reference to venient space ; to incumber by multitudes ; to trifling subjects. Crows'-feet are, the wrinkles throng together without order ; to thrust among

which old age produces under the eyes. A crow- keeper is, a scare-crow.

When that the firste cock hath crowe, anon Up rist this jolly lover Absolon .

Chaucer. Cant. Tales.

Wei sikerer was his crowing in his loge, Than is a clok or any abbey orloge . Id.

As blake he lay as any cole or crow, So was the blood yronnen in his face. Id,

So longe mote ye liven, and all proude, Till crowis-feete growin under your eie.

Id. Troilus and Creseide.

I am not he, such eloquence to bost, To make the crow in singing, as the swanne.

Wyatt

And now the crowing cocke, and now the owle, Lowd shriking ; him afflicted to the very sowle.

Spenser. Faerie Queene.

That fellow handles his bow like a crowkeeper.

Shakspeare. But even then the morning cock crew loud.

Id. Hamlet.

The crows and choughs, that wing the midway air,

Show scarce so gross as beetles. Id. King Lear.

Diogenes called an ill physician, cock. Why ?

saith he. Diogenes answered, Because when you

crow, men use to rise. Bacon,

Resolve, before we go

That you and I must pull a crow. Hudibras. If you dispute, we must even pluck a crow about it.

L'Estrange.

To crows he like imperial grace affords, And choughs and daws, and such republick birds.

Dry den.

Within this homestead lived, without a peer For crowing loud, the noble Chanticleer, So hight her cock. Id. Fables.

The crow is used as a lever to lift up the ends of great heavy timber, and then they thrust the claws between the ground and the timber ; and laying some stuff behind the crow, they draw the other end of the shank backwards, and so raise the timber.

Moxon's Mechanical Exercises.

Selby is crowing, and, though always defeated by his wife, still crowing on. Richardson.

How lonely every freeborn creature broods ! The sweetest song-birds nestle in a pair ; The eagle soars alone ; the gull and crow Flock o'er the carrion, just as mortals do.

Byron. Don Juan.

CROWD, v. a. & n. s.) Welsh crwth. A CKO'WDER, n. s. j fiddle; a fiddler.

Hark how the minstrels 'gin to shrill aloud Their merry musick that resounds from far, The pipe, the tabor, and the trembling croud, That well agree withouten breach or jar.

Spenser's Epith.

Chevy-chase sung by a blind crowder. Sidney,

Fidlers, crowd on, crowd on; let no man lay a

block in your way Massinger.

a multitude. To crowd sail, is to hoist as much sail as possible ; to hurry on. A crowd is, a promiscuous multitude, or medley of any thing; the vulgar; the populace.

A rude disordered rout he did espy Of men and women, that most Spitefully Did one another throng, and crowd so sore, That his kind eye in pity wept therefore. Danes.

Thus Love persuades, and all the crowi of men That stands around doth make a murmuring. Id,

The time misordered, doth in common sense

Crowd us and crush us to this monstrous form,

To hold our safety up. Shakspeare. Henry IV.

A mighty maa, had not some cunning sin

Amidst so many virtues crowded in.

*Cowley's Davideu^*

They follow their undaunted King ; Crowd through their gates ; and, in the fields of light, The shocking squadrons meet in mortal fight.

Dry den's Virgil.

He went not with the crowd to see a shrine, But fed us by the way with food divine. Id. Fables

How short is life ! Why will vain courtiers toil. And crowd a vainer monarch for a smile ? Grancille.

He could then compare the confusion of a multi- tude to that confusion he had observed in the Icariaii sea, dashing and breaking among its crowd of islands.

Pope.

A mind which is ever crowding its memory with things which it learns, mav cramp the invention itself.

Watts.

Trees produced without culture, here straggling or single, and there crowding into little groves and bowers, Beattie.

Tis morning ; and the sun, with ruddy orb Ascending, fires the' horizon ; while the clouds. That crowd away before the driving wind, More ardent as the disk emerges more, Resemble most some city in a blaze, Seen through the leafless wood. Cowper.

*Imperious man, who rules the bestial crowd, Of language, reason, and reflection proud, With brow erect who scorns this earthy sod, And styles himself the image of his God. Darwin^*

Amidst the barren sand and rocks so rude She and her wave-worn love had made their bower,

Where nought upon their passion could intrude. And all the stars that crowded the blue space, Saw nothing happier than her glowing face.

Byron. Don Juan.

A crowd of shivering slaves of every nation, And age, and sex, were in the market ranged. Id.

CRO'WFLOWER, n. s. From crow and flower. A species of campion.

Fantastick garlands did she make Of crow-flowers, nettles, daisies, and long purples. Shakspeare. Hamlet.

CRO'WFOOT, n. s. From crow and foot ; in Lat. ranunculus A flower ; the butter-flower, or butter-cup.

CROWFOOT, n. s. From crow and foot. A caltrop, or piece of iron with four points, two, three, or four inches long ; so that whatever way it falls, one point is up. It is used in war for incommoding the cavalry.

CROWFOOT. See RANUNCULUS. CROWFOOT, on ship-board, a complication of small cords spreading out from a long block, like the smaller parts which extend from the back-bane of a herring. It is used to suspend the awnings ; or to keep the top-sails from stri- king violently, and fretting against the tops.

CROWLAND, a small town of Lincolnshire, seated in the fens, and having formerly a market of some note. It consists of four streets, sepa- rated from each other by water-courses, and con- nected by a curious bridge, formed of three segments of a circle, meeting in a point at the top, but so steep that only foot-passengers can pass over ; horses and carriages go underneath. On the south-west wing, which faces the London road, is an image of king Ethelbald, in a sitting posture, having a crown fleury on the head, and a globe in the right hand. Its chief trade is in fish and wild ducks, which are in great plenty iu the adjacent marshes.

The history of this place is involved in that of its far-famed abbey. It appears, from a charter of Ethelbald, that the lands belonging to the abbey comprehended ' the whole island of Croyland, formed by the four waters of Shep- ishee on the east, Nene on the west, Southee on the south, and Asendyk on the north ; in length four leagues, in breadth three, with the marshes adjoining on both sides the Weland ; part of which, to the north, called Goggisland, is two leagues long from Croyland bridge to As- path, and one league broad from the Weland south to Apenhall, and another part of the marsh south of the Weland, two leagues long, from Creyland bridge to South Lake; and two leagues broad from the Weland to Fynset, with fishery in the waters of Nene and Weland.' This charter is dated A. D. 716, and witnessed by Brithwald, archbishop of Canterbury ; Win- fred, archbishop of the Mercians; Ingwald, bishop of London ; Aldwin, bishop of Litchfield; Tobias, bishop of Rochester; Ethelred, abbot of Bardney ; Egbert, abbot of Medeshamsted ; Egga, earl of Lincoln ; Lurie, earl of Leicester, &c.

&c. The monarch further gave towards the building of the monastery £300 in silver, and £100 a-year for ten years to come ; he also au- thorised the monks to build, or enclose, a town for their own use, with a right of common for themselves and their servants.

The monastery was dedicated to the honor of St. Mary, Sf. Bartholomew, and St. Guthlac, who, 'by divine guidance, came in a boat to one of those solitary desart islands, called Cru- lande, on St. Bartholomew's day; and in an hollow, on the side of an heap of turf, built himself a hut in the days of Conrad, king of Mercia, when the Britons gave their inveterate enemies, the Saxons, all the trouble they could.' (Gough's History and Antiquities of Croyland). In the year 870 the Danes burned the monas- tery, and murdered the religious ; it was, how- ever, refounded in the year 948 by king Edred, VOL. VI.

out was afterwards destroyed by fire in the year 1091. It was rebuilt in the year 11 12 by li- beral contributions, and burnt and rebuilt again between the years 1142 and 1170. About the year 1720 the roof of the abbey-church fell in, and was found to consist of Irish oak, finely carved and gilt ; pieces of which are to be found in almost every house in Crowland. The ve- nerable remains of this once celebrated abbey are extremely magnificent, and consist chiefly of a portion of the conventual church, which is highly interesting to the architect and antiquary. The choir, central tower, transepts, and the whole of the east end are down ; what portions are found standing, are the skeletons of the nave, with parts of the south and north aisles; the latter of which is covered over, pewed, and fitted up as the parish-church. This edifice was made a garrison during the civil wars. Over the west gate are images of several kings and abbots ; and among the rest of St. Guthlac, with a whip an(? knife, his usual symbols, and St. Bartholomew, with a knife.

Crowland is seven miles from Spalding, twelve N.N. E. of Peterborough, and ninety-three north by west of London.

Goth. krona ; Dut. kroone ; Fr. couronne ; Lat. co- rona. ' Anciently written chorona,' says Selden, ' and made Latin from | xopwvoc, which they J civile (derive) from

CROWN, n. s. & v. a.

CROWNER, n. s.

CROWN-GLASS, n. s.

CROWN-LESS, adj.

CROWN-PORT, n. s.

CROWN-SEAL, n.s.

CROWN-THISTLE, n. s.

CROWN-WHEEL, n. s.

CROWN-WORKS, n. s.

Xopoc or xopsvrai. i. e. the dancers or singers, and number of the solemnising sacrificers ;' and perhaps this from Q^S, Hebrew, to dance around or in circles. The primitive idea seems to have been that of something surrounding the head. ' The antientest mention of a royal crown,' con tinues the above learned writer, ' is in the holy story, in that of the Amalekites bringing Saul's crown to David.' It was in the East more com- monly a fillet circling the head, he adds. A diadem, the type of imperial, regal, or papal dignity; the authority of a king: as a verb, to invest with a diadem, or with such dignity ; also the top or upper part of the head, or of a moun- tain ; the upper part of the hat ; a piece of money bearing royal ensignia ; and, metaphori- cally, honor, reward, dignity in general ; to con- fer honor or dignity ; to complete, perfect, or praise. Crownet is the same with CORONET, which see. Crowner is a perfection, the old word for coroner, and still in use among the vulgar ; and is also used by Shakspeare for the chief end or purpose; see the extract. The com- pounds denote severally ; something large, su- perior, or excellent of their kind.

Now they do it to obtain a corruptible crown, but we an incorruptible. 1 Cor. ix. 25.

A seyn Steyenes day a non \>e croune vorst he

here. Robert of Gloucester.

Thou has maad him a little lesse than aungelis,

thou hast crowned him with glorie and onour, and

thou hast ordeyned hym on the workis of thin, hondis.

Widif. Ebrew'ts 2.

And corouned were as kyngis, With crounis wrought full of losynges.

Chaucer. The House of Fame. O pale is whilom crowne of housis al !

Id. Troilus and Creseide.

Witnesse the gultlesse blood pourd off on ground, The crowned often slain, the slayer crowned.

Spenser. Faerie Queene.

And like a Persian mitre on her hed Shee wore, -with crownes and ouches garnished. Id. The wyfe came yet, And with her fete,

She holpe to kepe him downe, And with her rocke Many a knocke

She gave him on the crowne.

Sir T. More.

The kings of England before his (Edward I.) time, used to wear their crown upon all solemn feast dayes : he first omitted that custome, saying merrily that crowns do rather onerate than honour princes.

Camden's Remains.

' If thou be a king where is thy crown 1 — My crown is in my heart, not in my head . . My orovm is called content :

A crown it is that seldom kings enjoy. Shakspeare.

Upon my head they placed a fruitless crown, And put a barren sceptre in my gripe, Thence to be wrenched with an unlineal hand, No son of mine succeeding. Id. Macbeth.

For within the hollow crown, That rounds the mortal temples of a king, Keeps death his court ; and there the antick sits, Scoffing his state, and grinning at his pomp.

Id. Richard II.

Ill have this crown of mine cat from my shoulders, Before I'll see the crown so foul misplaced.

Id. Richard III.

Upon the crown o' th' cliff, what thing was that Which parted from you ? Id. King Lear.

In his livery

Walked crowns and crownets ; realms and islands were As plates dropped from his pocket.

Id. Antony and Cleopatra. Oh, this false soul of Egypt ! this gay charm ! Whose eye becked forth my wars, and called them

home ;

Whose bosom was my crownet, my chief end ; Like a right gipsy hath, at fast and loose, Beguiled me to the very heart of loss. Shukspeare.

She shall be, to the happiness of England, An aged princess ; many days shall see her, And yet no day without a deed to crown it. Id. Trust not to your servants who may misinform you, by which perhaps they may gain a few crowns.

Bacon.

He left behind him the reputation of a very fine gentleman, and a most accomplished courtier ; and. after having spent in a very jovial life above four hundred thousand pounds, which, upon a strict com- putation, he received from the crown, he left not a house, nor acre of land, to be remembered by.

Clarendon.

The lasting and crowning privilege, or rather pro- perty, of friendship, is constancy. South. But he that can eat beef, and feed on bread which

is so brown, May satisfy his appetite, and owe no man a crown.

Suckling.

Black he stood as night ; Fierce as ten furies j terrible as hell ; And shook a deadly dart. What seemed his head The likcuesj of a kingly crown had on. Milton.

An our.ce oi silver, whether in penc°, groats, o crown pieces, stivers, or ducatoons, or in bullion, is, and eternally will be, of equal value to another ounce of silver. Locke.*

Let merit crowns, and justice laurels give, But let me happy by your pity live. Dryden's Ep.

All these a milk-white honeycomb surround, Which ill the midst the country banquet crowned.

Dryden.

While his head was working upon this thought, the toy took him in the crown to send for the songster.

L'Estrange.

Behold ! if fortune or a mistress frowns, Some plunge in business, others shave their crowns.

Pope.

I once opened a remarkable atheroma ; it was about as big as the crown of a man's hat, and lay underneath the pectoral muscle. Sharp's Surgery.

To conclude, my lords, if ministers thus persevere in misadvising the king, I will not say that they can alienate the affections of his subjects from the crown, but I affirm they will make the crown not worth his wearing. Lord Chttham.

• They consider themselves as emancipated from obedience, and as being no longer the subjects of the British crown. They leave us no choice but of yield- ing or conquering, of resigning our dominion, or main- taining it by force. Johnson.

King was a name too proud for man to wear With modesty and meekness ; and the crown, So dazzling in their eyes who set it on, Was sure to intoxicate the brows it bound. Coiopcr.

The castled crag of Drachenfels Frowns o'er the wide and winding Rhine,

Whose breast of waters broadly swells Between the banks which bear the vine,

And hills all rich with blossomed trees, And fields which promise corn and wine, And scattered cities crowning these. Byron.

The Niobe of nations ! there she (Rome) stands Childless and crownlcss, in her voiceless woe ;

An empty urn, within her withered hands, Whose holy dust was scattered

long ago.

Id. Childe Harold.

CROWN is also used to signify the possessions and dignity of a king. The crown of England, according to Sir William Blackstone, is, by common law, and constitutional custom, here- ditary, and this in a manner peculiar to itself; but the right of inheritance may, from time to time, be changed or limited by act of parlia- ment, under which limitations the crown still continues hereditary. See SUCCESSION.

CROWN OFFICE, an office belonging to the court of king's bench, of which the king's coro- ner, or attorney, is commonly master. In this office, the attorney-general and clerk of the crown severally exhibit informations for crimes and misdemeanors at common law, as in the case of batteries, conspiracies, libelling, &c., on which the offender is liable to pay a line to the king.

CROWN, PLEAS OF THE. See ARRAIGNMENT, and PLEA.

CROWN, in commerce, is a general name for coins, both foreign and domestic, of or near the value of five shillings sterling. In its limited sense, crown is only applicable to the British coin of that name, which is worth 5s., and equi- valent to six livres French money ; but, in its

extensive sense, it takes in several others ; as the French ecu, which we call the French crown, struck in 1641, for sixty sols, or three livres; also, the patagon, dollar, ducatoon, rix-dollar, and piece of eight.

CROWN, in an ecclesiastical sense, is used for the clerical tonsure, the mark of the Romish ec- clesiastics. This is a little circle of hair shaved off from the crown of the head, more or less broad, according to the quality of the orders re- ceived. That of a mere clerk is the smallest; that of priests and monks the largest. The cle- rical crown was anciently a round list of hair shaved off around the head, representing a real crown ; this is easily observable in several an- cient statues, &c. The religious of St. Dominic and St. Francis still retain it.

CROWNS, ANCIENT. The first crowns were no more than a bandelet drawn round the head, and tied behind, as we still see it represented on

medals round the heads of Jupiter, the Ptole- mies, and the kings of Syria. See our article. CORONATION. Afterwards they consisted of two bandelets; by degrees they took branches of trees of divers kinds; at length they added flowers; insomuch that, Claudius Saturninus says, there was not any plant whereof crowns had not been made. The Roman emperors had four kinds of crowns, still seen on medals, viz. a crown of laurel, a radial or radiating crown, a crown adorned with pearls and precious stones, and the fourth a kind of bonnet, or cap, some- thing like the mortier. The Romans had also various kinds of crowns, which they distributed as rewards of merit, which were considered as marks of nobility to the wearers; and, upon competitions with rivals for rank and dignities, often determined the preference in their favor. CROWNS, MODBEN. A term in heraldry. CROWNE (John), a celebrated dramatic writer, born in Nova Scotia, where his father was a minister. Impatient of the restraint under which he had been educated, he came to Eng- land, where he was reduced to enter into the service of an old lady. He then had recourse to his pen, which quickiy procured him favor at court ; but this kind of subsistence proving pre- carious, he ventured to solicit Charles II. for some establishment. Charles promised to pro- vide for him ; insisted, however, first on having another comedy; and suggested to him the plan of a Spanish play, from which Crowne pro- duced the comedy of Sir Courtly Nice; but the sudden death of the king, on the last day of the rehearsal, disappointed his hopes. He died about 1703, and left seventeen tragedies and co- medies, a romance called Pandion and Amphi- geria, and a burlesque poem, Dasneids, partly imitated from Boileau's Lutrin. His merit lay chiefly in his comedies. Dryden was jealous of him, and used to compliment him when any of his pieces failed.

CROW-NET, an invention for catching wild fowl in winter, which may be used in the day-time. It is made of a fine pack-thread ; the meshes should be two inches wide, the length about ten yards, and the depth three ; it must be verged on the side with good strong cord, and stretched out very stiff on long poles prepared for that pur-

pose. At the proper place, open it, and lay it out at its full length and breadth; then fasten the lower end of it all along the ground, so as only to move it up and down ; the upper end of the net must stand extended on the long cord ; the further end thereof being staked first to the earth by a strong cord about five yards from the net. Place this cord in an even line with the lower edge of the net. The other end must be at least twenty-five yards distant to reach into some natural or artificial shelter, where one may lie concealed from the fowl, otherwise no success can be expected. The net must be placed in such exact order that it may give way to play on the fowl on the least pull of the cord, which must be done smartly lest the fowl should escape. This net may be used for pigeons, crows, or other birds, on

corn-fields newly sown ; also in stubble- fields provided the stubble conceal the net from the birds.

CROWNING, in architecture, is understood, in the general, of any thing that terminates or finishes a member or decoration. Thus, a cor- niche, a pediment, &c. are called crownings: the abacus is said to crown the capital; and any moulding is said to be crowned when it has a fil- let over it ; and a niche is crowned when it is covered with a capital.

CROWNING, in sea-language, denotes the finishing part of a knot made at the end of a rope. It is performed by interweaving the ends of the different stands artfully amongst each other, so as they may not become loosened or untwisted. They are useful in all kind of stoppers.

CROWN-POINT, a township of New York, in Clinton county, so called from the celebrated for- tress in it, which was garrisoned by British troops, from the time of its reduction by general Amherst in 1759, till the late revolution. It was taken by the Americans on the 14th of May, 1775, and retaken by the British the year after. The point upon which it was erected by the French, inl 731 , extends north into lake Champlain.

CROWTH, or CRUTH, a kind of musical in- strument anciently in use among the common people of Wales.

CRO'WTOE, n. s. From crow and toe. A plant.

Bring the rathe primrose that forsaken dies,

The tufted crow-toe, and pale jessamine. Milton.

CROXALL (Samuel), an ingenious English divine, born at Walton-upon-Thames, in Surry, and educated at St. John's College, Cambridge. While at the University he wrote The Fair Cir- cassian, a licentious imitation of Solomon's Song. On entering into orders he obtained the living of Hampton in Middlesex, with several preferments in Hereford Cathedral; and afterwards the united parishes of St. Mary Somerset, and St. Mary Mounthaw, in London ; both which he held till his death in 1751. He was chaplain in ordinary to king George II. He published Scripture Poli- tics, and various poems and translations, with an entire English edition of Esop's Fables. He was a zealous whig.

CROYDEN, a township of New Hampshire, in Cheshire county, adjoining Cornish, and about eighteen miles north-east of Charlestown. It was incorporated in 1763.

CROYDON, a town of England, in Surry, near the head of the river Wandle. It is sur- rounded with hills, and was formerly a seat of the archbishop of Canterbury. It has a large handsome church, an hospital, and a free school. The trade of this town is considerably increased by means of a canal which communicates with the Grand Surry, previously to its falling into the Thames, and, by an iron rail-way, from Wands- worth to Croydon, thence extending forward to Mersham, near Reigate. The archbishop's pa- lace was sold by act of parliament, in 1 780, and has since been converted into a cotton manufac- tory : market day Saturday.

CROYLSTONE, n. s. Crystallised cauk. or spar, found in Derbyshire. In this, says

oodward, the crystals are small.

CRUCIAL, adj. Lat. crux, crucis. Trans- verse ; intersecting one another.

Whoever has seen the practice of 'the crucial inri- sion, must be sensible of the false reasoning used in its favour. Sharp's Surgery.

CRUCIANELLA, petty madder, a genus of the monogynia order, and tetrandria class of plants ; natural order forty-seventh, stellatas. COR. monopetalous, and funnel-shaped, with the lube filiform and the limb unguiculated, or having sin inflexed segment on the top of each segment ; CAL. diphyllous, and there are two linear seeds. There are five species, natives of the southern part of Europe.

CRU'CIATE, v. a. i Lat. crucio. To tor- CRUCIA'TION, n. s. S ture ; to torment ; to excruciate. See EXCRUCIATION.

— Thinking — Why God would suffer his children and servants so vehemently to be cruciated.

Fox's Martyrs.

No man can be so insensate, to think there can be more dreadfulness in the place of those infernal tor- tures, than there is pleasure am! joy in the height of that sphere of blessc.!ii"ss ; since we know we have to do with a God, that delights more ia the prosperity of his saints, than in the eructation and howling of his enemies. Bithop Hall.

CRU'CIBLE, n. f. Lat. crucibulum ; Ital. crosola. A chemist's melting pot, made of earth ; said to be so called, because they were formerly marked with a cross to preserve the operations of the chemist from the interference of infer- nal spirits.

Take a quantity of good silver, and put it in a cru- cible or melting cruse, and set them on the fire, well covered about with coals. Peacham.

Wit, like every other power, has its boundaries. Its success depends on the aptitude of others to receive impressions ; and that as some bodies, indissoluble by heat, can set the furnace and crucible at defianee, there are minds upon which the rays of fancy may be pointed without effect, and which no fire of sentiment can agitate, or exalt. Johnson.

These calces therefore, when mixed with the enamel flux, are melted in crucibles, once or oftener, and the deep coloured opaque glass thence resulting is ground Uito impalpa ! powder, and used for enamel.

Darwin.

CRU'CIFY, v. a. ~\ Lat. crux, crucis. To

CRU'CIFIX, n. s. put to death by nailing

CRU'CIFIXION, n.s. I on a CROSS, which see.

CRU'CIFIER, n. s. ^-The instrument or cross

CRU'CIFEROUS, adj. j on which the person cru-

CRTJ'CIFORM, adj. | cified generally our Sa-

Cau'ciGEROUs. adj.} viour, is represented.

Crucifixion is the punishment so inflicted, and

crucifier, he who inflicts it. Cruciferous and cru-

cigerous are explained by exactly the same

phrase, ' bearing the cross,' by Dr. Johnson ;

but he gives no instance of their use. Cruciform

is, having the form of across. Metaphorically,

the verb is used for the infliction of extreme pain

of any kind.

Thei crieden and seiden, take awei, take awei, cru- cifie him. Pila. seith to hem, schal I crecifie ghoure kynge ? the bisshopis answeriden, we han no kyng but the emperour, and thannc Pilat bitook him to hem that he schulde be crucified. And thei tooken lesus and ledden him out and he bar to himsilff a cross, and wente out into that place that is seid caluarie in ebrew golgatha, where thei crucifieden him.

Widif, Jon 19.

They crucify to themselves the Son of God afresh, and put him to an open shame. Heb. vi. 6.

How scourged, how crowned, how buffeted, how

bruised, And, lastly, how twixt robbers crucifide.

Spenser. Hymn of Heavetily Love.

The misbelieving Christian, therefore, crucifies Christ again. Each of his willing sins is a plain de- spite to his Redeemer. Bishop Hall.

He that prayed for his first crucifiers curseth his se- cond : they crucified him in his weakness ; these in his glory, they fetched him from the garden to the cross ; these pull him out of heaven. Id.

I believe that Jesus Christ was crucified, dead and buried, rose again the third day from the dead, and ascended into heaven. Locke.

But to the cross he nails thy enemies, The law that is against thee, and the sins Of all mankind, with him there crucified. Milton.

Visible judgments were executed on Christ's cruci- fiers. Hammond.

There stands at the upper end of it a large crucifix, very much esteemed. The figure of our Saviour re- presents him in his last agonies of death.

Addison on Italy.

This earthquake, according to the opinion of many learned men, happened at our Saviour's crucifixion.

Id.

The sight of Christ in glory, with his saints, will, in an inexpressible manner, torment the crucifiers of the one, and the persecutors of the others.

Bishop Home, Psa. cxii. 10.

Some were disguised in the skins of wild beasts, and worried to death by dogs. Some were crucified, and others were wrapped in pitched shirts and set on fire when the day closed, that they might serve as lights to illuminate the night. Paley's Evidences.

He died as born, a Catholic in faith ,

Like most in the belief in which they're bred, And first a little crucifix he kissed, And then held out his jugular and wrist.

Byron. Don Juan.

CRUCITA, in botany, a genus of the digynia order, tetrandria class of plants. Interior CAL. tetraphyllous ; exterior CAL. triphyllous; COR. none; only one seed.

CRU

6?:

CRU

CRUDE, adj. CRU'DELY, adv. CRU'DENESS, n.s. ' CRU'DITY, n. s. CRU'DY, adj.

Lat. crudus; Or. from rnp cold. Raw; harsh ; unripe ; uncon- cocted ; immature.

A juice so crude as cannot be ripened to the degree of nourishment. Bacon.

While the body, to be converted and altered, is too strong for the efficient that should convert or alter it, whereby it holdeth fast the first form or consistence, it is crude and inconcoct ; and the process is to be called crudity and inconcoction. Id.

Sherris sack ascends into the brain ; dries me there all the foolish, dull, and crudy vapours which environ it. Shakspeare.

They are very temperate, whereby they prevent in- digestion and crudities, and consequently putrescence of humours. Browne.

Others, whom mere ambition fires, and dole Of provinces abroad, which they have feigned To their crude hopes, and I as amply promised.

Ben Jonson.

In a moment up they turned Wide the celestial soil ; and saw beneath The' originals of nature, in their crude Conception : sulphurous and nitrous foam They found, they mingled, and with subtle art, Concocted and adusted. Milton's Paradise Lost.

Deep versed in books, and shallow in himself, Crude, or intoxicate, collecting toys. Id.

Absurd expressions, crude abortive thoughts, All the lewd legions of exploded faults. Roscommon.

Common crude salt, barely dissolved in common aqua fortis, will give it power of working upon gold.

Boyle.

Fermented liquors have quite different qualities from the point itself; for no fruit, taken crude, has the intoxicating quality of wine. Arbuthnot.

A diet of viscid aliment creates flatulency and cru- dities in the stomach. Id.

The' advice was true ; but fear had seized the most, And all good counsel is on cowards lost : The question crudely put, to shun delay, 'Twas carryed by the major part to stay. Dryden.

Wisdom and power in God are absolutely necessary, because God himself is absolutely necessary : but we cannot crudely say, the curing in men their aversion to the true religion, is absolutely necessary. Locke.

Where cruder juices swell the leafy vein, Stint the young germ, the tender blossom stain ; On each lopped shoot a foster scion bind, Pith pressed to pith, and rind applied to rind.

Darwin.

Bowles — if some new-born whim, or larger bribe Prompt thy crude brain, and claim thee for a scribe, If chance some bard, though once by dunces feared. Now prone in dust, can only be revered, If Pope, whose fame and genius from the first Have foiled the best of critics, needs the worst, Do thou essay ; each fault and failing scan ; The first of poets was, alas ! but man !

Byron. English Bards.

CRUDEN (Alexander), M. A. principally known as author of a

Concordance to the Holy Scriptures, was the son of Mr. William Cruden, merchant, and one of the magistrates of Aberdeen. He was born in 1701, and educated at the gram- mar school of that city. He studied divinity at Marischal College ; but betraying symptoms of insanity, through disappointmei: 31 a love affair,*

u ELLY, aav. lL.a.1. cruaelis, trom crudens. U'ELNESS,W.S. {See CRUDE. Savage ; bar- J'ELTY, n. s.) barous; fierce; hard-hearted ;

he was confined for some time after in a house for the reception of lunatics, at Aberdeen. He was afterwards a private tutor, and a corrector of the press in London, where his Concordance was first published in 1737, dedicated to queen Caro- line. The details of his life in the metropolis embrace only a mournful exhibition of great mental weakness, united with much that was amiable and instructive. He was more than once confined, we believe; called himself Alexander the Corrector, and published Adventures and Admonitions to the public under that title ; and died at Islington, Nov. 1770, possessed of some little property.

CRU'DLE, v. ,t. I From CURD, which see.

CRU'DY, adj. $ To coagulate, congeal, or make into curd. Congealed ; concreted ; coagu- lated.

His cruel wounds with crudy blood congealed, They binden up so wisely as they may. Spenser.

I felt my crudled blood Congeal with fear ; my hair with horrour stood.

Dryden. Virgil.

The Gelous use it, when, for drink and food, They mix their crudled milk with horses' blood. Id. CRUEL, adj. -\ Fr. cruel; Ital. crudele; CRTJ'ELLY, adv. ˆLat. crudelis, from crudens. CRU'ELNESS, CRU' inhuman.

Consider mine enemies ; for they are many, And they hate me with cruel hatred. Psalm xxv. 19.

When he endured hed a yere or two Thi cruel torment, and this peine and wo, At Thebes, in his contree, as 1 said.*

Chaucer. Cant. Tales. The cruette of thee, Quene Medea, Thy litel children hanging by the hals For thy Jason, that was of love so fals. Id.

Ones have the wyndes ihe trees dyspoled clene, And once agayne beginnes their cruelnesse, Synce I have hyd under my brest the harme That never

shall recover healthfulnesse. Surrey.

Use then my death, soe shall your crueltye Spite of your spyte, rid me from all my smart.

Wyatt.

But she more cruel, and more savage wild, Than either lion or the lioness,

Shames not to be with guiltless blood defiled, She taketh glory in her cruelness. Spenser.

Wretched man ! wretched tree ! whose nature

weake

A cruell witch, her cursed will to \vreake, Hath thus transformed, and plast in open plaines.

Id. Faerie Queene.

The Scottish arrows, being sharp and slender, enter

into a man or horse most cruelly, notwithstanding they

are shot forth weakly. Id. On Ireland.

We beheld one of the cruelest fights between two

knights, that ever had adorned the most martial story.

Sidney.

REG. Wherefore to Dover ? GLO. Because I would not see thy cruel nails Pluck out his poor old eyes, nor thy fierce sisters In his anointed flesh stick boorish fangs.

Sluikspeare. King Lear. The cruelty and envy of the people, Permitted by our dastard nobles, Have suffered me by the voice of slaves to be Whooped out of Rome. Shukapenr?.

Who can express the savage cruelty of tke enemies of the gospel ? Look into

the ancient story of the in- tancy of Christianity, ye shall see how men set their •wits on the rack to devise torments. Bishop Hall,

Now hath the spider caught a wandring flye, And drags her captive at her cruell thigh. Id. Sat.

He relies upon a broken reed, that not only basely fails, but also cruelly pierces, the hand that rests upon it. South.

If thou art that cruel god, whose eyes Delight in blood, and human sacrifice. Dryden.

There were great changes in the world by the revo- lutions of empire, the cruelties of conquering, and the calamities of enslaved nations. Temple.

Jefferies, who wantoned in cruelty, had already given a specimen of his character in many trials where he presided ; and he now set out with a savage joy, as to a full harvest of death and destruction. Hume.

Illusions vain ! Can sacred Peace reside Where sordid gold the breast alarms, Where cruelty inflames the eye of Pride, And Grandeur wantons in soft Pleasure's arms ?

Beattie. I am a bending aged tree,

That long has stood the wind and rain ; But now has come a cruel blast,

And my last hold of earth is gane. Burns.

Why did they not then die ? — they had lived too

long

Should an hour come to bid them breathe apart ; Years could but bring them cruel things or wrong.

Byron. Don Juan.

CRU ENTATE, adj. La.t.cruentatus. Smeared •with blood.

Atomical aporrheas pass from the cruentate cloth or weapon to the wound. Glanville.

CRU'ET, n. s. Dutch kruicke ; perhaps from Lat. grus. A crane or heron, from both the bird and the vessel having a long neck ; a vial for vinegar or oil.

Within thy reach I set the vinegar ;

And filled the cruet with the acid tide,

While pepper- water worms thy bait supplied.

Swift.

CRUIKSHANK (William), F.R.S. an emi- nent surgeon and anatomist, was born at Edin- burgh, and completed his medical education at Glasgow in 1771, when he became librarian to the celebrated Dr. William Hunter. He after- wards became also his assistant in his anatomical lectures. On the death of Dr. Hunter he asso- ciated himself as a lecturer with the late Dr. Baillie, and published, in 1786, The Anatomy of the Absorbent Vessels of the Human Body, 4to, of which an improved edition appeared in 1790. He was also'the author of Experiments on the Insensible Pepspiratiou of the Human Body, 1795, 8vo; and several scientific essays and papers in the Transactions of the Royal So- ciety. He died in 1800.

CRUISE, v. n. Dutch kruicke ; Teut. krus ; Fr. cruche ; Lat.grws. Derived as above. A small vesssel or pitcher.

I have not a cake, but an handful of meal in a barrel, and a little oil in a cruise. 1 Kings.

Now shalt tbou never see the salt beset With a big-bellyed gallon flagonet Of an ebbe cruce must thirsty Silen sip, That's all forestalled by his upper lip.

Bp. Hall' Sat.*

The train prepare a cruise of cunouii mould, A cruise of fragrance, formed of bu-nished gold

Pope's Odjssey

CRUISE, v. n. & n. s. ~\ Fr. croise. Either

CRUI'SER, n. s. >from the cioisaders, the

CRUI'SING, adj. j Christian pirates of the

twelfth century, or more directly from Lai. crux,

crucis, as Skinner says, from their sailing up and

down, or cross-ways, in quest of an enemy. To

pass backward and forward, by sea ; to rove ; to

sail in search of an enemy.

*Amongst the cruisers it was complained, that their surgeons were too active in amputating fractured members. Wiseman^*

Thy thoughts are vagabonds ; all outward-bound Mid sands, and rocks, and storms, to cruise for plea- sure;

If gained, dear bought ; and better missed than gained. Young. The Complaint.

Cruisers are small men of war, made use of to-and- fro in the Channel, and elsewhere, to secure our mer- chant-ships and vessels from the enemy's small fri- gates and privateers. They are generally such as sail well, and are commonly well manned. Chambers.

Thus she came often, not a moment losing, Whilst her piratical papa was cruising.

Byron. Don Juan. Thus having settled his marine affairs,

Dispatching single cruisers here and there, His vessel having need of some repairs,

He shaped his course to where his daughter fair, Continued still her hospitable cares. Id.

CRUM, or \ Goth, krome ; Ang.

CRUME, v. n. & n. s. > Sax. cruma. A small

CRUMBLE, v. a. j part of a loaf or portion

of bread ; that which readily breaks off; the soft

part of a loaf, as distinguished from the crust ; a

small portion of any thing.

It is not good to take the breed of children and gyve to houndis. An sche answerde and seyde to him, ghis lord, for litil whelpis eten undir the bord of the crummys of children. Wiclif..Mark vii.

Think on the woman Cananee, that saide That whelpes eten som of the cromes alle That from hir lordes table ben yfalle.

Ohaucer. Cant. Tales.

Take of manchet about three ounces, the crumb only thin cut ; and let it be boiled in milk till it grow to a pulp. Bacon.

Flesh is but the glass which holds the dust That measures all our time, which also shall Be crumbled into dust. Herbert.

There is so hot a summer in my brain, That all my bowels crumble up to dust.

Shakspeare. King John.

He with his bare wand can unthread thy joints, And crvmble all thy sinews. Milton.

*By frequent parcelling and subdividing of inheri- tances, in process of time they became so divided and crumbled, that there were few persons of able estates. Hole's Law of England**

At the same time we were crumbled into various factions and parties, all aiming at by-interests, with • out any sincere regard for the public good. Atterbury, The bill leaves three hundred pounds a year to the mother church j which they can divide likewise, and crumble as low as their will and pleasure will dispose of them. Swift.

If the stone is brittle, if will r.ften crumble, and pass in the form of gravel. Arbuthnot on Diet.

CRUSADES.

6/9

Nor is the profit small the peasant makes,

Clitophon had received such a blow, that he had

Who smooths with harrow, or who pounds with rakesˆ lost the reins of his horse, witn his head well nigh The crumbling clods. Dryden's Georgicksˆ touching the crupper of the horse. Sidney.

Ambition sighed : she found it vain to trust The faithless column, and the crumbling bust.

Pope.

More familiar grown, the table crums Attract his slender feet. Thomson's

Winter.

On these principles he chooses to suppose (for he does not pretend more than to suppose) a naked pos- sibility, that he shall draw some resource out of crumbs dropped from the- trenchers of penury ; that something shall he laid in store from the short allow- ance of revenue officers, overloaded with duty, and famished for want of bread. Burke.

Daily near my table steal,

While I pick my scanty meal ;

Doubt not little tho' there be,

But I'll cast a crumb to thee. LangJtorne.

The storied pyramid, the laurelled bust,

The trophied arch, had crumbled into dust.

Darwin.

How numerous, at the tables there, The sparrows beg their daily fare. For there, in every nook and cell, Where such a family may dwell, Sure as the vernal season comes, Their nests they weave in hope of crumbs.

Cowper.

CRU'MENAL, n. s. Lat. crumena; from Gr. icptyiaw. To hang down as a purse, which was anciently borne at the girdle. A purse.

The fat ox, that woonnt ligye in the stall,

Is now fast stalled in her crumenal.

Spenser's Pastoral.

CRUMP, adj. -\ Anglo-Saxon crtum^;

CRU'MPLE, v. a. >Goth. krome; Dut. rom-

CRT/MPLING, n. s.jpelen. Crooked ; bent, or driven into folds ; to make crooked ; to wrinkle, or rumple. Crumpling is an apple of a rumpled appearance.

When the workmen took measure of him, he was crwmp-shouldered, and the right side higher than the left. L' Estrange.

Sir Roger alighted from his horse, and exposing his palm to two or three that stood by him, they crumpled it into all shapes, and diligently scanned every wrinkle that could be made. Addison.

On inspecting the locomotion of about thirty acres of earth with a small house, near Bilder's Bridge in Shropshire, about twenty years ago, from the foot of a mountain towards the river, I well remember it bore all the marks of having been thus lifted up, pushed away, and as it were crumpled into ridges, by a column of water contained in the mountain. Darwin.

CRUOR, sometimes signifies the blood in general ; sometimes only the venous blood ; and sometimes extravasated or coagulated blood ; but is most frequently used for the red globules of the blood, in contradistinction to the limpid or se- rous part.

CRU'PPER. n. s. Fr. croupier, probably from icpvTrrw, to conceal. The leather of a saddle, •which fastens it to the croup of a horse.

A male tweifold on his croper lay, It seemed that he carried litel array.

Chaucer. Cant. Tales But Guyon selfe, ere well he was aware, Nigh a speare's length behind his crouper fell

Where have you left the money that I gave you ?

Oh — sixpence that I had a Wednesday last,

To pay the saddler for my mistress' crupper.

Shakspeare.

Full oft the rivals met, and neither spared His utmost force, and each forgot to ward : The head of this was to the saddle bent, The other backward to the crupper sent. Dryden. That with fishes and loaves loads his crupper While sectaries squint at the bait, And get nothing but kicks for their supper.

Huddesford.

CRUR7EUS, or CRUREUS Museums, in ana- tomy, a fleshy mass, covering almost all the fore- side of the os femoris, between the two vasti, which likewise cover the edges of this muscle on each side. See ANATOMY.

CRU'RAL, adj. Lat. eras, cruris, the thigh. Belonging to the leg.

The sharpness of the teeth, and the strength of the crural muscles, in lions and tygers, are the cause of the great and habitual immorality of those

animals.

Arbuthnot.

CRUSA'DE, n. s. J See CROISADE. An CRUSA'DO, n. s. $ expedition against the in- fidels; a coin stamped with a cross.

Believe me, I had rather have lost my purse Full of crusadoes. Shakspeare. Othello.

CRUSADES, or CROISADES, ir modern ec- clesiastical history, may be applied to any war undertaken on pretence of defending the cause of religion ; but it has been chiefly used to designate certain expeditions of the powers of Europe against the infidels for the conquest of Palestine. These expeditions commenced A. D. 1096. The foundation of them was a superstitious venera- tion for those places where our Saviour performed his miracles, and accomplished the work of man's redemption. Jerusalem had been taken, and Palestine conquered, by Omar. See KHALIFS. This proved a considerable interruption to the pilgrims, who flocked from all quarters to perform their devotions at the holy sepulchre. They had however still been allowed this liberty, on paying a small tribute to the Saracen caliphs, who were not much inclined to molest them. But in 1065 this city changed its masters. The Turks took it from the Saracens ; and being much more fierce and barbarous, the pilgrims now found they could no longer perform their devotions with the same safety. An opinion was at this time also prevalent in Europe, which made these pil- grimages much more frequent than formally. It was imagined that the 1000 years, mentioned in Rev. xx., were fulfilled ; that Christ was soon to make his appearance in Palestine, to judge the world ; and consequently that journeys to that country were in the highest degree me- ritorious, and even absolutely necessary. The multitude of pilgrims who now flocked to Pales- tine, meeting with a very rough reception from the Turks, filled all Europe with complaints against those infidels, who profaned the holy city, and derided the sacred mysteries of Christianity, even in the place where they were fulfilled

Spenser. Faerie Queene. Pope Gregory A/II

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CRUSADES.

uniting all the princes of Christendom against the Mahommedans ; but his

exorbitant encroach ments upon the civil power of princes had created him so many enemies, and rendered his schemes so suspicious, that he was not able to make great progress in Iris undertaking. The work was reserved for a meaner instrument. Peter, commonly called the hermit, a native of Amiens, in Picardy, had made (he pilgrimage to Jerusalem ;• and being deeply affected with the dangers, to which that act of piety now exposed the pilgrims, as well as with the oppression under which the eastern Christians now labored, formed the bold, and in all appearance impiacticable, design of leading into Asia, from the farthest extremities of the West, armies sufficient to sub- due those potent and warlike nations that now held the holy land in slavery. lie proposed his scheme to pope Martin II., who, prudently re- solving not to interpose his authority till he saw a probability of success, summoned, at Placentia, acounci) of 4000 ecclesiastics and 30,000 seculars. As no hall could be found large enough to con- tain such a multitude, the assembly was held in a plain. Here the pope himself, as well as Peter, harangued them, representing the dismal situation of their brethren in the east, and the indignity offered to the Christian name in allowing the holy city to remain in the hands of the infidels. Tlitsf: speeches were so agreeable to those who heard them, that the whole multitude suddenly and violently declared for the war, and solemnly devoted themselves to perform a service which they believed to be meritorious in the sight of God. But, though Italy seemed to have em- braced the design with ardor, Martin thought it necessary, in order to ensure perfect success, to engage the greater and more warlike nations in the same enterprise. Having therefore despatched Peter to the chief cities and sovereigns of Christendom, he summoned another council at Clennont in Auvergne. The fame of this great and pious design, being now universally diffused, procured the attendance of the greatest prelates, nobles, and princes; and when the pope and the hermit renewed their pathetic exhortations, the whole assembly, as if impelled by immediate in- spiration, exclaimed with one voice, ‘ it is the will of God !’ These words were deemed so much the effect of a divine impulse, that they were employed as the signal of rendezvous and battle in all future exploits of these adventurers. Men of all ranks now flew to arms with the utmost ardor, and a cross was affixed to their right shoulder by all who enlisted in this holy enterprise. At this time Europe was sunk in the most profound ignorance and superstition. The ecclesiastics had gained the greatest ascendancy over the human mind ; and persons who com- mitted the most horrid crimes and disorders, knew of no other expiation than the observances im- posed on them by their spiritual pastors. But amidst the abject superstitionwhichnow prevailed, the military spirit had also universally diffused itself; and, though not supported by art or dis- cipline, was become the general passion of the nations governed by the feudal law. All the great ords possessed the rights of peace and war. They were engaged in continual hostilities with

one

another ; the open country was become a scene of outrage and disorder : the cities, still mean and poor, were neither guarded by walls nor protected by privileges. Every man was obliged to depend for safety on his own prowess or private alliances; and valor was the only excellence which was held in esteem, or gave one man the pre- eminence above another. When, therefore, all the particular superstitions were here united in one great object, the ardor for private hostilities took the same direction ; ‘ and all Europe,’ as the princess Anna Comnena expresses it, ‘torn fro’n its foundations, seemed ready to precipitate itself in one united body upon Asia.’

I. The nobles were moved, by the romantic spirit of the age, to hope for opulent establish- ments in the east, the chief seat of arts and commerce at that time. In pursuit of these chimerical projects, they sold at low prices their ancient castles and inheritances, which had now lost all value in their eyes. The infirm and aged contributed to the expedition by presents and money ; and many of them attended it in person, being determined, if possible, to breathe their last in sight of that city where their Saviour died for them. Even women, concealing their sex undei the disguise of armour, attended the camp. The greatest criminals were forward in a service which they considered as an expiation for all crimes ; and the most enormous disorders were, during the course of these expeditions, committed by men inured to wickedness, encouraged by ex- ample, and impelled by necessity. The adven- turers were at last so numerous,that their sagacious leaders became apprehensive lest the greatness of the armament should be the cause of its o\vn disappointment. For this reason they permitted an undisciplined multitude, computed at 300,000 men, to go before them under the command of Peter the hermit, and Gautier or Walter, sur- named the Moneyless from his being a soldier of fortune. These took the road towards Constan- tinople through Hungary and Bulgaria; and trusting that heaven, by supernatural assistance, would supply all their necessities, they made no provision for subsistence in their march. They now, therefore, soon found themselves obliged to obtain by plunder what they vainly expected from miracles ; and the enraged inhabitants of the countries through which they passed, attacked and slaughtered them without resistance. The more disciplined armies followed after ; and, passing the straits of Constantinople, were mus- tered in the plains of Asia, and amounted in the whole to 700,000 men. The princes engaged in this first crusade were, Hugo, count of Ver- mandois, brother to Philip I. king of France; Robert, duke of Normandy; Robert, earl of Flanders ; Raimond, earl of Toulouse and St. Giles ; the celebrated Godfrey of Bouillon, duke of Lorraine, with his brothers Baldwin and Eus- tace; Stephen, earl of Chartres and Blois; Hugo, count of St. Paul’s; with many other lords. The

general rendezvous was at Constantinople. In this expedition, Godfrey besieged and took the city of Nice. Jerusalem was taken by the con- federated army, and Godfrey chosen king. The Christians gained the famous battle of Ascalon against the sultan of Egypt, which put an end to

the first crusade ; but not to the spirit of cru- sading. The rage continued for nearly two cen- turies.

It. The second crusade, in 1144, was headed by the emperor Conrad III., and Louis VII. king of France. The forces of the emperor were either destroyed by the enemy, or perished through the treachery of Mamiel, the Greek emperor ; and the second army, through the unfaithfulness of the Christians of Syria, was forced to break up the siege of Damascus.

III. The third crusade, in 1188, immediately followed the taking of Jerusalem by Saladin the sultan of Egypt. The princes engaged in this expedition were, the emperor Frederick Barba- rossa; Frederick, duke of Suabia, his second son; Leopold, duke of Austria; Berthold duke of Moravia ; Herman, marquis" of Baden ; the counts of Nassau, Thuringia, Missen, and Hol- land ; and above sixty other princes of the em- pire ; with the bishops of Besancon, Cambray, Munster, Osnaburg, Missen, Passau,Visbur2;, and several others. In this expedition the emperor Frederick defeated the sultan of Iconium : his son Frederick, joined by Guy Lusignon king of Jerusalem, in vain endeavoured to take Acre or Ptolemais. During these transactions, Philip Augustus king of France, and Richard II. king of England, joined the crusade ; by which means the Christian army consisted of 300,000 fighting men ; but, great disputes happening between the kings of France and England, the former quitted the holy land, and Richard concluded a peace with Saladin.

IV. The fourth crusade was undertaken, in 1195, by the emperor Henry VI. after Saladin's death, In this expedition the Christians gained several battles against the infidels, took a great many towns, and were in prospect of great suc- cess, when the death of the emperer obliged them to quit the holy land, and return into Germany.

V. The fifth crusade was published by pope Innocent III. in 1198. Those engaged in it made fruitless efforts for the recovery of the holy land ; for though John de Neule, who commanded the fleet equipped at Flanders, arrived at Ptole- mais a little after Simon of Montfort, Renard of Darrpierre, and others; yet the plague destroying many of them, and the

rest either returning or engaging in the petty quarrels of the Christian princes, there was nothing done ; so that the sultan of Aleppo easily defeated their troops in

1204.

VI. The sixth crusade began in 1228; in which the Christians took the town of Damietta, but were forced to surrender it again. In 1229 the emperor Frederick made peace with the sul- tan for ten years. About 1240 Richard earl of Cornwall, brother to Henry III. king of England, arrived in Palestine at the head of the English crusade; but finding it most advantageous to con- clude a peace he re-embarked, and steered towards Italy. In 1244 the Karasmians, being driven out of Persia by the Tartars, broke into Palestine, and gave the Christians a general defeat neaa Gaza. •

VII. The seventh crusade was headed, in 1249, by St. Lewis, who took the town of Damietta ;

but. a sickness happening in the Christian army, the king endeavoured a retreat ; in which, being pursued by the infidels, most of his army were miserably butchered, and himself and his nobility taken prisoners. A truce was agreed upon for ten years, and the king and lords set at liberty.

VIII. The eighth crusade, in 1270, was headed by the same prince, who made himself master of the port and castle of Carthage in Africa ; but, dying a short time after, he left his army in a very ill condition. The king of Sicily coming up with a good fleet, and joining Philip the Bold, son and successor of Lewis king of Tunis, after several engagements with the Christians, in which he was always worsted, desired peace, which was granted upon conditions advantageous to the Christians : after which both princes embarked for their own kingdoms. Prince Edward of England, who ar- rived at Tunis at the time of this treaty, sailed towards Ptolemais, where he landed a small body of 300 English and French, and hindered Ben- dochar from laying siege to Ptolemais ; but being obliged to return, to take possession of the crown of England, this crusade ended without contri- buting any thing to the recovery of the holy land. In 1291 the town of Acre, or Ptolemais, was taken and plundered by the sultan of Egypt, and the Christians quite driven out of Syria.

This, happily for the honor of the Christian name, was the last of the crusades, although va- rious a ‘ mpts were made by the popes to revive them, particularly by Nicholas IV. in 1291, and Clement V7. in 1311. Voltaire computes the people who perished in the different expeditions at upwards of 2,000,000. Many there were, however, that returned ; and these, having con- versed so long with more civilized and magnifi- cent

races of people, began to entertain some taste for a refined mode of life. Thus the bar- barism, in which Europe had been so long immersed, began soon after to wear off. The princes, also, who remained at home, found means to avail themselves of the frenzy of the people. By the absence of such numbers of restless adventurers, peace was established in their do- minions. They also took the opportunity of annexing to their crowns many considerable fiefs, either by purchase or the extinction of the heirs ; and thus the mischiefs which must always attend feudal governments were considerably lessened. Mr. Gibbon, in tracing the consequences and effects of the crusades, considers that the inter- course between Constantinople and Italy diffused the knowledge of the Latin tongue ; and that several of the fathers and classics were thus at length honored with a Greek version. If we compare, he says, at the era of the crusades, the Latins of Europe with the Greeks and Arabians, their respective degrees of knowledge, industry, and art, our rude ancestors must he content with the third rank in the scale of nations. Their successive improvement and present superiority may be ascribed to a peculiar energy of character, to an active and imitative spirit, unknown to their more polished rivals, who, at that time, were in a stationary or retrograde state. With such a disposition, the Latins might have derived essen-

tial benefits from events which opened to them a long and frequent intercourse with the more culti- vated regions of the east. Their first and most obvious progress was in trade and manufactures, in the arts, which are strongly prompted by the thirst of wealth, the calls of necessity, and the gratification of the sense of vanity. But the in- tellectual wants of the Latins were more slowly felt and supplied ; and, in the age of the crusades, they viewed with careless indifference the litera- ture of the Greeks and Arabians ; nor did they derive any substantial advantage from it. The principle of the crusades was a savage fanaticism ; and the most important effects were analogous to the cause. Each pilgrim was ambitious to return with his sacred spoils, the relics of Greece and Palestine ; and each relic was preceded and fol- lowed by a train of miracles and visions. The active spirit of the Latins preyed on the vitals of their reason and religion, and if the ninth and tenth centuries were the times of darkness, the thirteenth and fourteenth were the ages of absurdity and folly. The embers of the arts of antiquity, as Mr. Gibbon conceives, were rekin- dled by the northern conquerors of the Roman empire ; and after a long interval, from the reign of Charlemagne forward, the tide of civilisation began to flow, about the eleventh century, with a steady and accelerated course. During the two centuries of the crusades its increase was great, and its progress rapid ; and

some philosophers, as we have already stated, have applauded the propitious influence of these holy wars ; but Mr. Gibbon thinks that they checked rather than for- warded the maturity of Europe. The lives and labors of millions, who were buried in the east, would have been more profitably employed in the improvement of their native country ; the accumulated stock of industry and wealth would have overflowed in navigation and trade ; and the Latins would have been enriched and enlightened by a free and friendly correspondence with the climates of the east. In one respect he perceives the accidental operation of the cru- sades, not so much in producing a benefit as in removing an evil. ‘ The larger portion of the inhabitants of Europe1 was chained to the soil, •without freedom, or property, or knowledge ; and the two orders of ecclesiastics and nobles, whose numbers were comparatively small, alone de- served the name of citizens and men. This oppressive system was supported by the acts of the clergy and the swords of the barons. The authority of the priests operated, in the darker ages, as a salutary antidote : — they prevented the total extinction of letters, mitigated the fierceness of the times, sheltered the poor and defenceless, and preserved or revived the peace and order of civil society. But the independence, rapine, and discord, of the feudal lords were unmixed with any seiablance of good ; and every hope of in- dustry and improvement was crushed by the iron weight of the martial aristocracy. Among the causes that undermined that Gothic edifice, a conspicuous place must be allowed to the cru- sades. The ertates of the barons were dissipated, and their race was often extinguished, in these costly and perilous expeditions. Their poverty extorted from their pride those charters of

freedom which unlocked the fetters of the slave, secured the farm of the peasant and the shop of the artificer, and gradually restored a substance and a soul to the most numerous and useful part of the community. The conflagration which destroyed the tall and barren trees of the forest gave air and scope to the vegetation of the smaller and nutritive parts of the soil.’ See Gibbon’s History of the Roman Empire, vol. ii. ; Robert- son’s History, chap. 5. vol. i. ; Historical disqui- sitions concerning India, p. 131, &c. ; Smith’s Wealth of Nations, vol. i. chap. 3 ; Mosheim’s Ecclesiastical History, vols. ii. and iii. ; and Hume’s History, vols. i. and ii.

The late lamented Mr. Mill is the last and not least interesting writer on this fruitful topic. He clothes a narrative full of romantic adventure and anecdote in a correct, clear, and energetic style. We cannot forbear extracting some of his closing reflections.

‘ A view of the heroic ages of Christianity, in regard to their grand and general results, is a useful and important, though a melancholy, em- ployment. The crusades retarded the march of civilisation ; thickened the

clouds of ignorance and superstition ; and encouraged intolerance, cruelty, and fierceness. Religion lost its mildness and charity ; and war its mitigating qualities of honor and courtesy. Such were the bitter fruits of the holy wars ! Painful is a retrospect of the consequences ; but interesting are the historical details of the heroic and fanatical achievements of our ancestors. The perfect singularity of the object, the different characters of the preachers and leaders of the crusades, the martial array of the ancient power and majesty of Europe, the political and civil history of the Latin States in Syria, the military annals of the orders of St. John and the Temple, fix the regard of those who view the history of human passions with the eyes of a philosopher or a statesman. We can follow with sympathy both the deluded fanatic and the noble adventurer in arms, in their wanderings and marches through foreign regions, braving the most frightful dangers, patient in toil, invin- cible in military spirit. So visionary was the object, so apparently remote from selfish rela- tions, that their fanaticism wears a character of generous virtue. The picture, however, becomes darkened, and nature recoils with horror from their cruelties, and with shame from their habitual folly and senselessness. Comparing the object with the cost, the gain proposed with the certain peril, we call the attempt the extremest idea of madness, and wonder that the western world should for 200 years pour forth its blood and treasure in chase of a phantom. But the crusades were not a greater reproach to virtue and wisdom, than most of those contests to which in every age of the world pride and ambition have given rise. If what is perpetual be natural, the dreadful supposition might be entertained that war is the moral state of man. The miseries of hostilities almost induce us to think, with the ancient sage, that man is the most wretched of animals. Millions of our race have been sacrificed at the altar of glory and popular praise, as well as at the shrine of superstition. Fanciful claims to foreign thrones, and the vanity of foreign do-

minion, have, like the crusades, contracted the circle of science and civilisation, and turned the benevolent affections into furious passions. But

They err, who count it glorious to subdue By conquest far and wide, to overrun Large countries, and in field great battles win, Great cities by assault ; what do these worthies, But rob and spoil, burn, slaughter, and enslave Peaceable nations, neighbouring, or remote, Made captive, yet deserving freedom more /

Than those their conquerors, who leave behind Nothing but ruin wheresoe'er they rove, And all the nourishing works of peace destroy ?

We feel no sorrow at the final doom of the crusades, because in its origin the war was ini- quitous and ifhjust. "THE BLOOD OF MAN

SHOULD NEVER BE SHED BUT TO REDEEM THE

BLOOD OF MAN. IT is WELL SHED FO& OUR FAMILY, FOR OUR FRIENDS, FOR OUR GOD, FOR OUR KIND. THE REST is VANITY, THE REST is CRIME." ' vol. ii. pp. 373—376.

CRUSCA, Ital. i.e. bran, the title assumed by a celebrated academy established at Florence, for purifying and perfecting the Tuscan language. The academy took its name from its office and object, which were to refine the language, and, as it were, to separate the bran from it. Accor- dingly, its device is a sieve ; and its motto, II piu bel fior ne coglie ; that is, ' It gathers the finest flour.' The vocabulary Delia Crusca is an excellent Italian dictionary, composed by this academy.

CRUSH, v. a- & n. «. > Mseso-Goth. krius-

CRU'SHING, adj. j tan ; Fr. ecraser. To

break with violence, and perhaps originally, with a violent noise. To compress with force; to squeeze; drive together; press down; subdue; oppress.

The ass thrust herself unto the wall, and crushed Balaam's foot against the wall. Numbers xxii. 25.

They use them to plague their enemies, or to op- press and crush some of their own too stubborn free- holders. Spenser on Ireland.

Cold causes rheums and defluxions from the head, and some astringent plasters crush out purulent matter.

Bacon.

He crushed treasure out of his subjects' purses, by forfeitures upon j

Certainly virtue is like precious odours, most frag- rant where they are incensed or crushed : for prospe- rity doth best discover vice, but adversity doth Dest discover virtue. Id.

Put in their hands thy bruising irons of wrath, That they may crush down, with a heavy fall, The usurping helmets of our adversaries !

Shakspeare. Richard III. You speak him far

T don't extend him, Sir : within himself

Crush him together, rather than unfold

His measure fully. Id. Cymbeline.

This act

Shall bruise the head of Satan, crush his strength, Defeating sin and death, his two main arms. Milton.

Bacchus, that first from out the purple grape Crushed the sweet poison of misused wine. Id.

When loud winds from diff 'rent quarters rusli, Vast clouds encount'ring one another crush. Waller.

Vain is the force of man, and heaven's as vain, To cruth the pillars which the pile, sustain.

Dryden's sEneid.

I fought and fell like one, but death deceived me ; I wanted weight of feeble Moors upon me, To crush my soul out. . Id. Don Sebastian.

Thou shall flourish in immortal youth, Unhurt amidst the war of elements, The wreck of matter, and the crush of worlds.

Addison't Cato.

Dr. Merish has further observed, that many of the echini are crushed in their form, and yet filled with flint, which has taken the form of the crushed shell.

Darwin.

No sycophant or slave, that dared oppose Her sacred cause, but trembled when he rose ; And every venal stickler for the yoke Felt himself crushed at the first word he spoke.

Cowper. How profound

The gulf ! and how the giant element From rock to rock leaps with delirious bound, Crushing the cliffs, which downward worn and rent With his fierce footsteps, yield in chasms a fearful veut. Byron.

Ye race of Frederic ! Frederics but in name And falsehood— heirs to all except his fame ; Who, crushed at Jena, crouched at Berlin, fell First, and but rose to follow. Id.

CRUST, v. & n. "\ Ital. crosta ; Lat. erus- CRU'STACEOUS, adj. | ta, from Gr. (epu-raXXof. CRUSTA'TION, n. s. [See CRYSTAL. To con- CRU'STILY, adv. fgeal; to make hard, or CRU'STINESS, n.s. cover with a coat or CRU'STY, adj. j case ; the coat or case

so produced ; crustaceous is hard or covered with a spell.

For shepherds (said he) there doen lead As lords doen otherwhere ; Their sheep han crust, and they the bread ; The chips and they the cheer.

Spenser. Shepherd's Calendar,

Pretending, that the face of nature may be now quite changed from what it was ; and that formerly the whole collection of waters might be an orbicular abyss, arched over with an exterior crust or shell of earth, and that the breaking and fall of this crust might naturally make a deluge. Bentley.

The 7th of December I put some very strong French brandy into a China cup, such as they drink coffee out of, and exposed it to the air ; in three hours time it was turned into a crusty ice all about the sides of the cup, as if some cold blast had forced it abroad.

Boyle. On Cold.

I contented myself with a plaster upon the place that was burnt, which crusted and healed in very few days. Temple.

Ye are liberal now, but when your turn is sped, You '11 wish me choaked with every crust of bread.

Dry den.

It is true, that there are some shells, such as those of lobsters, crabs, and others of crustaceous kinds, that are very rarely found at land.

Woodward's Nat. Hut.

The egg itself deserves our notice : its parts within, and its crusty coat without, are admirably well fitted for the business of incubation.

Derham's Physico- Theology.

If your master hath many musty, or very foul and crusted bottles, let those be the first you truck at the alehouse. Swift.

He was never suffered to go abroad, for fear of catching cold ; when he should have been hunting down a buck, he was by his mother's side, learning how to season it, or put it in crust.

Addison't Spectator.

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With thee to smile upon him as he eats his crust, the swain is happier than his monarch, from whose court thou art exiled. Sterne,

All else was hushed as Nature's closed ee ; The silent moon shone high o'er tower and tree : The chilly frost, beneath the silver beam, Crept, gently crusting, owre the glittering stream.

Burns.

From cliff to Cliff, the liquid treasure falls ; In beds of stalactite, bright ores among, O'er corals, shells, and crystals, winds along ; Gnats the green mosses, and the tangled wood, And sparkling plunges to his native flood.

Darwin.

I praise you much, ye meek and patient pair, For ye are worthy ; choosing rather far A dry but independent crust, hard earned, And eaten with a sigh, than to endure The rugged frowns and insolent rebuffs Of knaves in office, partial in the work Of distribution. Cowper.

To this family party I do not wish to belong. He may invite persons, if he please, to dinner, and, like lord Pe-'cr, say, that this tough crust is excellent mut- ton. He may toss a sceptre to the king of Etruria to play with, and keep a rod to scourge him in the cor- ner, &c. Sheridan.

CRUST is also applied, by naturalists and che- mists, to those bony coverings of which the whole external surface of crabs, lobsters, and other sea animals is composed. And, as these consist of, 1. cartilaginous substance, possessing the properties of coagulated albumen ; 2. car- bonate of lime ; 3. phosphate of lime (the pre- sence of which distinguishes them from bones), they are considered as an intermediate substance betwixt

bones and shells, partaking of the pro- perties and constitution of both. The shells of eggs, though the animal ceˆnent is much less in them, may likewise be considered in this class, as they contain both carbonate and phosphate of lime ; and it seems very probable, from the expe- riments of Berniard and Hatchett, that the shells of snails are composed of the same ingredients, as these chemists detected phosphate of lime in them. The last mentioned gentleman examined the crust of crabs, lobsters, prawns, and crayfish. Being immersed in diluted nitric acid, they effer- vesced a little, and gradually assumed the ap- pearance of a yellowish-white soft elastic cartilage, each retaining its respective form. The solution yielded a precipitate to acetate of lead, and am- monia threw down phosphate of lime ; carbonate of ammonia threw down a much more copious precipitate of carbonate of lime. See CONCHO- LOGY.

CRUSTACEOUS FISH have their shells usually softer than those of the testaceous kind, which consist of a single piece, generally much thicker and stronger than the former ; such as those of the oyster, scallop, cockle, &c. Dr. Woodward observes, in his Natural History, that of all the shells found in beds of all the different matters dug out of the earth, there are scarce any of the crustaceous kind: the reason he gives for it is, that these being much lighter than the rest, must have floated on the surface at the time of the de- luge, when all the strata were formed, and there have corrupted and perished.

CRUTCH, n.s. > Swed. kruka; Teut.

CRUTCH-LIKE, 5 krucke ; Fr. croce , in all

probability from jcparos, strength ; and upartw,

is to lay fast hold. A support or staff of age or

lameness.

My lymes been both hole and sound, me needed

stilt ne crouch,

He cast asyde them both, and lepe oppon an huche. Chaucer. Cant. Tales.

Ah, thus king Henry throws away his crutch, Before his legs be firm to bear his body.

Shakspeare. Henry VI.

Hence, therefore, thou nice crutch ; A scaly gauntlet now, with joints of

steel, Must glove this hand. Id. Henry IV.

On these new crutchet let them learn to walk.

Dryden's Georgicks.

This fair defect, this helpless aid called wife, The bending crutch of a decrepit life. Dryden,

The dumb shall sing, the lame his crutch forego, And leap exulting like the bounding roe.

Pope's Messiah.

The broken soldier, kindly bade to stay, Sate by his fire and talked the night away ; Wept o'er his wounds, or, tales of sorrow done, Shouldered his crutch and shewed how fields were

won. Goldsmith.

Halting on crutches of unequal size, One leg by truth supported, one by lies ; They sidle to the goal with awkward pace, Secure of nothing but to lose the race. Cowper.

And Circumstance, that unspiritual god And miscreator, makes and helps along

Our coming evils with a crutch-like rod, Whose touch turns hope to dust — the dust we allhave trod. Byron. Childe Harold

CRUZ, SANTA, one of the Caribbee Islands, in- the West Indies, about twenty-four miles in length, and nine in breadth. It enjoys a good air, but the water is not wholesome, until allowed to settle in jars. Sugar-canes, oranges, citrons, and various other fruits flourish here. It was first discovered by Columbus, and possessed after- wards by the English and Dutch. The latter were then driven out by the English, who, in their turn, were expelled by the Spaniards. At last the French seized upon the island in 1650, and sold it the following year to the knights of Malta, from whom it was again purchased by the French West India Company. It was finally sold to the Danes, who held it until the year 1801, when it was taken by the British. The value of the exports and imports for the years 1809 and 1810:—

Imports. Exports.

£435,378 £84,964

422,033 89,949

Long. 64° 35′ W., lat. 17° 45′ N.

CRUZ, SANTA, 1. A island in the straits of Magellan, opposite Cape Monday. 2. The name of a small island on the coast of Brasil. 3. A small island in the gulf of California, situated near the coast. 4. An island in the north Paci- fic Ocean, about twenty miles from the coast of New Albion, from which it is separated by tha straits of Santa Barbora. It is nearly fifty mile i in circumference.

CRUZ, SANTA, a river of South America, in the province of Maracaibo, which falls into the great

CRYING, n. s. CRY'ER, n. s. or CRIER, n. s.

lake of this name. Also a river of Patagonia, which runs into the Atlantic, in lat. 50° 25′ S.

CRUZ, SANTA, DE LA SIERRA, a town and pro- vince of Peru, bounded on the north by Moxos, east and south by the territory of the Indians, south-west by the province of Tomina, and west by that of Mizque. It is eighty-four miles in length, and fifty-four in breadth. It is of a moist and hot temperature. Population 16,000. CRY, v.a.&cns. ~\ Fr. and Welsh, crie ; (Germ. Span, and Port. tgrita ; Gr. icpauyjj. Cri J and gri seem, in most languages, to signify a call or sharp hailing. The Scottish word greit is of similar origin. To utter a loud sound of distress or anxiety ; to bewail ; to deplore ; this seems its primitive ac- ceptation. It came then to indicate the loud ex- pression of other passions; any noisy, sharp, or clamorous exertion of the voice.

Forsothe Jhesus eftsoone criede with a greet voys and gaf up the goost. Wiclif'Mztt. 27.

At midnight a cry was maad : lo the spouse cometh, go ye out to meete him. Id. Matt. 25.

But swiche a crie and swiche a wae they make, That in this world n'is creature living That ever herd swiche another waimenting.

Chaucer. Cant. Tales

What folk be ye that at min home coming Perturben so my feste with crying ! Id.

With cry of houndes and merry blastes betwent?, Where we did chase the feareful herte of force.

Surrey.

No other noyse, nor peoples troublous cryet, As still are wont to annoy the walled town Might there be heard ; but careless Quiet lyes, Wrapt in eternal silence farre from enimyes.

Spenser. Faerie Queerie.

Richely she fcdcs, and at the riche mannes cost. And for her meate she nedes not crave nor cry.

Wyatt.

By all means cry down that unworthy course of late tunes, that they should pay money.

Bacon to Villiers

•

No comfortable star did lend his light, No voice but owls' and wolves' death boding cries.

Skakspeare. The Rape of Lucrece.

Methought I heard a voice cry, Sleep no more ! Macbeth, doth murther sleep ? the innocent sleep.

Shakspeare,

You common cry of curs, whose breath I hate As reek o' th' rotten fens ; whose loves I prize As the dead carcases of unburied men, That do corrupt my air. fd. Corwlanut.

What's the matter, That in the several places of the city You cry against the noble senate ? Id.

Yet let them look they glory not in mischief, Nor build their evils on the graves of great men, For then my guiltless blood must cry against them.

Shaksveare.

I'll to the king,

And from a mouth of honour quite cry down This Ipswich fellow's insolence. Id. Henry VIII. For ere vengeance begin, repentance is seasonable ; but if judgment be once gone out, -we cry too late.

Bishop Hall.

Cry out upon the stars for doing 111 offices, to cross our wooing.

The astrologer, if his predictions come to poss, is cried up to the stars from whence he pretends to draw them. South.

Actors I ve seen, and of no vulgar name, Who being from one part possessed of fame, Whether they are to laugh, cry, whine, or bawl, Still introduce the fav'rite part in all. Churchill.

He scorns the dog, resolves to try The combat next ; but if their cry Invades again his trembling ear, He strait resumes his wonted care. Waller.

When men are become accomplished knaves, they are past crying for their cake. Shaftesbury.

Epiphanius cries out upon it, as rank idolatry, and destructive to their souls who did it. Stillingfleet.

The partial crowd their hopes and fears divide, And aid, with eager shouts, the favoured side. Cries, murmurs, clamours, with a mixing sound, From woods to woods, from hills to hills rebound.

Dry den.

The philosopher Deservedly suspected himself of vanity, when cried up by the multitude.

Glanoille's Scepsis.

All the effect that I conceive was made by crying

up the pieces of eight, was to bring in much more of

that species, instead of others current here. Temple.

They slight the strongest arguments that can be

brought for religion, and cry up very weak ones

against it. Tillotson.

When any evil has been upon philosophers, they

groan as pitifully, and cry out as loud, as other men.

Id.

We are ready to cry out of an unequal manage- ment, and to blame the Divine administration.

A tterbwrtj.

In popish countries some impostor cries out, A mi- racle ! a miracle ! to confirm the deluded vulgar in their errours ; and so the cry goes round, without ex- amining into the chestt. Swift. The child certainly knows, that the worm-seed or mustard-seed it refuses, is not the apple or sugar it cries for. Locke. Tumult, sedition, and rebellion, are things that the followers of that hypothesis cry out against. Id. I find every sect, as far as reason will help them, make use of it gladly ; and where it fails them, they cry out, It is matter of faith, and above reason. Id. Crying is a fault that should not be tolerated in children ; not only for the unpleasant and unbecom- ing noise it fills the house with, but for more consider- able reasons, in reference to the children themselves j which is to be our aim in education. /d. To all my weak complaints and cries,

Thy mercy lent an ear, Ere yet my feeble thoughts had learnt

To form themselves in prayer. Addison. Mute was the wail of Want, and Misery's cry, And grateful Pity wiped her lucid eye ; Peace with sweet voice the Seraph form addressed, And virtue clasped him to her throbbing breast.

Darwin.

Laugh when I laugh, I seek no other fame, The cry is up, and scribblers are my game ; Speed Pegasus ! — ye strains of great and small, Ode ! Epic ! Elegy ! have at you all.

Byron. English Bards.

CRYOPHORUS, the frost-bearer, or carriet of cold, an elegant instrument invented by Dr. Wollaston, to demonstrate the relation between evaporation at low temperatures, and the pro- duction of cold. Take a glass tube, whose in-

ternal diameter is about one-eighth of an inch, with a ball at each extremity of about one inch diameter ; and let the tube be bent to a right angle at the distance of half an inch from each ball. One of these balls should be somewhat less than half full of water, and the remaining cavity should be as perfect a vacuum as can readily be obtained ; which is effected by making the water boil briskly in the one ball, before sealing up the capillary opening left in the other. If the empty ball be immersed in a freezing mixture of snow and salt, the water in the other ball, though at the distance of two or three feet, will be frozen solid in the course of a very few minutes. The vapor contained in the empty ball is condensed by the common operation of cold, and the vacuum produced by this conden- sation gives -opportunity for a fresh quantity to arise from the opposite ball, with proportional reduction of its temperature.

CRYPSIS, a genus of the diandria digynia class and order : CAL. a glume, two-valved, one-flowered : COR. a glume, two-valved, and awnless. There is one species, a grass of Siberia.

CRYPT, n. s. N Lai. crypto; Gr. tcpvir

CRY'PTIC, adj. I TH>, to hide; a secret or

CRY'PTICAL, adj. Chidden place; a cave;

CRY'PTICALLY, adv. i ' Etsolitusmedisecryp-

CRY'PTOGRAPHY,«.S. J tarn penetrare Suburrpe.'

Juven. sat. 5. v. 106. A part of ancient

churches under the high altar. Secret; hidden;

occult; unknown-. Cryptography is a secret

kind of writing, or writing in copper.

When Christian religion was most pure, and in- deed golden, Christians had but low and poor conven- ticles, and simple oratories ; yea caves under the ground, called Cryptce, where they, for fear of perse- cution, assembled secretly together. A figure whereof rcmaineth in the vaults, which yet are builded under the great churches, to put us in remembrance of the old state

of the primitive church. Homilies.

We take the word acid in a familiar sense, without cryptically distinguishing it from those sapors that are akin to it. Boyle.

The students of nature, conscious of her more cryptich ways of working, resolve many strange effects into the near efficiency of second causes.

Glanuille's Apol.

Speakers, whose chief business is to amuse or de- light, do not confine themselves to any natural order, but in a cryptical or hidden method adapt every thing to their ends. Watts.

In consequence of the ardour which he expressed on this subject, it was thought proper to deposit his body in the crypt of that magnificent church. Malone.

CRYPTA, from Kpvirria, to hide, a subter- raneous cell or vault, especially under a church, for the interment of particular families or persons. S. Ciampini, describing the outside of the Vati- can, speaks of the cryptae of St. Andrew, St. Paul, &c. Vitruvius uses the word for a part of a building, answering nearly to our cellar; Juvenal for a cloaca.

CRYPTO-CALVINISTS, a name given to the favorers of Calvinism in Saxony, on account of their secret attachment to the Genevan doc- trine and discipline. Many of them suffered by the decrees of the convocation of Torgaw, held

in 1576. These Calvinists in their progress have divided into various lesser sects.

CRYPTOCEPHALUS, in entomology, a genus of insects of the coleoptera class. The antennae are filiform ; feelers four ; thorax mar- gined ; shells immarginate ; and the body some- what cylindrical. This genus is very extensive, consisting of 268 species.

CRYPTOGAMIA, from Kpuirroc, concealed, and ya/ioe, nuptials, the twenty-fourth class in the Linnaean system, comprehending those plants whose fructification is concealed, either through minuteness, or within the fruit. See BOTANY

CRYPTOSTOMUM, a genus of the pentan- dria class and order: CAL. five-cleft: COR. tube inserted into the throat of the calyx ; borders five-deft ; nectarium five-toothed ; berry, seeds scarred There is one species, a shrub of Guiana.

CRY'STAL, n. s. & adj. ~\ Fr. cristal ; CRY'STALLINE, n. s. & adj. I Span, cristal ;It. CRY'STALLISE, v. n. cristello ; Latin

CRYSTALLISA'TION, n. s. ˆ.crystellus ; Gr. CRY'STAL-COVERED, adj. I KpvCRY'STAL-CRUSTED, adj. from Heb. mp, CRT'STAL-STREAMING. adj. J to join ; coalesce; as water when frozen. The" Romans adopted the word for salts and minerals, as supposing them permanent congelations. See the follow- ing article.

And he schewide to me a flood of quycke watir schynynge as cristal comynge forth of the seete of god and of the lombe. Wiclif. Apocalips, 22.

O closit, gardin, voiJe of wedis wreke, Cristallin well, of clereness clere consigned. Chaucer. Alas the clear chrutall, the bright transplend ant

glasse,

Doth not bewray the colours hid which underneath it hase. Wyatt.

Such seemed they, and so their yellow heare Christalline humor dropped down apace.

Spenser. Faerie Queene.

Furth from her iyen the cristall teares outbrast, And syghing sore, her handes she wrong and folde.

Sackville .

Water, as it seems, turneth into crystal ; as is seen in divers caves, where the crystal hangs in stillicidiis.

Bacon. Mount eagle to my palace crystalline.

Shakspeare. Cymbeline.

If crystal be a stone, it is not immediately concreted by the efficacy of cold, but rather by a mineral spirit.

Browne.

As earth, so he the world Bunt on circumfluous waters, calm, in wide Crystaline ocean, and the loud misrule Of chaos far removed ; lest fierce extremes Contiguous might distemper the whole frame. Milton.

If you dissolve copper in aqua-fortis, or spirit of nitre, you may, by crystallising the solution, obtain a goodly blue. Boyle.

In groves we live, and lie on mossy beds, By crystal streams that murmur through the meads.

Dry den.

All natural metallick and mineral crystallixations were effected by the water, which first brought the particles, whereof each consists, out from amongst the

matter of the strata.

Woodward's Nat. Hut.

CRYSTALS,

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The parts of the eye are made convex, and espe- cially the crystalline humour, which is of a lenticular figure, convex on both sides. Ray on the Creation.

Island crystal is a genuine spar, of an extremely pure, clear, and fine texture, seldom either blemished with flaws or spots, or stained with any other colour.

Hill.

High in the flood her azure dome ascends, The crystal arch on crystal columns bends ; Roofed with translucent shell the turrets blaze, And far in ocean dart their coloured rays .

Darwin.

The cotours of these siliceous vegetables are ge- nerally brown, from the iron, I suppose, or mangan- ese, which induced them to crystallixe, or fuse more easily. Id.

How blest the Solitary's lot, Who, all-forgetting, all-forgot,

Within his humble cell, The cavern -wild with tangling roots, Sits o'er his newly-gathered fruits,

Beside his crystal well ! Burns.

A taste seen in the choice of his abode, A love of music and of scenes sublime,

A pleasure in the gentle stream that flowed Past him in crystal, and a joy in flowers, Bedewed his spirit in his calmer hours.

Byron. Don Juan.

CRYSTAL is found, 1. Opaque, or semitrans- parent, and white, or of a milk color. 2. Opaque and red, or of a cornelian color, from Oran in Barbary. 3. Opaque and black, from the same place. 4. Clear. The specific gravity of these kinds of crystals is from 2650 to 2700. Pro- fessor Bergman extracted from them about six parts of argilla, and one of calcareous earth per hundred weight ; but Mr. Gerhard found some so pure as to contain neither. 5. Clear and blackish brown, the smoky topaz, or rauch topaz of the Germans. It is found at Egan in Nor- way, and at Lovisa in Finland. These crystals are said to become clear by boiling them in tallow. 6. Clear and yellow ; found in Bohemia, and sold for topazes. 7. Clear and violet-colored ; the amethyst, from Saxony, Bohemia, and Dan- nemore in Upland. The most transparent of these are called false diamonds, Bristol, Kerry stones, Alencon diamonds, &c. 8. Colorless rock crystal, properly so called, found in Bo- hemia, the province of Jemtland, and many other places. 9. Pyramidal crystal with one or two points. These have no prismatic shape, but either stand upon a base in cavities of quartz veins; have only a single pyramid, and are of various colors ; or they lie in a clayey earth, and have both pyramids, but no prism. They are found at Blackenburg upon the Hartz, and at Morserosh in the Silverland in Transylvania. The colored transparent crystals derive their tinge from an exceedingly small portion of metallic calces, but lose them entirely when strongly heated. They are called false gems ; viz. the red from Oran in Barbary, false rubies ; the yel- low from Saxony, false topazes ; the green from Dauphiny, very rare, false emeralds or prases ; the violet from Vil in Catalonia, false amethysts ; the blue from Puy in Valey in France, false sap- phires. There are likewise opal or rainbow

crystals, the various colors of which are thrown out in zones across the surface. They make a very fine appearance, though they never shine like the oriental opal. Crystal is also found in many parts of Britain and Ireland. About Bristol it is found of an amethystine tinge. In Silesia, and Bohemia, it is found stained with the colors of the ruby, sapphire, emerald, and topaz ; 'n which case jewellers take great advantage of it, selling it under the name of occidental sap- phire. Fourcroy makes a remarkable difference between the crystals and quartz, by affirming that the former are unalterable in the fire, in which they neither lose their hardness, transparency, nor color, while the quartz loses the same qualities, and is reduced by it to a white and opaque earth. He classes the rock crystals, I. Accord- ing to their form, viz. 1. Insulated hexagonal crystals ending in pyramids of six faces, which have a double refraction, or show two images

of the same object when looked through. 2. Hex- agonal crystals united, having one or two points. 3. Tetrahedral, dodecahedral, flatted crystals ; and which, though hexagonal, have nevertheless their planes irregular. 4. Crystals in large masses, from the island of Madagascar, which have a simple refraction. II. With regard to their co- lor, as being either diaphanous, reddish, smoky, or blackish. III. With regard to accidental changes, some are hollow ; some contain water within one or more cavities ; some are cased one within the other ; some are of a round form, as the pebbles of the Rhine ; some have a crust of metallic calces or of a pyrites ; some are found crystallised in the inside of a cavity, while some seem to contain amianthus or asbestos; and others contain shirls. M. Fourcroy reckons among crystals the oriental topaz, the hyacinth, the oriental sapphire, and the amethyst. Mr. Daubenton has always looked upon this last as a quartz of a crystal.

i. The forms or orders into which pure crystals have been divided are three : Perfect columnar crystals, with double pyramids, composed of eighteen planes, in an hexangular column, ter- minated by an hexangular pyramid at each end. ii. Perfect crystals with double pyramids, with- out a column, composed either of twelve or sixteen planes, in two hexangular pyramids, joined closely base to base, without the inter- vention of any column, iii. Imperfect crystals, with single pyramids, composed either of twelve or ten planes, in an hexangular or pentangular column, affixed irregularly at one end to some solid body, and terminated at the other by an hexangular or pentangular pyramid. Under these there are almost infinite varieties in the number of angles, and the length, thickness, and other accidents of the columns and pyra- mids, iv. WThen crystal is blended with metalline particles at the time of its formation, it assumes a variety of figures wholly different from these, constituting a fourth order, under the name of metalline crystals : when the metal is lead, the crystal assumes the form of a cube ; when it is tin, of a quadrilateral pyramid, with a broad base ; when iron, the crystal is found concreted in rhomboidal figures : these crystals are very common about mines ; but the common spars,

which are liable to be influenced in the same manner by the metals, and to appear in the very same form, are to be carefully distinguished from them. There is one very easy test ; viz. that all spars are subject to be dissolved by aqua-fortis, and effervesce violently only on its touching them : but it has no such effects on crystal, v. When crystals are found in the form of round pebbles, which is occasioned by their being tos- sed about and rubbed against one another by floods or by the sea, they are called by the English lapidaries pebble crystal. They come from the Indies, Siberia, and other places, vi. The pebble crystal is common in all parts of the world ; but that

which is formed of hexangnlar columns, affixed to a solid base at one end, and terminated by an hexangular column at the other, is infinitely more so : this is called sprig or rock crystal, and is the species described by most authors, under the name of crystal of the shops, or that kept for medicinal uses. When the rock crystals are semitransparent, or intermixed with opaque veins, they are called by the Swedish lapidaries milk crystals. According to Bomare, they are generally formed upon or among quartz, which shows their great affinity, and are to be found in all parts of the world. The greatest quantity of them is brought from mourtf Saint Gothard, in Switzerland. Large pieces of these, weighing from 500 to 800 pounds, were found there at Grimselberg ; another of about 1200 pounds weight was found some years ago at Fisback in the Wallais ; and a piece six feet long, four wide, and equally thick, was found in the island of Madagascar, where these natural productions are of the most extraordinary size and perfection. In the imperial collection at Vienna, there is a pyramidal crystal vase two ells in height, cut wholly out of one piece. It is tisual with the largest crystals of the German mountains to be full of cracks and flaws, and to be so constructed internally as to show all the prismatic colors ; but the above mentioned ones were quite free from these blemishes, and resembled columns of the purest glass, ˆnly much clearer than any glass can be made

Natural crystal may be reduced by calcination into a state proper for making glass with alkaline sa}ts, and thus becomes a very valuable fritt. The method is this: calcine natural ciystal in a crucible ; when it is red-hot, throw it into cold water. Repeat this eight times, covering the crucible that no dust or ashes may get in among the crystal. Dry this calcined mass, and reduce it to an impalpable powder.

Crystal is frequently cut ; and lustres, vases, and toys, are made of it as of other beautiful stones. For this purpose it is to be chosen per- fectly clear and transparent. It may be tried by aqua-fortis, or by drawing it along a pane of glass. The genuine crystal will not be affected by the acid, and will cut glass almost like a diamond When any piece of workmanship of natural crystal is become foul and dark, the fol- lowing method is to be used for recovering its brightness without hurting the polish : — Mix to- gether six parts of common water and one part of brandy ; boil these over a brisk fire, and let the crystal be kept in it, in a boiling state, a

quarter of an hou- ; then take it out and rub it carefully over with a brush dipped in the same liquor ; after this wipe it with a napkin, and thus its surface will be perfectly cleaned, and rendered as bright us at first, without any injury to the points of the cutting, or the polish of the planes or faces, which would probably happen, were the cleaning attempted by mere rubbing with a cloth.

CRYSTALLISATION, (rpvraXXoc, ice,) is that process of nature by which the particles of a body are arranged systematically in passing from a liquid to a solid state. The Greeks first ap- plied it to ice, as the most obvious transforma- tion of this kind ; and the Roman naturalists transferred it to rock crystal and similar bodies, which they considered as only mere per- manent formations of the same description as ice. Then it being observed that nitre and cer- tain other salts were capable, by particular ma- nagement, of exhibiting a similar prismatic form, the word crystal assumed a more general mean- ing, and was finally applied to all such saline substances and metallic ores as exhibit this tendency to symmetrical arrangement. Crystallo- graphy is a term that has been used for the science which discourses of crystallisation. This process is in a vast number of cases completed by nature in the bodies presented to our view. Modern naturalists observe that ' most of the solids which compose the mineral crust of the earth, are found in the crystallised state. Thus granite consists of crystals of quartz, felspar, and mica. Even mountain masses like clay- slate, have a regular tabulated form.' It is also imi- tated by art. The chemist produces it both by ig- neous fusion, and by solution inaliquid. When the temperature is slowly lowered in the former case, or the liquid slowly abstracted by evapora- tion in the latter, the al tractive forces resume the ascendency, and arrange the particles in symmetrical forms. And, if few of the crystal- lisations that are performed by nature have been successfully accomplished by art, chemistry has been able on the other hand, to effect the crystal- lisation of a variety of substances, chiefly salts, which are not found crystallised naturally ; and, by taking proper advantage of this circumstance, has succeeded in obtaining them in a state of greater purity than they can be procured in by any other method. M. Le Blanc in a paper in the Journal de Physique, gives instructions for obtaining crystals of large size. His method is to employ flat glass or China vessels : to pour into these the solutions boiled down to the point of crystallisation : to select the neatest of the small crystals formed, and put them into vessels with more of the mother-water of a solution that has been brought to crystallise confusedly ; to turn the crystals at least once a day ; and to sup- ply them from time to time with fresh mother- water. If the crystals be laid on their sides, they will increase most in length ; if on their ends, most in breadth. When they have ceased to grow larger, they must be taken out of the liquor, or they will soon begin to diminish. It may be obseryed in general, that very large crystals are less transparent than those that are small.

The crystals of metals may be obtained by fusing them in a crucible with a

hole in its bot- tom, closed by a stopper, which is to be drawn out after the vessel has been removed from the fire, and the surface of the metal has begun to congeal. The same effect may be observed if the metal be poured into a plate or dish, a little inclined, which is to be suddenly inclined in the opposite direction, as soon as the metal begins to congeal round its edges. In the first method, the fluid part of the metal runs out of the hole, leaving a kind of cup lined with crystals ; in the latter way, the superior part, which is fluid, runs off, and leaves a plate of metal studded over with crystals. See CHEMISTRY.

*The phenomena of crystallisation have much engaged the attention of modern chemists, and a vast number of experiments have been made with a view to determine exactly the different figures assumed by salts in passing from a fluid to a solid form. It does not, as yet, however, appear, that any certain rule can be laid down in these cases, as the figure of saline crystals may be varied by the slightest circumstances. Thus, sal-ammoniac when prepared by a mix- ture of pure volatile alkali, with spirit of salt, shoots into crystals resembling feathers ; but if, instead of a pure alkali, we make use of one just distilled from bones, and containing a great quantity of animal oil, we shall, after some crys- tallisations of the feathery kind, obtain the very same salt in the form of cubes. Such salts as are sublimable, crystallise not only in the aqueous way by solution and evaporation, but also by sublimation ; and the difference betwixt the figures of these crystals is often very remarkable. In nature also we find frequently the same chemical substance crystallised in forms ap- parently very dissimilar. Thus, carbonate of lime assumes the form of a rhomboid, of a regu- lar hexahedral prism, of a solid terminated by twelve scalene angles, or of a dodecahedron with pentagonal faces, &c. Bisulphuret of iron or martial pyrites produces sometimes cubes and sometimes regular octohedrons, at one time do- decahedrons with pentagonal faces, at another icosahedrons with triangular faces, &c. And while one and the same substance lends itself to so many transformations, »s meet with very dif- ferent substances, which "3 *esent absolutely the same form. Thus fluate of lime', muriate of soda, sulphuret of iron, sulphuret of lead, &c. crys- tallise in cubes, under certain circumstances ; and in other cases, the same minerals, as well as sulphate of alumina and the diamond, assume the form of a regular octohedron.*

Linnaeus, in his bold attempt to arrange the whole of nature's works, could not fail to observe a resemblance more or less perfect between the forms of various salts, and those of several crys- tallised minerals. He however, considered the faculty of crystallising to be peculiarly charac- teristic of saline substances, and hence concluded that all the crystallised earthy minerals were compounded of earth and some particular salt, •which gave them outward form. Thus, because both nitre and quartz crystallise in the

form of hexahedral prisms, terminated by hexahedral pyramids, he regarded the former as the type of VOL. VI.

*a whole genus, of which the latter was one of the species ; observing again that alum and the diamond crystallise in pyramidal octohedrons, he arranged the latter as a species of the genus alum. Wallerius very soon proved that this hypothesis was untenable ; nothing more cor- rect, however, was offered as a theory of crys- tallisation until that of M. Rome de Lisle ap- peared. This able philosopher first arranged the study of crystallisation on the simple basis of facts. He examined all the crystalline forms that fell under his observation, delineated them with accuracy, ascertained *.he measurement of their principal angles, and arranged them with great sagacity, into species and varieties. Among the different forms belonging to each species, he chose one as the most proper, from its simplicity, to be regarded as the primitive form ; and by supposing it truncated in different ways, he de- duced the other forms from it, and determined a gradation or series of transitions between this same form and that of polyhedrons, which seemed to be still farther removed from it. In this way he discovered that the principal of the an- gles formed by the incidence of the circum- scribing planes on each other, are always of the same dimensions, notwithstanding the truncatures and other modifications undergone by the primi- tive figure; and also that the dimensions of these angles vary in every different species, although the general figure of the crystals may be the same.*

The illustrious Bergman followed the same line of observation ; until he became convinced that the varieties in crystallisation are not owing to truncations of the primitive figure, but to the superposition of secondary laminae upon its faces, either in regular, or variable and decreasing pro- portions. According to this hypothesis, however, it would still follow, that if the external laminse of any crystals were taken off in regular suc- cession, the remaining nucleus would be con- • stantly approaching to the primitive form, and at last arrive at it. Bergman demonstrated this his principal discovery in the formation of the dog-tooth spar, by an actual dissection of the crystal. Removing the different crystalline laminae in succession, he arrived at a rhomboidal solid, divisible only by planes parallel to its surfaces, and therefore unsusceptible of under- going any further change of form. In attempt- ing, "however, to apply this discovery to other varieties of calcareous spar, he was not equally successful.

It was reserved for M. Haiiy, to unfold with mathematical accuracy, the profound but sim- ple laws of nature on this subject. He has confirmed the general principles of de Lisle and Bergman with regard to the primitive formation of crystals ; and has rendered it highly probable, that the integrant particles of crystallising substances always combine in the same

body in the same way ; or in other words, that the same faces, or the same edges, always attach themselves toge- ther ; but that these differ in crystals produced from different substances; a fact which can scarcely be accounted for, without supposing that the particles of bodies are endowed with a certain polarity, which makes them attract one

part of another particle, and repel every other part. His next improvement in the study of the laws of crystallisation, however, was the sub- mitting to regular calculation. He produced a mathematical theory, reduced to analytical formulae, representing every possible case ; and the application of which to known forms leads to the accurate valuations of angles, and has hitherto agreed with all the recorded observations and experiments upon this subject.

We cannot, therefore, better exhibit the present state of science with regard to this interesting part of nature, than by submitting to the reader, I. M. Haiiy's Theory of the Structure of Crystals. IT. Of the Laws of Crystallisation; and III. The Observations of Dr. Wollaston and more modern philosophers on the same subject.

SECT. I. — M. HAUY'S THEORY OF THE STRUC- TURE OF CRYSTALS.

This may be conveniently considered in three parts. 1. His theory of primitive forms : 2. Of secondary forms ; and 3. Of integrant molecules, or constituent particles.

1. The primitive form is, according to this theory, the nucleus of the crystal ; or a solid of a constant form, engaged symmetrically in all the crystals of one and the same species, and the faces of which follow the directions of the laminae which form these crystals. The primitive forms of all crystals which have been hitherto examined are six. 1. The parallelepiped, bounded by six planes, the opposite planes being parallel. This includes the cube, and varieties of the rectangu- lar prism, the oblique angular prism, and the rhomboid. 2. The octahedron. This is a double four-sided pyramid. When the triangular faces are equilateral, it is called a regular octahedron. There are, besides this, other varieties of the pri- mitive octahedron, in which the pyramids are longer or shorter than the regular one, or have a rhomboidal base, or a rectangular base, longer in one direction than the other. 3. The regular tetrahedron bounded by four equilateral triangles. 4. The regular hexahedral prism, or equiangular six-sided prism. 5. The rhomboidal dodecahe- dron, bounded by twelve equal rhombs. 6. The pyramidal

dodecahedron, consisting of two six- sided pyramids joined base to base.

The primitive forms which most frequently occur are, the parallelepiped and the octahedron. The tetrahedron and dodecahedron are very rare as primitive forms, though common as the secon- dary forms of crystals.

By this mechanical division of minerals we as- certain their true primitive form, and prove that this is invariable while we operate upon the same substance ; however diversified or dissimilar the forms of the crystals belonging to that substance may be. Two or three examples will suffice to demonstrate this. If we take a regular hexahe- dral prism of carbonate of lime (plate I. CRYS- TALLISATION, figs. 1 and 2), and try to divide it parallel to the edges, from the contours of the bases, we shall find, that three of these edges taken alternately in the upper part, for instance, the edges If, cd, bm, may be referred to this di- vision : and in order to succeed in the same way with respect to the inferior base, we must choose

not the edges I'f, c cf, b' m', which correspond with the preceding, but the intermediate edges d'f, b'c', I'm'. The six sections will uncover an equal number of trapeziums. Three of the latter are represented upon fig. 2 ; viz. the two which intercept the edges, If, cd, and are desig- nated by pp o o, a a k k, and that which intercepts the lower edge cff, and which js marked by the letters nnii. Each of these trapeziums will have a lustre and polish ; from which we may easily ascertain in general cases that it coincides with one of the natural joint0 of which the prism is the assemblage. We shall attempt in vain to divide the prism in any other direction. But if we continue the division parallel to the first sec- tions, it will happen, that on one hand the surfa- ces of the bases will always become narrower, while, on the other hand, the altitudes of the lateral planes will decrease ; and at the term at which the bases have disappeared, the prism will be changed into a dodecahedron, fig. 3, with pentagonal faces, six of which, such as ooiOe, oik ii, &c. will be the residues of the planes of the prism ; and the six others E A I o o, O A' K i i, Sec. will be the immediate result of the mechan- ical division.

Beyond this same term, the extreme faces will preserve their figure and dimensions, while the lateral faces will incessantly diminish in height, until the points o, k, of the pentagon ol/cii, coming to be confounded with the points ii, and so on with the other points similarly situated, each pentagon will be reduced to a simple triangle, as we see in fig. 4. The points which are con- founded, two and two, upon this figure, are each marked with the two letters which served to de- signate them when they were separated, as in fig. 3. And when new sections have obliterated these triangles, so that no vestige of the surface of the prism remains, fig. 1, we shall have the nucleus or the primitive form, which will be an obtuse rhomboid, fig 5, the grand

angle of which E AI or EOI, is 101° 32′ 13”. It is observed, that each trapezium, such as ppoo, fig. 2, unco- vered by the first sections, is very sensibly inclined from the same quantity, as well upon the residue ppdebm of the base, as upon the residue ooff of the adjacent plane. Setting out from this equality of inclinations, we deduce from it, by calculation, the value of the angles with the pre- cision of minutes and seconds, which mechanical measurements are not capable of attaining.

If we try to divide a crystal of another species, we shall have a different nucleus. For instance, a cube of fluate of lime will give a regular octahe- dron, which we succeed in extracting by dividing the cube upon its eight solid angles, which will in the first place discover eight equilateral trian- gles, and we may pursue the division, always parallel to the first sections, until nothing more remains of the faces of the cube. The nucleus of the crystals of sulphate of barytes will be a straight prism with rhombous bases ; that of the crystals of phosphate of lime, a regular hexahe- dral prism ; that of sulphureted lead, a cube. Sec.; and each of these forms will be constant, relative to the entire species, in such a manner, that its angles will not undergo any appreciable variation.

2. Secondary forms are those in which the

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laminae of a crystal divide in any other direction than parallel to its faces ; and are sometimes called secondary crystals. The division of se- condary crystals by sections in the direction of the laminae is, in some cases, easily effected ; in others, the joints are indistinct, and require the crystal to be heated and plunged into cold water to make them visible. The direction of the la- minae is frequently rendered obvious by turning a mineral slowly round in the sunshine, when the reflections from the internal parts will show the structure. Where no joints are discoverable, Haiiy determines tbeir~direction and the form of the primitive nucleus by conjecture, from the appearances offered by the secondary crystal.

3. Of integrant molecules. According to M. Haiiy the nucleus of a crystal is

not the last term of its mechanical division. It may always be subdivided parallel to its different faces, and sometimes in other directious also. The whole of the surrounding substance is capable of being divided by strokes parallel to those which take place with respect to the primitive form. If the nucleus be a parallelopipedon, which cannot be subdivided except by blows parallel to its faces, like that which takes place with respect to car- bonated lime, it is evident that the integrant mo- lecule will be similar to this nucleus itself. But it may happen that the parallelopipedon admits of further sections in other directions than the former.

The forms of the integrant molecules of all crystals may be reduced to three, the tetrahedron, or the simplest of the pyramids ; the triangular prism, or the simplest of all the prisms ; and the parallelopipedon, or the simplest among the solids, which have their faces parallel two and two. And since four planes at least are neces- sary for circumscribing a space, it is evident that the three forms in question, in which the number of faces is successively four, five, and six, have still, in this respect, the greatest possible simplicity.

To recapitulate. — The constituent particles of all crystals Haiiy denominates their integrant molecules, and conceives them to be arranged in rows ; a number of these rows forming thin laminae or plates. When these laminae are par- allel with all the faces or planes of a crystal, they may be removed without changing the form of the crystal ; but if the laminae divide in any other direction than that which is parallel to the faces, a change of form will be produced by every division, until at last we obtain a nucleus which is divisible in a direction parallel to its sides. In the former case, the primitive form is the form of the crystal itself. Hence if a cubic crystal be divisible only by laminae parallel to its six sides, we may continue diminibhing the mag- nitude of the crystal, as long as mechanical divi- sion is possible without any change of form, When the laminae of a crystal divide in any other direction than parallel to its faces, it is called a secondary form or derivative crystal.

SECT. II. — OF THE LAWS OF CRYSTALLISATION-

‘ If,’ says M. Haiiy, ‘ we consider attentively

the figures of the plates which successively cover

again the nucleus of a crystal, and which we

thall call laminae of superposition, it will be per- ceived that proceeding from the nucleus they go on by a progressive diminution or decrement, sometimes on all sides at once, sometimes in cer- tain parts only. But the*

difference between each lamina and that which precedes it, can only arise from the retrenchment of a certain quantity of integrant particles that are taken from the first till it is equal to the second ; and, since the edges of the decreasing laminae are constantly right lines parallel one to another upon the different laminae, it results that the differences of which we have spoken are measured by the subtractions of one or many ranges of integrant particles. This, therefore, is the enunciation of the problem presented for solution : a secondary crystal being given, and the figure of its nucleus and of its in- tegrant particles being likewise given — supposing, moreover, that each of the laminae that will be added to the nucleus does not project so far as the preceding, in certain parts, by a quantity equal to one, two, three, &c/rangesof moleculse — to determine among the different laws of diminu- tion those from which a similar form to that pro- posed will result, with respect to the number, the figure, and the disposition of its faces, and to the measure of both its plane and solid angles. This sort of problems can only be resolved by the aid of a rigid calculus.'

The decrement in question, then, is effected by regular subtractions of one or more rows of in- tegrant molecules ; and the theory, in determin- ing the number of these rows by means of calcu- lation, succeeds in representing all the known results of crystallisation, and even anticipates future discoveries, indicating forms which, being still hypothetical only, may one day be presented to the enquiries of the philosopher.

1. Of Decrements on the Edges. — Let s s', fig. 6, plate I.

be a dodecahedron with rhombic planes. This solid, which is one of the six primitive forms of crystals, also pre- sents itself occasionally as a secondary form, and in this case it has, as a nucleus, sometimes a cube and sometimes an octohedron. Supposing the nucleus to be a cube : — In order to extract this nucleus, it is sufficient successively to remove the six solid angles composed of four planes, such as s, r, t, &c., by sections adapted to the direction of the small diagonals. These sections will dis- play as many squares, AEO I, EOO' E', I OO' I', fig. 7, &c., which will be the faces of the cube.

Now, let us conceive that each of these faces is subjected to a series of decreasing laminae solely composed of cubic molecules, and that every one of these laminae exceeds the succeeding one," towards its four edges, by a quantity equal to one course of these same molecules. After- wards we shall designate the decreasing laminae which envelope the nucleus, by the name of la- minae of superposition. Now, it is easy to con- ceive that the different series will produce six quadrangular pyramids, similar in some respects to the quadrangular steps of a column, which will rest on the faces of the cube. Three of these pyramids are represented in fig. 8, and have their summits in s, t, r'. As there are six quadrangu- lar pyramids, we shall have

twenty- four triangles, such as, O s I, O 1 1, &c. But because the de-

crement is uniform from j to t, and so on with the rest, the triangles taken two and two are on a level, and form a rhomb s O 1 I. The surface of the solid will therefore be composed of twelve equal and similar rhombs ; i. e. this solid will have the same form with that which is the sub- ject of the problem. This structure takes place, although imperfectly, with respect to the crystals called boracic spars. The dodecahedron now under consideration is represented by fig. 8 in such a way that the progress of the decrement may be perceived by the eye. On examining the figure attentively, we shall find that it has been traced on the supposition that the cubic nucleus has on each of its edges seventeen ridges of molecules ; whence it follows, that each of its faces is composed of 289 facets of molecules, and that the whole solid is equal to 4913 molecules. On this hypothesis, there are eight laminae of superposition, the last of which is reduced to a simple cube, whose edges determine the numbers of molecules which form the series 15, 13, 11, 9, 7, 5, 3, 1, the difference being 2, because there !s one course subtracted from each extremity. If instead of this coarse kind of masonry, which has the advantage of speaking to the eye, we substitute in our imagination the infinitely deli- cate architecture of nature, we must conceive the nucleus as being composed of an incomparably greater number of imperceptible cubes. In this case, the number of laminae of superposition will also be beyond comparison greater than on the preceding hypothesis. By a necessary conse- quence, the furrows which form these laminae by the alternate projecting and re-entering of their edges, will not be cognizable by our senses ; and this is what takes place in the polyhedra which crystallisation has produced at leisure, without being disturbed in its progress.

2. M. Haiiy calls decrements in breadth, those in which each lamina has only the height of a molecule ; so that their whole effect, by one, two, three, &c., courses, is in the way of breadth. Decrements in height are those in which each la- mina, exceeding only the following one by a sin- gle course in the direction of the breadth, may have a height double, triple, quadruple, &c., to that of a molecule : this is expressed by saying that the decrement takes place by two courses, three courses, &c., in height. SECT. III. — OF SUBSEQUENT OBSERVATIONS ON CRYSTALLISATION.

Dr. Wollaston communicated to the Royal Society in 1813 some

observations on the ulti- mate cause of crystalline forms, equally ingenious and profound.

Among the known forms of crystallised bodies, there is no one common to a greater number of substances than the regular octohedron, and no one in which a corresponding difficulty has oc- curred with regard to determining which modifi- cation of its form is to be considered as primitive; since in all these substances the tetrahedron ap- pears to have equal claim to be received as the original from which all their other modifications are to be derived. The relation of these solids to each other is most distinctly exhibited to those who are not much conversant with crystallo-

graphy, by assuming the tetrahedron as primitive: for this may immediately be converted into an octohedron by the removal of four smaller tetra- hedrons from its solid angles. Plate II. CRYS- TALLISATION, fig. 1.

The substance which most readily admits of division by fracture into these forms, is fluor spar ; and there is no difficulty in obtaining a sufficient quantity for such experiments. But it is not, in fact, either the tetrahedron or the octohedron, which first presents itself as the apparent primi- tive form obtained by fracture. If we form a plate of uniform thickness by two successive divisions of the spar, parallel to each other, we shall find the plate divisible into prismatic rods, the section of which is a rhomb of 70° 32′ and 109° 28′ nearly; and, if we again split these rods transversely, we shall obtain a number of regular acute rhomboids, all similar to each other, having their superficial angles 60° and 120°, and pre- senting an appearance of primitive molecule, from which all the other modifications of such crystals might very simply be derived. And we find, moreover, that the whole mass of fluor might be divided into, and conceived to consist of, these acute rhomboids alone, which may be put together so as to fit each other without any intervening vacuity.

But, since the solid thus obtained (as repre- sented in fig. 2) may be again split by natural fractures at right angles to its axis, fig. 3, so that a regular tetrahedron may be detached from each extremity, while the remaining portion assumes the form of a regular octohedron ; and, since every rhomboid that can be obtained must admit of the same division into one octohedron and two tetra- hedrons, the rhomboid can no longer be regarded as the primitive form ; and, since the parts into which it is divisible are dissimilar, we are left in doubt which of them is to have precedence as primitive. In the examination of this question, whether we adopt the octohedron or the tetra- hedron as the primitive form, since neither of them can fill space without leaving vacuities, there is a difficulty in conceiving any arrange- ment in which the particles will remain at rest : for, whether we suppose, with the abbe Haiiy, that the particles are

tetrahedral with octohedral cavities, or, on the contrary, octohedral particles regularly arranged with tetrahedral cavities, in each case the mutual contact of adjacent particles is only at their edges ; and, although in such an arrangement it must be admitted that there may be an equilibrium, it is evidently unstable, and ill adapted to form the basis of any permanent crystal.

With respect to fluor spar, and such other sub- . stances as assume the octohedral and tetrahedral forms, all difficulty is removed, says Dr. Wollas- ton, by supposing the elementary particles to be perfect spheres, which, by mutual attraction, have assumed that arrangement which brings them as near to each other as possible. The relative position of any number of equal balls m the same plane, when gently pressed together, forming equilateral triangles with each other (as represented perspectively in fig. 4), is familiar to every one ; and it is evident that, if balls so placed were cemented together, and the stratum

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thus formed were afterwards broken, the straight lines in which they would be disposed to sepa- rate would form angles of 60° with each other. If a single ball were placed any where at rest upon the preceding stratum, it is evident that it would be in contact with three of the lower balls (as in fig. 5), and that the lines joining the cen- tres of four balls so in contact, or the planes touching their surfaces, would include a regular tetrahedron, having all its equilateral triangles.

The construction of an octohedron, by means of spheres alone, is as simple as that of the tetra- hedron. For, if four balls be placed in contact on the same plane, in form of a square, then a single ball resting upon them in the centre, being in contact with each pair of balls, will present a triangular face rising from each side of the square, and the whole together will represent the superior apex of an octohedron ; so that a sixth ball similarly placed underneath the square will complete the octohedral group, fig. 6.

There is one observation with regard to these forms that will appear paradoxical, namely, that a structure, which in this case was begun upon a square foundation, is really intrinsically the same as that which is begun upon the triangular basis.

But if we lay the octohedral group, which con- sists of six balls, on one of its triangular sides, and, consequently, with an opposite triangular face uppermost, the two groups, consisting of three balls each, are then situated precisely as they would be found in two adjacent strata of the triangular arrangement Hence, in this 'posi- tion, we may readily convert the octohedron into a regular tetrahedron, by addition of four more balls (fig. 7). One placed on the top of the three that are uppermost forms the apex ; and if the triangular base, on which it rests, be enlarged by addition of three more balls, regularly disposed around it, the entire group of ten balls will then be found to represent a regular tetrahedron.

For the purpose of representing the acute rhomboid, two balls must be applied at opposite sides of the smallest octohedral group, as in fig. 9. And if a greater number of balls be placed to- gether, fig. 10 and 11, in the same form, then a complete tetrahedral group may be removed from each extremity, leaving a central octohedron, as may be seen in fig. 11, which corresponds to fig. 3.

We have seen that, by due application of spheres to each other, all the most simple forms of one species of crystal will be produced, and it is needless to pursue any other modifications of the same form, which must result from a series of decrements produced according to known laws. Since then the simplest arrangement of the most simple solid that can be imagined, affords so complete a solution of one of the most difficult questions in crystallography, we are naturally led to inquire what forms would probably occur from the union of other solids most nearly allied to the sphere. And it will appear, that, by the supposition of elementary particles that are spheroidical, we may frame conjectures as to the origin of other angular solids well known to crystallographers.

With respect to the obtuse rhomboid, if we suppose the axis of our elementary spheroid to

be its shortest dimension a class of solids will be formed which are numerous in crystallography. It has been remarked above, that by the natural grouping of spherical particles, fig. 10, one re- sulting solid is an acute rhomboid, similar to that of fig. 2, having certain determinate angles, and its greatest dimension in the direction of its axis. Now, if other particles having the same relative arrangement be supposed to have the form of oblate spheroids, the resulting solid, fig. 12, will still be a regular

rhomboid ; but the measures of its angles will be different from those of the former, and will he more or less obtuse accord- ing to the degree of oblateness of the primitive spheroid. It is at least possible tl.at carbonate of lime and other substances, of which the forms are derived from regular rhomboids as their pri- mitive form may, in fact, consist of oblate sphe- roids as elementary particles.

As to the hexagonal prisms, if our elementary spheroid be ou the contrary oblong, instead of oblate, it is evident that, by mutual attraction, their centres will approach nearest to each other when their axes are parallel, and their shortest diameters in the same plane (fig. 13). The ma- nifest consequence of this structure would be, that a solid so formed would be liable to split into plates at right angles to the axes, and the plates would divide into prisms of three or six sides with all their angles equal, as occurs in phosphate of lime, beryl, &c. It may farther be observed, that the proportion of the height to the base of such a prism, must depend on the ratio between the axes of the elementary spheroid.

And in regard to the cube : let a mass of matter be supposed to consist of spherical par- ticles all of the same size, but of two different kinds in equal numbers, represented by black and white balls ; and let it be required that, in their perfect intermixture, every black ball shall be equally distant from all surrounding white balls, and that all adjacent balls of the same de- nomination shall also be equidistant from each other. The doctor shows, that these conditions will be fulfilled if the arrangement be cubical, and that the particles will be in equilibrio. Fig. 14 represents a cube so constituted of balls, alternately black and white throughout. The four black balls are all in view. The distances of their centres being every way a superficial diagonal of the cube, they are equidistant, and their configuration represents a regular tetrahe- dron; and the same is the relative situation of the four white balls. The distances of dissimilar adjacent balls are likewise evidently equal ; so that the conditions of their union are complete, as far as appears in the small group : and this is a correct representative of the entire mass, that would be composed of equal and similar cubes.

There remains one observation with regard to the spherical form of elementary particles, whether actual or virtual, that must be regarded as favorable to the foregoing hypothesis, namely, that many of those substances which we have most reason to think simple bodies, as among the class of metals, exhibit this further evidence of their simple nature, that they crystallise in the octohedral form, as they would do if their particles were spherical. But it must, on th«

contrary, be acknowledged, that we can at present assign no reason why the same appearance of simplicity should take place in fluor spar, which is presumed to contain at least two elements ; and it is evident, that any attempts to trace a ge- neral correspondence between the crystallogra- phical and supposed chemical elements of bodies, must, in the present state of these sciences, be premature. Any sphere when not compressed will be surrounded by twelve others, and, conse- quently, by a slight degree of compression, will be converted into a dodecahedron, according to the most probable hypothesis of simple com- pression.

M. Beudant has lately made experiments to discover why a saline principle of a certain kind sometimes impresses its crystalline form upon a mixture in which it does not, by any means, form the greatest part ; and also with the view of determining why one saline substance may have such an astonishing number of secondary forms as we sometimes meet with. The pre- sence of urea makes common salt take an octo- hedral form, although in pure water it crystal- lises in cubes similar to its primitive molecules. Sal-ammoniac, which crystallises in pure water in octohedrons, by means of urea crystallises in cubes. A very slight excess or deficiency of base in alum, causes it to assume either cubical or octohedral secondary forms ; and these forms are so truly secondary, that an octohedral crystal of alum, immerged in a solution which is richer in respect to its basis, becomes enveloped with crystalline layers, which give it at length the form of a cube. The crystalline form in muddy solutions acquires greater simplicity, losing all those additional facets which would otherwise modify their predominant form. In a gelatinous deposit, crystals are rarely found in groups, but almost always single, and of a remarkable sharpness and regularity of form, and they do not undergo any variations but those which may result from the chemical action of the substance forming the deposit. Common salt, crystallised in a solution of borax, acquires truncations at the solid angles of its cubes ; and alum crystal- lised in muriatic acid takes a form which M. Beudant has never been able to obtain in any other manner. Thirty or forty per cent of sul- phate of copper may be united to the rhomboidal crystallisation of sulphate of iron, but it reduces this sulphate to a pure rhomboid, without any truncation either of the angles or the edges. A small portion of acetate of copper reduces sul- phate of iron to the same simple rhomboidal form, notwithstanding that this form is disposed to become complicated with additional surfaces. Sulphate of alumina brings sulphate of iron to a rhomboid, with the lateral angles only truncated, or w^at M. Haiiy calls his variete unitaire ; and jvhenever this variety of green vitriol is found in the market, where it is very common, we may be sure, according to M. Beudant, that it con- tains alumina. Natural crystals mixed with fo- reign substances are in general more simple than others, as is shown in a specimen of axinite or violet schorl of Dauphine, one

extremity of which, being mixed with chlorite, is reduced to its pri- mitive form ; while the other end, which is pure,

is varied by many facets produced by different decrements. In a mingled solution of two or more salts, of nearly equal solubility, the crystal- lisation of one of them may be sometimes deter- mined by laying or suspending in the liquid a crystal of that particular salt.

M. Le Blanc states, that on putting into a tall and narrow cylinder crystals at different heights, in the midst of their saturated saline so- lutions, the crystals at the bottom increase faster than those at the surface, and that there arrives a period when those at the bottom continue to enlarge, while those at the surface diminish and dissolve. Those salts which are apt to give up their water of crystallisation to the atmosphere, and of course become efflorescent, may be pre- served by immersion in oil, and subsequent wiping of their surface. In the Wernerian lan- guage of crystallisation the following terms are employed : When a secondary form differs from the cube, the octohedron, &c. only in having se- veral of its angles or edges replaced by a face this change of the geometrical form is called a truncation. The alteration in the principal form produced by two new faces inclined to one another, and which replace by a kind of bevel, an angle, or an edge, is called a bevelment. When these new faces are to the number of three or more, they produce what Werner termed a pointing, or acumination. When two faces unite by an edge, in the manner of a roof, they have been called culmination. Replacement is occasionally used for bevelment.

Professor Mohs, successor to Werner in Frey- berg; Dr. Weiss, professor of mineralogy in Berlin; and M. Brochant, professor of minera- logy in Paris, have each recently published sys- tems of mineralogy. Pretty copious details, re- lative to the first, are given in the third volume of the Edinburgh Philosophical Journal.

For the instrument that measures the angles ot crystals, see GONIOMETER.

CTESIAS, a native of Cnidos, who accom- panied Cyrus, the son of Darius, in his expedi- tion against his brother Artaxerxes, by whom he was taken prisoner; but curing Artaxerxes of a wound he received in the battle, he became a great favorite at the court of Persia, where he continued practising physic for seventeen years, and was also employed in several negociations. He wrote the history of Persia in twenty-three books, and a History of the Indies : but these works are now lost, and all we have remaining of them is an abridgment compiled by Photius. Several of the ancients considered Ctesias as a fabulous writer ; yet other historians, as

weL as some modern writers, have adopted in part hi chronology of the Assyrian kings.

CTESIBIUS, a mathematician of Alexandria who flourished about A.A.C. 120. He was the first who invented the pump. He also invented a clepsydra, or water clock, which, by a con- tinual supply of water and a waste pipe, was kept very regular. See CLEPSYDRA.

CTESIPHON, a celebrated Greek architect, who furnished the designs for the famous temple of Ephesus, and invented a machine for bringing thither the columns to be used in that noble struc- ture. He flourished A.A.C. 544. — Also the

name of an Athenian, who advised his fellow- •.jitir.ens to honor Demosthenes with a golden crown for his probity and virtue.

CIESIPHON, in ancient geography, a large city of Chalonitis, the most southern province of Assyria. It was situated on the east side of the Tigris, opposite to Seleucia : and built by the Parthians as a rival to that city. Here the kings of Parthia passed the winter, as they did the summer at Ecbatana.

CUB, v. a. & n. s. ? Minsheu is of opinion

CU'BLESS, adj. 5 that cub is derived from Lat. cubo, because it does not go out as the elder animals do, but lies close in its den. Cub is a young beast, particularly the offspring of a bear or fox ; the young of a whale ; contemptuously, a boy or girl ; a stall for cattle. To cub is to bring forth ; to shut up.

I would outstare the sternest eyes that look,

Pluck the young sucking cubs from the she-bear.

Shakspeare. O thou dissembling cub ! what wilt thou be,

When time hath sowed a grizzle on thy case ?

Or will not else thy craft so quickly grow,

That thine own trip shall be thine overthrow ? Id.

This night, wherein the cu&-drawn bear would

couch.

The lion, and the belly-pinched wolf, Keep their fur dry. Id. King Lear.

Was never fox but wily cubs begets ; The bear his fierceness to his brood besets. Hall. To be cubbed upon a sudden, how shall he be per- plexed ? what shall become of him ? Burton.

Two mighty whales, which swelling seas had tost, One as a mountain vast, and with her came A cub, not much inferior to his dame. Waller.

In the eagle's destroying one fox's cubs, there 's power executed with oppression. L'Ettrange.

Cubbed in a cabin, on a mattress laid, On a brown george with lousy-swabbers fed : Dead wine, that stinks of the Borrachio, sup From a foul jack, or greasy maple cup.

Dryden's Persius.

O most comical sight ! a country squire, with the equipage of a wife and two daughters, came to Mr. Suipwel's shop last night; but, such two unlicked cubs ! Congreve.

The love of offspring's nature 's general law, From tigresses and cubs to ducks and ducklings.

Byron. Don Juan. The cubless tigress in her jungle raging

Is dreadful to the shepherd and the flock ; The ocean when its yeasty war is waging

Is awful to the vessel near the rock. Id.

CUBA, the most considerable of the West India islands, is situated opposite to the entrance of the Gulf of Mexico, extending from 19° 48′ to 23° 15′ N. lat. ; and between 74° 2′ and 84° 55′ W. long. Its length, from east to west, is 764 miles, and its greatest breadth 134 miles ; the superficial extent of the whole island being estimated at 56,000 square miles. A chain of lofty mountains traverses it from east to west, and divides it into two parts. These mountains are co- vered with the most luxuriant forests of cedar, ma- hogany, ebony, &c. and give rise to 158 rivers, which pour their liquid treasures into the plains below. They also abound in mines of copper, icon, loadstone, rock-crystal and gold ; particles of the latter metal are often washed down by the

rapid mountain torrents. At the foot of these mountains the country spread out into fertile plains and extensive meadows, which afford pasturage to innumerable herds of cattle, both tame and wild, thousands of which are killed annually for their skins, which are considered of a very superior quality, and furnish one of the principal exports of the island.*

The climate of Cuba is hot and dry, but it is considered more healthy than that of St. Do- mingo, owing to the refreshing gales with which it is occasionally visited from the north and east. The rainy season commences in July, and con- tinues till September, during which time the country is almost deluged with water. The winter, however, is unknown, the ground every- where presenting a rich carpet of beautiful flowers and odoriferous plants, and the trees re- taining all their foliage throughout the year. The soil, though but partially cultivated, pro- duces, in abundance, ginger, long pepper, and a variety of other spices, maize, aloes, mastic cassia, manioc, fistula, sugar, coffee, cocoa, cot- ton, tobacco, &c. The tobacco of Cuba is con- sidered superior to that grown in any other country, and is exported to Europe in the va- rious forms of leaf, snuff and cigars. Tobacco has always been a royal monopoly(in the Spanish transatlantic dominions; the planters here have been exposed to such vexatious restrictions, that the cultivation of it has greatly decreased. In the year 1794, the quantity produced was about 8,000,000 of pounds ; but in 1803 it did not amount to 4,000,000. The cultivation of sugar, however, has greatly increased ; from the com- mencement of the present century to 1810, the quantity exported amounted to an average of 644.000 cwt. per annum. Whilst St. Domingo remained in the possession of the Spaniards, coffee was principally cultivated in that island ; on the destruction of their plantations there, however, they transferred this culture to Cuba, where it has risen to about 20,000,000 of pounds annually. Cotton is also profitably cultivated in this island In 1764 a straggling band of emigrants from Florida introduced bees, and this useful insect has multiplied to such an extent, that the inhabitants not only receive an ample supply of honey and wax for their own consump- tion, but annually export great quantities of both. In some parts of the island mineral waters, possessing valuable medicinal properties, are found ; and there are also many productive salt ponds. The rivers, none of which are navigable, abound with a variety of fish.

The Spaniards divided Cuba into two govern- ments, viz. Cuba towards the eastern, and Ha- vannah towards the western part of the island ; and these are again subdivided into jurisdictions and districts. Cuba, or San Jago, is considered to be the capital j but the Havannah has long been the place of residence of the governor, and most of the principal officers of the island. The other chief towns are Puerto del Principe, Hal- quin, Trinidad, Bayamo, and Batabane. The island is indented with several bays, the princi- pal of which visited by shipping, is Nueritas.

Cuba was discovered by the celebrated Chris- topher Columbus in his first voyage in the

year 1492. Yet so earnest was'the voyager in his pursuit of gold, that although he admired the great beauty of the scenery, and the luxuriant fertility of the soil, he sailed on to Hayti, in the expectation of finding a greater abundance. The Hand of Cuba did not submit to the Span- ish jurisdiction until 1511, when it was con- quered by Valasquez. About eight years after this event, a pilot having discovered that the channel which flows between the northern part of Cuba and the continent, was the most convenient pas- sage for vessels sailing from Mexico to Europe, the Havannah was built as a port for their re- ception. At first this town was an insignificant place, but its rapid increase in wealth and im- portance soon attracted the cupidity of the Eng- lish and French pirates, who repeatedly pillaged it. The noted freebooter Morgan succeeded in taking the Havannah in the year 1669. In the year 1741 Admiral Vernon established a fort, &c., on the southern coast ; but the heat of the climate soon obliged him to evacuate it. In 1762 the English, under admiral Pocock and lord Albemarle, again took the Havannah, and found vast quantities of booty in it ; but it was restored to the Spaniards in the following year, since which time they- have kept possession of it, and have endeavoured to render it impreg- nable. Of late this important part of the island has made a movement towards independence of the mother country ; and has requested, we be- lieve, to be placed under the protection of Co- lombia ; but the progress and present hope of this result is not known at this time (1826) in England. See HAVANNAH. According to the latest estimates, the population of Cuba amount- ed to 703,000, which is about eight persons for every square mile Humboldt considers that this population comprises 234,000 whites, 90,000 free people of color, and 108,000 slaves.

CUBA, a city in the island of the same name. It is situated in 76° 3′ W. long., and 20° 1′ N. lat. It has a good port, protected by a castle named the Morra. This city was once the capi- tal of the island, and still retains that nominal honor. Since the commerce, however, has cen- tered in the Havannah, Cuba has been deserted by its principal inhabitants, and is at present chiefly occupied by the proprietors of neighbour- ing estates. It contains no buildings worthy of notice.

CUB/EA, in botany, a genus of plants of the class decandria, and order

monogynia : CAL. turbinate, five-parted, unequal : COR. five-pe- talled, nearly equal, with the stamens inserted into the calyx, the three upper ones being shorter; the legume villous and six or seven seeded ; species two, both natives of Guinea : one, a tree sixty feet high, with spiked terminal flowers.

CUBAGUA, an island of South America, eight miles long, near Cumana, between Mar- garita and Terra Firma, discovered by Colum- bus. It originally abounded with pearls ; but in 1524 the pearl banks disappeared. The soil is dry, barren, and nitrous, without fresh water, and producing little else but rushss. Lonp. 63° 30′ W., lat. 10° 42′ N.

CUBAN. See KUBAN.

CUBA'TION, n. s. i Lat. cubatio. The act CU'BATORY, adj. $ °f ly>ng down. Recum- bent.

CU'BATUIIE, n. s. From cube. The find- ing exactly the contents of any solid body.

Kv/3oc, a die. A cube is a regular solid body, consisting of six square and equal faces or sides, and the angles all right, consequently all equal. Cube root and cubic root signify a number,

CUBE, n. s.

CUBE-ROOT, n. s.

CU'BICK-ROOT, n. s.

CU'BICAL, adj.

CU'BICK, adj.

CU'BICALLY, adv.

CU'BICALNESS, n. s.

CU'BIFORM, adj.

by whose multiplication into itself, and again into the product, any given number is formed : thus two is the cube root of eight. See ARITH- METIC, and GEOMETRY. Cubical and cubic denote having the properties of a cube. These adjectives are also applied to numbers. Cubi- form is cube-shaped.

The number of ten hath been as highly extolled, as Containing even, odd, long and plain, quadrate and cubical numbers. Browne's Vulgar Errourt.

The number of four multiplied into itself, produceth the square number of sixteen ; and that again multi- plied by four, produceth the cubick number of sixty- four. If we should suppose a multitude actually infi- nite, there must be infinite roots, and square and cubick numbers ; yet, of necessity, the root is but the fourth part of the square, and the sixteenth part of the cubick number. Hole's Origin of Mankind.

All the master planets move about the sun at seve- ral distances, as their common centre, and with dif- ferent velocities. This common law being observed in all of them, that the squares of the times of the revolutions are proportional to the cubes of their dis- tances. Grew'i Cosmologia.

A close vessel, containing ten cubical feet of air, will not suffer a wax candle of an ounce to burn in it above an hour before it be suffocated.

Wilkin's Math. Mag.

It is above a hundred to one, against any particu- lar throw, that you do not cast any given set of faces with four cubical dice ; because there are so many several combinations of the six faces of four dice.

Bentley's Sermon _*

If urged by a stronger fire, salt fuses or forms large cubes. Darwin.

Oft in wide lakes, around their warmer brim, In hollow pyramids the crystals swim ; Or, fused by earth-born fires, in cubic blocks Shoot their white forms, and harden into rocks. Id.

CUBE. See GEOMETRY.

CUBE ROOT. See ALGEBRA and ARITHME- TIC.

CU'BEB, n. s. A small dried fruit resem- bling pepper, but somewhat longer, of a grayish orown color on the surface. It has an aromatic smell, and is acrid to the taste. Cubebs are brought from Java.

Aromaticks, as cubebs, cinnamon, and nutmegs are usually put into crude poor wines, to give them more oily spirits. Flayer on the Humours.

j CUBI'CULAR, adj.) Old Fr. cubiculaire ; \ CUBI'CULARY, adj. ji Lat. cubicularis. Be- longing to the bed chamber. Fitted for the pos- ture of lying down.

1 Custom, by degrees, changed their cubiculary beds into discubitory, and introduced a fashion to go from the baths unto these. Browne's Vulgar

Errows.

Being the inseparable cubicular companion the king took comfort in, in the height of his troubles. Hotoell.

CUBIDIA ; from icv/3of, a die ; in mineralo- gy, a genus of spars, so named from their being of the shape of a common die, or of a cubic figure. These bodies owe this shape to an ad- mixture of lead, and there are only two known species of the genus. 1. A colorless crystalline kind, with thin flakes, found in the lead mines of Yorkshire, and some other parts ; and, 2. A milky white species, with thicker crusts, found in the lead mines of Derbyshire and Yorkshire, but usually small, and not very plentiful.

CU'BIT, n. s.) Lat. cubitus ; tcvfiirov. A CI/BITAL, adj. j measure in use among the ancients ; which was originally, says Calmet, the distance from the elbow bending inwards, to the extremity of the middle finger. This measure is the fourth part of a well-proportioned man's stature. Some fix the Hebrew cubit at twenty inches and a half, Paris measure ; and others at eighteen. Cubital signifies, that which is only the length of a cubit

This proude king let make a statue of gold Sixty cubitet long and seven in brede.

Chaucer. Cant. Tales.

That like a litle lake it seemd to bee, Whose depth exceeded not three cubits hight.

Spenser. Faerie Queene.

The watchmen of Tyre might well be called pyg- mies, the towers of that city being so high, that unto men below they appeared in a cubital stature.

Browne's Vulgar Errours.

From the tip of the elbow to the end of the long finger, is half a yard, and a quarter of the stature ; r.nd makes a cubit, the first measure we read of, the ark of Noah being framed and measured by cubits.

Holder on Time.

Measured by culit, length, and breadth, and height.

Milton.

The Jews used two sorts of cubits ; the sacred, and the profane or common. Arbuthnot on Measures.

When on the goddess first I cast my sight, Scarce seemed her stature of a cubit height. Pope.

CUBIT, ENGLISH, according to Dr. Arbuthnot, is equal to eighteen inches.

*CUBIT, JEWISH, one foot, 9*888 inches. »*

CUBIT, ROMAN, one foot, 5-406 inches.

CUBITUS, in anatomy, the same with Ulna. See ANATOMY. Some use the word for all that part of the arm between the elbow and the wrist, including the ulna or cubitus, properly so called, and the radius.

CUBOIDES Os, or Os CUBIFORME, in ana- tomy, the seventh bone of the foot, so called from its being in the form of a cube. See ANA- TOMY.

CUCItFIELD, a market town of Sussex, on the road from London to Brighton. It has a market on Friday, and fairs on Whit-Thursday and September 16th. It is fourteen miles north of Brighton, and thirty-seven south by west of London.

CU'CKINGSTOOL, n. s. Hickes derives it from coquina, anciently cockaigna, an idle jade, a base woman. Mr. Todd refers it to the Germ. , a sort of pillory. An engine invented

for the punishment of scolds and unquiet women, which, in ancient times, was called tumbrel.

We'll ship them out in cuck-stools, there they'll sail As brave Columbus did. Beaumont and Fletcher.

These mounted on a ciiair-curule, Which moderns call a cucking-stool, March proudly to the river's side. Hudibras.

CUCKINGSTOOL, an ancient instrument of punishment described in Doomsday book as cathedra stercoris ; it was in use even in the Saxon time. The delinquents, consisting of scolds, cheating bakers or brewers, and other petty offenders, were led to this stool and im- merged over head and ears in stercore,or stinking water. Some think it a corruption from duck- ing stool ; other from choaking stool, because the delinquents were nearly*

suffocated in the water.

CU'CKOLD, v. a. & n. s. -\ Fr. cocu; Dut.

CU'CKOLDLY, adj. tkochuer ; Germ

CU'CKOLDOM, n. s. fkuckcuck; Icel.

CU'CKOLD-MAKER, 7z. s. j qiwnkull. The last of these words, which is derived from quona, a woman, and kala, to blemish, is considered by Serenius, to be the parent of the English word ; and there is some plausibility in his conjecture. But the question as to the etymon seems to be set at rest by Home Tooke : ' The Italian cucolo, a cuckow/ says he, ' gives us the word cucol, (without the terminating d) as the common people rightly pronounce it, and as the verb was for- merly and should still be written. To cucol is to do as the cuckow does ; and cucol-ed, cucol'd, cucold, its past participle, means cuckow-ed, i. e. served as the cuckow serves other birds.' A cuckold is one whose wife is false to his bed. To cuckold is to seduce a wife to be unfaithful to her husband ; to wrong a husband by unchas- ttty. A cuckold-maker is an habitual seducer of married women Cuckoldom signifies the act of adultery ; the state of being a cuckold. Cuc- koldly is, cuckold-like ; abject; sneaking; cow- ardly.

This drunken miller spake ful sone again, And sayde, Leve brother Osewold, Who hath no wif he is no cokewold.

Chaucer. Cant. Tales.

If thou canst cuckold him, thou do'st thyself a pleasure, and me a sport. Shakspeare. Othello.

*But for all the whole world ; why, who would not make her husband a cuckold, to make him a monarch ? I should venture purgatory for*t. Id.*

Poor cuckoldly knave, I know him not : yet I wrong him to call him poor ; they say the jealous knave hath masses of money.

Id. Merry Wives of Windsor.

If I spared any that had a head to hit, either young or old, he or she, cuckold, or cuckoldmaker, let me never hope to see a chine again.

Id. Henry VIII.

But suffer not thy wife abroad to roam, Nor strut in streets with amazonian pace ; For that's to cuckold thee before thy face.

Dryden's Juvenal.

She is thinking on nothing bat her colonel, and conspiring cuckoldom against me. Id. Spanish Friar.

One Hernando, cuckoldmaker of this city, contrived to steal her away. W«

d98

C U C U L U S.

It is a true saying, that the last man of the parish thut knows of his cuckoldom, is himself.

Arbuthnot's John Bull. Cisar and Pompey, Mahomet. Belisarius,

Have much emp.oyed the muse of history's pen ; Their lives and fortunes were extremely various,

Such worthies Time will never see again ; Yet to these four, in three things, the same luck holds, They all were heroes, conquerors, and cuckolds.

Byron. Don Juan.

CU'CKOO, or > Fr. coucou; Ital. cuculo;

CU'CKOW, n. s. $ Span, cuco, cudiilo ; Ger. cuckuk; Dut. koekoeck; Dan. kuckuk; Sw. kuku; Welsh gwccw; Lat. cuculus; KOCKOˆ. A bird which appears in the spring, and is said to suck the eggs of other birds, and Jo lay her own to be hatched in their place : from which practice, it was usual to alarm a husband, at the approach of an adulterer, by calling cuckoo ; and the warn- ing became at last a name for the husband so warned. See CUCULUS. Cuckoo is also a term of contempt.

• Jalousie,

That wered of yelwe goldes a gerlond, And hedde a cuckew sitting on hire hond.

Chaucer. Cant. Tales.

Finding Mopsa, like a cuckoo by a nightingale, alone with Pamela, I came in. Sidney.

The merry cuckoo, messenger of spring, His trumpet shrill hath thrice already sounded.

The p ain song cuckoo gray, Whose note full many a man doth mark, And dares not answer, nay. Shahspeare

Why, what a rascal art thou, then, to praise him so

fonunning ! A horseback, ye cuckoo; — but a-foot,

he will not budge a foot. Id. Henry IV.

Strives for a court and for a college name, Yet nought within but lousy coules doth hold, Like a scabbed cuchow in a cage of gold. Hall.

I deduce,

From the first note the hollow cuckoo sings,

The symphony of spring ; and touch a theme

Unknown to fame ; the passion of the grove.

Thomson.

They have no more notes in their song than the cuckow. Burke.

Chides with her dulcet voice the tardy Spring, Bids slumbering Zephyr stretch his folded wing ; Wakes the hoarse cuckoo in his gloomy cave, And calls the wondering dormouse from the grave.

Darwin.

CUCKOO, or CUCKOW. See CUCULUS.

CU'CKOO-BUD, n.s. > Lat. cardaminus. CU'CKUO-FLOWER. n. s. J Thename of a flower,

When dazies pied, and violets blue, And cuckoo-buds of yellow hue, Do paint the meadows much bedight.

Shahspeare.

Nettles, cuckoo-flowers, Darnel, and all the idle weeds. Id. King Lear.

CU'CKOO-SPITTLE, n. s. Cuckoo and spit- tle.

Cuckoo-spittle, or woodseare, is that spumous dew or exudation, or both, found upon plants, especially about the joints of lavender and rosemary ; observable with us about the latter end of May.

Browne's Vulgar Errouri.

CU'CQUEAN, n. s. From cuck, a cuck old-maker, and quene, a wife, says Minsheu • and, therefore, a cucquean is a cuckold-maker wife ; a she cuckold. This derivation is borne out by the authority of our old writers. Mr. Todd, however, derives the word from French coquine, and defines it, a vile woman ; a prosti- tute. Minsheu is clearly nearer to the mark.*

He loves variety, and delights in change ~ And I heard him say, should he be married' He'd make bis wife a cucquean. Hayward.

CUCUBALUS, berry bearing chickweed: in botany, a genus of the trigynia order and de- candna class of plants, natural order twenty- second, caryophillei : CAL. inflated ; petals five, unguiculated, without a nectariferous corona at the throat; CAPS, trilocular. There are thirteen species, the most remarkable of which are : 1. C. behen, Swedish lychnis, or gum sepungar, a native of several parts of Europe. The era- palement of its flower is curiously wrought lik« network, and is of a purplish color. The leaves have somewhat of the flavor of peas. The Gothlanders apply the leaves to erysipelatous eruptions. Horses, cows, sheep, and goats, eat this plant. 2. C. noctiflora, the night flowering lychnis, growing naturally in Spain and Italy. It is a perennial plant, rising with an upright branching stalk, a foot and a half high, garnished with very narrow leaves placed opposite. The upper part of the stalk branches very much : 3. C. otites, the catch-fly, a native of Britain and other European countries. It has a thick, fleshy, perennial root, which strikes deep into the ground, from whence rises a jointed stalk three or four feet high. At the joints there exudes a viscous clammy juice, that sticks to the fingers when handled; and the small insects which settle upon those parts of the stalks are thereby so fastened that they cannot get off. The flowers are small, and of a greenish color. The plant is propagated by seeds.

CUCULLARIA, in botany, a genus of plants of the monandria class, and monogynia order, CAL. four-parted : COR. four petalled, unequal, and ' spurred; filaments petal-like ; anthers with dis- tinct cells. Species one only ; a tall tree of Gui- ana, having pale yellow flowers.

CU'CULLATE,a$. > Lat. cuculatus. Hood-

CU'CULLATED, adj. J ed ; covered, as with a hood or cowl ; having the resemblance or shape of a hood.

They are differently cucullated, and capuched upoa the nead and back. Browne's Vulgar Errours.

CUCULUS, the cuckoo, in ornithology, a cre_ nus belonging to the order of

pica. The cha- racters are : the bill smooth, and more or less bending; the nostrils bounded by a small rim; the tongue short and pointed ; the feet and toes formed for climbing. There a/e fifty-five species, of which the following are the most remarka- ble: —

1. C. canorus, the common cuckoo, weighs about five ounces, and is in Ipngth founeen inches: in breadth twenty-five. The bill is black, and about two-thirds of an inch in length. The head, hind part of the neck, coverts of tiifi wings and rump, are of a dove color; darker on

*the head and paler on the rump. The throat and upper part of the neck are of a pale gray ; the breast and belly white, crossed elegantly with undulated lines of black. The tail consists of feathers of unequal lengths ; the middle tail-fea- thers are black, tipped with white: the others are marked with white spots on each side their shafts. The legs are short, and the toes disposed two backwards and two forwards, like those of the wood-pecker, though it is never observed to run up the sides of trees. The female differs in some respects. — The neck before and behind is of a brownish red ; the tail barred with the same co- lor and black, and spotted on each side the shaft with white. The young birds are brown mixed with black, and in that state have been described by some authors as old ones. These birds ap- pear in our country early in spring, and make 5*ie shortest stay with us of any bird of passage. The cuckoo is silent for some time after his arri- val; his note is a call to love, and used only by the male, who sits perched generally on some dead tree or bare bough, and repeats his song, which he loses as soon as the amorous season is over. His note is so uniform, that his name in all languages seems to have been derived from it. The song of the female is widely different, and has been so little attended to, that few are acquainted with it. It resembles the cry of the dab-chick. Unlike the generality of birds, cuc- koos do not pair. When a female appears on the wing, she is often attended by two or three males, who seem to be earnestly contending for her favors. She does not begin to lay till some weeks after her arrival. It is almost universally allowed, that the cuckoo does not hatch its own eggs. The hedge sparrow, the water wagtail, or the titlark, is generally the nurse of them. Buffon enumerates twenty sorts of nests at least in which they have deposited their eggs. When the hedge sparrow has sat her usual time, and dis- engaged the young cuckoo and some of her own offspring from the shell, her own young ones, and any of her eggs that remain unmatched, are soon turned out, the young cuckoo remaining possessor of the nest, and sole object of her future care. The young birds are not previously killed, nor are the eggs demolished ; but all are left to*

perish together, either being entangled about the bush which contains the nest, or lying on the ground under it. A cuckoo, says Dr. Jenner, in a paper published in the Philosophical Trans- actions, laid her egg in a water wagtail's nest in the thatch of an old cottage. The wagtail sat her usual time, and then hatched all the eggs but one, which, with all the young ones except the cuckoo, was turned out of the nest. The young birds, consisting of five, were found upon the rafter that projected from under the thatch, and with them was the egg not in the least injured. The cuckoo was reared by the wagtails till it was nearly capable of flying, when it was killed by an accident. The same writer mentions a simi- lar case of a hedge sparrow, in which the young sparrow, having returned alive, was a second and third time turned out. Cuckoos may be, and often are brought up tame, so as to become familiar. They will eat in this state bread and milk, fruits, insects, eggs, and flesh either cooked

or raw ; but in a state of nature, chiefly live on caterpillars. When fat, they are said to be as good eating as a land rail. The French and Italians eat them, and the ancient Romans ad- mired them greatly. Pliny says that there is no bird that can be compared to them for delicacy. In migrating, the major part of these birds are supposed to go into Africa, as they are observed to visit the island of Malta twice a year. They are well known also at Aleppo, and are said to be common in Sweden, but not to appear so early by a month as with us. Russia is not des- titute of it, and Latham has seen a specimen of it brought from Kamptschatka, formerly in the possession of Sir Joseph Banks.

2. C. honoratus, or the sacred cuckoo, is some- what less than our cuckoo ; the general color is blackish ash on the upper parts, marked with two spots of white on each feather; beneath, white transversely spotted with ash-color : the quills are cinereous, transversely spotted with white : the tail is much cuneated, five inches and a half long, and of the same color as the quills; the outer feather only three inches long; the legs and claws are of a pale ash-color. This species inhabits Malabar, where the natives hold it sacred, as it feeds on reptiles.

3. C. indicator, or the honey-guide, is a native of Africa. This curious species of cuckoo is found at a considerable distance from the Cape of Good Hope, in the interior parts of Africa, being entirely unknown at that settlement. The Dutch settlers have given this bird the name of honiguyzer, or honey-guide, from its quality of discovering wild honey to travellers. Its color has nothing striking or beautiful. Its size is considerably smaller than that of our cuckoo in Europe ; but in return, the instinct which prompts it to seek its food in a singular manner is truly admirable. Not only the Dutch and Hottentots, but likewise a species of quadruped named ratel (probably a new species of badger), are frequently conducted to wild bee-hives by this

bird, which, as it were pilots them to the very spot. The honey being its favorite food, its own interest prompts it to be instrumental in robbing the hive, as some scraps are commonly left for its support. The morning and evening are its times of feeding, and it is then heard call- ing in a shrill tone, cherr, cherr ; which the ho- ney-hunters carefully attend to as the summons to the chase. From time to time they answer with a soft whistle ; which the bird hearing, al- ways continues its note. As soon as they are in sight of each other, the bird gradually flutters towards the place where the hive is situated, continually repeating its former call of cherr, cherr. Ai last the bird is observed to hover for a few moments over a certain spot, and then si- lently retiring to a neighbouring bush or resting place, the hunters are sure of finding the bees nest in that identical spot ; whether it be in a tree or in the crevice of a rock, or, as is most commonly the case, in the earth. While the hunters are busy in taking the honey, the bird is seen looking on attentively to what is going for- ward, and waiting for its share of the spoil. The bee-hunters never fail to leave a small portion for their conductor : but commonly take care*

never to leave so much as would satisfy its hun- ger. The bird's appetite being whetted by this parsimony, it is obliged to commit a second trea- son, by discovering another bees' nest, in hopes of a better salary. It is about seven inches in length, and is of a rusty brown color on the back, with a white breast and belly. A nest which was shown to Dr. Sparrman for that of this bird, was composed of slender filaments of bark woven together in the form of a bottle ; the neck and opening hung downwards, and a string, in an arched shape, was suspended across the opening fastened by the two ends, perhaps for the bird to perch on.

4. C. vetula is a little bigger than a blackbird ; the bill above an inch and a half long : the up- per mandible black, the lower whitish ; crown of the head brown, the feathers of it soft and silky ; the upper parts of the body and the quills cine- reous olive ; throat and forepart of the neck whitish ; the rest of the under parts rufous ; the tail is much cuneated ; the two middle feathers cinereous olive, the others dusky black tipped with white ; the outer feather very short ; legs blue black. It feeds on seeds, small worms, and caterpillars, and is very tame. Besides insects, it will also eat lizards, small snakes, frogs, young rats, and sometimes even small birds. The snakes they swallow head foremost, letting the tail hang out of the mouth till the foreparts are digested. Its gait is that of leaping, like a

magpie ; being frequently seen on the ground ; and its flight but short, chiefly from bush to bush. At the time when other birds breed, they likewise retire into the woods, but their nests have never yet been found. It has the name of rainbird, as it is said to make the greatest noise before rain. It is common all the year at Jamaica. In another variety, also, common in Jamaica, the feathers on the throat appear like a downy beard, whence probably the name of old man rain beard, given it there, and by Ray, Sloane, &c.

CU'CUMBER, re. s. FT. concombre ; Ital. cocomero ; Lat. cucumer. The name of a creep- ing plant, and also of its fruit.

How cucumbert along the surface creep, With, crooked bodies and with bellies deep.

Dryden't Virgil.

The southern wits are like cucumbers, which are commonly all good in their kind ; but at best are an insipid fruit : while the northern geniuses are like me- lons, of which not one in fifty is good j but when it is so, it is an exquisite relish. Berkeley.

Pardon then,

Ye sage dispensers of poetic fame, The' ambition of one meaner far, whose powers, Presuming an attempt not less sublime, Pant for the praise of dressing to the taste Of critic appetite, no sordid fare, A cucumber, while costly yet and scarce. Cowper.

CUCUMBER. See CUCUMIS.

CUCUMBER, WILD. See MOMORDICA.

CUCUMIS, in botany, a genus of the synge- nesia order, and monoecia class of plants ; na tural order thirty-fourth, cucurbitaceac. Male CAL. quinquedentated : COR. quinquepartite ; the filaments three. Female CAL. quinquedentated : COR. quinquepartite, pistil trifid ; the sides of the apple sharp-pointed. There are thirteen

species, of which the following are the most re- markable : l.C. chata, the round-leaved Egyp- tian cucumber. According to Hasselquist, this grows in the fertile earth near Cairo, after the inundation of the Nile, and not in any other place in Egypt, nor in any other soil. It ripens with the water melons. The fruit is a little wa- tery ; the flesh almost of the same substance with the melons ; it tastes somewhat sweet and cool ; but is far from being as cool as the water- melons. This the grandees and Europeans in Egypt eat as the most pleasant fruit they find, and that from which they have the least to ap- prehend.

2. C. colocynthis, the colocynth, coloquintida, or bitter apple of the shops, is brought to us from Aleppo and the island of Crete ; the leaves of the plant are large, placed alternate, almost round, and stand upon foot-stalks four inches long ; the flowers white, and succeeded by a fruit of the gourd kind, of the size of a large ap- ple, and which is yellow when ripe ; the shelly or husky outside enclosing a bitter pulp inter- spersed with flatfish seeds.

3. C. elaterium, the wild, or ass's cucumber, affords the elaterium of the shops ; which is the inspissated faecula of the juice of this species.

4. C.sativa, the common cucumber, has roots, composed of numerous, long, slender, white fi- bres ; long slender stalks, very branchy at their joints, trailing on the ground, or climbing by their claspers, adorned at every joint by large angular leaves on long erect foot-stalks, with numerous and monopetalous bell-shaped flowers of a yellow color, succeeded by oblong rough fruit. The prin- cipal varieties of this kind are, 1 . The common rough green prickly cucumber; a middle-sized fruit, closely set with very small prickles; the plant is of the hardiest sort, but does not show its fruit early. 2. The early green cluster cucumber is a short fruit, remarkable for growing in clusters, and appearing early. 3. The long smooth green Turkey cucumber, is a smooth green-rinded fruit, growing from ten to fifteen inches in length, without prickles. The plants are strong growers with very large leaves. 4. The large smooth green Roman cucumber is a very large and long

smooth green fruit, produced from a strong growing plant. 5. The long while prickly Dutch cucumber is a white fruit, eight or ten inches long, set with small black prickles; the plants are but bad bearers in this countiy. The first four >arieties are those chiefly cultivated in this country. They are raised at three different sea- sons of the year : on hot-beds for early fruit ; or under bell, or hand-glasses, for the middle crop ; or on the common ground, which is for a late crop, or to pickle. The cuourrbers which are ripe before April are unwholesome, being raised wholly by the heat of the dung without the as- sistance of the sun. Those raised in April are good, and are raised in the manner with which all our gardeners are well acquainted. The cu- cumber is chiefly used as a refrigerant, or condi- ment, to accompany animal food. They have a bland insipid juice, without acidity or sweetness, approaching, as appears by their ripening, to a farinaceous matter. When used green they have no nourishment so they are only to be used in

the summer season, and omy by the sedentary. Although cucumbers are neither sweet nor acid, yet they are considerably ascescent, and produce flatulency, cholera, diarrhoea, &c. Their cold- ness and flatulency may be likewise in part at- tributed to the firmness of their texture. Oil and peppei, the condiments commonly employed, are very useful to check their fermentation, The skin, which is bitter, may supply the place of aromatics; but should only be used when young.

CUCURBITA, the gourd, a genus ofthesyn- genesia order, and moncecia class of plants; natural order thirty-fourth, cucurbitaceae. Male, CAL. quinquedentatcd : COR. quinquefid ; the fi- laments three. Female, CAL. quinquedentated : COR. quinquefid : PIST. quinquefid ; the seeds of the apple with a tumid margin. There are seven species: the chief are, 1. C. lagenaria, the bottle gourd, with thick trailing downy stalks, branching into many spreading runners, and ex- tending along the ground sometimes fifteen or twenty feet in length. The leaves are large, roundish, heartrshaped, indented and woolly. The flowers are large and white, succeeded by long in- curvate.i whitish yellow fruit, growing from about two to five or six feet in length, and from about nine to twenty-four inches in circumference, hav- ing a ligneous and durable shell. 2. C. lignosa, the ligneous shelled gourd, or calabash. It has trail- ing stalks, branching into runners, which extend far every way ; tne leaves are large, lobated, and rough ; the flowers yellow, succeeded by round- ish smooth fruit of a

moderate size, with hard woody shells. 3. C. melopepo, or erect gourd, or squash. This rises with an erect strong stalk, several fee high, rarely sending forth side runners, but becoming bushy upward. It is adorned with large lobated leaves ; and the flowers are succeeded by depressed knotty fruit, both white and yellow, commonly of a moderate size. 4. C. papo, the pompion, or pumpkin, has strong trailing, rough stalks, branching into numerous runners. These extend from ten to forty or fifty feet each way, and are garnished with large, roundish, lobated, rough leaves, and yellow flowers; succeeded by large, round, smooth fruit, of different forms and sizes ; some as big as a peck or half-bushel measure ; some considerably less, and others not exceeding the bulk of an orange ; ripening to a yellow, and sometimes to a whitish color. This species is the most hardy of any, as well as the . most extensive in their growth. A single plant, if properly encouraged, will overspread ten or fifteen roods of ground, and produce a great number of fruit, which, when young, are gene- rally a mixture between a deep blue and a pale white, but change as they increase in bulk.*

CUCURBITA'CEOUS, adj. From Lat. cu- curlrita, a gourd.

Cttcurbitac"ous plants are those which resemble a gouid ; such as the pumpion and melon. Chambers.

CU'CURBITE, n. s. Lat. cucurbita. A chemical vessel, commonly called a body, made of earth or glass, in the shape of a gourd, and therefore called cucurbite. It is used in the place of a still for distillation. See the article ALEMBIC.

Cucurbites and alembikos eke, And other swiche ger. Chaucer. Cant. Talct. I have for curiosity's sake distilled quicksilver in a cucurbite, fitted with a capacious glass head.

Boyle on Calourt.

Let common yellow sulphur be put into a cucurbite glass, upon which pour the strongest aquafortis.

Mortimer.

CUCU'RBITIVE, adj. From cucurbite. An epithet applied to small worms shaped like a gourd-seed.

CUD, n. s. Ang.Sax. cub. That food which is reposited in the first stomach in order to ru mination, or to be chewed again.

Many times, when my master's cattle came hither to chew their cud in this fresh place, I might see the young bull testify his love. Sidney.

You range the pathless wood, While on a flowery bank he chews the cud.

Drydcn.

CUDBEAR, a dye-stuff, procured from the lichen Tartarius, thus named from Dr. Cuthbert Gordon the inventor, or rather the improver, of it; for it had been known and used in the High- lands of Scotland by the name of crottel, for se- veral centuries before. The method there prac- tised is this ; after the moss is scraped from the rocks, and cleaned, it is steeped in urine for three months; then taken out and made into cakes, which are hung up in bags to dry. These cakes are afterwards pulverised, and the powder is used, with the addition of alum, to impart the beautiful red color which it gives. Dr. Gordon and his brother first set up this manufacture at Leith ; but considerable improvements have been made in it, since its establishment in Glasgow, by Mr. George M'Intosh.

CUDDALORE, a town of Hindostan, in the Carnatic, on the west shore of the'bay of Bengal, and district of Gingee. It is very near the place where Fort St. David once stood, and was pos- sessed by the English so far back as 1C81. It was reduced by the French in 1782 ; and in 1783 underwent a severe siege by the British forces commanded by general Stuart ; nor did the enemy resign it until the peace of 1783. The neigh- bouring country suffered much during the wars with Hyder AH. It is now rapidly recovering, and comprehended in the collectorship of Arcot. The factory is the residence of the commercial agent.

CUDDAPAH, CURPA, or CRIPA, a considera- ble district in the province of Golconda, Hindos- tan. It was once governed by a nabob, from the court of Dehly, but, falling under the dominion of the nizam of Deccan, it was ceded to the British in 1800, and is now subdivided into the two collectorships of Cuddapah and Bellary, or Balhary, under the Madras government. The valleys are fruitful in grain, sugar, cotton, &c, Its principal towns are Cuddapah, Combam, and Wandicotta. The first of them is the resi- dence of the British judge and collector.

CU'DDEN, n.s.1 Without etymology, says

CTI'DDY, n. s. J Johnson ; but Serenius re- fers it to the Islandic, kuttc, a dwarf. Mr. Todd, on the other hand, derives it from Teut. kudde, a herd of cattle, and also a pig ; and this seems

Ct'D

*he most likely etymon. A clown; a stupid rustic ; a low dolt ; a low bad word.

The slavering cudden, propped upon his staff, Stood ready gaping with a grinning laugh. Dryden.

CU'DDLE, v. n. Dr. Johnson calls it a low •word, and believes it to have no etymology. Dr. Jamieson suggests that the parent may perhaps be found in the Ger. kudden, to meet, to come together. Mr. Todd suggests that ' it may be from the Welsh cuddio, to hide ;' which, how- ever, ought to be cuddiw. His etymology is by no means an improbable one. The VV elsh sub- stantive, cuddigyl, which means a retreat, a private place, a private room, a bed-room, comes still nearer in sound to the English word. To lie close ; to squat ; to embrace closely.

Have you marked a partridge quake, Viewing the towering falcon nigh ?

She cuddles low behind the brake ; Nor would she stay, nor dares she fly. Prior.

They hopped from spray to spray,

They billed, they chirped all day, They cuddled close all night ;

To bliss they waked each morn,

In every bush and thorn,

Gay scenes of new delight. Somerville.

CUDDUM RUSOUL, or the Footstep of the Prophet, a town of Bengal, in the district of Chittagong. Here is a handsome cenotaph or dirga containing a stone, on which there is the impression, it is said, of Mahomet's foot, to visit which his followers come once a year from all parts of the district, thereby constituting a fair.

CU'DDY, n. s. A fish which is found on the Scotch coasts; the cole-fish.

The cuddy is a fish, of which I know not the phi- losophical name. It is not much bigger than a gud- geon, but it is of great use in these islands, as it af- fords the lower people both food and oil for their lamps. Johnson,

CroDY, in a first-rate man of war, is a place lying between the. captain-lieutenant's cabin and the quarter-deck ; and divided into partitions for the master and other officers. It denotes also a kind of cabin near the stern of a lighter or barge of burden.

CU'DGEL, v. a. & n. s."| Dut. kudse, kod- CU'DGELLER, n. s. se ; Scot. cud. A

CU'DGELLING, n. s. \ cudgel is any stick CU'DGEL-PLAY, n. s. >or staff, lighter than CU'DGEL-PLAYER, n. s. a club, shorter than CU'DGEL-PLAY ING, n. s. a pole, carried for CU'DGEL-PROOF, adj. J the purpose of of- fence or defence ; a similar weapon, used by cudgel-players, in the exercise of cudgel-play, or cudgel-playing. To cudgel is, to beat with a stick ; to drub ; to beat in general. Cudgel- proof signifies being able to resist a beating given by a stick. To cross the cudgels means to for- bear the contest, from the practice of cudgel players, to lay one over the other.

My lord, lie speaks most vilely of you, like a foul- mouthed man as he is ; and said he would cudgel you. Shahspeare. Henry IV.

Cudgel thy brains no more about it ; for your dull UB6 will not mend his pace with beating.

Id. Kamlet.

All we have seen, compared to his experience, Has been but cudgel-play or cock-fighting.

Beaumont and Fletcher.

Vine twifijs, while they are green, are brittle ; yet the wood, dried, is extreme tough; and was used by the captains of armies, amongst the Romans, for their cudgels. Bacon.

They were often liable to a night-walking cudgeller, or the emptying of an urinal. Milton,

Do not provoke the rage of stones And cudgels to thy hide and bones : Tremble and vanish. Hudibras.

His doublet was of sturdy buff, And though not sword, yet cudgel-proof. Id.

This, if well reflected on, would make people more wary in the use of the rod and the cudgel. Locke.

It is much better to give way, than it would be to contend at first, and then either to cross the cudgelt, or to be baffled in the conclusion. L' Estrange.

The ass courting his master, just as the spaniel had done, instead of being stroked and made much of, is only rated off and cudgelled for all his courtship.

South.

The wise Cornelius was convinced, that these, be- ing polemical arts, could no more be learned alone than fencing or cudgel-playing. Arbuthnot and Pope.

Three duels he fought, thrice ventured his life, Went home, and was cudgelled again by his wife.

The cudgel in my nieve did shake, Each bristled hair stood like a stake, When wi' an eldritch stour, quaick — quaick —

Amang the springs, Awa ye squattered, like a drake,

On whistling wings. Burnt.

CU'DLE, n. s. A small sea-fish.

Of round fish there are britt, sprat, cwlles, eels.

Carew.

CU'DWEED, n. s. From cud and weed. A plant. See GNAPHALIUM.

There is a plant which our herbalists call herbam impiam, or wicked cudweed, whose younger branches still yield flowers to overtop the elder. Hatt.

CUDWORTH (Ralph), a learned English divine of the seventeenth century. He was one of the persons nominated in 1657 by a commit- tee of the parliament, to be consulted about the English translation of the Bible. In 1678 he published his True Intellectual System of the Universe; a work which met with great opposi- tion. He likewise published a treatise, entitled; Deus Justificatus, or The Divine Goodness of God vindicated against the Assertions of Abso- lute and Unconditionate Reprobation. He em- braced the mechanical or corpuscular philoso- phy ; but with regard to the Deity, spirits, genii, and ideas, he followed the Platoriists. He died at Cambridge in 1688, and left several manus- cripts, one of which bishop Chandler published in 1731, with this title, A Treatise concerning Eternal and Immutable Morality. The rest, after having been plundered by Dodd, for his Commentary on the Bible, were purchased by the trustees of the British Museum.

CUE. Old Fr. cowe ; mod. Fr. queue, a tail. The tail or end of anything, as the long tail of a wig ; the last words of a speech on the stage, which are the token for an entrance or answer ; a hint ; an intimation; the part which

any man is to play in his turn ; humor ; temper of mind ;

a mark denoting half a farthing, in the buttery hooks of Oxfo rd and Cambridge ; an instrument used in the game of billiards.

Pyramus, you'begin : when you have spoken yoar speech, enter into that brake • and so every one ac- cording to his cite.

Shakspeare. Midsummer Night's Dream. What's Hecuba to him, or he to Hecuba, That he should weep for her ? What would he do, Had he the motive and the cue for passion That I have ? He would drown the stage with tears.

Id. Hamlet. Hold your hands,

Both you of my inclining, and the rest : Were it my cue to fight, I should have known it Without a prompter. Id. Othello.

Neither is Otto here a much more taking gentle- man : nothing appears in his cue to move pity, or any way make the audience of his party.

Rymer's Tragedies of the last Age. Let him know how many servants there are, of both sexes, who expect vails ; and give them their cue to attend in two lines, as he leaves the house.

Swift.

CUENCA, or LA SIERRA DE CUENCA, a pro- vince of Spain, forming the eastern part of New Castile. In the north and east it is mountain- ous, and fit only for sheep pasture, but in the west and north it is fertile in corn, hemp, pulse, saffron, fruit, and honey. The province exports large quantities of fine wool, and manufactures a kind of coarse camlet, in considerable request. The capital is Cuenca, a bishop's see, situated on an eminence between two mountains, at the foot of which flow the rivers Huecar and Xucar. The walls rise from the valley to a great height ; and the streets are uncommonly steep and irregular. It is entered by six gates. The episcopal pa- lace is a respectable edifice, and the city has five gates, thirteen parishes, six monasteries, and six nunneries, beside a seminary, three colleges, and an hospital. The cathedral is in the Gothic style, upwards of 300 feet long and 180 broad, and was founded in the twelfth century by Al- phonso IX. A bridge across the Huecar consists of five arches, the pillars of which alone1 are said to have cost 63,000 ducats.

The earl of Peter- borough took this place for Charles III. in 1706. Population 6000. It is seventy-five miles east of Madrid, and 100 W.N.W. of Valencia.

CUEN9A, a district of the presidency of Quito, Colombia, bounded north by the province of Riobamba, south by that of Jaen de Bracamoros, east by that of Guayaquil, west by that ofQuixos and Macas, north-east by that of Chimbo, and south-east by that of Loxa. It is of a mild tem- perature, but subject to dreadful storms ; and fertile in grain, sugar, and cotton. Its minerals are gold, silver, copper, quicksilver, and sulphur; but the mines, for want of capital, are very par- tially worked. Cotton cloth is largely manufac- tured.

This district is subdivided into two depart- ments, Cuenca and Alausi ; the former including ten villages, and the latter, which borders on Riobamba, having four. Cuenca is famed for the many remains of Peruvian architecture it contains, as the ruins of the Fort of Cannar, near the village of Atun-cannar, or Great Cannarˆ &c.

Alausi, the chief town of the grand department, is an inconsiderable place. In this district Ata- balipa is said to have put to death 60,000 of the adherents of his brother Iluascar.

CuENfA, SANTA ANNA BE, the capital of the above district, is situated in a valley celebrated for its pleasantness and fertility. The streets run in parallel lines, and the city has a beautiful appearance, but the Indian huts of the suburbs are very mean. It is 180 miles south of Quito. Population 20,000.

CUERENHERT (Theodore Van), a cele- brated engraver, born at Amsterdam in 1522. Early in life he travelled into Spain and Portugal, but was afterwards obliged to have recourse to engraving for his support. His works are slight and hastily executed with the graver alone ; but in an open careless style, so as greatly to resemble designs made with a pen. He was established at Haerlem ; and there pursuing his favorite stu- dies in literature, he was made secretary to that town, from whence he was sent several times as ambassador to the prince of Orange, to whom he addressed a famous manifesto, which that prince published in 1566. He at length openly avowed his opinion — deism, maintaining that all religious communions being corrupted, no person, without a supernatural mission, had aright to administer in any religious office. For these sentiments he was several times imprisoned, and at last sen- tenced to banishment. He died at Dergoude in 1590, aged sixty-eight. His works were published in 3 vols. fol. in 1630.

CUE'RPO, n. s. Span. To be in cuerpo is to be without the upper coat or cloak, so as to discover the true shape of the cuerpo or body

Exposed in cuerpo to their rage, Without my arms and equipage. Hudibrai.

CUFF, v. a., v. 7i., & n. s. Swed. huff; Per. kuftan ; Scot, gouf, from Icelandic, kuffwa. Skinner derives the word from KOTTTW ; Junius from jcoXaˆoc; and Dr. Johnson from Ital. zujfa, a battle. To cuff is to strike with the fist, talons, or wings; to fight; to scuffle. Cuff, in its widest sense, signifies any stroke or blow ; but is usually applied to a blow with the fist.

Now cuffing close, now chasing to and fro, Now hurtling round advantage for to take.

Spenser. Faerie Queene. The Sarazin, sore daunted with the buffe, Snatcheth his sword, and fiercely to him flies, Whom well it wards, and guyleth cuffe with cuffe.

Id.

I'll after him again, and beat him. •

Do, cuff him soundly ; but never draw thy sword.

Shakspeare.

The priest let fall the book, And as he stooped again to take it up, The mad-brained bridegroom took him such a cuff, That down fell priest and book, and book and priest.

Id. Taming of the Shrew.

Those lazy owls, who, perched near fortune's top Sit only watchful with their heavy wings To cw/f down new-fledged virtues, that would rise To nobler heights, and make the grove harmonious.

Ottoay.

Hovering about the coasts, they make their moan, And cuff the cliffs with pinions not their own.

Dryden's

CUJ

CUJ

H« gave her cuff on the ear, and she would prick him with her knitting-needle. Arbuthnot't John Bull. When a man's fancy gets astride on his reason, when his imagination is at cuff with the senses ; and common understanding, as well as common sense, is kicked out of doors ; the first proselyte he makes is him- self, &c. Swift, CUFF, n. s. Ar. and Per. kuff; Goth, and Swed. knuffe; Ger. kuff. Johnson, however, derives it from Fr. coeffe. The cuff is that part of the sleeve which is next the hand. Byron uses the word in the sense of a handcuff. With ruffs and cufft and fardingalcs and things.*

Shahspeare. Taming of the Shrew. He railed at fops ; and, instead of the common fashion, he would visk his mistress in a morning gown band, short cuffs, »nd a peaked beard.

Arbuitmot. He had chained

His prisoners, dividUg them like chapters In numbered lots ; they all had cuff and collars, And averaged each from ten to a hundred dollars.*

liyrun. Don Juan.

CTIFF (Henry), the unfortunate secretary of the earl of Essex, was born atllinton St. George in Somersetshire, about 1560, of an honorable and opulent family. In 1576 he was entered of Trinity College Oxford, where he soon ac- quired considerable reputation as a Grecian and disputant. He obtained a fellowship, hut was expelled for speaking 4»sresPectnj"v ˚f tne founder. He was, howevgr, soon after admitted of Merton College, and in 1588 took the de- gree of M.A. Some time after he was elected Greek professor, and in 1594 proctor of the uni- versity. When the earl of Essex was made lord- lieutenant of Ireland, Mr. Cuff was appointed his secretary, and continued intimately connected with him until his confinement in the Tower. Ilefore his execution the earl charged him with V>eing the author of all his misfortunes, and Cuff was subsequently tried for high treason, and ex- ecuted at Tyburn, 30th of March 1601 . Lord Bacon, Sir Henry Wotton, and Camden, speak of him in very harsh terms ; but he was certainly a man of learning and abilities. He wrote 1. The Differences of the Ages of Man's Life; published after his death. 2. De Rebus Gestis in Sancto Conciho Niceeno.

CUIABA, a town and river of Brasil, in the prnvince of Mattogrosso, ninety-six leagues from its confluence with the Paraguay. The town is large, and computed to contain 30,000 inhabit- ants. It is well provided with fish, meat, ard all sorts of vegetables. In the neighbourhood are some mines of

the finest gold, which have yielded according to Mr. Mawe £500 annually. It is 288 miles east of Villa Batta.

CUJACIUS, or CUJAS (James), a celebrated civilian, born at Toulouse, in 1520. He studied polite literature and history ; and acquired great knowledge in the ancient laws, which he taught at Toulouse, Cahors, Bourges, and Valence, in Dauphine". Emanuel Philibert, duke of Savoy, invited him to Turin, and gave him singular marks of his esteem. Cujas afterward refused very advantageous offers from pope Gregory XIII. who invited him to teach at Bologna, choosing rather to fix at Bourges, where he had a large number of scholars ; whom he took great*

pleasure in instructing, and was called the Father of his Scholars. He died at Bourges in 1590, aged seventy. His works are in high esteem among the civilians.

CUI'NAGE, n.s. The ma'ung up of twine into such forms as it is commonly framed into for carriage to other places.

CUI'RASS, n. s.) Fr. cuirasse, from cuir,

CUIRASSI'ER, n.s. \ leather; Ital. coraccia. A breast-plate. A man at arms; a soldier in ar- mour, or with a cuirass.

The picture of St. George, wherein he is described like a cviraytier, or horseman completely armed, is rather a symbolical image than any proper figure.

Browne's Vulgar Errours.

The field, all iron, cast a glraming brown, Nor wanted clouds of foot, nor on each Lorn Cuirassiers, all in steel, for standing fight. Millun.

The lance pursued the voice without delay. And pierced his cuirass, with such fury sent, And signed his bosom with a purple tint. Dry den.

CUIRASS, a piece of defensive armour, made of iron plate, well hammered, serving to cover the body from the neck to the girdle, both before and behind. It was not brought into use till about A. D. 1 300, though it was known both to the an- cisnt Greeks and Romans in different forms. The use of the cuirass has been lately revived in the British and French armies : the cuirassiers of the latter were very conspicuous at Waterloo.

CUISH, n. s. Fr. cuisse. The armour that covers the thighs.

I saw young Harry, with his beaver up, His cuiahei on his thighs, gallantly

armed, Rise from the ground like feathered Mercury.

Shaks]ieare. Henry IV.

But what had our author to wound ˆEne. s with at so critical a time ? And how came the wishes to be worse tempered than the rest of his armour 1 Dryden. CU'LDEES, n. s. Lat. colidei. Monks in Scotland. Of this extraordinary people, who originally came from lona, and afterwards settled in England and Ireland, a very interesting ac- count has been published by Dr. Jamieson.

CULEX, the gnat: in entomology, a genus of insects belonging to the order of diptera. The mouth is formed by a flexible sheath, enclosing bristles pointed like stings. The antennas of the males are filiform ; those of the females feathered. There are fourteen species. Before they turn to flying insects, they have been in some manner fishes, under two different forms. One may ob- serve in stagnating waters, from the beginning of May till winter, small grubs with their heads downwards, their hinder part on the surface of the water; from which part arises sideways a kind of vent-hole, or small hollow tube like a funnel, and this is the organ of respiration. The head is armed with hooks, that serve to seize on in- sects and bits of grass on which it feeds. On the sides are placed four small fins, by the help of which the insect swims about, and dives to the bottom. These larvae retain their form during a fortnight or three weeks, after which period they turn to chrysalides. After three or four days fasting they pass to the state of gnats. A moment before, water was its element ; but now, become an aerial insect, he can no longer exist in it. He swells his head, and bursts his

enclosure. The robe he lately wore, turns to a ship, of which the insect is the mast and sail. He now seeks to pump trie alimentary juice of leases, or the blood of man and beasts. The sting which our naked eye discovers, is but a tube, containing five or six spicula of exquisite minuteness ; some dentated at their extremity like the head of an arrow, others sharp-edged like razors. The insect injects a small quantity of liquor into the wound, by which the blood be- comes more fluid, and is seen through the mi- croscope passing through those spicula. The liquor it has injected causes by its fermenting that disagreeable itching which we experience ; and which may be removed by volatile alkali, oˆ by scratching the part newly stung, and washing it instantly with cold water; for if later, the venom ferments, and

the tumor and the itching are only increased by friction.

C. pipiens, the musquito fly, is the most trou- blesome species of the whole genus ; and swarms in South America, and the West Indies. In the day time or at night they come into the houses ; and when the people are gone to bed they begin their disagreeable humming, approach always nearer to the bed, and at last suck up so much blood that they can hardly fly away. Their bite causes blisters in people of a delicate com- plexion When the weather has been cool for some days, the musquitoes disappear ; but when it changes again, and especially after rain, they gather frequently in such quantities about the houses, that their numbers are astonishing. In sultry evenings they accompany the cattle in great swarms, from the woods to the houses or to town ; and when they are driven before the houses, the gnats fly in wherever they can. In the greatest heat of summer, they are so nu- merous in some places that the air seems to be quite full of them, especially near swamps and stagnant waters, such as the river Morris in New Jersey. The inhabitants therefore make a fire before their houses to dispel these disagreeable guests by the smoke.

CULIACAN, a province of Guadalaxara, in Mexico, part of the intendancy of Sonora. It has Ginaloa on the north, New Biscay and the Zacatecas on the east. Chiametlan on the south, the gulf of California on the west. It abounds with all sorts of fruit, and has silver mines. The soil is fertile and the air healthy. It is about 200 miles long and 150 broad.

CU'LINARY, adj. Lat. culina. Relating to the kitchen ; relating to the art of cookery.

Great weight may condense those vapours and exha- lations, as soon as they shall at any tinle begin to as- cend from the sun, and make them presently fa'l back again into him, and by that action increase his heat ; much after the manner that, in our earth, the air in- creases the heat of a culinary fire. Newton.

To those who, by reason of their northern exposition, •will be still forced to be at the expence of culinary fires, it will 'reduce the price of their manufacture.

Arbuthnot. Hard fare ! but such as boyish appetite

Disdains not ; nor the palate, undepraved

By culinary arts, unsavoury deems. Cowper.

CULL, v. a. 3 Fr. cucillir ; Ital. cogliere ;

CU'LLER, n. s. 5 Lat. colligere. To select from; to make choice of the best. One who culls. VOL. VI.

The best of every thing they had being culled out for themselves ; if there were in their fiocks any poor diseased thing; not worth the keeping, they thouo-ht it good enough for the altar of God. Hooker.

Our engines shall be bent Against the brows of this resisting town . Call for our chiefestmen of discipline. To cull the plots of best advantage.

Shakspeare. King John. I do remember an apothecary In tattered weeds, with overwhelming brows, Culling of simples. Id. Romen and Juliet.

When the current pieces of the same denomination are of different weights, then the traders in money cull out the heavier, and melt them down with profit.

Locke.

When false flowers of rhetorick thou wouldst cull, Trust nature, do not labour to be dull. Dryden.

The various offerings of the world appear : From each she nicely culls with curious toil, And decks the goddess with the glittering spoil.

Pope To trim the ringlets of his scented hair ;

To aim, insidious, Love's bewitching g ance ; Or cull fresh garlands for the gaudy fair,

Or wanton loose in the voluptuous dance :

These were his arts ; these won Enone's love,

Nor sought his fettered soul a nobler aim.

Beattie.

Be silent, Conrad — dearest ! come and share The feast these hands delighted to prepare ; Light toil to cull and dress thy frugal fare.

Byron. The Corsair.

CULLEN (Dr. William), one of the most celebrated physicians of his age and country, was born of a respectable family in Lanarkshire in 1712. After serving his apprenticeship to a surgeon at Glasgow, he went several voyages to the West Indies as a surgeon ; but at last settled as a surgeon at

the village of Shotts, where he became acquainted with Archibald duke of Argyll. About this period Mr. Cullen formed a connexion in business with William Hunter, afterwards a celebrated lecturer on anatomy in London. It was agreed that, in order to improve their medical knowledge, one of them should alternately be allowed to study in what college he should choose, during winter, while the other should carry on business for their common benefit. Accordingly Cullen was allowed to study first for one winter in the University of Edinburgh ; but next winter, when it came to Hunter's turn, he preferred London, where his singular dex- terity in dissecting, and making anatomical pre- parations, recommended him so effectually to Dr. Douglas, who then lectured upon anatomy and midwifery, and whose chair he afterwards filled, that he engaged him as his assistant. On hearing this Mr. Cullen freely gave up the articles, and the two partners ever after kept up a friendly correspondence. In September, 1 740, Mr. Cullen took the degree of M. D. at Glasgow, and about the same time removed to Hamilton, with a view to practise as a physician ; and % vacancy not long after occurring in the Uni- versity of Glasgow, the duke of Hamilton pro- cured Dr. Cullen the appointment. In 1 746 he became professor of chemistry in that Univer- sity ; and his eminent abilities as a public lec- turer now began to appear. His practice as a

physician also daily increased ; and a vacancy occurring, in 1751 he was appointed by the king professor of medicine in that University. In 1756, on the death of Dr. Plumber, professor of chemistry in the University of Edinburgh, Dr. Cullen was unanimously called to the vacant chair; and removing to that metropolis continued a successful career there until his death. Among many useful reforms for which the students in Edinburgh are indebted to Dr. Cullen, the fol- lowing has been noticed, that before he came to Edinburgh, it was the custom of the medical professors to accept of fees from the students ; but Cullen would never take one from them. Dr. Cullen published his First Lines of the Theory and Practice of Physic ; and his Institu- tions of Medicine, his Lectures on the Materia Medica, &c. are universally known. He was first physician to the king for Scotland; F. R. S. of London, Edinburgh, and Paris ; Fellow of the Royal College of Physicians of Edinburgh and Madrid ; Member of the American Philo- sophical Society at Philadelphia; of the medical societies of Dublin and Copenhagen ; of the Royal Medical and Royal Physical Societies of

Edinburgh, &c.

CULLEN, a royal burgh in a parish of the same name, which joins with Banff, Kintore, Elgin, and Inverary, in electing a representative to parliament. By the patriotic exertions of the late earl of Finlater, it carries on a considerable linen manufacture. It has a post-office, and se- veral good schools.

CU'LLICE, or 3 Fr. coulis. Broth; rich

CULLIS, n. s. 5 jelly.

CULLODEN MOOR, a heath in Invernesshire, memorable for a victory gained over the adhe- rents of the house of Stuart, on the 16th of April 1746, by the royal army, commanded by the duke of Cumberland. A total defeat of the rebel forces took place, with the loss of 2500 killed, wounded, and prisoners ; while the royal- ists did not lose above 200 men. Prince Charles had his horse shot under him during the engage- ment ; and after the battle retired to the house of a factor of lord Lovat, about ten miles from Inverness, where he staid that night. Next day he set out for Fort Augustus, whence he pursued his journey, with great difficulty and distress, till at last he reached the coast and entered a vessel provided for him by the court of France. See ENGLAND.

CU'LLY, v. a., ». s. & adj. s Fr. couillon, CU'LLYISM, n. s. I coaiUe ; Ital. cog-

CUL-LIBI'LITY, n. s. \lione; Lat.coleus.

CU'LLION, n. s I To cully is, to

CU'LLIONLY, adj. } befool ; to trick;

to impose on. A cully is one who is in a state of cullyism, that is, egregiously led by the nose by sharpers or a strumpet. A cullion is a scoun- drel ; a mean wretch. Cullionly is mean ; de- spicable. Cuilibility signifies credulity ; facility of being imposed upon.

Such a one as leaves a gentleman, And makes a god of such a cullion.

Shakipeare. Taming of the Shrew. Up U) the breach, you dogs ; avaunt you cullions.

Shakspeare.

I'll make a sop o' th' moonshine of you : you whoreson, cullioidy, barber-

monger, draw.

Id. King Lezr.

Why should you, whose mother-wits Are furnished with all perquisites, .Be allowed to put all tricks upon Our cully sex, and we use none ? Hudibras.

Yet the rich cullies may their boasting spare : They purchase but sophisticated ware. Dryden.

He takes it in mighty dudgeon, because I won't let him make me over by deed as his lawful cully.

A rbuthnot.

What is this but being a cully in the grave ? Sure this is being hen-pecked with a vengeance ! But without dwelling upon these less frequent instances of eminent cullyism, what is there so common as to hear a fellow curse his fate that he cannot get rid of his passion to a jilt, and quote an half line out of a miscellany poem, to prove his weakness is natural ?

Spectator.

Providence never designed Gay to be above two- and-twenty, by bis thoughtlessness and cullibihty.

Swift.

CU'LLUMBINE, n. s. More properly spelt COLUMBINE. The flowers of this plant are beau- tifully variegated with blue, purple, red, and white.

Her goodly bosom, like a strawberry bed ;

Her neck, like to a buuch of collumbines. Spenser.

CULM, or CHULM, a market town of Bohe- mia, in the circle of Saatz, belonging to the knights of the Red Star, near which the French army, under Vandamme, was attacked and routed by the allies on the 29th and 30th of August, 1813, and the general taken prisoner. Another engagement took place in the neighbourhood on the 16th arid 17th of September, when the French found it -necessary to retreat. It is eight miles north-east of Egra.

CULM, in mineralogy, is thus distinguished by M. Magellan : ' It should be an easy matter for any person to distinguish culm from small caking coal, either by trying to make fire with it in a common grate, without interposing any other fuel between it ; when if it kindles, it is a caking coal ; if not it is

culm : or by putting some of these small fragments of coal on an ignited iron shovel: if they melt and run together, they be- long to the caking kinds; if not, they are culm. But it seems that coal merchants are now in the custom of calling culm the powdery parts of pit coal, of whatsoever kind they may happen to be. The reason of this is, that there is a difference in the duty payable by culrn and by caking coals. There never was any difficulty, however, on the subject ; nor would there be any difficulty in collecting the tax, were it not for the insufferable ignorance and love of despotic oppression, which generally pervades the underling officers of the revenue.'

CULMBACH, a town cf the Bavarian states, situated on the river White Maine. Population 3700 Fifteen miles N. N. W. of Bayreuth.

CU'LMEN, n. s. Lat. The summit. At the culmen or top was a chapel.

Sir T. Herbert.

CULMl'FEROUS, adj. Lat. cul»ms and fero. See BOTANY.

Culmiferous plants are such as have a smooth jointed stalk, and usually hollow ; and at each joint the stalk

is wrapprd about with single, narrow, long, sharp- pointed loaves, and their seeds are contained in chaffy husks. Quincy.

There are also several sorts of grasses, both of the Cyprus aud culmiferous kinds ; some with broader, others with narrower leaves. Woodward on Fossils.

The properrst food of the vegetable kingdom is taken from the farinaceous or mealy seeds of some culmiferoui plants ; as oats, barley, wheat, rice, rye, maize, panic, millet. Arbuthnot.

CU'LMINATE, v. n. i Lat.cw/men. To be CULMINA'TION, n. s. 3 vertical ; to be in the meridian. Culmination is the transit of a planet through the meridian ; the top or crown.

We upbraid the end with the beginning, the har- vest with the spiing, and wonder how that which in its putting forth was a flower, should iu its

growth and culmination become a thistle. Farindon.

Far and wide hir. eye commands ; For sight no obstacle found here, or shade, But all sunshine ; as when his beams at noon Culminate from the' equator. Milton. Par. Lost.

CULNA, a town in the distiict of Jessore, Bengal, standing on the north bank of one of the innumerable branches of the Ganges. Boats generally lay in a stock of fresh water and pro- visions here, and take a pilot to convey them through the navigation of the Sunderbunds.

CU'LPABLE, adj. } Old. Fr. coulpa CU'LPABLENESS, n. s. ble; Ital. colpevola; CI/LIV BLY, adv. Span, culpable ; Lat.

CULFAP 'LITY, n. s. \culpabilis, from cul- CU'LPE, n. s. pa, a fault. Culpa-

CU'LPRIT, n. s. & adj. ble is, criminal ; CU'LPATORY, adj. j guilty of; blamable.

Culpe is used, by Hall, to denote a fault. Cul- patory is attributing blame. ' Adjectives in osus, as famosus, &c. (says Horace Walpole), were most commonly used by Latin authors in a culpatory sense.' The word is not in the dictionaiies, but it deserves to be admitted. About culprit (says Johnson) there is great dis- pute. It is used by the judge at criminal trials, who, when the prisoner declares himself not guilty, and puts himself upon his trial, answers, ' Culprit, God send thee a good deliverance.' It is likely that it is a corruption of 'qu'il paroit,' ' May it so appear;' the wish of the judge being that the prisoner may be found innocent. Barrington agrees with Johnson in this derivation. Black- stone considers the word to have arisen from two abbreviations, cul for culpable, and the Fr. pret, ready to prove him so ; others derive it from the first of these abbreviations, and Fr. prist, taken ; Mr. Tyrwhitt looks for the origin in cul, the hind parts, and prist, one seized by the skirts ; aud, lastly, the Ency. Met. says, ' Cul- prit appears merely to be a compound and con- traction of culpe, a fault ; a crime ; a transgres- sion of the law ; and Fr. pris, part, of prcndre, to take ; one taken ; a prisoner, for a transgression of the law.'

And as Seint Gregory sayth, that precious clothing is culpable for the derth of it, and for hjs softnesse, and for his strangenesse and disguising, aud for the BUDerfluitee, or for the inordinate scantnesse of it.

rt.^,nlVn Cant. Tales.

These being perhaps culpable of this crime, or fa- vourers of their friends. Spenser's State of Ireland.

The wisdom of God setteth’: > efore us in Scripturp so many admirable patterns of virtue, and no one of them without somewhat noted wherein they were culpable ; to the end that to Him alone it might always be acknowledged, Thou only art holy, Thou only art just. Hooker.

Proceed no straighter ‘gsinst our uncle Glo’ster, Than from true evidence of good esteem He be approved in practice culpable.

Shakspeare. Henry VI.

If we perform this duty pitifully and culpably, it is not to be expected we should communicate holily.

Taylor.

Though prudence be reckoned among the cardinal virtues, yet I do not remember any professed treatise of morality, where it is treated in its full extent, and with that accuracy that it ought. For which possibly this may be a reason, that every imprudent action does not make a man culpable ‘ in foro conscientiae.’

Locke.

All such ignorance is voluntary, and therefore cul- pable; forasmuch as it was in every man’s power to have prevented it. South.

The knight appeared, and silence they proclaim ; Then first the culprit answered to his name ;

And, after forms of law, was last required To name the thing that woman most desired.

Dryden.

An author is in the condition of a culprit ; the pub- lick are his judges ; by allowing too much, and con- descending too far, he may injure his own cause ; and by pleading and asserting too boldly, he may displease the court. Prior’s Preface to Solomon.

Like other culprit youths he wanted grace, But could have no self-interest iu the case.

W. Whitehead.

3. SORF. The license of invention some people take is monstrous indeed.

MARIA. ‘Tis so ; but, in my opinion, those who report such things are

equally culpable. Sheridan.

CULPEE, a town in the district of Hoogly, Bengal, on the east bank of the Bhagarutty. It stands at the mouth of a creek, or small harbour, which gives shelter for boats from the impe- tuosity of the tides. Opposite the town is a place of anchorage for large vessels. It is said to be nearly certain death to an European to sleep on shore here, and coverings are recom- mended to be used during the night on all ships which anchor here, to keep off the heavy dews from the people.

CULROSS, a royal borough of Scotland, on the river Forth, about twenty- three miles north- west of Edinburgh. Its charter was granted by James VI. in 1588. The town is built on the abrupt ascent from the water, one street running direct north, while the other intersects it at right angles. The situation of the town gives it, es- pecially on the approach from the harbour, a very picturesque and grand appearance. By two royal grants from James IV. and Charles IT. the inhabitants of Culross possessed the exclusive privilege of making girdles (a kitchen utensil well known in Scotland for baking oat-cakes, &c.) It formerly carried on a very considerable trade in salt and coal, but this also has decayed ; and at present it has no manufacture of any note. This borough joins with those of Stirling, Duu-

fermling, Innerkeithinsr, and Quecnsferry, in electing a representative in parliament.

CU'LTEK, n. s. Lat. cutter. The iron of the plough perpendicular to the share. It is com- monly written COULTER. See that word.

Her fallow lees

The darnel, hemlock, and rank fumitory, Doth root upon ; while that the culler rusts That should deracinate such savagery.

Shakspeure. Henry V,

CU'LTIVATE, v. a. ~] Fr. cultiver ; Ital.

CULTIVABLE, adj. | coltivare ; Span, col-

CULTIVA'TION, n. s. (tivar; Lat. colere.

CULTIVATING, n.s. fTo till the soil; to

CU'LTIVATOR, n. s. \ make the soil pro-

CU'LTURE, v. a. & n. s.J line; to improve; to meliorate. These meanings are common to both verbs; to culture, however, seems to be of comparatively recent introduction. Cultivation is the art of improving soils, and forwarding and improving the growth of vegetables ; generally, improvement. Culture is, the art of cultivation ; tillage. Cultivable is a word of modern coinage, denoting that which has the capacity of being cultivated.

Give us seed unto our heart, and culture to our understanding, that there may come fruit of it.

2 Esdras viii. 6.

These three last were slower than the ordinary •wheat of itself, aud this culture did rather retard than advance. Bacon.

Were we but less indulgent to our faults,

And patience had to cultivate our thoughts,

Our muse would nourish. Waller.

He, who appropriates land to himself by his labour, does not lessen, but increases the common stock of mankind ; for the provisions serving to the support of human life, produced by one acre of inclosed and cultivated land, are (to speak much within compass) ten times more than those which are yielded by an acre of land of an equal richness lying waste in common. Locke.

It has been lately complained of, by some cultiva- tor! of clover grass, that from a great quantity of the seed not any grass springs up. Boyle.

An innate light discovers the common notions of good and evil, which, by cultivation and improve- ment, may be advanced to higher and brighter discoveries. South.

A foundation of good sense, and a cultivation of learning, are required to give a seasoning to retire- ment, and make us taste the blessing. Dryden.

To make man mild and sociable to man, To cultivate the wild licentious savage With wisdom, discipline, and liberal arts, The' embellishments of

life, Addison's Cato.

One might wear any passion out of a family by culture, as skilful gardeners blot a colour out of a tulip that hurts its beauty. Taller.

Where grows ? — Where grows it not ? If vain our

toil,

We ought to blame the culture, not the soil, Fixed to no spot is happiness sincere. Pope.

They rose as vigorous as the sun ; Then to the culture of the willing glebe. Thomson.

In countries cultured high, In ornamented towns, where order reigns, Free social life, and polished manners fair. Id.

It is therefore our business carefully to cultivate in our minds, to rear to the most perfect vigour and

maturity, every sort of generous and honest feeling that belongs to our nature. Burke.

To a mind thus disposed no part of creation is in- different. In the crowded city and howling wilder- ness ; in the cultivated province and solitary isl<; ; in the flowery lawn and craggy mountain ; in the mur- mur of the rivulet, and in the uproar of the ocean ; in the radiance of summer, and gloom of winter •, in the thunder of heaven, and in the whisper of the breeze j he still finds something to rouse or to sooth his imagination, to draw forth his affections, or to employ his understanding. Bealtic.

Delights which who would leave, that has a ht-art Susceptible of pity, or a mind Cultured and capable of sober thought, For all the savage din of the swift pack, And clamours of the field ? Cowper.

The beauties of the wilderness are his, That makes so gay the solitary place, Where no eye sees them. And th« fairer forms, That cultivation glories in are his. Id.

CU'LVER, n. s. Ang.Sax. culfre ; Lat. co lumba. A pigeon. The word is almost disused.

Righte as the lambe that of the wolf is bitten, Or as the culver that of the egle is smitten.

Chaucer. The Legende of Philomela. Live as tne culver on the bared bough

Sits mourning for the absence of her mate.

Spenier. Sonnet Ixxxviii. Whence borne on liquid wing, The sounding culver shoots. Thomson's Spring.

CU'LVERIN, n. $. Fr. coulevrine ; Ital. colu- brina; Span, culebrina, from Lat. coluber. A species of ordnance : originally a hawk.

As three great culverings for batterie bent, And leveld all against one certaine place, Doe all attonee their thunders rage frith-rent.

Spenser. Faerie Queene.

Here a well polished mall gives us the joy To see our prince his matchless force employ : i No sooner has he touched the flying ball, But 'tis already more than half the mall ; And such a fury from his arm 't has got, As from a smoakiiig culverin 'twere shot. Waller.

A whole cannon requires, for every charge, forty pounds of powder, and a bullet of sixty-four pounds ; a culverin, sixteen pounds of powder, and a bullet of nineteen pounds ; a Aemy-culverin, nine pounds of powder, and a bullet of twelve pounds.

Wilkins'i Math. Magic.

CULVERIN, a long slender piece of ordnance or artillery, serving to carry a ball to a great dis- tance. There are three kinds of culverins : the extraordinary, the ordinary, and the least sized. 1. The culverin extraordinary has 5£ inches bore; its length 32 calibres, or 13 feet; weighs 4800 pounds ; its load above 12 pounds ; carries a shot 5J inqhes diameter, weighing 20 pounds weight. • 2. The ordinary culverin is 12 feet long; carries a ball of 17 pounds 5 ounces; calibre 5£ inches ; its weight 4500 pounds. 3. The culverin of the least size, has its diameter 5 inches ; is twelve feet long ; weighing about 4000 pounds; carries a shot 3| inches diameter, weighing 14 pounds nine ounces.

CU'LVERKEY, n. s. A flower.

Looking down the meadows, I could sec a girl cropping culverheys and cowslips to make garlands.

Walton's Anyler.

C U M A N A.

*CU'LVERTAIL, n. *. nonymous with dove-tail.*

CUMJE, or CUM A, in ancient geography, a

In carpentry, sy- nocturnal birds, from whose fat is procured a valuable oil. Its site is truly majestic ; a river of considerable magnitude issues from its mouth,

city of Campania near Puteoli, founded by a co- which is every where surrounded by the richest

lony from Chalcis and Cumae of $x>lia before the verdure ; and the roar of the waters, joined to

Trojan war. The inhabitants were called Cu- the mournful cries of the birds within, is believed

meei. One of the Sibyls fixed her residence in a by the natives to proceed from the souls of the

cave in the neighbourhood, and was called the dead, who are forced to enter this cavern as a

Cumaean Sibyl. There is still a decayed town of vestibule to the other world. The climate of the

this name on the spot, about four miles north- territory of Cumana varies according to the situa-

west of Pozzuolo. Also a town of Asia Minor tion of its districts; it may, in fact, be said to

CUMA, a small island in the Mediterranean, concentrate every variety of" the habitable globe.

off the coast of Italy, five miles west of Naples. . The city of Cumana, the most ancient of all

CUMA, ST. ANTONIO r>E, a town of Brasil, in the towns on this continent, is situated near the

the province of Maranham.

gulf of Cariaco, on an arid and sandy plain. No

CUMANA, a province in the department of towering steeple or dome attracts the eye of the the Oronoco, and state of Venezuela, Colombia,

traveller from afar off; only a few trunks of ta-

il is bounded by the Caribbean Sea on the north and east, the river Unara on the west, and on the south by the wide-spreading Oronoco. It thus

marind, cocoa, and date trees rising above the

flat roofs of the houses.

The river Manzanares separates it from the

includes New Barcelona, as well as New Anda- suburbs ; the population is a European and

lusia, properly so called. The extent of the ter- mixed race. The appearance of the coast from

ritory of Cumana, the fertile soil of the interior, the mouth of this river is thus described by Hum-

and the nature of its boundaries, render it one boldt : ‘ We anchored opposite the mouth of the

of the most important divisions of the republic. Manzanares at break of day. Our eyes were

This province is extremely mountainous ; a fixed on the groups of cocoa trees that border

branch from the main chain of the Andes the river, and the trunks of which, more than

stretches across its whole extent to the gulf of sixty feet high, towered over the landscape. The

Paria. It abounds in highly picturesque scenery, plain was covered with tufts of cassias, capers,

and gives birth to numerous rivers ; some flowing and those arborescent mimosas, which, like the

towards the north and emptying themselves into pine of Italy, extend their branches in the form

the Caribbean Sea, others taking a southerly di- of an umbrella. The pennated leaves of the

rection and discharging themselves into the broad palms were conspicuous on the azure of a sky, the

expanse of the Oronoco. The principal of these clearness of which was unsullied by any trace of

are the Unara, the Neveri (on which Barcelona vapor. The sun was rapidly ascending towards

is built), the Manzanares, which encompasses the the zenith ; a dazzling light was spread through

city of Cumana on the south and west, the Gua- the air, along the whitish hills strewed with cy-

rapiche, the Mamo, the Pao, and the Suara. lindric cactuses, and over a sea ever calm, the

These rivers are agpin joined by others of lesser shores of which were peopled with alcatras,

importance, which intersect the territory in all egrets, and flamingoes. The splendor of the

directions, affording every possible facility to the day, the vivid coloring of the vegetable world,

erection of mills, and admirably adapted to the the forms of the plants, the varied plumage of the

purposes of irrigation.

birds, every thing announced the grand aspect of

The province of Cumana presents every va- nature in the equinoctial regions.'

riety of soil : from the river Unara to the city of Cumana the land is moderately fertile ; from the Point of Araya for about twenty-eight leagues to tho east the coast is dry and sandy, the soil offer- ing nothing but an inexhaustible mine of salt, both mineral and marine. The banks of the Oronoco consist chiefly of extensive commons, over which numerous herds of cattle are allowed

The castle of St. Antonio is built on the eastern extremity of a white, solitary hill of the same name, and forms the only bulwark to Cumana.

The city, as we have intimated, contains no remarkable buildings, the frequency of earth- quakes obliging the inhabitants to sacrifice architectural beauty and elegance to personal secu- rity. There is a theatre constructed after the

to range. The remaining parts of the province plan of the one at Caraccas. The pit, where the are every where fertile. The guaiacum, anacar- men are separated from the women, is uncovered, clium, Brasil, and Campeachy woods flourish down to the coast of Paria, whilst their branches

so that the audience may at once behold the actors and the stars. The heat of the climate

ar

the site of the old town, and also from the nature of the soil, which is supposed to be less exposed to the violent shocks of earthquakes. The population of Cumana has been variously estimated : M. Depons states it to have amounted to nearly 28,000 in the year 1802; other travellers have carried this number to 30,000; but Humboldt, who was favored with the sight of all the statis- tical memoirs of the country, pronounces it not to exceed 18,000 or 19,000.

The climate though excessively hot here is remarkable for its purity and healthiness. The town is only fifty-three feet above the level of the sea ; but the breezes which have to pass over the lofty hills, which stretch along its whole eastern side, seem greatly to moderate the heat of the day. From June to the end of October Fahrenheit's thermometer usually rises to 90° and sometimes to 95°; and during these months it rarely descends to 80° during the niglit. The mean temperature of the whole year, accordiug to observations on the centrigrade thermometer, is 27'7°. The mean temperature of the hottest month at Paris is 19° i

fine moonlight night in the water of Manza nares, to smoke cigars and discuss the news of the day. The ladies of his friends who accom- panied them displayed not the least apprehen- sion or fear of the baras or small crocodiles, and the troops of dolphins which spouted the waters around them. Indeed so frequently do they bathe that the whole of the inhabitants, even the women of the most opulent families, are expert swimmers. The Cumanese are said to be exces- sively polite, sober, and abstemious.

The most dreadful scourge of the territory of Cumana is the earthquake.

The natives have a tradition that the gulf of Cariaco was formed by an earthquake a short time previously to the third voyage of Columbus. They say that towards the end of the sixteenth century the whole coast was shaken, and the shores fre- quently inundated by the sea's rising fifteen or twenty fathoms above its usual level. As no re- cord exists at Cumana, however, of an older date than 150 years (a species of the white ant entirely destroying all the treasures of the biblio- manist) the precise date of these phenomena rests on mere hypothesis. On the 21st October, 1766, after a remarkable drought of fifteen months, the whole city was overthrown, and vast numbers perished. The oscillations of the earth continued hourly for fourteen months after- wards. The earth in many places ejected sul- phureous waters ; and a most singular feature of this earthquake is, that whilst the ground was externally oscillating the rain fell in torrents, and the harvest was unusally abundant. Another tremendous convulsion was experienced in 1794, and on the 19th December, 1797, four-fifths of the c-ity were utterly destroyed. In this dread- ful earthquake the ground was for the first time at Cumana felt to heave perpendicularly. About half an hour before the first shock there was a strong sulphureous smell near the castle, and a loud subterranean noise, resembling the explo- sion of a mine at a great depth : flames were also seen to rise from the banks of the river, and in several other places. Flames are not unfre- quentiy observed near the city of Cumana; they do not burn the herbage, neither do they appear to issue from any crevices or fissures in the earth : the people call them the soul of the tyrant Aguirre, a tyrannical Spanish governor, who attempted to raise the standard of inde- pendence in this neighbourhood, in 1561. He was killed at Barquisimeto, after having been abandoned by his own men. At the moment he fell he plunged a dagger into the bosom of his only daughter, ' that she might not have to blush before the Spaniards at the name of the daughter of a traitor.' Ever since his death the above superstition has been connected with his memory, the natives believing that his soul wan- ders about the earth in the appearance of a flame which shuns the approach of man.

The port of Cumana is capable of containing all the navies of Europe : indeed the whole of the gulf of Cariaco, which is thirty-five miles long and sixty-eight broad, affords excellent anchor- age. The West Indian hurricanes are never felt in these regions, the Caribbean Sea being a?

ralra and pacific as the great ocean which laves the coasts. The only

danger in this part of Peru is a shoal called Morro Rexo, which is 900 toises broad, and so very steep that vessels are aground on it before they have the least warning. Im- mense flocks of fishing-herons and alcatras of a most unwieldy form frequent its shores. The principal exports from this harbour are cattle, smoked meat (tosajo), and salted fish. Of this latter commodity the Cumanese make large ship- ments to Caraccas, &c. and to the windward islands, in return for which they receive provi- sions, implements of husbandry, and contraband goods. Amongst the exports, cocoa-nuts and oil extracted from the pulp they contain deserve to be mentioned. The province contains innume- rable medicinal plants and aromatics, which might become more important than they are in the list of their commercial articles. The retail trade of Cumana is vested almost entirely in the hands of the Biscayans, Canarians, and Catalans. These last-mentioned first established rape manufactories at Cumana, where they make excellent cobbs of the bark of the mahet (genus bombax), and cords and twine from the aloe, &c.

Seven nautical leagues to the south-west of the city of Cumana is the valley of Curnanacoa, celebrated for its plantations of tobacco. The principal other towns of Cumana are situated on the western coast, as Barcelona, Paritus, Cla- rinas, &c. On the coast, along the gulf of Paria, several villages have been established by the French and Spanish refugees who removed from Trinidad in 1797, when that island fell into the possession of the British. The progress which cultivation has made in this short time, induces the belief that this district will speedily become the richest in the province. The whole number of the inhabitants of this extensive territory, ac- cording to a recent official statement of the po- pulation, and distribution of the representatives at the congress of Colombia, amounts to 70,000 souls. But, as Colonel Hale says, the popula- tion is everywhere extrerrjely disproportioned to the territory of the republic. ‘ In the time of its greatest prosperity,’ he adds, ‘ the country was comparatively a desert, but this desolation has been fearfully augmented during the revolu- tionary war. The fertile provinces of Guiana, Cumana, and Barcelona, are almost abandoned, and the flourishing towns and villages of the plains reduced to a grass-grown wretchedness, which scarcely leaves room to conjecture their former prosperity. Could 20,000,000 of inhabi- tants be transferred from Europe, they would rind land to cultivate, and abundance to recom- pense their labor.’ He elsewhere observes that ‘ above half of the inhabitants of Venezuela are supposed to have perished in the late wars.’ The city of Cumana is situated in 10° 27′ 52″ N. lat, and 64° 9′ 47″ W. long.

CU’MBENT, jadj. Lat. cumbens, cumbere. Lying down ; in a recumbent posture.

Too cold the grassy mantle of the marl, In stormy winter’s long and dreary

night, For cumbent sheep. Dyer.

CUMBER, v. a. & n. s. ~) Goth, gaumbera ; CTJ'MBERSOME, adj. Swed./«/m6er;Dan.

CU'MBERSOMELY, adv. \ hammer; Dut. kom- CT/MBERSOMENUSS, n. s. \meren. The ancient C'UMBRANCE, n. s. spelling was com-

CU'MBROUS, adj. her. To embarrass ;

CU'MBROUSLY, adv. J to obstruct; to im- pede by the addition of something useless ; to involve in difficulties ; to busy ; to distract with multiplicity of cares; to harass; to crowd or load with something useless. The kindred words closely follow the various meanings of the primi- tive word.

How can I myself alone bear your cumbrance, and your burden, and your strife ? Dent. i. 12.

Martha was cumbered about mucli serving.

Luke x. 40.

Behold these three years I come seeking fruit on this fig-tree, and find none : cut it down ; why cum- bcreth it the ground ? Id. xiii. 7

The began Beryn to drede inwardlick sore, And thought thus in his hert, shall I be cumberid more ? Chaucer. Cant. Tales.

Thus fade thy helps, and thus tby cumbers spring.

Spenser.

They waste bignesse but cumbert the ground, And dirks the beauty of my blossoms round.

Id. Shepherd's Calendar A. cloud of cumbrous knattes do him molest, All striving to infix their feeble stinges, That from their noyance he can no where rest.

Id. Faerie Queene.

By the occasion thereof I was brought to as great cumber and danger, as lightly any might escape.

Sidney.

Domestick fury, and fierce civil strife, Shall cumber all the parts of Italy.

Skakspeare. Julius Caesar Let it not cumber your better remembrance.

Id. Timon.

The greatest ships are least serviceable, go very deep in water, are of marvellous charge and fearfd cumber. Raleigh,

Extol not riches then, the toil of fools, The wise man's cumbrance, if not snare j more apt To slacken virtue, and abate her edge, Than prompt her to do aught may merit praise.

Milton

Henceforth I fly not death, nor would prolong Life much ! Bent rather, how I may be quit, Fairest and easiest, of this cumbrous charge. Id There are scarce any of them that are not cumbered with some difficulties (such is the imperfection of human knowledge), which they have been fain to tover with obscurity of terms, and to confound the signification of words, which, like a mist before peo- ple's eyes, might hinder their weak parts from being discovered. Locke

Hardly his head the plunging pilot rears. Clogged with his clothes, and cumbered with his years

Dry den.

They reared him from the ground, And from his cumbrous arms his limbs unbound ;' Then lanced a vein. Id.

Very long tubes are cumbersome, and scarce to bs readily managed. Newton'i Optickt

What is a lordling's pomp ? a cumbrous load, Disguising oft the wretch of human kind, Studied in arts of hell, in wickedness refined '.

Btmu.

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CUMBERLAND.

CUMBERLAND, a county of Eastern Aus- tralia, bounded on the north and west by the rivers Havvkesbury and Nepean ; on the south and south-west by the Nepean and Cataract mers; and on the east by the sea coast.

CUMBERLAND, a county of England, suuate between 2° 13′ and 3° 30′ W. long., and 54° 6′ and 55° T N. lat. It is bounded on the west by the Irish sea, which washes its coasts for nearly seventy miles ; on the north by the Sol- way frith, the river Liddal and Adrian's wall, which separate it from Scotland for thirty miles ; on the south by Westmoreland and Lancashire for sixty-nine miles ; and on the east by Nor- thumberland and Durham for fifty-eight miles. Its greatest length is about seventy-three miles, but its mean extent is not more than sixty ; its greatest breadth thirty-eight; and its circum- ference 224. Thus it includes 1516 square miles, or 970,240 acres, and of these about 342,000 comprise the mountainous districts. According to an agricultural survey, which was made in the latter end of the last century, this county was found to contain 470,000 acres of old enclosures ; 150,000 of improvable common; and 8000 acres covered by lakes and waters. No county in England affords more instances of beautiful and sublime scenery than Cumberland ; indeed every turn of the roads presents a new combination of the picturesque. Nature here in- deed unites her most sublime with her most al- luring appearances. Even the monotony of that level tract which stretches along the north and north-western borders of the county is frequently broken by the interesting scenery of the margins of the rivers. These, though very numerous, are but partially navigable ; the names of the prin cipal are, the Eden, Derwent, Esk, Eamont, Duddon, Greata, Cocker, Caldew, Irthing and Liddal ; and almost every farm in the county enjoys the benefit of a clear spring. The rivers abound with salmon, trout, &c., and the smaller brooks with eels and a variety of other fish. But the chief attractions of Cumberland are its beau- tiful and extensive lakes. A lake poet very cha- racteristically describes them : ' I know not/ says Mr. Wordsworth, ' how to give the reader a dis- tinct idea of these more readily, than by request- ing him to place himself with me in imagination on some given point; let it be the top of Great Garel or Scaw-fell ; or rather let us suppose our station to be a cloud, hanging midway between these two mountains, at not more than half a mile's distance from the summit of each, and not many yards above their highest elevation; we shall then see stretehed at our feet a number of valleys, not fewer than eight, diverging from the point on which we are supposed to stand, like the spokes from the nave of a wheel. First we note lying to the south-east the vale of Longdale, which will conduce the eye to the long lake of Windermere, stretched nearly to the sands of the vast bay of Morecomb, serving here for this imaginary wheel — let us trace it in a direction from the south-east towards the south, and we shall next fix our eyes upon the vale of Coniston, running up likewise from the sea, but, not as the other valleys do, to the nave of the wheel, and

therefore it may not be unaptly represented as a broken spoke sticking in the rim. Looking again, with an inclination towards the west, immediately

at our feet lies the vale of Duddon, in which is no lake, but a winding stream among fields, rocks and mountains, and terminating its course in the sands of Duddon. The fourth vale, that of the Esk, is of the same general character as the last, yet beautifully discriminate from it by peculiar fea- oires. Its stream passes under the woody steep on which jstands Muncaster castle, the ancient seat of the Penningtons ; and, after forming a short and narrow estuary, enters the sea below the little town of Ravenglass. Next, almost due west, we should look down into and along the deep valley of Wastdale, with its little chapel and? a few neat dwellings, scattered upon a plain of meadow and corn ground, intersected with stone walls almost imperceptible. Beyond this fertile little plain, within its bed of steep moun- tains, lies the longi narrow, stern, and desolate lake of Wastdale, and beyond this a dusky tract of level ground conducts the eye to the Irish Sea. The stream, issuing from Wast-water, is called the Irt, and falls into the estuary of the river Esk, Ennerdale comes next in view, with its lake of bold and somewhat savage shores. Its stream, the Ehen, or Enna, flowing through a soft and fertile country, passes the town of Egreiiont, and the ruins of the castle ; then, seeming to break through 'the barrier of sand thrown up by the winds on this tempestuous coast, enters the Irish Sea. The vale of Buttermere, with the lake and village of Crummock-water beyond, next present themselves. We will now follow the main stream, the Cocker, through the fertile and beautiful vale of Lorton, till it is lost in the Derwent, below the noble ruins of Cockermouth Castle Lastly, Borrowdale, of which the vale ©f Keswick is only a continuation, stretching due Rorth, brings us to a point nearly opposite to the vale of Win- dermere, with which we began. From this it will appear, that the image of a wheel, thus far exact, is little more than one-half complete ; but the deficiency on the eastern side maybe supplied by the vales of Wytheburn, Uls-water, Haws- water, Crasmere, and Rydal ; none of these, however, run up to the central point between Great Garel and Scaw-fell. From this, hitherto our central point, if we take a flight, not more than three or four miles eastward, to the ridge of Helnellyn, we shall look down upon Wytheburn and St. John's vale, a branch of the vale of Kes- wick. Upon Uls-water, stretching due east, and not far beyond to the south-east, though from this "point not visible, lie the vale and lake of Haws-water, and lastly the vales Grasmere, Rydal, and Ambleside, bring you back to Windermere ; thus completing, though on the eastern side in a somewhat irregular manner, the representative figure of a wheel.'

Besides the lakes mentioned above there are several others ; and a multitude of taras. The only difference between a tara and a lake is, that the former is smaller or found in a ckcular re- cess. The loftiest of the English Appenines, which extend from Derbyshire to Linlithgow, separate the eastern from the western coasts, and bound the east side of this county.

Cross-fell, Geltsdale forest, Spariadam Waste, and II?.rtside-fell, abound in limestone, slate, sand- stone, clay, coal, and lead ore ; but are no ways remarkable for their general appearance. The other range occupies the south-western part of the county ; the majesty and grandeur of these mountains, some of them towering from 1100 to 3166 feet above the level of the sea, form the most striking features in the romantic scenery of the lakes. The valley bounded by this range, and extending from the Solway frith to West- moreland, abounds with strata of red sandstone, mixed with beds of limestone, sandstone, coal, &c.

This county is rich, therefore, in mineral pro- ductions, the principal of which are, coal, lime, lead ore, black lead, copper, gypsum, lapis cala- minai is, and excellent slate. Its copper-mines were formerly very productive, but of late years have sunk into neglect. The chief lead-mines are situate in Aldston Muir. This muir was vested in the hands of the commissioners and governors of Greenwich Hospital on the attainder of James, earl of Derwentwater (who was lord of the manor) in the year 1715. The number of mines in course of working and belonging to the hospital, in 1814, was 102, and the annual produce amounts to 4598 tons. On the eastern side of a mountain at the head of Borrowdale, the celebrated mines of black lead are situate : from the produce of these mines black lead pencils are made, known in France by the name of crayon d'An- gleterre ; these mines, however, are only opened occasionally to answer the demand, the quantity annually sold not amounting to more in value than £3000. The appearance of the mountains on which these mines are found, is excessively desolate and waste ; the horrid projections of the vast promontories, the vicinity of the clouds, the thundering explosions in the mines and quarries, and their total nudity, inspiring the beholder with the idea that he is surveying the ruins of a world which he has survived. The principal coal-mines in the county are situated in the neighbourhood of Workingtou and Whitehaven. From the former place upwards of 300 tons are shipped every day : there are sixteen mines from forty to ninety fathoms deep. The collieries near Whitehaven are perhaps the most astonishing of any in the world. These mines are sunk to the depth of 130 fathoms, and extend under the sea, sufficient depth of water to bear the largest ships rolling over them. A steep descent leads down to the lowest vein of coal, through long galleries hewn out of the solid rock. Of its limestone, which abounds in various parts, nearly 700,000 bushels are yearly exported to Scotland. Its export of coal, which is sent principally to

Scotland and Ireland, is said to amount to about 90,000 chal- drons.

The height of its mountains, and the great ex- tent of its sea-coast, render the climate of Cum- berland extremely variable. In the valleys, and low grounds, the snow seldom lies for more than twenty-four hours, whilst on the mountains it continues for six or eight months. Thus the lower parts of the county are mild and tempe- rate, whilst the more elevated are extremely

severe. This county is also subject to heavy falls of rain, especially during the autumnal months, w'uicn render the harvest very precarious. Yet, as a proof of the general salubrity of the air, it may be stated, that no county in England affords more instances of remarkable longevity. The soil may be classed under the four following heads: — 1. Rich loam and fertile clays, which extend over a very small portion of the county ; 2. Dry loams, including the various degiees from bright brown loam to the light sandy soil which extend over the lower districts and the sides of some of the mountains; 3. Black peat earth ; and 4. Wet loams. Till latterly the Cumberland farmers attended rather to grazing than tillage ; since the recent enclosure of 200,000 acres, however, considerable quantities of flour, oatmeal, &c., are exported. Cranberries are so plentiful in this county as to furnish an impor- tant branch of the export trade. The only fish exported hence are, cured cod for the Liverpool market, and salmon and potted shad for London. The principal manufactures of this county are calicoes, corduroys, ginghams, and various kinds of cotton goods; carpets, sail-cloth, paper, glass bottles, and pottery. Cumberland is defi- cient in harbours ; its commerce, however, is rapidly improving, upwards of 300 vessels, from sixty to 120 tons burden, being employed in the coast trade alone. The chief ports are Working- ton, Whitehaven, Harrington, and Maryport.

*Cumberland is divided into five wards, or hundreds, and 104 parishes. It contains one city, and eighteen market towns. Boroughs — White- haven, Carlisle, and Cocke*mouth. The city of Carlisle is beautifully situate in a forest near the confluence of the rivers Eden and Caldew. It is of very ancient date, and abounds with good buildings. Its distance from London is 306 miles. This city confers the title of earl on the Howard family ; Whitehaven that of viscount and baron to the Lowthers. The village of Ellenborough gives the same to the Law family. Cumberland sends nine members to parliament; four for the county, two for the city of Carlisle, and two for the borough of Cockermouth.*

Jts mosc interesting antiquities are a perfect Druidical circle, called by the country people Long Meg and her daughters, and the celebrated Picts' wall. The first of these is situated about two miles and a half distant from the

village of Salkeld; it consists of a circle, about eighty yards in diameter, formed of sixty-seven rude, unhewn, and massy stones. What renders this vestige of the ‘ olden time’ more astonishing, is the circumstance that no quarry of stone, similar to that of which it is constructed, is found within a great distance of this place, and how such im- mense masses could be moved is not easily determined when we reflect on the low state of mechanical knowledge in early ages. The cele- brated Roman wall, begun by Adrian and repaired and rebuilt by Severus, extended from Tinemouth in Northumberland, to Solway frith in this county, dividing the kingdom from sea to sea. Its remains may easily be traced for up- wards of seventy miles, in some places still en- tire to the height of five feet, and in others to the height of eight feet.

CUMBERLAND.

Cumberland derives its name from the Cimbri, or Cumbri, the aboriginal inhabitants. Ptolemy, however, calls the inhabitants of this county, in common with those of Yorkshire, Lancashire, Westmoreland, and Durham, Brigantes They are supposed not to have been conquered by the Romans till the time of Vespasian, from which period their country was the constant residence of several Roman legions. When the Saxons subdued the Roman power, in Britain, Cumber- land became part of the kingdom of Northum- berland, and was then first called Lumbra-land or Lumer-land, the land or country of the Cum- bri. From the time when the Danes broke the power of the Saxons, until 946, this country had petty kings of its own. About this time, how- ever, Edmund, brother to king Ethelstane, in conjunction with Leontine king of South Wales, overran the country and, having subdued the in- habitants, granted it to Malcolm, king of Scotland, upon condition that he should defend the north- ern parts of England against all invaders. It was by virtue of this grant that the eldest sons of the Scottish kings were styled governors of Cumber- land. The Saxons, subsequently to this, again reduced it under their government ; but, at the time of the Norman conquest, it was so much impoverished thatWilliam the Conqueror remitted all its taxes. From this circumstance Cumberland is not rated in Doomsday Book, as all the other counties of England are.

CUMBERLAND, a county of North America, in New Brunswick, which comprehends the lands at the head of the bay of Fundy, on the basin called Chebecton, and the rivers which fall into it. It has several settled townships ; as Cum- berland, Sackville, Amherst, Hillsborough, and Hopewell ; and is watered by the rivers Au Lac, Missiquash, Napan, Macon, Memramcook, Pet- coudia, Chepodie, and Herbert.

CUMBERLAND, a county of the United States, in the district of Maine, between York and Lin- coln counties. It has the Atlantic ocean on the

south, and Canada on the north. Its sea coast, formed into numerous bays and lined with a multitude of fruitful islands, is nearly forty miles in extent in a straight line. Cumberland is di- vided into twenty-four townships, of which Portland is the chief.

CUMBERLAND, a county of the United States, in New Jersey, bounded on the south by Dela- ware Bay, on the north by Gloucester county, on the south-east by Cape May, and on the west by Salem county. Fairfield and Greenwich are the chief townships.

CUMBERLAND, a mountainous county of Pennsylvania, bounded on the north and north- west by Mifflin ; on the east and north-east by the Susquehanna, which divides it from Dauphin ; or, the south by York, and on the south-west by Franklin county. It is forty-seven miles in length and forty-two in breadth, and has ten townships, of which Carlisle is the chief.

CUMBERLAND, a county of Virginia, on the north side of Appamatox River, which divides it from Prince Edward.

CUMBERLAND, a county of North Carolina, in Fayette district, containing, in 1816, 9382 inha- bitants.

CUMBERLAND, a considerable fort of North America in New Brunswick, at the head of the bay of Fundy, on the east side of the northern branch.

CUMBERLAND, a harbour on the east side of Washington's Isles, on the north-west coast of North America. It lies south of Skittikiss, and north of Cummashawaa. — Also a bay on the south- east coast of the island of Cuba.

CUMBERLAND, an island and bay of the United States, on the coast of Camden county, Georgia, twenty miles south of the town of Frederica.

CUMBERLAND ISLANDS, a cluster of islands so called by captain Cook, in 1770, and situated near the north-east coast of New Holland. They form a passage, called, from the day of its discovery, Whitsunday Passage; in long. 211° 2S7 W., lat. 20° 36′ S.

CUMBERLAND MOUNTAINS, a ridge of moun- tains in North America, about thirty miles broad, which extend from the Tennessee River, and join the Allegany Mountains in Virginia.

CUMBERLAND RIVER, a river of North Ame- rica, rising in the Cumberland Mountains on the western borders of Virginia, and falling, after a course of 450 miles, into the Ohio, ten miles above the mouth of the Tennessee. It is navig- able for loaded batteaux 800 miles without in-

terruption, and at its mouth is 300 yards wide.

CUMBERLAND STRAIT, a strait in the North Sea, west of Davis's Straits, beginning in long. 65° 30′ W., lat. 63° S5′ N.

CUMBERLAND (Richard), D.D., a learned di- vine of the seventeenth century, was the son of a citizen of London, and educated at Cambridge. In 1672 he published his excellent Treatise of the Laws of Nature ; and in 1686 An Essay upon the Jewish Weights and Measures. After the Revolution he was nominated by king William to the bishopric of Peterborough. 'At the age of eighty-three he applied himself to the study of the Coptic language, of which he made him- self master. He was as remarkable for humility as for his extensive learning. He died in 1718, aged eighty-seven.

CUMBERLAND (Richard), a celebrated drama- tic and miscellaneous writer, was born in 1732, in the master's lodge of Trinity College, Cam- bridge, under the roof of his grandfather Dr. Bentley. When about six years of age he was sent to the school of Bury St. Edmunds, where, at twelve years old, he produced a dramatic piece of some merit entitled Shakspeare in the Shades. He was next sent to Westminster, and at the age of fourteen removed to Trinity College, under the care of Dr. Morgan ; who, however, entirely neglected him, as did also his second tutor, Dr. Philip Young. But Dr. Smith suc- ceeding Dr. Bentley shortly after, and finding the little progress he had made, excited him to indus- try, and so far succeeded that young Cumberland soon obtained abatchelor's degree. A fellowship next presented itself to his hopes ; but he was induced to decline it for the time, by a prospect of preferment which was offered hino by lord Halifax, to become his private secretary in the colonial office. Here he found leisure to prose- cute his academical studies with so much success, that, in the first recess after coming to town, he

repaired to Cambridge, and gained his college honors in competition with candidates of older standing. From his official services, which were never burdensome, he was, soon after the settle- ment of his father at Fulham, entirely released by the resignation of his patron. At the begin- ning of the reign of George III. brighter days of official dignity opened upon lord Halifax ; and the beams of royal favor which shone upon the patron were as usual reflected upon his satel- lites. His lordship was appointed to the

high office of representing Majesty in Ireland, and was required to open the king's first parliament in that kingdom. Now our author anticipated a reward for his long and faithful services, and that his golden dreams of advancement would be re- alised. He had adhered to the new lord-lieutenant when in an office of less importance, and when in no office at all ; and hoped in return for the post of chief secretary. He was, however, obliged to content himself with the secondary post of Ulster-secretary ; Single-Speech Hamilton, with- out the lord-lieutenant's interference or concur- rence, having been appointed to the higher dig- nity. After remaining in this situation for some time, he returned from Ireland, and as the final reward for his long services, was appointed to £200 a year from the crown agency of Nova Scotia. Some benefit, however, accrued to his father from this Irish expedition, as he was soon after our author's return nominated bishop of Clomfert. The son now returned to his old office in the board of trade, and began to write for the theatre. His first attempt which met with approbation was a musical drama, in three acts, entitled The Summer's Tale. In the following winter he brought out the comedy of the Brothers atCovent Garden theatre ; and its success encou- raged him to proceed in a career thus auspiciously commenced. The West Indian, the most popu- lar of all his plays, was the next offering he made to the stage. It was represented for twenty-eight successive nights to crowded houses, without an after-piece ; and, when published, 12,000 copies of it were sold. To this succeeded the Fashionable Lover ; a performance which he seems inclined himself to rate higher, in many respects, than the one which gave him such celebrity. It is needless to add that the public were of a differ- ent opinion. The comedy of the Choleric Man was brought forward soon afterwards, and was honored with a prologue by Garrick. ' In the meantime lord George Germain became chancellor of the board of trade, and by his influence, upon the resignation of Mr. Pownal, Cumberland was advanced to the post of chief secretary, which very considerably increased his income. In 1780 he went on a mission to Lisbon and Madrid, but was recalled the year following, having, as was said, exceeded his powers. He was also de- prived of his situation at the board of trade, and from this time his circumstances were much em- barrassed. He retired to Tunbridge Wells, where losing his wife, he came to London, and died at the house of Mr. Henry Fry, in Bedford Place, Russel Square, at the advanced age of nearly eighty. He was interred in Poets' Corner, Westminste Abbey, "Between the monuments or Dryden and Addison. He wrote, besides his*

comedies above mentioned, a periodical work entitled the Observer; Memoirs of his own Life; Calvary, and tie Exodiad, epic poems ; Retro- spection, a poem ; some sermons, novels, &c.

CUMBRAY, GREAT, a small island on the Scottish coast, in the frith of Clyde, annexed to the county of Bute. It is separated from Little Cumbray

by a strait three-fourths of a mile broad. Its length is two miles and a half, and breadth one arid a half; its surface containing about 2500 acres, which produce grain, turnips and potatoes. There are few trees on the island, but abundance of freestone and limestone, the former of which is exported. On the east side are two remark- able basaltic rocks, called Reppel Walls, having seams like those of Staffa, but not columnar. Milnport, on the south-west shore, has safe an- chorage, and a small manufacture of thread and coarse linens is carried on in the village.

CUMBHAY, LITTLE, also annexed to the county of Bute, contains a light-house, and on the south side the remains of an ancient castle, surmounted by a ditch and rampart. Here are also some singular caves. The floor of one of them is thirty-two feet square, and six feet in height ; and the largest penetrates so far that it has never yet been explored. The general appearance of the islands is also remarkable ; they are nearly horizontal, and rise above one another like stairs as they recede from the shore.

CU'MFREY, n. s. A medicinal plant.

CU'MIN, n. s. Lat. cuminum. A plant.

Rank smelling rue, and cummin, good for eyes.

Spenser. Muipotmos.

When a dove-house is empty, there is cumin-seed used to purloin from the neighbours.

Beaumont and Fletctier.

CUMIN, in botany. See CUMINUM.

CUMINUM, cummin, a genus of the di- gynia order, and pentandria class of plants ; na- tural order forty-fifth, timbellatse. The fruit is ovate and striated; there are four partial umbels, and the involucra are quadrifid. There is but one species, viz. C. cyminum, an annual plant, perishing soon after the seed is ripe. It rises nine or ten inches in the warm countries where it is cultivated, but seldom rises above four in this country. The leaves are a deep green, di- vided into long narrow segments, like those of fennel, but much smaller, and generally turned backward at their extremity ; the flowers grow in small umbels at the top of the stalks ; they are composed of five unequal petals, of a pale bluish color, which are succeeded by long, chan- neled, aromatic seeds.

CUMLY, a small maritime district of the province of Malabar, in Southern India, situ- ated between the twelfth and thirteenth degrees of north

latitude. It was formerly subject to a rajah of the Khutrix tribe, who adopted the Nair custom of preferring to the succession the son of the eldest daughter.

CUMLY, the capital, is a small place, inhabited by Hindoos and Mahommedans, and very plea- santly situated between two rivers. Here the rajah still resides, but possesses no power.

CUMMAZEE, or COOMASSIE, a large town and district o." Western Africa, the capital of tne Ashantee territory. It has been made known to

Europeans, only by a British mission sent some few years ago from Cape Coast Castle, and of the results of which we have given an account in the article ASHANTEE, which see.

CU'MULATE, v. a.y Lai. cumulus. To

CUMULA'TION, n. s. > heap or pile together ;

CUMULATIVE, adj. j the act of heaping to- gether. Consisting of parts heaped together.

For cumulation, I must confess I never liked it.

Abp. Laud.

A man that beholds the mighty shoals of shells, lidded and cumulated, heap upou heap amongst earth, v ill scarcely conceive which way these could ever live.

Woodward.

CUN, v. a. Ice. kunna; Goth, kunnan. To have knowledge of; to learn thoroughly; to direct the course of a ship. See COND and CUND.

CUNCTATION, n.s. > Lat. cunctatio. De- CUNCTA'TOR, n. s. > lay ; procrastination.

One who has a habit of procrastinating ; an idler ; a sluggard.

It is most certain, that the English made not their best improvements of

these fortunate events ; and that especially by two miserable errours, cunctation in prosecuting, and haste in departure. Hat/ward,

The swiftest animal, conjoined with a heavy body, implies that common moral, festina lente ; and that celerity should always be contempered with cunctation.

Browne.

Others, being unwilling to discourage such cuncta- tnrs, always keep them up in good hope, that, if they are not yet called, they may yet, with the thief ˆ be brought in at the last hour.

Hammond's Fundamentals.

To CUND, v. n. Dut kunnen, to know. To give notice; a provincial or obsolete word. See COND.

They are directed by a balker or huer on the cliff, who, discerning the course of the pilchard, cundeth, as they call it, the master of each boat.

Carew't Survey of Cornwall.

CU'NEAL, adj. 1 Lat. cuneus. Relating

CU'NEATED, adj. > to a wedge ; of a wedge-

CU'NEIFORM, adj. 5 like form.

CUNEIFORM BONES, n.s. The fourth, fifth, and sixth bones of the foot; thus called from their wedge-like shape, being large above and narrow below.

CUN BUS, in antiquity, a company of in- fantry drawn up in form of a wedge, the better to break through the enemy's ranks.

CUNICULUS, in mining, a term used by authors in distinction from puteus, to express the several sorts of passages and cuts in these subterranean works. The cuniculi are those di- rect passages in mines where they walk on hori- zontally ; but the putei are the perpendicular cuts or descents. The miners in Germany call these by the names stollen, and schachts ; the first word expressing the horizontal, and the second the perpendicular cuts.

CUNILA, in botany, a genus of the mono- gynia order, and monandria class of plants ; natural order forty-second, verticillatae : COK. ringent, upper lip erect and plain ; there are two filaments, castrated, or wanting anthers : SEEDS four. There are five species, none of which has any

remarkable property.

CUNITZ (Mary), a lady of considerable ge- nius of the sixteenth century, was born in Silesia. She acquired languages with amazing facility ; and understood Polish, German, French, Italian, Latin, Greek, and Hebrew. She attained a knowledge of the sciences with equal ease ; and was skilled in history, anatomy, and the fine arts. She more particularly applied herself to the mathematics, and was ranked amongst the most able astronomers of her time. Her As- tronomical Tables acquired her great reputation: she printed them in Latin and German, and de- dicated them to the emperor Ferdinand III. She married Eliasde Lewin, M.D., and died at Pis- tehen in 1664.

CU'NNER, n. s. Lepas. A kind of fish less than an oyster, that sticks close to the rocks.

CU'NNING, n.s. & adj.~\ Goth, kunnan;

CU'NNINGLY, adv. (Ang.-Sax. connan;

CU'NNINGNESS, n. s. { Dut. konnen. These

CU'NNINGMAN, n. s. J words are among those of our language which have gradually lost their good meaning, and acquired, or been con- fined to, a bad one. Anciently cunning, though also used in a sinister sense, was more frequently indicative of something praiseworthy. It im- plied superior skill ; knowledge ; proficiency in any thing ; and in these meanings its derivatives, of course, participated. Now, this use of the word is nearly, it not quite, disused ; and cun- ning denotes artifice ; deceit ; slyness ; dissim- ulation ; fraudulent dexterity ; something meanly deceptious. Cunning is the vice and resource of a mean and dastardly mind. A cunning-man is a fortune-teller ; one who deludes the vulgar by pretending to a knowledge of the future.

Send me now therefore a man cunning to work in

gold and in silver, and that can skill to cut and to

grave. 2 Chronicles.

If I forget thee, 0 Jerusalem, let my right hand

forget her cunning. Psalm cxxxvii. 5.

For wondir thinˆ it semith me, Thus many fresh ladies to se So faire, so cunning, and so yong, And no man dwelling them among.

Chaucer's Dreume. The quene her self full cunningly, With softe wordis in gode wise, Said to the ladis yong and wise. Id.

The Memphite Zoroas, a cunnyng derke, To whom the heaven lay open as his booke.

Sonyes and Sonnettct.

And there beside of marble stone was built An altar, carved with cunning imagery ;

On which true Christians' blood was often spilt, And holy martyrs often done to die.

Spenser. Faerie Queene. Faire Venus' sonne, that with thy cruell dart At that good knight so cunningly didst rove, That glorious fire it kindled in his heart. Id.

The more he protested, the more his father thought he dissembled, accounting his integrity to be but a cunning face of falsehood, Sidney m

What if I be not so much the poet, as even that miserable subject of his cunning, whereof you speak ?

Id.

Schoolmasters will I keep within my house, Fit to instruct her youth. — To cunning men I will be very kind ; and liberal To mine own. children, in good bringing up,

Shafupeary,

CUN

717

CUP

Wherein is lie good, but to taste sack and drink it? Wherein cunniny, hut in craft ? Wherein crafty, hut in villainy ? Id. Henry IV.

I do present you with a man of mine, Gunning in musick and die mathematicks, To instruct her fully in those sciences.

Shaktpeare.

Once put out thy light, Thou cunning'st pattern of excelling nature, I know

not where is that Promethean heat, That can thy light relumine. Id. Othello.

We take cunning for a sinister or crooked wisdom ; and certainly there is a great difference between a cunning man and a wise man, not only in point of honesty, but in point of ability. Bacon.

These small wares and petty points of cunning are infinite, and it were a good deed to make a list of them ; for nothing doth more hurt than that cunning men pass for wise. Id.

Amongst other crimes of this nature, there was dili- gent enquiry made of such as had raised and dis- persed a bruit and rumour, a little before the field fought, that the rebels had the day, and that the king's army was overthrown, and the king fled ; whereby it was supposed, that many succours were cunningly put off and kept back. Id. Henry VII.

I must meet my danger, and destroy him first ; But cunningly and closely. Denham't Sophy.

He sent him for a strong detachment Of beadle, constable, and watchmen, T' attack the cunningman for plunder Committed falsely on his lumber, Hudibrat.

Discourage cunning in a child ; cunning is the ape of wisdom. Locke.

Or if confidence or cunning come once to mix with vice, and support his miscarriages, he is only the surer lost, — and you must undo again, and strip him of that he has got from his companions, or give him up to ruin.

Id.

Men will leave truth and misery to such as love it ; they are resolved to be cunning : let others run the hazard of being sincere. South.

When Pedro does the lute command, She guides the cunning artist's hand. Prior.

When stock is high, they come between Making by second-hand their offers ;

Then cunningly retire unseen,

W'th each a million in his coffers. Swift.

A proper seeresy is the ouly mystery of able men ;

mystery is the only secrcsy of weak and cunning ones.

Chetterfield.

Such fate to suffering worth is given,

Who long with wants and woes has striven,

By human pride or cunning driven

To misery's brink, Till wrenched of every stay but Heaven,

He, ruined sink ! Buna.

ANT. Hark ye, Isaac, do you dare to complain of tricking? — Don Jerome, I give you my word, this

CUNNINGHAM (Alexander), a Scotch writer of some celebrity, was born about the year 1654. His father was minister at Ettrick, in Selkirkshire. He was educated in Holland, where he lived amongst the English and Scottish refugees before the Revolution, particularly with the earls of Argyle and Sunderland. He came over to England with the prince of Orange, and enjoyed the confidence and intimacy of many leading men of that period. He was travelling companion and tutor; first to the earl of Hyndford, and his brother ; then to John lord Lome, afterwards duke of Argyle ; and afterwards to lord viscount Lonsdale. Sir Robert Walpole, on the accession of George I., sent him as British envoy to the republic of Venice, where he continued till 1720, when he returned, and died in London 1737. His History of Great Britain, from the Revolution of 1688 to the accession of George I., was published in two vols. 4to. in 1787. It waswiitten in Latin, but translated into English by the Rev. William Thompson, LL.D.

CUNNINGHAM (John), an ingenious English poet, was born in 1729 at Dublin, and educated at Drogheda. At the age of seventeen he wrote a farce, called Love in a Mist, on which Garrick founded the Lying Valet. His success made him so attached to the theatre that he now commenced performer, and entered into various companies of strolling players in England. In 1761 he produced, at Edinburgh, his Elegy on a Pile of Ruins; and, in 1762, published The Contem- platist. This was succeeded by Fortune, an Apologue, which contains many poetical beau- ties ; and the following year he published a volume of his poems by subscription. He continued earning a scanty subsistence in his pro- fession, until his death, which took place in 1773 atNewcastle-upon-Tyne. His Landscape is considered beautifully descriptive,

CUNOCEPHALI, in mythology, from evvw, dog, and KtQaXn, head, a kind of baboons, or ani- mals with heads like those of dogs, which were wonderfully endowed, and were preserved with great veneration by the

Egyptians in many of their temples. It is fabled that, by their assistance, the Egyptians found out the particular periods of the sun and moon ; that one-half of the animal was often buried, while the other half survived ; and that they could read and write !

CUNODONTES, a people mentioned by Solinus and Isidorus, and by them supposed to have had the teeth of dogs. They were probably denominated, says Bryant, from the object of their worship, the deity Chan-Adon, which the Greeks expressed KvvoSov, and thence called'his votaries Cunodontes.

CUNONIA, in botany, a genus of the digy- nia order, and decandria class of plants : COR.

cunning Portuguese has brought all this upon himself, pentapetaious . CAL. pentaphyllous : CAP. bilo-

*l»*f •Hfcˆ AAWMMqVrii frt n VO1H"«» Jl rll 17f»ll V|T7 €T<»ttlT)Cr VfllT . . .1 .1*

by endeavouring to overreach you, by getting your daughter's fortune without making any settlement in return. Sheridan.

Oh ! she was perfect past all parallel —

Of any modern female saints comparison ; So far above the cunning powers of hell,

Her guardian angel had given up his garrison : Even her minutest motions went as well

As those of the best time-piece made by Harrison

cular, acuminated, polyspermous ; the styles longer than the flower. Species, one only, a Cape shrub.

CUP, v. a. & n. J. -v Fr. coupe, -It. coppa;

CU'PBEARER, n. s. I Sp. copa ; Ang.-Sax.

Cu'pBOARD,u.a.&n. sAcwpp; Welsh cup ;

CU'PPER, n. s. I But. hop; Isl. kupp;

Cl/PPING-GLASS.

Per. hub, kubba ;

Byron. Don Juan. fla. To cup is, to supply with cups, but this

moaning is disused ; to fix a cupping glass on the skin, for the purpose of extracting blood. John- son derives the verb, in the latter sense, from Fr. con per t to cut; but it seems rather to have its origin in the shape of the glass which is em- ployed. Cup is, primarily, a small vessel to drink out of; thence, the liquor drank from it; a social entertainment, in which case the plural only is used; anything cup-like ; a glass to draw blood. Cup and can signify familiar com- panions, the cup being the necessary associate of the can. Cupper is one who performs the operation of cupping. Cupbearer is, an officer of the king's household ; the attendant who carries round the cup to the guests at a feast. A cup- board is a case with shelves ; and to cupboard is, to store in a cupboard ; to treasure up.

Thou shall deliver Pharaoh's cup into his hand, after the former manner when thou wast his butler.

Genesis.

Hire over lippe wiped sha so clene, That in her cuppe was no ferthing sene Of grese when she dronken hadde hire draught.

Chaucer. ProL to Cant. Tales. Pipen he coude, and fishe, and nettes bete, And turnen cuppes, and wrastlen wel and shete.

Chaucer. Cant. Tales.

His drinke the running streame : his cup the bare Of his palme closed : his bed the hard colde ground.

Sackwlle.

Which when the vile enchantress perceived, With cup thus charmed imparting she deceived.

Plumpy Bacchus, with pink eyne. In thy vats our cares be drowned ; With thy grapes our hairs be crowned ! Cup us, till tlie world -go. round.

Shakspeare. Antony and Cleopatra. Will 't please your lordship, drink a cup of sack?

Shakspeare. Henry IV. Then shall our names,

Familiar in their mouth as household words, Be in their flowing cups freshly remembered.

Id. Henry V. The belly did remain

I' the' midst o' the body, idle and unactive, Still cupboarding the viand, never bearing Like labour with the rest. Id. Coriolanus.

It was near a miracle to see an old m an silent, since talking is the disease of age j but, amongst cups, makes fully a wonder. Ben Jonson's ˆDiscoveries. Homer, to whom the Muses did carouse

A great deep cup with heavenly nectar filled The greatest deepest cup in Jove's great house. Davies.

Some trees are best for planchers, as deal ; some for tables, cupboardt, and desks, as walnut.

Bacon's Natural History. They that never had the use Of the grape's surprising juice, To the first delicious cup

All their reason render up. Waller.

Amidst his cups with fainting shivering seized, His limbs disjointed, and all o'er diseased, His hand refuses to sustain the bowl.

Dryden's Persius.

Codrus had but one bed ; so short, to boot, That his short wife's short legs hung dangling out : His cupboard's head six earthen pitchers graced, Beneath them was his trusty tankard placed.

Id. Juvenal.

The clotted blood lies heavy on his heart. Corrupts, and there remains in spite of art ; Nor breathing veins, nor cupping will prevail ; All outward remedies and inward fail. Id. Fables. A bubo, in this case, ought to be drawn outward by cupping-glasses, and brought to suppuration.

Wiseman.

You have quartered all the foul language upon me, that could be raked out of the air of Billingsgate, witnout knowing who I am, or whether I deserve to be cupped and sacrificed at this rate. Spectator

The best, the dearest favourite of the sky Must taste that cup ; for man is born to die.

Pope's Odyssey.

Hippocrates tells you, that in applying of cups, the scarification ought to be made with crooked instru- ments. Arbuthnot. There is conveyed to Mr. Villiers an intimation of the kings's pleasure to wait and to be sworn his ser- vant, and shortly after his cupbearer at large ; and the summer following he was admitted in ordinary.

Wotton.

*Ye heavenly powers, that guard The British isles, such dire events remove Far from fair Albion ; nor let civil broils Ferment from social cups. Philip**

You boasting tell us where you dined, And how his lordship was so kind ; Swear he's a most facetious man j That you and he are cup and can : You travel with a heavy load, And quite mistake preferment's road. Swift.

Yet their wine and their victuals these curmud-

geon-lubbards Lock up from my sight, in cellars and cupboards. Id.

Now stir the fire, and close the shutters fast. Let fall the curtains, wheel the sofa round, And, white -the bubbling and loud hissing urn Throws up a steamy column, and the cups, That cheer but not inebriate, wait on each, So let us welcome peaceful evening in. Cowper.

Each widening scale and bursting film unfold, Swell the green cup and tint the flower with gold.

Darwin.

Or conjures up aerial forms' To marshal all the fairy .swarms That quaff their acorn -cups, and sing And frisk, and dance in sportive ring, Tinging, where'er their tracks are seen, The circled sward with richer green. Huddesford.

The virgin Nine in terror fly the bower, And matron Juno claims despotic power ; Soon Gothic hags the classic pile o'erturn, A caudle cup supplants the sacred urn. Sheridan.

A land of slaves shall ne'er be mine — Dash down yon cup of Samian wine !

Byron. Don Juan. And with a stretch attaining A certain press or cupboard

niched in yonder, In that remote recess which you may see — Or if you don't the fault is not in me. Id.

CUP, in botany, calyx. See BOTANY. CUPANIA, in botany, a genus of the mono- delphia order, and moncecia class of plants ; natural ord'er forty-eighth, tricoccse. Male, CAL. tryphyllous : COR. pentapetalous ; stamina five. Female, CAL. triphyllous : COR. tripetalous; the style trifid : SEEDS two. There is but one spe cies, a native of America, which possesses no remarkable property.

CUPAR OF FIFE, a royal borough in toe centre of a parish of that name, beautifully si-

tuated on the north bank of the Ederi, on the spot where it joins the water of St. Mary. It boasts of very high antiquity. The Thanes of Fife, from the earliest times of which we have any account, held their courts in it. It is go-

species of pall, oak-leaves furnish several others, some of which are oblong, some round, and others flatted. Tliey all contain tlie worm of some small fly; and this creature passes all its changes in this habitation, being sometimes found

verried by a provost, three baillies, a dean of in the worm, sometimes in the nymph, and some-

guild, and thirteen counsellors, who choose one, with eight deacons, who are elected by the in- corporations. Here is an excellent grammar- school. In conjunction with Perth, Dundee, St. Andrew's, and Forfar : it sends a representa- tive to parliament. It is a well-built town ; and a considerable manufacture of coarse linen is carried on in the neighbourhood. It is eight miles north by east of Falkland, and seven south of Dundee.

CUPEL, in metallurgy, a small vessel, which

times in the fly state.

CUPID, in pagan mythology, the god of love. There were two cupids; one the son of Jupiter and Venus, whose delight it was to raise sentiments of love and virtue ; and the other the son of Mars and the same goddess, who in- spired base and impure desires. The first of these, called eros, or true

love, bore golden ar- rows, which caused real joy, and a virtuous affection ; the other, called anteros, had leaden arrows, that raised a passion founded only on

absorbs metallic bodies when changed by fire desire, which ended in satiety and disgust. into a fluid scoria; but retains them as long as Cupid was always drawn with wings, to repre- they continue in their metallic state. One of sent his inconstancy; and naked, to show that the most proper materials for making a vessel of he has nothing of his own. He was painted this kind is the ashes of animal bones; there is blind, to denote that love sees no fault in the scarcely any other substance which so strongly object beloved ; and with a bow and quiver of resists vehement fire, which so readily imbibes arrows, to show his power over the mind. Some- metallic scoriae, and which is so little disposed times he is placed between Hercules and Mer- to be vitrified by them. The hones, burnt to cury, to show the prevalence of eloquence and perfect whiteness, so that no particle of coaly or valor in love ; and at others is placed near For- inflammable matter may remain in them, and tune, to signify that the success of lovers de- well washed from filth, are ground into mode- pends on that inconstant goddess. Sometimes rately fine powder; which, to form into cupels, he is represented with a helmet on his head K> moistened with just as much water as is suffi- and a spear on his shoulder, to signify that love cieiit to make it hold together, when strongly disarms the fiercest men ; he rides upon the pressed between the fingers. The cupel is backs of panthers and lions, and uses their

formed in a brass ring, from three-quarters of manes for a bridle, to denote that love tames the an inch to two inches diameter, and not quite most savage beasts. He is likewise pictured

so deep : the ring being filled with moistened riding upon a dolphin, to signify that his empire

powder, which is pressed close with the fingers, extends over the sea no less than the land.

a round-faced pestle, called a monk, is struck CUPi'DITY, n. s. Fr. cupiditc ; Lat. cupiditas.

down into it with blows of a mallet, by which Concupiscence ; unlawful or unreasonable long-

the mass is made to cohere, and rendered suffi- ing.

ciently compact, and a shallow cavity is formed

in the middle. The figure of the cavity is nearly

spherical, that a small quantity of metal melted

in it may run together into a bead. To make

the cavity the smoother, a little of the same

ashes levigated into an impalpable powder, and

not moistened, is commonly sprinkled on the

surface, through a small fine sieve made for this

purpose, and the monk again struck down upon ™P°la lo the most g1”™™ of her works ; and wh. n*

Ft. The ring or mould is a little narrower at we load it withsnpemtimerarv ornamenu, we destroy

bottom than at top ; so that by pressing cbwn the f™^ of the * “*’ A(,dlS(>n>s Specta, ,*

on some of the dry powder spread upon a table, CU’pp£L „. s> See COPPEL.” ‘

the cupel is loosened, and forced upwards a Thcrfi he olher bodies nxcd> as we sce in t,,c stull

littie ; after which it is easily pushed out with the

finger, and is then set to dry in a warm place,

free from dust. See ASSAYING.

CUP-GALLS, in natural history, a name

given by authors to a very singular kind of galls

found on the leaves of the oak and some other

trees. They are of the figure of a cup or drink-

ing-glass, without its foot, being regular cones

Thus sharpens the curiosity, while he suggested the cupidity. Ed. JJuuntuyne.*

CU’POLA, n. s. ? Fr. coupole ; Ital. cupola.

Ct/pOLAED, adj. }A dome; the semi-globe which crowns a building. Having a cupola. Cupolaed, compassed with walls, and open to the air.

Sir T. Herueit.

Nature seems to have designed the head as t!i

whereof cuppels are made, which they put into fur- naces, upon which fire worketh not.

Bacon's Natural Hutvry.

CU'PREOUS, adj. Lat. cupreus. Coppery ; consisting of copper.

Having by the intervention of a little sal ainmo- niack made copper inflammable, I took some small grains and put them under the wick of a burnm;

adhering by their point or apex to the leaf ; and candle> whereby they were with the melted tallow so the tor) or broad part is hollowed a little way, ˆaied, that the green, not blue, fiame of the ev- so that it appears like a drinking-glass with a we(na body did burn. Boyle.

cover, made so small as not to close it at the mouth, but fall a little way into it. This cover is flat, and has in the centre a very small green protuberance ; t he rim round the lop is of a scarlet color, and very beautiful. Besides this

Hard dies of 6teel the mpreova circles cramp, nd wi,Q quic fan his massy hammers stamp. The Harp, the Lily, and the Lion, join, And George and Britain guard the sterling cc.ii.

The stalactites formed on the roofs of caverns are fˆften coloured in concentric strata, by their coats being spread over each other at different times ; and some of them, as the cupreous ones, possess great beauty. Id.

CUPREOUS STONES are the turquoise and lapis armenus. The latter has calcareous earth, or gypsum, for its base; whence it sometimes ef- fervesces with acids, and sometimes not. It is used in painting, when ground to a fine powder, under the name of bice.

CUPRESSUS, in botany, the cypress-tree ; a genus of the monadelphia order and moncecia class of plants, natural order fifty-first, coni- ferae. Male, CAL. a scale of the catkin : COR. none ; the antherae are four, sessile, and without filaments. Female, CAL. a scale of the strobilus, v and uniflorous ; instead of styles there are hol- low dots ; the fruit is an angulated nut. There are seven species, the most remarkable are the following, 1. C. disticha, the deciduous Ameri- can cypress, has an erect trunk, retaining a large bulk, branching wide and regular; grows fifty or sixty feet high, fully garnished with small spreading deciduous leaves, arranged distichous or along two sides of the branches. All these species are raised from seeds, and will sometimes also grow from cuttings ; but those raised from seeds prove the handsomest plants. 2. C. sem- pervirens, with an upright straight stem, closely branching all around, almost from the bottom upwards, into numerous quadrangular branches, rising in the different varieties, from fifteen to forty or fifty feet in height, and very closely gar- nished with small, narrow, erect, evergreen leaves, placed imbricaiim ; and flowers and fruit from the sides of the branches. The wood of this species is said to resist worms, moths, and putrefaction, and to last many centuries. The coffins in which the Athenians were wont to bury their heroes were made, says Thucydides, of this wood ; as were likewise the chests con- taining the Egyptian mummies. The same tree is, by many eminent authors, recommended as improving and meliorating the air by its balsamic and aromatic exhalations; upon which account, many ancient physicians of the eastern countries used to send their patients, who were troubled with weak lungs, to the island of Candia, where these trees grew in great abundance ; and where, from the salubrious air alone, very few failed of a perfect cure.

CU'PROSE, n. s. A name giren to the poppy in the north of England.

CUR, n. s. ~\ Dut. korre. A worth-

CU'RRISH, adj. /less degenerate dog; a CU'RRISHLY, adv. y> good -for - nothing man.

CU'RRISIINESS, n. s. I CU'RSHIP, n.s.

Currish is brutal; quar- relsome; malignant;

churlish ; 'intractable. Curship is, dogship ; mean- ness; scoundrelship.

For lo the gentil kinde of the lion ! For whan a flie offendeth him or biteth, He with his taile awaie the flie ysmitcth Al esily, for of his genterie Him deineth not to wreke him on a fiie, As doeth a curre or els another best.

Chiucer. The Legende of Good Women.

Like dastard curres, that having at a bay The salvage beest embost in wearie chacc, Dare not adventure on the stubborne pray.

Spenser. Faerie Queene. Yet would he not persuaded be for ought, Ne from his currish will a whit reclame. Id.

Sweet speaking oft a currish heart reclaims.

Sidney. Currishly, without all order of law or honesty.

J. For. Tis a good dog.

— A cur, Sir.

— Sir, he's a good dog, and a fair dog.

Shahspearc.

She says your dog was a cur ; and tells you, currish thanks is goor1 enough for such a present. Id.

What would ye have, ye curs, That like not peace nor war? Id. Coriolanut. O lawlesse paunch ! the cause of much despight, Through raunging of a currish appetite. Hall.

Hell's porter, Cerberus, That currishness into our heads dost put. May.

How durst th' I say, oppo&e thy curship 'Gainst arms, authority, and worship.

Hudibras.

Here's an old drudging cur turned off to shift for himself, for want of the very teeth and heels that he had lost in his master's service. L' Estrange.

A cur may bear

The name of tiger, lion, or whate'er Denotes the noblest or the fairest beast.

Dryden'» Juvenal.

This knight had occasion to inquire the way to St. Anne's Lane ; the person, whom he spoke to, called him a young popish cur, and asked him, who made Anne a saint? Addison.

Hidden as it is, and far remote From such unpleasing sounds as haunt the ear In village or in town, the bay of curs Incessant, clinking hammers,

grinding wheels, And infants clamorous whether pleased or pained. Oft have I wished the peaceful covert mine.

Cowper.

CURA, ST. LEWIS DE, a town of South Ame- rica, in the Caraccas, surrounded by mountains. It is sixty-six miles south-west of Caraccas. The temperature hot and dry. Population 4000.

CURACOA, an island in the Caribbean Sea, about seventy-five miles from the coast of the Caraccas, South America. It has several excel- lent harbours, and is thirty miles long and ten broad. Its soil, in general, is not fertile, and it is almost entirely dependent on the rains for water ; but it produces sugar and tobacco, and feeds a breed both of large and small cattle. Its ports were formerly much frequented by vessels from Carthagena and Porto Bello, in the slave-trade. It is, in general, well supplied with the manu- factures both of Europe and the East Indies. It was twice captured by the British during the late wars, but was restored to the Dutch at the peace of 1814. Its exports, in 1810, amounted, in value, to £263,996, and its imports to £236,181. Long. 69° 2′ W., lat. 12° 6′ N.

CURACOA, the capital of the above island, is a large and well-built city, has a good port, and is fortified by a castle.

CU'RATE, n. s. ˆ Lat. curator. A cler-

CU'RATESUIP, n. s. Sgyman who performs for

CU'RACY, n. s. J hire the duties of another;

a parish priest; one who holds a perpetual cu-

racy. Curacy arid curateship signify, employ- annum, nor to be less than £20. By the 36

ment of a curate ; a benefice known by the name of a perpetual curacy

he had power of confession,

As said himselfe, more than a curat, For of his order he was a licentiat.

Cftaucer. Prol. to Cant. Tales. Bishops and curates, and all congregations.

Common Prayer.

I thought the English of curate had been an eccle- siastical hireling. No such matter; the proper

George III. cap. 18, this was increased to £75 per annum ; and the curate wa«, in certain cases, to be allowed the use of the parsonage-house, or an allowance of £15 per annum instead. The 53 George III. cap. 149, much enlarged the powers of the bishops or ordinaries. They were authorised to appoint and license curates with salaries, in the event of non-resident in- cumbents neglecting to appoint, and the salary so made payable was not limited, as thereto-

•AUVUMQP j.^ \j ou\su tuaLici j lllc lUUIJcr / i* r>*

import of the word signifies one who has the cure of ***Ore» to tne sums of –*** *-50 or -£75 Per annum,*

but was to be in proportion to the value of the benefice and population of the parish.

CURATELLA, in botany, a genus of the di- gynia order and polyandria class of plants : CAL. is pentaphyllous ; the petals four; the styles two: CAPS- bipartite, with the cells dispermous.

CURATOR, n. s. Lat. One who has the superintendence of any thing ; a guardian ap- pointed by law.

The curators of Bedlam assure us, that some luna- ticks are persons of honour. Swift.

A minor cannot appear as a defendant in court but by his guardian and curator. Ayliffe's Parergon.

CURATOR, in Roman antiquity, an officer

thVcare or cure of souls, but "ge'rierally'denoting under the emperors, who regulated the prices of the lowest degree of the clergy in the church of alj klnds of merchandise and vendible commo- England, who represent the incumbent of a dlties? in the cities of the emPire- They had church, parson or vicar, and perform divine llkewise the superintendence of the customs service in his stead. He is to be licensed and and tributes; whence, also, they were called

logistse.

souls. Collier on Pride.

He spared no pains ; for curate he had none, Nor durst he trust another with his care.

Dryden's Fables.

They get into orders as soon as they can, and, if they be very fortunate, arrive in time to a curacy here in town. Swift.

And in truth to this curate, old Nick owed a grudge ; For — although in the pulpit as grave as a judge — Yet folks, who his conduct have narrowly scanned, Say he did not put quite enough starch in his band.

Huddesford.

CURATE, is an ecclesiastical term, sometimes applied to the incumbent of a parish, as having

admitted by the bishop of the diocese, or by an ordinary having episcopal jurisdiction : and the bishop often appoints the salary ; in such case, ' if he be not paid, the curate has a proper re- medy in the ecclesiastical court, by asequestration of the profits of the benefice; but if the curate is not licensed by the bishop, he is put to his remedy at common law, where he must prove his agreement, &c. A curate having no fixed estate in his curacy, or not being instituted and inducted, may be removed at pleasure by the bishop or incumbent. But there are perpetual curates as well as temporary, who are appointed where tithes are impropriate, and no vicarage endowed ; these are not removable, and the impropriators are obliged to find them ; some whereof have certain portions of the tithes

CURATOR, in the civil law, a trustee nominated to take care of the affairs of a person emanci- pated or interdicted. In countries where the Roman law prevails, between the age of fourteen and twenty-four years, minors have curators as- signed them ; till fourteen, they have tutors.

CURATOR OF AN UNIVERSITY, in the ci- devant United Provinces, was an elective office, to which belonged the direction of the affairs of the university ; as the administration of the re- venues, the inspection of the professors, Stc. The curators were chosen by the states of each province; the university of Leyden had three, the burghermasters of the city a fourth.

CURB, v. a. & n. s. Fr. courber. A curb is, primarily, ' an iron chain made fast to the upper

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settled on them. Every clergyman that officiates Puart of the branches of the bridle, in a hole called • . L i 1.1 . i J . , .-. . • thft evp_ ann riinnnitr OVPV thfi heard ot the horse.

in a church,whether incumbent or substitute, in the liturgy is called a curate. Curates must subscribe the declaration according to the act of uniformity, or are liable to imprisonment, &c. It is provided by the canons that no curate shall remove from one diocese to another, without testimonials from the bishop or ordinary of his honesty, ability, and conformity to the ecclesi-

the eye, and running over the beard of the horse.'

The purpose of it is, to check the horse ; to re- tain him in subjection. Hence, curb is, gene- rally, restraint; opposition; hindrance. It is also the name of a hard callous tumor running along the inside of a horse's hoof ; so called be- cause it impedes his motion. To curb signifies, to guide a horse by means of a curb ; to restrain ;

asticaUawsof-the church of England; and that to hold back ; to prevent from going beyond none should serve more than one church or proper bounds. It sometimes takes .from after

it. In the quotation from R^y, Dr. Johnson thinks that the verb is used, as in French, in the sense of to bend.

Were not the laws planted amongst them at the first, and had they not governors to curb and keep them still in awe and obedience ? Spenser on Ireland.

His angry steede did elude his foaming bit, As much disdayning to the curbe to yielde.

Id. Faerie Queenc,

serve more than one

chapel upon one day, except that chapel be a member of the parish church, or united thereto, and unless such church or chapel, where such minister should serve in two places be not able, in the judgment of the bishop or ordinary to maintain a curate. By the 12 Anne, cap. 12, the bishop or ordinary first had the power of appointing the curate's stipend at the time of granting his license, that is, admission to the curacy, such stipend not to

exceed £50 per VOL. VI.

*Yet you are curbed from that enlargement by 'lae consequence of the crown. Shafcspeare. C<;mbel*ne.*

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CUR

The ox hath his bow, the horse his curb, and the taulcon his hells ; so man hath his desires.

Id. As You Like It. The Roman state, whose course will en The way it takes, cracking ten thousand curbs Of more strong links asunder, than can ever Appear in your impediment. Id. Coriolanus.

Shall the controller of proud Nemesis In lawless rage upbraid each other's vice, While no man seeketh to reflect the wrong, And curb the range of his misruly tongue ? Hall. Then thou, the mother of so sweet a child, Her false imagined loss cease to lament, And wisely learn to curb thy sorrows wild. Milton. Part wield their arms, part curb the foaming steed.

Id.

We remain

In strictest bondage, though thus far removed, Under the inevitable curb, reserved His captive multitude. Id. Paradise. Lost.

By these men, religion, that should be The curb, is made the spur to tyranny.

Denham. Sophy.

Though the course of the sun be curbed between the tropics, yet are not those parts directly subject to his perpendicular beams unhabitable or extremely hot.

Ray.

On the other side, if the mind be curbed and humbled too much in children ; if their spirits be abashed and broken much, by too strict a hand over them ; they lose all their vigor and industry, and are in a worse state than

the former. Locke.

So four fierce coursers, starting to the race, Scour through the plain, and lengthen every pace ; Nor reins, nor curbs, nor threatening cries they fear.

Dry den.

Warm in the raptures of divine desire, Bursts the soft chain that curbs the aspiring mind ; And fly, where Victory, borne on wings of fire, Waves her red banner to the rattling wind. Beattie. Honour and shame are much more liberal motives ; and experience proves, that they may, for the most part, if not always, be more effectual. These indeed may be employed, with good success, through the whole of life, as a preservative from vice, and a curb to every inordinate passion. /'/.

Stretch the silk rein, and champ the silver curb.

Darwin.

It seems as if we Britons were ordained, By way of wholesome curb upon our pride, To fear each other, fearing none beside. Cowper.

And from his chief withdrawn, he wandered lone, Brief were his answers, and his questions none ; His walk the wood, his sport some foreign book : His resting-place the bank that curbs the brook.

Byron. Lara.

Yet again, ye shadowy heroes, Yield not to these stranger Neros ! Though the son who slew his mother, Shed Rome's blood, he was your brother : Twas the Roman curbed the Roman.

Id. The Deformed Transformed.

*CURB, in the menage, consists of these three parts; the hook,*xed to the eye of the branch; the chain of S S's, or lints ; and the two rings, or mailes. Large curbs, provided they be round, are always most gentle ; but care is to be taken, that it rest in its proper place, a little above the beard, otherwise the bit-mouth will not have the effect that may be expected from it. English watering bits have no curbs ; the Turkish bits, called genettes, have a ring that serves instead of a curb.*

CURCULIO, in zoology, a genus of insects belonging to the order of coleoptera. The feelers are subclavated, and rest upon the front, which is prominent and horny. These insects are di- vided into the following families, 1. Those which have the rostrum longer than the thorax, and

whose thighs are simple. 2. Those which have the rostrum longer than the thorax, and the thighs thicker and made for leaping. 3. Those which have the rostrum longer than the thorax, and the thighs dentated. 4. Those which have dentated thighs, and a rostrum shorter than the thorax. 5. Those whose thighs are without teeth or spines, and the rostrum shorter than the thorax. There are no less than ninety- five species, principally distinguished by their color. The larvae of the curculiones differ not from those of most coleopterous insects. They bear a resemblance to oblong soft worms. They are provided anteriorly with six scaly legs, and their head is likewise scaly. But the places where those larvae dwell, and their transforma- tions, afford some singularities. Some species of them, that are dreaded for the mischief they do in granaries, find means to introduce them- selves, while yet small, into grains of corn, and there make their abode. Other larvae of curcu- liones are not so fond of corn, but fix in the same manner on several other seeds ; and a species are lodged in the inside of plants. The heads of artichokes and thistles are often bored through and eaten away by the larvae of large curcu- liones. Another species smaller, but singular, pierces and inwardly consumes the leaves of elms. It frequently happens that almost all the leaves of an elm appear yellow, and as it were dead, towards one of their edges, while the whole remainder of the leaf is green. Upon inspecting tho.,e leaves, the dead part appears to form a kind of bag or small bladder. The two laminae, or outward pellicles of the leaf, as well above as below, are entire, but distant and sepa- rated from each other, whilst the parenchyma that lies between them has been consumed by several small larvae of the curculio, that have made themselves that dwelling, in which they may be met with. After this transformation, they come forth, by piercing the kind of bladder, and give being to a curculio that is brown, small, and hard to catch, by reason of the nimbleness with which it leaps. The property of leaping, allotted to this single species, depends on the shape and length of its hinder legs.

CURCUMA, turmeric, in botany, a genus of the monogynia order, and monandria class of plants, natural order eighth, scitamineae. It has four barren stamina, with a fifth fertile. The species are, 1. C. longa, with long fleshy roots, of a deep yellow color, which spread under the surface of the ground like those cf ginger ; they are about the thickness of a man's finger, having many round knotty cir- cles, from which arise four or five large spear- shaped leaves, standing upon long foot-stalks. The flowers grow in loose scaly spikes on the top of the foot-stalks, which arise from the larger knobs of the roots, and grow about a foot high ; they are of a yellowish-red color, and shaped somewhat like those of the Indian reed.

2. C. rotunda, with a round root. It has a fleshy jointed root like that of ginger, but round ; and sends up several spear-shaped oval leaves, which rise upwards of a foot high, and of a sea- green color. From between these arises the flower-stalk, supporting a loose stalk of flowers of a pale yellowish color, enclosed in several dif- ferent spathae, or sheaths, which drop off. The flowers are never succeeded by seeds in this country. Both these species grow naturally in India, from whence the roots are brought to Europe for use. They are very tender, and Will not live in this country unless kept constantly in a stove. They are propagated by parting the roots. The root communicates a beautiful but perishable yellow dye, with 'alum, to woollen, cotton, or linen. In medicine it is esteemed aperient, and emmenagogic ; and of singular efficacy in the jaundice.

CURD, v. a. & 7i. s. •) Thomson derives CURDLE, v. a. & v. n. >curd from Fr. cailler, CURDY, a$. jcaille, a derivation

which does not seem to be very plausible. Le- mon, with his usual positiveness, says, ' by trans- position evidently derived a icpuoc, quasi, icupfloc, frigus, et Kpvspoc, frigidus, unde cruor.' Skinner looks for its origin in the verb to crowd, whence crowdle. The old spelling, crudle, or cruddle, perhaps, suggested this etymology. To curd is to turn to curds; to cause to coagulate. To curdle is to coagulate ; to shut together ; to con- crete ; to force into coagulation, or concretions. Curd signifies, coagulated milk ; the concretion of the thicker parts of any liquor.

Which when as Una saw, through every vaine. The cruddled cold ran to her well of life.

Spenser. Faerie Queene.

For she would call him often heam, And give him curds and clouted cream.

Id, Shepherd's Calendar.

Maiden, does it curd thy blood, To say I am thy mother ?

Shakspeare. All's Well that Ends Well.

Powder of mint, and powder of red roses, keep the milk somewhat from turning or curdling in the sto- mach. Bacon.

Mixed with the sixth part of a spoonful of milk, it burnt to the space of one hundred pulses, and the milk was curdled. ••"•

Milk of itself is such a compound of cream, curds, and whey, as it is easily turned and dissolved. Id.

My soul is all the same,

Unmoved with fear, and moved with martial fame ; But my chill blood is curdled in my veins, And scarce the shadow of a man remains.

Dryden's Virgil.

This night, at least, with me forget your care ; Chesnuts, and curds and cream, shall be your fare.

Dry den.

Let Sporus tremble. — What ! that thing of silk ? Sporus, that mere white curd of ass's milk ? Pope,

Even now a fatal draught works out my soul : Even now it curdles in my shrinking veins The lazy blood, and freezes at my heart. Smith.

It differs from a vegetable emulsion, by coagu- lating into a curdy mass with acids.

Arbuthnot on Aliments.

Some to the house,

The fold, and dairy, hungry bend their flight, Sip round the pale, or taste the curdling cheese.

Thomson's Summer.

CURDISTAN. See KURDISTAN. CURDLING, the coagulating or fixing of any fluid body; particularly milk. See CHEESE Pausanias says, that Aristagus son of Apollo, and Cyrene daughter of the rivef Peneus, were the first who found out the art of curdling milk. At Florence they curdle their milk for making cheese with artichoke flowers instead of rennet. The Bisaltae, a people of Macedonia, Rochfort observes, live wholly on curds.

CURE, v. a. & n. s.~} Lat. cura. Cure was

CU'RELESS, adj. I anciently synonymous

CU'RER, n. i. [with care, as will be

CU'RABLE, adj. | seen in one of the il-

CW'RABLENESS, n. s. \ lustrations from Chau-

CU'RAT IVE, adj. J cer, and it still retains

this meaning in the ' Cure of souls,' the charge

committed to a clergyman. To cure is, to heal ;

to restore to health ; to remedy ; to recover ; to

prepare with antiseptics, so as to preserve from

corruption. Cure signifies, remedy ; act of

healing ; the benefice or employment of a curate

or clergyman. Curable is that which may be

cured ; curative that which relates to curing.

I do cures to-day and to-morrow. Luke viii. 32.

Of studie toke he most cure and hede ; Not a word spake he more than was nede.

Chaucer. Prol. to Cant. Tales.

And will ye knowe that of a sursanure In surgene is perilous the cure. Id. Cant. Tales.

But I wol leve it at this time, than Faunus al so well

Was aftir sent in hert, of sekner to be curyd. Id.

Thus every way you see wythe absence how I

burne,

And for my wound no cure I fynde, but hoape of good

returne. Surrey.

In depe wyde wound, the deedly stroke doth turne

To cureless skarre that never shall returne. Wyatt.

For in yourself your only help doth lie To heale yourselves, and must proceed •alone From your owne will to cure your maladie : Who can cure

him that will be cured of none ?

Spenser. Faerie Queene.

And being such, were now much more increast For want of taking heede unto the same, That now corrupt and cureless they became. Id.

It easeth some, tho none it ever cured, To think their dolour others have endured.*

Shakspeare. The Rape of Lucrece.

0 hateful, vaporous, and foggy night ! Since thou art guilty of my cureless crime, Muster thy mists to meet the eastern light This league that we have made Will give her sadness very little cure ; Brother of England how may we content This widow lady ? W. King John.

He is a curer of souls, and you a curer of bodies : if you should fight, you go against the hair of your professions. Id. Merry Wives of Windsor

We study speech, but others we persuade ; We leachcraft learn, but others cure with it. Davies.

The bones, in sharp colds, wax brittle ; and there- fore all contusions of bones, in hard weather, are more difficult U> cure. Bacon's Natural History.

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CUR

The therapeutick or curative physick, we term that which restores the patient unto sanity.

Browne's Vulgar Errmtrs.

A consumption of the lungs, at the beginning, herein differs from all other curable diseases, that it is not to be worn away by change of diet, or a cheerful spirit. Harvey.

Cold, hnnger, prisons, ills without a cure, All these he must, and guiltless

oft, endure.

Dryden's Pallet. If, said he,

Your grief alone is hard captivity, For love of heaven, with patience undergo A cureless ill , since fate will have it so. Id.

If his cure lies among the lawyers, let nothing be said against entangling property, spinning out causes, squeezing clients, and making the laws a greater grie- vance than those who break them. Collier.

The beef would be so ill chosen, or so ill cured, as to stink many times before it came so far as Holland.

Temple.

Horace advises the Romans to seek a seat in some remote part, by way of a cure for the corruption of manners. Swift f

Hear what from love unpractised hearts endure, From love, the sole disease thou canst not cure. Pope.

There may be taken proper useful indications, both preservative and curative, from the qualities of the air. Arlwthnot.

That certain bodily pains might be alleviated by certain sounds, was believed by the Greeks and Romans : and we have it on the best authority, that one species at least of madness was once curable by melody. Beaitie.

His unsuspecting sheep believe it pure ;

And, tainted by the very means of cure,

Catch from each other a contagious spot,

The foul forerunner of a general rot. Cowper.

Grief's cureless wounds with lenient balms assuage, Or prop with firmer staff the steps of age. Darwin.

their Politic Doctors assure her,

That they know where her malady lies, And their grand panacea shall cure her.

Huddesford.

CURETES,in antiquity, ancient priests of the Isle of Crete, called also Corybanies. They are said to have been originally of Mount Ida, in Phrygia ; for winch reason they were also called Idsei Daclyli. According to Pezron, and others, the curetes were in the times of Saturn, 8cc. and in the countries of Crete and Phrygia, what the Druids were afterwards among the Gauls, &c i.e. they were priests who had the care of what re- lated to religion and the worship of the gods. Hence, as in those days it was supposed there was no communication with the gods but by di- vinations, auguries, and the operations of magic, the curetes passed for magicians; to these they added the study of the stars, of nature, and poesy ; and so were philosophers, astronomers, &c. Vossius, de Idolatria, distinguishes three kinds of curetes, those of jEtolia, those of Phrygia, and those of Crete, who were originally derived from the Phrygians. The first, he says, took their name from

CU'RFEW. Old Fr. couvre-feu. An evening- peal, says Cowell, by which the Conqueror willed that every man should rake up his fire, and put out his light ; so that in places, at this day, where a bell is customarily rung towards bed-time, it is said to ring curfew. The custom, however, appears to have been in existence, at least in the convents of the north, before the time of William the Conqueror. Curfew is also the name of a cover for the fire ; a fire plate.

The dede slepe for, wery besinesse, Fell on this carpenter, right ass I gesse, Abouten curfew time, or litle more.

Chaucer. Cant. Tales. You, whose pastime

Is to make midnight mushrooms, that rejoice To hear the solemn curfew.

Shakspeare. Tempest. Who ever gives a pair of velvet shooes To the Holy Rood, or liberally allowes But a new rope to ring the curfew bell, But he desires that his great deed may dwell Or graven in the chancel window glasse, Or in the lasting tomb of plated brasse ? IfaU, But now for pans, pots, curfews, counters, and the like, the beauty will not be so much respected, so as the compound stuff is like to pass. Bacon.

Oft on a plat of rising ground I hear the far off curfew sound, Over some wide-watered shore, Swinging slow with sullen roar. Milton.

The curfew tolls the knell of parting day. Gray.

Soothed by the lulling sound of grove and stream, Romantic visions swarm on Edwin's soul :

He minded not the Sun's last trembling gleam Nor heard from far the

twilight curfew toll ; When slowly on his ear these moving accents stole.

Beattie.

Till, summoned by the curfew's sound, While falling dews embathe the ground, Again I seek the friendly shade From whence my devious steps have strayed, Repass the lawn, and hawthorn dell, Regain thy shelter, Lowly Cell ! Id.

CURIA, among the ancient Romans, denoted a portion or division of a tribe. In the time of Romulus, a tribe consisted of ten curiee, or 1000 men ; each curia being 100. The legislator made the first division of his people into thirty curiae. Afterwards curia became used for the place where each curia held its assemblies, as well as for the senate- house ; and hence the moderns use the word curia, a court, for a place of justice, and for the judges, &c. there assembled. Varro derives the word from cura, care, q. d. an assem- bly of people charged with the care of public affairs. Others deduce it from the Greek ; main- taining, that at Athens they called icvpia the place where the magistrate held his assizes, and the people used to assemble : icvpio, again, may come from icvpoc, authority, or power ; because it was here the laws were made.*

CURIA, or DOMUS CURIALIS, the place where the curia? used to assemble. Each of the thirty curia? of old Rome had a temple or chapel assigned to them for the common performance of their sacrifices, and other offices of their religion; so that they were not unlike our parishes. Some remains of these little temples seem to have sub- sisted many ages after on the Palatine hill,

where Romulus first built the city, and always tion ; exact; nicely diligent: elegant; hi°-hlv

I'OOll-lQˆ £1—1 t- 1 • • 1 . ° . V – •/

resided.

CURIA, in our ancient customs. It was usual for the kings of England to summon the bishops, peers, and great men of the kingdom, to some particular place, at the chief festivals in the year, and this assembly is called by our historians curia ; because there they consulted about the

weighty affairs of the nation : whence it was sometimes also called solennis curia, generalis curia, augustalis curia, and curia publica, &c.

See WlTTENAGEMOT.

CURIA CLAUDENDA, in law, is a writ that lies against him who should fence and enclose the ground, but refuses or defers to do it.

CURIA'LITY, n. s. From Lat. curialis. The privileges, prerogatives, or perhaps retinue, of a court.

The court and curiality. Bacon to Villiert.

CURIATII, three brothers of Alba, who main-

finished ; rigid ; severe. Curiosity is, inquisf- tiveness ; nicety; exactness; a nice experiment; an object particularly worthy of notice; a rarity. Curioso is synonymous with virtuoso.

Understanding to devise curious works to work in g°ld- Exodus.

Be not curious in unnecessary matters ; for more things are shewn unto thee than men understand.

Eccluf iii. 23.

And for to fasten his hood under his chinne He hadde of gold ywrought a. curious pinne.

Chaucer. Prol. to Cant. Tales.

Worship not Jove with curious fancies vaine, Nor him despise ; hold right atweene these twaine. Sonyes and Sonnettes.

And therewithal came curiousnesse , and carpet out of frame. Jd,

But he, to shifte their curious request,

. – V.ˆ r ' u V Gan causen why she could not come in place,

tamed the interest of their country against the <,

«. o fmpnxp.r. Fiipnp

Romans who had declared war against those of Alba. See HORATII.

CU'RIET, CU'RET, or CU'IRAT. Old Fr. cuirace, from cuir, leather,

because, breast-plates were originally made of that material. A cors- let ; a breast-plate.

Instead whereof she made him to be dight In woman's weedes that is to manhood shame. And put before his lap an apron white, Instead of cvriets and bases fit for fight.

Speruer. Faerie Queene.

CURIO, in the Roman customs, the chief and priest of a curia. Romulus, upon dividing the people into curise, galve each 'division a chief, who was to be priest of that curia, under the title of curio and flamen curialis. His business

Spenser. Faerie Queene. He looked very curiously upon himself, sometimes fetching a little skip, as if he said his strength had not yet forsaken him. Sidney.

Till Arianism had made it a matter of great sharp- ness and subtlety of wit to be a sound believing Christian, men were not curious what syllables or particles of speech they used. Hooker.

For curious I cannot be with you, Signior Baptist a, of whom I hear so well.

Shalixpearc .

When thou wast in thy guilt, and thy perfume, thsy mocked thee for too much curiosity ; in thy razs thou knowest none, but art despised for the contrary.

Id. Timon.

There hath been practised also a cariotitii, to set a tree upon the north side of a wall, and at a little

was to provide and officiate at the sacrifices of height to draw u throush the wall« and sPrPart

the curia, which were called curionia : the curia

upon the south side ; conceiving that the root and lower part of the stock should eijjoy the freshness of

j . . . . „ . »VT*ˆI u»ii, ui IIAO ai.vv,n. Duwuiu ci-iju_y tiiu ixcouucraa ui*

furnishing him with a sum of money on that con- the shadeˆ and the upper boughs and fruit the com.

sideration, which pension was called curioniurn. Each division had the election of its curio; but all these particular curios were under the direction of a superior or general.

CURIO MAXIMUS, the head of the curios, elected by the whole body assembled in the co- mitia curialis. All these institutions were intro- duced by Roinulus, and confirmed by Numa, as Dionysius Halicarnasseus relates.

CURIOS US, an officer of the Roman empire during the middle age, appointed to take care that no frauds and irregularities were committed ; par- ticularly in what related to the posts, the roads,

&c., and to give intelligence to the court of what ,. ,

‘ , . . b rr,, . j ., . . often, of meat and drink,

passed in the provinces. This made the cunosi

people of importance, and put them in a condi- tion of doing more harm than they prevented, on which account Julian cashiered them ; as did also Ilonorius, at least in some parts of the empire, A.D. 415.

CU’RIOUS, adj. ˆ Old Fr. curios, cu-

CU’RIOUSLY, adv. I rious ; mod. Fr. curieux ;

CURIO’SITY, n. s. >Lat. curiosus. Curious

CU’RIOUSNESS, n. s. i signifies, inquisitive ;

CURIO’SO, n. s. J anxious for information; prone to enquiry; prying; attentive to, some- times with after, and sometimes with of; eareful

to avoid error ; fastidious ; solicitous of perfec- watch.

fort of the sun j but it sorted not.

Bacon's Natural History. A vaile obscured the sunshine of her eyes, The rose within herself her sweetness closed ;

Each ornament about her seemly lies, By curious chance, or careless art, composed.

Fairfax,

Ee'n then to them the' spirit of lies suggests That they were blind, because they saw not ill,

And breathed into their incorrupted breasts A curious wish, which did corrupt their will.

Daeieo.

A temperate person is not curious of fancies and deliciousness ; he thinks not much, and speaks not

Taylor.

Our senses, however armed or assisted, are too gross to discern the curiosity of the workmanship of nature.

Ray.

Curiosity in children is but an appetite after know- ledge, and therefore ought to be encouraged in them, not only as a good sign, but as the great instrument nature has provided to remove the ignorance they were born with, and which without this busy inquisi- tiveness, will make them dull and useless creatures.

Locke.

Nor is it the having of wheels and springs, though never so curiously Wrought, and artificially set, but the winding of them up, that must give motion to the

South,

CUR

If anj one too curious should enquire After a victory which we disdain,

Then let him know the Belgians did retire Before the patron saint of injured Spain.

Dryden,

Then thus a senior of the place replies, Well read, and curious of antiquities. Id. Fables.

At first I thought there had been no light reflected from the water in that place ; but, observing it more curiously, I saw within it several smaller round spots, which appeared much blacker and darker than the rest. Newton's Opticks.

We took a ramble together to see the curiosities of this great town. A ddison's Freeholder.

It is pity a gentleman so very curious after things that were elegant and beautiful, should not have been as curious as to their origin, their uses, and their na- tural history. Woodward.

In proportion that credulity is a more peaceful pos- session of the mind than curiosity, so far preferable is that wisdom which converses about the surface, to that pretended philosophy which enters into the depth of things, and then comes back gravely with infor- mations and discoveries, that in the inside they are good for nothing. Swift.

This, Sir, is curious ; and what hardly would be expected in so reduced a court as that of Charles the Second, and in so improved a country as England might then be thought. But so it was. Burke.

His work on this last subject is the only one in which that antique piece of curiosity has been pre- served to us. Id,

Meanwhile, whate'er of beautiful, or new, Sublime, or dreadful, in earth, sea, or sky, By chance, or search, was offered to his view, He scanned wkh cwiwa -and romantic eye.

Beo,ttie,

Then Curiosity with tracing hands And meeting lips the line of form demands, Buoyed on light step, o'er ocean, earth, and sky, Rolls the bright mirror of her restless eye.

Darwin.

Oh, couldst thou speak, As in Dodona once thy kindred trees Oracular, I would not curious ask The future, best unknown, but at thy mouth Inquisitive, the less ambiguous past. Cowper. Books, for his volume heretofore was Man, With eye more curious he appeared to scan, And oft, in sudden mood, for many a day From all communion he would start away.

Byron. Lara.

Vain was all question asked her for the past, And vain e'en menace — silent to the last ; She told nor whence, nor why she left behind Her all for one who seemed but little kind. Why did she love him ? Curious fool ! — be still- Is human love the growth of human will ? Id.

I loathe that low vice curiosity,

But if there's any thing in which I shine, Tis in arranging all my friends affairs, Not having of my own domestic cares.*

/'/. Don Juan.

CURISCH-HAFF, or the GULF or GOUR- MAND, a lake or gulf of Prussia, alongside of the Baltic, from which it is separated by the Cu- risch-Nerung, extending from Memel to Lablau, about seventy miles. The breadth is very un- equal, being wide to the south and narrow to- wards the north.

Dan. krolle, knor- la ; Dut. krollen ; Ang.-Sax. cyrran ; >-from Isl. kra, a crook, a turn ; Ital. ciurlo; Lat. circulo; Fvpow. To curl is,

*CURL, v. a., v. n., & n. s. "**

CU'RLINESS, n. «.

CU'RLINGLY, adv-

CU'RLY, adj.

CURL-HEADED, adj.

CURLED-PATE, adj.

CURLING-IRONS, n. s.

to form the hair into ringlefs; to dress with curls; to writhe ; to twist ; to raise into waves or undu- lations; to shrink up into ringlets; to twist round ;

to shrink back. Curl signifies, a ringlet of hair ; an undulation ; a wave ; a sinuosity. Curliness, which means the state of being curled, is a word of modem coinage, but has a legiti- mate claim to form a part of the language, as no other word expresses the same meaning. Of the other words under this head, the meaning is ob- vious.

Before the threshold dredfull Cerberus His three deformed heads did lay along, Curled with thousand adders venemous.

Spenser. Faerie Queene.

She apparrelled herself like a page, cutting off her hair, leaving nothing but the short curls to cover that noble head. Sidney.

If she first meet the curled Antony, He'll make demand of her a kiss. Shakspeare. His browny locks did hang in crooked curls, And every light occasion of the wind Upon bis lips their silken parcels hurls.

Id. A Lover's Complaint. The visitation of the winds, Who take the ruffian billows by the top, Curling their monstrous heads. Id. Henry IV. Make curled-pate ruffians bald.

. Id. Timon of Athens. Letting them curl themselves about my limbs.

Beaumont and Fletcher, The very thinking it

Would make a citizen start ; some politic tradesman Curl with the caution of a constable. Id,

They, up the trees

Climbing, sat thicker than the snaky locks

That curled Megaera. Milton's Paradise Lost,

Those slender aerial bodies are separated and

stretched out, which otherwise, by reason of their

flexibleness and weight, would flag or curl. Boyle.

To every nobler passion of the town The curling billows rowl their restless tide ; In parties now they straggle up and down, As armies, unopposed, for prey divide. Dryden, Then round her slender waist he curled, And stamped an image of himself, a sovereign of the world. Id. Alexander's Feast,

Just as in act he stood, in clouds enshrined, Her hand she fastened on his

hair behind, Then backward by his yellow curls she drew j To him, and him alone, confessed in view.

Id. Fables.

Thus it happens, if the glass of the prisms be free from veins, and their sides be accurately plain and well polished, without those numberless waves or curls, which usually arise from the sand holes.

1 Newton's Opticht.

While curling smoaks from village tops are seen.

Pope,

Here, on the sharp spear, mad with mortal pangs, The bird transfixed in bloody vortex whirls, Yet fierce in death the threatening talon curls : There, while the life-blood bubbles from his wound, With little feet the pigmy beats the ground. Beattie.

CU'llLEW, n. s, Fr. corlieu. A kina of water fowl, with a large beak of a grey color, with red and black spots ; a bird larger than a partridge, with longer legs, frequent in Spain and Sicily, and sometimes found in France.

CURLEW. See SCOLOPAX.

CURMI, a name given by the ancients to a sort of malt liquor or ale. It was made of bar- ley, and was drunk by the people of many na- tions instead of wine, according to Dioscorides' account. He accuses it of causing pains in the head, generating bad juices, and disordering the nervous system. He also says that, in the west- ern part of Iberia, and in Britain, such a sort of liquor was, in his time, prepared from wheat in- stead of barley.

CURMU'DGEON, n. s.) An unknown

CURMU'DGEONLY, adj. $ correspondent suggested to Dr. Johnson, that this word is pro- bably derived from the Fr. caeur mechant. Dr. Johnson adopted the idea, and stated in what manner he obtained it. In Ash's Dictionary the ludicrous mistake was committed, of giving the words, an 'unknown correspondent,' as a translation of coeur mechant, and this blunder has afforded abundant food for laughter. Mr. Todd doubts the

correctness of the derivation itself, and refers the origin of the word either to Ger. curmede, a sort of vassalage, or to cur and the Ang.Sax. mupnanj, a complaint, a murmur ing ; but he inclines to the former. Thomson says, Ang.Sax. car modig, from care, care, and mod, the mind. Curmudgeon means, an avari cious, churlish fellow; a close-fisted churl; a niggard ; a griper.

And when be has it in his claws,

He'll not be bide-bound to tbe cause ;

Nor shalt tbou find him a curmudgeon,

If thou dispatch it without grudging. Hudibras.

A man's way of living is commended, because be will give any rate for it ; and a man will give any rate rather than pass for a poor wretch, or a penu- rious curmudgeon. Locke,

In a country where he that killed a hog invited the neighbourhood, a curmudgeonly fellow advised with his companions how he might save the charge.

• L' Estrange.

CURRAH, a small district in the province of Allahabad, between the twenty-fifth and twenty- sixth degrees of north latitude, and bounded by the Ganges and Jumna. The country from Cur- rah to Benares on the east side abounds with a species of earth called sujee muttee, impregnated with alkali, from one to three inches thick, which is sold, at the close of the rainy season, to the soap manufacturers.

CURRAH, the chief place of the district of Al- lahabad, is situated on the south-west side of the Ganges, forty-five miles north-west from Alla- habad, and extends a mile along the banks of the Ganges. Here is an old fort in ruins, and a new one with an unfinished stone gate-way. There are also many Hindoo temples.

CURRAN (John Philpot), a celebrated Irish advocate, of humble origin, was born at New- market, near Cork, in 1750. He was educated at Trinity College, Dublin, after which he re- paired to London, and studied at one of the inns of court. In due time he was called to the

bar; shortly after which he married Miss O'Dell, an Irish lady of a very respectable family. By the influence of his talents, he gradually rose to great reputation; and, during the administration of the duke of Portland, he

obtained a silk gown. In 1784, he was chosen a member of the Irish house of commons. His abilities now displayed themselves to advantage, and he became the most popular advocate of his age and country. During the distracted state of Ireland, towards the close of the last century, it was often his lot to defend persons accused of political offences, when Mr. Fitzgibbon (afterwards lord Clare), then attorney-general, was his opponent. The professional rivalry of these gentlemen degene- rated into personal rancour, which at length oc- casioned a duel, the result of which was not fatal to either party. On a change of ministry during the vice-royalty of the Duke of Bedford, Mr. Curran's patriotism was rewarded with the office of master of the rolls. This situation he held till 1814, when he resigned it, and obtained a pension of £3000 a year. With this he retired to England, and resided chiefly in the neigh- bourhood of London. He died in consequence of a paralytic attack, at Brompton, Nov. 13, 1817, at the age of sixty-seven. Curran pos- sessed talents of the highest order : his wit, his eloquence, his pathos, were irresistible ; and the splendid and daring style of his oratory formed a striking contrast with his personal appearance, which was mean and diminutive. As a compa- nion, he could be extremely agreeable ; and his conversation was often highly fascinating. In his domestic relations he was very unfortunate ; and he seems to have laid himself open to cen- sure. The infidelity of his wife, which was es- tablished by a legal verdict, is said to have been a subject on which he chose to display his wit, in a manner that betrayed a strange insensibility to one of the sharpest miseries which' a man can suffer. Mr. Curran appears never to have com- mitted any thing to the press, but produced some poetical pieces of considerable merit. A collection of his forensic speeches was published in 1805 (1 vol. 8vo.). See memoirs of his life, published by his son, by Charles Phillips, and by O'Regan.

CU'RRANT, n. s. Thomson says, 'crand, cranberry, and hindberry, seem to have included this fruit; which was afterwards confounded with the small raisins brought from Corinth.' The fruit of a species of grossularia; a small dried grape, now principally imported from Zante, but which takes its name from Corinth.

CURRANTS, or CURRANS, are the fruit of a species of grossularia. See GROSSULARIA. The white and red sort are mostly used; for the black, and chiefly the leaves upon first coming out, are in use to flavour English spirits, and counterfeit French brandy. Currants greatly assuage drought, cool and fortify the stomach, and help the digestion ; and the jelly of black currants is said to be very efficacious in curing inflammations of the throat.

CU'RRENT,n.s4-oˆ'.\ Fr. courant ; Ital. CU'RRENTLY, adj. f corrente ; Sp. corri CU'RRENTNESS, n. s. lente; Lat. currere, CU'RBENCY, n. s. -/ currens. That which

r;:ns or flows onward continuously, is the idea •which is here conveyed. Hence, current as a noun, signifies a running water ; a particular di- rection of the waters of the ocean towards cer- tain parts, of which the Gulf-stream affords an instance ; course; progression. As an adjective, it means, that which passes from hand to hand ; gene- rally received ; allowed to pass without contra- diction ; general ; popular ; fashionable ; al- lowable ; that which is now passing, as, the cur- rent year. Currency is, the mass of money in a country ; power of passing from hand to hand ; general belief and reception of; fluency of speech ; constant flow ; general esteem ; the papers which were formerly stamped in the English colonies by authority, and which passed as money.

Shekels of silver, current money with the mer- chant. Genesis xxiii. 16.

O rodie rosier, flowring without spine, Fountain filthlesse, as biril currant clere ! Chaucer,

Like as the tide that comes fro the ocean mayne, Flowes up the Shenar with contrarie forse, And over-ruling him in his own rayne, Drives back the current of his kindly course.

Spenser. Faerie Queene.

The very cause which maketh the simple and igno- rant to think they even see how the word of God runneth currently on your side, is, that their minds are forestalled, and their conceits perverted before- hand. Hooker. Preface.

The current, that with gentle murmur glides, Thou knowest, being stopped, impatiently doth rage ; But when his course is not hindred, He makes sweet musick with the' enamelled stones.

Shakspeare.

Fouler than heart can think thee, thou canst make No excuse current, but to hang thyself.

Id. Richard III.

When substantialness combineth with delightful- ness, and .currentness

with stayedness, how can the language sound other than most full of sweetness ?

Camden's Remains.

He that thinketh Spain to be some great overmatch for this estate, assisted as it is, and may be, is no good mintman, but takes greatness of kingdoms ac- cording to their bulk and currency, and not after their intrinsick value. Bacon.

Heaven her Eridanus no more shall boast, Whose fame in thine, like lesser current, '& lost ; Thy noble streams shall visit Jove's abodes, To shine among the stars, and bathe the gods.

Denliam.

We are also to consider the difference between worth and merit, strictly taken : that is a man's in- trinsick, this his current, value ; which is less or more, as men have occasion for him. Crew's Cosm.

Not fabled Po more swells the poet's lays, While through the sky his shining current strays.

Pope.

Oft leaving what is natural and fit, The current folly proves our ready wit ; And authors think their reputation safe, Which lives as long as fools are pleased to laugh. Id.

That there was current money in Abraham's time, i past doubt, though it is not sure that it was stampt ; for he is said to be rich in cattle, in silver, and in gold. Arbuihnot.*

The currency of those half pence would, in the universal opinion of our people, be utterly destruc tive to this kingdom. Swift.

They despaired of giving any very general currency to their opinions. They considered them as a re- served privilege for the chosen few. Burke.

Fain would I sing what transport stormed his soul, How the red current throbed his veins along, When, like Pelides, bold beyond control, Without art graceful, without effort strong, Homer raised high to Heaven the loud, the' impetuous song. Beattie.

On the flood,

Indurated and fixed, the snowy weight Lies undissolved ; while silently

beneath, And unperceived, the current steals away. Cowper.

Four sparkling currents laved with wandering tides Their velvet avenues, and flowery sides ; On sunbright lawn unclad the Graces strayed, And guiltless Cupids haunted every glade. Darwin.

J. SURF. I' faith, that's true, lady Sneerwell : whenever I hear the current running against the characters of my friends, I never think them in such danger as when candour undertakes their defence.

Sheridan. Before the mansion lay a lucid lake,

Broad as transparent, deep, and freshly fed By a river, which its softened way did take

In currents through the calmer water spread Around : the wild fowl nestled in the brake

And sedges, brooding in their liquid bed.

Byron. Don Juan.

CURRENCY. See MEDIUM CIRCULATING.

CURRENTS, in navigation, are either natural and general, as arising from the diurnal rotation of the earth about its axis; or accidental and particular, caused by the waters being driven against promontories, or into gulfs and straits, where, wanting room to spread, they are driven back, and thus disturb the ordinary flux of the sea. Currents are various, and directed towards different parts of the ocean, of which some are constant, others periodical. Perhaps the most extraordinary current of the sea, is that of the Atlantic Ocean, which we hare already noticed, and which extends from Guinea round by the coast of America. See ATLANTIC.

' This grand movement of the ocean from east to west,' says Mr. Tuckey, 'has a compli cated origin ; and the trade winds, so far from being the cause, as has been supposed by some, are probably in part the effect of this current. Buffon thought that the sun and moon advancing continually to the west, in regard to a fixed point on the earth, must draw the mass of waters after them, and occasion a constant movement of the ocean from east to west; but this explanation not being found satisfactory, the following has been offered : — The heat of the sun and the rotation of the earth constantly tend to diminish the density of the Equatorial waters, and evaporation draws from that region a much greater quantity of the fluid than is restored to it by rivers or meteors ; hence, as we have observed, the waters of the polar regions move towards the equator to restore the

equilibrium ; but these polar waters are spe cifically heavier than the tropical waters, and, be- sides, their rotative movement is infinitely slower, but their inertia prevents them from getting sud- denly rid of their original movement, and there-

fore they cannot follow with equal velocity the increased rapidity of the rotatory movement of the globe in the equatorial regions. Heavy and motionless, they fall at once into a sphere of the most active movement, but preserve, for some time, their original character.

A variety of other shifting currents do not last, but return at certain periods ; and most of these depend upon and follow the anniversary winds, which by blowing in one place may cause a cur- rent in another. Between the island of Celebes and Madura, when the western monsoons set in, riz. in December, January, and February, or when the winds blow from the north-west, or be- tween the north and west, the currents set to the south-east, or between the south and east. At Ceylon, from the middle of March to October, the currents set to the south, and in the other parts of the year to the noˆh, because at this time the southern monsoons blow, and at the other the northern. Between Cochin China and Malacca, when the western monsoons blow, viz. from April to August, the currents set eastward against the general motion ; but the rest of the year they set westward, the monsoon conspiring with the general motion. They run so strongly in these seas, that unexperienced sailors mistake them for waves that beat upon the rocks, known usually by the name of breakers. So for some months after the 15th of February, the currents set from the Maldives towards India on the east, against the general motion of the sea. On the shore of China and Cambodia, in October, No- vember, and December, the currents set to the north-west, and from January to the south-west, when they run with such rapidity about the shoals of Parcel, that they seem swifter than an arrow. At Pulo Condore, upon the coast of Cambodia, though the monsoons are shifting, yet the currents set strongly towards the east, even when they blow to a contrary point. Along the coasts of the bay of Bengal, as far as the Cape Romania, at the extreme point of Malacca, the current runs south in November and December. When the monsoons blow from China to Ma- lacca, the sea runs swiftly from Pulo Cambi to Pulo Condore on the coast of Cambodia. In the bay of Sans-Bras, not far from the Cape of Good Hope, there is a current peculiarly remarkable, where the sea runs from east to west to the land- ward ; and this more vehemently as it is opposed

by winds from a contrary direction. This is un- doubtedly owing to some adjacent shore which is higher than this. In the straits of Gibraltar, the •urrents almost constantly drive to the east, and carry ships into the Mediterranean : they are also found to drive the same way into St. George's Channel. The setting or progressive motion of the current may be either quite down to the bottom,, or to a certain determinate depth. As the know- ledge of the direction and velocity of currents is a very material article in navigation, it is highly necessary to discover both, in order to ascertain the ship's situation and course with as much ac- curacy as possible.

CU'RRICLE, n. s. Old Fr. curicule ; Lat. curriculus. This word formerly meant a course : it is now the name of a two-wheeled open chaise, drawn by two horses abreast.

Upon a curricle in this world depends a long course of the next, and upon a narrow scene here an endless expansion hereafter. Browne.

CURRIE (Dr. James), was born at Kirk- patrick, in Scotland, in 1756. He received the rudiments of learning at the parish school of his native place, whence he was transferred to the grammar-school of Dumfries. His original des- tination was for a commercial life, and he passed some years of his youth in a mercantile station in Virginia. Disliking his profession, and unwilling to be a witness of the impending trou- bles in the American colonies, he quitted that country in 1776, and in the following year com- menced a course of medical study at the univer- sity of Edinburgh. A prospect of an appointment in the medical staff of the army, which would not admit of the usual delay of an Edinburgh graduation, induce;! him to take the degree of doctor of physic at Glasgow ; but, being disap- pointed in his hopes, he finally settled in Liver- pool in 1781. In 1783 he married the daughter of W. Wallace, esq. a merchant of that town, by whom he had several children. His professional employment now rapidly increased, and he was elected one of the physicians of the infirmary. In 1790 he became a member of the London Medi- cal Society, and communicated to it a paper On Tetanus and Convulsive Disorders, pub- lished in the third volume of its Memoirs. In 1792 he became a fellow of the Royal Society. A very curious and instructive Account of the Remarkable Effects of a Shipwreck, communi- cated by him to that body, was published in the Philosophical Transactions of that year. A pamphlet which appeared in 1793, under the title of A Letter, Commercial and Political, addressed to the Right Hon. William Pitt, by Jasper Wilson, Esq. on the subject of the war with revolutionary France, and which excited con- siderable attention, was also generally understood to come from his pen. In 1797 his reputation was further extended by a publication entitled Medical Reports on the Effects of Water, Cold and Warm, as a Remedy in Febrile Diseases, with

Observations on the Nature of Fever, and on the Effects of Opium, Alcohol, and Inanition. The practice of affusion of cold water in fevers, which is the leading topic in this work, was sug- gested to the author by Dr. Wright's narrative in the London Medical Journal, of his successful treatment of a fever in a homeward-bound ship from Jamaica. Dr. Currie, however, greatly extended it, and investigated the principles by which its use should be directed.

On a visit to his native country, in 1792, he had become personally acquainted with that rus- tic son of genius Robert Burns. This extraordi- nary but unfortunate man having at his death left his family in great indigence, a subscription was made in Scotland for their immediate relief, and at the same time a design was formed of publishing an edition of his printed works and remains, for their emolument. Mr. Syrae of Ryedale, an old and intimate friend of Dr. Currie, strongly urged him to undertake the office of editor. In 1800, therefore, he published in 4 vols., 8vo., The Works of Robert Burns, with au Account of his Life, and a Criticism on his

Writings; to which are prefixed some Obser- vations on the Character and Conditions of the Scottish Peasantry. This work passed through repeated editions, and produced a balance of profit that formed a welcome assistance to the desti- tute family. Dr. Currie, though possessed of a frame naturally vigorous, was subject to violent pulmonary attacks, and, his health beginning to decline visibly in 1804, he was compelled to leave Liverpool. Spending the following winter alternately at Clifton and Bath, he thought him- self in the month of March in a state of convales- cence, and, taking a house in Bath, recommenced the practice of his profession. But his disease had now obtained a permanent hold on his constitution, and he was obliged to relinquish the attempt. As a last resource he went in August to Sidmouth, where, after much suffering, which he bore with manly fortitude and resig- nation, he expired August 31st, 1005, in the fiftieth year of his age. His disease was ascer- tained to be a great enlargement and flaccidity of the heart, accompanied with a remarkable wasting of the left lung, but without ulceration, tubercle, or abscess.

CURRIERS, COMPANY OF. This company was incorporated in 1438 by Henry I., and their arms are sabley a cross engrailed, or between four pair of shares in saltire argent. The crest, two arms embowed, holding a share : the motto, Spes uostra Deus

CURRITUCK, a county of North Carolina, on the sea-coast of Edenton

district, forming the north-east corner of the state, being bounded on the east by Currituck Sound, north by the state of Virginia, south by Albemarle Sound, and west by Camden county ; it contains upwards of 5000 inhabitants, and the celebrated Dismal Swamp, one of the best rice estates in America.

CURRITUCK, or CARATUNK, a township of the United States, in the district of Maine, twenty- eight miles above Norridgewalk.

CURRODREPANUS, from currus, a cha- riot, and Speiravov, a scythe, in antiquity, a chariot armed with scythes. The driver of these chariots was obliged to ride on one of the horses, as there was no other seat for him. There were no scythes pointing down to the earth, either from the beam or axle-tree ; but these were fixed at the head of the axle-tree in such a manner as to be movable by means of a rope, and thereby could be raised or let down, and drawn forward or let fall backward, by relaxing the rope.

CURRUCKDEAH, a hilly district of Hindos- tan, in the province of Bahar, covered generally with wood, and containing no important place except Curruckdeah, the capital, in long. 86° 13′ E., lat. 24° 26′ N.

CURRUCKPORE, also a district of the pro- vince of Bahar, in which are found hot springs, of no mineral taste, but keeping as well as the Bristol water. Curruckdeah is the capital.

CU'RRY, v. a. -\ Fr. cottrroyer; Lat.

CU'RRYCOMB, n. s. tcorium, leather. To dress

CU'RRYING, n. s. £ leather, so as to render it

CT/RRIER, n.«. J fit for use; to drub; to rub a horse with a currycomb, which is an iron

instrument, consisting of several parallel ridges, indented with small teeth; to wheedle. To curry favor, is to become a favorite by petty officiousness, slight kindnesses, or flattery; it always implies meanness in the person who re- sorts to it; favor is a corruption of favel, a name anciently given to yellow-colored horses. Cur- rier is one who dresses leather. Currying is the operation of dressing leather ; of rubbing down ahorse with a currycomb.

So from her parting, she thenceforth did labour By all the means she might to curry favour, With the Elfin knight, her ladies best beloved.

Spenser. Faerie Queene.

If I had a suit to master Shallow, I would hu- mour his men ; if to his men, I would curry with master Shallow. Shaksjteare.

Frictions make the parts more fleshy and full ; as we see both in men, and in the currying of horses : the cause is, for that they draw a greater quantity of spirits and blood to the parts. Bacon.

He has a clearer idea from a little print than from a long definition ; and so he would have of strigil and sistrum, if instead of a currycomb and cymbal, he could see stamped in the margin small pictures of these instruments. Locke,

This humour succeeded so with the puppy, that an ass would go the same way to work to curry favour for himself. L' Estrange.

A currier bought a bear-skin of a huntsman, and laid him down ready money for it. Id.

Warned by frequent ills, tbe way they found To lodge their loathsome carrion under ground ; For useless to the currier were their hides, Nor could their tainted flesh with ocean tides Be freed from filth. Dryden's Viryil.

I may expect her to take care of her family, and curry her hide in case of refusal.

Addison's Spectator.

CU'RRY. Hind, quorma, to stew. An East Indian savoury powder, used in cookery.

CURRYING is the art of dressing or preparing leather for shoes, and a variety of other pur- poses, after it has undergone the process of tanning.

It is a trade conducted under a license which is taken out annually from the Board of Excise, and curriers are obliged to specify in the entry, every room in which leather is deposited, as well as the vats and tubs in which it is soaked. Their premises are, of course, subject to the inspection of excise-officers; and any hide or skin not having the tanner's duty-mark, is liable to seizure.

The premises of a currier usually consist of a shaving-shop, scouring-house, and rough leather warehouse, on the ground floor; above these are erected the drying sheds, which are weather- boarded, and calculated to admit a free draught of air, where the wet leather is hung on hooks fixed in rails, which are placed horizontally in rows. The stuffing-tables, which are of

mahogany, are also fixed here ; the lower floors are differ- ently arranged by different persons, according to the extent of the premises, and the business to be carried on. Where a choice of situation offers, that will be preferred in which the air has free access to the sheds, and at a proper distance from foundries and steam-engines, the smoke

and smuts issuing from these buildings being a great annoyance to the currier, and injurious to saddle and boot-top leather in particular; the value of which depends much on the brightness and regularity of its color. An open yard is a useful appendage, and in extensive concerns cannot well be dispensed with. The coach and saddle currying is in many instances a distinct trade in London, but it is sometimes connected with the shoe trade, and in the country they are generally united.

The skin or shoe trade will come first under consideration, in which is comprehended the dressing of calf, seal, horse, and dog-skins, with the lightest ox and cow hides, for shoe upper- leathers; and to this is usually attached the business of a leather-cutter, which implies the cutting up heavy tanned hides, called crop leather, for soles, and curried goods for shoe upper leathers, welts, &c., for the retailer and consumer. It is a general practice to weigh the skins, and mark them singly before they are put into work, which enables the master to ascertain his profit on every lot of goods, or on every skin, if he wishes to be so particular; and also assists his judgment in buying and assorting the differ- ent kinds of goods, and in applying them to the particular purposes for which they are calculated. This requires as much experience as any part of the trade. In laying-in rough goods, the buyer should be well informed in the varieties of tan- nage, as well as the growth peculiar to different parts of the country, which are as readily distinguishable as the cattle themselves to an experienced dealer. Tanned goods are sold chiefly by weight, and the buyer must have in view the quality of the leather, pattern, and substance; the latter is unequal, and varies in the same lot of goods, and in different parts of the same skin. The proportion of thin loose leather to the middle or prime parts of the skin, is a principal consideration with the buyer, and he always finds the skin of the cow, or any other female animal more level, of a finer texture, and consequently more valuable than that of the male ; the firmness and fineness of leather depends much on the treatment it has had in the tanner's pits. It is part of his duty to contract and fill the looser parts of the skin, which will be seen in its proper place; the gashing of the skin by the butcher is also a matter of much consequence to the buyer, and requires all his caution, as the extent of the mischief does not always

appear, until the fibrous matter adhering to the flesh side, and which connects the skin to the carcase, is removed by the currier's knife.

An act was passed in the year 1800, inflicting certain penalties on the butcher, in proportion to the damage done to the skin ; and persons have been appointed to the markets throughout the kingdom, to inspect the skins, and levy the fines by information before a magistrate, in proportion to the damage ; but it has been found inefficient from the total negligence of the inspectors in some places,' and more so from the good understanding the tanner finds it his interest to keep up with the butcher. Unfortunately, the currier, and not the tanner, who is the only

check on the butcher, is the principal sufferer by his negligence. A late repeal of statute 1st, James I., has relieved the trade from a vexatious tax, by abolishing the useless offices of searchers and sealers of leather. Until the year 1808, Leadenhall Market was subject to the trouble- some interference of these officers, who were obliged to compromise a duty it was impossible to execute ; and we believe the most strenuous among those who at that time assisted in sup- porting such a regulation, now consider their own judgment well substituted for the obnoxious statute. The country leather dealers had long before wisely relieved themselves of its restric- tions. Experience soon teaches the buyer to discriminate between well-tanned and well-dried leather, and the contrary ; and according as a deficiency in either deteriorates the value, so is the price given.

To return to practical currying : the dressing of a calf-skin for shoe upper-leathers will give a good general idea of the process ; we will, there- fore, take one as it is received from the tanner, and pursue the operation through the hands of the workman to its finished state. The offal parts, such as the face, tail, and shanks, being first taken off, which is called rounding the skin, it is delivered into the journeyman's hands, who throws it into a vat, or tub of water, to soak, preparatory to the operation of shaving, which is performed by a knife of a peculiar make, and it will be necessary to give a description of this tool, as well as the beam on which the leather is shaved.

The beam, so called by the curriers, is a post about three feet high, fixed- in a slightly inclined position, on a firm stage or platform, which is raised eight or ten inches from the floor, for the man to stand upon; this post is about four inches thick and eight inches wide, and is faced with a board of lignum vitae of the same breadth.

The knife has two edges ; the blade is rectan- gular, about twelve inches long, and from four to six inches wide, and varies in size and weight, according to the work to be performed ; one end has a straight, and the other a cross handle, in the. plane of the knife. It is brought to a wire- edge,

by rubbing on a stone of a coarse grit, which is afterwards taken off, and a finer edge produced by a finer and softer stone. The cross-handle of the knife is then firmly fixed be- tween the workman's knees, and while in a kneeling posture he turns the edges to an angle with their former position, by means of a po- lished steel, similar in shape to a butchers' steel. They are kept in order, chiefly by a smaller steel, which the man holds constantly between his fingers, and passes along the knife, the point within, and the side without the groove, formed by the turned edge, as occasion requires, and, as often as the edges are worn, they are re- newed in the same way. The name of Cox, of Gloucester, is known throughout Europe as the principal maker of curriers' knives Mr. Bing- ley, of Birmingham, who has obtained a patent for an improvement in their manufacture, rivets a plate of steel, properly tempered, between two iron plates, instead of welding the whole together, which is the case with other makers ;

and, thereby, as he properly observes, making the thicker and thinner parts unequal in temper, according to the unequal influences of the same degree of heat on the thicker and thinner parts of the knife.

Having prepared the knife, the wet skin is thrown over the beam, with the flesh-side out- wards, and the man keeps it in its position by the pressure of his knees as he leans over the beam. The knife is then applied, horizontally, to the leather, and by repeated strokes down- wards, it is reduced to the substance required. The angular edge does not merely scrape the skin ; but, in the hands of a skilful man, takes off a shaving, the full breadth of the beam, at every stroke of the knife. The man's whole strength is exerted in shaving, and great care, as well as ingenuity, is necessary to avoid gal- ling, or reducing the skin more in some parts than others. In order to keep the substance of the skin equal, the man frequently examines it, in every part, in the course of shaving, by pas- sing it double through his fingers ; and, when sufficiently reduced, he throws it, a second time, into a tub of fresh water, to be scoured and ex- tended : for this purpose, it is laid on a stone table, to which the flesh-side adheres, and worked with the edge of a small square stone fixed in a stock or handle. Pumice-stone is used, but not so much as formerly. The skin is cleansed with a brush, from a whitish sub- stance called the bloom, which all leather, tanned with bark, is found to contain. The natural folds of the grain disappear in the extension of the skin; and, to effect this completely, it is sometimes scoured a second time, for which the workman makes an extra charge. Changing the water has, of itself, a good effect in reco- vering dead, or stale leather, and the trifling additional expense is well laid out. The skin is then removed to the drying-

shed, to be stuffed with a mixture of cod-oil and tallow, called dubbing, which is applied to both sides of the leather, but in larger quantities on the flesh than the grain side.

The dubbing is composed of about two parts of oil, and one part of tallow, melted and well stirred together in cooling, so as to be perfectly incorporated in a smooth, butter-like consist- ence. In conjunction with this mixture, sod- oil, which is a mixture of the cod-oil with the grease expressed from sheep-skins, &c., by the skinners and felmongers, is sometimes used, but is never applied to bright-colored leather, Leather, lightly stuffed, will not wear so well as when it is rendered soft and flexible with the oil and tallow ; and, on the other hand, if over stuffed, the color of the grain is darkened, and the oil itself, which, moderately used, is so great a preservative, becomes a cause of decay. The only motive for using more oil than adds to the quality of the leather is, to increase the weight; but, to admit of a good polish, less is usually applied than is leally beneficial to the leather. The firmer and stronger parts of the skin require more than the looser parts to make them soft, which must be attended to in laying it on. In this state it is hung on the hooks to dry. In the course of drying, most of the oily

matter will be absorbed, and what remains OH the surface, still feeds the leather, and is suf- fered to continue until the skin is wanted for finishing. Severe frosty weather will, of course, suspend the scouring, drying, and stuffing, and is apt to injure the texture of the leather, when frozen in the sheds, at the same time that it brightens the color ; and the kinds of leather, which are valuable on account of color, are consequently improved. The shed-drying not being sufficient in winter, the leather is afterwards dried off in a stove, and then follows the boarding or bruising.*

The board used for this purpose is toothed or grooved, similar to the crimping-board used by the ladies, and is slung on the hand hy a leather strap. The skin is doubled and worked with a coarse board of this description, until well sof- tened, and is then whitened, or lightly shaved over again, with a half-worn pair of edges, which leaves the flesh-side clean, and in a proper state to receive the color used in waxing. Be- fore it is waxed, however, it is boarded a second time, and the impression of the board often re- mains, particularly if the leather be not perfectly dry. The skin is now said to be finished russet, in which state it keeps best; and, when wanted for sale, it is again given out to be waxed. In London, this work is chiefly done by appren- tices, being the most simple, but the dirtiest part of the whole process. The blacking, usually termed color, is a composition of oil, lamp- black, and tallow, which is well rubbed into the flesh-side with a hard brush, great care being taken to keep the grain-side clean.

A coat of strong size and tallow is then laid on with a soft brush, and is afterwards rubbed with a smooth ing-glass ; and, lastly, it receives the finishing gloss from a little thin size laid on with a sponge. After the first coat of size, the skin is hung up a few hours to allow the size and color to dry and incorporate, and a lump of hard tallow is rubbed lightly over the surface. The skin is thus completely finished for the con- sumer, and leather so dressed is found superior in point of appearance and durability. Indeed, the blacking of the prime parts of calf-leather on the grain has almost entirely given way to waxing; an additional reason for which may be, that it is much better adapted for the polish it is afterwards to receive from the destructive shining blacking now in general use.

The middle and firmer part of the skin only is fit for the better purposes ; the outer and thinner portion being thrown by and sold at inferior prices. These offal parts, indeed, are frequently cut off before the skin is put into work, and dressed separately from the butt or middle, and when that is the case, it is usually blackened on the grain-side. Horse, seal, and dog-skins are also blackened on the grain, which varies the latter part of the process materially. After shaving, the leather is well washed with urine, as a mordant, on the scouring stone, to prepare it for the first ap- plication of a solution of copperas, which is given it in the course of scouring, and communicates the black dye. It is then stuffed in the manner before described, but more plentifully than waxed leather, and hung in the shed to dry ; when

taken down, the remains of the oily matter, ad- hering to the surface of the leather, are scraped off with a thin iron, formed and storked like the stone before-mentioned, and which is afterwards made use of to stone or set the leather smooth on the table. Here it receives a second appli- cation of copperas and bullocks' gall, which pro- duces a complete black, and this part of the process is called seasoning. The copperas is applied with caution, lest by a too plentiful use of it the leather be injured. It should scarcely penetrate the cuticle or grain of the skin, and, if used too strong, the grain is burnt up and destroyed. While the leather is damp with this liquid, and in the course of seasoning, the graining-board is applied as before ; only, as the grain is now to be worn outwards, the work- man is more particular in giving that side a neat appearance, by raising the grain neatly and re- gularly. The coarser kinds of grain-leather are also, at this time, hardened with a tooth-slicker, called a dicing-iron, which leaves a lasting im- pression, or an artificial grain is imprinted by means of an engraved roller to imitate seal-skin, which is found to answer better than

the board covered with fish-skin, formerly in use. This is not done so much with a view to increase its value, by imitating a better description of leather, as to harden and compress the looser parts of offal leather. It is now finished off with a little clear cod-oil, and is termed grained offal. The thin parts of the horse-hide are dressed in this manner, and are called cordovan, being probably in imitation of the manufacture of leather at Cordova, in Spain.

The act of James, already referred to, prohi- bited the use of horse-leather, clearly from igno- rance of the legislators of that day, and the infant state of the manufactures of the country, horse- leather having been found quite as useful as some other descriptions of leather, and little in- ferior to calf-skin. It is now in very general use. The middle and stouter parts are cut out for boot-legs ; and as leg-dressing is as curious, whether of calf or cordovan, as any part of the currying business, we shall be particular in de- scribing the process.

The piece intended for a leg being cut of a proper length, and tapering a little towards the small, is first soaked and scoured, having been already shaved in the hide : it is then marked and numbered to match its fellow of a correspond- ing size and substance. The breadth of the small is measured, and the number of inches marked with a piece of copperas, which writes legibly on wet leather, as a guide for the boot- maker in fitting it to the leg. It is then black- ened, if cordovan ; but instead of again extending it on the scouring-stone, it is worked inwards with the slicker, and the width partially reduced in that part which is to form the small. The wet leather is then placed on a plain mahogany board, between two curved irons, approaching to a semicircle, the convex sides of which are made to approach to and recede from each other, and are screwed down at a distance, according to the size required for the small of the leg. The slicker is then employed to work the leather and contract it within the limits of the frame, by

which the breadth is reduced from two to four inches, and the leather thickened in proportion, or so much of the surface transferred to the sub- stance ; the leg, thus treated, will be elastic when dry; and, after giving out sufficiently to admit the foot, closes to the shape of the wearer. This, however, is not so much a matter of atten- tion since the introduction of Hessian boots, which are cut out of the finished skin, and stand hollow without regard to shape ; but though the other description of legs, called draft legs, are not so much taken in, they continue to be dressed in the same way. The advantage of this method is nothing more than as it regards the fitting of a new pair of boots ; frequent ex- posure to wet will soon destroy the effects of the currier's ingenuity. Leg-dressing is the lightest and most profitable work to the journeyman in the shoe-currying ; it requires

superior work- manship, and generally is given to the man most distinguished as a complete and able currier. The leg is stuffed, dried, and finished in the usual manner. Some few years since cordovan legs were exported, in large quantities, to North America ; but, from the recent improvements in the art of currying in that part of the world, the demand has entirely failed ; and, cordovan hav- ing given way to calf legs for home consumption, the horse-hide is now used chiefly for ladies' shoes. The Spanish American horse-hides have lately been dressed thin and smooth on the grain, to imitate kid leather, for which, as far as re- spects durability, it is a good substitute.

There are several other processes in shoe cur rying, such as preparing binding, welt leather &c. &c. which we have not space to describe minutely; we pass on therefore to the hide trade, which includes the dressing of ox and cow hides, for coach, harness, saddle, and military purposes ; this, as was before observed, forms a distinct branch of the currying trade.

Harness leather is dressed from the strongest and heaviest dressing hides, and the substance is not reduced in shaving, but merely the rougli flesh taken off; for reins, the butt is reduced to a level with the thinner parts, and for both these uses the hide is first divided, or slit down the back, from head to tail, for the convenience of the workman; and, after bein:; shaved an;l scoured, is blackened in the same manner as grain shoe leather. But before it is stuffed it is hung on the poles and semi-dried, and then atoned or set, in order to make the surface smooth, preparatory to receiving the dubbing, which is now laid on in quantities proportioned to the substance of the hide, which is then re- placed on the poles until nearly dry. The grain being cleansed with the urine and ox galls, it receives the last application of copperas. A roll of hard tallow is then rubbed over the grain, which the man works into the leather with a stone, and after a second coat of tallow it hangs up till completely dry ; it now only remains to be finished witH a smoother stone, or a glass of the same form. Brown harness differs only in the omission of the copperas and the tallow in finishing, and, perhaps, is not quite so much stuffed in the first place.

Japan hides, for the roofs and bodies of

coaches, are shaved down to a thin substance, and carefully levelled, then stoned and set, and they are fit for the coachmaker's use ; the japan- ning is the coachmaker's province, after the hide is fitted to the coach-body. Hides for the heads of open carriages are selected from light, roomy, and the least defective hides, and require the best of workmanship ; they are blackened on the grain-side, and the leather is softened, and the grain is

raised in the same manner as black grain shoe-leather. These hides, for the thinner purposes, being so very much reduced from their original substance, and the shavings of no other use than for fuel, an engine was invented, and has been many years in use, for splitting the hide into two parts, so as to divide the sub- stance, and thereby obtain a useful piece of leather, which would otherwise be wasted in shavings.

The thinnest of all the hide-leather is that which is used for the lining of carriages ; it is dressed bright russet, but the colored goat-skins, called Morocco-leather are more generally ap- plied. The seats of army-saddles are cut out of thin hide-leather, of this description, as being less expensive, and quite as durable as hog- skins; but the hunting-saddles in general use are universally made of hog-skins ; the skirts and flaps are cut out to pattern, usually from the rough tanned hide, and go through the top-skin process to improve the color. Bridle-leather is cut into pairs of butts and middlings, which signify the middle and butt of the hide ; the neck and belly-parts being used for inferior purposes. The army consumes vast quantities of leather for harness, saddles, caps, and accou- trements, which all go through the curriers' hands; and the government contracts for ac- coutrements, &c., are great objects of contention in that line of business. The belts and straps are cut out of light cow-hides, which are curried much after the manner the same kind of hides are done for strong shoe-leather.

CURRYRURY, a frontier province of Ben- gal, on the eastern side of the Brahmapootra river, composed of lands formerly belonging to the territories of Assam and Bahar. It is moun- tainous and overrun with wood.

CUR

*CURSE, v. a., v. n. & n. *.") Swed. korsa ; CU'RSED, part. adj. Ang.Sax. cur*

CU'RSEDLY, adv. sian. To wish

CO'RSEDNESS, n. s. . evil to; to call

CU'RSER, n. s. (down maledic-

CU'RSING, n. s. tions upon ; to

CC'RST, adj: execrate ; to de-

CU'RSTNESS, n. s. J vote ; to do mis-

chief to; to torment; to afflict; to imprecate; to deny or affirm with imprecation of divine vengeance. Curse is, malediction ; torment ; vexation.

Cursed is, that which is deserving of a curse; hateful; wicked; blasted by a curse; vexatious ; annoying. Cursedly is a vulgarism, signifying miserably ; shamefully. Curst and curstness denote the quality, and the state, of being froward ; shrewish ; peevish ; snarling ; malignant.

Curse me this people, for they are too mighty for aie. Numbers.

He read all the words of the law, the blessings am! cursings. Joihua viii. 36

Thy silver about which thou cursedst, and spakest of also in mine ears, behold, the silver is with me.

Jiul. xvii. 2.

Neither have I suffered my mouth to sin, by wish- ing a curse to his soul. Job.

Ful loth were he to cursen for his tithes, But rather wolde he yeven out of doute Unto his poure parishers aboute Of his offring, and eke of his substance.

Chaucer. Prol. to Cant. Tales. Well may we curse our abbis and our place. Our statutes sharpe to singe in copis wide.

Id. The Court of Love. Hire thoughte hire cursed hertc brast atwo ; She wolde not that hire sone hed do so.

Id. Cant. Tales.

The remenant were anhanged, more and lease, That were consentant of this cursedness. Id.

And first within the portche and jaws of hell, Sate diepe Remorse of Conscience, al besprent With teares ; and to her selfe oft would she tell Her wretchedness, and cursing never stent To sob and sigh. Sackville.

The gold is good, and though she curse or banne Yet where thee list thou mayst lye good and warme

Wyatt.

Horribly then he gan to rage and rayle, Cursing his gods, and himself damning deep.

Spenser. Faerie Queene.

0 piteous worke of mutabilitie !

By which we all are subject to that curse, And death, instead of life, have sucked from our nurse. Id.

After Solyman had looked upon the dead body, and bitterly cursed the same, he caused a great weight to be tied unto it, and so cast into the sea. Knoltes.

The untented woundings of a father's curse, Pierce every sense about thee.

Shakspeare. King Lear. Merciful powers !

Restrain in me the cursed thoughts that nature Gives way to in repose. Id. Macbeth.

I pray you, though you mock me, gentlemen, Let her not hurt me : I was never curst ;

1 have no gift at all in shrewishness^ I am a right maid, for my cowardice ; Let her not strike me.

Id. Midsummer Night's Dream.

Then, noble partners,

Touch you the sourest points with sweetest terms. Nor curstness grow to the matter.

Id. Antony and Cleopatra. Come, lady, while heaven lends us grace, Let us fly this cursed place, Lest the sorcerer us entice

With some other new device. Milton.

The curser's punishment should fright the curse.

Dry den.

I never went from your lordship, but with a long- ing to return, or without a hearty curse to him who invented ceremonies, and put me on the necessity of withdrawing. Id.

What, yet again ? the third time hast thou curst

me?

This imprecation was for Laius' death, And thou hast wished me like him. Dryden and Lee.

One day, I think, in Paradise he lived ; Destined the next his journey to pursue. Where wounding thorns and cursed thistles grew. Prior.

There arc very few who can bear to grow old among the cwses of a whole people. Burke.

O the supreme curse of making three guineas do the business of five ‘ Not all the labours of Hercules ; not all the Hebrews’ three centuries of Egyptian bondage, were such an insuperable business. Burnt.

But days, like this, with doubting cursed,

I will not long endure — Am I disdained — I know the worst,

And likewise know my cure. Sheridan.

But pause one moment more, and take The curse, of him thou didst forsake ; And look once more to heaven, and see Its love for ever shut from thee.

Byron. Siege of Corinth.

CURSING and SWEARING. See SWEARING.

CU’RSITOR, 7i. s. Lat. An officer or clerk belonging to the chancery, that makes out origi- nal writs. They are called clerks, of course, in the oath of the clerks of chancery. Of these there are twenty-four in number, which have certain shires allotted to each of them, into which they make out such original writs as are required. They are a corporation among themselves. — Cowell.

Then is the recognition and value, signed with the handwriting of that justice, carried by the cursitor in Chancery for that shire where those lands do lie, and by him is a writ of covenant thereupon drawn, and ingrossed in parchment. Bacon.

CU’RSORY, adj. \ Lat. cursorius. Cur CU’RSORARY, adj. ˆsory signifies, hasty; CTJ’RSORILY, adv. i transient ; inattentive ; CU’RSORINESS, n. s.) not stationary. Curso- ranly, which seems of Shakspeare’s coinage, has the same meaning. Cursorily is, hastily ; with- out much heed : cursoriness, slight attention.

I have but with a cursorary eye O'erglanced the articles. Shakspeare. Henry V.

Besides their cursorie men, as Gerrard, &c.

Proceedings against Garnet.

The first, upon a cursory and superficial view, ap- peared like the head of another man. Addison.

This power, and no other, Luther disowns, as any one that views the place but cursorily must needs see.

Atterbury.

Whoever takes a view of this kingdom in a cursory manner, will imagine that he beholds a solid, com- pacted, uniform system of monarchy, in which all inferior jurisdictions are but as rays diverging from one centre. Burke

CURT, adj. ~] Fr. court ; Ital and

CU'RTAL, n. s. & adj. I Span, corto ; Per. kor, CU'RTLY, adv. cord ; Welsh, cor ; Sw.

CU'RTAIL, v. a. >kort ; Dan. hurt ; Ang.»

CURTA'ILER, n. s. I Sax. sceort; Dutch, CURTA'ILING, n. s. kortz ; Lat. curtus. CU'RTAIL-DOG, n. s. J Curt, curtly ; short, briefly. To curtail is, to cut off; to abbreviate : it has of before the thing cut off. A curtail-dog is a dog lamed, or mutilated according to the forest laws, whose tail is cut off, and who is therefore hindered from coursing. Curtal, as a noun, is a horse with a docked tail ; as an ad- jective, brief, or abridged.

I, that am curtailed of all fair proportion, Deformed, unfinished, sent before my time Into this breathing world.

Shakspeare. Richard II J.

My shepherd's pipe can sound no deal, My wether's bell rings doleful knell ; My wrtail-doy, that wont to have played, Plays not at all, but seems afraid.

Id. The Passionate Pilgrim.

Hold my stirrup, my one lacquey, and look 10 my curtal, the other. Ben Jonson.

Yet pursy Euclis cheerly smiling prayed That my sharp words might curtail their vile trade.

Hall.

Neither are they to be determined here by essays and curtal aphorisms, but by solid proofs of Scripture.

Milton. Curtly, succinctly, and concisely. Gaytun.

Then why should we ourselves abridge, And curtail our own privilege ? Hudibras.

Scribblers send us over their trash in prose anu verse, with abominable curtailings and quaint mo- dernisms. Swift. This conduct of theirs served to show, that the Latins had not been interpolators of the breed, but that the Greeks had been curtailers. Id. The count assured the court, that Fact his antago- nist, had taken a wrong name, having curtailed it of three letters ; for that his name was not Fact, but Faction. Addison. Let the rule be general ; let not the splendour of one be curtailed, while that of another is extended.

Sheridan.

CU'RTAIN, v. a. & n. s.) Fr. c ourtine ; It. CU'RTAIN-LECTURE, n. s. I copertino ; Lat. cor- tina. To enclose with curtains ; to conceal as by curtains. A curtain is a cloth to be con- tracted or expanded at pleasure, to admit or ex- clude the light from a bed or room ; in fortifica- tion, that part of the rampart between two bastions. To draw the curtain is either to close or unclose it. A curtain-lecture signifies, a scolding given by a wife to her husband when they are in bed.

And Pandarus, that led her by the lappe, Came nere, and gan in at the curtein pike.

Chaucer. Troilus and Creseide.

Now when as darksome Night hed all displayd Her cole blacke curtein over brightest skye,

The warlike youlhes, on dayntie couches layd Did chace away sweet sleepe from sluggish eye.

Spenser. Faerie Queene.

The governour, not discouraged, suddenly of tim- ber and boards raised up

a curtain twelve foot high, at the back of his soldiers. Knolles.

Now o'er one half the world Nature seems dead, and wicked dreams abuse The curtained sleep, Shakspeare. Macbeth.

Even so the curtain drawn, his eyes begun To wink, being blinded with a greater light.

Id. Rape of Lucrece. So soon as the all-cheering sun Should in the farthest east begin to draw The shady curtain from Aurora's hed.

Id. Romeo and Juliet. What endless brawls by wives are bred ! The curtain-lecture makes a mournful bed.

Dryden's Juvenal.

I must draw a curtain before the work for awhile, and keep your patience a little in suspense.

Burnet's Tlieory.

But, in her temple's last recess inclosed, On Dulness' lap the anointed head reposed : Him close she curtained round with vapours blue, And soft besprinkled with Cimmerian dew. Pope.

Thy hand, great Dulness ! lets the curtain fau, And universal darkness buries all. Id.

Now stir the fire, and close the shutters fast, Let fall the curtains, wheel the sofa round, And, while the bubbling and loud hissing urn Throws up a steamy column, and the cups, That cheer but not inebriate, wait on each, Se let us welcome peaceful evening in. Cowper.

He said ; and leading from her ivory seat The blushing beauty to his lone retreat, Curtained with night the couch imperial shrouds, And rests the crimson cushions upon clouds.

Darwin.

CURTAIN, CURTIN, or COURTIN, in fortifica- tion, that part of the wall that lies between two bastions. It is bordered with a parapet, behind •which

the soldiers stand to fire upon the covered way and in

CURTATE DISTANCE, n. s. In astronomy, the distance of a planet's place from the sun, reduced to the ecliptic.

CURTATION, n. s. From Lat. curto, to short- en. The interval between a planet's distance from the sun and the curtate distance.

CURTAXE,Cu'RTELASSE, or CURTELAX, n. t. See CUTLASS.

With curtaxe used Diamond to smite.

Spenser. Faerie Qucene.

' CURTESY OF ENGLAND, Jus Curialitatis An- gli«, in English law, is where a man taketh a wife seised in fee-simple, or fee-tail general, or as heiress in special tail, and hath issue by her, male or female, born alive, which by any possi- bility may inherit, and the wife dies : the hus- band in this case holds the lands during his life ; and is called tenens per legem Angliae, or te- nant by the curtesy of England. This appears to have been also the established law of Scot- land, where it was called curialitas. It is like- wise used in Ireland, by virtue of an ordinance of Henry III.

CURTEYN, CURTANA, a name of Edward the Confessor's sword, or the first sword carried before the kings of England at their coronation : the point of which is broken or taken off as an emblem of mercy.

CU'RTTLAGE, n. s. Old Fr. courtilage. A garden, field, or piece of ground, in the vici- nity of, or belonging to, a messuage.

CURTIS (William), a late distinguished bo- tanist, was born in Hampshire in 1746. He was apprenticed to an apothecary of Alton, and at the age of twenty became assistant to a Mr. Talwin, in Gracechurch Street, London, whom he succeeded in business. His love of botany, however, attracted him from his professional du- ties, and he at length gave up his practice and became a public lecturer on that science. He engaged at this time a garden in Bermondsey, which he soon exchanged for one at Lambeth, and occupied finally still more extensive pre- mises at Brompton. In 1771 he published, In- structions for collecting and preparing Insects ; and, in the following year, a translation of the Fundamenta Entomologiae of Linnaeus, under the title of An Introduction to a Knowledge of In- sects. These publications procured him consi- derable notice ; but in 1777 the first number of

his Flora Londinensis, (which was completed In six fasciculi of seventy-two plates each), and shortly after his Botanical Magazine, raised him in the

public estimation to the first rank of bo- tanical authors. He wrote also a History of the brown-tailed Moth, Practical Observations on the British Grasses, and some papers in the Transactions in the Linneean Society. He died the 7th of July, 1799. Since his death have appeared his Lectures, with coloured plates.

CURTIUS (Marcus), a Roman youth, who is said to have devoted himself to the gods' manes, for the safety of his country, about A. A. C. 360. A wide gap had suddenly opened in the forum, and the oracle had said that it never would close before Rome threw into it whatever it had most precious. Curtius imme diately perceived that no less than a human sa crifice was required. He armed himself, mounted his horse, and leaped into the gulf, which it is said instantly closed over his head.

CURTIUS (Quintus), a Latin historian, who wrote the life of Alexander the Great, in ten books, of which the two first are not extant, but are well supplied by Freinshemius. When this writer was born, or even when he lived, is not known. By his style he is supposed to have flourished near the Augustan age ; though some imagine the work of much later date, and that the name of Quintus Curtius was fictitiously pre- fixed. Cardinal du Perron was so great an ad- mirer of this work, as to declare that one page of it was worth thirty pages of Tacitus. CU'RTSY. See COURT. CURVE, v. a. n. s, & adj. ~\ Latin, curvu. CU'RVATED, adj. To bend ; to*

CU'RVATION, n.s. [crook. Any

CURVA'TURE, n. s. (thing bent, or

CURVILI'NEAR, adj. crooked. Curva-

CU'RVITY, n. s. j tion is the act of

bending any thing ; of making it curvated ; of giving it curvature, or curvity ; the state of being curved. Curvilinear signifies, consisting of a crooked line ; composed of crooked lines.

. As for his session, we must not look upon it as de- termining any posture of his body, corresponding to the curvation of our limbs. Pearson.

And the tongue is drawn back and curved. Holder.

Flaccid it was beyond the activity of the muscle

and curvature of the ossicles, to give-it a due tension.

Id.

The joined ends of that bone and the iucus receding, make a more acute angle at that joint, and give a greater curvity to the posture of the ossicles. Id.

It is bent after the manner of the catenarian curve, by which it obtains that curvature that is safest for the included marrow. Clieyne.

The impulse continually draws the celestial body from its rectilinear motion, and forces it into a curvi- linear orbit ; so that it must be repealed every minute of time. Id.

Unless an intrinsick principle of gravity or attrac- tion may make it describe a curve line about the at- tracting body. Bentley.

And as you lead it round, in artful curve, With eye intentive mark the springing game.

Thompson.

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Habit or custom, like a complex mathematical scheme, flows from a point, insensibly becomes a line, and unhappily, (in that which is evil,) it may become a curve. "Robinson.

In his ingenious work, entitled The Analysis of Beauty, Mr. Hogarth believes that the triangular glass, which was dedicated to Venus in her temple at Paphos, contained in it a line bending spirally round a cone with a certain degree of curvature, and that this pyra midal outline and serpentine curve constitute the prin- ciples of grace and beauty. Darwin. CURVE, in geometry, a line which, running on continually in all directions, may be cut by one right line in more points than one. See FLUXIONS.

CURVET, v. n. > Ital. corvettare. To leap ; CU'EVET, n. s. J to bound ; to prance; ; to frisk ; to be licentious. A leap ; a bound ; a prank.

Anon he rears upright, curvets and leaps, As who should say, lo ! thus my strength is tryed.

Shahspeare. Venus and Adonis.

Cry holla ! to thy tongue, I pr'ythee, it curvets un

seasonably. Shakspeare. As You Like It.

Himself he on an earwig set, Yet scarce he on his back could get, So oft and high he did curvet, Ere he himself could settle. Drayton.

Seized with unwonted pain, surprised with fright, The wounded steed curvets ; and, raised upright, Lights on his feet before : his hoofs behind Spring up in air aloft, and lash the wind.

Dryden't JEneid.

B. Agreed. But would you sell or slay your horse For bounding and curvetting in his course ? Or if, when ridden with a careless rein, He breaks away, and seek the distant plain ; No. His high mettle, under good control, Gives him Olympic speed, and shoots him to the gt>al.

Cowper.

CURVET, or CORVET, in the manege, an air in which the horse's legs are raised higher than in the demi-volt ; being a kind of a leap up, and a little forwards, wherein the horse raises both his fore-legs at once, equally advanced, (when he is going straight forward, and not in a circle), and as his fore-legs are falling he imme- diately raises his hind-legs, equally advanced, and not one before the other; so that all his four legs are in the air at once ; and as he sets them down he marks but twice with them.

CU'RtyLE, adj. Lat. curulis. Belonging to magistracy; magisterial.

We that are wisely mounted higher Than constables in curule wit. Hudibras.

And Tully's curule chair, and Milton's golden lyre.

Akensidc. Who deserves the civic wreath,

Who to fill the curule chair ? Feast from gold, rich perfumes breathe,

And all that honour gives, to share ? The brave, the brave, the patriot brave, Who arms his country's rights to save. Leftley.

CCRULE CHAIR, in Roman antiquity, a chair adorned with ivory, wherein the magis- trates of Rome had a right to sit and be car- ried. This chair was fitted in a kind of chariot, whence its name. The curules were carried to the senate-house in this chair, as were also those who triumphed, and such as went to administer justice, &,c.

CURULES, the curule magistrates, were the sediles, the praetors, censors, and consuls.

CURZOLA, an island of Dalmatia, separated from the peninsula of Sabionella by a narrow channel. It is thirty miles long and eight broad ; having abundance of wood : besides which it produces excellent wine. It contains one city, and several villages, but is thinly in- habited.

CURZOLA, a town on the east end of the above island, is the see of a bishop, and residence of the governor. It was at one time well fortified, and has a good harbour. In 1507 the Turks at- tempted to take it, but were repulsed by the women, after the men had fled.

CUSA (Nicolas de), a learned cardinal, of mean parentage, so named from Cusa, the place of his birth. ,He was made a cardinal in 1448; and being appointed governor of Rome by Pope Pius II. during his absence at Mantua, he was the chief conductor of the war against the Turks. He founded a church, and a sjood library of Greek and Latin authors, at Cusa, and left many excellent works behind him, which were collected and published in three volumes at Basil in 1565. In these he has made no scruple to detect the traditions and sophistries of the Roman church.

CUSCO, an ancient city and intendency of Peru, and the see of a bishop, and once the capital of the Peruvian empire. In the centre was a large level place, from which four grand streets branched out towards the four quarters of the world. Each province of the empire had its peculiar quarter, in which the inhabitants were obliged to reside during life, without the liberty of changing. There was also a quarter allotted to the descendants of the Incas. They might preserve their distinct customs, but were compelled to worship the sun in a sumptuous temple, the walls of which were encrusted with gold and silver, and adorned with figures and idols of the different nations subdued by the Incas. The Spaniards under Pizarro, made themselves masters of this city in 1534, and that with a display of their usual barbarity. On a hill towards the north are the ruins of a fortress built by the Incas, which had a communication, by meaus of subterraneous passages, with three forts on the walls of Cusco. These walls, of an extraordinary height, weie of stone cemented with astonished neatness. The Spaniards found the houses also built of stone, and amongst them a great number profusely ornamented with gold and silver. Cusco is at present a large city ; the houses are of stone, and covered with tiles. The cathedral is a stately stone edifice, and of elegant and noble architecture. There are nine parish churches, and several convents and hos- pitals. Cusco contains about 14,000 Indians, and 16,000 whites. The intendency contains 225,000 inhabitants, and is fertile in grain and fruit ; and the air temperate, but cold. The city is well watered by the rivers Apurimak and

Yukai. It is 380 miles E.S.E. of Lima.

CUSCUTA, in botany, dodder ; a genus of the digynia order, and tetrandria class of plants : CAL. quadriftd : COR. monopetalous : CAPS, bilo- cular ; species two, one of which is a native of

Britain, viz. C. europaea, dodder. This is a very singular plant, almost destitute of leaves, para- sitical, creeping, fixing itself to whatever is next to it. It decays at the root, and afterwards is nourished by the plant which supports it. Hops, flax, and nettles, are its common support ; but principally the common nettle. Its blossoms are white.

GUSH, the eldest son of Ham, and father of Nimrod, Seba, Havilah, Sabtah, Raamah, and Sabtecha. Gen. x. 6 — 8. We know of no other person who, in scripture, is called by this name, but there are several countries called by it.

GUSH, in ancient geography, is generally reckoned the same with Ethiopia, and is so trans- lated in the Vulgate, Septuagint, and other ver- sions, both ancient and modern : but there are various passages where this translation seems to obscure the sense, as Gen. ii. 13.

Bochart has shown very clearly that there was a country called ‘ the land of Gush,’ in Arabia Petraea, bordering upon Egypt ; and this country extended itself principally upon the eastern shore of the Red Sea, and, at its ex- tremity, to the point of this sea, inclining to- ivards Egypt and Palestine.

CU’SHION, n. s. ~\ Fr. coussin ; Dut. kussen.

CU’SHIONED, adj. >A pillow for the seat; a

CU’SHIONET, n. s.Jsoft pad placed upon a chair; a part of an electrical machine. Seated on, or supported by, cushions. A little cushion.

He bracyd hym by the myddil, and preyd hym sit

adoun, And lowly with much worshipp dressed his cotshon.

Chaucer. Cant. Tales. Call Claudius, and some other of my men ; I’ll have

them sleep on cushions in my tent.

Shahspeare. Julius Caesar. Upon these pretty cushioned did lie Ten thousand beauties. Beaumont.

But, ere they sat, officious Baucis lays Two cushion stuffed with straw, the seat to raise •, Coarse, but the best she had. Dryden's Fables*

An eastern king put a judge to death for an iniqui- tous sentence ; and ordered his hide to be stuffed into a cushion, and placed upon the tribunal, for the son to sit on. Swift.

Many, who are cushioned upon thrones, would have remained in obscurity. BoUngbrohn.

There are two kinds of electric ether, which exist either separately or in combination. That which is accumulated on the surface of smooth glass, when it is rubbed with a cushion, is here termed vitreous ether.

Darwin. The velvet cushions — for a throne more meet —

Were scarlet, from whose glowing centre grew A sun embossed in gold, whose rays of tissue, Meridian-like, were seen all light to issue.

Byron. Don Juan.

CUSHION, in engraving, is a bag of leather filled with sand, commonly about nine inches square, and three or four thick, used for support- ing the plate to be engraved.

CUSHION, in gilding, is made of leather, fas- tened to a square board, from fourteen inches square to ten, with a handle. The vacuity be- tween the leather and board is stuffed with fine tow or wool, so that the outer surface may be fiat and even. It is used for receiving the leaves

of gold from the paper, in order to its being cut into proper sizes and figures.

CUSP, n. s. Lat. cuspis. A term used to ex- press the points or horns of the moon, or other luminary.

*CU'SPATED, adj. * From Lat. cuspu. A **

CU'SPIDATED, adj.) word expressing the leaves of a flower ending in a point.

CU'STARD, n. s. Welsh cwstard. A kind of sweetmeat, made by boiling

eggs with milk and sugar till the whole thickens into a mass. It is a food much used in city feasts.

He crammed them, till their guts did ake, With cawdle, custard, and plum-cake. Hudibrat.

Now may'rs and shrieves all hushed and satiate

lay ; Yet eat, in dreams, the custard of the day. Pope.

CUSPINIAN (John), a German, born at Sweinfurt, in 1473. He was first physician to the emperor Maximilian I. and employed by him in several negociations. He wrote in Latin, 1. A History of the Roman emperors from Julius Csesar to the death of Maximilian I. Degory Wheare, in his Methodus Legends His- toriae, calls this Luculentum sane opus, and omnium lectione dignissimum. 2. A History of Austria; being a kind of continuation of the preceding. 3. A History of the origin of the Turks, and of their cruelties towards Christians. Gerard Vossius praises Cuspiman as magnum suo aevo historise lumen. He died at Vienna, in 1529.

CUSTEE, a town of Bengal, in the district of Ranjeshy, situated on the western bank of the Corroi river, a branch of the Ganges, which communicates with the Sunderbunds. It is navigable at all seasons, on which account much of the traffic from the north-west provinces passe by this town during the winter months.*

CU'STODY, n. s. Lat. custodia. Imprison- ment ; restraint of liberty ; care ; guardianship ; charge ; defence.

Under the custody and charge of the sons of M erari,. shall be the boards of the tabernacle. Numb. iii. 36.

The third hed of their wardrobe custody, In which were not rich tyres nor garments gay, The plumes of Pride, and winges of Vanity .

Spenser. Faerie Queene.

We being strangers here, how darest thou trust So great a charge from thine own custody?

Shahspeare.

There was prepared a fleet of thirty ships for the- custody of the narrow seas. Bacon.

The council remonstranced unto queen Elizabeth, the conspiracies against

her life, and therefore they advised her, that she should go less abroad weakly attended ; but the queen answered, she had rather be dead than in custody. Id.

For us enslaved, is custody severe, And stripes and arbitrary punishmeit Inflicted. Milton's Paradise Lost.

There is generally but one coin stampt upon the occasion, which is made a present to the person who is celebrated on it : by this means the whole frame i» in his own custody. A4diiti»,

CUSTOM, v. a., v. n., & n. 5.") Fr. coustume. CUSTOMABLE, adj. To custom is,

CU'STOMABLENESS, n. s. to pay duty

CU'STOMABLY, adv. at the custom-

CU'STOMARILY, adv. house ; toac-

Cu'STOMARINESS, H. S. ˆCUStOm. CuS-

CU'STOMARY, adj. torn signifies,

CU'STOMED, adj. habit; common

Cu'sroMERj n. f. way of acting;

CU'STUMARY, n. s. pra'ctice of buy-

CU'STOM-HOUSE, n. s. J ing from cer-

tain persons ; application from buyers ; tribute ; tax on goods exported or imported. In legal parlance, custom is a law or right not written, which, being established by long use, and the consent of our ancestors, has been, and is daily, practised. We cannot say, that this or that is a custom, except we can prove that it hath continued so 100 years ; yet, because that is hard to prove, it is enough for the proof of a custom, if two or more can depose that they heard their fathers say, that it was a custom all their time ; and that their fathers heard their fathers also say, that it was likewise a custom

No nat'ral exhalation in the sky, No common wind, no custumed event, But they will pluck away its nat'ral cause, And call them meteors, prodigies, and signs.

Id. King John.

I marry her! — What a customer? Pr'ythee bear some charity to my wit, do not think it so unwhole- some- Id. Othello.

All the merchants, with other merchandize,

Are safe arrived , and have sent me to know, Whether yourself will come and custom them.

Marlow.

Kingdoms have customably been carried away by right of succession, according to proximity of blood.

Huyward.

The residue of these ordinary finances be casual or uncertain, as be the escheats and forfeitures, the customs, butlerage, and imposts. Bacon.

To call God to witness truth, or a lye perhaps, or to appeal to him on every trivial occasion, in common discourse, customarily without consideration, is one of the highest indignities and affronts that can be offered him- Ray.

To a fond parent that would not have his child

*in the.r time. If it is to be proved by re- corrected for a perverse trick, but excused it, saying cord, the continuance of 100 years will serve. *" ~ Custom is either general or particular : general, that which is current through England ; particu- lar, is thatjwhich belongs to this or that county; as gavelkind to Kent, or this or that lordship, city, or town. Custom differs from prescription ;*

it was a small matter, Solon very well replied, ' Ay, but custom is a great one.' Locke.

Those commodities may be dispersed, after havin" paid the custom in England. Temple.*

We should avoid the profane and irreverent use

*for custom is common to more, and prescription of God's name' by cursing, or customary swearing : is particular to this or that man; prescription a,nd t"*e1hee.d of the neSlect of his worship, or any mav ho for a far «hnrfpp timo that, n,,Jt«m <-„. thlnS belonging to it. TiLotson.*

may be for a far shorter time than custom. Cus- tomary, customed, and customable, signify, ac- cording to established custom ; habitual ; usual.

A vice which for its guilt may justify the sharpest, and for its customariness the frequentcst, invectives,

Customer is one who goes to'a place of'sale for which can be made a&ainst

the purpose of purchasing ; one who habitually purchases from another ; in old writers, a com- mon woman ; a collector of customs ; but these

senses of the word are disused. Customary is a not y°ur votes- book, or code, of laws and customs.

And the priest's custom with the people was, that when any man offered sacrifice, the priest's servant came, while the flesh was in seething, with a flesh- hook of three teeth in his hands. 1 Sam. ii. According to the custom of the priest's office, his lot was to burn incense when he went into the temple of he Lord. Luke i.

Where archbishop and archdiacre Ygongin full out the servise A 'ter the custome and the guise And Irolie churches' ordinaunce.

Chaucer' t Dreame.

What ever he hath of any honest custome, Of her and me that holds he every whit. Wyatt.

For on a bridge he custometh to fight, Which is but narrow, but exceeding long And in the same are many trapfalls pight.

Spenser. Faerie Queene. Blood and destruction shall be so in use, That mothers shall but smile when they behold Their infants quartered by the hands of war ; All pity choaked with custom of fell deeds.

Shahspeare. Julius Ccesar. Even now I met him With customary compliment, when he, Wafting his eyes to the contrary, and falling A lip of much contempt, speeds from me.

Shakspeare.

Government of the Tongue.

You say he is assiduous in his calling, and is he not grown rich by it ? Let him have your custom, but

Addison.

Lord Strut has bespoke his liveries at Lewis Ba- boon's shop : Don't you see how that old fox steals away your customers, and turns you out of your busi- ness every day? Arbuthnot.

Some customhouse officers, birds of passage, and oppressive thrifty squires,

are the only thriving peo- ple amongst us. Swift.

It was drawn from the old Germanick or Gothick custumary ; from the feudal institutions, which must be considered as an emanation from the custumary.

Burke.

Who know'st man's frailty ; .with a favouring eye,

And melting heart, behold'st a brother's fall ; Who, unenslaved by custom's narrow tie, With manly freedom follow'st reason's call.

*Bealtie**

The volume closed, the customary rites Of the last meal commence. A Roman meal ; Such as the mistress -of the world once found Delicious, when her patriots of high note, Perhaps by moonlight, at their humble doors, And under an old oak's domestic shade, Enjoyed, spare feast! a radish and an egg.

Cowper.

For saddle-tree scarce reached had he,

His journey to begin, When, turning round his head, he saw

Three customers come in.

3 B 2

Id.

•740

CUSTOMS.

People have a cuttom cf excusing the enormities of their conduct by talking of their passions, and as if they were under the control of a blind necessity, and sinned because they could not help it. Cumberland.

But on my right hand and my left, instead Of thee and Zames, and our nutomed meeting, Wus ranged on my left hand a haughty, dark, And deadly face. — I could not recognize it, Yet I had seen it, though I knew not where

Byron. Sardanap.

CUSTOMS, in political economy, the duties, toH, tribute, or tariff, payable to the king upon merchandise exported and imported, forming a branch of the perpetual taxes. The considera- tion upon which this revenue, or the more ancient part of it, which arose only from exports, was invested in the king, were said to be two : 1. Because he gave the subject leave to depart the kingdom, and to carry his goods along with him. 2. Because the king was bound of com- mon right to maintain and keep up the Iports and havens, and to protect the merchant from pirates. Some have imagined they are called with us customs, because they were the inheri- tance of the king by immemorial usage and the common law, and not granted by any statute; but Sir Edward Coke has clearly shown, that the king's first claim to them was by grant of parliament, 3 Edw. I. And indeed this is in express words confessed by statute 25 Edw. I. c. 7, wherein the king promised to take no cus- tom from merchants, without the common assent of the realm, ' saving to us and our heirs the customs on wool, skins, and leather, formerly granted to us by the commonalty aforesaid.' These were formerly called hereditary customs of the crown ; and were due on the exportation only of the above three commodities, and none other : which were styled the staple commodities of the kingdom, because they were obliged to be brought to those ports where the king's staple was established, in order to be there first rated and then exported. In the barbarous Latin of our ancient records, they were denominated custuma, an appellation which seems to be de- rived from the French word coustume, or coutume, which signifies toll or tribute, and owes its own etymology to the word coust, which signifies price, charge, or as we have adopted it in Eng- lish, cost; not consuetudines, which is the language of our law whenever it means merely usages. The duties on wool, sheep-skins, or wool-fells, and leather, exported, were called custuma, antiqua sive magna : and were payable by every merchant, as well native as stranger ; with this difference, that merchant strangers paid an additional toll, viz. half as much again as was paid by natives. The custuma parva et nova were an impost of three-pence in the pound due from merchant strangers only, for all com- modities as well imported as exported; which was usually called ˆthe alien's duty, and was first granted in 31st Edw. I. But these ancient hereditary customs, especially those on wool and wool-fells, were of little account, when the nation became sensible of the advantages of a home

manufacture, and prohibited the exportation of wool by statute 11 Edw. III. c. 1. Other cus- toms payable upon exports and imports were distinguished into subsidies, tonnage, poundage, and other imposts. Subsidies were such as were imposed by parliament upon any of the staple commodities before mentioned, over and above the custuma antiqua et magna ; tonnage was a duty upon all wines imported, over and above the prisage and butlerage aforesaid : poundage was a duty imposed ad

valorem, at the rate of twelve-pence in the pound, on all other merchandise whatsoever : and the other imposts were such as were occasionally laid on by parliament, as circumstances and times required. These distinctions are now in a manner forgotten, ex- cept by the officers immediately concerned in this department : their produce being in effect all blended together, under the one denomina- tion of the customs. By these we understand, at present, a duty or subsidy paid by the mer- chant at the quay upon all imported as well as exported commodities, by authority of parlia- ment ; unless where, for particular national rea- sons, certain rewasds, bounties, or drawbacks, are allowed for particular exports or imports. But few commodities pay a duty upon exporta- tion : where a duty is not specified in the tables, and the exportation is not prohibited, all articles may be exported without payment of duty, pro- vided they are regularly entered and shipped ; but on failure thereof, they are subject to a duty ad valorem. To prevent frauds in the represen- tation of the value, a simple and equitable re- gulation is made, viz. the proprietor shall him- self declare the value; and if this should appear not to be a fair and true estimate, the goods may be seized by the proper officer, and four of the com- missioners of the customs jnay direct that the owner shall be paid the price, which he himself fixed upon them, with an advance of £10 per cent, besides all the duty which he may have paid. They may then order the goods to be publicly sold, and if they raise any sum beyond what was paid to the owner, and the subsequent expenses, one-half of the overplus shall be paid to the officer who made the seizure, and the other half to the public revenue.

By 27 Geo. III.c. 13, called the consolidation act, all the former statutes imposing duties of customs and excise were repealed with regard to the quantum of the duty ; and the two former books of rates were declared to be of no avail for the future ; but all the former duties were con- solidated, and were ordered to be paid according to a new book of rates annexed to that statute. The like plan has been followed in subsequent acts, as 43 Geo. III. c. 68, 49 Geo. III. c. 98, and particularly 6 Geo. IV. c. Ill, which contains the duties now in force. These are so important to the merchant and general trader, and bear so directly on the price of the numerous commodities specified, both at home and abroad, that we have conceived a complete table of the imports, exports, and coast imports of this description, would be acceptable to a large majority of our readers.

CUSTOMS.

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CUSTOM, denotes the manners, usages, cere- monies, and ways of living of a people or country, that have by long habit attained in some instances the

force of laws. We shall here submit those cus- toms which are considered popular though not necessary, but from which the independence of the inhabitants, their happiness, even sometimes their wealth and antiquity, may be inferred. — The antiquity of a particular custom argues the early civilization of the country where it is found, and the preservation of ancient habits proves the uninterrupted tranquillity and independence that the people have enjoyed. The following detailed account of popular customs, ancient and modern, is chiefly extracted from " Hone's Every Day Book," a work of extraordinary research. The arrangement commences with the first day of January, and guided by the memento of each saint's day in the calendar, touches upon all the ancient religious observances, as well as cere- monies, sports, and pastimes of our ancestors : — JANUARY 1.

Day of the Circumcision. — This festival stands in the calendar of the church of England, as well as in that of the Roman catholic church. It is said to have been instituted about 487 ; it first appeared in the reformed English liturgy in 1550. The late Rev. John Brand, in his " Po- pular Antiquities" edited by Mr. Ellis, observes, from Bishop Stillingfleet, that, among the Saxons of the North, the festival of the new year was observed with more than ordinary jollity and feasting, and by sending new year's gifts to one another. Mr. Fosbroke notices the continua- tion of the Roman practice during the middle ages ; and that our kings, and the nobility espe- cially, interchanged presents. Mr. Ellis quotes Matthew Paris, who appears to show that Henry III. extorted new year's gifts; and he cites from a MS. of the public revenue, anno 5, Edward VI. an entry of " rewards given on new year's day to the king's officers and servants in ordi- nary £155 5., and to their servants that present the king's majestic with new year's gifts." An orange stuck with cloves seems, by reference to Mr. Fosbroke, and our early authors, to have been a popular new year's gift. Mr. Ellis suggests that the use of this present may be ascertained from a remark by old Lupton, that the flavour of wine is improved, and the wine itself preserved from mouldiness, by an orange or lemon stuck with cloves being hung within the vessel so as not to touch the liquor.*

Dr. Drake says that, though Elizabeth made returns to the new year's gifts in plate and other articles, yet she took sufficient care that the ba- lance should be in her own favour.

No. 4982, in the Catalogue for 1824, of Mr. Rodd of Great Newport-street, was a roll of vel- lum, ten feet long, containing the new year's gifts from king James I. to the persons whose names are therein mentioned on the 1st of Janu- ary 1605, with the new year's gifts that his ma- jesty received the same day ; the roll is signed by James himself and certain officers of his household.

Pins were acceptable new year's gifts to the ladies, instead of the wooden skewers which they used till the end of the fifteenth century. Some-

times they received a composition in money : and hence allowances for their separate use is denominated " pin-money."

Gloves were customary new year's gifts. They were more expensive than in our times, and oc- casionally a money present was tendered instead : this was called " glove-money." Sir Thomas More, as lord chancellor, decreed in favour of a Mrs. Croaker against the lord Arundel. On the following new year's day, in token of her grati- tude, she presented Sir Thomas with a pair of gloves, containing forty angels. " It would be against good manners," said the chancellor, "to forsake a gentlewoman's new year's gift, and I accept the gloves ; their lining you will be pleased otherwise to bestow."

" New year's gifts," says Dr. Drake, " were given and received, with the mutual expression of good wishes, and particularly that of a happy new year. The compliment was sometimes paid at each other's doors in the form of a song ; but more generally, especially in the north of Eng- land and in Scotland, the house was entered very early in the morning, by some young men and maidens selected for the purpose, who pre- sented the spiced bowl, and hailed you with the gratulations of the season." To this my be added, that it was formerly the custom in Scot- land to send new year's gifts on new year's eve ; and on new year's day to wish each other a happy new year, and ask for a new year's gift. There is a citation in Brand, from the " Statistical Ac- count of Scotland," concerning new year's gifts to servant maids by their masters ; and it men- tions that " there is a large stone, about nine or ten feet high, and four broad, placed upright on a plain, in the (Orkney) isle of North Ronald- shay ; but no tradition is preserved concerning it, whether erected in memory of any signal event, or for the purpose of administering justice, or for religious worship. The writer of this (the parish priest) has seen fifty of the inhabitants assembled there, on the first day of the year, dancing by moonlight, with no other music than their own singing."

The first Monday after new year's day is called Handsell Monday in some parts of Scotland, and is observed by merry-making. In Sir J. Sin- clair's " Statistical Account," it is related of one William Hunter, a collier, that he was cured in the year 1758 of an inveterate rheumatism or gout, by drinking freely of new ale, full of barm or yeast. " The poor man had been confined to his bed for a year and a half, having almost en- tirely lost the use of his limbs. On the evening of Handsell Monday, as it is called, some of his neighbours came to make merry with him. Though he could not rise, yet he always took his share of the ale, as it passed round the company;

and, in the end, became much intoxicated. The conse- quence was, that he had the use of his limbs the next morning, and was able to walk about. He lived more than twenty years after this, and never had the smallest return of his old complaint." This is a fact worth remembering, as connected with chronical complaints.

St. Peter's day (January 6th) is a festival slill

observed. St Peter was a disciple of Gregory the Great, the first abbot of St. Augustine's mo- nastery at Canterbury, and drowned in 608 while proceeding on a voyage to France. Ac- cording to Cressy, the inhabitants buried his body without knowing any thing about him, till " a heavenly light appeared every night over his sepulture," when they held an inquest, and a Count Fumert buried him in the church of Bou- logne. From a quotation in Patrick, it appears that a weasel who gnawed his robe was found dead upon it for his sauciness.

The Rev. Thomas Dudley Fosbroke, M. A. F. A. S., &c. whose " Encyclopaedia of Antiqui- ties" has been already cited from, author of " British Monachism, or Manners and Customs of the Monks and Nuns of England," 4to. 1817 — a most erudite work, — gives an account from Du Cange, of the Feast of the Star, or Office of the Three Kings, a catholic service performed on this day. " Three priests, clothed as kings, with their servants carrying offerings, met from dif- ferent directions of the church before the altar. The middle one, who came from the east, pointed with his staff to a star : a dialogue then ensued ; and after kissing each other, they began to sing, ' Let us go and inquire ;' after which the pre- centor began a responsory, ' Let the Magi come.' A procession then commenced, and as soon as it began to enter the nave, a crown like a star, hanging before the cross was lighted up, and pointed out to the Magi, with ' Behold the star in the east.' This being concluded, two priests, standing at each side of the altar, answered, meekly, ' We are those whom you seek,' and drawing a curtain showed them a child, whom, falling down, they worshipped. Then the ser- vants made the offerings of gold, frankincense, and myrrh, which were divided among the priests. The Magi in the mean while continued praying till they dropped asleep ; when a boy clothed in an alb, like an angel, addressed them with, ' All things which the prophets said are fulfilled.' The festival concluded with chanting services, &c."

Tn London, with every pastrycook in the city, and at the west end of the town, it is " high change" on Twelfth-day. From the taking down of the

shutters in the morning, he, and his men, with additional assistants, male and female, are fully occupied by attending to the dressing out of the window, executing orders of the day be- fore, receiving fresh ones, or supplying the wants of chance customers. Before dusk the import- ant arrangement of the window is completed. Then the gas is turned on, with supernumerary argand-lamps and manifold wax-lights, to illu- minate countless cakes of all prices and dimen- sions, that stand in rows and piles ou the count- ers and sideboards, and in the windows. The richest in flavour and heaviest in weight and price are placed on large and massy salvers; one, enormously superior to the rest in size, is the chief object of curiosity; and all are deco- rated with all imaginable images of things ani- mate and inanimate. Stars, castles, kings, cot- tages, dragons, trees, fish, palaces, cats, dogs, churches, lions, milkmaids, knights, serpents, and innumerable other forms in snow-white con-

fectionary, painted with variegated colours, glit- ter by " excess of light" from mirrors against the walls festooned with artificial " wonders of Flora." This " paradise of dainty devices," is crowded by successive and successful desirers of the seasonable delicacies, while alternate tap- ping of hammers and peals of laughter, from the throng surrounding the house, excite smiles from the inmates.

To explain the practice. On Twelfth-night in London, boys assemble round the inviting shops of the pastrycooks, and dexterously nail the coat- tails of spectators, who venture near enough, to the bottoms of the window frames ; or pin them together strongly by their clothes. Sometimes eight or ten persons find themselves thus con- nected. The dexterity and force of the nail driving is so quick and sure, that a single blow seldom fails of doing the business effectually. Withdrawal of the nail without a proper instru- ment is out of the question ; and, consequently, the person nailed must either leave part of his coat, as a cognizance of his attachment, or quit the spot with a hole in it. At every nailing and pinning shouts of laughter arise from the perpetrators and the spectatois. Yet it often happens to one who turns and smiles at the duress of another, that he also finds him- self nailed. Efforts at extrication increase mirth, nor is the presence of a constable, who is usu- ally employed to attend and preserve free " in- gress, egress, and regress," sufficiently awful to deter the offenders.

In " Times Telescope," an useful and enter- taining annual volume, there is a short reference to the usage in Cumberland, and other northern parts of England. It seems that on Twelfth- night, which finishes their Christmas holidays, the rustics meet in a large room. They begin dancing at seven o'clock, and finish at twelve, when they sit down to lobscouse, and ponsondie; the former is made of beef, potatoes, and onions fried together ; and in ponsondie we recognise the wassail or waes-hael of ale, boiled with

sugar and nutmeg, into which are put roasted apples, — the anciently admired lambs'wool. The feast is paid for by subscription : two women are chosen, who with two wooden bowls placed one within the other, so as to leave an opening and a space between them, go round to the female part of the society in succession, and what one puts into the uppermost bowl the attendant col lectress slips into the bowl beneath it. All are expected to contribute something, but not more than a shilling, and they are best esteemed who give most. The men choose two from them- selves, and follow the same custom, except that, as the gentlemen are not supposed to be altoge- ther so fair in their dealings as the ladies, one of the collectors is furnished with pen, ink, and paper, to set down the subscriptions as soon as received.

On Twelfth-day the people of Germany, and the students of its academies, chose a king with great ceremony and sumptuous feastings.

In Fiance, the Twelfth-cake is plain, with a bean ; the drawer of the slice containing the bean is king or queen. All drink to her or his ma- jesty, who reigns and receives homage from all

during the evening. There is no other drawing, and consequently the sovereign is the only dis- tinguished character. In Normandy they place a child under the table which is so covered with a cloth that he cannot see, and when the cake is divided, one of the company taking up the first piece cries out, " Fabe Domini pour qui?" The child answers, " Pour 16 bon Dieu;" and in this manner the pieces are allotted to the company. If the bean be found in the piece for the " bon Dieu," the king is chosen by drawing long or short straws. Whoever gets the bean chooses the king or queen, according as it happens to be a man or a woman. According to Brand, under the old order of things, the Epiphany was kept at the French court by one of the courtiers being chosen king, and the other nobles attended an entertainment on the occasion; but, in 1792, during the revolution, La Fete de Rois was abo- lished.

The first Monday after Twelfth-day is called Plough Monday, and appears to have received that name because it was the first day after Christmas that husbandmen resumed the plough. In some parts of the country, and especially in the north, they drew the plough in procession to the doors of the villages and towns-people. Long ropes are attached to it, and thirty or forty men, stripped to their clean white shirts, but pro- tected from the weather by waistcoats beneath, drag it along. Their arms and shoulders are

decorated with gay-coloured ribbons, tied in large knots and bows, and their hats are smart- ened in the. same way. They are usually ac- companied by an old woman, or a boy dressed up to represent one; she is gaily bedizened, and called the Bessy. Sometimes the sport is as- sisted by a humourous countryman to represent a fool. He is covered with ribbons, and attired in skins with a depending tail, and carries a box to collect money from the spectators. They are attended by music, and Morris-dancers when they can be got ; but there is always a sportive dance with a few lasses in all their finery, and a superabundance of ribbons. When this merri- ment is well managed, it is very pleasing. The money collected is spent at night in conviviality. It must not be supposed, however, that in these times, the twelve days of Christmas are devoted to pastime, although the custom remains. Form- erly, indeed, little was done in the field at this season, and according to " Tusser Redivivus," during the Christmas holidays, gentlemen feasted the farmers, and every farmer feasted his ser- vants and taskmen. Then Plough Monday re- minded them of their business, and on the morn- ing of that day, the men and maids strove who should show their readiness to commence the labours of the year, by rising the earliest. Jf the ploughman could get his whip, his plough- staff, hatchet, or any field implement, by the fire- side, before the maid could get her kettle on, she lost her Shrove-tide cock to the men. Thus did our forefathers strive to allure youth to their duty, and provided them innocent mirth as •well as labour. On Plough Monday night the farmer gave them a good supper and strong ale. In some places, where the ploughmen went to work on Plough Monday, if, on his return at

night, he came witli his whip to the kitchen- hatch, and cried " Cock in pot," before the maid could cry " Cock on the dunghill," he gained a cock for Shrove Tuesday.

St. Paul's Day. — On this day prognostications of the months were drawn for the whole year. If fair and clear, there was to be plenty ; if cloudy or misty, much cattle would die ; if rain or snow fell, then it presaged a dearth ; and if windy, there would be wars :

If Saint Paul's Day be fair and clear, It does betide a happy year ; But if it chance to snow or rain, Then will be dear all kinds of grain : If clouds or mists do dark the skie, Great store of birds and beasts shall die ; And if the winds do fly aloft, Then wars shall vex the kingdome oft. •

Willsford's Nature's Secrets. These prognostications are Englished from an ancient calendar : they have likewise been trans- lated by Gay, who enjoins,

Let no such vulgar tales debase thy mind, Nor Paul nor S within rule the

clouds and wind. The latter lines are allusive to the popular su- perstitions, regarding these days, which were before remarked by Bishop Hall, who observes of a person under such influences, that " St. Paule's day and St. Swithine's, with the twelve, are his oracles, which he dares believe against the almanacke." It will be recollected that " the twelve" are twelve days of Christmastide, believed by the ignorant to denote the weather throughout the year.

Concerning this day, Bourne says, " How it came to have this particular knack of foretelling the good or ill fortune of the following year is no easy matter to find out. The monks, who were undoubtedly the first who made this won- derful observation, have taken care it should be handed down to posterity ; but why, or for what reason, they have taken care to conceal. St. Paul did indeed labour more abundantly than all the apostles ; but never that I heard in the science of astrology : and why this day should therefore be a standing almanac to the world, rather than the day of any other saint, will be pretty hard to find out." In an ancient Romish calendar, much used by Brand, the vigil of St. Paul is called " Dies JEgyptiacus ;" and he con- fesses his ignorance of any reason for calling it " an Egyptian-day." Mr. Fosbroke explains, from a passage in Ducange, that it was so called because there were two unlucky days in every month, and St. Paul's vigil was one of the two in January.

Dr. Forster notes, that the festival of the con- version of St. Paul has always been reckoned ominous of the future weather of the year, in various countries remote from each other.

According to Schenkius, cited by Brand, it was a custom in many parts of Germany, to drag the images of St. Paul and St. Urban to the river, if there was foul weather on their festival. St. Paul's day being the first festival of an apostle in the year, it is an opportunity for allud- ing to the old, ancient, English custom, with sponsors, or visiters at christenings, of presenting

spoons, called apostle-spoons, because the figures of the twelve apostles were chased, or carved on the tops of the handles. Brand cites several authors to testify of the practice. Persons who could afford it gave the set of twelve ; others a smaller number, and a poor person offered the gift of one, with the figure of the saint after whom the child was named, or to whom the child was dedicated, or who was the patron saint of the good-natured donor.

The 30th day of January is observed, because on this day, in the year 1649, king Charles I. was beheaded. In the Common Prayer Book of the Church of England, it is called " The Day of the Martyrdom of the Blessed King Charles I. ;" and there is " A Form of Prayer, with Fasting, to be used yearly " upon its re- currence.

The sheet, which received the head of Charles I. after its decapitation, is carefully preserved along with the communion plate in the church of Ashburnham, in this county ; the blood, with which it has been almost entirely covered, now appears nearly black. The watch of the unfor- tunate monarch is also deposited with the linen, the movements of which are still perfect. These relics came into the possession of lord Ash- burnham immediately after the death of the king.

CANDLEMAS DAY. — The 2d of February is a festival which catholics call the Purification of the Virgin ; they observe it with great pomp. It stands as a holiday in the calendar of the church of England. Naogeorgus thus introduces the day; or rather Barnaby Googe, in his translation of that author's " Popish Kingdom :"

" Then comes the Day wherein the Virgin

offred Christ unto The Father chief e, as Moyses law

commaunded hir to do. Then numbers great of Tapers large,

both men and women beare To Church, being halowed there with pomp,

and dreadful words to heare. , This done, eche man his Candell lightes

where chiefest seemeth hee, Whose Taper greatest may be scene'

and fortunate to bee ; Whose Candell burneth cleare and bright,

a wondrous force and might Doth in these Candells lie, which if

at any time they light, They sure beleve that neyther storme

or tempest dare abide, Nor thunder in the skies be heard,

nor any Devil's spide, Nor fearefull sprites that walke by night,

nor hurts of frost or haile." —

According to " The Posy of Prayers, or the Key of Heaven," it is called Candlemas, because before mass is said this day, the church blesses her candles for the whole year, and makes a pro- cession with hallowed or

blessed candles in the hands of the faithful.

From catholic service-books, quoted in " Pa- pano Papismus," some particulars are collected concerning the blessing of the candles. Being

at the altar, the priest says over them several prayers, one of which commences thus : " O Lord Jesu Christ, who enlightenest every one that cometh into the world, pour out thy bene- diction upon these Candles, and sanctifie them with the liiˆht of thy grace," &c. Another begins : " Holy Lord, Father Almighty, Ever- lasting God, who hast created all things of nothing, and by the labour of bees caused this liquor to come to the perfection of a wax can- dle ; we humbly beseech thee, that by the invo- cation of thy most holy name, and by the inter- cession of the blessed virgin, ever a virgin, whose festivals are this day devoutly celebrated, and by the prayers of all thy saints, thou wouldst vouchsafe to bless and sanctifie these candles," &c. Then the priest sprinkles the candles thrice with holy water, saying " Sprinkle me with," &c. and perfumes them thrice with incense. One of the consecratory prayers begins : " O Lord Jesu Christ, bless this creature of wax to us thy suppliants; and infuse into it, by the virtue of the holy cross, thy heavenly benedic- tion ; that, in whatsoever places it shall be lighted, or put, the devil may depart, and tremble, and rly away, with all his ministers, from those habi- tations, and not presume any more to disturb them," &c. There is likewise this benediction : " I bless thee, O wax, in the name of the Holy Trinity, that thou may'st be in every place the ejection of Satan, and subversion of all his com- panions," &c. During the saying of these prayers, various bowings and crossings are interjected ; and when the ceremonies of con- secration are over, the chiefest priest goes to the altar, and he that officiates receives a candle from him; afterwards, that priest, standing before the altar towards the people, distributes the candles, first to the priest from whom he received a candle, then to others in order, all kneeling (except bishops) and kissing the candle, and also kissing the hand of the priest who delivers it. When he begins to distribute the candles, they sing, " Alight to lighten the gen- tiles, and the glory of thy people Israel." After the candles are distributed, a solemn procession is made ; in which one carries a censer, another a crucifix, and the rest burning candles in their hands.

A Dorsetshire gentleman thus describes a custom which he witnessed at Lyme Regis in his juvenile days ; to what extent it prevailed he is unable to say, his knowledge being limited to the domestic circle wherein he was included. The wood-ashes of the family being sold through- out the year as they were made, the person who purchased them annually sent a present on Candlemas-day of a large candle. When night came, this candle was lighted, and, assisted by its illumination, the inmates regaled themselves with cheering draughts of ale, and sippings of punch, or some other

animating beverage, until the candle had burnt out, The coming of the Candlemas candle was looked forward to by the young ones as an event of some consequence ; for, of usage, they had a sort of right to sit up that night, and partake of the refreshment, till all retired to rest, the signal for which was the self-extinction of the Candlemas candle.

Bishop Blase's festival is celebrated at Brad- ford, on the 3d of February in each year. The septennial festival, held in honour of bishop Blase, and of the invention of wool-combing attributed to that personage, is celebrated with great gaiety and rejoicing.

There is no place in the kingdom where the bishop is so splendidly commemorated as at Bradford. In 1811, 1818, and at previous sep- tennial periods, the occasion was celebrated with great pomp and festivity, each celebration sur- passing the preceding ones in number and bril- liance. The celebration of 1825 eclipsed all hitherto seen, and it is most gratifying to know, that this is owing to the high prosperity of the worsted and woollen manufactures, which are constantly adding fresh streets and suburban villages to the town.

The different trades began to assemble at eight o'clock in the morning, but it was near ten o'clock before they all were arranged in marching order in Westgate. The arrange- ments were actively superintended by Matthew Thomson, Esq. The morning was brilliantly beautiful. As early as seven o'clock, strangers poured into Bradford from the surrounding towns and villages, in such numbers as to line the roads in every direction ; and almost all the vehicles within twenty miles were in requisition. Bradford was never before known to be so crowded with strangers. Many thousands of individuals must have come to witness the scene. About ten o'clock the procession was drawn up in the following order: —

Herald bearing a flag. Woolstaplers on horseback, each horse caparisoned

•with a fleece.

Worsted Spinners and Manufacturers on

horseback, in white stuff waistcoats, with

each a sliver over the shoulder, and

a white stuff sash ; the horses'

necks covered •with nets

made of thick yarn.

Merchants on horseback, with coloured sashes.

Three Guards. Masters' Colours. Three Guards.

Apprentices and Masters Sons, on horseback,*

•with ornamented caps, scarlet stuff

coats, white stuff waistcoats,

and blue pantaloons. Bradford and Keighley Bands.

Mace-bearer, on foot.

Six Guards. King. Queen. Six Guards.

Guards. Jason. Princess Medea. Guards.

Bishop's Chaplain.

BISHOP BLASE. hepherd and Shepherdess.

Shepherd Swains.

Woolsorters, on horseback, with ornamented cans, and various coloured sliven.

Combmakers. Charcoal Burners. Combers' Colours.

Band. Woolcombf rs, with wool wigs, &c.

Band.

Dyers, with red cockades, blue aprons, and crossed slivers of red and blue.

The following were the numbers of the differ- ent bodies, as nearly as could be estimated: — 24 woolstaplers, 38 spinners and manufacturers, 6 merchants, 56 apprentices and masters' sons,

160 wool-sorters, 30 combmakers, 470 wool combers, and 40 dyers. The king, on this occasion, was an old man, named William Clough, of Darlington, who had filled the regal station at four previous celebrations. Jason (the celebrated legend of the Golden Fleece of Colchis, is intarwoven with the commemoration of the bishop) was personated by John Smith ;

and the fair Medea, to whom he was indebted for his spoils, rode by his side. — Bishop Blase was a personage of very becoming gravity, also named John Smith; and he had enjoyed his pontificate several previous commemorations; his chaplain was James Beethom. The orna- ments of the spinners and manufacturers had a neat and even elegant appearance, from the delicate and glossy whiteness of the finely combed wool which they wore. The apprentice's and masters' sons, however, formed the most showy part of the procession, their caps bein,, richly adorned with ostrich feathers, flowers, and knots of various coloured yarn, and their stuff garments being of the gayest colours ; some of these dresses, we understand, were very costly, from the profusion of their decorations. The shepherd, shepherdess, and swains, were attired in light green. The wool-sorters, from their number and the height of their plumes of fea- thers, which were, for the most part, of different colours, and formed in the shape of Jleur-de-lis, had a dashing appearance. The combmakers carried before them the instruments here so much celebrated, raised on standards, together with golden fleeces, rams' heads with gilded horns, and other emblems. The combers looked both neat and comfortable in their flowing wigs of well-combed wool ; and the. garb of the dyers was quite professional. Several well-painted flags were displayed, one of which represented on one side the venerable Bishop in full robes, and on the other a shepherd and shepherdess under a tree. Another had a painting o Medea giving up the golden fleece to Jason : a third had a portrait of the king; and a fourth ap- peared to belong to some association in the trade. The whole procession was from half a mile to a mile in length.*

When the procession was ready to move, Richard Fawcett, Esq., who was on horseback at the head. of the spinners, pronounced, un- covered, and with great animation, the following lines, which it had long been customary to repeat on these occasions, and which, if they have not much poetical elegance, have the merit of expressing true sentiments in simple lan- guage:

Hail to the day, whose kind auspicious rays Deign'd first to smile on famous bishop Blase ! To the great author of our combing trade, This day's devoted, and due honour's paid ; To him whose fame thro Britain's isle resounds, To him whose goodness to the poor abounds ; Long shall his name in British annals shine, And grateful ages offer at his shrine ! By this our trade are thousands daily fed, By it supplied -with means to earn their bread. In various forms our trade its work imparts, In different methods, and by different arts. Preserves from starving, indigents distress'd, As combers, spinners, weavers, and the rest.*

We boast no gems, or costly garments vain, Borrow'd from India, or the coast of Spain ; Our native soil with wool our trade supplies, While foreign countries envy us the prize. Ho foreign broil our common good annoys, Our country's product all our art employs ; Our fleecy flocks abound in every vale, Our Meeting lambs proclaim the joyful tale. So let not Spain with us attempt to vie, Nor India's wealth pretend to soar so high ; Nor Jason pride him in his Colchian spoil, By hardships gain'd, and enterprising toil, Since Briton's all with ease attain the prize, And erery hill resounds with golden cries. To celebrate our founder's great renown Our shepherd and our shepherdess we crown ; For England's commerce, and for George's sway, Each loyal subject give a loud huzza! HCX/A !

These lines are afterwards several times re- peated in the principal streets and roads through which the cavalcade passed. About five o'clock they dispersed.

St.Valentine's, so celebrated amongst the youth of England, falls on the 14th day of February. Mr. Douce, whose atlaintments include more erudition concerning the origin and progress of English customs than any other antiquarian possesses, must be referred to upon this occasion. He observes, in his " Illustrations of Shak- speare," concerning St. Valentine's day, that " it was the practice in ancient Rome, during a great part of the month of February, to celebrate the Lupercalia, which were feasts in honour of Pan and Juno, whence the latter deity was named Februata, Februalis, and Februlla. On this occasion, amidst a variety of ceremonies, the names of young women were put in a box, from which they were drawn by the men as chance directed. The pastors of the early Christian church, who by every possible means endeavoured to eradicate the vestiges of pagan superstitions, and chiefly by some commutations of their forms, substituted, in the present in- stance, the names of particular saints instead of those of the women ; and, as the festival of the Lupercalia had commenced about the middle of February, they appear to have chosen St. Valen- tine's day for celebrating the new feast, because it occurred nearly at the same time. This is, in part, the opinion of a learned and rational com- piler of the ' Lives of the Saints,' the Rev. Alban Butler. It should seem, however, that it was utterly impossible to extirpate altogether any ceremony to which the common people had been much accustomed: a fact which it were easy to prove in tracing the origin of various other popular superstitions. And, accordingly, the outline of the ancient ceremonies was pre- served, but modified by some adaptation to the Christian system. It is reasonable to suppose that the above practice of choosing mates would gradually become reciprocal in the sexes; and that all persons so chosen would be called Valentines, from the day on which the ceremony took place."

Leaving intermediary facts to the curious inquirer, we come immediately to a few circum- stances and sayings from grave authors and gay

poets respecting this festival, as it is observed in our own country. It is recorded as a rural tra- dition, that on St. Valentine's day each bird of the air chooses its mate ; and hence it is pre- sumed, that our homely ancestors, in their lusty youth, adopted a practice which we still find peculiar to a season when nature bursts its im- prisonments for the coming pleasures of the cheerful spring. Lydgate, the monk of Bury, who died in 1440, and is described by Warton to have been " not only the poet of his monas- tery, but of the world in general," has a poem in praise of queene Catherine, consort to Henry V., wherein he says :

Seynte Valentine. Of customc yeere by yeere Men have an usauncc, in this regioun,

To loke and serche Cupides kalcndere,

And chose theyr choyse, by grete affeccioun j' Such as ben move with Cupides mocioun,

Takying theyre choyse as theyr sort doth falle .

But I love oon, whiche excellith alle.

Sylvanus Urban, in 1779, was informed by Kitty Curious, that on St. Valentine's day in that year, at a little obscure village in Kent, she found an odd kind of sport. The girls from five or six to eighteen years old were assembled in a crowd, burning an uncouth effigy which they called a "holly boy," and which they had stolen from the boys ; while in another part of the vil- lage the boys were burning what they called an " iv}' girV which they had stolen from the girls. The ceremony of each burning was accompanied by acclamations, huzzas, and other noise. Kitty inquired the meaning of this from the oldest people in the place, but she could learn no more than that it had always been a sport at that season.

A correspondent communicates to the " Every- Day Book" a singular custom, which prevailed many years since in the west of England. Three single young men went out together before daylight on St. Valentine's day, with a clapnet to catch an old owl and two sparrows in a neigh- bouring bam. If they were successful, and could bring the birds to the inn without injury before the females of the house had risen, they were rewarded by the hostess with three pots of purl in honour of St. Valentine, and enjoyed the privilege of demanding at any other house in the neighbourhood a similar boon. This was done, says our correspondent, as an emblem, that the owl being the bird of wisdom, could influence the feathered race to enter the net

of love as mates on that day, whereon both single lads and maidens should be reminded that happiness could alone be secured by an early union.

On this ancient festival, it was formerly the custom for men to make presents to the women. In Scotland these valentine gifts were reciprocal, as indeed they are still in some parts.

On Shrove Tuesday, an antiquarian observes, at Hoddesdon in Hertfordshire, the old curfew- bell, which was anciently rung in that town for the extinction and relighting of " all fire and candle light" still exists, and has from time im- memorial been regularly rang on the morning of Shrove Tuesday at four o'clock, after which hour the inhabitants are at liberty to make and eat

pancakes, until the bell rings again at eight" o'clock at night. He says, that this custom is observed so closely, that after that hour not a pancake remains in the town.

That the curfew-bell came in with William the Conqueror is a common, but erroneous sup- position. It is true, that by one of his laws he ordered the people to put out their fires and lights, and go to bed, at the eight-o'clock cur- few-bell; but Henry says, in his " History of Great Britain," that there is sufficient evidence of the curfew having prevailed in different parts of Europe at that period, as a precaution against fires, which were frequent and fatal, when so many houses were built of wood. It is related, too, in Peshall's " History of Oxford," that Alfred the Great ordered the inhabitants of that city to cover their fires on the ringing of the bell at Carfax every night at eight o'clock ; " which custom is observed to this day, and the bell as constantly rings at eight as Great Tom tolls at nine." Wherever the curfew is now rung in England, it is usually at four in the morning, and eight in the evening, as at Hoddesd&n on Shrove Tuesday.

Another writer, who visited Kingston-upon- Thames orf"the day called Shrove Tuesday, says : I got upon the Hampton-court coach to go there. We had not gone above four miles, when the coachman exclaimed to one of the passengers, " It's Foot-ball day;" not understanding the term, I questioned him what he meant by it ; his answer was, that I would see what he meant where I was going. — Upon entering Teddington, I was not a little amused to see all the inhabi- tants securing the glass of all their front win- dows from the ground to the roof, some by placing hurdles before them, and some by hailing laths across the frames. At Twicken-

ham, Bushy, and Hampton-wick, they were all engaged in the same way : having to stop a few hours at Hampton-wick and Kingston, I had an opportunity of seeing the whole of the custom, which is, to carry a foot-ball from door to door and beg money : at about twelve o'clock the ball is turned loose, and those who can, kick it. In the town of Kingston, all the shops are purposely kept shut upon that day ; there were several balls in the town, and of course several parties. I observed some persons of respectability follow- ing the ball : the game lasts about four hours, when the parties retire to the public-houses, and spend the money they before collected in refreshments.

Pancake Day is another name for Shrove Tuesday, from the custom of eating pancakes on this day, still generally observed. A writer in the " Gentlemen's Magazine, 1790," says, that " Shrive is an old Saxon word, of which shrove is a corruption, and signifies confession. Hence Shrove Tuesday means Confession Tues- day, on which day all the people in every parish throughout the kingdom, during the Romish times, were obliged to confess their sins, one by one, to their own parish priests, in their own parish churches; and that this might be done the more regularly, the great bell in every parish was rung at ten o'clock, or perhaps sooner, that it might be heard by all. And as the Romish religion has given way to the Protestant, yet the

custom of ringing the great bell in our ancient parish churches, at least in some of them, still remains, and obtains, in and about London, the name of ' Pancake-bell:' the usage of dining on pancakes or fritters, and such like provision, still continues."

Threshing the Hen is a custom almost ob- solete, yet it certainly is practised, even now, in at least one obscure part of the kingdom. A reasonable conjecture concerning its origin is, that the fowl was a delicacy to the labourer, and therefore given to him on this festive day, for sport and food.

So directs Tusser in his " Five Hundred Points of Good Husbandry, 1620," 4to. On this his annotator, " Tusser Redivivus, 1710," (8vo. June, p. 15,) annexes an account of the custom. " The hen is hung at a fellow's back, who has also some horse bells about him ; the rest of the fellows are blinded, and have boughs in their hands, with which they chase this fellow and his hen about some large court or small en- closure. The fellow with his hen and bells shifting as well as he can, they follow the sound, and sometimes hit him and his hen, ether times, if he can get behind one of them, they thresh one another well favour'dly ; but the jest is, the maids are to blind the fellows, which they do with their aprons, and the cunning baggages will endear their sweethearts with a peeping hole, whilst the

others look out as sharp to hinder it After this the hen is boiled with bacon, and store of pancakes and fritters are made."

The brutal practice of throwing at cocks on Shrove Tuesday is still conspicuous in several parts of the kingdom. Brand affirms that it was retained in many schools in Scotland within the last century, and he conjectures " perhaps it is still in use :" a little inquiry on his part would have discovered it in English schools. He pro- ceeds to observe, that the Scotch schoolmasters " were said to have presided at the battle, and claimed the run-away cocks, called fugees, as their perquisites." To show the ancient legiti- macy of the usage, he instances a petition in 1355, from the scholars of the school of Ramera to their schoolmaster, for a cock he owed them upon Shrove Tuesday, to throw sticks at, ac- cording to the usual custom for their sport and entertainment. No decently circumstanced per- son, however rugged his disposition from ne- glect in his childhood, will in our times permit one of his sons to take part in the sport. This is a natural consequence of the influence which persons in the higher ranks of life can benefi- cially exercise. Country gentlemen threw at the poor cock formerly : there is not a country gentleman now who would not discourage the shocking usage.

A correspondent, S. W., says, " It strikes me that the game of pitching at capons, practised by boys when I was young, took its rise from the sport of throwing at cocks, indulged in by the matured barbarians. The capons were leaden representations of cocks and hens pitched at by leaden dumps."

The cruelty of cock-fighting was another chief ingredient of the pleasure which intoxicated the people on Shrove Tuesday.

Code-fighting was practised by the Greeks. Themistocles, when leading his troops against the Persians, saw two cocks fighting, and roused the courage of his soldiers by pointing out the obstinacy with which these animals contended, though they neither fought for their country, their families, nor their liberty. The Persians were defeated; and the Athenians, as a me- morial of the victory, and of the incident, ordered annual cock-fighting in the presence of the whole people. Beckmann thinks it existed even earlier. Pliny says cock-fighting was an annual exhibition at Pergamus. Plato laments that, not only boys, but men, bred fighting birds, and employed their whole time in similar idle amusements. Beckmann mentions an ancient gem in Sir William Hamilton's collection, whereon two cocks are fighting, while a mouse carries away the earn of corn for which they

contest : " a happy emblem," says Beckmann, " of our law-suits, in which the greater part of the property in dispute falls to the lawyers." The Greeks obtained their fighting cocks from foreign countries: according to Beckmann, the English import the strongest and best of their's from abroad, especially from Germany.

Caesar mentions the English cocks in his " Commentaries ;" but the earliest notice of cock-fighting in England is by Fitz-Stephens, who died in 1191. He mentions this as one of the amusements of the Londoners, together with the game of foot-ball. The whole passage is worth transcribing : " Yearly at Shrove- tide, the boys of every school bring fighting- cocks to their masters, and all the forenoon is spent at school, to see these cocks fight together. After dinner, all the youth of the city goeth to play at the ball in the fields ; the scholars of every study have their balls; the practisers also of all the trades have every one their ball in their hands. The ancienter sort, the fathers, and the wealthy citizens, come on horseback to see these youngsters contending at their sport, with whom, in a manner, they participate by motion ; stirring their own natural heat in the view of the active youth, with whose mirth and liberty they seem to communicate."

Cock-fighting was prohibited in England under Edward III. and Henry VIII., and even later: yet Henry himself indulged his cruel nature by instituting cock-fights, and even James I. took great delight in them; and within our own time, games have been fought, and attend- ance solicited by public advertisement, at the Royal Cock-pit, Whitehall, which Henry VIII. built.

Beckmann says, that as the cock roused Peter, so it was held an ecclesiastical duty " to call the people to repentance, or at least to church ;" and therefore, " in the ages of ignorance, the clergy frequently called themselves the cocks of the Almighty."

Sir Frederick Morton Eden, in the " Statis- tical account of Scotland," says that at the parish of Scone, county of Perth, every year on Shrove Tuesday the bachelors and married men drew themselves up at the cross of Scone, on opposite sides ; a ball was then thrown up, and they played from two o'clock till sun-set. The game

was this : he who at any time got the ball into his hands, run with it till overtaken by one of the opposite party ; and then, if he could shake himself loose from those on the opposite side who seized him, he run on ; if not, he threw the ball from him, unless it was wrested from him by the other party, but no person was allowed to kick it. The object of the married men was to hang it, that is, to put it three times into a small hole in the moor, which was the dool or limit on the one hand : that of the bachelors was to drown

it, or dip it three times in a deep place in the river, the limit on the other: the party who could effect either of these objects won the game; if neither won, the ball was cut into equal parts at sun-set. In the course of the play there was usually some violence between the parties ; but it is a proverb in this part of the country that "All is fair at the ball of Scone."

This, the first day of Lent, is called Ash Wed- nesday, because in the Roman Catholic church, the priest blesses ashes on this day, and puts them on the heads of the people. ' These ashes are made of the branches of brushwood or palms, consecrated the year before. The ashes are cleaned, and dried, and sifted, fit for the pur pose. After the priest has given absolution to the people, he prays, " Vouchsafe + to bless and sanctify + these ashes — that whosoever shall sprinkle these ashes upon them for the redemption of their sins, they may obtain health of body and protection of soul," Sec. Prayers ended, the priest sprinkles the ashes with holy water, and perfumes them thrice with incense, and the people coming to him and kneeling, he puts ashes on their heads in the form of a cross with other ceremonies.

Platina, a priest, and librarian to the Vatican, who wrote the lives of the popes, relates that Prochetus, archbishop of Geneva, being at Rome on Ash Wednesday, he fell at the feet of pope Boniface VIII., who blessed and gave out the ashes on that day, in order to be signed with the blessed ashes as others had been. Thinking him to be his enemy, instead of uttering in the usual form, " Remember, O man, because thou art dust, thou shalt return to dust," &c., the pope parodied the form and said, " Remember thou art a Gibelline, and with the Gibellines thou shalt return to ' ashes," and then his holiness threw the ashes in the archbishop's eyes.

It is observed by Mr. Fosbroke that ladies wore friars' girdles in Lent. This gentleman quotes, from " Camden's Remains," that Sir Thomas More, finding his lady scolding her ser- vants during Lent, endeavoured to restrain her. " Tush, tush, my lord," said she, " look, here is one step to heavenward," showing him a friar's girdle. " I fear me," said he, " that one step will not bring you up one step higher." There are various instances of belief in the virtues of garments that had been worn by monks and friars ; some of them almost surpassing belief.

Ash 'Wednesday is observed in the church of England by reading publicly the curses de- nounced against impenitent sinners; to each malediction the people being directed to utter,

Amen. Many who consider this as cursing their neighbours, keep away from church on the occasion; which absence from these motives Mr. Brand regards as " a folly and superstition worthy of the after-midnight, the spirit-walking time of popery." On this eloquent remark, and Mr. Brand is seldom warmed to eloquence, it may be observed, that persons far removed from superstition, and who have never approached " the valley of the shadow of popery," deem the commination of the " Common Prayer Book," a departure from the Christian dispensation, and its injunctions of brotherly kindness.

From the Sabbath before Palm-Sunday, to the last hour of the Tuesday after Easter, " the Christians were accustomed to stone and beat the Jews," and all Jews who desired to exempt themselves from the infliction of this cruelty, commuted for a payment in money. It was likewise ordained in one of the Catholic services, during Lent, that all orders of men should be prayed for except the Jews.f These usages were instituted and justified by a dreadful per- version of Scripture, when rite and ceremony triumphed over truth and mercy. Humanity was dead, for superstition Molochized the heart. From the dispersion of the Jews they have lived peaceably in all nations towards all, and in all nations been persecuted, imprisoned, tor-tured, and put to death, or massacred by mobs. In England, kings conspired with their subjects to oppress them To say nothing of the well- known persecutions they endured under king John, the walls of London were repaired with the stones of their dwellings, which his barons had pillaged and destroyed. Until the reign of Henry II., a spot of ground near Red-cross- street, in London, was the only place in all England wherein they were allowed to bury their dead.*

In 1262, after the citizens of London broke into their houses, plundered their property, and murdered seven hundred of them in cold blood, King Henry III. gave their ruined synagogue in Lothbury to the friars called the fathers of the sackcloth. The church of St. Olave in the Old Jewry was another of their synagog'ues till they were dispossessed of it: were the sufferings they endured to be recounted we should shudder. Our old English ancestors would have laughed any one to derision who urged in a Jew's behalf, that he had " eyes," or " hands," " organs, dimensions, senses, affections, passions ;" or that he was " fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed and cooled by the same winter and summer as a Christian is." They would have deemed a man mad had one been found with a desire to prove that

the poor Jew,

In corporal sufferance feels a pang as great As when a Christian dies.

To say nothing of their more obvious sufferings for many centuries, the tide of public opinion raged against the Jews vehemently and inces- santly. They were addressed with sneers and contumely; the finger of vulgar scorn was

» Mr. Fosbrofce's Brit. Mon.

t Ibid.

pointed at them ; they were hunted through the streets in open day, and when protected from the extremity of violence, it was with tones and looks denoting that only a little lower hale sanctuaried their persons. In conversation and in books they were a by-word and a jest.

St. David, or, in Welch, Uewid, whose festi- val is held on the 1st of March, was son of Xantus, prince of Cardiganshire, brought up a priest, became an ascetic in the Isle of Wight, afterwards preached to the Britons, founded twelve monasteries, ate only bread and vege- tables, arid drank milk and water. A synod being called at Brevy, in Cardiganshire, A. D. 519, in order to suppress the heresy of Pelagius, " St. David confuted and silenced the infernal monster by his learning, eloquence, and mira- cles." After the synod, St. Dubritius, arch- bishop of Caerleon, resigned his see to St. David, which see is now called St. David's, He died in 544. St. Rentigern saw his soul borne by angels to heaven ; his body was in the church of St. Andrew. In 962, his relics were translated to Glastonbury.

St. David's day in London is the Anniversary of " the most Honourable and Loyal Society of Ancient Britons," established in 1714; they celebrate it with festivity in behalf of the Welch charity school in Grays-inn -road, which was instituted in 1718 for boarding, clothing, and educating eighty boys and twenty-five girls, born of Welch parents, in or within ten miles of the metropolis, and not having a parochial settlement within those limits. This institution has the king for patron as prince of Wales, and is supported by voluntary contributions. The " Ancient Britons," according to annual custom, go in procession to the royal residence on St. David's day, and receive the royal bounty. The society are in carriages, and each wears an artifi- cial representation of the leek in his hat, com- posed of ribbands and silver foil. They have been sometimes accompanied by horsemen decorated in the same way, and are usually pre- ceded by marshals, also on horseback, wearing leeks of larger dimension in their hats, and orna- mented with silk scarfs. In this state they pro- ceed from the school-house to some adjacent church, and hear a discourse delivered on the occasion, by a prelate or other dignified clergy- man. The day is concluded by an elegant dinner under the regulation of stewards, when a

collection is made for the institution, and a

handsome sum is generally contributed.

" Mothering Sunday, Refreshment Sunday, Rose Sunday," names given to the fourth Sunday in Lent, and noted as a holiday in the church of England calendar.

On this day boys went out, in ancient times, into the villages with a figure of death made ot straw; from whence they were generally driven by the country people, who disliked it as an ominous appearance, while some gave them money to get the mawkin carried off. Its pre- cise meaning under that form is doubtful, though it seems likely to have purported the death of Winter, and to have been only a part of another

ceremony conducted by a larger body of boys, from whom the death-carriers were a detach- ment, and who consisted of a large assemblage carrying two figures to represent Spring and Winter, whereof one was called " Sommer stout." These two figures they bore about, and fought ; in the fight Summer, or Spring, got the victory over Winter, and thus was allegorized the departure or burial of the death of the year, and its commencement or revival as Spring.

It is still a custom on Mid-Lent Sunday in many parts of England, for servants and ap- prentices to carry cakes or some nice eatables or trinkets, as presents to their parents ; and in other parts, to visit their mother for a meal of funnily, or to receive cakes from her with her blessing. This is called going " a mothering." Herrick mentions this custom in Gloucester-shire.

Going " a mothering " is from the Roman catholic custom of going to the mother-church on Mid-Lent Sunday, to make offerings at the high altar; and that custom of the Romish church is derived from the Hilaria, a heathen festival celebrated by the ancient Romans, in honour of the Mother of the Gods on the ides of March. The offerings at the altars were in their origin voluntary, and became church property. At length the parish priests compounded with the church at a certain sum, and these voluntary donations of the people have become the dues known by the name of Easter Offerings. • " Mid-Lent, or Mothering Sunday," is likewise called " Refreshment Sunday," " the reason of which," says Wheatley (on the Common Prayer), " I suppose is the Gospel for that day, which treats of our Saviour's miraculously feeding five thousand ; or else, perhaps, from

the first lesson in the morning, which gives us the story of Joseph entertaining his brethren." It is also denominated " Rose Sunday," from the pope on this day carrying a golden rose in his hand which he exhibits on his way to and from mass.

The 17th of March is St. Patrick's Day. This Saint was born towards the end of the fourth century, in Killpatrick, between Dun- briton and Glasgow. At sixteen he was carried off with many of his father's vassals into slavery, and compelled for six months to keep cattle on the mountains in Ireland, from whence he escaped through the humanity of some sailors. He travelled into Gaul and Italy, and received his apostolical mission to convert the Irish, from pope Celestine, who died in 432. Determined on attempting the conversion of the people, he penetrated to the remotest corners of Ireland, bapti/ed multitudes, ordained clergy to preside over them, instituted monks, gave alms to the poor of the provinces, made presents to the kings, educated children to serve at the altar, held councils, founded monasteries, restored health to the sick, sight to the blind, raised dead persons to life, continued his missions during forty years, and died at Down in Ulster, where he was buried. Such, in brief, is Alban Butler's account, who assigns the year 464, for the period wherein he lived.

Ribadeneira affirms it, as a most famous mi-

racle, and well known to the whole world, that St. Patrick did so free Ireland of all venemous beasts, that none could ever since breed'or live there, and that even the very wood has a virtue against poison, " so that it is reported of king's college, Cambridge, that being built of Irish wood, no spider doth ever come near it."

This being the anniversary of the day whereon St. Patrick died, it is commemorated as a high festival in the Catholic church ; and it is cele- brated to his honour in that country, with every demonstration of affection for his memory as the apostle and patron saint of Ireland, that a warm-hearted, enthusiastic, joyous people, can pos- sibly express. An eye-witness represents to the editor of the " Every-Day Book," that St. Patrick's day in Dublin is a scene of festivity and mirth unequalled by any thing observable in this country. From the highest to the lowest, all hearts seem inspired by the saint's benefi- cence. At day-break flags fly on the steeples, and the bells ring out incessant peals till mid- night. The rich bestow their benevolence on the poor, and the poor bestow their blessings on the rich, and on each other, and on the blessed St. Patrick. The " green, immortal " shamrock is in every hat. Sports of manly exercise exhibit the capabilities of the celebrated " shillelah," and before night many a head gives token of the application of its wonderful powers, by a mus- cular hand. Priestly care soothes querulousness ; laughter drowns casualty ; innumerable bright-

eyed, rosy-cheeked, jaunty lasses dance with their mirth-loving lads ; old women run about with children in the hoods of their cloaks, to publicly share care-drowning cups of sweet con- solation with each other ; and, by the union of wit, humour, and frolic, this miraculous day- is prolonged till after the morning dawn.

In London St. Patrick's day is observed at court as a high festival, and the nobility crowd to pay their compliments in honour of Ireland's tutelar saint. For many years it has been se- lected as an occasion for soliciting and obtaining aid to a great national object — the promotion of education. It is the anniversary of the " Bene- volent Society of St. Patrick," for clothing and educating children of Irish parents who need the assistance, by voluntary contribution. The festival is attended by Irishmen of different political parties and religious persuasions, and many of the highest rank.

In February, 1783, letters patent created a brotherhood denominated " Knights of the illus- trious order of St. Patrick," to iconsist of the sovereign for the time being, as sovereign of the order; and fifteen knights companions, the " lieutenant-general and general governor of Ire- land, or the lord-deputy or deputies, or lord's justices, or other chief governor or governors " for the time being, officiating as deputy grand masters. The statutes of the order of St. Patrick direct the badge to be of gold, sur- mounted with a wreath of Shamrock or trefoil, surrounding a circle of gold, bearing the motto of the order in gold letters, Quit's separabit ? with the date MDCCLXXXIH, wherein the order was founded, and encircling the cross of St. Patrick gules, surmounted with a trefoil vert, each leaf

charged with an imperial crown or, upon a field argent ; the badge, encircled with rays in form of a star of silver of eight points, four greater and four lesser, worn on the left side of the outer garment.

The shramrock resembles trefoil. The Druids used it to cure diseases. The Irish use it as a national cognizance. It is said that when St. Patrick lauded near VVicklow to convert the Irish in 433, the pagan inhabitants were ready to stone him ; he requested to be heard, and endeavoured to explain God to them as the Trinity in Unity, but they could not understand him, till plucking a trefoil from the ground, he said, "Is it not as possible for the Father, Son, and Holy Ghost, as for these leaves, to grow upon a single stalk ?" Then the Irish were immediately convinced.

March 18, is the festival of St. Edward. This is the English king who was

stabbed in the back with a dagger, by order of his stepmother, Elfrida, while drinking on horseback at the gate of Corfe castle, in the island of Purbeck. He spurred his horse, which plunged him into a deep marsh, and there he died of his wounds, in 979. Butler says his body was discovered by a pillar of light, and buried in Wareham church, and worked miracles. His name is in the church of England calendar.

It is an historical fact, that the wretched con- triver of king Edward's murder passed the re- mainder of her days in dismal horror ; and her nights brought no repose from the afflictions of her1 conscience. She obtained a kind of armour formed of crucifixes, wherein she encased her- self, performed penances, built monasteries, and died universally execrated by the indignant people. The treachery of the crime occasioned a general distrust, no one would drink without security from him who sat beside him, that he was safe while the bowl was at his lips ; and hence is said to have originated the customary expres- sion at table of " I pledge you," when one per- son invites another to drink first.

The Roman Catholic festival of the Annuncia- tion is commonly called in England " Lady Day," an abridgement of the old term " Our Lady's Day," or the " Day of our blessed Lady," and is celebrated on the 25th day of March.

This is a " gaudy day " in the Romish church. Deeming the mother of Christ an intercessor and mediatrix, it offers innumerable honours and devotions to her. " Hail Mary '." resounds in the masses to her praise; and the worshippers of her shrines and resemblances are excited to a fervour of devotion which would astonish if it were not known that sculpture, painting, poetry, vocal and instrumental music, have been added to revive the recollection of monkish fables, and early impressions in her behalf.

The festival of the annunciation is kept at Rome by sumptuous shows. The author of " Rome in the nineteenth Century " relates the pope's proceedings on the occasion : " We drove through streets lined with expecting crowds, and windows hung with crimson and yellow silk draperies, and occupied by females in their most gorgeous attire, till we made a stop near the

church before which the pope's horse-gnards, in their splendid full-dress uniforms, were sta- tioned to keep the ground ; all of whom, both officers and men, wore in their caps a sprig of myrtle, as a sign of rejoicing. After waiting a short lime, the procession appeared, headed by another detachment of the guards, mounted on prancing black chargers, who rode forward to clear the way, accompanied by such a flourish of trumpets and kettle-drums, that it looked at first like any thing but a peaceable or religious proceeding. This martial array was followed by a bareheaded

priest, on a white mule, bear- ing the host in a gold cup, at the sight of which every body fell upon their knees. The pope used formerly to ride upon the white mule him- self, and all the cardinals used to follow him in their magnificent robes of state, mounted either on mules or horses; and as the Eminentissimi are, for the most part, not very eminent horse- men, they were generally fastened on, lest they should tumble off. This cavalcade must have been a very entertaining sight. Pius VI., who was a very handsome man, kept up this custom, but the (then) present pope (Pius VII.) is far too infirm for such an enterprise; so he followed the man on the white mule, in a state coach ; at the very sight of which, he seemed to have made a jump back of two hundred years at least. It was a huge machine, composed almost en- tirely of plate-glass, fixed in a ponderous carved and gilt frame, through which was distinctly visible the person of the venerable old pope, dressed in robes of white and silver, and inces- santly giving his benediction to the people, by a twirl of three fingers; which are typical of the Father, the Son, and the Holy Ghost ; the last being represented by the little finger. On the gilded back of this vehicle, the only part that was not made of glass, was a picture of the pope in his chair of state, and the virgin Mary at his feet. This extraordinary machine was drawn by six black horses, with superb harness of crimson velvet and gold ; the coachmen, or rather postil- lions, were dressed in coats of silver stuff, with crimson velvet breeches, and full-bottomed wigs well powdered, without hats. Three coaches, scarcely less antiquely superb, followed with the assistant cardinals, and the rest of the train. In the inside of the church, the usual tiresome ceremonies went on that take place when the pope is present. He is seated on a throne, or chair of state ; the cardinals, in succession, ap- proach and kiss his hand, retire one step, and make three bows or nods, one to him in front, and one on the right hand, and another on the left; which are intended for him (as the personi- fication of the Father,) and for the Son, and for the Holy Ghost, on either side of him ; and all the cardinals having gone through these motions, and the inferior priests having kissed his toe — that is, the cross, embroidered on his shoe — high mass begins. The pope kneels during the elevation of the host, prays in silence before the high altar, gets up and sits down, reads some- thing out of a great book which they bring to him, with a lighted taper held beside it; and, having gone through many more such cere- monies, finally ends as he began, with giving his

benediction with three fingers, all the way lie goes out. During all the time of this high mass, the pope's military band, stationed on the plat- form in front of the church, played so many clamorous martial airs, that it

effectually put to flight any ideas of religious solemnity."

In England, " Lady Day " is only remembered as the first quarter-day in the year, and is there- fore only kept by tenants who truly pay rent to their landlords.

Palm Sunday is the first Sunday before Easter, and is sometimes called " Passion Sun- day." It is denominated " Palm Sunday," be- cause on this day the Roman catholic church ordains boughs or branches of palm trees to be carried in procession, in imitation of those strewed before Christ when he rode into Jeru- salem. In tiiis monkish procession the host was carried upon an ass, branches and flowers were strewed on the road, the richest cloths were laid down, and others were hung up. The palms were consecrated by the priest, and after they were used they were preserved to be burned for holy ashes, to lay on the heads of the people on Ash Wednesday in the following year, as before- mentioned, on that day.

On Palm Sunday, the palm flowers and leaves to be consecrated by the officiating prelate or priest were laid upon the high altar, and those for the poor laity being placed upon the south step of the altar, the priest arrayed in a red cope proceeded to consecrate them by a prayer, com- mencing " I conjure thee, thou creature of flowers and branches, in the name of God the Father," &c. This was to displace the devil or his in- fluences, if he or they lurked or were hidden in or about the " creature of flowers and branches." Then followed a prayer wherein he said, with crosses, " We humbly beseech thee that thy truth may + sanctify this creature of flowers and branches, and slips of palms, or boughs of trees, which we offer,' &c. Then the " creature of flowers and branches " was fumed with smoke of frankincense from the censers, and there were other prayers with crossings, and they were sprinkled with holy water with this supplication : " Bless + and sanctify f these branches of palms, and other trees and flowers," &c. Then the sacrists distributed the palms to the abbots, priors, and nobler persons and the flowers and leaves to the others. When this was done the procession moved, and afterwards made a stand while two priests brought a Pascal in which the crucifix was laid ; afterwards the banner and cross-bearers filed off to the right and to the left, and the boys and monks of the convent arranged themselves, and, after a short service, the priests with the tomb, headed by the banner and cross, passed between the monks, who knelt as they passed. When they came to the city- gates they divided again on two sides, and the shrine being put on a table, was covered with cloth. Above the entrance of the gates, in a place handsomely prepared with hangings, were boys with other singers whom the chanter had appointed, and these sang, " Gloria, laus," " Glory, praise," &c. After having made a pro- cession through the city, they returned to the

convent-gate, where the shrine was laid on the table and covered with cloth, and a religious service was performed. The monks then re- turned to the church, and stood before the cru- cifix uncovered, while mass was performed ; and after they had communicated, the deacon first and the rest afterwards, they offered their palms and flowers at the altar.

It was also an old Roman catholic custom on Palm Sunday, to draw about the town a wooden ass with a figure on it, representing Christ riding into Jerusalem, and the people strewing palms before it.

Palm Sunday remains in the English calen. dars. It is still customary with men and boys to go a palming in London early on Palm Sun- day morning ; that is, by gathering branches of the willow or sallow with their grey shining velvet-looking buds, from those trees in the vicinity of the metropolis : they come home with slips in their hats, and sticking in the breast button holes of their coats, and a sprig in the raouth, hearing the " palm " branches in their hands. This usage remains among the ignorant from the poor neighbourhoods, but there is still to be found a basket woman or two at Covent- garden, and in the chief markets, with this " palm," as they call it, on the Saturday before Palm Sunday, which they sell to those who are willing to buy ; but the demand of late years has been very little, and hence the quantity on sale is very small. Nine out of ten among the purchasers buy rt in imitation of others, they care not why ; and such purchasers, being Lon- doners, do not even know the tree which pro- duces it, but imagine it to be a " real " palm tree, and " wonder " they never saw any " palm " trees, and where they grow.

Maundy Thursday, or Shere Thursday, is always the Thursday before Easter : its name has occasioned some trouble to antiquaries. One writer conceives maundy to be corrupted from the mandate of Christ to his disciples to break bread in remembrance of him : or from his other mandate, after he had washed their feet, to love one another. Wiih better reason it is con- ceived to be derived from the Saxon word mand, which afterwards became maund, a name for a basket, and subsequently for any gift or offer- ing contained in the basket. Thus Shakspeare says, " a thousand favours from her maund she drew :" and Hall, in his satires, speaks of " a maund charged with household merchandize :" so also Drayton tells of " a little maund being made of osiers small." Thus, then, " Maundy Thursday, the day preceding Good Friday, on which the king distributes alms to a certain number of poor persons at Whitehall, is so named from the maunds in which the gifts were contained."

According to annual custom, on Maundy Thursday, 1814, the royal donations were distri- buted at the Chapel Royal, Whitehall. In the morning, Dr. Carey, the sub-almoner, and Mr. Hanby, the secretary to the

lord high almoner, Mr. Nost, and others belonging to the lord chamberlain's office, attended by a party erf the yeomen of the guard, distributed to seventy- ft v«

CUSTOMS

poor women, and seveety-uve poor own, btins- as many as tbe kin? was years old, a '{uact rty of salt nsb, consisting of salnM>tt,Cttd, awl Itemaˆ, pieces of very fine beef, five tons of head, and some ate to dVim\ die king1 health, Mr. Hanky gave notice that in future their CAMS mast, be eertified by die minister of tbe parish, by order of die locd almoner, At three o'clock tfaey the nven on one side the women on the otber. A procession entered, of those engaged ia the cere- mony, consisting of a party of yeomen of tbe guard,oue of them carry ing a large gold dish on bis bead, containing 150 baˆ with seventy-fire silver \>tmaifi in each, fertile poor people, which was placed in the royal closet- They were followed by the sub-almoner in bis robes, with i run nf fair linni mrrhii ihiiuliUr mil running, bis waist. He was followed by two boys, two girls, the secretary, and another grndrmju, with similar sashes, kc. kc-, all carrying large nosegays. The church evening service was then performed, at tbe eonetosion of which tbe silver pennies wese distribnted, and woollen doth, linen, shoe* and stockings, to the men and , and a cnp of wine to drink the king's*

Anciently, on Mauuuj Thursday, the kings and queens of England washed and kissed the feet of a many poor men and women as they were year* old, besides bestowing their mtmuh on each, llm was m imitation of Christ wash- ing his disciples' feet. Queen Elizabeth per- formed this at Greenwich, when she was tbirty- nine year* old, on which occasion the feet of the*

by tbe yeomen ofthe bundry with

•-.:. :•..•-:•. • •,—-••,•...—:, ..—.- – •-•. aiid lastly, by die queen herself ; tbe person who washed, making each time a cross on the pan- pel's foot above the toes, and kissing it. This ceremony was primrmfd by the queen, kneeling, being attended by thirty-nice ladies and

woe then distributed iimnm the poor. James

1L is said to have teea die last of our monarch who ptifoimtd dus ceremony m pemonv It was aftcru jids nivfarmri by die mmonur. On die 5dt of Afˆ 1731, it bemg Biaundy Thursday, dse king being dien in ms forty-eigbw year, there was distribnted at die Pininmllmfchiiuu,, Whitehall, to forty-eight poor men and forty- eight poor women, boiled beef and shoulden of mutton, and small bowk of ale, which is called dnmer; after dot, large wooden ptatten of fish and loaves, «k. undressed, one large old*

ling, and one large dried cod; twelve red herrings, and twelve white herrings, and four half-quar- tern loaves. Each person had one platter of dm provision; after which was distributed to dwan shoes, stockings, linen, and woollen dodi, and leathern bags, with one-penny, two-penny, three-penny, and four— penny psteu of silver, and sbittingt; to each about four pounds in value. Hi grace, the lord archbishop of York,*

lord high aloMioer, performed tbe annual cese- mony of Hashing the feet of the poor in ihe

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by tbe kings themselves.

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reformation ha left. Of the use of J.-A c?v«, 33 a mark or sign m papal worsrnp aai tiora; but she drvre him %«ay thr« by &e sign of the cress, and at last jˆnnkiˆi tie book with holy water; after which be rˆ..~.ˆi ;: > men,” In the booses of some ig&rraru people, a Good Friday bun is still kept u fc.: Iiˆck,” i,vi*

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bisant-Hke cake of open cross-wcrk, on a Good Friday, to remain there tul d OB die neu Good Friday by out of make; and off this tbe editor of the ” Every-Day Book” has beard amrmrd, that it preˆne) &e bouse from fire;” ” no fire erer bappe&ed ra a house that had one.”’ This undoˆbtedl; u a rdic of the old supeabtion; as a aLto a rblˆu notion in die west of England, that the straight stripe down tke shoulders of lie ass, uttenecttd by the long one from the neck to the tail, CTOM of honour conferred upon him by C&rat, and that before Christ rode upon the as*, uat wasnotsoi*

*or consecrated loaves, bestowed in die church as T!UH, and to those who from any impediment could net receive die host. They are made from the dough from whence the host itself is taken, and are given by d« priest to the people after mass, just before dut cuugirgatiou is dis- ad are kissed before they aie eat*r..*

They are marked with the cross as our Good Friday buns are. Winckelman relates this re- markable fact, that at Herculaneum were found two entire loaves of the same size, a palm and a half, or five inches in diameter. They

were marked by a cross, within which were four other lines; and so the bread of the Greeks was marked from the earliest periods. Sometimes it had only four lines, and then it was called quadra. This bread had rarely any other mark than a cross, which was on purpose to divide and break it more easily.

On the 1st of April it is customary for boys to practice jocular deceptions. When they succeed, they laugh at the person whom they think they have rendered ridiculous, and ex- claim, " Ah ! you April fool !"

Thirty years ago, when buckles were worn in shoes, a boy would meet a person in the street with — " Sir, if you please, your shoe's un- buckled," and the moment the accosted indivi- duals looked towards his feet, the informant would cry — " Ah ! you April fool !" Twenty years ago, when buckles were wholly disused, the urchin-cry was — " Sir, your shoe's untied ;" and if the shoe-wearer lowered his eyes, he was hailed, as his buckled predecessor had been, with the said—" Ah ! you April fool !" Now, when neither buckles nor strings are worn, the waggery of the day is — " Sir, there's something out of your pocket." " Where T' " There!" '• What?" " Your hand, sir — Ah! you April fool !"

Much is written concerning the custom of fool-making on the first of April, but with this result only, that it is very ancient and very general.

The practice of making fools on this day in North Britain, is usually exercised by sending a person from place to place by means of a letter, in which is wrkten —

" On the first day of April Hunt the gowk another mile."

This is called " hunting the gowk ;" and the bearer of the " fools' errand " is called an " April gowk." Brand says, that gowk is properly a cuckoo, and is used here metaphorically for a fool ; this appears correct ; for from the Saxon " geac, a cuckoo," is derived geek, which means " one easily imposed on." Malvolio, who had been " made a fool " by a letter, purporting to have been written by Olivia, inquires of her " Why have you suffered me to be — — Made the most notorious geek and gull That e'er invention play'd on 1″ ' Olivia affirms, that the letter was not written by her, and exclaims to Malvolia —

" Alas, poor fool ! how have they baffled thee !"

Easter-Day is distinguished by its peculiar name, through our Saxon ancestors, who at this season of the year held a great festival, in honour of the goddess Eastor, probably the Astarte of the eastern nations. The French call this festi- val Paques, derived from the Greek pascha, which is also

derived from the Hebrew pesech, meaning passover; and whence we have the

English word paschal, applied to the lamb which formed part of the evenrng meal, the last of which our Saviour partook before his death with his twelve missionaries. In Cambridgeshire the word pasch is still in use, and applied to a flower which appears at this time on the Gog- magog hills and its environs. The day is of importance in a civil, as well as in a religious light; for on this day depend the opening of our courts of law, which takes place after it, and the festivals of the church are arranged in con- formity to it. By the act of parliament on this subject, and the rule given in conformity to it in the " Common Prayer-Book," which of course every body has an opportunity of seeing, " Easter-Day is always the first Sunday after Full Moon, which happens upon, or next after, the twenty-first day of March ; and if the Full Moon happen upon a Sunday, Easter-day is the Sunday after."

Easter-day is observed all over Christendom with peculiar rites. In the catholic church high mass is celebrated, the host is adored with the greatest reverence, and both Catholics and Pro- testants might be led from it, to a more particu- lar attention to the circumstances attending its form and substance. The host, derived from the latin word hostia, meaning a victim, is a conse- crated wafer, of a circular form, composed of flour and water. Both substance and form are regulated by custom of very ancient date. On the night before his execution, our Saviour took bread, and blessing it, divided it among his mis- sionaries ; but the bread he took was not ordi- nary bread, but unleavened bread, such as is used by the Jews during the passover week in the present days. This bread is composed of merely flour and water, no leaven during; the festival of their passover being permitted to enter the house of a Jew. It is a kind of a bis- cuit of a circular form, and the host thus, by its form and substance, brings us back to the recol- lection of the Catholics, and the rite celebrated by our Saviour. It is the representation of the Jewish cake, or unleavened bread, which is to this day eaten by that nation during the passover week.

The Protestants have deviated from this cus- tom, and in their churches use leavened bread, without any regard to form, and they cut it with a knife into small pieces, forgetting that our Saviour broke the bread; but some use leavened bread, and, as they cannot break it, they attempt to imitate our Saviour's action by tearing it to pieces.

The day before Easter-day is in some parts called " Holy Saturday." On the evening of this day, in the middle districts of Ireland, great preparations are made for the finishing of Lent. Many a fat hen and dainty piece of bacon is put in the pot by the cotter's wife about eight or nine o'clock, and woe be to

the person who should taste it before the cock crows. At twelve is heard the clapping of hands, and the joyous laugh, mixed with " Shidtli or mogh or carries," i. e. out with the Lent : all is merriment for a few hours, when they retire, and rise about four o'clock to see the sun dance in honour of the resurrection. This ignorant custom is not con-

fined to the humble labourer and his family, but is scrupulously observed by many highly respec- table and wealthy families.

It is inquired in DuntorVs "Athenian Oracle," " Why does the sun at his rising play more on Easter-day than Whit-Sunday '(" The question is answered thus : — " The matter of fact is an old, weak, superstitious error, and the sun neither plays nor works on Easter-day more than any other. It is true, it may sometimes happen to shine brighter that morning than any other ; but, if it does, it is purely accidental. In some parts of England they call it. the lamb-playing, which they look for, as soon as the sun rises, in some clear or spring water, and is nothing but the pretty reflection it makes from the water, which they may find at any time, if the sun rises clear, and they themselves early, and un- prejudiced with fancy." The folly is kept up by the fact, that no one can view the sun steadily at any hour, and those who choose to look at it, or at its reflection in water, see it apparently move, as they would on any other day.

In Lancashire, Staffordshire, Warwickshire, and some other parts of England, there prevails the custom of heaving or lifting, at Easter-tide. This is performed mostly in the open street, though sometimes it is insisted on and submitted to within the house. People form into parties of eight or a dozen, or even more, for the pur- pose, and from every one lifted or heaved they extort a contribution. The late Mr. Lysons read to the Society of Antiquaries an extract from a roll in his custody, as keeper of the records in the Tower of London, which contains a payment to certain ladies and maids of honour for taking King Edward I. in his bed at Easter; from whence it has been presumed th;it he was lifted on the authority of that custom, which is said to have prevailed among all ranks through- out the kingdom. The usage is a vulgar com- memoration of the resurrection which the festival of Easter celebrates.

A custom still prevalent in some parts ot Cumberland, although not as generally attended to as it was twenty or thirty years ago, is the practice of sending reciprocal presents of eggs, at Easter, to the children of families, respectively, betwixt whom any intimacy subsists. For some weeks

preceding Good Friday the price of eggs advances considerably, from the great demand occasioned by the custom referred to.

The modes adopted to prepare the eggs for presentation are the following : — The eggs being immersed in hot water for a few moments, the end of a common tallow-candle is made use of to inscribe the names of individuals, dates of particular events, &c. The warmth of the egg renders this a very easy process. Thus in- scribed, the egg is placed in a pan of hot water, saturated with cochineal, or other dye-woods; the part over which the tallow has been passed is impervious to the operation of the dye ; and consequently when the egg is removed from the pan, there appears no discolouration of the egg where the inscription has been traced, but the egg presents a white inscription on a coloured ground. The colour of course depends upon the taste of the person who prepared the egg ; but

usually much variety of colour is made use of.

" Pasch eggs" are to be found at Easter in different parts of the kingdom. At Liverpool and its neighbourhood they are still common, and called " paste eggs." They are prepared by beipg boiled hard within the coat of an onion, which imparts to the shell the admired colour. In some parts they are variously coloured with the juices of different herbs, and played with by boys, who roll them on the grass, or toss them up for balls.*

The terms " pace, paste, or pasch," are de- rived from paschal, which is a name given to Easter from its being the paschal season. Four hundred eggs were bought for eighteen-pence in the time of Edward I., as appears by a royal roll in the Tower ; from whence it also appears they were purchased for the purpose of being boiled and stained, or covered with leaf gold, and afterwards distributed to the royal house- hold at Easter. They were formerly consecrated, and the ritual of pope Paul V. for the use of England, Scotland, and Ireland, contains the form of consecration. On Easter eve and Easter day, the heads of families sent to the church large chargers, filled with the hard boiled eggs, and there the " creature of eggs " became sacred by virtue of holy water, crossing, and so on.

Eating of tansy pudding is another custom at Easter derived from the Romish church. Tansy symbolized the bitter herbs used by the Jews at their paschal ; but that the people might show a proper abhorrence of Jews, they ate from a gam- mon of bacon at Easter, as many still do in several country places, at this season, without knowing from whence this practice is derived. Easter ball-play, another ecclesiastical device, the meaning of which cannot be quite so clearly traced ; but it is certain that the Romish clergy abroad played at ball in the church, as part of the service; and we find an archbishop joining in the sport. " A ball, not of size to be grasped

by one hand only, being given out at Easter, t!.e dean and his representatives began an antiphone, suited to Easter-day ; then taking the ball in his left hand, he commenced a dance to the tune of the antiphone, the others dancing round hand in hand. At intervals, the ball was bandied or passed to each of the choristers. The orsjan played according to the dance and sport. The dancing and antiphone being concluded, the choir went to take refreshment. It was the privilege of the lord, or his locum tenens, to throw the ball; even the archbishop did it." Whether the dignified clergy had this amusement in the English churches is not authenticated ; but it seems that "boys used to claim hard eggs, or small money, at Easter, in exchange for the ball- play before-mentioned." Brand cites the me. tion of a lay amusement at this season, wherein both tansy and ball-play is referred to.

Easter Monday and Tuesday, and Greenwich fair, are renowned as " holidays " throughout most manufactories and trades conducted in the metropolis. On Monday, Greenwich fair com- mences. The chief attraction to this spot is the park, wherein stands the Royal Observatory on

a hill, down which is the delight of boys and girls to pull each other till they are wearied. Frequently of late this place has been a scene of rude disorder. But it is still visited by thou- sands and tens of thousands from London and the vicinity; the lowest join in the hill sports; others regale in the public-houses ; and many are mere spectators, of what may be called the humours of the day.

In London, on Easter Monday and Tuesday, the Spital Sermons are preached. " On Easter Monday, the boys of Christ's Hospital walk in procession, accompanied by the masters and steward, to the Royal Exchange, from whence they proceed to the Mansion-house, where they are joined by the lord mayor, the lady mayoress, the sheriffs, aldermen, recorder, chamberlain, town clerk, and other city officers, with their ladies. From thence the cavalcade proceeds to Christ Church, where the Spital Sermon is preached, always by one of the bishops, and an anthem sung by the children. His lordship afterwards returns to the Mansion-house, where a grand civic entertainment is prepared, which is followed by an elegant ball in the evening.

On Easter Tuesday the boys again walk in procession to the Mansion-house, but, instead of the masters, they are accompanied by the matron and nurses. On Monday, they walk in the order of the schools, each master

being at the head of the school over which he presides ; and the boys in the mathematical school carry their various instruments. On Tuesday, they walk in the order of the different wards, the nurses walk- ing at the head of the boys under her imme- diate care. On their arrival at the Mansion-house, they have the honour of being presented individually to the lord mayor, who gives to each boy a new sixpence, a glass of wine, and two buns. His lordship afterwards accompanies them to Christ church, where the service is the same as on Monday. The sermon is on Tuesday usually preached by his lordship's chaplain."

The 23rd of April is the festival of St. George the Martyr, Patron of England. Butler says, the Greeks long distinguished St. George by the title of " The Great Martyr ;" that, among other churches, five or six were formerly dedicated to him at Constantinople ; that he " seems " to have been the founder of the church of St. George over " his tomb " in Palestine ; that one of his churches in Constantinople gave to the Hellespont the name of " the Arm of St. George ;' that he is honoured as principal patron of saints by several eastern nations, particularly " the Georgians ;" that the Byzantine historians relate battles gained, and miracles won, by his inter- cession; that he was celebrated in France in the sixth century; that his office is found in the sa- cramentary of the (credulous) pope Gregory the Great ; that certain of his (presumed) relics were placed in a church at Paris, on its consecration to St. Vincent; that "he is said to have been a great soldier ; " that he was chosen by our ances- tors the tutelar saint of England, under the first Norman kings ; that the council at Oxford in 1222, commanded his feast to be kept a holiday of the lesser rank,; that under his name and*

ensign our Edward III. instituted the most noble order of knighthood in Europe; that this insti- tution was fifty years before that of St. Michael by Louis XI. of France, eighty years before the order of the Golden Fleece by Philip the Good, duke of Burgundy,/ one hundred and ninety years before that of St. Andrew by James I. of Scotland, and one hundred and forty years before the order of St. George by the emperor Frederick IV.; and that " the extraordinary devotion of all Christendom to this saint is an authentic proof how glorious his triumph and name have always been in the church."

Butler informs us, that St. George was born in Cappadocia ; that he went with his mother into Palestine, of which country she was a native, where she had a considerable estate, " which fell to her son George," who was a soldier, and became " a tribune or colonel in the army," wherein he was further promoted by the emperor Dioclesian, to whom he resigned his commissions and posts when that emperor waged war against the Christian religion, and who threw him into prison for remonstrating against bloody edicts, and caused him to be beheaded. This is all that Butler relates of

him, and this on the authority of what he calls “the account given to us by Metaphrastes.” According also to Butler, St. George became the patron of the military because he had been military himself, and his apparition encouraged “the Christian army in the holy war before the battle of Antioch,” which proved fortunate under Godfrey of Bouillon ; and also because his apparition inspired Richard I. in his expedition against the Saracens. ” St. George,” says Butler, ” is usually painted on horseback, and tilting at a dragon under his feet; but this is no more than an emblematical figure, purporting that, by his faith and Christian fortitude, he con- quered the devil, called the dragon in the Apo- calypse.” This is not so easily proved, nor has Butler in any way attempted to prove it. To this assertion may be opposed the fact, that St. Michael is also represented killing a dragon ; and the present writer presumes to think, that unless there be any valid objection to mounting an angel on horseback, the well-known legend of this archangel supplies the clue to the pictorial representation of St. George; viz. that St. George and the dragon are neither more nor less than St. Michael contending with the devil. Con- cerning this device, however, more cannot be observed without excluding curious particulars.

In the 10th year of king Henry VII. the Irish were prohibited from using their favourite battle- cry of Aboo, or Aber. Every native of that coun- try was enjoined against using that word, or ” other words like or otherwise contrary to the king’s laws, his crown and dignity and peace, but to call on St. George, or the name of his Sove- reign Lord, the King of England, for the time being,” &c. There is also this injunction to the English in an old art of war: “Item that all souldiers entering into battaile, assault, skirmish, or other faction of armes, shall have for their common cry and word, St. George forward, or Upon them St George, whereby the soldier is much comforted, and the enemie dismaied by calling to minde the ancient valour of England,

which with that name has so often been victori- ous.” So much for the present concerning St. George.

King George IV., who was born on the 12th of August, changed the annual celebration of his birth-day to St. George’s-day.

The 1st of May or May-day was the great rural festival of our forefathers. Their hearts responded merrily to the cheerfulness of the sea- son. At the dawn of May morning the lads and lasses left their towns and villages, and repairing to the woodlands, by sound of music, they gathered the May, or

blossomed branches of the trees, and bound them with wreaths of flowers ; then, returning to their homes by sunrise, they decorated the lattices and doors with the sweet- smelling spoil of their joyous journey, and spent the remaining hours in sports and pastimes.

Of the English May-pole this may be observed. An author before cited says, that at the north- west corner of Aldgate ward in Leadenhall-street, standeth the fair and beautiful parish church of St. Andrew the apostle, with an addition, to be known from other churches of that name, of the knape, or undershaft, and so called St. Andrew Undershaft, because that of old time, every year (on May-day in the morning,) it was used, that a high or long shaft, or May-pole, was set up there, in the midst of the street, before the south door of the said church, which shaft or pole, when it was set on end, and fixed in the ground, was higher than tlte church steeple. Jeffrey Chaucer, writing of a vain boaster, hath these words, meaning of the said shaft : —

" Right well aloft, and high ye bear your head, As ye would bear the great shaft of Corn-hill.

It was a great object with some of the more rigid among our early reformers, to suppress amusements, especially May-poles ; and these " idols " of the people were got down as zeal grew fierce, and got up as it grew cool, till, after various ups and downs, the favourites of the po- pulace were, by the parliament on the 6th of April, 1C44, thus provided against: "The Lords and commons do further order and ordain, that all and singular May-poles, that are or shall be erected, shall be taken down, and removed by the constables, bossholders, tithing-men, petty constables, and churchwardens of the parishes, where the same be, and that no May-pole be hereafter set up, erected, or suffered to be set up within this kingdom of England, or dominion of Wales ; the said officers to be fined five shil- lings weekly till the said May-pole be taken down."

Accordingly down went all the May-poles that were left. A famous one in the Strand, which had ten years before been sung in lofty metre, appears to have previously fallen.

It appears from the ' Legends of Ireland,' that there are romantic remains of antiquity con- nected with the celebration of May-day in that country of imagination. " Mummers in Ire- land," says the author, " are clearly a family of the same race with those festive bands, termed

Morrice-dancers in England. They appear at all seasons in Ireland, but May-day is their favourite and proper festival. They consist of a number, varying according to circumstances, of the girls and young men of the

village or neigh- bourhood, usually selected for their good looks, or their proficiency, — the females in the dance, the youths in hurling and other athletic exercises. They march in procession, two abreast, and in three divisions ; the young men in the van and the rear, dressed in white or other gay-coloured jackets or vests, and decorated with ribbons on their hats and sleeves ; the young women are dressed also in light-coloured garments, and two of them bear each a holly bush, in which are hung several new hurling balls, the May-day present of the girls to the youths of the village. The bush is decorated with a profusion of long ribbons or paper cut in imitation, which adds greatly to the gay and joyous, yet strictly rural, appearance of the whole. The procession is al- ways preceded by music; sometimes of the bag- pipe, but more commonly of a military fife, with the addition of a drum or tamboureen. A clown is, of course, in attendance : he wears a fright- ful mask, and bears a long pole, with shreds of cloth nailed to the end of it, like a mop, which ever and anon he dips in a pool of water, or puddle, and besprinkles such of the crowd as press upon his companions, much to the delight of the younger spectators, who greet his exploits with loud and repeated shouts and laughter. The Mummers, during the day, parade the neighbouring villages, or go from one gentleman's seat to another, dancing before the mansion- house, and receiving money. The evening, of course, terminates with drinking. May-eve is considered a time of peculiar danger. The ' good people,' are supposed then to possess the power and the inclination to do all sorts of mis- chief without the slightest restraint. The ' evil eye ' is then also deemed to have more than its usual vigilance and malignity ; and the nurse who would walk in the open air with a child in her arms, would be reprobated as a monster. Youth and loveliness are thought to be especially exposed to peril. It is therefore a natural con- sequence, that not one woman in a thousand ap- pears abroad : but it must not be understood that the want of beauty affords any protection. The grizzled locks of age do not always save the cheek from a blast; neither is the brawny hand of the roughest ploughman exempt from a similar visitation. The blast is a large round tumour, which is thought to rise suddenly upon the part affected, from the baneful breath cast on it by one of the ' good people' in a moment of vindictive or capricious malice. May-day is called la na Beal tina, and May-eve neen na Beal tina, — that is, day and eve of Deal's fire, from its having been in heathen times, conse- crated to the god Beal, or Belus ; whence also the month of May is termed in Irish ' Mi na Beal-tine.' The ceremony practised on May- eve, of making the cows leap over lighted straw, or faggots, has been generally traced to the wor- ship of that deity. It is now vulgarly used in order to save the milk from being pilfered by 'the good people.' — Another custom prevalent

on May-eve is the painful and mischievous one of stinging with nettles. In the south of Ireland it is the common practice for school-boys, on that day, to consider themselves privileged to run wildly about with a bunch of nettles, striking at the face and hands of their companions, or of such other persons as they think they may ven- ture to assault with impunity."

This ancient custom, like many others among the ancient Britons, is annually growing into disuse. The decline of sports and pastimes is in every age a subject of regret. For in a civil point of view, they denote the general prosperity, natural energy, and happiness of the people, consistent with morality, and combined with that spirit of true religion, which unlike the howling of the dismal hyaena or ravening wolf, is as a lamb sportive and innocent, and as a lion magnanimous and bold !

Rogation Sunday is the fifth Sunday after Easter. " Rogation" is supplication, from the Latin rogare to beseech.

Rogation Sunday obtained its name from the succeeding Monday, Tuesday, and Wednesday, which are called Rogation-days, and were or- dained by Mammertus, archbishop of Vienne, in Dauphine; about the year 469 he caused the litanies, or supplications, to be said upon them, for deliverance from earthquakes, fires, wild beasts, and other public calamities, which are alleged to have happened in his city ; hence the whole week is called Rogation-week, to denote the continual praying.

Shepherd, in his " Elucidation of the Book of Common Prayer," mistaking Vienne for Vienna, the capital of Germany, says : " The example of Mammertus was followed by many churches in the West, and the institution of the Rogation- days soon passed from the diocese of Vienna into France, and from France into England."

Rogation-week is also called grass-week, from the appetite being restricted to salads and greens ; cross-week, from the cross being more than or- dinarily used ; procession-week, from the public processions during the period ; and gang-week, from the ganging, or going about in these pro- cessions.

The rogations and processions, or singing of litanies along the streets during this week, were practised in England till the Reformation. In 1554, the priests of queen Mary's chapel made public processions. " All the three days there went her chapel about the fields : the first day to St. Giles's, and there sung mass; the next day, being Tuesday, to St. Martin's in the Fields, and there a sermon was preached, and mass sung, and the company drank there; the third day to Westminster; where a sermon was made, and then mass and good cheer made ; and after, about the park, and so to St.

James's court. The same Rogation-week went out of the Tower, on procession, priests and clerks, and the lieu- tenant with all his waiters; and the axe of the Tower borne in procession : the waits attended. There joined in this procession the inhabitants of St. Katharine's, Radcliff, Limehouse, Poplar, Stratford, Bow, Shoreditch, and all those that belonged to the Tower, with their halberts. They

went about the fields of St. Katharine's, and the liberties." On the following Thursday, " Being Holy Thursday, at the court of St. James's, the queen went in procession within St. James's, with heralds and Serjeants of arms, and four bi- shops mitred; and bishop Bonner, beside his mitre, wore a pair of slippers of silver and gill, and a pair of rich gloves with ouches of silver upon them, very rich."

The effect of processions in the churches, must have been very striking. A person sometimes inquires the use of a large portion of unappro- priated room in some of our old ecclesiastical edifices; he is especially astonished at the enor- mous unoccupied space in a cathedral, and asks, " what is it for ?" — the answer is, at this time, nothing. But if the Stuarts had succeeded in re-establishing the catholic religion, then this large and now wholly useless portion of the structure, would have been devoted to the old practices. In that event, we should have had cross-carrying, canopy-carrying, censing, chant- ing, flower-strewing, and all the other accessories and essentials of the grand pageantry, which dis- distinguishes catholic from protestant worship. The utmost stretch of episcopal ceremonial in England, can scarcely extend to the use of an eighth part of any of our old cathedrals, each of which, in every essential particular as a building, is papal.

Mr. Fosbroke remarks that the feast of Whit- suntide was celebrated in Spain with represen- tations of the gift of the Holy Ghost, and of thunder from engines, which did much damage. Wafers, or cakes, preceded by water, oak-leaves, or burning torches, were thrown down from the church roof; small birds, with cakes tied to their legs, and pigeons were let loose ; some- times there were tame white ones tied with strings, or one of wood suspended. A long censer was also swung up and down. In an old Computus, anno 1509, of St. Patrick's, Dublin, we have 4s. 7d. paid to those playing with the great and little angel, and the dragon ; 3s. paid for little cords employed about the Holy Ghost ; 4s. 6d. for making the angel (thuiificuntis) censing, and 2s. 2d, for cords of it — all on the feast of Pentecost. On the day before Whitsun- tide, in some places, men and boys rolled them- selves, after drinkintr, 8cc. in the mud in the streets. The Irish kept the feast with milk food, as among the Hebrews; and a breakfast com- posed of cake, bread, and a liquor made by hot water poured on wheaten bran. The Whitson Ales were derived from the Agapai, or love-feasts of the

early Christians, and were so denominated from the churchwardens buying, and laying in, from presents also, a large quantity of malt, which they brewed into beer, and sold out in the church or elsewhere. The profits, as well as those from sundry games, there being no poor rates, were given to the poor, for whom this was one mode of provision, according to the Christian rule that all festivities should be rendered inno- cent by alms. Aubrey thus describes a Whitson Ale. " In every parish was a church-house, to which belonged spits, crocks, and other utensils for dressing provisions. Here the housekeepers

met. The young people were there too, and had dancing;, bowling, shooting at butts, &c. the ancients sitting gravely by, and looking on." It seems too that a tree was erected by the church door, where a banner was placed, and maidens stood gathering contributions. An arbour, called Robin Hood's Bower, was also put up in the church-yard. The modern Whitson Ale consists of a lord and lady of the ale, a steward, sword- bearer, purse-bearer, mace-bearer, train-bearer, or page, fool, and pipe and tabor man, with a company of young men and women, who dance in a barn.

May the 29th is called Restoration Day : it is so called from its being the anniversary of the day whereon king Charles II. entered London, in 1660, and re-established royalty, which had been suspended from the death of his father. It is usual with the vulgar people to wear oak- leaves in their hats on this day, and dress their horses' heads with them. This is in commemc-ration of the shelter afforded to Charles by an oak while making his escape from England, after his defeat at Worcester, by Cromwell. The battle was fought on the 3d of September, 1 65 1 ; Cromwell having utterly routed his army, Charles left Worcester at six o'clock in the afternoon, and without halting, travelled about twenty-six miles, in company with fifty or sixty of his friends, from whom he separated, without com- municating his intentions to any of them, and went to Boscobel, a lone house in the borders of of Staffordshire, inhabited by one Penderell, a farmer, to whom he intrusted himself. This man, assisted by his four brothers, clothed the king in a garb like their own, led him into the neigh- bouring wood, put a bill into his hand, and pre- tended to employ themselves in cutting faggots. Some nights he lay upon straw in the house, and frd on such homely fare as it afforded. For better concealment, he mounted upon an oak, where he sheltered himself among the leaves and branches for twenty-four hours. He saw several soldiers pass by. All of them were in- tent in search of the king ; and some expressed, in his hearing, their earnest wishes of seizing him. This tree was afterwards denominated the Royal Oak ; and for many years

was regarded by the neighbourhood with great veneration.

In the Romish church, on Trinity Sunday, there was a splendid festival, with processions and services peculiar to its celebration; devo- tions were daily addressed to every person of the Trinity: as the other festivals commemorated the Unity in Trinity, so this commemorated the Trinity in Unity.

In the Lambeth accounts are churchwardens' charges for garlands and drink for the children, for garnishing-ribbons, and for singing men in the procession on Trinity-Sunday-even.

It is still a custom of ancient usage for the judges and great law-officers of the crown, to- gether with the lord mayor, aldermen, and com- mon council, to attend divine service at St. Paul's cathedral, and hear a sermon which is al- ways preached there on Trinity Sunday by the lord mayor's chaplain. At the first ensuing meeting of the common council, it is usual for

that court to pass a vote of thanks to the chap- lain for such sermon, and order the same to be printed at the expense of the corporation, unless, as sometimes has occurred, it contained senti- ments obnoxious to their views.

The maritime corporation of the Brethren of the Trinity-house, according to their charter, meet annually on Trinity Monday, in their hospital for decayed sea-commanders and their widows at Deptford, to choose and swear in a master, wardens, and other officers, for the year ensuing. The importance of this institution to the naval interests of the country, and the active duties re- quired of its members, are of great magnitude, and hence the master has usually been a noble- man of distinguished rank and statesman-like qualities, and his associates are always experi- enced naval officers.

The grand festival of Mysteries, in the Romish church, is held on the Thursday next after Trinity Sunday, in which order it also stands in the church of England calender, and in the Eng- lish almanacs. It celebrates the doctrine of transu Instantiation. In all Roman catholic coun- tries it is observed with music, lights, flowers strewed in the street, rich tapestries hung upon the walls, and with other demonstrations of re- joicing: this is the usage still. Anciently in this country, as well abroad, it was the custom to perform plays on this day, representing scrip- ture subjects. The religious plays performed on Corpus Christi Day, in the times of superstition, were such as were represented at other periods, though with less ceremony

Corpus Christi day, at Newcastle-upon-Tyne, was celebrated with similar exhibitions by the incorporated trades. The earliest mention of the

performance of mysteries there, is in the ordinary of the coopers for 1426. In 1437, the barbers played the " Baptizing of Christ." In 1568, the " Offering of Abraham and Isaac " was exhibited by the slaters. About 1578, the Corpus Christi plays were on the decline, and never acted but by a special command of the magistrates of Newcastle. They are spoken of as the general plays of the town of Newcastle, and when thought necessary by the mayor to be set forth and played, the millers were to perform the " Deliverance of Israel ;" the house-car- penters, the " Burial of Christ ;" the masons, the " Burial of our lady Saint Mary the Virgin." Between the first and last mentioned periods, there are many minutes in the trades' books of the acting in different years. • •

Concerning the Coventry mysteries, Dugdale relates, in his " History of Warwickshire," pub- lished in 1656, that, " Before the suppression of the monasteries, this city was very famous for the pageants that were played therein, upon Corpus Christi day (one of their ancient faires,) which, occasioning very great confluence of peo- ple thither from far and near, was of no small benefit thereto : which pageants being acted with mighty state and reference by the Grey Friars, had theatres for the several scenes, very large and high, placed upon wheels, and drawn to all the eminent parts of the city, for the better ad- vantage of spectators, and contained the story of

the Old and New Testament, composed in the Old Englishe rithme, as appeareth by an ancient MS. (in Bibl. Cotton. Vesp. D. VIII.) intituled, Ludus Corparis Christi, or Ludus Coventrin. 1 1 have been told,' says Dugdale, ' by some old people, who in their younger years were eye-witnesses of these pageants so acted, that the yearly confluence of people to see that shew was extraordinary great, and yielded no small advan- tage to this city.' The celebrity of the perform- ances may be inferred from the rank of the audiences ; for, at the festival of Corpus Christi, in 1483, Richard III. visited Coventry to see the plays, and at the same season in 1 492, they were attended by Henry VII. and his queen, by whom they were highly commended."

The mysteries were acted at Chester, by the trading companies of the city. " Every com- pany had his pagiante, or parte, which pagiantes were a highe scafolde with two rowmes, a higher and a lower upon four wheeles. In the lower they apparelled themselves, in the higher rowme they played, being all open on the tope, that all behoulders might hear and see them. The places where they played them was in every streete. They begane first at the

Abay gates, and when the pagiante was played, it was wheeled to the High-cross before the mayor, and so to every streete ; and so every streete had a pagiante playing before them, till all the pagiantes for the daye appointed were played, and when one pagiante was neer ended, worde was broughte from streete to streete, that soe the miglite come in place thereof, excedinge orderlye, and all the streetes had their pagiante afore them, all at one time, playing together, to se which playes was great resorte, and also scafoldes, and stages made in the streetes, in those places where they deter- mined to playe their pagiantes."

St. Barnabas the apostle was of the tribe of Levi, and coadjutor with the apostle Paul for several years. Though denominated an apostle, it seems agreed that he was not entitled to that character ; if he were, his extant epistle would have equal claim with the writings of the other apostles to a place among the books in the New Testament. He is said to have been martyred, but of this there is not sufficient evidence.

St. Barnabas' Day was a high festival in Eng- land formerly.

Besides the holy thorn, there grew in the ab- bey churchyard of Glastonbury, on the north side of St. Joseph's chapel, a miraculous walnut-tree, which never budded forth before the fepst of St. Barnabas, viz. the eleventh of June, and on that very day shot forth leaves, and flourished like its usual species. This tree is gone, and in the place thereof stands a very fine walnut-tree of the common sort. It is strange to say how much this tree was sought after by the credu- lous; and, though not an uncommon walnut, queen Anne, king James, and many of the no- . bility of the realm, even when the times of monkish superstition had ceased, gave large sums of money for small cuttings from the ori- ginal.

The summer solstice has been celebrated throughout all ages by the lighting up of fires, and hence on "St. John's eve," or the vigil of the

festival of St. John the Baptist, there have been popular ceremonials of this kind from the earliest times of the Romish church to the present. Be- fore, however, particularizing any of these cele- brations, it may be worth while to notice the following practice, which is still maintained on Midsummer-eve, in Ireland. At Stoole, near Downpatrick, in the north of Ireland, there is a ceremony, commencing at twelve o'clock at night on every Midsummer-eve. — Its sacred mount is consecrated to St. Patrick : the plain contains three wells, to which the most extraordinary vir- tues are attributed. Here and there are heaps of stones, around some of which appear great numbers of people running with as much speed as possible; around others, crowds of worshippers kneel with bare legs and feet as an indispensa- ble part of the penance. The men, without coats, with handkerchiefs on their heads

instead of hats, having gone seven times round each heap, kiss the ground, cross themselves, and proceed to the hill ; here they ascend on their bare knees, by a path so steep and rugged that it would be difficult to walk up : many hold their hands clasped at the back of their necks, and several carry large stones on their heads. Having repeated this ceremony seven times, they go to what is called St. Patrick's chair, which are two great flat stones fixed upright in the hill ; here they cross and bless themselves as they step in between these stones, and while re- peating prayers, an old man, seated for the pur- pose, turns them round on their feet three times, for which he is paid ; the devotee then goes to conclude his penance at a pile of stones named the altar. While this busy scene of superstition is continued by the multitude, the wells, and streams issuing from them, are thronged by crowds of halt, maimed, and blind, pressing to wash away their infirmities with water conse- crated by their patron saint ; and so powerful is the impression of its efficacy on their minds, that many of those who go to be healed, and who are not totally blind, or altogether crippled, really believe for a time that they are, by means of its miraculous virtues, perfectly restored. These effects of a heated imagination are received as unquestionable miracles, and are propagated with abundant exaggeration.

Setting the watch in London on St. John's Eve is a custom. The curfew-bell, commanded by William Conqueror to be nightly rung at eight of the clock, as a warning, or command, that all people should then put out their fires and lights, was continued throughout the realm till the time of Henry the First, when Stow say, that it followed, "by reason of warres within the realme, that many men gave themselves to robbery and murders in the night." Stow then recites from an ancient chronicler, Roger Hoveden, that in the yeare 1175, during the time of a council held at Nottingham, a brother of the earle Ferrers, was " in the night privily slaine at London, and1 thrown out of his inne into the durty street ; when the king understood thereof he sware that he would be revenged on the citizens. It was then a common practice in this city, that a hundred or more in a company,*

young and old, would make nightly invasions upon houses of the wealthy, to the intent to rob them ; and if they found any man stirring in the city within the night, that were not of their crue, they would presently murder him : insomuch that when night was come, no man durst adventure to walk in the streets. When this had continued long, it fortuned, that a crue of young and wealthy citizens assembling together in the night, assaulted a stone house of a certaine rich man, and breaking through the wall, the

good man of that house having prepared himself with other in a corner, when hee perceived one of the theeves, named Andrew Bucquint, to lead the way, with a burning brand in the one hand, and a pot of coles in the other, which hee assaied to kindle with the brand, he flew upon him, and smote off his right hand, and then with a loud voyce cryed ‘ theeves.’ At the hearing whereof, the theeves took their flight, all saving he that had lost his hand, whom the good man (in the next morning) delivered to Richard de Lucie, the king’s justice. This theefe, upon warrant of his life, appeached his confederates of whom many were taken, and many were fled. Among the rest that were ap- prehended, a certaine citizen of great counte- nance, credit, and wealth, named John Senex, who for as much as he could not acquit him- selfe by the water-doome (as that law was then tearmed) hee offered to the king five hundred pounds of silver for his life. But forasmuch as he was condemned by judgement of the water, the king would not take the offer, but com- manded him to be hanged on the gallowes, which was done, and then the city became more quiet for a long time after.”

It appears that the city of London was subject to these disorders till 1253, when Henry III. commanded watches to be kept in the cities, and borough towns, for the preservation of the peace; and this king further ordained ” that if any man chanced to be robbed, or by any means damni- fied, by any theefe or robber, he, to whom the charge of keeping that county, city, or borough, chiefly appertained, where the robbery was done, should competently restore the losse.” In similar popular customs originated the present nightly watch in London.

The practice of setting the watch at Notting- ham, on St.. John’s eve, was maintained until the reign of Charles I., the manner whereof is thus described : —

” In Nottingham, by an ancient custom, they keep yearly a general watch every Midsummer eve at night, to which every inhabitant of any ability sets forth a man, as well voluntaries as those who are charged with arms, with such mu- nition as they have; some pikes, some muskets, calivers, or other guns, some partisans, halberts, and such as have armour send their servants in their armour. The number of these are yearly almost two hundred, who, at sun-setting, meet on the Row, the most open part of the town, where the mayor’s serjeant at mace gives them an oath, the tenure whereof followeth, in these words : ‘ They shall well and truly keep this town till to-morrow at the sun-rising ; you shall come into no house without license, or cause reasonable. Of all manner of casualties, of fire,

of crying of children, you shall due warning make to the parties, as the case shall require you. You shall due search make of all manner of affrays, bloud-sheds, outcrys, and of all other things that be suspected,’ &c. Which

done, they all march in orderly array through the prin- cipal parts of the town, and then they are sorted into several companies, and designed to several parts of the town, where they are to keep the watch until the sun dismiss them in the morning. In this business the fashion is for every watch- man to wear a garland, made in the fashion of a crown imperial, bedeck'd with flowers of various kinds, some natural, some artificial, bought and kept for that purpose ; as also ribbans, jewels, and for the better garnishing whereof, the towns- men use the day before to ransack the gardens of all the gentlemen within six or seven miles about Nottingham, besides what the town itsell affords them, their greatest ambition being to outdo one another in the bravery of their gar- lands." So pleasant a sight must have been reluctantly parted with ; and accordingly in an- other place we find that this Midsummer show was held at a much later period than at Notting- ham, and with more pageantry in the procession.

The annual setting 0? the watch on St. John's eve, in the city of Chester, was an affair of great moment. By an ordinance of the mayor, alder- men, and common councilmen of that corpora- tion, da'ed in the year 1564, and preserved among the Harleian MSS. in the British Museum, a pageant which is expressly said to be "accord- ing to ancient custom," is ordained to consist of four giants, one unicorn, one dromedary, one camel, one luce, one dragon, and six hobby- horses with other figures. By another MS. in the same library it is said, that Henry Hard- ware, Esq., the mayor, in 1599, caused the giants in the Midsummer show to be broken, " and not to goe the devil in his feathers ;" and it appears that he caused a man in complete armour to go in their stead : but in the year 160), John Ratclyffe, beer-brewer, being mayor, set out the giants and Midsummer show as of old it was wont to be kept. In the time of the commonwealth the show was discontinued, and the giants with the beasts were destroyed.

At the restoration of Charles II., the citizens of Chester replaced their pageant, and caused all things to be made new, because the old models were broken.

St. Swithin was of noble parentage, and also called Swithnn, or in the Saxon language Swith- um. He received the tonsure in the church at Winchester, and became a monk in the old mon- astery there, of which, after being ordained priest, he was made provost or dean. He studied gram- mar, philosophy, and theology. For his learning and virtue, Egbert, king of England, appointpd him his priest, in which character he subscribed a charter to the abbey of Croyland, in 833. Eg- bert also committed to him the education of his son Ethelwolfe, who on succeeding to the throne procured Swithin to be chosen bishop of Win- chester in 852.

"If it rains on St. Swithin's day, there will he rain the next forty days

afterwards." The

occasion of this old and well-known saying is obscure. In Mr. Douce's interleaved copy of Brand's " Popular Antiquities," there is a printed statement, " seemingly cut out of a newspaper," cited, in the last edition of Mr. Brand's work, thus: — "In the year 865, St. Swithin, bishop of W inchester, to which rank he was raised by king Ethelwolfe, the Dane, dying, was canonized by the then pope. He was singular for his desire to be buried in the open church-yard, and not in the chancel of the minster, as was usual with other bishops, which request was complied with; but the monks, on his being canonized, taking it into their heads that it was disgraceful for the saint to lie in the open church-yard, resolved to remove his body into the choir, which was to have been done with solemn procession on the 1 5th of July. It rained, however, so violently on that day, and for forty days succeeding, as had hardly ever been known, which made them set aside their design as heretical and blasphe- mous: and, instead, they erected a charel over his grave, at which many miracles are said to have been wrought."

St. Ouen was in great credit with king Clo- taire II. and his successor Dagobert I. of France, who made him keeper of his seal, and chancellor, and he became archbishop of Rouen, in Nor- mandy. Butler refers to a long history of mira- cles performed by the intercession and relics of St. Ouen. The shrine of this saint, at Rouen, had a privilege which was very enviable; it could once in a year procure the pardon of one criminal condemned to death in the prisons of that city : the criminal touched it, and pardon was imme- diate.

In all civilised countries justice has been tem- pered with mercy ; and, where the life could not be spared, the pain of the punishment has been mitigated. Wine mingled with myrrh was known amongst the Jews for this purpose, and was offered to the Saviour of mankind by the very persons who hurried him on to his painful and ignominious death. In many cities of Italy a condemned criminal is visited by the first no- bility the night before his execution, and supplied with every dainty in meat and drink that he can desire; and some ytars ago, in the parish of St. Giles in the Fields, wine mixed with spices was presented to the poor condemned wretches in that part of their progress from Newgate to Ty- burn. St. Ouen's festival is observed on the 24th of August.

St. Giles is mentioned in the church of Eng- land calendar. He was born at

Athens, and came into France in 715, having first disposed of his patrimony to charitable uses. After living two years with Caesarius, bishop of Aries, he commenced hermit, and so continued till he was made abbot of an abbey at Nismes, which the king built for his sake. He died in 750.

St. Giles is the patron of beggars. Going to church in his youth, he gave his coat to a sick beggar who asked alms of him, the mendicant was clothed, and the garment miraculously cured his disorder. He was also the patron of cripples. After he had retired to a cave in a solitary desert,

the French king was hunting near his thicket, and Giles was wounded by an arrow from a huntsman's bow while at prayers; whereupon being found unmoved from his position, the king fell at his feet, craved his pardon, and gave orders for the cure of his wound, but this the saint would not permit, because he desired to suffer pain and increase his merits thereby, and so he remained a cripple, and received reverence from the king, whom he counselled to build a mo- nastery ; and the king did so, and Giles became abbot thereof, " and led the life of an angel in- carnate," and converted the king. It is related of him that he raised the dead son of a prince to life, and made a lame man walk : our church of St. Giles, Cripplegate, is dedicated to him. It is further told, that at Rome he cast two doors of cypress into the Tiber, and recommended them to heavenly guidance, and on his return to France found them at the gates of his monastery, and set them up as the doors of his own church. These are some only of the marvels gravely told of him, " many wytnisse that they hercle the com- pany of aungelles berynge the soule of hym into heven."

On St. James's Day, the 25th of July, oysters come in ; by act of parliament they are prohibited until its arrival. It is a vulgar superstition, that whoever eats oysters on St. James's day will never want money. The indifference to industry which such notions engender in many minds, can he testified by some of themselves, who falsify the frivolous legend by their present abodes in workhouses.

Apples were blessed on this day by the priest. There is a special form for blessing them in the manual of the church of Sarum. A greater blessing is conferred at Cliff, in Kent, by the rector there: by an old custom he distributes "at his parsonage-house on St. James's day, annually, a mutton pye and a loaf to as many as choose to demand it, the expence of which amounts to about 15/. per annum."

Lammas-day, the first of August in our Eng- lish almanacs, and in the printed Saxon Chron- icle. " Antiquaries are divided in their opinions concerning the origin of Lammas-Day ; some derive it from Lamb-Mass, because on that day the tenants who held lands under the cathedral church

in York, which is dedicated to St. Peter ad Vincula, were bound by their tenure to bring a live lamb into the church at high mass : others derive it from a supposed offering or tything of lambs at this time." Various other derivations have been imagined. Blount, the glossographer, says, that Lammas is called Hlaf-Mass, that is Loaf-Mass, or Bread-Mass, which signifies a feast of thanksgiving for the first fruits of the corn. It was observed with bread of new wheat, and in some places tenants are bound to bring new wheat to their lord, on, or before, the first of August. New wheat is called Lammas-Wheat. Vallencey affirms that this day was dedicated, in Ireland, to the sacrifice of the fruits of the soil ; that La-ith-mas the day of the obligation of grain, is pronounced La-ee-mas, a word readily cor- rupted to Lammas; that ith, signifies all kinds

of grain, particularly wheat, arid that mas signi- fies fruit of all kinds, especially the acorn, whence the word mast. From these explications may easily be derived the reasonable meaning of the word Lammas.

Michaelmas is noticed by Mr. Brand in his "Popular Antiquities," which cites most of the circumstances presently referred to, that — " It has long been and still continues the custom at this time of the year, or thereabouts, to elect the governors of towns arid cities, the civil guardians of the peace of men, perhaps, as Bourne sup- poses, because the feast of angels naturally enough brings to our minds the old opinion of tutelar spirits, who have, or are thought to have, the particular charge of certain bodies of men, or districts of country, as also that every man has his guardian angel, who attends him from the cradle to the grave, from the moment of his coming in, to his going out of life."

Mr. Brand notices the English custom of ha- ving a roast goose for dinner on Michaelmas-day. He cites Blount as telling us that "goose-in- tentos," is a word used in Lancashire, where " the husbandmen claim it as a due to have a goose intentos on the sixteenth Sunday after Pen- tecost ; which custom took origin from the last word of the old church-prayer of that day : ' Tua, nos quaesumus, Domine, gratia semper praeveniat et sequitur; ac bonis operibus jugiter prsestetesse intentos.' The common people very humourously mistake it for a goose with ten toes." To this Mr. Brand objects, on the authority of Beckwith, in his new edition of the " Jocular Tenures :" that "besides that the sixteenth Sunday after Pentecost, or after Trinity rather, being move- able, and seldom falling upon Michaelmas-day, which is an immoveable feast, the service for that day could very rarely be used at Michael- mas, there does not appear to be the most distant allusion to a goose in the words of that prayer. Probably no other reason can be given for this custom, but that Michaelmas-day was a great festival, and

geese at that time most plentiful. In Denmark, where the harvest is later, every family has a roasted goose for supper on St. Martin's Eve."

Mr. Douce is quoted by Mr. Brand, as saying, "I have somewhere seen the following reason for eating goose on Michaelmas-day, viz. that queen Elizabeth received the news of the defeat of the Spanish Armada, whilst she was eating a goose on Michaelmas-day, and that in comme- moration of that event she ever afterwards on that day dined on a goose." This Mr. Brand regards as a strong proof that the custom pre- vailed even at court in queen Elizabeth's time; and observing that it was in use in the tenth year of king Edward the Fourth, as will be shewn presently, he represents it to have been a prac- tice in queen Elizabeth's reign, before the event of the Spanish defeat, from the " Posies of Gas- coigne," published in 1575.

" And when the tenauntes(come

to paie their quarter's rent, They bring some fowle at Midsummer,

a dish of fish in Lent,

" At Christmasse a capon,

at Michaelmasse A GOOSE ; And somewhat else at New-yeres tide,

forfeare their lease flie looie."

Gascoyne.

Michaelmas-day is one of the "four usual quarter-days, or days for the payment of rent in the year."

The festival of St. Remigius, the first of Octo- ber, is another in the church of England calendar and the almanacs. He was bishop or archbishop ofllheims, and the instructor of Clovis, the first king of the Franks who professed Christianity ; Remigius baptized him by trine immersion. The accession of Clovis to the church, is deemed to have been the origin of the " most Christian king," and the " eldest son of the church," which the kings of France are stiled in the present times.

The beadles and servants of the worshipful company of sailers are to attend divine service at St. Magnus church, London-bridge, pursuant to the will of Sir John Salter, who died in the year 1605; who was a good benefactor to the said company, and ordered that the beadles and ser- vants should go to the said church the first week in October, three times each person, and say, " How do you do brother Salter ? 1 hope you are well !"

The name of St. Luke the evangelist is in the church of England calendar and almanacs on the 18th of October, which was appointed his festival by the Romish church in the twelfth century. As a more convenient occasion will occur for a suit- able notice of his history and character, it is deferred till then. It is presumed that he died about the year 70, in the eighty-fourth year of his age, having written his gospel about seven or eight years before.

At the pleasant village of Charlton, on the north side of Blackheath, about eight miles from London, a fair is held annually en St. Luke's day, the 18th of October. It is called "Horn Fair," from the custom of carrying horns at it formerly and the frequenters still wearing them. £ foreigner, travelling in England in the year 1598. mentions horns to have been conspicuously dis played in its neighbourhood at that early period " Upon taking the air down the river (from Lot1 don), on the left hand lies Ratcliffe, a conside able suburb. On the opposite shore is fixed i long pole with rams-horns upon it, the intentic o of which was vulgarly said to be a reflection upi n wilful and contented cuckolds."

"A sermon," says Mr. Brand, "is preached at Charlton church on the fair-day." This sermon is now discontinued on the festival day : the practice was created by a bequest of twenty shillings a year to the minister of the parish fri preaching it.

Respecting the 31st of October, which is th< vigil of All Saints-day, Mr. Brand has collecte'.' many notices of customs; to him therefore w are indebted for the following particulars : —

On this night young people in the north v7 England dive for apples, or catch at them, wh^: stuck upon one end of a kind of hanging bean .,

at the other extremity of which is fixed a lighted candle. This they do with their mouths only, their hands being tied behind their backs. From the custom of flinging nuts into the fire, or cracking them with their teeth, it has likewise obtained the name of nutcrack night. In an ancient illuminated missal in Mr. Douce's col- lection, a person is represented balancing him-self upon a pole laid across two stools ; at the end of the pole is a lighted candle, from which he is endeavouring to light another in his hand, at the risk of tumbling into a tub of water placed under him. A writer, about a century ago, says, " This is the last day of October, and the birth of this packet is partly owing to the affair of this night. I am alone ; but the servant having demanded apples, ale and nuts, I took the op- portunity of

running back my own annals of Allhallows Eve ; for you are to know, my lord, that I have been a mere adept, a most famous artist, both in the college and country, on occa- sion of this anile, chimerical solemnity."

The fifth of November is a great day in the calendar of the church of England : it is duly noticed by the almanacs, and kept as a holiday at the public offices. In the " Common Prayer Book," there is " A form of Prayer with Thanks- giving, to be used yearly upon the Fifth day of November ; for the happy deliverance of King James I., and the three Estates of England, from the mostTraitorous and bloody-intended Massacre by Gunpowder : And also for the happy arrival of his late Majesty (King William III.) on this day, for the deliverance of our church and nation."

The ninth of November is commonly called the Lord Mayor's Day. The procession of the cor- poration of London to Westminster on the oc- casion of the new lord mayor being sworn into office, is familiar to most residents in the metro- polis, and the journals annually record the pro- cessions and festivals in the Guildhall, sufficiently to acquaint those who have not witnessed them with the nature of the proceedings. It is not purposed then, for the present, to describe what passes in our own times, but to acquaint the ci- tizens and all who feel an interest in ancient customs, with something of the splendour atten- dant upon the ceremony in old times.

In 1 575, " William Smy the, citizen and haber- dasher of London," wrote " A breffe description of the Royall Citie of London, capitall citie of this realme of England." This manuscript which is in existence sets forth as follows :

The day of St. Simon and St. Jude, the mayor enters into his state and office. The next day he goes by water to Westminster in most triumphant-like manner, his barge being gar- nished with the arms of the city ; and near it a ship-boat of the queen's majesty being trimmed up and rigged like a ship of war, with divers pieces of ordnance, standards, pennons, and targets of the proper arms of the said mayor, of his com- pany, and of the merchants' adventurers, or of the staple, or of the company of the new trades ; next before him goeth the barge of the livery of his own company, decked with their own proper arms ; then the bachelors' barge ; and so all the

companies in London, in order, every one having their own proper barge, with the arms of their company. And so passing along the Thames, he landeth at Westminster, where he taketh his oath in the exchequer before the judge there ; which done he returneth by water as aforesaid, and landeth at Paul's wharf, where he, and the rest of the aldermen, take their horses, and in tjreat pomp pass through Cheapside. And first of all cometh

two great standards, one having the arms of the city, and the other the arms of the mayor's company : next them two drums and a flute, then an ensign of the city, and then about Ixx or Ixxx poore men marching two and two, in blue gowns, with red sleeves and caps, every one bearing a pike and a target, whereon is painted the arms of all them that have been mayors of the same company that this new mayor is of. Then two banners, one of the king's arms, the other of the mayor's own proper arms. Then a set of hautboys playing . and after them certain wyfflers, in velvet coats and chains of gold, with white staves in their hands; then the Pageant of Triumph richly decked, whereupon by certain figures and writings, some matter touching justice and the office of a magistrate is represented. Then sixteen trumpeters, eight and eight, having banners of the mayor's company. Then certain wyfflers in velvet coats and chains, with white staves as before. Then the bachelors, two and two, in long gowns, with crimson hoods on their shoulders of satin ; which bachelors are chosen every year of the same company that the mayor is of (but not of the living), and serve as gentlemen on that and other festival days, to wait on the mayor, being in number according to the quantity of the company, sometimes sixty, or one hundred. After them twelve trumpeters more, with banners of the mayor's company; then the drum and flute of the city, and an en- sign of the mayor's company ; and after, the waits of the city in blue gowns, red sleeves and caps, every one having a silver collar about his neck. Then they of the livery in their Ion? gowns, every one having his hood on his left shoulder, half-black and half-red, the number of them according to the greatness of the company whereof they are. After them follow sheriff's officers, and then the mayor's officers, with other officers of the city, as the common serjeant, and the chamberlain ; next before the mayor goeth the sword-bearer, having on his head the cap of honour, and the sword of the city in his right hand, in a rich scabbard, set with pearl, and on his left hand goeth the common crier of the city, with his great mace on his shoulder all gilt. The mayor hath on a long gown of scarlet, and on his left shoulder a hood of black velvet, and a rich collar of gold of SS. about his neck, and with him rideth the old mayor also, in his scar- let gown, hood of velvet, and a chain of gold about his neck. Then all the aldermen, two and two (among whom is the recorder), all in scarlet gowns ; those that have been mayors have chains of gold, the others have black velvet tippets. The two sheriffs come last of all, in their black scarlet gowns and chains of gold. In this order they pass along through the city to the Guildhall, where they dine that day, to the number of one

thousand persons, all at the charge of the mayor and the two sheriffs. This

feast costeth 400/., whereof the mayor payeth 200/. and each of the sheriffs 100Z. Immediately after dinner, they go to St. Paul's church, every one of the aforesaid poor men bearing staff, torches, and targets, which torches are lighted when "it is late, before they come from evening prayer." In more ancient times, the procession to and from Westminster was by land; until in 1453, sir John Norman built a sumptuous barge at his own expense, for the purpose of going by water, whereupon water- men made a song in his praise, beginning, " Row thy boat, Norman." The twelve companies emulating their chief have, from that period, graced the Thames on lord mayor's day.

The first account of this annual exhibition known to have been published, was written by George Peele, for the inauguration of sir Wol- stone Dixie, knight, on the 29th of October, 1585. On that occasion, as was customary to the times, there were dramatic representations in the pro- cession— of an allegorical character. Children were dressed to personify the city, magnanimity, loyalty, science, the country, and the river Thames. They also represented a soldier, a sailor, and nymphs, with appropriate speeches. The show opened with a moor on the back of a lynx. On sir Thomas Middleton's mayoralty, in 1613, the solemnity is described as unparalleled for the cost, art, and magnificence of the shows, pageants, chariots, morning, noon, and night triumphs. In 1655 the city pageants, after a discontinuance of about fourteen years, were revived. Edmund Gayton, the author of the description for that year, says, that " our metropolis for these pla- netary pageants, was as famous and renowned in foreign nations, as for their faith, wealth, and va- lour." In the show of 1659, an European, an Egyptian, and a Persian, were personated. On lord mayor's day, 1671, the king, queen, and duke of York, and most of the nobility being pre- sent, there were " sundry shows, shapes, scenes, speeches, and songs, in parts;" and the like, in 1672, and 1673, when the king again " graced the triumphs." The king, queen, duke and duchess of York, prince Rupert, the duke of Mon- mouth, foreign ambassadors, the chief nobility, and secretary of state, were at the celebration of lord mayor's day, in 1674, when there were " emblematical figures, artful pieces of architec- ture, and rural dancing, with pieces spoken on each pageant."

The printed description of these processions are usually entitled " Triumphs," though they are more commonly called " The London Pa- eants," all of them are scarce, and some of such extreme rarity, as to bear a price at the rate of two and three guineas a leaf. The description of sir Patience Ward's show, on the 29th of Oc- tober, 1 680, composed by Thomas Jordan, is an interesting specimen of the setting out and pa- geantry of this procession. The lord mayor being of the livery of the merchant-tailors' company, at seven o'clock in the morning, liverymen of the first rank, appointed to conduct the business of the day, assembled at

merchant-tailors' hall, to meet the masters, wardens, and assistants, in their gowns, faced with foyns (the skin of the martin).

In the second rank, others in gowns faced with budge (lamhs'skin with the wool dressed out wards) and livery-hoods. In the third rank, a number of foyns-bachelors, and forty budge-ba- chelors, both attired in scarlet hoods and gowns. Sixty gentlemen-ushers, in velvet coats and chains of gold, bearing white staves. Thirty more in plush and buff, bearing colours and banners. Thirty-six of the king's trumpeters, with silver trumpets, headed by the serjeant-trumpeter, he wearing two scarfs, one the lord mayor's, and the other the company's colours. The king's drum- major, followed by four of the king's drums and fife. Seven other drums and two fifes, wearing vests of buff, with black breeches and waste scarfs. Two city marshals on horseback, with attendants. The foot-marshal ; with a rich broad shoulder-scarf, to put them in rank and file, at- tended by six others. The fence-master, with attendants, bearing bright broadswords drawn. Poor pensioners, with gowns and caps, bear- ing standards and banners. A troop of poor persons in azure gowns and caps. One hun- dred more with javelins and targets, bearing the arms of their benefactors. Being all assem- bled, they are, by the foot-marshal's judgment, arranged into six divisions, ranked out by two and two. The first division contains the ensigns of the company, followed by the poor company of pensioners. Four drums and one fife. Pen- sioners in coats as before described. Persons of worth, each bearing a standard or banner. Four trumpets. Two merchant-tailors' ensigns, bear- ing their supporters and crest. Six gentlemen- ushers. The budge-bachelors, marching in mea- sured order. Second division. Six trumpets. Two gentlemen, bearing the coats of arms of the city, and the merchant-tailor's company. Eight gentlemen, wearing gold chains. The foyns- bachelors. Third division. Two gentlemen in velvet coats with banners. Ten gentlemen-ushers in coats and chains of gold, as before described. A large body of the livery in their gowns aud livery-hoods, followed by " all lord mayors in the potential mood." In their rear divers of city trumpets. Two gentlemen bearing the arms of the city and the lord mayor. Gentlemen-ushers. The court of assistants. Four drums. Six trum- pets. Three gallants, bearing the banners of the diadem. The king's, queen's, and city's ensigns, attended by six gentlemen as pages. The masters and wardens of the merchant-tailors' company. Thus formed, they march from merchant-tailors' hall to the lord mayor's house, where his lord- ship and the aldermen take horse, according to their degree, and the whole body proceed in state to Guildhall. Being met at the gate by the old lord mayor, and there attired with the gown, fur hood, and scarf, and guarded by knights, esquires, and gentlemen, they all march through King-street down to Three-Crane-wharf, where the lord mayor and aldermen, discharging some of the attendants, take barge at the west-end of the*

wharf; the court of assistants' livery, and the best of the gentlemen-ushers taking barge at the east-end. The rest of the ushers, with the foyns and the budge-bachelors, remain ashore, with • others, to await the return of his lordship, who proceeds with several city companies by water

and is rowed all along by the Strand to West- minster ; a pleasure boat with great guns aboard saluting him on the way. At New Palace Stairs they disembark, and making a lane to the hall, the lord mayor passes along to take the oath and go through the usual ceremonies. These being completed, he makes a liberal donation to the poor of Westminster, reembarks with all his re- tinue, and, being rowed back to Blackfriars Stairs, he lands there under beat of drum and a salute of three volleys from the artillery company in their martial ornaments, some in buff, with head-pieces, many beiiig of massy silver. From Blackfriars they march before the lord mayor .and aldermen through Cheapside to Guildhall. The pensioners and banners who went not to Westminster, being set in order to march, the foot-marshal in the rear of the artillery company, leads the way along by the channel up Ludgate- hill, through Ludgate, into St. Paul's Church- yard, and into Cheapside, where his lordship is entertained by the first pageant, consisting of a large stage, with the coat armour of the mer- chant-tailors' company, eminently erected, con- sisting of a large tent royal, gules, fringed and richly garnished, or, lined, faced, and doubled, ermine. This stage is winged or flanked by two other stages, bearing two excellent figures of lively carved camels, the supporters to the com- pany's coat. On the back of one camel, a black native Indian, in a golden robe, a purple mantle fringedwith gold, pearl pendants in his ears, co- ronet of gold with feathers, and golden buskins laced with scarlet ribbon, holds a golden bridle with his left, and a banner of the company, re- presenting Treasure, in his right hand. On the other camel, a West Indian, in a robe of silver, scarlet mantle, diamonds pendant from his ears, buskins of silver, laced with purple ribbons, a golden crown feathered, holds a silver bridle in his left, and a banner of the lord mayor, repre- senting Traffic, in his right hand. On one of the camel stages four figures sit on pedestals, one at each corner, representing Diligence, Industry, Ingenuity, and Success; on the other camel- stage, in like manner, Mediocrity, Amity, Verity, Variety, all richly habited in silk or sarcenet, bear splendid emblems and banners. The royal tent, or imperial pavilion, between these two stages, is supported on one side by a minister of state representing Royalty, and on the other side by another representing Loyalty; each in rich robes of honor gules, wearing on their left arms shields azure, with this motto in gold, " For the king and kingdom," one bearing a banner of the king's, and the other one of the city's banners. On*

a high and eminent seat of throne-like ascension is seated Sovereignty, in royal posture and alone, with black curled hair, wearing an imperial crown, a robe of purple velvet, lined, faced, and caped with ermine, a collar of SS with a George pendant ; bearing in one hand a golden globe, in the other a royal sceptre. On a seat beneath, are Principality, Nobility, and Honour, all richly habited. On the next seat gradually descending beneath, are, 1. Gentility, shaped like a scholar and soldier, holding in one hand, clad with a golden gaunt- let, a silver spear, in the other a book ; 2. Inte-

grity, wearing an earl's coronet for the court, a loose robe of scarlet-coloured silk for the city, underneath a close coat of grass-green plush for the country; 3. Commonalty, as a knight of the shire in parliamentary robes. On the lowest seat, an ancient English Hero, with brown curling hair, in ancient armour, as worn by chief com- manders, the coat of mail richly gilt, crimson and velvet scarf fringed with gold, a quiver of arrows in a gold belt on one side, a sword at the other, buskins laced with silver and gold, a silver helmet with red and white plume, in one hand a large long bow, and a spear in the other. This personage, representing sir John Hawkwood, a merchant-tailor of martial renown under Edward III., when he conquered France, as soon as he perceives the lord mayor prepared, with at- tention riseth up, and with a martial bow exhi- biteth a speech in verse of thirty-seven lines, in compliment to the merchant-tailors and the lord mayor. His lordship testifying his approbation, rideth with all his brethren through the throng of spectators till, at Milk-street end, he is inter- cepted by the second pageant, which is a chariot of ovation, or peaceful triumph, adorned with delightful pieces of curious painting, and drawn by a golden lion and a lamb. On the lion is mounted a young negro prince, richly habited, according to the royal mode in India, holding a golden bridle, and in the other hand St. George's banner, representing Power. On the lamb is mounted a white beautiful seraphim-like crea- ture, with long bright flaxen curled hair, and on it a golden coronet of cherubims' heads and wings, a carnation sarcenet robe, with a silver mantle and wings of gold, silver, purple, and scarlet, reining the lamb by a silver bridle in his left hand, and with his right bearing an angelical staff, charged with a red cross, representing Clemency. In the chariot sitteth seven persons, 1. Concor- dia, 2. Unanimia, 8. Pacifica, 4. Consentania, 5. Melodia, 6. Benevolentia (whose habits, and those of other characters already and hereafter mentioned, are not described here for want of room), and 7. " Harmonia, a lady of great gra- vity, with masculine aspect, wearing a lovely dark brown peruke, curiously curled, on which is planted a crown imperial ; she wears a robe of French green velvet, pleasantly embroidered with gold, a crimson coloured silk and silver mantle, and sitting majestically alone in front, upon the approach and fixation of my lord mayor, improves the opportunity, riseth up, and deliver- eth an oration.

This consists of forty-four lines in verse, wherein she acquaints his lordship that the other characters are her attributes, recom- mends unity, because division is the policy of the pope and the Jesuits, expresses her belief that if the lion and the lamb fall out, she should run to ruin, descants upon magistrate-like virtues, and in the end tells his lordship,

You have done all things fair, no action foul ; Your sherevalry gave relish of good rule, Nor need they doubt your mayoralty, therefore, Begging your pardon, I shall say no more. This speech being concluded, his lordship exhi- biting a gracious aspect of favourable acceptation, advanceth further towards Guildhall, but is ci- villy obstructed by another scene, and, in regard

CUSTOMS.

his lordship is a merchant, and his company merchant-tailors, the Third Triumphal Scene, or Pageant, is a ship called the Patience, with masts and sails, fully ringed and manned, the captain whereof addresseth to my lord a speech begin- ning,—

What cheer, my lord ! I am returned from sea, To amplifie your day of Jubilee, In this tried vessa , &c.

His lordship having surveyed the ship, and the trumpets sounding, hecontinueth his determined course toward Guildhall, but by the way is once more obstructed by another scene, called the Palace of Pleasure, which is a triumphal Ionic arch of excellent structure, where, in distinct and perspicuous situations, sitteth nine beautiful and pleasant ladies, whose names, natures, and orna- ments are consentaneous, 1. Jollity, 2. Delight 3. Fancy, 4. Felicity, 5. Wit, 6. Invention, 7. Tu- mult, 8. Slaughter, 9. Gladness ; all of them pro- perly enrobed and adorned ; and to augment their delight, there are several persons properly habited, playing on sundry loud instruments of music, one of which, with a voice as loud and as tunable as a treble hautboy, chanteth out a ditty in commendation of the Merchant-tailors' Trade, commencing thus

Of all the professions that ever were natn'd, The Taylcrs, though slighted, is much to be fam'd, For various invention and antiquity. No trade with the Taylers compared may be : For warmth and distinction and fashion he doth Provide for both sexes with silk, stuff and cloth : Then do not disdain him, or slight him, or flout him, Since (if well consider'd) you can't live without him. But let all due praises (that can be) be made To honour and dignifie the Taylers trade. When Adam and Eve out of Eden were hnrl'd, They were at that time king and queen of the world : Yet this royal couple were forced to play The Taylers and put themselves in green array ; For

modesty's and for necessity's sake, They had figs for the belly, and leaves for the back ; And afterward clothing of sheep-skins they made : Then judge if a Tayler was not the first trade,

The oldest profession ; and they are but railers, Who scoff and deride men that be Merchant- Taylers.

This song being ended, the foot-marshal places the assistants, livery, and the companies on both sides of King's-street ; and the pensioners with their targets hung on the tops of javelins; in the rear of them the ensign-bearers; drums and fifes in front ; he then hastens the foins and budge- bachelors, tocher with the gentlemen ushers, to Guildhall, where his lordship is again saluted by the artillerymen with three volleys more, which concludes their duty. His land attendants pass through the gallery or lane so made into Guildhall ; after which the company repairs to dinner in the hall, and the several silk-works and triumphs are likewise conveyed into Blackwell- hall ; and the officers aforesaid, and the children that sit in the pageants, there refresh themselves until his lordship hath dined. At the dinner in Guildhall, his lordship and the guests being all seated, the city music begin to touch their in- struments with very artful fingers. Their ears being as well feasted as their palates, and a con-

cert lesson or two succeeding, a sober person with a good voice, grave humour, and audible utterance, proper to the condition of the times, sings a song called The Protestants' Exhortation, the burden whereof is, " Love one another," and the subject against the catholics. The song being ended, the musicians play divers new airs, which having done, three or four habit them- selves according to the humour of the song, and one of them chanteth forth The Plotting Papist's Litany, in ten stanzas, the first of which ends with

Joyntly then wee 1 agree, To sing a Litany,

And let the burden be, Ora pro nobii.

In the year 1688, the second mayoralty of sir Thomas Pilkington, who being of the skinner's company, a pageant in honour of their occupa- tion, consisted of " a spacious wilderness, haunt- ed and inhabited with all manner of wild beasts and birds of various shapes and colours, even to beasts of prey, as wolves, bears, panthers, leo- pards, sables, and beavers ; likewise dogs, cats, foxes and rabbits, which tossed up now and then into a balcony fell oft upon the company's heads, and by them tossed again into the crowd, afforded great diversion ; melodious harmony likewise allayed

the fury of the wild beasts, who were continually moving, dancing, curvetting, and tumbling to the music."

On the alteration of the style, the swearing in of the lord mayor and the accompanying show, which had been on the 29th of October, was changed to the 9th of November. The speeches in the pageants were usually composed by the city poet, an officer of the corporation, with an annual salary, who provided a printed descrip- tion for the members of the corporation before the day. Settle, the last city poet, wrote the last pamphlet intended to describe a lord mayor's show ; it was for Charles Buncombe's, in ˆ708, but the prince of Denmark's death the day before, prevented the exhibition. The last lord mayor who rode on horseback at his mayoralty was sir Gilbert Heathcote in the reign of queen Anne.

It will be remarked, after this perusal, that the modern exhibitions have no pretension to vie with the grandeur of the old " London triumphs." In 1760, the court of common council recom- mended pageants to be exhibited for the en- tertainment of their majesties on lord mayor's day. Such revivals are inexpedient, yet proba- bly some means might be devised for improving the appearance of the present procession, without further expenditure from the city funds, or inter- fering with the public appropriation of the allow- ance for the support of the civic dignity. All that remains of the lord mayor's show, to remind the curiously informed of its ancient character, is in the first part of the procession, wherein the poor men of the company to which the lord mayor belongs, or persons hired to represent them, are habited in long gowns and close caps of the company's colour, and bear painted shields on their arms, but without javelins. So many of these head the show, as there are years in the lord mayor's age. Their obsolete costume and hobbling walk are sport for the unsedate, who,

from imperfect tradition, year after year, are ac- customed to call them " old bachelors" — tongues less polite call them " old fogeys." The numer- ous band of gentlemen-ushers in velvet coats, wearing chains of gold and bearing white staves, is reduced to half-a-dozen full-dressed footmen, carrying umbrellas in their hands. The antiqua- rian reminiscences occasioned by the throwing of substances that stone-eaters alone would covet, from the tops of the houses, can arise no more; and even the giants in Guildhall are elevated upon octagon stone columns, to watch and ward the great west window, in no other than a gi- gantic capacity : their proper situation they were displaced from some few years ago, owing, it is presumed, to lack of information in the civic authorities, that figures of

giants anciently be- longed to Guildhall, and that their corporate sta- tion was at the Guildhall door. In their present station, they are as much out of place as a church weathercock would be if it were removed from the steeple, and put on the sounding board of the pulpit.

The festival of the nativity, or Christmas-day, was anciently kept by different churches in April. May, and in this month. It is now kept on the 25th of December, by every established church of Christian denomination; and is a holiday all over England, observed by the suspension of all public and private business, and the congregating of friends, end relations for " comfort and joy."

Christmas is ushered in by carols being sung upon the evening before. Carol is said to be derived from cantare, to sing, and rola, an inter- jection of joy. It is rightly observed by Jeremy Taylor, that " Glory to God in the highest, on earth peace, and good-will towards men," the song of the angela on the birth of the Saviour, was the first Christmas carol..'

The custom of singing carols at Christmas prevails in Ireland to the present lime. In Scot- land, where no church feasts have been kept since the days of John Knox, the custom is un- known. In Wales' it is still preserved to a greater extent, perhaps, than in England; at a former period, the Welsh had carols adapted to most of the ecclesiastical festivals, and the four seasons of the year, but in our times they are limited to that of Christmas. After the turn of midnight at Christmas-eve, service is performed in the churches, followed by the singing of carols to the harp. Whilst the Christmas holidays continue, they are sung in like manner in the houses, ahd there are cards especially adapted to be sung at ; the door^ of the houses by visitors before they enter. Lffyr Carolan, or the bouk of carols, con tain; sixty-six for Christmas, -dad five summer

carols ; Blodeugerdd Cymrii, or the " Aethology of Wales," contains forty-eight Christmas carols, nine summer carols, three May carols, one winter carol, one nightingale carol, and a carol to Cupid.

There were anciently great doings in the halls of the inns of court at Christmas time. At the Inner-Temple early in the morning, the gentle- men of the Min went to church, and after the service they did then " presently repair into the hall to breakfast with brawn, nmstard, and malmsey." At the first course at dinner, was " served in, a fair and large Bore's head upon a silver platter with minstralsye."

It appears from a memoir on the manner in which the inhabitants of the north riding of Yo. 1 – shire celebrate Christmas, in the " Gentleman's Magazine," 1811, that " On the feast of St. Ste- phen large goose pies are

made, all of which they distribute among their needy neighbours, except one which is carefully laid up, and not tasted till the purification of the virgin, called Candlemas."

The last day of the year is dedicated to St. Sylvester. This saint, whose name is in the church of England calendar and the almanacs, was pope Sylvester I. " He is said to have been the author of several rites and ceremonies of the Romish church, as asylums, unctions, palls, corporals 8tc. He died in 334."

To end the old year merrily, and begin the new one well, and in friendship, were popular objects in the celebration of this festival. It was spent amongst the ancient Britons in festivity and frolic by the men ; and the young women of the village carried from f'oor to door a bowl of spiced ale, the wassail bowl, which they offered to the inhabitants of every house they stopped at, singing rude congratulatory verses, and homing for small presents. Young men and women also exchanged clothes, which was termed Mumming, or Disguising; and wl.en thus dressed in fcac.li others garments, they went from one neighbour's cottage to another, singing, dancing, and partak- ing of good cheer.

*The anticipated pleasure of the coming year, accompanied by regret at parting with the old one, is thus naturally expressed by an eloquent writer. ** After Christmas-day cornes the last day of the year ; and 1 confess I wish the bells would not ring so merrily on the next. I have not become used enough to the loss of the old year to like so triumphant a welcome to the new. I am cer*

END OF VOL. VI.

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AND APPROPRIATE DIAGRAMS.

Sic oportet ad librum, pres«rtira miscellauei generis, legendum accedtre lectorem, IK solet ad eonvivinm eonvira civihi. ConTirator annititur omnibus satisfaeere ; ft tamen ti quid appunitur, qnotl bujut aut illlus palalo uon retpondeat, et hie et ille urbane dittimnlant, « alia fercula probanl, ne quid cnntristent coniiratorem.

Eraimui.

A reader •hould tit down to a book, eipecialljr of the miscellaneous kind, at a well-behaved Tititor doe< to a ban- quet. The matter or the feait exern himself to satisfy his guettt ; but if, after all his care and paint, something should appear on the table that doet not suit this or that person's taste, they politely pass it over without notice, and commend olhtr dishes, that they may not distress a kind host.

Tranilalion

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITAN A,

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

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THE

LONDON ENCYCLOPAEDIA

CUSTOM-HOUSE, an office established by the authority of the king, in maritime cities, or port-towns, for the receipt and management of tne customs and duties of importation and exportation, imposed on merchandise, and regulated by a books of rates. An edifice with considerable pretensions to grandeur, on the score of external decoration, was erected for the purpose of trans- acting public business, in 1826. Its site was well chosen from its proximity to the Tower; but, unfortunately, the piles on which the building rested, being exposed to the action of the Thames, speedily decayed, and the whole of the interior of the edifice sunk to the ground. It has since been rebuilt.

GUSTOS BREVIUM, the principal clerk be- longing to the court of common pleas, whose business it is to receive and keep all the writs made returnable in that court, filing every return by itself; and, at the end of each term, to re- ceive prothonotaries of all the records of the nisi prius, called the posteas. The posteas are first brought in by the clerks of assize, of every circuit, to that prothonotary who entered the issue in the causes, in order to enter judgment ; and after the prothonotary has entered the ver dict and judgment into the rolls of the court, he delivers them over to the custos brevium, who binds them into a bundle. The custos brevium also makes entries of writs of

covenant, and the concord upon every line ; he likewise makes out exemplifications and copies of all writs and re- cords iu hi? office, and of all fines levied, which, being engrossed, are divided between him and the chirographer, which last keeps the writ of covenant and the note, and the former the con- cord and foot of the fine. The custos brevium is appointed by the king's letters patent.

CUSTOS ROTULORUM, an officer who has the custody of the rolls and records of the sessions of peace, and also of the commission of the peace itself. He is usually a nobleman, and. always a justice of the peace, of the quorum, in the county where he is appointed. This officer is appointed by writing under the king's sign manual, being the lord chancellor's warrant to put (hem in commission. He may execute his office by a deputy, and is empowered to appoint the clerk of the peace; but he is prohibited from selling his office, under divers penalties.

CUSTOS SPIRITUAI.IUM, he that exercises the spiritual jurisdiction of a diocese, during the vacancy of any see, which, by the canon law, belongs to the dean and chapter ; but at present, in Kngland, to the archbishop of the province by prescription.

C.'rsTos TEMPORALIUM, the person to whom a vacant see or abbey was given by the king as supreme lord. His office was, as steward of the VOL. VII.— PART I.

goods and profits, to give an account to the escheator, who did tlie like to the exchequer.

CU'STREL, n. s. I'r. cnusfillier. A hurkh.

Every one had an archer, a demi-lance, and a autrel. Lord Herbert.

CUSTRIN, a fortified town of Prussia, the capital of the New Mark of Brandenburgh, is situated in a plain at the junction of the Wartha and the Oder. The town though small has spa- cious suburbs, and contains 4500 inhabitants.' It is encompassed by extensive morasses, which add to its strength ; a fortified dike also com- mences at one of the suburbs, and is continued for the space of three miles by means of thirty- six bridges, across a succession of marshy ground. In the month of August, 1758, this place was bombarded and laid in ashes by the Russians, but afterwards rebuilt in a style of great regu- larity. It is forty-eight miles east of Berlin.

CUT, v. a., v. n. & n. s. ~) Fr. couper,cou- CUTTER, n. s. j teau ; Sans. /CM-

CUTTING, n. s. [tan. West Goth.

GUTTER-OFF, n. S. [kotd, KOTTTID.

CUT-THROAT, n. s. & adj. \ Few words have CUT-PURSE, n. s. J more shades of

meaning than to cut, but in all of them division, producing, in some way or other, a solution of continuity, is expressed or implied. To cut is, to penetrate with a sharp instrument ; to hew ; to sculpture; to form by cutting; to divide by passing through ; to pierce with an uneasy sen- sation ; to divide packs of cards ; to intersect ; to castrate ; to avoid a person, or pretend not to see or know him ; to make way by dividing ; to perform the operation of lithotomy. It obtains many additional meanings from its conjunction with down, off", out, short, up, and in. To cut down is, to fell ; to level with the earth by a blow from a sharp instrument ; to diminish the amount of any demand ; to excel ; to overpower. To cut off is, to separate by cutting; to extirpate ; to bring to an untimely death ; to rescind ; to take away ; to intercept ; to put an end to ; to obviate ; to withhold ; to preclude ; to interrupt; to abbreviate. To cut out is, to shape; to scheme ; to adopt ; to debar ; to excel. To cut short is, to interrupt ; to abridge. To cut up is, to divide an animal, or some article of animal food, into convenient parts; to eradicate. To cut in is a phrase used in card-playing, parti- cularly at whist, when the cut made by the par- ties determines who are to be the players. To cut a caper is to dance. The meanings of the noun are also numerous. It denotes the action of a sharp instrument ; the separation made by

B

CUT S

such an instrument ; an incised wound ; an arti- ficial channel; a part cut off from the rest; a small particle ; a lot made by cutting into un- equal portions, a stick, straw, or bit of paper, which portions are held between the finger and thumb, while another draws the lot; a near passage, which saves distance, by cutting off an angle ; an impression taken from an engraving on wood or copper ; the plate on which the draw- ing is engraved ; the dividing of a pack of cards; anciently, a fcol or cully ; a gelding. Cut and long tail is a proverbial expression for all kinds of men. The .participial adjective, cut, signifies prepared for use, in which case it is joined with dry; rather the worse for liquor; hurt in the feeling. Cut and come again is a trivial ex- pression, denoting that there is an abundance. Cutter is the agent that cuts

anything; a small swift-going vessel ; the incisores, or cutting teeth ; an officer in the exchequer ; a ruffian. Cutter off means a destroyer. Cutting is, a piece cut off; an incision; a caper, but this is obsolete; division, as of a pack of cards. Cut-purse is a thief; cut-throat a murderer ; a butcher of men ; the animal which is sometimes miscalled a hero. For CUTLERY, see the article.

And they did beat the gold into thin plates, and cut it into wires. Exod. xxxix. 3.

And they caught him, and cut off his thumbs.

Juil. i. 6.

Thy servants can skill to cut timber in Lebanon.

2 Chron. ii.

Who cvt up mallows by the bushes and juniper- roots for their meat. Job xxx. 4.

A bowe in honde and arowis had she, Her clothis cuttid were unto the kne.

Chaucer. T/ie Legends of Dido. Right as a sword forcutteth and forkerveth An anue at-.vo, my dere son ! right so A tonjs cu!te:k friendship all atwo.

Id. Cant. Tales.

Now draweth cutte or that ye forlher twinne ; He which that hath the shortest shal beginne.

Id. Prol. Cant. Tales. The cotelere dwellith iu this town that made the

same kuyff, And for to prove the trowith he shall be here as

blyve. Id. Cant. Tales.

Either with nimble wings to cut the skies, When he them on his messages doth send, Or on his own dred presence to attend.

Spenser. Hymn on Heavenly Love But that same squire to whom she was more dere Whenas he saw she should be cut in twaine, Did yield she rather should with him remaine Alive then to himself be shared dead.

Id. Faerie Queene.

Eftsoones her shallow ship away did slide More swift than swallow sheres the liquid skye, Withouten oare or pilot it to guide, Or winged canvas with the wind to fly : Only she turnd a pin, and by and by It cut away upon the yielding wave. Id.

All Spain was first conquered by the Romans, and filled with colonies from them, which were still in- creased, and the native Spaniards still cut off.

Id. On Ireland^

It hath a number of short ruts or shreddings, which may be batter called wishes than prayers. Hooker.

CUT

My lady Zelmane and my daughter Mopsa may draw cuts, and the shortest cut speak first. Sidney. Why should a man, whose blood is warm within, Sit like his grandsire cut in alabaster ? Shakspeare.

Ah, cut my lace asunder,

That my great heart may have some scope to bear, Or else I swoon with this dead killing news.

Id. Richard I II.

He that cuts off" twenty years of life, Cuts off so many years of fearing death.

Id. Julius Caesar.

By the pattern of mine own thoughts I cut out the purity of his. Id. Winter's Tale.

To have an open ear, a quick eye, and a nimble hand, is necessary for a cutpurse. Id.

Send her money, knight, if thou hast her not in the end, call me cut. Id. Twelfth Night.

Their clothes are after such a Pagan cut too. That, sure, they've worn out Christendom.

Id. Henry VIII. A paultry ring

That she did give, whose poesy was For all the world like cutler s poetry Upon a knife : love me, and leave me not.

Shaktpeare. At quintin he, In honour of this bridaltee, Hath challenged either wide countee : Come cut and long tail ; for there be Six bachelors as bold as he.

Ben Jonson. Underwood.

Nor can good Myfon wear on his left hand A signet ring of Bristol diamond, But he must cut his glove to shew his pride, That his trim jewel might be better spyd. Hall.

The king of this island, a wise man and a great warrior, handled the matter so, as he cut off their land forces from their ships. Bacon.

It is no grace to a judge to shew quickness of con- ceit in cutting off evidence or counsel too short. Id.

I, for my part, do not like images cut out in juniper, or other garden-stuff : they be for children. Id.

The burning of the cuttings of vines, and casting them upon land, doth much good. Id.

All the timber whereof was cut down in the moun- tains of Cilicia. Knolles.

This great cut or ditch Sesostris the rich king of Egypt, and long after him Ptolemus Philadelphus, purposed to have made a great deal wider and deeper, and thereby to have let the Red Sea into the Medi- terranean. Id.

CUTTING is particularly used in heraldry, where the shield is divided into two equal parts, from right to left, parallel to the horizon, or in the fesse way. The word is also applied to the honorable ordinaries, and even to animals and moveables, when they are divided equally the same way ; so however, as that one moiety is color, the other metal. The ordinaries are said to be cut, couped, when they do not come full to the extremities of the shield.

CUTTING, in painting, the laying one strong lively color over another, without any shade or softening. The cutting of colors has always a disagreeable effect.

CUTTING, in surgery, denotes the operation of extracting the stone

out of the bladder by the knife. See LITHOTOMY.

cur

, in the manege, is when the horse's feet interfere j or when with the shoe of one foot ne beats off the skin from the pastern joints of another foot. This is more frequent in the hind feet than the fore : the cause is commonly bad shoeing.

CUTTING IN WOOD is a particular kind of sculpture or engraving; the invention of which, as well as that in copper, is ascribed to a gold-smith of Florence : but it is to Albert Durer and Lucas they are both indebted for their perfection. See ENGRAVING and PRINTING. Hugo da Carpi invented a manner of cutting in wood, by means of which the prints appeared as if painted in clair-obscure.

CUTTINGS, or slips, in gardening, the branches or spiigs of trees or plants, cut or slipped off to set again ; which is dono. in any moist fine earth. The best season is from August to April ; but care is to be taken, when it is done, that the sap he not too much in the top, lest the cut die before that part in the earth have root enough to support it : nor must it be too dry or scanty; the sap in the branches assisting it to take root. In providing the cuttings, such branches as have joints, knots, or burrs, are to be cut off two or three inches beneath them, and the leaves to be stripped off so far as they are set in the earth. Small top branches, of two or three years' growth, are fittest for this operation.

CUTCtI, an extensive province of the south- western part of Hindostan, situated principally between the twenty-third and twenty-fourth de-grees of north latitude. It is bounded to the north by a sandy desert and the province of Sindy; to the south by the gulf of Cutch; to the east by Gujrat, and to the west by Tatta, from which it is separated by the most eastern branch of the Indus. Its limits northward are not ac-curately denned, but it may be estimated at 110 milos in length, by seventy the average breadth. The greater part of the province is composed of woods and uncultivated plains ; where a number of very fine horses are bred, superior camels, and black cattle. Other parts produce grain and cotton. It is chiefly possessed by various inde-pendent chiefs, who are often connected with the pirates of the coast: the inhabitants are princi- pally Mahommedans. The chief towns are Boo- jehooje, Luckput, Bundar, and Mandavie.

CUTCH GCTNDAVA, a district of Baloo- chistan, in Persia, situated at the bottom of the mountains south-east of Kelat, and about 150 miles in length, by forty-five in breadth. The soil is black and rich, growing

every species of grain, together with cotton, madder, ana indigo. The rains are in June, July, August, and in the spring months, during the summer, the simoom, or pestilential wind, is frequent and very destructive. The climate is otherwise good, and the soil excellent, producing a large revenue to the khan of Kelat. Great quantities of grain are exported to the sea-ports of Corachie and Sonmeany. To the northward of Cutch Gunda- va lies Anund Dijil.

CUTCHWARA, a district in the province of Malwah, Hindostan, situated about the twenty- fifth degree of north latitude, and mostly tribu- tary to the Malwah Mahrattas. It is intersected

by the Gillysinde river. The chief towns are Dewaeur and Soonel.

CDTII, signifies knowledge or skill. So Cuthwin is a knowing conqueror; Cuthred, a knowing counsellor ; Cuthbert, famous for skill. Much of the same nature are Sophocles and Sophianus.

CUTH, or CUTIIAH, a province of Assyria, on the Araxes, the same with Cush ; but others take it to be the country which the Greeks called Susiana, and which to this day, says Ur. Wells, is by the inhabitants called Chusistan. Cahnet is of opinion that Cuthah and Scythia are the same place, and that the Cuthites who were removed into Samaria by Salmaneser (2 Kinˆs xvii. 24), came from CushorCuth, mentioned in Gen. ii. 13. They worshipped the idol Nergal, id. ibid. 30. He adds that they came from Cush, or Cutha upon the Araxes ; and that their first settlement was in the cities of the Medes, sub- dued by Salmaneser and the kings of Syria, his predecessors. The Scriptures inform us, that the Cuthites, upon their arrival in this new country, continued to worship the gods formerly adored by them beyond the Euphrates. Esarhaddon, king of Assyria, who succeeded Sennacherib, appointed an Israelitish priest to go thither, and instruct them in the religion of the Hebrews. But these people thought they might reconcile their old superstition with the worship of tbe true God. They therefore framed particular gods for themselves, which they placed in the several cities where they dwelt. But afterwards they gave up idolatry, and adhered solely to the law of Moses. The Samaritans were their descend- ants.

CUTICLE, n. s.ˆ Lat. cuticttla. The out- CUTI’CULAR, adj. S ward skin of the body ; a CUTA’NEOUS, adj. j thin skin formed on the

surface of any liquor. Belonging or relating to

the skin.

This serous, nutritious mass is more readily circu- lated iato the cutaneow or remotest part* of the body. Flayer on Humours.

When any saline liquor is evaporated to cuticle and let cool, the salt concretes in regular figures, which argues that the particles of the salt, before they con- creted, floated in the liquor at equal distances in rank and file. . Newton t Optickt.

Some sorts of cutaneous eruptions are occasioned by feeding much on acid unripe fruits and farinaceous substances. Arbuthnot.

In each of the very fingers there are bones and gristles, and ligaments and membranes, and muscles, and tendons, and nerves and arteries, and veins and skin, and cuticle and nail. Bentley't Sermons.

Where the spontaneous adhesive electric atmo- spheres are employed to charge plates of air, as in the Galvanic pile, or probably to charge their animal membranes or cuticlet, as perhaps in the shock given by the torpedo or gymnotus, it seems necessary that the intervening non-conducting plate must be ex- trornely thin. Darwin.

Those parts of our system which are in health ex- cited into perpetual action, give us pain when they are not excited into action : thus, when the hands ire

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for a time immersed in snow, an inaction of the aita~ iteoiu capillaries is induced, as is seen from the pale- ness of the skin, which is attended with the pain of coldness. •*"•

CUTICLE. See ANATOMY. CUTLASS, n. s. Fr. coutelas. This word is •written sometimes cutlace, sometimes cuttleax; iu Shakspeare, curtleax; and in Pope, cutlash. A broad cutting sword : the word is much in use among the seamen.

Were 't not better

That I did suit me all points like a man ? A gallant curtleax upon my thigh, A boar soear in my hand ?

Shakspeare. As You Like It.

Mores, in his curious dissertation on letter founders, calls a cutlass, as it seems, a courtlelasse, among the antique typographic ornaments. Warton.

CUTLER (Sir John), bart. and citizen of London, was a great benefactor to the grocers' company, and contributed largely to the rebuild- ing of the college of physicians in Warwick-lane. After his death, however, in 1699, his executors claimed the sum which he had advanced, with inte- rest, amounting in all to £7000. They finally com- promised the claim for £2000. Pope commemo- rates this circumstance in some well-known verses ; describing our baronet as a perfect miser. It appears, however, that he liberally subscribed to many charities, and built at his own charge the north gallery of his parish-church, St. Margaret's, Westminster. He had two daughters, who were respectively married to John, earl of Radnor, and Sir William Portman, bart. His funeral it is said cost the sum of £7666.

CUTLERS, COMPANY OF. This company was incorporated in 1413 by Henry V. ; their arms are gules, six daggers in three crosses saltire argent, handled and hilled or; the crest an ele- phant with a castle.

CUTLERY, in connection with the mecha- nical arts, will embrace all kinds of edged and sharp tools, of iron or steel, and the modes of their manufacture.

It might be expected, that in no department of the arts of a country, would the progress of civilisation be more distinctly marked, than in the degree of excellence attained in this manu- facture. A knife will purchase half the lands of a village from a barbarous tribe ; and Great Bri- tain has well sustained her superiority among civilised nations in the general quality of her cutlery goods.

But in other, and far less civilised countries, a superior steel has been manufactured for ages. It is a little remarkable, that none of our modern discoveries in chemistry have enabled us to imi- tate, successfully, the sword and sabre blades of Damascus ; and that, within a very few years, in 1795, we believe, a new kind of foreign steel, the wooti of India, has been introduced into this country, and been found superior to any thing manufactured here for the blades of pen- knives.

The Damascene blades are supposed, by Euro- pean cutleis, to be constructed of fine iron and steel-wire welded together in alternate layers ;

the wave or water being given to them by sul- phate of alumina applied to the final surface. Other accounts state them to be hardened by repeated immersions, when red-hot, in goat's blood. But the real process has never been accurately known in this country ; and it is not improbable, that the iron ore of Syria may pos- sess some peculiarity which is the foundation of this excellence in its manufactured steel.

Such a conjecture has been offered by Mr. Stodart, with regard to the ores out of which the wootz of India is formed. For the intro- duction of it into this country, we are indebted to the late distinguished naturalist, Sir Joseph Banks, who first procured a pen-knife to be made from a cake of it, in the year above-men- tioned. The forging was attended with some difficulty, owing to the unequal fusion of the metal, some parts being overcharged with the steely principle, and others being as much defi- cient in it. But the pen-knife made was excel- lent. The Indian method of making wootz has been described as follows : forged iron, in pieces, is enclosed in a crucible, and heated in a furnace with wood. Two or three pairs of bellows are employed to augment the heat, until the wood is completely charred, and the iron fused and con- verted into steel. The chief peculiarity of the process seems to be the use of uncharred wood. A variety of cutting instruments have been ma- nufactured from this steel with great success.

Those articles of cutlery which do not require a fine polish, and are of low price, are made from what is called blistered steel, or that which has not undergone fusion. See our article STEEL. Those which require the edge to possess consi- derable tenacity, but in which superior hardness is not required, are made from sheer steel. The finer kinds of cutlery are made from steel which has been in a state of fusion, and which is termed cast-steel, no other kinds being susceptible of a fine polish. Table-knives are mostly made of sheer-steel, the tang and shoulder being of iron, and the blade being attached, by giving them a welding heat. The knives, after forging, are hardened, by heating them red-hot, and plunging them into water ; they are afterwards heated over the fire, till they become blue, and then ground. Forks are made, almost altogether, by the aid of the stamp and appropriate dies. The prongs only are hardened and tempered. Razors are made of cast-steel, the edge of a razor requiring the combined advantages of great hardness and tenacity. After the razor-blade is forged into its proper shape, by the aid of a convex-faced hammer and anvil, it is hardened, by gradually heating it to a bright red heat, and plunging fc into cold water. It is tempered by heating it afterwards until a brightened part appears of a straw color. This would be more equally ef- fected by the use of sand, or, what is still better, by hot oil, or a fusible mixture,

consisting of eight parts of bismuth, five of lead, and three of tin ; a thermometer being placed in the liquid at the time the razors are immersed, for the purpose of indicating the proper temperature, which is about 500° of Fahrenheit. After the razor has been ground into its proper shape, it is finished by polishing.

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The glazer, used in polishing, is formed of •wood, faced with an alloy of lead and tin ; after its face is turned to the proper form and size, it is filled with notches, which are filled up with emery and tallow. This instrument gives the razor a smooth and uniform surface and a fine edge. The polisher consists of a piece of cir- cular wood, running upon an axis, like that of the stone or the glazer. It is coated with leather, having its surface covered with crocus martis. The handles of razors and knives are made of ivory and tortoise-shell, bone, or other materials, directed by fashion, or the use for which they are designed. The horn of razor-handles is com- monly cut into pieces, and placed between two dies, having a recess of the shape of the handle. By this process it admits of considerable exten- sion, and is dyed black by means of logwood and green vitriol. The clear horn-handles are sometimes stained, so as to imitate tortoise-shell, by being coated with a composition of three parts of potash, one of minium, ten of quick- lime, and as much water as will reduce the whole into a pulpy mass. Those parts of the handle requiring darker shades are more thickly covered, and the stains are dried in before the fire.

The manufacture of pen-knives is divided into three departments ; the first is the forging of the blades, the spring, and the iron scales ; the second, the grinding and polishing of the blades ; and the third, the handling, which con- sists in fitting up all the parts, and finishing the knife. The blades are made of the best cast- steel, and hardened and tempered to about the same degree with that of razors. In grinding they are made a little more concave on one side than the other, in other respects they are treated in a similar way to razors. The handles are covered with horn, ivory, and sometimes wood ; but the most durable are those of stags-horn. The general fault in pen-knives is that of being too soft. The temper ought to be not higher than a straw color, as it seldom happens that a pen-knife is so hard as to snap on the edge.

The beauty and elegance of polished steel is never displayed to more advantage than in the manufacture of the finer kinds of scissars. The steel employed for this purpose should be of the choicest description ; it must possess hardness and uniformity of texture for the sake of

securing a fine polish, and great tenacity, when hot, for the purpose of forming the bow or ring of the scissar, which requires to be extended from a solid piece, having a hole previously punched through it. It ought also to be very tenacious when cold, to allow that delicacy of form ob- served in ladies' sci?sars. After they are forged as near to the same size as the eye of the work- man can ascertain, they are paired. The bows and some other parts are filed to their intended form : the blades are also roughly ground, and the two sides properly adjusted to each other, after bting bound together with wire, and hard- ened up to the bows. They are afterwards heated till they become of a purple color, which indicates their proper temper. Almost all the remaining part of the work is performed at the grinding mill, with the stone, the lap, the po-

lisher, and the brush ; the last being used to polish those parts which have been filed, anci which the lap and the polisher cannot touch. Previous to screwing the scissars finally to?ether, they are rubbed over with the powder of quick- lime, and afterwards cleaned with soft sheep leather. The quick-lime absorbs the moisture from the surface. Scissars are ornamented by bluing and gilding ; also with studs of gold or polished steel. Very large scissars are manu- factured partly of iron and partly of steel ; the shanks and bows being of the former. These, as well as those all of steel, which are not hardened all over, cannot be polished : an in- ferior sort of lustre, however, is given to them by means of a burnish of hardened polished steel, which is very easily distinguished from the real polish, by the irregularity of the surface. Having entered into these particulars, relating to the manufacture of the usual articles found in cutlers' shops, we shall now enter upon some of the more general principles that are applicable to the finer articles of cutlery.

Cutlers do not use any coating to their work at the hardening heat, as the file-cutters do ; in- deed, it seems evidently unnecessary when the article is intended to be tempered and ground. The best rule is to harden as little as possible above the state intended to be produced by tem- pering. Work which has been overheated has a crumbly edge, and will not afford the wire here- after to be described. The proper heat is a cherry-red, visible by day-light. No advantage is obtained from the use of salt in the water, or cooling that fluid, or from using mercury instead of water; but it may be remarked, that questions respecting the rluid are, properly speaking, ap- plicable only to files, gravers, and such tools as are intended to be left at the extreme of hardness.

While Mr. Stodart does not seem to attach much value to peculiarities

in the process of hardening, he mentions it as the observation of one of his best workmen, that the charcoal fire should be made up with shavings of leather : and that he neve.r had a razor crack in the hardening since he had used this method. It appears from a consideration of other facts, that this process is likely to prove advantageous. When brittle substances crack in cooling, it arises from the outside contracting and becoming too small to contain the interior parts. But it is known, that hard steel occupies more space than soft, and it may be easily inferred, that the nearer the steel approaches to the state of iron, the less will be this increase of dimensions. If, then, we suppose a razor, or any other piece of steel, to be heated in an open fire with a current of air passing through it, the external part will, by the loss of carbon, become less steely than before ; and when the whole piece comes to be hardened, the inside will be too large for the external part, which will probably crack. But if the piece of steel be wrapped up in the cementing mixture, or if the fire itself contain animal coal, and is put together so as to operate in the manner of that mixture, the external surface, instead of being degraded by this heat, will be more carbonated than the internal part, in consequence of whidv

it will be so far from splitting or bursting during its cooling, that it will be acted upon in a con- trary direction, tending to render it more dense and solid.

One of the greatest difficulties in hardening steel-works of any considerable extent, more especially such articles as are formed of thin plates, or have a variety of parts of different sizes, consists in the apparent impracticability of heating the thicker parts before the slighter are burned away ; besides which, even for a piece of uni- • form figure, it is no easy matter to make up a fire which shall give a speedy heat, and be nearly of the same intensity throughout. ‘ This difficulty,’ says Mr. Nicholson, ‘ formed a very considerable impediment to my success in a course of delicate steel-work, in which I was en- gaged about seven years ago ; but, after various unsuccessful experiments, I succeeded in re- moving it by the use of a bath of melted lead, which, for very justifiable reasons, has been kept a secret till now. Pure lead, that is to say, lead containing little or no tin, is ignited to a mo- derate redness, and then well stirred : into this the piece is- plunged for a few seconds ; that is to say, until when brought near the surface, that part does not appear less luminous than the rest. The piece is then speedily stirred about in the bath, suddenly drawn out, and plunged into a large mass of water. In this manner, a plate of steel may be hardened so as to be per- fectly brittle, and yet continue

so sound as to ring like a bell ; an effect which I never could produce in any other way. Mr. Stodart has lately made trial of this method, and considers it to be a great acquisition to the art, as, in fact, I found it.'

The letting down, or tempering of hard steel, is considered as absolutely necessary for the production of a fine and durable edge. It has been usual to do this by heating the hardened steel till its bright surface exhibits some known color by oxidation. The first is a very faint straw color, becoming deeper and deeper, by increase of heat, to a fine deep golden-yellow, which changes irregularly to a purple, then to an uniform blue, succeeded by white and several successive faint repetitions of these series. It is well known, that the hardest state of tempered instruments, such as razors and surgeons' instru- ments, is indicated by this straw color ; that a deeper color is required for leather-cutters' knives, and other tools, that require the edge to be turned on one side ; that the blue, which in- dicates a good temper for springs, is almost too soft for any cutting instrument, except saws, and such tools as are sharpened with a file, and that the lower states of hardness are not at all adapted to this use. But it is of considerable import- ance, that the letting down, or tempering, as well as the hardening, should be effected by heat equally applied, and that the temperatures, es- pecially at the lower heats, where greater hard- ness is to be left, should be more precisely ascertained than can be done by the different shades of oxidation. Mr. Hartley first practised the method of immersing hard steel in heated oil, or the fusible compound of lead five parts, tin three, and bismuth eight. The temperature

of either of these fluids may be ascertained in the usual manner, when it does not exceed the point at which mercury boils ; and, by this con- trivance, the same advantages are obtained in lowering the temperature of a whole instrument, or any number of them at once, as have already been stated in favor of my method of hardening. Oil is preferable to the fusible mixture for se- veral reasons. It is cheaper; it admits of the work being seen during the immersion, by reason of its transparency ; and there is no occasion for any contrivance to prevent the work from floating. Mr. Nicholson requested Mr. Stodart to favor him with an account of the temperatures at which the several colors make their appearance upon hardened steel; in compliance with which he made a series of experiments upon surgeons' needles, hardened, highly polished, and exposed to a gradual heat, while floating at the surface of the fusible mixture. The appearances are as follow: No. 1, taken out at 430° of Fahrenheit. This temperature leaves the steel in the most ex- cellent state for razors and scalpels. The tarnish, or faint yellowish tinge, it produces, is too eva- nescent to be observed, without comparison with another piece of polished steel.

Instruments, in this state, retain their edge much longer than those upon which the actual straw color has been brought, as is the common practice. Mr. S. in- forms me, says Mr. Nicholson, that 430° is the lowest temperature for letting down, and that the lower degrees will not afford a firm edge. No. 2, at 440°, and 3, at 450°. These needles differ so little in their appearance from No. 1, that it is not easy to arrange them with certainty when misplaced. No. 4 has the evident tinge, which workmen call pale straw color. It was taken out at 460°, and has the usual temper of pen- knives, razors, and other fine edge-tools. It is much softer than No. 1, as Mr. Stodart assures me, and this difference exhibits a valuable proof of the advantages of this method of tempering. Nos. 2, 6, 7, and 8, exhibit successive deepeˆ shades of color, having been respectively taken out at the temperatures 470°, 480°, 490°, and 500°. The last is of a bright brownish metallic yellow, very slightly inclining to purple. No. 9 obtained an uniform deep blue at the tempera- ture of 580°. The intermediate shades produced on steel, by heats between 500° and 580°, are yellow, brown, red, and purple, which are exhi- bited irregularly on different parts of the surface. As I had before seen this irregularity, particu- larly on the surface of a razor of wootz, and had found, in my own experience, that the colors on different kinds of steel do not correspond with like degrees of temper, and probably of tempe- rature in their production, I was desirous that some experiments might be made upon it by the same skilful artist. Four beautifully polished blades were, therefore, exposed to heat on the fusible metal. The first was taken up when it had acquired the fine yellow, or uniform deep, straw color. The second remained on the mix- ture, till the part nearest the stem had become purplish ; at which period, a number of small round spots, of a purplish color, appeared in the clear yellow of the blade. The third was left till the thicker parts of the blade were of a de«p

ruddy purple; but the concave face still continued producing a notch. But on the other hand, if

yellow. This also acquired spots like the other, and a slight cloudiness. These three blades were of cast-steel ; the fourth, which was made out of a piece called Styrian steel, was left upon the mixture till the red tinge had pervaded almost the whole of its concave face. Two or

the edge be made to move foremost and meet such particle, it will slide beneath it, and suffer no injury. Another precaution in whetting is, that the hand should not be;ir heavy ; because it is evident, that the same stone must produce a more uniform edge if the steel be worn

away

three spots appeared upon this blade; but the by many, than by few strokes. It is also of es- greater part of its surface was variegated with sential importance that the hone itself should be blu< > clouds, disposed in such a manner, as to of a fine texture, or that its silicious particles produce those waving lines which, in Damascus should be very minute.

steel, are called ‘ the water.’ Two results are The grind-stone leaves a ragged edge, which more immediately suggested by these facts : it is the first effect of whetting to reduce so thin first, that the iiregular production of a deep color that it may be bent backwards and forwards, upon the surface of brightened steel, may serve This flexible part is called the wire, and if the to indicate the want of uniformity in its compo- whetting were to be continued too long it would

break off in pieces without regularity, leaving a finer though still very imperfect edge, and tending to produce accident while lying on the face of

sition ; and, secondly, that the deep color, being- observed to come on first at the thickest parts, Mr. Stodait was disposed to think, that its more

speedy appearance was owing to those parts not the stone. The wire is taken off by raising the

having been hardened. See STEEL.

face of the knife to an angle of about fifty de-

An ingenious method of hardening delicate grees with the surface of the stone, and giving a

steel-work was some time since communicated to Mr. Stodart by Dr. Wollaston. The steel enclosed in a tube is surrounded by the fusible alloy of eight parts lead, two tin, and five bismuth. The tube, with its contents, is then heated in a furnace to rednesss, and plunged into a cooling fluid. It is afterwards thrown into boiling water, by which the alloy is fused, and the steel is left perfectly hardened and un altered by twisting or cracking

light stroke edge foremost, alternately towards each end of the stone. These strokes produce an edge, the faces of which are inclined to each other in an angle of about 100 degrees, and to which the wire is so

slightly adherent that it may often be taken away entire, and is easily re- moved by lightly drawing the edge along the finger nail. The edge thus cleared, is generally very even : but it is too thick, and must again be reduced by whetting. A finer wire is by this

Suppose our cutting instrument to be forged, means produced, which will require to be again

hardened, and let down or tempered ; it remains to be ground, polished, and set. The grinding of fine cutlery is performed upon a grind-stone of a fine close grit, called a Bilston grind-stone, and sold at the tool shops in London at a mo- derate price. The cutlers use water, and do not

taken off, if, for want of judgment or delicacy of hand, the artist should have carried it too far But we will suppose the obtuse edge to be very even, and the second wire to be scarcely perceptible. In this case the last edge will be very acute, but neither so even nor so strong as

seem generally to know any thing of the ase of to be durably useful. The finish is given by two

tallow. The face of the work is rendered finer by subsequent grinding upon mahogany cylinders, with emery of different fineness, or upon cylin- ders faced with hard pewter, called laps, which

or more alternate light strokes with the edge slanting foremost, and the blade of the knife raised, so that its plane forms an angle of about twenty-eight degrees with the face of the stone-

are preferable to those with a wooden face. The This is the angle which by careful observation

last polish is given upon a cylinder faced with buff leather, to which crocus, or the red oxide of iron, is applied with water. This last opera-

and measurement Mr. Stodart habitually uses for the finest surgeons' instruments, and which he considers as the best for razors, and other keen

tion is attended with considerable danger of cutting tools. The angle of edge is therefore heating the work, and almost instantly reducing about fifty-six degrees. The excellence and

its temper along the thin edge, which at the same time acquires the

colors of oxidation. The setting now remains to be performed,

uniformity of a fine edge may be ascertained, by its mode of operation when lightly drawn along the surface of the skin, or leather, or any or-

ivhich is a work of much delicacy arid skill : so ganised soft substance. Lancets are tried by

much so, indeed , that Mr. Stodart says, he can- not produce the most exquisite and perfect edge if interrupted by conversation, or even by noises in the street. The tool is first whetted

suffering the point to drop gently through a piece of thin soft leather. If the edge be exquisite, it will not only pass with facility, but there will not be the least noise produced, any more than

upon a hone with oil, by rubbing it backwards if it had dropped into water. This kind of edge

and forwards. In all the processes of grinding or wearing down the edge, but more especially in the setting, the artist appears to prefer that stroke which leads the edge according to the ac- tion of cutting, instead of making the back run first along the stone: for if there be any lump or particle of stone or other substance lying

cannot be produced, but by performing the last two or more strokes on the green hone. The operation of strapping is similar to that of grind- ing or whetting, and is performed by means of the angular particle of fine crocus, or other material bedded in the face of the strap. It re- quires less skill than the operation of setting,

upon the face of the grinder, and the back of and is very apt, from the elasticity of the strap, the tool be first run over it, it will proceed be- to enlarge the angle of the edge or round it too neath the edge and lift it up, at the same time much. The chief manufactories of cutlery in

England, are at Sheffield and in London. At the former by the local advantages of coal, &c. on the spot, and the greater division of labor, cutlery in general is afforded at much lower prices than in the metropolis, where the finer descriptions of this important manufacture are more attended to, and surgical instruments, in particular, are made witfi the greatest skill.

CUTLET, n. s. |Fr. cotelette. A steak ; strictly, it means a rib.

So mutton cutlets, prime of meat. Swift.

CUTTACK, a considerable district of Orissa, Hindostan, situated between the twentieth and twenty-second degrees of north latitude. It is bounded on the north by Midnapoor and Mo- hurbunge ; on the south by the Circars ; on the east by the Bay of Bengal ; and on the west by several small states of the interior. Its length is about 150 miles, and breadth about sixty, con- taining a population of 1 ,200,000 souls. Between Gaintee and Bamori the country is richly pro- ductive, and is inhabited by weavers, who manufacture muslins in pieces for turbans. From Arickpoor to Cuttack the land is chiefly arable, but interspersed with bushes, and not thoroughly cultivated. The Mahanuddy River, in passing through this country, often changes its name, according to the vicinity of different towns and villages. It is also watered by other con- siderable streams. The rents are chiefly paid in cowries.

The holy land of Juggernauth extends about fifteen miles on each side of the temple of Jug- gernauth, to the north and south. Its occupants have from time immemorial been exempt from the taxes which Hindoos pay for access to the temple, except during the ruth and dole jattries, when they also are liable to a small impost.

The chief towns are Cuttack, Juggernauth, Buddruck, and Balasore. This district is men- tioned by the Mahommedan historians as early as the year 1212, under the title of Jagepore, or Jehazpore. It was then subject to a Hindoo prince, who resided at Jagepore ; it was subdued by and annexed to Bengal in the reign of Soly- man Kerang, 1569. Thus it remained till the year 1751, when it was ceded by the nuwab Alyverdy Khan to the Nagpore Mahrattas, who, in 1803, were again compelled to resign it to the victorious arms of the British, and it is now managed by a civil establishment of judge, collector, &c.

CUTTACK, the capital of the above district, called also Cuttack Benares, formerly Saringgur, was once fortified, and a highly respectable town ; but, during the period it was governed by the Mahrattas, it fell to decay. In the year 1592 it withstood the Mogul arms for nearly a month, and is naturally strong, but the climate is un- healthy. It is at present the residence of the gentlemen of the civil establishment, and has a cantonment for a corps of native infantry.

CUTTER, a small vessel, commonly navigated in the channel of England. It is furnished with one mast, and rigged as a sloop. Many of these vessels aiC used in an illicit trade, and others are employed by government to take them ; the litter of which are either under the

direction of the admiralty, or custom-house.

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CUTTLE. Ang.-Sax. cutele. A fish, which, when pursued, darkens the water with an inky substance ; a foul-mouthed fellow ; a knife.

Away, you cutpurse rascal ; you filthy bung, away : by this wine, I'll thrust my knife in your mouldy chaps, if you play the saucy cuttle with me.

Shakspeure. Henry IV.

It is somewhat strange, that the blood of all birds and beasts, and fishes, should be of a red colour, aud only the blood of the cuttle should be as black as ink.

Bacon.

He that uses many words for the explaining any subject, doth, like the cuttle fish, hide himself for the most part in his own ink. Ray on the Creation.

CUTTLE-FISH. See SEPIA. CUTTS (John lord), was son of Richard Cutts, esq. of Matching in Essex; where the family were settled about the time of Henry VI., and had a large estate. He entered early into the service of the duke of Monmoutn, was aid- de-camp to the duke of Lorraine in Hungary, and signalised himself in a very extraordinary manner at the taking of Buda by the imperialists in 1686; which important place had been for near a century and a half in the hands of the Turks. Returning to England at the Revolution, he obtained a regiment of foot; was created baron Gowran in Ireland, December 6th, 1690 ; appointed governor of the Isle of Wight, April 14th, 1693; was made a major-general; and, when the assassination project was discovered, 1695-6, was captain of the king's guard. He was colonel of the Coldstream guards in 1701 ; when Mr. Steele, who was indebted to his interest for a military commission, inscribed to him his first work, The Christian Hero. On the accession of queen Anne, he was made a lieute- nant-general of the forces in Holland ; com- mander in chief of the forces in Ireland, under the duke of Ormond, March 23d, 1704-5; aud afterwards one of the lords justices of that king- dom. He died at Dublin January 26th, 1706-7, and was buried there in the cathedral of Christ Church. He wrote a poem on the death of queen Mary, and published, in 1687, Poetical Exercises, written upon several occasions, and dedicated to her royal highness Mary, princess of Orange. One of his songs is quoted by Steele in his Tat- ler; but his

Muse Cavalier is erroneously ascribed by Walpole to lord Peterborough.

CUT-WATER, the sharp part of the head of a ship below the beak, so called because it cuts or divides'the water before it comes to the bow, that it may not come too suddenly to the breadth of the ship, which would retard it.

CUT-WORK, n. x. Embroidered work. CUVIER (George Leopold Christian Frederic Dagobert), baron and peer; born Aug. 25, 1769, at Montbeliard, in the duchy of Wiirtemburg. His brilliant talents early excited great expectations. His father was an officer. As (he son's health did not allow him to become a soldier, he re- solved to be a clergyman, and was obliged t® pass an examination for the stipend, by the help of which he expected to study at Tubingen. A malicious examiner rejected him. The affair, however, was marked by so much injustice, that prince Frederic, brother of the duke, and go- vernor of the district, thought it his duty to

compensate Cuvier by a place in the Charles Academy at Stuttgart, where he gave up his intention of becoming a clergyman. In Stutt- gart he studied law, although fond of natural history, and to, this period of his life he is indebted for his accurate knowledge of the German language and literature. The narrow circumstances of his parents compelled him to accept the office of tutor in the family of count D'Hericy, in Normandy, where he devoted his leisure to natural science. Cuvier soon perceived that zoology was far from that per- fection to which Linnaeus had carried botany, and to which mineralogy had been carried by the united labors of the philosophers of Germany and France. The first desideratum was a careful observation of all the organs of animals, in order to ascertain their mutual dependence, and their influence on animal life ; then a confutation of the fanciful systems which had obscured rather than illustrated the study. Examinations of the marine productions, with which the neighbouring ocean abundantly supplied him, served him as a suitable preparation. A natural classification of the numerous classes of vernies (Linn.) was his first labour, and the clearness with which he gave au account of his observations and ingenious views, procured him an acquaintance with all the naturalists of Paris. Geoffry St. Hilaire in- vited him to Paris, opened to him the collections of natural history, over which he presided, took part with him in the publication of several works on the classification of the mammalia, and placed him at the central school in Paris, May, 1795. The

institute, being re-estahlished the same year, received him as a member of the first class. For the use of the central school, he wrote his Tableau Elementaire de 1'Histoire Naturelle des Animaux (1798), by which he laid the foundation of his future fame. From this time he was considered one of the first zoologists of Europe. He soon after displayed his brilliant talents as professor of comparative anatomy. His profound know- ledge was not less remarkable than his elevated views, and the elegance with which he illustrated them before a mixed audience. In the lecture- room of the Lycee, where he lectured several years on natural history, was assembled all the accomplished society of Paris, attracted by the ingenuity of his classifications, and by his exten- sive surveys of all the kingdoms of nature. In January, 1800, he justly received the place for- merly occupied by D'Aubenton, in the College de France. Nor did his merits escape the saga- city of Napoleon. In the department of public instruction, in which, one after another, he filled the most important offices, he exercised much influence by his useful improvements and inde- fatigable activity. He delivered a report very honorable to Germany, in 1811, when he re- turned from a journey in Holland and Germany, as superintendent of instruction. He was ac- companied in his journey by Noel. In 1813 the emperor appointed him Maitre des Requetes to the council of state, and committed to his care the most important affairs in Mentz. Louis XVIII. confirmed him in his former offices, and raised him to the rank of counsellor. As such, he belonged at first to the committee of legisla-

tion, and afterwards to that of the interior. As a politician, he drew upon himself the reproaches of the liberals. In general, the political course- of Cuvier forms a contrast to his scientific one, and is, besides, of little importance. The mea- sures of the abbe Frayssinons, then chancellor of the university of Paris, determined him to resign the office of university-counsellor, in December, 1822. The principal of his works are, Recherches sur les Ossemens Fossiles, 5 vols., 4to., with plates (the classical introduc- tion to this work is printed separately); Discours sur les Revolutions de la Surface du Globe, et sur les Changemens qu'elles ont produit dans le Regne animal (Paris, 1825); also, Le Regne animal (1817, 4 vols.); Lecuns d' Anatomic Comparce, recueillies par Dume'ril et Duvernoy (1805, 5 vols.); Recherches anatomiques sur les Reptiles rcgardes encore comme douteux (1807, 4to.); Memoires pour servir a 1'llistoire de 1'Anatomie de"s Mollusques (1816, 4to.). As perpetual secretary, &c., of the academy, in the class of physical sciences, he pronounced clones on the deceased members of the institute. The Recueil d'Eloges Historiques (Paris, 1819, 2 vols.), contains models worthy of imitation. The

French academy received him, in consequence, among their forty members, and almost all the learne'd societies of the world sent him honorary diplomas. France is indebted to him for the establishment of a cabinet of comparative ana- tomy, which is the finest osteological collection in Europe. Cuvier may be said to have created the science of natural history, having, by his ex- traordinary and almost instinctive perception of the organic analogies, as traced in the fossil re- mains which had previously been considered as the mere ornaments of a cabinet of curiosities, thrown a light on the universal system of crea- tion, of which those formed in previous schools could not have even the remotest idea. In the po- litical changes which France underwent, the esti- mation in which he was held continued un- affected. King Louis Philippe conferred upon him the rank of peer, his title of baron being merely nominal. Cuvier expired on the 13lh of May, 1832, in the 63rd year of his age, leaving no property but his library and cabinet of natural history, both which were purchased by the French government for 72,000 francs. The French king, also, as a testimony of his regard for the learning and abilities of the deceased natu- ralist, conferred a pension of 6000 francs on his widow, with the enjoyment of the apartments in the Jardin des Plants, occupied by her late husband.

CUX HAVEN, a iea-port of Germany, in the duchy of Bremen, situated on the left bank of the Elbe, at its embouchure. The harbour, being very large and commodious, is much frequented, and vessels generally take in pilots here, in order to ascend the river to Hamburgh. A yacht is stationed out at sea, near the outermost buoy, with pilots ready to conduct any vessel that may demand them. The town and bailiwic belong to the corporation of Hamburgh, who have held them ever since the fourteenth century. During the late revolutionary wars Cuxhaven became a place of great importance as an entrepot i>f

British goods. On the fall of Hamburgh in 1806, it came into the possession of the French, and remained under their domination above seven years. When, at the close of the war, the French defended Hamburgh, Cuxhaven was the scene of some severe fighting. It is sixty miles north- west of Hamburgh, and the light-house is in long. 8° 43′ 1″ E., lat. 53° 52′ 21″ N.

CUYO, or CUJQ, an extensive province of Peru, and a portion of the former vice-royalty of Buenos Ayres, is bounded on the north by Tucuman, on the east by the Pampas deserts, on the south by deserts, and on the west by the Andes.

CYANOMETER, a contrivance, invented by Saussure, to ascertain a comparable specimen 01 the shade of blue of the sky at different times and in different places.

CYATHUS, Kvafloc, from xwai/> to Pour out> was a common measure among the Greeks and Romans, both of the liquid and dry kind. It was equal to an ounce, or the twelfth part of a pint, and was made with a handle like our punch-ladle. The Romans frequently drank as many cyathi as there were muses, i. e. nine; or as many as there were letters in their patron's name. The cyathus of the Greeks is said by Galen and others to have weighed ten drachms ; elsewhere he says, that a cyathus contains twelve drachms of oil, thirteen drachms and one scruple of wine, water, or vinegar, and eighteen drachms of honey. Among the Veterinarii, the cyathus contained two ounces.

CYAXARES I., son of Phraortes, king of Media and Persia. He bravely defended his kingdom against the Scythians; made war against Alyattes, king of Lydia ; and subjected to his power all Asia, beyond the river Ilalys. He died after a reign of forty years, in the year of Rome 160.

CYAXARES II. is supposed by Dr. Prideaux and others to be the same as Darius the Mede, the son of Astyages, king of Media. He added seven provinces to his father's dominions, and made war against the Assyrians, whom Cyrus favored.

CYBELE, in Pagan mythology, the daughter of Ccelius and Terra, wife of Saturn, and mother of Jupiter, Neptune, Pluto, &c. She is also colled Rhea, Ops, Vesta, Bona Mater, Magna Mater, Berecynthia, Dindymene, &c., and by some is reckoned the same with Ceres : but most mythologists make these two distinct goddesses. According to Diodorus, she was the daughter of a Lydian prince, and, as soon as she was born, she was exposed on a mountain. She was pre- served by sucking some of the wild beasts of the forest, and received the name of Cybele from the mountain where her life had been preserved. When she returned to her father's court, she had an intrigue with Atys, a beautiful youth, whom her father mutilated, &c. Most of the mythologists mention the amours of Atys and Cybele. In Phrygia the festivals of Cybele were observed with the greatest solemnity. Her priests, called Corybantes, Curetes, Gal|i, &c., it is said were not admitted to

the service of the goddess without a previous mutilation. In the celebration of the festivals, they imitated the manners of madmen, and filled the air with shrieks and bowlings,

mixed with the confused noise of drums, tabrets, bucklers, and spears. This was in commemo- ration of the sorrow of Cybe.e for the loss of her favorite Atys. The goddess was generally repre- sented as a robust woman, far advanced in pregnancy, to imitate the fecundity of the earth. She held keys in her hand, and her head was crowned with rising turrets, or with leaves of oak. She sometimes appears riding in a chariot, drawn by two tame lions : Atys follows by her side, carrying a ball in his hand, and supporting himself upon a fir-tree, which is sacred to the goddess. She is also represented with a sceptre in her hand, and with many breasts, to show that the earth gives aliments to all living creatures ; and she generally carries two linns under her arms. From Phrygia the worship of Cybele passed into Greece, and was solemnly established at Eleusis under the name of the Eleusinian mysteries of Ceres. The Romans, by order of the Sibylline books, brought the statue of the goddess from Pessinus into Italy ; and when the ship which carried it had run on a shallow bank of the Tiber, the virtue of Claudia was said to have been vindicated, by removing it with her girdle. It is supposed that the mysteries of Cybele were first known about 257 years before the Trojan war, or 1580 years before the Augus- tan age. The Romans were particularly super- stitious in washing, every year on the 6th of the kalends of April, the shrine of this goddess in the waters of the river Almon. Many obsceni- ties prevailed in the observation of the festivals ; and the priests themselves were the most eager to use indecent expressions, and to show their unbounded licentiousness.

CYBELICUM MAKMOR, a name given by the ancients to a species of marble dug in the mountain Cybele. It was of an extremely bright white, with broad veins of bluish-black.

CYCAS, in botany, a genus of plants of the moncecia class, and polygamia order. The fruit is a dry plum, with a bivalved kernel. There is but one species described by Linnaeus, viz. the circinalis; but professor Thunberg mentions another, viz. 1. C. caffra, broad broom, or bread tree of the Hottentots. This plant, discovered by professor Thunberg, is described in the Nova Acta Reg. Soc. Scient. Ups. vol. ii. p. 283, tab. V. The pith, or medulla, which abounds in the trunk of this little palm, Mr. Sparrman informs us, is collected and tied up in dressed calf or sheep skins, and then buried in the earth for the space of several weeks, till it becomes sufficiently mellow and tender to be kneaded up with water into a paste, of which they afterwards make

small loaves or cakes, and bake them under the ashes. 2. C. circinalis, or sago-tree, which grows spontaneously in the East Indies, and particularly on the coast of Malabar. It runs up with a straight trunk to upwards of forty feet in height, having many circles the whole length, occasioned by the old leaves falling off; for standing in a circular order round the stem, and embracing it with their base, whenever they drop, they leave the marks of their adhesion. The leaves are pinnated, and grow to the length of seven or eight feet. The pinnae or lobes are long, narrow entire, of a shining green, all the way of a

breadth, lance-shaped at the point, closely crowded together, and stand at right angles on each side the mid-rib, like the teeth of a comb. The flowers are produced in long bunches at the foot-stalks of the leaves, and are succeeded by oval fruit, about the size of large plums, of a red color when ripe, and a sweet flavor. Each con- tains a hard brown nut, enclosing a white meat which tastes like a chestnut. This is a valuable tree to the inhabitants of India, as it not only furnishes a considerable part of their constant bread, but also supplies them with a large article of trade. See SAGO.

CYCEON, from KVKUUV, to mix, a name given by the ancient poets and physicians to a mixture of meal and water, and sometimes of other ingre- dients. These constituted the two kinds of cyceon ; the coarser being of the water and meal alone ; the richer and more delicate composed of wine, honey, flour, water, and cheese. Homer, in the llth Iliad, speaks of cyceon made with cheese, and the meal of barley mixed with wine, but without any .mention either of honey or wa- ter ; and Ovid, describing the draught of cyceon ˆiven by the old woman of Athens to Ceres, mentions only flour and water. Dioscorides understood the word in both these senses ; but extolled it most in the coarse and simple kind : he says, when prepared with water alone, it re- frigerates and nourishes greatly.

CYCINNIS, a Grecian dance, so called from its supposed inventor, one of the satyrs belonging to Bacchus. It consisted of a combination of grave and gay movements.

CYCLADES, in ancient geography, islands so called, as Pliny informs us, from the Cyclus or orb in which they lie ; beginning from the promontory Geraestum of Eubcca, and lying round the island Delos. Their situation and number is not so generally agreed upon. Strabo

says, they were first reckoned twelve, but that many others were added : yet most of them lie to the south of Delos, and but few to the north, so that the middle or centre, ascribed to Delos, is to be taken in a loose, not in a geometrical sense. Strabo recites them, after Artemidorus, as follows : Helena, Ceos, Cynthus, Seriphus, Melos, Siphnus, Cimolus, Prepesiuthus, Olearus, Naxos, Paros, Syrus, Myconos, Tenos, Andros, Gyarus ; but he excludes from the number, Prepesinthus, Olearus, and Gyarus.

CYCLADES, GREAT. See HEBRIDES, NEW.

CYCLAMEN, sowbread, a genus of the monogynia order, and pentandria class of plants : natural order twenty-first, precise. COR. verticil- lated, with the tube very short, and the throat prominent: the BERRY is covered with the cap- sule. There are but two species, which, however, produce many beautiful varieties. They are low, herbaceous, flowery perennials, of the tuberous rooted kind, with numerous, angular, heart- shaped, spotted, marbled leaves ; and many fleshy foot-stalks six inches high, carrying monopetalous, five-parted, reflexed flowers, of various colors. CYCLE, n.s.) Lat. cyclus ; KOK\OC-

CYCLO'METRY, n. s. $ A circle ; a round of time ; a space in which the same revolutions beˆin again ; a method, or account of a method till the same course begins again ; imaginary

CYC

orbs ; a circle in the heavens. Cyclomctry is the art of measuring cycles.

How build, unbuild, contrive

To save appearances ; how gird the sphere

With eentrick, and excentrick, scribbled o'er

Cycle and epicycle, orb in orb ! Milton.

We do more commonly use these words, so as to style a lesser space a cycle, and a greater by the name of period ; and you may not improperly call the be- ginning of a large period the epocha thereof.

Holder on Time.

We thought we should not attempt an unacceptable work, if here we endeavoured to present our gar- deners with a complete cycle of what

is requisite to be doue throughout every month of the year.

Evelyn's Kalendar.

Chained to one centre whirled the kindred spheres, And. marked with lunar cycles solar years. JJarwin.

I must tell you that Sir H. Savile had confuted Joseph Scaliger'a cyclometry. Wallit.

CYCLE OF EASTER. See CHRONOLOGY.

CYCLE OF THE MOON. See CHRONOLOGY. It is called also the golden number, and the Metonic cycle, from its inventor Meton the Athenian. At the time of the council of Nice, when the method of finding the time for observing the feast of Easter was established, the numbers of the lunar cycle were inserted in the kalendar, which, upon the account of their use, were set in golden let- ters, and the year of the cycle called the golden number of that year.

CYCLE OF THE SUN. See CHRONOLOGY.

CYCLISUS, in surgery, an instrument in the form of a half moon, used in scraping the scull, in cases of fractures of that part.

CY'CLOID, n. s. i KueXotlfojc. A geome-

CYCLO'IDAL, adj. 5 trical curve, of which the genesis may be conceived by imagining a nail in the circumference of a wheel : the line which the nail describes in the air, while the wheel revolves in a right line, is the cycloid. Relating to a cycloid; as the cycloidal space is the space contained between the cycloid and its substance.

A man may frame to himself the notion of a para- bola, or a cycloid, from the mathematical definition of those figures. Reid.

CYCLOID, or TROCIIOID, a mechanical or transcendental curve, which is thus generated : — Suppose a circle F E II to roll along the straight line A B, so that all the parts of its circumference be applied to the straight line in succession; the point E, that was in contact with AB at A, will, by a motion thus compounded of a circular and rectilineal motion, describe a certain curve line A, to EDB, which is called a cycloid. The straight line AB is called the base, and the line CD perpendicular to AB, bisecting it at C, and meeting the curve in D, is called the axis of the cycloid. The circle by whose revolution the curve is described is called the generating circle. The following are some of

the most remarkable properties of this curve. — 1. The base AB is equal to the circumference of the generating circle. 2. The axis C D is equal to the diameter of the generating circle. These two properties are ob- vious from the definition of the curve. 3. Let the generating circle C K D be described on the axis C D as a diameter, and let G K E be per- pendicular to the axis, meeting the circle in K,

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and the cycloid in E. The straight line E G is equal to the sum of the circular arc D K, and its sine K G. Let the generating circle F E H pass through E and touch the base AB at F; join EF and KC, and draw the diameter FH. The chords F E and C K are evidently equal and parallel, therefore FCzzEK; now ACrzsemi- circumference F E H, and A Fˆarc F E which has quitted it, therefore FC— arc EH, or EK~ arc DK, and EG = arc DK + sine KG. 4. If E H be drawn touching the cycloid at E, it is parallel to K D the chord of the generating circle. Draw e kg parallel and indefinitely nearto E K G, meeting the chord KD in n. Draw KL, DL, touching the generating circle. The triangles KLD, K/cn are similar, and KLizLD, there- fore K fc— kn; now arc DK— EK, and arc Dk—ek, therefore K /c, or &n— EK — ek, and, adding ek to each of these equals, EKizen, therefore the indefinitely small part of the cycloidal arc Ee, which coincides with the tan- gent, is parallel to K n, therefore the tangent E H is parallel to the chord K D. 5. The arc D E of the cycloid is equal to twice the chord D K of the generating circle. Join DA: and draw/co per- pendicular to Kn, then Kois the indefinitely small increment of the chord k D, and K k has been proved equal to kn (4), therefore Kn is bisected in o; but K«— Ee (4) therefore Ee the increment of the cycloidal arc De is always dou- ble Ko the corresponding increment of the chord D k, therefore the whole arc D E must be double the chord D K. Corollary. The whole cycloid ADB is equal to four times the axis CD, or four times the diameter of the generating circle. 6. If C D is produced to M, so that C M = C D, and if the half of the cycloid B D be placed in the position AM, and the other half AD in the position M B, then, if a thread M Q ErzM Q A be unfolded from the arc MA, the extremity E of this thread will describe the cycloid ADB. Make AP equal and parallel to CM, and on AP describe the semicircle ATP. Let the thread touch the curve at Q ; draw QR perpen- dicular to A P, cutting the circle in T, and join A T. Then F Q is parallel to A T (4) and there- fore equal to it; now EQ is equal to the arc AQ which is double AT (5) or FQ, therefore EF = FQ- AT, if therefore EKG be drawn perpendicular to C D, C G is equal to A R, and arc CK— arc AT, also the chord KC is equal and parallel, to the chord AT, which is parallel to EF, therefore FC = EK; now AF or TQ = arc AT (3). Therefore FC or E Kzzarc T P =

arc D K : therefore E is a point in the cycloid A B D. 7. Let D V be drawn parallel to A C, and EV perpendicular to D V, the area contained by the straight lines E V, V D, and E D, the arc of the cycloid, is equal to the area contained by the circular arc D K, and the straight lines D G, G K. Draw ev parallel to E V, and let ge meet EVinx.

by similar triangles (4) Ear; xe’.’.DG ‘. GK, that is Gg : Vi > ; : EV : GK, therefore the rectangle GK G g — rectangle E V’Vv, that is, the contemporaneous increments of the circular area D kg and cycloidal area D ve are equal, therefore the circular area D KG is equal to the cycloidal area D V E. Cor. The area contained by the base AB and the arc of the cycloid AD B is equal to three times the area of the generating circle. For complete the rectangle D C AY, and the space D E AYis equal to the semi- circle DKC, therefore the rectangle DYAC is equal to the cycloidal area DEAC together with the semicircle DKC; but the rectangle DYAC is contained by D C the diameter of the circle and AC which is half its circumference, it is therefore four times the area of the semicircle, therefore three times the area of the semicircle is equal to the cycloidal area DEAC. See farther re- lating to the cycloid under PEKDULUM.

CYCLOPEDIA, or) KwicXoc, a circle, and CYCLOPE’DE, n. s. J iraiSeia. A circle of knowledge ; a course of the sciences.

The tedious and unedifying commentaries on Peter Lombard’s scholastic cyclopede of divinity. Warton.

CYCLOPEDIA, or ENCYCLOPEDIA, a term which, in modern times, has been appropriated, from the Greek, to express those useful and superioi Dictionaries of Science and Literature, of which we hope to furnish a favorable specimen. Under the term ENCYCLOPEDIA, which is the more common, we shall give some account of the principal works of this kind which have appeared in our language.

CYCLOPE’AN, adj.) From the Cyclops. CYCLO’PICK, adj. J Vast; inspiring terror; furious ; savage.

The cyclopean furnace of all wicked fashions, the heart. Bishop Hall.

Cyclopick monsters, who daily seem to fight against heaven. Bishop Taylor.

CYCLOPS, in fabulous history, the sons of Neptune and Amphitrite : the principal of whom were Polyphemus, Brontes, Steropes, and Py-

racmon ; but their whole number amounted to above 100. Jupiter threw them into Tartarus as soon as they were born ; but they were delivered at the intercession of Tellus, and became the assistants of Vulcan. They were of prodigious stature, and had each only one eye, which was placed in the middle of the forehead. Some mythologists say, that the cyclops signify the va- pors raised in the air, which occasion thunder and lightning; on which account they are re- presented as forging the thunderbolts of Jupiter. Others represent them as the first inhabitants ot Sicily, who were cruel, of a gigantic form, and dwelt round mount /Etna.

CYDER.

CYCLOPTERUS, tlie sucker, in ichthyology, a genus belonging to the order of amphibia .•antes. Thn head is obtuse, and furnished with s«w teeth : there are four rays in the gills, and the belly fins are connected together in an orbi- cular form. There are ten species. The chief are: — 1. C. liparis, or the sea snail, so called from the soft and unctuous texture of its body, resembling that of the land snail. It is almost transparent, and soon dissolves and melts away. It is found in the sea near the mouths of great rivers, and has been seen full of spawn in Janu- ary. The length is five inches; the color a pale brown, sometimes finely streaked with a darker. Beneath the throat is a round depression of a whitish color like the impression of a seal, sur- rounded by twelve small pale yellow tubera, by which probably it adheres to the stones like the other species. 2. 0. lumpus, the lump fish, cock paddle, or sea owl, grows to the length of nine- teen inches, and weighs seven pounds. The shape of the body is like that of the bream, deep and very thick, and it swims edgeways. The back is sharp and elevated : the belly flat, of a bright crimson color. Along the body there run several rows of sharp bony tubercles, and the whole skin is covered with small ones. The pectoral fins are large and broad, almost uniting at their base. Beneath these is the part by which it adheres to the rocks, &c. It consists of an oval aperture, surrounded with a fleshy, muscular, and obtuse soft substance, edged with many small threaded appendages, which concur as so many claspers. The tail and vent fins are pur- ple. This fish is sometimes eaten in England, neing stewed like carp : but is both flabby and insipid.

CY'DER, n. s. A fermented drink, made of the juice of apples. See CIDER.

A tendency to these diseases is certainly heredi- tary, though perhaps nut the diseases themselves ; thus a less quantity of ale, cyder, wine, or spirit, will induce the gout and dropsy in those constitutions whose

parents have been intemperate in the use of those liquors. Darwin.

CYDER, in rural economy, is particularly used for the liquor expressed and prepared by fer- mentation from the juice of apples. It has been made in this country from a very early period. Henry of Huntingdon, in describing a quarrel that arose at the court of Edward the Confessor, between the two sons of earl Godwin, represents one of them as departing in a rage to Hereford, (still famous for this beverage) where his brother had ordered a royal banquet to be prepared. * There he seized his brother's attendants, and cutting off their heads and limbs, he placed them in the vessels of wine, mead, ale, pigment, moral, and cyder.' Henry Hunt., vol. vi. p. 367. But the art of preparing it has never been in- vestigated with much attention, nor improved by science: it is principally, to this day, in the hands of the growers of the fruit. We shall present the reader with the best practical direc- tions that have been given to the public on the subject, viz. by Messrs. Marshall, Crocker, and Knight.

The first of these gentlemen made a tour through the cyder counties with a view to ob-

serve the different mctliods of preparing it. Tim may be divided into three processes : — I. Pre- paring the fruit. II. (jriuding and expressing the juice from it. III. Fermenting and bottling. I. In preparing tltc fruit, care must be taken both as to its peculiar quality, and its stage of ripeness, or the season at which it is gathered. Few apples are ready for gathering before Mi- chaelmas; though they are sometimes manufac- tured before that time. For sale-cyder, and keeping-drink, they are allowed to remain on the trees till fully ripe ; and in general the middle of October is considered a proper time for gathering the stire apples. The ripeness of the fruit is judged of by its falling from the tree ; and Mr. Marshall, as well as Mr. Crocker, thinks that the forcing it away before that time robs it of some of its most valuable properties. ' The; harvesting of fruit,' says the former, ' is widely different in this respect from the harvesting o. grain, which has the entire plant to feed it after the separation from the soil ; while fruit, after it is severed from ihe tree, is cut off. ft urn all pos- sibility of a further supply of nourishment, and, although it may have readied its wonted size, some of its more essential particles are undoubt- edly left behind in the tree. Fruits which are late in ripening, however, will sometimes hang on the tree until spoiled by frost, and particularly the weak watery fruits. The general practice of beating them down with poles is much disapproved o. by Mr. Marshall, because the fruit must thus be unequally ripe, the apples on the same tree not ripening all at the same time; and thus part of the richness and flavor of the fruit is

entirely lost : besides, if the fermentation is interrupted or rendered complex by a mixture of ripe and vmripe fruits, and the liquor is not, at first, suf- ficiently purged from its feculencies, it will be difficult to clear it afterwards. To avoid these .nconveniences, arising from the unequal ripe- ning of the fruit, the trees ought to be gone over first with a hook when the fruit begins to fall na- curally, and the trees may be afterwards cleared with the poles when it is all sufficiently ripened, or when tl-e winter is likely to set in. Mr. Mar- shall obseives, that the due degree of maturation of fruit for liquor is a subject about which men differ much in their ideas. The prevailing prac- tice of gathering it into heaps until the ripest begin to rot, is wasting the best of the fruit, and is by no means an accurate criterion. Some shake the fruit, and judge by the rattling of the kernels; others cut through the middle, an:! judge by their blackness : but none of these ap- pear to be a proper test. It is not the state or the kernels, hut of the flesh ; not of a few indi- viduals, but of the greater part of the prime fruit, which renders the collective body fit or unfit to be sent to the mill. The most rational test of the ripeness of the fruit is, that of the flesh having acquired such a degree of mellow- ness, and its texture such a degree of tenderness, as to yield to moderate pressure ; thus, when the knuckle or the end of the thumb can with mo- derate exertion be forced into the pulp of the fruit, it is deemed in a fit state for grinding.

Mr. Marshall is of opinion that one of the grand secrets of cyder-making is the skilful sep&-

ration of the ripe and unripe fruit, before send- ing it to the mill ; and as by various accidents they may be confounded, the most effectual me- thod of distinguishing them is by the hand. He also seems to think that the practice of mixing fruit* for liquor is improper, because the finer liquors are made from select fruits; and ob- serves, that it might be better to mix liquors after they are made, than to put together the crude fruits.

Mr. Crocker recommends making three dis- tinct gatherings of the crop, and keeping each by itself. The prime cyder will then be made from the first, and the latter gathering and wind-falls make a fair common article. According to Mr. Knight, the merit of cyder will always depend much on the proper mixture, or rather on the proper separation of the fruits. Those whose rinds and pulp are tinged with green or red, without any mixture of yellow, as that color will

disappear in the first stages of fermentation, should be carefully kept apart from such as are yellow, or yellow intermixed with red. The latter kinds, which should remain on the trees till ripe enough to fall without bˆing much shaken, are, as we have noticed, alone capable of making fine cyder. Each kind should be col- lected separately, as noticed above, and kept till it becomes perfectly mellow. For this purpose, in the common practice of the country, they are nlaced in heaps often inches or a foot thick, and exposed to the sun and air, and rain ; not being overcovered except in very severe frosts. The strength and flavor of the future liquor are, however, he says, increased by keeping the fruit under cover some time before it is ground; but unless a situation can be afforded it, in which it is exposed to a free current of air, and where it can be spread very thin, it is apt to contract an unpleasant smell, which will much affect the cyder produced from it. Few farms are pro- vided with proper buildings for this purpose on a large scale, and the improvement of the liquor will not nearly pay the expense of erecting them. It may reasonably be supposed that much water is absorbed by the fruit in a rainy season ; but the quantity of juice yielded by any given quan- tity of fruit will be found to diminish as it he- comes more mellow ; even in very wet weather, provided it be ground when thoroughly dry. The advantages, therefore, of covering the fruit, will probably be much less than may at first sight be expected. No criterion appears, the writer says, to be known, by which the most proper point of maturity in the fruit can be as- certained with accuracy ; but he has good rea- son to believe that it improves as long as it con- tinues to acquire a deeper shade of yellow. Each heap should be examined prior to its being ground, and any decayed o<- green fruit carefully taken away. The expense of this will, he ob- ser'es, be very small, and will be amply repaid by the excellence of the liquor, and the care with which too great a degree of fermentation may be prevented in the process of making it into cyder. In seasons ordinarily favorable half a hogshead of cyder may be expected from the fruit of each tree of an orchard in full beanng. As the num- ber of trees on the acre varies from ten to forty,

the quantity of cyder must vary in the same pro- portion, that is, from five to twenty hogsheads, Pear trees, in equally good bearing, yield fully one-third more liquor : therefore, although the liquor extracted from pears sells at a lower price than that produced from apples, yet the value by the acre, when the number of trees is equal, is nearly the same.

II. Of grinding the fruit, &c. — The cyder- makers in Herefordshire generally agree in con- sidering it necessary towards the perfection of the cyder, to grind the rinds and seeds of the fruit, as well as the

fleshy part, to a pulp; but Mr. Marshall complains, that the mills are often very imperfectly finished, and little in- debted to the operation of the square and chisel. As perfectly smooth rollers, nowever, would not lay hold of the fruit sufficiently to force it through, it might be proper, he suggests, to grind the fruit first in the mill to a cerlam degree, and after- wards put it between two smoother rollers to finish the operation. A bag, containing four corn bushels, is the usual quantity with which they charge a middle-sized mill ; and this should yield an equal quantity when ground. After the fruit is ground, it generally remains some time before pressing, that the rind and seeds may communicate their virtues to the li- quor ; and for this reason Mr. Marshall repro- bates the practice of pressing the pulp of the fruit whenever the grinding is finished. The ordinary cyder mill is exhibited on the right hand of our plate CYDER PRESS, &c., and will be further described at the close of this article.

A difference of opinion exists as to the pro- priety of pressing the fruit immediately after it is ground. Mr. Knight,an able writer on the apple and pear, contends that it should remain at least twenty-four hours before it is taken to the press. Others recommend two days; but many take it at once from the mill to the press when the grinding is finished. Mr. Crocker thinks both extremes wrong. There is an analogy, he ob- serves between the making of cyder from apples, and wine from grapes ; and the method which the wine-maker pursues ought to be followed by the cyder-maker. When the pulp of the grapes has lain some time in the vats, the vintager thrusts his hand into the pulp, and takes some from the mid- dle of the mass; and when he perceives, by the smell, that the luscious sweetness is gone off, and that his nose is affected with a slight piquancy, lie immediately carries it to the press, and by a light pressure expresses his prime juice. In like manner, should the cyderist determine the time when his pulp should be carried to the press. If he carry it immediately from the mill to the press, he may lose some small advantage which may be expected from the rind and kernels, and his liquor may be of lower color than he might wish. If he suffer it to remain too long un- pressed, he will find to his cost that the acetous fermentation will come on before the vinous is perfected, especially in the early part of the cy- der-making season. He will generally find that his pulp is in a fit state for pressing in about twelve or sixteen hours. If he must of necessity keep it in that state longer, he will find a sen- sible heat therein, which will engender a prema-

ture fermentation ; and he must not delay turn- ing it over, thereby to

expose the middle of the mass to the influence of the atmosphere.

In order to press the fruit, or pommage as it is now called, it is folded up in pieces of hair- cloth, or placed between layers of clean, sweet straw or reed, and piled up in a square frame or mould : the press is then pulled down and squeezes out the juice, forming the matter into thin and almost dry cakes. Care ought to be taken to keep the straw, reed, or hair-cloths sweet, or the ill ef- fects of their acidity will be communicated to the cyder. The first runnings come off foul and muddy, but the last, particularly in perry, will be as clear and fine as if filtered through paper. The refuse is generally thrown away as useless, or, when dry, used as fuel ; if it has not been thoroughly squeezed, the pigs will sometimes eat it ; and some people grind it a second time with water, and press it for an inferior liquor for fa- mily use. As long as a drop can be drawn, Mr. Marshall recommends to continue the pressure. Even breaking the cakes of the refuse with the hands only, he says, gives the press fresh power over it : regrinding them has a still greater effect : in this state of the materials, the mill gains a degree of power over the more rigid parts of the fruit, which in the first grinding it could not reach. The most eligible management in this stage of the process appears to be this: grind one pressful a-day; press, and regrind the residuum in the evening ; infuse the reduced matter all night among part of the first runnings, and in the morning repress while the next press- ful is grinding.

III. Of fermentation and bottling. — In the fer- mentation of the liquor, the common practice is to have it put into casks or hogsheads, immedi- ately from the press, and to fill them quite full; when the casks are put into airy sheds, where the warmth differs little from the open atmosphere. They are sometimes even exposed to the open air without any covering but a piece of tile or flat stone, propped up over the bung-hole to carry off the rain. It would seem, from Mr. Marshall's account, that the time with cyder, when the fermentation begins, is quite uncertain, in general varying from one day to a month after it is tunned ; though liquor taken immediately from the press, if much agitated, will sometimes pass directly into a state of fermentation. If the commencement of the fermentation is uncertain, its continuance is no less so ; liquors that have been agitated will frequently go through it in one day; but otherwise, when allowed to rest, it will take from two to six days. The appearance of the liquor also varies according to the ripeness of the fruit : if the fruit has been properly ma- tured, a thick scum is generally thrown up, re- sembling that of malt liquor. After the liquor has remained some time in the fermenting ves- sels it is racked off from the lees, and put into fresh casks. But as a fresh fermentation fre- quently takes place after racking, when this becomes

violent, the liquor must be racked again ; and sometimes, before the fermentation is checked, the racking must be repeated five or six times ; but when there is only a small degree of fermentation, called fretting, the liquor is suf- fered to remain in the same cask ; this degree,

however, is also very undetermined. The best informed cyder-makers are said to repeat the rackings until the liquor appears quiet or nearly so ; and when this cannot be accomplished by the ordinary methods of fermentation, they have recourse to fumigating the casks with sulphur, which is called stooming or stumming. For this purpose a match made of thick linen cloth, about ten inches long and an inch broad, well coated with brimstone for about three-fourths of its length, is lighted and hung in at the bung- hole of the cask (which has been previously well seasoned, and every other vent stopped), and, while the match burns briskly, the bung is driven in, keeping theuncoated end of the match by its side. The match thus suspended, burns as long as the air contained in the cask will sup- ply the fire ; and when it dies the bung is taken out with the remnant of the match, after which the cask is allowed to remain two or three hours, more or less, according to the degree of power the sulphur ought to have, before it is filled with liquor. A smell of the sulphureous acid is thus communicated to the liquor, but it goes off in a short time. Mr. Crocker says, when the fermen- tation ceases, and the liquor appears tolerably clear to the eye, it has also a piquant vinous sharpness upon the tongue, and if in this state the least hissing noise be heard in the fermenting liquor, the room is too warm, and atmospheric air must be let in at the doors and windows. ‘ Now,’ he continues, ‘ is the critical moment, which the cyderist must not lose sight of; for if he would have a strong, generous, and pleasant liquor, all further sensible fermentation must be stopped. This is best done by racking off the pure part into open vessels, which must be placed in a more cool situation for a day or two ; after which it may again be barrelled, and placed in some moderately cool situation for the winter.’

It is advisable in racking, that the stream from the racking-cock be small, and that the receiving- tub be but a small depth below the cock, lest, by exciting a violent motion of the parts of the liquor, another fermentation be brought up The feculence of the cyder may be strained through a filtering-bag, and placed among the second-rate cyders, but it must not be returned to the liquor designed for prime cyder.

It is observed by Mr. Knight, that ‘after the fermentation has ceased, and the liquor is become clear and bright, it should instantly be drawn

off, and not suffered on any account again to mingle with its lees ; for these possess much the same properties as yeast, and would inevitably bring on a second fermentation. The best criterion to judge of the proper moment to rack off will be, he says, the brightness of the liquor ; and this is always attended with external marks, which serve as guides to the cyder-maker. The dis- charge of fixed air, which always attends the pro- gress of fermentation, has entirely ceased ; and a thick crust, formed of fragments of the reduced pulp raised by the buoyant air it contains, is collected on the surface. The clear liquor being drawn off into another cask, the lees are put, he says, into small bags, sirni.ar to those used for jellies, being made, as noticed above ; through these, whatever liquor the lees coutain gradually

filtrates, becoming perfectly bright; and it istlien returned to that in the cask, in which it has the effect, in some measure, of preventing a second fermentation, as already hinted. It appears, he says, to have undergone a considerable change in the process of nitration. The color is re- markably deep, its taste harsh and flat, and it has a strong tendency to become acetous ; pro- bably by having given out fixed, and absorbed vital air. Should it become acetous, which it will frequently do in forty-eight hours, it must not on any account, he says, be put into the cask. If however, the cyder, after being racked off, remains bright and quiet, nothing more is to be done to it till the succeeding spring ; but if a scum collects on the surface, it must imme- diately be racked off into another cask ; as this would produce bad effects if suffered to sink. If a disposition to ferment with violence again appears, it will be necessary, he thinks, to rack off from one cask to another, as often as a hissing noise is heard. The strength of cyder is much reduced, he says, as noticed above, by being fre- quently racked off; but this, he supposes, arises only from a large portion of sugar remaining unchanged, which adds to the sweetness, at the expense of the other quality. The juice of the fruits which produce very strong cyders, often remains muddy during the whole winter, and much attention must frequently be paid, to pre- vent an excess of fermentation.'

' The casks into which the liquor is put, when- ever racked off, should always have been tho- roughly scalded, and dried again ; and each should want several gallons of being full, to ex- pose a larger surface to the air of the atmos- phere.' * But,' he adds, * should the cyder- maker neglect the above precautions, the inevi- table consequence will

be this : another fermen- tation will quickly succeed, and convert the fine vinous liquor he was possessed of into a sort of vinegar ; and all the art he is master of will ne- ver restore it to its former richness and purity.'

He suggests, however, the following correc- tives : — ' A bottle of French brandy, half a gallon of spirit extracted from the lees of cyder, or a pail full of old cyder, poured into the hogshead soon after the acetous fermentation is begun ; but no wonder, continues he, if all these should fail, if the cyder be still continued in a close warm cellar, lo give effect to either, it is necessary that the liquor be as much exposed to a cooler air as conveniently may be, and that for a consi- derable length of time. By such means it is possible fermentation may, in a great measure, be repressed : and if a cask of prime cyder cannot from thence be obtained, a cask of tolerable se- cond-rate kind may. These remedies are in- nocent ; but if the farmer or cyder-merchant attempt to cover the accident, occasioned by ne- gligence or inattention, by applying any prepa- ration of lead, let him reflect that he is about to commit an absolute and unqualified murder on those whose lot it may be to drink his poisonous draught. Such means should, therefore, on no account be ever had recourse to.'

The time of bottling depends greatly on the quality of the liquors themselves : good cyder can seldom be bottled with propriety until a year old, and sometimes not till two years. It is

stated by the writer just mentioned, that in th montli of April the cyder, in general, will be in a fit state for this operation ; but that the critical time for this process is, when the liquor has ac- quired in the cask its highest degree of perfec- tion : then, when the weatherj is fair, the baro- meter high, and the wind in some northerly point, let the bottles be filled, setting them by uncorked until the morning; thenletjthe corks be driven very tightly into the necks of the bottles, tied down with small strong twine or wire, and well secured with melted rosin, or other material of the same nature.

Mr. Knight thinks, that cyders which have been made from good fruits, and have been pro- perly manufactured, will retain a considerable portion of sweetness, in the cask, to the end of three or four years ; but that the saccharine part, on which alone their sweetness depends, gradually disappears, probably by a decomposition and discharge of fixed air, similar to that which takes place in the earlier stages of their fermentation.

The premises of a cider manufacturer consist of a mill-house, mill,

press, vat, and cask, with their appurtenances. The mill-house is generally one end of an out-building ; or perhaps a shed, under which straw or small implements are occasionally laid up. The smallest dimensions, to render it any way convenient, are twenty-four feet by twenty ; a floor thrown over it, at seven feet high ; a door in the middle of the front, and a window oppo- site ; with the mill on one side, the press on the other side of the window ; as much room being left in front, towards the door, for fruit and utensils, as the nature of the mill and the press will allow. It consists of two beams supported by uprights with strong braces of wood. The apples being introduced between the pressing surfaces, the juice exudes. To produce this effect the more rapidly, a roller is previously employed, very similar to that used for crushing gypsum, in the manufacture of plaster of Paris ; and the cohesive fibre of the fruit is by this means broken down. When a screw-press is substituted for this instrument, a spur wheel should be added, and the whole apparatus may then be erected for about £10. We mention this cir- cumstance the more particularly as, while we are now writing, the whole of the duty has been taken off this valuable and healthy beverage, so that it bids fair to be more generally made than hereto- fore.

The apple-mill does not differ essentially from that of a common tanner's mill for grinding bark ; and consists of a mill-stone from two feet and a half to four and a half in diameter, running on its edge in a circular stone trough, from nine to twelve inches in thickness, and from one to two tons in weight : the bottom of the trough in which the stone runs is somewhat wider than the thick- ness of the stone itself; the inner side of the groove rises perpendicularly, but the outer is levelled in such a manner as to make the top of the trough six or eight inches wider than the bottom, by which means there is room for the stone to run freely, and likewise for putting in the fruit, and stirring it up while grinding. The bed of a middle sized mill is about nine feet, some ten, and some twelve, the whole being composed of two, three, or four stones, bound

together with cramps of iron, and finished after being cramped in tins manner. The best stones are found in the forest of Dean, generally a dark reddish gritstone, not calcareous; for if the stone was of a calcareous quality, the acid juice of the fruit would act upon it and spoil the li- quor; a clean-grained erindstone grit is the fittest for the purpose. The runner is moved by means of an axle passing through the

centre with a long arm reaching without the bed of the mill, for a horse to draw by ; on the other side is a shorter arm, passing through the centre of the stone. An iron bolt, with a large head, passes through an eye in the lower part of the swi- vel, on which the stone turns into the end of the inner arm of the axis ; and thus the dou- ble motion of it is obtained, and the stone kept perfectly upright. There ought also to be fixed on the inner arm of the axis, about a foot from the runner, a cogged wheel, working in a circle of cogs fixed upon the bed of the mill ; these not only prevent the runner from sliding, which it is apt to do, when the mill is full ; but likewise make the work more easy for the horse.

The bottom of the press ought to be made entirely of wood or of stone ; the practice of covering it with lead being now well known to be pernicious. A few inches within its outer edges a channel is cut to catch the liquor as it is expressed, and convey it to a lip formed by a pi ejection on that side of tne bed opposite the mill ; having under it a stone trough or wooden vessel, sunk within the ground, when the bed is fixed low to receive it. The press is worked with levers of different lengths, first a short, and then a longer one, both worked by the hand ; and afterwards a bar, eight or nine feet in length, worked by a windlass. Mr. Marshall computes the expense of fitting up a mill-house at about £20 or £25, or on a small scale at £10 or £15, but if the stone has to be brought from a distance, the carriage will make a difference.

‘ Where iron-mills have been tried, this metal has been found to be soluble in the acid of apples, to which it communicates a brown color, and an unpleasant taste. No combination has been as- certained to take place between this acid and lead ; but as the calx of this metal readily dis- solves in, and communicates an extremely poi- sonous quality to, the acetous juice of the apple, it should never be suffered to come into contact with the fruit or liquor.’ Knight on the Apple and Pear, — which may justly be considered as one of the most valuable treatises on this im- portant subject.

There is a cyder-mill in use in the south of France, worked on a circular platform of boards, and, instead of stone, the wheel or conical roller is of cast-iron. The fruit is thinly spread over the platform, and the roller moved round by one man or woman. From the rollers covering more breadth than the narrow wheels in use in Eng- iand, more fruit is crushed in a short time by this sort of mill.

Another and very convenient cyder-mill some- times consists, in its simplest form, of two toothed or indented wooden cylinders of about nine inches in diameter, each being enclosed in the manner of other

mills, having a feeder at the top ; and VOL. VII.

being made so as to be turned by the hand Tin: cylinders are so arranged as to be capable of being removed to a greater or less distance from each other, and thus the business advances in ;i regular progressive manner, from the first cut- ting of the fruit until the cylinders are brought so close together that a kernel cannot pass with- out being bruised ; if a second pair of finer toothed cylinders bo made to work under these, the pulp will be brought into a perfect state of fineness. It is with difficulty that the same de- gree of fineness can be effected by the horse- mill.

A hand-mill, where cyder is only made for private use, sometimes consists of a pair of fluted rollers working into each other. They are of cast-iron, hollow, about nine inches diameter, with flutes or teeth, about an inch wide, and nearly as much deep : two men work them by hand against each other. The fruit passes be- tween them twice; the rollers being first set wide, to break it into fragments, and afterwards closer to reduce the fragments and the seeds.

Cyder-vats are vessels for receiving the pom- mage, or the cyder before it is racked off into the cask. They should be made of wood, as, where lead is employed, it is liable to be cor roded by the acid. Of the casks we have al- ready spoken.

Mr. Crocker observes that, in die districts of Hereford and Worcester, the following are con- sidered as the best liquor fruits : the bennet apple, captain Nurse's kernel, Elton's yellow, Normandy apple, and the yellow or forest stire. And that, in the county of Somerset, the Jersey, the white sour, the margill, vallis apple, barn's- door, crab red-streak, Du-ann, Jack Every, coc- cagee, Clark's prime, Buckland, Pit crab, Sla- ter's pearmain, Slater's No. 19, Slater's No. 20, Slater's No. 21, castle pippin, saw-pit, and the pomme apis, are supposed most valuable. But that in Devonshire, the most esteemed fruits are; the Seaverton red-streak, the sweet broady, the lemon bitter sweet, josey, Orcheton pippin, wine apple, marygold spice-apple, Ludbrook red-streak, green Cornish, the butter-box, red Cor- nish, broad-nosed pippin, cat's head, brandy- apple, Pine's red-streak, winter red, sweet pomme roi, and the Bickley red-streak. Mar- shall mentions the stire-apple, hagloe crab, the golden pippin, the old red-streak, and the woodcock, as favorite old cyder fruits, now on the decline. It was during the reign of Charles I. that the plantations of Herefordshire acquired the peculiar eminence which they yet retain, when by the spirited exertions of lord Scudamore, and other gentlemen of the county, Hereford- shire 'became, in a manner, one entire orchard.' The

principal markets for the fruit liquors of this county, are those of London and Bristol, whence great quantities are sent to Ireland, to the East and West Indies, and toother foreign markets, in bottles. The price of the common cyder is generally fixed once a year by a meeting of the dealers at Hereford fair, on the 20th of October.

CynER SPIRIT, is a spirituous liquor drawn from cyder by distillation, in the same manner as brandy from wine. Its flavor is not agree-

able, hut it may be entirely divested of it, and rendered perfectly pure by rectification. The traders in spirituous liquors are well acquainted with the value of such a spirit as this : they can give it the flavors of some other kinds, and sell it under their names, or mix it in large proportion with foreign brandy, rum, and arrack, in the sale, without danger of detection.

CYDER WINE, a kind of wine made from the juice of apples taken from the press and boiled, and which being kept three or four years is said to resemble Rhenish. The method of preparing it according to Dr. Rush of America, where it is much practised, consists in evaporating in a brewing copper the fresh apple juice till half of it be consumed. The remainder is then imme- diately conveyed into a wooden cooler, and after- wards put into a proper cask with an addition of yeast, and fermented in the ordinary way. The process is evidently borrowed from what has long been practised on the recent juice of the grape, under the term of vin cuit, or boiled wine, in Italy, and the islands of the Archipelago. This process has often become an object of imitation in the cyder counties, and particularly in the west of England. Dr. Fothergill made a variety of experiments to ascertain whether or not the liquor acquires any noxious quality from the copper in which it is boiled, and the result seemed to afford a strong presumption that the wine does contain a minute impregnation of copper. It is a curious chemical fact, he ob- serves, that acid liquors, while kept boiling in copper vessels, acquire little or no impregnation from the metal, but presently begin to act upon it .when left to stand in the cold.

CYDIAS, an ancient Greek painter who made a painting of the Argonauts in the eleventh Olympiad. This celebrated piece was bought by the orator Hortcnsius for 164 talents.

CYDNUS, in ancient geography, a river of Cilicia; rising in Mount

Taurus, or rather inAn- titaurus, north of Tarsus, through whose middle it ran, in a very clear and cold stream ; falling into the sea at a place called Rhegma, a breach, the sea breaking in there, and affording the peo- ple of Tarsus a station or port for their ships. The water of the Cydnus is commended by Strabo, as of service in nervous disorders and the gout ; it was so cold, however, that bathing in it had almost proved fatal to Alexander.

CYDONIAjOr CYDON, in ancient geography, one of the three most illustrious cities of Crete, situated in the north-west of the island, with a port walled round. Stephen of Byzantium says, that it was first named Apollonia from Cydon the son of Apollo. Pausanias ascribes the found- ing of it to Cydon the son of Tegetus, who tra- velled into Crete. Herodotus affirms, that it was founded by the Samians, and that its temples were erected by them. Alexander, in the first book of the Cretans, informs us, that it received its name from Cydon the son of Mercury. Cy- don was the largest city in the island ; and was en- abled to hold the balance between her contending neighbours. Phaleucus, general of the Pho- ceans, making an expedition into Crete with a fleet and a numerous army, invested Cydon both by sea and land ; but, lost his army and his life

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before its walls. In succeeding times, when Me- tellus subdued the island, he assailed Cydon with all his forces; and, after combating an ob- stinate resistance, subjected it to the power of Rome. Cydon occupied the present situation of Canea ; only extending half a league further towards St. Odero.

CY’GNET, n. s. Lat. fron- cygnus. A young swan.

I am the cygnet to this pale faint swan, Who chaunts a doleful hymn to his own deatn.

Shakspeare. King John.

So doth the swan her downy cygnets save, Keeping them prisoners underneath her wings.

Id. Henry VI.

Cygnets, from grey, turn white.

Bacm’t Natural History.

Young cygnett arc good meat, if fatted with oats ; but, fed with weeds, they taste fishy.

Mortimer's Husbandry.

Next the changed god a cygnet's form assumes, And playful Leda smooths his glossy plumes.

Darwin.

And she bent o'er him, and he lay beneath, Hushed as the babe upon its mother's breast,

Diooped as the willow when no winds can breathe, Lulled like the depth of ocean when at rest,

Fair as the crowning rose of the whole wreath, Soft as the callow cygnet in its nest.

Byron. Don Juan.

CY'LINDER, n. s.~\ KvXwfyoc. A circular CYLINDRICAL, adj. /body terminated by two CYLIN'DRICK, adj. t flat surfaces. Partaking CYLI'NDROID, n. s. J of the nature of a cylin- der ; having the form of a cylinder. A cylin- droid is a body approaching to the figure of a cylinder.

The square will make you ready for all manner of compartments, bases, pedestals, plots, and buildings ; your cylinder, for vaulted turrets, and round build- ings. Peacham.

The quantity of water which every revolution does carry, according to any inclination of the cylinder, may be easily found. Wilkiru.

Minera ferri stalactitia, when several of the cylin- drick striae are contiguous, and grow to ether into one sheaf, is called brush iron ore.

Woodward'* Natural History.

Obstructions must be most incident to such parts of the body where the circulation and the elastick fibres are both smallest, and those glands, which are the extremities of arteries formed into cylindrical canals. Arbuthnot on Aliment.

Nymphs ! your fine hands ethereal floods amass From the warm cushion, and the whirling glass ; Beard the bright cylinder with golden wire, And circumfuse the gravitating fire. Darunn.

Pent in dark chambers of cylindric brass, Slumbers in grim repose the sooty mass. Id.

This knob or corner of a cloud in being attracted by the earth will become nearly cylindrical, as loose wool would do when drawn out into a thread, and w?il strike the earth with a stream of electricity, perhaps two or ten vards in diameter. Id

CYLINDER, in geometry, a so- lid body, supposed to he gene- rated by the rotation of a rectangle about one of its sides, as the figure C D E F generated by the revolu- tion of the parallelogram A B E F round its side AB, which is the axis of the cylinder. See GEO- METEV.

CYLINDROID, in geometry, a solid body, approaching to the figure of a cylinder, but dif- fe'ring from it in some respects, as having the bases elliptical, but parallel and equal.

CYMA'lt, n. i. Properly written simar. A slight covering ; a scarf.

Her comely limbs composed with decent care,

Her body »haded with a slight cymar ,

Her bosom to the view was only hare. Dryden,

CYMA'TIUM, n. s. Lat. from Kvpanov, a little wave. A membep of architecture, whereof one half is convex, and the other concave. There are two sorts, of which one is hollow be- low, as the other is above.

In a cornice, the gola, or cymatium of the corona* the coping, the modillions, or dcntelli, make a nob'e ehow by their graceful projections. Spectator.

CY'MBAL, n. s. Lat. cymbalum. A musi- cal instrument.

The trumpets, sackbuts, psalteries, and fifes,

Tabors, and cymbals, and the shouting Romans,

Make the sun dance. Shaktpeare. Coriolamu.

If mirth should fail, 111 busy her with cares, Silence her clamorous voice with louder wars ; Trumpets and drums shall fright her from the throne, As sounding cymbals aid the lab'ring moon.

Dryden's Awengtebe.

Ah '. tinkling cymbal, and high sounding brass, Smitten in vain I such music cannot charm The eclipse, that intercepts truth's heavenly beam, And chills and darkens a wide-wandering soul.

Cowper.

A dolphin now his sportive limbs he laves, And bears the sportive damsel on the waves ; She strikes the cymbal as he moves along, A nd wondering ocean listens to the song. Darwin.

Others their hands applausive beat. Like cymbalt sounding as they meet. Sheridan.

Her large black eyes, that flashed through her long

hair

As it streamed o'er her ; her blue veins that rose Along her most transparent brow ; her nostril Dilated from its symmetry ; her lip« Apart ; her voice that clove through all the din, As a lute's picrceth through the cymbal't clash, Jarred but not drowned bv the loud brattling.

Kyron. Sardanapalui.

CYMBALS, ANCIENT, Gr. rv/i/3oX.ov. Thy cym- bal was much used among the ancients. It was made of brass like our kettle drums, and, as some think, in their form, but smaller, and of different use. Ovid gives cymbals the epithet of genialia, because they were used at weddings and other diversions. Cassiodorus and Isidore call this instrument acetabulum, the name of a cup or ca- vity of a bone wherein another is articulated ; .aid Xenophon compares it to a horse's hoof;

whence it must have been hollow : which ap- pears, too, from the figure of several other things denominated from it; as a basin, caldron, gob- let, cask, and even a shoe, such as those of Em- pedocles, which were of brass. The ancient cymbals appear to have been very different

from our kettle drums, and their use of another kind. To their exterior cavity was fastened a handle , whence Pliny compares them to the upper part of the thigh, and Rabanus to phials. They were struck against one another in cadence, and made a very acute sound. The invention of them was attributed to Cybele ; whence their use in feasts and sacrifices ; setting aside this occasion, they were seldom used but by dissolute and effeminate people. M. Latnpe attributes the invention to the Curetes, who, as well as the Corybantes, were reputed to excel in the music of the cymbal. The Jews had thei- cymbals, or at least instruments which translators render cymbals ; but as to their material and form, critics are not agreed.

CYMBALS, MODERN. The modern cymbal has been sometimes defined as a mean instrument, chiefly in use among vagrants, gypsies, &c. It consists of steel wire in a triangular form, whereon are passed rings, which are touched and shifted along the triangle with an iron rod held in the left hand, while it is supported in the right by a ring. Durandus says, that the monks sometimes use the word cymbal for the cloister-bell, which called them to the refectory. It is clear that our translators, at least, 1 Cor. xiii. 1, had this small kind of ‘ tinkling’ instruments in view when they contrast ˆoXjcoc »;xwv> sonorous brass, perhaps the sound of the trumpet, with nipfiaXov oXoXa£oi’, a tinkling cymbal.

But modern times have witnessed the extensive introduction of a very different cymbal amongst the military instruments of Europe. It is an instru- ment of loud percussion, adopted by us imme- diately from the east, and resembling the celebrated cymbals of Bacchus, which were evidently struck one against another, and would produce a sharp clamorous sound. They are employed as being useful for the loudness of their music in marking the due time and military step of a march. But the sounds produced are said to be inappreciable to the ear : this how- ever is not the fact.

CYME, or CUMA, in ancient geography, a city built by Pelops on his return from Greece. Cyme the Amazon gave it name, on expelling the inhabitants, according to Mela. Livy, Mela, Nepos, Pliny, and Tacitus use the Greek name Cyme, in preference to Cuma. It stood in ./Eolia, between the Myrina and Phocaea, and in Pentinger’s map is set down nine miles from Myrina. From this place was the Sybilla Cu- mjea, called also Erythrsea, from Erythrae, a neighbouring place. It was the country of Ephorus. Hesiod was a Cumean originally ; his father coming to settle at Astra in Bu-otia.

CYMENE, in botany, a name given by the ancient Greeks to a plant with which they used to dye woollen stuffs yellow; and with which

the women used also to tinge their hair ; yellow being the favorite color in those ages. It is the same plant with the latea herba of the Latins; or what we call dyer's weed.

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CYNˆEGIRUS, an Athenian, celebrated for his extraordinary courage. He was brother to the poet TEschylus. After the battle of Marathon, he pursued the flying Persians to their ships, and seized one of their vessels with his right hand, which was immediately severed by the enemy. Upon this he seized the vessel with his left hand, and when be had lost that also, he still kept his hold with his teeth.

CYNANCIIE, a species of quinsy, in which the tongue is inflamed and swelled, so that it hangs out beyond the teeth. Dr Cullen distinguishes h've species of this disease ; viz. 1. cynanche ma- ligna ; 2. cynanche parotidaea ; 3. cynanche pha- ryngaea ; 4. cynanche tonsillaris ; and 5. cy- nanche trachealis. See MEDICINE.

CYNANCHUM, bastard dogsbane,in botany, a genus of the digynia order, and pentandria class of plants ; natural order thirtieth, contortae. The nectarium is cylindrical and quinqueden- tated. There are six species ; of which the fol- lowing are the most remarkable: viz. 1. C. acutum, commonly called Montpelier scammony; and 2. C. Monspeliacum, the round-leaved Mont- pelier scammony. They abound with a milky juice like the spurge, which issues out wherever they are broken ; and this milky juice when con- creted has frequently been sold for scammony. These plants propagate so fast by their creeping roots, that few people care to admit them into their gardens.

CYNA'NTHROPY, n. s. Kvuv KVVOQ, and «v0pa>7roc. A species of madness in which men have the qualities of dogs.

CYNARA, the artichoke, in botany, a genus of the polygamia sequalis order, and syngenesia class of plants : CAL. dilated, imbricated with carnous squama, and emarginated with a sharp point. Of this genus there are eight species ; of which only two are cultivated for use : viz. 1. C. cardunculus, the cardoon, greatly resembles the artichoke, but is of larger and more regular growth : the leaves being more upright, taller, broader, and more regularly divided : the stalks of the leaves blanched are the only edible parts of the plant. This is a very hardy plant, and prospers in the open quarters of the kitchen garden. It is propagated by seed so'.vn annually in the full ground in March ; either

in a bed for transplanta- tion, or in the place where they are designed to re- main. 2. C. scolynius, the garden artichoke, nas large, thick, perennial roots, crowned by a consider- able cluster of large pennatifid, erect leaves, two or three feet long. In the middle are upright stalks rising a yard high, on the top of which is a large round scaly head, composed of numerous, oval, calycinal scales, enclosing the florets, sitting on a broad fleshy receptacle, which, with the fleshy base of the scales, is the eatable part of the plant. The varieties of this species are, 1 . The conical green-headed French artichoke, having the small leaves terminated by spines, a tall stalk, the head somewhat conical, and of a light green color, with the scales pointed at top, opening and turn- ing outward. 2. The globular-headed red Dutch artichoke, having leaves without spines, a strong stalk, the head large, globular, a little compressed at top, and of a reddish green color ; broad ob- tuse scales cmarginated at ton. growing close,

and turning inward. Of these varieties the last is deservedly the most esteemed, both on account of its superiority in size and the agreeablene?s of its flavor. Both varieties are perennial in their root; but the leaves and fruit-stem die to the ground in winter; and the roots remaining, send up fresh leaves and stems every summer, pro- ducing a supply of artichokes for twenty years if required. The flowers and seed of all the plants of this genus are produced in the centre of the head ; the scales of which are the proper calyx of the flower, which consists of numerous small bluish florets, succeeded by downy seeds sitting naked on the receptacle. Both the varieties of the artichoke are propagated by slips or suckers, arising annually from the stool or root of the old plants in spring, which are to be taken from good plants of any present plantation in March or the beginning of April, and planted in the open quarter of the kitchen garden, in rows five feet asunder; and they will produce artichokes the same year in autumn. It should however be re- marked, that, though artichokes are of many years duration, the annual produce of their fruit will gradually lessen in the size of the eatable parts after the third or fourth year, so that a fresh plantation should be made every three or four years.

CYNARCTO’MACHY. Kvuv, aptrbc, parf. A word coined by Butler, to denote bear-baiting with a dog.

That some occult design doth lie In bloody cynarctomachy, Is plain enough to him that knows How saints lead brothers by the nose.

Hudibras.

CYNEAS, or CINEAS, the friend of Pyrrhus and scholar of Demosthenes, who flourished A. A. C. 275. Pyrrhus and he wrote a treatise of War, quoted by Tully.

CYNEGE'TICKS, n. s. Kvvtyi{Tiica. The art of hunting; the art of training and hunting with dogs.

There are extant, in Greek, four books of cynege- ticks, or venation. Browne's Vulgar Errours.

CY'NICK, n. s. & adj. > KIWKOC. A philo- CY'NICAL, adj. S sopher of the snarling

or currish sort; a rude man; a snarler; a mis- anthrope. Having currish qualities ; brutal ; snarling; satirical.

How vilely doth this cynick rhime ! — Get you hence, sirrah ; saucy fellow, hence.

Shakspeare.

Or been the manes of that Cynic spright Cloathed with some stubborn clay and led to light 1 Or do the relic ashes of his grave Revive and rise from their forsaken cave 1 Hall.

He doth believe that some new-fangled wit (it is his cynical phrase) will some time or other find out his art. Wilhint.

Without these precautions the man degenerates into a cynick, the woman into a coquette ; the man grows sullen and morose, the woman impertinent and' fan- tastical. Addison.

The Cynics of old, and some of the Stoics, main- tained, that in words there is no indelicacy ; that tliLTe can be no harm in speaking of any thing that is

natural ; and that, if we may speak M ithont blame of anyone crime, or any ono part or 1 inction of the human body, we may, in like manner, of any other. But this is vile sophistry, tending to the utter debase- ment of man, and founded in the grossest ignorance of human nature and human language. Beattie

CYNICS, a sect of ancient philosophers, who valued themselves upon their contempt of riches and of pomp, of the arts and sciences, and of every thing in short except virtue and morality. The cynic philosophers owe their origin and in- stitution to Antisthenes of Athens, a disciple of Socrates ; who being asked of what use his philosophy had been to him, replied, ‘ It enables me to live with myself.’ Diogenes was the most fa- mous of his disciples, in whose character the system of this philosophy appears in its greatest perfection. See DIOCF.NES. These sages are said to have regarded chastity and modesty as weaknesses; and coarseness, even to indelicacy, was certainly one of their characteristics. They argued that what was right to be done, might be done at all times and in all places. Their chief principle, indeed, in common with that of the stoics, was, that we should follow nature. But the stoics clearly included the government of rea- son, in the rule of nature, which the cynics, for the greater part, rejected.

CYNIPS, in zoology, a genus of insects be- longing to the hymenoptera order. The mouth is armed with jaws, but has no proboscis : the sting is spiral, and mostly concealed within the body. There are many species. We can only mention two:

1. C. quercus folii, or oak-leaf cy nips, is of a burnished shining brown color. The antennae are black ; the legs and feet of a chestnut brown ; and the wings white, but void of marginal spots. It is in the little smooth, round, hard galls, found under the oak leaves, generally fastened to the fibres, that this insect is produced, a single one in each gall. These latter are ligneous, of a hard compact substance, formed like the rest, by the extravasation of the sap of the leaf, occa- sioned by ihe puncture of the gall fly when it deposits its eggs. Sometimes, instead of the cynips, there is seen to proceed from the gall a larger insect, of a brown color, which is an ich- neumon. This ichneumon is not the real in- mate of the gall, or he that formed it.

2. C. quercus gemmae, or oak bud cyuips, is of a very dark green, slightly gilded : its antennae and feet are of a dun color, rather deep. It deposits its eggs in the oak buds, which produce one of the finest galls, leafed like a rosebud be- ginning to blow. When the gall is small, that great quantity of leaves is compressed, and they are set one upon another like the tiles of a roof. In the centre of the gall there is a kind of ligneous kernel, in the middle of which is a cavity ; and *r. that is found the little larva, which feeds there, takes its growth, undergoes its metamorphosis, and breaks through the enclosure of that kind of cod in order to get out. The whole gall is often near an inch in diameter, sometimes more when dried and displayed ; and it holds to

a branch by a pedicle.

CYNOBELINE, a king of the South Britons, who flourished in the reign of Claudius, and

fought several battles with the Romans undct Plautius, the prictor; about A. D. 43-46.

CYNOGLOSSUM, hound's tongue, in bo- tany, a genus of the monogynia order, pentandria class of plants; natural order forty-first, asperi- foliae : COR. funnel-shaped, with its throat closed up by little arches formed in it; the seeds do- pressed, and affixed to the style or receptacle only on their inner side. There are eight species, not remarkable for beauty. C. officinale, the common greater hound's tongue, was formerly used in medicine, and its root supposed to pos- sess narcotic virtues; but it is discarded from the present practice. The smell of the whole plant is very disagreeable. Goats eat it : sheep, horses, and swine refuse it.

CYNOMETRA, in botany, a genus of the monogynia order and decandria class of plants ; CAL. tetraphyllous : ANTH. bifid at top ; the legu- men carnous, crescent-shaped, and monosper- mous. Species two, Indian trees.

CYNOMORIUM, in botany, a genus of the monandria order and moncecia class of plants : natural order fiftieth, amentaceae : CAL. imori- cated catkin : COR. none : one style ; and one roundish seed. Species one only.

CYNOPHONTiS, in antiquity, a festival ob- served in the dog-days at Argos, and so called OTTO Tsy Kvvag Qovuv, i. e. from killing dogs ; because it was usual on this day to kill all the dogs they met with.

CYNOSARGES, a place in the suburbs of Athens, named from a white or swift dog, who snatched away part of the sacrifice offering to Hercules. It had a gymnasium, in which stran- gers or those of the half blood performed their exercises ; the case of Hercules, to whom the place was consecrated. It had also a court of judicature, to try illegitimacy, and to examine whether persons were Athenians of the whole or half blood.

CYNOSCEPHALjE, in ancient geography, a place in Thessaly, near Scotussa; where the Romans, under Q. Flaminius, gained a great victory over Philip, son of Demetrius king of Macedon. These Cynoscephalae were small tops of several equal eminences ; named from their resem- blance to dogs' heads, according to Plutarch.

CYN OSS EM A, the tomb of Hecuba, on the promontory Mastusia, over against Sigeum, in the south of the Chersonesus Thracica; named either from the figure of a dog, to which she was fabled to have been changed, or from her sad reverse of fortune.

CYNOSURA, in astronomy, a denomination given by the Greeks to ursa minor, or the little bear, from mtvovupa, the dog's tail. This is the constellation next our pole, consisting of seven stars : four of which are disposed like the four wheels of a chariot, nd three lengthways repre senting the beam ; whence some give it the name of the chariot, or Charles's wain. See CYNOSURE.

CYNOSURA, in mythology, a nymph of Ida, in Crete, said to have nursed Jupiter, who changed her into a star.

CYNOSURA, CYNOSURE, or CYXOSURIS, in an- cient geography, a place in Laconia ; but whe- ther maritime or inland, is uncertain. Here /Esculapius was buried.

CY'NOSURE, n. s. From KVVOQ owpa. The star near the north pole, by which sailors steer.

Towers and battlements it sees Bosomed high in tufted trees, Where perhaps some beauty lies, The cynosure of neighbouring eyes. Milton.

CYNOSURUS, in botany, dog-tail grass ; a genus of the digynia order and triaudria class of plants ; natural order fourth, gramina : CAL. bi- valved and multiflorous; the receptacle proper, unilateral, and foliaceous. There are ten spe- cies, four of which are natives of Britain, viz. the cristatus, or crested dog-tail grass ; the echi- natus, or rough dog-tail grass ; the caeruleus, or blue dog-tail grass; and the paniceus or bearded dog-tail grass.

CYNTHUS, in ancient geography, a moun- tain of the island Delos, so high as to overshadow the whole island. On this mountain Latonawas fabled to have brought forth Apollo and Diana ; hence called Cynthius and Cynthia.

CYNURIA, or CYNURIUS AGER, in ancient geography, a district of Laconia, on the confines of Argolis, that proved a perpetual bone of

con- tention between the Argives and Spartans.

CY'ON. SeeCioN.

Gather cyons for graffs before the buds sprout.

Evelyn.

CYPERUS, in botany, a genus of the mono- gynia order and triandria class of plants ; natural order third, calamarise. The glumes are pale- aceous, and imbricated towards each side ; the corolla is wanting, and there is one naked seed. There are thirty species; the only remarkable are,

1. C. longus, the English, Flemish, or long sweet cyperus, grows in the water, and along banks and river sides. Its root is as thick as an olive, full of little knots or specks, of an oblong figure, gray color, sweet and somewhat sharp taste, and almost without smell when it is newly taken out of the ground. It is much used by per- fumers and glovers.

2. C. rotundus, the round cyperus, is a native of the East Indies, and grows by the sides of rivulets and ditches. The root is knotty, wrapped round with fibrous strings, not easy to break, of a brown color without any gray within ; of a plea- sant scent, especially when fresh and well dried ; the leaves are green, and resemble those of the reed and leek. The roots of both species are esteemed cordial, diuretic, cephalic, resisters of poisons, and expellers of wind.

CY'PHER. See CIPHER.

CY'PHERING, n. *. Skill in arithmetic; the art of arithmetic.

Is a fine clerk, and has his cyphering perfect.

Ben Jonson.

CYPHON, in antiquity, akind of punishment used by the Athenians. It was a collar made of wood ; so called because it constrained the cri- minal to bow down his head.

CYPHONISM, CYPHON ISMUS, from KV$UV, derived from niˆoc, crooked, a kind of torture or punishment in use among the ancients. The learned are at a loss to determine what it was. Some suppose it to be that mentioned by St. Jerome, in his Life of Paul the Hermit, chap. 2,

which consisted in smearing the body over with honey, and thus exposing the person, with his hands tied, to the warm sun, to invite the flies and other vermin to torment him.

CYPRˆEA, the gowrie, in zoology, a genus of insects belonging to the order of vermes testa- cea. It is an animal of the limax or snail kind ; the shell is one involuted, subovated, obtuse, smooth valve. The aperture on each side is linear, longitudinal, and teethed. There are forty-four species, distinguished by the form of their shells. This genus is called cypraca and venerea from its being peculiarly dedicated to Venus ; who is fabled to have endowed a shell of this genus with the powers of a remora, so as to impede the course of the ship which was sent by Periander, tyrant of Corinth, with orders to mutilate the young nobility of Corcyra.

CY'PRESS-TREE, n. s. Lat. cupressus. A tree anciently used in funerals ; thence, poeti- cally, the emblem of mourning. See CUPRESSUS.

He taketh the cypresx and the oak, which he strengthened for himself among the trees of the forest. Isaiah xliv. 14.

The aspine, good for staves, the cypresse funerall. Spenser. Faerie Queene. In ivory coffers I have stuffed my crowns ; In cypress chests my arras counterpanes.

Shakspeare.

Poison be their drink, Their sweetest shade a grove of cypress trees.

Id. Henry VI.

Bind ye my brows with mourning cyperisse, And palish twigs of dcadlie poplar tree. Hall.

Poplars and alders ever-quivering played, And nodding cypress formed a fragrant shade.

Pope's Odyssey.

Long aisles of cyprett waved their deepened glooms, And quivering spectres grinned amid the tombs.

Darwin*

Though no funereal cypress shade thy tomb, For thee the wreaths of Paradise shall bloom.

Huddesford.

Oh, snatched away in beauty's bloom, On thee shall press no ponderous tomb j But on thy turf shall roses rear Their leaves, the earliest of the year ; And the wild cypress wave in tender gloom.

Byron. Hebrew Melodies.

CYPRESS. See CUPRESSUS.

CYPRIANUS (Thascius-Caecilius), a father of the church, born at Carthage, about the end of the second or beginning of the third century. His parents were heathen ; and he himself con- tinued such till the last twelve years of his life. Applying early to the study of oratory, he taught rhetoric in Carthage with the highest applause. His conversion is fixed by Pearson, A. D. 246, at Carthage, where, as St. Jerome observes, he had often employed his rhetoric in the defence of paganism. Cyprian, although a married man, as soon as he was converted, resolved upon a state of continence, which was then thought a high degree of piety. He wrote ably in defence of Christianity, and addressed to Donatus his first production De Gratia Dei. He next com- posed a piece De Idolorum Vanitate, upon the vanity of idols. Cyprian was now ordained priest, and, when the bishop of Carthage died.

none was judged so proper to succeed him as Cyprian. His first episcopal engagement was to draw up a piece De Habitu Virginum, on the dress of young females; in which he inculcates many lessons of modesty and sobriety. In 249 Decius issued very severe edicts against the Christians; and in 250 the heathens, in the circus and amphitheatre of Carthage, insisted upon Cyprian's being thrown to the lions. Upon this he withdrew from Carthage, and wrote, in his retreat, some excellent letters to the Libellatici, or those pusillanimous Christians, who procured certificates of the heathen magistrates, to show that they had complied with the emperor's orders, in sacrificing to idols. At his return to Carthage he held several councils on the repentance of those who had fallen off during this persecution, and other points of discipline ; he opposed the schemes of Novatus and Novatianus ; and con- tended for the rebaptising of those who had been baptised by heretics. At last he died a martyr in the persecution under Valerian and Gallienus, in 258. Cyprian wrote eighty-one

letters, and several treatises. The best editions of his works are those of Pamelius in 1568; of Rigaltius in 1648 ; and of Oxford in 1682.

CYPRINUS, in ichthyology, a genus of fishes belonging to the order of abdominales. The mouth is toothless ; there are three rays in the gills ; the body is smooth and white ; and the belly fins have frequently nine rays. There are thirty-one species, principally distinguished by the number of rays in the vent-fin. The most remarkable are 1. C. alburnus, the bleak. These fish keep together in large shoals. At certain seasons they seem to be in great agonies : they tumble about near the surface of the water, and are incapable of swimming far from the place; but in about two hours they recover and disap- pear. Fish thus affected, the Thames fishermen call mad bleaks. They seem to be troubled with a species of Gordius, or hair worm, which tor- ments them so, that they often rise to the surface and die. The bleak seldom exceeds five or six inches in length. Artificial pearls are made of the scales of this fish, and probably also with those of the dace. They are beaten into a fine powder, then diluted with water, and introduced into a thin glass bubble, which is afterwards filled with wax. The French were the inventors of this art. 2. C. auratus, the golden fish, a small fish domesticated by the Chinese, and ge- nerally kept for ornament in their courts and gardens. They breed them in small ponds made for the purpose, in basins, and even in porcelain vessels. This fish is no larger than our pilchard. The male is of a bright red color from the top of the head to the middle of the body : the rest is of a gold color : hut it is so bright and splendid, that the finest gilding cannot approach it. The female is white : but its tail and half of its body resemble the lustre of silver. F. du Halde, how- ever, observes, that a red and white color are not always the distinguishing marks of the male and female ; but that the females are known by seve- ral white spots which are seen round the orifices that serve them as organs of hearing, and the males, by having these spots much brighter. Gold fish are light and lively ; they love to sport on the

surface of the water, soon become familiarised, and may even be accustomed to come and receive their food on sounding a small rattle. (Jreat care is necessary to preserve them ; for they are ex- tremely delicate, and sensible of the least injuries of the air : a loud noise, such as that of thunder or cannons, a strong smell, a violent shaking of the vessel, or a single touch, will oft-times de- stroy them. These fish live with little nourish- ment : those small worms which are engendered in the water, or the earthy particles that are mixed with it, being sufficient for their food. In winter they are removed from the court to a warm chamber, where they are kept, generally shut up in a porcelain vessel. During that season they receive no nourishment;

however, in spring, when they are carried back to their former basin, they sport and play with the same strength and liveliness as they did the preceding year. In warm countries these fish multiply fast, provided care be taken to collect their spawn, which floats on the water, and which they almost entirely de- vour. This spawn is put into a particular vessel exposed to the sun, and preserved there until vivi- fied by the heat : gold-fish, however, seldom multiply when they are kept in close vases, be- cause they are then too much confined. In order to render them fruitful, they must be put into reservoirs of considerable depth, in some places at least, and which are constantly supplied with fresh water. They were first introduced into England about A. D. 1691 ; but were not gene- rally known till 1728, when a great number were brought over, and presented to Sir Matthew Dekker, and by him circulated round the neigh- bourhood of London, from whence they have been distributed to most parts of the country. 3. C. brama, the bream, is an inhabitant of lakes, or the deep parts of still rivers. It is a fish that is very little esteemed, being extremely insipid. 4. C. carpio, the carp. This was introduced into England about 1514, by Leonard Maschal. Russia wants these fish at this day. Sweden has them only in the ponds of people o" fashion. They chiefly abound in the rivers and lakes of Polish Prussia, where they are sometimes taken of a vast size. They are there agreat article of com- merce, and sent in well-boats to Sweden and Russia. The merchants purchase them out of the waters of the noblesse of the country, who draw a good revenue from this article. They grow also to a very great size : some authors speak of carp 200 IDS. in weight, and five feet in Jength. They are prodigious breeders : the quan- tity of roe has been sometimes found so great, that when taken out and weighed against the fish itself, the former has been found to preponderate. From the spawn of this fish caviare is made for the Jews, who hold the sturgeon in abhorrence. The carp is extremely cunning, and is sometimes styled the river fox. They will sometimes leap over the nets, and escape that way ; at other times they will immerse themselves so deep in the mud, as to let the net pass over them. They are also very shy of taking a bait ; yet at the spawning time they are so simple as to suffer themselves to be tickled, handled, and caught by any body that will attempt it. This fish is apt to mix its milt with the roe of other fish ; from

which is produced a spurious breed. 5. C. cephalus, the chub, is a very coarse fish and full of bones. It frequents the deep holes of rivers ; and in summer commonly lies on the surface, beneath the shade of some

tree or bush. t is very timidˆ sinking to the bottom on the east alarm, even at the passing of a shadow, but soon resumes its former situation. It feeds on worms, caterpillars, grasshoppers, and other coleopterous insects that happen to fall into the water ; and it will even feed on cray-fish. It will rise to fly. Some of this kind have been known to weigh eight or nine Ibs. 6. C. barbus, the barbel, a common inhabitant of most fresh waters in Europe, and easily distinguished from the other species of cyprinus, by the upper jaw being advanced far beyoiid the lower one, and in having the four beards appendant, from which the ap- propriate name of barbus or barbel is derived. This fish, during the summer, prefers the rapid currents and shallows of rivers, and retires at the approach of winter to the more full and deeper places. They live in societies ; lurking in holes along the sides of the water under shelter of the steepest banks, and feed on smaller fish, and worms and flesh of all kinds, for which they dig in the banks like swine. In the day-time they love to lurk occasionally among weeds, and be tween the stones in retired parts of the river, and wander out at night in search of prey. They spawn in April, and begin to be in season in May and June. The flesh of the barbel was never in great esteem for the table. Mr. Pen- nant quotes a passage in Ausonius, which, as he observes, is no panegyric on its excellence, for he lets us know it loves deep waters, and that, when it grows old, it is not absolutely bad:

Laxos exerces barbc natatus Tu melior pejore xvo, tibi contigit uni Spirantum ex numero non inlaudata senectus.

And he adds himself, that ‘ they are the worst and coarsest of fresh-water fish, and seldom eaten but by the poorer sort of people, who sometimes boil them with a bit of bacon to give them a relish.’ ‘ The barbel,’ says old Walton, ‘ though he be of a fine shape, and looks big, yet he is not accounted the best fish to eat, neither for his wholesomeness nor his taste ; but the male is re- puted much better than the female, whose spawn is very hurtful.’ 7. C. gobio, the gudgeon, is gene- rally found in gentle streams, and is of a small size, the largest not exceeding half a pound weight. They bite eagerly ; and are assembled by raking the bed of the river ; to this spot they immediately crowd in shoals, in expectation of food. 8. C. leuciscus, the dace, is gregarious, haunts deep still waters, is a great breeder, very lively, and during summer is very fond of frolick- ing near the surface of the water. It never ex- ceeds the weight of a pound and a half; the scales are smaller than those of the roach. 9. C. rutilus, the roach, is a common fish found in many of the deep still rivers of this country. They are gregarious, keeping in large shoals. It has never been known to exceed five Ibs. in weight. 10. C. tinea, the tench, was

treated with rhe same disrespect by the ancients as the barbel;

but is now in much more repute. It has by some been called the physician of the fish ; and its slime has been said to be of so healing a nature, that the wounded fishes apply it as a styptic. In this country it is reckoned a wholesome and de- licious food ; but the Germans are of a different opinion. By way of contempt they call it the shoemaker. Gesner even says that it is insipid and unwholesome. It does not commonly ex- ceed four or five Ibs., though some have been known to weigh ten, and even twenty. They love still waters, and are rarely found in rivers ; they are easily caught. They are thick in proportion to their length. The color of the back is dusky ; the corial and ventral fins of the same color; the head, sides, and belly, of a greenish cast, most beautifully mixed with gold, which is in its greatest splendor when the fish is in highest season.

CYPRIPEDIUM, the lady's slipper, in botany, a genus of the diandria order", and gynandria class of plants : natural order seventh, orchideae. The nectarium is ventricose, inflated, and hollow. There are three species, of which only one, viz. C.calceolus, is a native of Britain. It grows in rough ground in different parts of the island. The other two species are natives of America. None of them are easily propagated in gardens, and therefore must be transplanted from those places where they are natives.

CY'PRUS, n. s. I suppose from the place where it was made ; or corruptly from cypress, as being used in mourning, says Dr. Johnson. A thin transparent black stuff.

A cypru*, not a bosom, Hides my poor heart ! Shakspeure.

Lawn as white as driven snow, Cyprus black as e'er was crow.

Id. Winter** Tale.

CYPRUS, or KUPRIS, as it is called by the Turks, is the most important island of the Levant, and subject to Turkey. It is situated between 33° and 36′ E. long., and 30° atid 34′ N. lat. It is about 150 miles in length by seventy-five broad, and is traversed from east to west by two re- markable mountain ranges, one of which yielded the third Olympus of the ancient mythology. The whole are covered with snow during the winter months, but seem only to render the neat of summer more oppressive. This island was called Macaria, the happy, by the Greeks. Homer celebrates its fertility, calling it by its present name, in Hymn. :

Ztvar' iiri Tpoiijv, TrpoXursfft ivwSta KvTrpov.

It is also known in history by the names of Acamantis, .ˆErosa, Amathus, Cerastis, Colinia, Paphia, Salaminui, and Spechia : but its most common name was that which it still bears. The principal towns of ancient Cyprus were Pa- phos, Citium, Amathus, Salamis, Idalium, Lapa- thus, Arsinoe, &c. There were three celebrated temples here : two dedicated to Venus, who was said to be born here, and was called the Cyprian queen, and one to Jupiter. The females of the island were proverbially dissipated.

Cyprus, according to Eratosthenes, was first discovered by the Phomicians two or three gene-

rations before Asterius and Minos, kings of Crete ; that is, according to Sir Isaac Newton's- compu- tation, 200G years before the Christian era. It was then so full of wood that it could not be tilled, and the Phoenicians first cut down that wood for melting copper, with which the island abounded ; afterwards, when they began to sail without fear on the Mediterranean, that is, after the Trojan war, they built numerous vessels of this wood. But Josephus informs us, that the descendants of Chittim, the son of Javan, and the grandson of Japhet, were the original inhabitants of Cyprus. According to his account, Chittim, seeing his brother Tarshish settled in Cilicia, where he built the city of Tarsus, settled with his followers in this opposite island ; and either he or his descendants laid the foundations of Citium, which, according to Ptolemy, was the most an- cient city in the island. As Cyprus was too narrow to contain the great numbers who at- tended him, he left here as many as might serve to people the country, and with the rest passed over into Macedon. Cyprus was divided among several petty kings till the time of Cyrus. He subdued them all ; but left each in possession of his kingdom, obliging them only to pay him an annual tribute, and to send supplies of men, money, and ships, when required. The Cyprian princes lived thus subject to the Persians till the reign of Darius Hystaspis, when they attempted, but with little success, to shake off the yoke; their forces being entirely defeated, and themselves again obliged to submit. They made another more successful attempt about A. A.C. 357 ; but they could never become entirely independent. They submitted, it is probable, to Alexander the Great, though historians are silent as to this event. On his death, the dominion of Cyprus was dis- puted by Antigonus and Ptolemy. At last Anti- gonus prevailed, and the whole island submitted to him about A. A. C. 304. He and his son Demetrius kept possession of it for eleven

years, when it was recovered by Ptolemy, and quietly possessed by him and his descendants till A. A. C. 53, when it was unjustly seized by the Romans. In the time of Augustus, it began to be ranked among the proconsular provinces, and to be governed by magistrates sent thither by the senate. In 648 it was conquered by the Saracens ; but recovered by the Romans in 957. They held it, however, but for a very short time, and the bar- barians kept possession of it till the time of the crusades. It was then reduced by Richard I. of England, who gave it to the princes of the Lu- signan family, who held it till A.D. 1570. They divided it into twelve provinces, in each of which was a capital city, from which the province was denominated. So considerable was the island at this time, that besides the cities abovementioned, and others of less note, it contained 800 villages. In 1570 it was taken by the Turks, and it has ever since continued under their yoke.

Cyprus has no river, and the torrents that descend from the mountains in winter do not reach the sea in summer, but form unhealthy stagnant lakes and marshes in the low grounds. It is generally fertile, producing wine, oil, cot- ton, silk, and pasture ; but has large tracts of forest. In minerals it is rich, having mines of

gold and silver, and yielding emeralds, rock- crystal, red jasper, agate, amianthus, terre d' ombre, and other minerals, besides the Paphian diamond. It has no wild animals but foxes and hares. The population is, according to Olivier, 60,000, half Greeks and half Turks ; according to Malte Bran 83,000. Dr. Clarke says that iu present state may be expressed in a few words. 'Agriculture neglected; inhabitants oppressed; population destroyed ; pestiferous air ; contagion; poverty ; indolence ; desolation.'

The bay of Salinas, between Cape Grego and Cane Tagista, or Chiti, is pointed out by the highest summit of the island, Mount Cius, or Rusie, being directly over it, whence it bears west. Larnaca, on the east shore of this bay, has a tolerable road even in winter, though ex- posed to the south-east and south. The town, which is a heap of ruins, is half a mile from the shore, on which is a suburb on the site of the ancient Citium : in the vicinity are many salt marshes, whence the name of the bay, which af- ford considerable quantities of salt, but render the air unhealthy. Salinas (Salamis) is at the head of the gulf; it has a citadel falling to ruin.

The Bay of Limasole, or Limisso, is sheltered on the west by point Delia Gatta : the village at the head of the bay is supposed to stand on the site of Amathonte, and a league east of it are considerable ruins- Piscopia is a village east of the south point of the island, and in the

most fertile part of it. On the west coast is Bati'a, supposed to be on the site of Paphos : it is a small town with a fort and port for small ves- sels ; the town is on an eminence one mile from the port, and is entirely inhabited by Greeks. Solea (Solce and ./Epeia) is on the north coast, as are Cerino (Ceronia), a village of 200 inhabi- tants with a castle in good order, and a small port within two rocks, but open to the north and unsafe in winter, Maceria (Macaria and Aphro- disum), and Artemisia.

The commerce of Cyprus is considerable, ex- porting of its own produce cotton, which is con- sidered the best of the Levant, 5000 bags of 600 Ibs. each, chiefly to Venice, Holland, and England ; silk, 25,000 bags of 300 Ibs. each , wool, 500 bags of 600 Ibs. each ; wine chiefly to Venice and Leghorn ; coloquintida, 100 quintals, chiefly to Holland and Leghorn ; laudanum, madder, chiefly to France ; cochineal a small quantity ; soda to Marseilles ; turpentine to Venice ; green earth for painters, and brown umber, chiefly to Holland ; corn, though pro- hibited, finds its way out of the island ; salt to Syria and Constantinople ; carob beans, pitch, tar, and planks, in small quantities, and some manufactured silks and cottons. The exports are chiefly paid for in specie. About 600 European vessels are computed to visit the island annually.

Wine is the staple product of this island. Its grapes, yielding a juice which is almost a con- centrated essence, are considered among the richest and most luscious in the world. The wines made from them strongly resemble Tokay, and, in the language of the east, ate said to have power to restore health and youth to the most exhausted frames. They are kept in casks, without any other precaution to exclude lite

air than that of placing a piece of sheet lead over the bung hole. At the age of forty years this nohle beverage is supposed to be in perfection, and its qualities are then truly balsamic. All the valuable kinds are white, the red being merely used as vin du pays. The apricots of Cyprus are also delicious. Near Baffa is found an amianthus, or mineral cloth, peculiarly dis- tinguished for its flexibility, whiteness, and deli- cate structure. Cyprus is likewise noted for the common Turkey manufactures of leather, car- pels, and printed cottons. The first is remarkable for its brilliant and lively color. The

carpets are of excellent workmanship ; and, though barely large enough to cover an English hearth, bring from forty to fifty piastres a-piece. The cottons have the valuable quality of preserving their co-lors in washing; which, in fact, rather improves them. The principal towns are Nicotia, Fama- gusta, and Larnica, all situated in the south-east part of the island.

Of the appearance ot the females of Cyprus, renowned from an early period of history, Dr. Clarke gives the following account: — 'The in-teresting costume presented in the dress of the Cyprian ladies ought not to pass without notice. Their head apparel was precisely mo-delled after the kind of Calathus represented upon the Phoenician idols of the country, and upon Egyptian statues. This was worn by wo-men of all ranks, from the wives of the consuls to their slaves. Their hair, dyed of a fine brown color, by means of a plant called Henna, hung behind in numerous long straight braids ; and, in some ringlets disposed near the face, were fastened blossoms of the jessamine, strung to- gether, upon slips from leaves of the palm-tree, in a very curious and pleasing manner. Next to the Calmuck women, the Grecian are, of all others, best versed in cosmetic arts. They pos- sess the valuable secret of giving a brown color to the whitest locks, and also tinge their eyebrows with the same hue; an art that would be highly prized by the hoary courtezans of London and of Paris. The most splendid colors are displayed in their habits ; and these are very becoming to the girls of the island. The upper robe is always of scarlet, crimson, or green silk, embroidered with gold. Like other Greek women, they wear long scarlet pantaloons, fastened round the ancle, and yellow boots, with slippers of the same color. Around the neck, and from the head, were sus- pended a profusion of gold coins, chains, and other trinkets. About their waists they have a large belt or zone, fastened in front by two large and heavy polished brass plates. They en- deavour to make the waist as long as possible, and the legs, consequently, short. Naturally cor- pulent, they take no pains to diminish the size of their bodies by lacing, but seem rather vain of their bulk, exposing their bosoms, at the same time, in a manner highly unbecoming. Notwith- standing the extraordinary pains they use to dis- figure their natural beauty by all sorts of ill- selected ornaments, the women of Cyprus are handsomer than those of any other Grecian island. They have a taller and more stately figure ; and the features, particularly of the women of Nicotia, are regular and dignified, ex-

hibiting that elevated cast of countenance so uni- versally admired in the works of Grecian artists. At present this kind of beauty seems peculiar to the women of Cyprus.'

The Turkish governor resides at Nicotia ; his appointment is renewed annually, and obtained by purchase. So that each succeeding ruler has only the one great point of his personal aggran- disement for a short period in view, and the permanent interests of the island are no topic of consideration with any of its masters. A common type on the medals of this island is the temple of the Paphian goddess, as in the annexed figure; in- scription, KYEPIQN; some- times it contains the name of their kings, and sometimes that of the emperors Augustus, Ca- ligula, Claudius, Galba, Vespa- sian, Titus, Domitian, Trajan, Septimius Severus, Julia, Caracalla, Geta, or Macrinus.

CYPRUS, KNIGHTS OF, an order instituted by Guy de Lusignan, titular king of Jerusalem, to whom Richard I. of England, after conquering Cyprus, made over his right.

CYRENAICA, an ancient kingdom of Africa, corresponding to the present kingdom and desert of Barca and Tripoli. It was originally inhab- ited by a number of barbarous nations, differing little from gangs of robbers. Afterwards some colonies from Greece settled in it, and Cyrenaica became so powerful a state, that it waged war with Egypt and Carthage, often with success. In the time of Darius Hystaspis, Arcesilaus, the reigning prince in Cyrenaica, was driven from the throne ; on which his mother Pheretima ap – plied for assistance to the king of Cyprus. Her son afterwards returning to Barca, was there assassinated together with his father-in-law. Pheretima, finding herself disappointed by the king of Cyprus, applied to Darius Hystaspis, and by the assistance of the Persians reduced Barca. Here she behaved with the utmost cruelty. Cyrenaica, however, seems to have re- mained free till the time of Alexander the Great, who conquered it along with Egypt. Soon after his death, the inhabitants recovered their liberty ; but were in a short time reduced by Ptolemy king of Egypt. Under these kings it remained till Ptolemy Physcon made it over to his illegitimate son Apian, who, in the 658th year of Rome, left it by will to the Romans. The senate permitted all the cities to be governed by their own laws ; and this immediately filled the country with tyrants, those who were most potent in every city or district endeavouring to assume the sovereignty of it. Thus the kingdom was thrown into great confusion ; but Lucullus con- siderably restored the public tranquillity, during the first Mithridatic war. It was found impos- sible, however, totally to suppress these distur- bances, till the country was reduced to the form of a Roman province, which happened about twenty years after the death of Apion A. A. C. 76. Upon a revolt, the city of Cyrene was ruined by the Romans ; but they afterwards re- built it. In process of time it fell to the Arabs ; and then to the Turks, who still retain it

CYRENAICS, a sect of ancient philosophers, so called from their founder Aristippus of Cy- rene, a disciple of Socrates. The great principle of their doctrine was, that the supreme good of man in this life is pleasure ; whereby they not only meant a privation of pain, and a tranquillity of mind, but an assemblage of all mental and sensual pleasures, particularly the last. Cicero makes frequent mention of Aristippus's school ; and speaks of it as yielding debauchees. Three disciples of Aristippus, after his death, divided the sect into three branches, viz. the Hegesiac school, the Annicerian, and the Theodoran; from the names of their authors. Under this di- vision it languished and sunk.

CYRENE, in ancient geography, the capital of Cyrenaica, and one of the five cities called Pentapolis, distant from Apollonia, its sea-port, ten miles, situated on a plain of the form of a table, according to Strabo. It is now called Caiboan.

CYRILL (St.), bishop of Jerusalem, suc- ceeded Maximus in 350. He was afterwards deposed for selling the treasures of the church, and applying the money to the support of the poor during a great famine. Under Julian he was restored to his see, and firmly established in all his honors under Theodosius ; in which he continued unmolested to his death in 386. The remains of this father consist only of twenty-three catecheses, and one letter to the emperor Constantius.

CYRILL (St.), patriarch of Alexandria, suc- ceeded Theopliilus, his uncle, in 413. Scarcely was he installed, when he began to exert his authority with great vigor ; and drove the No- vatians and Jews from Alexandria, permitting their wealth and synagogue to be taken from them. This proceeding highly displeased Orestes, the governor. Upon which a civil war broke out between them ; many tumults were raised and some battles fought in the very streets o. Alexandria. St. Cyrill also distinguished himself by his zeal against Nestorius bishop of Constan- tinople, who, in some of his homilies, had as- serted that the Virgin Mary ought not to be called the mother of God. The dispute at first proved unfavorable to Cyrill, whose opinion was not only condemned, but himself deprived of his bishopric and thrown into prison. But he was soon after released, and gained a complete victory over Nestorius, who in 431 was deposed from his see of Constantinople. Cyrill re- turned to his see at Alexandria, where he died in 444. St. Cyrill also wrote against Theodoras of Mopsuesta,

Diodorus of Tarsus, and Julian the Apostate. He composed commentaries on St. John's gospel, and wrote several other books. His works were published in Greek and Latin in 1 638, in six volumes folio.

CYRUS THE GREAT, the founder of the united empire of the Medes and Persians. The two chief historians, who have written the life of Cyrus, are Herodotus and Xenophon ; but their accounts of him are extremely different. The former tells us, that Astyages king of the Medes, dreaming that a vine sprung from the womb of his daughter Mandane, the branches whereof overshadowed all Asia, was told by the sooth-

sayers, that this portended the future power and greatness of a child who should be born of his daughter; and further, that this child should de- prive him of his kingdom. Astyages, to prevent the accomplishment of the prediction, married his daughter to Cambyses, a Persian of mean con- dition, and commanded one of his officers, named Harpagus, to destroy the infant as soon as it came into the world. Harpagus, fearing the re- sentment of Mandane, put the child into the hands of the king's shepherd. The shepherd's wife, we are told, was so extremely touched with the beauty of Cyrus, that she desired her husband rather to expose her own son, who was born some time before (a story equally unnatural and incredible), and preserve the young prince. Thus Cyrus was brought up among the shep- herds of the king, and one day, as the neigh- bouring children were at play together, being chosen for their prince or chief, he punished one of his comrades with some severity, and the child's parent complained to Astyages. This prince sent therefore for the youthful Cyrus, and observing something noble in his air, together with a great resemblance of his daughter Man- dane, he made particular enquiry into his history, and discovered that Cyrus was his grandson. Harpagus, who was the instrument of preser- ving him, was now punished with the death of his own son ; but Astyages, believing that the royalty which the soothsayers had promised to the young prince, was only that which he had lately exercised among the shepherds' children, laid aside his fears. Cyrus being grown up, Harpagus disclosed the secret of his birth to him, with the manner in which he had delivered nim from his grandfather's cruelty. He encou- raged him to come into Media, and promised to furnish him with forces, in order to make him master of the country, and depose Astyages. Cyrus now, therefore, engaged the Persians to take arms against the Medes, marched at the head of them to meet Astyages, defeated him, and pos- sessed himself of Media. He carried on many other wars ; and at length sat down before Ba- bylon, which, after a

long siege, he took.

Xenophon's account of the early life of Cyrus is more credible. According to that writer, Astyages king of Media married his daughter Mandane to Cambyses king of Persia, son and successor to Achaemenes. Cyras was born at his father's court, and was educated with all the care his birth required. When he was about the age of twelve, his grandfather Astyages sent for him to Media, together with his mother Man- dane. Some time after, a prince of Assyria having invaded Media, Astyages, with his son Cyaxares and his grandson Cyras, marched against him. Cyrus distinguished himself in this war, and defeated the Assyrians. Camby- ses afterwards recalled him, that he might have him near his own person ; and Astyages dying, his son Cyaxares, uncle oy his mother's side to Cyrus, succeeded him in the kingdom of Media. Cyrus, at the age of thirty, was. by his father Cambyses, made general of the Persian troops ; and sent at the bead of 30,000 men to the as- sistance of his uncle Cyaxares, whom the king of Babylon and his allies, the Cannadocianf»,

Carians, Phrygians, Cilicians, and Paphlago- nians, were preparing to attack. Cyaxares and Cyrus prevented them, by falling upon them and dispersing them. The latter now advanced as far as Babylon, and spread terror throughout the

country.

From this expedition he returned to his uncle, towards the frontiers of Armenia and Assyria, and was received by Cyaxares in the tent of the Assyrian king whom he had defeated. After this, Cyrus carried the war into the countries beyond the river Halys, entered Cappadocia, and subdued it entirely. From thence he marched against Croesus king of Lydia, defeated him in the first battle; then besieged him in Sardis the capital ; and after a siege of fourteen days obliged him to surrender. See CRCESUS. After this Cyrus, having almost reduced all Asia, repassed the Euphrates, and made war upon the Assyrians. He marched directly to Babylon, took it, and there prepared a palace for his uncle Cyaxares. After these expeditions Cyrus re- turned to his father and mother in Persia, where they were still living ; and some time after vi- siting Cyaxares in Media, he married his cousin the only daughter and heiress of his uncle's do- minions, and returned with her to Babylon. He is now stated to have again engaged in several wars,

and subdued all the nations which lie be- tween Syria and the Red Sea. He died at the age of seventy years, after a reign of thirty : but authors differ much concerning the manner of his death. Herodotus, Justin, and Valerius Maxirnus relate, that he died in a war against the Scythians ; that falling into an ambush, which their queen Tomyris had laid for him, she or- dered his head to be cut off, and cast into a vessel full of blood, saying, 'Thou hast always thirsted after human blood, now glut thyself with it.' Diodorus the Sicilian states, that he was taken in an engagement and hanged. Ctesias assures us, that he died of a wound which he received in his thigh : but by Xenophon's ac- count he died peaceably in his bed, amidst his friends and servants ; and certain it is, that in Alexander's time his monument was shown at Pasagarda in Persia. From all this it is obvious, that we are but imperfectly acquainted with the history of this great prince, the founder of the Persian, and destroyer of the Chaldaean empire.

Cyrus was monarch of all the east ; or as he himself speaks (2 Chr. xxxvi. 22, 23 ; and Ezra i. 1, 2,) ' of all the earth,' when he permitted the Jews to return mto their own country; A.M. 3466, and A.A.C. 538. The enemies of the Hebrews, making use of this prince's affection to his own religion, prevailed with him to coun- termand his orders for the building of the temple at Jerusalem (Ezra iv. 5). The prophets fre- quently foretold the coming of Cyrus ; and Isa. (xliv. 28) mentions him by name 200 years before he was born. Josephus (Antiq. I. II. c. 2) says, that the Jews of Babylon showed this passage of the prophet to Cyrus, which is extremely probable; and that this prince, in the edict which he granted them for their return, acknow- ledged that he received the empire of the world from the God of Israel ; that the same God had described him by name in the writings of the

prophets; and had foretold that he should buil(* a temple to him at Jerusalem. Cyrus is ex pressly styled in scripture, 'the Lord's anointed, and the shepherd of Israel,' (Isaiah xlv. 1, and xliv. 28.) ; and God says of him (Isa. xlv. 5) ' I girded thee, though thou hast not known me ' Daniel is supposed to allude to this prince Chap. viii. v. 3 — 20, under the figure of the ram The taking of Babylon by Cyrus was clearly foretold by the prophets. See BABYLONIA and BELSHAZZA'R. Archbishop Usher fixes the birth of Cyrus to A. M. 3405 ; his first year at Babv Ion to 3466, and his death to 3475.

CYRUS THE YOUNGER, son of Darius Nothus, and brother of Artaxerxes. He was sent by his father at the age of sixteen, to assist the Lacedae- monians against Athens. Artaxerxes succeeded to the throne at the death of Nothus ; and Cyrus, mad with ambition, attempted to assassinate him. He was discovered, and would have been pun- ished

with death, had not his mother Parysatis saved him by her tears and intreaties. This cir- cumstance did not check the ambition of Cyrus ; he was appointed over Lydia and the sea coasts, where he secretly fomented rebellion and levied troops under various pretences. At last he took the field with an army of 100,000 barbarians, and 13,000 Greeks, under the command of Clear- chus. Artaxerxes met him with 900,000 men near Cunaxa. The battle was long and bloody ; and Cyrus might have perhaps obtained the victory, had not his rashness proved his ruin. It is said that the two royal brothers met in person, and their engagement ended in the death of Cyrus, 401 years before the Augustan age ; and Artaxerxes, having boasted that his brother had fallen by his hand, put to death two of his subjects for declaring that they had killed him. The Greeks, who were engaged in the expedi- tion, obtained much glory in the battle ; and no less by their retreat, which is particularly re- corded by Xenophon, one of their leaders. See XF.NOPHON.

CYST, or \ Kv?«c. A bag contain

CY'STIS, «. *. (ing morbid matter. Con-

CY'STICK, adj. plained in a bag. The art

CYSTO'TOMY, n.s. J or practice of opening or extirpating encysted tumors.

In taking it out, the cystii broke, and shewed itself by its matter to be a meliceris. Wiseman's Surgery.

There may be a consumption, with a purulent spit- ting, when the vomica is contained in a cyst or bag ; upon the breaking of which the patient is commonly suffocated. Arbuthnot.

The bile is of two sorts : the cystick, or that con- tained in the gall-bladder, a sort of repository for the gall ; or the heoatick, or what flows immediately from the liver. Id.

CYTHERA, in ancient geography, an island opposite to Malea a promontory, and to Boa a town of Laconia ; sacred to Venus, with a very ancient temple of that goddess, who was ex- hibited in armour, as in Cyprus. It is now cal- led Cerigo.

CYTHERˆEA, in mythology, the surname of Venus, so called from Cythera, her birth-place, where she had a temple, and on the shores of which she was believed to be wafted by the Ze- phyrs, surrounded by the Cupids, the Graces

the Tritons, and the Nereides, reclining in a lan- guishing posture in a sea-shell.

CYTINUS, in botany, a genus of the dode- candria order, gynandria class of plants ; natural order eleventh, sarmentaceae : CAL. quadrifid, su- perior: COR. none; the anthene are sixteen, and sessile; the fruit an octolocular polyspcnnous berry. Species one, a Cape shrub.

CYTISUS, tree treefoil, a genus of the de- candria order, and diadelphia class of plants ; natural order thirty-second, papilionaceae : CAL. bilahiated, with the upper lip bifid ; inferior, tridentate ; the legume attenuated at the base. There are eleven species ; of which the most re- markable are, 1. C. Austriacus, the Austrian, or Tartarian evergreen cytisus, has a shrubby stem, dividing low into many greenish branches, forming a bushy head three or four feet high, having smooth whitish-green leaves, and bright yellow flowers in close umbellate heads at the ends of the branches, having a cluster of leaves under each head. These flowers appear in May. 2. C. laburnum, or large deciduous cytisus, has a large upright tree-stem, branching into n full spreading head, twenty or thirty feet high, having smooth greenish branches, oblong oval entire leaves, growing by threes on long slender foot- stalks; and from the sides of all the branches numerous yellow flowers collecting into long spikes, hanging loosely downward, and appearing in May.

CYZICENI, CrziCENiANS, the people of Cyzicum, who were noted by the ancients for their timidity and effeminacy. Hence the pro- verb in Zenodotus and others, tinctura Cyzicenica, applied to persons guilty of an indecency through fear; but stateres Cyziceni, nummi Cyziceni, denote things executed to perfection.

CYZICUM, in ancient geography, an island of the Propontis, on the coast of Mysia ; joined to the continent by two bridges, the first of which was built by Alexander the Great.

CYZICUM, or CYZICUS, one of the noblest cities of the Hither Asia; situated in the above island. It was a colony of the Milesians, and is famous for its siege by Mithridates, which was raised by Lucullus. The inhabitants were made free by the Romans, but forfeited their freedom under Tiberius. It was adorned with a citadel and walls; had a port and marble towers ; and three magazines, one for arms, another for warlike engines, and a third for corn.

CZAR, n. s. “) Sclav, czar, tzar, from Per. CZARI’NA, n. s. ftajur, a crown; taijzar, a CZA’RISH, adj. J monarch. The emperor of

Russia. Czarina is the feminine. Relating to

the czar.

There were competitors, the csur of Muscovy’s sou, the duke of Newburg, and the prince of Lorraine.

Browne.

y czo

His cgar’uh majesty dispatched an express.

The Tatler.

The czarina was satisfied with introducing them, for she found it impossible to render them polite.

Goldtmith.

CZASLAU, or TZASLAU, a town of Bohemia, the capital of a circle of the same name, on the Crudimka. It is said to possess the highest spire in Bohemia; and within the beautiful church is interred the famous Zisca. The circle of Czaslau, or Csaslau, is enclosed by Moravia, the circle of Tabor, Caurzim, Bitschow and Chrudim. The soil is productive, but the manufactures are not flourishing. It contains eight towns, thirty-throe boroughs, and 829 villages.

CZERNIGOV, or TSCHERNIGOV, a govern- ment of European Russia, erected in the year 1781, and lying between those of Mohilev, Smolensko, Orel, Kursk, Pultava, Kiev, and Minsk. The soil is very fertile. It has been augmented beyond its original boundaries by the addition of the government of Novgorod- Sieverskoi ; and now contains, according to offi- cial returns, 741,850 inhabitants. Czernigov, or Tchernigow, the capital, situated on the right bank of the Desna, is fortified, and is the see of a Greek archbishop. Population 5000. Seventy-five miles north of Kiev, and 344 south-west of Moscow.

CZERNOVICZ, orTscHERNOwuz, a town of Austria, the capital of the Bucharvine, or, more properly, of a circle in Galicia. It is situated at the foot of mountains, on the south bank of the Pruth, on the high road from Lemberg to Jassay, 140 miles south-east of the former, and

ninety-five north-west of the latter. It was much enlarged and improved in 1771, and con- tains 5400 inhabitants. Here is a Greek bishop, a custom-house, a criminal court, a provincial and a charity school. The population of the circle, in 1803, was 195,268.

CZIRKNITZ ZEE, a very extraordinary lake of Austria, in Carniola, five miles long and three broad, which annually produces both fish and corn : for, being dry in summer, its bottom is cultivated, and it produces corn, grass, &c. ; but about the 29th of September the water rushes in from several subterraneous passages, which, with the rains and streams that fall from the mountains, quickly fill it again for the winter season. These subterraneous passages are pro- bably connected with some gulf, the ebbing or flowing of whose waters depend upon periodical winds or currents.

CZONGRAD, a market town of Hungary, in a county of the same name, situated at the con- flux of the Korosch and the Theyss.

CZONGRAP, a county of Hungary, enclosed by the counties of Hewesch, Bekesch, Chonad, Batsch, Pesth, and Little Cumania. It is thirty miles in length and eighteen in breadth.

DAB

DAC

D

D. The fourth letter of the Hebrew, Syriac, Greek, Latin, and French languages, is traced by Minsheu in its shape to the Heb 1 daleth, sig- nifying, says he, a gate, which the figure of this letter partly resembles. Hence, with a slight alteration, came the Greek A, and by rounding two of the angles of the delta, the Roman D.

D is generally ranked among the lingual let- ters, having a middle sound between t and th, formed by a stronger impulse of the tongue to the roof of the mouth than the former letter. In Latin words the t and d are often changed for one another, as at fcr arf, set for sed, haut for huud, &c. And in the formation of words from the Latin, di frequently assumes the shape of gi or j, as journal for diurnal. In English the sound of d never varies, nor is it ever mute. D, as a numeral, signifies five hundred; D, five thousand.

DAB, v. a. & n. ~\ Gr. Stvu, SVTTTU ;

DA’BBLE, v. a. & n. f Chald. dub; Ger. efofg-

DA’BBLER, n.s. twa,dopa; Sax.dapan,

DA’B-CHICK. J dippan ; Scot, dub;

Belg. dabben, dabbelen; Fr. dauber. All pro- bably, as Minsheu suggests, from the sound of mud, when struck. To dab is to apply something soft or moist, as to a sore; to strike a soft blow. Dab, as a substantive, is a low word for a man expert at something : also a small fish. Mr. Todd thinks it a corruption of adept, adab. To dabble is to move about ; to strike, or strike in water or mud ; and, by consequence, to smear, daub, or bespatter: metaphorically, to ‘ meddle without mastery,’ as Dr. Johnson well says; and hence a dabbler is ‘ a superficial meddler.’ A dab-chick is a small water-fcwl. We first illustrate dab.

A sore should never be wiped by drawing a piece of tow or rag over it, but only by dabbing it with fine lint. Sharp.

Of flat fish there are rays, flowks, dabs, plaice.

Carew.

One writer excels at — a title-page ; another works away at the body of the book; and the third is a dab at an index. Goldsmith’s Essays.

A shadow, like an angel, with bright hair Dabbled in blood. Shakspeare. Richard III.

The little one complained of her legs, that she could neither swim nor dabble with them.

L’Estrange.

Neither will a spirit, that dwells with stars, dabble in this impurer mind. Glanoille’s Apol.

I scarified, and dabbled the wound with oil of tur- pentine. Wiseman’s Surgery.

But when he found the boys at play, And saw them dabbling in their clay, He stood behind a stall to lurk, And mark the progress of their work. Swift. He dares not complain of the tooth-ach, lest our dabblers in politicks should be ready to swear against him for disaffection. Id.

Shakespeare shall be put into your hands, as clean and as fair as it came out of them : though you, I think, have been dabbling here and

there with the

text, T have had more reverence for the writer and the printer, and have left every thing standing.

Atterbury to Pope.

A dab-chick waddles through the copse On feet and wings, and wades, and flies, and hops.

Pope.

DA CAPO, dial, from the head), in music, an Italian term signifying that the beginning of the tune is to be repeated to complete the piece.

DACCA JELALPORE, an important and pro- ductive district of Bengal, situated for the greater part between the twenty-third and twenty-fourth degrees of northern latitude. It is bounded on the north by Mymunsingh, on the east by Tipperah, on the south by Backer- gunge, and on the west by Ranjeshahy and Jessore. It contains a great number of valuable zemindaries or estates, and is every where inter- sected by the Ganges and Brahmapootra, and their various branches, so that every town of consequence has its river or canal. These rivers, however, frequently occasion considerable da- mage by their inundations. In this district it is not uncommon to find fields of rice covered with water, six or eight feet deep. Rice is its principal produce, and has been sold, in cheap years, at the rate of 640 Ibs. the rupee. Its other productions of consequence are the betel nut, tobacco, and cotton ; but it imports large quantities of the last article, which is manu- factured in every town and village. Its muslins are very fine and delicate. A deputy of the nabob, called the naib nazim, was the chief of this district during the Mahommedan govern- ment : the last person who held this office was Jessarut Khan, who having been ordered in 1763, by the nabob Cossim Aly Khan, to put all the English at Dacca to death, kindly put them on board boats, and sent them under the protection of a guard to Calcutta ; in reward for which he was appointed, after the expulsion of his master, to act in his former office on behalf of the Bri- tish, and, on his decease, a pension was settled on his family, and the eldest son honored with the title of nabob. The principal towns of this district are Dacca, Narraingunge, Sunergong, and Rajanagur. It contains nearly 1,000,000 in- habitants, most of whom are Mahommedans.

DACCA, a considerable city of Bengal, capital of the foregoing district, and for eighty years the capital of Bengal, when it was called Jehan-

gireanagur. It is the residence of a judge, col- lector, &c., and is situated on the north bank of the Boor Gunga (Old Ganges), which is here very deep and broad, at the distance of about 100 miles from the sea. The best houses are built of brick, but the bazaars are often thatched; and every vacant spot is filled with trees. The French, Dutch, and English East India Com- panies had factories here at an early period; those of the two former are gone to decay. The ancient citadel at the west end of the town is in ruins, but the palace or Pooshteh is in good re- pair. In this city are manufactured beautiful muslins, and shell bracelets much worn by the

Hindoo ladies. The hot winds which pervade almost all other parts of India, are, through the abundant irrigation of the neighbourhood, little felt here. The months of September and Octo- ber are, however, unhealthy. The neighbour- hood abounds with game of all sorts, from the tiger to the quail. Provisions and fish are also here very cheap and abundant. Distant by land from Calcutta, 180 miles.

DACE, n. s., called also DACE and DART, provincially. Sax. dagian, from dag to shine as in I. at. luciscit, luciscus ; a small fish.

Let me live harmlessly, and near the brink Of Trent or Avon have a dwelling place ;

Where I may see my quill or cork down sink With eager bite of pearch, or bleak, or dace. Walton.

DACE, in ichthyology, a species of CYPRIN us, which see.

DACIA, in ancient geography, a country which Trajan, who reduced it to a province, joined to Moesia by an admirable bridge. This country lies extended between the Danube and the Carpathian Mountains, from the river Tibis- cus, quite to the north bend of the Danube ; so as to extend thence in a direct line to the mouth of the Danube and to the Euxine ; being on the north next the Carpates, terminated by the river Hierasus, now called the Pruth ; on the west by the Tibiscus or Teiss ; and comprising a part of Upper Hungary, all Transylvania and Walachia, and a part of Moldavia.

DACIA AURELIANA, a part of ancient Illyri- cum, which was divided

into the eastern and western; Sirmium being the capital of the latter, and Sardica of the former.

DACIER (Andrew), was born at Castres in Upper Languedoc, 1651, and studied at Saumur under Tannegui le Fevre, then engaged in the instruction of his celebrated daughter, who be- came Madame Dacier. The duke of Montausier, hearing of his merit, engaged him in an edition of Pompeius Festus, which he published in 1681. His edition of Horace printed at Paris in ten volumes, 12mo., and his other works, raised him to great reputation. He was made a mem- ber of the Academy of Inscriptions in 1695. When the history of Louis XIV. by medals was finished, he was chosen to present it to his ma- jesty ; who settled upon him a pension of ‘2000 livres, and appointed him keeper of the books of the king’s closet. When that post was united to that of library keeper to the king, he was not only continued in the privileges of his place during life, but the survivance was granted tc his wife, a favor of which there had been no former instance. The death, however, of Ma- dame Dacier in 1720, rendered this grant, which was so honorable to her, ineffectual. He died September 18th, 1722, of an ulcer in the throat.

DACIER (Anne), daughter of Tannegui le Fevre, professor of Greek at Saumur in France, went after her father’s death to Paris, whither her fame had already reached : she was then preparing an edition of Callimachus, which she published in 1674. Having shown some sheets of it to M. Huet, preceptor to the dauphin, and to several other men of learning, the work was so highly admired, that the duke of Montausier made a proposal to her of publishing several

Latin authors tor the use of the dauphin. She now, therefore, undertook an edition of Floruj, published in 1674. Her reputation being soon after spread over Europe, Christina, queen of Sweden, ordered count Konigsmark to compli- ment her, and offer her a settlement at Stock- holm, in return for which Mademoiselle le Fevre sent the queen a Latin letter, with her edition of Florus. In 1683 she maricd M. Dacier; and soon after declared her design of reconciling herself to the church of Rome. Both she and her husband made their public abjuration in 1685. In 1693 she applied herself to the edu- cation of her son and daughter ; the former, how- ever, died in 1694, and the daughter, after mak- ing great attainments, became a nun in the abbey of Longchamp. Her mother has im- mortalised her memory in the preface to her translation of the Iliad. Madame Dacier was in a very infirm state of health the last two years of her life ; and died, after a painful sick- ness, August 17th, 1720, aged sixty-nine.

DACOLITHUS, in ichthyology, a name given by zoologists to a small fish, supposed to be a species of loache, and called by Ray and some others cobitis barbatulea aculeata. It is a very small fish, seldom exceeding two or at most three inches in length. The head is broader and flatter than the body : its back is of a dusky brown color spotted with black, and its belly yel- low. It has two beards on each side of the upper jaw ; and on the coverings of the gills, on each side, two prickles, or a double-pointed sharp hook, whereby it moves itself among the stones. It delights in shallow waters, with a stony bottom, and spawns in May and J une. DACTYLE.n.s.} Gr. SaKTvXof, a finger, DAC'TILET, Mfrom SUKU to point) be-

DACTYL'IC, adj. j cause composed of three parts, the first longer than either of the others; Minsheu. A poetical foot, consisting of one long syllable and two short, like the joints of a finger ; as candidus. Bishop Hall uses dactilet as a diminutive.

The nimble dactilt, striving to outgo The drawling spondees, pacing it below : The lingering spondees, labouring to delay The breathlesse dactilt, with a sudden stay. Whoever saw a colt, wanton and wilde, Yoked with a slow-foote oxe on fallow field, Can right arced how handsomly besets Dull Spoudees with the English dactilets.

Bp. Hall. Satire*, 1. 6.

A dactyl has the first 'syllable accented, and the two latter unaccented : as, labourer, possible.

Murray. On Proiody.

The dactylic measure being very uncommon, we shall give only one example of one species of it.

From the low pleasure! of this fallen nature, Rise we to higher, &C.

Id.

DACTYLE. The dactyle is said to have been the invention of Dionysius or Bacchus, who delivered oracles in this measure at Delphos, before Apollo. The Greeks call it *-oX»rucoc. The dactyl and spondee are the most considerable of the poetical feet ; as being the measures used in heroic verse, by Homer, Virgil, &c. These two are of equal time, but not equal motion.

DAC

DACTYLETHRA, or DACTYLITHRA, digi- a genus of the digynia order, and triandria class

tails, among the ancient physicians, a medicine of plants; natural order fourth, gramina : CAI.-

used to excite vomiting. It was a sort of topi- bivalved and compressed, with the one valve

cal application, and is described at large by longer than the other, carinated, or having the

Oribasius. rachis prominent and sharp. There are two

DACTYLIC VERSES are hexameter verses, end- species, both natives of Britain; viz. 1. D.

ing in a dactyle instead of a spondee ; as spon- cynosuroides, the smooth cock's foot grass, which

daic verses are those which have a spondee grows in marshy places ; and 2. D. glomeratus,

the rough cock's foot grass, which is common in

in the fifth foot instead of a dactyle. An in- stance of a dactylic verse occurs in Virgil : jEn. vi. 33.

Bis patriae cecidcre manus : quin protinus omnia. DACTYLI IDJEI, q. d. the Fingers of Mount Ida, in pagan mythology, personages very dif- ferently described by ancient authors. The Cretans paid divine worship to them, as to those who had nursed and brought up the god Jupiter ; whence it appears, that they were the same as the Corybantes and Curetes. Neverthe- less Strabo makes them different; and says, that the tradition in Phrygia was, that the ' Curetes and Corybantes were descended from the Dactyli Idcei : that there were originally 100 men in the island, who were called Dactyli Idaei ; from whom sprang nine Curetes, and each of these nine pro- duced ten men, as many as the fingers of a man's two hands ; and that this gave the name to the ancestors of the Dactyli Idaei.' He re- lates another opinion, which is, that there were but five Dactyli Idaei ; who, according to Sopho- cles, were the inventors of iron : that these five brothers had five sisters,

and that from this num- ber they took the name of fingers of Mount Ida, because they were in number ten ; and that they worked at the foot of this mountain. Diodorus Siculus says, ‘ the first inhabitants of the island of Crete were the Dactyli Idaei, who had their residence on mount Ida: that some said they were 100 ; others only five, in numbers equal to the fingers of a man’s hand, whence they had the name of Dactyli : that they were magicians, and addicted to mystical ceremonies : that Or- pheus was their disciple, and earned their mys- teries into Greece : that the Dactyli invented the use of iron and fire, and that they had been re- compensed with divine honors.’ Diomedes the grammarian says, the Dactyli Idaei were priests of the goddess Cybele : called Idaei, because that goddess was chiefly worshipped on Mount Ida in Phrygia ; and Dactyli, because that, to prevent Saturn from hearing the cries of infant Jupiter, whom Cybele had committed to their custody, they used to sing certain verses of their own invention, in the Dactylic measure. Strabo gives us the names of four of the Dactyli Idaei : viz. Salaminus, Damnanaeus. Hercules, and Acmon. See CORYBANTES, CRETE, and CU- RETES.

DACTYLIOMANCY, or DACTYLIOMANTIA from SaKTv\u>£, a ring, and fiavnia, divination, a sort of divination performed by means of a ring. It consisted in holding a ring, suspended by a fine thread, over a round table, on the edge of which were made divers marks with the letters of the alphabet. The ring in shaking, or vibra- ting over” the table, stopped over certain of the letters, which, being joined together, composed the answer required.

DACTYLIS, in botany, cock’s foot grass;

meadows and pasture grounds. It is eaten by horses, sheep, and goats ; but refused by cows.

DACTYLONOMIA, or DACTYLONOMY, from 8aKTv\of, and vo/toc, a rule, the art of number- ing by the fingers. The rule is this ; the left thumb is reckoned one; the index or fore finger two : and so on to the right thumb, which stands for the cypher.

DACTYLUS, in zoology, a name given by Pliny to the pholas. In Toulon harbour, and the road, are found solid hard stones, perfectly entire ; containing, in different cells, secluded from all communication with the air, several living shell fish, of an exquisite taste, called dactyli, i. e. dates: to come at these fish the stones are broken with mauls. Along the coast of Ancona, in the Adriatic, are stones usually weighing about fifty pounds, and sometimes even more, the outside rugged and easily broken, buf ‘he inside so hard as to require a strong

arm and an iron maul to break them ; within them, and in separate niches, are found small shell fish, quite alive and very palatable, called solenes and cappe laughe. These facts are attested by Gassendi, Blondel, Mayol, the learned bishop of Sulturara, and more particularly by Aldrovandi, a physician of Bologna. The two latter speak of it as a common fact, which they themselves saw.

DADUCHI, Gr. $aS

DAD, n.s.) Heb. ˆvi> dodh, beloved; Gr. DAD'DY. $ arra . Hind, ata ; Lat. tata; Goth. atia ; Fr. papa. One among those familiar words which, in all languages, children first salute

pounds of a and t or d ; or a and *t or p. I was never so bethumpt with words, Since first I called my brother's father dad.

Shahspeare.

His loving mother left him to my care, Fine child, as like his dad as he could stare.

Gay.

D.ED 33

DADK, f. u. Dut. dituden. To hold up by a eading striiig.

The little children when they learn to go, By painful mothers dudcd to and fro. Drayton.

D/ED'AL, adj. Lat. dadalus ; Gr. faicaXXw ; to variegate skillfully, first applied to needlework. Why Dr. Johnson warns us against using the word with this meaning is difficult to divine. See Ainsworth, and the fine example from Spen- ser. Various ; variegated. Skilful.

But living art may not least part expresse, . Nor life resembling pcncill it can paynt, All were Zcuxis or Praxiteles ; His Da-dale hand would faile and greatly faynt, And her perfections with his error taynt.

Spenser. Faerie Queene.

Nor hatK

The daedal hand of nature only poured Her gifts of outward ˆrace. Philips.

D./EDALA, two festivals in Boeotia ; one of them observed in

Alalcomenos by the Plataeans in a large grove, where they exposed in the open air pieces of boiled flesh, and carefully observed whithtr the crows that came to prey upon them directed their flight. All the trees upon which any of these birds alighted were immediately cut down, and with them statues were made, called Doedala, in honor of Daedalus. The other festival was of a more solemn kind. It was celebrated every sixty years by all the cities of Boeotia, as a compensation for the intermission of the smaller festivals, for that number of years, during the exile of the Plataeans. Fourteen of the statues called Daedala were distributed by lot among the Plataeans, Lebadaeans, Coroneans, Orchomenians, Thespians, Thebans, Tanagrgeans, and Chaero- neans, because they had effected a reconciliation among the Plataeans, and caused them to be recalled from exile about the time that Thebes was restored by Cassander, the son of Antipater. During this festival a woman, in the habit of a bride-maid, accompanied a statue which was dressed in female garments, on the banks of the Eurotas. This procession was attended to the top of Mount Cithaeron by many of the Breotians, who had places assigned them by lot. Here an altar of square pieces of wood cemented together like stones was erected, and upon it were thrown large quantities of combustible materials. After- wards a bull was sacrificed to Jupiter, and an ox or heifer to Juno, by every one of the cities of Bceotia, and by the most opulent that attended. The poorest citizens offered small cattle; and all these oblations, together with Dxdala, were thrown into the common heap and set on fire, and totally reduced to ashes. They originated in this fable : — When Juno, after a quarrel with Jupiter, had retired to Euboea, and refused to letnrn to his bed, the god, anxious for her return, went to consult Cithaeron king of Pla- taea, to find some effectual measure to break her obstinacy. Cithaeron advised him to dress a statue in woman's apparel, and carry it in a chariot, and publicly to report that it was Plataea the daughter of Asopus, whom he was going to rr.arry. The advice was followed ; and Juno, informed of her husband's future marriage, re- paired in haste to meet the chariot, and wˆs Vor. VII.

D/EM

easily united to him when she discovered the artful measures he made use of to effect a recon- ciliation.

D/EDALUS, in fabulous history, the son of Eupalamus, descended from Erectheus king of Athens. He was the most ingenious artist of his age; and to him we are said to be indebted for the invention of the wedge, with many other mechanical instruments ; as well as the sails of ships. He made statues, we are told, which moved of themselves, and

seemed to be endowed with life. After the murder of Talus, he, with his son Icarus, fled from Athens to Crete, where Minos gave him a cordial reception. Dxdalus made a famous labyrinth for Minos, and assisted Pasiphae the queen to gratify her unnatural passion for a bull. For this action Daedalus incurred the displeasure of Minos, who ordered him to be confined in the labyrinth which he had constructed. Here he made himself wings with feathers and wax, and carefully fitted them to his body and that of his son, who was the companion of his confinement. They took their flight in the air from Crete ; but the heat of the sun melted the wax on the wings of Icarus, whose flight was too high, and he fell into that part of the ocean, which from him has been called the Icarian Sea. The father, by a proper manage- ment of his wings, alighted at Cuma?, where he built a temple to Apollo, and thence directed his course to Sicily, where he was kindly received by Cocalus, who reigned over part of ihe country. He left many monuments of his ingenuity in Sicily, which still existed in the age of Diodorus Siculus. He was despatched by Cocalus,who was afraid of the power of Minos, who had declared war against him because he had given an asylum to Daedalus. The flight of Daedalus from Crete, with wings, is explained by observing that he was the inventor of sails, which in his age might pass at a distance for wings. He lived about A. A. C.

1400.

D/EMON, Satpatv, a name given by the an- cients to certain spirits or genii, which they say appeared to men both to do them service and to injure them. The word is derived, according to Plato, in his Cratylus, from &HJ/JOJV, knowing or intelligent; but according to others from dato/uu, to distribute. They held a middle rank between the celestial gods and men, and carried on all intercourse between them. It was the opinion of many tnat the celestial divinities did not themselves interpose in human affairs, but com- mitted the entire administration of the govern- ment of this lower woild to these subaltern deities. Hence they became the objects of worship. ‘ If idols are nothing,’ says CeUus (Origen cont. Cels. lib. viii. p. 393), ‘wn*t harm can there be to join in the public festivals ? If they are daemons, then it is certain that they are gods, in whom we are to confide, and to whom we should offer sacrifices and prayers, to render them propitious.’ Plutarch teaches, Vit. Romul. p. 36, ed. Paris, ‘ that according to a divine nature and justice, the souls of virtuous men are advanced to the rank of daemons ; and that from demons, if they are properly purified, they are exalted into gods, not by any political institution, but according to right reason.’ He

says in another place, de Is. et Osir. p. 361, ‘ that Isis and Osiris were, for their virtue, changed from good daemons into gods, as were Hercules and Bacchus afterwards, receiving the united honors both of gods and daemons.’ The word daemon is used indifferently in a good and in a bad sense. In the former sense it is very common among the ancient heathens. Pythago- ras held that daemons sent diseases to men and cattle. Diogen. Laert. Vit. Pythag. Zaleucus, in his preface to his Laws, supposes that an evil daemon might be present with a man to influence him to justice. The daemons of Empedocles were evil spirits, and exiles from heaven. And Plutarch in his life of Dion says, ‘ it was the opinion of the ancients that evil and mischievous daemons, out of envy and hatred to good men, oppose whatever they do.’ Scarce did any opinion more generally prevail in ancient times than this, viz. that as the departed souls of good men became good daemons, so the departed souls of l>ad men became evil daemons. Besides the two forementioned kinds of daemons, the fathers, as well as the ancient philosophers, held a third, viz. such as sprang from the congress of superior beings with the daughters of men. In the theo- logy of the fathers these were the worst kind of daemons. Different orders of daemons had dif- ferent stations and employments assigned them by the ancients. Good daemons were considered as the authors of good to mankind ; evil daemons brought innumerable evils both upon men and beasts. Amongst evil daemons there was a great distinction with respect to the offices assigned them ; some compelled men to wickedness, others stimulated them to madness. See DEMONIAC. Much has been said concerning the daemon ot Socrates ; who declared to the world that a friendly spirit, whom he called his daemon, directed him how to act on every important oc- casion in his life, and restrained him from impru- dence of conduct. See SOCRATES.

We have seen above, not only the meaning of the word daemon, but how the ancients wor- shipped da-mons. They were of various orders, and, according to the situation over which they presided, had different names. Hence the Greek and Roman poets talk of satyrs, dryads, nymphs, fauns, &c. &c. See MYTHOLOGY. These dif- ferent orders of intelligences, which, though worshipped as gods or demigods, were yet believed to partake of human passions and ap- petites, led the way to the deification of depart- ed heroes, and other eminent benefactors of the human race ; and from this latter probably arose the belief of

natural and tutelar gods, as well as the practice of worshipping these gods through the medium of statues cut into a human figure. Daemons, however, were not more zealously worshipped among the heathens, than they have been among Christians. Bishop Newton, after establishing the meaning of Paul's prophetic words, 1 Tim. iv. 1, above referred to, as corre- sponding exactly to the heathen daemon worship, says, 'It appears then that the doctrines of daemons, which prevailed so long in the heathen world, should be revived and established in the Christian church ; and is not the worship of saints and angels now in all respects the same that

the worship of daemons was in former times ? The name only is different, the thing is identically the same.'

D./EMONIAC, a human being, whose volition and other mental faculties are overpowered and restrained, and his body possessed and actuated, by some created spiritual being of superior power. Such seems to be the determinate sense of the word ; but it is disputed whether any of mankind ever were in this unfortunate con- dition.

It is the opinion of some, that neither good nor evil spirits are known to exert such authority at present over the human race : but in the ancient heathen world, and among the Jews, par- ticularly in the days of our Saviour, evil spirit?, at least, are thought by many to have possessed more influence than they do now. The Greeks and Romans imagined that their deities, to re- veal future events, frequently entered into the prophet or prophetess who was consulted, overpowered their faculties, and uttered responses with their organs of speech. Apollo was believed to enter into the Pythoness, and to dictate the prophetic answers received by those who con- sulted her. Other oracles, besides that of Delphi, were supposed to unfold futurity by the same machinery. And in various other cases, either malignant daemons or benevolent deities were thought to enter into, and to actuate, human beings. The Lymphatici, the Cerriti, the Lar- vati, of the Romans, were all of this description ; and the Greeks, by the use of the word Saipovi- Zofiivoi, show that they referred to this cause the origin of madness. Among the ancient heathens, therefore, it appears to have been a generally received opinion, that superior beings entered occasionally into men, overpowered the faculties of their minds, and actuated their bodily organs. They might imagine that this happened in in- stances in which the effects were owing to the operation of different causes ; but an opinion so generally prevalent had surely some plausible foundation. The Jews, too, both from the sacred writings, and Josephus, appear to have be- lieved in daemoniacal possession. The case of Saul may be recollected as one

among many in which superior created beings were believed by the Jews to exert in this manner their influence over human life. The general tenor of their his- tory and language, and their doctrines concerning good and evil spirits, prove the opinion of dae- moniacal possession to have been well known and generally received among them.

We shall here subjoin the chief popular argu- ments on each side of this interesting subject, and add a few remarks. Those who are un- willing to allow that angels or devils have ever intermeddled with the concerns of human life, urge a number of specious arguments. The Greeks and Romans of old, say they, did believe in the reality of daemoniacal possession. They supposed that spiritual beings did at times enter into the sons or daughters of men, and distinguish themselves in that situation by capricious freaks deeds of wanton mischief, or prophetic enun- ciations. But, in the instances in which they supposed this to happen, it is evident that no such thing took place. Their accounts of the

state and conduct of those persons whom they believed to be possessed in this supernatural manner, show plainly that what they ascribed to the influence of daemons were merely the effects of natural diseases. Whatever they relate con- cerning the larvati, the cerriti, and the lympha- tici, shows that these were merely people disordered in mind, in the same unfortunate situation with those madmen and idiots, and me- lancholy persons, whom we have among ourselves. Festus describes the larvati as being furiosi et mentemoti. Plato, in his Timaeus, says,

jap tvvovf ttyairrtreu pavTtKijf tvQtovic, a\t)Gov£. Lucian describes daumoniacs as lunatic, and as staring with their eyes, foaming at the mouth, and being speechless. It appears still more evi- dently, that all the persons spoken of as possessed with devils in the New Testament, were either mad or epileptic, and precisely in the same con- dition with the madmen and epileptics of modern times. The Jews, among other reproaches which they threw out against our Saviour, said, He hath a devil, and is mad : why hear ye him ? The expressions, he hath a devil, and is mad, were certainly used on this occasion as synony- mous. With all their virulence they would not surely ascribe to him at once two things that were inconsistent and contradictory. Those who thought more favorably of the character of Jesus, asserted concerning his discourses, in reply to his adversaries, These are not the words of him that hath a daemon ; meaning, no doubt, that he spoke in a more

rational manner than a madman could be expecVed to speak. The Jews appear to have ascribed to the influence of daemons, not only that species of madness in which the patient is raving and furious, bul also melancholy madness. Of John, who secluded himself from intercourse with the world, and was distinguished for absti- nence and acts of mortification, they said, He hath a daemon. . The youth, whose father applied to Jesus to free him from an evil spirit, describ- ing his unhappy condition in these words, Have mercy on my son for he is lunatic, and sore vexed with a daemon; for ofttimes he falleth into the fire, and oft into the water, was plainly epileptic. Every thing, indeed, that is related in the New Testament concerning daemoniacs, proves that they were people affected with such natural diseases as are far from being uncommon among mankind in the present age. When the symptoms of disorders cured by our Saviour and his apostles, as cases of daemoniacal possession, correspond so exactly with those of diseases well known as natural in the present age, it would be absurd to impute them to a supernatural cause. It is much more consistent with common sense and sound philosophy, to suppose, that our Sa- viour and his apostles wisely, and with that con- descension to the weakness and prejudices of those with whom they conversed, which so emi- nently distinguished the character of the author of our holy religion, and must always be a prominent feature in the character of the true Christian, adopted the vulgar language in speaking of those unfortunate persons who were groundlessly imagined to be possessed with daemons, though they well knew the notions which had given rise to such modes of expression

to be ill founded, than to imagine that diseases which arise at present from natural causes, were produced in days of old by the intervention of daemons, or that evil spirits still continue to enter into mankind in all cases of madness, me- lancholy, or epilepsy. Hesides, it is by no means a sufficient reason for receiving any doctrine as true, that it has been generally received through the world. Error, like an epidemical disease, is communicated from one to another. In cert-iiii circumstances, too, the influence of imagination predominates, and restrains the exertions of reason. Many false opinions have extended their influence through a very wide circle, and maintained it long. On every such occasion as the present, therefore, it becomes us to inquire, not so much how generally any opinion has been received, or how long it has prevailed, as from what cause it has originated, and on what evi- dence it rests. When we contemplate the frame of nature, we behold a grand and beautiful sim- plicity prevailing through the whole. Notwith- standing its immense extent, and though it contains such numberless diversities of being, yet the simplest machine

constructed by human art does not display greater simplicity, or a happier connexion of parts. We may therefore infer, by analogy, from what is observable of the order of nature in general to the present case, that to permit evil spirits to intermeddle with the concerns of human life, would be to break through that order which the Deity appears to have established through his works ; it would be to introduce a degree of confusion unworthy of the wisdom of Divine Providence. In opposition to these arguments the following are urged by the Dfemouianists. In the days of our Saviour, it would appear that dasmoniacal possession was very frequent among the Jews and the neighbouring nations. Many were the evil spirits whom Jesus is related in the gospels to have ejected from patients that were brought unto him as possessed and tormented by those malevolent daemons. His apostles, too, and the first Christians, who were most active and suc- cessful in the propagation of Christianity, appear to have often exerted the miraculous powers with which they were endowed on similar occasions. The daemons displayed a degree of knowledge and malevolence which sufficiently distinguished them from human beings : and the language in which the dasmoniacs are mentioned, and the actions and sentiments ascribed to them in the New Testament, show that our Saviour and his apostles did not consider the idea of daemoniacal possession as being merely a vulgar error con- cerning the origin of a disease or diseases pro- duced by natural causes. The more enlightened cannot always avoid the use of metaphorical modes of expression; which, though founded upon error, yet have been so established in lan- guage by the influence of custom, that they cannot be suddenly dismissed. But in descrip- tions of characters, in the narration of facts, and in the laying down of systems of doctrine, we require different rules to be observed. Should any person, in compliance with popular opinions, talk in serious language of the existence, dispo- sitions, declarations, and actions or a race of

beings whom he knew to be absolutely fabulous, reason can conjecture, concerning the existence we surely could not praise him for integrity : we of various orders of spiritual beings, good and must suppose him to be either exulting in irony over the weak credulity of those around him, or taking advantage of their weakness, with the dishonesty and the selfish views of an impostor. And if he himself should pretend to any con- nexion with this imaginary system of beings ; and should claim, in consequence of his connexion

with them, particular honors from his c'ontem- a man who took advantage of the weakness and poraries ; whatever might he the dignity of his ignorance of his contemporaries, if this doctrine

Character in all Other respects, nobody COuld *>f> nnthino- hilt a imla-nr Prrnr Tt tpqphps nnlhinrr

hesitate to brand him as an impostor. In this light must we regard the conduct of our Sa- viour and his apostles, if the idea of daemoniacal

bad, is perfectly consistent with, and even favor- able to, the doctrine of daemoniacal possession. It is mentioned in the New Testament in such language, and such narratives are related con- cerning it, that the gospels cannot well be re- garded in any other light than as pieces of im- posture, and Jesus Christ must be considered as

be nothing but a vulgar error. It teaches nothing inconsistent with the general conduct of provi- dence. In short, it is not the caution of philo- sophy, but the pride of reason, that suggests ob-

possession were to be considered merely as a jections against this doctrine.

vulgar error. They talked and acted as if they believed that evil spirits had actually entered into those who were brought to them as pos- sessed with devils,, and as if those spirits had been actually expelled by their authority out of the unhappy persons whom they had possessed. They demanded, too, to have their professions and declarations believed, in consequence of their performing such mighty works, and having thus triumphed over the powers of hell. The reality of dasmoniacal possession stands upon the same evidence with the gospel system in general. Nor is there any thing unreasonable in this doctrine. It does not appear to contradict

Such are the leading arguments generally urged on this subject ; the reader must of course judge for himself between them ; but we cannot dismiss the article without a few additional re- marks. It is argued by those who deny the in- fluence of daemons or evil spirits, that to permit such an influence on the concerns of human life, would be to break through that order which the Deity appears to have established throughout his works, and to introduce a degree of confusion unworthy of the Divine Providence. This, to say the least of it, is a most gratuitous assertion. For surely those who make it are well aware of the existence of much real evil in the affairs of

those ideas, which the general appearances of human life, and yet the

nature and the series of events suggest, concerning the benevolence and wisdom of the Deity, by which he regulates the affairs of the universe. We often fancy ourselves able to comprehend things to which our understanding is wholly in- adequate : we persuade ourselves at times that the whole extent of the works of the Deity must be well known to us, and that his designs must always be such as we can fathom. We are then ready whenever any difficulty arises to us, in considering the conduct of Providence, to model things according to our own ideas ; to deny that the Deity can possibly be the author of things which we cannot reconcile; and to assert that he must act on every occasion in a manner con-

moves on with a regularity and an order that cannot fail to excite the admiration of every well-disposed mind. Now to meet the objection in all its bearings, we would ask those who make it, whether they think that all the evil which they see existing around them, or any part of it, is effected without the medium of any kind of agency ? This, we conceive, no rational man would venture to maintain. The question then is simply this, — of what nature is this agency ? To this question, as the point at issue rests solely on the authority of Divine Revela- tion, we reply, — it is of a purely spiritual na- ture, and has its origin in the spiritual world. The existence of such agency, both of a good

sistent with our narrow views. This is the pride and of an evil nature, is as clearly taught as any of reason ; and it seems to have suggested the fact made known by the sacred writings. It is strongest objections that have been at any time by means of it that the various affections of the urged against the reality of dzemoniacal posses- human mind are produced; nor would any dif- sion. But the Deity may surely connect one order of his creatures with another. We per- ceive mutual relations and a beautiful connexion to prevail through all that part of nature which falls within the sphere of our observation. The inferior animals are connected with mankind, and subjected to their authority, not only in in-

stances in which it is exerted for their advantage,

ficulty be experienced by us on this point were we constantly to keep in mind that man, in his present state, is intimately connected with both worlds; with the invisible by means of his spirit, and with the visible or material world by means of his body. The cases of daemoniacal possession that occurred during the time of Christ’s sojourning on earth were exactly what,

but even where it is tyrannically abused to their from the information of Scripture, might have destruction. Among the evils to which mankind ‘ “* ”’ ” ”’ ‘

have been subjected, why might not their being liable to daemoniacal possession be one? While the Supreme Being retains the sovereignty of the universe, he may employ whatever agents he thinks proper in the execution of his purposes : he may either commission an angel or let loose a devil, as well as bend the human will, or com- municate any particular impulse to matter. All ihat revelation makes known, all that human

been expected to take place. The Eternal (ac- cording to the opinion of a vast body of Chris- tians) assumed the human nature, that in it He might, in the sight of mankind, effect their deli- verance from the infernal influence which threat- ened their destruction. This was accomplished by His passing through a series of the most un- paralleled trials, which terminated in a conflict unutterably awful. The numerous cases oi daemoniacal possession that are introduced to

our notice in the sacred history appear to have been so many specimens of the ascendency which this influence had gained, and the cer- tainty of its being removed ; for we find, in every case, that the evil spirit was cast out: and certainly it was no obscure allusion that Jesus made to this when in the immediate prospect of the last great conflict with the invisible powers of darkness, and in reference to the grand tried of his triumph over them in the spiritual state, he said, ‘ Now is the judgment of this world : now shall the prince of this world be cast out.’ Does not this very declaration seem to allude to the circumstance of such possessions being less frequent since that time ? We say less frequent, because we think there can be no doubt but that tome instances of extraordinary evil agency are, for wise purposes, still permitted to appear in the world ; although certainly, in no case, to the same extent as before our Lord’s subjugation of such agency. We do not deny that superstition has much augmented the number of these; yet it would be easy to specify some cases that have powerful claims on the most rational and en- lightened belief.

DEMONIACS, in church history, a sect whose distinguishing tenet was said to be, that the devils shall be saved at the end of the world.

DAFF,r.a.&n. s. > Goth, doef; Fr. dofu-a, DAFT, ns. J to stupify. But Dr. John-

son thinks our word d;iff, or daft, is a corruption of to do aft, or throw aside, and the examples from Shakspeare seem to justify him. To cast off; to daunt. A person treated contemptuously ; a dolt, or coward.

When this jape is tald another day, I shall be halden a daffe or a cokenay, I wol arise and auntre it by my fay : Unhardy is unsely, thus men say.

Chaucer. Cant. Talet.

The nimble-footed mad-cap prince of Wale*, And his comrades, that daft the world aside, Bid it pass. ShuJupeare. Henry IV.

I would she had bestowed this dotage on me : I •would have daft all other respects, and made her half myself. Id.

DA’FFODIL, n s. ~\ Supposed by Skinner DAFFODI’LLY. S to be corrupted from as-

DAFFODOWNDI’LLY. Jphodelus. A common flower.

Strew me the green round with daffodowndilliet, And cowslips, and kingcups, and loved lilies.

Spetuer.

Bid amaranthus all his beauty shed, And daffodillies fill their cups with tears. To strew the laurcat herse where Lycid lies.

Milton.

The daughters of the flood have searched the mead For violets pale, and cropped the poppy’s head : The short narcissus, and fair daffodil, Pansies to please the sight, and cassia sweet to smell.

Dry

DAFT. See DAFF.

DAG, orDAGGE,«.«. Because the Dacians, says Minsheu, first used it. A pistol or hand gun. Dr. Meyrick says, ‘the name is peculiar to Great Britain.’

D’ye call this gun a dag ?

Beaumont and Fletcher.

7 DAG

DAG, or -\ Old Fr. dugge ; Ital.

DAOOE, n. s. {dugga; Span, dapa’,

DAGGER. I \ ei. and Arm. du»r’,

DAGGER-DRAWING. J from Ileh. ipi, to pierce; Minsheu. A cutting and stabbing wea- pon, principally the latter.

Upon his armc lie barf a pale bracer, And by his side a swf rd ami a bokcler, And on that other side a jraie d

C/iaucer, Prut, to Cant. Talei.

She ran to her son’s dagger, and struck herself a . mortal wound. Sidney.

This sword a dagger had his page, And was but little for his ape, And therefore waited on him so As dwarfs upon knights-errant do. Hwlibnu.

They always aro at dtiggerxdratcing , And one another clapperclawing. Id.

I have heart! of a quarrel in a tavern, where all were at dagijersdrawing, till one desired to know the subject of the quarrel. SiciJ't.

He strikes himself with his dagger, but be.ing inter, rupted by one of his friends, he stabs him, and breaks the dagger on one his ribs. Addisun.

The Roman, when his burning heart Was slaked with blood of Rome, Threw down the dagger, dared depart

In savage grandeur home, Byron.

DAG, v. a. & >j. s. ˆ Sax. "eaj, to sprinkle, DAG'GLE, v. a. &n. f and uaj, dew. To be- DAG'TAILED. £mire; let fall into water;

DAG'GLETAIL. J besprinkle. Dagtailed.or daggletailed, is bemired, bespattered, or muddy.

Would it not vexe thee, where thy syres did keepe. To see the dunged foldes of dag-tayld sheepe ? And ruined house, where holy things were said, Whose free-stone wals, the thatched roofe upbraid ?

Bp. Hall.

Now in contiguous drops the flood comes down, Threatening with deluge this devoted town : To shops in crowds the daggled females fly. Pretend to cheapen goods, but nothing buy. Swift.

The gentlemen of wit and pleasure arc apt to be choaked at the light of so many daggletailed parsons, that happen to fall in their way. Id.

Nor like a puppy daggled through the town, To fetch and carry sing-song up and down.

Pope.

DAGELET, an island on the coast of Corea, about three leagues in circumference, covered with fine trees, and surrounded with steep rocks, except a few sandy creeks, which form convenient landing

places. It was discovered by La Fey- rouse in 1787, who found some boats of a Chi- nese construction upon the stocks. The men employed upon them, were supposed to be Corean carpenters, but as the ships approached they fled to the woods. The French navigator supposed that the island was uninhabited ; except during summer by people from Corea, for build- ing boats. -Long. 131° 22′ E., lat. 37° 25′ N.

IJAGHESTAN, a country of Asia, west of the Caspian Sea, between the efflux of the Koisin and the Rubas. It is about 134 miles in lengtl-t by between thirty and forty in breadth. It is almost wholly mountainous ; but the soil is pro- ductive, and fine crops of grain are raised The

Russians claim the sovereignty of Daghestan,

«hich is divided into four districts ; but their ithority is not universally acknowledged. Many of the inhabitants subsist by plunder; but it has recently been the scene of contest between .the Persians and Russians. The chief towns are Tarki, Derbend, Baschli, and Ottermisch.

DAGO, or DAGHO, an island in the Baltic Sea, on the coast of Livonia, between the gulf of Finland and Riga. It is of a triangular figure, and may be about twenty miles in circumference. It has nothing considerable but two castles called Daggerwort and Paden. Long. 22° 50′ E,, lat. 68° 44′ N.

DAGOE, DAGHO, or DAGEN, an island of the Baltic, at the entrance of the gulf of Finland, near the coast of Esthonia, and separated from the island of Oesel by a narrow channel. It is about forty miles long, and from twenty-six to thirty-six broad, and is well peopled. At Dage- rort there.is a lighthouse.

DAGQN, the idol of Ashdod or Azotus. He is commonly represented as a monster, half man and half fish ; whence most learned men derive the name from the Hebrew dag, which signifies a fish. Those who make him to have been the inventor of breadˆcorn, derive his name from the Hebrew,])3~\, Dagon, signifying corn ; whence Philo-Biblius calls him Ztvg Aparptioe, Jupiter Aratrius. This deity continued to have a temple at Ashdod to the time of the Maccabees : for the author of the first book of Maccabees tells us, that ‘Jonathan, one of the Maccabees, having beaten the army of Apollonius, Demetrius’s general, they fled to Azotus, and entered into •Bethdagon (the temple of their idol) ; but Jona- than set fire to Azotus, and burnt

the temple of Dagon and all those who were fled into it.' Dagou, according to some, was the same with Jupiter, according to others Saturn or Venus ; but according to most Neptune.

DAHALAK, DALAKA, or DALACCA, an island in the Red Sea, near the coast of Abyssinia, about twenty-five miles in length, and twelve in breadth, anciently celebrated for its pearl fishery. It is low and flat, with a sandy soil, and in summer destitute of every kind of herbage, except a small quantity of bent grass, which is barely sufficient to feed a few antelopes and goats. From the end of March to the beginning of October, they have no rain in Dahalak ; but in the inter- mediate months they have heavy showers, when the water is collected into artificial cisterns, to supply the inhabitants during the ensuing summer. Of these cisterns, which are supposed to be either the work of the Persians or of the first Ptolemies, upwards of 300 remained at a recent period, cut out of the solid rock. Its principal port is Dahalece-el-Kebar, but it will only admit small vessels; and its trade is with Masuah. It was formerly much more populous than at present. This as well as the neighbouring islands is dependent upon Masuah ; and the governor is furnished monthly with a goat from each of the twelve villages ; besides which every vessel put- ting in here for Masuah, pays him a pound of coffee, and every one from Arabia, a dollar. From these his revenue chiefly arises. Long. E., lat. 15° 40′ N.

DAIIL, or DAL, a large river of Sweden, which runs through the provinces of Dalecarlia and Gestricia, and falls into the gulf of Bothnia, four leagues E. S. E. of Gefle. Near Elfkarleby it forms a celebrated cataract, scarcely inferior to the fall of the Rhine at Lauffen.

DAHLIA, in botany, a genus of plants be- longing to the syngenesia class and polygamia order, thus named by Cavanilles in honor of Dr. Andrew Dahl, a Swedish botanist. The stems die every winter, but the root is perennial and tuberous. The known species are but four. 1 . D. pinnata, figured by Cavanilles, and in An- drew's Botanical Repository : it has bipenuate leaves of a deep puqile color. 2. D. rosea, a rose-colored variety figured by Cavanilles in his Icones. 3. D. coccinea, a scarlet variety ; and, 4. D. crocata, a saffron-colored species. These beautiful plants are now becoming so general in British gardens, that a lengthened description would be superfluous : it is sufficient to say, that they elevate the stem like the holly-hock, and bear fine showy axillary and terminal flowers late in the autumn.

DAHOMEY, orDAUMA, akingdom of Africa, on the coast of Guinea, situated about sixty or seventy miles from the Atlantic, to the east of

Ashantee. This kingdom,which is correctly placed in various old maps, particularly that of Merca- tor, who names its ancient capital Dauina, was erased from the maps of Africa in 1700, and the existence of the nation of Dauma denied ; but it emerged from obscurity in 1727, by the fame of its conquests of the maritime states ot Whidah and Ardra. Dahomey, as known at present, is- supposed to reach from the sea coast 150 miles in land, but no European has yet penetrated to that distance from the coast. The soil is a deep rich clay, of a reddish color, with a little sand on the surface, except about Calmina, where it is more light and gravelly ; but there is not to be found a stone so large as an egg in the whole country, so far as it has been visited by Europeans. Of farinaceous vegetables, the country yields a plen- tiful supply, in proportion to the culture. The Dahomese likewise cultivate yams, potatoes, the cassada or manioka, the plantain, and the banana. Pine-apples, melons, oranges, limes, guavas, and other tropical fruits, also abound in this fertile country. Nor is it destitute of pro- ductions adapted for commerce and manufacture ; such as indigo, cotton, the sugar-cane, tobacco, palm-oil, with a variety of spices, particularly a species of pepper, very similar in flavor, and indeed scarcely distinguishable from the black pepper of the East Indies. The Dahomese, like the other inhabitants of tropical climates, plant twice a-year, viz., at the vernal and autumnal equinoxes ; after which the periodical rains pre- vail. The harmattan, or dry wind, blows here strongly from the north-east ; hut Mr. Norris does not ascribe to it those pestilential qualities which have often been supposed, for while it parches up the ground, and injures every species of vegetable, it does not induce any fatal diseases. It is even said to cure cutaneous eruptions, and stop the progress of small pox, fluxes, and remittent fe- vers. The greatest bane of the climate is the periodical rains; which are attended with tern-

ole tornadoes. The language is that which the Portuguese call Lingua Geral, and is spoken not only in Dahomey Proper, but in Wliidah, and the other dependent states. The Dahoman religion is vague and uncertain in its principles, and ra- ther consists in the performance of some tradi- tionary ceremonies, than of any fixed system of belief, or moral conduct. According to Mr. Norris, human sacrifices are not unfrequent among the Dahomese. Their kings, lie says, water the graves of their ancestors every year with the blood of human victims. The same traveller mentions that the people in general take a peculiar pleasure in contemplating human skulls. The king said to a traveller, ‘

Some heads I place at my door : others I throw into the market-place. This gives a grandeur to my customs; this makes my enemies fear me ; and this pleases my ancestors to whom I send them.' The king is even said to sleep in a room paved with the skulls of prisoners of distinction taken in war ; and frequently to exclaim, ' Thus I can trample on the skulls of my enemies whenever I please.' It appears to be customary witli the Dahomese to cut off the ears of the prisoners they take in war, and to send them as a present to the Grand Seignior : upwards of 300 pairs of ears have been sent to him at one time. They believe more firmly in their amulets and fetiches, than in the deity ; their national fetiche is the tiger ; and their houses or huts are decorated with images, tinged with blood, stuck with feathers, besmeared with palm oil, and bedaubed with eggs. The government is perhaps the most perfect despo- tism upon earth, and seems to admit of no inter- mediate degree of subordination between the king and slave. Norris having asked a soldier if he did not think the enemy numerous in a war in which he found the Dahomese engaged ; the lat- ter replied, 'I think of my king, and then I dare en- gage five of the enemy myself He added, ' it is not material, my head belongs to the king, not to myself; if he pleases to send for it, I am ready to resign it ; for if it is shot through in battle, it is no difference to me, I am satisfied.' A mi- nister of state crawls towards the apartment of audience on his hands and knees, till he arrives in the royal presence, where he lays himself flat on his belly, rubbing his head in the dust, and uttering the most humiliating expressions. Be- ing desired to advance, he receives the king's commands, or communicates any particular busi- ness, still continuing in a recumbent posture; for no person is permitted to sit, even on the floor, in the royal presence, except the women ; and even they must kiss the earth when they receive or deliver the king's message. The king of Dahomey main- tains a considerable standing army, commanded by an agaow or general, with several other sub- ordinate military officers; the payment of these troops chiefly depends on the success of the ex- peditions in which they are engaged. Sometimes the king takes the field at the head of his troops ; and on very great emergencies at the head of his women. For within the walls of the different royal palaces in Dahomey, are immured not less than 3000 women ; several hundreds of whom are trained to arms under a female general, and subordinate officers appointed by the king.

These Ama/.ons are regularly exercised, and go through their evolutions with much expertness ; their accoutrements being precisely similar to those of the male troops. 1 he dress of the men in Dahomey consists of a p;iir of striped or white cotton drawers, of the manufacture of the coun- try, over which they wear a large square

cloth of the same, or of European manufacture. This cloth is about the size of a common counterpane for the middling class, but much larger for the grandees. It is wrapped about the loins, and tied on the left side by two of the corners, the others hanging down, and sometimes trailing on the ground. A piece of silk or velvet, of sixteen or eighteen yards, makes a cloth for a grandee. The head is usually covered with a beaver or felt hat, according to the quality of the wearer. The king, as well as some of his ministers, often wears a gold or silver laced hat and feather. The arms and upper part of the body remain naked, unless when the party travels, or performs labo- rious work, when the large cloth is laid aside, and the body is covered with a sort of frock or tunic without sleeves. The feet are always bare, none but the sovereign having a right to wear sandals. The dress of the women, though sim- ple, consists of a greater number of articles than that of the men. They use several cloths or handkerchiefs; the neck, arms, and ancles, are adorned with beads and cowries ; and rings of silver, or baser metal, encircle the fingers. The ears are so pierced as to admit the little finger, and a coral bead of that size, red sealing wax, or a piece of oyster-shell, stuck into each. Girls, before the age of puberty, wear nothing but a string of beads or shells round the loins, and young women usually expose the breasts. The general character of the Dahomese is marked by a strange mixture of ferocity and politeness. The former appears in the treatment of their enemies ; the latter they possess far above most of the African nations with whom we have hitherto had any intercourse. Abomey, the capital, lies between long. 3° and 4° E., and in lat. 7° 50′ N.

DAILLE (John), a protestant minister of the seventeenth century, the most esteemed by the Catholics of all the controversial writers among the Protestants. He was tutor to two of the grandsons of the illustrious M. du Plessis Mor- nai. Mr. Daille having lived fourteen years in this family, travelled into Italy with his two pupils ; one of them died abroad ; with the other he visited Italy, Switzerland, Germany, Flanders Holland, and England, and returned in 1621. He was received minister in 1623, and became chaplain to the family of M. Mornai. In 1625 he was appointed minister of the church of Sau- mur, and in 1626 removed to Paris, where he spent the rest of his life, and composed several works. His first work, Of the Use of the Fathers, was his masterpiece ; printed in 1631. He died in 1670, aged seventy-seven. DAILY. See DAY.

DAINT, adj. -ˆ Fr. dain, delicate.

DAIU’TEOI’S, adj. I From Lat. dens, a tooth, DAIN’TY, n. s. & adj.\ because pleasing to the DAIM’TILY, adv. i palate, as Minsheu

DAIN’TINESS, n. s. J says : delicious, exqui-

site, or of agreeable taste ; elegant. The adverb and substantives follow the meanings of the adjective.

Be not desirous of his dainties ; for they are deceit- ful meat. Proverbs xxiii. 3. Both halle and chambres, eche in his degree,

Houses of office stuffed with plentee ;

Ther mayst thou see of deinteotu vitaille

That may be found as far as lasteth Itaille.

Chaucer. Cant. Tales.

Ther may men fest and realtee beholde, And deintees mo than I can you devise, But all to dere they bought it or they rise. Id.

Ne poets witt, that passeth painter farre In picturing the parts of Beauty daynt, 80 hard a workmanship adventure darre.

Spenser. Faerie Queene.

Higher concoction is required for sweetness, or pleasure of taste, and therefore all your dainty plumbs are a little dry. Bacon.

Truth is a naked and open day-light, that doth not •hew the masks and mummeries and triumphs of the world, half so stately and daintily as candlelight. Id.

My house, within the city, Is richly furnished with plate and gold, Basons and ewers to lave her dainty hands.

Shakspeare.

Which of you all

Will now deny to dance ? She that makes dainty, I’ll swear hath corns. Id. Romeo and Juliet.

Therefore to horse ;

And let us not be dainty of leave-taking, But shift away. Id. Macbeth.

Why, that's my dainty ; I shall miss thee j But yet thou shall have freedom. Id. Tempest.

What should yet thy palate please ? Daintines* and softer ease, Sleeked limbs and finest blood ? Ben Jonton.

The duke exceeded in the daitttiness of his leg and foot, and the earl in the fine shape of his hands.

Wotton.

It was more notorious for the daintiness of the pro- vision which he served in it, than for the massiness of the dish. Hakewill on Providence.

Why should ye be so cruel to yourself, And to those dainty limbs, which nature lent For gentle usage and soft delicacy 1 Milton.

She then produced her dairy store, And unbought dainties of the poor. Drydtn.

Your dainty speakers have the curse, To plead bad causes down to worse. Prior.

The shepherd swains, with sure abundance blest, On the fat flock and rural dainties feast. Pope.

DAI'RY, n. t. > From dey, says Lye, an DAI'RY-MAID. 5 old word for milk. The milk-house, or place where it is managed . A dairy-maid and milk-maid, are nearly synony- mous. In Gloucestershire, the dairy is still called a dey-house. Yet we supply a very early use of ' dairies.'

Citees and burghes, castles high and towres, Thorpes and barnes, shepenes and dairies, This maketh that thir ben no Faeries.

Chaucer. Cant. Tales.

Dairies being well housewived, arc exceeding com- modious. Bacon.

Children, in dairy countries, do wax more tall than where they feed more upon bread and flesh. Id.

You have no more worth Than the coarse and country fairy, That doth haunt the hearth or dairy. BenJcmson.

She in pens his flocks will fold, And then produce her dairy store. Dryden.

The poorest of the sex have still an itch , To know their fortunes, equal to the rich ; The duirymaitl enquires if she shall take The trusty taylor, and the cook forsake. Id.

Come up quickly, or we shall conclude that thou art in love with one of Sir Roger's dairy-maids.

Addison.

DAIRY. The operations of the dairy are con nected with the domestic comforts of almostevery English family. Man is here seen taking that useful and honorable direction of the works of nature for which he was designed, and his origi- nal companion, when a good housewife, is almost more than ' a help meet' for him. She is gene- rally, and for the great benefit of both parties, en- trusted with the practical management of this department, even of extensive farming establish- ments ; and so large a portion of ' skill, frugality, cleanliness, and industry,' is required, as a mo- dern author well observes, in hardly any other of the duties of a farmer's wife.

In our articles AGRICULTURE and Bos we have entered pretty largely into the natural history and peculiarities of the only animal whose milk is extensively used in this country ; ve shall, in this paper, principally advert, — 1. To the selec- tion and general management of cows kept for the dairy, and by cow-keepers, as they are termed. 2. To the operations of the regular dairy in our cheese and butter counties, particularly the for- mer : for in our article BUTTER will be found many useful directions with regard to that im- portant manufacture. 3. We shall offer a few re- marks on the structure of the dairy-house and its furniture.

i. Of the selection and management of cows. — In and about London the Holderness cows, a variety of the short-horned breed, are preferred. They have large carcases and yield a great quan- tity of milk. They take their name from a dis- trict in Yorkshire, where, as well as in the county of Durham, they are extensively bred ; but most English counties have cultivated die breed in some degree. The Edinburgh dairy-men select the short-homed cow of Roxburghshire for simi- lar reasons. Ayrshire has also a celebrated breed. In Lancashire (and in the neighbourhood of Liverpool this topic has been well canvassed) a native long-horned cow is said to have a ge- neral preference. The Guernsey breed is also highly valuable for its rich and

abundant milk. At Caton, in Lancashire, in Mr. Hodgson's dairy establishment, a long-ho.ned cow yielded eight quarts of milk a day and four pounds of butter per week on an average of twelve months, during which period one of the short-horned breed gave nine quarts per day and four pounds and a half of butter per week, both having what they chose to take of exactly the same kind of food. But the quantity each consumed was not noted. Dr. Anderson's strong recommendation of the Alderney cows, as affording ' the richest milk hitherto known; though there are many

individuals of different kinds which afford much richer milk than others,' as he says, seems long to have kept up the public preference for them in many districts.

Cows known to afford milk and butter of the best qualities, will of course be selected ; but neither size nor breed seems to be a uniform criterion. Respectable cow-keepers rarely breed cattle, so that actual experience of the animal is the only final test; and the quantity of milk yielded seems to be, in this case, the sole ground of favoritism. Those who supply the metropolis with milk generally purchase their cows at from three to four years old, and in calf, at Islington, or Smithtii'ld. Some of them own several hun- dreds. The number scattered in and about London is calculated at about 9000. Ten bulls are generally allowed to a stock of 300 cows, and the calves are sent to Smithfield market at one, two, or three days old. The quantity of milk given on an average, by each cow, is said to be nine quarts a day, or 3285 quarts per annum. The weekly expense of their food is estimated in the Middlesex Report at 10s. 3d., and the other charges about £5. 7s. per annum.

These cows are often confined in the cow- house, or the premises adjoining, during the whole time of their being devoted to the pur- poses of the cow-keeper ; but respectable esta- blishments turn them out to grass in the spring. In the night they are turned into their stalls, and fed at about three in the morning with half a bushel each of grains. From four to half-past six or seven they are milked for the retail dealers; then they receive a bushel each of green food or turnips, and soon after at the rate of a truss ot meadow hay to ten cows. They are now turned out into the cow-yard, from eight to twelve o'clock, and about half-past one to three are milked and fed again as in the morning. This is the regular plan from September to May at least, or during the turnip season. At other parts of the year cabbages and tares diversify their food until they are turned out to grass (where that

change of food is supplied to them), and now they remain in the field all night ; but are frequently fed with grains to increase their milk, even at this period.

The cow-feeders of Edinburgh, according to the Supplement of the Encyclopaedia Britannica, do not find it for their interest to keep their cows for more than one year, or even so long, if they can be fattened sooner. ‘ Their object is to have as great a quantity of milk as possible in the first instance; and when the cows fall off in milking, as they almost always do from between four and six months after calving, to prepare them spee- dily for the butcher. Most of the cows continue tˆ give a good deal of milk while they are fatten- ing, and even until they are sent to the shambles. It is expected they should sell to the butcher at the price paid by the cow-keeper. Their food in summer is brewers’ and distillers’ grains and dreg, wheat shellings or small bran, grass and straw ; and in winter the same grains, dreg and bran, with turnips and potatoes, and hay instead of grass. Wl.cn grains are scarce, cut or chopped hay is mixed with them. Some of them are sent to pasture in fields near the city, for about two

months, during the best of the grass season; but even then a certain number must be kept in the house, for consuming the grains, which are pur- chased by contract for a whole year.’

‘ With regard to management, the cow-keepers begin with grains, dreg, and bran, mixed toge- ther, at five o’clock in the morning; feed a se- cond time at one o’clock in the afternoon ; and a third from seven to eight in theevening. Grass in summer, and turnips or potatoes in winter, are given at both intervals. A small quantity of straw is laid below the grass, which absorbs its moisture, and is eaten after the grass; and, in winter, straw or hay is given after the turnips. Part of the turnips or potatoes are boiled, parti- cularly when there is a scarcity of grains, and intermixed with them. The expense in summer is said to be 2s. lOJd., and in winter 3s. “ < £'/. per day, for each cow. The cows are seldom- milked more than twice a-day : for about a month after being bought, it is sometimes necessary to milk them three times. The common periods of milking are six o'clock in the morning, from three to four in the afternoon, and, when milked a third time, nine in the evening. Their produce in milk, when fed as already stated, may average about seven Scotch pints, or nearly twelve quarts and a half daily, per cow. When the cows are smaller, and not so well fed, five pints, or about nine quarts, are said to be the average. The price of milk in Edinburgh used to be 6d. per pint, but of late it has been sometimes lower in sum- mer. This is said to be very little more than the price of the food. For interest of money, risk,

expenses of management, and profit, there is the dung, worth £3. 10s. for each cow; some savings on the cows while at grass, which costs only 1 ». 8

- Comparing the London and Edinburgh dairies,' continues the above writer, ' there seems to be a difference in favor of the best of the latter of no less than three quarts and a half per day. If this be the fact, perhaps it is owing to the whole of the Edinburgh cows being always in milk ; none of them being kept for years, and bred from, as in the London dairies.'

Dr. Andersons's general aphorisms on the subject of the qualities of milk cannot be too well impressed on all dairy and cow-keepers. He says, 1. Of the milk drawn from a cow at any time, that which comes first is always thinnest, and continues to increase in thickness to the last drop. This is proved by experiment ; and so great is the importance of attending to it, that the person who, by bad milking of his cows, loses but half a pint of his milk, loses, in fact, as much cream as would be afforded by six or eivrrit pints at the beginning, and loses besides that part of the cream which done can give richness and high flavor to his butter 2. When milk throws up

cream to the surface, that portion which rises first will be thicker, and of better quality, as well as in greater quantity, than that which rises in a se- cond equal portion of time. 3. Thick milk throws up a smaller quantity of cream to the surface than such as is thinner; but that cream is of a richer quality. If water be added to that thick milk, it will afford a considerably greater quantity of cream than before, but its quality is at the same time greatly debased. 4. Milk when carried in vessels to any distance, so as to suffer considerable agitation, never throws up cream so rich, nor in such quantity, as if the same had been put into the milk-pans without any agitation. From these aphorisms, the following corollaries are deducible. 1. The cows ought always to be milked as near the dairy as possible. 2. The milk of different cows should be kept by themselves, that the good cows may be distinguished from the bad. 3. For butter of a very fine quality, the first- drawn milk ought always to be kept separate from the last.

The Farmers' Magazine, vol. xv. supplies the following directions on the subject of feeding stalled cows, as those which are practically given by a very intelligent dairy-man, to his cow- feeder and milkers,

at Farnham, in Surrey : —

1. To the feeder. ‘ Go to the cow-stall at six o’clock in the morning, winter and summer; give each cow half a bushel of the field-beet, carrots, turnips, or potatoes cut; at seven o’clock, the hour the dairy-maid comes to milk them, give each some hay, and let them feed till they are all milked. If any cow refuse hay, give her something she will eat, such as grains, carrots, &c., during the time she is milking, as it is abso- lutely necessary the cow should feed whilst milk- ing. As soon as the woman has finished milking in the morning, turn the cows into the airing ground, and let there be plenty of fresh water in the troughs ; at nine o’clock give each cow three gallons of a mixture composed of eight gallons of grains and four gallons of bran or pollard ; when they have eaten that, put some hay into the cribs; at twelve o’clock give each three gallons of the mixture as before ; if any cow looks for more, give her another gallon ; on the contrary, if she will not eat what you give her, take it out of the manger, never at one time letting a cow have more than she will eat up clean. Mind and keep your mangers clean, that they do not get sour. At two o’clock give each cow half a bushel of carrots, field-beet, or turnips ; look the turnips, &.C., over well before you give them to the cows, as one rotten turnip, &c. will give a bad taste to the milk, and most likely spoil a whole dairy of butter. At four o’clock put the cows into the stall to be milked ; feed them on hay as you did at milking time in the morning, ever keeping in mind that the cow whilst milking must feed on something. At six o’clock give each cow three gallons of the mixture as before. Rack them up at eight o’clock. Twicejn a week put into each cow’s feed, at noon, a quart of malt dust.’

2. To the dairy-maid. ‘ Go to the cow-stall at seven o’clock; take with you cold water and a sponge, and wash each cow’s udder clean before milking ; dowse the udder well with cold water, winter and summer, as it braces, and repels heats.

Keep your hands and arms clean. Milk each cow as dry as you can, morning and evening, and when you have milked each cow, as you suppose, dry, begin again with the cow you first milked, and drip them each ; for the principal reason of cows failing in their milk is from neg- ligence in not milking each cow dry, particularly at the time the calf is taken from the cow. Suf- fer no one to milk a cow but yourself, and have no gossiping in the stall. Every Saturday night give in an exact account of the quantity of milk each cow has given in the week.’

‘ Where butter is the principal object,’ says Mr. Loudon, ‘ such cows

should always be chosen as are known to afford the best and largest quan- tity of milk and cream, of whatever breed they may be. But the quantity of butter to be made from a given number of cows must always de- pend on a variety of contingent circumstances ; such as the size and goodness of the beasts, the kind and quantity of the food, and the distance of time from calving. As to the first, it need scarcely be mentioned that a large cow will give greater store of milk than one of a smaller size ; though cows of equal size differ as to the quantity of cream produced from the milk of each : it is, therefore, on those cows whose milk is not only in large abundance, but which, from a peculiar inherent richness, yields a thick cream, that the butter dairy-man is to place his chief dependence ; and where a cow is deficient in either of these, she should be parted with, and her place sup- plied by one more proper for this use. As to the second particular, namely, the kind and quality of the food, those who would wish to profit by a dairy, ought to provide for their cows hay of a superior goodness, to be given them in the depth of winter, and this in an unlimited degree, that they may always feed till they are perfectly satis- fied. And, when the weather will permit, the cows should be indulged with an outlet to marshes or low meadow-grounds, where they may feed on such green vegetables as are present; which is far preferable to the practice of con- fining them the whole day on dry meat, will en- able them to yield greater plenty of milk, and will give a fine yellow color to the butter even in the winter season.'

ii. The operations of the regular dairies of the cheese and butter counties have been justly stated to be very little improved by the application of modern science to farming. Dr. Anderson and Mr. Marshall are the only scientific writers whose attention seems to have been turned to the subject. The latter, in his Rural Economy of Gloucester- shire, has registered a number of observations on the heat of the dairy-room, and of the milk when the rennet was applied in cheese-making; on the time required for coagulation ; and the heat of the whey after : but the chemistry of these arts and productions has been wholly neglected at present. We cannot therefore do better than present the reader with the following popular ac- count of the cheeses best known in this country

Cheshire cheese is prepared in the following manner : — The evening's milk is not touched till the next morning, when the cream is taken off, and put to warm in a metal pan heated with boiling water. The cows being milked early in

the morning, the new milk, and that of the pre- ceding night, thus prepared, are poured into a large tub, together with the cream. A piece of rennet, kept in luke-warm water from the pre- ceding evening, is put into the tub in order to coagulate the milk ; with which, if the cheese is intended to be colored, a small quantity of arnotto (or of an infusion of marigolds, or carrots,) is rubbed fine and mixed ; the whole is then stirred together, and, being covered up warm, it is allowed to stand about half an hour, when it is turned over with a bowl, to separate the whey from the curds, and broken soon after into very small particles : the whey being separated, by standing some time, is taken from the curd, which sinks to the bottom, and is then collected into a part of the tub provided with a slip, or loose board, to cross the diameter of the bottom, for the sole purpose of effecting this separation; on which a hoard is placed, weighing from sixty to 120 pounds, in order to press out the whey. As soon as it acquires a greater degree of solidity it is cut into slices, and turned over several times, to extract all the whey, and again pressed with weights. See Coagulum, in CHEMISTRY.

These operations may consume about an hour and a half. It is then taken from the vub and broken very small by the hand, salted, and put into a cheese-vat, the depth of which is en- larged by a tin hoop fitted to the top. The side is then strongly pressed, both by hand and with a board at top, well weighted ; and wooden skewers are placed round the cheese, at the centre, which are frequently drawn out. It is then shifted out of the vat, a cloth being previously put on the top of it, and reversed on the cloth into another vat, or again into the same, if well scalded before the cheese be returned to it. The top, or upper part, is next broken by the hand down to the middle, salted, pressed, weighted and skewered ai before, till all the whey is extracted. This being done, the cheese is again reversed into another vat, likewise warmed with a cloth under it, and a tin hoop, or binder, put round the upper edge of the cheese and within the sides of the vat ; the former being previously enclosed in a cloth, and its edges put within the vessel. These various operations are performed from about seven o’clock in the morning till one at noon. The pressing of the cheese requires about eight hours more, as it must be twice turned in the vat, round which thin wire skewers are passed and shifted occasionally. The next morning it ought to be turned and pressed again, as likewise at night, and on the succeeding day, about the middle of which it is removed to the salting-room, where the outside is salted and a cloth binder tied round it. After this process the cheese is turned twice daily, for six or seven days ; then left two or three weeks to dry,

during which lime it is turned and cleaned every day ; and at length deposited in the common cheese-room, on a boarded floor covered with straw, where it is turned daily till it acquires a sufficient degree of hardness. The room should be of a moderate warmth, but no wind, or current of air, must be permitted to enter, as this generally cracks the cheese. Their outsides, or rinds, are sometimes rubbed with butter or oil to give them a coat.

‘ A dairy farm of 100 acres,’ gays an intelligent writer on the agriculture of Cheshire, ‘ is gene- rally divided into the following proportions : from ten to fourteen acres of oats, from six to eight acres of fallow wheat, and the like quantity of summer fallow ; the remainder consists of meadow and pasture, the former occupying about twelve acres. The good dairy farmer attends more to the size, form, and produce of the udder of his cow than to any fancied beauty of shape. This consideration induces him to be particular in the breeding and rearing his calves, and in the management of his cows during the winter and summer seasons. The annual quantity of cheese made from each cow varies from 50 to 500 Ibs. and upwards, the produce depending on the goodness of the land, the quality of the pasture, the seasons, and the manner in which the stock are wintered. On the whole, the average pro- duce may be estimated at 300 Ibs. from each animal. The quantity of milk yielded daily by each cow, according to this estimate, will be about eight quarts, which it is calculated will produce one pound of cheese.

‘ On the dairy farms one woman-servant is generally kept to every ten cows, who is em- ployed in winter in spinning, and other house- hold business, but in milking is assisted by al. the other servants of the farm. The cheese is chiefly sold in London, being exported from Chester, Frodsham-bridge, and Warrington. A large quantity goes to Liverpool and Bristol, some more is disposed of to the Yorkshire dealers, and some goes into Scotland. The proper season for calving is reckoned to be from the beginning of March to the beginning of May; and during these months there is more veal fed in Cheshire than in any other county in the kingdom, though generally killed to spare the milk.’

Gloucester cheese is made of milk immediately from the cow ; but which, in summer, is thought too hot, and is therefore lowered to the requisite degree of heat, before the rennet is added, by pouring in skim-milk, or, if that will not answer, by the addition of water. As soon as the curd ‘ is come,’ it is broken with a double cheese- knife, and also with the hand, in order to clear it from the whey, which is ladled off. The curd, being thus freed from the principal part of the

whey, is put into vats, which are set in the press for ten or fifteen minutes, in order to extract all the remaining liquid. It is then turned out of the vats into the cheese-tubs again ; broken small and scalded with a pail-full of water, lowered with whey, about three parts water to one of whey ; and the whole is briskly agitated, the curd and water being equally mixed together. After hav- ing stood a few minutes, to let the curd subside, the liquor is poured off; and the former collected into a vat, the surface of which is, when about half full, sprinkled with a little salt, that is worked in among the curd. The vat is then filled up, and the whole mass turned two or three times in it, the edges being pared and the middle rounded up at each turning. At length the curd is put into a cloth and placed in the press, whence it is carried to the shelves, and turned, generally, once a day till it has acquired a sufficient degree

of compactness to enable it to undergo the ope- ration of washing.

Parmesan cheese has long been famous for its richness and flavor ; the following mode of ma- nutacture is described in the Annales de Chemie . The size of these cheeses varies from sixty to 180 pounds, according to the number of cows in each dairy. During the heat of summer cheese is made every day, but in the cooler months milk will keep longer, and the cheese is made every other day. The summer cheese, which is the best, is made of the evening milk, after having been skimmed in the morning and at noon. Both kinds of milk are poured together into a caldron capable of holding about 130 gallons, of the shape of an inverted bell, and suspended on the arm of a lever so as to be moved off and on the fire at pleasure. In this caldron the milk is gradually heated to the temperature of about 1 20° ; it is now removed from the fire, and kept quiet for five or six minutes. When all internal mo- tion has ceased, the rennet is added ; this sub- stance is composed of the stomach of a calf, fermented together with wheaten meal and salt ; and the method of using it is to tie a piece, of the size of a hazel uut, in a piece of line'n cloth, and steep it in the milk, squeezing it from time to time ; a sufficiency of rennet soon passes through the cloth into the milk, which is now to be well stirred, and afterwards left to rest that it may coagulate. In about an hour the coagulation is complete, and then the milk is again put over the fire, and raised to a temperature of about 145 degrees.

During the time it is heating the mass is briskly agitated, till the curd

separates in small lumps ; part of the whey is then taken out, and a small portion of saffron is added to the remain- der in order to color it. When the curd is thus broken sufficiently small, nearly the whole of the whey is taken out and two pailfuls of cold water is poured in ; the temperature is thus lowered so as to enable the dairyman to collect the curd, by passing a cloth underneath it and gathering it up at the corners ; the curd is now pressed into a frame of wood like a bushel without a bottom, placed on a solid table and covered by a round piece of wood, having a great stone or weight on the top. In the course of the night it cools, assumes a firm consistence, and parts with the whey ; the next day one side is rubbed with salt, and the succeeding day the cheese is turned and the other side is rubbed with salt in the same manner as before. This alternate salting of each side is practised for about forty days ; after this period the outer crust of the cheese is pared off, and the fresh surface is coated with linseed oil. The convex sides are then colored red with ar- notto, and the cheese is fit for sale.

The Stilton cheeses, called the Parmesan of England, are usually made in cylindrical vats, and weigh from six to twelve pounds each. Im- mediately after they are made they should be put into boxes made exactly to fit them, as they are so extremely rich, that, without this precaution, they would be apt to bulge out and break asunder. In these boxes they shuu.d be daily turned, and kept two years ; they are then fit for sale. Some make them in a net like a caboage-net, so that

they appear when made like an acorn ; but these are never so good as the others, having a thicker coat, and wanting the rich flavor and mellowness of the others. The manufacture oftiese cheeses is not confined to Stilton and its neighbourhood ; as many other persons in Huntingdonshire, and also Rutland and Northampton shires, make a similar sort, sell them for the same price, and give them the name of Stilton cheeses. It is observed by Mr. Hazard, that, though the farm- ers about Stilton are remarkable for the cleanli- ness of their dairies, they take very little pains with the rennet; for if they did they would not have so many faulty and unsound cheeses. The inhabitants of other countries might make as good cheese as that of Stilton if they would adhere to- the same plan, which is this : — They make a cheese every morning, and to this meal of new milk they add the cream taken from that which was milked the night before. This, and the age of their cheeses, it is said, are the only reasons why they are preferred to others, their land not being in any respect superior to that of other countries.

In the Bath Papers, Mr. Hazard gives the fol- lowing receipt for making rennet. ‘ When the maw-skin is well prepared and fit for the

pur- pose, three pints or two quarts of soft water, clean and sweet, should be mixed with salt, wherein should be put sweet-brier, rose-leaves and flowers, cinnamon, cloves, mace, and, in short, almost every sort of spice and aromatic that can be procured ; and if these are put into two quarts of water, they must boil gently till the liquor is reduced to three pints, and care should be taken that this liquid is not smoked ; it should be strained clear from the spices, &c., and, when not warmer than milk from the cow, it should he poured upon the veil or maw ; a lemon may then be sliced into it, when it may remain a day or two ; after which it should be strained again and put into a bottle, where, if well corked, it will keep good for twelve months, or more : it will smell like a perfume, and a small quantity of it will turn the milk, and give the cheese a pleasing flavor.'

The method of making green cheese we should not, perhaps, omit. In a cheese of this sort, of about ten or twelve pounds weight, an infusion is made by steeping about two handfuls of sage, and one of marigold leaves, with a little parsley, after being bruised, one night in a proper quan- tity of milk. In the morning the greened milk is strained off, and mixed with about one-third of the whole quantity to be run. The green and the white milks are then run separately, keeping the two curds distinct, until they are ready for vat- ting. The mixing of them depends on the fancy of the maker. In some cases the two are con- nected together, blending them in an even and intimate manner ; in others, the green curd is broken down into irregular fragments, or cut out in irregular figures by means of proper tins. In the operation of vatting, the fragments or figures are placed on the outsides. The bottom of the vat is first set with them, crumbling the white or yellow curd among them. As the vat fills, others are placed at the edges, and the remainder buried flush with the top. In the management

afterwards, the same plan is pursued as those which we have already described for common cheese.

A dairy house should have a northern aspect, if possible, and good ventilation. The regulation of temperature may be accomplished on the plan suggested by Dr. Anderson, of having double walls and roofs ; or by means of hollow walls ; and for common purposes by the walls having a vacuity left, of eight or ten inches in width, be- tween the lath and plaster. According to the na- ture of the business to be carried on in them, these buildings will be of course regulated, both in regard to their size and the number of their conveniences : as whether they

are used for but- ter, cheese, or milk ; the number of cows which are kept, &c. In the Gloucester dairy houses twenty feet by sixteen are the usual dimensions for forty cows; and thirty feet by forty for 100 cows.

A butter dairy should consist of three rooms, or apartments : namely, a milk room, a churning room with necessary apparatus, and a room for the different utensils, and the cleaning and air- ing them in, when it may be requisite. The cheese dairy should, in the same manner, be composed of three rooms ; one for the reception of the milk ; another for the scalding and pres- sing of the cheese ; ana a third for the purpose of salting it in. In addition, there ought to be a room for the stowing of the cheese, which may conveniently be a loft made over the dairy. It is frequently at a distance, which is inconvenient and troublesome.

The milk dairy only requires two good rooms, one for the reception of the milk, and another for the purpose of serving it out in, and that of scalding, cleaning, and airing the different uten- sils.

The utensils of a cheese dairy are, the cheese tub, in which the curd is broken, and prepared ; the cheese-knife, commonly a thin spatula of wood or iron, for the purpose of cutting or break- ing down the curd ; the cheese-cloth, a piece of thin gauze, in which the cheese is placed in the press ; a circular cheese-board ; a strong wooden vat, and cheese-press.

The last article is generally constructed with a common wooden screw, though sometimes a large weight is used. The diagram represents a

very commodious one. Churns are almost end- less in their variety of shapes, and supposed re- commendations. Our article CHURN exhibits an improved mode of working this important utensil. We may add, in conclusion, that Mr. Dicas of Liverpool has lately invented a lactometer ‘ for ascertaining the richness of milk from its specific gravity, and its degree of warmth taken by a ther- mometer, on comparing its specific gravity with its warmth.’

It is a glass tube a foot long, with a funnel at top ; the upper two inches being marked in small divisions, just under the funnel ; when the instrument is filled to the height of one foot with milk, the depth of cream it yields is noted by the gradations on the upper part.

An invention of a similar kind has been noticed by the Highland Society of Scotland, in their Report for 1816 : Mrs. Lovi’s aereometric

beads, by which the specific gravity of the milk is tried first when new milked, and again when the cream is removed. — ‘ When milk is tried as soon as it cools,’ observes this Report, ‘ say to 60°, and again, after it has been thoroughly skimmed, it will be found that the skimmed milk is of considerably greater gravity ; and as this increase depends upon the separation of the lighter cream, the amount of the increase, or the difference between the specific gravity of the fresh and skimmed milk, will bear proportion to, and may be employed as a measure of, the relative quantities of the oily matter or butter contained in different milks.’ — ‘ The specific gravity of skimmed milk depends both on the quantity of the saccharo-saline matters, and of the curd. To estimate the relative quantities of curd, and by that determine the value of milk for the purpose of yielding cheese, it is only required to curdle the skim milk, and ascertain the specific gravity of the whey. The whey will, of course, be found of lower specific gravity than the skimmed milk, and the number of degrees of difference affords a measure of the relative quantities of the curd. According to this hypothesis, the aereometric beads may be employed to ascertain the quali- ties of milk, relatively both to the manufacture of butter and cheese.’ But neither of these inven- tions, though in themselves ingenious, have been extensively used.

The fixtures of a respectable dairy are, a cop- per boiler in the scalding-room ; benches and shelves in this room and the cheese-room ; a bench or table about two feet wide round the milk-room ; and a pump in the centre of the latter.

The utensils of a butter dairy are, pails; sieves of hair cloth, or silver-wire cloth for straining the milk ; milk dishes or coolers ; an ivory or bone cream-knife, and skimming dishes of willow or ivory ; bowls ; barrel, or other milk churns ; butter-makers ; and a portable rack for drying dishes in the air ; tubs, &c.

DAIS, in botany, a genus of the monogynia order, and decandria class of plants ; natural order, ihirtj first, vepreculse: involucrum tetra phyllous : COR. quadnfid, or quinquefid : FRUIT monospermous berry Species three, natives of South Sea Isles.

DAL

DAI’SY, n. s. > Sax. DAI’SIED, adj. y or,

day's-eye ;

as Mr. Thomson conjee- tares, dah's, i.e. does-eye. Minsheu says, from 3ot£

DAISY. See BELLIS PERENNIS.

DALE, n. *. Teut. thaal; Ang.Saxon, Spa nish, Belgic, and Irish, dal, from dalen,descendere, to descend. A valley or low place.

DALE (Richard), an American naval com- mander, was born in Virginia, Nov. 6, 1756. At twelve years of age he was sent to sea, and, in 1775, he took the command of a merchant vessel. In 1776 he entered, as a midshipman, on board of the American brig of war Lexington, commanded by captain John Barry In her he cruised on the British coast the following year, and was taken by a British cutter. After a confinement of more than a year in Mill prison, he effected his escape into France, where he joined, in the character of master's mate, the celebrated Paul Jones, then commanding the American ship Bon Homme Richard. Jones soon raised Dale to the rank of his first lieu- tenant, in which character he signalized himself in the sanguinary and desperate engagement between the Bon Homme Richard and the English frigate Serapis. He was the first man who reached the deck of the latter when she was boarded and taken. In 1781 he returned to America, and, in June of that year, was ap- pointed to the Trumbull frigate, commanded by captain James Nicholson, and soon afterwards captured. From 1790 to 1794 he served as captain in the East India trade. At the end of this period the government of the United States made him a captain in the navy. In 1801 he took tlie command of the American squadron of observation, which sailed, in June of that year, from Hampton roads to the Mediterranean. His broad pendant was hoisted on board the frigate President. Efficient protection was given by Dale to the American trade and olher interests in the Mediterranean. In April, 1802, he reached Hampton roads again. lie passed the remainder of his life in Philadelphia, in the en- joyment of a competent estate, and of the esteem of all his fellow-citizens. He died February 24, 1826. Captain Dale was a thorough, brave and intelligent seaman. He was several times se- verely wounded in battle. The adventures of his early years were of the most romantic and perilous cast. No man could lay claim to a more honorable and honest character.

DALEA, in botany, a genus of plants of the diadelphia class and decandria order. Stamina five or ten, with the wings growing to their co- lumn, and united without separate filaments: leguminous : SEED

one. Species fourteen, na- tives of North and South America.

DALECAHLIA, or STORA-KOPPAFBERG, as it has been recently named, is an extensive pro- vince of Sweden, bounded on the west by Nor- way, on the north by Herjedal, on the east by Helsingland, and on the south by Westmann- land. It contains nearly 1300 English square miles, and about 125,000 inhabitants. Though its general aspect is hilly, the mountains are ot

little elevation, except in the neighbourhood oi Norway ; the greater part of the x province is finely diversified with hills, dales, and lakes. It contains also two large rivers, the Dal and the Ljusne. In the south fine rye and barley fields meet the eye ; and the potatoe is cultivated with some success ; but the perpetual changes of the property and badness of the roads have been formidable obstacles to improvement. Lime- trees, elms, and maples, are found growing here nearly under the sixty-second degree of lati- tude. Dalecarlia has its chief riches, however, in its copper and iron mines, the chief of which (of copper) are at Fahlun and Afvestad. At the beginning of the present century the iron mines employed seventy-two smelting-furnaces, and fifty-six forges ; the total annual produce being about 113,000 cwt. Sulphur is likewise found; and at Elfvedal are quarries of porphyry. The chief towns are Fahlun, Hedemora, and Soter. The Dalecarlians are of noble make and ap- pearance, and have long been celebrated for their love of liberty. During the struggles of Gusta- vus Vasa for the crown, they obtained their chief privileges, and have since distinguished themselves on similar occasions. They seem to have imbibed from these circumstances much of the spirit of faction ; and they have great con- tempt for the other Swedes.

DALECHAMPIA, in botany, a genus of the monadelphia order, and monoecia class of plants, natural order thirty-eighth, tricoccse. Male in- volucrum, common and quadripartite : CAL. hex- aphyllous ; COR. none ; nectarium laminated or scaly ; the stamina monadelphous or coalited at the base, and polyandrous or numerous Female involucrum, common and triphyllous ; style one : CAPS, tricoccous. Species two, viz. 1. D. scandens, a native of Jamaica, and a climbing plant which rises to a considerable height, and is remarkable for nothing but having its leaves armed with bristly hairs, which sting the hands of those who unwarily touch them. 2. D. Gorolata, a native of New Gra- nada.

DALGARNO (George), a learned Scottish writer of the seventeenth century, was born at Aberdeen, and projected a plan for a universal language, in a work entitled Ars Signorum, Vulgo Character

Universalis et Lingua Philoso- phica, London 1661, 8vo. This exhibits a clas- sification, as the author and his admirers state, of all possible ideas, and a selection of characters adapted to them. He admits only seventeen classes of ideas, and uses the letters of the Latin alphabet, with two Greek characters. His plan resembles that of bishop Wilkins. He was the author also of Didascalophus, or the Deaf and Dumb Man's Tutor. Oxford, 1680, 8vo.

DALIN (Olof Von), a Swedish historian and poet, born atWinberga in Holland in 1 708, was de- signed for the medical profession, which he aban- doned. In 1735 he published a weekly paper, called The Swedish Argus, which gave great satis- faction to the diet, and he was rewarded with the situation of librarian at Stockholm. He has been termed the father of Swedish poetry. His two chief poems are, The Liberty of Sweden; and JJrunhilda, a tragedy. In 1744 he was en

gaged by the diet to write The History of Swe- den, and successively raised himself to be pre- ceptor to prince Gustavus, counsellor in ordinary of the chancery, knight of the northern star, and chancellor of the court. He died in 1763. He was the author of a Translation of Montesquieu's Causes de la Grandeur et de la Decadence des Romaines ; and several poems, fables, &c., printed in 6 vols. 1767.

DALKEITH (Gael. i. e. a plain between two rivers), a parish of Scotland, in Mid Lothian, situated between the south and north Esk, and not exceeding two miles in length or breadth. The soil is partly light and sandy, partly deep clay.

DALKEITH, a considerable town in the above parish, is six miles south-east of Edin- burgh, seated on the north Esk. It contains several good streets, and has a weekly market on Thursday, reckoned one of the best in Scot- land for grain ; which is all sold for ready money, and supplies the west country about Glasgow, Paisley, Carron, &c., as well as Edinburgh in part. It has also markets on Monday and Tues- day for meal and cattle, in winter ; and a fair the third Tuesday in October. The seat of the duke of Buccleuch is the principal ornament of the place, and the plantations which surround it are laid out with great taste. The house was built in the beginning of the eighteenth century on the site of Dalkeith castle. ~Long. 2° 20′ W., lat. 55° 50′ N.

DALKEITH CASTLE formerly stood at the east end of the town of Dalkeith. It was built on a perpendicular rock of great height, and inacces- sible on all sides, except the east where it was defended by a fosse, through which the river is said to have run. On the defeat of the Scots at the battle of Pinkie, in 1547, James earl of Morton, Sir David Wedderburn, and many others, fled to this castle; where they were besieged for some time by the English, but were obliged to surrender at last for want of provisions. Here, in 1660, it being the head quar- ters of general Monk, the restoration of monarchy, by calling home Charles II. was planned.

DALLA, an important island and district of the Delta of the Irrawuddy River, Hindostan. It is covered generally with wood, which shelters numerous wild beasts, but contains also fine pastures, and produces rice and salt in con- siderable quantities. During the contest between the Birmans and Peguers, in the middle of the last century, this district was often overrun by both armies. The principal towns are Dalla, Cowack, and Gnapee Ghewen.

DA'LLY, v. a. & n. 1 Ancient Belg. dollen;

DAL'LIANCE, n.s. > Goth, duella ; Saxon,

DAL'LIER, n. t. 3 dwolian. To talk fool- ishly or idly. Hence both to delay, and to trifle in love or otherwise.

They that would not be reformed by that correction, wherein he dallied with them, shall feel a judgment worthy of God. Witdom xii. 26.

A Frere ther was a wanton and a mery,

A limitour, a full solempne man :

lu all the ordres foure is non that can

So moche of duliance and fayre language.

Chaucer. Prol. to Cant. Talet.

With faire disport, and courting daUiavnce She intcrtaindc her lover all the. way ; But when she saw the kni/ht his speare advance, Shee soone left off her mirth and wanton play, And bad her knight addresse him to the fray,

Spenser. Faerie Qtteene.

The daily daUieri, with pleasant words, with smil- ing countenances, and with wagers purposed to ho lost, be fore they were purposed to be made. Aacluim.

Not dallying with a brace of courtezans, But meditating with two deep divines. Shalupeare.

She her airie buildeth in the cedar's top, And dallies with the wind, and scorns the sun. Id.

— Good lord, you use this dallianve to excuse Your breach of promise. Id.

Nor gentle purpose, nor endearing smiles, Wanted ; nor youthful dalliance, as beseems, Fair couple linked in happy nuptial league, Alone as they.

He left his cur, and laying hold Upon his arms, with courage bold Cried out, 'tis now no time to dally, The enemy begin to rally. Huflibrax.

I'll head my people ;

Then think of dalliance when the danger's o'er : My warlike spirits work now another way, And my soul's tuned to trumpets. Dryden.

One hundred thousand pounds must be raised, fo» there is no dallying with hunger. Swift.

DALMANUTIIA, in ancient geography, a city of Judea, on the east side of the sea of Ti- oerias ; either the same with Magdala, or situated near it. Hence Mark says, viii. 10, that our Saviour and his disciples landed in the parts of Dalmanutha: while Matthew, recording the same fact, says that they came into the coast 01 Magdala.

DALMATIA, a country of Europe, in a former maritime division of Austria, was bounded on the north by Bosnia and Croatia, on the east by Servia, and on the south and west by the Adriatic. The country is, as it were, strewed with mountains and hills, which are not alto- gether unfruitful ; olives, vines, myrtles, and a great variety of palatable and wholesome vege- tables growing amongst them. It has also many fertile plains ; and feeds considerable numbers of horned cattle and sheep. The rivers of Dal- matia have no long course, but are mostly navi- gable. The principal are the Cherka and the Narenta. The air is temperate and pure. The Dalmatians use the Sclavonian language and customs, and profess the Roman Catholic re- ligion.

Dalmatia was distinguished as follows : — 1 . Hungarian Dalmatia, lying on the upper part of the Adriatic Sea, containing part of ancient Liburnia, and which is more generally called Morlachia. 2. Venetian Dalmatia, or that part which was possessed by fhe Venetians, lying to the south- east of Hungarian Dalmatia, and abounds in ancient castles and fortresses. The inhabitants are estimated at 25,000, and are distinguished by different names, as well as diversity of man- ners. See MORLACHS, and UHLANS. They are warlike, intrepid soldiers, and excellent seamen. The nobi'ity and people were well at- tached to the republic; mildness made them faithful subjects to Venice; their privileges were

respected, and it was dangerous to offend them. The chief towns are Spalatro, the capital, Amissa, Narenta, Sebenico, Trau, and Zara. Besides what the Venetians possessed on the continent, several islands in the Adriatic belong to them, which are considered as part of Dalmatia. This portion belonging to Austria, is strictly the only part to which the name Dalruatia now applies. 3. Turkish Dalmatia, lying east of Venetian Dalmatia. The principal towns are, Herze- govina, the capital, Clinova, and Scardova. 4. The late republic of Ragusa formed another part of Dalmatia.

DALMATIA, ISLANDS OF. Besides the islands ucluded in the above province, Dr. Oppenheim mentions other seven islands of the late maritime division of Austria, as forming two distinct pro- vinces ; viz. the Four islands of Quarnaro, and the Three Dalmatian islands, peculiarly so called, viz. Brazza, Lesina, and Curtola.

DALMATIA, LOWER, or ALBANIA, a province of the late maritime division of Austria, divided from the ci-devant Venetian Dalmatia, by the late republic of Ragusa, and a part of Turkish Dalmatia. It comprehended the canal, town, &c., of Cattaro, the mountains and valleys of Buda, and the bailiwic of Pastˆovichi. It is mountainous, but produces some corn, much oil, and fine fruits. The inhabitants have also con- siderable trade in the Levant.

The name of Dalmatia is said to be derived from the ancient capital Delmium, or Delmi- nium. In the latter ages of the Roman empire this country suffered frequently from the in- roads of barbarians, and was

finally incorpo- rated with Hungary in the twelfth century. When the Venetians, however, had occupied the sea-coast, they succeeded in the fifteenth century in conquering the interior, which long remained in their possession. By the treaty of Campo Formio, in 1797, the whole was ceded to Austria ; but after the campaign of 1805 Buona- parte claimed it as king of Italy, and afterwards united it with the Illyrian provinces. Cattaro, and the southern part, were in 1806 seized by the Russians ; but delivered up to the French at the peace of Tilsit. In the final arrangements of 1814 the whole was again transferred to Austria.

DALRYMPLE (Sir David), an eminent and learned judge of Scotland, born at Edinburgh, Oct. 28th, 1726. He was educated at Eton, and from thence went to Utrecht, where he re- mained till after the rebellion in 1746. He was admitted a member of the Faculty of Advocates, Feb. 23rd 1 748. In March, he 1 766, was appointed a lord of Session, and in May, 1776, one of the lords of Justiciary. During this time he wrote several occasional papers, in The World,' the Gentleman's Magazine, &c. In 1773 he pub- lished his Remarks on the History of Scotland, which first displayed his talent for minute and accurate enquiry into doubtful points of history. This prepared the public mind for his Annals of Scotland, of which the first appeared in 1776, and the second in 1779, and fully answered the hopes he had excited. In 1786 lord Hailes evinced his unshaken attachment to religious truth, by publishing a 4to. volume, entitled, An Knquiry into the Secondary Causes, which Mr.

Gibbon has assigned for the rapid progress cf Christianity. This was the last work he pub- lished ; but he attended his duty on the bench till within three days of his death, which hap- pened Nov. 29th, 1792, in the sixty sixth year of his age. Lord Hailes was twice married ; first to the daughter of the late lord Coalston, and afterward to the daughter of lord Kilkerran, by each of whom he had one daughter. As he left no male issue, his nephew succeeded to his title. His knowledge of the laws was accurate and profound ; and he applied it in judgment with the most scrupulous integrity. Affectionate to his family and relations, simple and mild in his manners, pure and conscientious in his morals, enlightened and entertaining in his conversation, he left society only to regret that, devoted as he was to more important employments, he had so little time to spare for intercourse with them. His labors in illustration of the history of his country, and many other works of profound erudition, remain as monuments of his accurate and faithful researches for materials, and his sound judgment in the selection of them. Besides the works above enumerated, lord Hailes pub lished the following : 1. Memorials and Letters relating to the

History of Great Britain, in the reign of James I. 8vo. 1765. 2. The Secret Correspondence between Sir Robert Cecil and James VI. 12mo. 1766. 3. Accounts of the Persecution of Charles II. after the Battle of Worcester, 8vo. 1766. 4. Memorials and Let- ters relating to the History of Great Britain, in the reign of Charles I. 8vo. 1767. 5. Canons of the Church of Scotland, drawn up in the pro- vincial Synod held at Perth, 1242, 4to- 1769. 6. Historical Memorials concerning the Provin- cial Councils of the Scottish Clergy, 4to. 7. Ancient Scottish Poems, from a MS. of George Bannatyne, 12mo. 1770. All in 4to. in 1787. Lord Hailes has also left many valuable MSS.

D ALTON (John),D.D. an eminent divine and poet, was the son of the Rev. John Dalton, rector of Dean in Cumberland, where he was born in 1709. He was educated at Queen's College, Oxford ; and became tutor to lord Beauchamp, only son of the earl of Hertford; during which time he adapted Milton's mask of Comus to the stage, by a judicious insertion of several songs and different passages selected from other of Milton's works, as well as of several songs and other elegant additions of his own, suited to the characters and to the manners of the original author. During the run of this piece he indus- triously sought out a grand-daughter of Milton's, oppressed both by age and poverty, and pro- cured her a benefit from it, the profits of which amounted to a considerable sum. He was pro- moted by the king to a prebend of Worcester ; where he died on the 2nd of July 1763. Be- sides the above, he wrote a descriptive poem, addressed to two ladies at their return from viewing the coal-mines near Whitehaven ; and Remarks on twelve historical designs of Raphael, and the Museum Graecum et Egyptiacum.

DALTON, a market town of Lancashire. It is seated on the spring-head of a river in a cham- paign country, not far from the sea; and the ancient castle is made use of to keep the records,

and prisoners for debt, in the liberty of Furness. The church is an ancient, neat building, and has an organ. This town, being in an excellent sporting country, is much resorted to during the season. The port here is large and commodious ; and a light-louse has been erected at the south end of the Isle of Walney. A canal has been cut from the sea up to this town, one mile and a half in length, capable of navigating ships of great burden, which is of great advantage to the trade and commerce of the place. Market on Saturday. This is four

miles from Diversion, and 275 N.N.W.of London.

DAM, n. s. \ Fr. dame ; Span, dama ; Ileb.

DAME, n. s. S and Chald. QK ; Arab, arna ; Lat. dama, domina ; which, however, Minsheu derives from Heb. nOl> to govern ; Sans, amma ; Teut. ama, to which Thomson thinks Sax. dey, or die, one that gives milk, has been prefixed. A human mother ; a female who has borne young animals. Also, a title of honor; a lady; an el- derly woman.

But of hir3 song, it was as loud and yerne As any swalow sitting on a berne ; Thcrto she coude skip and make a game, As any kid or calf folowing his dame.

Chaucer. Cant. Talet.

Their dam upstart out of her den eflfraide, And rushed forth, hurling her hideous taile About her cursed head. Spenser. Faerie Queene.

This brat is none of mine j It is the issue of Polixena : Hence with it, and, together with the dam, Commit them to the fire.

Shakspeare. Winter'* Tale.

The dam rung lowing up and down, Looking the way her harmless young one went, And can do nought but wail her darling loss.

Id.

Not all these lords do vex me half so much As that proud dame, the lord protector's wife. Id.

Bless you, fair dame ! I am not to you known, Though in your state of honor I am perfect. Id.

Another layeth a well-marked lambe, Or spotted kid, or some more forward steere, And from the payle doth praise their fertile dam. Bp. Hall. Defiance to Envy.

Who would not repeat that bliss, And frequent sight of such a dame Buy with the hazard of his fame ? Waller.

Mother, says a sick kite, let me have your prayers. Alas, my child, saya the dam, which of the gods shall I go to ? L' Estrange.

They killed the poor cock ; for, say they, if it were not for his waking our dame, she would not wake us

Id.

Birds bring but one morsel of meat at a time, and have not fewer, it may be, than seven or eight young in the nest together, which, at the return of their dams, do all at once, with equal greediness, hold up their heads and gape. Ray.

The word dame originally signified a mistress of a family, who was a lady ; and it is used still in the English law to signify a lady : but in common use, iinw-a-days, it represents a farmer's wife, or a mis- tn ss cf a family of the lower rank in the country.

Wattt't Logick. VOL. VII.

DAM

As is the hedghog's.

Which sucks at midnight from the wholesome dam Of the young bull, until the milkmaid finds The nipple next day sore and udder dry. Byron.

No spectre gaunt she saw of bones entwined, With scythe wide brandished as to sweep mankind, But a plump dame, of pampered aspect sly, With fiendlike, scowling merriment of eye.

Dr. T. Brown.

DAM, v. a. & n. s. From Gr. caˆaˆuj, catena, to reduce to quiet, or stillness ; Ang.Sax. &em man ; Belg. damm. To confine and overcome the force of water ; to shut up by moles or banks. To stop up an opening. Shakspeare applies it to fire, and Milton to light, restrained or con- fined.

I'll have the current in this place dammed up j And here the smug and silver Trent shall run In a new channel, fair and evenly.

SJwktpeare. Henry VI. The more thou dammest it up, the more it burns.

Id.

Now will I dam up this thy yawning mouth For swallowing the treasure of the realm. Id.

Moon ! if your influence be quite dammed up With black usurping mists, some gentle taper, Though a rush-candle from the wicker hole

Of some clay habitation, visit us With thy long levelled rule of streaming light.

Milton.

As when the sea breaks o'er its bounds, And overflows the level grounds, Those banks and dams, that like a skreen Did keep it out, now keep it in. Hudibras.

Home I would go,

But that my doors are hateful to my eyes, Filled and dammed up with gaping creditors, Watchful as fowlers when their game will spring.

Ottcay.

Not with so fierce a rage the foaming flood Roars, when he finds his rapid course withstood, Bears down the dams with unresisted sway, And sweeps the cattle and the cots away.

Dryden.

The inside of the dam must be very smooth and straight ; and if it is made very sloping on each side, it is the better. Mortimer's Husbandry.

Tis you must drive that trouble from your soul ; As streams, when dammed, forget their ancient current, And, wondering at their banks, in other channels flow.

Smith.

DAMAGE,!). a., v.n.&n. **.** > **Fr. damage**

DAMAGEABLE, adj. \ dommage ; Goth-

damnage, from Lat. damnum, injury. To injure hurt, impair; and the injury, or harm done. Damages are an estimated value or supposed, reparation of injury done. Damageable goods are those readily susceptible of injury.

His heart exalts him in the harm

Already done, to have dispeopled heaven,

My damage fondly deemed! Milton.

Gross errours and absurdities many commit for want of a friend to tell them of them, to the great damage both of their fame and fortune. Bacon.

The bishop demanded restitution cf the spoils taken by the Scots, or damages for the same. /•/.

Such as were sent from thence did commonly do more hurt and damage to the English subjects than to the Irish enemies, by their continual cess anJ extortion.

They believed that they were not able, though they should be willing to sell all they have in Ireland, to pa/ the damage* which had been sustained by the war.

Id.

DAMAGE-FEASANT. Beasts are said to be damage-Peasant, or doing damage, when those of one person are found upon the land of another without his permission and without his fault; for if the owner of a field or enclosure adjoining upon another enclosure neglects to repair his fences, and the beasts pass through, he cannot seize them as damage-feasant. But if the beasts break into a close from the highway, where they were wrong- fully left to run at large, the owner of the close may lake them up, or distrain them as damage-feasant, though the fence of the close on the side next the highway was defective ; for the owner is not obliged to make a fence against beasts where they cannot be lawfully left at large. The owner of land has a right to sue the owner of the beasts in trespass for the damage done by them to his crops, &c., but the law gives him also the means of stopping the dam- age, for he may distrain and impound the beasts.

DAMAR, a considerable town and district of Arabia, in the country of Yemen. It is well- built, and has a large castle and a university of the Mussulman sect Zeidi, which, Niebuhr was iuformed, contained 500 students. It is said to contain 5000 houses. Distant fifty-six miles north of Sana, and ninety-four north-east of Mocha.

DAMASCENE, Lat. damascenus. From Da- mascus; a plum. See PRUNUS.

In fruits the white commonly is meaner, as in pears, plums, and

damascenes ; and the choicest plums are black. Bacon.

DAMASCENUS (John), an illustrious father of the church in the eighth century, born at Da- mascus, where his father, though a Christian, enjoyed the office of counsellor of state to the Saracen caliph, to which the son succeeded. He retired afterwards to the monastery of St. Sabas, and spent the remainder of his life in writing books of divinity. His works have been often printed; but the Paris edition, in 1712, two vols. folio, is esteemed the best.

DAMASCIUS, a celebrated heathen philoso- pher, born at Damascus, A. D. 1540, when the Goths reigned in Italy. He wrote the life of his master, Isidorus, and dedicated it to Theodora, a very learned and philosophical lady, who had also been a pupil to Isidorus. In this life, which was copiously written, he frequently made oblique attacks on the Christian religion. We have nothing remaining of it but some extracts preserved by Photius. Damascius succeeded Theon in the rhetorical school, and Isidorus in that of philosophy, at Athens.

DAMASCUS, pttflQI, Heb. ; a very ancient city of Syria, in Asia. The ancients supposed it to have been built by one Damascus, from whom it took its name ; and one of the medals of the city represents a hind suckling a child, supposed to have an allusion to the founder of the city, who is said to have been brought up by dama, a hind, whence his name. This city was in being

in the time of Abraham, Gen. xiv. 15 ; and con- sequently may be looked upon as one of the most ancient cities in the world. In the time of David it seems to have been a very considerable place ; as the sacred historian tells us that the Syrians of Damascus sent 20,000 men to the relief of Iladadezer, king of Zobah. We are not informed whether, at that time, it was go- verned by kings, or was a republic. Afterwards, however, it became a monarchy, and proved very hostile to the kingdom of Israel, and would have destroyed it entirely, had not the Deity miraculously interposed in its behalf. This mo- narchy was destroyed by Tiglath Pileser, king of Assyria, and Damascus was never afterwards go- verned by its own kings. From the Assyrians and Babylonians it passed to the Persians, and thence to the Greeks, under Alexander the Great. After his death it belonged, with the rest of Syria, to the Seleucidae, till their empire was subdued by the Romans, about A.A.C. 70. From them it was taken by the Saracens, A. D. 633 ; and it is now in the hands of the Turks.

Notwithstanding the tyranny of the Turkish government, Damascus is still a considerable place. It is situated in a plain of so great ex- tent,

that one can but just discern the mountains, which compass it on the other side. It stands on the west side of the plain, about two miles from the head of the river Barrady, which waters it. It is of a long, straight figure, extending about two miles in length, adorned with mosques and steeples, and encompassed with gardens, computed to be full thirty miles round. The river Barrady, as soon as it issues from the clefts of the Antilibanus into the plain, is divided into three streams.; the middle one, which is the largest, runs directly to Damascus, and is distri- buted to all the cisterns and fountains of the city. The other two seem to be artificial ; and are drawn round, one to the right, and the other to the left, on the borders of the gardens, into which they are let by little currents, and dispersed every where. This river finally flows into a hol- low of the south-east desert, called Behairat-el- Merdi, the Lake of the Meadow.

The houses of the city, whose streets are very narrow, are all built on the outside, either with sun-burnt bricks, or Flemish wall ; and yet it is no uncommon thing to see the gates and doors adorned with marble portals, carved and inlaid with great beauty and variety ; and, within these portals, to find Jarge courts, beautified with fra- grant trees and marble fountains, and surrounded with splendid apartments. In these apartments the ceilings are usually richly painted and gilded ; their duans, which are a sort of low stages, seated in the pleasantest part of the room, and elevated about sixteen or eighteen inches above the floor, are floored, and adorned on the sides with variety of marble, mixed in mosaic knots and mazes, spread with carpets, and fur- nished all round with bolsters and cushions, to the very height of luxury. No city in the world has an equal number of fountains, or more splendid private houses. The interior of some of them is said to contain furniture worth £5000 or £6000. In this city are shown the church of John the Baptist, now converted into

a famous mosque ; the house of Ananias, which is only a small grotto, or cellar, wherein is nothing remarkable; and the house of Judas, with whom Paul lodged. In this last is an old tomb, said to be that of Ananias, which the Turks hold in such veneration, that they keep a lamp continually burning over it. There is a castle belonging to Damascus, which is like a little town, having its own streets and houses; and here a magazine of the famous Damascus steel was formerly kept. The principal public building worth notice is the Zekia mosque, re- markable for its noble dimensions and general

architecture. This is of the Corinthian order throughout ; it has two minarets, and is of an oblong figure, crowned by a large stone cupola, supported by four enormous pillars. The gate- way is supported by large columns of red gra- nite; on the outside is a superb fountain, which throws the water twenty feet high. Another, with a grove of trees on each side, stands in a spacious court within. Numerous columns sup- port galleries within, and portions of the walls exhibit the remains of mosaic work, with which they were once adorned. An hospital for the indigent sick is attached. This mosque is said to have been originally the cathedral church of Damascus. The Christians affirm, that it was dedicated to St. John Damascenus, whose body reposes here ; but the Turks call it the mosque of St. John the Baptist. Another mosque is beautifully adorned with all kinds of fine marble, like mosaic pavement ; and the tower or mina- ret of a third, is entirely cased with pantiles. The finest of its numerous hospitals is that con- structed by the sultan Selim, consisting of a spacious quadrangle, lined by an interior co- lonade, which is entirely roofed by forty small domes, covered with lead. On the south side of the court there is a mosque, with a magnificent portico, and two exquisite little minarets, sur- mounted by a spacious cupola. The patriarch of Anlioch has his see at Damascus, where he commonly resides. There is also a Greek, Ma- ronite, Syrian, and Armenian church ; and three convents of Franciscan monks. There are eight Jewish synagogues.

Damascus was, at one time, noted for its ge- neral ill-treatment of Europeans; but, although no one can venture to traverse the streets, unless in the Oriental costume, without insult, there is now little difference between the citizens of Da- mascus, and those of other eastern cities. A number of persons are generally seen in the streets, calling themselves saints, and appearing like ideots or madmen.

The fruit-tree, called the damascene, and the flower, called the damask-rose, were transplanted from the gardens belonging to this city ; and the silks and linens, known by the name of da- masks, were first manufactured by its inha- bitants. Niebuhr, who has given a plan of this city, makes it 3250 toises, or something less than a league and a-half in circumference, and it probably contains 180,000 inhabitants. The greater part of these are Arabs and Turks ; the number of Christians is estimated at 20,000. Damascus is the rendezvous for all the pilgrims who go to Mecca, from the north of Asia, as

Cairo is for those from Africa. Their number, , every year, amounts to from 30,000 to 50,000, Many of them repair here for four months before the time, but the greatest number only at the end of the Ramadan. Damascus then resembles an immense fair ; nothing is to be

seen but strangers from all parts of Turkey, and even Persia; and every place is full of camels, horses, mules, and merchandise. By means of this caravan, Da- mascus is become the centre of a very extensive commerce. By Aleppo, the merchants of this city correspond with Armenia, Natolia, Diar- bekir, and even with Persia. They send cara- vans to Cairo, which, following a route frequented in the time of the patriarchs, take their course by Djesryakoub, Tiberias, Naplous, and Gaza. In return, they receive the merchandise of Con- stantinople and Europe, by way of Said and Bairout. The home consumption is supplied by silk and cotton-stuffs, which are manufac- tured here in great quantities, and are very well made; by the dried fruits, of their own growth, and sweetmeats, cakes of roses, apricots, and peaches, of which Turkey consumes to the amount of about 40,000 Ibs. Tiie remainder, paid for by course of exchange, occasions a con- siderable circulation of money, in custom-house duties, and the commission of the merchants. The pachalic of Damascus comprehends neatly the whole eastern part of Syria. In this vast extent of country, the soil and its productions are very various ; but the plains of Hauran, and those on the banks of the Orontes, are the most fertile; they produce wheat, barley, sesamum, doura, and cotton. This city was one of the objects of Buonaparte's ambition while in the east : a small detachment of his cavalry had de- feated the pacha's troops, and he was about to proceed to take possession of Damascus, when he was checked in his progress, in this direction, by British prowess and the disastrous results of the siege of Acre. In the year 1811 the city was menaced by the Wahabees, but the pacha going out to meet them, at the head of 6000 men, they retired. Damascus is 190 miles south of An- tioch, 136 N.N.E. of Jerusalem, and 276 S.S.W. of Diarbekir.

DAMASCUS STEEL. See STEEL and CUTLERY.

DAM' ASK, v. a. & n. s.) Fr. damasquin ;

DAMASKEN'ING, n. s. > Ital. damaschino.

DAM'ASK-ROSE,«. s. j Damask is a silk, first manufactured at Damascus : damaskening an operation of cutlery, whereby the blades ot swords and locks of pistols are ornamented, as at Damascus : and damask-rose, a rose varie- gated, after the manner of damask, with red and white : hence the damask of a cheek.

Not any weaver which his work doth boast In diaper, damatb, or in lyne. Spenser.

Damath-roiCf have not been known in England above one hundred

years, and now are so common.

Bacon.

And for some deale perplexed was her spirit, Her damask late, now changed to purest white.

Fairfax .

They sat recline On the soft downy bank, danuuked with flowers.

W8tm.

E 1

Wipe your shoes, for want of a clout, with a damatk napkin. Swift's Rules to Servants.

Around him dance the rosy hours, .And df masking the ground with flowers, With ambient sweets perfume the morn. Fenton. No gradual bloom is wanting from the bud, Nor broad carnations, nor gay spotted pinks, Nor, showered from every bush, the damask-rose.

Thomson.

Loud claps the grinning fiend his iron hands, Sumps with black hoof, and shouts along the lands ; Withers the damask cheek, unnerves the strong, And drives with scorpion lash the shrieking throng.

Darwin.

DAMASK, a silk stuff, with a raised pattern, so that the right side of the damask is that which has the flowers raised above the ground. Damasks should be of dressed silk, both in warp and woof. Those made in France are half an ell in breadth.

DAMASK is also a kind of wrought linen, made chiefly in Flanders ; so called, because its large flowers resemble those of damasks. It is chiefly used for tables.

DAMASKEENING, or DAMASKING, partakes of the mosaic, of engraving, and of carving; like the mosaic, it has inlaid work ; like engraving, it cuts the metal, representing divers figures; and, as in

chasing gold and silver, is wrought in relievo. There are two ways of damasking ; the one, which is the finest, is when the metal is cut deep with proper instruments, and inlaid with gold and silver wire; the other is superficial only.

DAMAUN, a sea-port in the province of Aurungabad, Hindostan, 100 miles north from Bombay. The Portuguese, who still retain it, reduced this place so early as 1531. Its houses and churches make a conspicuous figure from the sea ; but the commerce is now reduced. Ship-building, however, is carried on to a consi- derable extent, the teak-forests of the vicinity sup- plying excellent timber. A ship, coppered, and equipped for sea, in the European style, in 1800, cost about £14 sterling per ton, according to Mr. Hamilton. The harbour is commodious for vessels of a small size.

DAMIANISTS, in church history, a branch of the ancient Acephali Severitag. They agreed with the catholics in admitting the sixth council, but disowned any distinction of persons in the God-head ; and professed one single nature inca- pable of distinction ; yet they called God ‘ the Father, Son, and Holy Ghost.’

DAMIENS (Robert Francis), a French as- sassin, of some notoriety for his attempt on the life of Louis XV., and for the tortures inflicted on him for that attempt, was born in Artois in 1715. He was the son of a small farmer ; and his character, even in his childhood, procured him the name of Robert le Diable. He enlisted, when young, for a soldier, deserted, and after- wards became the servant of an officer, whom He attended to the siege of Philipsburgh. He was afterwards a domestic in the Jesuits’ Col- lege at Paris. He finally left their service in 1738. He is accused of having afterwards poisoned one of his masters, after which he fled into Flanders. On the last day of the year 1756, he returned

to Paris, whence he proceeded to Versailles ; and on the evening of the 5th of January, 1757, went to the palace, and, as his majesty was about to get into his carriage, to go to Trianon, pushing aside the attendants, made his way up to the king, and stabbed him in the side. He made no effort to escape, but was taken imme- diately ; and, after having been interrogated at Versailles, was transferred to Paris. On his trial he denied having any accomplices, nor did the application of the most cruel tortures wring from him any probable accusation. On being questioned as to the cause of his crime, he said he did not mean to kill the king, and that he could have done it, if he had thought proper. He added, ‘ What I did was, that God might touch the king’s heart, and induce him to restore order and tranquillity to the nation. The arch-

bishop of Paris is the sole cause of our troubles.' Having been repeatedly tortured, he was sen- tenced to be put to death in the same cruel manner with Ravaillac, the murderer of Henry IV.

DAMIETTA, a port-town of Egypt, on the east mouth of the Nile, four miles from the sea- coast. The present town stands upon a different site from the ancient Damietta, so repeatedly attacked by the European princes. The latter, according to Abulfeda, was ' a town surrounded by walls, and situated at the mouth of the eas- tern branch of the Nile.' Stephen of Byzan- tium informs us, that it was called Thamiatis, under the government of the Greeks of the lower empire, but that it was then very inconsiderable. It increased in importance, in proportion as Pe- lusium, which was frequently plundered, lost its power. The total ruin of that ancient town, oc- casioned the commerce of the eastern parts of the Delta to be transferred to this. It was, how- ever, no longer a place of strength, when, about the year 238 of the Hegira, the emperors of Constantinople took possession of it a second time. The importance of a harbour, so favorably situated, opened the eyes of the caliphs. In the year 244 of the Hegira, Elmetouakkel sur- rounded it with strong walls. This obstacle did not prevent Roger, king of Sicily, from taking it from the Mahommedans, in the year 550 of the Hegira. He did not, however, long enjoy his conquest. Salah Eddin, who about that period mounted the throne of Egypt, expelled the Eu- ropeans from Damietta. They returned to be- siege it fifteen years after ; but the sultan baffled all their efforts. Notwithstanding their land army was supported by a fleet of 1200 sail, they were obliged to make a disgraceful retreat. It was the fate of this place to be often besieged. In the year 615 of the Hegira, under the reign of Eladel, the crusaders attacked it with a very considerable force. They landed on the western shore of the Nile, and their first care was to sur- round their camp with a ditch and pallisadoes. The mouth of the river was defended by two towers, furnished with numerous garrisons. An enormous iron chain, stretching from one side to the other, hindered the approach of vessels. The crusaders carried, by storm, the tower on the same side with their camp, broke the chain, and opened the entrance of the river for their

fleet. Nejm Eddin, the sultan's son, who was encamped near Damietta, covered it with an army. To stop the enemy's vessels, he threw a

bridge over the Nile. The Franks overturned it, and the prince adopted the measure of chok- ing up the mouth of the river, which he rendered almost impassable by several large boats he sunk there. After alternate successes, many bloody battles, and a siege of seventeen months, the Christian princes took Damietta by storm. They did not, however, long enjoy the fruit of so much blood spilt, and of an armament which had cost immense sums. Completely invested near the canal of Achmoun, by the waters of the Nile, and by the Egyptian army, they purchased their lives and their liberty by the sacrifice of their conquest. Thirty-one years after this de- feat, St. Louis carried Damietta without striking a stroke. The Arabs, however, soon recovered it; but, tired of keeping a place, which conti- nually drew upon them the most warlike nations of Europe, they totally destroyed it, and built another further up in the country. This modern Damietta, first called Menchie, as Abulfeda tells us, has preserved the memory of its origin, in a square still called by that name. Writers, in general, have confounded these two towns, as- cribing to the one the attributes of the other.

The present Damietta is of a semicircular form, and stands also on the east bank of the Nile, seven miles and a-half from its mouth. It is reckoned, by Savary, to contain 80,000 souls, but this has been thought an excessive estimate. It has several squares, the most considerable of which has retained the name of Menchie. The bazaars are filled with merchants. Spacious okals, or khans, collecting under their porticos the stuffs of India, the silks of Mount Lebanon, sal ammoniac, and pyramids of rice, proclaim its commercial respectability. The houses, those in particular which are on the banks of the river, are very lofty. They have, in general, handsome saloons on the top of their terraces, open to every wind ; where the Turk, reclining on a sofa, passes his life in smoking, or in looking on the sea, which bounds the horizon on one side ; on the great lake that extends itself on the other ; and on the Nile, which, running between them, traverses a rich country. Several large mosques, adorned.with minarets, are dispersed over the town. The public baths, lined with marble, are distributed in the same manner as those of Grand Cairo, The linen is clean, and the water very pure. The heat, and the treatment in them, so far from injuring the health, serve to strengthen and improve it, if used with modera- tion. This custom, founded on experience, is ge- neral in Egypt. The port of Damietta is conti- nually filled with a multitude of boats and small vessels. Those called scherm serve to convey the merchandise on board the ships in the road, and to unload them : the others carry on the coasting- trade. This town carries on a great trade with Syria, Cyprus, and Marseilles. The rice, called mezelaoui, of the finest quality in Egypt, is cul- tivated in the

neighbouring plains. The exports of it amount, annually, to about six millions of livres. Other articles of the produce of the country are linens, sal ammoniac, corn, 8cc. The Christians

of Aleppo and Damascus, settled in this town, have, for several ages, carried on its principal commerce. The bad state of the port is very detrimental to Damietta. The road, where the vessels lie, being exposed to every wind, the slightest gale obliges the captains to cut their cables, and take shelter in Cyprus, or stand off to sea. The tongue of land, on which Damietta is situated, straitened on one side by the river, and on the other by the western extremity of the lake Menzale, is only from two to six miles wide from east to west. It is intersected by innu- merable rivulets in every direction, which render it the most fertile spot in Egypt. There are many villages around the town, in which are manufactures of the most beautiful linens. The finest napkins, in particular, are made here, fringed with silk. Damietta is 100 miles N. N. E. of Cairo.*1′

DAMN, v. a.

DAMNED, part. & n. s.

DAM’NABLE, adj.

DAM’NABLENESS, n. s.

DAM’NABLY, adv.

Lat. damno ; Old Fr. datnner ; which Minsheu derives from the Ileb. Cl, > the shedding of ‘ blood in sacrifice or punishment. To condemn; and the state of being con-

DAM’NATION, n. s.

DAM’NATORY, adj.

DAM’NIFY, v. a.

DAM’NINGNESS, n. s.

demned, temporally or eternally. To curse; to disapprove ; to explode. * Indecently used,’ also, as Johnson says, ‘ in a ludicrous (and trifling) sense.’

I answeride, that it is not custom to romayns, to dampne ony man before that he that is accused haue his accuseds present. Wicklif.

Dedis. 25.

And not as we ben blasfemed, and as sum men seyn, that we seyn, do we yuele things that goode thingis come, whos dampnaciovn is just.

Id. Romayss, iii. 8. For wel thou wost thy selven veraily

That thou and I be damned to prison

Perpetual ; us gaincth no rainson.

Chaucer. Cant. Tale*.

When now he saw himself so freshly rear, As if late fight had nought him damnified, He was dismayed, and ‘gan his fate to fear.

Faerie Queene. Not in the legions

Of horrid hell can come a devil more damned In evils to top Macbeth. Shakspeare. Macbeth.

Let not the royal bed of Denmark be A couch for luxury and damned incest. Id. Hamlet.

He’s a creature unprepared, unmeet for death ; And to transport him in the mind he is Were damnable. Id. Measure for Measure.

It gives him occasion of labouring with greater ear- nestness elsewhere, to entangle unwary minds with the snares of his damnable opinion. Hooker.

Whence damned vice is shrouded quite from shame, And crowned with virtue’s meed, immortal name ! Infamy dispossest of native due, Ordained of old on looser life to sue.

Bishop Hall. Prologue to Satires.

He that hath been affrighted with the fears of hell, or remembers how often he hath been spared from an horrililc damnation, will not be ready to strangle hU brother for a trifle. Taylor’s Worthy Communicant.

He may vow never to return to those sins which he hath had such experience of, for the emptiness and damningtifss of them, and so think himself a com- plete penitent. Hammo*d.

DAM

Now mince the sin, And mollify damnation with a phrase : Say you consented not to Sancho's death, But barely not forbade it. Dryden.

His own impartial thought Will damn, and conscience will record the fault. Id.

We will propose the question, whether those who hold the fundamentals of faith may deny Christ damnably, in respect of those consequences that arise from them? South' s Sermons.

He, who has suffered the damage, has a right to demand in his own name, and he alone can remit, satisfaction : the damnified person has the power of appropriating the goods or service of the offender, by right of self-preservation. Locke.

Dare not

To brand the spotless virtue of my prince With falsehoods of most base and damned contrivance.

Rowe.

As he does not reckon every schism of a damnable nature, so he is far from closing with the new opinion of those who make it no crime. Swift.

The more sweets they bestowed upon them, the more damnably their conserves stunk. Dennis.

You are so good a critick, that it is the greatest happiness of the modern poets that you do not hear their works ; and, next, that you are not so arrant a critick as to damn them, like the rest, without hearing. Pope.

Clouds

Rise curling fast beneath me, white and sulphury, Like foam from the roused ocean of deep Hell, Whose every wave breaks on a living shore, Heaped with the damned like pebbles. — I am giddy.

Byron.

DAMNIT, an ancient people of Britain, who inhabited the district situated between the ter- ritories of the Selgovae on the south, and the Caledonii on the north, now called Clydesdale.

DAMOCLES, one of the flatterers of Diony- sius the elder, of Sicily. He

admired the ty- rant's wealth, and pronounced him the happiest man on earth. Dionysius prevailed upon him to undertake, for a while, the charge of royalty, and be convinced of the happiness which a so- vereign enjoyed. Damocles ascended the throne, and while he gazed upon the wealth and splendor which surrounded him, he perceived a sword hanging over his head by a single hair. This so terrified him, that all his imaginary felicity va- nished at once, and thus represented to him the danger and misery of royal state.

DAMON AND PYTHIAS, two illustrious friends of antiquity, who have immortalised their names by the strength and sincerity of their friendship. Damon was a Pythagorean philosopher, who, having incurred the displeasure of Dionysius, tyrant of Syracuse, was condemned to death. He asked a short respite, till he should settle some domestic business, of the utmost importance to his family, but which required his personal presence at some distance from Syracuse. Dio- nysius agreed to grant his request, upon a con- dition, which he supposed impossible to be complied with, viz. that Damon should find some person who was willing to suffer death in his stead, provided he did not return at the time appointed. Pythias, to the surprise of the tyrant, cheerfully surrendered himself as a pledge for his friend Daman : who, after settling

his business, astonished the tyrant still more, by returning punctually at the hour fixed for his execution. Dionysius was so struck with the fidelity of these two friends, that he remitted the punishment, and entreated them to permit him to share their friendship, and enjoy their confidence.

DAMP, v. a., n. s. & adj.\ Sax. and Belg. DAMP'NESS, n. s. I damp ; Teutonic,

DAMP'ISH, adj. \dampf. Sereuius

DAMP'ISHNESS, n. s. i says from Scyth.

DAMP'Y, adj. J daa, vapor. To

wet, moisten, make humid ; foggy, moist, or heavy air ; and hence to depress, deject, make dull, discourage. Dampish, dampishness, and dampy are diminutives of the same signification.

It has been used by some with great success to make their walls thick ; and to put a lay of chalk between the bricks, to take away all

dampishness.

Bacon.

A soft body dampeth the sound much more than a hard. Id.

Night j not now, as ere man fell, Wholesome and cool, and mild ; but with black air Accompanied, with damps and dreadful gloom.

Milton.

All these and more came flocking, but with looks Downcast and damp : yet such wherein appeared Obscure some glimpse of joy. Id.

Unless an age too late, or cold Climate, or years, damp my intended wing Depressed. Id.

The very loss of one pleasure is enough to damp the relish of another. L' Estrange.

Nor need they fear the dampness of the sky

Should flag their wings, and hinder them to fly ;

'Twas only water thrown on sails too dry.

Dryden.

She said no more : the trembling Trojans hear, O'erspread with a damp sweat and holy fear. Id.

This commendable resentment against me, strikes a damp upon that spirit in all ranks and corporations of men. Swift.

Even now, while thus I stand blest in thy presence, A secret damp of grief comes o'er my thoughts.

Addison.

An eternal state he knows and confesses that he has made no provision for, that he is undone for ever : a prospect enough to cast a damp over his sprighlliest hours. Rogers.

Dread of death hangs over the mere natural man, and, like the hand-writing on the wall, damps all his jollity. Atterbury.

The heat of the sun, in the hotter seasons, pene- trating the exterior

parts of the earth, excites those mineral exhalations in subterraneous caverns, which are called damps: these seldom happen but in the summer-time ; when, the hotter the weather is, the more frequent are the damps. Woodward.

The lords did dispel dampy thoughts, which the remembrance of his uncle might raise, by applying him with exercises and disports. Hayward.

Cypress and ivy, weed and wall-flower grown Matted and massed together, hillocks heaped On what were chambers, arch crushed, column strown In fragments, chok'd up vaults, and frescos steeped In subterranean damps, where the owl peeped, Deeming it midnight. Byron.

DAMPS, in natural history, from the Saxon word damp, signifying vapour, are certain noxi-

ems exhalations issuing from some parts of the earth, chiefly observed in mines and coal-pits: hough vapors of the same kind often issue from aid lavas of burning mountains, in those countries where volcanoes are common. In mines and coal- Bits they are chiefly of two kinds, called by the miners and colliers the choke and fire-damps. The choke-damp is very much of the nature of fixed air; and usually infests those places which have been formerly worked, but long neglected, and are known to the miners by the name of wastes. The choke-damp suffocates the miners suddenly, with all the appearances found in those suffocated by fixed air. Being heavy, it descends towards the lowest parts of the workings, and thus is dangerous to the miners, who can scarcely avoid breathing it. The fire-damp, which seems chiefly to be composed of inflammable air, rises to the roof of the workings, as being specifically lighter than the common atmosphere; and hence, though it will suffocate as well as the other, it seldom proves so dangerous in this way as by its in flammable property, by which it often takes fire at the candles, and explodes with extreme vio- lence. See COAL-MINES.

Of the formation of these damps we have as yet no certain theory; nor, though the experiments of aerologists are able to show the composition and manner of forming these noxious airs artificially, have they yet thrown much light on the method by which nature

prepares them on a large scale. There are two general ways in which we may suppose this to be done ; one bv the stagnation of atmospherical air in old waste places of mines and coal-pits, and its conversion into these mephitic exhalations ; the other by their original formation from the phlogistic or other materials found in the earth, without any interference of the atmo- sphere. See GAS and CARBURETTED HYDROGEN.

DAMPIER (William), a famous navigator, descended from a respectable family in Somer- setshire, and born in 1652. Losing his father when very young, he went to sea, where he soon distinguished himself. His Voyage round the World, &c. are well known, and have gone through many editions. He appears afterwards to have engaged in an expedition concerted by the mer- chants of Bristol to the South Sea, commanded by captain Woods Rogers; who sailed in August 1708, and returned in September 1711 : but no further particulars of his life or death are recorded.

DAM'SEL, n. «. Goth, damoisell ; Ital. and Span, donzella ; i. e. a female don, from Lat. dominus. f A gentlewoman, unmarried, being not a lady,' says Minsheu ; and ' quasi parvus dominus, a little lord or master.' Johnson notices its having formerly been applied to both sexes, but gives no instance of it in the mascu- line. It is now only used in verse.

He seide go ye awey for the damytel is not deed but sleepith, and thei scorneden him.

ll'idif. Matthew 9. At last she has

A damnel spyde slow-footing her before,

That on her shoulders sad a pot of water bore.

Spenser. Faerie Queene. With her train of damsel* she was gone In shady walks, the scorching heat to shun.

Dryden.

Kneeling, I my servant's smiles implore, And one mud damiel dares dispute my pov.'er.

Prior.

DAM'SON, n. s. Corruptly from damascene A small black plum. See DAMASCENE.

My wife desired some datnsmis, And made me climb with danger of my life.

Shakspcare.

DAN, n. s. From dominus, as now don in Spain, and Ital. donna, from domina. The old term of honor for men, as we now say master. ‘ I know not,’ says Dr. Johnson, ‘ that it was ever used in prose, and imagine it to have been rather of ludicrous import.’ But Spenser uses it in serious praise of Chaucer, below.

Ofd dan Geffrey, in whose gentle spright The pure well-head of poetry did dwell — He whilst he lived was the soveraigne head Of shepherds all. Spenser.

This whimpled, whining, purblind, wayward boy. This signor Junto’s giant dwarf, dan Cupid.

Shakspeare.

Dick, if thif. story pleaseth thee, Pray thank dan Pope, who told it me.

Prior’s Alma.

DAN, JT Heb. i. e. judgment, one of the twelve patriarchs, the fifth son of Jacob. Of his history nothing is recorded, except that he had but one son, named Hushim; though his poste- rity was afterwards very numerous.

DAN, OT the DANITES, one of the twelve tribes of Israel, descended from the patriarch Dan. Their number, at the emigration from Egypt, amounted to 62,700, and they increased in the wilderness. After their settlement in Canaan, a party of them, who went to take Laish, in their way robbed Micah the Ephraimite of his idol, which they continued to worship till they were carried captive by Tiglath Pileser. Samson, the heroic judge of Israel, was of this tribe; and 28,600 of them attended at David’s coronation. The Danites appear to have been early acquainted with commerce, for they had ships in the time of Jabin, king of the Canaanites. See Judges v. 17. Their territory extended west of Judah, and was terminated by Azotus and Dora on the Mediter- ranean.

DAN, in scripture geography, a city of the Danites, situated on the east side of the springs of Jordan, on the south of Mount Lebanon. It was named Laish or Leshem. Here Jeroboam established idolatry by setting up his golden calves. This city and Beersheba were the two extremities

of the kingdom of Israel. Dan was taken and pillaged by Benhadad king of Syria; notwithstanding which it made some figure after the captivity. Some authors say, that it was rebuilt by Philip the tetrarch of Galilee, in our Saviour's time, and named by him Csesarea Philippi. It lay east of Sidon and west of Damas- cus. It is thought by sojne to be the Lasha of Gen. x. 19.

DAN, in modern geography, a considerable river of the United States in North Carolina, which has been rendered navigable for boats a great way up. It unites with the Staunton in Virginia, and forms the Iloanoke.

DANAE, in antiquity, a coin somewhat more than an obolus, used to be put into the mouths of the dead, to 'pay their passage over the river Styx.

DANAE, in fabulous history, the daughter of Acrisius, king of Argos, by Eurydice. She was confined in a brazen tower by her father, who had been told by an oracle that his daughter's son would put him to death. But Jupiter, who was enamoured of Danae, introduced himself to her bed by changing himself into a shower of gold. From his embraces Danae had a son, with •whom she was exposed on the sea by her father. The wind drove the bark which carried her to the coasts of the island of Seriphus ; where she was saved by some fishermen, and carried to Poly- dectes king of the place, whose brother, Dictys, educated the child, named Perseus, and tenderly treated the mother. Polydectes fell in love with her; but, being afraid of her son, he sent him to conquer the Gorgons, pretending that he wished Medusa's head to adorn his nuptials with Hip- podamia the daughter of CEnomaus. When Per- seus had victoriously finished his expedition, he retired to Argos with Danae to the house of Acrisius, whom he inadvertently killed. Virgil says that Danae after this came to Italy, and founded the city of Ardea. Some suppose that it was Proctus, the brother of Acrisius, who intro- duced himself to Danae in the brazen tower; but, whoever was her seducer, the fable of the golden shower plainly implies that the keepers of the tower were bribed. Against such showers, indeed, towers of brass and bars of iron are no defence.

DANAIDES, in fabulous history, the fifty daughters of Danaus king of Argos. When their uncle Egyptus came from Egypt with his fifty sons, they were promised in marriage to their cousins; but before the

celebration of their nuptials, Danaus, who had been informed by an oracle that he was to be killed by the hands of one of his sons-in-law, made his daughters solemnly promise that they would destroy their husbands. They were provided with daggers, and all except Hypermnestra proved but too obedient to their father's bloody injunctions, as a proof of which they presented him with the heads of their mur- dered husbands, on the morning after their nup- tials. Hypermnestra was summoned to appear and answer for her disobedience in suffering her husband Lynceus to escape ; but the unanimous voice of the people declared her innocent, and she dedicated a temple to the goddess of Per- suasion. The forty-nine sisters were condemned, in hell, to fill with water a vessel full of holes, so that their labor was infinite and their punish- ment eternal.

DANAUS, in fabulous history, a son of Belus and Anchinoe, who, after his father's death, reigned conjointly with his brother ./Egyptus on the throue of Egypt. Some time after a differ- ence arose between the brothers, and Danaus set sail with his fifty daughters in quest of a settle- ment. He visited Rhodes, where he consecrated a statue to Minerva, and arrived safe on the coast of Peloponnesus, where he was hospitably received by Gelanor king of Argos. Gelanor had lately ascended the throne, and the first years

of his reign were marked by dissensions with his subjects. Danaus took advantage of his un- popularity, and obliged him to resign the crown. The success of Danaus led the fifty sons of Egyptus to embark for Greece. They were received with hypocritical kindness by their uncle; and soon after all murdered, except Lyn- ceus. See DANAIDES. Danaus at first perse- cuted Lynceus with unremitted fury; but he was afterwards reconciled to him, and acknow- ledged him for his son-in-law and successor after a reign of fifty years. He began his reign about A.A.C. 1586; and after death was honored with a splendid monument in Argos, which existed in the age of Pausanias.

DAN BURY, a town of the United States of America, in Connecticut, fifty-five miles N.N. E. of New York, and 116 south-west of Boston. This town was settled in 1687, and, with a great quantity of military stores, was burnt by the British on the 26th of April, 1777, but has been rebuilt since the peace. It lies thirty-three miles north-west by west of New Haven.

DANCE, v. a., v. n. & n. s.~\ Goth. & Belg.

DANCER, i dans; FT. danse ;

DANCING. V Ital- danza, from

DANC-ING-MASTEE, I the Heb. *“l, to

DANCING-SCHOOL, J leap, says Min-

sheu. To step, or move in measure ; to dandle ; a motion of one or more musically regulated : one who practises such motions is a dancer; he who teaches them a dancing-master; and a dancing-school the place where they are profes- sedly taught. Dancing is also used for any con- certed and regular motion or attendance.

But in the day of eroudis birthe, the daughtir of erodias daunside in the myddil and pleside eroude. Wiclif. Matt. xiv.

Now his elder son was in the field, and, as he came and drew nigh to the house, he heard music and dan- Luke xv.

In olde dayes of the king Artour, — The Elf quene with hire joly compagnie Danced ful ofte in many a grene mede. This was the old opinion as I rede.

Chaucer. Cant. Tales.

In pestilences, the malignity of the infecting vapour danceth the principal spirits. Bacon.

The honourablest part of talk is to give the occasion, and again to moderate and pass to somewhat else ; for then a man leads the dance. Id.

What say you to young Mr. Fenton ? He capers, he dances, he has eyes of youth, he writes verses.

Shakspeare

Thy grandsire loved thee well, Many a time he danced thee on his knee. Id.

He at Philippi kept

His sword e’en like a dancer, while I strook The lean and wrinkled Cassias. Id.

They bid us to the English dancing-schools,

And teach lavoltas high, and swift courantos ;

Saying our grace is only in our heels. Id

Musicians and dancers ! take some truce With these your pleasing labours ; for great use As much weariness as perfection brings. Donne.

Men are sooner weary to dance attendance at the gates of foreign lords, than to tarry the good leisure of their own magistrates. Raleigh's Essays.

cing.

DANCES.

A certain Egyptian king endowed a dancing-ichool for the instruction of apes of quality. L'Kitranye.

The apes were taught their apes' tricks by a dancing- matter. M.

How I loved,

Witness yc days and nights, and all ye hours, That danced away with down upon your feet, As all your business were to count iny passion.

Dry den.

It upbraids you,

To let your father's friend, for three long months, Thus dance attendance for a word of audience.

Id.

The legs of a dancing-matter, and the fingers of a musician, fall, as it were, naturally, without thought or pains, into regular and admirable motions.

Locke on Understanding.

Nature, I thought, performed too mean a part, Forming her movements to the rules of art ; And, vexed, I found that the musician's hand Had o'er the dancer'* mind too great command.

Prior.

Midnight shout, and revelry, Tipsy dance, and jollity. Byron.

Nor short nor slight the sufferance, when the

•weight

Of fiequent Sin provokes unpitying Fate ; But for brief mutiny, in frets begun, And half forgotten e'er the dance is done, Wild wanderings, more of fancy than of heart, As light the treason, light the vcnging smart.

Dr. T. Brown.

DANCES, ANCIENT. There is no account of the origin of dancing among mankind. It is found to exist among the most barbarous and uncivi- lised nations, and is too intimately connected with the mechanism of the human body to be originally derivable from art. The Greeks were the first people, however, who reduced it to a system. At Athens, it is said, that the dance of the Eumenides, or Furies, on the theatre had so expressive a character as to strike the spectators with irresistible terror; and people imagined they saw in earnest the]>ersonified deities com- missioned with the vengeance of heaven to pur- sue and punish their crimes. They had also martial dances, to keep up the warlike spirit of their youth. Plato reduces the dances of the ancients to three classes, viz.

1. Domestic Dances. Of these, some were but simply gambols, or sportive exercises, which had no character of imitation, and of which the greater part exist to this day. The others were more complex, more agreeable, figured, and were always accompanied with singing. Among the first or simple ones was the ascoliasmus; which consisted in jumping, with one foot only, on bladders filled with air or with wine, and rubbed on the outside with oil. The kybestesis was what is called in this country the Somerset. Of the second kind was that called the wine-press, of which there is a description in Longmus, and the Ionian dances.

2. Mediatorial Dances. These were used in expiations and sacrifices. Among the ancients there were no festivals nor religious assemblies but what were accompanied with songs and dances. They were looked upon to be so essen- tial in these kinds of ceremonies, that to express

the crime of such as were guilty of revealing the sacred mysteries, they employed the word kbeistae, 'to be out of the dance.' The most an- cient of these religious dances is the Bacchic; which was not only consecrated to Bacchus, but to all the deities whose festival was celebrated with a kind of enthusiasm. The most grave and majestic was the hyporchematic; it was executed to the lyre, and accompanied with the voice. — At his return from Crete, Theseus instituted a dance

at which he himself assisted, at the head of a numerous and splendid band of youth, round the altar of Apollo. The dance was composed of three parts, the strophe, the antistrophe, and the stationary. In the strophe the movements were from the right to the left; in the antistrophe from the left to the right. In the stationary they danced before the altar ; so that the station- ary did not mean absolute pause or rest, but only a more slow or grave movement. Plutarch is persuaded that in this dance there is a pro- found mystery. He thinks that by the strophe is indicated the motion of the world from east to west ; by the antistrophe the motion of the pla- nets from west to east; and, by the stationary, the stability of the earth. To this dance The- seus gave the name of geranos, or ‘ the crane ;’ because the figures which characterised it bore a resemblance to those described by cranes in their flight.

3. Military Dances, which tended to make the body robust, active, and well disposed for all the exercises of war. Of these there were two sorts ; viz. the gymnopedic, and the pyrrhic. 1. The gymnopedic dance, or the dance of children, was invented by the Spartans for an early excita- tion of courage in their children, and to lead them on insensibly to the exercise of the armed dance. This dance used to be executed in the public place. It was composed of two choirs ; the one of grown men, the other of children ; whence, being chiefly designed for the latter, it took its name. They were both in a state of nudity. The choir of the children regulated their motions by those of the men, and all danced at the same time, singing the poems of Thales, Alcman, and Dionysodotus.

The Pyrrhic, or Enoplian dance, was per- formed by young men armed cap-a-pee, who ex- ecuted, to the sound of the flute, all the proper movements either for attack or for defence. It was composed of four parts : 1. The podism or footing, which consisted in a quick shifting mo- tion of the feet, such as was necessary for over- taking a flying enemy, or for getting away from him when an overmatch : 2. The xiphism was a kind of mock fight, in which the dancers imitated all the motions of combatants ; aiming a stroke, darting a javelin, or dexterously dodging, parry- ing, or avoiding a blow or thrust. 3. The ko- mos consisted in very high leaps or vaultings, which the dancers frequently repeated, for the better using themselves occasionally to leap over a ditch, or spring over a wall. 4. The tetracomos was the last part ; this was a square figure, exe- cuted by slow and majestic movements , but it is uncertain whether it was every where executed in the same manner. Of all the Greeks, the Spartans most cultivated the Pyrrhic dance.

DANCES.

Athenaeus relates that they had a law by which they were obliged to exercise their children at it from the age of five years. This warlike people constantly retained the custom of accompanying their dances with hymns and songs. The follow- ing was sung for the dance called trichoria, said to be instituted by Lycurgus, and which had its name from its being composed of three choirs, one of children, another of young men, and the third of old. The old men opened the dance, saying, ‘ In time past we were valiant.’ The yonng men answered, ‘ We are so at present.’ ‘ We shall be still more so when our time comes,’ replied the chorus of children. The Spartans never danced but with real arms. In process of time, however, other nations came to use only weapons of wood on such occasions. Nay, it was only so late as the days of Athenaeus, who lived in the second century, that the dancers of the Pyrrhic, instead of arms, carried only flasks, thyrsuses or reeds. But, even in Aristotle’s days, they had begun to use thyrsuses instead of pikes, and lighted torches in lieu of javelins and swords. With these torches they executed a dance which was called the conflagration of the world.

Religious dances were not confined to the pagan world. They have been practised both by Jews and Christians. Among the ancient Jews, it appears to have made a part of religious worship on some occasions, as we learn from passages in the Psalms, though we do not find it enjoined as a divine precept. In the Christian churches mentioned in the New Testament, there is no account of dancing being introduced as an act of worship, though it is certain that it was used as such in after ages.

Theatrical or stage dances. The Greeks were the first who united the dance to their tragedies and comedies ; not indeed as making part of those spectacles, but merely as an accessary. The Romans copied after the Greeks ; but in the reign of Augustus they left their instructors far behind them. Two remarkable men made their appearance at that time, who invented a new species of entertainment, and carried it to a great degree of perfection. These were Pylades and Bathylus, who first introduced among the Romans what the French call the ballet d’action, wherein the performer is both actor and dancer. Pylades undertook the task of representing, with the assistance of the dance alone, strong and pathetic situations. He succeeded perhaps be- yond his own expectation, and may be called the father of that style of dancing which is known to us by the name of grave or serious

pantomine. Bathylus, an Alexandrian, and a freedman of Mecaenas, took upon himself to represent such subjects as required a certain liveliness and agility. He was handsome in his person ; and the two great scourges of Roman follies, Persius and Juvenal, speak of him as the gallant of every woman in Rome. After their death the art gradually sunk into obscurity, and became even entirely forgotten on the accession of Trajan to the empire. Thus buried with the other arts in oblivion, dancing remained uncultivated till about the fifteenth century, when ballets were revived in Italy at a magnificent entertainment

given by a n'obleman of Lombardy at Tortona on account of the marriage between Galeas duke of Milan and Isabella of Arragon. At first the women had no share in the public or theatrical dance ; but, in 1 681, we find the then dauphiness, the princess of Conti, and some other ladies of the first distinction in the court of Louis XIV. performed a ballet with the opera called Le Triomphe de 1'Amour. This union of the two sexes served to enliven and render the spectacle more pleasing and far more brilliant. It was received with so much applause, that in the May of that year, when the same opera was acted in Paris at the theatre of the Palais Royal, it was thought indispensable for the success of that kind of entertainment to introduce female dancers, and they have continued ever since to be the principal support of the opera. Thus, what was at first introduced as a mere accessary to the musical performance, became in process of time its only support ; and this circumstance ex- cited the emulation of several ballet masters.

Modern dancing is so much the creature of change and fashion, that we feel it impossible to detail its ever-varying steps in a work of science. We must refer our younger readers to the pro- fessors of the art ; observing, only, that it seems in itself a natural and most innocent mode of exercise and graceful motion ; while, on the other hand, in crowded assemblies, among the suffocating vapors of innumerable lights and breaths, the blood becomes often unnaturally propelled to the breast and head ; perspiration is dangerously checked ; the lungs are expanded, and the foundation is too often laid of that fatal disease, consumption.

DANCER (Daniel), an extraordinary miser, born near Harrow, in Middlesex, in 1716, of a family who possessed a considerable estate in that county. He succeeded to the family estate in 1736. For upwards of fifty years he led the life of a hermit, having no dealings with mankind but what the sale of his hay necessarily occasioned ; and was seldom seen, except when he was out gathering logs from the

common, or old iron, or sheep's dung under the hedges. His house was at one time robbed, to prevent which, he fastened up the door, and, by means of a ladder, went in at an upper window, drawing the ladder carefully up after him. He had a sister who lived with him for a number of years, and who left hioi a considerable increase to his store, at her death ; on which occasion, to put himself in decent mourning, he purchased a pair of second-hand worsted stockings. Even this was an article of luxury, for he commonly wore bands of hay around his legs. He died in 1794, and left his estates to lady Tempest, who had been very charitable to the poor man and his sister.

DANCETTE, in heraldry, an epithet applied to the bordure or ordinary, when very deeply in- dented, so as to make generally but three points in the breadth of the shield, as fig. 1. a fesse dancette sable, fig. 2, azure two bars indented or. Name James. Double dancette, fig. 3, is an epithet belonging peculiarly to the bend, as argent a bend double dancette, azure, name Hen- ricson.

rig. 2.

Fig. 3.

DAN'DELION, n. s. Fr. dent de lion. A plant of the syngenesia class. See LEONTODON.

For cowslips sweet let dandelions spread, For Blouzelinda, blithsome maid, is dead.

Gay.

DANDINI (Caesar), an historical painter, was born at Florence, and successively studied with Cavalier, Curradi, Passignano, and Christopher Allori, from whom he acquired a very pleasing manner of designing and coloring. He was ex- tremely correct in his drawing, and finished his pictures highly. Several noble altar-pieces in the churches of Florence are of his hand ; and one, which is in the chapel 1'Annonciata, is par- ticularly admired.

DANDINI (Peter), an eminent painter, born at Florence in 1646. He received his first instruc- tions from Valerio Spada, who excelled in small drawings with a pen. He afterwards travelled through most of the cities of Italy, studying the works of those who were most distinguished; and resided long at Venice, where he copied the paintings of Titian, Tintoretto, Paul Veronese, and Correggio. When he

returned to Florence the grand duke Cosmo III. kept him perpetually employed, in painting fresco, as well as in oil ; his subjects being taken not only from sacred and fabulous history, but from his own fancy, which frequently furnished him with whimsical carica- tures. He died in 1712.

DANDIPRAT, n. «., or DODKIN, says Min- sheu, ‘ as little among other money, as a dandi- prat or dwarf among other men.’ For according to Camden, Henry VII. stamped a small coin of this name. Dr. Johnson says, ‘ a fool.’

A very dandiprat and exceedingly deformed.

World of Wonder*, 1608.

DAN’DLE, v. a. \ Fr. dandiner ; Teut. tan-

DAN’DLER, n. s. J die ; Belg. danden, to trifle.

To fondle a child ; to lull it, or dance it lightly

up and down. Also to trifle away time ; to

delay.

And ye shall suck at the breast, Ye shall be carried at the side, And on the knees shall ye be dandled.

Isaiah Ixvi. Bishop Lowth’i Translation.

Captains do so dandle their doings, and dally in the service, as if they would not have the enemy subdued.

Spenser.

Courts are but superficial schools To dandle fools. Bacon.

Their child shall be advanced, And be received for the emperor’s heir, And let the emperor dandle him for his own.

Sfuiktpeare.

Sporting the lion ramped, and in his paw Dandled the kid. Milton.

Motion occasions sleep, as we find by the common use of rocking froward children in cradles, or dandling them in their nurses’ arms. Tiilutioo.

They have put me in a silk gown, and ». gaudy fool's cap ; I am ashamed to be dandled thus, and cannot look in the glass without blushing, to sec my- •elf turned into such a little pretty master.

Addisvn's Guardian.

DANDOLO (Henry), doge of Venice, was born in 1108, and chosen to that office in 1192. He was nearly blind at the period of his election, but neither that circumstance, nor his age, im- paired the vigor of his mind, and the events of his government became the principal causes of the greatness of his country. Dandolo induced the senate to join in the fourth crusade, but di- rected the first efforts of the armament to recover Zara, which had revolted from its allegiance to the republic. He accompanied the expedition to Constantinople, and, on the storming of the city, was the first who leaped on shore. After the various changes with respect to the imperial throne, which succeeded the second siege, Dan- dolo was nominated emperor, but in consequence of his age, and his pressing tics to Venice, the choice ultimately fell on Baldwin. But Venice, in the sharing of the imperial dominions, ob- tained a full moiety, and Damiolo was solemnly invested as prince of Romania, lie ended his extraordinary life at Constantinople, at the age of ninety-seven.

DANDOLO (Andrew), a learned doge and historian of Venice, was born about 1310. He rose first to the office of procurator of St. Mark, and then to that of doge in 1343. Making war against the Turks with considerable success, he greatly extended Venetian commerce, and opaned her trade with Egypt. Genoa becoming jeal- ous of this trade, a powerful Genoese fleet ar- rived in the gulf of Venice, and caused so much anxiety to the doge, that it brought on an illness which terminated his life, September 1354. Andrew Dandolo was a correspondent of Pe- trarch, and to him is ascribed the compilation of the sixth book of the Venetian Laws, and a Chro- nicle of Venice, written in Latin, and comprehend- ing the History of the Republic, from its com- mencement to 1342. It was first published by Muratori in his collection of original Italian Historians.

DANEGELT, an ancient annual tax of the Anglo-Saxons, first of Is. afterwards of 2s. for every hide of land through the realm, and for maintaining such a number of forces as were thought sufficient to clear the British seas ot Danish pirates, who then greatly annoyed our coasts. The danegelt was first imposed as a standing yearly tax on the whole nation, under king Ethelred, A. D. 991. King Stephen, on his

coronation day, abrogated it for ever. No church, or church-land paid the danegelt ; be- cause, as it is said in an ancient Saxon law, the people of England placed more confidence in the prayers of the church than any military de- fence they could make !

DANG'ER, v. a., & n. t. -> Goth, dunger ; DANG'EROUS, adj. I Fr. danger; from

DANG'EROUSLY, adv. V Latin, damnigcr, DANG'ERLESS,

DANG'EROUSNESS, n, s. J ing injury : or, says Minsheu, from favoc, death; but this seems far- fetched. To put to risk, hazard, or peril ; a state

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of risk or hazard. It has beer used in an obso- lete sense for custody, as in the old French dan- gler. See the first example.

In danger had he at his owen gise The yonge girles of the diocise, And knew hir counseil and was of hir rede A garland hadde he sette upon his hede.

Chaucer. Pro/, to Cant. Tales. Fareth every knight thus with his wif as ye ? Is this the lawe of king Artoure's hous ? Is every knight of his thus dangerous 1

Id. Cant. Tales. Our craft is in danger to be set at nought.

Acts*. 27.

Pompey's son stands up

For the main soldier ; whose quality going on, The sides o* th' world may danger. Sfiaksptiare.

He hath writ this to feel my affection to your ho- nour, and to no other pretence of danger. Id.

A sort of naughty persons Have practised dangerously against your state, Dealing with witches and with conjurors. Id.

' Wyser Raymundus, in his closet pent, Laughs at such daunger and adventurement ; " .Vhen halfe his lands are spent in golden smoke, And now his second hopeful glasse is broke.

Bishop Hall's Satires, iv. 3.

It is just with God te permit those, which think they stand so surely, to fall most dangerously.

Hammond on Fundamentals.

More danger now from man alone we 6nd, Than from the rocks, the billows, and the wind .

Waller.

I shall not need to mind you of judging of the danrjerousness of diseases, by the mildness of the part affected . Boyle.

Already we have conquered half the war, And the less dangerous part is left behind. Dryden.

He showed no less magnanimity in dangerless de- spising, than others in dangerous affecting, the multi- pi;, ing of kingdoms. Sidney,

It is dangerous self-flattery to give soft and smooth- ing names to sins in order to disauise. – Mason.

Wealth heaped on wealth, nor truth nor safety buys, The dangers gather as the treasures rise.

Johnson. Vanity of Human Wishes.

J)eep in wide raves below the dangerous soil Hlue sulphurs flame, imprisoned waters boil. Darwin. I'o me, A Imigh'.y, in thy mercy shining.

Life's dark *nd dangerous portals thou didst ope ; And softly en my mother's lap reclining,

Breathed through my breast the lively soul of hope.

K. White.

Thy days of health, and nights of sleep ; thy toils, By danger dignified, yet guiltless ; hopes Of cheerful old age and a quiet grave, With cross and garland over its green turf, And thy grand-children's love for epitaph ; This do I see — and then I look witliin — Byron.

DANGER, ISLES OF, three islands in the Pacific Ocean, seen by commodore Byron, in June 1 765 ; and which he supposed to be the

same with those seen by Quiros, in the beginning of the seventeenth century, and named Solomon's Islands. They were very populous, but so sur- rounded with rocks on all sides, that it was not safe to attempt to land. ' The islands themselves had a more fertile and beautiful appearance than

any we had seen before,' says this navigatoi, ' and like the rest, swarmed with people, whose habitations we saw standing in clusters all along the coast. We saw also a large vessel under sail at a little distance from the shore ; but to our unspeakable regret we were obliged to leave the place without further examination, for it was surrounded in every direction by rocks and breakers, which rendered the hazard more than equivalent to every advantage we might procure.' Long. 169° 28′ W., lat. 10° 15′ S.

DA'NGLE, v. n. ˆ Swed. dingla or dangla,

DA'NGLER, w. . seems, as Mr. Todd sug-

DA'NGLING, adj. j gests, the most probable ety mology; but Skinner derives it from Saxon dune, down, and hangan, hanging. To hang loose ; to hang on and downwards ; to follow. A dangler is a follower.

Go, bind thou up yon dangling apricocks.

Shakspeare.

He'd rather on a gibbit dangle, Than miss his dear delight to wrangle. Hmlilirus.

Codrus had but one bed ; so short, to boot, That his short wife's short legs hung dangling out.

Dryden.

But have you not with thought beheld The sword hang dangling o'er the shield ? Prior.

The presbyterians, and other fanaticks that dangle after them, are well inclined to pull down the present establishment. Swift.

A dangler is of neither sex. Ralph.

In faithful memory she records the crimes Or real, or fictitious, of the times j Laughs at the reputations she has torn, And holds them dangling at arm's length on scorn.

DANIEL; VN'y> Heb. '• e- mv judge is God ; the fourth of the greater prophets, was born in Judea, of the tribe of Judah, about the thirteenth year of the reign of Josiah, A. M. 3376. He was led captive to Babylon, with other young Hebrews, after the taking of Jeru- salem by Nebuchadnezzar, That prince gave them masters to instruct them in the language and sciences of the Chaldeans, and ordered them to be fed with the most delicate viands; but they desired the king's officers to allow them only pulse. The wisdom and conduct of Daniel pleasing Nebuchadnezzar, that monarch gave him several posts of honor. We need not par- ticularise them, or the few events of his life : they are contained in the prophecies universally attri- buted to him. It is believed that Daniel died in Chaldea, and did not take advantage of the per- mission granted by Cyrus to the Jews of return- ing to their own country. St. Epiphanius says he died at Babylon. The prophecies of Daniel concerning the coming of the Messiah, and the other great events of after times, are so clear and explicit, that, as St. Jerome tells us, Porphyry insisted that those which related to the kings of Syria and Egypt, chap, xi., must have been written after the times of Antiochus Epiphanes; whereas this prophecy was translated into Greek 100 years before his time, and was in the hands of the Egyptians, who had no particular kind- ness for the Jews or their religion. Josephus says the prophecies foretelling the successes of Alexander, chap, viii.5, xi. 3, were shown to him

by the Jews, in consequence of which they ob- tained several privileges from him. Antiq. lib. xi. c. 8. The style of Diniel is not so lofty and figurative as that of the other prophets ; but it is more clear and concise, and his narrations and descriptions are simple and natural; in short, he writes more like a historian than a prophet. Part of his book, viz. from the fourth verse of chapter ii. to the end of chapter vii. was originally written in Chaldee, all the rest of the book is in Hebrew. The first six chapters are a history of the kings of Babylon, and what befel the Jews under their government. In the last six he is altogether prophetic, foretelling not only what should hap- pen to his own church and nation, but events in which foreign princes and kingdoms were con- cerned ; and some of which appear to be even yet unfulfilled.

DANIEL (Gabriel), a celebrated Jesuit, and one of the best French

historians, was born at Rouen in 1649. lie taught polite literature, philosophy, and divinity, among the Jesuits; and was superior of their house at Paris, where he died in 1728. There are a great number of his works published in French, of which the prin- cipal are : 1. A History of France, of which he also wrote an abridgment, in 9 vols. 12mo. 2. A History of the French Militia, in 2 vols. 4to. 3. An Answer to the Provincial Letters. 4. A Voyage to the World of Descartes. 5. Letters on the Doctrines of the Theorists, and on Pro- bability. 6. New Difficulties relating to the Knowledge of Brutes : and, 7. A Theological Treatise on the Efficacy of Grace.

DANIEL (Samuel), an eminent poet and his- torian, born near Taunton in Somersetshire, in 1562, and educated at Oxford ; but, leaving that University without a degree, he applied himself to English history and poetry under the patronage of the earl of Pembroke. He was afterwards tutor to the lady Ann Clifford ; and, upon the death of Spencer, was created poet laureat to queen Elizabeth. In king James's reign he was ap- pointed gentleman extraordinary, and afterwards one of the grooms of the privy chamber to the queen consort. He wrote a History of England, several dramatic pieces, and some poems, and died in 1619.

DANK, n. s. & adj. \ Swed. dunk ; Germ.

DA'NKISH. j tunck. Skinner says, from

the kindred German word tunken. Damp, moist, humid; or inclining to that state. Milton uses clank as a substantive.

He her the maiden sleeping found. On the dank and dirty ground. Shalttpeare.

They bound me, bore me thence, And in a dark and dankish vault at home There left me. Id.

Yet oft they quit

The dank, and rising on stiff pinions tour The mid aercal sky. Milton.

Through each thicket dank or dry,

Like a black mist, low creeping, he held on

His midnight search. Id.

To wash the skins of beasts and fowls herewith, irould keep them from

growing dank in moist weather.

Grew.

Each dank steam the reeking marsh exhales, Contagious vapours, and volcanic gales. Darwin.

Along the leagucred wall and bristling bank. Of the armed river, while with straggling liirhi The stars peep through the vapours dim ami dank.

liyron.

DAN'MONII, an ancient British nation, sup- posed to have inhabited the tract of country now called Cornwall and Devonshire, bounded on the south by the British Ocean, on the west by St. George's Channel, on the north by the Severn Sea, and on the east by the country of the Du- rotrkes. Some other British tribes were also seated within these limits : as the Cossini anil Ostidamnii, which were probably particular clans of the Danmonii. Ptolemy names a few places, both on the sea-coasts and in the inland parts of their country, which were known to the Horn IDS. The most considerable of these are the famous promontories of Bolerium and Ocrinium, now the Landsend and the Lizard; and the towns of Isca Danmoniorum and Tamare, now Exeter and Saltash. After the departure of the Ko- mans kingly government was immediately re- vived amongst the Danmonii in the person (if Vortigern.

DANTE (Aligheri), a most distinguished po.t of Italy, was born at Florence in 1235, of an ancient and honor.ible family. Boccaccio, who lived in the same period, has left a very curious end entertaining treatise, on t'le life, studies, and manners of this extraordinary man ; whom he regarded as his master, and for whose memory he professed the highest veneration. lie relates that Dante, before he was ten years old, con ceived a passion for the lady whom he has immortalised in his poems. Her age was near his own ; and her name was Beatrice, the daughter of Folco Portinari, a noble citizen of Florence. The passion of Dante, however, seems to have been of the platonic kind; but on the death of his mistress, at the age of twenty-four, he fell into a deep melancholy, from which his friends endeavoured to raise him, by persuading him to marriage. He followed their advice, but un- fortunately made choice of a Xantippe. The poet, not possessing the patience of Socrates, separated from her, and never afterwards admitted her to his presence. In the early part of his life he gained some credit in a military character ; distinguishing himself by his

bravery in an action where the Florentines obtained a signal victory over the citizens of Arezzo. He became still more eminent by the acquisition of civil honors ; and at the age of thirty-five rose to be one of the chief magistrates of Florence, being elected by the suffrages of the people. Italy was at that time distracted by the contending factions of the Gibellines and the Guelphs : the latter, among whom Dante took an active part, were again divided into the Blacks and the Whites. Dante, says Gravina, exerted all his influence to unite these inferior panics; but his efforts were ineffectual, and he had the misfortune to be unjustly persecuted by those of his own faction. A powerful citizen of Florence, named Corso Donati, had taken measures to terminate these intestine broils, by introducing Charles of Va- lois, brother to Philip the Fair, king of France. Dante, with great vehemence, opposed this dis- graceful project, and obtained the banishment of

Donati and his partizans. The exiles applied to pope Boniface VIII., and by his assistance suc- ceeded in their design. Charles ofValois entered Florence in triumph, and those who had opposed his admission were banished in their turn. Dante took refuge at Signa, and afterwards at Arezzo, where many of his party were assembled. An attempt was made to surprise the city of Florence, by a small army which Dante is supposed to have attended; but the design miscarried, and our poet wandered to various parts of Italy, till he found a patron in the great Candella Scala, prince of Verona, whom he has celebrated. The high spirit of Dante was ill suited to courtly de- pendence; and he is said to have lost the favor of his Veronese patron by the rough frankness of his behaviour. From Verona he retired to France, according to Manetti ; and Boccacio affirms that he disputed in the theological schools of Paris with great reputation. The election of Henry count of Luxemburgh to the empire, in November, 1308, afforded Dante a prospect of being restored to his native city, as he attached himself to the interest of the new emperor, in whose service he is supposed to have written his Latin treatise De Monarchist, in which he asserted the rights of the empire against the encroachments of ,the papacy. In 1311 he instigated Henry to lay siege to Florence ; in which enterprise, how- ever, he did not appear in person. The emperor was repulsed by the Florentines ; and his death, in 1312, deprived Dante of all hope of re- establishment in Florence. After this he passed some years in Italy, in a state of poverty and distress, till he found an establishment atRavenna, under the protection of Guido Novello da Polenta, the lord of that city, who received this illustrious

exile with the most endearing liberality, continued to protect him through the few remaining years of his life, and extended his munificence to his ashes. Eloquence was one of the many talents which Dante eminently possessed, and on this account he was employed on fourteen different embassies. Guido sent him to negociate a peace with the Venetians, who were preparing to attack Ravenna. Manetti asserts that he was unable to procure a public audience at Venice, and returned to Ravenna by land, from his apprehensions of the Venetian fleet ; when the fatigue of his jour- ney, and the mortification of failing in the attempt to preserve his patron from the impending danger, threw him into a fever, which terminated in death on the 14th of September, 1321. He died in the palace of his friend ; and the affec- tionate Guido paid the most tender regard to his memory. He commanded the body to be adorned with ornaments, and after being carried on a bier through the streets of Ravenna, by the most illustrious citizens, to be deposited in a marble coffin. He himself pronounced the funeral oration, and expressed his design of erecting a splendid monument in honor of the deceased : a design which his subsequent misfortunes rendered him unable to accomplish. This was afterwards done by Bernard Bembo,the father of the cardinal of that name. Boccacio asserts that Dante began his Inferno, the work which has immortalised his name, and finished seven can- tos of it before his exile ; that in the plunder of

his house, on that event, the beginning of his poem was fortunately preserved, but remained for some time neglected, till its merit being ac- cidentally discovered by an intelligent poet named Dino, it was sent to the marquis Malespina, an Italian nobleman, by whom Dante was then pro- tected The marquis restored these papers to the poet, and intreated him to proceed in the work. To this incident we are probably indebted for this celebrated poem, which Dante must have continued under all the disadvantages of an un- fortunate and agitated life. It does not appear at what time he completed it ; perhaps before he quitted Verona, as he dedicated the Paradise to his Veronese patron. The very high estimation in which this production was held by his coun- trymen, appears from a singular institution in the republic of Florence; which, in 1373, as- signed a public stipend to a person appointed to read lectures on it. The critical dissertations that have been written on Dante are almost as numerous as those to which Homer has given birth ; the Italian, like the Grecian bard, having been the subject of the highest panegyric, and of the grossest invective. Voltaire has spoken of him with that precipitate vivacity which so fre- quently led him to insult the reputation of the best writers. But more temperate and candid critics have sufficiently vindicated his claims as

an original and most captivating poet. There are many valuable editions of his works, among which it will be sufficient to specify those of Conte Zapato, Venice, 1767, 3 vols. 4to. ; and Parma, Bodoni, 1796r 3 vols. folio. There is an English translation of his Comedia by the Rev. H. Boyd ; and another and much better by the Rev. H. F. Carey of Chiswick.

DANTON (George James), a celebrated French politician, who took an active part, during the French revolution, in erecting those bloody tribunals, and establishing that despotic power, to which he himself fell a victim. He was born at Arcis sur 1'Aube, in 1760; was bred to the law, and became an advocate : with regard to re- ligious opinions, he openly avowed himself an atheist ; and, in politics, he was a decided re- publican : but having differed with Robespierre he was accused of monarchical opinions, and, being condemned by the revolutionary tribunal, was guillotined with eight other deputies at Paris on the 5th of April, 1794, in the thirty-fourth year of his age.

DA1NTZIC, or DANTZIG, the capital of West Prussia, is seated on a branch of the Vistula, about five miles above its embouchure into the Baltic. This city is famous in history on several accounts, particularly as having been formerly at the head of the Hanse towns. It is large, beau- tiful, populous, and rich ; its houses being gen- erally five stories high, and many of its streets planted. It is traversed by two branches of the Vistula, and consists properly of three towns: the Vorstadt,or Fore-town ; the Aldstadt,or Old-town ; and the Rechstadt. The suburbs, called Old and New Scotland, are the best built parts of the place ; and the Scotch have considerable privi- leges here, in consequence, as they tell us, of their gallant defence of the town under one of the family of Douglas, v/hen it was besieged by the

Poles. In the time of king Charles II. there were about "> 3,000 of that nation in the neighbourhood, and Sir John Denham and Mr. Killigrew were sent to tax them by the poll, with the king of Poland's licence ; which liaving obtained, they brought home £l 0,000 sterling, besides their charges in the journey.

Dantzic has a noble harbour; and is still an eminent commercial city, although it seems to have past its meridian: which it enjoyed pro-

bably about the time that the president De Thou wrote his Historia sui Temporis, in which he speaks so highly of its commerce and grandeur. It was then a republic, claiming a small adjacent territory, about forty miles round, under the protection of the king and republic of Poland. Its magistracy and the majority of its inhabitants are Lutherans ; although other religious profes- sions are tolerated. It has twenty- six parishes, with many convents and hospitals; and contains four dock-yards for building merchantmen. It has an annual fair, called the fair of St. Dominic, which begins on the 5th of August. Accounts are kept in florins, the value of which is much less than that of Holland or Germany, being not quite equsl to 9Jd. sterling. The chief public buildings are the cathedral, the church of St. Catherine, the Jesuits' college, the town-house, the arsenal, and the court of the nobles. The inhabitants were once computed to amount to 200,000 ; but later computations, and its memo- rable connexion with the late continental wars, have reduced them to little above 40,000 or

45,000.

The road, or gulf of Dantzic consists of an arm of the sea, sheltered from north winds by a tongue of land on which stands the small town of llela. Its own shipping is numerous, but the foreign ships constantly resorting to it are more so : of these the British are the most in number, particularly when our corn laws admit of the importation of that commodity ; Poland being the greatest magazine for corn in all Europe, and Dantzic the principal port for its exportation. Besides which, Dantzic exports considerable quantities of naval stores, potash, linen, and am- ber. The value of these, and still more that of corn, is of course fluctuating, but £1,500,000 sterling is considered a fair average of the annual value of its exports. See our article CORN LAWS. It imports, from various parts of Europe, wine, oil, groceries, woollens, silk, iron, copper, lead, skins, and furs.

Dr. Busching affirms that, as early as the year 997, Dantzic was a considerable commercial city. The inhabitants have often changed their masters, and have been under the protection of the English, Dutch, French, and Prussians in succession. The city is surrounded with ram- parts which mount upwards of 100 brass cannon ; and although it could not, through its situation, stand a long siege, by the facility it possesses of inundating the neighbourhood it has offered, as in 1807, an effectual resistance to assailants. In 1734 the inhabitants discovered a remarkable attachment and fidelity towards Stanislaus, king of Poland, not only when his enemies the Rus- sians were at their gates, but even in possession of the city. This city was exempted by Frede-

rick the Great, king of Prussia, from those claims which he made on the neighbouring countries ; notwithstanding which, Frederick William II., his successor, seized its territories, under pretence of their having been formerly part of Polish Prussia, and possessed himself of the port-duties. In 1784 it was blockaded by his troops, on various pretences ; but by the interposition of the empress of Russia, and the king of Poland, they were withdrawn; and, a compromise having taken place, the city was restored to its former immunities. In 1793 the king of Prussia seized on the city itself with the remainder of the pro- vince, which he added to his dominions. Its internal government, however, was undisturbed ; and thus it remained until 1807, when the French entered it after a long siege, and held it until the peace of 1814, when it returned to Prussia. It was blockaded for a great length of time pre- viously, and ably, though not very humanely, defended by general Rapp. The German is the language in common use here. Dantzic is sixty- eight miles W.S.W. of Konigsberg, thirty south- east of Marienburg, and 235 north-east of Berlin.

DANUBE, the largest and most considerable river in Europe, rising in the Black Forest, near Zunberg, and running north-east through Suabia, by Ulm the capital of that country, then running east through Austria, it passes by Ratisbon, Pas- sau, Ens. and Vienna. It then enters Huugary, and runs south-east from Presburg to Buda, and so on to Belgrade ; after which it divides Bulga- ria from Morlachia and Moldavia, discharging itself by several channels into the Black Sea, in the province of Bessarabia. Towards the mouth it was called, by the ancients, the Ister ; and it is now said that four of the mouths are choked up with sand, and that there are only two remain- ing. It receives sixty rivers, great and small, in its course ; and runs near to, or washes the fol- lowing cities and towns : — Eschingen, Ulm (where it begins to be navigable), Donawert, Neuburg, Ingoldstadt, Passau, Lint7,Ips, Stein, Vienna, Presburg, Raab or Javarm, Comorn, Waitzen, Pest, Buda, Belgrade, &c. &c. It is so deep between Buda and Belgrade, that both the Turks and Christians have had men of war upon it ; and yet it is not navigable to the Black Sea, on account of the cataracts. The Danube was generally supposed to be the northern boun- dary of the Roman empire in Europe. It was worshipped as a deity by the Scythians. It abounds in fish, and particularly in a large kind of sturgeon.

DANUBE, CIRCLE OF THE UPPER, one of the chief divisions of the kingdom of Bavaria. It has on its frontiers the circles of the Rezat, the Regen, and the Iser; Tyrol, the lake of Con- stance, and Wirtemberg. It contains 4350 square miles, and 470,000 inhabitants, mostly Catholics. The capital is Eichstadt, and the other chief towns are,

Neuburg, Nordlingen, Dillingen, Gunzburg, Hochstadt, Pappenheim, Donauwerth, and In- goldstadt. The surface is in general hilly, diversified with forests and lakes, particularly in the direction of the Suabian Alps : and, besides the Danube, it is watered by the Iller and the Lech. In the low country, com, hemp, and flax abound,

but the majority of the peasantry rear cattle. Iron, coal, and copper, are the mineral produc- tions, and in the towns the manufacture of paper and linen is carried on.

DANUBE, CIRCLE OF THE LOWER, another cir- cle of Bavaria, consists of the greater part of Lower Bavaria Proper, and the principality of Passau. It borders on Bohemia, Upper Austria, and the circles of the Iser and Ilegen. Its area is 4335 square miles, and its inhabitants amount to 396,150. The surface is an alternate succes- sion of mountains, valleys, and plains. It is also traversed by the Inn, the Ilz, and the Iser. The climate is mild except in the north-west ; and the tracts on the south side of the Danube are so fer- tile in corn as to be accounted the granary of Bavaria : they have besides an excellent breed of horses. The chief productions are corn, flax, and hemp. In the larger towns there are manu- factures of linen and other cloths, which, together with the natural productions, produce a brisk trade in the Danube, the Iser, and the Inn. The capital is Passau.

DANVERS, a township of Massachusetts, in Essex county, adjoining Salem on the north-west, in which it was formerly comprehended by the name of Salem village. It consists of two pa- rishes, and was incorporated in 1757.

DANVILLE, a post town of the United States, in Kentucky, situated in a large fertile plain on Dick's River. It consists of about eighty houses. Thirty-five miles S.S.W. of Lexington, and 830 from Philadelphia. — Also a township in Ver- mont.

DAP, or DAPE, v. n., probably the same with DAB, which see. Dr. Johnson says it is a cor- ruption of dip.

I have taught him how to catch a chub by dapping •with a grasshopper. Walton.

DAPAT'ICAL, adj. Lat. dapiteus, sumptuous.

Bailey.

DAPHNE, in ancient geography, a small dis- trict on the lake Samachonites, in the Higher Galilee, very pleasant, and plentifully watered with springs, which feed theLesser Jordan, whence its name seems to arise, probably in imitation of that nearAntioch.

DAPHNE, in botany, spurge laurel ; a genus of the monogynia order and octandria class of plants ; natural order thirty-first, vepreculse : CAL. none: COR. quadrifid and marcescent, enclosing the stamina: FRUIT a monospermous berry. Species thirty, of which the following are the most re- markable . —

1. D. gnidium, the flax-leaved daphne, is a low deciduous shrub : native of Italy, Spain, and about Montpelier. This species seldom grows higher than three feet. The branches are very slender, and ornamented with narrow, spear-shaped, pointed leaves, much like those of the common flax. The flowers are pro-t duced in panicles at the ends of the branches : they are small, come out in June, but are rarely succeeded by seeds in England.

2. D. laureola, the spurge laurel or evergreen daphne; a low evergreen shrub, common in some parts of this kingdom, also in Switzerland and France. This shrub seldom grows more than a yard or four feet high : it sends out many

branches from the bottom, and these are covered with a smooth light-brown bark that is very thick. The leaves sit close to the branches, and are produced in such plenty, that they have the appearance, at a small distance, of clusters at the end of the branches. They are spear-shaped, shining, smooth, and thick ; their edges are entire. These leaves, when growing under the drip of trees, spread open, and exhibit their green color, pure, and untarnished : when planted singly, in exposed places, they naturally turn back with a kind of twist, and the natural green of the leaf is often alloyed with a brown tinge. This shrub is also valuable on account of the fragrance of its flowers ; it blows the beginning of January, and will continue until the middle or latter end of April before the flower falls off. They make but little show ; being small, and of a greenish yellow. They are succeeded by oval berries, which are first green, and after- wards black when ripe.

S.D.mezereum, the mezereon, or spurge olive, is a low deciduous shrub. It is a native of Germany, and has also been discovered in some woods near Andover in Hampshire. Of this elegant plant there are four varieties : 1. The white ; 2. The pale red ; 3. The crimson; and 4. The

purple flowering. They are of low growth, seldom arising to more than three or four feet in height, and, therefore, are proper even for the smallest gardens. They will be in bloom in February, nay, sometimes in January, when few trees, especially of the shrubby tribe, present their honors. Each twig has the appearance of a spike of flowers of the most consummate lustre; and, whether beheld near or at a distance, it has a most enchanting appearance, and the air is perfumed with their odors to a. considerable distance. Besides the beauty of the leaves, which come out after the flowers are fallen, and which are of a pleasant green color and an oblong figure, it will be full of red berries in June, which continue growing till the autumn. The root of the mezereon was long used in the Lisbon diet-drink, a remedy said to be good for several complaints, particu- larly nodes and other symptoms resisting the use of mercury. The composition of this diet-drink is described in the Edinburgh Physical Essays, by Dr. Donald Monro. On chewing the root it proves very pungent, and its acrimony is accu- mulated about the fauces, and is very durable. It is employed chiefly under the form of decoc- tion ; and enters the decoctum sarsaparillae com- positum of the London college; but it has also been used in powder combined with some inac- tive one, as that of liquorice root. It is often usefully combined with mercury. The bark of the root, which is the most acrimonious part, is recommended, in the Pharmacopoeia Chirurgica, to be steeped in vinegar, and applied to pro- mote the discharge of issues. Mezereon has also been of use in tumors and cutaneous eruptions. The whole plant is very corrosive ; and six of the berries, it is said, will kill a wolf. A woman gave twelve grains of the berries to her daughter who had a quartan ague ; she vomited blood, and died immediately.

4. D. villosa, the hairy-leaved daphne, a low deciduous shrub ; native of Spain and Portugal.

DAP 6

The atalks are ligneous, about two feet high, and send forth branches alternately from the sides. The leaves are spear-shaped, plane, hairy on both sides, anil grow on very short foot-stalks. The llowers have very narrow tubes, are small, and make no great show ; they come out in June, and are not succeeded by ripe seeds in England. This shrub, in some situations, re- tains its leaves all winter in such beauty as to cause it to be ranked among the low-growing evergreens ; but in others it is sometimes shat- tered with the first black winds.

‘ DAPHNE, in the Pagan mythology, daughter of the river Peneus by the goddess Terra, of whom Apollo became enamoured. This passion

had been raised by Cupid ; with whom Apollo, proud of his late conquest of the serpent Py- thon, had disputed the power of his darts. Daphne heard with horror his addresses, and endeavoured to avoid his importunity by flight. Apollo pur- sued her, and Daphne intreated the assistance of the gods, who changed her into a laurel. Apollo crowned his head with the leaves of the laurel, and ordered that that tree should be for ever sa- cred to his divinity.

DAPHNE, a daughter of Tiresias, priestess in the temple of Delphi. She was consecrated to

DAPHNEPHORIA, a festival in honor ot Apollo, celebrated every ninth year by the Boeo tians. It was then usual to adorn an olive bough with garlands of laurel and other flowers, and place on the top a brazen globe, on which were suspended smaller ones. In the middle were placed a number of crowns and a globe of in- ferior size, and the bottom was adorned with a saffron-colored garment. The globe on the top represented the sun or Apollo. That in the middle was an emblem of the moon, and the other of the stars. The crowns, which were 365 in number, represented the sun's annual revo- lution. This bough was carried in solemn pro- cession by a beautiful youth of an illustrious family, and whose parents were both living. He was called foˆvijˆopoc, daphnephorus, laurel- bearer ; and at the time executed the office ot priest of Apollo. Behind him followed a train of virgins with branches in their hands. In this order the procession advanced as far as the tem- ple of Apollo Ismenius, where supplicatory hymns were sung to the gods.

DAPHNIN, in chemistry, the bitter princi- ple of the laurel, first discovered by M. Vau- quelin. From the alcoholic infusion of this bark the resin was separated by its concentration. On diluting the tincture with water, filtering, and adding acetate of lead, a yellow daphnate of lead fell, from which sulphureted hydrogen separated the lead, and left the daphnin in small transparent crystals. They are hard, of a grayish color, a bitter taste when heated, evapo- rate in acrid acid vapors, sparingly soluble in cold, but moderately in boiling water.
VOL VII.

> DAR

DAP'IFER, n. s. Lat. and Old Fr. dupij'tr ; *CORONATION.*

In France the barons and great men gave in like manner their attendance at the king's court. Such were the dapifer, butler, chamberlain, constable,

chancellor, and others. Madox't Hiit. of the Eji-lteq.

DAPPER, adj. > Belg. dapper; Teut.

DAP'PERUNG, n. s. $ tappir ; which signify brave, valiant; and therefore Dr. Johnson thinks this word is generally applied in contempt, lint Minsheu suggests its possible derivation from dapifer (see above), and well defines it, neat ; spruce; dainty. Dapperling is a diminutive of dapper.

The dapper diltcis that I won't devise To please youths' fancy.

Spetuer. S/iepherd'g Calender.

And on the tawny sands and shelves. Trip the pert fairies and the dapper elves. Milton.

A pert dapper spark of a magpie fancied the birds would never be governed till himself should sit at the helm. L'Ettranye.

DAP'PLE, v. a. & adj., from apple, as pom- mele in the French. To variegate; to streak with different colors : that which is so streaked or variegated.

Horses that are dappled turn white ; and old squir. rels turn grisly. Bacon.

But under him a grey steed did he wield, Whose sides with dappled circles were endight.

Spenser. The gentle day Dapple» the drowsy east with spots of grey.

Shakspeare.

Come, shall we go and kill us venison ? And yet it irks me the poor dappled fools, Being native burghers of this desert city, Should, in their own confines, with forked heads, Have their round haunches gored. Id.

The lark begins his flight, From his watch-tower in the skies, Till the dappled dawn doth rise. Milton.

The dappled pink, and blushing rose, Deck my charming Chloe's hair. Prior

The gods, to curse Pamela with her prayers. Gave the gilt coach and dappled Flanders marcs.

Pupe.

DAR, DART, or DACE, n. s., a fish. See DACE.

DARABJIRB, or DARAB-GUIERD, a town oi Persia, in the province of Kerman, surrounded by groves of lemon and orange trees, yielding such abundance of fruit that the juice is ex- ported to every part of Persia. It is watered by a copious stream. A – considerable portion of the town is in ruins, but it contains a population of 10,000 or 15,000, and was formerly very cele- brated, being supposed to have been founded by the Darius Nothus of ancient historians. It was invested by Lootf AH Khan, in the year 1794, but he was compelled to relinquish the siege. Distant 150 miles north-east of Schiias. DAR AH, or DRAS, a country of Northern Af- rica, bounded on the north by Morocco, Gezula, and Tafilet, on the east and the south by the Great Desert, and on the west bySuz. It takes its name from the river Darah, or Dn.s which

passes through it, and is absorbed in the desert. The principal produce is indigo and dates. The inhabitants are Arabians and Mahommedans, and some of the districts of the country are depen- dencies of Morocco. It contains a superior breed of goats. Copper and antimony are found in the mountains, and in the southern part, at Atta and Takka, are places of rendezvous for the great caravan which passes toTimbuctoo from Morocco.

DARANTASIA, in ancient geography, a town of the Centrones, in Gallia Narbonensis, between Lemincum and Augusta Pretoria, called Forum Claudii by the Romans. It is now called Moutiers.

DARAPTI, among logicians, one of the modes of syllogisms of the third figure, whose premises are universal affirmatives, and the conclusion is a particular affirmative : thus,

DAR Every body is divisible ;

AP- Every body is a substance ;

TF. Therefore, some substance is divisible.

DARCET (John), a French physician and chemist, was born in 1725, at Douazit in Guienne. Being discarded by his father, who was a magistrate, for preferring the study of medicine to the profession of the law, he was obliged, while pursuing his studies, to teach Latin for his support, at Bourdeaux. Here he became acquainted with Montesquieu, with whom he went to Paris in 1742 ; remaining with him as a literary assistant till his death. He afterwards went with the duke de Laura- guais into Germany, and had an opportunity of critically examining the Hartz mines, in

Hanover. At the peace he applied himself to technical chemistry, and the improvement of the porce- lain manufacture, respecting which he drew up several memoirs presented to the Academy of Sciences in 1766 and 1768. He also demon- strated, about this time, the combustibility of the diamond; on which subject he addressed the academy in 1770. In 1762 he was made regent of the Faculty of Medicine at Paris; in 1771 he married the daughter of the chemist Rouelle ; and in 1774 travelled over the Pyrenees, to study the geology of those mountains. He succeeded Macquer as a member of the Academy of Sciences, and director of the manufactory of Sevres, and became afterwards inspector-general of the assay of coins, and of the gobelin manufac- tory. His valuable life was preserved during the reign of terror, by Fourcroy, who procured the obliteration of his name from Robespierre's list ; and he died in 1801, a member of the Institute, and of the conservative Senate.

DARDANELLES, two ancient and strong castles of Turkey, one of which is in Romania, and the other in Natolia, on each side of the ancient Hellespont, now the strait of Gallipoli, which opens a communication between the Archi- pelago, and the Propontis, or sea of Marmora. The mouth of the canal is four and a half miles over; and the castles which were built in 1659, to secure the Turkish fleet from the insults of the Venetians, are defended on each side by fourteen brass guns with chambers like mortars, to receive granite balls. They are twenty-two feet long, from twenty-five to twenty-eight inches

diameter in the bore, and lie on a paved terrace near the level of the water. They are called the Old Dardanelles, to distinguish them from two others built at the entrance of the strait, about ten miles to the south-west, one of which stands in like manner in Asia, and the other in Europe^ and called the New Dardanelles. The ships that come from Constantinople are searched at the castle on the side of Natolia. The passage betwixt both these pairs of castles was forced by a British fleet under admiral Duckworth, in February, 1807.

DARDANIA, in ancient geography, 1. A district of Mcesia Superior on the south, now the south part of Servia, towards the confines of Macedonia and Illyricum. 2. A small district of Troas, along the Hellespont. 3. The ancient name of Samothracia ; from Dardanus, who re- moved thither.

DARDANUS, a son of Jupiter and Electra, who, after the death of his brother Jason, left Samothrace, his native country, and passed into Asia Minor, where he married Batia, the daugh- ter of Teucer king of Teucria. After the death of his father-in-law, he reigned sixty-two years. He built the city of Dardania, and was reckoned the founder of the kingdom of Troy. He was succeeded by Erichthonius. According to some, Corybas, his nephew, accompanied him to Teucria, where he introduced the worship of Cybele. Dardanus taught his subjects to wor- ship Minerva, and he gave them two statues of the goddess, one of which is well known by tha name of Palladium. According to Virgil, Dar- danus was originally an Italian.

DARE, v. a., v. n. & n. s. ~\ Sax. dearren, DAREFUL, adj. I Belg. and Teut.

DARING, adj. & n. s. \darre,n; Lat. au- DARINGLY, adv. idere; probably

DARINGNESS, n. s. J from the Greek

Oappeiv, to adventure. To be confident; to be prepared or bold for any purpose ; to challenge ; to defy. In Shakspeare only do we find dare used as a substantive. In Beaumont and Flet- cher's Maid Tragedy, it is used for affrighting or amazing : and this seems to be the meaning in the phrase, to dare a lark or bird.

Dar ony of ghou that hath a cause aghens a nothir be demed at wicked men, and not at hooli men ?

Wicklif. 1 Cor. \i.

She was so propre, and swete, and likerous, I dare well sain if she had ben a mous And he a cat he wolde hire hente anon

Chaucer. Cant. Talet.

' Ah ! dame/ quoth he, ' thou temptest me in

vaine

To dare the thing which daily yet I rew ; And the old cause of my continued paine With like attempt to like end to renew.'

Spenser, Faerie Queene.

I dare do all that may become a man ; Who dares do more, is none. Sfiaktpeare.

Sextus Pompeius

Hath given the dare to Caesar, and commands The empire of the sea. Id.

We might have met them darcfvl, beard to beard. And beat them backward home. /ef.

D A R F U R.

6?

Shrimps are dipped up in shallow water with little round nets, not much unlike that which is used for daring larks. Careu,.

Dare to be true ! Nothing can need a lie, — The fault that needs it must grow two thereby.

Herbert.

He had many days come half seas over ; and sometimes passing further, came and lay at the mouth of the harbour, daring them to fight. Knollet.

Time ! I dare thee to discover Such a youth, and such a lover. Dryden.

As larks lie dared to shun the hobby's flight. Id. Masters of the arts of policy thought that they might even defy and dare Providence to the face.

South. The song too daring, and the theme too great.

Prior.

The last Georgick has many metaphors, but not so daring as this : for human passions may be more na- turally ascribed to a bee than to an inanimate plant.

Addison.

Some of the great principles of religion are every day openly and daringly attacked from the Dress.

A llerbury.

Your brother, fired with his smccess, Too daringly upon the foe did press. Halifax.

Grieve not, O daring prince, that noble heart.

Pope. He turned not — spoke not — sunk not — fixed his

look,

And set the anxious frame that lately shook : He gazed- — how long we gaze despite of pain, And know, but dare not own, we gaze in vain!

Byron.

But with the breath which fills Their mountain-pipe, so fill the mountaineers With the fierce native daring which instils The stirring memory of a thousand years, And Evan's, Donald's fame rings in each clansman's

ears! Id.

On that warm sod, uncrossed by wanderer's path, Some youthful blushing sweetness daret the bath ; Half bold, half trembling, her last vesture thrown, Safe from all eyes, yet shrinking from her own.

Dr. T. Brown.

DARES, a Phrygian, who lived during the Trojan war, in which he was engaged, and of which he wrote the history in Greek. This his- tory was extant in the time of ./Elian ; the Latin translation, now extant, is universally believed to be spurious, though it is attributed by some to Cornelius Nepos. This translation first made its appearance A. D. 1477, at Milan. Homer mentions Dares, Iliad, lib. v., ver. 10, & 27.

DARFUR, DARFOOR, or FUR, a large king- dom of Central Africa, between Abyssinia and Bornou. We are indebted for all our know- ledge of it to Mr. Browne, who resided here from 1793 to 1796. According to this writer it is bounded on the east by Kordofan, and the country of the Shilluks, which separates it from Sennaar and Abyssinia ; on the west by Bergoo, which divides it from Begherme and Bornou ; while the regions to the south are occupied by barbarous nations, extending to, and inhabiting the Mountains of the Moon, and the rise of the Bahr-el-Abiad. It does not seem to contain any great river or lake ; during the dry season, there- fore, all nature wears a parched and barren appearance ; but the rainy season begins in June

and continues till September. This is the sow- ing season, and the king, with his attendants, goes out into the fields, and makes, with his own hand, the first holes in the ground. Water and vegetation are now most abundant. In the south the tamarind, plane, and sycamore are found. The heglig and the nebbek, having very hard wood, are two species peculiar to Darfur. A kind

of bean and pea, used not for food but for being strung in beads, seems also indigenous here. Other plants largely produced are the mimosa nilotica, yielding a gum which is car- ried into Egypt; the water melon, the gourd, Cayenne pepper, hemp, and tobacco. But a small quantity of wheat is raised ; the principal grains are the dokn, a species of millet, and another species of larger size, called the kassob. The harvest is conducted by women and slaves, who break off the ears with their hands, and carry it away in baskets ; while the straw is left standing. The grain being threshed, is buried in the earth to preserve it. It is ground and boiled for food, and eaten either w,ith milk or the juice of a particular kind of herb, which lias a bitter and slightly acid taste.

The wild animals are the lion, hyena, leopard, wild buffalo, wolf, and jackall : herds of the jackall and hyena are said to enter the villages at night. Here are also found the rhinoceros, the elephant, the camelopardalis, the hippopotamus, and the crocodile ; and still more abundantly the invaluable camel. The horses, asses, and sheep are inferior, but goats and horned cattle are nu- merous, and their flesh very good.

Gold is plentiful both to the east and west, and very fine copper is brought from the south. The rocks consist chiefly of gray granite ; con- taining alabaster, various kinds of marble, sul- phur, and fossil salt.

The houses are built of clay, with a coating of plaster ; the roofs being flat, and formed of light beams of wood, with a clay covering. A house containing two dongas, the apartment for the stowage of property, two knournacs and two sukteias, both sleeping and sitting rooms, is considered fit for the accommodation of persons of supreme rank.

Mr. Browne did not conceive that the popu- lation could be more than 200,000 souls. Cobbe, the capital, contains about 6000; our traveller heard only of eight other considerable places, Sweini, Kourma, Cubcabia, Ril, Cours, Shoba, Gidid, and Gelle ; although a native of the country named to Dr. Seetzen more than fifty. The capital is wholly occupied by foreign merchants, from Egyot and the eastern countries of Dongola, Kordofan, and Sennaar. Other great towns abound also with Arabs and other foreigners

On the death of the monarch, the crown, which is perfectly despotic, descends to the eldest son ; or is seized by any stronger or more popular member of the royal family. The military hare, in this case, the chief influence, and are always much courted. The usual residence of the sultan is at a village near Cobbe, called El Fasher. Mr. Browne, being admitted to an audience of state, found the monarch seated on his throne, under a lofty canopy, composed

of various stuffs of Syrian and Indian fabric, hung loosely on a light frame of wood, and spread with small Turkey carpets. The minis- ters, or meleks, were seated at some distance on the right and left, and behind them was a line of guards, bearing a spear and target, with caps, in which a black ostrich feather was stuck. The ground in front was filled with spectators and petitioners, to the number of 1500. On the monarch's left hand stood a person whose em- ployment was to sound his praises, and who vociferated continually, ' See the buffaloe, the offspring of a buffaloe, a bull of bulls, the ele- phant of superior strength, the powerful sultan Abd-el-rach-man-d-rashid.' His revenue is de- rived from various sources, and often coHected by troops who march through the territory, and seize the cattle until it is paid. The king is also an extensive merchant, exporting and importing every year a large quantity of goods on his own account.

The religion of Mahomet is professed uni- versally and zealously. But the people are cheerful in their dispositions; and the females not immured, nor, unless in the case of the great, are their faces veiled. A fermented liquor called merise, the same with the bouza of the negroes, is universally indulged in, however, and by both sexes. The men sometimes sit whole days over it. The intercourse of the sexes is extremely licentious, and polygamy has no bounds. The Furians are also considered as by no means conspicuous for honor or even honesty. No property is found to be safe out of the sight of the owner.

The grand intercourse of Darfur is with Egypt, and is carried on entirely by caravans, whose mo- tions from Fur are, however, extremely uncertain, and sometimes two or even three years elapse without one. The caravan going to Egypt is much larger than the one returning, and often consists of 2000 camels. The water is carried in goat-skins or ox-hides, artificially covered to prevent evaporation, and every tenth camel is loaded with straw and beans. Among the articles sent to Egypt, the most important are slaves, taken in the negro countries of the south ; ivory, the horns, teeth, and hide of the rhi- noceros, the hippopotamus, and the camel. The imports comprise beads of all sorts, toys, glass, arms, light cloths, Barbary caps, carpets, silks, shoes, and writing-paper in large quantities. Commerce is transacted entirely by barter. There is also a considerable intercourse with Mecca, which takes the route by Suakem and Jidda, as much shorter than that by

Egypt.

DARIC, in antiquity, a famous gold coin, first struck by Darius the Mede, about A.A.C. 538; probably during his stay at Babylon. From thence the darics were dispersed over the east, and into Greece ; where they were also called stateres, and were the gold coins best known in Athens in ancient times. According to Dr. Bernard, the daric weighed two grains more than our guinea. Plutarch says, they bore on one side an archer clothed in a long robe, and crowned with a spiked crown, hold- ing a bow in his left hand, and an arrow in his right; and on the other side the effigies of Darius. There were afterwards half darics.

DARIEN, or TERRA FIRM A PROPER, once the northern division of Terra Firma, or Castile del Oro, is now a province of Colombia, and is bounded on the north by the Spanish Main, or Caribbean Sea ; on the east by Carthagena ; on the west by Panama ; and on the south by the Pacific Ocean, and the province of Choco. Darien is one of the largest provinces of Tierra Firme : It is about 2 DO miles long, and eighty broad.

The Gulf of Darien, which is the mouth of the Rio Atrato, or rather a large arm of the Atlantic, is the most important part of the northern coast, and contains several islands of considerable size. The rivers are very large, but few of them navigable, owing to the shoals, bars, and rapids, in which they abound ; most of them, however, yield grains of gold.

The province of Darien is thinly inhabited, and almost wholly by native tribes, who amount perhaps to 30,000; the unhealthiness of the climate and the impenetrable forests preventing the formation of European settlements. The valleys are so marshy, from the overflowing of the rivers, that the natives generally build their habitations in the branches of high trees.

The chief products are cotton and tobacco. The mouth of the Atrato, though wide, has many shoals ; yet it serves to export much of the internal produce of the neighbouring provinces, andisanoted smuggling station, where European goods are exchanged for the gold of Choco. A small fort which protects the gold mines of Cana is the principal station on the frontiers of Choco : its garrison is sent monthly from Panama.

Santa Cruz de Cana is the capital, and was formerly a considerable place. There were also at one time nine other towns or missions, and several hamlets; but most of them have been abandoned. In this province the Scotch at- tempted a settlement in 1699; and for this pro- ject a fund was subscribed, amounting to about £900,000 sterling. The plan, however, com- pletely failed, partly, it is said, through the jea- lousy of the English,

but chiefly from the un- healthiness of the climate. Of 1200 individuals who embarked for the colony, not above thirty survived.

DARIEN, a town of the Tjnited States, in Liber- ty county, Georgia, on the banks of the North Channel of the river Alatamaha, ten miles below Fort Barrington.

DARII, in logic, one of the modes of syllogism of the first figure, wherein the major proposition is an universal affirmative, and the minor and conclusion particular affirmatives : thus,

DA- Every thing that is moved is moved by another ;

RI- Some body is moved ;

i, Therefore, some body is moved by another.

DARIUS THE MEDE. See CYAXARES II.

DARK, v. a., n. s. & adj, DARK'EN, v. a. & n.s. DARK'ENER, n. s. DARK'ISII, adj. DARK'LING, part. DARK'LY, adv. DARK'NESS, n. s. DARK'SOME, adj. DARK'-WORKIKG, adj.

Saxon, deorck Irish dorch . By antiphrasis, from fopjcw, to see, says Minsheu. To de- prive of licrht (one of our oldest verbs, as Mr. Todd re- marks): the state

of being so deprived : not light; opaque; obscure; blind. Hence gloomy, not cheerful ; not of a showy or vivid color. To darken is to make, as well as to grow, or gradually become, dark. Darkish is dusky; that which is approaching a black or dark color. Darkling is a poetical par- ticiple to express the state of being without light. The meaning of the other derivative; seems sufficiently obvious.

And the suunc was derked and the eir, of the smoke of the pitt. Wiclif. Apoc. 9.

Then the priest shall look: and, behold, if the bright spots in the skin of their flesh be darkish white.

Bible. Lev. 14.

Who hath delivered us from the power of darkness, and translated us into the kingdom of his dear Son.

Colossians.

Ther saw I first the derke imagining Of felonie and alle the compassing ; The cruel ire, red as any glede, The pikepurse, and eke the pule drede.

Chaucer. Cant. Tale.*

Fair when that cloud of pride, which oft doth dark Her goodly light, with smiles she drives away.

Spenter.

For light she hated as the deadly bale, Ay wont in desert darkness to remaine, Where plain none might her face see, nor she see any laine. Spenser. Faerie Queene.

What may seem dark at the first, will afterwards be found more plain. Hooker.

Such was his wisdom, that his confidence did sel- dom darken his foresight, especially in things near at hand. Bacon.

You must not look to have an image in any thing lightsome ; for even a face in iron, red-hot, will not be sren, the light confounding the small differences of lightsome and darksome, which shew the figure. Id.

Come, thick night,

And pall thee in the dunnest smoke of hell, That my keen knife sec not the wound it makes ; "Nor heaven peep through the blanket of the dark, To cry, hold ! hold ! Shakspeare. Macbeth.

Fleance, his son, who keeps him company, Must embrace the fate of that dark hour.

Shakspeafe. Meantime we shall express our darker purpose.

Id.

The instruments of darkness tell us truths ; Win us with honest trifles, to betray us In deepest consequence. Id.

Darkling stands The varying shore o' the world Id.

Cloud and ever-during dark Surrounds me ! from the cheerful ways of men Cut off. Milton.

He, here with us to be, Forsook the courts of everlasting day, And chose with us a darksome house of mortal clay.

Id.

The wakeful bird

Sings darkling, and, in shadiest covert hid, Tunes her nocturnal note. Id.

The age, wherein he lived, was dark ; but he Could not want sight, who taught the world to see.

Denhatn.

The lusts and passions of men do sully and darken tin ir minds, even by a natural influence. TilloUon.

Thou wretched daughter of a dark old man, Conduct my weary steps. Dryden and Lee's CKdtput.

For well you know, and can record alone, What fame to future times conveys but darkens down.

Dryden.

Mistaken blessing, which old age they call, 'Tisalong, nasty, darksome hospital. /

All the light truth has, or can have, is from the clearness and validity of those proofs upon which it is received ; to talk of any other light iu the under- standing, is to put ourselves in the dark ; or in tae power of the prince of darkness. Locke.

Whether the darkened room to muse invite, Or whitened wall provoke the skewer to write. Pope.

All men of dark tempers, according to their degree of melancholy or enthusiasm, may tind convents fitted to their humours. Addisnn on Italy.

Foul ministers, dark-working by the force Of secret, sapping gold. Thomson.

Must helpless man, in ignorance sedate, Roll darkling down the torrent of his fats ? Must no dislike alarm, no wishes rise, No cries invoke the mercies

of the skies ?

Johnson. Vanity of Human Wishes. Their quickness is owing to their presumption and rashness, and not to any hidden irradiation that in a moment dispels all darkness from their minds.

Burke.

Dark will thy doom be, darker still Thine immortality of ill. Byron. Siege of Corinth.

So do the dark in soul expire, Or live like Scorpion girt by fire So writhes the mind Remorse hath riven, Unfit for earth, undoomed for heaven, Darkness above, despair beneath Around it flame, within it death ! Byron.

DAR'LING, adj. & n. s. Sax. deorling, the diminutive of dear. Favorite; beloved. One much beloved.

Lo my child whom I have chosen ; my derlyng in •whom k hath wel plesid to my soul, I schal putte my Spirit on hym : and he schal tclle doom to hethene men. Wiclif. Matt. 12.

Young Ferdinand they suppose is drowned, And his and my loved darling. Shakspeare.

In Thames, the ocean's darling, England's pride, The pleasing emblem of his reign does glide.

Halifax.

She became the darling of the princess.

Addison.

Have a care lest some beloved notion, or some dar- ling science, too far prevail over your mind. Watts.

And to find out our most beloved sin, let ns con- sider what are those worldly objects or amusements which give us the highest delight ; this, it is proba- ble, will lead us directly to some one of our darling iniquities. Mason.

The text, that sorts not with his darling whim, Though plain to others, is obscure to him .

Coirper. Progress of Error. Save me, oh ! save me, from the sword dividing ;

Give me my darling from the jaws of death ;

Thee will I praise, and, in thy name confiding,

Proclaim thy mercies with my latest breath.

A'. White.

DARLINGTON, a county of the United States, in Cheraws district, South Carolina, bounded on the south and south-west by Lynch's

Creek. It is thirty five miles long, and twenty- four broad.

DARLINGTON, a town of Durham, situated on a flat on the river Skerne. It stands on the great road from London to Edinburgh. It has a weekly market, and, excepting January and February , a fair once a fortnight through the year. This town carries on linen and woollen manufactures. A curious water machine for grinding optical glasses, and spinning linen yarn, has been erected here ; the invention of a native of the town. It is nineteen miles south of Durham, and 247 north by west of London.

DARMSTADT, a neat town of Germany, the capital of the grand duchy of Hesse. It was fortified by a wall in 1330. The town contains a regency, a court of appeals, a consistory, and criminal court. The prince of Hesse Darmstadt entered into the late confederation of the states of the Rhine, and, by the treaty of alliance, re- ceived the title of grand duke, and royal high- ness. The palace of the landgrave Louis VII., and the modern residence of the grand duke, with its beautiful gardens, are principal objects : to which may be added, the town church with the tombs of the landgraves; the state house; the psedagogium, or academy ; the public library ; the library of the grand duke; the cabinet of natural history (containing a number of curious fossils) ; the military school ; and the building ap- propriated to military exercises, an edifice 300 feet by 150, and capable of containing 3000 men. It is situated on a river of the same name, thirty miles north-west of Heidelberg, and contains 13,000 inhabitants.

DARN, or DEARNE, v. a. & adj. Ang.-Sax.

By many ft dearne and painful perch, Of Pericles the careful search Is

made. Shakspeare. Pericles.

He spent every day ten hours in his closet, in darn- ing bis stockings, which he performed to admiration.

Swift. Will she thy linen wash, thy hosen darn ? Gay.

DAR'NEL, Sax. derren, hurtful. A grass of the temulentum species, hurtful to corn.

But while people were asleep, his enemy came, and sowed darnel among the wheat.

Matt. xiii. 25. Campbell's Translation.

He was met even now

Crowned with rank fumiter and furrow-weeds, Darnel, and all the idle weeds that grow In our sustaining corn. Shakspeare.

No fruitful crop the sickly fields return ; But oats and darnel choak the rising corn.

Dryden.

DARNLEY'S ISLAND, a beautiful island in the Eastern seas, in Torres Strait, between New Hol- land and New Guinea. It is about fifteen miles in circumference, and varied with hills and plains covered with vegetation. The inhabitants are stout, and exceed the ordinary size. The men go perfectly naked, and the women nearly «o. They dwell in conical huts, disposed in villages, and adorned with two or three human

skulls, and several strings of hands, five or six on a string. Their arms are bows and arrows, lances, and long clubs ; and they have handsome canoes from fifty to seventy feet in length. They are apparently a treacherous race. Long. 142° 59′ 15″ E., lat. 9° 39′ 30″ S.

DARRAIN', v.a. Old Fr. desrener. By Ju- nius referred to dare. ' It seems to me,' says Dr. Johnson, 'more probably deducible from arran- ger la battaille.' To prepare, or range troops for battle ; to commence single combat.

And on the morwe, or it were day light, Ful prively two harneis hath he dight, Both suffisant and mete to darreine The bataille in the field betwix him tweine.

Chaucer. Cant. Tales.

Therewith they 'gan to hurlen greedily, Redoubted battle ready to darraine. Spenser,

Comes Warwick, backing of the duke of York ; Darrain your battle ; for they are at hand.

Shakspeare.

The town-boys parted in twain, the one side calling themselves Pompeians, the other Cxsarians ; and then darraining a kind of battle, but without arms, the Caesarians got the over hand.

Carew's Survey of Cornwall.

DART, v. a., v. n. & n. s. Fr., Teut. and Arm. dard ; Swed. dart ; Ital. dardo ; from Gr. fopv. To throw a missile, or short lance ; to project any thing offensive ; to emit ; to fly as a dart ; to let fly. As a substantive, it is the wea- pon thrown or darted.

In alle thingis take ghe scheeled of fcith in which ghe nioun quenche all the fyry dartis of the worste.

Wiclif. Effesies vi. Now, darting Parthia, art thou struck.

Shakspeare.

He wets his tusks, and turns, and dares the war ; The invader dart their javelins from afar. Dryden. Overwhelmed with darts, which from afar they*

fling, The weapons round his hollow temples ring. Id.

Pan came, and asked what magick caused my smart j Or what ill eyes malignant glances dart. Pope.

See, prompt to ill, the insiduous foe Now couched in secret bend the bow, Now to the string adjust the dart That thirsts to wound the guiltless heart.

Mevrich's Psalm.*

Glad zephyr leads the van, and waves above The barbed darts, and blazing torch of love j Reverts his smiling face, and pausing flings Soft showers of roses from aurelian wings.

Darwin

And that sarcastic levity of tongue, The stinging of a heart the world hath stung, That darts in seeming playfulness around, And makes those feel that

will not own the wound , All these seemed his. Byron.

DARTFORD, a market town of Kent, in the road from London to Canterbury. Here was a celebrated nunnery, which Henry VIII. converted into a royal palace, and which is now a gen- tleman's seat. The river Darent will admit boats to bring up goods to the town. The first paper-mill in England was erected on this river by Sir John Spilman, to whom king Charles I. granted a patent with £200 a-year to encourage the manufactory. On this river also was the first

mill forslitting iron bars to make wire. The town was the first that engaged in the rebellion of Wat Tyler and Jack Straw : the market on Saturday is well supplied with provisions. It is seven miles west of Gravesend, fifteen east by south of London.

DARTMOOR, an extensive moor and forest in Devonshire, reaching from Brent to Oak- hampton, twenty miles from south to north, and between five and fifteen miles broad from east to west. It contains about 80,000 acres, and is watered by the river Dart. Many sheep are bred here, but of a small kind, and subject to the rot. The chief riches of the inhabitants of the villages are their black cattle, which thrive well on the coarse herbage. Some thousands of acres of land have lately been cleared, and plan- tations formed ; much barren ground has also been converted into tillage, under the direction of colonel Tyrwhit, by order of his late majesty, when prince of Wales. The French prison, for- merly on this moor, is converted into an agri- cultural settlement for the poor.

DARTMOUTH, a sea-port town in Devon- shire, seated on the river Dart, near its fall into the sea : said to have been formerly called Clif- ton. It is an ancient corporation, and a borough town, sending one member to parliament. The town is large, well built, and populous ; but the streets are narrow, though well paved. The har- bour is large and safe, capable of containing 500 ships; and the inhabitants have a considerable trade to the south of Europe, and to Newfound- land. Dartmouth is esteemed a great nursery for seamen, the fishery employing nearly 3000, a certain number of which the owners are obliged by act of parliament to select from land men. It has a weekly market on Friday for corn and pro- visions, arid one almost every day for fish. It was burnt in the reign of Richard I. by the French, and again in the reign of Henry VI. They attempted it afterwards, but were repulsed, chieHy by the bravery of the women. Beside a great slaughter which was made, they took M. Castel the French general, three lords, and thirty- two knights, prisoners. It lies thirty miles S. S. W. of Exeter, and 204 west by south of London.

DARTMOUTH, a thriving sea-port town of the United States, in Bristol county, Massachusetts, situated on the west side of the Accushnet, seventy miles south of Boston. It was incorporated in

1664.

DARTMOUTH, a town of the United States, in Elbert county, Georgia, situated on the peninsula formed by the confluence of Broad and Savannah rivers, two miles from Fort James Dart- mouth.— Also a town of the United States, in Grafton county, New Hampshire, north-west of the foot of the White Mountains : thirty-three miles north-east of Haverhill, and eighty-seven north- west of Portsmouth.

DARWAR, also called Nasserabad, a town and fortress of the province of Bejapore, Hindus- tan. Although not regularly fortified, it is by nature very strong, and the ditches are good. The town is situated to the south of the fort, and is surrounded by ft wall and ditch. In the year 1685 it was taken from the king of Bejapoie by

DAS

Aurunpzebe, and, soon after t\ie decease of that monarch, fell into the hands of tliu Mahruttas, from whom it was taken byTippoo in 1784, and retained by him till the year 1791, when it was retaken by the Mahrattas, assisted by the British, after a tedious siege of twenty-nine weeks. It has been lately ceded to the British.

DARWIN (Erasmus), an English physician and poet, was born in December, 1731, at Els- ton, near Newark. After receiving the early part of his education at Chesterfield, he was sent to St. John's College, Cambridge, where he studied medicine, and took his bachelor's degree in 1755. He was elected to one of Lord Chesterfield's scholarships, worth about £16 per annum. On leaving Cambridge, he attended the lectures of Dr. Hunter in London, and afterwards completed his medical studies at Edinburgh, where he took the degree of M. D. He first settled at Notting- ham, as a physician ; but, not meeting with the practice he hoped for, he went to Litchfield, where his knowledge and acquirements were justly appreciated. In 1757 he marrk-d the daughter of Charles Howard Esq., who died in 1770, leaving him three sons. Not long after the death of his wife, Dr. Darwin commenced his laborious work, the Zoonomia, but which he de- clined publishing for above twenty-five years. He next wrote his Botanic Garden, and The Loves of the Plants. About 1780 Dr. Darwin married the widow of colonel Pole, of Radbourne- hall, near Derby, who brought him a large fortune ; and he removed, in consequence of this con- nexion, to Radbourne, with a view of settling in Derby. He continued in fhis neighbourhood till

February 1802, when he removed to Breadwall Priory, about three miles distant, a commodious retirement for his age and infirmities, and at this place he died in his seventy-first year. The literary fame of Dr. Darwin rests on the Botanic Garden, with philosophical notes, in two parts ; 1. The Economy of Vegetation; 2. The Loves of the Plants, 2 vols. 8vo. : Zoonomia, or (he Laws of Organic Life, 4 vols. 8vo. : Phytologia, or the Philosophy of Agriculture and Gardening,] vol. 4to. : works which display not only the poet, but the botanist and the philosopher; though there is frequently too much sacrificed to imagi- nation; and the author evinces a contempt for all religion, Dr. Darwin was also the author of several medical and philosophical papers in the Philosophical Transactions, a Treatise on Female Education, and a poem published since his death, entitled The Temple of Fame. He had likewise a principal share in the translation of Linnjcus's Systema Vegetabulum, published in the name of the Botanical Society of Litchfield.

DASH, v. a. v. n., n. x. & adv. Goth, and Swed. duska ; Scot, dusch. Serenius refers to the first as the etymology of our word, which Dr. Johnson considers in all its senses ' very doubtful.' Minsheu derives it from the Gr. Stura, C'HTIU, and defines it ' to bedash, dabble, bemire with dust.' This is at any rate not im- probable. It is a word variously applied. It signifies to throw; to strike; to break to pieces by collision ; to besprinkle ; to agitate ; to mingle fluids ; to strike off in haste ; to blot ; to con- found ; to strike down. As a ueuler verb, to fly

off; to rush through, so as to scatter ; to strike, as a ship upon a rock. As a noun, it expresses collision ; infusion ; a stroke made with the pen; a sudden blow, or striking appearance. Dryden uses it adverbially to express the sound of falling water.

Happy shall he be, that taketh and dasheth thy little ones against the stones. P. cxxxvii. 9.*

If you dash a stone against a stone in the bottom of the water, it makctli a sound. Bacon.

They that stand high have many blasts to shake

them , And, if they fall, they dash themselves to pieces.

Shahspeare. This tempest,

Dashing tbe garment of this peace, aboded The sudden breach on't. Id. Henry VIII.

David's throne shall then be like a tree, Spreading and overshadowing all the earth ; Or as a stone, that shall to pieces dash All monarchies besides throughout the world.

Milton. His tongue

Dropped manna, and could make the worse appear The better reason, to perplex and dash Matures! councils. Id.

If a woman once dash upon the rock of reproach, she hardly ever recruits her credit. Bp. Taylor.

Whacum, bred to dash and draw, Not wine, but more unwholesome law.

Hwlibras.

Nothing dashed the confidence of the mule like the braying of the ass, while he was dilating upon his genealogy. L'Estrange.

A man that cuts himself, and tears his own flesh, and dashes his head against the stones, docs not act so unreasonably as the wicked man. Tillotson.

At once the blushing oars and brazen prow Dash up the sandy waves, and ope the depths below.

Dryden.

Doeg, though without knowing how or why, Spurred boldly on, and dashed thro' thick and thin ; Thro' sense and nonsense, never out or in. Id.

To dash this cavil, read but the practice of Chris- tian emperors. South.

Some stronger power eludes our sickly will ; Dashes our rising hope with certain ill. Prior.

Never was dashed out, at one lucky hit,

A fool so just a copy of a wit. Pope.

To dash over this with a line, will deface the whole copy extremely, and to a degree that, I fear, may dis- please you. Id.

There is nothing which one regards so much with an eye of mirth and pity,

as innocence, when it has in it a dash of folly. Addison.

Middling his head, and prone to earth his view, With ear and chest that dash the morning dew.*

Tickel.

Torrents that from yon promontory's head Dashed furious down in desperate cascade Heard from afar amid the lonely night, That oft have led the wanderer right, Are silent at the noise. Beattie.

— Here Time's huge fingers grasp his giant mace, And daah proud Superstition from her base.

-Darwin.

I should be so,

Had I a knife even ; but it matters not — Death hath a thousand gates ; and on the marble, Even at the altar foot, whence I look down Upon destruction, shall my head be dashed, Ere thou ascend it. Byr

DASTARD, v. a., n. s. & adj. } From Sax. DAS'TARDISE, v. a. [• abar-rpiˆan, to

DAS'TARDLY, adj. & adv. J terrify. To

affright ; make faint-hearted ; a coward ; pol-

tron.

The cruelty and envy of the people, Permitted by our dastard nobles, Have suffered me by the voice of slaves to be Whooped out of Rome. Shakrpeare.

Dastard and drunkard, mean and insolent • Tongue-valiant hero, vaunter of thy might, In threats the foremost, but the last in fight.

*Dryden**

He had such things to urge against our marriage, As, now declared, would blunt my sword in battle, And dastardise my courage. Id.

Brawl and clamour is so arrant a mark of a dot- tardly wretch, that he does as good as call himself so that uses it. L' Estrange.

Bug-bear thoughts, in the minds of children, make them dastards, and afraid of the shadow of darkness ever after. Locke.

Curse on their dastard souls, they stand astonished !

Addison.

DASYPUS, the armadillo, or tatou, in zoology; a genus of quadrupeds, belonging to the order of bruta. The dasypus has neither fore-teeth nor dog-teeth ; it is covered with a hard bony shell, intersected with distinct moveable zones or belts: this shell covers the head, the neck, the back, the flanks, and extends even to the extremity of the tail ; the only parts to which it does not extend, are the throat, the breast, and the belly, which are covered with a whitish skin of a coarse grain, resembling that of a hen after the feathers are pulled off. The shell does not consist of one entire piece, like that of the tor- toise ; but is divided into separate belts, connected with each other by membranes, which enable the animal to move it, and even to roll itself up like a hedgehog. All the species of this animal are originally natives of the western continent, and are endowed with the faculty of extending and contracting their bodies, and of rolling themselves up like a ball, like the hedgehog, though not into so complete a sphere. They are very in- offensive, excepting when they get into gardens, where they devour the melons, potatoes, and other roots. They walk quickly ; but can hardly be said to run or leap, so that they seldom escape the pursuit either of men or dogs. But they dig deep holes in the earth, and seldom go very far from their subterraneous habitations; or, when at a great distance, require but a few moments to make one. When taken, they roll themselves up, and will not extend their bodies unless they are held near a fire. There is no other method of making them come out from deep holes, but by forcing in smoke or water. The female gene- rally brings forth four young ones every month ; which is the reason why the species are so nume- rous, notwithstanding they are much sought aftet

on account of the sweetness of their flesh. The Indians likewise make baskets, boxes, &c., of the shells which cover their heads. Linnams enu- merates six species of dasypus, principally dis- tinguished by the number of their moveable belts. Mr. Kerr, who prefers the arrangement of Buf- fon to that of Linnaus, enumerates ten species of this genus.

DATA, among mathematicians, a term for such things or quantities, as are given, or known, in order to find other things thereby that are un- known. Euclid uses the word data (on which he has a particular tract) for*

such spaces, lines, and angles as are given in magnitude, or to which we can assign others equal. From the use of this word in mathematics, it has been transplanted into other arts, as philosophy, medicine, &c. ; where it expresses any quantity which, for the sake of a present calculation, is taken for granted to be such, without requiring an immediate proof for its certainty ; called also the given quantity, num- ber, or power.

DATCHET, a town in Buckinghamshire, near Windsor, with a bridge over the Thames, built in the reign of queen Anne, and noted for its fre- quent horse-races. It is situated in a valley sur- rounded on every side with steep hills.

DATE, v. a. & n. s. \ Fr. date, from Ital.

DATE'LESS, adj. . $ dato ; Lat. datum. To note a particular time ; a time noted or appoint- ed ; the time and place at which a letter is writ- ten.

Of later date of wives hath he redde, That soin han slain hir husbondes in his bedde.

Chaucer. Cant. Tola. His days and times are past, And my reliance on bis fracted dates Has smit my credit. Shakspeare. Timon.

Then raise,

From the conflagrant mass, purged and refined,

New heavens, new earth, ages of endless date,

Founded in righteousness. Milton.

Could the declining of this fate, O friend,

Our date to immortality extend ? Denham.

My father's promise ties me not to time ;

And bonds without a date, they say, are void.

Dryden.

What time would spare, from steel receives its

date ; And monuments, like men, submit to fate. Pope.

The accession of Elizabeth, from which we date the golden age of our language.

Johnson. Plan of Dictionary.

DATE, is derived from the Latin datum, given, and implies the place from whence, as well as the time when. Our ancient deeds had no dates, but only the month and year, to signify that they were not made in haste, or in the space of a day, but upon longer and more mature deliberation. The king's grants began with these words, pras- sentibus et futuris, &c. ; but the grants of pri- vate persons, with omnibus praesentes literas in- specturis, &c.

DATE, n. s. | Lat. dadylus. A species

DATE-TREE, n.s. S of palm.

Hold, take these keys, and fetch morn spices, nurse, — They call for data and quinces in the pastry.

Shakspeare. E, in botany. See PHOENIX

DATE, in law. A deed is good, though it mentions no date or has a false, or even an im- possible date, as the 30th of February ; provided the real day of its being dated or given, that is, delivered, can be proved. Blackstone's Com- mentary, vol. ii. p. 304.

DATI (Carlo), professor of polite learning at Florence, his native country, and the private friend of the poet Milton. The chief work tc which Dati applied himself, was Delia Pittur Antica, of which he published an essay in 1G67. He died in 1675.*

DATISCA, in botany, a genus of the dode- candria order, and dicecia class of plants ; natu- ral order thirty-fourth, miscellanea;. Male, CAL. pentaphyllous : COR. none : the authere are ses- sile, long, and fifteen in number. Female, CAL. bidented : the STYLES three : CAP. triangular, three-horned, unilocular, pervious, polyspermous, inferior. Species two: 1. D. Cannabina, a native of Canada with a smooth stem ; 2. D. hirta, u native of Pennsylvania with a rough hairy stem.

DATISI, in logic, a mode of syllogisms in the third figure, wherein the major is a universal affirmative, and the minor and conclusion par- ticular affirmative propositions. Thus,

DA- All who serve God are kings ;

TI- Some who serve God are poor ;

si. Therefore, some who are poor are kings.

The DATIVE, in Latin and Greek grammar, is the third case, and is used to express the state or relation of a person or thing to whose advantage or disadvantage some" other thing is referred. In the English language, which has no dative, this relation is expressed by the prepositions to or for. In the Greek language, which has no abla- tive, the dative is used instead of it. See ABLA- TIVE.

DATUM, or DATUS, in ancient geography, a town of Thrace, situated between Neapolis and the river Nessus, built by a colony of Thracians, according to Eustathius ; who places it on the sea-coast, near the Strymon, in a rich and fruitful soil, famous for ship-building and mines of gold ; hence the proverb Aaroc AyaOwv, denoting prosperity and plenty. It was taken by Philip of Macedon, who changed its name to Philippi. It was afterwards famous for the de- feat of Brutus and Cassius by Augustus and Antony.

DATURA, the thorn apple, in botany, a ge- nus of the monogynia order, and pentandria class of plants ; natural order twenty-eighth, luridae : con. runnel-shaped, and plaited: CAL. tubular, angulated, and deciduous; CAPS, quadrivalved. There are seven species. D. stramonium, the common thorn-apple, rises about a yard high, with an erect, strong, round, hollow, green stalk, branching luxuriantly on every side: large, oval, irregularly angulated, dark green leaves ; and from the divisions of the branches, large white flowers singly succeeded by oval, prickly cap- sules, growing erect, commonly called thorn apples. At night the upper leaves rise up and enclose the flowers. The blossoms have some- times a tinge of purple or violet. The flowers consist of one large, funnel-shaped petal, having a long tube, and spreading pentagonal iimh, succeeded by large roundish capsules of the siio

of middling apples, closely beset with sharp spines. An ointment prepared from the leaves gives ease in external inflammations, and in the haemorroids. Cows, horses, sheep, and goats, refuse this plant.

DAVAL (Peter Esq.) F.R.S., an eminent English mathematician. He was bred a bar- rister at law ; was afterwards master in chancery ; and at last accountant general of that court. He translated the Memoirs of the Cardinal de Retz, printed in 12 mo. 1723. In the dispute con- cerning elliptical arches, when Blackfriars bridge was built, his opinion was applied

for by the committee. His answer may be seen in the London Magazine for March 1760. He died January 8th, 1763.

DAVALLIA, in botany, a genus of the cryp- togamia class, and order filices. Fructification in roundish distinct dots near the margin : IN- voLucRi'M membranaceous, from the surface half-hooded, distinct, somewhat truncate, opening towards the margin. Species nineteen.

DAVANGIRI, a town of the south of India, province of Mysore, district of Chittle- droog. It consists of 500 houses, with a small tort in the centre, and has an extensive manufac- ture of blankets. It carries on a good trade with the Carnatic and its vicinity.

DAUB, v. a.v.n.&n.s.-\ Fr. dauber; Belg.

DAUB'ER, n. s. I dabben ; Irish diob,

DAUB'ERY, n. $. V (mortar). To smear ;

DAUB'ING, n. s. i cover with something

DAUB'Y, adj. J adhesive, and gross,

as mortar. Hence, to paint coarsely and vilely ; to cover with gaudy or showy ornaments ; to flatter. As a neuter verb, to play the hypocrite. Daubery and daubing are both used in the sense of the substantive daub ; and dauby is an adjec- tive, signifying viscous, adhesive.

She took for him an ark of bulrushes, and daubed it with slime and with pitch. Exodui.

When the wall is fallen, shall it not be said unto you, Where is the daubing wherewith ye have daubed it 7 Ezekiel xiii.

Since princes will have such things, it is better they should be graced with elegancy, than daubed with cost.

liucon.

So smooth he daubed his vice with shew of virtue, He lived from all attainder of suspect. Shakspeare.

I cannot daub it further ; And yet I must. Id.

She works by charms, by spells ; and such daubry as this is beyond our element. Id.

They snatched out of his hands a lame imperfect piece, rudely daubed over with too little reflection.

Dry den.

Let him be daubed with lace, live high, and whore ; Sometimes be lousy, but be never poor. Id,

A sign-post dauber would disdain to paint The one-eyed hero on his elephant. Id.

Not in vain the' industrious kind V.'ith dauby wax and liowers the chinks have lined.

Id.

Let every one, therefore, attend the sentence of his conscience ; for, he may be sure, it will not daub nor natter. South.

Hasty daubing will but spoil the picture, and make it so unnatural as must want false light to set it oil.

The treacherous tapster, Thomas, Hangs a new angel two doors from us, As fine as daubers hands can make it. S'dft.

And did you step in to look at the grand picture in your way back? — Tis a melancholy daub! my lord ; not one principle of the pyramid in any one group !

Sterne.

If a picture is daubed with many bright and glaring colours, the vulgar admire it as an excellent piece.

Watt.*

DAUBENTON (Louis-Jean Marie), an emi- nent French anatomist and naturalist, born at Montbar in Burgundy, on the 29th of May, 1716. His father designed him for the church; but on his death, in 1736, Daubenton relinquished that pursuit for the study of physic and natural history ; and in three years after took his degree at Rheims ; after which he returned to his own country with the design of following the practice of medicine. But the celebrated Buffon, who was also a native of Montbar, having shortly before succeeded Dufay in the superintendance of the botanic garden, selected Daubeiˆton to assist him in his improvements and arrange- ments. In 1742 Buffon procured for him the place of demonstrator of the cabinet

of natural history, with a salary of only 500 francs, which was afterwards raised to 2000. The cabinet of natural history, which was of immense service, was arranged and in a great measure collected by his means. The appearance of the History of Quadrupeds, wherein he gave the dissection and description of 182 species, gained him a very high reputation, but raised the jealousy of Reaumur, who then considered himself at the head of natural history. About this time Buffon was persuaded to separate himself from Dauben- ton ; but their intimacy afterwards revived, and continued till Buffon's death. Daubenton was admitted a member of the Academy of Sciences in 1744 ; and contributed many valufvble disser- tations on natural history to its memoirs. But his service to science was not confined to his pen and the press: from 1775 he gave lectures on natural history in the college of medicine ; and in 1783 on ruial economy. In 1784 he published his Instructions to Shepherds, a work of great excellence. In 1794, when France vas ruled by a lawless rabble, it became a matter of necessity with Daubenton to make application to the section of Sans-culottes for a certificate of civism, to enable him to hold his place in the garden of plants. His request was made under the title of Shepherd Daubenton ; and it was granted to him under that name with the greatest facility. At the garden of plants the Convention appointed him professor of mineralogy ; and he gave lectures during the ephemeral existence of the Normal School. He was also the author of a Methodical View of Minerals, and a contribu- ter to both the French encyclopaedias. In 1799 he was elected a member of the conservative senate; but the first meeting he attended he fell from his seat in an apoplectic fit. Speedy as- sistance being procured, he was restored to his senses, and calmly pointed out, in different parts of his body, the progress of the paralysis, which terminated his life on the 1st of January 1800, in his eighty-third year.

DAY

DAUCUS, the carrot, in botany : a genus of the digynia order, and pentandria class of plants ; natural order forty-fifth, umbellatae : COR. a little radiated, hermaphrodite. The fruit bristly with short hairs. There are six species ; but the one which chiefly merits attention is the D. carota, or common carrot. There are several varieties, as the white, the orange, and the purple carrot ; but of these the orange is the most esteemed. Carrots are propagated by seeds, sown at dif- ferent seasons of the year, to afford a supply for the table at all times. The season for sowing for the earliest crop is soon after Christmas. The situation should be open, and in a warm sandy light soil, well dug to a good depth, that the roots may meet with no obstruction in running down, so as to make them forked. The next crop should be sown in February, and the third in July for autumn ; and lastly in the end of August, for those which are to stand the winter. These last will be fit for use in March, before any of the spring ones; but they are

seldom BO tender or well tasted. Carrots were first intro- duced into England by the Flemings, in the reign of qaieen Elizabeth.

DAVENANT (Charles), LL.D., an eminent author and civilian, eldest son of Sir William Davenant, was bora in 1656, and educated in Cambridge. He •wrote several political tracts, and some plays. He was in 1685 empowered, with the master of the revels, to inspect the plays designed for the stage, that no immoralities might be presented ; and was also inspector general of exports and imports. His Essays on Trade were reprinted in 5 vols. 8vo in 1771. He died in 1714.

DAVENAMT (John), bishop of Salisbury, the son of an eminent merchant in London, where he was born in 1570. He took his degree of A.M. in Queen's College, Cambridge, in 1587, and that of D. D. in 1609, when he was elected professor of divinity, and is chiefly known as having been sent by James I. to the synod of Dort, in 1618.

DAVENANT (Sir William), an eminent poet, born at Oxford in 1606. After some stay at the university, he entered into the service of Frances first duchess of Richmond, and afterwards of Fulke Greville, lord Brooke. Upon the death of Ben Jonson he was created poet laureat. He wrote his poem Gondibert at Paris, where he formed a design for carrying over a considerable number of artificers, especially weavers, to Virginia ; but he and his company were seized by some parliament ships, and he was carried prisoner first to the Isle of Wighj, and then to the Tower of London, where, by the mediation of Milton, he was allowed to be a prisoner at large. At this time tragedies and comedies being pro- hibited, he set up an opera, to be performed by declamation and music. This Italian opera began in Rutland-house in Charter-house yard, 1656 ; but was afterwards removed to the cock- pit in Drury-Lane, and was much frequented for many years. His Madagascar, and other poems, were printed in 1648. He died in 1668.

DAVENTRY, an incorporate town of Nor- thamptonshire, situated near the sources of the Avon and Nen, which flow into opposite seas.

It is seventy-two miles N. N.W. from London, and ten from Northampton. The manor for- merly belonged to John of Gaunt who had a castle here. The ancient priory is in ruins, but parts of it are inhabited by the poor. On a hill in the neighbourhood are some strong entrench- rrents occupied by Charles I. before the battl of Naseby. The ground formerly was used as a race course. The town is very narrow and badly paved, and the church but a poor piece of archi- tecture. The affairs of the corporation are managed by thirteen burgesses, one of whom is annually chosen bailiff, a recorder,*

town clerk, two head wardens, and twenty common council- men. The bailiff acts as justice of the peace and coroner of the inquest, and the bailiff and ex-bailiff, with the recorder, constitute a quorum of the corporation, and can attach for debts under £100, or, in criminal cases, commit the accused to the county-gaol. Daventry has a considerable manufacture of whips, and a good market for provisions on Wednesday.

DAUGHTER, n. s. a Sax. bohren; Goth.

DAUGHTERLY, udj. $ dauhtar ; Runick dotter; Germ.dohter; Dut.dochter. A female child; the wife of a son ; in the plural, the females of a country. A female taken into the relation of a child, or addressed tenderly. Any female deity or imaginary personage. Daughterly is like, or behaving with the duty of, a daughter.

Jacob went out to sec the daughters of the land.

Genet it.

Daughter, be of good comfort, thy faith Lath made thee whole. Matt. ix. 22.

A daughter hadden they betwix hem two Of twenty yere, withouten any mo, Saving a child that was of half yere age In cradle it lay and was a propre pag?.

Chaucer. Cant. Talcs.

Your wives, your daughters, Your matron:), and your maids, could not fill up The cistern of my lust. S/takspeare.

Are you at leisure, holy father, now, Or shall I come to you at evening mass ? — — My leisure serves me, pensive daughter, now Id.

Sir Thomas liked her natural and daughterly affec- tion for him. Cavendish's Life of More.

Now Aurora, daughter of the dawn, With rosy lustre purpled o'er the lawn. Pope.

Commerce, however we may please ourselves with the contrary opinion, is one of the daughters of fortune, inconstant and deceitful as her mother.

Johnson. Thoughts on Agriculture.

Is thy face like thy mother's, my fair child ! Ada ! sole daughter of my house and heart ? When last I saw thy young blue eyes they smiled, And

then we parted, — not as now we part, But with a hope. Byron.

DAVID, Tn,Heb. i.e. beloved, king of Israel, and Hebrew poet, was born at Bethlehem A.A.C. 1085, and died A.A.C. 1015, after having reigned seven years and a half in Hebron, and thirty-three in Jerusalem. Wehave acomplete and faithful portrait of this great prince and poet of the Jews in Scripture ; and while in this portrait no friend of revelation will pretend that we can exhibit a faultless character, the infidel Bayle allows hin. to have been a great and justly distm-

guished monarch and poet; and we may refer to his Historical and Critical Dictionary, for a fall and tolerably impartial disquisition on the subject.

DAVID ( ), a celebrated modern French

painter, was born about the middle of the last century, and became the pupil of Vien, an artist f considerable eminence. He was painter to the unfortunate Louis XVI. and in September, 1790, presented to the legislative body a picture, representing his entrance into the national as- sembly. He was afterwards a deputy from Paris to the national convention, where he voted for his royal masters death. With perfect con- sistency he became a member of the committee of Public Safety during the reign of terror, and closely connected himself with Robespierre. In January, 1794, he was president of the conven- tion. On the fall of Robespierre, he contrived to elude the danger for some time ; but at length, in May, 1795, he was committed to the Luxem- bourg. His professional friends, however, pro- cured his liberation ; but during the following winter he joined a new society of terrorists, as- sembled near the pantheon, and became their first president; and in 1799 attempted to re- establish the jacobin club. About this time he was made a member of the National Institute for the class of painting; and Buonaparte, in 1800, appointed him painter to the government. During the imperial domination, David enjoyed his highest reputation as a painter, and exercised considerable influence over the measures adopted by the government for the cultivation of the fine arts. On the restoration of the Bourbons he was exiled to Brussels, where he continued to em- ploy his talents till the' time of his death, which took place December the 29th, 1825. His best paintings are — The Rape of the Sabines ; The Oath of the Horatii ; The Death of Socrates ; Napoleon presenting the Imperial Eagles to his Troops ; Mars Disarmed by Venus and the Graces, a work executed at Brussels ; and The Coronation of Napoleon, exhibited in London in 1822, and said to be the largest painting ever made on canvass. David was clearly of a most cruel and sanguinary disposition in the height of his political career, and it seems to have infected at one

time the efforts of his genius. The deputy Reboul found him, in 1792, in the prison of La Force, calmly sketching the prisoners who were going to execution : ‘ What are you about,’ said Reboul, ‘I am catching the last impulses of nature in these rascals,’ replied David. He will be thought by some of our readers a characteris- tic painter of Napoleon presenting the Imperial Eagles.

DAVID I , king of Scots, succeeded his brother Alexander I., A. D. 1124, and died at Carlisle, A. D. 1153. See SCOTLAND.

DAVID II., king of Scots, succeeded his father Robert Bruce, A. D. 1320, when only seven years of age. His nonage proved disastrous to Scotland, and afforded Edward Baliol the oppor- tunity of usurping the crown, by the aid of the English.

DAVID’S (St.), an episcopal town of South Wales, in Pembrokeshire, seated in a barren soil on the river lien, not a mile from the sea. It

was once a considerable place, and had walls, which are now demolished. The cathedral is a fine structure. The see has a bishop, precentorr chancellor, treasurer, four arch-deacons, nineteen prebendaries, eight vicars choral, &c. : near the church formerly stood a college. St. Nun’s Well, near this place, is occasionally resorted to on account of its medicinal virtues. From the cape, near it, there is a prospect into Ireland. It is twenty-four miles north-west of Pembroke, and 266 west by north of London.

DAVIDSON, a county of the United States, in Mero district, in Tennessee, bounded on the north by the state of Kentucky, on the east by Sumner, and on the south by the Indian terri- tory. Its chief town, Nashville, lies on the great bend of Cumberland River.

DAVIES (Sir John), a distinguished’ states- man, and poet, born at Tisbury, in Wiltshire, in 1570, received his academical education at Queen’s College, Oxford, and removed thence to the Middle Temple to study the law ; but, after being called to the bar, was expelled from that society, for an insult which he publicly offered to the recorder of London. He now retired to Ox- ford, where he wrote his celebrated Nosce Teip- sum, a poem, and courted the patronage of queen Elizabeth by writing, under the title of Hymns of Astrea, twenty-six acrostics in her praise. In 1601 he was restored to the Temple, and in the same year was chosen member of parliament for Corfe Castle, and took a distin- guished part in the suppression of monopolies. He was sent to Ireland as solicitor-general, on the accession of James I., and became succes- sively attorney-general, and

justice of the assize; was made a sergeant of law, and knighted. In 1C07 he accompanied the chief justice of Ireland on a progress through the counties of Monaghan, Fermanagh, and Cavan, and drew up an account of the circuit. He soon after visited England, to lay before the king an account of that country, in which he seems to have exercised his judicial function with great impartiality and public spirit ; and on his return assiduously recommenced his labors. In 1612 he published A Discovery of the true Causes why Ireland has never been en- tirely subdued and brought under Obedience to the Crown of England, until the Beginning of His Majesty's happy Reign. During this year the first parliament was convoked for Ireland, formed by a general representation of Catholics and Protestants, and Sir John was chosen speaker of the house of commons. He published, in 1614, A Declaration concerning the title of Prince of Wales; and the year following his Reports of Cases adjudged in the King's Courts in Ireland. Soon after, returning to England, he went several circuits as a judge, and was elected member for Newcastle-under-Line. He was subsequently raised to the office of chief justice of England, but almost immediately cut off by a fit of apoplexy, in December, 1626. His poems were reprinted in 1773, 8vo., and form a part of various modern collections. His prose works were collected in one vol. 8vo. 1786, under the title of Historical Tracts, by Sir John Davies. This acute lawyer and politician mar- ried a daughter of lord Audley, but was inost

•unhappy in his family, his son proving an idoot, and one of his daughters of a remarkably flighty disposition. His second daughter married lord Hastings.

DAVILA (Henry Catherine), a celebrated historian, the youngest son of Antonio Davila, prand constable of Cyprus. He was born in 1576, at an ancient castle in Padua, but was brought early into France. At the age of eigh- teen he signalized himself in the military scenes of that country; and at the siege of Amiens, where he fought under Henry IV., received a wound in the knee. After peace was established in France, he withdrew into Italy, and entered into the service of the Venetians. While at Ve- nice, he wrote his admirable History of the Civil Wars of France, from the death of Henry II. in 1559, to the peace of Vervins in 1598. He con- tinued to serv.e the republic of Venice with great reputation, till he was murdered, in 1631, by a brutal Veronese, called II Turco, who entered the room of an hotel where he and his family were at supper, and, being reprimanded for his intrusion by Davila, discharged a pistol at the historian, and shot him dead in an instant. His •eldest son Antonio, a youth of eighteen, revenged ihe death of his father by killing the murderer on the spot.

DAVIS (John), a famous navigator in the sixteenth century, was born at Sandridge, near Dartmouth in Devonshire ; and distinguished himself by making three voyages to the northern parts of America, in order to find out a north- west passage to the East Indies; in which he discovered the Straits which bear his name. He afterwards performed five voyages to the East Indies; in the last of which he was slain in a desperate encounter with some Japanese, near the coast of Malacca, on the 27th of December, 1605. He wrote an account of a second voyage for the discovery of the north-west passage ; a voyage to the East Indies ; and other tracts.

DAVIS'S STRAIT, a narrow sea, lying between the north rnain of America, and the western coast of Greenland ; running north-west from Cape Farewell. Lat. 60° N. to Baffin's Bay in 80°. It extends to long. 75° W. communicating with Baffin's Bay, which lies to the north of this strait, and of the North Main, or James's Island.

DAVISON (William), a statesman of Scottish origin, who became secretary of state to queen Elizabeth. His early life is little known, but in 1575 he was employed on a mission to Brabant and Flanders; and commissioned, in a similar way, in 1579, to the states of Holland. In 1583 he was employed confidentially in Scotland ; and, acquiring considerable fame as a diplomatist, was made clerk of the council. On his re- turn from a second embassy into the Low Coun- tries, he was made secretary of state. Camden supposes that he was raised to this office in order to involve him in the mysterious transaction which now proved his ruin. When the com- mission was opened to bring Mary queen of Scots to trial, the name of secretary Davison was in- serted in it, but it does not seem that he was present when it was opened, or ever assisted at Fotheringay Castle. The unhappy princess's death being resolved upon, it only remained to decide upon the manner of it, and here Davison

differed with Walsingham, being of opinion that it should be open ; upon which the latter pre- tended sickness, which threw the business of drawing up the warrant and bringing it to tin.' queen for signature, on Davison. If Davison's apology, indeed, may be believed, he acted throughout under dictation ; but he was tried in the Star Chamber for revealing the secrets of the queen's council, fined 10,000 marks, and sen- tenced to imprisonment during her majesty' pleasure; a copy of the proceedings being sent to king James to account for the death of his mother. The fine was rigorously levied ; but he was assisted from time to time with small sums of money, and recommended to king James by the friendship of the earl of Essex. His final fortunes and time of death ate not known.*

DAVIT, in a ship, a long beam of timber, used as a crane whereby to hoist the flukes of the anchor to the top of the bow, without injuring the sides of the ship as it ascends ; an ope- ration which, by mariners, is called fishing the anchor. The anchors being siluated on both the bows, the davit may be occasionally shifted, so as to project over either side of the ship, according to the position of that an- chor on which it is employ- ed. The inner end of the davit is secured by being fixed in the fore channels outer end is hung a large which a strong rope traverses, called the fish pendent d; to the foremost end of which i; fitted a large iron hook e, and to the after end a tackle or complication of pullies /"; the former of which is called the fish-hook, and the latter the fish tackle. The anchor being previously raised to the cat head, the fish-hook is fastened upon its flukes; and the effort of the tackle being transmitted to the hook, by means of the fish-pendent, draws up that part of the anchor sufficiently high upon the bow to fasten it. There is also a davit of a smaller kind occa- sionally fixed in the long-boat, and employed to weigh the anchor therein.

DAULE, a large navigable river of Quito, in the province of Guayaquil, which, after a course of sixty miles, falls into the Guayaquil, in lat. 2° 8′ S., on the west side. Its shores are covered with estates and gardens belonging to the inha- bitants of Guayaquil, and abound in delicious fruits. It gives name to a small district.

DAU NT, v.a. ~\ Fr. domter ; Lat. domiter ;

DACNT'LESS, adj. >but perhaps more imme-

DAUNfLESSNESs.) diately derived to our lan- guage from Goth, and Swed. dana, signifying to make faint, amazed. To affright, discourage, in-timidate. A dauntless man is he who cannot readily be intimidated.

Metellius, the foule cherle, the swine That with a staf beraft his wif hire lit", For she drank wine, though I had ben his wif, Nc shuld he nat have daunted me fra drink.

Chavccr. Cant. Tula.

b, and upon th» block c, through

DAUPHIN, a title given by the court of France to the pre- sumptive heir of

the crown, on account of the province of Dau- phine", which in 1349 was given to Philip VI. on this condition, by Hubert II. dauphin of Vien- nois. He is styled the eldest son of France. His crown is a circle of gold set round with eight fleur-de-lis, closed at the top with four dol- phins, whose tails conjoin under a fleur-de-lis.

DAUPHIN, in geography, a county of Penn- sylvania, formerly contained in that of Lancas- ter. Its form is triangular; and it is surrounded by the counties of Mifflin, Cumberland, York, Berks, and Northumberland.

DAUPHINE', an extensive south-east pro- vince of France, containing the three depart- ments of

Population. Chief Towns.

Isere, 471 ,660, Grenoble.

Drome, 253,372, Valence.

Upper Alps, 124,763, Gap.

849,795.

Its entire area is about 6700 square miles, the surface being very mountainous, and the lower division intersected by a ridge of the Alps. The pasture is universally good, except where the hills are covered with forests. They contain mines of copper, iron, and lead. The principal rivers are the Isere, the Durance, and the Drome, which rise in the Alps, and terminate in the Phone. In the higher mountains it is cold and sharp, but on the banks of the Rhone the climate is warm. The valleys produce corn, flax, and olives ; and the sides of the hilli are covered with vines. The culture of silk is also prosecuted with success, particularly in Valence, Romans, Pierrelatte, and Montelimart. Cheese is a prin- cipal article of export. The ecclesiastical digni- taries are one archbishop (of Vienne), and three bishops (Grenoble, Valence, and Gap).

DAVY (sir Humphrey, bart.), one of the most distinguished chemists of the age, was born at Penzance, in Cornwall, December 17th, 1779. After having received the rudiments of a classical education, he was placed with a surgeon and apothecary, who pronounced him an ' idle and incorrigible boy.' He had, however, already distinguished himself at school, and a taste for chemistry, which he displayed in some experi- ments on the air contained in sea-weed, attracted the attention of Mr. Gilbert, afterwards presi- dent of the royal society, and of Dr. Beddoes. The latter, who had just established a pneumat- ical institution at Bristol, offered him the place of assistant in his laboratory. Here Davy dis- covered the respirabilily and

exhilarating effect of the nitrous oxide. He published the results of his experiments, under the title of Chemical and Philosophical Researches, &c., London, 1800. This work immediately obtained him the place of professor of chemistry in the royal in- stitution at the age of twenty-two. In 1803 he was chosen a member of the Royal Society. His lectures at the Royal Institution were at- tended by crowded and brilliant audiences, at- tracted by the novelty and variety of his experi-

merits, the eloquence of his manner, and toe clearness of his exposition. His discoveries with the galvanic battery, his decomposition of the earths and alkalies, and ascertaining their metallic bases, his demonstration of the simple nature of the oxymuriatic acid (to which he gave the name of chlorine), &c., obtained him an extensive reputation; and, in 1810, he re- ceived the prize of the French Institute. In 1814 he was elected a corresponding member of that body. Having been elected professor of chemistry to the board of agriculture, he de- livered lectures on agricultural chemistry during ten successive years, and, in 1813, published his valuable Elements of Agricultural Chemistry. His next discovery was of no less importance to humanity than his former researches had been valuable to science. The numerous accidents arising from fire-damp in mines led him to enter upon a series of experiments on the nature of the explosive gas, the result of which was the invention of his safety-lamp. In 1818 and 1819 he visited Italy, and made some unsuc- cessful attempts to unrol the Herculaneum ma- nuscripts. In 1820 he succeeded sir Joseph Banks, as president of the royal society. In 1824 he visited Norway for the purpose of making some scientific investigations. On this voyage he proved the efficacy of his plan for preserving the copper of ships, by covering it in part with a certain quantity of iron. At the same time the trigonometrical measurements of Denmark and Hanover were connected, under his direction, by chronometrical observations, with the measurements in England. This dis- tinguished philosopher died May 29, 1829, at Geneva, whither he had gone for the benefit of his health. Besides the works already men- tioned, the most important are Electro-Chemical Researches ; Elements of Chemical Philosophy, vol. i. 1802; Bakerian Lectures, 1807 — 1811; Researches on the Oxymuriatic Acid, 1810; on the Fire-Damp, 1816. He also contributed some valuable papers to the Philosophical Transactions, and the journals of Nicholson and Tilloch.

DAVY (William), a clergyman, who was edu- cated at Baliol College, Oxford, where he took the degree of B.D. was curate of Lustleigh, in Devonshire, and the editor, printer, and pub- lisher of a work entitled, 'A System of Divinity, in a course of Sermons on the first Institutes of Religion ; on some of the most important articles of the Christian Religion in connexion ; and on the several Virtues and Vices of Mankind ; with occasional Discourses : being a compilation froni the best sentiments of the

polite writers and emi- nent sound divines, both ancient and modern, on the same subjects, properly connected, with improvements ; particularly adapted for the use of chiefs of families and students in divinity, for churches, and for the benefit of mankind in gene- ral,' 26 vols. 8vo. 1785-1807. The singular history of this production is said to be this : — •' Mr. Davy, having completed his preliminary arrangements, issued proposals for publishing his work by sub- scription; but, being unpatronised and unknown, he had no success. Undaunted by his disap- pointment, he determined to become his own

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printer. With a press which he constructed himself, and as many worn and cast-off types (purchased from a country printing-office) as sufficed to set up two pages, he fell to work. Performing every operation with the assistance of his female domestic only, and working off a page at a time, he finished forty copies of the first 300 pages. Twenty-six copies he distri- buted among the universities, the bishops, the royal society, and the reviews, expecting to de- rive from some quarter or other that patronage and assistance to which he fancied himself en- titled. A second time disappointed, he would not abandon his project, but contracted his views, resolving in future to spare his expenses in paper. He had reserved only fourteen copies, ana to that number he limited the impression of his entire work. After years of unremitting toil, he saw it completed in 26 volumes. Disdaining to get assistance, for which he could ill afford to pay, he put the books in boards with his own hands, and then took a journey to London for the express purpose of depositing a copy in each of the principal public libraries of the me- tropolis.' Quarterly Review.

DAW, n. t. Supposed by Skinner so named from its note; by Junius to be corrupted from dawl, the Germ, lul, and dot in the Bavarian dialect, having the same signification. The name of a bird.

DAWES (Richard), a learned critic of the last century, was born in 1708, in Leicestershire. He was educated at Market Bosworth, and ad- mitted a sizer of Emanuel College, Cambridge, of which he became a fellow in 1731, and in 1733 took the degree of M.A. He distinguished himself by his violent asperity towards Bentley, and in 1736 published a proposal for printing by subscription a translation into Greek verse of Milton s Paradise Lost; but the plan did not proceed. In 1738 he was appointed master of the free grammar-school atNewcastle-upon-Tyne. In 1745 he published his Miscellanea Critica, intended as a specimen of an intended emenda- tory edition of all the Attic poets. But neither was this design ever completed; the Miscellanea, however, gained the author great reputation, and a second edition of it, with additions, was published in 1781, by Dr. Burgess, bishop

of Salisbury. He resigned his schools in 1749, and retired to Heworth, where he died in 1766.

DAWK, v. a. & n. s. Scot. dalk. To mark with an incision. A word among workmen for a hollow, rupture, or incision, in their stuff.

*DAWN, v. n. & n. *.) The past partici-*

*DAWNINO, n. *. $ pie, according to Mr. Tooke (Diversions of Purley, v. ii.), of Anglo- Saxon, ˆaˆian, to grow light. To becoma day ; to grow luminous. Hence to glimmer ; to ap- pear obscurely ; to commence. The dawn, or dawning is used for the time between the first appearance of the sun's light and sun-rise.*

As it began to dawn towards the first day of the week, came Mary Magdalene to see the sepulchre.

Matthew.

All night I slept, oblivious of my pain ; Aurora dawned, and Phoebus shinod in vain. Pope,

These tender circumstances diffuse a dawn of sere- nit Dvcr the soul. Id.

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In such an enterprise to die is lather The daumof an eternal day, than death. Jlyron,

DAX, an old town of trance, in Gascony, situated on a plain on the left bank of the Adour, a bridge across which unites it to the suburb, Sablar. It has a wall flanked with towers, and a castle. The place has been long celebrated for its mineral waters. In the middle of the town is a large and deep spring which throws out warm water in large quantities. The sur- rounding country is flat and sandy, but produc- tive. To the north-west is an immense forest. Population 4400. It is twenty-five miles north- east of Bayonne, and eighty-five south by west of Bourdeaux.

DAY, n. s. "1 Ang.-Sax. 'DJES; Goth. TO-DAY, adv. Swed. and Belg. dag ; Tent. DAU.\,adj.&tadv tag ; Icel. dagur ; Lat. dies ; DAY-BED, n. s. all probably from Gr. Sat], DAY-BOOK, light. Minsheu says from

DAY-BIIEAK Heb. HK1, to fly ; or from

DAY-DREAM, the Belg. ducht, i. e. de acht DAY-LABOR, (of aught, or some value),

DAY-LABORER, W Belg. nacht, night, is DAY-LIGHT, from nic acht, no value.

DAY-LILY, The last conjecture is cu-

DAYSMAN, rious, and the coincidence

DAY-SPRING, remarkable. We leave the DAY-STAR, decision of these conflict-

DAY-TIME, jng etymologies with the

DAY-WOMAN learned reader. The time DAY-WORK. j between sun-rise and sun- set ; from noon to noon ; from one evening to ano- ther; or from midnight to midnight ; or between any two points marking an artificial division of time of this kind ; light, sunshine ; any specified or appointed time; particularly a time appointed to give judgment, and therefore that judgment given; the period of human life; any remark- able period ; time in general. To-day appears simply to signify on this day. The meaning o the compounds is obvious, except perhaps tha of daysman, which signifies an umpire or judge" Dr. Johnson says , ' a surety.' But the instances from Job ix. and Spenser seem to confirm the former meaning, which is what Ainsworth gives. Wiclif clearly uses it for ' judgment,' in 1 Cor. iv.

And to roe it is for the leeste thing that I be deemed of ghou or of mannys dai, but neither I demc mysilf. Wiclif. 1 Cor. iv.

I worche a werk in ghoure daies, a werk that ghe schulen not bileeue if ony man schal telle it ghou.

Id.

And God called the light day, and the darkness he called night. And the evening and the morning were the first day. Bible. Gen. i. 5.

For he is not a man, as I am, that I should an- swer him, and we should come together in judgment. Neither is there any daysman betwixt us, that might lay his hand upon upon us both. Id. Job. ix. 32, 33.

To-day, if ye will hear his voice, harden not your hearts. Ptalm xcv. 7.

Upon a day he got him more moncie Than that the persone gat in monethes twice • And thus with fained flattering and gapes, He made the persone and the people his apes.

Chaucer. Prul. to Cant. Tola.

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After hitn reigned Gutheiine his heir, The justest man and truest in his day.*

Spenser. Faerie Queene. By this the drooping daylight 'gan to fade, And yield his room to sad succeeding night. Id.

For what art thou,

That makest thyself his daysman, to prolong The vengeance prest ? Id.

Bavaria hath been taught, that merit and service doth oblige the Spaniard but from day to day.

Bacon.

In the daytime Fame sittteth in a watch-tower, and flieth most by night ; she minglcth things done with things not done, and is a terror to great cities. Id.

How many hours bring about the day, How many days will finish up the year.

Shakspeare.

Much are we bound to heaven In daily thanks, that gave us such a prince. Id.

The noble Thanes do bravely in the war ; The day almost itself professes yours, And little is to do. Id. Macbeth.

Calling my officers about me, in my branched velvet gown ; having come down from a daybcd, where I have left Olivia sleeping.

Id. Twelfth Night. Thou shalt buy this dear, If ever I thy face by daylight see. Now go thy way. Id.

I meant to make her fair, and free, and wise, Of greatest blood, and yet more good than great :

I meant the daystdr should not brighter rise, Nor lend like influence from his lucent seat.

Ben Jonson.

True labour in the vineyard of thy lord, Ere prime thou hast the' imposed daywork done.

Fairfax. Or objects new

Casual discourse draws on, which intermits Our day's work. Milton.

Doth God exact daylabour, light denied, I fondly ask ? Id.

In one night, ere glimpse of morn, His shadowy nail hath threshed the corn That ten daylabourers could not end. Id.

The breath of heaven, fresh-blowing, pure and

sweet, With day spring born, here leave me to respire. Id.

Sunk though he be beneath the wat'ry floor ; So sinks the day-star in the ocean bed, And yet anon repairs his drooping head. Id.

I saw you every day, and all the day ; And every day was still but as the first : So eager was I still to see you more. Dryden. Would you the' advantage of the fight delay, If, striking first, you were to win the day ? Id.

Or if my debtors do not keep their day, Deny their hands, and then refuse to pay, I must with patience all the terms attend. Id.

I watched the early glories of her eyes, As men for daybreak watch the Eastern skies. Id. Daylabour was but an hard and a dry kind of live- lihood to a man that could get an estate with two or three strokes of his pen. South.

We have, at this time of day, better and more certain means of information than they had.

Woodward.

Yet are we able only to survey Dawniags of beams, and promises of day.

Prior.

Cease, man of woman born ! to hope relief From daily trouble, and continued grief. Id.

I think, in these days, one honest man is obliged to acquaint another who are his friends. Pope.

If bodies be illuminated by the ordinary prisma- tick colours, they will appear neither of their own daylight colours, nor of the colour of the light cast on them, but of some middle colour between both.

Newton's Optic.hf.

Of night impatient, we demand the day • The day arrives, then for the night we pray. The night and day successive come and go, Our lasting pains no interruption know.

Blackmore.

My ants never brought out their corn but in the night when the moon did shine, and kept it under- ground in the daytime. A ddison.

Tb •• daily labours of the bee Awake my soul to industry ; Who can observe the careful ant And not provide for future want ? Gay.

The past is all by death possest, And frugal fate, that guards the rest,

By giving, bids us live to-day. Fenton. Are these the questions that raise a flame in the minds of men at this day? If ever the church and the constitution of England should fall in these islands (and they will fall together), it is not presbyterian or popish hierarchy that will rise upon their ruins.

Burke.

Thus Genius rose and set at ordered times. And shot a day-spriiig into distant climes, Ennobling every region that he chose ; He sunk in Greece, in Italy he rose.

Cowper's Table Talk. Parting day

Dies like the dolphin, whom each pang imbues With a new colour as it gasps away, The last still loveliest, till — 'tis gone— and all is gray.

Byron.

DAY, CIVIL. See CHRONOLOGY.

DAY, NATURAL. See CHRONOLOGY.

DAY, SIDEREAL; DAY, SOLAR. See ASTRO- NOMY.

DAYS OF GRACE, in commerce, are a cus- tomary number of days allowed for the payment of a bill of exchange, 8cc., after the same br-

comes due. Three days of grace are allowed in Britain; ten in France andDantzic; eight at Naples ; six at Venice, Amsterdam, Rotterdam, and Antwerp ; four at Francfort ; five in Leipsic ; twelve at Hamburg, &c. In Britain the days of grace are given and taken as a matter of course, the bill being only paid on the last day : but in other countries, where the time is much longer, it would be thought dishonorable for a merchant to take advantage of it ; bills are therefore paid on the very day they fall due.

DAYS OF GRACE, in law, are those granted by the court at the prayer of the defendant or plaintiff.

DAY (Thomas), a benevolent English writer, born in the metropolis, in 1748. While an in- fant, he was left heir' to a fortune of £1200 a year by the death of his father, who was a colˆ lector of the customs. He received the first part of his education at the Charter-house, and was afterwards sent to Corpus Christi College, Oxford. Leaving Oxford he entered of the Middle Temple, and, having been disappointed iu an

?ariy affection, took two foundling girls, with the intention of modelling their minds and manners. The former he placed with a milliner, but the latter he took under his own instruction, till, finding his scheme fruitless, he gave it up, and sent her to a school, lie is principally known as the author of the History of Saudford and Merton, a tale for youth, bearing no small similarity to Rousseau's Emilius. Mr. Day's opinions were more theoretical and sentimental than adapted to the world as he found it : an instance of which occasioned his death. Having a foal which he wished to ride, he would not suffer it to be previously broke in, by those usually employed in the task, but, undertaking the management of it himself, was thrown from its back, and received a severe kick on the head, of which he died, September 8th, 1789.

DAY-COAL, in natural history, a name given by the miners of England, and the people who live in coal countries, to that seam or stratum of the coal which lies uppermost in the earth. See COAL.

DAZE, v. a. '\ Sax. 'Daejian, to shine.

DAZZLE, v. a. & v. n. > Mass.-Goth. dagsian ;

DAZZLEMENT, n. s. j Goth, and Swed. dasa. To overpower with light, so

as to confuse or rtupify : for both daze and dazzle may be regarded ns the same active verb. Hence to dazzle is also to strike with surprise ; to astonish ; and ‘ a dazed person,’ in the North of England, is one of a vacant, staring countenance. As a neuter verb, to dazzle, is to be overpowered with light; to become blind.

Proud of such glory and advancement vayne, While flashing beaincs do daze his feeble eyen, He leaves the welkin way most beaten playne ; And, wrapt with whirling wheeles, inflames the skyers With fire not made to burne, but fayrely for to shyne.

Spenser. Faerie Queene. The crystall glass, which lent mine eyes their light,

Doth now waxe dym, and daxeled all with dread ; My senses all, wyll now forsake me quite,

And hope of health abandoneth my bead.

Gatcoigne.

Fears tise to be represented in such an imaginary fashion, as they rather daxxle men’s eyes than open them. Bacon.

An overlight maketh the eyes daxsle, insomuch as perpetual looking against the sun would cause blind- ness. 74.

Daxxle mine eyes ? or do I see three suns ?

Shaktpeare. Mysteries Ar» like the sun, dazxling, yet plain to all eyes.*

Donne. Satires.

They smote the glistering armies, as they stand, With quivering beams, which dazed the wond’ring eye.

Fairfax.

Those heavenly shapes Will daxxle now this earthly with their blaze Insufferably bright. Milton.

Poor human kind, all daxed in open day, Err after Miss, and blindly miss their way.

Dryden.

Ah, friend ! to daxxle let the vain design ; To raise the thought, or touch the heart, be thine.

Pope.

It is with books as with women, where a certain plainness of manner and of dress, is more engaging VOL. VII.

than that glare of paint and airs and apparel, which may daxzle the eye, but reaches not the affections.

Hume

We gaze and turn away, and know not where, Dazzled and drunk with beauty, till the heart Reels with its fulness ; there — for ever there — Chained to the onariot of triumphal Art, We btand as captives, and wou'J not depart.

Jlyrun.

DAZE, in natural history, a name given by our miners to a glittering sort of stone, which oftens occurs in their works; and, as it is an un- profitable substance, is one of those things they call weeds. The word is applied by them to every stone that is hard and glittering; and there- fore comprehends the whole genus of the telangia, or stony nodules, which have the flakes of talc in their substance.

DEACON, n. s. ~\ Gr. ftaicovoc. A minis-

DEACONESS, f ter or official servant of the

DEACONRY, £ church, from cia, empha-

DEACONSHIP. J tic ; and KOVUO, to serve. See the following article. Deacon ry is both the office of a deacon, and a sort of hospital or re- ligious house at Rome.

Also (it bihoueth) dekenes to be chaast, not double tunged. Wiclif. 1 Tymo. iii.

Likewise roust the deacons be grave, &c.

Bible. 1 Tim. iii.

When a contemptuous bold deacon had abused his bishop, he complained to S. Cyprian, who was an arch-bishop, and indeed S. Cyprian tells him he did honour him in the business that he would complain to tim. Bp. Taylor.

Timothy was to prefer those who formerly had been employed by the church as deaconesses, and had dis- charged that office with faithfulness

and propriety. Mucknight on 1 Tim. v. 10.

There were fourteen of these deaconries or hospitals, at Rome, which wore reserved to the cardinals. Du Cange gives in their names. C/tambers.

DEACON, in civil polity, the prases of a cor- poration, in the royal boroughs of Scotland.

DEACON, in ecclesiastical polity, ciaeoj/oc, a servant, one whose business is to baptize, read in the church, and assist at the celebrations of the eucharist. Seven deacons were instituted by the apostles, Acts vi., which number was retained a long time in several churches. Their office was to serve in the Agapce, and to distribute the bread and wine to the communicants. Another part of their office was to be a sort of directors to the people in the exercise of their public devotions in the church ; for which purpose they used cer- tain forms of words, to give notice when each part of the service began. Whence they are sometimes called eirokerukes, or holy criers of the church. Deacons had, by license from the bishop, a power to preach, to reconcile penitents, to grant absolution, and to represent their bishops in general councils. Their office out of the church was to take care of orphans, widows, prisoners, and all the poor and sick who had any title to be maintained out of the revenues of the church ; to enquire into the morals of the people, and to make their report to the bishop. Whence, on account of the variety of business, it was usual to have several deacons in the same church. In the Romish church, it is the deacon's office to

incense the officiating priest or prelate ; to lay the administrator for the temporal concerns, called corporal on the altar; to receive the patera or the father of the deaconry, who was sometimes cup from the subdeacon, and present it to the a priest and sometimes a layman.

person officiating ; to incense the choir ; to receive the pax from the officiating prelate, and carry it to the subdeacon ; and at the pontifical mass, when the bishop gives the blessing, to put the mitre on his head, and to take offtjie archbishop's pall and lay it on the altar. In England, the form of ordaining deacons, declares that it is their office to assist the priest in the distribution of the holy communion ; in which, agreeably to the practice of the ancient church, they are con- fined to the administering

wine to the communi- cants. A deacon in the Church of England is not capable of any ecclesiastical promotion ; yet

DEAD, v. a. v. n. n. s. & adj.^\ Sax. t>ea& :_ DEADEN, v. a. I Goth.andlcel.

DEADLY, adj. & adv. daud • Teut.

DEAOLINESS, n. s. \ tod. See

DEADNESS, n. s. ^DEATH. As

DEAD-BORN, adj. active verbs,

DEAD-DOING, part. adj. to dead and to

DEAD-LIFT, n. s. deaden, both

DEAD-RECKONING, n. s. J signifyto cause

death, as well as to deprive of power or force ; to make vapid or spiritless ; but are nearly obso- lete. Lord Bacon uses dead as a neuter verb.

Dead, the adjective, is, deprived of life ; sense- he may be a chaplain to a family, curate to a iess . without motion ; inactive ; empty ; void ; Leneficed clergyman, or lecturer to a parish juli . useless; unadorned; flat in taste ; vapid.

church. He may be ordained at twenty-three ^ a noun> it signifies those who have suffered

years of age, but it is expressly provided, that deatn) and, figuratively, a still or quiet season.

the bishop shall not ordain the same persona Deadly is, mortal, or like death. Dead-doing is,

priest and deacon in the same day. The quali- fications of a deacon in the primitive church are

mentioned by the apostle Paul, 1 Tim. iii. 8 — 13. DEACONESS, an order of women who had their

distinct offices and services in the primitive

church. This office appears as ancient as the

apostolical age ; for St. Paul calls Phebe, Siaico-

vof, a servant of the church of Cenchrea. Ter-

tullian calls them, viduae, widows, because they

were commonly chosen out of the widows of the

church; and Epiphanius, and thfc council of

Laodicea, call them irptaBvTidac, elderly women,

because none but such were ordinarily taken

into this office. For, by some ancient laws,

these four qualifications were required in every

on" that was to be admitted into this order : — •

t . That she should be a widow. 2 That she

should be a widow that had borne children. 3.

A widow that has been but once married. 4. One

of a considerable age, forty, fifty, or sixty years

old : though all these rules admitted of excep- tions. One part of their office was to assist the

minister at the baptizing of women. Another

part was to be private catechists to the female

catechumens who were preparing for baptism.

They were likewise to attend the women that

were sick and in distress; to minister to martyrs

and confessors in prison ; to attend the women's gate in the church ; and, lastly, to assign all women their places in the church, regulate their

.behaviour, and preside over the rest of the widows, whence in some canons they are styled •7rpoKaT0t[itvai, governesses. This order, which since the tenth or twelfth century has been wholly laid aside, was not abolished at once, but contin- ued in the Greek church longer than in the Latin, and in

some of the Latin churches longer than in others.

DEACONRY, diaconia, is a name given to the chapels and oratories in Rome, under the direc- tion of the several deacons, in their respective regions or quarters. To the deaconries were an- nexed a sort of hospitals or boards for the dis- tribution of alms governed by the regionary dea- cons, called cardinal deacons, of whom there were seven answering to the seven regions, their chief being called the archdeacon. The hospital adjoining to the church of the deaconry had an

that which is destructive, having the power or design to kill. Deadliness is that state or con- dition which threatens death ; a dead-lift is ‘ hopeless exigence,’ says Dr. Johnson ; that is, figuratively, for the original idea is the heavy mass or ‘ dead weight’ which a lifeless body becomes. See the example from Locke. Dead- reckoning is a sea phrase, meaning the reckon- ing that is kept without observation of the heavenly bodies.

How seyn summen among ghou that the aghen- risynge of deede men is not ? and if the aghenrisynge of deede men is not, neither crist roos aghen fro deeth. « Widif. 1 Cor. 15.

There was not a house where there was not one dead. Exod. xii. 30.

At thy rebuke, O God of Jacob, both the chariot and horse are cast into a dead sleep. •• Psalms.

. I will break Pharaoh’s arms, and he shall groan before him with the groanings of a deadly wounded man. Ez. xxx. 24.

Therewith the fire of jalousie up sterte Within his brest, and hent him by the herte Soo woodly, that he like was to behold The box-tree, or the ashen tied an cold,

Chaucer. Cant. Tales.

Hold, O dear lord, your dead-doing hand, Then loud he cried, I am your humble thrall.

Spenser.

Loth was that other, and did faint though feare To taste the’ untried dint of deadly steele ; But yet his lady did so well him cheare, That hope of new good hap he gan to feelp.

Id. Faerie Queene.

That the sound may be extinguished or deaded i>y discharging the pent air, before it cometh to the mouth of the piece, and to the open air, is not pro- bable. Bacon.

The beer and the wine, as well within water as above, have not been palled or deaded at all. Id.

Anointing of the forehead, neck, feet, and back. bone, we know is used for procuring deep sleeps. Id,

Iron, as soon as it is out of the fire, deadeth strait- ways. Id. Natural History.

*She then on Romeo calls — As if that name, Shot from the deadly level of a gun, Did mur'ier her. Shafapear**

DEA

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DKA

Like dumb statues, or imbreathing stones, Stared each on other, and looked deadly pale.

The queen, my lord, is dead : – She should have died hereafter.

Id. Macbeth.

The tin sold sometimes higher, and sometimes lower, according to the quick vent and abundance, or the dead sale and scarcity. Careic.

But why doth Balbus his deade-doing quill Parch in his rusty scabbard ?

Bishop Hall. Satires, vi. 1.

Their flight was only deferred until they might cover their disorders by the dead darkness of the night. Hayward.

Travelling over Amanus, then covered with deep snow, they came in the dead winter to Aleppo.

Knolles.

And have no power at all, nor shift To help itself at a dead-lift. Hudibrat.

They never care how many others They kill, without regard of mothers, Or

wives, or children, so they can Make up some fierce dead-doing man. Id.

In the dead of the night, when the men and their dogs were all fast asleep. L'Eitrange.

When it (the cavity) was closed up, the bell seemed to sound more dead than it did when just be- fore it sounded in the open air. . Boyle.

She either from her hopeless lover fled Or with disdainful glances shot him dead. Dryden.

Jove saw from high, with just disdain, The dead inspired with vital life again. Id.

Nought but a blank remains, a dead void space, A step of life, that promised such a race Id.

At a second sitting, though I alter not the draught, I must touch the same features over again, and change the dead colouring of the whole. Id.

Young Arcite heard, and up he ran with haste, And asked him why he looked deadly wan ? Id.

Your gloomy eyes betray a deadneis, And inward languishing. Dryden and Lee't (Ediput.

Mettled schoolboys, set to cuff, Will not. confess that they have done enough, Though deadly weary. Orrery.

After this life, to hope for the favours of mercy then, is to expect an harvest in the dead of winter.

South.

They cannot bear the dend weight of unemployed time lying upon their hands, nor the uneasiness it is to do nothing at all. Locke.

That the dead shall rise and live again, is beyond the discovery of reason, and is purely a matter of faith. u.

This motion would be quickly deadened by counter- motions. danville's Scepsis Scientiftca.

All, all but truth, drops dead-born, from the press, Like the last gazette, or like the last address. Pope.

How cold and dead does a prayer appear, that is composed in the most

elegant forms of speech, when it is not heightened by solemnity of phrase from the sacred writings. Addison.

Our dreams are great instances of that activity which is natural to the human soul, and which is not in the power of sleep to deaden or abate. Spectator.

Somewhat is left under dead walls and dry ditches.

Arbuthnot.

Anodynes are such things as relax the t<-r. sum o: the aftected nervous fibres, or destroy the particular acrimony which occasions the pain ; or what drt>di-n± the sensation of the brain, by procuring sleep.

Id. tin Diet.

A little rill of scanty stream and bed — A name of blood from that day's sanguine rain : And Sanguinetto tells ye where the dead Made the earth wet, and turned the unwilling waters red. Byron.

But, hark! — that heavy sound breaks in once

more,

As if the clouds its echo would repeat, And nearer, clearer, deadlier than before ' Arm! arm ! — it is — it is — the cannon's opening roar !

Id.

DEAD-EYE, in maritime affairs, a sort of round flattish wooden block, usually encircled with a rope, or with an iron band, g, and pierced with three holes through the flat part, in order to receive a rope called the lanyard /», which, corres- ponding with three holes in another dead-eye i, creates a purchase employed for various uses, but chiefly to extend the standing rigging. In order to form thi5 purchase, one of the dead-eyes is fastened in the upper link of each chain on the ship's side, which is made round to receive and encompass the hollowed outer edge of the dead-eye. After this the lanyard is passed alter- nately through the holes in the upper and lower dead-eyes, till it becomes six-fold ; and is then drawn tight by the application of mechanical powers.

DEAD-LIGHTS, certain wooden ports, which arc made to fasten into the cabin windows, to prevent the waves from gushing into the ship in a high sea; and, as they are made exactly to fit windows, and are strong enough to resist the waves, they are always fixed in on the approach of a storm,

and the glass lights taken out, which must other- wise be shattered to pieces by the surges, and suffer great quantities of water to enter the vessel.

DEADLY FEUD, in English law-books, a pro- fession of irreconcilable enmity, till a person is revenged by the death of his enemy. See FECD. Such enmity and revenge were allowed by law in the time of the Saxons. If any man was killed, and a pecuniary satisfaction was not made to the kindred, it was lawful for them to take up arms and revenge themselves on the murderer: this was called deadly feud ; and probably was the original of an appeal.

DEAD SEA, in geography, a lake of Judea, into which the river Jordan discharges itself. See

ASPHALTITES.

DEAD WATER, at sea, die eddy water just astern of a ship ; so called because it does not pass away so swift as the water running by her sides does. They say that a ship makes much dead- water when she has a great eddy following her stem.

DEAF, v. a. oc adj.~\ Sax. al>earian, "seap;

DEAFEN, v. a. f Goth, deif; Dan. doev.

DEAFLY, adv. l Minsheu says, Tent.

DEAFNESS, n. s. J daub, from Heb. 3K1. weak: and this seems • continued by an olu

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DEAFNESS.

meaning of the word in our language, i.e. sterile, unprofitable. To deprive of hearing ; to stun : wanting the sense of hearing, totally or partially ; dull ; determined against a request or solicita- tion : applied also to sounds heard imperfectly, i. e. weakly. It requires to before the thing or sound that ought to be heard.

And by so myche more thci wondriden and sˆiden, he dide wel alle thingis and he made deefe men to here and douinbe men to speke. Wiclif. Mark 7.

A good wif was ther of beside Bathe, But she was some del defe, and that was scathe.

Chaucer. Prol. to Cunt. Tales.

Come on my right hand, for this ear is deaf.

Shakspeare.

1 will be deaf to pleading and excuses ; 'Nor tears nor prayers shall purchase out abuses. Id.

Hearing hath deafed our sailors ; and if they Know how to hear, there's none know what to say.

Donne.

I found such a deaf nets that no declaration from the bishops could take place. King Charles.

A swarm of their aerial shapes appears, And fluttering round his temples, deaft his ears.

Dryden.

But Salius enters : and, exclaiming loud For justice, deafen and disturbs the crowd. Id.*

Nor silence is within, nor voice express, But a deaf noise of sounds that never cease ; Confused and chiding like the hollow roar Of tides receding from the insulted shore. Id.

Those who are deaf and dumb, are dumb by conse- quence from their deafneu. Holder.

Whilst virtue courts them ; but, alas, in vain ! Fly from her kind embracing arms, Deaf to her fondest call, blind to her greatest charms.

Rotcommon.

If any sins afflict our life With that prime ill, a talking wife, Till death shall bring the kind relief, We must be patient, or be deaf. Prior.

Thus you may still be young to me, While I can better hear than see : Oh ne'er may fortune shew her spite, To make me deaf, and mend my sight. Swift. Hope, too long with vain delusion fed, Deaf to the rumour of fallacious fame, Gives to the roll of death his glorious name.

Pope.

The Dunciad had never been writ, but at his re- quest, and for his deaf nest ; for, had he been able to converse with me, do you think I had amused my time so ill ? Id.

From shouting men, and horns, and dogs, he flies, Deafened and stunned with their promiscuous cries.

Addison.

Wheel in wide circle, form in hollow square, And now they front, and now they fly the war, Pierce the deaf tempest with lamenting cries. Press their parched lips, and close their blood-shot eyes. Darwin.

DEAFNESS arises commonly either from an obstruction or a compression of the auditory nerve ; from some collection of matter in the cavities of the inner ear; from the auditory pas- sage bang stopped up by some hardened excre- ment ; or lastly, from some excrescence, a swelling of the glands, or some foreign body introduced within it.

There are also diseases of the internal ear that admit of no distinct classification, and sometimes such defects of the auditory nerves, either as a whole or in part, as to occasion this unhappy peculiarity. The sensibility of these nerves, like that of the rest of the body, becomes also weak- ened by age and various diseases, so as to occasion what is properly called a loss of hearing.

Our object in this paper is to consider deafness distinctly, and as a disease. Its unhappy con- sequence, in those who are born deaf, DUMBNESS, is an entirely different topic : at least in a noso- logical point of view. We shall first treat of both distinctly, and then, in the latter article, give some account of the modern efforts to ameliorate the situation of those in whom these disorders are hopeless. And,

1 . Of deafness from deficiency in the auditory organs. — We are said to possess more accurate and detailed descriptions of the anatomy of the ear than of any other part of the body : in our articles ANATOMY and PHYSIOLOGY we shall be seen to avail ourselves of them. But it is re- markable that the profession of an aurist is almost new to the medical world, and that many diseases and deficiencies of the organs of the ear are yet to be explained. We have perhaps, therefore, less of the just application of know- ledge to its diseases than to those of any other part. See ACCOUSTIC«.

The office of individual portions of this com- plicated organ, for instance, has been but very im- perfectly ascertained. Numerous observations seem to indicate that considerable injuries and deficiencies of the membrana

tympani may take place without producing much effect upon the faculty of hearing. Persons who, by driving smoke taken in at the mouth, iu large volumes through the ears, indicate a deficiency of this kind, are often found acute in the perception of sounds ; and Sir Astley Cooper mentions an instance in which the membrana tympani of one ear being totally destroyed, and that of the other nearly so, by disease, it appeared that the deaf- ness was inconsiderable, and that sound was most readily perceived by the ear in which no trace of the membrane could be discovered. In the same case, the ear was nicely susceptible of musical tones, the individual played well on the flute, and sang perfectly in tune. The power of accommodating the ear to differing intensity of sound was, indeed, lost for some time after the destruction of the membrane : it, however, gradually returned ; and at the period of exa- mination there was no distress arising from that deficiency.

Where deafness has followed the accidental destruction or continued disease of this mem- brane, it would appear to arise more directly, therefore, from its effect on neighbouring 01- gans, as on the membranes of the fenestra, and the fluid of the labyrinth, which seem to be es- sential to the distinct conveyance of sound. The tympanum is, in fact, only one of the outward portals of this mysterious temple, though the last of them at which the sound arrives.

Its functions seem to be analogous with those of the pinna, or outward ear, i. e. to regulate

and direct, only in a more perfect degree, the waves and impression of sound. In the case above quoted, after this membrane had been so materially injured, the muscles of the external ear seemed to acquire a new power of moving upward, and backsvards, which was regularly exerted in the effort to catch an indistinct sound. The whole of the pinna, we need hardly observe, has been frequently removed without any abiding injury to the hearing. And in cases where the auricle has never been formed, the functions of the inner ear have been found perfect. Scarpi considers the fenestra rotunda as a species of second tympanum. So long, therefore, as the internal ear is sound and healthy, all the essential operations of this organ will proceed.*

One practical remark may be permitted us here, on a very common practice. Sir Hans Sloane has observed, ‘ that among the many people in England who had applied to him on account of deafness, the far greater part were thrown into their complaints by too often picking their ears, and thereby bringing humors, or ul- cerous dispositions, on them.’ — Phil.

Trans. No. 246, p. 406.

2. Of diseases of the meatus auditor ius, or ex- ternal passage of the ear. — In this passage, and its secretions, arise the most common impediments to hearing. The exact, healthy quantum of ce- rumen, or wax, which should be here secreted, has never been ascertained. But in a diseased state of this part of the ear the cerumen has been found completely stopping up the passage, and sometimes forming a false tympanum. The cerumen hardened and permanently lodged on the tympanum is a frequent and uniform cause of deafness. The common application of warm water for this accumulation has never been im- pioved upon. This passage is also subject to I'lreration, which produces a great thickening of the integuments, and consequent obstruction. The ichor, exuding from the ulcerated surface, inspissates in the passage, and is accompanied with much fcetor. This disease generally yields to the application of solutions of the metallic salts, as of muriated mercury in lime-water ; or of vitriolated zinc ; or to the use of the unguen- tum hydrargiri nitratum ; calomel, or other alte- ratives being taken at the same time. (Saunders). Polypous excrescences and other extraneous substances sometimes require to be removed by mechanical means from this passage.

3. Of diseases or obstructions of the Eustachian tube. — This forms, in fact, the body of the drum, if we may be allowed the phrase, of which the ear so largely consists. Communicating with the back of the palate, it admits a portion of air to counterbalance that in the meatus, and assists materially, during the vibrations of the tym- panum, in perfecting the distinct sensation of sounds. Inveterate deafness is therefore often produced by the disease or obstruction of this organ and its cavity. When air is no longer found here, the tympanum is unduly forced and stretched inward, and thus cannot vibrate as in its perpendicular state. »

Obstructions of this tube arise frequently from syphilitic ulcers in the throat, or sloughing in the cynanche maligna. The deafness ensues on

the healing of the ulcers, that is, when the ob- struction is complete. The descent of a nasal polypus into the pharynx, and enlarged tonsils, have also been known to cloˆe the tube. Some- times the cavity has been found filled with mucus.

The only symptom to which medical men can advert in this case is, that when the patient blows, with his nose and mouth stopped, he does not experience that peculiar sensation, which arises from the inflation of the tympanum. He speaks only of the loss of sense, and complains of no particular symptom. In this respect the deafness differs from all other species.

Sir Astley Cooper has, however, introduced a method of relieving this previously incurable disease of the ear, by puncturing the tympanum. The effect is said to be an instantaneous resto- rative to the faculty of hearing. But there is some difficulty in keeping open the puncture, which is, in point of fact, to become, in this case, an artificial Eustachian tube. A large hole diminishes the perfection of the returning tension sense, and a small one is perpetually closing. If the membrane also be much lacerated or de- tached at its circumference, the tension will be lessened; yet even, in these cases, the patient receives an evident benefit.

The instrument, in this operation, is passed through the meatus and the anterior or inferior part of the tympanum. The position of the manubriura of the malleus demanding this pre- caution : a little crack will immediately be heard like that which is occasioned in pricking a com- mon drum, particularly if the tube be entirely closed, as the sound will then be more acute> from the rapid entrance of the air. The instru- ment must not penetrate far into the tympanum, lest it should pierce its vascular lining; and the escape of blood injure the operation.

4. We come now to the more numerous and important diseases of the internal ear. — It is evident that deafness often exists when no ap- parent cause or morbid affection appears ; and that it arises from a nervous insensibility, in some cases, which no surgical aid can remove. The tympanum will appear perfect, and exercise^ apparently, its usual functions ; and the secretions of the meatus seem healthy. In some cases> complaint is made of great noises in the head, and, as they often correspond with the beating of the pulse, this has been traced to a peculiar perception of the pulsation of the arteries. The organic causes of some of these diseases are even traceable to the brain. Where the deafness has been preceded by local inflammation in the head> evacuants, particularly local ones, are generally prescribed ; such as the application of leaches and blisters to the neck and behind the ears ; and the general antiphlogistic plan should be pursued more or less, according to the nature of the plerothic symptoms.

Imperfect circulation, on the other hand, and general debility, will sometimes be the cause of deafness ; when the usual stimulants of elec- tricity and galvanism have been found effec- tual, and stimulating liquids may be cautiously dropped into the ear. In the swelling, or en- largement of neighbouring parts of the head OT

reck, through scrophulous or syphilitic affections, these disorders, of course, must be attended to, as the root of the disorganisation.

Mr. Saunders has described, at some length, one of the most common, and important diseases, connected both with the external and internal ear; and, at the same time, one of the most common causes of deafness that occur. We mean the puriform discharge, or ‘ running,’ as it is popularly called, from the tympanum. He considers it under three states or stages: 1. A simple puriform discharge. 2. A puriform discharge, complicated with fungi

and polypi. 3. A puriform discharge, with a caries of the tympanum. The time of transition from one of these stages to another is quite uncertain. In some instances, years do not affect it ; and, in others, it seems to advance, almost at once, to a carious state of the bone.

This puriform discharge from the tympanum, he insists, is a local disease, and does not depend on any disordered state of the constitution : ge- neral remedies are, therefore, inefficacious. But, as a bad state of health is unfavorable to the healing of any parts, so, in this particular com- plaint, any disordered condition of the habit should be corrected. The chief dependence is to be placed on direct applications to the parts af- fected. Injections of vitriolated zinc, acetate of lead, &c., are very efficacious in suppressing the discharge ; and their effects may be aided by the external employment of blisters and setons. The fungous and polypous excrescences must be re- moved or destroyed by mechanical means ; they are only incidental occurrences, and their re- moval reduces the disease to the first stage.

The deafness during the continuance of this discharge is sometimes very considerable, when the real injury which the organ has sustained is trivial. In the first stage, the mere thickening of parts, or the collection of the discharge, must impede the action of the intervening machinery between the external and internal parts of the ear; and, in the second, the mechanical obstruc- tion of the funguses or polypi excludes the pulses of sound. On this account there is often a re- markable increase of the power of hearing, when the discharge is suppressed in the first and se- cond stages. But as the parts are invisible, i is difficult, if not impracticable, to decide a priori, how far the power of hearing can be restored. This, however, is no valid objection to attempt- ing the cure. The sense will not be rendered worse by a failure; and if the discharge should be stopped, the disease which caused it is removed, the organ safe from farther injury, and the pa- tient freed from an offensive malady. In the last stage, the sense is almost, if not totally, de- stroyed ; and although the discharge be stopped, the patient's hearing will be very 1 ittle, if at all, improved.*

When this disease is cured, the tympanum is exposed to the free ingress and egress of the air, and the mucilaginous discharge inspissates, as the mucus of the nose, by the exhalation of its watery parts. By this accident the patient's deafness increases at intervals, for which he often s?eks relief. The practitioner, on sounding the ear, perceives this hardened matter ; and con-

ceiving, as is really the case, that it produces the augmentation of deafness, is tempted to remove it. But nothing stimulative, nor any rude at- tempts, can be safe, for there is great danger of reproducing the discharge. Having learned that a discharge has pre-existed, it will be expedient to leave it to

spontaneous separation. Suunders's Anatomy and Diseases of the Ear.

This is frequently the disorder of the ear, at- tended with violent inflammations of the tympa- num, and even with delirium ; remarkably resem- bling, in its fluctuations, the tooth-ache, and often popularly but most improperly treated with similar stimulating applications. Parents and individuals who have the care of children cannot be too observant of the nature of frequent dis- charges from the ear, and should apply early for a good medical opinion as to their cause.

DEAL, T. a., v. n. & n. s. ") Sax. t>sel ; Goth-

DEAL'ER, n.s. >rf«i7; Teut. deil ;

DEAL'ING, n. s. j Belg. d

Gr. SteXav, says Minsheu, to distribute or divide. These are clearly the leading ideas of the word in all its various applications. To separate and distribute in portions ; to dispose of in parts ; to scatter; to give to different persons. As a neuter verb, to trade ; to transact business ; and hence, to negotiate and mediate an intercourse between different parties ; taking various pre- positions, as to deal by, deal in, and deal with. As a substantive, it expresses the part or quan- tity divided or distributed ; the act or practice of apportioning out a pack of cards ; a plank of fir, divided, split, or sawn out from the tree. A dealer is a trader, or distributer of various com- modities for profit. Dealing, the practise of trading, and hence any kind of business, transac- tion, or intercourse.

Deal thy bread to the hungry, and bring the poor that are cast out to thy house, Isaiah Iviii. 7.

And with the one lamb, a tenth deal of flour min- gled with the fourth part of an hin of beaten oil.

Exod. xxix. 40.

The treacherous dealer dealeth treacherously, ana. the spoiler spoileth. Isaiah xxi. 2.

He kept his patient a ful great del In houres by his magike nature!.

Chaucer. Prol. to Cant. Tales. –

Neither can the Irish, nor yet the English lords, think themselves •wronged, nor hardly dealt frith, to have that which is none of their own given to them.

Spenser's Ireland.

When men's affections do frame their opinions, they are in defence of errour more earnest, a great deal, than, for the most part, sound believers in the maintenance of truth. Hooker.

Concerning the dealings of men who administer government, and unfto whom the execution of that law belongeth, they have their judge, who sitteth iu heaven. Id.

But ibis was neither one pope's fault, nor one prince's destiny : he must write a story of the empire, that means to tell of all their dealings in this kind.

Raleigh.

Sometimes he that deals between man and man, raiseth his own credit with both, by pretending greater interest than he hath in either. Bacon,

It is generally better to deal by speech than by letter ; and by a man himself, than by the mediation of a third. Id.

To weep with them that weep, do'.h ease some deal; But sorrow flouted at is double death. Shakspeare.

Two deep enemies,

Foes to my rest, and my sweet sleep's disturbers, Are they that I would have thee deal upon. Id.

What these are !

Whose own hard dealings teach them to suspect The thoughts of others. Id.

What a deal of cold business doth a man mispend the better part of life in ' In scattering compliments, and tendering visits. Ben Jonson.

If she hated me, I should know what passion to deal with. Sidney.

Still in the night she weeps, and her tears fall Down her cheeks along, and none of all Her lovers comfort her. Perfidiously Her friends have dealt, and

now are enemy.

Donne. On the Lamentat. of Jeremy.

Gentlemen were commanded to remain in the country, to govern the people, easy to be dealt with whilst they stand in fear. Hayward.

God's gracious dealings with men, are the aids and auxiliaries necessary to us in the pursuit of piety.

Hammond.

Who then shall guide

His people ? Who defend ? Will they not deal Worse with his followers, than with him they dealt ?

Milton.

I have also found, .that a piece of deal, far thicker than one would easily imagine, being purposely inter- posed betwixt my eye, placed in a room, and the clearer daylight, was not only somewhat transparent, but appeared quite through a lovely red.

Boyle on Colours.

God did not only exercise this providence towards his own people, but he dealt thus also with other nations. Tillotson.

They buy and sell, they deal and traffic. South. Possibly gome never so much as doubted of the safety of their spiritual estate ; and, if so, they have so much the more reason, a great deal, to doubt of it.

Id. One with a broken truncheon deals his blows.

Dry den.

But I will deal the more civilly with his two poems, because nothing ill is to be spoken of the dead. Id.

**Ceep me from the vengeance of thy darts, Which Niobe's devoted issue felt, When hissing through the skies the featheied deaths*

were dealt. Id.

Such an one deals not fairly by his own mind, nor conducts his own understanding aright. . Locke.

With the fond maids in palmistry he deals, They tell the secret which he first reveals. Prior.

Reflect on the merits of the cause, as well as of the men who have been thus dealt with by their country.

Swift.

How can the muse her aid impart, Unskilled in all the terms of art ? Or in harmonious numbers put The deal, the shuffle, and the cut ? Id.

I find it common with these small dealers in wit and learning, to give themselves a title from their first adventure. Id.

The Scripture forbids even the countenancing a poor man in his cause ; which is a popular way of preventing justice, that some men have dealt in, .though without that success which they proposed to themselves. Atterbury,

Wherever I rind a great deal of gratitude in a poor man, I take it for granted there would be as much generosity if he were a rich man. Pone.

You wrote to me with the freedom of a friend, dealing plainly with me in the matter of my own trifles. /

Among authors, none draw upon themselves more displeasure than those who deal in political matters.

Addison.

The business of mankind, in this life, being rather to act than to know, their portion of knowledge is dealt them accordingly. /rf.

True logick is not that noisy thing that deals all in dispute, to which the former ages had debased it.

Watt is Lotjich.

How Spain prepares her banners to unfold, And Rome deals out her blessings and her gold.

Tic/tell. The nightly mallet deals resounding blows.

Gay.

Nature seldom forms an universal genius ; but deals out her favours in the present state with a par- simonious hand. Mason.

I do readily admit that a great deal of the wars, seditions, and troubles of the world did formerly turn upon the contention between interests that went by the names of protestant i.nd catholic. Burke.

The Goth, the Christian, Time, War, Flood, and

Fire

Have dealt upon the seven-hilled city's pride ; She saw her glories star by star expire, And up the steep barbarian monarchs ride, Where the car climbed the capitol. Byron.

DEAL, in carpentry, a thin kind of fir plank, formed by sawing the trunk of a tree into a great many longitudinal divisions, of greater or less thickness according to the purposes it is in- tended to serve. A good method of seasoning planks for deal, is to throw them into salt water as soon as they are sawed, and keep them there three or four days, frequently turning them. In this case they will be rendered much harder, by drying afterwards in the air and sun; but neither this, nor any other method yet known, will pre- serve them from shrinking. Rods of deal expand laterally, or cross the grain, in moist weather,and contract again in dry.

DEAL, in geography, a market town and sea- port of Kent, between Dover and Sandwich, and supposed to be the Dola of Nennius, and situa- ted on a flat and level coast. The town of Deal, except it may be the sea's shrinking a little from it, is in much the same condition in which it ever was, even from the earliest accounts. Dr. Halley has proved, in his Miscellanea Curiosa, that Julius Csesar landed here, August 26th, A. A. C. 55. The great conveniency of landing has been of infinite service to the place ; so that it is large and populous, divided into the upper and lower towns, adorned with many buildings, and is in effect the principal place on the Downs. To the south of the town is a castle, surrounded by a ditch ; it consists chiefly of a round tower, containing apartments for the captain and other officers, and a battery. The batteries and mar- tello towers, constructed during the late war, command from the eminences, every access to the shore. Anchors, cables, &e., are always ready to

supply ships that may need them. It has a very commodious market held on Tuesday and Wed- nesday, which is well supplied with every kind of provision, &c. It lies seven miles south by east of Sandwich, and seventy-

four east by south of London.

DEALBA'TION, n. s. Lat. dealbatio. The act of bleaching or making white.

411 seed is white in viviparous animals, and such as have preparing vessels, wherein it receives a manifold dealbation. Browne's Vulgar Errours.

DEAMBULATION, n. s. > Lat. deambula-

DEA'MBULATORY, adj. 3 tio. The act, or relating to the practice, of walking abroad. See AMBULATION.

DEAMENA, in the mythology, the goddess who was supposed to preside over women during their menses.

DEAN, M.S. > Fr. doyen; Lat. decanus-

DEAN'ERY.W.S. j ' From the Greek word Stica,' says Ayliffe, ' in English, ten, because he was anciently set over ten canons or prebendaries at least in some cathedral church.'

The dean and canons, or prebends, of cathedral churches, were of great use in the church ; they were not only to be of counsel with the bishop for his reve- nue, but chiefly for government in causes ecclesiasti- cal. Use your best means to prefer such to those places who are nt for that purpose. Bacon.

Take her by the hand, away with her to the deanery, and dispatch it quickly. Shakspeare.

He could no longer keep the deanery of the chapel- royal. Clarendon. Put both deans in one ; or, if that 's too much trou

ble, Instead of the deans make the deanery double.

Swift.

DEAN. As there are two foundations of ca- thedral churches in England, the old and the new (the new are those which Henry VIII., upon suppression of abbeys, transformed from abbot or prior, and convent, to dean and chapter), so there are two means of creating deans; those of the old foundation are appointed to their dig- nity, much like bishops, the king first issuing his conge" d'elire to the chapter, the chapter then choosing, and the bishop confirming, and giving his mandate to install them. Those of the new foundation are, by a shorter course, installed by virtue of the king's letters patent, without elec- tion or confirmation. This word is also applied

to the chief officers of certain peculiar churches or chapels ; as the dean of the king's chapel, the dean of the arches, the dean of St. George's chapel at Windsor, and the dean of Bocking in Essex. The dean and chapter are the council of the bishop, to assist him with their advice in affairs of religion, as well as in the temporal concerns of his see. When the rest of the clergy were settled in the several parishes of each diocese, these were reserved for the celebration of divine service in the bishop's own cathedral ; and the chief of them, who presided over the rest, obtained the name of decanus, or dean, being, probably, at first appointed to superintend ten canons or pre-bendaries. The chapter, consisting of canons or prebendaries, are sometimes appointed by the King, sometimes by the bishop, and sometimes

elected by each other. The dean and chapter are the nominal electors of a bishop. The bishop is their ordinary and immediate superior; and has, generally speaking, the power of visit- ing them, and correcting their excesses and enor- mities. They had also a check on the bishop at common law; for, till the stat. 32, Hen. VIII. cap. 28, his grant, or lease, would not have bound his successors, unless confirmed by the dean and chapter.

DEAN, in geography, a forest of England, in Gloucestershire, between the Severn and the county of Monmouth. The forest once con- tained 30,000 acres of land, in which were twenty-three parishes, and four market towns, with great abundance of fine timber. It was reckoned the chief support of the English nary ; and the Spanish armada, it is said, was ex- pressly commissioned to destroy it. The iron forges have lessened the quantity of wood, but not consumed it, as care is said to be taken in cutting it. The hills abound in iron ore

DEAN, GREAT DEAN, or MICHAEL DEAN, a town in the above forest, with an elegant church and handsome spire. Cloth and pins are its chief manufactures. It has a market on Mon- day, and fairs Easter Monday and October 10th. It lies twelve miles west of Gloucester, fifteen of Monmouth, and 120 south-west of London.

DEAN OF GUILD, in Scottun law, the cmef judge of a guild-court. The dean of guild in Edinburgh, and most of the royal boroughs ol Scotland, is a member of, and elected by, the town-council; ranks next to the bailies, and con- tinues two years in office.

DEAR,n.s.&ad;'.ˆv Sax. beon; Belg. dier ;

DEAR'BOUGHT,O

DEAR'LING, n. s. \cher ; from Lat. carus, ca-

DEAR'LY, adv. \reo, to want, as Minsheu

DEAR'NESS. n. s. J conjectures. One much valued or beloved ; valuable ; beloved ; costly ; scarce.

They do feed on nectar, heavenly wise, With Hercules and Hebe, and the rest Of Venus' dearlings, through her bounty blest.

Spenser.

The whole senate dedicated an altar to Friendship, as to a goddess, in respect of the great dearnett of friendship between them two. Bacon,

" It is rarely bought, and then also bought dearly enough with such a fine. Id.

Your brother Glo'ster hates you. — Oh, no, he loves me, and he holds me dear.

Shakspeare.

My brother holds you well, and in dearnett of heart hath holp to effect your ensuing carriage. Id.

That kiss

I earned from thee, dear ; and my true lip Hath virgined it e'er since. Id. Coriolamu,

Where life is deare, who cares for coyned drosse? That, spent, is counted gaine ; and spared, losse.

Bp. Hall. Satiret ii. «">.

O fleeting joys

Of Paradise, dearbought with lasting woe. Milton.

He who hates his neighbour mortally, and wisely too, must profess all the dearnest of friendship, with readiness to serve him. South.

See, my dear, How lavish nature has adorned the year.

Dry den.

Turnus shall dearly pay for faith forsworn ; And corps, and swords, and shields, on Tyber born.

Id.

Such dearbought blessings happen every day, Because we know not for what things to pray. Id.

These are the pleasing moments, in absence my dearest blessing, either to read something from you, or be writing something to you ; yet I never do it but I am touched with a sensible regret, that I cannot pour out in words what my heart is so big with, which is much more just to your dear self (in a passionate re- turn of love and gratitude) than I can tell you.

Lady Russel's Letters.

Landlords prohibit tenants from plowing, which is seen in the dearness of corn. Swift.

What made directors cheat the South-sea year ? To feed on ven'son when it sold so dear. Pope.

And the last joy was dearer than the rest. Id.

The dear, dear name, she bathes in flowing tears, Hangs o'er the tomb. Addison's Ovid,.

I was, at the time this compliment was paid me, and am still, much gratified by it. The approbation of such men ever has been, and ever will be, dearer to me than the most dignified and lucrative stations in the church. Bishop Watson.

How did I hope to vex a thousand eyes ! Oh glorious malice, dearer than the prize !

Dr. T. Brown.

DEAR, adj. Sax. bepe, from bejnan, to injure. See DARE. Bitter ; hateful ; grievous. An obso- lete word, but frequently used in this sense by Shakspeare.

Three yere in this wise his lif he ledde, And bare him so in pees and eke in werre, Ther n' as no man that Theseus hath derre.

Chaucer. Cant. Tales.

What foolish boldness brought thee to their mercies, Whom thou in terms so bloody, and so dear, Hast made thine enemies ?

Shakspeare. Twelfth Night. Let us return,

And strain what other means is left unto us Tn our dear peril. Id. Timon.

Some dear cause

Will in concealment wrap me up a-while : When I am known aright, you shall not grieve Lending me this acquaintance. Id. King Lear.

Would I had met my deafest foe in heaven, Or ever I had seen that day. Id. Hamlet.

The other banished son, with his dear sight Struck pale and bloodless. Id. Titu-s Andronicus.

DEARNLY, adv. Sax. dearn. Secret, or deep. See DARN. Here applied to deep and bitter mourning.

At last, as chanced them by a forest side To pass, for succour from the scorching ray, They heard a rueful voice, that dearnly cried With piercing shrieks= Spenser.

DEARTH, n. s. The third person, according to Mr. Tooke, of tertian, to injure. Minsheu says from Belg. dier, dear, and tiit, time : a dear time. ‘ Dyrtid, as used with the Goths,’ says Mr. Thomson, ‘ a time of dearness.’ It is meta- phorically applied to the mind.

In times of dearth, it drained much coin out of the kingdom, to furnish us with corn from foreign parts.

Bacon.

Pity the dearth that I have pined in, By longing for that food so long a time.

Shakspeare.

Of every tree that in the garden grows, Eat freely with glad heart ; fear here no dearth.

Milton.

The French have brought on themselves that dearth of plot, and narrowness of imagination, which may be observed in all their plays. Dryden.

There have been terrible years dearths of corn, ami every place is strewed witli beggars ; but dearths are common in better climates, and our evils here lie much deeper. Swift.

DEATH, n. s. ˆ Sax. t>ea ; Belg. dwl ; DEATH-BED, Teut. tod, todt, that; from*

DEATH'FUL, adj. Gr. Qavaroc, says Minsheu DEATU'LESS, adj. Or the Heb. nn, doth. DEATH-LIKE, }>The cessation or extinction DEATH'S-DOOR, of life; the state of the DEATH'S-HEAD, dead ; the immediate cause DEATH'S-MAN, | or causer of death ; the DEATH'WATCH. J final perdition of wicked men. A death's man is a public executioner : death's door, a near approach to death. A death watch is an insect making a ticking noise, like a watch, and supposed to presage death. The other compounds seem to require no explana- tion.

For the sorrowe that is aftir God worchith penaunce into stidefast heelthe, but sorrow of the worlde worchith deeth. Wiclif. 2 Cor. vii.

They cried out, and said, O thou man of God, there is death in the pot. 2 Kings iv. 40.

He is the mediator of the New Testament, that by means of death, for the redemption of the transgres- sions, they which are called might receive the promise of eternal inheritance. Heb. ix. 15.

Thou shall die the deaths of them that are slain in the midst of the seas. Ezekiel xxviii. 8.

We pray that God will keep us from all sin and wickedness, from our ghostly enemy, and from ever- lasting death. Church Catechism.

They were adradde of him as of the deth. His wanning was ful fayre upon an heth.

Chaucer. Prol. to Cant. Tales.

He answered naught, but in a traunce still lay, And on those guileful dazed eyes of his The cloude of death did sit. Spenser. Faerie IJueene.

As in manifesting the sweet influence of his mercy, on the severe stroke of his justice ; so in this, not to suffer a man of death to live. Bacon.

Time itself, under the deathful shade of whose wings all things wither, bath wasted that lively virtue of nature in man, and beasts, and plants. Raleigh.

In swinish sleep Their drenched natures lie, as in a death.

Shakspeare.

I had rather be married to a death's head, with a bone in his mouth, than to either of these. Id.

*He's dead ; I'm only sorry He had no other deathsman. Id**

Death, a necessary end, Will come when it will come.

*Id. Julius Caesar**

DBA

Sweet soul, take lieed, take heed of perjury ; Thou art on thy death-bed. Id. Othello.

Life, by this death abled, shall controll Death, whom thy death slew ; nor shall to me Fear of first or last death bring miserie, If in thy life's book my name thou enroll.

Donne. Dirine Poems.

There was a poor young woman, that had brought herself even to death's door with grief for her sick husband. L' Estrange.

No blacks, nor soul-bslls, nor death's-heads on our rings, nor funeral sermons, nor tombs, nor epitaphs, can fix our hearts enough upon our frail and miserable condition. Bishop Hall. Sermon 30.

On seas, on earth, and all that in them dwell, A deathlike quiet and deep silence fell. Waller.

Blood, death, and deathfvl deeds, are in that noise, Ruin, destruction at the utmost point. Milton.

A deathlike sleep ! A gentle wafting to immortal life ! Id.

God hath only immortality, though angels and hu- man souls be deathless. Boyle.

I myself knew a person of great sanctity, who was afflicted to death's-door with a vomiting.

Taylor's Worthy Communicant. These are such things as a man shall remember with joy upon his death-bed ; such as shall cheer and warm his

heart, even in that last and bitter agony.

South's Sermons. He must his acts reveal, From the first moment of his vital breath, To his last hour of unrepenting death. Dryden. Then round our death-bed every friend should run, And joy us of our conquest early won. Id. Fables.

Your cruelty was such, as you would spare his life for many deathful torments. Sidney.

Faith and hope themselves shall die, While deathless charity remains. Prior.

A death-bed repentance ought not indeed to be ne- glected, because it is the last thing that we can do. • Atterbury.

Oft, as in airy rings they skim the heath, The clam'rous lapwings feel the leaden death. Pope.

Black Melancholy sits, and round her throws A death-like slumber, and a dread repose. Id.

These eyes behold The deathfvl scene ; princes on princes rolled. Id.

Misers are muckworms, silkworms beaus, And deathwatches physicians. Id.

He caught his death the last county-sessions, where he would go to see justice done to a poor widow-wo- man. Addition.

The solemn deathwatch clicked the Lour she died.

Gay.

We learn to presage approaching deatn in a family by ravens, and little worms, which we therefore call a deathwatch. Watts.

Death opens the gate of fame, and shuts the gate of envy after it, — it unlooses the chain of the captive, and puts the bondsman's task into another man's hands. Sterne.

Heavens ! on my sight what sanguine colours

blaze !

Spain's deathless shame ! the crimes of modern days . When avarice, shrouded in religion's robe, Sailed to the west, and slaughtered half the globe.

Darwin.

Ever since the passing of the acts, which punish with death, the stealing in shops, or houses, or on board ships, property of certain stated values, juries have, from motives of humanity, been in the habit of

frequently finding by their verdicts, that the thing stolen were worth much less than had been clearly proved. Sir S. Rumilly.*

Horribly beautiful ! but on the verge, From side to side, beneath the glittering morn, An Iris sits, amidst the infernal surge, Like Hope upon a death-bed, and, unworn Its steady dyes, while all around is torn By the distracted waters. Byron.

DEATH is generally considered as the separa- tion of the soul from the body; in which sense it stands opposed to life, which consists in their union. Physicians have defined death by a total stoppage of the circulation of the blood, and a cessation of the animal and vital functions consequent thereon, as respiration, sensation, &c. The signs of death are in many cases very uncertain. If we consult what Win slow or Bruchier have said on this subject, we shall be convinced, that between life and death the shade is so very undistinguishable, that all the powers of art can scarcely determine where the one ends and the other begins. The color of the visage, the warmth of the body, and the suppleness of the joints, are but uncertain signs of life still subsisting; while, on the contrary, the paleness of the complexion, the coldness of the body, the stiffness of the extremities, the cessation of all motion, and the total insensibility of the parts, are but uncertain marks of death begun. In the same manner also, with regard to the pulse and breathing; these motions are often so small, that 't is impossible to perceive them. This ought to be a caution against hasty burials, especially in cases of sudden death, drowning, &c. See DROWNING.

DEATH, in law. The law makes a distinction between natural and civil death. 1. Civil deatli takes place, where a-persoh is not actually dead, but adjudged so by law. Thus, if any person, for whose life an estate is granted, remains be- yond sea, or is otherwise absent, seven years, and no proof of his being alive, he shall be ac- counted naturally dead. 2. Natural death means a person actually dead.

DEATH-WATCH, in natural history, a species of fermes, so called on account of an old tradi- tion, that its beating or ticking in a sick room, is a sure sign of death. See FERMES.

DEAL) RATE, v. a. frpart. pass.) Lat. deau-

DEAURATION, n. s. J ro. To gild;

gilded.

And while the twilight and the rowis rede Of Phoebus' light were deaurat alike.

Chaucer. Comp. of Black Knight.

DEBACCHATION, n.s. Lat. debacchatio. A raging ; a madness.

DEBAR, v. a. From de and bar. See BAR. To exclude; to preclude; to shut out from any thing ; to hinder.

The same boats and the same buildings are found in countries dcb.irred from all commerce by unpassable mountains, lakes, aad deserts. Raleigh's Essays.

Not so strictly hath our Lord imposed Labour, as to debar us when we need Refreshment, whether food, or talk between, Food of the mind. Milton.

DEB

The thread-bare client's poverty JJebarres the attumey of his wonted fee ?

Bishop Hall's Satires, v. 3.

Civility, intended to make us easy, is employed in laying chains and fetters upon us, in debarring us of our wishes, and in crossing our most reasonable de- sires. Swift. DEBARB, v. a. Lat. from de and barba. To deprive of his beard.

DEBARK, v. a. & n. Fr. debarquer. To dis- embark. See EMBARK. Also to strip a tree of its bark.

From hence it appears that the branches of de- barked oak-trees produce fewer leaf-buds, and more flower-buds, which last circumstance I suppose must depend on their being sooner or later debarked in the vernal months. Darwin.

DEBASE',v. a. } Old Fr. debas, from de DEBAS'ER, n. s. /and base. See BASE. To DEB ASE'MENT. 5 reduce, degrade, adulterate, lessen in strength.

It is a kind of taking God's name in vain, to de- base religion with such frivolous disputes. Hooker.

Words so debased and hard, no stone Was hard enough to touch them on. Hudibrat.

He reformed the coin, which was much adulterated and debased in the times and troubles of king Stephec

Hale.

Homer intended to teach, that pleasure and sen- suality debase men into beasts. Broome on the Odyssey.

It is a wretched debasement of that sprightly faculty, the tongue, thus to be made the interpreter to a goat or boar. Government of the Tongue.

A man of large possessions has not leisure to consi- der of every slight expense, and will not debase him- self to the management of every trifle. Dryden.

Restraining others, yet himself not free ; Made impotent by power, debased by dignity. Id,

As much as you raise silver, you debase gold ; for they are in the condition of two things put in opposite scales ; as much as the one rises, the other falls.

Loche.

He ought to he careful of not letting his subjects debase his style, and betray him into a meanness of ex- pression. Addison. DEBATE', v. a., v. n. &n.s.\ Fr. debattre. ; DEBATE'ABLE, adj. I Ital. debatire, DEBA'TER, > from Lat. ba- DEBATE'FUL, I tuo, to beat. DEBATE'M ENT. J To controvert, dispute, contend for : as a neuter verb to delibe- rate (taking on or upon) ; to dispute. Debate- able is disputable ; liable or likely to be con- tended for : a debate, a formal and personal dis- pute, or controversy.

But God tempride the bodi ghyuynge more wor- shipe to it to whom it failide, that debate bo not in the bodi. Wiclif. 1 Cor 12.

Debate thy cause with thy neighbour himself, and discover not a secret to another. Proverbs xxv. 9.

Tho spake our Hoste, A, Sire, ye shuld ben hende, And curteis, as a man of your estat, la compagnie we will have no debat.

Chaucer. Cant. Tales. Your several suits Have been considered and debated on.

Shakspeare.

Now, lords, if heaven doth give successful end To this debate that bleedeth at our doors, We will our youth lead on to higher fields, Ar,.l draw no sworJs but what are sanctified. Id.

Without delmtement further, more or less, He should the bearers put to sudden death. Id.

Have I not vowed for shunning such debate, (Pardon ye Satyres), to degenerate ? And, wading low in this plebeian lake, That no salt wave shall froath upon my backe.

Bp. Hall. Satires, iv. 4.

The French requested, that the debatable ground, and the Scottish hostages, might be restored to the Scots- Hayward.

He could not debate any thing without some com- motion, even when the argument was not of moment.

Clarendon.

'Tis thine to ruin realms, o'erturn a state • Betwixt the dearest friends to raise debate. Dryden.

A way that men ordinarily use, to force others to submit to their judgments, and receive their opinion in debate, is to require the adversary to admit what they alledge as a proof, or to assign a better. Locke.

He presents that great soul debating upon the sub- ject of life and death with his intimate friends.

Tatler.

It is to diffuse a light over the, understanding, in our enquiries after truth, and not to furnish the tongue •with debate and controversy. Watts's Logick.

It is knowledge and experience that make ˆ.debater.

Cketterfield.

*DEBAUCH', v. a. & n. *.") Fr. desbaucher ; DEBAUCHEE', n. s. from Lat.*

debac-

DEBAUCH'ER, fchor, to offer sa-

DEBAUCH'ERY, I crifice toBacchus :

DEBAUCH'MENT. J anciently written

in our language deboise and debosh. To corrupt; to violate ; to vitiate, whether by lewdness or intemperance : a fit or habit of intemperance or lewdness. Debauchery, the constant practice of them. A debauchee is one who is himself de- voted to lewdness or excess ; a debaucher, one who corrupts others, or seduces them into vice. Here do you keep a hundred knights and squires Men so disordered, so debauched, and bold, That this our court, infected with their manners, Shews like a riotous inn. Shakspeare. King Lear. Reason once debauched, is worse than brutishness. Bp. Hall. Contemplations.

They told them ancient stories of the ravishment of chaste maidens, or the debouchment of nations, or the extreme poverty of learned persons.

Taylor's Rule of Holy Living. This it is to counsel things that are unjust ; first, to debauch a king to break his laws, and then to seek protection. Dryden's Spanish Friar.

The first physicians by debauch were made ; Excess began, and sloth sustains, the trade.

Dryden.

A man must have got his conscience thoroughly debauched and hardened, before he can arrive to the height of pin. South.

Could we but prevail with the greatest debauchees among us to change their lives, we should find it no very hard matter to change their judgments. Id.

Oppose vices by their contrary virtues ; hypocrisy by sober piety, and debauchery by temperance.

Spratt-

He will for some time contain himself within the hounds of sobriety ; till within a little while he reco- vers his former debauch, and is well again, and then his appetite returns. Calamy.

No man's reason did ever dictate to him, that it is reasonable for him to debauch himself by intemperance and brutish sensuality. Tillotson.

Debauched from nature, how can we relish her ge- nuine productions ? As well might a man distinguish objects through the medium of a prism, that presents tothing but a variety of colours to the eye, or a maid pining in the green sickness prefer a biscuit to a finder. SmoUet.

DEBE'L, v. a. DEBE'LLATE, v. a.

Lat. debello. To con-

| Lat. debilito, of de

and habilis, fit, pro-

' per. To weaken ; make

I unfit for exertion ; to

> quer ; to overcome in DEBELLA'TION, n. s. J war. Obsolete.

It doth notably set forth the consent of all nations and ages, in the approbation of the extirpating and de- bellating of giants, monsters, and foreign tyrants, not only as lawful, but as meritorious even of divine ho- nour. Bacon's Holy War.

Him long of old

Thou didst debel, and down from heaven cast With all his army. Milton,

DEBENTURE, n. s. ^ Lat. debentur, of DEBENTURED, part. S debeo, to owe. A note of debt, generally now used respecting goods entitled to an allowance at tne custom- house.

You modern wits, should each man bring his claim, Have desperate debentures on your fame ; And little would be left you, 'I'm afraid, If all your debts to Greece and Rome were paid.

Swift.

DEBENTURE is used at the custom-house for a kind of certificate, signed by the officers of the customs, which entitles a merchant, exporting goods, to the receipt of a bounty or draw back. The forms of debentures vary

according to the merchandise exported.

DEBl'LITATE, v.a.

DEBI'LE, adj.

*DEBILITA'TION, n. *. |*

DEBI'LITY. n. s. emasculate. Debile is weak, enfeebled. The substantives express a confirmed or habitual state of weakness.

I have not washed my nose that bled, Or foiled some debile wretch, which without note There's many else have done. Shakipeare.

Methinks I am partaker of thy passion, And in thy case do glass mine own debility.

Sidney.

The weakness cannot return any thing of strength, honour, or safety to the head, but a debilitation and ruin. King Charles.

The spirits being rendered languid, are incapable of purifying the blood, and debilitated in attracting nu- triment. Harvey on Consumptions.

In the lust of the eye, the lust of the flesh, and the pride of life, they seemed as weakly to fail as their debilitated posterity ever after.

Browne's Vulgar Errours.

Aliment too vaporous or perspirable will subject it to the inconveniencies of too strong a perspiration, which are debility, faintness, and sometimes sudden death. Arbuthnot.

Thus Conscience pleads her cause within the breast, Though long rebelled against, not yet suppressed, And calls a creature formed for God alone, For Heaven's high purposes, aiid not his own, Calls him away from selfish ends and aims, From what debilitates and what inflames.

Cotcper. Retirement.

DEBIR, in ancient geography, a sacerdotal city of Palestine, in the southern part of the tribe of Judah, not far from Hebron. It is also called Kirjath-sepher, and Kirjath-sannah. See Josh. xv. 15, 49.

DE-BOIS-BLANC, an island of the United States, belonging to the north-western territory, which was a voluntary gift of the Chippeway Indians, at

the treaty of peace, concluded by general Wayne, at Greenville, in 1795.

DEB'ONAIR, adj. i Fr. debonnaire, pro-

DEBOXAIR'LY, adv. \ bably from de ban air. Civil; gentle; courteous; well-bred; gay.

He, in the first flowre of my freshest age, Betrothed me unto the only haire Of a most mighty king, most rich and sage j Was never prince so faithful and so faire, Was never crince so meek and debonnaire.

Spenser. Faerie Queene.

Crying, let be that lady debonair. Id.

Zephyr met her once a-maying ; Filled her with thee, a daughter fair, So buxom, blithe, and debonair. Milton.

The nature of the one is debonair and accostable ; of the other, retired and supercilious ; the one quick and sprightful, the other slow and saturnine.

Howel's Vocal Forest.

And she thdt was not only passing fair, But was withal discreet and debonair, Resolved the passive doctrine to fulfil. Dryden.

DEBORAH, man, Heb.; i.e. a bee; the nurse of Rebecca, whom she accompanied from Padanaram, and survived. She lived in Jacob's family to an advanced age, and died near Bethel, where she was buried under an oak. Gen. xxiv. 59. xxxv. 8.

DEBORAH, a prophetess, poetess, and judge of Israel, who excited Barak to deliver his country from the oppressions of Jabin. See BARAK. Her message to Barak, her reproof for his cowardice, and her song upon the victory, are recorded in Judges iv. & v. She flourished about A.M. 2651.

DEBRUISED, in heraldry, a term peculiar to the English, by which is intimated the re- straint of any animal, debarred of its natural freedom, by any of the ordinaries being laid _ over it. Argent, a lion ram- pant; or debruised by a fesse; gules, name Charleston.

DEBT, n. s. \ Old Fr. debte ; Lat. de

DEBT'ED, part. 9 bitum, of debeo, to owe.

DEBT'OR, n. s. & adj. /That which is owed or

DEBT-ROLL, n. s. 3 due to another ; obliga- tion. Debted is used by Shakspeare for our modern word indebted. A debtor is he who owes money or any other obligation.

I am debtor both to the Greeks and to the Bar- barians, both to the wise and to the unwise.

Rom. i. 14.

This worthy man ful wel his wit besette j Ther wiste no wight that he was in dette, So stedfastly dide he his governance With his bargeine and with his cheersance. Chaucer. Prol. Cant.*

D EC 93

There was one that died greatly in debt: Well, says one, if he be gone, then he hath carried five hundred ducats of mine with him into the other world.

bacon's Apothegms.

Your son, my lord, has paid a soldier's debt ; He only lived but till he was a man, But like a man he died. Shakspeare. Macbeth.

Which do amount to three odd ducats more Than I stand delited to this gentleman. Shakspeare. I'll bring your latter hazard back again,

And thankfully rest debtor for the first. Id.

Like to a merchant's debt-role new defac't, When some cracked manour crost his books at last.

Bp. Hall's Satires, iv. 1. To this great loss a sea of tears is due ; But the whole debt not to be paid by you.

Waller.

The fashion of imperial grandeur is imitated by all inferior and subordinate sorts of it, as if it were a point of honour. They must be cheated of a third part of their estates ; two other thirds they must ex- pend in vanity ; so that they remain debtors for all tie necessary provisions of life, and have no way to sa- tisfy those debts, but out of the succours and supplies of rapine. Cowley.

Swift, a thousand pounds in debt, Takes horse, and in a mighty fret Rides day and night. Swift.

An atheist is but a mad ridiculous derider of piety ; but a hypocrite makes

a sober jest of God and reli- gion ; he finds it easier to be upon his knees than to rise to a good action : like an impuden debtor, who goes every day to. talk familiarly to his creditor, with- out ever paying what he owes. Pope.*

When I look upon the debtor side, I find such in- numerable articles, that I want arithmetick to cast them up : but when I look upon the creditor side, I find little more than blank paper. Addison.

If he his ample palm Could haply on ill-fated shoulder lay Of debtor, strait his body, to the touch Obsequious, as whilom knights were wont, To some enchanted castle is conveyed. Philipt.

Let him who sleeps too much, borrow the pillow of & debtor. A Spanish Proverb, quoted by Johnson.

DEBT, NATIONAL. See FUNDS, and NA- TIONAL DEBT.

DEBULLITION, n. s. Lat. debullitio. A bubbling or seething over.

DECACU'MINATED, adj. Lat. decacumi- natus. Having the top cut off.

*DECA'DE, n. s. I Gr. &*ac; Lat. decas.*

DECAGON, n. s. j The sum of ten; a num- ber containing ten. A decagon (adding yiavia, a corner), is a figure in plane geometry, contain- ing ten sides and angles.

Men were not only out in the number of some days, the latitude of a few years, but might be wide by whole olympiads, and divers decades of years.

Browne's Vulgar Errours.

We make cycles and periods of years ; as, decades centuries, and chiliads, chiefly for the use of compu tations in history, chronology, and astronomy.

Holder on Time.

All ranked by ten ; whole decades, when they dine, Must want a Trojan slave to pour the wine. Pope.

DECA'DENCY,n.«. Fr. decadence. Decay; fall. See DECAY.

DEC

DECAGYNIA, from Suea, ten, and yvvrj, \ woman, an order in the class decandria, consist- ing of plants, whose flowers are furnished witn ten

stamina, and the same number of styles. See BOTANY.

DE'CALOGUE, n. s. Gr. fceaXoyoc. The ten commandments given by God to Moses.

The commands of God are clearly revealed both in the decalogue and other parts of sacred writ.

Hammotiil. '

DECALOGUE, in theology, the ten command- ments, which were engraved by God on two tables of stone. The Jews, by way of eminence, call these commandments, after Deut. x. 4, the ten words, from whence they had afterwards the name of decalogue. The church of Rome has, in some catechisms, united the second command- ment, in an abridged form, with the first; and, to make their number complete, has divided the tenth into two. The reason is obvious. See Stillingfleet's Works, vol. vi. It should, in fair- ness, however, be added, that Jews, as well as Christians, have divided the commandments dif- ferently

DECA'MP, v. n. > Fr.decamper. To shift DECA'MPMENT, n. s. J the camp; to move off. The act of shifting the camp.

The king of Portugal would decamp on the twenty- fourth in order to march upon the enemy. Taller. DECA'NT, v. a.~\ Fr. decanter; Lat. de- DECA'NTER, n. s. > canto. To pour off gently DECANTA'TION. j by inclination. A decanter is a vessel made for receiving wine perfectly clear.

Take aqua fortis and dissolve it in ordinary coined silver, and pour the coloured solution into twelve times as much fair water, and then decant or filtrate the mixture, that it may be very clear. Boyle.

They attend him daily as their chief, Decant his wine, and carve his beef. Swift.

DECANUS, in Roman antiquity, an officer who presided over the ten officers, and was head of the contubernium, or serjeant of a file of soldiers.

DECA'PITATE, v. a. ? Lat. decapito. To

DEC/VPITATION. n. s. 3 behead. A behead- ing, or DECOLLATION, which see.

DECAPOLIS, in ancient geography, a dis- trict beyond Jordan, almost wholly belonging to the half tribe of Manasseh ; before the captivity, called Bethsan ; but after, occupied by heathens. It comprises, as the name

denotes, ten principal cities on the other side of the Jordan, except Scythopolis, which stood on this side, but its territory lay on the other.

DECAPROTI, DECEMPRIMI, in Roman an- tiquity, officers for gathering the taxes. The de- caproti were also obliged to pay for the dead, or to answer to the emperor, for the quota parts of such as died out of their own estates.

DECASPERMUM, in botany, a genus of the monogynia order and icosandria class of plants: CAL. perianth turbinated, quinquefid at the apex : COR. five roundish petals. The stamina are many filiform filaments, a little shorter than the corolla : PERICARP, is a dry, globular, decemlo- cular berry, with solitary egg-shaped seeds.

DECASTYLE, in the ancient architecture, a building, with an ordnance of ten columns in front, as the temple of Jupiter Olympius was.

DECA'Y, v. a., & n. & n. s. Jl Fr. decheolr ; DECAYER, w. s. j from Lat. de

and cado. To impair; to make less in value; to decline ; to lose excellence ; to be impaired.

And if thy brother be -waxen poor, and fallen in decay with thee, then thou shalt relieve him.

Levit. xxv. 35.

Cut off a stock of a tree, and lay that which you cut off to putrefy, to see whether it will decay the rest of the stock. Bacon.

Infirmity, that decays the wise, doth ever make better the fool. Shakspeare.

I am the very man

That, from your first of difference and decay, Have followed your sad steps. Id. King Lear. Your water is a sore decayer of your whorson dead body. Id. Hamlet.

She has been a fine lady, and paints and hides Her decays very well. Ben Jonion.

And those decays, to speak the naked truth, Through the defects of age, were crimes of youth.

Denliam.

He was of a very small and decayed fortune, and of no good education. Clarendon.

In Spain our springs, like old men's children, be Decayed and withered from their infancy. Dryden.

The monarch oak,

Three centuries he grows, and three he stays Supreme in state, and in three more decays.

Dryden.

By reason of the tenacity of fluids, and attrition of their parts, and the weakness of elasticity in solids, motion is much more apt to be lost than got, and is always upon the decay, Newton.

Each may feel increases and decays, And see now clearer and now darker days. Pope.

Now kindred merit fills the sable bier, Now lacerated friendship claims a tearj Year chases year, decay pursues decay, $till drops some joy from withering life away.

Johnson. Vanity of Human Withes. Alas ! the lofty city ! and alas ! The trebly hundred triumphs ! and the day When Brutus made the dagger's edge surpass The conqueror's sword in bearing fame away I Alas, for Tully's voice, and Virgil's lay, And Livy's pictured page ! — but these shall be Her resurrection ; all beside — decay. Byron

DECCAN, or the Country of the South, ac extensive region of Hindostan, bounded on the north by the Narbuddah, and on the south by the Krishna, or Kistnah river, extending across the peninsula from sea to sea. It was possessed, in former times, by the rajah of Telingana, and the Hindoo princes, and first invaded by the Mahommedans in 1293. They plundered the city of Deoghir, now called Dowlatabad, and the Tagara of Ptolemy. In the year 1306 the city and fortress were taken, and the rajah, Ram Deo, carried to Delhi. In 1 323, Warunkul, the ca- pital of Telingana, was also taken by the Ma- hommedans, and the Hindoo dynasty overthrown. For some time the Deccan remained subject to Delhi, till the governor having rebelled, laid the foundation of an independent state, under the title of the

Bhamenee sultans, whose capital was Kalberga; this was in 1347. The Bhamenee dynasty, consisting of fourteen persons, conti nued till the year 1518. On the dissolution of this empire, the DCCCJU «T

pore kingdom ; tne Kootub Shahy, or Golconda • the Nizam Shahy, or Ahmednagur ; the Um- maud Shahy, or Berar; the Beered Shahy, or Beeder.

During the reign of Aurungzebe, all these states were reduced, and the Deccan again an- nexed to the kingdom of Delhi. It was then divided into six governments, viz. Khandesh, Ahmednagur, Beeder, Golconda, Bejapore, and Berar. In subsequent reigns, these governments came under the superintendance of the Nizam, who, taking advantage of the weak state of the court of Delhi, after the Persian invasion in 1739, threw off his allegiance, became indepen- dent, and fixed his court at Hyderabad. The Mahrattas, however, were now rising into power, and the nizam was obliged to cede to them the territorities now constituting the dominions of the peishwa. See HINDOSTAN.

DECEASE, v. n. & n. s. Lat. decedo, decessus, from de and cado, to fall. To die ; to quit life : death.

He tells us Arthur is deceased to-night.

Shakspeare.

Lands arc by human law, in some places, after the owner's decease, divided unto all his children; in some, all descendeth to the eldest son. Hooker.

You shall die Twice now, where others, that mortality

In her fair arms holds, shall but once decease.

Chapman.

His latest victories still thickest came, As, near the centre, motion doth increase ;

Till he, pressed down by his own weighty name, Did, like the vestal, under spoils decease. Dryden.

DECEIT', n.s. ~\ Old Fr. decepte ; Lat.

(<

DECEH'FUL, adj

deceptus ; of de ami

DECEIT'FULLY, adv. i capio, captus, to take.

DECEIT'FULNESS, n. s. J A taking by fraud ; a fallacy ; a cheat : deceitful is, fraudulent in any degree : deceitfulness, tendency to deceive.

My lips shall not speak wickedness, nor my tongue utter deceit. Job xxvii. 4.

The care of this world, and the deceitfulness of riches, choke the word, and he becometh unfruitful.

Matt. xii. 22. His demand

Springs not from Edward's well-meant honest love, But from deceit, bred by necessity. Shakspeare.

I grant him bloody,

Luxurious, avaricious, false, deceitful. Id.

Exercise of form may be deceitfully dispatched of course. Wotton.

Those, which are plain-hearted in themselves, are the bitterest enemies to deceit in others.

Bp. Hall's Contemplations.

Outward appearances are deceitful guides to our judgment, or affections. Id.

The lovely young Lavinia once had friends, And fortune smiled, deceitfull on her birth.

Thomson.

Human nature is the same now as it was then : the heart as deceitful : and the necessity of watching, knowing, and beeping it, the same. Mason.

He, who still expects deceit, Only teaches how to cheat. Johnson's Poems.

A true artist should put a generous deceit on the spectators, and effect the noblest designs by easy me- thods. Btirfte.

DEC

French, decevoir ;

DECEIVE, v. a. ~\ i rench, decevoir ;

DECEIV'ABLE, adj. i Lat. decipio, from

DECEJV'ABLESESS, n. s. \deandcapin. See DECEIV'ER, i DECEIT. To de-

DECEIV'ING. mrt. J lude, cheat, deprive

by fraud ; hence 'to mislead, guide into error, whether by design or otherwise. Deceivable is used both for fraudulent, and for being liable or particularly exposed to fraud. Deceivable- ness also expresses both artfulness, and a liable- ness to be deceived.

For synne through occasiouii taken bi the com- maundement disseyuyde me, and bi that it slough me.

Wiclif. Romayns vii.

Be not borun aboute with ech wynd of techyng in the weiwardnesse of men in sutil witt to the disseyu- yng of errowr. Id. Effesies 4.

With all deceivableness of unrighteousness

2 Tim, ii. 10.

Sporting themselves -with their own dcceivings, •while they feast with you. 2 Pet. ii. 13.

It is no wonder thing though it be so ; A lousy jogelour can deceiven thee, And parde yet can I more craft than he.

Chaucer. Cant. Tales.

Wine is to be forborne in consumptions, for that the spirits of the wine prey upon the viscid juice of the body intercommon with the spirits of the body, and so deceive and rob them of their nourishment.

Bacon.

It is good to consider of deformity, not as a sign, which is more deceivable , but as a cause which seldom faileth of the effect. Id.

As for Perkin's dismission out of France, they in- terpreted it not as if he

were detected for a counter- feit deceiver. Id. Sig-h no more, ladies, sigh no more ;

Men were deceivers ever : One foot in sea, and one on shore ;

To one thing constant never. Shakspeare. They are worthy to be deceived that value things as> they seem. Bishop Hall. Contemplations.

He received nothing but fair promises, which proved deceivable. Hayward.

O ever failing trust

In mortal strength ! and oh, what not in man Deceivable and vain? Milton.

Man was not only deceivable in his integrity, but the angels of light in all their clarity.

Browne's Vulgar Errours. How happy he that loves not, lives ! Him neither hope nor fear deceives To fortune who no hostage gives. •Denham.

They raised a feeble cry with trembling notes, But the weak voice deceived their gasping throats.

Dry den.

Those voices, actions, or gestures, which men have not by any compact agreed to make the instruments of conveying their thoughts one to another, are not the proper instruments of deceiving, so as to denominate the person using them a liar or deceiver. South.

Some have been deceived into an opinion, that there was a divine right of primogeniture to both estate and power. Locke.

Adieu the heart-expanding bowl,

And all the kind deceivers of the soul. Pope.

He that has a great patron, has the advantage of his negligence and deceivableness.

Government of the Tongue.

By thus disguising our motives, we may impose upon men ; but at the same time we impose upon our- selves : and, whilst we are deceiving others, our own

hearts deceive us : and, of all impostures, se\f-deccptwn is the most

dangerous, because least suspected.

Mason .

I have not loved the world, nor the world me j But let us part fair foes : I do believe, Though I have found them not, that there may be Words which are things, — hopes which will not de- ceive,

And virtues which are merciful, nor weave Snares for the failing. Byron.

DECE'MBER, n. s. Lat. december. The last month of the year, named december, or the tenth month, when the year began in March.

What should we speak of

When we are old as you ? When we shall hear The rain and wind beat dark December. Shakspeare.

Men are April when they woo, and December when they wed. Id. As You Like It.

DECEMBER is the month wherein the sun en- ters the tropic of Capricorn, and makes the winter solstice. Among the ancient Romans, December was under the protection of Vesta. Romulus assigned it thirty days, Numa reduced it to twenty-nine, which Julius Caesar increased to thirty-one. In the reign of Commodus this month was called, by way of flattery, Amazonius, in honor of a courtezan, whom that prince pas- sionately loved, and had painted like an Ama- zon; but this name died with that tyrant. At the end of December they had the juveniles ludi ; and the country people kept the feast of the goddess Vacuna in the fields, having then gathered in their fruits, and sown their corn; whence seems to be derived our popular festival called harvest-home.

DECEMPEDA, SiKairovg, from decent, ten, and pes, a foot ; ten-fret rod, an instrument used by the ancients in measuring. It was a rule, or rod, divided into ten feet ; the foot was subdivided into twelve incites, and each inch into ten digits. The decempeda was used both in measuring land, like the chain among us; and by architects, to give the proper dimensions and proportions to the parts of their buildings, which use it still retains.

DECE'MPEDAL, adj. Lat. decempeda; from Gr. 8tica£. Ten feet in length.

DECEMVIRI, ten magistrates of absolute authority among the Romans. The privileges of the patricians raised dissatisfaction among the plebeians ; who, though freed from the power of the Tarquins, still saw that the administration of justice depended upon the will and caprice of their

superiors ; and it was at length agreed, that ten new magistrates, called decemviri, should be elected from the senate, to put the project into execution. Their power was abso- lute, all other offices ceased after their election, and they presided over the city with regal autho- rity. They were invested with the badges of the consul, in the enjoyment of which they succeeded by turns ; and only one was preceded by the fasces, and had the power of assembling the senate, and confirming decrees. The first decemviri were, Appius Claudius, T. Genutius, P. Sextus, Sp. Veturius, C. Julius, A. Manlius, Ser. Sulpitius, Pluriatius, T. Romulus, and Sp. Posthumius; A.U.C. 302. Under them the'

taws, which had been exposed to public view, were publicly approved of as constitutional, and ratified by the priests and augurs, in the most solemn manner. They were ten in number, and were engraved on tables of brass ; two were afterwards added, whence they were called the laws of the twelve tables, leges XII tabularum, and leges decemvirales. The decemviral power, which was at first beheld by all ranks of people with the greatest satisfaction, was continued ; but in the third year after their creation, the decem- viri became odious on account of their tyranny; and the attempt of Ap. Claudius to ravish Vir- ginia totally abolished the office. Consuls were again appointed, and tranquillity re-established in the state. There were other officers in Rome called decemviri, who were originally appointed in the absence of the praetor, to administer jus- tice. Their appointment became afterwards ne- cessary, and they generally assisted at sales, called subhastationes, because a spear, hasta, was fixed at the door of the place where the goods were exposed to sale. They were called decem- viri litibus judicandis. The officers, whom Tar- quin appointed to guard the Sybilline books, were also called decemviri. They were ori- ginally two in number, called duumviri, till A. U.C. 388, when their number was increased to ten, five of whom were chosen from the ple- beians and five from the patricians. Sylla in- creased their number to fifteen, hence called quindecemvirs.

DE'CENCE, or \ Fr. decence ; Lat. de DE'CENCY, n. s. \tet, it becometh. Pro- DE'CENT, adj. i priety of form or man-

DE'CENTLY. adv. J ner, principally the lat- ter; modesty. Decent is, becoming; fit; suit- able; and hence sometimes applied to that which is grave or formal.

Come, pensive nun, devout and pure, Sober, stedfast, and demure, All in a robe of darkest grain Flowing with majestick train, And sable stole of Cyprus lawn O'er the decent shoulders drawn. Milton.

Those thousand decencies that daily flow From all her words and actions. Id.

They could not decently refuse assistance to a per- son, who had punished those who had insulted their relation. Broome.

And must I own, she said, my secret smart, What with more decence were in silence kept ?

Dry den.

Since there must be ornaments both in painting and poetry, if they are not necessary, they must at least be decent ; that is, in their due place, and but moderately used. Id.

Past hope of safety, 'twas his latest care, Like falling Caesar, decently to die. Id.

The consideration immediately subsequent to the being of a thing, is what agrees or disagrees with that thing ; what is suitable nr unsuitable to it ; and from this springs the notion of decency of indecency, that which becomes or misbecomes. South.

In good works there may be goodness in the ge- neral : but decence and gracefulness can be only in the particulars in doing the good. Sprat.

Immodest words admit of no defence ; For want of decency is want of sense. Roscommon.

>S DEC

Performed what friendship, justice, truth require , What could he more, but decently retire ? Swift.

Were the offices of religion stript of all the external decencies of worship, they would not make a due im- pression on the minds of those who assist at them.

A tterbwry.

She speaks, behaves, and acts just as she ought ; But never, never reached one generous thought ; Virtue she finds too painful an endeavour, Content to dwell in decencies for ever. Pope.

Sentiments which raise laughter, can very seldom he admitted with any decency into an heroick poem.

Addison.

Give every bishop income enough, not for display of wordly pomp and fashionable luxury, but to ena- ble him to maintain works of charity, and to make a decent provision for his family. Bishop Watson.

DECE'NNIAL, adj. From Lat. decennium. Continuing for the space of ten years.

DECENNALIA, ancient Roman festivals, celebrated by the emperors every tenth year of their reign, with sacrifices, games, and largesses for the people. Augustus first instituted these solemnities, in which he was imitated by his suc- cessors.

DECENNO'VAL, adj.) Lat. decem and

DECENNO'VARY) novem. Relating

to the number nineteen.

Melon, of old, in the time of the Peloponnesian war, constituted a decennoval circle, or of nineteen years ; the same which we now call the golden num- ber. Holder.

Seven months are retrenched in this whole ilecen- novary progress of the epacts, to reduce the accounts of her motion and place to those of the sun. Id.

*DECE'PTION. n. s. *} From Lat. deccptio.*

DECEPTIBI'LITY, I See DECEIT. Fraud;

DECE'PTIBLE, adj. (the act or means of

DECE'PTIOUS, (fraud. Deceptibility,

DECE'PTIVE, , and deceptible, ex-

DECE'PTORY. J press a liableness to

imposture ; deceptious and deceptive, the power

or design of deceiving. Deceptoiy, says Dr.

Johnson, is, containing means of deceit.

Yet there is a credence in my heart, That doth invert the' attest of eyes and

ears ; As if those organs had deceptious functions, Created only to calumniate. Shakspeare.

Reason, not impossibly, may meet Some spacious object by Ihe foe suborned, And fall inlo deception unaware. Milton.

The first and father cause of common errour, is the common infirmity of human nature ; of whose decep- tible condition, perhaps, there should not need any other eviction, than the frequent errours we shall ourselves commit. Browne.

Being thus divided from truth in themselves, they are yet farther removed by advenient deception. Id.

All deception is a misapplying of those signs, which, by compact or institution, were made the means of men's signifying or conveying their thoughts.

South.

Some errours are so fleshed in us, that they main- tain thr.ir interest upon the deceptibility of our decayed natures. ' Glanville.

DECE'RPT, adj. 1 Lat, decerptm. Crop- DECE'RPTIELE, adj. / ped ; taken off. That DECE'RPTION, n. s. J which may be, or is taken off; the act of taking off.

If our souls are decerptions of our parents, then I must have been guilty of all the sins that ever were committed by my progenitors ever since Adam.

Glawville.

DECERTATION, n. s. Lat. decertatio. A contention; a striving; a dispute.

DECE'SSION, n. s. Lat. decessio. A de- parture ; a going away.

DECHA'RM, v. a. Fr. decharmer. To coun- teract a charm ; to disenchant.

Notwithstanding the help of physick, he was sud- denly cured by dectiarming the witchcraft. Harvey.

DECI'DE, v. a. & v. n.ˆ Fr. decider ; Ital.

DECI'DEDLY, adv. decidere ; Lat. deci-

DECI'DER, n. s. do, from de and ca-

DECIS'ION, (do, or scindo. To cut

DECIS'IVE, adj. (short a controversy,

DECISIVELY, adv. says Minsheu. To

DECIS'IVENESS, n. s. fix an event or is-

DECIS'ORY. J sue ; to determine.

A decider is a judge of controverted matters.

Decision, the act or habit of determining, and

sometimes of determining promptly. Decisory,

able to determine.

The time approaches, That will with due decision make us know What we shall say we have, and what we owe.

Shakspeare. Pleasure and revenge

Have ears more deaf than adders to the voice Of any true decision. Id.

The day approached, when fortune should decide The important enterprise, and give the bride.

Dryden.

Their arms are to the last decision bent, And fortune labours with the vast event. Id.

In' council oft, and oft in battle tried, Betwixt thy master and the world decide.

Granville.

The man is no ill decider in common cases of pro- perty, where party is out of the question. Swift.

?uch a reflection, though it carries nothing per- fectly decisive in it, yet

creates a mighty confidence in his breast, and strengthens him much in his opinion.

Atterbury.

War is a direct appeal to God for the decision of some dispute, which can by no other means be de- termined. Id.

Who shall decide, when doctors disagree, And soundest casuists doubt? Pope.

I cannot think that a jester or a monkey, a droll or a puppet, can be proper judges or deciders of con- fovcrsy . . Watts.

For on the event,

Decisive of this bloody day, depends The fate of kingdoms. Philips.

1 never troubled myself with answering any argu- ments which the opponents in the divinity-schools brought against the articles of the church, nor ever admitted their authority as decisive of a difficulty ; but I used on such occasions to say to them, holding the New Testament in my hand, ‘ En sacrum codicem !’

Bp. Watson.

DE’CIDENCE, n. s. Lat. decidentia. The quality of being shed, or of falling away ; the act of falling away.

Men observing the decidence of their horn, do fall upon the conceit thut it annually rotteth away, and successively reneweth again.

Browne’s Vulgar Errouri. VOL. VTI.

DECI’DUOUS, adj.) Lat. dcciduui. Fall-

DECI’DUOUSNESS, n. s. j ing ; not perennial ; not lasting through the year.

In botany, the perianthium, or calyx, is deciduous, with the flower. Quincy.

DECIL, in astronomy, an aspect or position of two planets, when they are distant from each other a tenth part of the zodiac.

DE’CIMAL, adj. Lat. decimus. Numbered or multiplied by ten.

In the way we take now to name numbers by mil- lions of millions of millions, it is hard to go beyond eighteen, or, at most, four-and-twcnty

decimal pro- gressions, without confusion. Locke.

DECIMAL ARITHMETIC, the art of computing by decimal fractions. See ARITHMETIC, Index. DE'CIMATE, v. a. J Lat. decimus. To DECIMA'TION, n. s. $ tithe ; to take the tenth ; a tithing ; a selection by lot of every tenth sol- dier, in a general mutiny, for punishment.

By decimation and a tithed death, Take thou the destined tenth. Shakspeare.

A decimation I will strictly make Of all who my Charinus did forsake ; And of each legion each centurion shall die.

Dryden.

DECIMATION was a punishment inflicted by the ancient Romans, on such soldiers as quitted their posts, or behaved themselves cowardly in the field. The names of the guilty were put into an urn, or helmet, and as many were drawn out as made the tenth part of the whole number, and those were put to the sword, and the others saved. The ancient Roman militia, to punish whole legions when they had failed in their duty, made the soldiers draw lots, and put every tenth man to death for an example. The Romans had also the vicesimatio, and even centisimatio, when only the twentieth or hundredth man suf- fered by lot.

DECI'PHER, v. a. Fr. dechiffrer, from de and cipher. See CIPHER. To explain that which is written in ciphers ; hence to unfold; to explain; to write out.

Zelmane, that had the same character in her heart, could easily decipher it. Sidney.

Assurance is writ in a private character, not to be read, nor understood, but by the conscience, to which the Spirit of God has vouchsafed to decipher it.

, South.

Could I give you a lively representation of guilt and horrour on this hand, and point out eternal wrath and decipher eternal vengeance on the other, then might I shew you the condition of a sinner hearing himself denied by Christ. Id.

Then were laws of necessity invented, that so every particular subject might find his principal pleasure deciphered unto him, in the tables of his laws.

Locke.

DECIPHERING, the art of reading or explain- ing ciphers. See CIPHER.

DECIUS (Cn. Mctius), a native of Pannonia, sent by the emperor Philip, to appease a sedition in Mcesia. Instead of obeying his master's com- mand, he assumed the imperial purple, and soon after marched against him, and, at his death, became the only emperor. He signalised himself against the Persians ; but whes he marched against the Goths, he pushed his horse

into a deep marsh, from which he could not ex- tricate himself, and perished, with all his army, by the darts of the barbarians, A.D. 251, after a reign of two years.

DECIUS Mus, the name of three patriotic Ro- mans, viz. 1 . a celebrated consul, who, after many glorious exploits, devoted himself to the gods manes, for the safety of his country, in a battle against the Latins, about 340 years before the Augustan age. 2. His son, Decius Mus, imi- tated his example and devoted himself, in like manner, in his fourth consulship, when fighting against the Gauls and Samnites. 3. His grand- son also did the same in the war against Pyrrhus and the Tarentines.

DECK, v. a. & n. s. ? Sax. ocean, fcecan ;

DE'CKER, n. s. y Bel. decken; from Lat.

tego, tectum. To cover ; to adorn ; ornament ; dress. A deck is the covering of a ship's hold.

His goodly image, liuing eucnuore In the diuine resemblaunce of your face, Which with your vertues ye embellish more, And natiue beauty deck with heuenlie grace.

Spenser. Sonnets.

We have also raised our second decks, and given more vent thereby to our ordnance, trying on our nether overloop. Raleigh.

Sweet ornament ! that decks a thing divine.

Shakipeare.

Long may'st thou live to wail thy children's loss, And see another, as I see

thee now, Decked in thy rights, as thou art stalled in mine.

Id.

Her keel plows hell, And deck knocks heaven. Ben Jonson.

The ruder Satyre should go ragged and bare, And show his rougher and his hairy hide, Tho' mine be smooth, and dcckt in carelesse pride. Bp. Hall. Defiance to Envy.

Ye mists and exhalations, that now rise From hill or steaming lake, dusky or grey, Till the sun paint your fleecy skirts with gold ; In honour to the world's great Author, rise ! Whether to deck with clouds the uncoloured sky, Or wet the thirsty earth with falling showers, Rising or falling, still advance his praise. Milton. How the dew with spangles decked the ground , A sweeter spot of earth was never found. Dryden.

At sun-set to their ship they make return, And snore secure on decks till rosy morn.

Id. Mneid.

If any, born and bred under deck, had no other in- formation but what sense affords, he would be of opi- nion that the ship was as stable as a house.

Glanvtile.

Besides gems, many other sorts of stones are re- gularly figured : the amianthus, of parallel threads, as in the pile of velvet ; and the selenites, of parallel plates, as in a deck of cards. Grew.

It was intended by the means of these precepts, not to deck the mind with ornaments, but to protect it from nakedness ; not to enrich it with affluence, but to supply it with necessaries.

Johmon. Preface to Preceptor.

DECK, the planked floors of a ship, which connect the sides together, and serve as different platforms to support the artillery and lodge the men ; as also to preserve the cargo from the sea, in merchant-vessels. As all ships are broader at the lower deck than on the next above it, and as the cannon thereof are always heaviest, it is

DEC

necessary that the frame of it should be much stronger than that of the

others; and, for the same reason, the second, or middle-deck, ought to be stronger than the upper-deck or forecastle. Ships of the first and second rates are furnished with three whole decks, reaching from the stem to the stern, besides a forecastle and a quarter- deck, which extends from the stern to the main- mast ; between which and the forecastle, a va- cancy is left in the middle, opening to the upper deck, and forming what is called the waist. The inferior ships of the line-of-battle are equipped with two decks and a-half; and frigates, sloops, &c. with one gun-deck and a-half, with a spar- deck below to lodge the crew. The decks are formed and sustained by the beams, the clamps, the water-ways, the carlings, the ledges, the knees, and two rows of small pillars, called stanchions, &c. See SHIP-BUILDING.

DECK, FLUSH, implies a continued floor laid from stem to stern, upon one line, without any stops or intervals.

DECK, HALF, a space under the quarter-deck of a ship of war, contained between the fore- most bulk-head of the steerage and the forepart of the quarter-deck. In the colliers of North- umberland, the steerage itself is called the half- deck, and is usually the habitation of the crew.

DECKENDORF, a town of Bavaria, near the Danube. In the year 1633 it was taken by the troops of the duke of Saxe-Weimar, and re- taken by the Swedes in 1641. It is twenty-eight miles north-west of Passau, and thirty-eight E.S.E. of Ratisbon. Long. 123 55′ E., lat. 46° 50′ N.

DECLA'IM, v. a. & n.} Fr. declamer ; Ital .

DECLA'IMER, n. s. I declamutore ; of Lat.

DECLAIMING, «. s. •dedamo, from de and

DECLAMA'TION, i clamn, to call aloud.

DECLA'MATORY, adj. J — To harangue; to speak with formality or vehemence ; to address the passions rather than the judgment. Some- times a college theme or composition is termed particularly, a declamation.

The cause why declamations prevail so greatly, is, for that men suffer themselves to be deluded.

Hooker.

What are his mischiefs, consul 1 You declaim Against his manners, and corrupt your own.

Ben Jonson,

This a while suspended his interment, and became a declamatory theme amongst the religious men of that age. Wotton.

Thou mayest forgive his anger, while thou makest use of the plainness of his declamation. Taylor.

He has run himself into his own declamatory way, and almost forgotten that he was now setting up for a moral poet. Dryden.

*The splendid declaiming! of novices and men of heat**

Smith.

It is usual for masters to make their boys declaim on both sides of an argument. Swift.

Your salamander is a perpetual declaimer against jealousy. Additon.

Who could, I say, hear this generous declamator, without being fired at his noble zeal 1 Tatler.

Dress up all the virtues in the beauties of ora- tory, and declaim aloud on the praise of goodness.

Watte.

DEC

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DEC

I every week imposed upon myself a task of com- posing a theme or a declamation in Latin or English. 1 had great pleasure in lately finding among my pa- pers two of these declamations ; there is nothing excel- lent in either of them, yet I cannot help valuing them, &c. Bishop Watson.

DECLAMATION may be defined a speech made in public, in the tone and manner of an oration, uniting the expression of action to the propriety of pronunciation, in order to give the sentiment its full impression upon the mind. See ORA- TORY. The word is now principally used in a derogatory sense.

Fr. declarer; Span, and Port, dedarar ; Lat. dedaro, of de and c/arus, clear. To make clear, plain, 'or well known. As a neuter verb, with for or

against, to pub- lish an opinion or re-

DECLA'RABLE, adj. DECLARATION, n. s. DECLARATIVE, adj. DECLARATORY, adj. DECLARATORILY, adv. DECLAREDLY, adv. DECLAREMENT, n. s. DECLARER,

DECLARING, part. J solution. That is de- clarable which is capable of proof: declaration and declarement, the instrument or act of making a thing clear or known: declarative is ex- planatory : declaratory, in the form of a decla- ration : declaratory, affirmative, or that which openly expresses a doubtful, obscure sense, or law : declaredly, avowedly. Declaring, as a sub- stantive, is synonymous with declaration.

Declare his glory among the heathen.

1 Chron. xvi. 24.

Which things, the most part of our old martyrs rather than they would doe, or once kneel or offer up one crumbe of incence before an image, suffered most crewell and terrible deaths, as the histories of them at large do declare.

Homilies. Sermon against Perill of Idolatry. And bi three sabotis he declaride to hem of scrip- turis, and openyde and schewide, that it bihofte crist to suffre, and rise aghen fro deeth.

Wiclif. Dedi. 17.

Nought may the woful spirit in myn herte Declare o' point of all my sorwes smerte To you my lady, that I love most, But I bequethe the service of my gost.

Chaucer. Cant. Tales. They on humble knee Making obeysaunce, did the cause declare Why they were come her roiall state to see, To prove the wide report of her great maiest'ie.

Spenser. Faerie Queene.

His promises are nothing else but declarations what God will do for the good of men. Hooker.

In Caesar's army somewhat the soldiers would have had, yet they would not declare themselves in it, but only demanded a discharge. Bacon.

This is declarable from the best writers. Browne. Crystal will calefy into electricity ; that is, into a power to attract straws, or light bodies ; and convert ihfl needle freely placed, which is a declarement of very different parts. Id.

Andreas Alciatus the civilian, and Franciscus de Cordua, have both declaratorily confirmed the same. Id. Vulgar Errours.

To declare this a little, we must assume that the suriaccs of su> h bodies are exactly smooth. Boyle.

"The internal faculties of will and understanding d.crttiag and declaring against them. Taylor,

These blessings are not only declaratory of the good pleasure and intention of God towards them, but like- wise of the natural tendency of the thing. Tillotson.

There are no where so plain and full declarations of mercy and love to the sons of men, as are made in the gospel. Id.

The sun by certain signs declares, Both when the south projects a stormy day, And when the clearing north will puff the cloud away.

Dry den's Virgil.

God is said not to have left himself without witness in the world ; there being something fixed in the na- ture of men, that will be sure to testify and declare for him . South's Sermons.

Though wit and learning are certain and habitual perfections of the mind, yet the declaration of them, which alone brings the repute, is subject to a thousand hazards. South.

To this we may add the vox populi, so declarative on the same side. Swift.

A declared gout is the distemper of a gentleman ; whereas, the rheumatism is the distemper of a har.kney- coachman or chairman, who are obliged to be out at all weathers, and in all hours. Chesterfield.

I have had and used the opportunities of conversing with men of the greatest wisdom and fullest experience in those matters, and I do declare to you most solemnly and most truly, that on the result of this reading,

thinking, experience, and communication, I am not able to come to au immediate resolution in favour of a change of the groundwork of our constitution.

Burke.

My declared opposition to the increased and increas- ing influence of the Crown had made a great impres- sion on His Majesty's mind ; for on the day I did homage, he asked the Duke of Rutland if his friend the Bishop of Landaff was not a great enemy to the influence of the Crown. Bishop Watson.

DECLINE', v. a.,v. n. &. n s.ˆ Fr. decll-

DECLEN'SION, n. s. t ner ; Span.

DECLIN'ABLE, adj. f and Port. de-

DECLINA'TION, n. s. [dinar; Ital.

DECLIN'ATOR, 1 dedinaire ;

DECLIN'ATORY. J Lat. dedino,

from deorsum, downwards, and dino, to bind ;

Gr. eXivw. — Minsheu. To bend downwards ;

to bring down ; to shun; avoid; sink : as a neuter

verb, to lean or incline downward ; to deviate ;

to sink ; decay. Decline, as well as declension,

signifies also the state of decrease, or alteration

for the worse ; a tendency to a less degree of

excellence ; descent. Declinable is principally

a term of grammar, and expresses that quality of

words whereby they can be traced to their roots.

Declination, and declinator, are also scientific

terms, for which see the articles following :

Neither shalt thou speak in a cause to decline after many, to wrest judgment. Exodus xxiii. 2.

And now fair Phoebus 'gan decline in haste His weary waggon to the western vale. Spenser.

The queen, hearing of the declination of a mo- narchy, took it so ill, as she would never after hear of his suit. Bacon.

They'll be by the fire, and presume to know What's don i' th' capitol ; who's like to rise, Who thrives, and who declines. Shakspeare,

Sons at perfect age, and fathers declining, the father should be as a ward to the son. Id.

A beauty-waining and distressed widow, Even in the afternoon of her best days, Seduced the pitch and height of all his thoughts, To base declension. Id. Richard III.

Since the muses do invoke my power, I shall no more decline that sacred bower, Where Gloriana, their great mistress, lies. Waller.

Hope waits upon the flow'ry prime ; And summer, though it be less gay,

Yet is not looked on as a time Of declination or decay. Id.

Sometimes nations will decline so low From virtue, which is reason, that no wrong, But justice, and some fatal curse annexed, Deprives them of their outward liberty. Milton. And nature, which all acts of life designs, Not like ill poets, in the last declines. Denham.

He had wisely declined that argument, though in their common sermons they gave it. Clarendon.

If it should be said that minute bodies are indis- soluble, because it is their nature to be so, that would not be to render a reason of the thing proposed, but, in effect, to decline rendering any. Boyle.

That a peccant creature should disapprove and re- pent of every

declination and violation of the rules of just and honest, this right reason, discoursing upon the stock of its own principles, could not but infer.

South's Sermons.

Thus then my loved Euryalus appears ; He looks the prop of my declining years ! Dryden.

Autumnal warmth declines ; Ere heat is quite decayed, or cold begun. Id.

There is no declination of latitude, nor variation of the elevation of the pole, notwithstanding what some have asserted. Woodward.

• *Thy rise of fortune did I only wed, From its decline determined to recede. Prior.*

We may reasonably allow as much for the declen- sion of the land from that place to the sea, as for the immediate height of the mountain. Burnet's Theory.

Those fathers lived in the decline of literature.

Swift.

Faith and morality are declined among us. Id.

God, in his wisdom, hath been pleased to load onr declining years with many sufferings, with diseases, and decays of nature. Id.

Whatever they judged to be most agreeable or dis- agreeable, they would pursue or decline. Atterbury.

Supposing there were a declination of atoms, yet will it not effect what they intend ; for then they do all decline, and so there will be no more concourse than if they did perpendicularly descend. Ray.

You decline mnsa, and construe Latin, by the help of a tutor, or with some English translation. Watts.

There are several ways to know the several planes ; but the readiest is by an instrument called a declina- tory , fitted to the variation of your place. Moxon.

Declension is only the variation or change of the termination of a noun, whilst it continues to signify the same thing. Clarke's Latin Grammar.

And leaves the semblance of a lover, fixt

In melancholy deep, with head declined,

And love-dejected eyes. Thomson.

The surest way to conquer, is sometimes to decline a battle ; to weary out the enemy, by keeping him at bay. Mason.

But, though the felon on his back could dare The dreadful leap, more rational, his steed Declined the death, and wheeling swiftly round , Or e'er his hoof had pressed the crumbling verge.

Cowper.

This praise, O Cheronean sage, is thine !

Why should this praise to thee alone belong ? All else from Nature's moral path decline, Lured by the toys that captivate the throng.

Beattie.

Statues of glass — all shivered — the long file Of her dead Doges are declined to dust ; But where they dwelt, the vast and sumptuous pile Bespeaks the pageant of their splendid trust.

Byron.

DECLINATION, in astronomy, is either north or south, and either true or apparent, accord- ing as the real or apparent place of the object is considered. See ASTRONOMY.

DECLIVITY, 7i. s. t Old Fr. decliviti ;

DECLIVOUS, adj. $ from the Lat. declivis, decline. See DECLINE. Descent; obliquity; downwards; gradual descent, opposed to ac- clivity.

Rivers will not flow unless upon declivity, and their sources be raised above the earth's ordinary surface, so that they may run upon a descent. Woodward.

I found myself within my depth ; and the decli- vity was so small, that I walked near a mile before I got to the shore. Gulliver's Travels.

And on thy happy shore a temple still, Of small and delicate proportion, keeps, Upon a mild declivity of hill, Its memory of thee ; beneath it sleeps Thy current's calmness. Byron.

DECOCT, v. a. \ Fr. decoction; Ital. de DECOCTION, n. s. f coctione ;

Span.DECOCTIBLE, adj. {from Lat. decoctus, of de DECOCTURE, n. s. 3 and coquo, to seethe. To extract the virtues of any thing by boiling, or heat. Shakspeare uses it, barbarously enough, for strengthening by boiling ; decoction is the act of boiling to extract the virtue, or the pre- paration decocted ; and the latter seems the meaning also of decocture.

Sena loseth its windiness by decocting ; and subtile or windy spirits are taken off by incension or evapo- ration. Bacon.

In infusion, the longer it is, the greater is the part of the gross body that goeth into the liquor : but in decoction, though more goeth forth, yet it either purgeth at the top, or settleth at the bottom. Bacon.

Can sodden water, their barley broth, Decoct their cold blood to such valiant heat ?

Shakspeare.

They distil their husbands' land In decoctions ; and are manned With ten empirics, in their chamber Lying for the spirit of amber. Ben Junson.

There she decocts, and doth the food prepare ; There she distributes it to every vein; There she expels what she may fitly spare. Danes.

The lineaments of a white lily will remain after the strongest decoction. Arbuthnot.

DECOLLATE, v. a. \ Fr. decoller. From DECOLLATION, n. s. S Lat. decollatio, de and collum, the neck. To behead ; a beheading, or decapitation. Applied also metaphorically

A fine piece (a painting) of a decollated head of St. John the Baptist was shewn to a Turkish Empe- ror ; he praised many things, but he observeii that

the skin did not shrink from the wounded part of the neck. Burke on the Sublime.

He by a decollation of all hope, annihilated his mercy ; this, hy an immoderancy thereof, destroyed his justice. Brown.

DE'COMPOSE, v. a. -\ Fr. decomposer ;

DECOMPOS'ITE, adj. /Lat. decompono,

DECOMPOSITION, n. s. fdccompositus, of

DE'COMPOUND, v. a, & adj. s de and compono,

composui, to COMPOSE, which see. To compound

a second time, to dissolve (chemically), seem

alike the meaning of both verbs. Decomposite and

decompound, as adjectives, mean compounded a

second time. Decomposition, the actor practice

of so compounding, or a resolution of the parts

of things chemically.

Decomposites of three metals, or more, are too long to enquire of, except there be some compositions of them already observed. Bacon.

The pretended salts and sulphur are so far from being elementary parts extracted out of the body of mercury, that they are rather, to borrow a term of the grammarians, decompound bodies, made up of the whole metal and the menstruum, or other additaments employed to disguise it. Boyle.

We consider what happens in the compositions and decompositions of saline particles. Id.

No body should use any compound or decompound of the substantial verbs. Arbuthnot and Pope.

When a word stauds for a very complex idea, that is compounded and decompounded, it is not easy for men to form and retain that idea exactly, Locke.

If the violet, blue, and' green be intercepted, the remaining yellow, orange, and red will compound upon the paper an orange ; and then if the intercepted co- lours be let pass, they will fall upon this compounded orange, and, together with it, decompound a white.

Newton.

Bees' wax becomes bleached by exposure to the sun and dews in a similar manner as metals become calcined or rusty, viz., by the water on their surface being decomposed ; and hence the inflammable mate- rial which caused the colour becomes united with vital air forming a new acid, and is washed away.

Darwin.

In preparing the salt from the brine, there is a re- fuse part, which is formed by the separation and de composition of the grosser particles from the pure salt.

Sir T. Barnard.

DECOMPOSITION, in chemistry, usually signi- fies the disunion or separation of the constituent parts of bodies. It differs from mere mechanical division, in that, when a body is chemically de- composed, the parts into which it is resolved are essentially different from the body itself; but though a mechanical force is applied to it ever so long, or if with ever so much violence, the minutest particles into which the body may be reduced, still retain their original nature. Thus, let nitre be reduced to ever so fine a powder, each particle retains the nature of nitre as much as the compounded mass ; but, if oil of vitriol is applied, a decomposition takes place, and one of the largest component parts of the nitre rises in the form of a smoking acid spirit, which never could have been suspected to lie hid in the neu- tral salt. See CHEMISTRY.*

Fr. decorer ; Ilal. de-

DE'CORATE, a a.

DECOR'AMENT, n. s. {corature ; from Lat. dc- DECORA TION, n. s. t coro, ofdecus, honor. To DEC'ORATER j adorn, beautify, dress,

embellish. Decorament seems synonymous wilh

decoration.

The ensigns of virtues contribute to the ornament of figures ; such as the decorations belonging to the li- beral arts, and to war. Dryden.

After all, to inherit is not to acquire, to decorate is not to make. Johnson.

DE'COROUS, adj.) Lat. decorus, decel, DECO'RUM, n. s. S it becometh. See DE-

CORATE. Befitting, becoming, proper, suitable to character or station ; therefore decorum is be coming gravity and seemliness of behaviour.

If your master

Would have a queen his beggar, you must tell him That majesty, to keep decorum, must No less beg than a kingdom. Shakspeare.

I am far from suspecting simplicity, which is bold to trespass in points of decorum. Wotton.

Every one is a virtuoso, of a higher or lower de- gree : every one pursues a Grace, and courts a Venus of one kind or another. The venestums, the hones- turns, the decorum of things, will force its way.

Shaftesbury.

Beyond the fixed and settled rules Of vice and virtue in the schools, The better sort shall set before 'em A grace, a manner, a decorum. Prior

Gentlemen of the army should be, at least, obliged to external decorum : a profligate life and character should not be a means of advancement. Swift.

It is not so decorous, in respect of God, that he should immediately do all the meanest and triflingest things himself, without any inferiour or subordinate minister. Ray.

If the prudence of reserve and decorum dictates si- lence in some circumstances, in others prudence of a higher order may justify us in speaking our thoughts.

Burhe. No band of friends or heirs be there.

To weep, or wish, the coming blow • No maiden, with disshevelled hair,

To feel, or feign, decorous woe. Beattie.

DECO RTICATE, v. a.) Lat. decortico.— DECORTICA'TION, n. s. } To divest of the

bark or husk ; to husk ; to peel ; to strip.

Take great barley, drie'l and decorticated, after it is

well washed, and boil it in water. Arbuthnot.

DECOY, v. a. & n. s. } From Goth, duck and DECOY'DUCK, n. s. } kui, or

Dut koey, a

cage. To entrap ducks into a net, or otherwise ;

and hence to entrap or ensnare generally. The

*decoy-duck is the instrument of lure. Se°**

below.

A fowler had taken a partridge, who offered to de- ooy her companions into the snare. L' Estrange.

These exuberant productions of the earth became a continual decoy and snare : they only excited and fo- mented lusts. Woodward.

The Devil could never have had such numbers, had he not used some as decoys to ensnare others.

Government of the Tongue.

An old dramdrinker is the Devil's decoy. Berkeley

There is a sort of ducks, called decoy-ducks, that will bring whole flights of fowl to their retirements, where are conveniences made for catching them.

Mortimer.

Decoyed by the fantastic blaze, Now lost, and now renewed, he sinks absorpt, Rider and horse. Thornton.

A stifled smile of stern vindictive joy Brightened one moment Edwin's starting tear, But why should gold man's feeble mind decoy And innocence thus die by doom severe ? Beati'tc.

DECOY, among fowlers, a place made for catch- ing wild fowl. A decoy is generally made where there is a large sheet of water surrounded with wood, and beyond that a marshy and unculti- vated country. As soon as the evening sets in, the decoy rises, as they term it, and the wild fowl feed during the night. The decoy-ducks are fed with hemp-seed, which is thrown over the skreens in small quantities, to bring them for- wards into the pipes

or canals, and to allure the •wild fowl to follow, as this seed floats. There are several pipes, as they are called, which lead up a narrow ditch that closes at last with a fun- nel net. Over these pipes, which grow nar- rower from their first entrance, is a continued arch of netting suspended on hoops. It is neces- sary to have a pipe or ditch for almost every wind that can blow, as upon this circumstance it depends which pipe the fowl will take to; and the decoy-man always keeps on the leeward side of the ducks, to prevent his effluvia reaching their sagacious nostrils. All along eacli pipe, at cer- tain intervals, are placed skreens made of reeds, so situated, that it is impossible the wild-fowl should see the decoy-man, before they have passed on towards the end of the pipe, where the purse-net is placed. The inducement of the wild-fowl to go up one of these pipes is, because the decoy-ducks trained to this lead the way, either after hearing the whistle of the decoy-man, or enticed by the hemp-seed : the latter will dive under water, whilst the wild-fowV fly on, and are taken in the purse net. It often happens, how- ever, that the wild-fowl are in such a state of sleepiness and dozing, that they will not follow the decoy-duck. Use is then generally made of a dog, who is taught his lesson ; he passes back- wards and forwards between the reed-skreens, in which are little holes, both for the decoy-man to see, and the dog to pass through; this attracts the eye of the wild-fowl, who, not choosing to be interrupted, advance towards the small and con- temptible animal, that they may drive him away. The dog all the time, by the direction ef the decoy-man, plays among the screens of reeds, nearer and nearer the purse-net ; till at last the man appears behind a screen, and the wild-fowl not daring to pass by him in return, nor being able to escape upwards, on account of the net covering, rush on into the net. Sometimes the dog will not attract their attention, if a red hand- kerchief, or something very singular, is not put about him. The general season for catching fowls in decoy, is from the end of October till February. Decoys are commonly let at a certain annual rent, and yield large quantities of ducks, wigeons, and teal; but they have been diminished

in number by the recent drainage of many of the fenny parts of England.

DECREASE,u.a.&n.ccn..?. \ Lat. decresco, DE'CREMENT, n.s. >from de, and

DECRESCENT, adj. j cresco, to in-

crease. To make less ; diminish : as a neuter verb, to grow less ; be diminished. The state or act of growing less : decrement is the quantity lost in decrease; and decrescent, growing less.

From the moon is the sign of feasts, a light that de- creaseth in her perfection. Eccles. xliii. 7.

He did dishonourable find Those articles, which did our state decrease.

Daniel.

See "in what time the seeds, set in the increase of the moon, come to a certain height, and how they dif- fer from those that are set in the decrease of the moon.

Bacon.

Unto fifty years, as they said, the heart annually increaseth the weight of one drachm ; after which, in the same proportion, it decreaseth.

Browne's Vulgar Errours.

Upon the tropick, and first descension from our sol- stice, we are scarce sensible of declination ; but de- clining farther, our decrement accelerates : we set apace, and in our last days precipitate into our graves.

Id.

Rocks, mountains, and the other elevations of the earth, suffer a continual decrement, and grow lower and lower. Woodward.

By weakening toil and hoary age o'ercome, See thy decrease, and hasten to thy tomb. Prior.

Heat increases the fluidity of tenacious liquids, as of oil, balsam, and honey •, and thereby decreases their resistance. Newton.

When the sun comes to his tropicks, days increase and decrease but a very little for a great while together.

Id.

They who are now, like the Baptist, burning and shining lights, must like him gradually decrease, while others are increasing about them.

Doddridge's Expositor.

DECREE', v. a., v. n. & n. s.ˆ Fr. decret,

DECRE'TAL,

DECRE'TIST,

DECRE'TORY, from Lat. decretum ; qu. Gr. Kptvw, to judge. To doom or

decide formally or publicly ; to make an edict; to establish by law; resolve. A de- cree is the edict, law, rule, or decision. Decre- tal, a book of decrees or laws, and particularly of the popes : decretist, he who professedly studies or is skilled in the decretals : decretory, judicial, decisive, final.

When he made a decree for the rain, and a way for the lightning of the thunder. Job xxviii. 26.

There went a decree from Caesar Augustus, that al the world should be taxed. Luke ii. 1.

They shall see the end of the wise, and shall not understand what God in his counsel hath decreed of him. Wisdom iv.

The second room, whose walls

Were painted fair with memorable gests

Of magistrates, of courts, of tribunals,

Of laws, of judgments, and of decretals. Spenser.

If you deny me, fie upon your law ! There is no force in the decrees of Venice.

Shakspeare.

Traditions and decretals were made of equal force, and as authentical a» the sacred charter Itself.

Howel's Vocal Forest.

Father eternal ; thine is to decree ; Mine, both in heaven and earth, to do thy will.

Milton.

The motions of the moon, supposed to be measured by sevens, and the critical or decretory days depend on that number. Browne's Vulgar Errours.

The folly of man, and not the decree of heaven, is the cause of human

calamity. Broome.

There are lenitives that friendship will apply, be- fore it will be brought to the decretory rigours of a condemning sentence. South's Sermons.

Had heaven decreed that I should life enjoy, Heaven had decreed to save unhappy Troy.

Dryden. Are we condemn'd by fate's unjust decree,

No more our houses and our homes to see ? Id. The king their father,

On just and weighty reasons, has decreed

His sceptre to the younger. Rowe.

A decretal epistle is that which the pope decrees either by himself, or else by the advice of his cardi- nals ; and this must be on his being consulted by some particular person or persons thereon.

Ayliffe's Parergon.

The decretiits had their rise and beginning under the reign of the emperor Frederick Barbarossa. Id.

Whether it be decreed by the authority of reason, or the tyranny of ignorance, that, of all the candidates for literary praise, the unhappy lexicographer holds the lowest place, neither vanity nor interest incited me to inquire. Johnion. Plan of Dictionary.

Here are the ancient editions of the Papal decretals, and the commentators on the civil law, the edicts of Spain, and the statutes of Venice.

Id. On the Harleian Library.

DECREP'ID, or "j Fr. decrepite; Ital. DECREP'IT, adj. I and Span, decrepito;

DECREP'ITATE, v. a. I Lat. decrepitus, crack- DECREPITA'TION, n. s. [ling; from the crack- DECREP'ITNESS, I ling of a candle or

DECREP'ITUDE. J lamp when nearly

out, says Minsheu, after Scaliger. Wasted ; old ; weak; in extreme decay. To decrepitate is used by Browne for the calcining of salt until it ceases to crackle. Decrepitness and decre- pitude are man's ' last stage of all.'

Of men's lives, in this decrepit age of the world, many exceed fourscore, and some an hundred years.

Raleigh.

This pope is decrepit, and the bell goeth for him : take order that there be chosen a pope of fresh years.

Bacon.

Decrepit miser ! base, ignoble wretch. Shakspeare.

If favours out-live one age, they prove decrepit and heartless. Bishop Hall. Contemplations.

And from the north to call Decrepit Winter. Milton.

So will it come to pass in a pot of salt, although decrepitated. Browne's Vulgar Errours.

If true succession from our isle should fail, And crowds profane with impious hands prevail, Not thou, nor those thy factious arts engage Shall reap that harvest of rebellious rage, With which thou flatterest thy decrepit age. Dryden.

Propped on his staff, and stooping as he goes, A painted mitre shades his furrowed brows j The god, in this decrepit form arrayed, The gardens entered, and the fruits surveyed. Pope.

Mother earth, in this her barrenness and decrepit- ness of age, can procreate such swarms of curious engines. Bentley.

The charge of witchcraft inspires people with a malevolence towards those poor decrepit parts of our species, in whom human nature is defaced by infir- mity and dotage. Addison.

Time in advance behind him hides his wings, And seems to creep decrepid with his age. Young.

The emaciated and decrepid appearance, with the ridiculous and idiotic gestures, of the opium-eaters in Constantinople, is well described in the Memoirs of Baron de Tott. Darwin.

DECREPITATION, in chemistry, the crackling noise which several salts make when suddenly heated, accompanied by a violent exfoliation of their particles. This phenomenon has been ascribed to the ' sudden conversion of the water which they contain into steam.' But absolutely dry sulphate of

barytes decrepitates furiously without any possible formation of steam, or any loss of weight. The same holds with respect to common salt, calcareous spars, and sulphate of potash, which contain no water. In fact, it is the salts which are anhydrous, or destitute of water, which decrepitate most powerfully; those that contain water generally enter into tranquil lique- faction on being heated. Salts decrepitate, for the same reason that glass, quartz, and cast-iron crack, with an explosive force, when very sud- denly heated ; namely, from the unequal expan- sion of the laminae which compose them, in consequence of their being imperfect conductors of heat.

DECRESCENT, in heraldry, a term signify- ing a representation of the moon when declining from the fall to the last quarter, her horns being turned to the sinister side of the shield.

The DECRETALS compose the second part of the canon law. The first, acknowledged by all the learned as genuine, is a letter of Pope Siri- cius, written A. D. 385, to Himerus, bishop of Tarragona, in Spain, concerning some disorders which had crept into the churches of Spain. Gratian published a collection of decretals, con- taining all the ordinances made by the popes till A.D. 1150. Gregory IX. in 1227, following the example of Theodosius and Justinian, formed a constitution of his own, collecting into one body all the decisions and all the causes which served to advance the papal power; which collection of decretals was called the pentateuch, because it contained five books.

DECRY', v. a. Fr. decrier, de and cry. See CRY. To censure ; to blame clamorously, or vehemently.

Malice in criticks reigns so high, That for small errours they whole plays decry.

Dryden.

Quacks and imposters are still cautioning us to beware of counterfeits, and decry others' cheats only to make more way for their own. Swift.

Those measures, which are extolled by one half of the kingdom, are naturally decried by the other

Additon.

Then prompt no more the follies you decry, As tvranfs doom ihcir tools of uuili. to die. Johnson.

DEC

DECUMANA, in ancient history and geogra- phy, the name of a nation of the iVIarse or Mar- comanni. See DECUMATES AGRI.

DECUMARIA, in botany: a genus of the monogynia order, and dodecandria class of plants : CAL. decaphyllous, superior; petals ten; CAPS. eight or nine cells and polyspermous. Species two, both natives of Carolina.

DECUMATES AGRI, fields granted on a tithe, as appears from Tacitus, to the Gauls who succeeded the Marcomanni, that had till then proved a check to the Roman conquests, on the Rhine ; and hence, probably, their name, people living on the marches or limits of the empire.

DECU'MBENCE, n. s.-> Lat. decumbo.

DECU'MBENCY, >The act of lying

DECU'MBITURE, j down ; the posture

of lying down.

This must come to pass, if we hold opinion they lie not down, and enjoy no decumbence at all ; for station is properly no rest, but one kind of motion.

Browne's Vulgar Errours.

Not considering the ancient manner of decumbency, be imputed this gesture of the beloved disciple unto rusticity, or an act of incivility. Id.

If but a mile she travel out of town, The planetary hour must first be known, And lucky moment : if her eye but akes, Or itches, its decumbiture she lakes. Dryden.

DE'CUPLE, adj. Lat. decuplus, tenfold. The same number ten times repeated.

Man's length, that is, a perpendicular from the vertex unto the sole of the foot, is decuple unto his pro- fundity ; that is, a direct line between tbe breast and the spine. Browne's Vulgar Errours.

Supposing there be a thousand sorts of insects in this island, if the same proportion holds between the in- sects of England and of the world, as between plants domestick and cxotick, that is, near a decuple, the species

of insects will amount to ten thousand. Ray.

DECURIA, or DECURY, among the ancient Romans, ten men under one leader, called the decurio. The decuria was the third part of a turma, or the thirtieth of a legion of horse, which consisted of 300 men. The Roman cavalry was divided into decuriae, which were subdivi- sions of a century, each century containing ten decuries.

DECURIO, a subaltern officer in the Roman armies, who commanded a decuria.

DECU'RION, n. s. Lat. decurio. A com- mander over ten ; an officer subordinate to the centurion.

He instituted decurions through both these colonies, that is, one over every ten families. Temple.

DECURIONES MUJJICIPALES, magistrates in the Roman provinces, who formed a body to represent the Roman senates in free and corpo- rate towns. They consisted of ten, whence the name; and their duty was to watch over the interests of their fellow citizens, and to increase the revenues of the commonwealth. Their court was called curio decurionum and minor senatus ; and their decrees, called decreta decurionum, were marked D. D. at the top. They generally styled themselves civitatum patres curiales, and honorati muuieipiorum senatores. They were ••lected witli the same ceremonies as the Roman

senators; they were to be at least twenry-fivo years of age, and to be possessed of ten talents.

DECU'RSION, n. s. Lat. decurcus, from de and cursua. The act of running down.

What is decayed by that decursion of waters, is sup- plied by the terrene faeces which water brings. Hale.

DECU'SSATE, v . a. \ Lat. decusso. To in-

DECUSSA'TION, n. s. I tersect at acute angles. The act of crossing, or state of being crossed at unequal angles. See OPTICS.

The crucigerous ensign carried this figure not trans- versely or rectangularly intersected, but in a decussa- tion, after the form of an Andrian or Burgundian cross, which answereth this description. Browne.

This it performs by the action of a notable muscle on each side, having the

form of the letter X, made up of many fibres, decussating one another longways.

Ray.

Though there be decwssation of the rays in the pu- pil of the eye, and so the image of the object in the retina, or bottom of the eye, be inverted ; yet doth no the object appear inverted, but in its right or natu- ral posture. Id.*

DECUSSORIUM, an instrument used by sur- geons, which, by pressing gently on the dura mater, causes an evacuation of the pus collected between it and the cranium, through the perfora- tion made by the trepan.

DEDDINGTON, a market-town of Oxford- shire, formerly a corporation and borough. The Birmingham and Oxford canal passes near this place, and is of considerable advantage to it. In the neighbourhood are two medicinal springs, one of which is highly impregnated with vitriolic salt. It has a weekly market on Saturday. It is seated on an eminence, seventeen miles north of Oxford, and sixty-nine N.N.W. of London.

DEDE'CORATE, v. a. } Lat. dedecoro. To

DEDECORA'TION, n. s. £ disgrace ; to bring a

DEDECO'ROUS, adj. j reproach upon. The

act of disgracing ; disgrace. Disgraceful.

DEDENTIT ION, n. s. Lat. de and dentitio. Shedding of teeth. The loss or shedding of the teeth.

Solon divided life into ten septenaries, because in every one thereof a man received some sensible muta- tion , in the first is dedentition, or falling of teeth.

Browne' t Vulgar Errours.

DEDHAM, a town and parish of England, in the county of Essex, situated on the river Stour, over which is a bridge. It is six miles N.N. E. of Colchester, and its church is noted for a fine Gothic steeple. Population about 2200.

DEDHAM, a township of Massachusetts, incor- porated in 1637.

DEDHAM, a town in the above township, the capital of Norfolk county, called by the Indians Tiot. It lies on the south side of Charles River, eleven miles south-west of Boston, and 320 from Philadelphia.

DEDICATE, v. a. & adj. ~\ French, dedier ;

DEDICATION, n. s. (Port, and Ital. de-

DEDICATOR. tdicare; Teut. de-

DEDICATORY, adj. J diciren ; Lat. de-

dicare, from Deo, dicare, to consecrate to God. To devote to some deity, or to some pious or religious service ; to resign, appropriate, or inscribe, to a particular person or service. Dedication

is also the act, form, or inscription, used in dedi- cating. A dedicator, says Johnson, with more temper than accuracy, is one who inscribes his work to a patron, with compliment and servility.

The princes offered for dedicating the altar, in the day that it was anointed. Numb. vii. 10.

A pleasant grove,

Was shot up high, full of the stately tree,

That dedicated is to Olympick Jove,

And to his son Alcides. Spenser.

Ladies, a general welcome from his grace

Salutes you all : this night he dedicates

To fair content and you. Shakspeare.

Prayers from preserved souls,

From fasting maids, whose names are dedicate

To nothing temporal. Id.

It cannot be laid to many men's charge, that they Lave been so curious as to trouble bishops with placing the first stone in the churches ; or so scrupulous as, af- ter the erection of them, to make any great ado for their

dedication. Hooker.

This tenth part, or tithe, being thus assigned unto him, becometh as a thing dedicate and appropriate onto God. Spelman.

He compiled ten elegant books, and dedicated them to the lord Burghley. Peacham.

He went to learn the profession of a soldier, to which he had dedicated himself. Clarendon.

Bid her instant wed,

And quiet dedicate her remnant life,

To the just duties of an humble wife. Prior;

He that would make a real progress in knowledge, must dedicate his age as well as youth, the latter growth, as well as the first fruits, at the altar of truth.

Berkeley.

Thus I should begin my epistle if it were a dedica- tory one ; but it is a friendly letter. Pope.

Proud as Apollo on his forked hill, Sat full-blown Bufo, puffed by every quill j Fed by soft dedication all day long, Horace and he went hand in hand in song. Id. Leave dangerous truths to unsuccessful satires ;

And flattery to fulsome dedicators. Id.

Among publick solemnities there is none so glorious as that under the reign of king Solomon, at the dedi- cation of the temple. Addison. For growing names the weekly scribbler lies,

To growing wealth the dedicator flies.

Johnson. Vanity of Human Wishes.

DEDICATION, the act of consecrating a temple, altar, statue, palace, &c. to the honor of some deity. The use of dedications is very ancient both among the worshippers of the true God and among the heathens : the Hebrews call it fU3r\ hhanuchah, ‘ initiation;’ which the Greek translators render Eyicaivia, and Eyicaivi

times dedication is only applied to a church; and is properly the

consecration of it perrbrmed by a bishop, with a number of ceremonies prescribed by the church. See CONSECRATION.

DEDITION, ». s. Lzt.deditio. The act of yielding up any thing ; surrendry.

It was not a complete conquest, but rather a detition upon terms and capitulations agreed between the con- queror and the conquered. Hale.

Fr. deduire ; Span. deduzer ; ItsA.didurre ; Lat. deduce, deducere, of de and duco. To lead or f draw. To draw or de- rive a conclusion in argument ; to trace a series of events, or con-

DEDU'CE, v. a. DEDU'CIBLE. adj. DEDU'CIVE,

DEDU'cEMF_NT,n. S.

DEDU'CT, v. a.

DEDU'CTION, n. s

DEDU'CTIVE, adj.

DEDU'CTIVELY, adv.

catenatious circumstances; to subtract or take off; hence to separate, divide. Deducible, and deductive, mean consequential, evident to reason. Deducive, performing, or drawing a conclusion. Deductively, consequentially. Deduction, the result of a series of argumentation ; a conse- quence, as well as a sum or thing subtracted.

Having yet, in his deducted spright, Some sparks remaining of that heavenly fire.

Spenser.

Out of scripture such duties may be deduced, by some kind of consequence J as by long circuit of de- duction it may be that even all truth, out of any truth may be concluded. Hooker.

I will deduce him from his cradle, through the deep and lubric waves of state and court, till he was swal- lowed in the gulph of fatality. Wotton Buck.

The condition, although deducible from many grounds, yet shall we evidence it but from few.

Browne's Vulgar Errours.

There is scarce a popular errour passant in our days, which is not either directly expressed, 01 deduc- tively contained in this work. Id.

You have laid the experiments together in such a way, and made such deductions from them, as I have not hitherto met with. Boyle.

All cross and distasteful humours are either ex- pressly, or by clear consequence and deduction, forbid- den in the New Testament. Tillotson.

So far, therefore, as conscience reports any thing agreeable to or deducible from these, it is to be heark- ened to. South.

Praise and prayer are his due worship, and the rest of those deducements which I am confident are the remote effects of revelation. Dryden.

The general character of the new earth is paradisai- cal •, and the particular character, that it hath no sea : and both are apparently deducible from its formation.

Burnet.

Reason is nothing but the faculty of deducing un- known truths from principles already known. Locke.

All properties of a triangle depend on, and are de- ducible from, the complex idea of three lines, includ- ing a space. Id.

We deduct from the computation of our years that part of our time which is spent in incogitancy of in-

fancy.

Norrit.

~-j –

All knowledge of causes is deductive ; for we know none by simple intuition, but through the meditation

of their effects.

Glam-ille.

That by diversity of motions we should spell out iues not resembled bv them.we must attribute to soine

things not resembled by them, we must

secret deduction ; but what this deduction should be, or by what mediums this knowledge is advanced, is as dark as ignorance. Id.

O goddess, say,, shall I deduce my rhimes From the dire nation in its early times ? Pope.

Bring then these blessings to a strict account ; Make fair deductions ; see to what they mount. Id.

A reflection so obvious, that natural instinct seems to have suggested it even to those who never much attended to the deductions of reason. Rogen.

Lend me your song, ye nightingales ! oh pour The mazy-running soul of melody Into my varied verse ! while I deduce, From the first note the hollow cuokoo sings, The symphony of spring. Thomson.

Set before you the moral law of God, with such de- ductions from it as our Saviour hath drawn, or our own reason, well informed, can make. Duppa.

DEE, a river of England and Wales, which rises at the foot of the lofty mountain Arun, in the north-west angle of Merionethshire, from which it runs through a fine valley in a north- east direction to Denbighshire ; visits the north- west border of Cheshire, to which it serves as a boundary ; then crossing over to Chester, it flows thence to the sea, forming a broad sandy estuary, which separates Cheshire from Flint- shire. This river is navigable from Elsemere, in Shropshire, to Chester; but at this city the navi- gation is interrupted by a ledge of rocks running across the bed of it, and causing a cascade. The Dee fells into the Irish Sea, fifteen miles below Chester.

DEE, a river of Scotland, in Aberdeenshire, which rises from the hill Breirach, and after run- ning through the parishes of Braemar, Crathy, and many others, with vast rapidity, falls into the German Ocean at Aberdeen, 140 miles from its source. It produces, in great plenty, trout, pikes, eels, &c., and affords one of the greatest salmon-fisheries in Scotland. In passing through Braemar, the Dee has a fine cascade, with the additional singularity, that for sixty yards it is confined between two rocks, within so narrow a space, that some persons have ventured to step over it.

DEE (John), a famous mathematician and astrologer, born in London, July 1527. In 1542 he was sent to St. John’s College, Cambridge. After five

years close application to the mathe- matics and astronomy, he went to Holland ; and, on his return to Cambridge, was elected a fellow of Trinity College, then first erected by king Henry VIII. In 1548, he took the degree of M.A. and left England a second time on ac- count of the suspicion attached to his character as an astrologer. Upon leaving England, he went to the University of Louvain, where he took the degree of LL.D. In 1551 he returned to England, and obtained the rectory of Upton- upon-Severn; but soon after the accession of queen Mary, he was accused of practising against her life by enchantment. He suffered a tedious confinement on this account, and was several times examined; till, in 1555, he obtained his liberty bv an order of council. In 1564 he made another voyage to the continent, to present a book he had dedicated to the emperor Maxi- milian, lie returned to England; but, in 1571,

we find him at Lorrain; where, being danger- ously ill, the queen sent over two physicians to his relief. Having once more returned to Ins native country, he settled at Mortlake in Surry, where he continued his studies with un remitted ardor, and collected a considerable library of curious books and MSS. with a variety of in- struments, most of which were afterwards destroy- ed by the mob. In 1579 queen Elizabeth, being desirous of information concerning the recent discoveries of her subjects in America, com- manded Mr. Dee to furnish her with proper geo- graphical descriptions. Accordingly he presented her, in three weeks after, with two large rolls, on which the new countries were geographically described and historically illustrated : these rolls are preserved in the Cottonian library. In 1581 Dee became acquainted with one Edward Kelly, by whose assistance he performed various incan- tations, and affected, it is said, to maintain a frequent intercourse with the spiritual world. In 1 583 they were both introduced to a Polish nobleman, then in England, named Albert Laski, palatine of Siradia, who persuaded them to accompany him to his native country ; and they visited, successively, Poland, the court of the emperor Rodolph II., and Bohemia. In 1595 they returned to England, and Dee was once more graciously received by the queen; who made him Warden of Manchester College. In 1604 he returned to his house at Mortlake, where he died in 1608. Queen Elizabeth seems to have made use of Dee, occasionally, as a political agent: he was evidently a mathemati- cian of considerable genius; but his pretensions to astrological and alchemical knowledge dis- grace his memory. Dr. M. Casaubon published, in 1659, ‘ A true and faithful Relation of what passed between Dr. John Dee and some Spirits.’

DEED, n, s. J Sax. &ae&; Belg. daed;

DEED’LESS. $ Goth, dad; Lat. from do, dedi, says Minsheu ; and this from Gr. StSovat ; to give (effect). An action : any thing done or fully

performed; a completed legal instrument or act; fact ; reality. Deedless is, inactive ; wordy, without performance of pledges or professions.

And manye men bileeuydeu, and camen know- lechinge and tellynge her dedis. Wiclif. Dedis, xix.

The same had not consented to the counsel and deed. Luke.

They desire, with strange absurdity, that to the same senate it should belong to give full judgment in matter of excommunication, and to absolve whom it pleased them, clean contrary to their own former deeds and oaths. Hooker.

The solicitor gave an evidence for a deed, which was impeached to be fraudulent. Bacon.

From lowest place when virtuous things proceed, The place is dignified by the doer's deed.

Shahspeare.

Speaking in deeds, and deedless in his tongue.

Id.

Nor knew I not To be with will and deed created free.

Milton.

I, on the other side.

Used no ambition to commend my deeds ; The deedt themselves, tho mute, spoKc loud tne ooer*

Us

T'ae monster nought replied ; for words wore vain, And deeds could only deeds unjust maintain.

Dryden.

We are not secluded from the expectation of re- ward for our charitable deeds. Sinalridye's Serm/jns.

Instant, he cried, your female discord end,

Ye deedless boasters ! and the song attend. Pope. T was where in early youth he wont retire

To woo sweet Solitude, and taste her charms Ere that his bosom caught the martial fire ;

Ere that his name was great in deeds of arms.

Gay.

Roll on, thou deep and dark blue Ocean — roll ! Ten thousand fleets sweep over thee in vain ; Man marks the earth with ruin — his control Stops with the shore ; — upon the watery plain The wrecks are all thy deed. Byron.

DEEG, a celebrated town and fortress of Hindostan, in the province of Agra. It was taken from the Jauts in the year 1776, by the nabob Nujuff Khan, after a siege of twelve months, but soon afterwards restored. Here in 1805 lord Lake defeated the Mahratta army, com- manded by Holkar, and, took this supposed im- pregnable town by storm. At the peace it was restored to the raja Runjeet Sing.

*DEEM, v. a:, v.n. Sc n. s. Sax. *»eman ; Goth, and Swed. doma; Teut. doeman , Gr. of Otywc, justice. To judge; to determine; to conclude on consideration : also, as a neuter verb, to judge, determine, or imagine. Shak- speare uses the substantive for judgment or opinion.*

Nyle ye deem that ghe he not demed. For, in what doom ye demen, ye schulen be demed; and, in what inesure ye meten, it schal be meten agen to you.

Widif. Matt.l.

But they that skill not of so hoavenly matter, All that they know not, envy, or admire,

Rather than envy, let them wonder at her, But not to deem of her desert aspire. tipenaer.

Here eke that famous golden apple grew, For which the Idean ladies disagreed, Till partial Paris dempt it Venus' due. Id.

So natural is the union of religion with justice, that we may boldly deem there is neither, where both are not. Hooker.

Hear me, my love, be thou but true of heart, —I true ! how now ? what

wicked deem is this 1

Shakspeare. He who to be deemed A god, leaped fondly into ˆEtna's flames. Milton.

These blessings, friend, a deity nestowed ; For never can I deem him less than god. Dryden.

Nature, disturbed, Is deemed vindictive to have changed her course.

Thomson. They are gone,

And others come : so flows the wave on wave Of what these creatures call eternity, Deeming themselves the breakers of the ocean, While they are but its bubbles, ignorant That foam is their foundation. Byron.

How happier she, who in Love's tranquil bower, Clasps the sweet prize of conquest, not the power ; Who while one gaze her charms to all prefers, And one warm heart returns the warmth of hers, Heeds not tho' crowds to half her beauty chill, Should deem some flirt of fashion fairer still.

Dr. T. Brown.

DEEMSTERS, or DEMSTERS. All contro- versies in the Isle of Man are decided without process, writings, or any charges, by certain judges chosen yearly from among themselves, called deemsters, there being two for each divi- sion of the island : they sit judges in all courts, either for life or property ; and, with the advice of twenty-four keys, declare what is law in un- common emergencies.

DEEP, adj. &ra.s. ˆ Sax. beeb; Goth, and DEEP'EN, v. a. & n. Swed. diup; Belg. diep ; DEEP'EMNG, n. s. \ old Goth, dy, to which DEEP'LY, adv. ˆSerenius traces this word.

DEEP'-MOUTHED, Mr. Tooke says, ' it is DEEP'MUSING, I merely the past partici DEEP'NESS, n.s. j pie of bibban, to dip, or dive.' Profound ; having length downwards ; depressed ; sunk ; and, because that which is deep in the earth is dark, remote, and un- disturbed, gloomy; dark-colored; a dark or strong shade of any color ; voluminous in sound ; quiet; still. Also, in a metaphorical sense, gloomy ; remote in meaning ; sagacious ; far- penetrating. Deep, as a substantive, expresses the still and quiet part of night; an abyss ; and, more particularly, the sea. To deepen is, as an active verb, to make deep; to sink low or lower ; to darken ; becloud ; make gloomy : as a neuter verb, to descend slowly, or by degrees. The adverb, and other substantives, follow these meanings.

And I saigh an aungel comynge doun fro heucno, hauynge the keye of depnesie and a great chayne in his hond. Wiclif. Apo'c. 20.

And the Lord God caused a deep sleep to fall upon Adam. Genesis ii. 21.

Deep calleth unto deep at the noise of thy water- spouts t all thy waves and thy billows are gone over me. Psalm xlii. 7.

Some fell upon stony places, and they withered, because they had no deepness of earth. Mat. xiii. 5.

Hee was close and secrete, a deep dissimuler, lowlye of counteynaunce, arrogant of heart, outwardly coum- pinable where he inwardely hated, not letting to kisse whom he thoughte to kyll. Sir T. Moore.

Yet we did lift up our hearts and voices to God above, who sheweth his wonders in the deep. Bacon.

To keep his promise with him, he had deeply of- fended both his nobles and people.

Id. Henry VII.

He's meditating with two deep divines.

Shakspeare.

There want not many that do fear, In deep of night, to walk by this Herne's oak. Id.

This avarice

Strikes deeper, grows with more pernicious root.

Id.

Behold the English beach

Pales in the flood with men, with wives and boys, Whose shouts and claps outvoice that deep-mouthed sen.

Id.

When I have most need to employ a friend, Deep, hollow, treacherous, and full of guile, Be he to me. Id. Richard III.

Klockings so deeply hath sworn ne'er more to coma In bawdy-house, that

he dares not go home. D< >nne.

DEE

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DEE

If we co down to the great deep, the womb of moisture, the well of fountains, the great pond of the world, we know not whether to wonder at the element itself, or the guests which it contains.

Bishop Hall's Contemplations. He in my ear

Vented much policy and projects deep Of enemies, of aids, battles, and leagues, Plausible to the world, to me worth nought.

Milton.

And in the lowest deep, a lower deep, Still threatening to devour me opens wide, To which the hell I suffer seems a heaven.

Milton's Paradise Lost.

For, even in that season of the year, the ways in that vale were very deep. Clarendon.

Fear is a passion that is most deeply rooted in our natures, and flows immediately from the principle of self-preservation. Tilletson.

You must deepen your colours so, that the orpiment may be the highest. Penckam.

What earth in her dark bowels could not keep From greedy man, lies safer in the deep. Waller.

Having taken of the deeply red juice of buckthorn berries, I let it drop upon white paper. Boyle.

The gaping gulph low to the centre lies, And twice as deep as earth is distant from the skies.

Dryden.

Thou hast not strength such labours to sustain : Drink hellebore, my boy ! drink deep, and scour thy

brain. Id.

With deeper brown the grove was overspread. Id. Then toils for beasts, and lime for birds were found, And deep-mouthed dogs did forest walks surround.

Id.

If the matter be knotty, and the sense lies deep, the mind must stop and buckle to it, and stick upon it with labour and thought, and close contemplation. Locke.

Her gloomy presence sad dens all the scene, Shades every flower, and darkens every green, Deepens the murmurs of the falling floods, And breathes a browner horror on the woods. Pope.

But he deep-musing o'er the mountains strayed, Through many thickets of the woodland shade. Id.

The city of Rome would receive a great advantage from the undertaking, as it would raise the banks and deepen the bed of the Tiber. Addison.

Virgin face divine

Attracts the hapless youth through storms and waves, Alone in deep of night. Philips.

Hills, dales, and forests far behind remain, While the warm scent draws on the deep-mouthed train.

Gay.

While at the bow the watch Arion keeps, To shun what cruisers wander o'er the deeps.

Falconer.

We have to supply tneans of occupation and sub- sistence for those, to whom not only England, but Europe is so deeply indebted. Sir T. Bernard.

Cosmetic succour won a vermeil hue, All soft she spreads, and lo ! the rouge is blue ! In vain she wipes and washes, frets and scrubs, The horrid azure deepens as she rubs. Dr. T. Brown. Such wriiings, though they may be lightly passed over by many readers, yet if they make a deep im- pression on one active mind in a hundred, the effects may be considerable. Franklin.

Her hollow womb,

Conceiving thunders, through a thousand deeps And fiery caverns, roars beneath his foot. The hills move lightly, and the mountains smoke, f'ft he has touched them. Cowper.

Me they revile, with many ills molested,

They bid me seek from thee, my Lord, redress, On God, they say, his hope and trust he rested, Let God relieve him in his deep distress.

Kirht White.

The sweetness of the violet's deep blue eyes, Kissed by the breath of heaven, seems coloured by its skies. Byron.

The Convent bells are ringing,

But mournfully and slow ; In the gray square turret swinging,

With a deep sound, to and fro. Id.

Vain

The struggle ; vain, against the coiling strain And gripe, and deepening of the dragon's grasp, The old man's clench ; the long envenomed chain Rivets the living links, — the enormous asp Enforces pang on pang, and stifles gasp on gasp. Id.

*DEER, n. s. Sax. *»eori; Goth, dyr ; Belg. dier; Teut. their ; from Gr. 0qp ; jEolic 0»>p. and thence probably from Heb. JH3, wild deer. Originally signifying any wild animal, though now confined to the cervine species.*

You have beaten my men, killed my deer, and broke open my lodge. Shahspeare.

The pale that held my lovely deer. Waller.

I was a stricken deer that left the herd Long since, with many an arrow deep infixed : My panting side was charged, when I withdrew To seek a tranquil death in distant shades.

Cowper. Task.

DEER, in zoology. See CERVUS. Of this use- ful animal there are three principal species in this country, viz. the stag, C. elaphus; the roe, C. capreolus ; and C. dama the fallow deer. By castrating the males when

newly dropped, says Mr. Loudon, which is not in the least dangerous, it affords the means of having good venison until Christmas, without any other sort of food than the common grass; they also fatten more quickly; the operation must, however, be performed while they are quite young. By stat. 16 Geo. III. cap. 30., if any person shall hunt or take in a snare, or kill or wound any red or fallow deer in any forest, chase, &c., whether enclosed or not; or in any closed park, paddock, &c., without the consent of the owner, or be aiding in such of- fence, they shall forfeit £20 for the first offence ; and also £30 for each deer wounded, killed, or taken. A game-keeper offending, to forfeit dou- ble. For a second offence offenders shall be transported for seveo years. By stat. 28 Geo. II. cap. 19, destroying goss, furze, and fern, in fo- rests arid chases, being the covert for deer, sub- jects the offenders to a penalty from £5 to 40s. or to three months' imprisonment

DEER, GREAT, an island of the East Indian sea, near the west coast of the island of Celebes. Long. 119° 35′ E., lat. 5° 12′ S.

DEER, LITTLE, a rocky islet in the Eastern Seas, near the west coast of the island of Celebes. Long. 119° 35′ E., lat. 5° 5′ S.

DEER ISLAND, or MULDONFCH, a small island of the Hebrides, near that of Barry.

*DEER ISLAN D, a small island of Ireland, in the bay of Galway. Long. 9° W., lat. 53° 9′ N.— Also an island on the coast of North America, in Pe- nobscot Bay, about eighteen miles in circumfer**

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ence. It is 170 miles north-east of Boston. Long. 68° 30′ \V., lat.41° 10'N..

in their meaning. In Wiclif s translation of the New Testament, this word is used in the sense of

DEFACE, v. a. ~) Fr. effacer ; Lat. defa- spreading fame or a report; the de being only an

.- do, of "de &/«n'es, a face, expletive.

3 To mar, disfigure, ruin, And t}je yghen of hem wearcn opened, and Jhe- sus thretenyde hem and seide se ye that no man wite. But thei gheden out

and defameden him thorugh al that lond. Wiclif. Matt. 9.

I heard the defaming of many. Jer. x.. 10.

DEFA'CER, DEFA'CEMENT.

destroy. Defacement is the injury done. De- facer, he who performs or accomplishes it.

But whanne ye fasten nyle be ye maad as ypo- crites sorrowful, for thei defasen hem silf to seme fas- tynge to men, treuly I seye to you thei han resseyved her meede. Wiclif. Matt. 6.

But what is this image, and how is it defaced ? the poor men of Lyons will tell ycu, that the image of God is purity, and the defacement sin. Bacon.

Give me leave to speak as earnestly in truly com- mending it, as you have done in untruly and unkindly defacing and slandering it. Whitgifte.

Pay him six thousand, and deface the bond.

Shakspeare.

That foul defacer of God's handy work Thy womb let loose to chace us to our graves. Id.

Fatal this marriage,

Defacing monuments of conquered France, Undoing all. Id.

As man was the image of God, so was that earthly paradise an image of heaven ; both the images are defaced, both the first patterns are eternal.

Bishop Hall. Cuntemplaiont. Whose statues, freizes, columns broken lie, And, though defaced, the wonder of the eye.

Dryden.

One nobler wretch can only rise, 'Tis he whose fury shall deface The stoick's image in this piece. Prior.

Thy very weeds are beautiful, thy waste More rich than other climes' fertility ; Thy wreck a glory, and thy ruin graced With an immaculate charm which cannot be defaced.

Byron .

DE FACTO, something actually in fact, or existing; in contradiction to de jure, where a thing is only so in justice : as, a king de facto is a person who is actually in possession of a crown ; and a king de jure is the person who has

a just right to the crown. It was a distinction gated, hath been great, much in use at the period of the Revolution.

DEFA'ILANCE, ».«. Fr.de/ai7/ance. Fai- lure ; miscarriage. Obsolete.

The affections were the authors of that unhappy defaUanae. Glanvilte.

DEFA'LCATE, v. a. } Fr. defalquer ; from want.

Many doughty knights he in his days Had done to death,

And hung their conquered arras for rcore defame On gallowtrees. Spenser.

My guilt thy growing virtues did defame ; My blackness blotted thy unblemished name.

Dryden.

Be silent, and beware, if such you see ; 'Tis defamation but to say, that's he. Id.

Augustus, conscious to himself of many crimes, made an edict against lampoons and satires, and defa- matory writings. Id.

Defamation is the uttering of contumelious language of any one, with an intent of raising an ill fame of the party ; and this extends to writing, as by defama- tory libels ; and to deeds, as reproachful postures, signs, and gestures. Ayliffe.

It may be a useful trial of the patience of the de- famed, yet the iefamer has not the less crime.

Government of the Tongue.

The most eminent sin is the spreading of defamatory reports. Id.

They live as if they professed Christianity merely in spite, to defame it. Decay of Piety.

Many dark and intricate motives there are to de- traction and defamation; and many malicious spies are searching into the actions of a great man. Addison.

DEFAMATION is punishable according to the nature of the offence, either by action upon the case at common law, or by statute in the eccle- siastical court.

DEFATIGATE, v. a. \ Lat. defatlgo. To

DEFATIGA'TION, n. s. J weary ; to tire.

The power of these men's industries, never defati-

Dr. Maine.

DEFA'ULT, v. a. & n. s. 3 Old Fr. default;

DEFA'ULTER, n. s. $ Ital. dtffalta ; Lat.

defectus, de, privative, and facio, to do. To fail in peformance. A default is failure of that which ought to be done legally or morally. Defect ;

DEFALCATION, n. s. }/a£r, j'alcis a sickle. To cut off; to lop ; to take away part of an al- lowance.

The tea-table is set forth with its accustomary bill of fare, and without any defalcation. Addison.

DEFA'LK, v. a. See DEFALCATE. To cut off ; to lop away.

What he defalks from some insipid sin, is but to make some other more gustful. Decay of Piety.

*DEFAME, v. a. & n. *. -v Fr. defamer ; It.*

DEFAMBR, n. s. I diffamare ; Span.

V Qnrl ~

But what man wolde him selfe auise His conscience, and nought misuse, He male well at the first excuse His God, whiche euer stant in one, In him there is defaute none. Gower.

But sith thou mayst not so, give leave a while To baser wit, his power therein to spend, Whose grosse defaults thy daintic pen may sile And unaduised ouer sights amend.

Spenser. Sonnets.

Sundrye victories hadde hee, and sommetime ouei- throwes, but neuer in

defaulte as for his owne par-

and Port, defamar; gone, cither of hardinesse or polytike order.

T-“- -” Sir T. More.

DEFAMING, n. s. sauu r

DEFAMATION, I Latin, defamare,

DEFAMATORY, adj. J from Greek, ˆpjj,

fame, and de, privative. To slander, make infamous, calumniate, deprive of good fame or honor by

words or deeds. Defamatory, is libellous ; fend- Ja default Of the king’s pay, the forces were laid ng to delame. The substantives are obvious upon the snbject. Davids.

We, that know wha it is to fast and pray. Are penitent for your default to-day.*

Shakipeire.

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f.- 1 ine not iMshlv call in doubt Divine prediction : what if all foretold Had been fulfilled, but through mine own default, Whom have I to complain of but myself 7 Milton.

Partial judges we are of our own excellencies, and other men’s default. Swift.*

Cooks could make artificial birds and fishes, in de- fault of the real ones. Arbitthnut on Coins.

DEFEA’SANCE. 3 Fr. defaisanee; Ital.

DEFEASIBLE. 5 defaciemento ; Law Lat. defeixantia. The act of annulling or abrogating any contract or stipulation.

That hoary king, with all his train,

Being arrived where that champion stout,

After his foe's defeasance, did remain,

Him goodly greets, and fair does entertain.

Spenser.

He came to the crown by a defeasible title, so was never settled. Dark's.

Defesance is a condition annexed to an act ; as to an obligation, a recognizance, or statute, which per- formed by the obligee, or the cognizee, the act is dis- abled and made void, as if it had never been done.

Cowell.

DEFEASANCE, or DEFEISANCE. The difference between a common condition and a defeasance is, that the condition is annexed to, or inserted in, the deed ; and the defeasance is a deed by it- self, concluded and agreed on between the parties, and having relation to another deed.

DEFEAT, v. a. & n. s. > Old Fr. desfaite,

DEFEATURE, n s. S from Lat. de, priva-

tive, and facere, to complete an action. To over- throw; to frustrate; undo; mar. Shakspeare says, ' defeat thy favor,' meaning disguise thy face; and defeatures of the face mean disfigura- tions of it.

They invaded Ireland, and were defeated by the lord Mountjoy. Bacon.

To his accusations

He pleaded still not guilty, and alledged Many sharp reasons to defeat the law. Shakspeare.

Defeat thy favour with usurped beard. Ye gods, ye make the weak most strong. Id.

Grief hath changed me,

And careful hours, with time's deformed hand, Hath written strange defeatures in my face. Id.

Death,

Then due by sentence when thou didst transgress, Defeated of his seizure

many days, Given thee of grace. Milton.

He finds himself naturally to dread a superior Being, that can defeat all his designs, and disappoint all his hopes. Tillotson.

End Marlborough's work, and finish the defeat.

Addison.

Oh, more than all ! — untired by time : Which, nor defeated hope, nor baffled will, Could render sullen were she ne'er to smile, Nor rage could fire, nor sickne'ss fret to vent On her one murmur of his discontent. Byron.

DEFECATION, n. s. ? Lat. defaco. From

DE'FECATE, v. a. & adj.) de and fax, fads, filth. To purge or make clear from lees; to pu- rify.

This liquor was very defecate, and of a pleasing golden colour. Boyle.

The blood is not sufficiently defecated or clarified, but remains muddy, Harvey.

We defecate the notion from materiality, and ab« stract quantity, place, and all kind of corporeity from it- Glanville.

Provide a brazen tube Inflext ; self-taught and voluntary flies The defecated liquor, through the vent Ascending ; then, by downward tract coiweyrd, Spouts into subject vessels lovely clear. Philips.

DEFE'CT, n. s. & v. n.ˆ Fr. dcfaut ; Ital- DEFECTION, n. s. defetto • Span, de-

DEFE'CTIVE, adj. fecto ; Lat. defec-

DEFE'CTIVELY, adv. Wus, from de pr'iva- DEFE'CTIVENESS, n. s. tive and facio,fac- DEFE'CTIBLE, adj. tus, to do. As a

DEFECTIBI'LITY, J neuter verb, to be

deficient; to fall short of ; to fail. Defect, as a substantive, is want; insufficiency; failrre of that which is proper to a person or thing ; and hence injury; mistake; error. Defection is a fall- ing away ; an act or course of apostasy ; an abandonment: defectible, imperfect; wanting: defectibility, a state of deficiency, or imperfection. This defection and falling away from God was first found in angels, and afterwards in men. Raleigh.

We had rather follow the perfections of them whom we like not, than in defects resemble them whom we love. Hooker.

Neither can this be meant of evil governours or tyrants, but of some perverseness and defection in the very nation itself. Bacon.

Oft 'tis seen

Our mean secures us, and our mere defects Prove our commodities. S/ia/ tspeare.

You praise yourself,

By laying defects of judgment to me. Id.

Errors have been corrected, and defects supplied.

Dames.

He was diverted and drawn from hence by the general defection of the whole realm. Id.

Some lost themselves in attempts above humanity ; yet the enquiries of most defected by the way, and tired within the sober circumference of knowledge.

Browne's Vulgar Errours.

Nor will polished amber, although it send forth a gross and corporeal exhalement, be found a long time defective upon the exactest scales. Id.

The extraordinary persons, thus highly favoured, were for a great part of their lives in a defect- ible condition. Hale.

The corruption of things corruptible depends upon the intrinsical defectibility of the connection or union of the parts of things corporal. Id. Origin of Mankind.

Men, through some defect in the organs, want words, yet fail not to express their universal ideas by signs. Locke.

It will ve/y little help to cure my ignorance, that this is the best of four or five hypotheses proposed, which are all defective. Id.

If we fall away after tasting of the good word of God, how criminal must such a defection be !

Atterbury.

Trust not yourself ; but, your defects to know, Make use of ev'ry friend — and ev'ry foe. Pope. Had this strange energy been less,

Defect had been as fatal as excess. Blackmore.

If it renders us perfect in one accomplishment, it generally leaves us defective in another. Addison.

The lowness often opens the building in breadth, or the defectiveness of some other particular makes any single part appear in perfection. /

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There is more evil owing to our original defection from God, and the foolish and evil dispositions that are found in fallen man. Watti.

And if youth has less of that prudence which is necessary to manage a family, vet the parents and elder friends of young married persons are generally at hand to afford their advice, which amply supplies that defect. Franklin.

But once achieved — though barbarous wreck o'er-

throw

The sacred fane, and lay its glories low ; Yet shall the sculptured ruin rise to day, Graced by defect, and worshipped in decay.

Sheridan.

DEF

DEPEND, v. a. ~] Fr. defendre ;

DEFE'NCE, v. a. & n. s. Span, defender ;

DEFE'NCELESS, adj. Ital. d'ifendere ;

DEFE'NDABLE, or Lat. defendere,

DEFE'NDIBLE, defensus, from

DEFE'NDANT, n. s. & adj. [fffavSovta, ' to DEFE'NDER, ˆ fight with a

DEFENSA/TIVE, n. s. sliug,' as Min-

DEFENS'IBLE, ad). sheu suggests.

DEFEN'SIVE, adj. & n. s. To protect;

DEFEN'SIVELY, adv. shield ; sup-

DEFE'NST, past part. J port ; make se-

cure ; vindicate. Henc6 to repel ; keep off, from the Latin verb ; and therefore to forbid or beat off; to prohibit, from the French. See the examples from Chaucer and Milton. To defence, though obsolete, is used as an active verb in the received translation of the Bible. Defenceless is, without protection: defendible, that which may be de- fended, as is also defensible : and hence the latter likewise signifies justifiable ; right : de- fendant is used as an adjective by Shakspeare. It and defender seem, in a general sense, syno- nymous ; but, legally, the defendant is the party to a suit, who is sued or accused, A defensa- tive is a guard, or, in surgery, a protecting band- age ; a plaster. A defensive is also that which serves to defend. The adjective means proper for defence, or protection, as distinguished from assaultˆ The adverb and participle explain themselves.

Lo this same thing that ghe ben sorouful aftir god, hou mych bisynesse it worchith in ghou, but defend- yng, but yndignacioun, but drede, but desier, but !oue, but vemaunce. . Wiclif. 2 Cor. vii.

My defence to hem that axen me, that is whethir we han not power to ete and drynke ? Id. 1 Cor. 9.

Deliver me from mine enemies, O my God : de- fend me from them that rise up against me.

Psalm lix. 1.

Rehoboam dwelt in Jerusalem, and built cities for defence in Judah. 2 Chran. ii. 5.

0 Thomas, jeo vous dis, Thomas, Thomas ! This maketh the fend, this muste ben amended, Ire is a thing that high God hath defended.

Chaucer. Cant. Tales.

Wars preventive, upon just fears, are true defen- tivet, as well as on actual invasions. Bacon.

They must make themselves defensible both against the natives and against strangers. Id.

Heaven defend your souls, that you think

1 will your serious and great business scant.

Shakspeare.

Banish your defenders, till at length Your ignorance deliver you, As most abated captives, to some nation That won you without blow. Id.*

A field,

Which nothing but the sound of Hotspur's name Did seem to make defensible. Id

Line and new repair our towns of war With men of courage, and with means defendant.

Id.

This is the day appointed for the combat, And ready are the' appellant and defendant. Id. Stout men of arms, and with their guide of power, Like Troy's old town defenst with Ilion's tower.

Fairfax,

My unpreparedness for war testifies for me that I am set on the defensive part. King Charles.

O sons ! like one of us man is become, To know both good and evil, since his taste Of that defended fruit. Milton.

My sister is not so defenceless left As you imagine : she has a hidden strength Which you remember not. /,/.

A village near it was defended by the river.

Clarendon.

His majesty, not at all dismayed, resolved to stand upon the defensive only. Id.

So lawyers, lest the Bear defendant, And plaintiff Dog, should make an end on't ; Do stave and tail with writs of error, Reverse of judgment, and demurrer. Hudibrcu.

A very unsafe defenmtive it is against the fury of the lion, and surely no better than virginity, or blood royal, which Pliny doth place in cock-broth.

Browne's Vulgar Errours.

Severe defences may be made against wearing any linen under a certain breadth. Temple.

The use of wine is little practised, and in some places defended by customs or laws. Id.

Undoubtedly there is no way so effectual to betray the truth, as to procure it a weak defender. South.

If the bishop has no other defensatives but excom- munication, no other power but that of the keys, he may surrender up his pastoral staff. Id.

And here the' access a gloomy grove defends And here the' unnavigable lake extends. Dryden.

Do'st thou not mourn our power employed in vain, And the defenders of our city slain ? Id.

He would not be persuaded by danger to offer any offence, but only to stand upon the best defensive guard he could. Sidney.

Let me be foremost to defend the throne,

And guard my father's glories and my own.

**v.*

Having often heard Venice represented as one of the most defensible cities in the world, I informed myself in what its strength consists. Addison.

There is nothing so bad which will not admit of something to be said in its defence. Sterne.

Those high towers, out of which the Romans might more conveniently fight with the defendants on the wall, those also were broken by Archimedes' engines. Wilkins's Math. Magic.

I conceive it very defensible to disarm an adversary, and disable him from doing mischief. Collier.

If I could not avoid his company, why did I not arm myself ? Why did I venture defenceless into so much danger. Mason.

The car of victory, the plume, the wreath, Defend not from the bolt of fate, the brave.

Beattie.

DEFENDER OF THE FAITH. Fidei defensor, a peculiar title belonging to the king of England ; as Catholicus to the king of Spain, and Christian-

issimus to the king of France, &c. These titles were originally given by the popes. That of Fidei defensor was first conferred by Leo X. on king Henry VIII. for his memorable book against Martin Luther; and the bull for it bears date quinto idus Octob. 1521. It was afterwards confirmed by Clement VII. Chamberlayne says, the title belonged to the kings of England before that time ; and for proof hereof appeals to several charters granted to the university of Oxford : so that pope Leo's bull was only a renovation of the ancient right.

*DEFE*R, v. a. & v. n. fFr. differer ; Span. differir ; Ital. differire ; Lat. dijferre, from de and^m), to bear away. To put away for a time; to put off; delay; withhold. It is also used for refer, and thus becomes the parent of the substantive deference.*

The commissioners deferred the matter unto the earl of Northumberland, who was the principal man of authority in those parts Bacon.

He will not long defer To vindicate the glory of his name Against all competition, nor will long Endure il. Milton.

Neither is this a matter to be deferred till a more convenient time of peace and leisure. Swift.

Inure thyself betimes to the love and practice of good deeds ; for the longer thou deferrest to be ac- quainted with them, the less every day thou wilt 6nd thyself disposed to them. Atterbury.

Defer the promised boon the goddess cries.

Pope.

Be wise to-day ; 'tis madness to defer ; Next day the fatal precedent will plead ; Thus on, till wisdom is pushed out of life.

Young.

DE'FERENCE, n. s. Fr. deference. Re- gard ; respect. See DEFER.

Virgil could have excelled Varius in tragedy, and Horace in lyric poetry, but out of deference to his friends he attempted neither. Dryden.

A natural roughness makes a man uncomplaisant to others ; so that he has no deference for their in- clinations, tempers, or conditions. Locke.

He may be convinced that he is in an error, by ob- serving those persons, for whose wisdom and good- ness he has the greatest deference, to be of a contrary sentiment. Swift.

Deference is the most complicate, the most in- direct, and the most elegant of all compliments.

Shenttone.

Most of our fellow-subjects are guided either by the prejudice of education, or by a deference to the judg- ment of those who, perhaps, in their own hearts, dis- approve the opinions which they industriously spread among the multitude. Addison.

We ought to show the regard, deference, and honour, •which belong to superiors ; and the candour, inte- grity, and benevolence, we owe to all. Mason.

DE'FERENT, adj. & n. s. From Lat. de- ferens, of defero. See DEFER. That which 'carries or conveys. That carries up and aown.

The figures of pipes or concaves, through which sounds pass, or of other bodies' deferent, conduce to the variety and alteration of the sound. Bacon.

It is certain, however, it crosses the received opi- nion, that sounds may be created without air, though air be the most favourable deferent of sounds. Id.

DEFFAND (Marie du), a Frencn lady, dis- tinguished both for her talents and extensive ac- quaintance with the literati of the last century, was born in 1696, and was the daughter of Gas- pard de Vichy, compte de Champ-Rond. She received an excellent education, but no care seems to have been taken to regulate her temper and moral habits, which displayed throughout her life a disgusting portion of selfishness. In 1718 she married J. B. J. du Deffand, marquis de la Lande, whose ancestors had signalised themselves by their attachment to the dukes of Burgundy. Madame du Deffand left no monument of her abilities except her Correspondence, which has been highly praised by D'Alembert, as affording a model of epistolary style. She died in 1780, having, during the last thirty years of her life, been afflicted with blindness. In 1810 appeared Correspondance inedite de Madame du

Deffand avec D'Alembert, Montesquieu, le president He- nault, la Duchesse du Maine ; Mesdames de Choiseul, de Stael ; le Marquis d'Argens, le Chevalier d'Aydie, &c., 3 vols. 8vo. Her Letters to Horace Walpole have also been printed. DEFIANCE. See DEFY. DEFI'CIENCE, or ˆ Lat. deficio ; de pri- DEFI'CIENCY, n. s. > vative, auidfacio, to DEFICIENT, adj. 5 make. Want, imper-

fection, defect. Deficient ; defective, imperfect. See DEFECT.

Figures are either simple or mixed : the simple be either circular or angular ; and of circular, either complete, as circles, or deficient, as ovals. Wotton.

0 woman ! best of all things as the will Of God ordained them : his creating hand Nothing imperfect or deficient left. Milton.

Thou in thyself art perfect, and in thee Is no deficience found. Id.

Scaliger finding a defect in the reason of Aristotle, introduced! one of no less deficiency himself.

Browne's Vulgar Errowrs.

Neither Virgil nor Homer were deficient in any of the former beauties. Dryden,

The characters of comedy and tragedy are never to be made perfect, but always to be drawn with some specks of frailty and deficience, such as they have been described to us in history. Id.

Several thoughts of the mind, for which we have either none or very deficient names, are diligently to be studied. Locke.

What great deficience is it if we come short of others ? Sprat.

There is no burden laid upon our posterity, nor any deficiency to be hereafter made up by ourselves, which has been our case in so many other subsidies.

Addison.

DEFI'LE, v. a. & n. s.ˆ Compounded of DEFI'LER, n. s. \de and foul. Sax.

DEFI'LEMENT. 3 apylan. Goth, fyla ;

Belg. vuyl ; from the Gr. <]>av\ot, vile, unclean. — Minsheu. To make foul, or unclean ; to pol- lute, violate, corrupt, taint ; and hence to calum- niate.

That which dieth of itself he shall not eat to defil himself therewith. Lev. xxii. 8.*

Forgetfulness of good turns, defiling of souls, ad ul- tery, and shameless uncleanness. Wild. xiv. 26.

There is a thing, Harry, known to many in our land oy the name of pitch ; this pitch, as ancient writers do reporf, doth defile. Skaltspeare.

Lust,

By unchaste looks, loose gestures, and foul talk, Lets in defilement to the inward parts. Milton.

God requires rather that we should die, than defile ourselves with impieties. Stillingfteet.

Every object his offence reviled ; The husband murdered, and the wife defiled. Prior.

He is justly reckoned among the greatest prelates of this age, however his character may be defiled by mean and dirty hands. Swift.

Let not any instances of sin defile your requests.

Wake.

The unchaste are provoked to see their vice ex- posed, and the chaste cannot rake into such filth without danger of defilement. Spectator.

At the last tremendous day, I shall hold forth in my arms my much wronged child, and call aloud for vengeance on her defiler. Addison.

Thus when Cambyses led his barbarous hosts From Persia's rocks to Egypt's trembling coasts, Defiled each hallowed fane, and sacred wood, And, drunk with fury, swelled the Nile with blood.

Darwin.

DEFI'LE, v. n. & n. s. Fr. defile, from file, a line of solders, itself derived from Lat. filum, a thread. To pass off in files ; a narrow passage ; a long

narrow pass; a lane.

There is in Oxford a narrow defile, to use the mi- litary term, where the partisans used to encounter.

Addison.

It has been mentioned by a writer of military ma- noeuvres, that defiling should be performed with rapi- dity, &c. James.

DEFILE, in war, a narrow lane or passage, through which a company of horse or foot can pass only in file, by making a small front ; so that the enemy may take an opportunity to stop their march, and to charge them with so much the more advantage, as those in front and rear cannot reciprocally come to the relief of one another.

DEFI'NE, v. a. & v n

DEFIN'ABLE, adj.

DEFIN'ER,, n.s.

DEF'INITE, n. s. & adj.

DEP'JNITENESS,

DEFINITION,

DEFINITIVE,

DEFINITIVELY.

DEFI N'ITIVENESS.

ter verb, to decide, determine. Definable is, ca- pable of being defined. Definer, he who defines ; and hence he who explains or describes a thing. Definite is, precise; exact; determined; and sometimes it is used as a substantive. Definiteness is, certainty ; limitedness. Definition, the act or form of defining ; the concise description of a thm£. Definitive is, determinate ; express ; final. Definitiveness, decisiveness.

The unjust judge is the capital remover of land- marks, when he defineth amiss of lands and proper- ti ••. Bacon.*

Idiots in this case of favour, Would be wisuiy definite. SJiahtpeare.

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Fr. and Port, de-

Jiner ; Spanish, de-

Jlnir ; lta.diffinire ;

Lat. dejtnirc. From

\do and jinem, to

I give a limit. To set

a limit by words or

I actions ; to mark a

) bound. As a neu-

Definitively thus I answer you :

Your love deserves my thanks ; but my desert,

Unmeritable, shuns your high request. /

Bellarmine saith, because we think that the body of Christ may be in many places at once, locally and visibly ; therefore we may say and hold, that the same body may be circumspectively and definitively in more places at once. Hall.

Other authors write often dubiously, even in mat- ters wherein is expected a strict and definitive truth. Browne's Vulgar Errows.

Definitions do not tell an sit, but quid sit ; the first is to be supposed before any definition is to be in- quired after. Uishop Taylor.

The Supreme Nature we cannot otherwise define, than by saying it is infinite ; as if infinite were de- finable, or infinity a subject for our narrow under- standing. Dryden.

I drew my definition of poetical wit from my parti- cular consideration of him ; for propriety of thoughts and words is only to be found in him. Id.

Though defining be thought the proper way to make known the proper signification, yet there are some words that will not be defined. Locke.

Whose loss can'st thou mean, That dost so well their miseries define ? Sidney.

Hither to your arbour divers times he repaired, and here, by your means, had the sight of the goddess, who, in a definite compass, can set forth infinite beauty. Id.

Concerning the time of the end of the world the question is, whether that time be definable or

Burnet's Theory.

So universally does repetition contribute to our pleasure in the fine arts, that beauty itself has been defined by some writers to consist in a due combina- tion of uniformity and variety. Darwin.

Your God, forsooth, is found Incomprehensible and infinite ; But is he therefore found ? Vain searcher . no : Let your imperfect definition show, That nothing you, the weak definer, know. Prior.

When the rings appeared only black and white, they were very distinct and well defined, and the blackness seemed as intense as that of the central spot. Newton.

What is man ? Vot a reasonable animal merely ; for that is not an adequate and distinguishing defini- tion. Bentley.

Special bastardy is nothing else but the definition of the general ; and the general, again, is nothing else but a definite of the special. Ayliffe.

DEFINITE, in grammar, is applied to an arti- cle that has a precise determinate signification ; such as the article the in English, le and la in French, &c.', which fix and ascertain the noun to waich they belong; whereas a, an, un, or une, mark nothing particular, and are therefore called indefinite. See ARTICLE.

DEFLA'GRABLE, adj.\ From Lat. defla DEFLAGRA'TION, n. s. SgT0- Combustibi- DEFLAGRABI'LITY, ». s- Jlity; the quality of taking fire, and burning totally away.

The true reason why paper is not burned by the flame that plays about it, seems to be, that the aqueous part of the spirit of wine, being imbibed by the paper, keeps it so moist, that the flame of the sul- phureous parts of the same spirit cannot fasten on it ;

and therefore, when the deflagration is over, you shall always find the paper moist. Boyle.

Our chymical oils, supposing that they were ex- actly pure, yet they would be, as the best spirit of wine is, but the more inflammable and deflagrable.

Id.

We have spent more time than the opinion of the ready deflagrability , if I may so speak, of salt petre did permit us to imagine. Id.

DEFLECT', v. n. ~\ From Lat. de and/ec- DEFLEC'TION, n. s. >fo, to turn. To turn DEFLEX'URE, n. s. j aside; to deviate. At some parts of the Azores the needle deflecteth not, but lieth in the true meridian: on the other side of the Azores, and this side of the equator, the north ooint of the needle wheeleth to the west.

Browne's Vulgar Errours.

Needles incline to the south on the other side of the equator ; and at the very line, or middle circle, stand without deflection. Id.

For, did not some from a straight course deflect, They could not meet, they could no world erect.

Blackmore.

As by the cultivation of various sciences, a language is amplified, it will be more furnished with words deflected from their original sense.

Johnson. Preface to Dictionary.

DEFLECTION OF THE RAYS OF LIGHT, a pro- perty which Dr. Hook observed in 1675, and read an account of before the Royal Society, March 18th, the same year. He says he found it different both from reflection and refraction, and that it was made towards the surface of the opaque body, perpendicularly. This property Sir Isaac Newton calls inflection.

DEFLOUR', v. a. ˆ Fr. defiorer ; Span, des- DEFLOUR'ER, n. s. \florar; Lat. deflorare; DEFLORA'TJON, n. s.j from de privative and fioreo, floSjfloris, a flower. To violate a virgin ; hence to mar or deface any thing that is beau- tiful ; to select the most valuable of a number of things. The meaning of the substantives is ob- vious.

How on a sudden lost, Defaced, deflowed, and now to death devote !

Milton.

The laws of Normandy are, in a great measure, the defloration of the English laws, and a transcript of them. Hale.

If he died young, he died innocent, and before the sweetness of his soul was defioured and ravished from him by the flames and follies of a froward age.

Taylor.

I have often wondered, that those deflourert of in- nocence, though dead to all the sentiments of virtue and honour, are not restrained by humanity.

Addison.

.FLU'X, n. s. ˆ

F'LUVOUS, adj. > FLU'XION, n. s. j

Lat. defluxio, from de, and Jluo, to flow. The flow of humors down-

DEFLU'X, n. s.

DEF'LUVOUS,

DEFLU'XION,

wards.

Both bodies are clammy, and bridle the deflux of humours, without penning them in too much.

Bacon.

• We see that taking cold moveth looseness by con- traction of the skin and outward parts ; and su doth cold, likewise, cause rheums and dejltixion from the head. Id.*

DE'FLY, adv. From DEFT, which see. Dex- terously; skilfully. Obsolete. Properly deftly.

Lo, how finely the graces can it foot

To the instrument ; They dauncen defly, and singen soote,

In their merriment. Spenser.

DE FOE (Daniel), a celebrated miscellaneous writer of the last and

preceding century. When kingWilliam, to allay the dissent of the people, was obliged to dimiss his Dutch guards, De Foe ridi- culed the enemies of government in a well-known poem, called the True-Born Englishman. He next wrote a tract, called the Shortest Way with the Dissenters, a satire on those who now, having the power, wished to retaliate on the Romanists and dissenters those persecutions they had loudly complained of when inflicted on themselves. For this he was sentenced to the pillory, which so little intimidated him, that, in defiance of this usage, he wrote a Hymn to the Pillory. It is unneces- sary to enumerate all his publications : the fol- lowing are the principal. The History of the Plague in 1665 ; a novel, entitled The History of Colonel Jack; a New Voyage Round the World by a Company of Merchants, printed for Bettesworth, 1725; The History of Roxana; Memoirs of a Cavalier ; The History of Moll Flanders; a religious romance, entitled Religi- ous Courtship ; and The Life and Adventures of Robinson Crusoe, a well-known tale, of which there have been editions without number. The basis of this popular story was afforded by the real history of a Scottish sailor, Alexander Selkirk, who had been left ashore on the island of Juan Fernandez. Selkirk used to relate his adven- tures at a coffee-house in London, where money was frequently given him by the company, and where De Foe so often heard them, that out of them he formed the above mentioned history. De Foe's malignant enemies have misrepresented this to his disadvantage. He died at Islington in 1731.

DEFCEDA'TION, n. s. Lat. from defadus, of de zndfasdus, foul. The act of making filthy; pollution. This is not an English word ; at least, to make it English, it should be written defeda- tipn, says Dr. Johnson.

What native unextingiiishable beauty must be im- pressed and instincted through the whole, which the defaedation of so many parts by a bad printer, and ~ worse 'editor, could not hinder from shining forth.

Bentley.

DEFORCEMENT, n. s. from force. A with holding of lands and tenements by force from the right owner. ' It may be grounded,' says Blackstone, ' on the disability of the party de- forced.'

DEFORM', v. a. & adj.^\ Fr. deformcr ; Ital. DEFORM'ED, part. adj. 1 difformare ; Span. DEFORMA'TION, n. s. { desformar ; Lat. de- DEFORM'EDLY, adv. fformare ; i. e. demere DEFORM'EDNESS, n. s. | formam, to take away DEFORM'ITY. j beauty. To disfi-

*gure ; to mar the form of any thing; to dishonor, disgrace. Deformation is a defacing, disfiguring. Deformity is ugliness, irregularity of *brm; hence inordinateness, ridiculousness.*

I did proclaim,

That whoso killed that monster most deform, Should have mir>e only daughter to his dame.

Spenser,

I that am curtailed of all fair proportion, Cheated of feature by dissembling nature, Deformed, unfinished, sent before my time Into this breathing world, scarce half made up.

ShoJupeare.

Where sits deformity to mock my body, To shape my legs of an unequal size, To disproportion me in every part. Id.

No glory is more to be envied than that of due re- forming either church or state, when deformities are such, that the perturbation and novelty are not like to exceed the benefit of reforming. King Charles.

Why should not man, Retaining still divine similitude In part, from such deformities be free, 4.nd for his Maker's image sake, exempt?

Milton.

So spake the grisly terror ; and in shape, So speaking and so threatening, grew tenfold More dreadful and deform. Id.

Old men with dust deformed their hoary hair.

Dryden.

It is well known what strange work there has been in the world, under the name and pretence of reforma- tion ; how often it has turned out to be, in reality, deformation ; or, at best, a tinkering sort of business, where, while one hole has been mended, two have been made. Biihop Home.

Affectation is certain deformity ; by forming them- selves on fantastic models, the young begin with being ridiculous, and often end in being vicious. Blair.

Had no Power presented me The possibility of change, I would Have done the best which Spirit may, to make Its way, with all Deformity's dull, deadly, Discouraging, weight upon me, like a mountain.

Byron.

DEFORMITY may be defined, in general, the want of uniformity ; though it certainly does not, as some have supposed, include the want of that perfect degree of uniformity that is necessary to constitute beauty. Many are the objects in na- ture tha cannot be said to be beautiful, and yet are by no means deformed. Deformity is either natural or moral. These are both referred by Mr. Hutcheson to an internal sense ; and our perceptions of them, as he supposes, arise from an original arbitrary structure of our own minds, by which certain objects, when observed, are rendered the occasions of certain sensations and affections. See BEAUTY.*

DEFRAUD, v. a. "\ Fr. defrauder ; Span DEFRAUDA'xiON,n.s. \defrauddr; Lat. defrau- DEFRAUDER.) dare, from de and jraus,

fraudis, deceit. To cheat ; deceive ; beguile of something : always taking of before the thing gained. Defraudation is privation by deceit or guile. Defrauder, he who cheats another of his property.

My son, defraud not the poor of his living, and make not the needy eyes to wait long. Eccl. iv. 1.

Churches seem injured and defrauded of their rights, when places, not sanctified as they are, prevent them unnecessarily in that pre-eminence and honour.

Hooker.

Their imposture ar • worse than any other, de luding not only into pecuniary defraudations , but th« irreparable deceit of death. Bruwne's Vulgar Erroun.

There they, who brothers better claim disown, Expel their parents, and usurp the throne ; Defraud their clients, and, to lucre sold, Sit brooding on unprofitable gold. Dryden.

There, is a portion of our lives which every wise man may justly reserve for his own particular use, without defrauding his native country. Id.

But now he seized Briseis' heavenly charms, And of my valour's prize defrauds my arms. Pope.

The profligate in morals grows severe, Defraitders just, and sycophants sincere.

Blackmoris.

DEFRA'Y, v. a. \ Fr. defrayer, accord DEFRAY'ER, n. s. > ing to Minsheu, from DEFRAY'MENT, n. s. 3 the old Fr. fredum, a fine. Rather, from de, andfrals, Fr. expense. It may, however, be nothing more than a com- pound of the English verb, free. To pay expenses ; to discharge a charge made ; defrayment is, com- pensation ; satisfaction. Defrayer, he who pays or discharges an account.

He would, out of his own revenue, defray the charges belonging to the sacrifices. 2 Mac. ix. 16.

It is easy to lay a charge upon any town ; but to foresee how the same may be answered and defrayed, is the chief part of good advisement.

Spenser's State of Ireland.

It is long since any stranger arrived in this part, and therefore take ye no care ; the state will defray you all the time you stay ; neither shall you stay one day the less for that. Bacon.

DEFT, adj. Sax. ba-pt. Obsolete. Neat; handsome; spruce; fitting.

You go not the way to examine ; you must call the

watch that are their accusers.

Yea, marry, that's the deftest way.

Shakspeare. Come, high or low,

Thyself and office deftly show. Id. Macbeth. Loud fits of laughter seized the guests, to see The limping god so deft at his new ministry.

Dryden.

The wanton calf may skip with many a bound, And my cur, Tray, play deftest feats around. Gay.

Young Colin Clout, a lad of peerless meed, Full well could dance, and deftly tune the reed. Id.

DEFUNCT", n. s. & adj.) Lat. defunctus, DEFUNC'TION, n. s. S of de and fungor,

to finish. In a state of death ; dead. Nature doth abhor to make his couch With the defunct, or sleep upon the dead,

Shakspeare. I therefore beg it not To please the palate of my appetite ; Nor to comply with heat, the young effects In me defunct, and proper satisfaction. Id

Here entity and quiddity, The souls of defunct bodies, fly. Hudibras. In many cases, the searchers are able to report th« opinion of the physician who was with the patient, as they receive the same from the friends of the defunct.

Graunt.

DEFY/v. a. & n. s.) Sax. and Teut. fgan ;

DEFv'ER,n. s. >Goth. fga; Fr. dcfier ;

DEFI'ANCE. j Span, desafier; Ital. dis-

sidere, from Lat. dissidere, to differ: because-,

says Minsheu, we differ with those whom we efy. To dare ; to challenge ; to call to cora- oat ; to despise ; to disdain ; to deny. Defy is used as a substantive by Drydeu, but not com- monly. Defiance is the instrument or mode of challenge; any expression of enmity, abhor- rence, or contempt.

I knowe her eke a false dissiinulour, For finally fortune I do defie.

Chaucer. Pro/, to Cant. Tale. As many fools that stand in better place, Garnished like him, that for a tricksy word Defy the matter. Shakspeare.*

The fiery Tybalt, with his sword prepared, Which, as he breathed defiance to my ears, He swung about his head. Id.

I once again

Defytliee to the trial of mortal fight. Milton. How many of us can bid defiance to death, and suggest answers to absent temptations, which when

they come home to us, we fly off, and change our note.

Bp. Hall's Contemplations. Nor shall it e'er be said that wight With gantlet blue and bases white, And round blunt truncheon by his side So great a man at arms defyed. Hudibras.

Is it not then high time that the laws should pro- vide, by the most prudent and effectual means, to rurb those bold and insolent defiers of heaven ?

TiUotsom.

At this the challenger, with fierce defy, His trumpet sounds ; the challenged makes reply : With clangour rings the field, resounds the vaulted sky. Dry den.

Nor is it just to bring

A war without a just defiance made. Id,

Nobody will so openly bid defiance to common sense, as to affirm visible and direct contradictions. Locke.

Here let the pippin, fretted o'er with gold, In fostering straw defy the winter's cold ; The hardier russet here will safely keep. And dusky rennet, with its crimson cheek.

Sheridan.

And one enormous shout of ' Allah !' rose In the same moment, loud as even the roar Of war's most mortal engines, to their foes Hurling defiance. Byron.

DEGEN'ERATE,v. n. badj.ˆ Ttr.degenerer; DEGEN'ERACY, n. s. Span, degene-

DEGEN'ERATENFSS, (rar ; Ital. de-

DEGEN'ERATIVE, \generare; La-

DEGEN'EROUS, adj. \ tin, degenero;

DEGEN'EROUSLY, adv. J from de and

genere errare, to wander from its kind. To fall off from the virtue or fame of one's ancestors ; to decline in station, in kind, or in class : as an adjective, unlike or unequal to ancestry ; unwor- thy ; base. Degeneracy, degenerateness, and de- generation are synonymous, and signify a state or

act that exhibits degradation from the excel- lence or honor of ancestors; an apostasy or de- clining from that which is good. Degenerous is synonymous with degenerated.

Most of those fruits that used to be grafted, if they JK- net of kernels or stones, degenerate. Bacon.

Thou art like enough To fight against me under Piercy's pay ; To oog his heels, and curtsy at his frowns. To show how much thou art degenerate.

Shitksj^eure.

Let not the tumultuary violence of some men's im- moderate demands ever betray me to that degenerous and unmanly slavery ,which should make me strengthen them by my consent. King Charles.

In plants, these transplantations are obvious ; as barley into oats, of wheat into darnell; and those grains which generally arise among corn, as cockle, aracus, oegilops, and other degenerations.

Browne's Vulgar Emntn. So all shall turn degenerate, all depraved ;

Justice and temperance, truth and faith, forgot !

One man except. Milton.

When wit transgresseth decency, it degenerate into insolence and impiety. Tillotson.*

'Tis true, we have contracted a great deal of weak- ness and impotency by our wilful degeneracy from goodness ; but that grace, which the gospel offers to us for our assistance, is sufficient for us. Id.

Fair, tall, his limbs with due proportion joined ; But of a heavy dull degenerate mind, His soul belied the features of his face ; Beauty was there, but beauty in disgrace. Dryden.

Degenerous passion, and for man too base, It seats its empire in the female race ; There rages, and, to make its blow secure, Puts flattery on, until the aim be sure. Id.

When a man so far becomes degenerate as to qui me principles of human nature, and to be a noxious creature, there is commonly an injury done some person or other. Locke.

Degenerate from their ancient brood, Since first the court allowed them food.

Swift.

The ruin of a state is generally preceded by an universal degeneracy of manners, and contempt of religion, which is entirely our case at present. Id.

How wounding a spectacle is it to see heroes, like Hercules at the distaff, thus degenerously employed 1

Decay of Piety.

There is a kind of sluggish lesignation, as well as poorness and degeneracy of spirit, in a state of sla- very. A ddison.

When we think of the infinite purity of God, who cannot behold iniquity ; and consider the corrupted and degenerate state of human nature ; this i» apt to make us more apprehensive than is reasonable, of the difficulty of our duty. Clarke's Sermons.

Tongues, like governments, have a natural ten- dency to degeneration ; we have long preserved our constitution, let us make some struggles for our lan- guage. Johnson. Preface to Dictionary.

DEGLUTITION, n. s. Lat. deglutio, of de and glutio, from Gr. yXu£o>, to swallow. — Ains- worth. The act or power of swallowing.

When the deglutition is totally abolished, the patient may be nourished by clysters. Arbuthnot on Diet. DEGLUTITION, in the animal economy, is performed in the first place by means of the tongue, driving the aliment into the resophagus or gullet, and then, by the contraction of the sphincter, and the fleshy fibres of the esophagus, which, lessening its aperture, protrude the con- tents downward into the stomach. In its course, by pressing the glands, the food itself increases the mucus required for lubrication, and thus easily passes without irritation.

DEGRADE', v. a.) Fr. degradir ; Span,

DEGRADATION, n. s. S degraddr ; Ital. disgra-

ddrc ; from Lat. de. privative, and gradus a step.

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To deprive of rank or degree ; to reduce from a higher to a lower rank or value. Degradation is the state of deprivation so effected; dismissal from trust or office.

He should

Be quite degraded, like a hedgeborn swain. That doth presume to boast of gentle blood.

Shakspeare.

Nor shall thou, by descending to assume Man's nature, lessen or degrade thine own.

Milton.

All higher knowledge in her presence falls Degraded. Id.

So deplorable is the degradation of our nature, that nhereas before we bors the image of God, we now .etainonly the image of men. South.

The word degradation is commonly used to denote a deprivation and removing of a man from his degree.

Ayttffe.

Time hath not yet the features fixed, But brighter traits with evil mixed ; And there are hues not always faded, Which speak a mind not all degraded Even by the crimes through which it waded.

Byron. The Giaour.

DEGRADATION from political rank or station •was, and is, performed in a different manner in the cases of a peer, a priest, a knight, a gentle- man, an officer, &c. In the time of Francis I. M. Fangel, a French officer, having, in a coward- ly manner, given up Fontarabia, whereof he was governor, was publicly degraded. On this oc- casion twenty or thirty cavaliers were assembled, before whom this gentleman was accused of treason and breach of faith by a king at arms. Two scaffolds were erected, the one for the judges, heralds, and pursuivants, and the other for the guilty cavalier, who was armed at all points, and his shield placed on a stake before him, with the point reversed. On one side as- sisted twelve priests, in surplices, who sung the vigils of the dead. At the close of each psalm they made a pause, during which the officers of arms stripped the condemned of some piece of his armour, beginning with his helmet, and pro- ceeding thus till he was quite disarmed ; which done, they broke the shield in three pieces with a hammer. Then the king at arms emptied a basin of hot water on the criminal's head ; and the judges, putting on mourning habits, went to the church. The degraded was then drawn from off the scaffold with a rope tied under his arm- pits, laid on a bier, and covered with mortuary clothes ;

the priests singing some of the prayers for the dead ; and then he was delivered to the civil judge and the executioner of justice. Sir Andrew Harcla, earl of Carlisle, being convicted of treason, 18 Edward II. coram rege : after judgment was pronounced, his sword was broken over his head, and his spurs hewn off his heels ; Sir Anthony Lucy, the judge, saying to him : ‘ Andrew, now thou art no knight, but a knave.’ It has been maintained that the king may de- grade a peer ; but it appears from later authori- ties, that he cannot be degraded but by act of parliament. We have an instance of ecclesiasti- cal degradation, before condemnation to death, in the eighth century, at Constantinople, in the person of the patriarch Constantine, whom Con-

stantine Copronymus caused to be executed. lie was made to ascend the ambo ; and thepalnarcn Nicetas sent some of his bishops to strip h.u. of the pallium, and anathematised him : then they made him go out of the church backwards. When Cranmer, archbishop of Canterbury, was degraded by order of queen Mary, they dressed him in episcopal robes, made only of canvas, put the mitre on his head, and the pastoral staff in his hand ; and in this attire showed him to the people. They then stripped him piece by piece. Pope Boniface pronounced that six bishops were required to degrade a priest ; but the difficulty of assembling so many bishops, rendered the punishment frequently impracticable.

DEGRADED, in heraldry, the name of a cross when it has steps at each end, as argent, a cross, degraded sable. Name Wentworlh.

DEGREE’, n. s. FT. degre ; Port, grim ; Span, and Ital. grado, from Lat. gradus, a step. See DEGRADE. Rank; quality ; order ; place of relative merit or precedency ; measure ; propor- tion. Variously applied in the sciences: see the following articles. By degrees is, gradually ; by steps, or graduated progress.

Surely men of low degree are vanity, and men of high degree are a lye : to be laid in the balance, they are altogether lighter than vanity. Psalm Ixii. 9. Methinkith it accordant to reson,

To tell you alle the condition

Of ech of them, so as it semid me,

A.nd which they werin, and of what degree,

And eke in what array that they wer in ;

And at a knight then woll I first begin.

Chaucer. Prol. to Cant. Tales.

It was my fortune, common to that age, To love a lady fair, of great degree,

The which was born of noble parentage, And set in highest seat of dignity. Spenser.

I embrace willingly the ancient received course and conveniency of that discipline, which teacheth inferior degrees and orders in the church of God.

Hooker.

The book of Wisdom noteth degrees of idolatry, making that of worshipping petty and vile idols more <;ross than simply the worshipping of the creature.

Bacon.

Degree being vizarded, The unworthiest shews as fairly in the mask.

Shakspeare.

How vainly do we hope to be perfect at once ! it is •well for us, if through many degrees we can rise to our consummation. Bishop Hall. Contemplations.

A strange harmonious inclination Of all degrees to reformation. Hudibras.

In minds and manners, twins opposed we see ; In the same sign, almost the same aegree. Dryden.

If all the parts are equally heard as loud us one another, they will stun you to that decree, that you •will fancy your ears were torn in pieces. As if there were degrees in infinite, And Heaven itself had rather want perfection Than punish to excess.

Farmers in degree, He a good husband, a good housewife she.

Id.

The several degrees of angels may probably have larger views, and be endowed with capacities able to set before them, as in one picture, all their past know- ledge at once. Locke.

Poesy

Admits of no degrees ; but must be still Sublimely good, or despicably ill. Roscommon.

But is no rank, no station, no degree, From this contagious taint of sorrow free ? Prior.

Exulting in triumph now swell the bold notes ; In broken air, trembling, the wild musick floats Till by degrees remote and small, The strains decay, And melt away,

In a dying, dying fall. Pope.

The unusual extension of my muscles on this occa- sion, made my face ache on both sides to such a de- gree, that nothing but an invincible resolution and perseverance could have prevented me from falling back to my monosyllables. Spectator.

A person who is addicted to play or gaming, though he took but little delight in it at first, by de- greet contracts a strong inclination towards it.

Id. No. 447.

Men's prejudices, I was sensible, could only be lessened by degrees ; and I was firmly of opinion that no change ought ever to be made in quiet times, till the utility of the change was generally acknowledged.

Bishop Watson.

Without hinting the abolition of the order, [IJ strongly insisted on the propriety of obliging them to keep exercises in the schools, as the other candidates for degrees did. Id.

How numerous were the instances in which juries found a compassionate verdict, in direct contradiction to the plain facts clearly established before them, we do not know j but hat these evils must all have existed to a considerable degree, no man can doubt. Sir Samuel Romilly.

DEGREE, in universities, denotes a quality con- ferred on the students or members thereof, as a testimony of their proficiency in the arts or sciences, and entitling them to certain privi- leges.

DECREE OF LATITUDE. See LATITUDE.

DEGREE OF LONGITUDE. See LONGITUDE.

DEHORT, v. a. Lat. dehortor ; of de and hortor ; Gr. opw, wprat, to incite. To dissuade.

One severely deJtorted all his followers from prosti- tuting mathematical principles unto common appre- hension or practice. Wilkins.

The apostles vehemently defwrt us from unbelief.

Ward.

The author of this epistle, and the rest of the apostles, Jo every where vehemently and earnestly nehort from unbelief : did they never read these de- hortations? Id. on Infidelity.

DEJANIKA, in fabulous history, daughter of Oeneus, king of yttolia, and wife of Hercules. The centaur Nessus, endeavouring to ravish her, v.as slain by Hercules with a poisoned arrow. \essus, when dying, gave his bloody shirt to De- janira ; assuring her that it was a sovereign re- medy to cure her husband, if he proved unfaith- ful. Some time after, Dejanira, suspecting his fidelity, sent him the shirt, which he put on, and was seized with the most excruciating torments. Being unable to support his pains, he retired to Mount Oeta, and erecting a pile of wood set fire

to it, and threw himself into the flames; upon which Dejanira killed herself in despair.

DE'ICIDE, n. s. From Lat. deus and cttdo A barbarism of Prior's, meant, we suppose to express the death of Christ as being both God and man. Fully believing that such he was, we cannot think that a sober theology will warrant 'his term.

Explaining how Perfection suffered pain, Almighty languished, and Eternal died ;

How by her patient victor Death was slain, And earth profaned, yet blessed with deicide! Prior.

DEJECT', v. a. & adj. ~\ Old Fr. dejecter ; Lat.

DEJKCT'EDLY, adv. j dejicere, from de, and

DEJECT'EDXESS, n. s. > jacio, to cast. To cast

DEJECT'ION, i or throw down ; de-

DEJECT'URE. J press ; debase : hence

to afflict in any way; to mar with grief.v. The

adjective signifies cast down ; depressed ; low in

spirits and manner : dejecture, that which is

thrown down in a particular way.

No man in that passion doth look strongly, but de- jectedly : and that repulsion from the eyes diverteth the spirits, and gives heat more to the ears, and the parts by them. Bacon.

I am of ladies most deject and wretched, That sucked the honey of his music vows.

Shaksj-eare.

The lowest, most dejectea thing of fortune, Stands still in esperance ; lives not in fear ! Id.

What besides

Of sorrow, and dejection, and despair, Our frailty can sustain, thy tidings bring.

Milton.

The liver should continually separate the choler from the blood, and empty it into the intestines ; where there is good use for it, not only to provoke de-jection, but also to attenuate the chyle.

Ray on the Creation.

Oh ! If I did but steadfastly believe, I could not be dejected ; for I will not injure myself to say, I offer my mind any inferior consolation to supply this loss.

Lady Russell's Letters. Eneas here beheld, of form divine, A godlike youth in glittering armour shine, AVith great Marcellus keeping equal pace, But gloomy were his eyes, dejected was his face.

Dryden.

Nor think to die dejects my lofty mind ; All that I dread is leaving you behind ! Pope'. The effects of an alkalescent state, in any great de- gree, are thirst and a dejection of appetite, which putrid things occasion more than any other.

Arbuthnot on Aliments.

A disease opposite to spissitude is too great fluidity, the symptoms of which are excess of animal secretions ; as of perspiration, sweat, urine, liquid dejeztures, lean- ness, weakness, and thirst Id.

Deserted and astonished, he sinks into utter dejec- tion ; and even hope itself is swallowed up in despair.

Rogers.

She was dejected ; she learned an humbler language, and seemed, if she did not trust in God, at least to have renounced her confidence in herself.

Cowper. Private Correspoirience. Or fondly gay, with unambitious guile, Attempt no prize but favouring Beauty's smile ; Or bear dejected to the lonely grove The soft despair of unyrevailing love. Sheridan

DEJERATION, n. s. From Lat. dejero. A taking of a solemn oath.

DE IFORM, adj. From Lat. dens and forma. Of a godlike form.

DE'IF Y, v. a. Fr. deifier ; Lat. deus, and Jio to be made. To make like God ; to treat as a deity ; to praise excessively.

He did again so extol and deify the pope, as made all that he had said in praise of his master and mis- tress seem temperate and passable. Bacon.

Persuade the covetous man not to deify his money, and the proud man not to adore himself. South.

Daphnis, the fields' delight, the shepherds' love, Renowned on earth, and deified above. Dryden.

The seals of Julius Caesar, which we know to be antique, have the star of Venus over them, though they were all graven after his death, as a note

that he was deified. Id.

Half of thee

1» deified before thy death. Prior,

*Thus by degrees, self-chea*ed of their sound And sober judgment, that he is but man, They demi-deify and fume him so, That in due season he forgets it too.*

Cowper't Task,

One noble stroke -with a whole life may glow, Or deify the cauvass till it shine With beauty so surpassing all below, That they who kneel to idols so divine Break no commandment, for high Heaven is there Transfused, transfigurated. Byron.

DEIGN, v. a. & n. Fr. daigner ; Lat. dignor, As a verb active, to vouchsafe ; to think worthy (with some condescension). To grant; allow; permit.

Now Sweno, Norway's king, craves composition ; Nor would we deign him burial of his men, Till he disbursed ten thousand dollars. Shakspeare.

Deign to descend now lower, and relate What may no less perhaps avail us known.

Milton.

O deign to visit our forsaken seats, The mossy fountains, and the green retreats.

Pope.

Yet nature's care, to all her children just. With richer treasures and an ampler state Endows at large whatever happy man Will deign to use. Akenstde,

News have I none that I can deign to write, Save that it rained prodigiously last night.

Cowper. Private Correspondence.

DEI NTEGRATE, v. a. Lat. from de and mlegro. To take from the whole ; to spoil ; to diminish.

DE1PHON, in fabulous history, a brother of Triptolemus, and son of Celeus and Metanira. When Ceres travelled over the world, she stopped at his

father's court, and undertook to nurse him and biing him up. To reward the hospitality of Celeus, the goddess, to make his son immortal, every evening placed him on burning coals, to purify him from his mortal particles. The un- common growth of Deiphon astonished Metanira, who wished to see what Ceres did to make him so vigorous. She was frightened to see her son on burning coals ; and her shrieks disturbing the mysterious operations of the goddess, Deiphon perished in the flames.

DEISCAL. or DEISHEAL, in the ancient British customs, a ceremony originally used in the druidical worship. The temples of the an- cient Britons were all circular ; and the druids in performing the public offices of their religion, never neglected to make three turns round the altar, frorr east to west, accompanied by all the worshippers. This was called the deischal, from deas, the right hand, and sul, the sun.

DE'ISM, 7i. s. ~\ Fr. deisme ; from Lat.

DE'JST, «. s. ydeus, God. See DEITY.

DEIST'ICAL, adj. J Strictly, a belief in God, or one God ; but generally applied to those who, professing such a belief, reject Revelation. See the following article.

In the second epistle of St. Peter, certain deists, as they seem to have been, have laughed at the pro- phecy of the day of judgment. Burnet.

Deism, or the principles of natural worship, are only the faint remnants or dying flames of revealed religion in the posterity of Noah. Dryden.

Weakness does not fa.1. only to the share of Chris- tian writers, but to some who have taken the pen in hand to support tlie deiitical or auti-christian scheme of our days. Watts.

DEISM may properly be used to denote natural religion, as comprehending those truths which have a real foundation in reason and nature ; and in this sense it is so far from being opposite to Christianity, that it is one great design of the gospel to illustrate and enforce it. In this sense some of the deistical writers have affected to use it. But deism popularly signifies that system of religion and morals which is sup- posed to be derived, by the mere force of reason, from the contemplation of the works of nature, and which rejects revelation. In the article REVELATION, we shall present the reader with a complete view of the entire argument on this momentous subject.

DE'ITY, 7i. j. Fr. deite; Span, and Port. dietad; Arm. del, from Lat. deltas, deus; Gr. A«oc, God. Applied also to fabulous gods, and the supposed

qualities of a divinity.

DE JURE. See DE FACTO.

DELACAPEDE (Bernard Germain Stephen Laville, count), a French naturalist, of noble family, was born at Agen, December 16th, 1756. He was originally destined for the army, and entered while a youth into the Bavarian service. But his love of science soon procured him the post of keeper, of the cabinets in the Jardin du Roi at Paris, for which he abandoned the army, and which he held to the period of the revolution. He composed, as a continuation of the great work of Buffon, the Natural History of Oviparous Quadrupeds and Serpents. He much improved the royal cabinet ; and in 1798 pub- lished the Natural History of Fishes, 5 vols. 4to. But the events of the revolution now dis- tracted his attention. He became a member of the department of Paris, and in 1791 one of the deputies of that city. He was successively secretary and president of the National Assem- bly ; and was one of the very few conspicuous men who steered in safety through the public storms. He was chosen one of the first members of the National Institute, and on the ?.()th o>'

January, 1796, carried up an address from a deputation of that body to the council of five hundred, declaring its hatred of royalty. Buona- parte nominated him in 1799 a member of the Conservative Senate; in 1801 he was president of that body, in 1803 grand chancellor of the legion of honor, and in 1804 senator of Paris. He had frequent intercourse with the emperor, to whom he manifested much attachment ; but in January, 1814, when the power of his master was tottering, he assumed a new tone, and at the head of the senate recommended peace. At the restoration of the Bourbons he returned to his studies. His lectures at the Garden of Plants were numerously attended. He published several tracts, and contributed to theAnnalesdu Muse- um d' Histoire Naturelle, and other periodical works. His History of Cetaceous Animals, which appeared in 1804, was his last work of importance. He died of the small-pox, October 6th, 1825, and his funeral was attended by several peers of France, members of the Insti- tute, &c.

DELACERATION, n. s. From Lat. delacero. A tearing in pieces.

DELACRYM A'TION, n.s. Lat. delacrymatio. A falling down of the humors ; the waterishness of the eyes, or a weeping much.

DELACT A'TION, n. s. Lat. delactatto. A weaning from the breast.

DELAMBRE, one of the most distinguished astronomers of our time, born at Amiens in 1749, studied under the abbe Delille, who always remained his friend. He first applied himself to the languages, particularly most of the living ones, and made himself one of the best Hellen- ists in France. His studies were not directed to astronomy until his thirty-sixth year. He en- riched the writings of Lalande with a comment- ary, and became the friend and pupil of the author, who proudly called him his best work. In 1 790, eight years after the discovery of Her- schel, Delambre published the tables of that planet, although in that period it had performed but a small part of its eighty years' course. He also constructed tables of Jupiter and Saturn, and of the satellites of Jupiter, which, with se- veral treatises, procured him a reception into the National Institute. He was engaged with Me"- chain, from 1792 till 1799, in measuring an arc of the meridian from Barcelona to Dunkirk for the verification of which he measured two bases of 6000 toises, one near Melun, the other near Per- pignan. See his Base du Systeme Metrique decimal, ou Mesure de 1′ Arc du Meridien com- pris entre les Paralleles de Dunkerque et Bar- celonne, Paris, 3 vols. 4to. ; and Recueil d' Ob- servat. Geodesiques faisant Suite au 3mevol. de la Base du Syst. Metr. r£dige par Biot et Arago. He was made member of the bureau des lon- gitudes. In 1802 Napoleon appointed him in- specteur-ge'ne'ral des eludes, which post he re- signed when chosen perpetual secretary of the class of mathematical sciences in 1803. His first tables of the sun were published in 1792 ; in 1806 appeared his new ones. In 1807 he succeeded Lalande in the college de France, and wrote his Traite d' Astronomic theorique et pra- tique, 3 vols. 4to.l814 ; 1 1 is'oire de 1′ Astronomic

du moyen age, 1819 ; Hist, de 1'Astron. moderne, 1821, 2 vols.; and Hist, de 1′ Astron. du 18me. Siecle, 2 vols. ; a collection of works such as no other nation can show. Delambre also distin- guished himself, as perpetual secretary of the in- stitute, by the justice and elegance of his eloges. He died in 1822.

DELAMERE FOREST, a forest of England, in Cheshire, north of Chester, near the Weever ; abounding with wood on its hills, fine pasture in its valleys, and fish in its waters.

DELANY (Patrick), a learned divine, and ingenious author, was born in Ireland about 1686. He received his education at Trinity College, Dublin, which he entered in the charac- ter of a siier, and afterwards became a fellow. Under the patronage of lord Carteret he obtained preferment in the church ; and in 1732 published in London a work entitled Revelation Examined with Candor. In 1738 he published his Re- flections upon Polygamy ; and, not long after, the Life of David, king of Israel, a work display- ing much ingenuity and labor. In 1743 he married a second wife, the widow of a Cornish gentleman, and the following year obtained the

deanery of Downe. In 1754 he published Observations on Lord Orrery's Remarks on the Life and Writings of Swift, in which there are many curious anecdotes of the latter. Dr. Delany continued writing for the public till a short time before his death ; and his Sermons on Social Duties are still in estimation. He died at Bath in 1768.

DELA'PSED, adj. Lat. delapms, with physi- cians. Bearing or falling down. It is used in speaking of the womb, and the like.

DELATE', v. a.) Lat. delutus, dcfero. To

DELA'TION, n. s. > carry, convey, or spread.

DELA'TOR, n. s. J Applied both literally, and to the carrying intelligence, or an accusation. A delator is an accuser ; an informer.

DELATIN, a market town of Austrian Gal- licia, in the circle of Stanislawow. Near this town are extensive quarries of alum slate. It is twenty-four miles from Stanislawow.

DELAVAL (Edward Hussey), a chemist and natural philosopher, F. R. S. of London and Gottingen, was a brother of lord Delaval, and died at his house in Parliament-place, Westmin- ster, August 14th, 1814, aged eighty-five. He particularly directed his studies to the chemistry of optics, on which he published many excellent papers in the Philosophical Transactions. He was the author of an Experimental Enquiry into the Cause of the Changes of Colors in Opaque and Colored Bodies, with an Historical Preface relative to the Parts of Philosophy therein examined, and to the several Arts and Manufactures dependent on them, 1777, 4to. : a work which was translated into French and Italian.

DELAWAR, a town of Virginia, in King William's county, situated on the peninsula formed by the confluence of the Pamunky and Mattapony. Twenty miles north by west of Williamsburg.

DELAWARE, one of the United States of North America, situated between 38° 29′ 30', and 39° 5V N. lal., and between 75° and 75° 4li'

W. long, being in length ninety miles, and in breadth twenty-five, contains 1700 square miles, or 1,088,000 acres. It is bounded on the north by Pennsylvania, on the south and west by Maryland, and on the east by Delaware Bay and the Atlantic Ocean. It is divided into three counties,

Newcastle, Kent, and Sussex ; of which the chief towns are Wilmington, Dover, and Georgetown. The state of Delaware, the upper parts of the county of Newcastle excepted, is generally low and level. Large quantities of stagnant water, at particular seasons of the year, overspreading a great portion of the lan,d, render it equally unfit for the purposes of agriculture, and injurious to health. The spine, or highest ridge of the peninsula, runs through the state of Delaware, inclining to the eastern, or Delaware side. In Sussex, Kent, and part of the county of Newcastle, there is a remarkable chain of swamps, from which the waters descend on each side, passing on the east to the Delaware, and on the west to the Chesapeake. Many of the shrubs and plants, growing in these swamps, are similar to those found on the highest mountains. Delaware is chiefly an agricultural state. It includes a very fertile tract of country ; and scarcely any part of the United States is better adapted to the different purposes of agriculture, or in which a greater variety of the most useful productions can be conveniently and plentifully reared. The soil along the Delaware River, and from eight to ten miles into the interior country, is generally a rich clay, producing large timber. From thence to the swamps above-mentioned, the soil is light, sandy, and of an inferior qua- lity. The surface of the country is very favor- able for cultivation. The heights of Christiana are lofty and commanding ; some of the hills of Brandywine are rough and stony ; but descend- ing from these, and a few others, the lower country is so little diversified as almost to form one extended plain. In the county of Newcastle the soil consists of a strong clay ; in Kent there is a considerable mixture of sand ; and in Sussex the quantity of sand altogether predominates. Wheat is the staple of this state. It grows here in such perfection, as not only to be particularly sought by the manufacturers of flour throughout the Union, but also to be distinguished and pre- ferred, for its superior qualities, in foreign markets. It possesses an uncommon softness and whiteness, very favorable to the manufactu- rers of superfine flour, and in other respects far exceeds the hard and flinty grains raised in general on the higher lands. This state also produces plentiful crops of Indian corn, barley, rye, oats, flax, buck-wheat, and potatoes. It abounds too in natural and artificial meadows. Hemp, cotton, and silk, if properly attended to, thrive well.

The county of Essex exports very large quantities of lumber, obtained from a swamp, called the Indian River, or Cypress Swamp, lying partly within this state, and partly in the state of Maryland. This morass extends six miles from east to west, and nearly twelve from north to south, including an area of nearly 50,000 acres of land. The whole is a high and level basin, very wet, though undoubtedly the highest

land between the sea and the bay, whence the Pokomoke descends on the one side, and Indian River and St. Martin's on the other. It contains a great \ariety of plants, trees, wild beasts, birds, and reptiles.

Few minerals are found in this state, except iron; but large quantities of bog iron ore, fit for casting, are obtained m Sussex county, among the branches of Nanticoke River.

The coast of this state is indented with a large number of creeks, or small rivers, which gene- rally have a short course, soft banks, and numer- ous shoals ; and are skirted with very extensive marshes. In the southern and western parts spring the head waters of Pocomoke, Wicomico, Nanticoke, Choptank, Chester, Sassafras, and Bohemia rivers, all falling into the Chesapeake; some of them are navigable twenty or thirty miles into the country, for vessels of fifty or sixty tons.

In the beginning of the seventeenth century, the Dutch, under the pretended purchase made by Henry Hudson, took, possession of the lands on both sides the river Delaware, and as early as 1623 built a fort at a place since called Glou- cester. In 1627, by the influence of William Useling, a respectable merchant in Sweden, a colony of Swedes and Finns came over, furnished with all the necessaries for beginning a new settlement, and landed at Cape Henlopen ; at which time the Dutch had wholly quitted the country. The latter however returned in 1630, and built a fort at Lewistown, called by them Hoarkill. The year following, the Swedes built a fort near Wilmington, which they called Christian, or Christiana. Here also they laid out a small town, which was afterwards de- molished by the Dutch. The same year they erected a fort higher up the river, upon Tenecum Island, which they called New Gottenburgh, and about the same time built forts at Chester, Elsingburgh, and other places. In 1655 the Dutch, under the command of Peter Stuyvesant, arrived in Delaware River, from New York, then called New Amsterdam, in seven vessels, with 600 or 700 men. They dispossessed the Swedes of their forts on the river, and sent the officers and principal inhabitants prisoners to Holland. The rest submitted to the conquerors, and remained in the country. On the 1st of Octo- ber, 1664, Sir Robert Carr obtained the submis- sion of the Swedes on the Delaware. Four years after, colonel Nicholls, governor of New York, with his council, on the 21st of April, appointed six persons to assist captain Carr in the govern- ment of the country. In 1672 the town of Newcastle was incorporated by the slate of New York, to be governed by a bailiff and six assist- ants. They were to have a free trade, without being obliged to make entry at New York, as had formerly been the practice. Wampum was at this time the principal currency of the country. In 1674 Charles II., by a second patent, dated 29th of June, granted to his brother, the duke of York, all that country called by the Dutch New Netherlands, of which the three counties ot Newcastle, Kent, and Sussex were a part. It, 1683 the duke of York sold to William Penn the town of Newcastle, with the whole of the

territory which, till the revolution, was called the Three Lower Counties. These three counties were considered as a part of Pennsylvania in matters of government. The same governor presided over both : but the assembly and courts of judicature were different, as to their constituent members, though in form nearly the same. At the revolution they became a distinct territory, called the Delaware State. See AMERICA, NORTH.

The population of the three counties of Dela- ware, subdivided into hundreds, was thus returned, under the last census : —

1 . NEWCASTLE COUNTY.

II. KENT COUNTY.

Population in 185,!

. 3951 . 1590 . 1963 . 7558 5731

Duck Creek hundred St. Jones hundred Little Creek hundred Murderhill hundred Mispillion hundred

Brandywine hundred Borough of Wilmington . Christiana hundred Newcastle hundred Mill Creek hundred White Clay Creek ‘hundred Red Lion hundred Pencader hundred St. George’s hundred Appoquinimink hundred

Population in 1820.

2796 5268 3087 2671 3046 1904 929 1876 2934 3388

Tola, of Kent county 20,793 III. SUSSEX COUNTY. Cedar Creek hundred . .2280 Broad Kiln hundred . .2731 Lewes and Rehoboth hundred 1657 Indian River hundred . . 1887 Nanticoke hundred . . 2335

North-west Fork hundred . 3456 Baltimore hundred . . 2057

Dagsborough hundred . . 2204 Broad Creek hundred . . 2599 Little Creek hundred 2851

Total of Newcastle county 27,899

Total of Sussex county 24,057

Grand total 72,749

The following table shows the population of Delaware, at each of the four national enume- rations : —

r

Whites Slaves Free blacks

Total .

1790.

1800.

1810.

1820.

Increase in 30 years.

Rate of Increase.

46,308 8,887 3,899

49,852 6,143 8,278

55,361 4,177 13,136

55,282 4,509 12,958

8,974 9,059

19 per cent. 232 per cent.

59,094

64,273

72,674

72,749

13,645

23 per cent.

DELAWARE, a river of the United States, which rises at two principal

heads in the state of New York. It runs towards the south, and in its course forms the boundary line between Pennsylvania, New York, and Jersey ; a few miles below Philadelphia it separates the state of Delaware from Jersey, and afterwards loses itself in Delaware Bay. The bay and river are navigable for 155 miles from the sea, up to the great or lower falls at Trenton. A seventy-four gun ship may ascend to Philadelphia; and sloops thirty-five miles further.

DELAWARE BAY, a large bay or arm of the sea, between the Delaware and New Jersey states, and formed by the mouth of the Delaware river, and several other small ones. The bay is about sixty miles long, and thirty miles across in the centre. It opens into the Atlantic north- west and south-east, between Cape Henlopen on the right and Cape May on the left, and its mouth is twenty-one miles broad.

DELAWARE COUNTY, in Pennsylvania, is south- west of Philadelphia county, on Delaware River. It is about twenty-one miles in length, and fifteen in breadth, containing 115,200 acres, and subdivided into nineteen townships ; the chief of which is Chester. The number of inhabitants is 9,483. The lands bordering on the Delaware a—e low, and afford excellent meadows and pas-

turage; and are guarded from inundations by mounds of earth or dykes. Great numbers of cattle are brought here from the western parts of Virginia and North Carolina, to be fattened for supplying the Philadelphia market.

DELAWARE COUNTY, a county in the state of New York, on the head waters of Delaware River, taken from Otsego county. It is bounded on the north by Otsego county, cast by Schoha- rie and Green counties, south by Ulster and Sul- livan counties, and west by the state of Pennsyl- vania, by Broome county, and a small part of Chenango county. Its greatest length is fifty- four miles, its greatest breadth thirty-five; the area 1425 square miles, or 912,000 acres; between 41° 51′ and 42° 1′ north lat. It is of a broken and diversified surface, containing rugged and lofty mountains, with low plains and rich valleys. It sends two members to the house of assembly.

DELA WARES, a nation of North American Indians, formerly numerous and powerful, and who possessed part of Pennsylvania, New Jersey, and New York. This name was given them by the Europeans; for they call themselves Lenni- lenape, that is, Indian men ; or Woapanachky which signifies a people living towards the rising sun. They are now, however, much reduced in number.

DEL

DELAY', v. a., v. n & n. s. } Fr. delayer ; DELAY'ER. n. s. S Span, and Port.

dilatar ; Ital. d'datare ; Lat. delatlo, differre, from de and _/ˆro, to put off. To procrastinate ; defer; and hence to hinder, frustrate, as well as allay; temper ; qualify : as a neuter verb, to stop ; cease from action. As a substantive, inactivity ; stoppage; stay. A delayer is an habitual procrastinator.

And when the people saw that Moses delayed to come down out of the mount, the people gathered themselves together unto Aaron. Exod. xxxii. 1.

I have learned that fearful commenting Is leaden servitor to dull delay ; Delay leads impotent and snail-paced beggary.

Shakrpeare. Richard III.

That misery which must be is mitigated with speed, and aggravated with delay.

Bp. Hall. Contemplations.

Delayed thankfulness is not worthy of acceptation.

Id.

Fhyrsis, whose artful strains have oft delayed The huddling brook to hear his madrigal. Milton. She flies the town, and mixing with the throng Of madding matrons, bears the bride along : Wandering through woods and wilds, and devious

ways, And with these arts the Trojan match delays.

Dry den.

Cyrus he found, on him his force essayed ; For Hector was to the tenth year delayed. Id.t There seem to be certain bounds to the quickness and slowness of the succession of those ideas one to another in our minds, beyond which they can neither delay nor hasten. Locke.

Sullen and a delayer of Justice.

ˆwift. Char, of Henry VII. Be mindful goddess, of thy promise made ! Must

sad Ulysses ever be delayed 1 Pope.

At thirty man suspects himself a fool j Knows it at forty and reforms his plan ; At fifty chides his infamous delay ; — In all the magnanimity of thought Resolves, and re-resolves, then dies the same.

Young.

DELECTABLE, adj. ~\ Fr. Span, and DELECT'ABLENESS, n. s. f Portug. delectable ; DELECT'ABLY, adv. t Ital. dilettabile; Lat. DELECT A'TION, n. s. J delectabilis ; from delecto, (de and lacto, to suckle) to delight. De- lightful ; pleasing ; state of being pleasing or delightful.

Out break the tears for joy and delectation.

Sir T. More.

Evening now approached : For we have also our evening and our morn : We ours for change delectable, not need. Milton.

He brought thee into this delicious prove, This garden planted with the trees of God ; Delectable both to behold and taste. Id.

Some of his attributes, and the manifestations thereof, are not only highly delectable to the intellec- tive faculty, but are suitably and easily conceptible by us, because apparent in his works ; as his good- ness, beneficence, wisdom, and power. Hale.

The apple's outward form, Delectable, the witless swain beguiles ; Till that with writhen mouth, and spattering noise, He tastes the bitter morsel. Philips.

DEL'EGATE, v. a., n.s. &; adj } Span, and DELEGATION. $ Portug. dele-

gar; Fr. deleguer; Lat. deligo ; de and lego ; Gr. Xeyw; Ileb. npS; to choose. To appoint ano- ther one's representative ; to entrust with power. A delegate is the party so commissioned ; a vicar. The court of delegates is denned by Ayliffe as a court wherein all causes of appeal, by way of devolution from either of the arch- bishops, are decided.

If after her

Any shall live, which dare true good prefer, Every such person is her delegate, To' accomplish that which should have been her fate.

Dcmne.

As God hath imprinted his authority in several parts upon several estates of men, as princes, parents, spiritual guides ; so he hath also delegated and com- mitted part of his care and providence unto them.

Taylor.

Princes in judgment, and their delegate judges, must judge the causes of all persons uprightly and im- partially. Id.

When bishops divided parishes, and fixt the pres- byters upon a cure, so many parishes as they distin- guished, so many delegations they made.

Rp. Taylor.

Why does he wake the correspondent moon And fill her willing lamp with liquid light ;

Commanding her, with delegated powers, To beautify the world, and bless the night ?

Prim:

Let the young Austrian then her terrours bear, Great as he is, her delegate in war: /

Elect by Jove, his delegate of sway, With joyous pride the summons I'd obey.

Pope.

As God is the universal monarch, so we have all the relation of fellow-subjects to him ; and can pre- tend no farther jurisdiction over each other, than what he has delegated to us. Decay of Piety.

The goddess ceased, — the delegated throng, O'er the wide plains delighted rush along ; In dusky squadrons, and in shining groups, Hosts follow hosts, and troops succeed to troops.

Darwin.

DELEGATES, COURT OF, is the great court of appeal in all ecclesiastical causes. These dele- gates are appointed by the king's commission under his great seal, and issuing out of chancery, to represent his royal person, and hear all appeals to him made by virtue of the statute 25 Henry VIII. cap. 19. The commission is usually filled with lords, spiritual and temporal, judges of the courts at Westminster, and doctors of the civil law.

DELENI'FICAL, adj. Lat. delenificus. Having virtue to assuage or ease pain.

DELE'TE, v. a. ~\ Lat. deletus, from deleo,

DELETE'RIOUS, adj. (de, privative, and lin< > to

DEL'ETERY, i paint. To blot out; to ob-

*DELE'TION, n. s. * literate : deleterious and*

aeletery signify, destructive; poisonous; deletion

is razing out or destroying.

Many things, neither deleterious by substance 01 quality, are yet destructive by figure, or some occa- sional activity. Brown.*

indeed, if there be a total deletion of every person of the opposing party or country, then the victory is complete, because none remains to call it in question.

Hale.

Composed of two deleteriatu materials, chlorine and sodium, the united substance is more beneficial and salubrious, than it is in the power of our limited un- derstanding to comprehend. Sir T. Bernard.

Nor doctor epidemick, Though stored with deletery medicines, Which whosoever took is dead since, E'er sent so vast a colony To both the under worlds as he. Hudibrat.

Tis pity wine should be so deleteriout, For tea and coffee leave us much more serious.

Byron.

DELF, n. s. l From Sax. feelpan, to dig. A DELFE. i mine ; a quarry ; a pit dug. Also a particular kind of earthenware. See be- low.

Yet could not such mines, without great pains and charges, if at all, be wrought : the delfi would be so flown with waters, that no gins or machines

could suffice to lay and keep them dry. Ray.

DELFT WARE is a. kind of pottery of a baked earth, covered with an enamel or white glazing, which gives it the appearance and neatness of porcelain. Some kinds of it differ much from others, either in sustaining sudden heat without breaking, or in the beauty and regularity of their forms, of their enamel, and of the painting with which they are ornamented. In general, the fine and beautiful enamelled potteries, which approach the nearest to porcelain in external appearance, are least able to resist a brisk fire. Those which best sustain a sudden heat are coarse, and resem- ble common pottery. The basis of this pottery is clay, which is to be mixed, when too fat, with such a quantity of sand, that the earth shall pre- serve enough of its ductility to be worked, moulded, and turned easily: and yet that its fat- ness shall be sufficiently taken from it, that it may not crack or shrink too much in drying or in baking. Vessels formed of this earth must be dried very gently to avoid cracking. They are then to be placed in a furnace to receive a slight baking, which is only meant to give them a cer- tain consistence of hardness. And, lastly, they are to be covered with an enamel or glazing; which is done by putting upon the vessels thus prepared, the enamel, which has been ground very fine, and diluted with water. As vessels on which the enamel is applied are but slightly baked, they readily imbibe the water in which the enamel is suspended, and a layer of this enamel adheres to their surface: these vessels may then be painted with colors composed of metallic calces, mixed and ground with a fusible glass. When they are become perfectly dry, they are to be placed in the furnace, included in cases of baked earth called seggars, and exposed to a heat capable of fusing uniformly the enamel which covers them. This heat, given to fuse the enamel, being much stronger than that which was applied at first to give some consistence to the ware, is also the heat necessary to complete the baking of it. The furnace, and the colors used for painting this ware, are the same as those

employed for porcelain, which, in Holland, was once exclusively famous for delft ware, but its sale has lately been greatly rivalled by the potteries of England and Germany.

DELFT, a fine old town of South Holland, once the capital of Delftland, js situated on a canal called the Shie, which, after traversing the city, joins the Meuse at Schiedam and Delfts- haven. Its figure is a parallelogram, about two miles in circuit ; the streets are clean, neat, and well built, having many handsome houses and magnificent edifices, particularly the stadt-house. The city holds a third rank in the country ; its magistracy is composed of four burgo-masters, and seven eschevins, jointly with the vroedschap or common council, who name the escout for three years, and continue him if they judge pro- per. It has an arsenal generally well

furnished; and the country around it is agreeable, but so low, that, if great care were not taken to keep the dykes and sluices in good repair, it would soon be overwhelmed. The building of this city was begun in 1075, by Godfrey le Bossu, after he had conquered Holland ; since which it has often experienced the calamities of war, as well as those of fire. In the fourteenth cen- tury, Albert de Bavaria, count of Holland, took it after a siege of six weeks, dismantled and ruined the castle, and obliged the city to pay 10,000 crowns. In 1536, it was reduced to ashes by a dreadful fire, during which a stork, not being able to save her young, was observed to precipitate herself into the flames. The city was soon after rebuilt with greater magnificence; but in 1654 it was again greatlydamaged by fire, which destroyed a magazine of gun-powder, and above 500 houses; since which the powder-maga- zine is built at some distance from the town. Before the Reformation, Delft had ten religious houses, besides hospitals and chapels. In one of the present churches is the tomb of William I. prince of Orange, who was assassinated in a house near, which is still standing ; and in another that of admiral Tromp. The celebrated Hugo Grotius was a native of this place. The Doelen inn was the scene of many of the councils and prepara- tions of the Dutch patriots in their struggles against Spain. Delft was formerly much cele- brated for beer, of which it exported large quan- tities; and also for a peculiar kind of glazed earthenware, called delft ware. Here are now made several kinds of fine cloth, and carpets. Butter and tobacco pipes also are made here in considerable quantities. It is nine miles north- west of Rotterdam, and thirty south-west of Amsterdam.

DELHI, or DELLI, an extensive province of Hindostan, bound on the north by Lahore, and several districts in Northern Hindostan, as Bes- seer, Dewarcote, and Serinagur; to the south by Agra and Ajmeer; to the east it has Oude, and various ridges of high hills, which separate it from Northern Hindostan ; and to the west Ajmeer and Lahore. In length it may be esti- mated at 240 miles, by 180 the average breadth. The greater part of this province is in the most wretched state of barrenness, having been the seat of continued war for many years ; and being naturally very sterile, though formerly well planted

with mangoe trees, scarcely one is now to be seen. The Cauggar River overflows part of the Hurri- anch, during the rainy season, after which the pasturage is excellent, and the country tole- rably healthy until the desert to the west be- comes heated ; and, between the Jumna and Sattulege, the

soil produces wheat, barley, gram, and other grains; but it is but little cultivated. Irrigation is necessary to insure any crop, and water is found at ten or twelve cubits from the surface of the earth; yet wells are seen only near towns and villages. This province is, at present, occupied in the following manner. The whole district to the east of the Jumna and round the city of Delhi, with a considerable portion of the north-eastern quarter, are possessed by the British, and governed by a regular civil establishment. The south-west is occupied by the Machery rajah of Alvar, the rajah of Bhurtpoor, and other native chiefs, who are in alliance with, or under the influence of the British. The country to the north-west of the Jumna and south of the Suttulege is occupied by a number of petty Seik chiefs, and other native princes, in dependence on the British, who form a barrier to their terri- tories in this quarter. The western frontier has a natural protection, from the immense extent of desert and sterile territory by which it is bounded.

Except in the country possessed by the British, the inhabitants still continue to carry on internal warfare ; to which they have been so long accus- tomed, that they are extremely expert in the use of arms, particularly the lance, sabre, and match- lock. The principal towns are Delhi, Sirhind, Saharunpore, Buriely, Anoopsheher, Herat, His- sar, Seerdhuna, Patteealah, and Budavoon.

*DELHI, a celebrated city, for many years the capital of the foregoing province of Ilindos- tan, is situated on the banks of the Jumna; and during the era of its prosperity, is said to have covered a space of twenty miles in length. Its ancient name was Indraput, or Inderprest. It was taken by the Mahommedans in the year 1 1 93, under Cuttubaddeen Khan, who fixed his resi- dence here, and made it his capital. Several suc- ceeding emperors increased and improved it till the beginning of the sixteenth century, when the Afghan monarch, Sekunder Lody, made Agra the seat of empire, and Delhi was neglected until the return of Homayon from Persia in the year 1554, when he rebuilt the old fort of Inderprest, and named it Deenpunnah, or the asylum of religion. During the reigns of Akbar and Jehan- gire, Delhi was again deserted; but the emperor Shan Jehan restored it to its former splendor, and expended immense sums of money on the present fortress, the cathedral, mosque, &c. Superb palaces, mosques, and colleges, in dif- ferent parts of the city, were raised by his court and followers. The walls which environ the town were put into repair, and its seven gates erected or beautified. Its noble gardens were also now laid out, and the tombs of the saints and deceased sovereigns thoroughly repaired. The canal was lengthened and deepened, and Delhi was ren- dered the glory of Hindostan. One garden alone is said to have cost a million sterling. The modern city, apportioned into thirty-six divisions, *>ach named after some ancient noble family, con-*

tains many good brick houses. The streets are narrow, with the exception of two; the first lead- ing from the palace to the Delhi Gate, which is broad and spacious, and had formerly an aque- duct along its whole extent; the second from the palace to the Lahore Gate. The bazaars appear in a dilapidated state; but in the Chandeny Choke, or Silver Square, is a number of well- furnished shops. The population has consider- ably increased under the British management, and every species of property is yearly rising in value. The English resident and other gentlemen live in the town, while the troops have a distinct cantonment. Precious stones of a good quality are to be had at Delhi, particularly the large red and black cornelian and peerozas; becdree hookah bottoms are also manufactured here. The cultivation in the neighbourhood is princi- pally on the banks of the Jumna, where corn, rice, millet, and indigo, are raised. It stands in long. 77° 19′ E., lat. 28° 43′ N.

DELIA, in antiquity, a festival celebrated every fifth year in the island of Delos, in honor of Apollo. It was first instituted by Theseus; who, at his return from Crete, placed a statue there, which he had received from Ariadne. At the celebration they crowned the statue of the goddess with garlands, appointed a choir of music, and exhibited horse-races. They after- wards led a dance, in which they imitated, by their motions, the various windings of the Cretan labyrinth, from which Theseus had extricated himself by Ariadne's assistance. — There Was another festival of the same name yearly cele- brated by the Athenians in Delos. It also was instituted by Theseus, who, in going to Crete, made a vow, that he would yearly visit the tem- ple of Delos The persons employed in this annual procession were called Deliastae and Theori. • The ship, the same which carried The- seus, and had been carefully preserved by the Athenians, was called Theoria and Delias. When the ship was ready for the voyage, the priest of Apollo solemnly adorned the stern with gar- lands, and a universal lustration was made all over the city. The Theori were crowned with laurels, and before them proceeded men armed with axes, in commemoration of Theseus, who had cleared the way from Trcezen to Athens, and delivered the country from robbers. When the ship arrived at Delos, they offered solemn sacrifices to the god of the island, and celebrated a festival to his honor. After this they retired to their ship and sailed back to Athens, where all the people of the city ran in crowds to meet them. Every appearance of festivity prevailed at their approach, and the citizens opened their doors and prostrated themselves before the Deli- astae as they walked in procession. During this festival it was unlawful to put to death any male- factor, and on that account the life of Socrates was prolonged for thirty days.

DELIACUS, among the ancients, denoted a poulterer, or a person who sold fowls, fatted capons, eggs, &c., because the people of Delos first practised

this occupation. Cicero, in his Academic Questions, lib. iv., Pliny, lib. x. cap. 30, and Columella, lib. viii. cap. 8, mention the Deliaci.

DELIBATION, n. s. Lat. delibatio. An essay ; a taste.

DELIB'ERATE, v. a. & n. ~] Fr. ddiberer ;

DELIB'ERATELY, adv. & adj. I Span, and Por.

DELIB'ERATENESS, n. s. [deliberar ; Ital.

DELIBERATION, [and Lat. detibe-

DELIBERATIVE, [rare; from det

DELIB'ERATIVENESS. J and libra, a ba-

lance. To weigh in mind ; consider : as a neu- ter verb, says Minsheu, to think with a view to choose, or decide ; to hesitate. Deliberate is circumspect ; wary ; advised.

Commonly it is for virtuous considerations, that •wisdom so far prevaileth with men as to make them desirous of slow and deliberate death, against the stream of their sensual inclination. Hooker.

Echoes are some more sudden, and chop again as soon as the voice is delivered ; others are more deli- berate, that is, give more space between the voice and the echo, which is caused by the local nearness or distance. Bacon.

In deliberative, the point is, what is evil ; and. of good, what is greater ; and of evil, what is less. Id.*

Most Grave-belly was deliberate, Not rash, like his accusers. Shakspeare. Coriolanvi.

They would not stay the fair production of acts, in the order, gravity, and deliberateness befitting a par- liament. King Cliarles.

How should we deliberate in our actions, which arts so subiect to imperfection ! since it pleased thine in- finite perfection, not out of need, to

take leisure.

Bishop Hall. Contemplation.*

If mankind had no power to avoid ill or choose good by free deliberation, it should never be guilty of any thing that was done.

Hammond's Fumlamentnlt.

He judges to a hair of little indecencies ; knows better than any man what is not to be written ; and never hazards himself so far as to fall, but plods on deliberately ; and, as a grave man ought, is sure to put his staff before him. Dryden.

When love once pleads admission to our heart, In spite of all the virtue we can boast, The woman that deliberates is lost. Addison.

Where men are the most sure and arrogant, they are commonly the most mistaken, and have there given reins to passion, without that proper deliberation and suspense, which can alone secure them from the grossest absurdities. Hume.

DELIBERANDI ANNT;S, in the Scottish law, a year allowed to an heir, to deliberate whether he will enter as heir or not.

DELIBERATIVE VOICE, a right to give advice and to vote in an assembly. In councils, the bishops have deliberative voices ; those beneath them have only consultative voices.

DEL'ICATE, adj.&n. s.-\ Fr. delicat -, Span.

DEL'ICACY, n. s. i and Port, dclicado ;

DEL'ICATENESS, \ Ital. delicato; Lat.

DEL'ICATELY, i delicatus ; from de~

DELI'CES, n. s. Si.pl. J licitt, delights. A- greeable to the taste, or the senses generally ; nice ; of small constituent parts ; felicitous in construction ; elegant : and, as agreeableness, ' sweet, attractive grace,' is peculiarly feminine : a delicate is an effeminate, though not an agree- able man ; and expresses also inability to bear hardships. A delicate is used by the Tatler for a nice man :' but the plural substantive, deli-

cates, expresses, like the old word delices, the same as delicacies, i. e. dainties, agreeable viands.

And kiugis of the erthe and marchauntis of the erthe diden fornycacioun with hir, and thei ben maad riche of the vertue of delices of hir.

Wiclif. Apoc. 18.

The delicate woman among you would not adven- ture to set the sole of her foot upon the ground, for delicatenest and tenderness. Deut. xxviii. 56.

Yet was I late promised otherwyse, This yere to Hue in welth and delice.

Sir T. More.

And now he has poured out his idle mind In dainty delices and lavish joys,

Having his warlike weapons cast behind, And flowers in pleasures and vain pleasing toys.

Spenser.

Tender and delicate persons must needs be oft angry, they have so many things to trouble them, which more robust natures have little sense of.

Bacon.

Witness this army, of such mass and charge, Led by a delicate and tender prince. Shakspeare. Where they most breed and haunt, I have ob- served, The air is delicate. Id.

The shepherd's homely curds, His cold thin drink out of his leather bottle, All which secure and sweetly he enjoys, Are far beyond a prince's delicate. Id.*

These delicacies I mean of taste, sight, smell, herbs, fruits, and

flowers, Walks, and the melody of birds. Milton.

Eat not delicately, or nicely ; that is, be not trouble- some to thyself or others in the choice of thy meats, or the delicacy of thy sauces. Taylor.

Persons born of families noble and rich, derive a weakness of constitution from the ease and luxury of their ancestors, and the delica

A man of goodly presence, in whom strong making took not away delicacy, nor beauty fierceness.

Sidney.

Van Dyck has even excelled him in the delicacy of his colouring, and in his cabinet pieces.

Dryden.

That which will distinguish his style from all other poets, is the elegance of his words, and the numer- ousness of his verse : there is nothing so delicately turned in all the Roman language. Id.

They their appetites not only feed,

With delicatei of leaves and marshy weed,

But with thy sickle reap the rankest land. Id.

Any zealous for promoting the interest of his coun- try, must conquer all that tenderness and delicacy, which may make him afraid of being spoken ill of.

Addison.

You may see into the spirits of them all, and form your pen from these general notions and delicacy of thought and happy words. Felton.

And such, I exclaimed, is the pitiless part

Some act by the delicate mind, Regardless of wringing and breaking a heart

Already to sorrow resigned. Cowper

But in his delicate form — a dream of Love, Shaped by some solitary nymph, whose breast Longed for a deathless lover from above, And maddened in that vision ! Byron.

DELl'CIOUS, adj. y Fr. delicieux ; Lat. DELI'CIOUSLY, adv. ˆdeliciie, delights. — DELI'CIOUSNESS, n. s. 7 Sweet ; agreeable ; de- licate; charming; grateful to the sense or mind.

How much she hath glorified herself, and lived deliriously, so much torment and sorrow give her.

Rev. xviii. 7. The sweetest honey Is loathsome in its own ddiciousness, And in the taste confounds the appetite.

Shakspeare.

Let no man judge of himself, or of the blessings and efficacy of the sacrament itself, by any sensible relish, by the gust and deliciousness, which he sometimes perceives, and at other times does not perceive.

Taylor.

And if some nice and likuorous appetite Desired more daintie dish of rare dclite, They scaled the stored crab with clasped knee, Till they had sated their delicious eie.

Bp. Hall. Satires iii. 1.

It is highly probable, that upon Adam's disobe- dience Almighty God chased him out of Paradise, the fairest and most delicious part of the earth, into some other the most barren and unpleasant. Woodward.

Still on that breast enamoured let me lie, Still drink delicious poison from thy eye. Pope.

But since, to make use of your own allusion, the cherries began now to crowd the market, and their season was almost over, we consulted our future en- joyments, and endeavoured to make the exquisite pleasure that delicioui fruit gave our taste as lasting as we could. Spectator.

In his last hours his easy wit display : Like the rich fruit he sings, delicious in decay.

Smith.

DELIGHT', v. a., v. n. & n. s. ~\ Fr. delec- DELIGHT'FUL, adj. ter ; Span.

DELIGHT'FKLLY, adv. and Port, de-

DELTGHT'FULNESS, n. s. >leytar; It. di-

DELIGHT'SOME, lettare, from

DELIGHT'SOMELY, Lat.c/e/ecfare,

DELIGHT'SOMENESS. J deligo. See

DELEGATE. To please in a high degree ; to nave pleasure, followed by in. Delightsome and de- lightful are synonymous, as are delightsomely and delightfully. Delight is either the satisfaction and pleasure felt or the object that affords them.

Doth my lord, the king, delight in this thing ?

2 Sam. xxiv.

Blessed is the man |hat feareth the Lord, that de- lighteth greatly in his commandments. Psalm cxii. 1.

For I delyte togidre to the law of God aftir the yn- ner man, but I see a nother law in my membris aghen fightynge the law of my soule. Wiclif. Romaym 7.

To liven in delit was ever his wone, For he was Epicures owen sone That held opinion that plein delits Was veraily felicite partite.

Chaucer. Prol. to Cant. Tales. And though he lyste to see hisladyes grace full sore, Such pleasures as delyght his eye, do not his helthe

restore. 'Surrey.

The words themselves being so ancient, the knitting of them so short and intricate, and the whole periods and compass of his speech so delightsome for the roundness, and so grave for the Kiningcniss.

Spenser.

To thee, that art the sommer's nightingale,

The soucraine goddesses most deare deliqnt, Why do I send this rustic madrigale,

That may thy tunefull care unseason quite.

Id. Faerie Queenr.. Come, sisters, cheer we up his spfights, And shew the best of our deliqhts : We'll charm the air to give a sound, While you perform your antic round.

Shakspeare. O voice ! once heard Delightfully, increase and multiply ; Now death to hear. Milton.

If happiness had consisted in doing nothing, man had not been employed ; all his ileliyhts could not have made him happy in an idle life.

Bp. Hall. Contemplations.

The princes delighting their conceits with confirming their knowledge, seeing wherein the sea-discipline differed from the land service, had pleasing entertain- ment. Sidney.

This indeed shews the excellency of the object, but doth not altogether take away the delightfulness of the knowledge. Tillotson.

She was his care, his hope, and his delight, Most in his thought, and ever in his sight.

Dryden.

Poor insects, whereof some are bees, delighted with flowers, and their sweetness ; others beetles, delighted with other kinds of viands. Locke.

He heard, he took, and pouring down his throat, Delighted, swilled the large luxurious draught.

Pope.

No spring,nor summer, on the mountain seen, Smiles with gay fruits or with delightful green.

Addison.

God has furnished every one with the same means of exchanging hunger and thirst for delightsome vigour

Grew. We love

The king, who loves the law, respects his bounds, And reigns content within them : him we serve Freely and with delight, who leaves us free.

Cowper's Task.

But you will say, it is reasonable to conclude that as all your predecessors, in this vale of misery and hor- ror, have found themselves delightfully disappointed at last, so will you. Id. Private Correspondence.

When the soft lute iu sweet impassioned strains, Of cruel nymphs or broken vows complains, As on the breeze the fine vibration floats, We drink delighted the melodious notes. Darwin.

Yes, woman, yes ! Though in his pompous school Man proud may learn to think and talk by rule, There is the native eloquence, whose grace Flows true to every hour and every place — That with a swain familiar can recal Scenes, persons, things, and spread delight on all.

Dr. T. Brown.

DELIMA, in botany, a genus of the mono- gynia order, and polyandria class of plants : COR. none : CAL. five-leaved with a two-seeded berry. Species one only, a native of South Ame- rica.

DELIN'EATE, v. a. } Lat. ddineo ; of dc,

DELINEA'TION, n. s. >and linea, a line; to

DELIN'EAMENT, n. s.j make lines. To sketch,

or make an outline ; hence to paint, and to des-

cribe : delineation and delineament both express

the painting or drawing made ; the representa-

tion.

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The sun 's a type of that eternal light

Which we call God, a fair delineament.

More's Song of the Soul.

Itfolloweth, to delineate the region in which God hist planted his delightful garden. Raleigh.

The licentia pictoria is very large : with the same reason they may delineate old Nestor like Adonis, Hecuba with Helen's face, and Time with Absalom's head. Browne.

I have not here time to delineate to you the glories of God's heavenly kingdom ; nor, indeed, could I tell you, if I had, what the happiness of that place and portion is. Wake.

In the orthographical schemes, there should be a true delineation, and the just dimensions.

Mortimer,

DELINQUENT, n.s. > Fr. delinquent; Span. DELINQUENCY. $ and Port. delinquento;

Lat. delinquent, from de, and linquu to leave one's duty. One criminally neglectful of duty : neg- lect ; failure of duty.

All ruined, not by war, or any other disaster, but by justice and sentence, as delinquents and criminals.

Bacon.

The next news we heard was, the House of Com- mons had drawn up a bill against us, wherein they declared us to be delinquents of a very high

nature.

Bp. Hall's Hard Measure. Such an envious state, That sooner will accuse the magistrate Than the delinquent ; and will rather grieve The treason is not acted, than believe.

Ben Jonson.

They never punish the greatest and most intolerable delinquency of the tumults, and their exciters.

King Charles.

He had, upon frivolous surmises, been sent for as a delinquent, and been brought upon his knees.

Dryden. Can

Thy years determine like the age of man, That thou should'st my delinquencies enquire, And with variety of tortures tire?

Sandy's Paraphrase of Job.

A delinquent ought to be cited in the place or juris- diction where the delinquency was committed by him.

Ayliffe.

Does law, so jealous in the cause of man, Denounce no doom on the delinquent ? None.

Cowper's Task.

DELIQ'UATE, v. n. & a. ˆ Lat. deliquo ; from

DELIQUA'TION, n. s. £ de and liquo (lix,

DELIQUIUM, n. s. 3 liquid) to melt. As

a verb active, to dissolve into liquid : deligation and deliquium both signify a dissolving chemi- cally ; and hence fainting or swooning.

It will be resolved into a liquor very analogous tc that which the chymists make of salt of tartar, left in moist cellars to deliquate. Boyle.

Their conscience was not stark dead, but under a kind of spiritual deliquium. Leath.

When salt of tartar flows per deliquium, it is visible that the particles of water are moved towards the particles of salt. Bp. Berkeley.

Such an ebullition as we see made by the mixture of some chymical liquors, as oil of vitriol and deliquated salt of tarter. Cudworth.

DELIQUESCENCE, in chemistry, the pro- perty which certain bodies have of attracting moisture from the air, and thereby becoming liquid. This property is never found but in saline substances, or matters containing them.

It is caused by the great affinity which tnese substances have with water. The more simple they are, according to Mr. Macquer, the more they incline to deliquescence. Hence, acids, and certain alkalis, which are the most simple, are also the most deliquescent salts. Many neutral salts are deliquescent, chiefly those whose bases are not saline substances. Though the immediate cause of deliquescence is the at- traction of the moisture of the air, yet it remains to be discovered, why some salts attract this moisture powerfully, and others, though seem- ingly equally simple, do not attract it. The vegetable alkali, for instance, attracts moisture powerfully ; the mineral alkali, though to ap- pearance equally simple, does not attract it at all. The acid of tartar by itself does not at- tract the moisture of the air ; but if mixed with borax, which has a little attraction for moisture the mixture is extremely deliquescent. See CHEMISTRY.

DELI'RATE,v.n. ˆ Lat. dehro (from

DELIRA'TION, n. s. I de, and lira a ridge

DELI'KAMENT, lor furrow); to be

DELI'RIOUS, adj. f'mad, because a mad

DELI'RIOUSNESS, n. s. person passes the

DELI'RIUM. J bounds of reason. —

Ainsworth. To dote » talk wildly or idly: de-

liration is the same with delirium, and the latter

a more common word, signifying alienation of

mind; a state of dotage: delirious is light-headed ;

partaking of delirium.

The people about him said he had been for some hours delirious ; but when I saw him he had his un- derstanding as well as ever I knew. Swift.

On bed Delirious flung, sleep from his pillow flies.

Thomson.

Too great alacrity and promptness in answering, especially in persons naturally of another temper, is a sign of an approaching delirium ; and in a feverish delirium there is a small inflammation of the brain.

Arbuthnot on Diet.

On the 6th, he was all day delirious, which he mentioned four days afterwards as a sufficient humi- liation of the vanity of man. At the intermission of his deliriousness, he was always saying something kind either of his present or his absent friends.

Johnson's Life of Pope. How profound

The gulf ! and how the giant element From rock to rock leaps with delirious bound, Crushing the cliffs, which, downward worn and rent With his fierce footsteps, yield in chasms a fearful vent.

Byron.

DELIRIUM. When the ideas excited in the mind do not correspond to the external objects, but are produced by the change induced on the common sensorium, the patient is said to be in a delirium. See MEDICINE.

DELITIGATION, n. s. Lat. delitigo; de and litigo (lites ago, to raise strife), to quar- rel. A striving or contending. See LITIGATION.

DELI'VER, v. a. & n."\ Fr. delivrer ; Span.

DELI'VERANCE, n. s. (librdr ; Ital. liberdre;

DELIVERER, £from Lat. libero (a

DELI'VERY. 3 liber, free). To make

or set free ; to disburden ; to rescue ; to give up : hence to offer; present; exert one's self; utter by speech : delivering over and delivering up are only forms of delivering, and mean resigning

DEL

to. Deliverance and delivery are the act of de- livering; utterance; activity; and the latter has a particular application to childbirth.

Thanne he delyverede to hem Barabas, but he took to hem Jhesus, scourgid to be crucified.

Wiclif. Matt, xxvii.

Thou shall deliver Pharaoh's cup into his hand, after the former manner, when thou wast his butler.

Gen. xl. 13.

Deliver me not over unto the will of mine enemies, for false witnesses are risen up against me, and such as breathe out cruelty. Psalm xxvii. 12.

Like as a woman with child, thatdraweth near the time of her delivery, is in pain, and crieth out.

Isaiah xxvi. 7.

He hath sent me to heal the broken-hearted, to preach deliverance to the captives, and recovering of sight to the blind, to set at liberty those that are bound. Luke iv. 18.

He that spared not his own son, but delivered him tip for us all, how shall he not, with him also, freely give us all things ? Rom. viii. 32.

We allege what the Scriptures themselves do usually speak, for the saving force of the word of God ; not with restraint to any certain kind of deli- very, but howsoever the same shall chance to he made known. Hooker.

People have a superstitious belief, that in the la- bour of women it helpeth to the easy deliverance.

Bacon.

A mirth-moving jest, Which his fair tongue, conceit's expositor, Delivers in such apt and gracious words, That aged ears play truant at his tales.

Shakspeare.

Are the cities, that I got with wounds, Delivered up again with peaceful

words ? Id.

The constables have delivered her over to me, and she shall have whipping enough, I warrant her. Id.

He swore, with sobs, That he would labour my delivery. Id.

On her fright and fears, She is something before her time delivered. Id.

DELL, n. s. Goth, dale; Belg. del. See DALE.

DELLILE (Jacques), a celebrated French poet, born in 1738, at Clermont in Auvergne, and educated at the university of Paris. He was early distinguished for the brilliancy of his talents, and the extent of his acquirements ; but the first work by which he made known his name to the public, and laid the foundation of his poetical fame, was a translation of Virgil's Georgics. This procured him a seat in the Academy. His next performance was an original work, entitled Les Jardins, which added considerably to his reputation. About this time, M. Le Comte de Choiseul Gouffier, who had formerly visited and described the interesting shores of Greece, was appointed" ambassador to Constantinople, and Dellile was persuaded to accompany him to that city. Thence he went to Greece, where he remained for several months, and finally passed over to Asia Minor, where he was first attacked with a distemper in his eyes, that after his return deprived him entirely of sight. At Constantinople he wrote a consider- able portion of his poem on Imagination, and on his return published a translation of the .fluieid. He continued also to read lectures at Paris, till the revolution obliged him to emi- grate into Switzerland. He afterwards visited Vox.. VII.

Germany and England. Here, in misfortune and banishment, 'muses of melancholy inspira- tion,' he composed his poem, Le Malheur et hi Pitie, to give vent to his oppressed feeling^. While he remained in England he also trans- lated the Paradise Lost. After France had be- come settled under Napoleon, he returned to his native land, where he died in the summer of 1813. His other works are L' Homme des Champs; ou, les Georgiques Fran9;iises, 1808; Les Trois Ltegnes de la Nature, 1809 ; and La Conversation, 1812, a playful satire.

DELOLME (John Louis), born at Geneva, 1740 (according to some in 1745), was a lawyer in his native city, and the part which he took in its internal commotions by a work entitled Examen des trois Points de Droit, obliged him to repair to England, where he passed some years in great indigence. He wrote for journals, frequented low taverns, was devoted to gaming and pleasure, and lived in such obscurity, that; when he became

known by his work on the English Constitution, and some people of distinction were desirous of relieving him, it was impossible to discover his place of residence. His pride was gratified by this kind of low independence, and he rejected all assistance, ex- cepting some aid from the literary fund, to enable him to return to lu's country. This was probably in 1775, since, from that time, he calls himself member of the council of the two hun- dred in Geneva. Among his peculiarities was this, that, although principally occupied with political law, he was never present at a session of parliament. At the time of his arrival in England, aristocratical arrogance and turbulence had reached its highest pitch in Sweden and Poland, and it was feared, not without reason, in England, that the same evils threatened that country. Delolme entered into an investigation of this subject. Hence originated his famous work, Constitution de 1'Angleterre, ou Etat du Gouvernement Anglais compare avec la Forme republicaine et avec les autres Monarchies de TEurope (Amsterdam, 1771); and a work in English, called A Parallel between the English Government and the former Government of Sweden (London, 1772). In both, his principal object was to illustrate the excellence and sta- bility of the English constitution. Its character of a spirited eulogium is undoubtedly the reason that the first politicians of England, lord Chatham, the marquis of Camden, and the author of the celebrated Letters of Junius, spoke so highly of this work of a foreigner. It contains much ingenious reflection on the English constitution, on the energy arising from a happy union of royal power with popular liberty, and particularly on the value of an independent ju- diciary and the freedom of the press, subjected to penal laws, but not to a censorship. This work, translated by the author himself into English, in 1772 (fourth English edition, 1784, with observations by doctor Charles Coote), is still considered, in England, one of the mosfin- genious works on the English constitution. De- lolme also published, in English, his History of the Flagellants, or Memorials of Human Super- stition (1783, 4to.); An Essay on the Union

with Scotland (London, 1796, 4to.) On the occasion of the will of Mr. Thelluson, he wrote his Observations on the Power of Individuals to prescribe, by testamentary Dispositions, the par- ticular future Uses to be made of their Property (London, 1798, 4to.) He died in July, 1806, at a village in SwiUerland.

DELOS, an island of the Archipelago, very famous in ancient history. Originally it is re- ported to have been a floating island, but after- wards it became fixed. It was fabled to have been the birth-place of Apollo and

Diana. It was governed by its own kings. Virgil mentions Anius a king of Delos, in the time of the Tro- jan war, who was afterwards high priest of Apollo, and entertained ./Eneas with great kindness. The Persians allowed the Delians to enjoy their ancient liberties, after they had reduced the rest of the Grecian islands. In after ages, the Athe- nians made themselves masters of it ; and held it till they were driven out by Mithridates, who granted the inhabitants many privileges, and ex- empted them from all sorts of taxes. Strabo and Callimachus tell us that Delos was watered by the river Inapus : but Pliny calls it only a spring ; and adds, that its waters swelled and abated at the same time with those of the Nile. At present there is no river in the island, but one of the noblest springs in the world, twelve paces in diameter, and enclosed partly by rocks, and partly by a wall. So sacred was the island of Delos held by the ancients, that hostilities were suspended by nations at war, when they hap- pened to meet in this place. Livy tells us, that soTne Roman deputies being obliged to put in at Delos, in their voyage to Syria and Egypt, found the galleys of Perseus king of Macedon, and those of Eumenes king of Pergamus, anchored in the same harbour, though these two princes were then at war. — Hence this island was a ge- neral asylum, and protection was extended to all living creatures, dogs excepted ; for this reason it abounded with hares, no dogs being suffered to enter it. No dead body was suffered to be buried in it, nor child to be born there; all dying persons, and women ready to be delivered, were carried over to the neighbouring island of Rhenaea. It is now called Sdili.

DELOS, an extensive city in the above island, which occupies a spacious plain, reaching from the one coast to the other. It was well peopled, and, after the destruction of Corinth, the richest city in the Archipelago ; merchants flocking thi- ther from all parts, both on account of the im- munity they enjoyed, and of its convenient situation between Europe and Asia. It contained many stately buildings ; as the temple of Apollo, Diana, and Latona ; an oval basin, made at an immense expense, for the representation of sea- fights ; and a most magnificent theatre. The temple of Apollo was, according to Plutarch, begun by Erisichthon, the son of Cecrops ; but afterwards enlarged and embellished at the com- mon charge of all the states of Greece. It con- tained an altar built with horns of various animals, so artificially adapted to one another, that they hung together without cement. This altar is said to have been a cube ; and the doub- ling it was a famous mathematical problem

among the ancients. This went under the name of ProblemaDeliacum, and is said to have been proposed by the oracle, to free the country from a plague. The trunk of the famous statue of Apollo, mentioned by Strabo and Pliny, is still an object of great admiration to travellers. It is without head, feet, arms, or legs ; but from the parts that yet remain it plainly appears, that the ancients did not exaggerate when they com- mended it as a wonder

of art. It was of a gigantic size, though cut out of a single block of marble ; the shoulders being six feet broad, and the thighs nine feet round. Plutarch tells us, in his Life of Nicias, that he caused to be set up, near the temple of Delos, a huge palm-tree of brass, which he consecrated to Apollo ; and adds, that a violent storm of wind threw down this tree on a Colossean statue raised by the inha- bitants of Naxos. Round the temple were magnificent porticoes built at the charge of various princes, as appears from inscriptions which are still very plain.

DELPHI, in ancient geography, a town of Phocis situated on the south-west extremity of mount Parnassus, famous for a temple and oracle of Apollo. A number of goats that were feed- ing on mount Parnassus, approached a place which had a deep and long perforation. The steam which issued from the hole seemed to in- spire the goats, and they played and frisked about in such an uncommon manner, that the goatherd was tempted to lean on the hole, and see what mysteries the place contained. He was immediately seized with a fit of enthusiasm, and his expressions were so wild and extravagant, that they passed for prophecies. This circumstance was soon known, and many experienced the same enthusiastic inspiration. The place was revered ; a temple erected to Apollo ; and a city built, which became the most illustrious in Phocis. The influence of its oracle controlled the councils of states, directed the course of armies, and decided the fate of kingdoms.

The temple of Apollo was at first a kind of cottage covered with boughs of laurel. An edi- fice of stone was next erected by Trophonius and Agamedes, which subsisted about 700 years, and was burnt in the year 636 after the destruc- tion of Troy, and A.A.C. 548. It is mentioned in the hymn to Apollo ascribed to Homer. An opulent and illustrious Athenian family, called Alcmaeonidae, which had fled from the tyrant Hippias, raised a new temple, the front of which was of Parian marble. The pediments were adorned with Diana, Latona, Apollo, Bacchus, the setting of the sun, the Muses, and the Thy- ades. The architraves were decorated with golden armour; bucklers suspended by the Athenians after the battle of Marathon ; and shields taken from the Gauls under Brennus. In the portico were inscribed the celebrated maxims of the seven sages of Greece. There was an image of Homer, and in the cell was an altar of Neptune, with statues of the Fates, and of Jupiter and Apollo. Near .the hearth before the altar, stood the iron chair of Pindar. In the sanctuary was an image of Apollo gilded. The enclosure was of great extent, and filled with treasures (in which many cities had con-

secratecl tenths of spoils taken in war), and with the public donations of

renowned states in va- rious ages.

The oracles were delivered by a priestess called Pythia, who received the prophetic influence in the following manner. A lofty tripod, decked with laurel, was placed over the aperture, whence the sacred vapor issued. The priestess, after washing her body, and especially her hair, in the cold water of Castalia, mounted on it, to re- ceive the divine effluvia. She wore a crown of laurel, and shook a sacred tree which grew close by. Having mounted the tripod, she was seized with the most violent paroxysms of frenzy, and in that situation delivered her oracular responses ; and if she declined acting, they dragged her by force to the tripod. The habit of her order was that of virgins. The season of enquiry was in the spring, during the month called Busius; after which Apollo was supposed to visit the altars of the Hyperboreans.

The city of Delphi arose in the form of a theatre, upon the winding declivity of Parnassus, whose fantastic tops overwhelmed it like a canopy on the north, while two immense rocks rendered it inaccessible on the east and west, and the rugged and shapeless mount Cirphis defended it on the south. The foot of Cirphis was washed by the rapid Plistus, whose waters fell into the sea a few leagues from the city. This inaccessible and romantic situation from which the place derived the name of Delphi, or solitary, was rendered still more striking by the innumerable echoes which multiplied every sound, and increased the ignorant veneration of visitants for the god of the oracle. The prin- cipal inhabitants of Delphi, claiming an im- mediate relation to Apollo, were entitled to officiate in the rites of his sanctuary ; and even the inferior ranks were continually employed in dances, festivals, processions, and all the gay pageantry of an elegant superstition. Delphi, lying in the centre of Greece, and, as was then imagined, of the universe, was conveniently situated for the conflux of votaries. It was cus- tomary for those who consulted the oracle to make rich presents to the god : his servants and priests feasted on the numerous victims which were sacrificed to him ; and the rich magnifi- cence of his temple had become proverbial even in the age of Homer. In aftertimes Croesus, the wealthiest of monarchs, was particularly munificent in his donations. The sacred re- pository was, therefore, often the object of plunder. Neoptolemus the son of Achilles was slain, while sacrificing, by a priest, on suspicion of a design of that kind. Xerxes divided his army at Panopeus, and proceeded with the main body through Boeotia into Attica, while a part, keeping Parnassus on the right, advanced along Schiste to Delphi ; but they were seized with a panic when near Ilium, and fled. The divine hoard was seized by the Phocians under Philo- melus, and dissipated in a long war with the Amphictyons. The Gauls experienced a recep- tion like that of the Persians, and manifested similar dismay and superstition. Sylla, more wise, wanting money to pay his army, sent to borrow from the

holy treasury ; and when his

messenger would have frightened Lm, by rp- porting that the sound of a harp had been heard from within the sanctuary, he replied, it was a. sign that the god was happy to oblige him. But the temple, in the time of Strabo, was reduced to extreme poverty; and Apollo was silent. Nero attempted to drive him, as it were by violence, from the cavern ; killing men at the mouth, and polluting it with blood. An oracle of Apollo at another place informed the con- suiters, that he should no more recover the power of utterance at Delphi, but enjoined the continuance of the accustomed offerings.

Yet the store appeared inexhaustible ; and the robbery of Nero, who removed 500 brazen images, was rather regretted than perceived. The holy treasuries, though empty, served as memorials of the piety and glory of tne cities which erected them. The Athenian portico pre- served the beaks of ships and the brazen shidds, trophies won in the Peloponnesian war; and a multitude of curiosities remained untouched. Constantine the Great, however, proved a more fatal enemy to Apollo and Delphi, than either Sylla or Nero. He removed the sacred tripods to adorn the Hippodrome of his new city; where these, with the Apollo, the statues of the Heli- conian muses, and the celebrated Pan, dedicated by the Greek cities after the war with the Medes, were extant when Sozomen wrote his history. Afterwards Julian sent Oribasius to restore the temple ; but he was admonished by an oracle to represent to the emperor the deplorable condition of the place. ' Tell him,' said the oracle, ' that the well-built court is fallen to the ground. Phoebus has not a cottage, nor the prophetic laurel, nor the speaking fountain, Cassotis ; and even the beautiful water is extinct.'

DELPHINIA, a new alkali, procured by the action of dilute sulphuric acid, on the bruised unshelled seeds of the larkspur. The solution of sulphate, thus formed, is precipitated by subcar- bonate of potassa. Alcohol separates from this precipitate the vegetable alkali in an impure state.

Pure delphinia is crystalline while wet, but becomes opaque on exposure to air. Its taste is bitter and acrid. When heated it melts; and on cooling becomes hard and brittle like resin. If more highly heated, it blackens and is decom- posed. Water dissolves a very small portion of it. Alcohol and aether dissolve it very readily. The alcoholic solution renders syrup of violets green, and restores the blue tint of litmus red- dened by an acid. It forms soluble neutral salts with acids. Alkalies precipitate the delphinia in a white gelatinous state like alumina.

DELPHINIC ACID. The name of an acid, extracted from the oil of the dolphin. It resem- bles a volatile oil ; has a light lemon color, and a strong

*aromatic odor, analogous to that of rancid butter. Its taste is pungent, and its vapor has a sweetened taste of setter. It is slightly soluble in water, and very soluble in alcohol. The latter solution strongly reddens litmus. 100 parts of delphinic acid neutralise a quantity of base, which contains 9 of oxygen, whence its prime equivalent appears to be 11*11.*

DELPHINIUM, dolphin flower, or larkspur:

in botany, a genus of the trigynia order, and po- lyandria class of plants ; natural order twenty- sixth, multisiliquae: CAL.none; petals live; necta- rium bifid, and horned behind ; siliquae three or one. Species fourteen ; two of which are perennial. They are herbaceous plants of upright growth, rising from eighteen inches to four feet in height, garnished with finely divided leaves, and termi- nated by long spikes of pentapetalous flowers of blue, red, white, or violet colors. One species, viz. D. consolida, is found wild in several parts of Britain, and grows in corn fields. The seeds are acrid and poisonous. When cultivated, the blossoms often become double. Sheep and goats eat this plant ; horses are not fond of it ; cows and swine refuse it. The annual larkspur makes a very fine appearance in gardens, and is easily propagated by seeds, being so hardy that it thrives in any soil or situation. •

DELPHINUS, the dolphin, in zoology, a genus of fishes belonging to the 'order of cete. There are five species, viz. 1. D. delphisr the dolphin. This fish was consecrated to the gods, and, celebrated in the earliest time for its fondness of the human race, was honored with the title of the sacred fish. Arion the musician, when flung into the ocean by the pirates, was said to be re- ceived and saved by this benevolent fish. Its natural shape is almost straight, the back being very slightly incurvated, and the body slender; the nose long, narrow, and pointed, not much unlike the beak of some birds, for which reason the French call it 1′ oye de iner. It has forty teeth ; twenty-one in the upper jaw and nineteen in the lower ; a little above an inch long, conic at their upper end, sharp-pointed, bending a little in. They are placed at small distances from each other; so that when the mouth is shut, the teeth of both jaws lock into one another. The spout-hole is placed in the middle of the head ; the tail is ssmilunar; the skin smooth, the color of ihe back and sides dusky, the belly whitish : it swims with gteat

swiftness; and its prey is fish. It was formerly reckoned a great delicacy. This species of dolphin must not be confounded with that to which seamen give the name ; the latter being quite another kind of fish, viz. the coryphsena hippuris of Linnaeus, and the dorado of the Portuguese. 2. D. leucas, a species called by the Germans wit-fisch, and by the Russians beluga; both signifying white fish: but to this the latter add morskaia, ‘ of the sea,’ to distin- guish it from a species of sturgeon so named. They are numerous in the gulf of St. Lawrence, and go with the tide as high as Quebec. 3. D. orca, the grampus, is found from the length of fifteen feet to that of twenty-five. It is remark- ably thick in proportion to its length, one of eigh- teen feet being in the thickest part ten feet diameter. With reason then did Pliny call this ‘ an immense heap of flesh armed with dreadful teeth.’ It is extremely voracious ; and will not even spare the porpoise, a congenerous fish. It is said to be a great enemy to the whale. 4. D. orca ensidorsatus, the sword fish. The nose is truncated ; the teeth, of which there are forty in both jaws, are sharp-pointed ; and on the back is a very long sword-like spine, or bony fin. It inhabits the European seas, the Atlantic, towards

the Antarctic Pole, and Davis’s Straits. It is the largest species of the genus, being twenty-four or twenty-five feet long, and from ten to thirteen feet in diameter where thickest ; the lower jaw is much larger than the upper : the spout-hole is on the top of the head, and has two orifices. The spine on the back is often six feet long. It is broadest at the base, and resembles a scimitar or bent sword; being, however, covered with the common skin of the back. It is a bitter enemy to the whale, and carries on a constant war with the seals. It also feeds on flounders. 5. D. phocaena, the porpoise. This species is found in vast multitudes in all parts of the British seas ; but in greatest numbers at the time when fish of passage appear, such as mackerel, herrings, and salmon, which they pursue up the bays.

DELPHOS, now called Castri, a town, or rather village, of Turkey in Asia, in Livadia ; occupying part of the site of the ancient Delphi. Some vestiges of temples are visible ; and above them, in the mountain side, are sepulchres, niches with horizontal cavities for the body, uome of which are covered with slabs. A monastery is erected on the site of the Gymnasium. Strong terrace walls and other traces of a large edifice remain. The village is at a distance. Castalia is on the right hand in ascending to it, the water coming from on high and crossing the road ; a steep precipice, above which the mountain still rises immensely, continuing on in that direction. The village consists of a few cottages covering the site of the temple and oracle.

DELTA, a part of Lower Egypt, which occu- pies a considerable space of ground between the branches of the Nile and the Mediterranean Sea : the ancients call it Delta, because it is in the form of a triangle, like the Greek

A. It is about 130 miles along the coast from Damietta to Alex- andria, and seventy on the sides from the place where the Nile begins to divide itself. It is the most fertile country in all Egypt, and it rains more there than in other parts, but the fertility is chiefly owing to the inundation of the Nile. The principal towns on the coast are Damietta, Rosetta, and Alexandria; but, within land, Me- nousia, and Maala or Elmala. See EGYPT.

DE'LTOIDE, adj. from delta, the fourth I'etter of the Greek alphabet ; so called by reason of its resembling this letter. An epithet applied to a triangular muscle arising from the clavicula, and from the process of the same, whose action is to raise the arm upward.

Cut still more of the deltoide muscle, and carry the arm backward. Sharp's Surgery.

DELU'DE, v. a. ˆ Ital. and Lat. deludere,

DELU'DER, n. s. £ from de, and ludo to de-

DELU'DABLE, adj. J ceive. To cheat; deceive;

impose upon : deludable is, easily imposed upon.

O, give me leave, I have deluded you ; 'Twas neither Charles, nor yet the duke.

Shakspeare. Henry VI.

Not well understanding omniscience, he is not so ready to deceive himself, as to falsify unto him whose cogitation is no ways deludable.

Browne's Vulgar Eirovrs. Let not the Trojans, with a feigned pretence Of proffered peace, delude the Latian prince.

Drydcn.

DELUGE.

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And thus the sweet

June their song.

Pope.

For when our poor deluded people at Ifome, and foreigners abroad, read

the poisonous and inflamma- tory libels that are daily published with impunity

they act accordingly.

Jwiius.

Where wavering man, betrayed by venturous pride To chase the dreary paths without a guide, As treacherous phantoms in the mist delude, Shuns fancied ills, or chases airy good.

Johnson. Vanity of Human Wishes.

DELVE, v. a. & n. s.) Sax. -celpan ; Teut.

DE'LVER, n. s. $ delben ; Be\gicdelven;

Goth, dalf, a subterranean place. Screnius re- fers to this last as the origin of the Saxon be- delfan, to bury; and Wiclif confirms this etymology by using dalf for delve. See below. To dig, and, figuratively, to endeavour to fathom the mind. It is used as a substantive by Spenser and Jonson, for the pit or place dug : a delver is a digger.

But he that hadde taken oon ghede forthe and dalf mto the earthe : and hidde the money of his Lord.

Wiclif, Matt. xxv. When Adam delved, and Eve span, Who was then the Gentleman ? Old Ballad.

He by and by

His feeble feet directed to the cry ; Which to that shady delve him brought at last, Where Mammon erst did sun his treasury.

Spenser.

It shall go hard,

But I will delve one yard below the mines, And blow them at the moon. Sluikspeare.

What's his name and birth ? — I cannot delve him to the root : his father Was called Sicilius. Id.

Such a light and mettled dance Saw you never yet in France ; And by leadmen, for the nonce, That turn round like grindle-stones, Which they dig out fro' the delves, For their bairns' bread, wives, and selves.

Ben Jonson.

Delve of convenient depth your thrashing floor, With tempered clay, then fill and face it o'er.

Dryden.

The filthy swine with delving snout The rooted forest undermine. Philips.

DELVING, one of the principal towns of Lower Albania, between Joannina and Butrinto. It stands on the side of a mountain, on the site of the ancient Eleus, between the Paria, or an- cient Xanthus, and Pistrini ; and is well de- fended by a castle. Population 8000. It is fifty miles E. N. E. of Larissa.

DE'LUGE, n. s. Fr. deluge ; Span. Ital. and Portug. diluvio ; Lat. diluvium, from diluo, de and luo ; Gr. \v

If there had not been so deep a deluge of sin, tnere had been none of the waters.

Bishop Hall Contemplations.

But if with hays and dams they strive to force His channel to a new or narrow course, No longer then within his banks he dwells, First t-> a torrent, then a deluge, swells. Denham.

The apostle doth plainly intimate, that the old world was subject to perish by a deluge, as this is sub- ject to perish by conflagration. Burnet's Theory.

At length corruption, like a general flood, Shall dduye all. Pope,

Still the battering waves rush in Implacable, till deluged by the foam, The ship sinks, foundering in the vast abyss.

Philips.

The restless flood the land would overflow,

By which the deluyed earth would useless grow.

Bluckmore.

DELUGE. Several deluges are recorded in history ; as that of Ogyges, which overflowed almost all Attica; and that of Deucalion, which drowned all Thessaly in Greece : the most memo- rable however was the universal deluge or Noah's flood, which overflowed and destroyed the whole earth ; and from which only Noah, and those with him in the ark, escaped. See

ANTEDILU- VIAN, an article in which we have entered into this subject at some length, and particularly its epoch. See also CHROKOLOGY.

But the deluge is a topic of great interest both to science and religion. It has given birth, there- fore, to various theories and controversies on every point connected with it; and, while we cannot devote much space to the review of them in this work, some of the principal considerations that have been offered respecting its causes and effects may be acceptable to the reader. The great points in question may be reduced to three : 1. Was the deluge universal, as is commonly supposed, or partial? 2. Was it from natural agency only, and if so what natural agency effected this mighty convulsion ? 3. What were the principal effects and changes resulting?

1. Isaac Vossius and bishop Stillingfleet are amongst the most respectable supporters of an opinion that the deluge was but partial. But the reasoning of the former upon this subject is a little involved in our second question, respect- ing the agency employed; for it rests partly upon the difficulty there must have been in effecting a universal deluge. 'Many miracles,' he says, ' must have concurred ; but God works no mira- cles in vain. What need was there to drown those lands where no men lived, or are yet to be found ? Although we should believe that part of the earth only to have been overflowed by the waters which we have mentioned, and which is not the hundredth part of the terrestrial globe, the deluge will nevertheless be universal (oecu- menical), since the destruction was universal, and overwhelmed the whole habitable world.' Bishop Stillingfleet adopted the same opinion, from a persuasion that the earth was by no means fully peopled, and therefore there was no necessity for the deluge being universal. ' I cannot,' says he, ' see any urgent necessity from the Scripture to assert that the flood did spread itself all over the surface of the earth. That all mankind, those in the ark excepted, were destroyed by it, is most certain according to Scripture. When the Lord said that he would destroy man from the face of the earth, it could not be any particular deluge of so small a country as Palestine, as some have ridiculously imagined; for we find a umveisal

corruption in the earth mentioned as the cause ; a universal threatening upon all men for this cause ; and afterwards a universal destruction expressed as the effect of this flood. So then it is evident that the flood was universal with regard to mankind ; but from thence follows no neces- sity at all of asserting the universality of it as to the globe of the earth, unless it be sufficiently proved ; and what reason can there be to extend the flood

beyond the occasion of it, which was the corruption of mankind ? The only probability of asserting the universality of the flood, as to the globe of the earth, is from the destruction of all Mving creatures, together with man. Now though ;nen might not have spread themselves over the whole surface of the earth, yet beasts and creep- ing things might, which were destroyed with the flood ; for it is said that ' all flesh died that moved upon the earth, and every man.' To what end should there be not only a note of universality added, but such a particular enumeration of the several kinds of beasts, creeping things, and fowls, if they were not all destroyed ? To this I answer ; I grant that, as far as the flood extended, all these were destroyed ; but see no reason to extend the destruction of these beyond that compass and space of the earth where men inhabited, because the punishment upon the beasts was occasioned by, and could not be concomitant with the de- struction of man ; but (the occasion of the deluge being the sin of man, who was punished in the beasts that were destroyed for his sa'ke, as well as in himself) where the occasion was not, as ••vhere there were animals and no men, there seems no necessity of extending the flood thither.'

The bishop, therefore, thinks it probable that this visitation of divine judgment extended only to the continent of Asia, and those animals only which were immediately connected with mankind ; and he thinks the latter a sufficient reason for Noah's preserving the pairs of animals which he was commanded to take with him into the ark. But it is shown, under the article AN- TEDILUVIAN, that, according to the most moderate computations, the world was probably more full of inhabitants than at present ; the expression of Scripture is strong, ' that the earth was filled with violence :' and if it were admitted that ' the earth' means only continental Asia, the supposi- tion of a partial deluge involves almost all the difficulties, with regard to the agency employed, that are supposed to be connected with that of a universal one. If the tops of the highest moun- tains, in a very considerable part of the earth, were covered, the laws of gravity would carry the water that must have been thus elevated over all the ordinary habitations of men, or it would require a miracle to suspend their operation. We shall see that nothing strictly miraculous is supposed on our hypothesis of a universal de- luge.

Mr. Bryant, in his Ancient Mythology, adverts Ht great length to the traditional traces of the fact of a universal deluge in all the early fables and histories of the heathen world. He even contends that this fact furnished the principal, if not the only foundation of ancient idolatry ; that the first of all the heathen deities was Noah ;

that all the ancient nations regarded him as their founder ; and that he, his sons, and the first patriarchs, are alluded to, in most if not all the religious

ceremonies. The Egyptian Osiris (he says) was the same with Ham the son of Noah ; though the name was sometimes bestowed on Noah himself. Osiris, according to Diodorus Siculus, was wonderfully preserved in an ark, and taught the use of the vine ; to build, plant, &c. ‘ We may reasonably suppose,’ says Mr. Bryant, ‘ that the particulars of this extraordinary event would be gratefully commemorated by the patriarch himself, and transmitted to every branch of his family ; that they were made the subject of domestic converse, where the history was often renewed, and ever attended with a reve- rential awe and horror, especially in those who had been witnesses to the calamity, and had experienced the hand of Providence in their favor. When there was a falling off from the truth, we might farther expect, that a person of so high a character as Noah, so particularly dis- tinguished by the Deity, could not fail of being reverenced by his posterity ; and, when idolatry prevailed, that he would be one of the first among the sons of men to whom divine honors would be paid. Lastly, we might conclude, that these memorials would be interwoven in the mythology of the Gentile world ; and that there would be continual allusions to these ancient occurrences, in the rites and mysteries as they were practised by the nations of the earth. In conformity to these suppositions, I shall endea- vor to show that these things did happen ; that the history of the deluge was religiously pre- served in the first ages ; that every circumstance of it is to be met with among the historians and mythologists of different countries, and traces of it are to be found particularly in the sacred rites of Egypt and of Greece.’

If the success of this author, in this great undertaking, was not complete; if his theories involve many doubtful points of history, and some altogether conjectural assumptions ; he em- bodies on the other hand many unquestionably in- teresting and important facts, connected with this subject, and which the reader who is desirous of a complete review of it should not overlook. Of Noah, he says, they styled him Prometheus, Deucalion, Atlas, Theuth, Zuth, Xuthus, Ina- chus, Osiris. When there began to be a tenden- cy towards idolatry, and the adoration of the sun was introduced by the posterity of Ham, the title of Helius, among others, was conferred upon him. Noah was the original Zeus and Dios. He was the planter of the vine, and inventor of fermented liquors : whence he was denominated Zeuth, which signifies ferment, rendered Zeus by the Greeks. He was also called Dionusus, in- terpreted by the Latins Bacchus, but very im- properly. Bacchus was Chus the grandson of Noah; as Ammon may be esteemed Ham, so much reverenced by the Egyptians. Among the people of the east, the true name of the patriarch was preserved ; they called him Noas, Naus, and sometimes contracted Nous ; and many places of sanctity, as well as rivers, were deno- minated from him. Anaxagoras of Clazomenje had obtained some knowledge of him in Egypt

By him the patriarch was denominated Noas or Nous ; and both he and his disciples were sen- sible that this was a foreign appellation ; not- withstanding which he has acted as if it had been a term of the Greek language. Eusebius informs us, that the disciples of Anaxagoras say, ‘ that Nous is by interpretation, of the deity Dis or Dios ; and they likewise esteem Nous the same as Prometheus, because he was the re- newer of mankind, and was said to have fashion- ed them again,’ after they had been in a manner extinct. Suidas has preserved, from some an- cient author, a curious memorial of this won- derful personage, whom he affects to distinguish from Deucalion, and styles Nannacus. Accord- ing to him, this Nannacus was a person of great antiquity, and prior to the time of Deucalion. He is said to have been a king, who, foreseeing the approaching deluge, collected every body together, and led them to a temple, where he offered up his prayers for them, accompanied with many tears.’ Other well known traditions, mentioned by Stephenson,. speak of the flood of Deucalion in which all mankind were destroyed. Afterwards, when the surface of the earth began to be again dry, Zeus ordered Prometheus and Minerva to make images of clay in the form of men ; arid, when they were finished, he called the winds, and made them breathe into each, and rendered them vital.’ From these accounts, Mr. Bryant concludes : ‘ However the story may have been varied, the principal outlines plainly point out the person who is alluded to in these histories. It is, I think, manifest, that Annacus, and Nan- nacus, and even Inachus, relate to Noachus or Noah. And not only these, but the histories of Deucalion and Prometheus have a like reference to the patriarch ; in the 600th year, and not the 300th, of whose life the waters prevailed upon the earth. He was the father of mankind, who were renewed in him. Hence he is represented by another author, under the character of Pro- metheus, as a great artist, by whom men were formed anew, and were instructed in all that was good. He seems in the east to have been called Noas, Noasis, Nasus, and Nus; and by the Greeks his name was compounded Dionusus. The Amonians, wherever they came, founded cities to his honor ; hence places called Nusa often occur, and many of them are mentioned by ancient authors. These, though widely distant, being situated in countries far removed, yet re- tained the same original histories ; and were ge- nerally famous for the plantation of the vine. Misled by this similarity of traditions, people in after times imagined that Dionusus must neces- sarily have been where his history occurred ; and as it was the turn of the Greeks to place every tiling to the account of conquest, they made him a great conqueror, who went over the face of the whole earth, and taught mankind the plantation of the vine. Though the patriarch is represented under various titles, and even

these not always uniformly appropriated; yet there continually occur such peculiar circumstances of his history, as plainly point out the person referred to. The person preserved is always men- tioned as preserved in an ark. He is described as being in a state of darkness, which is repre-

sented allegorically as a state of death. He then obtains a new life, which is called a second birth ; and is said to have his youth renewed. lie is, on this account, looked upon as the first born of mankind ; and both his antediluvian and postdi- luvian states are commemorated, and sometimes the intermediate state is also spoken of. Dio- dorus calls him Deucalion ; but describes the deluge as almost universal.' We have noticed the corresponding Chaldean tradition, &c. mentioned by Berosus in the article ANTEDILUVIANS. While we consider the further range of these traditional accounts of the flood over the continent of India, and as far as China, has also its weight in establishing the Mosaic accounts, we shall shortly advert to the present and permanent ef- fects of such a visitation, now remaining, as another proof both of the fact of a deluge, and of its universality. At present we enquire :

2. What was the nature of the agency employed on this occasion ? Dr. Thomas Burnet, in his Telluris Theoria Sacra, endeavours to show, that all the waters in the ocean are not sufficient to cover the earth to the depth assigned by Moses. Sup- posing the sea drained quite dry, and all the clouds of the atmosphere dissolved into rain, we should still want the greatest part of the water of a deluge. According to the Dr. no less than eight oceans would have been requisite. To get clear of this difficulty, he and others have adopted Descartes's theory. That philosopher will have the antediluvian world to have been perfectly round and equal, without mountains or valleys. He accounts for its formation on mechanical principles, by supposing it at first in the condition of a thick turbid fluid replete with divers heterogeneous matters ; which, subsiding by slow degrees, formed themselves into different concentric strata, or beds, by the laws of gravity. Dr. Burnet improves on this theory, by sup- posing the primitive earth to have been no more than a crust investing the water contained in the ocean, and in the central abyss, which he and others suppose . to exist in the bowels of the earth. See ABYSS. At the time of the flood, this outward crust broke in a thousand places ; and sunk down among the water, which thus spouted up in vast cataracts, and overflowed the whole surface. He supposes also, that before the flood there was a perfect coincidence of the equator with the ecliptic, and consequently that the antediluvian world enjoyed a perpetual spring ; but that the violence of the shock, by which the outer crust was broken, shifted also the position of the earth, and produced the pre sent obliquity of the ecliptic. This theory is not only equally arbitrary with the former, but di- rectly contrary to the words of Moses, who as- sures us, that all the high hills were covered ;

while Burnet affirms that there were no hills then in being. Dr. Hook conjectured that the shell of earth was subjected at the deluge to a compression into a prolate spheroid, thereby pressing out the water of an abyss under the earth. Dr. Halley ascribes the deluge to the shock of a comet, whereby the polar and diurnal rotation of the globe was changed ; and the in- genious Whiston so far adopted and improved upon this hypothesis, that he published a tract

on the subject entitled, The Cause of the Deluge demonstrated.

The theories above enumerated, though sanc- tioned by those names which entitled them to our notice, are, we conceive, one and all, desti- tute of any thing amounting to proof. The fol- lowing, which endeavours to account for this most remarkable event, without doing any vio- lence to the established laws of nature, is the hypothesis, we believe, of a Mr. James Tytler, a chemist of Edinburgh, who contributed largely to the Encyclopaedia Britannica, from which work we make the extract.

1 . ‘ If we consider the quantity of water requi- site for the purpose of the deluge, it will not appear so very extraordinary as has been com- monly represented. The height of the highest hills is thought not to be quite four miles. It will therefore be deemed a sufficient allowance, when we suppose the waters of the deluge to have been four miles deep on the surface of the ground. Now it is certain, that water, or any other matter, when spread out at large upon the ground, seems to occupy an immense space in comparison of what it does when contained in a cubical vessel, or when packed together in a cubical form. Suppose we wanted to overflow a room sixteen feet every way, or containing 258 square feet, with water, to the height of one foot, it may be nearly done by a cubical vessel of six feet filled with water. A cube of eight feet will cover it two feet deep, and a cube of ten feet will very nearly cover it four feet deep. It makes not the least difference whether we sup- pose feet or miles to be covered. A cube of ten miles of water would very nearly overflow 256 square miles of plain ground to the height of four miles. But if we take into our account the vast number of eminences with which the surface of the earth abounds, the above- mentioned quan- tity of water would do a great deal more. If, therefore, we attempt to calculate the quantity of water sufficient to deluge ‘the earth, we must make a very considerable allowance for the bulk of all the hills on its surface. To consider this matter, however, in its utmost latitude : the sur- face of the earth is supposed, by the latest com- putations, to contain 199,512,595 square miles. To overflow tnis surface to the height of four

miles, is required a parallelepiped of water six- teen miles deep, and containing 49,878,148 square miles of surface. Now, considering the immense thickness of the globe of the earth, it can by no means be improbable, that this whole quantity of water may be contained in its bowels, without the necessity of any remarkable abyss or huge collection of water, such as most of our theorists suppose to exist in the centre. It is certain, that as far as the earth has been dug, it has been found not dry, but moist; nor have we the least reason to imagine that it is not, at least, equally moist all the way down to the centre. How moist it really is cannot be known, nor the quantity of water requisite to impart to it the degree of moisture it has; but we are sure it must be immense. The earth is computed to be nearly 8000 miles in diameter. The ocean is of an unfathomable depth ; but there is no reason for supposing it more than a few miles. To

make all reasonable allowances, however, we shall suppose the whole solid matter in the globe to be only equal to a cube of 5000 rmles ; and even on this supposition we shall find, that all the waters of the deluge would not be half suf- ficient to moisten it. The above-mentioned parallelepiped of water would indeed contain 798,050,368 cubic miles of that fluid; but the cube of earth containing no less than 125,000 millions of cubic miles, it is evident that the quantity assigned for the deluge would be scarcely known to moisten it. It could have indeed no more effect this way, than a single pound of water could have upon 150 times its bulk of dry earth. We are persuaded, therefore, that any person who will try by experiment how much water a given quantity of earth contains, and from that experiment will make calculations with regard to the whole quantity of water contained in the bowels of the earth, must be abundantly satisfied, that though all the water of the deluge had been thence derived, the diminution of the general store would, comparatively speaking, have been next to nothing. 2. It was not from the bowels of the earth only that the waters were discharged, but also from the air; for we are assured by Moses, that it rained forty days and forty nights. This source of the diluvian waters has been considered as of small consequence by almost every one who has treated on the subject. We shall transcribe the general opinion from the Universal History, Vol. I. where it is very fully expressed. ‘ According to the observations made of the quantity of water that falls in rain, the rains could not afford one ocean, nor half an ocean, and would be a very inconsiderable part of what was necessary for a deluge. If it rained forty days and forty nights throughout the whole earth at once, it might be sufficient to lay all the lower grounds under water, but it would signify very little as to the overflowing of the mountains ; so that it has been said, that if the deluge had been made by rains only, there would have needed not forty days, but forty years, to have brought it to pass. And if we suppose the whole atmosphere condensed into water, it would not all have been

sufficient for this effect ; for it is certain, that it could not have risen above thirty- two feet, the height to which water can be raised by the pressure of the atmosphere ; for the weight of the whole air, when condensed into water, can be no more than equal to its weight in its natural state, and must become no less than 800 times denser; for that is the difference between the weight of the heaviest air and that of water.' On this subject we must observe, that there is a very general mistake with regard to the air, simi- lar to the above-mentioned one regarding the earth. Because the earth below our feet appears to our senses firm and compact, therefore the vast quantity of water, contained even in the most solid parts of it, and which will readily appear on proper experiment, is overlooked, and treated as a non-entity. In like manner, because the air does not always deluge with excessive rains, it is also imagined that it contains but very little water. Because the pressure of the air is able to raise only, thirty-two feet of water on the surface of the earth, it is therefore supposed we

may know to what depth the atmosphere could deluge the earth, if it was to let fall the whole water contained in it. But daily observations show, that the pressure of the atmosphere has not the least connexion with the quantity of water it contains. Nay, if there is any connex- ion, the air seems to be lightest when it contains most water. In the course of a long summer's drought, for instance, the mercury in the baro- meter will stand at thirty inches, or little more. If it does so at the beginning of the drought, it ought to ascend continually during the time the dry weather continues; because the air all the while is absorbing water in great quantity from the surface of the earth and sea. This, however, is known to be contrary to fact. At such times the mercury does not ascend, but remains station- ary; and what is still more extraordinary, when the drought is about to have an end, the air, while it yet contains the whole quantity of water it absorbed, and has not discharged one single drop, becomes suddenly lighter, and the mercury will perhaps sink an inch before any rain falls. The most surprising phenomenon, however, is yet to come. After the atmosphere has been dis- charging for a number of days successively a quantity of matter 800 times heavier than itself, instead of being lightened by the discharge, it becomes heavier, nay, specifically heavier than it was before. It is also certain, that very dry air, provided that it is not at the same time very hot, is always heaviest ; and the driest air which we are acquainted with, namely, Dr. Priestley's dephlogisticated air, is considerably heavier than the air we commonly breathe. For these reasons we think the quantity of water contained in the whole atmosphere ought to be considered as indefinite, especially as we know that by what- ever agent it is suspended, that agent

must counteract the force of gravity, otherwise the water would immediately descend ; and while the force of gravity in any substance is counteracted, that substance cannot appear to us to gravitate at all. 3. The above considerations render it pro- bable, at least, that there is in nature a quantity of water sufficient to deluge the world, provided it was applied to the purpose. We must next consider whether there is any natural agent powerful enough to effect this purpose. We shall take the phrases used by Moses in their most obvious sense. The breaking up of the fountains of the deep we may reasonably sup- pose to have been the opening of all the passages, whether small or great, through which the sub- terraneous waters possibly could discharge them- selves on the surface of the earth. The opening of the windows of heaven we may also suppose to be the pouring out the water contained in the atmosphere through those invisible passages by which it enters in such a manner as totally to elude every one of our senses, as when water is absorbed by the air in evaporation. As both these are said to have been opened at the same time, it seems from thence probable, that one natural agent was employed to do both. Now it is certain, that the industry of modern enquirers has discovered an agent unknown to the former ages, and whose influence is so great, that with regarc to this world it may be said to have a

kind of omnipotence. The agent we mean in electricity. It is certain, that, by means of itr immense quantities of water can be raised to a great height in the air. This is proved by the phenomena of water-spouts. Mr. Forster relates, that he happened to see one break very near him, and observed a flash of lightning proceed from it at the moment of its breaking. The conclusion from this is obvious. When the electric matter was discharged from the water, it could no lon- ger be supported by the atmosphere but immedi- ately fell down. Though water-spouts do not often appear in this country, yet every one must have made an observation somewhat similar to Mr. Forster's. In a violent storm of thunder and rain after every flash of lightning, or dis- charge of electricity from the clouds, the rain pours down with increased violence; thus show- ing that the cloud, having parted with so much of its electricity, cannot longer be supported in the form of vapor, but must descend in rain. It is not, indeed, yet discovered that electricity is the cause of the suspension of water in the atmosphere; but it is certain that evaporation is promoted by electrifying the fluid to be evapo- rated. It may therefore be admitted, as a possi- bility, that the electric fluid contained in the air is the agent by which it is enabled to suspend the water which rises iu vapor. If, therefore, the air is deprived of the due proportion of this fluid, it is evident that rain must fall in prodi- gious quantities. Again : we are assured from the most undeniable observations, that electricity is able to swell up water on the surface of the earth. This we can make it do even in our trifling experiments ; and much more must the whole force of the fluid

be supposed capable of doing it, if applied to the waters of the ocean, or any others. The agitation of the sea in earth- quakes is a sufficient proof of this. .It is certain, that at these times there is a discharge of a vast quantity of electric matter from the earth into the air; and, as soon as this happens, all becomes quiet on the surface of the earth. From a mul- titude of observations it also appears, that there is at all times a passage of electric matter from the atmosphere into the earth, and vice versS, from the earth into the atmosphere. There is, therefore, no absurdity in supposing the Deity to have influenced the action of the natural powers in such a manner that for forty days and nights the electric matter contained in the atmos- phere should descend into the bowels of the earth ; if, indeed, there is occasion for supposing any such immediate influence at all, since it is not impossible that there might have been, from some natural cause, a descent of this matter from the atmosphere for that time. But by whatever cause the descent was occasioned, the consequence would be, the breaking up of the fountains of the deep, and the opening of the windows of heaven. The water contained in the atmosphere being left without support, would descend in impetuous rains; while the waters of the ocean, those from which fountains originate, and those contained in the solid earth itself, would rise from the very centre, and meet the waters which descended from above. Thus the breaking up of the fountains of the deep, and

the opening the windows of heaven, would accom- pany each other, as Moses tells us they actually did ; for, according to him, both happened on the same day. In this manner the flood would come on quietly and gradually, without that violence to the globe which Burnet, Whiston, and other theorists, are obliged to suppose. The abatement of the waters would ensue on the ascent of the electric fluid to where it was before. The atmosphere would then absorb the water as formerly : that which had ascended through the earth would again subside ; and thus every thing would return to its pristine state.'

3. We conclude by noticing some of the alte- rations and effects which are supposed to have taken place in consequence of the deluge. One of these is the much greater quantity of water in the present than in the old world. Dr. Keill has, indeed, endeavoured to prove, that the present extent of the surface of the waters is necessary to raise such a quantity of vapors as may supply the surface of the earth with rain and with springs. In answer to this it is said, that it may justly be questioned whether all springs are de- rived from the vapors raised by the sun's heat ? and, secondly, Whether the primitive earth stood in need of such a quantity of rain to render it fertile

as the present? Dr. Woodward supposes the antediluvian seas to have been nearly of the same extent with those at present, because ‘ the spoils of the sea, the shells and other marine bodies, are left in such prodigious numbers in the earth, that they could not have been left in such quantities, had not the seas occupied much the same space as they do now.’ This argument, however, is thought by Mr. Cockburn to be in- conclusive ; and that the seas in the present earth are vastly more extended, and consequently the dry land so much less in proportion, may be in- ferred, he thinks, from the great multitude of islands that lie near the shores of the greater con- tinents, &c. To all this it may be replied, that the Mosaic account says nothing of the extent of the seas either before or after the flood ; but simply tells us, that the waters were poured out upon the surface of the earth from the windows of heaven and the fountains of the deep, and that as the flood decreased the waters returned from off the face of the earth. That the fish, as well as land animals, were more numerous in the an- tediluvian world than now when such quantities are destroyed by mankind, is also probable, as we see they abound to this day ip uninhabited places. This may account for the astonishing quantities of exuviae to be met with in many different parts of the earth ; but from the formation of islands nothing can be concluded concerning the antedi- luvian world. The late discoveries have shown that many islands have a volcanic origin ; that others are formed by the growth of coral ; and some by an accumulation of sea-weeds and other matters floating on the surface of the ocean, and detained upon sand-banks and sunk rocks ; while not a few of those near the great continent owe their origin to the quantities of mud brought down by the great rivers which fall into the ocean. The inferior fertility of the earth after the deluge is much insisted upon by the same author.

There has been a valuable addition to the spe-

culations we have noticed above, in a modern work of the Rev. Mr. Townsend, entitled, The Character of Moses established for Veracity as an Historian, recording Events from the Creation to the Deluge. It might be said on opening this volume, Is it necessary again to take up arms in defence of Moses? is not the phalanx of wise and good men who have already stood forth in his behalf sufficient to secure him from any new attack ? It is true, indeed, that the aegis of ce- lestial wisdom has often darted its benumbing rays on the impious cavillers, but they rise ever with new courage from the ruin which had over- whelmed them, and rush with blind rage on the bulwarks whence they have been so often re- pelled. They have begun, of late, to try the effect of new methods of assault, and to exult in the advantageous display of their resources. It was no small triumph over Revelation to have proved that the earth was never created, but was originally a splinter struck off from the sun by a heavy body which happened to impinge upon it. But a great Epicurean philosopher recently

de- funct, has proceeded much further, and has finally developed the theory of the animal crea- tion. It seems that the primitive world was one vast pool, in which all creatures sported in the shape of tadpoles, until some of them longing to walk on dry knd, legs fitted for that purpose spontaneously sprang forth from the hinder quar- ters. Some affected hoofs, and gradually became horses ; while others, of a more ambitious charac- ter, forced their humbler brethren to carry them on their backs. A great metaphysician, the pride of Scotland, proved, in defiance of Moses, that the primitive men wore tails, and that it was owing to the friction of tight clothing that their posterity have lost so ornamental an appendage. We have not heard, indeed, that the Sansculotte philosophers have recovered this badge, though they are well rid of all other symptoms of huma- nity; but it is impossible to say how far their perfectibility may reach, and to what new heights of dignity and honor they may be destined to ascend. It is surprising that the old-fashioned tradition has not been rooted out by so many improvements in science ; but, as Moses has stood his ground so long, there seems a fair chance of his holding out to the last. Still it is impossible to say what new stratagems may be played off; and, as the enemy seems to be flushed with victory, we are not displeased to hail a new auxiliary. We therefore enter upon some of the facts and reasonings of the work before us with considerable satisfaction.

The design of Mr. Townsend is, to compare the present state of our knowledge of the history of man and of the earth with the relations con- tained in the early part of Genesis, and by this comparison to establish the character of the his- torian as a faithful recorder of events. The first part of his work contains a disquisition on the similar traditions which were handed down among many nations from the most ancient times ; but the larger portion of the volume con- sists of a geological essay on the proofs that our globe has undergone a universal deluge. He shows that the creation of the world, and its emerging from a state of primitive chaos and

from a universal ocean, are not only contained in the works of the Grecian poet? and philoso- phers, but are traced among several more ancient nations. In a curious extract from one of the Paranas are the following details : — ‘ Of all ob- jects in the created world, water existed first. The universe was dark. In this primeval water did Bhagavat, in a masculine form, repose for the space of a thousand ages ; after which, the inten- tion of creating other beings, for his own wise purposes, became predominant in the mind of the Supreme. In the first place, by his will, was produced one flower of the lotus ; then the form of Brahma, who, emerging from the cup

of the lotus, looked round and beheld, from the eyes of hi-s four heads, an immeasurable expanse of water. In this flower he passed 500 years in wonder, perplexity, and prayer ; after which he produced the four elements, and the genii which preside over them. From his right side there issued, by the omnipotence of God, a man of perfect beauty, Swayambhuva Menu, that is, son of the Self-existent ; and from his left side a wo- man, named Satarupa.' (P. 43, 44.) To the same purpose is a passage in the ancient Edda of Saemund, published by Resenius.

On the subject of the deluge, which occupies the principal part of this work, he prefers dwell- ing on arguments which are in a great measure new, and refers us to other writers for the histo- rical testimony. This we approve, while we think that the historical part of the question is far from being exhausted. The Pralayas or peri- odical inundations of the Hindoos, as related in the Bhagavat — the successive destructions and renovations of the world, of which a correspond- ing account is given by Saemund in the Runic Voluspa, and by Seneca from the representations of the Stoics — and the similar ceremonies prac- tised in celebration of this event in Egypt and in Mexico, are facts which deserve a careful eluci- dation.

The proofs which Mr. Townsend brings for- ward of this universal catastrophe are diffused through a geological disquisition which occupies the larger portion of the volume. He takes a ge- neral survey of the surface of the earth, and the constitution and order of its strata, as far as they have been explored ; in the course of which he unfolds to us in a very interesting manner the fruits of a diligent investigation, continued, as he informs us, during fifty years, and pursued in various parts of Europe. We may safely say tha-t his volume contains far more information than any other work on the same subject.

In order to lay a foundation for the develop- ment of the more general phenomena to which he adverts, this author gives a brief view first of the geological formation of our own island. We regret that we cannot follow him through their details : they well prepare the reader to contemplate with interest the succession of formations in other countries. Under this head our author lias given us brief notices afforded by travellers in almost every part of the world which has been explored by Europeans. They are very general, yet suffi- cient to justify the conclusion which Mr. Town- spnd has drawn from them. ' Whether we exami ie,' he observes, 'Europe, Asia, Africa, or

America, the same arrangement may be traced ; with this exception, that both in our island, and over the surface of the globe, in some places, the superior strata are deficient, and may be sup- posed to have been carried off, after they had been deposited in the bosom of the ocean. This arrangement, as already stated, includes granite, gneiss, slate, and

argillaceous schist, mountain lime-stone, coal, schist, calcareous rocks, with clay, sand, chalk, and its integument of sand and clay.'

The geological theory adopted by Mr. Town- send is highly favorable to this part of the Scrip- tural History. If, with him, we can trace the actual operation of agents sufficiently powerful to«levate the continent of South America, (which this author conceives to have been those now operating in her abundant volcanoes), and other such extensive regions from the depths of the ocean, it is no longer difficult to conceive, that the waters may have covered the highest moun- tains, and that great tracts of habitable land may have been submerged.

But absolute and distinct proofs of this event are to be found in the dislocations of strata, and in the phenomena connected with alluvial depo- sitions. There is no part of the earth in which the violent dislocations of the regular strata are not to be found ; and they are chiefly abundant in mountainous tracts, of which no other proof need be cited than the vertical position which the strata forming high mountains now hold, while we are assured that these very strata were origi- nally horizontal. But even in the most level coun- tries we need not go far for evidences of these convulsions. Every river, every brook which breaks out under our feet, and every valley which diversifies the surface, owes its existence to the disruption of strata. All the rock forma- tions were at first unbroken and continuous; wherever a valley occurs there is now an inter- ruption of this continuity. That these hollows were not the mere effect of rivers which have worn out courses for their waters may be proved by a variety of geological facts which we have not room to introduce here; but it is put in sufficiently strong light by Mr. Townsend's ob- servations on springs, which are in a great mea- sure new, and of very general interest. Every stratum of rock, before it becomes broken up, carries with it in its course under the surface a stratum of water, which percolates its stony beds, and is confined between impervious layers of clay. It is only where these subterranean courses are disturbed, and the strata are torn asunder by some extraneous force, that fountains and rivers burst forth. These dislocations and dis- turbances of strata can only be attributed to the agency of vast torrents every where flowing over and disorganising the surface of the earth, and such torrents can only be furnished by the incur- sions of the ocean. Land floods and rivers are the effects of the previous disruption of the strata, and therefore cannot be considered the efficient causes.

The production of these phenomena by the waters of a deluge is further proved by alluvial deposit. The vast extent of alluvions, inde- pendently of all other proof, declares that the

ocean gave them birth. One great accumula- tion of debris fills nearly the whole of Flanders arid Holland; it reaches across the channel, and covers the southern and eastern counties of Eng- land, concealing under it, at a great depth, the regular strata of these districts. Another allu- vion forms Lower Saxony and Holstein. Simi- lar appearances occur in all level countries, and valleys are generally filled with these accumula- tions, through the midst of which the feeble streams of the present rivers have opened for themselves diminutive channels. That these ac- cumulations were affected at once by vast oceanic torrents, and not by the gradual influence of rain and land floods, appears, Mr. T. observes, from the alluvial strata not being mixed or blended together, but frequently disposed according to their specific gravity. The vast fragments of rock which are found scattered over plains and mountains, in so many parts of the earth, at great distances from their native mountains, lead us forcibly to the same inference.

One of the most important observations which relates to these deposits is the following : — ' In all the alluvial districts here particularly noticed, it appears that only one bed of vegetable earth is to be seen. Consequently these strata have not been produced by land floods, at different and at distant periods. They direct our attention to one epoch, and most distinctly give us a measure, by which to estimate the time which has elapsed since either the elevation of our present conti- nents, or the depression of the surrounding seas.'

We are assured, that the incursions of the ocean over the habitable surface of the earth took place at a time since it was actually inha- bited by land animals, by the organic remains which the alluvions contain ; and this remark leads us to our author's disquisition on the inte- resting subject of extraneous fossils, with which %ve shall close our observations. Mr. Townsend is the first who has given us any extensive ac- xXmnt of the organic remains, in connexion with the strata to which they belong ; and in this re- spect he has rendered great service to the public. The oldest class of rocks contain no vestiges of organised beings, and this fact is sufficient to silence the assertion of Hutton, that the world exhibits no traces of a beginning. Lithophytes and shells occur in the oldest secondary rocks, and more complicated beings gradually make their appearance. All these, however, and in- deed all the organic remains occurring in strata which have never been disturbed and disinte- grated, may be termed indigenous. It is plain, that the creatures of which they are the spoils lived and died on the places where they are here traced. The shells are found deposited accord- ing to families, and confined in a great measure each to its own stratum ; and a similar remark applies to other animal remains of this

depart- ment. It is not so with those of alluvial ground. These are assembled from all parts of the earth, and are thrown together in promiscuous heaps. In the same beds are found shells and corals only known in the Pacific Ocean, and the bones of elephants and rhinoceroses. ‘ They seem,’ says Mr. Townsend, ‘ to have been transported from

distant climates, and to have been deposited in a tumultuous manner by some grand convulsion, which blended and buried terrene and submarine productions, ancient and recent, in one common grave. The direction in which they have been conveyed, appears to have been from south-east to north-west. Hence, where we have an op- portunity of making distinctions respecting their natural habitations, as in the Asiatic and African elephants, it is remarkable that the former, and not the latter, are to be found fossil in the north of Europe. Should the latter have been transported from their native seats by the same convulsion, it is probable that their relics have been deposited in the Atlantic Ocean.’

On the whole, though the arrangment of the author’s materials might have been improved in this work, he has added considerably both to the stores of natural history, and to the elucidation and confirmation of the details of the sacred vo- lume on this subject.

DELU’SION, n. s. } Lat. delusio. SeeDt-

DELU’SIVE, adj. S LUDE. A cheat, a false-

DELU’SORY. 3 hood ; the act of cheating

or deluding : the adjectives alike mean apt to

deceive.

Yea, they have chosen their own ways, and their soul delighteth in their abominations. I also will chuse their delusions. Bible. Isaiah Ixvi.

Who therefore seeks in these True wisdom, finds her not, or by delusion.

Milton.

This confidence is founded on no better foundation than a delusory prejudice. Glanville.

Phaenomena so delusory that it is very hard to es- cape imposition and mistake. Woodward.

I waking, viewed with grief the rising sun, And fondly mourned the dear

delusion gone.

Prior.

While the base and grovelling multitude were listening to the delusive deities, those of a more erect aspect and exalted spirit separated themselves from the rest. Taller. No. 81.

Why will any man be so impertinently officious as to tell me all prospect of a future state is only fancy and delusion ? Is there any merit in being the mes- senger of ill news 1 If it is a dream, let me enjoy it, since it makes me both the happier and better man.

Addison.

Unnumbered suppliants crowd preferment's gate, Athirst for wealth, and burning to be great ; Delusive fortune hears the incessant call, They mount, they shine, evaporate, and fall.

Johnson. Vanity of Human Wishes.

Can we persist to bid your sonows flow For fabled sufferers, and delusive woe ? Sheridan.

DE'MAGOGUE, n.s. Gr. 5n/iaywyoC. A ringleader of the rabble ; a popular and factious orator.

Who were the chief demagogues .and patrons of tu- mults, to send for them, to flatter and embolden them 1

King Charles.

A plausible, insignificant word, in the mouth of an expert demagogue, is a dangerous and dreadful wea- pon. South.

Demosthenes and Cicero, though each of them a leader, or, as the Greeks called it, a demagogue, in a popular state, yet seem to differ in their practice.

Swift,

DEMA'IN, n. s. } Old Fr. demesne ; Fr. do- DEME'AN. / maine ; both probably from

DEME'SNE. 5 Lat. dominus. That land

which a man holds originally of himself, called dominium by the civilians, and opposed to feodum or fee, which signifies those that are held of a superior lord. It is sometimes used also for a distinction between those lands that the lord of the manor has in his own hands, or in the hands of his lessee, demised or let upon a rent for a term of years or life, and such other lands appertaining to the said manor as belong to free or copyholders. Estate in land, or land adjoining a mansion, in which sense demesne has been thought to come from old Fr. mesne, and Lat. mansio.

Having now provided A gentleman of noble parentage, Of fair demesnes, youthful, and nobly allied.

Shakspeare.

That earldom indeed had a royal jurisdiction and seigniory, though the lands of that county in demesne were possessed for the most part by the ancient in- heritors. Davits.

Those acts for planting forest trees have hitherto been wholly ineffectual, except about the demetnes of a few gentlemen ; and even there, in general, very unskilfully made. Swift.

DEMA'ND, v. a. & n. s.~\ Fr. demander ;

DEMA'NDABLE, adj. /Span, and Portug.

DEMA'NDANT, n. s. tdemanddr; Ital. de-

DEMA'NDER. J mandare ; Lat. de-

mando, from de and mando (manu do, to give with the hand). To claim; ask for as one's own previously, or with authority ; hence to question, interrogate. As a substantive it is the claim made; the amount of it in money; an application made for any thing at its price: demandable, that which is due : demandant and demander, he who requires his alleged due by law or other- wise.

And when Uriah was come unto him, David de- manded of him how Joab.did, and how the people did, and how the war prospered. 2 Sam. xi. 7.

This matter is by the decree of the watchers, and the demand by the word of the holy ones.

Dan. iv. 17.

All sums demandable, for licence of alienation to be made of lands holden in chief, have been stayed in the way to the hanaper. Bacon.

The pound of flesh which I demand of him, Is dearly bought ; 'tis mine, and I will have it.

Shakspeare. Young one,

Inform us of thy fortunes ; for, it seems, They crave to be demanded. Id.

They grow very fast and fat, which also bettereth their taste, and delivereth them to the demander'i ready use at all seasons. Carew.

The oracle of Apollo being demanded, when the war and misery of Greece should have an end, re- plied, When they would double the altar in Delos, which was of a cubick form. Peacham on Geometry.

Giving vent, gives life and strength to our appe- tites j and he that has the confidence to turn his wishes into demands, will be but a little way from thinking he ought to obtain them. Locke.

My bookseller tells me, the demand for those my papers increases daily. Addison.

One of the witnesses deposed, that dining on a Sunday with the demandant, whose wife had sat be- low the squire's lady at church, she the said wife- dropped some expressions, as if she thought her hus- band ought to be knighted. Spectator.

There are two manners of demands, the one of deed, the other in law : in deed, as in every praecipe, there is express demand ; in law, as every entry in land dis- tress for rent, taking or seizing of goods, and such like acts, which may be done without any words, are demands in law. Blount.

But the misery of it is, men will not think ; will not employ their thoughts, in good earnest, about the things which most of all deserve and demand them.

Mason.

Every man has frequent occasion to state a con- tract, or demand a debt, or make a narrative of minute incidents of common life. Johnson.

Thus for short sins short hours of penance flow, But heavier guilt demands more lasting woe.

Dr. T. Brown.

DEMBEA, a large lake of Abyssinia, is in the heart of the country, and supposed to be about 450 miles in circumference. It contains many islands, particularly one of great size, which is made a place of confinement. The great river Bahr-el-Azrek, so often supposed. to be the true Nile, falls into it on the west, and issues from it on the south-west : it is said that the stream may be distinguished through the whole of its passage. Various small streams also fall into it.

DEMBEA, a province of Abyssinia, surrounding the great lake of that name. On the north it comprehends that fertile tract of which Gondar is the capital. On the east it includes Foggora, Dara, and Alata ; and, on the west, the lands about Waindaga and Dingleber. The whole re- gion is fruitful, and finely varied by mountains and plains. It is particularly described by Bruce. DEMEAN', v. a. & n. s. { Fr. mener ; Ital.
DEMEANOUR. $ menare ; Norm. Fr.

demesner ; whence, thinks Mr. Todd, our word manage, i. e. conduct, carriage, demeanour : per- haps the whole, we might add, from Lat. manus, the hand. To behave ; generally to carry one's self in a particular way. There seems to be no good authority for using it for debase. Dr. John- son's instance from Shakspeare, and Mr. Todd's from Doddridge, are equivocal ; but the reader will judge.

At his feet with sorrowful demean, And deadly hue, an armed corse did lie.

Spenser

Now, out of doubt, Antipholis is mad, Else he would never so demean himself.

SJiakipeare.

Angels best like us, when we ?re most like unto them, in all parts of decent demeanour. Hooker.

His gestures fierce

He marked, and mad demeanour, then alone, As he supposed, all unobserved, unseen.

Milton.

He was of a courage not to be daunted, which was manifested in all his actions, especially in his whole demeanour at Rhee, both at the landing and upon the retreat. Clarendon.

Those plain and legible lines of duty requiring us to demean ourselves to God humbly and devoutly, to our governors obediently, and to our neighbours justly, and to ourselves soberly and temperately. South.

Of so insupportable a pride he was, that where his deeds might well stir envy, his demeanour did rather breed disdain. Sidney.

A man cannot doubt but that there is a God ; and that, according as he demeans himself towards him, he will make him happy or miserable for ever.

Tillotson.

Strephon had long perplexed his brains , How with so high a nymph he might Demean himself the wedding night. Swift.

That brow in furrowed lines had fixed at last, And spake of passions, but of passions past ; The pride, but not the fire, of early days, Coldness of mean, and carelessness of praise ; A high demeanour, and a glance that took Their thoughts from others by a single look. Byron. Peter vras so affected at his condescending to per- form such a mean office, that he says to him, It is a thousand times fitter that I should wash thine, nor can I bear to see thee thus demean thyself.

Doddridge's Expositor.

DEME'NTATE, t>, a. 3 Lat. demento, of de DEMENTA'TION, n. s. 3 and mens, the mind. To make mad. Making mad, or frantic.

DEMERARA, or DEMERARA AND ESSEQUIBO, a colony of Great Britain, in the north-eastern part of South America. It is composed of two governments, named as above, both which, having been finally confirmed to Great Britain by the peace of 1814, are now one united colony. They form a part of what was originally Dutch Guienne ; hut the king of the Netherlands only retains, in this part of the world, the colony of Surinam. The general features and natural history of this country have been described already in our arti- cle AMERICA, SOUTH, par. 206 — 220. Deme- rara is bounded on the north by the Atlantic Ocean, on the east by a

line drawn from the mouth of Albany Creek, in a south-east direction, dividing it from the British colony of Berbice, on the west by the river Pomaron, which divides it from Spanish Guiana; its southern boundary is undetermined. Staebroek, the only con- siderable town, and the seat of government, is in lat. 6° 46′ N., and long. 57° 45′ W. from Lon- don.

The whole country is low and swampy : on the coast the tides rise to the height of from sixteen to twenty-four feet. The rivers are the Essequibo, Demerara, and Canji or Cayonny, the last being supposed to communicate with the Oronoco. The Demerara River has a bar across its mouth, which prevents ships of large burden passing it ; but vessels drawing fourteen feet may be loaded at Staebroek. Here are convenient wharfs : no large vessels, however, can lie near them, on ac- count of the declivity of the bank, but are com- pelled to load and unload their cargoes in the middle of a rapid stream. The Essequibo is easily entered by the largest ships, but they must also be loaded and unloaded in the stream, as the same causes prevent their lying near shore.

We have also noticed the political history of these settlements. It is only necessary to add, that while, under the British government, the general internal.policy is improved, and the roads, drain; ge, &c., have assumed a very different as- pect ti> that which they bore in former times, the

curse of an extensive dependence on slave-culti- vation is no where more evident. Coffee, sugar, and cotton, are the staple articles of produce, and no where on earth is a finer soil presented to the hand of man. It has been transported to other of our western possessions as manure, and has been known to produce thirty crops of rattoon canes in snccession, without replanting. Some- times it has been cropped two or three years with plantains, to reduce its excessive richness, and afterwards with sugar canes ; but the first, second, and sometimes even the third crop, has been so luxuriant as to be only fit to make rum. Each estate is intersected with dikes and trenches, communicating with the river, by means of which, in small flat-bottomed boats, the whole convey- ance of the produce is effected from one part of the estate to another. Thus they carry the canes from the field to the sugar-mill and the still- house. The earth removed to form these ditches is thrown on beds, which contain the cotton-trees planted in rows six feet asunder. The coffee-trees are planted in rows from nine to twelve feet apart, and the intermediate spaces are filled either by plantain-trees, or the bois immortel, growing to the height of twelve or fourteen feet, and affording a welcome shade to the coffee plants.

In the colony are from 60,000 to 65,000 slaves kept in awe with difficulty, and in no small de- gree by the strong aversion that subsists between them and the aboriginal Indians of the interior, who readily bring back all

stragglers to their masters, and often assist in suppressing insubor- dination. The colony is governed by the Dutch laws. The free inhabitants do not exceed

3000.

DEME'RIT, 7i. s. Fr. demerite ; from demeri- tus, Lat. of demereor. See MERIT. Blame.

They should not be able once to stir, or to murmur but it should be known, and they shortened according to their demerits. Spenter on Ireland.*

I fetch my life and being From men of royal siege ; and my demerits May speak, unbonnetting, to as proud a fortune As this that I have reached. Shakspeare. Othello.

Thou livest by me, to me thy breath resign ; Mine is the merit; the dement thine. Dry den.

Whatever they acquire by their industry or inge- nuity, should be secure, unless forfeited by any deme- rit or offence against the custom of the family.

Temple.

I considered the possession of it [a bishopric] as a frequent occasion of personal dement ; for I saw the generality of the bishops bartering their independence and the dignity of their order for the chance of a trans- lation, and polluting gospel-humility by the pride of prelacy. Bp. Watson.

DEME'RSED,par£. } From demersus, orde-

DEME'RSION, n. s. S mergo, Lat. Plunged ; drowned. A drowning. In chemistry, the put- ting any medicine in a dissolving liquor.

DEME'SNE. See DEMAIN.

DEMETRIUS I., surnamed Poliorcetes, de- stroyer of towns, was the son of Antigonus. At the age of twenty-two he was sent by his father against Ptolemy, who invaded Syria. He was defeated i_; ir Gaza, but soon repaired his loss by

DEMETRIUS.

a victory over one of the generals of the enemy. He afterwards sailed with a fleet of 250 ships to Athens, and restored the Athenians to liberty, by freeing them from the power of Cassander and Pto- lemy, and expelling the

garrison, which was sta- tioned there under Demetrius Phalereus. After this successful expedition, he besieged and took Muny- chia, and defeated Cassander at Thermopylae. His reception at Athens after these victories was at- tended witli the most servile flattery ; and the Athenians were not ashamed to raise altars to him as to a god, and consult his oracles. This raised the jealousy of the successors of Alexander ; and Seleucus, Cassander, and Lysimachus united to destroy Antigonus and his son. Their hostile armies met at Ipsus, A. A. C. 301 : Antigonus was killed in the battle ; and Demetrius, after a severe loss, retired to Ephesus. The Athenians, who had lately adored him as a god, refused to admit him into their city ; but he soon after ra- vaged the territory of Lysimachus, and recon- ciled himself to Seleucus, to whom he gave his daughter Stratonice in marriage. Athens now labored under tyranny, and Demetrius relieved it a second time, and pardoned the inhabitants. The loss of his possessions in Asia recalled him from Greece, and he established himself on the throne of Macedonia. Here he was continually at war with the neighbouring states, and the superior power of his adversaries obliged him to leave Ins kingdom, after he had sat on the throne for seven years. He passed into Asia, and attacked some of the provinces of Lysimachus with various suc- cess ; but famine and pestilence having destroyed the greatest part of his army, he applied to Se- ieucus for assistance. He, at first, met with a kind reception, but hostilities were again soon begun ; and, though he gained some advantages over his son-in-law, he was at last forsaken by his troops, and taken prisoner. Though Seleucus kept him in confinement, he maintained him like a prince, and he passed his time in hunting, and in other laborious exercises. His son Antigonus offered Seleucus all his possessions, and even his person, to procure his father's liberty, but in vain, and Demetrius died in the fifty-fourth year of his age, after a confinement of three years, A. A. C. 286. His remains were given to Antigonus, and ho- nored with a splendid funeral at Corinth, and thence conveyed to Demetrias.

DEMETRIUS I., king of Syria, surnamed Soter, or Saviour, was son of Seleucus Philopater. Being a hostage at Rome, when his father died, his uncle, Antiochus Epiphanes, usurped the kingdom, and was succeeded by his son Antio- chus Eupator. Demetrius at last procured his liberty on pretence of going to hunt, and fled to Syria, where the troops received him as their law- ful sovereign. He put to death Eupator and Lysias, but, endeavouring to establish himself on his throne by cruelty and oppression, Alexander Bala, the pretended son of Antiochus Epiphanes, claimed the crown, and defeated Demetrius in a cattle, A.A.C. 150.

DEMETRIUS, the disciple of Apollonius Tya- naeus, a cynic philosopher of the age of Caligula. The emperor wished to gain him to his interest by a large present ; but Demetrius refused it with indignation, and said, If Caligula wishes to bribe

me, let him send me his crown. Vespasian \vas displeased with his insolence, and banished him to an island. The cynic derided the punishment, and satirised the emperor. He died in an ex- treme old age ; and Seneca observes, that ‘ na- ture had brought him forth to show mankind, that an exalted genius can live securely without being corrupted by the vices of the surrounding world.’

DEMETRIUS PHALEREUS, a celebrated orator and peripatetic philosopher, was the scholar of Theophrastus. He acquired so much autho- rity at Athens, that he governed the city for ten years; and he ruled with so much wisdom and virtue, that thirty-six statues were erected in honor of him. Being obnoxious, how- ever, to the aristocratical party, they procured an order for his death ; but, he escaped into Egypt, and was protected by Ptolemy Lagus. On the death of that prince he was banished by his suc- cessor. None of the works of this celebrated philosopher are extant, except his Rhetoric, which is usually printed among the Rhetores Selecti.

DEMETRIUS, czar of Russia, commonly called the false Demetrius, was, according to most au- thors, a native of Jaroslaw, and a novice in a monastery, where he was instructed by an old monk to personate Demetrius, son of the czar John Basilovitz, who had been murdered by Bo- ris Gudenov, in 1597. The youth, according to his instructions, went under the name of Deme- trius, and pretended to have escaped from his murderers into Lithuania, where he was taken into the service of a nobleman named Wicno- vitski, to whom he told his story, and who es- poused his cause. When Boris heard of this rival, he sent assassins to despatch him ; but his pa- tron beingwarned of it conveyed him to Mnieski, palatine of Sandomir, who promised to assist him in his design on the Russian throne, provided he would embrace the Roman Catholic religion, which he readily consented to, and was married to the palatine’s daughter. Assisted by the Poles, Demetrius, in 1604, marched into Rus- sia, at the head of a small army, and was soon joined by a number of Russians and Cossacs. He defeated an army sent against him, and an in- surrection took place in his favor. On the death of Boris, the people strangled his son; and placed Demetrius on the throne ; but his par- tiality to the Poles and contempt of the Greek religion occasioned an insurrection, and he was murdered in 1606, after a short reign of about eleven months. Mr. Archdeacon Coxe, contrary to the generality of writers, considers him to have been the true prince Demetrius.

DEMI ATTICI, in ancient history, boroughs or large villages of Attica. The Athenian tribes were distributed into Demi. Homer, in his cata- logue, distinguishes the Athenians by the appel- non Demos. And when Theseus prevailed on them to quit the country of Attica, and settle at Athens, they still continued to frequent the Demi, and to perform their religious

ceremonies there.

DEMI-CANNON, n. s. From demi, half, and cannon. An ancient piece of artillery, carrying a thirty-six pound ball.

What '. this a sleeve, 'tis like a demi-cannen.

Shakspeare.

Ten engines, that shall be of equal force either to a cannon or demi-cannon, culverin or demi-culverin, may be framed at the same price that one of these will amount to. WUkuu.

DEMI-CULVERIN. An old piece of ord- nance carrying a thirteen pound ball.

They continue a perpetual volley of demi-culverin.*

Raleigh.

The army left two demi-culverint, -and two other good guns. Clarendon.

DEMI-DEVIL. From demi and devil. Par- taking of infernal nature ; half a devil.

Will you, I pray, demand that demi-devil,

Why he hath thus ensnared my soul and body ?

Sluikspeare. Othello.

DEMI-GOD, n. s. From demi and god. Partaking of a divine nature ; half a god ; a hero produced by the cohabitation of divinities with mortals. See HERO.

He took his leave of them, whose eyes bade him farewell with tears, making temples to him as to a demi- god. Sidney. Be gods, or angels, demi-gods. Milton. Transported demi-gods stood round, And men grew heroes at the sound, Inflamed with glory's charms. Pope. Nay, half in heaven, except (what's mighty odd) A fit of vapours clouds this demi-god. Id.

Who is this ?

Who truly looketh like a demi-god, Blooming and bright, with golden hair, and stature, If not more high than mortal, yet immortal.

Byron.

DEMI-GORGE, in fortification, is that part of the polygon which remains after the flank is raised, and goes from the curtain to the angle of the polygon. It is half of the vacant space or entrance into a bastion.

DEMI-LANCE, n. s. From demi and lance. A light lance ; a short spear ; a half pike.

On their steeled heads their demi-lances wore Small pennons, which their ladies colours bore.

Dryden.

Light demi-lances from afar they throw, Fastened with leathern thongs, to gall the foe.

Id.

DEMI-MAN, n. s. From demi and man. Half a man; a term of reproach.

We must adventure this battle, lest we perish by the complaints of this barking demi-man. Knolles.

DEMIS'E, v. a. & n. s. Fr. demis ; Lat. de- mitto, demisi, to hand down . (de and mitto, Gr. /u0i»j/u). Applied to handing down by legacy or death : and, as a substantive, to death itself, by which the crown of a monarchy is generally transmitted.

Inexorable vigour is worse than a lasche demission of sovereign authority. L'Estrange.

About a month before the demise of queen Anne, the author retired. Swift.

My executors shall not have power to demise my lands to be purchased. Swift's Last Will.

DEMISE, in law, is applied to an estate either in fee simple, fee-tail, or for a term of life or years ; and so it is comraonlv taken in many writs.

DEMISE, and RE-DEMISE, denote a conveyance where there are mutual leases made from one to another of the same land, or something out of it.

DEMI-SEMI-QUAVER, in music, the short- est note, two of them being equal to a semi- quaver.

DEMIT, v. a. Lat. de.rn.itto. See DEMISE. To depress; to hang down ; to let fall.

When they are in their pride, that is, advancing their train, if tbey decline their neck to the ground, they presently demit and let fall the same.

Browne's Vulgar Errours.

DEMI-WOLF, n. s. From demi and wolf.

Half a wolf; a mongrel dog between a dog and

wolf.

Spaniels, curs,

Showgas, water-rugs, and demi-wolves, are 'cleped All by the name of dogs. Shakspeare. Macbeth.

*DEMO'CRACY, n. *. ˆ Fr. democratic ;*

DEM'OCRAT, > Spanish democracia,

DEMOCRATIC, n. s. 3 from Gr. ˆjj/xoicparia

(%ioe the people, and rpartw to govern). A

government by the people at large. A democrat

is an advocate or partizan of democracy. The

old word democratic is only more agreeable tc

the etymology.

Thence to the famous orators repair, Those ancient, whose resistless eloquence Wielded at will that fierce democratic, Shook the arsenal and fulmined over Greece.

Milton.

They are still within the line of vulgarity, and are democratical enemies to truth.

Browne's Vulgar Errours.

While many of the servants, by industry and vir- tue, arrive at riches and esteem, then the nature of the government inclines to a democracy. Temple.

The majority, having the whole power of the com- munity, may employ all that power in making laws, and executing those laws ; and there the form of the government is a perfect democracy. Locke.

As the government of England has a mixture 01 democratical in it, so the right is partly in the people.

Arbuthnot.

DEMOCRITUS, one of the greatest philoso- phers of antiquity, was born in Abdera, in Thrace, about the 80th Olympiad, or A.A.C. 466. His father, says Valerius Maximus, was able to entertain the army of Xerxes; and Dio- genes Laertius adds, that the king, in return, presented him with some Magi and Chaldeans. From these he received the first part of is edu- cation; and, whilst yet a boy, learned theology and astronomy. He next applied toLeucippus, and learned from him the systems of atoms and a vacuum. His father dying, he and his two brothers divided the estate. Democritus made choice of that part which consisted of money, as being, though the least share, the most conve- nient for travelling ; and it is said, that his por- tion amounted to 100 talents, which is nearly £20,000 sterling. He now went to visit the priests of Egypt, from whom he learned geo- metry : and it is said, that he penetrated even into India and Ethiopia, to confer with the Gymnosophists. In these travels he wasted his substance, so that on his return he was main- tained by his brother ; notwithstanding which, he procured the highest honors of his country,

which he governed with unlimited sway and consummate wisdom. The magistrates of Ab- dera made him a present of 500 talents, and erected statues to him, even in his lifetime ; but, being naturally more inclined to contemplation than delighted vvitli public honors and employ- ments, he withdrew into solitude and retirement. lie incessantly laughed at human life, as a con- tinued farce, which made the inhabitants of Ab- dera think he was mad, on which they sent for Hippocrates to cure him ; but that celebrated physician told the Abderians, that those who esteemed themselves the most healthy were the most distempered. Democritus died, according to Diogenes Laertius, aged 100, A. A. C. 361. He was the author of many books, which are lost; and from these Epicurus borrowed his

philosophy.

DEMOIVRE (Abraham), an eminent French mathematician, F. R.S. London, was a native of Vitri, in Champagne, and driven from his native country, as a Protestant, by the revocation of the edict of Nantes. He settled in London as a teacher of mathematics, and was particularly celebrated for his skill and accuracy as a calculator, for which he is referred to by Pope :

Sure as Demoivre, without rule or line.

He died in 1754, at the age of eighty-six. His works are, Miscellanea Analytica, 4to. ; The Doctrine of Chances, or a Method of Calculating the Probabilities of Events at Play, 4to. ; and a work on Annuities ; besides papers in the Trans- actions of the Royal Society.

DEMO'LISH, v. a.-) Fr. demolir ; from

DEMO'LISHER, n. s. ˆLat. demolari, i. e. de

DEMOLITION. J and molior (moles, a

mass). To destroy a building ; hence to de- stroy generally.

Notwithstanding which, it is now demolished, and all this glory lyeth in the dust, buried in its own ruins j there being nothing standing but a few broken walls, which seem to mourn their own approaching funerals. Fuller. Worthies of Devon.

I expected the fabrick of my book would long since have been demolished, and laid even with the ground.

Tillotson. Red lightning played along the firmament,

And their demolished works to pieces rent.

Dryden.

Two gentlemen should have the direction in the demolition of Dunkirk. Swift.

The damsel led him thro' a spacious hall,

Where ivy hung the half-demolished wall. Gay

The first care of the builder of a new system is to demolish the fabrics which are standing. Johnson.

The professor of divinity had been nick-named Malleus Haereticorum ; it was thought to be his duty to demolish every opinion which militated against what is called the orthodoxy of the Church of England.

Bp. Watson.

DE'MON, n. s. ˆ Fr. demon ; Ital.

DEMO'NIAC, n. s. & adj. ˆfrom Lat. damon;

DEMONI'ACAL, adj. i daifitdv, Saiw, San-

DEMO'NIAN, adj. } puv, knowing. An

inferior deity; a devil; generally used in a bad sense.

Demonian spirits now, from the element

Each of his reign allotted, rightlier called

Powers of fire, air, water. Milton

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Demoniack phrensy, moping melancholy. Itl.

I felt him strike, and now I see him fly : Cursed demon! O for ever broken lie Those fatal shafts, by which I inward bleed !

Prior.

Those lunaticksand de.moniacks that were restored to their right mind, were such as sought after him, and believed in him. Bentley.

But ah ! those dreadful yells what soul can hear, That owns a carcase, and not quake for fear ? Damons produce them doubtless, brazen-clawed, And fanged with brass the daemons are abroad.

Coicper. I said not

You were the demon, but that your approach Was like one. Byron.

DEMONA, VAL, a province of Sicily, which occupies the north-east portion of the island, ex- tending from the strait of Messina to Catania, and having the Val de Mazzara to the west, and Val de Noto to the south. Its greatest width is sixty-five miles, the length 112. To it belong the Lipari and other islands. The population is about 521,000. It is mountainous and woody,

being fertile only on the banks of the rivers. The chief productions are silk, hemp, flax, olives, lemons, oranges, figs, and currants ; but sulphur abounds in the neighbourhood of Mount ./Etna. The atmosphere is here cool and humid. The capital is Messina ; the other chief towns are Melazzo, Cefalu, and Taormina.

DEMONO'CRACY, n. s. Aai/xuv and Kpariu. The power of the devil.

DEMONO'LATRY,w.S. Aai>wi/and Xarp«a. The worship of the devil.

DEMONO'LOGY, n. s. Aaipuv and \6yoS. Discourse of the nature of devils. Thus king James entitled his book concerning witches.

Fr. demonstrer ; Span, demostrar, dimostrare ; from Lat. demonslrare, de, and monstro, to show. To prove with cer- tainty ; to exhibit

DEMONSTRATE, v. a.

DEMONSTRABLE, adj.

DEMON'STRABLY, adv.

DEMONSTRATION, n. s.

DEMONSTRATIVE, adj.

DEMONSTRATIVELY, adv.

DEMONSTRA'TOR, n. s.

DEMONSTRAT'ORY, adj.

facts : demonstrable is that which may be proved or exhibited : demonstration, the highest degree of proof; indubitable evidence : demonstrative, having the power of indubitable proof, or of clear expression. Demonstratory, having a ten- dency to demonstrate. The other derivatives seem plain.

An argument necessary and demonstrative, is such as, being proposed unto any man, and understood, the man cannot choose but inwardly yield. Hooker.

What appeareth to be true by strong and invincible deinonstration, such as wherein it is not by any way possible to be deceived, thereunto the mind doth ne- cessarily yield. Id.

Where is a probability on one side, and no appear- ance of reason to the

contrary ; that probability does the work of a demonstration. Bishop Taylor.

He should have compelled his ministers to execute the law, in cases that demomtrably concerned the pub- lick peace. Clarendon.

Demonstratively understanding the simplicity of perfection, it was not in the power of earth to work them from it. Browne.

DEM

We cannot demonstrate these things so as to shew that the contrary often involves a contradiction.

Tillotson.

Painting is necessary to all other arts, because of the need which they have of demonstrative figures, which often give more light to the understanding than the clearest discourses. Dryden.

No man, in matter? of this life, requires an assu- rance either of the good which he designs, or of the evil which he avoids, from arguments demonstratively certain. South.

Where the agreement or disagreement of any thing is plainly and clearly perceived, it is called demonstra- tion. Loclte.

The grand articles of our belief are as demonstrable as geometry. Glanville.

First, I demonstratively prove, That feet were only made to move. Prior.

As for business, the world yet knows nothing of his (the Duke of Grafton) talents or resolution ; unless a wayvard, wavering inconsistency be a mark of genius, and caprice a demonstration of spirit. Junius's Letters.

DEMONSTRATION. See LOGIC.

DEMOSTHENES, the famous Athenian orator, was born at Athens, A. A.C. 381. He lost his father at seven years of age, and was placed under the conduct of guardians, who plundered his property and neglected his educa- tion. Demosthenes soon repaired this loss by his extraordinary abilities. He became the dis- ciple of Isaeus and Plato, and studied the orations of Isocrates. At the age of seventeen he gave a proof of his eloquence and abilities against his guardians, from whom he recovered the greatest part of his estate. His rising talents were, how- ever, impeded by various natural defects, but which he overcame by dint of resolution and un- wearied

attention. He declaimed by the sea- shore, that he might be used to the noise of a tumultuous assembly, and with pebbles in his mouth, that he might correct a defect in his speech. He confined himself in a subterraneous cave, to devote himself more closely to study ; and, to check all inclination to appear in public, he shaved one half of his head. In this solitary retirement, by the help of a glimmering lamp, he composed the greatest part of those orations which have since been the admiration of all ages, though his contemporaries and rivals in- veighed against them, and observed that they smelt of oil. His abilities, as an orator, raised him to consequence at Athens, and he soon influenced all the decisions of the government. In this ca- pacity he roused his countrymen from their indolence, and animated them against the en- cronchments of Philip of Macedon, In the battle of Cheronaea, his eloquence, however, could not supply the want of courage, and he saved his life by flight. After the death of Philip, he declared himself warmly against his son Alexander. When the Macedonians de- manded of the Athenians their orators, Demos- thenes reminded his countrymen of the fable of the sheep which delivered up their dogs to the wolves. By the prevalence of party, however, he was forced to retire to Troezene and ˆEgina, where, it is said, he lived effeminately. When Antipjtter made war against Greece, after the

death of Alexander, Demosthenes was publicly recalled from his exile, and a galley was sent to fetch him from JKgina. His return was attended with much splendor, and all the citizens crowded at the Pirseus to see him land. But his triumph and popularity were short. Anti pater and Cra- terus were near Athens, and demanded all the orators to be delivered up into their hands. De- mosthenes fled to the temple of Neptune, in Ca- lauria ; and when he saw no hopes of safety, he took a dose of poison, which he always carried in a quill, and expired on the day that the Thes- mophoria were celebrated, A. A. C. 322. The Athenians raised a brazen statue to his honor, with an inscription, of which the following is a translation :

Si tibi par menti robur, vir magne, fuisset, Graecia non Macedse succubuisset hero.

Demosthenes has been deservedly called the prince of orators, and has often been compared with Cicero, whose magnificent eloquence ha» scarcely the effect of the powerful simplicity of his master, as he was accustomed to style him. Indeed, no orator had ever a finer field than De- mosthenes, in his Olynthiacs and Philippics, which are his capital orations. For to the greatness of the subject, and to that integrity and public spirit which breathe in them, they owe the largest portion of their merit.

DEMOTICA, or DIMOTUC, a town of Euro- pean Turkey, in the province of Romania; situated near the Maritsch, where a Greek arch- bishop resides, and the Christians have two churches. This town was the abode of Charles II. for some years. It is twelve miles south of Adrianople.

DEMPSTER OF COURT, the name formerly given, in Scotland, to the common executioner, or hangman.

DEMULCENT, adj. Lat. demuiceo, from de, and mulceo to soften. Softening; mollifying; assuasive.

Pease, being deprived of any aromatick parts, are mild and demulcent in the highest degree ; . but, being full of aerial particles, are flatulent, when dissolved by digestion. Arbuthnot.

DEMULCENTS, among physicians, medicines good against acrimonious humors. Such ar< > the roots of marshmallows, white lilies, liquorice, and viper-grass, the five emollient herbs, &c.

DEMU'R, v. a. & n. & n. s. ˆ Fr. demeurer ;

DEMUR'RER, > Lat. demorari ;

DEMUR'RAGE. J from de, and mo-

ra, delay. To doubt of: as a neuter verb, to delay a process ; to pause ; doubt. A demurrer is de- fined in the extract from Burns. Demurrage is an allowance to masters of ships for delaying them in port.

Upon this rub the English ambassadors thought fit to demur, and so sent into England to receive direc- tions from the lords of the council. Hay ward. The latter I demur; for in their looks

Much reason, and in their actions, oft appears.

Milton.

O progeny of heaven, empyreal thrones ! With reason hatb deep silence and demur Seized us, though undismayed. Id.

How can I e'er expect to have her, Having demurred unto her favour ? Hudibrax.

DENBIGH.

Running mt j demands, they expect from us a sudden resolution in things wherein the devil of Del- phos would demur, Browne's Vulgar Erroart.

To this plea the plaintiff demurred.

Walton's Angler.

Certainly the highest and dearest concerns of a temporal life are infinitely less valuable than those of an eternal ; and consequently ought, without any demur at all, to be sacrificed to them, whensoever they come in competition with them. South.

There she kept her word : But with rejoinders and replies, Long bills, and answers stuffed with lies, Demur, imparlance, and essoign, The parties ne'er could issue join. Swift.

There is something in our composition that thinks and apprehends, and reflects and deliberates, deter- mines and doubts, consents and denies ; that wills and demurs, and resolves, and chuses, and rejects.

Bentley.

All my demurs but double his attacks ; At last he whispers, Do, and we go snacks. Pope. In criminal cases, not capital, if the defendant demur to an indictment, &c., whether in abatement or otherwise, the court will not give judgment against him to answer over, but final judgment.

Burn's Justice.

A demurrer signifies an abiding in point of law, upon which the defendant joins issue, allowing the fact to be true as laid in the indictment. Id.

DEMURE, adj. & v. n. ") Fr. de bonsmxurs; DEMURELY, adv. Vfrom Lat. mores,

DEMURENESS, n. s. j manners. Of good manners. All these words have been used in a good sense ; but now commonly mean affected modesty or gravity. See the admirable illustra- tion from Dryden. Shakspeare uses demure as a neuter verb, and demurely for solemnly.

Lo! two most lovely virgins came in place, With countenance demure, and modest grace.

Spenser.

There be many wise men, that have secret hearts and transparent countenances; yet this would be done with a demure abasing of your eye

sometimes.

Bacon.

Esop's damsel, turned from a cat to a woman, sat very demurely at the board's end, till a mouse ran before her. Id.

After a demure travel of regard, I tell them I know my place, as I would they should do theirs.

Shukspeare. Put on a sober habit,

Talk with respect, and swear but now and then, Wear prayer-books in my pocket, look demurely. Id. Hark, how the drums demurely wake the sleepers !

Id.

Your wife Octavia, with her modest eyes, And still conclusion, shall acquire no honour, Demuring upon me. Id.

Come, pensive nun, devout and pure, Sober, stedfast, and demure. Milton.

Next stood Hypocrisy with holy leer, Soft smiling, and demurely looking down ; But hid the dagger underneath the gown.

Dryden.

A cat lay and looked so demure as if there had been neither life nor soul in her. L' Estrange.

Her eyes having in them such a cheerfulness, as nature seemed to smile in them ; though her mouth

and cheeks obeyed to that pretty demureness, which the more one marked, the more one would judge the poor soul apt to believe. Sidney.

Silent when glad ; affectionate though shy ; And now his look was most demurely sad ; And now he laughed aloud, yet none knew why.

Beatfte.

*DEMY, in heraldry, an epi- thet for any charge borne half, as o** a demy-lion rampant ; gules, name Mallory.*

DEN. Sax. ben; Belg. denne ; Teut. den; Ital. tanna. A cavern; a low place. As the termination of a local name, says Gibson's Cam- den, it may signify

either a valley or a woody place; for the Saxon ben imports both.

And Jhesus seide to him, foxis han dennet, and briddis of hevene han nestis : but manne sone hath not where he schal reste his hed. Widif. Matt. 1.

This is the wandering wood, this Errour's den, A monster vile whom God and man does hate ; Tnerefore I read beware. Spenser. Faerie Queene.

They here dispersed, some in the air, some on the earth, some in the waters, some amongst the minerals, dens, and caves under the earth. Hooker.

What, shall they seek the lion in his den,

And fright him there ? Shakspeare

Whose attempt

At first against mankind so well had thrived

In Adam's overthrow; and led their inarch

From hell's deep-vaulted den to dwell in light.

Milton.

'Tis then the shapeless bear his den forsakes ; In woods and fields a wide destruction makes.

Dryden.

DENARIUS, in antiquity, the chief silver coin among the Romans, worth, in our money, about l\d. at 5s. 2rf. per ounce, or Q\d. when bullion is high-priced. It was about the size ot a six-pence, but much thicker, and had the em- peror's head on the one side ; the figures on the reverse were various. In our translation of the New Testament, the denarius is called a penny. See Matt. xxii. 19.

DENA'Y, n. s. A word formed between deny and nay. Denial; refusal.

DENBIGH, a borough, market, and fair town in the county of Denbigh, North Wales. It occupies the side of a steep limestone rock, the summit of which is crowned by the ruins of its once noble castle, and commands an extensive prospect over the admired and fertile vale of the Clwyd. The population is returned at 3,786. The old town lies at the foot of the rocky pedestal on which the castle rests, and the new town ex tends down the side of the hill in one long and handsome avenue, nearly a length of one mile.

Here are a chapel of ease, a town hall, a public dispensary, an old established banking house, and two large inns. The corporation consists of an alderman, two bailiffs, a recorder and two coroners. Denbigh is contributing with Rhuthyn and other places in sending one member to parliament, and derived its charter from king Charles II. The parish church, usually called Whit- church, lies one mile from the town, and con-

tains the tombs of Humphrey Llwyd, the antiqua- rian, Edwards, the Cambrian Shakspeare, and of Richard Myddleton, father of Hugh, who brought the New River to London. The castle owes its greatness to Henry, earl of Lincoln, who also enclosed the town with walls, and, after passing through various owners, it was granted by Elizabeth to the earl of Leicester. This last proprietor raised here the walls of the first protestant church erected in Great Britain, but neglected to complete his design : the ruins stand upon the rock opposite St. Hilary's chapel. There is no event in the history of the fine castle of Denbigh more worthy of historic recollection than the gallant stand it made for king Charles, under the command of the brave William Salisbury. Near the lower termination of the main street, stand the remains of a Car- melite church desecrated into a malt-kiln, but still in excellent preservation.

DENBIGHSHIRE, one of six counties into which North Wales is divided. It presents a front to the Irish Sea on the north, is bounded on the east by Flintshire, Cheshire, and Shropshire. Merioneth and Montgomery shires enclose it on the south, — and Caernarvonshire constitutes its boundary on the west. Its dimensions are 39 miles in length, by an average breadth of 23, and its area occupies 410,000 acres of land. The population is calculated at 83,167. The surface is hilly and inclined to a mountainous character, but the soil in many places remark- ably rich. Two ranges of elevated hills per- vade the county, and preserve a parallelism to each other during their lengths : one rises from the sea, and crossing over near Gwytherin, and thence to Cerig-y-druidion, falls in with the masses of Merionethshire ; Moel Eiddyn, the most elevated summit in the chain, stands 1660 feet above the level of the sea. The Clwydian hills extend a length of thirty, miles and overhang the celebrated vale of Clwyd, whence the origin of their name. Rising near the sea at St. Asaph's, they culminate in Moel Fammau, and descend gradually towards the beautiful vale of Llangollen. The loftiest point, Moel Fammau, attains a height of 1 845 feet above the sea, and this has been judiciously selected by the Cambrians as

the site of a handsome obelisk, erected to commemorate the happy accomplishment of a fifty years' reign by king George III. The vales of Clwyd, Llanrwst, Llangollen, and the maritime portion of the county, are both beau- tiful and fertile, while the higher grounds, occu- pying one-third of the whole surface, are, from neglect, in a very unproductive state. The six hundreds into which the county is divided are called Bromfield, Chirk, Isaled, Isdulas,Yale, and Rhuthyn : these are ecclesiastically partitioned into fifty parishes, most of which are in the dio- cese of St. Asaph. The towns are larger than those of the other Welsh counties ; Wrexham is the most populous, Denbigh an ancient borough, Rhuthyn the assize town, also a con- tributing borough, besides Llanrwst, Abergelle, and Ruabon, in which weekly markets are held. The Dee is the noblest river which waters the county, but the Conway is the most useful, being navigable for twelve miles

from its embouchure : the others are the Elwy, Aled, Alen, Clwyd.and the Ceiriog, which sepa- rates England from Wales in the valley of Chirk. The principal lakes are the Elwy, Aled, and Conway, in which the .rivers bearing their names respectively originate. These all abound in fish, but are devojd of the picturesque scenery which characterizes the other Welsh pools. The only artificial navigation established here is a branch of the Ellesmere canal, which is fed by the river Dee, crosses the vale of Llangollen by an aque- duct of twenty-one arches, called Pont-y-cysylte, and passing to Chirk is conducted over the Ceiriog by a second aqueduct of nine stone arches. Iron is manufactured at Ruabon, where, as well as at Chirk, coal of a superior quality is worked. The woollen manufacture is spread very generally over the county : the slate trade exists only on the borders, but agriculture exerts a universal dominion here. But few remnants of military antiquity are found here : of these the castles of Denbigh and Rhuthyn are the most interesting ; and, of the few monastic establish- ments, the abbeys of Valle – Crucis and the fine church at Denbigh, now desecrated into a malt-kiln, are the principal. The county returns two members to parliament, and the boroughs of Wrexham, Holt, Denbigh, and Rhuthyn a third. The ancient family of Fielding enjoy the earldom of Denbigh.

DENDERA, a town of Egypt, on the west side of the Nile, at the edge of a small but fer- tile plain, about half a mile from the river. Near the town are remarkably masnificent ruins, sup- posed of an ancient temple of Serapis, or Venus. The portico contains twenty-four columns, in three rows, each above twenty-two feet in cir- cumference, thirty-two feet high, and covered with hieroglyphics. The great peculiarity con- sists in the square capitals, with a front face of Isis on each side, the effect of which, though singular, is by no means unpleasing. All the walls and ceilings of the interior are covered with sculptures, which display the highest per- fection of Egyptian

art. They have originally been covered with paint, the brilliant colors of which partially remain. The subjects are various ; religious ceremonies, priests, offerings, deities, and human sacrifices. Isis, with Osiris behind her, forms the grand theme of representation. There are also numerous astronomical figures on the ceilings ; of these two zodiacs have, in a particular degree, attracted the attention of the learned, who have been much divided as to the date when they were formed. De la Laride would fix theiv period at 3000 years ago, or 1200 before the Christian era; but Mr. Hamilton is disposed to consider them as much more modern, and as probably formed in the reign of Tiberius. By the side of the great temple is a smaller one, supposed to have been dedicated toTyphon, whose figure is displayed on the capitals ; but the chief object of adoration seems to be an infant figure, in which may be distinguished the attitude and character of the young Harpocrates. Mr. Ha- milton is of opinion, that several of those struc- tures may have been raised in the time of the Ptolemies; and the names of Tiberius and other Roman emperors, which he found in the inscrip-

tions, prove that repairs were made at that period. The whole of these edifices, with the exception of one propylon, is contained within a square of 1000 feet, surrounded by a brick wall. Within the enclosure, a great number of modern buildings have been erected, so as often to hide them entirely from view.

Dr. Richardson, one of our latest travellers in the east, thus describes this spot : ‘ The scene of ruins is nearly a mile squa re, and consists of houses of unburnt brick, that have been repeatedly over- turned, and at every restoration, the new houses have been built on the top. The first thing that attracts the eye of the traveller, on the edge of this black field of ruins, is a small square stone building, with four columns ; it has an unfinished appearance,’ and is without hieroglyphics. It is difficult to say for what purpose this edifice was intended ; it looks like a porter’s lodge, or habitation for the guardian of the precincts of the temple : and I should not have mentioned it at all, had it not been constructed of the same spe- cies of sand-stone with the temple itself; and as these must have been brought thither from a great distance, and at a great expense, it is pro- bable that this insignificant fabric was con- nected with it for religious purposes. Advancing from this, for several hundred yards among the brick ruins, we came to an elegant gateway, or propylon, which is also of sand-stone, well hewn, and completely covered with sculpture and hie- roglyphics, remarkably well cut. Immediately over the centre of the doorway is the beautiful Egyptian ornament, usually called the globe, with serpent and wings, emblematic of the glo- rious sun poised in the airy firmament of

heaven, supported and directed in his course by the eternal wisdom of the Deity. The sub- lime phraseology of Scripture, ‘ the sun of righteousness shall arise with healing in his wings,’ could not be more accurately, or more emphatically represented to the human eye, than by this elegant device. To this succeed re- presentations of Osiris, Isis, and their son Horus, with processions of priests and people advancing to pay their homage, and presenting their offerings on their knees. Passing under the gateway, we find the principal devices on each side of the passage to be the sceptre of Osiris alternating with a figure, representing the letter T, suspended by a handle ; or, to speak more correctly, with a handle attached to it 4- ; it has been called the handled cross, the key of the Nile, and is honored with other designations.’ Vol. i. 185 — 187.

Dr. Richardson considers this as the sign, or letter Thau, mentioned in the Vulgate Latin version of Ezekiel ix. 4 ; and there intimated as being the sign of life and salvation to those who received it. Some of the female figures are ad- mirably executed, and exhibit a remarkable mild- ness of feature and expression. The remains of three temples still exist. The largest of these is in a state of fine preservation, and is emphati- cally termed the temple of Dendera. It is minutely described by Dr. Richardson, whose account, as well as his disquisition on Egyptian deities, will not easily admit of abridgment. We

only remark, that he controverts the commonly received opinion, that the splendid sculptures in the pro-naos, which have lately arrived at Paris, are a zodiac ; and in this opinion he is supporter by some eminent French literati. He had an opportunity of comparing the original with parf of the great French work on Kgypt; to the ele- gant execution of which he gives the just tribute of praise, but he announces it to be extremely incorrect in every part. It is 242 miles south o”f Cairo, and forty-eight S.S. E. of Girge.*

I)ENDERMONDE,a handsome town of the Netherlands, with a strong citadel. It is sur- rounded by marshes and fine meadows, which the inhabitants can lay under water when they please, and seated at the conflux of the Dender and Scheldt, fourteen miles east of Ghent, and nineteen south-west of Antwerp. Inhabitants 5000. In 1667 the town was besieged by Louis XIV. with an army of 50,000 men, but he was obliged to retreat with precipitation, the inha- bitants having opened the sluices. The vicinity is very fertile.

DENDRACHATES, in natural history, from SevSpov, a tree, and a\arri£, an agate ; the name used by the ancients for an extremely elegant and beautiful species of agate, the ground of which is whitish, variegated with veins of a brighter white. These veins are beautifully disposed in a number of various figures; but generally in many concentric irregular circles, drawn

round one or more points. It is common also, in va- rious parts of this stone, to find very beautiful delineations of trees, mosses, sea plants, and the like, so elegantly expressed, that many have er- roneously taken them for real plants included in the substance of the stone; whence the name.

DENDRO'LOGY, n. s. AivSpov and XoyoC. The natural history of trees.

DENDROMETER,from fovfyov, a tree, and prpew, to measure ; an instrument so called from its use in measuring trees. This instrument

consists of a semicircle A, divided into two quadrants, and graduated from the middle ; upon the diameter B there hangs a plummet L for fixing the instrument in 'a vertical position ; there is also a chord D parallel to the diameter, and a radius F., passing at right angles through the diameter and chord. From a point on the radius hangs an altimeter C, between the chord and diameter, to which is fixed a small semi- circle G, and a screw, to confine it in any posi- tion. The altimeter, which is contrived to form the same angle with the radius of the instrument, as the tree forms with the horizon, is divided from its centre both ways into forty equal parts; and these parts are again subdivided into halves and quarters. Upon the small semicircle G, on which is accounted the quantity of the angle made by the altimeter and radius, are expressed degrees, and the radius is numbered with the same scale of divisions. There is also a nonius to the small semicircle, which shows the quantity of an angle to every five minutes. There is also a groove in the radius, that slides across the axis, by means of a screw I, working between the chord and semicircle of the instrument ; and this screw is turned by the key O. The principal use of this instrument is for measuring the length and diameter of any tree, perpendicular or oblique, to an horizontal plane, or in any situa- tion of the plane on which it rests, or of any figure, whether regular or irregular, and also the length and diameter of the boughs, by mere in- spection.

DENDROPHORI, from StvSpov, a tree, and 0«pw, to bear ; tree-bearers. In antiquity, priests who marched in procession, carrying branches of trees in their hands, in honor of some god, as Bacchus, Cybele, Sylvanus, Sic. The college of the dendrophori is often mentioned in ancient marbles ; and we frequently see, in basso relievos, the bacchanals, represented as men, carrying little shrubs or branches of trees.

DENHAM (Sir John), an eminent English poet, was born in Dublin in

1615; but he re- ceived his education in England. In 1641 he published a tragedy, called The Sophy, which was much admired; and, in 1643, wrote his famous poem called Cooper's Hill, which, ac- cording to Dryden, will ever be a standard of good writing. Denham was sent ambassador from Charles II. to the king of Poland ; and at the Restoration was made surveyor-general of his buildings, and created knight of the Bath. On obtaining this post, he is said to have re- nounced his poetry for more important studies ; though he afterwards wrote a copy of verses on the death of Cowley. He died at his office, in Whitehall, in 1668.

DENHAM (Dixon, lieutenant-colonel), eminent by his expedition to central Africa, was born at London in the year 1786, and, after completing his studies at school, was placed with a soli- citor; but, in 1811, he entered the army as a volunteer, and served in the peninsular wars. After the general peace he was reduced to half pay, and, in 1819, was admitted to the senior department of the Royal Military College at Farnham. In 1823-4 he was engaged, in com- pany with captain Clapperton and doctor Oudney, in exploring the central regions of Af-

rica. See CLAPPERTON. His courage, address, firmness, perseverance and moderation, his frank energetic disposition, and his conciliating man- ners, peculiarly fitted him for such an under- taking. The narrative of the discoveries of these travellers was drawn up by Denham. In 1826 he proceeded to Sierra Leone, as superintendant of the liberated Africans, and, in 1828, was ap- pointed lieutenant-governor of the colony ; but on the ninth of June, in the same year, he was attacked by a fever, and died after an illness of a few days.

DENIAL, DEMER. See DENY.

DENIE'R, n. s. Lat. denarius. It is pro- nounced as deneer, in two syllables. A small denomination of French money ; the twelfth part of a sous.

You will not pay for the glasses you have burst ? — No, not a denier, Shakspeare.

DENIER is a small French copper coin, of which twelve make a sol. There are two kinds of deniers, the one Tournois, the other Parisois, the latter of which is worth a fourth part more than the former. Denier is also the name of a small weight, used in assaying silver. Like the carat, used in trying and expressing the fineness of gold, it is rather imaginary than real, as the whole mass of silver, whatever be its weight, is supposed to be divided into twelve deniers ; and as many twelfth parts, as it contains of pure silver, it is called silver of so many deniers fine. Thus sterling silver, of eleven deniers fine, is a mixture, of which eleven parts are pure silver and one part

copper. Each denier is supposed to be divided into twenty-four grains; and thus, estimating pure silver at 6s. per oz., an ounce of sterling silver is worth 5s. 6d. ; and the fineness of any quantity of silver can be calculated with the utmost exactness to half a grain in purity, or half a farthing in value per oz. The deniers and grains, used by the assaymasters for this purpose, are real weights, made with the most scrupulous exactness in the above proportions to each other.

DE'NIGRATE, v. a. } Lat. denigro, from DENIGRA'TION, n. s. } de and niyro. To blacken ; to make black.

DEN'IZEN, or ˆ Either, says Minsheu,

DENizoN,u.a.&w.s. (from old Fr. donaisson,

*DENIZA'TION, n. s. * giving (liberty); or from*

Dane's son, the son of a Dane, according to Dr.

Johnson, from the Danes being made free by

Alfred. A freeman ; a stranger made free ; (the

Welsh is dinasddyn, a man of the city ; and dine-

sydd, free of the city). To make free.

Denizen is a British law term, which the Saxons and Angles found here and retained. Davies.

That the mere Irish were reputed aliens, appears by the charters of denization, which in all ages were purchased by them. Id.

Pride, lust, covetize, being several To these three places, yet all are in all ; Mingled thus, their issue is incestuous ; Falsehood is denizened, virtue is barbarous.

Donne.

DENIZEN, in law, an alien made a subject by the king's letters patent; otherwise called do- naison, because ' his legitimation proceeds ex

donatione regis, from the king's gift.' A denizen is in a kind of middle state

between an alien and a natural-born subject, and partakes of both of them. He may take lands by purchase or devise, which an alien may not ; but cannot take by inheritance : for his parent, through whom he must claim, being an alien, had no inhe- ritable blood ; and, therefore, could convey none to the son : ana, upon a like defect of blood, the issue of a denizen, born before denization, cannot innerit to him ; but his issue, born after, may. A denizen is not excused from paying the alien's duty, and some other mercantile burdens. And no denizen can be ot the pnvy council, or eitner house of parliament, or have any office of trust, civil or military, or be capable of any grant of lands, &c. from the crown.

DENMAN (Dr. Thomas), an eminent physi- cian and medical writer, was bora at Bakewell, in Derbyshire, in 173 3, where his father was a respect- able apothecary; on whose death, he was, for some time, an assistant to his elder brother. He af- terwards came to London, and attended at St. George's Hospital : he then entered the navy, as surgeon's mate, and in 1757, was made surgeon of a ship. In 1763 he quitted the navy, after having served in the expedition against Belleisle. His first publication was in London, An Essay on Puer- peral Fever, which was well received ; but his pro- fessional prospects were so little satisfactory, that he was happy to obtain the situation of surgeon to one of the royal yachts, which brought nim in a salary of £70 a-year, without interrupting his practice. He was shortly after (1770) chosen joint-physician and man-midwife to the Middle- sex Hospital, and gave lectures on the latter branch of practice. He thus slowly emerged from obscurity into the most extensive prac- tice : was appointed licentiate in midwifery of the College of Physicians in 1783, and, six years after, an honorary fellow of the Royal So- ciety of Edinburgh. After the death of Dr. William Hunter, he was considered as the most eminent obstetrical practitioner in the metro- polis. His great work, is The Introduction to the Practice of Midwifery, which, with his Apho- risms for the Use of Junior Practitioners, claims a place in every medical library. In the decline of life, Dr. Denman relinquished the more labo- rious part of his practice to his son-in-law, Sir Richard Croft, and became a consulting physi- cian. His death, which was sudden, took place November 26th, 1815.

DENMARK, one of the most ancient mo- narchies in Europe, comprehends the peninsula of Jutland, Sleswick, Holstein, and Lauen- bnrg, on the continent ; and the islands of Zealand, Funen, Langeland, Falster, Laaland, Bornholiu, Moen, and several others in the Baltic. Den- mark Proper is that part of Scandinavia which formerly went by the name of Cimbrica Cher- sonesus. It is everywhere bounded by the sea, except on its southern frontier in Holstein, and stretches northward from about 53° 30′ to 57° 30′ of lat., i. e. from the right bank of the Elbe, to the extreme point of Jutland. This main-land tract is divided into three divisions, of which Holstein forms

the southern, Sleswick the cen- tral, and Jutland the northern province, each

being governed by laws and institutions, occa- sionally very dissimilar; and contains, togethe with the adjacent islands, a territory of about 22,000 square miles, and a population of about 1,635,000 inhabitants, thus distributed :

Jutland contains

Zealand (including Copenhagen),

Funen, and other islands, . Sleswick .... Holstein .... Lauenburgh

400,000

550,000

300,000

350,000

35,000

1,635,000

Iceland, the Faroe Islands, and the settlements of Denmark in the East and West Indies and Africa, are supposed to add about 155,000 more to the population in the following proportions :

Iceland

Faroe fsles .... East and West Indies and Afnca

50,000

5,500

100,000

155,500

The dismemberment of Norway from Denmark, which took place in 1814, abstracted full one- third of her population and strength, that ancient possession of the Danish crown being estimated to contain at that period 900,000 in- habitants. Denmark received from Sweden, in exchange, Swedish Pomerania, which she again parted with to Prussia for the duchy

of Lauen- burgh, and a sum of money.

Her remaining territory is, however, compact, and well situated for commerce. The aspect of the continental part is flat and undiversified, containing neither mountains nor rivers of any magnitude, but it is in an excellent general state of cultivation; and, in the character of its cli- mate and rich pasturage, very much resembling our own country.

It is largely indented by the sea, and pos- sesses numerous creeks and bays, as well as in- ternal lakes, but only one canal of importance, that of Kiel. This will admit vessels of 120 tons burden, and extends from the Baltic to the Eyder at Rendsburg, where the river becomes navigable, thus opening a communication be- tween the two seas, or through 105 miles of territory. Its length is twenty-two English miles. Its breadth at top 100 feet, at bottom fifty-four, and depth ten feet. It was begun in 1777, and completed in 1785, at an expense of £800,000 sterling. During the late war between 3000 and 4000 vessels annually passed through it, but in time of peace the number is diminished. It has much improved the internal trade of Sleswick and Holstein.

The revenue of Denmark fluctuates between £1,700,000 and £2,000,000, about £120,000 of which arises from the dues of the Sound : the national debt is nominally £15,000,000. The military force somewhat exceeds 20,000 men ; the naval force is only 4000 men in service, but capable of being increased with great facility, as there are between 14,000 and 15,000 registered seamen. The seafaring people of the kingdom are altogether little short of 50,000.

Theie are no mineral productions in Den- mark of any commercial importance ; salt is made in considerable quantities from the lime springs of Oldesloe ; and a little coal is found ; but turf is the great article of fuel. Both tim- ber and salt are imported largely. The agricul- tural produce consists of wheat, in small quan- tity, barley, oats, beans, peas, and potatoes ; the last very largely. Excellent madder also abounds, and hops, flax, hemp, and tobacco, are partially cultivated. Gardens are seldom seen except in Arak, the great kitchen garden of the capital. The horned cattle and horses are very superior ; in Holstein are some of the best working breeds of both, that are known : the exportation of horses is said to amount to 1200 or 1500 an- nually, valued at from £160,000 to £200,000 sterling. Milch cattle are also well managed here : butter and cheese abound : trie sheep, though recently improved by the introduction of

merino, and other breeds, are still inferior. ‘ There are now better meadows, and more hedges and walls in Denmark,’ says Mr. Lou- den, •’ than in any country of Germany of the same extent.’ Here was founded, in 1686, the first veterinary school in Germany. ‘Artificial grasses and herbage plants enter into most rota- tions, and rye-grass is perhaps more sown in Holstein than any where, excepting in England. In a word, considering the disadvantages of climate, the agriculture of Denmark is in a more advanced state than that of any other kingdom of Germany.’ Fishing in the bays and creeks is conducted on a large scale ; the most important branch is the herring fishery ; beds of oysters and muscles are not uncommon : and fresh water fish abound in several arms of the Baltic, so little is that sea impregnated with salt.

Denmark has pursued a studiously pacific policy for more than half a century, and the consequence, until nearly the close of the late wais of the French revolution, were the uninter- rupted improvement and extension of her com- merce. In 1800 she possessed above 2000 merchant men, 20,000 seamen, and 250,000 tons of shipping. During our second war with France these were in a state of rapid increase, but the seizure of her navy in 1807 by Great Britain, and the consequent breach between the two countries, permitted her no longer to carry on a neutral trade, and she has scarcely to the present time recovered the blow. The chief intercourse of the Danes is with the adjacent coasts of the Baltic, with England, Holland, France, and the Mediterranean.

They have found the benefit of a general car- rying trade so considerable, that they have pushed it with success, both in the Mediterranean (where their flag is respected by the Barbary states, equally with that of stronger powers), and to the most distant parts of the globe. The whale fishery, likewise, employs a considerable portion of their seamen, and in the West India trade they have about seventy sail of merchant- men. Their connexion with the Guinea and Gold coasts has been in a great measure discontinued since their honorable abolition of he slave trade in 1803.

The principal exports from Denmark to Eng-

land are skins, raw hides, and, when our com laws permit, oats. Until lately the most exten- sive part of the trade between the two countries was timber from Norway. The imports from England are manufactured articles., and coionial produce. The duties on the importation of foreign commodities into Denmark are high, buf all kinds of. merchandise, with the exception of the following articles, are allowed to be imported ; viz. sugar, either raw or refined, coming from European ports, porcelain, colored delf, wool- cards, roasted coffee, printed calicoes, and some kinds of woollen cloth.

In 1797 the government laid open the trade to the East Indies (previously monopolised by a Danish East India Company), to all private mer- chants. Similar liberal regulations have been made with regard to intercourse with their West Indian possessions. The Icelandic trade was laid open by an ordinance from the king towards the close of 1816. The exports of Denmark to this distant part of her dominions are grain, wine, brandy, tobacco, and spices, together with linen and woollen cloths, timber, and hardware. The vessels generally sail thither in May and June, and return with salt fish, whale oil, coarse cloth, woollen stockings, gloves, hides, skins, feathers, and Eider-down. All the necessary supplies for the Greenland colonies are trans- mitted from the parent country ; and oil, whale- bone, seal-skins, and other articles, furnished by the fisheries in the adjacent seas, are taken in return. The manufactures of Denmark are confined to the supply of her own most com- mon wants : and it is necessary to import hard- ware, printed cottons, and linen. The porcelain manufacture is carried on by the government. A late return of the sugar refineries in Denmark makes their number forty-six ; that of paper mills twenty-two; iron foundries four.

The constitution of Denmark was of a free Gothic original. The convention of the estates, even including the representatives of the boors or peasants, elected the king, having still a re- gard to the sor of their late monarch, whom, however, they made no scruple of setting aside, if they deemed him unworthy of the royal dig- nity. The convention enacted laws; conferred the great offices of state ; debated all affairs re- lating to commerce, peace, war, and alliances ; and occasionally gave their consent to the im- position of necessary taxes. The king was only the chief magistrate of the people. His business was to see justice administered impartially ; to command the army in time of war ; to encourage industry, religion, arts, and sciences ; and to watch over the interests of his subjects. But, by the revolution, in 1660, the constitution was new-modelled, and it was declared that ‘ the hereditary kings of Denmark and Norway should be in effect, and ought to be esteemed by their subjects, the only supreme head upon earth; they shall be above all human laws, and shall acknowledge, in all ecclesiastical and civil affairs, no higher power but God alone. The king shall enjoy the right of making and inter- preting the laws ; of abrogating, adding to, and dispensing with them. He may also annul all the laws which either he or his predecessors

shall have made, excepting this royal law, which must remain irrevocable, and be considered as the fundamental law of the state. He has the power of

declaring war, making peace, imposing taxes, and levying contributions of all sorts,' &c. &c. It is finally added, ' If there is any thing further which has not been expressly spe- cified, all shall be comprised in the following words: — The king of Denmark and Norway shall be the hereditary monarch, and endued with the highest authority; insomuch that all that can be said and written to the advantage of a Christian, hereditary, and absolute king, shall be extended under the most favorable interpreta- tion to the hereditary king or queen of Denmark and Norway,' &c. To this singular step the representatives of the people were urged at that time by the tyianny of the nobles. They found ahundied tyrants, as a late political bishop said, a hundred times worse than one. The nobility were obliged to make a similar surrender of their peculiar privileges.

The established religion is the Lutheran and Episcopal. The reformation was introduced in 1536, the crown taking possession at that period of the revenues of the church, and depriving the bishops of their temporal power : they have at present full spiritual jurisdiction, but no votes in the legislature ; and there exists a complete toleration of dissenters. There is a university at Copenhagen on a large scale, and another of smaller funds at Kiel. There is also a college with four professors at Odensee in Funen ; and Danish literature, though not of general preten- sions, has yielded in modern times some dis- tinguished names. We need only mention those of Niebuhr and Le Brun.

Saxo Grammaticus, the most ancient and best of the Danish historians, derives the name of Denmark from Dan the son of Humble, the first king, and Mark, a word signifying a country, in several dialects of the Teutonic; according to which etymology, the word Denmark signifies the country of Dan. He is said to have flou- rished about A.A.C. 1038 or 1050. Almost all historians agree that he was the son of Humble, a native of Zealand. His possessions and in- fluence were very considerable, not only in Zea- land, but in the islands of Langeland and Mona. It was his courage, however, and skill in the art of war, that induced the inhabitants of Den- mark to choose him for their king. He was called to the assistance of the Jutlanders upon an irruption of the Saxons into their territories, and promised the sovereignty of the country if he drove out the enemy. On this he raised an army, gained a complete victory over the Saxons, and obliged them to leave the country ; and he was accordingly elected king. The history of Denmark, for several ages after Dan, is filled with fabulous exploits of heroes, encounters with giants, dragons, &c. One of their kings named Frotho, who reigned about A. A. C. 761, is said to have conquered Britain, Sleswick, Russia, Pomerania, Holstein, &c. an assertion which cannot easily be credited, considering the difficulty which succeeding warriors, even the greatest in the world, found to subdue the inha- bitants of those countries. It is certain, how-

ever, that anciently the kingdom of Denmark made a much more conspicuous figure than it does at present. The Danes appeal to have had a very considerable naval force almost from the foundation of their empire; and the conquests they undoubtedly made in our isbnd are cer- tain proofs of their valor. Their chief enemies were the Swedes, Norwegians, and Saxons ; es- pecially the first. With one or other of these nations almost perpetual war was carried on. The kingdom was also often rent by civil dis- sensions, which the neighbouring monarchs did not fail to take advantage of, in order to reduce the kingdom of Denmark under their subjection. As in general, however, neither party came off with much advantage, the history of these wars affords nothing interesting.

One of the most illustrious of the kines of Denmark was Canute II., the son of Sueno I., surnamed the Great, from his wisdom as well as his conquests. He was at once king of Den- mark, Norway, and England. See CANUTE and ENGLAND. He also conquered a great part of Sweden. Alstedius ranks him as the sixty-seventh monarch of Denmark. Between his son Canute III. and Sueno III. there was a succession of ten kings of whom little important is recorded. One of the greatest of the Danish monarchs, after Canute the Great, was Valdemar I. who obtained the throne in 1157; having defeated and killed the usurper Sueno III. after a civil war of ten years. He maintained a long war with the Vandals, whose power he at last entirely

broke, and reduced under his subjection the is- land of Rugen. He also proved victorious over the Norwegians, so that their king and queen came in person to submit to him. In 1165, he laid the foundations of the city of Dantzic; which, though it has since become a place of very great consequence, consisted at first only of a few poor fishermen's huts ; but the privileges and immunities conferred upon it by this mon- arch, soon proved the means of its becoming a flourishing city. In 1169, he entirely subdued the Courlanders ; and, soon after, was invested with the duchy of Holstein by the emperor Fre- deric Barbarossa. He is said to have been poi- soned by a quack medicine, given with a design to recover him from a distemper with which he was seized in 1182, after reigning twenty-eight years. In 1195, Canute VI., Valdemar's son and successor, caused a muster to be made of all the men fit to bear arms in his dominions ; and ordered each province to fit out its proportion of shipping, every way equipped, and ready for action. The whole force of Denmark, at that time, consisted of 670 ships of war, besides the squadrons supplied by vassals, tributary states, and allies. The number of the land forces is not mentioned. In the reign of this prince, the Danish dominions were enlarged by the con- quest of Stromar, and the districts of Lubec and Hamburgh, formerly Nordalbingia, but now in- cluded under the general name of Holstein. He died in 1203, and was succeeded by Valdemar II. who proved a very warlike prince. In 1211 he founded the city of Stralsund. He built the castle of Droningholm xn memory of his queen, that name importing the Queen's Island ; and

gained in 1218 a victory over the "Livonians near the fortress of Valdemar, which was thus named from him. The flourishing state in which Denmark was at this time, appears from an estimate of the revenues of the tributary provinces, which is still extant. He kept for constant service 1400 great and small ships, each of which at a medium carried 121 soldiers; making the whole of the standing forces, besides garrisons, consist of 169,400 fight- ing men. In 1223, however, Henry Palatine, earl of Swerin, a German prince, having been deprived of part of his dominions by Valdemar, surprised and carried off the king himself, and kept him close prisoner for three years. The conditions on which he at last obtained his liberty were, — that he should pay a large sum of money ; relinquish Holstein, Swerin, Hamburgh, and all his possessions on the other side of the Elbe ; and solemnly swear that he would never take any measures to punish Henry or his asso- ciates. This treaty was signed on the 25th of March 1226. Besides these territories, which Valdemar was obliged to cede by treaty, many tributary princes took the opportunity of his captivity to recover their

liberty ; and among the rest the inhabitants of Lubec revolted, and entered into alliance with Albert, duke of Saxony, against him. Valdemar, however was not of a disposi- tion to submit tamely to such treatment. He obtained a dispensation from the pope to break his engagements with Henry, and immediately entered Holstein at the head of a numerous army. Here he was met by several German princes ; and a desperate engagement ensued. Valdemar at first had the advantage ; but, being wounded in the eye, his troops were at last defeated with great slaughter. It does not appear that he was ever able to revenge himself, or to recover the dominions he had lost. Instead of this he was obliged, in 1228, to cede Lauenburg to the duke of Saxony, who had already seized on Ratzburg and Molna. Soon after his eldest son, Valdemar, was accidentally killed as he was hunting, and his two other sons married the daughters of his two greatest enemies. Abel, the third son, mar- ried the daughc. »• of Adolphus duke of Holstein ; and Eric, the sec M, the duke of Saxony's daughter. These misfortunes are supposed to have hastened his death, which happened in April, 1242; and on this the kingdom was divided between the two young princes, a war commencing the very next year between them. A peace was concluded the year following, and war renewed the year after. In 1250 Eric paid a visit to his brother Abel, entreating his media- tion between him and the princes of Holstein, with whom he was then at war. Abel received him, in appearance, with great kindness, but in the mean time laid a plan for murdering him at sea : this was effected, and Abel became master of the whole kingdom. But he did not long en- joy the sovereignty thus wickedly obtained. He was tormented by his own conscience, especially when he found, among his brother's papers, one by which he was left heir to the whole kingdom on the decease of Eric, and many kind expres- sions with regard to himself. He was at last killed in a battle with his own subjects in 1252.

From this time to 1333 the kingdom of Denmark gradually declined. Usurpers established them- selves in different provinces ; while the kings of Sweden did not fail to avail themselves of the distracted state of the Danish affairs. In 1333 died Christopher II., who possessed only the cities of Scanderberg in Jutland and Neoburg in Fionia, with some few other inconsiderable places, of all the hereditary dominions of Denmark. Halland, Holbeck, Calemburg, and Samsoe, were held by Canute Porsius ; Schonen, Lystre, and Bleking, by the king of Sweden, to whom they had been lately sold : John earl of Wagna had the jurisdictions of Zealand, Falstre, Laaland,and Femerin: Gerhard, those of Jutland and Fionia; and Lawrence Jonea those of Lange- land and Arras. After the death of Christopher an interregnum of seven years, or according to Marcel of fifteen, ensued. The first attempt for the sovereignty was made by Otho, second son to the late king, who tried to drive Gerhard out of Jutland, but was taken prisoner, and closely confined by Gerhard. The king of Sweden

next wrote to pope Benedict XIII., beseeching his Holiness to confirm to him the provinces of Schonen, &c., which he possessed ; and to allow him to subdue the rest of the kingdom, which was now usurped and rendered miserable by a set of petty princes, who knew not how to govern. To influence the pope he promised to hold this kingdom of him, and to pay him the usual tax collected by the church. This request, however, was refused. Valdemar of Sleswic, nephew to Gerhard, had formerly been elected king ; but, on account of the superior influence of Christo- pher, had never enjoyed the sovereignty. He now, at the instigation of his uncle, resumed his ambitious views. Several of the nobility also cast their eyes on young Valdemar, Chrislopher's son. But, while these two princes were laying schemes to aggrandise themselves, the unhappy Danes were distressed by exorbitant taxes, famine, and pestilence, which destroyed more than half of the inhabitants. In the midst of these cala- mities Gerhard, sovereign of Jutland, proposed to his nephew Valdemar an exchange of territo- ries, which he believed would prove favorable to the designs of the latter on the crown. A treaty for this purpose was actually drawn up and signed ; but the inhabitants, notwithstanding their distressed situation, so highly resented their being disposed of like cattle, from one master to another, that they refused to pay the taxes. Ger- hard resolved to compel them, and therefore led 10,000 men, whom he had levied in Germany, into the heart of the province. Providence, however, now raised up an enemy to this tyrant. One Nicholas Norevi, a man greatly esteemed for his courage, public spirit, and prudence, beheld with sorrow the condition to which Denmark was reduced. He had long meditated various pro- jects for its relief. Young Valdemar, Christopher's son, had a number of adherents in the kingdom , his most dangerous enemy was Gerhard ; and, if he could be removed, the Jutlsnders would at least be free from an oppressor, and might choose Valdemar, or any other they thought proper, for their sovereign. Collecting, therefore, a body of chosen horse he marched in the night to Zander-

shusen,where Gerhard had fixed his head-quarters; and, having forced open the tyrant's apartment, immediately put him to death. He then fled with the utmost expedition, and, though overtaken by a party of the enemy's horse, forced his way through them and escaped. Gerhard's sons, hearing of their father's death, retired into Hoi- stein, leaving the army, composed chiefly of Holsteiners, to be cut to pieces by the enraged peasants, who fell upon them from every quarter. Still, however, the Holsteiners kept possession of the citadels and fortified places, from which Ni- cholas resolved to dislodge them. He accordingly attacked and took Landen, a castle situated on the river Scheme : After which he laid siege to Albeg ; but the garrison making an obstinate de- fence, he turned the siege

into a blockade, by which they were soon reduced to great extremity. The governor sent an express to Gerhard's sons, acquainting them with the impossibility of his holding out more than a few days, without being relieved. They marched to his relief, and came up with Nicholas just as the governor was ready to surrender, but were defeated ; though Nicho- las was unfortunately kHled in the engagement. Jutland having thus regained its liberty, the rest of the kingdom followed its example. Zealand first openly declared itself. Here Henry, Ger- hard's son, maintained several garrisons ; and resolved to defend his possessions in spite of all the power of the inhabitants. For this purpose he drew together an army; but in the mean time a tumult arose among the peasants, on account of a Danish nobleman slain by the Holsteiners. By this the people were so irritated that, falling upon the Holsteiners, they killed 300 of them, drove the rest out of the island, and chose Valdemar III. Christopher's son, for their sovereign. The Danes now resumed their courage ; the lands were cul- tivated, the famine and pestilence ceased, and the kingdom began to flourish as formerly. Matters continued prosperous till 1373, when Valdemar III. died, and was succeeded by his daughter Margaret. Marcel ranks his grandson Glaus V. as his immediate successor; but he, being an infant, can hardly be said to have reigned, and therefore Alstedius ranks his mother, who go- verned during his infancy, as the successor of Valdemar.

Margaret raised the kingdom of Denmark to its highest pitch of glory. She defeated and de- posed Albert king of Sweden, in 1487 ; and partly by her address, partly by hereditary right, she formed the union of Calmar, by which she was acknowledged sovereign of Sweden, Denmark, and Norway. She held her dignity with such firmness and courage, that she was justly styled the Semiramis of the North. Heronly son, Glaus V. dying at seven years of age, in 1388, she adopted her sister's son, Eric duke of Pomerania, as her successor, and died in 1412, after a glorious reign of thirty-seven years. Eric IX., her successor, being destitute of her great qualifications, the union of Calmar fell to nothing : but Norway still con- tinued annexed to Denmark. Some say he was deposed, but Alstedius states that he resigned the crown in 1438, and retired to Pomerania, where he died in 1469. Upon his resignation his ne- phew, Christopher III. duke of Bavaria, and count

palatine of the Rhine, was elected. After an in glorious reign of ten years, during which Sweden was separated from Denmark, he died in 1 448,and made way for a new royal race, which still conti- nues to reign in Denmark, by the election of Cliris- tian,count of Oldenburg. Christian I. was crowned king of Denmark in 1448,of Norway in 1450,andof Sweden upon the deposition of Charles VIII. in 1457, who, however, was restored by the Swedes in 1464; Christian not having adhered to the terms he had made with them. He died in!481, and was succeeded by his son John, who

had frequent wars with the brave Swedish governors, Steno and Sweno Sture. John, dying in 1513, was succeeded by Christian II. who recovered Sweden for a short time on the death of Steno Sture; but was expelled for 1 is cruelties, by the illustrious Gustavus Vasa, who threw off the Danish yoke, and restored the independence of his country in 1520. See SWEDEN.

Christian died in 1559, but was previously de- posed, and Frederick I. duke of Holstein elected king in 1523. He reigned only ten years; dying in 1533, when he was succeeded by his son Christian III. a wise and politic prince, by whom, in 1536, the protestant religion was established in Denmark. He was succeeded in 1559 by his son Frederick II. who, after reigning about twenty-nine years, left the kingdom to his son Christian IV. who, however, was not crowned till 1596. This monarch twice visited England, in compliment to his son-in-law king James I. ; in July 16X>6 and 1614. In 1629, he was chosen head of the Protestant league formed against the house of Austria; but, though personally brave, he was in danger of losing his dominions; when he was succeeded in that command by the famous Gustavus Adolphus king of Sweden. The Dutch having obliged Christian, who died in 1648, to lower the duties of the Sound, his son Frederic III. consented to accept of an annuity of 150,000 florins for the whole. The Dutch after this per- suaded him to declare war against Charles X. king of Sweden, which had almost cost him his crown in 1657. Charles stormed the fortress of Fre- dericstadt; and, in the succeeding winter, he marched his army over the ice to the island of Funen, where he surprised the Danish troops, took Gdensee and Nyburg, and marched over the Great Belt to besiege Copenhagen itself. Gliver Cromwell- interposed ; and Frederic defended his capital with great magnanimity till the peace of Roschild ; by which he ceded the provinces of Halland, Bleking, and Sconia, the i-sland of Born- holm, Bahus, and Drontheim, in Norway, to the Swedes. Frederic sought to elude these severe terms ; but Charles took Cronenburg, and once more besieged Copenhagen by sea and land. The steady integrid conduct of Frederic under these misfortunes endeared him to his subjects; and the citizens of Copenhagen made an admirable defence, till a Dutch fleet arrived in the Baltic, and beat the Swedish fleet. The fortune of war was now entirely changed in favor of Frederic, who showed on every occasion great abilities both civil and military : and, having forced Charles to raise the siege of Copenhagen, might have carried the war into Sweden, had not the English fleet under Montague appeared in the Baltic.

This enabled Charles to besiege Copenhagen a third time: but, France and England offering their mediation, a peace was concluded in that capital :

by which the island of Bornholm re- turned to the Danes; but the island of Rugen, Bleking, Halland, and Schonen, remained with the Swedes.

The year 1660, as we have already intimated, affords an instance of a revolution in Denmark, unparalleled in the annals of history, viz. that of a free people resigning their liberty into the hands of their sovereign of their own accord, and without the least compulsion rendering him despotic. This was in part occasioned by the great character which Frederic had acquired by his late prudent and valiant conduct. At that time he had also taken care to ingratiate himself with the commonalty, by obliging the nobility to allow them some immunities which they did not enjoy before, and permitting them by a special edict to possess lands. After the conclusion of the treaty with Sweden, a diet was summoned at Copenhagen, to take into consideration the state of the kingdom, which was now very much ex- hausted, by the calamities of war. This distressed state of affairs was, by the commons, attributed to the nobility ; who, on the other hand, took no care to conciliate the affections of the inferior classes : but rather increased their discontents by their arrogance. They had even the imprudence to remonstrate against the immunities above mentioned, which had been granted by the king during the siege of Copenhagen. In consequence of this, the deputies of the commons and clergy united against them ; and, being joined by the citizens of the capital, formed a very considera- ble party. On bringing forward in the assembly the sums necessary fpr the national exigencies, a general excise was proposed by the nobles on every article of consumption ; and they professed themselves willing to submit to it, though, by an express law, their order was to be exempted from taxes. This offer, however, was accompanied with a remonstrance to the king; in which they endeavoured to reclaim many obsolete privileges, and to add fresh immunities, tending to diminish the royal prerogative, and check the rising influ- ence of the commons and clergy. This proposal occasioned great disputes in the diet ; and the two inferior orders insisted, that they would not admit of any tax which should not be levied equally upon all ranks. The nobles not only re- fused to comply with this proposal, but even to be subject to the present fax for more than three years ; pretending that all taxes whatever were infringements on their privileges. By way of compensation, however, they proposed new du- ties upon leather and stamped paper, and at last offered to pay a poll tax for their peasants. This at first seemed to be agreeable to the two inferior estates ; but they suddenly changed their minds, and demanded that the fiefs and domains, which the nobles had hitherto possessed exclusively, and at a very moderate rent, should be let to the highest bidder. In the heat of the dispute, one of the chief senators having imprudently thrown out some reproachful expressions against the com- mons, a general ferment ensued, and the assembly was broken up in confusion. This gave occasion

to the interposition of the king's friends ; and the idea of rendering the crown hereditary, and en- larging the royal prerogative, began to be suggested as the proper method of humbling the nobility. This was first proposed by the bishop of Zealand ; an act for rendering the crown hereditary was drawn up ; and the best method of publicly producing it taken into consideration. All this time the king seemed quite inactive, nor could he be prevailed upon to take any part in an affair which so nearly concerned him. But this indolence was abundantly compensated by the alertness and diligence of his queen. On the morning of the 8th of October, therefore, the bishop of Zealand having obtained tlie consent and signatures of the ecclesiastical deputies to the new proposal, delivered it to Nausen, burgo- master of Copenhagen and speaker of the com- mons, whose speech in favor of it had such an effect upon the assembly, that they subscribed it unanimously ; the nobles being all the while in perfect security, and entirely ignorant of the trans- action. Next day it was presented to the kingby the bishop and Nausen ; and finally to the nobles ; who, while they professed their general willingness to assent to the declaration, observed to the speaker of the commons that it required the most serious dis- cussion. Nausen replied, that the other estates had already taken their resolution; that they would lose no time in debate ; and that, if the nobles would not concur with them, they would imme- diately repair to the palace by themselves, where they had not the least doubt that the king would graciously accept their proffer. In the mean time the nobles had privately despatched a mes- sage to the king, intimating that they were wil- ling to render the crown hereditary in the male line of his issue, provided it was done with the usual formalities. But his majesty stipulated for an equal right of succession in the female line, lie added, however, that he by no means wished to prescribe rules for their conduct; they were to follow the dictates of their own judgment, and he would owe every thing to their free consent. In the interim, the other deputies arrived at the palace, and the bishop of Zealand addressed his majesty on the resolution taken by the clergy and commons, adding, that they were ready to sacri- fice their lives in th'e defence of an establishment so salutary to the country. His majesty, while he assured them of his protection, and promised a redress of all grievances, mentioned the con- currence of the nobles as a necessary condition ; and dismissed them with an exhortation to con- tinue their sittings until they should have brought their design to a pacific conclusion. The no- bles, breaking up without coming to any resolu- tion, and preparing, it is said, to leave Copenha- gen, the court and the popular party took the necessary measures to force them to a concurrence. Orders were given to shut the gates of the capi- tal, when a message arrived that they were ready to concur with the commons, and subscribe to all the conditions of the royal pleasure. Nothing now remained but to ratify the transaction with proper solemnity. Accordingly, on th» 16th of October, the estates

annulled in the most solcma manner, the capitulation or charter signed by tne king on his accession to the throne ; absolved him

from all his engagements, and cancelled all the limitations imposed upon his sovereignty! The whole was concluded by the ceremony of doing homage, taking the new oath with great ceremony ; after which a new form of government was promulgated under the title of The Royal Law of Denmark.

Frederic III. was succeeded, in 1670, by his son Christian V., who obliged the duke of Holstein Gottorp to renounce the advantages he had gained by the treaty of Roschild. He then recovered a number of places in Schonen ; but his army was defeated in the bloody battle of Lun- den by Charles XI. of Sweden. This de- feat did not put an end to the war, which Christian obstinately continued till he was defeated entirely at the battle of Landscroon ; and, having exhausted his dominions in his mi- litary operations, he was in a manner aban- doned by all his allies, and forced to sign a treaty on the terms prescribed by France, in 1679. Christian, however, did not desist from his mili- tary attempts ; and at last became the ally and subsidiary of Louis X[V. He died in 1699, and •was succeeded by Frederic IV., who, like his predecessors, maintained his pretensions upon Holstein ; and, probably, would have become master of that duchy, had not the English and Dutch fleets raised the siege of Tonningen ; while the young king of Sweden, Charles XII., then only sixteen years of age, landed within eight miles of Copenhagen, to assist his brother-in-law the duke of Holstein. Charles probably would have made himself master of Copenhagen, had not his Danish majesty agreed to the peace of Travendahl, which was entirely in the duke's favor. By another treaty concluded with the States General, Frederic obliged himself to fur- nish a body of troops who were to be paid by the confederates ; and who afterwards did great service against the French. Notwithstanding this peace, Frederic was perpetually engaged in wars with the Swedes. While Charles was an exile at Bender, he marched through Holstein into Swedish Pomerania, and in 1712 into Bre- men, and took the city of Stade. His troops, however, were totally defeated by the Swedes at Gadesbusch, who laid his favorite city of Altona in ashes. Frederic revenged himself by seizing great part of the ducal Holstein, and forcing the Swedish general, count Steinbock, to surrender himself prisoner, with all his troops. In 1716 the success of Frederic was so great, in taking' Tonningen and Stralsund, driving the Swedes out of Norway, and in reducing Wismar and Pomerania, that his allies began to suspect he was aiming at the sovereignty

of all Scandinavia. Upon the return of Charles of Sweden from his exile, he renewed the war against Denmark with a most embittered spirit ; but upon his death at the siege of Fredericshal, Frederic durst not re- fuse the offer of his Britannic majesty's mediation between him and the crown of Sweden ; in con- sequence of which a peace was concluded at Stockholm, which left him in possession of the duchy of Sleswick. Frederic died in 1730, after having seen his capital reduced to ashes by an accidental fire, in 1728. His son and successor Christian VI. made no other use of his power,

and the advantages with which lie mounted the throne, than to cultivate peace with all his neigh- bours, and to promote the happiness of his sub- jects, whom he eased of many oppressive taxes. In 1734, after guaranteeing the Pragmatic Sanc- tion, he sent 6000 men to the assistance of the emperor, during the dispute about the succession to the crown of Poland. Though he was pacific, yet he was jealous of his rights, especially over Hamburgh. He obliged the Hamburghers, in 1736, to call in the mediation of Prussia, to abolish their bank, to admit the coin of Denmark as current, and to pay him a million of silver marks. He had, in 1738, a dispute with king George II. about the little lordship of Steinhorst, which had been mortgaged to the latter by the duke of Holstein Lauenburg, and wnich Christian said belonged to him. Some blood was spilt during the contest ; in which Christian, it is thought, never was in earnest. It brought on, however, a treaty, in which he availed himself of his Britannic majesty's predilection for his Ger- man dominions ; for he agreed to pay Christian a subsidy of £70,000 sterling a year on condition of keeping in readiness 7000 troops for the pro- tection of Hanover : which was a gainful bargain for Denmark. And two years after he seized some Dutch ships for trading without his leave to Iceland : but the difference was made up by the mediation of Sweden. Christian had so great a party in that kingdom, that it was gene- rally thought he would revive the union of Cal- mar, by procuring his son to be declared successor to his then Swedish majesty. Some steps for that purpose were certainly taken : but whatever Christian's views might have been, the design was frustrated by the jealousy of other powers. Christian died in 1746, with the character of being an excellent monarch. His son and suc- cessor, Frederic V., had, in 1743, married the princess Louisa, daughter to king George II. He improved upon his father's plans for the hap- piness of his people ; but took no concern, ex- cept that of a mediator, in the German war. For it was by his intervention that the treaty of Clos- terseven was concluded between the duke of Cumberland and the French general Richelieu. Upon the death of queen Louisa, mother to the late king, he married a daughter of the duke of Brunswick Wolfenbuttel ; and died in 1766. He was succeeded by his son Christian VII. who married the princess Carolina Matilda of England, an alliance which proved unfortunate, as is generally stated through the intrigues of the

queen dowager. The king had displaced several of her friends who had for some time had a share in the administration ; and the two new favorites, Brandt and Struensee, who had now appeared, paid great court to the queen. The dowager on this took occasion to insinuate, that the queen had condescended to an intrigue with Struensee. The result is familiar to most of our readers. When the plan of removing the existing administration was brought 19 maturity, it was resolved to surprise the king in the middle of the night, and force him instantly to sign an order for committing the ministers to separate prisons ; to accuse them of high treason in general, and particularly with a design to dethrone or poison*

the king. If this could not be properly authen- ticated, it was determined to suborn witnesses to confirm the report of a criminal correspondence between the queen and Struensee. This design was executed on the night of the 16th of January, 1772, when a masked ball was given at the court. The queen, after having danced most part of the evening with count Struensee, retired to her chamber about two in the morning. About four the same morning prince Frederic rose, and went with the queen dowager to the king's bed-cham- ber, accompanied by general Eichstedt and count Rantzau. Having ordered his valet de chambre 10 awake the king, they informed him that the queen, with Struensee, his brother, and Brandt, were at that moment busy in drawing up an act of renunciation of the crown, which they would immediately after compel him to sign ; and there was therefore a necessity for him to give an order for their arrest. Christian is said to have hesi- tated for some time, and to have been inclined to refuse this scandalous requisition ; but at length, through importunity, and, according to some accounts, being even threatened into com- pliance, he consented to what they required. Count Rantzau was despatched, at an untimely hour, into the queen's apartments, and immedi- ately executed the orders of the king. This un- fortunate lady, together with an infant princess, was conveyed in one of the king's coaches to the castle of Cronenburgh, escorted by a party of dragoons. Struensee and Brandt were seized in their beds and imprisoned, as well as other mem- bers of the administration to the number of eigh- teen. The queen dowager and her adherents assumed the government, and a total change took place in all departments of the state. The prince royal, son of queen Carolina Matilda, then in the fifth year of his age, was put under the care of a lady of quality, who was appointed governess, under the superintendency of the queen dowager. Struensee and Brandt were put in irons, and underwent long and frequent examinations. Stru- ensee at last confessed that he had conducted a criminal intrigue with the queen. These minis- ters were both beheaded on

the 28th of April ; but many of their partisans were set at liberty. Such is one mode of accounting for the revolution of 1772. The confession of Struensee is by many supposed to have been extorted by fear of the torture, and to have no foundation in truth ; but, as no means were used by the court of Great Britain to clear up the queen's character, the affair undoubtedly wears a suspicious aspect. At last, however, his Britannic majesty interfered so far as to send a small squadron of ships to convoy the unhappy princess to Germany. The city of Zell was appointed for her residence; and in this place she died of a fever on the 10th May, 1775, aged twenty- three years and ten months.

Of Struensee as a minister, 'it must not be for- gotten,' says an able writer in the Edinburgh Review, September 1826, ' that he was the first minister of an absolute monarchy who abolished the torture, and that he patronised those excellent plans for the emancipation of the enslaved husbandmen, which were first conceived by Re- verdil a Swiss, and of which the adoption by the second Bernstorff has justly immortalised that

statesman. He will be honored by after ages for what offended the Lutheran clergy : the free ex- ercise of religious worship granted to Calvinists, to Moravians, and even to Catholics ; for the Danish clergy were ambitious of retaining the right to persecute, not only long after it was im- possible to exercise it, but even after they had lost the disposition to do so; at first to overawe, af- terwards to degrade non-conformists; in both stages, as a badge of the privileges and honor of an established church.'

The same writer, in a Review of general Fal- kenskiold's Memoirs of the Revolution of 1772, observes, that the evidence against the queen consisted in/ a number of circumstances (none of them incapable of an innocent explanation) sworn to by her attendants, who were employed as spies on her conduct. She owned that she was guilty of much imprudence ; but in her dying moments she declared to M. Roques, pastor of the French church at Zell, that she never had been unfaithful to her husband. (Communicated by M. Roques to M. Secretan, the editor of Falkenskiold, on the 7th of March 1780. Falk. 234.) It is true that her own signature affixed to a confession was alleged against her. But if general Falkenski- old was rightly informed (for he has every mark of honest intention), that signature proves nothing but the malice and cruelty of her enemies. Schack, the counsellor sent to interrogate her at Cronenburgh, was received by her with indigna- tion when he spoke to her of her connexion with Struensee. When he showed Struensee's con- fession to her, he artfully intimated that the fallen minister would be subjected to a very cruel death if he was found to have falsely criminated the queen. ' What ! ' she exclaimed, ' do you believe that if I was to confirm this declaration, I should save the life of that unfortunate man ?' Schack answered with a profound bow. The queen took

a pen, wrote the first syllable of her name, and fainted away. Schack completed the signature, and carried away the fatal document in triumph. Struensee himself, however, had confessed his intercourse to the commission- ers. It is said that his confession was obtained by threats of torture, facilitated by some hope of life, and influenced by a knowledge that the proceeding against the queen could not be carried beyond divorce. But his repeated and deliberate avowals to Dr. Munter do not (it must be owned) allow of such an explanation. Scarcely any supposition favorable to this unhappy prin- cess remains, unless it should be thought likely, that as Dr. Munter's narrative was published under the eye of her oppressors, they mighthave caused the confessions of Struensee to be inserted in it, by their own agents, without the consent, perhaps without the knowledge of Munter, whose subsequent life is so little known, that we cannot determine whether he ever had the means of ex- posing the falsification. It must be confessed, however, it is added, that internal evidence does not favor this hypothesis; for the passages of the narrative, which contain the avowals of Struensee, have a striking appearance of genuineness.

Their treatment of Matilda did not long prove advantageous to the queen dowager and her party. — Another revolution took place in April

1784, when the queen dowager's friends were removed, and a new council was formed tmder the sole auspices of the prince royal. After that period the king, who from the beginning of his reign showed a great degree of incapacity, was entirely detached from the government ; and the prince, who finally succeeded to the throne in 1808, conducted with great circumspection and ability the whole of the public affairs. The Danes took part with the late empress of Russia in her war with the Turks, the immediate oppo- nent of Denmark being Sweden, and, in 1801, acceded to the confederacy formed by the northern powers against the naval superiority of Great Britain, under the title of a Convention of Neu- trality. But this league was quickly dissolved by the appearance of Lord Nelson in the Baltic, who, in the battle of the 2d April of that year, forced the line of defence formed by the Danish fleet before Copenhagen, and compelled the Danes to agree to a cessation of arms, in order to pre- serve their capital. In this short war they lost their islands in the West Indies, and the settle- ment of Tranquebar, on the coast of Coromandel. But the dispute between England and the northern powers being soon after amicably adjusted by a treaty, their foreign possessions were restored to them. We have noticed a

second rupture be- tween Denmark and Great Britain in 1807, and its fatal consequence to the commerce of the for- mer. In fact it led also to the still more humilia- ting result of the dismemberment of Norway. For in the united efforts of the allies to crush the power of Buonaparte, this country and Russia both came into that arrangement with the crown prince of Sweden, which terminated in his tak- ing possession of this oid appendage of Den- mark.

The language of Denmark is a dialect of the Teutonic, and bears a strong affinity to that of Norway : it is disagreeable to strangers on ac- count of the drawiing tone with which it is pro nounced. Many words have been borrowed from the German, and the Dutch is often used in com- mon discourse. French also is well understood, and frequently spoken by all classes.

DENNIS (John), once a critic of celebrity, the son of a tradesman in London, was born in 1657. He received the rudiments of his edu- cation at Harrow, and took his degree of A. B at Caius College, Cambridge, after which he made the tour of Europe. On his return he became acquainted with Dryden, Wycherley, Congreve, and Southern; whose conversation inspiring him with a passion for poetry, and the belles lettres, diverted him from the exercise of any profession. His zeal, however, for the pro- testant succession recommended him to the duke of Marlborough, who procured him a place in the customs worth £120 per annum; which he enjoyed for some years, till, by want, of economy, he was obliged to dispose of it to satisfy some pressing demands. In 1704 came out his fa- vorite tragedy, Liberty Asserted ; in which were so many strokes on the French nation, that he had worked himself into a persuasion, that the king of France would insist on his being delivered up, before he would consent to a peace ; and when the congress was held at Utrecht, he is said

to have waited on his patron, the duke of Marl- borough, to desire that no such article might be stipulated. The duke told him he really had no interest with the ministry ; but had made no such provision for his own security, though he could not help thinking he had aone the French as much injury as Mr. Dennis. Dennis, partly through a natural petulance of temper, and partly to procure the means of subsistence, was con- tinually engaged in paper wars with his contem- poraries. His attacks on distinguished authors were numerous, among whom were Addison, Steele, and Pope. In the close of his days a play was acted for his benefit, at the little theatre in the Hay- market ; when Pope, notwithstanding his previous gross abuse of him, even wrote a prologue to the play. He died on the 6th of January, 1733. As a dramatic author, it was justly said of him by a wit, that he was the most complete instructor for a dramatic poet, since he could teach him to distinguish good plays by his precepts, and bad ones by his ex- amples.

DENOMINATE, v. a.ˆ Fr. denominer ; DENOM'INABLE, adj. I Span. denomindr ; DENOMINATION, n.s. Sltal. and Lat. deno- DENOM'INATIVE, adj. Lminare; from de DENOMINATOR, n. s. J and nomino, nomen, a name. To give name to. Denominable sig- nifies, that may be named; denomination the name given : denominative, that which gives a name; characteristic: denominator, the giver of a name, or a particular number in the doctrine of fractions. See FRACTIONS.

DENON, Dominique V7ivant, baron de, was born Feb. 4, 1747, at Chalons-sur-Saone, of a noble family. He was destined to study law at Paris, where he was favorably received in so- ciety ; and his talent and inclination led him to devote himself to the arts. A comedy which he wrote, called the Good Father, gained him the favor of the ladies. His amiable manners made him a favorite of Louis XV., who appointed him gentilhomme ordinaire about his person. lie was afterwards attached to an embassy at St. Peters- burg, where Catherine, however, observed him with a jealous eye. Subsequently he was in- trusted with a diplomatic mission to Switzerland. On this occasion, he drew Voltaire's likeness (engraved by St. Aubin), and the well known picture Le Dejeuner de Ferney. He then oc- cupied, during seven years, a place in the French embassy at Naples. His residence in this city, and repeated visits to Sicily and Malta, gave him an opportunity of exercising his talent for draw- ing and engraving. Denon had the principal direction of the artists engaged in preparing the abbe St. Non's Voyage Pittoresque de Naples et de Sicile, and the text was chiefly taken from his journal. This elegant work appeared at Paris in 1788. The remainder of Denon's journal, relating to Sicily and Malta, appeared separately, in 1788. His career at Naples was interrupted by the death of the minister Ver- gennes, his patron, or, according to some, by the displeasure of the queen, Maria Caroline. But still his love for the study of the great masters detained him in Italy. He resided at Venice during several years, where he shone in the

circles of the countess Albrizzi, who was dis- tinguished for her amiable and intelligent cha- racter, and loved to be surrounded by men of talent. Denon was not forgotten in her Rittratti, where she bestows the greatest praise on his cha- racter, his passion for the arts, his cheerfulness, and amiable disposition, and excuses the raillery with which he attacked the foibles of others. The observation a,nd restraint, to which the revo- lution subjected Frenchmen in foreign countries, compelled him to leave Venice.

After a short stay in Florence and Switzerland, he was obliged to return to France during the reign of terror; but he made himself agreeable to Robespierre, and was, in consequence, subsequently accused of devotion, at that time, to Jacobin principles. During this period he exercised himself in en- graving. At last, he became acquainted with Buonaparte, and immediately united himself with him. He accompanied the general in his campaigns to Italy and Egypt, and Desaix to Upper Egypt. The work which was the result of this journey, was an addition to Denon's fame, particularly the engravings which orna- ment it (Paris, 1802, 2 vojs. fol., and 3 vols. 12ino., without engravings). Denon, in this, has shown himself a very able artist. Nature, animate and inanimate, the monuments of cen- turies, and the Arabian flying through the de- sert, are represented with great fidelity. When he returned to Paris with Buonaparte, he was appointed general director of the museums, and all the works of art executed in honor of the French successes — monuments, coins, the erec- tion of the triumphal pillar in the place de Ven- dome, &c. He accompanied Napoleon in all his campaigns, and employed himself in draw- ing, and in selecting those masterpieces in the conquered countries, which were taken to Paris as trophies. In 1815, he was compelled to wit- ness the restoration of the spoils. After the ab- dication of the emperor, he retained his office, hut was deprived of it in 1815, in consequence of having joined Napoleon on his return from Elba. He retained, however, his place in the institute. From that time he lived retired, and the preparation of engravings and lithographs of his splendid collection of works of art, formed the occupation of his last years. He died at Paris, April 28, 1825. His mind was active to the last. Denon much resembled Voltaire in his old age. In 1826 appeared at Paris the De- scription des Objets d'Art composant le Cabinet de feu M. le Bar. V. Denon, in 3 vols. (Monu- mens antiques, tableaux et estampes). The cabinet was sold by auction.

DENOTE, v. a. { Lat. denoto, to mark ;

DENOTATION, n. s. i to be a sign of; to be- token ; to show by signs : the act of denoting ; a symptom

DENOUNCE, v. a. 3 Fr. denoncer ; Span.

DENOUNC'EK, n. s. Idenunciar ; Ital. denon-

DENOUNCE'MENT. J dare ; Lat. denunciare, from de against, and nuncio, to carry orders. To threaten or impugn by public or open proclama- tion. Denouncement is the proclamation made.

DENSE, adj.) Lat. densus, close ; com-

DENS'ITY, n. s. i pact ; approaching to so- lidity.

DENSITY, denotes vicinity or closeness of par- ticles; but in mechanical science, it is used as a term of comparison, expressing the proportion of the number of equal moleculae, or the quantity of matter in one body to the number of equal moleculae in the same bulk of another body. Density, therefore, is directly as the quantity of matter and inversely as the magnitude of the body. Since it may be shown experimentally, that the quantities of matter, or the masses in different bodies, are proportional to their weights ; of consequence the density of any body is directly as its weight, and inversely as its magnitude ; or, the inverse ratio of the magnitudes of two bodies, having equal weights, in the same place, con- stitutes the ratio of their densities.

DE'NSHIRE, v. a. A barbarous term of husbandry.

DENTAL, adj. & n. s.^\ From Lat. dentalis,

DENTI'CULATION, n. s. dens, dentis, a tooth.

DENTI'CULATED, adj. \ Dental is, relating

DENT'IFRICE, n. s. J>-to the teeth, and the

DENT'ISE, v. a. , I name of a small

DEN I'IST, n. s. \ shell-fish : denticu-

DENTI'TION. J lated, being set with

teeth, like a saw: dentifrice, a tooth powder:

denlise, to renew the teeth ; dentition being the

corresponding substantive : and dentist, a modern

word for the profession of healing, preserving,

and drawing teeth.

DENTALIUM, in natural history, a shell-fish belonging to the order of vermes testacea. The shell consists of one tubulous straight valve, open at both ends, and not divided into chambers. There are twelve species, distinguished by the angles, string, &c., of their shells.

DENTARIA, tooth-wort, or tooth-violet, in botany, a genus of the siliquosa order, and te- tradynamia class of plants ; natural order, thirti- eth,

siliquosae. The siliqua parts with a spring, and the valvules roll spirally backwards ; the stigma is emarginated ; the calyx closing longi- tudinally. There are five species, all of them hardy perennials ; producing annual stalks twelve or eighteen inches high, adorned with many lobed leaves, and spikes of quadrupetalous cruciform flowers of a red or purple color. They delight in shady places, and are propagated either by seeds or parting the roots. The seeds may be sown in autumn or early in the spring, in a shady border of light earth ; and when the plants are three inches high, they may be planted where they are to remain. The time for parting the roots is in October or November, or early in the spring.

DENTATUS (Curius), a renowned Roman general, whose virtues render him more memo- rable than his victories, flourished A. A. C. 272. He was thrice consul ; conquered the Samnites, Sabines, and Lucanians ; and gave each citizen forty acres of land, allowing himself no more. The ambassadors of the Samnites making him a visit, found him boiling turnips in a pipkin ; upon which they offered him gold to come over to their interest : he told them his design was not to grow rich, but to command those who were so. He defeated Pyrrhus near Tarentum, and received the honour of a triumph.

DENTATUS (Sicinius), a hero of ancient Rome, of the plebeian order, who flourished about A.U C. 300. When disputes ran high between the patricians and plebeians, concerning the Agra- rian law, Dentatus addressed the people, and expatiated upon his achievements and his hard- ships. He had served his country in the wars forty years ; he had been an officer thirty ; first a centurion and then a tribune ; he had fought in 120 battles, and by the force of his single arm had saved the lives of a multitude of his fellow citizens. He had gained fourteen civic, five mural, and eight golden crowns ; besides eighty- three chains, sixty bracelets, eighteen gilt spears, and twenty-three horse-trappings, of which nine were for killing the enemy in single combat: and he had received forty-five wounds, all before, none behind. These were his honors ; yet not- withstanding all this, he had never received any share of those lands which were won from the enemy, but continued to drag on a life of poverty and contempt, whilst others possessed those very territories which his valor had won, without any merit to deserve them, or ever having contributed to the conquest. The people unanimously de- manded that the law might be passed, and that such high merit should not pass unrewarded. Some of the senators attempted to

speak, but were overpowered by the cries of the people. At last a number of resolute young patricians rushing furiously amongst the crowd, broke the balloting urns, and dispersed the multitude. For this riot they were fined by the tribunes, but they gained their object for the time, by getting the Agrarian law postponed. Such was the justice of the Roman patricians, at one of the most virtuous periods of that celebrated republic.

DENTELLA, in botany, a genus of the mo- nogynia order, and pentandria class of plants : CAL. a five-parted perianth, with small subulated leaves ; STAM. five short subulated filaments ; ANTH. small ; PERICARP, globular ; CAPS, bilocu- lar; SEED, egg shaped, and very numerous. Species one only, a native of New Caledonia.

DENTE'LLT, n. s. Ital. Modillons.

The modillions, or dentelli, make a noble show by graceful projections. Spectator, No. 415.

DENTILES, or DENTILS, in architecture, an ornament in cornices bearing some resemblance lo teeth, particularly used in the Ionic and Corin- thian orders.

DENTISCALPRA, in surgery, an instrument for scouring yellow, livid, or black teeth ; to which being applied, near the gums, it scrapes off the foul morbid crust.

DENTITION. See ODONTOLOGY.

1JEJNU 1JE, v. a. ˆ Lat. denude, from de DENU'DATE, v. a. Sand nudo (ne and duo DENUDA'TION, n. x. j the root of induo to clothe). To strip; to make naked.

Till be has denudated himself of all incumbrances, he is unqualified. Decay of Piety.

Not a treaty can be obtained, unless we would de- nude ourselves of all force to defend us. Clarendon.

If in summer-time you denude a vine-branch of its leaves, the grapes will never ceme to maturity.

Ray on the Creation.

VVII.

DENUNCIATION, n. s.) Lat. denunaatia.

DENUNCIATOR, n.s. $ See DENOUNCE

The act of denouncing ; the proclamation of a threat ; a public menacer.

In a denunciation or indiction of a war, the war is not confined to the place of the quarrel, but is left at large. Bacon.

Christ tells the Jews, that, if they believe not, they shall die in their sins ; did they never read those denunciations ? Ward.

Midst of these denunciations, and notwithstanding the warning before me, I commit myself to lasting durance Congreve.

The denunciator does not make himself a party in judgment as the accuser does. Ayliffe's Parerg.

DENY', «. a. ~\ Fr. nier ; Span, denegar ;

DENI'AL.TI j. >Ital. and Lat. negare ; from

DENI'ER, 9 Lat. ne and ago, to refuse to

do. To refuse ; contradict ; and hence to dis- regard j denounce.

If we denyen he schal denye us ; if we bileeuen not he dwellith fcithful he mai not denye himsilff.

Wiclif, 2 Tymo. 2.

It shall be therefore a witness unto you, lest you deny your God. Joshua xxiv. 27.

And therfor, though he had thus made a realme, holy Scripture denyid to cal hym a kyng. Fortesque.

The denial of landing, and hasty warning us away, troubled us much. Bacon.

My young boy

Hath an aspect of intercession, which Great nature cries — deny not. Shakspeare.

Here comes your father ; never make denial : I must and will have Catherine to my wife. Id.

It may be I am esteemed by my denier sufficient of myself to discharge my

duty to God as a priest, though not to men as a prince. King Charles.

How unworthy is he of life, who with the same breath that he receives, denies the Giver of it.

Bishop Hall. Contemplations.

The negative authority is also deniable by reason.

Brotene.

Ah, charming fair, said I, How long can you my bliss and yours deny ?

Dryden.

We may deny God in all those acts that are capa- ble of being morally good or evil : those are the proper scenes in which we act our confessions or de- nials of him. South.

The best sign and fruit of denying ourselves, is mercy to others. Spratt.

Our Saviour assures us, that if a tender mother cannot deny the son of her love any reasonable re- quest, much less will God deny his Holy Spirit to them that ask him. Clarke's Sermons.

No man more impudent to deny, where proofs were not manifest ; no man more ready to confess, with a repenting manner of aggravating his own evil, where denial would but make the fault fouler.

Sidney.

By the word Virtue the affirmer intends our whole duty to God and man, and the denier by the word Virtue means only couiage, or, at most, our duty towards our neighbour, without including the idea of the duty which we owe to God. Watt.*

If you had been contented to assist him indirectly, without a notorious denial of justice, or openly insult- ing the sense of th-; nation, you might have satisfied every duty of political friendship. Junivs.

It has been asserted, that, if you alter her symbols, you alter the being of the church of England. This, for the sake of the liberty of that church, I must ab- solutely deny.

Bur/it.

DEO

I have gnashed

My teeth in darkness till returning morn, Then cursed myself till sun-set ; — I have prayed For madness as a blessing — 'tis denied me. Byron.

DENYS (St.) a town of France, in the depart- ment of Paris, famous for a magnificent church, built by king Dagobert, in 632; in which were the tombs of many of the French kings, of the constable Guesclin, and of marshal Turenne. In ihe treasury, among other curiosities, were the swords of St. Lewis, and the Maid of Orleans, and the sceptre of Charlemagne. The abbey of the Benedictines, a magnificent piece of modern architecture, has more the appearance of a palace than a convent. In 1793 the republican popu- lace broke into the royal tombs, and greatly dilapidated the buildings. In 1806 Bonaparte caused them to be repaired, selected the church as the burying-place for his own family, and founded a chapter here of ten canons, which the Bourbons have retained with some modifica- tions. The late prince of Conde has been in- terred here since the return of Louis XVIII. St. Denys is seated on the river Crould, near the Seine, five miles north of Paris, and contains 6000 inhabitants.

DEOBSTRUCT, v. a. > From de privative, DEOBSTRU'ENT, adj.) and OBSTRUCT, which see. To clear away obstacles ; deobstruent is, having the power to remove obstructions.

It is a singular good wound-herb, useful for deob- itructimj the pores of the body.

Morc's Antidote against Atheism.

Such as carry off the faeces and mucus, deubstruct the mouth of the lacteals, so as the chyle may have a free passage into the blood. Arbuthnot on Diet.

All sopes are attenuating and deobstruent, resolving viscid substances. Id. on Aliments.

DE'ODAND, n. s. Lat. Deo dandum. A thing given or forfeited to God.

Deodandt are forfeitures which the ignorance and superstition of ancient times introduced and called by the name of deodandi, from the application of them to pious uses. Burn's Justice.

D'EON (the Chevalier), bora in 1728, at Tonnere, in Burgundy, of a respectable family, is principally distinguished for consenting to ap- pear half his life as a woman. He received a liberal education ; and, becoming an orphan, the Prince de Conti procured him a commission as a cornet of dragoons. He was employed in 1755 on a mission to Petersburg, after which he joined his regiment, and served with considerable credit in the campaigne of 1762, as aid-de-camp to Marshal Broglio. The year following he was in- vested with the order of St. Louis, and accom- panied the duke de Nivernois to England as se- cretary. On the duke's leaving England, D'Eon remained in the character of minister plenipo- tentiary, until he was superseded by the count de Guerchy, to whom he was appointed secretary. At this arrangement he was very indignant, and published in revenge an account of the negocia- tions in which he had been engaged ; wherein he stigmatized the conduct of the count. HP. was prosecuted by de Guerchy for a libel in the Court of King's Bench, in July, 1764, and being found guilty absconded, and was outlawed.

In 1771 doubts were entertaine-1 concerning his sex, and bets were laid to a great amount that D'Eon was a woman. In one instance this produced an action at law, that ended in a non- suit. The chevalier in the mean time returned to France, where he assumed (compulsorily it is said) the female dress, but for what reason ex- actly has never been ascertained ; his conduct in this respect was certainly sanctioned by his court, which continued his pension, and suffered him to retain the cross of his order.

In 1785 D'Eon came to England, where, still appearing as a woman, he gave lessons in fencing ; but when the Revolution deprived him of his pensions, he presented in June 1792 a petition to the National Assembly, in which he com- plained of being obliged to wear a cap and pet- ticoats, and asked permission to resume his mili- tary uniform. His petition remained unnoticed. He now again sought an asylum in London, where he passed the latter part of his life in poor circumstances ; and died in New Millman-street, May 21st, 1810. His confessor, father Elyse'e, discovering that the chevalier was of the male sex, after his decease invited some medical and other gentlemen to examine the corpse. He was interred in St. Pancras church-yard, where he is registered, ' Charles Genevieve Louise Auguste Andre Timothee D'Eon de Beaumont.' He is said to have been the author of L'Espion Chinois, 6 vols. 12mo. ; Loisirs, 13 vols. 8vo. ; Lettres, Memoires, et Negociations particulieres.

DEO'PPILATE, v. a. Lat. de and oppilo. To clear a passage; to free from obstructions.

Though the grosser parts be excluded again, yet are the dissoluble parts extracted, whereby it becomes effectual in deoppUationt. Browne's Vulgar

Errours.

A physician prescribed him a deoppilatne and pur- gative apozem. Harvey.

DEOSCULATION, n. s. Lat. from de and osculum (os, oris, the mouth). Kissing.

We have an enumeration of the several acts of worship required to be performed to images, viz. pro- cessions, genufluxions, thurifications, and deosculatiota

Stilling/fleet.

DEPA'INT, v. a. or DEPEINCT, as Spenser aiso writes it. Fr. depeint ; de, and PAINT, which see. To picture ; to describe by colors ; to show by resemblance.

He did unwilling worship to the saint, That on his shield depainted he did see.

Spenser,

The red rose medlied with tb white y fere, In either cheek depeincten liveiy here. Id.*

Such ladies fair would I depaint. In roundelay, or sonnet quaint. Gay.

DEPART ,. a. & n. & n. s.-v Fr. departer ; DFPA RT'ER, I Span, partirse ;

DEPARTING, n. s. >It.partisi ."rom

DEPARTMENT, I Lat.pars,partis ;

DEPART'URE. ./a part; Heb.

*D*tt> (to divide). To separate; to part. As a neuter verb, to quit a place, taking/rom after it ; to desert ; to fall away ; to be lost ; to die ; hence to desist from a practice and to revolt. Depart- ing and departure both express the act of going away, and abandoning, or death. Department*

is principally a continental division of territory, hut has also a general

application.

And alle folkis schulen be gederid bifore him ; and he schal departe hem atwynne, as a scheparde de- partith scheep fro kid.s. Wiclif. Matt. 25.

I N. take tb.ee N. to my wedded wife, to love and to cherish, till death us depart.

Old Family Prayer Booh, (1661).

As her soul was in departing ; fo> she died.

Gen. xxxv. 18.

They departed quickly from the sepulchre, with fear and great joy, and did run to bring his disciples word. Matt, xxviii.

Lord, now lettest thou thv servant depart in peace, according to thy word. Luke xxix.

The chymists have a liquor called water of de part,

Bacon.

He, which hath no stomach to this fight, Let him depart; his passport shall be made.

Shakspeare.

As you wish Christian peace to souls departed, Stand these poor people's friend. Id.

When your brave father breathed his latest gasp, Tidings, as swiftly as the post could run, Were brought me of your loss ana his depart.

Id. Henry VI.

You've had dispatch in private by the consul ; You are willed by him this evening To depart Rome. Ben Jonson.

What besides

Of sorrow, and dejection, and despair, Our frailty can sustain, thy tidings bring ; Departure from this happy place. Milton.

His majesty prevailed not with any of them to de- part from the most unreasonable of all their demands.

Clarendon.

The fear of the Lord, and departure from evil, are phrases of like importance. Tillotson.

And couldst thou leave me, cruel, thus alone ; Not one kind kiss from a departing son ! No look, no last adieu ! Dryden.

Happy was their good prince in his timely depar- ture, which barred him from the knowledge of his son's miseries. Sidney.

The Roman fleets, during their command at sea, had their several stations and departments ; the most considerable was the Alexandrian fleet, and the se- cond was the African. Arbuthnot.

The gentlemen, his particular friends, in various departments of ministry, &c.

Burke. Character of Lord Chatham. For a departing being's soul

The death-hymn peals, and the hollow bells knoll.

Byron.

DEPARTMENT. This word was adopted by the national assembly of France instead of pro- vince, when the ancient provinces of that king- dom were divided into departments, of which, including Corsica, there were eighty-three. These departments were much more equal in point of extent than the provinces ; some of the old extensive provinces being divided into four or five departments, whilst some of the smaller ones constitute exactly one, and in some instances two provinces are included in one department. Each department has been subdivided into dis- tricts, and each district again into cantons.

DEPARTURE, in navigation, is the easting or westing of a ship in respect of the meridian ;t

departed or sailed from ; or it is the difference of longitude, either east or west, between the present meridian th° ship is under, and that where the last wko7iing or observation was made. This departure, any where but under the equator, must bf> rounted according to the number of miles in a degree proper to the pa- rallel the ship is under. The departure, in plane and Mercator's sailing, is always represented by the base of a right-angled plane triangle, where the course is the angle opposite to it, and the dis- tance sailed is the hypothenuse ; the perpendi- cular or other leg being the difference of latitude. And then the theorem for finding it is always this : as

radius to the sine of the course ; so is the distance sailed, to the departure sought.

DEPASTURE, v. a. Lat. depascor ; de and pasco, from Gr. Traw. To feed ; to eat up.

They keep their cattle, and live themselves, in bodies pasturing upon the mountains, and removing still to fresh land, as they have depastured the former.

Spenser.

DEPAU'PERATE, v. a. Lat. depaupero; de and pauper. To make poor; to impoverish ; to consume.

To represent God in a carved stone, or a painted table, does depauperate our understanding of God, and dishonours him below the painter's art. Bp. Taylor.

Great evacuations, which carry off the nutritious humours, depauperate the blood. Arbuthnot.

DEPE'CTIBLE, adj. Lat. depecto. Tough ; clammy ; tenacious ; capable of being extended .

It may be also, that some bodies have a kind of lentor, and are of a more depectible nature than oil, as we see it evident in coloration ; for a small quan- tity of saffron will tinct more than a very great quan- tity of brazil or wine. Bacon.

DEPEND', v. a. ~} Fr. dependre, de-

DEPEND'ANCE, n. s. I pendance; Span, and

DEPEND'ANT, adj. & n.s. I Port, depender ; of

DEPENDENCE, ,'Lat. dependere; de

DEPENDENCY, j andpendeo. To hang

DEPENDENT, adj.&cn.s.j down, or from ;

hence, to be connected with, so as to be subject

to the will of, or be supported by, another;

and to be in suspense, whether of interest or

attention. Dependance and dependence, the

one from the older French and the other from the

Latin verb, are both used in the literal as well as

figurative sense.

On God, as the most high, all inferior causes in the world are dependent. Hooker.

Never be without money, nor depend upon the courtesy of others, which may fail at a pinch. Bacon.

Never was there a prince bereaved of his dependan- cies by his council, except where there hath been either an over-greatness in one counsellor, or an over- strict combination in divers. Id.

By no means be you persuaded to interpose your- self in any cause depending, or like to be deprnding, in any court of justice. Id.

We work by wit and not by witchcraft ; And wit depends on dilatory time. Shaktpeare.

Her madness hath the oddest frame of sewe ; Such a dependency of tiling on thing, As ne'er I heard in madness. /"•

M 2

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J)EP

A great abatement of kindness appears as well in the genera! dependants, as in the duke himself also, and your daughter. Shakspeare.

What shall though expect, To be depender on a thing that leans ? Id.

How dependant and servile is the life ot man, that annot either want one element, or endure it corrupted.

Bishop Hall. Contemplations.

For a six-clerk a person recommended a dependant upon him, who paid six thousand pounds ready money. Clarendon.

From the frozen beard

Long icicles depend, and crackling sounds are heard.

Dryden.

They slept in peace by night, Secure of bread, as of returning light ; And with such firm dependence on the day, That need grew pampered, and forgot to pray. Id. Every moment we feel our dependance upon God, and find that we can neither be happy without him, nor think ourselves so. Tillotson.

In all sorts of reasoning, the connexion and depen- dance of ideas should be followed, till the mind is brought to the source on which it bottoms. Locke.

We speak of the sublunary worlds, this earth, and its dependencies, which rose out of a chaos about six thousand years ago. Burnet's Theory.

The expectation of the performance of our desire, is that we call dependence upon him for help and assist- ance. Stillingfleet,

There is a chain let down from Jove, 80 strong, that from the lower end, They say, all human things depend. Swift.

The judge corrupt, the long depending cause, And doubtful issue of misconstrued laws. Prior.

The direful monster was afar descried, Two bleeding babes depending at her side. Pope.

But if you're rough, and use him like a dog, Depend upon it — he'll remain incog. Addison.

We are indigent, defenceless beings ; the creatures :f his power, and the dependents of his providence.

Rogers.

This is not like the tribute which earthly kings exact ; who as much depend upon their subjects for the support of their power, as their subjects do upon them for the protection of their property. Mason.

Thus happiness depends, as nature shows, Less on exterior things than most suppose. Cowper.

MAN. Think'st thou existence doth depend on time ? It doth ; but actions are our epochs, Byron.

DEPERDITION, n. s. Lat. deperdo ; de and verdo ; Gr. irtpQu ; to lose or waste. Loss ; destruc- tion.

It may be unjust to place all efficacy of gold in the non-omission of weights, or deperdition of any ponder- ous particles. 'Browne.

DEPHLE'GM, or } Low Lat. de-

DEPHLEG'MATE, v. a. fphlegmo. To clear

DEPHLE'GMEDNESS, n. s. j from phlegm, or aqueous insipid matter.

We have sometimes taken spirit of salt, and care- fully dephlegmed it. Boyle.

In divers cases it is not enough to separate the aque- ous parts by dephlegmation ; for some liquors contain also an unsuspected quantity of small corpuscles, of somewhat an earthy nature, which, being associated with the saline ones, do clog and blunt them, and thereby vraken their activity. Id.

The proportion betwixt the coralline solution and

the spirit of wine, depends much upon the strength of the former liquor, and the dephlegmedness of the latter.

Id.

DEPHLOGISTICATED \IR. See OXY- GEN.

DEPICT ; Lat. depingo, depictus, from de and pingo, pictus ; to paint; describe.

The cowards of Lacedemon depicted upon their shields the most terrible beasts they could imagine.

Taylor.

When the distractions of a tumult are sensibly depicted, every object and every occurence are so pre- sented to your view, that, while you read, you seem indeed to see them. Felton.

In a cottage by night may I pass the soft time,

In the field and the meadows all day ; With the wife of my heart, whose charms, in their prime,

Depict her as blooming as May. Brerewood.

DEPIL'ATORY,n. s.) Lat. de privative DEPI'LOUS,O

That which takes off the hair. Without hair.

This animal is a kind of lizard, or quadruped, cor- ticated and depilotu ; that is, without wool, fur, or hair. Browne.

DEPILATORY MEDICINES, those applied to take off the hair; such are lime, and other caustic substances, which ought to be used with great caution. Unless they destroy the skin, the roots of the hair remain unaffected, and it will grow again.

DEPLETION, n. s. Lat. depleo, depletus. The act of emptying.

DEPLORE', v. a. } Fr. deplnrcr ; Sp-attd

DEPLOR'ABLE, adj. \ Port.dephrar ; It. aud

DEPLOR'ABLENESS,n.». (Lat. dfplorare,' from

DEPLOR'ABLY, adv. [de and ploro, to weep.

DEPLOR'ATE, To lament ; mourn ;

DEPLORA'TION. J bemoan ; deplorable,

and deplorate, lamentable ; that which is to be

bemoaned.

This was the deplorable condition to which the king was reduced. Clarendon.

The bill of all weapons gives the most ghastly and deplurable wounds. Temple.

But chaste Diana who his death deplored,

With ^-Esculapian herbs his life restored. Dryden,

The case is then most deplorate when reward goes over to the wrong side. L'Estrange.

Notwithstanding all their talk of reason and philo- sophy, God knows, they are deplorably strangers to them. South.

It will be considered in how deplorable a state learn- ing lies in that kingdom. Swift. A third's all pallid aspect offered more

*The traits of sleeping sorrow, and betrayed, Through the heaved breast, the dream of some far shore *

Beloved and deplored. Byron.

DEPLUME', v. a.) Lat deplumalio. To DF.PLUMA'TION, n. s. \ pluck ; offend. A pluming, or plucking off the feathers : in sur- gery, a swelling of the eyelids, accompanied with the fall of the hairs from the eye-brows.

DEPONE', v. a. } Lat. depono, de and pono,

DEPO'NEXT, n. s. 3 to lay down. To state on

oath, in law. To pledge or adventure any thing

on some scheme of success. A particular kind

of verb. Sˆe the extract.

In chancery — such witness (who answers interro- gatories), is called a deponent. Cuwell.

On this I would depone As much as any cause I've known. Hudibras.

Such verbs as have no active voice are called de- ponents, and generally signify action only ; as fateor, I confess. Clarke's Latin Grammar.

DEPOPULATE, v. a. & v. n. j Fr. de- DEPOPULA'TOR, n. s. gpeupler; It.

DEPOPULATION, j dispopolare,

from Lat. depopulare (de. and populo), to ravage.

To destroy the people of a country; to ravage.

As a neuter verb, to become dispeopled. A

depopulator is a destroyer or waster of inhabited

countries.

He turned his arms upon unarmed and unprovided people, to spoil only and depopulate, contrary to the laws both of war and peace. Bacon.

Where is this viper, That would depojndate the city, and Be every man himself ? Shakspeare.

How didst thou grieve then, Adam ! to behold The end of all thy offspring, and so sad Depopulation! thee another flood, Of tears and sorrow a flood, thee also drowned And sunk thee as thy sons. Milton

A land exhausted to the last remains, Depopulated towns and driven plains. Dryden.

Grim death ia different shapes Depopulates the nations. Philips.

Remote thou nearest the dire effect of war, Depopulation. Id.

This is not the place to enter into an enquiry •whether the country be depopulating. Goldsmith.

DEPO'RT, v. a. Si.n.s.1 Fr. deporter, de- DEPORT'MENT, n. s. J portment ; Ital. de- portamento, from Lat. portare ; Gr. 0oprw, to carry one's self. To behave, demean ; generally used with a compound pronoun.

I will but sweep the way with a few notes, touching the duke's own deportment in that island. Wotton.

She Delia's self Tn gait surpassed and goddess-like deport.

Milton.

The coldness of his temper, and the gravity of his deportment, carried him safe through many difficulties, and he lived and died in a great station. Swift.

Let the ambassador deport himself in the most graceful manner before a prince. Pope.

What's a fine person, or a beauteous face, Unless deportment gives them decent grace ? Blessed with all other requisites to please, Some want the striking elegance of ease.

Churchill.

DEPORTATION, Lat. deportatio, of de and portare.

An abjuration, which is a deportation for ever into a foreign land, was anciently with us a civil-death.

Ayliffe.

DEPO'SE, v. a. "1 Fr. deposer ; Ital. deporre ;

DEPOS'ING, n. s. >Span. deponer ; Lat. depo-

DEPOSI'TION. J nere, depositus, from de and

pono, to place. Hence, to swear, because by so

doing a man deposits or pledges his faith to the

truth of his declaration. To lay down, lodge;

to degrade, deprive of; and generally, to lay

as:de, lay up.

First, of the king ; what shall of him become ? The duke yet lives that Henry shall depots

Shakspeare.

There shouldst thou find one heinous article, Containing the deposing of a king. Id.

According to our law,

Depose him in the justice of his cause. Id. Love straight stood up and deposed, a he could not come from the mouth of Zelmane. Sidney.

Its shores are neither advanced one jot farther into the sea, nor its surface raised by additional mud de- posed upon it by the yearly inundations of the Nile.

Woodward.

If you will examine the veracity of the fathers by those circumstances usually considered in depositions, you will find them strong on their side.

•Sir K. Digby.

A witness is obliged to swear, otnerwise his deposition is not valid. Ayliffe.

His [James II.] conduct and the passage of Charles the Second's reign,

might rankle still at the hearts of some men, but could not be set to account among the causes of his deposition. Bolingbroke.

DEPO'SITE, v, a. &cn.s.ˆ For etymon, DEPOSITARY, £ see DEPOSE. To

DEPOSI'TORY. 3 lay up. The

place of deposit is a depository; and a person in

trust is a depositary.

I gave you all.

— Made you my guardians, my depositaries, But kept a reservation to be followed With such a number. Shakspeare.

The Jews themselves are the depositories of all the prophecies which tend to their own confusion.

Addison.

They had since Marseilles, and fairly left it : they had the other day the Valtoline, and now have put it in deposite. Bacon.

God commands us to return as to him, to the poor, his gift", out of mere duty and thankfulness : not to deposit them with him, in hopes of meriting by them.

Sprat. The eagle got leave here to deposit her eggs.

L'Estrange.

The difficulty will be to persuade the depositing of those lusts, which have, by I know not what fascina- tion, so endeared themselves. Decay of Piety.

DEPOSITION. The proof in the high court of chancery is by the depositions of witnesses ; and the copies of such regularly taken and published, are read as evidence at the hearing. For the purpose of taking deposition in or near London, there is an examiner's office appointed ; but for such as live in the country, a commission to examine witnesses is usually granted to four commissioners, two named on each side, or any three or two of them to take the depositions there. And if the witnesses reside beyond sea, a commission may be had to examine them there upon their own oaths ; and if foreigners, upon the oaths of two skilful interpreters. The commis- sioners are sworn to take the examinations truly and without partiality, and not to divulge them till published in the court of chancery ; and their clerks are also sworn to secrecy. The wit- nesses may be compelled, by a process of

sub- poena, as in courts of common law, to appear and submit to examination ; and when their de- positions are taken, they are transmitted to the

court with the same care that the answer of a defendant is sent. 3 Black. 455.

DEPOT denotes any particular place in which military stores are deposited for the use of the army. In a more extensive sense it signifies several magazines collected together for that pur- pose. It is likewise applied to any particular fort or place, appropriated for the reception of recruits to detached parties, belonging to different regiments. In England, the barracks near Maid- stone are depots for the British cavalry, and Chatham is allotted to the infantry. In the time of war the greatest attention should be given to preserve the several depots which belong to the righting army. Hence the line of operation should invariably be connected with them; or rather no advance should be made upon that line, without the strictest regard being had to the one of communication.

DEPOT is again used to denote a particular place at the tail of the trenches, out of the reach of the cannon of the place attacked ; where the troops generally assemble, when a sally from the besieged is suspected.

DEPOT also means a temporary magazine for forage, for fascines, gabions, tools for raining, &c., with such other articles necessary for the support of an army, or for carrying on a siege.

DEPRAVE', v. a. ~\ Fr. depraver ; Span.

DEPRAV'ER, n. s. j and Portug. depravdr ;

DEPRAVA'TION, J Ital. and Lat. depra-

DEPRAV'EDNESS, n.s. fvare, from de and pra-

DEPRAVE'MENT, vus, crooked. To cor-

DEPRA'VITY. J rupt, vitiate, calumni-

ate : he who corrupts is a depraver; depravement, depravation, depravedness, and depravity a cor- rupt, vitiated state ; depravation is used

by Shakspeare for calumny.

We admire the providence of God in the continu- ance of scripture, notwithstanding the endeavours of infidels to abolish, and the fraudulence of heretics to deprave, the same. Hooker.

Who lives that's not depraved, or depraves ?

Shakspeare.

Stubborn critics are apt, without a theme For depravation, to square all the sex. Td.

What sins do you mean ? Our original depraved- nets, and proneness of our eternal part .to all evil.

Hammond.

But from me what can proceed But all corrupt, both mind and will depraved ?

Milton.

He maketh men believe, that apparitions are either deceptions of sight, or melancholy depravements of fancy. Browne.

A taste which plenty does deprave, Loalhs lawful good, and lawless ill does crave.

Dryden.

We have a catalogue of the blackest sins that human nature, in its highest depravation, is capable of com- mitting. South.

This will be equivalent to the proposal made by Boileau to the academicians, that they should review all their polite writers, and correct such impurities as might be found in them, that their authority might not contribute at any distant time to the depravation of the language. Johnson. Plan of Dictionary.

If this be so, there must be a cause or causes for such a depravity in our common people. Franklin.

DEPRECATE, t>. «.ˆ From Lat. deprecari, DEPRECATION, n.s. I from de and precor, DEPRECATIVE, ad/'. \to pray. To pray DEPRECATORY, adj. I against : to beg oft', or DEPRECATOR, n. s. J from, apologetic. Bishop Fox understanding that the Scottish king was still discontent, being troubled

that the occasion of breaking off the truce should grow from his men, sent many humble and deprecatory letters to the Scot- tish king to appease him. Bacon.

I, with leave of speech implored, And humble deprecation, thus replied. Milton.

Sternutation they generally conceived to be a good sign, or a bad one ; and so, upon this motion, they commonly used a gratulation for the one, and a de- precation for the other. Browne.

In deprecating of evil, we make an humble ac- knowledgment of guilt, and of God's justice in chasti- sing, as well as clemency in sparing, the guilty. Grew.

Poverty indeed, in all its degrees, men are easily persuaded to deprecate from themselves. Rogers.

The judgments which , we would deprecate are not removed. Smalridge.

The Italian entered them in his prayer : amongst the three evils he petitioned to be delivered from, he might have deprecated greater evils.

Baker's Reflections on Learning.

DEPRE'CIATE, v. a.) Fr. deprecier, from DEPRECIATION, n. s.] Lat de priv. and prc- tiutn (from Gr. Trparqj, a seller) an equivalent given to the seller for his goods. To bringdown in price or value ; the act of lessening the value of, or underrating a thing.

They presumed upon that mercy, which, in all their conversations, they endeavour to depreciate and mis- represent. Addison.

As there are none more ambitious of fame, than those who are coiners in poetry, it is very natural for such as have not exceeded in it to depreciate the works of those who have. Spectator.

It has been held, indeed, by some of the judges (but certainly not by all of them, or at least not upon all occasions), that juries in favour of life, may fairly, in fixing the value of the property, take into their consideration the depreciation of money, which has taken place since the statutes passed .

Sir S. Romilly.

DEP'REDATE, v.a.~) Fr. depreder, from DEPREDA TION, > Lat. de and pnsdor, to

DEPREDA'TOR.) rob. To pillage, spoil;

devour. The substantives plainly follow this.

It maketh the substance of the body more solid and compact, and so less apt to be consumed and depreda- ted by the spirits. Bacon.

It is reported that the shrub called our Lady's Seal, which is a kind of brionv, and coleworts, set near together, one or both will die : the cause is for that they be both great depredators of the earth, and one of them starveth the other. Bacon.

The land had never been before so free from rob- beries and depredations as through his reign.

Wotton.

Were there not one wbo had said, Hitherto shall thou come, and no farther ; we might well expect such vicissitudes, such clashing in nature, and such depredations and changes of sea and land.

Woodward.

DEP 1G7

DEPREIIE'ND, v.a.) Lat. deprehendo,

DEPREHE'NSION. $ from de and prehen-

dere, to take. To catch; to take unawares; to take in the fact.

Who can believe men upon their own authority, that are once deprehended in so gross and impious an imposture ? More.

That wretched creature, being deprehended in that impiety, was held in ward. Hooker.

The motions of the minute parts of bodies, which do so great effects, are invisible, and incur not to the eye ; but yet they are to be deprehended by experience.

Bacon.

DEPRESS', v. a. & n. s.-\ Fr. deprimer ; It.

DEPRESSION, ˆand Lat. deprimere,

DEPRESS'OR, (fromdeorsum,down-

DEP'RIMENT. J wards, andprewzere,

to press ; — Minsheu. To press or push down ; hence to let fall ; to humble. Depressor and depriment, in anatomy, are terms applied to muscles whose action is to depress the parts to which they adhere.

Depression of the nobility may make a king more absolute, but less safe. Bacon.

Bricks of a rectangular form, if laid one by another in a level row between supporters sustaining the two ends, all the pieces between will necessarily sink by their own gravity ; and much more, if they suffer any depression by other weight above them. Wotton.

The same thing I have tried by letting a globe rest, and raising or depressing the eye, or otherwise moving it, to make the angle of a just magnitude.

Newton.

Others depress their own minds, despond at the first difficulty, and conclude that the making any progress in knowledge is above their capacities.

Locke.

Passion can depress or raise The heavenly, as the human mind. Prior. This mournful truth is every where confessed, Slow rises worth, by poverty depressed. Johnson.

DEPRIVE', v. a. ˆ fr.priver; Span, and DEPKIVA'TION, n. s. > Port, privar ; Ital. and DEPRIV'ABLE, adj. J Lat. privare; from de and privo. To bereave or depossess ; taking of after it ; hence to hinder, to debar from. Depri- vation has certain formal and legal applications; see below. Deprivable is that which may, in justice, be taken away.

God hath deprived her of wisdom, neither hath he imparted to her understanding. Job, xxxix. 17.

Most happy he,

Whose least delight sufficeth to deprive

Remembrance of all pains which him opprest.

Spenser.

They gather that enjoy them, (the church's grants) possess them wrongfully, and are deprivable at all hours. Hooker.

A minister, deprived for inconformity, said, that if they deprived him, it should cost an hundred men's lives. Bacon.

He lamented the loss of an excellent servant, and the horrid manner in which he had been deprived of him. Clarendon.

From his face I shall be hid, deprived

His blessed countenance. Milton.

Fools whose end is destruction, and eternal depriva- tion of being. Bentley.

DEP

Now wretched Oedipns, deprived of sight, Led a long death in everlasting night. Po]v.

I have no hope of a future existence except that which is grounded on the truth of Christianity ; I wish not to be deprived of this hope. "Bishop Watson.

DEPRIVATION, ECCLESIASTICAL, is of two kinds, viz. a beneficio, when for some crime a minister is for ever deprived of his living ; and ab officio, when a minister is for ever deprived of his order. It is the same with deposition and degradation. It is usually for some heinous crime deserving death, and is performed by the bishop in a solemn manner. See DEGRADATION.

DEPTFORD, a town situated on the Thames, partly in the county of Kent, and partly in Surrey. It derives its name from a deep ford over the Thames, formerly used, but now cleared. It was generally known in ancient records by the name of Deptford Strond. Deptford is now a large and populous town, though it has no mar- ket, and is divided into Upper and Lower Dept- ford. It contains about 3000 houses, many of which are neat and well built, two churches, several meeting-houses, and two charity schools. The greatest support and consequence of Dept- ford arises from its excellent docks. Here the royal navy was formerly built and repaired. The storehouses, which form a square, have, in the last war, had several additional buildings : the whole yard covers thirty-one acres of ground, containing two wet docks, one single, the other double, three slips, a basin, and two ponds for masts, with the various manufactories for anchors, cables, masts, blocks, &c.,and apartments for the numerous officers employed. Here the royal yachts are generally kept. Besides the national

docks, there are several others belonging to snip- builders for merchants' vessels. Near the dock formerly stood Says-Court, where Peter the Great resided for some time, and in this yard he completed his knowledge of the practical part of naval architecture. The Red-house, on tht north-west side of the dock, is a large collection of warehouses and storehouses for navy provi- sions. At Deptford, in 1515, was first formed the society of the Trinity House, by Sir Thomas Spert. There are annually relieved by this com- pany about 3000 poor seamen, their widows and orphans, at the expense of £6000. The gover- nors are invested with the power of examining the mathematical classes of Christ's Hospital, and the masters of his Majesty's ships ; and have the appointment of all pilots ; erecting and maintaining lighthouses, buoys, beacons, &c. Theii business was formerly carried on in a hall in the parish of Deptford Strond ; but it is now conducted in a spacious building near the Tower, erected in 1787. This town is four miles east of London.

DEPTH, n. s. Belg. diepte; Teut. tie/. See DEEP. The measure of deepness; hence a deep place ;, the sea, an abyss, a quiet place, or season ; and, figuratively, obscurity and sagacity. The plural, depths, is very frequent in the received translation of the Bible.

The depths have covered them : they sank into the bottom as a stone. Exod. xv. 5.

As for men, they had buildings in many places higher than the depth of the water. Baco".

Thou spirit, –

-Inspire,

As thou an wont, my prompted song, else mute, And bear through height or depth of Nature's bounds.

Milton.

And in the depth of winter, in the night, You plough the raging seas to coasts unknown.

Denham.

The false tides skim o'er the covered sand, And seamen with dissembled depths betray.

Dryden.

or tho', in nature, depth and height Are equally held infinite ; In poetry the height we know, Tis only infinite below. Swift.

There are greater depths and obscurities in an ela- borate and well written piece of nonsense, than in the most abstruse tract of school divinity.

Addison's Whig Examiner.

It is certainly a sign of great self-ignorance, for a man to venture out of his depth, or attempt any thing he wants opportunity or capacity to accomplish.

Mason.

DEPUL'SION, n. s. \ Lut.depulsio. A beat-

DEPU'LSORY, adj. J ing or thrusting away.

DEPURE', v. a. ^ Fr. depurer ; from

DEPU'RATE, v. a. & adj. >Lat. depurgo; de

DEPURA'TION, n. s. j and purgo. To cleanse, purify. The verbs are synonymous, and the meaning of the derivatives is plain.

It produced plants of such imperfection and harm- ful quality, as the waters of the general flood could not so wash out or depure, but that the same defection hath had continuance in the very generation and nature of mankind. Raleigh.

Brimstone is either used crude, and called sulphur rive ; or is of a sadder color, and, after depuration, such as we have in magdeleons, or rolls of a lighter yellow. Browne's Vulgar Errours.

Chemistry enabling us to depurate bodies, and in some measure to analyse them, and take asumler their heterogeneous parts, in many chemical experiments we may, better than in others, know what manner of bodies we employ. Boyle.

Neither can any boast a knowledge depurate from the defilement of a contrary, within this atmosphere of flesh. Glanville.

DEPUTE', v. a. } Fr. deputer ; Out. depu-

DEPUIA'TION, >teren; Span, and Port, de-

DEP'UTY. jputar; Ital. and Lat. depu-

tare ; to judge or choose ; hence deputatus, a per- son chosen. To send another; to empower another to transact one's business. A deputy is a person so sent, generally or specially.

And Absolom said unto him, See thy matters are good and right, but there is no man deputed of the king to hear. 2 Sam.

Presbyters, absent through infirmity from their churches, might be said to preach by those deputies, who, in their stead, did but read homilies. Hooker.

A man hath a body, and that body is confined to a place ; but where friendship is, all offices of life are, as it were, granted to him and his deputy; for he may exercise them by his friend. Bacon.

Cut me off the heads

Of all the fav'rites that the absent king

In deputation left behind him here,

When he was personal in the Irish war.

Shakspeare.

He looks not below the moon, but hath designed the regiment of sublunary affairs into sublunary depu- tations Brown.

He exerciseth dominion over them as the vice- gerent and deputy of Almighty God.

Hale's Origin of Mankind.

The authority of conscience stands founded upon its vicegerency and deputation under God. South

And Linus thus, deputed by the rest, The heroes welcome and their thanks expressed.

Roscommon.

A bishop, by deputing a priest or chaplain to admi- nister the sacraments, may remove him.

Ayliffe's Parergon.

DEQUA'NTITATE, v. a. from Lat. de and quantitas. To diminish the quantity of.

This we affirm of pure gold ; for that which is cur- rent, and passeth in stamp amongst us, by reason of its allay, which is a proportion of silver or copper mixed therewith, is actually deqwintitated by fire, and possibly by frequent extinction.

Browne's Vulgar Errours.

DERA'CINATE, v.a. Fr. deraciner, from de and racine, a root, from Lat. radix, radicis. To tear up by the roots.

Her fallow lees

The darnel, hemlock, and rank fumitory Doth root upon ; while that the culter rusts That should deracinate such savagery. Shakspeare.

DERAIGN', v. a. } See ARRAIGN. But

DERAIGN'MENT, or > Minsheu says from either

DERAILMENT, n. s. j Fr. desarroyer or des-

ranger, to disorder, or Norman defrene, ' a

proofe of the deniall of a man's owne fact.' To

prove, or justify.

When the parson of any church is disturbed to de- mand tythes in the next parish by a writ of indicavit the patron shall have a writ to demand the advowson of the tythes being in demand : and when it is de- raigned, then shall the plea pass in the court Chris- tian, as far forth as it is deraigned in the king's court.

Blount.

DERANGE', v. a.) Fr. desranger, to dis- DERANGE'MENT, n.s.) order. The quotation from Blount includes a curious explanation of this word. It is of modern introduction, as to its general, but now very common, application both to disordered minds and things.

In some places the substantive deraignment is used in the very literal signification with the French dis- rayer, or desranger ; that is, turning out of course, displacing or setting out of order ; as, deraignment or departure out of religion, and deraignment or dis- charge of their profession, which is spoken of those religious men who forsook their orders and profes- sions. Blount.

Most nations have adopted peculiar expressions, to signify the form or degree of derangement of intellect. The term derangement, which we have taken imme- diately from the French, and which means out of rank, or order, is metaphorically applied to the mind, to denote that its ideas are out of the rank, or order generally preserved by intelligent beings. Dr. Rees.

DERA'Y, n. s. Fr. desrayer. To turn out of the right way ; ' tumult ; disorder ; noise ; mer- riment;' and even ' solemnity,' says Dr. John- son, adding, truly, ' not in use.'

DERBEND, or DERBENT, a town of Persia, said to have been founded by Alexander the Great, and once the residence of the celebrated caliph Haroun-al-Raschid. The Russians took it in the year 1722, and retained possession until

1735, when it was restored to the Persians. Afterwards it was subdued and possessed by l;eth Ali. In the year 1796, the empress of Russia having declared war against the Persians, count Subow entered Daghestan, at the head of an army ; having reconnoitred Derbend, he ordered an assault, but the town surrendered. The highest part of the town is crowned by a fort or citadel of a triangular figure. Many of the stones used are cubes of six feet, but the ramparts are so narrow that cannon are mounted only on the towers. The entrance to the town is through an ancient iron gate. There is a tra- dition in the neighbourhood that the empire of the Mahommedans is to be overthrown by a yel- low infidel army, which shall enter by this gate. No stranger is, therefore, permitted to enter the fortress, and a tax is taken of all strangers at the gate before mentioned. The streets of Derbend are irregular, but the town is well supplied with water from a fine, but almost ruined, aqueduct. The inhabitants consist of various eastern tribes and Jevvs, and amount altogether to about 4000. It is a place of little trade, but a great quantity of saffron is cultivated in the neighbourhood, and the gardens are fine. To the north-east there are some graves covered with flag- stones above the natural size of man ; and many curious tombs in the vicinity. One of these, some years ago, was found to contain undecayed bones of the natural dimensions, a battle-axe, shield, and spear. The walls are built with stones as hard as marble ; and near it are the remains of a

wall which reached from the Caspian to the Black Sea. It is seated near the Caspian Sea, at the foot of Mount Caucasus, in long 48° 60 E., lat. 42° 8′ N., and is now the capital of the princi- pality or khanship of Derbend. See below. It extends, on a declivity to the margin of the shore, full three miles, and is about half a mile wide. To the west is a passage leading into the mountains, which are possessed by barbarous independent tribes. Derbend is considered one of the gates of Persia, and its name signifies, in Persian, a locked door. It is surrounded by walls and towers of considerable strength.*

DERBEND, a principality or khanship of Persia, bounded on the north by tne river Der- bak, or Kerebagh, on the south by the rivers Kur and Salian, on the east by the Caspian Sea, and on the west by the district of Talasseran. It extends about twenty miles in length by fifteen in breadth : it is mountainous and well watered. The soil is very fertile, wheat yielding twenty and rice forty fold. There are also fine grapes pro- duced, but the wine is not good. Some silk and woollen manufactures are also carried on.

DERBEND, or DERBENT, a town of European Turkey, in the province of Romania, twenty miles north of Adrianople.

DERBY, or DERBYSHIRE, an inland county of England, situated nearly in the centre of th'e island, and at an almost equal distance from the eastern and western seas. It is bounded on the north by Yorkshire and part of Cheshire ; on the east by Nottinghamshire ; on the south by Lei- cestershire ; and on the west by Staffordshire and Cheshire. Its form is extremely irregular ; but probably the figure to which it approaches the

nearest is that of an inverted pyiamid ; this, however, is extremely arbitrary, owing to its un- common indentations and projections. It is of considerable extent, being computed to be the twentieth in point of magnitude, and the nine- teenth in point of population, of all the English counties. Its greatest length, in a direction S.S.E. toN.N.W. is about fifty-six miles and a half. Its greatest breadth, from E.N.E. to W.S.W., thirty-three miles. It contains about 972 square miles, or 622,080 statute acres. Here are six hundreds, one bomugh, eleven market towns, and 116 parishes. This county is in the diocese of Litchfield and Coventry, and the pro- vince of Canterbury, and is included in the midland circuit.

Prior to the Roman invasion, the site of the present county belonged to the Coritani. The Romans included it in the division named Flavia Caesariensis ; but during the time of the Anglo- Saxons it belonged to the kingdom of Mercia. The word Derby, from whence comes the name of the county, is of uncertain derivation. By the Saxons it was called Northworthig, and by the Danes Deoraby. The latter is obviously the source whence its modern name, and probably that of the river Derwent, is derived ; but its precise meaning

cannot now be ascertained.

The eastern and western districts, into which the Derwent naturally divides this county, are materially different, both in respect to the air, the face of the country, and the soil. The cli- mate of the eastern division is healthy, temperate, and pleasant; but in the western district the air is much keener, and the state of the weather always more changeable. The face of the country presents, if not the most agreeable and pleasing, certainly the most varied and romantic scenery of any county in England. There is the most striking difference and contrast of features be- tween the northern and southern parts ; the former abounding with hill and dale. The coun- try gradually rises until we come to the neigh- bourhood of Wirksworth, and then begins to assume that picturesque and sublime appearance which it continues to possess to its extremity. That chain of hills arises, which stretching north- wards is continued in a greater or less breadth quite to the borders of Scotland, and forms a natural boundary between the east and west sides of the northern part of the kingdom. Its course in this county is inclined a little to the west. It spreads as it advances northerly, and at length fills up the whole of the north-west angle ; also overflowing a little, as it were, to- wards the eastern parts. The hills are at first of small elevation ; but, being in their progress piled one upon another, they form very elevated ground in the tract called the High Peak, though without any eminences which can rank among the loftiest mountains even of this island. The most considerable in height are the Axe-edge and the Kinder-scout mountains. Mr. Farey, in his admirable and comprehensive View of the Agri- culture and Minerals of this county, has given an alphabetical list of the several mountains, hills, and eminences throughout Derbyshire, or in the borders of the adjoining counties, describ- ing their situations, the strata on the top of each,

&c. These amount to upwards of 700 in num- ber. This intelligent and truly scientific writer has also enumerated upwards of fifty of the prin- cipal narrow and rocky valleys or defiles with precipitous cliffs in and near to this county, describing their situations, the strata exhibited in their sides and bottoms, and the names of the most noted rocks, caverns, &c., in each. These lists are uncommonly curious and interesting. The High Peak is not, as many suppose, a high barren rock, but an extensive range of rather elevated ground, called the Peak Hundred. It is cultivated and populous.*

The principal rivers of Derbyshire, beside the Derwent, are the Trent, the Dove, the Wye, the Errewash, and the Rother. The Derwent rises in the

High Peak district, and leaves this county on the Leicestershire border near Wilne. The Trent enters the county from Staffordshire, a little south of Calton, and leaves it near Barton, on the confines of Leicestershire. The Dove rises a little south of Buxton, and, joining the Trent near Burton in Staffordshire, finally quits the county. The Wye, rising in the vicinity of Buxton, never leaves the county, but falls into the Derwent a few miles below Bakewell. The Errewash rises in the coal district near Alfreton, and falls into the Trent a few miles below its junction with the Derwent. The Rother rises near Chesterfield, and enters Yorkshire between Kilmarsh and Beighton. These rivers are well stocked with almost every kind of fresh-water fish. The Dove and the Trent have been long celebrated by Cotton, and still more by his in- valuable friend, the pleasing and honest Isaac Walton, in his admirable book on angling. Nor has the Derwent received less honor from the pens of Darwin and Seward. This county is benefited by an extensive inland navigation. The principal canals are the following : the Grand Trunk from the Trent near Wilden-Ferry to the river Mersey near Runcorn-Gap. It was planned by the ingenious Mr. Brindley, and was begun on July 17th, 1766, and finished in May 1777. The Chesterfield Canal, another of Mr. Brindley's projects, extends from Chesterfield to the river Trent, at which it arrives a little below Gains- borough : its whole length being about forty six miles. Langley Bridge, or Errewash Canal, extends from Langley Bridge to the Trent, op posite to the entrance of the Soar. Its length is about eleven miles. The Peak Forest Canal was completed in the year 1800. It extends about fifteen miles in length, besides a railway of six miles, from the Ashton-under-line Canal, near Duckensfield Bridge, to the basin and lime- kilns at Chapel-Milton. The railway, passing Chapel-en-le-Erith, leads to Loads-knowl lime- stone quarries in the Peak. Cromford Canal begins at Cromford, near Matlock, and joins the Errewash Canal at Langley Bridge : its length is about fourteen miles. Ashby-de-la-Zouch Canal, about fifty miles in length, joins the Co- ventry Canal at Marston Bridge, about two miles to ths south of Nuneaton, and ends at Ashby-de- ra-Zouch in Leicestershire. The Derby Canal commences in the Trent, at Swarkenstone Bridge; and, crossing the Trent and Mersey Canal, ter- minates at Little Eaton, about three miles north

of Derby. The length of this branch is about eight miles and a half, with a rise of about twenty- nine feet. There is a railway branch of four miles and a half to the Smithy Houses and thence to the collieries near Derby. Another branch of this canal begins at Derby, and holds an easterly direction nearly parallel to the road leading to Nottingham, and finally joins the Errewash Canal between Long Eaton and Sandiacre : its length is eight miles and a half. This canal is forty- four feet wide at top, twenty-four at bottom, and five deep in the ebbest part.

There is an almost endless variety of soil in this county. In the northern

parts very exten- sive peat-bogs exist. The soil in these districts consists chiefly of ligneous particles, being the roots of decayed vegetables mixed with argilla- ceous earth or sand, and a coaly substance de- rived frorr decayed vegetable matter. The sur- face presents nothing but the barren black moss, thinly covered with heath or ling. But in many parts of the Peak there is to be found what the inhabitants call a corn-loam, apparently con- sisting of a virgin earth impregnated with nitre. This soil is good; but the parts where it is found are counterbalanced by vast tracts of barren hills and mountains, whose sides present very little soil, being chiefly composed of rocks. In those parts of Derbyshire near the borders of Cheshire and Staffordshire these barren rocks are very high, bleak, and numerous. Indeed so uneven and rugged is almost all the road between Mac- clesfield in Cheshire and Buxton in this county, that it has been quaintly remarked to be — Up hill to Buxton all the way, And up hill all way back.

When the mountain is formed of the limestone, the soil, though scanty, is productive of the finer grasses, which form good pasturage for sheep. On that part which is called the East Moor, ob- serves the Rev. D. P. Davies, a late elegant writer on the history, &c., of this county, there is scarcely any vegetation; not a dale or a glade which seems to have received the cultivating hand of man, or the fostering smile of nature. The most common soil in the southern parts is a reddish clay or marl. This soil is also found to prevail through the middle part of the extensive tract of limestone which lies on the north-west side of the county, and consists of much calcare- ous earth, which readily effervesces with acids. Some parts of the southern district are inter- spersed with small beds of sand or gravel. The large tract of country producing coal is covered with a clay of different colors ; black, gray, brown, and especially yellow. This kind of soil is also found in some parts where the gritstone is met with ; but there it is frequently of a black color and bituminous quality. That on the north side of the county, where the limestone prevails, is of a brown color and loose texture. The soil on the banks of the rivers and in the valleys is dif- ferent from that of the adjacent parts, and has evidently been altered by the depositions from the frequent inundations. It is extremely difficult to compress the great mass of information which Mr. Farey and others have collected relative to the soils of this county. Mr. Farey's map, however, contains a delineation of the several

soils of this and the adjoining one. Those which belong to this are the following : — A very exten- sive tract, from Morley south, along the

borders of Nottinghamshire, to the extreme boundaries of the county on the edge of Yorkshire north, consists of numerous strata of bind, clunch, shale, and other argillaceous strata, enclosing and sepaiating seams of coal and coaly impressions of vegetables. These strata, on exposure to the air, rain, and frosts, perish and fall to different kinds of clay or loam.

The very extensive coal district, branching out of Derbyshire, north and south, into Yorkshire and a small part of Nottinghamshire, has been not unaptly denominated the Derbyshire and Yorkshire Coal Field. Mr. Farey, with his usual attention to interesting detail, has given an alpha- betical list of about 500 collieries which are, or have been, worked in Derbyshire and in the bordering parts of the seven adjacent counties. Of these it appears nearly one-half are in Derby- shire.— The gravel of which these coal districts ˆre chiefly composed, produces a clayey soil, which is indiscriminately strewed over the county, but chiefly in patches about Derby and parts bordering on Staffordshire. These patches of land are again intermixed with other patches of red marl strata, occupying the largest portion of the southern districts. The yellow limestone strata are to be found chiefly, if not entirely, in some few parts bordering on Nottinghamshire, a little above and below Bolsover, in this county. It occupies nearly 21,600 acres. The coal- measures, or strata, already mentioned, occupy altogether 190,000 acres. The gritstone and shale strata occupy, with the exceptions yet to be mentioned, a tract of land about 160,500 acres, extending rather diagonally from Duffield south to the borders of Lancashire north ; and in breadth in the widest part, from about Chapel- en-le-Frith to near Dove on the borders of York- shire. The mineral limestone and loadstone strata occupy an unshapen mass of land, ex- tending from Wirksworth to Castleton, being about 51,500 acres. Along the same tract of country, but more to the Staffordshire side, is also a limestone stratum, making a surface of about 40,500 acres. This limestone appears to have undergone an amazing degree of shrinking; and hence there are vast shake-holes and caverns, some of them of a tremendous and frightful depth, in various parts These natural caverns are in number about twenty-seven. It will be proper to enumerate one or two of them in this place.

Bagshaw's Cavern, or the Crystallised Cavern, in Mule-Spinner Mine, is a little south-west of Bradwell, and is 400 yards in length. Elden Hole, surrounded with a stone wall, a little north of Peak Forest Town, is a very deep hole, con- necting with a vast lateral cavern below. The opening or chasm in the rock is about five yards long and three broad. The top of it is somewhat higher than the surface of the earth, with a very jagged and uneven mouth, opening into a chasm, ' steep, black, and full of horror.' This chasm nas more than once been descended. It was forme -ly represented as altogether unfathomable, and teeming, at a certain depth,

with such

noxious air, that no animal could respire it with- out inevitable destruction. Cotton affirmed, more than a century ago, that he let down 884 yards of line, of which the last eighty yards were wet, without finding a bottom ; and it has been confidently asserted, that a poor man, who was once lowered in a basket to the depth of 200 yards, on being drawn up died in a state of delirium. We cannot give a better description of the actual depth and di- mensions of this singular cavern, than the fol- lowing of Mr. Lloyd's, as contained in vol. xiii. of the Philosophical Transactions Abridged. Mr. Lloyd having seen several accounts of the unfathomable depth of Elden Hole, in Derby- shire, and being in that neighbourhood, he was inclined to make some enquiries about that noted place, of the adjoining inhabitants; who informed him that about fourteen or fifteen years before, the owner of the pasture in which this chasm is situated, having lost several cattle, had agreed with two men to fill it up ; but finding no visible effects of their labor, after having spent some days in throwing down many loads of stones, they ventured to be let down into it, to see if their undertaking was practicable ; when, on finding at the bottom a vast large cavern, they desisted from their work, as it would have been almost impossible to have procured a sufficient quantity of stones to have filled it up. On en- quiry of one of these men whether there were any damps at the bottom, and being assured in the negative, Mr. L. procured two ropes of forty fathoms nearly in length, and eight men to let him down.

For the first twenty yards Mr. L. was letdown, he could assist himself with his hands and fuet, as it was a kind of confined slope; but after that the rock jetted out into large irregular pieces, on all the three sides next him; and on that ac- count he met with some difficulty in passing, for about the space of ten yards more ;

to believe it extended to a vast height ; for when nearly at the top of one of the incrusted rocks, at the height of about twenty yards, he could find no closure of the dome, though he then saw much farther than when he stood at the bottom. The curiosities to be met with in the small cavern are not worth mentioning ; indeed he did not meet there with any stalactitical incrustations whatever ; but the wall consisted of rude and ir- regular fragments of rock. But among the sin- gularities in the second cavern, he observed the following ; climbing up a few loose stones on the south side, he descended again through a small slit into a little cave, four yards long and irregu- lar, as to height not exceeding two yards ; and the whole lined with

a kind of sparkling stalac- tites, of a fine deep yellow color, with some small stalactitical drops hanging from the roof. Facing the first entrance is a most noble column, of the same kind of incrustation, above thirty yards high : and, proceeding on to the north, he came to a large stone, covered with the like matter; and under it was a hole two yards deep, lined with the same ; whence sprung a rock consisting of vast solid round masses, like the former in color, though not in figure, on which he easily as- cended to the height of twenty yards, and got some fine pieces of stalactites, pendent from the cragged sides which joined this rock.

After this, proceeding forward, he came to another pile of incrustations, different from the two former, and much rougher ; and which was not tinged with such a yellow, but rather with a brown color; and at the top of this also is a small cavern, into which he went. The last thing he took notice of was the vast drops of stalactites, hanging like icicles from every part of the vault ; some of which were as large as a man's body, and at least four or five feet long. The greatest part of the walls of the large cavern was lined with incrustations, and they were of three kinds : the first being the deep yellow stalactites ; the second being a thin coating, like a kind of light stone-colored varnish on the surface of the lime- stone, and which glittered exceedingly by the light of 'the candles ; and the third being a sort of rough efflorescence, every minute shoot re- sembling a kind of rose-llower. Having satisfied his curiosity with a view of this astonishing vault, he began to return. Fastening the rope to his body, he gave the signal to be drawn up ; which he found to be a much more difficult and danger- ous task than the descent, owing to his weight drawing the rope into clefts, between the frag- ments of the rock, which made it stick ; and to his body jarring against the sides, which he could not possibly prevent with his hands. Another circumstance also increased the danger, which was, the rope loosening the stones over head, whose fall he every instant dreaded.

After writing the above, Mr. L. was informed there was formerly the mouth of a second shaft in the floor of the great cavern, somewhere under the great heap of stones ; and that it was covered up by the miners, at the time when so many loads were thrown in from the top. It is re- ported to have gone down a vast depth farther, and to have had water at the bottom ; but he did not perceive any remaining appearance of such

opening himself, nor did the miners, who went down with him, say any thing about it.

Golconda is also a very large cavern, near Hopton. Poole's Hole, about half a mile S.S.W. of Buxton, is a very long cavern. The entrance is extremely narrow ; but at the end of about twenty or thirty yards a spacious and lofty ca- vern opens, from the roof and sides of which water, continually

dropping, congeals into large pillars and masses on the floor. Further up the cavern is a large suspended icicle or stalactite, denominated The Flitch of Bacon. Beyond this the cavern again becomes contracted ; but a little further on it again expands, into a greater height and width, and continues so till we reach what is called Mary Queen of Scots' Pillar, a name given to a large massy column of stalac- tites, on account of its having been visited by that much injured princess during her stay at Buxton, when she wrote on a pane of glass at the hall :

Buxton, whose fame thy baths shall ever tell, Which I, perhaps, shall see no more, farewell !

The cavern extends beyond this pillar about 100 yards, and is, from its mouth to this place, about 669 yards. Peak's Hole, near Castleton, is also a remarkable cavern, in which are several lakes or springs of water. Besides these horrid ca- verns there are numerous water-shallows or holes in the rocks, into which streams of water fall and disappear : in all about twenty.

Both Mr. Lloyd and the traditions of this neighbourhood, mention the appearance of water at the bottom of the several shafts. It has been conjectured that this is the continuation of a subterranean river; indeed of that very stream which runs out of the mouth of the ocean at Castleton.

*Among the wonders of the Peak is Tide's or Weeden's Well, constituting one of the class which ebb and flow like the sea. That it does ebb and flow is certain; but it is at very unequal periods, sometimes not in a day or two, and sometimes twice in an hour. The basin of the spring is about a yard deep, and *he same in length and breadth. When it flow ;, the water rises with a bubbling noise, as if the air, which was pent up within the cavities of the rock, was forcing itself a passage, and driving the water before it. It is occasionally used as a restorative.*

But the great medicinal wonder of Derby- shire is Buxton Wells, the waters of which, be- side their medicinal use, have this singularity, that within five feet of one of the hot springs there arises a cold one ; as, indeed, in several other places in England, and other countries. These springs possess a less degree of warmth than those at Bath. The water is sulphureous, with a small quantity of saline particles, but it is not in the least impregnated with a sulphureous acid, hence they are verv palatable in comparison with other medicinal waters. See BUXTON. Mr. Pennant observes, with his usual elegance : — ' With joy and gratitude I this moment reflect on the efficacious qualities of the waters ; I re- collect with rapture the return of spirits, the flight of pain, and the re-animation of n-y long, long crippled rheumatic limbs.' About twelve

miles south-east of Buxton, in one of the most romantic situations of the whole kingdom, is Matlock. Here too is a medicinal bath of great value, the warm springs of which were first dis- covered about the year 1698. Near this place there is a petrifying spring; and the whole sur- rounding country is uncommonly interesting and romantic. In. many respects Matiock, as a wa- tering-place, is preferable to Buxton. Here are less bustle, noise, and dissipation.

Having dwelt at some length on the soil, &c., of this county, there is less occasion and still less room to detail its other natural productions. These chiefly consist of lead, antimony, mill- stones, grind-stones, marble, alabaster, alum, pit- coal, and iron, which constitute, of course the great bases of its trade. In addition, there are silk and cotton mills at Derby and Ashbourne ; respectable marble works at Ashford ; and consi- derable woollen manufactories in various parts. Malt is also made in this county in considerable quantity. It sends to parliament two members for the county, and two for the town of Derby.

There is a singular custom in this county of strewing the churches on the anniversary of the dedication of the church, or on midsummer eve, with rushes. The ancient custom of hanging up garlands of roses in the churches, with a pair of gloves cut out of white paper, which had been carried before the corpses of unmarried women At their funerals, also prevails in the neighbour- hood of the Peak1, and the county wakes are generally observed on the Sunday following the day of the dedication of the church or chapel, or on the saint's day after whom it is named. Druidical circles, tumuli of earth and stones, rocking-stories, rock-basins, and rude military works, attest the ancient British customs. The principal Roman remains are, an altar preserved in Haddon-Hall ; some inscribed pigs of lead lately transferred to the British Museum; and the silver plate found in Risley-Park. Several Roman roads passed through the county; and stations may be traced in several places.

Sir Richard Arkwright, Brindley, Samuel Ri- chardson, Anthony Black wall, Flamsteed the astronomer royal, and bishop Halifax, are among the 'worthies ' it has produced. The gentlemen's seats, though not numerous, are nowhere ex- ceeded in individual splendor and romantic si- tuation. See CHATSWORTH. •

DERBY, the county town of Derbyshire, is seated on the Derwent,over which it has a hand- some stone bridge. A small brook runs through it

under nine stone bridges. It is large, popu- lous, and well built; containing five churches, of which All Saints is the chief, the tower of which is 1 78 feet in height, the upper part befng richly ornamented. The interior is particularly light, elegant, and spacious. The roof is supported by five-columns on each side ; the windows are jarge and handsome, and the symmetry and pro- portions of the whole building have a very pleasing effect. In ancient writings this church is called All-Hallows, which name it still retains among the common people. It was originally a free collegiate chapel, and besides the master or rec- tor, who was the dean of Lincoln, had seven prebendaries. The county hall, county gaol, infir-

mary, an elegant assembly room, and a theatre, are the other principal buildings. The county hall is a handsome stone building, erected in the year 1730. In 1734 a machine was erected here by Sir Thomas Lombe, for the manufacturing of silk, the model of which he brought from Italy at the risk of his life. It was the first of its kind erected in England ; and its operations are to wind, double, and twist the silk, so as to render it fit for weaving. It has employed many hands in the town. When Sir Thomas's patent expired, in 1732, parliament was so sensible of the value and importance of the machine that they granted him a further recompense of £14,000, for the hazard and expense he had incurred in intro- ducing and erecting it, upon condition that he should allow an exact model of it to be taken. This model is deposited in the Tower of London. Derby has a considerable manufactory of silk, cotton, and fine worsted stockings ; and a fab- ric of porcelain equal, if not superior, in quality to any in the kingdom. Several hands are em- ployed in the lapidary and jewellery branches ; and the work of this kind, executed here, is in high estimation. Derbyshire spar and marble, as well as foreign marble, are also wrought here into various ornamental articles. The malting trade is extensively carried on in this town. It is governed by a mayor, nine aldermen, &c. The aldermen are appointed for life, unless removed for ill behaviour. The recorder is chosen by the corporation, who can remove him at pleasure. The common-clerk is coroner and clerk of the

Eeace, and is likewise chosen by the corporation ; ut both these officers must be approved of by his majesty. This town sends two members to parliament, who are elected by the corporation, freemen, and sworn burgesses ; the mayor is the returning officer. A court of record is held here every second Tuesday, besides the quarter ses- sions, and a half-yearly court-leet.

The Derby General Infirmary is an excellent institution, situated near the London road, in a healthful, airy, and dry situation, abounding with good water. The building is constructed of a beautiful hard white stone, of a handsome, yet simple elevation, of three stories, containing a light central

hall, with a double stair-case. Here the iron dome, the wide' stone gallery, and the very large stone stair-case resting upon the perforated floor of the hall, which covers part of the base- ment story, excite admiration from their well known strength and solidity. This infirmary pos- sesses a degree of perfection unknown to similar establishments ; for instance, in the construction of two light and spacious rooms, one for each sex, called day, or convalescent rooms, where persons recovering, instead of being confined to the same room day and night, as has been the usual practice, may eat their meals and pass the day. Here is also a fever house, where relief is administered, in case of infectious diseases. The entrance to this is directly opposite to the front, and has no internal connexion with the infirmary. Besides the convalescent rooms, and the fever house, superior accommodations are provided for patients laboring under acute diseases in general ; these consist of four small wards, containing one, two, three, and four beds respectively, with a

water-closet, nurse's bed-room, and scullery, This arrangement enables the medical men to separate the diseases from each other, as may best suit their natures ; and the wards being parted off from the body of the house by folding doors, silence is obtained, aud too much light excluded (essential in some cases), rendering this part of the establishment more convenient, perhaps, on the whole than many private houses. Another contrivance is, that ventilation shall be copious., and the warmth regulated at pleasure : and with respect to water-closets, to, prevent the draft from the house being reversed, a mode of con- s'ruction has been invented which does away every objection. A small steam engine is used to pump water, wash, &c. A statue of Escula- pius, indicating the object of this useful institu- tion, is placed upon the centre of the dome. The building is calculated to hold upwards of 100 patients. Three physicians, four surgeons, and a house apothecary, have been appointed to the institution since it was opened for relief of in and out patients in June 1810.

The ordnance depot is situated near the infir- mary, and was erected, according to a plan of Mr. Wyatt's, in 1805. It consists of an armory in the centre, calculated to contain 15,000 stand of arms. Above this is a room of the same pro- portions, containing accoutrements for the use of the army. On the north and south sides are two magazines, capable of containing 1200 barrels of ammunition. Four dwellings are situated in the angles of the exterior wall ; two of which are barracks, and the other two are the residences of officers in the civil department.

Derby, as the centre of the literature of the county, and the scene of many of its improve- ments, has given birth to, and still boasts, many excellent literary institutions and libraries. The Derby Philosophical Society, the object of which is, the promotion of scientific knowledge by occasional meetings and conversation, and by the circulation of books, was founded by Dr. Darwin, who spent the last twenty years of his life in this neighbourhood. The first meeting, in the year 1788, was at Dr. Darwin's house ; and he retained the chair of this society till his decease. It boasts a considerable number of members, and is in possession of an extensive and valuable library.

Another flourishing institution made its ap- pearance here in the year 1808, under the title of the Derby Literary and Philosophical Society. The objects of this association are, ' the pursuit of literary and scientific enquiries, and the im- provement of its members in the power of gain- ing and of communicating knowledge.' The means by which these objects are attempted to be accomplished are the production and discus- sion of papers, or essays, which may be written on any subject connected with literature or science, excluding only the practical departments of medicine and surgery, party politics and religion. It is a fundamental law of this society, that each member shall furnish an essay in his turn, and no instance has hitherto occurred in which this rule has been violated. The meetings are held monthly from September to April in- clusively, one paper being read, and another

discussed, on each evening. These are the prin- cipal institutions, but there are eight or ten others in the town, and one exclusively devoted to the cultivation of French literature. Derby has a market on Wednesday and Friday. It is situated in a fine plain, opening as it advances southward into a beautiful and highly cultivated country. It is thirty-six miles north of Coventry, and 126 north-west by west of London.

DERBY, a town of the United States, in Orleans county, Vermont, on the north line of the state, and on the east shore of lake Memphre- magog.

DERBY, a town of New Haven county, Con- necticut, on the point of land formed by the con- fluence of Naugatuck and Housatonick rivers. This town was settled in 1665, under New Haven jurisdiction, and has an academy.

DERBY, a town of Pennsylvania, in Chester county, seven miles from Chester, and five from Philadelphia. It is situated OP Derby Creek, which falls into Delaware River, near Chester.

DERBY, WEST, a township of England, in the county of Lancaster, four

miles from Liverpool, and containing about 3000 inhabitants.

To DERE, v. a. Sax. t>eruan. To hurt. See DARE. Obsolete.

So from immortal race he does proceed, That mortal hands may not withstand his might

Dred for his derring doe, and bloody deed ; For all in blood and spoil is his delight.

Faerie Queene.

DEREHAM, or MARKET DEREHAM, a mar- ket town of Norfolk, sixteen miles north from Nor- wich, and 100£ N.N.E. from London. This is a clean and well paved place, and stands on a small rivulet which supplies it with water. The church is a very ancient structure, and the steeple is open to the body like that of a cathe- dral : it contains four chapels, one of which, St. Edmunds, contains an antique chest, taken out of the ruins of Beckenham Castle, in which are deposited the records of the church. The font, erected in 1468, is a fine specimen of ancient sculpture, being richly carved. In the church- yard stands a square tower containing a peal of bells. In this church the poet Cowper was buried in 1800. Here are also three respectable meeting-houses. This town has sustained con- siderable damage by fires ; first in the year 1581, when nearly the whole town was destroyed ; and again in 1679. The market is on Friday, well stocked with provisions, and the greatest pig market in the county.

DERELICT', n. s. & adj.) Lat. dcreiictus, DERELIC'TION, n. s. £ de and relinquo,

linquo, to leave. Terms first applied to pro- perty voluntarily relinquished or forsaken : hence to any other abandonment or forsaking; to emp- tiness; and figuratively to the mind.

There is no other thing to be looked for, but the effects of God's most just displeasure, the withdrawing of grace, dereliction in this world, and in the world to come confusion. Hooker.

Derelict lands, suddenly left by the sea,, belong to the king : but if the sea shrink back so slowly that the gain be by little and little, it shall go to the owner of the lands adjoining.

2 Comm. 261, quoted by Jacobs.

They easily jTevailed, so as 10 seize upon the must vacant, unoccupied, and derelict minds of his [lord Chatham's] friends. Burke.

DERELICTS imply, also, such lands as the sea, by receding from them, leaves dry and fit for cul- tivation. If they are left by a gradual recess of the sea, they are adjudged to belong to the owner of the adjoining lands ; but when an island is formed in the sea, or a large quantity of new land appears, such derelict lands belong to the king.

DERHAM (Dr. William), a celebrated Eng- lish divine, born in 1657. In 1682 he was pre- sented to the vicarage of Wargrave in Berkshire, and, in 1689, to the rectory of Upminster, Essex. Applying himself with great eagerness to natural and experimental philosophy, he soon became a distinguished member of the Royal Society, whose Philosophical Transactions con- tain a great variety of curious and valuable pieces, the fruits of his industry. In his younger years he published his Artificial Clock-maker, which has been often reprinted : and in 1711, 12, and 14, he delivered the Boyle's Lectures, which he afterwards digested under the well-known titles of Physico-Theology and Astro-Theology ; or a Defence of the being of a God from a Survey of the Works of Creation and of the Heavens. He next published Christo-Theology, a demonstration of the divine authority of the Christian religion. He died at Upminster in 1735, and left a valuable collection of curiosities, particularly specimens of English birds and insects.

DERIDE, v. a.~\ Ital. and Lat. deridere, DERI'DER, n. s. I from de and rideo. To DERI'SION, \ laugh ; to mock with laugh-

DERI'SIVE, adj. iter; to scorn. Derisive DERI'SORY. j and derisory seem syno- nymous adjectives.

I am in derision daily ; every one mocketh me.

Jer. xx. 7.

Upon the wilful violation of oaths, execrable blas- phemies, and like contempts offered by deriders of re- ligion, fearful tokens of divine revenge have been known to follow. Hooker.

The faith of the righteous cannot be so much de- rided, as their success is magnified.

Bishop Hall. Contemplations.

Ensnared, assaulted, overcome ; led bound, Thy foe's derision, captive, poor, and blind, Into a dungeon thrust. < Milton.

What shall be the portion of those who have de- rided God's wordj and made a mock of every thing that is sacred and religious ? Tillotson.

O'er all the dome they quaff, they feast; Derisive taunts were spread from guest to guest, And each in jovial mood his mate addressed. Pope.

Are we grieved witn the scorn and aerision of the profane ? Thus was the blessed Jesus despised and rejected of men. Rogers.

Some, that adore Newton for his fluxions, deride him for his religion. Berkley.

I know that expectation, when her wings are once expanded, easily reaches heights which performance never will 'attain ; and when she has mounted the summit of perfection, derides her follower, who dies in tho pursuit. Johnson. Plan of Dictionary.

> <3 DER

DERIVE, v. a. & v.n. ") *Fren. derivfr ; DERIV'ABLE, adj. Span, and Port.*

DERIVATION, n. s. [derivar; Ital. and

DERIVATIVE, n. s. & adj. ˆLat. derivare, to DERIV'ATIVELY, adv. draw water, from

DERIV'ER, n. s. J dezndrivus; Heb.

nn, a stream, Hence to draw or trace from a source ; and as a neuter verb to come from ; to owe origin to. Derivable is traceable, to or from ; hence deducible in argument. Deriva- tion, literally, a drainage of water, and a drawing out, or displaying words or ideas from their original sources ; the drawing out a peccant humor of the body ; and the thing drawn out, or derived. Derivative is used as a substantive in this last sense.

Though not in word nor deed ill meriting, Is from her knight divorced in despayre, And her dew loves deryv'd to that vile witchers snayre.

Spenser. Faerie Queene.

Christ having Adam's nature as we have, but in- corrupt, deriveth not nature, but incorruption, and that immediately from his own person, unto all that belong unto him. Hooker.

I am, my lord, as well derived as he, As well possest. Shakspeare.

For honour,

Tis a derivative from me to mine, And only that I stand for. Id.

The streams of the publick justice were derived into every part of the kingdom. Davies.

By which I knew the time, Now full, that I no more should live obscure ; But openly begin, as best becomes The authority which I derived from Heaven.

Milton.

As it is a derivative perfection, so it is a distinct kind of perfection from that which is in God. Hale.

They endeavour to derive the varieties of colors from the various proportion of the direct progress or motion of these globules to their circumvolution, or motion about their own centre. Boyle.

The word Honestus originally and strictly signifies no more than creditable, and is but a derivative from Honor, which signifies credit or honour. South.

Such a one makes a man not only a partaker o other men's sins, but also a deriver of the whole intire guilt of them to himself. Id.

Men derive their ideas of duration from their reflec- tion on the train of ideas they observe to succeed one another in their own understandings. Locke.

Most of them are the genuine derivations of the hypothesis they claim to. Glanville.

Among other derivatives I have been careful to insert and elucidate the anomalous plurals of nouns and preterites of verbs.

Johnson. Preface to Dictionary.

Here is the fountain of truth, why do you follow the streams derived from it by the sophistry, or pol- luted by the passions of man ? Bishop Watson.

The mind that is immortal — it derives No colour from the fleeting things without j But is absorbed in sufferance or in joy, Born from the knowledge of its own desert.

Byron.

DERNIE'R, adj. Last. Is a French word; used only in the following phrase.

In the Imperial Chamber, the term for the prose- cution of an appeal is not circumscribed by the term of one or two years, as the law elsewhere requires in the empire ; this being the dernier resort. Ayliffe.

The court of dernier resort is the peerage of Eng- land. Franklin.

DERMESTES, in zoology, a genus of insects belonging to the order of coleoptera. The antennae are clavated, with three of the joints thicker than the rest; the breast is convex; and the head is inflected below the breast. Many varieties of this genuij, as well as their larvae, are to be met with in dried skins, bark of trees, wood, seeds, flowers, the carcases of dead animals, Sec. There are eighty-seven species, of which the following are the most remarkable : D. domesticus varies greatly in size and color, some being found of a dark brown, others of a much lighter hue. The form of it is oblong, almost cylindrical. The elytra are striated, the thorax is thick and rather gibbous. This little animal, when touched, draws in its head under its thorax, and its feet beneath its abdomen, remaining so motionless that one would think it dead. This is the insect which makes in wooden furniture those little round holes that reduce it to powder. D. ferrugineus is the largest of the genus ; its color is a rusty iron, having many oblong, velvet black spots upon the elytra, which give the insect a gloomy, yet elegant appearance. D. lardarius, of an oblong form and of a dim black color, easily distinguishable by a light brown stripe that occupies transversely almost the anterior half of the elytra. That color depends on small gray hairs situated on that part. The stripe is irregular at its edges, and intersected through the middle by a small transversal streak of black spots, three in number, on each of the elytra, the middlemost of which is somewhat lower than the rest, which gives the black streak a serpentine form. Its larva, which is oblong, somewhat hairy, and divided into seg- ments alternately dark and light colored, gnaws and destroys preparations of animals preserved in collections, and even feeds upon the insects ; it is also to be found in old bacon. This species may be destroyed by arsenic. D. violaceous, a beautiful little insect : its elytra are of a deep violet blue. The thorax is covered with greenish hairs, the legs are black. The whole animal's being of a glittering brilliancy renders it a pleas- ing object. The larva, as well as the perfect insect, inhabits the bodies of dead animals.

DERMODY (Thomas), an English poet, was born in the south of Ireland in.1775. His father was a schoolmaster at Ennis, and employed him, when

only nine years old, in teaching the Latin and Greek languages. lie, however, ran away from home at an early age, and enlisted as a common soldier. Having obtained the notice of the present marquis of Hastings, that nobleman procured him a commision ; but his conduct was most dissipated, and rendered all efforts to serve him abortive. A volume of his poems appeared in 1800; and another was published in 1802, in which year he died, at Sydenham in Kent, of disease brought on by his vices. His pieces have since been collected and published by Mr. Raymond.

DER'OGATE, v. a., v. n. & adj.^\ Fr. dero- DER'JGATELY, adv. ger ; Span.

DEROGA'TION, n. s. [and Port

DEROG'ATIVE, adj. (derogar; It.

DEROG'ATORY, adj. | and Latin

DEROG'ATORILY, adv.) derogare,

from de and rogo, to demand. To act so as to diminish the legal force of a prior act, law, or custom ; hence to disparage generally : and, as a neuter verb, to detract; lessen reputation ; degene- rate. The adjective means degenerated ; de- graded. Derogative and derogatory mean detractious; dishonorable.

So surely he is a very brave man, neither is that any thing which I speak to his derogation ; for in that I said he is a mingled people, it is no dispraise.

Spenser on Ireland.

We should be injurious to virtue itself, if we did derogate from them whom their industry hatli made great. Hooker.

Is there no derogation in it ? — You cannot derogate, my lord.

Shahspeare.

Into her womb convey sterility ; Dry up in her the organs of increase, And from her derogate body never spring A babe to honour her. Id. King Lear.

The wisest princes need not think it any diminu- tion to their greatness, or derogation to their suffi- ciency, to rely upon counsel. Bacon.

By several contrary customs and stiles used here, many of those civil and canon laws are controuled and derogated. Hale.

That spirits are corporeal, seems to me a conceit derogative to himself, and such as he should rather labour to overthrow ; yet thereby he established ihe doctrine of lustrations, amulets, and charms.

Browne's Vulgar Errours.

That which enjoins the deed is certainly God's law; and it is also certain, that the scripture, which allows of the will, is neither the derogation nor relax- ation of that law. South.

These deputed beings are derogatory from the wis- dom and power of the Author of Nature, who doubt- less can govern this machine he could create, by more direct and easy methods than employing these sub- servient divinities. Cheyne.

None of these patriots will think it a derogation from their merit to have it said, that they received many lights and advantages from their intimacy with my lord Somers. Addison.

DEROGATORY CLAUSE, in a testament, is a cer- tain sentence, cipher, or secret character, which the testator inserts in his will, and of which he reserves the knowledge to himself alone, adding a condition, that no will he may make hereafter is to be reckoned valid, if this derogatory clause is not inserted expressly and word for word. It is a precaution invented by lawyers against latter wills extorted by violence or obtained by sug- gestion.

DERRY, a township of the United States, in Dauphin county, Pennsylvania, situated on the east side of Swatara Creek, two miles above its confluence with the Susquehannah, and cele- brated for its curious cave. Its entrance is under a high bank, nearly twenty feet wide, and about eight or ten feet in height. It descends gradually nearly to a level with the creek. Its

apartments are numerous, of different sires, and adorned with stalactites curiously diversified in size and color.

DER'VIS, n. s. Fr. dervis, from Per. dervish. See the article below. A priest or monk among the Turks.

Even there, where Christ vouchsafed to teach, Their demises dare an impostor preach. Sandys.

The dervis at first made some scruple of violating his promise to the dying hrachman ; but told him, at last, that he could conceal nothing from so excellent a prince. Spectator.

DERVIS, or DERVICH, a name given to a sort of monks among the Turks, who lead a very austere life, and profess extreme poverty ; though they are allowed to marry. The word originally signifies a beggar, or a person who has nothing ; and because the religious, and particularly the followers of Mevelava, profess not to possess any thing, they call both the religious in general, and the Mevelavites in particular, dervises. There are in Egypt several kinds : those that are in convents are a kind of religious order and live retired; though there are of these some who travel and return again to their convents. Some take this character, and yet live with their fami- lies, and exercise their trades : of this kind are the dancing dervises at Damascus, who go once or twice a week to a little uninhabited convent, and perform their extraordinary exercises. There is a third sort of them who travel about the country, and beg, or rather oblige people to give, for whenever they sound their horn something must be given them. The people of these orders, in Egypt, wear an octagonal badge, of a greenish white alabaster, at their girdles, and a high stiff cap without any thing round it. The dervises in Persia, are called abdals, servants of God. See ABDALS. The dervises called Mevelavites are a Mahommedan order of religi- ous ; the chief or founder of which was one Meve- lava. They are very numerous. Their chief monastery is that near Cogni in Natolia, where the general makes his residence, and where all trie assemblies of the order are held ; the other houses being all dependent on this, by a privi- lege granted to this monastery under Ottoman I. These dervises affect humility and charity. They always go bare-legged and open-breasted, and frequently burn themselves with hot irons, to inure themselves to patience. They always fast on Wednesdays, eating nothing on those days till after sun-set. Tuesdays and Fridays they hold meetings, at which the superior presides. One of them plays all the while on a flute, and the rest dance, turning their bodies round and round with the greatest swiftness imaginable. This practice they observe with great strictness, in memory, it is said, of Mevelava their patriarch turning miraculously round for the space of four days, without any food or refreshment, his com- panion Hamsa playing on the flute ; after which he fell into an ecstacy, and therein received revelations for the establishment of his order. They believe the flute an instrument consecrated by Jacob and the shepherds of the Old Testa- ment, because they sang the praises of God upon it. They profess poverty, chastity, and obedi- VOL. VII.

ence; but if they choose to go out and marry, they are always allowed. The generality of der- vises are mountebanks: some apply themselves to legerdemain, postures, &c., to amuse the people ; others pretend to sorcery

and magic : but all of them, contrary to Mahomet's precept, are said to drink wine, brandy, and other strong liquors, to give them the degree of gaiety their order requires. The dervises are great travellers ; and, under pre- tence of preaching, and propagating their faith, are continually passing from one place to another : on which account they have been frequently used as spies. See MAIIOMICT AND KORAX.

DERWENT, a rapid river of the county of Cum- berland, rising in Borrowdale, from whence it emerges to form a lake. It receives the Cocker at Cockermouth, after which it falls into the Irish sea at VVorkington.

DERWENT, a second river of England, which runs into the Ouse, five miles south-east of Selby, in the county of York. 3. A river of England, which rises in Northumberland, and flows into the Tyne, about three miles above Newcastle. 4. A river of England which rises in the northern part of the county of Derby, and is formed of several streams, one of which issues from the cavern of Castleton. It forms one of the princi- pal ornaments of the magnificent seat of Chats- worth and afterwards falls into the Trent, eight miles E.S. E. of Derby.

DERWENT FELLS ; a chain of mountains in Cumberland, reckoned among the loftiest in England. One of them is celebrated for its mines of black lead, from which, for its superior quality, great part of Europe and America are supplied. In travelling through the valley of Borrowdale, amongst these mountains, they exhibit to the admirer of nature's romantic beauties, the repre- sentation of a stormy ocean ; the numerous dis- tant hills appearing like so many waves rising and undulating behind each other. The immense masses of rugged rocks, however, abruptly broken off here and there, occasionally start up to dispel the illusions of fancy; and, together with the trees, villages, farms, and cattle, which he dis- covers as he proceeds, serve to convince the tra- veller that he is still on terra firma.

DERWENT WATER, or the LAKE OF KESWICK, a beautiful lake of Cumberland, in the vale of Keswick, lying between the mountain of Skiddaw on the north and the craggy hills of Borrowdale on the south, whence it derives its chief supplies of water. See CUMBERLAND.

DESAGULIERS (John Theophilus), a Pro- testant divine, born at Rochelle in 1683. He was educated at Christ Church, Oxford ; where he succeeded Dr. Keill in reading lectures on experimental philosophy at Hart Hall. The duke of Chandos made Dr. Desaguliers his chaplain, and presented him to the living of Edg- ware, near his seat at Cannons : he was after- wards chaplain to Frederic prince of Wales. He introduced the practice of reading public lectures on experimental philosophy, in London, and continued them with great success to the time of his death in 1749. He communicated

many curious papers to the Philosophical Trans- actions; published a valuable Course of Expe- rimental Philosophy, in 2 vols, 4to; and edited

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an edition of Gregory's Elements of Catoptrics and Dioptrics, with an Appendix on Reflecting Telescopes, 8vo. He was also a member of several foreign academies.

DESAIX (Louis Charles Anthony), a cele- brated French general, born near Riom, in 1768. At an early life he made choice of the military life, and before the revolution had risen to the rank of lieutenant. In the republican army he was first employed as aid-de-camp to general Custine. He displayed great bravery at the battle of Lauter- bourg, where, though severely wounded, he kept the field, rallying the disordered batalions. Having been successively created general of brigade and of division, he contributed, very considerably, to the famous retreat of Moreau. At the battle of Rastadt he commanded the left wing of the French army, obliging the archduke Charles to fall back ; and he afterwards heroically defended the bridge of Kehl, where he was severely wounded. He accompanied Buonaparte into Egypt, where he was appointed governor of the upper part of the country. Having signed the treaty of El Arish with the Turks and English, he returned to Leghorn, but was detained there as a prisoner of war by admiral lord Keith. Upon obtaining his parole he returned to France, and accompanied Buonaparte to Italy. He was killed at the battle of Marengo, June 14th, 1800.

DESAQUADERO, a river of South America, in Peru, over which the Ynca Huana Capac built a bridge of flags and rushes, to transport his army to the other side, and which remained a few years since.

DESART, or DESERT, a large extent of country entirely barren, and producing nothing. In this sense some are sandy desarts ; as those of Lop, Xamo, Arabia, and several others in Asia; in Africa, those of Libya and Zara: others are stony, as the desart of Paran in Arabia Petraea. The Desart, peculiarly so called in Scripture geography, is that part of Arabia south of the Holy Land, where the children of Israel wandered forty years. See DESERT.

DESATIR is a lately discovered collection of sixteen sacred books, consisting of the fifteen old Persian prophets, together with a book of Zoroaster. This, at least, is what the book itself pre- tends to be. The collection is written in a lan- guage not spoken at present any where, and equally different from the Zend, the Pelvi, and modern Persian. The last of the

fifteen pro- phets, Sasan, who lived at the time of the down- fal of the Sassanides, when the Arabians con- quered the country, literally translated theDesatir, and accompanied it with commentaries. This work was afterwards, until the 17th century, one of the chief sources of the ancient Persian reli- gious doctrines, interwoven with astrology and demonology ; and, after having been forgotten for about a century and a half, a learned Parsee discovered it at Ispahan. His son, Molla Firuz, was induced by the marquis of Hastings to pub- lish an edition of the Desatir at Bombay, in 1820, to which Erskine added an English trans- lation. Erskine, however, considers the collec- tion as spurious ; and Sylvester de Sacy (Journal des Savants, Feb., 1821) believes that the De- satir is the work of a Parsee in the 4th century

of the Ilegira, who, as he thinks, invented tht> language, in order to give to the collection, which is itself an assemblage of old traditions and significant mysteries, an air of genuineness. Joseph von Hammer, on the contrary, is said to consider it as genuine. At all events, it is inter- esting to learn from this work, with greater ao curacy, an old religious system of the East, in which are to be found, with pandsemonism and the metempsychosis, the elements of the worship of the stars, of astrology, the theurgy, the doc- trine of amulets, as well as the elements of the Hindoo religion, particularly the system of castes, and many elements of the Christian re- ligion. Yet no trace of any connexion with the Zendavesta and the magic of the Parsees has been found in the Desatir.

D E'SC ANT, v. »., & n. s. Span, and Ital. dis- canto, from Lat. de and canto, to sing. The verb seems formed in our language from the noun, which signifies a song or tune, in parts ; a har- mony for different voices or instruments : hence, a discourse consisting of various parts ; and to sing in various parts. 'To discourse ; declaim ; generally used in the latter sense, contemp- tuously.

DESCANT, in music, signifies the art of com- posing iq several parts. Descant is threefold, viz. double, figurative, and plain. Double descant is when the parts are so contrived, that the treble, or any high part, may be made the bass ; and, on the contrary, the bass the treble. Figurative or florid descant is that part of an air of music wherein some discords are con- cerned, as well, though not so much, as concords. This may be termed the ornamental and rheto- rical part of music, in regard that there are in- troduced all the varieties of points, syncopes, diversities of measure, and whatever is capable of adorning the composition. Plain descant is the ground-work and foundation of all musical compositions, consisting altogether in the orderly placing of many concords answering to simple counterpoint.

DESCARTES, Rene (Renatus Cartesms), an original thinker, and reformer of philosophy, with whom the modern or new philosophy is often considered as commencing, was born in 1596, at La Haye, in Touraine, and died at Stockholm, in, 16 50. While pursuing his edu- cation in the Jesuits' school at La Fleche, where he studied philology, mathematics, and astro- nomy, his superior intellect manifested itself. After having read much, without coming to any certain conclusions, he travelled. Both his birth and inclination led him to embrace the military profession, and he fought as a volunteer at the siege of Rochelle, and in Holland under prince Maurice. While he served in Holland, a ma- thematical problem in Dutch, pasted up in the streets of Breda, met his eye. Not being ac- quainted with the language, he asked a man who stood near him to translate the problem to him. This man happened to be professor Beecman, principal of the university of Dort, and himself a mathematician. He smiled at the question of the young officer, and was greatly surprised, the next morning, to find that he had solved it. From hence Descartes went to Germany, and

entered the Bavarian service. His situation, however, affording him little opportunity of pur- suing his favorite studies, he left the army in 1621, and visited Moravia, Silesia, Poland, Pomerama, and the shores of the Baltic. In order to see West Friesland with advantage, he purchased a boat, and embarked with a single valet. The sailors, thinking him a foreign mer- chant, with much money in his baggage, resolved to kill him. Imagining him ignorant of their language, they conversed of their plan openly. Descartes, seeing his danger, drew his sword, addressed them in their own tongue, and threa- tened to slab the first man that should offer him violence. The sailors were overawed, and gave up their design. After a variety of travels, he remained in Holland, where he composed most of his writings, from 1629 to 1649, drew about him many scholars, and was engaged in many learned controversies, especially with theologians. His celebrated system abounds in singularities and originalities ; but a spirit of independent thought prevails througbou it, and has contri- buted to excite the same spirit in others. It has done much to give to philosophical inquiries a new direction, and found many adherents, espe- cially in England, France, and Germany. Des- cartes founds his belief of the existence of a thinking being on the consciousness of thought : " I think, therefore I exist" (cogito, ergo sum). He developed his system with much ingenuity, in opposition to the then empiric philosophy of the English, and the Aristotelian scholastics, and adopted the rigorous, systematic or mathematical method of reasoning.*

From his system origi- nated the notion among the moderns, that the very existence and certainty of philosophy con- sists in definitions, arguments, and a metho- dical arrangement of them. The thinking being, says Descartes, or the soul, evidently differs from the body, whose existence consists in space or extension, by its simplicity and immateriality (whence, also, its immortality), and by the free- dom that pertains to it. But every perception of the soul is not clear and distinct ; it is in a great degree involved in doubt, and is so far an imperfect, finite being. This imperfection of its own leads it to the idea of an absolutely perfect being. (He, therefore, here makes use of the (so called) ontological proof of the existence of God, in a different manner from that in which Anselm of Canterbury had, somewhat earlier, employed the same ; and hence the name of the " Cartesian proof.") He placed at the head of his system the idea of an absolutely perfect being, which he considers as an innate idea, and deduces from it all further knowledge of truth. The principal problems of metaphysics he con- ceived to be substantiality and causality. He contributed greatly to the advancement of ma- thematics and physics. He made use of the dis- coveries and observations of others, defining them accurately, and assigning them their place in his system. The higher departments of geometry (to which he successfully applied analysis), as well as optics, dioptrics, and mechanics, were greatly extended by him, their method simpli- fied, and thereby the way prepared for the great discoveries made in the sciences by Newton and

Leibnitz ; for instance, lie contributed much to define and illustrate the true law of refraction. His system of the universe attracted great atten- tion in his time, but has been long since ex- ploded. It rests on the strange hypothesis of the heavenly vortices, immense currents of ethe- real matter, with which space is filled, and by which he accounted for the motion of the planets. He labored much to extend the Copernican sys- tem of astronomy. Descartes loved independ- ence; he nevertheless suffered himself to be per- suaded to go to Stockholm, upon the invitation of queen Christina, who was very desirous of his society. He died at that place four months after his arrival. His body was carried lo Paris in 1666, and interred anew in the church of St. Genevieve du Mont. Descartes was never mar- ried, but had one natural daughter, Francina, who died in his arms, in her fifth year, and whose loss he felt acutely. His works have at various times been published, singly and to- gether; as, for instance, at Amsterdam, 1692, 9 vols. 4to. Bailie and Tarpelius have written his life. (See his letters ; also the eulogies on him by Gaillard, Thomas, and Mercier, and Leibnitz's account of him in his letters.)

DESCEND', v. a. & v. n.~) Fr. descendre ; DESCEND'ANT, n. s. I Span, descender;

DE'SCEND'ENT, adj. \ Ital. discendere ;

DESCEND'IBLE, j > Lat. descendere,

DESCEN'SION, n. s. I from de privative,

DESCEN'SIOUAL, adj. \ and scandere, to

DESCENT7, n. s. } clamber. To walk

downwards; or cling as to a rope, going down- wards. As a neuter verb, to fall, or sink, or go downwards : hence, to be derived from, and to come in order of inheritance. A descendant is applied to offspring, near or remote : descendent, falling, sinking ; derived from : descendible, that which may be descended, or may descend. De- scension, figuratively, a degradation, or a de- clension.

DESCENT, in heraldry, is used to express the coming down of any thing from above ; as, a lion en descent is a lion with his head towards the base points, and his heels towards one of the comers of the chief, as if he were leaping down from some high place.

DESCENT, or hereditary succession, in law, is the title whereby a man, on the death of his an- cestor, acquires his estate by right of repre- sentation, as his heir at law. An heir, therefore, is he upon whom the law casts the estate imme- diately on the death of the ancestor; and an estate so descending to the heir is in law called the inheritance. See INHERITANCE. Descent is either lineal or collateral. Collateral descent is that springing out of the side of the line or blood ; as from a man to his brother, nephew, or the like. See CONSANGUINITY. Lineal descent is that conveyed down in a right line from the grandfather to the father, from the father to the son, and from the son to the grand- son, &c.

DESCENT OF DIGNITIES. A dignity differs from common inheritances, and goes not ac- cording to the rules of the common law : for it descends to the half blood : and there is no co- pareenership in it, but the eldest takes the whole.

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The dignity of peerage is personal, annexed to the blood ; and so inseparable, that it cannot be transferred to any person, nor surrendered

even to the crown : it can move neither forward nor backward, but only downward to posterity ; and nothing but corruption of blood, as if the ancestor be attainted of treason or felony, can hinder the descent to the heir.

DESCRIBE', v. a.- Fr. descrire ; Span. DESCRIB'EK, n. s. I descriver ; Ital. descri- DESCRJP'TION, n. s. \vere ; Lat. describere, DESCRIPTIVE, adj. I from de, concerning, and DESCRIVE', v. a. J scribere, to write. To delineate ; trace out ; distribute a thing or country into its parts : description is both the act and form of describing. Descrive is used for describe by Surrey.

DESCRY', v. a. & n. s. I Fr. descrier. To DESCRI'ER, n. s. S give notice of any

thing suddenly discovered : hence to spy out ; detect; discover.

How near 's the other army ? — Near, and on speedy foot, the main descry Stands in the hourly thought. Shakspeare.

DESEADA, DESIRADA, or DESIDERADA, the first of the Caribbee Islands, discovered by Co- lumbus in his second voyage, in 1494, when he gave it that name. It is ten miles long and five broad, and looks at a distance like a galley, with a low point at the north-west end. The soil is in some places black and good, in others sandy and unproductive. It lies twelve miles east of Guadaloupe.

DESEADA, or CAPE DESIRE, the south point of the Straits of Magellan, at the entrance of the South Sea. Long. 74° 18′ W., lat. 53° 4′ S.

DES'ECRATE, v. a. \ Lat. desacro, from

DESECRA'TION. S de, privative, and sa-

cro,to consecrate; although the Latin compound desacro also signifies to hallow. To apply to common or profane purposes, that which has been consecrated.

The founders of monasteries imprecated evil on those who should desecrate their donations.

Salmon's Survey.

DESERT', v. a., n. s. & a$.-\ Fr. deserter ;

DESERT'ER, /from Lat. dese-

DESER'TION, fro, desertum.

DESER'TRICE, n. s. Fern. J To leave, for- sake, abandon. A desert is a solitary, forsaken place ; hence, as an adjective, wild, unfrequented, uninhabited : a deserter, he who forsakes his post of duty; and Milton has afforded us a fe- minine substantive of this meaning.

And it is written in the book of salmys, the ab- stacioun of hem be maad desert, and be there noon that dwelle in it, and anothir take his bishopriche.

Wiclif. Dedis.l.

He found him in a desert land, and in thn waste howling wilderness. Deuteronomy, xxxii. 10.

For light she hated, as the deadly bale, Ay wont in desert darkness to remaine, Where plain none might her see, nor she see ony plainc. Spenser. Faerie Queene.

I have words

That would be howled out in the desert air,

Where hearing should not catch them.

Shakspeare.

He, looking round on every side, beheld

A pathless desert, dusk with horrid shades.

Milton.

[It is] as vain to go about to compel (the unhappy pair) into one flesh as to weave a garment of sand.— Cleave to a wife, but let her be a wife, not an adver- sary, not a desertrice. Id. Tetrachordon.

Hosts of deserters, who your honour sold, And basely broke your faith for bribes of gold.

Dryden.

Christ hears and sympathises with the spiritual agonies of a soul under desertion, or the pressures of some stinging affliction. South.

What is it that holds and keeps the orbs in fixed stations and intervals,

against an incessant and inhe- rent tendency to desert them ? Bentley.

The members of both houses, who at first withdrew were counted deserters, and outed of their places in parliament. King Charles.

Thou, false guardian of a charge too good, Thou, mean deserter of thy brother's blood . Pope.

A deserter, who came out of the citadel, says the garrison is brought to the utmost necessity.

Tatler. No. 59. Deserted is my own good hall,

Its hearth is desolate ; Wild weeds arc gathering on the wall ; My dog howls at the gate. Byron.

DESERTER. A deserter is, by the articles of war, punishable by death ; which, after con- viction, is executed upon him at the head of the regiment he formerly belonged to, with his crime written on his breast. A reward of twenty shillings is given to every person who apprehends a deserter, and persons concealing, harboring, or buying the clothes, arms, 8cc. of such person, are liable to very heavy penalties. No non-com- missioned officer or soldier shall enlist himself in any other regiment, troop, or company, without a regular discharge from the regiment, troop, or company, in which he last served, on the penalty of being reputed a deserter, and suffering ac- cordingly : and in case any officer shall knowingly receive and entertain such non-commissioned officer or soldier, or shall not, after his being discovered to be a deserter, immediately confine him, and give notice thereof to the corps in which he last served, he, the said officer so offending, shall, by a court-martial, be cashiered. DESERT', n. s. > Old Fr. deserte, or a DESERT'LESS, adv. 5 participial form of DE- SERVE, which see. Merit or demerit ; title to reward or punishment : desertless is used by Dryden for without merit.

Being of necessity a thing common, it is, througL the manifold persuasions, dispositions, and occasions of men, with equal desert both of praise and dispraise, shunned by some, by others desired. Hooker.

Use every man after his desert, and who shall 'scape whipping? Shakspeare.

She said she loved,

Loved me desertless^ who with shame confest Another flame had seized upon my breast. Dryden.

All desert imports an equality between the good . conferred, and the good deserved, or made due.

South.

I was determined to be advanced in my profession by force of desert, or not at all. Bishop Watson.

DAZ

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DEA

Fr. deservir ; Lat. de-

DESERVE', v. a. ~\ IT. deservir; LAI. ae DESER'VER, n. s. f simre, to be useful, from DESER'VEDI.Y, i dc and servus, to be a

DESER'VING, n. s. J slave. To be worthy of good or ill: all the derivatives from this root are applied to both by respectable writers. But when used absolutely, to be deserving, &c., it commonly expresses merit.

Those they honoured, as having power to work or cease, as men deserved of them. Hooker.

Their love is never linked to the deservcr, Till his deserts are passed . Sha/ ispeare.

All friends shall taste The wages of their virtue, and all foes The cup of their deservinga. Id.

Heavy, with some high minds, is an overweight of obligation ; or otherwise great deservers do, perchance, grow intolerable presumers. Wotton.

Yet well, if here would end

The misery : I deserved it, and would bear

My own deservings. Milton.

Ill deserving of others can be no excuse for our in- justice, for our uncharitableness.

Bp. Hall. Contemplations.

• Courts are the places where best manners flourish, Where the deserving

ought to rise. Otway.

A mother cannot give him death : though he Deserves it, he deserves it not from me. Dryden.

Since my Orazia's death I have not seen

A beauty so deserving to be queen. Id.

According to the rule of natural justice, one man may merit and deserve of another. South.

A. man deservedly cuts himself off from the affec- tions of that community which he endeavours to sub- vert. Addison.

Annex to each bishoprick some portion of the royal ecclesiastical patronage, which is now prostituted by the Chancellor and the Minister of the day to the purpose of parliamentary corruption, that every Bi- shop may have means sufficient to reward all the de- serving clergy of his diocese. Bp. Watson.

DESIC'CATE, v. a. & n. ˆ Lat. desicco, de

DESIC'CANTS, n. s. Cand siccus ; Heb.

DESICCA'TION. 3 rvtf dry (Min-

sheu). To dry up; to exhaust; to grow dry; Desiccants are applications that dry up sores.

Where there is moisture enough, or superfluous, their wine helpeth to digest and desiccate the moisture. Bacon's Natural History.

If the spirits issue out of the body, there followeth desiccation, induration, and consumption. Id.

Seminal ferments were elevated from the sea, or some desiccated places thereof, by the heat of the sun.

Hale.

This, in the beginning, may be prevented by desic- cants, and wasted. Wiseman.

If tea be a desiccative, according to Paulli, it can- not weaken the fibres, as our author imagines ; if it be emetick, it must constringe the stomach, rather than relax it. Johnson.

DESIDE'RATE, v. a.) Lat. desidero. To DESIDERA'TUM, n. s. J want or desire in absence. A desideratum is that which is much, or has been long, desired.

Eclipses are of wonderful assistance toward the so- lution of this so desirable and so much desiderated problem. Cheym.

Fr.

desinar ; Ital. de-

segnare ; Lat. desig-

nare. To show a

; thing by signs or

tokens; to purpose;

to form or order

with a particular

J purpose in view,

DESIGN', v. a. & n. s. DESIGN'ABLE, adj. DESIGNA'TION, n. s. DESIGNEDLY, adv. DESIGN'ER. n. s. DESIGN'ING part. adj. DESIGN'LESS, adj DESIGN'LESSLY, adv. DESIGN'MENT, n.s.

taking for after it; to devote, taking to ; to plan, project. As a substantive a design is the scheme or plan of an undertaking in the mind, or in any form of development: and designment is syno- nymous with design : designable is distinguish- able : designation, the act or form of pointing or marking out : designedly, purposely, with some proposed object in view : designing is generally used in an ill sense. Designless is without plan or scheme, purposeless ; designlessly is inadver- tently.

Leave these sad designs To him that hath more cause to be a mourner.

Shaksjteare.

News, lords ! our wars are done : The desperate tempest hath so banged the Turks, That their designment halts. /•/.

William the ConqueiO" forebore to use that claim in the beginning, but mixed it with a titulary pre- tence, grounded upon the will and designation of Edward the Confessor. Bacon.

We are to observe whether the picture or outlines be well drawn, or, as more elegant artizans term it, well designed ; then, whether it be well coloured ; which be the two general heads. Wotton.

That Providence, which keeps the -whole from destruction, will also keep all its necessary parts from corruption, lest the work of God become insufficient to the end of its designation. Bishop Taylor.

One of those places was designed by the old man to his son. Clarendon.

In this great concert of his whole creation, the designlessly conspiring voices are as differing as the conditions of the respective singers. Boyle.

'Tis a greater credit to know the ways of captivating nature, and making her subserve our purposes and de- signments, than to have learned all the intrigues of policy. Glanville.

Is he a prudent man, as to his temporal estate, that lays designs only for a day, without any prospect to the remaining part of his life ? Tillotson.

The acts of religious worship were purposely de- signed for the acknowledgment of a Being, whom the most excellent creatures are bound to adore as well as we. Stilling/fleet.

You are not for obscurity designed, But, like the sun, must cheer all human kind.

Dryden.

He was born to the inheritance of a splendid for- tune ; he was designed to the study of the law. Id.

A sedate settled design upon another man's life, puts him in a state of war with him against whom he has declared such an intention. Locke.

'Tis not enough to make a man a subject, to con- vince him that there is regal power in the world ; but there must be ways of designing and knowing the per- son to whom this regal power of right belongs. Id.

The power of all natural agents is limited : the mover must be confined to observe these proportions, and cannot pass over all these infinite deiignaUe de. grees in an instant. Digby. .

DES

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Uses made things ; that is to say, some things were made designedly, and on purpose, for such an use as thev serve to. Ray on the Creation.

There is a plain designation of the Duke of Marl- borough : one kind of stuff used to fatten land is called marie, and every body knows that borough is a name for a town. Swift.

There is a great affinity between designing and poetry ; for the Latin poets, and the designers of the Roman medals, lived very near one another, and were bred up to the same relish for wit and fancy.

Addisim. The hand strikes out some new design,

Where life awakes and dawns at every line. Pope.

Twould shew me poor, indebted, and compelled, Designing, mercenary ; and I know You would not wish to think I could be bought.

Southern.

It has therefore always been both the rule and practice for such designers to suborn the publick inter- est, to countenance and cover their private.

Decay of Piety.

Spectators only on this bustling stage, We see what vain designs mankind engage.

Churchill.

Would I describe a preacher, such as Paul, Were he on earth, would hear, approve, and own, Paul should himself direct one, I would trace His master-strokes, and draw from his design.

Cowper.

DESIGN, in manufactories, expresses the figures with which the workman enriches his stuff, or silk, and which he copies after some painter or eminent draughtsman, as in diaper, damask, and other flowered silk and tapestry, &c. In un- dertaking of such kinds of figured stuffs, it is necessary, says Mons. Savary, that before the first stroke of the shuttle, the whole design be represented on the threads of the warp ; we do not mean in colors, but with an infinite number of little packthreads, which being disposed so as to raise the threads of the warp, let the workman see, from time to time, what kind of silk is to be put in the eye of the shuttle for

woof. This method of preparing the work is called reading the design, and reading the figure, which is per- formed in the following manner : a paper is provided, considerably broader than the stuff, and of a length proportionate to what is intended to be represented thereon. This they divide lengthwise, by as many black lines as there are intended threads in the warp ; and cross these lines by others drawn breadthwise, which, with the former, make little equal squares ; on the paper thus squared, the draughtsman designs his figures, and heightens them with colors as he sees fit. When the design is finished, a workman reads it, while another lays it on the simblot. To read the design is to tell the person who manages the loom the number of squares or threads comprised in the space he is reading, in- timating at the same time, whether it is ground or figure. To put what is read on the simblot is to fasten little strings to the several pack-threads, which are to raise the threads named ; and this they continue to do till the whole design is read. Every piece being composed of several repetitions of the same design, when the whole design is drawn, the drawer, to re-begin the de- sign afresh, has nothing to do but to raise the

little strings, with slip-knots, to the top of the simblot, which he had laid down to the bottom : this he is to repeat as often as is necessary till the whole is manufactured. The ribbon weavers have likewise a design, but far more simple than that now described. It is drawn on paper with lines and squares, representing the threads of the warp and woof. But instead of lines, whereof the figures of the former consist, these are con- stituted of points only, or dots, placed in certain of the little squares formed by the intersection of the lines. These points mark the threads of the warp that are to be raised, and the spaces left blank denote the threads that are to keep their situation : the rest is managed as in the former.

DESIGN, in music, is defined by Rousseau to be the invention and the conduct of the subject, the disposition of every part, and the general order of the whole. See Music.

DESIGN is particularly used, in painting, for the first idea of a large work, drawn roughly, with an intention to be executed and finished in large. In this sense it is the simple contour or outlines of the figures intended to be represented, or the lines that terminate and circumscribe them : such design is sometimes drawn in crayons on ink, without any shadows at all : sometimes it is hatched, that is, the shadows are expressed by sensible outlines, usually drawn across each other with the pen, crayon, or graver. Some- times the shadows are made with the crayon rubbed so as that there do not appear any lines : at other times, the grains or stroke of the crayon appear, as not being rubbed ; sometimes the de- sign is washed, that is, the shadows are done with a pencil in Indian ink, or some other liquor; and sometimes the design is colored, that is, colors are laid on resembling those

intended for the grand work.

DESIGNATION of an estate is made by the tenants, hutments, and boundings. Among the Romans there were designations of the consuls and other magistrates, some time before their elections.

DESIGNATOR, a Roman officer, who as- signed and marked each person his place and rank in public ceremonies, shows, processions, &c. He was a kind of master of the ceremonies, who regulated the seats, march, order, &c. There were designators at funeral solemnities, and at the games, theatres, and shows, who not only assigned every one his place, but also led him to it ; as appears from the prologue to the Pcenulus of Placetus.

DESIGNING, the art of delineating or drawing the appearance of natural objects, by linee, on a plane. To design, according to the rules of mathematics, makes the object of perspective. See PERSPECTIVE.

DESIRE', v. a. & ». s.ˆi Fr. desirer ; Span.

DESIR'AELE, adj. I dessear ; Lat. deiitle-

DESIR'ABLY, adv. rare, which M'msheu

DESIR'ABLENESS, n. s. >thinks derived flora

DESIR'ER, { de sideribus, the stars

DESIR'OUS, adj. I having been the first

DESIR'OUSLY, adv. J objects of worship and

admiration. To wish ; to long for; intreat of, or

for; demand. As a noun it generally expres'es

a strong or earnest wish. That is desirable which is wished with earnestness ; pleasant ; delightful. Desirous is full of desire.

And he seide to hem with desier I haue dcsirid to ete this pask with you bitore that I suffre.

Wicitf. Lull. 22.

Be not desirous of his dainties ; for they are deceitful food. Prov. xxiii. 3.

For possible is, sin thou hast hir presence, And art a knight, a worthy and an able, That by some cas, sin Fortune is changeable, Thou maiest to thy desir sometime atteine.

Chaucer. Cant. Tales.

A doleful case desires a doleful song, Without vain art or curious compliments.

Spenser. '

The same piety which maketh them that are in au- thority desirous to please and resemble God by justice, inflameth every way men of action with zeal to do good. Hooker.

I will counterfeit the bewitchment of some popular man, and give it bountifully to the desirers.

Shakspeare.

Sir, I intreat you home with me to dinner, — I humbly do desire your grace of pardon ; I must away this night. Id.

Men ate drowsy and desirous to sleep before the fit of an ague, and yawn and stretch. Bacon.

Adam the while,

Waiting desirous her return, had wove Of choicest flowers a garland. Milton.

Jove beheld it with a desiring look.

Dryden.

Desire '$ the vast extent of human mind ; It mounts above, and leaves poor hope behind.

Id.

Desire is the uneasiness a man finds in himself upon the absence of any thing, whose present enjoyment carries the idea of delight with it. Locke.

She then let drop some expressions about an agate snuff-box : I immediately took the hint, and bought one ; being unwilling to omit any thing that might make me desirable in her eyes. Addison.

This desire of knowledge, like other affections planted in our nature, will be very apt to lead us wrong, if it be not well regulated. Mason.

Fiction raises the mind by accommodating the images of things to our desires, and not, like history and reason, subjecting the mind to things. Byron.

DESIRE, PORT, a harbour on the eastern coast of South America, so called by Sir Thomas Ca vendish, in 1586. On the south side of its entrance is a remarkably steep rock, which is an excellent sea-mark. The harbour was found, by commodore Byron, to fce narrow for nearly four miles, with a tide running at the rate of eight miles an hour. There were also various rocks and shoals; but they were all above water. Long. 64° 25′ W., lat. 47° 7′ S.

DESIST', v.n.) Fr. desister ; Span, de-

DESIST'ANCE, n. s. \ sister ; Ital. and Lat. dc-

sistere, from de (from), and sisto, sto; Gr. craw, to

stand. To stand off, or cease from any thing ;

to stop. Desistance is cessation.

Desist, thou art discerned, And toil'st in vain ; nor me in vain molest.

Milton.

Men usua-lly give freeliest where they have not given before : and make it both the motive and ex- cuse of their dasistance from giving any more, that they have given already. Boyle.

There are many who will not quit a project, though they find it pernicious or absurd ; but will readily desist from it, when they are convinced it is imprac- ticable. Addison.

Lat. dcsitus. Ending ;

DKS'ITIVR, adj. concludent; final.

Inceptive and desitive propositions are of this sort ; the fogs vanish as the sun rises ; but the fogs have not yet begun to vanish, therefore the sun is

not yet risen. Watts.

DESK, n. s. Dut. disch, a table; Teut. tisch. .An inclining table for the use of writers or readers, made commonly with a box or reposi- tory connected with it.

Tell her in the desk,

That's covered o'er with Turkish tapestry, There is a purse of ducats. Shakspeare.

He is drawn leaning on a desk, with his bible before him. Walton's Anyler.

I have been obliged to leave unfinished in my desk the heads of two essays. Pope.

Sweet sleep enjoys the curate in bis desk, The tedious rector drawling o'er his head ; And sweet the clerk below. Cowper.

DESMOULINS (B. C.), one of the dema gogues of the French revolution, was born at Guise, in Picardy, in 1762, and is said to have been a descendant of the celebrated Charles Du- moulin. Educated with Robespierre, for the bar, he became a counsellor of parliament, and commenced his career, as an advocate, by plead- ing against his father, on a charge for his board. From the commencement of the revolution he was connected with Robespierre, and became the editor of a journal, in which he styled him- self attorney-general of the Lantern. He was the great director of the factious mob of Paris, but at one time was esteemed by La Fayette. In a denunciation against him to the Constituent Assembly, in 1790, for his virulent abuse of the king, Desmoulins was warmly defended by all the jacobins. After the unhappy flight of Louis XVI. to Varennes, he was one of the instigators of the meeting of the Champ de Mars ; and was conspicuous in the insurrection of the 20th of June, 1792, as well as in that of the 10th of August. He now became secretary to Danton, the minister .of justice, and was chosen a deputy from Paris to the convention, in which, of course, he voted for the death of the king. Robespierre, however, was jealous of his connexion with Danton ; he was arrested March 31st, 1794, and on the 5th of April suffered by the guillotine. Beside a great number of political pamphlets, Desmoulins published Les Revolutions de France et de Brabant; Le Vieux Cordelier; Histoires des Brissotins ; Satires ; and Opuscules de Camille Desmoulins.

DES'OLATE, v. a. & adj.^ Fr.desoler; Sp. DES'OLATELY, adv. fdessoiar ; Italian

DESOLA'TION, n. s. land Lat. desulare,

DES'OLATER. s from de and solus.

To depopulate ; make desert; solitary; uninha- bited. Desolation is the act or consummation of ruin or destruction ; desolater, he who accoiu-

plishes it. Wiclif makes a curious use of the verb for being removed from.

And britheren, we desolat fro ghou for a tyme bi mouth and in beholdyng but not in herte,han highed more plenteuousli to se ghoure face with greet desier. Wiclif. 1 Tessal. ii.

How is Babylon become a desolation among the nations ! Jer. 1. 23.

The lion would not leave her desolate, But with her went along, as a strong gard Of her chast person. Spenser. Faerie Qtieene.

What with your praises of the country, what with your discourse of the lamentable desolation thereof made by those Scots, you have filled me with a great compassion. Spenser's State of Ireland.

Let us seek some desolate shade, and there Weep our sad bosoms empty. Shakspeare.

Without her follows to myself and thee, Herself, the land, and many a Christian soul, Death, desolation, rain, and decay. Id.

The island of Atlantis was not swallowed by an earthquake, but was desolated by a particular deluge.

Bacon.

Thick around

Thunders the sport of those, who with the gun, And dog impatient bounding at the shot, Worse than the season desolate the fields.

Thomson.

It is remarkable, that they never see any way to their projected good but by the road of some evil. Their imagination is not fatigued with the contem- plation of human suffering, through the wild waste of centuries, added to

centuries of miseries and devo- lution. Burke.

He calls for famine, and the meagre fiend Blows mildew from between his shrivelled lips, And taints the golden ear. He springs his mines, And desolates a nation at a blast. Cotcper.

The desolater desolate!

The victor overthrown ! The arbiter of others' fate

A suppliant for his own ! Byron.

DESPARD (Edward Marcus), was a native

ments, held secret meetings with them at different places, to which no persons were admitted with- out a treasonable oath. Various plans were agitated in this club for the murder of the king and other desperate undertakings ; but, some of the conspirators having discovered the plot, the colonel, and several others, were apprehended, and brought to trial by a special commission, February 5th, 1803. Despard and nine others were found guilty, on the clearest proof, and executed on Monday, the 21st.

DESPAIR', v. n. & n. s.~\ Fr. desesperer;

DESPAIR'ER, n. s. /Span, and Port.

DBSPAIR'FUL, adj. Idesesperar ; Lat.

DESPAIRINGLY, adv. 3 desperare ; from, de (privative) and spero to hope ; Heb. "Q'tf . To be hopeless ; to despond, taking of, in modern usage, before the object. Despair is hopelessness ; confirmed despondency ; and sometimes expresses the cause of such a state of mind.

We are troubled on every side, yet not distressed -f we are perplexed, but not in despair. 2 Cor. iv. 8.

Other cries among the Irish savor of the Scythian barbarism -, as the lamentations of their burials, with despairful outcries. Spenser.

Strangely visited people,

All swoln and ulcerous, pitiful to the eye ;

The mere despair of surgery, he cures ;

Hanging a golden stamp about their necks,

Put on with holy prayers. Shakspeare.

We commend the wit of the Chinese, who despair of making of gold, but are mad upon making of silver.

Bacon.

He speaks severely and despairingly of our society.

Boyle.

That sweet but sour despairful care. Sidney.

Equal their flame, unequal was their care ;

One loved with hope, one languished with despair.

Drydcn. He cheers the fearful, and commends the bold ,

And makes despairers hope for good success. I/I.

Despair is the thought of the unattainableness of any good, which works differently in men's minds ; some-

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of Queen s county, in Ireland, where his family times producing uneasiness or pain, sometimes rest maintained considerable respectability. When and indolence. Locke. but nineteen, he entered into the army as an en- Are not all or most evangeiical viˆs and graces sign, and soon became distinguished for his skill in danger of extremes ? As there is, God knows, too as an engineer. About the close of the American often a defect on the one side, so there may be an ex- war, he served in the West Indies, where his cess on the other: may not hope in God, or godly sor. talents appeared particularly conspicuous in an row, be perverted into presumpi ion or despair? Sprat. expedition on the Spanish Main. «e was pro- Enlivening Hope, and fond Desire, moted to the rank of lieutenant-colonel for his achievements on this occasion, and, in 1784, was appointed English superintendant in the Bay of

Honduras ; but his conduct proving offensive to the settlers, they complained to the government at home; in consequence of which he was sus-

Resign the heart to Spleen and Care ; Scarce frighted Love maintains her fire, And rapture saddens to despair.

Johnson. Winter's Walk.

DESPATCH', v. a. & n. s.) Fr. despecher ;

DESPATCH'FUL, adj. \ Span, despachar.

pended. He arrived in England in 1790, and To send off or away in haste ; hence to perform made application to government for an investi- business quickly, and to assassinate. The sub- gation of his conduct, but his claims were re- stantive is used not only for prompt performance ected ; upon which he became a violent demo- of business, but intelligence, or news, supposed crat, and, in consequence of his inflammatory to be sent with despatch ; and in the plural for conduct, was apprehended, during the suspension official or public intelligence or papers. Des- of the Habeas Corpus Act, and sent to Cold patchful is, sent in haste. The e of the first syl- Bath-fields prison ; and finally to Tothill-fields lable has become of late almost universal, bridewell. He was afterwards liberated on his

own recognisance. Soured, apparently, by his disastrous fate, he now endeavoured to seduce and corrupt some of the lowest of the soldiery ; smd, having collected some few of similar senti-

And the company shall stone them with stones, and despatch them with their swords. Ezek. xxiii. 47.

What are the brothers parted ? — They have despatched with Pompey ; he is gone.

Shalufcaie,

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Edmund, I think, is gone, In pity of his misery to despatch His knighted life, Shakspeare.

Long and curious speeches are as fit for despatch as a robe or mantle, with a long train, is for a race.

Bacon.

So saying, with despatchfid looks in haste She turns, on hospitable thoughts intent. Milton. Bushes are of so quick despatch, that the joy of the wicked is compared to a fire of thorns.

Bp. Hall. Contemplations.

Doctor Theodore Coleby, a sober man, I despatched immediately to Utrecht, to bring the moxa, and learn the exact method of using it. Temple.

Despatch me quickly, I may death forgive ; I shall grow tender else, and wish to live.

Dryden.

No sooner is one action despatched, which, by such a determination as the will, we are set upon, but an- other uneasiness is ready to set us on work. Locke.

Let one despatchful bid some swain to lead,

A well-fed bullock from the grassy mead. Pope. You'll see, could you her inward motions watch,

Feigning delay, she wishes for despatch;

Then to a woman's meaning would you look,

Then read her backward. Granville.

DES'PERATE, adj. & n. s. \ Lat. despera-

DES'PERATELY, adv. f tus. See DES-

DES'PERATENESS, n. s. I PAIR. Hope-

DESPERA'TION. 3 less ; abandon-

ed to sorrow ; without care of consequences ; irretrievable : hence rash ; mad ; and expressing an extreme degree of any tiling bad.

Were it not the part of a desperate physician to wish his friend dead, rather than to apply the best endeavours of his skill for his recovery ?

Spenser's State of Ireland. Since his exile she hath despised me most ;

Forsworn my company, and railed at me,

That I am desperate of obtaining her. Shafts-peare.

These debts may be well called desperate ones ; for a mad man owes them. Id.

The going on not only in terrors and amazement of conscience, but also boldly, hopingly, confidently, in wilful habits of sin, is called a desperateness also ; and the more bold thus, the more desperate. Hammond.

As long as we are guilty of any past sin, and have no promise of remission, whatever our future care be, this desperation of success chills all our industry, and we sin on because we have sinned. Id.

Grace often resisted turns to desperateness.

Bishop Hall. Contemplations. Tis not amiss, ere ye're giv'n o'er,

To try one desperate med'cine more ;

For where your case can be no worse,

The desperatest is the wisest course ! Hudibras.

In a part of Asia, the sick, when their case comes to be thought desperate, are carried out and laid on the earth, before they are dead, and left there. Locke.

She fell desperately in love with him, and took a voyage into Sicily in pursuit of him. Addison.

Concluding all mere desperate sots and fools, That durst depart from Aristotle's rules. Pope.

Beware of desperate steps, the darkest day,

Live till to-morrow will have passed away.

Cowper. I cannot find my hero ; he is mixed

With the heroic crowd that now pursue

The fugitives, or battle with the desperate.

What have we here ? tyron.

DE'SPICABLE, adj. ˆ See DESPISE. Coo DE'SPICABLENESS, n. s. Memptible ; mean DE'SPICABLY, adv. J low.*

Our case were miserable, if that wherewith we mosi endeavour to please God were in his sight so vile and despicable as men's disdainful speech would make it.

Hooker.

All the earth he gave thee to possess and rule, No despicable gift. Milton.

Not less even in this despicable hero, Than when my name shook Africk with affright, And froze your hearts beneath your torrid zone.

Dry den. Here wanton Naples crowns the happy shore,

Nor vainly rich, nor despicably poor ;

The town in soft solemnities delights,

And gentle poets to her arms invites. Addison.

We consider the great disproportion between the in- finity of the reward and the despicableness of our service. Decay of Piety.

There is, indeed, no employment, however despica- ble, from which a man may not promise himself more than competence, when he sees thousands and myriads raised to dignity, by no other merit than that of con- tributing to supply their neighbours with the means of sucking smoke through a tube of clay, £c.

Adventurer.

DESPI'SE, v. a. ~\ Span, despreciar, from DESPIS'ABLE, adj. J-Lat. despicere, from det DESPIS'ER, n. s. j down and specio ; Gr.

ffKtTTTw ; Heb. ˆp8T, to look or see. To look

upon with contempt, to scorn ; abhor : despisa-

ble is contemptible.

God chees the feble thingis and despisable thingis

of the world to confounds the stronge thingis.

Wiclif. 1 Cor. 1

Behold ye desptsers, and wonder, and perish.

Isaiah.

However yet they me despise and spight, I feed on sweet contentment of my thought.

Spenser. The Tears of the Muse.*

Let not your ears despise my tongue for ever, Which shall possess them with the heaviest sound That ever yet they heard. Shakspeare.

As the wicked have no peace with God, so the godly have no peace with men ; for if they prosper not they are despised ; if they prosper they are envied.

Bp. Hall. Contemplations.

All cold, but in her breast, I will despise ; And dare all heat but that in Celia's eyes,

Roscommon.

I am obliged to you for taking notice of a poor olo distressed courtier, commonly the most despisable thing in the world. Arbulhnot to Pope.

Admire, exult — despise — laugh, weep, — for here There is such matter of all feeling : — Man ! Thou pendulum betwixt a smile and tear, Ages and realms are crowded in this span. Byron.

DESPITE', v. a. & n. s.ˆ Fr. dcpit ; Dutch

DESPITE'FUL, adj. spijt ; Ital. despUto,

DESPITE'FULLY, adv. (from Lat. dcspectus,

DESPITE'FULNESS, n. s. f dc and specio, xpec-

DESPIT'EOUS, adj. tus. See DESPISE.

DESPIT'EOUSLY, adv. j To vex, to do a

malicious act to : malice; malignity ; and hence

defiance. Despiteful is malicious, mischievous,

splenetic. Despiteful ness, synonymous with des-

pite j and despiteous, despiteously, with despite-

tul, despitefully. Wiclif uses despite for dis- honor.

Wher a pottere of cley hath not power to make of the same gobet oo vessel into onour, a nothir into dispyt ? Wiclif. Romayns 9.

Pray for them that despitefully use you and perse- cute you. Matthew v. 44.

But out the child he hent Despiteously , and gan a chere to make, As though he would have slain it or he went.

Chaucer. Cant. Talet. Full many mischiefs follow cruell wrath ;

Bitter despight, with rancour's rusty knife ;

And fretting griefe the enemy of life.

Spenser. Faerie Queene.

The knight of the red-cross, when him he spied, Spurring so hot with rage despiteous, Can fairly couch his speare. Id.

The mortal steel despiteously entailed Deep in their flesh, quite through the iron walls, That a large purple stream adown their giambeux falls.

Spenser.

The life thon gavest me first, was lost and done ; Till with thy warlike sword despite of fate, To my determined time thou gavest new date.

Shakspeare.

Turning despiteous daughter out of door. Id.

Saturn, with his wife Rhea, fled by night ; setting the town on fire, to despite Bacchus. Raleigh.

Preserve us from the hands of our despiteful and deadly enemies. King Charles.

His punishment, eternal misery, It would be all his solace and revenge, As a despite done against the Most High, Thee once to gain companion of his woe. Milton. Know I will serve the fair in thy despite.

Dryden.

With men these considerations are usually the causes of despite, disdain, or

aversion from others ; but with God they pass for reasons of our greater ten- derness towards others. Sprat.

Say, would the tender creature, in despite Of heat by day, and chilling dews by night, Its life maintain ? Blackmore,

Venice ! thy lot

Is shameful to the nations, — most of all, Albion ! to thee : the Ocean queen should not Abandon Ocean's children ; in the fall Of Venice think of thine, despite thy watery wall.

Byron.

DESPOIL', v. a. J De and spoil. Fr. de- DESPOLIA'TION, n. s.)pouiller,lia.despogliare; Lat. despoliare. See SPOIL. To rob ; strip ; di- vest; deprive; taking of. Despoliation is the act of stripping, or plundering. A groom gan despoil Of puissant arms, and laid in easy bed. Spenser.

You are nobly born, Despoiled of your honour in your life. Shakspeare.

He waits, with hellish rancour imminent, To intercept thy way, or send thee back Despoiled of innocence, of faith, of bliss. Milton. He, pale as death, despoiled of his array, Into the queen's apartment takes his way. Dryden,

Even now thy aid,

Eugene, with regiments unequal prest, Awaits : this day of all his honours gained Despoils him, if thy succour opportune Defends not the sad hour. Philips.

These formed stones, despoiled of their shells, and exposed upon the sr.rface of the ground, in time moulder away. Woodward.

DESPOND', v. a. ˆ Old Fr. dcspunder ;

DESPO'NDING, adj. > Lat. despondeo. To

DESPOND'ENCY, n. s. j despair; to lose hope; to become hopeless or desperate.

It is every man's duty to labour in his calling, and not to despond for any miscarriages or disappointments that were not in his own power to prevent.

L'Estrange. Physick is their bane :

The learned leeches in despair depart,

And shake their heads, desponding of their art.

Dryden.

Others depress their own minds, despond at the first difficulty ; and conclude, that making any pro- gress in knowledge, farther than serves their ordinary business, is above their capacities. Locke.

It is well known, both from ancient and modern experience, that the very boldest atheists, out of their debauches and company, when they chance to be sur- prised with solitude or sickness, are the most suspi- cious, timorous, and despondent wretches in the world.

Bentley.

Aim at perfection in every thing, though in most things it is unattainable ; however, they who aim at it, and persevere, will come much nearer to it, than those whose laziness and despondency make them give it up as unattainable. Chesterfield.

DESPO'NSATE, v. a. > Lat. desponso. To DESPONSA'TION, n. s. 3 betroth; to affiance; to unite by reciprocal promises of marriage; the act of betrothing.

DES'POT, n. s. -\ Fr. despot, from

DESPOT'IC, adj. I Gr. Sfffirorng (Stoy

DESPOT'IC A L, adj. Vfear and TTOUW to

DESPOT'IC A LN ESS, n. s. imake.) An abso- DES'POTISM, ./ lute prince ; a ty-

rant : despotic is, absolute in power ; arbitrary : despotism, despoticalness, the power of a despot.

God's universal law Gave to the man despotick power Over his female in due awe, Nor from that right to part an hour, Smile she or lowre. Milton.

In all its directions of the interior faculties, reason conveyed its suggestions with clearness, and enjoined them with power : ic had the passions in perfect sub- jection ; though its command over them was but per- suasive and political, yet it had the force of coactive, and detpotical. South.

We see in a neighbouring government the ill con- sequences of having a despotic prince. Addison.

Can despots compass aught that hails their sway ?

Or call with truth one span of earth their own, Save that wherein at last they crumble, bone by bone ! Byron. Childe Harold's Pilgrimage.

DESPOT originally signified the same with herus, a master. Nicephorus having ordered his son, Stauracius, to be crowned, the son, out of respect, would only take the name AECnOTHC, leaving to his father that of BACIAEYC. The following emperors, however, preferred AECHOTHC to BACIAEYC; particu- larly Constantine XII., Michael Ducas, Roma- nus Diogenes, Nicephorus Botoniates, the Comneni, and some others. In imitation of the princes, the princesses likewise assumed the title of AECIIOINA. It was the emperor Alexius Angelus that created the dignity of despot, and made it the first after that of emperor, or Au-

gustus, above those of Sebastocrator and Caesar. The despots were usually the emperor's sons or sons-in-law, and their colleagues, or co-partners, in the empire, as well as their presumptive heirs. Those who were sons of the emperors had more privileges and authority than those who were only sons-in-law. Codin, p. 38, describes the habit and ornaments of the despot. See the notes of Father Goar on that author. Under the successors of Constantine the Great, the title Despot of Sparta was given to the emperor's son or brother, who had the city of Sparta or Lacede- mon by way of appendage.

DESQUAMATION, n. s. Lat. from squama. The act of scaling foul bones. A surgical term.

DESSAU, orDESSAW, a strong town of Ger- many, in Upper Saxony, the capital of the prin- cipality of Anhalt. It was first fortified by prince Leopold in 1341, and has one Lutheran and two Calvinist churches, besides a Catholic and Jewish chapel. Inhabitants about 10,000, of which the Jews form one-tenth. Dessau, the surround ing district, contains 53,500 inhabitants : its chief products are corn and flax : it has also considerable pastures. The people manu- facture cloths, hats, and stockings. It is seated on the Mulda, a branch of the Elbe, twenty-eight miles south-east of Magdeburg, thirty-seven north of Leipsic, forty-eight south- west of Potsdam, and sixty north-west of Dres- den. One of the most remarkable objects here is a dyke at the side of the Elbe, nearly five miles long, from ten to eleven feet high, and sixty feet thick at the base. Long. 12° 17′ 1 E.,*

lat. 51° 50′ 6″ N.

DESSALINES (John James), brother of the brave Toussaint 1'Ouverture, of St. Domingo, was born in slavery, and first emerged with him to notice in the active part they both took in the commotions excited in St. Domingo in 1791. Dessalines particularly distinguished himself by his defence of Crete le Perrot against the French general, Leclerc. When Toussaint was obliged to make peace with the French, Dessalines was included in the treaty, though he by no means approved it; and what followed, but too well confirmed his suspicions of the French. Tous- saint was treacherously seized, and carried to France, where he died. Dessalines was now unanimously elected commander-in-chief of the forces, which rose upon Rochambeau, who had succeeded Leclerc, and who treated the black inhabitants of St. Domingo with no less cruelty than his predecessor. He, at once, attacked Ro- chambeau with the main body of his army, near Cape Francois, the capital of the island, and defeated him with great slaughter, compelling him to retreat into the town, and finally to sur- render to the English. Dessalines now exerted himself to provide for the future security, and concerted a variety of measures for the internal regulation, of the island. He first caused a pro- clamation of independence to be issued on the 29th of November, 1803, in which the colony was solemnly declared to be for ever separated from France. His next step was to abolish the name of St. Domingo, and substitute in its place the original appellation of Hayti. He was subsequently chosen governor of Hayti during- his

life, with authority to appoint his successor ; and on the 8th of October, 1804, proclaimed emperor. This dignity, the acceptance of which forms the only conspicuous act of folly in his course, he only enjoyed about two years. In October, 1806, Christophe, the second emperor, headed a suc- cessful conspiracy against him, and murdered him, by surprise, in his palace.

DESSAULT (Peter Joseph), an eminent French surgeon, born at Magny Vernois, near Macon, in 1744. He received the early part of his education among the Jesuits, with a view to the priesthood, which profession he afterwards declined, and became a student in the military hospital of Besort. When about twenty years of age, he removed to Paris, where the greater part of his time was spent at the anatomical theatres and hospitals ; and, in the winter of 1766 he commenced teacher of anatomy. His fame soon spreading, he was in a short time at- tended by 300 pupils; and, in 1776, was ad- mitted a member of the corporation of surgeons. In 1782 he was appointed surgeon-major to the hospital of Charity. At this time Dessault was considered as one of the first surgeons in Paris; and having succeeded to the next vacancy at the Hotel Dieu, he was entrusted with almost the whole surgical department of that hospital, after the death of

Moreau. A clinical school of sur- gery, on a liberal and extensive plan, was here instituted by him, which attracted a concourse of students, not only from all corners of France, but from foreign countries, and his lectures were frequently attended by 600 students ; so that it may be said, the greater part of the surgeons in the French army derived the knowledge of their profession from his school. In 1791 he com- menced his Journal de Chirurgerie, a work of considerable reputation. In the midst, however, of his useful and important labors, the prevailing parties of this turbulent period took offence at him as standing neutral ; and in 1 792, after being twice examined, he was seized, while deli- vering a lecture, and confined in the Luxem- bourg prison, where he remained three days; but his usefulness restored him to his former situation. Upon the establishment of the school of health, he was made clinical professor for ex- ternal maladies ; and he was particularly instru- mental in the conversion of the Evech6 into an hospital for surgical operations. So deeply, however, was he affected by the horrid scenes which were exhibited in May, 1795, that he was seized with a fever, accompanied with de- lirium, and died on the 1st of June, aged fifty- one.

DESSE'RT, n.s. Fr. desserte. The last course at an entertainment ; the fruit or sweetmeats set on the table after the meat.

To give thee all thy due, thou hast the art To make a supper with a fine dessert. Dryden.

At your dessert bright pewter comes too late, When your first course was well served up in plate.

King.

And here, assembled cross-legged round their trays, Small social parties just begun to dine ;

Above them their dessert grew on its vine, The orange and pomegranate nodding o'er, Dropped in their laps, scarce plucked, their mellow store.
#:"•'«

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Lat. destino. To doom ; design for a given purpose ; ap- point irreversibly.

I DESTINE, v. a. DES'TINATE, v. a. • DESTINATION, n. s. DES'TINY,

Out of this prison helpe that we may 'scape, And if so be our destine be

shape By eterne word to dien in prisoun Of our lignage have som compassion.

Chaucer. Cant. Tales. But who can turn the stream of destiny, Or break the chain of strong necessity, Which fast is tied to Jove's eternal seat ?

Faerie Queene.

Thou art neither like thy sire or dam ; But, like a foul mis-shapen stigmatick, Marked by the destinies to be avoided. Shakspeare. The destinies of old put poverty upon the celestial herald as a punishment j and ever since those Ge- mini, or twin-born brats, Poetry and Poverty, have been inseparable companions. Burton.

Wherefore cease we then ? Say they who counsel war : we are decreed, Reserved and destined to eternal woe ; Whatever doing, what can we suffer more? Milton.

They'll find i' th' physiognomies O' th' planets, all men's destinies ; Like him that took the doctor's bill, And swallowed it instead o' th' pill. Hudibras.

There is a great variety of apprehensions and fan- cies of men, in the destination and application of things to several ends and uses. Hale.

All altars flame ; before each altar lies, Drenched in his gore, the destined sacrifice. Dryden.

Birds are destinated to fly among the branches of trees and bushes. Ray on the Creation.

The infernal judge's dreadful power From the dark urn shall throw thy destined hour.

Prior.

May heaven around this destined lieaa, The choicest of its curses shed. Id.

Some against hostile drones the hive defend, Others with sweets the waxen cells distend ; Each in the toil his destined office bears, And in the little bulk a mighty soul appears. Gay.

DESTITUTE, adj.) Fr. destitue ; Span.

DESTITUTION, n. s. \ destituydo ; Ital. desti-

tuto, from Lat. destituo, (de and statuo), to for-

(trpww, to build. To overturn an edifice ; henca to ruin ; lay waste; put an end to; kill.

Neither grutche ghe as somme of hem gru'.chiden, and thei perisscheden of a distriere. Widif. 1 Cor. x. The Lord will destroy this city. Gen. xix. 14.

'Tis safer to be that which we destroy, Than by destruction dwell in doubtful joy.

Shakspeare.

Triumph, to be styled great conquerors, Patrons of mankind, gods, and sons of gods ! Destroyers rightlier called, and slayers of men.

Milton.

The wise Providence has placed a certain antipathy between some animals and many insects, whereby they delight in their destruction, though they use them not as food ; as the peacock destroys snakes and adders ; the weazel, mice and rats ; spiders, flies ; and some sorts of flies destroy spiders. Hale.

Do we not see that slothful, intemperate, and in- continent persons destroy their bodies with diseases, their reputations with disgrace, and their faculties with want ? Bentley.

Yet, guiltless too, this bright destroyer lives ; At random wounds, nor knows the wound she gives.

Pope.

Armres, though always the supporters and tools of absolute power, for the time being, are always the destroyers of it, too ; by frequently changing the hands in which they think proper to lodge it. Chesterfield, When Nero perished by the justest doom Which ever the destroyer yet destroyed, Amidst the roar of liberated Rome,

Of nations freed, and the world overjoyed, Some hands unseen strewed flowers upon his tomb.

Byron.

DESTRUCTION, n. s.] Lat. destructio, DESTRUC'TIBLE, adj. from destruo. See

DESTRUCTIBI'LITY, DESTROY. The

DESTRUCTIVE, adj. >act or consumma-

DESTRUCT'IVEEY, adv. tion of destroying; DESTRUCT'IVENESS, n. s. hence,killing,mur- DESTRUC'TOR. J der. Destructible

is, liable to be destroyed ; destructive is, having the quality of destroying ; wasteful ; tending to- rum, or causing it. The adverb and noun fol- lowing, express a similar sense. Destructor is used by Boyle for destroyer.

For the aarmuris of our knytghoodben not fleischli,

sake. Forsaken ; abandoned ; taking of- friend- but my§hti bie God to the destruction of strength!*.*

*11 9 if * -vir:i!f o r>.. IA*

less, low.

He will regard the prayer of the destitute, and no1 despise their prayer. Psalm cii. 17.

That destitution in food and cloathing is such an impediment, as, till it be removed, suffereth not the mind of man to admit any other care. Hooker.

The order of paying the debts of contract or resti – tution is set down by the civil laws of a kingdom ; in destitution or want of such rules, we are to observe the necessity of the creditor, the time of the delay, and the special obligations of friendship. Taylor.

Take the destined way

To find the regions destitute of day. Dryden.

Nothing can be a greater instance of the love that mankind has for liberty, than such a savage mountain covered with people, and the Campania of Rome, which lies in the same country, destitute of inhabi- tants. Addison.

DESTROY', v. a. I Fr. detruire ; Span.

Widif. 2 Cor. 10. Broad is the way that leadeth to destruction.

Matthew.

'Tis safer to be that which we destroy, Than by destruction dwell in doubtful joy.

Shakspeare.

What a favour is it to men, to be reserved from common destruction, to be sacrificed to their Maker and Redeemer. Bp. Hall. Contemplations.

Helmont wittily calls the fire the destructor and the artificial death of things. Boyle.

In ports and roads remote, Destructive fires among whole fleets we send.

Dryden.

Excess of cold, as well as heat, pains us ; because it is equally destructive to that temper which is neces- sary to the preservation of life. Locke.

He will put an end to so absurd a practice, which makes our most refined diversions destructive of all politeness. Addison.

What remains but to breathe out Moses's wish t

DESTROY'ER, n. s. 5 destruire ; Ital. distrug o that men were not so destructively foolish '.

gcre ; Lat. de&truere, de privative, and struo, Gr.

*Decay of Piety**

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The vice of professors exceeds the destructiveness of the most hostile assaults, as intestine treachery is more ruinous than foreign violence. Id.

Waste cannot be accxirately told, though we- are sensible how destructive it is. Johntun.

If he was

Aught but a phantasy, and could be classed

With forms which live and suffer — let that pass — His shadow fades away into destruction's mass.

Byron.

DESUDATION, n. s. Lat. desudatio. A profuse and inordinate sweating,

from what cause soever.

DES'UETUDE, n. s. Fr. desuetude ; Latin, desuetudo, from desuesco, desuetus ; de privative and suesco, to be accustomed. Cessation of cus- tom or habit.

How come they to be prejudiced, rescinded, abro- gated, by contrary laws, and desuetude, by change of times and opinions. Bp. Taylor.

By the irruption of numerous armies of barbarous people, those countries were quickly fallen off, with barbarism and desuetude, from their former civility and knowledge. Hale.

DESULTOR, in antiquity, a vaulter or leaper, who, leading one horse by the bridle, and riding another, jumped from the back of the one to the other. This practice required great dexterity, being performed before the use of either saddles or stirrups. The custom was practised in the army chiefly among the Numidians, who always carried with them two horses for that purpose, changing them as they tired : the Sarmatae also were great masters of this exercise.

DES'ULTORY,a$. > Latin desultorius.

DESULTOR'IOUS. 3 Vaulting or leaping to and fro. See above. Unsettled ; without method in thought or action ; wavering.

'Tis not for a desultory thought to atone for a lewd course of live : nor for any thing but the superindu- cing of a virtuous habit upon a vicious one, to qua- lify an effectual conversion. L'Estranye.

Let but the least trifle cross his way, and his desul- torious fancy presently takes the scent, leaves the un- finished and half-mangled notion, and skips away in pursuit of the new game, Norris.

Take my desultory thoughts in their native order, as they rise in my mind, without being reduced to rules, and marshalled according to art.

Felton on the Classics.

DESU'ME, v.a. Lat. desumo. To take from anything; to borrow.

This pebble doth suppose, as pre-existent to it, the more simple matter out of which it is desumed, the heat and influence of the sun, and the due preparation of the matter. Hale.

They have left us relations suitable to those of jElian and Pliny, whence

they desumed their narra- tions. Browne.

DETACH', v. a. > Fr. detacher, from dis Lat.

DETACH'MENT. 5 and ATTACH, which see. To separate ; disengage : hence to select and send out a body of military : a detachment is applied to the body so sent out.

Mean while the Squire was on his way,

The knight's late orders to obey ;

Who sent him for a strong detachment

Of beadles, constables, and watchmen.

Hudibras.

If ten men are iti war with forty, and the latter de- tach only an equal number to the engagement, what benefit do they receive from their superiority ?

Addison.

The several parts of it are detached one from the other, and yet join again, one cannot tell how.

Pope.

Besides materials, which are brute and blind, Did not this work require a knowing mind, Who for the task should fit detachments chuse From all the atoms ? Blackmore.

DETACHMENTS are sometimes formed of entire squadrons and battalions ; but more generally of a number of men picked out from several regi- ments or companies equally, to be employed as the general may see proper ; 'whether on an at- tack, or to scour the country. A detachment of 2000 or 3000 men is a command for a briga- dier general : 800 for a colonel : 400 or 500 for a lieutenant-colonel. A captain never marches on a detachment with less than fifty men, a lieu- tenant, an ensign, and two Serjeants. A lieu- tenant is allowed thirty, and a Serjeant ; and a seajeant ten or twelve men.

DE'TAXL, v. a. & n. s. Fr. detailler. From de and TELL, which see. To relate in particular, or with minuteness.

They will perceive the mistakes of these philoso- phers, and be able to

answer their arguments, without my being obliged to detail them. Cheyne.

I was unable to treat this part of my subject more in detail, without becoming dry and tedious. Pope.

His train of reasoning is ingenious and whimsical > but I am not at leisure to give you a detail.

Franklin.

DETAIN', v. a. ˆ Fr. detiner ; Span, detc-

DETAIN'ER, n. s. >ner, from Lat. detinere, de

DETAIN'DER. j and teneo ; Gr. r«vw, to

stretch. To hold or keep back; to restrain; to

keep in custody. See DETINUE.

Let us detain thee until we shall have made ready a kid. Judges, xiii. 13.

These doings sting him

So venomously, that burning shame detains him From his Cordelia. Sltakspeare.

Detain not the wages of the hireling ; for every de- gree of detention of it, beyond the time, is injustice and uncharitableness. Taylor.

Judge of the obligation that lies upon all sorts of injurious persons ; the sacrilegious, the detainers of tithes, and cheaters of men's inheritances. Id.

Had Orpheus sung it in the nether sphere, So much the hymn had pleased the tyrant's ear, The wife had been detained to keep her husband there.

Dryden.

DETECT, v. a. ˆ Lat. delectus, from dele- DETECT'ER, n. s. %gere, de privative, and tego DETECT'ION. 3 to hide. To discover a crime, or scheme ; to discover generally.

There's no true lover in the forest ; else sighing1 every minute, and groaning every hour, would detect the lazy foot of time as well as a clock. SJiakspeare.

Should I come to her with any detection in my hanr , I could drive her then

from the ward of her family.

Id.

Though should I hold my peace, yet thou Wouldst easily detect what I conceal. Milton.

Detection of the incoherence of loose discourses was wholly owing to the syllogistical form. Locke.

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The utmost infinite ramifications and inosculations of all the several sorts of vessels may easily be de- tected by glasses. ^”.’/.

Not only the sea, but rivers and rains also, are in- strumental to the detection of amber, and other fossils, by washing away the earth and dirt that concealed them. Woodward.

DETENTION, n. s. From DETAIN, which see. The act of keeping back, or withholding ; restraint; custody.

How goes the world, that I am thus encountered With clamorous claims of debt, of broken bonds, And the detention of long-since due debts, Against my honour T Shakspeare.

This worketh by detention of the spirits, and consti- pation of the tangible parts. Bacon,

DETENTS, in a clock are those stops which, by being lifted up or let fall down, lock and un- lock the clock in striking. See CLOCK.

DETENT-WHEEL, or HOOP-WHEEL, in a clock, a wheel which has a hoop almost round it, wherein there is a vacancy, at which the clock locks.

DETER’, v. a. > Lat. deterreo, from de DETER’MENT, n. s. j and terreo, to frighten ;

Gr. rpfk), to tremble. To discourage by terror ;

to affright from.

I never yet the tragick strain assayed, Deterred by the inimitable maid. Waller.

These are not all thy determent! that opposed my obeying you. Boyle.

Many and potent enemies tempt and deter us from our duty ; yet our case is not hard, so long as we have a greater strength on our side. Tillotton.

Beauty or unbecomingness are of more force to draw or deter imitation, than any discourses which can be made to them. Locke.

The ladies may not be deterred from corresponding •with me by this method. Addisun.

Death is not sufficient to deter men who make it their glory to despise it j but if every man who fought a duel were to stand in the pillory, it would quickly lessen the number of these imaginary men of honor.

Id.

Get a habit of doing right, whatever pain it costs you ; let no difficulties deter you in the way of virtue ; and account every thing else despicable, in comparison of this. Johruon.

I do not give you to posterity as a pattern to imi- tate, but as an example to deter. Jvnitu.

DETERGE', v. n. > Fr. deterger; Lat. de- DETERG'ENT, adj.] tergere, de and tergo. To cleanse, applied particularly to the cleansing of sores. Detergent, having the quality of cleans- ing.

The food ought to be nourishing and detergent.

Arbuthnut.

Sea salt preserves bodies through which it passeth, from corruption ; and it detergeth the vessels, and keeps the fluids from putrefaction. Id.

Consider the part and habit of body, and add or diminish your simples as you design to deterge or in- carn. Wiseman.

DETERIORATION, n. s. From Lat. de- tenor. The act of making, or state of growing worse.

When the deterioration of a commodity, seized bv an officer, arises from the fault of the keeper, he is answerable for the same. Dr. A. Rees.

DETER/MINE, v. a. & v. n.ˆ Fr. detcr-

DETJIR'MINATE, v. a. & adj. miner ; Span.

DETER'MINATELY, adv. [determinur ;

DETERMINATION, n. s. ("Ital. and Lat.

DETER'MINATIVE, n. s. & adj. detcrminare,

DETERMINA'TOR. J from de and

terminus ; Gr. rtp/xa, a bound. To mark or fix a bound ; hence to conclude ; settle ; adjust generally ; and to choose or influence choice. As a neuter verb, to conclude ; settle an opinion; decide and resolve. Determinate and deter- mine seem synonymous as verbs active, but the former is obsolete.

And maad of oon al the kynde of men to enhabite on all the face of the erthe, determynynge tymes ordeyned and teermys of the dwellyng of hem.

Wiclif. Dedis. xvii.

Jonathan knew that it was determined of his father to slay David. 1 Sam. xx. 33.

In those errors they are so determinately settled, that they pay unto falsity the whole sum of whatso- ever love is owing unto God's truth. Hooker. Now, noble peers, the cause why we are met

Is to determine of the coronation. Shakspeare.

I' the progress of this business, Ere a determinate resolution, he, I mean the bishop, did require a respite. Id.

The fly-slow hours shall not determinate The dateless limit of thy dear exile. Id.

They have acquainted me with their determinatnm, which is to go home, and trouble you no more.

Id. Merchant of Venice.

The knowledge of men hitherto hath been deter- mined by the view or sight ; so that whatsoever is in- visible, either in respect of the fineness of the body itself, or the smallness of the parts, or of the subtilty of the motion, is little enquired. Bacon.

They were apprehended, and, after conviction, the danger determined by their deaths. Hayward.

Eve ! now expect great tidings, which perhaps

Of us will soon determine or impose

New laws to be observed. Milton.

The proper acts of the intellect are intellection, deliberation, and determination, or decision.

Hale't Origin of Mankind.

Whether all plants have seeds, were more easily determinable, it we could conclude concerning harts- tongue, ferae, and some others.

Browne's Vulgar Erroun.

Like men disused in a long peace, more determi- nate to do, than skilful how to do. Sidney.

Think thus with yourselves, that you have not the making of things true or false ; but that the truth and existence of things is already fixed and settled, and that the principles of religion are already either determinately true or false, before you think of them.

Tillotton.

Revolutions of state, many times, make way for new institutions and forms, and often determine in either setting up some tyranny at home, or bringing in some conquest from abroad. Temple.

A man may suspend the act of his choice from being determined for or against the thing proposed, till he has examined it. Locke.

Demonstrations in numbers, if they are not more evident and exact than in extension, yet they are

more general in their use, and determinate in their application. Id.

As soon as the studious man's hunger and thirst makes him uneasy, he, whose will was never deter- mined to any pursuit of good cheer, is, by the uneasi- ness of hunger and thirst, presently determined to eating and drinking. Id.

When we voluntarily waste much of our lives, that remissness can by no means consist with a constant determination of will or desire to the greatest apparent good. Id.

That individual action, which is justly punished as sinful in us, cannot proceed from the special influence and determinative power of a just cause.

Bramhall against Hobbes.

All pleasure springing from a gratified passion, as most of the pleasure of sin does, must needs deter- mine with that passion. South.

Probability, in the nature of it, supposes that a thing may or may not be so, for any thing that yet appears, or is certainly determined, on the other side.

Id. Destruction hangs on every word we speak,

On every thought, till the concluding stroke

Determines all, and closes our design. Addison.

No sooner have they climbed that hill, which thus determines their view at a distance, but a new pros- pect is opened. Atterbwy.

To make all the planets move about the sun in cir- cular orbs, there must be given to each, by a deter- minate impulse, those present particular degrees of velocity which they now have, in proportion to their distances from the sun, and to the quantity of the solar matter. Bentley.

Consult thy judgment, affections, and inclinations, and make thy determination upon every particular ; and be always as suspicious of thyself as possible.

Calamy.

He confined the knowledge of governing to justice and lenity, and to the speedy determination of civil and criminal causes. Gulliver's Travels.

The long dispute among the philosophers about a vacuum, may be determined in the affirmative ; that it is to be found in a critic's head. Swift.

If the term added to make up the complex subject does not necessarily or constantly belong to it, then it is a determinative, and limits the subject to a par- ticular part of its extension ; as, every pious man shall be happy. Watts.

How far this unexpected distinction can be rated among the happy incidents of life, I am not yet able to determine. Johnson. Plan of Dictionary.

DETERRATION, n. s. Lat. de and terra; Fr. deterrer. Discovery of any thing by removal of the earth that hides it ; the act of unburying.

This concerns the raising of new mountains, deter- rations, or the devolution of earth down upon the val- leys from the hills and higher grounds. Woodward.

DETER'SION, n. s. } From Lat. deter-

DETER'SIVE. adj. & n. s. 5 go. See DETERGE.

The act of cleansing a sore. Having the power

to cleanse. An application that cleanses wounds .

I endeavoured detersion, but the matter could not be discharged. Wiseman.

We frequently see simple ulcers afflicted with sharp humours, which corrode them, and render them pain- ful sordid ulcers, if not timely relieved by detersives and lenients. J

Fr. de tester ; Span. ' detestar ; Lat. detestare, • according to Minsheu, from deum testari (odio- ' sum illud est), a form

DETEST, v. a.

DETEST'ABLE, adj.

DETEST'ABLY, adv.

DETESTA'TION, n. s. I

DETEST'ER.

of declaring hatred to, and innocence of any crime. Detestatio was the swearing a tiling to be hateful and odious. To hate ; abominate : hateful ; abhorred : a detester is one who hates or abhors.

He was deadly made, And all that life preserved did detest.

Faerie Qtteene, That detestable sight him much amazd,

To see the' unkindly imps of heaven accurst

Devoure their dam. Spenser. Faerie Queene.

I ‘ve lived in such dishonour, that the gods Detest my baseness. Shakspeare.

Glory grows guilty of detested crimes, When for fame's sake, for praise, an outward part, We bend to that the working of the heart. Id.

He desired him to consider that both armies con- sisted of Christians, to whom nothing is more detest- able than effusion of human blood. Hayward.

Then only did misfortune make her see what sh-; had done, especially finding in us rather detestation than pity. Sidney.

There is that naturally in the heart of man which abhors sin as sin, and consequently would make him detest it both in himself and others too. South.

Who dares think one thing, and another tell, My heart detests him as the gates of hell. Pope.

Our love of God will inspire us with a detestation for sin, as what is of all things most contrary to his divine nature. Swift.

It is the peculiar condition of falsehood, to be equally detested by the good and bad. Johnson.

The detestable maxim, Qui nescit dissimulare nescit regnare, will not be heard of in heaven. Bp. Watson.

DETHRONE, v. a. Fr. detroner ; de and throne (Lat. thronus). To divest of regal dignity.

The queen became the object of public hatred, the dethroned king was regarded with pity. Hume.

DETIN'UE, ra. s. Fr. detenue. A writ that lies against him, who, having goods or chattels delivered him to keep, refuses to deliver them again.

DETINUE lies for any thing certain and valu- able, wherein one may have a property or right; as for a horse, cow, sheep, hens, dogs, jewels, plate, cloth, bags of money, sacks of corn, &c. It must be laid so certain, that the thing detained may be known and recovered : and therefore, for money out of a bag, or corn out of a sack, &c., it lies not ; for the money or corn cannot in this case be known from other money or corn ; so that the party must have an action on the case, &c. Yet detinue may be brought for a piece of gold of the price of 22s. though not for 22s. in money. In this action, the thing detained is generally to be recovered, and not damages ; but if one cannot recover the thing itself, he shall recover damages for the

thing, and also for the detainer.

DET'ONATE, v. n. ˆ Lat. detono, from de

DETONA'TION, n. s. > emphatic, and tonus,

DET'ONISE, v. a. 3 a sound. To thunder or make a great noise. It is used for various explosions in chemistry. To detonise is to calcine with detonation.

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A new coal is not to be cast on the nitre, till the detonation occasioned by the former be either quite or almost altogether ended ; unless it chance that the pulling matter do blow the coal too soon out of the crucible. Bˆle-

ineteen parts in twenty of detonixed nitre is de- stroyed in eighteen days. Arbuthnot on Air.

The nitrates yield oxygen gas mingled with nitrogen gas by the action of fire ; they give out a white va- pour of nitric acid when acted on by concentrated sulphuric acid ; and, when mixed with combustible substances, produce, at a red heat, inflammation and detonation. Parke'e Chemieal Catechism.

DETONATION, in chemistry, signifies an explo- sion with noise made by the sudden inflamma- tion of some combustible body : such as are the explosions of gunpowder, and fulminating pOw- ders. See CHEMISTRY.

DETORT', v. a. Lat. detortus, of detorqueo. To wrest from the original import, meaning, or design.

They have assumed what amounts to an infallibility in the private spirit, and have detorted texts of scrip- ture to the sedition, disturbance, and destruction of the civil government. Dryden.

DETOUR DES ANGLOIS, or English Turn, a circular direction of the river Mississippi, in North America, so very considerable, that vessels cannot pass it with the same wind that conducted them to it, and must either wait for a favorable wind, or make fast to the bank, and haul close ; there being sufficient depth of water for any vessel that can enter the river. The two forts and batteries at this place on both sides the river, are more than

sufficient to stop the progress of any vessel whatever. Dr. Cox, of New-Jersey, ascended the Mississippi to this place, anno 1698, took possession, and called the country Carolina. It lies eighteen miles below New Orleans, and eighty-seven above the Balize.

DETRACT v. a. ~] Fr. detracter; Span.

DETRACT'ER, n. s. j detratar ; Lat. detra-

DETRACT'ION, (here, from de (down-

DETRAC'TIOUS,^'. j ward) and trahere ;

DETRACT'ORY, Gr. ipaoau, to draw.

DETRACT'RESS, n. s. J To take away or sub- ract ; generally to take away, or derogate from, character. Detractory, and detractious, alike mean, dishonorable to character.

Lest pcrauenture stryuyngis, enuyes, sturdnessis, dissenciouns, and detracciouta, priuy spechis of dis- cord ben among ghou. Wiclif. 1 Cor. 12.

I am right glad to be thus satisfied, in that I yet was never able till now to choke the mouth of such detracters with the certain knowledge of their slander- ous untruths. Spenser on Ireland.

I put myself to thy direction, and Unspeak mine own detraction ; .here abjure The taints and blames I laid upon myself, For strangers to my nature. Shakspeare.

Those were assistants in private, but not trusted to manage the affairs in publick ; for that would detract from the honour of the principal ambassador. Bacon.

You shall enquire of the unlawful taking of par- tridges, and pheasants, or fowl, the detraction of the eggs of wild-fowls, &c. Id.

By the largeness of the cornices they hinder both the light within, and likewise detract much from the view of the froct without. Wotton.

Fame, that her high birth to rais? Seemed erst so lavish and profuse, We may justly now accuse Of detraction from her praise. Milton

The painters are most envious, if they want Good colours for preferment ; virtuous ladies Love this way to be flattered, and accuse The workman of detraction, if he add not Some grace they cannot truly call their own.

Masiinger.

This is not only derogatory unto the wisdom of God, who hath proposed the world unto our knowledge, and thereby the notion of himself ; but also detractory unto the intellect and sense of man. Browne.

The multitude of partners does detract nothing from each private share, nor does the publickness of it lessen propriety in it. Boyle.

No envy can detract from this : it will shine in his- tory, and, like swans, grow whiter the longer it en- dures. Dryden.

Away the fair detracters went, And gave by turns their censures vent.

Swift.

If any shall detract from a lady's character, unless she be absent, the said detractress shall be forthwith ordered to the lowest place of the room. Addison.

The detractory lye takes from a great man the re- putation that justly belongs to him. Arbuthnot.

Detraction, in the native importance of the word, signifies the withdrawing or taking off from a thing ; and, as it is applied to the reputation, it denotes the impairing or lessening a man in point of fame, render- ing him less valued and esteemed by others, which is the final aim of detraction. Ayliffe.

Hard is his fate on whom the public Is fixed for ever to detract or praise ; Repose denies her requiem to his name, And folly loves the martyrdom of Fame. Byron.

DETRANCHE, in heraldry, a line bend- wise, proceeding always from the dexter side, but not from the very angle diagonally athwart the shield.

DETRIMENT, n. s. } Fr. detrimeitt ; Spa.

DETRIMENTAL, adj. 5 Portug. and Ital. de- trimento ; Lat. detrimentum, from detero, detritus, worn, because that which is worn is thereby in- jured. Injury ; diminution ; harm. Detrimen- tal is, mischievous; causing injury.

Difficult it must be for one Christian church to abo- lish that which all Lad received and held for the space of many ages, and that without any detriment unto religion. Hooker.

I can repair

That detriment, if such it be, to lose Self-lost. Milton.

He with the foe began to buckle, Vowing to be revenged for breach Of crowd and skin upon the wretch, Sole author of all detriment He and his fiddle underwent. Hudibras.

Let a family burn but a candle a night less than the usual number, and they may take in the Spectator without detriment to their private affairs. Addison.

Obstinacy in prejudices, which are detrimental to our country, ought not to be mistaken for virtuous re- solution and firmness of mind. Id.

And the reason seems to be, because aa apprehen- sion of the displeasure of their superiors, and the de- trimental consequences which may accrue from thence, may be a check upon them, and engage them to pay the just regards which they expect. Mason,

DETRITION, n. s. Lat. dete.ro, detritus, rr:m de and te.ro ; Gr. rtpw, to rub. The act of wearing away.

DETROIT RIVER, or Strait of St. Clair, the strait or river which flows from lake St. Clair into lake Erie, and forms part of the boundary between the United States and Upper Canada. It is forty miles long, and the great channel by vrhich the waters of- the lakes of Canada, Huron, Superior, and Michigan, are conveyed to the ocean. On the east side cultivation has made great progress.

DETROIT, a flourishing town of the United States, on the west side of the above river. The fort and military works are very strong ; but they were taken in 1812, by the British, undergeneral Brock.

DETRUDE', 3j. a. \ Lat. detrudo ; de and

*DETRU'SION, n. *. 5 trudo, to thrust ; to push' down ; the act of thrusting or forcing down.*

Philosophers are of opinion, that the souls of men may, for their miscarriages, be detruded into the bo- dies of beasts. Locke.

From this detrusion of the waters towards the side, the parts towards the

pole must be much increased. Keil against Btirnet. At thy command the vernal sun awakes

The torpid sap, detruded to the root

By wintry winds. Thomson.

Such as are detruded down to hell,

Either for shame they still themselves retire,

Or, tied in chains, they in close prison dwell.

Daviet.

To DETRU'NCATE, v. a. i Lat. detrunco ;

DETRUNCA'TION, n. s. 3 de and trunco.

To lop; to C'lt; to shorten by deprivation of parts.

It may sometimes happen by hasty detnmcation, that the general tendency of a sentence may be changed. Johnson. Pref . to Dictionary.

DETTINGEN, a village of Germany, in the electorate of Mentz, situated on the east side of the Maine, where a battle was fought between the English, under the command of king George II. in person and the earl of Stair, and the French, under the command of the duke of Noailles. The English had the honor of the day ; but were soon obliged to leave the field of battle, which was taken possession of by the French, who treated the wounded English with great clemency. It is nine miles south of Ilariau, and six north-west of Aschaffenburgh. Long. 9° 5′ E., lat. 49° 55′ N.*

DETURBATION n. s. Lat. deturbo. The act of throwing down ; degradation.

DEVAPO RATION, n. s. Lat. from de and vapor. The condensation of vapor.

For the wind1 blows uniformly upon this hot part of the coast of Peru, but no cause of devapora- tion occurs till it begins to ascend the mountainous Andes, and then its. own expansion produces cold suf- ficient to condense its vapour. Darwin,

DEVAPRAYAGA, a town of the province of Serinaghur, Northern Hindostan, situated at the junction of two branches of the most sacred part of the Ganges. It is built on the side of a mountain, about 100 feet above

the stream. The houses are of stone, covered with shingles. The celebrated temple of Ramachandra. containing

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a statue of the deity, of black stone, is constructed of large blocks of cut stone, piled up, without mortar, to the height of sixty feet. It is at the upper part of the town, and surrounded by twenty-five villages, which belong to the Brah- mins. This place suffered much by an earth- quake in 1803.

• DEVASTATION, n. $. Lat. devasto, de and vastus. Waste ; havock ; desolation ; destruc- tion.

By devastation the rough warrior gains, And fanners fatten most when famine reigns Garth.

That flood which overflowed Attica, in the days of Ogyges, and that which drowned Thessaly in Deuca- lion's time, made cruel havock and devastation among them. Woodward.

If it excite a man to wicked attempts, make him wil- ling to sacrifice the esteem of all wise and good men to the acclamations of a mob ; to overleap the bounds of decency and truth, &c. it is then not only vanity but vice ; a vice, which of all others hath made the greatest havock and devastation, among men. Mason.

DEUCALION, king of Thessaly, is said to have been the son of Prometheus. A flood re- corded to have happened in this time (about A. A. C. 1500), is supposed to have been only an inundation of the neighbouring country, oc- casioned by heavy rains, and an earthquake that stopped the course of the river Peneus. He governed his people, we are told, with great equity ; but the rest of mankind, being extremely wicked, were destroyed by a flood, while Deucalion and Pyrrha his queen saved themselves by ascending mount Parnassus. When the waters decreased, they went and consulted the oracle of Themis, on the means by which the earth was to be re- peopled, and were ordered to veil their heads and faces, to unloose their girdles, and throw behind their backs the bones of their great mother. At this advice Pyrrha was seized with horror ; but Deucalion explained the mystery, by ob- serving, that their great mother must mean the earth, and her bones the stones ; when taking them up, those Deucalion threw over his head became men, and those thrown by Pyrrha women. M. Bryant and others have supposed, that Deu- calion was the same with the patriarch Noah ; and that his flood in Thessaly, and those 01 Ogyges in Attica, and Prometheus in Egypt, were the same with that of Noah recorded in Scripture. See DELUGE.

DEUCE, Goth, dut ; Lat. dusius ; Arm. teut, once applied to good as well as evil spirits. See DEMON.

'Twas the prettiest prologue^as he wrote-it ; Well, the deuce take me if I ha'n't forgot it.

Congreve.

DEUCE, n. s. Fr. de.ux. Two : a word used in games.

You are a gentleman and a gamester ; then, I am sure, you know how much the cross sum of deuce ace amounts to. Shaktpeare.

DEVE'LOP, v. a. Fr. developer; Lat. deveiu To disengage from something that enfolds 01 conceals ; to disentangle.

Take him to develop, if you can, And hew the block off, and get ont the man.

Dunciail.

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DEV 19-

In his eye

And nostril, beautiful disdain, and might, And majesty, flash their full lightnings by, Developing in that one glance the Deity. Byron. DEVENTER, the capital of a district in the province of Overyssel, Netherlands, situated in a fertile country, on the right bank of the river Yssel, is not a town of great size, but is strong, being surrounded by a wall, well flanked with towers, and defended with broad and deep ditches. The cathedral is a fine structure. There are besides three parish churches, and several convents ; and an athenaeum, or provincial academy. The manufacture of this place is linen, and the trade is in butter, cheese, and cattle. There is a beau- tiful promenade on the Yssel. Population 10,100. It is eight miles N. N. W. of Zutphen, aid forty-six east of Amsterdam.

DEVEREUX (Robert), earl of Essex. See ESSEX.

DEVE'ST, v. a. Fr. dtvesier ; Lat. de and ves- tit. See DIVEST. To strip; to deprive of clothes.

What are those breaches of the law of nature and nations, which do forfeit and devest all right and till in a nation to government ? Bacon.

Friends all but now,

In quarter and in terms, like bride and groom Deviating them for bed. Shakspeare.

Come on, thou little inmate of this breast, Which for thy sake from passions I devest. Prior.

DEVE'X, adj.) Lat. devexus. Bending DEVE'XITY/, n. s. J down ; declivous ; incur- vated downwards ; declivity.

DE'VIATE, v. n. ˆ Lat. de via decedere DEVIA'TION, n. s. >To wander from the DE'VIOUS, adj. j right or common way ; »o go astray.*

In this minute devious subject, I have been ne- cessitated to explain myself in more words than may seem needful. Holder.

A story should, to please, at least seem true, Be apropos, well told, concise, and new : And whensoe'er it deviates from these rules, The wise will sleep, and leave applause to fools.

Stillingfleet.

The rest to some faint meaning make pretence, But Shad well never deviates into sense. Dry den.

Some lower muse, perhaps, who lightly treads The devious paths where wanton fancy leads. Rowe.

What makes all physical and moral ill ? ThereNature deviates, and here wanders Will. Pope.

These bodies constantly move round in the same tracks, without making the least deviation.- Cheyne.

One devious step at first setting out, frequently leads a person into a wilderness of doubt and error.

Clarissa.

Worthy persons, if inadvertently drawn into a de- viation, will endeavour instantly to recover their lost ground, that they may not bring error into habit.

Id.

Every muse,

And every blooming pleasure, wait without fo bless the wildly devious morning walk.

Thomson. To what gulfs

A single deviation from the track Of human duties leads even those who claim The homage of mankind as their born due, And find it, till they forfeit it themselves !

Byron.

DEVICE', n.s. DEVIL,

See DEVISE.

Goth. diqft; Sax. diofut.

DE, } ot. dq; ax. diofut.

DEV'ILISH, adj. >Teut. teuffel ; Irish dual;

DEV'ILISHLY, adv. J Belg. duvcll; Fr. dlable ; Span, diablo, from Lat. diabolus ; Gr. SiafioXoc, £iaj3a\A«, from Sia, through and /3aXXw, to cast; to strike through as with a dart ; and thence as with slander. The great spiritual enemy of man, called in Scripture ' an accuser ;' a term of reproach, expressing extreme wickedness, raal, or supposed : a ridiculous expletive : the adjective and adverb seem plain.

Clothe ghou with the armure of God, that ghe moun stande aghens aspiyngis of the deitel.

Wiclif. Effesies 6.

Have not I chosen you twelve, and one of you is a devil 1 Bible. John vi. 70.

This wisdom descendeth not from above, but is earthly, sensual, devilish. Id. Jamet iii. 15.

For grief thereof and devilish despight, From his infernal furnace forth he threw

Huge flames, that dimmed all the heaven's light, Enrolled in duskish smoke and brimstone blue.

Spenser.

The devil was ill and the devil a monk would be, The devil was well the devil a monk was he.

Old Proverb. See thyself, devil ;

Proper deformity seems not in the fiend So horrid as in woman. Shakspeare.

A devilish knave ! besides, the knave is handsome, young, and blyth ; all those requisites are in him that delight. Td.

Worldly wealth is the deriil't bait ; and those whose minds feed upon riches, recede, in general, from real happiness, in proportion as their stores increase ; as the moon when she is fullest of light is farthest from the sun. Burton.

Be frustrate all ye stratagems of Hell, And devilish machinations come to nought.

Milton.

Those trumpeters threatened them with continual alarms of damnation, if they did not venture life, for- tune, and all, in that which wickedly and devilinfilt, those impostors called the cause of God. South.

The things, we know, are neither rich nor rare ; But wonder how the devil they got there ! Pope.

With all these tokens of a knave complete, If thou art honest, thou 'rt a devilish cheat.

, Addison.

DEVI L, an evil angel, one of those celestial spirits cast down from heaven for aspiring to be equal with God. The Ethiopians paint the devil white. Satan and Belial are equivalent to this term in the Old Testament : nor do we meet with it in any heathen authors, in the sense it is taken among Christians, that is, as a creature revolted from God, although their theology was familiar with evil genii and daemons. See DAEMON and DEMONIAC. Some of the aboriginal nations of America have a notion of two collateral inde- pendent beings, one of whom is g«-od, and the other evil ; which last they imagine has the super- intendance of the earth, for which reason they chiefly worship him ; and hence tliey have been said to worship the devil. The Chaldeans and Persians, in like manner, believed in both a good principle and an evil one ; which last they ima- gined was an enemy to mankind. Isaiah, accor- ding to some commentators, when speaking of

the fall of the king of Babylon, alludes to that of the devil, calling him Lucifer, son of the morning. The Arabians call Lucifer, Eblis ; which some writers suppose to be a diminutive or corruption of the word Diabolus.

DEVIL IN A BUSH, in botany. See NIGELLA.

DEVISE', v. a. -j Fr. deviser; Span, and

DEVI'SER, n. s. > Portvig. devisar, according

DEVICE', n. s. 3 to Skinner, from Lat. devi-

sare, to look about. To contrive j consider : a

device is the scheme or plan contrived : hence

also a skelch or drawing on a shield; a token.

Behold I frame evil against you, and deviss a de- vice against you. Jer. xiii. 11.

Her merry fit she freshly 'gan to rear, And did of joy and jollity devise, Herself to cherish and her guest to chear.

Faerie Queene.

At last the nourse in her fool hardy wit Conceived a bold devise, and thus bespake. Id. Touching the exchange of laws in practice with laws in device, which they say are better for the state of the church, if they might take place ; the farther we examine them, the greater cause we find to con- clude, although we continue the same we are, the harm is not great. Hooker.

Devise but how you'll use him when he comes, and let us two devise to bring him thither. Shakspeare.

He's gentle ; never schooled, and yet learned ; full of noble device, of all sorts enchantingly beloved.

Id.

This is our device,

That Falstaff at that oak shall meet with us. Id. Being divided from truth in themselves, they are yet farther removed by advenient deception ; for true it is, if I say they are daily mocked into error by de- visers. Browne.

Then change we shields and their devices bear ; Let fraud supply the want of force in war. Dryden.

The authors of useful inventions, the devisers of wnolesome laws, as were the philosophers of antient times, were honoured as the fathers and prophets of their country. • Grew.

Hibernia's harp, device of her command, And parent of her mirth, shall there be seen.

Prior.

He intended it as a politick device to lessen their interest, and keep them low in the world.

Atterbwy.

Ye sons of art, one curious piece devise, From whose constructive motion shall arise.

Blackmore.

A tavern with a gaudy sign, Whose bush is better than the wine, May cheat you once — will that device, ' Neat as imported/ cheat you twice 1 Garrick. DEVICE, in heraldry, painting, and sculpture, an emblem used to represent a certain family, person, action, or quality ; with a suitable motto, applied in a figurative sense. The essence of a device consists in metaphorical similitude be- tween the things representing and represented : thus a young nobleman, of great courage and ambition, is said to have borne his device, in a carousal at the court of France, a rocket mounted in the air, with this motto in Italian, ' poco duri purche m'inalzi ;' importing, that he preferred a short life, provided ha might thereby attain to glory and eminence. The Italians have reduced the making of devices into an art.

? Old Fr. devise, a 5 will. To give by

DEVI'SE, v.a. & n. s.

DEVISEE', n. s.

will ; the act of giving or bequeathing by will' devisee, he to whom

something is bequeathed by will. Devisour, he who bequeaths it.

The alienation is made by devise in a last will only, and the third part of these profits is there demand abli'.

Locke.

This word devisee is properly attributed, in our com- mon law, to him that bequeaths his goods by his last will or testament in writing ; and the reason is, be- cause those that now appertain only to the devitow, by this act are distributed into many parts. Cowell.

DE'VITABLE, adj. \ Lat. devitabilin. 1'os-

DEVITA'TION, n. s, $ sible to be avoided; avoidable : the act of escaping or avoiding.

DEVIZES, a town of Wiltshire, six miles north fromLavington,and eighty-nine west fromLondon. It contains two churches and a chapel, besides a place of worship for dissenters, and returns two members to parliament. Here was formerly a castle, supposed to be one of the strongest in England ; but it is now nearly destroyed. Two markets are held weekly, one on Monday, prin- cipally for butcher's meat ; the other on Thursday for corn, wool, cattle, &c., considered one of the best in England. Considerable manufactures are carried on, particularly of serges, kersey- meres, and broad-cloth. In the market place is erected a stone with an inscription, as a me- morial of divine vengeance inflicted on a woman who called God to witness a falsehood concern- ing some money. The corporation consists of a mayor, recorder, ten magistrates, and twenty- four common-council-men. The number of bur- gesses is unlimited, and they have a right to vote for representatives in parliament as soon as they are made free. Its name is to be derived from the Latin divisae, divided, from its having been anciently divided between the king and the bishop of Salisbury ; and it is supposed to have been the Punctuobice of Ravennus. The Ro- mans enclosed it with a vallum and ditch, in which there is now a road almost round the town. Brass figures of household gods, coins, bricks, and urns, evidently Roman, have been dug up here.

DEVOID', adj. Fr. vuide. Empty; vacant; void.

When 1 awoke and found her place devoid, And nought but pressed grass where she had lyen, I sorrowed all so much as earst I joyed.

Faerie Queene

That the soul and angels are devoid of quantity and dimension, and that

they have nothing to do with proper locality, is generally opinioned. Glunville.

DEVOIR', n. s. Fr. devoir; Lat. debere. To owe service.

DEVOLVE' v. a. & n. s. } Lat. devolvo ; de

DEVOLU'TION, n. s. J and volvo, to roll.

To roll down or upon ; hence, to give in succes- sion. Devolution is the art of so removing or giving, or the removal so effected.

DEVON, a river of Scotland, in the counties of Perth and Clackmannan, which rises in the Ochil hills, and after running ten miles directly east, makes a turn to the west at a place hence called the Crook of Devon ; then passes through

the vale of Glendovan to the Rumbling Bridge and Caldron Linn, where it forms a scenery, wild, beautiful, and romantic.

DEVONPORT, a sea-port, market, and borough town, in the county of Devon, England, returning two members to parliament under the Reform Bill of 1832. It is in the parish of Stoke Dancarel, on the Hamoaze, a creek in the estuary of the Tamar, and received its present name by command of George IV., in 1824. Its foundation may be attributed to the docks con- structed here originally by William III., and enlarged in the reign of George III. The royal dock yard occupies an area of seventy-one acres and thirty- six poles, and includes one wet and three dry or graving docks, formed in so many excavations of a slaty stratum, and faced with Portland stone. In the dock yard is a chapel, opened in 1817, a magazine, gun-wharf, covering five acres of ground, a surgery and permanent medical establishment, besides offi- cers' apartments, store houses, and other neces- sary buildings. The town is governed by com- missioners, elected by those of the inhabitants who contribute eight pounds annually to the poor's rate, and for the election of members to parliament a returning officer is appointed by the sheriff of the county. Courts leet and baron are held by the constable of the manor, and petty sessions by the county magistrates. The com- mercial interests have been promoted by the erection of an exchange in Ker Street, and general traffic is conducted in a market place. The trade and manufacture peculiar to this place are block, sail, rope

making, and such others as are connected with nautical equipment. The town is strongly fortified. The fort and battery on Mount Wise, command the harbour entrance and the sound, and here also is the house of the port admiral. There is one ferry at Crimble Passage, one to Mount Edgcumbe, and a flying bridge preserves an easy communication with Saltash, in Cornwall. Devonport is 218 miles southward of London, and contains a population of 44,454 souls.

DEVONSHIRE is a maritime county, one of the most valuable in England ; and is bounded on the north and north-west by the Bristol Chan- ne4 ; on the west by Cornwall, th« river Tamar, and a small rivulet called Marsland Water ; on the south and south-east it is skirted by the British Channel; on the east and north-east it borders on the counties of Dorset aud Somerset, the dividing limits being artificial. In point of extent this county is second only to Yorkshire, and the fourth in population. Its greatest length, which is from north to south, is about seventy- three miles; and its greatest breadth, from east to west, sixty-five miles. It contains about 1,600,000 acres, or upwards of 2,493 square miles. This county is divided into thirty-three hundreds, 349 parishes, 117 vicarages, 1733 vil- lages, one city, and thirty-seven market towns. It is in the diocese of Exeter, and the western circuit of the province of Canterbury.

It was incorporated by the Romans with Corn- wall, under the general appellation of Danrao- niurn ; its original name being Dyvnaint, signi- fying

it belonged to the West Saxons, and was then called Devonscyre. It was included in the first Roman district, or Britannia Prima.

The climate of Devonshire differs materially in the northern and southern districts. It is, however, in general mild and genial. The northern district, considered in its most exten- sive sense, as comprehending the whole district between Dartmoor and the British Channel, but, more generally speaking, embracing only the parts round Biddeford, Barnstaple, South Moulton, and the north coasts, is by no means comparable to the temperature which characterises the south- ern parts of the county; yet even here, and along the sea coasts, from the northern extremity of the district to the most southern, snow seldom lies longer than a few hours, except indeed on the summits of some of the high hills. In the southern parts the progress of vegetation is but little impeded during winter, and the ground almost constantly wears an aspect of verdure and beauty. The climate of Devonshire has been frequently recommended by the faculty as pre- feraMe for delicate invalids, even to Lisbon or the South of France. The face of the country is exceedingly varied and uneven. The heights in many parts, but particularly in Dartmoor and its vicinity, swell into mountains ; the altitudes of the principal eminences being from 1500 to 1800 feet. ‘ On

approaching this tract from the south and south-east, the eye is bewildered by an extensive waste, exhibiting gigantic tors, large surfaces covered with masses of scattered granite, and immense rocks, which seem to have been precipitated from the steep declivities into the valleys. These huge and craggy fragments are spread confusedly over the ground, and have been compared to the ponderous masses ejected by volcanoes, to the enormous ruins of formidable castles, and to the wrecks of mountains torn piecemeal by the raging elements.' Taking the plane of high water in the Bristol Channel as a base, it appea-s that the highest hill, which is Dunkery Beacon, on part of Exmoor Forest, is 1890 feet; the next, Castle Head-down, High Bray parish, 1500 feet. The lowest, which is Hilsborough, overhanging the town of Ilfracombe to the east, is about 300 feet. Exraoor has re- cently been disforested by act of parliament.

The principal rivers of Devonshire are the Exe, the Torridge, the Teign, the Taw, the Oke, the Dart, the Plym, the Otter, the Axe, and the Tamar : though this last belongs more properly to Cornwall. It forms at its mouth the harbour of Hamoaze, or Plymouth Sound. All these rivers abound in fine salmon. Sufficient atten- tion does not appear to have been paid to the inland navigation of this extensive county, though it contains one of the most ancient specimens of canal navigation in the kingdom : this is the Haven at Exeter, which was formed in the year 1544. It is properly a canal, and conveys ship- ping from the tideway above Topsham to the quay at Exeter, which is effected by an embanked navigation, with a large lock placed near the middle of the line. The Crediton and Exetet Canal is also a fine work ; as is the Tavistock Canal, undertaken in the year 1803, under the superintendance of Mr. John Taylor. The Ta- mar Canal skirts the western edge of this county

The principal mineral waters in the county are at Bampton, Cleeve, Lomerton, Lifton and Ta- vistock.

The soils of this county divide themselves into four kinds, the first of which is found to occupy the smallest space. Risdon, in his Survey of Devon, says that ' on the east side of the shire the mould standeth most upon white chalk, which is passing good for sheep and corn.' The second is the red land, surrounding Exeter, and extend- ing considerably east and west of it ; this is deemed good pasture land. The third is the peat soil, of which Dartmoor furnishes the prin- cipal example. Of this soil Risdon speaks somewhat disparagingly, saying that it is richer in its bowels than in the face thereof, yielding tin and turf.' The fourth, which pervades by far the

greater part of the county, though varied in its appearances by casual admixtures, is what has lately obtained the name of dun-land. It is furnished probably by the decomposition of schistus rock, on which it lies, and is found in almost every state, from the most fertile to the most sterile. The writer of most excellent and accurate ‘ Remarks on the present State of the County of Devon, introductory to the new edi- tion of Risdon’s Survey,’ published in 1811, observes that ‘ the soil most prevalent is remark- able in two circumstances ; its rapid spontaneous production of grass when under good manage- ment, and its total want of calcareous principle.’ The cattle of Devonshire are in the highest request in all parts of the kingdom ; and dis- tinguished by fineness of bone and skin : the sheep are small and subject to the rot. This county has also long been famed for its cyder, which is the beverage of the lower classes. Two hundred years ago, many copyholders might pay their lords’ rent with their cyder only. The above writer adds, that ‘ this is even now pro- bably in some parts and in some seasons the case, though the orchards are not either so large and productive, or so numerous as they used to be.’ Much butter is made in the grass lands and that without the churn. This writer has given a truly interesting and scientific outline of the mineralogy of Devon, which, as he very justly observes, is a feature of distinguished im- portance in this county, whether we regard the value of the mineral productions, or the pheno- mena which it presents to the scientific enquirer. The general character of this mineralogy is that of an elevated tract of granite, running from north to south across the district, and passing into or under a superstratum of primitive schistus on its western side, and of alluvial sand-stone and chalk on the eastern limits. A vein of culm was found some years ago near Chittlehampton, varying from about four inches to one foot in thickness, and dipping about one foot in three to the southward. It was wrought for a short time, but the expense being considerable, it was abandoned. In Bovey Heathfield, which seems to have been formerly covered by the tide, that remarkable substance called Bovey coal, is found. It runs nine miles to the southward, keeping to the west of large beds of potters’ clay. The uppermost strata are within a foot of the surface, and from eighteen inches to four feet thick : the

deepest stratum is sixteen feet thick. At the bottom is a bed of clay and sand. This coal retains the vegetable structure, and has the ap- pearance of charred wood, impregnated with bitumen. It is divided into two kinds, the stone coal and the wood coal; the last has more of the peculiar properties. When this coal is burning, a thick heavy smoke, of a foetid and disagreeable nature, arises from it. The small coal, thrown into a heap, and exposed to the weather, will take fire of itself. Its specific gravity is from 1‘4 to 1-558, and its proportion of pure carbon from 54 to 75 per cent.

The chief mineral productions are tin, which the granite hills of Dartmoor

have produced probably for many ages, as traces of seam works and mines are to be seen in every part of this immense waste. Stone, which is justly esteemed as the best in existence for the purpose of build- ing where durability is to be regarded. The same kind of granite rock, which produces tin, has also produced some lodes of copper. This county also produces lead and silver ; also iron, zinc, antimony, manganese, wolfram, arsenic, and cobalt. 1.50 miles of this extensive county lies on the sea-coast, and contains many excellent bays, harbours, and sea-ports, of which the prin- cipal, and one of the best in the world, is that of Devonport (late Plymouth Dock). See PLY- MOUTH. The coasts, as well as the rivers, abound with fish, and particularly the southern coast. Torbay is famous for its fine soles and turbot. Plymouth for Johndorey ; Topsham, Starcross, and Lympstone for oysters : and the rare fish, opah and torpedo, are sometimes caught on the coasts. Its pleasant situation, and the cheap- ness of all the necessaries of life, have induced a great number of the nobility and gentry to adorn it with seats.

This county sends twenty- two members to the Imperial Parliament under the provisions of the Reform Bill of 1832, viz. four for the county ; two for the city of Exeter ; two for Totness ; two for Plymouth ; two for Barnstaple ; two for Honi- ton ; two for Tavistock ; one for Ashburton ; one for Dartmouth ; two for Tiverton, and two foi Devonport.

Of the ‘ Worthies of Devon,’ collected down to the commencement of the eighteenth century, in a folio volume, by the Rev. John Prince, we can only mention the following : — Sir John For- tescue Aland, an able judge; Bishop Barring- ton ; Archbishop Baldwin, who accompanied Richard I. to the Holy Land, and died there in 1191 ; Henry de Bathe, a learned judge, who died 1261; Lady Mary Chudleigh; John Churchill, the immortal duke of Marlhorough ; The Rev. archdeacon Conant, on whom his friend Dr. John Prideaux used thus admirably to pun, ‘ Conanti nihil est difficile;’ William Courtney, archbishop of Canterbury, who con- demned Wicliffe and his followers; Mrs. Han- nah Cowley, an ingenious dramatic writer; John Davis, the navigator who discovered the well-known straights in North America, which bear his name; Sir Francis Drake; John Dun- ning, lord Ashburton; Sir John Fortescue; Monk, duke of Albemarle ; Sir Walter Raleigh ; Sir Joshua Reynolds, &c &c.

The principal manufactures ot the county are serges, kerseys, shalloons, broad-cloth, and blond lace, in which, and in corn, cattle, fish, and its mineral productions, the inhabitants carry on a considerable trade.

Barnstaple potteries have increased of late years ; they consist of dairy and kitchen utensils. There is a considerable ship-building trade at Barnstaple. The woollen cloth manufactures at Tiverton, Great Torrington, and the wool-combing of Chumleigh were for- merly extensive, but have now decayed or vanish- ed. There is, however, a considerable trade in the gloving business at the former place. The iron, cordage works, 8cc., for the Royal Dock- yard at Plymouth, have long been extensive sources of manufacture. Serges are manufactured at Totness, Moreton, Hempstead, Chafford, and other places ; and the long ells of Devonshire have been long known. Silk and porcelain have been deemed the principal manufactures of the county ; but the productions from the minerals of the county are perhaps equal to any, excepting indeed the woollen manufactory. There is also a considerable quantity of yarn manufactured in the county, as well as of laces.

DEVONSHIRE (Georgiana, duchess of) > was the eldest daughter of John earl Spencer, and born June 9th, 1757. She married, in 1774. William duke of Devonshire, and was long the object of attraction to the fashionable world, and the patroness of taste in the fine arts. She became well acquainted with the histoiy and polity of nations, but the belles lettres princi- pally attracted her regard. She left an elegant poem on the passage of Mount St. Gothard, which Dellile translated into French. She died at Devonshire House, Piccadilly, March 30th,

1806.

DEVORATION, n. s. See DEVOUR. DEVOTE, v. a. & adj.ˆ Lat. devoveo, de- DEVOTEE', n. s. I votus; to vow. To

DEVO'TEDNESS, n. s. [dedicate to divine DEVO'TION, n. s. for superior service ;

DEVO'TIONAL, adj. hence to appropriate

DEVO'TIONALIST, n. s. J in any particular manner: to resign. Hence, also, to doom, to execrate. A devotee, Dr, Johnson defines as one erroneously or superstitiously religious; but it is also used for one warm in religion generally. Devotion is the act, habit, or state, of being devoted or given up to ; devotional per- taining to devotion; devotionalist, synonymous with devotee.

With denocion we ban avowid, that we schulen not taaste ony thing til we sleen poul.

Wiclif. Dedis, 23.

No devoted thing that a man shall devote unto the Lord, of all that he hath, both of man and beast, and of the field of his possession, shall be sold or redeemed.

Lev. xxvi:. 21.

They tied were to stedfast chastity, And continence of life, that all forgon, They mote the better tend to their devotion.

Spenser. Faerie Queene.

Religious minds are inflamed with the love of pub- lics devotion. Hooker.

What black magician conjures up this fiend, To stop devoted charitable deeds ? Shakspeare.

Be opposite all planets of good luck To my proceeding, if, with pure heart's love. Immaculate devotion, holy thoughts, I tender not thy beauteous princely daughter.

Id.

Nor are the soberest of them so apt for that devo- tional compliance and juncture of hearts, which I de- sire to bear in holy offices, to be performed with me.

King Charles.

In vain doth man the name of just expect, If his devotions he to God neglect. Denham.

To destruction sacred, and devote, He with his whole posterity must die.

Milton.

Grateful to acknowledge whence his good Descends, thither with heart, and voice, and eyes Directed in devotion, to adore And worship God supreme, who made him chief Of all his works. Id.

Whatever may fall from my pen to her disadvan- age, relates to her but as she was, or may again be, an obstacle to your devotedness to seraphick love.

Boyle.

He had a particular reverence to the person of the king, and the more extraordinary devotion for that of the prince, as he had had the honour to

be trusted with his education Clarendon.

Goddess of maids, and conscious of our hearts, So keep me from the vengeance of thy darts, Which Niobe's devoted issue felt, When, hissing through the skies, the feathered deaths

were dealt. Dryden.

The owning of our obligation unto virtue, may be styled natural religion ; that is to say, a devotednest unto God, so as to act according to his will. Grew.

Your devotion has its opportunity : we must pray always, but chiefly at certain times. Sprat.

The favourable opinion and good word of men comes oftentimes at a very easy rate, by a few demure looks, with some devotional postures and grimaces.

South.

Let her, like me, of every joy forlorn, Devote the hour when such a wretch was bo rn ; Like me to deserts and to darkness run. Rowe.

From the full choir when loud hosannas rise, And swell the pomp of dreadful sacrifice ; Amid that scene, if some relenting eye Glance on the stone where our cold reliques lie, Devotion's self shall steal a thought from heaven, One human tear shall drop, and be forgiven.

Pope.

Ah why, Penelope, this causeless fear. To render sleep's soft blessings insincere. ? Alike devote to sorrow's dire extreme, The day reflection and the midnight dream

Id.

Pilgrimages are often either enjoined by confessors, or undergone by devotee. Serce.*

Aliens were devoted to their rapine and despight.

Decay of Piety.

Devotion may be considered either as an exercise of publick or private prayers at set times and occasions, or as a temper of the mind, a state and disposition of the neart, which is rightly affected with such exercises.

Law on Christ's Perfection.

With such a cause as yours, my lord , it is not suffi- cient that you have the court at your devotion, unless you can find means to corrupt or intimidate the jury.

Junius.

He sue for mercy ! He dismayed By wild words of a timid maid ! He, wronged by Venice, vows to save Her sons devoted to the grave. Byron.

A mere ideal, unintelligible, notion, fit only for

the cloistered monk, or the superstitious devotee.

Porteut.

DEVOTION, among the ancient Romans, a kind of sacrifice or ceremony, whereby they conse- crated themselves to the service of some person. The ancients thought that the life of one might be ransomed by the death of another ; whence these devotions became frequent for the lives of the emperors. Devotion to any particular per- son was unknown among the Romans till the time of Augustus. The day after the title of Augustus had been conferred upon Octa- vius, Pacuvius, a tribune of the people, pub- licly declared, that he would devote himself to Augustus, and obey him at the expense of his life, if he was commanded. This example of flattery was immediately followed by all the rest; till at length it became an established custom never to go to salute the emperor, without de- claring that they were devoted to him. Before this, the Roman practice was much more noble and patriotic, viz. that of devoting themselves to their country. See DECIUS.

DEVOUR', v. a. ˆ Lat. devoro ; of Gr-

DEVOUR'ER, n. s. > /3op«, the food of beasts-

DEVORA'TION, n. s.ˆTo eat up ravenously,

as a beast or wild animal ; to destroy : hence

to consume or enjoy with eagerness. Devoration

says Dr. Johnson, is 'the act of devouring,' but

we have seen no instance of its occurrence.

And I took the book of the aungelis hond and de- uowride it, and it was in mi mouthe as sweete as bony, and whanne 1 hadde deuouride it mi \vombc was bitter.

Wiclif. Apoc. 10.

A fire devoureth before them, and behind them a flame burneth. Joel, ii. 3.

We've willing dames enough : there cannot be That vulture in you, to devour so many As will to greatness dedicate themselves, Finding it so inclined. Shakspeare

So looks the pent up lion o'er the wretch That trembles under his devouring paws. Id.

Rome is but a wilderness of tygers ; Tygers must prey, and Rome affords no prey But me and mine : how happy art thou, then, From these devourers to be banished ! Id

Death stalks behind tb.ee, and each flying hour Does some loose remnant of thy life devour.

Dryden,

Such a pleasure as grows fresher upon enjoyment ; and though continually fed upon, yet is never devoured.

South.

Notwithstanding that Socrates lived in the time of this devouring pestilence at Athens, he never caught the least infection. Addison.

Since those leviathans are withdrawn, the lesser devourers supply their place : fraud succeeds to vio- lence. Decay of Piety.

You, while amazed his hurrying hordes retire From the fell havoc of devouring fire.

Taught the first art ! with piny rods to raise By quick attrition the domestic blaze. Darwin.

DEVOUT', adj. } Lat. devotus. See DE- DEVouT'LY,acfo. S VOTION. Pious; religious;

devoted to holy duties.

Her twilights were more clear than our mid-day.

She dreamt devoutlier than most use to pray. Donne.

Her grace rose, and with modest paces Came to the altar, where she kneeled ; and saint-like Cast her fair eyes to heaven, and prayed devoutly.

Shaksjicare.

One of the wise men having a while attentively and devoutly viewed and contemplated this pillar and cross, fell down upon his face. Bacon.

Anon dry ground appears, and from his ark The ancient sire descends with all his train ; Then with uplifted hands, and eyes devout, Grateful to heaven. Milton.

For this, with soul devout, he thanked the god • And, of success secure, returned to his abode.

Dryden Think, O my soul, devoutly think,

How, with affrighted eyes, Thou saw'st the wide extended deep

In all its horrors rise ! Addison.

We must be constant and devout in the worship of our God, and ready in all acts of benevolence to our neighbour. Rvyers.

To second causes we seem to trust, without ex- pressing, 3-) devoutly as we ought to do, our depen- dance on the first. Atterbury.

DEUTEROCANONICAL, from Sumpos, se- cond, and Kctvovucof, canonical, in the school of theology, an appellation given to certain books of holy scripture, which were added to the canon after the rest; either because they were not written till after the compilation of the canon, or by reason of some dispute about them. The Jews acknowledge several books in their canon, which were later than the rest. They say, that under Ezra a great 'assembly of their doctors, which they call by way of eminence the great synagogue, made the collection of the sacred books which we now have in the Hebrew Old Testament, including those which were not written before the Babylonish captivity, viz. Ezra, Nehemiah, Esther, Ezekiel, Daniel, Hag- gai, Zechariah, and Malachi ; and the Romish church has since added others to the canon, that were not, and could not be, in the canon of the Jews, being written long after. Such are several of the

apocryphal books, as the Maccabees, Ecclesias- ticus, Wisdom, &c. Others were added stiU later. The deuterocanonical books in the modern canon are, the epistle to the Hebrews; those of James and Jude; the second of St. Peter, the second and third of St. John ; and the Re- velation.

DEUTEROG'AMY,n.s. A£v«poc.and y«/io«r A second marriage;

DEUTERON'OMY, n.t. Atvrcpoevo/ioc. The second book of the law; the fifth book o Moses.

DEUTERONOMY was the last of the five books written by Moses, and contains, as its name im- ports, the repetition of the law. It was written in the fortieth year after the delivery from Egypt, Moses being then in the 120th year of his age. In the Hebrew it contains eleven paraches, though there are only ten in the editions of the rabbins at Venice, twenty chapters, and 055 verses. In the Greek, Latin, and other versions, it contains thirty-four chapters. The last is not by Moses. Some suppose it was written by Joshua immediately after Moses's deat'i ; which is the most probable opinion. Others say it %va:»

added by Ezra. See PENTATEUCH. This book opens with an interesting address to the Israelites, in which Moses briefly recapitulates the many instances in which they had experienced the di- vine favor since their departure from Horeb. He describes the success and victories which had marked their progress ; and the incredulous murmurs and ingratitude, by which the people had incensed God ; so that of the multitude which were brought out of Egypt, few now re- mained. He proceeds to rehearse the various commandments, statutes, and judgments which had been delivered to them by God, that they might become ' a wise and understanding peo- ple;' and while he intersperses with those laws, frequent instances of their past misconduct, he unfolds the glorious attributes of God, and reiterates many persuasive motives. He enjoins them, on their first entrance into Canaan, to give a public display of their reverence for God's law, by erecting stones on which all its words and precepts might be inscribed. He renews the covenant with the people, including all that previously passed at Horeb ; and ratines those assurances of spiritual blessings, long since im- parted to Abraham and his descendants. He then, in consistency with the promises and sanc- tions of both covenants, sets forth, for their in- struction, life and good, and death and evil, temporal and eternal recompense, present and future punishment.

DEUTEROPOTMI, in Grecian antiquity, a designation given to such of the Athenians as had been thought dead, and, after the celebration of the funeral rites, unexpectedly recovered.

DEUTERO'SCOPY,n.s. Aswrtpocand woTrtw. The second intention ; the meaning beyond the literal sense : not in use.

Not attaining the deuteroscopy, or second intention of the words, they are fain to omit their consequences, coherences, figures, or tropologies.

Browne's Vulgar Errours.

DEUX FONTS, a ci-devant duchy and prin- cipality of Germany, in the circle of the Upper Rhine. It was composed of the ancient county of the same name, and the conrity of Veldentz, and bounded by the provinces of Alsace and Lorrain on the south and south-west, by the electorate of Treves on the north, and the Lower Palatinate on the east ; but much intersected by the possessions of different princes. In the year 1385 it was annexed to the Palatinate. The descendants of the princes palatine having ob- tained the throne of Sweden, and given three princes to that kingdom, Charles X. XI. and XII., it remained under the dominion of Sweden during that period ; but this line becoming ex- tinct, it descended to the house of Birkenfield, in the possession of which it continued till its late subjection to the power of France. The duchy was overrun by the French in 1793, and finally attached to that kingdom in 1797, when it was included in the department of the Sarre and Moselle. It is mountainous, and abounds in mines of copper, mercury, iron, and coals; as well as in vineyards, pastures, and corn-fields, which sufficiently supply the people. The prin- cipality, when under the German empire, paid for the Roman month 240 florins, and to the im-

perial chamber 172 rix-dollars, and thirty-six kruitzers. The revenues were estimated at500,000 florins. It returned in 1814 to the possession of Austria, and has since been exchanged for other districts with Bavaria. It is now a part of the Bavarian province of the Rhine, and has about 60,000 inhabitants.

DEUX PONTS, or Zweybrucken, as the Ger- mans call it, a town of Germany, now annexed to France, and included in the department of Sarre and Moselle, of which it is the capital ; as it was, till December, 1797, of the ci-devant duchy. It was the seat of justice for the prin- cipality, and has churches for Roman Catholics, Lutherans, and Calvinists. It is seated on the Erlbach, forty-six miles west of Manheim, fifty south-west of Mentz, and forty-nine north by west of Strasburgh. Long. 7° 26′ E., lat. 49° 16′ N.

DEUX PONTS, LES, a town of the Bavarian States, the capital of the foregoing district, is situated on-the right bank of the Little Erlbach, and has a castle, formerly the ducal residence The chief objects of interest are a beautiful organ in the town church, the new Lutheran church and academy, and the orphan-house. In 1709 Stanislaus Leczynsky, king of Poland, took up his residence here, and built the palace of Schuh- flick, about half a mile from the town. The town is distinguished for its valuable editions of the Greek and Latin classics. Population 5000. It is forty-six miles west of Manheim, and fifty- eight east of Mentz.

Goth.doggwa; Swe. diefwa ; Belg. dauw Teut. tau, from Gr. ctvu, to moisten. The condensed moisture of the atmosphere. See the scientific article. Dew-berry is a fruit. Dew-lap, the

DEW, n. s.

DEW'BERRY, n. 3.

DEWBESPRENT', part.

DEV/BURNING, adj.

DEW'DROP, n. s

DEW'LAP,

DEW'LAPT, adj.

DEW'WORM, n. s.

DEW'Y, adj.

flesh of the 'throat of oxen that laps the dew. The meaning of the other compounds is obvious. Dew is often used figuratively for bounty and love, as in the instance from Shakspeare.

At last the golden orientale gate Of greatest heaven gan to open fayre, And Phoebus fresh, as brydegroome to his mate Came dauncing forth, shaking his deawie hayre. Spenser. Faerie Qveene.

A trickling stream of balm most sovereign And dainty dear, which on the ground still fell, And overflowed all the fertile plain, As it had dewed been with timely rain. Id.

He, now to prove his late renewed might, High brandishing his bright dew-burning blade,

Upon his crested scalp so sore did smite, That to the scull a yawning wound it made. Id.

With him pour we in our country's purge Each drop of us.

Or so much as it needs

To dew the sovereign flower, and drown the weeds.

Shaktpearc.

Never yet one hour in bed Did I enjoy the golden dew of sleep, But with his tim'rous dreams was still awakad.

Id.

DEW.

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Feed him with apricocks and dewberries, With purple grapes, green figs, and mulberries.

Id.

I must go seek some dewdrops here, And hang a pearl in every cowslip's ear. Id.

And sometimes lurk I in a gossip's bowl, In very likeness of a roasted crab ; And •when she drinks against her lips I bob, And on the withered dewlap pour the ale. Id.

Who would believe that there were mountaineers Dewlapt like bulls, whose throats had hanging at 'em Wallets of flesh? Id.

That Churchman bears a bounteous mind, indeed ; A hand as fruitful as the land that feeds us ; His dew falls every where. Id,

Dews and rain are but the returns of moist vapours condensed. Bacon.

An host

Innumerable as the stars of night, Or stars of morning, dewdrops, which the sun Impearls on every leaf, and every flower. Milton.

From the earth a dewy mist Went up, and watered all the ground, and each Plant of the field. Id.

He ceased ; discerning Adam with such joy Surcharged, as had, like grief, been dewed in tears, Without the vent of words, which these he breathed.

Id.

This evening late, by then the chewing flocks Had ta'en their supper on the savoury herb Of knot-grass dewbesprent, and were in fold, I sat me down to watch upon a bank With ivy canopied, and interwove With flaunting honey-suckle. Id.

Dewberries, as they stand here among the more de- licate fruits, must be understood to mean raspberries, •which are also of the bramble kind. Hammer.

For the trout, the dew-worm, which some call the lob worm, and the brandling, are the chief. Walton.

Palemon above the rest appears In sable garments, dewed with gushing tears.

Dry den.

Where two adverse winds, Sublimed from dewy vapours in mid sky, Engage with horrid shock, the ruffled brine Roars stormy. Philips,

In Gallic blood again

He dews his reeking sword, and strows the ground With beardless ranks. Id.

Large rowles of fat about his shoulder slung, And from his neck the double dewlap hung.

Addison.

The dewlapt bull now chases along the plain, While burning love ferments in every vein. Gay.

Rest, sweet as dewdrops on the flowery lawns, When the sky opens, and the morning dawns.

Tickell.

Now sliding streams the thirsty plants renew, And feed their fibres with reviving dew. Pope. No more the morn, with tepid rays,

Unfolds the flower of various hue, Noon spreads no more the genial blaze,

Nor gentle eve distils the dew.

Johnson. Ode to Winter. The spring is come ; the violet's gone, The first-born child of the early sun ; With us she is but a winter's flower, The snow on the hills cannot blast her bower, And she lifts up her dewy eye of blue To the youngest sky of the self-same hue.

Byron.

DEW is defined byDr. Hutton ' a thin light insen- sible mist, or rain, ascending with a slow motion, and falling while the sun is below the horizon.' He adds, ' that it appears to differ from rain, as less from more ' Its origin and matter are doubt- less from the vapors and exhalations that rise from the earth and water. See EXHALATION.

As it appears only during clear nights, when the heavens seem to glow with constellations, the ancients finely imagined it to be actually shed from the stars, and therefore to partake of a pure and celestial essence. l Hence,' says Mr. Leslie, ' the vulgar notion that dew falls, which has prevailed through all ages, and continues to tincture every language.' ' Plutarch asserts it to be most abundant in the time of full moon. The lunar beams themselves were supposed to contri- bute some influence, being of a cold nature, and therefore possessed of a humifying qua- lity. The moon, it was imagined, performed merely the office of an imperfect mirror, reflect- ing the softened lustre of the sun without any portion of his heat.' Certain abstergent quali- ties were at the same period ascribed to dew. Ammianus Marcellinus says that the health of mountaineers is principally owing to their con- stant exposure to bracing dews.

It was long disputed whether the dew is formed from the vapors ascending from the earth during the night time, or from the descent of such as have been already raised through the day. M. Huet shows that dew does not fall but rises. Some of the most remarkable experiments in support of this hypothesis are those of Mr. Du Fay of the (Royal) Academy of Sciences at Paris. He supposed, that if the dew ascended, it must wet a body placed low down sooner than one placed on a higher situation ; and if a num- ber of bodies were placed in this manner the lowermost would be wetted first, and the rest in like manner, gradually up to the top. To determine this, he placed two ladders against one another, meeting at their tops, spreading wide asunder at the bottom, and so tall as to reach thirty-two feet high. To the several steps of these he fastened large squares of glass like the panes of windows, placing them in such a man- ner that they should not overshade one another. On the trial it appeared exactly as Mr. Du Fay had apprehended. The lower surface of the first piece of glass was first wetted, then the upper, then the lower surface of the pane next above it ; and so

on, till all the pieces were wetted to the top. Hence it appeared plain to him, that the dews consisted of the vapors ascend ing from the earth during the night; which, being condensed by the coldness of the atmosphere, are prevented from being dissipated as in the day-time by the sun's heat. He afterwards tried a similar expe- riment with pieces of cloth instead of panes of glass, and the result was quite conformable to his expectations. He weighed all the -pieces of cloth next morning, to know what quantity of water each had imbibed, and found those that had been placed lowermost considerably heavie. than such as had been placed at the top ; thougl he owns that this experiment did not succeed 90 perfectly as the former. M. Muschenbroeck, wno embraced the contrary opinion, thought he had

invalidated all Mr. Du Fay's proofs, by repeating his experiments with the same success, on a plane covered with sheet lead. But to this M. Du Pay replied, that there was no occasion for sup- posing the vapor to rise through the lead, nor from that very spot ; but that, as it arose from the adjoining open ground, the continual fluc- tuation of the air could not but spread it abroad, and carry it thither in its ascent. This experi- ment of M. Muschenbroeck's was not considered sufficient to overthrow those of M. Du Fay. Yet one thing seemed to favor the hypothesis of its descent, i. e. that in cloudy weather there is little or no dew to be observed. And Muschen- broeck, continuing his experiments, made the interesting discovery that dew forms in very dif- ferent proportions on different bodies, for that it will scarcely adhere to a polished metal surface, while it abounds on glass or porcelain. The color of the substance appeared also, he found, to alter the effects. A piece of red leather ac- quired, by exposure through the night, twice as much dew as another black or blue piece of the same size. He was afterwards, however, led to attribute this latter circumstance to the coloring matter of the morocco leather used.

M. Du Fay also continued his experiments : and the result was, that on neither side of this controversy was there a sufficient preponderance of proof to decide the question ; but the old doc- trine of Aristotle on the subject was revived, viz. that dew separates, under certain circumstances, from the air, and becomes attracted to particular bodies ; or that the moisture, in which it directly originates, is suspended in the atmosphere by a perfectly chemical process, similar to that by which salts are dissolved in water, heat in both cases being found to increase the solvent power. Professor Leslie's attention was first drawn to the subject as early as the year 1798. By means of his hygrometer he then established the curious fact, that the moisture of air is deposited on glass before it actually reaches

thfe point of saturation. He thus explains, in his valuable Treatise on the Relations of Air to Heat and Moisture, the gene- ral result of his investigations at this and a sub- sequent period : — ‘ In fine calm weather, after the rays of the declining sun have ceased to wann the surface of the ground, the descent of the higher mass of air gradually chills the under- most stratum, and disposes it to dampness, till their continued intermixture produces a fog, or low cloud. Such fogs are, towards the evening, often observed gathering in narrow vales, or along the course of sluggish rivers, and generally hover- ing within a few inches of the surface. But in all situations, these watery deposits, either to a gt eater or a less degree, occur in the same dispo- sition of the atmosphere. The minute suspended globules, attaching themselves to the projecting points of the herbage, form dew in mild weather, or shoot into hoar-frost when cold predominates. They collect most readily on glass, but seem to be repelled by a bright surface of metal.’ In clear and calm weather, the air is always drier near the surface during the day than at a certain height above the ground, but it becomes damper on the approach of evening, while, at some eleva- tion, if retains a moderate degree of dryness through the whole of the night. If the sky be

clouded, less alteration is betrayed in the state of the air, both during the progress of the day, and at different distances from the ground ; and, if wind prevail, the lower strata of the atmosphere, thus agitated and intermingled, will be reduced to a still nearer equality of condition.’ (pp. 92 and 192). See METEOROLOGY.

Some interesting experiments were now made in France, in regard to the tendency M. du Fay had observed in different bodies, to imbibe dew in different proportions. It had long been seen that dew is deposited on glass, when metals in its neighbourhood remain dry ; M. Prevost of Montaubon however discovered some new and curious facts relative to this deposition. When thin plates of metal are fixed on pieces of glass, it sometimes happens that they are as much covered with dew as the glass itself: but more frequently they remain dry ; and in this case they are also surrounded by a dry zone. But when the other side of the glass is exposed to dew, the part which is opposite to the metal remains per- fectly dry. If the metal be again covered with glass, it will lose its effect in preventing the de- position.

These experiments may be conveniently con- firmed on the glass of a window, when moisture is attaching itself to either of its surfaces. Mr. Prevost remarks that it often happens that dew is deposited externally, even when the air within is warmer than without. A plate of metal fixed in- ternally on the window receives a larger quantity of moisture than the glass, while the space oppo- site to an external plate remains dry : and, if the humidity is deposited from without, the place op- posite the internal

plate is also more moistened, while the external plate remains dry : and both these circumstances may happen at once with the same result. A small plate fixed externally, opposite to the middle of the internal plate, pro- tects this part of the plate from receiving mois- ture ; and a smaller piece of glass, fixed on the external plate, produces again a central spot of moisture on the internal one : and the same changes may be continued for a number of alter- nations, until the whole thickness becomes more than half an inch. Gilt paper, with its metallic surface exposed, acts as a metal ; but when the paper only is exposed it has no effect. When a plate of metal, on which moisture would have been deposited, is fixed at a small distance from the glass, the moisture is transferred to the sur- face of the glass immediately under it without affecting the metal : if this plate is varnished on the surface remote from the glass, the effect re- mains ; but if on the side next the glass, it is destroyed. The oxidation of metals renders them also unfit for the experiment. When glasses partly filled with mercury, or even with water, are exposed to the dew, it is deposited only on the parts which are above the surface of the fluid. But in all cases when the humidity is too copious the results are confused. In order to reduce these facts to some general laws, M. Prevost ob- serves, that when the metal is placed on the warmer side of the glass, the humidity is de- posited more copiously either on itself or on either surface of the glass in its neighbourhood : but that, when it is on the colder side, it neither receives humidity, nor permits its deposition on

DEW.

the glass : that a coat of glass, or varnish, destroys the efficacy of the metal, but that an additional plate of metal restores it.

M. Prevost was at first disposed to attribute these phenomena to the effects of electricity, but r.e thinks it possible to explain them all by the action of heat only; for this purpose he assumes, first, that glass attracts humidity the more power- fully as its temperature is lower ; secondly, that metals attract it but very little; thirdly, that glass exerts this attraction, notwithstanding the interposition of other bodies ; and, fourthly, that metals give to glass, placed in their neighbour- hood, the power of being heated by warm air, and being cooled by cold air, with greater rapi- dity. Hence, that the temperature of the glass approaches more nearly to that of the air on the side opposite to the metal, and attracts the humi- dity accordingly, more or less, either to its own surface, or to that of the metal. We should, indeed, have expected a contrary effect; that the metal would rather have tended to communi- cate to the glass the temperature of the air on its own side ; but, granting that the assumptions of M. Prevost serve to generalise the facts with accuracy, their temporary utility is as great as if they were fundamentally probable. –

Dr. Wells, however, has traced up the pheno- mena of dew to their legitimate sources. ‘ Very little,’ he observes, with Aristotle, ‘ is deposited, except on calm and clear nights, or when the clouds are high. It is never seen on nights both doudy and windy; and if, in the course of the night, the weather, from being serene, should be- come dark and stormy, dew, which had been deposited, will disappear. In calm weather, if the sky be partially covered with clouds, more dew will appear than if it were entirely un- covered.’

Dew probably begins in the country to appear upon grass, in places shaded from the sun, during clear and calm weather, soon after the heat of the atmosphere has declined, and conti- nues to be deposited through the whole night, and for a little after sun-rise. Its quantity will depend, in some measure, on the proportion of moisture in the atmosphere, and is, conse- quently, greater after rain than after a long tract of dry weather; and in Europe, with southerly and westerly winds, than with those which blow from the north and the east. The direction of the sea determines this relation of the winds to dew. For in Egypt, dew is scarcely ever ob- served, except while ihe northerly or Etesian winds prevail. Hence, also, dew is generally more abundant in spring and autumn, than in summer. And it is always very copious on those clear nights which are followed by misty mornings, which show the air to be loaded with moisture. And a clear morning, following a cloudy night, determines a plentiful deposition of the retained vapor. When warmth of atmosphere is com- patible with clearness, as is the case in southern latitudes, though seldom in our country, the dew becomes much more copious, because the air then contains more moisture. Dew continues to form with great copiousness, as the night advan- ces, from the increased refrigeration of the ground. Dew, according to Aristotle, is a species of

rain, formed in the lower atmosphere, in conse- quence of its moisture being condensed, by the cold of the night, into minute drops. Opinions of this kind, says Dr. Wells, are still entertained by many persons, among whom is the very inge- nious professor, Leslie. (Relations of Heat and Moisture, pp.37 and 132). A fact, however, first taken notice of by Gerstin, who published his Treatise on Dew in 1773, proves them to be erroneous; for he found that bodies a little elevated in the air, often become moist with dew, while similar bodies, lying on the ground, re- main dry, though necessarily, from their position, as liable to be wetted, by whatever falls from the heavens, as the former. The above notion is perfectly refuted by what will presently appear relative to metallic surfaces exposed to the air in a horizontal position, which remain dry, while every thing around them is covered with dew.

After a long period of drought, when the air was very still and the sky

serene, Dr. Wells ex- posed to the sky, twenty-eight minutes before sun-set, previously weighed parcels of wool an

Dr. Wells, by a copious induction of facts, derived from observation and experiment, esta- blishes the proposition, that bodies become colder than the neighbouring air before they are dewed. The cold, therefore, which Dr. Wilson and Mr. Six conjectured to be the effect of dew, now appears to be its cause. But what makes the terrestrial surface colder than the atmosphere ? The radiation or projection of heat into free space. Now the researches of professor Leslie and count Rumford have demonstrated, that dif- ferent bodies project heat with very different de- grees of force.

In the operation of this principle, therefore, conjoined with the power of a concave mirror of cloud, or any other awning, to reflect, or throw down again those calorific emanations which would be dissipated in a clear sky, we shall find a solution of the most mysterious phenomena of dew. Two circumstances must here be consi- dered : —

I. The exposure of the particular surface to be dewed, to the free aspect of the sky.

II. The peculiar radiating power of the sur- face. 1. Whatever diminishes the view of the sky, as seen from the exposed body, obstructs the depression of its temperature, and occasions the quantity of dew formed upon it, to be less than would have occurred, if the exposure to the sky had been complete.

Dr. Wells bent a sheet of pasteboard into the the tin-foil prevents the glass under it from di shape of a pent-house, making the angle of sipating its heat, and, therefore, it can receive

flexure 90°, and leaving both ends open. This was placed one evening, with its ridge upper- most, upon a grass-plat, in the direction of the wind, as well as this could be ascertained. He then laid ten grains of white, and moderately fine wool, not artificially dried, on the middle part of that spot of the grass which was sheltered by the roof, and the same quantity on another part of the grass-plat, fully exposed to the sky. In the morning, the sheltered wool was found to have increased in weight only two grains, but that which had been exposed to the sky, sixteen grains. He varied the experiment on the same night, by placing, upright, on the grass-plat, a hollow cylinder of baked clay, one foot diameter, •vad two feet and a-half high. O.n the grass round the outer edge of the cylinder, were laid ten

grains of wool, which, in this situation, as there was not the least wind, would have re- ceived as much rain as a like quantity of wool fully exposed to the sky. But the quantity of moisture acquired by the wool partially screened by the cylinder from the aspect of the sky, was only about two grains, while that acquired by the same quantity, fully exposed, was sixteen grains. Repose of a body seems necessary to its acquiring its utmost coolness, and a full deposit of dew. Gravel-walks and pavements project heat, and acquire dew, less readily than a grassy surface. Hence, wool placed on the former, has its temperature less depressed than on the latter, and, therefore, is less bedewed. Nor does the wool here attract moisture by capillary action on the grass, for the same effect happens if it be placed in a saucer. Nor is it by hydrometric attraction; for, in a cloudy night, wool placed on an elevated board acquired scarcely any in- crease of weight.

If wool be insulated a few feet from the ground, on a bad conductor of heat, as a board, it will become still colder than when in contact with the earth, and acquire fully more dew than on the grass. At the windward end of the board it is less bedewed than at the sheltered end, because, in the former case, its temperature is nearer to that of the atmosphere. Rough and porous surfaces, as shavings of wood, take more dew than smooth and solid wood ; and raw silk and fine cotton are more powerful in this respect than even wool. Glass projects heat rapidly, and is as rapidly coated with dew. But bright metals attract dew much less powerfully than other bodies. If we coat a piece of glass, par- tially, with bright tin-foil, or silver leaf, the un- covered portion of the glass quickly becomes cold by radiation, on exposure to a clear noc- ;urnal sky, and acquires moisture ; which, be- jinning on those parts most remote from the metal, gradually approaches it. Thus, also, if we coat outwardly a portion of a window-pane with tin-foil, in a clear night, then moisture will be deposited inside, on every part except oppo- site to the metal. But if the metal be inside, then the glass under and beyond it will be sooner, or most copiously bedewed. In the first case,

no dew ; in the second case, the tin-foil prevents the glass, which it coats, from receiving the calorific influence of the apartment, and hence it is sooner refrigerated by external radiation than the rest of the pane. Gold, silver, copper, and tin, bad radiators of heat and excellent con- ductors, acquire dew with greater difficulty than platina, which is a more imperfect con- ductor; or than lead, zinc, and steel, which are better radiators. Hence, dew which has formed upon a metal will often disappear, while other substances in the neighbourhood remain wet ; and a metal, purposely moistened, will become dry, while neighbouring bodies are acquiring moisture. This repulsion of dew is communi- cated by metals to bodies in contact with or near them. Wool laid on metal acquires less dew than wool laid on the contiguous grass.

If the night becomes cloudy, after having been very clear, though there be no change with re- spect to calmness, a considerable alteration in the temperature of the grass always ensues. Upon one such night, the grass, after having been 12° colder than the air, became only 2° colder; the atmospheric temperature being the same at both observations. On a second night, the grass be- came 9° warmer in the space of an hour and a half. On a third night, in less than forty-five minutes, the temperature of the grass rose 15% while that of the neighbouring air increased only 3£°. During a fourth night, the temperature of the grass, at half past nine o'clock, was 32°. In t%venty minutes afterwards, it was found to be 39°, the sky in the mean time having become cloudy. At the end of twenty minutes more, the sky being clear, the temperature of the grass was again 32°. A thermometer lying on a grass-plat will sometimes rise several degrees, when a cloud comes to occupy the zenith of a clear sky.

When, during a clear and still night, different thermometers, placed in different situations, were examined at the same time, those which were situated where most dew was formed, were always found to be the lowest. On dewy nights the temperature of the earth, half an inch or an inch beneath the surface, is always found much warmer than the grass upon it, or the air above it. The differences on five such nights, were from 12° to 16°.

In making experiments with thermometers, it is necessary to coat their bulbs with silver or gold leaf, otherwise the glassy surface indicates a lower temperature than that of the air, or the metallic plate it touches. Swandown seems to exhibit greater cold, on exposure to the aspect of a clear sky, than any thing else. When grass is 14° be- low the atmospheric temperature, swandown is commonly 15°. Fresh unbroken straw and shreds of paper, rank in this respect with swan- down. Charcoal, lamp-black, and rust of iron, are also very productive of cold. Snow stands 4° or 5° higher thaji swandown laid upon it in a clear night.

The following tabular view of observations by Dr. Wells, is peculiarly instructive :—

DEW.

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6h. 45′

7h.

7h. 20′

7h. 40′

8h. 45′

Heat of the air four feet above the grass,

60i° 53J 54i

58 53

60|°

54 53 57 51*

59° 51i

51

55J 49ˆ

53°

*48**

47i

54° 44i

42$

49

42

The temperature always falls in clear nights ; warmth that is felt in winter, when a fleece of tut the deposition of dew, depending on the clouds supervenes in clear frosty weather. Che- moisture of the air, may occur or not. Now, if mists ascribed this sudden and powerful change •cold were the effect of dew, the cold connected to the disengagement of the latent heat of the with dew ought to be always proportional to the condensed vapors ; but Dr. Wells's thermometric quantity of that fluid ; but this is contradicted observations on the sudden alternations of tem- by experience. On the other hand, if it be perature by cloud and clearness, render that granted that dew is water precipitated from the opinion untenable. We find the atmosphere atmosphere by the cold of the body on which it itself, indeed, at moderate elevations, of pretty appears, the same degree of cold in the precipi- uniform temperature, while bodies at the surface tating body may be

attended with much, with of the ground suffer great variations in their tern-
little, or with no dew, according to the existing perature. This single fact is
fatal to the hypo- state of the air in regard to moisture ; all of thesis
derived from the doctrines of latent heat, which circumstances are found
really to take 'I had often,' says Dr. Wells, 'smiled, in the place. The actual
precipitation of dew, indeed, pride of half knowledge, at the means
frequently

ought to evolve heat.

employed by gardeners to protect tender plants

A very few degrees of difference of tempera- from cold, as it appeared to
me impossible that a

ture between the grass and the atmosphere are thin mat, or any such flimsy
substance, could

sufficient to determine the formation of dew, prevent them from attaining
the temperature of

when the air is in a proper state. But a differ- the atmosphere, by which
alone I thought them

ence of even 30°, or more, sometimes exists, by liable to be injured. But
when I had learned

the radiation of heat from the earth to the that bodies on the surface of the
earth become,

heavens. And hence, the air near the refrige- during a still and serene night,
colder than the

rated surface must be colder than that somewhat atmosphere, by radiating
their heat to the

elevated. Agreeably to Mr. Six's observations, heavens, I perceived
immediately a just reason

the atmosphere, at the height of 220 feet, is often, for the practice which I
had before deemed use-

upon such nights, 10° warmer than what it is less. Being desirous, however,
of acquiring

seven feet above the ground. And had not the some precise information on
this subject, I fixed

lower air thus imparted some of its heat to the surface, the latter would have been probably 40° under the temperature of the air.

Insulated bodies, or prominent points, are sooner covered with hoar-frost and dew than

perpendicularly, in the earth of a grass-plat, four small sticks, and over their upper extremities, which were six inches above the grass, and formed the corners of a square whose sides were two feet long, I drew tightly a very thin cambric

others; because the equilibrium of their tempe- handkerchief. In this disposition of things, there-

rature is more difficult to be restored. As aerial stillness is necessary to the cooling effect of ra-

fore, nothing existed to prevent the free passage of air from the exposed grass to that which was

diation, we can understand why the hurtful ef- sheltered, except the four small sticks, and there

fects of cold, heavy fogs, and dews, occur chiefly was no substance to radiate downwards to the

in hollow and confined places, and less frequently latter grass, except the cambric handkerchief.'

on hills. In like manner, the leaves of trees • The sheltered grass, however, was found nearly

often remain dry throughout the night, while the of the same temperature as the air, while the un-

blades of grass are covered with dew.

sheltered was 5° or more colder. One night the

No direct experiments can be made to ascer- fully exposed grass was 11° colder than the air;

tain the manner in which clouds prevent or lessen but the sheltered grass was only 3° colder,

the appearance of a cold at night, upon the sur- Hence we see the power of a very slight awning

face of the earth, greater than that of the atmo- to avert or lessen the injurious coldness of the

sphere. But it may be concluded from the pre- ground. To have the full advantage of such

ceding observations, that they produce this effect protection from the chill aspect of the sky. the

almost entirely by radiating heat to the earth, in covering should not touch the subjacent bodies,

return for that which they intercept in its pro- Garden walls act partly on the same principle,

gress from the earth towards the heavens. The Snow screens plants from this chilling radiation,

heat extricated by the condensation of transpa- In warm climates, the deposition of dewy mois-

rent vapor into cloud must soon be dissipated ; ture on animal substances hastens their putrefac-

whereas, the effect of greatly lessening, or pre- tion. As this is apt to happen only in clear

venting altogether, the appearance of a greater nights, it was anciently supposed that bright

«old on the earth than that of the air, will be moonshine favored animal corruption,

produced by a cloudy sky during the whole of a From this rapid emission of heat from the

long night.

surface of the ground, we can now explain the

We can thus explain, in a more satisfactory formation of ice during the night in Bengal, while manner than has usually been done, the sudden the temperature of the air is above 32°. The

nights most favorable for this effect, are those which are the calmest and most serene, and on which the air is so dry as to deposit little dew after midnight. Clouds and frequent changes of wind are certain preventives of congelation. 300 persons are employed in this operation at one place. The enclosures formed on the ground are four or five feet wide, and have walls only four inches high. In these enclosures, previously bedded with dry straw, broad, shallow, unglazed earthen pans are set, containing unboiled pump- water. Wind, which so greatly promotes evapo- ration, prevents the freezing altogether, and dew forms in a greater or less degree during the whole of the nights most productive of ice. If evapo- ration were concerned in the congelation, wetting the straw would promote it. But Mr. Williams, in the 83d vol. of the Philosophical Transactions, says, that it is necessary to the success of the process that the straw be dry. In proof of this he mentions, that when the straw becomes wet by accident it is renewed; and that when he purposely wetted it in some of the enclosures, the formation of ice there was always prevented. Moist straw both conducts heat and raises vapor from the ground, so as to obstruct the congela- tion. According to Mr. Leslie, water stands at the head of radiating substances.

DEWARCUNDAH, a sterile, or rather a desolated district of Hindostan, province of Gol- conda, extending along the south side of the river Godavery, and situated between the eighteenth and nineteenth degrees of northern latitude. The country contains the ruins of a number of forts and villages, which evince it to have been formerly well cultivated.

DEW-BORN, in country affairs, a distemper in cattle, being a swelling in the body, as much as the skin can hold, so that some beasts are in danger of bursting. It proceeds from greediness in feeding, when put into a rank pasture ; but commonly when the grass is full of water. In this case the beast should be exercised, and made to purge well; but the proper cure is bleeding in the tail ; then take a grated nutmeg, with an egg, and breaking the top of the shell, put out so much of the white as that you may nave room to slip the nutmeg into the shell ; mix them together, and then let shell and all be put down the beast's throat ; that done, walk him up and down, and he will soon mend.

DE WITT (John), a celebrated Dutch states- man, born in 1625, at Dort. At the age of twenty-three, he published Elementa Curvarum Linearum; and, after taking his degrees, became, in 1650, pensionary of Dort, and distinguished himself very early in the management of public affairs. He opposed the war with the English as injurious to the States ; and when the event justified his predictions, he was unanimously chosen pensionary of Holland. In this capacity he labored to procure a peace with Cromwell ; in

which peace a secret article was introduced for the exclusion of the House of Orange. In the war with England, after the Restoration, when it was thought expedient, on Opdam's defeat and death, that some of their own depu- ties should command the fleet, he was one of the three in commission, and wrote an accurate re-

lation of all that happened during the expedi- tion; for which, at his return, he received the solemn thanks of the States-General. In 1667 he established the perpetual edict for abolishing the office of Stadtholder, which produced sedi- tions and tumults; on which the pensionary begged dismission from his post : this was granted, with thanks for his services. But the invasion of the French, and the internal division among the Hollanders, spread every where terror and confusion. Cornelius, the pensionary's brotner, was imprisoned, and condemned to exile; and a report being raised that he would be rescued, the mob armed, and surrounded the prison where the two brothers were together, dragged them out, barbarously murdered them, hung the bodies on the gallows, and cut them to pieces. Such was the end of John De Witt, a man whose life had been devoted to the ser- vice of his country, without any consideration of his own emolument. Besides the work already mentioned, he wrote a book on the maxims of government, a translation, of which, entitled, The true Interest and Political Maxims of the Republic of Holland, has been printed in London.

DE WITT'S LAND, part of the north-west coast of New Holland, discovered by a Dutch navigator of that name, in 1628. It is supposed to comprehend about ten degrees of latitude, and fifteen of longitude. Many low and sterile islands, were afterwards discovered along the coast, by the French.

DEX'TER, adj. ~\ From Lat. dexter, DEX'TRAL, adj. I the right hand. Gr.
DEXTRA'LITY, n. s. f_ fogirepoc, from Sexopai, DEXTER'ITY, n. s. /to
receive, because we DEX'TEROUS, adj. 1 generally receive things
DEX'TEROUSLY, adv.s with the right hand. The right, not the left; a term in heraldry. Dex- tral is a synonymous general term. Dextrality, the state of being on the right hand side. Dex- terous is, clever ; expert ; because the right hand is generally more so than the left. My mother's blood

Runs on the dexter cheek, and this sinister Bounds in my sire's. Shakspeare.

His wisdom, by often evading from perils, was turned rather into a dexterity to deliver himself from dangers, when they pressed him, than into a provi- dence to prevent and remove them afar off. Bacon. In business dexterous, weighty in debate. Johnson. As for any tunicles or skins, which should hinder tne liver from enabling the dextral parts, we must not conceive it diffuseth its virtue by mere irradiation, but by its veins and

proper vessels.

Browne's Vulgar Errours

If there were a determinate prepotency in the righ- and such as ariseth from a constant root in nature we might expect the same in other animals, whose parts are also differenced by dextrality. Id.

They attempted to be knaves, but wanted art and dexterity. South.

But tnen my study was to cog the dice, And dext'rously to throw the lucky sice. Dryden. They confine themselves, and are dexterous mana- gers enough of the wares and products of that corner with which they content themselves. Locke.

For both their dexterout hands the lance could wield. Pope.

DIA

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DIA

The measures, for instance, in which your Grace's have a share. The tirst were called diacrii, and activity has been chiefly exerted, as they were adopted the latter pediaci ; the latter inhabiting the without skill, should have been conducted with more lower, and the former the aspov, or upper part chan common dexterity. Juni'ia. of tne city. — The laws of Solon imported, that

Pisistratus should be chief of the diacrii ; though

DEXTER, in heraldry, an appellation given to whatever belongs to the right side of a shield or

the scholiast on Aristophanes's comedy of The

coat of arms : thus we say, bend dexter, dexter Wasps, affirms that Pandion distributed the

point, &c.

quarter of the diacrii among his sons, and put

DEY, the title of the sovereign of Algiers, Lycus at their head, under the protection of the grand siguior. A DIADELPHIA, from f^ twice, prince, under this title, was appointed by the brother, the seventeenth class in the

sexual system, sultan, at the request of the Turkish soldiers, in comprehending those plants which bear herma- 1710. The term dey, in the Turkish language, phrodite flowers with two sets of united sta- signifies an uncle by the mother's side. The mina ; but this circumstance must not be abso- reason of the denomination is this : the Turkish lutely depended on. They are the papilionacei military consider the grand seignior as their fa- of Tournefort, the irregulares tetrapetali of ther; the state as their mother, by which they Rivinus, and the legurainosa of Ray. See Bo- are nourished and maintained; and the dey as TANY. the brother of the state, and consequently the DI'ADEM, n. s. uncle of all who are under his dominion. See ALGIERS.

DIABE'TES, n. s. Aia/3mrt;c. A morbid

copiousness of urine ; a fatal colliquation by the is crowned.

Fr. diad'eme; Span, and DI'ADEMF.D, adj. $ Lat. diadema; Gr. diaify/ia, from &a and Stu, to bind. The fillet, tiara, or crown of monarchs. See CROWN. Diademed

urinary passages.

An increase of that secretion may accompany the general colliquations ; as in fluxes, hectic sweats and coughs, diabetes, and other consumptions.

Derham'i Physico-Theology.

A theory of the diabetes and dropsy, produced by drinking fermented or spirituous liquors, is- explained in a treatise on the inverted motions of the lymphatic system. Darwin.

DIABETES, from foa, through, and patvw, to pass. An immoderate flow of urine. A genus of disease in the class neuroses,order spasmi of Cullen. There are two species of this com- plaint : Diabetes insipidus, in which there is a superabundant discharge of limpid urine, of its

And the ighen of him weren a flawme of fier, and in his heed manye diademyt. Wiclif. Apoc. xix.

Thou shall be a crown of glory in the hand of the Lord, and a royal diadem in the hand of thy God.

Isaiah Ixii. 3.

The sacred diadem in pieces rent, And purple robe gored with many a wound.

Spenser.

Mctl'ought I sat in scat of majesty, In the cathedral church of Westminster, And in that chair where kings and queens are

crowtied,

Where Henry and Dame Margaret kneeled to me, And on my head did set the diadem. Shakspeare. A crown.

usual urinary taste ; and diabetes mellitus, in Golden in show> is but a wreath of ˆo™ , >

which the urine is very sweet, and contains a Brmgs dangers, troubles, cares and sleepless nights,

- ** 'In him wnn wˆarc tnA T-no-nl at ft ft 0m mlitrtn..*

great quantity of sugar.

DIABOLICAL, adj. a FroniLat. diabolus.

DIABOL'ICK. 5 See DEVIL. Devilish ;

partaking of the qualities of the deril ; impious ; atrocious.

This, in other beasts observed, Doubt might beget of diabolich power, A f live within, beyond the sense of brute.

Milton.

The practice of lying is a diabolical exercise, and they that use it are the devil's children. Ray.

They are beautiful, and cannot, sure, be demons ? STRANGER. True -,

The Devil's always ugly j and your beauty

Is never diabolical. Byron.

DIACH'YLON, in pharmacy, an emollient digestive plaster composed of mucilages 01 viscid juices drawn from certain plants. See PHARMACY.

DIACO'DIUM, n. s. AWIKW&OV. The syrup of poppies.

To him who wears the regal diadem.

Milton.

A list the coblers' temples ties, To keep the hair out of their eyes ; From whence 'tis plain the diadem, That princes wear, derives from them. Swift. Not so, when diademed with rays divine, Touched with the flame that breaks from virtue's

shrine,

Her priestless muse forhids the good to die, And opes the temple of eternity. Pope.

What is the exaltation of the meanest beggar from a dunghill to an earthly diadem, when compared with that of human nature from the grave to the throne of God. Bp. Home, Psal. cxiii. 7.

And she, proud Austria's mournful flower,

Thy still imperial bride ; If still she loves thee hoard that gem, Tis worth thy vanished diadem.

Byron. Ode to Napoleon.

DIADEM, in antiquity, a head-band or fillet,

bworn by kings as a badge of their royalty. It lACO'USTICS, n. s. Ataes- ruca. The doc- was made of silk, thread, or wool, and tied trine of sounds. round the temples and forehead, the ends being

DIACRII, in antiquity, the name of a faction , tied behind, and let fall on the neck. It was at Athens. That city was divided into two par- usually white and plain, though sometimes em- ties : the one desired an oligarchy, and would broidered with gold, and set with pearls and only have a few persons employed in the govern- precious stones. In latter times it came to be ment: the others were for a democratical go- twisted round crowns, laurels, &c., and even vernment, wherein the whole people should appears to have been worn on divers parts of the

body. The word is derived from the Greek, as mentioned in the preceding article.

DIADEM, in heraldry, is applied to circles or rims serving to inclose the crowns of sovereign princes, and to bear the globe and cross, or the fleurs-

de-lis for their crest. The crowns of sovereigns are bound, some with a greater, and some with a less number of diadems. The ban- dage about the heads of Moors on shields is also called diadem, in blazoning.

DI'ADROM, n. s. AiaSpoptw. The time in which any particular motion is performed.

A gry is one tenth of a line, a line one tenth of an inch, an inch one tenth of a philosophical foot, a phi- losophical foot one third of a pendulum ; whose dia- droms, in the latitude of forty-five degrees, are each equal to one second of time, or a sixtieth of a minute.

Locke.

DIURESIS, n. s. Auupmf. The separa- tion or disjunction of syllables, as ae'r.

Diaeresis is also a kind of metaplasm, or addition to a word, by dividing one syllable into two ; as aulae, by a diaeresis, is a word of three syllables, instead of aulae. Dr. A. Rees.

DIURESIS, in medicine, is the consuming of the vessels of an animal body, when, from some corroding cause, certain passages are made which naturally ought not to have been, or certain na- tural passages are dilated beyond their ordinary dimensions, so that the humors which ought to have been contained in the vessels extravasate or run out.

DIURESIS, in surgery, an operation serving to divide and separate the part when the con- tinuity is a hindrance to the cure.

DI/ETETˆE,, in Grecian antiquity, a kind of judges, of which there were two sorts ; viz. Diaetetae cleroti, public arbitrators, chosen by lot to determine all causes exceeding ten drachms, within their own tribe; and from their sentence an appeal lay to the superior courts. And diaetetae diallecterii, private arbritators from whose sentence there lay no appeal. They al- ways took an oath to administer justice without partiality.

DIAGLYPHICA, the art of cutting or en- graving figures on metals, such as seals, intaglios, matrices of letters, &c., or coins for metals. See ENGRAVING.

DIAGNO'STICK, n. $. Atayivw

One of our physicians proved disappointed of his prognosticks, or rather diagnottichi.

Harvey on Consumptions

DIAG'ONAL, adj. & n. s. > Fr. diagonal, DIAG'ONALLY, adv.)

vtof, Sia and ywvia, an angle. A line drawn from one angle of a square to another.

The monstrosity of the badger is ill-contrived, and with some disadvantage ; the shortness being fixed into the legs of one side, that might have been more properly placed upon the diagonal movers.

Browne's Vulgar Errours.

"When a man has in his mind the idea of two lines, viz. the side and diagonal of a square, whereof the diagonal is an inch long, he may have the idea also of the division of that line into a certain number of equal parts. Locke.

All sorts of stone composed of granules, will cut and rive in any direction, as well in a perpendicular, or in a diagonal, as horizontally and parallel to the side of the strata. Woodward.

If a region of air be gradually removed from north to south, it would also blow diagonally between the north and east. Darioin.

DIAGONAL, in geometry, a right line drawn across a quadrilateral figure, from one angle to another ; by some called the diameter, and by others the diametral, of the figure. See GEO- METRY.

DIAGORAS, surnamed the Atheist, lived in the ninety-first Olympiad. He was not a native of Athens, but he taught there. He had com- posed a poem which a certain poet stole from him. He sued the thief, who swore it was his own, and obtained fame by it. This tempted Diagoras to deny a Providence. The Athenians summoned him to give an account of his doc- trine. He fled, and they set a price upon his head, promising a reward to any who should kill him; but he took shipping, and was wrecked.

DI'AGRAM, n. s. Aiaypa/i/m. A delineation of geometrical figures; a mathematical scheme.

Many a fair precept in poetry is like a seeming demonstration in the mathematics ; very specious in the diagram, but failing in the mechanic operation.

Dry den.

Why do not these persons make a diagram of these cogitative lines and angles, and demonstrate their properties of perception and appetite, as plainly as we know the other properties of triangles and circles ?

Bentley.

DIAGRY'DIATES, n.s. From Lat. diag- rydium. Strong purgatives made with diagry- dium.

All cholerick humours ought to be evacuated by _ diagrydiates, mixed with tartar, or some acid, or rhu-

from Gr.

DI'AL, n.s.

DI'AL-PLATE DI'ALLING DI'ALLIST dials.

$. ~\ Lat. diah .IE, I day. An ii >, I ing the hour J ling is th

Lat. diale, belonging to the An instrument for mark- ; the hour of the day. Dial- ling is the art of makin

Full faire of windowes and delightful bow-res, And en the top a dtall told the houres.

Spenser. Faerie Qucene. O, gentlemen, the time of life is short : To spend that shortness basely were too long, Though life did ride upon a dial's point Still ending at the arrival of an hour.

Shakspeare. Henry IV.

It is not necessary in the arts of dialling or naviga- tion to mention the true system or earth's motion.

Berkeley.

Strada tells us that the two friends, being each of them possessed of a magnetical needle, made a kind of dial-plate, inscribing it with the four-and-twenty letters, in the same manner as the hours of the day are marked upon the ordinary dial-plate.

Addison's Spectator.

Scientifick dialists, by the geometrick considerations of lines, have found out rules to mark out the irregu- lar motion of the shadow in all latitudes, and, on all planes. Moxon.

While dial is derived from theLatin dies, day, because it indicates the hour of the day, the an- cients also called it sciatherium, from its effect by the shadow.

1. DIALLING may be denned the art of draw- ing dials on the surface of any given body, whether plane or curved. By the Greeks and Romans this art is called gnomonica, and scia- therica, because it distinguishes the hours by the shadow of the gnomon.

2. This art is of great antiquity, for we read in Isaiah, xxxviii. 8, of the dial of Ahaz, who began to reign 400 years before Alexander, and within twelve years of the building of Rome.

3. Among the ancients Anaximenes the Mile- sian, and Thales, are said to have made dials ; and Vitruvius mentions one made by the ancient Chal- dee historian Berosus, on a reclining plane almost parallel to the equator. ,

4. Aristarchus of Samos invented the hemi- spherical dial, and there were at the same time some spherical ones, with a needle for a gnomon. The discus of Aristarchus was an horizontal dial, with its rim raised up all around to prevent the shadow from stretching too far.

5. It was late before the Romans became ac- quainted with dials. The first sun-dial at Rome was set up by Papirius Cursor, about the year of the city 460; before which time, says Pliny, there is no mention of any reckoning of time but by the sun's rising and setting : it was set up at or near the temple of Quirinus, but was very inaccurate. About thirty years after M. Valerius Messala, being consul, brought out of Sicily another dial, which he set up on a pillar near the rostrum ; but because it was not made for that latitude it did not show the time truly. They made use of it for

ninety-nine years ; till Martius Philippus set up another more exact.

6. The first professed writer on dialling is Cla- vius : who demonstrates both the theory and the operations, after the manner of the ancient ma- thematicians ; but with so much intricacy, that few perhaps ever read them all. Dechales and Ozanam give much simpler demonstrations in their Courses, and Wolfius in his Elements. M. Picard has given a new method of making large dials, by calculating the hour lines; and M. De la Hire, in his Dialling, printed in 1683, a geometrical method of drawing hour lines from

certain points determined by observation. Eber- hardus Welperus, in 1625, published his Dialling, in which he lays down a method of drawing the primary dials on a very easy foundation. The same foundation is described at length by Sebas- tian Munster, in his Rudimenta Mathematica, published in 1551.

7. Sturmius, in 1672, published a new edition of Welperus's Dialling, with the addition of a whole second part, about inclining and declining dials, &c. In 1708 the same work, with Stur- mius's additions, was republished, witli the ad- dition of a fourth part, containing Picard's and De la Hire's methods of drawing large dials. Paterson, Michael and Muller,have each written on dialling in German ; Coetsius, in his Ilorolo- giographia Plana, printed in 1689; Gauppenius in his Gnomouica Mechanica ; Bion in his Use of Mathematical instruments ; the late ingenious Mr. Ferguson in his Select Lectures ; Mr. Emerson in his Dialling ; and Mr. W. Jones in his Instru- mental Dialling, &c.

DEFINITIONS.

8. A dial is a surface, generally plane, upon which lines are described in such a manner, that the shadow of a wire, or of the upper edge of another plane, erected perpendicularly on the former, may show the time of the day.

9. The edge of the plane by which the time of the day is found is called the stile of the dial, which must be parallel to the earth's axis ; and the line on which the said plane is erected is called the substile.

10. The angle included between the substile and stile is called the elevation, or height, of the stile.

11. Dials, the planes of which are parallel to the plane of the horizon, are called horizontal dials ; and those which have their planes per- pendicular to the plane of the horizon, are called vertical, or erect, dials.

12. Erect dials, the planes of which directly front the north or south, are called direct north, or south, dials : all other erect dials are called decliners, because their planes are turned away from the north or south.

13. Dials, the planes of which are neither pa- rallel nor perpendicular to the plane of the horizon, are called inclining or reclining dials, according as their planes make acute or obtuse angles

with the horizon ; and, if their planes are also turned aside from facing the south or north, they are called declining inclining, or declining reclin- ing, dials.

14. The intersection of the plane of the dial, with that of the meridian, passing through the stile, is called the meridian of the dial, or the hour line of XII.

15. Meridians, the planes of which pass through the stile, and make angles of 15°, 30°, 45°, 60°, 75°, and 90°, with the meridian of the place, which marks the hour line of XII, are called hour circles ; and their intersections with the plane of the dial are called hour lines.

16. In all declining dials -the substile makes an anglo with the hour line of XII., and this angle is called the distance of the substile from the meridian.

17. The declining plane's difference of longi- tude is the angle formed at the intersection of the stile and pkne of the dial, by two meridians ; one of which passes through the hour line of XII, and the other through the substile.

PRINCIPLES OF DIALLING.

18. If the whole earth, a P e p, fig. 1, plate I.) •were transparent and hollow, like a sphere of glass, and had its equator divided into twenty-four equal parts by so many meridian semicircles, a, b, c, d, e,f, g, &c., one of which is the geogra- phical meridian of any given place, as London, (which is supposed to be at the point a) ; and if the hour of XII were marked at the equator, both upon that meridian and the opposite one, and all the rest of the hours in order on the rest of the meridians, those meridians would be the hour circles of London : then, if the sphere had an opaque axis, as PEp, terminating in the poles P and p, the shadow of the axis would fall upon every particular meridian and hour when the sun came to the plane of the opposite meri- dian, and would consequently show the time at London, and at all other places on the meridian of London.

19. If this sphere were cut through the middle by a solid plane, A B C D, in the rational horizon of London, one-half of the axis E P would be above the plane, and the other half below it; and, if stiaight lines were drawn from the centre of the plane to those points where its circum- ference is cut by the hour circles of the sphere, those lines would be the hour lines of a horizon- tal dial for London : for the shadow of the axis would fall upon each particular hour line of the dial when it fell upon the like hour circle of the sphere.

20. If the plane which cuts the sphere be up- right, as A F C G, fig. 2.

touching the given place (London) at F, and directly facing the me- ridian of London, it will then become the plane of an erect direct south dial ; and if right lines be drawn, from its centre, E, to those points of its circumference where the hour circles of the sphere cut it, these will be the hour lines of a vertical or direct south dial for London, to wbich the hours are to be set, as in the figure, and the lower half, Ep, of the axis will cast a shadow on the hour of the day in this dial, at the same time that it would fall upon the like hour

circle of the sphere if the dial plane were hori- zontal.

21. If the plane (still facing the meridian) be made to incline, or recline, any given number of degrees, the hour circles of the sphere will still cut the edge of the plane in those points to which the hour lines must be drawn straight from the centre ; and the axis of the sphere v/'ll cast a shadow on these lines at the respective hours.

22. The same will be the case if the plane be made to decline by any given number of degrees from the meridian towards the east or west : pro- vided the declination be less than 90°, or the reclination be less than the co-latitude of the place ; and the axis of the sphere will be a gno- mon, or stile, for the dial. But it cannot be a gnomon when the declination is quite 90°, nor when the reclination is equal to the co- latitude ; because, in these two cases, the axis has no elevation above the plane of the dial. And thus it appears that the plane of every dial represents the plane of some great circle upon the earth ; and the gnomon the earth's axis, whether it be a fine wire, as in the above figures, or the edge of a thin plate, as in the common horizon- tal dials.

23. The whole earth, as to its bulk, is but a point, if compared to its distance from the sun ; and therefore, if a small sphere of glass be placed upon any part of the earth's surface, so that its axis be parallel to the axis of the earth, and the sphere have such lines upon it, and such planes within it, as above described, it will show the hours of the day as truly as if it were placed at the earth's centre, and the shell of the earth were as transparent as glass.

24. But because it is impossible to have a hollow sphere of glass, perfectly true, blown round a solid plane ; or, if it were, we could not get at the plane within the glass to set it in any given position ; we make use of a wire sphere to explain the principles of dialling, by joining twenty-four semicircles together at the poles, and putting a thin flat plate of brass within it, as is shown in the preceding figures.

DIALLING BY THE TERRESTRIAL GLOBE.

25. A common globe of twelve inches diame-. ter has generally twenty-four meridian semicircles drawn upon it. If such a globe be elevated to the latitude of any given place, and turned about until one of these meridians cut the horizon in the north point, where the hour of XII is sup- posed to be marked, the rest of the meridians will cut the horizon at the respective distances of all the other hours from XII. And if these points of distance be marked on the horizon, and the globe be taken out of the horizon, and a flat board or plate be put into its place,even with the surface of the horizon ; then if straight lines be drawn from the centre of the board, to those points of distance on the horizon which were cut by the semicircles ; these lines will be the hour lines of a horizontal dial for that latitude, the edge of whose gnomon must be in the very same sinia- tion in which the axis of the globe was befcre it was taken out of the horizon : that is, the gnomon must make an angle with the plane of the dial,

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equal to the latitude of the place for which the dial is made.

26. If the pole of the globe be elevated to the co-latitude of the given place, and any meridian be brought to the north point of the horizon, the rest of the meridians will cut the horizon in the respective distances of all the hours from XII, for a direct south dial, the gnomon of which must form an angle with the plane of the dial equal to the co-latitude of the place; and the hours on this dial must be placed in a direction contrary to that ia which they stand on the horizontal dial.

27. But if the globe have more than twenty- four meridian semicircles upon it, we must take the following method for making horizontal and south dials : — Elevate the pole to the latitude of the place, and turn the globe until any particular meridian (suppose the first) comes to the north point of the horizon, and the opposite meridian will cut the horizon in the south. Then set the hour index to the uppermost XII on its circle, and turn the globe westward until 15° of the equator pass under the brazen meridian, and the hour index will be at I, for the sun moves 15° every hour), and the first meridian will cut the horizon in the number of degrees from the north point that I is distant from XII. Turn on until other 15° of the equator pass under the bra- zen meridian, and the hour index will then be at II, and the first meridian will cut the horizon in the number of degrees that II is distant from XII : and so, by making 15° of the equator pass under the brazen meridian for every hour, the first meridian of the globe will cut the horizon in the distances of all the hours from XII to VI, •which is just 90° ; and then the distances of XI, X, IX, VIII, VII, and VI, in the forenoon will be the same from XII, as the distance of I, !! > Ill, IV, V, and VI, in the afternoon : and these hour lines continued through the centre, will give the opposite hour lines on the other half of the dial. ‘

28. To make a horizontal dial for the latitude of London, which is 51° 30′ north, elevate the north pole of the globe 51° 30′ above the north point of the horizon ; and then turn the globe, until the first meridian (which, on

the British terrestrial globe, is that of London), cuts the north point of the horizon, and set the hour in- dex to XII at noon. Then turning the globe westward until the index points successively to I, II, III, IV, V, and VI, in the afternoon, or until 15°, 30°, 45°, 60°, 75°, and 90° of the equator pass under the brazen meridian, the first meridia-n of the globe will cut the horizon in the following numbers of degrees from the north towards the east, viz. llf, 24 J, 38ˆ, 53£, 71-&, and 90; which are the respective distances of the above hours from XII upon the plane of the horizon. To transfer these, and the rest of the hours, to a horizontal plane, draw the parallel right lines ac, and db, fig. 3, upon that plane, as far from each other as is equal to the intended thickness of the gnomon or stile of the dial, and the space included between them will be the me- ridian or twelve o'clock line on the dial. Cross this m eridian at right angles with the six o'clock line, /cA; and setting one foot of the compasses in

the intersection a, as a centre, describe the qua- drant ke with any convenient radius or opening of the compasses ; then setting one foot in the intersection b, as a centre, with the same radius describe the quadrant fh, and divide each qua- drant into ninety equal parts or degrees, as in the figure.

29. As the hour lines are less distant from each other about noon than in any other part of the dial, it is best to have the centres of these qua- drants at a little distance from the centre of the dial plane, on the side opposite to XII, in order to enlarge the hour distances thereabouts, under the same angles on the plane. Thus the centre of the plane is at C, but the centres of the quadrants are at a and b. Lay a ruler over the point b, and (keeping it there for the centre of all the afternoon hours in the quadrant fli), draw the hour line of I through 11° 30′ in the quadrant; the hour line of II through 24° 30'; of III through 38° 5'; IV through 53° 30'; and V through 71° 4′ : and, because the sun rises about four in the morning on the longest days, at London, con- tinue the hour lines of IV and V in the afternoon through the centre b to the opposite side of the dial.

30. the other quadrant is now to be divided, but it is very obvious that the same minute pro- cess need not be gone through in doing so, as the divisions already laid down may be readily trans- ferred to the quadrant ek; as the labor of divid- ing both may be much shortened by working from a scale, having a line of chords upon it, as will be shown presently.

31. If a plate similar to this triangle be made as thick as the distance between the lines ac and bd, and set upright between them, touching at a and b, its hypothenuse a g will be parallel to the axis of the world, when the dial is truly set ; and will cast a shadow on the hour of the day.

32. To make an erect direct south dial, fig. 4, elevate the pole to the co-latitude of the place, and proceed in all respects as above for the horizontal dial, and from VI in the morning to VI in the afternoon ; only the hours must be reversed, as in the figure ; and the hypothenuse ag, of the gnomon ugh, must make an angle with the dial-plane equal to the co-latitude of the place. As the sun can shine no longer on this dial than from six in the morning until six in the evening, there is no occasion for having any more than twelve hours upon it.

33. To make a direct dial, declining from the south towards the east or west, elevate the pole to the latitude of the place, and screw the qua- drant of altitude to the zenith. Then, if the dial decline towards the E. (which we shall suppose it does), count in the horizon the degrees of decli- nation, from the E. point towards the N. and bring the lower end of the quadrant to that de- gree of declination at which the reckoning ends. Then bring any particular meridian of the globe (suppose the first) directly under the graduated edge of the upper part of the brazen meridian, and set the hour to XII at noon. Then, keeping the quadrant of altitude at the degree of decli- nation in the horizon, turn the globe eastward on its axis, and observe the degrees cut by the

rirst meridian in the quadrant of altitude (counted from the zenith), as the hour circle comes to XI, X, IX, &c., in the forenoon, or as 15, 30, 45, &c. degrees of the equator pass under the brazen meridian at these hours respectively ; and the de- grees then cut in the quadrant by the first meri- dian, are the respective distances of the forenoon hours from XII on the plane of the dial.

34. Then, for the afternoon hours, turn the quadrant of altitude round the zenith until it comes to the degree in the horizon opposite to that where it was placed before ; namely, as far from the W. point of the horizon towards the S. as it was set at first from the E. point towards the N.; and turn the globe westward on its axis, un- til the first meridian comes to the brazen meri- dian again, and the hour index to XII ; then, continue to turn the globe westward, and as the 'ndex points to the afternoon hours, 1, II, III, &c., or as 15°, 30C, 45°, &c., of the equator pass under the brazen meridian, the first meri- dian will cut the quadrant of altitude in the re- spective number of degrees from the zenith that each of these hours is from XII on the dial. And when the first meridian goes off the quadrant at the

horizon in the forenoon, the hour index shows the time when the sun will come upon this did., and when it goes off the quadrant in the afternoon, the index will point to the time when the sun goes off the dial. Having thus found all the hour dis- tances from XII, lay them down upon the dial plane, either by dividing a semicircle into two quadrants of 90° each (beginning at the hour 'ine of XII), or by the line of chords, as above directed.

35. In all declining dials, the line on which ihe stile or gnomon stands (commonly called the substile line) makes an angle with the twelve o'clock line, and falls among the forenoon hour lines, if the dial declines towards the E ; and among the afternoon hour lines, when the dial declines towards the W. that is, to the left hand from the twelve o'clock line in the former case, and to the right hand from it in the latter.

36. To find the distance of the substile from the twelve o'clock line, if the dial declines from the S. towards the E. count the degrees of the de- clination in the horizon from the E. point toward the N. and bring the lower end of the quadrant of altitude to that degree of declination where the reckoning ends ; then, turn the globe until the first meridian cuts the horizon in the like num- ber of degrees, counted from the S. point toward the E. and the quadrant and the first meridian will then cross one another at right angles ; and the number of degrees of the quadrant, which are in- tercepted between the meridian and the zenith, is equal to the distance of the substile line from the twelve o'clock line ; and the number of degrees of the first meridian, which are intercepted between the quadrant and the N. pole, is equal to the elevation of the stile above the plane of the dial.

37. If the dial declines westward from the S., count that declination from the E. point of the horizon towards the S. and bring the quadrant of altitude to the degree in the horizon at which the reckoning ends ; both for finding the forenoon hours, and distance of the substile from the meri- dian : and for the afternoon hours, bring the qua-

drant to the opposite degree in the horizon, namely, as far from the W. towards the N. and then proceed in all respects as above.

38. Thus when our declining dial is finished, we have four dials, viz.]. A north dial declining eastward by the same number of degrees ; 2. A north dial declining the same number west; 3. A south dial, declining east; and, 4. A south dial declining west; only placing the proper number of hours, and the stile or gnomon re- spectively, upon each plane. For, in the S. W. plane, the substilar line falls among the afternoon hours; and in the S. E. of the same declination, among the forenoon hours, at equal distances from XII. And so all the morning hours on the W. decliner, will be like the afternoon hours on the E. decliner ; and the S. W. decliner, the N. E.

decliner, by only extending the hour lines, stile and substile, quite through the centre : the axis of the stile (or edge that casts the shadow on the hour of the day), being in all dials whatever, parallel to the axis of the world, and conse- quently pointing towards the north pole of the heaven in north latitudes, and towards the south pole, in south latitudes.

METHOD OF CONSTRUCTING DIALLING LINES.

39. Describe, with any opening of the com- passes, as EA, fig. 5, according to the intended length of the scale, the circle A D C B, and cross it at right angles by the diameters C E A and D E B ; divide the quadrant A B first into 9 equal parts, and then each part into 10; so shall the quadrant be divided into 90 equal parts or degrees. Draw the right line A F B for the chord of this quadrant ; and, setting one foot of the compasses in the point A, extend the other to the several divisions of the quadrant, and transfer these divisions to the line A F B by the arcs 10, 20, 30, &c., and this will be a line of chords, divided into 90 unequal parts.

40. Divide the quadrant C D into 90 equal parts, and from each point of division draw right lines, as i, k, I, &c., to the line C E ; all perpendi- cular to that line, and parallel to D E, which will divide E C into a line of sines ; and although these are seldom put among the dialling lines on a scale, yet they assist in drawing the line of la- titudes. For if a ruler be laid upon the point D, and over each division in the line of sines, it will divide the quadrant C B into 90 unequal parts, as B a B 6, &c., shown by the right lines 12 a, 20 b, 30c, &c., drawn along the edge of the ruler. If the right line B C be drawn, subtending this quadrant and the nearest distances, Ba, B6, Be, &c., be taken in the compasses from B, and set upon this line in the same manner as directed for the line of chords, it will make a line of latitudes B C, equal in length to the line of chords A B, and an equal number of divisions, but very une- qual as to their lengths.

41 . Draw the right line D G A, subtending the quadrant D A ; and parallel to it, draw the right line r s, touching the quadrant D B at the nume- ral figure 3. Divide this quadrant into six equal parts, as 1, 2, 3, 8cc., and through these points of division draw right lines from the centre Eto the line r s, which will divide it at the pointt where the six hours are to be placed, as lu tn»

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figure. If every sixth part of the quadrant be subdivided into four equal parts, right lines drawn from the centre through these points of division, and continued to the line r s, will divide each hour upon it into quarters.

METHOD OF CONSTRUCTING DIALS BY DIALLING LINES.

42. This is the easiest of all mechanical me- thods, and by much the best, when the lines are truly divided : and not only the- half hours and quarters may be laid down by all of them, but every fifth minute by most, and every single mi- nute by those where the line of hours is a foot in length. Having drawn the double meridian line a b, c d, fig. 6, on the plane intended for a hori- zontal dial, and crossed it at right angles by the six o'clock line/ e, as in fig. 3, take the latitude of the place with the compasses, from the scale of latitudes, and set that extent from c to e, and from a to/, on the six o'clock line : then, taking the whole six hours between the points of the compasses from the scale of hours, with that ex- tent set one foot on the point e, and let the other foot fall where it will upon the meridian line cd, as at d. Do the same from/ to b, and draw the right lines c d and/ 6, each of them will be equal in length to the whole scale of hours. Then, setting one foot of the compasses in the begin- ning of the scale at XII, and extending the other to each hour on the scale, lay off these extents from a to e for the afternoon hours, and from b to / for those of the forenoon : this will divide the lines d e and bf in the same manner as the hour scale is divided at 1, 2, 3, 4, and 6 ; on which the quarters may also be laid down, if re- quired. Then, laying a ruler on the point c, draw the first five hours in the afternoon, from that point, through the dots at the numeral figures 1, 2, 3, 4, 5, on the line de; and continue the lines of IV and V through the centre r, to the other side of the dial, for the like hours of the morn- ing : which done, lay the ruler on the point a, and draw the last five hours in the forenoon through the dots, 5, 4, 3, 2, 1, on the line / b ; continuing the hour lines of VII and VIII through the centre a to the other side of the dial, for the like hours of the evening ; and set the hours to their respective lines, as in the figure. Lastly, make the gnomon the same way as directed above for the horizontal dial, and the whole will be finished.

43. To make an erect south dial, take the co- latitude of your place from the scale of latitudes, and then proceed in all respects for the hour line as in the horizontal dial ; only reversing the hours as in fig. 4, and making the angle of the stile's height equal to the co-latitude.

GEOMETRICAL METHOD OF DRAWING THE HOUR LINES.

44. I. To construct a horizontal dial, fig. 1, plate II.- — Describe with any

opening of the com- passes, as Z L, the two semicircles LF k and L Q k, upon the centres Z and z, where the six o'clock line crosses the double meridian line, and divide each semicircle into twelve equal parts, beginning at L (though strictly speaking, only the quadrants from L to the six o'clock line need be

*divided); then connect &e divisions which ate equi-distant from L, by the parallel lines K M, I N, II O, G P, and F Q. Draw V Z for thi? iiy- pothenuse of the stile, making the ansle *' Z E equal to the latitude of the place; and continue the line VZ to R. Draw the line Rr parallel to the six o'clock line, and set off the distance a K from Z to Y, the distance 6 I from Z to X , c H from Z to W, d G from Z to T.and e 1- from Z *o S. Then draw the lines S s, T t, W u; X j-, aridYj/, each parallel to Rr. Set off the dis- tance y Y, from a to 11, and from /to 1 ; the distance x X from b to 10, and from g to 2 ; wW from c to 9, and from ft to 3 ; tT from d to 8, and from t to 4 ; s S from e to 7, and from « to .'>. Then laying a ruler to the centre Z, draw the forenoon hour lines through the points 11, 10, 9, 8, 7 ; and laying it to the centre z, draw the af- ternoon lines through the points 1, 2, 3, 4, .5; continuing the forenoon lines of VII and VIII through the centre Z, to the opposite side of the dial, for the like afternoon hours ; and the after- noon lines IV and V through the centre x, to the opposite side for 'the like morning hours. Set the hours to these lines as in the figure, and then erect the stile or gnomon, and the dial will be finished.*

45. II. To construct a south dial, draw the line V Z, making an angle with the meridian Z L equal to the co-latitude of your place ; and pro- ceed in all respects as in the above horizontal dial for the same latitude, reversing the hours as in fig. 4, and making the elevation of the gno- mon equal to the co-latitude.

46. III. To construct a north dial. See fig. 2. If the hour lines IV and V, as also VII and VIII on the south dial, fig. 4, plate I. be con- tinued beyond the line VI a VI, and the triangle ag h turned about the point a, till ah fall on a XII produced, it is evident a north dial is thereby had. The hour line for VII in the morning on the south dial, when produced, forms the hour line for V in the morning on the north dial : and the hour line for V in the afternoon, on the south dial, Torms the hour line for VII in the evening on the north dial. The manner of placing the characters for the other hours is therefore obvious.

47. IV. To construct an east dial. On the eastern side of the plane of the meridian, draw a line A B, fig. 3, parallel to the horizon, draw also a line AK, making with AB an angle KAB equal to the complement of the latitude of the place for which the dial is made. Take a point D in AK, and on that point for a centre describe a circle. Through D draw EC per- pendicular to

AK, thus the circle will be divided into four quadrants ; divide two of these quad- rants into six equal parts, as in the figure. Draw a straight line F EG perpendicular to EC, the diameter of the circle, and from the centre D through the several divisions, draw the right lines D IV, D V, D VI, D VII, D VIII, D IX, D X, DXI. Through IV, V, VI, VII, &c.; draw lines IV, IV, V, V, &c. parallel to E DC. Lastly, in D erect a stile equal to the radius D E, perpendicular to the plane ; or on two little pieces perpendicularly fixed in EC, and equal to the same D E, fit an iron rod parallel to

EC, thus will each index at the several hours project a shadow to the respective hour lines IV IV, V V, VI VI, &c. The east dial, it is obvi- ous, can only show the hours till twelve o'clock.

48. V. To construct a west dial. The con- struction is perfectly the same as that of an east dial, only that its situation is inverted, and the hours are written accordingly. A west dial, it is obvious, caa only be illuminated after noon, and therefore, joined with an east dial, shows all the hours of the day.

OF UNIVERSAL DIALS.

49. I. The universal dial, invented by Pardie, fig. 4, consists of three principal parts ; the first whereof is called the horizontal plane A, because in practice it must be parallel to the horizon. In this plane is fixed an upright pin, which enters into the edge of the second part BD, called the meridional plane ; which is made of two pieces, the lowest whereof, B, is called the quadrant, because it contains a quarter of a circle, divided into 90° ; and it is only into this part, near B, that the pin enters. The other piece is a semicircle D adjusted to the quad- rant, and turning in it by a groove, for raising and depressing the diameter EF of the semi- circle, which diameter is called the axis of the instrument. The third piece is a circle, G, divided on both sides into twenty-four equal parts, which are the hours. This circle is put upon the meridional plane, so that the axis E F may be perpendicular to the circle, and the point C be the common centre of the circle, semicircle, and quadrant. The straight edge of the semicircle is chamfered on both sides to a sharp edge, which passes through the centre of the circle. On one side of the chamfered part, the first six months of the year are laid down, according to the sun's declination for their res- pective days, and on the other side the last six months. And against the days on which the sun enters the signs, there are straight lines drawn upon the semicircle, with the characters of the signs marked upon them. There is a black line drawn along the middle of the upright edge of the quadrant, over which hangs a thread H, with its plummet I, for levelling the instru- ment.

From the 23d of September to the 20th of March, the upper surface of the circle must touch both the centre C of the semicircle, and the line of and ˆt ; and from the 20th of March to the 23d of September, the lower sur- face of the circle must touch that centre and line.

50. To find the time of day by this dial, set it on a level place in sun-shine, and adjust it by the levelling screws k and /, until the plumb- line hangs over the black line upon the edge of the quadrant, and parallel to the said edge; move the semicircle in the quadrant, until the line of and £b (where the circle touches) comes to the latitude of the place in the quad- rant : then turn the whole meridional plane BD, with its circle G, upon the horizontal plane A, until the edge of the shadow of the circle falls on the day of the month in the semicircle ; and then the meridional plane will be due north and south; the axis EF will be parallel to the axis

of the world, and will cast a shadow upon the true time of the day among the hours of the circle.

51. When the instrument is thus rectified, the quadrant and semicircle are in the plane of the meridian, and the circle is then in the plane of the equinoctial. Therefore as the sun is above the equinoctial in summer (in northern latitudes), and below it in winter, the axis of the semi- circle will cast a shadow on the hour of the day, on the upper surface of the circle, from the 20th of March till the 23d of September ; and from the 23d of September to the 20th of March, the hour of the day will be determined by the shadow of the semicircle upon the lower surface of the circle. In the former case the shadow of the circle falls upon the day of the month, on the lower part of the diameter of the semicircle ; and in the latter case on the upper part.

52. The method of laying down the months and signs upon the semicircle is as follows : — Draw the right line A C B, fig. 5, equal to the diameter of the semicircle A D B, and cross it in the middle at right angles with the line E G D, equal in length to ADB; then EC will be the radius of the circle F C G, which is the same as that of the semicircle. Upon E, as a centre, describe the circle F C G, on which set off the arcs C h and C t, each equal to 23 £°, and divide them accordingly into that number for the sun's declination. Then laying the edge of a ruler over the centre E, and also over the sun's decli- nation for every fifth day of each month, mark the points on the diameter AB of the semicircle from a to g, which are cut by the ruler ; and there place the days of the months accordingly, answering to the sun's declinations. Then setting one foot of the compasses in C, and extending the other to a or g, describe the semi- circle a b c d efg ; which divide into six equal parts, and through the points of division draw right lines parallel to C D, for the beginning of the signs (of which one half are on one side of the

semicircle, and the other half on the other), and set the characters of the signs to their proper lines, as in the figure.

. 53. II. The universal, or astronomical equi- noctial ring-dial is an instrument that serves to find out the hour of the day in any latitude. It consists of two flat rings or circles, uswally from four to twelve inches diameter, and of a mode- rate thickness; the outward ring representing the meridian of the place it is used at, contains two divisions of 90° each, opposite to one another, serving to let a sliding piece and ring (by which the dial is usually suspended) be placed on one side, from the equator to the N. pole, and on the other side to the S., according to the latitude of the place. The inner ring represents the equator, and turns diametrically within the outer, by means of two pivots insert- ed in each end of the ring at the hours XII. Across the two circles is screwed to the meridian a thin pierced plate or bridge, with a cursor, that slides along the middle of the bridge : this cursor has a small hole for the sun to shine through. The middle of this bridge is con- ceived as the axis of the world, and its extremi- ties as the poles ; on the one side are delineated

the twelve signs of the zodiac, and sometimes opposite the degrees of the sun's declination; and on the other side the days of the month throughout the year. On the other side of the outer ring A are the divisions of 90°, or a quad- rant of latitude. It serves, by the placing of a common pin in the hole, to take the sun's altitude, from which the latitude of the place may easily be found.

54. In using this dial, place the line in the middle of the sliding piece, over the degree of latitude of the place. Suppose, for example, 51| for London ; put the line which crosses the hole of the cursor C to the day of the month of the degree of the sign. Open the instrument till the two rings be at right angles to each other, and suspend it by the ring, that the axis of the dial represented by the middle of the bridge may be parallel to the axis of the earth, viz. the north pole to the north, and vice versa. Then turn the flat side of the bridge towards the sun, so that his rays passing through the small hole in the cursor may fall exactly in a line drawn through the middle of the concave surface of the inner ring or hour-circle, the bright spot shows the hour of the day in the said concave surface of the dial. The hour XII cannot be shown by this dial, because the outer ring, being then in the plane of the meridian, excludes the sun's rays from the inner ; nor can this dial show the hour when the sun is Jti the equinoctial, because his rays, then falling parallel to the plane of the inner circle or equinoctial, are

excluded by it.

55. III. Figs. 6, 7, and 8, a universal dial on a plain cross, as described by Mr. Ferguson. It is moveable on a joint C, for elevating it to any given latitude on the quadrant C o 90, as it stands upon the horizontal board A. The arms of the cross stand at right angles to the middle part; and the top of it, from a to n, is of equal length •with either of the arms ne or mk. See fig. 6. The dial is rectified by setting the middle line t u to the latitude of the place on the quadrant, the board A level, and the point N. northward by the needle ; thus, the plane of the cross will be parallel to the plane of the equator. Then, from III o'clock in the morning till VI, the upper edge kl of the arm to will cast a shadow on the time of the day on the side of the arm c m ; from VI till IX, the lower edge i of the arm i o will cast a shadow on the hours on the side o q. From IX in the morning to XII at noon, the edge a b of the top part an will cast a shadow on the hours on the arm n ef; from XII to III in the after- noon, the edge c d of the top part will cast a sha- dow on the hours on the arm klm; from III to VI in the evening, the edge g h will cast a sha- dow on the hours on the part p u ; and from VI to IX, the shadow of the edge eˆwiU show the time on the top part an. The breadth of each part a b, ef, &c., must be so great, as never to let the shadow fall quite without the part or arm on which the hours are marked, when the sun is at his greatest declination from the equator.

56. To determine the breadth of the sides of the arms which contain the hours, so as to be in just proportion to their length ; make an angle ABC, fig. 7, of 23° 30', which is equal to the sun's greatest declination : and suppose the

length of each arm, from the side of the long middle part, and also the length of the top part above the arms, to be equal to B d. Then as the edges of the shadow, from each of the arms, will be parallel to Be, making an angle of 23° 30′ with the side Bd of the ann, when the sun's declination is 23° 30'; it is plain, that if the length of the arm be Ed, the least breadth that it can have, to keep the edge Be of the sha- dow B egd from going off the side of the arm de before it comes to the end of it ed, must be equal to e d or d B. But to keep the shadow within the quarter divisions of the hours, when it comes near the end of the arm, the breadth of it should be still greater, so as to be almost doubled, on account of the distance between the tips of the arms.

57. The hours may be placed on the arms, by laying down the cross abed, fig. 8, on a sheet of paper; and with a black lead pencil held close to it drawing its shape and size on the paper. Then take the length ae in the compasses, and with one foot in the corner a, describe with the other the quadrant ef. Divide this arc into six equal parts, and through the points of

division draw right lines ag, ah, &c., continuing three of them to the arm c e, which are all that can fall upon it ; and they will meet the arm in those points through which the lines that divide the hours from each other are to be drawn right across it. Divide each arm for the three hours contained in it, in the same manner ; and set the hours to their proper places, on the sides of the arms, as thay are marked in fig. 6. Each of the hour spaces should be divided into four equal parts, for the half hours and quarters, to the quadrant ef; and right lines should be drawn through these division-marks in the quadrant, to the arms of the cross, in order to determine the places thereon where the subdivision of the hours must be marked. This kind of universal dial is easily made, and has a pretty uncommon appearance in a garden.

58. IV. The universal mechanical dial, fig. 9, affords, by its equinoctial circle, an easy method of describing a dial on any kind of plane. For example : suppose a dial is required on a hori- zontal plane. If the plane be immoveable, as A B C D, find a meridian line as G F ; or, if moveable, assume the meridian at pleasure : then by means of the triangle EKF, whose base is applied on the meridian line, raise the equinoc- tial dial H till the index GI becomes parallel to the axis of the earth (which is so, if the angle K E F be equal to the elevation of the pole), and the XII o'clock line on the dial hang over the meridian line of the plane or the base of the triangle. If then, in the night, or in a dark place, a lighted candle be successively applied to the axis G I, so as the shadow of the index or style G I fall upon one hour line after another, the same shadow will mark out the several hour lines on the plane ABCD. Noting points, therefore, on the shadow, draw lines through them to G ; then an index being fixed on G, ac- cording to the angle IGF, its shadow will point out the several hours by the light of the sun. If a dial were required on a vertical plane, having raised the equinoctial circle as directed, push

forward the index G I till the tip thereof, I, touch the plane. If the plane be inclined to the hori- zon, the elevation of the pole should be found on the same ; and the angle of the triangle KEF should be made equal thereto.

59. V. Fig. 1, plate III., represents a universal dial, which shows the hour of the day by a ter- restrial globe, and by the shadows of several gnomons, at the same time ; together with all the places of the earth which are then enlightened by the sun ; and those to which the sun is then rising, or on the meridian or setting. This dial is made of a thick square piece of wood, or hol- low metal. The sides are cut into semicircular hollows, in which the

hours are placed ; the stile of each hollow coming out from the bottom thereof as far as the ends of the hollows project. The coiners are cut ˆ>ut into angles, in the insides of which the hours are also marked ; and the edge of the end of each side of the angle serves as a stile for casting a shadow on the hours marked on the other side. In the middle of the uppermost side, or plane, there is an equinoctial dial ; in the centre of which an upright wire is fixed, for casting a shadow on the hours of that dial, and supporting a small terrestrial globe on the top.

60. The whole dial stands on a pillar, in the middle of a round horizontal board, in which there is a compass and magnetic needle, for placing the meridian stile towards the S. The pillar has a joint with a quadrant upon it, divided into 90°, for setting it to the latitude of any given place. The equator of the globe is divided into twenty-four equal parts, and the hours are laid down upon it at these parts. The time of the day may be known by these hours, when the sun shines upon the globe.

61. To rectify and use this dial, set it on a level table, or on the sole of a window, where the sun shines, placing the meridian style clue S. by means of the needle ; which will be, when the needle points as far from the N. fleur-de-lis toward the W. as it declines westward at the place. Then bend the pillar in the joint, till the black line on the pillar comes to the latitude of the place in the quadrant. The machine being thus rectified, the plane of its dial part will be parallel to the equator, the wire or axis that sup- ports the globe will be parallel to the earth's axis, and the N. pole of the globe will point toward the N. pole of the heavens.

62. The same hour will then be shown in several of the hollows, by the ends of the sha- dows of their respective stiles ; the axis of the globe will cast a shadow on the same hour of the day, in the equinoctial dial, in the centre of which is it placed, from the 20th of March to the 23rd of September ; and, if the meridian of the place on the globe be set even with the meridian stile, all that part of the globe that the sun shines upon will answer to those places of the real earth which are then enlightened by the sun. The places where the shade is just coming upon the globe, answer to all those places of the earth in which the sun is then setting; as the places where it is going off, and the light coming on, answer to all the places of the earth where the tun is then rising. And lastly, if the hour of VI

be marked on the equator in the meridian of the place (as it is marked on the meridian of London in the figure), the division of the light and shade on the globe will show the time of the day.

63. The northern stiie of the dial is hid in the figure by the axis of the globe. The hours in the hollow to which that stile belongs, are also

supposed to be hid by the oblique view of the figure : but they are the same as the hours in the front hollow. Those also in the right and left hand semicircular hollows are mostly hid from sight ; and so also are all those on the sides next the eye of the four acute angles.

64. The construction of this dial is as follows : on a thick square piece of wood, or metal, draw the lines ac and lid, fig. 2, as far from each other as you intend for the thickness of the stile abed; and in the same manner, draw the like thickness of the other three stiles, efgfi, iklm, and nopq, all standing outright as from the centre. With any convenient opening for the compasses, as a A, so as to leave proper strength when KI is equal to a A, set one foot in a, as a centre, and with the other describe the quadranta.' arc Ac. Then, without altering the compasses, set one foot in b as a centre, and with the othei describe the quadrant dB. All the other quad- rants in the figure must be described in the same manner, and with the same opening of the com- passes, on their centres efik, and n o, and each quadrant divided into six equal parts, for as many hours, as in the figure ; each of which parts must be subdivided into four, for the half hours and quarters. At equal distance? from each corner, draw the right lines Ip and I.p, L0 and M q, N r and Or, P s and Q s : to form the four angular hollows IpK, Lˆ M, NrO, and PsQ; making the distances between the tips of these hollows, as IK, LM, NO, and PQ, each equal to the radius of the quadrants : and leaving sufficient room within the angular points pqr and s, for the equinoctial in the middle.*

65. To divide the inside of these angles for the hour spaces, take the following method : — Set one foot of the compasses in the point I as a centre, and open the other to K ; and with that opening describe the arc Kt: then, without altering the compasses, set one foot in K, and with the other describe the arc 1 1 . Divide each of these arcs, from I and K to their intersection at t, into four equal parts ; and from their centres I and K, through the points of division, draw the right lines I 3, 1 4, I 5, I 6, I 7 : and K 2, K 1, K 12, Kll ; and they will meet the sides Kp and Ip of the angle IpK where the hours thereon must be placed. And these hour spaces in the arcs must be subdivided into four equal parts, for the half hours and quarters. Do the like for the other three angles, and draw the dotted lines, and set the hours in the insides where those lines meet them, as in the figure ; and the like hour lines will be parallel to each other in all the quad- rants and in all the angles. Mark points for all these hours on the upper side : and cut out all the angular hollows, and the quadrantal ones quite through the places where their four gno- mons must stand ; and lay down the hours on their insides, and set in their gnomons, which n;ust be as broad as the dial is thick , and this

London, J^bfohedsby Thomas Tegg. 73.

J.Stury sculp.

breadth and thickness must be large enough to keep the shadows of the gnomons from ever falling quite out of the sides of the hollows, even when the sun's declination is at the greatest. Lastly, draw the equinoctial dial in the middle, all the hours of which are equidistant from each other; and the dial will be finished.

66. As the sun goes round, the broad end of the shadow of the stile acbd will show the hours in the quadrant Ac, from the sun-rise till VI in the morning ; the shadow from the end M will show the hours on the side L q from V to IX in the morning; the shadow of the stile efgh in the quadrant Dg in the long days, will show the hours from sun-rise till VI iu the morning; and the shadow t& the end N will show the morning hours, on the side Or, from III to VII. Just as the shadow of the northern stile abt d goes off the quadrant Ac, the shadow of the southern stile iklm begins to fall within the quadrant F /, at VI in the morning ; and shows the time, in that quadrant, from VI to XII at noon; and from noon till VI in the evening, in the quadrant mE. And the shadow of the end O shows the time from XI in the forenoon till III in the afternoon, on the side r N ; as the shadow of the end P shows the time from IX in the morning till I o'clock in the afternoon on the side Qs.

67 At noon, when the shadow of the eastern stile efg h goes off the quadrant h C, in which it showed the time from VI in the morning till noon, as it did in the quadrant g D, from sun- rise till VI in the morning, the shadow of the western stile nopq begins to enter the quadrant Up; and shows the hours thereon from XII at noon till VI in the evening : and after that till sun-set, in the quadrant q G ; and the end Q casts a shadow on the side P s, from V in the evening till IX at night, if the sun be not set before that time. The shadow of the end I shows the time on the side Kp from III till VII in the after- noon; and the shadow of the stile abed shows the time from VI in the evening till the sun sets. The shadow of the upright central wire, that sup- ports the globe at top, shows the time of the day, in the middle or equinoctial dial, all the summer half-year, when the sun is on the north side of the equator.

DIALLING BY SPHERICAL TRIGONOMETRY.

68. The construction of sun-dials on all planes whatever, may be included in one general rule ; sufficiently intelligible, if that of a horizontal dial for any given latitude be well understood. For there is no plane, however obliquely situated with respect to any given place, but what is pa- rallel to the horizon of some other place ; and, therefore, if we can find that other place, by a problem, on the terrestrial globe, or by a trigo- nometrical calculation, and construct a horizontal dial for it ; that dial applied to the place where it is to serve will be a true dial for that place. — Thus, an erect direct south dial in 51° 30′ N. lat. would be a horizontal dial on the same meridian, 90° southward of 51° 30′ N. lat.: which falls in •with 38° 30′ S. lat. But if the upright plane declines from facing the south at the given

place, it would still be a horizontal plane 90° from that place, but for a different longitude, which would alter the reckoning of the hours accordingly.

69. To calculate the angles which the hour lines of a horizontal dial make with the meridian or twelve o'clock line, see fig. 3. Let N KS VV represent the horizon of any place, P S N the meridian, and P the N. pole of the sphere : let KPH be any hour circle, for example, the circle which makes with the meridian an angle of 15°, then the arch of the horizon inter- cepted between N, the north, and PII the hour circle, in the plane of which the sun is at XI or I o'clock, measures the angle contained by the substile of the dial, and the hour lines cor- responding to these hours. In the spherical triangle P NH, right angled at N, there are given the side P N, which is the elevation of the pole above the horizon, and the angle N PII which is contained by the meridian and hour circle, to find N H the arch of the horizon opposite that angle. By spherical trigonometry, radius is to the sine of P N as the tangent of N P II to the tangent of N II the side required. Hence we have this practical rule. To find the angle which any hour line of a horizontal dial makes with the meridian, or which is the same, to find the angle which the hour lines on any dial make with the substile. — To the logarithmic sine of the latitude of the place for which the dial is made, add the logarithmic tangent of the sun's distance from the meridian, for the hour required, the sum, 1 — 10, is the logarithmic tangent of the angle required.

70. Example. — To find the angles which the hour lines of XI or I make with the meridian of a horizontal dial for the latitude of London, which is 51° 30'.

To logarithmic sine of 51° 30′ 9'89354 Add logarithmic tangent of 15° 9-42805

Sum, rejecting 10, is . . 9-32159

which is the tangent of 11° 51′ nearly. In like manner it will be found, that the hour lines of X and II make each with the meridian an angle of 24° 18', &c. And by computing in this manner, with the sine of the latitude, and the tangents of 30°, 45°, 60°, and 75°, for the hours of II, III, IV, and V in the afternoon ; or of X, IX, VIII, and VII in the forenoon ; you will find their an- gular distances from XII to be 24° 18', 38° 3', 53° 35', and 71° 6'; which are all that there is occasion to reckon. And these distances may be set off from XII by a line of chords ; or rather, by taking 1000 from a scale of equal parts, and setting that extent as a radius from C to XII, fig. 4, and then, taking 209 of the jsame parts, which are the natural tangents of 11° 50 and setting them from XII to XI and I, on the line H O, which is perpendicular to C XII : and so for the rest of the hour lines, which in the table of natural tangents, against the above dis- tances, are 452, 782, 1355, and 2920, of such equal parts from XII, as the radius C Xll con- tains 1000. And, lastly, set off 1257, the na- tural tangent of 51° 30', for the angle of the*

stile's height, which is equal to the latitude of the place.

DECLINING DIALS.

71 . Let us suppose that an upright plane at London declines 36° westward from facing the south, and that it is required to find a place on the globe to the horizon of which the said plane is parallel ; and also the difference of longitude between London and that place.

72. Let N E S W be the horizon of London, fig. 5, whose zenith is Z, and P the N. Pole of the sphere; and let ZA be the position of a vertical plane at Z, declining westward from S (the south) by an angle of 36°; on which plane an erect dial for London at Z is to be described. Make the semi-diameter Z D perpendicular to Z A, and it will cut the horizon in D, 36° west of the south S. Then a plane, in the tangent H D, touch- ing the sphere in D, will be parallel to the plane ZA; and the axis of the sphere will be equally inclined to both these places. Let W Q E be the equinoctial, whose elevation above the horizon of Z (London) is 38° 30': and PRD be the me- ridian of the place D, cutting the equinoctial in R. Then it is evident, that the arc RD is the latitude of the place D, where the plane ZA would be horizontal, and the arc RQ is the difference of longitude of the planes ZA and DH.

73. In the spherical triangle WDR, the arc WD is given, for it is the

complement of the plane's declination from S the south; which complement is 54°, viz. 90°— 36° : the angle at R, in which the meridian of the place D cuts the equator, is a right angle ; and the angle R W D measures the elevation of the equinoctial above the horizon of Z, namely 38° 30'. Say, there- fore, as radius is to the co-sine of the plane's de- clination from the south, so is the co-sine of the latitude of Z to the sine of RD the latitude of D : which is of a different denomination from the latitude of Z, because Z and D are on different sides of the equator.

As radius lO'OOOOO

To co-sine 36° 0′ = RQ . 9-90796 So co-sine 51° 30′ — QZ . 9-79415

To sine 30° 14′ — DK 9-70211 — the latitude of D, whose horizon is parallel to the vertical plane Z A at Z.

74. To find RQ the difference of longitude of the places D and Z ; say, as radius is to the co- sine of RW D 38° 30', the height of the equi- noctial at Z, so is the co-tangent of D W 36° the plane's declination, to the co-tangent of R Q the difference of longitudes. Thus, To the logarithmic sine of 51° 30′ 9'89354 Add the logarithmic tangent of

54° 0′ 10-13874

Their sum rejecting 10 ... 10-03228 is the nearest tangent of 47° 8′ =r W R ; which is the co-tangent of 42° 52′ := R Q, the difference of longitude sought. Which difference, being reduced to time, is 2 h. 51 i m.

75. And thus having found the latitude and longitude of the place D, to whose hosizon the

vertical plane at Z is parallel, we proceed to the construction of a horizontal dial for the place D, whose latitude is 30° 14′ south; but antici- pating the time at D by 2 h. 51 m., neglecting the half minute in practice, because D is so far westward in longitude from the meridian of London ; and this will be a true vertical dial at London, declining westward 36°.

76. Assume any right line C S L, fig. 4, for the substile of the dial, and make the angle K C P equal to the latitude of the place, viz. 30° 14', to the horizon of which the plane of the dial is parallel; then CRP will be the axis of the stile, or edge that casts the shadow on the hours of the day, in the dial. This done, draw the contingent line E Q, cutting the substilar line at right angles in K ; and from K make K R perpendicular to the axis CRP. Then KG — KR being made radius, that is, equal to the chord of 60°, or tangent of 45° on a good sector, take 42° 52′ (the difference of longitude of the places Z and D) from the tangents, and having set it from K to M,

draw CM for the hour line of XII. Take KN, equal to the tangent of an angle less by 15° than K M; that is, the tangent of 27° 52′ : and through the point N draw C N for the hour line of I. The tangent of 12° 52′ (which is 15° less than 27° 52'), set off the same way, will give a point between Kand N, through which the hour line of II is to be drawn. The tangent of 2° 8', the difference between 45° and 50° 42′ placed on the other side of C L, will determine the point through which the hour- line of III is to be drawn ; to which 2° 8', if the tan- gent of 15° be added, it will make 17° 8′ ; and this set off from K towards Q, on the line E Q, will give the point for the hour line of IV ; and so of the rest. The forenoon hours line are drawn the same way, by the continual addition of the tangents 15°, 30°, 45°, &c., to 42° 52′ — the tangent K M for the hours of XI, X, IX, &c., as far as necessary; that is, until there be five hours on each side of the substile. The sixth hour, accounted from that hour or part of the hour on which the substile falls, will be always in a line perpendicular to the substile, and drawn through the centre C.

77. In all erect dials, C M, the hour line of XII is perpendicular to the horizon of the place for which the dial is to serve ; for that line is the intersection of a vertical plane with the plane ot the meridian of the place, both which are per- pendicular to the plane of the horizon ; and any line HO, or ho, perpendicular to CM, will be a horizontal line on the plane of the dial, along which line the hours may be numbered ; and CM being set perpendicular to the horizon, the dial will have its true position.

78. If the plane of the dial had declined by an equal angle towards the east, its description would have differed only in this, that the hour- line of XII would have fallen on the other side of the substile C L, and the line H O would have a subcontrary position to what it has in this figure.

79. And these two dials, with the upper points of their stiles turned toward the N. Pole, will serve for other two planes parallel to them; the one declining from the N. towards

the E., and the other from the N. toward the W., by the same quantity of angle. The like holds true of all dials in general, whatever be their declination and obliquity of their planes to the horizon.

80. If the plane of the dial not only declines, but also reclines, or inclines. Suppose its de- clination from fronting the south S be equal to the arc S D, fig. 6, on the horizon ; and its re- clination be equal to the arc D d of the

vertical circle D Z : then it is plain, that if the quadrant of altitude ZdD on the globe cuts the point D in the horizon, and the reclination is counted upon the quadrant from D to d; the intersection of the hour-circle PRd, with the equinoctial W Q E, will determine R d, the latitude of the place d, whose horizon is parallel to the given place Z A at Z ; and R Q will be the difference in longitude of the places at d and Z. Trigono- metrically thus : — Let a great circle pass through the three points, W, d, E; and in the triangle WDd, right angled at D, the sides W D and D dare given; and thence the angle DWd is found, and so is the hypothenuse W d. Again, the difference, or the sum, of D W d and D W R, the elevation of the equinoctial above the horizon of Z, gives the angle d W R ; and the hypotlie- nuse of the triangle W R d was just now found; whence the sides R d and W R are found, the former being the latitude of the place d, and the latter the complement of R Q, the difference of longitude sought. Thus, if the latitude of the place Z be 52° 30′ N. the declination S D of the plane Z h (which would be horizontal at d) be 36°, and the reclination be 15°, or equal to the arc Dd; the south latitude of the place d, that is, the arc Rrf, will be 15° 9'; and RQ, the difference of the longitude, 36° 2'. From these data, there- fore, let the dial, fig. 7, be described, as in the former example.

81. There are several things requisite in the practice of dialling; the chief of which shall be given in the form of arithmetical rules, simple and easy to those who have learned the elements of trigonometry. For in practical arts of this kind, arithmetic should be used as far as it can go; and scales never trusted to, except in the final construction, where they are absolutely ne- cessary in laying down the calculated hour dis- tances on the plane of the dial,

82. The latitude of the place, the sun's decli- nation, and his hour distance from the meridian, being given, to find, first, his altitude, second, his azimuth. Let d, fig. 6, be the sun's place, d R, his declination ; and in the triangle P Z d, Pd the sum, or the difference of dR, and the quadrant P R, being given by the supposition, as also the complement of the latitude P Z, and the angle dP Z, which measures the horary dis- tance of d from the meridian ; we shall (by spheric trigonometry) find the base Z d, which is the sun's distance from the zenith, or the comple- ment of his altitude. And, as sine Zd : sine Pd – : sine dPZ : dZP, or of its supplement DZS, the azimuthal distance from the south.

83. Or the practical rule may be as follows : Write A for the sine of the sun's altitude, L and I for the sine and co-sine of the latitude, D and d for the sine and co-sine of the sun's declina-

tion, and H for the sine of the horary distance from VI. Then the relation of H to A will have three varieties.

84. When the declination is towards the ele- vated pole, and the hour of the day is between XII and VI; it is A = LD + ll/

Id

85. When the hour is after VI, it is Arr LD

— H Id, and II — LD~ _^

Id

85.* When the declination is toward the de- pressed pole, we have An: Hid — LD, and

Id

86. These theorems will be found useful and expeditious enough for solving those problems, in geography and dialling, which depend on the relation of the sun's altitude to the hour of the day.

87. Example I. Suppose the latitude of the place to be 51° 30′ north: the time five hours distant from XII, that is, an hour after VI in the morning, or before VII in the evening; and the sun's declination 2° north. Required the sun's altitude ?

Then to log. L=log. sin. 51° 30'-1'89354 add log. Drzlog. sin. 20° 0′ -1-53405

Their sum -1-42759 gives L D:z:logarithm of 0-267664, in the natural sines. And, to log. Hzzlog. sin. 15° 0′ -1-41 300 , , < log. Z— log. sin. 38° 0′ -1-79414 (log. d =:log. sin. 70° 0'-1'97300

Their sum -l-18014gives

Hid — logarithm of 0-151408, in the natural sines. And these two numbers (0-267664 and 0-151408) make 0-419072=: A; which, in the table, is the nearest natural sine of 25° 47', the sun's altitude sought.

88. In these calculations the radius is con- sidered as unity, and not 10-00000, by which, instead of the index 9, we have -1, which only makes the work a little easier.

89. The same hour distance being assumed on the other side of VI, then LD — Hid is 0-116256, the sine of 60° 40′ 30"; which is the sun's altitude at V in the morning, or VII in the evening, when his N. declination is 20°. But when the declination is 20° S. (or towards the depressed pole) the difference Hid — LD becomes nega- tive ; and thereby shows, that an hour

before VI in the morning, or past VI in the evening, the sun's centre is 6° 40′ 30″ below the horizon.

90. Example II. From the same data to find the sun's azimuth. If H, L, and D, are given, then from H having found the altitude and its complement Zd: and the arc Pd (the distance from the pole) being given ; say, As the co-sine of the altitude is to the sine of the distance from the pole, so is the sine of the hour distance from the meridian to the sine of the azimuth distance from the meridian. Let the latitude be 51° 30′ N., the declination 15° 9′ S., and the time. 2 h. 24 m. in the afternoon, when the sun begins to illuminate a vertical wall, and it is required to find the position of the wall. Then, by the fore-

going theorems, the complement of the altitude will be 81° 32′ 30', and Pdthe distance from the pole being 109° 5', and the horary distance from the meridian, or the angle d P Z, 36°. To log. sin. 74° 51′ -1-98464

Add log. sin. 36° (X -1-76922

And from the sum -1-75386

Take the log. sin. 81° 32J' -1-99525

Remains -1-75861 = log. sin. 35°, the azimuth distance sought.

91. When the altitude is given, find from thence the hour, and proceed as above. This praxis is of singular use on many occasions; as, 1. In finding the declination of vertical planes more exactly than in the common way, especially if the transits of the sun's centre are observed by applying a ruler with sights, either plain or tele- scopical, to the wall or plane whose declination is required. 2. In drawing a meridian line, and finding the magnetic variation. 3. In finding the bearings of places in terrestrial surveys ; the transits of the sun over any place, or his hori- zontal distance from it, being observed, together with the altitude and hour; and thence deter-mining small differences of longitude. 4. In ob- serving the variations at sea, &c.

OF FINDING THE DECLINATION, INCLINATION, AND RECLINATION OF PLANES.

92. The declination, inclination, and reclina- tion of planes are frequently taken with a suffi- cient degree of accuracy by an instrument called the

declinator or declinatory.

92. The construction of this instrument, as somewhat improved by Mr. Jones, is thus : On a mahogany board is inserted a semicircular arch of ivory or box-wood, divided into two quadrants of 90° each, beginning from the middle. On the centre of this arch turns a vertical quadrant, which is divided into 90°, beginning from the base; on which is a moveable index, with a small hole for the sun's rays to pass through, and form a bright spot on a certain mark. The lower extremity is pointed, to mark the linear direction of the quadrant when applied to any other plane; as this quadrant takes off occa- sionally, and a plumb-line hangs at the centre, for taking the inclinations and reclinations of planes. On the plane of the board is inserted a compass of points and degrees, with a magnetical needle turning on a pivot over it. See DECLI- NATORY.*

93. The addition of the moveable quadrant and index considerably extend the utility of the declinator, by rendering it convenient for taking equal altitudes of the sun, the sun's altitude, and bearing, at the same time, Sec. To apply this instrument in taking the declination of a wall or plane : Place the back part of it in a horizontal direction to the plane proposed, and observe what degree or point of the compass the N. part of the needle stands over from the north or the south, and it will be the declination of the plane from the north or south accordingly. In this case, allowance must be made for the variation of the needle (if any) at the place ; and which,

if "not previously known, will render this opera- tion very inaccurate.

94. But the most exact way for taking the de- clination of a plane, or finding a meridian line, by this instrument, is, in the forenoon, about two or three hours before twelve o'clock, to observe two or three heights or altitudes of the sun ; and at the same time the respective angular polar distances. Write these down ; and in the after- noon watch for the same, or one of the same alti- tudes, and mark the angular distances or dis tance on the quadrant; the division or degree exactly between the two noted angular distances will be the true meridian, and the distance at which it may fall from the centre of the divi- sions, will be the declination of the plane. The reason for observing two or three altitudes and angles in the morning is, that in case there should be clouds in the afternoon, we may have the chance of one corresponding altitude.

OF THE RIGHT PLACING OF DlALS.

95. The plane on which the dial is to rest being duly prepared, and every thing necessary for fixing it, you may find the hour with tolera- ble exactness by a large equinoctial ring-dial, and set your watch to it. And

then the dial may be fixed by the watch at your leisure.

96. If you would be more exact, take the sun's altitude by a good quadrant, noting the precise time of observation by a clock or watch. Then compute the time for the altitude observed ; and set the watch to agree with that time, ac- cording to the sun. Hadley's quadrant is very convenient for this purpose : for by it you may take the angle between the sun and his image reflected from a basin of water; the half of which angle, subtracting the refraction, is the altitude required.

97. This is best done in summer ; and the nearer the sun is to the prime vertical, the east or west azimuth, when the observation is made, so much the better. Or, take two equal altitudes of the sun in the same day; one any time between seven and ten in the morning, the other between two and five in the afternoon ; noting the moments of these two observations by a clock or watch : and if the watch shows the observations to be at equal distances from noon, it agrees exactly with the sun : if not, the watch must be corrected by half the difference of the forenoon and afternoon intervals ; and then the dial may be set true by the watch.

98. For example, suppose you had taken the sun's altitude when it was twenty minutes past VIII in the morning by the watch ; and found, by observing in the afternoon, that the sun had the same altitude ten minutes before IV ; then it is plain, that the watch was five minutes too fast for the sun : for five minutes after XII is the middle time between VIII h. 20 m. in the morning, and III h. 50 m. in the after- noon ; and, therefore, to make the watch agree with the sun, it must be set back five minutes.

99. In many cases, where the situation is suitable, it is very desirable to have a true meri- dian line for the regulation of clocks and watches ; we shall, therefore, here insert Mr. Ferguson's method of constructing one.

Make a round hole, about a quarter of an inch diameter, in a thin plate of metal ; and fix the plate in the top of a south window, in such a manner that it may recline from the zenith at an angle equal to the colatitude of your place, as nearly as you can guess: for then the plate will face the sun directly at noon on the equinoctial days. Let the sun shine freely through the hole into the room; and hang a plumb-line to the ceiling of the room, at least five or six feet from the window, in such a place as that the sun's rays, transmitted through the hole, may fall upon the line when it is noon by the clock ; and hav- ing marked the said place on the ceiling, take away

the line.

Having adjusted a sliding bar to a dovetail groove, in a piece of wood about eighteen inches long, and fixed a hook into the middle of the bar, nail the wood to the above-mentioned place on the ceiling parallel to the side of the room in which the window is ; the groove and the bar being towards the floor : then hang the plumb- line upon the hook in the bar, the weight or plummet reaching almost to the floor; and the whole will be prepared for further and proper adjustment.

This done, find the true solar time by either of the last two methods, and thereby regulate your clock. Then, at the moment of the next noon by the clock, when the sun shines, move the sliding bar in the groove, until the shadow of the plumb- line bisects the image of the sun, made by his rays transmitted through the hole, on the floor, wall, or on a white screen placed on the north side of the line ; the plummet at the end of the line hanging freely in a pail of water placed be- low it on the floor. — But because this may not be quite correct for the first time, on account that the plummet will not settle immediately, even in water ; it may be farther corrected on the follow- ing days, by the above method, with the sun and clock ; and so brought to a very great exactness.

The rays transmitted through the hole will cast but a faint image of the sun, even on a white screen, unless the room be so darkened that no sunshine may be allowed to enter but what comes

through the small hole in the plate. And always, for some time before the observation is made, the plummet ought to be immersed in a jar of water, where it may hang freely ; by which means the line will soon become steady, which other- wise would be apt to continue swinging.

OF THE DOUBLE HORIZONTAL, THE BABYLONIAN AND ITALIAN DIALS.

100. Sometimes a stereographic projection of the hour circles, and the parallels of the sun's declination, is added to the gnomonic projection, on the same horizontal plane ; the upright side of the gnomon being sloped into an edge, standing perpendicularly over the centre of the projection : so that the dial, being in its due position, the shadow of that perpendicular edge is a vertical circle passing through the sun, in the stereo- graphic projection. The months being duly marked on this dial, the sun's declination, and the length of the day at any time, are had by in- spection; as also his altitude, by means of a scale of tangents. But its chief property is, that it may be placed true, whenever the sun shines, without the help of any other instrument.

101. The Babylonian and Italian dials reckon the hours, not from the meridian as with us, but from the sun's rising and setting. Thus, in Italy, an hour before sun-set is reckoned the twenty- third hour ; two hours before sun-set the twenty- second hour ; and so of the rest. And the shadow that marks them on the hour-lines, is that of the point of a stile. This occasions a perpetual varia- tion between their dials and clocks, which they must correct from time to time, before it arises to any sensible quantity, by setting their clocks so much faster or slower. And in Italy, they begin their day, and regulate their clocks, not from sun- set, but from about mid-twilight, when the Ave Maria is said ; which corrects the difference that would otherwise exist between the clock and the dial. The improvements which have been made in all sorts of instruments and machines for mea-suring time, have rendered these dials of little account.

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DIALLING in a mine, called also plumbing, is the using of a compass, which the miners call dial, and a long line to know which way the load or vein of ore inclines, or where to shift an air- shaft, or bring an adit to a desired place.

DIALLING LINES, or DIALLING SCALES. See DIALLING, Index.

DIALLING SECTOR is a sector having upon it, besides other lines, the dialling lines, the con- struction of which is shown under DIALLING. It is evident that some advantage will be ob- tained in the practice of dialling by having the line placed on a sector. See SECTOR.

DIALLING SPHERE, is an instrument made of brass, with several semicircles sliding over one another, on a moving horizon, to demonstrate the nature of the doctrine of spherical triangles, and to give a true idea of the drawing of dials on all manner of planes.

DIALLING TRIGON, an instrument invented by Mr. Benjamin Martin, consisting of two graduated scales and a plane, used by some in the practice of dialling.

DI'ALECT, n. s. Fr. dialecle ; Span, dia- lecto ; Ital. dialetto; Lat. dialectus; Gr. SiaXtK- roff, from dia and Xtyw, to speak. Language ; style ; the mode of expression peculiar to a cer- tain district.

When themselves do practise that whereof they •write, they change their dialect ; and those words they shun, as if there were in them some secret sting.

Hooker. In her youth

There is a prone and speechless dialect, Such as moves men.

Sltakspeare. Measure for Measure.

If the conferring of a kindness did not bind the person upon whom it was conferred to the returns of gratitude, why, in the universal dialect of the world, are kindnesses still called obligations ? Soutli.

The Tuscan language is greatly admired for iU elegance, and the meanest inhabitants of Florence speak a dialect which the rest of Italy are proud to imitate. Johnson.

DIALECT is an appellation given to the Ian guage of a province, in so far as it differs from that of the whole kingdom. The term is par- ticularly used in speaking of the ancient Greek, whereof there were four dialects, each of which was a perfect language in its kind, that took place in certain countries. In Great Britain, besides the two dialects of English and Scotch, almost every county has a dialect of its own, all differing considerably in pronunciation, accent, and tone, although one and the same language.

DIALECTICS, in the literary history of the ancients, that branch of logic which taught the rules and modes of reasoning. See LOGIC. Zeno Eleates was the first who discovered the natural series of principles and conclusions observed in reasoning, and formed an art thereof in form of a dialogue; which, for this reason, was called dialectica. The dialectica of the ancients is usually divided into several kinds : The first was the eleatica, that of Zeno Eleates, which was threefold; viz. consecutiouum, colloqutionum, and contentionum. The first consisting of rules for deducing or drawing conclusions. The second, the art of dialogue ; which became of such universal use in philosophy, that all reason- ing was called interrogation : then, syllogism being laid aside, the philosophers used dialogue, and required the respondent to conclude and argue from the several concessions

made. The last part of Zeno's dialectics, cpt?uo}, was con- tentious, or the art of disputing and contradicting ; though some, particularly Laertius, ascribe this part to Protagoras a disciple of Zeno.

The second is the dialectica megarica, whose author is Euclid, as of Megara. He gave much

into the method of Zeno and Protagoras ; though there are two things appropriated to him : the first, that he impugned the demonstrations of others, not by assumptions, but conclusions ; continually making illations, and proceeding from consequence to consequence : the second, that he set aside all arguments drawn from com- parisons of similitude as invalid. He was suc- ceeded by Eubulides, from whom the sophistic way of reasoning is said to be derived. In his time the art is described as manifold : mentiens, fallens, electra, obvelata, arcevalis, cornuta, and calva. See SOPHISM.

The third is the dialectica of Plato, which he proposes as a kind of analysis to direct the hu- man mind, by dividing, denning, and bringing things to the first truth ; where being arrived, it applies itself to explain sensible things, but with a view to return to the first truth where alone it can rest. Such is the idea of Plato's analysis.

The fourth is Aristotle's dialectica: containing the doctrine of simple words, delivered in his book of Predicaments ; the doctrine of propo- sitions, in his book De Interpretatione ; and that of the several kinds of syllogism, in his books of Analytics, Topics, and Elenchuses.

The fifth is the dialectica of the Stoics; which they call a part of philosophy, dividing it into rhetoric and dialectic ; to which some add the definitive, whereby things are justly defined; comprehending likewise the canons or criterions of truth. The Stoics, before they treat of syllogisms, have two principal places ; the one about the signification of words, the other about the things signified. On occasion of the first, they consider abundance of things belonging to the grammarian's province: what, and how many letters ; what is a word, diction, speech, &c. On occasion of the latter, they consider things themselves, not as without the mind, but as in it, received in it by means of the senses. Accordingly, they first teach, that nil sit in in- tellectu, quod non prius fuerit in sensu ; ' what- ever is in the mind came thither by the senses ;' and that aut incursione sui, as Plato, who meets the sight; aut similitudine, as Caesar by his effigy; aut proportione,

either by enlarging as a giant, or by diminishing as a pygmy ; aut translatione, as a Cyclops; aut compositione, as a Centaur; aut contrario, as death ; aut privatione, as a blind man.

The sixth is Epicurus's dialectica: who had recourse to certain canons, the collection whereof he called Canonica ; and as all questions in phi- losophy are either de re or de voce, he gave separate rules for each.

DIALEC'TICK, n. s. AiaXsKmcq. Logic; the art of reasoning. See DIALECT.

DIALECTICAL, adj. Logical; argumen- tative.

Those dialectical subtleties, that the schoolmen employ about physiological mysteries, more declare the wit of him that uses them, than increase the knowledge of sober lovers of truth. Boyle.

DIALITHA, in the writings of the ancients, a word used to express the elegant ornaments of the Greeks and Romans, composed of gold and gems. They also called these lithocolla, cemented stones or gems ; the gold being in this

case as a cement-to hold the stones together, They wore bracelets and other ornaments about their dress : and their cups and table-furniture were of the same kind. The green stones were found to succeed best, and the emerald and chrysolite were most in esteem for this purpose. Pliny says of them : ' Nihil jucundius aurum decet,' ' Nothing becomes gold better.'

DIAL'OGIST, n. s.) Gr. SiaXoyoc ; ha DI'ALOGUE, n. s. & v. n. $ and Xoyoc, a word. A speaker in a conference ; a conference or con versation between two or more persons. To hold a conference.

Will you hear the dialogue that the two learned men have compiled in praise of the owl and cuckow ?

Shahspeare. Dost dialogw with thy shadow ?

Id. Timon.

In easy dialogues is Fletcher's praise ; He moved the mind, but had not power to raise.

Dryden. With the stars

And the quick Spirit of the Universe He held his dialogues ; and they did teach To him the magic of their mysteries. Byron.

DIALYSIS, in grammar, a mark or character, consisting of two points (••)

placed over two vowels, because otherwise they would make a diphthong, as Mosaic, Phaeton, &c.

DIAMASTIGOSIS, a festival of Sparta, in honor of Diana Orthia, which received that name OTTO TOV fiaˆifovv, from whipping, because boys were whipped before the altar of the goddess. These boys, called Bomonicffi, were originally free-born Spartans, but in the more delicate ages they were of mean birth, and generally of a sla- vish origin. This operation was performed by an officer in a severe and unfeeling manner ; and that no compassion should be raised, the priest stood near the altar with a small light statue of the goddess, which suddenly became heavy and insupportable if the lash of the whip was less ri- gorous. The parents of the children attended the solemnity, and exhorted them not to show themselves, either by fear or groans, unworthy of Laconian education. These flagellations were so severe, that the blood gushed in profuse tor- rents, and many expired under the lash of the whip, without uttering a groan, or betraying any marks of fear. Such a death was reckoned very honorable, and the corpse was buried with much solemnity with a garland of flowers on its head. The origin of this festival is unknown. Some suppose that Lycurgus first instituted it to inure the youth of Lacedemon to bear labor and fa- tigue, and render them insensible to pain and wounds. Others maintain, that it is a mitigation of an oracle, which ordered that human blood should be shed on Diana's altar ; and according to their opinion, Orestes first introduced that barbarous custom, after he had brought the sta- tue of Diana Taurica into Greece. There is another tradition which mentions that Pausanias, as he was offering prayers and sacrifices to the gods, before he engaged with Mardonius, was suddenly attacked by a number of Lydians who disturbed the sacrifice, and were at last repelled with staves and stones, the only weapons with which the Lacedemonians were provided at that

moment. In commemoration of this, therefore, the whipping of boys was instituted at Sparta, and after that the Lydian procession.

DIAM'ETER, n. s. \ Gr. ha and fur DIAM'ETRAL, adj. f pov, a measure. Trie DiAM'ETRALLY,adu. \ line which, passing DIAMETRICAL, adj. I through the centre of DIAMET'RICALLY, adv. J a circle, or other cur- vilinear figure, divides it into equal parts. Di- ametral and diametrical is describing or relating to a diameter; also, in a figurative sense, directly opposite ; or perhaps, to the greatest length opposed, as are the points of a circumference touched by the ends of a diameter. Diametrally and

diametrically are also synony- mous.

The space between the earth and the moon, accord- ing to Ptolemy, is seventeen times the diameter of the earth, which makes, in a gross account, about one hundred and twenty thousand miles. Raleigh.

He made an instrument to know If the Moon shine full or no.

Tell what her diameter to an inch is,

And prove that she's not made of green cheese.

Hudibrcu.

He persuaded the king to consent to what was d»a- melricfilly against his conscience and his honour, and, in truth, his security. Clarendon.

Christian piety is, beyond all other things, diame- trally opposed to profaueness and impiety of actions.

Hammond.

Thus intercepted in its passage, the vapour, which cannot penetrate the stratum diametrically, glides along the lower surface of it, permeating the horizon- tal interval, which is betwixt the said dense stratum and that which lies underneath it. Woodward.

That the longer diameter of an ellipsis may be shortened, till it shall differ little from a circle, is indisputably true. Johnson.

DIAMETER. The line, which passing through the centre of a circle, or other curvilinear figure, divides it into equal parts. The impossibility of expressing the exact proportion of the diame- ter of a circle to a circumference, by any re- ceived way of notation, and the absolute neces- sity of bringing it as near the truth as possible, has induced .some of the most celebrated men in all ages to endeavour to approximate it. The first who attempted it with success was the ce- lebrated Van Cuelen, a Dutchman, who, by the ancient very laborious method, carried it to thirty- six decimal places ; these he ordered to be en- graven on his tomb-stone, thinking he had set bounds to improvement. However, the indefa- tigable Abraham Sharp carried it to seventy-five places in decimals ; and since that time it has been carried much further.

DI'AMOND, n. s.) Fr. and Dut. diamant;

DI'AMONDED, adj.) Ital. Span, and Port, dia- mante ; Teut. demant,

from Lat. adamas, adaman- tis ; Gr. aSapac, aSapavroc, i. e. a privative, and SapaZu to subdue, because too hard to break or mould into shape. See the article below. A precious stone. Diamonded is, shaped like a diamond.

I see how thine eye would emulate the diamond : thou hast the right arch bent of the brow.

Shahtpeare.

Lop a bough of a tree, and one shall behold the grain thereof (by some seret cause in nature) diamondtd or streaked in the fashion of a lozenge. Fuller.

Certainly the price and virtue of things consist not in the quantity : one diamond is more worth than many quarries of stone. Bp. Hall. Contemplations.

The diamond is by mighty monarchs worn, Fair as the star that ushers in the morn.

Blackmore.

The lively diamond drinks thy purest rays, Collected light, compact Thomson.

Shakspeare opens a mine which contains gold and diamonds in inexhaustible plenty, though clouded by incrustation, debased by impurities, and mingled with a mass of meaner minerals. Johnson.*

The DIAMOND is a genus of siliceous earths, called adamas gemma by the Latins, demant by the Germans and Swedes, and diamant by the French, and is the hardest of all stones hitherto discovered. See ADAMAS. It was thought by the ancients that the diamond became soft and malleable, by steeping it in hot goat's- blood. Diamonds are found only in the East Indies, and in Brasil in South America. The diamond mines are in GOLCONDA, VISAPOUR, BENGAL, and the island of BORNEO. See these articles. In the mines of Golconda are found a great number of stones from ten to forty carats, and upwards ; and it was here that the famous diamond of Aurcngzebe, the great mogul, was found, which before it was cut weighed 793 ca- rats. The stones of this mine are not very clear ; their water is usually tinged with the quality of the soil : being black where that is marshy ; red where it partakes of red; and sometimes green and yellow, where the ground is of these colors. Another defect is a kind of greasiness appearing on the diamond, when cut, which takes off part of its lustre. There are usually not fewer than 60,000 persons, men, women, and children, at work in this mine. When the miners have found a place where

they intend to dig, they level ano- ther somewhat bigger near it, and enclose it with walls about two feet high, leaving apertures from space to space, to give passage to the water. They dig twelve or fourteen feet deep, and till they find water. Then they cease, and the water thus found serves to wash the earth two or three times, after which it is let out at an aperture reserved for that purpose. This earth being well washed and dried, they sift it in a kind of open sieve, as we do corn ; then thresh it, and sift it afresh ; and lastly, search it well with the hands to find the diamonds. The miners work naked, except that they have a thin linen cloth before them. They have also inspectors, to prevent their concealing diamonds; which, however, they frequently do, by swallowing them when not observed.

Diamonds are commonly clear and pellucid, yet some are met with of a rose color, or inclin- ing to green, blue, or black, and some have black specks. Tavernier saw one in the treasury of the mogul, with black specks in it, weighing about fifty-six carats ; and he informs us, that yellow and black diamonds are produced in the mines at Carnatica. Mr. Dutens also relates, that he saw a black diamond at Vienna in th<» collection of the prince de Lichtenstein. Some

diamonds have a greenish crust ; and of these M.Tavernier relates, that they burst into pieces while working into a proper shape, or in the very act of polishing on the wheel. In confirmation of this, he mentions a large diamond worth up- wards of £5000 sterling, which burst into nine pieces while polishing on the wheel at Venice. The finest diamonds are those of a color like pure water, of a regular form, and free from stains, spots, specks, flaws, and cross veins. Diamonds, tinctured yellow, blue, green, or red, in a high degree, are next in esteem ; but if they are tinc- tured with these colors only in a low degree, the value is greatly diminished. There are also dia- monds of a brown, and some of a dark hue ; the first resembling the brownest sugar-candy, and the latter dusky iron. In the Philosophical Com- merce of Arts, Dr. Lewis tells us of a black dia- mond that he himself had seen. At a distance it looked uniformly black, but on closer examina- tion appeared in some parts transparent, and in others charged with foulness, on which the black hue depended. These gems are lamellated, con- sisting of very thin plates like talc, but very closely united, the direction of which must be found out by lapidaries before they can work them properly. Such as have their foliated sub- stance not in a flat position, are called by the workmen diamonds of nature.

The first water in diamonds means the greatest purity and perfection of their complexion, which ought to be that of the purest water. When diamonds fall short of this perfection, they are said to be of the second or

third water, Sec., till the stone may be properly called a colored one : for it would be an impropriety to speak of an imperfectly colored diamond, or one that has other defects, as a stone of a bad water only.

Diamond is so hard, that it can only be cut and ground by itself and its own substance. To bring it to that perfection which augments its price so considerably, they begin by rubbing se- veral against each other while rough, after having fixed them to the ends of two wooden blocks, thick enough to be held in the hand, with a mix- ture of rosin and brick dust. It is this powder, thus rubbed off, and received in a little box for that purpose, that serves to grind and polish the diamonds. This is done by a mill, which turns a wheel of soft iron, sprinkled over with dia- mond dust mixed with oil of olives. The same dust, well ground, |and diluted with water and vinegar, is used in the sawing of diamonds, which is performed with an iron or brass wire as fine as a hair. Sometimes, in lieu of sawing, they cleave them, especially if there be any large shivers therein. But the Europeans are not usually dar- ing or expert enough to run the risk of cleaving, for fear of breaking.

1 . The greatest diamond ever known belongs to the king of Portugal, and was found in Brasil. It is still uncut ; and Mr. Magellan informs us, that it was larger, but a piece was broken ofF by the ignorant countryman who chanced to find this great gem, and tried its hardness by the stroke of a large hammer upon an anvil. This prodigious diamond weighs 1680 carats; and although it is uncut, Mr. Rome de 1'Isle says VOL. VII.

that it is valued at £224,000,000 sterling, wiacli gives the estimation of 79 '36, or about £80 ster- ling for each carat; viz. for the multiplicand of the square of its whole weight. But even in case of any error of the press in this valuation, if we employ the general rule abovementioned, this great gem must be worth, at least, above £3,500,000 sterling. 2. The famous diamond which adorns the imperial sceptre of Russia under the eagle at the top of it, weighs 779 carats, and is worth at least £4,854,728 sterl., although it hardly cost 135,417 guineas. This diamond was one of the eyes of a Malabarian idol, named Sche- ringham. A French grenadier, who had deserted from the Indian service, contrived to become one: of the priests of that idol, from which he stole one of its eyes ; he then ran away to the English at Trichinapeuty, and thence to Madras. Aship's captain bought it for 20,000 rupees ; afterwar a Jew gave £17,000 or £18,000 sterling for it: nt last a Greek merchant, named Gregory Suffra offered it to sale at Amsterdam in 1766; and the late prince Orloff purchased it, as he himself told Mr. Magellan in London, for the empress Ca- tharine II. The figure and size of this diamond may be seen in the British Museum in London : it is not of a regular form. 3. The diamond of the great mogul is cut in rose ; weighs 279$ carats, and is worth 380,000 guineas. This diamond has a

small flaw underneath near the bottom ; and Tavernier, page 389, who examined it, valued the carat at 150 French livres. Before this dia- mond was cut it weighed 793$ carats, according to Rome de 1'Isle ; but Tavernier, vol. 2, p. 339, says, that it weighed 900 carats before it was cut. If this is the same diamond, its loss by being cut was very extraordinary. 4. Another diamond of the king of Portugal, which weighs 215 carats, is extremely fine, and is worth at least 369,800 guineas. 5 — 7. The diamond of the emperor of Germany weighs 139J carats ; and is worth at least 109,520 guineas. Tavernier says, that this diamond has a little hue of a citron color ; and he valued it at 135 livres tournoises the carat. Robert de Berquen the grandson of Louis, says, that this diamond was cut into two : that the grand Turk had another of the same size ; and that there were at Bisnagar two large diamonds, one of 250 and another of 140 carats. 8. The dia- mond of the late king of France, called the Pitt or Regent, weighs 136f carats : this gem is worth at least 208,333 guineas, although it did not cost above the half of this value. 9. The other dia- mond of the same monarch, called the Sancy, weighs fifty-five carats : it cost 25,000 guineas ; and M. Dutens says, that it is worth much above that price.

For the valuation of diamonds of all weights, Mr. Jefferies lays down the following rules. — He first supposes the value when rough to be £2 per carat, at a medium; then to find the value of diamonds of greater weights, multiply the square of their weight by 2, and the product is the value required. Example. To find the value of a rough diamond of two carats, 2 X 2 = 4, the square of the weight; which, multiplied by 2 gives £8, the true value of a rough diamond of two carats. For finding the' value of manufac-

tured diamonds, he supposes half their weight to be lost in manufacturing them. To find their va!ue, multiply the square of double their weight by 2, which will give their true value in pounds. Thus to find the value of a wrought diamond weighing two carats ; we first find the square of double the weight, viz. 4 x 4 — 16; then 16 X 2 — 32. So that the true value of a wrought diamond of two carats is £32.

The names of oriental and occidental, given by jewellers to this and all other precious stones, have a different meaning from the obvious sense; the finest and hardest being always called oriental whether they be produced in the east or not. Those called occidental are of inferior value ; but according to Mr. Jefferies, who has written a treatise on the subject, the diamonds of Brasil equal the finest oriental ones. Diamonds are also distinguished according to their figure, by the names of rose diamonds, brilliants, and rough diamonds.

Brilliant diamonds are those cut in faces both at top and bottom ; and whose table, or principal face at top, is flat. To make a complete square brilliant, if the rough diamond be not round of a square figure, it must be made so ; and if the work be perfectly executed, the length of the axis will be equal to the side of the square base of the pyramid. Jewellers then form the table and col- let by dividing the block, or length of the axis, into eighteen parts. They take 5-18ths from the upper part, and 1-1 8th from the lower. This gives a plane at 4-18ths from the girdle for the table; and a smaller plane at 5-1 8ths distance for the collet, the breadth of which will be l-5th of the breadth of the table. In this state the stone is said to be a complete square table diamond. The brilliant is an improvement on the table dia- mond, and, according to Mr. Jefferies, was introduced within the last century. To render a brilliant perfect, each corner of the above de- scribed table diamond, must be shortened by l-20th of its original. The corner ribs of the upper sides must be flattened, or run towards the centre of the table l-6th less than the sides; the lower part, which terminates in the girdle, must be l-8th of one side of the girdle ; and each corner rib of the under sides must be flattened at the top, to answer the above flattening at the girdle, and at the bottom must be l-4th of each side of the collet. The parts of the small work, which complete the brilliant, or the star, and skill facets, are of a triangular figure. Both of these partake equally of the depth of the upper sides from the table to the girdle ; and meet in the middle of each side of the table and girdle, as also at the corners. Thus they produce regu- lar lozenges on the four upper sides and corners of the stone. The triangular facets, on the under sides, joining to the girdle, must be half as deep again as the above facets, to answer to the collet parts. The stone here described is said to be a full-substanced brilliant. If the stone is thicker than in the proportion here mentioned, it is said to be an over-weighted brilliant. If the thickness is less than in this proportion, it is called a spread- brilliant. The beauty of brilliants is diminished by their being either over-weighted or spread. The true proportion of the axis, or depth of the

stone to its side, is as 2 to 3. Brilliants are dis- tinguished into square, round, oval, and drops, from the figure of their respective girdles.

Rose diamonds are quite flat underneath, with their upper part cut in divers little faces, usually triangles, the uppermost of which terminate in a point, The depth of the stone from the base to the point must be half the breadth of the diameter of the base of the stone. The diameter of the crown must be 2-5ths of the diameter of the base. The perpendicular, from the base to ttie crown, must be 3-5ths of the diameter of the stone. The lozenges which appear in all circular rose dia- monds, will be equally divided by the ribs that form the crown ; and the upper angles or facets will terminate in the extreme point of the stone, and the lower in the base or girdle.

Rough diamonds are the stones, as nature pro- duces them in the mines. They should be cho- sen uniform, of a good shape, transparent, not quite white, and free of flaws and shivers. Black, nigged, dirty, flawey, veiny stones, and all such as are not fit for cutting, they use to pound in a steel mortar made for that purpose ; and when pulverised they serve to saw, cut, and polish the rest. Shivers are occasioned in diamonds by this, that the miners, to get them more easily out of the vein, which winds between two rocks, break the rocks with huge iron levers, which shakes, and fills the stone with cracks and shivers.

It has been proved that diamonds are capable of being dissipated, not only by the collected heat of the sun, but also by the heat of a fur- nace. Boyle says, that he perceived certain acrid and penetrating exhalations from diamonds exposed to fire. A diamond by exposure to a concave speculum, the diameter of which was forty inches, was reduced to an eighth part of ils weight. In the Giornale de Letterriti d'ltalia, there is a relation of experiments made on pre- cious stones, by order of the grand duke of Tus- cany, with a burning lens, the diameter of which was two-thirds of a Florentine ell, near the focus of which was placed another smaller lens. By these experiments we find, that diamonds were more altered by solar heat than most of the other precious stones, although not the least appear- ance of a commencing fusion was observable. A diamond weighing thirty grains, thus exposed during thirty seconds, lost its color, lustre, and transparency, and became of an opaque white. In five minutes bubbles appeared on its surface ; soon afterwards it burst into pieces, which were dissi- pated ; and the small fragment which remained was capable of being crushed into fine powder by the pressure of the blade of a knife. Neither the addition of glass, flints, sulphur, metals, or salt of tartar prevented this dissipation of dia- monds, or occasioned any degree of fusion. By other experiments made by order of the emperor Francis I. we find, that diamonds were entirely dissipated by having been exposed in crucibles to a violent fire of a furnace during twenty-four hours ; while rubies by the same heat were not altered in weight, color, or polish. By exposing diamonds during two hours only at a time, the following alterations produced on them by fire were observed. First, they lost their polish

then they were split into thin plates ; and, lastly, totally dissipated. By the same fire, emeralds were fused. See Magasin cle Ilambourg, torn, xviii. The action of fire on diamonds was, not- withstanding the above-mentioned experiments, doubted in France, where numerous experiments have been made. M. D'Arcet, found, not only that diamonds included in porcelain crucibles, closed or covered with perforated lids, and ex- posed to the long and intense heat of a porcelain furnace, were perfectly dissipated ; but also,

that these stones could, in a few hours, be totally volatilised with a much inferior degree of heat, by exposing them in a coppel, under the muffle of an assay furnace. In this experiment, he ob- served that the dissipation was gradual, and that it was effected by a kind of exfoliation. The dis- sipation of diamonds exposed in coppels was confirmed by M. Macquer, who farther observed, that the diamonds were, before the dissipation began, rendered, by the fire, brilliant and shining, as it were, with a phosphoric light. To deter- mine whether the dissipation of diamonds was effected by their reduction into vapor, or by a combustion or other effect of air upon them, Messrs. Lavoisier, Macquer, and Cadet, exposed diamonds to intense heat in an earthen retort, during several hours, but without any other effect than that their polish was destroyed, and about l-7th of their weight diminished. M. Mitouard put diamonds in a tobacco-pipe filled with pounded charcoal accurately closed with lute. He further secured the diamonds from access of air or flame, by placing the tobacco-pipe in a crucible, to which another crucible was inverted and carefully luted. The diamonds, thus excluded from external air, having been exposed to the most intense heat which could be excited in a well constructed furnace, were not thereby altered or diminished.

Lavoisier, in a memoir published in 1772, showed that when the diamond is burnt, carbonic acid gas is obtained, and that there is a striking analogy between it and charcoal. In 1785 Guyton Morvau found that the diamond is com- bustible when dropped into melted nitre ; that it burns without leaving any residuum, and in a manner analogous to charcoal. In 1797 Mr. Tennant repeated this experiment with much more precision ; and the conclusion he drew from it was, that when a diamond is burnt, the whole of the product is carbonic acid gas ; that a given weight of diamond yields just as much carbonic gas as the same weight of charcoal ; and that diamond and charcoal are both com- posed of the very same substance- Sir Humphry Davy, from the action of pot- assium on it, and its non-conduction of elec- tricity, suggested in his third Bakerian lecture, that a minute portion of oxygen might exist in it ; and in his new experiments on the fluoric compounds he threw out the idea, that it might be the carbonaceous principle, combined with some new, light, and subtle element, of the oxygenous and chlorine class.

This unrivalled chemist, during his residence at Florence in March, 1814, made several experiments on the combustion of the diamond and of plumbago, by means of the great lens in

the cabinet of natural history ; the s,iiin: instru- ment as that employed in the first trials on thf action of the solar heat on the diamond, insii tuted in 1694 by Cosmo III., grand duke of Tuscany. He subsequently made a series of researches on the combustion of different kinds of charcoal at Rome. His

mode of investigation was peculiarly elegant, and led to the most decisive results.

From the results of his different experiments, conducted with the most unexceptionable pre- cision, it is demonstrated, that diamond affords no other substance by its combustion than pure carbonic acid gas ; and that the process is merely a solution of diamond in oxygen, without any change in the volume of the gas.

DIAMOND, in the glass trade, an instrument used for squaring the large plates or pieces; and, among glaziers, for cutting their glass. These sorts of diamonds (which are small bro- ken pieces of real diamonds), are differently fitted up. To be used for large pieces, as looking- glasses, &c. they are set in an iron ferrule, about two inches long, and a quarter of an inch in dia- meter, the cavity of the ferrule being filled up with lead, to keep the diamond firm : there is also a handle of box or ebony fitted to the ferrule, for holding it by. An application of the dia- mond, of great importance in the art of engra- vng, has been also made within a few years by the late Wilson Lowry, the eminent engra- ver, and first inventor of the mechanical methods now used in that part of the process called etching. He applied them to the purpose of drawing or ruling lines, which are afterwards to be deepened by aqua-fortis. Formerly steel points, called etching-needles, were used for that purpose, but they soon became blunt by the friction against the copper.

DIAMOND, in heraldry, a term used for ex- pressing the black color in the achievements of peerage. Guillim does not approve of blazoning the coats of peers by precious stones, instead of metals and colors ; but the English practice allows it. Morgan says the diamond is an emblem of fortitude.

DIAMONDS, CORNISH, a name given by many people to the crystals found in digging the mines of tin in Cornwall.

DIAMOND HARBOUR, a harbour in the Ganges, or Hoogly River, about thirty-four miles below Calcutta. The Company's ships are generally unloaded here, and take in their homeward- bound cargoes. The place is unhealthy ; and owing to the heavy exhalations the sleeping in it is next to certain death. The country on both sides of the river abounds with tigers. The vil- lage is poor ; but at Fulta, twelve miles up the river, there is a market and a good inn.

DIANA, the goddess of hunting. According to Cicero, there were three of this name : a daughter of Jupiter and Proserpine, who became mother of Cupid — a daughter of Jupiter and Latona— and a daughter of Upis and Glauce. The second is the most celebrated, and to her the ancients allude

She was early averse to marriage, and obtained leave of her father to live in perpetual celibacy, and to preside over the pains of women. To shun the society of

men she devoted herself'to hunting, and was always accompanied by a number of chosen vir- gins, who, like herself, abjured marriage. She is represented with a quiver, attended with dogs, and sometimes drawn in a chariot by two white stags. Sometimes she appears with wings, hold- ing a lion in one hand and a panther in the other, with a chariot drawn by two heifers, or two horses of different colors. She is tall, her face something manly ; her legs are bare, well- shaped, and strong, and her feet covered with a buskin. She received many surnames, particu- larly from the places where her worship was es- tablished, and from the functions over which she presided. She was called Lucina, Ilythia, or Juno Pronuba, when invoked by women in child-bed ; and Trivia, when worshipped in the cross-ways, where hˆr statues were generally erected. She was supposed to be the same as the moon, and Proserpine or Hecate ; hence she was called Triformis ; and some of her statues represented her with three heads,— that of a horse, a dog, and a boar. Her powers and functions under these three characters have been expressed in these lines : —

Terret, lustrat, agit, Proserpina, Luna, Diana, Ina, suprema, feras, sceptro, fulgore, sagitta.

She was also called Agrotera, Orthia, Taurica, Delia, Cynthia, Aricia, &c., and supposed to be the same as the Isis of the Egyptians, whose worship was introduced into Greece with that of Osiris. . When Typhon waged war against the gods, Diana metamorphosed herself into a cat to avoid his fury. The most famous of her temples was that of Ephesus. See EPHESTJS. She was there represented with a great number of breasts, and other symbols of Cybele, or the earth. Though the patroness of chastity, yet she is said to have descended from her dignity to enjoy the company of Endymion, and to have granted favors to Pan and Orion. The inhabi- tants of Taurica were particularly attached to the worship of this goddess, and offered on her altar all the strangers that were shipwrecked on their coasts. Her temple in Aricia was always served hy a priest who had murdered his prede- cessor; and the Lacedaemonians yearly offered her human victims till the time of

Lycurgus, who changed this barbarous custom for the sacri- fice of flagellation. See DIAMASTIGOSIS. The Athenians generally offered her goats ; and others a white kid, a boar pig, or an ox. Among plants, the poppy and the dittany were sacred to her. She had oracles in Egypt, Cilicia, and Ephesus.

DIANˆL FANUM, in ancient geography, a promontory of Bithynia ; now called Scutari, a citadel, opposite to Constantinople, on the east side of the Bosphorus Thracius.

DIANDRIA, from Stf twice, and ovjjp a man, the second class in Linnaeus's sexual system, consisting of hermaphrodite plants, which have flowers with two male organs. See BOTANY.

DIA'NIUM, in ancient geography, a town in Valentia, famous for a temple of Diana, whence the name ; now called Denia.

DIANTHERA, in botany. See JUSTICIA.

DIANTHUS, the clove-gilliflower, carnation, pink, sweet-william, &c., a genus of the digynia

order, and decandria class of plants; natural order twenty-second, caryophyllei : CAL. cylin- drical, and monophyllous, with four scales at the base. There are five petals with narrow heels ; the capsule is cylindrical and unilocular. There are many species, but not above four that have much beauty as garden flowers. But each of these furnishes several beautiful varieties : viz.

1. D. barbatus, or bearded dianthus, commonly called sweet-william. This rises with many thick leafy shoots, crowning the root in a cluster close to the ground; garnished with spear- shaped evergreen leaves, from half an inch to two inches broad. The stems are upright and firm, branching erect two or three feet high, having all the branches and main stem crowned by numerous flowers in aggregate clusters of dif- ferent colors and variegations.

2. D. caryophyllus, clove-gilliflower, includ- ing all the varieties of carnation. It tises wtth many short trailing shoots from the rpot, gar- nished with long, very narrow, evergreen leaves; and amidst them upright slender flower-stalks, from one to three feet high, emitting many side shoots, all of which, as well as the main stalk, are terminated by large solitary flowers, having short oval scales, to the calyx, and crenated pe- tals. The varieties of this are very numerous, and unlimited in the diversity of flowers.

3. D. Chinensis, Chinese, or Indian pink, is an annual plant, with upright

firm flower-stalks, branching erect on every side, a foot or fifteen inches high, having all the branches terminated by solitary flowers of different colors and varie- gations, appearing from July to November.

4. D. deltoides, or common pink, rises with numerous short leafy shoots, crowning the root, in a tufted head close to the ground, closely gar- nished with small narrow leaves, and -from the ends of the shoots many erect flower-stalks, from about six to fifteen inches high, terminated by solitary flowers of different colors, single and double, and sometimes firmly variegated. This species is perennial, as all the varieties of it commonly cultivated also are.

DI'APASE, or DIAPA'SON, n. s. Gr. Sia vaffuv. . A chord including all tones. The first is the old word.

The sweet numbers and melodious measures,

With which I wont the winged words to tie, And make a tuneful diapase of pleasures,

Now being let to run at liberty. Speiiser.

It discovereth the true coincidence of sounds into diapasons, which is the return of the same sound.

Bacon. Harsh din

Broke the fair sausick that all creatures made To their great Lord, whose love their motion swayed In perfect di'tpason, whilst they stood In first obedience, and their state of good. Milton. From harmony, from heavenly harmony,

This universal frame began j From harmony to harmony

Through all the con. pass of the notes it ran, The diapason closing full in man. Dryden.

Diapason denotes a chord which includes all tones : it is the same with that we call an eighth, or an octave ; because there are but seven tones or notes, and then the eighth is the same again with the first.

'

How musical ! when all-devouring Time, Here sitting on his throne of ruins hoar, While winds and tempests sweep his various lyre, How sweet thy diapason, Melancholy. Byron.

DIAPASON among musical instrument makers, a kind of scale whereby they adjust the pipes of their organs, and cut the holes of their haut- boys, flutes, &c., in due proportion for perform- ing the tones, semi-tones, and concords just.

DIAPASON, in music, a musical interval by which most writers on music express the oc- tave of the Greeks.

DIAPASON DIA EX, a kind of compound con- cord, of which there are two sorts : the greater, which is in the proportion of 10-3; and the lesser, in that of 16‘5.

DIAPASON DIAPENTE, a compound conso- nance in a triple ratio, as 3-9. This interval, says Martianns Capella, consists of nine tones and a semi-tone, nineteen semi-tones, and thirty- eight dieses. It is a symphony made when the voice proceeds from the first to the twelfth sound.

DIAPASON DIATESSARON, a compound con- cord, founded on the proportion of eight to three. To this interval Martianus Capella allows eight tones and a semi-tone, seventeen semitones, and thirty-four dieses. This is when the voice proceeds from its first to its eleventh sound. The moderns would rather call it the eleventh.

DIAPEDESIS, in medicine, a transudation of the fluids through the sides of the vessels that contain them, occasioned by the blood’s becoming too much attenuated, or the pores too open.

DIAPENTE, in ancient music, an interval marking the second of the concords, and with the diatessaron an octave. This is what in mo- dern music is called a fifth.

DI’APER,w.s. &u. a. Yr.diapre; so called from Ypres (D’Ypres), as Denim from Nismes. Linen cloth woven in flowers, and other figures ; the finest species of figured linen after damask. Hence, as a verb, to diversify or variegate with flowers, or to imitate diaper.

Not any damsel, which her vaunteth most

In skilful knitting of soft silken twine ; Nor any weaver, which his work doth boast

In diaper, in damask, or in lyne, Might in their diverse cunning ever dare With this so curious net- work to compare.

Spenser.

For fear the stones her tender foot should wrong, The ground he strewed with flowers all along, And diapered like the discoloured mead. . Id.

Let one attend him with a silver bason

Full of rose-water, and bestrewed with flowers ;

Another bear the ewer, a third a diaper.

Shakspeare.

If you diaper upon folds, let your work be broken, and taken, as it were, by the half; for reason tells you, that your fold must cover somewhat unseen.

PeacJuim on Drawing.

Flora used to cloath our grand.dame earth with a new livery, diapered with various flowers and che- quered with delightful objects. Bowel's Vocal Forest.

DIAPHAN'IC, adj. } Gr. Sia^avaa. Trans-

DIAPH'ANOUS, adj. Vparency : pellucidness ;

DIAPHANE'ITY, n.s.j power of transmitting light.

Aristotle calleth light a quality inherent or cleaving to a diaphanous body. Raleigh.

Air is an element superior, and lighter than water, through whose vast, open, subtile, diaphanicli, or transparent body, the light, afterwards created, easily transpired. /j.

Because the outward coat of the eye ought to be pellucid, to transmit the light, which, if the eyes should always stan'l open, would be apt to grow dry and shrink, and loose their diaphaneity • therefore are the . eyelids so contrived as often to wink, that they so may, as it were, glaze and varnish them over with the moisture they contain. Huy.

DIAPHORE'SIS, in medicine, an elimination of the humors in any part of the body through the pores of the skin. See MEDICINE.

DI'APIIKAGM, n. s. Gr. diaijtpaypa. The midriff' which divides the upper cavity of the body from the lower. Any division or partition which divides a hollow body.

It consists of a fasciculus of bodies, round, about on« sixth of an inch in diameter, hollow, and parted into numerous cells by means of diaphraqms, thick set throughout the whole length of the body.

Woodward on Fossils.

DIAPHRAGM, or DIAPHRAGMA. See ANA- TOMY. Plato, as Galen informs us, first called this muscle diaphragm, from the verb Sia^arrav, to separate or be between two.

DIAPHORE'SIS, Cia^opj/o-tf, in rhetoric, a figure expressing the hesitation or uncertainty of the speaker. It is most naturally placed in the exordium of a discourse. We have an example in Homer, where Ulysses, about to relate his sufferings to Alcinous, begins thus :

Tt Trpwrov, n S' nrnra, n 5′ wzariov icaraXf^w ; Quid primum, quid deindc, quid postremo alloquar?

DIAPHORET'ICK, adj. Gr. BiaQoptinicoe. Sudorific; promoting a diaphoresis or perspira- tion ; causing sweat.

A diaphoretick medicine, or a sudorific, is something that will promote sweating. Watts.

Diaphoreticks, or promoters of perspiration, help the organs of digestion, because the attenuation of the aliment makes it perspirable. Arbuthnot.

DIARBECK, DIARBEKER, or DIARBEKIR, an extensive province of Asiatic Turkey ; com- prehending, in its greatest extent, Diarbekir, pro- perly so called, Yerak or Chaldea, and Curdistan, •which were the ancient countries of Mesopotamia, Chaldea, and Assyria, with Babylon. See KUR- DISTAN. It is called Diarbeck, and Diarbeker, from the word dhyar, a duke or ruler, and beker, country. It extends along the banks of the Ti- gris and Euphrates from N.N.W. to south-east, that is, from Mount Taurus, which divides it from Turcomania on the north, to the inmost re- cess of the Persian gulf on the south, about 600 miles ; and from east to west, that is, from Persia on the east, to Syria and Arabia Deserta on the west, in some places 200, and in others about 300, miles ; but in the southern or lower parts not above 150. It extends also from the thirtieth to the thirty-eighth degree of latitude, and lies under part of the fifth and sixth climates, whose longest day is about fourteen hours and a half, and enjoys a good temperature of air, as well as in the greater part of it a rich and fertile soil; al .'hough there are

some large desert tracts in it. Having a cou-

siderable frontier towards Persia, it is well guarded and fortified ; but its many ancient cities are at present dwindled into heaps of ruins. Diarbekir, Bagdad, and Mosul, are however considerable places. The rivers Euphrates and Tigris have almost their whole course through this country.

DIARBEKIR, or Di ARBECK PROPER, is bounded on the north by Turcomania, on the west by Syria, on the south by part of Arabia Deserta and Yrack Proper, and on the east by Curdistan. It is the same country that is called Padanaram by Moses, signifying fruitful, which it still is in a very high degree, especially on the north side ; where it yields corn, wine, oil, and fruits, in great abundance. Christianity flourished here in an eminent manner, till its purity was sullied about the beginning of the sixth century by the heresy of the Jacobites, whose patriarch resided here at a very recent period. It is now a pa- chalic or government of Turkey, subdivided into twelve districts. The principal towns are Diarbekir, Mosul, Orsa or Edessa, Nisibis, Gezir, Merdin, Zibin, Amadia, and Carasara; all of little note except Diarbekir and Mosul.

DIARBEKIR, DIARBECK, or CARAHMED, the capital of the above district, is situated in a de- lightful plain, on the banks and near the head of the Tigris, about 155 miles or fifteen caravan days' journey, north-east of Aleppo. A bridge of ten arches over the river is said to have been built by order of Alexander the Great. It is one of the richest and most mercantile cities in all Asiatic Turkey; and was once well fortified, being encompassed with a double wall, the outer- most of which was flanked with seventy-two towers ; but the whole is now in a very dilapi- dated state. The streets are narrow, but the houses, being of stone and lofty, look respectable ; and it has several stately piazzas or bazaars, well stored with all kinds of merchandise, and twelve magnificent mosques, said to have been formerly Christian churches. The Armenian cathedral is a handsome structure, the roof of which is sup- ported by two rows of pillars ; and the whole floor covered by carpets. A very handsome fountain in the court in front throws the water to a considerable height. Extensive manufactures are carried on here in iron, copper, silk, wool, and cotton ; but its chief article of trade and manufacture is Turkey leather, of which the sale is immense. It has also a manufacture of fine dyed linen and cotton cloths, which are nearly jn the same request. There are many large and con- venient inns on both

sides of the river, for the caravans that go to and from Persia ; and the place is much frequented by pilgrims of all na- tions and religions. The Turkish ladies are said here to enjoy an extraordinary degree of liberty, and are commonly seen on the walks of the city in company with the Christian women, with whom they live in great friendship. The citizens generally are said to be polite, affable, and cour- teous. A basha resides here, who has very ex- tensive jurisdiction. He has commonly a body of 20,000 horse under him. The adjacent terri- tory is very rich and picturesque; the bread, wine, flesh, and fruits, excellent. The inhabi- tants, who consist of Turks, Armenians, Kuids,

Catholics, and Jacobites, are computed at 80,000 by Gardanne, at 38,000 by Mr. M'Donald Kinneir; the real number may probably be a medium between the two. Diarbekir is sixty miles from Merdin, 172 from Malatia, and 540 E.S. E. of Constantinople.

DIARRHCE'A, n. s.) Gr. Siappotn,. A flux,

DIARRHCE'TICK, adj. $ productive of frequent stools. The adjective signifies purgative.

In the midst of that service was I surprised with a miserable distemper of body ; which ended in a diar rheea biliosa, not without some beginning and further threats of a dysentery ; wherewith I was brought so low, that there seemed small hope of my recovery. Bp. Hall's Account of Himself.

Millet is diarrheetick, cleansing, and useful in dis- eases of the kidneys. Arbuthnot.

During his diarrhoea I healed up the fontanels.

Wiseman.

It is certain, that much swimming is the means of stopping a diarrhoea, and even of producing a constip- ation. Franklin.

DIARRHOEA, in medicine, an excessive purg- ing, distinguished by frequent stools with the natural excrement, not contagious, and sel- dom attended with pyrexia. It is a genus of disease in the class neuroses, and order spasmi of Cullen, containing the following species : —

1. Diarrhoea crapulosa. The feculent diarrhoea, from crapulus, one who overloads his stomach.

2. Diarrhoea biliosa. The bilious, from an in- creased secretion of bile. 3. Diarrhoea mucosa. The mucous, from a quantity of slime being voided. 4.

Diarrhoea hepatirrhcea. The hepaticp in which there is a quantity of serous matter, somewhat resembling the washings of flesli, voided ; the liver being primarily affected. 6. Diarrhoea lienterica. The lientery ; when the food passes unchanged. 6. Diarrhoea cocliaca. The coeliac passion : the food passes off in this affection in a white liquid state like chyle. 7. Diarrhoea verminosa Arising from worms.

DI'ARY, n. s. Lat. diarium. An account of the transactions, accidents, &c, of every day; a journal.

In sea voyages, where there is nothing to be seen but sky and sea, men make diaries ; but, in land -travel, wherein so much is to be observed, they omit it.

Bacon.

I go on in my intended diary. Tatler.

DIASTOLE, n. s. AeaToXjj. A figure in rhetoric, by which a short syllable is made long : also, the dilation of the heart.

The systole seems to resemble the forcible bending' of a spring, and the diastole its flying out again to its- natural state. Ray on the Creation. If systole or diastole move

Quickest when he's in wrath or love. Hudibrat.

DI'ASTYLE. Aia and

DIATES'SERON, n. s. Of &a and rtfffftpa, four. An interval in music, composed of one greater tone, one lesser, and one greater semitone ; its proportion being as four to three. It is called, in musical composition, a perfect fourth. Harris.

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DIB

DIATHESIS, ASTHENIC, is described to be that state of the body, wherein there is ' too little excitement of the whole living system, arising from the debilitating noxious powers, impairing all the functions, disturbing some, giving a false appearance of increasing others, but always de- bilitating.'

DIATHESIS, STHENIC, is that state of the body, wherein ' all the functions are first increased ; a disturbance or irregularity then takes place in some ;

others are impaired ; but not, as long as this diathesis lasts, by a debilitating operation.'

DIATONIC. Of diarovoe. The ordanary sort of music which proceeds by different tones,

either in ascending or descending, ft contains only the two greater and lesser tones, and the greater semi-tone. Harris.

DIATONIC, in music, is compounded of two Greek words, viz. the preposition cia, signifying a transition from one thing to another, and the substantive TOVOQ, importing a given degree of tension and musical note. It is indifferently ap- plied to a scale or gamut, to intervals of a cer- tain kind, or to a species of music, whether in melody or harmony, composed of these intervals. We copy the following scale of the Greek dia- tonics from Dannely's Musical Dictionary : —

27 26 25 24 23 22 21

Nete hyperbolaeon (second space treble clef)

j 27 Paranete hyperbolaeon diatonos

J 26 Paranete hyperbolaeon chromatice

i v.z Paranete hyperbolaeon enarmonios . . .

Trite hyperbolaeon

Nete diezeugmenon

Paranete diezeugmenon diatonos

Paranete diezeugmenon chromatice

20 fParanete diezeugmenon enarmonios

19 Trite diezeugmenon

18 J Paramese (space above bass staff)

T17 Nete synemmenon (the space below the trebje staff)

Paranete synemmenon diatonos

Paranete synemmenon chromatice

I • Paranete synemmenon enarmonios

13 Trite synemmenon

Ll2ˆl Mese

1 1 1 Lichanos meson diatonos

10 [Lichanos meson chromatice

9 [Lichanos meson enarmonios

8 I Parypate meson

f 7j Hypate meson

j 6 Lichanos hypaton diatonos

1 -« Lichanos hypaton chromatice*

Lichanos hypaton enarmonios

Parypate hypaton

Hypate hypaton

Proslambanomenos (first space bass”)

g-jlaf) or f-sharp

ex) enhzr.f-ftat

c

d

d-flat) c-sharp

c

*b *) enhar. c-flat*

b-natural

d

c

c-flat (b-natnral)

b'-flut

ax) enhar. b-jlat

g-flat) f-sharp

f

ex) enhar. f-jlat e d

d-flat (c-sharp) c

b x) enhar. c-flat b-natural

DIAUGOPHRAGMIA, in natural history, a genus of fossils of the order of septariae, whose partitions, or septa, consist of spar with an ad- mixture of crystal. Of this genus there are three species: 1. A red kind, with brownish-yellow partitions ; 2. A brownish-yellow kind, with whitish partitions ; 3. A bluish-white kind, with straw-colored partitions.

DIAZ (John), a martyr to the frantic zeal of his brother against the protestant religion, was born in the beginning of the sixteenth century, at Cuenza in Spain. He studied theology at Paris, and under the celebrated Calvin at Geneva, He was the companion of Bucer at the Ratisbon conference; and, going soon after to Neuburgh, was visited by his brother and murderer Alphon- sus Diaz, an advocate of the court of Rome. This zealot, failing in his endeavour to reclaim him to popery, immediately plotted against his life. He pretended to close his visit and take his departure, but secretly returned at break of day to the apartment of Diaz, with a companion, who affected to be the bearer of a letter. Gain- ing admission on this pretence, while Diaz was reading the paper presented, Alphonsus's comrade

gave him a death-blow on the head with an axe, and fled. This murder took place in March 27th, 1546 ; and, though the assassins were taken, the emperor Charles V. put a stop to the pro- ceedings against them. The miserable fratricide afterwards hanged himself. An account of his death was composed in Latin, under the title of Historia vera de Morte J. Diazii. It produced a great sensation at the time. J. Diaz was the author of A Summary of the Christian Religion.

DIAZEUTIC TONE. Of Sia and fcwyvv/w. In the ancient Greek music, it disjoined two fourths, one on each side of it ; and which, being joined to either, made a fifth. This is, in our musick, from A to B.

They allowed to this diazeutick tone, which is our La, Mi, the proportion of nine to eight, as being the unalterable difference of the fifth and fourth. Hafris.

DIB'BLE, n. s. & v. a. > Dut. dipfel, a

DIB'BLER. \ sharp point, Skin-

ner; from dabble, Junius; or a corruption of dog-bill, according to Mr. Thomson. A small spade ; a pointed instrument with which are made holes for planting or sowing. The verb is of recent introduction.

Through cunning, with dibble, rake, mattock, and

spade, By line and by level trim garden is made.

Tuiaer's Husbandry.

Wheat is generally dibbled in October, on land newly broken up from clover-ley a man with an iron dibble, about three feet long, in each hand, walking backward and making two rows of holes in each furrow, slice, or flag ; they are made about four inches distant from each other and from one to two inches deep. The dibbler is followed by two or three women, boys, or girls, who drop two or three grains into each hole. Dixon's Agriculture.

DIBDIN (Charles), a celebrated writer of vongs and musical composer, was the son of a silversmith of Southampton, where he was bom about the year 1745. He was intended for the church, and received his early education at Win- chester school. At the age of fourteen, however, he became a candidate for the situation of orga- nist in a Hampshire village, and, relinquishing all views of entering the church, came at the in- vitation of an elder brother, a captain in the West India trade, to London. Here he was first engaged in composing ballads, and tuning piano- fortes. He made his first appearance as a per- former in 1762, at the Richmond theatre, and two years afterwards appeared on the London stage, as Ralph in The Maid of the Mill. The chief part of the music to Lionel and Clarissa, and the whole of that to the musical entertain- ment of The Padlock, now established his fame as a composer for the drama, which he rapidly increased. The most celebrated of his pieces, perhaps, are The Deserter, The

Waterman (the dialogue of which is also his production), and the Quaker, which appeared between 1772 and 1775. Mr. Dibdin never shone as an actor; and, having quarelled with Garrick and some other proprietors of the London theatres, he quitted the stage altogether, and made a success- ful attempt to entertain the public by accompany- ing himself, in his own songs, on the piano-forte. His saloon was near Leicester square, and known by the title of Sans Souci. His songs and enter- tainments produced at this time are said to have exceeded 1200. His sea songs are considered very superior : witness the immense popularity of his Tom Bowling, Poor Jack, &c. The for- mer is said to have been a tribute of affection to the memory of his brother. Imprudence, how- ever, always kept Dibdin poor ; and, though as- sisted by government and many opulent indi- viduals, he died in indigent circumstances in 1814. An edition of his best songs has been published by Dr. Kitchiner.

DIBRA, a town of European Turkey, in Macedonia, near Albania. It was besieged by the Turks in 1442, who conveyed a dead dog into the only spring that supplied the town with water, which compelled the inhabitants to sur- render. It is thirty miles north of Akrida.

DIB'STONE, n. s. A little stone which children throw at another stone.

I have seen little girls exercise whole hours together, and take abundance of pains, to be expert at dibstones.

Locke

DICAC'ITY, n. s. Lat. dicacitas. Pertness ; sauciness.

DICˆIARCHUS, a scholar of Aristotle, who composed a great number of books which were valued highly by Cicero and Atticus. He wrote a work to prove that men suffer more mischief from one another than from all evils beside. Another work he composed, concerning the re- public of Lacedaemon, was read every year be- fore the youth in the assembly of the ephori. Geography was one of his principal studies, on which science there is a fragment of a treatise of his still extant, and preserved among the Vetens Geographic Scriptores Minores.

DICE, n. s. & v. n. \ The plural of die,

DI'CER, 7i. s. >SeeDiE. To dice is to

DICE'BOX. j play with dice, or gam-

ble. A dicer; a gamester.

In prison ! certes nay, but in paradise ;

Wei hath Fortune yturned thee the dise

That h'ath the sight of her, and I the absence.

Chaucer's Canterbury Tale. They make marriage vows*

As false as dicers' oaths. Shukspeare. Hamlet.

I was virtuously given as a gentleman need to be ; virtuous enough ; swore little ; diced not above seven times a week. Shakspeare Henry I V.

It is above a hundred to one against any particular throw, that you do not cast any given set of faces with four cubical dice, because there are so many several combinations of the six faces of four dice. Bentley.

I look upon every man as a suicide from the moment he takes the dicebox desperately in his hand ; and all that follows in his career from that fatal time is only sharpening the dagger before he strikes it to his heart.

Cumberland.

DICE, among gamesters, cubical pieces of bone or ivory, marked with dots on each side of their faces, from one to six. Sharpers have several ways of falsifying dice : by drilling and loading them with quicksilver; by filing and rounding them, &c.

The dice box is a narrow deep cornet, chan- nelled within. It answers to what the Romans called fritillus ; whence, crepitantes fritilli : and, in Seneca, resonante fntillo. Besides the fritillus, the Romans, for greater security, had another kind of dice-box called pyrgus, Trwpyoc, and some- times turricula. It was placed immoveable in the middle of the table, being open at both ends, and likewise channelled within; over the top was placed a kind of funnel, into which the dice were cast out upon the fritillus ; whence descending, they fell through the bottom on the table ; by which all practising on them with the fingers was effectually prevented. For want of some contrivance of this kind, our sharpers have op- portunities of playing a variety of tricks with the box.

DICH. This word seems corrupted, says Dr Johnson from dlt for do it.

Rich men sin, and I eat root :

Much ood dich thy good heart, Apemantu.*

Shakspeare. Timon.

DICHOTOMY, n. s. AiXoToput. Distribu- tion of ideas by pairs.

Some persons have disturbed the order of nature, and abused their readers by an affectation of dichoto- mies, trichotomies, sevens, twelves, &c. Watts.

DICHOTOMY, a term used by astronomers for that appearance on the moon, wherein she is

bisected, or shows just half her disk. In this situation the moon is said to be in .a quadrate aspect, or to be in her quadrature.

DICK'ENS. A kind of adverbial exclamation, importing, as it seems, much the same with the devil. Belg. dicker.

Where had you this pretty weathercock !

I cannot tell what the dickens his name is my hus- band had him of. Shahs. Merry Wives of Windsor.

What a dickens does he mean by a trivial sum 7 But ha'n't you found it, Sir ?

Congreve. Old Bachelor.

DICKINSON (Edmund), a celebrated En- glish physician and chemist, born in 1624. He studied and took his degrees at Merton College, Oxford; and, in 1655, published there his Del- phi Phcenicizantes, &c., a learned piece, in which he attempted to prove, that the Greeks borrowed the story of the Pythian Apollo, and all that rendered the oracle at Delphi famous, from the Holy Scriptures, and from the book of Joshua in particular. He practised physic first at Oxford ; but, removing to London in 1684, and restoring the earl of Arlington from a dangerous illness, he was promoted to be physician in ordinary to Charles II. ; and continued in his appointments by his successor. After the Revolution, being afflicted with the stone, he retired from practice, and died in 1707. He published Physica Vetus et Vera, &c., containing a system of philosophy chiefly framed on principles collected from the Mosaic history.

DICTAMNUS, white dittany, or fraxinella, a genus of the monogynia order and decandria class of plants ; natural order twenty-sixth, mul- tisiliquas :

CAL. pentaphyllous ; the petals are five, and patulous; the filaments sprinkled with glandulous points, the capsules five, coalited. There is only one species. It has thick, penetrat- ing, perennial roots, collected into a head at top, sending up erect stalks annualjy two or three feet high, garnished with pinnated alternate leaves, of three or four pair of oblong stiff lobes, terminated by an odd one ; and the stalks crowned by long pyramidal loose spikes of flowers, of white, red, and purple colors. They are very ornamental plants, and succeed in any of the common borders. The dittany which grows in Crete, Dalmatia, and the Morea, formerly con- stituted an article in the materia medica. The leaves in smell and taste somewhat resemble le- mon thyme, but have more of an aromatic flavor, as well as a greater degree of pungency ; when fresh, they yield a considerable ‘ quantity of es- sential oil.

)Fr. dieter; Ital. dettare; Lat. dic-

DIC’TATE, v. a. & n. s.-

DICTA’TFON, n. s.

DICTA’TOU, \tare; from d’co, a

DICTATORIAL, adj. i Gr. SIIKW, to show;

DICTA’TORSIIIP, n. s. J Chald. plj to see; to speak. To declare or prescribe with authority. As a substantive, dictate is the rule or maxim laid down ; dictation, the act of dictating ; dictator, one who delivers rules or orders ; and particu- larly a Roman magistrate invested with absolute authority in certain exigencies. The other deri- vatives follow these meanings.

This is the solemnest title they can confer under the princedom, being indeed a kind of dictatorship.

Wotton.

Unanimous they all commit the care And management of this main enterprise To him their great dictator. Milton.

He that was fetched from the plough to be made dictator, had not half his (a clown’s) pride and inso- lence. Butler.

Kind dictators made, when they came home, Their vanquished foes free citizens of Rome.

Waller.

This is that perpetual dictatorship which is exercised by Lucretius, though often in the wrong. Dryden.

Those right helps of art, which will scarce be found by those who servilely confine themselves to th« dic- tates of others. Locke.

Then let this dictate of my love prevail.

Pope's Oil.

That riches, honours, and outward splendour, should set up persons for dictators to all the rest of mankind, is a most shameful invasion of the riˆht of our understanding. Watts.

Judgment, like other faculties, is improved by prac- tice, and its advancement is hindered by submission to dictatorial decisions, as the memory grows torpid by the use of a table-book. Johnson.

Thou, who with thy frown

Annihilated senates — Roman, too

With all thy vices, for thou didst lay down With an atoning smile a more than earthly crown —

The dictatorial wreath, — couldst thou divine

To what would one day dwindle that which made

Thee more than mortal ? Byron.

A DICTATOR was first chosen during the Ro- man wars against the Latins. The consuls be- ing unable to raise forces for the defence of the state, because the plebeians refused to enlist if they were not discharged from all the debts they had contracted with the patricians, the senate found it necessary to elect a new magistrate with absolute and uncontrolable power to take care of the state. The dictator remained in office for six months, after which he was again elected, if the affairs of the state seemed to be desperate ; but if tranquillity was re-established, he gene- rally laid down his power before the time was expired. He knew no superior in the republic, and even the laws were subjected to him. He was called dictator, quoniam dictis ejus parebat populus, because the people implicitly obeyed his command. He was named by the consul in the night viva voce, and his election was con- firmed by the auguries. As his power was ab- solute, he could proclaim war, levy forces, con- duct them against an enemy, and disband them at pleasure. He punished as he pleased, and from his decision

there lay no appeal, at least till later times. He was preceded by twenty-four lictors with the fasces ; during his adminis- tration, all other officers, except the tribunes of the people, were suspended, and he, was the master of the republic. But amidst ail this in- dependence, he was not permitted to go beyond the borders of Italy ; he was always obliged to march on foot in his expeditions, and he never could ride in difficult and laborious marches, without previously obtaining a formal leave from the people. He was chosen only when the state was in imminent danger from foreign enemies, or

intestine seditions. In the time of a pestilence, a dictator was sometimes elected ; as also to hold the comitia, or to celebrate the public festivals, or drive a nail in the capitol ; by which super- stitious ceremony the Romans believed that a plague could be averted, or the progress of an enemy stopped. This office, so respectable and illustrious in the first ages of the republic, be- came odious by the perpetual usurpations of Sylla and Caesar; and after the death of the latter, the Roman senate passed a decree which for ever forbade a dictator to exist in Rome. The dictator, as soon as elected, chose a subor- dinate officer, called his magister equitum, mas- ter of horso. This officer could do nothing with- out his express order. This subordination, how- ever, was some time after removed ; and during the second Punic war, the master of the horse was invested with a power equal to that of the dictator. A second dictator was also chosen for the election of magistrates at Rome after the battle of Cannae. The dictatorship was origi- ginally confined to the patricians ; but the ple- beians were afterwards admitted to share it. Titus Lartius Flavus was the first dictator, A.U.C. 253. The institution has been revived in South America, in modern times, in the person of the illustrious Bolivar.

DI'CTION, n. s. Fr. diction; Lat. dictio. Style; language; expression.

There appears in every part of his diction, or ex- pression, a kind of noble and bold purity. Dryden.

We are refined ! and plain manners, plain dress, and plain diction, would as little do in life, as acorns, herbage, and the water of the neighbouring spring, would do at table. Chesterfield.

DICTIONARY, n. s. Fr. dictionaire; Span. dictionario ; Ital. dittionario ; Lat. dictionarium, from dictio, dico, to speak. See DICTION. A book containing the words of a language, with their explanations ; a lexicon ; a

nomenclature of words or things.

Some have delivered the polity of spirits, and left an account that they stand in awe of charms, spells, and conjurations ; that they are afraid of letters and characters, notes and dashes, which, set together, do signify nothing ; and not only in the dictionary of man, but in the subtler vocabulary of Satan.

Browne's Vulgar Errours.

Is it such a fault to translate simulacra images ? I see what a good thing it is to have a good catholick dictionary. Stilliiigjieet.

An army, or a parliament, is a collection of men j a. dictionary, or nomenclature, is a collection of word.*

Watts.

It is not enough that a dictionary delights the cri- tick, unless, at the same time, it instructs the learner. Johnson. Plan of Dictionary.

DICTYNNIA, in antiquity, feasts celebrated at Lacedaemon and in Crete, in honor of Diana, or of a nymph taken for her, who, having plunged herself into the sea, to escape the passion of Minos, was caught in fishermen's nets, SIKTVU, whence the name.

. DICTYS, a very ancient Cretan historian, who, serving under Idomeneus in the Trojan war, wrote the history of that expedition. Tzet- zes tells us that Homer formed his Iliad upon the plan of that history. The Latin history of Dictys, which has come down to us, is spurious.

DIDACTICAL, adj. ? Gr. itianrucot. Pre- DIDAC'TICK. $ ceptive ; giving pre-

cepts : thus a didactic poem is a poem that gives rules for some art ; as the Georgics

The means used to this purpose are partly didacti- cal, and partly protreptical ; demonstrating the truth of the gospel, and then urging the professors of those truths to be stedfast in the faith, and to beware of in- fidelity. Ward on Infidelity.

But what shall I say to Junius, the grave, the so- lemn, the didactic ! Home Tooke.

DID'APPER, n. s. From dip. A bird that dives into the water.

DIDASCAL'ICK, adj. Greek, SiSaoKtAiKog. Preceptive; didactic; giving precepts in some art.

I found it necessary to form some story, and give a kind of body to the poem : under what species it may be comprehended, whether didascalick or heroick, I leave to the judgment of the criticks. Prior.

DID'DER, v. a. Teut. diddern ; Ger. zittern. To quake with cold ; to shiver. ' A provincial word,' says Skinner.

DIDELPHIS, in zoology, the opossum; a genus of quadrupeds belonging to the order of ferae, the characters of whic11 are these : — They have ten fore-teeth in the upper jaw, and eight in the under one. The dog-trteth are long ; the tongue is somewhat ciliated ; and they have a pocket formed by a duplicatnre of the skin of the belly, in which the dugs are included. Kerr enumerates nineteen species ; the chief are : — 1. D. brachyura, the short-tailed opossum of Pennant, of a red color, has naked ears, and a short hairy tail, thick at the base, and gradually lessening to the extremity. The body is from three to five inches and a half long. The fur is very soft and glossy, and there is a beautiful red streak along the sides of the head and body. This species inhabits the woods of South Ame- rica. The female has from nine to twelve young at a birth, which adhere to her teats as soon as born, and she has no pouch. This species agrees with the Murina, in the general torm of the body. 2. D. cancrivora, the crab-eater of Buf- fon, or the Cayenne opossum, has a long slender face ; ears erect, pointed, and short : the coat woolly, mixed with very coarse hairs, three in- ches long, of a dirty white from the roots to the middle ; from thence to the ends, of a deep brown ; sides and belly of a pale yellow ; legs of a dusky brown ; thumb on each foot distinct ; on the toes of the fore-feet, and thumb of the hind, are nails, very long, taper, naked, and scaly. Length seventeen French inches; of the tail fifteen and a half. The subject measured was young. It inhabits Cayenne; is very active in climbing trees, on which it lives the whole day. In marshy places it feeds on crabs, which, when it cannot draw out of their holes with its feet, hooks them by means of its long tail. If the crab pinches its tail, the animal sets up a loud cry, resembling the human voice, which maybe heard afar; but its common voice is a grunt like a young pig. It is well furnished with teeth, and will defend itself stoutly against dogs ; brings forth four or five young, which it secures in some hollow tree. The natives eat

these animals, and say their flesh resembles a hare. They are easily tamed,

and will then re- fuse no kind of food. 3. D. cayopollin, the Mexican opossum of Buffon and Pennant, is of an ash color on the head and upper parts of the body : the belly and legs are whitish : the tail is long and pretty thick, varied with brown and yellow; it is hairy near an inch from its origin, the rest naked : the length of the animal from nose to tail, about seven inches and a half; of the tail, more than eleven. It inhabits the mountains of Mexico, and lives in trees, where it brings forth its young : when in any fright, they embrace the parent closely. Her belly has no pouch. The tail is prehensile, and serves in- stead of a hand. 4. D. gigantea, the kangaroo. This animal has a small head, neck, and shoul- ders ; the body increasing in thickness to the rump. The head is oblong, formed like that of a fan, and tapering from the eyes to the nose ; end of the nose naked black ; the upper lip divided. The nostrils are wide and open ; the lower jaw is shorter than the upper; and the aperture of the mouth small : there are whiskers on both jaws, those on the upper longest; and strong hairs above and below the eyes. The eyes are not large ; the irides are dusky ; the pupil is of a bluish black. The ears are erect, oblongly ovated, rounded at the ends, and thin, covered with short hairs, four inches long. There are no canine teeth, but six broad cutting teeth in the upper jaw ; two long lanceolated teeth in the lower, pointing forward ; and four grinding teeth in each jaw, remote from the others. The belly is convex and great. The fore legs are very short, scarcely reaching to the nose, and useless for walking. The hind legs are almost as long as the body, and the thighs are very thick : on the fore feet are five toes, with long conic and strong claws ; on the hind feet only three; the middle toe is very long and thick, like that of an ostrich; the two others are placed very distinct from it, and are small ; the claws are short, thick, and blunt: the bottom of the feet, and hind part, black, naked, and tubercu- lated, as the animal rests often on them. The tail fs very long, extending as far as the ears ; thick at the base, tapering to a point. The scrotum is large and pendulous. The hair on the whole animal is soft, and of an ash color, lightest on the lower parts. It inhabits the western side of New Holland, and has as yet been discovered in no other part of the world. It lurks among the grass, and feeds on vege- tables ; it goes entirely on its hind legs, making use of the fore feet only for digging, or bringing its food to its mouth. The dung is like that of a deer. It is very timid ; at the sight of men it flies from them by amazing Ieaps5 springing over bushes seven or eight feet high, and going progressively from rock to rock. It carries its tail quite at right angles with its body when it is in motion ; and when it alights, often looks back. 5, D. murina, the murine opossum, has the face and upper parts of the body of a tawny color ; the belly of a yellowish white : the tail is slender, and covered with minute scales to the very rump : the length of the animal from nose to tail, about six inches and a half; the tail

of the same length ; the female wants the false belly of the last; but on the lower part the skin forms on each side a fold, between which the teats are lodged. It inhabits the hot parts of South America; agrees with the others in its food, manners, and the prehensile power of its tail. Count de Buffon, from inspection, says the female has fourteen teats, and brings from ten to fourteen youngones at a time ; they affix them- selves to the teats as soon as they are born, and remain attached like inanimate things, till they attain growth and vigor to shift a little for them- selves. 6. D. opossum, the sarigue of Buffon, or Molucca opossum of Pennant, has long, oval, and naked ears : the mouth is very wide ; the lower side of the upper jaw, throat, and belly, is of a whitish ash color ; the rest of the hair a cinereous brown, tipt with tawny, darkest on the back : the tail is as long as the body ; near the base covered with hair ; the rest naked ; the claws are hooked. On the belly of the female is a pouch, in which the young shelter. Marc- grave found six young within the pouch. It has ten cutting teeth above, and eight below. Over each eye is an oblong white spot. The length of the animal from nose to tail is ten inches ; and the tail exceeds the length of the head and body. Its whole figure is of a slender and elegant make. This species is found in great numbers in Aroe and Solor. It is called in the Indies pelandor Aroe, or the Aroe rabbit. They are reckoned very delicate eating, and are very common at the tables of the great, who rear the young in the same places in which they keep their rabbits. It inhabits also Surinam, and the hot parts of America. 7. D. tridactyla, Phil- lip's opossum, or the kangaroo rat, is described as similar, both in the general shape of the body and the conformation of the legs, to the kan- garoo ; but the visage having a strong resem- blance to that of the rat, and the color of the whole not ill resembling that animal, it has ob- tained the name of the kangaroo rat. It is an inhabitant of New Holland ; and two of the species were seen alive at the exhibition of ani- mals over Exeter 'Change in 1790, where one of them brought forth young. This species has two cutting teeth in front of the upper jaw, with three others on each side of them ; and at a dis- tance one false grinder, sharp at the edge, and channelled or fluted on the sides; and close to these, two true grinders : in the lower jaw there are two long cutting teeth, formed like those oi the squirrel, with three grinders corresponding with those in the upper jaw. 8. D. volans, th'e flying opossum, a beautiful species, and clothed with fur of the most exquisite texture, is an in- habitant of New South Wales. In length, from the tip of the nose to the root of the tail, it is twenty inches; the tail itself is twenty- two in- ches ; at the base, quite light, increasing gra- dually to black at the end : the ears are large and erect : the coat or fur is of a. rich and most delicate texture, appearing on the upper parts of the body at first sight, of a glossy black ; but on a nicer inspection, is found to be mixed with gray ; the under parts are white, and on each hip is a tan-colored spot, nearly as big as a shil- ling ; at this part the fur is thinnest, but at the

root of the tail it is so rich and close that the hide cannot be felt through it. The fur is also continued to the claws. On each side of the body is a broad flap or membrane (as in the flying squirrels), which is united to both the fore and hind legs. The jaws are furnished with teeth, placed as in some others of this genus : in the upper jaw forwards are four small catting teeth, then two canine ones, and backwards five grinders: the under jaw has two long large cutting teeth and five grinders, with no inter- mediate canine ones, the space being quite va- cant. The fore legs have five toes on each foot, with a claw on each ; the hinder ones four toes, with claws (the three outside ones without any separation), and a thumb without a claw, enabling the animal to use the foot as a hand, as many of the opossum tribe are observed to do.

DIDEROT (Denys), a celebrated French writer, born at Langres in 1713. He was edu- cated among the Jesuits, with a view to the church, and received the tonsure ; but, disliking the profession, he was placed with a lawyer. This pursuit, however, he also abandoned, and thereby incurred his father's displeasure. He did not devote himself particularly to any one object of study ; hut his attention was at dif- ferent times engrossed by geometry, metaphysics, and the belles lettres. In 1745 he published Principles of Moral Philosophy, 12mo. which first brought him into public notice as an author. Next year he published a piece, entitled Pensees Philosophiques, a work which gained him con- siderable fame, and was highly applauded by the partizans of the new philosophy, among whom he had now enrolled himself, and to the propagation of which he applied in the most zealous manner. He afterwards gave a second edition of this work, under the title of Etrennes aux Esprits Forts, which was eagerly read. About this period, having been concerned in a Medical Dictionary, it gave rise to the idea of the Dic- tionnaire Encyclopedique ; and, in conjunction with his friend d'Alembert, the plan of this vast undertaking was formed. Diderot's share in this work was large, for, besides many articles in va- rious departments of science, the whole of the arts and trades were furnished by him. Between the years 1751 and 1767, the first edition of the dictionary was completed ; and although Diderot had labored almost twenty years upon it, he received but a small consideration. During this period, however, he composed various other works, particularly A Letter on the Blind, for the use of those who See ; a work for which the author was confined six months at Vincennes,on account of the free sentiments it contained. About two years after, he published A Letter on the Deaf and Dumb, for the use of those who Hear and See, 2 vols. 12mo. His next produc- tions were two comedies, in prose, Le Fils Na- turel, 1757; and Le

Pere de Famille, 1758, which latter has been thought one of the best sentimental comedies that ever appeared on the French stage. Besides the above-mentioned works, Diderot wrote A Panegyric on Richard- son ; and An Essay on the Life and Writings of Seneca, which was published in 1779, and was the last work of his pen. At the conclusion of

the Encyclopedie, he was obliged to dispose of his library. The empress of llussia became a purchaser ; the price which the philosopher re- ceived was 50,000 livres ; while he was to be allowed the use of it during his life. Diderot was a member of the Academy of Science's ai Berlin. He died suddenly as he rose from table, July 31st, 1784. His works have been collected and published in two large octavo volumes.

DIDO, or ELISSA, a daughter of Belus, king of Tyre, who married Sichoeus or Sicharbas her uncle, priest of Hercules. Her brother, Pygma- lion, who succeeded Belus, murdered Sichaeus, to get possession of his immense riches ; and Dido, disconsolate for the loss of her husband, whom she tenderly loved, and by whom she was equally esteemed, set sail in quest of a settle- ment, with a number of Tyrians, to whom the cruelty of the tyrant had become odious. Ac- cording to some writers, she threw into the sea the riches of her husband, which Pygmalion so greedily desired ; and by that artifice compelled those ships to fly with her that had come by or- der of the tyrant to obtain the riches of Sichaeus. But it is more probable that she carried the riches along with her, and by their influence pre- vailed on the Tyrian seamen to follow her. During her voyage, Dido visited the coast of Cyprus, where she obtained fifty wives for her Tyrian followers. A storm drove her fleet on the African coast, where she bought of the in- habitants as much land as could be surrounded by a bull's hide cut into thongs. Upon this land she built a citadel, called Byrsa ; and the in- crease of population, and the rising commerce among her subjects, soon obliged her to enlarge her city, and the boundaries of her dominions. Her beauty, as well as the fame of her enter- prise, gained her many admirers ; and her sub- jects wished to compel her to marry larbas, king of Mauritania, who threatened them with a dread- ful war. Dido begged three months to give her decisive answer; and during that time she erected a funeral pile, as if wishing by a solemn sacrifice to appease the manes of Sichaeus, to whom she had promised^eternal fidelity. When all was prepared, she stabbed herself on the pile in presence of her people; and by this uncom- mon action, obtained the name of Dido, ' valiant woman,' instead of Elissa. According to Virgil and Ovid, the death of Dido was caused by the sudden departure of ;£neas, of whom she was deeply enamoured, and whom she could not ob- tain as a husband. This poetical fiction repre- sents j?Eneas as living in the age of Dido, and introduces an anachronism of nearly 300 years. Dido left Phoenicia 247 years after the age of ./Eneas, and about A.A.C. 953. This chronolo- gical error proceeded not from the ignorance of the poets, but

from a voluntary fiction. W'hile Virgil describes, in a beautiful episode, the des- perate love of Dido, and the submission oL'Eneas to the will of the gods, he traces the origin of the hatred between the republics of Rome and Car- thage, and pretends that it was kindled by a more remote cause than the jealousy and rivalship of two flourishing empires. Dido, after her death, was honored as a deity by her subjects.

DIDOT (Ambrose), a celebrated French ty- pographer, was born at Paris in 1730. His

fether was a printer and bookseller, and, having received a classical education, he materially im- proved various branches of his business, and the trades connected with it. The manufacture of fine paper received his early attention, and he invented many machines and instruments in aid of stereotyping. His edition of the Delphin clas- sics, and various other works, will long distin- guish his name. One of his sons became a celebrated type-founder, another shared with his father the reputation of being one of the first printers in Europe. His anxiety for accuracy is said to have been so great, that at the age of seventy-three, he read five times over each sheet of his son's edition of Montaigne. He died at Paris in 1804.

DIDUCTION, n.s. Lat. diductio. Separa- tion by withdrawing one part from the other.

He ought to shew what kind of strings they are which, though strongly fastened to the inside of the receiver and superficies of the bladder, must draw as forcibly one as another, in comparison of those that within the bladder draw so as to hinder the deduction of its sides. Boyle.

DIDUS, or DODO, in ornithology, a genus be- longing to the order of gallinse. The bill is contracted in the middle by two transverse rugs; each mandible is inflected at the point; and the face is bare behind the eyes. Only one species, viz. the ineptus, is mentioned by Lin- nseus : three are described by Buffon, viz. : —

1 . D. ineptus, the dronte of Buffon, or hooded dodo, is somewhat bigger than a swan, and nearly three feet in length. The bill is strong, large, and hooked at the end ; the gape stretches be- yond the eyes : the color is a very pale blue, except the end of the upper mandible, which is yellowish, and a red spot on the bend of it; the end of the lower is blackish ; the irides are

white. The general color of the plumage is cinereous, and soft to the touch ; the belly and thighs are whitish. The head is large, and seems as it were covered with a black hood or cowl. The wings are very short, and of a yellowish ash- color : the tail feathers are curled, stand up on the rump, and incline to yellow. The legs have four toes, three before and one behind ; are very stout, short, and yellowish ; the claws are black. It inhabits the islands of Mauritius and Bourbon in the Indian Ocean.

2. D. Nazarenus, the Nazarene dodo is bigger than a swan. The bill is a little bent downwards and large : instead of feathers, the whole is covered over with a black down ; but the wings are feather- ed, and it has some frizzled ones upon the rump, which serve instead of a tail : the legs are long and scaly, and there are three toes on each foot. This was met with in the Isle of France, and described as above by Fr. Cauche; who adds, that the female lays only one egg, which is white, and as big as a penny loaf, and that there is always found with it a white stone of the size of a hen's egg ; that it makes its nest of leaves and dry herbs, in the forests, on the ground ; and that there is likewise found a gray stoue in the gizzard of the young bird.

3. D. solitarius, the solitaire of Buffon, or so- litary dodo, is a large bird, and the male is said to weigh sometimes forty-five pounds. The neck

is of a proportionable length, and the eye black and lively : the head is not crested, and the general color of the plumage is gray and brown mixed : it has scarce any tail, and the bastard \vin« swells out into a round knob : the wings are too short for flight; and the hind parts are rounded like a horse's rump, being clothed with feathers, which may be termed coverts. The females are covered with sometimes brown, and sometimes light yellow feathers, and appear very beautiful. The feathers on each side of the breast enlarge into two white tufts, somewhat resembling the bosom of a woman. Those of the thighs are rounded at the end like shells ; and, according to Leguat, the bird has altogether a noble and ele- gant gait. It is an inhabitant of the Isle of Ito- drigue, where it is not uncommon ; but not met with in flocks, scarcely more than two being found together. It makes its nest in by-places, of the leaves of the palm, a foot and a half in thickness ; and lays one egg, bigger than that of a goose. The male sits in his turn ; and does not suffer any bird to approach within 200 yards of the spot while the hen is sitting, which is seven weeks. They are chased in the winter season, viz. from March to September, being then fat ; and the young birds are much esteemed for the table.

DIDYMUS, of Alexandria, an ecclesiastical writer of the fourth century ; who though he is said to have lost his sight at five years of age, when he had scarcely learned to read, yet ap- plied so earnestly to study, that he

was thought worthy to fill the chair in the famous divinity school at Alexandria. He was the author of a great number of works: but all we have now remaining are, a Latin Translation of his book upon the Holy Spirit, in the works of St. Jerome, who was the translator ; Short Strictures on the Canonical Epistles ; and a book against the Manichees.

DIDYNA'MIA; from Sic, twice, and Svvafuc, power; the name of the fourteenth class in Lin- naeus's sexual method ; consisting of plants with hermaphrodite flowers, which have four male organs, two long and two short. See BOTANY.

DIE, v. n. Goth, deia ; Sax. daedian ; Dan. and Swed. do; from Gr. StiSu, to fear, because death is generally an object of fear, says Minsheu, ingeniously. To lose or depart from life; taking by before an instrument of death ; of before a disease, or a positive cause of death ; and for be fore a privative; to sink or faint; grow vapid; to vanish ; perish ; be doomed to hell.

For wher we lyuen, we lyuen to the Lord, and whether we dim, we dien to the Lord, therefore wher we lyuen or dien we ben of the Lord.

Widif. Romayns. 14.

His heart died within him, and he became as a stone. 1 Samuel.

Except a corn of wheat fall into the ground, and die, it abideth alone ; but if it die, it bringeth forth much fruit. John.

If I die for it, as no less is threatened me, the king my old master must be relieved.

Shakspeare. King Lear

How now, my lord, why do you keep alone Of sorriest fancies your companion making, Using those thoughts which should iudeed have died With them they think on. Id. Macbeth.

This battle fares like to the morning's war, When dying clouds contend with growing light. Id. O, thou great power, in "whom we move,

By whom we live, to whom we die, Behold me through thy beams of love,

Whilst on this couch of tears I lie. Wutton.

So long as God shall live, so long shall the damned die. Hakewill on Providence.

At first she startles, then she stands amazed ; At last with terror she from thence doth fly,

4.nd loaths the watery glass wherein she gazed, And shuns it still, although for thirst she die.

Davies.

Oh let me live my own, and die so too!

To live and die is all I have to do. Denham.

The dira only served to confirm him in his first opinion, that it was his destiny to die in the ensuing combat. Dryden.

If any sovereignty, on account of his property, had been vested in Adam, which in truth there was not, it would have died with him. Locke.

The young men acknowledged in love-letters, that they died for Rebecca. Taller.

He in the load en vineyard dies far thirst .

Addison.

Hipparchus being passionately fond of his own wife, who was enamoured of Bathyllus, leaped and died of his fall. Id.

The smaller stains and blemishes may die away and disappear, amidst the brightness that surrounds them ; but a blot of a deeper nature casts a shade on all the other beauties, and darkens the whole character.

Id. Spectator. Trembling, hoping, lingering, flying,

Oh the pain the bliss of dying ! Pope.

Talk not of life or ransom, he replies ;

Patroclus dead, whoever meets me, dies :

In vain a single Trojan sues for grace •,

But least the sons of Priam's hateful race ;

Die then, my friend ! what boots it to deplore ?

The great, the good Patroclus is no more !

He, far thy better, was foredoomed to die;

And thou, dost thou, bewail mortality ?

Pope's Homer.

They often come into the world clear, and with the appearance of sound bodies ; which, notwithstand- ing, have been infected with disease, and have died of it, or at least have been very infirm. Wiseman.

Thy body dies ; but thou, thou must live for ever, and thine eternity will take its tincture from the man- ner of thy behaviour, and the habits thou contractest, during this thy short co-partnership with flesh and blood. Mason.

If the man who turnips cries, Cry not when his father dies, 'Tis a proof that he had rather Have a turnip than his father. Dr. Johnson.

Tis solitude should teach us how to die; It hath no flatterers ; vanity can give No hollow aid ; alone — man with his God must strive.

Byron.

Like the figures on arras, that gloomily glare, Stirred by the breath of the wintry air So seen by the dying lamp's fitful light, Lifeless, but life-like, and awful to sight. Id.

OFE, n. s, Fr. di; Ital. Span, and Portug. dado; Lat. tessertt (dice), from Gr. Tiaaapa, four, because four sided. A small cube, marked on its faces with numbers from one to six, which gamesters

thiow in play. Hence hazard, chance ; and gene- ally any small cube.

Eftsoons his cruel hand Sir Guyon staid, Tempering the passion with advisement slow, And mustering might on enemy dismayed ; For the' equal die of war he well did know.

Faerie Queene.

I have set my life upon a cast, And I will stand the hazard of the die.

Shakspeare. Richard III. To put it to the chance and try, I' the ballot of a box and dye, Whether his money be his own, And lose it, if he be

o'erthrown. Butler.

Thine is the adventure, thine the victory : Well has thy fortune turned the die for thee.

Dryden.

He Knows which way the lot and the die shall fall, us perfectly as if they were already cast. South.

Young creatures have learned spelling of words by having them pasted upon little flat tablets or dies.

Watts.

DIE, n.s.. plural dies. The stamp used in coinage.

Such v-rioty of dies made use of by Wood in stamp- ing his money, makes the discovery of counterfeits more difficult. Swift.

DIEMEN (Anthony Van), governor of the Dutch East India possessions, was born at Kui- lenberg, of which place his father was burgo- master. He went out to India in an inferior station, but was employed there as accountant to the government; and in 1625 became a member of the supreme council. In 1631 he returned to Holland as commander of the India fleet, but the following year went out again as director general ; and not long after was appointed gover- nor general, in which station he greatly extended the Dutch interest and power in the east. In 1642 he sent Abel Tasman on a voyage to the south, the consequence of which was the disco- very of the island near the south coast of New Holland, which Tasman named Van Diemen's Land. He died in 1645.

DIEMEN'S (Van) LAND, an island of Aus- tralasia, to the south of New Holland, from which it is separated by Bass's Straits ; having its north coast in S. lat. 40° 41', and its southern promontory in 43° 38′ S. Its length is about 170 miles, and breadth about 154, It was first seen by the Dutch commander, Tasman, in 1642, who, mistaking it for a part of what was then called the Great South Land, or New Holland, gave it its present name, in honor of the Dutch governor-general of Batavia, Anthony Van Die- men. But the Dutch did not land here at this time ; Tasman's carpenter only swam through the surf, < with the prince's flag, and a post, to set up as a memorial of their visit, to the poste- rity of the inhabitants of this country.' Our own enterprising navigators, Furneaux, Cook, Hayes, and above all Mr. Bass, the companion of captain Flinders, have far better pretensions to be called its discoverers. Furneaux and Cook anchored in Adventure Bay, and the latter had some communication with the islanders;

subsequently, Bligh and captain Cox put into Adventure and Oyster Bay; and, in 1794, cap- tain Hayes, of the Bombay marine, sailed up

what he named the Derwent River. But none of these navigators, nor yet the French, under d'Entrecasteaux, who discovered Storm Bay, supposed this to be an island; a fact which Mr. Bass first announced in the close of 1798, after tracing 600 miles of the coasts in this neighbour- hood, in a small decked whale-boat. Together with captain Flinders, he also first visited Port Dalrymple.

The general appearance of this island is diver- sified by ranges of moderate hills and broad valleys, having a fine soil. The hills, the ridges of which ' form,' according to Mr. Evans, ' irregular circles, are for the greater part wooded ; and, from their summits, are to be seen levels of good pasture-land, thinly interspersed with trees, the grass growing most luxuriantly. These beau- tiful plains are generally of the extent of 8000 or 10,000 acres; and this description is to be considered as common to the whole of the island.' The southern extremity terminates in a promontory, whose shape corresponds with, but whose height exceeds, that of the Table Moun- tain, of the Cape of Good Hope, and to which has been given the same name. The height of the Table, behind Hobart Town, is 3964 feet ; that of the Cape 3315. The former is covered with snow for seven or eight months in the year. To the eastward of the Tamar is a considerable mountain, named Ben Lomond, whose height has not been ascertained ; and another called Tasman's Peak. There is also a lofty mountain on the north-western part of the island, and a range of hills, called the Asbestos Hills, from the great quantity of that substance found in them. In the south-west part of the island, at the dis- tance of about sixty miles to the north-west of Hobart Town, are the Western Mountains, whose height is computed to exceed 3000 feet. A beautiful lake, in the midst of the last-men- tioned range, was visited, for the first time, in 181 7, by Mr. Beaumont, the provost-marshal of the island. The principal branch of the Der- went is supposed to flow from it, and he describes it as about fifty miles in circumference, and having its banks moderately clothed with wood. About the middle of the island are salt- pan plains, on which are several small lakes, the waters of which are strongly impregnated with salt, and from which many tons of this article are annually extracted. On all the lakes and rivers are water-fowl in abundance.

The climate is described as exceedingly fine and congenial to Englishmen. ' It is in fact,' says the Quarterly Review, ' England with a finer sky, witu

less of its winter frosts and of its au- tumnal and spring moisture ; all the fruits and vegetables of an English kitchen-garden are, without difficulty, raised here.' During summer the ordinary course of the weather is the alternate land and sea breeze, the former commencing early in the morning, and prevailing till noon, when it is succeeded by the latter, which usually lasts till after sun-set. Occasionally, however, a hot wind blows from the north or north-west, which, though resembling that of New South Wales, which there raises the thermometer to 106° in the shade, is greatly mitigated in Van Dicraen's Land, by passing across Bass's Straits.

The autumn is generally a serene and delightful season, and the weather continues fine and open to the middle or end of May. In June, rain, sleet, and, in elevated situations, snow, set in! with strong southerly gales ; but, even in winter! fine weather intervenes, and neither wind nor rains can be said to be periodical. Slight frosts occur at night, but neither ice nor snow remains throughout the day in the valleys and plains. In September the spring rapidly advances, and in October the weather resembles the ' faithless April of an English May.'

Van Dietnen's Land has four principal ports, connected with its rivers: Storm Bay, terminatin"- •with the Derwent; Port Dalrymple, or the Tamar; Port Macquarie, and Port Uuvey. The river Derwent, besides its direct outlet into Storm Bay, has a lateral one into Storm Bay Passage, canal d'Entrecasteaux, a strait about thirty miles long; dividing the large island Bruny from the main land, and continuing from two to five miles wide, till it opens to the Sou- thern Ocean, at Tasman's Head. This large inlet presents every where bold shores and deep water, perfectly sheltered from all winds, and forming a noble port. The Derwent, at its en- trance, is two miles broad, and takes a northerly course, which varies in breadth from one to two miles, expanding, occasionally, into large basins equally deep and safe for the distance of twenty- five miles, to which point ships of 500 tons burden can navigate with ease. Here the river begins to freshen, and continues hence for the distance of forty miles, narrowing gradually, but affording a safe passage for vessels of fifty tons as far as New Norfolk, where a ridge of rocks forms a rapid, and abruptly terminates the navigation.

Twelve miles up the Derwent, on the western bank, stands Hobart Town, the capital of the island, picturesquely placed under the Table Mountain already named. Down its side trill several rivulets, one of the most considerable ot which passes through the town, and discharges itself into Sullivan's Cove. The town is laid out on an extensive and regular plan, and has many handsome brick houses ; but the majority of the buildings are of wood and plaster. There are very few that are not white-washed (for lime abounds in the neighbourhood), and glazed ; and each has a paled garden.

Several respectable public buildings are either completed or in progress ; as a large church of brick and stone, a government-house, a county-jail, store and commissariat offices, a barrack for 100 men, and a small hospital, fenced in together ; a battery, guard-house, magazine, &c. The farms of settlers extend principally along the banks of the Derwent, from the entrance of the river from Storm Bay Passage; for the shores of Van Die- men's Land have often a rich black mould close to the edge of the cliff. On the Hobart side, the most considerable group of settlements is New Town, about two miles from Hobart Town, and is watered by a fine stream. A little below Ho- bart Town, on the opposite bank, is the settle- ment of Clarence Plains.

To the eastward, upon the north and easf sides of au extensive salt-water inlet, commuru

Bating with what the settlers call Frederik Hen- drik's Bay, is the more considerable settlement of Pittwater, the chief granary of the island. It is watered by two streams, and presents to view a vast extent of naturally clear ground. On the road from Hobart Town to Port Dalrymple, there is a plain extending, in one direction, for twenty miles, and clear land is frequent on that side of the island. To the north- west of Pittwater is the Coal River settlement. About twelve miles higher up are several farms; midway, stands Mount Direction, a remarkably picturesque hill. There are several scattered farms in this quarter, and on the east of the Der- went, as far as New Norfolk. Above the falls at this place the Derwent receives many rivulets; and a most beautiful and fertile country lies on its banks. All these settlements form together a county, under the name of Buckinghamshire, comprising about half the island, the other half being called the county of Cornwall.

The chief settlement near Port Dalrymple is Launceston, situated forty miles up the Tamar, at the confluence of two small streams, called the North and South Esk. This town is about 120 miles across the island from Hobart Town. The Tamar, not admitting large vessels more than seven or eight miles, George Town has been recently laid out near the mouth of the river, and governor Macquarie speaks of it being already in a flourishing state.

Port Macquarie and Port Davey are on the western coast. The channel inwards, of the former, is made between an island and the west head of entrance ; it is very deep, but not more than thirty yards wide ; the basin is navigable, but shoally for about eight miles, after which there is deep water. In its cliffs are veins of coal, and on its shores abundance of useful and valuable timber, particularly a sort of cedar called the Huon pine, much esteemed in the co- lony and in India, for its peculiar property of repelling insects. Port Davey is more to the southward, and is a spacious port, with an open entrance ; but the country is rocky and barren, and the timber difficult of access. Into these two ports fall Gordon's and several other rivers.

The mineralogical productions of this island are iron, copper, slate, alum, limestone, asbestos, and basalt; together with crystal, cornelian, jasper, marble, and various petrifactions. The first is most abundant towards Launceston, where entire mountains of this mineral, yielding twenty per cent, of ore, are said to be found. Its bo- tany, and general natural history, resemble those of New South Wales. All kinds of European grain flourish ; the harvests have never failed, it is said, for want of rain. ' Barley and oats pro- duce most abundantly, and the wheat is superior to that which is grown in New South Wales ; so greatly, indeed, that the difference of price which it bears in Sydney market will generally pay the expense of transport thither ; and the average produce is generally greater, with the exception, perhaps, of the flood-lands on the banks of the liawkesbury and Nepean. The natural grasses afford abundance of pasturage at all seasons of the year, and supersede the njcessity of making provi-

sion for winter provender in the shape of hay or other artificial food; and, notwithstanding the greater severity of the winters, every description ot stock attains a larger size here than in the neigh- bourhood of Port Jackson. The only advantage which the large island seems to enjoy over this, consists in the fineness of its wool, and the great excellence and variety of its fruits; particularly the grape, which promises to yield as good wine as any that is made in France, Spain, or Por- tugal. The temperature of Van Diemen's Land is not sufficiently high for the cultivation of the vine; but, by the introduction of the Merino sheep, the wool has been already so much im- proved, as to leave no doubt it will soon become a valuable article of export to the mother- country. Mr. Wentworth supposes, that twenty years hence, this single article will raise the co- lonists of New South Wales and Van Diemen's Land, to as high a pitch of happiness and pros- perity as is enjoyed by any portion of his ma- jesty's subjects in any quarter of the globe ; and that they may be enabled to ship, for Great Britain, every year, at least to the value of a million sterling. The exports, at present, consist of cattle, sheep, wool, flour, corned meats, hams, tongues, dried

fish, hides, tallow, barilla, bark for tanning leather, seal-skins and oil, whale-oil, and spars. The markets hitherto opened to the colonists are England, the Cape of Good Hope, Mauritius, and the East Indies. They have also sent considerable supplies of butcher's meat, corn, and potatoes to Port Jackson.' — Quarterly Review.

The wild animals are, the kangaroo, opossum, wombat, squirrel, kangaroo-cat, &c., aod (rarely) the hyaena opossum. Horned cattle, and particularly sheep, thrive excellently well, the ewes generally dropping lambs twice a year. Goats and pigs run wild. Few indigenous plants vvere found here, but nearly all the European fruits have cultivated with success.

Van Diemen's Land has a lieutenant-governor and judge-advocate of its own, commissioned by his majesty; but it has not obtained the benefit of a separate criminal jurisdiction, so that pri- soners for trial, prosecutors and witnesses, are compelled to make the voyage to Port Jackson. Its civil jurisdiction is confined to causes of £50 value; but the judge of the supreme court of New South Wales has lately made a circuit to the island for the trial of causes of greater value. The colony is peopled by free settlers and convicts from England as well as from New South Wales.

The remaining natives are few in number con- sidering the extent of country which they yet hold free, and in that state of extreme wretchedness which probably forbids their increase. They are, at present, hostilely inclined to Europeans; a circumstance ascribed to a fatal quarrel at the first settling, in which several of them were killed by the rash command of a young officer, and the memory of which has been kept alive by occasional encounters in the interior. The stock- keepers of the settlers are often assaulted by them with spears and stones ; but a more friendly- intercourse has been effected on the Western Coasts.

DIE MEN'S LAND.

241

The following Tables show: — 1. The progress of POPULATION in this Colony, from 1818 to 1820 (omitting the military). 2. The IMPORTS and EXPORTS of the cap:t?l at the same period.

TABLE I. — ABSTRACT OF THE GENERAL MUSTER BOOKS OF VAN DIEMAN'S LAND, IN OCTOBER 1818 AND 1820.

Number of Free

Acres of Land.

Horses.

lorned Cattle

Sheep.

Persons and

Convicts.

1

Settlers.

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13

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H ˆ

Hobart Town, Including that

part called the

county of

Buckingham.

In 1818

3529

1354

145

247J

97

106

4668

7019

30680

62909

640

333

483

1114

185

2755

In 1820

6293

409

349

454

158

142

8196

13753

44988

95477

726

392

759

1875

266

4018

Port

Dalrymple.

Including that

part called the

county of

Cornwall.

In 1818

15204

784

3J

214

29

32

1398

2271

13195

21099

189

78

150

267

55

739

In 1820

2982

119

18

63

45

66

2708

4181

12600

29403

255

118

241

712

104

1450

As many arri-

vals took place

during and

since the last

Muster may be

added

130

20

60

520

730

Grand Total

In 1818

50494

214

1484

269

126

138

6066

9290

43875

84008

829

411

633

1381

240

3494

Grand Total

In 1820

9275

528

367

517

203

208

10904

17934

57588

124880

1111

530

1060

3107

370

6178

Increase in

2 years

42264

314

2184

248

77

70

4838

8644

13713

40872

282

119

427

1726

13C

2684

TABLE II. — OFFICIAL RETURN OF THE IMPORTS AND EXPORTS AT HOBART TOWN FOR THE YEARS 1817 AND 1818.

IMPORTS (exclusive of Government Stores, British Goods, and India Piece-Goods).

Spirits.

Wine.

Beer.

Sugar.

Soap.

Tohacco.

fea.

Gallons.

Gallons.

Casks.

Tons.

Boxes.

Baskets.

Chests.

1817

10,313

2,291

47

83

156

370

278

1818

13,537

4,982

152

100

172

203

311

EXPORTS (exclusive of 250 Tons of Oil taken home by the licensed whaler Anne).

1

1

Horned

1 Seal and

Huon

Wheat.

Meat.

Cattle.

Sheep.

Kangaroo

Oil.

Potatoes.

Pine.

Skins.

Bushels.

Tons.

Tons.

Feet.

1817

24,000

20 tons

—

—

10,000

—

150

—

1818

8,000

70 casks

92

1,200

10,000

90

—

17,500

DIEPHOLT,or DIEPHOLZ, a county of West- phalia, belonging to Hanover, bounded on the north by the county of Hoya, on the east by Minden, on the south by the bishopric of Os- naburg, and on the west by Munster. It is about twenty-four miles long, and twelve broad ; and is full of briers, underwood, and morasses; except along the Dumma Lake. It contains four towns and about 16,000 inhabitants. The people are Lutherans, and subsist chiefly by feeding cattle, which they sell to Holland and the coun- tries bordering on the Rhine, along with coarse woollens and linens. This territory was erected into a country by Maximilian I. In 1585 it passed to the duchy of Zell, and from them to the electorate of Hanover. The inhabitants rear cattle and flax.

DIEPPE, a town of Normandy, in the de- partment of the Lower Seine, with a good har- bour, formed by the mouth of the river Arques. It has an old castle westward, and two piers. Packet boats pass between this port and

Brigh- ton constantly. They are about sixty-six miles distant. The church of St. James is a very fine structure, and there is a tower from which, in fine weather, the coast of England may be seen. The principal trade consists in fish, ivory toys, and laces. It was bombarded, and great part of it burnt by the English, in 1694. Here is a navigation school very well conducted. It con- tains about 20,000 inhabitants; and lies thirty- four miles north of Rouen, and 100 north-west of Paris.

DIES MARCHI.E was the day of congress or meeting of the English and Scotch, annually ap- pointed to be held on the marches or borders, in order to adjust all differences between them.

DIESIS, in music, is the division of a tone less than a semitone ; or an interval consisting of a less or imperfect semitone. Diesis is the smallest and softest change or inflexion of the voice imaginable : it is called a faint, expressed thus (X) by a St. Andrew's cross or saltire.

DIESPITER, in antiquity, a name given to Jupiter ; and signifying diei pater, father of the day.

DI'ET, n. s. From dies, an appointed day, Skinner ; from diet, an old German word sig- nifying a multitude. — Junius. An assembly of princes or estates. See the article.

An emperor in title without territory, who can or- dain nothing of importance but by a diet, or assembly of the estates of many free princes, ecclesiastical and temporal. Raleigh.

DI'ET, v. a., v. n> & ». S.-N FT. Germ, and Dut.

DIETA'RY, adj. I diete ; Span. Port.

DI'ETER, n.s. Vand Ital. dieta ;

DI'ETICAL, adj. i from Gr. SMITO, the

DI'ET-DRINK, w. s. _/ manner of living.

To feed or live by rule; to give food to; as a neuter verb, to feed ; eat : diet as a substantive is food, generally, or allowance of food. Dietary and dietic, pertaining to diet.

For his diet, there was a continual diet given him by the king. Jeremiah.

She diets him with fasting every day,

The swelling of his wounds to mitigate,

And made him pray both early and eke late.

Faerie Queene.

I'm partly led to diet my revenge. For that I do suspect the lusty Moor Hath leapt into my seat. Shakspeare. Othello.

When we've stuffed

These pipes, and these conveyances of blood, With wine and feeding, we have suppler souls, Than in our priestlike fasts ; therefore I'll watch him Till he be dieted to my request. Id. Coriolaitus.

Shew a while like fearful war, To diet rank minds sick of happiness, And purge the obstructions which begin to stop Our very veins of life. Id. Henry IV.

He sauced our broth as Juno had been sick, And he her dieter. Id. Cymbeline.

I commend rather some diet for certain seasons, than frequent use of physick ; for these diets alter the body more, and trouble it less. Bacon.

He received no other counsel than to refrain from cold drink, which was but adietetieal caution, and such as culinary prescription might have afforded.

Browne's Vulgar Errovrs. Time may come, when men

With angels may participate ; and find

No inconvenient diet, nor too light fare. Milton. Henceforth my early care

Shall tend thee, and the fertile burden ease ;

Till, dieted by thee, I grow mature

In knowledge as the gods, who all things know.

Id.

No part of diet, in any season, is so healthful, so natural, and so agreeable to the stomach, as good and well-ripened fruits. Temple.

Nature delights in the most plain and simple diet.

Addiion.

We have lived upon expedients, of which no country had less occasion ; we have dieted a healthy body into a consumption, by plying it with physick in- stead of food. Swift.

This book of Cheyne's became the subject of con- versation, and produced even sects in the dietetick phi- losophy. Arbuthnot on Aliments. Pref.

Milk appears to be a proper diet for human bodies, where acrimony is to be purged or avoided ; but not where the canals are obstructed, it being void of all saline quality. Id.

As an article of diet, salt seems to act simply as a stimulus, not containing any nourishment, and is the only fossil substance which the caprice of mankind has yet taken into their stomachs along with their food. Darwin.

DIET, in medicine, according to some, com- prehends the whole regimen of life, with regard to air, meat, drink, sleep, watching, motion, rest, the passions, retentions and excretions. Others restrict the term to eating and drinking alone. See FOOD. The natural constitution of the body of man is such, that it can easily bear some changes and irregularities without much injury. Had it been otherwise, we should be almost con- stantly put out of order by slight causes. This advantage arises from those wonderful commu nications of the inward parts, whereby, when one part is affected, another comes immediately to its relief. Thus, when the body is too full, na- ture causes evacuations through some of the out- lets : and for this reason, diseases from absolute inanition are generally more dangerous than from repletion, unless the latter be excessive ; because we can more expeditiously diminish that, increase the juices of the body. Uoon the same

account, though temperance be beneficial to all men, the ancient physicians advised persons in good health, now and then to eat and drink more plentifully than usual. But of the two, intemperance in drinking is safer than in eating. If a man be obliged to fast, he ought to avoid all laborious work. From satiety it is not proper to pass directly to sharp hunger, nor from hunger to satiety : neither will it be safe to indulge ab- solute rest immediately after excessive labor, nor suddenly to fall to work after long idleness. In a word, all changes in the way of living should be made by degrees. The softer and milder kinds of aliment are proper for children, and for youth the stronger. Old people ought to lessen the quantity of their food, and increase that of their drink : but some allowance is to be made for custom, especially in cold climates like ours : for as in these the appetite is

keener, so is the digestion better performed. The article ALI- MENT presents a regular table of all the ordinary articles of human food, or diet: in that of DI- GESTION more remarks on this subject occur.

DlET, GENERAL, OF THE GERMAN EMPIRE,

was usually held at Ratisbon, It consisted of the emperor, the nine electors, and the ecclesias- tical princes ; viz. the archbishops, bishops, ab- bots, and abbesses ; the secular princes, being dukes, marquises, counts, viscounts, or barons ; and the representatives of the imperial cities. It met on the emperor's summons, but any of the princes might send deputies. Peace and war, the levying of general taxes, and the assessment of different states, were among the principal sub- jects submitted to the deliberation of the diet. But it required the consent of the emperor to give their determinations the force of laws. The imperial dignity, though not hereditary, was possessed for several ages, without interruption,

than that which arises from the extent of his dominions within the limits of the confederacy. Two new kingdoms were created in the north, and two in the south. These were Hanover and Saxony, in the former; and Bavaria and Wir- temburg, in the latter.

The great powers of this new confederation are Austria, Prussia, Hanover, Saxony, Bavaria, and Wirtemburg. In the diet, each member of the confederacy has an equal vote. The mem- bers, as constituted by the act of congress, are seventeen, composed of the following separate or combined powers : —

1. Austria.

2. Prussia.

3. Bavaria.

4. Saxony, kingdom (not the duchies).

5. Hanover.

6 Wirtemberg.

.7. Baden.

8. The electorate of Hesse.

9. The grand duchy of Hesse.

10. Denmark for Holstein and Lauenburg.

11. The Netherlands for Luxemburg.

12. The grand ducal, and the ducal houses of

Saxony.

13. Brunswick and Nassau.

14. Mecklenburg, Schwerin and Strelitz.

15. Oldenburg, Anhalt, and Schwartzburg.

16. Hohenzollern, Lichtenstein, Reuss, Shaum-

burg-Lippe, Lippe, and Waldeck.

17. The free towns of Lubeck, Frankfort,

Bremen, and Hamburg.

This list therefore exhibits the present political division of Germany, and the states included un- der the same number vote in the diet conjointly. The deliberations of this body embrace all ordi-

by the house of Austria. The Confederation of nary discussions ; but when general laws are to the Rhine, during the domination of Buonaparte, be enacted, or changes made in the fundamental

completely dissolved this ancient system, and compelled the house of Austria to resign the style and title of emperor of Germany, which it has not since resumed.

rules or principles of the confederation, the diet forms itself into a general assembly, in which each state votes separately. But as it would evidently have been an unequal partition of

At the congress of Vienna, however, the con- power to have given each an equal voice in this

assembly, the number of votes possessed by the several states are regulated by their territoria/ extent and importance. For this purpose, th» whole of the confederacy is divided into four classes, which, with the population of each state, according to the official returns of 1818, and the number of votes it possesses in the general as- sembly, are as follow, viz : —

FIRST CLASS. States. Population. Votes.

1. Austria (for her possessions within the limits of the confederacy) 9,482,227 — 4

2. Prussia (exclusive of her Polish territories) .... 7,923,439 — 4

3. Saxony, kingdom of 1,200,000— 4

4. Bavaria, do. . . . . 3,560,000— 4

5. Hanover, do . . . . 1,305,350— 4

6. Wirtemburg, do . • . . . 1,395,463— 4

stitution of Germany was so far remodelled on the former plan, that a new diet was created to watch over the interests of what was now called the Germanic Confederation. By this confede- ration, although the title of elector ceases, all the states have a vote in the diet according to their respective territories, and the population. The emperor of Austria has no other preponderance

SECOND CLASS.

1. Baden, grand duchy of .

2. Hesse-Cassel, electorate of

3. Hesse-Darmstadt, grand duchy of .

4. Holstein and Lauenburg, duchies of

5. Luxemburg, grand duchy of- .

. 1,000,000— 3 . 540,000 — 3 . 619,500— 3 . 360,000— 3 . 214,058 — 3 R2

THIRD CLASS.

Stales.

Population. Votes.

1. Brunswick, duchy of .....

. 209,600— 2

2. Mecklenburg-Schwerin, grand duchy of .

. 358,000— 2

3. Nassau, duchy of .....

. 302,767— 2

FOURTH CLASS.

1 . Saxe-Weimar, grand duchy of ....

• 201,000— 1

2. Saxe-Gotha, duchy of

. 185,682— 1

3. Saxe-Coburg .....

80,012 1

4. Saxe-Meinungen .....

54,400— 1

5. Saxe-Hildburghausen

27,706— 1

6. Mecklenburg-Strelitz, grand duchy of ...

71,769— 1

7. Oldenburg .....

. 217,769— 1

8. Anhault-Dessau, duchy of

52,947— 1

*9. Anhalt-Bernburg **

37,046 1

10. Anhalt-Kothen

32,454 1

11. Schwartzburg-Sondershausen, principality of .

45,117— 1

12. Schwartzburg-Rudolstadt

53,937 1

13. Hohenzollern-Hechingen . . . . ,

14,500 1

14. Lichtenstcin

5,546 1

15. Hohenzollern-Sigmaringen . . . fir •.

35,360— 1

16. Waldeck, county of .....

51,877— 1

17. Reuss (Elder Branch), principality of . . i. i

i . -. • 22,255— 1

18. Reuss (Younger Branch)

52,205— 1

19. Hesse-Homburg

20,000 1

20. Schaumburg-Lippe

24,000 1

21. Lippe-Detmold .....

69,062— 1

22. Lubeck, the free town of

40,650 — 1

23. Frankfort

. -.: 47,850 1

24. Bremen .....

48,500— 1

25. Hamburgh .....

. ‘ . 129,800— 1

This federative body keeps up a military ar- mament, composed in time of peace of 120,000 men, including 96,000 infantry, 18,000 cavalry, and 6000 artillery. In war the contingent is to be increased ; the forces being one in every hun- dred of the population, which, according to the preceding scale, would be 301,000. A reserve of one in every 200 is also to be maintained ; which would therefore at present amount to 150,000 men. Of this army

Austria furnishes .

Prussia

Bavaria . > >

Wirtemburg .

Hanover

Saxony, kingdom of

Baden

The other states :

94,822 79,234 35,600 23,955 13,054 12,000 10,000 32,335

301,000

The pecuniary contributions of the several members of the confederacy have also been voted for five years ; after which the proportions are subject to revision. The fortresses that are con- sidered as essential to the defence of the domi- nions, belong in common to the confederation, and are to be repaired and supported at the ge- neral expense. Gennersheim, as

*commanding the passage of the Rhine, is to be made a place of great strength ; as well as Homburg and Ulm. For completing the fortifications of the last of these places, the sum of £800,000 was voted by th« diet in 1818. In *.ime of war, a generalis-*

simo is to be chosen by the diet, and who is to be accountable to them alone for his conduct.

DIETRICH, or DIETRICY (Christian Wil- liam Ernest), a modern artist, born at Weimar in 1712. He resided chiefly at Dresden, where he was professor of the Academy of Arts. He succeeded both in history and landscape, and painted above 150 small subjects, which he en- graved in the style of Salyator Rosa. Some of these etchings are exceedingly rare.

DIEU ET MON DROIT, Fr. i. e. God and my right. The motto of the arms of England, first assumed by Richard I. to intimate that he did not hold his empire in vassalage of any mortal. It was afterwards taken up by Edward III. and was continued without interruption to the time of king William III. who used the motto Je maintiendray, though the former was still retained upon the great seal. After him queen Anne used the motto Semper eadem, which had been before used by queen Elizabeth ; but ever since queen Anne, Dieu et mon droit has been the royal motto.

DIEU ET SON ACTE, in common law,, a maxim that the act of God shall hurt no man : so that if a house be beat down by a tempest, the lessee shall not only be free from an action of waste, but also have a right to take the timber to rebuild the house.

DIEU, ISLE DE, an island in the Atlantic, near the coast of France, about seven miles long, and two wide, fifteen miles S. S. W. of Noirmoutier. Long. 15° 17′ E. of Ferro,, lat. 46° 42′ N.

DIEZ (Juan or John Martin), better known as the Empecinado of modern Spanish guerilla warfare, was the son of a peasant of Valladolid,

Old Castile, and born in 1775. Having twice before served in the army, as a private dragoon, he first distinguished himself on the invasion of Spain by Buonaparte in 1808, when placing him- self at the head of a party of four

or five of his neighbours, he commenced killing the French couriers, seizing their horses, arms, &c. After the massacre committed by the French army at Madrid, Martin openly defied and harassed them in various directions ; and besetting the TOads, seized their convoys, and exceedingly ha- rassed their small parties. He and his twelve principal comrades are said to have slaughtered 600 Frenchmen in three months. He at first neither gave nor expected quarter; but when at the head of about fifty men, abandoned this mode of war- fare, but continued to signalise himself by great personal efforts. In one affair, being opposed to the commander of an enemy's party, the Etn- pecinado received a sword-thrust through his arm into his side ; when, enraged by the pain, he seized his adversary by the neck, dragged him from his horse, and fell with him to the ground, keeping himself uppermost. The struggle was violent, until both were disarmed, when, as the Frenchman refused to surrender, the Em- pecinado holding him down with one hand, snatched up a stone with the other and dashed his brains out. In September, 1809, Martin commanded 170 men, mounted, and placed them under the orders of the junta of Guadalaxara. He afterwards received the rank of a brigadier general of cavalry, but very unwillingly ex- changed his peasant's dress for uniform.

When the duke of Wellington entered Madrid in triumph, Diez attended him, and received his commands to join the army in the neighbourhood of Tortosa, at the head of 4850 men. After the peace he addressed a letter to king Ferdinand, dated February 13th, 1815, and evincing consi- derable powers of mind. It was published in 1823, in ' The Military Exploits of D. Juan Martin Diez, the Empecinado, who first com- manded, and the\i organised the System of Gue- rilla Warfare in Spain.' Yet he could write, it is said, no more than his name. On the establishment of the present wretched system of government in Spain the Empecinado became obnoxious to the ruling powers, and, notwithstanding all his former services, was seized on a charge of conspi- racy, tried, and executed at Ruedtz, the 19th of August, 1825.

DIFF, the name of an instrument in music among the Arabs, serving chiefly to beat time to the voice ; it is a hoop, sometimes with pieces of brass fixed to it to make a gingling, over which a piece of parchment is distended. It is beat with the fingers, and is the true tympanum of the ancients.

DIFFARREATION, in Roman antiquity, a cerp.mony whereby the divorce of their priests was solemnised. The word comes from the preposition dis, used in composition for division, and farreatio, a ceremony with wheat, of far, wheat Diffarreation was properly the dissolv- ing of marriages contracted by confarreation, which were those of the pontifices or priests. Festus says, it was performed with a wheaten cake. Vigenere will have confarreation and

diffarreation to be the same thing, contrary to the obvious derivation of the words.

DIFFER, v. n. ~\ French differer ;

DIFFERENCE, v. a. & n.s. Span.rfe/erencwr; DIFFERENT, adj. { Itzl. differ ire, Lat.

DIFFERENTIAL, [diffcrre, from dis

DIFFERENTLY, adv. different,andfe7re,

DIF'FERINGLY, adv. j to scatter. To be distinguished from ; to contend; to beat variance. To difference is to make things to differ; a dif- ference, the diversity or contrariety made : hence a dispute ; quarrel ; and the evidence or ground of distinction, or quarrel. Differential is a sci- entific term explained below. The two adverbs seem synonymous.

Where the faith of the holy church is one, a dif- ference between customs of the church doth no harm.

Hooker.

You shall see great difference betwixt our Bohemia and your Sicilia. Shakspeare. Winter' Tale.*

Oh the strange difference of man and man ! To thee a woman's services are due ; My soul usurps my body. Id. King Lear.

What was the difference ?

• It was a contention in publick. Id. Cymbeline. This nobility, or difference from the vulgar, was not in the beginning given to the succession of blood, but to the succession of virtue. Raleigh.

A man of judgment shall sometimes hear ignorant men differ, and know well within himself that those which so differ mean one thing, and yet they them selves never agree. Bacon.

If the pipe be a little wet on the inside, it will make a differing sound from the same pipe dry. Bacon.

This is notoriously known in some difference of brake or fern. Browne's Vulgar Errourt.*

Opiniators naturally differ

From other njen ; as wooden legs are stiffer

Than those of pliant joints, to yield and bow.

Which way soe'er they are designed to go.

Butler.

Such protuberant and concave parts of a surface may remit the light so differingly, as to vary a colour.

Boyle.

Nothing could have fallen out more unlukcily than that there should be such differences among them about that which they pretend to be the only means of ending difference. Tillotson.*

Most are apt to seek all the difference of letters in those articulating motions ; whereas several combina- tions of letters are framed by the very same motions of those organs which are commonly observed, and are differenced by other concurrent causes. Holder.*

Thus, born, alike, from virtue first began The difference that distinguished man from man : He claimed no title from descent of blood ; But that, which made him noble, made him good.

Dry den.

Though it be useful to discern every variety that is to be found in nature, yet it is not convenient to con- sider every difference that is in things, and divide them into distinct classes under every such difference.

Locke.

Grass differenceth a civil and well cultivated region from a barren and desolate wilderness. Ray-

lu things purely speculative, as these are, and no ingredients of our faith, it is free to differ from ono another in our opinions and sentiments.

Burnet's Theory.

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The world's a wood, in which all lose their way, Though by a different path each goes astray.

Buckingham.

DIF

DIFFICILE, adj.

Fr. difficile; Span.

There are certain measures to be kept, which may leave a tendency rather to gain than to irritate those who differ with you in their sentiments.

Addison's Freeholder.

He may consider how differently he is affected by the same thought, which presents itself in a great writer, from what he is when he finds it delivered by an ordinary genius. Id.

By different methods different men excel ; But where is he that can do all things well ?•

Churchill.

Plutarch, discoursing of the effects of the air on the minds of men, observes, that the inhabitants of the t'iraeum possessed very different tempers from those of the higher town in Athens, which was distant about four nyles from the former : but I believe no one at- tributes the difference of manners in Wapping and St. James's to a difference of air or climate. Hume.

The difference of natural tempers seems to be chiefly owing to the different degrees of influence the several passions have upon the mind. Mason.

The powers of the letters, when they were applied to a new language, must have been vague and un- settled, and therefore different hands would exhibit the same sound by different combinations.

Johnson. Preface to Dictionary.

Differential method, is applied to the doctrine of infinitesimals, or infinitely small quantities, called the arithmetick of fluxions. It consists in descending from whole quantities to their infinitely small differ- ences, and comparing together these infinitely small differences, of what kind soever they be : and from thence it takes the name of the differential calculus, or analysis of infinitesimals. Harris.

DIFFERENCE, in heraldry, a term given to the figures added to coats of arms, serving to distin- guish one family from another; and to show how

distant younger branches are from the elder or principal branch. %

DIFFERENCE, in logic, an essential attribute belonging to some species, and not found in the genus; being the idea that defines the species. Thus, body and spirit are the two species of sub- stance, which, in their ideas include something more than is included in the idea of substance. In body, for instance, is found impenetrability, and extension ; in spirit, a power of thinking and reasoning; so that the difference of body is im- penetrable extension, and the' difference of spirit is cogitation.

DIFFERENCE, in mathematics, is the remainder, when one number or quantity is subtracted from another.

DIFFERENTIAL, in the higher geometry, is an infinitely small quantity, or a particle of quan- tity so small as to be less than any assignable one. It is called a differential, or differential quantity, because frequently considered as the difference of two quantities ; and, as such, is the foundation of the differential calculus. Sir Isaac Newton, and the English, call it a moment, as being considered as the momentary increase of quantity. See CALCULUS.

DIF'FICILENESS, n. s. j dificil ; ml. and Lat.

• difficile, de, privative, andfacilis, easy. Hard; 1 not easy ; not obvious ;

DIFFICULT, adj. DIFFICULTLY, adv. DIF'FICULTY, n. s.

distressing; scrupulous. Difficile and difficult are synonymous adjectives ; the former being common in our old writers. The synonymous substantives are difficulty and difficileness. It is difficult in the eyes of this people.

Zachar.

The cardinal finding the pope difficil in granting the dispensation, doth use it as a principal argument, concerning the king's merit, that he Lad touched none of those deniers which had been levied by popes in England. Bacon,

There be that in their nature do not affect the good of others : the lighter sort of malignity turneth but to a crossness or frowardness, or aptness to oppose, or difficilness, or the like ; but the deeper sort to envy and mere mischief. Id.

The way he came, not having marked, return Was difficult, by human steps untrod. Milton.

Latin was not more difficil Than to a blackbird 'tis to whistle. Hudibrat.

Some write in Hebrew, some in Greek, And some, more wise, in Arabic, To avoid the critic, and the expense Of difficulty, wit, and sense. Id.

A man, who has always indulged himself in the full enjoyment of his station, will difficultly be per- suaded to think any methods unjust that offer to con- tinue it. Rogers's Sermons.

They mistake difficulties for impossibilities ; a per- nicious mistake certainly ; and the more pernicious, for that men are seldom convinced of it, till their convictions do them no good. South.

Men should consider, that raising difficulties con- cerning the mysteries in religion, cannot make them more wise, learned, or virtuous. Swift.

It is very difficult to praise a man without putting him out of countenance. Addison.

If, therefore, we would have the benefit of seeing our language more generally known among mankind, we should endeavour to remove all the difficulties, however small, that discourage the learning of it. But I am sorry to observe, that of late years those difficulties, instead of being diminished, have been augmented. Franklin.

Some of the cases which occurred about this time are of such a kind, that it is difficult to imagine by what casuistry the jury could have been reconciled to their verdict. Sir S. Romilly.

Nothing so difficult as a beginning

In poesy, unless perhaps the end ; For oftentimes when Pegasus seems winning

The race, he sprains a wing, and down we tend, Like Lucifer, when hurled from heaven for sinning.

Byron.

DIFFIDE', v. n. } Fr defter ; from Lat.

DIF'FIDENCE, n. s. > diffido ; de, privative,

DIF'FIDENT, adj.) and Jide, confidence; trust. To distrust ; have no reliance on : diffi- dence, the more common word, is therefore, doubt; distrust; whether applied to ourselves or others.

No man almost thought himself secure, and men durst scarce commune or talk one with another; but there was a general diffidence every where.

Bacon's Henry VII.

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DIG

I am not so confident of my own sufficiency, as not willingly to admit the counsel of others ; but yet I am nnt so diffident of myself, as brutishly to submit to any man's dictates. King Charles.

You have brought scandal To Israel, diffidence of God, and doubt In feeble hearts, propense enough before To waver. Milton's Agonistes.

Be not diffident

Of wisdom ; she deserts thee not, if thou Dismiss not her, when most thou need'st her nigh.

Milton.

If the evidence of its being, or that this is its true sense, be only on probable proofs, our assent can reach no higher than an assurance or diffidence arising from the more or less apparent probability of the proofs.

Locke.

With hope and fear The woman did the new solution heat : The man diffides in his own augury, Aud doubts the gods. Dryden.

The generality of mankind, either out of laziness, or diffidence of their being able to judge right in points that are not very clear, are apt rather to take things upon trust, than to give themselves the trouble to examine whether they be true or no. Buckingham.

Be silent always when you doubt your sense ; And speak, though sure, with seeming diffidence.

Pope. Distress makes the humble heart diffident.

Clarissa.

Pliny speaks of the Seres, the same .people with the Chinese, as being very shy and diffident in their manner of dealing. Arbuthnot.

My memory of past errors makes me diffident for he future. Hume on the Human Understanding.

DIFFI'ND, v. a. Lat. diffindo. To cleave in

two; to split.

DIFFI'SSION, w. s. Lat. diffissio. The act

of cleaving or splitting.

DIFFLATION, n. s. Lat. difflare. The act

of scattering with a blast of wind. DIFFLU'ENCE, or} Lat. diffluo; dis, di-
DIFFLUEN'CY, n. s. > versely, and fluo, to DIFFLU'ENT, adj. jflow; Gr. /3Xow. To

flow diversely. The flowing away on all sides,

as a fluid.

Ice is water congealed by the frigidity of the air, whereby it acquireth no new form, but rather a con- sistence or determination of its diffluency ; and adroit- teth not its essence, but condition of fluidity.

Browne's Vulgar Errours.

DI'FFORM, adj.) From Lai. forma. Con- DI'FFORMITY, n. s.] trary to uniform ; having parts of different structure ; dissimilar ; unlike ; as a difform flower, of which the leaves are un- like each other.

While they murmur against the present disposure of things, they desire in them a diffbrmity from the primitive rule, and the idea of that mind that formed all things best. Browne's Vulgar Errmirs.

The unequal refractions of difform rays proceed not from any contingent irregularities ; such as are veins, an uneven polish, or fortuitous position of the pores of glass. Newton.

DIFFRA'NCHISEMENT, n.s. Fr. franchise. The act of taking away the privileges of a city.

DIFFUS'E, va . & adj. ˆ Ital. diffondcre , DIFFUSE'D, part. adj. Lat. diffundere ; dis, DIFFL'SEDLV, adv. diversely, and fun

DIFFI/SF.DNESS, n. s. \do, to shed. ' To DIFFUSION, j pouroutonasupei-

DIFFU'SIVE, adj. | ficies ; hence to

DIFFUSIVELY, adv. J spread, to scatter; diffuse, as an adjective, therefore,

sometimes means obscure of meaning ; difficult to gather ; also ex- tended. Diffusion is a state of dispersion; copi- ousness; exuberance.

He grows like savages, To swearing and stern looks, diffused attire, And every thing that seems unnatural.

Shakspeare. Henry V.

Whereas all bodies act either by communication of their natures, or by the impressions ami signatures of their motions, the diffusion of species visible seerneth to participate more of the former operation, and the species audible of the latter. Bacon's Natural History.

Wisdom had orJained

Good out of evil to create ; instead

Of spirits malign, a better race to bring

Into their vacant room, and thence diffuse

His good to worlds, and ages, intinite. Milton.

A sheet of very well sleeked marble paper did not cast distinct colours upon the wall, nor throw its light with an equal diffusion ; but threw its beams, unstained and bright, to this and that part of the wall.

Boyle on Colours. A chief renowned in war,

Whose race shall bear aloft the Latian name,

And through the conquered world diffuse our fame.

Dryden. The stars, no longer overlaid with weight,

Exert their heads from underneath the mass,

And upward shoot, and kindle as they pass,

And with diffusive light adorn their heavenly place.

Id.

No man is of so general and diffusive a lust, as to prosecute his amours all the world over. South.

They are not agreed among themselves where infal- libility is seated ;

whether in the pope alone, or a council alone, or in both together, or in the diffusive body of Christians. Tillotson.

All liquid bodies are diffusive ; for their parts being in motion, have no connexion, but glide and fall off any way. Burnet's Theory of the Earth.

The fault that I, find with a modern legend is its diffusiveness ; you have sometimes the wJiole side of a medal overrun with it. Addison on Medals.

The wisdom of the ignorant somewhat resembles

the instinct of animals ; it is diffused, but in a very

narrow sphere j but within the circle it acts with

vigour, uniformity, and success. Goldsmith.

Some glossy-leaved and shining in the sun,

The maple, and the beech of oily nuts

Prolific, and the lime at dewy eve,

Diffusing odours. Cowper.

DIG, v. a. & v. n. Saxon, die ; Dan. dyger ; Belg. dyken ; from dick, a ditch. To pierce and turn over the earth ; to cultivate ground ; to form by digging ; to pierce ; to obtain any thing by this operation. As a neuter verb, to work with the spade.

They long for death, but it cometh not ; and dig for

J r.i ::: Ol

it more than for hid treasures.

Job iii. 21.

If I digged up thy forefathers' graves. And hung their rotten coffins up in chains, It would not slake mine ire. Shahtpeare.

The walls of your garden, without their furniiuro, .OOK as ill as tho«e of your hoise : so that you cannot uiff up your garden too often. Temple.

When we visited mines, we have been told by dig- gers, that even when the sky seemed clear, there would suddenly arise a steam so thick, that it would put out their candles. Boyle.

Nor was the ground alone required to bear

Her annual income to the crooked share ;

But greedy mortals, rummaging her store,

Digged from her entrails first the precious ore.

Dryden'i Ovid.

A rav'nous vulture in his opened side Her crooked beak and cruel talons tried ; Still for the growing liver digged his breast ; The growing liver still supplied the feast.

Id. JEneid.

The Italians have often dug into lands, described in old authors as the places where statues or obelisks stood, and seldom failed of success.

Addison's Travels.

It is digged out of even the highest mountains, and all parts of the earth contingently ; as the pyrites.

Woodward.

The bushman spade is a pointed stick about three feet long, to which there is affixed about the middle a stone to increase its power in digging up bulbous roots. Burchell'i Travels.

DIGAMMA, a letter of the Greek language retained in the ˆolic dialects. Dr. Jones observes that such letters were formerly aspirates, as they derived their origin from the strong guttu- rals, which the Greeks borrowed from the ori- ental tongues; and hence he traces the origin of the /Eolic digamma. It is the tendency of every guttural, says this writer, when become habitual, to soften down in the rapidity of utterance into a mere aspirate. The digamma, he contends, did not belong, as Dr. Bentley and others supposed, to the jEolic dialect only, but to all the dialects of Greece in their more ancient mode of pronun- ciation; and ha observes, in opposition to the opinion of the learned, who say that the digamrra at first prevailed, and was afterwards succeeded by the aspirate, that the gutturals at first pre- vailed, which were softened into mere aspirates, and that these were again

changed for a more easy and agreeable letter, which being simply a labial, was diversified by different people into y, w, v, 0, b or f.

Dr. Marsh would have it called, the Pelasgic di- gamma. 'The connexion,' says he, 'between the Pelasgi and the JEolic dialect has been fully estab- lished. Indeed, it might properly be called the Pelasgic dialect : for it was used by the Pelasgi, before the name of I'Eolic existed. The principal migrations of the Pelasgi, both to Italy, and to the islands in the ˆEgean sea, took place from Thes- saly, as we have already seen, during the reign of Deucalion. They carried, therefore, their dialect to Italy, and to the islands in the .ffigean sea, before that dialect had acquired the appel- lation of ˆEolic. The character, therefore, which distinguishes the j(Eolic dialect, might pro- perly be called the Pelasgic digamma.' — Horo Pelasgtf, p. 50.

This, however, the learned bishop of Salisbury disputes. — ' By the / Eolians,' the Digamma, as he states, 'was anciently called Vau, or Wau, the name which is given to the sixth letter in the

Hebrew, Syriac, and Samaritan Alphabets, and to the letter corresponding to it in the Arabic and Ethiopic Alphabets. The term Digamma ha3 little or no relation to its power, and must have been given to it after the knowledge of its origin was lost. The Greek grammarians, com- paring it with the third letter or" their alphabet, called it a double gamma; but it was in fact a double Vau. Its new name must have followed its new figure, which was probably given it to distinguish the consonant power of the letter from the vowel.' — Letter to the Bishop of Dur- ham. 1815.

*However this may be, Homer has so frequently used it, as to give it with some writers the name of the Homeric digamma. His object was clearly to avoid every hiatus of vowels : but when the introduction of aspirates had insensibly abo- lished the use of this letter with the transcribers, its existence could only be traced in a few ancient inscriptions. To remove the harshness thus often apparent iu this great poet, the com- mentators interposed the final v, or the par- ticles v, d', T, altering, with respect to the first, the case of words sometimes and conse- quently the sense. ' Numberless passages/ says Dr. Valpy, ' remained in their naked defor- mity, and exercised the conjectural sagacity of grammarians and commentators. Thus in the verse in the opening of the Iliad ; ' Hpwo*i> av- roiic tie e\wpia Tivxt Kvvtiraiv ;' aware of the inhar- monious effect of the concurrence of the two t, they cut off the former. The quantity of the latter created another difficulty. Some doubled the X, and others asserted that t was lengthened before the liquid. But there were passages, to which even these and similar expedients were in- applicable. A successful effort was made by the great Bentley to/ remove these embarrassments. The restoration of the digamma has at length vindicated the poet, and displayed*

the harmo- nious beau ties of his original versification.' Dr. V. furnishes us with the following Table of words iu Homer, which either constantly, or generally admit the digamma in the initial vowel.

ayw,)

to £,'"w'

fAIKtg,

ayvu/u, t

i i H (('J •

break, ,. '

llCltl\OV,

*kiwi**

a\t}/xt,

!'.\in

tilCt\OG, ilKOffl,

eXTTtg,

fXTTW,

uAic,

U\U)fU,

dva£,

t»cw,to resemble,£\w, tiXap, ?Xwp,*

avdavii), apato£, dpSio,

ClAMtff (tXvijj, ilXvipdu,

£('X(il,

C/\U/LllUf

tVlTOl, tVVVftl,

touca.

apUTTOV,

apvig,

UffTV,

tipyw,

fipw,

RffKW,

iKaQtv,

IKUQ, tKOffTOff

tap, sSvov, tOttpa, Wivt

iKT)Tt,

ipvw, to draw

DIG

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DIG

ITOQ, top»C,

iruwrtoe, isficu,

e(i>, to put on. V'/eeXot,1,

H

iviov, lov,

OIVOQ, 8ft

owpov.

jjpiov,

rta,

The form of the digamma in the first instance was that of a gamma reversed; then that of a gamma; afterwards it was written in the shape of a double gamma F , whence it derives its name ; and hence it has been written F as FajStoi for FojScoc, TiOtv for VtOiv, Ytvro for Fevro, JEol. for WTO, Dor. for SfXro, from ?Xw, &c. Claudius ordered chat it should be written £, or F reversed, but that form seems to have ceased after it was used in the inscription on the tomb of that em- peror ‘ TERMINAJIT.’ It has often been ex- pressed by B, and sometimes by K, M, n, P, $, X. See letter F.

DI’GAMY, n. s. Gr. Siyapia. Second mar- riage ; marriage to a second wife after the death of the first : as bigamy, having two wives at once.

Dr. Champny only proves, that archbishop Cranmei was twice married ; which is not denied : but brings nothing to prove that such bigamy, or digamy rather, deprives a bishop of the lawful use of his power of ordaining. Bishop Feme.

DIGBY, a town of Nova Scotia, on the south- east side of Annapolis Bay, eighteen miles south- west of Annapolis, and fifty-three north by east of Yarmouth. It is one of the most considerable of the new settlements of Nova Scotia.

DIGBY (Sir Kenelm), an illustrious author and statesman of the seventeenth century, was de- scended of an ancient English family. His father, Everard, was beheaded under king James, I. for being engaged in the gunpowder plot. King Charles I. made the son a gentleman of the bed-chamber, commissioner of the navy, and governor of the Trinity House. He granted him letters of reprisals against the Venetians, by vir- tue of which he took several prizes, with a small fleet. He fought the Venetians near the port of Scanderoon, and bravely made his’ way through them with his booty. He also translated various authors into English; and his Treatise on the Nature of Bodies and the Immortality of the Soul, discovers great penetration and knowledge. In the beginning of the civil wars, he exerted himself vigorously in the king’s cause; but was afterwards imprisoned, by order of the parliament, in Winchester-house, and had leave to depart

thence in 1643. He afterwards compounded for his estate, but was ordered to leave the nation; when he went to France, and was se'it on two

embassies to pope Innocent X. from the queen, widow of Charles I. whose chancellor he then was. On the Restoration he returned to London , where he died in 1665, aged sixty.

DIGE'ST, v. a. &«. s. ˆ Fr. digerer ; Sp. DIGEST 'ER, n. s. digestir ; Lat. di-

DIGEST'IBLE, {.gero, digestum, dis

DIGEST'ION, n s. [diversely, and gero

DIGEST'IVE, adj. & n. s. to bear. To dis- DIGEST'URE. J tribute, or reduce,

into the proper classes, or sorts : hence to con- coct in the stomach, and soften or adapt by heat ; and to receive with enjoyment. The de- rivatives all follow these meanings.

First, let us go to dinner,

— Nay, let me praise you while I hixve a stomach. — No, pray thee, let it serve for table talk, Then, howsoe'er thou speak'st, 'mong other things I shall digest it. Shakipeare.

Now good digestion wait on appet.te And health on both. It'.

I had a purpose to make a particular digest, or rc- compilement to the laws of irine own natior..

Bacon.

We conceive, indeed, that a perfect good concoc- tion, or digestion, or maturation of some metals, will produce gold. /'.

Those medicines that purge by stool are, at the first, not digestible by the stomach, and therefore move immediately downwards to the guts. Id.

A chilifactory menstruum, or a digeitive preparation, drawn from species or individuals, whose stomachs peculiarly dissolve lapideous bodies.

Browne's Vulgar Errours.

It is not good to devour the favours of God tor> greedily : but to take them in, that we may digest them.

Bp. Hall. Contemplations.

The earth and sun were in that very state ; the one active, piercing, and digestive, by its heat ; the other passive, receptive, and stored with materials for sucli a production. Hale.

The digestion of the counsels in Sweden is made in senate, consisting of forty counsellors, who are gene- rally the greatest men. Temple.

Rice is of excellent use for all illnesses of the sto- mach, a great restorer of health, and a great digester .

Id.

When men comfort themselves with philosophy, it is not because they have got two or three sentences, but because they have digested those sentences, and made them their own ; so upon the matter, philosophy is nothing but discretion. Selden.

Every morsel to a satisfied hunger, is only a new labour to a tired digestion. South

Did chymick chance the furnaces prepare, Raise all the labour-houses of the air, And lay crude vapours in digestion there ?

Blackmore.

People that are bilious and fat, rather than lean, are great eaters and ill digesters. Arbuthnot.

Laws in the digest shew that the Romans applied themselves to trade. Id. On Coins.

I dressed it with digestives. Wiseman.

The first stage of healing, or the discharge of mat tor, is by surgeons called digestion.

Sharp's Surgery.

Chosen friends, with sense refined, Learning digested well. Thomson.

Britain has not yet well digested the loss of its do- minion over us ; and has still at times some flatter- ing hopes of recovering it. Franklin.

DIG

As Life discordant elements arrests, Rejects the noxious, and the pure digettt, Combines with Heat the fluctuating mass, And gives awhile solidity to gas. Darwin.

Oh, the souls of some men

Thou wouldst digett what some call treason, and Fools treachery. Byron.

DIGEST, DIGESTUM, is a collection of the Ro- man laws, ranked and digested under proper titles by order of the emperor Justinian. That prince gave his chancellor Tribonianus a com- mission for this purpose : who, in consequence of this, chose sixteen jurisconsulti, or lawyers, to work upon them. These, accordingly, took the best decisions from the 2000 volumes of the an- cient jurisconsulti, and reduced them all into one body ; which was published A. D. 533, under the name of the Digest. To this the emperor gave the force of a law, by a letter at the head of the work, which serves it as a preface. The Digest makes the first part of the Roman law, and the first part of the corpus or body of the civil law contained in fifty books. It was translated into Greek under the same emperor, and called Pan- decta See PANDECTS. Cujas says, that Digest is a common name for all books disposed in a good order and economy ; and hence Tertullian calls the gospel of St. Luke a digest. Hence also abridgments of the common law are deno- minated digests of the numerous cases, argu- ments, readings, pleadings, &c., di°nersed in the year books and other reports and books of law, reduced under proper heads. The first was that of Statham, which comes as low as Henry VI.

DIGESTER, an instrument invented by Mr. Papin about the beginning of the last century. It is a strong vessel of copper or .iron, with a cover adapted to screw on with pieces of felt or paper interposed. A valve with a small aperture is made in the cover, the stopper of which valve may be more or less loaded, either by actual weights, or by pressure from an apparatus on the principle of the steelyard. The purpose of this vessel is to prevent the loss of heat by evapora- tion. The solvent power of water when heated in this vessel is greatly increased.

DIGESTION. For the rationale of this process, see PHYSIOLOGY. See also the word BILE for an account of part of the changes which aliment un- dergoes, before it may in one sense be said to be duly digested; and, for an account of the de- rangements in the process of digestion see the article MEDICINE, and the word STOMACH ; under which last word, the reader

will find a detailed account of those modern theories which have re- cently excited so much attention in respect of stomach derangements and their general influ- ence over the frame. It is under this word, that we propose discussing the merits and demerits of these theories, and engaging in a somewhat comprehensive disquisition on the subject in all its bearings.

DIGESTIVES, in medicine, such remedies as strengthen and increase the tone of the stomach, and assist in the digestion of food. To this class belong all stomachics' and strengtheners, or cor- roborants.

DIGGING, among miners, is appropriated to the

operation of freeing any kind of ore from the bed or stratum in which it lies, where every stroke of their tools turns to account : in contradistinction to the openings made in search of ore, which are called hatches, or essay hatches : and the opera- tion itself, tracing of mines or hatching. When a bed of ore is discovered, the beele-men free the ore from the fossils around it; and the shovel- men throw it from one shamble to another, till it reaches the mouth of the hatch. In most mines, to save the expense as well as fatigue of the shovel-men, they raise the ore by means of a winder and two buckets, one of which goes up as the other comes down.

DIGHT, v. a. Goth. & Swed. duga; Sax. dihten. To arrange; dress; embelish. It seems always to signify the past ; the participle passive is dight, as dighted in Hudibras is per- haps improper.

Every spirit as it is most pure And hath in it the more of heavenly light,

So it the fairere body doth procure To habit in, and it more fairly dight With cheerful grace, and amiable sight.

Spenser.

On his head his dreadful hat he dight, Which maketh him invisible to sight.

Hub. Tale.

Let my due feet never fail To walk the studious cloisters pale ; And love the high embowed roof, With antick pillar, massy proof ; And storied windows richly dight, Casting a dim religious light. Milton.

Just so the proud insulting lass Arrayed and dighted Hudibras. Hudibrat.

DIG'IT, re. s. > Lat. digitus ; from Gr, DIGITATED, adj. j &ucw, fcuccroc, to show, be- cause we point out any thing with the finger. Any of the numbers expressed by a single finger. Also a measure of about three-fourths

of an inch, from the width of the finger ; or the twelfth part of the sun's or moon's diameter. Digitated is branched out.

Not only the numbers seven and nine, from consi- derations abstruse, have been extolled by most, but all or most of other digits have been as mystically ap- plauded. Browne's Vulgar Errours.

For animals multifidous, or such as are digitated, or have several divisions in their feet, there are but two that are uniparous : that is, men and elephants.

Id.

If the inverted tube of mercury be but twenty-five digits high, or somewhat more, the quicksilver will not fall, but remain suspended in the tube, because it cannot press the subjacent mercury with so great a force as doth the incumbent cylinder of the air, reach- ing thence to the top of the atmosphere. Boyle.

DIGIT, in astronomy, is used to express the quantity of an eclipse. Thus an eclipse is said to be of six digits, when six of these parts are hid.

DIGIT, is also a measure taken from the breadth of the finger. It is properly three-fourths of an inch, and contains the measure of four barley- corns laid breadthwise.

DIGITALIS, fox-glove, a genus of the angi- ospermia order, and didynamia class of plants; natural order twenty-eighth, luridae : CAL. quin-

quepartite: COR. campanulated, quinquefid, and ventricose; CAPS, ovate and bilocular. There are six species: five of which are hardy, herbaceous, biennial, and perennial plants, and the sixth a tender shrubby exotic. The herbaceous species rise two or three feet high, ciowned with spikes of yellow, iron-colored, or purple flowers. The shrubby sort rises five or six feet high, having spear-shaped rough leaves, four or five inches long, and half as broad ; the branches being all terminated with flowers growing in loose spikes. All the species are easily raised by seeds. An ointment made of the flowers of purple fox-glove and May butter, is much commended by some physicians for scrophulous ulcers which run much and are full of matter. Taken internally this plant is a violent purgative and emetic ; and is

therefore only to be administered to robust con- stitutions: indeed it often proves even then a poison. An infusion of two drachms of the leaf in a pint of water, given in half-ounce doses every two hours or so, till it begin to purge, is recommended in dropsy, particularly that of the breast. It is said to have produced an evacuation of water so copious and sudden, in ascites, by stool and urine, that the compression of bandages was found necessary. The plentiful use of dilu- ents is ordered during its operation. But besides being given in infusion, it has also been employed in substance. And when taken at bedtime to the extent of one, two, or three gra:ns of the dried powder, it often in a short time operates as a very powerful diuretic, without producing any other evacuation. Even this quantity, however, will sometimes excite very severe vomiting, and that too occurring unexpectedly.

DIGLADIA'TION, n. s. Lat. digladiatio. A combat with swords ; any quarrel or contest.

Aristotle seems purposely to intend the cherishing of controversial digladiations, by his own affection of an intricate obscurity. Glanville.

DIGLIGGYHEUR, a town in the island of Ceylon, about ten miles to the eastward of Candy, on the road to Battacolo. The district around is very wild and impenetrable, for which reason it was once a royal residence; and when the king was driven out of Candy, and his capital burned by the British in 1803, he found here a retreat, to which no European army could penetrate. There are a few villages among the surrounding hills, and some rice grounds.

DIGLYPH, in architecture, a kind of imper- fect triglyph, console, or the like : with two channels or engravings either circular or angular. DIGNE, the chief town of the department of the Lower Alps, France, famous for the baths near it. It is seated on the Bleone, and is a bishop's see. The streets are steep and winding, and the houses mean; but the cathedral is a respectable edifice, and there are four other churches Not far from the town there is an extinct volcano. It contains about 3500 inhabitants. Thirty miles south of Apt, and thirty-four south by west of Embrun.

DIG'NIFY v. a. ~\ From Lat, dignus (Gr. DIGNIFICA'TION, n. s. I SIKTI, right) worthy ; DIG'NIFIED, adj. ˆand facia to make. DIG'NITARY, n. s. i Tuadvance; promote; DIG'NITY, n. s. J raise to honor. Digm-

fication and dignity are synonymous substan- tives ; and the cognates of the "latter. Fr. dig- nit'c ; Span, dignidad; It. dignita, Dignities is used by Browne for the general or chief maxims of a science. Ayliffe says, that among ecclesias- tics, ' we understand by a dignity that piomo- tion or

preferment to which any jurisdiction is attached.' Dignitary has also a peculiar appli- cation to clergymen, above the rank of a parish- priest ; but is likewise used generally.

Angels are not any where spoken so highly of as our Lord and Saviour Jesus Christ, and are not in dignity equal to him. Hooker.

Such a day,

So fought, so followed, and so fairly won,

Came not till now to dignify the times

Since Caesar's fortunes ! Sltakspeare. Henry IV.

Not that we think us worthy such a guest, But that your worth will dignify our feast.

Ben Jonson.

The sciences concluding from dignities, and prin- ciples known by themselves, receive not satisfaction from probable reasons, much less from bare asseve- rations. Brown.

I grant that where a noble and ancient descent and merit meet in any man, it is a double dignfication of that person. Walton' t Angler.

Abbots are stiled dignified clerks, as having some dignity in the church. Ayliffe's Parergon.

If there be any dignitaries, whose preferments are perhaps not liable to the accusation of superfluity, they may be persons of superior merit. Swift.

Some men have a native dignity, which will pro- cure them more regard by a look, than others can obtain by the most imperious commands. Clarissa.

The peaceable lawyers are, in the first place, many of the benchers of the several inns of court, who seem to be the dignitaries of the law, and are endowed with those qualifications of mind that accomplish a man rather for a ruler than a pleader. Addison.

No turbots dignify my boards ; But gudgeons, flounders, what my Thames affords.

Pope.

We all know, that those who loll at their ease in high dignities, whether of

the church, or of the state, are commonly averse to all reformation. Burke.

Or, turning to the Vatican, go see Laocoon's torture dignifying pain — A father's love and mortal's agony With an immortal's patience blending. Byron.

DIGNITY, as applied to the titles of noblemen, signifies honor and authority. And dignity may be divided into superior and inferior ; as the titles of duke, marquis, earl, baron, &c. are the highest names of dignity; and those of baronet, knight, serjeant at law, &c., the lowest. Nobility only can give so high a name of dignity as to supply the want of a surname in legal proceedings; and as the omission of a name of dignity may be pleaded in abatement of a writ, &c., so it may be where a peer who has more than one name of dignity is not named by the Most Noble. No temporal dignity of any foreign nation can give a man a higher title here than that of Esquire. The first personal dignity after the nobility is a knight of the order of St. George, or of the gar- ter, first instituted by Edward III. A. D. 1344. Next (but not till after certain official dignities, as privy-counsellors, the chancellors of the ex-

chequer and duchy of Lancaster, the chief jus- tice of the king's bench, the master of the rolls, and the other English judges,) follows a knight banneret ; who indeed by statutes 5 Richard II. c. 4, and 14 Richard II., o. 11, is ranked next after barons; and his precedence before the younger sons of viscounts was confirmed by order of king James I. But to entitle him to this rank, he must have been created by the king in person, in the field, under the royal banners, in time of open war ; else he ranks after baronets, who are the next in order ; which title is a dignity of inhe- ritance, created by letters patent, and usually descendible to the issue male. Next follow the knights of the Bath. The last of these inferior nobility are knights bachelors; the most ancient though the lowest order of knighthood amongst us. See BACHELOR. The above, with those enumerated under the article NOBILITY, Sir Ed- ward Coke says, are all the names of dignity in this kingdom; Esquires and Gentlemen being only names of worship. But before these last the heralds rank all colonels, Serjeants at law, and doctors of law, physic, and divinity.

DIGNO'TION, n. s. From Lat. dignosco. Distinction; distinguishing mark.

That temperament all diyiwtions, and conjecture of prevalent humours,

may he collected from spots in our nails, we are not averse to concede.

Browne's Vulgar Krrours.

DIGRESS', t>. «. } Span, and Port digre-

DIGRESS'ION, n. s. > dir ; Ital. digredire ; Lat.

DIGRESS'IVE, adj. J digrediri, digressus, from dis and gradior, gressus,to step ; to go aside from a road, or design ; to wander ; expatiate. Digressive is wandering.

Thy noble shape is but a form of wax, Digressing from the valour of a man.

Sliahtpeare.

Fhe digression of the sun is not equal ; but, near the equinoctial intersections, it is right aud greater ; near the solstices, more oblique and lesser.

Browne't Vulgar Errours. He, she knew, would intermix

Grateful digressions, and solve high dispute

With conjugal caresses. Milton.

The good man thought so much of his late con- ceived commonwealth, that all other matters were but digressions to him. Sidney.

In the pursuit of an argument, there is hardly room to digress into a particular definition, as often as a man varies the signification of any term. Loike.

Digrettiom in a book are like foreign Troops in a state, which argue the nation to want a heart and hands of its own ; and often cither subdue the natives, or drive them into the most unfruitful corners.

Swift.

The excellence of this work is not exactness but copiousness. The wild diffusion of the sentiments, and the digressive sallies of imagination, would have been compressed and restrained by confinement to rhyme. Johnson.

DIG YNIA ; from Stf, twice, and yvvrj, a woman ; the name of an order in the first thirteen classes, except the ninth, in Linnaous's sexual method ; consisting of plants, which have two female organs.

DII, the divinities of the ancient heathens, were very numerous. Every object which caused

terror, inspired gratitude, or bestowed affluence, received the tribute of veneration. Man saw a superior agent in the stars, the elements, or the trees, and supposed that the waters which com- municated fertility to his fields and possessions, were under the influence and direction of some invisible power inclined to favor and to benefit mankind. Thus arose a train of divinities which imagination arrayed in different forms and armed with different powers. They were supposed to be endowed with understanding, and actuated by the same passions which daily afflict the human race ; and to be appeased or provoked, like the imperfect beings whose fears gave them birth. Their wrath was to be mitigated by sacrifices and incense ; and sometimes human victims bled, and thus real crimes were committed, to expiate crimes, which superstition alone supposed to exist. The sun, from his powerful influence and animating nature, first claimed the adoration of the uncivi- lised inhabitants of the earth. The moon also was honored with sacrifices, and addressed in prayers; and after immortality had been liberally bestowed on all the heavenly bodies, man- kind classed among their deities the brute creation, and the cat and the sow shared equally with Jupiter himself, the father of gods and men, the devout veneration of their votaries. This im- mense number of deities has been divided into different classes according to the fancy of the my- thologists. The Romans generally reckoned two classes of the gods. Among the demi-gods, who were said to have merited immortality by the greatness of their exploits and services to man- kind, were Verturntms, Hercules, Jason, Castor, and Pollux, whose parents were some of the im- mortal gods. All the passions and moral virtues were also reckoned powerful deities, and temples were raised to the goddesses of concord, peace, &c. According to Hesiod, there were no less than 30,000 gods that inhabited the earth, and were guardians of men, all subservient to Jupiter. To these, succeeding ages added an almost equal number ; and indeed they were so numerous, and their functions so various, that we find temples erected and sacrifices offered, to unknown gods. All the gods of the ancients were supposed to have once lived upon earth as mere mortals ; and even Jupiter himself, the ruler of heaven, is re- presented by the mythologists as once a helpless child ; and all the particulars, attending the birth and education of Juno, are recorded. In process of time, not only virtuous men, who had been the patrons of learning and the supporters of li- berty, but also thieves and pirates, were admitted among the gods, and the Roman senate servilely granted immortality to the most cruel and worth- less of their emperors.

DIJAMBUS, in Latin poetry, the foot of a verse of four syllables ; it is compounded of two iambics, as severltas.

DIJON, or DIGON, an ancient and handsome city of France, a bishop's see, in the department of the Cote d'Or and ci-devant province of Burgundy. It has a university which has long been among the most celebrated and best regulated in France. The public structures, and particularly the churches, are very fine. In front of the ci- devant Place Royale, is the ancient palace of the

dukea of Burgundy ; and at the gates of Dijon is a late Chartreuse founded in 1383, in which are some magnificent tombs of those princes. The Place Royale, in the form of a horse-shoe, is the principal part of the city. Among the churches worth notice are, that of St. Benigne, the spire of which has an elevation of 370 feet; the church of St. Michael, remarkable for the richness of its portal ; that of St. Stephen, now the cathedral church ; and the church of Notre Dame, esteemed one of the best models of Gothic architecture in Europe. Of the old monastic institutions, the richest was the Cistercian abbey, the origin of all of that order throughout Europe. Here is also a citadel built by Louis XI. The streets arc well paved, and regular, and the houses in general neat and commodious ; the population, including the suburbs, is 21,600. Here are ma- nufactures of silk, cotton, and wool, the trade in which has been much iinproved by the recent con- struction of a canal from this place to St. Jean de Loire. Three great annual fairs are held here : March 10th, June 14tb, and November 10th, last^ ing eight days each. Dijon is built on an oval plan and seated in a pleasant plain, which produces excellent wine, between two small rivers, forty- eight miles north-east of Autun, 100 miles north of Lyons, and 175 south-east of Paris; contains professorships of theology, philosophy, mathe- matics, Latin, German, history, rhetoric, elo- quence and poetry. Here are also a drawing school, a library of 4000 volumes, a museum of pain- tings and engravings, and a theatre. The acade- my of sciences was founded in 1725. Among the eminent characters of Dijon, may be men- tioned the celebrated Bossuet, and the poets Crebillon and Piron. It has several public walks; of which the most frequented are the ramparts.

*DIJUDICATION, n. *. Lat. dijudicatio. Judicial distinction.*

DIKE, n. s. Goth and Swed. dike ; Saxon, die; Erse dyk ; Fr. digue; from Gr. rw^oc; Heb. p 1 a wall, or mound. A boundary of lands made by water, and often by embankments on the side ; a channel for water.*

God, that breaks up the flood-gates of so groat a d«luge, and all the art and industry of man is not sufficient to raise up dykes and ramparts a?ainst it.

Cowley.

The dykeia.ro filled, and with a roaring sound The rising rivers float the nether ground.

Dryden's Virgil.

The king of dykes ! than whom no sluice of mud With deeper sable blots the silver flood.

Pope's Dunciad.

DIKE denotes also a ditch or drain, made for the passage of waters. The word seems formed from the verb to dig; though others derive it from the Dutch diik, or dyke, a dam, sea-bank, or wall.

DIKE, or dyke, is a work of stone, timber, or fascines, raised to oppose the entrance or pas- sage of the waters of the sea, a river, lake, or the like. See HOLLAND.

DILAC'ERATE, v.a 3 Lat. dilacero. To

*DILACERA TION n. *. 5 tear ; to rend; to force in two.*

The infant, at the accomplished period, struggling to come forth, dilacerates and breaks those parts which restrained him before. Browne's Vulgar Errours.

The greatest sensation of pain is by the obstruction of the small vessels, and dilaceration of the nervous fibres. Arbuthnot.

DILA'NIATE, v. a. Lat. dilanio. To tear ; to rend in pieces.

Rather than they would dilaniate the entrails of their own mother, and expose her thereby to be ra- vished, they met halfway in a gallant kind.

Howel's Eng. Tears.

DILAPIDATE, v. n. 3 Lat. dilapido. To

DILAPIDATION, n. s. J go to ruin; to fall by decay. The incumbent's suffering the chancel, or any other edifices of his ecclesiastical living, to go to ruin or decay, by neglecting to repair the same : it likewise extends to his commit- ting, or suffering to be committed, any wilful waste in or upon the

glebe-woods, or any other inheritance of the church. (Ayliffe's Parergon.) This word has also been applied generally of late.

Tis the duty of all church-wardens to prevent the dilapidations of the chancel and mansion-house be- longing to the rector or vicar. Ayliffe.

Fr. dilater; Span.

'dilator; Ital. & Lat.

. dilatare, from de and latus ; Gr. irXaroc, broad, from Heb.

DILATE', v. a. Sc

DILA'TABILITY, n. s.

DILA'TABLE, adj.

DILATA'TIOU, n.s.

DILA'TOR.

ta'jS, to set at large. To extend ; spread out ; enlarge ; hence to relate at length or diffusely : as a neuter verb, to widen ; speak largely. Di- latability is admitting of extension. Dilatation, the act of extending, or state of being extended.

But ye thereby much greater glory gate, Than had ye sorted with a prince's peer ;

For now your light doth more itself dilate, And in my darkness greater doth appear.

Spenser.

But he would not endure that woful theam For to dilate at large. Faerie Queene.

Do me the favour to dilate at full What hath befallen of them, and thee, till now.

Shakspeare.

Joy causeth a cheerfulness and vigour in the eyes ; singing, leaping, dancing, and sometimes tears : all these are the effects of the dilatation, and coming forth of the spirits into the outward parts.

Bacon's Natural History.

It may be behoveful for princes, in matters of grace, to transact the same publickly, and by them- selves ; or their ministers to dilate upon it, and im- prove their lustre, by anv addition or eloquence of speech. Clarendon.

Satan alarmed,

Collecting all his might, dilated stood, Like Teneriff,or Atlas, unremoved. Milton. The motions of the tongue,, by contraction and dilatation, are so easy and so subtle, that you can hardly conceive or distinguish them aright. Holder.

We take notice of the wonderful dilatability or ex- tensiveness of the gullets of serpents : I have taken wo adult mice out of the stomach of an adder, whose neck was not bigger than my little finger. Ray.

Diffused, it rises in a higher sphere ; Dilates its drops, and softens into air. PnV.

DIL

His heart dilates and glories in his strength,

Addison.

The second refraction would spread the rays one way as much as the first doth another, and so dilate the image in breadth as much as the first doth in length. Newton.

The windpipe divides itself into a great number of branches called bronchia : these end in small air- bladders, dilatable and contractible, capable to be in- flated by the admission of air, and to subside at the expulsion of it. Arbuthnot on Aliments.

The buccinatores, or mowers up of the cheeks, and the dilitors of the nose, are too strong in cholerick people. Id.

This fluid may possibly be the same with that which, being attracted by and entering into other more solid matter, dilate the substance, by separating the constituent particles, and so rendering some solids fluid, and maintaining the fluidity of others.*

Franklin.

Here, there, he points his threatening front, to suit His first attack, wide waving to and fro His angry tail ; red rolls his eyes, dilated glow.

Byron.

DILATATION, in physics, a motion of the parts o. any body, by which it is so expanded as to occupy a greater space. This expansive motion depends upon the elastic power of the body ; whence it appears that dilatation is different from rarefaction, this last being produced by the means of heat.

DILATORY PLEAS, in law, are such as are put in merely for delay, and there may be a demurrer to a dilatory plea, or the defendant shall be ordered to plead better, &c. The truth of dilatory pleas is to be made out by affidavit of the fact, by stat. 4 and 5 Anne.

DILATRIS, in botany, a genus of the mono- gynia order, and triandria class of plants : CAL. none : con. has six petals, and is shaggy ; the stigma simple. Species three ; all natives of the Cape.

DIL'ATORY, adj. Fr. dilatoire ; Lat. dilu- torius. See DILATE. (For a dilatory person spreads or extends his work.) Slow ; delaying ; tardy.

These cardinals trifle with me : I abhor This dilatory sloth, and tricks of Rome.

Shakspeare. Henry VIII.

An inferior council, after former tedious suits in a higher court, would be but dilatory, and so to little purpose. Hay ward.

All promise is poor dilatory man, And that through every stage. Young.

A dilatory temper commits innumerable cruelties without design. Addison's Spectator.

DILECTION, n. s. Lat. dilectio. The act of loving; kindness.

So free is Christ's dilection, that the grand con- dition of our felicity is our belief.

Boyle's Seraphic Love.

DILEM'MA. Fr. dilemme; Lat. dilemma; Gr. SiXrififia, from dig and \ijupa, an assumption, 6 Xa/i/3avw, to take. An argument or sophism capable, apparently, of two equally correct, but opposite conclusions.

A dilemma, that Morton used to raise benevolence, fome called his fork, and some his crotch.

Bacon's Henry VII.

Quoth he, in all my past adventures I ne'er was set so on the tenters, Or taken tardy with dilemma, That every way I turn does hem me.

Hudibras

Hope, whose weak being ruined is Alike if it succeed, and if it miss ; Whom good or ill does equally confound, And both the horns of fate's dilemma wound.

Cowley.

A dire dilemma ; either way I'm sped ; If foes they write, if friends they read, me dead.

Pope.

DILIGENCE, n. s.} Fr. diligent ; Span., DIL'IOENT, adj. > Port., and Ital. dili- DIL'IGENTLY, adv. j gentc ; Lat. diligens, from diligerCj to favor (work). Industry ; con- stancy in business ; continued application. Hence a name, not seldom misapplied, of stage coaches.

Seest thou a man diligent in his business, he shall stand before kings. Prov. xxii. 29.

Brethren, give diligence to make your calling and election sure. 2 Pet. i. 10.

Still when she slept he kept both watch and ward ; And when she wakt he wayted diligent, With humble service to her will prepard.

Spentcr. Faerie Queene.

If you inquire not attentively and diligently, you shall never be able to discern a number of mechanical motions. Bacon.

But the power of nature is only the power of using to any certain purpose the materials which diligence procures, or opportunity supplies. Johnton.

Now, who would have suspected your friend Miss Prim of an indiscretion ? Yet such is the illnature of people, that they say her uncle stopped her last week, just as she was stepping into the York diligence with her dancing master. Sheridan,

DILL, n. s. Sax. "mle ; Pers. dilee, from dil, the heart, a cordial. It hath a slender, fibrous, annual root ; the leaves are like those of fennel ; the seeds are oval, plain, streaked, and bor- dered.

Dill is raised of seed, which is ripe in August.

Mortimer.

DILLEMBURG, or DILLEHBURG, a town of Germany, in Westphalia, and capital of Nassau Dillenburg, situated on the Dille. Near it is a furnace for the smelting of copper. The sove- reignty of this town was added to the grand duke of Berg, by the late treaty of confederation between the states of the Rhine. It is fourteen miles north-west of Wetzlar. Long. 8° 22′ E., lat. 50° 36′ N.

D1LL1NGEN, a neat town of Bavaria, on the left bank of the Danube, with a university or ly- ceum. The bishop of Augsburg resided here formerly, and it is still a bishop's see. It con- tains a chapter and three convents ; and was formerly a county; the princes of which were powerful. Near this town Louis XVIII. was fiied at, and wounded in the forehead, by some unknown assassin, July 12th, 1796. Population 3120. It is twenty-three miles north-east of Augsburg and twenty-four north-east of Ulm.

DILLENIA, in botany, a genus of the poly- gynia order, and polyandria class of plants : CAL. pentaphyllous ; the petals five : CAPS. nuj

merous, polyspermous, coalited and full of pulp. Species eight; all Indian plants.

DILLEN1US (John James), an eminent bo- tanist, born at Darmstadt in Germany, in 1687, and educated at the university of Gieffen. He contributed several curious papers to the Mis- cellanea Curiosa, and, in 1721, accompanied Dr. Sherard to England, where he spent the re- mainder of his days. Soon after his arrival he undertook a new edition of Ray's Synopsis Stirpium Britannicarum. He was appointed the first botanical professor at Oxford, on Dr. Sherard's foundation, and in 1735 the univer- sity admitted him to the degree of M. D. He died in 1747. He published an elaborate work, entitled Hortus Elthamensis, and also a History of Mosses.

DILLON (Wentworth), earl of Roscommon, a British poet of celebrity, was the son of James, earl of Roscommon, by a sister of the earl of Strafford. Though born in Ireland (in 1633) he received his education at lord Strafford's seat in Yorkshire, and finally entered the Protestant university

of Caen in Normandy, under the ce- lebrated Bochart. After travelling into Italy he returned, soon after the Restoration, to England, and was made captain of the band of pensioners. He now ruined his estate by gaming ; and, being involved also in quarrels, he returned to Ireland, where his property lay. Here, however, he fol- lowed nearly the same course as in England, until his marriage with a daughter of the earl of Burlington. He now appears to have cultivated letters, and to have reformed himself. He pro- jected,among other modes of promoting literature, an academy for improving and fixing the English language; but the scheme was never accom- plished. On the accession of James II. he visited Italy, and took up his residence at Rome, where he died of the gout in 1684. Lord Ros- common was not a voluminous writer, his prin- cipal piece being a poetical Essay on Translated Verse, in which he lays down the rules that ought to govern translations. Other poems of this writer are translations of Horace's Art of Poetry, of Virgil's sixth Eclogue, of the Dies Irae, of a scene in Pastor Fido, &c. Dr. Johnson calls him the most correct writer of English verse be- fore Dryden ; and Pope has said of him, addres- sing a poet of rather different character, Unhappy Dryden ! in all Charles's days, Roscommon only boasts unspotted lays.

DILU'CIDATE, v. a.ˆ From Lat. kluei- DILU'CID, adj. > dare. To make clear,

DILUCIDA'TION, n. s. J or plain ; to explain ;

to free from obscurity.

I shall not extenuate, but explain and dilucidatc,

according to the custom of the ancients.

Browne's Vulgar Errours.

DILUTE', v. a. & adj.~\ From Lat. diluo, DILU'TER, n.s. f de and IUQI Gr. Xww

DILU'TION, < (Heb. r6a, to waste)

DILU'ENT.) to wash. To make

thin or fluid-like; to weaken; make vapid.

Dilution is the act of making thin or weak,

or the thing so made.

Drinking a large dose of diluted tea, as she was

ordered by a physician, she got to bed. Locke.

If the red and blue colours were more dilute and weak, the distance of the images would be less than an inch ; and if they were more intense and full, that distance would be greater. Newton.

Water is the only dlluter, and the best dissolvent of most of the ingredients of our aliment.

Arbuthnot on Aliments.

There is no real diluent but water : every fluid is diluent, as it contains water in it. Id.

Opposite to dilution is coagulation, or thickening, which is performed by dissipating the most liquid parts by heat, or by insinuating some substances, which make the parts of the fluid cohere mor strongly. 2d.

DILU'VIAN, adj. From Lat. diluvium, de and luo, to wash. Relating to the deluge.

Suppose that this diluvian lake should rise to the mountain tops in one place, and not diffuse itself equally into all countries about. Burnet's Theory.

DIM, v. a. &tadj.ˆi Goth, dimma ; Sax.DIM'ISH, adj. ime; Swed. dimm ; Welsh DIM'ISHLY, adv. £dy; Erse dow. According DIM'ISHNESS, n.s.J to Minsheu from Stipoe, fear, because the dark occasions fear. To be- cloud ; darken ; make less bright, or obscure : as an adjective, somewhat dark ; and hence not seeing clearly ; dull. Dimish is a diminutive of dim.

When Isaac was old his eyes were diwithat he could not see. Gen. xxvii. 1.

The statu of Mars began his hauberke ring, And with that sound he herd a murmuring Full low and dym, that saied, ' Victory !'

Chaucer.

And her fair eyes, like stars that dimmed were With darksome cloud, now shew their goodly beams.

Spenser. As where the Almighty's lightning brand does

light,

It dims the dazed eyen, and daunts the senses quite. Id. Faerie Queene.

All of us have cause To wail the dimming of our shining star.

Shakspeare. Richard III.

It hath been observed by the ancients, that much use of Venus doth dim the sight ; and yet eunuchs, which are unable to generate, are nevertheless also dim sighted. Bacon.

Thus while he spake, each passion dimmed his face, Thrice changed. Milton.

Unspeakable ! who sittest above these heavens, To us invisible, or dimly seen, In these thy lowest works Id.

In the beginning of our pumping the air, the match appeared well lighted, though it had almost filled th-e receiver with fumes ; but by degrees burnt more and more dimly. Boyle's Spring of the Air.

The principal figure in a picture is like a king among his courtiers, who dims all his attendants.

Dryden.

Every one declares against blindness, and yet who almost is not fond of that which dims his sight ?

Locke.

'Tis true, but let it not be known, My eyes are somewhat dimish grown ; For nature, always in the right, To your decays adapts my sight. Swift.

For thee I dim these eyes, and stuff this head, With all such reading as was never read.

Pope's Dunciad.

Add to all these improvements backwards another modern fancy, that grey printing is more beautiful than black. Hence the English new books are printed in so dim a character, as to be read with difficulty by old eyes,

unless in a very strong light, and with good glasses. Franklin,

But when the fading eye grows dim, And fails each faint and wasted limb, And short and fre quent pantings show The sad disease that lurks below. Bawdier.

I linger yet with Nature, for the night Hath been to me a more familiar face Than that of man ; and in her starry shade Of dim and solitary loveliness, I learned the language of another world- Byron.

DIMACH/E ; from Sis, double, and /taˆco, I fight; in antiquity, a kind of horsemen, first instituted by Alexander. Their armour was lighter than that of the infantry, and at the same time heavier than that used by horsemen, so that they could act as horse or foot as occasion required.

DIMCHURCH, or DINCHURCH, a village of England, in Kent, situated by the side of a strong dyke, called Dimchurch Wall, between Romney and Hythe, made to prevent the encroachments of the sea, with a road on the top which is mostly wide enough for carriages to pass each other. Here are kept the records of the Romney Marsh ; and the court is held here by the lords of the Marsh and the members of the corporation, to re- gulate all affairs concerning it It is four miles ami ahalf N.N.E. of New Romney, and four and a half S.S.W. of Hythe.

DIMENSION, n. s. ˆ Fr. and Span, di-

DIMEN'SIONLESS, adj. > mension; Ital. dimen-

DIMEN'SIVE. j sione ; Lat. dimensio ;

dt and mensio, from metior, Gr. pnptw, to mea- sure. Extent ; capacity ; solid contents. Dimen- sionless is used by Milton for without bulk. Dimensive is marking the boundary or dimen- sions.

Wherefore base When my dimensions are as well compact,

My mind as generous, and my shape as true,

As honest Madam's issue ? Shakspeare.

All bodies have their measure, and their space

But who can draw the soul's dimentne lines ?

Davies. In they passed

Dimensionless through heavenly doors. Milton.

My gentleman was measuring my walls, and taking the dimension of the room. Swift.*

To judge rightly of our own worth, we should retire a little from the world, to see its pleasures, and pains too, in their proper size and dimensions. Sterne.

Thus mingled still with wealth and state, Croesus himself can never know ;

His true dimensions and his weight

Are far inferior to their show. Watts.

DIMENSION, in geometry, is either length, breadth, or thickness ; hence a line has one di- mension, viz. length ; a superficies two, viz. length and breadth ; and a body or solid has three, viz. length, breadth, and thickness.

DIMICATION, n. s. Lat. dimicatio. A battle ; the act of fighting ; contest.

DIMIDIATION, n. s. Lat. dimidiatio. The act of halving ; division into two equal parts.

DIMINISH, v. a. a. & n. ~} Fr. dimmuer ;

DIMIN'ISHINGLY, adj. Ital. diminuire ;

DIMINUTION, n. s. (Span, and Port.

DIMIN'UTIVE, n. s. & adj. fdiminuyr ; Lat.

DIMIN'UTIVELY, adv. diminuere, di and

DIMIN'UTIVENESS, n. s. J minuo. To make less;. to impair; take from in any way ; degrade:, as a neuter verb, to grow less ; be impaired or degraded. Diminutive, as a substantive, and diminutiveness, express littleness. Diminutive also means, that makes little ; any thing small.

Ye shall not add unto the word which I comninnci you, neither shall you diminish aught from it.

Deut. iv. 2. The poor wren,

The most diminutive of birds, will fight, Her young ones in her nest, against the owl.

Shakspeare. Macbeth.

Follow his chariot ; monster-like, be shown For poor'st diminutives, for doits ! Shakspeare.

The one is not capable of any diminution or augmen- tation at all by men ; the other apt to admit both.

Hooker.

He afterwards proved a dainty and effeminate youth, was commonly called, by the diminutive of his name, Peterkin or Perkin. Bacon's Henry VII.

Make me wise by thy truth, for my own soul's sal- vation, and I shall not regard the world's opinion or diminution of me. King Charles.

Impiously they thought Thee to diminish, and from thee withdraw The number of thy worshippers. Milton.

O thou that with surpassing glory crowned, Look'st from thy sole dominion like the God, Of this new world ; at whose sight all the stais, Hide their diminished heads Id.

Sim, while but Sim, in good repute did live; Was then a knave, but in diminutive. Cotton.

What judgment I had, increases rather than dimi- nishes ; and thoughts, such as they are, come crowding in so fast upon me, that my only difficulty is to chuse or to reject. Dryden.

The light of man's understanding is but a short, diminutive, contracted light, and looks not beyond the present. South.

Finite and infinite seem to be looked upon as the modes of quantity, and to be attributed primarily to those things which are capable of increase or diminu- tion. Locke.

I never heard him censure, or so much as speak diminishingly , of any one that was absent. Id.

The gravitating power of the sun is transmitted through the vast bodies of the planets without any diminution, so as to act upon all their parts, to their very centres, with the same force, and according to the same laws, as if the part upon which it acts were not surrounded with the body of the planet.

Newton.

They know how weak and aukward many of those little diminutive discourses are. Watt.*

Crete's ample fields diminish to our eye ; Before the Boreal blasts the vessels fly.

Pope's Odyssey.

Security diminishes the passions ; the mind, when left to itself, immediately languishes. Hume.

Check then the solicitations of the flesh ; and dare to do nothing that may diminish thy native excellence, dishonour thy high original, or degrade thy noble nature. Mason.

Thence with what pleasure have we just discerned The distant plough, slow moving, and beside }lis labouring team, that swerved not from the track, The sturdy swain diminished to a boy. Cowper.

DIM'ISSORY, adj. Lat. dimissorius. That by which a man is dismissed to another jurisdic- tion.

A bishop of another diocess ought neither to ordain or admit a clerk, without the consent of his own pro- per bishop, and without the letters dimissory.

Ayliffe.

DIMISSORY LETTERS, literse dimissorise, in the canon law, a letter given by a bishop to a candi- date for holy orders, having a title in his diocess, directed to some other bishop, and giving leave for the bearer to be ordained by him. When a person produces letters of ordination or tonsure, conferred by any other than his own diocesan, he must at the same time produce the letters dimis- sory given by his own bishop, on pain of nullity. Letters dimissory cannot be given by the chapter, sede vacante ; this being deemed an act of volun- tary jurisdiction, which ought to be reserved to the successor.

DI'MITY, 7i. s. A fine kind of fustian, or cloth of cotton.

I directed a trowze of fine dimity. Wiseman.

DIM'PLE, n. s. & v. n. ˆ Dint, a hole ; din- DIM'PLEU, adj. > tie, a little hole; by

DIMP'LY, adv. J a careless pronunci-

ation made dimple, says Skinner. A small hol- low, or depression, often applied to the face.

On each side her Stood pretty dimpled boys like smiling cupids.

Shakspeare.

By dimpled brook, and fountain brim, The wood-nymphs decked with daisies trim Their merry wakes and pastimes keep : What hath night to do with sleep ? Milton.

The wild waves mastered him, and sucked him in, And smiling eddies dimpled on the main. Dryden.

As the smooth surface of the dimply flood The silver-slippered virgin lightly trod.

Warton's Isis.

In her forehead's fair half round, Love sits in open triumph crowned ; He in the dimple of her chin, In private state, by friends is seen. Prior,

The dimple [laugh] is practised to give a grace to the features, and is frequently made a bait to entangle a gazing lover. Steele.

How frail is Beauty's bloom ! The dimpled cheek — the sparkling eye — Scarce seen, before their wonders fly

To decorate a tomb. Robinson.

DIMCERITˆ ; from Sta, and /iotpaw, to di- vide ; a name given to the Apollinarists, who at first held that Christ only assumed a human body without taking a reasonable soul ; but, being at length convinced by texts of Scripture, they al- lowed that he did assume a soul, but without understanding, the Word supplying that faculty. From this way of separating the understanding from the soul they were denominated DimcGritse, or separaters.

DIMOTUC, a town of European Turkey, in Romania, with a Greek archbishop's see. It is seated on a mountain surrounded by the river VOL. VII.

Meriza, twelve miles south-west of Adrianople Long. 26° 15′ E., lat. 41° 35′ N.

DIMSDALE (Thomas), a celebrated English physician, the son of a surgeon at Theydon Gar non in Essex, where he was born in 1712. He studied some time at St. Thomas's Hospital, London; and, about 1734, commenced practi- tioner at Hertford. In 1745 he accompanied the army under the duke of Cumberland as assistant surgeon, and continued in that capacity till Car- lisle had surrendered to the royal army, when he returned to Hertford. In 1761 he took the de- gree of M. D., commenced physician, and became celebrated by his successful mode of inoculating for the small pox. He published a treatise on it in 1767, which was quickly translated, and cir- culated all over the continent. His fame as a skilful practitioner occasioned his being invited to Russia to inoculate the empress Catherine and her son, in 1768, for which he was appointed counsellor of state and physician to her imperial majesty, with an annuity of £500 : he was at the same time created a baron of the Russian empire, and the same title was conferred on his son. At Moscow he inoculated also a considerable num- ber of the people ; but refused the invitation of the empress to reside in Russia as her physician, and after being admitted, at Sans Souci, to a pri- vate audience of Frederic II. king of Prussia, he returned to England. In 1780 he was elected M.P. for the borough of Hertford; upon which he declined his practice, except for the relief of the poor. In 1781 he again visited Russia to inoculate the late emperor Alexander and his brother, in which he experienced the same success as before. On bis resignation, in 1790, his son Nathanael was elected representative of the borough of Hertford. Baron Dimsdale died at Hertford, after a short illness, in 1800.

DIN, v. a. & n. s. Sax. byn, from 'aynan, to make a noise ; Ice dyna, to thunder. To sun with a noise ; stupify ; overpower with clamotr ; the noise made.

And all the way he roared as he went, That all the forest with astonishment Thereof did tremble, and the beasts therein Fled fast away from that so dreadful din.

Hubberd's Tale.

O, 'twas a din to fright a monster's ear ; To make an earthquake : sure, it was the roar Of a whole herd of lions. Shahipeare.

Now night, over heaven Inducing darkness, grateful truce imposed, And silence on the odious din of war. Milton.

Rather live

To bait thee for his bread, and din your ears With hungry cries. Otway.

Some independent ideas, of no alliance to one ano- ther, are, by education, custom, and the constant din of their party, so coupled in their minds, that they always appear there together, and they can no more separate them in their thoughts than if they were but one idea, and they operate as if they were so. Locke.

What shall we do if his majesty puts out a proclamation commanding us to take Wood's half- pence ? This hath been often dinned in my ears.

Swift.

Nature's eye is melancholy O'er the city high and holy :

DIN

But without there is a din

Should arouse the' saints within,

And revive the heroic ashes

Round which yellow Tiber dashes. Byron.

DINAGEPORE, a district of Bengal, situated oetween the twenty-fifth and twenty-sixth de- grees of northern latitude. It is bounded on the north and west by Purneah.on the east by Rung- pore and Ghoragot, and (nn the south by Bet- tooriah. The soil is much diversified, and the general face of the country is divided into small valleys of two or three miles broad. These are watered by rivers, which, in the rainy seasons, inundate the low lands and swell into large lakes fifty or sixty miles long, till the falling of the Ganges permits the water to retire, after which these lowlands are covered with luxuriant pas- ture, and are capable of producing abundant crops of rice. The soil does tiot answer for grain, but indigo, tobacco, and hemp are cultivated suc- cessfully, It is on the whole, however, one of the poorest districts of Bengal. Three-fourths of the inhabitants are Hindoos.

DINAGEPORE, or Rajigunge, the capital of the above district, is situated on an island formed by the Pernabubah,and is the residence of the rajah. It is a considerable place of trade.

DINAH ; Heb. HJ'T, i. e. judgment; the only daughter of the patriarch Jacob. Her misfor- tune with the prince of Shechem ; his honorable proposal of repairing the injury by marriage ; and the prevention of the fulfilment of his gen- erous intention by the treachery and barbarity of her

bloody brethren, Simeon and Levi, are re- corded in Gen. xxxiv See LEVI.

DINAN, or DIXANT, a town of the depart ment of the Cotes du Nord, Brittany, containing manufactures of cotton, linen, and flannel, and about 4200 inhabitants. It is surrounded with walls, and has an old castle, situated on the river Ranee, a few miles from the sea. The small harbour is about thirteen miles south of St. Malo.

DINAPORE, a town, or rather a military can- tonment, belonging to the British, situated on the southern bank of the river Ganges, in the pro- vince of Bahar, eleven miles and a half west of the city of Patna, for the defence of which it was constructed, in the year 1767. It consists of two handsome brick squares that will contain 1 200 men, and superior barracks for the European of- ficers. 'The officers,' says Mr. Hamilton, ' have more accommodations than in any barracks in England ; and the private soldiers of the Euro- pean regiments are provided with large and well aired apartments. The native soldiers are quar- tered in small huts, which to them is no hardship. The magazine built by Mr. Hastings has had £l 5,000 expended on it. In the vicinity is an excellent house in the European style, built by the soudah AH, nabob of Oude.

DINDIGUL, or DANDIGALA, a district in the south of India, situated between the tenth and eleventh degrees of north latitude. It is bounded on the north by Coimbetoor and Kist- nagherry, on the east by the Polygar territory and Madura, on the south by Travancor and Madura, and on the west by Travancor, Cochin, and Malabar. The principal rivers are the

Noil and the Amravati ; and the chief towns Dindigul, Balny, and Palapetty. Particular in- habitants are here in the enjoyment of a portion of land, rent free, and the hereditary occupiers of the rest. This district was ceded to the Bri- tish by Tippoo, in 1792, and, together with Ma- dura, the Manapara Pollams, Ramnad, and She- vagunga, now forms one of the collectorships of the Madras presidency. The Dindigul dis- tricts and sequestered pollams have been con- verted into forty zemindaries.

DINDIGUL, the capital of the district of the same name, in southern India; has a fort, si- tuated on a strong rock, in the midst of a plain, which is bounded on the west by the great range of mountains which separates it from the coast of Malabar, and on the east by a lower range, which runs between it and the district of Ma- dura. This place was taken in 1755 by the My- sore rajahs, and by the British army in May,

1783, but restored to Tippoo at the peace of

1784. Travelling distance from Seringapatam 198 miles, from Madras 275 miles.

DINDYMA, or DINDYMUS, a mountain or ridge, allotted by many to Phrygia. Strabo mentions two mountains of this name, one in Mysia, near Cyzicus, the other in Gallograccia, near Pessinus, and none in Phrygia. Ptolemy extends this ridge from the borders of Troas, through Phrygia to Gallognecia : though, there- fore, there were two mountains called Dindymus in particular, both sacred to the mother of the gods, and none of them in Phrygia Major, yet there might be several hills and eminences in it, on which this goddess was worshipped, and tnerefore called Dindyma in general.

DINE, v. a. & v. n. -\ Fr. diner, to take the DI'NFNG-ROOM, n, s. 9 day-meal, from Sax. DIN'NEE, fdaegjian, a day. See

DIN'NER-TIME. 3 DAY. To give the day,

or principal, meal to. To feed ; to eat that meal.

The dining-room, dinner, and dinner-time, are in

this country well understood.

Pernaps some merchant hath invited him, And from the mart he's somewhere gone to dinner : Good sister let us dine, and never fret. Shakspeare.

At dinner-time, I pray you have in mind where we must meet.

Id. He would dine with him the next day.

Clarendon.

Before dinner and supper, as often as it is conve- nient, or can be had, let the public prayers of the church, or some parts of them, be said publicly in the family. Taylor.

The apartments within were very splendid, espe- cially the dining-room ; and many other of the rooms were well adorned with mouldings and fret-work ; some of whose marble clavils were so delicately fine, that they would reflect an object true and lively from a great distance. Fuller. Worthies of Devon.

Boil this restoring root in generous wine, And set beside the door the sickly stock to dine.

Dryden.

Thus, of your heroes and brave boys, With whom old Homer makes such noise. The greatest actions I can find, Are, that they did their work and dined.

Prior.

Then from the mint walks forth the man of rhyme, Happy to catch me just at dinner-time. Poj.e.

On carcasses of every kind. This man hath elegantly dined. Gay.

DINET'ICAL, adj. Aivjjnicoc. Whirling round ; vertiginous.

Some of late have concluded, from spots in the sun, -which appear and disappear again, that, besides the revolution it maketh with its orbs, it hath also a dinetical motion, and rolls upon its own poles.

Browne's Vulgar Errours.

A spherical figure is most commodious for dinetical •motion, or revolution upon its own axis. Ray.

DING. Goth, denga ; Sax. dengan; Dutch dringen, to beat about. To dash violently ; to bluster; bounce.

Let us all ring fancy's knell ; Dingt dong bell. Shakspeare.

He huffs and dinys, because we will not spend the little we have left, to get him the title of lord Strut.

Arbuthnot.

DINGELFINGEN, a well-built old town of Lower Bavaria, situated on the Iser, in the circle of the Danube, and containing 2080 in- habitants. It is divided into the upper and lower towns ; the former standing on a steep eminence, communicating with the hills by a sort of dry aqueduct. It is eighteen miles north- east of Landshut, and forty-eight north-east of Munich.

DIN'GLE, n. s. From Sax. "oen, or "oin, a hollow. A hollow between hills ; a dale.

I know each lane, and every alley green, Dingle or bushy dell of this wild wood ;

And every bosky bourn from side to side, My daily walks and ancient neighbourhood.

Milton.

DINGLE, in geography, a sea-port of Ireland, in Kerry, Munster, seated on the north side of a bay, and formerly a place of great trade, parti- cularly with Spain. Several of the houses are built in the Spanish fashion, with ranges of stone balcony windows. It is a borough, and sent two members to the Irish parliament. It is twenty-four miles W.S.W. of Tralee, and 166 of Dublin.

DINGWALL, an ancient and flourishing royal borough, in the county of Ross, Scotland, erected by king Alexander II., in 1226. Its charter of that date was confirmed and renewed by James IV., and the inhabitants empowered to elect a provost, two baillies, dean of guild, trea- surer, and ten counsellors. It joins with Kirk- wall, Wick, Dornoch, and Tain, in sending a representative to the British parliament. From the remains of some old causeways, Dingwall appears to have been anciently much more ex- tensive than it is now. The ruins of its castle are still to be seen, consisting of ' stones so strongly cemented with mortar that it is easier to break a solid rock than to separate those of which it is composed.' It was surrounded with a deep ditch, and a regular glacis remains. The town has been much enlarged and improved, and a considerable inland trade is carried on in it. It lies eighteen miles west of Crornarty, and is seated on the Frith.

DINOCRATES, a celebrated architect of Ma- cedonia, who rebuilt the temple of Ephesus, when burnt by Erostratus, with much more magnificence than before. Vitruvius informs us, that Dinocrates proposed to Alexander the Great to convert mount Athos into the figure of a man, whose left hand should contain a walled city, and all the rivers of the mount £ow into his right, and from thence into the sea ! He also conceived a scheme for building the dome of the temple of Arsinoe at Alexandria, of loadstone, that should, by its attraction, uphold her iron image in the centre, suspended in the air.

*DINT, v. a. & n. s. Sax. *oynt ; Goth, dunt, a blow ; a stroke. To give a blow that marks or in- dents : the blow given ; force.*

Much daunted with that dint, her sense was dazed ; Yet, kindling rage, herself she gathered round.

Spenser.

A gentle knight was pricking on the plaine Ycladd in mighty arms and silver shielde,

Wherein old dints of deepe wounds did remaine, The cruel marks of many 'a bloody fielde.

Spenser. Faerie Queene. Leave, leave, fair bride, your solitary bone,

No more shall you return to it alone ;

It nurseth sadness ; and your body's print,

Like to a grave, the yielding down doth dint.

Donne.

Now you weep ; and I perceive you feel The dint of pity. Sfutkspeare. Julius Ccesai .

Neither vainly hope

To be invulnerable in these bright arms,

Though tempered heavenly ; for that mortal dine ,

Save he who reigns above, none can resist.

Milton.

Deep-dinted wrinkles on her cheeks she draws ; Sunk are her eyes, and toothless are her jaws.

Dryden's JEneid.

We are to wrest the whole Spanish monarchy out of the hands of the enemy; and, in order to it, to work our way into the heart of his country by dint of arms. Addison.

Fast by the rock, all menacing but mute,

He stood ; and save a light beat of his foot,

Which deepened now and then the sandy dint

Beneath his heel, his form seemed turned to flint.

Byron.

DINUMERA'TION, n.s. Lat. dinumeratio. The act of numbering out singly.

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DIG, surnamed Chrysostom, (golden mouth), a celebrated orator and philosopher of Greece, in the first century, born at Prusa, in Bithynia. He attempted to persuade Vespasian to quit the em- pire; and Domitian was so offended at his free- dom of speech that he would have put him to death had he not fled into Thrace. After the death of that tyrant Dio returned to Rome, and acquired the esteem of Trajan, who made him ride with him in his triumphal chariot. There are still extant eighty of Dio's Orations, and some other of his works, — the best edition of which is that of Samuel Raimarus, in 1750, in folio.

DI'OCESS, n. s. \ Gr. Sia, and oucijmc,

DIOC'ESAN, n. s. & adj.) or spe the article fol- lowing. The circuit of a bishop's jurisdiction : diocesan is the bishop administering therein.

None ought to be admitted by any bishop, but such as have dwelt and remained in his diocess a conve- nient time. Whitgift.

One younger roan amongst the rest would take upon him to defend that every diocesan bishop was pope. I answered him with some scorn.

Bp. Hall't Hard Measure.

Although he (the bishop) had not all the diocess actually in communion and subjection, yet his charge, his diocess was so much. Just as with the Apostles, to whom Christ gave all the world for a diocess, yet at first they had but a small congregation. Bishop Taylor.

I have heard it has been advised by a diocesan to his inferior clergy, that they should read some of the most celebrated sermons printed by others.

Tatler.

This realm has two divisions, one into shires or counties, in respect of temporal policy ; another into dioceses, in respect of jurisdiction ecclesiastical.

Cowell.

Oblige him to a longer residence in his diocese than is usually practised, that he may do the proper work of a bishop ; that he may direct and inspect the flock of Christ ; confirm the unstable, reclaim the reprobate, &c. Bishop Watson.

DIOCESE is also used in ancient authors for the province of a metropolitan. Diocesis meant, originally, a civil government, composed of di- vers provinces. The first division of the em- pire into dioceses is ordinarily ascribed to Con- atantme, who distributed the whole Roman state into four : viz. those of Italy, Illyria, the east, and Africa. And yet, long before Constantine, Strabo, who wrote under Tiberius, takes notice (lib. xiii. p. 432) that the Romans had divided Asia into dioceses ; and complains of the con- fusion such a division occasioned in geography, Asia being no longer divided by people, hut by dioceses, each of which had a tribunal or court, where justice was administered. Constantine, then, was only the institutor of those large dio- ceses which comprehended several metropoles and governments ; the former dioceses only com- prehending one jurisdiction, or the country under one judge, as appears from this passage in Strabo, as well as from Cicero himself; lib. iii. epist. ad famil. 9. and lib. xiii. ep. 67. Thus, at first, a province included diverse dioceses ; and afterwards a diocese came to comprise divers provinces. In after times the Roman empire became divided into thirteen dioceses or pre- fectures; though, including Rome and the suburbs, there were fourteen. These fourteen dioceses comprehended 120 provinces; each province had a proconsul, who resided in the capital ; and each diocese of the empire had a • consul, who resided in the princi- pal city of the district. On this civil constitution the ecclesiastical one was afterwards regulated : each diocese had an ecclesiastical vicar or pri- mate, whose judgment determined all the con- cerns of the church wil!iin his territory. At pre- sent diocese is confined to a single province, under a metropolitan, or more commonly to the single jurisdiction of a bishop. Brito affirms diocese to be properly the territory and extent of a baptismal or parochial church; whence the word is used by divers authors to signify a sim- ple parish.

DIOCLEIA, AtoeXaa, in antiquity, a solem- nity kept in the spring, at Megara, in memory of the Athenian hero, who died in the defence of the youth he loved.

DIOCLESIANUS (Caius Valerius Jovius), a celebrated Roman emperor,

born of an ob- scure family in Dalmatia, in 245. He was first a common soldier, and by merit and success he gradually rose to the office of a general ; and at the death of Numerian, in 284, was invested with imperial power. In this high station he rewarded the fidelity of Maximian, who had shared with him all the subordinate offices in the army, by making him his colleague on the throne. He created two subordinate emperors, Constantius and Galerius, by the title of Caesars, whilst he claimed for himself and his colleague the superior title of Augustus. Dioclesian has been celebrated for his military virtues ; and though he was not polished by education, was, nevertheless, a patron of learning. He was bold, resolute, and active ; but his cruelty to the Christians has been deservedly branded with in- famy. After he had reigned twenty-two years in the greatest prosperity, he publicly abdicated the crown at Nicomedia, in 305, and retired to a private station at Salona. Maximian, his col- league, was compelled to follow his example ; and when he, some time after, endeavoured to rouse the ambition of Dioclesian and persuade him to re-assume the imperial purple, he received for answer, that Dioclesian took now more de- light in cultivating his little garden, than he for- merly enjoyed in a palace, when his power was extended over all the earth. He lived nine years after his abdication in the greatest security and enjoyment at Salona, and died in 314, in the sixty-eighth year of his age. His persecution of the Christians forms a chronological era, called the era of Dioclesian, or of the Martyrs. It was long used in theological writings, and is still fol- lowed by the Copts and Abyssinians. It com- menced August 29th, A. D. 284.

DIOCTAHEDRIA, in natural history, a genus of pellucid and crystalliform spars, com- posed of two octangular pyramids, joined base to base, without any intermediate column. Of these some have long pyramids, others short and sharp-pointed ones, and others short and obtuse pointed ones ; the two former species being found in the Hartz, and the last in the mines of Co- nwall.

DIODATI (John), a Protestant divine, and professor of theology at Geneva, who was born at Lucca in 1579, and died at Geneva in 1652. He is distinguished by his translations • 1 . Of the Bible into Italian, with notes, Geneva, 1607, 4to. This work is, however, rather a paraphrase than a translation, and the notes, divine medita- tions more than critical reflections. 2. Of the Bible into French, Geneva, 1644; and 3. ()t Father Paul's History of the Council of Trent into French.

DIODIA, in botany, a genus of the monogy- nia order, and tetrandria class of plants ; natural order, forty-seventh, stellatav, COR. monopetalous and funnel-shaped : CAPS, bilocular and disper- mous. Species six, natives of the West Indies and of Mexico.

DIO DON, the sun-fish, in ichthyology, a genus belonging to the order of branchiostega. There are three species : viz.

1. D. trystrix, or the globe-fish, common to

Europe and South Carolina. The form of the body is usually oblong ; but when alarmed it lias the power of inflating the belly to a globular shape of great size. This seems designed as a means of defence against fish of prey, as they have less means of laying hold of it, and are besides terrified by the numerous spines with which that part is armed, and which the animal can erect on every part. The mouth is small ; the irides white, tinged with red ; the back, from head to tail, almost straight, or at least very slightly elevated, of a rich deep blue color. It has the pectoral, but wants the ventral fins : the tail is almost even, divided by an angular pro- jection in the middle ; tail and fins brown. The belly and sides are white, shagreened, or wrinkled, and beset with innumerable small sharp spines, adhering to the skin by four processes.

2. D. mola, or the sho:t sun-fish, differs from the oblong, in being much shorter and deeper. The back and the anal fins are higher, and the aperture to the gills not semilunar, but oval. The situation of the fins is the same in both. Both kinds are taken on the western coasts of this kingdom, but in much greater numbers in the warmer parts of Europe.

3. D. oblongus, the oblong sun-fish, grows to a great bulk : one examined by Sylvianus was above 100 pounds in weight; and Dr. Borlase mentions another taken at Plymouth in 1734, that weighed 500. In form it resembles a bream, or some deep fish cut in the middle. The mouth is very small, and contains in each jaw two broad teeth, with sharp edges. The eyes are small ; before each is a small sernilunar aper- ture ; the pectoral fins are very small, and placed behind them. The color of the back is dusky, and dappled ; the belly silvery ; between the eyes and the pectoral fins are certain streaks, pointing downwards. The skin is free from scales. When boiled, it has been observed to turn into a glutinous jelly, resembling boiled starch when cold, and served the purposes of glue on being tried on paper and leather. The meat of this fish is uncommonly rank : it feeds on shell-fish. The sun-fish of the Irish, the squalus of Gmelin, differs in all respects from this.

DIODORUS, surnamed Siculus, an ancient historian, born at Argyra, in

Sicily. He wrote a history of Egypt, Persia, Syria, Media, Greece, Rome, and Carthage ; and it is said that he vi- sited all the places mentioned in his history, which was the labor of thirty years. He is, however, too credulous in some of his narratives; and often dwells too long upon fabulous reports and trifling incidents ; while events of the greatest importance to history are treated with brevity, and sometimes passed over in silence. He lived in the age of Ciesar and Augustus, and spent much time at Rome to procure information, and authenticate his history. This important work, which he composed in Greek, contained forty books of which there are only fifteen remaining. The best editions are that of Amsterdam, 1745, in 2 vols. folio, and Ileyne, 10 vols. 8vo. 1793.

DICECIA, the twenty-second class in Lin- nous's sexual system, consisting of plants which, having no hermaphrodite flowers, produce male

and female flowers on separate roots. These last only ripen the seeds ; but require for that pur- pose the vicinity of a male plant ; for the asper- sion or sprinkling of the male dust. From the seeds of the female flowers, thus impregnated, are raised both male and female plants. The plants in the class dioecia are therefore all either male or female, on separate roots; not hermaphrodite, as in the greater number of classes ; nor with male and female flowers upon one root, as in the class monoecia. See BOTANY.

DIOGENES of Apollonia, in the island of Crete, held a considerable rank among the phi- losophers who taught in Ionia before Socrates ap- peared at Athens. He was the scholar and successor of Anaximenes, and in some measure rectified his master's opinion concerning air being the cause of all things. It is said that he was the first who observed that air was capable of condensation and rarefaction. He taught with great reputation at Athens ; but was at length banished for the freedom of his opinions. He died about A. A. C. 450.

DIOGENES the Cynic, an ancient philosopher, the son of a banker of Sinope. Being banished with his father for coining money, he retired to Athens, where he studied philosophy under An- tisthenes. Here he added new degrees of aus- terity to the sect of the Cynics, and never did any philosopher carry contempt for the con- veniences of life so far. He lodged in a tub ; and had no other property beside his staff, wallet, and wooden bowl, which last he threw away, on seeing a boy drink out of the hollow of his hand. He used to call himself a vagabond, who had neither house nor country ; was obliged to beg was ill clothed, and lived from hand to mou'.h Such singularity soon gained him reputation ; and Alexander the Great condescended to visit the philosopher in his tub. He asked if there was any thing in which he could oblige him : ' Gev out of my sunshine' was the only answer from the philosopher. The conqueror was so struck with the

independence of mind thus exhibited, that he declared, ‘ if he was not Alexander, he would choose to be Diogenes.’ In reply to one who asked at what time he ought to dine, Dio- genes said, ‘ If you are a rich man, when you will ; if you are poor, when you can.’ ‘ Would you be revenged upon your enemy/ said Diogenes, ‘ be virtuous, that he may have nothing to say against you.’ As Diogenes was going over to the island of ˆEgina, he was taken by pirates, who carried him into Crete, and there exposed him to sale. He answered the crier, who asked him what he could do, that ‘ he knew how to com- mand men:’ and perceiving Xeniades, a Corin- thian, going by, he said, ‘ Sell me to that gentleman, for he wants a master.’ Xeniades, struck with the singularity of Diogenes, bought him and carried him to Corinth, appointed him tutor to his children, and soon entrusted him with the management of his house. Diogenes’s friends being desirous of redeeming him, ‘ You are fools,’ said he ; ‘ the lions are not the slaves of those who feed them, but they are the servants of the lions.’ Some say that Diogenes spent the remainder of his life in Xeniades’s family; but Dio Chrysostom asserts that he passed the winter

*at Athens, and the summer at Corinth. He died at Corinth when he was about ninety years old : but authors are not agreed either as to the time or manr-pr of his death. The account of Jerom is, that as he was going to the Olympic games, a fever seized him; upon which he lay down under a tree, and refused the assistance of those who accompanied him. * Go you to the games,’ said he, ‘ and leave me to contend with my illness. If I conquer, I will follow you : if I am con- quered, I shall go to the shades below.’ He des- patched himself that very night ; saying, that ‘ he did not so properly die, as get rid of his fever.’ He had for his disciples Onesicritus, Phocion, Stilpo of Megara, and several other great men. His works are all lost.*

DIOGENES, surnamed Laertius, from Laerta in Cilicia, his birth place, an ancient Greek author, who wrote ten books of the Lives of the Philoso- phers, still extant. In what age he flourished is not determined. The oldest writers who mention him are Sopater of Alexandria, who lived in the time of Constantine the Great, and Hesychius Milesius, who lived under Justinian. Diogenes often mentions Plutarch and Phavorinus; and Menage has fixed the period of his appearance at the time of Severus, or about A. A. C. 200. He divided his Lives into books, and inscribed them to a learned lady of the Platonic school, as he himself intimates in his Life of Plato. There have been several editions of his Lives of the Philosophers; but the

best is that printed in 2 vols. 4to., at Amsterdam, 1693.

DIOMEDES, in fabulous history, a tyrant of Thrace, who is said to have fed his horses with the flesh of men. Hercules killed him, and threw him to be eaten by his own carnivorous horses ; Hyginus says there were four of them, and that the hero afterwards killed them, along with Abderus, their groom.

DIOMEDES, king of ˆEtolia, the son of Tydeus and Deiphyle, one of the bravest of the Grecian chiefs in the Trojan war. He went with Ulysses to steal the Palladium from the temple of Mi- nerva in Troy ; and assisted in murdering Rhesus king of Thrace, and carrying off his horses. At his return, from the siege of Troy, he lost his way in the darkness of the night, and landed in Attica, where his companions plundered the country, and lost the Trojan Palladium. During his long absence, his wife .ZEgiale had prostituted herself to Cometes, one of her servants. This was at- tributed to the resentment of Venus, whom Dio- medes had wounded in a battle before Troy. He resolved to abandon his native country, which was the seat of his disgrace ; and the at- tempts of his wife to take away his life, hastened his departure. He came to that part of Italy .vhich has been called Magna Graecia, where he built a city, which he called Argyrippa, and mar- ried the daughter of Daunus. he king of the country. He died there in extreme old age ; or, according to a certain tradition, he perished by the hand of his father-in-law. His death was greatly lamented by his companions, who, in the excess of their grief, were changed into birds re- sembling swans. These birds took flight into a neighbouring island in the Adriatic, and became remarkable for the tameness with which they ap-

proached the Greeks, and for the horror with which they shunned all other nations. They are called the birds of Diomedes. Altars were raised to Diomedes, as to a god, one of which Strabo mentions at Timavus.

DIOMEDIA. in ornithology, a genus belong- ing to the order of anseres. The bill is strait ; the superior mandible is crooked at the point, and the lower one is truncated ; the nostrils are oval, open, a little prominent, and placed on the sides. There are four species : the principal are : — •

1. D. demersa, has no quill-feathers on the wings ; and the feet have four toes, connected to- gether by a membrane. It is the black penguin of Edwards, about the size of a goose, and is fcund at the Cape of Good Hope. It is an ex- cellent swimmer and diver ; but hops and flut- ters in a strange aukward manner on the land ; and, if hurried, stumbles perpetually, and fre- quently runs for some distance like a quadruped, making use of the wings till it can recover its upright posture, crying out at the same time like a goose, but in a much hoarser voice. It is said to

clamber some way up the rocks in order to make the nest; in doing which, it has been ob- served to assist with the bill. The eggs are two in number, white, as large as those of a duck, and reckoned delicious eating, at least are thought so at the Cape, where they are brought in great numbers for that purpose. At this place the birds are often seen kept tame ; but in general they do not survive the confinement many months.

2. D. exulans, has pennated wings, and three toes on each foot. It is the albatross of Ed- wards ; and is about the size of a pelican. These birds are found in the ocean betwixt the tropics, and at the Cape of Good Hope. They are also often seen in vast flocks in Kamtschatka, and the adjacent islands, about the end of June, where they are called great gulls ; but it is chiefly in the bay of Penschinensi, the whole inner sea of Kamtschatka, the Kurile Isles, and that of Bhe- ring ; for on the eastern coasts of the first they are scarce, a single straggler only appearing now and then. Their chief motive for frequenting these places seems to be plenty of food ; and their arrival is a sure presage of shoals of fish following. At their first coming they are very lean, but soon grow immensely fat. They are very voracious, and will often swallow a salmon of four or five pounds weight ; but as they cannot take the whole of it into their stomach at once, part of the tail end will often remain out of the mouth ; and the natives, finding the bird in this situation, easily knock it on the head on the spot. Before the middle of August they migrate elsewhere. They are often taken by a hook baited with a fish, not for the sake of their flesh (it being hard and unsavory) but on account of the intestines, a particular part of which is blown up as a blad- der, and serves as a float to buoy up nets in fish- ing. Of the bones, tobacco-pipes, needle-cases, &c., are made. When caught they defend them- selves stoutly with the bill. Their cry is harsh and disagreeable, not unlike the braying of an ass. The breeding places of the albatross, if at all in the northern hemisphere, have not yet been pointed out ; but we are certain of their multi- plying in the southern, viz. Patagonia and Falk-

land Islands ; to this last place they come about the end of September or beginning of October, among other birds, in great abundance. The nests are made on the ground with earth, are round in shape, a foot in height, indented at top. The egg is larger than that of a goose, four inches and a half 1 ng, white, marked with dull spots at the bigger end, and is thought to be good food, the while never growing hard with boiling. While the female is sitting, the male is con- stantly on the wing, and supplies her with food :

during this time they are so tame as to suffer themselves to be shoved off the nest while their eggs are taken from them ; but their chief destruc- tion arises from the hawk, which, the moment the female gets off the nest, darts thereon, and flies away with the egg. The albatross itself likewise has its enemy, being greatly persecuted while on the wing by the dark gray gull, called skua. This bird attacks it on all sides, but par- ticularly endeavours to get beneath, which is only prevented by the first settling on the water ; and indeed they do not frequently fly at a great dis- tance from the surface, except obliged so to do by high winds or other causes. As soon as the young are able to remove from the nest, the pen- guins take possession, and hatch their young in turn. It is probable that they pass from one part of the globe to another according to the sea- son; being now and then met with by different voyagers at various times in intermediate places. The food is supposed to be chiefly small marine animals, especially of the molluscae or blubber class, as well as flying fish.

DION, the son of Hipparinus, a Syracusan, famous for his power and abilities. He was re- lated to Dionysius, and often joined with the philosopher Plato (who at his request had come to reside at the tyrant's court), in advising him to lay aside the supreme power. His great po- pularity rendered him odious in the eyes of the tyrant, who banished him to Greece. There he collected a numerous force, and resolved to free his country from tyranny. This he easily ef- fected on account of his popularity. He entered the port of Syracuse with only two ships ; and in three days reduced under his power an empire which had already subsisted for fifty years, and which was guarded by 500 ships of war, and above 100,000 troops. The tyrant fled to Co- rinth, and Dion kept the power in his own hands, fearful of the aspiring ambition of some of the friends of Dionysius : but he was shame- fully betrayed and murdered by one of his fa- miliar friends called Callicrates, or Callippus, 354 years before the Christian era.

DION CASSIUS, a native of Nicaea in Bithynia. His father's name was Apronianus. He was raised to the greatest offices of state in the Roman empire by Pertinax, and his three successors. He was naturally fond of study, and he improved himself by unwearied application. He was ten years in collecting materials for a history of Rome, which he published in eighty books, after a laborious employment of twelve years in com- posing it. This valuable history began with the arrival of .ZEneas in Italy, and was carried down to the reign of Alexander Severus. The first thirty-four books are totally lost ; the twenty fol-

lowing, that is from the thirty-fifth to the fifty- fourth, remain entire ; the six following are mutilated ; and fragments are all that we possess of the last twenty. In the compilation of this extensive history, Dion proposed

Thucydides for a model, but he is not perfectly happy in his imitation. His style is pure and elegant, and his narrations are judiciously managed, and his reflections learned ; but, upon the whole, he is credulous, and the bigoted slave of partiality, satire, and flattery. He inveighs against the republican principles of Brutus and Cicero, and extols the cause of Caesar. Seneca is the object of his satire, and he represents him as debauched and licentious in his morals.

DION/EA, in botany, a genus of sensitive plants lately discovered. It belongs to the order monogynia, in the decandria class. There is but one genus as yet known : viz. D. muscipula, or Venus's fly-trap. Every one skilled in natural history knows, that the sensitive plants close their leaves, and bend their joints, upon the least touch (see MIMOSA); but no design of na- ture has yet appeared to us from these surprising motions : they soon recover themselves again, and their leaves are expanded as before. But the dionaea shows that nature may have some view towards its nourishment, in forming the upper joint of its leaf like a machine to catch food ; upon the middle of this lies the bait for the unhappy insect that becomes its prey. Many minute red glands that cover its inner surface, and which discharge a smell of carrion, tempt the poor animal to taste them; and the instant these tender parts are irritated by its feet, the two lobes rise up, grasp it fast, lock the two rows of spines together, and squeeze it to death. And lest the strong efforts for life, in the creature thus taken, should serve to disengage it, three small erect spines are fixed near the middle of each lobe among the glands, that effectually put an end to all its struggles. Nor do the lobes ever open again, while the dead animal continues there. The plant, however,. , cannot distinguish an animal from a general substance ; for, if we introduce a straw or a pin between the lobes, it will grasp it full as fast as if it was an insect. It grows in North America, in about 35° lat. N., in wet shady places, and flowers in July and August, The largest leaves are about three inches long, and an inch and a half across the lobes, the glands of those exposed to tht sin are of a beautiful red color ; but those in the shade are pale, and inclining to green. The roots are squamous, sending forth but few fibres, and are perennial. The leaves are numerous, inclining to bend downwards, and are placed in a circular order; they are jointed and succulent ; the lower joint, which is a kind of stalk, is flat, longish, two edged, and inclining to heart-shaped. In some varieties they are serrated on the edges near the top. The upper joint consists of two lobes ; each lobe is of a semi-oval form, with its margins furnished with stiff hairs like eye-brows, which embrace or lock in each other when they close. The upper surfaces of the lobes are covered with small red glands; each of which appears, when highly magnified, like a com- pressed arbutus-berry. If the fly, enclosed in

these lobes, can be forced out so as not to strain the lobes, they expand again ; but if force is used to open them, so strong has nature formed the spring of their fibres, that one of the lobes will generally snap off rather than yield. The stalk is about six inches high, round, smooth, and without leaves ; ending in a spike of flowers. The flowers are milk-white, and stand on foot- stalks, at the bottom of which is a little painted bractea or flower leaf. The soil in which it grows, as appears from what comes about the roots of the plants when they are brought over, is a black, light mould, intermixed with white sand, such as is usually found in our moorish heaths. Being a swamp plant, a northern aspect will be properest for ft at first, to keep it from the direct rays of the sun ; and in winter, till we are acquainted with what cold weather it can en- dure, it will be necessary to shelter it with a bell glass, such as is used for melons. This should be covered with straw or a mat in hard frosts. By this means several of these plants have been preserved through the winter in a very vigorous state. Its sensitive quality will be found in pro portion to the heat of the weather, as well as the vigor of the plant. Our summers are not warm enough to ripen the seed; or possibly we are not yet sufficiently acquainted with the culture of it. To try further experiments on its sensitive powers, some of the plants might be placed in pots of light moorish earth, set in pans of water, in an airy stove in summer; where the heat of such a situation, being like that of its native country, will make it surprisingly active.

DIONYSIA, in Grecian antiquity, solemnities in honor of Bacchus, sometimes called by the general name of Orgia ; and by the Romans Bac- chanalia and Liberalia.

DIONYSIACA, in antiquity, a designation given to plays and all manner of sports acted on the stage : because play-houses were dedicated to Dionysius, or Bacchus, one of the deities of sports.

DIONYSIUS I. from a private secretary be- came general and tyrant of Syracuse and all Sicily. He patronised learning and men of let- ters, and made his court the resort of many of the greatest philosophers of Greece. He was also himself a poet; and having, by bribes, gained the prize for tragedy at Athens, he in- dulged himself so immoderately at table from excess of joy that he died of the debauch, A. A. C. 386. Some authors, however, say he was poi- soned by his physicians.

DIONYSIUS II., his son and successor, was a greater tyrant than his father : his subjects were obliged to fly to the Corinthians for succour ; and

Timoleon their general having conquered the tyrant, he fled to Athens, where he was obliged to keep a school for subsistence. He died A. A. C. 343.

DIONYSIUS, surnamed Halicarnasseus, or Ibe Halicarnassian, a celebrated historian, and one of the most judicious critics of antiquity. He was born at Halicarnassus ; and went to Rome after the battle of Actium, where he staid twenty-two years in the reign of Augustus. He there com- posed in Greek his History of the Roman Anti- quities, in twenty books of which the first eleven

only are now remaning. There are abo still extant several of his critical works. The best edition of the works of this author is that of Ox- ford, in 1704, in Greek and Latin, by Dr. Hud- son.

DIONYSIUS, surnamed Periegetes, a learned geographer, to whom is attributed a Periegesis, or Survey of the Earth, in Greek verse. Some suppose that he lived in the time of Augustus ; but Scaliger and Saumasius place him under the reign of Severus, or Marcus Aurelius. He wrote many other works, but his Periegesis is the only one we have remaining ; the best and most useful edition of which is that improved with notes arid illustrations by Hill.

DIONYSIUS, the Areopagite, was born and educated at Athens. He went afterwards to Heliopolis in Egypt; where, if we may believe some writers of his life, he saw that extraordinary eclipse which happened at our Saviour's passion, and was urged by some uncommon impulse to cry out, Aut Deus Naturae patitur, aut cum pa- tiente dolet : ' Either the God of Nature suffers, or condoles with him who does.' At his return to Athens he was elected into the court of Areo- pagus, whence his title. About A. D. 50, he embraced Christianity (Acts xvii. 34) ; and, some say, was appointed first bishop of Athens by St. Paul. He is supposed to have suffered martyrdom ; but whether under Domitian, Tra- jan, or Adrian, is uncertain. We have nothing remaining under his name, but what there is great reason to believe spurious.

DJOOJOCARTA, a considerable town and European settlement of the island of Java, situ- ated on a navigable stream. It is the capital of the sultan of Mataram, who has a palace here three miles in circuit, surrounded by a broad wet ditch with draw-bridges, and defended by 100 pieces of cannon. Within its precincts is a lake, on which stands an ancient mansion, which is entered by a long and spacious passage under the water. A guard of 300 Amazons, daughters of petty chieftains, are said to be trained here both to a military and domestic life. They are armed with spears, and are excellent equestrians. This place was taken by a coup de

main, by the British, in 1812.

DIOPHANTINE PROBLEMS, in mathematics, certain questions relating to square and cube numbers, and right-angled triangles, &c., the nature of which was determinined by Diopha- nus.

DIOPTRIC, adj.\ Gr. ˆwrro/tm. Af

DIOP'TRICAL, adj. > fording a medium for the

DIOP'TRICS, n. s. j sight ; assisting the sight

in the view of distant objects ; a branch of the

science of optics.

Being excellently well furnished with divptrical glasses, he had not been able to see the sun spotted

Boyle

View the asperities of the moon through a dinjitrtck glass, and venture at the proportion of her hills by their shadows. Mare's Antid. against Atheism.

*DIOPTRICS ; of Sia, through, and «7rro/*ai, I see ; sometimes called also Anaclastics, the doc- trine of refracted vision. A branch of the science of optics. The ancients treated distinctly of di- rect and reflected vision ; but of refracted vision*

thoir knowledge was very imperfect. An early treatise on refraction, in nine oooks, was written by J. Baptista Porta; but Kepler was the first who elucidated this subject in any great degree, having demonstrated the properties of spherical lenses very accurately, in a treatise published anno 1611. After Kepler, Galileo introduced the doctrine into his Letters ; as also an Exami- nation of the Preface of Johannes Pena upon Euclid's Optics, concerning the use of Optics in astronomy. Des Cartes also wrote a treatise on Dioptrics, commonly annexed to his Principles of Philosophy, one of his best works : in which the true doctrine of vision is more distinctly ex- plained than by any former writer, arid in which is contained the law of refraction, discovered by Snell, though the name of the inventor is sup- pressed. Here are also laid down the properties of elliptical and hyperbolical lenses, with the practice of grinding glasses. Dr. Barrow has

treated on Dioptrics in a brief but very elegant manner, in his Optical Lectures, read at Cam- bridge. There are also Huygens's Dioptrics, an excellent work of its kind. Molyneux's Diop- trics, a heavy and dull work. Hartsoeker's Essai de Dioptrique, Cherubin's Dioptrique Oculaire, et De Vision Parfaite, David Gregory's Elements of Dioptrics, Traber's Nervus Opticu-s, and Zahn's Oculus Artificialis Teledioptricus. Dr. Smith's Optics is a complete work of its kind. Wolfius's Dioptrics are contained in his Elementa Matheseos Universalis. Harris's Op- tics, Bouguer's Optics, and the second volume of Haiiy's Natural Philosophy, may also be ad- vantageously consulted. The Treatise on Optics, and the Optical Lectures of Newton, contain an account of inestimable experiments and reason- ings in vhis science : and Mr. Dollond's disco- very of achromatic glasses, by which colors are obviated in refracting telescopes, has been of great importance to this branch of optics. See OPTICS.

DIORTHO'SIS, n.s. Gr. &0p0w

DIOSCOREA, in botany, a genus of the hexandria order and dicccia class of plants; natural order eleventh, sarmentaceae. Male CAL. sexpartite : COR. none. Female CAL. sexpartite : STYL. three : CAPS, trilocular and compressed ; and there are two membranaceous seeds. There are fifteen species, of which the only remarkable one is the D. bulbifera, or the yam. It has triangular winged stalks, which trail upon the ground, extend far, and frequently put out roots from their joints as they lie upon the ground, by which the plants are multiplied. The roots are eaten by the inhabitants of both the Indies ; and, in the West India islands, make the greatest part of the negroes' food. The plant is supposed to have been brought from the East to the West Indies ; for it has never been observed to grow wild in any part of America ; but, in the island of Ceylon, and on the coast of Ma- labar, it grows in the woods, and there are in those places many different species. It is pro- pagated by cutting the root in pieces, observing to preserve an eye in each, as in planting pota-

toes. One plant will produce three or four large roots. The skin of these roots is pretty thick, rough, unequal, covered with many stringy fibres or filaments, and of a violet color, ap- proaching to black. The inside is white and of the consistence of red beet. It resembles the potatoe in its mealiness, but is of a closer texture. When raw, the yams are viscous and clammy ; when roasted, or boiled, they afford very nou- rishing food ; and are often preferred to bread by the inhabitants of the West Indies, on account of their lightness and facility of digestion. When first dug out of the ground, the roots are placed in the sun to dry ; after which, they are either put in sand, dry garrets, or casks ; where, if kept from moisture, they may be preserved whole years without being spoiled or diminished in their goodness. The root commonly weighs two or three pounds ; though some yams have been

found upwards of twenty pounds weight.

DIOSCORIDES, a physician of Anazarba, in Cilicia, who lived in the reign of Nero. He was originally a soldier; but afterwards he applied himself to study, and wrote a book upon Medi- cinal Herbs.. See BOTANY.

DIOSCURI, in antiquity, a name given to Castor and Pollux, as Koupoi, the children, Atoc, of Jupiter. They are often borne on the medals of the Roman consuls, and generally appear, as in the annexed diagram, on horse-back, armed with spears, and with helmets surmounted with stars.

DIOSCURIA, Sioffitovpia, in antiquity, a fes- tival in honor of Castor and Pollux. It was observed by the Cyreneans, but more especially by the people of Sparta, the birth-place of these heroes. The solemnity was full of mirth, being at a time wherein they shared plentifully of the gifts of Bacchus, and diverted themselves with sports, of which wrestling matches made a part.

DIOSMA, African spiraea, a genus of the monogynia order and pentandria class of plants : COR. pentapetalous ; nectarium crown-shaped, above the germen : CAPS, five, coalited : SEEDS hooded. There are nine species, of which the most remarkable are,

1. D. hirsuta, with narrow hairy leaves; a very handsome shrub, growing to the height of five or six feet. The stalks are of a fine coral color, the leaves come out alternately on every side of the branches ; the flowers are produced in small clusters at the end of the shoots, and are of a white color. They are succeeded by starry seed-vessels, having five corners ; in each of which corners is a cell, containing one smooth, shining, oblong, black seed ; these seed-vessels abound with a resin which emits a grateful scent, as does also the whole plant.

2. D. oppositifolia, with leaves in the form of a cross. It rises to the height of three or four feet; the branches are slender, and produced from the stem very irregularly ; the flowers are produced at the ends of the branches, between the leaves; the plants continue long in flower, and make a fine appearance, intermixed with other exotics in the open air.

BIOS NOMBRE DE, a town of Mexico, on the road from the mines of Sombrerete to Du- rango. It contains 6800 inhabitants.

DIOSZEGH, a large market town of Hun- gary, in the county of Bihar, thirty miles S. S. W of Zathmar.

pIOSPOLITES NOMOS, a division of The- bais, or the Higher Egypt, to distinguish it from another of the Lower Egypt, or the Delta ; south of the Nomos Thinites, on the west side of the Nile.

DIOSPYROS, the Indian date-plum, a genus of the dioecia order and polygamia class of plants; natural order eighteenth, bicornes . CAL. hermaphrodite and quadrifid : COR. urceolated and quadrifid; STAM. eight: STYL. quadrifid: BERRY octospermous. There are two species, viz.

1 . D. lotus, which is supposed to be a native of Africa, from whence it was transplanted into several parts of Italy, and also into the south of France. The fruit of this tree is supposed to be the lotus with which Ulysses and his compa- nions were said to have been enchanted, and which made those who eat of it forget their country and relations. In the warm parts of Europe this tree grows to the height of thirty feet.

2. D. Virginiana, pinshamin, persimon, or pichumon plum, is a native of America, but particularly of Virginia and Carolina. The seeds of this sort have been frequently imported into Britain, and the trees are common in many nurseries about London. It rises to twelve or fourteen feet; but generally divides into many irregular trunks near the ground, so that it is very rare to see a handsome tree of this sort. Though plenty of fruit is produced on these trees, it never comes to perfection in this country. In America the inhabitants preserve the fruit till it is rotten, as is practised with aiedlars in England, when they are esteemed ?ery pleasant. Both species are propagated by seeds, and the plants require to be treated ten- derly while young ; but when theyare grown up, they resist the greatest cold of this country.

DIP, -o. a., v. n. & n. s.) Goth, doppen ; Sax.

DIP'CHICK, n.s. jidopen; Dutch doo-

pene; Teut. tauffen ; Hindoo duba, from Gr. Svirrta. To immerse ; put into a liquid ; wet ; and, figuratively, to be deeply involved in any affair, and to engage as a pledge. As a neuter verb to sink ; enter ; immerge : as a substantive it is applied by miners to the direction of coal- shafts and minerals (see p. 268), and by scientific men to the depression of a part of the horizon, the needle of the compass, 8cc. Dip-chick the example explains.

Who, dipping all his faults in their affection, Work like the spring that turneth wood to stone, Convert his gyves to graces. Shakspeare.

Dipchick is so named of his diving and littleness.

farcw.

And though not mortal, yet a cold shuddering

dew

Dipt me all o'er, as when the wrath of Jove Speaks thunder. Milton.

To be baptized, is to be dipped in water ; metapho- rically, to be jilunged in afflictions.

Poole'i Continuators.

In Richard's time, I doubt, he was a' little dipt in the rebellion of the commons. Dryden. Fables.

Be careful still of the main chance, my son ; Put out the principal in trusty hands, Live on the use, and never dip thy lands

Id. Perstus.

When men are once dipt, what with the encourage- ments of sense, custom, facility, and shame of de- parting from what they have given themselves up to, they go on till they are stifled. L'Estrange.

So fishes, rising from the main, Can soar with moistened wings on high ;

The moisture dried, they sink again, And dip their wings again to fly. Swift.

The kindred arts shall in their praise conspire, One dip the pencil, and one string the lyre. Pope.

The vulture dipping in Prometheus' side, His bloody beak with his torn liver dyed.

Granville.

The persons to be baptised may be dipped in water ; and such an immersion or dipping ought to be made thrice, according to the canon. Ayliffe's Parergon.

Crowd round her baths, and, bending o'er the side, Unclasped their sandals, and their zones untied, Dip with gay fear the shuddering foot undressed, And quick retract it to the fringed vest. Darwin.

In nautical observations it is necessary to know the depression or dip of the sea, to correct the apparent altitude of an observed object. Dr. A. Reet.

DIPET'ALOUS. adj. AiS and vtraXov. Having two flower leaves.

DIPHTHONG, n. s. Fr. diphthongue ; Ital. and Span, diftongo ; Lat. diphthongus ; Gr. , from £tj, double, and Qoyyn, a sound.

We see how many disputes the simple and ambigu- ous nature of vowels created among grammarians, and now it has begot the mistake concerning diph- thongs ; all that are properly so are syllables, and not diphthongs, as is intended to be signified by that word. Holder's Elements of Speech.

Make a diphthong of the second eta and iota, instead of their being two syllables, and the objection is yone.

Pope.

DIPHTHONGS are distinguished by some au- thors into those that regard the eye, and those that regard the ear; but a more accurate distinc- tion was long ago made by that eminent gram- marian, Mr. Ruddiman, into proper and im- proper. A third class, however, seems to exist in the English language, which may be styled neutral. 1. Improper diphthongs, are those wherein only one of the vowels is sounded, the other being sunk ; as £e and oe in the Latin, and ea, ei, eo, ie, ou, oe, ue, and ui, in the English language. The Latins pronounced the two vowels in their diphthongs ae or ae, oe or o?, much as we do ; only that the one was heard much weaker than the other, though the division was made with all the delicacy imaginable. 2. Neutral diphthongs are those combinations of vowels, wherein either a new sound, different from that of both, takes place, or neither of them is sounded ; for instance, the sound of eo in people, is quite different from that of eo in jeo- pardy, or of either of the vowels separate ; and the apparent diphthong, or diphthong of the eye, as other? style it, ue, in rogue, vogue, ice

is sunk altogether. Among the former of these classes may be ranked ee and oo, wherein the original sound of the vowels, instead of being lengthened, like that of aa, is changed to that of i and u. The diphthong oe, in shoe, also belongs to this class, with many others. 3. Proper diphthongs, are such as include the sound of both the component vowels, though still in one syllable; such as au, eu, and ei, in Latin ; and ai, au, ay, eu, ey, oi, and ou, in English.

DIP'LOE, n. s. The inner plate or lamina of the skull.

DIPI.OE, in anatomy, the soft meditullium, or medullary substance, which lies between the two laminae of the bones of the cranium.

DIPLO'MA, n. s. Fr. diplome ; from Gr. SiirXwpa. See the article following.

In 1728 he received from Edinburgh and Aberdeen an unsolicited diploma. Academical honours would have more value, if they were always bestowed with equal judgment. Johnson's Life of Watts.

DIPLOMA is peculiarly used for an instrument or licence, given by colleges, societies, &c., to clergymen or physicians, to exercise their re- spective professions, after passing examination, and being admitted to a degree.

DIPLOMATICS, the science of diplomas, or of ancient literary monuments, public docu- ments, &c. It does not, however, nor can it, absolutely extend its researches to antiquity ; but is chiefly confined to the middle age, and the first centuries of modern times. For though the ancients were accustomed to reduce their contracts and treaties into writing, yet they graved them on tables, or covered them over with wax, or brass, capper, stone, or wood, &c. And all that in the first ages were not traced on brass or marble, have perished by the length of time, and the destructive events, that have taken place. The word diploma signifies, properly, a letter, or epistle, folded in the middle, and not open. But, in more modern times, the title has been given to all ancient epistles, let- ters, literary monuments, and public documents, and to all those pieces of writing which the an- cients called syngrapha, chirographa, codicilli, Sac. In the middle age, and in the diplomas themselves, these writings are called literae, praecepta, placita, chartae indiculae, sigilla, and bullae ; as also panchartae, pantochartae, tracto- riae, descriptiones, &,c. The originals of these pieces are named exemplaria, or autographa, chartae authenticae, originalia, &c. ; and the co- pies, apographa, copiae, particulae, &c. The collections that have been made of them, are called chartariae and charti/ae. The place where these papers and documents were kept, the an- cients named scrinia, tabularium, or aeraruim, words that were derived from the tables of brass, and, according to the Greek idiom, archeium, or archivum. To understand the nature of these ancient papers, diplomas, and MSS., and to distinguish the authentic from the counterfeit, it is necessary to observe, that the paper of the ancients came from Egypt, and was formed of thin leaves, or membranes, taken from the branches of a tree named Papyrus, or Biblum

TEgyptiacum, and which were pasted one over the other with the slime of the Nile, and were pressed and polished with a pumice stone. This paper was very scarce ; and it was of va- rious qualities, forms, and prices, which they distinguished by the names of charta hieratica, luria, augusta, amphitheatrica, saitica, tanirica, emporetica, &c. They cut it into square

leaves, which they pasted one to the other, in order to make rolls of them ; from whence an entire book was called volumen, from volvendo; and the leaves of which it consisted, paginac. Some- times, also, they pasted the leaves all together by one of their extremities, as is now practised in binding; by this method they formed the back of a book, and these the learned called codices. They rolled the volume round a stick, which they named umbilicus; and the two ends which came out beyond the paper, cornua. The title, written on parchment, in purple characters, was joined to the last sheet, and served it as a cover. They made use of all sorts of strings or ribands, and even sometimes of locks, to close the book ; sometimes, also, it was put into a case It is easy for those, who apply themselves to this study, to distinguish the parchment of the an- cients from that of the moderns, as well as their ink and various exterior characters; but that which best distinguishes the original from the counterfeit, is the writing or character itself; which is, in most cases, very distinctly different from one century to another. There are two works which furnish the best lights on this matter, and which may serve as sure guides in judging of what are called ancient diplomas. The one is the celebrated Treatise on the Diplo- matic, by F. Mabillon ; and the other, the first volume of the Chronicon Gotvicense. \Ve shall here only add, that all the diplomas are written in Latin, and consequently the letters and cha- racters have a resemblance to each other; but there are certain strokes of the pen which dis- tinguish not only the ages, but also the different nations; as the writings of the Lombards, French, Saxons, &c. The letters in the diplomas are usually longer, and not so strong as those of MSS. There has been also introduced a kind of court hand, of a very disproportionate length, and the letters of which are called, Exiles lit- terae, crispae ac protractiores. The first line of the diploma, the signature of the sovereign, that of the chancellor, notary, &c., are usually written in this character. The signature of the diploma consists either of the sign of the cross, or of a monogram, or cipher, composed of the letters of the names of those who subscribed it. The initial letters of the name, and sometimes also the titles, were placed about this cross. By degrees, the custom changed, and they invented other marks. They sometimes added also the date and epoch of the signature, the feasts of the church, the days of the kalendar, &c. The suc- cessive corruption of the Latin language, the style, and orthography of each age, as well as their different titles and forms ; the abbreviations, accentuations, and punctuation, and the various methods of writing the diphthongs; all these matters united, form so many characters and marks, by which the authenticity of a diploma

is to be known. The seal annexed to a diploma was anciently of white wax, and artfully im- printed on the parchment itself. It was after- wards pendent from the paper, and enclosed in a box or case, which they called bulla. There are some also that are stamped on metal, and even on pure gold.

DIPONDIUS, a coin, of very little value, mentioned by St Luke, xii. 6. Our translation of the passage is, Are not five sparrows sold for two farthings ? In St. Matthew, x. 29, it runs, Are not two sparrows sold for a farthing ? The Greek has assarion instead of as, which some say was worth half an as, i. e. four French de nicrs and one-eighth; and, according to others, two deniers and five-sixteenths. Dipondius seems rather to signify half an as. — Calmet. Dr. Arbuthnot, however, says, that this coin was at first libralis, or of a pound weight ; and, even when diminished, it retained the name of libella ; so that dipondius denotes two asses.

*DIPPEL (John Conrad), a German physician, born at Darmstadt in 1672. He studied theo- logy at Giessen, and afterwards read medical lectures at Strasburgh, but took his doctor's de- gree at Leyden in 171 1. He was much addicted £o the study of alchemy, and, among other secrets, pretended to have discovered the philosopher's stone. After rambling from place to place, he at last settled at Hamburgh ; but having used some indiscreet freedoms with the administration of Denmark, he was given up to the government of that country, by whom he was sentenced to per- petual imprisonment in the island of Bornholm. He, however, obtained his liberty at the end of seven years ; and about the same time was in- vited to Sweden, to attend the king, who was dangerously ill, but through the influence of the clergy, whom he had ridiculed, he was obliged u> leave the kingdom in 1727. He afterwards *ent to Germany, and in 1733 gave out pub- licly that he should not die till 1808, but next year he was found dead in his bed. He denied rtie inspiration of the Scriptures, and wrote a number of wild enthusiastic books, under the name, of Christianus Democritus. His works were published in 5 vols. 4to. 1747. We are in- debted to him for the discovery of the Prussian blue, and he inverted a useful oil, which is called after him.*

DIPPING, among miners, signifies the inter- ruption, or breaking off the veins of ore ; an accident that gives them a great deal of trouble before they can discover the ore again. A great part of the skill of the miners consists in the understanding of this dipping of the veins. In Cornwall they have this general rule to guide them in this respect : most of their tin-loads, which run from east to west, constantly dip to- wards the north. Sometimes they underlie ; that is, they slope dowi- towards the north three feet in height perpendicular. This must carefully be observed by the miners, that they may ex- actly know where to make their air-shafts when occasion requires;

yet, in the higher mountains of Dartmaer, there are some considerable loads which run north and south ; these always underlie towards the east. Four or five loads may run nearly parallel to each ther in the same hill;

and yet, which is rare, they may meet all together in one hatch, as it were a knot, and so separate again, and keep their former distances.

The DIPPING NEEDLE, or INCLINATORY NEEDLE, is defined, by Dr. Hutton, 'a mag- netical needle, so hung, as that, instead of play- ing horizontally, and pointing out N. and S., one end dips or inclines to the horizon, and the other points to a certain degree of elevation above it. It is used for observing the quantity of inclination towards the earth assumed by the magnetic needle. The inventor of the dipping needle was Robert Norman, a compass-maker, at Ratcliffe, about 15(50. This is not only tes- tified by his own account, in his New Attractive, but also by Mr. Whiston, Dr. Gilbert, Mr. Wil- liam Burrowes, Mr. Henry Bond, and other writers of that period. The occasion of the dis- covery he himself relates, viz. that it being his custom to finish, and hang the needles of his compasses, before he touched them, he always found that, immediately after the touch, the N. point would dip or decline downwards, pointing in adirection under thehorizon; so that, to balance the needle again, he was always forced to put a piece of wax on the S. end, as a counterpoise. The constancy of this effect led him at length to observe the precise quantity of the dip, or to measure the greatest angle which the needle would make with the horizon. This, in 1576, he found at London to be 71° 50.

It is not quite certain, however, whether the dip varies, as well as the horizontal direction, in the same place. Mr. Graham made many exper- iments with the dipping needle in 1723, and found the dip between 74° and 75°. Mr. Nairne, in 1772, found it somewhat above 72°. And, by many observations made since that time at the Royal Society, the medium quantity is 72£°. The trifling difference between the first observa- tions of Norman, and the last of Mr. Nairne and the Royal Society, has led some philosophers to the opinion that the dip is unalterable ; and yet it may be difficult to account for the great dif- ference between these and Mr. Graham's num- bers, considering the well-known accuracy of that ingenious gentleman. Philosophical Trans- actions, vol. xlv. p. 279; vol. Ixii. p. 476; vol. Ixix. Ixx. Ixxi. From a comparison of Mr. Gilpin's observations of the dip in August, 1805, when he found it 70° 20', with those of Mr. Ca- vendish, in 1775, its annual decrease, on a mean, appears to have been 4-3′ ; and its progressive annual decrease, on a mean, in the above-men- tioned period of thirty years, to have been 1-4'. It is certain, from many experiments and obser- vations, that the dip is different in different lati- tudes, and that it increases in going northward. It appears from a table of observations, made with a marine dipping needle of Mr.

Nairne's, in a voyage towards the north pole in 1773, that in lat. 60° 18′ the dip was 75° 0', in lat. 70° 45′ the dip was 77° 52', in lat. 80° 12′ the dip was 81° 52', and in lat. 80° 27′ the dip was 82° 2£'. See Phipps's Voyage, p. 122. See also the Ob- servations of Mr. Hutchins, made in Hudson's Bay and Straits, Philosophical Transactions, vol. Ixv. p. 129. Messrs Burrowes, Gilbert, Ridley,

Bond, &c. endeavoured to apply tliis discovery of the dip to the finding of the latitude ; and Bond first proposed finding the longitude by it; but for want of observations and experiments, he could not conduct his reasoning to any length. Mr. Whiston, being furnished with the farther observations of colonel Windhara, Dr. Halley, Mr. Pond, Mr. Cunningham, M. Noel, M. Feuille, and his own, made great improvements in the doctrine and use of the dipping needle, brought it to more certain rules, and endeavoured to find the longitude by it. For this purpose, he observes: l.That the true tendency of tbe N. or S. end of every magnetic needle is not to that point of the horizon to which the horizontal needle points, but towards another directly under it, in the same vertical, and in different degrees under it, in different ages, and at different places. 2. That the power by which the horizontal needle is governed, and all our navigation usually directed, it is proved, is only one quarter of the power by which the dipping needle is moved ; which should render the latter by far the more effectual and accurate instrument. 3. That a dipping needle of a foot long will plainly show an alteration of the angle of inclination, in these parts of the world, in one-eighth of a degree, or seven and a half geographical miles; and a needle of four feet, in two or three miles; i. e. supposing these distances taken along, or near a meridian. 4. A dipping needle four feet long, in these parts of the world, will show an equal alter- ation along a parallel, as another of a foot long will show along a meridian, i. e. that will, with equal exactness, show the longitude, as this the latitude. This depends on the position of the lines of equal dip, in these parts of the world, which, it is found, do lie about 14° or 15° from the parallels. Hence he argues, that as we can have needles of five, six, seven, eight, or more feet long, which will move with strength sufficient for exact observa- tion ; and since microscopes may be applied for viewing the smallest divisions of degrees on the limb of the instrument, it is evident that the longitude at land may thus be found to be less than four miles. And as there have been many ob- servations made at sea with the same instrument by Noel, Feuille, &c., which have determined the dip usually within a degree, sometimes within a half, or one-third of a degree, and this with small needles of five or six, or, at the most, nine inches long ; it is inferred that the longitude may be found

even at sea, within less than one-eighth of a degree.

The phenomena of the dipping needle are :~- That about the equatorial parts of the earth it remains in an horizontal position, but depresses one end as we recede from these ; the north end, if we go towards the north, and the south end, if we proceed towards the south pole. The farther north or south that we go, the inclination becomes the greater; but there is no place of the globe hitherto discovered where it points directly downwards, though it is supposed that it would do so in some part of it very near the pole. Its inclination is likewise found to vary very consider- ably at different times in different places of the earth, and by some changes of situation, in such a manner as must appear at first sight very unac-

countable. Of all those who have attempted the. investigation of this obscure subject, none have been more successful than M.Cavallo,who, in his Treatise on Magnetism, has given particular atten- tion to all the phenomena, and accounts for them upon plain and rational principles, in the follow- ing manner : — The dip of the magnetical needle, in general, may be understood from the following easy experiment : Lay an oblong magnet horizon- tally upon a table, and over it suspend another smaller magnet (a sewing needle to which the magnetic virtue has been communicated will answer the purpose), in such a manner as to re- main in an horizontal position when not dis- turbed by another magnet. Now, if this lasr small magnet or sewing needle, suspended by the middle, be brought just over the middle of the large one, it will turn itself in such a manner that the south pole of the small magnet will point towards the north pole of the large one ; and if at an equal distance from both, will remain in an horizontal position. But if we move it nearer to one of the poles than the other, it will be readily understood that the corresponding end of the needle will be attracted by the pole to which it approaches, and of consequence inclined down- wards; the contrary end being proportionably elevated. It is likewise evident, that this inclina- tion will be greater or less according to the dis- tance at which the small magnet is placed from the pole of the large one ; the attraction of the nearest pole having always the greatest effect upon it. And it is equally plain that, when brought directly over one of the poles of the large mag- net, it will turn its own contrary one directly to- wards it, and thus lie exactly in the axis of the large one. Tiie application of this experiment to the phenomena of the dipping needle is ob- vious, as nothing more is requisite for solving the whole mystery, than to suppose the earth itself to be the large magnet, and the magnetic needle, or any other magnetic body, the small magnet iu the experiments : for admitting that the north pole of the earth possesses a south magnetism, and that the opposite pole is possessed of a north magnetical polarity ; it appears, and the theory is confirmed by experiment, that when a magnet is suspended properly in the equatorial parts of the

world, it must remain in an horizontal posi- tion ; but when removed nearer to one of the poles, it must incline one of its extremities, viz. that which is possessed of the contrary magnetic polarity ; and that this inclination must increase in propor- tion as the magnet or magnetic needle recedes from the equator of the earth ; and, lastly, when brought exactly upon either of the poles of the earth, it must stand perpendicular to the ground, or in the same direction with the axis of the earth. The only difficulty in this explanation arises from the attributing a south magnetism to the north pole of the earth ; but by this our author means only that its magnetism is contrary U that end of the magnetic needle which turns towards it; and in the same sense it must be understood, that the south pole of the earth has a north magnetic polarity. If the extremities of the axis of the earth, or the poles about which it performs its diurnal revolution, coincided with its magnetic poles, or even if the magnetic poles

were always at a certain distance from them, the inclination of the needle would be always the same at equal distances from the equator, and might be very useful for determining the latitudes. But it would seem, that these poles are perpe- tually shifting their places, since both the incli- nation and horizontal direction of the needle are continually varying even in the same place : so that its quantity of inclination cannot be exactly calculated. Two general remarks may be made upon this subject. 1 . That the inclination of the needle does not alter regularly in going from N. to S. or from S. to N. in any meridian. 2. That its alteration in the same place, and at dif- ferent times, is but small. Thus, in London, about the year 1576, the dip was 70° 50′ below the horizon, and in 1775 it stood at 72° 3'; the alteration in nearly 200 years, scarce amounting to three quarters of a degree, which may be attri- buted to the errors of the instruments; as these were at first exceedingly erroneous, and even yet are far from being perfect.

The general method of constructing dipping needles is, to pass an axis quite through the needle itself, and to let the extremities of the axis rest upon two supports, like the beam of a pair of scales, that the needle may move vertically round ; and hence, when placed in the magnetic meridian, it will naturally assume that position which is called the magnetic line, viz. the two ends nearly north and south, and one of them inclined considerably to the horizon. The de- grees of this inclination are shown upon a gra- duated circle ; and when the instrument is made use of at land it has a stand, but at sea a ring is necessary to suspend it. When furnished with a stand, it has also a spirit-level ; and the stand has three screws, by which the whole is adjusted in such a manner as to let the centre of motion in the needle, and

the mark of 90° on the lower part of the divided circle, be exactly in the same line perpendicular to the horizon. The greatest imperfections attending this instrument are the balancing of the needle itself, and the difficulty of knowing whether, after being made magnetic, it be properly balanced or not. The inaccuracy here indeed can be but very small, as arising only f'om dust or moisture. The method recommended by Mr. Cavallo, to obviate these inconveniences, is first to observe the dip of the needle, then to reverse its magnetism by the application of mag- nets, so that the end of it which before was ele- vated above the horizon may now be below it ; and, lastly, to observe its dip again ; for a mean of the two observations will be pretty near the truth, though the needle may not be perfectly balanced. See MAGNETISM, and MAGNETICAL NEEDLE.

In order to determine the law that regu- lates the inclination or dip of the needle, Biot, in a memoir delivered by himself and Hum- boldt to the French National Institute, on the Variations of the Terrestrial Magnetism in dif- ferent Latitudes, supposed in the axis of the magnetic equator, and at equal distances from the centre of the earth, two centres of at- tractive forces, the one austral and the other boreal, so as to represent the two opposite mag- netic poles of the earth : he then calculated the

effect which ought to result from the action of these centres upon any point of the earth's sur- face, assuming the attractive force in the recipro- cal ratio of the squares of the distances; he found that his results approximated more and more to the truth in proportion as the distance between the magnetic poles was assumed less ; and, in- deed, by supposing those two poles or centres to coincide, or the inclination of the magnetic needle to be produced by an indefinitely small magnet placed in the centre of the earth, his theorem gave the same numbers as had been observed by Humboidt both in Europe and in America, as well as what had been observed in Russia, Lapland, and various other places in both hemispheres : the results of theory being classed with those of observations in a compara- tive table, which clearly evinces tkeir near coin- cidence. Let u be the angle included between a radius drawn from the earth's centre to any as- sumed point on its surface and the magnetic axis, /3, the angle comprehended between the line coinciding with the real position of the needle and the said magnetic axis, and I the inclination of the needle with the horizon of the place; then we have

I. tan/3- Sin'2" :

*cos. 2w + *

whence /3 is readily determined ; and then we shall hive the inclination by means of the fol- lowing :

II. I •=. 90° + u — /3.

Still it must be observed, that though these formula?, given by Biot, furnished in general re- sults very near the truth ; yet when he attempted to represent the inclinations in different latitudes by the supposition of a magnet infinitely small, very near the centre of the earth, and perpendi- cular to the magnetic equator, he did not pretend to consider the hypothesis as any tiling real, but solely as a mathematical abstraction.

DIPSACUS, teasel, in botany, a genus of the monogynia order, and tetrandria class of plants : CAL. is polyphillous, proper above ; the recep- tacle paleaceous. There are four species : the most remarkable is the D. carduus fullonum, which grows wild in many parts of England. It is of singular use in raising the knap upon woollen cloth. For this purpose the heads are fixed round the circumference of a large broad wheel, which is made to turn round, and the cloth is held against them. In the west of England, great quantities of the plant are cultivated for this use. It is propagated by sowing the seeds in March, upon a well prepared soil. About one peck of seed is sufficient for an acre, as the plants must have room to grow ; otherwise the heads will not be large enough, nor in great quantity. When the plants come up, they must be hoed in the same manner as is practised for turnips, cutting down all the weeds, and thinning the plants to about eight inches distant ; and as they advance, and the weeds begin to grow again, they must be hoed a second time, cutting out the plants to a wider distance, so that they may finally stand a foot distant from each other. The second year they will shoot up heads which may be cut about the beginning of August. They are then to be tied up in bunches, and set in the sun

if the weather is fair : or, if not, in rooms to dry them. The common produce is about 160 bun- dles or staves upon an acre, which are sold for one shilling each. The leaves of the common wild teazel, dried, and given in powder or infu- sion, are a very powerful remedy against flatuses and crudities in the stomach. There is also ano- ther, though somewhat whimsical, use for which this plant is famous among the country people in England. If the heads are opened longitudinally, about September or October, there is generally found a small worm in them : one of these only is found in each head, whence naturalists have named it the vermis solitarius dipsaci. They col- lect three, five, or seven of these, always ob- serving to make an odd number ; and sealing them up iu a quill, give them to be worn as an amulet against the ague. This superstitious remedy is in

much higher repute than the bark, in many parts of England.

DIP'SAS. n. s. Lat. from £u//aw, to thirst. A serpent whose bite produces the sensation of unquenchable thirst.

Scorpion, and asp, and amphisboena dire, Cerastes horned, hydrus, and ellops drear, And dipsas. Milton.

DIPTERA, from £ic; and Trrepov, wing, in entomology, an order of insects, which have only two wings, and under each wing a style or ob- long body, terminated by a protuberance, and called a balancer.

DIP'TOTE, n. s. AtTrrwra. Anoun consist- ing of two cases only.

DIPTYCH, n.s. Lat. diptycha (two leaves folded together). A register of bishops and martyrs.

The commemoration of saints was made out of the diptychs of the church, as appears by multitudes of places in St. Austin. Stillinyifleet.

DIPTYCH, or DIPTYCHA, in antiquity, was a public register, wherein were written the names of the consuls, and other magistrates, among the heathens ; and of bishops, and living as well as dead brethren, among the Christians. The word is Greek, Stwrvxa, the plural of SITTTVˆOV, q. d. a book folded in two leaves ; though there were some in three, and others in four or five leaves. This name is supposed to have been first given them to distinguish them from the books that were rolled, caUed volumina. There ' were profane diptycha in the Greek empire, as well as sacred ones in the Greek church.

DIPUS, Gr. Snrss, i- e. two-footed, in zoology, the jerboa,, a genus of quadrupeds, belonging to the order of glires, in the class mammalia. These animals were ranked by Linnaeus under the ge- nus mus ; but Gmelin has, with great propriety, distributed the numerous and very different spe- cies of that genus, into nine new divisions, form- ing so many distinct genera, of which the dipus is one. The characters are these : there are two fore-teeth in each jaw ; the tail is long, and tufted at the end ; but the most striking characteristic of this genus is the enormous length of the hind feet, and extreme shortness of the fore paws. From this conformation, instead of walking or running on all fours, they leap or hop on the hind feet like birds, making prodigious bounds, and only use the fore paws for burrowing, or for

carrying their food to the mouth like squirrels. 1. D. cafer, or the Cape jerboa, has four toes on the hind feet and five on the paws ; the tail is very hairy, and tipt with black. This species inhabits the Cape of Good Hope,

and is fourteen inches long; the tail fifteen, the ears three. It is called aerdmannetje, or little earth man, and springen haas, or leaping hare, by the Dutch at the Cape. It has a grunting voice ; is very strong, and leaps twenty or thirty feet at one bound. It burrows with its fore feet ; nnd sleeps sitting on its hind legs, with the knees separated, the head between, and holding its ears with the fore paws over its eyes. It is eaten by the natives; and is caught by pouring water into its hole, which compels it to come out. 2. D. jaculus, the common jerboa, or leaping mouse of Linnaeus, has four toes on all the feet, and a claw in place of a thumb or fifth toe on each fore foot. The body is somewhat more than seven inches long, and the hind legs and thighs are longer than the body. The upper parts are of a pale tawny co- lor, and the under parts white : the ears and feet are flesh-colored. The female has eight teats dis- tantly placed. These animals inhabit Egypt, Arabia, Calmuck Tartary, and southern Siberia. They frequent firm hard ground, and fields co- vered with grass and herbs, where they form bur- rows of several yards long in a winding direction, leading to a large chamber about half a yard be- low the surface ; and from this a second passage is dug to within a very little of the surface ; by which they can escape when threatened with danger. When at rest, they sit with their hind legs bent under their belly, and keep the fore legs so near the throat as hardly to be perceptible. They eat grain and herbage like the hare. Their dis- positions are mild, and yet they can never be perfectly tamed. This animal is roasted and eaten by the Arabs, who call it the lamb of the children of Israel. It has been particularly described by Mr. Bruce in his Abyssinian Travels. 3. D. sagitta, the Arabian jerboa, the mus Snraz of the Greeks, and mus bipes of the Romans, has three toes on the hind feet, and no thumb or fifth toe on the fore paws. It is only about six inches long, and the tail rather shorter than the body ; the soles of the hind feet and bottom of the toes are covered with a very thick coat of hair ; the head is more rounded than that of the jaculus, and the ears are much longer than the head. It inhabits Arabia, and near the Irtish in Siberia, where it frequents the sandy plains. 4. D. Canadensis, or Canadian jerboa, is thus described by general Davies : ‘ As I conceive there are very few persons, however conversant in natural history, who may have seen or known that there was an animal existing in the coldest parts of Canada of the same genus with the jerboa, hitherto confined to the warmest climates of Africa, I take the liberty of stating the following parti- culars. With respect to the food, or the mode of feeding, of this animal, I have it not in my power to speak with any degree of certainty, as I could by no means procure any kind of sustenance that could induce it to eat ; therefore, when caught, it lived only a day and a half. The first I was so fortunate as to catch, was taken in a large fip’d near the Falls of Montmorenci, and, by its having

strayed too far from the skirts of the wood, al- lowed myself, assisted by three other gentlemen, to surround it, and after an hour's hard chase, to get it unhurt, though not before it was thoroughly fatigued, which might in a great measure acce- lerate its death. During the time the animal re- mained in its usual vigor, its agility was incre- dible for so small a creature. It always took progressive leaps of from three to four, and some- times of live yards, although seldom above twelve or fourteen inches from the surface of the grass; but I have observed others in shrubby places, and in the woods, among plants, where they chiefly reside, leap considerably higher. When found in such places it is impossible to take them, from their wonderful agility, and their evading all pur- suit, by bounding into the thickest part of the covert they can find. With respect to the figure given of it, in its dormant state, I have to observe, that the specimen was found by some workmen, in digging the foundation for a summer-house in a gentleman's garden, about two miles from Quebec, in the end of May, 1787. It was dis- covered enclosed in a ball of clay, about the size of a cricket-ball, nearly an inch in thickness, per- fectly smooth within, and about twenty inches under ground. The man who first discovered it not knowing what it was, struck the ball with his spade, by which means it was broken to pieces, or the ball would have been presented to me. How long it had been under ground it is im- possible to say ; but, as I could never observe these animals in any part of the country after the be- ginning of September, I conceive they lay them- selves up some time in that month, or beginning of October, when the frost becomes sharp. Nor did I ever see them again before the last week in May or beginning of June. From their being enveloped in balls of clay, without any appear- ance of food, I conceive they sleep during the •winter, and remain for that term without suste- nance. As soon as I conveyed this specimen to my house, I deposited it as it was, in a small chip box in some cotton, waiting with great anxiety for its waking, but that not taking place at the season they generally appear, I kept it until they found it begin to smell ; I then stuffed it, and preserved it in its torpid position. I am led to believe its not recovering from that state arose from the heat of my room during the time it was in the box, a fire having been constantly burning in the stove, and which in all probability was too great for its respiration.'

DIRj?E, the general name of the three furies in the Pagan mythology. They were so called as being quasi Deorum irae, the ministers of Divine vengeance in punishing guilty souls after death. They were the daughters of Acheron and Night.

DIRCA, in botany, a genus of the monogyuia order and octandria class of plants : CAL. none : COR. tubular, with the limb indistinct : STAM. longer than the tube : BER. monospermous. Spe- cies one, a Virginian shrub.

DIRE, adj. -\ Lat. dims. Dreadful ; DIRE'FUL, v terrible; dismal; extremely DIRE'NESS, n. t. 5 evil.

But yet at last, whereas the direful fiend She saw not stir, off shaking vain affright,

She nigher drew, aad saw that joyous end ; Then God she prayed, and thanked her faitlifu. knight. Faerie Queene.

Direful hap betide that hated wretch That makes us wretched by the death of thee.

Sfiakspeare.

Direness, familiar to my slaughterous thoughts, Cannot once start me. Shukspeare. Macbeth.

Hydras, and gorgons, and chimaeras dire.

Milton.

Or what the cross rfire-looking planet smites,

Or hurtful worm with cankered venom bites. Id.

The voice of God himself speaks in the heart of

men, whether they understand it or no ; and by secret

intimations gives the sinner a foretaste of that direful

cup, which he is like to drink more deeply of hereafter.

South.

Discord ! dire sister of the slaughtered power, Small at her birth, but rising every hour ;

While scarce the skies her horrid head can bound, She stalks on earth, and shakes the world around.

Pope.

Achilles' wrath, to Greeks the direful spring, Of woes unnumbered, heavenly goddess ! sing. Id.

Ah me ! the dire effect Of loitering here, of death defrauded long ; Of old so gracious, and let that suffice, My very master knows me not. I've been so long remembered I'm forgot. Young.

Unnumbered maladies his joints invade, Lay siege to life, and press the dire blockade ; But unextinguished avarice still remains And dreaded losses agravate his pains.

Johnson. Vanity of Human Wisliet A brave man knows no malice, but at once Forgets in peace the injuries of war, And gives his direst foe a friend's embrace.

Coteper. DIRECT', v. a. & adj.^ Fr. diriger; Spar,

and Ital. dirizzur ; Port, dirigir, from Lat. dirigo, directui, a de and rego, to govern. To aim or project in a straight line ; to order, regu-

DIREC'TER, n. s.

DIREC'TOR,

DIREC'TION,

DIREC'TIVE, adj.

DIRECT'LY, adv.

DIRECT'NESS, n. s.

DIREC'TORY. late, prescribe: a directer, or director, he who orders or commands ; also a rule or ordinance, as well as any instrument that guides an operation, as in surgery : direction is having the power to guide or rule; directly is, rectilineally ; in a straight course or line; apparently; immediately. Directness, straightness ; plainness of conduct. See the following articles for particular uses o f directory.

The nobles of the people digged it, by the directiim of the lawgiver. Numb. xxi. 18.

It is not in man that walketh to direct his steps.

Jer. x. 23.

Infidels, being clean without the church, deny di- rectly, and utterly reject, the very principles of Chris- tianity, which hereticks embrace erroneously by mis- construction. Hooker.

They are glad to use counsellors and directors in all their dealings of weight, as contracts, testaments.

Id.

A law, therefore, generally taken, is a directive rule unto goodness of operation. !

Even now

I put myself to thy direction. Shakspeare. Macbeth.

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There be, that are in nature faithful and sincere, and plain and direct, not crafty and involved.

Bacon.

Men's passions and God's directions seldom agree.

King Charles.

Thelikerany thing is to wisdom, if it be not plainly the thing itself, the more directly it becomes its oppo- site. Shaftesbury .

Two geomantick figures were displayed Above his head, a warrior and a maid, One when direct, and one when retrograde.

Dryden's Fables.

The spear flew hissing thro' the middle space, And pierced his throat, directed at his face.

Id. JEneid.

I am her director and her guide in spiritual affairs.

Dryden.

He that does this, will be able to cast off all that is superfluous ; he will see what is pertinent, what co- herent ; what is direct to, what slides by, the question.

Locke.

All that is in a man's power, is to mind what the ideas are that take their turns in his understanding j or else to direct and sort, and call in such as he de- sires. Id.

Such was as then the state of the king, as it was no time by direct means to seek her. And such was the state of his captivated will, as he would delay no time of seeking her. Sidney.

On the directive powers of the former, and the re- gularity of the latter, whereby it is capable of direction, depends the generation of all bodies. Grew.

His work directly tends to raise sentiments of ho- nour and virtue in his readers. Addison. Freeholder.

If the refracted ray be returned directly back to the point of incidence, it shall be refracted by the incident ray. Newton's Optics.

The direction of good works to a good end, is the only principle that distinguishes charity. Smalridge.

The manner of opening with a knife, is by sliding it on a director, the groove of which prevents its being misguided. Sharp's Surgery.

They argued from celestial causes only, the constant vicinity of the sun, and the directness of his rays ; ne- ver suspecting that the body of the earth had so great an efficiency in the changes of the air. Bentley.

No particle of matter, nor any combination of par- ticles, that is, no body, can either move of itself, or of itself alter the direction of its motion. Clteyne.

Common forms were not designed Directors to a noble mind. Swift.

No reason can be assigned, why it is best for the world that God Almighty hath absolute power, which doth not directly prove that no mortal man should have the like. Id.

Two eagles from a mountain's height, By Jove's command, direct their rapid flight. Pope.

All nature is but art unknown to thee, All chance, direction which thou canst not see.

Id.

Nor visited by one directive ray, From cottage streaming, or from airy hall.

Thomson.

That revelation, which God hath been pleased to make of his will to mankind, was designed rather to •fit us for the future happiness, and direct our way to it, than open to us the particular glories of it, or distinctly show us what it is. Mason.

U is better to fail, if fail we must, in the paths of (firect and manly, than of low and crooked wisdom.

Burke. Vol. VII.

Call your light legions, tread the swampy heath, Pierce with sharp spades the tremulous peat beneath ; With colters bright the rushy sward bisect, And in new veins the gushing rills direct. Darwin.

DIRECTION, in mechanics, signifies the line or path of a body's motion, along which it endea- vours to proceed according to the force impressed upon it.

DIRECTION, ISLANDS or, four small islands at the west entrance of the stiaits of Magellan, in the South Pacific Ocean. Long. 77° 19′ W. lat. 52° 27′ S.

DIRECTORS, in commercial polity, are conside- rable proprietors in the stocks of their respective companies, being chosen by plurality of votes from among the body of proprietors. The Dutch East India Company has sixty such directors; that of France, twenty-one; the British East India Company .has twenty-four, including the chairman, who may be re-elected for four years successively. These last have salaries of £150 a year each, and the chairman £200. They meet at least once a week, and commonly oftener, being summoned as occasion requires. The di- rectors of the Bank of England are twenty-four in number, including the governor and deputy-governori

DIRECTOR, in surgery, a grooved probe, to direct the edge of the knife or scissars, in open- ing sinuses or fistulse, that the adjacent vessel, nerves, and tendons, may not be hurt.

The DIRECTORY OF PUBLIC WORSHIP was a celebrated book drawn up by the assembly of divines at Westminster, and established by an ordinance of parliament in 1644, repealing the statutes of Edward VI. and of Elizabeth, for uniformity in the common prayer. The Direc- tory set aside the use of the liturgy, and allowed of no church-music besides that of singing the Psalms. The Directory was so called, in part, because it only points out certain topics of prayer, on which the minister might enlarge. The whole apocrypha was rejected; and both private baptism and lay baptism, with the use of godfathers and godmothers, and the sign of the cross. In the sacrament of the Lord's supper, no mention is made of private communion or administering it to the sick. The altar with rails was changed into a communion table, about which the people might stand or sit ; kneeling not being thought so proper a posture. Light- foot, Selden, and others, were for open com- munion, to which the parliament also most inclined, in opposition to those presbyterians who were for granting powers of admission or rejection to the ministers and elders, and to the independents who were for committing them to the whole brotherhood ; but it was agreed, that the minister, before the communion, should 'warn, in the name of Christ, all such as are ignorant, scandalous, profane, or that live in any sin or offence against their knowledge or con- science, that they presume not to come to that holy table, showing them, that he that eateth and drinketh unworthily, eateth and drinketh judg- ment to himself.' The prohibition of marriage in Lent, and the use of the ring, were laid aside. In the visitation of the sick no mention is made of private confession, or authoritative absolution.

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No service is appointed for the burial of the dead. All particular vestments for priests or ministers, and all saints'days, were discarded. It has been remarked, as a considerable omission, that the Directory does not enjoin the reading of the apostles' creed, and the ten commandments. However, these were added to the assembly's confession of faith, which was published a year or two afterwards. This Directory continued in use till the restoration of king Charles II.. when, the constitution being restored, the old liturgy took place again; the ordinance for its repeal having never obtained the royal assent. The revolution, thus occasioned in the form of public worship, did not take place for a considerable time over the whole kingdom. In some parts of the country the churchwardens could not pro cure a Directory ; and in others they despised it, and continued the old commoh prayer book ; some would read no form, and others used one of their own. In order to enforce the use of the Directory, the parliament, by an ordinance, dated August 23rd, 1645, called in all common prayer books, and imposed a fine upon those ministers who should read any other form than that con- tained in the Directory. By the same ordinance, which continued till the Restoration, to preach, write, or print any thing in derogation or de- praving of the Directory, subjected the offender, upon indictment, to a discretionary fine, not exceeding £50.

DIRECTORY, in a more modern sense, was used as the title of the supreme executive power, according to the new constitution, formed by the French convention after the fall of Robespierre, and presented to the primary assemblies for ac- ceptance in August, 1795. By this constitution the legislative body was composed of what they called a Council of Ancients and a Council of Five Hundred. The whole of this fabric, it is well known, was overturned by the successful ambition of Napoleon : but as it directed the energies of a numerous, if not a great, people for a considerable period, we may here perpe- tuate its forms. The executive power was en- trusted to a Directory of five members, nomi- nated by the legislative body as follows: — 1. The Council of Five Hundred formed a list by ballot of three times the number to be nomi- nated, and presented it to the Council of An- cients, which chose out of this list by ballot. 2. The members of the Directory were to be forty years of age at least. 3. After the ninth year of the republic, they were to be chosen only from among those citizens who had been mem- bers of the Legislative Body, or the Administra- tion, or General Agents of Execution. 4. Mem- bers of the legislative body could not be elected members of the Directory, either during the continuance of their legislative functions, or during the first year after their expiration. 5. The Directory was partially renewed by the annual election of a new member. 6. No ci- devant director could be re-elected till after an Interval of five years. 7. The ascendant and descendant in the direct line ; the brother, uncle, and

nephew ; connexions by marriage in the same degrees, and cousins in the first degree, could not be members of the Directory at the

same time, nor succeed one another in it, till after an interval of five years. 8. In case of death, removal, or resignation of a member of the Directory, his successor was elected within ten days. The Council of Five Hundred were obliged to propose the candidates within the first five days, and the Council of Ancients to complete the election within the last five. The new member could only continue in office for the remaining period of the person he succeeded, un- less it did not exceed six months, in which case, he continued five years and a half in office. 9. Each director was to preside in rotation for three months only. 10. The president was to sign and keep the seal. 11. The laws and acts of the legislative body were addressed to the Directory, in the person of its president. 12. The Directory could not deliberate unless three raembers were present. 13. A secretary was chosen (not one of its members), who countersigned despatches, and drew up delibe- rations, in a register, wherein each member might also enter his opinion, with his reasons. 14. The Directory could deliberate without the aid of the secretary, and one of the directors might record its resolutions in a particular regis- ter. 15. The Directory provided for the security of the public according to the laws, issued pro- clamations; &c. It disposed of the armed force ; but none of its members could command it, either while they continued in office, or for two yeais after. 16. The Directory, upon hearing of any conspiracy against the republic, might order the supposed authors or accomplices to be appre- hended, and interrogate them ; but were bound, under the penalty of arbitrary imprisonment to re- mit them to an officer of police, within two days, to proceed with them according to law. 17. The Directory nominated the generals, but could not choose them among the relations of its members, within the degrees above-mentioned. 18. It su- perintended the execution of the laws by commis- saries of its nomination. 19. It nominated the general agents of execution, but not of its own members, and recalled them at pleasure. 20. It determined their number and functions. 21. It nominated all receivers of direct taxes. 22. As well as the superintendants of indirect contribu- tions, and the administration of national domains. 23. It superintended the coinage of money, and nominated the officers charged with it. 24. No Director could go out of the territory of the re- public, till two years after he was out of office ; but was obliged to certify his placn of residence during that interval to the legislative body. 25. The Directory was responsible for the non-execu- tion of laws, and for the abuses which it did not denounce. 26. Its agents were respectively re- sponsible for the non-execution of the laws, and orders of the directory. 27. Its members might be tried by the legislative body for acts of trea- son, corruption, embezzlement of public money, and all capital crimes as to their official conduct. 28i They were subject to the jurisdiction

of the tribunals for ordinary and private offences ; but they could not be arrested except in the case 01 flagrans delictum, or brought to trial without the authority of the legislative body.

Every denunciation against the Directory, or

any of its members, was addressed to the Coun- cil of Five Hundred. If, after deliberation, the Council admitted the denunciation, it declared it in these terms : the denunciation against — for the fact of — dated — signed by — is admitted. The party was then cited, and heard in the inte- rior place of the Council of Five Hundred ; who declared whether there was ground for examinin

Betrothed beauty bending o'er his bier Breathes the loud sob, and sheds the incessant tear ; Pursues the sad procession, as it moves Through winding avenues and waving groves ; Hears the slow dirge amid the echoing aisles, And mingles with her sighs discordant smiles.

Darwin.

DIRIBITORES, among the Romans, officers

his conduct. He was then heard by the Council appointed to distribute tablets to the people at of Ancients at the bar; and, if he was deemed the comitia. See COMITIA.

culpable, the Council proceeded to accusation, which was followed by suspension, when the ac- cused was sent before the High Court of Justice, which was to proceed to trial without delay. If the party was acquitted, he resumed his func- tions.

The Legislative Body could not cite the Di- rectory, nor any of its members, except in the case above specified. The accounts and infor- mation demanded of the Directory by the Le- gislative Body were furnished in writing. On the opening of a session of the Legislative Body, the Directory were obliged to present to it an estimate of expenses, the state of the finances, pensions, &c., with the abuses that had come to its knowledge. It might invite the Legislative Body to take a subject into consideration ; but could not pro- pose legislative dispositions, except with regard to peace and war. No member of the Directory durst be absent more than five days, nor

re- move above four myriametres, or ten leagues, from his usual residence, without being autho- rised by the Legislative Body. The members of the Directory could only appear in an appro- priate dress. They had a constant guard of 120 infantry and 120 cavalry, who attended them in public processions, in which they had always the first rank. Each member was attended out of doors by two guards ; and was entitled to the superior military honors from every post of armed force. The Directory resided in the same commune with the Legislative Body, at the ex- pense of the republic. The salary of each was fixed at the value of 50,000 myriagrammes, about 10,000 quintals of wheat.

DIREP'TION, n. s. Lat. direptio. The act of plundering.

DIRGE, n. s. This is from the Teutonic dyrke, laudare, to praise and extol, says Dr. Johnson, after Verstegan, ' whence it is possible their dyrke, and our dirge, was a laudatory song to commemorate and applaud the dead. Bacon apparently derives it from dirige.' A mournful djitty ; a song of lamentation.

The imperial jointress of this warlike state Have we, as 'twere, with a defeated joy, With mirth in funeral, and with dirge in marriage. In equal scale weighing delight and dole, Taken to wife. Sfuikspcare. Hamlet.

Meanwhile, the body of Richard, after many in- dignities and reproaches, the diriges and obsequies of the common people towards tyrants, was obscurely buried. Bacon.

All due measures of her mourning kept,

Did office at the dirge, and by infection wept.

Dryden.

What though no sacred earth allow thee room, Nor hallowed dirge be muttered o'er thy tomb, Yet shall thy grave with rising flowers be drest, A mi the green turf lie lightly on thy breast. Pope.

DIR'IGENT, adj. Lat. dirigens.

The dirigent line in geometry is that along which the line describent is carried in the generation of any %ure- Harris.

DIRK, n. s. Goth, dorg; Sax. dork; Isl. turric. A kind of dagger used in the Highlands of Scotland.

In vain thy hungry mountaineers Come forth in all their warlike geers, The

shield, the pistol, dirk, and dagger, In which they daily wont to swagger. Tickell. And in the fire his recent rags they scattered,

And drass'd him, for the present, like a Turk, Or Greek — that is, although it not much mattered. Omitting turban, slippers, pistols, dirk.

Byron. Don Juan.

DIRKE, v. a. To spoil ; to ruin. Obsolete. Thy waste bigness but cumbers the ground , And dirkes the beauties of my blossoms round.

Spenser.

*DIRT, n. s. ., Dut. an,. Goth dryt ; DIRT'ILY, adv. / Islandic, dirt. Mud ; DIRT'INESS, n. s. * filth ; mire ; any thing DIRT'Y, v. a. & adj. j that sticks to the clothes or body ; any thing mean.*

For whom I made all thingis peyrement and I deeme as dyrt, that I wyne Crist.

Wiclif. Filipentiji, 3.

Their fell contention still increased more, And more thereby increased furor's myght, That he his foe has hurt and wounded sore And him in blood and dirt deformed quight.*

Spenser. Faerie Quecne. Or were it such gold as that wherewithal_ Almighty chimiques from each mineral, Having by subtile fire a soul out-pulled, Are dirtily and desperately gulled, Donne.

Thy Dol and Helen of thy noble thoughts Is in base durance, and contagious prison, Hauled thither by mechanic, dirty hands.

Shahspeare.

Such employments are the diseases of labour, and the rust of time, which it contracts not by lying still, but by dirty employment. Taylor's Holy Living •

Marriages would be made up upon more natural motives than mere dirty interests, and increase of riches without measure or end. Temple.

Numbers engage their lives and labours to heap together a little dirt that shall bury them in the end.

Wake.

Pound an almond , and the clear white colour will be altered into a dirty

one, and the sweet taste into an oily one. Locke.

They come at length to grow sots and epicures, mean in their discourses, and dirty in their practices

South.

Is yellow dirt the passion of thy life, Look but on Gripus, or on Gripus' wife. Pope. Ill company is like a dog, who dirts those moSi whom he loves best. Swift.

The god of day

A tripod gives, amid the crowded way, To raise the dirty foot, and case his toil. Gay.

The lords Strutts lived generously, and never used to dirty their fingers with pen, ink, and counters.

Arbuthnot.

DIRUPTION, n. s. Lat. diruptio. The act or state of bursting or breaking.

DIS, in mythology,' a god of the Gauls, the same as Pluto, the god of hell. The ancient inhabitants of Gaul supposed themselves de- scended from that deity.

DISA, in botany, a genus of the diandria order and gynandria class of plants. The spatha is univalvular; the petals three; the third smaller than the rest, bifid, and gibbous, at the base. Species four, all Cape plants.

DISA'BLED, v. a. I Of dis, and ABLE,

DISABILITY, n.s. $ which see. To deprive

of force or power ; to disqualify ; impair ; to

declare deficient Disability is the want of

power, aptitude, or legal right to do a thing.

Our consideration of creatures, and attention unto scriptures, are not in themselves things of like disa- bility to breed or beget faith. Hooker.

Many withdrew themselves out of pure faintness, and disability to attend" the conclusion, Raleigh,

I have disabled mine estate, By shewing something a more swelling port Than my faint means would grant continuance.

Shakspeare.

Farewell, Monsieur Traveller ; lock you lisp, and •wear strange suits ; disable all the benefits of your own country. Id.

The invasion and rebellion did not only disable this king to be a conqueror, but deprived him both of his kingdom and life. Daries's Ire'and.

I will not disable any for proving a scholar , nor yet dissemble that I have seen many happily forced upon the course to which by nature they seemed much indisposed. Wotton.

is overcome

Satan, whose fall from heaven, a deadlier braise Disabled not to give thee thy death's wound.

Milton.

A Christian's life is a perpetual exercise, a wrest- ling ant} warfare, for which sensual pleasure disables him, by yielding to that enemy with whom he must »'-rive. Taylor's Holy Living.

I have known a great fleet disabled for two months, and thereby lose great occasions by an indisposition of the admiral. Temple.

Your days I will alarm, I'll haunt your nights, Al.'»l worse than age disable your delights. Dryden.

He that knows most of himself, knows least of his knowledge, and the exercised understanding is con- scious of its disability. GlanviUe.

The ability of mankind does not lie in the impo- tency or disabilities of brutes. Locke.

This disadvantage which the dissenters at present lie under, of a disability

to receive church prefer- ments, will be easily remedied by the repeal of the test. Swift.

A suit is commenced in a temporal court for an inheritance ; and the defendant pleads, in disability, that the plaintiff is a bastard. Ayliffe's Parergv.i.

Foiled, bleeding, breathless, furious to the last. Full in the centre stands the bull at bay, Mid wounds, and clinging darts, and lances brast, And foes disabled in the brutal fray. Byron.

DrsABiLiTY, in law, is when a man is dis- abled, or made incapable to inherit any lands, or take that benefit which otherwise he might have done. This may happen four ways : 1st, by the act of an ancestor: 2d, of the party : 3d, by the act of God: or, 4th, of the law. 1. Disability by the act of the ancestor is where the ancestor is attainted of high treason, &c., which corrupts the blood of his children, so that they may not inherit his estate. 2. Disability by the act of the party is where a man binds himself by ob- ligation, that, upon surrender of a lease, he will grant a new estate to a lessee ; and afterwards he grants over the reversion to another, which puts it out of his power to perform it. 3. Dis- ability by the act of God is where a man is non sanae memoriae, whereby he is incapable to make any grant, &c. So that, if he passes an estate out of him, it may, after his death, be made void ; but it is a maxim in law, ' that a man of full age shall never be received to disable his own person.' 4. Disability by the act of the law is where a man, by the sole act of the law, with- out any thing by him done, is rendered inca- pable of the benefit of the law ; as an alien born, &c.

I. ISABUSE', v. a. Dis and ABUSE, which see. To deliver from mistake or delusion.

The imposture and fallacy of our senses impose not only or common heads, but even more refined mer- curies, rbo have the advantages of an improved rea- son to disabuse you. Glanville't Scepsis.

Those teeth fair Lyce must not show, If she would bite : her lovers, though Like birds they stoop at seeming grapes, Are disabused when first she gapes. Waller.

If by simplicity you meant a general defect in those that profess angling, I hope to disabuse you.

Walton's Angler. Chaos of thought and passion, all confused ;

Still by himself abused or disabused. Pope.

DISACCOMMODATION, n.s. Dis and accommodation. The state of jeing unfit or unprepared.

Devastations have happened ir some places more than in others, according to the accommodation or disaccommodation of them to such calamities.

Hale' Origin of Mankind.*

DISACCUSTOM, v.a. Dis and accustom. To destroy the force of habit by disuse, or con- trary practice.

DISACKNOWL'EDGE, v.a. Dis and ac- knowledge. Not to acknowledge.

The manner of denying Christ's deity here pro- hibited, was, by words and oral expressions verbally to deny and disacknowledge it. South.

DISACQUAINTANCE, n s. Dis and ac- quaintance. Disuse of familiarity.

Conscience, by a long neglect of, and duacquain- tance with itself, contracts an inveterate rust or soil.

South.

DISADVANTAGE, v. a. & n. s.~\ Dis and

DISADVAN'TAGEABLE, adj. f advantage.

DISADVANTAGEOUS, adj. t To injure;

DISADVAKTA'GKOUSLY, adv.

impair.

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Loss ; injury to interest ; diminution of any thing desirable ; a state of weak defence.

No fort can be so strong, Ne fleshly breast can armed be so sound,

But will at last be won with battery long ; Or unawares at disadvantage found.

Faerie Queene.

In clearing of a man's estate, he may as well hurt himself in being too sudden, as in letting it run on too long ; for hasty selling is commonly as disadvan- tageable as interest. Bacon.

Chaucer in many things resembled Ovid, and that •with no disadvantage on the side of the modern author.

Dry den.

A multitude of eyes will narrowly inspect every part of an eminent man, consider him nicely in all views, and not be a little pleased when they have taken him in the worst and most disadvantageous lights. Addison's Spectator.

Their testimony will not be of much weight to its disadvantage, since they are liable to the common objection of condemning what they did not under- stand. Swift.

An approving nod or smile serves to drive you on, and make you display yourselves more disadvantayc- ously. Government of the Tongue.

Mr. Pope's bodily disadvantages must incline him to a more laborious cultivation of his talent, without •which he foresaw that he must have languished iu obscurity. Shenstone.

Methinks I am like a man who, having struck on many shoals, and having narrowly escaped shipwreck in passing a small firth, has yet the temerity to put out to sea in the same leaky weather-beaten vessel, and even carries his ambition so far as to think of compassing the globe under these disadvantageous cir- cumstances. Hume on Human Nature.

DISADVEN'TUROUS adj. Disand adven- turous. Unhappy; unprosperous.

Now he hath left you here, To be the record of his rueful loss, And of my doleful disadventurous death.

Faerie Queene.

DISAFFECT, v. a. ~

;./

Dis and affect.

DiSAFFEc'TED,par£.oc[;.To fill with discon-
DiSAFFEc'TEDLY,aDISAFFEC'TION. j or zealous.

They had attempted to disaffect and discontent his majesty's late army. Clarendon.

In making laws, princes must have regard to the public dispositions, to the affections and disaffection of the people ; and must not introduce a law witi. public scandal and displeasure.*

Taylor's Rule of Holy Living.

*By *enying civil worship to the emperor's statues, which the custom then was to give, they were pro- ceeded against as disaffected to the emperor.*

Stillingfleet.

The disease took its original merely from the dis- affection of the part, and not from the peccancy of the humours. Wiseman.

DISAFFIR'MANCE, n. s. Dis and affirm. Confutation; negation;

That kind of masoning which rednceth the oppo- site conclusion to something that is apparently absurd, is a demonstration in di&affirmance cf any tbifls: that is affirmed. lisle-

To DISAFFOR'EST, v. a. Dis and forest. To throw open to common purposes; to reduce from the privileges of a forest.

The commissioners of the treasury moved the king to disafforest some forests of his, explaining them- selves of such forests as lay out of the way, not near any of the king's houses. Bacon.

How happy's he, which hath duo place assigned To his beasts ; and disafforested his mind ! Dunne.

DISAGREE', v. n. ^ Dis and agree.

DISAGREE'ABLE, adj. I To differ; to be

DISAGREE'ABLY, adv. N in opposition : dis-

DISAGREE'ABLEN ESS, n. s.C agreeable is, un-

DISAOREE'MENT. J suitable; displea-

sing. Disagreement, dissimilitude ; diversity of sentiment ; quarrel .

They seemed one to cross another, as touching their several opinions about the necessity of sacraments, whereas in truth their disagreement is not

great.

Hooker.

It containeth many improprieties, disagreeing almost in all things from the true and proper description.

Browne. Why both the bands in worship disagree,

And some adore the flower, and some the tree.

Drydcn.

A father will hug and embrace his beloved son, for all the dirt and foulness of his cloaths ; the dearness of the person easily apologizing for the disagreeable- ness of the habit. South.

The mind clearly and infallibly perceives all distinct ideas to disagree ; that is, the one not to be the other.

Locke.

To make the sense of esteem or disgrace sink the deeper, and be of the more weight, either agreeable or disagreeable things should constantly accompany these different states. Id.

Strange it is, that they reject the plainest sense of scripture, because it seems to disagree with what they call reason. Atterbury.

Some demon, an enemy to the Greeks, had forced her to a conduct disagreeable to her sincerity.

Broome.

Do you not sometimes find dull disagreeable ideas annexed to certain places, seasons, or employments, which give you a secret aversion to them ? Mason.

DISALLOW, v. a. & n. s. } Dis and allow. DISALLOW'ABLE, adj. >To deny in res-

DISALLOW'ANCE, n. s. J pect to authority, legality, or propriety ; to refuse permission. Dis- allowance is prohibition.

God doth in converts, being married, allow con- tinuance with infidels, and yet disallow that the faith- ful, when they are free, should enter into bonds of wediock with sura. Hooker.

Neutrality is always a thing dangerous, and disal- lowable. Raleigh.

When, said she,

Were those first councils disallowed by me?

Or where did I at sure tradition strike,

Provided still it were apostolic ?

Dryden't Hind and Panther.

God accepts of a tiling suitable for him to receive, antl for us to give, where he does not declare his refusal and disallowance of it. South.

It was known that the most eminent of those who professed his own principles, publickly disallowed his proceedings. Swift.

DISAN'CHOR, v. a. From dis and anchor.

To drive u ship from its auchov.

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DISAN'IMATE, v. a. \ Dis and aniraate. DISAN'IMATION, n. s. J To deprive of life ; to discourage ; deject.

The presence of a king engenders love amongst his subjects and his loyal friends, as it disanimutes his enemies. Shahtpeare. Henry VI.

They cannot in reason retain that apprehension after death, as being affections which depend on life, and depart upon disanimation.

Browne's Vulgar Errours.

To call the pearly drops from Pity's eye, Or stay Despair's disanimating sigh, Whether, O friend of art ! the gem you mould Rich with new taste, with ancient virtue bold.

Darwin.

*DISANNUL', v. a. (Dis and annul. This DISANNULLING, n. *. S word, as Dr. Johnson observes, is formed, contrarily to analogy and by the needless*

use of the negative particle. It ought therefore ti be rejected, as ungrammatical and barbarous. To annul; to deprive of au- thority; to vacate; to make void.

The covenant that was confirmed before of God in Christ, the law which was four hundred and thirty years after, cannot disannul, that it should make the promise of none effect. Gal. iii. 17.

The Jews ordinances for us to resume, were to check our Lord himself, which hath diannulled them.

Hooker,

That gave him power of disannulling of laws, and disposing of men's fortunes and estates, and the like points of absolute power, being in themselves harsh and odious. Bacon.

Wilt thou my judgments disannul ? Defame My equal rule, to clear thyself of blame ?

Sandys.

DISAPPEAR', v. n. Fr. disparoitre. To be lost to view ; to vanish out of sight ; to fly ; to go away.

She disappeared, and left me dark ! I waked To find her, or for ever to deplore. Milton.

When the night and winter disappear, The purple morning rising with the year Salutes the spring. Dryden.

If at your coming princes disappear, Comets ! come every day — and stay a year.

Dr. Johnson's Poems.

DISAPPOINT, v. a. J Old Fr. desa- DISAPPOINT'MENT, n.s. \pointer. To defeat expectation ; to delude ; cheat ; deprive ; taking of before the thing lost by disappointment.

Oar comfortable expectations in earthly things do not seldom disappoint us. Bp. Hall. Contemplations.

The superior Being can defeat all his designs, and disappoint all his hopes. Tillotson.

If we are ditappointed, we are still no worse than the rest of onr fellow

mortals ; and if we succeed in our expectations, are eternally happy. Burnet.

HPW many disappointments have, in their conse- quences, saved a man from ruin! Spectator.

Whilst the champion, with redoubled might, Strikes home the javelin, his retiiiug foe Shrinks from the wound, and disappoints the blow.

Addiion.

There's nothing like surprising the rogues ! How will they be duappotntfj, when they hear that thou »-«st prevented thfir avenge!

A rbuthnot's Hiit. of John Bull.

DISAPPOINTMENT ISLANDS, a cluster of small islands in the South Pacific Ocean, discovered by commodore Byron in 1765, who gave them this name from the shores affording no anchorage for his ships. This obliged him to quit them with- out landing, or procuring any refreshments for his crew. The inhabitants appeared on the beach armed with spears full sixteen feet long; and they every where discovered hostile intentions. These islands abound with cocoa trees, and turtles are plentiful on the coast. Long. 145° 4′ W. lat. from 14° 5′ to 14° S.

DISAPPOINTMENT ISLAND is also a name given by captain Wilson in 1797 to an island in the South Sea, one of the Duff's group, in E. long. 167°, and S. lat. 9° 57'. See DUFF.

DISAPPROVE', v. a. } Fr. desapprouver.

DISAPPROBATION, n. s. 5 To dislike; to cen- sure ; expressive of dislike.

I reasoned much, alas ! but more I loved ;

Sent and recalled, ordained, and disapproved.

Prior. Without good breeding truth is disapproved;

That only makes superior sense beloved. Pope.

He was obliged to publish his letters, to shew his disapprobation of the publishing of others. Id.

DISARM', v. a. Fr. desarmer. To spoil or divest of arms; to deprive of arms.

An order was made by both houses, for disarming all the papists in

EngJ'xid. Clarendon.

I am jˆd the same,

By different ways still moving to one fame j And by disarming you I now do more To save the town, than arming you before.

Dryden.

Then, where Nemea's howling forests wave, He drives the lion to his dusky cave ; Seized by the throat the growling fiend disarms, And tears his gaping jaws with sinewy arms.

Darwin.

DISARMING, in law, the prohibiting people to wear arms. It is an offence by the common law of England for persons to go or ride armed with dangerous anr1 uncommon weapons : though gentlemen may wear common armour, according to their quality. It is also ordained by statute, that no persons shall come before the king's jus- tices with force of arms, on pain of imprison- ment, &c. We have noticed the introduction of the celebrated disarming act of Scotland into the Highlands, under the article CLAN.

DISARRAY', v. a. &, n. s. Dis and array. To undress any one ; to divest of clothes; un- dress; disorder.

So, as she bad, the witch they disarrayed.

Faerie Queene.

He. returned towards the river, to prevent such dan- ger as the disarray, occasioned by the narrowness ot the bridge, might cast upon them. Hayward.

Disarray and shameful rout ensue, And force is added to the fainting crew.

Drydcn't Fables.

Phrase that time hath flung away, Uncouth words in disarray, Tricked in antique ruff and bonnet, Ode, and elegy, and sonnet,

Dr. Johnson's Poem,*

DIS

DISASSIDU'ITY, n. s. Absence of care or attention.

The Cecilians kept him back ; as very well knowing that, upon every little absence or disassiduity , he should be subject to take cold at his back. Wotton.

DISASTER, v.a.k n.s. } Fr. and Span, desas-

DISAS'TROUS, adj. ˆtre; Ital. desastro;

DISAS'TROUSLV, adv. j from Lat. dis, ad- verse, and astra, the stars, under adverse stars. Misfortune; grief, calamity: disastrous is, unfor- tunate; portending disaster.

Stars shone with trains of fire, dews of blood fall ; Disasters veiled the sun ; and the moist star, Upon whose influence Neptune's empire stands, Was sick almost to doomsday with eclipse.

Skahspeare.

These are the holes where eyes should be, which pitifully disaster the cheeks. Id.

The moon,

In dim eclipse, disastrous twilight sheds

On half the nations. Milton.

Ah, chaste bed of mine, said she, which never heretofore couldst accuse me of one defiled thought, how canst thou now receive that disastered changeling ?

Sidney.

Immediately after his return from this very expedi- tion, such disastrous calamities befel his family, that he burnt two of his children himself. South.

This day black omens threat the brightest fair, That e'er deserved a watchful spirit's care ; Some dire disaster, or by force or slight ; But what, or where, the fates have wrapt in night.

Pope. In his own fields, the swain

Disastered stands. Thomson.

DISAVOW, v. a. } Dis and avow. To dis-

DISAVOV/AL, n. s. >own ; to deny knowledge

DISAVOW'MENT. j of; to deny concurrence in any thing, or with any person : denial. But being aged now, and weary too,

Of warres delight and worlds contentious toyle,

Tne name of knighthood he did disavow.

Spenser. Faerie Queene.

A man that acts below his rank, doth but disavow fortune, and seemeth to be conscious of his own want :a worth, and doth but teach others to envy him

Bacon.

As touching the Tridentine history, his holiness will not press you to any disavowment thereof.

Wotton. He only does his conquest disavow,

And thinks too little what they found too much.

Dryden.

We are reminded by the ceremony of taking an oath, that it is a part of that obedience which we learn from the gospel, expressly to disavow all evasions and mental reservations whatsoever.

Addison's Freeholder.

An earnest disavowal of fear often proceeds from fear. Clarissa.

To DISAUTHORIZE, v. a. Dis and autho- rize. To deprive of credit or authority.

The obtrusion of such particular instances as these, are insufficient to disa'ithorise a note grounded upon the final intention of nature. Wotton.

DISBAND',v. a. & v. n. Old Fr. desbander. To dismiss from military service; to retire; be dismissed ; broke up.

Our navy was upon the point of disbanding, and many of our men come ashore.

Bacon. War wiih Svain.

The ranged powers

Disband, and wandering each his several way Pursues. Milton.

The common soldiers, and inferior officers, should be fully paid upon their disbanding. Clarendon.

Pythagoras bids us in our station stand, Till God, our general, shall us disband. Denham.

I am content to lead a private life ; Disband my army to secure the state.

Dryden's Aurengxebe.

Were it not for some small remainders of piety and virtue which are yet left scattered among mankind, human society would in a short space disband and run into confusion, and the earth would grow wild and become a forest. Tillotion.

Bid him disband his legions. Addison's Cato. Some imagine that a quantity of water, sufficient to make such a deluge, was created upon that occa- sion ; and, when the business was done, all disbanded again, and annihilated. Woodward.

DISBARK', v. a. Fr. debarquer. To land from a ship ; to put on shore.

Together sailed they, fraught with all the things To service done by land that might belong, -And, when occasion served, disbar ked them.

Fairfax The ship we moor on these obscure abodes ;

Disbarh the sheep an offering to the gods.

Pupe'i Odystey.

DISBELIEVE', v. a. J From dis and be-

DISBELIEV'ER, n. s. } lieve. Not to credit; one who refuses belief; one who denies any po- sition to be true.

The thinking it impossible his sins should be for- given, though he should be truly penitent, is a sin? bnt rather of infidelity than despair ; it being the dis- believing of an eternal truth of God's.

Hammond's Practical Catechism.

Our belief or disbelief of a thing does not alter the nature of the thing. Tillotson.

Such who profess to disbelieve a future state, are not always equally satisfied with their own reasonings.

Atterbury.

An humble soul is frightened into sentiments, be- cause a man of great name pronounces heresy upon the contrary sentiments, and casts the disbeliever out of the church. Wattt.

DISBENCH', v. a. Dis and bench. To drive from a seat.

Sir, I hope My words disbenched you not?

No, Sir ; yet oft,

When blows have made me stay, I fled from words.

Shahipeare.

DISBRANCH',, a. Dis and branch. To separate, or break off, as a branch from a tree. She that herself will sliver and disbranch*

From her maternal sap, perforce must wither,

And come to deadly use. Shakspeare. King Lear.

Such as are newly planted need not be disbranched till the sap begins to stir, that so the wound may be healed without a scar. Evelyn's Kalendar.

DISBUD', v. a. With gardeners. To take away the branches or sprigs newly put forth, that are ill placed.

DISBUR'DEN, v. a. Dis and burden. To ease of a burden ; to unload.

The river, with ten branches or streams, disburden himself within the Persian Sea.*

Peacham on Drawing.

We shall disburden the piece of those hard shadow- ings, which are always ungraceful.

Dryden's Dufremoy.

They removed either by casualty and tempest, or by intention and design, eithei out of lucre of gold. or for the disburdening of the countries surcharged with multitudes of inhabitants.

Hate's Origin of Mankind. Disburdened Heaven rejoiced. Milton.

Lucia, disburden all thy cares on me,

And let me share thy most retired distress.

AMison's Cato.

To DISBURSE', v. a. Fr. debourser ; dis and burse. To spend or lay out money.

The queen's treasure, in so great occasions of dis- bursements, is not always so ready, nor so plentiful, as it can spare so great a sum together.

Spenser's Ireland. Nor would we deign him burial for his men,

Till he disbursed ten thousand dollars. Shakspeare.

As Alexander received great sums, he was no less generous and liberal in disbursing of them.

Arbuthnot en Coins.

DISC, in antiquity, a quoit made of stone, iron, or copper, five or six fingers broad, and above a foot long, somewhat of an oval figure. It was hurled like a bowl to a vast distance, by the help of a leathern thong, tied round the throw- er's hand and put through a hole in the middle According to Ovid, Met. 10, Apollo laid down his divinity, and abandoned the charge of his oracle at Delphi, to go to Sparta to play at the discus, where he mortally wounded his fa- vorite Hyacinthus. Pausanias gives the invention of the game to Perseus, the son of Jupiter and Danae, who had the misfortune to kill his ma- ternal grandfather Acrisius with his disc.

The game of discus was in practice at the time of the Trojan war. The myrmidons of Achilles practised it, during their leader's inaction, on the sea-shore, while burning with ire against Aga- memnon. Homer also records it as among the gymnastic sports given at the funereal obsequies of Patroclus, with an iron discus.

Disc, in astronomy, the face of the sun and moon, as they appear to us on the earth ; or the face of the earth as it appears to a spectator in the moon.

Disc, in optics, the wideness of the aperture of a telescopic glass, whether plain, convex, con- cave, or of any other form.

DISCAL'CEATED, adj. J Lat. discalceatus.

DISCALCEA'TION, n. s. $ Stripped of shoes : the act of pulling off the shoes.

The custom of discalceation, or putting off their shoes at meals, is conceived to have been done, as by that means keeping their beds clean.

Browne's Vulgar Errours.

DISCAN'DY, v. n. From dis and candy. To dissolve; to melt.

The hearts

That spanieled me at heels, to whom I gave Their wishes, do discandy, melt their sweets On blossoming Caesar. Shakspeare.

DISCARD', v. a. Dis and card. To throw out of the hand such cards as are useless : hence to dismiss or eject from service or employment.

Their captains, if they list, discard whom they please, and send away such as will perhaps willingly be rid of that dangerous and hard service.

Spenta's State of Ireland.

to judge or deter- mine. To descry ; j discover ; distin-

These men being certainly jewels to a wise man, considering what wonders they were able to perform, yet were discarded by that unworthy prince, as not worthy the holding. Sidney.

And laughter where it reigns unchecked. Discards and dissipates respect. Shenstone.

Should we own that we have a very imperfect idea of substance, would it not be hard to charge us with discarding substance out of the world ?

Locke.

Justice discards party, friendship, kindred, and is always therefore represented as blind.

Addison's Guardian.

DISCAR'NATE, adj. Dis and caro, carnis, flesh'; Ital. scarnato. Stripped of flesh.

'Tis better to own a judgment, though but with a curta supellex of coherent notions ; than a memory, like a sepulchre, furnished with a load of broken and discarnate bones. Glanville.

To DISCASE', v. a, Dis and case. To strip ; to undress.

Fetch me the hat and rapier in my cell : I will disease me, and myself present.

Shakspeare. Tempest.

DISCERN', v. a. & v. n.ˆ Fr. discerner ; Sp.

DISCERN'ER, n. s. and Portug. discer-

DISCERN'IBLE, adj.. nir ; Ital. and Lat.

DISCERN'IBLENESS, .discernere ; dis and

DISCERN'IBLY, \cemere ; Gr.

DISCERN'ING, part. adj.

DISCERNINGLY, ad

DISCERN'MENT.

guish ; judge : as a neuter verb to make distinc- tion. Discerning is knowing; discreet ; wise. The meaning of the other derivatives seems plain.

And behold among the simple ones, I discerned among the youths a young man void of understand- ing. Prov. vii. 7.

You shall be ruled and led By some discretion, that discerns your state Better than you yourself. Shakspeare. King Lear. Does any here know me ? This is not Lear : Does Lear walk thus, speak thus? Where are his

eyes?

Either his motion weakens, or his discernings Are lethargied. Id,

"fwas said they saw but one ; and no discerner Durst wag his tongue in

censure.

Id. Henry VIII.

They follow virtue for reward to-day ; To-morrow vice, if she give better pay : We are so good, or bad, just at a price ; For nothing else discerns the virtue or vice.

Ben Jonson.

It discerneth of forces, frauds, crimes various of stellionate, and the inclinations towards crimes ca- pital, not actually perpetrated. Bacon.

Consider what doctrines are infused discernibly amongst Christians, most apt to obstruct or interrupt the Christian life. Hammond.

He was a great observer and discerner of men's natures and humours, and was very dexterous in com- pliance, where he found it useful. Clarendon.

All this is easily discernible by the ordinary dis- courses of the understanding. Si,uth.

To discern such buds as are fit to produce blossoms, from such as will display themselves but in leaves, it no difficult matter . Boyle.

What doth better become wisdom than to discern what is worthy the loving ? Sidney.

The custom of arguing on any side, even against our persuasions, dims the understanding, and makes it by degrees lose the faculty of discerning between truth and falsehood. Locke.

These two errours Ovid has most discerningly avoided. Garth.

It is indeed a sin of so gross, so formidable a bulk, that there needs no help of opticks to render it dis- cernible, and therefore I need not farther expatiate on it. Government of the Tongue.

A reader that wants discernment, loves and admires the characters and actions of men in a wrong place.

Freeholder. Safe in his power, whose eyes discern afar

The secret ambush of a specious prayer j

Implore his aid, in his decisions rest,

Secure, whate'er he gives, he gives the best.

Johnson. Vanity of Human Withes.

DISCERF, v. a. \ Lat. discerpo. To DISCERP'TIBLE, adj. S tear in pieces ; to break ; to destroy by separation of its parts.

What is most dense, and least porous, will be most coherent and least discerptible .

Glanville's Scepsis.

Matter is moveable, this immoveable ; matter dis- cerptible, this indiscerptible. More.

DISCHARGE', v. a., v., n., & n. s. > Dis and DISCHARG'ER, n. s. 5 charge, or

Fr. descharger. To disburden, throw off, deliver from a load, a debt, crime, or obligation ; hence to perform duty, as well as to dismiss from office, or employ ; to emit. As a neuter verb, to ex- plode. As a substantive, discharge is emission, or explosion ; matter emitted ; disruption ; dis- mission, or release, from duty or punishment. Performance of duty.

There is no discharge in that war, neither shall wickedness deliver those that are given to it.

JEccles. viii. 8.

They wanted not reasons to be discharged of all blame, who are confessed to have no great fault, even by their very word and testimony, in whose eyes no fault of ours hath ever hitherto been esteemed to be small. Hooker.

Infected minds To their deaf pillows will discharge their secrets.

Shakipeare. Macbeth. If he had

The present money to discharge the Jew, He would not take it. Id. Merchant of Venice. Trial would also be made in herbs poisonous and purgative, whose ill quality perhaps may be discharged, or attempered, by setting stronger poisons or purga- tives by them. Bacon.

The cloud, if it were oily or fatty, would not dis- charge. Bacon's Natural History.

The galleys also did oftentimes, out of their prows, discharge their great pieces against the city.

KnoUet's History. A grateful mind

By owing owes not, but still pays ; at once Indebted and discharged. Milton.

He warns

Us, haply too secure of our discharge From penalty, because from death released Some jays. Id.

To abate the borni.ilalion of punpowder, a way is promised by Porta, by borax and butter, which he says

will make it so go off, as scarcely to be heard bv the discharger. Bnncne.

They are imprudent enough to discharge themselves of this blunder, by laying the contradiction at Virgil's door- Dryden.

Had I a hundred tongues, a wit so large

As could their hundred offices discharge.

Dryden's Fables.

The text expresses the sound estate of the con- science, not barely by its not accusing, but by its not condemning us ; which word imports properly an acquittance or discharge of a man upon some prece- dent accusation, and a full trial and cognizance of his cause. South.

If one man's fault could discharge another man of his duty, there would be no place left for the common offices of society. L' Estrange.

When foreign trade imports more than our commo- dities will pay for, we contract debts beyond sea ; and those are paid with money, when they will not take our goods to discharge them. Locke.

As the heat of all springs is owing to subterraneous fire, so wherever there are any extraordinary disc/target of this fire, there also are the neighbouring springs hotter than ordinary. Woodward.

The man who builds, and wants wherewith to pay. Provides a house from

which to run away. In Britain what is many a lordly seat But a discharge in full for an estate ? Young.

We discharged a pistol, and had the sound returned upon us fifty-six times, though the air was foggy.

Addiion on Italy.

Soon may kind heaven a sure relief provide ; Soon may your sire discharge the vengeance due, And all your wrongs the proud oppressors rue.

Pope's Odyssey.

The matter being suppurated, I opened an inflamed tubercle in the great angle of the left eye, and dis- charged a well concocted matter. Wiseman's Surgery.

The haemorrhage being stopped, the next occurrence is a thin serous discharge. Sharp's Surgery.

DISCING!", adj. Lat. discinctus. Ungirded ; loosely dressed.

DISCIND', v. a. Lat. discindo. To divide; to cut in pieces.

We found several concretions so soft, that we could easily discind them betwixt our fingers. Boyle.

DISCI'PLE, v. a. & n. s. } Fr. disciple ;

DISCI'PLESHIP. \ Span, and Port.

discipulo ; Lat. discipulus, from disciplina. One who submits himself to discipline as a scholar. See DISCIPLINE. Discipleship is the state of being a disciple.

So that the disciplit weren named at Antioche cris- ten men. Wiclif. Dedis. 11.

She, bitter penance ! with an iron whip

Was wont him to ditciple every day. Spenser,

He did look far

Into the service of the time, and was

Discipled of the bravest. Shahtpeart

That to which justification is promised, is the giving up of the whole soul intirely unto Christ, undertaking discipleship upon Christ's terms.

Hammond's Pract. Catech.

He rebuked disciples who would call for fire from heaven upon whole cities, for the neglect of a few.

King C/Mrlts.

A young disciple should behave himself so well, as to gain the affection and the ear of Lis instructor

Wattt.

For, as Christians, we are the disciples, the followers, aad the servants of Christ, redeemed by him.

Mason.

Yea, a disciple, that would make the Founder Of your belief renounce it, could he see Such proselytes. Byron.

DISCIPLE, in a more restrained sense, is the designation applied to those who were the imme- diate followers and attendants on Christ's person, of whom there were seventy or seventy-one. The terms disciple and apostle are often used 'sy- nonymously in the gospel history ; but sometimes the apostles are distinguished from disciples, as persons selected out of the number of disciples, to be the principal ministers of his religion : of these there were only twelve. The Latins kept the festival of the seventy or seventy-two dis- ciples on July 15th, and the Greeks on Janu- ary 4th.

DISCIPLINE, v. a. & n. s. \ Fr. disci DIS'CIPLINABLE, adj. I pline ; Lat.

DIS'CIPLINABLENESS, n. s. >Span. Port. DISCIPLINA'RIAN, n. s. & adj. i and It. d is- DIS'CIPLINARY. Jciplina,from

disco, to learn, because discipline is necessary to teaching. To educate, instruct, with power to punish ; to advance by instruction. As a sub- stantive discipline is, instruction ; rule ; any thing taught ; system of government ; mortification ; punishment. Disciplinable is, docile; capable of

discipline. Disciplinarian, relating to, and as A substantive one zealous for, discipline. Disci- plinary, pertaining to discipline.

If ony vertue, if ony preisyng of discipline, thenke ghe these thingis, that also ghe ban lerned.

Wiclif. Filiptmsit 4. He had charge my discipline to frame,

And tutors nouriture to oversee. Spenser.

As we are to believe for ever the articles of evan- gelical doctrine, so the precepts of discipline, we are,ia like sort, bound for ever to observe. Hooker.

The cold of the northern parts is that which, with- out aid of discipline, doth make the bodies hardest, and the courage warmest. Bacon.

This opens all your victories in Scotland, Your discipline in war, wisdom in peace. Shakspeare.

The law appeared imperfect, and but given With purpose to resign them in full time Up to a better covenant, disciplined From shadowy types to truth, from flesh to spirit.

Milton.

These are the studies wherein our noble and gentle youth ought to bestow their time in a disciplinary way. Id.

The love of God makes a man chaste without the laborious arts of fasting and exterior discipline ; he reaches at glory without any other arms but those of love. Taylor.

Art may be said to overcome and advance nature in these mechanical disciplines, which, in this respect, are much to be preferred. WHkins.

VV- nuil in animals, especially some of them, as ioxes, 'logs, apes, horses, and elephants, not only perception, phantasy, and memory, common to most, if not all animals, but something of sagacity, provi- dence, and disciplinablenest. Hale.

Let crooked steel invade

The lawless troops which discipline disclaim, Auu their superfluous growth with rigour tame.

Drydeu.

What eagerness in disciplinarian uncertainties, when the love of God and our neighbour, evangelical unquestionables, are neglected ! Glan. Scepsis.

The most perfect, who have their passions in the best discipline, are yet obliged to be constantly on thei • guard. Rogers.

They look to us, as we should judge of an army 01 •well-disciplined soldiers at a distance.

Derham's Astro- Theology.

They were with care prepared and disciplined for confirmation, which" they could not arrive at till they were found, upon examination, to have made a suffi- cient progress in the knowledge of Christianity.

Addison on the Christian Religion.

They draw those that dissent into dislike with the state, as puritans, or disciplinarians.

Sanders. Pax Eccl.

Those canons in behalf of marriage were only dis- ciplinary, grounded on prudential motives.

Bp. Feme.

It is by the assistance of the eye, and the ear especi- ally, which are called the senses of discipline, that our minds are furnished with various parts of knowledge.

WatU.

The passions may be humoured till they become our master, as a horse may be pampered till he gets the better of his rider; but early discipline will pre- vent mutiny, and keep the helm in the hands of rea- son. Cumberland.
In colleges and halls in ancient days,

When learning, virtue, piety, and truth.

Were precious and inculcated with care,

There dwelt a sage called Discipline. Cotcper.

DISCIPLINE, ECCLESIASTICAL, consists in putting those laws in' execution by which the church is governed, and inflicting the penalties enjoined by them against the several sorts of of- fenders. The primitive

church never pretended to exercise discipline upon any but such as were within her pale in the largest sense, by some act of their own profession : and even upon these she never pretended to exercise her dis- cipline so far as to cancel or disannul their bap- tism : all that she pretended to was, to deprive men of the benefits of external communion, such as public prayer, receiving the eucharist, and other acts of divine worship. The church dis- cipline was confined to the admonition of the party, and to the lesser and greater excommuni- cation. As to the objects of ecclesiastical dis- cipline, they were all such delinquents as fell into great and scandalous crimes after baptism. Dis- cipline, in a more peculiar sense, is used for the bodily punishments _ inflicted on a religious of the Romish church who has been found a delin- quent ; or even for that which the religious TO- luntarily undergo or inflict on themselves, by way of mortification.

DISCIPLINE, THE BOOK OF, in the history of the church of Scotland, is a common Order, drawn up by the assembly of ministers in 1650, for the reformation, and uniformity to be observed in the discipline and policy of the church. In this book the government of the church by pre- lates is set aside, kirk sessions are established, the observation of fast days and saints' days is con- demned, and other regulations for the government of the church are determined. This book was approved by the privy council, and is called the First Book of Discipline.

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DISCLAIM', v. a. > Dis and claim. To DISCLAIMER, n. s. $ disown ; to deny any knowledge of; to retract any union with ; to ab- rogate : a disclaimer is both one that disclaims, disowns, or renounces, and a legal or other plea containing an express denial or refusal.

You cowardly rascal ! nature disclaims all share in tbee : a taylor made thee. Shakspeare. King Lear. He calls the gods to witness their offence ;

Disclaims the war, asserts his innocence .

Dryden's JEneid.

We find our Lord, on all occasions, disclaiming all pretensions to a temporal kingdom. Roger.*

Very few, among those who profess themselves Christians, disclaim all concern for their souls, disown •.he authority, or renounce the expectations, of the gospel. Id.

DISC'LO SE, v. a.-\ Lat. discludo, dis and Disc' LOSER, n. s. /close. To uncover; to DISCLOSURE, £ produce to open view.

DISC'LUSIONS, n. s.J Disclusion is emission.

There may be a reconciliation, except for upbraiding, or pride, or disclosing of secrets, or a treacherous wound ; for from these things every friend will depart.

Ecclus.

The producing of cold is a tiling very worthy the inquisition, both for the use and disclosure of causes.

Bacon,

He that proportioned wonders can disclose, At once his fancy and his judgment shows. Waller.

• Judge what a ridiculous thing it were, that the con- tinued shadow of the earth should be broken by sud- den miiaculous eruptions and disclusions of light, to prevent the art of the lanthorn-maker. More.

Then earth and ocean various forms disclose.

Dryden.

If I disclose my passion, Our friendship's at an end ; If I conceal it, The world will call me false. Addison's Cato.

Ten brother-youths with light umbrellas shade, Or fan with busy hands the panting maid ; Loose wave her locks, disclosing, as they break, The rising bosom and averted cheek. Darwin.

ANGIOUNA. Ah! why

Do you still keep apart, and walk alone, And let such strong emotions stamp your brow, As not betraying their full import, yet Disclose too much ?

DOGE. Disclose too much ? — of what ?

What is there to disclose. Byron.

DISCOL'OUR, ». a. (Lat. decoloro. To DISCOL'OURATION, n. s. S change from the natu- ral hue ; to stain. The change produced, or art of changing, is discoloration.

All in a kirtle of discoloured say He clothed was, ypaynted full of eies.

Spenser. Faerie Queenc. Many a widow's husband grovelling lies, Coldly embracing the discoloured earth.

Shakspeare. King John.

Drink water, either pure, or but discoloured with malt. Temple.

Suspicions, and fantastical surmise, And jealousy, with jaundice in her eyes, Discolouring all she viewed. Dryden.

Have a care lest some beloved notion, or some dar- ling science, so prevail over your mind as to discolour all your ideas. Watts.

In a depravation of the humours from a sound state to what the physicians call by a general name of a cacochymy, spots and discolorations of the skin are signs of weak fibres. Arbuthnot.

DISCOM FIT, v. a. & n. s.) Yr.desconfire ; DISCOM'FITURE, n. s. \ Ital. sconfipgere,

from Lat. disconfigere. To defeat ; to conquer ; overpower ; subdue.

Joshua discomfited Amalek and his people with the edge of the sword. Exodus.

The pillowes dide hir besinessj and cure, After the bataille and discomfiture.

Chaucer. Cant. Tales.

For in this world there ne is no creture Walking, alas ! in more discomfiture Than 1, ne that more sorrowe doth endure.

Donne.

Fight against that monstrous rebel, Cade, Whom, since, I heard to be discomfited.

Shakspeare.

Fly you must : incurable discomfit Reigns in the hearts of all our present party. Id.

Dagon must stoop, and shall ere long receive Such a discomfit, as shall quite despoil him Of all these boasted trophies. Milton's Agonistet.

While my gallant countrymen are employed in pur- suing rebels half discomfited through the consciousness of their guilt, I shall improve those victories to the good of my fellow subjects. Addison.

DISCOM'FORT,v.a.&n.s. 3 Disandcom- DISCOM'FORTABLE, adj. $ fort. To grieve; sadden; deject: as a substantive, uneasiness; sorrow ; melancholy.

Therefore whanne ye seen the abomynacioun of discoumfort, that is seid of Danyel the profete ston- dynge in the hooly place, he that redith undirstonde he. Wiclif. Matt. 24.

This himself did foresee, and therefore armed his church, to the end they might sustain it without dis- comfort. Hooker.

Discomfort guides my tongue, And bids me speak of nothing but despair.

Shakspeare.

Discomfortable cousin, knowest thou not That when the searching eye of Heaven is hid Behind the globe, it lights the lower world 1 Id.

It is no discomfort for a man to flee, when bis con- science, pursues him not.

lip. Hall. Contemplation.*

What ! did that help poor Dorus, whose eyes could carry unto him no other news but discomforlable ?

Sidney.

In solitude there is not only discomfort, but weak- ness also. South.

DISCOMMEND', v. a. \ Dis and com DISCOMMEN'DABLE, adj. / mend. To DISCOMMEN'DABLENESS,TI.S.\ blame; to cen- DISCOMMENDA'TION, n. s. i sure : discom- DISCOMMEN'DER. J rnendable is

blameable, deserving censure: discommendation, censure : discommender, he who expresses or bestows it.

Absolutely we cannot discommend, we cannot abso- lutely approve, either willingness to live, wr forward- ness to die. Hooker.

Now you will all be wits : and he, I pray, And you, that discommend it, mend the play.

Denham.

Neither do I discommend the lofty style in tragedy, which is naturally pompous and magnificent.

Dryden.

Pusillanimity is, according to Aristotle's morality a vice very discommendable. Ayliffe't Parergon.

Tally assigns three motions, whereby, without any aitcommendation, a man might be drawn to become an accuser of others. Id.

DISCOMMODE', v. a. } Fr. dis and com- DISCOMMOD'IOUS, adj. >mode. To put to DISCOMMO'DITY, n. s. j inconvenience ; to molest; to incommode. The adjective and sub- stantive follow this meaning.

So many thousand soldiers, unfit for any labour, or other trade, must either seek service and employment abroad, which may be dangerous ; or else employ them- selves here at home, which may be discommodious.

Spenser's State of Ireland.

We speak now of usury, how the discommodities of it may be best avoided, and the commodities retained : or how, in the balance of commodities and discommodi- ties, the qualities of usury are to be reconciled.

Bacon.

It is better that a ship should be preserved with some discommodity to the sailors, than that, the sailors being in health, the ship should perish. Hayward.

DISCOMPOSE', v. a. > Fr. decomposer.

DISCOMPO'SURE, n. $. 5 To disorder ; to un- settle : hence to offend ; vex ; irritate. Discom- posure is the effect thus produced.

Though he was a dark prince, and infinitely sus- picious, he never put down or discomposed a counsellor or near servant. Eicon.

He threw himself upon his bed, lamenting with much passion, and with abundance of tears ; and con- tinued in this melancholick discomposure, of mind many days. Clarendon.

No more, dear mother : ill in death it shows, Your peace of mind by rage to discompose. Dryden.

Men who possess all the advantages of life, are in a state where there are many accidents to disorder and discompose, but few to please them. Swift.

DISCONCERT, v. a. Dis and concert. To unsettle ; discompose ; disturb a scheme.

You need not provoke their spirits by outrages : a careless gesture, a word, or a look, is enough to dis- concert them. Collier.

DJSCONFOR'MITY, n. s. Dis and con-

lormity. Want of agreement ; inconsistency.

Lyes arise from errour and mistake, or malice and forgery ; they consist in the disagreement and discon- formity betwixt the speech and the conception of the mind, or the conceptions of the mind and the things themselves, or the speech and the things.

Hakewill on Providence.

DISCONGRU'ITY,n. s. Dis and congruity. Disagreement ; inconsistency.

There is want of capacity in the thing, to sustain such a duration, from the intrinsical ditcongntity of the one to the other.

Hole's Origin of Mankind.

DISCON'SOLATE, adj. 3 Dis and console.

DISCONSOLATELY, adv. ? Void of comfort ;

DISCON'SOLATENESS, n. s. 5 hopeless; sorrow- ful ; melancholy.

See Cassius all disconsolate, With Pindarus his bondman on this hill.

Shakspeare.

In his [God's] absence, there is nothing but dolour, discontolateness, and despair. Bp. Hall.

If patiently thy bid ding they obey, Dismiss them not disconsolate. Milton.

The ladies and the knight, no shelter nigh,*

Were dropping wet, disconsolate and wan, And through their thin array received the rain.

Dryden

The moon reflects the sunbeams to us, and so, by illuminating the air, takes away in some measure the disconsolate darkness of our winter nights. Ray.

I am first affrighted and confounded with that for- lorn solitude in which I am placed by any philosophy, and fancy myself some strange uncouth monster, who, not being able to unite and mingle in society, has been expelled all human commerce, and left utterly aban- doned and disconsolate.

Hume. On the Human Understanding. DISCONTENT, n.s.badj.ˆ DˆandCoN- DISCONTENT'ED, part. adj. I TENT, which DISCONTENTEDLY, adv. ssee. Uneasi- DISCONTENT'EDNESS, n.s. I ness; dissatis- DISCONTENT'MENT. J faction with

one's present state. Discontentment is an old word, expressing the same meaning.

These are the vices that fill them with general dis- contentment, as though the bosom of that famous church, wherein they live, were more noisome than any dun- geon. Hooker.

I see your brows full of discontent, Your hearts of sorrows, and your eyes of tears.

Shakspeare.

The politick and artificial nourishing and enter- taining of hopes, and carrying men from hopes to hopes, is one of the best antidotes against the poison of discontentment. Bacon.

The misery which is supposed to follow poverty, arises, not from want, but from peevishness and dis- content. Burton.

Pride is ever discontented, and still seeks matter of boasting in her own works.

Bp. Hall. Contemplations. The rest were seized with sullen discontent, And a deaf murmur through the squadrons went.

Dryden.

These are, beyond comparison, the two greatest evils in this world ; a diseased body, and a discon- tented mind. Tillotson.

A beautiful bust of Alexander the Great casts up his face to heaven with a noble air of grief, or discon- tentedness, in his looks. Addison's Travels.

As a man inebriated only by vapours, soon recovers in the open air ; a nation discontented to madness, without any adequate cause, will return to its wits and allegiance, when a little pause has cooled it to reflec- tion . Johnson.

DISCONTINUE, v. a. & v. n. } Fr. dis-

DISCONTINCT'ITY, n. s. $ continuer.

To leave off; to cease ; break off; interrupt : as a neuter verb, to lose cohesion, or any established right.

Thyself shall discontinue from thine heritage that I give thee, and I will cause thee to serve thine ene- mies. Jer.

Twenty puny lies I'll tell,

That men shall swear I have discontinued school Above a twelvemonth. Shakspeare.

Examine thy customs of diet, sleep, exercise, ap- parel, and the like ; and try, in any thou shall judge hurtful, to discontinue it by little and little; but so, as if thou find any inconvenience by the change, thou come back to it again. Bacon.

There is that property, in all letters, of aptness to be conjoined in syllables and words, through the vo- luble motions of the organs from one stop or figure to another, that they modify and discriminate the voice, without appearing to discontinue it.

Holder's Elements of Speech.

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Let us consider whether our approaches to him are sweet and refreshing, and if we are uneasy under any long discontinuance of our conversation with him.

Atterbury ,

Upon, any discontinuation of parts, made either by bubbles, or by shaking the glass, the whole mercury falls. Newton.

That discontinuity of parts is the principal cause of the opacity of bodies, will appear by considering that opaque substances become transparent by filling their pores with any substance of equal, or almost equal, density with their parts. Id.

The effect of discontinuance of possession is, that a man may not enter upon his own land or tenement alienated, whatsoever his right be unto it, or by his own authority ; but must seek to recover possession by law. The effect of discontinuance of plea is, that the instance may not be taken up again, but by a new writ to begin the suit afresh. Cotoell.

DISCONVE'NIENCE, n. s. Dis and con- venience. Incongruity; disagreement; opposi- tion.

Fear ariseth many times out of natural antipathies of nature ; but, in these disconveniencies of nature, deliberation hath no place at all.

Bramhall's Answer to Hobbes.

DIS'CORT), i>. n. &n.s.ˆv FT. discord; Sp. DISCOR'DANCE, n. s. I Ital. and Lat. dis- DISCOR'DANCY, \ cordia ; from dis

DISCOR'DANT, adj. i and cars, cordis,

DISCOR'DANTLY, adv. J the heart ; an ad- verse heart. To disagree ; not to accord with. As a substantive, disagreement ; opposition ; jangling ; contrariety of, or ill agreement be- tween, sounds. Discordance and discordancy both seem synonymous with discord.

These things doth the Lord hate, the false witness hat speaketh lies, and he that soweth discord among brethren. Proverbs.

See what a scourge is laid upon your hate, That heaven finds means to kill your joys with love ! And I, for winking at your discords too, Have lost a brace of kinsmen.

S/takspeare. Romeo and Juliet.

It is sound alone that doth immediately and incor- poreally affect most ; this is most manifest in music, and concords and discords in music : for all sounds, whether they be sharp or flat, if they be sweet, have a roundness and equality ; and if they be harsh, are unequal : for a discord itself is but a harshness of divers sounds meeting. Bacon.

This is the slowest, yet the daintiest sense ;

For even the ears of such as have no skill Perceive a discord, and conceive offence ;

And knowing not what's good, yet find the ill.

Davies.

How doth music amaze us, when of discords she maketh the sweetest harmony ! Peacham.

Hither conscience is to be referred ; if by a com- parison of things done with the rule there be a con- sonancy, then follows the sentence of approbation j if discordant from it, the sentence of condemnation.

Hole's Origin of Mankind.

Two strings of a musical instrument being struck together, making two noises that arrive at the ear at the same time as to sense, yield a sound differing from either of them, and as it were compounded of both; insomuch, that if they be discordantly tuned, though each of them struck apart would yield a pleas-

ing sound, yet being struck together they make » harsh and troublesome noise. Boyle on Colours.

Discord, like that of music's various parts, Discord that makes the harmony of hearts j Discord that only this dispute shall bring, Who best shall love the duke and serve the king.

Dryden.

All nature is but art unknown to thee ; All chance, direction which thou canst not see ; All discord, harmony not understood ; All partial evil, universal good. Pope.

DISCORD, in music, every sound which, joined with another, forms an assemblage disagreeable to the ear ; or, rather, every interval whose ex- tremes do not coalesce. Now, as there are no other concords, or

consonances, except those which form amongst themselves, and with their fundamental sound, perfect chords, it follows that every other interval must be a real dissonance or discord : even the third and sixth were reckoned such among the ancients, who excluded them from the number of consonant chords. The term dissonance, which is synonymous with discord both in a literal and metaphorical sense, signifies disagreement or disunion. In reality, that which renders dissonances grating is, that the sounds which form them, far from uniting in the ear, seem to repel each other, and are heard each by itself as two distinct sounds though produced at the same time. This repulsion or violent oscilla- tion of sounds is heard more or less as the vibrations which produce it are more or less fre- quently coincident. When two vocal strings are gradually tuned, till they approach a consonant interval, the pulsations become slower as the chord grows more just, till at last they are scarcely heard, if heard at all ; whence it appears certain that the pleasure, produced in us by har- mony, results from the more or less exact and frequent coincidence of vibrations; though the reason why this coincidence should give pleasure, more than any other modification or combination of sounds, appears to us inscrutable. The agree- able effects of dissonance, in harmony, are no objection to this theory : since it is allowed that the sensations excited by discord are not in them- selves immediately and necessarily pleasing, but only please by auricular deception. The ear is surprised with the shock it receives ; and, in proportion as it is harsh and grating, we feel the pleasure of returning harmony enhanced, and the disappointment of being artfully and insensibly extricated more agreeable. The name of disso- nance is given sometimes to the interval, and sometimes to each of the sounds which form it. But, though two sounds equally form a disso- nance between themselves, the name is most fre- quently given to that sound in particular which is most extraneous to the chord. The number of possible dissonances is indefinite; but as in music we exclude all intervals which are not found in the system received, the number of dis- sonances is reduced to a very few : besides, ir practice, we can only select from those few such as are agreeable to the species, and the mode, in which we compose ; and from this last number we must exclude such as cannot be used consist- ently with the rules prescribed. But what are these rules ? Have they any foundation in nature

or are they merely arbitrary ? This is what Rous- seau has endeavoured to investigate and to deduce, with more ingenuity than success, from principles purely mechanical.

*DISCOVER, v. a. -\ Fr. decouvrir; dis DISCOV'ERABLE, adj. f arid cover. To see or DISCOV'EKEK, n. s. £ explore; to show; DISCOV'ERY. * disclose ; bring to*

light; make plain or visible.

He discovereth deep things out of darkness, and bringeth out to light the shadow of death.

Job xii. 22.

When we had discovered Cyprus, we left it ou the "eft hand. Acts.

Let that man with better sense advise, That of the world least part to us is read ; And daily how through hardy enterprize Many great regions are discovered.

Spenser. Faerie Queene.

The utter waulls of it yet stond. The kepe is ex- eeaing fair and strong ; and in the waulles be certein strong towers. The lodgings that were within the area of the castelle be discovered and faul to ruine.

Leland.

Here stand my lords, and send discoverers forth, To know the numbers of our enemies. Shakspeare.

What, must I hold a candle to my shame 1 They in themselves, good sooth, are too, too light. Why 'tis an office of discovery, love, And I should be obscured. Id. Merchant of Venice.

Some high climbing hill, Which to his eye discovers unaware The goodly prospect of some foreign land, First seen, or some renowned metropolis With glistering spires and battlements adorned.

Milton.

Man with strength and free will armed Complete, to have discovered and repulsed Whatever wiles of foe or seeming friend. Id. They were deceived by Satan, and that not in an invisible situation, but in an open and discoverable apparition, that is, in the form of a serpent.

Browne's Vulgar Errours.

If more be found out, they will not recompense the discoverer's pains, but will be fitter to be cast out.

Holder.

The cover of the coach was made with such joints, that as they might, to avoid the weather, pull it up lose, so they might put each end down, and remain as discovered and open-sighted as on horseback.

Sidney.

Of all who since have used the open sea, . Than the bold English none more fame have won ; Beyond the year, and out of heaven's high way, They make discoveries where they see no sun.

Dryden.

Things that appeared amiable by the light of this •world, appear of a different odious hue in the clear discoveries of the next. South.

An old maiden gentlewoman is the greatest disco- verer of judgments ; she can tell you what bin it was that set such a man's house on fire.

Addison's Spectator.

It is concluded by astronomers, that the atmos- phere of the moon hath no clouds nor rains, but a perpetual and uniform serenity ; because nothing discoverable in the lunar surface is ever covered and absconded by the interposition of any clouds or mists.

Bcntley.

Places receive appellations, according to the lan- guage of the discoverer, from observations made upon the people. Broome.

Revelation may assert two things to be joined, whose connection or agreement is not discoverable by r«ason. Watts.

*DISCOUN'SEL, *. a. Dis and counsel. To dissuade ; to give contrary advice. Obsolete.*

But him that palmer from that vanity With temperate advice discounselled. Spenser.

DIS'COUNT, v. a. & n. s. From dia and count. To count back; to pay back aˆain. In- terest so counted after a principal given.

My father's, mother's, brother's death I pardon : My prayers and penance shall discount for these, And beg of heaven to charge the bill on me.

Dryden.

The farmers, spitefully combined, Force him to take his tithes in kind ; And Parvisol discounts arrears By bills for taxes and repairs. Swift.

His whole intention was, to buy a certain quantity of copper money from Wood, at a large discount, and sell them as well as he could. Id.

DISCOUNT, in commerce, a term among traders, merchants, and bankers. It is used by the two former on occasion of their buying commodities on the usual time of credit, with a condition that the seller shall allow the buyer a certain discount, at the rate of so much per cent, per annum, for the time for which the credit is generally given, upon condition that the buyer pays ready money for such commodities, instead of taking the time of credit. Traders and merchants also frequently taking promissory notes for moneys due, payable to them or order at a certain time, and sometimes having occasion for money before the time is elapsed, procure these notes to be discounted by bankers before the time of payment. Bills of ex- change are also discounted by bankers ; and in this consists one article of the profits of banking. See BANK.

DISCOUNTENANCE, v. a. &) From da

DISCOUN'TENANCER, n. s. [n. s. $ and coun- tenance. To discourage by cold treatment : one who discourages.

Rumours of scandal and murmurs against the king and his government, taxed him for a great taxer of his people, and discountenancer of his nobility,

Bacon.

He thought a little discountenance upon those per- sons would suppress that spirit. Clarendon.

He came, and with him Eve, more loth, tho' first To offend ; discountenanced both, and discomposed.

Milton.

The truly upright judge will always countenance right, and ducounten-ince wrong. Atterbury.

In expectation of the hour of judgment, he pati- ently bears all the difficulties of duty, and the discoun- tenance be meets with from a wicked and prophane world. Rogers.

Present time and future may be considered as ri- vals ; and he who solicits the one, must expect to be discountenanced by the other. Sir Joshua Reynolds.

DISCOUR'AGE, v. a. ~\ Fr. decourager.

DISCOUR'AGER, n. s. > Dis and courage.

DISCOUR'AGEMENT. J To depress ; deprive of confidence ; dastardise; deter; taking/rom : discouragement is the cause of depression, or fear.

Wherefore discourage ye the neart of the children of Israel from going over into the land ? Numbers.

I might neither encourage the rebels' insolence, nor discourage the protestants' loyalty and patience.

Kino Cluirles.

You may keep your beauty and your health, unless you destroy them yourself, or discourage them to stay with you, by using them ill. Temple.

To things we would have them lfiarn,the great and only discouragement is, that they are called to them.

Locke.

*The apostle with great zeal discourages too unrea- sonable a presumption. Rogers**

The books read at schools and colleges are full of incitements to virtue, and discouragement from vice.

Swift.

Most men in years, as they are generally discou- ragers of youth, are like old trees, which, being past bearing themselves, will suffer no young plants to flourish beneath them. Pope.

The obscurity of the prophecies, great as it is in some parts, is not such as should discourage the Christian Laic from the study of them, nor such as

will excuse him under the neglect of it.

Bp. Horsley.

DISCOURSE', v. a., v.n. & n Span, and

DISCOURSED, n. s. [n. t. > Fr. discourir ;

DISCOURS'IVE, adj. 3 It. discorrcre;

Lat. discurrere, dis and curro, to wander about ; because in discourse the mind travels from ob- ject to object. To treat of by speech or writing ; to discuss : as a neuter verb, to talk ; relate ; converse ; reason.

By reason of that original weakness in the instru- ments, without which the understanding part is not able in this world by discourse to work, the very con- ceit of painfulness is a bridle to stay us. Hooker.

Sure he that made us with such large discourse, Looking before and after, gave us not That capability and godlike reason To rust in us unused. Shakspeare.

Go with us into the abbey here, And let us there at large discourse all oof fortunes.

Id.

The tract of every thing Would by a good discourser lose some life, Which action's self was tongue to. Id.

He waxeth wiser than himself, more by an hour's discourse, than by a day's meditation. Bacon.

Brutes do want that quick discoursing power.

Davies.

In thy discourse, if thou desire to please, All such is courteous, useful, new, or witty j Usefulness comes by labour, wit by ease, Courtesy grows in court, news in the city.

Herbert. The soul

Reason receives, and reason is her being, Discoursive, or intuitive ; discourse »

Is oftest yours, the latter is most ours. Milton. • Philologers and critical

discourses, who look be- yond the obvious exteriors of things, will not be angry at our narrower explorations. Browne.

The act of the mind which connects propositions, and deduceth conclusions from them, the schools call discourse ; and we shall not miscall it, if we name it reason. Glanville.

Of various things discoursing as he passed, Anchises hither bends. Dryden.

The discourse here is about ideas, which, he says, are- real things, and seen iu God. Locke.

The general maxims we are discoursing of are not known to children, ideots, and a great part of man- kiad. iff.

Flowers of rhetoric in sermons and serious dis- courses are like the blue and red flowers in corn, pleasing to those who come only for amusement, but prejudicial to him who would reap profit from it.

Pope.

When a man's capacity does not enable him to en- tertain or animate the company, it is the best he can do to render himself inoffensive, and to keep his teeth clean ; but the person who has talents for discourse, and a passionate desire to enliven conversation, ought to have many improprieties excused, which in the other were unpardonable. Shenstone.

DISCOURTEOUS, adj. Pis and courteous. Uncivil ; uncomplaisant ; defective in good manners.

DISCOURTESY, n. s. ? Dis and courtesy.

DISCOUR'TEOUS, adj, 5 Incivility ; rude- ness ; act of disrespect.

Be calm in arguing ; for fierceness makes

Error a fault, and truth discourtesy. Herbert.

As if chearfulness had been tediousness, and good entertainment had been turned'to discourtesy, he would ever get himself alone. Sidney.

He made me visits, maundering as if I had done him a discourtesy. Wiseman.

He resolved to unhorse the first discourteous knight he should meet . Motteux's Don Quixote.

DIS'COUS, adj. From Lat. discus. Broad ; flat ; wide. Used by botanists to denote the middle, plain, and flat part of some flowers, such as the flos so) is, &c.

DISCREDIT, v. a. & n. s. Fr. dicrediter. To deprive of credibility ; to make not trusted ; to disgrace ; distrust : as a substantive, reproach; disgrace ; lower degree of infamy ; imputation of fault ; ignominy.

He, like a privileged spy, whom nothing can Discredit, libels now 'gainst each great man. Donne.

You had left unseen a wonderful piece of work, which not to have been blest withal, would have dit- credited you. Shakspeare.

Had I been the finder out of this secret, it would not have relished among my other discredits.

Shakspeare.

Idlers will ever live like rogues, and not fall to work, but be lazy, and then certify over their country to the discredit of a plantation. Bacon.

He is commended that makes a saving voyage, and least discredits his travels, who returns the same man he went. Wotton.

'Tis the duty of every Christian to be concerned for the reputation or discredit his life may bring on his profession. Rogers.

Alas, the small discredit of a bribe

Scarce hurts the lawyer, but undoes the scribe.

Pope.

Reflect how glorious it would J>e to appear in coun- tenance of discredited duty, and by example of piety j-evive the declining spirit of religion. Id.

DISCREET', adj.

Fr. discret ; Span. Port, and Ital. dis- crete; Lat. discretus, from discerno,io judge. Prudent; wary; cauti-

r, adj.

DISCREET'LY, adv

DISCREET'NESS, ri. s.

DISCRE'TION,

DISCRE'TIONARY, adj.

ous ; sober ; modest. Discretion and discreetness afe synonymous substantives. Discretionary means unlimited, except by discretion.

But now parfourme ghe in dede, that as the discre- cioun of wille is redi so be it also of parfourmyng of that that ghe han. Wiclif. ii Cor. 8.

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The greatest parts without discretion, as obserred by an elegant writer, may be fatal to their owner.

Hume.

Honest, discreet, quiet, and godly learned men, wilj not be withdrawn by you. Whitgifte.

Nothing then was further thought upon for the man- ner of governing ; but all permitted unto their wisdom and discretion which were to rule. Hooker.

Less fearful than discreet, Yon love the fundamental part of state, Mere than you doubt the charge of 't. Shakspeare. It is not good that children should know any wicked- ness : old folks have discretion, and know the world.

Id.

Discretion is the victor of the war, With lenity, and our directions followed With cheerfulness, a prosperous end must crown Our works well undertaken. Massinger.

Poets lose half the praise they should have got, Could it be known what they discreetly blot.

Waller.

The labour of obedience, loyalty, and subjection, is no more but for a man honestly and discreetly to sit •till. South.

The major being a person of consummate experience, was invested with a discretionary power. Toiler.

It is the discreet man, not the witty, nor the learned, nor the brave, who guides the conversation, «nd gives measures to society. Addison's Spectator.

There is no talent so useful towards rising in the world, or which puts men more cut of the reach of fortune, than discretion, a species of lower prudence.

Swift.

The dullest brain, if gently stirred, Perhaps may waken to a humming bird ; The most recluse, discreetly opened, find Congenial object in the cockle kind.

Pope's D unclad.

A deacon may have a dispensation for entering into orders before he is twenty-three years of age ; and it is discretionary in the bishop to admit him to that order at what time he thinks fit. Ayliffe's Parergon.

Dear youth, by fortune favored, but by love, Alas ! not favoured less, be still as now Discreet. Thomson.

To Jeffrey go, be silent and discreet,

His pay is just ten sterling pounds per sheet :

Fear not to lie, 'twill seem a lucky hit,

Shrink not from blasphemy, 'twill pass for wit.

Byron.

DISCREP'ANCE, n. s. f Lat. discrepantia.

DISCREP'ANT, adj. \ Difference; contra-

riety ; disagreement.

Diversity of education, and discrepancy of those principles wherewith men are at first imbued, and wherein all our after reasonings are founded.

Lord Digby to K. Digby.

DISCRETE, v. a. & adj.) Lat. discretus.

DISCRE'TIVE, adj } To separate; to

discontinue; distinct; disjoined. For discre- tive, see the instance.

As for its diaphaneity, it enjoyeth that most emi- nently ; as having its earthly and salinous parts so exactly resolved, that its body is left imporous, and not discreted by atomical terminations. Browne.

Discrete quantity, or different individuals, are measured by number without any breaking continuity ; that is, m things that have continuity, as continued quantity and motion. Hole's Origin of Mankind.

Discretive propositions are such wherein various, and seemingly opposite, judgments are made, whose variety or distinction is noted by the particles but, though, yet, &c. as, travellers may change their cli- mate, but not their temper ; Job was patient, though his grief was great. Watts.

DISCRETE, or DISJUNCT, PROPORTION is that in which the ratio between two or more pairs of numbers is the same, and yet the proportion is not continued, as the ratio between 3 : 6 is the same as that between 8 : 16, and therefore the numbers are proportional; but it is only dis- cretely or disjunctly, for 3 is not to 6 as 6 to 8 ; that is, the proportion is broken off between 8 and 3, and is not continued as in the follow- ing continual proportionals : —

3 : 6 : : 12 : 24.

DISCRIMINATE, v.a. & adj.ˆ Lat. discri- DISCRIMI'NABLE, adj. mino, from

DISCRIM'INATELY, adv. I Gr. dig and

DISCRIMI'NATENESS, n. s. }>iepii/w, to

DISCRIMINATION, I judge. To

DISCRIMINATIVE, , adj. \ mark a dif-

DISCRIM'INOUS. J ference; dis-

tinguished by tokens ; select ; separate. As an adjective, distinguished by marks. Discriraiua- ble is distinguishable. Discriminous is an obso- lete word for critical, hazardous.

Oysters and cockles and muscles, which move not, have no discriminate sex. Bacon.

Take ,heed of abetting any factions, or applying any publick discriminations in matters of religion.

King Charles.

There are three sorts of it differing in fineness from each other, and discriminated by the natives by three peculiar names. Boyle.

Discriminative Providence knew before the nature and course of all things.

More'i Antidote against Atheism.

There may be ways of discriminating the voice ; as by acuteness and gravity, the several degrees of rais- ing and falling from one tone or note to another.

Holder.

Any kind of spitting of blood imports a very discri- minous state, unless it happens upon the gaping of a vein opened by a plethory. Harvey.

There is a reverence to be shewed them on the ac- count of their discrimination from other places, and se- paration for sacred uses. Stittingfleet.

The right hand is discriminated from the left by a natural, necessary, and never to be confounded dis- tinction. South,

The only standing test and discriminative characte- ristics of any metal or mineral, must be sought for in the constituent matter of it. Woodward.

By that prudent discrimination made between the offenders of different degrees, he obliges those whom he has distinguished as objects of mercy. Addison.

DIS'CRO WN, v. a. From dis and crown. To deprive of a crown.

Through storm and darkness yawns the rending

ground,

The gulf is thick with phantoms, but the chief Seems royal still, though with her head discrowned, And pale, but lovely, with maternal grief She clasps a babe, to whom her breast yields no relief.

Byron.

DISCU'BITORY, adj. Lat. discubitorius. Fit- ted to the posture of leaning.

After bathing they retired to bed, and refreshed themselves with a repast ; and so that custom, by de- grees, changed their cubiculary beds into discubitory. Browne's Vulgar Errours.

DISCUM'BENCY, n.s. Lat. d iscumbens. The act of leaning at meat, after the ancient manner. See ACCUBATIOX.

The Greeks and Romans used the custom of discum- bency at meals, which was upon their left side ; for so their right hand was free and ready for all service. Browne's Vulgar Errours.

DISCUM'BER, v. a. Dis and cumber. To disengage from any troublesome weight ; to dis- engage from impediment.

His limbs discumbered of the clinging vest, He binds the sacred cincture round his breast,

Pope.

DISCURE', v. a. Fr. decouvrir. To discover; to reveal.

I will, if please you, it discure, assay To ease you of that ill. Faerie Queene.

Fr. discursif ; from • Lat. discurro. Moving

DISCUR'SIVE, adj.

DISCUR'SORY, adj. 3 here and there; rov- tempt ing; desultory; as a corruption of discoursive. disdain. Proceeding by gradation from premises to con- sequences; and thus discursory is argumenta- tive.

Some noises help sleep ; as the blowing of the wind, and the trickling of water : they move a gentle atten- tion ; and whatsoever moveth attention, without too much labour, stilleth the natural and discursive motion of the spirits. Bacon.

There is a sanctity of soul and body, of more effi- cacy for the receiving of divine truths, than the great- est pretences to discursive demonstration.

More's Divine Dialogues.

Tfcere hath been much dispute touching the know- ledge of brutes, whether they have a kind of discursive faculty, which some call reason.

Hole's Origin of Mankind.

We have a principle within, whereby we think, and we know we think ; whereby we do discursively, and hy way of ratiocination, deduce one thing from ano- ther. Id.

DiS'CUS, n. s. Lat. A quoit; a heavy piece of iron thrown in the ancient sports. See Disc.

From Elatreus' strong arm the discus flies, And sings with unmatched force along the skies.

Pope.

Fr. discuter; Span, and

His usage was to commit the discussing of causes privately to certain persons learned in the laws.

Ayliffe's Parergon.

If by the liberty of the press, we understand merely the liberty of discussing the propriety of public mea- sures and political opinions, let us have as much of it as you please. Franklin.

DISCUTIENT, n. s. Lat. discutiens. A me- dicine that has power to repel or drive back the matter of tumors in the blood. It sometimes means the same as carminative.

The swellings arising from these require to be '.reated, in their beginning, with moderate repellents ind discutients. Wiseman.

DISCUTIENTS, in surgery, are such exter- nal remedies as, by their subtilty, dissolve or disperse a stagnating or coagulated fluid in any part of the body.

DISDAIN', v. a., v.n. &n s.-\ T?T.dedaigner;

DISDAIN'FUL, adj.

DISDAIN'FULLY, adv.

DISDAINFULNESS, n. s.

and dignor.) To esteem unworthy. As an ac- tive verb it signifies to scorn : as a substantive, contempt ; scorn ; indignation united with con- Disdainfulness is synonymous with

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(.Sp- desdignar ; (Lat. dedignari ; 3 (de privative,

Children being haughty, through disdain and want of nurture, do stain the nobility of their kindred .

Ecclus. A proud disdainfulness of other men.

Ascliam.

His angry steede did chide his foaming bitt, As much disduyidnij to the curbe to yield : Full jolly knight he seemed and faire did sitt, As one for knightly giusts and fierce encounters fitt. Spenser. Faerie Queene.

There will come a time when three words, uttered with charity and meekness, shall receive a far more blessed reward, than three thousand volumes, writtea with disdainful sharpness of wit. Hooker-

The queen is obstinate, Stubborn to justice, apt to' accuse it, Disdainful to be tried by 't. Shakspeare.

Either greet him not,

Or else disdainfully, which shall shake him more.

Id.

uas, v. a. ~\ rr. aiscuter; span, ana S'SER, n. s. f Port, discutir ; Ital. and S'SIVE, adj. £ Lat. discutere, dis and qua- S'SION, n. s. J tio, to shake down or at-

DISCUSS', v. a.

DlSCUS'sER,

DISCUS'SIVE,

DISCUS'SION,

tack by battering. To examine, or clear by dis- quisition ; to ventilate ; to

clear up ; to disperse matter or humors of the body.

Many arts were used to discuss the beginnings of new affection. Wotton.

Consider the threefold effect of Jupiter's trisulk, to burn, discuss, and terebrate.

Browne's Vulgar Errours.

Truth cannot be found without 'some labour and intention of the mind, and the thoughts dwelling a considerable time upon the survey and discussion of «ach particular. South.

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Can I forget, when they in prison placing her, With swelling heart, in spite and due disdainfulness, She lay for dead, till I helped with unlacing her.

Sidney.

The disdainful soul came rushing through the wound. Dry den.

It is not to insult and domineer, to look disdain fully, and revile imperiously, that procures esteem from any one. South.

Tell him, Cato Disdains a life which he has power to offer.

Addison.

But against you, ye Greeks, ye coward train, Gods ? how my soul is moved with just disdain ! Pope's Odyssey.

But no one ever heard her speak or shriek.

Although her paroxysm drew towards its close : Hers was a phrensy which disdained to rave. Even when they smote her, in the hope to save.

Byron.

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DISDIACLASTIC CRYSTAL, in natural his- tory, a name given by

Bartholine and some others to the pellucid fossil substance, more usually called, from the place whence it was first brought, Iceland crystal ; though properly it is no crystal at all, but a tine pellucid spar, called by Dr. Hill from its shape parallelopipe- dum.

DISEASE' v. a. & n. s.) Dis and ease. To

DISEAS'EDNESS, n. s.] afflict with illness ; to torment with pain or sorrow ; to make morbid ; infect: as a substantive, the malady, sickness, &c., endured.

In the world ghe schuler haue dise.ie, but triste ghe, I haue ouercome the world. Wiclif. Jon xvi.

And Asa, in the thirty and ninth year of his reign, was diseased in his feet, and his disease was exceeding great ; and in his disease he sought not to the Lord, but to the physicians. Chron.

Full of diseases was his carcas blew, And a dry dropsie through his flesh did flow, Which by misdiet daily greater grew.

Spenser. Faerie Queene,

We are all diseased,

And with our surfeiting and wanton hours Have brought ourselves into a burning fever.

Shakspeare.

Food improperly taken, not only produces original diseases, but affords- those that are already engendered both matter and sustenance ; so that, let the father of disease be what it may, intemperance is certainly its mother. Burton.

A lazar-house it seemed, wherein were laid Numbers of all diseased, all maladies Of ghastly spasm, or racking, torture. Milton.

Authority is a disease and cure, Which men can neither want nor well endure.

Butler.

We cannot be too jealous, we cannot suspect our- selves too much to labour under the disease of pride, which cleaves the closer to us by our belief or confi- dence that we are quite without it. Clarendon.

Though great light be insufferable to our eyes, yet the highest degree of darkness does not at all disease them. Locke.

This is a restoration to some former state ; not that state of indigency and diseasedness. Burnet's Theory.

Then wasteful forth Walks the dire power of pestilent disease.

Thomson's Summer.

But he was phrenzied, — wherefore, who may know • Since cause might be which skill could never find ; But he was phrenzied by disease or woe, To that worst pitch of all, which wears a reasoniog show. Byron.

DISEASE has been variously denned by physi- cians, almost every founder of a new system having given a definition of disease, differing in some respects from his predecessors. See MEDICINE and NOSOLOGY. Of all animals, man is subject to the most diseases ; and of men, the studious and speculative are most exposed to them. Other animals have their diseases ; but they are in small number, because they live more according to nature : nor are plants with- out them ; though their known maladies are few. The ancient Hebrews, who were versed in the study of natural philosophy, and not much ac- customed to recur to physical causes, and con-

sult physicians, when they were sick, imputed their diseases generally to evil spirits, the exe- cutioners of divine vengeance.

DISEASES OF DOGS. See DOG and HYDRO- PHOBIA.

DISEASES OF HORSES. SEE FARRIERY. DISEDG'ED, adj. Dis and edge. Blunted , obtunded ; dulled

I grieve myself

To think, when thou shall be disedged by her Whom now thou tirest on, how thy memory Will then be panged by me.

Shakspeare. Cymbeline.

DISEMBARK', v. a. & v. n. Dis and em- bark. To carry to land; to go on land. I must unto the road, to ditembarh Some necessaries.

Shakspeare. Two Gentlemen of Verona. There disembarking on the green sea-side, We land our cattle, and the spoil divide.

Pope's Odyssey.

DISEMBITTER, v. a. Dis and embitter. To sweeten ; to free from bitterness ; to clear from acrimony : an unusual word.

Encourage such innocent amusements as may dii- embitter the minds of men, and make them mutually rejoice in the same agreeable satisfactions.

Addison's Freeholder.

DISEMBODIED, adj. Dis and embodied. Divested of the body; discharged from military icrvice.

Disembodied spirits are generally creatures of the imagination, and of old wondering wit. Thomas.

DISEMBOGUE', v. a. & v. n. Old Fr. disem- boucher. — Skinner. To pour out at the mouth 01 a river ; to vent : to gain vent ; flow.

Rivers In ample oceans disembogued, or lost.

Dryden. Ovid.

By eminences placed up and down the globe, the rivers make innumerable turnings and windings, and at last disembogue in several mouths into the sea.

Cheyne.

Rolling down, the steep Timavus raves, And through nine channels disembogues his waves.

Addison.

DISEMBOS'OMED, part. adj. Dis and era- bosom. Taken from the bosom.

He

Who, disembosomed from the Father, bows

The heaven of heavens to kiss the distant earth.

Young.

DISEMBOWELLED, part. adj. Dis and embowel. Taken from out the bowels.

So her disembowelled web Arachne in a hall or kitchen spreads, Obvious to vagrant flies. Philips.

DISEMBROIL', v. a. Fr. debrouiller. To disentangle ; to free from perplexity ; to reduce from confusion.

Then earth from air, and seas from earth were

driven,

And grosser air sunk from etherial heaven ; Thus disembroiled, they take their proper place.

Dryden.

The system of his politicks is disembroiled, and cleared of all those incoherences and independent matters that are woven into this motley piece.

Addisofi's Whig Examiner.

DISENA'BLE, v. a. Dis and enable. To deprive of power ; to disable ; to sink into weakness ; to weaken.

Now age has overtaken me ; and want, a more in- sufferable evil, through the change of the times, has wholly disenabled me. Dryden.

DISENCHANT' v. a. Dis and enchant. To free from the force of an enchantment ; to deliver from the power of charms or spells. Muse, stoop thy disenchanted wing to truth.

Denham. Alas ! let your own brain disenchant you. Sidney.

Haste to thy work ; a noble stroke or two Ends all the charms, and disenchants the grove.

Dryden.

DISENCUM'BER, v. a. } Dis and encum- DISENCUM'BRANCE, n. s. 5ber. To discharge

from encumbrances ; free from impediment or

obstruction ; disburden.

Dim night had disencumbered heaven. Milton.

It will need the actual intention, the particular stress and application of the whole soul, to disencumber and set it free, to scour off its rust, and remove those hindrances which would otherwise clog and check the freedom of its operations.. Sprat.

The disencumbered soul

Flew off, and left behind the clouds and starry pole.

Dryden.

Dreams look like the amusements of the soul, when she is disencumbered of her machine ; her sports and recreations, when she has laid her charge asleep.

Spectator.

There are many who make a figure below what their fortune or merit entitles them to, out of mere choice, and an elegant desire of ease and disencum- brance. Id.

The church of St. Justina, designed by Palladio, is the most handsome, luminous, disencumbered build- ing, in the inside, that I have ever seen.

Addison on Italy.

DISENGAGE', v. a. & v. v.~\ Dis and en- DISENGAGED'J part. adj. f gage. To re-

DISENGAGED'NESS, n. s. I lieve from duty

DISENGAGE'MENT. J or obligation ;

to withdraw from duty, obligation, or engage- ment. Hence disengagement, and disengaged- ness, are applied to any state of freedom or va- cancy.

When our mind's eyes are disengaged and free, They clearer, farther, and distinctly see. Denham.

Some others, being very light, would float up and down a good while, before they could wholly disengage themselves and descend. Burnet's Theory.

Providence gives us notice, by sensible declensions, that we may disengage from the world by degrees.

Cottier on T/toayht .

In the next paragraph, I found my author oretty well disengaged from quotations. Atteroury.

The consideration that should disengage our fond- ness from worldly things, is, that they are uncertain in their foundation j fading, transient, and corruptible in their nature. Rogers.

It is very hard for the mind to disengage itself from a subject on which it has been long employed.

Addison.

The great use of light to vegetation would appear from this theory to be by disengaging vital air from the water which they perspire, and thence to facilitate its union with their blood exposed beneath the thin surface of their leaves. Darwin.

A man purposes his schemes of life in a state of abstraction and disengagement, exempt from the en- ticements of hope, the solicitations of affection, the importunities of appetite, or the depressions of fear.

Johnson.

DISENTAN'GLE, v. a. Dis and entangle. To untold or loosen the parts of a thing ; to free from impediment or perplexity ; separate ; dis- tinguish

Though in concretions particles so entangle one another, that they cannot in a short time clear them- selves, yet they do incessantly strive to disentangle themselves, and get away. Boyle.

Till they could find some expedient to explicate and disentangle themselves out of this labyrinth, they made no advance towards supplying theii armies.

Clarendon.

The welfare of their souls requires a better judg- men than their own, either to guide them in their duty, or to disentangle them from a temptation.*

South,

Neither can God himself be otherwise understood by us than as a mind free and disentangled from all cor- poreal mixtures. Stillingjleet.

Wherever I turned my view, there was perplexity to be disentangled, and

confusion to be regulated.

Johnson. Preface to Dictionary.

DISENTER', v. a. Dis and Fr. enterrer. To unbury ; to take out of the grave.

Though the blindness of some fanaticks have savaged on the bodies of the dead, and have been so injurious unto worms as to disenterre the bodies of the deceased, yet had they therein no design upon the soul. Browne's Vulgar Errours.

DISENTHRAL', v. a. Dis and enthral. To set free ; to restore to liberty ; to rescue from slavery.

If religion were false, bad men would set the ut- most force of their reason on work to discover that falsity, and thereby disenthral themselves. South.

But God my soul shall disenthral ; For I upon his name will call. Sandys.

DISENTHRONE', v. a. Dis and enthrone. To depose from sovereignty; to dethrone.

Either to disenthrone the King of heave" We war, if war be best ; or to regain Our own right lost. Milton.

DISENTRANCE', v a. Dis and entrance. To awaken from a trance, or deep sleep.

Ralpho, by this time disentranced, Upon his bum himself advanced. Hudibrat.

DISESPOUSE', v.a. Dis and espouse. To separate after faith plighted.

Such was the rage Of Tnmus, for Lavinia disespoused. Milton.

DISESTEEiVT, v. a. & re. s.) From dis and DISESTIMA'TION, n. s. $ esteem. To dis-

regard, or regard slightly : slight regard.

But if this sacred gift you disesteem, Then cruel plagues shall fall on Priam's state.

Denham.

When any one, by miscarriage, falls into diset- teem, he will fall under neglect and contempt.

Locke.

I would not be thought to disesteem or dissuade the study of nature. !&•

Should Mars see't,

That horrid hurrier of men, or she that betters him, Minerva, never so incensed, they could not disesteem.

Chapman. U 2 .

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DISFA'VOR, v. a. & n. s. Dis and favor. To discountenance; withhold, or withdraw kind- ness : discountenance ; slight regard ; unfavor- able circumstance ; an unfavored state.

It was verily thought, that had it not been for four great ditfawwert of that voyage, the enterprize had succeeded. Bacon,

While free from sacrilege, he was at peace, as it were, with God and man ; but after his sacrilege he was in disfavour with both. Spelman.

Might not those of higher rank, and nearer access to her majesty, receive her own commands, and be countenanced or disfavoured according as they obey ?

Swift.

DISFIG'URE, v.a. } Dis and figure. To DISFIGURA'TION, n. s. 5 deform; to change any DISFIG'UEEMENT. 3 thing to a worse form ; to mangle.

You are but as a form in wax By him imprinted, and within his power To leave the figure, or disfigure it. Shakspeare.

Abject is their punishment, llisfigvring not (rod's likeness, but their own, Or, If his likeness, by themsfilves defaced,

Milton.

A nose flatter, or a month wider, could have con- sisted, as well as the rest of his figure, with such a soul and such parts as 'made him, disfigured as he was, capable to be a dignitary in the church.

Locke.

That understanding, in which, though little is writ- ten, yet nothing is blotted ; that which is not disfigured by ill impressions, is a subject most capable of the best. Sprat.

Nor would his slaughtered army now have lain, On Afric's sands, disfigured with their wounds, To gorge the wolves and vultures of Numidia.

Addison's Cato.

The disfigurement that travel or sickness has be- stowed upon him, is not thought great by the lady of the isle. Suckling.

Our foot half sunk in hillocks green and soft, Raised by the mole, the miner of the soil. He, not unlike the great ones of mankind, Disfigures earth. Cotuper.

DISFOR'EST, v. a. Dis and forest. To reduce land from the privileges of a forest to the state of common land.

DISFRANCHISE, v. a. > Dis and fran-

DISRANCHISE'MENT, n. s. J chise. To deprive of privileges or immunities.

DISFU'RNISH, v. a. Dis and furnish. To deprive; to unfurnish ; to strip. . (V

My riches are these poor habiliments,

Of which if you should here disfurnish me.

You take the sum and substance that I have.

Shakspeare.

He durst not disfurnish that country either of so great a commander, or of the wonted garrisons.

Knotteis History.

DISGAR'NISH, v. a. Dis and garnish. To strip of ornaments ; to take guns from a fortress. DISGLO'RIFY, v. a. Dis and glorify. To deprive of glory ; treat with indignity.

So Dagon shall be magnified, and God, Besides whom is 110 god, compared with idois, JJuglorified, blasphemed, and bad in scorn.

Milton.

DISGORGE , v. a. Fr. degorger, from gorge the throat. To discharge by the mouth ; vomit • pour out violently.

So, so, thou common dog, didst thou disgorge Thy glutton bosom of the royal Richard ? And now thou wouldst eat thy dead vomit up,

Shakspeare.

The deep-drawing barks do there disgorge Their warlike fraughtage. Jo.

They move along the banks Of four infernal rivers that disgorge Into the burning lake their baleful streams.

Milton.

Countries much annoyed with earthquakes have volcanoes j and these are constantly all in flames, whenever any earthquake happens ; they disgorging that fire which was the cause of the disaster.

Derham.

From the distant shore they loudly laught, To see his heaving breast disgorge the briny draught.

Dryden

DISGRACE', v. a. & n. s.~\ Fr. disgrace. DISGRA'CER, I To bring re-

DISGRACE'FUL, adj. [proach or dis-

DISGRACE'FULLY, adv. [honor upon ; to DISGRACE'FULNESS, I bring to shame,

DISGRA'CIOUS. J or disfavor. Dis-

graceful is, shameful ; dishonorable : disgracious, unpleasing.

We may not so in any one special kind admire her, that we disgrace her in any other ; but let all her ways be according unto their place and degree adored.

Hooker.

Like a dull actor, now I have forgot my part, and I am out Even to a full disgrace. Shakspeare.

I do suspect I have done some offence, That seems disgracious in the city's eye. Id

The senate have cast you forth Disgracefully, to be the common tale Of the whole city. Ben Jonson's Catiline.

Masters must correct their servants with gentleness, prudence, and mercy ; not with upbraiding and dit- graceful language, but with such only as may express and reprove the fault, and amend the person.

Taylor's Rule of Living Holy. And he whose affluence disdained a place, Bribed by a title, makes it a disgrace. Browne. To such bondage he was for so many courses tied by her, whose disgraces to him were graced by her excellence. Sidney.

And is it not a foul disgrace, To lose the boltsprit of thyˆface ? Baynard.

Men's passions will carry them far in misrepresent- ing an opinion which they have a mind to disgrace.

Bwrnet,

I have given good advice to those infamous dis- gracers of the sex and calling. Swift.

To retire behind their chariots, was as little disgrace- ful then, as it is now to alight from one's horse in a battle. Pope.

Grant me, kind heaven, to find some happier place, Where honesty and sense are no disgrace.

Dr. Johnson's Poems.

DISGUISE', v. a., & n. s. ˆ Fr. deguiser ; DISGUI SER. n. s ydis and guise. To

DISGUISE MENT. 3 conceal by an un-

usual guise, or dress : the dress worn in disguise . disguiser, he who wears it.

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How might we disguise him ?

Alas ' I know not : there is no woman's gown big enough for him. Shaksp. Merry Wives of Windsor. We see we've burnt our cheeks ; and mine own

tongue

Splits what it speaks : the wild disguise hath almost Antickt us. Id. Antony and Cleopatra.

Death's a great disyuiser. Shakspeare.

The marquis thought best to dismask his beard, and told him, that he was going covertly to take a secret view of the forwardness of his majesty's fleet : this did somewhat handsomely heal the disguisement.

Wetton.

Disguised he came ; but those his children dear Their parent soon discerned through his disguise.

> Milton.

Under that disguisement I should find opportunity to reveal myself to the owner of my heart. Sidney.

Since I in Arcite cannot Arcite find, The world may search in vain with all their eyes, But never penetrate through this disguise.

Dryden's Fables,

I hope he is grown more disengaged from his intent- ness on his own affairs, which is quite the reverse to you, unless "you are a very dexterous disyuiser.

Swift.

I have just left the right worshipful, and his myr- midons, about a sneaker of five gallons ; the whole magistracy was pretty well disguised before I gave them the slip. Spectator.

They generally act in a disguise themselves, and therefore mistake all outward show and appearances for hypocrisy in others. Addison.

Hence guilty joys, distaste, surmises, False oaths, false tears, deceits, disguises. Pope.

This discovers ourselves to us ; pierces into the in- most recesses of the mind; strips off every disguise; lays open the inward part ; makes a strict scrutiny 'nto the very soul and spirit. Mason.

And is it thus Demetrius meets his friend,

Hid in the mean disguise of Turkish robes ?

Johnson. Irene.

My temper is naturally open ; and it ought, as- suredly, to be without disguise to a manwhom I wish no . onger to look upon as an antagonist, but a friend .

Bp. Watson.

DISGUST, v. a. &n.s.) Fr. degouter; Lat.

DISGUSTFUL, adj. } degmto. To raise aver- sion in the stomach : hence, to cause distaste, or dislike generally. Disgustful is nauseous.

Pleasure is no rule of good ; since, when we fol- low pleasure, merely, we are disgusted, and change from one sort to another ; condemning that at one time, which at another we earnestly approve.

Shaftesbury.

The manner of doing is of more consequence than the thing done, and upon that depends the satisfac- tion or disgust wherewith it is received. Locke.

If a man were disgusted at marriage, he would never recommend it to his friend. Atterbury.

What disgusts me from baring to do with answer- jobbers is, that they have no conscience. Swift.

I have finished the most disgustful task that ever I undertook. Id.

Those unenlarged souls are disgusted with the wonders which the microscope has discovered. Watts.

Thence dark disgust and hatred, winding wiles, ”

Coward deceit, and ruffian violence. Thomson.

Paltry affectation, strained allusions, and disgusting finery, are easily attained by those who chuse to •wear them. Goldsmith.

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*DISH, n. s. & v. a.~\ Saxon, disch; Goth DISH-CLOUT, n. s. {disk; Erse, dysc ; Wei DI’SHING, part. adj. i dysgel ; Teut. tisc/i, fron DISH-WASHER. * Gr. SKTKOG; Lat. discus, (a*

5»(cw,tohurl) around plate of iron, or other metal, hurled in the games. See Discus. A broad vessel used for setting food on a table, or to con- tain liquids : hence the food contained in a dish, and a measure of quantity ; and, as a verb, to place in a dish, or dishes; to serve up. Dish- clout, the useful cloth for cleaning dishes. Dish- ing, of a hollow, dish-like shape. Dish-washer, the name of a bird; rnergus.

And sche bifore warnid of hir modir seidc give thou to me heere the head of Jon Baptist in a dische. Wiclif. Matt. 14.

The earth's face is but a table ; there are set Plants, cattle, men, dishes, for death to eat.

Bonne.

Let 's kill him boldly, but not wrathfully ; Let 's carve him as a dish fit for the gods, Not hew him as a carcass fit for hounds.

Shakspeare. For conspiracy,

I know not how it tastes, though it be dished, For me to try. Id.

A dish-clout of Jaquenetta's he wears next hi8 heart for a favor. Id.

They measure block-tin by the dish, which containeth a gallon. Carew.

Who would rob a hermit of his weeds, His few books, or his beads, or maple dish ; Or do his grey hairs any violence ? Milton.

Many people would, with reason, prefer the griping of an hungry belly, to those dishes which are a feast to others. Locke.

A ladle for our silver diih, Is what I want, is what I wish. Prior.

Send them up to their masters with a dith-clout pinned at their tails. Swift's Directions to the Cook.

For the form of the wheels, some make them more dishing, as they call it, than others ; that is, more con- cave, by setting off the spokes and fellies more out- wards. Mortimer.

'Tis not the meat, but 'tw the appetite,

Makes eating a delight ;

And if I like one dish

More than another, that a pheasant is. Suckling.

The same care and toil that raise a dish of peas at Christmas, would give bread to a whole family dur- ing six months. Hume.

Suppose the ancient luxury of a dish of peacocks' brains were to be revived, how many carcasses would be left to the poor at a cheap rate ! and as to the rout that is made about people who are ruined by extrava- gance, it is no matter to the nation tha some indivi- duals suffer. Johnson.

DISHABILLE', n. s. & adj. Fr. deshabille. Undress; loose, or negligently dressed.

Queens are not to be too negligently dressed or dishabille, Dryden's Dufresnoy.

A woman, who would preserve a lover's respect to her person, will be careful of her appearance before him when in dishabille. Clarissa.

DISHAB'IT, v. a. To throw out of place; to drive from their habitation.

But for our approach those sleeping stones By the compulsion of their ordinance.

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DISHERTT, „.«.-< SeeDlsINHERIT.

By this time from their fixed beds of lime Had been dishabited, and wide havock made.

Shakspeare. King Lear.

DISHAR'MONY, n.s. Dis and harmony. Contrariety to harmony.

DISHEART'EN, v. a. Dis and hearten. To discourage ; to deject ; to terrify ; to depress.

To dishearten with fearful sentences, as though sal- vation could hardly be hoped for, is not so consonant with Christian charity. Hooker.

Be not disJteartened then, nor cloud those looks

That wont be more chearful and serene. Milton.

Yet neither thus disheartened nor dismayed,

The time prepared I waited. Id.

Shortly, some harsh and nnpleasing answer so dis- heartened me, that I resolved to embrace the first op- portunity of my remove.

Bp. Hall's Account of himself .

It is a consideration that might dishearten those who are engaged against the common adversaries, that they promise themselves as much from the folly of enemies, as from the power of their friends.

Stilling fleet.

Men cannot say, that the greatness of an evil and danger is an encouragement to men to run upon it ; and that the greatness of any good and happiness ought in reason to dishearten men from the pursuit of it. Tillotson.

A true Christian fervour is more than the alliances of our potent friends, or even the fears of our dis- heartened enemies. Atterbury.

T, v. a.)

DISHER'ISON, n. s. J

DISHEVEL, v. a. Fr. decheveler. To spread the hair disorderly ; to throw the hair of a woman negligently about her head.

A gentle lady all alone, With garments rent and hair dishevelled, Wringing her hands, and making piteous moan.

Spenser.

A troop of Trojans mixed with these appear, And mourning matrons with dishevelled hair.

Dryden's JEneid.

You this morn beheld his ardent eyes, Saw his arm locked in her dishevelled hair. Smith. Headlong he rushes through the affrighted air With limbs distorted, and disheveled hair, Whirls round and round, the flying crowd alarms, And death receives him in his sable arms ! —

Darwin.

Had you touched a hair

Of those dishevelled locks, I would have thinned Your ranks more than the enemy. Byron.

DISHON'EST, adj.) Dis and honest. DISHON'ESTLY, adv. J Void of probity : void of faith ; faithless ; wicked ; fraudulent.

A wise daughter shall bring an inheritance to her husband ; but she that liveth dishonestly is her father's heaviness. Ecc. xxii. 4.

Mrs. Ford, the honest woman, the modest wife, the virtuous creature, that hath the jealous fool to her hus- band ! I suspect without cause, mistress, do I ? — Heaven be my witness you do, if you suspect me in any dishonesty. Shakspeare.

I protest he had the chain of me, Tho' most dishonestly he doth deny it. Id.

Dishonest with lopped arms the youth appears, Spoiled of his nose, aud shortened of his ears.

Dryden.

He lays it down as a principle, that nght and wrong, honest and dishonest, are defined only by laws, and not by nature. Locke.

Justice then was neither blind to discern, nor lame to execute. It was not subject to be imposed upon by a deluded fancy, nor yet to be bribed by a glozing appetite, for an utile or jucundum to turn the balance to a false or dishonest sentence. South.

Their fortune depends upon their credit, and a stain of open public dishenesty must be to their disadvan- tage. Swift. She saw her sons with purple death expire,

Her sacred domes involved in rolling fire ;

A dreadful series of intestine wars,

Inglorius triumphs, and dishonest scars. Pope.

DISHON'OR, v. a. & n. s.) Dig and ho-

DISHON'ORER. $' nor. To dis-

grace ; to bring shame upon ; to blast with in- famy : a dishonorer is he who treats another with indignity.

He that is honoured in poverty, how much more in riches ! and he that is dishonourable in riches, how much more in poverty ! Ecclus. x. 31.

Let not my jealousies be your dishonours, But mine own safeties. Shakspeare. Macbeth.

It is no vicious blot, murther, or foulness, No unchaste action, or dishonoured step, That hath deprived me of your grace and favour.

Id.

Preaching how meritorious with the gods It would be, to ensnare an irreligious Dishonourer of Dagon. Milton.

Take him for your husband and your lord j Tis no dishonour to confer your grace On one descended from a royal race.

Dryden's Fables.

He was pleased to own Lazarus even in the dif honours of the grave, and vouchsafed him, in that despicable condition, the glorious title of his friend. Boyle's Seraphick Love.

To pay for, personate, and keep in a man's hands a greater estate than he really has, is of all others, the most unpardonable vanity, and must in the end re- duce the man who is guilty of it to dishonour.

Steele.

It is a mighty shame and dishonour to employ ex- :ellent faculties and abundance of wit, to humour and to please men in their vices and follies.

Sir. R. Blackmore.

But what is most dishonourable of all is, for a man at once to discover a great genius and an ungoverned mind. Mason.

DOGE. Would'st thou repeat them ?

Would' st thou repeat them — thou, a Faliero, Harp on the deep dishonour of our house, Dishonoured in its chief — that chief the prince Of Venice, first of cities ? To the sentence.

Byron.

DISHORN', v. a. Dis and horn. To strip of horns.

Well dishorn the spirit, And mock him home to Windsor.

Shakspeare.

DISHU'MOR, n. s. Dis and humor. Pee- vishness ; ill humor ; uneasy state of mind.

Speaking impatiently to servants, or any thing that betrays inattention or dishumour, are also criminal.

Spectator.

DISIMPROVE'MENT, n. s. Dis and im- provement. Reduction from a better to a worse state ; the contrary to melioration ; the contrary to improvement.

The final issue of the matter would be, an utter neglect and ditimprovement of the earth. Norris.

I cannot see how this kingdom is at any height of improvement, while four parts in five of the planta- tions, for thirty years past, have been real ditimprove- ments. Swift.

DISINCAR'CERATE, v. a. Dis and incar- cerate. To set at liberty ; to free from prison.

The arsenical bodies being now coagulated, and kindled into flaming atoms, require dry and warm air, to open the earth for to disincarcerate the same venene bodies. Harvey.

DISINCLI'NE, v. a. 2 Dis and incline.

DISINCLINA'TION, n.s. 5 To produce dislike to; to make disaffected; to alienate affection from. Want of affection or alienation.

They were careful to keep up the fears and appre- hensions in the people of dangers and designs, and to disincline them from any reverence or affection to the queen, whom they begun every day more implacably to hate, and consequently to disoblige. Clarendon.

Disappointment gave him a disinclination to the fair •ex, for whom he does not express all the respect pos- sible. Arbuthnot and Pope.

What are those duties which we read or hear of from the word of God, to which we find ourselves most disinclined? This, in all likelihood, will help us to detect some of our peculiar sins of omission.

Maton.

DISINGENU'ITY, n. s. From disingenuous. Meanness of artifice ; unfairness.

They contract a habit of ill-nature and disingenuity necessary to their affairs, and the temper of those upon whom they are to work. Clarendon.

DISINGEN'UOUS, adj. } Dis and ingenu- DISINGEN'UOUSLY, adv. >ous. Unfair ;mean- DISINGEN'UOUSNESS, n. s. j ly artful ; subtle ; sly; illiberal.

Tis disingenuous to accuse our age Of idleness, who all our powers engage In the same studies, the same course to hold, Nor think our reason for new arts too old.

Denham.

It was a disingenuous way of proceeding, to oppose a judgment of charity concerning their church, to a judgment of reason concerning the nature of actions.

StUlingfleet.

There cannot be any thing so disingenuous and mis- becoming any rational creature, as not to yield to plain reason, and the conviction of clear arguments.

Locke.

I might press them with the unreasonableness, the disingenuousness of embracing a profession to which their own hearts have an inward reluctance.

Government of the Tongue.

DISINHERIT, v. a.~\ All from dit and in- DISINHER'ISON, n. s. fherit. To cut off he- DISHER'IT, v. a. {reditary succession or

DISHER'ISON, n. s.) inheritance. The last two words are only the older

mode of spelling.

He tries to restore to their rightful heritage such good old English words as have been long time out of use, almost duherited. Speiuer.

If he stood upon his own title of the house of Lau caster, inherent in his person, he knew it was a titlo condemned by parliament, and generally prejudged in the common opinion of the realm, that it tended di- rectly to the disinheriaon of the line of York.

Bacon's Henry VII.

The chief minister of the revenue was obliged to prevent, and even oppose, such disinherison.

Clarendon.

In respect of the eflects and evil consequences, the adultery of the woman is worse, as bringing bastardy into a family, and disinherisons or great injuries to the lawful children. Taylor.

Is it then just with us to disinherit The unborn nephews for the father's fault?

Danes.

Unmuffle, ye faint stars ; and thou, fair moon, Stoop thy pale visage through an amber cloud, And disinherit chaos that reigns here In double night of darkness, and of slander. Milton.

Of how fair a portion Adam disinherited his whole posterity by one single prevarication ! South.

• Nor how the Dryads and the woodland train, Disherited, ran howling o'er the plain.

Dryden's Fables.

DISINTER', v. a. From dis and inter. To unbury ; to take as out of the grave.

The philosopher, the saint, or the hero, the wise, the good, or the great man, very often lie hid and concealed in a plebeian, which a proper education might have disinterred. Additon.

DISIN'TERESSED,o$. Disand Fr. interest. Written disinterested generally, and more pro- perly. Without regard to private advantage ; not biassed by

particular views ; impartial. Not that tradition's parts are useless here, When general, old, disinterested, and clear.

Dryden.

DISINTERESSMENT, n. s. Dis and Fr. inter easement. Disregard to private advantage ; disinterest; disinterestedness. This word is merely a Gallicism.

He has managed some of the charges of the king- dom with known ability, and laid them down with en- tire disinterestment. Prior' Postscript.*

DISINTEREST, n. s. ~) -Dis and interest. DISINTERESTED, adj. f What is contrary to DISINTERESTEDLY, adv. Bone's interest, desire, DisiN'TERESTEDNESS,n.s.Jor prosperity; that

which any one is concerned to prevent: indiffer

ence to one's own advantage.

These expressions of selfishness and ditinterestednest

have been used in a very loose and indeterminate

manner. Browne.

They judge it the great disinterest to Rome.

Glanville.

As disinterested as you appear to the world, no man is more" in the power of that prevailing favourite pas- sion than yourself. Swift.

It is usual with persons who mount tie stage for the cure or information of the crowd about them, to make solemn professions of their being wholly disinterested in the pains they take in public good. Steele.

DISINTITLED, part . adj. Dis and intitled Not entitled.

Yet 3. S. and his little convention of four or five brothers of the tradition have clearly ditintitled them- selves to any use of these (the Scriptures, &c.)

Bp. Taylor

DJS

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DISI'NTRICATE, v. a- Dis and intricate. To disentangle.

DISJO'IN, v. a. Fr. disjo'mdre; dis and join. To separate; to part from each other; to dis- unite ; to sunder.

Never shall my harp thy praise Forget, nor from thy father's praise disjoin.

Milton.

Lest different degree Disjoin us, and I then too late renounce Deity for thee, when fate will not permit. Id.

Happier for me, that all our hours assigned Together we had lived ; even not in death disjoined.

Dryden.

Never let us lay down our arms against France, till •we have utterly disjoined her from the Spanish monarchy. Addisnn.

DISJOI'NT, v. a., v., n., & part. Dis and joint. To put out of joint. As a neuter verb, to fall in pieces.

Young Fontinbras,

Holding a weak supposal of our worth, Thinks by our late dear brother's death Our state to be disjoint and out of frame.

Shakspeare. Hamlet.

The constancy of your wit was not wont to bring forth such disjointed speeches. Sidney.

Be all their ligaments at once unbound, And their disjointed bones to powder ground.

Sandys.

Yet what could swords or poison, racks or flame, But mangle and disjoint the brittle frame ? More fatal Henry's words : they murdered Emma's fame. Prior.

I asked a gentleman the other day that is famous for a good carver (at which acquisition he is out of countenance, imagining it may detract from some of his more essential qualifications) to help me to some- thing that

was near him ; but he excused himself, and blushing told me, of all things he could never carve in his life ; though it can be proved upon him that he cuts up, difjoinit, and uncases, with incomparable dex- terity. Spectator. Rotation must disperse in air

All things which on the rapid orb appear ;

And if no power that motion should controul,

It must dttjuint and dissipate the whole. Blackman.

Mouldering arches, and disjointed columns. Irene.

Rocks reared on rocks in huge disjointed piles Form the tall turrets, and the lengthened aisles ; Broad ponderous piers sustain the roof, and wide Branch the vast rainbow ribs from side to side.

Darwin.

DISJU'DICATION, n. s. Lat. dijudicutio. Judgment ; determination : perhaps only mis- taken for dijudication.

The disposition of the organ is of great importance in the dujudications we make of colours.

Boyle on Colours.

DISJUNCT', adj. ˆ Lat. disjunct™. Dis- DISJUNC'TION, n. s. >joined ; separate : dis- DISJUNC'TIVE, adj. j union; incapable of

union.

You may Enjoy your mistress now, from whom you see

There's no disjunction to be made, but by

Your ruin. Sltakspeare. Winter's Tale.

There is a great analogy between the body natural

and politic, in which the ecclesiastical or spiritual

part justly supplies the part of the soul ; and the vio- lent separation of this from the other, does as certainly infer death and dissolution, as the disjunction of the body and the soul in the natural. South.

Such principles, whose atoms are of that disjunc- tive nature, as not to be

united in a sufficient number to make a visible mass. Grew.

*A disjunctive proposition, in logic, is when the part**

are opposed to one another by disjunctive particles.

The truth of disjunctives depends on the necessary and

immediate opposition of the parts. Watts' s Logick.

There are such words as disjunctive conjunctions.

Id.

What he observes of the numbers disjunctively and apart, reason suggests to be applicable to the whole body united. Causes of the Decay of Piety.

DISK, n. s. Lat. discus. A quoit. The face of the sun, or any planet, as it appears to the eye.

The disk of Phoebus, when be climbs on high, Appears at first but as a blood-shot eye. Dryden. The crystal of the eye, which in a fish is a ball, in any land animal is a disk or bowl ; being hereby fitted for the clearer sight of the object. Grew.

It is to be considered, that the rays, which are equally refrangible, do fall upon a circle answering to the sun's disk. Newton.

In areas varied with mosaic art, Some whirl the disk, and some the jav'iin dart.

Poj.e.

Mercury's disk

. Can scarce be caught by philosophic eye, Lost in the near effulgence. Thomson.

Where finds philosophy her eagle eye With which she gazes at yon burning dish C'ndazzled, and detects and counts his spots.

Cowper.

DISKIND'NESS, n. s. Dis and kindness. Want of kindness or benevolence ; injury ; ma- lignity.

This discourse is so far from doing any diskindness to the cause, that it

does it a real service.

Woodward.

DISLIKE', v. a. & n. s. ˆ Dis and like. To DISLIKE'FUL, adj. S disapprove; to re-

gard without affection ; to regard with ill will or disgust.

He then them took, and tempering goodly well, Their contrary dislikes with loved means,

Did place them all in order, and compel To keep themselves within their sundry reigns, Together linked with adamantine chains. Spenser.

I think it best, by an union of manners and con- formity of minds, to bring them to be one people, and to put away the dislikeful conceit of the one and the other. Id. Ireland.

What most he should falUte, seems pleasant to

him ; What like, offensive Shakspeare. King Lear.

Your dislikes, to whom I would be pleasing, Do cloud my joys with danger and with sorrow.

Id.

God's grace, that principle of his new birth, gives him continual dislike to sin.

Hammond's Practical Catechism. True love to the person cannot long agree with dislike of the religion. Bp. Hall's Contemplations.

This said Aletes, and a murmur rose That shewed dislike among the Christian peers.

Fairfax.

Whosoever dislikes the digressions, or grows weaiy of them, may throw them away. Temple,.

Sorrow would have been as silent as thought, as severe as philosophy. It would have rested in in-

The jealous man is not angry if you dislike another ; but if you find those faults which are in his own cha- racter, you discover not only your dislike of another, but of himself. Additon.

There is a point, which whoever can touch, will never fail of pleasing a majority, so great that the didikers will be forced to fall in with the herd.

Swift.

DISLIK'EN, v. a. Dis and liken. To make unlike. Unusual.

Muffle your face,

Dismantle you ; and, as you can, duliken The truth of your own seeming.

Shakspeare. Winter's Tale.

DISLIKE'NESS, n. s. Dis and likeness. Dissimilitude ; not resemblance ; unlikeness.

That which is not designed to represent any thing but itself, can never be capable of a wrong represen- tation, nor mislead us from the true apprehension of any thing by its disliheness to it ; and such, excepting those of substances, are all our own complex ideas.

Locke.

DISLIMB', v. a. Dis and limb. To dila- niate ; to tear limb from limb.

DISLIMN', v. a. Dis and limn. To unpaint ; to strike out of a picture.

That which is now a horse, even with a thought The rack dislimns, and makes it indistinct As water is in water.

Shakspeare. Antony and Cleopatra.

DI'SLOCATE, v. a. i Lat. dis and locus. To DISLOCA'TION, n. s. $ put out of the proper place : a luxation.

Were't my fitness

To let these hands obey my boiling blood, They 're apt enough to dislocate and tear Thy flesh and bones. Shakspeare. King Lear. The posture of rocks, often leaning or prostrate, shews that they had some dislocation from their

natu- ral site. Burnet.

It mighjt go awry either within or without the upper, as often as it is forcibly pulled to it, and so cause a dislocation, or a strain. Grew's Musaeum.

After some time the strata on all sides of the globe were dislocated, and their situation varied, being elevated in some places, and depressed in others.

Woodward.

She neither broke nor dislocated any bones ; but received such a contusion below the hip, as crippled her completely. Cowper. Private Correspondence.

DISLODGE', v. a. & n. Dis and lodge. To remove from a place ; to go away.

The ladies have prevailed,

The Volscians are dislodged, and Marcus gone.

Shakspeare.

Soon as midnight brought on the dusky hour, Friendliest to sleep, and silence, he resolved With all his legions to dislodge. Milton.

These senses lost, behold a new defeat, The soul dislodging from another seat.

Dryden's Juvenal.

The shell-fish which are resident in the depths live and die there, and are never dislodged or removed by storms, nor cast upon the shores ; which the litto- rales usually are Woodward.

DISLOY'AL, adj. } Fr. dcsloyal, dis and DiSLOY'ALLY,arfu. >loyal. Not true to alle- DISLOY'ALTY, n. s. J giance ; faithless ; false to a sovereign ; disobedient.

When that tumultuous rage and fearfull deene Of northerne rebels ye did pacify, And their disloiall powere defaced clene, The record of enduring memory. Spenser. Sonneti. The lady is disloyal.

Disloyal I The word is too good to paint out

her wickedness. Shakspeare.

There shall appear such seeming truths of Hero's disloyalty, that jealousy shall be called assurance.

Id.

Let the truth of that religion I profess be repre- sented to judgment, not in the disguises of levity schism, heresy, novelty, and disloyalty.

King Charles. Foul distrust and breach Disloyal ; on the part of man, revolt And disobedience. Milton.

Disloyal town ! Speak, didst not thou

Forsake thy faith, and break thy nuptial vow ?

Dryden.

DIS'MAL, adj. \ Lat dies malus, an evil DIS'MALLY, adv. > day. Sorrowful; dire; DIS'MAI.NESS,?!. s. 3 horrid; melancholy; un comfortable ; unhappy ; dark.

The thane of Cawder 'gan a dismal conflict.

Shakspeare. He hears

On all sides from innumerable tongues A dismal universal hiss. Milton.

Nor yet in horrid shade or dismal den, Nor nocent yet ; but on the grassy herb Fearless, unfeared, he slept. Id.

The dismal situation waste and wild, A dungeon horrible ! Id.

Such a variety of dismal accidents must have broken the spirits of any man. Clarendon.

On the one hand set the most glittering temptations to discord, and on the other view the dismal effects of jt. ' Decay of Piety.

Dreadful gleams, Dismal screams. Pope.

DISMAL, GREAT, or DISMAL SWAMP, a large swamp, or bog, extending from north to south nearly thirty miles, and from east to west, at a medium, about ten miles, partly in Virginia and partly in North Carolina. No less than five na- vigable rivers, besides creeks, rise out of it ; two of which run into Virginia, viz. the south branch of Elizabeth, and the south branch of Nansemond river, and three into North Carolina, namely, North River, North West River, and Perquimons. All these hide their heads,

properly speaking, in the Dismal, there being no signs of them above ground. There must, for this reason, be plenti ful subterraneous stores of water here, or else the soil is so replete with this element, poured down from the high lands that surround it, that it can abundantly afford these supplies. • This is, per- haps, most probable, as the ground of the swamp is a mere quagmire, trembling under the feet of those who walk upon it, and every footstep being instantly filled with water. The skirts of the swamp, towards the east, are overgrowa with reeds, ten or twelve feet high, intersperses, with strong bamboo briars. Among these grow

here and there a cypress or white cedar, com- monly rnistaken for the juniper. Towards the south end of it is a large tract of reeds, which, being constantly green and waving in the wind, is called the Green Sea. In many parts, espe- cially on the borders, grows an ever-green shrub, very plentifully, called the gall-bush. It bears a berry which dies a black color like the gall of an oak, whence its name. Near the middle of this swamp the trees grow much thicker, both cypress and cedar, and, being always green and loaded with very large tops, are much exposed to the wind and easily blown down. Neither beast, bird, insect, nor reptile, approach the heart of this horrible desert ; perhaps deterred by the everlasting shade, occasioned by the thick shrubs and bushes, which the sun can never pe- netrate to warm the earth : nor indeed, on ac- count of the noisome exhalations, do any birds fly orer it. These noxious vapors infect the air all around. On the west border is a pine swamp, above a mile in breadth, great part of which is covered with water, knee-deep ; the bottom, how- ever, is firm, and the pines grow very tall. With all these disadvantages Dismal Swamp is, in many places, pleasing to the eye, though disa- greeable to the other senses. It was judged im- passable, till the line, dividing Virginia from North Carolina, was carried through it, in lat. 36° 28′ N., in 1728, by order of king George II. Although this was undertaken in a very dry season, the men who were employed were ten whole days before they could accomplish their work. In the middle is a lake about seven miles long, called Drummond's Pond, whose waters run south into Pasquotank River, which falls into Albemarle Sound; and on the north into Elizabeth and Nansemond Rivers, which fall into James River. A navigable canal has, with immense labor, been cut through this swamp, connecting the waters of the Pasquo- tank, which fall into Albemarle Sound, and those of the Elizabeth, which is connected by means of James River with Chesapeak Bay. As the Dismal Swamp lies so near Norfolk, where there is a constant demand for shingles,

staves, &c., for exportation ; and as the best of these ar- ticles are made from the trees growing \ipon the swamp, it is on this account a valuable pro- perty. It chiefly belongs to two companies, the Virginia Company, who possess 100,000 acres of it, and the North Carolina Company, who possess

40,000.

DISMANTLE, v. a. Dis and mantle. To deprive of a dress ; to strip ; to denude.

This is most strange !

That she, who even but now was your best object, Dearest and best, should in this trice of time Commit a thing so monstrous, to dismantle So many folds of favour. Shakspeare. King Leaf.

It is not sufficient to possess our own fort, without the dismantling and demolishing of our enemies.

Hakewill.

His eyeballs, rooted out, are thrown to ground j His nose dismantled in his mouth is found ; His Jaws, checks, front, one undistinguished wound.

Dryden.

He that makes his prince despised and undervalued . and beats him out of his subjects' hearts, may easily

strip him of his other garrisons , having already dis- possessed him of his strongest, by dismantling him of his honour, and seizing his reputation. South.

Sees dancing slaves insult his martial plains Parts with chill stream the dim religious bower Time-mouldered bastion, and dismantled tower.

Darwin.

DISMA'SK, v. a. Dis and mask. To divest of a mask ; to uncover from concealment.

Fair ladies masked are roses in the bud, Or angels veiled in clouds ; are roses blown, Dismaihrd, their damask sweet commixture shewn.

Shakspeare,

The marquis thought best to dismask his beard ; and told him that he was

going covertly. Wottan.

DISMAY', v. a. & n. s. 3 Sp. desmayer; old Fr. DISMAY'EDNESS, n. s. $esmayer. Minsheu after Sebastian, a Spanish etymologist, says, fancifully enough, ' from the moneth of Maye, for in that moneth the flowers of the field hang their heads and fade away :' to discourage ; divert of self-possession ; terribly.

He will not fail thee ; fear not, neither be dismayed.

Deut.

Nought could she say,

But suddeine catching hold, did her dismay With quaking hands, and other signes of feare.

Spemer, Faerie Queene. Their mighty strokes their haberjeons dismayed.

Spenser.

Enemies would not be so troublesome to the wes- tern coasts, nor that country itself would be so often dismayed with alarms as they have of late years been.

Raleigh's Essays. All sate mute,

Pondering the danger with deep thoughts ; and each In others countenance read his own dismay.

Milton.

The valiantest feels inward dismayedness and yet the fearfullest is ashamed fully to shew it. Sidney.

Nothing can make him remiss in the practice of his duty ; no prospect of interest can allure him, no fear of danger dismay him. Atterbury.

DI'SME, n. s. Fr. A tenth ; the tenth part ; tythe.

Since the first sword was drawn about this question, Every tithe soul 'mongst many thousand dismes, Hath been as dear as Helen.

Shakspeare. Troilus and Cressida.

The pope began to exercise his new rapines by a compliance with king Edward, in granting him two years disme from the clergy. Aylijfe's

Parergon.

DISMEM'BER, v. a. Dis and member. To divide member from member ; to d ilacerate ; to cut in pieces.

Him booteth not resist, nor succour call, His bleeding hart is in the venger's hand,

Who streight him rent in thousand pieces small, And quite dismembred hath.

Spenser. Faerie Queene. I am with both, each army hath a hand; And in their rage, I having hold of both, They whirl asunder and dismember me.

Shakspeare.

A state can never arrive to its period in a more deplorable crisis, than whenˆsome prince lies hovering, like a vulture, to devour or dismember its dying car- cass. Swift.

Fowls obscene ditmembered his remains, And dogs had torn him on the naked plains.

Pope's Odyucy.

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Those who contemplate only the fragments or pieces of science dispersed in short unconnected dis- courses, can never survey an entire body of truth, but must always view it as deformed and dismembered.

Watts.

DISMISS', v. a. 1 Lat. dimissus. To send DISMIS'SION, n. s. J away; despatch.

He dismissed the assembly. Acts, xix. 41.

We commit thee thither, Until his army be dismissed from him.

Shakspeare. Henry IV.

You must not stay here longer ; your dismission Is come from Caesar. Id.

Ant. and Cleop.

Not only thou degrad'st them, or remit'st To life obscure, which were a fair dismission; But throw'st them lower than thou didst exalt them high. Milton's Agonistes.

If our young lulus be no more, Dismiss our navy from your friendly shore.

Dryden's Virgil.

Dismiss, as soon as may be, all angry and wrathful

thoughts. These will but canker and corrode the

mind, and dispose it to the worst temper in the

world. Mason.

Puff not your cheeks, fond youths! dismiss the

flute!

Hushed be the harp, the soft guitar be mute : Such signs of passion in contempt I hold : — But there's substantial proof of love — in gold.

Sheridan.

DISMISSION OF A BILL, in chancery. If the plaintiff does not attend on the day fixed for the hearing, his bill is dismissed with costs. It may be also dismissed for want of prosecution, which is in the nature of a nonsuit at law, if he suffers three terms to elapse without moving forwards in the cause.

DISMOR/TGAGE, v. a. Dis and mortgage. To redeem from mortgage.

He dismortgaged the crown demesnes, and left be- hind a mass of gold. Howel's Vocal Forest.

DISMOUNT', v.a. & v. n. Fr. demonter. To throw off a horse, or from an elevation : to alight from a horse ; to descend.

The champion stoul

Eftsoones dismounted from his courser brave, And to the dwarfe awhile his needless spere he gave.

Spenser. Faerie Queene. From this flying steed unreined, as once

Bellerophon, though from a lower clime, Dismounted, on the Aleian field I fall. Milton. The Turks' artillery, planted against that tower, was by the Christian cannoneers dismounted with shot from the tower, and many of the gunners slain.

Knolles.

When he came within sight of that prodigious army at Agincourt, he ordered all his cavalry to dis- mount, and implore upon their knees a blessing.

Addison's Freeholder.

DENATURALIZE, v. a. Dis and natural- ize. To alienate ; to make alien ; to deprive of the privileges of birth.

DISNATURED, adj. Dis and nature. Un- natural ; wanting natural tenderness ; devoid of natural affection. Unusual.

If she must teem,

Create her child of spleen, that it may live, And be a thwart disnatured torment to her.

peare. King Lear .

DISNEY (John), an English divine and ma- gistrate, born at Lincoln, in 1677. He received the early part of his education at the grammar school in his native city, after which, his father being a dissenter, he was sent to an academy of that persuasion. From this he removed to the Middle Temple, where he studied the law, though he never followed it as a profession ; but when he retired to his paternal estate, he distin- guished himself greatly as an active magistrate, particularly in the laudable but unpopular mea- sures he took for the suppression of vice and im- morality, for which he repeatedly received the thanks of the judges on the circuits. When about forty-two years of age he took orders in the church, and was presented to the vicarage of Croft, and the rectory of Kirby-Super-Baine, in Lincolnshire. In 1722 he was preferred to the living of St. Mary, in Nottingham, where he died in 1730. He published, 1. Two Essays upon the Execution of the Laws against Immo- rality arid Profaneness, 8vo. 2. Primitiae Sacrse, the Reflections of a devout Solitude, 8vo. 3. Flora, prefixed to a Translation of Rapin's Poem on Gardens. 4. Remarks upon a Ser- mon preached by Dr. Sacheverell. 5. A View of ancient Laws against Immorality and Profane- ness.

DISOBEY', v. a. -\ Dis and obey. To

DISOBE'DIENCE, n.s. (break commands, or

DISOBE'DIENT, adj. £ transgress prohibiti-

DISOBE'DIENTLY, adv. J ons ; move out of order, or cease to follow a previous impulse.

The man of God was disobedient unto the word of the Lord. 1 Kings xiii. 26.

The offence is holy that she hath committed j

And this deceit loses the name of craft,

Of disobedience, or unduteous title.

Shakspeare.

Disobedient children, if preserved from the gallows, are reserved for the rack, to be tortured by their own posterity. One complaining, that never father had so undutiful a child as he had ; Yes, said his sonne, with less grace than truth, my grandfather had.

Fuller.

Of man's first disobedience, and the fruit Of that forbidden tree, sing heavenly muse.

Milton.

Murder, adultery, or disobedience to parents, have a general notion antecedently to laws. Stillingfleet.

She absolutely bade him, and he durst not know how to disobey. Sidney.

He's loth to disobey the god's command, Not willing to forsake this pleasant land.

Denham.

This disobedience of the moon will prove The sun's bright orb does not the planets move.

Blackmore.

This disobedience of the fibres of age to their usual stimuli, Ijas generally been ascribed to repetition or habit, as those who live near a large clock, or

a mill, or a waterfall, soon cease to attend to the perpetual noise of it in the day, and sleep during the night un- disturbed. Darwin.

DISOBLIGE', v. a. DISOBLI'GING, part. adj. DISOBLI'GINGLV, adv. DISOBLIGINGNESS, n. s. DISOBLIGA'TION. low this sense.

Dis and oblige. 'To offend; dis- > gust ; give slight offence to. All ' the derivatives fol-

Asldey had been removed from that charge, and •was thereby so much disobliged, that he quitted the king's party. Clarendon.

There can be no malice, and consequently no crime or disobligation. L' Estrange.

Those, though in highest place, who slight and disoblige their friends, shall infallibly come to know the value of them, by having none when they shall most need them. South.

If a woman suffers her lover to see she is loth to disoblige him, let her beware of an encroacher.

Clarissa.

My plan has given offence to some gentlemen, •whom it would not be very safe to disoblige.

Addison's Gitardian.

We love and esteem our clergy, and are apt to lay some weight upon their opinion, and would not wil- lingly disoblige them.

Swift concerning the Sacramental Test.

Peremptoriness can befit no form of understand- ing : it renders wise men disobliging and troublesome, and fools ridiculous and contemptible.

Government of the Tongue.

DISORB'ED, adj. Dis and orb. Thrown out of the proper orbit.

Fly like chidden Mercury from Jove, Or like a star disorbed.

Shahspeare. Troilut and Cressida.

DISORDER, w.o.& w.s."\ Fr. desordrc. DISORDERED, adj. (ˆ Dis and order. To

DISOR'DEREDNESS, n, s. {disturb; throw DISORDERLY, adv. J out of arrange-

ment ; ruffle ; discompose.

We behaved not ourselves disorderly among you.

2 Thest.

By that disorderednes$ of the soldiers, a great ad- vantage was offered unio the enemy. Knolles.

Here do you keep a hundred knights and squires Men so disordered, so debauched and bold, That this our court, infected with their manners, Shews like a riotous inn. Shakspeare. King Lear.

Naked savages fighting disorderly with stones, by appointment of their commanders, may truly and absolutely be said to war. Raleigh.

He is one that seldome takes care for old age, be- cause ill diet and disorder, together with a consump- tion, or some worse disease, taken up in his full ca- reer, have onely chalked out his catastrophe but to a colon. Micrologia, 1629.

Eve,

Not so repulsed, with tears that ceased not flowing, And tresses all disordered, at his feet Fell humble. Milton.

' .Those obsolete laws of Henry I. were but disorderly, confused, and general things ; rather cases and shells of administration than institutions. Hale.

Let him be stript, and disordered ; I would fain see him walk in querpo, that the world may behold the inside of a friar. Dryden's Span. Friar.

Pleasure and pain are only different constitutions of the mind, sometimes occasioned by disorder in the body, or sometimes by thoughts in the mind.

Locke,

A disorderly multitude contending with the body of the legislature, is like a man in a fit under the con- duct of one in the fulness of his health and strength.

Addison.

From vulgar bounds with brave disorder part, And snatch a grace beyond the reach of art. Pope.

The incursions of the Goths, and other barbarous nations, disordered the affairs of the Roman empire.

Arbuthnot.

Many a brave fellow, who has put his enemy to flight in the field, has been in the utmost disorder upon making a speech before a body of his friends at home. Hughes.

*DISORD'INATE, adj. * Dis and ordinate. DISORD'INATELY, adv. 5 Not living by rules of virtue ; inordinate.*

These not disordinate, yet causeless suffer The punishment of dissolute days.

Milton. Agonistes.

DISORIENTATED, adj. Dis and orient. Turned from the east; turned from the right direction ; thrown out of the proper place.

Andrew Marvel uses the word disoccideutated in- stead of disorientated : ' Geneva had disoccidentated our geographer.' Dr. A. Rees.

DISO'WN, v. a. Dis and own. To deny; not to allow ; renounce.

Then they, who brother's better claim disown, Expel their parents, and usurp the throne.

Dryden's JEneid.

When an author has publickly disowned a spurious piece, they have disputed his name with him.

Swift.

DISORGANIZE, t7. a.) Fr. desorganiser, DISORGANIZATION, n. s. $ dis and organize. To derange a system in its parts ; subversion of system or order. A modern word altogether.

These disorganizing principles spread rapidly, and, had not the contagion been interrupted by the war with France, the consequences would have been far more serious to England. Thomas.

DISPA'ND, v. a. { Lat. dispando. To dis- DISPA'NSION, n. s. J play ; spread abroad ; the act of displaying or spreading.

DISPAR'AGE, v. a. ˆ Ital. dispareggiare, DISPAR'AGER, n. s. > from Lat. dispar, un- DISPAR'AGEMENT. j fit, and agere, to do; Minsheu. To match or compare for the worse ; to depreciate by comparison ; to treat contemp- tuously.

Gentle knight,

That doth against the dead his hand uprear, His honour stains with rancour and despight, And great disparagement makes to his former might.

Spenser.

Yet doe not sdeigne to let thy name be writt In this base poem, for thee far unfitt ; Nought is thy worth disparaged thereby.

Id. Sonnets.

She was much affectionate to her own kindred, which did stir great envy in the lords of the king's side, who counted her blood a disparagement to be mingled with the king's. Bacon.

In a commonwealth, much disparagement is occa- sioned, when able spirits, attracted by a familiarity, are inflamed with faction. Wotton.

It is no disparagement for greater persons to begin treaties of peace. Bp. Hall's Contemplations.

Ahaz, his sottish conqueror, he drew God's altar to disparage and displace, For one of Syrian mode.

Milton's Paradise Lost. They wrll defy

That which they love most tenderly ; Quarrel with minced pies, and disparage Their best and dearest friend, plum-ponidge.

Hudibrat.

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Tis no disparagement to philosophy, that it cannot deify us. Glanville.

It is a hard and nice subject for a man to speak of himself; it grates his own heart to say any thing of disparagement, and the reader's ears to hear any thing of praise from him. Cowley.

You wrongfully do require Mopsa to so great a disparagement, as to wed her father's servant.

Sidney.

The play was never intended for the stage ; nor, without disparagement to the author, could have suc- ceeded. ,. Dryden.

Reason is a weak, diminutive light, compared to re- velation, but it ought to be no disparagement to a star that it is not a sun. South.

His religion sat easily, naturally, and gracefully upon him, without any of those forbidding appearances which sometimes disparage the actions of men sin- cerely pious. Atterbury,

DISPA'RATES, n. s. > From Lat. disparata. DISPA'RITY, n. s.] Things so unlike that they cannot be compared with each other ; ine- quality.

Between Klihu and the rest of Job's familiars, the greatest disparity was but in years. Hooker.

Among unequal, what society Can sort, what harmony or true delight? Which must be mutual, in proportion due Given and received ; but in disparity, The one intense, the other still remiss, Cannot well suit with either, but soon prove Tedious alike. Milton.*

There was as great a disparity between the practical dictates of the understanding, then and now, as there is between empire and advice, counsel and command.

South.

Men ought not to associate and join themselves to- gether in the same office, under a disparity of condi- tion. Ayliffe's Par ergon.

DISPARK', v. a. Dis and park. To throw open a park. To set at large; to release from enclosure.

You have fed upon my signiories, Disparked my parks, and felled my forest

woods.

Shakspeare. They were supposed By narrow wits to be enclosed ; Till his free muse threw down the pale, And did at once dispark them all. . Waller.

DISPART', v . a. Dis and part. Fr. depar- tir ; Lat. dispertior. To divide in two ; to sepa- rate ; to break ; to burst ; to rive.

Hard is the doubt, and difficult to deem, When all three kinds of love together meet, And do ditpart the heart with power extreme, Whether shall weigh the balance down.

Spenser.

The rest to several places Disparted, and between spun out the air.

Milton.

Disparted Britain mourned their doubtful sway, And dreaded both, when neither would obey.

Prior.

The pilgrim oft,

At dead of night, mid his oraison hears Aghast the voice of Time, disparting towers, Tumbling all precipitate down-dashed, Rattling around, loud thunderin to the moon.

Dyer. I

DISPART, in gunnery, is the mark set upon the muzzle ring of a piece of ordnance, so that a sight-line, taken upon the top of the base ring against the touch-hole, by the mark set on or near the muzzle, may be parallel to the axis of the concave cylinder. The common way of doing this is, to take the two diameters of the base-ring, and of the place where the dispart is to stand, and divide the difference between them into two equal parts, one of which will be the length of the dispart, which is set on the gun with wax or pitch, or fastened theie with a piece of twine or marline. By means of an in- strument it may be done with great nicety.

DISPA'SSION, n.s. j From dis and Pas-

DISPA'SSIONATE, adj. S-sion. Freedom from

DISPA'SSIONATED, adj. j mental perturbation ; exemption from passion.

Wise and dispassionate men thought he had been proceeded with very justly. Clarendon.

What is called by the Stoicks apathy, or dispassion, is called by the Scepticks indisturbance, by the Moli- nists quietism, by common men peace of conscience.

Temple.

You have, as all dispassinnated men may judge, fulfilled the poet's definition of madness.

Dr. Maine.

DISPEL', v. a. Lat. dispello. To drive by scattering; to dissipate.

If the night

Have gathered aught of evil, or concealed, Disperse it, as now light dispels the dark.

Milton.

When the spirit brings light unto our minds, it dis- pels darkness ; we see it, as we do that of the sun at noon, and need not the twilight of reason to shew it.

Locke. Fr. dispence. Expense;

DISPENCE', n. s. cost; charge; profusion.

It was a vault ybuilt for great dispence, With many ranges reared along the wall,

And one great chimney, whose long funnel thence The smoke forth threw. Faerie Queene.

DISPEND', v. a. Lat. dispendo. To spend; to consume : to expend.

Of their commodities they were now scarce able to dispend the third part. Spenser't State of Ireland.

DISPENSE', v. a. & n. s.~\ Fr. dispenser ;

DISPENS'ARY, n.s. /Span, despensar ;

DISPENSATION, > Ital. and Lat. dis-

DISPENSA'TOR, ipewsare, from dis,

DISPEN'SATORY. J diversely, and

pendo, to weigh out money. To deal out ; dis- tribute by rule or measure : hence to excuse, or suspend compliance with a rule ; and to set free from obligation. A dispensary is, strictly, a place where medicines are weighed or dealt out; a dispensatory a book prescribing them ; dispensa- tion, a rule of dealing between God and man ; distribution : hence, permission to do what may have been forbidden.

So a man gesse us as mynystri of Crist, and dis~ penderis of the mynysteries of God. Now it is sought among the dispenderit that a manbefoundun trwve.*

Wiclif. i. Cor. 4. One loving howre

For many years of sorrow can dispence.

Spenser. Faerie Queene.

Hast thou not sworn allegiance unto me ? Canst thou dispense with heaven for such an oath ?

Shakspeare.

How few kingdoms are there, wherein, by dispensing with oaths, absolving subjects from allegiance, and cursing, or threatening to curse, as long as their curses were regarded, the popes have not wrought innumer- able mischiefs. Raleiyh.

As her majesty hath made them dispentaiors of her favour towards her people, so it behoveth them to shew themselves equal distributers of the. same. Bacon.

The description of the ointment is found in the chy- mical dispensatory. Id. Natural History.

God delights in the ministries of his own choice, and the methods of grace, in the economy of heaven, and the dispensations of eternal happiness.

Taylor't Worthy Communicant. Royal bounties

Are great and gracious, while they are dispensed With moderation. Mansinyer.

Those now that were dispensed The burden of many ages, on me light At once by my foreknowledge. Milton. '

Then reliques, beads, Indulgences, dispenses, pardons, bulls, The sport of winds. Id.

At length the muses stand restored again, While you dispense the laws, and guide the state.

Dry den.

To thee the loved dispensary I resign. Garth. Neither are God's methods or intentions different in his dispensations to each private man. Rogers.

Do thou, my soul, the destined period wait, When God shall solve the dark decrees of fate ; His now unequal dispensations clear, And make all wise and beautiful appear. Tickell. Our materia medica is large enough ; and, to look into our dispensatories, one would think, no disease in- curable. Baker.

A dispensation was obtained to enable Dr. Barrow to marry. Ward.

I could not dispense with myself from making a voyage to Caprea. Addiion on Italy.

Those to whom Christ has committed the dispens- ing of his gospel.. Decay of Piety.

This perpetual circulation is constantly promoted by a dispensation of water promiscuously and indiffer- ently to all parts of the earth.

Woodward's Natural History.

Those who stand before earthly princes, who are the dispensers of their favours, and conveyors of their will to others, challenge high honours. Atterbury.

His peculiar doctrines are not like any thing of human contrivance. ' Never man spake like this man.' One of the first names given to that dispensa- tion of things which he came to introduce, was ' the kingdom,' or the reign, ' of heaven.' Beattie.

DISPENSARY, a kind of charitable institu- tion, of late years very prevalent in Britain. They are designated the General Dispensary, the Universal Dispensary, the Dispensary of par- ticular counties or districts, &c. They are sup- ported by voluntary subscriptions, having each one or more physicians and surgeons, whose business is to attend at stated times, to pre- scribe for the poor ; and, if necessary, to visit them at their own habitations. It is in this latter respect, that the patients of a dispensary differ from those called out-patients at an hospital. The poor are supplied gratis with medicine, and

many of these institutions also afford gratuitous assistance to lying-in women. Formerly there were three dispensaries established in London, for selling medicines to the poor at prime cost, under the direction of the College of Physicians. IniChina the medicines are not dispensed gratis, but money is given to the poor to purchase them. The Chinese have a stone, ten cubits high, erected in the public squares of their cities : on this stone are engraved the names of all sorts of medicines, with the price of each; and when the poor stand in need of any relief from physic, they go to the treasury, where they receive the price each medicine is rated at.

DISPENSATIONS are most generally dispensed by the pope, who claims the office jure divino, and has extended it to every thing. See IN- DULGENCES. His power to grant a dispensation for any thing contrary to the divine law, or the law of nature, has, however, been denied by the more moderate of the Romanists, who confine him to what is contrary to positive laws, or to things relating to facts, marriages, holding se- veral benefices, &c. ; and who limit him even in these things. The archbishop of Canterbury has a power, by statute, of dispensing in any cause wherein dispensations were formerly granted by the see of Rome, as well to the king as his subjects ; and, during the vacancy of the archbishop's see, the guardian of the spiritu- alities may grant dispensations. Every bishop of common right has the power of instituting to benefices, and of dispensing in common cases, &c. A dispensation of the king makes a thing prohibited, lawful to be done by the persoiuthat has it, though a thing evil in itself will not admit of a dispensation. And where the subject has an immediate interest in an act of parliament, the king cannot dispense with it ; but may, if the suit be the king's own, only for the breach of a penal law that is not to the damage of a third person. There is a dispensation by non obstante, which is where a statute tends to re- strain some prerogative incident to the person of the king, as the right of pardoning, or command- ing the service of the subjects for the benefit of the public, &c., each of which prerogatives is inseparable from the king, and therefore, by a clause non obstante, such statute may be dis- pensed with.

DISPE'OPLE, v. a. i Dis and people. To DISPE'OPLER, n. s. $ depopulate ;

to empty of people : he who depopulates, or wastes.

The Irish, banished into the mountains, where they lived only upon white meats, seeing their lands so dispeopled and weakened, came down into the plains. Spenser.

Conflagrations and great droughts, do not merely dispeople, but destroy. Bacon.

His heart exalts him in the harm Already done, to have dispeopled heaven. Milton.

Nor drain I ponds the golden carp to take ; Nor trowle for pikes, dispeoplers of the lake. Gay.

Kings, furious and severe,

Who claimed the skies, dispeopled air and floods, The lonely lords of empty wilds and woods. Pope.

DISPE'RGE, v. a. Lat. dispergo. To sprin- kle ; to scatter.

DISPERSION.

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DISPERSE', v. a. -v Fr. disperser, from Lat. DISPERS'EDLY, adv. I dispergere, dispersus ; DISPERSE'DNESS, n. s. VDISPERSE'R, i spargo ; Gr.

DISPERS'ION. f to sprinkle. To scat-

ter ; dissipate into parts ; distribute.

And I scattered them among the heathen, and they •were dispersed through the countries. Ezek. xxxvi. 19.

The exquisite wits of some few, peradventure, are able, dispersedly here and there, to find now a word, and then a sentence, which may be more probably suspected, than easily cleared of errour. Hooker. Soldiers, ditperse yourselves. Shakspeare.

Noah began from thence his dispersion. Raleigh. Being a king that loved wealth, he could not endure to have trade sick, nor any obstruction to continue in the gate vein which disperteth that blood. Bacon.

Dispersed love grows weak, -and fewness of objects useth to unite affection. Bp. Hall's Contemplationi.

If the night

Have gathered aught of evil, or concealed, Disperse it, as now light dispels the dark. Milton. The torrid parts of Africk are by Piso resembled to a libbard's skin, the distance of whose spots represent the dispersedness of habitations or towns in Africk.

Brerewood on Languages.

Those who are pleased with defamatory libels, so far as to approve the authors and dispersert of them, are as guilty as if they had composed them.

Spectator.

After so many dispersions, and so many divisions, two or three of us may yet be gathered together.

Pope.

Those minerals are either found in grains, disper- sedly intermixed with the corpuscles of earth or sand, or else amassed into balls or nodules. Woodward.

They have built

More Babels without new dispersion, than The stammering young ones of the flood's dull ooze, Who failed and fled each other. Byron.

DISPERSION OF INFLAMMATION, in medicine and surgery, is the removing the inflammation, and restoring the inflamed part to its natural state

The DISPERSION OF MANKIND, in the early history of the world, was occasioned by the con- fusion of tongues, and took place in consequence of the overthrow of Babel at the birth of Peleg ; whence he derived his name. It appears by the account given of his ancestors, Gen. xi. 10 — 16, to have happened in the 101st. year after the flood, according to the Hebrew chronology, and by the Samaritan computation in the 401st. How- ever, various difficulties have been suggested by chronologers concerning the true era of this event. Sir John Marsham and others, to reconcile the Hebrew and Egyptian chronologies, maintain a dispersion of mankind before the birth of Peleg. Others, unable to find numbers sufficient for the plantations of colonies in the space of 101 years, according to the Hebrew computation, fix the dispersion towards the end of Peleg's life, thus following the computation of the Jews. Petavius assigns the 153d year after the flood : Cumberland the 180th ; and Usher, though he generally refers it

to the time of Peleg's birth, in one place assigns the 131st after the flood for this event. Mr. Shuck- ford supposes the dispersion to have been gradual, and to have commenced with the separation of

some companies at the birth of Peleg, and to have been completed thirty-one years after. Accord- ing to the calculation of Petavius, the number of inhabitants on the .earth at the birth of Peleg amounted to 32,768. Cumberland makes them 30,000. ˆMr. Mede states them at 7,000 men, besides women and children : and Mr. Whiston, who supposes that mankind now double them- selves in 400 years, and that they doubled them- selves, between the deluge and the time of David, in sixty years at a medium, when their lives were six or seven times as long as they have been since, by his computation, produces about 2,389 ; a number much too inconsiderable for the pur- poses of separating and forming distinct nations. This difficulty induced Mr. Whiston to reject the Hebrew, and to adopt the Samaritan chronology, as many others have done ; which, by allowing an interval of 401 years between the flood and the birth of Peleg, furnishes, by the last mentioned mode of computation, more than 240,000 per- sons. As to the manner of the dispersion of the posterity of Noah from the plain of Shinar, the sacred historian informs us that they were divided in their lands, every one according to his tongue, according to his family, and according to his nation. Gen. x. 5. 20. 31 : and thus, as Mr. Mede observes, they were ranged according to their nations, and every nation by its families ; so that each nation had a separate lot, and each family in every nation. The following abstract will serve to give a general idea of their respec- tive settlements : — Japhet, Noah's eldest son, had seven sons, viz. Corner, whose descendants in- habited those parts of Asia which lie upon the JEgean Sea and Hellespont northward, contain- ing Phrygia, Pontus, Bithynia, and a great part of Galatia. The Galatians, according to Jose- phus, were called Gomeraei ; and the Cimmerii, according to Herodotus, occupied this tract of country : and from these Gomerians, Cimmerii, or Celts, Mr. Camden derives our ancient Bri- tons, who still retain the name Cymro, Cymru, or Cumbri. See BRITAIN. Magog, the second son of Japhet, was probably the father of the Scythians on the east and north-east of the Euxine Sea. Madai planted Media, though Mr. Mede assigns Macedonia to his share. Javan was the father of the Grecians about Ionia, whose country lies along the Mediterranean Sea; the radi- cals of Javan and Ionia being the same, J1V To Tubal and Meshech belonged Cappadocia and the country which lies on the borders of the Euxine Sea ; and from them, migrating over the Cauca- sus, it is supposed the Russians and Muscovites are descended. And Tiras occupied Thrace. The sons of Shem were five ; Elam, whose country lay between the Medes and Mesopotamians, and was called by the Gentile writers Elymais ; and Jo- sephus calls the Elamites the founders of the Per- sians ; Ashur, who was

driven out of Shinar by Nimrod, afterwards settled in Assyria, and there built Nineveh and other cities; Arphaxad, who gave name to the country which Ptolemy calls Arraphacitis, a province of Assyria, though Josephus makes him the father of the Chaldees, Lud, who inhabited and gave name to the coun- try of Lydia about the river Maeander, remark- able for its windings, in Asia Minor ; and Aram,

the father of the Syrians. Ham, the youngest son of Noah, had four sons, viz. Cush, whose poste- rity spread into the several parts of Arabia, over the borders of the land of Edom, into Arabia Fe- lix, up to Midian and Egypt ; Mizraim, the fa- ther of them who inhabited Egypt and other parts of Africa ; Phut, to whom Bochart assigns the remaining part of Africa, from the lake Tritonides to the Atlantic Ocean, called Lybia ; and Ca- naan, to whom belonged the laira of Canaan, whence the Phoenicians derived their origin. Dr. Bryant has advanced a new hypothesis on this subject, and supported it with his usual acuteness and learning. He maintains that the dispersion, as well as the confusion of tongues, was local, and limited to the inhabitants of the province of Ba- bel ; that the separation and distribution recorded to have taken place in the days of Peleg, Gen. x. 25, 31, 32, which was the result of Divine ap- pointment, occasioned a general migration ; and- that all the families among the sons of men were concerned in it. The house of Shem, from which the Messiah was to spring, was particularly re- garded in this distribution ; the portion of his chil- dren was near the place of separation ; they in general had Asia to their lot, as Japhet had Europe, and Ham the large continent of Africa. But the sons of Cush would not submit to the divine dispensation ; they went off under the conduct of Nimrod, and seem to have been for a long time in a roving state. They, however, at last arrived at the plains of Shinar ; and having ejected Ashur and his sons, seized his dominions, and laid there the foundation of a great monarchy. But afterwards, fearing lest they should bedivided and scattered abroad, they built the tower of Babel as a land mark to which they might re- pair ; and probably to answer the purposes of an idolatrous temple, or high altar, dedicated to the host of heaven. Here they were punished with the judgment of confounded speech through a failure in labial utterance, and with the disper- sion recorded in Gen. x. 8, 9 : in consequence of which they were scattered abroad from this city and tower, without any certain place of des- tination.

*‘ Various, however,’ as Dr. Kippis remarks, * bave been the opinions concerning the confusion of tongues at Babel. Some have thought that the change produced by it was of so total a nature, as to oblige men to speak in*

languages funda- mentally different. But this is not probable, as, in that case, the whole set of their ideas, and the very organs of their speech, mutt have been altered. Neither is this hypothesis agreeable to experience, since most of the languages we are acquainted with have a certain degree of affinity. They either appear to be materially related, as sister languages, or show that they were originally derived from the same source.

‘ Other persons therefore, with greater reason, suppose that the change was only partial, and brought about in a gradual manner. Dr. Gr. Sharpe is of opinion, that the confounding of the speech, or lip, does not relate to language, pro- perly so called, but to a confusion of design, counsels, and purposes ; so that the builders of Babel could not agree together, to carry on the undertaking they had begun.’

This last writer fairly enough observes — ‘ The number of people at Babel before the dispersion is not known, and of the miraculous division of languages there is not one word in the Bible. In Psalm Iv. 9, David says, ‘ Destroy, O Lord, and divide their tongues, for I have seen violence and strife in the city ; where he certainly does not mean that God would make them speak nevr languages : for to divide their tongues is to di- vide their counsels, and to scatter dissension and animosity, not new-made words, amongst them. However, in Genesis xi. their language is not even said to be divided ; but God says, ‘ Let us go down and confound their language, that they may not understand one another’s speech. So the Lord scattered them abroad from thence upon the face of all the earth, and they left off to build the city. Therefore is the name of it called Babel (or confusion), because the Lord did there confound the language of all the earth.’*

He thus concludes — ‘ It is said that they (the whole earth) were together in the plain of Shi- nar, and that the language of all the earth was there confounded. No person is excepted. However, it is not presumed that Noah con- sented to the building, much less that he assisted in the work, or that he was ‘ignorant that men were to be dispersed, and the world peopled by their dispersion, or that he did not oppose the raising an edifice to prevent their dispersion, which, from the natural increase of men and cattle, must in time have happened without a miracle. But it is apprehended, that there could be no occasion for a lofty fortress to defend the whole earth ; for what enemies had the whole earth, against whom it was necessary to build a high tower ? There is a like difficulty in assign- ing any reason for making themselves men of name or renown ; for who were to esteem them men of name or of renown? Or where and when where they to be famous, before there were any human inhabitants but themselves ?’

The Cushites seem afterwards to have invaded Egypt or the land of Mizraim in its infant state, seized the whole country, and held it for some

ages in subjection : they extended themselves likewise to the Indies and Ganges, and still far- ther into China and Japan. From them the province of Cushan or Goshen in Egypt pro- bably derived its name. Here they also obtained the appellation of ‘ royal shepherds ;’ and when they were by force driven out of the country, after having been in possession of it for 260 or 280 years, the land which they had been obliged to quit was given to the Israelites, who were also denominated shepherds, but should not be con- founded with the former or the antecedent inha- bitants of Goshen. See EGYPT.

DISPERSION, POINT OF, in dioptrics, the point from which refracted rays begin to diverge, where their refraction renders them divergent.

DISPI’RIT, v. a. > Dis and spirit. To

DISPI’RITEDNESS, n.s. > discourage; deject; depress; intimidate; exhaust.

Certain it is, that the poor man appeared so dis- pirited, that he spoke but few words after he came upon the scaffold. Clarendon.

The providence of God strikes not in with them.

but dashes, and even dispirits, all their endeavours, and makes their designs heartless and ineffectual.

South.

Steady to my principles, and not dispirited with my afflictions, I have overcome all difficulties.

Dryden.

Amidst all the honours that are paid him, he feels nothing in himself but a poor, weak, dispirited mortal, yielding to the laws of corruption. Rogers.

He his dispirited himself by a debauch, and drank away his good humour. Collier.

I cannot bring myself to believe that the King was cither the first projector or the principal actor in the sorry farce of neglecting a man whom they could not dishonour, of distressing a man whom they could not dispirit,

which has been playing at Court for near twenty-six years. Bp. Watson,

DISPITEOUS, adj. Dis and piteous. Un- pitying.

The Knight of the Red Crosse, when him he spide, Spurring shote with rage dispiteous, Gan fairely couch his speare.

Spenser. Faerie Queene.

DISPIA'CE, v. a. Dis and place. To put out of place, state, office, or trust.

You have displaced the mirth, . broke the good

meeting, With most admired disorder. Shakspeare.

One then may be displaced, and one may reign ; And want of merit render birthright vain. Dryden.

A religion, established by God himself, should not be displaced by any thing, under a demonstration of that divine power that first introduced it. South.

Whose arch or pillar meets me in the face, Titus or Trajan's ? No — 'tis that of Time : Triumph, arch, pillar, all he doth displace ScofPng ; and apostolic statues climb To crush the imperial urn, whose ashes slept sublime.

Byron.

DISPLA'CENCY, n. s. Lat. displicentia Incivility ; any thing unpleasing.

The displaceneies that he receives, by the conse- quences of his excess, far outweigh all that is grate- ful in it. Decay of Piety.

DISPLANT, v.a.) D« and plant. To DisPLANT'ATiON,n.s. J remove a plant; hence to drive a people from their place of residence.

All those countries, which, lying near unto any mountains, or Irish desarts, had been planted with English, were shortly displanted and lost. Spenser.

I may justly account new plantations to be the children of former kingdoms : I like a plantation in a pure soil ; that is, where people are not displanted.

Bacon.

The Edenites were garrisoned to resist the Assy- rians, whose displantation Senachcrib vaunted of.

Raleigh.

DISPLAY', v. a. & n. s. Fr. .deployer, from Lat. dii (privative) and p'ico, to fold. To un- fold; to exhibit, spread open to view.

His glistring armor made

A little gloomy light, much like a shade, j By which he saw the ugly monster plaine, Halfe like a serpent horribly displaide.

Spenser. Faerie Queene. Yon speak not like yourself, who ever yet Have stood to charity, and displayed the effects Of disposition gentle. Shakspeare.

Our enobled understandings take the wings of the morning to visit the world above us, and have a glo- VOL. VII.

nous display of the highest form of created excellen- cies. Glanoille.

Thou heaven's alternate beauty can'st display, The blush of morning, and the milky way.

Dryden.

The worKs of nature, and the wocds of revelation, display truth to mankind in characters so visible, that those who are not quite blind, may read. Locke.

It is a noble and great thing to covgr the blemishes and to excuse the failings of a friend ; to draw a curtain before his stains, and to display his perfec- tions. South. He carves, displays, and cuts up to a wonder.*

Spectator.

So the gay lady, with expensive care, Borrows the pride of land, of sea and air ; Furs, pearls, and plumes, the glittering thing displays, Dazzles our eyes, and easy hearts betrays. Cray.

The storm the dark Lycaean groves displayed, And first to light exposed the sacred shade.

Pope's Slatius.

DISPLEA'SANCE, n. s. -\ Dis and please.

DISPLEA'SE, v. a. & n. s. I To offend ; make

DISPLEA'SIKG, ra. s. S angry or sad:

DISPLEA'SINONESS, n. s. I as a neuter verb,

DISPLEA'SURE, v. a. & n. s. J to disgust; make

averse. Displeasingness is the quality of giving

offence; displeasure the offence given.

God was displeased with this thing.

1 Chron. xxi. 7.

Cordell said, she loved him as behoved : Whose simple answer, wanting colours fair To paint it forth, him to displeasance moved.

Faerie Queene.

True repentance may be wrought in the hearts of such as fear God, and yet incur his displeasure, the deserved effect whereof is eternal death. Hooker.

He should beware that he did not provoke Soly- man's heavy displeasure against him. Knol'.es.

Oft our displeasures, to ourselves unjust, Destroy our friends, and- after weep their dust.

Shakspeare.

When the way of pleasuring or displeasuring lieth by the favourite, it is impossible any other should be over great. Bacon,

Undoubtedly he will relent, and turn From his displeasure. Milton.

What to one is a most grateful odour, to another is noxious and displeasant ; and it were a misery to some to lie stretched on a bed of roses. Glan. Scepsis.

It is a mistake to think that men cannot change their displeasing ness or indifferency, that is in actions, into pleasure and desire, if they will do but what is in their power. Locke.

On me alone thy just displeasure lay ; But take thy judgments from this mourning land.

Dryden.

Nothing is in itself so pernicious to communities of earned men, as the displeasure of their prince.

Addison's Freeholder.

DISPLODE', v. a. { Lat. displodo. To dis- DISPLO'SION, n. s. J perse with a loud noise ;

to vent with violence : a sudden bursting forth.

Stood ranked of seraphim another row, In posture to displode their second tire Of thunde Milton.

DISPORT, w.n.&ns. Dis and sport. To

play ; sport : pastime ; diversion ; amusement. She list not hear, but her disports pursued j

And ever bade him stay, till time the tide renewed.

Spenser.

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He often, but attended with weak guard, Comes hunting this way to disport himself.

Shakspeare.

His disports were ingenuous and manlike, whereby he always learned somewhat.

Hayward on Edward VI. Fresh gales and gentle airs

Whispered it to the woods, and from their w:ngs Flung rose, flung odours, from the spicy shrub Disporting ! Milton.

Loose to the winds their airy garments flew ; The glittering textures of the filmy dew Dipt in the richest tincture of the skies, Where light disports in ever mingling dyes. Pope.

DISPOSE', v. a., v,n.,Sf.n.s.\ Fr. disposer;

DISPOS'ER, n. s. Ital. diaporre ;

DISPOSITION, [Span, and Port,

DISPOS'ITIVE, adj. Cdlsponer ; Lat.

DISPOS'ITIVELY, adv. \ disponere, from

DISPO'SURE, n.s. _) dis and pono,

posui, to place, a Gr. irovot, to labour. To em- ploy ; place ; order ; give an impulse ; taking to : to make fit; taking for; to transfer, put away, conduct : as a neuter verb, to make terms or a bargain : as a substantive, it signifies power ; right or management ; taking at or to ; distribu- tive : dispositive is distributive. The other sub- stantives follow the verb, dispose, in their meaning.

The tabernacle of witnessyng was with onre fadris in desert as god dispotide to hem and spak to moises, that he schulde make it aftir the fourme that he saigh. Wiclif. Dedis. vii.

The lot is cast into the lap ; but the whole disposing thereof is of the Lord. v Proverbs.

These when the knights beheld, they 'gan dispose Themselves to court, and each a damsel chose.

Spenser. But if thee list unto the court to throng,

And there to haunt after the hoped prey,

Then must thou thee dispose another way.

Hubberd's Tale.

Touching musical harmony, whether by instrument or voice, it being of high and low, in due proportion- able disposition, such notwithstanding is the force thereof, and so very pleasing effects it hath, in that very part of man which is most divine, that some have been thereby induced to think, that the soul itself by . nature is, or hath in it, harmony. Hooker.

As she is mine, I may dispose of her : Which shall be either to this gentleman, Or to her death. Shakspeare.

When she saw you did suspect She had disposed with Caesar, and that

your rage Would not be purged, she sent word she was dead.

Id.

I have suffered more for their sakes, more than the villanous inconstancy of man's disposition is able to bear. Id.

He carries on the stream of his dispose Without observance or respect of any, In will peculiar. Id. Troilus and Cressida.

I crave fit disposition for my wife, Due reference of place and exhibition, As levels with her breeding. Id. Othello.

Suspicions dispose kings to tyranny, husbands to jealousy, and wise men to irresolution and melancholy.

Bacon.

They must receive instructions how to dispose of themselves when they come, which must be in the nature of laws unto them. Id. to Villiers.

They remained in a kind of warlike dispotwe, or perhaps little better. Wotton,

Whilst they murmur against the present disposure of things, they do tacitly desire in them a difformity from the primitive rule, and the idea of that mind that formed all things best.

Browne's Vulgar Errours.

That axiom in philosophy, that the generation of one thing is the corruption of another, although it be substantially true, concerning the form and matter, is also dispositively verified in the efficient or producer.

Id.

How sweetly doth God dispose of all second causes,, that, while they do their own will, they do his !

Bp. Hall. Contemplations. Tax not divine disposal; wisest men Have erred, and by bad women been deluded.

Milton.

All is best, though oft we doubt What the' unsearchable dispose

Of highest wisdom brings about, And ever best found in the close.

Milton. Agonistes. He knew the seat of Paradise ; And, as he was disposed, could prove it Below the moon, or else above it. Hudibras. The memory of what they had suffered, by being without it, easily disposed them to do this.

Clarendon..

I think myself obliged, whatever my private appre- hensions may be of the success, to do my duty, and leave events to their disposer. Boyle.

Would I had been disposer of thy stars, Thou shouldst have had thy wish, and died in wars.

Dryden.

Of all your goodness leaves to our dispose, Our liberty's the only gift we chuse.

Id. Indian Emperor.

Under this head of invention is placed the disposition of the work, to put all things in a beautiful order and harmony, that the whole may be of a piece.

Id. Dufresnoy, Preface-,

In his disposure is the orb of earth,

The throne of kings, and all of human birth.

Sandys.

This may dispose me, perhaps, for the reception of truth ; but helps me not to it. Locke.

We shall get more true and real knowledge by one rule, than by taking up principles, and thereby put- ting our minds into the disposals of others. Id.

Disposition is when the power and ability of doing any thing is forward, and ready upon every occasion to break into action. Id.

All the reason of mankind cannot suggest any solid ground of satisfaction, but in making that God our friend, who is the absolute disposer of all things.

South.

Although the frequency of prayer and fasting may be of no efficacy to dispose God to be more gracious, yet it is of great use to dispose us to be

more objects of his grace. Smalridge.

They require more water than can be found, and more than can be disposed of, if it was found. Burnet.

Of what you gathered, as most your own, you have disposed much in works of public piety.

Sprati.

Thus, whiUt she did her various power dispose, The world was free from tyrants, wars, and woes.

Prior.

I have disposed of her to a man of business, who will let her see, that to be well dressed, in good

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ˆmour, and chearful in her family, are the arts and sciences of female life. Tatler.

If mere moralists find themselves disposed to pride, lust, intemperance, or avarice, they do not think their morality concerned to check them. Swift.

I take myself to be as well informed as most men in the dispositions of each people towards the other.

Id.

Refrangibility of the rays of light is their disposi- tion to be refracted, or turned out of their way, in passing out of one transparent body or medium into another. Newton.

Are not the blessings both of this world and the next in his disposal? Atterbury.

The love we bear to our friends is generally caused by our finding the same disposition in them which we feel in ourselves. Pope.

Bleeding is to be used or omitted according to the symptoms which affect the brain; it relieves in any inflammatory disposition of the coat of the

nerve.

Arbuthnot on Diet.

There is a sort of masonry in poetry, wherein the pause represents the joints of a building, which ought iu every line and course to have their disposition varied. Shenstone.

Under his fatherly rebukes then let us be ever humble and submissive. Such now is the true filial disposition. Mason.

DISPOSSESS, v. a. Dis and possess. To put out of possession ; to deprive ; to disseize.

The children went to Gilead, and took it, and dis- possessed the Amorite which was in it.

Numbers xxxii. 39.

The blow from saddle forced him to fly ; Else might it needs down to his manly breast Have cleft his head in twain, and life thence dispostest. Spenser. Faerie Qtieene.

I will chuse

Mine heir from forth the beggars of the world, And dispossess her all. Shakspeare. Timon.

Let us sit upon the ground, and tell How some have been deposed, some slain in war, Some haunted by the ghosts they dispossessed.

Id. Richard II.

In thee I hope ; thy succours I invoke, To win the crown whence I am dispossessed ;

For like renown awaiteth on the stroke, To cast the haughty down, or raise the' oppressed.

Fairfax.

They arrogate dominion undeserved Over their brethren, and quite dispossess Concord and law of nature from the earth.

Milton.

This inaccessible high strength, the seat Of Deity supreme, us dispossessed,

He trusted to have seized. Id.

No power shall dispossess My thoughts of that expected happiness.

Denham.

*O fairest of all creatures, last and best Of *hat heaven made, how art thou dispossessed Of all thy native glories !*

Dryden. State of Innocence.

Nothing can create more trouble to a man than to endeavour to dispossess him o/this conceit. TiUotson.

It will be found a work of no small difficulty to dispossess and throw out a vice from that heart, where long possession begins to plead prescription. South.

~\ Dis and praise. (/fo blame; cen-

s;

DISPRA'ISE, v. a.,&n..- DISPRAIS'ER, n. $.*

DISPRA'ISIBLE, adj. i sure ; dishonor :

DISPRAI'SINGLY, adv. J one who Llames another : dispraisible is, unworthy of commenda- tion.

In praising Antony, I've dispraised Caesar.

Shakspeare. If I can do it

By aught that I tan speak in his dispraise, She shall not long continue love to him. Id.

Michael Cassio !

That came a wooing with you : many a time, When I have spoke of you dispraisingly, Hath ta'en your part. Id. Othello.

Nothing is here for tears, nothing to wail Or knock the breasts ; no weakness ; no contempt, Dispraise, or blame. Milton's Agonistes.

I need not raise Trophies to thee from other men's dispraise.

Denham.

Looks fright not men : the general has seen Moors With as bad faces ; no dispraise to Bertran's.

Dryden.

The criticks, while they like my wares, may dis- praise my writing. Spectator.

My faults will not be hid, and can be no dispraise to me that they will not ; the clearness of one's mind is never better proved than in discovering its own faults. Pope.

DISPREAD', v. a. \ Dis and spread. To DISPREAD'ER. S spread different ways.

in this word, and a few others, says Johnson truly, dis has the same force as in Latin com- position, and means different ways.

As morning sun her beams dispreaden clear, And in her face fair truth and mercy doth appear

Spenser.

Over him art, striving to compare With nature, did an arbour green dispread,

Framed of wanton ivy, flowing fair, Through which the fragrant eglantine did spread His pricking arms, entrailed with roses red. Id.

Above, below, around, with art dispread, The sure enclosure folds the genial bed.

Pope's Odyssey.

DISPRO'FIT, n. s. Dis and profit. Loss ; damage; detriment.

DISPRO'OF, n. s. Dis and proof. Confu- tation ; conviction of error or falsehood.

His remark contains the grounds of his doctrine, and offers at somewhat towards the disproof of mine.

A tterbury.

I need not offer any thing farther in support of one, or in disproof of the other. Rogers.

DISPROP'ERTY, v.a. Dis and property. To dispossess of any property. DISPROPORTION, u.o.&n.s. DISPROPORTION ABLE, adj.

DISPROPOR'TIONABLENESS, K. S.

DISPROPOR'TIONABLY, adv.

DISPROPOR'TIONAL, adj.

DISPROPOR'TIONALLY, adv.

DISPROPORTIONATE, adj.

DISPROPORTIONATELY, adv.

DISPROPOR'TIONATENESS, n. s. tionable is unsuitable in the parts, or in compa- rison : disproportional and disproportionate seem to express the same idea, and the adverbs follow these adjectives in their meaning.

A. "

Dis and propor- tion. To apportion, >or join un- fitly, or without symmetry: dispropor-

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There sits deformity to mock my body, To shape my legs of an unequal size, To ditproportion me in every part. Shakxpeare. Had the obliquity been greater, the earth had not been able to endure the disproportionable differences of season. Browne.

Musick craveth your acquaintance : many are o such disproportioned spirits, that they avoid her com- pany. Peacham.*

We on earth, with undiscording-voice, May rightly answer that melodious noise ; As once we did, till disproportioned sin Jarred against nature's chime. Milton.

Perhaps, from greatness, state and pride, Thus surprised, she may fall :

Sleep does disproportion hide, And, death resembling, equals all. Waller.

For their strength,

'Fhe disproportion is so great, we cannot but Expect a fatal consequence. Denham's Sophy. We have no reason to think much to sacrifice to God our dearest interests in this world, if we consider how disproportionably great the reward of our suf- ferings shall be in another. Tillotson.

We are apt to set too great a value on temporal blessings, and have too low and disproportionable es- teem of spiritual. Smalridge.

None of our members are crooked or distorted, or disproportionate to the rest, either in excess or defect.

Ray.

It is plain that men have agreed to a dispropor- tionate and unequal possession of the earth.

Locke.

Distance and men's fears have so enlarged the truth, and go disproportioned every thing, that we have made the little troop of discontents a gallant army, and already measured by the evening shadow.

Suckling.

There is no wine of so strong a body as to bear such a disproportionable quantity of water as sixty.

Broome.

That we are designed for a more exalted happiness than can be derived from the things of this life, we. may infer from their vast disproportion to the desires and capacities of our soul. Rogers.

*DI'SPROVE, v.a. * Dis and prove. To DI'SPROVER, n. s. 5 confute ; to convict of error or falsehood. A disprover, as well as ex- pressing this sense, seems corruptly used by Wotton for disapprover.*

This exposition they plainly disprove, and shew by manifest reason, that of David the words of David could not possibly be meant. Hooker.

This Westmoreland maintains, And Warwick shall disprove it. Shaktptare.

The single example that our annals hare yielded of two extremes, within so short time, by most of the same commenders and disprovers, would require no slight memorial. Wotton.

It is easier to affirm than to disprove. Holder.

The traitor's odious name I first return, and then disprore thy claim.

Dryden'i Fables.

That false supposition I advanced in order to dis- prove it, and by that means to prove the truth of my doctrine. Atterbury.

The cit — a common-council-man by place Ten thousand mighty nothings in his face, By situation as by nature great, With nice precision parcels out the state j

Prove and dirprovet, affirms and then denies Objects himself, and to himself replies.*

Churchill.

DISPU'NISHABLE, adj. Dis and punish- able. Without penal restraint.

No leases of any part of the said lands shall ever be made, other than leases for years not exceeding thirty-one in possession, and not in reversion or re- mainder, and not dispunishable of waste.

Swift's Last Will.

DISPURGE', v. a. Dis and purge ; dis being used expletively. To cleanse or purge.

Thou, then, that hast dispurged our score,

And dying wert the death of death, Be now, whilst on thy name we call, Our life, our strength, our joy, our all !

Wotton.

DISPU'RSE, v. a. Dis and purse. To pay ; to disburse. ' It is not certain that the following passage should not be written disburse,' says Johnson.

Many a pound of my own proper store. Because I would not tax the needy commons, Have I disparted to the garrisons, And never asked for

restitution.

Shakipeare. Henry VI.

DISPUTE', v. a., v. n. & n. s. ~] Fr. ditpu-

DIPPUT'ABLE, adj. ter ; Spanish

DIS'PUTANT, n. s. & adj. and Portug.

DISPWTA'TION, 1 disputar;Ger.

DISPUTA'TIOUS, adj. [and Dutch

DISPU'TATIVE, adj. disputercn ;

DISPUTE'LESS, adj. Ital. and Lat.

DISPU'TER, n. s.) disputare,

from dis (diversely) and puto, to think. To con- tend for ; discuss : as a neuter verb, to debate ; argue ; controvert : as a noun, contest ; contro- versy ; quarrel. Disputable means both liable to be contested, and fond of disputation. Dis- putatious and disputativc have a similar sense to this last. Disputer and disputant are synony- mous ; and disputeless means incontrovertible.

Things were disputed before they came to be deter- mined : men afterwards were not to ditpute any longer, but to obey. Hooker.

Dispute it like a man.

I shall do so j

But I must also feel it as a man.

Shakipeare. Macbeth.

Now was I called to public disputations often, with no ill success. Bp. Hall's Account of himself.

Thou there wast found Among the gravest rabbles, disputant On points and questions fitting Moses' chair.

Milton.

Well do I find, by the wise knitting together of your answer, that any

disputation I can use is as much too weak as I unworthy. Sidney,

So dispute the prize, As if you fought before Cydaria's eyes.

Dry den's Indian Emperor.

The question being about a fact, it is begging it, t« bring as a proof an hypothesis which is the very thing in dispute. Locke.

Notwithstanding these learned disputants, it was to the unscholastick statesman that the world owed their peace, defence and liberties. Id.

If they are not in themselves disvutaUe, why are they so much disputed 1 South.

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Both are vehement disputers against the heathen idolatry. Stillingfleet.

The atheist can pretend no obligation of conscience, why he should dispute against religion. Tillotion.

Our disputants put me in mind of the skuttle fish,

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DISQUI'ET, v. a., n. s., & adj.} From DISQUI'ETER, n. s. i and quiet.

DISQUI'ETLY, adv. \ To disturb;

DISQUI'ETNESS, n. s. \ make

DISQUI'ETUDE.

that, when he is unable to extricate himself, blackens fret. The substantives are synonymous.

un- easy; harass ;

all this water about him till he becomes invisible.

Spectator.

A man must, be of a very disputatious temper, that enters into state controversies with any of the fair sex.

Addison.

Until any point is determined to be a law, it re- mains disputable by every subject. Swift.

The earth is now placed so conveniently, that plants thrive and flourish in it, and animals live ; this is matter of fact, and beyond all dispute. Bentley.

Did not Paul and Barnabas dispute with vehemence about a very little point of conveniency ? Atterbury,

These conclusions have generally obtained, and have been acknowledged even by disputers themselves, till •with labour they had stifled their convictions.

Rogers.

Perhaps this practice might not so easily be per- verted, as to raise a cavilling disputative, and sceptical temper in the minds of youth.

Watts's Improvement of the Mind.

There is nothing displays a genius (I mean a quick- ness of genius) more than a dispute ; as two diamonds encountering, contribute to each other's lustre. But,

Why art thou so vexed, O my soul ? and why art thou so disquieted within me. Psalm.

All otherwise, said he, I riches rede, And deem them root of all disquietness.

Faerie Queene.

Arius won to himsnlf both followers and great do- fenders; whereupon much disquietness ensued.

Hooker.

I pray you, husband, be not so disquiet ; The meat was well if you were so content.

Shakspeare.

Treachery, and all ruinous disorders, follow us dit- quietly to our graves. Id. King Lear.

If we give way to our passions, we do but gratify ourselves for the present, in order to our future dis- ?«»e<. Tillotion.

Thou happy creature, art secure From all the torments we endure ; Despair, ambition, jealousy, Lost friends, nor love, disquiets thee.

Roscommon.

Contentment produces, in some measure, all those effects which the alchymist usually ascribes to what he

perhaps, the odds is much against the man of taste, calls the philosopher's stone; and if it does not bring

in this particular. Shenstone.

As to the capacity of sitting in parliament, after all the capacities for voting, for the army, for the navy, for the professions, for civil officers, are conceded, it is a dispute de lana caprina, in my poor opinion, at least on the part of those who oppose it. Burke.

She breathes! But no, twas nothing of the last. Faint flutter life disputes vtith death. Byiun

DISQUALIFY, v. a. > Dis and qualify. DISQUALIFICATION, n. s. } To make unfit ; to disable by a natural or legal impediment.

Such persons as shall confer benefices on unworthy and disqualified persona, after a notice cr correction given, shall for that turn be deprived of the power of presenting unto such benefices. Aytijfe's Parergon.

I know no employment for which piety disqualifies.

Swift.

My common illness utterly disqualifies me for all conversation ; I mean my deafness. Id.

The church of England is the only body of Christians which disqualifies those, who are employed to preach its doctrine, from sharing in the civil power, farther than as senators. Id. on the Sacramental Test.

It is recorded as a sufficient disqualification of a wife, that, speaking of her husband, she said, God forgive him. Spectator.

The power of a member of parliament is uncertain and indirect ; and if power rather than splendor and fame were the object, I should think that any of the principal clerks in office, (to say nothing of their supe- riors) several of whom are disqualified by law for seats in parliament, possess far more power than nine-tenths of the members of the House of Commons.

Burke.

DISQUA'NTITY, v. a. Dis and quantity. To lessen ; to diminish. Not used.

Be entreated

Of fifty to disquantity yqur train ; And the remainders, that shall still depend, To be such men as may besort your age. S/uikspeare.

riches, it does the same thing by banishing the desire of them. If it cannot remove the disquietudes arising from a man's mind, body, or fortune, it makes him easy under them. Addison.

I had rather live in Ireland than under the fre- quent disquiets of hearing you are out of order.

Swift.

He rested disqvietty that night j but in the morning 1 louud f.im calm. Wiseman.

DISQUISITION, n. s. Lat. disquisition Examination ; disputative enquiry.

God hath reserved many things to his own resolu- tion, whose determinations we cannot hope from flesh ; but with reverence must suspend unto that great day, whose justice shall either condemn our curiosity, or resolve our disquisitions. Browne.

The royal society had a good effect, as it turned many of the greatest geniuses of that age to the dis- quisitioni of natural knowledge. Addison's Spectator.

'Tis indeed the proper place for this diiquisition concerning the antediluvian earth.

Woodward's Natural History.

The nature of animal diet may be discovered by taste, and other sensible qualities, and some general rules, without particular disquisition upon every kind.

Arbuthnot.

I am apprehensive that I shall not be able to find leisure for making all the disquisitions and experiments which would be desirable on this subject. [Swimming.] I must, therefore, content myself with a few remarks.

Franklin.

DISRA'NK, a. a. Dis and rank. To de- grade from his rank

DISREGA'RD,u. a. &«.«.} Dis and re- DISREGA'RDFUL, adj. >gard. To treat

DISREGA'RDFULLY, adv. j with slight no- tice or neglect ; contempt.

Since we are to do good to the poor, to strangers, to enemies, those whom nature is too apt to make us

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despise, disregard, or hate, then undoubtedly we are to do good to all. Sprat,

Those fasts which God hath disregarded hitherto, Le may regard for the time to come. Smalridge.

Studious of good, man disregarded fame, And useful knowledge was his eldest aim.

Blachmore.

DISRE'LISH, v. a. & n. s. Dis and relish. To make, or feel a distaste : bad taste ; nauseous- ness.

Oft they assayed,

Hunger and thirst constraining ; drugged as oft

With hatefullest disrelish, writhed their jaws

With soot and cinders filled. Milton.

Fruits of taste to please True appetite, and not disrelish thirst Of nectarous draughts between, from milky stream.

Id.

Bread or tobacco may be neglected, where they are shewn not to be useful to health, because of an in- differency or disrelish to them. Locke.

The same anxiety and solicitude that embittered the pursuit, disrelishes the fruition itself. Rogers.

The world is become too busy for me : every body is so concerned for the publick, that all private enjoy- ments are lost, or disrelished. Pope.

DISREPUTE, n. s. i Dis and reputation.

DISREPUTA'TION, n. s. $ Disgrace ; dishonor ; want of reputation.

I will tell you what was the course in the happy days of queen Elizabeth, whom it is no disreputation to fol- low. Bacon.

The king fearing lest that the bad success might dis- courage his people, and bring disreputation to himself, forbad any report to be made. Hayward.

Gluttony is not of so great disreputation amongst men as drunkenness. Taylor's Holy Living.

How studiously did they cast a slur upon the king's person, and bring his governing principles under a disrepute. South.

DISRESPECT, n.s. ˆ Dis and respect.

DISRESPECT'FUL, adj. > Incivility ; want of

DisRESPECrr'FULLY)adi;. j reverence ; irrever- ence ; rudeness.

Any disrespect to acts of state, or to the persons of statesmen, was in no time more penal. Clarendon.

Aristotle writ a methodical discourse concerning these arts, chusing a certain benefit before the hazard that might accrue from the vain disrespects of ignorant persons. Wilkins.

What is more usual to warriours than impatience of bearing the least affront or disrespect ? Pope.

We cannot believe our posterity will think so dis- respectfully of their great grandmothers, as that they made themselves monstrous to appear amiable.

Addison's Spectator.

DISRO'BE,t>.a. D« and robe. To undress; to uncover ; to strip.

The holy saints of their rich vestiments He did disrobe, when all men carelesse slept, And spoiled the priests of their habiliments.

Spenser. Faerie Queene. Kill the villain straight, Disrobe him of the matchless monument. Thy father's triumph o'er the savages.

Shakspeare. King John.

These two great peers were disrobed of their glory, the one by judgment, the other by violence. Wotton.

Who will be prevailed with to disrobe himself at once of all his old opinions, and pretences to know-

ledge and learning, and turn himself out stark

in quest afresh of new notions ? Locke.

When the trees are all bare, not a leaf to be seen,

And the meadows their beauty have lost ; When Nature 's disrobed of her mantle of green,

And the streams are fast bound with the frost.

Brercicood.

DISRUPTION, n. s. Lat. disruptio. The act of breaking asunder : the breach made.

This secures them from disruption, which they would be in danger of, upon a sudden stretch or con- tortion. Ray.

The agent which effected this disruption, and dislo- cation of the strata, was seated within the earth.

Woodward.

If raging winds invade the atmosphere, Their force its curious texture cannot tear, Nor make disruption in the threads of air.

Blackmore.

DISSATISFY, v. a. -v Dit and satisfy.

DISSATISFA'CTION, n.s. ˆ To displease ;dis- DISSATISFA'CTORY, adj. {content; fail to DissATisFA'cTORiNESS,ra.s.) please : dissatis- faction is the state of being dissatisfied : dissatis- factory, and dissatisfactorinesss, express inability to give satisfaction.

He that changes his condition, out of impatience and dissatisfaction, when he has tried a new one, wishes for his old again. L 'Estrange.

I still retain some of my notions, after your lord- ship's having appeared dissatisfied with them.

Locke.

The ambitious man has little happiness, but is sub- ject to much uneasiness and dissatisfaction.

Addison's Spectator.

In vain we try to remedy the defects of our acqui- sition, by varying the object : the same dissatisfaction pursues us through the circle of created goods.

Rogers.

The advantages of life will not hold out to the length of desire ; and, since they are not big enough to satisfy, they should not be big enough to dissatisfy.

Collier.

If we see a universal spirit of distrust and dissatis- faction, a rapid decay of trade, dissensions in all parts of the empire, we may pronounce, without hesitation, that the government of that country is weak, distracted, and corrupt. Junius.

DISSECT', v. a. ~\ Fr. disscquer ; Lat. dis DISSECT'ION, n. s. > secure, from dis and seco, DISSECT'OR, n. s.) to carve or cut. To divide an animal body into its parts : applied also figu- ratively.

Let no man say, the world itself being dead, 'Tis labour lost to have discovered The world's infirmities, since there is none Alive to study this dissection. Donne.

She cut her up ; but, upon the dissection, found her just like other hens. L' Estrange.

No mask, no trick, no favour, no reserve ; Dissect your mind, examine every nerve.

Roscommon.

Critics to plays for the same end resort, That surgeons wait on trials in a

court : For innocence condemned they've no respect, Provided they've a body to dissect. Gangrene. Such strict enquiries into nature so true and so perfect a dissection of human kind, is the work of ex- traordinary diligence. GranrtiUi.

DISSEISIN.

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Following life in creatures we dissect, We lose it in the moment we detect. Pope. With strict propriety their care's confined To weigh out words, while passion halts behind : To syllable-dissectors they appeal, Allow their accent, cadence, — fools may feel.

Churchill.

I shall enter upon the dissection of a coquet's heart, «md communicate that curious piece of anatomy.

Addison.

DISSEISE', v. a. From Fr. dessaisii . i.e. action ; de saisir an action concerning seizing. To dispossess ; deprive of legal right. See the following articles on DISSEISIN and DISSEISOR.

He so disseised of his griping gross, The knight his thrillant spear again assayed, In his brass-plated body to emboss.

Faerie Queene.

If a prince should give a man, besides his ancient patrimony which his family had been disseixed of, an additional estate, never before in the possession of his ancestors, he -could not be said to re-establish lineal succession. Locke.

DISSEISIN, in law, an unlawful dispossess- ing a man of his land, tenement, or other im- moveable arid incorporeal right. It is a species of injury by ouster, or a privation of the free- hold, consisting in a wrongful putting out of him that is seised of the freehold. It differs from abatement and intrusion, which denote a wrongful entry where the possession was vacart, by its being an attack upon him who is in actual possession, and turning him out of it. The former were an ouster from a freehold in law, this is an ouster from a freehold in deed. Dis- seisin may be effected either in corporeal inheri- tances, or incorporeal. Disseisin of things corporeal, as of houses, lands, &c., must be by entry and actual dispossession of the freehold (Co. Litt. § 181); as if a man enters either by force or fraud into

the house of another, and turns, or at least keeps, him or his servants out of possession. Disseisin of incorporeal heredi- taments cannot be an actual dispossession ; for the subject itself is neither capable of actual bodily possession, nor dispossession ; but it depends on their respective natures and various kinds ; being, in general, nothing more than a disturbance of the owner in the means of coming at, or enjoying them. With regard to freehold rent in particular, our ancient law-books (Finch. L. 165, 166. Litt. § 237, &c.) mention five methods of working a disseisin thereof: — 1. By enclosure ; where the tenant so encloseth the house or land, that the lord cannot come to dis- train thereon, or demand it. 2. By forestaller, or lying in wait ; when the tenant besetteth the way with force and arms, or by menaces of bodily hurt, affrights the lessor from coming. 3. By rescous ; that is, either by violently retaking a distress taken, or by preventing the lord, with force and arms, from taking any at all. 4. By re- plevin ; when the tenant replevies the distress at such time when his rent is really due. 5. By denial ; which is, when the rent being lawfully demanded, is not paid. All, or any of these circumstances amount to a disseisin of rent; that is, they wrongfully put the owner out of the only possession, of which the subject matter is capa-

ble, namely, the receipt of it. But all these disseisins of hereditaments incorporeal, are only so at the election and choice of the party injured ; if, for the sake of more easi\y trying the right he is pleased to suppose himself disse- ised. (Litt. § 588, 589.) Otherwise, as there can be no actual dispossession, he cannot be com- pulsively disseised of any incorporeal heredita- ment. Thus also, even incorporeal hereditaments, a man may frequently suppose himself to be disseised, when he is not so in fact, for the sakf of entitling himself to the more easy and com- modious remedy of an assise of novel disseisin, instead of being driven to the more tedious pro- cess of a writ of entry. (4 Burr. 1 1 0.)

The true injury of compulsive disseisin seems to be that of dispossessing the tenant, and sub- stituting one's self to be the tenant of the land in his stead ; in order to which, in the times of pure feodal tenure, the consent or connivance of the lord, who, upon every descent or alienation, personally gave, and who, therefore, alone could change the seisin or investiture, seems to have been considered as necessary. But when, in process of time, the feodal form of alienations was off, and the lord was no longer the instru- ment of giving actual seisin, it is probable that the lord's acceptance of rent or service, from him who had dispossessed another, might con- stitute a complete disseisin. Afterwards, no regard was had to the lord's concurrence, but the dispossesser himself was considered as the sole disseisor; and this wrong was then allowed to be remedied by entry only, without any form of law, or against the disseisor himself; but required a legal process against his heir or alienee. And when the remedy by assise

was introduced, under Henry II., to redress such disseisins as had been committed within a few years next preceding, the facility of that remedy induced others, who were wrongfully kept out of the freehold, to feign, or allow themselves to be disseised, merely for the sake of the remedy. Blackst. Comm. book iii. ch. 10.

If a feme sole be seised of lands in fee, and is disseised, and then taketh husband; in this case the husband and wife, as in right of the wife, have right to enter, and yet the dying seised of the disseisor shall take away the entry of his wife after the death of the husband. (Co. Lit. 246.) If a person disseises me, and, during the disseisin, he or his servants cut down the timber growing upon the land, and afterwards I re-enter into the land, I shall have action of tres- pass against him; for the law, as to the disseisor and his servants, supposes the freehold to have been always in me : but if the disseisor be disse- ised by another, or if he makes a feoffment, gift in tail, lease for life or years, I shall not have an action against the second disseisor, or against those who come in by title : for all the mesne profits shall be recovered against the disseisor himself. (11 Rep. 52. Keilw. 1.)

By Magna Charta, 9 Henry III., c. 29, no man is to be disseised, or put out of his free- hold, but by lawful judgment of his peers, or by the law of the land ; and by stat. 32 Henry VIII. c. 33, the dying seised of any disseisor of, or in any lands, &c., having no right therein, shall not

be a descent in law, to take away an entry of a person having lawful title of entry, except the disseisor hath had peaceable possession five years, without entry or claim by the person having lawful title.

According to some writers, disseisin is of three sorts, viz. simple disseisin, committed by clay, without force and arms : and disseisin by force, and fresh disseisin. Assises are called writs of disseisin, which lie against disseisors in any case : whereof some are termed little writs of disseisin, as being vicontial, that is, suable before the sheriff in the county court, because determinable by him without assise.

DISSEISOR is he who disseiseth, or puts another out of his land : as the disseisee is he who is put out. If a disseisor, after he has ex- pelled the right owner, gains peaceable posses- sion of the lands five years without claim, and continues in possession, so as to die seised, and the land descends to his heirs, they will have a right to the possession till the owner recovers at

law; and the owner shall lose his estate for ever, if he doth not prosecute his suit within the time limited by the statute of limitations.

And if a disseisor levy a fine of the land whereof he is disseised unto a stranger, the dis- seisor shall keep the land for ever ; for the disseisor against his own fine cannot claim, and the conusee cannot enter, and the right which the disseisor had, being extinct by the fine, the disseisor shall take advantage of it. (2 Rep. 56.) But this is to be understood, where no use is declared of the fine by the disseisee; when it shall enure to the use of the disseisor, &c. (1 Lev. 128.) A disseisor in assize, where dama- ges are recovered against him, shall recover as much as he hath paid in rents chargeable on the lands before the disseisin. (Jenk. Cent. 189.) But if the disseisor or his feoffee sows corn on the land, the disseisee may take it before or after severance. (Dyer 31. 173. 11 Rep. 46.) Where a man hath a house in fee, &c., and locks it, and then departs ; if another person comes to his house, and takes the key of the door, and says that he claims the house to him- self in fee, without any entry into the house, this is a disseisin of the house, (2 Danv. Abr. 624.) If the feoffor enters on the land of the feoffee, and makes a lease for years, &c., it is a disseisin ; though the intent of the parties to the feoffment was, that the feoffee should make a lease to the feoffor for life. (2 Rep. 59.) If lessee for years is ousted by his lessor, this is said to be no disseisin. (Cro. Jac. 678.) A man who enters on another's land, claiming a lease for years, who hath not such lease, is a disseisor ; though if a man enters into the house of another by his sufferance, without claiming any thing, it will not be a disseisin. (9 Henry VI., 21, 31. 2 Danv. 625.) If a person enters on lands by virtue of a grant or lease, that is, void in law, he is a disseisor. (2 Danv. 630.) As the king in judgment of law can do no wrong, he cannot be a disseisor. (1 Ed. V. 8.) A disseisor is to be fined and imprisoned ; and the disseisee restored to the land, &c., by stat. 20, Henry III. c. 3. Where a disseisor is disseised, it is called disseisin upon disseisin.

DISSE'MBLE, v.a. & v. n.'

DISSE'MBLER, n.s.

DISSE'MBLING, n. s.

DISSE'MBLINGLY, adv. dissimulare, from dis privative, and simulare, sig- nifying to ' feign that not to be which is.' Min- sheu.

Ye dissembled in your hearts when ye sen t me unto the Lord your God, saying, Pray for us.

Jeremiah xlii. 20. Your son Lucentio

Doth love my daughter, and she loveth him, Or both dissemble deeply their affections.

Shakfpeare.

I that am curtailed of this fair proportion, Cheated of feature by dissembling nature, Deformed, unfinished. Id, Richard III.

Such an one, whose virtue forbiddeth him to be base and a dissembler, shall evermore hang under the wheel. Raleigh.

The French king, in the business of peace, was the greater dissembler of the two. Bacon. Henry VII.

She answered, that her soul was God's ; and touching her faith, as she could not change, so she •would not dissemble it. Hayward.

Man is to man all kind of beasts ; a fawning dog, a roaring lion, a thieving fox, a robbing wolf, a dis- sembling crocodile, a treacherous decoy, and a rapa- cious vulture. Cowley.

Thy function too will varnish o'er our arts, . And sanctify dissembling.

Rowe's Ambitious Stepmother.

If the show of any thing be good for any thing, I am sure sincerity is better ; for why does any man dissemble, or seem to be that which he is not, but be- cause he thinks it good to have such a quality as he pretends to ? Tillotson,

In vain on the dissembled mother's tongue

Had cunning art and sly persuasion hung ;

And real care in vain, and native love,

lu the true parents panting breast had strove.

Prior.

Men will trust no farther than they judge a person for sincerity fit to be trusted : a discovered dissembler can achieve nothing great and considerable. South.

It is true indeed that we should not dissemble and flatter in company ; but a man may be very agreeable, strictly consistent with truth and sincerity, by a pru- dent silence where he cannot concur, and a pleasing assent where

he can. Spec tutor .

They are the happiest, who dissemble best Their weariness ; and they the most polite Who squander time and treasure with a smile, Though at their own destruction. Cowper.

DISSE'MINATE, v.a.ˆ From Lat. disse- DISSEMINA'TION, n. s. ˆmino, dis diversely, DISSEMINA'TOR. 3 and semino, to sow.

To diffuse, or scatter, as seed. The act of sow- ing or diffusing.

Ill uses are made of it many times in stirring up seditions, rebellions, in disseminating of heresies, and infusing of prejudices. Hammond.

*Though now at the greatest distance from the be- ginning of errour, yet we are almost lost in its disse- mination, whose ways are boundless, and coniess no circumscription. P*owne.*

There is a nearly uniform and constant fire of heat disseminated throughout the body of the earth.

Woodtcard.

DISSENTERS.

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The Jews are so disseminated through all the trading parts of the world, that they are become the instru- ments by which the most distant nations converse with one another, and by which mankind are knit together in a general correspondence. Spectator.

By firmness of mind, and freedom of speech, the gospel was disseminated at first, and must still be main- tained. Atterbury. DISSENT', v. a. & n. s.\ Fr. dissenter; It. DISSEN'SION, n, s. I and Lat. dissentire ; DISSEN'SIOUS, adj. > from dis (diversely) DISSENTA'NEOUS, adj. land»e«fio, to per DISSENT'ER, n. s. J ceive or discern. To disagree in judgment; to differ; applied particularly to a difference of opinion with the established church of England. Dissension is disagreement in any degree : dissensious, quar- relsome.

We ban founden this wicked man stirynge dissen- siuun to alle iewis in alle the world, and auctour of dissencioun of the secte of Nazarens.

Wiclif. Dedis. 24.

Either in religion they have a dissensious head, or in the commonwealth a

factious head.

Ascham's Schoolmaster.

We see a general agreement in the secret opinion of men, that every man ought to embrace the religion which is true, and to shun, as hurtful, whatever dis- senteth from it, but that most which doth farthest dis- sent. Hooker.

You dissensious rogues. That rubbing tbe poor itch of your opinion, Make yourselves scabs. Shahspeare. Coriolanus.

Friends now, fast sworn,

Whose hours, whose bed, whose meal, whose exer- cise,

Are still together ; who twine, as 'twere in love Unseparable, shall within this hour, On a dissension of a doit, break out To bitterest enmity. Id.

Let me not be any occasion to defraud the publick of what is best, by any morose or perverse dissentings.

Kiny Charles.

How will dissenting brethren relish ? What will malignants say ? Hudibras.

Grown

In wealth and multitude, factious they grow ; But first among the priests dissension springs.

Milton.

Debates, dissensions, uproars are thy joy; Provoked without offence, and practised to destroy.

Dryden.

In propositions, where though the proofs in view are of most moment, yet there are grounds to suspect that there is proof as considerable to be produced on the contrary side j there suspense or dissent are vo- luntary actions. Locke.

They will admit of matter of fact, and agree with dissenters in that ; but differ only in assigning of rea- sons. Id.

There are many opinions in which multitudes of men dissent from us, who

are as good and wise as our- selves. Addison.

What could be the reason of this general dissent from the notion of the resurrection, seeing that al- most all of them did believe the immortality of the soul? Bentley's Sermons.

DISSENTERS. Of the comprehensiveness of this term as designating, in strict language, all who differ in opinion from the Established Church, few of our readers can be altogether ig- norant. Mr. Justice Blackstone considers a

cognate legal term, non-conformists, as embrac- ing all who absent themselves from the public worship of the Church, whether, 1. Through total irreligion, they attend the service of no other persuasion; or, 2. Through a mistaken zeal, ' weakness of intellect,' or < perverseness and acerbity of temper, which,' he adds, ' is often the case,' they -unite in worship with other communities, ' herding with a party.' This latter class of dissenters is divisible again, according to the same learned authority, in.o ' the papists,' who divide from the national church, ' upon ma terial though erroneous reasons,' and the Pro testant Dissenters, many of whom divide from it ' upon matters of indifference ; or, in other words, upon no reason at all.'

These terms in fact, then, though constantly used to describe large bodies of religionists, are neither of them, religious terms : they simply express the political relation of a heterogeneous multitude of their fellow-subjects to the esta- blished church ; a multitude including the wide extremes of the devout catholic and the avowed unbeliever ; the Painite and the Southcottite ; the ultra-Calvinist and the rational Unitarian. They are terms too, which, unlike the vast ma- jority of those in our Lexicon, we trust, will be found to vary in their meaning according to that particular part or subdivision of our common, happy country in which these observations may meet the eye of our readers. In England, for instance, his majesty's good and acute subjects of the kirk of Scotland, in common with the other Presbyterians, are dissenters ; in Scotland, the Episcopalian of the ever-loyal church of England is a dissenter; in Canada, the Protes- tant of whatever denomination ; all of them in their respective situations, in the places ' afore- said,' and for reasons by them deemed ' mate- rial' or ' no reason at all,' dividing from the esta- blished church.

We can only, therefore, in this place affix to so vague a term its more common and popular meaning. Connected necessarily with no religion, as we, after Mr. Justice Blackstone, contend, it has still too much of the savour of piety about it to be affiliated by the unbeliever; on the other hand it has too little of antiquity and dignity to be acknowledged by the

consistent Catholic; to the Protestant dissenters, therefore, whatever the sages of the law may determine, and whatever may be its unhappy or discreditable associations, it seems, at last to belong : they are THE DIS- SENTERS of common parlance ; and we propose, therefore, to offer to our readers in this paper, 1st, Some account of their existing legal situa- tion and rights ; 2dly. Of the principles com- mon to this body as separatists from the establish- ment ; and, 3dly. Of their political history.

1 . Of the legal situation of Dissenters. — The basis of the existing law of England, on the sub- ject of separatists, is still to be found in the sta- tutes of 1 Eliz. c. 2. §. 14.; 23 Eliz. c. 1.; and 29 Eliz. c. 6. The first of these enacts, that every person, not having reasonable excuse, shall resort to his parish church or chapel, or upon reason- able let thereof to some usual place where com- mon prayer shall be used, on every Sunday and holiday,' on pain of punishment by the censures

of the church, or of forfeiting, for every offence, 1 Id. The second, that every person above the age of sixteen, who shall not repair to some church or chapel, or usual place of common prayer, shall forfeit for every month £20; and if he shall forbear for twelve months, he shall be bound to the good behaviour till he conform. The third, that every offender in not repairing to church, having been once convicted, shall, with- out any other indictment or conviction, pay half yearly into the exchequer £20 for every month afterwards till he conform ; which if he shall omit to do, the king may seize all his goods, and two parts of his lands. And by 3 Jac. I. c.4, §. 11, the king may refuse the £20 a month, and take two parts of the land at his option.

By the 3 Jac. I. c. 5, no recusant, not repair- ing to church, being convicted thereof, shall enjoy any public office ; or shall practise law or physic, or be executor, administrator, or guar- dian. And by the 35 El. c. 1., if any person refusing to repair to church, shall be present at any assembly, meeting, or conventicle, under pre- tence of any exercise of religion, he shall be im- prisoned till he conform ; and if he shall not con- form in three months, he shall abjure the realm, which if he shall refuse to do, or after abjuration shall not go, or shall return without license, he shall be guilty of felony, without benefit of clergy. And whether he shall abjure or not, he shall for- feit his goods and his lands during life.

These severe injunctions and penalties are suspended, but not repealed, by the celebrated Toleration Act, 1 W. & M. st. 1. c. 18, « for ex- empting

their majesty's protestant subjects, dis- senting from the church of England, from the penalties of certain laws ;' which is confirmed by stat. 10 An. c. 2, and declares that neither the laws above-mentioned, nor any other penal laws made against popish recusants (except the cor- poration and test acts), shall extend to any dis- senters, other than papists, and such as deny the Trinity : provided, 1 . That they take the oaths of allegiance and supremacy (or make a similar affirmation, being Quakers — see stat. 8Geo. I.e. 6) ; and subscribe the declaration against popery. 2. That they repair to some congregation certi- fied to, and registered in, the court of the bishop or archdeacon, or at the county sessions. 3. That the doors of such meeting-house shall be unlocked, unbarred, and unbolted; in default of which the persons meeting there are still liable to all the penalties of the former acts.

The offence of non-conformity is therefore not to be considered as legally abrogated, although it ' ceases to exist,' as Blackstone says, ' with regard to protestant dissenters, during their com- pliance with the condition imposed by the act of toleration : and, under these conditions, all per- sons, who will approve themselves no papists or oppugners of the Trinity, are left at full liberty to act as their consciences shall direct them in the matter of religious worship. And if any person shall wilfully, maliciously, or contemptu- ously disturb any congregation, assembled in any church or permitted meeting-house, or shall mis- use any preacher or teacher there, he shall (by virtue of the same statute), be bound over to the sessions of the peace, and forfeit £20 But by statute 5 Geo. 1. c. 4, no mayor or principal

magistrate must appear at any dissenting meet- ing with the ensigns of his office, on pain of disabi- lity to hold that or any other office ; the legislature judging it a matter of propriety, that a mode o%. worship set up in opposition to the national, when allowed to be exercised in peace, should be exercised also with decency, gratitude, and humility. Neither doth the act of toleration ex- tend to enervate those clauses of the statutes 13 and 14 Car. II. c. 4, and 17 Car. II. c. 2, which prohibit (upon pain of fine and imprison- ment), all persons from teaching school, unless they be licensed by the ordinary, and subscribe a declaration of conformity to the liturgy of the church, and reverently frequent divine service established by the laws of the kingdom.'

Since the time of Blackstone, by stat. 53 Geo. III. c. 160, so much of 1 W. & M. c. 18, as ex- cepts persons denying the Trinity, from the be- nefit of that act, and so much of stat. 9 and 10 W. III. c. 32, as imposes penalties on persons denying the Trinity, are repealed ; 57 Geo. III. c. 70, also repeals the like provii ions of the Irish act 6 Geo. I. c. 5.

So far, therefore, has our statute-book been cleared of all that directly or

practically imposes penal restrictions on Protestant dissenters in the exercise of their religion. But important bar- riers are still placed around them in regard to what they consider as their civil rights. The statute 13 Car. 2, st. 2, c. 1, usually called the Corporation Act, disqualifies for offices relating to the government of any city or corporation, such as have not, within a twelvemonth before their election, received the sacrament of the Lord's Supper, according to the rites of the church of England (enjoining also the oaths of allegiance and supremacy); and the 25 Car. II. c. 2, commonly called the Test Act, directs all officers civil and military, to take the oath, and make the declaration ˆagainst transubstantiation six months after their admission, and also within the same time to receive the sacrament of the Lord's Supper, according to the usage of the church of England. If, without taking the sa- cramental qualification within the time prescribed by the act, a person continues to occupy a civil office, or to hold a military commission, and is lawfully convicted, then he is disabled from thenceforth, for ever, from bringing any action in course of law, from prosecuting any suit in any court of equity, from being guardian of any child, or executor or administrator of any per- son, as well as from receiving any legacy. Such is the legal situation of the dissenting laity.

Dissenting teachers in order to be exempted from the penalties of the statutes 13 and 14 Car.

II. c. 1 ; 15 Car. II. c. 6, must subscribe the articles of religion mentioned in stat. 13 Eliz. c. 12 (which only concern the confession of the true Christian faith, and the doctrine of the sacraments) ; with an express exception of those relating to the government and powers of the church, and to infant baptism ; or, if they scru- ple subscribing the same, are to make and subscribe the declaration prescribed by 19 Geo.

III. c. 44, professing themselves to be Chris- tians and Protestants, and that they believe the Scripture to contain the revealed will of God, and to be the rule of doctrine and practice.

'And the justices at the sessions where any Protestant dissenting minister shall live, are required to tender and administer the said last- mentioned declaration to such minister, upon his offering himself to make and subscribe the same, and thereof to keep a register; for the registering of which he shall pay 6d. to the offi- cer of the court, and no more ; and 6d. for a certificate thereof signed by such officer.'

By stat. 10 Ann. c. 2, § 9. Any preacher or teacher of any congregation of dissenting protes- tants, duly qualified according to the act of W. & M., shall be allowed to officiate in any congregation, although the same be not in the county where he was so qualified ; provided that the place of meeting hath been duly certi- fied and registered : and such teacher or preacher shall, if required, produce a certificate of his having so qualified himself, under the hand of the clerk of the peace where he was qualified ; and shall also, before any justice of such county or place where he shall so officiate, make and subscribe such declaration, and take such oaths as aforesaid, if required.

And by 1 W. & M. c. 18. § 11., and 19 Geo. III., c. 44. § 1. Every such teacher and preacher, that is a minister, preacher, or teacher of a congregation, having taken the oaths, and subscribed as aforesaid, shall from thenceforth be exempted from serving on any jury, or from being chosen or appointed to bear the office of churchwarden, overseer of the poor, or any other parochial or ward office, or other office, in any hundred of any shire, city, town, parish, division, or wapentake, and by 42 Geo. III., c. 90, and 43 Geo. III., c. 10, from serving in the militia, either personally or by substitute, if he be a licensed teacher of any separate congre- gation, and has been licensed twelve months previous to the yearly general meeting appoint- ed to be held in October, &c. : and by 43 Geo. III., c. 96, § 12, from serving under the army of reserve act, If he be a licensed teacher of any separate congregation in holy orders, or pretended holy orders, and not carrying on any other trade, or exercising any other occupation for his livelihood, except that of a school- master.

By stat. 52 Geo. III., c. 155, § 2, no congre- gation of Protestants for religious worship, where more than twenty persons shall be present besides the preacher's family, shall be permitted (unless registered under former acts) until duly certified to the bishop, &c., or to the sessions, and a due return shall be made thereof once a year to the bishop or archdeacon, and registered in the court of the bishop, &c., on penalty of £20 on every person allowing any such congre- gation, to meet in any place occupied by him. Persons preaching in any place without consent of occupiers, are liable to a penalty of £30.

And by § 4. Every person who shall teach or preach at, or officiate in, or shall resort to any congregation or assembly for religious worship of protestants, whose place of meeting shall be duly certified according to the provisions of this act, or any other act or acts relating to the certi- fying and registering of places of religious wor- ship, shall be exempt from all such pains and

penalties under any act or acts relating to re- ligious worship, as any

person who shall have taken the oaths and made the declaration pre- scribed by or mentioned in the 1 \V. & M. or any act amending the said act, is by law exempt. And by § 6, it is provided, that no person shall be required by any justice to go to any greater distance than five miles from his own home, or from the place where he shall be re- siding at the time of such requisition, for the purpose of taking such oaths as aforesaid.

§ 7. Any of his majesty's protestant subjects may appear before any one justice, and produce to such justice a printed or written copy of the said oaths and declaration, and require such justice to administer such oaths, and to tender such declaration to be made, taken, and subscribed by such person ; and thereupon such justice shall administer such oaths, and tender such declaration to the person requiring to take and make and subscribe the same; and such person shall take and make and subscribe such oaths and declaration in the presence of such justice accordingly ; and such justice shall attest the same to be sworn before him, and shall trans- mit or deliver the same to the clerk of the peace for the county, 8tc., for which he shall act as such justice, before or at the next general or quarter sessions of the peace for such county, &c. And for the making and signing of which cer- tificate, where the said oaths and declaration are taken and made on the requisition of the party taking and making the same, such justice shall be entitled to demand and have a fee of 2s. 6d. and no more : and such certificate shall be con- clusive evidence that the party named therein has made and taken the oaths and subscribed the declaration in manner required by this act.

Dissenters chosen to any parochial or ward offices, and scrupling to take the oaths, may ex- ecute the office by deputy, who shall comply with the law in this behalf. Stat. 1 W. & M. st. 1, c. 18. — But it appears that they are not sub- ject to fine on refusing to serve corporation offices. For where a freeman of London was elected one of the sheriffs, but refused to take the office on account of his being a dissenter, and, as such, not having received the sacrament according to the rites of the Church of England, within a year before his election, an action was brought in the Sheriff's Court, for the. penalty incurred by such refusal, and a judgment re- covered ; which judgment was affirmed in a writ of error brought in the court of Hustings. But the defendant having obtained a commission of errors, the judges' delegates reversed both judg- ments; and, on a writ of error in parliament, this judgment of reversal was affirmed ; the judges being (except one) of opinion that the defendant was at liberty to object to the validity of his election, on the ground of his own non- conformity.

And thus the reader has before him a summary view of the existing legal situation and rights of the Protestant Dissenting body.

2. Of the principles common to thts body as separatists from the establishment, we know of no general authentic summary : but dissenters at large are very familiar with those arguments for

the liberty of conscience, the right of private judgment, and final obedience to God alone in re- ligion, which they consider as involving the right and duty of the course they adopt. They are also not without respectable publications on the subject, by learned individuals >f their body. It will be sufficient to mention those of Dod- dridge, Watts, Dr. John Taylor, Neal, Delaune, Palmer, and Towgood, all of whom have pro- duced able defences of the dissenting system.

The celebrated Richard Baxter declared, what is true, perhaps, of a majority of the existing dissenters, that the Non-conformists of his day agreed with the doctrines of the thirty-nine arti- cles, and differed only from the church in the form of government. He says, that the Inde- pendents, as well as Presbyterians, offered to sub- scribe to the articles, except as to prelacy and ceremony. ' We are one,' he adds, ' with the church of England in all the necessary points of faith and Christian practice.'

Yet these men departed from the church of England, at the expense of all their earthly comforts; and some of them braving perse- cution, 'even to death;' laid the foundation of the existing dissent, by denying the atitho- rity of any body of fallible men to ' decree rites and ceremonies' in the church. They contended, as do the modern dissenters, that what was left indifferent by the only lawgiver of his church, should not be made important and peremptorily enjoined upon his followers. They revolted, particularly, at subscribing to the principle of ' a power in the church to decree rites and ceremo- nies, and to have authority in matters of faith,' as so indefinite and extensive, that under the shadow of it, all the enormous usurpations and superstitions of the church of Rome might be and have been included. If the church of Eng- land, it is moreover said, claims and exercises this power, and obliges all its ministers to subscribe to articles of faith, which it hath authoritatively decreed, and to use in religious worship cere- monies and rites, which it hath authoritatively enjoined ; hath not the church of France, or the church of Spain, the same authority and power? It cannot be an exclusive privilege of any one church. And if it be allowed that the church of Rome hah this prerogative, such a claim would overthrow the Reformation and the foundations of the church of England itself. They say, with a modern divine of the church of England, 'When-

ever useless rites and ceremonies are imposed, corruptions are passed into a law, and the terms of communion are such as are not authorised by the law of Christ, then it becomes a duty to dissent, and they are the separatists who compel others to divide, not they who deplore the ne- cessity of so doing.'

But dissenters have further enquired, who are the persons that are, in point of fact, invested with this authority and power ? In other words, who are the church ? This power to order the manner of God's worship, and to settle articles of faith, is not lodged in the bishops and clergy, who are usually denominated our spiritual pas- tors and guides, but entirely in the king and parliament of these realms, under whose direc- tion and control the clergy are to act. Accord-

ingly, the dissenters allege, that the church of England is a parliamentary church ; not pro- perly an ally, but a mere creature of the existing government, depending entirely upon the acts and authority of parliament for its essence and frame. The qualifications of its ministers, their power to officiate, the manner in which they are to administer the sacraments, are all limited and prescribed by authority of parliament : and this authority, which at first made, can alone alter and new make it; can abolish, or add to, its arti- cles or rites, according to its pleasure, even though the whole body of bishops and clergy ever so much dislike or ever so earnestly protest against it. Therefore, while some dissenters justify their dissent from the establishment, because, for example, they think that some cere- monies imposed, or the various orders of minis- ters, or the received subjects of baptism, or the mode of administering baptism and the Lord's supper, or the state of her discipline, are incom- patible with the scriptural pattern ; others go farther, and attempt to prove, that every religious establishment is neither more nor less than a direct violation of some of the strongest injunc- tions of the great Head of the church.

These quote the words of Jesus Christ, ' My kingdom is not of this world,' as virtually for- bidding all such attempted alliances between church and state, as every ecclesiastical esta- blishment involves. They say that such a system debases Christianity into an engine of state, se- cularises its ministers and institutions, argues a concealed distrust of the apostolic weapons of faith, prayer, and ' the words of truth and sober- ness,' and is, in its influence on the conduct of the dominant party towards those who differ from them, essentially persecuting.

In confirmation of this view of the subject, they adduce the existing state of the laws with regard to dissenters. They argue that, every man has a right to the common privileges of the society in which he lives ; and among these common privileges is a legal capacity for serving his sovereign and country;

a right, so important, that the forfeiture of it is made the punishment of some of the greatest crimes. No man who does not forfeit that capacity of serving his sove- reign and country, which is his natural right, as well as the honor and emoluments that may happen to be connected with it, by overt-acts, ought to be deprived of them; and disabilities that are not thus incurred, are unjust penalties, implying both disgrace and privation. Punish- ment, without the previous proof of guilt, cannot be denied to be an injury ; and injuries inflicted, on account of religion, are undoubtedly perse- cutions.

The dissenters, therefore, contend, that the subjection to higher powers, and obedience to magistrates, which the Scriptures enjoin on Christians, relates only to civil, not at all to religious matters ; and that so far is Christianity from enjoining, that it actually forbids obedience to civil governors in things of a religious nature. It commands us to 'call no man upon earth fa- ther or master,' Matthew xxiii. 8, 9, i.e. to ac- knowledge no authority or jurisdiction of any in matters of religion, but to remember that

'One only is our master' and lawgiver, even Christ; and that all Christians are brethren, Matthew xx. 25.

We cannot follow out the dissenting system into its numerous separate lines of divergence from the established church. Under the parti- cular names of each of their well-known deno- minations will these be fully discussed. But many pious and excellent men, we may add, have divided from the church of England, on account of her laxity in discipline ; others from the evident disagreement, as they allege, between the doctrines of the desk, or liturgy, and those of the pulpit ; and while the major part of dis- senters, as we have stated, profess agreement with her doctrinal articles, a respectable minority would object to several of them. The entire system of Wesleyan Methodism, a species of modern dissent, has grown out of the first of these complaints against the church. We do not feel ourselves called upon to add more as to the general principles of this body. See ME- THODISTS.

*3. Their history, dissenters, of course, contend, commences with the persecutions of that early sect of our religion with whose affairs the book of the Acts of the Apostles is occupied : but, in this country, they consider themselves the succes- sors of the Wicliffites and Lollardites of the fourteenth century. Of John Wicliff Mr. Gil- pin says, * The authority claimed by the church he strenuously opposed. It was a scandal, he would say, to the Christian church, that any of its mem- bers should set up their*

owoi authority against that of their Saviour. The great argument of that day (which was indeed a subtle one) for the authority of the church, was this. Many persons, besides Mathew, Mark, Luke, and John, wrote gospels; but the church rejected them all, excepting these four : and this it did by its own proper authority. It might, by the same autho- rity, have rejected those four gospels, and have received others. It follows, therefore, that the authority of the church is above that of any gos- pel.— To this Wicliff replied, that the evidence for the received gospels was so strong, and that for the rejected ones so weak, that the church could not have done otherwise than it did, without doing violence to reason. But the best argument, he said, if it were proper to avow it, for sup- porting the authority of the church, was the necessity of it to support the tyranny of the pope. This was what made it worth defending at the expense of truth. In another place, speaking on the same subject, he says, that the pope would not submit his actions to the same criterion, by which Christ was contented to have his actions tried. If I do not, says Christ, the works of my father which is in heaven, believe me not. But the pope's authority, it seems, must be acknow- ledged, though he manifestly does the works of the devil. Thus, says he, Christians are in greater thraldom than the Jews under the old law ; and that liberty, by which Christ hath made us free, is, by the wickedness of designing men, changed into the most absolute spiritual bondage. The days, says he, I hope, will come, when men will bf> wise enough to shake from their necks the dominion of human ordinances; and disdain

submission to my ecclesiastical injunctions, but such as are plainly authorised by the word of God.'

Early in the Reformation, a respectable party of the church of England contended for a more complete departure from the popish models of church government and discipline. Bishop Hoo- per, perhaps, led the way to the practical se- cession that afterwards took place, by refusing to be consecrated in the Roman pontificals. This was in the reign of Edward VI. On the perse- cutions that arose under queen Mary, a conside- rable number of the British exiles settled at Frankfort, and agreed to conduct their worship, without answering aloud after the minister, and without using the liturgy and surplice ; to begin the public service with a general confession of sins, then to sing a psalm, after which the minister prayed for the divine assistance, and next pro- ceeded to the sermon ; after sermon, to use a ge- neral prayer for all estates, and particularly for England, at the end of which were subjoined the Lord's prayer, and a rehearsal of the articles of belief; then the people were to sing another psalm, and the minister to dismiss them with a blessing. Such was the order which they had unanimously adopted ; and, having chosen a minister and deacons, they invited their dispersed brethren to join with them. In the year 1556 Dr. Cox joined them, with several of his friends; who interrupted the public

service by answering aloud after the minister, and read the whole litany, in violation of the agreement upon which the con- gregation was formed. They out-numbered the first settlers, and, obtaining leave of the magis- trates for the free use of king Edward's service- book, performed divine worship according to the rites that had been authorised by that prince. The original party, upon this, left the city of Frank- fort, and removed to Basil and Geneva. Here commenced the distinction of Puritans and Con- formists, by which the two parties were ever afterwards known, the former being called Conformists, on account of their compliance with the ecclesiastical laws of Edward VI., and the latter, Nonconformists and Puritans, from their insisting upon a form of worship of a purer kind, as they alleged.

On the accession of queen Elizabeth, the schism became more important. Dr. Cox was appointed bishop of Ely ; and the standard of orthodoxy, according to this divine, and the majority of the bishops, was ' the queen's supremacy and the laws of the land ;' whilst the Puritans contended for ' the decrees of provincial and national synods,' allowed and enforced by the civil magistrate; for neither party, it must be allowed, was for admitting full liberty of conscience, and freedom of religious profession.

Ministers were now obliged to comply with an act for the uniformity of common prayer and ser- vice in the church and administration of the sacraments ; to subscribe a declaration of faith, issued by order of the archbishops and bishops, for the unity of doctrine ; to take the oath of su- premacy to the queen, &c. Tiie question about habits was revived ; and in 1566 these and se- veral other ceremonies, imposed by law, com- pelled the puritans to an open separation. la

the following, year they published other objec- tions against the hierarchy and various ceremo- nies, for the use of which, they contended, there was no foundation in Scripture or antiquity. The leaders of this separation were chiefly beneficed persons of the diocese of London ; who first assembled, with such of their flocks as chose to follow them, in woods and private houses, sub- jecting themselves to a variety of legal penalties and frequent imprisonment. The adherence of the puritans to Calvinistic principles seems, in no small degree, to have urged the established clergy at this time to adopt the intricate distinc- tions of Arminius on the subject of grace, free- will, &c. But several episcopal divines remained attached to the puritan system in the reign of James I. ; and all these abettors of Calvinism, whether episcopal or presbyterian, were called doctrinal puritans. At length, according to Ful- ler (Church Hist, book ix. p. 97, book x. p. 100),

the name was extended to stigmatise all those who endeavoured in their devotions to accom- pany the minister with a pure heart, or who were remarkably holy in their conversation.

Queen Elizabeth and James I. treated these early dissenters with that rigor which induced many of them to emigrate to the colonies. In the year 1629 they founded Massachusett's Bay. The colony of Connecticut was formed by emi- grants of the same class in 1636, and that of New Haven by those who, in 1637, fled from the per- secution of Laud, and the oppressions of the star-chamber and high commission courts. The puritans were afterwards not allowed to transport themselves to New England ; we have seen, in the article CROMWELL, how singularly the future lord protector was then prevented expatriating himself; and many of them removed, with their families, to the Low Countries.

On the restoration of Charles II., in the year 1660, the name of Puritans, says bishop Burnet, was changed into that of Protestant Noncon- formists, who were subdivided into Presbyterians, Independents, Anabaptists, and Quakers. At this time a second Act of Uniformity was passed, by which all who refused to observe the rites, and subscribe the doctrines, of the church of England, were entirely excluded from power. From this period until the reign of king William III. the Nonconformists were in a very precarious situation, sometimes involved in calamity and trouble, and at other times enjoying intervals of tranquillity, according to the varying temper of the court and ministry. But in the year 1 689 the ̂memorable bill for the toleration of all Pro- testant dissenters from the church of England, except impugners of the Trinity, passed in par- liament almost without opposition, and delivered those who could comply with the conditions it imposed from the penal laws to which they had been so long subjected.

Fluctuations have taken place in the political treatment of dissenters since this period, and in the close of the reign of queen Anne the act of Occasional Conformity, which was pushed for- ward by the high-church party, threatened the ex- tinction of lueir new liberties. But the accession of the present illustrious House of Brunswick to the throne of these realms has confirmed and

enlarged them ; and each of the successive mo- narchs has renewed and redeemed his pledge to keep the toleration act inviolate : and while the parties interested are still hopeful of the abro- gation of all excluding statutes, on the subject of religion, they wait with patience the final con- viction of the government and country as to the period of awarding their rights.

DISSENTIENT ; a word literally signifying they dissent or disagree,

prefixed to protests, or rather to the reasons of dissent, given in by protesting peers, in the upper House of Parliament, to be entered on the journals of the house.

DISSERTATION, n. s. Lat. dissertatio. A discourse; a disquisition , a treatise.

Plutarch, in his dissertation upon the Poets, quotes an instance of Homer's judgment in closing a ludicrous scene with decency and instruction.

Broome on the Odyssey.

I have known a woman branch out into a long ex- tempore dissertation upon the edging of a petticoat, and chide her servant for breaking a china cup in all the figures of rhetoric. Addison.

The following relation is so curious and entertain- ing, and the dissertations that accompany it so judi- cious and instructive, that the translator is confident his attempt stands in need of no apology.

Johnson. Preface to Father Lobo's Voyage.

DISSE'RVE, v. a. ~\ Dis and serve.

DISSE'RVICE, n. s. f To do injury to ;

*DISSE'RVICEABLE, adj. I to damage; hurt. DISSE'RVICEABLENESS, n. s. **

Having never done the king the least service, he took the first opportunity to disserve him, and engaged against him from the beginning of the rebellion.

Clarendon.

All action being for some end, and not the end itself, its aptness to be commanded or forbidden, must be founded upon its serviceableness or disser- viceableness to some end. Norris.

We shall rather perform good offices unto truth, than any disservice unto relaters who have well de- served. Browne.

Great sicknesses make a sensible alteration, but smaller indispositions do a proportionable disservice.

Collier,

Desires of things of this world, by their tendency, promote or disserve our

interests in another. Rogers.

‘ DISSETTLE, v. a. Dis and settle. To un- settle ; to unfix.

DISSEVER, v. a. Dis and sever. In this word the particle dis makes no change in the signification, and therefore, says Dr. Johnson, the word, though supported by great authorities, ought to be ejected from our language. To part in two ; to break ; divide ; rend asunder ; dis- unite.

Dissever your united strengths. And part your mingled colours once again.

Shakspeare,

The dissevering of fleets hath been the overthrow of many actions. Raleigh.

Shortly had the storm so dissevered the company, which the day before had tarried together, that most of them never met again, but were swallowed up.

Sidney.

The meeting points the sacred hair dissever From the fair head, for ever and for ever. Pope.

DIS

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DIS

For surprise is only produced when any external irritations suddenly obtrude themselves, and dissever iar passing trains of ideas. Darwin.

*DIS’SIDENCE. n. s. * Lat. dissideo. Dis- DIS’SIDENT, $ cord ; disagreement.*

Kee the article DISSIDENTS.

DISSI’LIENCE,n.s.j Lat. dissilio. The DISSI’LIENT, adj. >act of starting asun DISSI’LIATION, n.s. j der. The air having much room to rereive motion, the

dissilition of that air was great.

Boyle’s Spring of the Air.

DISSIMILAR, adj. ˆ Dis and similar. Un-

DISSIM'ILARITY, n. s. > like ; heterogeneous :

DISSIMILITUDE. j want of similitude.

Thereupon grew marvellous dissimilitudes, and by reason thereof jealousies, heartburnings, jars, and discords. Hooker.

Simple oil is reduced into dissimilar parts, and yields a sweet oil, very differing from sallet oil.

Beyle:

The dissimilitude between the Divinity and images, shews that images are not a suitable means whereby to worship God. Stillingfleet.

As human society is founded in the similitude of some things, so it is promoted by some certain dissi- militudes. Grew.

The light whose rays are all alike refrangible, I call simple, homogeneal, and similar ; and that, whose rays are some more refrangible than others, I call compound, heterogeneal, and dissimilar. Newton.

If the principle of reunion has not its energy in this life, whenever the attractions of sense cease, the acquired principles of dissimilarity must repel these beings from their centre. Cheyne.

Women are curious observers of the likeness of children to parents, that they may, upon finding dis- similitude, have the pleasure of hinting unchastity.

Pope's Odyssey, Notes.

Ideas of the same race, though not exactly alike, are sometimes so little different that no words can express the dissimilitude.

Johnson. Preface to Dictionary.

DISSIMULATION, n. s. 2 Lat. dissimula- DISSIM'ULATING, n. s. $tio. See DIS- SEMBLE. The act of dissembling; hypocrisy; fallacious appearance or pretensions. See the extract from the Tatler.

Who coude tellen you the forme of daunces So uncouth, and so freshe countenances, Swiche subtil lokings and dissimulings, For dred of jalous mennes apperceivings.

Chavcer. Cant. Tales.

Dissimulation is but a faint kind of policy ; for it asketli a strong wit, and a strong heart, to know when to tell truth, and to do it. Bacon.

He added not ; and Satan bowing low His grey dissimulation, disappeared Into thin air diffused. Milton.

Dissimulation may be taken for a bare concealment of one's mind ; in which sense we commonly say, that it is prudence to dissemble injuries. South.

The learned make a difference between simulation and dissimulation. Simulation is a pretence of what is not, and dissimulation is a concealment of what is.

Tatler, 213.

dis and seps, sepis, a venomous serpent, because whatever is bitten thereby, putrifies. — Minsheu To disperse; scatter; destroy: dissipation is the act or habit of dispersing or wasting : applied figuratively also to the mind, and particularly the attention. Dissipable is an obsolete adjective for, easily dispersed, or liable to dispersion.

The heat of those plants is very dixsipakle, which under the earth is contained and held in ; but when it comcth to the air it exhaleth.

Bacon's Natural History.

Abraham was contemporary with Palcg, in whose time the famous dissipation of mankind, and distinc- tion of languages, happened.

Hole's Origin of Mankind.

It is covered with skin and hair, to quench and dissipate the force of any stroke, and retard the edge of any weapon. Ray.

Gold is a wonderful clearer of the understanding ; it dissipates every doubt and scruple in an instant.

Addison.

I have begun two or three letters to you by snatches, and been prevented from finishing them by a thousand avocations und dissipations. Swift.

The parts of plants are very tender, as consisting of corpuscles which are extremely small and light, and therefore the more easily dissipable.

Woodward's Natural .History. The circling mountains eddy in, From the

bare wild, the dissipated storm.

Thomson.

This slavery to his passions produced a life irregular and dissipated. Johnson, Savage's Life.

DISSIPATION, in physics, an insensible loss or consumption of the minute parts of the body ; or that flux whereby they fly off" and are lost.

DISSIPATION, CIRCLE OF, in optics, that cir- cular space upon the retina, which is taken up by one of the extreme rays issuing from an object. When the distance of an object from the eye is too small or too great for perfect or distinct vision, the rays of each pencil, issuing from the object, cannot be united at a point on the retina; consequently, the rays of eacli pencil will occupy a circular space upon the retina, which circle is called the circle of dissipation, bcause the rays of a pencil, instead of being col- lected into a central point, are dissipated all over this circle.

DISSIDENTS, a denomination applied in Poland to those of the Lutheran, Calvinistic, and Greek professions. The kings of Poland engaged by the pacta conventa to tolerate them in the free exercise of their religion, but they had often reason to complain of the violation of these promises. See POLAND.

DISSO'CIATE, v. a. Lat. dtssocio. To se- parate ; disunite ; part.

In the dissociating action, even of the gentlest ˆre, upon a concrete, there perhaps vanish some active aud fugitive particles, whose presence was requisite to contain the concrete under such a determinate form.

Boyle.

DIS'SOLUBLE, adj.) Lat. dissolubilis. Ca-

DISSOLUBIL'ITY, n. s. \ pable of separation ; having one part separable from another. Disso lubility is liableness to dissolution.

Nodules, reposed in cliffs amongst the earth, being hard and not so dissoluble, are left behind.

Woodward's Natural H'utory.

DIS

Bodies seem to have an intrinsick principle of

alteration, or corruption, from the dissolubility of their

parts, and the coalition of several particles endued

with contrary and destructive qualities each to other.

Hale's Origin of Mankind.

DISSOLVE', v.a. & n. ˆ Lat. dissolvere, DISSOLV'ENT, n. s. & adj. (from <£»?, asun- DISSOLV'EB, fder, and solverc,

DISSOLV'IBLE, adj. J to loose. To dis-

unite the parts of a thing by moisture or by heat ; to melt ; liquefy : hence, figuratively, to destroy a union, compact, or delusion, as well as to dissipate obscurity or doubt. Dissolvent is having the power of dissolving; dissolver is synonymous with it as a substantive : dissolvible is, liable to liquefy or disperse by dissolution.

I haue a desier to be dissolved and to be with Crist, it is mych more bettre. Wiclif. Filipensis 1.

And I have heard of thee, that thou canst make interpretations and dissolve doubts. Dan. v. 16.

If there be more, more woeful, hold it in ; For I am almost ready to dissolve, Hearing of this. Shakspeare. King Lear.

She and I, long since contracted, Are now so sure that nothing can dissolve us. Id. By the king's authority alone, and by his writs, parliaments are assembled ; and by him alone they are prorogued and dissolved, but each house may ad- journ itself. Bacon to Villiert.

Down fell the duke, his joints dissolved asunder, Blind with the light, and stricken dead with wonder.

Fairfax.

Witness these ancient empires of the earth In height of all their flowing wealth dissolved.

Milton.

Angels dissolved in hallelujahs lie. Dryden.

The commons live, by no divisions rent ; But the great monarch's death dissolves the govern- ment. Id. In man and viviparous quadrupeds, the food, mois- tened with the spittle, is first chewed, then swallowed into the stomach, where, being mingled with dissolvent iuices, it is concocted, macerated., and reduced into a chyle. liny.

As wax dissolves, as ice begins to run And trickle into drops before the sun. So melts the youth, and languishes away.

Addison's Ovid.

Such things as are not dissolvable by the moisture of the tongue, act not upon the taste. Newton.

Spittle is a great dissolvent, and there is a great quantity of it in the stomach, being swallowed con- stantly. Arbuthnot.

Fire, and the more subtle dissolver, putrefaction, by dividing the particles of substances, turn them black.

Id.

The snow dissolved, no more is seen, The fields and wood, behold ! are green.

Johnson. Despotic love dissolves the bestial war. Darwin.

DIS'SOLUTE, adj. •} Yr.dissolu; Italian, DIS'SOLUTELY, adv. f Span, and Port, disso- DIS'SOLUTENESS, n.s. tluto; Lat. dissdutus, DISSOH/TION. } from dis and solvere,

tolutus, to loose. Unrestrained by law or morals ; debauched ; luxurious. Dissolution is more generally applied in the literal sense, and to death. Dissoluteness, to behaviour or man- ners : yet both occur in the latter sense ; and dissolution is used by lord Bacon for the sub- stance formed by dissolving a body.

A giant huge and tall, Who him disarmed, dissolute, dismayed, Unawares surprised. Faerie Queene.

He determined to make a present dissolution of the world. Hooker.

Such stand in narrow lanes, And beat our watch, and rob our passengers ; While he, young, wanton, and effeminate boy, Takes on the point of honjur, to support So dissolute a crew. Shakspeare, Richard If.

I am as subject to heat as butter ; a man of con- tinual dissolution and thaw.

Id. Merry Wives of Windsor. The life of man is always either increasing towards ripeness and perfection, or declining and decreasing towards rottenness and dissolution. Raleigh's History.

Weigh Iron and aqua-fortis severally ; then dis- solve the iron in the aqua-fortis, and weigh the disso- lution. Bacon.

Neither doth God say, I was the God of Abraham, Isaac, Jacob ; but I am. The patriarchs still live, after so many years of dissolution.

Bp. Hall's Contemplations.

Yet, I deny not, but dissolute men, like unskilful horsemen, which open a gate on the wrong side, may, by the virtue of their office, open heaven for other, and shut themselves out. Fuller.*

A longing after sensual pleasures is a dissolution of the spirit of a man, and makes it loose, soft, and wandering, unapt for noble or spiritual employments.

Bp. Taylor. We expected

Immediate dissolution, which we thought Was meant by death that day.

Milton Paradise Lost. They cooled in zeal,

Thenceforth shall practise how to live secure. Worldly, or dissolute, on what their lords Shall leave them to enjoy. Id.

If we look into the common management, we shall have reason to wonder, in the great dissoluteness of manners which the world complains of, there are any footsteps at all left of virtue. Locke.

Is a man confident of wealth and power 1 Why let him read of those strange unexpected dissolutions of the great monarchies and governments of the world. South.

The true spirit of religion banishes indeed all levity of behaviour, all vicious and dissolute mirth ; but, in exchange, fills the mind with a perpetual serenity. Addison's Spectator.

That mind is dissolute and ungoverned, which must be hurried out of itself by loud laughter or sen- sual pleasure, or else be wholly inactive. Steele.

Would they have mankind lay aside all care oi provisions by agriculture or commerce, because possi- bly the dissolution of the world may happen the next moment 1 Bentley.

In the next place, Sir, I am clear that the act of union, reciting and ratifying one Scotch and one Eng- lish act of parliament, has not rendered any change whatsoever in our church impossible, but by a disso- lution of the union between the two kingdoms.

Burke.

A dissolution of all bonds ensued ; The curbs invented for the mulish mouth Of headstrong youth were broken. Coioper. DISSOLUTION, in physics, a general name for all reductions of concrete bodies into their small- est parts, without regard either to solidity or flui- dity ; though in the usual acceptation of the word among authors, it is restrained to the reduction

of solid bodies into a state of fluidity ; which is more properly expressed by solution. See CHE- MISTRY.

DIS'SONANCE, n. s. > Fr. dissonance ; Ital. DIS'SONANT, adj. ydissonanza; Lat. disso- nantia, from dis, diversely, and sonans, sonantis, sounding. Harshness, or jargon of sounds ; dis- agreement: dissonant is inharmonious; and hence incongruous; disagreeing; followed by f^orn, and less correctly by to.

Though he nought fonde yet would he lie Discordaunt er fro armonie, And dissonid fro melodie ; Controve he would, and foule faile, With hornpipis of Cornewaile.

Chaucer. Romaunt of the Rose. Still govern thou my song, But drive far off the barbarous dissonance Of Bacchus and his revellers. Milton.

What can be more dissonant from reason and nature, than that a man, naturally inclined to clemency, rhould shew himself unkind and inhuman ?

Hakewill on Providence. With to ; less properly.

When conscience reports any thing dissonant to truth, it obliges no more than the falsehood reported by it. South.

Dire were the strain, and dissonant, to sing The cruel raptures of the savage kind. Thomson.

DISSUADE' v.a. -\ Fr. dissuader;

DISSTJADE'R, n. $. f Span, dessuadir;

DISSUA'SION, £ Lat. distuadere :

DISSUA'SIVE, adj. & n. s. J dis, opposite, and

suadere, to persuade. To dehort ; divert from, by

persuasion : dissuader is he who endeavours to do

this ; and dissuasion the act or means of doing it.

We submit to Caesar, promising To pay our wonted tribute, from the which We were dissuaded by our wicked queen.

Shakspeare. Cymbeline. Not diffident of thee do I dissuade Thy absence from my sight.

Milton's Paradise Lost.

What is meant by disswading ; it is making a man to change his opinion, and unfixing of the mind.

Bp. Taylor.

Endeavour to preserve yo-.iRelf from relapse by such dis&tasions from love, as its votaries call invec- tives against it. Boyle. I'd fain deny this wish, which thou hast tnadeˆ Or, what I can't deny, would fain dissuade.

Addison's Ovid. What more powerful dissuasive from suspicion, jea-

Weave thou to end this web which I begjn ; I will the distaff hold, come thou and spin.

Fairfax.

In some proud Boreas never ruled fleet, Who Neptune's web on danger's distaff spins, With greater power than she did make them wenJ Each way, as she that age's praise did bend.

Sidney.

See my royal master murdered. His crown usurped, a distaff in the throne.

Dryden.

In my civil government some say the crosier, some say the distaff, was too busy.

Howel's England's Tears.

I can no more pardon a fair one for endeavouring to wield the club of Hercules, than I could him for at- tempting to twirl her distaff. Goldsmith.

DISTA'IN, v. a. Dis and stain. To stain ; to tinge with an adventitious color ; hence to blot or obliterate.

For certainly all these mowe out suffice To' apperin with my ladie in no wise. For as the sunne woll the fire distain, So passith all my ladie soverain.

Chaucer. Legend of Women. He understood,

That lady, whom I had to me assigned, Had both distained her honourable blood, And eke the faith which she to me did bind.

Faerie Queene

The worthiness of praise distaint his worth, If he that's praised himself bring the praise forth.

Shakspeare.

Nor ceased his arrows, till the shady plain Seven mighty bodies with their blood distain.

Dryden's Virgil.

Place on their heads that crown distained with gore, Which those dire hands from my slain father tore.

Pope.

DISTASTE', n. s. 1 Dis and taste. Dis- DISTASTE'FUL, adj. j relish ; aversion of the palate; disgust: the verb being derived from the noun, and both often applied figuratively. Dangerous conceits are in their nature poisons, Which at the first are scarce found to distaste, But, with a little act upon the blood, Burn like the mines of sulphur.

Shakspeare. Othello. After distasteful looks,

With certain half-caps, and cold moving nods, They froze me into silence. Id. Tlmon.

The king having tasted of the envy of the people, for his imprisonment of Edward Plantagenet, was doubt- to heap up any more distastes of that kind by the

lousy, and anger, than the story of one friend mur- imprisonment of De la Pole also.

dercd by another in a duel. Bp. Home. , Bacons Henry VII.

*T^Toc.irr/T A T^T i-. x * r, A A II is in tne general behalf of society that,I speak, at*

DISaYL LABLE, n. s. AifftrwXXa/Soc. A word ,east thc more judicious part of it> which seems much

of two syllables. distasted with the immodest and obscene writing of

No man is tied, in modern poetry, to observe any many in plays-. Ben Jonson.

farther rule in the feet of his verse, but that they be

dyssyllaUes ; whether spondee, trochee, or iambique, it matters not. Dryden.

He (Shakspeare) seems to have been the very ori- ginal of our English tragical harmony ; that is, the harmony of blank verse, diversified often by dissyllable, and trissyllable terminations. Dennis.

DISTAFF, n. s. Sax. daestaff, from diege, the thigh, and staff, 'because females while spinning fit it to the thigh.' — Minsheu. The staff from which the flax is drawn off in spinning : used as an emblem ci" the sex. VOL. VII.

The ground might be the distasteful averseness of the Christian from the Jew. Browne.

On the part of heaven, Now alienated, distance and distaste, Anger, and just rebuke.

Milton's Paradise Lost. None but a fool distasteful truth will tell ; So it be new and please, 'tis full as well.

Dryden.

Distasteful humours, and whatever else may render the conversation of men grievous and uneasy to oue another, are forbidden in the New Testament.

Tillotson.

V

DIS

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DIS

I am unwilling to believe that he doth it with a de- sigii to play tricks, and fly-blow my words to make others distaste them. Stilling/fleet.

With stern distaste avowed, To their own districts drive the suitor crowd.

Pope's Odyssey.

DISTANCE, v. a. & n. s. } Fr. distance ;

DIS'TANT, adj. S Span, distancia ;

Ital. distanza ; Lat. distantia, from dis, asunder, and stuns, stantis, standing. The extent of space between two standing bodies. The verb seems here derived from the noun. Distant is, remote in place, time, or nature; and in any degree : hence, not obvious; not intelligible.

We come to see fight ; to see thy pass, thy stock, thy reverse, thy distance.

Shakspeare. Merry Wives of Windsor.

Banquo was your enemy, So is he mine ; and in such bloody distance, That every minute of his being thrusts Against my nearest of life. Shakspeare. Macbeth.

A good merchant never demands out of distance of the price he intends to take. If not always within the touch, yet within the reach of what he means to sell for. Fuller.

This heaven which we behold Distant so high. Milton.

On the part of heaven, Now alienated, distance and distaste, Anger, and

just rebuke, and judgment given. Id.

This was the horse that ran the whole field out of distance, and won the race. U Estrange.

We have as much assurance of these things, as things future and at a distance are capable of.

Tillotson.

That which gives a relievo to a bowl, is the quick light, or white, which appears to be on the side near- est to us, and the black by consequence distances the object. Dryden's Dufresnc/y.

I hope your modesty Will know what distance to the crown is due.

Dryden.

Distance is space considered barely in length between any two beings, without considering any thing else between them. Locke.

It was one of the first distinctions of a well-bred man to express every thing obscene in modest terms and distant phrases. Addison's Spectator.

Caesar is still disposed to give us terms, And waits at distance till he hears from Cato.

Addison.

If a man makes me keep my distance, the comfort is, he keeps his at the same time. Swift.

These dwell at such convenient distance, That each may give his friend assistance. Prior. I help my preface by a prescript, to tell that there is ten years distance between one and the other. Id.

Each daring lover, with adventurous pace, Pursued his wishes in the dangerous race j Like the swift hind the bounding damsel Hies, Strains to the goal ; the distanced lover dies. Gay. Tis by respect and distance that authority is upheld.

Atterbury.

The wondrous rook the Parian marble shone, And seemed to distant sight of solid stone. Pope. The senses will discover things near us with suffici- ent exactness, and things distant also, so far as they relate to our necessary use. Watts's Logisk.

The worse living authors fare now, the better they will succeed with posterity ; for the critics love the

aport too well to hunt any but those who can stand a good chase ; and authors are the only objects in na- ture, which are magnified by distance, and diminished by approach. Cumberland.

Be silent ! How the soldiers' rough strain seems Softened by distance to a hymn-like cadence ! Listen ! Byron.

DISTEM'PER, v. a. & re. s. ˆ Dis and tem- DISTEM'PERATE, adj. > per. To dis-

DISTEM'PERATURE, n. s. j order; disease ; disturb ; render disaffected ; to temper colors anew. As a substantive, it expresses disorder ; disproportion ; or disease of any kind ; and has the same use among painters as the adjective. Distemperate is, immoderate; and distempera- ture, habitual or extreme disorder ; violence.

Tell how the world fell into this disease, And how so great distemperature did grow-

Daniel.

Thy earliness doth me assure Thou art uproused by some distemperature.

Shakspeare. There is a sickness,

Which puts some of us in distemper ; but I cannot name the disease, and it is caught Of you that yet are well. Id. Winter's Tale.

Young son, it argues a distempered head, So soon to bid good-morrow to thy bed.

Id. Romeo and Juliet.

Aquinas objecteth the distemperate heat, which he snpposeth to be in all places directly under the sun. Raleigh's History.

The true temper of empire is a thing rare, and hard to keep ; for both temper and distemper consist of contraries. Bacon.

I was not forgetful of those sparks, which some men's distempers formerly studied to kindle in parlia- ment. King Charles.

He distempered himself one night with long and hard study. Boyle's History of Fluids.

Distempered zeal, sedition, cankered hate, No more shall vex the church and tear the state.

Dryden. They heighten distempers to diseases.

Suckling.

Sin is the fruitful parent of distempers, and ill lives occasion good physicians. South.

They were consumed by the discommodities of the country, and the distemperature of the air. Abbot.

When I behold a fashionable table set out in all its magnificence, I fancy that I see gouts and dropsies, fevers and lethargies, with innumerable other distempers, lying in ambuscade among the dishes.

Addison.

A night of fretful passions may consume, All that thou hast of beauty's gentle bloom, And one distempered hour of sordid fear Print on thy brow the wrinkles of a year.

Sheridan.

DISTEMPER, in painting, a term used for work- ing up of colors with something besides water or oil. If the colors are prepared with water, that kind of painting is called limning ; and if with oil, is called painting in oil, and simply painting. If the colors are mixed with size, whites of eggs, or any such proper glutinous or unctuous matter, and not with oil, then they say it is done in dis- temper. See COLOUR.

DISTEND', v. a. ˆ Fr. dhtendre;

DrsTENT', n. s. Sf.past.part. £ Lat. distendere ;

DISTEN'TION, n. s. J from dis, asunder,

and tendere, to stretch. To stretch breadth-wise.

DISTJ LLATION.

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Some others were new driven and distent Into great ingots and to wedges square, Some in round plates witbouten muniment.

Spemer,

Those arches are the gracefullest, which, keeping precisely the same height, shall yet be distended one fourteenth part longer, which addition of distent will confer much to their beauty, and detract but little from their strength. Wotton.

Thus all day long the full distended clouds Indulge their genial stores. Thomson.

Wind and distention of the bowels are signs of a bad digestion in the intestines ; for in dead animals, when there is no digestion at all, the distention is in the greatest extremity. Arbuthnot.

DISTICH, n. s. Fr. distique; Ital. Span, and Port, dist icho ; Lai. distichon; Gr. Si< ˆi\ov, a song of two verses, i.e. Sw two, and TIˆOC a verse, from Tt^w to step, because ancient verses were measured by the steps. A couplet ; a cou- ple of lines ; an epigram consisting only of two verses.

The French compare anagrams, by themselves, to gems ; but when they are cast into a distich, or epi- gram, to gems enchased in enamelled gold.

Cumden's Remains.

The bard, whose distich all commend, In power, a servant ; out of power, a friend.

Pope.

DISTICHIASIS, in surgery, a disease of the eye-lids, when under the ordinary eye-lashes there grows another extraordinary row of hair, which frequently eradicates the former, and pricking the membrane of the eye, excites pain, and brings on a defluxion. It is cured by pull- ing out the second row of hairs with nippers, and cauterising the pores out of which they issued.

DISTI'L v. a. &v.n. "| Fr. distiller; Sp- DISTILLA'TION, n. s. \destilar; Ital. des- DISTIL'LATORT, adj. \tillare ; Lat. distil-

DISTI'LLER, n. s. j lore, from stillo; Gr.

DISTI'LLERY, n. s. & adj. raXa£w, to drop. DISTI'LMENT. j To let fall in, or

reduce to, drops ; to extract spirit in drops by a peculiar process ; to diffuse. As a neuter verb, to drop, or fall in drops ; to flow gently ; to use a

still. Distillation is the art of distilling; distillatory, belonging to that art. Distiller, one who practises it : and distillery, the place of dis- tilling ; or, as an adjective, belonging to such a place. Distilment is used by Shakspeare for that which is produced by distillation.

They pour down rain, according to the vapour there- of, which the clouds do drop and distil upon man abundantly. Job.

Have I not been

Thy pupil long ; Hast thou not learned me how To make perfumes, distil, preserve ? Shahspeare.

There hangs a vapourous drop, profound ; I'll catch it ere it comes to ground ; And that, distilled by magick slights, Shall raise up articial sprights. Id.

Upon, my secure hour thy uncle stole, And in the porches of mine ears did pour The leperous dittilment. Id.

I he Euphrates distilleth out of the mountains of Armenia, and falleth into the gulph of Persia.

Raleiah's Historu.

Now, gentlemen, I go To turn an actor, and a humourist, Where, ere I do resume my present person, We hope to make the circles of your eyes Flow with distilled laughter. Ben Jonson.

Besides those grosser elements of bodies, salt, sul- phur, and mercury, ingredients of a more subtle nature, extremely little, and not visible, may escape at the' junctures of the distillatory vessels. Boyle.

The dew, which on the tender grass,

The evening had distilled, To pure rose-water turned was, The shades with sweets that filled.

Drayton.

From his fair head

Perfumes dittil their sweets. Prior.

Water by frequent distillations changes into fixed earth. Newt an.

Swords by the lightning's subtle force distilled, And the cold sheath with

running metal filled.

Addison.

When you set about composing, it may be necessary for your ease and better distillation of wit, to put on your worst clothes, and the worse the better.

Swift. A dvice to a young Poet. In vain kind seasons swelled the teeming grain ; Soft showers distilled, and suns grew warm in vain.

Pope.

The Arabians invented distillation • and thus, by ob- taining the spirit of fermented liquors in a less diluted state, added to its destructive quality. Darwin.

By act of parliament, distillers are not at liberty to draw off any low wines before they have charged their wash-stills with wash or wort. Hey's Ganger.

We shall only here remark, that when a wash-back, or other distillery utensil, cannot be accurately mea- sured by any other mode, recourse must be had to the method of equidistant ordinates. Id.

DISTILLATION is the art of separating the vo- latile and spirituous from the fixed and watery parts of fermented liquors.

When a fluid which has undergone the vinous fermentation is exposed to the action of heat, the vapor which arises from it is, when collected and condensed by the reduction of its tempera- ture, again converted into a fluid : but the fluid thus obtained is found to have different proper- ties to that from which it was derived, and it re- ceives the name of spirit. This spirit consists of water, and a peculiar fluid called alcohol. Al- cohol, in combination with more or less water, and flavored by the aroma of the different sub- stances from which it is obtained, forms brandy, rum, geneva, and all the various descriptions of spirit known in commerce. The art of the dis- tiller consists in selecting the most convenient mode of heating the fermented fluid, and of con- densing the vapor it affords, while he prevents the intermixture with his products of whatever would injure their flavor. To accomplish these purposes, although they are apparently simple, it is found that great care and skill are required.

The distillations performed by the chemist, with the retort, the alembic, the lamp-fnrnace, the pneumato-chemical and Woulfe's apparatus, for obtaining gaseous and volatile products in general, are essentially the same as the distilla- tions conducted for the commercial purpose of obtaining

spirit ; but the scale is different , the chemist having his whole apparatus so completely

under his eye that he can adjust the heat and other circumstances with much nicety. In using, for example, when he has vapor to condense, the lamp-furnace, a wet sponge placed on the beak of the retort will suffice : but the commercial dis- tiller requires, for the purpose of condensation, a large convoluted tube, passing through an im- mense body of water, which must be constantly renewed : the difference of scale, therefore, re- quires more than a mere enlargement of the apparatus, and there has in fact been found ample scope for improvements in the art.

The quantity and excellence of the spirit pro- duced by the French, in consequence of the al- terations they have made in the old method of distilling (the most improved form of which, by Saintmarc, we shall presently describe), have de- cisively shown the value of the new plans, which may be adopted without the disadvantage of increasing the first cost or complexity of the apparatus. They consist in the application of Woulfe's apparatus to this purpose. Wine being put into the boiler, and into all the intermediate receivers between the boiler and the worm, the tube from the boiler plunges into the wine of the first receiver, to which it communicates suf- ficient heat to raise its contents in vapor : this vapor has the same effect on the wine of the next receiver ; and after the continuation of the process through as many receivers as may be thought proper, the whole of the vapor finally ex- tricated is condensed in the usual way by passing through a worm. By this truly ingenious appara- tus, spirit of various degrees of concentration may be obtained at one operation, according as the pro- duct of the first, the second, or any other receiver is taken ; the consumption of fuel is extremely small, the product excellent, as well as greater in quantity than by 'any other means ; and by using water instead of wine, in the boiler, the possibi- lity of an empyreumatic taste is prevented.

In distilling from grain an oil is apt to come over, which injures the taste of the spirits ; it is usual to keep it back by adding a little sulphuric acid to the wash.

The comparative salubrity of the spirit or ge- neva made in Holland is notorious, and it has been supposed that nothing like it can be pro- duced in this country ; out it appears to be entirely the result of the care they take in their processes. They use the most perfect grain, and use it only when

perfectly malted, aware that a fourth part more spirit is obtained from such grain than from that of which the germination has been checked too soon, or suffered to continue too long. The best Hollands is prepared from wheat, which is the fittest grain for this use, and is more productive than barley ; but rye yields about one-third more spirit than wheat, and is more extensively used in Holland. The fermen- tation is continued about three days: the first distillation is extremely slow, and the observation of this point is essential ; the second distillation or rectification is done with juniper berries. The most rigid cleanliness is observed, and the ves- sels are cleansed with lime-water instead of soap, which would give the liquor a urinous taste. They use the rye grown on a calcareous soil, and never, if they can avoid it, that of fat clayey

ground • i is Prussian rye they employ. A little malt added to rye improves the flavor, but not the quantity of the spirit.

The substances from which spirit is obtained are usually barley, wheat, oats, rye, sugar, or molas- ses. In countries where the grape ripens in the open air, wine is distilled forthis purpose : hence the superiority of the brandies of France; the spirit afforded by good wines containing the finest aroma of all products capable of yielding alcohol. When grain is used it is malted according to the usual process, like barley for brewing ; and the fermentation is conducted in the same manner. After fermentation, the fluid intended to be distilled is called wash, and it is ready for the still.

A still consists of a boiler, which contains the wash; and a tube, in passing through which the vapors are condensed : the tube is convoluted, in order that it may have a great length in a mo- derate compass, and it is thence called the worm. The boiler formerly used was a cylinder, the height of which was in general one-half greater than its diameter; but the French, who have al- ways been foremost in the improvements which this art has received, have introduced a much su- perior form. The height of the boiler has been considerably diminished, its width augmented, and instead of being cylindrical it widens upward gradually to within about three or four inches of the top ; there the sides are curved into an arch, and become narrower . nence its form is in fact similar to that of a common tea-kettle : the mouth cd, as is shewn in plate DISTILLATION, is of the same diameter as the bottom a b. To the boiler is fitted a conical head, in the interior of which, round thp lower edge, is a channel, destined to receive the liquid condensed against the sides, and which, instead of returning to the boiler, is conveyed into the worm. In the old construc- tion the head communicated with the worm by an inclined tube of a very small diameter; but now the tube in this situation, at its base fg, is as wide as the head, and diminishes in diameter as it approaches the worm, into which it opens. Ano- ther important difference, between the improved boiler and the old one, consists in the shape of the bottom : the old ones were flat ; this is con- cave. By this means the heat received is nearly equal at every point directly exposed to the fire ; and, as the bottom is convex within, the sediment from the wash falls round its edge, where, from its resting on the brick-work and not receiving the direct heat, it is not liable, from being burnt, to give an empyreumatic taste to the spirit. Two inches of the circumference of the bottom rest on brick-work, The boiler is filled by the aper- ture o.

In the old construction of the furnace the heat was applied only to the bottom of the boiler; and a further loss was sustained by placing, as is still common in furnaces generally, the centre of the grate under the centre of the boiler : without reflecting that the stream of air towards thfi chimney always carries the heat and flame in an oblique direction towards the end of the boiler. At present the end of the grate next the chimney is not placed further back than the middle of the boiler, and the heated air is conducted

round the-

boiler before it passes off, by which the whole mass of fluid in the boiler is heated at once, and the heat may be maintained with great regu- larity, while a much less quantity of fuel will suffice. The brick-work surrounding the boiler reaches as high as the circle k k.

The worm is generally made of tin or pewter, and is the same as that in common use, except that at the commencement I, where it is con- nected with the beak of the head of the boiler, it is w'der than they were formerly made, and tapers gradually towards the discharging extre- mity m. The reason of this is evident, because vapor, only partly condensed, requires more room than where the whole is fluid. The refri- geratory, or vessel A B, is kept constantly filled with cold water; this is effected by a tube n, •which descends and opens nearly at the bottom of it, and brings a supply of cold water from a gtaater elevation ; while another tube, r, conveys the hot water with equal rapidity from the top. By this means the condensation is so complete, that the spirit discharged at m exhales little or no odor. As it is often not possible to have the water from a greater elevation than the refrige- rator, without raising it by mechanical means, the following plan, by Alexander Johnston, is highly entitled to attention, as in it the syphon is applied to the worm-tube as a refrigerator ; and water is conveyed in any quantity to a worm-tub of the largest dimensions, if perfectly air-tight; it is represented at in the same plate A, is the feed pipe of cold water. B, the hot water, or waste pipe, the end of which must be about two feet be- low the feed pipe, to make it act with full effect. When the work is commenced, the cocks must be shut, and the tub filled through a hole at the top, and of course, both pipes : and when full, the hole at the top is to be stopped, and the cocks opened together ; the water will then commence running, and continue as long as the supply holds good, as it acts in every respect on the principle of a syphon. By this means pumps, horse-mills, and other machinery, are rendered unnecessary for that purpose. The application of this improvement is simple, and executed at a very little expense. The saving for the city of Dublin alone, is calculated at upwards of 100 horses per annum.

With respect to the usual mode in which dis- tillation is conducted in the great public distil- leries, the most interesting account that has been communicated to the public, is that contained in the deposition of James Forbes, of Dublin, who was for many years concerned in a large distil- lery. It is from the Appendix to the Fifth Re- port of the Commissioners of

Enquiry into the Fees, &c., received in the public offices of Ire- land ; which report was printed by order of the house of commons.

'The corn is first ground, then mashed with water, and the worts, after being cooled, are set for fermentation, to promote which, a quantity of barm is added to them, and they become wash ; the wash is then passed through the still, and makes ssinglings, and these, being again passed through the still, produce spirits ; the latter part of this running, being weak, is called feints. When singlings are r>ut into the still, a small

quantity of soap is added, to prevent the' still from running foul ; a desert spoonful of vitriol well mixed with oil is put into a puncheon of spirits, to make them show a bead when reduced with water : this is only done with spirits in- tended for home consumption, and no vitriol is used in any other part of the process. In this distillery, the former practice was to use about one-fourth part of malt, and the remainder a mix- ture of ground oats and barley, and oatmeal ; latterly the custom has been to use only as much as would prevent the kieve (mash-vat) from set- ting. He had found that malt alone produced a greater quantity of spirits, than the mixture of malt and raw corn of the same quality with that of which the malt had been made. He generally put from fifty to fifty-four gallons of water to every barrel of corn of twelve stone (14 Ib. to the stone). Each brewing was divided into three mashings, nearly equal : the produce of the two first was put into the fermenting backs ; and the produce of the last, which was small worts, was put into the copper for the purpose of being heated, and used as water to the next day's brewing, when as much water was added as would make, with the small worts of the brew- ing, fifty-four gallons to each barrel of the corn. The kieves were so tabulated, that he always knew the quantity of worts which would come off at each mashing. Their strength he ascer- tained by Saunders's saccharometer, and at the above proportions he obtained, from a mixture of the two first worts, an increase of gravity from twenty pounds to twenty-two pounds per barrel, of thirty-six gallons, above water-proof, at a temperature of about 88°. The small worts gained at the same temperature about six pounds. The grain, after the last worts were off, retained nearly the same bulk as when put into the kieve ; the whole of the grain was put in at the first mashing ; he never knew any grain to be added to the second mashing. The worts of the first and second mashing were run through the mash- kieve into the under-back, in which state they were usually found to correspond with the com- putation made in the mash-kieve and under- back, in the latter of which a correct gauge might be taken of them. He usually commenced brewing at six o'clock in the morning : the first worts were run off into the under-backs, and required from an hour to an hour and a half to be forced up into the cooler ; the second worts came off at the end of two hours from the dis- charge of the first, and required about the same time to pass into the coolers. The small

worts were generally let off late at night; and being then, or early on the following morning, put into the copper to be used for the next brewing, were seldom shown on the coolers. He thinks that any decrease of the worts by evaporation whilst on the coolers, must have been very in- considerable; and that a correct gauge of the worts may be taken in the coolers as well as in the underbacks. The quantity of wash in the backs was found to be nearly correspondent with that of the strong waters which had been on the kieve and in the cooler. The fermentation of the worts was produced by means of yeast, and was in general so contrived as to be apparently kept

DISTILLATION.

ap for the full time allowed by law (six days) : lie has, however, usually had his wash ready for the still in twenty-four hours from the time in which it was set. Backs are renewed in two ways; either by additions made to them from other backs in the distillery, each supplying a certain portion of wash to the back which is next before it in the order of fermentation, while the newest and least fermented wash is replenished by worts, or, when the fermentation is down, by an entire substitution of worts. He has ordina- rily, in the course of work, charged a 500 gallon still with wash, and run it off in twenty to twenty-three minutes : he has seen a 1000 gallon still charged and worked off in twenty-eight or thirty minutes. He understands that it is now the practice of some distillers, to heat the wash nearly to the state of boiling before the still is charged with it ; by which means he believes the process to be accelerated by three or four minutes. He has seen a 1000 gallon still charged with singlings, and worked off in from forty to fifty minutes, and thinks a 500 gallon still re- quires nearly an equal time. Feints from pot- ale (the name given to completely fermented wash) usually are run off in from six to seven minutes ; making allowance for every delay, about six charges of spirits may be run off from a still of 500 gallons' contents, each charge esti- mated at 150 gallons. The feints were always put back into the pot-ale receiver ; twenty gal- lons of feints is the usual quantity run from a 500 gallon still charged with singlings ; he thinks there is more spirit extracted from feints than from pot-ale ; there was no delay between one charge of pot-ale and another, or between one of singlings and another ; the still could be cleansed in less than a minute; it very rarely occurred that the ordinary accidents which hap- pened to the still delayed the work to any con- siderable degree. The still is never charged with wash beyond about seven-eighths of the still, nor with singlings beyond about four-fifths, exclusive of the head. The estimated produce (according to which the duty may be charged) is one gallon of singlings from three gallons of •wash, and one gallon of spirits from three gal- lons of singlings, but it is very frequently some- what more. Previous to the regulation (of Ex- cise) which took place in June, 1806, from a still of 540 gallons, which is charged with 2075 gallons of spirits weekly, he has

frequently drawn 530 gallons in one week, and thinks 500 gallons to be a fair average. He usually made spirits about fourteen per cent, above proof, by Saunders's hydrometer. Spirits exported by him from twelve to fourteen per cent, above proof by Saunders' and Hyatt's hydrometer, were charged in London at from twenty-four to twenty-six gal- lons per cent. Before he sent them to the cus- tom-house, he either reduced them with water, or drew them at that strength from the still. To every six gallons of strong spirits, one gallon of water was added in the distillery, which reduced them to the strength usual for exportation. The reduced spirits are permitted to the king's ware- houses, and the distiller given a credit for a de- crease of stock equal to the quantity so permit- ted ; by these means he has one gallon of private

spirits to dispose of for every gallon of water mixed with the spirits exported ; besides this, the distiller draws back the allowance given in lieu of the malt-duty on every gallon of water added : when he warehoused spirits with the in- tention of afterwards using them for home con- sumption, he left them at their full strength.'

The absence of improvement in the process of distillation, as well as in the apparatus for effect- ing it, in this country, may be chiefly traced to the shackles which have proceeded from the regula- tions of excise, adopted and enforced for the protection of the revenue. Whether those regu- lations may have been indispensably requisite to that end, is, perhaps, very questionable; but it is quite certain that they have had the effect of restraining those extensive improvements in this branch of science and business, which have been almost universally accomplished, where the in- ventive genius of our countrymen has had free scope in the application of its powers to practical results. This is especially visible on a compari- son of the means employed in France for the im- provement of this branch. With an unlimited supply of the grape, a material certainly calcu- lated to afford one of the finest spirits, they are enabled, almost at will, to effect such improve- ments in its quality as result from changes of process, and the adoption of superior apparatus; since, although in some respects under certain revenue regulations, they are not enforced in a manner calculated to prejudice the exercise of talent, whether mechanically or chemically ap- plied to the art.

In the English language, too, there scarcely exists a treatise of any value on this subject ; and that which has been published is little more than translations from works in the French lan- guage. There the scientific investigations of such men as Lavoisier, Chaptal, Gay Lussac, and Thenard, have laid a sure foundation for the more practical illustrations of Macquer, Dubrunfaut, Dubuisson, and others of less note, who have sent forth to the world the result of their labors.

With names as high on the list of science as our countrymen Davy, Woollaston, Dalton, Henry, Thomson, Ure, and Black, and with some of the most important departments of the art of distillation, up to the point of fermentation, as well understood, and as extensively practised as in France, the paucity of information on the sub- ject generally, in this country, is not a little sur prising. The French distillers have brought to notice several stills of curious construction, which have had for their object the saving of time and fuel, and the production of a spirit of superior strength arid good quality. In some of these per- petual distillation has been aimed at, but it cannot be said with success. Indeed, it is difficult to conceive that the elements to be converted, and the practice necessary for their conversion, can be so nicely combined and adjusted as to bring about such a result, without a most elaborate and expensive series of machinery and vessels ; costly in themselves, not easy of management, and leading to the risk of considerable loss, from some of those inconveniences and irregularities to which all complicated apparatus are subject.

A still has lately been brought forward, which

is stated to be roming into extensive use, and to comprise all the advantages of perpetual distilla- tion without its disadvantages; uniting moderate cost, the employment alike of a single vessel and a single operation, and the most perfect facility of management, with great economy of time, fuel, and other items of expense ; and, which must be a primary object with all distillers, with the pro- duction of a fine and potent spirit. It has been introduced by two French gentlemen, M. Alegre, and M. Saintmarc; and is patented in this coun- try in the name of the latter.

On a view of the plans and descriptions of this apparatus, there seems little reason to doubt its powers and advantages, as described ; and, assuming the truth of the facts stated with regard to those powers as proved in practice, the inven- tion is entitled to great praise ; and must effect an extensive revolution in distillation, both iu this country and in its colonies.

The plate of DISTILLATION presents a series of figures, exhibiting the construction and prac- tical operation of this interesting combination of chemical and mechanical power.

Fig. 1 represents a sectional view of the still, with its furnace, and an elevation or outside view of the refrigerator, or worm tub. Figs. 2, 3, and 4, are plans of three portions of the still. Fig. 5 is a perspective view of one of

the double tubes or pipes. Fig. 6 is an elevation of its front ex- terior, and fig. 7 is an elevation of its back ex- terior.

FIGURE I.

A. THE FIRE-PLACE or FURNACE, above which the still is placed.

B. EIGHT COPPERS or BOILERS, surmounting each other, constituting the apparatus or still, in the form of a column or cylinder, and numbered 1 to 8; the different coppers or compartments being put together by flanches and bolts.

C. (vide fig. 6 and 7), OPENINGS or MANHOLES. tightly closed by screw boxes, or otherwise, cal- culated, when the still is of large diameter, to admit a person into the several coppers, No. 1 to 7, for the purpose of cleaning or repairing them ; or, when on a smaller scale, intended to admit a person's arm for the same object.

D. AN EXTERIOR VESSEL, or INTERMEDIATE WASH CHARGER, surrounding the upper compart- ment of the still ; and calculated to contain a quantity of wash equal to the proper charge of one copper.

E. SUPPLY PIPE communicating from the ge- neral wash charger, or vessel containing the liquid to be distilled, to the exterior vessel D ; and furnished with a cock for the purpose of turning the wash into that vessel.

F. A PLUG or VALVE fixed in the head of a pipe extending from the bottom of the vessel D into the lower part of the copper, 7 ; which plug or valve is raised by the aid of

G. A LEVER AND FULCRUM for the purpose of discharging the wash contained in the vessel D into the copper 7; from whence, as it reaches the upper end of the pipes H, it flows down from copper to copper, until it reaches No. 2; a quan- tity being displaced from the surface of the liquor in each copper equal to that which is thrown in from the copper next above.

II. FIVE PIPES, communicating from the cop- per, %. 7 to rig. 6, and so on in succession, from vessel to vessel, down lo fig. 2, extending from the level of the wash in one copper, marked by dotted lines to nearly the bottom of the copper below, in order to displace the warmest liquor. as shown in the description of G.

I. (Vide figs. 6 and 7), Six PIPES FURNISHED WITH COCKS, communicating respectively from one copper to that next below, by which all the wash in the several coppers, from fig. 7 down- wards, may be conveyed into the lower coppers, and finally drawn off from the lowest

vessel.

K. (Vide figs. 6 and 7), SMALL TRIAL COCKS IN COPPERS 1 and 2, which, on being turned, indicate when those coppers are charged to the proper height, as denoted by the dotted lines on the same level as these cocks. They serve also as valves to admit air when the liquor is drawn oft'. A similar cock is likewise placed in copper, fig. 3, for the purpose last mentioned.

•L. (Vide fig. 6), A SMALL PROOF COCK, placed vertically near thereof of the copper, No. 1, which, on being turned, determines by the application of a lighted taper or candle, whether or not there remains any portion of alcohol in this copper or boiler.

M. A DISCHARGE PIPE AND COCK to carry off the spent wash from the copper, fig. 1, when the spirit has distilled from it. This cock discharges down to about one inch above the crown, or highest part of the copper ; and, in consequence, it is not necessary to damp the fire when it is opened.

N. A SECOND DISCHARGE PIPE AND COCK in the lowest part of the bottom, which carries off the whole contents of the copper ; and, when opened, will generally require the fire to be damped, to prevent burning the bottom.

O. TEN DOUBLE TUBES or PIPES, of which five are fixed on the roof of copper 1, and five on that of 2. These pipes are closed at the top, and have openings in the upper part of the in- ner, communicating with the outer one. The vapor produced from the wash in copper 1, passes through the five double tubes on the roof of that copper into the copper 2, by rising up the inner tubes, passing therefrom through the openings at the upper part thereof, and descending down the outer tubes, discharging itself into the liquid in copper No. 2, where it becomes con- densed. In like manner the vapor produced in the last mentioned copper passes up the double tubes on the roof thereof, into the copper fig. 3. (For a better description of these double tubes, vide the perspective view of one of them in fig. 5 ; and for the plan of the coppers containing them, vide fig. 4, and their respective explanations given below).

P. FIVE SEMISPHERICAL VESSELS or DOMES (in French, CALOTTES), constructed upon, and tightly jointed to, the centres of the roofs of the several coppers, No. 3 to 7, both inclusive. These domes, except the highest, are surrounded with wash ; but have internal communication only with each other, by means of pipes fixed on their centres, which pass into the pipes Q, next described.

Q. FIVE DOUBLE TUBES or PIPES (ofthesame

kind as those marked O.), which are tightly fixed on the centres of the roofs of the coppers Nos. 3 to 7, and stand within the domes last described. The vapor described above (O) to have reached the copper No. 3, becomes condensed in the wash contained therein. The vapor generated in this copper passes through the double tube Q into the dome which encloses it, and so in suc- cession, through the several tubes and domes above, until it reaches the dome on the roof of tho copper No. 7, where it finally passes off into

R. A LARGE PIPE, which conveys it to

S. AWoRM TUB, or REFRIGERATOR (of which an elevation or outside view only is given in the drawing), through

T. A WORM contained therein ; and runs it off as alcohol, at the bottom thereof into

U. A SPIRIT RECEIVER. (For the plan of the coppers containing the domes P, and double tubes Q, above described, as well as the reversed double tubes V, and the safety pipes W, both hereafter described, vide fig. 4, and the explana- tions of it given below).

V. FIVE REVERSED or DESCENDING DOUBLE TUBES or PIPES (constructed on the same prin- ciple as those already described, but of smaller diameter), which are suspended, reversed, from the roofs of the several coppers from No. 7, down to No. 3, both inclusive. Of these reversed tubes the four uppermost pass through the domes P, to which they are tightly fixed ; and they serve to return to the lower domes in succession, the phlegms, or such results of the vapor, in a liquid form, as may have been condensed in its passage upwards through these several domes. These phlegms, or condensed liquids, are partially re- distilled in their progress ; and the remainder pass through the fifth, or lowest, of these reversed tubes, into the copper No. 3, where they become mixed with the wash contained therein, and are again distilled with it.

W. FOUR SAFETY PIPES, fixed in the roofs of the several coppers, Nos. 4, 5, 6, and 7, which are intended to carry off such vapor as may rise from the wash in those coppers, and terminate in

X. A PIPE, which passes on to the worm-tub or refrigerator S, and by a

separate worm

Y. of two or three coils only, runs off the small portion of spirit it produces into the spirit- receiver U.

Z. A PIPE communicating between coppers No. 1 and 2, having its upper end carried about four inches above the level of the liquor in cop- per No. 2, in order to admit of the increase of its volume by the condensation of the vapor which passes into it from the copper No. 1 by the tubes O. It also serves to return from copper No. 2 10 the lower part of No. 1 whatever liquor may pass up the tubes O, by any sudden or excessive action of the fire

FIGURE II.

a. A PIPE AND COCK for the supply of cold water into the copper No. 8, for the purpose of additional condensation when the spirit is re- quired of high proof.

b. A WASTE PIPE, fixed near the top of the uppermost copper No. 8, to carry off the heated

water from the surface, in proportion as the pipe a furnishes cold water.

c. A PIPE AND COCK placed in the bottom of the copper No. 8, for the purpose of entirely drawing off, at pleasure, the water which may have been employed for additional condensation.

d. A PIPE AND COCK by which a stream of water may be thrown into the vessel D, and thence conveyed, by the valve or plug F, and pipes I or H, into the lowest vessels, either to be used as an occasional condensing power, or for the purpose of washing the still.

e. A PIPE AND COCK, by which a stream of clear water may be thrown into the uppermost of the domes P, and thence descend through the other domes below, in order to cleanse them from impurities.

B. 8, Plan of the copper B. 8, as shown in section in fig. 1.

D. Plan of the exterior vessel D, fig. 1.

E. Plan of the charging pipe E, fig. 1.

F. Plan of the valve or plug F, fig. 1.

G. Plan of the lever or fulcrum O, fig. 1. P. Plan of the dome P, fig. 1.

R. Plan of the pipe R, fig. 1. X. Plan of the pipe X, fig. 1.

FIGURE III.

(Referred to above, after the explanation of the spirit pipe T, fig. 1.)

B. PLAN OF THE COPPERS OR BOILERS from B, No. 4 to 7, as shown in section in fig. 1.

H. PLAN OF THE PIPES H, fig. 1, through which the liquor flows from copper to copper from No. 7 to No. 2, as it is displaced by the discharge from vessel D.

P. PLAN OF THE DOMES or semispherical ves- sels P, fig. 1, fixed in the centre of each copper

Q. PLAN OF THE DOUBLE ASCENDING TUBES OR PIPES Q, fig. 1, fixed upon the centre of the domes P.

V. PLAN OF THE DOUBLE REVERSED, OR DE- SCENDING TUBES OR PIPES V, fig. 1, through which the liquor produced by condensation of the vapor in its passage through the domes, falls back into copper No. 3.

W. PLAN OF THE SAFETY PIPES W, fig. 1, fixed upon the roofs of the coppers from No. 4 upwards, for the purpose of carrying off the little vapor generated in those coppers.

FIGURE IV.

(Referred to above, after the explanation of the double tubes or pipes O, fig. 1.)

B. PLAN OF THE Two COPPERS OR BOILERS B, Nos. 2 and 3, as shown in section in fig. 1 .

O. PLAN OF THE FIVE DOUBLE TUBES OR PIPES O, fig. 1, standing within the coppers Nos. 2 and 3 respectively, but fixed tightly upon the roofs of the coppers Nos. 1 and 2 ; through which the vapor passes from copper No. 1 to No. 2, and from No. 2 to No. 3.

H and Z. PLAN OF THE PIPES II and Z, fig. 1, passing through the roofs of the coppers Nos. 1 and 2. The pipe II extends from the liquor level in copper No. 3 to nearly the bottom of No. 2, and the pipe Z extends from about four inches above the liquor level in No. 2 to nearly the bot-

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torn of the lowest copper ; as shown in section in fig. t.

FIGURE V.

Presents in perspective, on an increased scale, one of the tubes () or Q, fig. 1.

FIGURE VI.

Presents a front elevation of the still, as fixed, exhibiting the mode of putting together the dif- ferent compartments, constituting the several coppers B, No. 1 to 8, in fig. 1, which are secured by flanches and bolts.

A. THE FIRE-PLACE OR FURNACE as shown in section in fig. 1 .

D. THE EXTERIOR OF THE VESSEL D, fig. 1.

F. THE PLUG OR VALVE F, fig. 1, with its pipe conveying the wash from the vessel D to the copper No. 7.

G. THE LEVER AND FULCRUM G, fig. 1, by which the valve or plug F is raised, to discharge the contents of the vessel D into the copper No. 7.

C. MANHOLE OR OPENING C, fig. 1, for the purposes there described. This figure only re- presents that in the copper No. 7; the remainder are shown in fig. 7.

I. EXTERIOR PIPE I, fig. 1, for the purpose of drawing off the wash from one copper to another. This figure only represents that communicating from copper No. 2 to No. 1 ; the remainder are shown in fig. 7.

K. SMALL TRIAL OR GAUGE COCK, K, fig. 1, to show when the wash is charged to the proper height, .and to admit air when the liquor is drawn off. This figure only exhibits that in copper 1 ; those in Nos. 2, and 3, are shown in fig. 7.

L. SMALL PROOF COCK, L, fig. 1, to deter- mine, by the application of a light, when all the spirit has distilled from the wash in copper No. 1.

M. A DISCHARGE PIPE AND COCK, M, fig. 1. for the purpose of discharging the wash above the crown or highest part of the copper.

N. A SECOND DISCHARGE PIPE AND COCK, N, fig. 1, for the purpose of

discharging the wash entirely.

FIGURE VII.

Presents a back elevation of the still, as fixed, exhibiting the manner in which the several re- maining pipes I, manholes C, and cocks K, re- ferred to, but not shown in fig. No. 6, are ar- ranged ; the repetition of the description being considered unnecessary. The lowest manhole in this drawing is of a form different from the others ; being on a scale to admit a person in- side the vessel for the purpose of cleaning the bottom, the only part exposed to the action of the fire. The upper ones are of sufficient dimen- sion to admit a person's arm to clean the cop- pers. But when the diameter exceeds materi- ally that of the present view (which is in the original four feet two inche?) it is necessary to have large manholes, the same as that in the lowest copper, to admit a person into them all. The command of all the pipes, cocks, and man- holes is arrived at by means of a spiral staircase,

which makes a half revolution of the still, and is generally made of cast iron.

In this figure the various water pipes, de- scribed in fig. No. 2, are not shown ; as they could only be represented in a very indistinct way. For the same reason the discharge pipes M and N are not repeated; and the chimney is omitted, which would have given the figure an additional appearance of confusion ; and is not necessary to make it intelligible. The foregoing explanations have the advantage of being per- fectly clear and intelligible, a quality nof com- mon to descriptions of a mechanical nature ; which are usually more adapted to the compre- hension of scientific, than to the understanding of ordinary readers. Although in the descrip- tion of the different parts of the apparatus, the separate uses of each are well denned, the ge- neral effect of the whole combination is left un- explained. It may therefore be necessary to give an idea of the principles on which the advan- tages to be derived from it are founded.

The eight coppers, placed one upon the other, of which the seven lowest are intended to hold the wash, and the upper one to receive water, — distil in the following manner : —

The first three, of which the second and third alone are intersected by the double pipes, distil almost at the same time. The lowest, only, being submitted to the immediate action of the fire, is, consequently, the first whose wash enters into a boiling state. The vapor penetrates into the second, passing through the wash which is contained in it, by means of the above mentioned pipes, and is there condensed, yielding up its caloric to

that liquid, which is thereby quickly brought into a boiling state; the vapor which proceeds from the wash in the second boiler passes into the third, producing the same effects as in the preceding. The new vapor, necessa- rily stronger than the first, rises and passes into the fourth, where it is received under a semi- spherical dome (or calotte), which prevents it from communicating directly with the cold wash contained in that copper.

On arriving in this dome it is easily conceived that the most watery portion of the vapor is there condensed, giving up its caloric, which contributes to heat the wash that surrounds the dome. The most spirituous part, which passes into the dome of the fifth copper, experiences the same effect on coming in contact with a cold body. The same operation takes place from one dome to another up to the last. As the vapor which rises is exposed to a cold temperature it is condensed, ceding its caloric ; and it is after a succession of sufficient condensations, that the spirit is divested of all weak and watery particles, which, thus liquefied, return from one dome to another, being partially re-distilled in their pro- gress, according to their degree of gravity, until the least spirituous reaches the third copper, there to undergo a new distillation. It has been observed that the upper copper is reserved to contain cold water; it is by this means, and by renewing this water, keeping it in a higher or lower temperature, according to circumstances, that the distiller can obtain the spirit at the strength he desires.

To explain by what physical law the watery vapor is forced to return from dome to dome to the third copper, and is there found totally se- parated from the alcohol, which arrives at the worm pure and free from any empyreuma, we shall call to mind what all chemists and distil- lers are, doubtless, aware of. It is known that water cannot boil under a heat of 212° of Fah- renheit; while alcohol boils at about 173°. It is evident, therefore, that whenever the watery and alcoholic vapors rise, and are successively received in one or more atmospheres of from 174° to 190° or 200°, the watery vapor becomes separated from the alcoholic, and is condensed ; and the last, only, passes out, and is received at the desired strength ; care being taken to regu- late properly the temperature of the water con- tained in the uppermost copper, which is tra- versed by the strongest and most alcoholic vapor before it passes into the worm.

It may be affirmed that the advantages of this apparatus are the greatest that have, as yet, been obtained. There is a great economy in fuel, as well from the small surface exposed to the action of the fire, and productive

employment of every portion of the caloric, as by the simplicity and rapidity of the operation. To the saving of fuel we shall shortly advert more particularly. It will be perceived that a large portion of the spirit is distilled by vapor; and it is, conse- quently, much purer than that obtained by the ordinary apparatus. It is to the immediate contact with the fire of the material to be dis- tilled, that distillers owe the greater portion of those injurious flavors and qualities with which spirits are frequently impregnated. Those bad flavors are acquired chiefly by the length of time that the wash remains exposed on the bottom of the still ; for during the period requisite to bring it up from the cold state to that of ebullition, at which distillation commences, deposits of the heavier particles contained in the wash are made on the bottom, which, being rather absorbents than conductors, prevent that constant and uni- form transmission of caloric which is essential to good and pure distillation. It is in the earlier stages of the application of fire that this effect is mainly produced ; for, as the wash approaches a state of ebullition, the struggles, to reach the sur- face, of those parts of the wash which are impreg- nated with caloric, and consequently decreased in gravity, and which, in the first instance, are sluggish in their motion, gradually bring the mass into a state of ebullition, which counter- acts the tendency to burn, or otherwise acquire injurious flavor. Once arrrived at the boiling point, the risk of this evil is almost entirely re- moved. But as, on the common principle of distillation, the still is every time charged with cold wash, so every distillation is equally exposed to the recurrence of the evil.

It is one of the peculiar merits of M. Saint- marc's still to have effectually provided against this disadvantage. In his apparatus, only the first charge of the lowest copper is entirely dis- tilled by the direct action of the fire. The aqueous and alcoholic vapors, which rise together, on arriving in the second copper, become mixed with the wash contained in it and are re-distilled

before they pass into the third copper. A thmi distillation takes place in that copper before it passes under the correcting influence of the suc- ceeding vessels. Thus he effects one distillation by fire, which is immediately succeeded by two vapor distillations; and, subsequently, by five purifying processes, which divest the spirit of all its impurities; and it comes over, at one opera- tion, of the strength of thirty-five per cent, over proof, according to Sikes's hydrometer, used by the Excise and English distillers ; which is equi- valent to bubble seventeen or eighteen in the commerce of the West India Planter, and about •870 of the specific gravity of chemists. The strength at which M. Saintmarc brings over his spirit by a still of eight compartments, is limited to thirty-five or forty per cent, over proof; that being the highest degree generally required for purposes of commerce. But, by the addition of two or three more coppers or compartments to his still,

he would succeed in obtaining, by one operation, the pure alcohol of the chemist, of the gravity of -820 or -825.

It has been observed, that only the first charge of the lowest copper is entirely distilled by the direct action of the fire; and that is the only portion of a distillation, however prolonged, which is exposed to the injury of burning. By making the first charge of the lowest copper water, instead of wash, even this small risk will be totally avoided ; since the wash, when once heated, comes down invariably into the lowest copper in a boiling state ; and during the short time that it remains there, being kept in a con- slant state of ebullition, it is not subject to the disadvantage of burning.

We speak of the shortness of the time during which the wash remains in the lowest copper. As soon as the whole of the spirit has distilled from the lowest copper, which is proved by the application of a light to the small proof cock L, fig. 6, already described, the wash is dis- charged from that copper and the cock I, com- municating from copper No. 2 to No. 1, is immediately opened, which discharges the whole contents of No. 2 into No. 1, without at all suspending the distillation. In order to replace the wash drawn from copper No. 2, that con- tained in the vessel D is discharged, by raising the valve or plug F by means of the lever and fulcrum G, which displaces the same quantity down the pipes H, until the copper No. 2 is re- plenished. A fresh charge of wash is then drawn by the pipe E into the vessel D, ready for the next supply.

It is easy to conceive, that, when the first cop- per has furnished all the alcohol it contains, the wash of the second is chiefly distilled; and, therefore, when brought down into the lowest copper, in a state of perfect ebullition, and thus far advanced in the process, it remains for so short a time in contact with the fire, that it not only does not acquire any bad taste in conse- quence, but its perfect distillation is completed within fifteen or twenty minutes; the depth of the liquor being no more than ten or twelve in- ches. The process may thus be carried on ad infinitum, or so long as wash is furnished to feed the still. The supply displaced from the third

to the second copper has been already stated to be partly distilled; and the quantities contained in the copper with the domes have acquired a considerable degree of heat; graduated from a little below the boiling point in copper No. 4, down to 1GO° or 170° in copper No. 7. In im bibing the caloric brought by the vapor through the domes, which is continually renewed, the wash in the fourth and succeeding coppers becomes the first

agent which contributes to divest the al- cohol of the watery parts that rise with it.

It is among the advantages of this apparatus, that the continual and regular supply of wash, and the gradually advancing heat which it ac- quires in the manner just described, are calcu- lated to prevent the occurrence of those acci- dents which arise in distilleries, chiefly from the mismanagement of the workmen employed : we mean by explosion or collapsion. When a large quantity of liquid, of a turbid and heavy nature, is collected in a body, and subjected to the action of a powerful fire, it happens, not unfre- quently, that, before it arrives at the boiling point, it forms a strong head, which fills the space in the upper part of the still, and passes even down the worm ; and, on some occasions, has caused an explosion of the still. The same result would follow the want of a proper outlet for the vapor. But the accident which more frequently occurs is collapsion. When a charge is worked off in the common still, it has fre- quently happened, that whilst it remains filled with vapor, a new charge of cold wash is thrown in for distillation, or of water for cleansing, without the precaution of opening the man-hole, or other aperture in the breast of the still, to admit air. A sudden condensation follows the admission of the cold liquor ; and, a vacuum being formed, the still immediately collapses.

Against both these accidents, M. Saintmarc's still affords complete protection. If the wash acquire a head, which is only likely to happen with the first charge of the lowest copper, (and that may be prevented by using water for the first charge, as before stated), it can never penetrate further than the second copper ; and is imme- diately returned by the pipe Z into the lower copper again. The pipes O and Q are ample security for the free passage of vapor which has to pass up them ; and the safety-pipes W equally secure the coppers on which they stand, against all possibility of injury from the generation of vapor upon the surface of the wash in those coppers.

Against the risk of collapsion the same security seems to exist. The liquor brought down into the lowest copper being always at the boiling point, and that in the vessels above graduated below that point, the descent from vessel to vessel is accomplished without any material change in the temperature, which is acting upon the vapor within the domes ; and, consequently, without, in any important degree, changing the course of condensation which is going forward. From this observation, ;n its strict sense, must be excepted the copper, No. 7 ; where a supply of wash being introduced from the vessel D, of a temperature considerably lower than that already existing in the copper, an additional condensing

power is acting in that copper for a few minutes; and the product in spirit,

during that period, will be somewhat diminished in quantity, but of higher strength. One of the effects of discharging the wash from the vessel D into the bottom of the copper No. 7 is that, to a certain extent, an equalisation of temperature takes place, by the admixture of the two bodies, in the act of dis- placing, by the pipe II, a quantity equal to that admitted from above. The more immediate ob- ject of fixing the vessel D round the uppermost compartment of the still, rather than as a de- tached vessel, is also to encrease the temperature of its contents, by contact, during the period occupied in working off a charge below, with a body at a much higher degree than the wash which it contains. By the union of these two advantages, the diminution of temperature in copper No. 7, only produces a slight effect, as already observed ; and nothing like a vacuum is, or can be, formed in consequence ; which is fur- ther provided against by the connexion of the dome in copper No. 7, with those both below and above : and, through the latter, with the large pipe leading to the worm-tub. We have been thus particular in detailing these parts of the case, as it is of high importance in distille- ries to be independent both of ignorance and carelessness on these points.

The first impression on our minds, on a view of the drawing of the still, was that it was com- plex in its nature and construction, and must be difficult to manage. It requires, however, but little attention to discover that such is not the case. On the contrary, it is entirely self-acting as to all its interior arrangements, and so simple and unerring in its principle and operation, that any person, whether previously conversant with distillation or not, will be quite competent to its management, with a few days' practice ; a point of great importance, where the indifference or ignorance of the parties employed to work the stills (as is the case, particularly in the WesUln- dies), renders all complexity unadvisable. The mere stirring of a fire, and the turning of two or three cocks, is the utmost extent of attention re- quired to conduct its operations.

The construction of the still has been already spoken of, in the description of its various parts ; and care seems to have been taken, in this re- spect, to meet all reasonable emergencies. The diameter of the still being small, in proportion to its powers, as compared with the common stills in use ; and each compartment being sepa- rately manufactured, and finally put together by flanches and bolts, M. Saintmarc generally makes a spare lower compartment, precisely adapted to the higher part, which goes with the still; and especially to the West Indies. It does not appear that this still will be of less duration than any other in use, or re- quire more repairs than the most simple ones. On the contrary, the lowest copper is the only one which is submitted to any severe action ; and if, either by lapse of time or constant use, or by any accident, to which carelessness equally exposes stills of all sorts, the bottom should be injured, a period of two or three

days would suffice for taking away the lower compartment,

fixing the spare new one, and replacing the still in its position ready for work, as sound and per- fect as when quite new. This must be of great importance to a West India planter, who, if the same thing were to happen with a common still, at the beginning of a crop, would, in all proba- bility, be deprived of the means of work ing during the whole season ; as the consequence of such an accident to a common still is, generally, the necessity for a new one ; so difficult and expen- sive is the repair. In like manner the principle of the construction of this still affords easy access to any copper or compartment, in the event of a little repair being necessary. But it would ap- pear to be little liable to derangement in its up- per compartments ; the only action there being an equable and quiet transmission of vapor up- wards, and of wash downwards ; neither of them calculated to injure the interior works.

A question suggested itself to us, as to the power of introducing into the lower compartment of M. Saintmarc's still, the machinery employed in most malt distilleries, for disturbing the heavier ingredients in the wash, which may settle on the bottom. We have already shown that such a case may be prevented here ; but, supposing our view of the non-liability of the wash to be burnt should be erroneous, there does not appear any difficulty in introducing the chains, or other pro- per machinery, for that purpose. In the com- mon still it is fixed vertically, through the upper pan of the still, and worked through a stuffing box. In this it would also be required to be worked through a stuffing box, but horizontally, through the side of the lowest copper, by the aid of a pair of bevil wheels in the interior.

A series of experiments and calculations have been made for the purpose of demonstrating the powers of M. Saintmarc's still, and proving the allegations with regard to its saving of fuel, water, and many other points of economy, ad- vanced in its favor. These experiments and statements are of a sufficiently interesting charac- ter to induce us to add them to the preceding observations, as they are calculated to carry con- viction to the mind, from the plain and simple manner in which they are advanced. They are made in a way likely to attract notice; the powers of the patent still being placed in juxta- position or contrast, with those of the common still. As far as our means extend of judging of the correctness of the statement with regard to the powers of the old still, we should be in- clined to think them not unfairly put. The data on which some of them rest are admitted by chemists, having been proved by the experiments of some of the ablest men in that b;anch of science, both in this country and in France. The deduc- tions, therefore, are easy on those parts of the case. With regard to

many points, such as cost and number of apparatus and vessels, space required, savings, and other considerations of a commercial nature, and some other points, they are not susceptible of check by any but practical persons.

It is of course, well known, that the ordinary process of distillation consists of three operations, and is usually performed in two stills of differ- ent dimensions ; the larger one called a wash

still, being that in which the first operation takes place, of distilling the wash, the vapor proceed- ing from which, being of a weak nature, the product is an imperfect body, of about half the strength of proof spirit, and technically called low wine. This product is then conveyed to the smaller still called the low wine still, where it is subjected to a second distillation, from which results a spirit. A portion, how- ever, of this latter product is separated from the remainder, it being of a weak and impure character ; it is denominated feints by the ex- cise laws and by the distillers, and is either sub- mitted to a third distillation per se, or is mixed with the wash of the next distillation ; being, however, generally separately distilled. These constitute three distinct operations. By M. Saintmarc's still, all this is effected at one opera- tion; the weaker vapor, which constitutes the low wine of the first, and the feints of the second, distillation, on the old plan, being strengthened and purified by the subsequent processes to which it is subjected in the higher parts of his still ; and all the weak part of the vapor, which, if passed into the worm, and there condensed, would be in the state of low wines or feints, being condensed within the still, long before it reaches the summit, and returned into the lowest coppers. This is the basis of one of the important savings of the still. On the old plan, the vapor generated by the first distillation is passed off immediately to the refrigerator or worm-tub, and there con- densed ; the vapor of the second distillation, the result of a new application of fuel, is again sent to the worm-tub and there condensed ; and the third distillation, by the aid of a third fire, is again treated in the same way. M. Saintmarc makes the first application of fuel to his still ef- fect all these objects. The vapor of the first copper heats the second; that of the second heats the third ; that, again, passes through the several upper compartments, distributing a portion of its caloric to the wash in each of them, thus prepar- ing them for distillation, in which process the vapor has the benefit of those condensing powers which each body of wash contains, for the sepa- ration, by liquefaction, of its aqueous or weaker, from its alcoholic or stronger, portions.

The advantages here described are demon- strated by experiments, showing the actual powers of a still on this principle, as compared with those of the two stills in use on the old plan, of equal powers of production ; in which are shown the relative areas or superficies of each exposed to the action of

the fire ; the generation of vapor on both plans ; and the quantity of water em- ployed in condensing that vapor.

A still on M. Saintmarc's principle, contain- ing 560 imperial gallons of wash, in seven cop- pers of eighty gallons each, estimated to work off thirty charges of one copper, amounting to 2400 gallons, will produce (supposing the wash to be attenuated sixty degrees, and, consequently, capable of yielding twelve per cent, of proof spirit on the wash), 213 gallons of spirit at thirty-five per cent, over proof, equal to 288 gallons at proof in a day of twelve hours. A common still of the total contents of about 1700 imperial gallons (to contain a charge of 1200 gallons of wash), wil1

work off twice in twelve hours ; distilling 2400 The cost of these two stills is described as

gallons of the same gravity as above, into 960 double that of ti.e new still,

gallons of low wine; and a low wine still con- Taking, next, the diameters and superficu s of

taining a charge of 480 gallons, will produce, at the stills on both systems, it will be found that

twelve per cent, on the wash, the same quantity, on the old plan, a wash still to contain a charge

or 288 gallons of proof spirit. of 1200 gallons, will have

A diameter of seven feet, and an area of about . 331 feet

And a low wine still of 480 gallons, will have a diameter of five feet, and an area of 19′

Making a total superficial area in the two stills of 53 feet

The diameter of a still to contain a charge of 560 gallons on the patent principle

will be about fifty inches, and its area . . . . . 13.1 feet

It maybe shown that, from the union of these considerations, results the fact (proved in prac- tice), that the patent still does not consume, in any case, more than one-third, and, probably, less than one-fourth, of the fuel

that is employed' by the others. To present this more intelligibly (always bearing in mind the respective super- ficies of 13i and 58 feet), the different quantities of vapor passed through the worms, aud there condensed on the two plans, may be stated. For this purpose, taking the average volumes of vapor generated by the various liquids distilled, when entirely evaporated, to be in the proportion of 1500 to 1, it will be seen that, by the old plan, there is produced : —

. 960 gallons

. 288 . 72

1320 gallons X 1500 = 1,980,000

Being less than one fourth of the superficial area, exposed to the action of the fire, as compared with the two stills on the old plan.

The consequences of these diminished propor- tions, are —

First. — That the construction of the furnace for the patent still, does not cost above one-third, or one-fourth, that of the two furnaces on the old plan.

Secondly. — That the consumption of fuel is proportioned to the areas of the respective stills, combined with the quantities of liquid raised into vapor, and the economy of caloric, or heat, in that operation, resulting from their different principles of construction.

Of low wines ... Of spirit, (at proof) Of feints, (one fourth) .

Making ....

being the gallons of vapor passed through the refrigerator on the old plan. — On the patent prin- ciple there is produced : —

Of spirit, (35 over proof)

being the gallons of vapor passed through the refrigerator on that principle ; or less than one- sixth of that produced by the principle now in practice.

In pursuing this enquiry to the consumption of water, which is necessarily proportioned to the quantity of vapor condensed, it is assumed, that the vapor necessary to produce one gal- lon of liquid will raise to the boiling point, in its condensation, five gallons of water — and taking 50° of Fahrenheit as the mean temperature of water, it will be found that 1500 gallons of

Thus, on the old plan, (as shown before)

. 213 gallons X 1500 — 319,500 vapor, equivalent to one gallon of liquid,

will

communicate to five gallons of water, caloric to the extent of 162° ; but as the temperature of water, for the purpose of condensation, will be in a great measure ineffectual, when raised above 104°, it follows, that the absorption of caloric, by the water, to bring it to that point, is only 54°, or one-third of 162° — and, therefore, three times five gallons, or fifteen gallons of water, will be necessary to condense the vapor, which will produce one gallon of liquid.

1320 × 15 = 19,800

And on the patent plan, (as shown before) To which must be added, for the water consumed in the upper- most copper of the still .....

Making a total quantity of

213X15 = 3195

600

3795

Which two sums of 19,800 and 3,795 are the respective numbers of gallons of water employed to condense the vapor, on the two principles ; or, in the same proportion for any increased or diminished consumption, arising either from em- ploying the water at a lower or higher tempera- ture, or from the repeated use of the standing contents of the worm-tub, in consequence of its becoming cool when not worked.

A variety of estimates are given, exhibiting the diminished size and cost of the necessary build- ings, and the decrease, in number and expense, of the various descriptions of vessels, pumps, pipes, Sec., employed in one, as compared with the other, system. These, though essential to the distiller, are not necessary parts of our view of the question.

Another statement is given of the powers of

a still on M. Saintmarc's principle, which, were it not, as is stated,

demonstrable in practice, would exceed belief.

A still of eight feet six inches diameter, con- taining 350 gallons of wash in each of the seven lower compartments, or a total charge of 2450 gallons, will run off in the day of twenty-four hours, at least 30,000 imperial gallons of wash, and produce between 3000 and 4000 gallons of spirit ; a quantity unprecedented in the annals of distillation.

The results of some experiments are given, which were made in the presence of the officers of the board of excise in May 1 826, by which, atone operation, some spirit was produced as high as fifty-eight per cent, over proof, and the mean strength of the whole day's distillation was forty-three per cent, over proof. The produce in quan- tity exceeded by ten per cent, what was required by the excise, according to the attenuation of the wash. A surplus to this extent, however, cannot be calculated upon ; but it is manifest, that the evaporation and loss consequent upon one sin- gle distillation, is small as compared with that which results from three distillations, and two pumpings, or other removals from vessel to ves- sel, as hitherto practised. By experiments on this head made with the same wash, on the two modes of distillation, the result has shown a surplus product, in favor of M. Saintmarc's plan, varying, according to the delicacy of ma- nagement, from three to six per cent.

M. Saintmarc and , M. Alegre, have also introduced into practise in distillation, some changes in the previous process of fermentation, which effect an improvement in the quality of the wash, and give an increase in the quantity of spirit. See article FERMENTATION.

They have likewise constructed an apparatus, secured by patent, for improving the rectification of raw or feint spirits, by which a greater degree of purity is attained than by the common recti- fying still ; and the fine flavors necessary for making compounds are employed more bene- ficially and delicately than by the existing pro- cess. For a description of this still, see article RECTIFICATION.

We have devoted a large space to the examin- ation of this question. But the apparatus and process united, present too interesting a subject of enquiry and investigation, as compared with the existing systems, to admit of its being slightly passed over.

We shall conclude with a few observations of the proprietors of the patent, addressed alike to the interest of the British distiller and the West India planter. They say, when speaking of the advantages the still offers : — ' These advantages consist, shortly, in the comparatively low price of the still — the trifling expense of 'erecting the furnace — the small consumption of

fuel and water — the diminished number, dimensions, and cost of the necessary vats, pumps, pipes, &c., con- nected with the still — the limited space required for its erection — the saving of time in the process of distillation resulting from its use — its uniform applicability to every liquid that has undergone, or is susceptible of, vinous fermentation (as well as to numerous other branches of chemical

science), and, especially, in the production, by one operation from the wash, of a spirit, exceed- ing in strength and purity all those which have hitherto been obtained in this country, by any single process. To these important considera- tions, which are alike applicable to the united kingdom and the colonies, may be added, as especially so to the latter, the no less important points of the production of rum one-third higher proof than the average of what is now obtained in many of them ; and the extensive saving in puncheons, freight, and charges, when shipped in that concentrated state.'

' It is unnecessary to go into details of the sav- ing in puncheons, freight and charges, when rum is shipped at a high proof. It is a matter of too much importance, and too easily estimated by a planter, to require figures in confirmation of the statement. But the actual saving to him in these items, however considerable, is only a part of the advantage. The spirit thus obtained, from its greater purity, bears a value in the market much above that determined by the relative de- gree of strength, as compared with rum of a lower standard. And as this improvement in strength and quality is effected, not at an augmentation, but at a considerable diminution of expense, it is unquestionable, that, when employed for pur- poses of barter, according to the practice of the colonies, at a reduced strength, that reduction from the high strength at which it is brought over by this apparatus, may be made consistently with a preservation of its purity ; and its value, as an article of barter, thus enhanced in a considerable degree.'

They conclude —

- *It must be recollected that this is not an ap- paratus the principle of which is untried. For some years a still of the same kind — less perfect, it is true, but still embodying the main principle of this, has been used in France, by the inventor there (who is also one of the proprietors of the present patent), with the most entire success. This has, therefore, the great advantage of having corrected, in its construction, whatever defects were found in the original invention, from which no new invention is entirely exempt ; sue i corrections being founded on eighteen months' experience in France. And the opinion is war- ranted, that the apparatus constituting the subject of this patent, and ot the present remarks, is, in its principle, the most*

sound and scientific, and the most sure and perfect in its operations, of any that has been adapted to the art of distillation in this country.'

The practical uses of distillation in chemistry are too numerous to be mentioned. By it the volatile part of any substance is separated from that which is fixed, as in the distillation of turpen- tine, in which the essential oil rises and the rosin is left behind ; the more evaporable is separated from the less evaporable, as in the preparation or rectification of ardent spirit ; liquids are freed from foreign or accidental impurities, as in the distillation of common water: volatile substances are united in an easy and commodious manner, as in preparing the odorous distilled waters of aromatic vegetables : bodies are decomposed and analysed, new compounds are formed, and a

knowledge is gained of the native and chemical properties of natural substances.

Common distillation of aromatic vegetables is a simple process, but gives room for some nicety of management, particularly in the regulation of the heat and the quantity of water, which can only be learned by experience. As an example, common peppermint water may be given, and is thus made : put a pound and a half of dry pep- permint in a still, cover it with water, put on the capital, luting the joints with wet bladder or pasted paper ; bring the liquor to boil quickly, and keep it just boiling till about a gallon of water has run over. The residue in the still is then thrown away as useless. The water that comes over first is somewhat turbid, owing to the excess of essential oil that it contains, and in consequence is by much the strongest. By rest it becomes clear, and a fine pellicle of oil rises to the top.

The following circumstances are chiefly obser- vable in common distillation: — The substance from which the distillation is made in some cases requires previous treatment, in others none. The petals of flowers, such as roses and jasmine, may be used immediately, or only after the gen- tlest drying. The aromatic herbaceous vegetables, such as peppermint, may be used indiscriminately fresh or dry, observing, that as the plant is much more watery when fresh than when dry, more water may be added in the distillation of the latter than of the former. Hard woods should be rasped or bruised, and, as they are less easily pe- netrated by the water, they should be macerated in it without heat for from one or two days to as nany weeks, before distillation.

The quantity of water to be used varies much according to circumstances. It should be always so much as during the whole process to coverall that part of the still which is immediately over the fire, otherwise the vegetable matter will scorch, and give a very disagreeable burnt taste and smell, orempyreuma, to the distilled liquor. On the other hand, too much water makes the distilled liquor unnecessarily dilute. In general, fresh vegetables require about thrice their weight of water ; and when dry, five or six times. The still should never be more than about three- fourths full, or even less when succulent vegeta- bles are used, to prevent boiling over. The management of the fire is of some consequence, to prevent boiling over and empyreuma on the one hand, and on the other to give heat enough for extraction of the aromatic principle. Where a water bath is used (which, however, is tedious, and seldom if ever necessary), all danger of ex- cess of heat is avoided, but it is often requisite to increase the heat of the bath by adding salt to the water. When, in distilling without a bath, too much heat is used, there is danger either of blowing off the capital, not without risk to the bye-stander, when the liquor boils with extreme vehemence (which is particularly likely to occur when the still is too full of bulky herbaceous ve getables, that rise in the capital and partly choke up the opening into the worm-pipe), or else the liquor boils over into the worm-pipe, and mixes a decoction of the vegetable with the distilled water. This is soon perceived by the condensed

liquor coming out at the bottom of the worm, not in a clear uniform streamlet, but by gushes and starts, with a gurgling noise, and fouled or colored. When this accident happens, the fire should be entirely slacked, the capital taken off, the liquor already come over returned into the still, and the distillation begun again with more care. When the stream of distilled water flows evenly, and the boiling liquor is heard to simmer moderately in the boiler, the operator will know that the process is going on properly.

The quantity of aromatic water to be obtained from a given weight of any vegetable cannot be laid down with accuracy, so as to obtain a liquor of uniform strength, as (independently of any difference in conducting the operation) the sea- son of the year, the length of drying, and other causes, will materially affect the intensity of aroma in the vegetable. The taste, therefore, is a better criterion to judge when to stop the pro- cess, as the liquor will run nearly tasteless long before the water has all boiled away. Some ad- vantage is gained by mixing all the distilled liquor together, as the first portion has generally rather more essential oil than it can retain, and the last portion has less.

The laws which relate to the management of a distillery are numerous and important; we subjoin a brief abstract. By 43 Geo. III. c. 69, every distiller

or maker of low wines or spirits for sale, or exportation, within England, shall take out a licence, which shall be charged with the yearly sum of £10 ; and every rectifier of spirits within England, shall pay for such li- cence a duty of £5 ; and such licence shall be renewed annually before the end of the year, on pain of forfeiting, if a common distiller, £200 ; if a molass distiller or rectifier, £30. (24 Geo. III. c. 41.) No person shall be deemed a recti- fier or compounder who shall not have an entered still capable of containing, exclusive of the head, 120 gallons, which shall have suitable tubs and worms, and be used for rectifying British spirits for sale, (26 Geo. III. c. 73. By 19 Geo. III. c. 50,) every such distiller shall cause to be put up in large characters, over the outward door of every place used for making or keeping of Bri- tish-made spirits, the words Distiller, Rectifier, or Compounder of Spirituous Liquors, on pain of £100 ; and if any person shall buy any such spirits of any person not having such words over his door, he shall forfeit £50 By 21 Geo. III. c. 55, if any distiller or dealer shall buy any British-made spirits (except, as in the former case, at the public sales of condemned spirits by the commissioners of excise) he shall forfeit £500. By 19 Geo. III. c. 50, no person shall be permitted to make entry of any work-house or place, or of any still or utensil for making, dis- tilling, or of keeping low wines or spirits, unless he shall occupy a tenement of £10 a year, as- sessed in his own name, and paying the parish- rates ; and by 21 Geo. III. c. 55, in order to pre- vent private distillations, every person who shall make or distill any low wines or spirits, whether for sale or not for sale, shall be deemed a com- mon distiller for sale, and shall enter his still and vessels at the next office of excise ; and every person making or keeping any wash fit for dis-

filiation, and having in his custody any still, shall be deemed a common distiller for sale, and be liable to the several duties, and subject to the survey of the officers. No common distiller or maker of low wines, spirits, or strong waters, for sale, shall set up any tun, cask, wash-back, copper, still, or other vessel, for making or keep- ing any worts, wash, low wines, spirits, or strong •waters; nor alter, nor enlarge the same, nor have any of them private or concealed, or any private warehouse, cellar, &c., for making or keeping any of the said liquors, without first giv- ing notice at the next office of excise, on pain of £20 ; and he in whose occupation any of the same shall be, shall forfeit £50 ; 8 and 9 Wil. c. 19. And by 24 Geo. II. c. 40, every distiller shall, ten days before he distils or makes any spirituous liquors, enter every vessel, &c., at the next office of excise, on pain of £50 for every still or vessel used and not entered. And every distiller shall, four days before he begins to brew any grain, &o., make

entry at the next excise office, of all coppers, vessels, &c., inserting in such entry the day on which he intends to begin, and the use to which such vessel is to be applied, which shall not be altered on pain of forfeiting £100, with the liquor, which may be seized by any officer of excise, 26 Geo. III. c. 73. And by 21 Geo. III. c. 55, no person shall make use of any vessel, room, 8cc., for making wash for the distillation of low wines and spirits, without giving a notice at the next office of excise, on pain of £50 for every vessel, room, &c., used without notice. Nor shall any person withdraw his entry whilst any duty is depending, or any vessels are standing, except by changing it on the day of its being withdrawn, (23 Geo. III. c. 70. ; 26 Geo. III.

from charging the still with any other, under a penalty of £100. ' 24 Geo. II. c. 40 ; 12 Geo III. c.46; 14 Geo. III. c. 73.

Distillers, in preparing grist for wash, that use more in the proportion of one quarter of wheat to two quarters of any other grain, forfeit £50. 33 Geo. II. c. 9.

If any corn distiller, or maker of low wines or spirits from corn or grain, shall make use of any molasses, coarse sugar, hcney, or any composi tion or extract of sugar, in brewing or preparing his wash for distillation, or receive such materials into his custody, exceeding 10 Ibs. in weight, he shall forfeit £100 ; and officers may take samples of the wash in any vessel, paying for the same at the rate of Is. 6d. a gallon ; and if the distiller shall obstruct him, he shall forfeit £100. 23 Geo. III. c. 70.

Officers are to attend at the still-houses, after due notice, to see that the wash-stills are properly filled, and when they are fully charged to lock and secure them. And if any person shall open any still-head, &c., after they have been so locked and before they are opened by the officer of ex- cise, or shall wilfully damage any lock or fasten- ing, he shall forfeit £200. 12. Geo. III. c. 46.

Removing or concealing wash, &c., in the possession of any distiller, incurs a forfeiture of the same ; and such distiller, and the person em- ployed to remove, or who shall receive the same, shall severally forfeit 10s. for every gallon of it ; and no wort, wash, &c., shall be put into the still or removed from the back or vessel in which it was fermented, till the same has been gauged, in the penalty of £200 and double duty.

The officer shall every three months, if re- quired, take an account of the stock of all dis-

c. 73.) No person is allowed to have any still or tillers and rectifiers, and,

if any unfair increase

number of stills, which singly or together contain less than 100 gallons, under the penalty of £100 for every still ; and the wash-still shall contain at least 400 gallons, exclusive of the head, under the same penalty. 2 Geo. III. c.5 ; and 14 Geo. III. c. 73.

Distillers are to show to the officer every still or other vessel entered ; and the vessels are to be marked by the gauger ; and defacing the mark, or rubbing out, incurs a penalty of £20. 26 Geo. II. c. 40.

Distillers who use private pipes, &c., for con- veyance of distilled liquors, forfeit £100. (10 and 11 Wil. c. 4.) They shall also make holes in the breast of the still for taking gauges and samples, and provide locks on the still-heads, the holes, discharge-cocks, and furnace-door, under a pe- nalty of £50, and of £200 for breaking or wil- fully damaging such lock or fastening, after it has been secured by the officer. 12 Geo. III. c.46; 14 Geo. III. c.73.

The distiller shall provide proper ladders for the officer to examine each still, and assist in setting them up, on pain of £200. 23 Geo. III. c. 70.

Distillers are required to give notice to the officer of excise before they receive any wine, cyder, &c., or any kind of fermented wash, on pain of £50, and also before they charge or open the still, ex- pressing and describing the number and marks of the wash-batches used and they are prohibited

shall be found, the same shall be forfeited and may be seized ; and the person in whose stock such excess shall be found shall forfeit £50. Rec- tifiers are to mark the strength and quality of mixed spirits on the outside of the cask, and in default thereof, or if untruly marked, the same shall be forfeited, and also the casks, and may be seized; and the rectifier shall forfeit £50. 26 Geo. III. c. 73.

*By 27 Geo. III. c. 31, made perpetual by 41 Geo. III. c. 97, it was enacted, that all spirits should be deemed and taken to be of the strength indicated by Clarke's hydrometer; but, by 43 Geo. III. c. 97, the lords of the treasury may discontinue the use of this hydrometer, and direct any other to be used in lieu of it. All British spirits of the third extraction, or which have been twice distilled from low wines, and had flavor communicated to them, shall he deemed ' British brandy ;' if no flavor has been commu nicated to them, the same shall be deemed * rec- tified British spirits.' If of the second extraction, or once distilled from low wines, the same shall be deemed ' raw British spirits.' And all British spirits distilled with juniper berries,*

caraway seeds, anise seeds, or other seeds, or ingredients used In the compounding of spirits, shall be deemed 'British compounds.' And all British spirits of a greater strength than one to two over hydrometer proof shall be deemed ' spirits of wine.' Officers shall take an account of the

S'.ock of rectifiers and compounders every three months at least, and if any increase of quantity, onder certain limitations, be found, the quantity in excess shall be forfeited, and may be seized; and such person shall forfeit £50.

And if any British spirits or compounds are sent out of a greater strength than one in five under hydrometer proof, the same shall be forfeited, and treble value, or £50 in the whole ; and the same may be seized, with the casks and vessels contain- ing it. 30 Geo. III. c 37. The distiller shall weekly make entry of all wash by him used for the making of low wines and spirits within each week, on pain of £10; and within a week after shall pay off the duties, on pain of double duty. 19 Geo. III. c. 50. All permits for removing British spirits shall correspond with the request notes, and be delivered with such spirits to the buyer, on the forfeiture of the same to such buyer and double the price, including the duties : and such buyer may be admitted to prove that such spirits were delivered without a lawful per- mit; but no buyer shall be allowed to avail him- self of such forfeiture unless complaint is made within fourteen days after the delivery of the spi- rits. 26 Geo. III. c. 73.

Retailers of distilled liquors, or such as sell the same in less quantity than two gallons, must take out a licence, for which they are to pay annually a sum corresponding to the rent of the premises which they occupy ; if the rent of such retailer be £15, or upwards, £5. 2s. ; at £20, and up- wards, £5. 10s.; at £25, and upwards, £5. 18s. at £30, or upwards, £6. 6s. ; at £40, or upwards, £6. 14s. ; and at £50, or upwards, £7. 2s. This licence, which is to be renewed annually, on the penalty of £50, is to be granted only to those who keep taverns, victualling-houses, inns, coffee- houses, or ale-houses; who, within the limits of the office of excise in London, pay £10 a year rent, and parish rates, and in places where the occupiers are not rated £12 a year; and who, in other parts of the kingdom, pay to church and poor. They must first be licensed to sell ale in the places where they dwell.

By 16 Geo. II. c. 8, retailers of spirituous li- quors, without licence, were subject to a penalty of £10; and by 24 Geo. II. c. 40, all liquors found in

the custody of such persons, or within six calendar months after conviction, were to be seized. And by 13 Geo. III. c. 56 ; and 30 Geo. III. c. 38, such retailers are to forfeit £50, subject to mitigation so as not to be reduced below £5. Every person who shall retail less than two gallons shall enter his warehouses, shops, &c., and his spirituous liquors, on pain of £20'for every place, and 40s. for every gallon not entered; and also the liquors and casks. 9 Geo. II. c. 23; 30 Geo. III. c. 38. By 19 Geo. III. c. 69, every importer or dealer in spirituous liquors, shall cause to be painted on a conspicuous part of the house, shop, or cellar, &c., used by him, the words Importer of, or Dealer in, Spirituous Liquors, on pain of £50. Any importer or dealer buying of a person who has not these words over the door of his shop, &c., shall forfeit £100. Any person who hath not made entry of his liquors, and who hath these words over his door, shall forfeit £50. No spi-

rituous liquors shall be brought into a place of sale without previous notice to the officer of ex- cise, and leaving with him a certificate, express- ing that all the duties are paid, the quantity and quality, the name of the seller, &c., on pain of forfeiting £20, and also the liquor and casks. 9 Geo. II. c. 23. Retailers shall not increase the quantity of their liquors, on pain of 40s. a gal- lon ; and the liquors so mixed with water, or any other liquors, shall be seized and forfeited. 9 Geo. II. c. 23. By 21 Geo. III. c. 55, the stock in- creased shall be forfeited, a quantity equal to the increased quantity shall be seized by the officer, and the person offending shall forfeit £20. The officer may at all times, by day or night, enter into warehouses, shops, or other places, to take an account of the quantity and quality ; and if any retailer hinder the officer he shall forfeit £50. 9 Geo. II- c. 23. No licensed retailer shall have any share in a distillery or rectifying house, or be concerned in such trade, on pain of £200. 26 Geo. III. c. 73.

Hawkers of spirituous liquors in the :treets, &c., are liable to a forfeiture of £10. 9 Geo. II. c. 23. 11 Geo. II. c. 26. Persons giving away spirituous liquors, or paying wages in them, shall be deemed retailers. 9 Geo. II. c. 23. Keepers of gaols, workhouses, &c., selling spi- rituous liquors, or knowingly suffering them to be sold, except such as are prescribed by a phy- sician, surgeon, or apothecary, forfeit for the first offence £100, and for the second their office. Persons bringing any such liquors into any place of that kind may be apprehended, and on con- viction committed to the house of correction, or prison, for any time not exceeding three months, unless they immediately pay a fine, not exceed- ing £20, nor less than £10. Debts for spirituous liquors cannot be recovered, unless they have been contracted, or the liquors delivered at one time to the value of 20s. or upwards : and dis- tillers knowingly selling or delivering distilled liquors to unlicensed retailers, forfeit £10, and treble their value ; and the retailer, convicting the distiller, is entitled to a share of the penalty, and is himself

indemnified. Persons riotously rescuing offenders, or assaulting informers, and their aiders or abettors, are guilty of felony, and liable to seven years' transportation. 24 Geo. II, c. 40. If any person shall obstruct any officer in the execution of his duty, in relation to this act, he shall forfeit £200. 23 Geo. III. c. 81. No liquor exceeding one gallon shall be removed without a permit. 6 Geo.l. c. 21. British spi- rits made from corn are allowed on exportation as merchandise, a bounty or drawback of £3. 12s. per ton. 5 Geo. III. c. 5; 27 Geo. III. c. 13. And by 6 Geo. II. c. 17. for spirits drawn from British corn, a drawback was to be allowed at the port of shipping, of £4. 18s. per ton, in full of all drawbacks: and by 23 Geo. II. c. 9, there was to be an additional drawback of £24. 10s. a ton, on all British-made spirits exported ; pro- vided that they are not exported in casks con- taining less than 100 gallons, and in vessels of less burden than 100 tons, except to Africa and Newfoundland, whither they may be exported m any vessels not less than seventy tons. 6 Geo. III. c. 46. The 43 Geo. III. c. 69, which con-

solidates the duties, &c., of excise, continues all advances, bounties, and drawbacks, which are particularly directed to be made by any act or acts of parliament in force, on or immediately before the 5th of July, 1803, except so far as such allowances may be varied or repealed by the same act. By 39 and 40 Geo. III. c. 73, spirits distilled in England for exportation to Scotland, are exempted from the excise duties in England. And by 43 Geo. III. c. 69, for every gallon, English wine measure, of spirits, not exceeding in strength that of one to ten over hy- drometer proof, and so in proportion for any higher degree of strength, made in England and thence imported into Scotland, payment is to be made by the importer before landing, of 4s.; and by c. 81, an additional duty of '2s.: for every such gallon manufactured in Scotland and brought from thence into England, 5s. O^d. ; and by c. 81, an additional duty of 2s. 5d. For every gallon of such spirits of greater strength than one to ten over hydrometer proof, and not exceeding £3 per cent, over and above one to ten over hydrometer proof, 7s 5%d. and a surcharge. And all duties and drawbacks under these acts shall be proportionate to the actual quantity. No spirits shall be sent from Scotland to Eng- land, or from England to Scotland, by land, or in vessels of less than seventy tons burden, or in casks containing less than 100 gallons, on for- feiture of the same, together with casks or pack- age. And if any distiller, rectifier, compounder, or dealer in spirits, or

servant belonging to any such person, shall obstruct an officer in the execution of this act, he shall forfeit £200. Vide laws relating to distillation under GENEVA, WHISKEY, BRANDY, and RUM. See also HYDROMETER.

DISTINCT', adj. ˆ Fr. distinct ; Italian, DISTINCTION, ra. s. I Portug. and Span, dis- DISTINC'TIVE, adj. [tinto; Lat. distinctus, DISTINCTIVELY, adv. (from distinguo, dis, and DISTINCT' LY, adv. 1 Gr. «=ri£w, to mark or DISTINCTNESS, n.s. } prick for distinction : marked out in any way ; different in kind, de- gree, or number ; separate : distinction is the act or art of discerning a difference, as well as the thing that notes it ; and the honor or difference of state resulting. Distinctive is that which marks a difference, or having power to do so : distinctively and distinctly, clearly without con- fusion of differences. Distinctness, more intense or accurate distinction.

For tho thingis that ben withonten the soule ghyieth voicis, eithir pipe, eithir harpe, but tho ghyuen dit- tinccioun of sownyngis hou schal it be knowun that is sungun eithir that that is trumpid ?

Wiclif. 1 Cor. 13.

The mixture of those things by speech, which by nature are divided, is the mother of all error : to take away therefore that error, which confusion breedeth, distinction is requisite. Hooker.

I did all my prilgrimage dilate, Whereof by parcels she had something heard, But not distinctively. Shakspeare. Othello.

This fierce abridgment Hath to it circumstantial branches, which Distinction should be rich in. Id. Cymbeline.

Lawfulness cannot be handled without limitations and distinctions. Bacon's Holy War.

Credulous and vulgar auditors readily believe it, and the more judicious and distinctive heads do not reject it. Browne.

Heaven is high,

High and remote, to see from thence distinct Each thing on earth. Milton .

Tempestuous fell

His arrows from the fourfold-visaged four, Distinct with eyes ; and from the living wheels Distinct alike with multitude of eyes. Id.

If by the church they mean the communion of saints only ; though the persons of men be visible, yet because their distinctive cognizance is invisible, they can never see their guide ; and therefore they can never know whether they go right or wrong.

Bp. Taylor.

The intention was, that the two armies, which marched out together, should afterwards be distinct.

Clmrendon.

Maids, women, wives, without distinction fall ; The sweeping deluge, love, comes on, and covers all.

Dry den.

The object I could first distinctly view, Was tall straight trees, which on the waters flew.

Id.

The membranes and humours of the eye are per- fectly pellucid, and void of colour, for the clearness, and the distinctness, of vision. Ray on Creation.

Fatherhood and property are distinct titles, and be- gan presently, upon Adam's death, to be in distinct persons. Locke.

This will puzzle all your logick and distinctions to answer it. Denham's Sophy.

On its sides it was bounded pretty distinctly, but on its ends very confusedly and indistinctly.

Newton's Opticks.

In story-telling, besides the marking distinct charac- ters, and selecting pertinent circumstances, it is like- wise necessary to leave off in time and end smartly.

Steele.

For from the natal hour, distinctive names, One common right the great and lowly claims.

Pope's Odyssey.

Some young men of distinction are found to travel through Europe, with no other intent, than that of understanding, and collecting pictures, &c.

Goldsmith.

There is too much reason to apprehend, that the custom of pleading for any client, without discrimi- nation of right or wrong, must lessen the regard due to those important distinctions, and deaden the moral sensibility of the heart. Percival.

The painter, on the other hand, can throw stronger illumination and distinctness on the principal moment or catastrophe of the action ; besides the advantage he has in using a universal language which caa be read in an instant of time. Darwin.

I used then to say, and I say so still, render the office of a bishop respectable by giving some civil dis- tinction to its possessor, in order that his example may have more weight with both the laity and clergy.

Bp. Watton.

DISTIN'GUISH,t-.a.&w.n."l Fr. distinpuer ; DISTINGUISHABLE, adj. I Span, and Port. DISTINGUISHED, part. adj. [distinguer ; It, DISTIN'GUISHER, n. s. [and Lat. distin~

DISTIN'GUISHINGLY, adv. \ guere. SeeDis- DISTIN'GUISHMENT, n.s. J TINCT. To mark diversity ; to specify ; to know by some mark or

token ; to judge ; and hence to honor: as a neuter verb, to make distinction. Distinguishable is capable of being distinguished ; honorable. Dis- tinguishingly, accurately; or with some mark of honor. Distinguishment seems synonymous with distinction.

Rightly to distinguish, is, by conceit of the mind, to sever things different in nature, and to discern wherein they differ. Hooker.

We have not yet been seen in any house, Nor can we he distinguished, by our faces, For man or master.

Stuikspenre. Taming of the Shrew. Let us admire the wisdom of God in this distinguisher of times, and visible deity, the sun.

Browne's Vulgar Errouri. Impenitent, they left a race behind Like to themselves, distinguishable scarce From Gentiles, but by circumcision vain.

Milton.

The acting of the soul, as it relates to perception and decision, to choice and pursuit, or aversion, is distin- guishable to us. Hole's Origin of Mankind.

Being dissolved in aqueous juices, it is by the eye distinguishable from the solvent body. Boyle.

The not distinguishing where things should be dis tinguished, and the not confounding where things should be confounded, is the cause of all the mistakes in the world. Selden.

If writers be just to the memory of Charles II., they cannot deny him to have been an exact knower of mankind, and a perfect distinguisher of their talents.

Dryden.

We are able, by our senses, to know and distinguish things ; and to examine them so far as to apply them to our uses, and several ways to accommodate the exigencies of this life. Locke.

St. Paul's Epistles contain nothing but points of Christian instruction, amongst which he seldom fails to enlarge on the great and distinguishing doctrines of our holy religion. Id.

Can I be sure that in leaving all established opinions I am following the truth •, and by what criterion shall I distinguish her, even if fortune should at last guide me on her footsteps ?

Hume on Human Understanding .

The dittinguishing part of our constitution is its liberty. Burke.

Moses distinguishes the causes of the flood into those that belong to the heavens, and those that belong to the earth, the rains, and the abyss.

Burnet't Theory.

I would endeavour that my betters should seek me by the merit of something distinguishable, instead of my seeking them. Swift.

Wit, I consider as a singular and unavoidable man- ner of doing or saying

any thing peculiar and natural to one man only, by which his speech and actions are dittinguished from those of other men. Congreve.

Let us revolve that roll with strictest eye, Where, safe from time, distinguished actions lie.

Prior.

To make corrections upon the searchers' reports, I considered whether any credit at all were to be given to their distinguishments.

Graunt's Bills of Mortality.

For sins committed, with many aggravations of guilt, the furnace of wrath will be seven times hotter, and burn with a distinguished fury. Rogers.

Some call me a Tory, because the heads of that party have been distinguishingly favourable to me.

Pope.

Never on man did heavenly favour shine With rays so strong, distinguished, and divine.

Id. Odyssey,

The question is, whether you rlijtinr/uis/i me, because you have better sense than other people, or whether you seem to have better sense than other people, be- cause you distinguish me. Shenstone.

DISTORT', v. a. \ hat. distortus, from a is DISTOR'TION, n. s. j and torqueo, tor/us, to

turn. To make crooked ; twist ; writhe ; deform :

often used figuratively.

Something must be distorted beside the intent of the divine inditer. Peacharn on Poetry.

With fear and pain

Distorted, all my nether shape thus grew Transformed. Milton.

Wrath and malice, envy and revenge, do darken and distort the understandings of men. Tilbitson.

By his distortions he reveals his pains ; He hy his tears and by his sighs complains.

Prior.

In England we see people lulled asleep with solid and elaborate discourses of piety, who would b« warmed and transported out of themselves by the bel- lowings and distortions of enthusiasm.

Addison's Spectator. Now mortal pangs distort his lovely form. Smith.

Here cross-legg'ed nobles in rich state shall dine, There, in bright mail, distorted heroes shine. (fay.

For gold, his sword the hireling ruffian draws ; For gold, the hireling judge distorts the laws.

Johnson. Vanity of Human Wishes.

We prove its use

Sovereign and most effectual to secure A form, not now gymnastic as of yore, From rickets and distortion, else our lot.

Cowper.

DISTRACT, v. a. & adj. ~\ Fr. distraire ; DISTRACT'EDLY, adv. Ital. distrare ;

DISTRACT'EDNESS, n. s. [Span, distrahar, DISTRAC'TION, j from Lac. dis, di-

DISTRAC'TIVE, adj. I versely, and tra-

DISTRAUGHT', part. adj. J ho; Gr. fyaenrw, to draw. To draw several ways at once : to per- plex the mind; to harass: vex; make mad. Distraction and distractedness are synonymous. Distractive is causing perplexity. Distraught is distracted.

While I suffer thy terrors I am distracted. Psalm.

By sea, by sea.

— Most worthy Sir, you therein throw away The absolute soldiership you have by land ; Distract your army, which doth most consist Of war-marked footmen.

Shakspeare. Antony and Cleopatra.

Better I were distract,

So should my thoughts be severed from my griefs -, And woes, by wrong imagination, lose The knowledge of themselves. Id. King Lear.

Come, cousin, canst thou quake, and change thy

colour,

Murder thy breath in middle of a word And then again begin, and stop again, As if thou wert distraught and mad with terror ?

Id. Richard III.

Methought her eyes had crossed her tonpi-e , For she did speak in starts distractedly.

Id. Twelfth Night. Z2

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DIS

She was unable in strength of mind to bear the grief of his disease, and fell distracted of her wits.

Bacon.

The needle endeavours to conform unto the meri- dian ; but being distracted, driveth that way where the greater and powerfuller part of the earth is placed.

Browne' Vulgar Errourt.*

He had been a good military man in his days, but was then distraught of his wits. Camd. Rem.

It would burst forth ; but I recover breath ; And sense distract to know well what I utter.

Milton's Agonistei.

The two armies lay quiet near each other without improving the confusion

and distraction which the king's forcos were too much inclined to. Clarendon.

Idleness is but the devil's home for temptation, and for unpro6 table distracting musings. Baxter.

Never was known a night of such distraction, Noise so confused and dreadful '.jostling crowds, That run and knew not whither. Dryd. Span. Fr. Oft grown unmindful through distractive cares, I've stretched my arms, and touched him unawares.

Dryden.

If he cannot wholly avoid the eye of the observer, he hopes to distract it by a multiplicity of the object.

South.

You shall find a distracted man fancy himself a king, and with a right inference require suitable atten- dance, respect, and obedience. Locke.

So to mad Pentheus double Thebes appears, And furies howl in his distempered ears ; Orestes so, with like distraction tost, Is made to fly his mother's angry ghost. Waller, What may we not hope from him in a time of quiet and tranquillity, since, during the late distractions, he has done so much for the advantage of our trade ?

Addison's Freeholder.

Commiserate all those who labour under a settled distraction, and who are shut out from all the plea- sures and advantages of human commerce.

Atterbury.

This quiet sail is as a noiseless wing To waft me from distraction ; once I loved Torn ocean's roar, but thy soft murmuring Sounds sweet as if a sister's voice reproved, That I with, stern delights should e'er have been so

moved. Byron's Childe Harold.

DISTRAIN' v. a. & n. ~) Fr. destraindre ; DISTRAIN'ER, n. s. Mtal. and Lat. dis-

DISTRAINT', n. s. j tringere; dis, exple-

tive, and stringo, to gripe. To lay hold of by law. See the article.

Here's Beauford, that regards not God nor king, Hath here distrained the Tower to his use.

Shakspeare.

The earl answered, I will not lend money to my superior, upon whom I cannot distrain for the debt.

Camden't Remains. Blood, his rent to have regained Upon the British diadem distrained. Marvel.

DISTRAIN, or DISTREIN, in law, is to attach, or seize on one's goods, for the satisfaction of a debt. It is the mode of levying a distress. See the following article.

DISTRESS', v. a. & n. $. > Fr. dltresse ; It.

DISTRESSFUL, adj. J distrezza ; from

Lat. districtio, distringo; to press hard; hence, distress, because a person in distress is pressed by his affairs. To seize by law; to harass; crush by affliction; make unhappy.

We are troubled on every side, yet not distressed. Bible. 2 Cor. iv. 8.

0 flesh they ben, and o flesh, as I gesse, Hath but on herte in wele and in distress.

Chaucer. Cant. Tales.

He would first demand his debt ; and, if he were not paid, he would straight go and take a distress of goods and cattle, where he could find them, to the value. Spenser.

There can I sit alone, unseen of any, And to the nightingale's complaining notes Tune my distresses, and record my woes.

Shakspeare.

1 often did beguile her of her tears, When I did speak of some distressful stroke That my youth suffered. Id. Othello. They were not ashamed — to come to me for assess- ments and monthly payments for that estate which they had taken ; and took distresses from me upon my most just denial. Bp. Hall's Hard Measure.

Quoth she, some say the soul's secure Against distress and forfeiture. Hudibras.

People in affliction or distress cannot be hated by generous minds. Clarissa.

The ewes still folded, with distended thighs, Unmilked, lay bleating in distressful cries.

ˆPope's Odyssey.

And such is the fate of hapless lexicography, that not only darkness, but light, impedes and distresses it ; things may be not only too little, but too much, known, to be happily illustrated .

Johnson. Preface to Dictionary.

Ah ! then and there was hurrying to and fro, And gathering tears, and tremblings of distress,

And cheeks all pale, which but an hour ago Blushed at the praise of their own loveliness.

Byron.

DISTRESS, DISTRICTIO, is the taking of a per- sonal chattel out of the possession of the wrong- doer, into the custody of the party injured, to procure a satisfaction for the wrong committed. The term distress is also, in our law books, applied to the thing taken by this process, as well as to the process itself. The most usual injury for which a distress may be taken is that of non-payment of rents. See RENT.

It is held as a universal principle, that a dis- tress may be taken for any kind of rent in arrear; the detaining of which beyond the day of pay- ment is an injury to him that is entitled to re- ceive it. Likewise, for neglecting to do suit to the lord's court, or other certain personal ser- vice, (Co. Litt. 46,) the lord may distrain, of com- mon right. Also, for amercements in a court-leet a distress may be had of common right ; but not for amercements in a court-baron, without a special prescription to warrant it, (Brownl. 36.) Another injury for which distresses may be taken, is where a man finds beasts of a stranger wan- dering in his grounds, damage-feasant; that is, doing him hurt or damage, by treading down hij grass, or the like ; in which case the owner of th» soil may distiain them till satisfaction be mad him for the injury sustained. Lastly, for severa\ duties and penalties inflicted by special acts of parliament, as for assessments made by commis- sioners of sewers, stat. 7 Ann. c. 10, or -for the relief of the poor, stat. 43 Eliz. c. 2, remedy by distress and sale is given : with regard to Which

it may be observed, that such distresses are partly analogous to the ancient distress at com- mon law, as being repleviable and the like (4 Burr. 589) ; but more resembling the common law process of execution, by seizing and selling the goods of the debtor under a writ of FIERI FACIAS, which see.

By stat. 56 Geo. 3, c. 88, § 16, 17, tenants in Ireland having paid rent to their immediate landlord, if distrained by the superior landlord, may recover damages against their immediate landlord, and retain them out of the future accruing rent. By this act, as amended by 58 Geo. 3, c. 39, the powers of distress on corn, &c., growing (given in England by stat. 11 Geo. II., c. 19) are extended to Ireland; and other provi- sions are made for the recovery of tenements from absconding, overholding, and defaulting tenants.

With respect to the things which may be dis- trained, or taken in distress, it may be laid down as a general rule, that all chattels personal are liable to be distrained, unless particularly pro- tected or exempted. Instead, therefore, of men- tioning the things that are distrainable, it will be more easy to recount the things which are not so, with the reason of their particular exemptions. (Co. Litt. 47). Every thing which is distrained is presumed to be the property of the wrong-doer : it will follow, therefore, that such things, in which no man can have an absolute and valuable pro- perty, as dogs, cats, rabbits, and all animals feras nature, cannot be distrained. But if deer, which are ferae naturae, are kept in a private enclosure for the purpose of sale or profit, this circum- stance reduces them to a kind of stock or mer- chandise, that they may be distrained for rent. Moreover, whatever is in the personal use or occupation of any man is, for the time, privi- leged and protected from any distress ; as an axe with which a man is cutting wood, or a horse while a man is riding him. But horses drawing a cart, and also the cart, may be distrained for rent-arrere, if a man be not upon the cart (1 Vent. 36) : and it hath been said, that if a horse, though a man be riding him, be taken damage- feasant, or trespassing in another's ground, the horse may be distrained and ' led away to the pound. (1 Sid. 440.) However, the authorities on this point being collected together in Hargr. Co. Litt. 47, the clear result of them is, that such a distress is illegal. Again, valuable things in the way of trade shall not be liable to distress ; as a horse standing in a smith's, shop to be shod, or in a common inn ; or cloth at a tailor's house ; or corn sent to a mill or market. All these are protected or privileged for the benefit of trade ; and are supposed in common presumption not to belong to the owner of the house, but to his customers. But, generally speaking, whatever goods and chattels the landlord finds upon the premises, whither they, in fact, belong to the tenant or a stranger, are distrainable by him for rent ; for otherwise

a door would be open to in- finite frauds upon the landlord ; and the stranger has his remedy by action on the case against the tenant, if by the tenant's default the chattels are distrained, so that he cannot render them when called upon. With regard to a stranger's beasts

which are found on the tenant's land, the follow- ing distinctions are taken. If they are put in by consent of the owner of the beasts, they are distrainable immediately afterwards for rent- arrere by the landlord. (Cro. Eliz. 549.) So also if the stranger's cattle break the fences, and commit a trespass by coming on the land, they are distrainable immediately by the lessor for his tenant's rent, as a punishment to the owner of the beasts- for the wrong committed through his negligence. (Co. Litt. 47.) But if the lands were not sufficiently fenced so as to keep out cattle, the landlord cannot, generally, distrain them, till they have been levant and couchant on the land ; that is, have been long enough there to have lain down and rose up to feed ; which, in general, is held to be one night at least; and then the law presumes, that the owner may have notice whither his cattle have strayed, and it is his own neglect not to have taken them away. There are also other things privileged by the ancient common law; as a man's tools and uten- sils of his trade, the axe of a carpenter, the books of a scholar, and the like ; which are said to be privileged for the sake of the public, because the taking of them away would disable the owner from serving the commonwealth in his station. So, beasts of the plough, averia carucae, and sheep, are privileged from distresses at common law (stat. 51 Hen. III. c. 4.) : while dead goods, or other sort of beasts, which Bracton calls catalla otiosa, may be distrained. But, as beasts of the plough may be taken in execution for debt, so they may be for distresses by statute, which partake of the nature of executions. 4 Burr 589). And, perhaps, the true reason, why these and the tools of a man's trade were privi- leged at the common law, was, because the dis- tress was then merely intended to compel the payment of the rent, and not as a satisfaction for the non-payment ; and, therefore, to deprive the party of the instruments and means of paying it, would counteract the very end of the distress (4 Burr. 588). Moreover, nothing shall be dis- trained for rent, which may not be rendered again in as good a plight as when it was dis- trained ; for which reason milk, fruit, and the like, cannot be distrained ; a distress at common law being only in the nature of a pledge or secu- rity, to be restored in the same plight when the debt is paid. So, anciently, sheaves or stacks of corn could not be distrained ; because some damage must needs accrue in their removal ; but a cart loaded with corn might ; as that could be safely restored. But now by statute 2 W. & M. c. 5, corn in sheaves or cocks, or loose in the straw, or hay in barns or ricks, or otherwise, may be distrained, as well as other chattels. Lastly, things fixed to the freehold may not be distrained, as caldrons, windows, doors, and chimney pieces; for they savour of the

realty. For this reason also corn growing could not be distrained; till the statute of 11 Geo. II, c. 19, empowered landlords to distrain corn, hops, grass, or other products of the earth, and to cut and gather them when ripe. The goods of a carrier are privileged, and cannot be distrained for rent, though the waggon con- taining them is put into the barn of a house, or on the road. (1 Salk. 249). But the goods of

.1 third person, found on the premises, may be distrained by the collector of the house and win- dow tax, for arrears under 43 Geo. III. c. 161, though the goods are only borrowed and the person in arrear has other goods of his own on the premises sufficient to satisfy the arrears, 1 Maid, and Sel. Rep. 601.

ii. We enquire next how distresses may be taker, disposed of, or avoided. The law of dis- tresseS) says Elackstone, is greatly altered in late years. Formerly they were regarded as a mere pledge or security for payment of rent or other duties, or satisfaction for damage done. And so the law continues with regard to distresses of beasts taken damage-feasant, and for other causes, not altered by act of parliament; over which the distraincr has no other power than to retain them till satisfaction is made. But distresses for rent-arrere being found by the legislature to be the shortest and most effectual method of compelling the payment of such rent, many be- neficial laws for this purpose have been made in the last century ; which have much altered the common law, as laid down by our ancient wri- ters. In discussing this part of the subject, it will be supposed that the distress is made for rent; and the differences between such distress, and that taken for other causes, will be specified. All distresses must be made by day, unless in the case of damage-feasant ; an exception being made in this case, lest the beasts should escape before they are taken. (Co. Lift. 142). When a per- son intends to make a distress, he must, by him- self or his bailiff, enter on the demised premises ; formerly during the continuance of the lease, but : now (stat. 8 Ann. c. 14), if the tenant holds over, the landlord may distrain within six months after the determination of the lease; provided his own title or intere»t, as well as the tenant's possession, continue at the time of the distress. If the lessor does not find sufficient distress on the premies, formerly he could not resort any where else ; and therefore, knavish tenants made a practice to convey away their goods and stock, fraudulently, from the house or lands demised, in order to cheat their landlords. But now (stat. 8 Ann. c. 14. 11 Geo. II. c. 19), the landlord may distrain any goods of his tenant, carried clandestinely off the premises, wherever he rinds them within thirty clays after, unless they have

been bona fide sold for a valuable consideration : and all persons privy to, or assisting in such fraudulent conveyance, forfeit double the value to the landlord. The landlord may also dis- train the beasts of his tenant, feeding upon any commons or wastes, appendant or appurtenant to the demised premises. The landlord might not formerly break open a house, to make a distress, for that is a breach of the peace. But when he was in the house, it was held, that he might break open an inner door (Co. Litt. 16. Com- berb. 17) ; and now (stat. 11 Geo. II. c. 19) he may. by the assistance of the peace officers of the parish, break open, in the day-time, any place whither the goods have been fraudulently re- moved, and locked up to prevent a distress ; oath being first made, in case it be a dwelling-house, of a reasonable ground to suspect that such goods are concealed in it. Where a man is en-

titled to distrain for an entire duty, he ought to distrain for the whole at once; and not for part at one time, and part at another. (2 Lutw. 1532). But if he distrains for the whole, and there is not sufficient on the premises, or he hap- pens to mistake in the value of the thing dis- trained, and so takes an insufficient distress, he may take a second distress to complete his remedy. (Cro. Eliz. 13. stat. 17; Car. II. c. 7: 4 Burr 590). Distresses must be proportioned to the thing distrained for. By the statute of Marl- bridge, 52 Hen. III. c. 4, if any man takes a great or unreasonable distress, for rent-arrere, he shall be heavily amerced for the same. Or if (2 Inst. 107.) the landlord distrains two oxen for twelve-pence rent ; the taking of both is an un- reasonable distress; but if there were no other distress near the value to be found, he might reason- ably have distrained one of them; but for homage, fealty, or suit and service, as also for parliamen- tary wages, it is said that no distress can be ex- cessive. (Bro. Abr. tit. Assise. 291 ; Prerogative 98.) For as these distresses cannot be sold, the owner, upon making satisfaction, may have his chattels again. The remedy for excessive dis- tresses is by a special action on the statute of Marlbridge ; for an action of trespass is not maintainable upon this account, it being no injury at the common law.

iii. When the distress is taken, the next ob- ject of consideration is the disposal of it. For which purpose the things distrained must in the first place be carried to some pound, and there impounded by the taker. But in their way thi- ther, they may be rescued by the owner, in case the distress was taken without cause, or contrary to law : as if no rent be due ; if they were taken upon the highway, or the like ; in these cases the tenant may lawfully make rescue. (Co. Litt. 160, 161). But if they be once impounded, even though taken without any cause, the owner may not break the pound and take them out ; for they are then in custody of the law. (Co. Litt. 47). When impounded, the goods were formerly only in the nature of a pledge or security to compel the performance of satisfaction : and upon this

account, it has been held (Cro. Jac. 148) that the distrainor is not at liberty to work or use a distrained beast. And thus the law still continues with regard to beasts taken damage-feasant, and distresses for suit or services; which must remain impounded, till the owner makes satisfaction ; or contests the right of distraining by replevying the chattels. This kind of distress, though it puts the owner to inconvenience, and is therefore a punishment to him, yet, if he continues obstinate and will make no satisfaction or payment, it is no remedy at all to the distrainor. But for a debt due to the crown, unless paid within forty days, the distress was always saleable at common law. (Bro. Abr. tit. Distress. 71). And for an amercement at a court-leet, the lord may also sell the distress (8 Rep. 41); partly because, being the king's court of record, its process partakes of the royal prero- gative (Bro. ubi. supra. 12 Mod. 33O): but prin- cipally, because it is in the nature of an execution to levy a legal debt. And so in the several sta- tute-distresses already mentioned, which are also in the nature of executions ; the power of sale is

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likewise usually given, to effectuate and complete the remedy. And in like manner, by several acts of parliament (2 W. & M. c. 5., 8 Ann. c. 14., 4 Geo. II. c. 28, 11 Geo. II. c. 19), in all cases of distress for rent, if the tenant or owner do not, within five days after the distress is taken, and notice of the cause thereof given to him, replevy the same with sufficient security, the dis- trainor, with the sheriff or constable, shall cause the same to be appraised by two sworn appraisers, and sell the same towards satisfaction of the rent and charges ; rendering the overplus, if any, to the owner himself. And, by these means, a full and entire satisfaction may now be had for rent in arrear, by the mere act of the party himself, viz. by distress, the remedy given at common law, and sale consequent thereon, which is added by act of parliament. If any distress and sale shall be made, for rent in arrear and due, when none is really due, the owner shall recover double value, with full costs. 2 W. Sess. 1 c. 5.

The taking of a distress was formerly reckoned a hazardous proceeding, on account of the many particulars that attended it : for if any irregularity was committed, it vitiated the whole, and made the distrainors trespassers ab initio (1 Ventr. 37). But now, by the statute 11 Geo. II. c. 19, it is provided, that for any unlawful act done, the whole shall not be unlawful, or the parties tres- passers ab initio ; but that the party grieved shall only have an action for the real damage sustained; and not even that, if tender of amends is made before any action is brought. Blackst. Comm. Book iii.

DISTRESS, PERSONAL, is made by distraining a man's moveable goods, and seizing the profits of his lands and tenements, from the teste, or date of

the writ, for the defendant's contempt in not appearing to an action brought against him when he was summoned, or attached ; and the issues so returned by the sheriffs, are forfeited to the king, and estreated into the exchequer.

DISTRESS, REAL, is made on immoveable goods. It differs from an attachment in this, that it cannot be taken by any common person, with- out the compass of his own fee ; except it be presently after the cattle, or other things are driven, or borne off the ground, on purpose to avoid distress.

Distress has been termed either finite or infinite. Distress finite, is that which is limited by law, in regard to the number of times it shall be made, in order to bring the party to a trial of the action. Distress infinite, is that which is without any limitation being made till the person ap- pears. It is farther applied to jurors that do not appear : as, upon a certificate of assise, the pro- cess is venire facias, habeas corpora, and distress infinite. It is also divided into grand distress and ordinary distress : of these the former extends to all the goods and chattels that the party has within the county. A person, of common right, may distrain for rents and all manner of services; and where a rent is reserved on a gift in tail, lease for life, or years, &c., though there be no clause of distress in the grant or lease, so as that he has the reversion : but on a feoffment made in fee, a distress may not be taken, unless it be ex- iiitssly reserved in the deed.

DIS

DISTRIBUTE, v. a. \ Fr. distribuer ; Ital. DISTRIBUTER, n. s. I and Span, distri DISTRIBU'TION, adj. \buere; Lat. distri- DISTRIB'UTIVE, adj. I buere; dis, diversely, DISTRIB'UTIVELY, adv.J and tribuo, to be- stow. To divide among several ; to deal forth ; dispense. Distributer is, he who deals out; and distribution, the act of distributing ; hence cha- rity. Distributive, that which assigns the due portions of things Distributively, proportion- ally; singly; particularly.

She did distribute her goods to all them that were nearest of kindred. Judith xvi. 24.

The king sent over a great store of gentlemen and warlike people, amongst whom he distributed the land.

Spenser.

Although we cannot be free from all sin collec- tively, in such sort that no part thereof shall be found inherent in us ; yet, distributively at the least, all great and grievous actual offences, as they offer them- selves one by

one, both may and ought to be by all means avoided. Hooker.

The spoil got on the A ntiates Was not distributed. Shiikspeare. Coriolanus. Of great riches there is no real use, except it be in the distribution. Kacon's Essays.

If Justice will take all, and nothing give, Justice methinks is not distributive. Dryden.

Observe the distributive justice of the authors, which is constantly applied to the punishment of virtue, and the reward of vice, directly opposite to the rules of their best criticks. Swift.

There were judges and distributers of justice ap- pointed for the several parts of his dominions.

Addison on Itnl;/.

Let us govern our charitable distributions by this pattern of nature, and maintain a mutual circulation of benefits and returns. Atterbury.

As an integral whole is distinguished into its seve- ral parts by division, so the word distribution is most properly used, when we distinguish a universal whole into its several kinds of species. Wat's.

There remains yet to be considered the distribution of words into their proper classes, or that part of lexi- cography which is strictly critical. Johnson.

The Latin language, long the vehicle used in dis- tributing knowledge among the different nations of Europe, is daily more and more neglected.

Franklin.

DISTRIBUTION, in printing, the taking a form asunder, separating the types, and disposing them in the cases again, each in its proper cell. See PRINTING.

DI'STRICT, n. s. Fr. district; Ital. dis- tretto; Span, districto ; Lat district™, from dis- tringo, to bind, as with limits. The limit, or circuit, of a given authority : hence, a region, country, or portion of a country.

His governors, who formed themselves upon the example of their grand monarque, practised all the arts of despotick government in their respective du- tricts. Addison.

With stern distate avowed, To their own districts drive the suitor crowd.

Pope.

Those districts which between the trnpicks lie, The scorching beams, directly darted, fry.

Blachmore.

DISTRINGAS, in English law, a writ directed to the sheriff, or other officer, commanding hirr

to distrain for a debt to the king ; or for his ap- pearance at a certain day. There is a distringas against peers, and persons entitled to privilege of parliament, under statute 10 Geo. III., cap. 50; by which the effects, in law called issues, levied may be sold to pay the plaintiffs cost, and it has been held that this statute extends to all writs of distringas. In detinue, after judgment, the plain- tiff may have a distringas to compel the defendant to deliver the goods by repeated distresses of his chattels. See DISTRESS, EXECUTION, and PAR- LIAMENT.

DISTRINGAS JURATORES, a writ directed to a sheriff, whereby he is commanded to distrain upon a jury to appear and to return issues on their lands, &c. for non-appearance. Where an issue in fact is joined to be tried by a jury, which is retained by the sheriff in a pannel upon a venire facias for that purpose ; there goes forth a writ of distringas juratores, for the sheriff to have their bodies in court, &c. at the return of the writ. This writ ought to be delivered to the sheriff in such time, that he may warn the jury to appear four days before the writ is returnable, if the jurors live within forty miles of the place of trial ; and eight days if they live farther off. There may be an alias, or pluries distringas jur', where the jury doth not appear. See JURY, and TRIAL.

DISTRU'ST, v. a. & n. s.ˆ Dis and trust. DISTRU'STFUL, adj. f To regard with

DISTRUSTFULLY, adv. £ diffidence or sus- DISTRU STFULNESS. ˆ picion ; not to

trust.

He sheweth himself unto such as do not distrust him.

Wisdom. To me reproach Rather belongs, distrust, and all dispraise.

Milton.

Common swearing, if it have any serious meaning at all, argues in man a perpetual distrust of his own reputation, and is an acknowledgment that he thinks his bare word not to be worthy of credit.

Tillotson.

You doubt not me ; nor have I spent my blood. To have my faith no better understood : Your soul's above the baseness of distrust ; Nothing but love could make you so unjust.

Dry den.

Generals often harbour distrustful thoughts in their breasts. Boyle.

How frequently is the honesty and integrity of a man disposed of, by a smile or a shrug ; — how many good and generous actions have been sunk into obli- vion by a distrustful look, or stampt with the imputa- tion of proceeding from bad motives, by a mysterious and seasonable whisper. Sterne.

DISTU'RB, v. a. kn.s.\ Span, disturbar ; DISTURBANCE, n. s. ' Ital. and Lat. dis- DISTU'RBER, (turbare, from dis

DISTU'RBED, part. adj. J expletive, and tur- bo to disorder, a turba a crowd. To perplex ; disquiet; confound; interrupt; turn off attention, or aim. " Milton uses disturb as a substantive for confusion or tumult, or synonymous with dis- turbance.

*And thei seynge him walkinge on the sec wcren *'if'i"'>M and sciden that it is a fantum.*

Wwlif. Malt. U.

He stands in the sight both of God and men most justly blameable, as a needless disturber of the peace of God's church, and an author of dissensions.

Hooker.

Where love reigns, disturbing jealousy Doth call himself affliction's sentinel ; Gives false alarms, suggesteth mutiny, And in a peaceful hour doth cry, kill ! kill !

Shakspeare.

Instant without disturb they took alarm. And onward move embattled. Milton.

This mischief had not then befallen, And more that shall befall : innumerable Disturbances on earth through female snares.

Id.

He that has his own troubles, and the happiness of his neighbours, to disturb him, has work enough.

Collier on Envy.

His youth with wants and hardships must engage ; Plots and rebellions must disturb his age. Prior.

Ye great disturbers, who in endless noise, In blood and horror, seek unnatural joys : For what is all this bustle, but to shun Those thoughts with which you dare not be alone f

Granvitle.

They can survey a variety of complicated ideas without fatigue or disturbance. Watts.

Thrice round the grave Circaea prints her tread, Anil riiaunts the numbers which disturb the dead.

Darwin.

DISTU'RN, v.a. Dis and turn. To turn off; turn aside. Not in use.

He glad was to disturn that furious stream Of war on us, that else had swallowed them.

Daniel.

DISVAL'UE, v a. i Dis and value. To DISVALUA'TION, n.s. $ estimate below worth; disgrace . diminution of reputation.*

What can be more to the disvaluation of the power of the Spaniard, than that eleven thousand English should have marched into the heart of his countries ?

Bacon.

Her reputation was disvalued In levity. Shahspeare. Measure for Measure.

The very same pride which prompts a man to vaunt and overvalue what he is, does as forcibly incline him to contemn and disavow what be has.

Government of the Tongue.

DISVE'LOP, v.a. Fr. developer. To un- cover.

DISUNITE', >.o.&n.. 2 Dis and unite.*

DISU'NITION, n. «. (To separate; di-

DISU'NITY. 3 Vl^e > Part uni°n-

While every particular member of the publick pro- vides solely for itself, the several joints of the body politick do separate and disunite, and so become un- able to support the whole. South.

Disunity is the natural property of matter, which is nothing else but an infinite congeries of physical monads. More-

Rest is most opposite to motion, the immediate cause of disunion. Glanville's Scepsis.

Disunion of the corporeal principles, and the vital, causeth death. Crew's Cosmolcgia Sacra.

The strength of it will join itself to France, and grow the closer to it by its disunion from the rest

Additon on the War.

The beast they then divide, and disunite The ribs and limbs. Pope's Odyssey.

BIT

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BIT

DISU'SAGE, n.s. Dis and usage. The gradual cessation of use or custom.

They cut off presently such things as might be ex- tinguished without danger, leaving the rest to be abolished by disusage through tract of time.

Hooker.

DISUSE', v. a & n. s. Dis and use. To cease to make use of; to disaccustom : with from or to; more properly from.

Disuse me from the queasy pain Of being beloved and loving. Donne.

Tis law, though custom now diverts the course : As nature's institute is yet in force, Uncancelled though disused. Dryden's Fables.

The disuse of the tongue is the only effectual re- medy against these. Addison's Guardian.

That obligation upon the lands did not prescribe, or couie into disuse, but by fifty consecutive years.

Arbuthnot.

DISVOUCH', v. a. Dis and vouch. To des- troy the credit of; to contradict.

Every letter he hath writ hath disvouched another.

Shakspeare.

DISWITTED, adj. Dis and wit. De- prived of the wits; mad; distracted. A word not in use.

She ran away alone,

Which when they heard, there was not one But hasted after to be gone, As she had been diswitted. Drayton's Nymphid.

DIT, n. s. Dutch dicht . A ditty ; a poem ; a tune. Obsolete.

No bird but did her shrill notes sweetly sing ;

No song but did contain a lovely dit.

Faerie Queene.

DITATION, n. s. Lat. ditatus. The act of enriching.

Those eastern worshippers intended rather homage than dilation; the blessed virgin comes in the form of poverty. Hall's Contemplations.

DITCH, n s. & v. a. ~\ Gothic,

DITCH-DELIVERED, part. adj. {ˆdigue ; Ice.

DITCH-DOG, n. s. i diki ; Belg.

DITCH'ER. J dijck. See

DIKE. The verb comes from the noun. Ditcher

is one who makes ditches : the compounds of

Shakspeare explain themselves.

In the great plagues there were seen, in divers ditches and low grounds about London, many toads that had tails three inches long. Bacon.

The ditches, such as they were, were altogether dry, and easy to be passed over. Knolles.

Poor Tom, when the foul fiend rages, eats cow-dung for sallets, swallows the old rat, and the ditch-dog.

Shakspeare.

Finger of birth-stiangled babe, Ditch-delivered by a drab. Id.

To some men the wide seas are but narrow ditches, and the world itself too limited for their desires.

Burton.

You merit new employments daily, Our thatcher, ditcher, gardener, baily. Swift. I have employed my time, besides ditching, ia finishing my travels. Id.

Sudden the ditches swell, the meadows swim.

Thomson.

I have no more pleasure in hearing a man attempt- ing wit, and failing, than in seeing a man trying to leap over a d'ti-fi, and tumbling into it. Johnson.

Up again ! for every warrior Slain, another climbs the barrier. Thicker grows the strife ; thy ditches Europe's mingling gore enriches. Byron.

DITCH, in fortification, called also thefossand moat, is a trench dug round the rampart, or wal of a fortified place, between the scarp and coun- terscarp. Ditches are either dry or wet, that is, having water in them ; both of which have thei- particular advantages. The earth dugout of the ditch

serves to raise the rampart. The ditch in front should be of such breadth as that tall trees may not reach over it, being from twelve to twenty-four fathoms wide, and seven or eight feet deep. But the most general rule is, perhaps, that the dimensions of the ditch be such as that the eaith dug out may be sufficient to build the rampart of a proper magnitude..

DITCH is a common fence in tnaishes, or other wet land, where there are no hedges. They allow these ditches six feet wide against high ways that are broad ; and against com- mons, five feet. But the common ditches about enclosures, dug at the bottom of the bank on which the quick is raised, are three feet wide at the top, one at the bottom, and two feet deep. By this means each side has a slope, which is of great advantage ; for where this is neglected, and the ditches dug perpendicular, the sides are always washing down , besides, in a narrow-bot- tomed ditch, if cattle get down into it, they cannot stand to turn themselves to crop the quick : but where the ditch is four feet wide, it should be two feet and a half deep ; and where it is five feet wide, it should be three feet deep ; and so in proportion.

D1THYRAMBICK, n. s. & adj. Lat. dithy- rambus. A song in honor of Bacchus ; in which among the Italians, the distraction of ebriety is still imitated. Wild ; distracted.

Pindar does new words and figures roll Down his impetuous dithyrambick tide.

Cotcley.

DITHYRAMBICS were songs in honor of Bacchus, which first gave birth to dramatic repre- sentations, and are as ancient as the worship of Bacchus in Greece. Many of the most splendid exhibitions upon the stage, for the entertainment of the people of Athens and Rome, being per- formed upon the festivals of Bacchus, gave occasion to the calling all those that were em- ployed in them, whether for singing, dancing, or reciting, servants of Bacchus. The dithyrambus owes its birth to Greece, and to the transports of wine. Horace and Aristotle tell us, that the ancients gave the name of dithyrambus to those verses wherein none of the common rules or measures were observed. As we have now no remains of the dithyrambus of the ancients, we cannot exactly tell what their measure was.

DITMARSEN, a district of Holstein, Den- mark, separated from Sleswick on the north by the Eyder, and from Bremen on the south-west by the Elbe ; and having Holsteiu Proper to the east, and the German Ocean to the west. It is marshy, and frequently inundated : yet by means of the internal navigation, a number of tracts have been drained, and are highly productive.

Its length is thirty-two miles, and its breadth twenty-seven. The chief towns are Meldorf and Lunden. It is fertile in corn and pastu- rage.

DITONE, in music, an interval comprehend- ing two tones. The proportion of the sounds that form the ditone is 4 : 5, and that of the semiditone is 5 : 6.

DITRIHEDRIA, in mineralogy, a genus of spars with twice three sides, or six planes ; being formed of two trigonal pyramids joined base to base, without any intermediate column. See SPAR. The species of ditrihedria are dis- tinguished by the different figures of these pyra- mids.

DITTA'NDER, n. s. The same with pepper- wort. See LEPIDIUM.

DITTANY, n. s. Lat. dictamnus.

Dittany hath been renowned, for many ages, upon the account of its sovereign qualities in medicines. It is generally brousrht over dry from the Levant.

Miller.

Virgil reports of dittany, that the wild goats eat it when they are shot with darts.

More's Antidote against Atheitm.

DITTANY, BASTARD, a species of marrubium.

DITTANY, OF CRETE. See ORIGANUM.

DITTANY, WHITE. See DICTAMNUS.

DITTEAI1, a town and fortress of Bundel- cund, Ilindostan, about a mile and a half long, and nearly as much in breadth. It is populous and -well-built ; the houses being chiefly of stone, and tiled. It is surrounded by a stone wall and gates. On an eminence, which over- looks a handsome lake, stands the rajah's palace. The surrounding district yields an annual reve- nue of between £12,000 and £15,000 sterling. This place is mentioned in early history, and the rajah, who is one of the British allies, boasts of its having belonged to his family for several cen- turies. During the reign of

Aurenzebe, Ditteah was the capital of Dhoolput Roy, a Bondelah rajah of some celebrity.

DITTO, in hooks of accounts, usually written Do, signifies the aforementioned. The word is corrupted from the Italian delto, 'the said:' as in our law-phrase, ' the said premises,' meaning the same as were before-mentioned.

DITTY, n. s.) Sax. tetit; Swed. dickt ;

Di TTIED, adj. \ Germ, and Dutch, dicht, from Goth, tia to show, or, according to Minsheu, from Lat. dictum, a thing said or delivered as an ora- tion. A poem to be sung ; a song. Adapted to music.

Although we lay altogether aside the consideration of ditty or matter, the very harmony of sounds being framed in due sort, and carried from the ear to the spiritual faculties of our souls, is by a native puis- sance and efficacy, greatly available to bring to a per- fect temper whatsoever is there troubled. Hooker.

Being young, I framed to the harp Many an English ditty lovely well, And gave the tongue a helpful ornament.

Shakspeare.

Strike the melodious harp, shrill timbrels ring, And to the warbling lute soft ditties sing. Sandys.

He, with his soft pipe, and smooth dittied song, Well knows to still the wild winds when they roar.

Milton.

His annual wound in Lebanon, allured The Syrian damsels to lament his fate, In amorous ditties, all a summer's day. Id.

They will be sighing and singing under thv inex- orable windows lamentable ditties, and call thee cruel.

Dryden.

DIU, or DIVIPA, THE ISLAND, an island and harbour at the southern extremity of the Gujrat Peninsula, in lat. 20° 43′ N., long. 71° E. the island is not above four miles long by one broad, but formerly contained a Hindoo temple, dedicated to Somnath, celebrated for its sanctity and riches. This was plundered in 1025 by sultan Mahmood of Ghizni, who sent the frag-

ments of the image to Mecca and Medina. The Portuguese obtained possession of Diu in 1515, and were allowed by the sultan of Gujrat to fortify it, about twenty years after. In 1670, however, their establishment was surprised and plundered by the Muscut Arabs, and has since dwindled away. The island has a good port.

DIVAL, in heraldry, the herb nightshade, used by such as blazon by flowers and herbs, instead of colors and metals, for sable or black.

DIVALIA, in Roman antiquity, a feast held in honor of the goddess ANGERONA ; also called ANGERONALIA. See these articles.

DIVA'N., n. s. Arab, deuan; Turk, dovan, probably from Heb. n, to judge. The council of Oriental princes : any council assembled.

Forth rushed in haste the great consulting peers, Raised from the dark divan, and with like joy Congratulant approached him. " Milton.

Swift to the queen the herald Medon ran, Who heard the consult of the dire divan.

Pope's Odystey.

DIVAN, a court of justice among the eastern nations, particularly the Turks. The word sig- nifies the same with sofa in the Turkish dialect. There are two sorts of divans ; that of the grand signior, called the council of state, which con- sists of seven of the principal officers of the em- pire ; and that of the grand vizier, composed of six other viziers, or counsellors of state, the chancellor, and secretaries of state, for the dis- tribution of justice.

DIVANDUROW, the name of seven islands in the Indian Ocean, three miles north of the Maldives, and twenty-four from the coast of Malabar, almost opposite to Cananore.

DIVA'RICATE, v.a.&v. n. I Lat. divari-

DIVARICA'TION, n.s] catus. To di-

vide into two ; to be parted into two ; to become bifid. Divarication is, division into two or more.

To take away all doubt, or any probable divarica- tion, the curse is plainly specified.

Browne's Vulgar Errours.

Dogs running before their masters, will stop at a divarication of the way, till they see which hand their masters will take. Ray.

A slender pipe is produced forward towards the throat, whereinto it is at last inserted, and is there divaricated, after the same manner as the spermalick vessels. Grew.

The partitions are strained across : one of them di- varicates into two, and another into several small ones.

Woo'lii'ard.

DIVING BELL.

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DIVE, v. a. kv.n.l Sax. "eippan; Teut.

Dt'vER, n. s. \tufan; Ital. toffb, from

Gr. fvirrti), to dip. To explore by diving : as a

neuter verb, to sink, or go under water ;

hence, to enter deeply into a question, or into

business, and to go beyond sight or observation.

Vive, thoughts, down to my soul.

Shakspeare.

Sweet prince, the untainted virtue of your years Hath not yet dived into the world's deceit, Nor can distinguish. Id. RicJuird III.

Crocodiles defend those pearls which lie in the lakes : the poor Indians are eaten up by them, when they dive for the pearl. Raleigh's History.

I am not yet informed, whether, when a diver di- veth, having his eyes open, and swimmeth upon his back, he sees things in the air greater or less.

Bacon's Natural History. The wits that dived most deep, and soared most

high, Seeking man's powers, have found his weakness such.

Dames.

He would have him, as I conceive it, to be no su- perficial and floating

artificer ; but a diver into causes, and into the mysteries of proportion.

Walton's A rchitedure.

air that can be contained in the pores cf the sponge, and how much that little will be con- tracted by the pressure of the incumbent water such a supply cannot long maintain the respi- ration of the diver. It is found by experiment, that a gallon of air included in a bladder, and by a pipe reciprocally inspired and expired by the lungs, becomes unfit for respiration in little more than one minute : for though its elasticity be but little altered in passing the lungs, yet it loses its vivifying spirit, and is rendered effete. A naked diver, Dr. Halley assures us, without a sponge, cannot remain above a couple of minutes enclosed in water, nor mucn longer with one, without suffocating ; nor, without long practice, near so long: persons not accustomed to dive, beginning to be stifled in about half a minute. Hence, where there has been occasion to continue long at the bottom, some have contrived double flexible pipes, to circulate air down into a cavity, enclosing the diver as with armour, both to fur- nish air and to bear off the pressure of the water, as well as to give room to his breast to dilate upon inspiration ; the fresh air being forced down

He performs all this out of his own fund, without °ne f, the PP! with b.e”°™.. and returning by <«>ing into the arts and sciences for a supply. tbe °ther; But this method is impracticable when*

the depth surpasses three fathoms; the water embracing the bare limbs so closely as to obstruct the circulation of the blood in them ; and pres- sing so strongly on all the junctures where the armour is made tight with leather, that, if there be the least defect in any of them, “the water rushes in, and instantly fills the whole engine, to the great danger of the diver's life. People being accustomed to the water from their infancy, will however at length be enabled, not only to stay much longer under water than the time above mentioned, but put on a kind of amphibious nature, so that they seem to have the use of all their faculties as well when their bodies are im- mersed in water as when on dry land. Most savage nations are remarkable for this. The inhabitants of the South Sea islands are such expeit divers, that, when a nail or any piece of iron is thrown overboard, they instantly jump into the sea after it, and never fail to recover it, notwithstanding the quick descent of the metal. Even among civilized nations, many persons have been found capable of continuing an incre- dible length of time below water. The most remarkable instance of this kind is the famous Sicilian diver Nicolo Pesce. See PESCE.

To obviate the inconveniences of diving dif- ferent instruments have been contrived, of which the chief is the diving bell. The com- mon bell is made

in form of a truncated cone,

DIVING, the art or act of descending under the smaller base being closed, and the larger water to cons;derable depths, and remaining there open. It is poised with lead; and so sus- for some time. The uses of diving are very pended, that the vessel may sink full cf air, with considerable, particularly in the fishing for its open basis downward, and as near as may pearls, corals, sponges, &c. Various methods be in a situation parallel to the horizon, so as to have been proposed, and machines contrived, to close with the surface of the water all at once, render the business of diving more safe and easy. Under this covercle the diver sitting, sinks down The great point is to furnish the diver with fresh with the included air to the depth desired : and air; without which he must either make a short if the cavity of the vessel can contain a tun of stay under water or perish. Those who dive for air, a single man may remain a full hour, with- sponges in the Mediterranean, assist themselves out much inconvenience, at five or six fathoms by carrying down sponges dipt in oil in their depth. But the lower he goes, the more the mouths. But considering the small quantity of included air contracts itself, according to the

diving into th<

Dryden.

Whensoever we would proceed beyond those simple ideas, and dive farther into the nature of things, we fall presently into darkness and obscurity. Locke. You should have dived into my inmost thoughts.

Philips.

Then Brutus, Rome's first martyr, I must name ; The Curtii bravely dived the gulph of fame.

Denham. Perseverance gains the diver's prize.

Pope's Dunciad.

That the air in the blood-vessels of live bodies has a communication with the outward air, I think, seems plain, from the experiments of human creatures being able to bear air of much greater density in diving, and of much less upon the tops of mountains, provided the changes be made gradually. Arbuthnot.

But dive into this subject as deep as thou canst. Examine thyself ; and this knowledge of that which passes within thee will be of more use to thee than the knowledge of all that passes in the world.

Mason.

Led by the sage, Lo ! Britain's sons shall guide Huge sea-balloons beneath the tossing tide ; The diving castles, roofed with spheric glass, Ribbed with strong oak, and barred with bolt of brass. Darwin.*

To be the Table Talk of clubs up stairs, To which th' unwashed artificer repairs, To indulge his genius after long fatigue, By diving into cabinet intrigue. Cowper.

DIVER, in ornithology. See COLYMBUS.

weight of the water which compresses it; so that at thirty-three feet deep the bell becomes half full of water, the pressure of the incumbent water being then equal to that of the atmosphere; and at all other depths the space occupied by the compressed air in the upper part of the bell will be to the under part of its capacity filled with water as thirty-three feet to the surface of the •water in the bell below the common surface of it. • One inconvenience that attends this con- densed air is found in the ears, within which there are cavities which open only outwards, and that by pores so small as not to give admission even to the air itself, unless they be dilated and distended by a considerable force. Hence, on the first descent of the bell, a pressure begins to be felt on the ear ; which, by degrees, grows painful, till, the force overcoming the obstacle, what constringes these pores yields to the pres- sure, and, letting condensed air slip in, ease pre- sently ensues. The bell descending lower, the pain is renewed, and again eased in the same manner. But the greatest inconvenience of this engine is, that the water entering it, contracts the bulk of air into so small a compass, that it soon heats and becomes unfit for respiration, so that there is a necessity for its being drawn up to re- cruit it ; besides the uncomfortable situation of the diver almost covered with water.

To obviate the difficulties of the foregoing kind of diving bell, Dr. Halley contrived further apparatus, whereby not only to recruit and re- fresh the air from time to time, but also to keep the water wholly out of it at any depth. The manner in which this was effected, he relates in the following words : — ' The bell I made use of was of wood, containing about sixty cubic feet in its concavity, and was of the form of a trun- cated cone, whose diameter at the top was three feet and at the bottom five. This I coated with lead so heavy that it would sink empty ; and I distributed the weight so about its bottom, that it would go down in a perpendicular

direction, and no other. In the top I fixed a strong but clear glass, as a window, to Vt in the light from above, and likewise a cock to iet out the hot air that had been breathed ; and below, about a yard under the bell, I placed a stage which hung by three ropes, each of which was charged with about 100 weight to keep it steady. This ma- chine I suspended from the mast of a ship by a sprit, which was sufficiently secured by stays to the mast head, and was directed by braces to carry it overboard clear of the ship's side, and to bring it again within board as occasion required. To supply air when under water, I caused a couple of barrels, of about thirty-six gallons each, to be cased with lead, so as to sink empty, each of them having a bung-hole in its lowest part to let in the water, as the air in them condensed on their descent ; and to let it out again when they were drawn up full from below. And to a hole in the uppermost part of these barrels I fixed a leathern trunk or 'nose, well liquored with bees' wax and oil, and long enough to fall below the bung-hole, being kept down by a weight ap- pended : so that the air in the upper part of the barrels could not escape unless the lower ends of these hose were first lifted up. The air-barrels

being thus prepared, I fitted them with tackle proper to make them rise and fall alternately, after the manner of two buckets in a well, which was done with so much ease, that two men, with less than half their strength, could perform all the labor required : and in their descent they were directed by lines fastened to the under edge of the bell, which passed through rings on both sides the leathern hose in each barrel; so that, sliding down by these lines, thev came readily to the hand of a man who stood on the stage on purpose to receive them, and to take up the ends of the hose into the bell. Through these hose, as soon as their ends came above the sur- face of the water in the barrels, all the air that was included in the upper parts of them was blown with great force into the bell ; whilst the water entered at the bung-holes below, and filled them : and as soon as the air of one barrel had been thus received, upon a signal given, that was drawn up, and at the same time the other descended ; and, by an alternate succession, fur- nished air so quick, and in so great plenty, that I myself have been one of five who have been together at the bottom in nine or ten fathom water, for above an hour and a half at a time, without any ill consequence : and I might have continued there as long as I pleased, for any thing that appeared to the contrary. Besides, the whole cavity of the bell was kept entirely free from water, so that I sat on a bench which was diametrically placed near the bottom, wholly dressed, with all my clothes on. I only observed that it was necessary to be let down gradually at first, as about twelve feet at a time, and then to stop and drive out the water that entered, by receiving three or four barrels of fresh air before I descended further. But being arrived at the depth designed, I then let out as much of the hot air that had been breathed, as each barrel would replenish with cool, by

means of the cock at the top of the bell ; through whose aperture, though very small, the air would rush with so much violence, as to make the surface of the sea boil, and to cover it with a white foam, notwith- standing the weight of the water over us. Thus I found that I could do any thing that required to be done just under us; and that, by taking off the stage, I could, for a space as wide as the circuit of the bell, lay the bottom of the sea so far dry as not to be overshoes thereon. And, by the glass window, so much light was transmit- ted, that when the sea was clear, and especially when the sun shone, I could see perfectly well to write or read ; much more to fasten or lay hold on any thing under us that was to be taken up. And, by the return of the air barrels, I often sent up orders, written witli an iron pen on small plates of lead, directing how to move us from place to place, as occasion requited. At other times, when the water was troubled and thick, it would be as dark as night below; but in such cases I have been able to keep a candle burning in the bell as long as 1 pleased, notwith- standing the great expense of air necessary to maintain flame. By an additional contrivance, I have found it not impracticable for a divei to go out of an engine to a good distance from it, the air being conveyed to him with a continued

stream, by small flexible pipes ; which pipes may serve as a clue to direct him back again when he would return to the bell.' Plate, DIV- ING BELLS, fig. 1, shows Dr. Halley's diving bell. D B L 11 M represents the body of the bell ; D, the glass which serves as a window. B, the cock for letting out the air which has been breathed. L M, the seats. C, one of the air barrels. H, another diver at a distance from the bell, and breathing through the flexible tube F P, of which F is a stop-cock, which I can turn at pleasure to prevent the air being forced back into the cell by the pressure of the water when he stoops below the mouth of the bell. This diver is supposed to have a head-piece of lead, made to fit quite close about his shoulders : this head-piece was capable of containing as much air as would supply him for a minute or two.

Mr. Triewald, F.R. S., military architect to the king of Sweden, invented a diving bell, fig. 2, which, for a single person, is thought to be more eligible than Dr. Halley's, and is con- structed as follows : — A B is the bell, which is sunk by lead weights D D, hung to its bottom. This bell is of copper, tinned all over in the in- side, which is illuminated by two strong convex lenses, G, G, with copper lids, II, H, to defend them. The iron plate, E, serves the diver to stand on when he is at work ; and is suspended at such a distance from the bottom of the bell, by the chains F F, that when the diver stands up- right his head is just above the water in the bell, where the air is much better than higher up, be- cause it is colder, and consequently more

fit for respiration. But as the diver must always be within the bell, and his head of course in the upper part, the inventor has contrived, that even there, when he has breathed the hot air as long as he can, he may, by means of a spiral copper tube, fb cbc, placed close to the inside of the bell, draw the cooler and fresher air from the lower parts.

*But the greatest improvement which the diving bell has received was from the late Mr. Spalding, of Edinburgh. A section of his improved diving bell is represented in fig. 3. This construction is designed to remedy some inconveniences of Dr. Halley's, which are very evident, and of very dangerous tendency. By Dr. Halley's construction, the sinking or raising of the bell depends entirely on the people who are at the surface of the water ; and as the bell, even when in the water, has a very considerable weight, the raising it not only requires a great deal of labor, but there is a possibility of the rope breaking by which it is raised, and thus every person in the bell would inevitably perish. And as there are, in many places of the sea, rocks which lie at a considerable depth, the figure of which cannot possibly be perceieved from above, there is danger that some of their ragged prominences may catch hold of one of the edges of the bell in its descent, and thus overset it before any signal can be given to those above, which would infallibly be attended with the destruction of the people in the bell : and as it must always be un- known, before trial, what kind of a bottom the s*a has in any place, it is plain that, without some contrivance to obviate this last danger, the descent*

in Dr. Halley's diving bell is not at all eligible. How these inconveniencies are remedied Lv Spalding's construction will be easily understood from the following description.— A BCD repre- sents a section of the bell, which is made of wood ; e,e, are iron hooks, by means of which it is suspended by ropes QBFe, and QAERe, and QS, as expressed in the figure: c, c, are iron hooks, to which arc appended lead weights, that keep the mouth of the bell always parallel to the surface of the water, whether the machine, taken altogether, is lighter or heavier than an equal bulk of water. By these weights alone, however, the bell would not sink : another is therefore added, represented at L, and which can be raised or lowered at pleasure, by means of a rope pas- sing over the pulley a, and fastened to one of the sides of the bell at M. As the bell descends, this weight, called the balance weight, hangs down a considerable way below the mouth of the bell. In case the edge of the bell is catched by any obstacle, the balance weight is immediately lowered down so that it may rest upon the bottom, by this means the bell is lightened M that all danger of oversetting is removed ; for being lighter, without the balance weight, than an equal bulk of water, it is evident that the bell will rise, as far as the length of the rope affixed to the balance weight will allow it. This weight therefore will serve as a kind of anchor to keep the bell at any particular depth which the divers may think

necessary ; or, by pulling it quite up, the descent may be continued to the very bottom. By another very ingenious contrivance, Mr. Spalding rendered it possible for the divers to raise the bell, with all the weights appended to it, even to the surface, or to stop at any particular depth, as they think proper; and thus they could still be safe, even though the rope designed for pulling up the bell was broke. For this purpose the bell is divided into two cavities, both of which are made as tight as possible. Just above the second bottom, EF, are small slits in the sides of the bell ; through which the water, entering as the bell descends, displaces the air originally contained in this cavity, which flies out at the upper orifice of the cock H. When this is done, the divers stop the cock ; so that if any more air was to get into the cavity A E F B, it could no longer be discharged through the orifice H as before. When this cavity is full of water the bell sinks ; but when a con- siderable quantity of air is admitted it rises. It therefore the divers have a mind to raise them- selves, they turn the cock V, by which a commu- nication is made between the upper and under cavities of the bell. The consequence of this is, that a quantity of air immediately enters the up- per cavity, forces out a quantity of the water con- tained in it, and thus renders the bell lighter by the whole weight of the water which is displaced. Thus, if a certain quantity of air is admitted into the upper cavity, the bell will descend very slowly ; if a greater quantity, it will neither ascend nor descend, but remain stationary ; and if a larger quantity of air is still admitted, it will arise to the top. It is to be observed, how- ever, that the air which is thus let out into the upper cavity must be immediately supplied from the air-barrel ; from which the air is to be let

out very slowly, or the bell will rise to the top with so great velocity, that the divers will be in danger of being shaken out of their seats. But, by following these directions, every possible acci- dent may be prevented, and people may descend to great depths without the least apprehension of danger. The bell also becomes so easily manage- able in the water, that it may be conducted from one place to another by a small boat with the greatest ease, and with perfect safety to those who are in it. Instead of wooden seats used by Dr. Halley, Mr. Spalding made use of ropes suspended by hooks b, b, b ; and, on these ropes, the divers may sit without any inconvenience. K K are two windows made of thick strong glass, for admitting light to the divers. N represents an air-cask with its tackle, and O C P the flexible pipe through which the air is admitted to the bell. In the ascent and descent of this cask, the pipe is kept down by a small weight appended, as in Dr. Halley's machine. R is a small cock by which the hot air is discharged as often as it becomes troublesome.

A considerable modern improvement is that of supplying air to a diving-bell, by means of a syringe or pump, which forces the air down in a continual stream into the bell, whence it es- capes from beneath the lower edges of the bell, or from a waste pipe, as fast as it is supplied. In this way the air is kept very pure, and the people in the bell have no kind of trouble to obtain • a supply. Mr. Smeaton was the first who put in practice the method to which we allude, though it had been frequently proposed by other inventors. His first attempt was in 1786, in shallow water, the bell being only in- tended to enable workmen to examine and" re- pair the foundations of a bridge at Hexham, in Northumberland.

Mr. Smeaton, a few years afterwards, con- structed another bell upon the same principle, for the works at Ramsgate harbour. It was used to raise up large stones, which had formerly been thrown into the sea around the base of the pier.

The bell was made of cast iron, of sufficient weight to sink without any extra ballast. In the top were lenses for the admission of light, and a strong shackle for the chain by which the bell was suspended. A strong leathern pipe was con- nected with the top of the bell, to convey air into it from an air-pump placed either in a boat or on the shore.

This kind of diving-bell has since been ap- plied to the purposes of building foundations of masonry in deep water, under the direction of the late Mr. Rennie, who constructed machinery to move the bell under water in any direction, and which acts with such facility, that the masons in the bell make great despatch in laying the stones. It was used in Plymouth Sound to sweep the bottom for old anchors, 8cc. At Houth, in Dublin county, Ireland, the foundations for the pier were wholly laid by this machine. In many parts the rocky bottom was too uneven to work upon, and it was then necessary to blast it with powder. The divers bored the hole in the rock, and placed the powder in a tin cartridge, which was well secured in the hole, by running in small fragments of stone. A small tin pipe

was affixed to the canister, long enough to reach above the surface of the water. When all was prepared, the bell was drawn up out of the way, and a nail or other small piece of iron heated red hot, was dropped into the tin pipe, thereby to descend to the powder.

As the diving bell is, however, in any stage of improvement, necessarily very large and un- wieldy, several attempts have been made to en- case a man sufficiently to enable him to breathe and bear the pressure of the water. Among these the most successful is that of Klingert of Breslau, which is made of strong tin plate, in the form of a cylinder, which goes over the diver's head, and which consists of two parts, that he may conveniently

thrust his arms through it and put it on ; also a jacket with short sleeves, and drawers of strong leather. All these being water- tight, and closely jointed round the body of the diver, secure every part of him, but his arms and legs, from the pressure of the water, which, at the depth of twenty feet, will occasion no incon- venience to these parts. Plate, DIVING BELLS, &c., fig. 4, represents the diver covered with the harness and drawers. Figs. 5 and 6 are repre- sentations of the cylinder, the diameter of which is equal to the breadth of a man at the top of the hipbone. It is fifteen inches in height, has a globular top, and is made of the strongest tin plate. In the inside of the cylinder, at a, is a strong broad iron hoop, to enable it to withstand becter the pressure of the water ; and in the in- side of the top there are two pieces of a strong hoop of the same kind, placed over each other in the form of a cross at b ; a strong ring of brass wire is soldered upon the outside at c, that the jacket may be fastened to it with an elastic ban- dage, to prevent it from slipping downwards ; at dd are the upper halves of the apertures for the arms; and e, e, are holes to afford light, and into which the eye-glasses are screwed : /"is the open- ing into which the mouth-piece of the breathing- pipe is screwed, and g is an aperture for looking through, as well as for the purpose of breathing when out of the water, and which, by means of the cover h suspended from it, can be screwed up before the diver enters the water.

The lower part of the cylinder, which is also fifteen inches in height, is strengthened at i and k by iron hoops on the inside, in the same man- ner as the former. To the lower hoop k are soldered four small rings, to which are fastened strong leather straps, three inches in breadth, that can be buckled across over the shoulder, and support the whole machine ; I, I, are the under halves of the apertures for the arms ; m is also a ring of brass wire soldered to the cylinder, which serves to keep fast the jacket when buckled on. and to support the upper cylinder dd b, which slips over the under one ; and on that account the under one is a little smaller, so as to fit into the upper one : there is also another such ring atn, in order to prevent the drawers from falling down.

At o is a strong semicircular piece of iron, the use of which is to prevent the drawers, when pressed by the water, from touching the under part of the body, otherwise the pressure, even at the depth of six feet, would be insupportable. As it is not possible to sew the leather so closely

as to prevent water from forcing its way through the seams, a small pump is suspended at p for the purpose of pumping out the water, when it has

risen to the height of a few inches in the lower cylinder. Four hooks, q, q, q, q, soldered to the lower part of the cylinder, are for the purpose of suspending weights from them.

The jacket r (fig. 4), with short sleeves that cover the upper part of the arms, serves to pre- vent the water from penetrating through the joining of the cylinders where the one is inserted into the other, as also through the holes for the arms, as it is bound fast round both parts of the cylinder, and likewise round the arms. The case is the same with the drawers, which are bound close round the knees.

Fig. 7 represents a brass elastic bandage, em- ployed for fastening on the jacket ; and which, when hooked together, is screwed fast by means of the screw s, three inches in length ; a brass bandage is here used, because leather is apt to stretch, and on that account migbtbe dangerous.

The reservoir a (fig. 4), applied in such a manner that it can be screwed off, is for the pur- pose of collecting the small quantity of water that might force itself into the breathing pipe when long used, and which otherwise would be in con- tinual motion, and render breathing disagreeable.

A man, named Frederick William Joachim, a huntsman by profession, dived in the above ap- paratus into the Oder, near Breslau, where the water is of considerable depth, and the current strong, on the 24th of Juna, 1797, before a great number of spectators, and sawed through the trunk of a tree which was lying at the bottom.

The DIVING BLADDER is a machine invented by Borelli, and by him preferred, though without much reason, to the diving bell. It is a globular vessel of brass or copper, about two feet in dia- meter, which contains the diver's head. It is fixed to a goat's skin habit exactly fitted to his person. Within the vessel are pipes, by means of which a circulation of air is contrived ; and the person carries an air-pump by his side, by which be can make himself heavier or lighter as fishes do, by contracting or dilating their air bladder. By these means he thought all the ob- jections to which other diving machines are liable were entirely obviated, and particularly that of want of air ; the air which had been breathed, being, as he imagined, deprived of its noxious qualities by circulating through the pipes. These advantages, however, it is evident, are only ima- ginary. The diver's limbs, being defended from the pressure of the water only by a goat's skin, would infallibly be crushed if he descended to any considerable depth ; and, from the discove- ries now made, by Dr. Priestley and others, it is abundantly evident, that air, which is once ren- dered foul by breathing, cannot, in any degree, be restored by circulation through pipes.

The following description of a DIVING-VESSEL invented by Mr. Bushuell, of Connecticut, is given in the Philosophical Transactions of Ame- rica:— The external shape of the sub-marine vessel bore some resemblance to two upper tor- toise-shells, of equal size, joined together; the place of entrance into the vessel being repre- sented by the opening made by the swell of the

shells, at the head of the animal. The inside was capable of containing the operator, and air sufficient to support him thirty minutes, without receiving fresh air. At the boctom, opposite to the entrance, was fixed a quantity of lead for ballast. At one edge, which was directly before the operator, who sat upright, was an oar for rowing forward or backward. At the other edge was a rudder for steering. An aperture, at tl»e bottom, with its valve, was designed to admit water, for the purpose of descending ; and two brass forcing-pumps served to eject the water within, when necessary for ascending. At the top there was likewise an oar for ascending or descending, or continuing at any particular depth. A water-gauge, or barometer, deter- mined the depth of descent, a compass directed the course, and a ventilator within supplied the vessel with fresh air, when on the surface.

The entrance into the vessel was elliptical, and so small as barely to admit a person. This entrance was surrounded with a broad elliptical iron band, the lower edge of which was let into the wood, of which the body of the vessel was made, in such a manner as to give its utmost support to the body of the vessel against the pressure of the water. Above the upper edge of this iron band there was a brass crown, or cover, resembling a hat with its crown and brim, which shut water-tight upon the iron band ; the crown was hung to the iron band with hinges, so as to turn over sideways when opened. To make it perfectly secure when shut, it might be screwed down upon the band by the operator, or by a person without.

There were in the brass crown three round doors, one directly in front, and one on each side, large enough to put the hand through. When open, they admitted fresh air; their shut- ters were ground perfectly tight into their places with emery, hung with hinges, and secured in their places when shut. There were likewise several small glass windows in the crown for looking through, and for admitting light in the day-time, with covers to secure them. There were two air-pipes in the crown. A ventilator within drew fresh air through one of the air- pipes, and discharged it into the lower part of the vessel ; the fresh air introduced by the ven- tilator expelled the impure light air through the other air-pipe. Both air-pipes were so con- structed, that they shut themselves whenever the water rose near their tops, so that no water could enter through them, and opened themselves im- mediately after they rose above the water.

The vessel was chiefly filled with lead fixed to its bottom ; when this was sufficient, a quantity was placed within, more or less, according to the weight of the operator ; its ballast made it so stiff, that there was no danger of oversetting. The vessel, with all its appendages, and the operator, was sufficient to settle it very low in the water. About 200 Ibs. of the lead, at the bottom for ballast, would be let down forty or fifty feet below the vessel; this enabled the operator to rise instantly to the surface of the water, in case of accident.

When the operator would descend, he placed his foot on the top of a brass valve, depressing

DIVING VESSEL.

it, by which he opened a large aperture in the bottom of the vessel, through which the water entered at his pleasure ; when he had admitted a sufficient quantity, he descended very gradually ; if he admitted too much, he ejected as much as was necessary to obtain an' equilibrium, by the two brass forcing-pumps, which were placed at each hand. Whenever the vessel leaked, or he would ascend to the surface, he also made use of these forcing- pumps. When the skilful operator had obtained an equilibrium, he could row up- ward, or downward, or continue at any parti- cular depth, with an oar, placed near the top of the vessel, formed upon the principle of the screw, the axis of the oar entering the vessel ; by turning the oar one way, he raised the vessel, by turning it the other way he depressed it.

A glass tube, eighteen inches long, and one inch in d iameter, standing upright, its upper end closed , and its lower end, which was open, screwed into a brass pipe, through which the external water had a passage into the glass tube, served as a water-gauge, or barometer. There was a piece of cork, with phosphorus on it, put into the water-gauge. When the vessel descended, the water rose in the water-gauge, condensing the air within, and bearing the cork, with Us phos- phorus, on its surface. . By the light of the phos- phrous, the ascent of the water in the gauge was rendered visible, and the depth of the vessel under water ascertained by a graduated line.

An oar, formed upon the principle of the screw, was fixed in the fore part of the vessel ; its axis entered the vessel, and being turned one way, rowed the vessel forward, but being turned the other way, rowed it backward ; it was made to be turned by the hand or foot.

A rudder, hung to the hinder part of the vessel, commanded it with the greatest ease. The rudder was made very elastic, and might be used for rowing forward. Its tiller was within the vessel, at the operator's right hand, fixed, at a right angle, on an iron rod, which passed through the side of the

vessel ; the rod had a crank on its outside end, which commanded the rudder, by means of a rod extending from the end of the crank to a kind of tiller, fixed upon the left hand of the rudder. Raising and depressing the first-mentioned tiller, turned the rudder as the case required.

A compass, marked with phosphorus, directed the course, both above and under the water ; and a line and lead sounded the depth when ne- cessary.

The internal shape of the vessel, in every pos- sible section of it, verged towards an ellipsis, as near as the design would allow, but every hori- zontal section, although elliptical, yet as near to a circle as could be admitted. The body of the vessel was made exceedingly strong ; and to strengthen it as much as possible, a firm piece of wood was framed, parallel to the conjugate diameter, to prevent the sides from yielding to the great pressure of the incumbent water, in a deep immersion. This piece of wood was also a seat for the operator.

Every opening was well secured. The pumps had two sets of valves. The aperture at the bottom, for admitting water, was covered with a

plate, perforated full of holes, to receive the water, and prevent any thing from choking the passage, or stopping the valve from shutting. The brass valve might likewise be forced into its place with a screw, if necessary. The air-pipes had a kind of hollow sphere, fixed round the top of each, to secure the air-pipe valves from in- jury; these hollow spheres were perforated full of holes, for the passage of the air through the pipes ; within the air- pipes were shutters to se- cure them, should any accident happen to the pipes, or the valves on their tops.

Wherever the external apparatus passed through the body of the vessel, the joints were round, and formed by brass pipes, which were driven into the wood of the vessel ; the holes through the pipes were very exactly made, and the iron rods, which passed through them, were turned in a lathe to fit them ; the joints were also kept full of oil, to prevent rust and leaking. Particular attention was given to bring every part, necessary for performing the operations, both within and without the vessel, before the operator, and as conveniently as could be devised ; so that every thing might be found in the dark, except the water gauge and the compass, which were visible by the light of the phosphorus, and nothing re- quired the operator to turn to the right hand, o”- to the left, to perform any thing necessary.

Description of a magazine, and its appen- dages, designed to be conveyed, by the sub- marine vessel, to the bottom of a ship : — In the fore part of the brim of the crown of the sub- marine vessel was a socket, and an iron tube, passing through the socket; the tube stood up- right,' and could slide up and down in the socket, six inches ; at the top of the tube was a wood-screw, fixed by means of a rod, which passed through the tube, and screwed the wood- screw fast upon the top of the tube. By pushing the wood-screw up against the bottom of a ship, and turning it at the same time, it would enter the planks ; driving would also answer the same purpose : when the wood-screw was firmly fixed, it could be cast off by unscrewing the rod, which fastened it upon the top of the tube.

Behind the sub-marine vessel was a place,, above the rudder, for carrying a large powder- magazine ; this was made of two pieces of oak timber, large enough, when hollowed out, to contain 150 Ibs. of powder, with the apparatus used in firing it, and was secured in its place by a screw, turned by the operator. A strong piece of rope extended from the magazine to the wood-screw above-mentioned, and was fastened to both. When the wood-screw was fixed, and to be cast off from its tube, the magazine was to be cast off likewise by unscrewing it, leaving it hanging to the wood-screw ; it was lighter than the water, that it might rise up against the object to which the wood-screw and itself were fastened.

Within the magazine was an apparatus, con- structed to run any proposed length of time, under twelve hours; when it had run out its time, it unpinioned a strong lock, resembling a gun-lock, which gave fire to the powder. This apparatus was so pinioned, that it could not pos- sibly move, till, by casting off the magazine from the vessel, it was set in motion

The skilful operator could swim so low on the surface of the water, as to approach very near a ship, in the night, without fear of being disco- vered, and might, if he chose, approach the stem or stern above water, with very little danger. He could sink very quickly, keep at any depth he pleased, and row a great distance in any di- rection he desired, without coming to the sur- face ; and, when he rose to the surface, he could soon obtain a fresh supply of air, when, if ne- cessary, he might descend again, and pursue his course.

The first experiment made was with about two ounces of gunpowder,

which, were exploded four feet under water, to prove to some of the first personages in Connecticut that powder would take fire under water.

The second experiment was made with two pounds of powder, enclosed in a wooden bottle, and fixed under a hogshead, with a two-inch oak plank between the hogshead and the powder ; the hogshead was loaded with stones as deep as it could swim ; a wooden pipe descending through the lower head of the hogshead, and through the plank, into the powder contained in the bottle, was primed with powder. A match put to the priming exploded the powder, which produced a very great effect, rending the plank into pieces, demolishing the hogshead, and casting the stones and the ruins of the hogshead, with a body of water, many feet into the air, to the astonishment of the spectators. This experiment was likewise made for the satisfaction of the gentlemen above- mentioned.

There were afterwards made many experi- ments of a similar nature, some of them with large quantities of powder; they all produced very violent explosions, much more than suffi- cient for any purpose had in view.

In the first essays with the sub-marine vessel, the inventor took care to prove its strength to sustain the great pressure of the incumbent •water, when sunk deep, before he trusted any person to descend much below the surface; and he never suffered any person to go under water without baring a strong piece of rigging made fast to it, until he found him well acquainted with the operations necessary for his safety. After that, he made him descend, and continue at particular depths, without rising or sinking, row by the compass, approach a vessel, go under her, and fix the wood-screw, mentioned before, into her bottom, &c., until he thought him sufficiently expert to put any design in execution.

It required many trials to make a person of common ingenuity a skilful operator; the first employed was very ingenious, and made himself master of the business, but was taken sick in the campaign of 1776, at New York, before he had an opportunity to make use of his skill, and never recovered his health sufficiently after- wards.

Experiments made with a sub-marine vessel. After various attempts to find an operator to his wish, Mr. Bushnell sent one, who appeared more expert than the rest, from New York, to a fifty gun ship, lying not far from Governor's Island. He went under the ship, and attempted to fix the wood-screw into her bottom, but struck, as VOL. VII.

he supposed, a bar of iron, which passes from the rudder-hinge, and is spiked under the ship's quarter. Had he moved a few inches, which he might have done, without rowing, he would pro- bably have found wood

where he might have fixed the screw ; or, if the ship were sheathed with copper, he might easily have pierced it but not being well skilled in the management ex the vessel, in attempting to move to another place, he lost the ship ; after seeking her in vain, for some time, he rowed some distance, and rose to the surface of the water, but found day-light had advanced so far, that he durst not renew the attempt. The adventurer said he could easily have fastened the magazine under the stem of the ship, above water, as he rowed up to the stern, and touched it before he descended. Had he fastened it there, the explosion of 150 Ibs. of powder, the quantity contained in the magazine, must have been fatal to the ship. In his return from the ship to New York, he passed near Go- vernor's Island, and thought he was discovered by the enemy on the island ; being in haste to avoid the danger he feared, he cast off the maga- zine, as he imagined it retarded him in the swell, which was very considerable. After the magazine had been cast off one hour, the time the internal apparatus was set to run, it blew up with great violence.

Afterwards, there were two attempts made in Hudson's river, above the city, but they effected nothing. Mr. Fulton, we believe, afterwards improved on this machine in England, but the attempts to use it proved equally abortive.

DIVE'RGE, v. n. > Lat. diverge. To tend

DIVERGE'NT, adj. 5 various ways from one point.

Homogeneal rays, which flow from several points of any object, and fall perpendicularly on any reflect- ing surface, shall afterwards diverge from so many points. Newton.

Thus when the mother-bird on moss-wove nest Lulls her fond brood beneath her plumy breast Warmth from her tender heart diffusive springs And charmed she shields them with diverging wings.

Darwin.

DIVERGENT, or DIVERGING LINES, in geometry, are those which constantly recede from each other. They are opposed to conver- gent, or converging lines, whose distances con- tinually approach nearer to each other, and become still less and less. Those lines whic – converge the one way, diverge the other.

DIVERGENT RAYS, in optics, are those which going from a point of the visible object, are dis- persed, and continually depart one from another in proportion as they are removed from th» object : in which sense it is opposed to conver gent. See OPTICS.

DI'VERS, adj. Lat. diversus. Several ; sun- dry ; more than one. Out of use.

We have divers examples in the church of such as, by fear, being compelled to sacrifice to strange gods, repented, and kept still the office of preaching the gospel. Whitgift.

The teeth breed when the child is a year and a half old : then they cast them, and new ones come about seven years ; but divers have backward teeth come at twenty, some at thirty and forty.

Bacon's Natural Hittory 2A

DIV

3-54

DIV

Time travels in divert paces with divert persons. I'll tell you who time ambles withal, who time trots xrithal, -who time gallops witha., and who he stands Oill withal. Shakspeare.

DIVERSE', v. H. & adj. ˆ Lat. diversus. See DIVERSITY, n. s. \ DIVERSIFY. To

DIVERSE'LY, adv. j differ : different ; in

various directions. Diversity, is dissimilitude ;

variety ; distinct existence. Diversely, differently ;

variously.

A nothir clerenesse is of the sunne, a nothir clere-

nesse of the moone, and a nothir clerenesse is of

sterres, and a sterre diuersith fro a sterre in clereness.

Wiclif. 1 Cor. 15. Mi britheren, deme al ioie whanno ye fallen into

dyurte temptacions. Id. James 4.

Four great beasts came up from the sea, diverse one from another. Dan. vii. 3.

And for there is so grete diversite

In English and in writing of our tonge

So piaie I to God, that none misurrte the

Ne the misse-metre for defaute of tonge.

Chaucer. Troilus and Cressida. Then is there in this diversity no contrariety.

Hooker.

But yet their various and perplexed course, Observed in diverse ages, doth enforce Men to find out so many eccentrique parts, Such diverse downright lines, such overthwarts As disproportion that pure form. Donne.

Both of them do diversely work, as they have their medium diversely disposed. Bacon's Natural History.

Leicester bewrayed a desire to plant him in the queen's favour, which was diversely interpreted by such as thought that great artizan of courts to do nothing by chance, nor much by affection. Wotton.

Eloquence is a great and diverse thing, nor did she yet ever favour any man so much as to be wholly his.

Ben Jonson.

They cannot be divided, but they will prove oppo- site , and, not resting in a bare diversity, rise into a contrariety. South.

Considering any thing as existing at any determined time and place, we compare it with itself existing at another time, and thereon form the ideas of identity and diversity. Locke.

William's arm

Could nought avail, however famed in war ;

Nor armies leagued, and diversely assayed .

To curb his power. Philips.

On life's vast ocean diversely we sail ;

Reason the card, but passion is the gale. Pope.

The most common diversity of human constitutions arises from the solid

parts, as to their different degrees of strength and tension. Arbuthnot on Aliment.

And in the whole there is a magnificence like that ascribed to Chinese plantation, the magnificence of vast extent and endless diversity. Johnson.

DIVERSIFY, v. a.) Fr. diversifier ; Sp.

DIVERSIFICATION, n. s. S Portug. and Italian diversificare, from Lat. diversion, i.e. dis, di- versely, and verto, or verso to turn, and facto to make. To make different ; discriminate ; varie- gate : diversification is variety of form, color, or quality; change.

There is, in the producing of some species, a com- position of matter, which may be much diversified.

Bacon.

If you consider how variously several things may be compounded, you will not Bonder that such fruitful

principles, or manners of diversification, should gene- rate differing colours. Boyle on Colours.

This, which is here called a change of wil., is not a change of his will, but a change in the object, which seems to make a diversification of the will, bu. indeed is the same will diversified.

Hole's Origin of Mankind.

The country being diversified between hills and dales, woods and plains, one place more clear, another more darksome, it is a pleasant picture. Sidney.

It was easier for Homer to find proper sentiments for Grecian generals, than for Milton to diversify his infernal council with proper characters.

Addison't Spectator. Nor less attractive is the woodland scene

Diversified with trees of every growth,

Alike yet various. Cowper.

DIVE'RT, v. a. ˆ Fr. divertir ; Lat.

DIVE'RSION, n. s. divertere, from dis

DIVE'RTER, n. s. [away,andt-e7-

*DIVE'RIISE, v. a. fTo turn off, or from, DIVE'RTISEMENT,JI. *. a particular course: DIVE'BTIVE, adj. J hence, to amuse ; to please; to exhilarate. 'Diversion,' says Di. Johnson, 'seems to be somewhat lighter than amusement, and less forcible than pleasure.' Di- vertise is an obsolete synonyme of divert. Di- vertisement is an old word recently revived, and applied to musical compositions of a particu- lar cast. Divertive is recreative, amusing. Knots, by the conflux of the meeting sap, Infect the sound pine, and divert his grain, Tortive and errant, from his course of growth.*

Sliahspeare.

Frights, changes, horrours, Divert and crack, rend and deracinate The unity and married calm of states. Id. Cutting off the tops, and pulling off the buds, work retention of the sap for a time, and diversion of it to the sprouts that were not forward.

Bacon's Nat. Hist.

The kings of England would have had an absolute conquest of Ireland, if their whole power had been employed ; but still there arose sundry occasions, which divided and diverted their power some other way.

Davies on Ireland.

Alas, how simple, to these cates compared, Was that crude apple that diverted Eve !

Milton. Paradise Regained.

Angling was, after tedious study, a rest to his mind, a cheerer of his spirits, and a diverter of sadness.

Walton.

Let orators instruct, let them divertise, and let them move us ; this is what is properly meant by the word salt. Dryden.

He finds no reason to have his rent abated, because a greater part of it is diverted from his landlord.

Locke

You for those ends whole days in council sit, And the diversions of your youth forget.

Waller.

How fond soever men are of bad divertisement, it will prove mirth which ends in heaviness.

Government of the Tongue.

What can that man fear, who takes care to please a Being that is so able to crush all his adversaries ? a Being that can divert any misfortune from befalling him, or turn any such misfortune to his advantage ?

Addison's Guardian.

They diverted raillery from improper objects, and gave a new turn to ridicule. Id. Freeholder

DIV

Such productions of wit and humour as expose vice and folly, furnish useful diversions to readers.

Id.

Nothing more is requisite for producing all the va- riety of colours, and degrees of refrangibility, than that the rays of light be bodies of different sizes ; the least of which may make violet, the weakest and dark- est of the colours, and be more easily diverted by re- fracting surfaces from the right course ; and the rest, as they are bigger and bigger, make the stronger and more lucid colours, blue, green, yellow, and red, and be more and more difficultly diverted. Newton.

I would not exclude the common accidents of life, nor even things of a pleasant and diverting nature, so they are innocent, from conversation. Rogers.

I have ranked this diversion of Christian practice among the effects of our contentions.

Decay of Piety.

DIVEST', or ˆ Fr. dcvestir ;

DEVEST', v. a. & n. s. £ Lat. deces^'re, from

DIVEST'URE, n s.) de, privative, and

vcstio, to clothe, a vestis ; Gr. faQijs, a garment. To denude, strip :

divesture the act of disrobing or stripping.

Then of his arms Androgeus he divests ; His swords, his shield, he takes, and plumed crests.

Denham.

Let us divest the gay phantom of temporal happi- ness of all that false lustre and ornament in which the pride, the passions, and the folly of men havo dressed it up. Rogers.

The diveiture of mortality dispenses them from those laborious and avocating duties which are here requisite to be performed. Hoyle's Seraphick Love.

DIVI'DE, v. a. Sav.n.ˆ Fr. diviser ; Span. DIVID'ABLE, adj. . and Port.dimdir; Ital. DIVI'DANT, adj. ! and Lat. dividere, from

DIV'IDEND, n. s. [dis, diversely, and

DIVID'ER, | video, to see, a di-

DIVID'UAL, adj. J vided thing being seen

in more parts than one. — Ainsworth. To part into different pieces; hence to disunite; sepa- rate; distribute: as a neuter verb, to sunder; break concord or friendship ; differ. A dividend is an allotted share ; in arithmetic, however, it is the sum to be divided: dividual is used by Mil- ton for divided ; and dividant by Shakspeare, for separable ; distinguishable.

Let there bo a firmament in the midst of the •waters, and let it divide the waters from the waters.

Genesis. There shall five in one house be divided. Luke.

Rend us in sunder, thou canst not divide Our bodies so, but that our souls are tied, And we can love by letters still and gifts, And thoughts, and dreams; love never wanteth shifts. Donne.

Love cools, friendship falls off, Brothers divide. Shakspeare. King Lear.

How could communities maintain Peaceful commerce from dividable shores ?

Shakspeare.

Twinned brothers of one womb, Whose procreation, residence, and birth,

Scarce is dividant, touch with several fortunes. Id. According as the body moved, the divider did more and more enter into the divided body ; so it joined itself to some new parts of the medium, or divided body, and did in like manner forsake others.

Digby on the Soul.

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DIV

She shin.-.,

Revolved on heaven's great ::xlc, and her reign With thousand lesser lights dividual holds, With thousand thousand stars ! Miltun

If on such petty merits you confer So vast a prize, let each his portion shun- : Maktt a just dividend; and, if not all, The greater part to Diomede will fall.

You must go Whore seas, and winds, and deserts will iliv'nh' you.

Drijden.

Cham and Japhet were heads and princes over their families, and had a right to divide the earth by families.

Lucke.

Money, the great divider of the world, hath, by u strange revolution, been the great uniter of a divided lje°Ple- Swift'.

Each person shall adapt to himself his peculiar share, like other dividends. Decay of Piety.

To remedy this inconvenience, it will be necessary to divide their troughs into small compartments, in such a manner, that each of them may ba capable of containing water ; but this is seldom or never done.

Franklin.

It so happened that persons had a single office divided between them who had never spoken to rach other in their lives ; until they found themselves, they knew not how, pigging together, heads and points, in the same truckle-bed.

Burke. Character of Lord Cluithnm. DIVIDEND. See ARITHMETIC.

DIVIDEND OF STOCKS is a share of the inter- est of stocks erected on public funds, as the South Sea, &c., divided among and paid to the adventurers half-yearly.

DIVINE', v. u., o.n., n.s., & adj.} Fr. di-*

DIVINA'TION, n. s. vin; Ital.

DIVINE'LY, adv. Span. and

DIVI'NER, n. s.) Port, di-

DIVINE'NESS, | vino; Lat.

DIVIN'ERESS, n. s.,fem. \ divinus ;

DIVIN'ITY, n. s. J from divi,

the gods ; Gr. ˆtoc- See DEITY. To foreknow,

foretell, or presage, truly or falsely : as a neuter

verb to utter prognostics, or feel presages ; to

conjecture : divination is the foreseeing, or fore-

telling, future events, or pretending so to do :

diviner and divineress those who make this pre-

tension. Divine, as an adjective, is partaking

of the nature of, or proceeding from, God ;

superhuman ; excellent : divinely, a correspond-

ing adverb : divineness and divinity, participa-

tion of the nature of God ; Godhead : THE God-

head, the Supreme Being.

And it was don whanne we gheden to preir, that a damysel that hadde a spirit of dyuynacioun meete us which ghaf greet wynnyng to her lordis in dyuy- nyng. Wiclif. Dedis. 16.

Surely there is no enchantment against Jacob, nei- ther is there any divination against Israel. Numbers.

Certain tokens they noted in birds, or in the entrails of beasts, or by other the like frivolous divinations.

Hooker.

The Grecians most divinely have given to the activ« perfection of men, a name expressing both beauty and goodness, Id.

Then is Caesar and he knit together. – If I were to divine of this unity, I would not prophesy so.

Shakspeare. 2 A 2

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DIVINATION.

If secret powers

Suggest but truth to my divining thoughts, This pretty lad will prove our country's bliss. Id.

By Jupiter, an angel ! or, if not, An earthly paragon : behold divineness No elder than a boy. Id. Cymkeline.

Hear him but reason in divinity, 4nd, all admiring, with an inward wish You would desire the king were made a prelate,

Sfuikspeare,

Give Martius leave to procned in his discourse ; for he spoke like a divine in armour.

Bacon's Holy War. The divinest and the richest mind. Both by art's purchase and by nature's dower, That ever was from heaven to earth confined.

Davies.

As with new wine intoxicated both, They swim in mirth, and fancy that they feel Divinity within them breeding wings, Wherewith to scorn the earth. Milton.

In the very shapes and colours of brute creatures there is a divine hand, which disposeth them to his own ends. Bp. Hall. Contemplations.

This man born and now up grown, To shew him worthy of his biith divine

And hi?h prediction, henceforth I expose To Satan. Milton.

She fair, divinely fair ! fit love for gods. Id.

The eternal cause in their immortal lines Was taught, and poets were the first divine.*

Dcnham. Her line Was hero-make, half human, half divine.

Dry den.

His countenance did imprint an awe. And naturally all souls to his did bow ;

As wands of divination downward draw, And point to beds where sovereign gold doth grow.

Id.

The mad divinereu had plainly writ, A time should come, but many ages yet, In which sinister destinies ordain, A dame should drown with all her feathered train.

Id.

If he himself be conscious of nothing he then thought on, he must be a notable diviner of thoughts, that can assure him that he was thinking. Locke.

Faith, as we use the word, called commonly divine faith, has to do with no propositions but those which are supposed to be divinely inspired. Id.

When he attributes divinity to other things than God, it is only a divinity bv way of participation.

Stillingjieet.

Is it then impossible to distinguish the divineness of this book from that which is human ? Grew.

The excellency of the soul is seen by its power of divining in dreams : that several such divinations have been made, none can question who believes the holy writings. Addism.

*Tis the Divinity that stirs within us, *Tis Heaven itself that points out an hereafter, And intimates eternity to man. Id.*

Vain idols, deities that ne'er before In Israel's lands had fixed their dire abodes, Beastly divinities, and droves of gods. Prior.

A divine has nothing to say to the wisest congrega- tion, which he may not express in a manner to be un- derstood by the meanest among them. Swift.

God doubtless can govern this machine he could create, by more direct and easy methods than employ- ing these subservient divinities. Cheyne.

This topick was very fitly and divinely made nse of by our apostle, in his conference with philosophers, and the inquisitive people of Athens. Bentley.

Instructed, you'd explore Divine contrivance, and a God adore.

Blackmore.

I reduced the study of divinity into as narrow a compass as I could j for I determined to study nothing but my Bible, being much unconcerned about the opinions of councils, fathers, churches, bishops, and other men, as little inspired as myself. This mode of proceeding being opposite to the general one, and es- pecially to that of the Master of Peterhouse, who was a great reader, he used to call me auToSiSaxToj, the self-taught divine. Bp. Watson.

Glowiug, and circumfused in speechless love, Their full divinity inadequate That feeling to express, or to improve, The gods become as mortals, and man's fate Has moments like their brightest. Byron.

DIVINATION, in antiquity, was divided by Plato, Aristotle, Plutarch, Cicero, and others, into two species, viz. artificial and natural. Ar- tificial divination was so called, because it was not obtained, or pretended to be obtained, by immediate inspiration, but proceeded upon cer- tain superstitious experiments and observations arbitrarily instituted. Of this sort there were various kinds, as by sacrifices, entrails, flame, cakes, flour, wine, water, birds, lots, verses, omens, &c. In the sacred writings nine different sorts of divination are mentioned. The first per- formed by the inspection of planets, stars, and clouds. The practisers of this are supposed, to be those whom Moses calls piya jneonen, of jjtf anan/a cloud, Deut. xviii. 10. 2. Those whom the prophet calls in the same place ˆnjO mtna- cheseh, which the vulgate and generality of in- terpreters render augur. 3. Those who in the same place are called P)UOn mecascheph, which the septuagint and vulgate translate ' a man given to ill practices.' 4. Such augurs whom Moses in the same chapter, ver. 11, calls "lain hhober.

*5. Those wiio consult the spirits called Python ; or, as Moses expresses it in the same book, 31K *?KtP ' those who ask questions of Python.'*

6. Witches or magicians, whom Moses called iˆyˆi judeoni. 7. Those who consult the dead, necromancers. 8. The prophet Hosea, chap. iv. 12, mentions such as consult staves, i?po *?tW; which kind of divination is called rhabdomancy. 9. The last kind is hepatoscopy, or the con- sideration of the liver. Divination of all kinds being the offspring of credulity, nursed by im- posture, and strengthened by superstition, was necessarily an occult science, retained in the hands of the priests and priestesses, the magi, the soothsayers, the augurs, and other like pro- fessors, till the time of the coming of Jesus Christ. Since then the pure doctrines of Chris- tianity, and the spirit of philosophy, becoming every day more widely diffused have equally concurred in banishing these visionary opinions.*

The following are the principal kinds of divi- nation practised among the ancients. For a more minute description of which see their se- parate articles. 1. Aeromancy, the art of di- vining by the air. 2 Astrology; divided into

natural astrology and judicial. 3. Augury con- sisted in observing the flight, singing, &c., of birds. 4. Chiromancy, the art which pretends to discover, by inspecting the hand, not only the inclinations of a man, but his future destiny also. 5. Geomancy was a divination made by observing of cracks or clefts in the earth. 6. Haruspicy consisted in the inspection of the bowels of animals, but principally of victims ; and from thence predicting incidents relative to the re- public, and the good or bad events of its enter- prises. 7. Horoscopy is a branch of ASTROLOGY, which see. 8. Hydromancy is the art of di- vining by water. The Persians, according to Varro, invented it; and Pythagoras and Numa Pompilius made great use of it. 9. Physiog- nomy, or physiognomancy, is a science that pre- tends to teach the nature, the temperament, the understanding, and the inclinations of men, by the inspection of their countenances, and is there- fore thought by many, to be little less frivolous than chiromancy ; though Aristotle, and the ce- lebrated Lavater, have written express treatises concerning it. But as it is an undeniable fact, that our passions, especially when frequently and violently agitated, make indelible impressions on our features, by their repeated action on particular muscles, insomuch that the tempers of many people may be known at first view from their looks ; and as it is not improbable, that certain habits of vice may make impres- sions equally uniform and perhaps equally legi- ble, if we were accustomed to study them, phy- signomy appears to be worthy of rather more attention. 10. Pyromancy is a divination made by the inspection of a flame, either by observing to which side it turns, or by throwing into it some combustible matter, or a bladder

filled with wine, or any thing else from which they imagined they were able to predict. Natural divination was so called, because it was supposed to be not at- tainable by any rules or precepts of art, but in- fused or inspired into the diviner, without his taking any further care about it, than to purify and prepare himself for the reception of the di- vine afflatus.

DIVINING ROD. We have anticipated, in the article BAGUETTE DEVINATOIRE, which see, all that we feel disposed to give credence to on this subject : but an ingenious gentleman has lately advocated the pretensions of the hazel or willow rod to be naturally, under proper management, a discoverer of metals and springs of water, at great depths ; and we insert, just as they are supplied to us, his directions for choosing the rods, and observations on their properties.

I. Directions for choosing the Rods. — The hazel and willow rods he has, by experience, found, will actually answer with all persons in a good state of health, if they are used with mo- deration, and at some distance of time, and after meals, when the operator is in good spirits.

The hazel, willow, and elm, are all attracted by springs of water. Some persons have the virtue intermittently ; the rod in their hands will attract one half-hour, and repel the next. The rod is attracted by all metals, coals, amber, and lime-stone, but with different degrees of strength. The best rods are those from the hazel or nut- frn« o<; they are pliant and tough, and cut in the

winter months ; a shoot that terminates, equally forked, is to be preferred, about two feet and a half long; but as such a forked rod is rarely to be met with, two single ones of similar length and size may be tied together with thread, and they will answer as well as tlie other.

The most convenient and handy method of holding the rod, is with the palms of the hands turned upwards, and the two ends of the rod coming outwards: the palms should be held horizontally, as nearly as possible ; the part of the rod in the hand ought to be straight, and not bent backward or forward. The upper part of the arm should be kept pretty close to the sides, and the elbows resting on them ; the lower pjirt of the arm making nearly a right angle with the upper, though rather a little more acute. The rod ought to be so held, that in its working the sides may move clear of the little fingers.

The best manner of carrying the rod is witli the end extended in an angle of about eighty degrees from the horizon, as by this method of carrying it, the repulsion is more plainly perceived than if it was held perpendicularly. But after all the directions that can be given, the adroit use of it can only be

attained by practice and attention.

It is necessary that the grasp should be steady, for if, when the rod is going, there be the least succussion or counteraction in the hands, though ever so small, it will greatly impair, and, gene- rally, totally prevent its activity, which is not to be done by the mere strength of the grasp ; for provided this be steady, no strength can stop it.

II. Properties observed in the Rod, and Direc- tions for using it. — As soon as the person's fore- most foot comes near the attracting body (as far as I can observe its semi-diameter), the end of the rod is repelled towards the face ; then open the hands a little, replace the rod, and approach nearer, and the repulsion will be continued until the foot is on or over the attracting body. When this is the case, the rod will first be repelled a little, viz. two or three inches, and then be at- tracted towards the metallic body, viz. its end will be drawn down towards it.

When it has been drawn down, it must not be thrown back without opening the hands, a fresh grasp being necessary to every attraction, but then the least opening of the hand is sufficient. As long as the person stands over the attracting body, the rod continues to be attracted ; but as soon as the forefoot is beyond it, then the rod is drawn backward to the face.

Metals have different degrees of attraction ; gold is strongest, next copper, then iron, silver, tin, lead, bones, coals, springs of water, arid limestone.

In using the rod to discover springs »nd me- tals, let the person hold the rod as already d1- rected, and then advancing north or south with a slow pace, just one foot before the other, at first the rod may be repelled ; but as the person ad- vances slowly, and comes over the spring or vein of ore, the rod will be strongly attracted.

A person who, by frequent practice'and ex- •perience, can use the rod tolerably, may soon give the greatest sceptics sufficient satisfaction except they are determined not to be con- vinced.*

FIV

Some have .supposed that the science called Rhabdomancy (divination by a rod), is alluded to in the following verse of Hosea : — ' My peo- ple ask counsel at their stocks, and their staff declareth unto them.' ch. iv. As Europe re- ceived in very early times many superstitious customs from the east, together with many useful inventions, the conjecture is not improbable. Divination by arrows, a method of a similar kind mentioned in Ezekiel, chap, xxi., continued among the Arabs till the days of Mahomet, who, in the Koran, forbade his followers this idle at- tempt at prescience.

DIVISION, n. s. ~\ Span, and YT. division, PIVIS'IBLE, adj. I from Lat. divisio, a di- DIVIS'IBLENESS, n. s. \videre, divisus. See Di- DIVISIBIL'ITY, n. s. I VIDE. The act of di- DIVI'SOR. Jviding; state of being

divided ; the separated part, and that which separates: hence disunion, discord, dispute; a rule of arithmetic: divisible is capable of di- vision; divisibility, quality of admitting it. Divisor, an arithmetical term for a given num- ber by which another is divided.

I will put a division between my people and thy peo- ple. Ejcodvt.

Thy tongue

Makes Welsh as sweet as ditties highly penned Sung by a fair queen in a summer's bower, With ravishing division, to her lute.

Shakspeare. Henry IV.

Naturalists disagree about the origin of motion, and the indefinite dmsiblcness of matter. Boyle.

This will easily appear to any one, who will let his thoughts loose in the vast expansion of space, or di- visibility of matter. Locke.

Express the heads of your divisions in as few and clear words as you can, otherwise I never can be able to retain them. Swift.

If we look into communities and divisions of men, we observe that the discreet man, not the witty, guides the conversation. Addison's Spectator.

The effects of human industry and skill are easily subjected to calculation : whatever can be completed in a year, is divisible into parts, of which each may be performed in the compass of a day. Adventurer.

When we frame iu our minds any notion of matter, we conceive nothing else but extension and bulk, •which is impenetrable, or divisible and passive.

Bentley's Sermons.

In dread divisions marched the marshalled bands, And swarming armies blackened all the lands.

Darwin.

DIVISIBILITY, in physics, is that property by which the particles of matter

in all bodies are capable of a separation or disunion from each other. The Peripatetics and Cartesians hold divi- sibility to be an affection of all matter. The Epicureans, again, allow it to agree to every physical continuum ; but they deny that this af- fection agrees to all bodies, for the primary cor- puscles or atoms they maintain to be perfectly inseoable and indivisible.

DIVISIBILITY OF MATTER. As it is evident that body is extended, so it is no less evident that it is divisible ; for since no two particles of mat- ter can exist in the same place, it follows, that they are really distinct from each other ; which is all that is meant by being divisible. In this •ense the least conceivable particle must still be

divisible, since it will consist of parts which will be really distinct. To illustrate this by a fami- liar instance. — Let the least imaginable piece of matter be conceived lying on a smooth plain surface, it is evident the surface will not toucli it every where : those parts, therefore, which it does not touch may be supposed separable from the others, and so on as far as we please ; and this is all that is meant when we say that matter is infinitely divisible. The infinite divisibility of mathematical quantity is demonstrated geome- trically. All that is supposed, however, in strict geometry, says Mr. Maclaurin, concerning the divisibility of magnitude, amounts to no more than that a given magnitude may be conceived to be divided into a number of parts equal to any given or proposed number. The number of parts, into which a given magnitude may be con- ceit ed to be divided, is not to be fixed or limited, because no given number is so great but a greater may be conceived and assigned : but there is not, therefore, any necessity of supposing the number of parts actually infinite ; and if some have drawn very absurd consequences from such a supposition, yet geometry ought not to be loaded with them. How far matter may be divided, may, in some measure, be conceived from this fact, that a piece of wire gilt with so small a quantity as eight grains of gold, may be drawn out to a length of 13,000 feet, the whole surface of it still remain- ing covered with gold. We have also a sur- prising instance of the minuteness of some parts of matter from the nature of light and vision. Let a candle be lighted, and placed in an open plain, it will then be visible two miles round, and consequently were it placed two miles above the surface of the earth, it would fill with lumi- nous particles a sphere whose diameter was four miles, and that before it had lost any sensible part of its weight. A quantity of vitriol being dissolved, and mixed with 9000 times as much water, will tinge the whole ; consequently will be divided into as many parts as there are visible portions of matter in that quantity of water. With respect also to coloring substances, parti- cularly carmine, which is a kind of powder ob-

tained from the insect commonly called cochi- neal : dilute a small quantity of this powder, to the weight of about three quarters of a grain, by putting it at the bottom of a vessel, in which is afterwards poured nearly thirty pounds of water; the color will be so diffused as to be perceptible throughout the whole volume of the water. The weight of this water being 300,000 times greater than that of five centigrammes of carmine, if it be supposed that each centigramme of the fluid mixture contains only two moleculae of the co- loring principle, there will be 3,000,000 of vitriol parts in five centigrammes of carmine. Many perfumes also, without a sensible diminution of their quantity, fill a very large space with their odoriferous particles; which must therefore be of an inconceivable smallness, since there will be a sufficient number in every part of that space sensibly to affect the organ of smelling. Dr. Keill demonstrates, that any particle of matter, how small soever, and any finite space, how large soever, being given, it is possible for that small particle of matter to be diffused through

all that space, and to fill it in such a manner, as that there shall be no pore in it whose diameter shall exceed any given line. The chief objec- tions against the divisibility of matter in infini- lum are, That an infinite cannot be contained by a finite : and that it follows from a divisibility in infinitum, either that all bodies are equal, or that one infinite is greater than another. But the answer to these is easy ; for the properties of a determined quantity are not to be attributed to an infinite considered in a general sense ; and who has ever proved, that there could not be an infinite number of infinitely small parts in a finite quantity, or that all infinites are equal ? The contrary is demonstrated by mathematicians in innumerable instances. Sir Isaac Newton is said to have derived from the system of Epicu- rus, the following opinion relative to the limits prescribed to the divisions of body in the actual state of things. We confess it seems to us no- thing but a bold conjecture. This great philo- sopher conceives that the Supreme Being, in creating matter, formed it of various species of elementary molecules, solid, hard, unchangeable, the figures and the different qualities of which were appropriated to the respective ends they were proposed to answer. But such is the fixity of these molecules that no process of art, nor even any force existing in nature, can either di- vide or alter them, unless the essence of the body should be changed with time. Thus all the mo- difications experienced by bodies depend solely upon this, that these durable molecules separate the one from the other, and then become re- united in various ways forming new combina- tions. These different molecules are, hence, the simple substances of chemistry ; and the results of the operations which

they would present singly, should be the design of the efforts of this science ; in the mean time we may consider as simple the substances which we have not yet been able to decompose, and wisely imagine simpli- city to reside at the place where observation slops. See the article INFINITE.

DIVISION, in sea affairs, a select number of ships in a fleet or squadron of men of war, dis- tinguished by a particular flag or pendant, and usually commanded by a general officer. A squadron is commonly ranged into three divi- sions, the commanding officer of which is always stationed in the centre. When a fleet consists of sixty sail of the line, that is, of ships having at least sixty cannon each, the admiral divides it into three squadrons, each of which has its divi- sions and commanding officers. Each squadron has its proper colors, according to the rank of the admiral, and every division its proper mast. Thus in Britain, the first admiral, or the admiral of the fleet, displays the union flag at the main- top-mast head ; next follows the white flag with St. George's cross ; and afterwards the blue. The private ships carry pendants of the same color with their respective squadrons at the mast of their particular divisions; so that the last ship in the division of the blue squadron carries a blue pendant at her mizen-top-mast head.

DIVISIONS OF AN ARMY, in the military art, the several brigades and squadrons into which it is cantoned.

DIVISIONS OF A BATTALION are the several platoons into which it is divided in marching or firing, each of which is commanded by an of- ficer.

DIUM, in ancient geography, thp name of a town of Macedonia, in Pieria, on the west side of the Sinus Thermaicus. Strabo and Livy place it on the borders of Pieria to the south, at the foot of mount Olympus towards Thessaly. That it was a splendid city, appears from Polybius ; who relates, that its gymnasium and walls were overthrown by the ./Etolians. From which over- throw, however, it again recovered, Alexander adding new splendor to it, by the brass statues cast by Lysippus and erected there in memory of those slain at the Granicus : an ornament which was continued down to the time of the Romans; \vho made it a colony, called Diensis.

DIVODORUM, in ancient geography, a town of the Mediomatrici in Gallia Belgica ; situated on the Moselle, in the spot where Metz now stands. See METZ.

DIVORCE', v. a. & n. s. ˆ Fr. divorcer ; It. di-

DIVORCE'MENT, n. s. ˆvorzare ;from Barb.

DIVOR'CER. 3 Lat, divortere ; die

and vertere, a marito, to turn, from her husband. The legal separation of a husband and wife, the verb being derived from the noun : hence dis- union, or separation generally ; and separation by authority or force. Divorcement seems sy- nonymous with the substantive ; and a divorcer is, he who causes or procures a divorce.

Write her a bill of divorcement, and give it in her hand, and send her out of his house. Deut. xxiv. 1.

If so be it were possible, that all other ornaments of mind might be had in their full perfection, never- theless the mind that should possess them, divorced from piety, could bo but a spectacle of commiseration.

Hooker.

To restore the king, He counsels a divorce, a loss of her, That like a jewel has hung twenty years About his neck, yet never lost her lustre.

Shakspeare. Henry VII I. Go with me, like good angels, to my end ; And, as the long divorce of steel falls on me, Make of your prayers one sweet sacrifice, And lift my soul to heaven. Id.

The continent and the island were continued toge- ther within men's remembrance by a drawbridge ; but are now divorced by the downfalleo cliffs.

Carew's Survey of Cornwall.

Su~h motions may occasion a farther alienation of mind, and divorce of affections, in her, from my reli- gion. King Charles.

So seemed her youthful soul not easily forced, Or from so fair, so sweet a seat divorced. Waller.

Divorce is a lawful separation of husband and wife, made before a competent judge, on due cognizance had of the cause, and sufficient proof made thereof. Ayliffe's Parergon.

Death is the violent estranger of acquaintance, the eternal divorcer of marriage.

Drummond's Cyprian Grove. Aerial pasture the lungs with gentle force Constant embrace by turns, by turns divorce.

Blackmore.

DIVORCE. This is a topic connected with many moral and legal

considerations ; and those of sufficient importance, we apprehend, to justify

our entering upon it at some length. Scarcely has the country survived the moral effects of a recent discussion of it in the highest quarters, and in the inner sanctuary of British justice. It will be sufficient to remark, with regard to that unhappy circumstance, that both the learned pro- fessions appeared in a state of even unusual ob- scurity and doubt upon the subject. Lawyers, unquestionably well versed in the institutions of their country, were as singularly divided with regard to the fair effect of some of our statutes and usages respecting divorce, as the learned prelates were disagreed among themselves re- specting what was really the law of God.

The writer of this paper has had occasion to pay considerable attention to this subject, both in a moral and legal point of view. He has seen the laws of his country to be in a remark- able state of confusion respecting it ; he is con- vinced that their ordinary course, with regard to divorces, is opposed to the simple provisions of the law of Jesus Christ. He would therefore offer to the reader a brief statement of the actual laws and practices of this country on the subject, with a view to the examination of their moral effect and propriety ; then compare them with the provisions and usages of antiquity generally : and finally, with the express injunctions of Holy Writ.

1. There are many kinds of divorce, say the law authorities mentioned in our books ; as causa pracontractus ; causa frigiditatis ; causa consan- guinitatis ; causa affinitatis; causa professionis, &c. But the usual divorces are of two kinds, i. e. a mensa et thoro, from bed and board; and a vinculo matrimonii, from the very bond of marriage. A divorce £ mensa et thoro does not dissolve the marriage ; for the cause of it is subsequent to the marriage, and supposes the marriage to be lawful : this divorce may be by reason of adultery in either of the parties, for cruelty of the husband, &c. And as it does not dissolve the marriage, so it does not debar the woman of her dower, or bastardise the issue, or make void any estate for the life of husband and wife, &c. Co. Lit. 235 ; 3 Inst. 89 ; 7 Rep. 43. The woman under separation by this di- vorce must sue by her next friend ; and in her own name she may sue her husband for alimony.

A divorce & vinculo matrimonii, absolutely dissolves the marriage, and makes it void from the beginning, the causes of it being precedent to the marriage; as precontract with some other person, consanguinity or affinity, within the Le- vitical degrees, impotency, impuberty, &c. On this divorce

dower is gone ; and if, by reason of precontract, consanguinity, or affinity, the chil- dren of the marriage are bastards. But in these divorces, the wife, it is said, shall receive all again that she brought with her, because the nul- lity of the marriage arises through some impedi- ment ; and the goods of the wife were given for her advancement in marriage, which now ceases : but this is where the goods are not spent ; and if the husband give them away during the cover- ture, without any collusion, it shall bind her : if she knows her goods unspent, she may bring action of detinue for them ; and as for money, %c.| which cannot be known, she must fie in the

spiritual court. This divorce enables the partte? to marry again.

In regard to the former case, it is the practice in the higher walks of life to apply to parliament to complete the divorce by an ex post facto law, when, if the divorce is grounded, as it almost invariably is, on adultery, it is necessary that a clause be inserted in the proposed bill, interdict- ing the offending parties from intermarrying. Evidence must be given, on the bill, that an ac- tion for damages has been brought against the seducer, and judgment for the plaintiff had thereon, or a sufficient reason given why such action was not brought, or judgment obtained. Upon the second reading of the bill in the house of lords (where, indeed, it usually originates), it is necessary that an official copy of the proceed- ings, and definitive sentence of divorce a mensa et thoro, in the ecclesiastical court, at the suit of the petitioner, be delivered at the bar on oath ; and that the petitioner attend the house to be examined, if the house think fit, whether there be any collusion respecting the act of adultery, or the divorce, or any action for criminal conver- sation ; and whether the wife was living apart from her husband under articles of separation.

If after a divorce a mensa et thoro, either of the parties marry again, the other being living, such marriage is a mere nullity; and by sen- tence to confirm the first contract, she and her first husband become husband and wife to all intents, without any formal divorce from the second. Also on this divorce, as the marriage continues, marrying again while either party is living, hath been held to be bigamy within the stat. 1 Jac. c. 1 1.

A divorce for adultery was anciently a vinculo matrimonii ; and therefore in the beginning of the reign of queen Elizabeth the opinion of the church of England was, that after a divorce for adultery, the parties might marry again ; but in Foliambe's case, H. 44 El. in the star-chamber, that opinion was changed ; and archbishop Ban- croft, by the advice of divines, held, that adultery was only a cause of divorce ft mensa et thoro. Sentence of divorce must be given in the life of the parties, and not afterwards : but it may be repealed in the spiritual court, after the death of the parties.

It should be added that divorce is, according to our law, a judgment spiritual ; hence it must be sued for and pronounced in the spiritual court, where also, ‘ says Coke upon Littleton,’ if there be occasion, it ought to be reversed : and that the canon law, by which these courts are regulated, is followed by the common law, in considering the nuptial tie so strong as not to be capable of being unloosed for any cause what- ever. Our law, in fact, refers throughout to the Romish notion of the sacrament of marriage, and its utter indissolubility. Such, without entering into minute provisions, is the law and practice of our enlightened country on this im- portant subject.

2. Divorce was allowed in much greater free- dom in all the celebrated nations of antiquity. At Rome, barrenness, age, disease, madness, and banishment, were the ordinary causes of divorce, Spurius Carvilius, between 500 ard 600 years

after the building of Rome, under the consulship of M. Attilius and P. Valerius, was the first who put away his wife because she was barren ; though Plutarch, in his Roman questions, main- tains that Domitian was the first who permitted divorce. Justinian afterwards added impotence, a vow of chastity, and the profession of a monastic life, as valid reasons of divorce. The Roman lawyers distinguish between repudium and divortium ; making the former to be the breaking of a contract or espousal, and the latter separation after matrimony. Romulus enacted a severe law, which suffered not a wife to leave her husband, but gave the man the liberty of turning off his wife, for adultery, for poisoning her children, or counterfeiting his private keys. However, in later times, the women as well as the men might sue for a divorce. The common way of divorcing was by sending a bill to the woman, containing the reasons of separation, and a tender of all her goods which she brought with her ; and this was called repudium mittere ; or else it was performed in her presence, and before seven witnesses, and accompanied with the for- malities of tearing the writings, refunding the portion, taking away the keys, and turning the woman out of doors. .

The Grecian Laws concerning divorces were different : the Cretans allowed divorce to any man who was afraid of having too many children. The Spartans seldom divorced their wives ; and held it extremely scandalous for a woman to de- part from her husband. The Athenians allowed divorce on very small grounds, by a bill contain- ing the reason of the divorce, and approved, if the party appealed, by the chief magistrate; and women also were allowed to leave their husbands on just occasions. Persons divorcingˆ

their wives were obliged to icturn their portions; otherwise the Athenian laws obliged them to pay nine oboli a month for alimony. The terms expressing the separation of men and women from each other were different ; the men were said cnroTrtijnreiv or airo\ivuv, to dismiss their wives ; but wives, airoXuirtiv, to leave their hus- bands.

According to Ricaut (State, Ottom. Emp. ch. xxi.) there are among the Turks three degress of divorce. The first only separates the man and wife from the same house and bed, the mainte- nance of the wife being still continued : the se- cond not only divides them in that manner, but the husband is compelled to make good her ' kabin,' which is a jointure or dowry promised at her marriage, so as to have no interest in him or his estate, and to remain in a free condition to marry another. The third sort of divorce, which is called ' Ouch Talae,' is made in a solemn and more serious manner, with more rigorous terms of separation ; and in this case the husband, re- penting of his divorce, and desirous of retaking his wife, cannot by the law be admitted to her without first consenting to, and contenting him- self with, her being temporarily possessed by another man ; which the law requires as a pun- iihment of the husband's lightness and incon- stancy. These usages seem to have grown out of the laws of Mahomet, who, in the second chap- ter of the Koran, has ordered that if a man di-

vorce his wife tlie third time (for he may divorce her twice without being obliged to part with her) if he repent of what he has done, it shall not be lawful for him to take her again, until she has been first married and bedded by another, and divorced by such second husband. (Koran, ch. i,. p. 27). The precaution, on the whole, has had so good an effect, that the Mahommedans are seldom known to proceed to the extremity of di- vorce, notwithstanding the liberty given them ; it being reckoned a great disgrace so to do : and there are few, except those who have little or no sense of honor, that will take a wife again on the condition enjoined. (Seld. ubi. Sup. 1. iii. c. 21 ; Ricaut's Ottom. Emp. b. ii. c. 21). It must be observed, also, that though a man is allowed, by the Mahommedan law, to repudiate his wife, even on the slightest disgust, yet the women are not allowed to separate themselves from their husbands, unless it be for ill usage, want of pro- per maintenance, neglect of conjugal duty, im- potency, or some cause of equal import; but then she generally loses her dowry, which she does not lose if divorced by her husband, unkss she has been guilty of impudicity or notorious disobedience. (Koran, ch. iv. p. 62). When a woman is divorced she is obliged, by the direc- tion of the Koran, to wait three months before she marry another ; after which time, in case she be not found with child, she is at full liberty to dispose of herself as she pleases ; but if she prove with child she must wait till she be delivered : and, during her whole term of waiting, she may continue in her husband's house, and is to be

maintained at his expense ; it being forbidden to turn a woman out before the expiration of the term, unless she be guilty of dishonesty. (Koran, ch. ii. p. 26, 27; ch. Ixv. p. 454). Where a man divorces a woman before consummation, she is not obliged to wait any particular time (Koran, ch. xxxiii. p. 348); nor is he obliged to give her more than one-half of her dower. (Koran, ch. ii. p. 28). If the divorced woman have a young child, she is to suckle it till it be two years old ; the father, in the mean time, maintaining her in all respects : a widow is also obliged to do the sime, and to wait four months and ten days be- fore she marry again. (Koran, ch. ii. p. 27).

The divine law to the Jews on this subject is to this effect (Deut. xxiv. 1, &c.) : ‘ When a man hath taken a wife, and married her, and it come to pass that she finds no favor in his eyes, because he has found in her some unclearmess ; then let him write her a bill of divorcement, and give it into her hand, and send her out of his house. And when she is departed, she may go, and be another man’s wife ; and if her second husband hate her, and write her a bill of divorce, or if he chance to die, her former husband shall not take her again to be his wife, after she is de- filed, for that is an abomination to the Lord.’ A question has occurred respecting the interpre- tation of this law, What is meant by the words, ‘ if he find any uncleanness, turpitude, or naked- ness in her ? ‘ and the critics are divided in opi- nion about it. Dr. Geddes has rendered the Hebrew words, 131 HITS, ‘ some defect,’ but they are by Montanus rendered nuditatem verbi —by our translators, ‘ something unclean.’ Sept

OXOV 7rpay/ia. Vulg. aliquam faeditatem, and so equivalently Onk. Syr. and both Arabs. ButTharg. nTDJJ OJfiS, ‘some transgression;’ and this transgression is supposed by Rabbi Sammai and his followers to be adultery. R. Hillel and his party extend the “QT nilJJ to whatever may displease the husband ; and such appears to have been the loose construction of this law in our Saviour’s time. The opinion of the Sammaites is untenable ; for adultery was punished with death ; while that of the Hillelites appears to be too lax. It was probably either some very great bodily blemish, or some base immoral habit, that was meant by the legislator. The form of the bill of divorce was to this effect : ‘ Such a day, month, or year, I, such an one, of such a place, upon, or, near such a river, do, of my own free consent and choice, repudiate thee, such an one, my late wife, banish thee from me, and restore thee to thy own liberty ; and thou mayest henceforth go whither, and marry whom thou wilt : and this is thy bill of divorcement, and writing of expulsion, according to the law of

Moses and Israel.' This writing was signed by two witnesses, and delivered in the presence of as many, at least. From this time, the wife was as much at her liberty, as if she had been a widow ; only, in both cases, she was obliged to stay at least ninety days, before she was mar- ried to another, lest she should prove pregnant by the last. It does not appear that women were indulged by the law of Moses with the pri- vilege of divorcing their husbands upon the same ground ; unless in the case of a virgin betrothed by her parents before she was twelve years of age, who might then refuse to ratify the contract which her parents had madn, without giving any other reason than that she did not like the person designed for her ; but this cannot be called a di- vorcement, because there is no marriage in the case. Josephus, therefore, thinks (Ant. lib. xv. c. 11 ; xviii. 7 ; xx. 15), that a divorce was so far from being permitted to women, that, if the hus- band forsook his wife, it was not lawful for her to marry another, till she had first obtained a di- vorce from him. He adds, that Salome, sister of Herod the Great, was the first who took upon her to repudiate her husband, whose example was soon followed by others, mentioned by the same author.

3. Let us now regard the subject more particu- larly in its various relations to society, and as a topic of legislation with the great Christian lawgiver.

Divorce is always an evil. The sufferings of the innocent, the regrets of the wise and virtu- ous, and the abhorrence of God, attend upon it ; while it opens a breach in the foundations of human society to which no other domestic evil is comparable. That it may be the refuge of a good man from the vices of an incorrigible com- panion, and the prospect of indefinite future in- juries, who can deny ? but never can it be his remedy for the past ; never will it offer any thing to his min«l in the shape of compensation. It is of that species of punishment on the guilty, of which the innocent is compelled to share the shame and the suffering, in a peculiar manner; and to bea r, perhaps, in this life the chief mise-

ries. The feelings of the mind that preserve that innocence, the very affections that prompt and support him in the path of duty, prepare for him present sufferings, against which the criminal party must be hardened ; and to the same remote generations, that hear the tale of delinquency on the one side, the humiliation, and, generally, the groundless blame of the other, will be faithfully conveyed.

As far as the immediate parties to a divorce are concerned, all the objects and uses of mar- riage are ruinously overthrown and defeated by it. The husband (following the supposition of his being the innocent party), can no longer — • never more, perhaps, can he — regard the charac- ter of woman in its true light. No longer has she power to infuse a peculiar sensibility into his heart, to give candor and patience to his mind, or

sweetness to his disposition. All his recol- lections of her influence are calculated to inspire just the opposite feelings. ‘ More bitter than death,’ have been the consequences of his sub- mission to it. And when the husband is the guilty, and the wife the innocent party (for the only just cause of divorce will compel the Christian moralist to hold the balance even be- tween the sexes), what must the widowed heart of an all-confiding female endure? It is hardly possible that she should ever more look up to man ; that she should again believe that his judgment can strengthen hers, or his character become a safe pillar of her hope.

The mischiefs of divorce are but too often ca- pable of a still greater aggravation, i. e. when children are connected with its consequences. For a father’s authority (in our boyish days par- ticularly) it is as impossible to find a substitute, as for a mother’s care in earlier life. Let not parents forget, that no hireling, however faithful or respectable, can do their, duty to their chil- dren— a duty ever, as a whole, intransferable, ‘ be- cause he is a hireling ;’ but divorces generally break into a family w”hen all that is most important in the character of each parent should be in full ex- ercise; when, if there are children, they are of tender years, and every thing in relation to their character and hopes is in the bud, or in blossom- Now, either ‘ father,’ or ‘ mother (names espe- cially in conjunction, of greater moral power than any other that belong to creatures), becomes a term worse than unmeaning, worse than dead. As soon as the mind can be influenced by the fa- tal example, it is weakened on the side of virtue, and influenced to evil by one or other of these endearing and important names ; which it con- nects for life with the ideas of tyranny, and cruelty, and profligacy — or with those of trea- chery, and folly, and female shamelessness. Nor is this all ; though one of the less direct, it is not one of the least blessings of marriage to so- ciety, that it frequently draws together numerous collateral parties into kindred, and, like a single branch of an inland navigation, unites the re- sources and blends the interests of distant neighbourhoods. Imagine this one branch to be obstructed or annihilated, and the effect is felt wherever its waters flow. Something like this, or worsa than this, occurs in every case of

divorce, however just. Amongst all the parties connected by affinity with the original tie, the annihilation of it distils evil. Where only ordi- nary good wishes were increased by it, and approving aunts and smiling cousins felt it but decent to remember the relationship when it did not infringe on their selfishness, or on prior claims, the warmest discussion of the facts and circumstances, the merits and demerits of the case, will spread ; and

wounded pride will be far more productive of hatred and of falsehoods, than any such ties ordinarily are of affection. Every divorce is thus a party affair with a num- ber of families and individuals, an evil unseen, but increasing with the increasing intelligence of the community — and proportionably destroying the safeguards of virtue amongst them, by fami- liarising them with the details of the worst of crimes.

*It is rather remarkable that we have a most elaborate disquisition on this subject from the pen of Milton.. As his prose writings generally, and his theological sentiments in particular, have recently attracted considerable public notice, we may be allowed to notice his views of divorce somewhat in detail. He hud made what he would call ‘ a disastrous and misyoked mar- riage,’ ‘ a remediless mistake ;’ in which it were ‘ as vain to go about to compel ‘ the unhappy pair * into one flesh, as to weave a garment of sand, to compel the vegetable and nutritive powers of nature to assimilations and mixtures which are not alterable each by the other; or force the concoctive stomach to turn that into flesh, which is so totally unlike that substance as not to be wrought upon.’ In other words, the prince of poets had proved himself but man in his choice of a wife ; and because she was not more than woman in bearing with his learned peculiarities at home, and not a well advised or discreet woman, in refusing to return home after a short absence at her father’s house, Milton branded her as ‘ no wife,’ ‘ an adversary,’ ‘ a desertrice ; and actually paid his addresses to another lady with a view to supplying her place. The sequel of the poet’s history speaks of a ro- mantic reconciliation taking place between them She rushed to his feet in tears at the house of A relative ; and, after a short reluctance, he sacri- ficed his resentment to her entreaties, and the solicitation of surrounding friends. To this event, according to Fenton, we owe much of the paint- ing in ‘ that pathetic scene in Paradise Lost, in which Eve addresses herself to Adam for pardon and peace. Now then, the « mistake’ was re- medied ; the uncongenial ‘ assimilations ‘ mixed ; and the champion of divorce and his ‘ adver- sary’ became ‘ one flesh:’ but he had published, in the interim, his work on Divorce, and others in defence of it; and he through life justified the theory he had, under these un- Coward circumstances, espoused. Milton com- posed two sonnets on the treatment he received from the public, and particularly from the clergy, on account of these works. In one he says : — A book was writ of late, called Tetrachordon*

And woven close, both matter, form, and style ;

The subject new : i> walked the town awhile, Numbering good intellects •, now seldom pored on.

Cries the stall-reader, ‘ Bless us ! what a word on A title-page is this!’ And

some in file Stand spelling false, while one might walk to Milc- End-Green.

In the other he is more serious : —

I did but prompt the age to quit their clogs By the known rules of ancient liberty, When straight a barbarous noise environs me Of owls and cuckoos, asses, apes, and dogs : As when those hinds that were transformed to frogs, Railed at Latona's twin-born progeny, Which after held the sun and moon in fee. But this is got by casting pearls to hogs, That bawl for freedom in their senseless mood, And still revolt when truth would set tnem free.

A definition of marriage, which the poet fur- nishes in due form and order, certainly lies at the basis of the ' Doctrine of Divorce.'

' The material cause of matrimony,' says Milton, ' is man and woman; the author and efficient, God and their consent. The internal form and soul of this relation is conjugal love, arising from a mutual fitness to the final causes of wedlock, — help, and society in religious, civil, and domestic conversation, which includes, as an inferior end, the fulfilling of natural desire and specifical increase; these are the final causes, both moving the efficient and perfecting the form.' p. 272.

Or again, and with all the eloquence of a dis- appointed lover : —

' Marriage is a divine institution, joining man and woman in a love fitly disposed to the helps and comforts of domestic life. A divine insti- tution. This contains the prime efficient cause of marriage : ' Joining man and woman in a love, &c. This brings in the parties' con- sent, until which be, the marriage hath no true being. When I say ' consent,' 1 mean not error : for error is not properly consent ; and why should not consent be here understood with equity and good to either part, as in all other friendly covenants — and not be strained and cruelly urged to the mischief and destruction of both ! Neither do I mean that singular act of consent which made the contract ; for that may remain, and yet the marriage not true nor law- ful ; and that may cease, and yet the marriage both true arid lawful, to their sin that break it. So that either as no efficient at all, or but a tran- sitory, it comes not into ,the definition. That consent I mean which is a love fitly disposed to mutual help and comfort of life; this is that happy form of marriage, naturally arising from the very heart of divine institution in the text, in all the former definitions either obscurely, and under mistaken terms expressed, or not at all. This gives marriage all her due, all her benefits, all her being, all her distinct and proper being. This makes a marriage not a bondage — a bless- ing not a curse — a gift of God not a snare. Unless there be a love, and that love born of fitness, how can it last? Unless it last, how can the best and sweetest purposes of marriage be

attained ? And they not attained, which are thfe chief ends, and with a lawful love con- stitute the formal cause itself of marriage, how can the essence thereof subsist? How can it be,

indeed, what it goes for? Conclude, therefore, by all the power of reason, that where this es- sence of marriage is not, there can be no true marriage; and the parties, either one of them or both, are free, and without fault, rather by a nul- lity than by a divorce, may betake them to a second choice, if their present condition be not tolerable to them. If any shall ask, why ' do- mestic ' in the definition ? I answer, that because both in the Scriptures, and in the gravest poets and philosophers, I find the properties and ex- cellencies of a wife set out only from domestic virtues; if they extend further, it diffuses them into the motion of some more common duty than matrimonial.' pp 276, 7.

*We have but one objection to both these defi- nitions. They envelope in a cloud of words the chief design of marriage ; or rather they wholly mis- state its chief design to be the personal com- fort of the immediate parties. ' Help and society in religious, civil, and domestic conversation ; ' ' a love fitly disposed to the help and comfort [of each other] in domestic life.' The relative Bearing of the institution, or its aspect towards society at large, is almost wholly overlooked. Now we are not about to tempt an unequal war- fare with the able quills, or still more formidable frowns, of our fair countrywomen, by denying for one moment the reality of the * only want ' of our primitive sire; or disputing the superior personal comforts he enjoyed, after the forma- tion of his bride. But even a Milton must not be allowed to stigmatise, in prose, the dearest iiope of the marriage state, the possession of children, as ' an inferior end' of marriage. We contrast such a sentiment with the nobler views of the author of Paradise Lost, and smile at the versatility of our nature : —*

Hail wedded love, mysterious law, true source Of human offspring, sole propriety In Paradise, of all thiugs common else ! By thee adulterous lust was driven from men Among the bestial herds to range ; by thee, Founded in reason, loyal, just, and pure, Relations dear, and all the charities Of father, son, and brother, first were known.

The Roman moralist (Cicero) understood the matter better than either of these definitions state it: or rather, unbiassed by his private grievances in respect to marriage (for he too had them, it will be remembered), he expressed its great ob- jects far more correctly, when he called it ' The

*beginning of a city, the seminary of the com- monwealth.' In fact, if ekher the Mosaic narra- tive of the original institution, or the positive declaration of the almighty Author, is to be held decisive on the subject, the relative objects of marriage, as a ' source of human offspring,' and a natural guarantee of their education, far from being subordinate to any other, constituted his principal design in it. Every other part of creation is represented by the sacred historian as containing, at its birth, some provision for its perpetuity. Light is divided into successive days ; the gramineous tribes are secured against destruc- tion in the seed which they yield, and the fruits in that which they contain ; all the inferior creatures of the deep, the earth, and the air, are created * after their kind :' and God saw this arrangement,*

in particular, to be 3113 'good/ perfect, complete. The male of the human species only was, at first, produced ' alone ;' perhaps to teach man more distinctly some of the lessons we are about to consider. This was 'not good,' not a perfect arrangement with regard to man ; it did not pro- vide for the complete development of the divine plans concerning him. Marriage was accordingly instituted ; and the nuptial benediction pro- nounced in these terms : ' Be fruitful, and mul- tiply, and replenish the earth, and subdue it ; and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.' Jehovah formed for man ' a companion, a covenanted wife.' ' Did he not make (two) one flesh ? And is there not one spirit thereto ? And what doth he seek ? A godly seed.' Abp. Newcome's version of Mai. ii. 15. The endearing names of husband and wife are subordinated by revelation to the important duties of parents. It is truly sur- prising to see so accurate a textuary, so good a moralist, and so profound a divine, as Milton unquestionably was, bringing together a pon- derous volume on marriage and divorce, in which this consideration does not occupy the extent of one page.

The parties then, as we contend, who are in the first instance capable of forming a good and binding marriage, are incapable afterwards of dissolving the contract. The will that binds be- comes bound by its own act, and the tie can neither be less strong nor less reasonable on that account. Too common is the notion of measur- ing the obligation of this, the most important of our voluntary engagements, by the same sort of capricious feeling in which it often originates. With regard, indeed, to the particular person we marry, we are and may justifiably be directed by our own inclinations and preference ; but if hence it is assumed, that inclination rather than duty may be a safe future rule, a decent recollection of the ends of marriage will show the fallacy of the conclusion ; while to the Christian, who sin- cerely feels that ' the way of man is not in him- self,' it will appear perfectly monstrous. Various are the contracts that bring us into such new relations to others, that, after having once volun- tarily

engaged in them, no power of withdraw- ment is reserved to us. The formal promises and promissory undertakings of the merchant, most of the actual engagements of the learned professions, the acceptance of political office and military rank, but all marriages pre-eminently, are contracts of this description. They bring us into a new moral state ; we disengage ourselves from one class of duties, and undertake another; and our good or evil conduct supports the good or evil, promotes the prosperity or adv< rsity, of all men of our class. If we would retreat, we cannot replace numerous other interested par- ties, nor can we be ourselves replaced in our respective situations before contracting. Amongst these other interested parties to marriage, the appointment of God and nature places pro- minently— children. Their being is to be con- sidered as a matter of course, and the promo- tion of their moral well-being as a matter of duty, attendant upon every marriage ; — a seed,

*and * a godly seed.' The cases in which this relation may be lawfully entered into, without any view to the obtaining a family, are to be regarded as exceptions to the general purposes of the institution ; they are clearly out of ana- logy with what we have seen to be its chief de- sign.*

We would press particularly on the considera- tion of the moral reader, married or unmarried, the divinely established connexion between mar- riage and education. Men and women are united, when God is duly acknowledged to join them together, for objects worthy their own fu- ture destiny. A new tribe of creatures, wearing the image of our Almighty Maker, is designed to spring from the union — creatures whose duties, and whose happiness, whose temporal, and whose everlasting destiny, will be more materially affected by the conduct of their parents, as such, than by that of any other human beings. These are the parties, for the sake of whom Christianity has banished polygamy, and restrained divorce ; for the sake of whom, even the course of nature seems to dictate the expediency of pairing, and the permanency of the marriage tie, all animals, whose care is necessary for the rearing of their young, having a similar instinct ; and none dis- carding them while their parental care is im- portant : — but what animal has eternal destinies connected with that care, except man ? In an age greatly distinguished for the promotion of education by substitute, we have never seen these considerations sufficiently insisted upon in print. Let us educate by substitute, we say, and let any adequate moral superintendence be intro- duced, when there are no means (from whatever cause) of bringing the parent to watch over and control the machinery of education. But where this can be done, let it be done. It ought to be done. It

is the Divine appointment that it should be done ; and in those classes of society that have so laudably stood forward for the be- nefit of others, it is ever practicable — it should ever be borne in view.

Our poet's ' Doctrine of Divorce,' proportion- ably defective with his definition of marriage, •would place the most important of our voluntary contracts on the weakest of all possible grounds. With him, the peculiar temperament of mind and character which first determines us to marry a particular person may, if afterwards reversed, reverse and annul the bond. ' Indisposition, unfitness, or contrariety of mind !' It would be irreverence to the memory of this great man, to multiply quotations from his mode of reasoning on the subject.

Milton defends his doctrine by contending that the law of Moses on this subject is not, in point of fact, repealed by Jesus Christ ; and that as other reasons of divorce than actual adultery were allowed by the Jewish legislator, the Chris- tian magistrate should yet admit of them. He minutely examines the celebrated text, Deut. xxiv. 1 ; and compares it with the original in- stitution of marriage ; insisting that no covenant whatever obliges against the main end of itself and the parties covenanting, which main end he calls, in marriage, the ' remedy of loneliness' in man. He then objects to the ignorance and in-

iquity, as he terms it, of the ' canon law, pro- viding for the right of the body in marriage, but nothing for the wrongs and grievances of the mind.' He contends, that the ordinary con- struction of Matt. v. 32, as repealing th$ Mosaic law, in reality charges that law with conniving at open and common adultery among the chosen people of God. Nine reasons are given (chap. ii. to xiii.) for the Mosaic precept, thus assumed to be still in force. 1. A meet and proper con- versation is the chiefest end of marriage. 2. Without this law, marriage, as it happens oft, is not a remedy of that [kind] which it promises [to bej. 3. Without it, he who finds nothing but remediless offences and discontents, is in greater temptations than ever before. 4. God regards love and peace in the family more than a compulsive performance. 5. Nothing more hinders and disturbs the whole life of a Chris- tian, than a matrimony found to be incurably unfit. G. To prohibit divorce sought for natural causes is against nature. 7. Sometimes the con- tinuance in marriage may be evidently the short- ening or endangering of life. 8. It is probable, or rather certain, that every one who happens to marry hath not the calling. 9. Marriage is not a mere carnal coition, but a human society. Such are the contents of book I. of the Doctrine and Discipline of Divorce.

He examines, in his second book, the Chris- tian doctrine on the subject. Christ, it is in- sisted, neither ' did nor could' abrogate the law of divorce,

but only reproved the abuse thereof. He afterwards combats the common exposition of divorce being permitted to the Jews, ‘ be- cause of the hardness of their hearts,’ and in- sists, that the law cannot permit, much less enact a permission of, sin ; that to allow sin by law is against the nature of law ; that if divorce be no command, neither is marriage ; and that divorce could be no dispensation, if it were sinful.

He further objects, that if a dispensation of the real law of marriage be supposed, Christians need it as much as the Jews did, and that the gospel is apter to dispense than the law. In defining (chap, viii.) the true sense in which Moses suffered divorce for hardness of heart, he says : —

‘ Moses, Deut. xxiv. 1. established a grave and prudent law, full of moral equity, full of due con- sideration towards nature, that cannot be resisted, a law consenting with the laws of wisest men and civilest nations ; that when a man hath mar- ried a wife, if it come to pass that he cannot love her, by reason of some displeasing natural quality or unfitness in her, let him write her a bill of divorce. The intent of which law undoubtedly was this, that if any good and peaceable man should discover some helpless disagreement or dislike, either of mind or body, whereby he could not cheerfully perform the duty of a hus- band, without the perpetual dissembling of of- fence and disturbance to his spirit ; rather than to live uncomfortably and unhappily, both to himself and to his wife ; rather than to continue undertaking a duty, which he could not possibly discharge, he might dismiss her whom he could not tolerably, and so not conscionably, retain. And this law, the spirit of God by the mouth of

Solomon, Prov. xxx. 21, 23, testifies to be a good and a necessary law, by granting it that ‘ a hated woman’ (for so the Hebrew word signifies rather than ‘ odious,’ though it come all to one) that ‘ a hated woman when she is married, is a thing that the earth cannot bear.’ What follows then, but that the charitable law must remedy what nature cannot undergo?’ pp. 99, 100.

The opening of chap. ix. of this book is, per- haps, t!ie most remarkable part of his whole rea- soning. It shows indeed the difficulty of making the worse appear the better cause, in this in- stance. We recollect no equal display of digni- fied quibbling : —

‘ And to entertain a little their overweening arrogance,’ he is speaking of our Lord’s reply to the Pharisees on this subject, Mark x., ‘ as best befitted, and to amaze them yet further, because they thought it no hard matter to

fulfil the law, ne draws them up to that unseparable institution, which God ordained in the beginning before the fall, when man and woman were both perfect, and could have no cause to separate : just as, in the same chapter, he stands not to contend with the arrogant young man, who boasted his observance of the whole law, whether he had in- deed kept it or not, but screws him up higher to a task of that perfection, which no man is bound to imitate. And in like manner, that pattern of the first institution he set before the opinionative Pharisees, to dazzle them, and not to bind us. For this is a solid rule, that every command, given with a reason, binds our obedience no otherwise than that reason holds. Of this sort was that command in Eden, ' Therefore shall a man cleave to his wife, and they shall be one flesh ;' which we see is no absolute command, but with an inference, ' therefore :' the reason then must first be considered, that our obedience be not misobedience. The first is, for it is not sin- gle, because the wife is to the husband 'flesh of his flesh,' as in the verse going before. But this reason cannot be sufficient of itself; for why then should he for his wife leave his father and mother, with whom he is far more ' flesh of fiesh, and bone of bone,' as being made of their substance ? And besides, it can be but a sorry and ignoble society of life, whose inseparable injunction de- pends merely upon flesh and bones. Therefore we must look higher, since Christ himself recalls us to the beginning ; and we shall find that the primitive reason of never divorcing, was that sacred and not vain promise of God to remedy man's loneliness, by ' making him a meet help for him,' though not now in perfection, as at first, yet still in proportion as things now are. — To make a meet help is the only cause,' he goes on to assert, 'that gives authority to this com- mand of not divorcing to be a command. And it might be further added, that if the true defini- tion of a wife were asked at good earnest, this clause of being 'a meet help' would show itself so necessary and so essential, in that demonstra- tive argument, that it might be logically con- cluded ; therefore she who naturally and per- petually is no ' meet help' can be no wife ; which clearly takes away the difficulty of dismissing such a one.' p. 102 — 104.

According to the same lax mode of interpreta-

tion, 'whom God hath joined together,' only describes a married pair, ' when their minds are fitly disposed and enabled to maintain a cheerful conversation to the solace and love of each other;' p. 127, and the term 'fornication,' in the excep- tive clause of Matt. v. 32, &c., will include ' such things as give open suspicion of adulterisir.g, as the wilful haunting of feasts, and invitations with men not of her near kindred, the lying forth of her house, without probable cause, the frequent- ing of theatres against her husband's mind.' p. 136.

We are not acquainted with the writings of any modern advocate of these

notions who is also a believer in Christianity. The great name of Milton, however, will ever confer a degree of interest on his sentiments generally ; while we with pleasure reflect, how little it weighs, in England, in point of authority on the subject of divorce : — a proof of the predominance of sound moral feeling on that topic in this country. Let us retain our English household virtues, and the springs of virtuous life and life eternal will be still untouched. But modern infidelity, with its characteristic indifference to all our real good, has spun similar theories to those of Milton on the subject of marriage, even in this land of Bibles ; and we cannot forget that the political reign of that abortion of the human mind in France was distinguished for its numerous and most profli- gate divorces. Infidelity has recently reared its head amongst us ; and is ever likely to reason and act in this way. The idea of marriage, and all its engagements, being mere matters of private right and private feeling, rather than of express and irrepealable law between God and man, is perhaps natural to us ; but it is not a Christian sentiment : and because all classes of society are warmly interested in reprobating it, we shall ven- ture a little deeper into the topics of marriage and divorce.

We are advocates for adverting at once to re- velation, upon every subject on which it pro- fessedly treats ; and few are the moral duties that are more copiously, or more definitely, ex- hibited in Scripture, than those of the marriage state. Few are the needful remedies for worse evil, that, in our judgment, are more clearly prescribed in Scripture, than the unhappy one of divorce. The divine Saviour, in referring to the original institution of marriage, calls his heavenly Father, as Chrysostom long ago re- marked, ‘ the Maker of all holy matches.’ He professes to republish the primitive law of the institution ; he defines it as embracing only two persons, ‘ They twain shall be one flesh ;’ he restores the woman to her station of equality, as to the nature and duration of the tie ; while he shows that it binds equally both parties from all others, and through the whole of life. The apostolical epistles dwell upon its purposes, honors, and duties. The earliest and most dis- tinguished of the Christian teachers had ‘ com- mandments’from ‘the Lord’ on the topic (1 Cor. vii. 10, 11), which he distinguishes from his own warmest recommendations. He endeav- ours to illustrate the most profound Christian doctrines by a figurative use of the institution and its duties ; which he presses, in detail, as

amongst the most important parts of Christian practice.

As a system of morals Christianity must be held to be decidedly friendly to

marriage. It attributes expressly all the most abominable vices of the heathen world to ‘ forsaking ‘ its whole- some provisions, while, externally, it exhibits some of its most beneficial influences in society, in the changes it has produced in the condition of women, wherever it has spread. Unhallowed affections fly before it. They are not merely re- presented as impolitic, inconvenient, and ruin- ous, in their temporal consequences, which they are ; but plainly declared to exclude men from the kingdom of God, 1 Cor. vi. 9, Gal. v. 19, lieb. xiii. 4. Other systems of religion trans- fer the impurities of human passion and lust to another world — Christianity brings down hea- venly purity into all our earthly affections and passions. It interposes a positive command in all ordinary situations of society : ‘ Let every man have his own wife, let every woman have her own husband.’ ‘ I will that the younger women marry, bear children, guide the house, give none occasion to the adversary to speak reproach- fully.’

The few texts in St. Paul’s writings, which, when isolated from their connexion, have been supposed to express a general preference for ce- libacy, far from inculcating any such sentiment, will be seen, when duly compared with their con- text, to establish the very opposite doctrine. They state, in effect, that when marriage may be to the highest degree imprudent, from circum- stantial considerations, it is not in all cases sinful ; in some cases it may be advisable, and in others even a duty, 1 Cor. vii. 9. In circumstances of avayKti,1 distress,’ tribulation, (compare Luke xxi. 23,) such in some instances, as had not been equalled in the history of the world, and never shall be exceeded ; when all the powers of the state were arrayed in open hostility against the Christian cause ; when a false philosophy insti- gated,and its most able, and most amiable disciples, as the younger Pliny and others, watched iuqui- sitorially over the execution of a deliberate at- tempt to extirpate Christianity from the earth ; and when its advocates and professors (for all the professors of primitive Christianity were its open advocates in some intelligible way) not only were compelled to meet in cells and ‘ caves of the earth’ in that character, but had no certain dwel- ling-place as individuals; then, indeed, wrote the apostle, ‘ I suppose — it is good, for the pre- sent distress, for a [single] man so to be.’ But even then he adds, ‘ Art thou bound to a wife ? seek not to be loosed.’ Fear not, despair not. ‘ If thou marry, thou hast not sinned; and if a virgin marry, she hath not sinned.’ Let this doctrine be contrasted with the too common spe- culation of parents for the splendid misery of their children, in either persuading or compel- ling them into matches for the mere love of mo- ney ; let it be compared with the undue severity •with which what are called imprudent marriages, of •wmcii we are not the advocates, are ordina- rily visited by parents, amongst whom adultery i.s a fashionable gaiety, especially if committed

with ‘ the lower orders,’ and fornication a mere peccadillo ; let it even be

taken as a test of the antichristian application and effect of that part of yur marriage law which respects the royal fa- mily ; and the recent unhappy agitation of these' topics may yield some ultimate good.

The clear and definite limitations of divorce in the Christian Scriptures occur but infre- quently, for the best of all reasons — sincere and discreet Christians can very rarely be interested in them. It is a moral question, upon which no man need seek to be experimentally informed ; and the Gospel would teach ,us to be ' simple con- cerning that which is evil.' But our great Master more than once delivers a formal judgment on the topic: and the apostle Paul enlarges and confirms the spirit of the Saviour's rule.

The great duties of marriage, common to both parties, are fidelity, the cultivation of love and peace, the joint pursuit of God's glory in the order of the family, and the education of children. All the individual duties of a husband are com- prehended, by inspired wisdom, under one great admonition, ' Husbands, love your wives ;' on the proofs of which, however, the New Testa- ment is not silent : while those of a wife are contained in another, 'Let the wife see that she reverence her husband.' These duties supply the best view of the nature of the tie. In point of fact, they can never be fully exercised by one party, without the concurrence of the other. So far, then, there is an essential reciprocity in them : they impart rights to each ; from both they command corresponding duties. Chris- tianity knows nothing of human rights that are not thus connected with duty. Without mean- ing to afford to either a justification for indi- vidual negligence on this ground — or to give at once, even to the innocent party, all the power and right of punishing the guilty — clear it is, that revelation regards marriage as a mutual in- terchange of rights and privileges. Does it grant a husband peculiar, and almost absolute authority ? It demands of him a peculiar and equivalent protection of the gentler sex. Does it give him the ruling arm? It also describes him as the moral head of his family, particularly of his wife (Eph. v. 23) ; and requires from him spiritual and moral wisdom, spiritual and moral conduct, accordingly. On the other hand, has Christianity conferred on woman privileges un- known to her in the ancient world, and even amongst God's chosen people ? • She is ex- horted also to an intelligent submission and obedience, and to exhibit an unreserved devo- tion to the wants and comforts of man, never before required, an/1 fully equal to the protection she claims. They are formed to develope each other's excellencies — to bear with, and to win away each other's faults : ' The man is not with- out the woman,' not himself — uot the man that God made, ere he would rest from liis works — says this unimpeachable authority ; ' nor the woman without the man, in the Lord.' Only such views of the institution can give us a correct idea of its rupture.

The same divine system clearly regards mar- riage as a constant

interchange of duties. It

*knows nothing of the modern fashion of separa- tion ; it allows no sanction, as we think, to the modern laws of partial divorce. The considera- tion of these subjects will necessarily lead to the 'only legitimate cause of divorce the Scriptures acknowledge. Separation by mutual consent, as it is called, is nothing less (and how, in point of bad faith, could it be more!) than two account- able human beings undertaking privately to con- tradict and renounce what they had sworn pub- licly, in the name of God, to do and perform. Apart from its being wholly opposed to the general obligation of lawful vows, it holds up a man and woman to the world, it sends them into the world, as neither married nor unmarried — both and neither. ' Joined together' of God, or in obedience to a law under which he has placed them, and separated by the inconveniences of keeping it! The express determination of Scrip- ture anticipates the awful moral evils to which such a monstrous system leads. ' I wish not my- self any other advocate, nor you any other adver- sary,'says the devout bishop Hall, to a friend who inclined to a separation, ' than St. Paul who never gave, I speak boldly, a direct precept, if not in this.' Should the remaining part of our quotation grate a little ungraciously on a delicate ear, let the substantial interests of re ligion and virtue, and the possible prevention of such mischiefs in other ranks, as have lately stared upon us from a throne, be our apology. His express charge whereupon I insisted is, ' defraud not one another ; except with consent, for a time, that you may give yourselves to fast- ing and prayer: and then come again together, that Satan tempt you not for your incontinency.' Every word, if you weigh it well, opposes your part, and pleads for mine. By consent of all divines, ancient and modern, * defrauding' is refraining from matrimonial conversation. See what a word the Spirit of God hath chosen for this abstinence — never taken but in ill part ! But there is no fraud in consent,' as Chrysos- tom, , Athanasius, Theophylact, expound it :' true. Therefore St. Paul adds, ' unless with consent ;' that I may omit to say, that in saying, ' unless with consent,' he implies, both that there may be a defrauding without it, and with a con- sent a defrauding, but not unlawful. But see what he adds — * for a time.' Consent cannot make this defrauding lawful, except it be temporary: no» defrauding without consent; no consent for a perpetuity. ' How long then, and wherefore ? Not for every cause; not for any length of time : but only for a while, and for devotion, ut vacetis, &c. Mark how the apostle adds, ' that you may give yourselves to fasting and prayer.' It is a solemn exercise which the apostle here intends, such ab is joined with fasting and external humi- liation; wherein all earthly comforts must be forborne. ' But what if*

*a man list to task him- *elf continually ?' No : ' Let them meet together again, saith the apostle; not as a toleration, but a charge. ' But what if they can both live safely thus severed ? This is more than they can under- take : there is danger, saith our apostle, in this abstinence, ' lest Satan tempt you for your in- continence.' What can be more plain ? Bi$hop*

Hall's Epistles, decad, 7. ep. 9. ; Works, vol. vii. p. 249.

The application of these remarks to our presen legal practice with regard to divorce is plai nlj this. The apostolic rule will include a prohi- bition of the divorce a thoro et mensu, except in cases of adultery. It sanctions no partial divorces. There is but one scriptural cause for any divorce, and then it is to be a complete one. By our ecclesiastical law (Can. 107) it is enjoined, ' that in all sentences pronounced only for divorce and separation a. thoro et mer.sa, there shall be a caution and restraint inserted in the act of the said sentences, that the parties so separated shall live chastely and continently ; neither shall they, during each other's life, con- tract matrimony with another person. And, for the better observation of this last clause, the said sentences of divorce shall not be pronounced, until the party or parties requiring the same have given good and sufficient caution and secu- rity into the court, that they will not any way break or transgress the said restraint or prohibi- tion. We are not acquainted with the kind of caution or security which is found to satisfy the learned judges of this court in such cases, but St. Paul would not have taken any. He esti- mated human nature, it would seem, according to a different rule ; and would not believe that even devout Christians could offer such security. He would prevent the crime of adultery, by removing the temptations to it. His language is not, Meet again when ye are — but lest ye be tempted.

Permanent separation of every kind is advow- try, our old English word for adultery. It is contrary to vow. ' God will contempne ad- voulerers and whorekeepers,' says an old version of Heb. xiii. 4, now before us. So again Wic- liffe's translation of Matt. xv. 19, is, ' Of the herte gon out yvcl thoughtis, mansleyngis, avou- tries, &c. And of Mark x. 11. ' Whoevere Icevith his wife, and weddith another, he doth avoutrie.' We vow, in marriage, ' Forsaking all other to keep to the object of our choice, ' so long as we both do live.' To take another is a final and irrevocable breach of this vow; but not to keep to the espoused object is also R breach of it: it proves and encourages alienated affection ; it is the harbinger of all that is evil in the violation of this tie. Look at its conse- quences again in this way; the Jewish law of divorce, upon which the Christian system was introduced as an improvement, when it sent the wife away, provided for her freedom. ' When she is departed out of the house' of her hus- band, ' she may go,' said Moses, ' and become another man's wife.' It particularly provided, that the repudiating husband was never after- wards to reclaim her; Deut.

xxiv. 4. This was a moral and merciful system, compared with which all articles of separation are both impure and cruel. They ‘ send away’ a wife, but they keep her bound; they expose her to second attachments, which she cannot lawfully enter- tain ; they suspend over her a husband’s power, while they deprive her of his protection and his smile.

In ihe spirit of these remarks, we apprehend, the Christian legislator pronounced the repudi- ation of a husband or wife unlawful, except for a previous violation of the marriage vow. No basis of Christian morals can be more firm or orthodox than the sermon on the Mount ; and here stands conspicuously the simple and une- quivocal rule, ‘ Whosoever shall put away his wife, saving for the cause of fornication, Tropvua, I except for whoredom, Campbell] causeth her to commit adultery; and whosoever shall marry her that is divorced, committeth adultery.’ The same doctrine was inculcated in reply to the question of the Pharisees on this point, ‘ Is it lawful for a man to put away his wife ? He answered and said, What did Moses command you ? And they said, Moses suffered to write a bill of divorcement, and put her away. And Jesus answered and said unto them, For the hardness of your heart he wrote you this precept : but from the beginning of the creation God made them [a] male and [a] female.’ — ‘And in the house his disciples asked him again of the same matter, and he saith unto them, Whosoever shall put away his wife, and marry another, commit- teth adultery against her. And if a woman shall put away her husband, and be married to another, she committeth adultery.’ The exceptive clause is not here added ; but it is clear, on a comparison with the passage in St. Matthew, that it may be safely understood.

2. May not the Christian moralist ask, why should we have one kind of law upon this sub- ject for the rich, and another, or rather no law at all, in the vast majority of cases, for other classes ? for a real divorce is unattainable by our law in its ordinary course. It must be an ex post facto law, made for each specific case, and by application in the first instance, at an enormous cost, to the highest court of appeal in the country : at once, in all instances of its occur- rence, attesting the imperfect and crude state in which the subject is left in the statute-book, and precluding, by the expensive manner of proceed- ing necessary, the greater portion of the people from availing themselves of it. Is this a com- pliment that our legislators pay the middle and lower classes, supposing the crime, so conspicu- ous among themselves, never to desolate these walks of life ! We are quite sure that the affec- tions and fire-side feelings of these classes deserve as much protection as those of the higher orders. Let the same

courts and course of law, we suggest, which are now appealed to in all cases to prove the fact of adultery, pro- nounce in all cases, where it is sought for, the Scriptural remedy of divorce to poor or rich, forthwith ; and without additional expense.

We believe, in conclusion, that Dr. Paley is mistaken when he says, ‘ the law of this country, in conformity to our Saviour’s injunction, con- fines the dissolution of the marriage contract to the single case of adultery in the wife,’ for all the remedies for this evil, such as they are, re- gard adultery in husband or wife, as equally a ground of divorce ; but we fully and heartily join in his enquiry, ‘ Whether a law might not be framed, directing ‘the fortune of the adulte- ress to descend as in case of her natural death :

reserving a certain proportion of the produce of it, by way of annuity, for her subsistence (such annuity in no case to exceed a certain sum), and also so far suspending the estate in the hands of the heir, as to preserve the inheritance to any children she might bear to a second marriage, in case there was none to ‘succeed in the place of their mother by the first, and whether such a law would not render female virtue in higher life less vincible, as well as the seducers of that virtue less urgent in their suit ? I would recommend this,’ continues he, ‘ to the deliber- ation of those who are willing to attempt the reformation of this important but most incor- rigible class of the community. A passion for splendor, for expensive amusements and distinc- tions, is commonly found in that description of women who would become the subjects of such a law, not less inordinate than their other appe- tites. A severity of the kind proposed applies immediately to that passion. And there is no room for any complaint of injustice, since the provisions above stated, with others which might be contrived, confine the punishment, so far as it is possible, to the person of the offender ; suf- fering the estate to remain to the heir, or within the family of the ancestor from whom it came, or to attend the appointments of his will.’

DIURETIC, adj. Atspi/rucoc. Having the power to provoke urine.

Diureticks are decoctions, emulsions, and oils of emollient vegetables, that relax the urinary passages : such as relax ought to be tried before such as force and stimulate. Those emollients ought to be taken in open air, to hinder them from perspiring, and on empty stomachs. Arbuthnot.

Graceful as John, she moderates the reins, And whistles sweet her diwetick strains. Young.

DIURETIC, DIURETICUS, Aiovpjjnicoc; from

vpnffig, a discharge of urine. That which, when taken internally, augments the flow of urine from the kidneys. It is obvious that such an effect will be produced by any substance capable of stimulating the secreting vessels of the kidneys. All the saline diuretics seem to act in this man- ner. ‘ They are received into the circulation; and, passing off with the urine, stimulate the vessels, and increase the quantity secreted. Murray, in his Elements of Materia Medica, classes the super-tartrate of potassa, or cream of tartar, and nitrate of potassa, or nitre, the muriate of am- monia, or crude sal-ammoniac, potassa, and the acetate of potassa, or kali acetatum, among the saline diuretics ; and selects the following from the vegetable kingdom : — scilla maritima, digita- lis purpurea, nicotiana tabacum, solanum dul-camara, lactuca virosa, colchicum autumnale, gratiola officinalis, spartium scoparium, juniperus communis, copaifera officinalis, pinus balsamea, and pinus larix ; and the lytta vesicatoria from the animal kingdom. The principal articles in- cluded by Dr. Cullen, in his catalogue of diure- tics, are dulcamara, digitalis, scilla ; some of the alliaceee and siliquosae ; the balsams and resins ; cantharides, and the diuretic salts.

DIUR’NAL, w,s. & arf;.-) Lat. diurnalis ;

DIUR’NALLY, adv. >from dies, a day.

DIURME’, adj. > See DAY. A jour

DIV

nal, or record of daily transactions : relating to or constituting the day ; daily.

Performed hath the sonne his arke diurne, No longer may the body of him sojourne On the orisont, as in that latitude.

Chaucer. Cant. Tales.

We observe in a day, which is a short year, the greatest heat about two in the afternoon, when the sun is past the meridian, which is the diurnal solstice, and the same is evident from the thermometer.

Browne’s Vulgar Errours. The prime orb,

Incredible how swift, had thither rowled Diurnal. Milton.

The diurnal and annual revolution of the sun have been, from the beginning of nature, constant, regular, and universally observable by all mankind.

Locke.

Why does he order the diurnal hours To leave earth's other part, and rise in ours ?

Prior.

In my former I represented that the diurnal rota- tions of the planets could not be derived from gravity, but required a divine arm fo impress them.

Sir Isaac Newton. Letters to Bentley. As we make the enquiries, we shall diurnally com- municate them to the publick. Taller.

You with soft breath attune the vernal gale, When breezy evening broods the listening vale ; Or wake the loud tumultuous sounds, that dwell In echo's many-toned diurnal shell. Darwin.

DIUTU'RNITY, n. s. Latin, diuturnitat. Length of duration.

Such a coming, as it might be said thai that gene- ration should not pass till it was fulfilled, they needed not suppose of such diuturnity.

Browne's Vulgar Err ours.

DIVULGE', v. a.) Fr. divulgner ; Span.

DIVULGE'R, n. s.)and Port, dimilgar ; Lat. and Ital. divulgare ; dis and vulgo, to spread a report, from vulgus; Gr TroXXoc, the common people. To publish ; make universally known ; proclaim.

Men are better contented to have their commen- dations suppressed, than the contrary much divulged.

Hooker.

I will pluck the veil of modesty from the so seem- ing mistress Page, and divulge Page himself for a secure and wilful Acteon.

Shakspeare. Merry Wives of Windsor.

I think not any thing in my letters could tend so much to my reproach, as the odious divulging of them did to the infamy of the divulgers. K. Charles. This is true glory and renown, when God,

Looking on the earth, with approbation marks

The just man, and divulges him through heaven

To all his angels, who with true applause

Recount his praises. Milton's Paradise Lost.

These answers, in the silent night received,

The king himself divulged, the land believed.

Dryden's JEneid.

The cabinets of the sick, and the closets of the dead, have been ransacked to publish private letters, and divulge to all mankind the most secret sentiments of friendship. Pope.

DIVU'LSION, n. s. Lat. divulsio. The act of plucking away.

Aristotle, in his Ethics, takes up the conceit of the beaver, and the divulsion of his testicles.

Browne's Vulgar Errours.

DIXAN, a large town of Tigre", Abyssinia, on the side of Taranta, under the government of the Baharnegash. It is built on the top of a conical hill : a deep valley surrounds it like a trench, and the road winds spirally up the hill. The houses are flat-roofed and without chimneys. Dixan is the seat of a considerable trade in slaves. The other commodities most common here are tobacco, black pepper, white cloths, looking glasses, snuff, spirits, and large beads. It was formerly a fief under Axum. The priests are very active in the disgraceful traffic in slaves.

DIXCOVE, a British African fort, in the country of Ahantah, on the Gold Coast. It stands at the entrance of a small cove, which will admit vessels of thirty or forty tons at high water. The channel is narrow but safe, and the situation strong. It is forty miles south-west of Cape Coast Castle.

DIXMUYDEN, a town of West Flanders, in the kingdom of the Netherlands, situated in the tract called the Freye Lande, on the river Yperlee. The trade has of late declined ; but there is still a great yearly horse-fair in the month of June, and the place is noted for its butter and cheese. The sea came at one time up to the walls, forming a small harbour. Here are salt refineries, soap works, and breweries. The great church is a fine building. Eleven miles south of Ostend, and twenty-four east of

Dunkirk.

DI'ZEN, v. a. (Corrupted from dight.) To dress; to deck; to rig out. A low word.

Your ladyship lifts up the sash to be seen j For sure I bad dizened you out like a queen.

Swift.

DIZIER (St.), a town of France, in the de- partment of Upper Marne, and ci-devant pro- vince of Champagne, seated on the Marne, at the place where it becomes navigable by boats, seventeen miles south-east of Vitri le Francois, and 157 east of Paris. The road between these two towns, being levelled and planted with trees, is one of the finest walks in France. St. Dizier is famous for boat-building, and contains 5900 inhabitants. It was formerly a strong fortress, being remarkable for a siege which it sustained in 1544, for six weeks against the emperor Charles V. A sharp action took place here be- tween the French and allies on the 27th of January 1814, and again on the 26th of March of the same year.

DIZUK, a district of the province of Mekran, Persia, forming part of the country of Baloo- chistan. Within its precincts are seven or eight villages, designated by the general term Dizuk, though each has also a distinct name. It is go- verned by a chief, who receives a tenth of the produce, in wheat and dates. His revenues are computed at 60,000 or 70,000 rupees, or from £8000 to £9000 yearly.

Dl'ZZY, v.a.&tadj.y Sax. deusigh ; Belg

DIZ'ZINESS, n. s. fduysigh. See DAZE.

DIZ'ZARD, n. s. j Giddy ; vertiginous;

having a swimming or whirling sensation in the

head ; thoughtless ; the verb being derived from

the adjective. Dizzard, says Johnson, is a

blockhead ; a fool.

b/i

DO

II ow fearful And dizxy 'tis to cast one's eyes so low !

Shakspeare. King Lear. Not the dreadful spout, Which shipmen do the hurricane call, Shall dizzy with more clamour Neptune's car la his descent, than shall my prompted sword Falling on Diomede. Id. Troilus and Cressida.

All on a sudden miserable pain Surprised thee, dim thine eyes and dizzy swam In darkness. Milton's Paradise Lost.

Fixed seriousness heats the brain in some to dis- traction, and causeth an aching and dizziness in sounder heads. Glanville.

You who have stood all storms and never sunk, And climbed up to the pinnacle of power, And never fainted by the way, and stand Upon it, and can look down steadily Along the depth beneath, and ne'er feel dizzy.

Byron.

DLUGOSS (John Longinus), a Polish divine, was born in 1415. Having received his educa- tion at Cracow, he was taken into the service of the bishop, who gave him some considerable preferments, and appointed him one of his ex- ecutors. In 14.50 Dlugoss went to Palestine, and became on his return tutor to the sons of Casimir IV. He was at one time disgraced, but recalled at the end of three years, and em- ployed on many state affairs. At length he be- came archbishop of Leopold, but died in 1480, before consecration. His principal work is Historia Polonica, 1615, folio; and 1712. His other writings are 1. Vita St. Stanislai, 1611. 2. Polocensium Episcoporum Vitse, fol. 3. Vitoe Episcoporum Postpasiensium, 4to.

DMITROU, a town and circle of European Russia, in the government of Moscow, on the river Jachroma. The environs are celebrated for yellow and white apples, as also for a beautiful palace of the counts of Soltikof, to which the French set fire in 1812. Here are manufactories of cloth, leather, porcelain, and a yearly fair for horses on the 5th of September, which lasts a fortnight. It is thirty-two miles north of Moscow. DNIEPER, DNEPER, or NIEPER, the ancient Boristhenes, a large river of Europe, rising in the government of Smolensko, running a long course in a south direction, and falling into the Black Sea, between Cherson and Ockzakov. From its source to its mouth, it flows entirely through the Russian dominions, a course of above 800 miles, and its navigation is only once inter- rupted by a series of cataracts which begin below the mouth of the Samara, and continue for about forty miles. They are not so dangerous but they may be passed in spring by loaded barks. At other seasons, the goods are landed at Kemensk, and transported by land to Kitchkase, six miles from Alexandrowsk, where they are again em- barked and descend the river to Cherson. These

cataracts might be rendered navigable at all seasons; and, although the expense would be considerable, the navigation would soon repay it. In 1784 the empress Catherine II. caused some of the rocks which occasioned these water- falls to be blown up, but without any material benefit to the navigation. Above its mouth the river widens into a kind of lake or marsh, called

Liman. The lower part of its course has been the scene of many conflicts between the Turks and Russians, and the upper part, in the neigh- bourhood of Smolensko, was the scene of some severe conflicts in Buonaparte's retreat in Novem- ber 1812. Its principal tributary streams are the Berezyna, the Priepitz, the Rose and the Bog. The water, though often unfit for domestic use, abounds in fish, particularly shad, sturgeon, pike, and carp. The chief towns which it passes are Smolensko, Orcha, Mohilev, Bobryovv, Kiev, Crementchong, Ekaterinoslav, Nicopol, and Cher- son.

DNIESTER, or NIESTER, the ancient Tyras, a fine river of Europe, which rises in Austrian Galicia, and running south-east visits Choczim, dividing Podolia from Moldavia : it then sepa- rates the Turkish province of Bessarabia, from the Russian government of Catherinenslaf, and after watering Egerlik, Bender, &c., falls into the Black Sea, between the mouths of the Dnieper and the Danube. At its mouth it forms a large bay, and though somewhat dangerous to navigate, on account of rocks, the improvements lately made in it by the Russian government have in- duced the Poles to send a considerable portion of the produce of their soil through its medium, to the port of Odessa.

DO, v. a. & v. n. ") Sax. son; Teut. thuen;

DO'ER, n. s. SGoth. doga, from Goth.

DO'ING. J taujan ; Gr. rivˆu, to

build. Coming into our language in modern times from the same root as to, Mr. Tooke (Diversions of Purley) contends that it is the same word ; and that, as we still put to before the infinitive, do used formerly to mark other parts of a verb not distinguished by their termi- nations. See To. We still, indeed, often say, when we wish to speak emphatically or formally, I do love ; I did go, &c. Its present office, as an auxiliary verb, is, however, as Mr. Tyrwhitt observes, not very easy to define. But if a dis- tinguishing termination is used with a verb, it is always omitted. It has a peculiar expletive use : thus it will perform the office of a substitute for other verbs, expressed or understood, as, I shall go, but if I Do not, will you? and beside giving emphasis on other occasions, as we have noticed, it adds vehemence

to a command or entreaty, as, Do come, do; and strength to a question or negative, as, Do you love him? I do not believe him. As an active verb it signifies to practise; perform; execute with any degree of success ; as also to finish and complete : Spen- ser uses it for to cause to be done. As a neuter verb it signifies to behave in any manner; to fare in regard to health ; to succeed ; to cease. The meaning of the nouns obviously follows.

Therfore whanne thou do'ist almes, nyle thou trumpe bifore thee as ypocrites don in synagogis a stretis, that thei be worschippid of men.

Wiclif. Matt. vi.

To him not without desert was ghouun power t write the doyngi of apostlis in her mynystene.*

Wiclif. Prologe to Dedu.

Unto this day they do after the former manner they fear not the Lord, neither do they after he and commandment which the Lord "" children of Jacob. o B 2

and

DO

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DO

What will ye do in the end thereof ? Jer. v, 31. Do thy diligence to come shortly unto me.

2 Tim. iv. 9.

We do you to wit of the grace of God bestowed on the churches of Macedonia. Bible. 2 Cor. viii. 1.

He for despit, and for his tyrannic, To don the ded bodies a vilanie, Of alle our lordes, which that ben yslavee, Hath alle the bodies on an hepe ydrawe.

Chaucer. Cant. Tales. My lute, adieu ! perform the last Labour that thou and I shall waste, And end that I have now begun ; For when this song is sung and past,

My lute, be still, for I have done. Wyatt. For steward was excessive Gluttony, That of his plenty poured forth to all : Which doen, the

chamberlain Slowth did to rest them

call. Spenser. Faerie Queene.

A fatal plague which many did to dye. Spenser. In this we shew ourselves weak, and unapt to be doers of his will, in that we take upon us to be controllers of his wisdom. Hooker.

Dangerous it were for the feeble brains of man to •wade far into the doings of the most High. Id.

They are great speakers but small doers ; greater in show than in deed. Knolles's History.

Thou canst not say I did it. Shaltspeare.

Off with the crown, and with the crown his head : And whilst we breathe take him to do him dead. Id.

May one, that is a herald and a prince, Do a fair message to his kingly ears ?

Id. Trailus and Cressida. If there be any good thing to be done, That may to thee do ease, and grace to me, Speak to me. Id. Hamlet.

The lord Aubrey Vere

Was done to death. Id. Henry VI.

Good woman, how dost thou ?

The better that it pleases your good worship

to ask. Shakspeare.

Perdition catch my soul

But I do love thee ; and when I love thee not, Chaos is come again. Id. Othello.

Fear not, my lord, we will not stand to prate ; Talkers are no good doers : he assured, We go to use our hands and not our tongues.

Shakspeare.

I have but killed a fly. —

— But how if that fly had a father and mother ?

How would he hang his slender gilded wings,

And buz lamented doings in the air ! Id.

No man, who hath to do with the king, will think himself safe, unless you be his good angel and guide him. Bacon.

The jury prayed of the senate a guard, that they might do their consciences. . Id.

The Turks do acknowledge God the Father creator of heaven and earth, being the first Person in the Trinity, though they deny the rest. ”

Bacon’s Holy War.

Too much thinking doth consume the spirits ; and oft it falls out, that while one thinks too much of doing, he leaves to do the effect of his thinking.

Sir P. Sidney.

Hitherto appertaineth the saying of St. John, tow that the children of God cannot sin ; speaking not of the present time only, but finally and perpetually, no less attributing to God’s seed, which he saith doth

abide in them that are born of God, than to the seed of the devil in our corrupt nature and flesh.

Manuscript Note of Bradford the Martyr. To will implies delay, therefore now do. Donne. The same act varies in the manner of doing and ia the intention of the doer. Bp. Hall. Contemplations.

No sooner he does peep into The world, but he has done his doe. Hudibra. Go to the reading of some part of the New Testa- ment, not carelessly, or in haste, as if you had a mind to have done ; but attentively, as to be able to give some account of what you have read.*

Duppa.

But God like his unwearied bounty flows ; First loves to do, then loves the good he does.

Denham. Cooper’s Hill.

At length a reverend sire among them came, And of their doings great dislike declared, And testified against their ways. Milton.

Thus painters Cupids paint, thus poets do A naked god, blind, young, with arrows two.

Sidney.

Doing good is the only certainly happy action of a man's life. Id.

I have been deterred by an indisposition from having much to do with steams of so dangerous a nature. Boyle.

Men are many times brought to that extremity, that, if it were not for God, they would not know what to do with themselves, or how to enjoy them« selves for one hour. Tillotson.

When all is done, there is no man can serve his own interest better than by serving God. Id.

No men would make use of disunited parties to destroy one body, unless they were sure to master them when they had done with them. Stiliingjieet.

It may be indeed a public crime, or a national mis- chief ; yet it is but a private act, and the doer of it may chance to pay his head for his presumption.

South.

As every prince should govern as he would desire to be governed, so every subject ought to obey as he would desire to be obeyed, according to the maxim of doing as we would be done by. Temple.

— Loose me. — I will free thee. — Do, and I'll be thy slave.

Dryden's King Arthur. When did his pen on learning fix a brand, Or rail at arts he did not understand ? Dryden.

Gigantick hinds, as soon as work was done, To their huge pots of boiling pulse would run. Id.

Though lending to foreigners, upon use, doth not at all alter the balance of trade between those coun- tries, yet it does alter the exchange between those countries. Locke.

What had I to do with kings and courts ? My humble lot had cast me far beneath them.

Rowe.

Tis true, I did so ; nor was it in vain : She did me right, and satisfied my vengeance. Id. Come, 'tis no matter j we shall do without him.

Addiion.

You may ramble a whole day, and every moment discover something new ; but when you have done, you will have but a confused notion of the place.

Spectator.

They did their work and dined. Prior.

What is the reason a man's arm wont smile and frown, and do all the intellectual postures of the countenance ? Collier

DOA

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DOB

Acts of mercy done to the poor, shall be accepted and rewarded as done to our Saviour himself.

Atterbury.

You do her too much honour : she bath neither sense nor taste, if she dares to refuse you. Surift.

After such miraculous doings, we are not yet in a condition of bringing France to our terms. Id.

Expletives their feeble aid do join. Pope.

Having done with such amusements, we give up what we cannot disown. Id.

Part of the work being already done, more care is naturally bestowed on the other part. Johnson.

O my soul, look back but a few years, and thou •wast nothing ! — And how didst thou spring out of that nothing ? — Thou couldst not make thyself. Mason.

What I have done is done ; I bear within A torture which could nothing gain from thine : The mind which is immortal makes itself R»quiU»l for its good or ill. Byron.*

DO, in music, a note of the Italian scale, cor- responding to ut of the common gamut. See Music.

DOAB; a name which, according to Mr. Hamilton, should include all the territory between the Jumna and the Ganges; but the term is usually restricted to the southern portion of it, comprehended, for the most part, in the province of Agra, and, during the Mogul government, subdivided into the districts of Furruckabad, Kanoge, Etaweh, Korah, Currah, and Allahabad. There are several Doabs in Hindostan, the name meaning any tract of country included between two rivers.

The cultivated part of this country is very fer- tile. Tamarind and mango trees abound every where; the millet is also raised, and, although a small-eared grain, furnishes straw ten feet long, which is of great use as provender. Barley and the sugar-cane are likewise cultivated ; and, in the neighbourhood of Kanoge, considerable quantities of tobacco. Indigo is found in a wild state, and of superior quality. The cattle are generally small. The climate of the Doab is excessively sultry in April and May, before the commencement of the rains; and even in the winter season it is the morning only that is cool. The natives manufacture a coarse cotton cloth, dyed red with cheap materials. Dow let Row Sindia on the 30th December 1803, ceded his part of this country to the British. The southern part of the Doab was ceded, during the administration of the marquis Wellesley, in 1801, by the reign- ing Nabob of Oude, Saadet Ali.

DOABEH BARRY, or BARI RESIDENCE, a district in the province of Lahore, situated be- tween the Beyah and Ravey rivers, and the thirtieth and thirty-first degrees of north latitude. In modern maps this territory is placed in Mool- tan; but, according to Abul Fazel's arrangement, in 1582, says Mr. Hamilton, it belonged to Lahore. This country, named also Manjha, contains the cities of Lahore and Amritseer ; and becomes, in consequence, the great centre of the power of the seiks. It is of the same general climate and soil as

DOABEH JALLINDER, another district in the province of Lahore, included between the

Sutuleje and Beyah rivers, and for the most part between the thirtieth and thirty-first decrees of north latitude. This is the most fruitful of all the possessions of the seiks. The soil is light, but well watered and very productive; and the country, which is open and level, abounds in grain. The principal towns are Jalindra and Sultanpoor. This territory is principally occu- pied by the Malawa Singh Seiks, who are called the Doabeh Singhs, or Singhs who dwell betwixt two rivers.

DO AT, v.n. See DOTE.

DOBSON (William), an eminent English portrait and historical painter, born at London in 1610. He served an apprenticeship with one Peck, a stationer and picture dealer ; and owed his improvement to the copying some pictures of Titian and Van Dyck, whose manner he always retained. A picture of Dobson's being exposed at a shop in Snowhill, Van Dyck passing by was struck with it ; and enquiring after the author, found him at work in a garret. Van Dyck generously equipped him in a manner suitable to his merit ; and presented him to king Charles I. who took him under his protection, kept him with him at Oxford all the time he continued in that city, and not only sat to him several times for his picture, but caused the prince of Wales, prince Rupert, and most of the lords of his court, to do so too. Dobson, however, being extrava- gant, did not improve the many opportunities he had of making his fortune ; and died very poor in 1647, at his house in St. Martin's Lane.

DOBI7NI, or BODUNI, an ancient people of Britain, who possessed the territory which now forms the counties of Oxford and Gloucester. Both the names of this British people seem to have been derived from the low situation of a great part of the country which they inhabited : for both Duvn and Bodun, signify profound, or low, in the ancient language of Gaul and Britain. The Dobuni are not mentioned among the British nations who resisted the Romans under Julius Caesar, which was probably owing to the distance of their country from the scene of action ; and before the next invasion under Claudius, they had been so much oppressed by their ambitious neighbours the Cattivellauni, that they willingly submitted to the Romans. Cogidunus, who was at that time prince of the Dobuni, recommended himself so effectually to the favor of Claudius, by his ready submission, that he was not only con- tinued in the government of his own territories, but had other states put under his authority. This prince remained so steady a friend and ally to the Romans, that. his subjects never revolted, nor stood in need efforts or forces to keep them in subjection. So that we meet with very few Roman towns and stations in the country anci- ently inhabited by the Dobuni. The Durocor- novium of Antoninus, and the Corinium of Ptolemy, are believed by antiquaries to have been the same place, the capital of the Dobuni, aud situated at Cirencester, in Gloucestershire, where there are many marks of a Roman station. Clevum or Glevum, in the thirteenth iter of Antoninus, stood where the city of Gloucester now stands ; and Abone, in the fourteenth iter. WHS probably situated at Avinton on the Severiu

The country of the Dobnni was comprehended in the Roman province, Britannia Prima.

DOCE'Rio, a river of Brasil, which rises near the town of Villa Rica, and after a north course, through a fine country, turns eastward and discharges itself in to the Atlantic, in lat. 19° 30′ S. It has a course of about 500 miles. Until lately the fertile neighbourhood of this river has been totally neglected : otherwise the abun- dance of timber, cotton, and sugar, it is capable of 'yielding, would long since have found their way to European markets. There is another river of this name, which falls into the ocean in lat. 8° 10′ S.

DOCETˆE, from SOKEIV, to appear, in eccle- siastical history, the followers of Julius Cassia- nus, one of the Valentinian sect, towards the close of the second century, who revived a notion that had been adopted by a branch of the Gnos- tics, against whom St. John, Ignatius, and Poly- carp, had asserted the truth of the incarnation. They believed and taught, as their name imports, that the actions and sufferings of Jesus Christ were not in reality, but only in appearance.

DOCIL'ITY, n. s. ˆ Fr. docile ; Span, and

DO'CILE, adj. f Portug. doc'd ; Ital. and

DO'CIBLE, adj. £ Lat. docibile, docile, from

DO'CIBI.ENESS, n.s. Jfaciiis easy, and doceo to teach ; Gr. SoKtu, to judge, pj-j, a Chald. to observe. Teachableness ; aptness to receive in- struction. The adjectives and substantives are respectively, synonymous.

The asinine feast of sow-thistles and brambles is commonly set before them, as all the food and enter- tainment of their tenderest and most docible age.

Milton.

I might enlarge in commendation of the noble hound, as also of the docibleness of dogs in general.

Walton's Angler.

What is more admirable than the fitness of every creature for our use ? the docility of an elephant, and the insitiency of a camel for travelling in deserts ?

Grew.

All the perfection they allowed his understanding •was aptness and docility, and all that they attributed to his will was a possibility to be virtuous. South.

Soon docile to the secret acts of ill,

With smiles I could betray, with temper kill.

Prior.

Dogs soon grow accustomed to whatever they are taught, and, being docile and tractable, are very useful.

Ellis's Voyage.

DOCIMASIA, in Greek antiquity, a proba- tion of the magistrates and persons employed in public business at Athens. It was performed publicly in the forum, where they were obliged to give account of themselves and their past lives before certain judges. Among several questions proposed to them, we find the followiBg: whether they had been dutiful to their parents, had served in the wars, and had a competent estate ?

DOCIMASTIC ART, a name given to the art of assaying by operations in small, the nature and quantity of metallic or other matters which may be obtained from mineral or other com- pound bodies. See METALLURGY and REFINING.

DOCIMENUM MARMOR, a name given by the ancients to a species of marble of a bright and clear white, much used in large and sump-

tuous buildings. It had its name from Docime- nos, a city of Phrygia, near which it was dug, and whence it was sent to Rome. It was ac- counted little inferior to the Parian in color, but not capable of so elegant a polish; whence it was less used by the statuaries, or in the smaller works. Adrian used this marble in- building the temple of Jupiter ; and many other of the great Roman buildings are formed of it.

DOCK, n. s. Sax. "socca. A plant; a weed. Nothing teems

But hateful docks, rough thistles, kecksies, burs,

Losing both beauty and utility.

Shakspeare. Henry V. My love for gentle Dermot faster grows

Than yon tall dock that rises to thy nose :

Cut down the dock, 'twill sprout again ; but know,

Love rooted out again will never grow. Swift.

The species are seventeen, ten of which grow wild, several of them being used in medicine ; and the sort called the oriental burdock, is said to be the trae rhubarb. Miner.

DOCK, in botany. See RUMEX. DOCK, v. a. & n.s.) ¥romYr.ecouer,decouer, DOCK'ET, n. s. i todock,aLat.cauda,a tail. To cut short, or trim : as a substantive, the thing trimmed or cut short : a docket is an abridged writing, a summary of legal proceedings.

The Reve was a sleodre colerike man, His herd was shave as neighe as ever he can, His here was by his eres round yshorne ; His top was docked like a priest beforne.

Chaucer. Prologue to Cant. Tales, The tail of a great rhinoceros is not well described by Bontius. The dock is about half an inch thick, and two inches broad, like an apothecary's spatula.

Grew's Muteum.

One or two stood constant century, who docked al favours banded down ; and spread a huge invisible net between the prince and subject, through which nothing of value could pass. Swift's Examiner.

DOCK, n. s. & v. a. Flem. dok ; Teut. dock ; Swed. docka ; Suid-Goth. docka; perhaps from dekken, to cover, protect, secure ; and all these from Gr. doytiov, a receptacle; vtmSroneos (the ship-house), a dock. An enclosed receptacle for ships : see the article. Also an enclosed place for prisoners in a court of justice. As a verb, to put in dock.

The boatswain and mariner may bring religion to- what doeh they please. Howel.

There are docks for their gallies and men of war, as well as work-houses for all land and naval prepa- rations. Addison.

DOCK, in the manege, is used for a large case of leather, as long as the dock of a horse's tail, which serves it for a cover. The French call the dock troussequeue. It is made fast by straps to the crupper, and has leathern thongs that pass between his thighs, and along his flanks to the saddle straps, in order to keep the tail tight, and to hinder it from whisking about.

DOCKS, for shipping, are enclosed excava- tions or basins formed in rivers

and harbours, for the receiving, building, or repairing of ships. They are constructed of brick, stone, or timber;, with locks or flood-gates, pointed to or from the tide, to keep the water in or out, as the object and nature of the docks require.

DOCK S.

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WET DOCKS are for the reception of ships ro lie afloat while loading or unloading, with gates pointed from the tide, to keep the water in at low water. Locks are attached to them, generally with double gates, for the more easy admission and egress of shipping; and, to aid the operation of opening and shutting these gates, sluices are made within to regulate the water, until the same level' is produced within as without. A wet dock without gates is called, both by the French and ourselves, a basin ; a dry dock is with them une forme, and a slip, un calle. Wet docks are in fact artificial har- bours for the keeping a vessel afloat at all pe- riods of the tide ; and to no other modern im- provement do our great commercial towns owe so much of their general superiority and opu- lence. Liverpool, as it has been often remarked, might still have remained a poor fishing village without them.

Basins, or docks open to the tide, are called DRY DOCKS, because the vessels frequenting them ground at low water, and lie dry on the ebb tide, and float again on the next rise of the tide. They are used at Liverpool as entrances to the wet docks, and are frequented by coasters, and small or light vessels, that do not injure by lying on the shore. Dry as well as wet docks are en- closed with gates which exclude the tide as cir- cumstances may require; and often have the interior water completely pumped out by means of horses and machinery, or the steam engine. Here ships are conveniently built and floated out : though generally there are places set apart for this purpose, called slips. The port of Liverpool, from the badness of its harbour, the rapidity of the river Mersey, and the shifting of its sands, resorted to the construction of docks in 1708. The management of the first undertaking of this kind was invested in the corporation for the term of twenty-one years, which gave for this purpose four acres of land ; and they were empowered to borrow the sum of £6000. In 1717 the term was prolonged for fourteen years, and they were authorised to borrow £4000 more. In 1737 the term was further extended to thirty-one years, and powers given to make an additional dock, to build a pier in the open harbour, and to light the docks. The corporation on this occa- sion gave seven acres of land, and they were empowered to borrow £6000. In 1761 the commerce of Liverpool was so much increased, and its shipping had become so numerous, and so enlarged in size, that further accommodation

was wanting. The term of the corporation's management was again extended for twenty-one years, with powers to make another dock, and to erect a light-house for the benefit of the port ; for these purposes they were authorised to bor- row the sum of £25,000, and to raise the further sum of £2000 on the light-house duties. In 1784 the powers of all the former acts were en- larged, and the term extended to forty-one years, •with liberty to make two additional docks and piers, and to borrow for this purpose £70,000. In 1799 an act was passed to alter and enlarge the powers of former acts, and to render the • locks and the port more commodious and safe ; by which a further extension of term was granted

for thirty years. The corporation a?ain gave some lands, and they were empowered to make two additional docks, and other docks; with li- berty to raise the sum of £120,000, and to dou- ble the former tolls.

Under the authority of these various acts of parliament the several docks have been con- structed, and it has been found that each suc- cessive improvement, by aribrdin-_' additional convenience to foreign trade, has been followed by its increase, and prepared the way for the further extension of this excellent system of ac- commodation. In the course of the last century there were established within this port six wet and three dry docks, and five graving or repair- ing docks, independent of the Duke of Bridge- water's dock, for canal purposes. In the ten years, ending with 1808, the number of ships that entered these docks was 48,497, ton- nage 4,954,204; and the dock duties received £329,566 ; in the following ten years, ending in 1818, the number of ships was 60,200, the tonnage 6,375,560, and the amount of duties £666,433. Hull, Bristol, and Leith, have suc- cessfully emulated this example.

In 1794 a general meeting of merchants was convened, to consider the great inconveniences of the port of London, arising from the crowded state of the river, and the confined extent of the legal quays ; when a committee was appointed to consider of the best mode of relief, who took into consideration all the plans which had been suggested, when they approved of the plan for making wet docks in Wapping with wharfs and warehouses on their borders, as the most effec- tual means of remedying the evils of the port. In consequence of this determination, Mr. Daniel Alexander, an ingenious architect and surveyor, who was conversant with operations connected with the tide, was directed to make a survey, and prepare plans and estimates for forming docks at Wapping, with the addition of a cut or canal leading to them, from that part of Blackwall where the present East India docks are now situated, and a long line where the West India docks have been since constructed. The plan and estimates were laid before a meeting of mer- chants, held 22d December, 1795, and the sum of £800,000 subscribed towards their comple- tion in a few hours. A

committee was appointed to make application to parliament, who presented a petition in January 1796, which was referred to a select committee of the house of commons, who were directed ‘ to enquire into the best mode of providing sufficient accommo- dation for the increased trade and shipping of the port of London.’ The project of the mer- chants experienced great opposition both from the corporation of the city of London and from private interests ; and a great variety of plans and projects were brought forward for the exten- sion of the legal quays above and below the bridge, and the improvement of the river with or without docks. At length, through the great exertions and perseverance of \Villiam Vaughan, esq. assisted by several other highly respectable mercantile characters, the various obstacles to the plan of the London docks were successively overcome, and in August, 1798,

the subscribers gave notice, that in the ensuing session of parliament they meant to renew their application for forming docks at Wapping. In December following they petitioned for leave to bring in a bill for this purpose. A few days after a petition was presented by the corporation of London, with a view to similar objects, by making a navigable canal or passage across the Isle of Dogs from Blackwall to Limehouse, purchasing the mooring-chains in the river, which were mostly private property, and ap- pointing harbour-masters to regulate the navi- gating and mooring of vessels in the port ; they also proposed to make wet-docks in some part of the Isle of Dogs for the reception and dis- charge of West India shipping. The latter part of the plan had, however, been taken tip by a number of West India merchants and planters, who had formed themselves into a company dis- tinct from the subscribers to the London docks, for the purpose of forming docks, for the recep- tion of the West India trade only, either alone, or in conjunction with the other improvements projected by the corporation. The general con- viction of the necessity of some measure of this kind was not sufficient to produce a union of interests in favor of either of the proposed plans. At length the committee of the house of commons made a report, recommending the forma- tion of wet-docks as the only remedy for the evils of the port, and that they should be made both at Wapping and the Isle of Dogs, but that the latter should be adopted first. The corpo- ration and the West India merchants of London forming a junction, the act for making the West India docks passed in July, 1799. In the next session, on the 30th June, 1800, an act was passed for forming the docks at Wapping, which was followed by other acts for making docks at Blackwall for the East India trade.

The first stone of these last docks was laid :n March 1805, and the first ship entered them in August, 1806. The dimensions of the dock for unloading, inwards, are 1410 feet in length, and 560 feet in width, containing about eighteen acres and one-eighth : the dock for loading outwards, which was a part of Mr. Perry's dock, is 780 feet in length, and 520 feet in width, con- taining nine acres and one-fourth. The extent of the entrance basin, which connects them with the river, is two acres and three-fourths ; the length of the entrance lock 210 feet; the width of the gates forty-eight feet in the clear, and the depth of water at ordinary spring- tides twenty-four feet. The great West India dock is 420 yards in length, and 230 yards in width, covering an area of twenty acres. A basin of three acres nearly connects it with the river. The warehouses are most noble buildings : the tobacco warehouse is the most spacious erection of the kind in the world ; being capable of con- taining 25,000 hogsheads of that article, and the vaults underneath as many pipes of wine. This single building, under one roof, is said to occupy upwards of four acres of ground. These docks were opened in February 1805.

The dry docks and slips of his majesty's yards have recently added to their other improve- ments, that greatest of the whole, the actual

covering or looting in of vessels, a plan which seems to have been long since used at Venice, Roofs have been thus constructed at Plymouth of ninety-five feet span, without a single beam, and one at Chatham, under the direction of Mr. Seppings, of 100 feet, and having an entrance width of 150 feet.

The wicket-gate of docks, a contrivance re- sorted to where the abutments are too weak for swinging gates, is represented below. Fig. 1 the plan; fig. 2 the elevation. It consists of three parts, which, when opened, are removed separately, and is the most simple, though by no means the most effective, contrivance for keeping out the water.

Fig. 1.

Fig. 2.

We also give below a diagram of swinging gates, which open in the middle, and lie flat, one part against each wharf or side-wall of the pas- sage, leading into the dock or basin. This kind of gate is made with sound timber, and good iron, of great strength, and the gudgeons on which the hinges turn, must be well secured in the abutments. The bottom of the passage, and of the gates, must be also perfectly plane and parallel, to prevent leakage, and give facility to their opening and shutting. This is usually aided by rollers fixed in a groove, and turned by means of a small capstern

on each pier. At top is often placed a foot bridge with railing.

In docking a ship formerly, if her keel required inspection or repair, it was found necessary to lift up her whole immense weight off the blocks ; but about twenty years ago, Mr. Seppings con- trived a very simple and excellent improvement, by which twenty men will suspend the largest ship in the navy, or, which amounts in practice to the same thing, will disengage any one block that may be required in the space of two or three minutes, without the necessity of suspending her. This improvement may be thus exhibited j

K is the keel ; W the wedge on which the keel rests, having its obtuse angle equal to 170°, and P P are two inclined planes, having each an acute angle of 5°. The wedge is of iron or hard wood, having its two sides lined with iron; the inclined planes are of cast iron. A few smart blows on the two sides of the inclined planes will disengage them, when the middle part or wedge drops.

DOCK-YARDS, in the navy, are magazines of naval stores, and timber for ship-building ; the royal dock-yards in England are those at Chat- ham, Deptford, Pembroke, Plymouth, Ports- mouth, Sheerness, and Woolwich. In time of peace, ships of war are laid up in these docks, in ordinary; those of the first rates mostly at Chat- ham, where, and at other yards, they receive, fiom time to time, such repairs as are necessary.

Chatham dock-yard consists of a line of wall, extending 5500 feet along the right bank of the Medway, being 400 feet in width at the upper, 800 at the lower end, and 1000 feet in the mid- dle. Its superficial area is about ninety acres. In front it has six building-slips of different sizes, and four dry-docks. At the southern ex- tremity is the ropery, hemp, and yarn houses, rigging and general storehouses, 1000 feet in length, by about fifty in breadth ; in front of which, and along the wharf, are the anchor racks, nearly 1000 feet long. Next to these are the slios and docks, with the working sheds and artificers' shops in the rear, an excellent smithery, timber- births, deal and iron yard, seasoning sheds, &c. The commissioner's house and garden are in the centre, and, on the eastern extremity of the yard, the officers' houses and gardens. The lower or north-east part is occupied by mast-ponds, mast-houses and slips, s'ore boat-houses and slins, ballast-wharf, timberbirths, and saw-pits.

The river Medway forms the principal wt-i- dock or basin appertaining to

this yard ; and it is sometimes so shallow, and the navigation so intricate, that vessels are obliged to take in their stores and provisions at various different points a circumstance that often delays them here muck longer than even at Deptford.

The improved saw-mil! of Mr Brunei], erected here, is supposed to be equal to the power of fifty saw-pits, and one hundred sawyers ; and is capable of supplying the dock-yards of Chatham and Sheerness with all their straight-sawn tim- ber. The greatest advantage of the plan is its application of the steam-engine to the manage- ment and arrangement of the timber, by which the labor and expense of a vast number of horses are saved. See SAW-MILL.

In war the dock and rope-yard of Chatham employed together about 2250 men.

Deptford yard has a front or wharf wall facing the Thames, of about 1700 feet in length, the mean breadth of the yard 650 feet, and the su- perficial area about thirty acres. It has three slips for ships of the line, and two for smaller vessels on the face next the river, with a basin, or wet-dock, 260 by 220 feet. Here are also three dry-docks, one of them a double dock, communicating with the Thames. The proxi- mity of Deptford Dock-yard to the capital is a great convenience, and it became, during the last

war the general magazine of stores and necessaries for the fleet, whence they were transmitted as oc- casion required to the other yards, the out-ports, and foreign stations.

The great storehouse is a large quadrangular building surrounding a square, of three stories in height, with cellars underneath, for pitch, tar, rosin,8cc. Its length is about 2 10 feet, but the sidei vary in width from forty-six to twenty-four feet. Parallel to the west front is the rigging-house and sail-loft, 240 feet, and nearly fifty feet wide, in which all the rigging is fitted for ships and stowed away. On the eastern side is the pavi- lion, a long range of buildings, in which the beds, hammocks, and slop-clothing are kept, and in which also are the house-carpenters', the join- ers', and wheelwrights' shops. This range is about 580 feet long by twenty-six feet wide. Other buildings are an excellent blacksmith's shop, plumbers', glaziers', and painters' shops, sea- soning-sheds, store-cabins, saw-pits, mast-house and pond, boat-houses, mould-loft, timber- births, besides houses and gardens, coach-houses and stabling, for the officers. The number of men employed here, in time of war, was about 1500, of whom about one-half were shipwrights. There were, besides, in constant employ, eighteen or twenty teams, of four horses each. Adjoining to the dock-yard is the victualling-yard, the most complete establishment of the kind in the

kingdom. The principal naval stores kept at Deptford are small cordage, canvas and ship sails, hammocks, beds and hair for beds, slops and marine cloth- ing, and anchors under the weight of about seventy-five cwt.

Pembroke dock-yard was a small establish- ment for the building of vessels undertaken at the close of the war. It contains an area of sixty acres, ascending from the southern shore of Milford Haven, about two miles from the town of Pembroke. Here are two dry-docks and twelve building-slips which are built of wood on a limestone foundation. There have never been above 500 hands employed here.

Plymouth dock-yard extends along the shores of Hamoaze, in a circular sweep of 3500 feet, its width about the middle being 1600, and at each extremity 1000 feet. Its superficial area is about ninety-six acres. In the front towards the harbour are two dry-docks for ships of the first rate, a double dock for seventy-four gun ships, communicating with Hamoaze, and an- other dock for ships of the line, opening into the basin, which is 250 feet long by 180 feet wide. There is also a graving dock without gates, and a canal or camber, similar to that in Portsmouth yard, for the admission of vessels bringing stores. This, communicating with the boat-pond, cuts the dock-yard nearly into two parts. Five jetties project from the en- trances of the dry-docks into Hamoaze, along side of which ships are brought to be undocked. These are situated between the centre and the northern extremity of the harbour line. On the south are three building-slips for the largest class of ships, and two for smaller vessels, the smithery, the outer mast-pond and mast-houses, timber- births, and saw-pits. Higher up on this end is an extensive mast-pond and mast-locks, with

plank-houses over them ; and above these three lie in p magazines, close to which is the noble ropery of this establishment, consisting of two ranges of buildings, one the laying-house, the other the spinning-house, each being 1200 feet in Jength, and three stories high. No wood has been used in the construction of the rope-house, excepting the shingles of the roof, to which the slates are fastened. All the rest is of iron; so that the whole building is considered as fire- proof.

The northern part of the yard, besides the docks and basin, working sheds and artificers' shops, contains a quadrangle of elegant stone buildings, the longer sides being about 450 feet, and the shorter 300 feet. Within are also two new ranges of magazines, built principally with iron instead of wood. The upper and northern part of the yard is occupied by a range of

handsome houses, with good gardens, for the commissioner and principal officers of the yard, the chapel, guard-house, pay-office, stabling for the officers and teams, and a fine reservoir of fresh water. Plymouth is an excellent refitting yard, and em- ployed, during the war, upwards of 3000 hands of various descriptions. Here, as at Portsmouth, is an unconnected victualling establishment.

In the time of Edward VI. Portsmouth was the only dock-yard that could be considered as a national one ; indeed it was almost the only naval station in England. All the ships in the public service, amounting to fifty-three in number, lay in this port, with the exception of three, two of which lay at Deptford and one at Woolwich. The crews belonging to these ves- sels, including soldiers, marines, and gunners, did not amount to 8000 men ; yet, from such beginnings has the naval power of England risen to a height unparalleled in history. Edward, sensible of the great consequence of this port to the future glory of his kingdom, augmented its fortifications by the addition of two strong castles. But Portsea has the advantage of having both the dock-yard and gun-wharf within its precincts.

The former is entered from the town by a lofty gateway, after passing which the first ob- jects that attract attention, are the porter's resi- dence, the mast-houses, and a large modern guard-house. A little further on stands the pay- office ; and beyond it is the royal naval academy, which consists of a centre and two wings. This building is furnished with every requisite ac- commodation for naval instruction, and has an excellent observatory on its summit. The com- missioner's house next appears, and to it suc- ceeds an immense range of store-houses, to the right of which is a handsome modern chapel ; thence a visitor is generally conducted through the anchor-wharf, where hundreds of anchors of every size and description are piled up ready for immediate service; then to the rope-house, a spacious pile three stories high, fifty-four feet broad, and 1094 feet long. Here the cables are formed with immense labor; but of late years the operation is much facilitated by the use of machinery. The operations in this division of the yard are particularly ingenious and highly interesting. Leaving it, and passing various store-houses, stables, and other buildings, and

many vast piles of timber for the service of the yard, a sort of square presents itself to the view, and displays in its centre a statue of William III. in a Roman habit. On the east side of this square is a row of handsome houses appropriated for the residence of the chief officers of the yard, and on the north and south sides are various offices, store-houses, &c. Proceeding onwards, the next impressing object that arrests the atten- tion is the vast building called the anchor-forge, and, on entering it, both the eye and ear are con- founded by the terrific noise and scenes, which spread throughout this Vulcanic abode. Many of the anchors which are here

wrought weigh from seventy to ninety tons each.

Approaching nearer the harbour the visitor beholds, in time of war, numerous ships upon the stocks, either building or repairing. The jetty heads, with the basins and docks, are next in order, and, with the shipping in the haven, present a very grand and imposing spectacle, to which the extraordinary capaciousness of the new range of docks greatly contributes. These im- mense works are all peculiarly adapted for their respective purposes, and while the ships are un- der repair are kept completely drj ; but, in their immediate vicinity, the depth of water is suffi- cient to float the largest vessels in the navy. Many other parts of this celebrated arsenal, and particularly the rigging houses, claim the exami- nation of the curious. The number of workmen employed in this dock-yard is very great, but varies considerably. In time of peace seldom fewer than 2000 are kept at constant work in its different departments. Here, as at Plymouth, the workmen receive sixpence a day as a commuta- tion for their former perquisite of chips.

The sea-wall of this yard extends from north to south about 3800 feet, and has a mean depth of about 2000 feet. The area enclosed is about 100 acres. The great basin, into which enter four fine dry-docks, is 380 feet in length by 260, and contains an area of two acres and one-third. Here are two docks, at the ends, opening into the harbour; the whole six being capable of receiv- ing vessels of the largest dimensions. Here is also a camber, with a wharf-wall on each side 660 feet in length, and of sufficient width to admit of transports and merchant-ships bringing stores to the yard. In the same face of the yard are three building-slips capable of receiving the largest ships; a small one for sloops; two building slips for frigates on the northern face of the yard, and a smaller slip for sloops. The range of store- houses on the north-east side, and the rigging- house and sail-loft on the south-west side of the camber, are magnificent buildings. The two hemp-houses and the two sea-store houses occupy a line of building which extends 800 feet. The rope-house, tarring-house, and other appendages of the ropery, are on the same scale. The two sets of quadrangular store-houses, and the two corresponding buildings, with the intervening timber-births and saw-pits, at the head of the dry-docks, issuing from the great basin, are also all excellent. The smithery is on a large scale, and close by is an iron-mill, a copper-mill, and a copper refinery, at which is remelted and rolled all the old copper which is taken from ships'

bottoms : here, also, are cast bolts, gudgeons, and various articles of copper

used in the navy. The number of sheets manufactured in one year of the war amounted to about 300,000, weighing above 12,000 tons.

The WOOD MILLS are at the head of the north dock, at-' which every article of turnery, rabbit- ting, &c., is made for the use of the navy. The principal part of these mills is the machinery for making blocks contrived by Mr. Brunell. See our article BLOCK-MACHINERY.

*Notwithstanding that every precaution that can be devised is taken, to guard against the de- structive element of fire, three great conflagra- tions have occurred in this dock-yard since the year 1760. The first, which appears to have been accidental, broke out in the night of the 3rd of July, 1761, and raged for a long time with dreadful fury. The night had been ex- tremely tempestuous ; and the fire was attributed to the lightning striking upon the hemp store- house, the windows of which had been left open to air it. By this conflagration many hundred tons of tar, 500 tons of cordage, 700 sails, and 1050 tons of hemp, were totally consumed. The second fire occurred on the morning of the 27th of July, 1770, when the damage done was still greater ; and it was even for some time doubtful whether any part of the yard would escape de- struction. From its bursting forth at different places at one time, and various other circum- tances, great suspicions were entertained of its having been occasioned intentionally, but the officers were unable to discover the offenders. The third fire happened on the 7th of December, 1776, and in this instance was undoubtedly the effect of design, as the incendiary was traced, tried, condemned, and executed, upon incontes- table proof, afterwards confirmed by his own con- fession. The real name of this malefactor was John Aitken ; but the appellation by which he is commonly known is that of ' Jack the Painter.' He is supposed to have acted under foreign in- fluence, and had previously attempted to destroy the docks at Plymouth and Bristol, but failed in both those attempts, though he excited very con- siderable alarm. His plans were laid with great sagacity and forethought ; and, in order the more effectually to ensure their success and avoid sus- picion, he had invented a very ingenious ma- chine, which he contrived to lodge among the cordage over night, and setting fire to it left it, and passed out of the gates in the morning un- molested. In the course of the same day the fire broke out, as it luckily happened, several hours before the incendiary had purposed, for, had it not begun to display itself till after the fall of night, the destruction would probably have been much greater than it was. The immediate and effective assistance which was given to check the progress of the flames, and the favorable di- rection of the wind, confined the damage to the rope-house, and a few adjoining st*re-houses. The incendiary immediately quitted Portsmouth, but was apprehended about two months after- wards, and, his villany being distinctly traced, he suffered the penalty of the law on the 7th of March, 1777, having previously made all the re- paration to his country*

in his power, by pointing

out some effectual measures for securing the dock- yards from similar attempts.

Portsmouth dock-yard, during the war, em- ployed above 4000 workmen, of whom about 1500n-ere shipwrights and caulkers; 500 joiners and house-carpenters ; the smiths nearly 200 ; the sawyers 250; the riggers 200; other laborers about 700 ; and the ropers 350.

Sheerness dock-yard is situated on the island of Sheppey, on a point of land composed of sand and mud, brought from the sea on the one side and down the Medway on the other. It com- mands the mouths of both this river and the Thames. Till a short time ago this was a very unhealthy and disagreeable place, and as a dock- yard totally destitute of convenience or arrange- ment. The whole premises of the dock-yard, indeed, divided among wharfs and buildings belonging to the ordnance department, did not exceed fifteen acres of ground. It had at this period only two small inconvenient docks for frigates or small vessels. These inconveniences of Sheerness suggested at one time an extensive project for a new naval arsenal at Northfleet, but a committee of engineers and others being ap- pointed to report on the possibility of improving this station, among whom were Watt, Huddart, and Jessop, their plan was afterwards examined, and some improvements suggested in it by Mr. Rennie. The first stone of a new establishment was laid on the 19th of August, 1814. This plan embraced the addition of nineteen acres to the area of the dock-yard, on the west shore of th'e Medway ; the construction of a wet-dock or basin 520 feet long by 300 feet in width, entered by a lock from the Medway ; the erection of three dry- docks on the east side of this basin ; the enclo- sure of Major's marsh, as a further addition of ten to twelve acres of area; and the construction of store and mast houses, mast-ponds, a smithery, governor's and officers' houses, as at the other royal yards. The whole area of the new yard is about fifty acres.

We come, lastly, to the most ancient of our dock-yards, that at Woolwich. This occupies a frontage to the Thames 3300 feet; the breadth extends irregularly from 250 to 750 feet: the whole enclosed area being about thirty-six acres. It has five slips, which open into the river, three of which are for ships of the line, one for frigates, and one for small vessels. It has likewise three dry-docks, one double and one single dock ; all of these are capable of receiving ships of the line.

Woolwich yard has produced some of the largest and finest ships in the navy, and is chiefly important as a building yard ; but of late years the increasing shallowness of the river, and the immense accumulation of mud,

which is often found in a few weeks to block up all the entrances into the docks and slips, has much injured it. In the Eighth Report of the Select Committee on Finance (1818) it is stated, that ‘ the wharf wall at Woolwich, owing to the action of the tide on the foundation, is in a falling state, and in danger of being swept into the river, it being secured only in a temporary manner, and requiring to be immediately rebuilt in a direction that will pre- serve it from similar injury hereafter.’ This re-

commendation has been acted upon ; but the works are as yet, we believe, incomplete.

The new mast-houses and mast-slip, the new mast-ponds, and the houses here for stowing yards, topmasts, &c., with the locks under them, are all excellent. The timber births are also well arranged, and the addition lately made to the western extremity of the yard will allow the stacking and classing of several thousand loads of timber.

The present situation of the ropery, at a dis- tance from the yard, is very inconvenient: but it is of good dimensions, being 180 fathoms long, and having store room for 2000 tons of hemp and 6000 barrels of pitch and tar. The process of tarring, or passing the yarns through heated tar, and then drawing them through apertnres in an iron plate, is here performed by four horses. The laying of a cable of twenty-two or twenty-three inches is performed by the labor of 170 or 180 men, and requires upwards of an hour of the most severe exertion of strength, especially on the part of those who are stationed at the cranks. Woolwich dock-yard is pretty complete in its work-shops, store-cabins, offices for the clerks, houses and gardens for the com- missioner and principal officers. The number of men employed during the war amounted to about 1800, of whom nearly 1100 were ship-wrights and artificers. The spinners, knitters, layers, laborers, &c., in the ropery, were about 260. Upwards of twenty teams of horses were also employed here daily.

Henry VIII. first established a royal dock- yard at Woolwich ; where it appears that the Harry Grace de Dieu, of 1000 tons, was built in 1512. This ship is stated to have been in length 128 feet, and in breadth forty-eight feet: she had three flush decks, a forecastle, half-deck, quarter-deck, and round-house, and carried 176 pieces of ordnance : she had eleven anchors, the largest of which weighed 4400lbs. M. Dupin, who regarded all our establishments with the eye both of a man of science and of a jealous rival, says of our present ship-building : ‘ The English ships of war, with all

the improvements which we have just made known, are superior to French ships of war, 1st. As fabrics that are solid, du- rable, and, as preserving their form, nearly un- changeable ; 2d. As military machines, without any weak points, being capable, within the same space, to discharge a mass of fire much more considerable ; and nevertheless to exercise more at ease this accumulated artillery ; 3d. As habit- able fabrics. They have banished from these ships of war the fantastical mixture of mean and highly finished ornaments, of a species of deco- ration more suited for dwelling houses, and fit only to degrade the austere beauties of naval architecture. They have banished all those re- finements of bad taste; refinements which always produced a most miserable effect, which, never- theless, giving to the exterior an air of luxury and magnificence, encourage naval officers to expend in the interior a still greater degree of luxury ; in short, which pervert from its purpose a floating fortress,by changing it into a furnished hotel, supported at a great expense to the nation.' torn. i.-p. 165.

The officers of an established dock-yaid are, 1. The commissioner. 2. The master attendant 3. The master shipwright. 4. Th.e clerk of the check. 5. The store-keeper. 6. The clerk of the survey ; to which have recently been added the subordinate officers of timber-master, and the master measurer. There are besides several assistants to the master attendant and master shipwright, foremen, sub-measurers, quartermen, and converters, surgeon, chaplain, boatswain, warden, &c. The establishment at Portsmouth, which will convey an idea of the others, con- sisted, at the close of the war, of —
•

1. The commissioner, having a salary of £1100 a year (all others £1000); three clerks with salaries from £400 to £120.

2. Two masters attendant, one at £650, the other at £500 a year; one clerk to both.

3. Master shipwright, £720 a year ; three clerks from £300 to £120.

4. Clerk of the check, salary £600; eight clerks from £400 to £80.

5. Storekeeper, salary £600 a year; twelve clerks from £400 to £80.

6. Clerk of the survey, £500; eight clerks from £400 to £80.

7. Clerk of the rope-yard, £350; one clerk.

8. Engineer and mechanist, £600 (at Ports- mouth only), with a draughtsman ; one clerk.

9. Timber-master, salary £500 ; seven clerks from £250 to £80.

10. Three assistants to the master attendant at £220 each ; one assistant to the timber-master, £200 ; three assistants to the master shipwright, £400 each.

11. The master-measurer, £250 a year; ten clerks from £200 to £80.

12. Thirty-five foremen, from £250 to £80 each.

13. Sub-measurers, quartermen, and conver- ters, from £180 to £160 each.

14. The master mast-maker, sail-maker, boat- builder, joiner, house carpenter, bricklayer, smith, rope-maker, rigger, painter (wood-mills, metal-mills, mill-wright, at Portsmouth only) ; with salaries each, from £260 to £200 a year.

15. Twenty-two cabin-keepers from £100 to £60 each.

16. A surgeon, £500 ; assistant, £200.

17. Chaplain, £500.

18. Boatswain, £250.

19. Warden of the gate, £200. Watchmen, warders, and rounders.

The total amount of the salaries paid to the above mentioned officers in the year 1817, in Portsmouth yard alone, was £50,065. 5s. — Esti- mates of the. Ordinary of the. Navy, 1817.

According to the above estimates the expenses of the principal 3? these establishments in 18 17, were as follow :

Deptford dock-yard . £27,582 0 0 Woolwich ditto . . 32,440 12 0 Chathaln ditto . . 36,883 10 4 Sheerness ditto . . 26,659 6 0 Portsmouth ditto . . 59,969 5 0 Plymouth ditto . . 45,299 13 0

See NAVY.

DOCKUM, a town of the Netherlands, in Friesland, seated at the mouth of a canal whiai»

DOCTOR.

at high water brings up large vessels. It has a good harbour, built in 1248, by Ubbo, duke of Friesland. The town is very well built, and for- tified by ramparts and bastions. It is ten miles north-east of Lexvarden, and thirty-three west of Deltzyl. Population 3100. The trade is in salt, cheese, and butter.

DOCTOR, n.s. & v. a.} Fr. docteur ; Sp.

DOC'TORAL, adj. I and Port, dotor ;

DOC'TORALLY, adv. Vital, dottore ; Lat.

DOC'TORATE, n. s. i doctor, from doceo,

DOC'TORSHIP. J to teach. See DO-

CILE. He who teaches in any faculty ; hence, one who has taken a high degree in the learned professions, and is an able or skilful man, gene- rally. The verb is a low word derived from the noun. Doctorate and doctorship are the degree or rank of a doctor.

And prophetis and doctouru weren in the churche that was at Antioche. Wiclif. Dedis. 13.

No woman had it, but a civil doctor, Who did refuse three thousand ducats of me, And begged the ring.

Shakspeare. Merchant of Venice.

By medicine life may be prolonged, yet death Will seize the doctor too. Id. Cymbeline.

Changing hands without changing measures, as if a drunkard in a dropsy should change his doctors, and not his diet. Saville.

The physicians resorted to him to touch his pulse, and consider of his disease doOtorally at their depart- ure. Hakewill.

From a scholar he became a fellow, and then the president of the college,

after he had received all the graces and degrees, the proctorship and the doctor- thip. Clarendon.

Then subtle doctors scriptures made their pride, Casuists, like cocks, struck out each other's eyes.

Denluim.

To 'pothecaries let the learned prescribe, That men may die without a double bribe ; Let them but under their superiors kill, When doctors first have signed the bloody bill.

Dryden.

He that can cure by recreation, and make pleasure the vehicle of health, is a doctor at it in good earnest

Collier.

In truth, nine parts in ten of those who recovered, owed their lives to the strength of nature and a good constitution, while such one happened to be the doctor. Sioift.

I thank you, my dear Lord, for your congratulations on my advancement to the doctorate; though I doubt it will seem a little incongruous in me to combat the scarlet whore in her own vestments. Bp. Hwrd.

DOCTOR, At£a

DOCTOR is also an appellation adjoined to seve- ral specific epithets, expressing the merit of some of the schoolmen : thus, Alexander Hales is called the irrefragable doctor; Thomas Aquinas, the angelic doctor ; St. Bouaventure, the seraphic doctor; John Duns Scotus, the subtle doctor;

Raimond Lully, the illuminated doctor; Rojrer Bacon, the admirable doctor, &c.

DOCTOR OF THE CHURCH, a title given to cer- tain fathers whose doctrines and opinions have been the most generally followed and authorised. Of these there are four of the Greek church, and three of the Latin. The first are St. Athanasius, St. Basil, St. Gregory Nazianzen, and St. Chry- sostom. The latter are St. Jerome, St. Augustine, and Gregory the Great. In the Roman breviary there is a particular office for the doctors. It only differs from that of the confessors, by the anthem of the Magnificat, and the lessons.

DOCTOR OF THE LAW, a title of honor among the Jews. The investiture of this order was performed by putting a key and table book in their hands ; which is what some authors imagine our Saviour alluded to, when, speaking of the doctors of the law (Luke xi. 52), he says, ‘ Woe unto you doctors of the law, for you have taken away the key of knowledge : you entered not in yourselves, and them that were entering you hindered.’

The establishment of the doctorate, such as now in use among us, is ordinarily attributed to Irnerius, who himself drew up the formulary. The first ceremony of this kind was performed at Bologna, in the person of Bulgarus, who be- gan to profess the Roman law, and on that oc- casion was solemnly promoted to the doctorate, i. e. installed juris utriusque doctor. But the custom was soon transferred from the faculty of law to that of theology ; the first instance whereof was given in the university of Paris, where Peter Lombard and Gilbert de la Portree, the two chief divines of those days, were created doctors in theology, sacra theologiae doctores. Spelman takes the title of doctor not to have commenced till after the publication of Lombard’s sentences, about 1140, and affirms, that such as explained that work to their scholars were the first that had the appellation of doctors. Others go much higher, and hold Bede to have been the first doctor at Cambridge, and John de Beverly at Oxford, which last died A. D. 721. But Spel- man will not allow doctor to have been the name of any title or degree in England, till the reign of king John, about 1207. By stat. 37, Hen. VIII. c. 17, sect. 4, a doctor of the civil law may exercise ecclesiastical jurisdiction, though a layman.

To pass D.D. at Oxford, it is necessary for the candidate to have been four years bachelor of divinity. For LL.D. he must have been seven years in the university ; to commence LL. B. five years, after which he may be ad- mitted doctor. Otherwise, in three years after taking the degree of M.A , he may take the de- gree of LL. B., and in four years more that Oi LL. D., which method and time are likewise re- quired to obtain the degree of M. D. At Cam- bridge, to take the degree of D. D., it is requisite that the candidate have been seven years B.D., though in several of the colleges the taking of the bachelor’s degree is dispensed with, and they may go out per saltum. To commence LL. D. the candidate must have been five years LL. B., or seven M.A. To pass M.D. he must haTe been five years B.D., or seven years M.A.

DOCTRINE, n. s. } Tr. doc trine; Ital. DOC'TRINAL, adj. & n.s. >Span. and Port. DOC'TRINALLY, adv. j dottrina ; Lat. doc- trine, from doceo, doctus, to teach. See DOCILE.

pointed minister of Hanwell, in Oxfordshire ; whence he removed to Fenny Compton, and to Cannons Ashby, in Northamptonshire. In 1624 he was presented to the living of Faws-

Principles or propositions taught; the act of ley, in the same county, where he died in 1645.

teaching: doctrinal has been formerly used synonymously. As an adjective it signifies relating to, or containing doctrine ; and doctri- nally is the corresponding adverb.

Whiche thingis we speken also not in wise word is of manny's wisdom, but in the doctrine of the spyryt, and maken a liknesse of spyritual thingis to goostli men. Widif. 1 Cor. ii.

He said unto them in his doctrine.

Mark iv.

To make new articles of faith and doctrine, no man thinketh it lawful : new laws of government, what church or commonwealth is there which maketh not, either at one time or other ? Hooker.

What special property or quality is that, which

He wrote, 1. An Exposition of the Command- ments, 4to., which work procured him the name of the Decalogist ; 2. An Exposition of the Book of Proverbs, 4to.

DODART (Denis), a regent of the faculty of medicine at Paris, was born in that city in 1634. He had an exquisite taste for music and painting, was in high esteem at court as a physician, and a member of the Academy of Sciences. He wrote Memoires pour servir a 1'Histoire de Plantes ; and a curious work, entitled Medicina Statica Gallica. He died in 1707. His son, Claude John Baptiste Dodart, became physician to Louis XV., and died in 1730.

DODARTIA, in botany, a genus of the an- giospermiaotder, and didynamia class of plants;

... . . .1 tl iu. L'ci ill la vriiAci , ailu uiu y uaiuia i_icu3 \ji I'lcuiLo.

*beine no where found but in sermons, maketh them £ r . , ,. '. , **

. . ., ., , , .- , natural order fortieth, personatae : CAL. qumque- effectual to save souls, and leaveth all other doctrinal

means besides destitute of vital efficacy ? Id.

Humility is a virtue all preach, none practise, and yet every body is content to hear. The master thinks it good doctrine for his servant, the laity for the clergy, and the clergy for the laity. Selden.

Not such as assent to every word in scripture, can be said in doctrinal to deny Christ. South.*

Scripture accommodates itself to common opinions, and employs the usual forms of speech, without delivering any thing doctrinally concerning these points. Ray-

Ye are the sons of clergy, who bring all their doc- trine fairly to the light, and invite men with freedom to examine them. Atterbury.*

That great principle in natural philosophy is the doctrine of gravitation, or mutual tendency of bodies toward each other.

Watts's Improvement of the Mind.

Spirits and doctrines therefore may be considered, the latter word as explanatory of the former : and

dentated ; COR. under lip twice as long as the upper : CAPS, bilocular and globose. Species two, natives of Palestine.

DODBROOK, a market town and parish of Devonshire, fifteen miles south-west from Dart- mouth, and 207 W.S.W. from London. It is noted as being the first place where white ale was brewed, of which the rector claims tythe ; but in lieu thereof receives lOd. from each innkeeper. Market, third Wednesday in every month.

DODD (Charles), a Roman catholic priest, at Harvington in Worcestershire, where he died in 1745. He wrote The Church History of England, 3 vols. folio, printed at Brussels, from 1737 to 1742.

DODD, (Dr. William), an unfortunate En- glish divine, born in 1729. He was sent in 1745, at the age of sixteen, to the university of Cambridge. In 1749 or 1750 he took the degree of B. A. with considerable honor. Leaving the university, he married in 1751; was ordained a

error sometimes signifying idolatry, erroneous doc- deacon the same year ; priest in 1753, and soon

Junes may comprehend idolatrous, as well as false doctrines. Bp. Newton.

DOCUMENT, n. s.) Fr. document; Ital.

DOCUMENT'AL, adj. > Span, and Port, docu-

mento; Lat. documentum, from doceo, docui, to

became a celebrated preacher. His first prefer- ment was the lectureship of West-Ham. In 1754 he was also chosen lecturer of St. Olave's, Hart-Street; and in 1757 took the degree of M.A. at Cambridge. On the establishment of

teach. The thing taught: precept; instruction, the Magdalen Hospital in 1758, he was a strenu- ous supporter of that charity, and soon after be- came preacher at the chapel. By the patronage

of bishop Squire, he, in 1663, obtained a pre- them, that as their majesty made them dispensators , •> <• r> jV»u L r

*. , .,r , bend ot Brecon, and, by the interest of some city of her favour, so it behoveth them to shew themselves . *J f ,*

Hence written evidence in law.

It is a most necessary instruction and document for

.... • i

nends' was appointed one of the king s chap- lains ; soon atter which he had the care of the education of the earl of Chesterfield. In 1766 he went to Cambridge and took the degree of LL.D. Impatient for further advancement, he

Gentle insinuations pierce, as oil is the most pene- adopted measures which eventually terminated

in hig ruin Qn the hvi of gt George Hanover

^ becoming vacant, he wrote an anony-

., , , ,

mous letter to the lord chancellor s lady, offering

3000 guineas if by her assistance he was promoted ˆ it- This being traced to him> complaint was

immediately made to the king, and Dr. Dodd DOD (John), a puritan divine, was born at was dismissed with disgrace from his office of Shotledge in Cheshire, in 1547. He became chaplain. From this period he lived neglected, fellow of Jesus College, Cambridge, and was ap- if not despised ; and his extravagance still cpu-

equal distributors. Bacon.

It h not unnecessary to digest the documents of cracking authors into several classes.

Harvey on Consumption.

trating of all liquors ; but in magisterial documents men think themselves attached, and stand upon their guard. Government of the Tongue.

Learners should not be too much crowded with a heap or multitude of documents or ideas at one time.

Watts.

tinuing, he became involved in difficulties, which tempted him to forge a bond from his late pupil lord Chesterfield, February 4th, 1777, for £4200, which he actually received ; but, being detected, was tried at the Old Bailey, found guilty, and received sentence of death. Notwithstanding numerous and, we believe, unprecedented appli- cations for mercy, he was executed at Tyburn, June 27th, 1777. Dr. Dodd was a voluminous writer and compiler. He published a Commen- tary on the Bible, 3 vols. folio; Sermons to Young Men, 3 vols. 12mo.; Reflections on Death, 12mo. ; The Visitor, a periodical paper, 2 vols. 12mo. ; Sermons on the Miracles and Parables, 4 vols. 8vo. ; Several Poems and Mis- cellaneous Pieces ; and lastly, he left for the press Thoughts in Prison.

DODD (Ralph), a civil engineer, the original projector of a tunnel under the Thames, and various other public works of importance. In 1795, he published an Account of the principal Canals in the known World, with Reflections on the great Utility of Canals. In 1798, he laid before the public

his plan for a tunnel under the Thames, which was approved by government ; but the scheme was abandoned soon after its commencement. He had also a share in the im- provement of steam vessels ; and the first impetus to the scheme for navigating by steam in England •was given by a patent which he obtained for a steam-boat on the Thames, from London to Gravesend, which, however, was not carried into effect. He afterwards navigated, in a steam – vessel, round the coasts of England and Ireland. He died at Cheltenham, in April, 1832.

DOD'DER, n. s. & v. a. } According to

DOD'DERED, adj. S Skinner from Dut.

touteran, to shoot up ; but Mr. Thomson says, from Goth, dattdi ; Teut. todter, the slayer, because injurious to corn and flax. A plant. See the extract from Hill. The verb is derived from the noun. Doddered is overspread; dodder, excrescencies.

DODDRIDGE (Philip), D.D., an eminent Independent minister, born in London, 1702. Having completed the study of the classics, he was, in 1719, placed under the tuition of the Rev. John Jennings, who kept an academy at Kibworth in Leicestershire. He was first settled as a minister at Kibworth, where he preached to a small congregation of the Independent persua- sion ; but, on Mr. Jennings's death, succeeded to the care of his academy; and soon after was chosen minister by a large congregation at Nor- thampton, to which he removed, and where the number of his pupils increased. He instructed them with the freedom and tenderness of a father; and never desired that they should blindly follow his sentiments. He checked every appearance of bigotry and uncharitableness. Yet while thus liberal to the opinions of others, he refused a very handsome offer of patronage made him by the duchess of Bedford, on condition of entering the church of England. He died at Lisbon, whither he went for the recovery of his health, in 1751. He wrote, 1. Free Thoughts on the most probable means of reviving the Dissenting In- terest; 2. The Life of Colonel James Gardiner;

3. Sermons on the Education of Children ; 4. The Rise and Progress of Religion in the Soul ; 5. The Family Expositor, in 6 vols. 4to., Sec. ; of which several of the prelates of the church have spoken highly. Among others, the late bishop of Durham observes : — ' In reading the New Testament, I recommend Doddridge's Family Expositor, as an impartial interpreter, and faithful monitor. Other expositions and commentaries might be mentioned greatly to the honor of their respective authors, for their several excellencies ; such as, elegance of com- position, acuteness of illustration, and copious- ness of erudition : but I know of no expositor,

who unites so many advantages as Doddridge; whether you regard the solidity of his version, the fulness and perspicuity of his composition, the utility of his general and historical informa- tion, the impartiality of his doctrinal comments, or, lastly, the piety and pastoral earnestness of his moral and religious applications.' Since the author's death a volume of his Hymns has been published, and his Theological Lectures. Several of his works have been translated into Dutch, German, and French.

DODE'CAGON, n. s. Awfora and yuvta. A figure of twelve sides

DODECAGON, a regular polygon of twelve equal sides and angles. If the side of a dode- cagon be 1, its area will be equal to 3 times the tan. of 75°:= 3 x 2 + V 3 =: 11-1961524 nearly; and, the areas of plane figures being as the squares of their sides, therefore 11-1961524 mul- tiplied by the square of the side of any dodecagon, will give its area.

DODECAGYNIA ; from Sotitica, twelve, and yvv»j, a woman ; the fifth order in the class dode- candria; consisting of plants, which, along with the general characteristics of the class, have twelve female organs. See BOTANY.

DODECAHEDRON, in geometry, one of the Platonic bodies, or regular solids, contained under twelve equal and regular pentagons.

DODECANDRIA ; from S o > 5«a, twelve, and avqp, a man; the eleventh class in Linnaeus's sexual system, consisting of plants with her- maphrodite flowers, that have twelve male organs. It is not, however, limited to this number. Many genera have sixteen, eighteen, and even nineteen stamina. The essential character is, that the stamina, however numerous, are inserted into the receptacle. See BOTANY.

DODECAS, in botany, a genus of the trigy- nia order, and dodecandria class of plants : CAL. half quadrifid, having the corolla above : COR. quinquefid : CAPS, unilocular, conjoined with the calyx. Species one only, a Surinam shrub.

DEDECATEMO'RION, n. s. A«fl«arjj- ftopiov. The twelfth part.

Tis dodecatemorion thus described :

Thrice ten degrees, which every sign contains,

Let twelve exhaust, that not one part remains ;

*It follows straight, that every twelfth confine**

Two whole and one half portion of the signs.

Creech.

DODECATHEON, in botany, meadia; a genus of the monogynia order, and pentandria class of plants; natural order twenty-first, precix :

COK. verticillated and reflexed : STAM. placed ia me tube : CAPS, unilocular and oblong. Species one only, a native of Virginia, with leaves like a lettuce, but bearing beautiful flowers somewhat resembling a cowslip.

DODGE, v. n. Dr. Johnson says from a cor- ruption of dog, but more probably from Teut. ducken, dongen, to conceal. To deal craftily ; shift place so as to hide; treat capriciously.

DODINGTON (George Bubb, lord Mel- combe Regis), was the son of a gentleman of fortune; or, as others say, of an apothecary, named Bubb, who married into a wealthy family, in Dorsetshire. He was born in 1691, was elected member of parliament for Winchelsea, in 1715, and was soon after appointed envoy to the court of Spain. In 1720, by the death of his maternal uncle, he came into possession of a large estate, and took the surname of Dodington. In 1 724, having closely connected himself with Sir Robert Walpole, he was appointed a lord of the treasury, and became clerk of the pells in Ireland. He afterwards joined the opposition, and, on the fall of Walpole, became treasurer of the navy. This party he also quitted, in order to lead the opposition under Frederic, prince of Wales, whose death for some time arrested his career. In 1755, he accepted his former post of treasurer of the navy, under the duke of New- castle, but lost it the following year. On the accession of George III., he was early received into the confidence of lord Bute ; and, in 1761, was advanced to the peerage by the title of lord Melcombe, and died the following year. This versatile politician was generous, magnificent, and convivial in private lite, and the patron and friend of Young, Thomson, Glover, Fielding, Bentley, Voltaire, Lyttelton, and Chesterfield, who, with many of meaner pretensions, mingled at his hospitable table. He is best known by his celebrated Diary, published in 1784, by Henry Penruddock Wyndham, Esq. A more curious exposition of avarice, vanity, servility, and selfishness, as a place-hunter and trading politician, has seldom been exhibited.

DO'DKIN, n.s. Dut. duytken. A doitkin or little doit ; a contemptuous name

for a low coin.

DO'DMAN, n. s. The name of a fish.

DODO, in ornithology. See DIDUS.

DODONA, a town of Thesprotia in Epirus, or, as some say, in Thessaly. There was in its neighbourhood a celebrated oracle of Jupiter. The town and temple of the god were first built by Deucalion, after the general deluge. It was supposed to be the most ancient oracle of all Greece ; and according to the traditions of the Egyptians, mentioned by Herodotus, it was founded in consequence of an oracular message by a dove. Two black doves, he says, took their flight from the city of Thebes in Egypt ; one of which flew to the temple of Jupiter Ammon, and the other to Dodona, where with a human voice they acquainted the inhabitants that Jupiter had consecrated the ground, which in future woujd give oracles. This fable might have been founded on the double meaning of the word TtXciai, which signifies doves in most parts of Greece, while in a dialect of the Epirots it

implies old women. In ancient times the oracles were delivered by the murmuring of a neigh- bouring fountain ; but the custom was afterwards changed. Large kettles were suspended in the air near a brazen statue, which held a lash in its hand. When the wind blew strong, the statue was agitated, and struck against one of the ket- tles, which communicated the motion to all the rest, and raised the clattering and discordant din, which continued for awhile, and from which the artifice of the priests drew the predictions. The ship Argo was built with wood of the oaks of Dodona, and some of the beams, it is said, gave oracles to the Argonauts, and warned them against the approach of calamity. Within the forest of Dodona there was a miraculous stream, and a fountain of cool water, which had the power of lighting a torch as soon as it touched it. This fountain was totally dry at noon-day, and was restored to its full course at midnight, from which time till the following noon it began to decrease, and at the usual hour was again deprived of its waters. The oracles of Dodona were generally delivered by women. No traces of this town have been discovered in modern times ; but in Mount Tomarus, there is a forest of vast extent, spreading far to the westward, which seems to answer to the site. In the higher parts, where the oak does not thrive, there are immense ranges of pines and firs. Dr. Holland, one of the latest travellers in Albania, when describing the city of loannina, enters into the long con- troverted point of the site of Dodona, which he endeavours to fix between Thesprotia and Mo- lossia. Strabo distinctly says, that it belonged at first to the Thesprotians, and afterwards to the Molossians. And we are not aware of its having been assigned by any writers of the same era to these two

different nations at the same time. It is singular that Dr. Holland should have over- looked one proof of the opinion supported by him, as it occurs in the very passage of JEschy- lus, to which he refers in the note to p. 143. ./Eschylus speaks of lo going to the Molossian plains and the temple of Thesprotian Jove.

|TT£I ydp jjX&c Trpotr MoXofftrd yaT TJ)V aiTrvvwTov r afiQl Aai5aiv»jv, 'iva pavrtia flajcoc r' rjarl QtffirpwTov Aiof, rtpac r diriffTOV, ai TrpoffTJyopoi Spvig.

Prom. 854—857.

DODONJEUS, DODONIAN, in antiquity, an epithet given to Jupiter, because he was wor- shipped in a temple built in the forest of Dodona. Dodonides were the priestesses who gave oracles at this temple.

DODSLEY (Robert), an eminent bookseller, and ingenious writer, born at Mansfield in Not- tinghamshire in 1703. He was originally a livery servant, but his natural genius, and early passion for reading, soon elevated him to a superior station. He wrote an elegant satirical farce called The Toy Shop, which was acted with great applause in 1735, and which recom- mended him to the patronage of Pope. The following year he produced the King and Miller of Mansfield. The profits of these two farces enabled him to commence bookseller, and his own merit procured him eminence in that pro-

He wrote some other dramatic pieces, and published a collection of his works in one vol. 8vo., under the modest title of Trifles ; which was followed hy Public Virtue, a poem, in 4to. : he also collected several volumes of well-chosen Miscellaneous Poems and Fugitive Pieces, whose brevity would otherwise have endangered their being totally lost to posterity. Tie was also the original publisher of the Annual Register, of which Burke was the editor ; and in 1750 he published his best work, The (Economy of Human Life. He died in 1764.

DODWELL (Henry), a learned controversial writer, born at Dublin in the year 1641. He wrote a great numbei of tracts ; but bishop Bur- net and others accuse him of doing injury to Christianity, by his indiscreet love of paradoxes and novelties, and thus exposing himself to the scoffs of unbelievers. His pamphlet, On the Immortality of the Soul, gave rise to the well- known controversy between Mr. Collins and Dr. Clark on that subject. He died in 1711.

DOE, n. s. From Sax. ba ; Dan. daa; Lat. dama. A she deer; the female of a buck. Then but forbear your food a little while,

While, like a doe, I go to find my fawn,

And give it food. Shakspeare. At You Like It.

Bucks have horns, does none.

Jiacon's Natural History. The fearful. doe And flying stag amidst the greyhounds go.

Dryden's Virgil.

DOE, in zoology. See CERVUS. DOES (Jacob Vender), a painter, born at Amsterdam in 1623, died in 1673. He studied at Rome, where he followed the manner of Bamboccio. His landscapes are dark, but fine, and the figures beautifully executed. He had two sons, Jacob and Simon, both good artists ; the first of whom died in 1693, the latter in

1717.

DOFF, v. a. From do off. To put off dress ; to shift : divest ; delay.

You have deceived our trust, And made us duff GUT easy robes of peace, To crush our old limbs in ungentle steel.

Shakspeare. Henry IV. Your eye in Scotland

Would create soldiers, and make women fight, To doff their dire distresses. Id. Macbeth.

Every day thou doffett me with some device, lago.

Id. Othello. Nature, in awe to him, Hath doffed her gaudy trim, With her great master so to sympathize.

Milton. That judge is hot, and doffs his gown.

Dryden's Jtevenal.

Alcides doffs the lion's tawny hide. Rowe. Why art thou troubled, Herod ? What vain fear Thy blood-revolving breast doth move ?

Heaven's king, who doffs himself our flesh to wear, Co:nes not to rule in wrath, but serve in love.

Craihaw. Could they doff

Their hose as they have doffed their hats, 'twould be A blessing, as a mark the less for plunder. But let them fly, the crimson kennels now Will not much stain their stockings, since the mire Is of the self-same purple hue. Byron,

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DOFREFIELD, or DOFRINE, the highest peak of the mountains which divide Norway from Sweden. King Christian V. rode over i": in 1686, while his attendants only ventured to go on foot. He was saluted with nine pieces of cannon by general Webe; and erected a pyramid on the peak, in memory of the exploit. DOG, n. s. & v. a. ~\ Fr. dogue ; Dutch DOG-BANE, n. s. dogghe ; Teut. dagghc,

DOG-BER'HY, according to Minsheu,

DOG-BOLT, from Belg. duckcn, to

DOG-BRIAR, shut up, because dogs

DOG-CHEAP, are shut up in the day-

DOG-DAYS, time, or from Gr. &ZKOC,

DOG-DRAW, a biter. See the article.

DOG-FISH, A name of contempt

DOG-FISHER, for man. As a verb it

DOG-FLY, signifies to watch or

DOGGED, adj. hunt as a dog does. Dog-

DOGGEDLY, adv. bane, dog-berry, dog- DOGGEDNESS, n. s. .briar, dog-rose, and dog- DOGGISH, adj. 'wood are plants ; dog-

DOG-HEARTED, adj. bolt is a coarse fellow,' DOG-HOLE, n.s. as Dr. Johnson thinks,

DOG-KENNEL, from the coarser part of

DOG-LOUSE, rlour having been called

DOG-ROSE, dog-bolt ; dog-cheap,

DOG-SLEEP, cheap as the food of

DOG-STAR, dogs ; dog-days begin

DOG-TEETH, when the dog-star rises

DOG-TRICK, and sits with the sun ; a

DOG-TROT, dog-draw is, says Co well,

DOG-WEARY, a manifest deprehension

DOG-WOOD, of an offender against

DOG'S-MEAT. J venison in the forest,

when he is found drawing after a deer by the scent of a hound which he leads in his hand. Dog-fish is another name for the shark ; dog- fisher another and small, but voracious fish ; dog- lly a voracious fly. Dogged and doggish is morose, ill-tempered, surly ; and doggedly and doggedness the corresponding adverb and sub- stantive ; dog- hearted is doggish ; dog-hole a mean hole or habitation, sometimes not equalling that of the dog, or a dog-kennel : dog-louse a louse that is frequently found on the dog : dog-sleep, pretended sleep : dog-star, Sirius, the star that gives name to the dog-days, once reckoned unhealthy: dog-teeth are those teeth next the grinders, which resemble the dog's : dog-trick is a mischievous or ill turn : dog-trot a gentle trot, like that of a dog : dog-weary, excessively weary dogs'-meat, a refuse, offal.

Beware of dogs, beware of evil workers

Phil. Hi. 2.

She bringeth me the grete clobbed staves, And cryeth, slee the dogget everich on, And breke hem bothe bak and every bon.

Chaucer. Cant. Tale.*

I never heard a passion so confused, So strange, outrageous, and so variable, As the dog Jew did utter in the streets.

Shakspeare.

I have dogged him like his murtherer. Id.

Your uncle must not know but you are dead ; 111 fill these dogged spies with false reports. Id, King 9 T

D O G.

His unkindness.

That stript her from his bcuetliction, turned her To foreign casualties, gave her dear rights To his doghearted daughters. Id. King Lear.

Such smiling rogues as these sooth every passion Renege, affirm, and turn their halcyon beaks With every gale and vary of their masters, As knowing nought, like dojs, but following. Id.

France is a doghole, and it no more merits the tread of a man's foot : to the wars. Id.

Oh, master, master, I have watched so long, That I'm dogweary. Id. Taming of the Shrew.

Sorrow dogging sin,

Afflictions sorted. Herbert.

I fear the dread events that dog them both, Lest some ill -greeting touch attempt the person Of our renowned sister. Milton.

Few miles on horseback had they jogged, But fortune unto them turned dogged.

Hudibrat.

His only solace was, that now His dogbolt fortune was so low, That either it must quickly end, Or turn about again, and mend. Id.

This said, they both advanced, and rode A dogtrot through the bawling crowd. Id.

Behold an Egyptian in the skin of an Hebrew • How dogged an answer doth Moses receive to so gentle a reproof ! Bp. Hall Contemplations.

Nor was it more in his power to be without promo- tion and titles, than for a healthy man to sit in the sun, in the brightost dog-dags, and remain without warmth. Clarendon.

The dog-faher is good against the falling sickness.

Walton. These spiritual joys are dogged by no sad sequels.

Glamille.

The same ill taste of sense will serve to join Dog foxes in the yoke, and sheer the swine.

Dryden.

But could you be content to bid adieu To the dear playhouse, and the players too, Sweet country seats are purchased every where. With land and gardens, at less price than here You hire a darksome doghole by the year.

Id. Juvenal.

Good store of harlots, say you, and dogcheap. Id. A certain nobleman beginning with a dogkennel, never lived to finish the palace he had contrived.

Id.

His reverence bought of me the flower of all the market ; these are but dogsmeat to 'em. Dryden.

Learn better manners, or I shall serve you a dog- trick ; I'll make you know your rider.

Dryden't Don Sebastian.

Why should we not think a watch and pistol as dis- tinct soecies one from another, as a horse and a dog ?

Locke.

Of the rough or hairy excrescence, those on the briar, or dogrose, are a good instance.

Derham's Physico- Theology. Thump-buckler Mars began, And at Minerva with a lance of brass he head-long

ran ; These vile words ushering his blows, Thou dog.fly,

what's the cause

Thou makest gods fight thus? Chapman' t Iliad. I am desired to recommend a dogkennel to any that shall want a pack. Tatler.

Juvenal indeed mentions a drowsy husband, who raised an estate by snoring ; but then he is represented to h.-.ve slept what the common people

call dog-sleep.

Additon.

All shun the raging dog-star's sultry heat,

And from the half-unpeopled town retreat. Id. It is part of the jaw of a shark or dog-fish.

Woodward.

The best instruments for dividing of herbs are inci- sor-teeth ; for crarking of hard substances, as bones and nuts, grinders or mill- teeth ; for dividing of flesh, sharp-pointed or dog-teeth. Arbuthnot on Aliments.

Had whole Colepeper's wealth been hops and hogs, Could he himself have sent it to the dogsl Pope.

I have been pursued, dogged and way-laid through several nations, and even now scarce think myself secure. Id.

Reverse your ornaments and hang them all

On some patched doghole eked with ends of wall. « , Id.

Hate dogs their rise, and insult mocks their fall.

Johnson. Vanity of Human Wishes.

DOG, in zoology, an animal remarkable for its natural docility, fidelity, and affection for its master; qualities which mankind are careful to improve for their own advantage. These useful creatures guard our houses, gardens, and cattle, with spirit and vigilance. By their help we are enabled to take not only beasts,but birds ; and to pursue game both over land, and through the wa- ter. In some northern countries they draw sledges, and are also employed to carry burdens. In several parts of Africa and China dogs are eaten, as well as by the West Indian negroes, and accounted excellent food ; and we have the testimony of Mr. Forster, that dog's fiesh in taste exactly re- sembles mutton. They were also used as food by the Romans, and long before them by the Greeks, as we learn from several treatises of Hippocrates.

From the structure of the teeth, it is evident that the dog is a carnivorous animal. He is possessed of such strong digestive powers, as to draw nourishment from the hardest bones. When oppressed with sickness, to which he is very sub- ject, especially in the beginning of summer, and

before ill weather, in order to procure Teachings, he eats the leaves of the quicken-grass, the bearded wheat-grass, or the rough cock's-foot grass, which give him immediate relief. His drink is water, which he takes in small quantities at a time, by lapping with his tongue. His ex- crements are generally hard scybals, which, es- pecially after eating bones, are white, and were once in great repute as a drug; but are now justly disregarded.

The dog is an animal not only of quick mo- tion, but remarkable for travelling very long journeys. He can easily keep up with his mas- ter either on foot or horseback for a whole day. When fatigued, he does not sweat, but lolls out his tongue. He lies generally on his breast, with his head turned to one side, and sometimes with his head above his two fore feet. He sleeps little, and even that does not seem to be very quiet; for he often starts, and seems to hear with more acuteness in sleep than when awake. He can trace his master by the smell of his feet in a church, or in the streets of a populous city. This sensation is not equally strong in every kind. The hound can trace game, or his mas- ter's steps, twenty-four hours afterwards. He barks more furiously the nearer he approaches

the fowls, unless lie be trained to silence. The fe- males admit the males before they are twelve months old. They remain in season ten, twelve, or even fifteen days, during which time they ad- mit a variety of males. They come in season generally twice a-year, and more frequently in the cold than in the not months. The female goes with young about nine weeks. They gene- rally bring forih from six to twelve puppies. Those of a small size bring forth four or five, sometimes but two. The whelps are commonly blind, and cannot open their eyes till the tenth or twelfth day : the males resemble the dog, the females the bitch. In the fourth month, they ose some of their teeth, which are soon suc- ceeded hy others.

Buffon has given a genealogical table of all the known dogs, in which he makes the chien de berger, or shepherd's dog, the origin of the whole species, because it naturally possesses the great- est share of instinct. This table is intended not only to exhibit the different kinds of dogs, but to give an idea of their varieties as arising from a degeneration in particular climates, and from a commixture of the different races. ' The chien de berger, or shepherd's dog,' says Buffon, ' is the root of the tree. This dog, when transported into Lapland, or other very cold cli- mates, assumes an ugly appearance, and shrinks into a smaller size; but in Elussia, Iceland, and Siberia, where the climate is less rigorous, and the people a little more advanced in civilisation, lie seems to be better accomplished. These changes

are occasioned solely by the influence of those climates, which produce no great altera- tion on the figure of this dog ; for, in each of these climates his ears are erect, his hair thick and long, his aspect wild, and he barks less fre- quently, and in a different manner, than in more favorable climates, where he acquires a finer po- lish. The Iceland dog is the only one that has not his ears entirely erect ; for their extremities are a little inclined ; and Iceland, of all the northern regions, has been longest inhabited by half-civilised men. The shepherd's dog, when brought into temperate climates, and among a people perfectly civilised, as Britain, France, Germany, would, by the mere influence of the climate, lose his savage aspect, his erect ears, his rude, thick, long hair, and assume the figure of the bull-dog, the hound, and the Irish grey- hound. The bull-dog and the Irish grey-hound have their ears still partly erect, and very much resemble, both in their manners and sanguinary temper, the dog from which they derive their ori- gin. The hound is farthest removed from the shep- herd's dog ; for his ears are long, and entirely pendulous. The gentleness, docility, and even timidity of the hound, are proofs of his great degeneration, or rather of the great perfection he has acquired by the long and careful educa- tion bestowed on him by man. The hound, the harrier, and the terrier, constitute but one race ; for, it has been remarked, that in the same litter, hounds, harriers, and terriers, have been brought forth, though the female hound had been covered by only one of these three dogs. I have joined the common harrier to the Dalmatian dog, or barrier of Bengal, because they differ only in

having more or fewer spots on their coat. I have also linked the turnspit, or terrier with crooked legs, with the common terrier ; because the defect of the legs of the former has originally proceeded from a disease similar to the rickets", with which some individuals had been affected, and transmitted the deformity to their descen- dants.'

P We shall now proceed to describe more parti- cularly the principal varieties of this animal : —*

1. The Jkagle, the smallest hunting-dog used in this country, is chiefly employed in chasing the hare, and is remarkable for the melody of its tone. Huntsmen distinguish the rough and smooth beagle, but they are both the same species.

2. The Bull-dog derives its name from the barbarous diversion of bull-baiting in which it is used. It is of the mastiff kind, but is smaller with a somewhat flatter snout, the lower jaw projecting considerably beyond the upper one. Its aspect is very ferocious, and its courage and obstinacy in attacking the bull are well known. It generally seizes on the Up or other part of the face, pinning the bull, as it is called, to the ground, and maintaining its hold in spite of every effort of the animal to disengage

himself. Goldsmith relates, that, at a bull-bait in the North of England, a young man wagered that his dog would attack the bull after his feet were cut off one by one. The cruel experiment was tried, and the dog seized the bull as eagerly as ever !

3. Dalmatian, or Coach-dog, is an animal of great beauty, being of a white color, elegantly marked on all parts with numerous round black spots. The native country of this breed is un- certain ; it is commonly termed the Danish dog, and is usually kept by gentlemen as au attendant on the carriage.

*4. Greenland, or Kamtschatdale dog. Dogs of this species have a long sharp nose, erect pointed ears, and a long tail, and are more like the shepherd's dog of various parts of Europe than any other. They are of different colors, and many of them curiously spotted. In sum- mer they scratch a hole in the earth in which they lie, as being cooler, and in the winter they bury themselves in the snow in the same way, as a shelter from the frost. They can bear any de- gree of cold better than heat; and in spring, when the weather begins to be warm, they pant as .f come off a long journey. As soon as these dogs can eat, their training begins. They are then tied to a stake, and plenteously fed with soup made of fish, by which means they grow stronger and larger than if suffered to be loose. A dark place or pit is considered best for their confinement, as this makes them timid, and afraid of surrounding objects, and they exert their strength more effec*ually to avoid them. All those designed for the draught are castrated, and have their tails cropped, and such as have large bones, a broad foot, a wide mouth, and are thick made at the back of the head and in the breast, are considered as the best adapted for work. Each dog has a particular name, as with us, which is of great use in driving them, as the whole set is managed by the voice, neither reins nor whip being used for this purpose. They are*

fed on fish, which is given them in all possible forms ; raw, dressed, dried, fresh, frozen, or pu- trid. After they are full grown they are suffered to range at large during the summer, as their services are not then wanted, and they provide their own food without any trouble to their owners. They frequent the shore, and lurk on the banks of the rivers, often standing up to the belly in water catching the fish, at which they snap with such a certain aim, that they seldom miss it if within reach. When the salmon as- cend the

rivers in great numbers, their food is abundant, and they only eat the heads, as being the finest flavored. In autumn, want of food obliges them to return to the dwellings of their masters, where they are tied up, that they may be ready for use when wanted. They are then very fat, so that a small piece of dried fish is all that is given them, and this very sparingly, that they may be the sooner fit for work, as a fat heavy dog is never a good traveller. They do not bark like the European dogs, but make a sort of howl, and at this season they express the most piteous lamentations day and night for the loss of their liberty. The villages generally con- sist of fifteen or twenty houses, each of which has at least six dogs belonging to it, and when one dog sets up a howl, all the rest immediately follow, and make the most horrible noise imagi- nable.

Six of these dogs are the usual number yoked to a sledge, and they are capable of drawing a weight of 600 or 700 pounds, at tne rate of ten or twelve versts an hour ; the best dogs, however, will often go fifteen versts or more, which is from eight to ten miles. With about half a dried or frozen fish gwen them in the morning, they will run sixty or eighty, and sometimes even a hundred versts a day ; after which they are well fed. At other times food is very sparingly administered to them. The price of the common dogs is from thirty to forty rubles, but a good leader will sometimes sell for 100 rubles.

5. The greyhound is remarkable for the slen- derness of its form, its elongated snout, and the extreme swiftness of its course. It is indeed esteemed the fleetest of all the hunting dogs, but, as it wants the faculty of scent, follows by the eye. Formerly, the greyhound was held in such esteem, that, by the laws of king Canute, it was enacted that no one under the degree of a gentleman should presume to keep one.

6. Irish greyhound. This is the largest of the dog kind, and in its appearance the most beau- tiful and majestic. The breed is peculiar to Ire- land, where it was formerly of great use in destroying the wolves, with which that country was much infested, but is now extremely rare. These dogs are generally of a white or cinnamon color, and more robust than the greyhound, their aspect mild, and their disposition gentle and peaceable. It is said that their strength is so great, that in combat the mastiff or bull dog is far from being equal to them. They commonly seize their antagonists by the back, and shake them to death.

7. Italian greyhound, has the body arched and the snout tapering, but its size is only half that

of the common greyhound. It is a beautiful and delicate animal, not common in this country, the climate being too cold.

8. Harrier, another of the hunting dogs, closely allied to the beagle, and like that kind comprehending several varieties. This is larger than the beagle, more nimble, and better adapted to endure the labor of the chase. In the pur- suit of the hare it evinces the warmest ardor, and frequently outstrips the speed of the fleetest sportsman. A hybrid breed between this and the terrier, is sometimes kept for hunting the otter.

9. Blood-hound or Sleuth dog. This sort of hound was held in high request among our ances- tors, and as it was remarkable for the most ex- quisite sense of smelling, was frequently em- ployed in recovering game that had escaped from the hunter. It could follow, with great certainty, the footsteps of a man to a consider- •able distance, and was therefore of the utmost utility in those barbarous and uncivilised times, in tracing murderers and other felons through the most secret coverts. In many districts, in- fested with robbers, a certain number of these hounds were maintained at the public charge, and in general proved the means of discovering the perpetratois of crimes when every other en- deavour failed of success. The breed of this kind of dog is not very generally cultivated at this time. Some few are kept for the pursuit of deer which have been previously wounded by a shot to draw blood, the scent of which enables the dog to pursue with the greatest certainty. During the American war numbers of them were sent to that country, and employed in discovering fugitives concealed in the woods and other secret places : they were in use also, for a similar pur- pose, during the late revolts in the West-India islands, and likewise in Ireland at the time of the last rebellion. They are sometimes employed in discovering deer-stealers, whom they infallibly trace by the blood that issues from the wounds of their victims. They are also said to be kept in convents situated in the lonely mountainous countries of Switzerland, both as a guard to the sacred mansions, and to find out the bodies of men who have been unfortunately lost in crossing those wild and dreary tracts.

10. Old English hound is distinguished by its great size and strength : the body is long, with a deep chest, its ears long and sweeping, and the tone of its voice peculiarly deep and mellow. It possesses the most exquisite sense of smelling, and can often discover the scent an hour after the beagles have given it up. Dogs of this kind were once common in Britain, and are said to have been formerly much larger than at present.

11. Fox-hound. The breeding and training of this kind of dog is attended to wUh so much care in this country, that they are superior in strength, agility, and swiftness, to those of every other part of the world. It is affirmed, that the fox-hounds reared in this country lose much of their native vigor, on Keing transported into any other climate. In choosing these animals, such as stand high and appear light in their make are deemed preferable. The fox-hound is not limited to the pursuit of the fox only, but

is instructed also to hunt the stag and other deer, and is found

equal to the most arduous contests ot the chase. A chase of six or eight hours has been sustained by these hounds on many occasions; and in 1795, Merkin, a celebrated fox-hound bitch, was chal- lenged to rim any hound of her years, five miles over Newmarket, giving 220 yards, for 10,000 guineas, and as a run for trial, performed a race of four miles in seven minutes and a half.

12. King Charles's dog, a variety of the most elegant kind, and which is sufficiently known in this country under the appellation above-men- tioned. The head is small and rounded, with the snout short, and the tail curved back; its ears are long, hair curled, and feet webbed. Its name is derived from its being a favorite of Charles- II., who was always accompanied by some of these beautiful animals.

13. .Lion-dog, an animal generally of small size, having the head and fore part of the body covered with shaggy hair, while the hind part is quite smooth, except a tuft at the end of the tail.

14. Lurcher, the usual attendant on the poacher, is a dog of smaller size than the grey- hound, and stouter in proportion ; its hair rough and commonly of a .pale yellowish color, and the aspect of its visage remarkable for its sullenness. As this dog possesses the advantage of a fine scent, it is most commonly employed in killing hares and rabbits during the night-time. When turned into the warren it lurks about with the utmost precaution, and darts upon the rabbits, while feeding, without barking or making the least noise; and then conveys his booty in silence to his master.

15. Maltese dog, a variety with long soft and silky hair, appertaining to the spaniel kind, very small, and of a white color in general. This is one of the most elegant of the lap-dog kind, and in some varieties, as in the shock, is almost con- cealed in the hair which covers it from head to foot.

16. Mastiff. This is the size of a wolf, very robust in its form, and having the sides of the lips pendulous. Its aspect is sullen, its bark loud and terrific; and he appears every way formed for the important trust of guarding pro- perty committed to his care. As a house or yard dog, he may be perhaps more valuable than the Newfoundland breed, which is more commonly kept for this purpose. The mastiff, in its pure state, is seldom met with. The generality of dogs, distinguished by that name, are crossed breeds between the mastiff and bull-dog, or the ban-dog.

17. Newfoundland dog, a variety of large size, superior strength, sagacity,

and docile disposi- tion. The feet of this kind of dog are more pal- mated than usual, and the animal is remarkably partial to the water. The breed of Newfound- land dogs was originally brought from the coun- try of which they bear the name, where they are extremely useful to the settlers on those coasts, who employ them as animals of burden, to bring wood from the interior of the country to the sea side : three or four of them yoked to a sledge will draw two or three hundred weight of wood piled upon it for seve ^1 miles with great ease.*

18. Pointer, originally a native of Spain, but long since naturalised in this country. This dog

is remarkably apt at receiving instruction, and is chiefly employed in finding partridges, phea- sants, Sec., for the dog; or gun.

19. Pwg-dog has the nose turned upwards, the ears pendulous, and body square. In its outward appearance this animal resembles the bull-dog in miniature : it was formerly very com- mon in England, but has of late years become scarce.

20. Setter, a narcly, nimble, and handsome dog, possessed of an exquisite scent and sagacity in discovering various kinds of game, especially birds, and esteemed one of the most valuable of our hunting dogs.

21. Shepherd's dog, canis domesticus of Lin- njeus, and le chien de berger of Buffon, is dis- tinguished by its upright ears and remarkable velocity of the tail beneath ; and stands at the head of the first class of farm dogs. This breed of dogs is said to be preserved in the 'greatest purity in the northern parts of Scotland. In driving a number of sheep to any distant part, a well-trained dog never fails to confine them to the road ; he watches every avenue that leads from it, and. pursues the stragglers, if any should escape, and forces them into order without doing them the least injury. If the herdsman be at any time absent from the flock, he depends upon his dog to keep them together; and, as soon as he gives the well-known signal, tins faithful creature conducts them to his master, though at a considerable distance.

22. The Spaniel, is known by its curled hair, and propensity to the water. It is far more elegant than the water dog, and its aspect more sagacious and mild : the ears are long and pen- dulous, and the hair beautifully crisped. It ij chiefly used in discovering the haunts of water- fowl, and in finding birds that hate been shot in marshy places.

23. Terrier, a small thickset dog, of which there are two kinds, one with the legs short, the back long, and most commonly of a black or yellowish color

mixed with white ; the other of more sprightly appearance, with the body shorter, and the colot reddish-brown or black. In both the disposition is nearly the same ; it has an acute smell, is generally an attendant on every pack of hounds, and is very expert in forcing foxes and other game out of their coverts.

24. Turnspit, a spirited and active dog, once an indispensable attendant on the spit. The turnspit is distinguished by having the body long, the legs very short, and the tail curled on the hack ; its usual color is grayish, with black spots. Gmelin has three varieties of this family of dogs, one of which has the feet straight, ano- ther the feet curved, and the third having the body covered with long curly hair.

25. Water dog, a variety, distinguished by its curly hair, which much resembles wool. The webs between the toes are larger than in most other dogs, which sufficiently accounts for the ease with which it swims, and renders it useful in hunting ducks and other water-fowl. Dogs of this breed are also frequently kept on board ships, for the purpose of sending into the water after any small article that may chance to fall overboard.

In order to choose a dog and bitch for good whelps, take care that the bitch come of a gener- ous kind, be well proportioned, having large ribs and flanks ; and likewise that the dog be of a good breed and young ; for a young dog and an old bitch breed excellent whelps. The best time for hounds to be lined in, are the months of January, February, or March. The bitch should be used to a kennel, that she may like it after her whelping, and she ought to be kept warm. Let the whelps be weaned after two months old ; and though it be somewhat difficult to choose a whelp under the dam that will prove the best of the litter, yet some approve that which is last, and account him to be the best. Others remove the whelps from the kennel, and lay them se- verally and apart one from the other ; then they watch which of them the bitch first takes and carries into her kennel again, and that they sup- pose to be the best. Others again imagine that which weighs least when it sucks to be the best : this is certain, that the lighter whelp will prove the swifter. As soon as the bitch is littered, it is proper to choose them you mean to preserve, and drown the rest : keep the black, brown, or of one color, for the spotted are not much to be esteemed, though of hounds the spotted are t« be valued. Hounds for chase are to be chosen by their colors. The white, with black ears, and a spot at the setting on of the tail, are the prin- cipal to compose a kennel of, if of good scent and condition. The black hound, or the black tanned, or the all liver-colored, or all white :

the true talbots are the best of the stronger line ; the grizzled, whether mixed or unmixed, so they be shag-haired, are the best verminers, and a couple of these are proper for a kennel. In short, take these marks of a good hound : that his head be a middle proportion, rather long than round : his nostrils wide, his ears large, his back bowed ; his fillet great, his haunches large, thighs well trussed, ham straight, tail big near the reins, the rest slender, the leg big, the sole of the foot dry, and in the form of that of a fox, with large claws. As pointers and spa- niels, when good of their kinds, and well broken, are very valuable to sportsmen, it is worth while to take some care to preserve them in health. This very much depends on their diet and lodg- ing ; frequent cleaning their kennels, and giving them fresh straw to lie on, is very necessary; or, in summer time, deal shavings or sand, instead of straw, will check the breeding of fleas. A dog is of a very hot nature ; he should there- fore never be without clean water by him, that he may drink when he is thirsty. In regard to their food, carrion is by no means proper for them : it must hurt their sense of smelling, on which the excellence of these dogs greatly de- pends. Barleymeal, the dross of wheat flour, or both mixed together, with broth or skimmed milk, is very proper food. For change, a small quantity of greaves, from which the tallow is pressed by the chandlers, mixed with flour, or sheep's feet well baked or boiled, are a very good diet: and when you indulge them with flesh, it should always be boiled. In the season of hunting, it is proper to feed the dogs in the evening before, and give them nothing in the

morning they are to be taken out, but a little milk; but if you stop for your own refreshment in the day, the dogs s'hould also get a little bread and milk. A pointer ought not to be hunted oftener than two or three days in a week ; and unless you take care of his feet, and give him good lodging as well as proper food, he will not be able to perform that through the season. You should therefore, after a day's hard hunting, wash his feet with warm water and salt; and when dry, wash them with warm broth, or beer and butter, which will heal their soreness, and prevent a settled stiffness from fixing. It has been already observed, that dogs are of a hot constitution ; the greatest relief to them in sum- mer is twitch grass, sometimes called dog grass. It will therefore be proper to plant some of it in a place into which the dogs may be turned every morning ; and by feeding freely on it, they will be cured of the sickness they are subject to, as well as of any extraordinary heat of the blood ; but unless the grass be of this sort, it will have no effect. Dogs are exposed to different casualties, such as bites, blows, poison, &c. If dogs are bitten by any venomous creatures, as snakes, adders, &c., squeeze out the blood, and wash the place with salt and \irine; then lay a plaster to it made of calamine, pounded in a mor tar, with turpentine and yellow wax, till it come to a salve. If you give your dog some of the juice of calamine to drink in milk, it will be of service ; or an

ounce of treacle dissolved in sweet wine. If a dog has received any little wounds by forcing through hedges, or gets any lameness from a blow or strain, bathe the wound or grieved part with salt and cold vinegar (for warming it only evaporates the fine spirit) ; and when dry, if a wound, you may pour in it a little friar's balsam, which will perform the cure sooner than any method hitherto experienced.

For stealing a dog a man is to forfeit to the king, for the first offence, not less than £30, nor more than £50, with the charges attendant on his conviction, or be imprisoned not less than six, or more than twelve, months. Any person keeping a dog accustomed to bite, is liable to be indicted for a common nuisance; and an action will lie against any person for any sheep, horse, &c , torn by a dog, if it is proved that the animal has done so before

DOGS, DISEASES OF. Dogs are subject to various diseases : the principal are thus de- scribed by Elaine, with the method of their cure.

The canine asthma is hardly ever observed to attack any but either old dogs, or those who, by confinement, too full living, and want of exer- cise, may be supposed to have become diseased by these deviations from a state of nature. It is hardly possible to keep a dog very fat for any great length of time, without bringing it on. This cough is frequently confounded with the cough that precedes and accompanies distemper, but it may be readily distinguished from this l>y an attention to circumstances, as the age of the animal, its not affecting the general health, nor producing immediate emaciation, and its less readily giving way to medicine. The cure is often very difficult, because the disease has m general been long neglected before it is sufficiently

noticed by the owners. As it is in general brought on by confinement, too much warmth, and over-feeding ; so it is evident the cure must be begun by a steady persevering alteration in these particulars. The medicines most useful, are alteratives, and of these occasional emetics are the best. One grain of tartarised antimony (i. e. tartar emetic), with two, three, or four grains of calomel, is a very useful and valuable emetic. This dose is sufficient for a small dog, and may be repeated twice a week with great success — always with palliation.

Of diseases of the eyes dogs are subject to almost as great a variety as ourselves, many of which end in blindness. No treatment yet dis- covered

will remove or prevent this complaint. Sore eyes, though not in general ending in blind- ness, aro very common among dogs. It is an affection of the eyelids, is not unlike the scrofu- lous affection of the human eyelids, and is equally benefited by the same treatment : an unguent' made of equal parts of nitrated quicksilver oint- ment, prepared tutty and lard, very lightly ap- plied. Dropsy of the eyeball is likewise some- times met with, but is incurable.

Cancer. The virulent dreadful ulcer, that is so fatal in the human subject, and is called cancer, is unknown in dogs ; yet there is very commonly a large schirrous swelling of the teats in bitches, and of the testicles (though less frequent) in dogs, that as it sometimes becomes ulcerated, so it may be characterised by this name. In the early state of the disease discutients prove useful, as vine- gar with salt, and camphor and Spanish flies, with mercurial ointment, have sometimes suc- ceeded ; taking care to avoid irritating the part so much as to produce blister. But when the swelling is detached from the belly, and hangs pendulous in the skin, it had better be removed, and as a future preventive suffer the bitch to breed. Schirrous testicles are likewise some- times met with ; for these no treatment yet dis- covered succeeds but the removal of the part, and that before the spermatic chord becomes much affected, or it will be useless.

Colic. Dogs are subject to two kinds of co- lic ; one arising from constipation of the bowels, the other is of a kind peculiar to dogs, apparently partaking of the nature of rheumatism, and also of spasm. From a sudden or violent exposure to cold, dogs become sometimes suddenly para- lytic, particularly in the hinder parts; having great tenderness and pain, and every appearance of lumbago. In every instance of this kind there is considerable affection of the bowels, generally costiveness, always great pain. A warm bath, externnl stimulants, but more particularly active aperients, remove the colic. Colic, arising from costiveness, is not in general violently acute from the pain it produces ; sometimes it appears ac- companied with more spasm than is immediately dependent on the confinement of the bowels. In the former give active aperients, as calomel with pil. cochire, i. e. aloetic pill and glysters; in the latter castor oil, with laudanum and ether.

Cough. Two kinds of cough are common among dogs, one accompanying distemper, the other in an asthmatic affection of the chest. See Canine Asthma.

Distemper. This is by far the most common and most fatal among the diseases of dogs; hardly any young dog escaping it ; and of the few who do escape it in their youth, three- fourths are attacked with it at some period after- wards : it being a mistake that young do

is much stupidity, aim ihe head seems much affected, a blister on the top is often serviceable.

Fits. Dogs are peculiarly subject to fits. These are of various kinds, and arise from va- rious causes. In distemper, dogs are frequently attacked with convulsive fits, which begin with a champing of the mouth and shaking of the head, gradually extending over the whole body. Sometimes an active emetic will stop their pro- gress, but more generally they prove fatal. Worms are often the cause of fits in dogs. These deprive the animal wholly of sense; he runs wild till he becomes exhausted, when he gra- dually recovers, and perhaps does not have one again for some weeks. Confinement produces fits and likewise costiveness. Cold water thrown over a dog will generally remove the present attack of a fit; and for the prevention of their future recurrence it is evident, that the foregoing account of causes must be attended to.

Inflamed bowels. Dogs are very subject to inflammation of their bowels, from costiveness, from cold, or from poison. When inflammation arises from costiveness it is in general very slow in its progress, and is not attended with very acute pain, but it is characterised by the want ot evacuation and the vomiting of the food taken, though it may be eaten with apparent appetite. In these cases the principal means to be made use of are the removal of the constipation by active purging, clysters, and the warm bath. Calomel with aloes forms the best purge. But when the inflammation may be supposed to arise from cold, then the removing of any costiveness that may be present is but a secondary consi- deration. This active kind of inflammation i? characterised by violent panting, total rejection of food, and constant sickness. There is great heat in the belly, and great pain ; it is also ac- companied with great weakness, and the eyes are very red. The bowels should be gently opened with clysters, but no aloes or calomel should be made use of. The belly should be blistered > having first used the warm bath. When the in- flammation arises from poison, there is then con- stant sickness, the nose, paws, and ears are ".old, and there is a frequent evacuation of brown or bloody stools. Castor oil should be given, and clysters of mutton brotn thrown up, but it is seldom any treatment succeeds.

Inflamed lungs. Pleurisy is not an uncom- mon disease arrong dogs. It is sometimes epi- demic, carrying off great numbers. Its attack is rapid, and it generally terminates in death on the third day, by a great effusion of water in the chest. It is seldom that it is taken in time, when it is, bleeding is

useful, and blisters may be applied to the chest.

Madness. The symptoms of madness are thus summed up by Mr. Daniel : — ‘ At first the dog looks dull, shows an aversion to his food and company, does not bark as usual, but seems to murmur; is peevish, and apt to bite strangers; his ears and tail drop more than usual, and he appears drowsy ; afterwards he begins to loll out his tongue, and froth at the mouth, his eyes seeming heavy and watery : if not confined he soon goes off, runs panting along with a de- jected air, and endeavours to bite any one he

meets. If the mad dog escapes being killed, he seldom runs above two or three days, when he dies exhausted with heat, hunger, and disease.’ Elaine describes this formidable disease as com- mencing sometimes by dullness, stupidity, and retreat from observation ; but more frequently, particularly in those dogs which are immediately domesticated around us, by some alteration in their natural habits ; as a disposition to pick up and swallow every minute object on the ground ; or to lick the parts of another dog incessantly ; or to lap his own urine, &c. About the second or third day the disease usually resolves itself into one of two types. The one is called raging, and the other dumb madness. These distinctions are not, however, always clear ; and to which is owing so much discrepancy in the accounts given by different persons of the disease.

The raging madness, by its term, has led to an erroneous conclusion, that it is accompanied with violence and fury ; which, however, is sel- dom the case : such dogs are irritable and snap- pish, and will commonly fly at a stick held to them, and are impatient of restraint : but they are seldom violent except when irritated or wor- ried. On the contrary, till the last moment they will often acknowledge the voice of their master, and yield some obedience to it. Neither will they usually turn out of their way to bite hurran persons ; but they have an instinctive disposi- tion to do it to dogs ; and in a minor degree to other animals also : but, as before observed, sel- dom attack mankind without provocation.

Dumb madness is so called because there is seldom any barking heard, but more particu- larly, because the jaw drops paralytic, and the tongue lolls out of the mouth, black, and appa- rently strangulated. A strong general character of the disease, is the disposition to scratch their bed towards their belly ; and equally so is the general tendency to eat trash, as hay, straw, wood, coals, dirt, &c. : and it should be remem- bered, that this is so very common and so inva- riable, that the finding these matters in the sto- mach after death, should always render a suspi- cion formed of the existence of the disease con- firmed into certainty. Elaine is also at great pains to disprove the nation generally enter- tained, that rabid dogs are averse to water ; and neither drink or come near it. This error he contends has led to

most dangerous results; and is so far from true, that mad dogs from their heat and fever are solicitous for water, and lap it eagerly. When the dumb kind exists in its full force, dogs cannot swallow what they attempt to lap ; but still they will plunge their heads in it, and appear to feel relief by it : but in no in- stance out of many hundreds, did he ever dis- cover the smallest aversion to it. He lays very great stress on the noise made by rabid dogs, which he says is neither a bark nor a howl, but a tone compounded of both. It has been said by some that this disorder is occasioned by heat or bad food, and by others that it never arises from any other cause but the bite. Accordingly this malady is rare in the northern parts of Turkey, more rare in the southern provinces or that empire, and totally unknown under the burning sky of Egypt. At Aleppo, where tnese

aaimals perish in great numbers, for want of water and food, and by the heat of the climate, this disorder was never known. In other parts of Africa, and in the hottest zone of America, dogs are never attacked with madness. Blaine knows of no instance of the complaint being cured, although he has tried to their fullest extent the popular remedies of profuse bleedings, strong mercurial and arsenical doses, vinegar, partial drowning, night-vshade, water plantain, &c. : he therefore recommends the attention to be princi- pally directed towards the prevention of the ma- lady. The preventive treatment of rabies or madness is, according to Blaine, always an easy process in the human subject, from the imme- diate part bitten being easily detected ; in which case the removal of the part by excision or cau- tery is an effectual remedy. But, unfortunately for the agriculturist, it is not easy to detect the bitten parts in cattle, nor in dogs ; and it would be therefore most desirable if a certain internal preventive were generally known. Dr. Mead's powder, the Ormskirk powder, sea-bathing, and many other nostrums are deservedly :n disre- pute : while a few country medicines, but little known beyond their immediate precincts, have maintained some character. Conceiving that these must all possess some ingredient in com- mon, he was at pains to discover it;' and which he appears to have realized, by obtaining, among others, the composition of Webb's Watford drink. In this mixture, which is detailed below, he con- siders the active ingredient to be the buxus or box, which has been known as a prophylactic as long as the times of Hippocrates and Celsus, who both mention it. The recipe, detailed below, has been administered to nearly three hundred animals of different kinds, as horses, cows, sheep, swine, and dogs : and appears to have succeeded in nineteen out of every twenty cases, where it was fairly taken and kept on the stomach. It appears also equally efficacious in the human subject ; in which case he advises the extirpation

of the bitten parts also. The box preventive is thus directed to be prepared : — Take of the fresh leaves of the tree-box two ounces, of the fresh leaves of rue two ounces, of sage half an ounce, chop these fine, and boil in a pint of water to half a pint; strain carefully, and press out the liquor very firmly ; put back the ingredients into a pint of milk, and boil again to half a pint; strain as before; mix both liquors, which forms three doses for a human subject. Double this quantity is proper for a horse or cow. Two- thirds of the quantity is sufficient for a large dog, half for a middling-sized, and one-third for a small dog. Three doses are sufficient, given each subsequent morning, fasting; the quantity directed being that which forms these three doses. As it sometimes produces strong effects on dogs, it may be proper to begin with a small dose ; but in the case of dogs we hold it always prudent to increase the dose till effects are evident, by the sickness, panting, and uneasiness of the dog. In the human subject, where this remedy appears equally efficacious, we have never wit- nessed any unpleasant or active effects, neither are such observed in cattle of any kind : but candor obliges us to add, that in a considerable

proportion of these, other means were used, as the actual or potential cautery : but in all the animals other means were purposely omitted. That this remedy, therefore, has a preventive quality, is unquestionable, and now perfectly established ; for there was not the smallest doubt of the animals mentioned either having been bitten, or of the dog being mad who bit them, as great pains were in every instance taken to ascertain these points. To prevent canine madness, Pliny recommends worming of dogs ; and from his time to the present it has had, most deservedly, says Daniel, its advocates. He tells us, that he has had various opportunities of proving the usefulness of this practice, and re- commends its general introduction. Blaine, on the contrary, asserts that the practice of worm- ing is wholly useless, and founded in error; and that the existence of any thing like a worm under the tongue is incontestably proved to be false ; and that what has been taken for it, is merely a deep ligature of the skin, placed there to restrain the tongue in its motions. He also observes, that the pendulous state of the tongue in what is termed dumb madness, with the exist- ence of a partial paralysis of the under jaw, by which they could not bite, having happened to dogs previously wormed, has made the inability to be attributed to this source, but which is wholly an accidental circumstance; and happens equally to the wormed and unwormed dog.

Mange. This is a very frequent disease in dogs, and is an affection of the skin, either caught by contagion, or generated by the animal. The scabby mange breaks out in blotches along the back and neck, and is common to Newfoundland dogs, terriers, pointers, and spaniels, and is the most contagious. The cure should be begun by removing the first exciting cause, if removable, such as filth or poverty ; or, as more generally the contrary

(for both will equally produce it), too full living. Then an application should be made to the parts, consisting of sulphur and sal am- moniac : tar-lime-water will also assist. When there is much heat and itching, bleed and purge. Mercurials sometimes assist, but they should be used with caution; dogs do not bear them well.

Worms. Dogs suffer very much from worms, which, as in most animals, so in them, are of several kinds : but the effects produced are nearly similar. In dogs having the worms the coat generally stares ; the appetite is ravenous, though the animal frequently does not thrive the breath smells, and the stools are singular, sometimes loose and flimsy, at others hard and dry; but the most evil they produce is occasional fits, or sometimes a continued state of convulsion, in which the animal lingers some time, and then dies ; the fits they produce are sometimes of the violent kind, at others they exhibit a more stupid character, the dog being senseless, and going round continually. The cure consists, while in this state, in active purgatives joined with opium, and the warm bath ; any rough substance given internally, acts as a vermifuge to prevent the re- currence. The worming of whelps is performed with a lancet, to slit the thin skin which imme- diately covers the worm ; a small awl is then to be introduced under the centre of the worm to

raise it up ; the farther end of the worm will, with very little force, make its appearance, and vith a cloth taking hold of that end, the other •will be drawn out easily ; care should be taken that the whole of the worm comes away without breaking, and it rarely breaks unless cut into by the lancet, or wounded by the awl.

DOGS' SKINS, dressed with the hair on, are used in muffs, made into a kind of buskins for persons in the gout and for other purposes. Dressed without the hair, they are used for ladies' gloves, and the linings of masks, being thought to make the skin peculiarly white and smooth. The French import many of these skins from Scotland, under a small duty. Here, when tanned, they serve for upper leathers for neat pumps. Dogs' skins dressed are exported under a small, and imported under a high duty. The French import from Denmark large quantities of dogs' hair, both white and black. The last is esteemed the best, and is worked up in the black list of a particular kind of woollen cloth.

DOGS, ISLE OF, a small tract of low land in the county of Middlesex, opposite to Greenwich ; where Togodumnus, brother of Caractacus, is said to have been killed in a battle with the Romans, A. D. 46. The Isle of Dogs is said to have derived its name from being the depot of the spaniels and greyhounds of Edward III. ; and to have been chosen for this purpose because it lay contiguous to his sports of woodcock shooting, and coursing the red deer, in Waltham and the other royal forests in Essex. It is well known that, for the more convenient enjoyment of these sports, he generally resided, in the sporting season, at Greenwich.

One of the largest canals ever attempted in England has been cut, nearly one mile and a quar- ter in length, 142 feet wide at top, and twenty- four feet deep, across the Isle of Dogs, for short- ening the passage of vessels to and from the pool, and to avoid the long circuit by Greenwich and Deptford. When the locks and other works of this canal were nearly finished, an unforeseen accident, by the blowing up of the coffer and preventer dams, just as the entrance-locks were completed, on the 24th of July 1805, prevented this canal from being opened until the 9th of December, when the Duchess of York West Indiaman, of 500 tons burden, passed through it, in presence of the lord mayor and corporation of London. Several large sums of public money having been granted out of the consolidated fund, in aid of this project, for the repayment of them, vessels passing through this canal of 200 tons or upwards paid, for three years after its completion, 2d. per ton; those from 200 to 100 tons, \ˆd. per ton; from 100 to 50 tons, Id. per ton; 50 to 20 tons, 5s. each, and boats and craft Is. each. This canal is now the property of the directors and company of the noble docks adjoining.

DOG-BANE, in botany. See APOCYNUM.

DOG-BERRY-TREE. See CORNUS.

DOG-DAYS. See CANICULA.

DOGE, n. s. Ital. dodge. The title of the chief magistrate of Venice and Genoa.

Doria has a statue at the entrance to the doge's jialacc with the title of deliverer of the common •wealth. Addison. .

DOGE OF VENICE was formeily the chief of the council, and the mouth of the republic ; yet the Venetians did not go into mourning at his death, as not being their sovereign, but only their first minister. At Venice he was elected for life ; at Genoa, only for two years ; he was addressed under the title of serenity, which was esteemed superior to that of highness. In fact,

the doge of Venice was only the shadow of a prince ; all the authority being reserved to the republic. Anciently, indeed, the doges were sovereigns ; but, for a considerable time past, all the preroga- tives reserved to the quality of doge were these he gave audience to ambassadors; but did not give them any answer from himself, in matters of any importance; only he was allowed to answer as he pleased to the compliments they made to the seignory. The doge, as being first magistrate, was head of all the councils ; and the credentials which the senate furnished its ministers in foreign courts, were written in his name ; but a secretary of state signed and sealed them with the arms of the republic. The ambassadors directed their despatches to the doge : yet he was not allowed to open them but in presence ot the counsellors. The money was struck in the doge's name, but not with his stamp or arms. All the magistrates rose and saluted the doge when he came into council : but the doge rose to none but foreign ambassadors. He nominated to all the benefices in the church of St. Mark ; he was protector of the monastery of the Virgin, and bestowed cer- tain petty offices of ushers of the household, cal- led commanders of the palace. His family was not under the jurisdiction of the master of the ceremonies ; and his children had staff-officers, and gondoliers in livery. But his grandeur was tempered with various circumstances, which ren- dered it burdensome. He could not go out of Venice without leave of the council ; and if he did he was liable to receive affronts, without being entitled to demand satisfaction. His chil- dren and brothers were excluded from all the chief offices of state. They could not receive any benefice from the court of Rome ; but were allowed to accept of the cardinalate, as being no benefice, nor including any jurisdiction. The doge could not divest himself of his dignity, for his ease; and, after his death, his conduct was examined by three inquisitors and five correctors, who sifted it with great severity.

DOG-FISH. See SQQALUS.

DOGGER, in sea-language, a strong vessel with two masts, used by the Dutch, &c., for fishing in the German sea, and on the Dogger-bank. On ' the main-mast are set two square-sails ; on the mizen-mast a gaff-sail, and above that a top-sail. Also a bow-sprit with a sprit-sail, and two or three jibs.

DOGGER-BANK, in geography, a very extensive sand-bank in the German Ocean, between the coast of England and Germany. It stretches south-east and north-west, beginning about twelve leagues from Flamborough-head, and ex- tending nearly seventy-two leagues towards the coast of Jutland. Between the Dogger and the Well-bank, to the south, are the silver pits of the Marinus, which supply London with cod ; a fish which loves the deep water n«-ar the banks.

A. sanguinary but indecisive engagement was fought near it on 5th August 1781, between the English and Dutch.

DO'GGEREL, adj. & n. s. From dog. Loosed from the measures or rules of regular poetry; vile; despicable; mean.

Beside all this, he served his master In quality of poetaster, And rhymes appropriate could make To every month i' the almanack ; When terms begin and end could tell, With their returns, in doggerel. Hudibrcu.

Then hasten Og and Doeg to rehearse. Two fools that crutch their feeble sense on verse ; Who by my muse to all succeeding times Shall live, in spite of their own doggerel rhymes.

Dryden.

The hand and head were never lost of those Who dealt in doggerel, or who pined in prose.

Dryden's Juvenal.

It is a dispute among the critics, whether burlesque poetry runs best in heroic verse, like that of the Dis- pensary j or in doggerel, like that of Hudibras.

Addiion's Spectator.

The vilest doggerel Grub-street sends Will pass for yours with foes and friends. Swift. DOGGET (Thomas), an Irish comedian, was a native of Dublin. He played comic characters at Drury-lane with applause, and finally became joint manager of that house. He died at Eltham in Kent in 1721, leaving a sum to provide a coat and badge to be rowed for by six watermen, yearly on the 1st of August, the day of the acces- sion of George I. He wrote a comedy called the Country Wake, afterwards altered to Flora, or Hob in the Well.

DOGGERS, in the English alum-works, a name given by the workmen to a sort of stone found in the same mines with the true alum rock, and containing some alum, though not near so much as the right kind. The county of York, which abounds greatly with the true alum rock, affords

also a very considerable quantity of these dog- gers ; and in some places they approach so much to the nature of the true rock, that they are wrought to advantage.

DOG'MA, «, s. "l Fr. dogme ;

DOGMAT'IC, adj. Lat. dogma; Gr.

DOGMAT'ICAL, adj. Soyfia, from St-

*DOGMAT'ICALLY, adv. £oy/*ai, per. pass.*

DOOM AT'ICALN ESS, n. s. >of doictu, to DOG'MATISM, j judge. Fixed

DOG'MATIST, principle or doc-

DOG'MATIZE, v. n. I trine; see the ex-

DOG'MATIZER, n. s. j tract from Ay-

liffe : dogmatic and dogmatical mean authorita- tive ; positive ; in the manner of a teacher. Dog- matism and dogmaticalness, positiveness of opi- nion; over-bearing manner. To dog-matise, tc lay down propositions or opinions positively.

Such opinions, being not entered into the confes- sions of our church, are not properly chargeable either on Papists or Protestants, but on particular dogma- tizers of both parties. Hammond.

I could describe the vanity of bold opinion, which the dogmatists themselves demonstrate in all the con- Iroversies they arc engaged in. Glanville's Scepsis.

The dim and bounded intellect of man seldom prosperously adventures to be dogmatical about things

that approach to infinite, whether in vastncss or little ness. Boyle

I shall not presume to interpose dogmatically in a controversy, which I look never to see decided.

South.

Our poet was a stoic philosopher, and all his moral •sentences are drawn from the dogmas of that sect.

Dryden.

Learning gives us a discovery of our ignorance, and keeps us from being peremptory and dogmatical in our determinations. Collier on Pride.

Critics write in a positive dogmatick way, without either language, genius, or imagination. Spectator.

One of these authors is indeed so grave, senten- tious, dogmatical a rogue, that there is no enduring him. Swift.

Dogma, in canon law, is that determination which consists in, and has a relation to, some casuistical point of doctrine, or some doctrinal part of .the Chris- tian faith. AyLjfe's Parergon.

A dogmatist in religion is not a great way off from a bigot, and is in high danger of growing up to be a bloody persecutor. Watts' Improvement of the Mind.*

Nothing can be more unphilosophical than to be positive or dogmatical on any subject ; and even if ex- cessive scepticism could be maintained, it would not be more destructive to all just reasoning and inquiry.

Hume.

Perhaps what I have here not dogmatically but deliberately written, may recal the principles of the drama to a new examination.

Johnson's Preface to Shakspeare.

If the present establishment should fall, it is this religion which will triumph in Ireland and in Eng- land, as it has triumphed in France. This religion, which laughs at creeds, and dogmas, and confessions of faith, may be fomented equally amongst all descrip- tions, and all sects ; amongst nominal catholics, and amongst nominal churchmen ; and amongst those dis- senters who know little, and care less, about a presby- tery, or any of its discipline, or any of its doctrines.

Burke.

At present, we can well conceive the probability of his dogmatism being patiently supported by attend- ing admirers, awed by the literary eminence on which he stands. Seward.

DOGMATISTS, a sect of ancient physicians, of which Hippocrates was the founder. They are also called logici, logicians, from their using the rules of logic in medical subjects. They laid down definitions and divisions ; reducing dis- eases to certain genera, and those genera to species, and

furnishing remedies for them all ; supposing principles, drawing conclusions, and applying those principles and conclusions to par- ticular diseases under consideration; in which sense, the dogmatists stand contradistinguished from empirics and methodists.

DOG-RIBBED INDIANS, a nation of North Americans, who inhabit round Lake Edland, in the north-west part of North America. They are often at war with the Arathapescow Indians. Both these tribes are among the most savage of the human race. They trade with the Hudson Bay Company's settlements.

DOG-STAR. See SIRIUS.

DOGS-TOOTH. See ERYTHRONIUM.

DOG-WOOD. See CORNUS.

DOG-WOOD OF JAMAICA, a species of erythrina

DOG-WOOD TREE. See PISCIPIA.

DOIAGOI, an island of Asiatic Russia, in the Frozen Sea, at the entrance of Vagatskoi, or Waygat's Straits. Long. 57° 14′ E., lat. 70° 5'N.

DOI'LY, n. s. A species of woollen stuff, so called, I suppose, says Dr. Johnson, from the name of the first maker.

We should be as weary of one set of acquaintance,

though never so good, as we are of one suit, though

never so fine : a fool and a doily stuff, would now

and then find days of grace, and be worn for variety.

Congrere's Way of the World,

DOIT, n.s. Dut. duyt; Erse, doyght. A small piece of money.

When they will not give a doit to relieve a lam beggar, they will lay out ten to see a dead Indian. Shakspeare. Tempest.

In Anna's wais a soldier, poor and old, Had dearly earned a little purse of gold ; Tired with a tedious march, one luckless night Fie slept, poor dog ! and lost it to a doit. Pope.

DOIT was the ancient Scottish penny piece ; of which twelve were equal to a penny sterling. It was a small copper coin, as thin as a silver penny and not much larger. Doits were extremely nu- merous in Scotland before the Union, and were current for several years after it. Two of them were equal to the bodle, six to the baubee, and eight to the acheson. Some of them, struck in the reigns of Charles I. and II., with C. R.1 or C. R.« on the one side, and the thistle on the other, are still to be found in the cabinets of antiquaries.

DOL, a town [of France, in Brittany, depart- ment of the Ille and Vilaine. Population 3300. It is thirty-four miles north-west of Rennes, and 232 west of Paris.

DOLBEN (John), an English prelate, born at Stan wick, in Northamptonshire, in 1625. Was educated at Westminster School, and at Christ Church, Oxford. In the civil wars he served as an officer in the royal army, and rose to the rank of major. Returning on the decline of the king's affairs to college, he took his degrees and entered into orders. At the Restoration he obtained a canonry of Christ Church, and the deanery of Westminster. He was promoted in 1666 to the see of Rochester, and from thence in 1683 he removed to York, where he died of the small pox in 1686. Some of his sermons are still extant.

DOLCE (Charles, or Carlino), a celebrated historical and portrait painter, born at Florence in 1616. He was the disciple of Vignali, and was particularly fond tof representing pious sub- jects, though he sometimes painted portraits. His works are easily distinguished by the peculiar delicacy with which he perfected all his composi- tions, by a pleasing tint of color, and by a ju- dicious management of the chiaro scuro. His performance was remarkably slow ; and it is re- ported that his brain was fatally affected by see- ing Lucas Jordana despatch more business in four or five hours than he could have done in as many months. He died in 1686.

*DOLE, n. s. * From deal ; Sax. ˆaelan. The act of distribution or dealing. The thing dealt. It was your presurmise,*

Tiat (n the dole of blows your son might drop.

Shaktpeare,

Now my' masters, happy man be his dole, say I every man to his business.

Id.

The personal fruition in any man cannot reach to feel great riches: there is a custody of them, or a power of dole and donative of them, or a fame of them, but no solid use to the owner. Bacon.

Now thou art lifted up, draw me to thee, And, at thy death giving such liberal dole, Moist with one drop of thy blood my dry soul.

Donne. Divine Poems.

What if his eye-sight, for to Israel's God Nothing is hard, by miracle restored, He now be dealing dole among his foes, And over heaps of slaughtered walk his way.

Milton.

Let us, that are unhurt and whole, Fall on, and happy man be 's dole.

Hudibras.

Clients of old were feasted ; now a poor Divided dole is dealt at the' outward door, Which by the hungry rout is soon dispatched.

Dryden'i Juvenal. At her general dole, Each receives his ancient soul. Cleaveland.

DOLE, n. s. ~] Old Fr. dole, seems

DOLE'FUL, adj. to be the origin of the

DOLE'FCLLY, adv. first class of these DOLE'FULNESS, n.s. words; and Lat. dolor DOLE'SOME, adj. of the second. The

DOLE'SOMELY, adv. ˆsubstantive roots sig

nify, in both, grief; sorrow ; and hence its causes, pain ; depriva- tion ; and its expres- sion, lamentation, com-

DOLE'SOMENESS, n.s. DO'LOR, n. s. DOLORIF'IC, adj. DO'LOROUS, adj. DO'LOROUSLY, adv. plaint.

For none but you, or who of you it learns, Can righfully aread so doleful lay. Spenser.

With kindly counter under mimick shade, Our pleasant Willy, ah ! is dead of late ; With whom all joy and jolly merriment Is also deaded, and in

dolour drent. Id.

We are taught, by his example, that the presence of dolorous and dreadful objects, even in minds most perfect, may, as clouds, overcast all seasonable joy.

Hooker.

Our sometime sister, now our queen, Have we, as 'twere, with a defeated joy, With mirth in funeral, and with dirge in marriage, In equal scale weighing delight and dole, Taken to wife. Shakspeare. Hamlet.

I've words too few to take my leave of you, When the tongue's office should be prodigal, To breathe the' abundant ddour of the heart. Id.

You take me in too dolourous a sense : I spake t' you for your comfort. Id.

A mind fixed and bent upon somewhat that is good, doth avert the dolourt of death. Bacon.

They might hope to change Torment with ease, and soonest recompense Dole with delight. Milton's Paradise Lost.

No light, but rather darkness visible,

Served only to discover sights of woe,

Regions of sorrow ; doleful shades, where peace

And rest can never dwell. Id.

Yet to that hideous place not so confined

By rigour unconniving, but that oft

Leaving my dolorous prison I enjoy

Large liberty. ' "1 Id,

DOL

31/7

DOL

No man could comfort other : every man was too full of his own sorrow : helping rather to make the % noise of the lamentation more doleful and

astonishing. Dp. Hall. Contemplations.

With screwed face, and doleful whine, they only ply with senseless harangues of conscience against carnal ordinances. South.

The pain returned, dissipating that vapour which obstructed the nerves, and giving the dolorifick motion free passage again. Kay.

*She earnestly entreated to know the cause thereof, that either she might comfort or accompany her dole- *ul humour. Sidney.*

Never troubling him either with asking questions or finding fault with his melancholy ; but rather fit- ting to his dolour, dolorous discourses of their own anc other folks' misfortunes. Id m

Hell-ward bending o'er the beach descry The dulesome passage to the infernal sky.

Pope's Odyssey.

Talk not of ruling in this dvlorous gloom, Nor think vain words, he cried, can ease my doom.

Pope.

Happy the mortal man, who now at last Has thought this doleful vale of misery past ; Who to his destined stage has carried on The tedious load, and laid his burden down.

Prior.

Thi?, by the softness and rarity of the fluid, is in- sensible, and not dolorifick. Arbuthnot on Air.

DOLE, a large well-built town of France, on the river Doubs, in Franche Ccmpte", in the de- partment of the Jura. The country around has, from its fertility and beauty, received the name of the Val d'Amour. It has several good edi- fices, as the Palais de Justice, the former Chambre des Comptes, the church of Notre Dame, the College d'Arc, and the Hotel Dieu Hospital. It has also a pleasant public pro- menade.

Dole was the Dola Sequanarum of the Ro- mans, and contains considerable remains of that people. The great Roman road to Lyons passed through this place; and here arc two aqueducts and a public edifice near the river of their erec- tion. It was the capital of Franche Compte un- til 1674, and, is twenty-three miles south of Besancon, and twenty-eight south-east of Dijon.*

DOLE, LA, a lofty point of the Jura chain of mountains, between the department of Jura and the Swiss canton of Vaud, it is elevated 5600 feet above the level of the sea, and has the appear- ance of an immense rock. From its summit there is a most magnificent view for 100 miles in each direction, and, on the side of France, a prospect which extends into Burgundy.

DOLGELLY, or DOLGETII, a town of North Wales, in Merionethshire, at the foot of the mountain Cader-Idris. A new court-house has been erected, in which the summer assizes for the county are held. The county jail is situated at a small distance from the town. The town and its neighbourhood have a peculiar manufacture of coarse undyed woollen cloth, called webbing or white plains, which is chiefly exported. It has a market on Tuesday. It is seated in a valley on the banks of the A\ on, thirty-one miles north- west of Montgomery, and 212 north-west of London.

DOLICHOS, in botany, a genus of the de- candria order, and diadelphia class of plants ; natural order thirty-second, papilionaceae. The basis of the vexillum has two callous knobs, ob- long, parallel, and compressing the alse below. There are fifty-three species, natives of the East and West Indies and of the Cape : the most re- markable are: 1. D. lablab, with a winding stalk, a native of warm climates, where it is fre- quently cultivated for the table. The Egyptians make pleasant arbours with it, by supporting the stem and fastening it with cords ; by which means the leaves form an excellent covering, and an agreeable shade. 2. D. pruriens, the couhage, cow-itch, or stinging bean, is also a native of warm climates. It has a fibrous root, and an herbaceous climbing stalk, which is naked, di- viding into a great number of branches ; and rises to a great height when properly supported. The leaves are alternate and trilobate, rising from the stem and branches about twelve inches dis- tant from each other. The foot-stalk is cylindri- cal, from six to fourteen inches long. From the axilla of the leaf descends a pendulous solitary spike, from six to fourteen inches long, covered with long blood-colored papilionaceous flowers, rising in clusters of three each, in a double alter- nate manner, from small fleshy protuberances, each of which is a short pedunculus of three flowers. These are succeeded by leguminous, coriaceous pods, like those of kidney beans, four or five inches long, densely covered with sharp hairs, which penetrate the skin, and cause great itching, stinging like a nettle, though not quite so painfully. This will grow in any soil in those countries where it is a native : but is generally eradicated from all cultivated grounds ; because the hairs from the pods fly with the winds, and torment every animal they happen to touch. If it was not for this mischievous quality, the beauty of its flower would entitle it to a place in the best gardens. It flowers in the cool months, from September to March, according to the situa- tion. The spiculce, or shraap hairs, of this

plant, have been long used in South America as a ver- mifuge, and have of late been frequently employed in Britain. The spiculae of one pod mixed with syrup or molasses, and taken in the morning fasting, is a dose for an adult. The beans are used in the East Indies as a cure for the dropsy. 3. D. soja is a native of Japan, where it is termed daidsu; and, from its excellence, mame; that is, the pod, by way of eminence. It grows with an erect, slender, and hairy stalk, to the height of about four feet. The leaves are like those of the garden kidney bean. The flowers, of a bluish-white, are produced from the blosom of the leaves, and succeeded by bristly hanging pods resembling those of the yellow lupine, which commonly contain two, sometimes three, large white seeds. This legumen is doubly useful in the Japanese kitchens. It serves for the preparation of a substance named miso, that is used as butter ; and likewise of a pickle cele- brated among them under the name of sooju or soy.

DOLL, n. s. A contraction of Dorothy; and hence a child's toy.

Jtoll tearsheet Shakiveare.

DO'LLAll, n.«. Dutch daler. Sec below. A Dutch and German coin of different value, from about two shillings and sixpence to four and sixpence.

He disbursed Ten thousand dollars for our general use.

Shabipeare. Macbeth.

DOLLAR, in this country, is chiefly applied to the Spanish silver coin, otherwise called a piece of eight. Dollars are also coined in different parts of Germany and Holland : and have their sub- divisions into semi dollars, quarter dollars, &c. See COINS.

DOLLART BAY, or THE DOLLERT, an arm of the North Sea, extending between East Fries- land in Hanover, and Groningen in the Nether- lands, to the mouth of the Ems. It is said to have been formed by the sea breaking in here towards the close of the thirteenth century ; when it swept away nearly fifty villages. On the side of East Friesland, the sea has in some measure receded.

DOLLOND (John), a celebrated optician, the inventor of the achromatic telescope, was de- scended from that useful body of artificers the French refugees of Spitalfields, London, where he was born 10th June, 1706. His education was limited by the circumstances of his friends, who could only

destine him to their own occu- pation, and he is said to have passed many years of his life as an operative silk-weaver. Mr. Dollond, however, possessed a mathematical and philosophical taste, which soon disclosed it-self; he acquired the Greek and Latin languages, together with a considerable knowledge of ana- tomy and scholastic divinity ; and though he married early, found means to continue his scien- tific pursuits, and bring up his family. In his eldest son Mr. Peter Dollond, he was happily afforded an heir of his own taste, and in 1752 he had so well established him in business as an optical instrument-maker, that he quitted Spital-fields to join him in partnership. This same year was read in the Royal Society, a letter of Mr. J.Doilond's to James Short, A. M. F. R. S., concerning a mistake in Mr. Euler's Theorem for correcting the Aberration in the Object Glasses of Refracting Telescopes, together with an introductory letter of Mr. Short, in which Euler's calculations are disputed; with Euler's answers to Short and Dollond. (Phil. Trans. 1753, p. 287.) ' It is somewhat strange,' says Mr. Dollond, ' that any body now-a-days should attempt to do that which so long ago has been demonstrated impossible : ' and his discoveries were doubtless fora while retarded by his defer- ence to the great name of Newton, whom Euler considered to agree with him ; and whose experi- ments were certainly compatible with the doctrine of Euler, while Mr. Dollond was better acquainted than either with the mechanism of the eye. In 1753 he describes, in a second letter to Mr. Short, a te- lescope with six glasses, ' calculated for correct- ing, either wholly or in a great measure, the errors of refraction arising from the dispersion of the different colors, as well as from the spherical form of the surfaces of the eye-glasses ; ' ap- pealing to the superiority of the telescopes, which he had thus constructed, above those

which had before been in use. He here reserves the det3.il of his theory for a future occasion.

His great discovery is narrated in an ' Ac- count of some Experiments concerning the dif- ferent Refrangibility of Light,' Phil. Trans, 1758, p. 733. Mr. Dollond commenced the decisive experiments here described, by putting a common prism of glass into a prismatic vessel of water, and varying the angle of the vessel till the mean refraction of the glass was compen- sated ; when he found that the colors were not destroyed, as they were supposed to have been in a similar experiment of Sir Isaac Newton's ; for the remaining dispersion was nearly as great as that of a prism of glass of half the refracting angle. A thinner wedge of glass being then em- ployed, our optician found that the image was colorless when the refraction of the water was about one-fourth greater than that of the glass. He next attempted to construct compound ob- ject-glasses by enclosing water between two lenses; but in this arrangement he found great inconvenience from the spherical aberration. He was, therefore, obliged to try the effects

of dif- ferent kinds of glass, and fortunately discovered that the refractions of flint and crown glass were extremely convenient for his purpose, the image afforded hy them being colorless, when the angles were to each other nearly as two to three : hence he inferred that a convex lens of crown-glass, and a convex one of flint, would produce a colorless image when their focal distances were in the same proportion. ‘ The spherical aberration, where the curvature was so considerable, still produced some inconvenience; but, having four surfaces capable of variation, lie was enabled to make the aberrations of the two lenses equal ; and since they were in opposite directions, they thus corrected each other.’ These arrangements required great accuracy of execution for their complete success ; but, in the hands of the in- ventor, they produced the most admirable in- struments ; and he was fortunate in obtaining a quantity of glass of remarkably uniform density. He afterwards made some small Galilean teles- copes, with triple object-glasses.

For these inventions Mr. Dollond received the Copleian medal of the Royal Society ; and in 1761 he was chosen a fellow of that learned body, and appointed optician to the king. Other valuable contributions of his to the So- ciety were, A description of a Contrivance for Measuring Small Angles, and an Explanation of an Instrument for that purpose. Trans. 1753 and 1754. His instrument consisted of a di- vided object-glass, with a scale for determining the distance of the images by measuring the li- near displacement of the two portions of the glass.

Mr. Dollond, however, did not long enjoy these well-deserved honors. On the 30th of November, 1761, as he was reading a new work of Clairaut on the theory of the moon, he fell down in an attack of apoplexy, which shortly became fatal. He left two sons who succeeded to his business.

DOLLOXD (Peter), eldest son ot Mr. John Dollond, the optician, was born in 1730. He communicated, in 1765, a paper to the Royal

Society on his improvement of telescopes ; adopting his father’s contrivance for measuring small angles (see above); and in 1772 another on his additions to and alterations in Hadley’s quadrant. In 1779 he gave an account of his equatorial instrument for correcting the errors arising from refraction in altitude; and in 1789, ‘ Some account of the discovery made by his father in refracting telescopes,’ which became also a separate

publication He died at Ken- sington in 1820, at the advanced age of ninety years.

DOLOMIEU (Deodate-Guy-Silvain Tancred Gratet de), a celebrated geologist, was born in Dauphiny in 1750. He entered into the service of the knights of Malta, and became a member of the order ; but, happening to kill one of his com- panions, was sentenced to death. The grand master, however, granted him a pardon, but it was necessary that this should be confirmed by the pope, and Dolomieu was closely confined for nine months under suspense. This perhaps de- cided his future studious habits. At the age of twenty-two he went to Metz, where he. studied chemistry and natural history. In 1783 he pub- lished his voyage to the Lipari Isles, and a me- moir on the earthquakes of Calabria. In 1788 appeared his Memoire sur les Isles Ponces, et catalogue raisonne de 1'Etna.

On the breaking out of the revolution, Dolo- mieu ardently embarked, with his friend La Rochefoucault, in the supposed cause of liberty; he was at Paris on the 14th of July, and when La Rochefoucault fell a victim to the horrors of the day, watched his last moments, and reˆ ceived the affectionate messages which he sent to his mother and his wife. He now resumed his geological studies in other parts of Europe, and particularly in its southern countries. He after- wards extended his researches into the physical constitution of Egypt, on which subject he ad- dressed a Memoir inserted in the Journ. Phys., v. xlii. In 1795 we find him again in France; and, upon the establishment of the school of Mines, he became Professor of Geology and In- spector of Mines. He was also one of the origi- nal members of the National Institute of Sciences and Arts. From this time he redoubled his philosophical labors, and published a great num- ber of memoirs in the course of a few years. He also furnished various contributions to the Encyclopedic Methodique. On the scientific ar- rangements being made for the expedition to Egypt, he was invited to take part in them : and on his journey was employed as a negociator for the surrender of Malta. In Egypt he visited the pyramids, and examined some of the mountains which form the limits of the country ; but his health compelled him to return long before his companions. On his voyage home, the vessel was nearly lost in a tempest, and was only saved at the last extremity by running into a port in the gulf of Tarentum. Here, as a knight of Malta, he was pronounced a traitor to the existing government, and committed to close confinement at Messina. In this unfortunate situation he re- mained until the peace of 1800, in which the French government stipulated expressly for his release. During this period he had commenced

a Series of Lectures on the Philosophy of Miner- alogy, written with bones and soot-water, on the margin of the few books he was allowed to read. He was appointed, during Ms confinement, the successor of Daubenton in the

Museum of Natu- ral History. His last publication was Sur la Philosophic Mineralotjique etsur 1'espece Miner- alogique. lie died at Paris, universally respected, 27th of November, 1801.

DOLOMITE. Of this calcareo-magnesian carbonate, we have three sub-species.

1. Dolomite, of which there are two kinds, viz. 1st. White granular. It occurs massive, and in fine granular distinct concretions, loosely ag-gregated. Lustre glimmering and pearly. Frac- ture imperfect slaty ; hard as fluor, and brittle. Specific gravity 2-83. It effervesces feebly with acids, and is phosphorescent on heated iron, or by friction. Its constituents are 46-5 Carbonate of magnesia, 52'08 carbonate of lime, 0'25 oxide of manganese, and 0-5 oxide of iron. 2d. Brown dolomite, or magnesian limestone of Tennant. Color, yellowish-gray and yellowish-brown. Mas-sive, in minute granular concretions. Lustre, internally glistening. Fracture splintery. Harder than calcareous spar. Brittle. Specific gravity of crystals, 2'8. It dissolves slowly, and with feeble effervescence. Its constituents are, lime 29'5, magnesia 20'3, carbonic acid 47'2, alumina and iron 0-8. In the north of England it occurs in beds of considerable thickness, and great ex- tent, resting on the Newcastle coal formation. In the Isle of Man it occurs in a limestone which rests on gray wacke.

2. Columnar Dolomite. Color, pale grayish- white. Massive, and in thin prismatic con- cretions. Cleavage imperfect. Fracture un- even. Lustre vitreous, inclining to pearly, Breaks into acicular fragments. Brittle. Spe-cific gravity 2'76. Its constituents are, 51 car- bonate of lime, 47 carbonate of magnesia, 1 carbonated hydrate of iron. It occurs in serpen- tine in Russia.

3. Compact Dolomite, or Gurhofite. Color, snow-white. Massive and dull. Fracture flat conchoidal. Semi-hard. Difficultly frangible. Specific gravity 2- 76. When pulverised, it dis- solves with effervescence in hot nitric acid. It consists of 70'5 carbonate of lime, and 29'5 car- bonate of magnesia. This kind occurs in veins of serpentine rocks, near Gurhoff, in Lower Austria.

DOLPHIN, n.s. Fr. dauphin; Germ. Span. Ital. and Lat. delphin, from Gr. fcXˆic a dt\aK, a pig, because the dolphin resembles a pig in its fatness, and the form of its intestines, &c., says Minsheu after Becmanus. A fish. See our article DELPHINUS.

His delights

W ere dolphin like ; they shewed his back above The element they lived in.

Shakspeare.

Draw boys riding upon goats, eagles, and dolphins.

Peacham.

Misshapen seals approach in circling flocks, In dusky mail the tortoise climbs the rocks, Torpedoes, sharks, rays, Corpus, 'dolphins, pour Their twinkling squadrons round the glittering shore.

Darwin.

DOM 4'

DOLPHIN OP THE MAST, in sea language, a peculiar kind of wreath, formed of plaited cordage, to be fastened occasionally round the masts as a support to the puddening, whose use is to sus tain the weight of the fore and main yards in case the rigging or chains by which those yards are suspended should be shot away in the time of battle ; a ciicumstance which might render their ' sails useless at a season when their assistance is extremely necessary.

DOLT, n. s.) Teut.andSax. dol. A heavy DOLTISH, adj. \ stupid fellow ; a blockhead ; a thickscull; a loggerhead. It is clearly the past participle of dull, as Mr. Tooke says.

Thou hast not half that power to do me harm, As I hare to be bur' : oh gull, oh dolt, As ignorant as dirt ! Shakspcare. Othello.

Like men condemned to thunder-bolts, Who, ere the blow, become mere dolts ; They neither have the hearts to stay, Not wit enough to run away. Hudibras.

Dametas, the most arrant doltish clown that ever was without the privilege of a bauble. Sidney.

Let dolts in haste some altar fair erect To those high powers, which idly sit above. Id.

Wood's adulterate copper, Which, as he scattered, we, like dolts, Mistook at first for thunder-bolts. Swift.

DO'MAIN, n. s. Fr. domaine, from Lat. do- minium. Empire; dominion ; possession. Hence also, we may remark, our termination dom as birthdom, kingdom, &c.

Rome's great emperor, whose wide domain

Had ample territory, wealth and power. Milton.

A Latian field, with fruitful plains, And a large portion of the king's domains.

Dryden's JEneid. Ocean trembles for his green domain. Thomson.

So Howard, Moira, Burdett, sought the cells, Where Want, or Wo, or Guilt in darkness dwells ; With Pity's torch illumed the dread domains, Wiped the wet eye, and eased the galling chains.

Darwin.

Vain end of human strength, of human skill, Conquest, and triumph, and domain, and pomp, And ease, and luxury ! Byron.

DOMAIN. See DEMESNE.

DOMAT (John), a celebrated French lawyer born in 1625, who, observing the confused state of the laws, digested them in 4 vols. 4to, under the title of The Civil Laws in their Natural Or- der; for which Louis XIV. settled on him a pension of 2000 livres. Domat was intimate with the famous Pascal, who left him his private papers at his death. He died in 1696.

DOMBES, a ci-devant principality of France, about twenty-four miles long, and twenty-one broad, lying around and partly in the late pro- vince of Burgundy, but not under its govern- ment, on the west bank of the Soane. Trevoux was the capital. It now forms part of the de- partment of Ain.

DOMBEY (Joseph), a French botanist of celebrity, was born at Macon in 1742. He took the degree of doctor of physic at Montpelier, and in 1778 went to South America, where he discorer'nl the majestic tree of the tribe of pines, now named after him, Dombeya. On his return

to Europe, in 1785, the revolution disgusted him so much that he re-embarked for America; and, being captured on the passage, died in prison in the island of Moiitserrat, February 19th, 1796.

DOMBEYA, in botany, a genus «-f the class monodelphiaand order dodecandria : CAL. double, outer three-leaved, deciduous: PET. five : VTAM. ten or twenty : STYL. five-cleft : CAPS, five, united, one-celled, one or many seeded. Species twelve, chiefly natives of the isles of Bourbon and Mauritius.

DOMBOO, a considerable town of Bornou, Africa, situated on the caravan route from Mourzouk, and the first which occurs after passing the desert of Bilma. It is situated amid fertile plains.

DOMBOO LARES are situated on the northern extremity of Bornou, and supply that kingdom, Cassina, and the states on the south of the Niger, with salt. The merchants of Agadez bring hither annually a large caravan, which they load with this commodity, and convey it to the sur- rounding counties. These lakes are supposed to be the O'-'onides Palus of Ptolemy.

DOME, n. s. Fr. dome, from Lat. domus. A. building , nouse ; fabric. Also, from an early shape of roofs, probably a hemispherical arch, a cupola.

Best be he called among good men, Who to his God this column raised ;

Though lightning strike the dome again, The man who built it shall be praised. Prior.

Stranger ! whoe'er thou art, securely rest Affianced in my faith, a friendly guest ; Approach the dome, the social banquet share.

Pope's Odyssey.

From dome to dome when flames infuriate climb, Sweep the long street, invest the tower sublime ; Gild the tall vanes amid the astonished night, And reddening heaven returns the sanguine light.

Darwin.

While the vine-mantled brows The pendent goats unveil, regardless they Of hourly peril, though the clefted domes Tremble to every wind. Byron.

DOME, in architecture is a roof of a hemi- spherical form, raised over the middle of a build- ing, as a church, hall, pavilion, vestibule, stair-case, &c., by way of crowning. Domes are the same with what the Italians call cupolas ; or, according to Vitruvius, tholi. They are usually made round, though we have instances of square ones ; as those of the Louvre ; and others that are polygons, as that of the ci-devant Jesuits' church in the Rue St. Antoine at Paris. They have usually columns ranged around their outsides, both by way of ornament, and to support the vault. See ARCHITECTURE.

DOME, in chemistry, the upper part of fur- naces, particularly portable ones. It has the figure of a hollow hemisphere, or small dome. Its use is to form a space in the upper part of the furnace, the air of which is continually expelled by the fire; hence the current of air is consider- ably

increased, which is obliged to enter by the ash-hole, and to pass through the fire, to supply the place of the air driven from the dome. The form of this piece renders it proper to reflect or reverberate a part of tV flam upon substances*

\vhich are in the furnace, which has occasioned this kind of furnace to be called a reverberatory one. See CHEMISTRY.

DOME, or DOOM, signifies judgment, sentence, or decree. The homagers' oath in the black-book of Hereford ends : ' So help me God at his holy dome, and by my trowthe.'

DOMENICHINO, a famous Italian painter, born at Bologna in 1581. He was at erst a disciple of Calvartthe Fleming, but soon quitted his school for that of the Caraccis. He always applied himself to his woik with much study and thoughtful ness ; and never offered to touch his pencil but when he fancied a kind of enthu- siasm upon him. His great skill in architecture also procured him the appointment of chief ar- chitect of the apostolical palaceˆfrom pope Gre- gory XV. nor was he without a theoretical know- ledge of music. He died in 1641.

DOMESDAY BOOK, an ancient record, made in the time of William I. and containing a survey of all the lands of England. It consists of two volumes. The first is a large folio, written on 382 double pages of vellum, in a small but plain character; each page having a double column. Some of the capital letters and principal pas- sages are touched with red ink; and some have strokes of red ink run across them, as if scratched out. This volume contains a descrip- tion of thirty-one counties. The other volume is in 4to., written upon 450 double pages of vellum, but in a single column, and in a large but very fair cha- racter. It contains the counties of Essex, Nor- folk, Suffolk, part of the county of Rutland in- cluded in that of Northampton, and part of Lan- cashire in the. counties of York and Chester. This work, according to the red book in the exche- quer, was begun by order of William the Con- queror, with the advice of his parliament, in the year of our Lord 1080, and completed in the year 1086. The reason given for taking this sur- vey, as assigned by several ancient records and historians, was, that every man should be satis- fied with his own right% and not usurp with im- . punity what belonged to another. But, besides this, it is said by others, that now all those who possessed landed estates became vassals to the king, and paid him so much money by way of homage in proportion to the lands they held. This appears very probable, as there was

at that time extant, a general survey of the whole king- dom, made by order of king Alfred. For the execution of the survey recorded in domesday book, commissioners were sent into every county and shire; and juries summoned in each hundred, out of all orders of freemen, from barons down to the lowest boors. These commissioners were to be informed by the inhabitants, upon oath, of the name of each manor, and that of its owner; also by whom it was held in the time of Edward the Confessor; the number of hides; the quan- tity of wood, of pasture, and of meadow land ; /iow many ploughs were in the demesne, and how many in the tenanted part of it ; how many mills, how many fish-ponds or fisheries belonged to it ; with the value of the w1! 3le together in the time of king Edward, as well as when granted by king William, ami at the time of this survey; also whether it was capable of improvement, or VOL. VII.

of being advanced in its value : they were like- wise directed to return the tenants of every de- gree, the quantity of lands then and formerly held by each of them; what was the number of villains or slaves, and also the number and kinds of their cattle and live stock. These inquisitions being first methodised in the country, were after- wards sent up to the king's exchequer. This survey, at the time it was made, gave great offence to the people ; and occasioned a jealousy that it was intended for some new imposition. But not- withstanding all the precaution taken by the con- queror, to have this survey faithfully and impar- tially executed, it appears, from indisputable authority, that 'a false return was given in by some of the commissioners ; and that, as it is said, out of a pious motive. This was particu- larly the case with the abbey of Croyland in Lin- colnshire, the possessions of which were. greatly under-rated, both with regard to quantity and value. Perhaps more of these pious frauds were discovered, as it is said Ralph Flambard, minis- ter to William Rufus, proposed the making a fresh and more rigorous inquisition ; but this was never executed. Notwithstanding this proof of its falsehood in some instances, which must throw a suspicion on others, the authority of domesday book was never permitted to be called in ques- tion ; and always, when it has been necessary to distinguish whether lands were held in ancient demesne, or in any other manner, recourse was had to that only to determine the doubt. From this definitive authority, from which, as from the sentence pronounced at domesday, or the day of judgment, there could be no appeal, the name of the book is said to have been derived. But Stowe assigns another reason for this appellation ; namely that domesday book is a corruption of domus Dei book ; a title given it because here- tofore deposited in the king's treasuiy, in a place of the church of Westminster, or Winchester, called domus Dei. From the great care formerly taken for the preservation of this survey, we may learn the estimation in which its importance was held. The dialogue de Scaccaris says, ' Liber ille

(Domesday) sigilli regis comes est individuui in thesauro.' Until lately it has been kept undei three different locks and keys ; one in the cus- tody of the treasurer, and the others in that oi the two chamberlains of the exchequer. It is now deposited in the chapter-house at Westmins- ter, where it may be consulted on paying to the proper officers a fee of 6s. 8d. for a search, and 4d. per line for a transcript. Besides the two volumes above mentioned, there is also a third made by order of the same king; and which dif- fers from the others in form more than matter. There is also a fourth called domesday, which is kept in the exchequer ; which, though a very large volume, is only an abridgment of the others. In the remembrancer's office in the exchequer is kept a fifth book, likewise called domesday, which is the same with the fourth book already men- tioned. King Alfred had a roll which he called domesday; and the domesday-book made by William the Conqueror, referred to the time of Edward the Confessor, as that of king Alfred did to the time of Ethelred. The fourth book of domesday having many pictures and gilt letters

in the beginning relating to the time of king Edward the Confessor, this led some to a false opinion that domesday-book was composed in the reign of king Edward.

In 1767, in consequence of an address from the House of Lords, his late Majesty gave direc- tions for the publication of domesday-book, among other records. An engraved fac-simile was at first contemplated ; but the great expense of such an undertaking caused it to be laid aside : and a tolerably exact fac-simile metal type having at length been obtained, the editing of the work was confided to Mr. Abraham Farley, Deputy Keeper of the Records in the Chapter-house, at Westminster, a gentleman of singular learning and experience in this department of literature, who had had almost daily recourse to the book for more than forty years. The work was com- menced in 1770, and was completed early in 1783, at the press of Mr. John Nichols — the type with which it was executed, was destroyed in the fire which consumed his printing-office in February, 1808. Accurately as Mr. Farley ac- complished the task which had been assigned to him, the printed Domesday was comparatively of little value for want of minute indexes. This deficiency has been supplied under the direction of the Record Commission, in a folio volume, containing indexes of names of persons, of places, and things, so minute, (and from frequent re- ference, we can state, so accurate,) that the ob- ject of enquiry, if in the work, may be readily ascertained. These indexes have been compiled

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by the clerks in the Record Office of the Chapter- house, under the superintendence of the late Right Hon. George Rose, the .principal keeper of that repository of our national muniments: and to them is prefixed a very elaborate Intro- duction to Domesday, by Mr. Ellis, one of the librarians of the British Museum, containing; dis- sertations on the formation and execution of the Record, the principal matters therein contained, its original uses, conservation, and authority in courts of law. From these disquisitions, which are comprised in eighty-eight well-filled folio pages, the preceding particulars have been chiefly abridged. In further illustration of this ancient and important record, the Commissioners have thought it their duty to print a supplemental volume of similar surveys, of nearly coeval date, for Exeter, Ely, and Winton or Winchester, which appear to have been the original inquisi- tions whence the general survey was compiled, so far as relates to those districts : and, as the county palatine of Durham was not comprised within the Conqueror's survey, they have deemed it expedient to add the contents of a similar sur- vey for that county, denominated the Boldon Book, though its date is somewhat later. This supplement to Domesday forms a large volume in folio, and is enriched with a critical and his- torical dissertation on the records there printed, together with appropriate indexes, by its editor, Mr. Ellis.

The following extract will give our readers an idea of the nature of this venerable Record :

IN BRIXISTAN HUNIT.

Rex ten BERMUNDESYE. herald9 tenuit. Tc se defd

£. xiii. hid. m° £. xii. hid. Tra, e. viii. car. In driio. e una

h h

car. 7 xxv. vitti 7 xxxiii. bord cu. un. car.

Ibi nova 7 pulchra eccta. 7 xx. ac pati.'Silva/ v. pore

*» * .... '*

de pasnag : In Lundonia. xiii. burgses de xliiii. den

T. R. E. 7 m0/ vat. xv. lib 7 vicecoui ht. xx. sot.

j Comes morit ten. i. hida que T R. E. 7 post fuit in hoc 55

IN BRIXISTAN

That is

Rex tenet BERMUND.ESYE. Heraldws comes tenuit. TMWC se defendebat pro xiii hidis, mo

In English thus : In Bnxistau Hundred.

‘ The king holds BERMUNDESYE. Earl HERALD held it [before]. At that time it was rated at thirteen hides ; now, at twelve. The arable land is eight carrucates [or plough-lands]. There is one carrucate in demesne ; and twenty-five villans, and thirty-three bordars, with one carrucate. There is a new and handsome church, with twenty acres of meadow, and woodland for five hogs in pasnage [pasturage] time. In LONDON are thirteen burgesses at forty-four pence. In the time of king Edward it was valued, as it now is, at fifteen pounds ; and the sheriff has twenty shillings. The Earl of Moriton holds one hide, which, in the time of King Edward, and afterwards, was in this maiior.’

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DOM

Independently of the immediate uses of this •urvey to the Conqueror, it is to this day a record of no small importance to the historian and to the antiquary, for the light it throws on the dif- ferent classes of persons into which the English people were divided — the different denominations of lands, their culture and measurement — the different denominations of money, and the per- sons and places that enjoyed the liberty of coin- age— territorial jurisdictions and franchises — tenures and services — criminal and civil juris- dictions— ecclesiastical and historical matters therein noticed, besides many curious illustrations of ancient manners, which we have not room to detail.

DOMESTIC, n.s. & adj.~\ Tr.domestique;

DOMES’TICAL, adj. /Span. Portug.

DOMES’TICALLY, adv. f and Ital. domcs-

DOMES’TICATE, v. a. J tico ; Lat. do-

mesticus, from domus, a house. See DOMINION. Perhaps the adjective domestic, of or belonging to the house, is here the root; it means also private, and tame. To domesticate is to make as a domestic, to familiarize.

Dcmestical evils, for that we think we can master them at all times, are often permitted to run ou for- ward, till it be too late to recall them,

Hooker. Dedication.

Equality of two domestic powers Breeds scrupulous faction.

Shahspeare. Antony and Cleopatra. Next to the sin of those who began that rebellion, theirs must needs be, who hindered the speedy sup- pressing of it, by domestick dissentions.

King Charles.

If the first corruption be not sucked in from the domestic manners, a little providence might secure men in their first entrance into the world.

Clarendon.

A servant dwells remote from all knowledge of his lord's purposes : he lives as a kind of foreigner under the same roof ; a domestick, and yet a stranger too.

South.

Beholding thus, O happy as a queen ! We cry ; but shift the gaudy, flattering scene, view her at home in her domestick light, For thither she must come, at least at night.

Granville.

The practical knowledge of the domestick duties is the principal glory of a woman. Clarissa.

The faithful prudent husband is an honest, tracta- ble, and domestic animal. Addison's Spectator.

Probably a philosopher would rejoice in that liberty which Englishmen give their domestics ; and for my own part, I cannot avoid being pleased at the happi- ness of those poor creatures, who in some measure contribute to mine. Goldsmith.

DOMIFYING, in astrology, the dividing or distributing the heavens into twelve houses, to erect a theme, by means of six great circles, called circles of position. Regiomontanus makes the circles of position pass through the intersec- tions of the meridian and the horizon : others make them pass through the poles of the zodiac. See ASTROLOGY.

DOMINANT, among musicians, is used either U aa adjective or substantive ; but these different acceptations are far from being indiscriminate.

In both senses it is explained by Rousseau as follows : —

DOMINANT, adj. The dominant or sensible chord, is that which is practised upon the domi- nant of the tone, and which introduces a perfect cadence. Every perfect major chord becomes a dominant chord, as soon as the seventh minor is added to it.

DOMINANT, n.s. Of the three notes essential to the tone, it is that which is a fifth from the tonic. The tonic and the dominant fix the tone; in it they are each of them the fundamen- tal sound of a particular chord : whereas the mediant, which constitutes the mode, has no chord peculiar to itself, and only makes a part of the chord of the tonic, llameau gives the name of dominant in general to every note which carries a chord of the seventh, and distinguishes that which carries the sensible chord by the name of a tonic dominant ; but on account of the length of the word, this addition to the name has not been adopted by artists : they continue simply to call that note a dominant which is a fifth from the tonic ; and they do not call the other notes, which carry a chord of the seventh, dominants, but fundamentals ; which is sufficient to render their meaning plain, and prevents confusion.

A DOMINANT, in that species of church music which is called plain chant, is that note which is most frequently repeated or beaten, in whatever degree it may be from the tonic. In this species of music there are dominants and tonics, but no mediant.

DOMINATE, v. a. • DOMINA'TION, n. s. DOM'INATIVE, adj. DOM'INATOR, n.s. DOMIN'ION, n.s.

IT. domain ; Span. Portug. and Ital. domi- • nio; Lat. dominium, from domus ; Gr. Sopof, a house, a Seuu, to build.

To prevail over : domination and dominion both signify supreme authority, power, as over a man's own house or territory : a dominator is he who thus rules.

Settynge him on his right half in heuenli thingis

aboue ech principal and potestat and vertu and domi.

nacioun, and (above) ech name that is named, not

oonli in this world, but also in the world to comyng.

Wiclif. Effeties i.

By him were all things created, visible and invisi- ble, whether they be thrones or dominions, or princi- palities or powers. Col. i. 16.

Thou and thine usurp " The domination, royalties, and rights

Of this oppressed boy. Sliakspeare. King John.

Jupiter and Mars are dominators for this north- west part of the world, which maketh the people impatient of servitude, lovers of liberty, martial, and courageous. Camden's Remains.

Conquest and good husbandry both enlarge the king's dominions: the one by the sword, making the acres more in number, the other by the plough, making the same acres more in value. Fuller.

The Law of Works is that empire and dominion which God exercised over man, using his utmost right, and obliging man to the rigorous observation of all that law he should impose upon him.

Bp. Taylor.

He gave us only over beast, fish, fowl, Dominion absolute ; that right we hold By his donation : but man over man He made not lord. Milton.

DOMINGO.

Hear, all ye angels, progeny of light, Thrones, dominations, princedoms, virtues, powers.

Id.

What can our travellers bring home That is not to be learnt at Rome ? What politics, or strange opinions, That are not in our own dominions ? Hudibras.

I thus conclude my theme, The dominating humour makes the dream.

Dryden.

He could not have private dominion over that which was under the private dominion of another. Locke.

Maximinus traded with the Goths in the product of his own estate in Thracia, the place of his nativity ; whither he retired, to withdraw from the unjust domination of Opilius Macrinus. Arbuthnot on Coin.*

Blest use of power, O virtuous pride in kings !

And like his bounty whence dominion springs.

Tickell.

Of all the enemies of idleness, want is the most formidable. Fame is soon found to be a sound, and love a dream. Avarice and ambition may be justly suspected of being privy confederacies with idleness, for when they have, for a while, protected their vota- ries, they often deliver them up, to end their lives under her dominion. Johnson.

To sit on rocks, to muse o'er flood and fell, To slowly trace the forest's shady scenes, Where things that own not man's dominion dwell, And mortal foot hath ne'er, or rarely been.

Byron.

DOMINEER, v. n. Fr. dominer. See DOMI- NATE. To rule with absolute authority : hence to swell ; bluster.

Go to the feast, revel, and domineer, Oaroase full measure.

Shakspeare. Taming of the Shrew.

The voice of conscience now is low and wfak, chastising the passions, as old Eli did his lustful domi- neering sons. South.

Both would their little ends secure ; He sighs for freedom, she for power : His wishes tend abroad to roam, And hers to domineer at home. Prior.

DOMINGO (St.), HISPANIOLA, or HAYTI, one of the largest and most fertile of the West India islands, and the second in point of size, is situated between Porto Rico on the east, and Jamaica and Cuba on the west. It is approached on its northern side by the southern part of the 3ahama chain, while southward the Caribbean sea runs between it and Terra Firma. The ex- treme length of St. Domingo is generally stated at about 400 miles ; Rainsford, however, extends it to 490 miles, and its utmost breadth 150 ; but a considerable peninsula projects for nearly 140 miles towards the west, and, with a large pro- montory on the uoith, forms a spacious bay op- posite the island of Cuba. Its medium length may therefore be computed at 300 miles, and its breadth at 100, which gives a superficial area of

about 30,000 square miles, equal therefore to that of Ireland. Its most northerly point is in 19° 46'; and its most southerly in 17° 37′ N. lat. ; westward its extreme point (Cape Tiberon) is in 74° 15'; and eastward, Cape Engano, its extreme point in this direction, is 67° 35′ W. long. Columbus, who dis- covered it in his first voyage to the New World,

found it known at Cuba as Hayti, signifying, it appears, a highland country ; thus the natives also called it, and the name has been revived of late years by the independent black governments who have revolutionised the French portion of the island. This great navigator himself called it, according to Dr. Robertson, Espagnola, or Little Spain; or at first, as other writers say,. Isabella, in honor of the queen of Spain. It is. however, best known to European geographers as St. Domingo, the name of the capital of the Spanish part of the island.

St. Domingo, as it existed before the revolu- tion of 1789, is described by the abbe" Raynal as abounding, in ' delightful vales, where all the sweets of spring are enjoyed, without either win- ter or summer. There are but two seasons,' he continues, ' in the year, and they are both equally fine. The ground always laden with fruit, and covered with flowers, realises the delights and riches of poetical descriptions. Wherever we turn our eyes, we are enchanted with a variety of objects, colored and reflected by the clearest light. The air is temperate in the day-time, and the nights are constantly cool.' The Spaniards and French were the European masters of this island, until a very recent period ; the line of demarcation, between their respective territories, commencing at the river Massacre on the north side, at the head of the bay of Mancenille, and extending to the river Pedernates south. All the country east of this line, being about three-fourths of the island, was claimed by Spain ; and all to the westward by France. The French part of the island, of a very irregular figure, comprehended 2,500,000 acres,of which 1,500,000 were in high cultivation previous to 1789.

The coast of St. Domingo is abrupt and rocky, and the navigation of the neighbourhood dangerous: in his course from Cuba to Cape Francois, Columbus, it is well known, lost the vessel in which he originally sailed from Europe. None of its harbours will admit vessels of con- siderable burden. On the south side are the bays of St. Domingo, Neyba and Aeon, or Acoa. The first has become, of late years, very shallow and full of reefs. The bay of Neyba receives vessels of thirty tons burden ; but a river of this name flowing into it, divides itself, before enter- ing the ocean, into various channels, which, changing in the rainy season, perplex the pilot. Acoa Bay has also several small rivers falling into it. The entrance is two leagues across, and it widens inwards to nearly six leagues. On the east side is the capacious port of Caldera, one of the best and safest of the island. On the

north- east coast is the Bay of Samana, extending from its southern point, Cape Rafael, to the opposite side or peninsula of Samana, eighteen miles, and enclosed by a bulwark of rocks and sands, the entrance only being left clear, but having a safe and deep channel between the shore of Samana and some detached islands : it receives the rivers Yuna and Cambu after their junction. The former has a course of about 100 miles. This bay is about sixty miles deep, and is surrounded on every side by a fertile country. In Puerto Plata is Balsama Bay, which has only fourteen feet depth of water, and is of difficult navigation,,

the entrance being very narrow: the neighbour- hood is rich in valuable woods. Batia Ecossaise, or Scots' Bay, is in this direction, but is a dangerous, rocky inlet; and there are several other small harbours and bays on this side of the -sland. None of the rivers are practicable, even for boats, in the dry season. Eleven leagues east of Port-au-Prince is a salt lake, named Henriquelle, twenty-two leagues in circuit ; its water is deep, clear, and bitter, and it abounds in alligators and tortoises of a large size ; in it is an island, two leagues long, abounding with wild goats, and having a spring of fresh water.

The independent portion of St. Domingo (the former French part), is mountainous and well- wooded, containing mines of silver and iron. Much of the central part of the Spanish territo- ries is also composed of elevated mountains, many of them capable of cultivation, and having a soil extremely rich. They also have yielded gold and silver. From the city of St. Domingo several wide plains, from twenty to twenty-five miles in breadth, stretch for about eighty miles to the east. They are called the Los Llanos, and are adapted to the growth of every tropical pro- duction. A beautiful valley to the north of these, through which the river Cotu flows, is "aid to be still more productive. The mountains are principally composed of two parallel chains, running from east to west, with several collateral branches. Excellent timber abounds throughout the mountains. In those of Cibao originate the principal streams of the island ; and the influence of these lofty ranges, in mitigating the winds and cooling the atmosphere, is most important in this climate. Some of them rise to the height of 6000 feet above the level of the sea.

Such, according to Edwards, is the unrivalled fertility of the plains of this island, that they are alone capable of producing more sugar and other valuable commodities than all the British West Indies put together. Common attention to their decided advantages was alone wanting in the

Spanish colonists to render this one of the most important possessions of that crown. But when, by the arts of cruelty and oppression, they had extirpated the aboriginal inhabitants, many of them became speculators in adventures to South America ; while those who remained sunk into such wretched indolence, as to suffer this beau- tiful part of the country to become a luxuriant wilderness. The Savannahs, and fine plains in the interior, became, in consequence, entirely occupied by wild animals, such as swine, horses, and horned cattle; and herds of domestic animals ran wild in every direction. The export of those animals to the French settlements of the neighbourhood, formed an important branch ot commerce to the Spaniards; and it was in ex- change for them chiefly that they received the manufactures of Europe.

The climate is moist, hot, and unhealthy to Europeans ; the thegmometer in the plains rising as high as 99° ; and in the higher parts to 72° and 77°. But these heats are moderated Dy the regular sea-breeze, which sets in about ten in the morrjing, and which is succeeded, towards the evening, by a land breeze. The heaviest ruins of the wet season fall in May and June;

and so impregnated with moisture is the atmos- phere at this season, that the brightest metallic polish becomes tarnished ; the brooks now swell into torrents, and not seldom overwhelm the ad- jacent plantations. From time immemorial the inhabitants of the dryer parts of the island have reserved a portion of these copious streams by an artificial irrigation. The sea-coast is said to be more unfavorable to European constitutions than the interior. On the northern coast severe gales are felt, but the violent hurricanes of other parts of the West Indies seldom blow here ; when they occur, it is chiefly on the southern coast, where they are denominated southern gales.

St. Domingo is chiefly valuable for its vegeta- ble productions. The useful and elegant maho- gany-tree here grows to a noble size 'and is of very superior grain. The largest of its plants is the cotton-tree, whose stem often furnishes the entire body of the Indian canoes : the pine is also abundant; and here is a species of oak. resembling the American, which yields planks or from sixty to seventy feet long. Brasil, satin, and various hard and ornamental woods are also found. Sugar, coffee, and cotton, of a fine qua- lity, are produced in abundance. Indigo was once cultivated, but it has been long since aban- doned. Vanilla gn.ws spontaneously in the woods, and the plantain, also, is abundant. Flowers are numerous, and are distinguished both by their beauty and fragrance : all the tropical fruits are produced in high perfection.

The only indigenous quadruped remaining is the agouti cat, called by the natives heetia. But the stock of horned cattle, horses, mules, asses, sheep, and goats, is prodigious. Many of the cattle, as we have stated, run wild,

and are the prey of any one who will pursue them : some farmers of the interior own 10,000 or 12,000, worth from six to eight dollars a head : the horse is here very sure-footed, and useful, but of small size and inferior paces. The whole number of horses, mules, and asses, both the latter being valuable breeds, is estimated at 150,000; the horned cattle at 300,000.

Birds are numerous, ˆparticularly wild fowl; but the Jamaica nightingale, or mocking-bird, and the banana, are the only songsters. The flesh of the wild pigeon is particularly savorv, though somewhat bitter ; the parrot is also eaten, and ortolans are numerous. The best fish of the riveis are the mullet, snook, calapever, parˆo, grooper, baracooter, craw and rock-fish, and particularly the land-crab. Turtle abounds on the coast, and immense quantities of tarapins, together with a small species of amphibious tortoise, which is a very delicate and luxurious food.

The serpent tribes, though numerous, are not venomous, but the centipede is very annoying. A venomous crab-spider is also found here ; the destructive white-ant, and abundant swarms of insects. This ant will eat through any kind of packing box, from side to side, and penetrate every fold of goods.

The aborigines of St. Domingo have been long since extirpated by the Spaniards. When it was discovered by Columbus, 9th of December 1492, it formed five kingdoms, called Maqaa,

Marien, Higuay, Maguana, and Xaraguay, each governed by its own cacique. The Spaniards had possession of the whole of it for 120 years. This island, their earliest settlement in the new world, was at first in high estimation for the quantity of gold it supplied. But its wealth diminished with the inhabitants of the country, whom they obliged to dig it out of the bowels of the earth; and the source of its wealth was entirely dried up, when the" were extinct. Ben- zoni relates, that of 2,000,000 of inhabitants, contained in the island when discovered by Columbus in 1492, scarcely 153 were alive in 1545. Bishop Las Casas makes the extermi- nation of the natives by his countrymen still greater and more rapid. He states the original number at 3,000,000, and says they were reduced to 60,000 within fifteen years. A. vehement desire of opening again this source of wealth first inspired the thought of obtaining slaves from Africa ; but, besides that these were found unfit for the labors they were destined to, the multitude of mines, then beginning to be wrought on the con- tinent, made those of St. Domingo no longer of any importance. An idea now suggested

itself, that the negroes, who were healthy, strong, and patient, might be usefully employed in husban- dry. The produce of theii industry was at first extremely small, because the laborers were few. Charles V. had granted an exclusive right of the slave trade to a Flemish nobleman, who made over his privilege to the Genoese. These avaricious republicans conducted this infamous commerce as all monopolies are conducted : they resolved to sell dear, and they sold but few. When time and competition had fixed the price of slaves, the number of them increased. It may easily be imagined that the Spaniards, who had been accustomed to treat the Indians as beasts, did not entertain a higher opinion of these unfor- tunate Africans, whom they substituted in their place. Degraded still farther in their eyes by the price they had paid for them, even religion could not restrain them from aggravating the weight of their servitude. They made frequent attempts, however, to recover the undeniable rights of mankind, and thus procured somewhat better treatment. The cultivation of the island was, at times, therefore, pursued with tolerable success About the middle of the sixteenth cen- tury, Spain drew annually from this colony 10,000,000 weight of sugar, a large quantity of wood for dyeing ; tobacco, cocoa, cassia, ginger, cotton, and peltry in abundance. One might imagine, that such favorable beginnings would have given both the desire and the means of carrying them further; but a train of erents, more fatal each than the other, ruined these hopes. The first misfortune arose from the depopulation of the island. The Spanish con- quests on the continent should naturally have contributed to promote the success of an island, which seemed to have been formed to be the centre of that vast dominion arising around it. But it fell out quite otherwise : on a view of the immense fortunes raising in Mexico, and other parts, the richest inhabitants of Hispaniola began to despise their settlements, and the government endeavoured in vain to pat a stop to emigration:

the laws were always either artfully eluded, or openly violated. The weakness, which was a necessary consequence of such conduct, leaving the coasts without defence, encouraged the ene- mies of Spain to ravage them. See our article BUCCANIERS. Even the capital of this island was taken and pillaged by Sir Francis Drake. Cruizers of less pretensions contented them- selves with intercepting vessels in their passage through those latitudes, which were the best known at that time of any in the new world To add to these misfortunes, the Spaniards them- selves commenced pirates. They attacked no ships but those of their own nation ; which were more rich, worse provided, and worse defended, than any others. The custom they had of fitting out ships clandestinely, to procure slaves, prevented them from being known ; and the assistance they purchased from the ships of war, commissioned to protect the trade, insured to them impunity. The foreign trade of the colony was its only resource in this distress; and that was

illicit: but as it continued to be carried on, notwith- standing the vigilance of the governors, or, per- haps, by their connivance, the policy of an exasperated and short-sighted court exerted itself in demolishing most of the sea-ports, and driving the miserable inhabitants into the inland country. This act of violence threw them into a state of dejection, which the incursions and settlement of the French on the island afterwards carried to the utmost pitch. The latter, after having made some unsuccessful attempts to settle on the island, had part of it yielded to them, in 1697, by the Spaniards. The court of Spain, totally taken up with that vast empire which they had formed on the continent, used no pains to dissipate this lethargy. They even refused to listen to the solicitations of their Flemish subjects, who earnestly pressed that they might have permis- sion to clear the fertile parts of this island. Rather than run the risk of seeing them carry on a contraband trade on the coasts, they chose to bury in oblivion a settlement which had been of considerable consequence, and was likely again to become so. This colony, which had no longer any intercourse with the mother country but by a single ship, of no great burden, that arrived hence every third year, consisted, in 1717, of 18,410 inhabitants, including Spaniards, Mesteesj Negroes, and Mulattoes. The com- plexion and character of this population differed according to the different proportions of American, European, and African blood they had received from that natural and transient union, which restores all races and conditions to the same level. Demi-savages, in fact, the greater part of them plunged into extreme sloth, lived upon fruits and roots, or dwelt in cottages without fur- niture, and most of them without clothes. The few among them, in whom indolence had not totally suppressed the sense of decency and taste for the conveniences of life, purchased clothes of their neighbours, the French, in return for their cattle, and the money sent to them for the maintenance of 200 soldiers, the priests, and the government. A century after its original settlement it was found necessary to remit annu- ally from Mexico 300,000 dollars, for the sup-

port of the local government of this colony. Nor did the company formed at Barcelona, in 1757, with exclusive privileges for the re-establish- ment of St. Domingo, ever make any consider- able progress. They only sent out two small vessels annually, which were freighted back with 5000 hides, and other commodities.

The Spanish government was, however, roused to some exertions in favor of St. Domingo at the close of the last century. Settlers were encou- raged to come hither from the Canary Islands, the monopoly imposed on its trade

was relaxed, and encouragements were held out to agricul- ture and commerce. Under the influence of these measures the colony began to improve, the towns and villages were rebuilt and peopled, new plantations were laid out, and the trade with the French part of the island became consider- able. At the period of the French revolution, in 1789, the Spaniards had twenty-four sugar- works in St. Domingo. They paid with raw sugar, hides, timber, and piastres for the small number of cargoes they received from Europe. Besides 1 1,000 heads of cattle, they furnished the French part of St. Domingo with horses, mules, and some tobacco. Next to the ancient city of St. Domingo, their principal towns were Monte Christi, La Vega, St. Jago, Zeibo, St. Thome, Azua, and Isabella.

This part of the island was ceded formally to France by the treaty of Basle, July 22nd, 1795 : b t it was not taken possession of by that power until 1801, when the unfortunate Toussaint L'Ouverture appeared before the capital at the head of a considerable French force. At this period it is said 25,000 of the inhabitants emi- grated to Cuba, South America, or other of the Spanish settlements, so averse were they to the French yoke. At the close of 1808 attempts to expel the French were openly made : in Novem- ber the French commander was shut up in the capital ; but it was not until July of the follow- ing year that he surrendered, when a British ar- mament, under General Carmichael, came to the aid of the Spaniards. Since this period they have declared their independence of the mother country, and offered their allegiance to the new republic of Colombia. At the period of its ces- sion to France, the Spanish part of St Domingo had 125,000 inhabitants, 110,000 of whom were free people, and 15,000 negro slaves. Land was at six French livres, or five shillings the arpent; and labor at two French livres, sixty-one cen- times, or a little better than two shillings per day. Walton estimates the inhabitants of this part, in 1810, at 104,000. We have seen that there had been a considerable emigration, which he excludes from this amount.

We have noticed the visits, and, under that article, the settlement, of the BCCCANIERS, in St. Domingo. That part of this singular com- munity, which abandoned the sea for its fertile valleys, consisted principally of Frenchmen, and became acknowledged subjects by the govern- ment of France at the close of the seventeenth century. In 1669 the planters here amounted to upwards of 1500; Bertrand Dogeron, a man of considerable talents and probity, having been deputed to form them into a regular colony. In

1670, however, the oppressive measures of the French West India Company caused the inha- bitants of this part of St. Domingo to revolt : and tranquillity was only restored at the price of a free trade to France, subject to a duty of live per cent, paid to the company on the arrival and

departure of all vessels.

Under the excellent management of Dogeron the colony continued to prosper; but after his death, in 1673, it languished under the mono- poly of exclusive trading companies. Three years before his death the town of Cape Fran- pois had been founded by Gobin, a French Pro- testant, whom the persecutions of Louis XIV. had driven from his native land. In 1688, several slaves having been taken from the English, the inhabitants of St. Domingo began to turn their attention to the culture of the sugar-cane. With this view they increased their stock of negroes, and in 1694, taking advantage of the misfortunes which had befallen the English colony of Ja- maica, they effected a landing in that island, and carried off a considerable number of slaves. The English, in their turn, attacked the settle- ment of Cape Francois in the following year, which they plundered and reduced to ashes. It was, however, soon rebuilt. At the peace of Ryswick, the French obtained the first regular cession of the western part of St. Domingo, and in 1702, Port-au-Prince was made the seat of the government, but the town of the cape conti- nued in every other respect the capital of the co- lony. The French in St. Domingo flourished as the Spaniards decayed. Their colony, which in the time of Herrera counted 14,000 Castilians, besides a proportional number of other inhabi- tants, had, in 1717, only 18,410 individuals of every description ; whilst, according to the abbe Rayiial, the produce of the French colony, in 1720, amounted to 1,200,000 Ibs. of indigo, 1,400,000 Ibs. of white sugar, and 21,000,000 Ibs. of raw sugar. From 1722, when the French colony of St. Domingo was freed from the yoke of exclusive trading companies, it rose gradually to the highest pitch of prosperity. In the year 1754, the value of the various commodities of the colony was £1,261,469 sterling, and the im- ports from the mother country £1,777,509 sterl- ing. There were 14,000 white inhabitants, 4000 free mulattoes, and upwards of 172,000 negroes ; 599 sugar plantations, 3379 of indigo, 98,946 cocoa trees, 6,300,367 cotton plants, and nearly 22,000,000 cassia trees; 63,000 horses and mules, 93,000 heads of horned cattle, 6,000,000 banana trees; upwards of 1,000,000 plots of potatoes, 226,000 plots of yams ; and nearly 3,000,000 trenches of manioc.

In 1789 the prosperity of the French part of St. Domingo was at its greatest height. It was divided into the northern, western, and southern provinces. The first extended about forty leagues along the northern coast, from the river Massacre to cape St. Nicholas, and contained, inclusive of the island of Tortuga, twenty-six parishes. The principal towns were Cape Franpois, Fort Dau- phin, Port de Paix, and Cape St. Nicholas. The western province commenced at this cape, and terminated at Cape Tiburon. It contained four- teen parishes; its chief towns were Port-au-

Prince, St. Marc, Leogane, Petit Goave, and Jere"mie. The southern province occupied the remaining coast from Cape Tiburon to l'Anse-a Pitre, and contained ten parishes and two towns, Cayes and Jacmel. The cultivated land amounted to 2,290,000 English acres, or 771,275 carreaux of French measurement, 350 feet on every side to the carreau. But Barbe Marbois, in his Compte rendu des finances de St. Domingue, en 1789, reckons the cultivated land at 570,210 carreaux only. There were 792 sugar plantations, 2810 coffee plantations, 705 cotton plantations, 3097 indigo plantations, sixty-nine cacao plantations, and 173 distilleries of rum. The produce of these plantations, in 1788, consisted of 163,405,500lbs. of sugar, 68,151, 000 Ibs. of coffee, 6,289,000 Ibs. of cotton, 930,000 Ibs. of indigo, 150,000 Ibs. of cacao, 34,453,000 Ibs. of syrup, worth in all, with some less important articles, 135,763,000 French livres. It was sent to France in 686 vessels of 199,122 tons. The goods imported into the colony from different ports of France, in 465 vessels of 138,624 tons, amounted to the value of 54,578,000 French livres. Before the revo- lution, the exportation from the whole island employed 1070 vessels, navigated by 7936 sea- men.

The population consisted in 1788, according to Marbois, of 27,717 white inhabitants, of whom there were 14,571 males, 4482 females, and 8664 children ; of 405,564 negro slaves, of whom there were 174,971 males, 138,800 females, and 91,793 children; and of 21S308 free people of color.

Soon after 1789 a most dreadful reverse took place. At this period, says Mr. Bryan Edwards, in his Historical Survey of the French Colony in St. Domingo, London, 4to. 1797, 'the mu- lattoes were in a situation more degrading and wretched, than that of the enslaved negroes in any part of the West Indies. No law allowed the privileges of a white person to any descen- dant of an African, however remote.' — 'The laws, he adds, were dreadfully unequal.' In such a situation it is not to be wondered at, that they should have listened with pleasure to the news of the French revolution, and to the acts of the assembly, which abolished slavery, and established equality of rights. A colonial as- sembly met at St. Mark, on the 16th of April, 1790, composed of 213 members, which, says Mr. Edwards, ' fairly and fully represented the inhabitants.' ' They passed acts of indulgence, and rectified gross abuses. But persons inter- ested in the continuance of these abuses were displeased. They counteracted the proceedings of the assembly, and misrepresented their inten- tions. M. Peynier, the governor, attempted to restore the old despotic system :

whereupon eighty-five members of the assembly embarked for France;' as did also M. Peynier, who re- signed in November 1790. 'The pride of power,' adds this writer, ' the rage, of reformation, the contentions of party, and the conflict of opposing interests, now produced a tempest, that swept every thing before it.' In October, 1790, James Oge, a free mulatto, who had been at Paris, and who is characterised by Mr. Edwards, as ' an enthusiast for liberty, but mild and humane,' leturned from France, and put himself at the

head of the insurgent negroes and people of color; but being defeated, in March 1791, was betrayed by the Spaniards, to whom he had fled for refuge, and, with Mark Chavane his lieu- tenant, broke alive on the wheel. The eighty- five members of the colonial assembly were arrested in France, and their act of the 12th of October 1790, annulled. In March, 1791, 8000 troops arrived from France ; and Mauduit the new governor was murdered by his own soldiers, with circumstances of horrible barbarity. By a decree of the National Assembly, of the loth of May 1791, people of color were declared eligible to seats in the colonial assembly. And on the llth of September, a concordat, or truce, was signed between the whites and mulattoes. ' But the operation of this truce,' says Edwards, 'was destroyed by the absurd decree of the national assembly of the 24th of September, repealing the decree of the 15th of May, whereby in the very moment when the justice and necessity of this decree were acknowledged, and its faithful observance promised by the colonial assembly, its repeal was pronounced by the legislative as- sembly in the mother country. To such repug- nancy and absurdity must every government be driven, that attempts to regulate and direct the local concerns of a country 3000 miles distant. Open war in all its horrors was now renewed. All the workings of humanity were absorbed, in the raging and insatiable thirst of revenge, which inflamed each class alike. It was no longer a contest for mere victory, but a diabolical emula- tion which party could inflict the most abomi- nable cruelties on the other.' On the 23d of August, 1791, Cape Francois was burnt, and in the space of two months it was computed, that upwards of 2000 white persons perished by these horrible massacres ; and that ot the mulattoes and negroes not fewer than 10,000 died by fa- mine and the sword, besides several hundreds that suffered by the executioner. Meantime ci- tizens Santhonax, Polverel, and Ailhaud, arrived from France as commissioners, accompanied by 6000 of the national guards ; and citizen Gal- baud was appointed governor. Their attempts, however, to stop these enormities proved fruitless, though they proclaimed the total abolition of slavery, and a general indemnity.

In October, 1793, a body of British forces under colonel Whitlock, were landed, and took possession of Tiburon, Treves, Jere'raie, Leogane, Cape Nicolas Mole, and upwards of ninety miles of the eastern coast with little

opposition. But though the loss of the British in these engage- ments, or rather skirmishes, did not exceed 100 men, yet the victims of disease, within six month 5 after their arrival, were upwards of 6000. among whom were 150 officers. Leogane was soon after retaken by the negroes, who now amounted to above 100,000, under their general Toussiant 1'Ouverture ; and Tiburon was taken by the French under general lligaud. To remedy these disasters, and to supply the Mole with pro- visions, an expedition was undertaken against the fort of Bombarde, but the reduction of it • (which was not accomplished till the 18th of June 1796) cost an immense number of men, and after it was taken, instead of being able to supply

the Mole, it was found necessary to supply it from thence, at a vast expense, and- with the loss of many brave troops. These and similar losses, with the deaths of lieutenant colonels Brisbane and Markham, who were killed in 1795, together wit! > the faithlessness of the French emigrants, upon whose suggestions this expedition had been undertaken, at last determined the British com- mander to surrender Jeremie, Port au Prince, and Cape Nicolsk Mole, the only places re- maining in the hands of the British, to general Hedonville, by capitulation in August 1798 ; and on the 1st of October the island was totally evacuated by the British. The name of Port au Prince was at this rime changed to Port Repub- licain; and the Spanish part of the island, having been ceded to the French by treaty was taken possession of, as we have already intimated, by 1'Ouverture. We must refer our readers to the life of this chieftain in another part of our work, for the detailed proofs of his very superior talents and character. lie applied himself at this period to heal the wounds of this his native country with the greatest success ; and such was his popularity, that though the commis- sioners, who had been sent out by the French directory, remained in the island, and were treated with every external mark of respect, they were, in fact, mere cyphers, destitute of influence, and dependent on Toussaint for sup- port.

Agriculture and commerce were the first ob- jects of his care. Many of the planters were restored to their former estates, but no property in human beings was allowed. The blacks, however, were not permitted to waste their lives in idleness. The planters were obliged to em- ploy their laborers as hired servants, and a third part of the crops was assigned for their remune- ration. While ample encouragement was af- forded to industry, penalties were at the same time denounced for the punishment of idleness. The beneficial effects of such an administration were soon visible. The wasted

colony began to revive ; the plantations were again brought into a fertile state ; the sugar-works and distilleries were rebuilt ; the ports were opened to foreign vessels ; and, notwithstanding the ravages of a ten years' war, the exports of St. Domingo were raised from the lowest ebb to one-third of their former amount and value in the most prosperous periods. Population also increased with aston- ishing rapidity; and while the planters of the neighbouring West-India Islands were contin- ually urging the necessity of annual importations from Africa, to supply the constant diminution among the negroes, in St. Domingo their num- bers were considerably augmented, notwithstand- ing the waste of blood during the troubles and sanguinary conflicts of the ten preceding years. The churches were re-opened, public worship was restored ; the elegant arts and amusements of civilised life began to resume their sway ; and the combined result of all these causes was a visible and striking improvement in every class of society. In the intercourse of the social hour, all were on a perfect equality ; thus presenting a striking contrast to the very strict subordination which prevailed in the army.

The military establishment, when the British forces evacuated the islan 1 in 1798, did not exceed 40,000 ; but in two years it was more than double that number. The soldiers regarded Toussaint as an extraordinary being: his generals trembled before him (Dessalines durst not look him in the face) ; and every one trembled before his generals. No European army, indeed, was ever subject to a more rigorous discipline, than that whieh was observed by the troops of Tous- saint. Every officer commanded, pistol in hand; and had the power of life and death over the sub- alterns. 60,000 men were frequently reviewed and exercised together on the plain of the Cape. On these occasions 2000 officers were seen in the field, carrying arms, from the general to the ensign, yet with the utmost attention to rank ; without the smallest symptom of the insubordi nation indulged in the leisure of the hotel. Each general officer had a demi-brigade, which went through the manual exercise with a degree of expertness seldom witnessed ; and performed equally well several manreuvres applicable to their method of fighting. At a whistle a whole brigade would run 300 or 400 yards, then, sepa- rating, throw themselves flat on the ground, changing to their backs or sides, keeping up a strong fire the whole of the time, till they were recalled : then they would form again, in an instant, into their wonted regularity. This single manoeuvre used to be executed with such facility and precision, as totally to prevent cavalry from charging them in bushy and hilly countries. Such complete subordination, such promptitude and dexterity, prevailed the whole time, as would have astonished any European soldier who had the least knowledge of their previous situation. (History of St. Domingo, 1818.)

' In these reviews,' says M. de la Croix, ' Toussaint appeared like an

inspired person, and became the fetiche or idol of the blacks who listened to him. In order to make himself bet- ter understood, he frequently addressed them in parables, and often made use of the following: — In a glass vessel full of grains of black maize, he would mix a few grains of white maize, and say to those who surrounded him : — ‘ You are the black maize ; the whites, who are desirous of enslaving you, are the white maize.’ He would then shake the vessel, and presenting it to their fascinated eyes, exclaim, ‘ See the white here and there !’ in other words, see how few the white are in comparison of yourselves.’ The gleam of prosperity, however, which resulted from his wise administration, was of short con- tinuance.

The independence of St. Domingo was pro- claimed on the 1st of July, 1801 ; and, while the inhabitants were indulging the hope of future happiness, a storm was gathering, which hurst upon them with accumulated fury. Scarcely was the peace of Amiens concluded, when a for- midable armament of twenty-six ships of war was equipped by order of the first consul, with the determination of reducing the revolted co- lony of St Domingo. On board this fleet were err barked 25,000 chosen troops, amply furnished with all the apparatus of military slaughter. The better to ensure success to the expedition (the

chief command of which was confided to ge- neral Le Clerc, the brother-in-law of Buonaparte), recourse was first had to perfidious means. At- tempts were made to sow disunion among the free people of St. Domingo. Proclamations and letters, expressed in all the delusive jargon of the republic, were widely circulated. The chiefs of both colors, then in France, and the two sons of Toussaint himself, who had sent them thither for instruction, were pressed into the service of this expedition.

The French forces arrived in January, 1802 ; yet so little did Toussaint expect to have any enemy to combat, that he had given no orders for resistance in case of attack. When the French squadron was descried, he was making a tour round trie eastern part of the island : and, if some of the generals resisted, it was only in con- sequence of the menaces and hostile manner in which they were summoned to surrender.

*After his troops had disembarked, and pre- viously to commencing operations in the in- terior of the country, and perhaps in the hope that the sight of so formidable a force would in- spire the Haytians with terror, Le Clerc thought proper to try what effect these circumstances, the sight of his two sons, and a specious letter from Buonaparte, would produce upon Toussaint. Coisnon, their tutor, who had accompanied them from France, and was one of the chief confiden- tial agents in this expedition, was accordingly deputed on this errand, with instructions to press Toussaint's instant return to the Cape, and to bring back the children in case he should not succeed. When he reached Eunery, Toussaint's country residence, that chief was absent in a dis- tant part of the island, whence he did not re- turn till the second day. The wily Frenchman availed himself of this delay to work upon the feelings of their mother; whose tears, and the solicitations of the children, for a while shook the resolutions of Toussaint. Being at length con- firmed in his suspicions of the snare that had been laid for him, by the conduct and language of Coisnon, Toussaint suddenly composed his agitated countenance; and, gently disengaging himself from the embraces of his wife and chil- dren, he took their preceptor into another apart- ment, and gave him this dignified decision : — * Take back my children ; since it must be so, I will be faithful to my brethren and my God.' Unwilling to prolong the painful scene, Tous- saint mounted his horse, and rode to the camp. A correspondence was subsequently opened with him by Le Clerc, but it failed to produce Tous- saint's submission.*

Le Clerc now proceeded to hostilities, the minute circumstances of which we

have not room to detail. It must therefore suffice to state, that the numbers and discipline of the French troops, added to the military skill of their commanding officers, overpowered all open resistance in the field, so that the blacks, after several obstinate conflicts, and after the burning of several of their principal towns, were finally compelled to retire into the inaccessible fastnesses of the interior, whence they carried on, under their brave chief- tain, Toussaint, a desultory, but destructive, %var- iare against detached parties of their enemies.

This mode of fighting was dictated by the na- ture of their country. They would frequently place whole lines in ambush, sometimes reaching from one part to another, and sometimes extend- ing to a considerable distance from each wing of a camp. By their admirable discipline, and astonishing celerity, their enemies were often disconcerted, and thrown into disorder ; and sometimes, when the French thought themselves sure of a victory, detachments in ambush sud- denly made their appearance, and mortified them with a defeat. At length, however, the negroes and cultivators were either subdued by the ter- ror of the French army, or cajoled by the deceitful promises of the French general, who had published in his own name, and in that of the first consul, repeated solemn declarations, that the freedom of all the inhabitants of St. Domingo, of all colors, should be preserved inviolate. But elated by his successes, he now threw aside the mask, and issued an order, expressly restoring to the pro- prietors or their attorneys, all their ancient authority over the negroes upon their estates. This order opened the eyes of the negro popula- tion. Toussaint, descending from his fastnesses with seveial hundred men, effected a junction with Christophe, who was at the head of three hundred, and marched rapidly to the north of the island. Wherever he came, he summoned the cultivators to arms, multitudes of whom flocked to his standard. His force speedily became for- midable: they drove in the enemy's posts in all directions, and surrounded the town of Cape Franc ois, within whose walls they had taken re- fuge. To save that place from being stormed by the infuriated black troops, Le Clerc was obliged to abandon all his conquests in other parts of the island, and hasten by forced marches to its relief. Sensible of his precipitancy in throwing off the mask, he again had recourse to his for- mer acts; and having issued a proclamation couched in the most specious terms, the black chieftains, who were weary of the war, and whose troops began to quit the ranks, agreed to lay down their arms, on condition of a general amnesty, and the preservation of their own rank, and that of their officers.

Scarcely had the French thus succeeded in extending their dominion over the whole island, when they began to put in execution their fright- ful system of slavery and destruction; and, as a preliminary step towards this object, Le Clerc caused Toussaint to be privately seized, in the dead of the

night, together with his family, and embark for France, on board a fast-sailing fri- gate, about the middle of May, 1802. He was kept a close prisoner on the voyage, and heard of no more by his countrymen. SeeL'OuvERTURE.

To justify this base act of treachery, Le Clerc accused Toussaint of having intended to excite an insurrection among the working negroes, and to raise them in a mass. The only proof alleged by the French general was two intercepted let- ters, said to havebezn written by him to his aid- de-camp Fontaine. M.de la Croix (who was an officer in the army of Le Clerc) has printed one of these letters as genuine : the manifesto ad- dressed to the sovereigns of Europe by Christophe, on his accession to the throne of Hayti, affirms it

to be a forgery ; and such is the opinion of M. de Gastine, who observes further, that the pre- tended letters not only do not prove that Tous- saint was preparing to take up arms again, but that every thing concurs to prove that they were forged, otherwise the French would have tried him before a special commission, instead of tran- sporting him 2000 miles from his country, in defiance of the law of nations and of humanity.

The base treachery of Le Clerc aroused the black chieftains, and opened the eyes of their countrymen to the designs of the French. Des- salines, Christophe, and Clerveaux, again raised their standards, and were soon found at the head of considerable bodies of troops, ready to renew the struggle for liberty, and determined to suc- ceed or perish in the attempt. During the latter half of the year, 1802, actions were fought with various success. And though the French were continually receiving fresh supplies of men, yet these did not suffice to supply the place of those who perished by the sword and by sickness. Their hospitals were crowded with sick, and disease daily made new ravages. At length Rochambeau, who had succeeded to the chief command on the death of Le Clerc, was com- pelled by Dessalines to evacuate Cape Francois, where the remains of the French army were sur- rounded ; and, as the war had then recommenced between Great Britain and Fiance, the French gladly surrendered themselves prisoners of war to a British squadron, and were conveyed to this country. We shall not harrow up the feelings of our readers by a recital of the refined cruelty and savage barbarity practised by the French during this residence of twenty-one months on the island of St. Domingo. According to the returns which have been subsequently made to the Haytian Government, more than 16,000 ne- groes and people of color perished

under the various tortures inflicted by them. The bar- barities committed by these modern conquerors upon the children of Hayti far exceeded indeed the crimes of the Pizarros, Cortez, and the Bovadillas, those early scourges of the New World.

The French being expelled, at a general meeting of the National Assembly, on the 1st of January, 1804, the independence of the island was again proclaimed ; the aboriginal name of Hayti was resumed., and the Haytians pronounced the oath to die free and independent, and never again to submit to any foreign domination what- ever. Dessalines was elected governor-general for life, which title, a few months afterwards, he exchanged for that of emperor, being crowned by the style of Jacques I. But his reign was of short duration ; the cruelties he perpetrated caused a conspiracy to be formed against him ; and, two years after his coronation, he was sur- rounded by the conspirators at his head-quarters, and, struggling to escape, received a wound, which terminated his life. His death produced a division of St. Domingo, and another civil war.

In the north, Christophe assumed the reins of government, with the modest designation of chief of the government of Hayti ; while Pe- tion, a mulatto, asserted his claim to sovereign

power. For several years these rival chieftains carried on a sanguinary contest, with various success on both sides, until the year 1810, when hostilities were suspended ; and, though no formal treaty was concluded, the country lonˆ enjoyed the blessings of peace. Christophe was crowned king of Hayti in March 1811, by the title of Henry I.; and Petion, as president of the republic of Hayti, governed the southern part until 1818, when he died, and was suc- ceeded by general Boyer, whom he was allowed to nominate his successor.

Both governments encouraged agriculture as the basis of their national prosperity, and dis- played a laudable solicitude for the instruction of the rising generation. Christophe examined the rival claims of the two systems of mutual instruction practised in England, and- gave the preference to that of the British and Foreign School Society. Schools, under the care of English teachers, were established in his domi- nions at Cape Henry, Sans Souci, Port de Paix, Gonaives, and St. Marc. In the primary schools, the instructions are principally given in English. In the republican part of the island, a school was established at Port-au-Prince, on the Bri- tish and Foreign Society's plan, by an English teacher, to whose conduct and ability the presi- dent, general Boyer, has borne the most ho- norable testimony. This school is under the superintendence of a native teacher. A lyceum has likewise been instituted for teaching the higher branches of literature and science.

Christophe, in imitation of other monarchs, created various orders of nobility, together with numerous officers of state, each of whom had a fixed order of precedence, according to the supposed dignity of their office. His dynasty, however, was like his predecessor's, but short- lived. In 1820 a successful conspiracy was formed against him, and finding himself surrounded by an overwhelming force, he committed suicide. See CHRISTOPHE. The president of the republic, Boyer, now advanced upon the kingdom, and succeeded, with but little opposition, in adding it to the republic of Hayti.

In 1822, Boyer took advantage of another event to unite the Spanish part of the island to the republic. The people, who were principally colored, revolted from the Spanish authorities, and Boyer, immediately hastening to the city of St. Domingo, with 12,000 men, was received without opposition. The Spanish soldiers were dismissed from the island, the republican flag was hoisted, and the slaves were emancipated. From that period the republic of Hayti has been co-extensive with the island of St. Do- mingo.

The revenues of the two governments are supposed to be about 48,000,000 francs; and the expenses of their administration, in 1817, scarcely exceeded 18,000,000 francs, thus leaving a surplus of 15,000,000 at the disposal of each. The Catholic religion is declared to be that of both divisions of the island; the hierarchy of the northern part consists of an archbishop, three bishops, and a rector in each parish. At Sans Souci there is a royal and parochial church.

It was erected by Henry, and was mentioned in the royal almanack as ' a monument of his royal munificence and piety.' The archbishop, whom the pope has hitherto refused to consecrate, has a chapter, a seminary, and a college attached to the metropolitan see, all well endowed He has also three archi-episcopal palaces assigned to him; and the bishops have each a chapter and a seminary, endowed with considerable revenues.

The armies of the two governments, in 1820, were composed of about 24,000 regular troops each ; but not more than 5000 or 6000 were on duty at one time. They were relieved alternately every three months ; and received pay while on actual service. During the remaining nine months of the year, they were quartered upon the great provision-grounds of the two governments. Since the revolution, commerce is said to have greatly declined. From 1804 to 1808, accord- ing to Walton, only about seventy-five vessels arrived annually, with cargoes amounting to about £150,000

sterling.

Tiie Haytians express themselves witn great energy and propriety, on moral and political subjects. Some of the state-papers of the late king might vie with those of far more advanced communities. ‘ Five-and-twenty years ago,’ says the black baron de Vastey, in his Po- litical Reflections, printed at the press of Sans Souci, ‘ we were plunged in the most complete ignorance ; we had no notion of human society, no idea of happiness, no po •. jrful feeling; our faculties, both physical and moral, were so over- whelmed under the load of slavery, that I myself, who am writing this, I thought that the world finished at the spot which bounded my sight; my ideas were so limited, that things the most simple were to me incomprehensible, and all my countrymen were as ignorant, and even more so than myself, if that were possible. I have known many of us,’ he continues, ‘who have learned to read and write of themselves without the help of a master ; I have known them walking with their books in their hands, enquiring of the passengers, and praying them to explain to them the signification of such a character or such a word, and in this manner many, already advanced in years, became able to read and write without the benefit of educa- tion. Such men,’ he adds, ‘ have become nota- ries, attornies, advocates, judges, administrators, and have astonished the world by the sagacity of their judgment; others have become painters and sculptors from their own exertions, and have astonished strangers by their works ; others again have succeeded as architects, mechanics, wea- vers; in short, others have worked mines of sulphur, fabricated saltpetre, and made excellent gunpowder, in mills and establishments similar to those of Europe, with no other guides than books of chemistry and mineralogy. And yet,’ he continues, ‘ the Haytians pretend not to be a manufacturing and commercial people’ — ‘ like the Romans, we go from arms to the plough, and from the plough to arms.’ But he contem- plates the time when they shall call to their as- sistance the mechanical arts, the employment of machines, of animals, and of the natural agents, air, fire, and water, and put in practice those

means, ‘ which,’ says he, ‘ will render our coun- try the most beauiiful, populous, and flourishing, and its inhabitants, heretofore so unfortunate, the happiest people in the world.’

In July 1816, after Louis XVIII. was restored to the throne, commissioners were sent from France to St. Domingo, entrusted with the ad- ministration of all the affairs of the island, both civil and military, but all their overtures were firmly rejected in both parts of the island. His majesty Charles X. has been more successful in asserting the claims of France to this island. He has procured that kind of recognition of the in- terest of the former planters, which has resulted in a treaty of indemnity in regard to

them, whereby the French government stipulates to acknowledge the independence of Hayti, which is on the other hand to pay a shm of money to France, and give certain advantages to the French commerce above that of other nations.

We conclude with the excellent reflections of a modern periodical publication. ‘ The establish- ment of a black empire in the midst of the British West Indies,’ observes this writer, ‘ excited the most fearful apprehensions in the minds of the planters. Subsequent events have shown that, however well founded those appre- hensions might seem, they have little to fear, so long as their slaves are treated with kindness and humanity. The abolition of the nefarious traffic in slaves, and other wise measures of the British legislature, have already contributed to ameliorate the condition of the slaves; aadwe may reason- ably expect that, in proportion as these measures have their full effect, the condition of the negroes in our West-India colonies will be progressively improved. In their present state entire freedom would be no boon to them. Nothing indeed can prepare their minds for its reception and enjoy- ment but the introduction of Christianity, and the diffusion of moral and religious education. We have no data by which we can compute the actual number of Christian slaves in the West Indies; but we know generally that, in almost all the larger islands, there are active and zealous missionaries, who devote themselves to the pious and benevolent task of imparting religious in- struction to those neglected outcasts. In Antigua, especially, this greatest of blessings has been imparted to many thousands of slaves, who bear the yoke of bondage with patience, cheered by the hope which the Gospel reveals, as the end and compensation of all their sufferings. In many other islands, the prejudice of planters against the tuition of their slaves is silently wearing away ; while the number of those, who, from various causes, are favorable to their in- struction, is gradually increasing ; and a convic- tion is gaining ground, most advantageous to the interests of all parties, of the inefficacy of human restraints and punishments to produce that uni- form obedience, which is seen in well instructed and religious slaves. These are truly encoura- ging signs of the times ; and when we add to them the increasing liberality of British Christians in this country, we may reasonably indulge the hope that the period is not far distant, when the entire black population in the West Indies shall hail wjth devout gratitude the <ˆy, that

ported them from their native deserts, to make them free men in the noble sense suggested by the New Testament.

DOMINICA, the last of the Leeward or Caribbee islands, taking them from north-west to south-east; so named by Christopher Columbus, from his having discovered it on Sunday, Nov. 3d, 1493. It is situated about half way betwixt Guadaloupe on the north-west, and Martinico on the south-east, fifteen leagues from each, between 15° 20′ and 15° 44′ 30″ N. lat., and between 61° 17′ and 61° 30′ W. long. It is twenty-nine miles long from Crab-Point on the south, to the north-west cape of Agusha Bay on the north; and nearly sixteen broad from Raymond Bay east, to Coulihaut on the west. It contains 186,436 acres of land, an

Tiie imports from the island to England, and the exports from the latter were,

Imports. £315,584

282,002

Exports. £161,291

39,686.

The principal imports were,

Coffee. Sugar. Rum. Cotton.

cwts. ciats. galls. Ibs.

In 1809 3,254 41,990 56,356 75,425.

1810 27,185 61,522 39,397 59,742.

This island was reduced in 1778 by the French, under the marquis de Bouille, governor of Marti- nico ; who made a descent with 2000 men, and found only 100 regulars, and a few companies of militia, to oppose him. Resistance therefore

being vain, the only tiling the garrison couid do, was to procure as favorable terms as possible. These were granted with such readiness as did great honor to the character of this officer; the inhabitants experiencing no kind of change ex- cept that of transferring their obedience from Britain to France. A large quantity of military stores, with 164 pieces of cannon, and twenty- four brass mortars, were found in the place ; so that the French themselves expressed their sur- prise at finding so few hands to make use o-

them. It was restored to Britain at the conclu- sion of the peace in 1783; and, in 1795, the French attempted to take it again, but were un- successful ; all the Frenchmen who landed being either killed or taken prisoners. The position of Dominica renders it of great consequence to England in war with France; for a, squadron, stationed at Prince Rupert's Bay, may effectually cut off the communication between Martinique and Guadaloupe.

DoMrNiCA, or HEEVAROA, is the largest of the Marquesas islands, called by the natives Iliwaoa and Ohiwana, extending east and west eighteen miles. It is about forty-eight miles in circum- ference ; full of rugged hills, and of a barren sur- face, but is, however, inhabited. Long. 139° 3′ W., lat. 9° 44′ N.

DOMI'NICAL, adj. Lat. domirucal'u. Re- lating to the Lord's day, or Sunday.

*The cycle of the moon serves to shew the epacts, and that of the sun the dominical letter, throughout all their variations. Holder on Time**

DOMINICAL LETTER, or SUNDAY LETTF.R, See CHRONOLOGY. The dominical letters were introduced into the kalendar by the primitive Christians, instead of the nundinal letters in the Roman kalendar.

DOMINICANS, an order of religious, so named from their founder Dominic de Guzman, who preachpd with great zeal against the Albi- genses in Languedoc, where he laid the first foundation of this order. See GUZMAN. It was approved of in 1215, by Innocent III., and con- firmed in 1216, by a bull of Honorius III, under the title of St. Augustin ; to which Domi- nic added several austere precepts and obser- vances, obliging the brethren to take a vow of absolute poverty ; to abandon entirely all their revenues and possessions ; and to take the title of Preaching Friars, because the public instruc- tion was the main end of their institution. The first convent was founded at Thoulouse by the bishop thereof and Simon de Montfort. Two years afterwards they had another at Paris, near the bishop's house; and some time after a third in the rue St. Jacques, whence the denomination of Jacobins. Just before his death, Dominic sent Gilbert de Fresney, with twelve of the brethren, into England, where they founded their first monastery at Oxford, in 1221, and soon after another at London. In 1276 the mayor and aldermen of the city of London gave them two whole streets by the river Thames, where they erected a very commodious convent, whence that place is still called Black Friars, from the name by which the Dominicans were called in England. Dominic, at first, only took

the habit of the regular canons ; that is, a black cassock and rochet : but this he quitted in 1219, for that which they now wear, which it is pretended was shown by the blessed Virgin herself to the beatified Renaud of Orleans. This order has been spread throughout the whole known world. Before the revolutionary wars, it had forty-five provinces under the general, who re- sided at Rome ; and twelve particular congrega- tions, governed by vicars general. There have been three popes of this order, above sixty cardinals, several patriarchs, 150 archbishops, and about 800 bishops ; besides masters of the sacred palace, whose office has been constantly dis- charged by a religious of this order, ever since St. Dominic, who hold it under Honorius III. in 1218. Of all the monastic orders, none enjoyed a higher degree of power and authority than the Dominicans. Their credit was great, and their influence universal. But the measures they used to maintain and extend their authority were so perfidious and cruel, that their influence began to decline towards the beginning of the six- teenth century. The tragic story of Jetzer, con- ducted at Bern in 1509, for determining an uninteresting dispute between them and the Franciscans, relating to the immaculate concep- tion, reflects indelible infamy on this order. See an account of it in Mosheim's Eccl. Hist. vol. iii. p. 294, 8vo. They were indeed perpetually employed in stigmatising with the opprobrious name of heresy numbers of learned and pious men ; in encroaching upon the rights and proper- ties of others, to augment their possessions ; and in laying the most iniquitous snares and strata- gems for the destruction of their adversaries. They were the principal counsellors, by whose instigation and advice Leo X. was determined to the public condemnation of Luther. The papal see never had more active and useful abettors than this order, and that of the Jesuits. The dogmata of the Dominicans are opposite to those of the Franciscans. There are nuns of this order, called in some places Preaching Sisters. These are even more ancient than the friars ; St. Dominic having founded a society of religious maids at Proilles in 1206. There is also a third order of Dominicans, both for men and women. 9, DOMINIS (Mark Anthony de), archbishop of Spalatro in Dalmatia at the close of the fif- teenth and beginning of the sixteenth centuries. Becoming acquainted with bishop Bedell, while chaplain to Sir Henry Wotton, ambassador from James I. at Venice, he became resolved to aban- don the Roman Catholic religion, concerning the authority of which he had long had his doubts. He had written De Republic^. Ecclesiastica, but had hitherto dreaded to publish his work ; he now therefore committed them to Bedell, and they were afterwards published at London, with his corrections. He came to England with Bedell ; where he was received with great respect, and preached and wrote against the Romish religion. He had a principal share in publishing

father Paul's History of the Council of Trent, which was inscribed to king James in 1619. But on the promotion of pope Gregory XIV,, who had been his school-fellow and old acquaintance, he was deluded by Gondomar, the Spanish ambas-

sador, into the hopes of procuring a cardinal's hat, by which he fancied he should prove an in- strument of great reformation in the church. Accordingly he returned to Rome in 1622, re- canted his errors, and was at first well received ; but he afterwards wrote letters to England, re- penting his recantation ; which being intercepted, he was imprisoned by pope Urban VIII., and died in 1625. He was the author of the first philosophical explanation of the rainbow.

DOMINIUM DIRECTUM, in Scotch law, the right which a superior retains in his lands, not- withstanding the feudal grant to the vassal. See LAW.

DOMINIUM EMINENS, in Scotch law, that power which the state or sovereign has over pri- vate property, by which the proprietor may be compelled to sell it for an adequate price where public utility requires.

DOMINIUM UTILE, in Scotch law, the right which the vassal acquires in the lands by the feudal grant from his superior.

DOMINUS, a title anciently prefixed to a name, usually to denote the person either a knight or a clergyman. The title was sometimes also given to a gentleman not dubbed ; especially if he were lord of a manor. In Holland, tne title dominus distinguished a minister of the re formed church.

DOMUS, in antiquity, is sometimes used for all sorts of houses, either magnificent or ordi- nary; but it is often taken by writers to intimate a mansion of some lord, or palace of some prince, as in Virgil, speaking of the palace of Dido.

' At domus interior regali splendida luxu.'

These houses were built with much magnifi- cence, and were of a vast extent ; for they had many courts, apartments, wings, cabinets, bag- nios, stoves, and halls, either to accommodate their owners at table, or for transacting matters of cpnsequence. Before these houses was ge- nerally a large place or porch, where clients and persons giving attendance to great men waited to make their court. It is supposed that this was covered, for the conveniency of persons, who were sometimes waiting very long before they were admitted.

There was a second part to these houses, called cavum-ccdium, or cavoedium : it was a spacious enclosed court.

The third part was called atrium interius, i. e. in general the whole inside of the house. Virgil used this word in this sense, when he said,

*‘ Apparet domus intus, et atria longa patescunt j**

for it is plain that Virgil means by the word atria, that all may be seen in the inside of a house when the doors are opened. There was a porter waiting at the atrium, called servus atriensis. Within this there were many figures ; for the Romans raised every where trbphies and statues, to leave monuments of their great actions to posterity, not only in the provinces, which they subdued to the empire, but also in public places, and their own palaces at Rome.

Here were therefore painted or engraven battles, axes, bundles of rods, and the other badges of the offices that their ancestors or them-

selves had obtained : and statues of wax or metal, representing their fathers in basso relievo, were set up in niches of precious wood or rare marble. On the days of their solemn feasts, or triumphal pomp, these niches were opened, and the figures, crowned with festoons and garlands, carried about the town. When any of the family died, these statues accompanied the funeral parade; wherefore Pliny says, that the whole family was there present from the first to the last. There were also large galleries in these houses, adorned with pillars and other works of architecture.

The halls were built after the Corinthian or Egyptian order. The first had only a row of pillars set upon a pedestal, or on the pavement, and supported nothing but the architrave, and cornish of joiners’ work or stud, over which was the ceiling in form of a vault; but the later halls had architraves upon pillars, and the architraves of the ceilings made of pieces joined together, which make an opened circular terrace. These houses had many apartments, some for men, and others for women ; some for dining-rooms called triclinia, others for bed-chambers named dormi- toria ; and some others to lodge strangers. So large was ancient Rome, that there were 48,OOC houses standing by themselves, or being so many insulse, and having a light on every side.

The Greeks built in a different manner from the Romans ; for they had no porch, but from the first door they entered into a narrow passage ; on one side of it there were stables, and on the other was the porter’s lodge ; at the end of this passage there was another door, to enter into a gallery supported with pillars, and this gallery “had piazzas on three sides.

Within the Greek houses there were halls, for the mistresses of the family, and their servant maids to spin in ; in the entry both on the right and left hand there were chambers; one called thalamus, and the other antithalamus. Round the piazzas there were dining-rooms, chambers, and wardrobes. To this part of the house was, joined another which was considerably larger. The finest entries and most magnificent doors were at this part of the house. There were sometimes four square halls, so large and spa- cious, that they would easily hold four tables, with three seats in form of beds, and leave room enough for the servants and gamesters. They entertained their friends in these halls, for it was not the custom for women to sit amongst men. On the right and the left of these buildings were small apartments, and convenient rooms to re- ceive the guests ; and among the Greeks wealthy and magnificent men kept apartments, with all their conveniencies, to receive any persons who came to lodge at. their houses. The custom was, that after they had given them an entertainment the first day, they sent them afterwards every day some present, as chickens, eggs, pulse, and fruits ; so that travellers were lodged as they had been at their own houses, and might live in these apartments privately.

The apartments were paved with mosaic or inlaid work. Pliny tells us, that the pavements that were painted and wrought with art came from the Greeks, who called them Xi0o

of Sylla, who had one made at Prasneste, in the temple of Fortune. This pavement was not only used for paving the courts of houses and the halls, but also in chambers, and wainscottiug the walls, and called musasa, musia, and mu- siva, because ingenious works were ascribed to the muses, and the muses and sciences were thereby represented.

DON, v. a. [To do on.] To put on ; to invest with ; the contrary to doff. Obsolete.

The purple morning left her crimson bed, And donned her robes of pure vermilion hue.

Fairfax.

Her helm the virgin donned. Id.

What ! should I dm> this robe, and trouble you ?

Shakspeare.

DON, n. s. 1 Lat. dominus. The Spanish DON'SHIP, n. s. f title for a gentleman ; as, Don Quixote. It is with us used ludicrously : don- ship is the rank of a don or gentleman.

To the great dons of wit, Phoebus gives them full privilege alone To damn all others, and cry up their own.

Dryden.

I'm none of those, Your bosom-friends, as you suppose Hut Ralph himself, your trusty squire, Wh' has dragged your donship out o' the mire.

Hudibras.

Here dons, grandees, but chiefly dames abound, Skilled in the ogle of a roguish eye. Yet ever well inclined to heal the wound.

Byron.

DON, a river of Russia, anciently called Ta- nais, which takes its rise from the small lake of St. John, near Tula, in the government of Mos- cow, and passing through part of the province of Voronetz, a small portion of the Ukraina Slo- bodskaia, and the whole province of Azof, divides itself near Tcherkask into three streams, and falls in these separate branches into the sea of Azof. The river has so many windings, is in many parts so shallow, and abounds with such nume- rous shoals, as to be scarcely navigable, except- ing in the spring, upon the melting of the snows ; and its mouth is also so choked up with sand, that only flat-bottomed vessels can pass into the sea of Azof, at any other season. The banks of the Don, and the rivulets which fall into it, are clothed with large tracts of forest, whose timber is floated down the stream to St. Demetri and Rostof, where the frigates for the sea of Azof are chiefly constructed. The navigation of the Don, Mr. Coxe observes, may possibly hereafter be rendered highly valuable, by conveying to the Black Sea the iron of Siberia, the Chinese goods, and the Persian merchandise : which latter com- modities, as well as the products of India, for- merly found their way into Europe through this same channel.

DON, a river of Scotland, in Aberdeenshire, which rises about four miles north of the castle of Brae-Mar, runs through the district of Al- ford ; so named from the river being almost All ford, or every where fordable, in that part of its course ; afterwards joins the Ury at Inverury, and falls into the British Ocean at New Aber- deen, within two miles of the mouth of the Dee. It has been long famous for its salmon fishery

A space of within 500 yards of this river has in one year produced fish to the amount of £2000.

DONAGHADEE, a post, market, and port town in the barony of Ardes, and county of Down, tweuty-seven miles and a half distant from Port Patrick in Scotland, the corresponding packet station. Lat. 54° 45′ N., long. 5° 40′ \V. The ancient quay, in form of a crescent, was built by lord Montgomery, and accommodated from twelve to fourteen sail. The present pier was built at the expense of government, and is in- tended to enclose a surface of 100 fathoms square, accessible at low water for vessels of fifteen feet draft. The south pier is completed, but shelter is much wanted on the north. Port Patrick lies N. E. by E. i N., or nearly north-east by com- pass from Donagliadee. It has been suggested that the execution of this harbour, according to the original design, i. e. with a funnel-shaped mouth, might possibly cause vessels to steer wildly when entering in a heavy swell.

DONALDSON (John), a painter and engraver of some repute, was born at Edinburgh in 1737. He painted portraits in miniature, and was dis- tinguished also for his skilful imitations of the old engravers, which he executed so correctly as to deceive even connoisseurs. He published a volume of poems, and an Essay on the Elements of Beauty. He also cultivated chemistry, and discovered a method of preserving meat and ve- getables during long voyages. He died in 1801.

DONARIA, among the ancients, in its pri- mary signification, was taken for the places where the oblations offered to the gods were kept ; but afterwards was used to denote the offerings them- selves ; and sometimes, improperly, the temples.

DONATIA, in botany, a genus of the trigynia order and triandria class of plants : CAL. triphyl- lous perianth, with short subulated leaves stand- ing at a distance from one another : COR. petals from eight to ten, of an oblong linear shape, twice as long as the calyx : STAM. three subu- lated filaments, the length of the calyx ; the an- therae roundish, didymous, and two-lobed at the base. Species, one only, a native of Terra del Fuego.

DONATIO MORTIS CAUSA, in law, a dispo- sition of property made by a person in his last sickness, who, apprehending his dissolution near, delivers or causes to he delivered to another the possession of any personal goods, to keep in case of his decease. If the donor dies, this gift needs not the consent of his executor ; but it shall not prevail against creditors ; and it is accompanied with this implied trust, that, if the donor lives, the property shall revert to himself, being only given in prospect of death, or mortis causa. This method of donation seems to have been conveyed to us from the civil lawyers, who borrowed it from the Greeks.

DONATION, n. s. j Fr. donation; Span.

DON'ATIVE, n. s. > donation ; Ital. and Lat.

DO'NOR, n. s. j donatio. from dono, ex-

pletive ot do, to give. A donation is a grant ; the act of giving ; and a gift : for donative see the following article. A. donor is a giver or bestower.

The Roman emperor's custom was, at certain solemn times, to bestow on his soldiers a donative; which

donative they received wearing garlands upOA their heads. Hooker.

Howsoever the letter of that dona'ion may be unre- garded by men, yet the s;nse thereof is so imprinted in their hearts, as if every one laid claim for himself unto that which was conferred upon all.

Raleiyh's Essays.

He gave us only over beast, fish, fowl, Dominion absolute ; that right we hold By his donation. Milton's Paradise Lost.

After donation there is an absolute change and alien- ation made of the property of the thing given : which being so alienated, a man has no more to do with it than with a thing bought with another's money.

South.

Litters thick besiege the donor's gate, And begging lords and teeming ladies wait The promised dole. Dryden's Juvenal.

It is a mighty check to beneficent tempers to consi- der how often good designs are frustrated and per- verted to purposes, which, could the donors themselves have foreseen, they would have been very loih to promote. A tterbury .

Never did steeple carry double truer ;

His is the donative, and mine the cure. Cleveland.

DONATISTS, ancient schismatics in Africa, so denominated from their leader Donatus. They had their origin A.D. 311, when, in the room of Mensunus, who died in that year on his return to Rome, Caecilian was elected bishop of Car- thage, and consecrated without the concurrence of the Numidian bishops, by those of Africa alone ; whom the people refused to acknowledge, and to whom they opposed Majorinus ; who, accordingly,

was ordained by Donatus bishop of Casae Nigrae. They were repeatedly condemned, in different councils held at Rome and Aries : and particularly in one at Milan, in 316, before Constantine the Great, who deprived them of their churches, banished their bishops, and pu- nished some of them with death. Their cause was espoused by another Donatus, called the Great, the principal bishop of that sect, who, with numbers of his followers, was exiled by Con- stans. Many of them were punished with great severity. See CIRCONCELLIONES. However, after the accession of Julian, in 362, they were restored to their former liberty. Gratian, in 377, deprived them of their churches, and prohibited their assemblies. But, notwithstanding these severities, they had a very considerable number of churches towards the close of the fourth cen- tury ; till they began to decline, on account of a schism among themselves, occasioned by the election of two bishops, in the room of Parme- nian, the successor of Uonalus. One party elected Primian, and were called Primiani?ts, and another Maximian, and were called Maxi- mianists. Their decline was also precipitated by the zealous opposition of St. Augustine, and by the violent measures pursued against them by Honorius, at the solicitation of two councils held at Carthage ; the one in 404, and the other in 411. Many of them were fined, their bishops were banished, and some put to death. This sect revived and multiplied under the protection of the Vandals, who invaded Africa in 427, and took possession of this province; but it sunk again under new. severities, when their empire

was overturned in 534. Nevertheless, they re- mained in a separate body till the close of the sixth century, when Gregory, the Roman pontiff, used various methods for suppressing them; his zeal succeeded, and there are few traces to be found of the Donatists after this period. They were distinguished by other appellations ; as Montenses, Campites, Rupites, &c. They held three councils, one at Cirta in Numidia, and two at Carthage. The peculiar opinions of the Donatists were, 1. That baptism conferred out of the church, that is, out of their sect, was null; and accordingly they rebaptised those who joined their party from other churches, and re-ordained their ministers. Donatus seems likewise to have given into the doctrine of the Arians, with whom he was closely allied ; and, accordingly, St. Epi- phanius,Theodoret, aud some others, accused the Donatists of Arianism ; and it is probable that the charge was well founded, because they were patronised by the Vandals, who were of these sentiments. But St. Augustine (Ep. 185, to count Boniface, and Haer. 69.) affirms, that the

Donatists, in this point, were clear of the errors of their leader.

DONATIVE, in the canon law, a benefice given by the patron merely without a presentation to the bishop. If chapels founded by laymen be not approved by the diocesan, and, as it is called, spiritualised, they are not accounted proper be- nefices, neither can they be conferred by the bishop, but remain to the pious disposition of the founders, and their heirs, who may give such chapels without the bishop. Gwin observes, that the king might anciently found a free chapel, and exempt it from the jurisdiction of the dio- cesan ; so may he, by letters patent, give liberty to a common person to found such a chapel, and make it donative, not presentable ; and the chap- lain or beneficiary, is deprivable by the founder or his heir, and not by the bishop. Donatives are within the statute against simony ; and, if they have cure of souls, within, that against pluralities. If the patron of a donative does not nominate a clerk, there can be no lapse thereof, unless it be specially provided for in the foundation; but the bishop may compel him to do it by spiritual censures. But, if it be aug- mented by queen Anne's bounty, it will lapse like other presentative livings. 1 Geo. I. stat. 2, cap. 10. The ordinary cannot visit a donative, and therefore it is free from procuration, and the incumbent is exempted from attendance at visi- tations. All bishoprics anciently were donative by the king. Where a bishop has the gift of a benerice, it is properly called a donative, because he cannot present to himself.

DONATIVE, DONATIVUM, in antiquity, was properly a gift made to the soldiers, as congia- rium was to the people. The Romans made large donatives to their soldiers. Julia Pia, wife of the emperor Severus, is called on certain me- dals mater castrorum, because of the care she took of the soldiery, by interposing for the aug- mentation of their donatives, &c. Salmasius, in his notes to Lampridius, on his Life of Helio- gabalus, mentioning a donative that emperor gave of three pieces of gold per head, observes, that this was the common am' legitimate rate of VOL. VII

a donative. Casaubon, in his notes on the Life of Pertinax by Capitolinus, observes, that Perti- nax made a promise of 2000 denarii to eac'i soldier; which amounts to upwards of £97 sterling. The same author writes, that the legal donative was 20,000 denarii; and that it was not customary to give less, especially to the praetorian soldiers : that the centurions had dou- ble, and the tribunes, &c.J more in proportion.

DONATUS (TElius), a celebrated gramma- rian, who lived at Rome, about A. D. 354. He was one of St. Jerome's masters ; and com- posed commentaries on Terence and Virgil, which are esteemed.

DONATUS (Jerom), a learned and noble Vene- tian, who flourished in the

end of the fifteenth century, and died in the beginning of the six- teenth. He was a benefactor to his country, both as a commander and as a negociator, and pro- cured its reconcilement with pope Julius II. He wrote many books, which remain in MS. ; besides a translation of Alexander Aphrodiceus de Anima, which he published. He died of a fever at Rome just as he had completed his ne- gociation with Julius.

DONAVESCHINGEN, or DONESCHINGEN, a town of Germany, in the circle of Suabia, si- tuated in the Black Forest, where the prince of Furstenberg has a palace, near which is a spring, said to be the source of the Danube, thirteen miles N. N. W of Schaffhausen, and thirteen west of Duttlingen.

DONAUWERTH, a strong and well built town of Bavaria, in the circle of the Upper Da- nube, on the left bank of that river. It has been taken and retaken several times in the wars of Germany ; and was formerly an imperial city. It has a bridge over the Danube, four good churches and four hospitals : it lies thirty miles west of Ingoldstadt, and eighteen north of Augs- burgh. In this neighbourhood were the famous lines of Schellenberg, when the allies under the duke of Marlborough obtained an important victory over the Bavarians on the 2d July 1704.

DONAX, a genus of insects belonging to the order of vermes testacei. It is an animal of the oyster kind ; and the shell has two valves, with a very obtuse margin in the fore part. There are nineteen species, principally distinguished by the figure of their shells.

DONCASTER, an ancient, large, and popu- lous town, in the West Riding of Yorkshire, seated on the Don, with a castle, whence its name. It is incorporated, and is governed by a mayor, recorder, six aldermen, and twenty-four councillors. In this town is a handsome theatre, town-hall, bank, free grammar-school, alms- house, work-house, a public dispensary, and va- rious other benevolent societies and institutions for the relief of sick and afflicted persons. The parish church is an ancient structure ; and its steeple is a piece of excellent workmanship. Here are numerous meeting-houses for religious sects of different denominations. Doncaster has long been celebrated for its races ; on the course, which is one of the most eligible in the king- dom, is erected an elegant stand for the accom- modation of the spectators and visitors, who are always numerous and fashionable. It has a

market on Monday ; and carries on manufactures improvements, a market would be found for the

of vests, petticoats, stockings, gloves, &c. It overplus of food obtained^ by the improved nar- has two bridges over the Don, with a high cause- way beyond them, the river being apt to over- flow its banks. It has also the relics of an old

Roman road, and lies thirty-seven miles south of visited by Dr. Berger, Dr. btokes, and Su

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bours, at the same time that civilisation would advance much more rapidly. Donegal abounds in valuable mineral substances ; it has been

York, and 160 north by west of London.

DONE, a kind of interjection. The word by which a wager is concluded : when a wager is offered, he that accepts it says ‘ Done!’

Done : the wager ? Shakspeare. Tempest.

One thing, sweet heart, I will ask : Take me for a new-fashioned mask. • — • — Done : but my bargain shall be this, 111 throw my mask off when I kiss. Cleveland. Twas done and done, and the fox, by consent, was to be the judge. L’ Estrange.

DONEGAL, anciently Tyrconnel, is a county in the province of Ulster, bounded on the north

Charles Giesecke. The surface may be termed both boggy and mountainous ; the former part useless, from a scanty population and want of drainage ; the latter unapproachable from want of roads. There is a valuable lead mine, at full work, near Kildrum. At Muckish there exists a rich bed of silicious sand. Iron ore is found in Aran-more, Muckish, and other places. Coals are found at Dromore, Ards, and Gla- nelly, and slate near Ballyshannon and Letter- kenney. Veins of primitive limestone and marble, fit for statuary, appear at Fintown ; sienite, and porphyritic sienite, are had here in great abundance, besides several species of lime-

and west by the Atlantic Ocean, by parts of stone. Dykes are of frequent occurrence, and

Leitrim and Fermanagh on the south, and by consist principally of trap and greenstone. There

Tyrone, Londonderry, and Fermanagh on the is but little trade of any description existing here,

east. It is divided into six baronies, and forty- Linen is made by the cottagers, and sold to the

two parishes. Its superficies measures about travellers from Derry, Sligo, and Strabane.

679,550 plantation acres. The line of coast is Kelp is made along the coast ; and the fisheries,

adorned by many islands, of which seventeen now in a very low state, might be rendered a

are inhabited ; and it is also indented by nume- great blessing to the poor and peaceable inhabi-

rous excellent harbours and bays, capable of being made available either for the West-India trade, or the encouragement and growth of valuable fisheries. The chief islands are Aranmore, con- taining 2000 acres, 132 houses, and 778 inhabit- ants : Inisbofin, having forty-three houses and 252 inhabitants : Tory Island, supporting a population of 296 in fifty-nine houses. The

tants of this large county, by the adoption of a few of Mr. Nimmo's very beautiful designs for coast improvements.

There are some remarkable natural beauties and curiosities in Donegal : the pass of Bamsmore is the most sublime of the first description ; and M'Swine's Gun the most singular of the second. The climate, from its latitude and exposure to

most important harbours are, the noble inlet of the Atlantic, is both colder and more damp than

Lough Swilly, extending thirty miles in length ; most of the other northern counties ; yet longe-

Mulroy and Sheep-haven in the north ; Teelin, vity is said to be one of its attributes : the last

Killybegs, and Brucklis in the south. The whale census returns upwards of

twenty persons in the

fishery was once successfully prosecuted on this county as having attained the age of 100, and

coast, and a pier was erected at Inver, as an aux- iliary, which now, unhappily, is a total ruin.

several as having reached the unusually extended age of 115 years. The chief towns are Lifford,

Inver and Brucklis Bay continue to be the chief Letterkenney, Raphoe, Ballyshannon, Rathmel- seat of the herring fishery; but from the want of ton, Killybegs, Buncrana, Ballintra, Dunfana- shelter for boats, this mode of life is rendered in this place awfully perilous. In 1813 fifty fisher-

ghy, &c. The chief, or county town is Lifford, situated on the river Finn. The assizes for the

men were lost in the last- mentioned bay, en- county are held here, but from its awkward situa-

tirely owing to the want of any rendezvous, when tion, upon the boundaries of the county, and its

the squall came on. The safest, best, and largest proximity to Strabane, it has never risen to the

harbour on this line, is Killybegs : here several importance to which shire-towns are entitled ;

hundred sail might anchor safely, but could not the population scarcely amounts to 1000 per-

put to sea hence in west or south-west winds. The fishery along this coast has latterly decayed, and is not likely to be arrested in its melancholy decline, without either the countenance and assistance of government, or of the landed pro- prietors of the county.

sons. Letterkenny is well situated for supply- ing the county with imports, but Rathmelton much better. The town of Ballyshannon, the property of Packenham Conolly, Esq., is situated at the embouchure of the river Erne. Here is the famous salmon fishery, the produce of which

The roads in Donegal are, in most places, un- is all exported to London, carefully packed in fit for carriages ; and the traffic of the country ice. The

fall of Ballyshannon is a beautiful ob- is carried on generally by horses, with sacks and ject, and always supplied with a great body of baskets. No mail-coach, as yet, passes through water from Lough Erne. The harbour of Bally- any part of this great district. The coast road shannon is obstructed by two bars; but, when should be all remade : a new line is wanted from they are passed, there is safe lying for small the Rossos, by the Giddore River, to Gortahork ; vessels in the pool below the waterfall. This and also from the same place to Fintown, by harbour is much in want of improvement, and a Aragib Mountain. In fact, without coast improve- navigation from Loch Erne to the sea is an ob- ments, the population will find it difficult to pro- vious want. The Erne, the Finn, and the Guy- cure subsistence ; and with the required road barra, are the principal rivers in the county ; but

lakes and mountain pools are very numerous. Lough Derg is rendered famous in story by the pilgrimages to St. Patrick's Purgatory, on one of its islands, annually performed by multitudes from every part of Ireland ; and Lough Esk is noted for the production of excellent char fisb. There are few counties in Ireland possessing greater interest, and at the same time less known to the public, than Donegal.

DONEGAL TOWN, in the barony of Tyrhugh, county of Donegal, and province of Ulster, is about 140 miles from Dublin. It is a post, market, and fair town. Here is a beautiful remnant of the military antiquities of Ireland, O'Donnel's castle, erected in the twelfth century, and at this day singularly perfect. The ruins of a monastery, founded in 1474, by Owen Rowe, stand at the distance of half a mile from the town.

DONERAIL, a borough of Ireland, in Cork, seated on the Awbeg, near some quarries of beau- tiful variegated marble. It sent two members to parliament before the Union. It is nineteen miles north-east of Cork, and 1 1 5 south-west of Dublin.

DONGALA, DANGALA, or DANKALA, as it is called by the Arabs, is a town of Afiica, in Nu- bia, seated on the east bank of the Nile. The streets are said to be half-deserted, being filled up with sand brought down by the waters from the mountains. The castle is large but not strong; but an account of it by Porcet, dated at the close of the seventeenth century, is the last we have seen. Persons of rank here go bareheaded, their hair being

disposed in tresses, and their whole attire consisting in a rude vest without sleeves. The pride of Dongala is in its horses, which are as beautiful as their riders are skilful. Since the expulsion of the Mamelukes from Egypt, those of that body which effected their escape, have taken possession of Dongala, and established a species of petty kingdom there. Their number, however, does not exceed 500, with 3000 or 4000 slaves. Dongala is 150 miles north of Sennar, and 690 south of Cairo.

DO'NJON, n.s. Now corrupted to dungeon, from low Lat. domnionum, according to Menage. The highest and strongest tower of the castle, where prisoners were kept : as in Chaucer. It is now used of subterraneous prisons.

The grete toure, that was so thicke and strong, Which of the castle was the chief dongeon, Wherein the knightes were in prison, Was evin joynant to the garden-wall, Ther as this Emely had her pluyeing. Chaucer.

DONNE (John), D. D., a poet and divine of the seventeenth century. His parents were of the Romish religion, and used their utmost ef- forts to keep him firm to it ; but his early exa- mination of the controversy between the church of Rome and the Protestants, at last determined him to choose the latter. He travelled into Italy and Spain, where he learnt their languages to perfection. Soon after he returned to Eng- land Sir Thomas Egerton, keeper of the great seal, appointed him his secretary : in which post he continued five years. Marrying privately Anne, the daughter of Sir George Moore, then chancellor of the garter, he was dismissed from his place, and thrown into prison : but he was

afterwards reconciled to Sir George by the good offices of Sir Francis Wolley. In 1612 he ac- companied Sir Robert Drury to Paris, and during this time many of the nobility solicited the king for some secular employment for him. But king James, who took plsasure in his con- versation, had engaged him in writing his Pseudo- Martyr, printed at London in 1610 ; and was so highly pleased with that work, that in 1614 he prevailed upon him to enter into holy orders ; appointed him one of his chaplains, and pro- cured him the degree of D. D. from the Univer- sity of Oxford. In 1619 he attended the earl of Doncaster in his embassy into Germany. In 1621 he was made dean of St. Paul's, and vicar of St. Dunstan's, in London; the advowson of it having been given to him long before by Richard earl of Dorset. By these and other preferments, he was enabled to be charitable to the poor, and to make good provision for his children. He wrote besides the above, 1. Devotions upon emergent occasions. 2. The Ancient History of the Septuagint, translated from the Greek of Aristeus, in 4to. 3. Three volumes of sermons, folio. 4. A considerable number of poems, and other works. He died in 1631; and was

in- terred in St. Paul's cathedral, where a monu- ment was erected to his memory. His writings show him to have been a man of wit and learn- ing ; but his chief talent lay in satire ; though it savors more of the coarse style of Juvenal, than of the elegant humor of Horace.

DONNE (Benjamin), a celebrated mathemati- cian, was born in 1729, at Bideford, in Devon- shire, where his father and brother Abraham were eminent teachers of the mathematics. Ben- jamin succeeded his father, but afterwards re- moved to Bristol, where he died in 1798. He was master of mechanics to his late majesty, and published — 1. Mathematical Essays, 8vo., 1759. 2. A Map of Devonshire, from an actual survey, made by himself. 3. The Accountant and Geometrician, 8vo. 4. The British Mariner's Assistant, 8vo. 5. Essays on Trigonometry, 8vo. 6. An Epitome of Natural Philosophy, 12mo. 7. A Treatise on Mechanical Geome- try, 12mo.

DONNINGTON, or DUNNINGTON, a town of England, in the county of Lincoln, with a good trade in hemp and hemp-seed, and a port for barges, by which goods are conveyed to Boston and the Washes. It has lately been much im- proved. Through the fens, a firm rampart of earth of considerable breadth has been con- structed, which forms a convenient road to Sem- pringham. The church is a convenient building: in the lower part of the steeple is a stone, on which are the remains of a Roman inscription, unintelligible, with the exception of the date of the year. It has a weekly market on Saturday ; arid is eleven miles W. S. W. of Boston, and 110 north of London.

DOOD'LE, n. s. A cant word, says John- son, perhaps corrupted from do little : faineant. A trifler ; an idler.

DOOM, v. a. & n. s.~\ Sax. dome, deman; DOOM'S-DAY, ˆTeut. thum, to DEEM,

DOOMS'MAN, i whicij see. To judge;

DOOMS'-DAY-BOOK. J destine; hencetocom-

itiand judicially, denounce ; and the sentence, determination, or judgment given. Doomsday is the day of future and universal judgment. For doom's- day-book, see DOMESDAY-BOOK.

Be thou consenting to thin adversarie soone, while thou art in the waye with him, lest peraventure thin adversarie take thee to the domesman and the domes- man take thee to the ministre, and thou be sent in to prisoun. Wiclif. Matt. v.

He that etith and drynkith unworthile, etith and drynkith doom to him, not wiseli demynge the bodi of the lord. Id. 1 Cor. xi.

Have I a tongue to doom my brother's death,

And shall that tongue give pardon to a slave ?

Shakspeare. Revoke thy doom,

Or whilst I can vent clamour from my throat, I'll tell thee thou dost evil. Id. King Lear. Search Windsor Castle, elves, within and out :

Strew good luck, ouphes, on every sacred room,

That it may stand till the perpetual doom. Id.

Men, wives, and children stare, cry out, and run, As it were doomsday. Id. Julius Caesar.

The Danes also brought iii a reckoning of money by ores, per oras, which is mentioned in doomsday- hook. Camden.

His business gives him not leave to think of his conscience, and when the time, or term of his life is going out, for dooms-day he is secure ; for he hopes he has a trick to reverse judgment. Bp. Earle.

They may serve for any theme, and never be out of date until doomsday. Browne's Vulgar Errours.

Him through malice fallen,

Father of mercy and grace ! thou didst not doom So strictly, but much more to pity incline. Milton.

Minos, the strict inquisitor, appears, And lives and crimes, with his assessors, hears ; Round in his urn the blended balls he rowls, Absolves the just, and dooms the guilty souls.

Dryden's JEneid.

Our souls, not yet prepared for upper light, Till doomsday wander in the shades of night • This only holiday of all the year, We privileged in

sunshine may appear. Id.

In the great day, wherein the secrets of all hearts shall be laid open, no one shall be made to answer what he knows nothing of : but shall receive his doom, his conscience accusing or excusing him.

Locke.

I have no will but what your eyes ordain ; Destined to love, as they are doomed to reign.

Granville.

From the same foes, at last, both felt their doom ; And the same age saw learning fall, and Rome.

Pope.

Indeed, as there is a difference in constitutions, some rest well after these meals ; it costs them only a frightful dream and an apoplexy, after which they sleep till doomsday. Nothing is more common in the newspapers, than instances of people, who, after eat- ing a hearty supper, are found dead a-bed in the morning. Franklin.

In groundless hope, and causeless fear,

Unhappy man ! behold thy doom ; Still changing with the changeful year, The slave of sunshine and of gloom.

Johnson. Winter's Walk.

When to the supper-hall we moved along,

Why was I doomed to face her in the throng !

With what provoking kindness did she stand,

And loose her arm from his to press my hand,

And beg with well feigned sympathy to know Of head-aches which I felt three months ago.

Dr. T. Brown.

The very knowledge that he lived in vain, That all was over on this side the tomb, Had made Despair a smilingness assume, Which, though 'twere wild, — as on the plundered

wreck

When mariners would madly meet their doom With draughts intemperate on the sinking deck, — Did yet inspire a cheer, which he forbore to check.

Byron.

DOON, or LOCH DOON, anciently called Dohn, a lake of Scotland, six miles long, in the south-east part of the district of Kyle, in Ayr- shire. There is an island in it, with an old fort called Balloch Castle. Also the name of a river of Scotland, which issues from Loch Doon, and, running north-west, divides the district of Kyle from that of Carrick. After a course of various meanderings for twenty-four miles, it falls into the Frith of Clyde, a little south of Ayr. It abounds with salmon, trout, pikes, ˆind eels.

DOOR, M.S. ~\ Goth, dare; Sax. dora;

DOOR'CASE, >Teut. thur ; Dan. doer; per-

DOOR'KEEPER. j haps from Gr. .Ovpa a Qix»,

to enter; Minsheu. The gate of a house or

room; hence entrance of any kind; passage;

and by metonymy, a house. To lay at the doors

of any one is to impute ; to charge upon him

any thing.

Petir stoode at the dore withoutforth : therfore the tothir disciple that was knowun to the bisschop wente out and seide to the womman that kepte the dore and broughte yn petir, and the damysel kepere of the dore seide to petir wher thou art also of this mannya disciplis. Wiclif. Jon. xviii.

The praier stint of Arcite the strong, The ringes on the temple dore they rong, And eke the dores clatten full fast, Of which Arcite somewhat hmi agast

Clutucer.

All the castle quaked from the ground, And every door of free-will open flew.

Faerie Qveene.

Since my own doors refuse to entertain me, 111 knock elsewhere. Shakspeare.

The indispensable necessity of sincere obedience, shuts the door against all temptations to carnal secu- rity. Hammond.

He that hath given the following assistances to thee, desires to be even a doorkeeper in God's house, and to be a servant to the meanest of God's servants. Taylor's Preface.

In the side a door

Contrived ; and of provisions laid in large, For man and beast. Milton's Paradise Lost.

A, seditious word leads to a broil, and a riot un- punished is but next door to a tumult. L' Estrange.

Lay one piece of flesh or fish in the open air, and another of the same kind and bigness within doors. Bacon's Natural History.

For without rules, there can be no art, any more than there can be a house without a door to conduct you in. Dryden.

In any of which parts if I ha,ve failed, the fault lies wholly at my door. Id. Dufresnoy, Preface.

Should he, who was thy lord, command thee now, With a harsh voice and supercilious brow, To servile duties, thou would 'st fear no more; The gallows and the whip are out of door.

Dryden. Persius.

His imaginary title of fatherhood is out of doors, and Cain is no prince over his brother. Locke.

Lambs, though they are bred within doors, and never saw the actions of their own species, push at those who approach them with their foreheads.

Addison's Spectator.

The making of frames for doorcases, is the framing of two pieces of wood athwart two other pieces.

Moxon.

Martin's office is now the second door in the street, where he will see Parnel. Arbuthnot.

A shrewd observer once said, that in walking the streets on a slippery morning, one might see where the good-natured people lived, by the ashes thrown on the ice before the doors. Franldin.

Love ends with hope ; the sinking statesman's door, Pours in the morning worshipper no more.

Johnson. Vanity of Human Wishes.

DOOSHACK, or Jullalabad, the capital of the province of Seistan, Persia, is situated in an open country, at the distance of eight or nine miles from the river Helmund, or Hetermund. It consists of about 2000 houses. Here is a good bazaar, and around are the ruins of a more extensive ancient city, which appears to have been built of half-burnt brick. The modern town, more commonly called Julallabad, is go- verned by a prince of an ancient and independent family, who styles himself king of Seistan.*

DO'QUET, n. s, A paper containing a war- rant. See DOCK.

Before the institution of this office, no doquet for licence to alien, nor warrant for pardon of alienation made, could be purchased without an oath.

Bacon's Office of Alienation.

DORAK, or Felahi, a town of the province of Kuzistan, Persia, situated on two branches of the river Jerahi. It is surrounded by mud walls, two miles in circuit, sixteen feet thick, and flanked at intervals, by round towers. The palace of the seik occupies a large area, but is a mean edifice, and in a decaying state. Dorak is celebrated for the manufacture of Arabian cloaks. There are few houses within the walls, as most of the inhabitants prefer residing under the shade of the date trees, in the suburbs. Population 8000. Seventy-five miles south of Shuster.

DORAN, a town of Arabia, in Yemen, the residence of the chief or governor of the district Bellad Aries. It is situated on the declivity of a mountain, and was once surrounded by a wall" with three gates. Twenty-eight "miles south of Sana.

DORCAS. See CAPRA. DORCHESTER, an ancient, neat, and well built town of England, the capital of Dorsetshire. It is seated on the river Frome, on a Roman road, and adorned with a fine terrace walk, planted with trees. It has three parish churches, with a court house where the county assizes are held ; and is governed by a mayor, twelve aldermen, a recorder, and twenty four council-men. It has long been

famous for its excellent ale. The streets are broad and well paved. It has two markets on Wednesday and Saturday, and sends two mem- bers to parliament. The manufactures are serge and broad cloth. It lies eight miles north of Weymouth, fifty-three east of Exeter, and 120 west by south of London.

DORCHESTER, a town in Oxfordshire, seated on the Tame, over which it has a bridge, three quar- ters of a mile above its junction with the Thames. It had five churches before the Norman conquest. It is ten miles south-east of Oxford, and forty- nine W. N. W. of London.

DORCHESTER, a county of Maryland, in North America. It is thirty-three miles long from east to west, and twenty-seven broad. Its produce is chiefly wheat, com, and lumber. Cambridge is the chief town.

DORCHESTER, a town of the United States of America, in Grafton county, New Hampshire, seventeen miles north-east of Dartmouth.

DORCHESTER, a township of the United States, in Norfolk county, Massachusetts. It is two miles south by east of Boston, and is about six miles long, and three and a half broad. The chief manufactures are paper, chocolate, snuff, leather, and shoes.

DORCHESTER, a town of the United States, in Cumberland county, New Jersey, seventeen miles east of Fairfield.

DORCHESTER NECK, a peninsula of Massa- chusetts, on the coast of the township, in Norfolk county; the north-east point of which approaches within half a mile of Castle Island, and its north-west point within half a mile of the south part of Boston. During the American war forts were erected on the heights, and the township suffered greatly.

DORDOGNE, a department of France, com- prehending part of the ci-devant province of Perigord, bounded on the north-east by that of the Upper Vienne, on the east by those of the Lot and Correze, on the south by that of the Lot and Garonne, on the west by those of the Gi- rondeandthe Lower Charente, and on the north- west by that of the Charente. Perigueux is the capital. Its superficial extent is about 3000 square miles, and the population 425,000, of whom 8500 are Protestants. It was at first divided

into nine districts, but now consists of the five arrondissements of Perigueux (the ca- pital), Bergerac, Sarlat, Riberac, and Nontron. The south of the department, particularly the banks of the Dordogne, the Vezere, and the He, is fruitful; but the north is mountainous, and covered with wood ; the deficiency of corn being supplied by chestnuts and potatoes. There are a few manufacturing establishments in various places, viz. for hardware, paper, glass, and pot- tery. Wine, oil, and cattle, form the chief articles of export. Of wine 150,000 hogsheads are accounted an average vintage ; the cattle and sheep are numerous.

DORDOGNE, a considerable river of France, which rises about seven miles north-west of Besse, in the department of the Puy-de-Dome. After forming the limit of the departments of the Puy- de-Dome and the Correze it runs through an extensive tract, and falls into the Garonne, at

Bourg, about fifteen miles below Bourdeaux. Here the united stream takes the name of the Gironde. The course of the Dordogne is above 200 miles, during which it receives a great num- ber of smaller rivers, the principal of which are the Vezere and He. The tide flows as high up as Castillon, about twenty-five miles from the con- fluence with the Garonne.

DORIA (Andrew), a celebrated patriot of Genoa, born in 1466. He entered into the ser- vice of Francis I. of France; but preserved that spirit of independence so natural to a sailor and a republican. When the French attempted to render Savona, long the object of jealousy to Genoa, its rival in trade, Doria remonstrated against the measure in a high tone ; which, be- ing represented by the malice of his courtiers in the most odious light, irritated Francis to that degree, that he ordered his admiral, Barbesieux, to sail to Genoa, then in the hands of the French troops, to arrest Doria, and to seize his galleys. This rash order being communicated to Doria, he retired with all his galleys to a place of safety; and, while his resentment was thus raised, closed with the offers of the emperor Charles V. ; re- turned his commission, with the collar of St. Michael, to Francis, and hoisted the Imperial colors. To deliver his country, weary alike of the French and Imperial yoke, from the domi- nion of foreigners, was now Doria's highest am- bition ; and the favorable moment soon offered. Genoa was afflicted with the pestilence, the French garrison was greatly reduced, and ill paid, and the inhabitants were disposed to se- cond his views. He sailed to the harbour with thirteen galleys, landed fifty men, and made

him- self master of the gates and the palace, with very little resistance. The French governor, with his feeble garrison, retired to the citadel, but was quickly forced to capitulate ; when the people ran together, and levelled the citadel with the ground. It was now in Doria's power to have rendered himself the sovereign of his country ; but, with a magnanimity of which there are few examples, he assembled the people in the court before the palace, disclaimed all pre- eminence, and recommended to them to settle the form of government they chose to establish. The people, animated by his spirit, forgot their factions, and fixed that form of government which subsisted till the revolution in 1797, with little variation. This event happened in 1528. Doria lived to a great age, respected and be- loved as a private citizen, and is still celebrated among his countrymen by the most honorable of all appellations, ' The father of his country, and the restorer of its liberty.'

DO'RIC, adj. Lat. dorus ; Fr. dorique. The anci«nt Dorians.

Love warms our fancy with enlivening fires, Refines our genius, and our verse inspires ; From him Theocritus, on Euua's plains, "jearnt the wild sweetness of his Doric strains.

Littleton.

DORIC DIALECT, one of the five dialects which prevailed among the Greeks. It was first used by the Lacedemonians, and particularly those of Argos ; thence it passed into Epirus, Libya,

Sicily, and the islands of Rhodes and Crete. In this dialect, Archimedes and Theocritus wrote, who were both Syracusans, as well as Pindar. The Doric dialect is properly the manner of speaking peculiar to the Dorians, after their recess near Parnassus and Asopus ; and which afterwards came to obtain among the Lacedemonians, &c. Some even distinguished between the Lacede- monian and Doric ; but, in reality, they were the same; setting aside a few particulars in the language of the Lacedemonians ; as shown by Rulandus, in his treatise De Lingua Graeca ejusque Dialectis, lib. v. To these authors we might add Archytas of Tareritum, Bion, Callinus, Simonides, Bacchylides, Cypselas, Alcman, and Sophron, as writers in the Doric dialect. Most of the medals of the cities of Graecia Magna, and Sicily, use the Doric dialect in their inscriptions, e. g. AMBPAKIQTAN, AHOAAQNIATAN, AXE- PONTAN, AXYPITAN, HPAX, AEOTAN, TPAX- INIQN, OEPMITAN, KAYAONIATAN, KOHIA- TAN, TAYPOMENITAN, &c. . Which shows the countries wherein the Doric dialect was used. The general rules of this dialect are thus giveft by the Port-royalists:

D's Hra, d'a> grand, d'«, d'o, & d « 1′ a fart le Dore. D'ti fait jjTot ; d'«,*

o»; & d'<» an fait encore. Oste i de 1′ infini : & pour le singulier Se sert au feminin du nombre plurier.

But they are much better explained in the fourth book of Rulandus ; where he even notes the minuter differences of the dialects of Sicily, Crete, Tarentum, Rhodes, Lacedsemon, Laconia, Macedonia, and Thessaly.

DORIC MODE, in music, the first of the authen- tic modes of the ancients. Its character is to be severe, tempered with gravity and joy ; and is proper upon religious occasions, as also to be used in war. It begins D, la, sol, re. Plato admires the music of the Doric mode, and judges it proper to preserve good manners as being masculine ; and on this account allows it in his commonwealth. The ancients had likewise their subdoric or hypodoric mode, which was one of the plagal modes. Its character was to be very grave and solemn : it began with re, a fourth lower than the Doric.

DORIC ORDER, the second of the five orders of architecture. It is usually placed upon the Attic base, though originally it had none. See ARCHITECTURE. The most considerable ancient monuments of this order, are the theatre of Mar- cellus at Rome, wherein the capital, the height of the frize, and its projecture, are much smaller than in the modern architecture; and the Par- thenon, or temple of Minerva, at Athens, in which the short and massy columns bear upon the pavement without a base ; and the capital is a simple torus, with its cincture, and a square, plain, and solid abacus.

DORIS, in ancient geography, a country of Greece, between Phocis, Thessaly, and Acar- nania. It received its name from Doras, the son of Deucalion, who made a settlement there. It was called Tetrapolis, from its four cities, viz. Pindus or Dryopis, Erincum, Cytinium, and Borium. To these four some add Lilaeum and Carphia, and therefore call it Hexapolis. The

name of Doris has been common to many parts of Greece. The Dorians in the age of Deucalion inhabited Phthiotis, which they exchanged for Histiaeotis, in the age of Dorus. From thence they were driven by the Cadmeans, and came to settle near the town of Pindus. Thence they passed into Dryopis, and afterwards into Pelo- ponnesus. Hercules having re-established ,/Egimius king of Phthiotis or Doris, who had been driven from his country by the Lapithae, the grateful king appointed Hyllus, the son of

his patron, to be his successor, and the Ileraclidte marched from that part of the country to recover Peloponnesus. The Dorians sent many colonies into different places, which bore the same name as their native country. The most famous of these is in Asia Minor, of which Halicarnassus was once the capital. This part of Asia Minor was called Hexapolis, and afterwards Pentapolis. DORIS, in entomology, a genus of insects, belonging to the order of vermes testacea. The oody is oblong, flat beneath ; creeping : mouth placed below : vent behind, surrounded with a fringe : two feelers, retractile. There are several species : particularly D. argo, the lemon doris, has an oval body, convex, marked with numer- ous punctures, of a lemon color; the vent beset with elegant ramifications. It inhabits different parts of our seas, and is called about Brighton the sea lemon.

DORIS, in mythology, the daughter of Oceanus and Tethys, wife of Nereus and mother of the Nereides.

*DORKING, a market town of Surry, situated in the midst of beautiful hills. The church is collegiate, and has a square tower, near the centre, with eight bells, and a set of chimes. Besides a convenient workhouse, here are some commodious alms-houses, on a pleasant heath, called Cotman Dean. A great traffic is carried . on in meal and lime ; and this town is noted for its breed of poultry, which is singular from their having five fingers in each claw. Capons bred here, often weigh seven or eight pounds each, out of their feathers. In the neighbourhood are several corn-mills, and in the suburbs are many elegant seats. The custom of Borough-English prevails in this manor, by which the youngest son is heir to a copyhold estate. This practice is supposed to be derived from the ancient cus- tom of the lord of the manor having a right to claim a lodging with every bride on her wedding night. Market on Thursday, Eight miles south from Epsom, and twenty-three S. S. W. from London. **

DOR'MANT, adj. -\ Fr. dormant, from

DOR'MITIVE, n. s. / Lat. dormio, to sleep.

DOR'MITORY, n.s. V Sleeping; hence private;

DOR'TOUK, I concealed. Dortour and

DOR'TURE. J dormitory, a place to

sleep in ; and hence a burial place. Dormitive,

a soporific.

His deth saw I by revelatioun, Sayde this frere, at home in our dortour.

Chaucer. Cant. Tales.

There were other dormant musters of soldiers throughout all parts of the realm, that were put in readiness, but not drawn together.

Bactm't War with Spain.

He led us to a gallery like a dorture, where he shewed us along the one side seventeen cells, very neat. Bacon.

Prayer is the only dormilive I take to bedward, and I need no other laudanum than this to make me sleep ; after which I close mine eyes in security, content to take my leave of the sun, and sleep unto the resurrection. Sir T. liruanie.

He a dragon ! if he be, 'tis a very peaceful one : I can insure his anger is dormant ; or, should he seem to rouse, 'tis well lashing him, and he will sleep li'ke a top. Congreve's Old Bachelor.

With this radius he is said to strike and kill his prey, for which he lies, as it were, dormant, till it swims within his reach. Greiv's Museum.

Query, — Whether churches are not dormitories of the living, as well as of the dead. Swift.

It would be prudent to reserve these privileges dormant, never to be produced but upon great occa- sions. Id.

The places where dead bodies are buried, are in Latin called caemiteria, and in English dormitories. Aylijfe's Parergon

Old dormant windows must confess Her beams ; their glimmering spectacles, Struck with the splendor of her face, Do the office of a burning-glass. Cleaveland.

Naked mourns the dormitory wall, • And Jones and Boyle's united labours fall.

Pope's Dunciad.

Rooms that have thorough lights are left for enter- tainment, and those that have windows on one side for dormitories. Mortimer.

Many vegetables during the night do not seem to respire, but to sleep like the dormant animals and insects in winter. Darwin.

DORMANT, in heraldry, is used for the posture of a lion, , or any other

beast, lying along in a sleeping attitude with the head on the fore paws; by which it is distinguished from the couchant, where though the beast is lying, yet he holds up his head; as gules, a lion dormant, name Aylesworth.

DOR'MOUSE, n. s. Dormio to sleep, and mouse. A small animal which passes a large part of the winter in sleep.

Come, we all sleep, and are mere dormice flies, A little less than dead : more dullness hangs On us than on the moon. Ben Jonson's Catiline.

After they have lain a little while, they grow as drowsy as dormice, unless they are roused .

Collier on Thought.

DORN, n. s. From German, dorn, a thorn. The name of a fish ; perhaps the same as the thornback.

The coast is stored both with shell-6sh, as scallops and shcathfish ; and fiat, as turbots, dorns, and holy- but. Carew.

DORNHAN, or DORNEM, a town of Wirtem- berg, in the Black Forest, in Suabia, and con- taining about 1050 inhabitants. It was burned down by lightning in 1718, but was soon after rebuilt. In the neighbourhood are the ruins of three castles. It is forty miles south-west cf Stuttgard.

DO'RNICK, B. s. Of Deornick in Flanders, where first made. A species of linen cloth used in Scotland for the table.

DORNOCH, the county town of Sutherland, in a parish of the same name, on the Frith of Dornoch. It has five fairs ; was made a royal borough in 1628; has a provost, four bailies, dean of guild, and treasurer ; and joins with Tain, Dingwall, Wick, Kirkwall, and Cromarty, in electing a representative in parliament.

DOROBAT,'a town of Arabia, in the capital of a district in the country of Yemen, situated on the crest of a mountain. Here is a remarkable prison excavated from the rock, wherein male- factors are secured by chains of considerable length. It is twelve miles west of Taas.

DOROGOBUSH, a town of European Russia, in the government of Smolensko, on the Dnieper. It is a place of great trade, and was burnt by

the French, in 1812, in their relreat from Moscow. Forty-six miles E. N. E. of Smolensko.

DORONICUM, leopard's bane: a genus of the polygamia superflua order, and syngenesia class of plants ; natural order forty-ninth, com- positse. Receptacle naked, the pappus simple ; scales of the calyx in a double row, longer than the disc. The seeds of the radius naked without any pappus. There are six species ; of which the

DORONICUM PARDALIANCHES, with obtuse heart-shaped leaves, is worthy of notice. It grows naturally in Hungary, and on the Helve- tian mountains ; but is frequently preserved in the English gardens. It has thick fleshy roots, which divide into many knobs or knees, sending out strong fleshy fibres which penetrate deep into the ground ; from these arise in the spring a cluster of heart-shaped leaves, which are hairy, and stand upon foot-stalks : between these arise the flower-stalks, which are channelled and hairy, nearly three feet high, putting out one or two smaller stalks from the side. Each stalk is ter- minated by one large yellow flower. The plant multiplies very fast by its spreading roots; and the seeds, if permitted to scatter, will produce plants wherever they happen to fall ; so that it very soon becomes a weed in the places where it is once established. It loves a moist soil and shady situation. The roots were formerly used in medicine as alexipharmics and purifiers of the blood, but their operation was so violent that they are now entirely laid aside.

DORPAT, or DORPT, a town in Livonia, European Russia, in the government of Riga. It is situated on the small river Embach or Ein- bach, on the high road to St. Petersburg, and its annual fair is of great importance. A university has been established here since 1802, with a revenue of from £10,000 to £15,000 sterling. It has a library, museum, and, botanic garden, liberally endowed. The environs are very agree- able. Dorpat is an ancient town. In 1704 it was taken and burned by the Russians, and in 1775 was consumed by accidental fire. Popu- lation 4500. Sixty-rive miles south-west of Narva, 120 N.N. E. of Riga, and 132 south- west of St. Petersburg.

To DORR, v. n. Teut. tor, stupid. To deafen or stupify with noise. This word I find only in Skinner, says Dr. Johnson.

DORR, n. s. So named probably from the noise which he makes. A kind of flying insect, remarkable for flying with a loud noise.

Some insects fly with four wings, as all the vagim- pennous, or sheath-winged, as beetles and dorrs.

Browne's Vulgar Erroart.

The dorr or hedge-chafer's chief marks are these : his head is small, like that of the common beetle : this, and his eyes black ; his shoulder-piece, and the middle of his belly also black ; but just under the • wing-shells spotted with white. His wing-shells, legs, and the end of his tail, which is long and fiat-pointed of a light chesnut ; his breast, especially, covered with a downy hair. Grew't Museum.

DO'RSEL, n. s. 1 From dorsum the back.

DO'RSER. $ A pannier; a basket or

bag, one of which hangs on either side a beast of burden, for the reception of things of small bulk. It is corruptly spoken, and perhaps writ- ten, dossel.

DORSET, a township of Vermont, in Ben- nington county, bounded by those of Rupert o& the west, Manchester on the south, and Danby on the north.

DORSETSHIRE, a county of England, is bounded on the north by Wiltshire and Somer- setshire, on the east by Hampshire, on the west by Devonshire and part of Somersetshire, and on the south by the British Channel. It is a maritime county, lying between 50° 30′ and 51° 6′ N. lat., and 1° 58′ and 3° 18′ W. long. Across the centre, from north to south, it measures about thirty-six miles ; and from east to west about fifty miles. It is said to contain in all about 512,154 acres. The political divisions of the county consist of divisions, hundreds, boroughs, liberties, and tithings. There are nine divisions, thirty-four hundreds, twenty-four market towns, 248 parishes, and four sea-port towns. This county is in the diocese of Bristol, and is divided into five deaneries. It is included in the western circuit, and the assizes are now held at Dorches- ter. According to Ptolemy and other writers, Dorsetshire under the Romans was inhabited by the Durotriges or Morini ; British words imply- ing maritime people, or dwellers on the sea-shore. The Saxon invaders gave the name of Dor-setta to this county, a word compounded of British and Saxon, and signifying the same as the Roman appellations. When the island was divided into Roman provinces, this county be- came part of Britannia Prima; and, on the esta- bishment of the Saxons, it was included in the kingdom of Wessex. The varied beauties of this county, the mildness of it> climate, and the value of its natural productions, have given to it the appellation of 'The Garden of England.' This character, however, is disputed by Mr. Stevenson, in his excellent View of the Agricul- ture of the county, which, he remarks, c;iu scarcely be deemed to be so mild in its tempera- ture, or so early in its seasons, as its latitude would lead us to expect. The fact is evident that the climate of

Dorsetshire has undergone a very material alteration ; and the air may now, as the same author remarks, be considered dry and salubrious rather than mild and bland ; and the seasons, except in spots very sheltered or possessed of a very warm soil, are not nearly so

forward as they are in other parts of England not so far southward.

This county, in respect to soil, is naturally divided into three principal districts, viz. chalky loams, gravelly sand, and clay, or various soils on a clay basis. The chalky district commences on the borders of Somersetshire, near Crewkevne in that county, and runs in a very narrow slip towards the interior of the county, as far as the town of Eversholt, where it suddenly widens, and spreads considerably to the north of Dor- chester. It then again abruptly contracts be- tween Piddleton, south, and Bingham's Mel- combe, north ; but immediately once more ex- tending itself, branches out more than half the breadth of the whole county, and extends into the county of Wilts and the borders of Hamp- shire. This district contains about 160,759 acres. The sand district, occupying about 85,157 acres, approaches the borders of the Bri- tish Channel ; and, commencing a little east of Dorchester, forms a crescent, the east horn of which terminates 'near Ring wood in the county of Hampshire. The clayey soils are found in different parts, west, north, and south of the county, but particularly on the northern borders, and in the western districts near Devonshire. This district contains altogether about 117,331 acres.

Of the rivers of this county we may notice the Frome, the Hooke or Owke, the Ivel, the Piddle, the Stour, the Char, the Eype, and the Wey. These three last are the rivers of Dorsetshire bordering upon Devonshire. The celebrated watering-place which is formed by the combined towns of Melcombe Regis and Weymouth, as Mr. Skrine observes, graces the exit of the Wey to the sea, remarkable for its grand semicircular beach, and its excellent as well as level sands. These advantages, and the preference often given to this place by the royal family, have raised it into high consideration ; splendid rows of houses oeing formed, with a superb esplanade in front of them, towards the coast, for a great extent, where they command the whole of the bay, bounded by great chalky cliffs, and backed by the Dorsetshire downs. The pier of Weymouth stretches out beneath an opposite rock, crowned with its garrison, which defends the harbour from the south and west winds, offering a convenient refuge to shipping, and possessing no small por- tion of trade. The village and high church of Wyke Regis occupy the highest point of this ridge of hills on the

west, immediately opposed to the vast protruding mass of Portland Island. The Char and the Eype, which come in succes- sion before the Wey, have no striking points; except that Charmouth, at the exit of the former, on the great western road, is preferred by some, as a bathing-place, to Lyme, which- is far more beautifully situated in its neighbourhood. The Eype, joined by the Brit from Bedminster, and another stream westward of it, falls into the sea in Bridport Harbour, a few miles below ttiat town. These rivers all descend from the Dorset- shire downs, and their course is nearly southward. The most considerable river is the Frome, rising, like the rest, in that vast tract of downs which divides it from Somersetshire; its two channels

uniting in a pleasant bourn at Maiden Newton, from whence it pursues a south-east course to Dorchester ; fed afterwards by various streams from the hollows in the downs in the south, and, meeting the Piddle from the north as it turns more and more eastward to reach Wareham, it forms the great expanse of water constituting Poole Harbour. The country through which this river takes its course is but thinly inhabited, and bare of wood ; but the range of downs that extend parallel with the latter part of its course, separating its vale from the coast, is formed by Nature in the boldest manner, containing many tumuli and ancient encampments, with the sin- gular curiosity of one perfect Roman amphi- theatre near Dorchester, within view of the old fortress of Maiden Castle. Dorchester may be called a pleasant town from the neatness of its streets, and, above all, from the avenues and planted walks by which it is environed and ap- proached, after the manner of many French towns, which have an increased effect in the midst of so bare a country. Wild heaths suc- ceed to the downs before the Frome reaches the sea; and Poole Harbour is a very extensive sheet of water, bounded towards the south-west by the Isle of Purbeck, in which the towers of Corfe Castle make a considerable figure. Poole is a flourishing port on its north shore. The Stour finds its source in six streams at Stourton in Wiltshire, three of which are in the park of Stourhead. Though perhaps somewhat less than the Frome, this is certainly by far the pleasantest of the Dorsetshire streams, forming in its passage the charming dell beneath the cliff of Brianstone. The vicinage of this river in particular, and indeed Dorsetshire in general, is noted for a pro- fusion of fine seats, and a race of noblemen and country gentlemen who exercise the splendid and captivating hospitality of past ages, yet un- contaminated by the encroachment of manufac- tures. This beautiful river yields trout, eels, and tench; and the author now quoted, Mr. Hutchins, remarks that the sea on the Dorset- shire coast abounds with sturgeons, turbots, mackarel, plaice, soles, basse, whitings, congers, porpoises, lobsters, red and gray mullet, thorn- backs, piper or gurnet, trill or scollop, shrimps, prawns, and oysters. The rivers furnish salmon, pike, carp, gudgeons, perch, Sec. The

Bay of Weymouth opens immediately below Portland; and that tract of Dorsetshire called the Isle of Purbeck stretches out on the opposite side to the south-east, terminating in the point called St. Alban's Head. The range of cliffs which bound this coast, as well as the shoals called The Race of Portland, are extremely dangerous to shipping, and wrecks are very frequent here in stormy sea- sons. The Cove of Lulworth presents an oc- casional refuge to small vessels, but its entrance is so narrow as to render it of little use. Im- mediately behind it, Lulworth Castle occupies a charming elevation, and exhibits a grand ba- ronial pile, in the midst of some ornamented grounds, commanding the sea with good effect, through a gap in the rocks. In the centre of the Isle of Purbeck, Corfe Castle displays its ruined towers on a high eminence with great majesty ; and this pleasant district is inhabited

*by several respectable families, whose seats make a handsome appearance ; the Grange being the most conspicuous. Turning round the point of Purbeck, towards the north, the Bay of Strud- land fronts the east, within which is the great expanse of Poole Harbour, marked with several islands, and distinguished by the port of Poole. Mr. Hutchins remarks of the mineral waters, that * they are chalybeate at Farringdon, Ayl- wood, and Corfe ; sulphureous at Sherford, Mor- el en, Nottington, and Sherborne; salt at Chil- combe; and petrifying at Sherborne and Bo- thenwood, near Winborne-Minster.' There are no canals in this county, though Mr. Stevenson says that a navigable one is intended to pass from Somersetshire by Chardstock and Dorches- ter to the sea, near Beer and Seaton, in the county of Devon. The principal produce of Dorsetshire are its fine sheep, its extensive mac- karel fishery, and the celebrated stone quarries in the peninsula or isle of Portland. There are no metallic mines nor coals of any value. The * pebbly desert,' called the Chesil Bank, is, as Dr. Maton remarks, one of the most extraordi- nary ridges or shelves of pebbles in Europe, and perhaps the longest, except that of Memel in Polish Prussia. Its length is supposed to be about seventeen miles; its breadth in some places near a quarter of a mile.*

Dorsetshire sends thirteen members to par- liament : viz. three for the county, two for Dor- chester, two for Poole, one for Lyme Regis, two for Weymouth and Melcombe Regis, one for Bridport, one for Shaftesbury, and one for Wareham.

This county has produced among other emi- nent persons, Anthony Ashley Cooper, Earl of Shaftesbury — Christopher Pitt, a very ingenious poet and divine, born at Blandford, in 1699, died 1748 — the learned and celebrated Bishop Stillingfleet — Dr. Thomas Sydenham, one of the most learned and rational physicians of his time, who died 1689 — Sir James Thornhill, nephew to the above, an eminent painter — The celebrated Archbishop Wake — The Rev. Samuel Wesley, father to the celebrated founders of Methodism — Thomas Creech, the poet — MatthewPrior, &c. &c. The principal manufactory in this county is that of flax and hemp, near Bridport and Bed- ininster. These produce twine, string, and cordage in general ; also nets, sacking, bags, &c. There are also several woollen manufactories, as also for twisting and making up raw silk into skeins. Shirt-buttons are manufactured at Shaftesbury ; and malting and brewing are car- ried on at Wareham, Dorchester, &c.

DORSI'FEROUS, adj. > Lat. dorsum and DORSI'PAROUS. $fero, or pario. Hav-

ing the property of bearing or bringing forth on the back. It is used; of plants that have the seeds on the back of their leaves, as fern ; and may be properly used of the American frog, which brings forth young from her back.

DORSTENIA, contrayerva, a genus of the monogynia order and tetrandria class of plants ; natural order fifty-third, scabridae : receptacle common, monophyllous, and carnous ; the seeds lying singly in the carnous substances. There are eleven species, all low herbaceous plants,

growing in the warm countries of America. The root is used in medicine. It is full of knots, an inch or two in length, about half an inch thick ; externally of a reddish-brown color, and pale within ; long, tough, slender fibres shoot out from all sides of it, which are generally loaded With small round knots. The root has a peculiar aromatic smell, and a somewhat astrin- gent, warm, bitterish taste, with a light and sweetish kind of acrimony when chewed. The fibres have little taste or smell; the tuberous part, therefore, should only be chosen. Con- trayerva is one of the mildest of alexipharmics, and is a useful diaphoretic. Its virtues are extracted both by water and rectified spirit, and do not arise by evaporation with either. The plants cannot be propagated in this country without the greatest difficulty.

DORSUM, the back, in anatomy, compre- hends all the posterior parts of the body, from the neck to the buttocks. See ANATOMY.

DORT, or DORDRECHT, a city of the Nether- lands, in the department of

Delft, South Hol- land. It is seated in a small island, formed by the rivers Meuse, Merue, Rhine, and Linghe. The Meuse, on which it stands, gives it a good harbour, and separates it from the islands of Ysselmonde and Ablas. It is divided from Beyerland by a canal. The harbour is very commodious for the merchandise which comes down the Rhine and the Meuse. Its strength consists in being surrounded with water, its walls being old and decayed. Dort is well built with brick, and had formerly the exclusive right of coining money. The church of Notre Dame is a good building, the tower lofty, and furnished with musical chimes. There is another church, dedicated to St. Nicholas, built in 1568. It had likewise, before the revolution, several religious houses for monks and nuns ; and the town house is a fine building. It is at present the staple town for wines, particularly Rhenish, though its exclusive privileges in this respect are abolished. It was detached from the main land in 1421, on the 17th November, by a flood occasioned by the breaking down of the dyke, which over- whelmed seventy villages, and about 100,000 persons. However, by time, and the industry of the inhabitants, a great part of the land is re- covered. It has two principal canals, namely, the New and Old Haven, by which heavy-loaded vessels may enter into the city; Over the Old Haven is a large bridge, well built with brick. Dort was almost reduced to ashes in 1457, there being then consumed 2000 houses, with the halls, hospital, and church of Notre Dame. The company of tradesmen, and some other commu- nities, elect the magistrates, and name one part of the members of the city council. In former times, Dort was the residence of the counts of Holland ; and, on the foundation of the Dutch republic, it became the first in rank of the towns of Holland at the States-general.

This city is famous for the meeting of the clergy, called the synod of Dort, in which the Calvinists obtained a sentence against the Ar- minians, who were catted Remonstrants. The dispute between the contending parties occa- sioned disorders, skirmishes, and murders, in

most of the principal cities. Those ministers, •who would not subscribe to the decree of the synod, were banished, of whom there were above 100. An important object of commerce here, at present, is the timber brought in large floats down the Rhine, and either exported to Eng- land, Spain, and Portugal, or prepared for dif- ferent uses in the saw-mills which skirt the town. Here are several excellent docks for ship-build- ing, and a brisk trade is carried on in the yarn and linen, as well as in the salt manufacture. The

salmon-fisheries here established are also productive.

The brothers, De Witt, were sons of the bur- gomaster of this place ; and the celebrated Vos- sius was once superintendent of the college here. Population about 20,000. Dort lies eleven miles south-east of Rotterdam, and thirty-seven west of Amsterdam.

DORT, SYNOD OF, a national synod, summoned by authority of the states-general, the provinces of Holland, Utrecht, and Overyssel excepted, and held at Dort in 1618. The most eminent divines of the United Provinces, and deputies from the churches of England, Scotland, Switzerland, Bremen, Hessia, and the Palatinate, assembled on this occasion, in order to decide the controversy between the Gomarists or Cal- vinists, and Arminians ; the latter were declared corrupters of the true religion. But the autho- rity of this synod was far from being universally acknowledged either in Holland or in England. The provinces of Friesland, Zealand, Utrecht, Guelderland, and Grohingen, could not be per- suaded to adopt their decisions ; and they were opposed by king James I. and archbishop Laud, in England. The reformed churches in France, though at first disposed to give a favorable recep- tion to the decisions of this famous synod, in process of time espoused doctrines very different from those of the Gomarists; and the churches of Brandenburgh and Bremen would not suffer their doctors to be tied down to the opinions and tenets of the Dutch divines. The liberty of pri- vate judgment, with respect to the doctrines of predestination and grace, which the spirit that prevailed among the divines of Dort seemed so much adapted to discourage and suppress, ac- quired new vigor in consequence of the arbitrary proceedings of this assembly.

DORTMUND, a rich, populous, and once imperial city of Germany, in the circle of West- phalia, and territory of Nassau-Dillenborg, to which it was ceded in 1802 ; but it was ceded to Prussia in 1815. It is pretty large, but not well built. Formerly it was one of the Hanse Towns. Its territory was also formerly a county, and had lords of its own ; but since 1504 it has been possessed entirely by the city. Here are four Lutheran churches, one Catholic, a Dominican and a Franciscan monastery, a nunnery, three hospitals, and a provincial academy. Population 4000. It is seated on the Emster, forty miles north-east of Cologne.

DORYPHORI; from Sopv, a spear, and Qepu, to bear; an appellation given to the life-guard men of the Roman emperors. They were held in such estimation as frequently to have the command of armies conferred on them. It was

usual also for chief commanders to have their doryphori or life-guards to attend them.

DOSE, v.n. Fr. dose ; Ital. Teut. Span. Port, and Lat. dosis, from Gr. Some h SiSovai, to give. A given quantity of medicine, or any other thing; hence any thing nauseous. No sooner does he peep into The world, but he has done his doe ; Married his punctual dose of wives, Is cuckolded, and breaks, or thrives. Hudibras. The too vig'rous dose too fiercely wrought, Aiid added fury to the strength it brought.

Dry den's Virgil.

If you can tell an ignoramus in power and place that he has a wit and understaading above all the world, I dare undertake that, as fulsome a dose as you give him, ho shall readily take it down. . South.

In a vehement pain of the head he prescribed the juice of the thapsia in warm water, without mending the dose. Arbuthnot.

We pity or laugh at those fatuous extravagants, while yet ourselves have a considerable dose of what makes them so. Granville.

DOSITHEUS, the chief of a faction among the Samaritans, mentioned by Origen, Epipha- nius, Jerome, and other Greek and Latin fathers. But the learned are not at all agreed as to the time wherein he lived. St. Jerome, in his Dia- logue against the Luciferians, places him before our Saviour ; in which he is followed by Drusius, who, in his answer to Serrarius, places him about the time of Sennacherib, king of Assyria. But Scaliger will have him posterior to our Saviour's time. And Origen intimates him to have been contemporary with the apostles ; where he ob- serves, that he endeavoured to persuade the Sa- maritans that he was the Messiah foretold by Moses. He had many followers; and his sect was still subsisting at Alexandria at the time of the patriarch Eulogius, as appears from a decree of that patriarch published by Phocius. In that decree, Eulogius accuses Dositheus of injuriously treating the ancient patriarchs and prophets, and attributing to himself the spirit of prophecy. He makes him contemporary with Simon Magus, and accuses him of corrupting the Pentateuch in divers places, and of composing several books directly contrary to the law of God. Archbishop Usher takes Dositheus to have been the author of all the changes made in the Samaritan Pentateuch, which he argues from the authority of Eulogius. But all we can justly gather from the testimony of Eulogius is, that Dositheus corrupted the Sa- maritan copies since used by that sect; but that corruption did not pass into all the copies of the Samaritan Pentateuch now in use among; us, many of which vary but little from the Jewish Pentateuch. And in this sense, we are to under- stand that passage in a Samaritan chronicle, where it is said, that Dousis, i. e. Dositheus, al- tered several things in the law of Moses. The author of that chronicle, who was a Samaritan by religion, adds, that their high priest sent se- veral Samaritans

to seize Dousis and his cor- rupted copy of the Pentateuch. Epiphanius takes Dositheus to have been a Jew by birth, and to have abandoned the Jewish party for that of the Samaritans. He imagines him likewise

to have been the author of the sect of the Sad- ducees; which is inconsistent with his being later than our Saviour; and yet the Jesuit Ser- rarius makes Dositheus the master of Sadoc, from whom the Sadducees are derived. Tertul- lian observes, that Dositheus was the fir-; who dared to reject the authority of the prophets, by denying their inspiration. But he charges that as a crime peculiar to this sectary, which in reality is common to the whole sect, who never allowed any but the five books of Moses to be divine.*

DO'SSIL, n. s. Corrupted from dorsel, some- thing laid upon the part. A pledget ; a nodule or lump of lint to be laid on a sore.

Her complaints put me upon dressing with such medicaments as basilicon, with precipitate, upon a dossil. Wiseman.

DOT, v.a., v. n. & n.s. Derived by Skinner from Ger. dotter, the white of an egg ; and inter- preted by him a grume of pus. It has now no such signification, and seems rather corrupted from jot a point. A small point or spot made to mark any place in a writing. To mark with specks ; to make dots or spots.

DOTAL, adj. Lat. details. Relating to the portion of a woman; constituting her portion; comprised in her portion.

Shall I, of one poor dotal town possest,

My people thin, my wretched country waste,

An exiled prince, and on a shaking throne,

Or risk my patron's subjects, or my own ?

Garth's Ovid.

DOTE, v. n. "1 Goth, dotla; Fr. do£-

DO'TAGE,TO. s. 1 ter, or radoter ; Belgic,

DO'TARD, n. 5. [doten; to be do/ing. To DO'TED, adj. [have the mind impaired

DO'TER, n. s. by age or otherwise ; to

DO'TINGLY, adv. J have extreme or foolish fondness ; often used with on or upon. Doted is stupid : dotage is a state of imbecility or de- cayedness of mind ; excessive fondness. Dot- ard and doter, he who is thus imbecile.

A sword is upon the liars, and they shall dote ; a sword is upon her mighty men, and they shall be dis- mayed. Jtr. i. 36.

His senseless speech and doted ignorance The prince had marked well. Spenser.

Dotard, said he, let be thy deep advise, Seems that through many years thy wits thee fail, And that weak old hath left thee nothing wise, Else never should thy judgment be so frail.

Faerie Queene.

Unless the fear of death make me dqte, I see my son. Shakspeare. Comedy of Errottrs. I have long loved her, and bestowed much on her, followed her with a doting observance. Shakrpeare.

If in black my lady's brow be deckt, It mourns that painting and usurping air

Should ravish dotert with a false aspect ; And therefore is she born to make black fair. Id.

O vanity,

How are thy painted beauties doted on, ily light and empty idiots ! Ben Jonson.

The soul in all hath one intelligence, Though too much moisture in an infant's brain, And too much driness in an old man's sense, "annot the prints of outward things retain :

Then doth the soul want work, and idle set ; «nd this we childishness and dotage call. Davies.

No, no ; I know the world too well to dote upon it.

Bp. Hall. Letter from tlus Tower. What should a hald fellow do with a comb, a dumb doter with a pipe, or a blind man with a looking-glass?

Bvrton.

Our dotert upon red and white are incessantly per- plexed by the incertainty both of the continuance of their mistress's kindness, and of the lasting of her beauty. Boyle.

All the beauties of the court besides Are mad in love, and dote upon your person.

Denham

Time has made you dote, and vainly tell, Of arms imagined in your lonely cell : Go, be the temple and the gods your care ; Permit to men the thought of peace and war.

Dryden's /Etieid.

That he, to wedlock dotingly betrayed, Should hope in this lewd town to find a maid !

Id. Juvenal.

We dote upon this present world, and the enjoyments of it ; and 'tis not without pain and fear, and reluc- tancy, that we are torn from them, as if our hopes lay all within the compass of this life. Burnet.

The sickly dotard wants a wife, To draw off his last dregs of life. Prior.

When an old woman begins to dote, and grow chargeable to a parish, she is turned into a witch, and fills the country with extravagant fancies.

Addison's Spectator.

O death all eloquent ! you only prove What dust we dote on, when 'tis man we love.

Pope.

Some, for renown, or scraps of learning doat, And think they grow immortal as they quote.

Young .

In vain their gifts the bounteous seasons pour, The fruit autumnal and the vernal flower, With listless eyes the dotard views the store, He views and wonders that they please no more.

Johnson. Vanity of Human Wishes. A strict accountant of his beads, A subtle disputant on creeds ;

His dotage trifled well : Yet better had he neither known A bigot's shrine, nor despot's throne.

Byron.

DO'TTARD, n. s. This word seems to sig- nify a tree kept low by cutting; or is perhaps a false spelling of dotard, and means any thing decayed.

For great trees, we see almost all overgrown trees in church-yards, or near ancient buildings, and the like, are pollards and dottards, and not trees at their full height. Bacon.

DOTTEREL, n. s. From dote. The name of a bird that mimics gestures.

We see how ready apes and monkeys are to imi- tate all motions of man ; and in catching of dotterels, we see how the foolish bird playeth the ape in ges- tures. Bacon.

DOUAY, a city of France, in the depart- ment of the North (of which it was for some time the capital), and ci-devant French Flanders. It has a fine arsenal, a foundry for cannon, and a military and artillery school. The fort of Scarpe, on the river of that name, within cannon-shot, serves for a citadel. It has three famous col- leges, incorporated of late into one ; and the great squares in the centre of the city, and the principal church, are worthy of notice. It was

erected into a university by Philip II. of Spain, who founded in it a seminary for English Roman Catholics in 1569. In 1667 it was taken from the Spaniards by Louis XIV. in person. The allies, under the duke of Marlborough, took it in 1710; but it was retaken by the French in 1711, after the suspension of arms between Great Britain and France. During the late wars it was the scene of several operations. It has a oanal communication with the Deule, and con- tains 18,000 inhabitants, many of whom are employed in the manufactures of linen, cotton, lace, and thread. It is fifteen miles north-west of Cambray, and eighty-three N.N.E. of Paris.
DOUB'LE, v. a. & v. n. ~\ Fr. double ; Sp. DOUB'LE-BITING, adj. doble ; Cut. dob-

DOUB'LE-DEALER, n. s. bel ; Germ, dop-

DOUB'LE-DIE, v. a. pel ; from Lat.

, DOUB'LE-FOUNTED, adj. duplex ; duo and DOUB'LE-HANDED, plico, to fold. To

DOUB'LE-HEADED, repeat; add the

DOUB'LE-LOCKED, (same quantity to

DOCB'LE-MINDED, fa given quantity ;

DouB'i.E-MiNDEDNESS,n. s. to contain twice DOUB'LE-PLEA, the quantity ; to

DOUB'LE-QUARREL, add ; to fold ; to

DOUB'LER, go round a cape

DOUB'LE-SHINING, adj. or headland : as DOUB'LE-TONGUED, a neuter verb, to

DOUE'LY, adv. J swell or increase

to twice the quantity ; to turn back or about : as a substantive, twice the number ; very strong beer ; a trick or artifice. Doubleness is the state of being double ; duplicity. The compounds seem obvious in their meaning.

The prestis that ben wel gouernour is be thei had worth! to double onour, moost thei that traueilen in word and teching. Widif. i. Tymo. 5.

If the thief be found, let him pay double.

Exodus,

Thou shalt double the curtain in the tabernacle.

Id. A double-minded man is unstable in all his ways.

James.

The deacons must be grave, not double-tongued, not given to much wine, nor greedy of filthy lucre.

1 Tim.

He was like a maister or a pope : Of double worsted was his semicopn,

That round was as a belle out of the presse, Somewhat he lisped for his wantonnesse.

Chaucer. Prol. to Cant. Tales. He oft finds med'cine wh."> his griefe imparts, But double griefes afflict concealing harts, As raging flames who striveth to suppress.

Spenser. Faerie Queene.

If you think well to carry this as you may, the dtnMeness of the benefit defends the deceit from re- proof. Shakspeare.

Rumour doth double voice and echo The numbers of the feared. Id. Henry IV.

I' the presence

He would say untruths, and be ever double Both in his words and meaning.

Id. Henry VIII.

Here's a pot of good double, neighbour : drink and fear not your man. Id. Henry VI.

Thou shalt not be the worse for me ; there's gold. — But that it would be double-dealing, Sir I would you could make it another. Id. Twelfth Niyht.

Sailing along the coast, he doubled the promontory of Carthage, yet famous for the ruins of that proud city- Knolles.

Great honours are great burthens ; but on whom They are cast with enry, he doth bear two loa.Js : His cares must still be double to his joys, In any dignity. Ben Jonson's Catiline.

It is a curiosity also to make flowers double, which is effected by often removing them into new earth ; as, on the contrary part, double flowers, by neglecting, and not removing, prove single.

Bacon's Natural History.

Under the line the sun crosseth the line, and maketh two summers and two winters : but in the skirts of the torrid zone it doubleth and goe-th back again, and so maketh one long summer. Id.

Here the double-founted stream Jordan, true limit eastward. Milton.

And if one power did not both see and hear, Our sights and sounds would

always double be.

Davies.

Jarres concealed are half reconciled ‘, which, if generally kuown, ‘tis a double task, to stop the breach at home, and men’s mouths abroad. Fuller.

Double-dealers may pass muster for awhile ; but all parties wash their hands of them in the conclusion.

L’Estranye

Our foe’s too proud the weaker to assail, Or doubles his dishonour if he fail. Dryden.

He saw proud Arcite and fierce Palemon In mortal battle doubling blow on blow ; Like lightning flamed their falchions to and fro.

Id.

Now we have the Cape of Good Hope in sight, the trade-wind is our own, if we can but double it.

Id.

*Who knows which way she points ? Doubling and turning like a hunted hare, Find out the meaning of her mind who can. Id**

Throw ./Egypt’s by, and offer in the stead, Offer — the crown on Berenice’s head : I am resolved to “double till I win.

Id. Tyrannic Love. Reverend, fat, old gouty friar, With a paunch swoln so high, his double chin Might rest upon it. Id. Spanish Friar.

But most their looks on the black monarch bend, His rising muscles and his brawn commend ; His double-biting ax, and beamy spear, Each asking a gigantic force to rear. Id. Fables.

For much she feared the Tyrians double-tongued, And knew the town to Juno’s care belonged.

Id. Virgil.

Yes, I’ll to the royal bed,

Where first the mysteries of our love were acted, And double-die it with imperial crimson.

Id. and Lee.

This power of repeating or doubling any idea we have of any distance, and adding it to the former, as often as we will, without being ever able to come to any stop or stint, is that which gives us the idea of immensity. Locke.

All things being double-handed, and having the appearances both of truth and falsehood, where out affections have engaged us, we attend only to the former. Glanville'i Scepsis.

In all the four great years of mortality above men- , tioned. I do not find that any week the plague in- creased to the double of the precedent week above five times. Graunt's Mortality.

DOU

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He was

Among the rest that there did take delight To see the sports of double-shining day. Sidney. Tis observed in particular nations, that v.ithin the space of three hundred years, notwithstanding all casualties, the number of men doubles.

Burnet's Theory.

Haply at night he does with horror shun A widowed daughter, or a dying son : His neighbour's, offspring he to-morrow sees, And doubly feels his want in their increase.

Prior.

He bought her sermons, psalms, and graces, And doubled down the useful places. Id.

He immediately double-locked his door, and sat down carefully to reading and comparing both his orders.

Tatler.

These men are too well acquainted with the chase, to be flung off by any false steps or doubles. Addison.

Our poets have joined together such qualities as are by nature most

compatible ; valour with anger, meekness with piety, and prudence with dissimula- tion : this last union was necessary for the goodness of Ulysses • for, without that, his dissimulation might have degenerated into wickedness and double-dealing. Broome's View of Epic Poetry.

I am not so old in proportion to them as I formerly was, which I can prove by arithmetick ; for then I was double their age, which now I am not. Swift.

So keen thy hunters, and thy scent so strong, Thy turns and doublings cannot save thee long. Id.

The sum of forty thousand pounds is almost double to what is sufficient. Id. Drop. Letters.

Double-plea is that in which the defendant alledges for himself two several matters, in bar of the action whereof either is sufficient to effect his desire in de- barring the plaintiff. Cowell.

Double-quarrel, is a complaint made by any clerk or other to the archbishop of the province, against an inferiour ordinary, for delaying justice in some cause ecclesiastical. The effect is, that the archbishop di- rects his letters, under the authentical seal, to all clerks of his province, commanding them to admonish the said ordinary within nine days to do the justice required, or otherwise to cite him to appear before him or his official ; and lastly to intimate to the said ordinary, that if he neither performs the thing en- joined, nor appears at the day assigned, he himself will proceed to perform the justice required. And this seems to be termed a double-quarrel, because it is most commonly made against both the judge, and him at whose petition justice is delayed. Id.

Man is frail,

Convulsions rack his nerves, and cares his breast ; His flying life is chased by ravening pains, Through all his doubles, in the winding veins.

Blackmore.

Lilies are by plain direction Emblems of a double kind j

Emblems of thy fair complection Emblems of thy fairer mind. Cotton.

The double rich scarlet nonsuch is a large double- headed flower, of the richest scarlet colour. Mortimer.

Every man hath a weak side. Every wise man knows where it is, and will be sure to keep a double guard there. Mason.

Since hope but sooths to double my distress, And every moment leaves my little less.

Johnson's London.

Far and wide

Temple and tower went down, nor left a site : — Chaos of ruins ! who shall trace the void, O'er the dim fragments cast a lunar light, And say, ' here was, or is,' where all is doubly night ?

Byron.

DOUBLE EMPLOYMENT, in music, a name given by M. Rameau to the two different manners in which the chord of the subdominant may be regarded and treated, viz. as the fundamental chord of the sixth superadded, or as the chord of the great sixth, inverted from a fundamental chord of the seventh. In reality, the chords carry exactly the same notes, are figured in the same manner, are employed upon the same chord of the tone, in such a manner, that frequently we cannot discern which of the two chords the au- thor employs, but by the assistance of the subse- quent chord, which resolves it, and which is dif- ferent in these different cases. To make this distinction, we must consider the diatonic pro- gress of the two notes which form the fifth and the sixth, and which, constituting between them the interval of a second, must one or the other constitute the dissonance of the chord. Now this progress is determined by the motion of the bass. Of these two notes, then, if the superior be the dissonance, it will rise by one gradation into the subsequent chord, the lower note will keep its place, and the higher note will be a su- peradded sixth. If the lower be the dissonance, it will descend into the subsequent chord, the higher will remain in its place, and the chord will be that of the great sixth. See the two cases of the double employment in Rousseau's Musical Dictionary.

DOUBLE FICHE, or DOUBLE FICHY, in heraldry, the denomination of a cross, when the extremity has two points; in contradistinction to fiche, where the extremity is sharpened away to one point.

DOUBLE OCTAVE, in music, an interval com- posed of fifteen notes in diatonic progression, and which, for that reason is called a fifteenth. ' It is,' says Rousseau, ' an interval composed of two octaves, called by the Greeks disdiapason.'

DOUB'LET, n. s. from double. The inner garment of a man ; the waistcoat ; so called from being double for warmth, or because it makes the dress double.

What a pretty thing a man is, when he goes in his doublet and hose, and leaves off his wit !

Shakspeare.

His doublet was of sturdy buff, And though not sword, yet cudgel-proof.

Hudibras. Two ; a pair.

Those doublets on the sides of his tail seem to add strength to the muscles which move the tail fins. •

Grew's Museum.

It is common enough to see a countryman in the doublet and breeches of his great grand-father.

Addison on Italy

They do but mimic ancient wits at best, As apes our grandsires, in their doublets drest.

Pope.

DOUBLET, among lapidaries, implies a coun- terfeit stone composed of two pieces of crystal.

and sometimes glass softened, together with proper colors between them ; so that they make the same appearance to the eye as if the whole substance of the crystal had been tinged with these colors. The impracticability of imparting tinges to the body of crystals, while in their proper and natural state, and the softness of glass, which renders ornaments made of it greatly inferior in wear to crystal, gave induce- ments to the introduction of coloring the surface of crystal wrought in a proper form, in such a manner, that the surfaces of two pieces so colored being laid together, the effect might appear the same as if the whole substance of the crystal had been colored. The crystals, and sometimes white transparent glass so treated, were called doublets ; and at one time were greatly in use, on account of the advantages, with respect to wear, such doublets had, when made of crystal, over glass, and the brightness of the colors which could with cer tainty be given to counterfeit stones this way, when colored glass could not

be procured, or at least not without a much greater expense. Doublets have not indeed the property which the others have, of bearing to be set transparent, as is frequently required in drops of ear-rings and other ornaments : but when mounted in rings, or used in such manner that the sides of the pieces where the joint is made cannot be in- spected, they are, when formed of crystal, pre- ferable to the colored glass; and the art of managing them is therefore, in some degree, of the same importance with that of preparing glass for counterfeiting gems ; and is therefore properly an appendage to it, as being entirely subservient to the same intention.

DOUBLETS, a game on dice within tables ; the men, which are only fifteen, being placed thus. Upon the size, cinque, and quatre points, there stand three men apiece; and upon the trey, deuce, and ace, only two. He that throws highest has the benefit of throwing first, and what he throws he lays down, and so does the other : what the one throws, and has not, the other lays down for him, but on his own account ; and thus they do till all the men are down, and then they bear. He that is down first, bears first; and will doubtless win the game, if the other throws not doublets to overtake them : which he is sure to do, since he advances or bears as many as the doublets make, viz eight for two fours.

DOUBLING, among hunters, is applied to a hare, which is said to double, when she keeps in plain fields, and winds about to deceive the hounds.

DOUBLING, in the manege, a term used of a horse, who is said to double his reins, when he leaps several times together to throw his rider.

DOUBLING, in the military art, is the putting two ranks or files of soldiers into one. Thus, when the word of command is, Double your ranks, the second, fourth, and sixth ranks march into the first, third, and fifth, so that the six ranks are reduced to three, and the intervals be- tween the ranks become double what they were before.

DOUBLING UPON, in naval tactics, the act of enclosing any part of a hostile fleet between two fires, or of cannonading it on both sides. It is

usually performed by the van or rear of that fleet which is superior in number, taking the advantage of the wind, or other circumstances, and tacking or veering round the van or rear of the enemy, who will thereby be exposed to great danger, and can scarcely avoid being thrown into general con- fusion.

DOUBLOON', n. s. Fr. A Spanish coin containing the value of two pistoles.

DOUBS, a department of France, bounded on the north by those of the Upper Saone and Upper Rhine ; on the south-west by the depart- ment of

Jura, and on the north-west by that of Upper Saone. It comprehends part of the ci- devant province of Tranche Cornte. Besancon is the capital.

DOUBT, v. a., v. n. & n. s.ˆ Fr. douter ; DOUBT'ER, n. s. j from Lat. dubi-

DOUBT'FUL, adj. to, i. e. duo and

DOUBT'FULLY, adv. [eo, ito, to go.

DOUBT'FULNESS, n. s. j To hold ques-

DOUBT'ING, n. s. tionable or in

DOUBT'INGLY, adv. I danger ; to fear ;

DOUBT'LESS, adj. & adv. j suspect ; dis- trust ; fill with distrust and fear. As a neuter verb, to question : be in uncertainty ; hesitate ; waver ; suspect ; sometimes taking of. As a substantive it means, uncertainty ; difficulty of determination ; suspension of mind, as well as the causes of it ; and the effects, danger and fear. Doubtless is, without doubt. The examples will make the other derivatives plain.

But axe he in faith, and doute nothing, for he tha doutith is lyk to a waive of the see which is moued and boron aboute of wynd. Widif. James i.

I desire to be present with you now, and to change my voice ; for I stand in. doubt of you. Gal. iv. 20.

Knowing how doubtfully all allegories may be con- strued, aud this book of mine being a continual al- legory, I have thought good to discover the general intention. Spenser.

Even in matters divine, concerning some things, we may lawfully doubt and suspend our judgment, inclining neither to one side or other ; as, name- ly, touching the time of the fall both of man and angels. Hooker.

Christ promiseth his Spirit shall be in him to whom he giveth it a spring of water running unto eternal life ; also that he witnesseth them which believe in him already to be passed all doubt and death, and to be presently in eternal life.

MS. Notes of Bradford the Martyr Friendship ts a thing so rare, as it is doubted whe- ther it be a thing indeed or but a word.

Sir P. Sidney.

The virtues of the valiant Caratach, More doubt me than all Britain.

Beaumont and Fletcher. Our doubts are traitors, And make us lose, by fearing to attempt The good we oft might win. Shakspeare.

Methiiiks I should know you, and know this man ; Yet I am doubtful. Id. King Lear.

Doubting things go ill, often hurts more Than to be sure they do. Id. Cymbeline.

He did ordain the interdicts and prohibitions which we have to make entrance of strangers, which at that time was frequent, doubting novelties and commixture of manners. Pna>n,

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In handling the right of a war, I am not willing to intermix matter doubtful with that which is out of doubt ; for, as in capital causes, wherein but one man's life is in question, the evidence ought to be clear ; so much more in a judgment upon a war, which is capi- tal to thousands. Id.

Whatsoever a man imagineth doubtingly, or with fear, must needs do hurt, if imagination have any power at all ; for a man representeth that oftener that he feareth, than the contrary. Id. Natural History.

Solyman said he had hitherto made war against divers nations, and always had the victory, whereof he doubted not now also.

Knolles's Hittory of the Turks.

What fear we then, why doubt we to incense His utmost ire 1 Milton.

He from the terror of this arm so late

Doubtedhls empire. Id. Paradise Lost.

Thus they their doubtful consultations ended.

Milton.

We have sustained one day in doubtful fight. What heaven's high Lord had powerfullest. Id.

I doubt not to make it appear, to be a monstrous felly to deride holy things.

Tillotson.

All their desires, deserts, or expectations, the Conqueror had no other means to satisfy, but by the estates of such as had appeared open enemies to him, and doubtless many innocent persons suffered in this kind. Hole's Common Law.

Nor did the goddess doubtfully declare Her altered mind, and alienated care. Dryden.

At first the tender blades of grass appear, And buds, that yet the blast of Eurus fear, Stand at the door of life and doubt to clothe the year.

Id.

Those who have examined it, are thereby got past doubt in all the doctrines they profess. Locke.

In arguing, the opponent uses as comprehensive and equivocal terms as he can, to involve his adver- sary in the doubtfulness of his expressions : and therefore the answerer, on his side, makes it his play to distinguish as much as he can. Id.

Let no man, while he lives here in the world, doubt whether there is any hell or no, and thereupon live so, as if absolutely there were none. South.

In doubtful cases, reason still determines for the safer side ; especially if the case be not only doubtful, but also highly concerning, and the venture be a soul and an eternity. Id.

Doubtless many men are finally lost, who yet have no men's sins to answer for but their own. Id.

Can we conclude upon Luther's instability, because in a single notion, no way fundamental, an enemy writes that he had some doublings ? Atterbury.

The king did all his courage bend Against those four which now before him were, Doubting not who behind him doth attend. Daniel.

This is enough for a project, without any name ; I duubt more than will bereduced into practice. Swift.

Most of his philosophy is in broken sentences, de- livered with much doubtfulness. Baker on Learning.

To teach vain wits a science little known, To admire superior sense, and

doubt their own.

Pope.

Doubtless, oh guest ! great laud and praise were

mine,

If after social rites and gifts bestowed, I stained my hospitable hearth with blood.

Id. Odyssey.

Though doubtfulness or uncertainty seems to be a medium between certain truth and certain falsehood

in our minds, yet there is no such medium in thing themselves. Watts.*

Hippocrates commends the flesh of the wild sow above the tame ; and no doubt but the animal is mor or less healthy, according to the air it lives in.*

Arbuthnot on Aliment.*

Should reason guide thee with her brightest ray. And pour on misty doubt resistless day ; Yet hope not life from grief or dangerfree, Nor think the doom of man reversed for thee.

Johnson. Vanity of Human Wishes. If I were to form a judgment from experience rather than theory, I should doubt much whether the capa- city for, or even the possession of, a seat in parliament, did really convey much of power to be properly called political. Burke.

But dreadful is their doom, when doubt has driven To censure Fate and pious Hope forego : Like yonder blasted boughs by lightning riven, Perfection, beauty, life, they never know ; But frown on all that pass, a monument of woe.

Seattle.

Here Cocks heroic burn with rival rage, And Quails with Quails in doubtful fight engage ; Of armed heels and bristling plumage proud, They sound the' insulting clarion shrill and loud.

Darwin.

Well was taught my brow that pride serene Which looks no triumph where no doubt had been j That easy scorn, all tranquil as before, Which speaks

no insult, and insults the more ; And with calm air, the surest to torment, Steals angry Spite's last torment, to resent.

Dr. T. Brown.

DOUBTING, the act of withholding our assent from any proposition on suspicion that we are not able peremptorily to decide between the reasons for and against it. Doubting is distin- guished by the schoolmen into two kinds, dubi- tatio sterilis, and dubitatio efficax. The former is that where no determination ensues: in this manner the Sceptics and Academics doubt, who withhold their assent from every thing. See SCEPTICS, &c. The latter is followed by judg- ment, which distinguishes truth from falsehood ; such is the doubting of the Peripatetics and Caf- tesians. The last in particular perpetually in- culcate the deceitfulness of our senses, and tell us that we are to doubt of every one of their reports, till they have been examined and con- firmed by reason. On the other hand the Epi- cureans teach, that our senses always tell truth ; and that if we go ever so little from them we come within the province of doubting.

DOUBTING, in rhetoric, a figure wherein the orator appears some time fluctuating, and unde- termined what to do or say. Tacitus furnishes us with an instance of doubting, almost to a de- gree of distraction, in those words of Tiberius written to the senate : Quid scribara, P. S. aut quomodo scribam, aut quid omnino non scribam hoc tempore, dii me deaeque pejus perdant quam perire quotidie sentio, si scio.

DOUCET, n. s. Fr. doucet. A custard. This word I find only in Skinner and Ainsworth, says Dr. Johnson. The Archaelog, vol. xv., mentions it frequently as a part of the diet of Charles I. when duke of York.

DOUCINE, in architecture, a moulding, con- cave above and convex below, serving commonly

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as a cymatiutn to a delicate corniche. It is like- wise called Gula.

DOUCK'ER, n. s. Colymbus ; from To douck, corrupted from To duck. A bird that dips in the •water.

The colymbi, or dowkers, or loons, are admirably conformed fordiving, being covered with thick plumage, and their feathers so slippery that water cannot moisten them. Ray.

DOVE, n.s. -v Goth, dafa; Sax. dau,

DOVE'COTE / Swed. dufwa ; Arm. dube:

DOVE'HOUSE, V perhaps from Heb. 3-|, to

DOVE'LIKE, adj. (murmur (Parkhurst), or

DOVE'TAI LED, adj. J from Gr. Stvu, to purify; for the Lat. columba, a dove, is formed from fo\vfj,j3tg, a diver. A bird of the COLUMBA ge- nus, which see : a dovecote and dovehouse both mean a habitation for doves.

And whanne Jht-sus was baptisid, auoon he wente up fro the watir, and lo heve>nes weren opened to him : and he saw the Spirit of God comynge downe as a doutne and comynge on him. IViclif. Matt. iii.

So shews a snowy dove trooping with crows, As yonder lady o'er her fellows shows.

Shakspeare. Romeo and Juliet. Like an eagle in a dovecot, I Fluttered your Volscians in Corioli ; Alone I did it. Id. Coriolanus.

Let, Love ! thou'rt blinder than thyself in this, To vex my dove-like friend for my amiss, And when one sad truth may expiate Thy wrath, to make her fortune run my fate.

Donne.

Pamphlets are the weekly almanacks, shewing what weather is in the state, which, like the doves of Aleppo, carry news to every part of the kingdom.

T. Ford. 1647.

The dove is sent forth, a fowl both swift and simole. She, like a true citizen of the ark, returns.

Bp. Hall. Contemplations. , Thou from the first

Wast present, and with mighty wings outspread,

Dove-like, sat'st brooding on the vast abyss,

And mad'st it pregnant. Milton.

The hawk sets up for protector, and makes havock in the dovehouse. L' Estrange.

When a man is made up wholly of the dove, with- out the least grain of the serpent in his composition, he becomes ridiculous in many circumstances of life, and very often discredits his best actions. Addison.

He made an administration so chequered and speckled ; he put together a piece of joinery so crossly indented and whimsically dove-tailed ; a cabinet 'so variously inlaid ; such a piece of diversified mosaic ; cuch a tesselated pavement without cement, &c.

Burke. Character of Lord Cluttham.

DOVE, in geography, a river of England, in Derbyshire, which rises in the Peak, divides that county from Staffordshire, and falls into the Trent, four miles north of Burton.

DOVE-DALE, one of the most romantic spots in Derbyshire, where the Dove runs in a chasm between precipitous rocks. It is situated near Ashborn.

DOVER, a cinque-port, sea-port, and market town of Kent, is a place of considerable historical and topographical interest. Camden and others suppose it to derive its name from the British word Dwfyrrha, which signifies a steep place : the Saxons called it Dorfa, and Antoninus, in his Itinerary, Dubris. It is probable that the Roman town stood on the south side of the Dour, and VOL. VII.

that the Watling Street entered it near the old Biggen-gate.

That the ancient Britons possessed it as c. military post, anterior to the Roman conquest, is also extremely probable : and that the Romans fortified and adapted it to their system of tactics is universally admitted. The old tradition, quoted and confirmed by Mr. King in his Munimenta Antiqua, vol. ii., is, that ' Arviragus, the British chief, here fortified himself, when he refused to pay the tribute imposed by Julius Caesar ; and that here, afterwards, king Arthur also held his residence.' Darrell, in his History of Dover Castle, has given currency to another tradition, which assigns the foundation of this fortress to Cassar : and Lambard quotes Lidgate and Rosse, as saying, that ' they of the castle kept till this day ceiteine vessels of olde wine and salte, which they affirme to be the remayne of suche provision as he (Csesar) brought into it.' Caesar's own nar- rative, however, would lead us to no such con- clusion. He speaks of being repulsed by the inhabitants of this part of Kent ; and most proba- bly landed, in his first expedition, at Deal. The Roman writers, indeed, do not affect to speak of him as having made any conquest here, but merely as having led the way into Britain : Territa quaesitis ostendit terga Britann is.

The fortifications, and all the works we can now trace of the Romans, upon the hill, near Dover, are bounded by the deep ditch, and it will be a vain attempt to search after any mili- tary works of that people in the castle beyond it. The form of the camp, the ditch, the parapet, and the octagon building, all point out the hand of the Roman engineer and architect. It was common for them, where the ground would ad- mit of it, to make their camp in the form of a parallelogram, with the angles rounded off, and to secure it witn a deep ditch and a high parapet : and this appears to have been the original plan of the Roman camp on this hill, before it was altered, either by the Saxons or the Normans. The former, at an early period, became masters of Dover ; and, soon after their conversion to Christianity, the ancient church within the walls of the castle is said to have been consecrated by St. Augustine, at the request of king Ethelbert, whose son and successor, Eadbald, founded a college near it for secular canons. In the reigfi of Edward the Confessor, if not before, the great earl Goodwin was governor of the castle, and is said to have strengthened it by new fortifications. It is well known that William the Norman, when he was contriving the conquest of England, re- fused to permit earl Harold to depart from Rouen, until he had bound him by a solemn oath to de- liver up, after Edward's death, ' the castle of Dover, with the well of water in it.'

Domesday Book informs us that, ' in the time of king Edward, Dovere paid £18, of which sum Edward had two parts, and the earl Goodwin the third part of one moiety, and the canons of St. Martin the other. The burgesses have furnished the king with twenty ships once in each year for fifteen days, and in each ship, were twenty-one men ; this they had done because he had freed them from sac and soc. Whoever constantly resided in the town, and paid custom to the

king, was quit of toll throughout England. All these customs were in use there when king William came into England.' For several succeeding centuries, Dover Castle was re- garded as the ' key and barrier of the whole kingdom ;'and, in every civil broil, the possession of this fortress was eagerly sought. Henry II.,. on his arrival from Normandy, rebuilt the keep, and fortified the castle, on the Norman plan, so that its strength was materially increased. Louis, the dauphin, besieged it when he landed to assist the barons, in the reign of king John ; but was repulsed with great loss, by Hubert de Burgh, then governor.

In the civil wars of the seventeenth century, it was seized for the parliament, hy a merchant named Drake, who, on the night of August 1st, 1642, took it by surprise, wkh the aid of ten or twelve men only. He contrived, "by the means of ropes and scaling ladders, to lead his party to the top of the cliff on the sea-side, which, being considered as inaccessible, was left unguarded. After these commotions had subsided, this ancient pile was, for upwards of a century, left to moulder into ruins; though, in 1745, barracks had been built here sufficiently large to contain a regiment of soldiers. The wars of the French revolution, however, and the many threats of invasion then thrown out, occasioned a great alteration in the defences of this coast ; and Dover Castle has been put in modern times into a respectable state of defence.

It at present consists of an immense mass of almost every kind of fortification ; and is divided into two courts, a lower and an upper, defended into by deep, broad, and dry ditches, from which communications with the inner towers have been made by subterraneous passages. The buildings occupy nearly the whole summit of the eminence which bounds the south-east side of the deep val- ley in which Dover stands ; the lower court is sur- rounded by an irregular wall, excepting on the side next the sea, where a considerable part of the clifF, with the remainder of the wall, was thrown down by an earthquake on the 6th of April, 1680. This wall is called the curtain, and is flanked, at unequal distances, by a variety of towers of different shapes, semi-circular, square, polygonal, &c., the workmanship of different ages. The oldest of them, which is on the eas- tern side of the castle, hears the name of earl Goodwin. Nine of the other towers are stated to have been built in Norman times, and to have derived their names from Sir John de Fiennes, and the eight approved warriors whom he had selected to assist in the defence of this fortress. These towers, according to their relative situa- tion on the wall, beginning from the cliff on the western side, are: 1. The Old, or Canons' tower, which anciently had a drawbridge and battery. 2. A pentagonal tower, originally named after its first commander Albrancis, but afterwards Rokesly tower, from one of its captains. 3. Chilham, or Calderscot tower, built by Fulbert de Lucy, lord of the manor and castle of Chil- ham. 4. Hurst. 5. Arsic, or Sayes. 6. Gat- ton tower. These three were named after adjacent manors appropriated to their repairs. 7. Perenl, Beauchamp, or Marshal's tower, so

successively called after William de Peveril and Hugh de Beauchamp, ancient commanders, and the marshalmen who had the superintendence of military stores, &c. 8. Port, or Perth's tower, whicli took its name from William de Porth, and was also called Casting's, from one of its captains ; but now bears the name of Mary's tower, from queen Mary, by 'whom it was re-built. 9. Fiennes tower, as it was originally named, after Sir John Fiennes, now more generally called New-gate, to distinguish it from the

ancient entrance ; and Con- stable's tower, from its having been the occa- sional residence of the constable or governor of the castle. 10. Clopton's tower, built by Ed- ward IV., and deriving its name from the lord of a manor assigned for its repair. 11. Godsfoe tower, so called from an ancient commander. 12. Crevequer's, Craville's, or the earl of Nor- folk's tower, a work of great magnificence, which has a subterraneous passage leading to a vault of vast extent, and strongly defended. 13. Fitz- William's, or St. John's tower, which derived its former name from Adam Fitz-William, to whom, for his valor at the battle of Hastings, the con- queror gave the scarf from his own arm, and its latter name from lord St. John, who held the lands allotted to it. 14. Averanche's, or Maun- sel's tower, a fine remain of Norman workman- ship, so named from Averanche, an ancient com- mander of this castle, and his successor Maunsel, who was lord warden of the cinque-ports in the reign of Henry III. 15. Veville, or Pincester tower, so called from two of its commanders, the latter of whom assisted Hubert De Burgh in the defence of the castle against the Dauphin. 16. Earl Goodwin's tower, built by that nobleman when governor of the castle. The upper court, like the lower one, is surrounded by a strong wall and various towers ; and near the centre stands the spacious keep, erected in the beginning of Henry III.'s reign. This building is in fine preserva- tion, and is constructed on a similar plan to those built by bishop Gundulph, and particularly to that at .Rochester. It is now used as a magazine, the roof having been rendered bomb-proof. On the eastern side of this court are three towers, which derive their names from Gilbert de Mami- not, or Mainmouth, who was one of the knights that accompanied the conqueror to England, and was appointed marshal of this castle by John de Fiennes : these towers command the whole vallum and ascent leading to the principal entrance to this court ; near the south angle of which is another entrance, by a gate called Palace, or Subterranean Gate.

The new works recently termed for the de- fence of this fortress consist of different batteries, furnished with a very formidable train of artillery, casemates dug in the solid chalk-rock, magazines, covered-ways, and various subterranean commu- nications and apartments for soldiery : the latter are sufficiently spacious for the accommodation of about 2000 men, and, with their inhabitants, form a very curious spectacle : light and air are conveyed into them by well-like apertures cut in the chalk, and by other openings in the face of the cliffs. A new road has also been made, under the direction of the Board of Ordnance, from the town to the top of the hill, where it

joins tne Deal road, in a direction to be com- manded by the batteries. A branch from this road turns to the right nearly opposite Gallon Tower, and

enters ihe caslle by a new bridge and gale. Near ihe edge of ihe cliff stands a piece of brass ordnance, twenty-four feet long, cast at Utrecht in 1544, and called Queen Elizabeth's Pocket Pistol.

Dover Castle occupies altogether about thirty- five acres of ground : the hill on which it stands is very sleep and rugged on the side of the lown and harbour; and towards the sea it is a com- plete precipice of upwards of 320 feet from ils base on ihe shore. But it is commanded by higher eminences both to the north-west by west and soulh west. Like other royal castles, it was formerly both extra-parochial and extra-judicial; but, as several of the ancient franchises are either lost or disused, the civil power has of late years been exercised within its limits, independemly of any conlrol from the warden. At the renewal of the war, in 1803, the heights on the western side of the town were strongly fortified, agreeably to the modern system, and a new military road lead- ing to them made. Other fortifications here are Archliff Fort, at tne extremity of the pier, and Amherst Battery, at the north Pier-head : these, acting in conjunction with the heights and caslle, entirely command the road to ihe town.

The harbour of Dover was evidently at one time considerably more inland, particularly towards ihe norlh-east. At what period the an- cient haven became useless is not known, but it was a flourishing harbour in Edward the Con- fessor's time. A round tower was built on the south-west side of the present harbour, A.D. 1500, to protect the shipping from the violence of the south-west winds : to this tower it is said the vessels were moored by rings ; and the haven •was called Little Paradise. In 1533 Sir J. Thompson, then holding the living, first pro- jected a pier at Dover, which was begun at Arch- cliff, on the south-west side of the bay, and carried out directly eastward into the sea, to an «xtent of 131 rods. The bottom was laid with vast stones, of twenty tons weight, brought from Folkstone by waler. The king himself came several limes lo Dover to view the works, and is staled by Harris lo have expended aboul £80,000 on ihis pier. Attempts were made in the two following reigns to forward the work, but no ef- fectual advance was made till the time of Eliza- beth, to whom Sir Walter Raleigh presented a memorial, stating that ' no promontory, lown, or haven, in Christendom, is so placed by nature and situalion, bolh lo gratify friends and annoy enemies, as this town of Dover.' An immense quantity of beach thrown up by the sea, had formed a bar across the harbour in her reign, which totally impeded the passage. The queen therefore now granted the town the free exporta- tion of 30,000 quarters of wheat, 10,000 quarters of barley, and 4000 tons of beer, in aid of the expense ; and for the same purpose a duty of 3d. per ton was laid on every vessel passing this porlnbove twenty tons burden : this duty pro- duced about £1000 annually in 24 and 2.j Eliz. Its repairs have been since provided for hy seve- ral grants and acts of parliament. Agreeably to

the idea of jcaptain Perry, in his report after a survey in 1718, several jetties have been erected towards the east, lo prevenl the encroachments of the se:x. In 1737 the mole or cross wall was faced with Portland stone, and several flood-gate? or sluices were conslrucled in it. When the tidj had receded from the moulh of ihe ouler harbour the immense back-water, confined by these sluices, was conveyed through them, to dislodge the beach thai accumulales al ils entrance During a violent storm, in 1802, several rods of the north-pier head were bealen down by the fury of the waves. This was immediately rebuilt, in a most substanlial manner, under the inspection of Mr. James Moon, the present harbour-master. A dry dock, and several other extensive and im- portant works, have also been completed under ihe direclion of ihis able and ingenious gentle- man. The back-water, which formerly lost its force in passing through the outer harbour, is now carried round it, in cast-iron culverts or tunnels, seven feet in diameter, to the exlremity of the south-pier head, where il branches off in direclions, and effeclually removes ihe beach from the entrance of the harbour, during the spring tides. These works were accomplished by Mr. Moon in 1822. The depth at spring tidea is now between eighteen and twenty feet, and at neap tides about fourieen ; so lhat ships of 400 or 500 tons may enter in safety.

The town of Dover was formerly defended by a strong embattled wall, which included a space of about half a mile square, and in which were ten gales ; though not a trace of the wall or gates now remains, except of the foundation in some places. From the hills above, the town has an interesting appearance. It extends in contrary directions, to the east, south-west, and north, three long streels meeting at one point in the centre. There were formerly six parishes, each of which had its dislinct church ; four of these edifices have long been destroyed, with the ex- ception of some parts of those of St. Nicholas and St. Martin-le-Grand ; and the town js now di-vided inlo Ihe two parishes of St. Mary the Vir- gin, and St. James ihe Aposlle. Greal part of the priory buildings still remains : a Maison Dieu, or hospital, on the left of the enlrance lo the town, was endowed by Hubert de Burgh, ihe greal jusliciary of England, about the beginning of the reign of Henry III. ; after the dissolution, this was converted by queen Mary into an office for victualling the navy, to which use it was ap- propriated up to the close of the late war. In times of war, all ships in the downs, belonging to the royal navy, are supplied hence by vessels en- gaged for that purpose.

St. Mary's, the principal cnurcli ot modem times, is a spacious and curious edifice, in length about 120 feet, in breadth fifty-five, consisting of a nave dnd aisles, with a tower at ihe wesl end. It is said to have been built by the priory and convent of St. Martin, in the year 1216. The west front is of Norman architecture, as are also the first three arches and their supporting columns on each side of the nave. Two years after the dissolution, this

church, which had previously belonged to the Maison Dieu, was given to the parishioners by Henry VIII., who was then at

Dover; and every house-keeper, paying scot and .ot, has now a right to vote in the election of a minister. The other church, St. James's, is an irregular structure, and its interior, which is kept particularly neat and clean, displays its origin to have been Norman : it has a square tower, built in arches, directly over the centre of the north aisle, and the pulpit is placed under it.

This town is governed by a mayor, twelve jurats, and thirty-six common-council-men ; from the latter of whom a town-clerk and chamberlain are annually chosen. The mayor was formerly elected by the resident freemen, in St. Mary's church, on the 8th of September, the nativity of the Virgin. The two members of parliament were also chosen in St. Mary's church by the whole body of freemen, resident and non-resident, in number about 2300. But in 1826 these elections were removed by act of parliament to the town hall, or to hustings erected in the market place. Freedom is acquired by birth, servitude, mar- riage, and burgage tenure : the franchise obtained by marriage ceases at the death of the wife, and that by tenure at the alienation of the freehold. Both in times of peace and war the trade of Dover is extensive; this being the principal place of embarkation for the continent. From thirty to forty vessels, exclusive of packets, are employed in the passage to the opposite shores : some are from sixty to seventy tons burden each ; and have been considered as the handsomest ?loops in the kingdom. They have frequently reached Calais, with a favorable wind, in three hours : the shortest passage ever known was two hours and forty minutes. Several steam vessels are now also employed in the passage to the con- tinent, which, as well as his majesty's steam packets stationed here, well sustain the honor of the ports for elegant accommodations. In the year 1778 an act was obtained for the better paving, cleansing, lighting, and watching the town; and, in 1822, an act was passed to light it with gas, which has been very completely car- ried into effect : so that Dover may now be said to be, on the whole, well paved and lighted.

Dover is distant seventy-two miles from Lon- don, sixteen from Canterbury, twenty-two from Margate, and eighty-eight from Brighton. It has two weekly markets, viz. on Wednesday and Saturday; the latter being the principal. There is an annual fair, which begins on the 22d day of November, and continues three market days. The number of persons of all ranks passing through the town, is generally very great. In- cluding the

garrison of Dover Castle, and the heights, together with those districts of other parishes which form a part of the town, the popu- lation may, with much probability, be fixed at from 16,000 to 18,000. It has of late become a favorite watering place. Numerous lodging houses have been erected, and fitted up in an elegant style, for the accommodation of visitors, and many others are in progress. During the bathing season, musical promenades are estab- lished at Batcheller's King's Arms Library and Assembly Rooms, and at Warren's Marine Li- brary. The former is an extensive and elegant structure, and was finished in 1826. No place can boast of local attractions more numerous (and

which want of space alone compels us thus to pass over), or prospects more interesting. Shaks- peare's beautiful description of the cliff that bears his name, on the south-west of the harbour, is well known.

DOVER, a considerable township of the United States, in Stafford county, New Hampshire ; in- corporated in 1633. It is situated on the south side of Cochecto River, about four miles above its junction with Salmon Fall River, which toˆe- ther form the Piscataqua. Ten miles south by east of Rochester.

DOVER, a large township of New Jersey, in Monmouth county, between Shrewsbury and New Stafford, extending from the sea to the county line.

DOVER, a township of Massacnusetts, in Nor- folk county, incorporated in 1650. It lies fif- teen miles southward of Boston.

DOVER, the metropolis of Delaware state, in Kent county, on the south-west side of Jones Creek, about four miles and a half north-west from its mouth, in the Delaware ; twelve miles from Duck Creek ; forty-eight from Wilmington ; and seventy-six S. S. W. of Philadelphia. This town has a lively appearance, and drives on a considerable trade with Philadelphia, chiefly in flour.

DOVER, a small town in York county, Pennsyl- vania, seated on the Fox Run.

DOVER, STRAITS OF, the narrow channel between Dover and Calais, which separates Great Britain from the French coast. Britain is sup- posed by many to have been once peninsulated, the present straits occupying the site of the isth- mus which joined it to Gaul. ' No certain cause,' says Mr. Pennant, in his Arct. Zool. Vol 1. Introd. p. ii., ' can be given for the mighty con- vulsion which tore us from this continent; whether it was rent by an earthquake, or whether it was worn through by the continual dashing of the waters. The correspondency of strata,' he adds, ' on part of the opposite shores of Britain and France, leaves no room to doubt but that

they were once united. The chalky cliffs of Blancnez between Calais and Bologne, and those to the westward of Dover, exactly tally: the last arc vast and continued ; the former short, and the ter- mination of the immense bed. Between Bologne and Folkstone (about six miles from the latter) is another memorial of the junction of the two countries ; a narrow submarine hill, called the Rip- raps, about a quarter of a mile broad, and ten miles long, extending eastwards towards the Goodwin Sands. Its materials are boulder-stones, adventitious to many strata. The depth of water on it, in very low spring tides, is only fourteen feet. The fishermen from Folkstone have often touched it with a fifteen feet oar ; so that it is justly the dread of navigators. Many a tall ship has perished on it, and sunk instantly into twen- ty-one fathoms of water. In July, 1782, the Belleisle of sixty-four guns struck, and lay on it during three hours ; but, by starting her beer and water, got clear off.' These celebrated straits are only twenty-one miles wide in the narrowest part : from the pier at Dover to that of Calais twenty- four. It is said that their breadth is diminish- ing, and that they are two miles narrower thau

they were in ancient times. An accurate ob- server for fifty years remarks, that the increased height of water, from a decrease of breadth, has been apparent even in that space. The depth of the channel at a medium, in the highest spring tides, is about twenty-five fathoms ; the bottom either coarse sand or rugged scars, which have for ages unknown resisted the attrition of the currents. From the straits both east and west is a gradual increase of depth through the channel to 100 fathoms, till soundings are totally lost. The spring tides in the straits rise on an average twenty-four feet, the neap tides fifteen. The tide flows from the German Sea, passes the straits, and meets, with a great rippling, the western tide from the ocean, between Fairleigh near Hastings and Bologne ; a proof that, if the separation of the land was effected by the seas, it must have been by the overpowering weight of those of the north.

DOUGH, n.s. ˆ Goth, and Scotch deigk; DOUGH'BAKED, adj. > Sax. dah ; Welsh and DOUGH'Y, adj. j Arm. toas ; Belg. deigh ; from dt/ghen, to increase, because dough increases, and causes other things to increase, by fermenta- tion.— Minsheu. Mr. Tooke insists that it is the past participle of the Sax. 'oeapian, to moisten or wet. Unbaked bread or pastry ; dough-baked, is unfinished, still dough, as in the similar phrase of Shakspeare : doughy, unsound ; soft ; weak.

The kyngdom of heven is lyk to sour dowyh, whiche a womman took and hidde in thre mesuris of mele, til it were al sowred. Wiclif. Matt. xiii.

My cake is dough, but I'll in among the rest ; Out of hope of all, but my share of the feast.

Shakspeare.

Your son was misled with a snipt taffata fellow there, -whose villainous saffron would have made all the unbaked and doughy youth of a nation in his colour. Id.

For when, through tasteless flat humility,

In doughbaked men some harralessness we see,

'Tis but his phlegm that's virtuous, and not he.

Donne.

Surely, if they would have been as good husbands of their cattle, as they were of their dough, they might have had enough to eat without need of murmuring : for if their back-burden of dough lasted for a month, their herds might have served them many years.

Bp. Hall. Contemplations.

When the gods moulded up the paste of man, Some of their dough was left upon their hands, For want of souls, and so they made Egyptians.

Dryden.

You that from pliant paste would fabricks raise, Expecting thence to gain immortal praise, Your knuckles try, and let your sinews know Their power to knead, and give the form to lough.

King.

DOUGHT'Y, adj. Sax. ˆohws ; Goth, dught , virtue. Brave ; noble ; eminent. Often used ironically.

Such restless passion did all night torment The flattering courage of that fairy knight, Devising how that doughty tournament With greatest honour he achieven might.

Faerie Qucene.

If this doughty historian hath any honour or con- science left, he ought to beg pardon. Stillinyfleet.

She smiled to see the douyhty hero slain ; But, at her smile, the beau revived again. Pupe,

*DOUGLAS (John), bishop of Salisbury, a native of Scotland, was born in 1721. He received his early education at Glasgow, whence he removed to Baliol College, Oxford, where he obtained a fellowship, and proceeded to die de- gree of master of arts, October 14th 1743. He accumulated the degrees of bachelor and doctor in divinity, May 6th, 1758. Not long after his en- tering into holy orders he obtained the rectory of Eaton Constantine in Shropshire, on the presen- tation of the earl of Bradford. In 1747 William Lauder, a native of Edinburgh, and a man of considerable talents and learning, excited general attention by publishing a paper, to which he gave the title of an Essay on Milton's Use and Imita- tion of the Moderns ; the design of which was to prove that our great epic poet had made free with the works of some obscure Latin poets of modern date, in the composition of his immortal poem of Paradise Lost. Mr. Douglas published a detection of Laudei *s forgeries in a letter to the earl of Bath, entitled, Milton Vindicated from the Charge of Plagiarism, brought against him by Mr. Lauder. In this masterly pamphlet the learned critic proves, that the passages which had been cited by Lauder from Masenius, Staphorstius, Taubmannus, and other obscure writers, had been interpolated by the forger himself, who had also foisted into his quotations entire lines from Hog's Latin translation of Paradise Lost, into which no examiner but Mr. Douglas had been inquisitive enough to look. The detection of this infamous fraud was so complete, that Lauder acknowledged it, and published a letter in •which he assigned the reasons for his conduct, and his pretended contrition for the offence. Soon after the impostor published another attack on the character of Milton, charging him with having made additions to the Icon Basilike of king Charles I. for the purpose of injuring that unfortunate monarch's reputation. This foul ca lumny, which was soon made manifest, rendered Lauder so infamous that he quitted the kingdom, and died some years after in the island of Barba- does. In his next literary work Mr. Douglas detected the pretensions of Archibald Bower, the author of the Lives of the Popes, whose story is too long for this place. In 1754 our author published his principal work ; entitled, Criterion, or a Discourse on Miracles ; in which he settles the distinction between true and false miracles in a masterly manner. And of all the answers to the sophistry of David Hume, except that of Dr. Campbell, this may be safely pronounced the clearest and most convincing. In 1757 the author was presented to a prebendal stall in the cathe- dral of Durham, in which he took his degree of doctor in divinity. In 1762 he was made canon of Windsor, on the promotion of Dr. Keppel to the bishopric of Exeter. His next elevation was*

to the episcopal bench on the death of Dr. Ed- mund Law, bishop of Carlisle, in 1783. From that see bishop Douglas was translated to Salis- bury, on the removal of Dr. Barrington to Durham, in 1791. Bishop Douglas was one of the first members of the celebrated beef-steak club, rendered so famous by Goldsmith's hu'

morous poem, entitled Retaliation. By the appointment of the lords of the admiralty, he arranged the journals and papers of captain Cook for publication, and he prefixed to the work a most admirable and perspicuous introduction. He died in 1807, and was buried in the collegi- ate chapel at Windsor.

DOUGLAS (Gavin), bishop of Dunkeld in Scotland, the third son of Archibald earl of An- gus, was born in 1474. Where he was educated, is r.ot known ; but it is certain he studied the- ology ; which did not, however, estrange him from the muses ; for he employed himself at intervals in translating into beautiful verse the poem of Ovid, de Remedio Amoris. The ad- vantages of foreign travel, and the conversation of the most learned men in France and Germany, to whom his merit procured him the readiest access, completed his education. His first pre- ferment was to be provost of the collegiate church of St. Giles in Edinburgh ; a place at that time of great dignity and revenue. In 1514 the queen regent appointed Douglas abbot of Aberbrothock, and soon after archbishop of St. Andrew's ; but her power not being sufficient to establish him in that dignity, he relinquished his claim in favor of his competitor Foreman, who was supported by the pope. In 1515 he was by the queen appointed bishop of Dunkeld ; and was soon after confirmed by Leo X. Ne- vertheless it was some time before he could obtain peaceable possession of his see. The duke of Albany, who in this year was declared regent, opposed him because he was supported by the queen ; and, in order to deprive him of his bishopric, accused him of acting contrary to law in receiving bulls from Rome. On this ac- cusation he was committed to the castle of Edin- burgh, where he continued in confinement above a year ; but the regent and the queen being at last reconciled, he obtained his liberty, and was consecrated bishop of Dunkeld. In 1517 he attended the duke of Albany to France ; but returned soon after to Scotland. In 1521, the disputes between the earls of Arran and Angus having thrown the kingdom into violent commo- tion, he retired to England, where he became intimately acquainted with Polydore Virgil the historian. He died in London of the plague in 1522 ; and was buried in the Savoy.

His most celebrated work was entitled Thirteen Bukes of Eneades, of the famous poet Virgil, translated out of Latin verses into Scottish metre, every buke having its particular prologue. Imprinted at London 1553, in4to; and reprinted at Edinburgh 1710, in folio. He undertook it at the desire of lord Henry Sinclair, a munificent patron of arts in those times : and he completed it in eighteen months. It is said also that he compiled an historical treatise, De Rebus Scoticis.

DOUGLAS (Sylvester Baron Glenbervie) was of a noble family in Aberdeenshire, and born May 24th, 1743. He entered as a member of one of the English inns of court, and was called to the bar, where he received a silk gown. His first political situation was that of secretary to the earl of Westmoreland, when lord-lieutenant • >f Ireland. In 1800 he was appointed governor of the Cape of Good Hope, but relinquished

that situation the same year, and was created baron Glenbervie of Kincardine. In 1801 lie was appointed joint paymaster-general of the forces ; and in 1803 surveyor-general of the king's woods and forests. His lordship died at Cheltenham, May 2d, 1 823. Lord Glenbervie published An Account of the Wines of Hungary, in the Philosophical Tranctions for 1773 ; History of the Cases of Controverted Elections, 4 vols. 8vo. ; Reports of Cases determined in the Court of King's Bench, 2 vols. 8vo. ; Ricciardetto, a humorous poem, translated from the Italian of Fortiguerri, with an introduction, 1822.

DOUGLAS, a town in a parish seated ou the river above Lanark, thirty-seven miles south-west of Edinburgh. Its ancient castle was burnt about forty years ago, but an elegant new seat is built on its site. Two cotton-works were erected in it, in 1791, when it contained 674 inhabitants.

DOUGLAS, the capital of the Isle of Man. It has lately increased both in trade and buildings. The harbour, for ships of a tolerable burden, is the safest in the island, and is much mended by a fine mole that has been built on the eastern side. Population about 3000.

DOUGLAS, a township of Massachusetts, the southernmost in Worcester county, having the state of Rhode Island on the south, and that of Connecticut on the south-west. It is very rocky, and lies sixteen miles south of Worcester, and forty-seven south-west of Boston. It was in- corporated in 1746, and named in honor of William Douglas, M.D. of Boston, a native of Scotland, and a considerable benefactor to the town.

DOUGLAS, CAPE, a promontory on the north- west coast of North America, which forms the west side of the entrance into Cook's River, op-posite Point Bode, which forms the east side. It is a very lofty promontory,

and its elevated summit appears above the clouds, forming two exceedingly high mountains. Long. 206° 1 0′ E., lat. 58° 56′ N.

*DOUGLAS ISLAND, an island between Admiralty Island and the west coast of America. It is about twenty miles long, and six miles broad in the middle; but becomes narrow towards each end ; eastward it terminates in a sharp point. The channel between this island and the main- land is generally choked up with ice.**

DOULEIA, SovXua, in antiquity, a punish- ment among the Athenians, by which the criminal was reduced to the condition of a slave. It was never inflicted upon any but the arijioi, so- journers and freed servants.

DOVRAFIELD, the highest range of moun- tains in the Scandinavian peninsula, which, with another chain, divides the kingdom of Norway into north and south. Its highest peak is up- wards of 8000 feet above the level of the sea. It derives its name from the village of Dovre.

DOURO, or DUERO, a river of Spain, which rising on the borders of Arragon, and flowing westward, traverses more than half the width of the peninsula. It receives a number of streams from the mountains of Biscay and Leon to the north, and from those of Old Castile to the south. In part of its course, it forms the boun-

dary between Spain and the province of Tras los Mo'ntes in Portugal. In the lower part of its course it runs wholly in Portugal, and forms a line of separation between Beira and the north- ern provinces. It finally discharges itself into

have a greater interest in property than either maids or wives ; so that it is as unnatural for a dowager as a freeholder to be an enemy to our consti- tution. Addison. DOWDY, n. s. & ad,. From dowd, or dey-

the Atlantic, a little below Oporto. The banks hood; deyanurse, and hoed a cap. An awkward of this river were the scene of various move- ill-dressed woman : slatternly, ments of the English and French armies in 1812

and 1813, previous to the battles of Salamanca and Vittoria.

To DOUSE, v. a. & v. n. Gr. Svaig ; but pro- bably it is a cant word formed

from the sound. To put over head suddenly in the water. To fall suddenly into the water.

It is no jesting trivial matter, To swing in the' air, or douse in water.

Hudibras.

DOUW (Gerhard), a celebrated painter, bom at Leyden in 1613. At the age of fifteen he became a disciple of Rembrandt, and continued with him three years. From Rembrandt he learned the true principles of coloring, and obtained a complete knowledge of the chiaro- scuro ; but to that knowledge he added a deli- cacy of pencil, and a patience in working up his colors to the highest degree of neatness, superior to any other master. His pictures are usually of a small size, with figures so exquisitely touched, so transparent, so wonderfully delicate, as to excite astonishment as well as pleasure. He designed every object after nature, and with an exactness so singular, that each figure sepa- rately appears perfect in respect to color, fresh- ness, and force. Of his patience Sandrart gives a remarkable instance. Having once, in com- pany with Bamboccio, visited Douw, they took

Laura, to his lady, was but a kitchen wench ; Dido, a duwdy ; Cleopatra, a gipsy ; Helen and Hero, slid- ings and harlots. Shakspcare. Romeo and Juliet.

The bedlam train of lovers use T' inhance the value, and the faults excuse ; And therefore 'tis no wonder if we see They doai on dowdies and deformity. Drydcn.

No housewifery the dowdy creature knew ; To sum up all, her tongue confessed the shrew.

Gay.

Let dowdies simper, and let bumpkins stare, The strolling pageant hero treads in air.

Churchill.

DOWER, n. s. ~\ Fr. douaire, from Lat.

DOW'RY, tdonare, expletive of do, dare,

DOW'ERED, adj. £ to give. The portion given

DOW'ERLESS.) with a wife, or for a wife;

the settlement on a widow; hence endowment :

generally; gift.

Ask me never so much duwery and gift, and I will give according as you shall say unto me ; but giire me the damsel to wife. Gen. xxxiv. 12.

Returne from whence ye came, and rest awhile, Till morrow next, that I the elfe subdew, And with Sansfoyes dead dowry you endew.

Spenser. Faerie Queene.

And ask no other dowry but such another jest.

Shahspf-are.

Wˆill you with those infirmities she owes, Unfriended, new adapted to our hate,

particular notice of a broom he was then paint- Dowered with our curse, and strangered with our oath,

*ing, and, expressing their surprise at the exces- Pp-v” *•”” ~ ‘ k~’ TJ ˆ”” T”~*

sive neatness of that minute object, Douw told them he should spend three days more on that liroom, before he should account it complete. In a family picture of Mrs. Spiering, the same author informs us, that the lady sat five days for the finishing one of her hands that leaned on an arm-chair. Few, therefore, would sit to him for their portraits ; so that he indulged himself mostly in works of fancy, on which he could employ as much time as suited his inclination. Douw died in 1674, aged sixty-one. He is doubtless the most wonderful in his finishing of all the Flemish masters. His pictures are also remarkable, not only for retaining their original lustre, but for having the same beautiful effect at any distance. In the gallery at Florence there is a night-piece by candle-light, which is exquisitely finished ; and, in the same apartment, a mountebank attended by a number of figures, which it seems impossible either sufficiently to commend or to describe.

DOWAGER, n.s. Fr. douuiriere. A widow with a jointure. A title also given generally to widows of rank.

She lingers my desires, Like to a stepdatne or a dowager, Long wintering on a young man’s revenue.

Shtthspeare. Catharine no more

Shall be called queen ; but princess dowager, And H'idow to prince Arthur. Id. Henry VIII.

Take her, or leave her ? Id. King Lear.

Thy dowerlest daughter, king, thrown to my chance, Is queen of us, and ours, and our fair France. Id.

His patrimonial territories of Flanders were in dower to his mother-in-law. Bacon's Henry VII.

Our first mother Eve bequeathed this dowry to her daughters, that they should be our helpers to sin.

Bp. Hall. Contemplations. What spreading virtue, what a sparkling fire, How great, how plentiful, how rich a dower, Dost thou within this dying flesh inspire ! Davies.

Thine own hand

An hundred of the faithless foe shall slay, And for a dowre a hundred foreskins pay.

Cowley. I could marry this wench for this dowre. Sidney.

His wife brought in dower Cilicia's crown, And in herself a greater dower alone. Dryden. The king must die, that I may make you great, And give a crown in dowry with my love.

Id. Spanish Friar

His only daughter in a stranger's power ; For very want, he could not pay a dower ? . Pope.

Rich, though deprived of all her little store, For who can seize fair virtue's better dower 1

Melmouth.

Yes, -when he shines in gold Girl, you but grasp your dowry. Byron.

DOWEH, DOTARIUM, DOARIUM, OV DOS, IS

the estate, for life, which a widow acquires in a certain portion of her husband's real property, after his death, for the maintenance of herself and

the education of her children.

DOWER.

The custom of dower is derived from the Ger- mans, amongst whom it was a rule, that a woman should have no marriage portion, but that the husband should allot a part of his property for her use, in case she survived him. Thus Tacitus, in his treatise, DeMoribusGermanorum, sect. 18, says, ‘ Dotem non uxor marito, Red uxori maritus offert.’ The Saxons, also, were acquainted with it, as appears from the laws of King Edmond ; by which a widow was entitled to a moiety of her husband’s property for her life. And no alteration seems to have been made in this custom at the conquest, nor indeed until the reign of Henry II. ; when, according to Glan- ville, every man was bound, both by the civil and ecclesiastical law, to endow his wife, at the time of marriage, eitherofall his lands, generally, or of some particular part thereof: if endowed generally, the wife was entitled to her dos ratio- nabilis, which was one third part of her husband’s freehold ; if specially, to the particular land named, provided it did not amount to more than a third. Similar regulations with respect to dower are contained in the Grand Coutumier of Normandy.

The following are the five different kinds cf dower which once existed, but the first two only are 0»>w in use. \ . Dower by the common law. This entitles the widow, after the death of her husband, to the enjoyment, during her life, of a third part of all the lands and tenements of which he was seized in fee simple or fee tail at any time during the coverture. This right is not pre- judiced by the husband’s conveyance of such lands, even though the wife join therein (unless a fine or recovery be used, as stated subsequently in this article), nor by his disposing of the same by will. 2. Dower by custom is where a widow becomes entitled to a certain portion of her hus- band’s lands in consequence of some local and peculiar custom. Thus, by the custom of gavel- kind (a tenure by which a great part of the land in Kent is still held), she is entitled to a moiety of the lands held by her husband in that tenure : and by the custom of some boroughs she is entitled to all the tenements that were her hus- band’s. Copyhold lands are not at common law subject to dower ; but, by the custom of most manors, the widows of copyholders are entitled to a certain part, and sometimes to the whole, of the copyhold lands of which their husbands die possessed. This kind of dower is generally called the widow’s free bench.

The species of dower now out of use are, 3. Dower ad ostium ecclesia, which was where the husband, at the church door, after the marriage, endowed his wife with the whole or a certain portion of his lands. 4. Dower

ex assensu patris, in which species the husband being heir apparent of his father, with his consent, endowed the wife, at the church door, with a part of the lands of the father. And, 5. Dower de la pluis beale. This was merely a consequence of tenures by knight-service, and was abolished by the statute of 12 Car. II., when those tenures were con- verted into socage.

As to the persons entitled to dower. — Alien women are not generally capable of acquiring dower : an alien queˆn is, however, an exception

to this rule ; and, by an act passed in the reign of Henry V. (not printed among the statutes but contained in Rot. Parl. vol. iv. 128-130), all alien women, who from thenceforth should be married to Englishmen, by license from the king, are enabled to have their dower. Naturalisation also removes this disability; as does also deniza- tion, so far as relates to the lands of which the iiusband was seized when his alien wife was created a denizen, but not to any of which he was seized before, and which he had then parted with. Jewesses also, as long as they continue of that religion, cannot be endowed. With the above exceptions every woman, who has attained the age of nine years, is by the common law entitled to dower; but she may be deprived thereof in the several ways following. 1. By the attainder of the husband for treason ; but not for misprision of treason or felony. 2. By the attain- der of herself for treason or felony, unless after- wards pardoned, in which case her capacity to be endowed is restored as Ailly as if it had never been lost. 3. By divorce a vinculo matrimonii: it must be observed that a divorce, a mcnsa, et thoro will not deprive the wife of dower, such divorce being merely a permission to the parties to live separate, and not a dissolution of, the mar- riage. 4. By elopement from the husband, and living with an adulterer : but if the former be afterwards voluntarily reconciled, and suffer his wife to dwell with him, the incapacity will be removed. 5. By withholding the title-deeds of the property from the heir at law. 6. By joining with the husband in levying a fine or suffering a common recovery of his lands: but this will only prevent her from claiming dower out of the lands comprized in the fine or recovery. Also, by the custom of London, a married woman may bar herself of dower by a bargain arid sale acknowledged before the lord mayor, or the recorder, and one alderman, and enrolled in the court of hustings : in this case the wife must be examined separately from her husband as to her consent. 7. The last and most usual mode, now in practice, of barring dower, is a jointure settled on the wife before marriage. See JOINTURE.

DOWLAS, n.s. A coarse kind of linen

Duwlat, filthy dowlas ; I have given them away to bakers' wives, and they have made boulters of them.

Sttakspeare.

DOWLAS HEAD, a cape of Ireland, on the coast of Kerry, in Munster. Near this are seve- ral large caves, one of which has its entrance so low as hardly to admit of a boat with a man standing up in it; but, further in, the roof is as high as that of a Gothic cathedral, and has a fine echo.

DOWLE1 ABAD, a district of Hindostan, in the nizam's dominions, in the province of Au- rungabad, situated between the nineteenth and twentieth degrees of north latitude, and extend- ing along the north side of the Godavtry.

DOWLETABAD, DEOGHIR, Or DEOGHl R, a

town and strong fortress in the province of Au- rungabad, deemed by the natives impregnable. It stands on the summit of a mountain, sur- rounded with other enclosures, of which that on the plain contains a large town. The two lower forts are overtopped by the upper, and coin-

Banded by it. In 1595 Dowletabad surrendered to Ahmed Nizam Shah, of Ahmednuggur, and on the fall of his dynasty it was taken posses- sion of by Mallek Amber, an Abyssinian slave, who was reckoned one of the ablest generals and financiers of his age. His successors reigned until 1634, when it was taken by the Moguls during the reign of Shah Jehan, and the capital transferred to the neighbouring town of Gurka, or Kerkhi, since named AURUNOAB AD, which see. DOWN, n. s. "i Bel. dons; Swed. dan; DOWN'ED, adj. £ Dan. duun. The softest part DOWN'Y, adj. J of a bird's plumage; hence applied to the soft fibres of plants, and any thing remarkably soft or soothing.

By his gates of breath There lies a downy feather, which stirs not : Did he suspire, that light and weightless down, Perforce must move. Shakspeare.

Banquo ! Donalbain! Malcolm! awake! Shake off this downy sleep, death's counterfeit, And look on death itself. Id. Macbeth.

There he plants that have prickles, yet have a. downy or velvet rind upon their leaves, as stock-gillyflowers and coltsfoot; which down or nap cousisteth of a subtile spirit, in a soft substance.

Bacon's Natural History.

Like scattered down, by howling Eurus blown, By rapid whirlwinds from his mansion thpown.

Sandys.

Give me flattery,

Flattery the food of courts, that I may rock him, And lull him in the down of his desires. Beaumont.

Virtue is the roughest way, But proves at night a bed of down. Wotton, Leave, leave, fair bride ! your solitary bed, No more shall you return to it alone ; It nurseth sadness : and your body's print, Like to a grave, the yielding down doth dint.

Donne.

We tumble on our down, and court the blessing Of a short minute's slumber. Derham's Sophy.

In her hand she held

A bough of fairest fruit, that downy smiled, New gathered, and ambrosial smell diffused.

Milton.

A side breeze from westward waits their sails to fill, And rests in those high beds his downy wings.

Dryden.

I love my husband still ; But love him as he was when youthful grace, And the first down began to shade his face. Id.

A tender weakly constitution is very much owing to the use of down beds. Locke.

Thou bosom softness, down of all my cares ! I could recline my thoughts upon this breast To a forgetfulness of all my griefs, And yet be happy. Southern's Oroonoko.

On thy chin the springing beard began To spread a doubtful down, and promise man.

Prior.

What pain to quit the world, just made their own, Their nest so deeply downed, and built so high ! Too low they build who build beneath the stars.

Young.

Belinda still her downy pillow prest, Her guardian sylph prolonged the balmy rest.

Pope.

How much do they mistake, how little know Of kings and kingdoms, and the pains which flow From royalty, who fancy that a crown, Because it glistens, must be lined with down.

Churchill.

How long shall sloth usurp thy useless hours, Unnerve thy vigour, and enchain thy powers ; While artful shades thy downy couch inclose, And soft solicitation courts repose ?

Dr. Johnson's Poems.

For the preservation of the immature seed nature has used many ingenious methods ; some are wrapped in down, as the seeds of the rose, bean, and cotton- plant ; others are suspended in a large air-vessel, as those of the bladder-sena, staphylaea, and pea.

Darwin.

DOWN, v.a.,v. n.,n. s., adj. ~) Saxon bun ; adv. prep. & interj. Erse, dune ; a- DOWM'CAST, adj. hill. The sub-

DOWN'FALL, n. s. stantive has*

DOWN'FALLEN, adj. here originated

DOWN'GYVED, adj. the other uses

DOWN'HILL, n. s. & adj. >of the word, DOWN'LOOKED, adj. and still retains

DOWN'LYING, n. s. in Sussex, and

DOWN'RIGHT, adj. & adv. in some other

DOWN'SITTING, n. s. parts of Eng-

DowN'xRODDEN,par£. ad). land, itsprimi- DOWN'WARD, adj. & adv. live meaning. DOWN'WARDS, adv. _) To down is

used by Sidney for to subdue ; beat downwards. As a neuter verb it signifies, to descend ; be re- ceived. As an adjective, dejected ; and sometimes firm ; positive (figuratively). As a preposition, it means along or towards a lower point. As an adverb, on or tending to the ground ; below the horizon, answering and opposed to up ; also from former to later times, and from higher to lower station or repute. As an interjection, it encourages to, or pronounces, degradation or destruc- tion. Downcast is, bent towards the ground. Downfal, ruin ; calamity. Downgy ved, hanging down like fetters. Downright is, plain ; open ; or, as we say, by a similar figure, straight- forward; direct ; unqualified. The meaning of the other compounds is apparent.

And now the axe is put to the roote of the tree, therfor every tre that makith not good fruyt schal be kit down and schal be cast into the fyr.

Wiclif. Matt. 3.

Let them wander up and down for meat, and grudge if they be not satisfied. Psalm lix. 15.

Thou knowest my downsitting and mine uprising ; thou understandest my thoughts afar off.

Id. cxxxix. 2.

Then thought the prince all peril sure was past, And that he victor onely did remayne ,

No sooner thought, then that the carle as fast Gan heap huge strokes on him, as ere he down was cast. Spenser.

How goes the night, boy?

— The moon is down; I have not heard the clock, And she goes down at twelve. Shakspeare. Macbeth. Down, down to hell, and say I sent thee thither.

Shakspeare.

Go, some pull down the Savoy ; others to the inns of courts : down with them all. Id.

Why dost thou say king Richard is deposed ; Barest thou, thou little better thing than earth, Divine his downfal 1 Id. Richard If.

Lord Hamlet, with his stockings loose, Ungartered and downgyved to his ancles.

Shaktpcare. Elves away ! We shall chide downright if I longer stay. /«/.

DOW

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DOW

A ring the count does wear, That downward hath succeeded in his house, From son to son, some four or five descents. Id.

Mahomet puts his chief substance into certain boats, to be conveyed down the river, as purposing to fly.

Knolles.

An admonition from a dead author, or a caveat from an impartial pen, will prevail more than a down- right advice, which may be mistaken as spoken ma- gisterially. Bacon.

I would rather have a plain downright wisdom, than a foolish and affected eloquence.

Ben Jonson's Discoveries.

Lord of much riches, which the use renowns : Seven thousand broad-tailed sheep grazed on his

down. Sandys.*

The idolatry was direct and downright in the peo- ple, whose credulity is illimitable.

Browne's Vulgar Errovrt.

No bread will down with them, save that which the earth yields ; no water but from the natural wells or rivers. Bp. Hall. Contemplations.

To come from all things to nothing, is not a descen but a downfall ; and it is a rare strength and con- stancy, not to be maimed at least. Id.*

We can naturally like no view of ourselves, unless we look downwards, to teach us what humble admirers we ought to be of our own value. Butler.

He shared our dividend o' the crown, We had so painfully preached down ; And forced us, though against the grain, To' have calls to preach it up again. Hwiibras.

A giant's slain in fight,

Or mowed o'erthwart, or cleft downright. Id.

Whom they hit, none on their feet might stand, Though standing else as rocks : but down they fell By thousands. Milton's Paradise Lost.

But first I mean

To exercise him in the wilderness, There he shall first lay down the rudiments Of his great warfare. Milton.

Not all the fleecy wealth

That doth enrich those down is worth a thought, To this my errand, and the care it brought. Id.*

Look downward on that globe, whose hither side, With light from hence, shines. Id.

It is downright madness to strike where we have no power to hurt. L' Estrange.

Down sinks the giant with a thundering sound, His pond'rous limbs oppress the trembling ground.

Dry den.

But now they cry, down with the palace, fire it, Pull out the' usurping queen. Id.

My wily nurse by long experience found, And first discovered to my soul its wound ; Tis love, said she ; and then my downcast eyes, And guilty dumbness witnessed my surprize. Id.

Heavy the third, and stiff, be sinks apace ; And though 'tis downfall all, but creeps along the race.

Id.

Jealousy, suffused with jaundice in her eyes, Discolouring all she viewed, hi tawny dressed ; Downlooked, and with a cuckoo on her fist. Id.

When Aurora leaves our northern sphere, She lights the downward heaven, and rises there.

Id.

A downright scholar is one that has much learning in the ore, unwrought and untried, which time and experience fashions and refines. Jiji. Earle.

It has been still preached up, but acted down ; and dealt with as the eagle in the fable did with the oyster,

carrying it up on high, that by letting it fall, he might dash it in pieces. South.

We have seen some, by the ways by which they had designed to rise uncontrollably, to have directly procured their utler downfall. Id.

The hidden beauties seemed in wait to lie,

To down proud hearts that would not willing die.

Sidney. On the downs we see, near Wilton fair,

A hastened hare from greedy greyhound go. Id.

Wanton languishing borrowed of her- eyes, the downcast look of modesty. Id.

A man falling down a precipice, though in motion, is not at liberty, because he cannot stop that motion if he would. Locke.

If he be hungry more than wanton, bread alont will down; and if he be not hungry, 'tis not fit he should eat. Id.

Hills are ornamental to the earth, affording pica- bant prospects to them that look downwards from them upon the subjacent countries. Ray on tlie Creation.

Hills afford pleasant prospects ; as they must needs acknowledge who have been on the downs of Sussex.

Id.

There are few, very few, authors, that will own themselves in a mistake,

though all the world see them to be in downright nonsense. Toiler.

There is not a more melancholy object in the learned world, than a man who has written himself down. A ddison.

Thy downcast looks, and thy disordered thoughts, Tell me my fate : I ask not the success My cause has found. Id. Cato.

It is then (in old age) we have nothing to manage, as the phrase is ; we speak the downright truth, and whether the rest of the world will give us the privi- lege or not, we have so little to ask of them, that we can take it. Steele.

What remains of the subject, after the decoction, is continued to be boiled down, with the addition of fresh water, to a sapid fat. Arbuthnot on Aliments.

And the first steps a downhill greensward yields.

Congreve.

As you lift up the glasses, the drop will ascend

slower and slower, and at length rest, being carried

downward by its weight as much as upwards by the

attraction. Newton.

O happy plains, remote from war's alarms,

And all the ravages of hostile arms !

And happy shepherds! who, secure from fear,

On open downs preserve your fleecy care. Guy.

To compass this, his building is a town, His pond an ocean, his parterre a down. Pope.

What would this man? Now upward will he soar And, little less than angel, would be more ; Now looking downwards, just as grieved appears To want the strength of bulls, the fur of bears. Id.

Religion seems not in danger from downright atheism, since rational men must reject that for want of proof. Rogers.

Who shall dispute what the reviewers say ?

their word ‘s sufficient ; and to ask a reason,

In such a state as theirs, is downright treason.

Churchill.

This structure in some degree obtains in the eso- phagus or throat of cows, who by similar means con- vey their food first downwards and afterwards up- wards by a retrograde motion of the annular muscles or cartilages, for the purpose of a second mastication of it. Darwin.

A more unsafe and uncertain rule could hardly be laid down, than this of estimating property accord ing to its value at some remoter period of our history.

Sir S. Komilly.

Gazing on his Trojan bride, With some remorse within for Hector slain And Priam weeping, mingled with deep passion For the sweet downcast virgin, whose young hand Trembled in his who slew her brother. Byron.

Around her form a thin robe twining, Nought concealed her bosom shining j Through the parting of her hair, Bloating darkly downward there, Her rounded arm showed white and bare.

Id. Siege of Corinth.

DOWN, in commerce, the fine feathers from the breasts of several birds, particularly of the duck kind. That of the eider duck, see ANAS, is the most valuable. These birds pluck it from their breasts, and line their nests with it. We are told that the quantity of down found in one nest more than filled the crown of a hat, yet weighed no more than three quarters of an ounce. Three pounds of this down may be compressed into a space scarcely bigger than one’s fist ; yet is afterwards so dilatable as to fill a quilt five feet square. That found in the nests is /nost valued, and termed live down; it is infinitely more elas- tic than that plucked from the dead bird, which is little esteemed.

DOWN, a county in the north of Ireland, con- taining a bishopric of the same name, founded in the fifth century : it contains eight baronies, and

one lordship, is fifty miles in length, by forty in breadth, having a surface of 364,118 plan- tation acres. Down is thickly inhabited by resident gentry, and is extensively engaged in the manufacture of linen. The towns of this county are some of the most comfortable and elegant in Ireland. The surface is rather hilly ; the prevailing rock, slate ; the soil clay loam, and occasionally sand. A group of lofty granite mountains in the south occupies an area of about ninety square miles, between Newry and Dundrum Bay : in these mountains beryls, not unlike emeralds, are frequently found, and sold in London at high prices. The Sliebh Croob group, in the centre of the county, is also a gra- nitic region. Sand-stone is also met with, but limestone scarcely at all. If we except the above mentioned districts, this county may be said to be wholly under tillage or pasture. The chief towns are Bangor, Donaghadee, Hillsboro' (the residence of the marquis of Downshire), Ros- trevor, a picturesque bathing village, Bann- bridge, Downpatrick, the assizes town; and Newry, a handsome flourishing town, in the lordship of that name. There are several valu- able fishing stations on the sea-coast of this county, from Bangor to Carlingford. Dundrum Bay affords good trawling-ground : Strangford Lough has hitherto been avoided, from a sup- posed intricacy of navigation, and from being represented as a bar-harbour; but it has been shown by Mr. Nimmothat Strangford Lough is the safest harbour on the coast, at the same time that he has detected the existence of a rock in the entrance, called the Buller Pladdy, hitherto unknown. Carlingford harbour is obstructed by two bars, Cranfield and Stalken : this har- bour requires a new chart. A pier has lately been erected at Ardglass, at the public expense, and another at Killough, by the proprietor, lord Bangor.

Graiiite is found in two great districts of Down, the Mourne and Sliebh Croob groups. Slate is also abundant, and it is probable that, at their junction, valuable mines will yet be dis- covered. Lead mines have been opened near Newton-Ardes, Portaferry, and Castlewellan, but not yet worked to any extent. Copper is found at Rostrevor, Portaferry, and Clonligg. Slate, of superior quality, is raised at Ballywalter and Doomarah : limestone at Cultra and Moira ; and several quarries of blackish marble are suc- cessfully worked in this last-mentioned district. Pearls, of some value, are often found in the rivers Bann and Lagan. This county is rich in remains of antiquity ; here are stone altars and cromliachs ; the giant's ring ; raths and mounds of singular formation : round towers stood at Drumboe and Downpatrick, and many beautiful ecclesiastical buildings, though now almost ruined, bear testimony to the ancient learning and piety of this county ; the remains of thirty- six are still discoverable. Amongst the natural curiosities, the chief are the caves of Ardglass and Ballycam. Many military antiquities also exist here : several of the finest castles were erected, during the civil wars, by colonel Monck. DOWNHAM, a town of

Norfolk, ten miles south of Lynn, famous for its butter; there being nearly 1000 firkins bought here every Monday, and sent up the river Ouse to Cambridge ; from whence it is conveyed to London in the Cam- bridge waggons, and hence called Cambridge butter. The church is a neat building, situate on a rising ground ; the ascent to it on the north- west is by a flight of brick steps, and on the south by a gradual ascent, ornamented with a row of lime-trees. In the vicinity of this church were formerly several religious foun- dations, particularly a priory of Benedictine monks. Downham has a market on Saturday, and is seated on the Ouse; thirty-five miles north-east of Cambridge, and eighty-four north by east of London. Long. 0° 20′ E., lat. 54° 40′ N.

DOWNINGS, a post town of Pennsylvania, in Chester county, on the east side of Brandy- wine Creek ; thirty-three miles west by north of Philadelphia, and nearly seven north-west of Westchester.

DOWNPATRICK, the assizes town of the county of Down, in Ireland : it is ninety-two miles from Dublin, is a borough, post, and fair town. He're St. Patrick is said to have been interred, along with St. Bridget and St. Columb. There are several monastic ruins in the vicinity, also St. Patrick's well, still supposed to possess very singular healing virtues, and used as Holy-well, in Flintshire, both for partial and total immer- sion. This town has a handsome court-house; a capacious jail, lately erected; a diocesan school ; an establishment for the support of clergymen's widows ; Southwell's hospital ; a poor school ; and meeting-houses for Presbyterians and Metho- dists. The staple is linen.

DOWNS, a celebrated road for ships, extend- ing six miles along- the east coast of Kent, be- tween North and South Foreland ; where both the outward and homeward-bound ships fre- quently make some stay ; and squadrons of men

of war rendezvous in time of war. It affords excellent anchorage ; and is defended by the castles of Deal, Dover, and Sandwich, as well as by the Goodwin Sands.

DO WNTON, or DUNKTON, an ancient borough in Wiltshire, which sent two members to parlia- ment. It retained this privilege until 1832, when it was disfranchised by the first and second clauses in the Reform Bill. Its chief trade is in malt, paper, leather, laces, &c. It has a neat church, the

tower of which has been raised about thirty feet, at the expense of the earl of Radnor. Here is a good free-school, chiefly supported by the produce of the fairs, and also a well-regulated workhouse. It is seated on the Avon, six miles south-east of Salisbury, and eighty-four W. S. W. of London. Lon. 1° 36′ W., lat. 51°0'N.

DOXOL'OGY, n. s. A<5£a and Xo>c- A form of giving glory to God.

David breaks forth into these triumphant praises ana doxologiet. Blessed be the Lord God of Israel, •who has kept me this day from shedding blood, and from avenging myself with my own hand. South.

Little did Athanasius imagine, that ever it would have been received in the Christian church, to con- clude their books with a doxulogy to God and the blessed virgin. Stillingfleet.

DOXOLOGY, an hymn used in praise of the Almighty, distinguished by the title of greater and lesser. Both the doxologies have a place in the church of England, the former being repeated after every psalm, and the latter used in the com- munion service.

DOXOLOGY, THE GREATER, or the angelic hymn, was of great note in the ancient church. It began with these words, which the angels sung at our Saviour's birth, Glory be to God on high, &c. It was chiefly used in the communion ser- vice, and in private devotions.

DOXOLOGY, THE LESSER, was anciently only a single sentence, without response, running in these words, Glory be to the Father, and to the Son, and to the Holy Ghost, world without end, Amen. Part of the latter clause, As it was in the beginning, is now, and ever shall be, was inserted some time after the first composition. Some read this ancient hymn, Glory be to the Father, and to the Son, with the Holy Ghost: others, Glory be to the Father, in or by the Son, and by the Holy Ghost. This difference of ex- pression occasioned no disputes in the church, till the followers of Arius began to make use of the latter as a distinguishing character of their party, when it was entirely laid aside by the Catholics, and the use of it was sufficient to bring any one under suspicion of heterodoxy. The doxology was used at the close of every solemn office. The western church repeated it at the end of every psalm. Many of their prayers were also concluded with it, particularly the solemn thanksgiving or consecration prayer at the eucharist. It was also the ordinary conclusion of their sermons.

DOX'Y, n. s. A whore ; a loose wench. A diminutive of DUCK, which see.

When daffodils begin to pure, With heigh ! the doxy o'er the dale.

Shaktpeare.

DOYEN (Francois), a celebrated painter, born at Paris in 1726, was, while a boy, continually disfiguring his school-books with sketches. Some of these being seen by an amateur, he persuaded the parents of the lad to place him under C. Vatiloo, and at twenty years of age he contended for the prize of the academy and gained it. By virtue of this he went to Rome, where he attached himself principally to the works of Annibal Caracci, but became equally enamoured, after- wards, of the style of Pietro da Cortona. On his return to Paris he employed himself two years on a large picture of the death of Virginia. His principal object was to gain the approbation of Vanloo. But that artist had been prejudiced against him, and it was with difficulty he could be prevailed upon to look at it. At last, after regarding it silently for some time, he embraced Doyen affectionately, and applauded the per- formance every where. From this time Doyen rose rapidly into fame. One of his best paintings was a representation of winter, of which there is > an engraving. He visited Petersburgh at the invitation of the Empress Catharine, and was chosen professor of the academy of painting there, where he died in 1806.

DOZE, v. n. &u.a.) Sax. draes ; Dutch

DOZ'INESS, n. s. >daes; Teut. dosen ;

DO'ZY, adj. j Swed. dasa. See DAZE.

To slumber; sleep lightly; become confused or drowzy. The active verb signifying to stupify, make dull, seems derived from the neuter verb : doziness is sleepiness; and figuratively stu- pidly ; dozy, drowsy.

He was now much decayed in his parts, and with immoderate drinking doted in his understanding.

Clarendon.

There was no sleeping under his roof ; if he hap- pened to dote a little, the jolly cobler waked him.

L' Estrange.

It has happened to young men of the greatest wit to waste their spirits with anxiety and pain, so far as to doze upon their work with too much eagerness of doing well. Dry den,

The yawning youth, scarce half awake, essays II is lazy limbs and dosy head to raise. Id.

A man, by a violent fit of the gout in his limbs, finds a doziness in his head, or a want of appetite.

Loehe.

How to the banks, where bards departed doze, They led him soft. Pope's Dttnciad.

DOZ'EN, n. s. Fr. dousaine ; Teut. dutzend; Ital. Span, and Port, dozsena ; probably a cor- ruption of Lat. duodecim. Twelve, taken collec- tively. Dr. Johnson says, it is seldom used but on light occasions. But see the definition of Locke : its convenience in fact has occasioned i to be in constant use in modern times, both on serious as well as light occasions.

We cannot lodge and board a doxen or fourteen gentlewomen, but we keep a bawdy house straight.

Shakspeare.

That the Indian figs bear such huge leaves, or de- licate fruit, I could never find ; yet I have travelled a doxen miles together under them. Raleigh.

We have more words than notions, and half a doxen words for the same thing. Sometimes we put a new signification to an old word, as when we call a piece a gun. Seldcn.

By putting twelve units together, we have ttie com- plex idea of a doxen. Locke.

The number of dissenters was something under a dozen with them. Swift.

DRAAIYA, or DREHYEII, a well-built town of Arabia, the capital of the Wahabees sect. It is represented as 1 60 leagues south-east of Jeru- salem. It is situated at the base of lofty moun- tains, in a fertile country.

DRAB, n. s. Sax. ˆonabbe, lees. A whore ; a strumpet.

If your worship will take order for the drabs and the knaves, you need not fear the bawds. Shakspeare.

Cursed be the wretch so venal and so vain, Paltry and proud as drabs in

Drury-lane. Pope.

DRABA, in botany, a genus of the siliculosa order, tetradynamia class of plants ; natural order thirty-ninth, siliquosae. The silicula is entire, and oval oblong; with the valves a little plain, parallel to the partition : there is no style. There are sixteen species; of which the one chiefly worthy of notice is the D. verna, or early whitlow grass. It has naked stalks with leaves a little serrated. The blossoms are white, and at night the flowers hang down. It grows on old walls and dry banks. It is one of the earliest flowering plants we have, and is good to eat as a salad. Goats, sheep, and horses eat it : cows are not fond of it ; swine refuse it.

DRABRICIUS (Nicholas), a celebrated enthu- siast, born in Moravia in 1587. IJe was admitted minister in 1616; but, on account of the severe edicts against the Protestants, he retired to Hun- gary in 1629. He then commenced woollen- draper; and, when about fifty years of age, assumed the prophetical office, and had his first vision on the 23d February, 1630, by which he was pro- mised in general great armies from the north and east, which should crush the house of Austria. In 1654 Drabricius was restored to his ministry, and had more visions than ever, which he com- municated to his coadjutor Comenius, that he might publish them to all nations. Comenius, fearing that if he did not print them he should disobey God, and if he did he would be exposed to the ridicule of men, printed them, but would not distribute the copies, arid entitled the book Lux in Tenebris. Some say Drabricius was burnt as a false prophet; others, that he died in Turkey.

DRABLER, in the sea language, a small sail in a ship, which is the same to a bonnet, that a bonnet is to a course, and is only used when the course and bonnet are too shoal to clothe the mast. See BONNET and COURSE.

DRABLING, in angling, is a method of catch- ing barbel. Take a large line of six yards ; which, before fastening it to the rod, must be put through a piece of lead, that, if the fish bite, it may slip to and fro, and that the water may something move it on the ground ; bait with a lob-worm well secured, and so by its motion the barbel will be enticed into the danger without suspicion. The best places are in running water, near piles, or under wooden bridges, supported with oaks floated and slimy.

DRABS, in the salt works, a kind of wooden boxes for holding the salt when taken out of the

boiling pan , the bottoms of which are made shelving or inclining forwards, that the briny moisture of the salt may drain off.

DRAG, an imaginary being, formerly much dreaded by the country people in many parts of France. The clracs were supposed to be mali- cious, or, at least, tricksome demons ; said to lay gold cups and rings over the surface of pits and rivers, as baits to draw women and children in. DRAC/ENA, in botany, a genus of the mono- gynia order, and hexandria class of plants : COR. sexpartite and erect ; the filaments a little thicker about the middle ; the berry trilocular and monospermous. Species, one only, a native of the West Indies.

*DRACHM, n. s. \ Fr. dragme; Span, and DRAM, n.s. &. v. n. $ Port, drama ; Lat. dracli ma ; Arab, drahm ; Gr. fy > ax/«j ; Heb. flOVl, from *pn, a way, PUQ, to spend ; i. e. as much as would be expended by a traveller. — Or, says Parkhurst, because anciently equal to six o/3oXot, or bars of iron, that a man could grasp in his hand, thus deriving it from the verb Spaaau, Stdpayncu, to clutch. A coin; a weight; the eighth part of an ounce ; a small definite quantity ; a dose. The verb is sometimes used, vulgarly, for to drink drams.*

True be it said, whatever man it said, That love with gall and honey doth abound ; But if the one be with the other weighed, For every dram of honey therein found, A pound of gall doth over it redound. Spenser. I could do this, and that with no rash potion, But with a lingering dram, that should not work Maliciously like poison. Shakspeare. Winter's Tale.

See here these movers, that do prize their honours At a cracked drachm. Id. Macbeth.

The trial being made betwixt lead and lead, weigh ing severally seven drams in the air, the balance in the water weigheth only four drama and forty-one grains, and abate th of the weight in the air two drama and nineteen grains : the balance kept the same depth in the water. Bacon.

No hallowed oils, no gums I need,

No new-born drams of purging fire, One rosy drop from David's seed

Was worlds of seas to quench thine ire : 0, precious ransom ! which, once paid, That consummatum est was said. Wotton.

He that has not religion to govern his morality, is not a dram better than my mastiff-dog. Selden.

If there had been but any drachm, of good nature ia these Hebrews, they had relented.

Bp. Hall. Contemplations.

No dram of judgment with thy force is joined, Thy body is of profit, and my mind.

Dryden's Fa'iles.

Every dram of brandy, every pot of ale that you drink, raiseth your character. Swift.

A second see, by meeker manners known, And modest as the maid that sips alone ; From the strong fate of drams if thou get free, Another Durfy, Ward ! shall sing in thee. Pope,

DRACO, a celebrated lawgiver of Athens. When he exercised the office of archon, he made a code of laws for his fellow-citizens, wherein all crimes were made capital ; and even idleness was punished with death as well as murder. These laws were at first enforced, but they vere after

wards neglected on account of their extreme severity ; and Solon totally abolished them, except that one which punished a murderer with death. The respect of Draco's admirers proved fatal to him. When at jEgina, he appeared on the theatre, he was received with repeated ap- plause ; and the people, according to the custom of the Athenians, showed their respect by throw- ing their garments upon him. This was done in such profusion, that Draco was soon hid under them, and smothered. He lived about A. A. C.

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DRACO. See ASTRONOMY.

DRACO, the dragon, in zoo ogy, a genus belonging to the order of amphibia reptilia; the characters of which are : it has four legs, a cylin- drical tail, and two membranaceous wings, radiated like the fins of a fish, by which he is enabled to fly, but not to any great distance at a time. There are two species, both harmless creatures, feeding on flios, ants, and small in- sects, viz. 1. D. praepos, with the wings fixed to the fore-legs. It is a native of America. 2. D. volans, the flying dragon, with the wings entirely distinct from the fore-legs. It is found in America and the East Indies.

DRACO VOLANS, in meteorology, a fiery exha- lation, frequent in marshy and cold countries. It is most common in summer ; and though prin- cipally

seen playing near the banks of rivers, or in boggy places, yet sometimes mounts up to a considerable height in the air; its appearance being that of an oblong, sometimes roundish, fiery body, with a long tail. It is entirely harm- less, frequently sticking on the hands and clothes of people without injuring them.

DRACOCEPHALUM, dragon's head, a genus of the gymnospermia order, and didyna- mia class of plants : COR. throat inflated, upper lip concave. There are thirteen species, most of them herbaceous, annual, or perennial, plants, from eighteen inches to three feet high, garnished mostly with entire leaves, and whorled spikes of small monopetalous and ringent flowers of a blue, white, or purple color. They are all easily pro- pagated by seeds, which may be sown either in spring or autumn. They require no culture but to keep them clear from weeds.

DRACONARIUS, Gr. SpctKovapiot, and fyaicovrao^opof, in antiquity, dragon-bearer. The Persians, Parthians, Scythians, &c., bore dragons on their standards ; whence the standards themselves were called dracones. See next arti- cle. The Romans borrowed the custom from the Parthians; or, as Casaubon has it, from the Dacae ; or, as Codin, from the Assyrians. The Roman emperors carried it to Constantinople.

DRACONES, among the Romans, were figures of dragons, painted in red, on their flags, as appears from Ammianus Marcellinus : but among the Persians and Parthians they were like the Roman eagles, figures in full relievo ; so that the Romans were frequently deceived, and took them for real dragon;-.

DRACONTIUM, in botany, dragons; a genus of the polyandria order, and gynandria class of plants ; natural order second, piperitae. The spatha is cymbiform, or shaped like a boat; the spadix covered all over: CAL. none; petals

five; berries polyspermous. There are five species, all natives of the Indies. D. pertusum, with leaves having holes, and a climbing stalk. It is a native of most of the West-India islands, and has trailing stalks which put out roots at every joint, that fasten to the trunks of trees, walls, or any support which is near them, and thereby rise to twenty-five or thirty feet. This plant is easily propagated by cuttings ; which if planted in pots filled with poor sandy earth, and plunged into a hot-bed, will soon put out roots ; but the plants are so tender, that they must be preserved in a store

DRACUNCULT, in medicine, small long worms which breed in the muscular parts of the arms and legs, called Guinea worms. This dis- temper is very common in Guinea, and particu- larly among the natives : Kempfer

found it so also at Ormuz, upon the Persian Gulph, and likewise in Tartary ; but this distemper is not so- frequent any where as on the Gold Coast, at Anamaboe, and Cormantin. The worm is white, round, and uniform, very much resembling white round tape, or bobbin. It lodges between the interstices and membranes of the muscles, where it insinuates itself, sometimes exceeding five ells in length. It occasions no great pain at the beginning; but at such times as it is ready to make its exit, the part adjoining to the extremity of the worm, where it attempts its exclusion, begins to swell, throb, and be inflamed ; this generally happens about the ancle, leg, or thigh, and seldom higher. The countries where this distemper is in any degree prevalent, are very hot and sultry, liable to great droughts, and the inhabitants make use of stagnating and corrupted water, in which it is very probable that the ova of these animalcula may be contained ; for such white people as drink this water, are troubled with the disease as well as the negroes. Sur- geons seldom attempt to extract this worm by making an incision; but as soon as they perceive the tumor rise to a competent bulk, they endea- vour to bring it to a suppuration, with all con- venient expedition; and then the head of the worm discovers itself, which they secure, by tying it to a bit of stick or cotton, that it may not draw itself up again : thus they continue to roll it round the stick, sometimes one inch, sometimes two or more, each day, taking care not to break the worm, for it would be very dif- ficult to recover the end of it again ; and an abscess would be formed, not only at the sup- purated part, but likewise through the whole winding of the muscles, where the dead putrefy- ing worm remains, which generally occasions very obstinate ulcers. During the extraction of the worm, the patient should be plied with bitter aloetic and other anthelminlic medicines, in order to dislodge the worm the sooner from his tenement. When the worm is totally extracted, the remaining ulcer may be treated in the same manner as other common ulcers ; nor does any farther inconvenience remain in the parts ot which it had possession. To prevent their form- ing again, wash the parts with wine, vinegar, alum, nitre, or common salt, or with a strong lixivium of oak-ashes, and afterwards ar,oint them with an ointment of the common kind used

for scorbutic eruptions, with a small mixture of quicksilver.

DRACUNCULUS, in botany. See ARUM.

DRACUT, a township of the United States., in the north part of Middlesex

county, on the bank of the Merrtmack, opposite Patucket Falls. It lies thirty miles north by west of Boston, and twenty-eight south-west of Exeter, in New Hampshire.

DRAD, adj. for dread, or the part, passive of To DREAD, which see. Terrible; formidable.

The utmost sand-breach they shortly fetch, Whilst the drad danger does behind remain.

Faerie Queene.

DRAFF, n. s. \ • Sax. drof ; Dutch, draf '; DRAF'FY, adj. J from Saxon, drabbe. Filth; offal. See DRAB.

Not a jest had they to keep their auditors from sleep but of swill and drcff. Yes ; now and then the servant put his hand into the dish before his master, and almost choaked himself, eating slovenly and ra- venously to cause sport. Surrey.

We do not act, that often jest and laugh : 'Tis old, but true, still swine cat all the draugh.

Shakspeare.

You would think I had a hundred and fifty tattered prodigals lately come from swinekeeping, from eating draff and husks. Shakspeare, Henry IV.

'Twere simple fury, still thyself to waste

On such as have no taste ; To offer them a surfeit of pure bread

Whose appetite is dead ! No, give them grains their fill ; Husks, draff, to drink and swill. Ben Jonson. Here rather let me drudge, and earn my bread, Till vermin, or the draff of servile food, Consume me. Milton's Agonistes.

Refuse; sweepings. Perhaps improper. Younger brothers but the draff of nature. Dryden.

DRAG, v. a., v. n. & n. s. > Goth, drnga ;

DRAG'-NET, n. s. 5 Belgic, trecken ;

Sax. dragan ; Lat. traho ; Gr. dparmv. To draw ; to pull onwards; to draw that which is weighty or burdensome ; hence to pull about with vio- lence or ignominy : as a neuter verb, to hang down so as to sweep or trail on the

ground. A drag-net is a net which is drawn along the bot- tom of the water.

They shall surprise

The serpent, prince of air, and drag in chains Through all his realm, and there confounded leave.

Milton.

Who, that had seen and heard Saul breathing out threatenings, and executing his bloody cruelties upon the church of God ; dragging poor Christians to their judgments and executions ; would not have given him up for a man branded for hell ? Bp. Hall.

The constable was no sooner espied but he was re- proached with disdainful words, beaten and dragged in so barbarous a manner, that he hardly escaped with his life. Clarendon.

You may in the morning find it near to some fixed place, and then take it up with a drag-hook, or other- wise. Walton.

He triumphs in St. Austin's opinion ; and is not only content to drag me at his chariot-wheels, but he makes a shew of me. StillingJJeet.

Some fishermen, that had been out with a drag-net, and caught nothing, had a draught towards the even- ing, which put them in hope of a sturgeon at last.

L' Estrange.

Dragnets were made to fish within the deep, And castingnets did rivers' bottoms sweep.

May's Virgil.

'Tis long since I, for my celestial wife, Loathed by the gods, have dragged a lingering life.

Dryden, From hence are heard the groans of ghosts, tho

pains

Of sounding lashes, and of dragging chains. Id.

The creatures are but instruments in God's hand : Jhe returning our acknowledgments to them is just the same absurdity with theirs who burnt incense to the drag, and sacrificed to the net. Rogers.

While I have any ability to hold a commerce with you, I will never be silent ; and this chancing to be a day that I can hold a pen, I will drag it as long as I am able. Swift.

Can I, who loved so well, To part with all my bliss to save my lover, Oh ! can I drag a wretched life without him ?

Smith.

The drag is made somewhat like a low car : it is used for the carriage of timber, and then is drawn by the handle by two or more men.

Moxon's Mech. Excr.

A door is said to drag, when, by its ill hanging on its hinges, the bottom edge of the door rides in its sweep upon the floor. Id.

Whatsoever old Time, with his huge dragnet, has conveyed down to us along the stream of ages, whe- ther it be shells or shellfish, jewels or pebbles, sticks or straws, sea-weeds or mud, these are the ancients, these are the fathers, Watts.

Warburton attacks the revisal of Shakspeare' text with a gloomy malignity, as if he were dragging to justice an assassin or incendiary. Johnson.*

We can only lament their fate, and still more that of a sailor, who is often dragged by force from his honest occupation, and compelled to imbrue his hands in perhaps innocent blood. Franklin.

Thou wast the veriest slave in days of yore, That ever dragged a chain, or tugged an oar.

Cowper.

Here, sheltering from the sons of murder, The hares drug their tired limbs no further. Reaitie.

DRAG, in sea language, is a machine consisting of'a sharp, square, iron ring, encircled with a net, and commonly used to take the wheel off from the platform or bottom of the decks. The word is also used for whatever hangs over the ship in the sea, as shirts, coats, or the like ; boats, when towed, or whatever else may retard the ship's way when she sails.

DRAG'GLE, v. a. & v. n. From drag. To make or become dirty, by dragging on the ground

His draggling tail hung in the dirt, Which on his rider he would flirt. Hudibras.

He wore the same gown five years, without drag gling or tearing. Swift.

You'll see a draggled damsel, here and there, From Billingsgate her fishy tramck bear.

Gay't Trivia.

DRAGOMAN, or DROOMAN, a term of gene- ral use through the east for an interpreter, whose office is to facilitate commerce between the ori- entals and occidentals. These are kept by the ambassadors of Christian nations residing at the Porte for this purpose. The word is formed from the Arabic targemen or targiman, of the verb taragem, « he has interpreted.' From dra-

goman the Italians formed dragoraano, and, with a nearer relation to its Arabic etymology, turci- manno ; whence the French and our truchemau, as well as dragoman and drogman.

DRAG'ON, n. s. DRAG'ONET, n. s.

*DRAG'ON-FLY,n. *.*

DRAG'ONISH, adj. DRAG'ON-LIKE, adj.

French, Ital., Span. and Port, dragon ; • Saxon, dracan ; Lat. draco ; Gr. 5pajcw/i, from dtpicuv, seeing,

because Uie dragon is said to be possessed of a Keen and watchful eye. — Minsheu. A real or supposed flying serpent; hence a fierce animal or man, and a fierce kind of fty : dragonet is a diminutive of dragon.

He caughte the dragmm, the elde serpent, that is the deuel and sathanas, and he boond hym bi a thou- synde ghecris. Wiclif. Apoc. xx.

And ever as he rode, his hart did ˆarne To prove his puissance in battell brave Upon his foe, and his new force to learne ; / Upon his foe, a dragon horrible and stearne.

Spenter, Faerie Queene. Or in his womb might lurk some hidden nest Of

many dragonett, his fruitful seed. Id.

I go alone,

Like to a lonely dragon, that his fen Makes feared and talked of more than seen.

Shakspeare.

He fights drayonlike, and does achieve As soon as draw his sword. Id. Coriolanus. The body of the cantharides is bright-coloured ; and it may be, that the delicate coloured dragon-ftiei may have likewise some corrosive quality.

Bacon's Natural Hittory.

ake dmyonsblood , beat it in a mortar, and put it in a cloth with aqua vitae, and strain them together.

Peacham.

And you, ye dragon '. of the scaly race, Whom glittering gold and shining armours grace ; In other nations harmless are you found, Their guardian genii and protectors owned. Rowe.*

On spiery volumes there a dragon rides ; Here, from our strict embrace, a stream he glides.

Pope.

Dragontblood is a resin, so named as to seem to have been imagined an animal production. Hill.

So, borne on brazen talons, watched of old The sleepless dragon o'er his fruits of gold. Darwin.

DRAGON, in botany. See ARUM.

DRAGON, in zoology. See DRACO.

DRAGON, WILD. See ARTEMISIA.

DRAGONET, or DRAGON-FISH, in ichthyology. See CALLIONYMUS.

DRAGON FLY. v See LIBELLULA.

DRAGON GUM, or GCM TRAGACAMH. See ASTRAGALUS.

DRAGONS-BLOOD, a gummi-resinous substance brought from the East Indies, either in oval drops wrapped up in flag leaves, or in large masses composed of smaller tears. It is said to be principally obtained from the dracaena draco, the pterocarpus draco, and several other vegeta- bles. The fine dragon's blood of either sort breaks smooth, free from any visible impurities, of a dark red color, which changes, upon being powdered, into an elegant bright crimson. Several artificial compositions, colored with the true dragon's blood, or Brasil wood, are sometimes sold for this commodity. Some of these dissolve like giims in water; others crackle in the fire without proving inflammable ; whilst the genuine

sanguis dracoms readily melts and catches flame, and is not acted on by watery liquors. It totally dissolves iu pure spirit, and tinges a large quan- tity of the menstruum of a deep red color. It is like wise soluble in expressed oils, and gives them a red hue, but less beautiful than that communi- cated by anchusa. This drug, in substance, has no sensible smell or taste; when dissolved, it dis- covers some degree of warmth and pungency. A solution of dragon's blood in spirit of wine is used for staining marble, to which it gives a red tinge, which penetrates more or less deeply according to the heat of the marble during the time of application. But as it spreads at the same time that it sinks deep, for fine designs the marble should be cold.

DRAGON'S HEAD. See DRACOCEPHALUM.

DRAGON'S HEAD AND TAIL, caput and cauda draconis, in astronomy, are the nodes of the planets-, or the two points in which the ecliptic is intersected by the orbits of the planets, and particularly that of the moon ; making with it angles of 5° 18'. One of these points looks northward, the moon beginning then to have north latitude, and the other southward, where she commences south. Thus her deviation from the ecliptic seems, according to the fancy of some, to make a figure like that of a dragon, whose belly is where she has the greatest latitude ; the intersection representing the head and tail, from which resemblance the denomination arises. But Jiese points abide not always in one place, but have a motion of their own in the zodiac, retro- grade-wise 3′ 11 per day; completing their cir- cle in eighteen years 225 days ; so that the moon can be but twice in the ecliptic during her monthly period, but at all other times she will have a latitude or declination from the ecliptic. About these points of intersection all eclipses happen. They are usually denoted by these characters SI dragon's head, and 15″ dragon's tail.*

DRAGON TREE. See DRACONTIUM.

DRAGON WORT. See ARTEMISIA.

DRAGOON', v. a. & n.s. Fr. dragon. Sup- posed to have been derived from dragon, ' be- cause mounted on horseback with lighted match, he seemethe like a fiery dragon' (Preface to Dr. Meyrick's Ancient Armour) ; or from the Latin draconarii, horse-soldiers who bore dragons for ensigns. See the article. The verb is derived from the noun.

Two regiments of dragoon suffered much in the late action. Taller.*

In politicks T hear you're staunch, Directly bent against the French • Deny to have your free-born foe Dragooned inio a wooden shoe. Prior.

Will the famished wretch who has braved your bayonets be appalled by your gibbets ? When death io a relief, and the only relief it appears that you will afford him, will he be dragooned into tranquillity?

Bynm,

DRAGOONS are divided into brigades as the cavalry : and each regiment into troops ; each troop having a captain, lieutenant, cornet, quar- ter-master, two Serjeants, three corporals, and two drums. Some regiments have hautboys. They are very useful on any expedition that

requires despatch ; for they can keep pace with the cavalry, and do the duty of infantry : they encamp, generally, on the wings of the army, or at the passes leading to the camp ; and some- times thr "»re brought to cover the general's quar- ters ; they march in front and rear of the army. The first regiment of dragoons raised in England was in 1681, and called the regiment of dragoons of North Britain. In battles or attacks they generally fight sword in hand after the first fire. Their arms are, a sword, firelock, and bajonet, to which pistols are now generally added.

DRAGOONING, a term that has been used to express the horrible persecution and oppres- XIV. after the revocation of the edict ot Nantes. By these means the Protestants in Montauban alone were, in four or five days, stripped of above a million of money. Their dining-rooms were turned into stables ; and the owners of the houses where the military were quartered were treated with every possible in- dignity and cruelty, without intermission. At Negreplisse, a town near Montauban, they hung up Isaac Favin, a Protestant citizen of that place, by his arm-pits, and tormented him a whole night, by pinching and tearing off his flesh with pincers. They made a great fire round a boy of about twelve years old, who, with hands and eyes lifted up to heaven, cried out, ' My God, help me ;' And when

they found the youth resolved to die rather than renounce his religion, they snatched him from the fire just as he was on the point of being burnt. In several places the soldiers applied red-hot irons to the hands and feet of men and breasts of women. At Nantes they hung up several naked woman by their feet, and others by their arm-pits, and thus exposed them to public view. They bound to posts mothers that gave suck, and let their sucking infants lie languishing in their sight for several days and nights, crying, mourn- ing-, and gasping for life. Some they bound before a great fire, and, being half roasted, let them go. Amidst a thousand hideous cries and blasphemies, they hung up men and women on hooks in chimneys by the hair, and feet, and suffocated them with wisps of wet hay. Some they tied under the arms with ropes, and plunged them again and again into wells : but we cannot proceed in these shocking details. If any to escape these barbarities endeavoured to save themselves by flight, they pursued them into the fields and woods, where they were hunted down like wild beasts, and prohibited at the same time from departing the kingdom, upon pain of confiscation of their effects.

DUAGUIGNAN, a town of France, the capital of the department of the Var, Provence, is situated in a fertile plain, on the river Pis. The bishops of Frejus had formerly a palace here. The town is the seat of the courts of pro- vincial justice, and has a public library There is little trade, and the manufactures are coarse cloth, soap, oil, and sugar of lead, the two last being made in considerable quantities. The wine raised on the sides of the neighbouring hills is remarkable for its strength. The general trade is bv no means considerable. Population VOL. VII.

about 5000. Thirty-five miles north-east of Toulon.

DRAIN, v. a. & n. s. } Fr. trainer; Tent. DRAIN'AGE. $ trancr, part, of verb

drygan, Sax. to expel ; and therefore to dry, according to Mr. Tooke; or from drehnigean, to strain, says Mr. Todd. To draw off; to empty of a fluid gradually; to make dry: as a sub- stantive, it means the channel, or course of the water or fluid taken off. Drainage is the act or system of draining.

The fountains drain the water from the ground ad – iacent, and leave but sufficient moisture to breed moss.

Bacon.

In times of dearth it drained much coin of the kingdom, to furnish us with corn from foreign parts.

Id. to Villiert.

Sinking waters, the firm land to drain, Filled the capacious deep, and formed the main

Roscommon. The royal babes a tawny wolf shall chain.

Dry den.

While cruel Nero only drains The mortal Spaniard's ebbing veins, By study worn, and slack with age, How dull, how thoughtless is his rage ! Prior. Had the world lasted from all eternity, these comets must have been drained of all their fluids. Cheyne.

When wine is to he bottled wash your bottles, but do not drain them. Swift'i Direction! to the Butler.

Whilst a foreign war devoured our strength, and drained our treasures, luxury and expences increased at home. Atterbury.

That boy was blest, Whose infant lips have drained a mother's breast.

Gay.

By oppression's woes and pains ! By your sons in servile chains ! We will drain our dearest veins,

But they shall be — shall be free ! Burns. Strike up the dance, the cava bowl fill high, Drain every drop ! — to-morrow we may die.

Byron.

In cases which arise from springs, as well as those which are produced by the stagnation of surface water, it will frequently be necessary, in order to effect their drainage, to have one or more deep open cuts, brought up in a proper direction from the lowest point at which the water can be discharged. Dr. A. Reet.

DRAINS, in the fen countries, are certain large cuts or ditches of twenty or thirty, nay sometimes forty feet wide, carried through the marshy ground to some river or other place, capable of discharging the water out of the fen lands. To clear wet and boggy lands of their superfluous moisture, is an art of the highest importance, not only to the agriculture, but to the health of a country ; yet it is only of late years that the principles of this art became well understood, and opened the way for many im- provements. Dr. James Anderson of Edin- burgh, in his Essays on Agriculture, seems to have been the first who treated the subject sci- entifically ; but before quoting his ingenious introductory observations, it may be remarked, that land

becomes charged with moisture from two causes : 1 . From water collected in the higher grounds, and filtrating among the different beds of gravel and other porous materials, forming springs below, and flowing over the surface, or stagnating underneath it. 2. From 2 G

rain or water lodging and becoming stagnant on the surface, from the clayey or impervious nature of the soil or superior stratum. The first of these is the cause of bogs, swamps, and morasses, and is the most difficult to remedy. Dr. Ander- son says, " springs are formed in the bowels of the earth, by water percolating through the upper strata where that is of a porous texture, which continues to descend downwards till it meets with a stratum of clay that intercepts it in its course; where, being collected in considerable quantities, it is forced to seek a passage through the porous strata of sand, gravel, or rock, that may be above the clay, following the course of these strata till they approach the surface of the earth, or are interrupted by any obstacle which occasions the water to rise upwards, forming springs, bogs, and the other phenomena of this nature ; which, being variously diversified in dif- ferent circumstances, produce that variety of appearance in this respect that we often meet with. This being the case, we may naturally conclude that an abundant spring need never be expected in any country that is covered to a great depth with sand, without any stratum of clay to force it upwards, as is the case in the sandy deserts of Arabia, and the immeasurable plains of Libya : neither are we to expect abundant springs in any soil that consists of a uniform bed of 'clay from the surface to a great depth ; for it must always be in some porous stratum tliat the water flows in abundance; and it can be made to flow horizontally in that, only when it is supported by a stratum of clay, or other substance that is equally impermeable by water. Hence the rationale of that rule so uni- versally established in digging for wells- that if you begin with sand, gravel, &c. you need seldom hope to find water till you come to clay ; and, if you begin with clay, you can hope for none in abundance till you reach to sand, gravel, or rock. It is necessary that the farmer should attend to this process of nature with care, as his success in draining bogs, and every species of damp and spouting groud, will in a great measure depend upon his thorough knowledge of this, — his actite- ness in perceiving in every case the variations that may be occasioned by particular circum- stances— and his skill in varying the plan of his operations according to these. As the variety of cases that may occur in this respect is very great, it would he a very tedious task to enumerate the whole, and describe the particular method of treating each ; I shall therefore content myself with enumerating a few particular cases, to show in what manner the principles above

established may be applied to practice.'

Let fig. 1. Plate Docs and DRAINS represent a perpendicular section of a part of the earth, in which A B is the surface of the ground, beneath which are several strata of porous substances, which allow the water to sink through them till it reaches the line C D, that is supposed to re- present the upper surface of a solid bed of clay; above which lies a stratum of rock, sand, or gravel. In this case, it is plain, that when the -water reaches the bed of clay, and can sink no farther, it must be there accumulated into a body ; and seeking for itself a passage, it flows

along the surface of the clay, among the sand or gravel, from D towards C ; till at last it issues forth, at the opening A, a spring of pure water. If the quantity of water that is accumulated be- tween D and C is not very considerable, and the stratum of clay approaches near the surface ; in that case, the whole of it will issue by the opening at A, and the ground will remain dry both above and below it. But if the. quantity of water is so great, as to raise it to a considerable height in the bed of sand or gravel, and if that stratum of sand is not discontinued before it reaches the surface of the ground, the water, in this case, would not only issue at A, but would likewise ooze out in small streams through every part of the ground between A and a ; forming a barren patch of wet, sandy, or gravelly ground upon the side of a declivity, which every attentive observer must have frequently met with. To drain a piece of ground in this situation is perhaps the most unprofitable task that a farmer can engage in ; not only because it is difficult to execute, but also because the soil that is gained is but of very little value. However, it is lucky, that patches of this kind are seldom of great breadth, although they sometimes run along the side of the declivity in a horizontal direction for a great length. The only effectual method of draining this kind of ground, is to open a ditch as high up as the highest of the springs at a, which should be of such a depth as not only to penetrate through the whole bed of sand or gravel, but also to sink so far into the bed of clay below as to make a canal therein sufficiently large to contain and carry off the whole of the water. Such a ditch is represented by the dotted lines aez: but as the expense of making a ditch of such a depth as this would suppose, and of keeping it after- vvards in repair, is very great, it is but in very few cases that this mode of draining would be ad- viseable ; and never, unless where the declivity happens to be so small, as that a great surface is lost for little depth, as would have been the case here if the surface had extended in the direction of the dotted line ad. But supposing that the stratum of clay, after approaching toward the surface at A, continued to keep at a little depth below ground ; and that the soil which lay above it was of a sandy or spongy nature, so as to allow the water to penetrate it easily ; even sup- posing the quantity of water that flowed from D to C was but very inconsiderable, instead o rising out at the spring A, it

would flow forward along the surface of the clay among the porous earth that forms the soil, so as to keep it constantly drenched with water, and of consequence render it of very little value. Wetness arising from this cause, is usually of much greater extent than the former : and, as it admits of an easy cure, it ought not to be one moment delayed ; as a ditch of a very moderate depth opened at A, and carried through a part of the stratum of clay (as repre- sented by the dotted lines A kf), would intercept and carry off the wholo of the water, and render the field as dry as could be desired. It is, there- fore, of very great consequence to the farmer, accurately to distinguish between these two cases, so nearly allied to each other in appearance ; and, as this can be easiest done by boring, every one

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who has much ground of this kind ought to pro- vide himself with a set of boring irons, which he will likewise find use for on other occasions. I might here enumerate a great variety of cases which might be reduced to the same head with the foregoing : but as any attentive reader may, after what has been said,be able easily to distinguish these, I shall only in general observe, that every soil of a soft and porous texture, that lies upon a bed of hard clay, whatever its situation in other respects may be, will in some measure be subject to this disease. And, if it is upon a declivity of any considerable length, the undermost parts of the field will be much damaged by it, unless ditches are thrown up across the declivity, at proper dis-. tances from one another, to intercept the water in its descent. It may not likewise be improper here to observe, that in cases of this nature, unless where the soil is of a very great depth, the ma- lady will always be increased, by raising the ridges to a considerable height ; as will appear evident by examining fig. 2 ; in which the line AB represents the surface of a field of this nature, and C D the surface of the bed of clay. Now, if this field were raised into high ridges, as at F F F, so that the furrows E E E descended below the surface of the clay, it is plain, that all the water that should sink through the middle of the ridge, would run along the surface of the clay till it came to the sides of the ridge LLLLLL, which would thus be kept continually soaked with water. Whereas, if the ground had been kept level, as in the part of the field from G to II, with open furrows H, at moderate distances from each other, the water would immediately sink to the clay, and be carried off by the fur- rows, so as to damage the soil far less than when the ridges are high. If the soil is so thin as that the plough can always touch the clay, the ridges ought to be made narrow and quite flat, as from G to H : but if there is a little greater depth of soil, then it ought to be raised into

ridges of a moderate height, as from H to B, so as to allow the bottom of the furrow to reach the clay : but neither is this necessary where the soil is of any considerable depth. I have seen some industri- ous farmers, who, having ground in this situation, have been at the very great expense of making a covered drain in each furrow. But, had they rightly understood the nature of the disease, they never would have thought of applying such a remedy ; as must appear evident at first sight to those who examine the figure. The success was what might be expected from such a foolish un- dertaking. These observations, it is hoped, will be sufficient as to the manner of treating wet, sandy, or porous soils. I now proceed to take notice of such as are of a stiff, clayey nature, which are often very different in appearance, and require a different treatment from these. ' Suppose that (in fig. 3) the stratum of sand or gravel D C should be discontinued, as at E, and that the stratum above it should be of a coherent clayey nature. In this case, the water that flowed towards E, being there pent in on every side, and being accumu- lated there in great quantities, it must at length force a passage for itself in some way; and pressing strongly upon the upper surface, if any

one part is weaker than the rest, it there wont • burst forth and form a spring (as suppose at A). But if the texture of every part of this stratum were equally strong, the water would squeeze through many small crannies, and would ooze out in numberless places, as between A and F, so as to occasion that kind of wetness that is known by the name of a spouting clayey soil. The cure, in this case, is much more easily effected than in any of the former ; for if a ditch of a considerable size is opened, as at A, towards the lowermost side of the spouting ground, so deep as to penetrate through the upper stratum of clay, and reach to the gravel, the water will rise up through it at first with very great vio- lence, which will gradually decrease as the pres- sure from the water behind is diminished ; and when the whole of the water accumulated in this subterraneous reservoir has run off, there being no longer any pressure upon the clay above it, the whole soon becomes as dry as could be de- sired, and continues so ever afterwards, if the ditch is always kept open. This I speak from experience, having rendered some fields of this kind that were very wet, quite dry by this me- thod of treating them. It will hardly be neces- sary for me here to put the farmer upon his guard, to be particularly careful in his observa- tions, that he may distinguish between the wet- ness that is produced from this cause, and that which proceeds from the cause before men- tioned ; because the treatment that would cure the one would be of no use at all to the other. The attentive observer likewise will readily per- ceive, that if any field that is wet from this cause admits of being ploughed, it will be in equal danger of being hurt by being raised into high ridges, with the other kind of damp ground before mentioned. For, as the depth of earth above the

reservoir would be smaller in the deep furrows than any where else, there would, of consequence, be less resistance to the water in that place, so that it would arise there in greater abundance. And if, in this case, a farmer should dig a drain in each furrow, as a considerable quantity of water would rise into them, in some cases the ground might be improved, or even quite drained thereby, especially if they should have accidentally reached the gravel in any one place ; although at an expense much greater than was necessary. I take notice of this circumstance, in some measure to prevent the prejudice, that some inattentive observers might entertain, against what was said before of this method of draining, from their having accidentally seen some fields that may not have been bettered by it.' ' Bogs,' continues the doctor, ' are only a variety of this last-mentioned kind of wet ground ; and therefore ought, in general, to be drained after the same manner with them. Clay is a substance that strongly resists the entrance of water into it : but when it is long drenched with it, it is, in process of time, in some mea- sure, dissolved thereby, loses its original firm- ness of texture and consistence, and becomes a sort of semi-fluid mass, which is called a bog ; and as these are sometimes covered with a strong scurf of a particular kind of grass, with very matted roots, which is strong enough to bear a

small weight without breaking, although it yields very much, it is in these circumstances called a swaggle. But, whatever be the nature of the bog, it is invariably occasioned by water being forced up through A bed of clay, as just now de- scribed, and dissolving or softening, if you will, a part thereof: I say only a part; because whatever may be the depth of the bog or swaggle, it generally has a partition of solid clay between it and the reservoir of water under k, from whence it originally proceeds : for if this were not the case, and the quantity of water were considerable, it would meet with no sufficient re- sistance from the bog, and would issue through it with violence, and carry the whole semi-fluid mass along with it. But this would more inevi- tably be the case if there was a crust at the bottom of the bog, and if that crust should ever be broken, especially if the quantity of water under it were very considerable : and as it is probable, that in many cases of this sort, the water slowly dissolves more and more of this under crust, I make no doubt, but that in the revolution of many ages a great many eruptions of this kind may have happened, though not deemed of sufficient importance to have the his- tory of them transmitted to posterity. Of this kind, although formed of a different substance, I consider the flow of the Solway moss, in Nor- thumberland, to have been ; which, upon the

16th of November, 1771., burst its former boun- daries, and poured forth a prodigious stream of semi-fluid matter, which in a short time covered several hundred acres of very fine arable ground. Nor will any one, who is acquainted with the nature of moss, who knows its resemblance to clay, in its quality of absorbing and retaining water, and its very easy diffusibility therein, be surprised at this; as, from all these properties, it is much better adapted for forming an extensive bog, and therefore in greater danger of producing an extensive devastation by an eruption of the water into it, than those that are formed of any kind of clay whatever. If the bog or swampy ground is upon a declivity, the ditch ought to be carried across the field about the place where the fewest springs arise. But if the surface of the ground is level, or nearly so, as between A and B, fig. 4, and the springs break out in seve- ral places, q q q q q, so as to form soft quagmires, interspersed through the whole of the field, it will be of little consequence in what part the

one another, which go so deep as to reach the gravel; for, as the water there meets with no resistance, it readily flows out at these openings, and is carried off by the drain without being forced up through the earth ; so that the ground is left entirely dry ever after. I have likewise drained several fields in this way ; and, as I have generally found the appearance pretty much alike, I shall, for the information of the inexperienced reader, give a short account of them. If you attempt to make your pit in one of these soft quaggy places where the water is found in great abundance, you will meet with very great difficulty in forming it; for, as the substance of which it is composed is soft, it will always flow into the hole as fast as you dig it; on which account I would advise, not to at- tempt to make the pit in the swaggle, but as near it in the solid earth as you conveniently can. However, if it is pretty firm, and of no great ex- tent, it is sometimes practicable to make a pit in the soft bog at the driest time of the year. This I have sometimes practised, which gave me an op- portunity of observing the nature of these bogs more perfectly than I otherwise should have had. In the trials of this kind that I have made, this soft quaggy ground has seldom been above three or four feet deep, below which I have always found a stratum of hard tough clay usually mixed with stone ; and so firm, that nothing but a mat- tock or pick-axe could penetrate it; and, as this is comparatively so much drier than the ground above it, an inexperienced operator is very apt to imagine that this is the bottom that he is in search of. In digging through this stratum you will frequently meet with small springs oozing out in all directions ; some of them that might fill the tube of a small quill, and others so small as to be scarcely perceptible ; but, without re- garding these, you must continue to dig on, with- out intermission, till you come to the main body of the reservoir, if I may so call it, that is con- tained in the rock, gravel, or sand ; which you will

generally find from two to four feet below the bottom of the swaggle, and which you will be in no danger of mistaking when you come to it : for, if there has been no opening made before that in the field, as soon as you break the crust im- mediately above the gravel or rock, the water bursts forth like a torrent; and, on some occa- sions, rises like a jet d'eau to a considerable height above the bottom of the ditch ; and continues to flow off with great impetuosity for some time, till the pent up water being drained off, the violent boiling up begins to subside, and the strength of the current to abate ; and, in a short time, it flows gently out like any ordinary spring; — allowing it to remain in this state, the quaggy earth begins to subside, and gradually becomes firmer and firmer every day ; so that, in the space of a few months, those bogs which were formerly so soft as hardly to support the weight of a small dog, become so firm, that oxen and horses may tread upon them without any danger of sinking, at the very wettest season of the year. I have had a field of this nature, that, by having only one such pit as I have now described opened in it, was entirely drained to the distance of above 100 yards around it in every direction. But as it is possible that the stratum in which the water

runs may be in some places interrupted, it will he in general expedient to make several of these pits, if the field is of great extent; always car- rying the drain forward through the lowermost part of the field, or as near the quag as you con- veniently can ; and sinking a pit wherever you may judge it will be most necessary. But, if the stratum of gravel is not interrupted, there will be no violent burst of water at opening any of these after the first, as I have frequently experienced. To keep these wells from closing up after they are made, it is always expedient to fill them up with small stones immediately after they are made, which ought to rise to the height of the bottom of the drain. I have often imagined, that the expense of digging these pits might be saved by boring a hole through this solid stratum of clay with a large wimble made on purpose ; but, as I never experienced this, I cannot say whether or not it would answer the desired end exactly. If the whole field that is to be drained consists of one extensive bog, it will require a long time before the whole work can be entirely finished, as it will be impossible to open a drain through it till one part of it is first drained, and becomes solid ground. In a situation of this kind, the undertaker, after having opened a drain to convey the water from the lowest part of the bog, must approach as near to the swampy ground as he can, and there make his first pit ; which •will drain off the water from the nearest parts of the bog. When this has continued open for some time, and that part of the bog has become so solid as to admit of being worked, let him con- tinue the

ditch as far forward through it as the situation it is in will admit of, and there sink another pit, and proceed gradually forward in the same manner; making cross cuts where necessary, till the whole be finished. In this manner, may any bog or track of spouting ground of this na- ture, be rendered dry at a very inconsiderable expense ; and, as there can be no other method of draining ground of this sort effectually, I re- commend the study of it to the attention of every diligent farmer who may have occasion for it. Let him first be extremely cautious in examining all the circumstances of his particular fields, that he may be certain which of the classes above enumerated it may be ranked with ; and, when he is perfectly sure of that, he may proceed with- out fear, being morally certain of success. There is, however, one kind of damp ground not yet particularly specified, that I have purposely omitted taking notice of till this time, as I have never had any opportunity of examining parti- cularly into the nature of it, nor of ascertaining, by experience, what is the most proper method of treating it. The soil I have now particularly in my eye, consists of a deep strong clay that does not vary its nature even on the surface, but in as far as manures may have rendered it more friable and tender ; the color usually inclines to a reddish cast, and, for the most part, it is situated upon the side of some declivity. This bed of clay reaches to a great depth, without any varia- tion, and is intermixed with a considerable quan- tity of small round stones. Many soils, of the sort now described, are apt to be continually moist and full of water during the winter season ;

but when the dry weather of summer sets in, tlip moisture is diminished, and the surface becomes hard ; and it is rent into many large gaps which allow free admission to the sun and air, so as to scorch up almost every plant that is sowed upon it ; and, as these soils are usually in themselves naturally fertile when drained, it were to (>e wished that some method could be discovered, that would be less expensive than what is usually practised with regard to some soils of this kind in Essex ; where they make covered drains of two feet and a half deep, running diagonally through the whole field, at the distance of twenty feet from each other.'

*In the Georgical Essays, T. B. Bayley, Esq. of Hope, near Manchester, gives the following directions for making covered drains: — ' First make the main drains down the slope or fall of the field. When the land is very wet, or has not much fall, there should, in general, be two of these to a statute acre ; for the shorter the narrow drains are, the less liable they will be to acci- dents. The width of the trench for the main drains should be thirty inches at top, but the width at the bottom must be regulated by the nature and si?,***? of the materials intended to be used. If the Jrain is to be made of bricks ten inches long, tfuee inches thick, and four inches in breadth, then the bottom of the drain must be twelve inches ; but if the common sale bricks are used, then the bottom must be proper**

tionably contracted. In both cases there must be an interstice of one inch between the bottom brick and the sides of the trench, and the vacuity must be filled up with straw, rushes, or loose mould. For the purpose of making these drains I order my bricks to be moulded ten inches long, four broad, and three thick, which dimension *always make the best drains. The method I pursue in constructing my main drains is as fol lows : when the ground is soft and spongy, the bottom of the drain is laid with bricks placed across. On these, on each side, two bricks are' laid flat, one upon the other, forming a drain six inches high and four broad, which is covered with bricks laid flat. When the bottom of the trench is found to be a firm and solid body, as clay, or marie, the bottom of the drain does not then require being laid with bricks. In that case the sides are formed by placing one brick edge' ways, instead of two laid flat. This latter method is much cheaper, and in such land equally dur- able with the other. When stones are used in- stead of bricks, the bottom of the drain should be about eight inches in width. And here it will be proper to remark, that, in all cases, the bot- tom of the main drains must be sunk four inches below the level of the narrow ones, even at the point where the latter fall into them. The main drains should be kept open till the narrow ones are begun from them, after which they may be finished ; but before the earth is returned upon the stones or bricks, it will be advisable to throw in straw, rushes, or brush-wood, to increase the freedom of the drain. The small narrow drains should be cut at the distance of sixteen or eighteen feet from each other, and should fall into the main drain at very acute angles, to pre- vent any stoppage. At the point where they fall*

in, and eight or ten inches above it, they should be made firm with brick or stone. These drains should be eighteen inches wide at top, and six- teen at bottom.' See plate DOGS and DRAINS. Fig. 3, represents a field with drains, laid out accord- ing to Mr. Bayley's method. The black lines represent the main drains, and the dotted lines represent the narrow drains communicating with the former from all parts of the field.

About the same time that Dr. Anderson had reduced the system of draining to scientific prin- ciples in Scotland, Mr. Joseph Elkington, of Princethorpe, in Warwickshire, appears to have made some similar discoveries in England. The priority, indeed, is claimed by Dr. Anderson, but as each party has his merits, and as the public is, doubtless, highly indebted to both, we shall not presume to decide upon this point. The great object of Mr. Elkington's system is the draining of lands rendered wet by waters con- fined beneath the surface, and attempting to rise in the manner of springs.

Among these, bogs or morasses are the chief. Having attempted, a considerable number of years ago, to drain a piece of ground of this kind on his farm at Princethorpe, by making a trench of five feet deep, but without success, he thought it might be of use to know, what kind of strata lay under the trench. Accordingly, he forced an iron crow, of about an inch and a half in diameter, three feet down, and upon taking it out, was agreeably sur- prised, to find a great quantity of water burst forth, and run down the trench. This led him to think of applying an auger, an instrument fitter for the purpose of boring, which, upon trial, he found equalled his expectations; and, by continuing the same plan with the auger, he at last drained all the wet parts of his farm, which were nume- rous, and had proved destructive to his sheep, by inducing the rot. When a morass is to be drained, his first object is to ascertain the direc- tion in which the trench is to be dug. The sub- stance of his rules for this, as laid before the Board of Agriculture in 1796, are these: l.To obtain as much knowledge as possible respecting the strata in the neighbourhood. 2. To direct the trench so as to hit the bottom of the bed, which occasions the mischief, and the particular spot where the main spring lies. 3. If there are various beds through which the water issues, to prefer the stone one for draining the whole ; and to make the trench from six to eight yards from the tail of the bed, where the rock ends, because in limestone, and other rocks, the tail, as it is technically termed, is harder than any other part of the rock ; but a few yards above it, it is softer, and the water is more accessible. The tail of these beds may often be found jutting out in a point. 4. To direct the trench in a line with the bottom of the hill ; as it makes the best separa- tion between the upland and meadow enclosures, where the spring can be best intercepted. The trench, however, must be carried in or near the line of the spring; for, if it diverges to any dis- tance, all chance of reaching the spring by tap- ping is over, and the labor of digging it probably lost. 5. To make a new trench, rather than to to tap the spring in any old brook, or run of water. 6, and lastly, having fixed on the line

of direction, and marked out the trench, to begin at the bottom or lowest level, carrying the trench gradually up. The fall of the water need not be above a few inches in 100 yards. The auger, which must often be used for tapping, need not exceed two inches in diameter. Mr. Elkington bored a hole with one, to the depth of thirty feet, which threw up water equal to three hogs- heads in a minute, and completely drained all the neighbourhood. In such cases, farther ope- rations in draining are unnecessary. In other cases, the trench being once made, and the spring cut off, by tapping, or otherwise, it remains only to determine, whether it is to be kept open or covered. Fig. 5 serves to exemplify on a large scale the advantages which result from the arrangement of drains indicated by A B C D. The section of a hill at fig. 6 is furnished with outlets to carry off the

water or supply springs at various heights. Thus A is supplied by the loose strata ;it the top of the hill. B and D are supplied by the bed beneath, while by the aid of a pipe at C we procure a continuously flowing spring, the water being insulated in its passage through the intermediate strata.

On the drainage of mixed and varied soils of the clayey kind, we have the following useful observations in Mr. Loudon's Encyclopedia of Agriculture : — ' The business of draining is here,' he remarks, ' considerably more tedious and dif- ficult than where the superficial and internal parts have greater regularity. , In such sorts of lands, as all the different collections of water are perfectly distinct from each other, by means o. the beds of clay that separate them, each collec- tion becomes so much increased, or accumulated, in the time of heavy rains, that they are filled quite to the level of the surface of the clay by which they are surrounded ; when the water getting a free passage, as it would over the edges of a bowl or dish, overflows and saturates the surface of that bed of clay in such a manner, as to render it so perfectly wet and sour, that its produce becomes not only annually more and more scanty, but the soil itself more sterile and unproductive. From the sand-beds, in such cases, having no communication with each other, it must evidently require as many drains as there are beds of this kind, in order fully to draw off the water from each of them. A drain or trench is therefore recommended to be cut from the nearest and lowest part of the field intended to be drained, up to the highest and most distant sand-bank in such a line of direction as, if pos- sible, to pass through some of the intermediate sand-beds, and prevent the labor and expense ot making longer cuts on the sides, which would otherwise be requisite.

Where the different beds of sand and clay are of less extent, and lie together with greater re- gularity, they can be drained in a more easy manner with less cutting, and of course at less expense. Below the layers or beds of sand and clay that lie, in this manner, alternately together, and nearly parallel to each other, is generally a body of impervious clay, which keeps up the water that is contained in the sand, and which, being constantly full, renders the adjacent clay moist ; and in wet seasons runs or trickles ever

it. As, in these cases, the principal under-stra- tum of clay is rarely above four or five feet be- low the surface, a drain is advised to be cut to that depth through the middle of the field, if it have a descent from both sides; but if it decline all to one side, the drain must be made in that place, as the

water will more readily discharge itself into it ; and unless the field be of great extent, and have more depressions or hollows in it than one, one drain may be quite sufficient for the purpose, as, by crossing the different beds that retain the water, it must take it off from each of them. A principal difficulty in draining ground of this nature, and which renders it impractica- ble by one drain, is when the direction of the alternate layers, or beds of clay and sand, lie across the declivity of the land, so that one drain can be of no other service than that of convey- ing away the water after it has passed over the different strata, and would naturally stagnate in the lowest part of the field, if there was no other passage for it. Where the land lies in this way, which is frequently the case, it will therefore be necessary, besides the drain in the lowest part, to have others cut up from it in a slanting di- rection across the declivity, which by crossing all the different veins, or narrow strata of sand,1 may be capable of drawing the water from each of them. In forming the drains in these cases, it is recommended that, after laying the bottom in the manner of a sough, or in the way of a triangle, it be filled some way up by small stones, tough sods being applied, the green side down- wards, upon them before the mould is filled in. But, where stones cannot be readily procured, faggots may be employed in their place, where they are plentiful : the under part of the drain being laid, or coupled, with stones, so as to form a channel or passage for the conveyance of the water that may sink through the faggots, and for the purpose of rendering them more durable; as where the water cannot get freely off, which is generally the case where there is not an open passage made of some solid material, it must, by its stagnation, soon destroy the faggots, and choke up the drain.

‘ The mode of draining retentive soils, is ma- terially different from that which has been de- scribed above. Many tracts of level land are injured by the stagnation of a superabundant quantity of water in the upper parts of the sur- face materials, which does not rise up into them from any reservoirs or springs below. The re- moval of the wetness in these cases may, for the most part, be effected without any very heavy expense. From the upper or surface soil, in such cases, being constituted of a loose porous stratum of materials, to the depth of from two to four or five feet, which has a stiff retentive body of clay underneath it, any water that may come upon the surface from heavy rains, or other causes, readily filtrates and sinks down through it, until it reaches the obstructing body of clay which prevents it from proceeding ; the conse- quence of which is, that the porous open soil above is so filled and saturated with water, as to be of little utility for the purpose of producing crops of either grain or grass. Land situated in this way, is frequently said by farmers to be wet-

bottomed. In order to remove this kind of wet- ness, it seldom requires more than a few drains, made according to the situation and extent of the

field, of such a depth as to pass a few inches into the clay, between which, and the under sur- face of the porous earth above, there will oO viously be the greatest stagnation, and conse- quently, collection of water, especially where it does not become much visible on the surface. In these cases there is not any necessity for having recourse to the use of the boring instrument, as there is no water to be discharged from below. When the field to be drained has only a slight declination, or slope, from the sides towards the middle, one drain cut through the porous super- ficial materials into the clay, in the lowest part of the ground, may be sufficient to bring off the whole of the water detained in the porous soil. This effect may likewise be greatly promoted, by laying out and forming the ridges so as to ac- cord with the direction of the land, and by the use of the plough or spade in removing obstruc- tions, and deepening the furrows. In such situa- tions, where the drain has been formed in this manner, the water will flow into it through the porous surface materials, as well as if a number of small trenches were cut from it to each side, as is the practice in Essex and some other parts of the country; but which is often an unnecessary labor and expense. The drain made in the hollow may frequently serve as a division of the field, in which case it may be open ; but in other cir- cumstances it may be more proper to have it covered. Where a field of this description has more than one hollow in its surface, it will ob- viously be requisite to have more than one main drain ; but when it is nearly level, or only in- clines slightly to one side, a trench or drain along the lowest part, and the ridges and fur- rows formed accordingly, may be sufficient for effecting its drainage. There may, however, be cases, as where a field is large and very flat, in which some side-cuts from the principal drain may be necessary, which must be made a little into the clay, and as narrow as they can be wrought, and then filled up with stones or other suitable materials.'

' What is called the Essex method of draining in ploughed springy lands, where the surface soil is tenacious, is described by Kent, and consists in substituting small under-drains for open fur- rows ; or in some cases having a small under- drain beneath every other or every third furrow. These drains lead to side or fence ditches, where they discharge themselves.' For draining of mines, see MINIKS.

Drains may be conveniently classed, as Mr. Loudon observes, under, 1. Drains of convey- ance simply ; and 2. Drains of conveyance and collection. The most complete drain of convey- ance is a large pipe of metal, masonry, or brick- work : and the most complete collecting drain, one formed with a channel built on the sides, and covered with flat-stones, with a superstra- tum of round stones or splinters, diminishing to the size of gravel as they rise to the surface, and there covered with the common soil. As the best constructions, however, are not always prac- ticable, the following are a few leading sorts

adapted for different situations. (We are in- debted to Mr. Loudon for this selection).

For drains of conveyance, there are the walled or box drain, the barrel drain, the walled or the triangular drain, and the arched drain, fig. 1.

Fig. 1.

Fig. 2.

Drains of collection are formed of stone, brick, gravel, cinders, wood, spray, straw, turf, and earth alone.

The boxed and rubble drain, fig. 2, is a drain of conveyance and collection. The common rubble drain is formed of rough land-stones of any sort, not exceeding six or seven inches in diameter, thrown in the bottom, with smaller ones over, and, if to be had, gravel or ashes at top. On this is laid a thin layer of straw or haum of any kind, and the remainder is filled up with the surface soil.

The brick drain is formed in a great variety of ways, either from common bricks and bats in imitation of the boxed and rubble, or rubble drain; or by the use of bricks made on pur- pose, of which there are great variety. Drain- ing tiles to be used with effect as collecting drains, should always be covered a foot in depth, or more, with stones or gravel.

The gravel or cinder drain is seldom made deep, though, if the materials be large, they may be made of any size. In general they are used in grass lands ; the section of the drain being an acute-angled triangle, and the materials being filled in, the smallest uppermost, nearly to the ground's surface.

The wood drain is of various kinds. A very sufficient and durable construction consists of poles or young fir-trees stripped of their branches and laid in the bottom of the drain lengthways. They are then covered with the branches and spray. Another form is that of filling the drain with faggot-wood, with some straw over. A variety of this mode is formed by first setting in cross stakes to prevent the faggots from sinking ; but they are of no great use, and often occasion such drains to fail sooner than common faggot drains, by the greater vacuity they leave after the wood is rotten. In some varieties of this drain the brush-wood is first laid down alongside the drain, and formed by willow, or other ties, into an endless cable of ten or

twelve inches in diameter, aud then rolled in, which is said to form an excellent drain with the least quantity of materials, and to last a longer time than any of the modes above mentioned. Some cut the brush -wood into lengths of three or four feet, and place them in a sloping direction with the root end of the branch in the bottom of the drain ; others throw in the branches at random, with little preparation, and cover them with

spray, straw, or rushes, and finally the surface soil.

The spray drain is generally like the gravel drain, of small size, and formed like it, with an acute angled bottom. In general, tne spray is trod firmly in ; though in some cases it is previously formed into a cable, as in the brush-wood drain. Drains of this sort are much in use in grass lands, and when the spray of larch-wood, heath, or ling can be got, they are of great durability. The straw drain, when reeds, rushes, and bean straw is used, is sometimes made like the spray drain, by pressing the loose material down, or forming a cable; but in general the straw is twisted into ropes as big as a man's leg, by the aid of a machine, and three or more of these laid in the bottom of a triangular drain, with or without the protection of three turves.

The turf drain,

fig. 3, may be FiS- 3

made of any con- venient depth, but it must be at least the breadth of a turf at bot- tom. The drain being dug out as if it were to be filled with stones or any or- dinary material; the operator next, with a spade three inches wide, digs a narrow channel along its centre a, clearing it out with the draining seoop ; and over this the turves, b, are laid without any other preparation, or any thing put over them but the earth that was excavated. This is found to oe a very cheap, and, considering the materials, a surprisingly durable method of drain- ing; answering, in pasture-fields especially, all the purposes that the farmer can expect to derive from drains constructed with more labor, and at a much greater expense. They are said to last frequently twenty years and upwards ; but the period which it can be supposed they will con- tinue to prove effectual, must depend on the nature of the soil, and the current of water.

The triangular sod drain is thus made: when the line of drain is marked out, a sod is cut in the form of a wedge, the grass side being the narrowest, and the sods being from twelve to eighteen inches in length. The drain is then cut to the depth required, but is contracted to a very narrow bottom. The sods are then set in with the grass side downwards, and pressed as far as they will go. As the figure of the drain does not suffer them to go to the bottom, a ca- vity is left, which serves as a watercourse ; and the space*

above is filled with the earth thrown out.

The hollow furrow drain is only used in sheep- pastures. Wherever the water is apt to stag- nate, a deep furrow is turned up with a stout plough. After this, a man with a spade pares off the loose soil from the inverted sod, and scatters it over the field, or casts it into hollow places. The sod thus pared, and brought to the thick- ness of about three inches, is restored to its ori- ginal situation, with the grassy side uppermost, as if no furrow had been made. A pipe or open- ing is thus formed beneath it, two or three in-

ches deep in the bottom of the furrow, which is sufficient to discharge a considerable quantity of surface water, which readily sinks into it. These furrows, indeed, are easily choked up by any pressure, or by the growth of the roots of the grass ; but they are also easily restored, and no surface is lost by means of them.

Pipe drains of turf are sometimes fo?med where the surface soil is a strong clay, as it is only turves from such a surface that are suf- ficiently durable. A semicylindrical spade is used to dig the turves, the ground plan of which presents a series of semicircles or half pipes. The drain being dug out to the proper depth, one turf is laid in the bottom, and another being placed over it completes the pipe. The same sort of pipe drain has been formed out of solid beds of clay, and has served for a time to convey water. As collecting drains, of course, they can be of little or no use. This mode of draining appears to have been first practised by Hannah, an ingenious farmer in Wigtonshire. He adopted jt for the purpose of conveying water through running sand, in which only a pipe drain will last for a moderate time. After a number of years the clay turves were found effective in con- veying away the water, and preventing the run- ning away of the sandy sides of the drain.

DRAKE, n. s. Swed. andrake, from drake, a male ; or duckrake, duck, and Goth, reke, a warrior or fighter, says Mr. Thomson ; ‘ from the noise it makes,’ — Minsheu. The male of a duck ; an old piece of ordnance.

Two or three shots, made at them by a couple of drakes, made them stagger. Clarendon.

Mourn, sooty coots, and speckled teals, Ye fisher herons, watching eels ; Ye duck and drake, wi’ airy wheels

Circling the lake. Burns.

DRAKE, in ornithology. See ANAS.

DRAKE (Sir Francis), the renowned English admiral, was the son of Edmund Drake, a sailor, and born near Tavistock, in Devonshire, in 1545. He was brought up under the care of Sir John Hawkins, who was his kinsman ; and, at the age of eighteen, was purser of a ship trad- ing to Biscay. At twenty, he made a voyage to Guinea ; and, at twenty-two, was made captain of the Judith. In that capacity he was in the harbour of St. John de Ulloa, in the gulf of Mexico, where he behaved most gallantly in the actions under Sir John Hawkins, and returned with him to England with great reputation. He next projected a design against the Spaniards in the West Indies; which he no sooner published, than he had volunteers enough ready to accom- pany him. In 1570 he made his first expedition with two ships; and in 1571 with one only, in which he returned safe, if not with such advan- tages as he expected. He made another expedi- tion in 1572, wherein he gained considerable booty. In these expeditions he was much as- sisted by a nation of Indians, who then were en- gaged in war with the Spaniards. The prince of these people was named Pedro, to whom Drake presented a cutlass from his side, which he saw the chieftain greatly admired. Pedro, in return, gave him four large wedges of gold ; which Drake

threw into the common stock, saying, ‘ That ha thought it but just that such as bore the charge of so uncertain a voyage on his credit, should share the utmost advantage that voyage pro- duced.’ Then, embarking his men with all the wealth he had obtained, which was very con- siderable, he bore away for England, where he arrived in August, 1573. His success in this expedition, joined to his honorable behaviour towards his owners, gained him a high reputa- tion : and the use he made of his riches, a still greater. For, fitting out three stout frigates at his own expense, he sailed with them to Ireland • where, under Walter, earl of Essex, the father of the famous unfortunate earl (see DEVEREUX), he served as a volunteer. After the death of his noble patron, he returned into England, where Sir Christopher Hatton introduced him to queen Elizabeth. He now proposed a voyage into the South Seas, through the Straits of Magellan, which was what hitherto no Englishman had ever attempted. The project was well received at court : the queen furnished him with means ; and his own fame quickly drew together a suffi- cient force. The fleet with which he sailed, or- this extraordinary undertaking, consisted only of five vessels, small when compared with modern ships, and no more than 164 able men. He sailed on the 13th December, 1577 : on the 25th fell in with the coast of Barbary, and on the 29th with Cape Verd. On the 13th March he passed the equinoctial, made the coast of Brasil on the 5th April, and entered the river

de la Plata, where he lost the company of two of his ships; but meeting them again, and taking out their provisions, he turned them adrift. On the 29th May he entered the port of St. Julian's, where he continued two months, for the sake of laying in provisions ; on the 20th August he entered the Straits of Magellan, and on the 25th September passed them, having then only his own ship. On the 25th November he came to Macao, which he had appointed for a place of rendezvous in case his ships separated ; but captain Winter, his vice-admiral, having repassed the Straits, re- turned to England. Thence he continued his voyage along the coasts of Chili and Peru, taking all opportunities of seizing Spanish ships, and attacking them on shore, till his men were sated with plunder; and then, coasting America to the height of 48°, he endeavoured to find a passage that way back into our seas, but could not. However, he landed, and called the country New Albion, taking possession of it in the name of queen Elizabeth; and, having careened his ship, set sail from thence, on the 29th September, 1579, for the Moluccas. He is supposed to have chosen this passage round, partly to avoid being attacked by the Spaniards at a disadvan- tage, and partly from the lateness of the season, whence dangerous storms and hurricanes were dreaded. On the 13th October he fell in with certain islands inhabited by the most barbarous people he had met with in his voyage : on the 4th November he had sight of the Moluccas; and, coming to Ternate, was well received by the king. On the 10th December he made Celebes, where, the 9th January following, his ship un- fortunately ran uj ion a rock, from which, how-

ever, he got off. On the 16th March he arrived at Java Major, and on the 25th, began to think of returning home. He doubled the Cape of Good Hope on the 15th June, having then on board fifty-seven men, and but three casks of water. On the 12th July he passed the line, reached the coast of Guinea on the 16th, and there watered. On the llth September he made the island of Tercera, and on the 3d November entered the harbour of Plymouth. This voyage round the world was performed in two years and about ten months. Shortly after his arrival, the queen going to Deptford, went on board his ship, where, after dinner, she conferred on him the order of knighthood, and declared her approba- tion of all he had done. She likewise gave di- rections for the preservation of his ship, that it might remain a monument of his own and his country's glory. This celebrated ship, which had been laid up many years at Deptford, at length de- caying, it was broke up, and a chair, made out of the planks, was presented to the university of Oxford. In 1585 he sailed with a fleet to the West Indies, and took the cities of St. Jago, St. Domingo, Carthagena, and St. Augustin. In

1587 he went to Lisbon with a fleet of thirty sail ; and having intelligence of a fleet assembled in the bay of Cadiz, which was to have made part of the Armada, he with great courage en- tered that port, and burnt there upwards of 10,000 tons of shipping, which he afterwards merrily called ‘ burning the king of Spain’s beard.’ In 1588, when the Armada from Spain was approaching our coasts, Sir Francis Drake was appointed vice-admiral under Charles lord Howard of ESngham, high admiral of England, where fortune favored him as remarkably as ever; for he made prize of a very large galleon, commanded by Don Pedro de Valdez, who was reputed the projector of this invasion ; and who surrendered, as soon as he learned it was Drake who summoned him. This Don Pedro remained about two years Sir Francis Drake’s prisoner in England ; and, when he was released, paid him for his own and his captains’ freedom, a ransom of £8,500. Drake’s soldiers were well recom- pensed with the plunder of this ship, for they found in it 55,000 ducats of gold, which were divided among them. In 1589 Sir Francis Drake commanded, as admiral, the fleet sent to restore Don Antonio, king of Portugal; the command of the land forces being given to Sir John Norris : but they were hardly got to sea, before the commanders differed, and so the at- tempt proved abortive. The war widi Spain continuing, a more effectual expedition was undertaken by Sir John Hawkins and Sir Francis Drake, against their settlements in the West In- dies, than had hitherto been made during the whole course of it: but the commanders here again not agreeing about the plan, this also did not turn out successfully. All difficulties, before these two last expeditions, had given way to the skill and fortune of Sir Francis Drake ; which probably was the reason why he did not bear these disappointments so well as he otherwise would have done. A strong sense of them is supposed to have thrown him into a melancholy, which occasioned a bloody flux; and of this he

died on board his own ship, near the town of Nombre de Dios, in the West Indies, on the 28th January, 1595-6. His death was la- mented by the whole nation. In the twenty- seventh parliament of queen Elizabeth, he was elected burgess for the town of Bossiney, alias Tintagal, in the county of Cornwall ; and for Plymouth in Devonshire, in the thirty-fifth of the same reign. This town had very particular obligations to him: for, in 1587, he undertook to bring water into it, through the want of which, till then, it had been grievously distressed ; and he performed it by conducting thither a stream from springs eight miles distant in a straight line; for, in the manner he brought it, the course of it runs upwards of twenty miles.

DRAKE (James), an English physician and author, born at Cambridge in 1667, and educated at that university, where he took his degrees. In 1704 he published a pamphlet, entitled The Memorial of the Church of England, which gave such offence that a proclamation was issued for discovering the author, which obliged him to keep concealed for some time. He was after-

wards prosecuted for the publication of a newspaper, entitled Mercurius Politicus ; and, although he was acquitted, it is supposed that the vexation threw him into a fever, of which he died in 1707. Besides the above, he published a System of Anatomy, 3 vols. 8vo ; a Transla- tion of Herodotus ; a play, called the Sham Law- yer, Sec.

DRAKE, in geography, a harbour of California, so called after the celebrated Sir Francis Drake, who discovered and took possession of the pen- insula.

DRAKENSTEIN, a district in the territory of the Cape of Good Hope. The division which goes by the general name of ‘ Stellenbosch and Drakenstein’ includes a large portion of the Cape territory. See STELLENBOSCH ; but the term Drakenstein is peculiarly applied to two beautiful and extensive valleys situated about thirty or forty miles from Cape Town, at the foot of lofty mountains. They are called the valleys of Great and Little Drakenstein, and are to the north- east of the district of Stellenbosch, sheltered by lofty mountains, and watered throughout by the Berg and its minor streams. The subdivision of Little Drakenstein is enclosed by the larger valleys, and the two together supply a large portion of the wine of the Cape. West of this valley is the village of Paarl, surrounded by a fine tract of land, and distinguished by a vast mass of granite, surmounted with a number of large round stones, like the pearls of a necklace. Mr. Anderson, Captain Cook’s surgeon, de- scribes it as at least half a mile in circumference, and appearing in its highest part ‘to equal the dome of St. Paul’s church. It is one uninterrupted mass, or stone,’ he adds, ‘if we except some fissures, or rather impressions, not above three or four feet deep, and a vein which runs across near its north end. It is of that sort of stone called by mineralogists saxum conglutinatum, and consists chiefly of pieces of coarse quartz and glimmer, held together by a clayey cement. But the vein which crosses it, though of the same materials, is much compacter. This vein

is Hot above a foot broad or thic’c, and its surface is cut into little squares or oblongs, disposed obliquely, which makes it look like some arti- ficial work. But I could not observe whether it penetrated far into the large rock or was only superficial.’ Cook’s Voyages, vol. v. p. 109. The same gentleman described this remarkable stone, at length, in a letter to Sir Joseph Pringle, which is inserted in the Philosophi- cal Transactions, vol. Ixviii. part. I. p. 102, and sent home a specimen of it which induced Sir William Hamilton to suppose it to have been raised by a volcanic

explosion. Mr. Barrow considers this a perfectly gratuitous assumption, and describes it as of similar materials with the other mountains of the colony, viz. aggregates of quartz and mica ; the first in large irregular masses, and the latter in black lumps resembling shorl, mixed with pieces of felspar, and bound together by a clayey iron ore. The pearl and the diamond he speaks of as two distinct central points of the summit, of which the latter is the higher block, and shaped like a cone. The pearl is inaccessible on three sides, and rises about 400 feet from its base on the summit of the mountain, where it measures in circumference, accord- ing to this writer, a full mile. The sloping nor- thern side, by which it is ascended, is upwards of 1000 feet in length, and nearly covered with a species of green lichen. Towards the summit it is split by two deep clefts crossing at right angles, in which grow a number of beautiful aloes, and several cryptogamous plants.

In the side of the mountain numerous species of the protea, particularly the mellifera, mingle with the lively green of the wild olive, and the elegant and almost endless tribe of heaths for which the colony is so remarkable, and some of which have here the growth and appearance of considerable trees. The fruit of this olive is too acrid for use, but the wood is close grained, and is said to bear a fine polish. The mellifera yields a saccharine juice in the bottom of its flowers, which is considered as an excellent sto- machic by the inhabitants of the district, and is occasionally boiled down with preserves, in the place of sugar. They call it the sugar-tree. The scenery of this spot in the autumn is exquisitely beautiful.

At the north, or upper end of the valley of Drakenstein, are the divisions of Dall Josephat, Waggon-maker's Valley, and Groenberg. The latter being a projecting eminence that bounds the valley northward, and participating in the fruitful character of the surrounding scene. Corn, vines, and fruits adorn its sides, — Lall of good quality ; and the finest peaches and oranges of the colony grow in the two little dales at its feet. Little Drakenstein, the Paarl village, Franche Hook, and the three last subdivisions, northward, embrace all the divisions of this re- markable valley.

The oaks in this valley commonly reach from twenty to thirty feet in height in the stem, and measure from ten to eighteen feet in circumfer- ence ; many are larger ; they appear to grow more freely and naturally in the degree of shelter they here find from the violent winds : the tops are not so bent as in the neighbourhood of Cape

Town, nor is the grain of the wood, when cut, so irregular and twisted. The whole valley is well inhabited, so that few wild animals appear in the day-tirr\e ; but hyenas, wolves and jackals descend from the mountains at night. Game abounds in the thick shrubbery ; particularly the diiiker (the diver or plunger) and the griesbock or grizzled deer; nor is the steenbok,

once so plentiful as to be supposed to have given name to the neighbouring drosdy, wholly driven from the northern hills The duiker stands about two feet and a half high, and measures upwards of three feet in length ; his color is a dusky brown, and the male has black straight horns, about four feet long, and nearly parallel. The female is without horns. The griesbock is rather smaller, and of a grizzled brown color; in every other respect it is of similar appearance with the diiiker. 'Both these animals commit considerable depredations on the young branches of the vine. Hares are numerous in the valley; common and red-winged partridges (which are as tame as poultryj quails, snipes, widgeons, and other species of wild ducks. In the mountains, both northward and eastward, are found the reebock, and the klip-springer, as he is called, or rock- leaper, the fleetest animal, perhaps, and the most formed for agility, of any in the world. His cloven hoofs are each divided into two segments, and jagged at the edges, so that he will adhere, like an insect, to the smoothest and steepest parts of the rocks. His color is a cinereous gray, and his hair is used as the best stuffing for mattrasses, chairs, and saddles. No dog has any chance of keeping up with this animal, but he is easily shot as he leaps from rock to rock. The Paardeberg, or Horse Mountain, and Rick- beck's Casteel or Castle, form a continuation of the Paarl Mountain, northward. Here the zebra, Kolben's 'wild ass,' or horse, formerly abounded ; at present neither horses nor cattle are reared here, except for agricultural purposes. See CAPE OF GOOD HOPE.

DRA'MA, n. s. -\ Fr. drdme ; Lat.

DRAMAT'IC, adj. I drama ; Gr. 8pap,a, a

DRAMAT'ICAL, > scene, from Spaa, to

DRAMATICALLY, adv. i act. A poem repre-

DRAM'ATIST, n. s. J senting action, or in which actions are supposed to be carried on, not related. A dramatist is the author of a drama.

Many rules of imitating nature Aristotle drew from Homer, which he fitted to the drama ; furnishing himself also with observation from the theatre, when it flourished under jEschylus. Euripides, and Sopho- cles. Dryden.

Ignorance and errors are severely reprehended, partly dramatically, partly simply. Id.

I hope to make it appear, that, in the great drama- tick poem of nature, is a necessity of introducing a God. Bentley.

The whole theatre resounds with the praises of the great dramatist, and the

wonderful art and order of the composition. Gurnet's Theory.

There is a kind of drama in the forming of a story, and the manner of conducting and pointing it, is the same as in an epigram. Steele.

To distress them as nothing human ever was dis- tressed ; to deliver them as nothing human ever was delivered, is the business of a modern dramatut.

Johnson.

In short, his idea is to dramatize the penal laws, and to make the stage a court of ease to the Old Bailey.

Sheridan,

DRAMA. The drama is, for the greater part, as Dr. Johnson has denned it, an adaptation of poetry to fictitious representation and dialogue. But it is not confined to any single form that language may have assumed. The works of our greatest dramatist are interspersed occasionally with prose ; and the sources of the influence of the dramatic art over our minds lie deep in the constitution of our nature. Neither are the scenic representations of our theatres essential to a just perception of the beauties, or a full resig- nation of the mind to the power, of this inchant- ing art. They are but the trappings that occa- sionally adorn, but often impede its progress. Man, in the lowest stages of civilisation, exhibits rude and barbarous attempts to arrive at the pleasure which the drama is calculated to im- part. The inhabitants of China, and even of the islands of the South Sea, secluded from the in- fluence of European example, participate in amusements resembling, in species, those of the theatre : and we observe in the earliest pastimes of children, imitations and representations of the conduct of their elders and superiors. They not only indulge in the mimicry of objects imme- diately before them, but frame out for themselves fancied similitudes of things, of which they can only have very partial knowledge. They ' pipe and they dance ; ' they ' mourn and they weep,' in early dramas : thus eagerly going out of themselves towards objects which have acquired a hold on the imagination and the heart. The Hindu theatre is extensive and various. Dra- mas bearing internal and almost indubitable evidence of being at least 500 years old (if not twice that age), could be adduced in proof of the early excellence of the Hindus in that species of composition.

But it is to ancient Greece and her rhapsodists, tragedians, and comedians,

that we must look, historically, for the origin of this art. The modern distinction between the province of the epic and the dramatic poet, was, in the rise of those pursuits, unknown. In the impassioned recitations of the rhapsodist, in the journeyings and declamations of Homer, they were mingled ; while, in the orgies of Bacchus, the historians of the dramatic art are accustomed to trace its first distinct appearance. It was customary, art the feasts of this deity, to sacrifice a he-goat, that animal being supposed to be peculiarly obnoxious to the god, in consequence of the injuries the vine received from its bite. On these occasions, reli- gious hymns were chanted in honor; of the fes- tive god, and rustic poets and reciters contended for the prize of victory. The compositions, at first produced on these occasions, were merely lyrical. To relieve the singer, however, and vary the gratification of the audience, interlocutors were soon introduced, who filled up the pauses of the song with short narratives of some heroic event. Thespis and Phrynicus added a little to this idea, by making one entire story occupy, in continua- tion, all the pauses of the song. In consequence of this improvement, the odes became subordi- nate, in some degree, to the narration, and

seemed to interrupt it at intervals. Dialogue, however, was still unknown; and, as far as this is considered essential to the dramatic art, to ./Eschylus must be given the praise of its inven- tion.

This distinguished poet was born, as it is generally stated, in the 69th, but on better autho- rity, in the 63d Olympiad. Bacchus, it is said, appeared to him in a dream, in his early youth, and commanded him to write tragedies. It is far better established that he was a general in the battle of Marathon, fought in the year before Christ 490 ; and that he was, like the father of the British drama, Shakspeare, an actor in his own plays. Before his time the Greeks had no regular theatre. The faces of the performers being stained with the lees of wine, they exhibited them- selves in the cart of Thespis, a kind of mounte- bank stage. To this succeeded a theatre of wood ; and to that, a more permanent building of stone.

But the improvement of the chorus, in the ancient tragedy, was the most important of the alterations which it owed to /Eschylus. This consisted of hymns sung in honor of Bacchus, as we have intimated, and constituted, at first, the principal part of the performance. It gradually, however, diminished in importance, as the true character of the drama became developed ; but .ˆEschylus first gave it that peculiar and compli- cated form which is so characteristic of the Greek plays. He found it composed of a body of mu- sicians whose lyrical performances were entirely independent of the incidents of the piece ; but he makes therfi to sympathize with all that is transpiring on the stage, and, in effect, to become the echo of the feelings of the audience. He also divided the chorus, which was formerly

directed by a single person, named the Coryphaeus, who frequently spoke or sung alone, into two or more bands, who addressed and replied to each other. ‘ By this means,’ as Sir Walter Scott observes, ‘ the two unconnected branches of the old Bac- chanalian revels were combined together; and we ought rather to be surprised that ˆEschylus ventured, while accomplishing such a union, to render the hymns sung by the chorus subordinate to the action or dialogue, than that he did not take the bolder measure of altogether discarding that which, before his time, was reckoned the principal object of a religious entertainment.’

The ancient tragedy was principally concerned in the development of some great event, influ- encing the fortunes of a dynasty, or involving the fate of a nation. Exalted personages, the sport of a luckless destiny, hurled by the gods, or something above the gods, from the pinnacle of their greatness to the depths of wretchedness, gave to the representation a dark and gigantic interest, hurrying the mind irresistibly on through the widest extremes of mortal condition, and surprising the soul with fearful examples of instability in the things on which man relies with the proudest confidence. The modern drama, with more artificial contrivance and in- tricacy of plot, shakes the mind with quicker alternations of feeling, sustaining and perpetuating its emotions by the anxiety of suspense, the flutter of expectation, and the shock of discovery. Tlie

scale of the theatre among the Greeks was pro- portioned to the magnificent conceptions of their dramatists, and had stages capable of exhibiting temple? and palaces almost in their real magni- tude and gigantic proportions. Neither did their decorations consist of tinsel ornaments, which could only glitter amidst a profusion of artificial lights, but were the genuine productions of the finest arts. The great events they celebrated took place beneath the cope of an unclouded sky, with which the scene was formed to harmo- nise. Neither expence nor labor was spared to make the representation perfect in its minutest circumstances ; the mask and the buskin, though totally unsuited to our dramatic style, were the elegant appendages of that of Athens. The chief object to be attained was a magnificent ideal beauty.

Adverting now to the other branch of the art, Epicharmis, who flourished about B. C. 450, is the first name of any consideration in comic dra- matic poetry. Philologists and philosophers have given us the derivation of the word jewjuwfoa, comedy, from Kw/tq, a ‘ village,’ and have ex- plained the reason for this derivation ; but they are unable to inform us who first

introduced or invented the characters, the actors, and the pro- logues. Aristotle here confesses his incapacity : but he ultimately suggests the true allusion of the word KwfiuiSia, and combats the absurd opinion of its being derived from eo>/iof, com- messatio, 'a revel.' Qc Kupiadsc, UK airo ra KdifiaZnv Xtˆfovrac aXAa rij Kara jcu>/xa£ TrXavij, arijua£o/«v«c IK TU «

the earlier ages of the world : the whc!e inhabi- tants of a district were divided mainly into two classes — those of the artisan and the soldier : and the simplicity and necessities of the one, and the bullying insolence of the other, were almost the only topics upon which the old comedy could descant. There was little subdivision of labor, and no subdivision of character, to furnish the Proteus-shapes of the modern comic muse.

In the old comedy of Greece the illustrious statesmen, generals, and public characters of the commonwealth were brought forward on the stage, and held up to ridicule by nnme before a-n applauding «udience, until it was deservedly su. perseded by what is termed the middle comedy which abolished the chorus, and compelled the poet to substitute for any real personages or characters, in whom he attempted to satirize the vices and follies of the times, disguised or ficti- tious names. This soon gave way in its turn to the new comedy, having for its object the ludi- crous incidents and mortifications of private life. It included also some scenes which call forth pa- thetic emotion, and approached more nearly to the character of tragedy than had been admitted in the ancient comedies of Aristophanes. An agreeable intermediate species of composition was thus introduced, which be-came the foun- dation of the modern drama. The translations of Menander, in Plautus and Terence, give us the only remaining specimens of the new comedy.

Of the Roman tragedy the works of Seneca are the only existing remains. The alterations, indeed, which the Romans made in the drama- tic art are of little importance to its history. They lessened the theatres ; and the orchestra, or, as we should say, the pit of the theatre was no longer left vacant for the occasional occupa- tion of the chorus, but was filled with senators, knights, and the more respectable citizens. The stage was thus brought more near to the eye of the better class of the audience. But an im- portant revolution was effected among this great people in the rank and estimation in which actors were held. ' The ancient Romans,' says Augustin, ' accounting the art of stage-playing and the whole scene infamous, ordained that this sort of men should not only want the honor of other citizens, but also be disfranchised, and thrust out of their tribe by a legal and disgrace- ful censure, which the censors were to execute ; because they would not suffer their vulgar sort of people, much less their senators, to be de- famed, disgraced, or defiled with stage-players ;' which act of

theirs he calls ‘ an excellent true Roman prudence, to be enumerated among the Romans’ praises.’ Individual players, however, it is but just to add, rose to high public estima- tion. Cicero called the celebrated Roscius his friend ; and Paris, the actor, preserved the life of Statius.

It has been admitted on all hands, that the progress of Christianity was unfavorable to the theatre. The primitive Christians regarded it with a double dislike : first, upon the account of its origin, as connected with heathen superstition.; and, secondly, for ‘ the beastly and abominable license practised in the pantomimes, which, al- though they made no part of the regular drama,

were presented, nevertheless, in the same place, and before the same audience.’ — ‘ We avoid your shows and games,’ says Tertullian, ‘ because we doubt the warrant of their origin. They savor of superstition and idolatry ; and we dislike the entertainment, as abhorring the heathen religion on which it is founded.’ Yet were these exhibi- tions never formally and legally abolished, even where Christianity became the religion of the state.

The Mysteries of the dark ages, like the orgies of Bacchus, first introduced a species of modern drama, mingled with superstitious rites. ‘ What- ever name they assumed,’ says Sir Walter Scott, they ‘ were often so unworthy of the Christian religion, on which they were founded, that their being tolerated can be attributed only to the gross ignorance of the laity, and the cunning of the Catholic priesthood, who used them, with other idle and sometimes indecorous solemnities, as one means of amusing the people’s minds, and detaining them in contented bondage to their spiritual superiors.’ To these succeeded the Moralities, and the Romantic Dramas, cultivated so successfully in the sixteenth century in Spain, and upon the model of which the English drama suddenly arose to comparative perfection in the reigns of queen Elizabeth and James I.

We now, therefore, arrive at the modern dis- tinction between the romantic and the classical drama ; and, in the history of our own dramatical productions, these different kinds of composition are most strikingly exemplified.

Shakspeare stands alone and unrivalled amon r the poets who cultivated the former species. In his hands the art bounded as it were to a sudden and instantaneous perfection ; — himself his own legislator and example ; —

freed from all external influence, and unfettered by any other rules, but those which great minds create for themselves ; — and confessedly beyond the reach of imitation, not merely in respect of that poetic genius which carried him into the most sublime and pathless tracks of human thought, but of the form and fabric of his dramas.

The shape and modification of the other class were deduced from the canons of that French criticism which obtained a footing amongst us at the time of the Restoration, and constituted that secondary or reflected Greek tragedy, which, though frequently confounded with the ancient school, is at best but its type or shadow. Pri- marily, however, it took ‘ its form and pressure’ from the unities, which, originating in a para- phrastic distortion of a passage in Aristotle, have held so despotic an influence over the dramatic writings of France. Its leading attributes are these : — a prologizing development of the story in the shape of a regular narrative recited by a subordinate agent,the immeasurably long speeches of the dialogue, and consequently the absence of rapid and vehement action. Add to this, the predominance of love over the destinies of the personages ; a passion, ‘ according to Dryden, the great apologist of the school,’ of such general concernment, that it delights to see its own image in a public entertainment.

Dr. Johnson well remarks upon this su\ect, ‘ He that, without diminution of any other ex- cellence, shall preserve all the unities unbrol.tn,

deserves the like applause with the architect who shall display all the orders of architecture in a citadel, without any deduction from its strength : but the principal beauty of a citadel is to exclude the enemy ; and the greatest graces of a play are to copy nature, and instruct life.’

‘ The necessity of observing the unities of time and place,’ says this great writer in his Pre- face to Shakspeare, ‘ arises from the supposed necessity of making the drama credible. The critics hold it impossible, that an action of months or years can be possibly believed to pass in three hours ; or that the spectator can suppose himself to sit in the theatre, while ambassadors go and return between distant kings, while armies are levied, and towns besieged, while an exile wan- ders and returns, or till he whom they saw court- ing his mistress, should lament the untimely fall of his sou. The mind revolts from evident false- hood, and fiction loses its force when it departs from the resemblance of reality.

‘ From the narrow limitation of time necessa- rily arises the contraction of place. The specta- tor, who knows that he saw the first act at Alex- andria, cannot suppose that he sees the next at Rome, at a distance to which not the dragons of Medea could, in so short a time, have transported him ; he

knows with certainty that he has not changed his place, and he knows that place can- not change itself; that what was a house cannot become a plain ; that what was Thebes can never be Persepolis.

1 Such is the triumphant language with which a critic exults over the miseries of an irregular poet, and exults commonly without resistance or reply. It is time, therefore, to tell him, by the authority of Shakspeare, that he assumes as an unquestionable principle a position, which, while his breath is forming it into words, his understanding pronounces to be false. It is false, that any representation is mistaken for reality.; that any dramatic fable, in its mate- riality, was ever credible,or, for a single moment, was ever credited. The objection arising from the impossibility of passing the first hour at Alexandria, and the next at Rome, supposes, that when the play opens, the spectator really imagines himself at Alexandria, and believes that his walk to the theatre has been a voyage t ander and Caesar, that a room illuminated with candles is the plain of Pharsalia, or the bank of Granicus, he is in a state of elevation above the reach of reason, or of truth, and, from the heights of empyrean poetry, may despise the circum- spections of terrestrial nature. There is no rea- son why a mind thus wandering in ecstasy should count the clock : or why an hour should not be a century in that calenture of the brain that can make the stage a field. The truth is, that the (judicious) spectators are always in their senses, and know, from the first act to th- last, that the

stage is only a stage, and that the players are only players. They come to hear a certain number of lines recited with just gesture and elegant modulation. The lines relate to some action, and an action must be in some place; but the different actions that complete a story may be in places very remote from each other; and where is the absurdity of allowing that space to represent first Athens, and then Sicily, which was always known to be neither Sicily nor Athens, but a modern theatre ?

‘ By supposition, as place is introduced, time may be extended ; the time required by the fable elapses for the most part between the acts ; for, of so much of the action as is represented, the real and the poetical duration are the same. If, in the first act, preparations for war against Mi- thridates are represented to be made in Rome, the event of the war may, without absurdity, be represented, in the catastrophe, as happening in Pontus; we know that there is neither war, nor preparation for war ; we know, that we are nei- ther in Rome nor Pontus ; that neither Mithri- dates nor Lucullus are before us. The drama exhibits successive imitations of successive ac- tions ; and why may not the second imitation represent an action that happened years after the first, if it be so connected with it, that nothing but

time can be supposed to intervene ? Time is, of all modes of existence, most obsequious to the imagination ; a lapse of years is as easily con- ceived 35 a passage of hours. In contemplation we easily contract the time of real actions, and therefore willingly permit it to be contracted when we only see their imitation. It will be asked how the drama moves,- if it is not credited ? It is credited with all credit due to a drama. It is credited, whenever it moves, as a just picture of a real original ; as representing to the audi- tor what he would himself feel, if he were to do or suffer what is there feigned to be suffered or to be done. The reflection that strikes the heart is not that the evils before us are real evils, but that they are evils to which we ourselves may be exposed. If there be any fallacy, it is not that we fancy the players, but that we fancy ourselves unhappy for a moment; but we rather lament the possibility, than suppose me presence of misery, as a mother weeps over her babe, when she remembers that death may take it from her. The delight of tragedy proceeds from our con- sciousness of fiction ; if we thought murders and treasons real, they would please no more.

- *Imitations produce pain or pleasure, not be- cause they are mistaken for realities, but because they bring realities to mind. When the imagin- ation is recreated by a painted landscape, the trees are not supposed capable to give us shade, or the fountains coolness ; but we consider how we should be pleased with such fountains play- ing beside us, and such woods waving over us. We are agitated in reading the history of Henry V. yet no man takes the book for the field of Agincourt. A dramatic exhibition is a book re- cited with concomitants that increase or diminish its effect. Familiar comedy is often more power- ful on the theatre than in the page; imperial tragedy is always less. The humor of Petru- chio may be heightened by grimace ; but what*

voice or what gesture can hope to add dignity or force to the soliloquy of Cato ? A play read affects the mind like a play acted. It is there- fore evident, that the action is not supposed to be real, and it follows, tint between the acts a shorter or longer time may be allowed to pass, and that no more account of space or duration is to be taken by the auditor of a drama, than by the reader of the narrative, before whom may pass in an hour the life of a hero, or the revolu- tions of an empire.'

We cannot pursue, in detail, the claims of modern dramatists to distinction. Theatrical performances, and consequently theatrical writ- ings, were from religious motives suspended dur- ing the life of Cromwell ; but at the accession of Charles, the drama re-appeared with a licentious- ness that has scarcely been equalled in any other age or country. No species of literature was more admired, or more debased, than this. Mil- ton had,

some years before, in his Comus and Sampson Agonistes, endeavoured to introduce the Grecian model, but his efforts were in vain. The profaneness and nauseous indecency which characterised the dramatical writings of Charles's time had not even the veil of refinement to ren- der them less disgusting. Folly, absurdity, and a dereliction of all the ancient rules of the drama, and even of common sense itself, were visible on every side. From this account little abatement can be made during the remainder of the century.

The celebrated play of the Rehearsal produced indeed some effect ; but a more considerable time was required, entirely to change the pre- possessions of the age. Even Dry den himself, though a writer of great original powers, was in- fected with a full proportion of the faults of his cotemporaries. We must not, however, regard, as barren of dramatical genius, a century which began in the life-time of Beaumont, Fletcher, Jonson, and even Shakspeare himself, and which afterwards gave birth to Otway, Lee, Dryden, and others, whose names are still deservedly ce- lebrated in dramatical literature. But, in the eighteenth century, the drama became more regular in its composition, and less openly impure in its language and sentiments. Collier having collected together a variety of offensive passages from the writings of our dramatic authors, the public, not wholly dead to taste and decency, started with displeasure at the disgusting recital, and having perceived the hideousness of such passages in combination, determined no longer to tolerate them in detail. From this time, not even the genius of Congreve could reconcile them to gross impurity ; so that, although much, very much, still remains which modesty can by no means approve, we have never reverted to that open licentiousness which our dramatists were at one time accustomed to display. The taste of the eighteenth century was farther evi- denced by the rejection of rhyming plays, and a growing admiration for the works of Shakspeare. Bombast of language was no longer confounded with loftiness of idea, nor a series of puns or quibbles mistaken for the festivity of genuine wit.

Modern dramatic poetry may be considered as comprehending tragedy, comedy, and farce.

These are sufficiently distinguished by their gene- ral spirit and strain. While pity and terror, and the other strong passions, form the province of

*tne tragic muse, the chief instrument of comedy and farce is ridicule. These last two species of composition are indeed so perpetually running into each other, that they can hardly be distin- guished : it is true that what is now known by the name of farce, is too much inclined to the extravagance of ridicule ; but the most commen- dable specimens of this kind of entertainment differ in nothing essential from proper comedy. * Comedy proposes for its object,' says Dr. Blair, ' neither the great sufferings, nor the great crimes of men; but their follies and slighter vices, those parts of their character which raise in be- holders a sense of impropriety, which expose them to be censured and laughed at by others, or which render them troublesome in civil society.*

' The subjects of tragedy are not limited to any age or country ; but the scene and subject of co- medy should always be laid in our own country, and in our own times. The reason is obvious ; those decorums of behaviour, those lesser discri- minations of character, which afford subject for comedy, change with the differences of countries and times ; and can never be so well understood by foreigners as by natives. The comic poet, who aims at correcting improprieties and follies of be- haviour, should catch the manners living as they rise. It is not his business to amuse us with a tale of other times ; but to give us pictures taken from among ourselves; to satirize reigning and present vices; to exhibit to the age a faithful copy of itself, with its humors, its follies, and its extravagancies.

- *Comedy may be divided into two kinds : co- medy of character, and comedy of intrigue. The former is the more valuable species ; because it is the business of comedy to exhibit the prevailing manners which mark the character of the age in which the scene is laid : yet there should be al- ways as much intrigue as to give us something to wish and something to fear. The incidents should so succeed one another, as to produce striking situations, and to fix our attention ; while they afford at the same time a proper field for the exhibition of character. The action in comedy, though it demands the poet's care in order to ren- der it animated and natural, is a less significant and important part of the performance than the action in tragedy; as in comedy it is what men say, and how they behave, that draws our atten- tion, rather than what they perform or what they suffer. In the management of characters, one of the most common faults of comic writers is the carrying of them too far beyond life. Wherever ridicule is concerned, it is indeed extremely diffi- cult to hit the precise point where true wit ends and buffoonery begins. When the miser in Plautus, searching the person whom he suspects of having stolen his casket, after examining first his right hand, and then his left, cries out, Ostende etiam tertiam. Show me your third hand, there is no one but must be sensible of the extravagance. Certain degrees of*

exaggeration are allowed to the comedian, but there are limits set to it by nature and good taste ; and supposing the miser to be ever so much engrossed bv his jealousy and

his suspicions, it is impossible to conceive any man in his wits suspecting another of having more than two hands.' See POETRY.

DRAMMEN, a town in the government of Christiania, Norway, consisting of two distinct places ; Bragernaes and Stromsoe, situated the one on the north and the other on tKe south bank of the river Drammer, which here discharges it- self into the gulph of that name. A brisk traffic is here carried on in timber and iron brought from the interior. The harbour admits only small vessels. Population of the whole place about 6000. Twenty miles south-west of Christiania.

DRANCE, a river of Switzerland, which runs through the lower Valais, and falls into the Rhone. In June, 1818, a dreadful calamity oc- curred here, from an accumulation of the waters of this river in the narrow valley of Bagnes. The fall of an enormous avalanche, or rather glacier, had blocked up the mouth of the valley, and the waters of the D ranee were thus formed into a lake, acquiring additional height daily. The only expedient was to cut a canal through the top of the ice, to stop the farther accumulation of the water. This was accordingly done ; and the water, flowing through the channel, fell during some days on the opposite side into the bed of this river, forming a magnificent cascade. On the 16th, however, the accumulated mass burst its narrow bounds, and overwhelming the lower val- ley, as far as the bed of the Rhine, swept away trees, cottages, and cattle, with a great number of the inhabitants of Champsee and Martigny.

DRAPE, v. w.\ FT. drop; low. Lat. dra

DRA'PER, n. s. (pus. To make cloth : a dra-

DRA'PERY, (per is he who sells this use

DRA'PET. 3 ml commodity ; and drapery cloth-work, and, in a particular sense, woollen cloth-work ; hence the cloth itself when made, and the dress made of it. Hence also any kind of flowing dress, robes, or stuff. Drapet is used by Spenser as synonymous with drapery.

Thence she them brought into a stately hall, Wherein were many tables fair dispred,

And ready dight with drapcts feastival, Against the v'.ands should be ministered.

Faerie Queene.

It was rare to set prices by statute •, and this act did not prescribe prices, but stinted them not to ex- ceed a rate, that the clothier might drape accordingly as he might afford. Bacon.

He made statutes for the maintenance of drapery, and the keeping of wools within the realm.

Id. Henry VII.

If a piece of cloth in a draper's shop be variously folded, it will appear of differing colours.

Boyle on Colours. The draper and mercer may measure her.

Howel,

Poets are allowed the same liberty in their de- scriptions and comparisons, as painters in their dra- peries and ornaments. Prior.

I could wish, for the sake of my country friends, that there was such a kind of everlasting drapery to be made use of by all who live at a. certain distance from the town, and that they would agree upon such fashions as should never be liable to changes and innovations. Addison.

The Bulls and Frogs had served the lord Strtitt with drapery ware for many years.

*Arbuthnot's History of John Bull**

DllA

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DRA

Lights came at length, and men, and maids, who

found

An awkward spectacle their eyes before ! Antonio in hysterics, Julia swooned,

Alfonso leaning, breathless, by the door, Some half-torn drapery scattered on the ground, Some bloodj and several footsteps, but no more.

Byron.

DRAPER (Sir William), an English general, born at Bristol, where his father was collector of the customs. He received his education at Eton and King's College, Cambridge, after which he went to the East Indies, where he rose to the rank of colonel. In 1763 he took Manilla, in conjunction with admiral Cornish ; but the fort was preserved from plunder, on condition of pay- ing a ransom of 4,000,000 of dollars, which was never discharged. The commander was, how- ever, created a knight of the Bath. In 1769 he was engaged in a controversy with Junius, in de- fence of his friend the marquis of Granby. In 1769 he was appointed lieutenant-governor of Mi- norca, and when that place surrendered to the enemy, he brought an accusation against general Murray, the governor, but after his trial general Draper was commanded by the court to make an apology to him. General Draper died at Bath in

1787.

DRA'STICK, adj. Apa?ucoe. Powerful; vigorous ; efficacious. It is used of a medicine that works with speed ; as jalap, scammony, and the stronger purges. DRAVE. See DRIVE. DRAVE, a large navigable river of Germany, which rises in the former archbishopric of Saltz- burg, in the Tyrol, runs south-east through Sti- ria, and, after dividing Hungary from Sclavonia, falls into the Danube at Esseck. Gold is some- times obtained from its washings. DRAUGH. See DRAFT. DRAUGHT, n. s. i DRAUGHT-HORSE, > See DRAW. DRAUGHT-HOUSE. 3

DRAUGHT, in architecture, or, as it is pro- nounced, draft, the figure of an intended building described on paper; wherein are laid down, by scale and compass, the several divisions and partitions of the apartments, rooms, doors, passages, conveniences, 8cc., in their due pro- portion. It is exceedingly convenient, before a building is begun to be raised, to have draughts of the ichnography, or ground plot, of each floor : as also the form and fashion of each front, with the windows, doors, ornaments, &c., in an or- thography, or upright. Sometimes the several fronts, &c., are taken, and represented in the same draught, to show the effect of the whole building : this is called a scenography, or per- spective.

DRAUGHT, in medicine. See POTION. DRAUGHT, in trade, called also cloff or clouch is a small allowance on weighable goods, made by the king to the importer, or by the seller to the buyer, that the weight may hold out when the goods are weighed again. The king allows 1 Ib. draught for goods weighing not less than 1 cwt.,

2 Ibs. for goods weighing between 1 and 2 cwt.,

3 Ibs. for goods weighing between 2 and 3 cwt.,

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4 Ibs. from 3 to 10 cwt., 7 Ibs. from 10 to 18 cwt. 9 Ibs. from 1 8 to 30 or upwards.

DRAUGHT is also used sometimes for a bill o; exchange, and commonly for an order for the payment of any sum of money due, &c. The person who gives the order is said to draw upon the other.

DRAUGHT HOOKS, large hooks of iron fixed 01: the cheeks of a cannon carriage, two on each side, one near the trunnion hole and the other at the train, distinguished by the name of fore and hind. Large guns have draught hooks near the middle transom, to which are fixed the chains thai serve to keep the shafts of the limbers on a march The fore and hind hooks are used for drawing a gun backwards or forwards, by men with strong ropes, called draught ropes, fixed to these hooks.

DRAUGHT HORSE, in farming, a sort of coarse made horse, destined for the service of a cart or plough.

DRAW, v. a., v. n., & n. s.~\ Sax. dragan ; Teut. DRAFTMENT, n. s. trecken, from Lat.

DRAUGHT, n. s. traho, to pull ; i.e.

DRAUGHT'-HORSE, Gr. Spaw, to do any

DRAUGHT'-HOUSE, thing with violence.

DRAW'BACK, n. s. [See DRAG. To pull

DRAW'BRIDGE, fin a particular di-

DRAWEE', rection, or with

*DRAW*ER, force sufficient to*

_ DRAW'ING, overcome resist-

DRAW'ING-ROOM, ance : hence to

DRAW'WELL. J lengthen, to force

generally, and to wrest or distort : hence also to attract, to extract, and to protract ; to let fluids run ; to inspire air ; to deduce or derive ; to trace in lines, or sketch ; and, metaphorically, to form in writing, or com pose; to collect; to bring off or away from combat, legal dispute, or friendly contest (thus we speak of a 'drawn' battle, suit, or game); and, literally or metaphorically, to lead, seduce, entice, or persuade ; with their consequences, to gain, win, or receive. Of the various prepositions often added to the active verb, to draw off", and to draw up, seem the only idioms : the one is applied to liquors drained through a vent, and often means to empty, as in the brewhouse ; the other, to draw up, is to complete in writing, to compose in a formal manner. We cannot see the propriety of ex- plaining draw in, draw over, &c., as different senses of the verb, any more than draw away, draw aside, or draw down : they are all but dif- ferent applications of the same idea. As a neu- ter verb, to draw signifies to act as a weight or overcoming force, hence as a beast of burden ; to adhere, contract, come together; advance towards ; to practise delineation ; take a lot, or card. As a substantive, ' a draw' is sometimes used for the act of drawing, and a lot, or the thing drawn. Dr. Johnson says, that to draw re- tains through all its varieties of use some shade of its original meaning, to pull ; and expresses ' a gradual, continuous, and leisurely action :' rather, we presume, overcoming force, and what- ever time is necessary to make it effectual. Draught is the act or habit of drawing ; a thing, quantity, or number drawn ; hence, a quantity drunk, a prescribed quantity or dose of medi-

cine ; a drain ; and the quantity of water neces- sary to float a vessel ; a representation, a picture. A draught-horse is one that habitually draws carriages ; a draught-house, a house in which offal, or what is drawn off from general use, is deposited. A draw-back is what is claimed back or against an account, whether by way of dis- count, abatement of legal dues, or otherwise. A draw-bridge, one that can be withdrawn at pleasure; drawee is explained in the extract; a drawing-room is one into which company with- draws; and a draw-well, one that is furnished with means for drawing up water.

Therfore thei don alle her werkis, that thei be seen of men : for thei drawen abrood her falateries and magnyfien hemmes, and thei love the nrste placis in soperis, &c. Wiclif.

And he wente and drough him to oon of the cyte- seynes of that cuntre, and he sente him into his toun to feede swyn. Wiclif. Luk. xv.

I will draw my sword ; my hand shall destroy them.

Exodus xv.

From the hewer of thy wood unto the drawer ef thy •water. Dent, xxix. 11.

The liers in wait draw themselves along.

Judges xx. 37.

Draw ye near hither all the chief of the people.

1 Sam.

And they brake down the image of Baal, and brake down the house of Baal, and made it a drawjhthouie.

2 King.*

Whatsoever entereth in at the mouth goeth into the belly, and is cast out into the draught. Matt. xv. 17.

Now draweth cutte or that ye for ther turnne ; He which that hath the shortest slial beginne.

Chaucer. Prol. to Cant. Tales.

The Irish will better be drawn to the English, than the English to the Irish government.

Spenser on Ireland.

I conceive the manner of your handling of the ser- vice, by drawing sudden draughts upon the enemy, when he looketh not for you. Id.

Whereas it is concluded, that the retaining diverse things in the church of England, which other reformed churches have cast out, must needs argue that we do not well, unless we can shew that they have done ill : What needed this wrest to draw out from us an accu- sation of foreign churches ? Hooker.

I wish that both you and others would cease from drawing the scriptures to your fantasies and affections.

Whitgifte.

Go, draw aside the curtains, and discover The several caskets to this noble prince.

Shakspeare.

Clerk, draw a deed of gift. Id.

Go, wash thy face, and draw thy action : come, thou must not be in this humour with me. Id.

The poet

Did feign that Orpheus drew trees, stones, and floods ; Since nought so stockish, hard, and full of rage, But musick, for the time, doth change his nature.

Id. For thy three thousand ducats here is six.

If every ducat in six thousand ducats

Were in six parts, and every part a ducat,

I would not draw them, I would have my bond.

Id.

For his sake

Did I expose myself, pure ; for his love Drew to defend him, when he was beset. Id,

What, art thou drawn amongst those heartless

hinds ? f,[.

There is no more faith in thee than in a stoned prune ; no more truth in thee than in a drawn fox.

Id.

Ill raise such artificial sprights, As by the strength of their illusion Shall draw him on to his confusion.

Id. Macbeth,

The wine of life is drawn, and the mere lees Are left this vault to brag of. Id.

This seems a fair deserving, and must draw me That which my father loses. Id. King Lear.

Some blood drawn on me would beget opinion Of my more fierce endeavour. Id.

With his other hand, thus o'er his brow, He falls to such perusal of my face, As he would draw it. Id. Hamlet.

Stand in some bye room, while I question my puny drawer to what end he gave me the sugar.

Id. Henry IV.

Ulysses and old Nestor yoke you like draft oxen and make you plough up the wair.

Id. Troilus and Cressida.

In process of time, and as their people increased , they drew themselves more westerly towards the Red Sea. Raleigh.

Geffrey of Bouillon, at one draught of his bow, shooting against David's tower in Jerusalem, broached three feetless birds called allerions.

Camden's Remains.

There was no war, no dearth, no stop of trade or commerce j it was only the crown which had sucked too hard, and now being full, upon the head of a young king, was like to draw less.

Bacon's Henry VII.

We see that salt laid to a cut finger, healeth it ; so as it seemeth salt draweth blood, as well as blood draweth salt. Bacon.

I have not yet found certainly, that the water itself by mixture of ashes, or dust, will shrink, or draw into less room. Id. Natural History.

When the fountain of mankind Did draw corruption, and God's curse, by sin, This was a charge that all his heirs did bind, And all his offspring grew corrupt therein.

Sir J. Davies.

Having the art by empty promises and threats, to draw others to his purpose. Hat/ward.

Under colour of war, which either his negligence draws on, or his practices procured, he levied a sub- sidy. Id.

The English lords did ally themselves with the Irish, and drew them in to dwell among them, and gave their children to be fostered by them.

Dame.*

She had all magnetic force alone, To draw and fasten sundered parts in one. Donne. Let the drawers be ready with wine and fresh

glasses ; Let the waiters have eyes, though their tongues must

be tied. Ben Jonson's Tavern A cad.

Half the buildings were raised on the continent, and the other half on an island, continued togethei by a drawbridge. Carew's Survey of Cornwall.

One injury draws on another.

Bp. Hall. Contemplations.

The covetous man is a downright servant, a draught-horse without bells or feathers. Cowley.

Draw out wiih credulous desire, and lead At will the manliest, resolutest

breast, As the magnetic hardest iron draws. Villon.

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He ended ; anil the' archangel soon drew nigh, Not in his shape celestial, but as man (-lad to meet man. Id. Paradise Lost.

Thus I called, and strayed I know not whither, From where I first drew air, and first beheld This happy light. Id.

Were it a draught for Juno when she banquets, I would not taste thy treasonous offer. Miltun.

Have they inve.nted tones to win The women, and make them draw in The men, as Indians with a female Tame elephant inveigle the male ? Hudibras He affected a habit different from that of the times, such as men had only beheld in pictures, which drew the eyes of most, and the reverence of many, towards him. Clarendon.

An army was drawn together of near six thousand horse. Id.

The lord Bernard, with the king's troops, seeing there was no enemy left on that side, drew up in a large field opposite to the bridge. Id.

He had once continued about nine days •without drink , and he might have continued longer, if, by distempering himself one night with hard study, he had not had some inclination to take a small draught. Boyle.

I took rectified oil of vitriol, and by tiegrees mixed with it essential oil of wormwood, drawn over with water in a limbeck. Id. on Colours.

The examination of the subtile matter would draw on the consideration of the nice controversies that perplex philosophers. Id. on Fluids.

Religion will requite all the honour we can do it, by the blessing? it will draw down upon us.

Tillotson.

Upon the draught of a pond , not one fish was left, but two pikes grown to an excessive bigness. Hale.

From the events and revolutions of these govern- ments, are drawn the

usual instructions of princes and statesmen. Temple.

Several wits entered into commerce with the Egyptians, and from them drew the rudiments of sciences. Id.

I have cured some very desperate coughs by a •Iraught every morning of spring water, with a handful of sage boiled in it. Id.

A general custom of using oxen for all sorts of draught, would be perhaps the greatest improvement.

Id.

The brand, amid the naming fuel thrown, Or drew, or seemed to draw, a dying groan.

Dryden's Fablet.

Draw out a file, pick man by man, Such who dare die, and dear will sell their death.

Dryden. The rest

They cut in legs and fillets for the feast, Which drawn and served, their hunger they appease.

Id. He has drawn a blank, and smiles. Id.

A curtain drawn presented to our view A town besieged. Id. Tyrannic Lovq.

So Muley-Zeydan found us Drawn tip in battle, to receive the charge.

Dryden.

Translation is a kind of drawing after the life ; where every one will acknowledge there is a double sort of a likeness, a good one and a bad. Id.

Her pencil drew whate'er her soul designed. And oft the happy draught surpassed the imago in her

mind. Id.

With roomy decks, her guns of mighty strength, Deep m her draught, and warlike in her length. Id,

In some similes, men draw their comparisons into minute particulars of no importance.

Felton on the Classiclx.

The first conceit tending to a watch, was a draw- well : the people of old were wont only to let down a pitcher with a hand-cord, for as much water as they could easily pull up. Grew.

People do not care to give alms without some se- curity for their money ; and a wooden leg or a wi- thered arm is a sort of draftment upon heaven for those who choose to have their money placed to ac- count there. Mackenzie.

Folly consists in the drawing of false conclusions from just principles, by which it is distinguished from mad- ness, which draws just conclusions from false princi- ples. Locke.

When he finds the hardships of slavery outweigh the value of life, 'tis in his power, by resisting his master, to draw on himself death. Id.

Those elucidations have given rise or increase to his doubts, and drawn obscurity upon places of scrip- ture. Id.

There may be other and different intelligent beings of whose faculties he has as little knowledge, or ap- prehension, as a worm, shut up in one drawer of a cabinet, hath of the senses or understanding of a man. id.

The Maltese harden the bodies of their children, by making them go stark naked, without shirt or drawers, till they are ten years old. Id.

I have, in a short draught, given a view of our ori- ginal ideas, from whence all the rest are derived. Id.

It was the prostitute faith of faithless miscreants that drew them in, and deceived them. South.

Every draught, to him that has quenched his thirst, is but a further quenching of nature ; a provi- sion for rheum and diseases. Id

A good inclination is but the first rude draught of virtue ; but the finishing strokes are from the will ; which, if well disposed, will by degrees perfect ; if ill disposed, will by the superinduction of ill habits quickly deface it. Id

Majesty in an eclipse, like the sun, draws eyes that would not have looked towards it if it had shined out.

Suckling.

Philoclea found her, and to draw out more, said she, I have often

wondered how such excellencies could be. Sidney.

Philoclea ititreated Pamela to open her grief ; who, drawing the curtain, that the candle might not com- plain of her blushing, was ready to speak. Id.

In private draw your poultry, clean your tripe, And from your eels their slimy substance wipe.

King.

A man of fire is a general enemy to all waiters, and makes the drawers abroad, and his footmen at home, know he is not to be provoked. Toiler.

From the soft assaults of love Poets and painters never are secure :

Can I, untouched, the fair one's passions move, Or thou draw beauty, and not feel its power?

Prior.

Numbered ills, that lie unseen In the pernicious draught : the word obscene, Or harsh, which, once elanced, must ever fly Irrevocable, the too prompt reply. Id-

His sword ne'er fell but on the guilty head ; Oppression, tyranny, and power usurped, Draw all the vengeance of his arm upon 'em.

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If we make a drawn game of it, or procure but mo- derate advantages, every British heart must tremble.

Id.

I shall say nothing of those silent and husy multi- tudes that are employed within doors in the drawing up of writings and conveyances. Id.

Such a draught of forces would lessen the number of those that might otherwise be employed. Id.

While near the Lucrine lake, consumed to death, I draw the sultry air, and gasp for breath, You taste the cooling breeze. Id. on Italy.

They should keep a watch upon the particular bias in their minds, that it may not draw too much.

Id. Spectator.

Authors, who have thus drawn off the spirits of their thoughts, should lie still for some time, till their minds have gathered fresh strength, and by reading, reflection, and conversation, laid in a new stock of elegancies, sentiments, and images of na- ture. Id. Freelwlder.

Some might be brought into his interests by mo- ney ; others drawn over by fear. Id. on the War.

When the engagement proves unlucky, the way is to draw off by degrees, and not to come to an open rupture. . Collier.

Sucking and drawing the breast dischargeth the milk as fast as it can be generated.

Wiseman on Tumours.

I opened the tumour by the point of a lancet, with" out drawing one drop of blood. Id. Surgery.

In poundage and drawbacks I lose half my rent ; Whatever they give me, I must be content. Swift.

Love is a flame, and therefore we say beauty is attractive, because physicians observe that fire is a great drawer. Id.

The report is not unartfully drawn, in the spirit of a pleader, who can find the most plausible topicks.

Id.

They slung up one of their hogsheads, and I drank it off at a draught ; which I might well do, for it did not hold half a pint. Gulliver's Travels.

Spirits, by distillation, may be drawn out of vege- table juices, which shall flame and fume of themselves.

Cheyne. The arrow is now drawn to the head.

Atterbury.

Why drew Marseilles' good bishop purer breath, When nature sickened, and each gale was death?

Pope. Shall Ward draw contracts with a statesman's skill ?

Id.

They random drawings from your sheets shall take, And of one beauty many blunders make. Id.

What you heard of the words spoken of you in the drawing-room was not true : the sayings of princes are generally as ill related as the sayings of wits.

Id. .

Delicious wines the' attending herald brought ; The gold gave lustre to the purple draught.

Id. Odyssey.

Now, sporting muse, draw in the flowing reins ; Leave the clear streams awhile for sunny plains.

Gay.

Batter a piece of iron out, or as workmen call it, 4ro.iv it out, till it comes to its breadth. Moxon.

With a small vessel one may keep within a mile of the shore, go amongst rocks, and pass over shoals, where a vessel of any draught would strike.

EUit't Voyage.

The most occasion that farmers hare, is for draught horses. Mortimer's Husbandry.

The joiner puts boards into ovens after the batch is drawn. Id.

Till rescued from the crowd beneath, No more with pain to move or breathe, I rise with head elate, to share Salubrious draughts of purer air. Shenstone.

It is sweet to feel by what fine-spun threads our affections are drawn together. Sterne.

The power of drawing, modelling, and using co- lours, is very properly

called the language of art.

Sir J. Reynolds.

There is a court jargon, a chit-chat, a small talk, which turns singly upon trifles ; and which, in a great many words, says little or nothing. It stands fools instead of what they cannot say, and men of sense instead of what they should not say. It is the proper language of levees, drawing-rooms, and ante- chambers. Chesterfield.

Compliments of congratulation are always kindly taken, and cost one nothing but pen, ink, and paper. I consider them as dnughts upon good breeding, where the exchange is always greatly in favour of the drawer. Id.

As the subtle enemy of mankind takes care to draw men gradually into sin, so he usually draws them by degrees into temptation. Mason,

Just when our drawing-rooms begin to blaze

With lights, by clear reflection multiplied

From many a mirror, in which he of Gath

Goliath, might have seen his giant bulk

Whole without stooping, towering crest and all,

My pleasures too begin. Cowper.

Here, my friend, are the drafts of two deeds, which I wish to have your opinion on. — By one, she will enjoy eight hundred a-year independent while I live ; and, by the other, the bulk of my fortune at my death.

Sheridan.

A bill of exchange is a written order for the pay- ment of a certain sum of money at an appointed time. It is a mercantile contract in which four persons are mostly concerned, viz. 1. The drawer, who receives the value. 2. His debtor in a distant place, upon whom the bill is drawn, who is called the drawee, and who is to accept and pay it, &c.

Dr. Ree»'r. Cyclopaedia.

DRAWBACK, in commerce, certain duties, either of the customs or of the excise, allowed upon the exportation of some of our own manufactures ; or upon certain foreign merchandises, that have paid duty on importation. The oaths of the merchants importing and exporting are required to obtain

the drawback on foreign goods, affirm- ing the truth of the officer's certificate on the entiy, and the due payment of the duties : and these may be made by the agent of any corpo- ration or company, or by the known servant of any merchant usually employed in making his entries and paying his customs. In regard to foreign goods entered outward, if less quantity or value be fraudulently shipped out than what is expressed in the exporter's certificate, the goods therein mentioned, or their value, are forfeited, and no drawback is allowed. Foreign goods ex- ported by certificate in order to obtain the draw- back, not shipped or exported, or relanded in Great Britain, unless in case of distress to save them from perishing, lose the benefit of the draw- back, and are forfeited, or their value, with the vessel, horses, carriages, &c., employed in the re- landing thereof ; and the persons employed in the relanding them, or by whose privity they are re- landed, or into whose hands they shall knowingly come, are to forfeit double the amount of the

drawback. Officers of the customs conniving at c r assisting in any fraud relating to certificate goods, besides other penalties, are to forfeit their office, and suffer six months' imprisonment with- out bail or mainprize ; as are also masters, or persons belonging to the ships employed therein. Bonds given for the exportation of certificate goods to Ireland must not be delivered up, nor draw- back allowed for any goods, till a certificate un- ler the hands and seals of the collector or comp- troller, &c., of the customs be produced, testifying the landing. See CUSTOMS.

A DRAWBRIDGE may be made after several

different ways ; but the most common are made with plyers, twice the length of the gate, and a foot in diameter. The inner square is traversed with a cross, which serves for a counterpoise ; and the chains which hang from the extremities of the plyers, to lift up or let down the bridge, are iron or brass. In navigable rivers it is sometimes necessary to make the middle arch of bridges with two moveable platforms, to be raised occa- sionally, in order to let the masts and rigging of ships pass through. But this contrivance has fallen into disuse before our modern improvements in the construction of bridges.

DRAWING.

DRAWIKG is the art of representation by pic- ture; or of delineating the appearances of things upon a plain surface, by means of lines, shades, and

shadows, formed by various coloring mate- rials. The art of drawing, or of delineating the boundaries, outlines, terminations, and forms of figures, may be considered as the basis of painting, and is of the greatest importance to every artist ; for it is but labor lost, when the painter endea- vours to conceal, by ingenious artifices of color, those details of form which are fundamentally incorrect, and incoherent. It is the groundwork ff painting and of sculpture, and is equally essential in architecture.

DRAWING, so called par excellence, embraces all the higher qualities of the art, and demands a good eye, a fine taste, and a well-practised hand. It requires a knowledge of pictorial geometry, perspective, anatomy, proportion, both relative and exact, and practice. Sir Joshua Reynolds forcibly calls it, ‘ an armour, which upon the strong is an ornament and a defence; and upon the weak and mis-shapen, a load.’ It leads to a facility in composing, and gives what is called a masterly handling of the chalk or pencil.

By every polished nation the study of this art has, at all times, been held in high esteem : — not only as affording a delightful employment in leisure hours, but from the more important con- sideration of its influence upon the mind and judgment, by forming the eye, and directing the intellect to habitual discrimination of dimension, regularity, proportion, and order; and we may add, that to those who, either from their birth or unforseen circumstances, are denied a competent portion of the world’s wealth, it presents a pow- erful motive for aspiration after excellence in the arts, which, if it deserve encouragement, rarely misses receiving it. The great masters of all ages are renowned for their skill in drawing, in the study and practice of which they were inces- santly sedulous ; nor did they cast off the port- crayon on assuming the brush, but first made various sketches of their intended compositions, then a correct finished drawing of the whole, after that larger and more correct drawings of every separate part ; — they then painted the pic- ture, and after all retouched and finished the figures fro n the life.

Among the greatest artists of ancient times,

Apelles, surnamed t he prince of painters, is men- tioned by ancient writers as the most eminent foi> the beauty of his drawing. After the revival of the arts in Italy, Michelangiolo Buonarotti ap- pears to have been the most learned and daring, and Raffaelle the most correct and graceful. The Roman and Florentine schools, indeed, have ex- celled all others in this fundamental part of the art : of the former, Raffaelle, Guilio Romano, Polydore, and their scholars; and of the latter, Michelangiolo, Leonardo da Vinci, and Andrea del Sarto, have been themostdistinguished. In the Bolognese school, the Carr,accis, particularly An- ibale, whose execution is

wonderful, are parti- cularly eminent. In the French school, Poussin, Le Sueur, and Le Brun ; and in the English school, omitting living artists, Mortimer, West, Barry, and Gavin Hamilton, demand commen- dation.

The human figure, as it is the most difficult, should be the first object of the student. To accomplish this, he must begin by acquiring a facile management of his portcrayon and crayon, so as to delineate with correctness the effects of the outline, and of the light and shade of the object which he has before him. When these first rudiments of drawing are obtained, and the student can trace, with sufficient correctness, the elementary parts of the figure, as ears, eyes, hands,' &c. (plates II. & IV.), he should then apply to the study of the human figure, after the antique, and after nature, in a philosophical manner.

The different styles of drawing or design may be arranged under the heads of individual nature^ or that of common or familiar forms, wita all the imperfections and peculiarities of the indivi- dual model ; select nature, or that wherein the artist has composed or made a selection from the mass of individual models that he has had before him ; and, thirdly, the grandstyle, the gran, gusto of the Italians, the beau ideal of the French, the ideal beauty of the Greeks in which they are so much our masters.

The individval style is that in which the Dutch masters, our great Hogarth and Wilkie, and his school, are so excellent. The select style has been ennobled by Raffaelle, and by the Carracci with their eclectic school ; and, in the third style none have surpassed the great sculptors of anti-*

quity, particularly those who executed the majes- tic Apollo Belvedere, and the marvellous works called the Elgin marbles.

The progress of the young artist's studies in drawing or designing, ought to be founded upon a graduated scale. Individual nature, at the commencement of his studies ; select, as he pro- ceeds, and, when he attempts originality, idealized according to the precepts of Reynolds, and the practice of Phidias.

SECT. I. — OF THE PROPER MATERIALS AND INSTRUMENTS FOR DRAWING, AND THE MAN- NER OF USING THEM.

The first step towards attaining a profi- ciency in drawing, is the study of geometry and perspective. Geometry is the science of extension, quantity, or magnitude abstractedly considered, and demands the greatest attention

from the scientific artist. Perspective is that branch of optics which teaches how to represent objects on a plain surface, in the manner wherein they appear under the peculiarities which arise from distance and height. A knowledge of these two branches of science may be said to form the fundamental part o'f drawing; and, when begin- ning, the learner must furnish himself with proper materials and instruments ; such as black lead pencils of different degrees of hardness; crayons of black, white, and red chalk ; crow or duck-quill pens ; Indian ink or seppia : as also with drawing-boards, rules or straight edges, and compasses; drawing-boards for fastening the paper upon, so that it may not shift, and like- wise for straining it, to prevent the colors, or the washes of tint, when laid wet upon the paper, from causing it to swell so as to dry uneven. The simplest of these latter requisites is made of a deal board glued together to its proper width and length, strengthened with a piece rabbeted on at' each end, to prevent warping. The paper may be fixed down upon this board with pins, wafers, or sealing wax, or it may be strained with paste or glue in the following manner: — First wet the paper well with a sponge, omitting the edges, which should be turned up about half an inch in width on every side ; apply a small quan- tity of good paste or glue all round on the under side, and press the paper down upoo the board with a cloth, rubbing it well with your nail, or the smooth handle of a knife to secure it. In the process of drying, the paper, which had expanded and blistered up much when wet, will contract, and (the edges being fixed immoveably) will strain quite flat and tight, and will be much fitter for drawing upon than when loose. But the best drawing boards are made with a frame and a moveable panel, upon which the paper is simply put wet, and then forced into the frame, where it is confined by wedges or keys at the back. This strains equally well, without the trouble of pasting, so that it may be dried at the fire ; it also looks better.

The young student must accustom himself to hold the pencil or port-crayon further from the point than he does a pen in writing, which will give him a better command of it, and render his Jiines or delineations more free and bold.

For Indian ink or sep;

outlines are to be sketched in by the black lead pencil, so that any part which is not correct may be easily obliterated by the Indian rubber. When the sketch is as correctly done with the pencil as is in the student's power, he is then to draw carefully his outline with the crow or duck-quill pen, and diluted ink or seppia. After this he is to dis- charge the pencil lines, by rubbing it gently with the crumb of stale bread or Indian rubber. The pigment used for this purpose is either Indian ink, or seppia, which is a pleasanter warmer color, and softer in execution. By rubbing these up with

soft water on a plate, or palette of earthen ware or marble, they may be made of any re- quired degree of strength, and used in the quill or steel pen like common ink.

Having got the outline clear and correct, the next step is to shade the work properly, either by drawing fine strokes with the pen in a manner which is called hatching, and of which the first engravings were imitations, or by washing in the shadows, and softening them into the lights with camel-hair pencils, and tints of Indian ink or seppia. As to the rule and compasses, they are very rarely to be used, except in architectural or geometrical drawings, or in measuring the pro- portions of figures, after they are drawn, to prove whether they are correct or not; or, finally, in the delineation of fortifications and linear per- spective. Chalks and crayons are managed in a similar manner, except that the lights and shades are drawn with the material dry, and hatched and softened into one another, in the same way.

SECT. II. — OF DRAWING LINES, SQUARES, CIR- CLES, AND OTHER GEOMETRICAL FIGURES.

The first practice of a learner should be to draw straight arid curved lines, with ease and freedom, upwards and downwards, inclined to the right and left, or in any required direction. To draw lines inclining to the right, or quite horizontal, he must hold his elbow close to his side as in writing ; when perpendicular, the elbow must be removed to about seven inches from the side, and when inclined to the left, at a very conside- rable distance, according to the degree which the angle forms. A good practice, illustrative of this precept, is for the student to draw by hand a series of equilateral triangles, with a perpendi- cular lino drawn from the apex ; and a row of various-formed right angled triangles, with hypo- thenuses, bases, and perpendiculars of various dimensions. He should also learn to draw by hand, squares, circles, ellipses, and other geome- trical figures : for as the alphabet or a knowledge of the letters of a language is an introduction to grammar, so is geometry to drawing.

The practice of drawing these simple elemen- tary figures, till he becomes master of them, will enable him to imitate, with ease and accuracy, many forms both in nature and art, which are composed thereof. Four general precepts or rules may here be laid down: 1. Never let the student be in a hurry, but always make himself master of one figure before he goes on to another ; the advantage, and even the necessity of this practice will appear to him as he proceeds. 2. lie should accustom himself to draw all his figures

of a considerable size, which is the only method of acquiring a free and bold manner. 3. He should practice drawing till he lias gained a tole- rable command of his pencil, before he attempts to shade any figure or object of any kind what- ever : and, 4. He should not aim at finishing perfectly any single part, before he has sketched out faintly, with light strokes of the pencil, the shape and proportion of the whole figure ; cor- recting it afterwards wherever necessary.

SECT. III. — OF DRAWING EYES, EARS, FLOW- ERS, FRUITS, BIRDS, BEASTS, 8cc.

The learner should begin with drawing the outlines of eyes, ears, &c., as in plate II. with noses and parts of faces as in plate III., after either of the modes directed in section I. He may next proceed with flowers, fruits, birds, beasts, and the like ; not only as it will be a more pleasing employment to those who do not aim at the severer beauties of the art, but as an easier task, particularly to young ladies, than the draw- ing of hands and feet, and other parts of the hu- man body, which require not only more care, but greater exactitude and nicer judgment. Very few instructions are necessary upon this head. The best thing that a learner can do is, to furnish himself with good prints or drawings by way of examples, and copy them with great care and exactness. If it is the figure of a beast, let him begin with the forehead, and draw the nose, the upper and under jaw, and stop at the throat. Then he should return to the top of the head, and trace the ears, the neck, and the back ; con- tinuing the line till he has given the full shape of the rump and buttock. Then proceed to the chest and breast, mark out the legs and feet, and delineate the belly. And, lastly, as before directed in sect. I., when the learner has acquired some proficiency in the art, let him draw the outline as there instructed, and finish it with shadows, or with the proper colors after nature as directed in section XII. It would not be amiss, by way of ornament, to add a small sketch of a landscape, appropriate to the country of the animal, either by way of a vignette, or determined by a paral- lelogram like a picture ; of these, and other sub- jects, the learner will find many examples among the plates of this work.

SECT. IV. — OF DRAWING LEGS, ARMS, HANDS, FEET, &c.

In the drawing of legs and arms, the learner will have very little more to do than to copy carefully the examples of arms given in plate IV., and of legs in plate V. But the actions and pos- tures of the hands are so many and so various, that no certain rules can be given for drawing them, which will

universally hold good. Yet, as the hands and feet are difficult to draw, it is very necessary to bestow some time and pains about them; carefully imitating their various postures and actions, so as not only to avoid all appearance of lameness and imperfection, but also to give them life and spirit. To arrive at this, great care, study, and practice are requisite, particularly in imitating at first, that is before beginning to draw from statues or from nature, the best prin's or drawings that can be obtained

of hands and feet; examples of which are given in plates IV. and V. As to mechanical rules for delineating them by lines and measures, thev are not only difficult and perplexing to the stu- dent, but are also contrary to the practice of the best masters. And here the general rule above mentioned must be applied, which is, to sketch out faintly, with light strokes, the general shape and proportion of the whole hand, with its action and turn; and after considering whether this first sketch be perfect, and altering it wherever it may be amiss, to proceed to the bending of the joints, the knuckles, the veins, and other small particulars, which, when the learner has obtained the whole shape and proportions of the hand or foot, will not only be more easily, but also more perfectly drawn.

SECT. V. — OF DELINEATING FACES.

The head is usually divided into four equal parts, namely, 1. from the crown of the head to the top of the forehead. 2. From the top of the forehead to the eye-brows. 3. From the eye- brows to the bottom of the nose. 4. From thence to the bottom of the chin. But this proportion, as may justly be inferred, is not invariable ; these features being, in different men, often very diffe- rent as to length, breadth, and shape : in a hand- some well-turned face, however, it is nearly cor- rect. In delineating a perfect face, therefore, the learner's first business must be to sketch slightly an oval or egg-like figure with its broad- est hemisphere upwards ; then to bisect it with a perpendicular line from the top to the bottom. Through the middle of this line he will draw a diametral one, directly across from one side to the other of the oval. On these two lines all the features of the face are to be delineated as fol- lows : first divide the perpendicular line into four equal parts, the first of which is to be allotted to the hair of the head ; the second is from the top of the forehead to the top of the nose between the eye-brows ; the third is from thence to the bottom of the nose ; and the fourth includes the lips and chin. The diametral line, or the breadth of the face, is always supposed to be the length of five eyes ; it must therefore be divided into five equal parts, and the eyes placed upon it so as to leave exactly the length of one .eye between them. This is to be understood only of a full front face as in plate I., for if it turn to either side, the distances are to be lessened on that side which turns from you, more or less in proportion. The top of the ear is to rise parallel to the eye-brows, at the end of the diametral line. The

nostrils ought not to come further out than the corner of the eye in any face ; and the mid- dle of the mouth must always be placed on the perpendicular line. See plate I., DRAWING.

SECT. VI. — OF DRAWING HUMAN FIGURES.

When the student is tolerably perfect in drawing faces, heads, hands and feet, he may next attempt to draw the human figure at full length. He should begin by sketching the head ; then draw a per- pendicular line from the bottom of the head seven times its length, or as many heads as the figure is high from which he is drawing ; for in general the length of the head is about one-eighth

part of the length of the figure. The best-pro- portioned figures of the ancients are seven heads and three quarters in height, but they vary as re- quired by the different characteristics of the figure. If, therefore, the figure stands upright, as fig. A, plate VI., draw a perpendicular line from the top of the head to the heel, which must be divided into two equal parts. The bottom of the belly is exactly the centre of the figure. Then divide the lower part into two equal parts again; the middle of which is to be the middle of the knee.

The method of delineating the upper pait of the figure is as follows : — Take off with the com- passes the length of the face, which is about three-fourths of the length of the head ; then set off the length of another face from the pit of the throat to the pit of the stomach; thence to the navel is another face in length, and thence to the lower rim of the belly is a third.

The entire line must then be divided into seven equal parts : against the end of the first division is the situation of the breasts; the second is the place of the navel ; at the third mark out the privities; the fourth comes in the middle of the thigh ; the fifth to the lower part of the knee ; the sixth to the lower part of the calf; and the seventh to the bottom of the heel ; the heel of the leg which supports the body being always under the pit of the throat.

As the essence of all good drawing consists in making a correct sketch at first, the student must be very accurate and careful in this stage of his business, rubbing out and sketching again till he is right in all the bearings and proportions ; and finishing no one part perfectly till lie finds the general sketch and character of the figure com- plete and good ; and when it is all in, correctly to his mind, he may then proceed to the finishing of one part after another, with all the fidelity in his power.

Some artists, when they have a statue to copy, begin with the head, which they finish, and then proceed in the same manner to the other parts of the figure, perfecting as they go on: but this manner is generally unsuccessful ; for, if they make the head in the least too large or too small, the consequence is a manifest disproportion be- tween all the parts, occasioned by their not hav- ing sketched the whole proportionably at first. Let the more advanced student therefore remem- ber that, in whatever he intends to draw, he should first sketch its several parts, measuring the distances and proportions between each with his finger or his pencil, without using the com- passes, observing the precept of Du Piles 'to bear the compass in his eye,' and then to judge of its general effect by the eye which by degrees will be able to estimate truth and proportion, and will become his principal and best guide. Let him also observe, as a general rule, invariably to begin with the right hand side of the piece he is copying ; for thus he will always have what he has done before his eyes, and the rest will follow more naturally and with greater ease. Whereas if he begin with the left side of the figure, his hand and arm will cover what he does first, and deprive him of the sight of it ; by which means he will not be able to proceed with so much ease, pleasure, or certainty.

When these more mechanical parts are ac quired, and their real measurements tolerably familiar, the student may proceed in respect to the order and manner of drawing the human fi- gure, as follows: — First he should sketch the head ; then the shoulders in their exact breadth, in relation to the head ; then draw the trunk of- the body, beginning with the arm-pits (leaving the arms for an after consideration), and so trace all the beautiful undulations which form the outline of the human body, down the hips on both sides ; observing carefully the exact breadth of the waist. Then he should draw that leg upon which the body stands, and afterwards the other which is in repose : then the arms, and last of all the hands. He must carefully notice all the bowings and bend ings that are in the figure; making the part which is opposite to that bend- ing inwards correspond to its antagonist by swelling outwards.

For instance : if one side of the body bend in, the other must naturally swell out to be answer- able to it : if the back bend in, the belly must swell out ; if the knee bend out, the ham must bend in, and so on of every other joint in the body. In a word, he must endeavour to form all the parts of the figure with truth, and in just proportion ; not one arm or one leg bigger or less than the other ; nor broad Herculean shoulders with a weak and slender waist; nor raw and bony arms with thick and puffy legs ; but pre- serving an harmonious "agreement and keeping amongst all the members, and consequently a beautiful symmetry throughout the whole figure. When these rudiments of drawing the human figure are thus acquired, and the student can draw with sufficient correctness, he must next apply himself to

its study after the antique anil nature in a philosophical manner ; studying OS- TEOLOGY and ANATOMY as his surest directors. See those articles.

In copying after the antique, which should pre- cede and always accompany that of drawing after nature, the following statues and sculptures are among the master-pieces of ancient art to which the student's attention is particularly directed, as subjects for his studies in chalk drawing or de- sign : namely, first of all the remains of ancient art, those incomparable works known by the name of the Elgin marbles. Of these the figure called Theseus or Hercules, the Ilissus, the Cu- pid, and the wonderful fragment of the chest and shoulders of Neptune, stand pre-eminent among the naked ones: the colossal statue of Bacchus, the Fates, the Victory, the Canepunra, and the Panathenaic procession amor,5 the dressed and every one of them — from the Me- topes to the fragment of a toe — for various degrees and kinds of perfection in art. They were for more than 700 years the admiration of the ancient world, and, in the time of Plutarch, were regarded as inimitable for their grace and beauty.

The torso of the Belvedere, commonly called the torso of Michel Angelo, as being a con- siderable favorite with that great master, is an- other beautiful study for the young artist; as is also the Farnese Hercules, which is a standard master-piece of art. The Apollo Belvedere is

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the most sublime of ancient statues, and presents a beautiful subject for the pencil. The Laocoon possesses splendid beauties of another character; and the Venus de Medicis is a perfect model of feminine beauty, grace,

elegance, and sweetness, and is indeed the perfection of the female form. The Antinoiis of the Belvedere is a magnificent specimen of male youthful beauty, and the celebrated Gladiators are remarkable for their display of anatomical correctness.

When the student has mastered these, and im- bued his mind with their beauties and propor- tions, he may commence drawing after nature, or from the living model ; undertaking a course of anatomy and anatomical drawing, and an occa- sional return to the beauties of the antique, to prevent a too great mannerism and individuality of form.

SECT. VII. — OF THE PROPORTIONS AND MEA- SURES OF THE HUMAN BODY.

The centre, or middle part, between the extre- mities of the head and feet of a well-proportioned new-born child is in the navel, but that of an adult is in the os pubis ; and the practice of di-

viding the measures of children into four, five, and six parts, of which one is given to the head, is made use of in the way of proportion both by painters and sculptors.

A child of two years of age is in general about five heads high, but, of four or five years old, nearly six ; about the fifteenth or sixteenth year, seven heads are the proportion or measure, and the centre declines to the upper part of the pu- bis. Hence it appears that, as the growth of the body advance^ there is a gradual approach to the proportion of an adult of nearly eight heads in the whole height ; of which, as before men- tioned, the head itself makes one.

Upon these principles the following table is constructed, exhibiting the proportions of a strong, and of a graceful mad, and of a fine woman, as given by the ancients, measured from the origi- nals at Rome, and published by J. J. Volpato and Raflfaelle Morghen. It is found in Elmes's Dictionary of the Fine Arts. The models are, the Farnese Hercules, the Belvedere Apollo, and the Medicean Venus, which may be classed as the Doric, the Ionic, and the Corinthian orders of human beauty.

PROPORTIONS OF THE

VENUS.

From the beginning of the head to the root of the hairs

From the root of the hairs to the eye-brows, or beginning of the

nose .....

From the eye-brows to the end of the nose .....

From the end of the nose to the bottom of the chin ....

From the chin to the articulation of the clavicle with the sternum From the clavicle to the end of the breast .....

From the end of the breast to the middle of the umbilicus

From the umbilicus to the symphysis pubis .....

From the symphysis pubis to the middle of the patella From the middle of the patella to the beginning of the flank From the same to the swell of the foot . . ‘ . .

From the swell of the foot to the bottom of the figure, or to the

ground . . . ;

From the patella to the ground .

From the patella to the end of the heel of the right leg

The length of the sole of the foot .....

*The highest part of the foot from the ground .. . . •’ * .•:~.-“Y; “”’ •’*

From the instep to the end of the toes . . . / ;- ; ‘., < " . From the clavicle or collar-bone to the beginning of the deltoid muscle The length of the whole clavicle on the right side ....

From the clavicle to the nipple .....

From one end of the breast to the other

The greatest breadth of the trunk, taken a little below the beginning of

the thorax .....

The breadth of the trunk from the end of the breast ....

The narrowest part of the same, taken at the beginning of the

flank

The greatest breadth of the ossa ilei, where the flanks project most . From

the highest part of the deltoid muscle to the end of the biceps . From the beginning of the os humeri to the cubit • From the end of the biceps to the beginning of the hand . . ; The greatest breadth of the fore arm in front . . . ′ .″ ‘ .

The greatest breadth of the arm in front

Breadth of the pulse of the arm in front .....

The greatest breadth from one trochanter to the other The greatest breadth of the thigh in front . ....

The greatest breadth of the left thigh

The greatest breadth of the knee, opposite to the middle of the patella The greatest breadth of the calf of the leg . . . The greatest breadth between the inner and the outer ancle

P. M.

3 0

3 0

3 0

3 0

6 0

9 4

10 4

8 2

23 3

30 1

*29 2**

6 1|

10 li

14 1 10 4

*15 I**

22 4

19 31

21 li

22 l.|

15 11

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5 1 22 0

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P. M.

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3 0 5 1 9 3

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18 3

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P. M.

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11 41 18 2 27 3

25 3

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15 1

17 5

20 2

14 0

5 0

4 5

19 3

9 5

5 0

6 31 4 0

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PROPORTIONS OF THE

VENUS.

The narrowest part of the foot .....

The broadest part of the same

From the last vertebra of the neck to the lower part of the os

sacrum .....

From the end of the os sacrum to the end of the glutaeus

From the end of the glutaeus to the beginning of the gastrocncmius

muscle .....

From the beginning of the gastrocnemius muscle to the end of the

figure . . .

P. M.

3 5

6 4>-

38 4

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15 4

30 1

P. M.

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P. M.

3 3

5 I

The entire proportions of these celebrated sta- tues are, in round numbers ; the Hercules seven heads, three parts, seven minutes (four parts being equal to one head, and twelve minutes equal to one part). The Apollo seven heads, three parts, six minutes ; and the Venus seven heads, three parts. The other most admired statues dif- fer a little from these proportions — the Laocobn measuring (if erect) seven heads, two parts, three minutes; the Pyramus seven heads, two parts ; the Antinous seven heads, two parts; the Grecian shepherdess seven heads, three parts, six minutes; and the Mirmillo eight heads; but all their va- rious proportions are harmonious aud agreeable, and in keeping with the characters of the figures they represent.

It is a leading principle, in which every per- son who is conversant in the arts of design agrees, that, without a perfect knowledge of the proportions

of the human figure, nothing can be produced but absurdity and extravagance; and it is abo universally admitted, that the ancient Greek and Roman sculptors attained the highest success in producing unexceptionable models.

The greatest modern artists, who have exa- loined these antique statues with attention, ad- mit, that several of the ancient sculptors have, in some degree, surpassed nature, no living man having been found so perfect in every part as some of their figures are. The opportunities for acquiring excellence, which they possessed, were indeed great : Greece abounded with models of beauty, strength, and elegance ; and Rome being mistress of the world, every thing beautiful, rich, or curious was brought to it, from all parts. The motives which inspired them and their patrons were also powerful. Religion, glory, and inte- rest, all united in their aid. They considered it a kind of religious duty to give to the figures of their gods so much beauty and grandeur, as to attract at once the love and veneration of the people. Their own glory was also concerned, particular honors being conferred on those who succeeded ; and for their fortune they had no farther care to take of that, after arriving at a certain degree of celebrity.

SECT. VIII. — OF THE ATTITUDES OF THE HU- MAN FIGURE.

If an artist be required to represent a powerful athletic figure, such as a Hercules or a Sampson, in a state of vigorous action, he must pay particular attention to the parts or limbs which are principally exerted in such action. If the figure be standing, the foot must l»e placed in a right line or perpendicular to the trunk or bulk of the body, so that the centre of

gravity may be placed in equilibrio. This point or centre is determined by the heel ; or, if the figure be on tiptoe, then the ball of the great toe in the centre. The muscles of the leg which supports the body must be swelled, and their tendons drawn more to an extension than those of the other leg, which is only so placed as to receive the weight of the body like a buttress or a prop, towards that way to which the action in- clines it.

For example, suppose Hercuies is to be repre- sented, aiming a blow with his club, at some- thing before him, towards his left side. Then must his right leg be placed so as to receive the whole weight of his body, and the left merely touching the ground with the toes. In this case the external muscles of the right leg must be strongly marked; while those of the left leg must be represented more flaccid, and in repose ; but, as the foot is extended, the muscles that compose the calf of the leg are extended also, as those of the right are compressed and tumefied. For if the leg or tibia is extended, then the ex- tending muscles are most swelled; but if it be bent, then the bending muscles and their tendons appear most plainly.

The like may be observed of the muscles of the whole figure in general, if it be represented in vigorous action. The Laocoon furnishes an example of this muscular appearance being car- ried through the whole figure ; while in the An- tinoiis, the Apollo, the youthful Bacchus, and other figures where no energetic action is ex- pressed, the muscles are expressed but faintly, as they appear through the skin in nature.

The clavicles, or collar bones, and the muscles in general, do not show themselves so strongly in the female as in the other sex, nor in youths as in adults. Nor will any action in which a female uses her utmost strength occasion such risings or indications of the muscles as they do in the stronger sex. The great quantity of fat under the skin of females so clothes their more delicate muscles as to prevent such a marked appearance.

SECT. IX. — OF THE EFFECTS OF THE EXER- TION OF THE M'.'SCLES.

The most obvious effects of the exertion of those muscles which chiefly demand the atten- tion of the artist are the following: viz.

If either of the mastoid muscles (see the plate of muscles in Anatomy,) act, the head is turned to the contraryside, and the muscle which performs that action appears very plainly through the skin.

If the arms be raised, the deltoid muscles placed on the shoulders, which perform chat

action, swell, and make the extremities of the spines of the shoulder blades, called the tops of the shoulders, appear indented or hollow. The shoulder blades following the elevation of the arms, their bases incline at that time obliquely downwards. If the arms be drawn down, put forward, or pulled backwards, the shoulder-blades necessarily vary their positions accordingly. These particulars can only be learned by an atten- tive study of anatomy and of the living model ; by which means the student becoming acquainted with the circumstances which attend every action he will be able to form an idea how they ought to be expressed.

When the cubit or fore-arm is bent, the biceps has its belly very much raised, as shown in the left arm. The like may be observed of the triceps when the arm is extended, as shown in the right arm.

The straight muscles of the abdomen appear very strong when arising from a recumbent pos- ture. Those parts of the great serratus muscle which are

received in the beginnings of the ob- lique descending muscle immediately below, are very much swelled when the shoulder on the same side is brought forwards; the serratus muscle then being in action in drawing the scapula forwards.

The long extending muscles of the trunk act alternately in walking. If the right leg bears the weight of the body, and the left is advancing as on tiptoe, the last-mentioned muscles of the back, on the left side, will be tumefied on the other side about the region of the loins, and so on the other side.

The trochanters, or outward and uppermost heads of the thigh bones, (see the skeleton in the plate of Anatomy,) vary in their positions in such a manner as that no precise observations can ex- plain their several appearances ; but a careful study of the living model, placed in action, must be carefully attended to. If either thigh be ex- tended, as when the whole weight of the body rests on that side, the glutaeus or buttock-muscle presents a very different appearance from what it offers at another time, or when in repose ; but if the thigh be drawn backwards, that muscle be- comes still more tumefied.

When the whole leg is drawn upwards and forwards, and at the same time the foot is in- clined inwards, the upper part of the sartorius muscle appears, rising very strong. In other po- sitions of the thigh that muscle makes a furrowing appearance in its whole progress.

If a man be on tiptoe, the extending muscles of the' leg, which are situated on the fore-part ot the thigh and those of the foot, which compose the calf of the leg, appears very strongly, and the long peraenous makes a considerable indentation or furrowing at that time in its progress on the outside of the leg. Many other remarks might be made on this subject; but an attentive study of nature will render them unnecessary. Indeed we beg leave to refer the reader for further illus- tration, to the plates and article ANATOMY.

SECT. X. — OF THE EFFECTS OF THE PASSIONS IN GENERAL.

When the student has thus made himself master of the various attitudes and muscular

exertions of the human body, it will be neces- sary for him next to study the effect of th9 passions upon the limbs and features. The passions, says Le Brun, are motions of the soul, either upon her pursuing what she judges to be for her good, or shunning what she thinks hurt- ful ; and commonly, whatever causes emotions of passion in the soul, creates also some action

in the body. It is therefore necessary for a painter to know which are the different passions of the soul, and how to delineate them.

Le Brun has been extremely happy in deli- neating many of the passions, and the young artist cannot study any thing better than the ex- amples which he has left us of them ; and of which we have given a copy in plate VI. However, as De Piles justly observes, it is absurd, as well as impossible, to pretend to give such particular demonstrations of them, as to fix their expression to certain strokes, which the painter should be obliged to use as essential and invariable rules. This, he very properly says, would be depriving the art of that excellent variety of expression which has no other principle than diversity of imagination, the extent of which is infinite. The same passion may be finely expressed several ways, each yielding more or less pleasure in proportion to the painter's understanding and the spectators' discernment.

Although every part of the face contributes towards expressing the sentiments of the heart, yet the eye-brow is the principal seat of ex- pression, and that wherein the passions princi- pally indicate themselves. It is certain, says Le Brun, that the pupil of the eye, by its fire and motion, very well shows the agitation of the soul, but then it does not express tne kind or nature of such an agitation ; whereas the motion of the eye-brow differs according as the passions change their nature. To express a simple pas- sion, the motion is simple ; to express a mixed passion, the motion is compound: if the passion be gentle, the motion is gentle ; and if it be violent, the motion is so too.

We may observe farther, says he, that there are two kinds of elevation in the eye-brows : one, in which the eye-brows rise up in the middle — this elevation expresses agreeable sen- sations, and it is to be observed that then the mouth rises at the corners : the other, in which the eye-brows rise up at the ends, and fall in the middle; this motion indicates bodily pain, and then the mouth falls at the corners. In laughter, all the parts agree ; for the eye-brows, which fall towards the middle of the fore-head, make the nose, the mouth, and the eyes follow the same motion. In weeping, the motions are compound and contrary; for the eye-brows fall towards the nose and over the eyes, and the mouth rises that way. It is to be observed also, that the mouth is the part of the face which more particularly expresses the emotions of the heart : for when the heart complains, the mouth falls at the cor- ners; when it is at ease, the corners of the mouth are elevatfed, and when it has an aver- sion, the mouth is protruded and rises in the middle.

'The head,' says De Piles, 'contributes more to the expression of the passions, than all the

other parts of the body put together. Those separately can only show some few passions, but the head expresses them all. Some, however, are more peculiarly expressed by it than others : humility, by hanging it down ; arrogance, by lifting it up ; languor, by inclining it on one side ; and obstinacy, when, with a still and reso- lute air, it stands upright, fixed, and stiff between the two shoulders. The head also best shows our supplications, threats, mildness, pride, love, hatred, joy, and grief. The whole face and every feature contribute something; especially the eyes, which, as Cicero says, are the windows of the soul. The passions which they more particularly discover are pleasure, languishing, scorn, severity, mildness, admiration, and anger; to which we may add joy and grief, if they did not proceed more particularly from the eye- brows and mouth : but when these two passions fall in also with the language of the eyes, the harmony will be wonderful.

‘ But though the passions of the soul are most vi- sible in the lines and features of the face, they often require the assistance also of the other parts of the body. Without the hands, for instance, all action is weak and imperfect ; motions, which are almost infinite, create numberless expressions : it is by them that we desire, hope, promise, call, send back ; they are the expressive instruments of threatening, prayer, horror, and praise ; by them we approve, condemn, refuse, admit, fear, ask ; express our joy and grief, our doubts, re- grets, pains, and admiration. In a word, it may be said, as they are the language of the dumb, that they contribute not a little to speak a language common to all nations, which is the language of painting. But to say how these parts must be disposed for expressing the various passions is impossible, nor can any exact rules be given for it, both because the task would be infinite, and because every one must be guided in this by his own genius and the particular turn of his own studies.’

SECT. XI. — OF THE PARTICULAR EIFECTS OF THE DIFFERENT PASSIONS ON THE FEATURE?.

Notwithstanding the justice of the preceding observations of De Piles, yet Lo Brun has given such an accurate description of the particular effects of the passions on the human features, as must be of essential service to all who wish to attain proficiency in any of the arts of design. We therefore subjoin it, not only as an illustra tion of his drawings, copied in plate VI. but as containing a set of general rules to the student for depicting the various passions of human nature.

1. Attention. — The effects of attention are to make the eye-brows sink, and approach the sides of the nose ; to turn the eye-balls towards the object that causes it ; to open the mouth, and especially the upper part ; to decline the head a little, and to fix it without any other remarkable alteration. See plate VI, 1.

2. Admiration. — Admiration causes but little agitation in the mind, and therefore alters but very little the muscles of the face. Nevertheless the eye-brows rise, the eyes open a little more than ordinary ; the eye-balls, placed equally be-

tween the eye-lids, appoar fixed upon the object: trie moutli half opens, but occasions no sensible alteration in the cheeks. Ibid. 2.

3. Admiration combined with Astonishment—' The motions that accompany this mixed expres- sion arc scarcely different from those of simple admiration; except, that they are more lively and more strongly marked. The eye-brows are more elevated, the eyes more open, the eye-balls removed farthei from the lower eye-lid, and more steadily fixed : trie mouth more open, and all the muscles in stronger action.

4. Veneration.— Admiration begets esteem, and esteem, in a high degree, produces veneration, which, when it has for its object something divine or beyond our comprehension, occasions the face to decline, and the eye-brows to bend down- ward. The eyes become almost closed and fixed, and the mouth is shut. These motions are gentle, and produce but little alteration iu the other parts of the face. Ibid. 3.

5. Rapture. — Although rapture has occasionally the same object as veneration, only viewed in a different manner, yet its motions and character- istics are different. The head becomes inclined to the left side, the eye-balls and eye-brows rise directly up ; the mouth half opens, and the cor- ners are also a little turned up ; while the other parts remain in the natural siate. Ibid. 4.

6. Desire. — This passion brings the eye-brows togetner, and protruded towards the eyes, which are more open than ordinary. The eye-balls are inflamed, and place themselves in the middle of the eyes. The nostrils rise up, and contract them- selves towards the eyes ; the mouth opens, and the spirits, being in motion, give a lively glowing color to the whole countenance. Ibid. 5.

7. Joy. — Very little alteration is perceived in the faces of those who feel within themselves the sweetness of this passion, or of joy mixed with

_ tranquillity. The forehead is smooth and serene; the eye-brows without

motion, elevated in the middle ; the eye pretty open, and with a laugh- ing air; the eye-balls .lively and shining; the corners of the mouth turned up a little ; the com- plexion lively, and the cheeks and lips red. ibid. 6.

8. Laughter. — That kind of laughter which is produced by joy mixed with surprise, makes the eye-brows rise towards the middle, and bend to- wards the nose; the eyes become almost closed, and are sometimes wet with tears, which make no alteration in the face. The mouth, half open, shows the teeth ; the corners of the mouth, drawn back, cause a wrinkle in the cheeks, which swell so as to partially close the eyes ; the nostrils open, and all the face is of a red color. Ibid. 7.

9. Acute Pain. — Acute pain occasions the eye- nrows to approach one another, and to rise to- wards the middle ; the eye-balls are concealed under the eye-brows, the nostrils rise and wrinkle the cheeks; the mouth half opens and is drawn back, and all the muscles of the face are agitated in proportion to the violence of the pain. Ibid. 8.

10. Simple Bodily Pain. — This degree of suffer- ing produces proportionably the same motions as the last, but in a less '-iolent degree. The eye-brows do not approach so close, nor rise so much ; tlw

eye-balls appear to be fixed upon some object ; the nostrils rise, but the wrinkles in the cheeks are less perceptible ; the lips are farther apart towards the middle, and the mouth is half open

11. Sadness. — The dejection whicn is pro- duced by this affection of the mind, makes the eye-brows rise towards the middle of the fore- head more than towards the cheeks. The eye- balls appear perturbed, the white of the eye becomes yellowish, the eye-lids are drawn down •»nd a little swelled. All about the eyes becomes I'vid, the nostrils are drawn downwards, the mouth is half open, its corners being drawn down/ the head carelessly droops on one of the shoulders, the face becomes of a heavy color, and the lips pale. Ibid. 9.

12. Weeping. — The alterations occasioned in the human countenance by weeping are very evident. The eye-brows sink down towards the middle of the forehead; the eyes are al- most closed, and are wet and drawn downwards towards the cheeks. The nostrils swell, the muscles and veins of the forehead appear, the mouth is closed, and the sides thereof are drawn down making wrinkles on the cheeks : the under lip, pushed out, presses the upper one; all the lace becomes wrinkled and contracted, and its color is

red, especially about the eye-brows, the eyes, the nose, and the cheeks. Ibid. 10.

13. Compassion. — That lively attention to the misfortune of others, which is called compassion, causes the eye-brows to sink towards the middle of the forehead ; the eye-balls to be fixed upon the object of its attention ; the sides of the nostrils next the nose to be a little elevated, forming wrinkles in the cheeks ; the mouth to be open ; the upper lip to be raised and thrust forwards ; the muscles and all the parts of the face to be de- pressed, and turned towards the object which excites the sentiment. Ibid. 11.

14. Scorn. — The motions of this feeling are lively and strong. The forehead becomes wrinkled, the eye-brows knit, the sides of them next the nose sunk down, and the others much risen. The eyes are widely open : and the eye-balls in the middle : the nostrils rise and are drawn towards the eyes, forming wrinkles in the cheeKS. The mouth closes, its sides are drawn down, and the under lip is protruded beyond the upper. Ibid. 12.

15. Horror. — A despised object sometimes ex- cites horror, and then the eye-brows become knit, and sink considerably more than in the last instance. The eye-balls, placed at the bottom of the eyes, are half covered by the lower eye-lids ; the mouth is half open, but closer in the middle than in the sides, which, being drawn backwards, make wrinkles in the cheeks; the face becomes pale, the eyes livid, whilst the muscles ana vains are strongly developed. Ibid. 13.

16. Terror, or Fright. — The violence of these sensations, which are not synonymous, although Le Brun has so classed them, as the former may be the result of certainty and durable, while the latter is sudden and often evanescent, alter all the middle parts of the face. The eye-brows rise in the centre, their muscles are strongly developed, swoln, pressed against each other, and depressed towards the nose, which is drawn up as well as

the nostrils. The eyes are very open, the upper eye-lid hidden by the eye-brow, the white of the eye encompassed with red, the eye-balls fixed toward the lower part of the eye ; the lower part of the eye-lids swell and become livid, the muscles of the nose and cheeks enlarge, and the latter terminate in a point towards the sides of the nostrils. The mouth is very open, and its corners become very apparent; the muscles and veins of the neck stretch ; the hair stands on end ; the color of the face, that is, of the end of the nose, the lips, the ears, and round the eyes, becomes pale and livid ; and all the muscles appear strongly marked. Ibid. 14.

1 7. Anger. — The effects of this passion show its nature. The eyes become red and inflamed; the eye-balls staring and sparkling; the oye-brows

sometimes elevated, and at others depressed equally; the forehead much wrinkled, as also the space between the eyes. The nostrils open and enlarged; the lips compress, the under one rising over the upper, slightly opens the corners of the mouth, and gives the appearance of a cruel and disdainful grin. Ibid. 15,

18. Hatred, or Jealousy. — The expression of the two passions is so very similar that Le Brun classes them together. They wrinkle the forehead, and the eye-brows become depressed and knit ; the eye-balls are half hidden under the eye-brows, and turn towards the object of hatred, appearing fiery and animated ; the nos- trils are pale, open, more marked than ordinary, and drawn backward so as to cause wrinkles upon the cheeks ; the lips are.'o compressed as to show that the teeth are firmly closed ; the cor- ners of the mouth are d rawn back, and much sunk; the color of the face becomes partly in- flamed and partly yellowish, and the lips pale or livid. Ibid. 16.

19. Despair. — As despair is extreme, so are its expressions. The forehead becomes wrinkled from the top to the bottom ; the eye-brows bend down over the eyes, and press each other on the sides of the nose ; the eyes become fiery in their expression and full of blood ; the eye-balls are disturbed, and concealed beneath the eye-brows, sparkling and wandering. The eye-lids are swoln and livid, the nostrils large, open and raised. The end of the nose turns down, the muscles, tendons, and veins, become swoln and stretched. The upper part of the cheeks becomes large ; the muscles protrude ; the mouth drawn backwards is more open at the sides than in the middle ; the lower lip swells and turns outwards. The sufferers gnash their teeth, foam and bite their lips, which are pale, as is the rest of the face; the hair becomes straight and stands on end. Ibid. 17.

To these rules the student will do well to add Charles Bell's Anatomy of Expression, published expressly for artists upon the same subject ; and, as has been so often insisted on, to pursue an attentive study of nature.

SECT. XII. — OF THE DISTRIBUTION OF LIGHT AND SHADE.

After the student has made himself master, in a tolerable degree, of drawing figures cor- rectly in outline, his next endeavour should

be to shade them properly. It is this portion of the art which gives the desired effect of sub- stance, form, distance, and distinction, to what- ever bodies he endeavours to represent, whether animate, or inanimate.

The best rule for performing this is, to consi- der from what point, and in what direction, the light falls upon the objects which he proposes to delineate ; and to make all his lights and shades fall according to that direction throughout the whole work. That part of the object must be lightest which has the light most directly opposed to it. If the light falls obliquely upon the ‘ picture, he must make that side which is oppo- site to the cause the lightest, and that side which is farthest from it the darkest. If he be draw- ing the figure of a man, and the light is placed above the head, then the top of the head will of course be the lightest, the shoulders will have the next degree of light, and the lower parts be less illumined as they are removed from the cause. That portion of the object, whether the figure be naked or dressed, or whether it be a building which stands farthest out or nearest to the eye, must be made lightest, because it is nearest to the light ; which loses so much of its brightness by how much any par of the object recedes ; because those parts which project, hinder the lustre and full brightness of the light from striking on the receding parts.*

Titian used to say, that he knew no better rule for the distribution of light and shadow, or, as the Italian critics call this department of the art, chiaro-scuro, than the observations that may be drawn from the lights, shadows, and reflexes of a bunch of grapes. Satins and silks, and all other shining stuffs, have certain glancing reflections, exceedingly bright where the light falls strongest. The like is seen in armour, brass pots, or any other glittering metal, where a sudden brightness appears in the centre of the light, which dis- covers the shining nature of the body depicted. The principal light should he thrown on the principal figure, and an equal balance must be kept between the lights and shades throughout the whole.

The outlines must be faint and almost imper- ceptible in such parts as receive the light; hut where the shades fall the outline may be stronger, but must never be too evident, as there is no such thing as outline in nature. Another effect of nature to be observed is, that as vision be- comes weaker by distance, so must the objects ap- pear more or less defined according to the places which they occupy in the picture ; those which are very distant, faint and undefined ; those which are nearer,’ and in the foreground, clear, strong, and accurately denned.

However, so much of this important portion of the art depends upon the artist’s own feelings and perceptions, that better directions for its acquire- ment cannot be given, than to study with atten- tion the works of those masters who are reckoned the most successful in its uses, and to follow them and their mistress — nature, as guides.

SECT. XIII. — OF DRAPERY.

Drapery is the art of clothing figures, and disposing the drapery or clothing properly

and elegantly upon them. In this department of the art many things are necessary to be observed. 1. The eye must never be left in doubt as to the object before it; but the shape and proportion of the limb, or portion of the figure, which is covered by the drapery, must appear to be beneath it; or at least so far as art and probability will permit. This is so material a consideration, that the best artists draw the naked figure first, and throw the drapery properly about i« afterwards. 2. The drapery must not be too loose about the figure, but should so flow round and adhere to it, that the latter may seem unencumbered and have a free motion. 3. The draperies which cover those parts which are ex- posed to great light, must not be so deeply shaded as to seem to pierce them, lest by the too great darkness of their shades, the limbs should look as if they were broken. 4. The great folds must be drawn first, and then divided into lesser ones ; and great care must be taken that they do not cross one another improperly. 5. Folds in general should be large and few ; this must be guided, however, by the quality and quantity of the stuffs of which the drapery is composed. The quality of the persons depicted must also be considered in their drapery ; if ancient legislators, orators, or philosophers, their robes should be large and ample; if clowns, countrymen, or slaves, short and or coarse materials ; if ladies, or nymphs, light and soft. 6. The garments should be adapted to the body, whose motions they should follow, and the closer the garments sit to the body the narrower and smaller must be the folds. 7. Well-imagined folds give spirit to any kind of action, because their motion implies a motion in the principal limb, which seems to act forcibly upon them, and makes them more or less stirring as the action is more or less violent. 8. An artful complication of folds in a circular manner greatly assists the effects of foreshortening. 9. All folds consist of two shades and no more, which maybe turned with the garment at pleasure, shadowing the nearer side deeply and the outer more faintly. 10. The shades in silk and fine linen are very thick and small, requiring little folds, and a light shadow. 11. Observe the motion of the air or wind, in order to draw the loose ap- parel all flying one way ; and draw that part of the garment which adheres closest to the body, be- fore you draw the looser part which flies off from it: lest by drawing the looser part first you should mistake the position of the figure, and thereby place it wrong. 12. Rich ornaments, when judiciously and sparingly used, will some- times contribute to the beauty of draperies ; but such ornaments are below the dignity of heavenly figures, whose grandeur should be derived from their characteristic forms and expressions, whe- ther of countenance, attitude, or attire, rather than from the earthly vanity of rich stuffs or glittering ornaments. 13. Light and flying draperies are proper only to figures in rapid mo- tion, or blown upon by the wind ; but in

a calm place, and free from violent action, their drape- ries should be large and flowing ; that by their contrast, and the fall of their folds, they may bear the appearance of grace and dignity. See further under PAINTING.

SECT. XIV. — OF DRAWING LANDSCAPES, BUILD- INGS, &c.

Of all the branches of art, this is the most generally useful and necessary ; because it is what every man may have occasion for at one time or another. To be able, on the spot, to take the' sketch of a fine building, a curious relic of antiquity, or a beautiful pros- pect of any curious production of art, or uncom- mon appearance in nature, is not only a desirable accomplishment, but an agreeable and useful amusement. Rocks, mountains, fields, woods, rivers, cataracts, cities, towns, castles, houses, fortifications, ruins, or whatsoever else may pre- sent itself to view on our journeys or travels, in our own or foreign countries, may be thus brought home and preserved for future use either in business or conversation. On this part, there- fore, more than ordinary pains should be be- stowed.

All drawing consists in measuring visible ob- jects accurately with the eye. In order to facili- tate this operation, the student should fancy, in his own mind, that the subject he is delineating is divided into squares of imaginary lines. We say imaginary lines, because though engravers and others, who copy with great exactness, divide both their copy and the original into an equal number of squares, yet this is a method not to be recommended ; since it imposes shackles upon the learner, from which he will find it difficult to emancipate himself, particularly when he comes to draw from nature, where such arti- fices will not avail him.

When colors are used in drawing, they should be managed with caution and judgment; it being

disgusting to see colored or tinted drawings, wherein the reds, greens, and blues are laid on without regard to truth or harmony. It may be urged, by those who execute them, that nothing is greener than grass, nor bluer than the sky ; but it should be considered, that nature employs such a multitude of little shadows, and such an endless variety of different tints, intermixed with her broadest colors, that the harshness of the original hue, or local tint, is thereby corrected, and the effect of the whole very different from a raw and unbroken color laid upon white paper.

Though the artist should have recourse to the study of nature, in preference to that of a master, for a knowledge of coloring, yet it requires some

judgment to know what part of nature is to be studied, and what to be avoided ; in short, selec- tion is necessary. The student, in coloring, should examine with attention, that of old walls, broken and stained by time and weather; old thatch, old tiles, rotten wood ; — in short, all ob- jects which are covered with moss, stains, and tints of various kinds ; wherein he will find all the principles of the picturesque and agreeable .n coloring. Such things as these should be copied with every possible care, and all objects of a decided uniform color should be as carefully avoided. This has ever been the practice of all the great masters who have excelled in this de- lightful part of the art ; and examples of draw- ing landscapes from nature according to the foregoing precepts have been often given.

To conclude, in order to attain any consider- able proficiency in this sort of drawing, a know- ledge of PERSPECTIVE is absolutely necessary. See that article.

*DRAWING SLATE, in mineralogy, black chalk. Its color is grayish black. Massive. Lustre of the principal fracture, glimmering; of the cross frac- ture, dull. Fracture of the former slaty, of the latter fine earthy. Opaque. Streak same color and glistening. Very soft. Sectile. Easily fran- gible. It adheres slightly to the tongue. Spe- cific gravity 2*11. It is infusible. Its constituents are — silica 64-06, alumina 11, carbon 11, water 7‘2, iron 2‘75. It occurs in beds, in primitive and transition clay-slate, also in secondary for- mations. It is found in the coal formation of Scotland, and in most countries. It is used in crayon-painting.*

DRAWL, v. n. ‘• From draw. To utter any thing in a slow, driveling way.

Then mount the clerks, and in one lazy tone Through the long heavy page drawl on. Pope.

Now sec him launched into the world at large ; If priest, supinely droning o’er his charge, Their fleece his pillow, and his weekly drawl, Though short, too long, the price he pays for all.

Cowper.

MRS. DAN. Then, I suppose, it must have been Mr. Bangle’s drawling manner of reading it to me.

Sheridan.

DRAY, n.s. \ Sax. ‘Djiaj, of the same DBAY’CART, I origin as DRAW, which see. DRAY’HORSE, > The car on which beer is DBAY’MAN, i conveyed; the horse at DRATT’PLOUGH. J tached, and the driver.

A brace of draymen bid God speed him well, And had the tribute of his supple knee. Shakspeare.

Have not coblers, draymen, and mechanicks go- verned as well as preached 1 Nay, have not they by preaching come to govern ?t' South.

This truth is illustrated by a discourse on the na- ture of the elephant and the drayhorse. Tatler.

Let him be brought into the field of election upon his draycart, and I will meet him there in a trium- phant chariot. Additon.

When drays bound high, then never cross behind Where bubbling yest is blown by gusts of wind.

Gay.

The drayplough is the best plough in winter for miry clays. Mortimer's Husbandry.

I know too that, if stopped upon my route,

Where the green alleys wmdingly allure, Reeling with grapes red waggons choke the way, — In England 't would be dung, dust, or a dray.

Byron.

DRAYTON (Michael), an eminent English poet, born of an ancient family in Warwickshire in 1563. His propensity to poetry was ex- tremely strong from his infancy; and we find most of his principal poems published by the time he was about thirty years of age. — It appears, from his poem of Moses's Birth and Miracles, that he saw at Dover the famous Spanish armada, and it is not improbable that he was engaged in some military employment there. He was patro- nised by several persons of consequence : parti- cularly by Sir Henry Goodere, Sir Walter Aston,

and the countess of Bedford ; to the first of whom i:e owns himself indebted for a great part of his education, and by the second he was for many years supported. His poems are very numerous and elegant; the most celebrated one is the Poly- Albion, a chorographical description of England, with its commodities, antiquities, and curiosities, in metre of twelve syllables; which

he dedicated to prince Henry, by whose encouragement it was written ; and, whatever may be thought of the poetry, his descriptions are allowed to be exact. He died in 1631 ; and was interred in Westmin- ster Abbey among the poets, where his bust is to be seen with an epitaph by Ben Jonson.

DRAYTON (William Henry), a statesman of the American revolution, and an able political writer, was born in South Carolina, in September 1742. In 1753 he went to England, and was placed in Westminster school ; thence he re- moved, in 1761, to Oxford, where he continued nearly three years, when he returned to South Carolina. In 1771 he was appointed, by the British government, privy counsellor for the pro- vince, and became conspicuous by his defence of the rights of his country against the encroach- ments and irregularities of the crown officers and judges. In 1774 he accepted the office of an assistant judge of the province. When the con- tinental congress was about to sit at Philadelphia, he wrote and published a pamphlet under the signature of Freeman — a production, of which Ramsay, in his History of Sorth Carolina, ob- serves, that ' it substantially chalked out the line of conduct adopted by the congress.' The lieutenant-governor suspended him from his place in the king's council, in consequence of his representation of American grievances, and the 'bill of American rights,' which he submitted to the congress in his pamphlet. As soon as the revolution began he became an efficient leader, and, in 1775, was chosen president of the provincial congress. In March of the fol- lowing year he was elected chief justice of the colony, in which character he delivered to the grand jury political charges of the most energetic character. He published, besides, a pamphlet, refuting the suggestions in favor of lord Howe's plan of a reconciliation with the mother country. Independence — unqualified independence —was his constant advice. In the year 1777 Mr. Drayton was invested with full powers, as pre- sident of South Carolina, and, early in the fol- lowing year, was elected a delegate to the conti- nental congress. In this body he took a prominent part. His speeches and writings against the propositions of the three British commissioners were particularly celebrated. The congress employed him on various important missions. The censure which he pronounced upon major-general Charles Lee's conduct at the battle of Monmouth, caused that officer to challenge him. The reasons which he assigned for declining the duel are such as became a true patriot and honorable man. Mr. Drayton con- tinued in congress until September, 1779, when he died suddenly at Philadelphia, in the thirty- sixth year of his age. His political resolution and sagacity, his literary attainments, his domestic virtues, and his polished manners, rendered him

valuable to his country, and dear to all his as- sociates. He left behind a considerable body of historical materials, which his only son, John

Drayton, revised and digested, and published at Charleston, in 1821, in two octavo volumes, under the title of Memoirs of the American Revolution, from its commencement to the year 1776, inclusive, as relating to the state of South Carolina, and occasionally referring to the states of North Carolina and Georgia.

DRA'ZEL, n. s. Perhaps corrupted from drossel, the scum or dross of human nature; or from Fr. droslesse, a whore. A low, mean, vvort.i- less wretch.

As the devil uses witches, To be their cully for a space, That, when the time's expired, the drazels For ever may become his vassals. Hudibras.

DREAD, n. s., v. a. & v, w.ˆ Sax. dried, from

DREAD'ER, n. s. Goth. radnr,ier-

DREAD'FUL, adj. \ ror ; or, as Mr.

DREAD'JULLY, adv. S-Todd suggests,

DREAP'FULNESS, n. s. from Icel. and

DREAD'LESS, adj. \ Goth, thra, sad-

*DREAD LESSNESS, n. *. J ness. Extreme*

fear, terror, awe ; the cause of fear. The verb

seems to be derived from the noun, and means to

fear in a great degree ; to be in fear : a dreader

is one who lives in habitual dread : dreadful is

terrible : dreadless, without fear or dread : the

derivatives correspond in meaning.

And Zacarye seynge was afrayed : and drede fel upon him.

And the aungle sayde to him, Zacarye drede thou not: for ihy preier is herd. Wiclif.

Not seruynge at ighe as plesynge to men, but in symplenesse of herte dredinge the Lord. Id. Col. iii.

The fear of you, and the dread of you, shall be upon every beast of the earth. Genesis ix. 2.

How dreadful is this place ! Genesis.

Let him be your dread. Isaiah.

Quod he, to Athenes right now wol I fare ;

Ne for no drede of deth shall I not spare

To see my lady, that I love and serve ;

In hire presence I rekke not to sterve.

Chaucer. Cant. Tal i.

Right, faithful, true he was in deed and word ; But of his cheere did seeme too solemne sad ; Yet nothing did he dread, but ever was ydrad

Spenser. Faerie Queene.

Think'st thou that duty shall have dread to speak, When power to flatt'ry bows ? To plainness honour Is bound, when majesty to folly falls.

Shakspeare. King Lear It cannot be, but thou hast murthered bin? j So should a murtherer look, so dread, so grim.*

Shakspeare.

The wicked heart never fears God, but thundering or shaking the earth, or raining fire from heaven ; but the good can dread him in his very sun-shine ; his loving deliverances and blessings affect them with awfulness. Bp. Hall. Contemplations.

Terrour seized the rebel host, When, coming towards them, so dread they saw The bottom of the mountains upward turned.

Milton.

From this descent Celestial virtues rising will appear More glorious and more dread than from no fall.

Id.

DREAMS.

Dreadjvl attraction ! while behind thee gapes The' unfathomable gulf where Ashur lies O'erwhelmed, forgotten ! Id. on Luxury.

DREAM, v. n., v. a. & n. s. ˆ Sax. drom ;

DREAM'ER,n.x. VGoth. drauma ;

DREAM'LESS, adj. 3 Belg. droom ;

Teut. traum, from Lat. dormio ; Heb. nm, to sleep. To have a representation or imagina- tion of things in sleep : hence, to imagine gene- rally ; to think vaguely or idly : as an active verb, to see in a dream. Dreamer has formerly meant an interpreter or master of dreams: dreamless is free from or without dreams. Dr. Johnson ob- serves ' This word is derived by Meric Casaubon, with more ingenuity than truth, from Spapa TH /Sis, the comedy of life ; dreams being, as plays are, a representation of something which does not really happen. This conceit Junius has en- larged by quoting an epigram : ' SKJJV?) ?rac 6 /3ioe KM iraiyviov f; fjiaSre Trai&iv, TJJV fffraSr}v p,tTaSsi£, ij (j > 'ept TO.Q oSwag.

Behold this dreamer (Marg. master of dreams) cometh ! Gen. xxxvii. 19.

Utterly these thinges be no dremes ne japes, to throwe to hogges, it is lyfelych mete -for children of trouth, and as they me betiden whan I pilgramed out of my kith in wintere. Chaucer.

We eat our meat in fear, and sleep In the affliction of those terrible dreams That shake us nightly. Shakspeare. Macbeth.

I have long dreamed of such a kind of man, But, being awake, I do despise my dream.

Shakspeare.

These boys know little they are sons to the king, Nor Cymbeline dreams that they are alive. Id.

Sometimes he angers me With telling of the moldwarp and the ant, Of dreamer Merlin, and his prophecies. Id.

The savages of Mount Atlas, in Barbary, were re- ported to be both nameless and dreamiest.

Camden't Remains.

But, dearest heart ! and, dearer image ! stay ; Alas ! true joys at best are dreams enough j Though you stay here you pass too fast away, For even at first life's taper is a snuff. Donne.

He sleeps but once, and dreames of burglarie,

Bp. Hall's Satires, iv. 6. The Macedon, by Jove's decree, Was taught to dream an herb for Ptolemy.

Dryden.

In dreams they fearful precipices tread ; Or shipwrecked, labour to some distant shore. Id.

Why does Anthony dream out his hours, And tempts not fortune for a noble day ? Id.

If our dreamer pleases to try whether the glowing heat of a glass furnace be barely a wandering imagi- nation in a drowsy man's fancy, by putting his head into it, he may perhaps be wakened into a certainty.

Locke.

Dreaming is the having of ideas, whilst the out- ward senses are stopped, not suggested by any external objects, or known occasion, nor under the rule or con- duct of the understanding. Id.

They dream on in a constant course of reading, but not digesting. Id.

I dreamed that I was conveyed into a wide and boundless plain. Tatler.

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The man of sense his meat devours, But only smells the peel and flowers ; And he must be an idle dreamer, Who leaves the pie and gnaws the streamer.

Prior.

He never dreamed of the deluge, nor thought that first orb more than a transient crust.

Burnet's Theory.

Her midnights once at cards and hazard fled, Which now, alas ! she dreams away in bed, And round her wait shocks, monkeys, and mockaws To fill the place of fops and perjured beaus. Gay.

Life, like their bibles, coolly men turn o'er , Hence unexperienced children of threescore, True all men think of course, as all men dream; And if they slightly think, 'tis much the same.

Young.

If we can sleep without dreaming, it is well that painful dreams are avoided. If, while we sleep, we can have any pleasing dreams, it is, as the French say, tant gague, so much added to the pleasure of life. Franklin.

With woe I nightly vigils keep,

Beneath thy wan unwarming beam j And mourn, in lamentation deep,

How life and love are all a dream. Bums. It may therefore, perhaps be fairly said, that, in respect of any supposed tendency to scepticism, the evidence of history is full as strong against natural philosophy as against metaphysics ; yet who ever dreamed of proscribing the natural sciences ?

Bawdier.

He came — oh Hope ! he hastened to my seat ; I saw, and almost dreamed him at my feet, Close by my side a gay attendant slave ; The glance, which thousands sought, to none he gave.

Dr. T. Brown.

Tell me no more of fancy's gleam. No, father, no, 'twas not a dream ; Alas ! the dreamer first must sleep, I only watched, and wished to weep ; But could not, for my burning brow Throbbed to the very brain as now.

Byron. The Giaour.

DREAMS have been denned as those thoughts of which we are conscious, and those imaginary transactions in which we fancy ourselves engaged, when in the state of sleep. Scarcely any part of nature is less open to our observation than the human mind in this state. The dreamer himself cannot observe the manner in which dreams arise or disappear. When he awakes he has in general but a confused recollection of the circumstances of his dreams. Were we to watch over him with the most vigilant attention, we could not perceive what emotions are excited in his mind, or what thoughts pass through it, during his sleep. But though we could ascertain these phenomena, many other difficulties would still remain. What parts of a human being are active, what dormant, when he dreams? Why does he not always dream while asleep ? Or why dreams he at all ? Do any circumstances in our constitution, situation, and peculiar character, determine

the nature of our dreams ?

Without pretending to solve the above ques- tions, we shall here give a brief view of those facts which have been ascertained concerning dreams. 1 . In dreaming we are not conscious of being asleep. This is well known from a thousand cir- cumstances. When awake, we often recollect our dreams ; and we remember on such occasions,

that, while those dreams were passing through our minds, it never occurred to us that we were separated by sleep from the active world ; ex- cept in those cases where we have a kind of double dream ; i. e. when, after dreaming for some time, we dream that we have awaked from sleep, and told our dream. But during this se- cond dream, and rehearsal of our former one, we are fully persuaded that we are awake, till, by awaking in reality, we are convinced that we were asleep all the time. We are also often ob- served to act and talk in dreaming, as if we were busily engaged in the intercourse of social life. 2. In dreaming we do not consider ourselves as witnessing or bearing a part in a fictitious scene ; we seem not to be in a similar situation with the actors in a dramatic performance, or the specta- tors before whom they exhibit, but engaged in the business of real life. All the varieties of thought, that pass through our minds when awake, may also occur in dreams ; all the images which ima- gination presents, in the former state, she is also able to call up in the latter ; all the same emotions may be excited, and we are often actuated by equal violence of passion ; none of the transac- tions, in which we are capable of engaging whi'e awake, is impossible in dreams ; in short, oui range of action and observation is equally wide in the one state as in the other ; nay often more so ; for we may dream of flying, walking upon waters, and performing actions which we can- not perform when awake. 3. It is said thdt all men are not liable to dream. Dr. Beattie, in a very pleasing essay on this subject, relates, that he knew a gentleman who never dreamed except when his health was in a disordered state ; and Locke mentions, that a person of his acquaint- ance was a stranger to dreaming till the twenty- sixth year of his age ; when he began to dream in consequence of having a fever. These in- stances, however, are too few; and, besides, it does not appear that those persons had always attended, with the care of a philosopher making an experiment, to the circumstances of their sleep. They might dream, but not recollect their dreams on awaking; and they might both dream, and recollect their dreams immediately upon awaking, yet afterwards suffer

them to slip out of their memory. But though it is by no means certain that any of the human race are, through the whole of life, absolute stangers to dreaming, yet it is well known that all men are not equally liable to dream. The same person dreams more or less at different times ; and, as one person may be more exposed than another to those circum- stances which prpmote this exercise of fancy, one person may therefore dream much oftener than another. The same diversity will naturally take place in this as in other accidents to which man- kind are in general liable. 4. Though in dreams imagination appears to be free from all restraint, and indulges in the most wanton freaks, yet it is agreed that the imaginary transactions of the dreamer, if in health, generally bear some rela- tion to his particular character in the world, his habits of action, and the circumstances of his life. The lover dreams of his mistress; the miser of his money ; the philosopher renews his scientific researches in sleep with the same assi-

duity as when awake ; and the merchant returns to balance his books, and compute the profits of an adventure, when slumbering on nis pillow And not only do the general circumstances of a person's life influence his dreams, but his pas- sions and habits are nearly the same when asleep as when awake. A person whose habits of life are virtuous does not in his dreams plunge into a series of crimes; nor are the vicious reformed, when they pass into this imaginary world. The choleric man finds himself offended by slight pro- vocations in his dreams, as well as in his ordinary intercourse with the world, and a mild temper continues pacific in sleep. 5. The character ot a person's dreams is influenced by his circum- stances when awake in a still more unaccount- able manner. Certain dreams usually arise in the mind after a person has been in certain situa- tions. Dr. Beattie relates, that he once, after riding thirty miles in a high wind, passed a part of the succeeding night in dreams beyond descrip- tion terrible. The state of a person's health, and the manner in which the vital functions are car- ried on, have a considerable influence in deter- mining the character of dreams. After too full a meal, or after eating of an unusual sort of food, a person has dreams of a certain nature. 6. In dreaming, the mind for the most part carries on no intercourse through the senses with surround- ing objects. Touch a person gently who is asleep, he feels not the impression. You may awake him by a smart blow; but, when the stroke is not sufficiently violent, he remains insensible of it. We speak softly beside a person asleep with- out fearing that he will overhear us. His eyelids are shut ; and even though light should fall upon the eye-ball, yet still his powers of vision are not awakened to active exertion, unless the light be so strong as to rouse him from sleep. He is in- sensible both to sweet and to disagreeable smells. It is not easy to try whether his organs of taste retain their activity, without awaking him : yet, from analogy, it may be presumed that these too are inactive. With respect to the circumstances

here enumerated, it is indifferent whether a per- son be dreaming or buried in deep sleep. Yet there is one remarkable fact concerning dream- ing which may seem to contradict what has been here asserted. In dreams we are liable not only to speak aloud in consequence of the suggestions of imagination, but some persons even get up and walk about and engage in little enterprises, with- out awaking. Now, as we are in this instance so active, it seems that we cannot be then insensible of the presence of surrounding objects. The sleep-walker is really sensible, in a certain de- gree, of the presence of the objects around him ; but he does not attend to them with all their circumstances, nor do they excite in him the same emotions as if he were awake. He feels no ter- ror on the brink of a precipice ; and, in conse- quence of being free from fear, he is also without danger in such a situation unless suddenly awoke. This is one of the most inexplicable phenomena of dreaming. There is another fact not quite consonant with what has been above advanced. It is said that, in sleep, a person will continue to hear the noise of a cataract in the neighbourhood or regular strokes with a hammer, or any similar

sound sufficiently loud, and continued uninter- ruptedly from before the time of his falling asleep. And it is affirmed that he awakes on the sudden cessation of the noise. This fact is asserted on sufficient evidence : it is curious. Even when awake, if deeply intent on study, or closely oc- cupied in business, the sound of a clock striking in the neighbourhood, or the beating of a drum, will escape us unnoticed ; and it is therefore the more surprising that we should thus continue sensible to sounds when asleep. 7. Not only do a person's general character, habits of life, and state of health, influence his dreams ; but those concerns in which he has been most deeply in- terested during the preceding day, and the views which have arisen most frequently to his imagi- nation, very often afford the subjects of his dreams. When one looks forward with anxious expectation towards any future event, he is likely to dream either of the disappointment or the gra- tification of his wishes. If engaged through the day, either in business or amusements which he found exceedingly agreeable, or in a way in which he has been extremely unhappy, either his hap- piness or his misery is likely to be renewed in his dreams. 8. Though dreams have been re- garded in almost all nations, at least in some pe- riods of their history, as prophetic of future events, yet it does not appear that this popular opinion has been established on good grounds. Christianity, indeed, teaches us to believe that the Supreme Being may operate through this medium, and actually has operated on the human mind; and influenced at time the determinations of the will ; as he did to Abimelech, Gen. xx. 3—6, and to Joseph, Matt. i.

20, and ii. 19, 22. The dreams of Joseph and Pharaoh ; of his chief butler and baker; of Nebuchadnezzar and the prophet Daniel, &c., are also decisive on this point. Yet it is perfect folly to confound such miraculous dreams with those which the priest- hood among heathen nations, or the vulgar among ourselves, have considered as prophetic. We know how easily ignorance imposes on itself, and what arts imposture adopts to impose upon others. We cannot trace any certain connexion between our dreams and those events to which the simplicity of the vulgar pretends that they refer. And we cannot, therefore, join with the vulgar and the superstitious in believing them really referrible to futurity. 9. It appears that brutes are also capable of dreaming. The dog is often observed to start suddenly up in his sleep, in a manner which cannot be accounted for any other way than by supposing that he is roused by some impulse received in a dream. The same thing is observable of other brutes. That they should dream, is not an idea inconsistent with what we know of their economy and manners in general. We may, therefore, consider it as a pretty certain truth that many, if not all, of the inferior animals are liable to dream, as well as human beings. It appears, then, that in dream- ing we are not conscious of being asleep ; that to a person dreaming, his dreams seem realities : that though it be uncertain whether mankind are all liable to dreams, yet it is well known that they are not all equally liable to dream : that the nature of a person's dreams depends in.

some measure on his habits of action, and on the circumstances of his life : that the state of the health too, and the manner in which the vital functions are carried on, have a powerful influ- ence in determining the character of a person's dreams : that in sleep, and in dreaming, the senses are either absolutely inactive or nearly so : that such concerns as we have been very deeply interested in during the preceding day, are very likely to return upon our minds in dreams in the hours of rest : that dreams may be rendered pro- phetic of future events ; and therefore, wherever we have such evidence of their having been pro- phetic as we would accept on any other occasion, we cannot reasonably reject the fact as absurd ; but that they do not appear to have been actually such, in those numerous instances in which the superstition of nations, ignorant of true religion, has represented them as referring to futurity, nor in those instances in which they are viewed in the same light by many among ourselves . and, lastly, that dreaming is not a phenomenon peculiar to human nature, but common to mankind with the brutes.

We know of no other facts, that have been ascertained concerning dreaming, besides the above. But we are by no means sufficiently ac- quainted with this important phenomenon in the history of mind. We cannot tell by what laws of our constitution we are thus liable to be so frequently engaged in imaginary transactions, nor what are the particular

means by which the delusion is accomplished. The delusion is indeed remarkably strong. One will sometimes fancy that he reads a book, and actually enter into the nature of the imaginary composition before him, and even remember, after he awakes, what he then knows, that he only fancied himself reading. Another will sometimes dream that he is at church, and hears a sermon delivered, which he would be incapable of composing when awake. Can this be delusion ? If delusion, how, or for what purpose, is it produced ? The mind, it would appear, does not, in sleep, become inactive like the body ; or at least is not always inactive while we are asleep. When we do not dream, the mind must either be inactive, or the connexion between the mind and the body must be con- sidered as in some manner suspended : and when we dream, the mind, though it probably acts in concert with the body, yet does not act in the same manner as when we are awake. It seems to be clouded or bewildered, in consequence of being deprived for a time of the service of the senses. Imagination becomes more active and more capricious ; and all the other powers, es- pecially judgment and memory, become disor- dered and irregular in their operations.

Various theories have been proposed to explain what appears most inexplicable in dreaming. The ingenious Mr. Baxter, in his treatise on the Immateriality of the Human Soul, endeavours to prove that dreams are produced by the agency of some spiritual beings, who either amuse or employ themselves seriously in engaging man- kind in all those imaginary transactions with which they are employed in dreaming. This theory, however, is far from being plausible. It leads us entirely beyond the limits of our know –

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ledge. It requires us to believe without evi- dence. It is unsupported by any analogy. It creates difficulties still more inexplicable than those which it has been proposed to remove. Till it appear that our dreams cannot possibly be produced without the interference of other spiritual agents, possessing such influence over our minds as to deceive us with fancied joys, and involve us in imaginary afflictions, we can- not reasonably refer them to such a cause. Be- sides, from the facts which have been stated as well known concerning dreams, it appears that their nature depends both on the state of the human body and on that of the mind. But were they owing to the agency of other spiritual beings, how could they be influenced fay the state of the body ? Wolfius, and after him M. Formcy, have supposed, that dreams never arise in the mind, except in consequence of some of the or-

gans of sensation having been previously excited. Either the ear or the eye, or the organs of touch- ing, tasting, or smelling, communicate informa- tion somehow, in a tacit, secret manner; and thus partly rouse its faculties from the lethargy in which they are buried in sleep, and engage them in a series of confused and imperfect exer- tions. But what passes in dreams is often so very different from all that we do when awake, that it is impossible for the dreamer himself to distinguish whether his powers of sensation per- form any part on the occasion. It is not neces- sary that imagination be always excited by sen- sation. Fancy, even when we are awake, often wanders from the present scene. Absence of mind is incident to the studious: the poet and the mathematician often forget where they are. We cannot discover from any thing that a person in dreaming displays to the observation of others, that his organs of sensation take a part in the imaginary transactions in which he is employed. In those instances, indeed, in which persons asleep are said to hear sounds, the sounds which they hear are also said to influence, in some man .ner, the nature of their dreams. But such in- stances are singular. Since it then appears, that .the person who dreams is himself incapable of distinguishing, either during his dreams or by recollection when awake, whether any new im- .pressions are communicated to him in that state ,by his organs of sensation ; that even by watch- ing over him, and comparing our observations of .his circumstances and emotions, in his dreams, with what he recollects of them after awaking, we cannot, except in one or two singular instances, .ascertain this fact; and that the mind is not in- capable of acting while the organs of sensation are at rest, and on many occasions refuses to listen to the information which they convey ; we juay conclude, that the theory is groundless. Other physaologists tell us, that the mind, when we dream, is in a state of delirium. Sleep, they say, is attended with what is called a collapse of the brain ; during which either the whole or a part of the nerves of which it consists, are in a state in which they cannot carry on the usual inter- course between the mind and the organs of sen- sation. When the whole of the brain is in this state, we become entirely unconscious of exist- ence and the mind sinks into inactivity ; when

only a part of the brain is collapsed, we are then neither asleep nor awake, but in a sort of delirium between the two. This theory, like the last, supposes the mind incapable of acting without the help of sensation : it supposes that we know the nature of a state, of which we cannot ascer- tain the phenomena; it also contradicts a known fact, in representing dreams as confused image » of thing? around us, not fanciful combinations of things not existing together in nature or in human life. We must treat it likewise, therefore, as a baseless fabric. In the second edition of the Encyclopaedia Britannica, a theory different from any of the forcgoingxwas advanced. It was observed, that the nervous fluid, which is

sup- posed to be secreted from the blood by the brain, appears to be likewise absorbed from the blood by the extremities of the nerves. It was argued that, as this fluid was considered as the principle of sensibility, therefore, in all cases in which a sufficient supply of it was not absorbed from the blood by the extremities of the nerves, the parts of the body to which those uerves belonged must be, in some degree, deprived of sensation. From these positions it was inferred, that, as long as impressions of external objects continue to communicate a certain motion from the sentient extremities of the nerves to the brain, so long we continue awake; and that, when there is a defi- ciency of this vital fluid in the extremities of the nerves, or when from any other cause it ceases to communicate to the brain the peculiar motiou alluded to, we must naturally fall asleep, and become insensible of our existence. It followed that, in sleep, the nervous fluid between the ex- treme parts of the nerves and the brain must either be at rest, or be deficient, or be prevented by some means from passing into the brain ; and it was concluded, that whenever irregular motions of this fluid were occasioned by any internal cause, dreaming was produced. Thus we might be deceived with regard to the operation of any of the senses ; so as to fancy that we see objects not actually before us : that we hear sounds ; that we taste, feel, smell, &c. The instances of visions which will sometimes arise, and as it were swim before us when awake, though our eyes be shut ; the tinnitus aurium, which is often a symptom in nervous diseases ; and the strange feelings in the case of the amputated limb, were produced in proof of this theory, and applied to confirm it.

Plausible as the above theory at first view may appear, it is not satisfactory. It is too much founded on supposition. The nature of the nervous fluid is but imperfectly known, and even its existence is not fully ascertained. All theories founded upon it must, therefore, be at best uncertain. Besides the suppositions made in this theory, of a partial privation and sensation, and efficiency of the vital fluid, as ne- cessary to produce sleep, seem to infer that sleep is not consistent with a state of perfect health, which every body knows is contrary to fact. The Brunonian system of medicine appears to give rather a more satisfactory solution of the pheno- mena and causes of sleep, by ascribing them to the exhaustion of the excitability by the exciting powers. But, without trusting entirely to the

hypotheses of either system, we are persuaded, a all, attended to. And it appears to be a suffi theory of dreaming, if not perfectly satisfactory, cient confirmation of this theory, that persons in at least less exceptionable than

any of the above, may be drawn from merely attending to a simple

tact that frequently takes place when we are awake. Every person must have observed, that

good health, and engaged in active employments, most commonly dream of those "latters wherein they are daily occupied; trr. < uniform current of

their ideas when awake, seldom taking any other i • . • i • i .

when alone, and while his attention is not called direction during sleep; whereas, persons in a to any particular subject, either by study, con- bad habit of body, or weak state of mind, and versation, manual labor, sudden noise, or the those who take little exercise, or who aie not objects around him, a kind of involuntary mo- engaged in active business, have generally wild tion, so to speak, will take place in his ideas ; and extravagant dreams, and sometimes very and that, if he makes no voluntary exertion of disagreeable ones, of monsters, mad dogs, devils, mind to fix his attention upon one idea more deep pits, houses on fire, stormy ocean, and the than another, a rapid succession of very different ideas, some old and some recent, will occur in the course of a few minutes. Every person, who attends church regularly, or who has at- tended the lectures of an unentertaining public speaker, must be sensible, that such involuntary motipns of his ideas have often taken place,*

when, either through the fault of the speaker, or that of the hearer, his attention has not been sufficiently fixed upon what was spoken. A person much addicted to study, and to the habit of fixing his ideas constantly upon one subject

like. In a word, when we consider the opera- tions of our minds when awake, particularly of that active faculty, the imagination, how readily upon hearing, reading, or speaking of any person, place, action, or circumstance, it forms an idea in the mind of such person, place, &c., though, perhaps, many years have elapsed since we saw them, or even though we have never seen them, we need not be surprised, that the same active faculty should be able, when uncontrolled by the will and judgment, and but partially assisted by the memory, to raise up a series of images in

or another, may, perhaps, be less sensible of the succession, and thus to create an ideal world, and

involuntary motion we here allude to, than various ideal transactions in the mind,

others ; but let such a studious person be placed The late Mr. Rennell, of

Kensington, consi-

in a company where a trifling conversation is ders dreams to afford satisfactory proof that the

going on, and he will soon find himself in the situation here described. A current of ideas will

mind can act without the intervention of the brain : upon this it has been well remarked, that

rapidly intrude upon his mind, and carry off we have not as yet sufficient data from which to his attention from the trifles in which those around estimate the degree of dependence of the former him are engaged; and thus subject him to what upon the latter, still we have no facts founded is commonly called absence of mind. And it upon our present state of being, which can esta- will also be admitted that the most studious, as blish the total independence which he supposes, •well as the most thoughtless, will sometimes find The proximate cause of sleep is undoubtedly an idea of a long forgotten fact, sentiment, or corporeal, and, perhaps, consists in a certain circumstance, suddenly recurring to their minds, inaptitude of the brain to receive the usual im- without any seeming cause. The inference we pulses of its immaterial tenant. When this in- would draw from all these facts, to our present aptitude amounts to complete quiescence, the subject, is, that during sleep, a similar involun- soul cannot display itself, because the instrument tary motion, or current of ideas, takes place ; of its operations is in a state of repose. In such but that, in consequence of the fatigue occasioned circumstances the sleep is profound, and no by the labors of the day (no matter whether these dreams take place. This repose or quiescence opeiate by exhausting the excitability, or by oc- of the brain may be increased to absolute torpor casioning a deficiency of the nervous fluid), the for a season, as is seen in the hybernation of ani- three chief powers of the mind — the will, the mals, and in those rare cases in the human spe- judgment, and the memory, are rendered in a cies, where persons have remained for several considerable degree inactive ; at least, in so far, hours, or even days, in a trance. When this that the will has no power over these faculties, torpor of the cerebral system abates, the imma- while the imagination, rendered more active, as terial principal is again enabled to resume its it would seem, by being freed from the control operations, owing to the renewed capabilities of of both the will and the judgment, gives every the instrument. Thus, as the cause of sleep is new idea that occurs a visionary form; and thus corporeal, there are strong grounds for presum- creates a fresh and rapid succession of various ing that the cause of dreams is corporeal also, images, according to the unlimited current of They occur oftenest when there is any irritation uncontrolled

ideas that succeed each other. How of the system in general, or of the brain in par- this happens, perhaps, the human faculties will ticular, hindering the complete repose of that never be able to comprehend or explain ; at least, part. When this irritation is great, as in general till they shall be capable of explaining the con- fever, accompanied with increased action of the nexion by which the soul and body are united, blood-vessels within the head, sleep is often en- if, indeed, mankind shall ever attain to such a tirely prevented ; or if it does take place, it is degree of perfection in physiology. But that disturbed with frightful illusions. What is the dreams take their rise chiefly, if not solely, from precise state of the soul at such times, is a dis- the mere succession of ideas, dressed into form puted point amongst metaphysicians. Perhaps, oy the imagination, uncontrolled by the will or on so dark a subject, it may be allowable to ha- the judgment, appears to us to be an undoubted zard a conjecture, that the operations of the fact, though hitherto it would seem little, if at immaterial being are modified by the semi-

quiescence of the material organ, and that this want of correspondence between the agent and the instrument is the cause of the wild imagina- tions and false judgments that distinguish our dreams from our waking thoughts. Dreams, therefore, instead of proving the contrary, rather tend to show that the dependence of the imma- terial upon the material part is perpetual and without exception, during the continuance of man's existence upon earth.

In whatever way we attempt to account for the manner, in which our powers of mind and body perform their functions in dreaming, we can, at least, apply to useful purposes the imper- fect knowledge which we have been able to acquire concerning this series r»f phenomena. Our dreams are affected by the state of our health, by the manner in which we have passed the preceding day, by our general habits of life, by the hopes which we most fondly indulge, and the fears which prevail most over our fortitude when awake. From recollecting our dreams, therefore, we may learn to correct many impro- prieties in our conduct; to refrain from bodily exercises, or from meats and drinks that have unfavorable effects on our constitution ; to resist, in due time, evil habits that are stealing upon us ; and to guard against hopes and fears which detach us from our proper concerns, and unfit us for the duties of life. Instead of thinking what our dreams may forebode, we' may, with much better reason, reflect by what they have been occasioned, and look back to those circum- stances in our past life, to which they are owing. The sleep of innocence and health is

sound and refreshing; their dreams delightful and pleasing. A distempered body, and a polluted or perturbed mind, are haunted in sleep with frightful, im- pure, and unpleasing dreams. The reader who is disposed to speculate farther on this subject, may consult Dr. Beattie's Essays, Hartley on Man, and the principal writers on physiology. We may add, some very beautiful fables have been written both by ancients and moderns in the form of dreams. The Somnium Scipionis is one of the finest of Cicero's compositions. In the periodical publications, which have diffused so much elegant and useful knowledge through Great Britain, the Tatlers, Spectators, Guardians, &c., we find a number of excellent dreams. Addison excelled in this way of writing. The public are now less partial to this species of composition than formerly. Dr. Beattie, in his valuable Essay on Dreaming, quotes a very fine one from the Taller, and gives it due praise. DREAR, adj. & n. s. \ Sax. dreorig ; Bclg. DREAR'Y, adj. I treuer ; from Goth.verb

DREAR'IHEAD, n. s. > rygga, to lament. All DREAR'IMENT, I the substantives signify

DREAR'INESS. j sorrow, united with

fear : drear and dreary are, dismal ; mournful ; fearful.

The ill-faced owl, death's dreadful messenger ; The hoarse night raven, trump of doleful drear.

Spenser.

The messenger of death, the ghastly owl, With dreary shrieks did also yell ; And hungry wolves continually did howl At her abhorred face, so horrid and so foul.

Id. Faerie Queene.

But the good knight Full of sad feare and ghastly dreriment, When all this speech the living tree had spent, The bleeding bough did thrust into the ground.

Spenser. Faerie Queene.

In urns and altars round, A drear and dying sound

Affrights the flamens at their service quaint. Milton. Obscure they went through dreary shades, that led Along the vast dominions of the dead. Dryden.

Towns, forests, herds, and men promiscuous

drowned, With one great death deform the dreary ground.

Prior.

So with his dread Caduceus Hermes led From the dark regions of the imprisoned dead, Or drove in silent shoals the lingering train To night's dull shore, and Pluto's dreary reign.

Darwin.

It struck even the besiegers' ear With something ominous an'i drear, An undefined and sudden thrill, Which makes the heart a moment still.

Byron. O luxury !

Bane of elated life, of affluent state-, What dreary change, what ruin, is not thine 1 Id.

DREDGE, v. a. & n. s.) Sax. draegan, to

DREDG'ER, n. s. J drag, of which word

(or of dregs?) this word is a corruption. To ga- ther into a particular kind of net : the net used : a dredger is one who uses such a net ; and, per- haps from its net-like top, a box for scattering flour on meat, or amongst pastry ; called also a dredging-box.

For oysters they have a peculiar dredge ; a thick, strong net, fastened to three spills of iron, and drawn at the boat's stern, gathering whatsoever it meeteth lying in the bottom. Carew.

The oysters dredged in the Lyne find a welcome acceptance. Id.

DREDGING, in civil engineering, is the art of removing mud, silt, or other depositions from the bed of rivers, canals, harbours, or docks ; and is accomplished by various tools and de- scriptions of machinery.

The common dredging-boat or barge is worked by two or more men, by whom the gravel, or ballast, is taken up in a leather bag, the mouth of which is extended by an iron hoop, attached to a pole, of sufficient length

to reach the bot- tom : in the small way, two men are employed to work each pole. The barge being moored, one of the men takes his station at the stern, with the pole and bag in his hand, the other stands in the head, having hold of a rope, tied fast to the hoop of the leather bag. The man at the stern now puts the pole and bag down, over the barge's side, to the bottom, in an inclined position. The hoop being farthest from the man in the head of the barge, and having a rope, one end of which is fast to the gunwale of the barge, he passes it twice or thrice round the pole, and then holds it tight : the man in the head now pulls the rope, fastened to the hoop, and draws the hoop and bag along the ground, the other allowing the pole to slip through the rope as it approaches the vertical position, at the same time causing such a friction, that the hoop digs into the ground, the leather bag receiving whatever passes through the

hocp : both men now assist in getting a bag into the barge, and delivering its contents. When the bag is large, several men are employed ; and, to increase the effect, a windlass, with wheel-work, is sometimes used. A chain or rope is brought to the winch from the spoon, through a block suspended from a small crane for bearing the spoon and its contents to the side of the boat, and bringing it over the gunwale to be emptied into it. The purchase rope is led upon deck by a snatch block in the proper direction for the barrel of the winch. From two to four men, can with this simple apparatus, lift from twenty to sixty tons in a tide, from a depth of from two and a half to three fathoms, when the ground is fa- vorable. In this manner the convicts at Woolwich upon the Thames, have been long employed to perform the ballast-heaving, or dredging.

The bucket dredging-machine, whether worked by men, horses, or the steam-engine, is a great improvement on the above. The frame-work consists of two beams of timber, supported on a rod of iron with shores of wood ; on these the full buckets move upon iron rollers fixed to the timber, while the empty buckets, attached to and guided by an endless chain, form a curve in descending to the bottom ; as they respectively arrive they are intended to excavate or scoop up the silt or gravel from the ground. The opera- tion of lowering and raising the frame once performed by crane-work, distinct from the machinery of the steam-engine, is now also accom- plished by a power taken from it.

Plate DREDGINI MACHINES, AA, fig. 1, is a frame of timber bolted to the starboard gun- wale, to support a large horizontal beam BB, fig. 2 ; another similar frame is fixed up in the middle of the ship at D, fig. 2, and

the end of the beam is sustained by an upright post bolted to the opposite gunwale ; the starboard end of the beam projects over the vessel's side, and has an iron bracket S fastened to it, to support one of the bearings for the long frame E E, composed of four timbers bolted together : the other end of the frame is suspended by pulleys a, a ; from a beam F fixed across the stern, the upper ends of the outside beams of the frame EE have each a stout iron bolted to them, which are per- forated with two large holes to receive two short cast iron tubes, one fastened to the iron bracket S at the end of the beam B, and the other to a cross beam of the frame A; these tubes act as the pivots of the frame E, upon which it can be raised or lowered'by the pulleys a, a: they also contain bearings for an iron axis, on which a wheel or trundle O is fixed, containing four rounds. Another similar trundle P is placed at the bottom of the frame E E, and two endless chains k,k, pass round both, as is seen in the plan. Between every other link of the two chains, a bucket of plate iron b b b is fastened, and, as the chain runs round, the buckets bring up the soil ; a number of c'ast iron rollers d, d, are placed between the beams of the frame to support the chain and buckets as they roll up. Four rollers e,e, aie also placed on each of the outside beams, to keep the chains in their places on the frame, that they may not get off to one side. The motion is conveyed to the chains by

means of a cast iron wheel at G in the plan, wedged on the end of the axis of the upper trundle O. The wheel is cast hollow, like a very short cylinder, and has several screws tapped through its rim, pointing to the centre, and pres- sing upon the circumference of another wheel enclosed within the hollow of the first, that it may slip round in the other, where any power greater than the friction of the screw is applied ; the internal wheel is wedged on the same shaft with a large cog-wheel /, turned by the small cog-wheel g, on the axis of the steam-engine. The steam-engine is one of that kind called high pressure, working by the expansive force of the steam only, without condensation ; h is the boiler containing the fire-place and cy- linder within it; I is one of the connecting rods, and I the fly wheel on the other end of the same shaft as the wheel g. The pulleys a, which sus- pend the chain frame, are reeved with an iron chain, the tackle fall of which passes down through the ship's deck, and is coiled on a roller m in the plan, and represented by a circle in the elevation : on the end of the roller is a cog-wheel p, turned by the engine wheel g : the bearing of this wheel is fixed upon a lever, one end of which comes near that part of the steam-engine, where the cock, which regulates the velocity of the engine, is placed ; so that one man can command both lever and cock, and, by depressing that end of the lever, cause the wheel p to geer with g, and consequently be turned thereby, and wind up the chain of the pulleys ; g is a strong curved iron bar bolted to the vessel's side and gunwale, passing through an eye bolted to the frame E, to keep the frame to the vessel's side,

that the tide or other accident may not carry it away.

A hopper or trough is suspended beneath the wheel o, by ropes from the beam B, into which the buckets b, 6, b, empty the ballast they bring from the bottom ; the hopper conveys it into a barge brought beneath it; this hopper is not shown in the plate, as it would tend to confuse parts already not very distinct. The motion of the whole machine is regulated by one man. The vessel being moored fast, the engine is started, and turns the chain of buckets : the engine tender now puts his foot upon a lever, disengages the wheel p from g, and by another takes off a gripe which embraced the roller m. This allows the end E of the frame to descend, until the buckets on the lower half of the chain drag on the ground, as shown in fig. 1, when he stops the further descent by the gripe, the buckets are filled in succession at the lower end of the frame, and brought up to the top, where they deliver their contents into the hopper before-mentioned : as they take away the ballast from the bottom, the engine tender lets the frame E down lower by means of the gripe lever, and keeps it at such a height that the buckets come up nearly full ; if at any time the buckets get such deep hold as to endanger the breaking of the chain or stopping the engine, the coupling-box at G before-described, suffers the steam-engine to turn without moving the chain of buckets, and the engine tender, pressing his foot upon the lever which brings the wheel p to geer with g, causes the roller n to be turned by the engine, and raise up the frame E, until

the buckets take into the ground the proper depth, that the friction of the coupling-box at G will turn the chain without slipping in any con- siderable degree. The steam-engine here de- scribed is of six-horse power, and will load a small barge with ballast in an hour and a half. Generally the excavated matters are required as ballast for shipping. Those of the Thames are sold to the colliers of Shield and Newcastle, at the rate of about a shilling per ton, and the bal- last hills of those places are said to consist of these matters principally. They are also used for em- banking and filling up behind piers, and those taken from the London docks are carried to the Osier Forelands on the banks of the river Lea, where they have already formed a valuable frontage for building. When dry they have also been used as brick-earth. When these matters are required to be transported by water to a distance, the re- ceiving boat is made with two holds sloping to- wards the keel or bottom, for the purpose of lessening the width of the discharging apertures, which are shut with hatches, or hinged doors. These

opening outwards, the pressure of the water prevents them from being opened until the time of arrival at the proper place ; when chains attached to ring-bolts force them apart, and the whole contents of the boat escape.

The Scouring or Dredging Basin is a water- tight compartment of a harbour, furnished with sluices, and designed to contain a quantity of tidal or river water, to be run off at pleasure. Where the command of head-water is sufficient, this is found the most effectual of all modes of disposing of loosened stuff. Most modern en- gineers have therefore included a scouring basin in their designs for tide harbours. The late Mr. Rennie reported that 400,000.tons of mud were annually discharged by the sewers of London into the river Thames. See HARBOUR.

DREGS, n. s. } Goth, dregg; Teut. trus-

DREG'GISH, adj. >cen; Lat. faces; Gr. rpo£,

DREG'GY, adj. J rpoyoc, refuse. (Used by

Shakspeare in the singular, see below.) The

sediments or lees of liquors ; offal ; refuse of any

kind : dreggy is, containing dregs.

TROI. What makes this pretty abruption?

What too curious dreg espies my sweet lady in the fountain of our love ?

CRES. More dregs than water, if my fears have eyes. Shakspeare. Troiltu and Crettida.

The king by this journey purged a little the dregs and leaven of the northern people, that were before in no good affections towards him. Bacon,

Fain would we make him author of the wine, If for the dregs we would some other blame.

Danes.

Ripe grapes being moderately pressed, their juice may, without much dreggy matter, be squeezed out.

Boyle.

To give a strong taste to this dreggish liquor, they fling in an incredible deal of broom or hops, whereby •mall beer is rendered equal in mischief to

strong.

Harvey on Consumptions.

Heaven Vfavourite thou, for better fates designed Than we, the dregt and rubbish of mankind.

Dry den.

What diffidence we must be under whether God will regard our sacrifice, when we have nothing to offer him but (Ue dregt and refuse of life, the days of

loathing and satiety, and the years in which we have no pleasure. Rogers.

Such run on poets, in a raging vein, Even to the dregs and squeezings of the brain.

Pope.

This the chalice of the fornications of rapine, usury, and oppression, which was held out by the gorgeous eastern harlot ; which so many of the people, so many of the nobles of the land, had drained to the very dregs. Burke.

The body of your work is a composition of dregt and sediments, like a bad tavern's worst wine.

Sheridan.

His had been quaffed too quickly, and he found The dregs were wormwood ; but he filled again, And from a purer fount, on holier ground, A.nd deemed its spring perpetual ; but in vain ! Still round him clung invisibly a chain Which galled for ever. Byron.

DREIN, v.n. See DRAIN. To empty. The same with drain ; spelt differently perhaps by chance.

She is the sluice of her lady's secrets : tis but set- ting her mill a-going, and I can drein her of them all. Congreve.

Tis dreined and emptied of its poison now ;

A cordial draught. Southern.

DREL1NCOURT (Charles), a minister of the reformed church at Paris, was born at Sedan in 1595. He is best known in England by his Consolations against the Fears of Death, which was translated, and has been often

printed. His third son, professor of physic at Leyden, was physician to the prince and princess of Orange before their accession to the crown of England. He died in 1660.

DRENCH, v. a. & n. s.) Saxon drencan ;

DRENCH'ER. $ Goth, dranca, to

immerse, moisten. To soak ; steep ; saturate with moisture ; physic abundantly or violently : the subtantives corresponding. A drench has been defined, ' physic for a brute.'

And he seide, come thou and Peter ghede doun fro the boot and wakide on the watris to come to Jhesus, But he sigh the wynd strong, and was aferd, and whanne he biganne to drenche, he criede and seide, lord make me saaf. Wiclif. Matt. xiv.

Our garments being as they were drenched in the sea, hold notwithstanding their freshness and glosses.

Shakspeare. In swinish sleep Their drenched natures lie, as in a death.

Id. Macbeth.

Harry, says she, how many hast thou killed to-day ? Give my roan horse a drench, says he ; and answers, fourteen, an hour after. Id. Henry IV.

Their counsels are more like a drench that must be poured down, than a draught which must be leisurely drank if I liked it. King Charles

Let such bethink them, if the sleepy drench Of that forgetful lake benumb not still, That in our proper motion we ascend. Milton. To-day deep thoughts learn with me to dreneh In mirth, that after no repenting draws. Id.

Now dam the ditches, and the floods restrain ; Their moisture has already drenched the plain.

Dryden.

A drench of wine has with success been used, And through a horn the generous juice infused.

Id.

DRE

Too oft, alas! has mutual hatred drenched Our swords in native blood. Philips.

If any of your cattle are infected, speedily let both sick and well blood, and drench them.

Mortimer's Husbandry. If Gideon's fleece, which drenched with dew he

found,

While moisture none refreshed the herbs around, Might fitly represent the Church, endowed With heavenly gifts, to Heathens not allowed.

Cowper.

The one cast up upon that great book Ycleped The Family Receipt Book ; By which she rules in all her courses, From stewing figs to drenching horses.

Sheridan.

Ah me ! neglected on the lonesome plain, As yet poor Edwin never knew your lore, Save when against the winter's drenching rain, And driving snow, the cottage shut the door.

Beattie.

Then she wrung His dewy curl? 'ong drenched by every storm.

Byron.

DRENT, part. Probably corrupted from drenched, to make a proverbial rhyme to brent or burnt.

What flames, quoth he, when I the present sec In danger rather to be drent than brent?

Faerie Queene.

DRESDEN, a handsome city of Germany, the capital of Saxony, is situated on both sides of the Elbe, at the influx of the Weisseritz. There is also a third division, lying on the Weis- seritz, called Frederickstadt. It is approached in almost every direction by delightful avenues, leading through

a rich and fertile country, and bounded by gentle acclivities. On entering the town, the noble bridge across tho Elbe first strikes the eye of the spectator. It is built en- tirely of freestone, and is about 550 paces in length, consisting of nineteen arches. A delight- ful prospect spreads on every side. The streets of Dresden are clean, broad, and well paved and lighted. Its public buildings are eleven Lutheran churches, two Catholic, and one Cal vinist ; the more recent of the Catholic churches, built in the middle of the eighteenth century, is one of the finest ecclesiastical edifices in Germany. It has a flat roof cased with copper, and a tower 300 feet in height. But the late elec- toral, now the royal palace, is both an extensive repository of the fine arts, which the traveller should not omit to explore, and a magnificent, though irregular structure. It has a tower 355 feet in height, and a number of remarkable apart- ments, particularly the well known green vault, divided xjnto eight rooms, paved with marble, and containing numerous statues, ivory work, silver plate, vases, and precious stones. Before the war of 1756 this collection was almost un- rivalled. Augustus II. and his preceding elec- tors had made the fine arts an object of their constant patronage ; and to him this city is in- debted for most of its modern improvements. Near the palace is the chancery, and a large ouilding containing a valuable collection ot paintings. The house of assembly for the diet of Saxony is an elegant building, as well as

the palaces called after the princes Anthony and Maximilian. In the suburbs are the Z winger gar- dens, a promenade con taining a valuable cabinet of natural history. The arsenal has a curious collection of early fire-arms. The castle, formerly belonging to the counts of Bruhl, is the great depot of"the porcelain manufactures. Another remarkable edifice is the Dutch and Japanese palace, a square building, rising amidst groves and thickets, and containing the royal library, said to consist of 150,000 volumes, some valuable sta- tues, and a beautiful collection of porcelain.

Here is a military school, and an academy for cadets of noble family. The charitable insti- tutions, particularly the house of industry, are said to be well regulated. It finds employment for more than 3000 individuals. The manufac- tures are those of lace, jewellery, porcelain, ear- thenware, mirrors, tapestry, and plaited straw. There are several public gardens outside of the city, of which the largest, the royal garden, is occasionally enlivened with concerts. There is also in this neighbourhood a romantic spot, called the Planische Grund, a valley formed by steep rocks of granite, and watered by the Weis- seritz. Vineyards extend along a hill in the direction of the castle of Pilnitz, the summer residence of the royal family, and remarkable for the coalition of 1792. In 1755 the popula- tion of Dresden was 63,000; in 1788, 53,000 ; in 1801, 48,000; in 1811, 45,000. This de- crease is ascribed to the alarms and actual cala- mities to which Dresden has been exposed in the late wars of the continent; and,

indeed, ever since Prussia ventured to cope with Austria. It was taken by the Prussians in 1 745, and again in 1756 ; when it became the scene of war and of ex- treme distress. August 26th and 27th, 1813, the combined Austrian and Russian army advanced in great force from the Bohemian frontier, and attacked this city, but were obliged to retire. Dresden remained in the possession of the French until the scene of war was transferred to the neighbourhood of Leipsic; and the decisive battles in that situation obliged Buonaparte to evacuate Germany. Marshal St. Cyr was blockaded in it, and ooliged to capitulate on the 6th of November, 1813.

Dresden was stripped of its walls in 1810 to repair the fortifications of Torgau. Since the peace it has been rapidly improving, and the population is now taken at 60,000. It is situated 100 miles south-west of Berlin.

DRESS, v. a., v. n. & n. s.~\ Fr. dresser ;

DRESS'ER, n. s. I Ital. drizzare ;

DRESS'ING, V Teuton, diriser ;

DRESS'ING-ROOM, i from Lat. dirigo;

DREST, part. J Gr. Spaam, to

make ready. To clothe ; robe; adorn. Hence to cover a wound with medicaments'; to rectify; adjust and prepare, generally : used also in a particular sense for the trimming, currying, and rubbing horses, as well as breaking them in ; and for preparing food for the table. As a neuter verb, it means to pay particular attention to dress ; and among soldiers, to keep in line. As a sub- stantive, it is synonymous with clothes, attire ; and sometimes means skill ; exactness in putting on dress. Dressing is synonymous with dress :

a dresser is one employed in dressing ; and a useful kitchen-board on which food is dressed.

To geve light to thorn that sitten in derknessis, and in s"hadowe of deeth, to dresse our feet into the weye of pees. Widif.

When he dresseth the lamps, he shall hum incense.

Exodus xxx.

Said he unto the dresser of his vineyard, Behold, these, three years I come seeking fruit on this Sg-tree, and find none. Luke.

Enforsed to slepe, and for to take some reste And to lye downe as soone as I my dreste At Harwyche porte slurobrynge as I laye In myne hostes house called powers keye. Skelton.

Tts burnt, and so is all the meat. What dogs are these ! Where is the rascal cook ? How durst you, villains '. bring it from the dresser, And serve it thus to me that love it not t

Shahspeare.

Adam ! well may we labour still to dress This garden ; still to tend plant, herb, and flower.

Milton.

Where was a fine room in the middle of the house, handsomely dressed up, for the commissioners to sit in.

Clarendon.

Our infirmities are so many, that we are forced to dress and tend horses and asses, that they may help our needs. Taylor.

The first request

Re made was, like his brothers to he dressed ; And, as bis birth required, above the rest. Dryden.

A steed Well mouthed, well managed, which himself did

dress ; His aid in war, his ornament in peace. Id.

Few admired the native red and white, Till poets dressed them up to charm the sight. Id.

Thus the voluptuous youth, bred up to dress For his fat grandsire some delicious mess, In feeding high his tutor will surpass, An heir apparent of the gourmand race. Id.

She hurries all her hand-maids to the task ; Her head alone will twenty dressers ask.

/

A maple dresser in her hall she had, On which full many a slender meal she made. Id. The mind loses its natural relish of real truth, and is reconciled insensibly to any thing that can be dressed up into any faint appearance of it. Locke.

When you take down dishes, tip a dozen upon the dresser. Swift's Directions to the Cook.

Latin books might be found every day in his dressing-room, if it were carefully searched. Suiift.

Lollia Paulina wore, in jewels, when dressed out, the value of three hundred twenty-two thousand nine hundred and sixteen pounds thirteen shillings and four-pence. Arbuthnot.

In time of my sickness another chirurgeon dressed her. Wiseman.

The second day after we took off the dressings, and found an eschar made by the catheretic.

Id. on Tumours.

Full dress creates dignity, augments consciousness, and keeps at distance an encroacher. Clarissa.

A robe obscene was o'er his shoulders thrown, A dress by fates and furies worn alone.

Pope's Stat.

The men of pleasure, dress, and gallantry. Pope. When you dress your young hops, cut away roots or sprigs. Mortimer's Husbandry.

A lady of genius will give a genteel a;r to her whole dre$t by a well-fancied suit of knots, as a judi-

cious writer "gives a spirit to a whole sentence by a single expression. Gay.

Dress drains our cellar dry, And keeps our larder lean ; puts out our fires ; And introduces hunger, frost, and woe, Where peace and hospitality might reign. Cowper.

And dear to love, to memory dear, It brightens through the starting tear j Like the glad bow, by fancy drest, That beams on evening's watery vest. Bawdier. oldiers dress by one another in ranks, the body collectively

dresses by some given object.

James's Military Dictionary.

DRESSING, in surgery. See SURGERY. DRESSING OF MEAT, by means of culinary fire, 'is intended to loosen the compages or tex- ture of the flesh, and dispose it for dissolution and digestion in the stomach. The usual opera- tions are roasting, boiling, and stewing. In roasting, it is observed, meat will bear a much greater and longer heat than either in boiling or stewing ; and in boiling, greater and longer than in stewing. Roasting being performed in the open air, as the parts begin externally to warm, they extend and dilate, and so gradually let out part of the rarefied included air, by which means the internal succussions, on which the dissolution depends, are much weakened and abated. Boil- ing being performed in water, the pressure is greater, and consequently the succussions to lift up the weight are proportionably strong, by •which means the coction is hastened ; and even in this way there are great differences ; for the greater the weight of water the sooner is the bu- siness done. In stewing, though the heat be much less than what is employed in the other methods, the operation is much more quick, because performed in a close vessel, and full ; by which means the succussions are oftener re- peated, and more strongly reverberated. Hence, the force of Papin's digestor. Boiling, Dr. Cheyne observes, draws more of the rank strong juices from the meat, and leaves it less nutritive, but lighter, and easier of digestion ; roasting, on the other hand, leaves it fuller of the strong nu- tritive juices, but harder to digest, and needing more dilution. Dr. Brown insists, that roasted meat is more easily digested, and every way fitter for a weak stomach than boiled. Strong and full grown animal food should be boiled, and the young and tender roasted.

DREVET (Peter), the elder and younger, two eminent French engravers. The father instructed, but was surpassed by his son, who was a member of the Royal Academy of painting and sculp- ture. His portraits are neat and elegant, but labored to the last degree. He particularly ex- cels in representing lace, silk, fur, velvet, and other ornamental parts of dress. His historical prints, in point of neatness and exquisite work- manship, are scarcely to be equalled. His Pre- sentation of Christ in the Temple, is reckoned the best of these. The following are also much valued : the Meeting of Abraham's Servant with Rebecca at the Well ; and Abraham, with Isaac on the Altar, dated 1707; both large upright plates from A. Coypel. Among his portraits, the following are held in the highest estimation : M. Bossuet, bishop of Meaux, a whole-length

figure standing ; and Samuel Bernard, a whole- length figure in a chair.

DREUX, a town of France, in the depart- ment of tl e Eure and Loire, and ci-devant pro- vince of Beauce. It is remarkable for its anti- quities. It was taken by Henry II. of England in 1186, and by Henry V. in 1421 It is also remarkable for a battle fought in the neighbourhood, December, 1562, between the Papists and Protestants. Some derive its name from the Druids. It has two churches, St. Ste- phen's and Notre Dame, or the great church, which is well built. It has a cloth manufacture, and is seated on the river Blaise, at the foot of a mountain, forty-five miles west by south of Paris. Population 5500.

DRIB, v. a. Contracted perhaps from drib- ble. To crop ; to cut oil; to defalcate.

Merchants gains come short of half the mart j For he who drives their bargains dribs a part.

Dryden.

DRIB'BLE, v. n. & v. a.) Or dripple, a di-

DRIB'LET, n. s. J minutive of DRIP,

which see. To fall in drops ; to throw down in drops. A driblet is a small sum of money

Believe not that the dribbling dart of love Can pierce a complete bosom. Shakspeare.

Twelve long years of exile borne, Twice twelve we numbered since his blest return j So strictly wert thou just to pay, Even to the dribblet of a day. Dryden.

Let the cook follow with a ladle full of soup, and dribble it all the way up stairs.

Swiff's Rules to Servants.

Semilunar processes on the surface owe their form to the dribbling of water that passed over it.

Woodward on Fossils.

A dribbling difficulty, and a momentary suppression of urine, may be caused by the stone's shutting up the orifice of the bladder. Arbuthnot on Aliments,

That wee bit heap o' leaves an' stibble, Has cost thee mony a weary nibble !

Now thou's turned out, for a' thy trouble.

But house or hald, To thole the winter's sleety dribble,

An' cranreuch cauld ! Burns.

DRIFT, n.s.,v.a.&c,v.n. From drive. Impulse; prevailing influence or tendency ; violent course : hence a snow-drift or violent shower, and a heap or stratum of any matter thrown together, or at random. The verb is derived from the substan- tive, and means, to draw; impel along; or throw into heaps.

The mighty trunk, half rent with rugged rift, Doth roll adown the rocks, and fall with fearful drift.

Faerie Qveene. Our thunder from the south Shall rain their drift of bullets on this town.

Shakspeare.

Some log, perhaps, upon the waters swam, An useless drift, which rudely cut within,

And hollowed, first a floating trough beeame, And cross some riv'let passage did begin. Dryden.

A man being under the drift of any passion, will still follow the impulse of it till something interpose, and, by a stronger impulse, turn him another way.

Phe main drift of his book being to prove

that

The drift of the pamphlet is to stir up our compas- sion towards the rebels. Addison.

This, by the stileˆ, the manner, and the drift, 'Twas thought could be the work of none but Swift.

Swift.

The ready racers stand ; Swift as on wings of wind upborne they fly, And drifts of rising dust involve the sky.

Pope's Odyssey.

Snow, no larger than so many grains of sand, drifted with the wind in clouds from every plain.

Ellis's Voyage. He wanders on

From hill to dale, still more and more astray, Impatient flouncing through the drifted heaps.

Thomson.

' Prince, to these walls give access free At all times for my friends and me.' Phrygius full well perceived her drift Yet nobly ratified his gift. Sheridan.

DRIFT, in navigation, the angle which the line of a ship's motion makes with the nearest meridian, when she drives with her side to the wind and waves, and is not governed by the power of the helm ; it also implies the distance which the ship drives on that line. A ship's way is only called drift in a storm; and then when it blows so vehemently as to prevent her from carrying any sail, or at least restrains her to such a portion of sail as may be necessary to keep her sufficiently inclined to one side, that she may not be dismasted by her violent labor- ing, produced by the turbulence of the sea.

DRIFT-SAIL, a sail used under water, veered out right a-head by sheets, as other sails are. It serves to keep the ship's head right upon the sea in a storm, and to hinder her driving too fast in a current.

DRILL, v. a., v. n., & n. s. Germ, and Dutch drillen ; Sax. dirhan, of the verb thregian, to turn; from durgh or turgh, through. To pierce or bore ; hence to drain : as a neuter verb, it means to flow gently, trickle; and hence, p.obably, to cause so to flow ; to conduct ; to train. Drill is used substantively for a boring instrument; a dribbling brook; military exercise; and a kind of monkey.

Springs through the pleasant meadows pour their

drills,

Which snake-like glide between the bordering hills.

Sandys.

My body through and through he drilled, And Whacum by my side lay killed. Hudibrai.

The foe appeared drawn up and drilled, Ready to charge them in the field. Id.

The way of tempering steel to make gravers, drills, and mechanical instruments, we have taught artificers.

Boyie.

Shall the difference of hair be a mark of a different internal specifick constitution between a changeling and a drill, when they agree in shape and want of reason? Locke-

When by such insinuations they have once got within him, and are able to drill him on from one lewdness to another, by the same arts they corrupt and squeeze him.

She has bubbled him out of his vouth : she

J'ne mam drift ol nis DOOK oem{, u» Vw, " – — – , . . , •*

*hat is true is impossible to be false, he opposes no- him on to five-and-fifty, and she will drop *™£^*

. botiy.

Tillotoon. old age.

DRI

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DRI

DrUlt are used for the making such holes as punches will not serve for ; as a piece of work that hath al- ready its shape, and must have an hole made in it.

Moxon.

When a hole is drilled in a piece of metal, they hold the drill-bow in their right hand ; but, when they tarn small work, they hold the drill-bow in their left hand. Id.

Tell, what could drill and perforate the poles, And to the' attractive rays adapt their holes ?

Blackmore.

Drilled through the sandy stratum every way, The waters with the sandy stratum rise. Thomson,

Some drill and bore

The solid earth, and from the strata there Extract a register, by which we learn, That he who made it, and revealed its date To Moses, was mistaken in its age. Cowper.

DRILL-SOWING, a method of sowing grain or seed of any kind, so that it may all be at a pro- per depth in the earth, which is necessary to its producing healthful and vigorous plants. For this purpose a variety of drill ploughs have been invented and recommended ; but from the expense attending the purchase, and the extreme complication of their structure, there is no instru- ment of this kind, as yet discovered, that has been brought into general use. This method, however, is greatly recommended in the Georgical Essays. See HUSBANDRY.

DRINK,t>.a.,v.n.,&n.s.^ Gothic drecka; DRIN&'ABLE, adj. Sax.drencan;Teut.

DRINR'ER, «. s. and Belg. trincken,

DRINK'MONEY, perhaps from the

DRUNK, adj. Vsound of drinking

DRUNK'ARD, n. t. from a cup. — Min-

DRUNK'EX, adj. sheu. To swallow

DRUNK'ENLY, adv. liquid; quench

*DRUNK'ENNESS, n. *. J thirst: hence to feast; guzzle habitually; salute in drinking. As an active verb, it means to swallow ; suck up; absorb ; to act upon by drinking ; and is used with the intensive particles off, up, and in : drink is liquid of any kind. Drinkable is proper or agreeable to drink: drinker is applied both to him who moderately as well as him who excessively drinks: drink- money, is money given to procure, or instead of, drink : drunk, and drunken, are the regular participial adjectives of drink: drunkard is one who habitually drinks to excess; and drunkenly,*

drunkenness, the corresponding ad- verb and substantive.

For Jon cam neither etynge ne drynhynge, and thei seyen he hath a devil. The son of man cam etynge and drynkynye ; and thei seyen lo a man a gloutoun and a drynkere of wyn, and a frend of pupplicanes and of synful men. Widif. Mat. xi.

And nyle ghe be drunken of wyn in which is lec- cherie, but be ghe fillid with the hooli goost.

Wiclif. Effesiet v.

She said, drink, and I will give thy camels drink also ; so I drank, and she made the camels drink also.

Gen. xxiv. 46.

Benhadad was drinking himself drunk in the pavi- lions. 1 Kings.

Withouten bake mete never was his hous Of fish and flesh, and that so plenteous It snewed in his hous of mete and drinke Of .Hi- deinices that men coud thinke.

Chaucer. Prol. to Cant. Talei.

Thou livest in bliss That earthly passion never stains ; Where, from the purest spring, The sacred nectar sweet Is thy continual drink.

Spenser. The Mourning MUM. Passion is the drunkenness of the mind, and there- fore in its present workings not controllable by reason.

Spenser.

Come, we have a hot venison pasty to dinner : come, gentlemen, I hope we shall drink down all unkindness.

S/utkspeare.

I take your princely word for those redresses. — I gave it you, and will maintain my word j And thereupon I drink unto your grace. /•/ .

My ears have yet not drunk a hundred words Of that tongue's uttering, yet I know the sound.

Id. Then let the earth be drunken with our blood.

Id. We will give you rare and sleepy drinks.

Id. Winter', Tale.

We came to fight you. For my part, I am sorry

it is turned to a drinking. Id. Antony and Cleopatra. Done in a state of inebriation. When your carters, or your waiting vassals. Have done a drunken slaughter, and defaced The precious image of our dear Redeemer, You straight are cm your knees for pardon, pardon.

Shaktpeare.

My blood already, like the pelican, Hast thou tapt out, and drunkenly caroused. Id. Some blood drawn on me would beget opinion Of my more fierce endeavour. I've seen drunkard Do more than this in sport. Id. King Lear.*

It were good for those that have moist brains, and are great drinkers, to take fume of lignum, aloes, rosemary, and frankincense, about the full of the moon. Bacon.

Drunken men imagine every thing turueth round : they imagine that things come upon them ; they see not well things afar off ; those things that they see near hand, they see out of their place, and sometimes they see things double. Id.

When God made choice to rear His mighty champion, strong above compare, Whose drink was only from the liquid brook !

Milton.

O madness, to think use of strongest wines, And strongest drinks, our chief support of health.

Id.

Drunkenness is the way to all bestial affections and •ins. lip. Hall's Contemplations.

Cannot he that wisely declines walking upon the ice for fear of falling, though possibly it might carry him sooner to his journey's end, as wisely forbear drinking more wine than is necessary, for fear of being drunk, and the ill consequences thereof.

Lord Clarendon.

Every going off from our natural and common tem- per, and our usual severity of behaviour, is a degree of drunkenness. Taylor's Ride of Holy

Living.

The body being reduced nearer unto the earth, and emptied, he cometh more porous, and greedily drink- eth in water. Browne's Vulgar Errours.

This was the morn when issuing on the guard. Drawn up in rank and file, they stood prepared Of seeming arms to make a short assay ; Then hasten to be drunk, the business of the day.

Dryden.

On the other side, let a drunkard see that his health decays, his estate wastes ; discredit and diseases, aud the want of all things, even of his beloved drink, at- tends him in the course he follow. Lucke.*

DRINK.

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The .drinker and debauched person is the ol>ject of M-.I i- 1 1 and contempt. South.

One man gives another a cup of poison, a thing as terrible, as death ; but at the. same time he tells him that it is a cordial, and so he drink it off, and dies.*

Id.

He will drown his health and his strength in his belly; and, after all his drunken tiophies, at length drink down himself too. Id.

We generally conclude that man dnmk, who takes pains to bo thought sober. Sjiectator.

We should for honour take The drunkm quarrels of a rake. Su

Phemius ! let acts of gods, and heroes old. What ancient bards in hall and bower have told, Attempered to the lyre, your voice employ ; Such the pleased ear will drink with silent joy.

Pope. I ,lrink delicious poison from thy eye. /.'.

Brush not thy sweeping skirt too near the wall ; Thy heedless sleeve will drink the coloured oil.

Gay.

Amongst drink, austere wine* are apt to occasion foul eruptions. Arbuthnot on Aliments.*

Peg's servants were always asking for drink-money.

A rbuthnot.

The Lacedemonians trained up their children to bate drunkenness, by bringing a drunken man into their company. Watts on the Mind.

It is not necessary to be drunk one's self, to relish the wit of i/ruriAvniMCf. Do we not judge of the tliiinke'i wit of the dialogue between lago and Cassio (the most excellent in its kind), when we are quite •ober T Wit is wit, by whatever mean it is produced ; and, if good, will appear so at all times. I admit that the spirits are raised by drinking, as by the com- mon participation of any pleasure : cock-fighting or bear-baiting will raise the spirits of a company, as drinkinij doe*, though surely they will not improve con- versation. I also admit, that there are some sluggish 1U—U who are improved by dnnkinii, aa there arc fruits which are not good till they an rotten : there arc such wen, but they are medlars. Johnson.*

No eyes

But mine now drink this sight of loveliness ; I should be sole in this sweet solitude, And with the Spirit of the place divide The homage of these waters. Byron.

Would that I had died Ere such a monster's victim I had been ! What may this midnight violence betide,

A sudden fit of drunk,-nnt-t.i or spleen ' Id.

DRINK is an essential part of our ordinary food in a liquid form. See FOOD. The general use of drink is, to supply fluid ; facilitate solu- tion; of course to assist the evacuation of the stomach, and promote the progress of the ali- ment through the intestines; for, by the con- traction of the longitudinal fibres of the stomach, the pylorus is drawn up, and nothing but fluid ran pass ; which, by its bulk, makes a hurried progress through the intestines, and so deter- mines a greater excretion by stool, as less than can he absorbed by the lacteals. Hence, a large quantity of common water has been found pur- gative ; and, ceteris paribus, that aliment which is accompanied with the largest proportion of drink, makes the largest evacuation by stool. Here a question has arisen, about where the fe- culent part of the aliment is first remarkably

collected. It is commonly thought to be in the great gut ; but, undoubtedly,

it often begins in the ilium, especially when the drink is in a small propottion, and when the progress of the aliment is slow ; for when the contents of the guts are very Huid, they are quickly pushed on, and reach the great guts before they deposit their feculency. Another effect of drink is, to facilitate the mixture of the lymph, refluent from every part of the system, with the chyle. In the blood-vessels, where all must be kept fluid in order to proper mixture, drink increases the fluidity, and gives tension, by its bulk. Hence, drink contributes to sanguification, as sometimes food gives too dense a nutriment to be acted upon by the solids; and hence, also, drink pro- motes the secretions. These are the effects ot drink in general ; but the more liquid the food is, it is the sooner evacuated, and less nourish- ment is extracted. Hence, drink is, in some degree, opposed to nourishment ; and so, ceteris paribus, those who use least drink are most nou- rished. All these effects may be produced by simple water; and it is said, that other liquois are fit for drink in proportion to the water they contain. Water, however, when used as drink, is most commonly impregnated with vegetable and farinaceous substances, which thus both operate as drink and contribute to nourishment. Sometimes we impregnate water with the subacid fruits; and thus it acquires other qualities, of considerable use in the animal economy. All drinks may be reduced to two heads : first, pure water, or where the additional substance gives no additional virtue ; second, fermented liquors. The latter have not only the qualities of the first, but also qualities peculiar to themselves. Fermented liquors are more or less poignant to the taste, and better calculated to quench thirst. They are peculiarly adapted for sti- mulating the mouth, fauces, and stomach, to throw out the saliva and gastric liquor. By their acescency they are fitted for some beneficial purposes in certain states of the system ; by their fluidity they dilate viscid food; though in this respect they answer no better than common water. Carried into the blood-vessels, in so far as they retain any saline property, they stimulate the excretories, and promote urine and sweat. Many physicians, in treating of fermented liquors, have rejected their nutritious virtues, which certainly ought to be taken into the ac- count, though, by expediting the evacuation by stool, they cause less of the nutritious parts of the aliment to be taken up, and, by stimulating the excretories, make these nutritious parts to rest for a shorter time in the system. All these and many other effects arise from fermented liquors. Their acescency sometimes promotes the disease of acescency, by increasing that of vegetables, acting as a ferment, and so producing flatulency, pur- ging, cholera, &c. So that, with vegetable ali- ment, as little drink is necessary, the most inno- cent is pure water ; and it is only with anim»l food that fermented liquors are necessary. In warmer climates, fermented liquors would seem requisite to obviate alkalescency and heat. But it should be considered, that, though fermented liquors contain an acid, yet they also contain al-

cohol ; which, though it adds stimulus to the sto- mach, yet is extremely hurtful in the warmer cli- mates, and wherever alkalescency prevails in the system. Nature in these climates has given men an inclination for water impregnated with acid fruits, e. g. sherbet : but this needs to be cau- tiously used, as in these countries they are apt to shun animal food, using too much of the vegetable, and often thus causing dangerous refrigerations, choleras, diarrhoeas, &c. It may be proper here to mention the chief heads on which the varieties of fermented liquors depend. 1st. They are owing to the quality of the subject, as more or less viscid ; and to its capacity also of under- going an active fermentation, although perhaps the more viscid are more nutritious. Hence the difference between ales and wines ; by the first, meaning fermented liquors from farinacea, by the second, from the fruits of plants. It depends, 2dly, On the acerbity, acidity, nature, and matu- ration, of the fruit. 3dly. The variety depends on the conduct of the fermentation In general, fermentation is progressive, being at first active and rapid, detaching the fixed air or gas sylvestre, at the same time acquiring more acid than before. These qualities of flatulency and acidity remain for some time : but, as the fermentation goes on, the liquor becomes more perfect, no air is de- tached, and alcohol is produced ; so that fer- mented liquors differ according to the progress of the fermentation, and have different effects on the system. When fermentation is stopped be- fore it comes to maturity, though naturally it proceeds in this way, yet, by addition of new ferment, it may again be renewed with a turbid intestine motion. In the inordinate quantities in which fermented liquors are occasionally drunk with a view of conviviality, they have a tendency to undermine the health, while they appear to fatten the body ; occasioning dropsy and other fatal diseases. The strong ale so much drunk in the country certainly has had many victims, as well as fermented liquors of other kinds ; but those beverages generally drunk at our meals under the name of beer and porter are certainly most- wholesome, when free of acidity, and answer every salutary purpose in the animal economy, See DIGESTION.

DRINO, a river of European Turkey, in Albania, formed of the White Drino, which falls from Mount Boras, on the frontiers of Dalmatia and Servia, and the Black Drino, a much larger stream, which takes its rise on the northern declivity of the mountains of Sagori, and after passing through the lake of Ochrida, flows in a northerly direction till it meets the former. The united stream now runs due west, separating Albania from Dalmatia, and finally empties itself by seven mouths into the Adriatic, below Alessio,

forming several islands, and the Gulf of Drino. It is navigable for large rafts for nearly 100 miles. On the banks are noble forests. DRINO is also the name of another large river of European Turkey, which separates Bosnia from Servia, and falls into the Save below Dri- novar.

DRIP, v. n., v.a. & n.s.~) Dutch, drippen; DRIPP'ING, n. s. > Teuton, dripelen;

DKIPP'JNGPAN, n. s. j Dan. dryppe. See

*DROP. To fall in drops, or *et drops fall ; in a particular sense, to let fat drop in roasting ; that which falls in drops or small quantities. In this last sense drip is synonymous with dripping.*

Let what was put iuto his belly, and what he drips, be his sauce. Walton's Angler.

His offered entrails shall his crime reproach, And drip their fatness from the hazle broach.

Dryden's Virgil.

The soil, with fattening moisture filled, Is cloathed with grass, and fruitful to be tilled ; Such as in fruitful vales we view from high, Which dripping rocks, not rolling streams, supply.

Dry den.

The finest sparks, and cleanest beaux, Drip from the shoulders to the toes. Prior.

Her flood of tears

Seem like the lofty barn of some rich swain, Which from the thatch drips fast a shower of rain.

Swift.

Shews all her secrets of house-keeping ; For candles how she trucks her dripping. Id.

When the cook turns her back, throw smoaking coals into the drippingpan. Id.

Water may be procured for necessary occasions from the heavens, by preserving the drips of the housas. Mortimer.

Though thy clime

Be fickle, and thy year most part deformed With dripping rains, or withered by a frost, I would not yet exchange thy sullen skies, And fields without a flower, for warmer France, With all her vines. Camper.

There breathes a living fragrance from the shore, Of flowers yet fresh with childhood j on the ear Drops the light drip of the suspended oar, Or chirps the grasshopper one good-night carol more.

Byron. Childe Harold. And thou, ghastly Beldame ! Dripping with dusky gore, and trampling on The carcases of Inde — away ! away ! Byron.

DRISSA, a town of the government of Wit- epsk, European Russia, situated on the right bank of the Dwina, at the influx of the Drissa. Here was situated the entrenched camp, con- structed by the Russians in 1812, to oppose the progress of the French, but abandoned on the approach of the latter. It is twenty miles W.N.W. of Polotzk, and 272 south of St. Pe- tersburgh.

DRIVE, v.a. &n. s.ˆ Sax. briven; Swe- DRIV'ER, do-Goth, drifwa ; Teut

DRIV'ING, n.s: [treiberi; from Greek,

DROVE, n. s. [rpci/Sw. To chase;

DROV'EN, part. | to push or impel with

DROV'ER, n. s.) overcoming force ;

opposed to draw or drag, in which that which draws or drags goes before ; that which drives goes behind or follows the thing driven : hence to force or compel, generally; to aim at; to urge to greater speed ; to regulate a carriage, or rather the horses, perhaps; to hurry on; to distress. A drove, from the preterite of drive, is a collec- tive number of things or animals driven : hence a crowd or tumult of persons. Droven, the old past participle of drive. A drover, one who ha- bitually drives animals, or feeds them to be driven to market. Spenser uses it for a boat driven 'along the stream.'

For the charite of Crist dryueth us, gessynge this thing, that if oon diede for alle, thanne alle weren deede. Wiclif. 2 Cor. j.

But if' questions ben of the word, and of names of ghoure lawe bise ghousilff, I will not be doraesman of these thingis, and he drnofhem fro the doom place.

Id. Dedis. 13.

And the watchman told, saying, the driving is like the driving of Jehu, the sou of Nimshi, for he driveth furiously. Bible, 2 Kings ix. 20.

They were driven forth from among men.

Job xxx. 5.

He stood and measured the earth : he beheld, and drove asunder the nations. Hub. Hi. 6.

And fro the benche he drove away the cat, And laid adoun his potent and his hat, And eke his scrip, and set himself adoun.

Chaucer. Cant. Tales.

For the metre sake, some words in him sometime be driven awry, which require straighter placing in plain prose. Ascham.

This kind of speech is in the manner of desperate men far driven. Spenser's State of Ireland,

To drive the deer with hound and horn Earl Percy took his way. Chery Chaie.

The Romans did not think that tyranny was thoroughly extinguished, till they had driven one of their consuls to depart the city, against whom they' found not in the world what to object, saving only that his name was Tarquin. Hooker.

He from the many-peopled city flies ; Contemns their labours, and the driver's cries.

Sandys.

They forthwith drane out their governour, and re- ceived the Turks into the town. Knolles's History. Four rogues in buckram let drive at me.

Shakspeare. Henry IV. Time drives the flocks from field to fold, When rivers rage and rocks grow cold.

Shakspeare.

I drove my suitor from his mad humour of love .o a living humour of madness.

Id. As You Like It. His thrice driven bed of down. Shakspeare.

This is fought indeed ;

Had we so done at first, we had droven them home With clouts about their heads. Id.

The prince hath got your Hero.

I wish him joy of her.

— Why, that 's spoken like an honest drover ; so they sell bullocks. Id. Much Ado About Nothing.

As a farmer cannot husband his ground so well, if he sit at a great rent ; so the merchant cannot drive his trade so well, if he sit at great usury. Bacon.

The experiment of wood that shineth in the dark, we have diligently driven and pursued ; the rather for that, of all things that give light here below, it is the most durable, and hath least apparent motion.

Id. Natural History.

They brought to their stations many droves of cat- tle ; and within a few days were brought out of the country two thousand muttons. Hayward.

Discontents drave men into slidings.

King Charles.

We have thus the proper notions of the four ele- ments, and both them and their qualities driven up and resolved into their most simple principles.

Digby on Bodies.

He drave them beyond Amon's flood, And their sad bounds marked deep in their own blood.

Cowley.

lost miserable if such unskilfulness make them drive on their time by the periods of sin and death.

Taylor.

Lord Cottington, being master of temper, and of the most profound dissimulation, knew too well how to

lead him into a mistake, and then drive him into cho- ler- Clarendon.

Thy flaming chariot-wheels, that shook Heaven's everlasting frame, while o'er the nrrks Thou drov'st of warring angels disarrayed. Milton. The sounds and seas, with all their finny drove, Now to the moon in wavering u.orrice move. Id.

A Spaniard is unacquainted with our northern drove. Browne.*

Authors drive at these, as the highest elegancies, which are but the frigidities of wit.

Id. Vulgar Errouri.

He taught the gospel rather than the law, And forced himself to drive, but loved to draw.

Dryden

Love, fixt to one, still safe at anchor rides, And dares the fury of the winds and tides ; But losing once that hold, to the wide ocean born, It drives away at will, to every wave a scorn. Id.

Fierce Boreas drove against his flying sails, And rent the sheets. Id, JEneid.

Perithous' dart drove on, and nailed him to the

wood. Dryden.

Ycur Pasimond a lawless bargain drove, The parent could not sell the daughter's love. Id.

Fate has driven 'em all Into the net. Id. Don Sebastian.

Not the fierce driver with more fury lends The sounding lash, and, ere the stroke descends, Low to the wheels his pliant body bends.

Id. Virgil.

But if to fame alone thou dost pretend, The miser will his empty palace lend, Set wide with doors, adorned with plated brass, Where droves, as at a city-gate, may pass.

Id. Juvenal.

The drover, who his fellow drover meets In narrow passages of winding streets. Id.

The wolves scampered away, however, as hard a they could drive. L'Estrange.*

The one 's in the plot, let him be never so inno- cent ; and the other is as white as the driven snow, let him be never so criminal. Id.

He, driven to dismount, threatened, if I did not the like, to do as much for my horse as fortune had done for his. Sidney.

It is better to marry than to burn, says St. Paul ; where we may see what drives men into a conjugal life : a little burning pushes us more powerfully than greater pleasures in prospect. Locke.

The multitude or common rout, like a drove of sheep, or an herd of oxen, may be managed by any noise or cry which their driver shall accustom them to.

South.

There find a herd of heifers, wandering o'er The neighbouring hill, and drive 'em to the shore.

Add'uon.

We have done our work, and are come within view of the end that we have been driving at.

Id. on the War.

To drive the argument farther, let us inquire into the obvious designs of this divine architect.

Cheyne't Philos. Principle.*

The trade of life cannot be driven without partner.*

Collier.

The design of t.iese orators was to drive some par- ticular point, either the condemnation or acquittal.

Swift.

He builds a bridge, who never drove a pile. Pope. Thick as autumnal

leaves, or driving sand, The movine squadrons blacken all the strand,

Id. Iliad.

DRI 4S(3

DRO

The foe rushed, furious as he pants for breath, And through his navel drove the pointed death. Id.

Or when the country floats with sudden rains, Or driving mists deface the moistened plains, In vain his toils the' unskilful fowler tries, While in thick woods the feeding partridge lies.

Gay.

First joyless rains obscure

Drive thro' the mingling skies with vapour foul, Dash on the mountain's brow, and shake the woods That grumbling wave below. Thomson.

Of plain sound sense life's current coin is made ; With that we drive the most substantial trade.

Young.

He that by the plough would thrive, Himself must either hold or drive. Franklin. May He who gives the rain to pour,

And wings the blast to blaw, Protect thee frae the driving shower,

The bitter frost and snaw ! Burns.

DRIVING, among sportsmen, a method of taking pheasant powts. The sportsman having found out the haunts of these birds, and fixed his nets there, he calls upon them together by a pheasant call, imitating the voice of the dam ; after this he makes a noise with his driver, which will make them run a little way forward in a cluster ; and this he repeats till he has made sure of them, by driving them into his nets.

DRIVING, in metallurgy, is said of silver, wnen, in the operation of refining, the lead be- ing burnt away, the remaining copper rises upon its surface in red fiery bubbles.

DRIVING, in the sea language, is said of a ship, when an anchor being let fall will not hold her fast, nor prevent her falling away with the wind or

tide. The best help in this case is to let fall more anchors, or to veer out more cable; for the more cable she has out, the safer she rides. When a ship is a-hull or a-try, they say she drives to leeward.

DRIVEL, v. n. & n. s. > Goth, drafia ; Icel.

DRIV'ELLER, n. s. 5 drafa, to talk wildly,

whence Teut. ravelen, to dote. To be weak ; foolish : hence to slaver like a child or idiot. The substantive, drivel, saliva, is derived from the verb. A driveller is a dastard ; fool ; idiot.

This driveling love is like a great natural, that runs lolling up and down to hide his bauble.

Shakspeare. Romeo and Juliet.

No man could spit from him, but would be forced to drivel like some paralytick, or a fool. Grew.

Besides the' eternal drivel, that supplies The dropping beard, from nostrils, mouth, and eyes.

Dryden.

I hate to see a brave bold fellow sotted, Made sour and senseless, turned to whey, by love A driveling hero, fit for a romance. Id.

What fool am I, to mingle that drivel's speeches among my noble thoughts. Sidney.

I met with this Chromes, a driveling old fellow, lean, shaking both of head and hands, already half earth, and yet then most greedy of earth. Id.

I have heard the arrantest drivellers commended for their shrewdness, even by men of tolerable judgment.

Swift.

All pay themselves the compliment to think They, one day, shall not drivel : and their pride / On this reversion takes up ready praise. Thomson.

In life's last scene what prodigies surprise, Fears of the brave, and follies of the wise !

From Marlborough's eyes the streams of dotage flow, And Swift expires a driveller and a show.

Johnson. Vanity of Human Wishes. Ye writers of what none with safety reads, , Footing it in the dance that fancy leads : Ye novelists, who mar what ye would mend, Sniveling and driveling folly without end.

Cowper.

DRIVERS, among sportsmen, a machine for driving pheasant powts, consisting of good strong ozier wands, such as the basket-makers- use, set in a handle, and twisted or bound with small oziers in two or three places. With this instrument the sportsman drives the young powts into his nets.

DRIZZLE, v. a. & v. n.) Goth, driusan ; DRIZZLY, adj. $ Germ, drise.ler, from,

Lat. ros; Gr. fyxxroc, dew. To shed or fall ir» small drops : drizzly is shedding small rain. And drizzling drops, that often do redound, The firmest flint doth in continuance wear.

Spenser.

Her heart did melt in great compassion, And drizzling tears did shed for pure affection.

Faerie Queene. When the sun sets, the air doth drizzle dew.

Shakspeare.

This day will pour down, If I conjecture aught, no drizzling shower, But rattling storm of arrows barbed with fire.

Milton.

This during winter's drizzly reign be done, Till the new ram receives the exalted sun.

Dryden's Virgil.

The neighbouring mountains, by reason of their height^ are more exposed to the dews and drixxlinp rains than any of the adjacent parts.

Addison on Italy.

But if perchance on some dull drizzling day A thought intrude, that says, or seems to say, If thus the' important cause is to be tried, Suppose the beam should dip on the wrong side ; I soon recover from these needless frights, And God is merciful — sets all to rights. Cowper.

DROGDEN CHANNEL, a channel between the islands of Amak and Saltholm, and the only- safe passage for ships of the line into the Baltic. It is about five miles in length, commencing opposite the road of Copenhagen, and there con- sisting of two channels, divided by a sand-bank. The inner, which is called Kongedyl (the royal passage), is commanded by the cannon of Co- penhagen, and was the scene of the engagement 2d of April, 1801, between the Danes and Eng- lish.

DROGHEDA, anciently called Tredagh, is a post, market, and fair town in Ireland, distant twenty-nine miles from Dublin. It is sit sated on the river Boyne, the natural boundary of the counties of Meath and Louth, and is in the county of the town of Drogheda; it is governed by a recorder, a mayor, two sheriffs, twenty-four aldermen, the sheriffs' peers, and fourteen repre- sentatives from the guilds. • Drogheda was for- merly a town of much consideration ; the privilege of coinage was once granted to it, and in the reign of Edward IV. an act passed the Irish parliament, for the foundation of an uni- versity here, with like privileges as Oxford, which act remains still unrepealed. In 1641

this place was besieged by the rebels, but after suffering considerably, was at length gallantly relieved by Sir Henry Tichbourne. Cromwell afterwards stormed and captured it, and left an everlasting remembrance of his sanguinary cha- racter here, in the massacre of its unarmed inhabitants : St. Lawrence's gate and tower are the chief remains of the ancient fortifications. About four miles from Drogheda, on the river Boyne, is the passage of Oldbridge, celebrated as being the scene of the memorable engagement between William III. and James II. in 1690, usually called the battle of the Boyne. A hand- some obelisk is erected on the spot.

Drogheda returns one member to the imperial parliament. The principal public buildings are the Tholsel, a very elegant structure : the churches of St. Peter's and St. Mary's ; five Roman Catholic chapels, and two meeting- houses. There are also large assembly-rooms, and a public reading-room. The gaol is a fine build- ing, lately erected at an expense of £12,000. There is an infantry barrack in the town, and a magazine on a hill called Millmount, on the Meath side of the river. The principal trade of this place consists in the sale of dowlass, from twenty-six to thirty inches wide : sheeting of a superior quality was once the staple, but it has lost the reputation of manufacturing the best description of that article. Much corn

is ex- ported, and coal imported, which latter is con- veyed by means of the Boyne navigation to Navan, whence the interior of Meath is conve- niently supplied. The harbour of Drogheda is capable of much improvement : the great ob- struction to the navigation is a bank called Ticket's Bed; by cutting through this, which could be done for a small sum, four feet water would be gained over the bar and up to the quay. There is but one bridge in Drogheda, and this is dangerously narrow. Amongst the valuable institutions are the classical school (one of very high character), founded by Sir Erasmus Smith ; the blue school, supported by the cor- poration ; an alms-house, affording shelter and partial support to twenty-four widows ; an asy- lum for thirty-six clergymen's widows, to each of whom £26 annually are allowed : this is sup- ported by bequests of primates Marsh and Bolter. There are many other valuable charities and institutions in this town. The export trade is tolerably nourishing, and to the establishment of steam-packets, which has already taken place, the harbour improvement above-mentioned only requires to be added, to make it the medium of importation to the midland counties.

DROIL, n. s. &v.n. A contraction of drivel- A drone ; a sluggard : hence to work sluggishly or slowly; to plod.

Let such vile vassals, born to base vocation, Drudge in the world, and for their living droil, Which have no wit to live withouten toyle.

Spenser.

Desuetude does contract and narrow our faculties, so that we can apprehend only those things in which we are conversant ; the droiling peasant scarce thinks there is any world beyond the neighbouring markets. Government of the Tongue.

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DROITWICII, a town of England, in the county of Worcester, containing three churches, and about 400 houses. It is noted for excellent white salt, made from the salt-springs in its neighbourhood; amounting to about 700,000 bushels a year. This town, anciently called Diertwich, from its wet dirty appearance, is seated on the navigable river Salwarp. It ap- pears to have been a populous place in the reign of William the Conqueror, and has always been particularly celebrated for its immense salt- springs, whereof mention is made in Domesday- Book. A canal has been made from this town to the Severn, about three miles from Worcester, for the purpose of conveying the salt. It has a weekly market on Friday, and sends one mem- ber to parliament. The right of election is in two bailiffs, the recorder, and eleven burgesses, who are styled the corporation of the salt-springs of

Droitwich. The bailiffs are the returning officers, and justices of the quorum : the re- corder is also a justice of the peace. It is seven miles E. N. E. of Worcester, and 1 18 W. N. W. of London.

DROLL, TZ. s., v. n.,v.a. &arf/.-\ Fr. drole ;

DROL'LER, n.s. I Arm. drew.

DROL'LERY, > A jester ; buf-

DROL'LING, i foon : hence

DROLL'HOUSE. / to play the

buffoon, or jester; to cheat; trick: and, as an adjective, ridiculous ; odd.

*There is nothing so disagreeable in works of hu- mour, as an insipid, unsupported vivacity, the very husks of drollery, bottled small beer, a man out-riding his horse, lewdness and impotence, a fiery actor in a phlegmatic scene, aii illiterate and stupid preacher discoursing upon Urim and Thummim, and beating the pulpit cushion in such a manner, as though he would make *ie dust and the truth fly out of it at once.*

Shewtone.

He is making an experiment by another sort of ene- mies, and sets the apes and drollers upon it.

GlanviUe.

Such august designs as inspire your inquiries, used to be decided by drolling fantasticks, that have only wit enough to make others and themselves ridiculous.

Id.

As he was running home in all haste, a droll takes him up by the way. L' Estrange.

Men that will not be reasoned into their senses, may yet be laughed or drolled into them. Id.

Let virtuosos insult and despise on, yet they never shall be able to droll away nature. South.

The vulgar may swallow any sordid jest ; any mere drollery or buffoonery ; but it must be a finer and truer wit which takes with men of sense and good

breeding. Shaftesbury.

Italy may have the preference of all other nations for history painting ; Holland for drolls and a neat finished manner of working; France for gay, jaunty, fluttering pictures ; and England for portraits.

Spectator.

Democritus, dear droll ! revisit earth, And with our follies glut thy heightened mirth.

Prior.

Some as justly fame extols, For lofty lines in Smithfield drolls. Swift.

They hang between heaven and hell, borrow tha Christian's faith, and the atheist's drollery upon it.

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Should the senate-house, where all our lawgivers assemble, be used for a theatre or droll-house, or for idle puppet shows ? Watts,

DROME, a river of France, in Dauphiny, which rises near the entrance of the Val de Drome, on the borders of the department of the Upper Alps, and which, rapidly traversing the department of its own name from east to west, falls into the Rhone between Montelimart and Valence. It is partially navigable.

DROME, a department of France, so named from the foregoing river, comprehends the south- west part of Lower Dauphiny, and is bounded by the departments of the Isere, Upper Alps, Lower Alps, and Vaucluse : the Rhone bounds it on the west. It contains a population of 253,500, among whom there are 34,000 Protes- tants. The country is high, full of mountains and valleys, and is watered by the Rhone, the Isere, the Drome, and several inferior rivers. In the valley of the Rhone, the mulberry, the almond, the chestnut, walnut, and in some places the olive, are found to thrive ; and though the cli- mate is cold, wine is a staple production, particu- larly the kinds called Hermitage and Vin de Nyons. Corn is imported yearly to a considerable amount. The stock of cattle is not

considerable, the pasturages being for the most part appropri- ated to the herds of Provence. Wood is in abundance. The manufactures are in the larger towns are linen, woollen, and cotton works. The exports consist of wine, silk, olive and nut oil, and almonds.

DROM'EDARY, n. Fr. dromadaire ; Ital. Span, and Port, dromedario; Lat. dromedarius ; Gr. fyo/iac, from fy>o/tof, a course, on account of the swiftness of its course. An animal of the CAMELUS species, which see.

Straw for the horses and dromedaries brought they unto the place. 1 Kings.

Mules, after these camels and dromedaries,

And waggons fraught with utensils of war.

Milton.

A sort of camel so called from its swiftness, because it is said to travel a hundred miles a-day. Drome- daries are smaller than common camels, slenderer, and more nimble. Calmet.

Or let me have the long

And patient swiftness of the desart-ship :

The helmless dromedary ; — and I'll bear

Thy fiendish sarcasm with a saintly patience.

Byron,

DROMORE, a town of Ireland, in the county of Down. It is a very ancient town, and the seat of a bishopric. The see was founded by St. Colman in the sixth century. It was refouuded by king James I., who, by his charters (pre- served in the rolls office), granted it very great privileges. Among other marks of royal favor, he distinguished the bishops of this see by the style of ' A. B., by Divine Providence bishop of Dromore ;' whereas all other bishops in Ireland, except those of Meath and Kildare, are styled 'by Divine Permission.' Dromore lies seventeen miles east of Armagh, and fifteen south-west of Belfast.

DRONE, n. s. & v. n.ˆ Belgic droomigh,

DRON'ISH, adj. > (sleepy). — Minsheu.

DRONE'PIPE. 3 Sax. draneofdrygan,

to expel. — H. Tooke. Serenius says, of Sax.

droen, to murmur. The bee which makes no honey and only murmurs: hence also a murmur- ing noise; an idler; a sluggard. To drone is to live idly ; to make a low humming noise : dronish, idle, lazy, sluggish.

There is a great number of noblemen among you, that are themselves as idle as drones ; that subsist or. other men's labour, ou the labour of their tenants whom, to raise their revenues, they pare to the quick,

Sir T. More.

The sad-eyed justice, with his surly hum, Delivering o'er to executors pale The lazy yawning drone. Shakspeare. Henry V.

Sit idle on the household hearth, A burdenous drone, to visitants a gaze. Milton, What have I lost by my forefather's fault ! Why was I not the twentieth by descent From a long restive race of droning kings ?

Dryden.

Melfoil and honeysuckles pound, With these alluring savours strew the ground, And mix with tinkling brass the cymbal's droning

sound. Id.

All, with united force, combine to drive The lazy drones from the laborious hive.

Id. Virgil.

Luxurious kings are to their people lost ; They live, like drones, upon the publick cost.

Id. Aurengzebe.

It is my misfortune to be married to a drone, who lives upon what I get, without bringing any thing into the common stock. Addison.

The dronish monks, the scorn and shame of man- hood,

Rouse and prepare once more to take possession, To nestle in their ancient hives again. Rowe.

Here while his canting drone-pipe scanned The mystic figures of her hˆnd, He tipples palmestry, and dines On all her fortune-telling lines. Cleaveland.

You speak with life, in hopes to entertain. Your elevated voice goes through the brain j You fall at once into a lower key, That's worse — the drone-pipe of an humble-bee.

Cowper.

Cobwebs for little files are spread, And laws for little folks are made ; But if an insect of renown, Hornet or beetle, wasp or drone, Be caught in quest of sport or plunder, The flimsy fetter flies in sunder. Beattie.

DRONTHEIM, a town and province of Nor- way, formerly the capital, and the usual resi- dence of the kings, situated on a gulf of the North Sea. It is nearly surrounded by the ocean and lofty mountains ; and has a well-frequented sea-port, which however is not capable of receiving large vessels, on account of rocks at the entrance of the harbour. It is still a bishop's see, is enclosed by a wall, and defended by a castle by no means strong. The houses are mostly of wood. Near it are mines of copper and silver. The principal exports are masts, fir timber, copper, iron, pitch, tar, stock-fish, skins, ' pot-ash, &c. In exchange, they receive and import spices, wines, salt, brandy, corn, tobacco, cloth, &c. It is 270 miles north-west of Stock-holm. Long. 11° 9'E., lat. 63° 26′ N. The province of Drontheim is the most northern of the four grand bailliages or dioceses ot 'Nor- way, and situated on the west coast, between

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*Bergen, Aggerhuus, the Swedish frontier, and Norrland. In its widest extent it comprises both the last-mentioned province and Finnmach. Drontheim Proper includes eighty-six parishes, with the four towns of Drontheim, Roraas, Christiansand, and Molde. The population of this district has received a marked increase during the last half century; in 1769 it was 105,238, and in 1814, 138,690 : including Norr- land and Finnmark, the number in 1801 was 239,*15. Though full of mountains, and little adapted for cultivation, the progress of rural economy has been of late years very consider- able.*

DROOP, v. n. Dut. droef (sorrow) ; Sax. drepen; Isl. diupa, from drop, almost a cognate word. To languish; bend in sorrow; sink; hang downwards.

I droop, with struggling spent ; My thoughts are on my sorrows bent. Sandys. Conceiving the dishonour of his mother, He straight declined, drooped, took it deeply ; Fastened and fixed the shame on 't in himself.

Sluikspeare.

I find my zenith doth depend upon A most auspicious star ; whose influence If now I court not, but omit, my fortunes Will ever after droop. Id. Tempest.

I never from thy side henceforth must stray, Where'er our day's work lies ; though now enjoined Laborious, till day droop. Milton's Paradise Lost.

His head, though gay,

Carnation, purple, azure, or specked with gold, Hung drooping, unsustained. Id.

Can flowers but droop in absence of the sun, Which waked their sweets ? and mine, alas ! is gone.

Dryden.

When factious rage to cruel exile drove The queen of beauty and the court of love, The muses drooped with their forsaken arts. Id.

When by impulse from heaven Tyrtaeus sung, In drooping soldiers a new courage sprung.

Roscommon.

Ill animate the soldiers' drooping courage With love of freedom and contempt of life.

Addison'i Cato.

I saw him ten days before he died, and observed he began very much to droop and languish. Swift.

On her heaved bosom hung her drooping head, Which with a sigh she raised, and this she said.

Pope.

With secret sighs the virgin lily droops, And jealous cowslips hang their tawny cups.

Darwin.

ISA. Nay, Don Jerome, you promised her forgive- ness; see how the poor creature droopi!

JER. Droops, indeed ! Why, gad take me, this is old Margaret — but

where's my daughter, where's Louisa ? Sheridan.

Little he cared how sped the bower, And little marked the drooping flower, But wandering through the bushy brake, Thus in bewildered accents spake. Id.

I see before me the Gladiator lie : He leans upon his hand — his manly brow Consents to death, but conquers agony, And his drooped head sinks gradually low — And through his side the last drops, ebbing slow From the red gash, fall heavy. Byron.

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The winds were pillowed on the •wave, The banners drooped along their staves, And, as they fell around them furling, Above them shone the crescent curling. It!.*

DROP, v. a., v. n. & n. s. \ Goth, droppa ; DROP'LET, [Saxon dropian •

DROP'PIXG, n. s. > Germ, and Dutch

dropfen; Swed. and Dan. dryppe. To let fall in small particles ; hence let go; quit; speak ca- sually; intermit; suffer to vanish or expire: as a neuter verb, to fall in drops; hence to fall ge- nerally; to come casually; to sink, die. Drop- let is a diminutive of drop.

His heavens shall drop down dew.

Deut. xxxiii 28. The heavens dropped at the presence of God.

Psalm Ixvii 8. Drop not thy word against the house of Isaac.

A mas.

It was your presurmise, That in the dole of blows your son might drop.

Shakspeare.

The quality of mercy is not strained ; It droppet/t as the gentle rain from heaven Upon the place beneath.

Id. Merchant of Venice.

Meet we the med'cine of our country's weal, And with him pour we, in our country's purge, Each drop of us. Id. Macbetn.

Though I could

With barefaced power sweep him from my sight, And bid my will avouch it ; yet I must not, For certain friends that are both his and mine, Whose loves I may not drop. Id.

Thou abhorredst in us our human griefs, Scorned our brine's flow, and those our droplets, which From niggard nature fall. Id. Timon.

Thrifty wench scrapes kitchen-stuff, And barrelling the dropping} and the snufF Of wasting candles. Donne.

Nothing, says Seneca, so soon reconciles us to the thoughts of our own death, as the prospect of one friend after another dropping round us.

Digby to Pope.

So mayest thou live, till, like ripe fruit, thou drop Into thy mother's lap ; or be with ease Gathered, not harshly plucked. Milton.

Or sporting, with quick glance, Shew to the sun their waved coats, dropped with gold.

Id.

So thick a drop serene hath quenched their orbs, Or dim suffusion veiled ! Id. Paradise Lott.

Admiring in the gloomy shade, Those little drops of light. Waller.

Whereas Aristotle tells us, that if a drop of wine be put into ten thousand measures of water, the wine, being overpowered by so vast a quantity of water, will be turned into it ; he speaks very improbably. Boyle.

One only hag remained : Propped on her trusty staff, not half upright, And dropped an awkward courtesy to the knight.

Dryden.

Either yon come not here, or, as yon grace Some old acquaintance, drop into the place, Careless and qualmish, with a yawning face. Id.

Beneath a rock he sighed alone, And cold Lycaeus wept from every dropping stone..

Had I but known that Sancho was his father, I would have poured a deluge of my blood To save one drop of his. Id, Spanish Friar.

I have beat the hoof till I have worn out these shoes in your service, and not one penny left me to buy more ; so that you must eveu excuse me if I drop you here. L'Estrange.

The thoughts that come often unsought, and, as it •were, drop into the mind, are commonly the most va- luable of any we have, and therefore should be seˆ cured, because they seldom return again. Loche.

St. Paul's epistles contain nothing but points of Christian instruction, amongst which he seldom fails to drop in the great and distinguishing doctrines of our holy religion. Id,

Repentance hath a purifying power, and every tear is of a cleansing virtue ; but these penitential clouds must be still kept dropping ; one shower will not suffice ; for repentance is not one single action but a course.

South.

He could never make any figure in company, but by giving disturbance at his entry : and therefore takes care to drop in when he thinks you are just seated.

Spectator, No. 448.

Thus was the fame of our Saviour perpetuated by such records as would preserve the traditionary account of him to after-ages ; and rectify it, if, by passing through several generations, it might drop any part that was material. Addison.

Virgil's friends thought fit to let drop this incident of Helen. Id. Travels.

In every revolution, approaching nearer and nearer to the sun, this comet must at last drop into the sun's body. Cheyne.

Where the act is unmanly or immoral, we ought to drop our hopes, or rather never entertain them.

Collier on Despair.

After having given this judgment in its favour, they suddenly dropt the pursuit. Sharp's Surgery.

Philosophers conjecture that you dropped from the moon, or one of the

stars. Gulliver's Travels.

St. John himself will scarce forbear To bite his pen and drop a tear. Swift.

Opinions, like fashions, always descend from those of quality to the middle sort, and thence to the vulgar, where they are dropped and vanish. Id.

The drops to thee, Brillante, we consign ; And, Momentilla, let the watch be thine. Pope. I heard of threats occasioned by my verses : I sent to acquaint them where I was to be found, and so it dropped. Id.

Strain out the last dull droppings of your sense, And rhyme with all the rage of impotence. Id.

The most affluent may be stript of all, and find his •worldly comforts like so many withered leaves dropping from him. Sterne.

Those who have assumed visible shapes for a season, can hardly be reckoned among this order of com- pounded beings ; because they drop their bodies, and divest themselves of those visible shapes.

Watts' Logick.*

Constancy in friendships, attachments, and familia- rities, is commendable, and is requisite to support trust and good correspondence in society. But in places of general, though casual concourse, where the pursuit of health and pleasure brings people promis- cuously together, public conveniency has dispensed with this maxim ; and custom there promotes an un- reserved conversation for the time, by indulging the privilege of dropping afterwards every indifferent ac- quaintance without breach of civility or good manners.

Hume.

Evening now from purple wings Sheds the grateful gifts she brings ; Brilliant drups bedeck the mead, Cooling breezes shake the reed.

Johnson. Ode to Evening.

Shrouded Nile,

Eridanus, and Tiber with his twins, And palmy Euphrates : they with dropping locks Hang o'er their urns, and mournfully among The plaintive-echoing ruins pour their streams.

Byron.

DROPS, in meteorology, small spherical bodies, which the particles of fluids spontaneously form themselves into when let fall from any height. This spherical figure, the Newtonian philoso- phers demonstrate to be the effect of corpuscular attraction ; for, considering that the attractive force of one single particle of a fluid is equally exerted to an equal distance, it must follow, that other fluid particles are on every side drawn to it, and will therefore take their places at an equal distance from it, and consequently form a round superficies.

DROPSY, ˆ fr.hydropisie; Span, and

DROP'SICAL, adj. >Port. dropesia, or tropesia;

DROP'SIED, adj. j Lat. hydrops ; Gr. vSpˆ,

from v£wp, water. A disease which accumulates

water in different parts of the body. See below.

Where great addition swells, and virtue none, It is a dropsied honour : good alone Is good. Shikspeare. All's Well that Ends Well.

There note they the ship's sicknesses, the mast Shaked with an ague, and the hold and waist With a salt drapsie clogged. Donne.

Revenge, that thirsty dropsy of our souls, Which makes us covet that which hurts us most, Is not alone sweet, but partakes of tartness.

Massinger.

The diet of nephritick and dropsical persons ought to be such as is opposite to, and subdueth the alkales- cent nature of the salts in the serum of the blood.

Arbuthnot on Aliments.

A tendency to these diseases is certainly hereditary though perhaps not the diseases themselves ; thus a less quantity of ale, cyder, wine, or spirit, will induce the gout and dropsy in. those constitutions, whose pa- rents have been intemperate in the use of those li- quors ; as I have more than once had occasion to observe. Darwin.

She likewise hinted that a certain widow in the next street had got rid of her dropsy, and recovered her shape in a most surprising manner. Sheridan.

DROPSY (wfyunj/), a collection of a serous fluid in the cellular

membrane, the viscera, or other cavities of the body. For the general description of this disease, see HYDROPS; for dropsy of the belly, see ASCITES; for dropsy of the brain, HY- DRCCEPHALUS ; for dropsy of the chest, HYDRO- THORAX ; for dropsy of the skin, ANASARCA ; for dropsy of the testicle, HYDROCELE.

*DROSERA, ros solis, or sun-dew, in botany, a genus of the pentagynia order, and pentandria class of plants; natural order fourteenth, grui- nales : CAL. quinquefid, petals five : CAPS, unilo- cular, and quinquevalved at top : SEEDS very numerous. Species eleven, which grow natu- rally in boggy places, in many parts of the king- dom. They are named sun-dew from a very striking circumstance in their appearance. The leaves, which are circular, are fringed with hairs, supporting small drops or globules of a pellucid liquor like dew, which continue even in the hot- test part of the day, and in the fullest exposure to the sun. The whole plant is acrid, and suffi – ciently caustic to erode the skin ; but some ladie**

know how to mix the juice with milk, so as to make it an innocent and safe application to re- move freckles and sun-burn. The juice that exudes from it unmixed, will destroy warts and corns.

DROSOMELI, £poffbpi\i, from Spoirog, dew, and peXi, honey ; manna.

DROSOMETER, an instrument for ascer- taining the quantity of dew which falls in a given time. It consists of a balance, one end of which is furnished with a plate fitted to receive the dew, the other containing a weight protected from it.

DROSS, ra. s.,, Sax. drof; Goth, drits;

O earth ! I will befriend thee more with rain Than youthful April shall with all his showers : In summer's drought I'll drop upon thee still.

Shnkspeare.

Great droughts in summer, lasting till the end of August, some gentle showers upon them, and then some dry weather, portend a pestilent summer the year following. liacon.

To south the Persian bay, And inaccessible the' Arabian drought. Milton.

One, whose drought

Yet scarce allayed, still eyes the current stream. Whose liquid murmur heard new thirst excites.

Id. They were so learned in natural philosophy, that

*DROSS'INESS, *.Belg.*

DROSSY, adj. 5 draussen, the exterior. The and 6reat plagues. Temple.

recrement of metals ; and hence, rust, refuse. In a drought, the thirsty creatures cry,

And gape upon the gathered clouds for rain.

Fair proud, now tell me why should fair be proud, Sith all world's glory is but dross unclean :

And in the shade of death itself shall shroud, However now thereof ye little ween ? Spenser.

Some scummed the dross that from the metal came,

Some stirred the molten ore with ladles great, And every one did swink, and every one did sweat.

Id.

DROTCHEL, n. s. Corrupted perhaps from dretchel. To dretch, in Chaucer, is to idle, to delay. Droch, in Frisick, is delay. An idle wench ; a sluggard. In Scotland it is still used.

DROUAIS (John Germain), born at Paris, 1763, the most distinguished painter of the school of David. His desire of going to Rome to study the great works of art, induced him to enter the lists for the great prize, which consisted of a pension for four years; but, being dissatis- fied with his work, he destroyed it, and left the prize to another. When reproached for this by his master, who saw with surprise the remains of his picture, he said, " Are you satisfied with me?" " Perfectly," answered David. "Well, then, I have gained the prize/' returned Drouais, " this was my aim ; the prize of the academy belongs to another, to whom it may be more useful than it would have been to me ; the next year I hope to deserve it by a better work." In 1784, Drouais again entered the lists. The Canaanitish woman at the feet of Jesus was the fruit of his study. He was publicly crowned, and led in triumph, by his fellow students, to their master. He accompanied him as a

pen- sioner to Rome, where he studied and copied the greatest masters. His Dying Gladiator, and,

Dryden.

Upon a shower, after a drought, earthworms and land-snails innumerable come out of their lurking- places. Ray.

If the former years Exhibit no supplies, alas ! thou must With tasteless water wash thy droughty throat.

Philips,

O ye wild groves, 0 where is now your bloom '. (The Muse interprets thus his tender thought) Your flowers, your verdure, and your balmy gloom, Of late so grateful in the hour of drought ! Beattie.

DROWN, v. a. & v. n. From. Germ, drunden, below. — Skinner. From Sax. druncnian. — Mr. Lye. Teut. trauken ; Swed. dranka. To suffo- cate in water ; sink ; immerge in water ; and hence to lose in something that overpowers ; to be suffocated with water.

There be, that keep them out of fire, and yet was never burned ; that beware of water, and yet was never nigh drowning. Ascham'i Schoolmaster.

Who cometh next will not follow that course how- ever good, which his predecessors held, for doubt to have his doings drowned in another man's praise.

Spenser on Ireland.

Methought what pain it was to drown! What dreadful noise of waters in my ears !

Shahspeare.

Or so much as it needs To dew the sovereign flower, and drown the weeds.

Id.

Galleys might be drowned in the harbour with the great ordnance, before they could be rigged.

Knollei's History.

Most men being in sensual pleasures drowned, It seems their souls but in their senses are. Davies. That the brightness of the sun doth drown our dis-

particularly, his Marius at Minturnje, on being cerning of the lesser lights, is a popular errour. exhibited in Paris, gained him and David's school a new triumph. He now sketched his Philoctetes at Lemnos ; but his career was sud- denly checked by an inflammatory fever, which

Wotton.

They would soon drown those that refused to swim down the popular stream. King Charles.

Here was nothing but a ma jostical terror in the eyes, in the ears of the Israelites. — Here was lightning

put an end to his life before he had completed darted in their eyes, the thunders roaring in their ears,

his 25th year, and while he was engaged on a the trumpet of God drowning the thunder claps, the

picture of Caius Gracchus. His rivals and his

friends united in erecting a monument to him in

St. Mary's church (in the Via Lata).

*DROUGHT, n. S. I From Sax. drygan, to a drowning man, he never loses, though it do but help DROUGHT'Y, adj. * dry. This word is evi- him to*

sink the sooner. Butler.

dentiy a corruption of dryth, as it was anciently Betwixt the prince and parliament we stand,

voice of God out-speaking the trumpet of the angel. Bp. Hall. Contemplations. Whatever he (an obstinate man) lays hold on, like

written ; it next became drowth, and, lastly, The barriers of the state on either hand : drought. Dry •want of drink.

want of rain ; thirst ;

May neither overflow, for then they drown the land.

Dryden.

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DROWNING.

My private voice is drowned amid the senate.

Addison.

When of God's image only eight he found Snatched from the watery grave, and saved from na- tions drowned. Prior. The innocent gambols of a few otters have been known to occasion those yells, which the vulgar of this country mistake for laughing or crying, and as- cribe to a certain goblin, who is supposed to dwell in the waters, and to take delight in drowning the be- wildered traveller. Beattie.

Care, ir.ad to see a man sae happy, E'en drowned himsel amang the nappy ; As bees flee hame wi' lades o' treasure, The minutes winged their way wi' pleasure.

Burns.

Thus drotcnings are much talked of by the divers, A nd swimmers who may chance to be survivers.

Byron.

DROWNING, the extinction of life by a total immersion in water. In some respects, there seems to be a great similarity between the death occasioned by immersion in water, and that by strangulation, suffocation by fixed air, apoplexies, epilepsies, sudden faintings, violent shocks of electricity, or even

violent falls and bruises. Physicians, however, are not agreed with regard to the nature of the injury done to the animal system, in any or all of these accidents. It is indeed certain that, in all the cases above men- tioned, particularly in drowning, there is very often such a suspension of the vital powers, as to us has the appearance of a total extinction of them ; while yet they may be again set in motion, and the person restored to life, after a much longer submersion than has been generally thought capable of producing absolute death.

The length of time during which a person may remain in water without being drowned, is very unequal in different individuals ; and depends as much on the temperature of the water as on the particular constitution of the subject : in ge- neral, however, there is less prospect of reco- very, after having continued fifteen minutes im- mersed in water. In such cases, death ensues from impeded respiration, and the consequent ceasing of the circulation of the blood, by which the body loses its heat, and, with that, the acti- vity of the vital principle. Dr. Goodwyn justly observes, that the water produces all the changes which take place in drowning, only indirectly, by excluding the atmospheric air from the lungs, as they admit but a very inconsiderable quantity of fluid to pass into them, during immersion. Hence we shall find, in the progress of this en- quiry, that inflation of the lungs is one of the principal means of restoring life.

Notwithstanding the differences in theory among physicians, it is certain, that great num- bers of drowned people have been restored to life, by a proper use of remedies ; and societies for recovering drowned persons have been insti- tuted in different places. The first society of this kind was instituted in Holland, where, from the great abundance of canals and inland seas, the inhabitants are particularly exposed to acci- dents by water. In a very few years 150 per- sons were saved from death by this society ; and many of these had continued upwards of an hour without any signs of life, after they had been

taken out of the water. The society was insti- tuted at Amsterdam in 1767: and, by an adver- tisement, informed the inhabitants of the United Provinces of the methods proper to be used on such occasions, offering rewards at the same time to those who should, with or without suc- cess, use those methods for recovering persons drowned and seemingly dead. The laudable and humane example of the Dutch was followed, in 1768, by the magistrates of health in Milan and Venice; afterwards by the magistrates of Hamburg in 1771, by those of Paris in 1772, and by those of London in 1774. Similar so- cieties have since been instituted at Leith, Glas- gow, Aberdeen, and many other places.

The Royal Humane Society of London has circulated the following

directions on this impor- tant subject : — I. As soon as the patient is taken out of the water, the wet clothes, if the person is not naked at the time of the accident, should be taken off with all possible expedition on the spot (unless some convenient house be very near), and a great coat or two, or some blankets if con- venient, should be wrapped round the body. II. The patient is to be thus carefully conveyed in the arms of three or four men, or on a bier, to the nearest public or other house, where a good fire, if in the winter season, and a warm bed, can be made ready for its reception. As the body is conveying to this place, great attention is to be paid to the position of the head ; it must be kept supported in a natural and easy posture, and not suffered to hang down. III. In cold or moist weather, the patient is to be laid on a mattress or bed before the fire, but not too near, or in a moderately heated room : in warm or sul- try weather, on a bed only. The body is then to be wrapped as expeditiously as possible with a blanket, and thoroughly dried with warm coarse cloths or flannels. IV. In summer or sultry weather loo much air cannot be admitted. For this reason it will be necessary to set open the windows and doors, as cool refreshing air is of the greatest importance in the process of resus- citation. V. Not more than six persons are to be present to apply the proper means ; a greater number will be useless, and may retard, or to- tally prevent, the restoration of life, by rendering the air of the apartment unwholesome. It will be necessary, therefore, to request the absence of those who attend merely from motives of curio- sity. VI. It will be proper for one of the as- sistants, with a pair of bellows of the common size, applying the pipe a little way up one nos- tril, to blow with some force, in order to intro- duce air into the lungs; at the same time the other nostril and the mouth are to be closed by another assistant, whilst a third person gently presses the chest with his hands, after the lungs are observed to be inflated. By pursuing this process, the noxious and stagnated vapors will be expelled, and natural breathing imitated. If the pipe of the bellows be too large, the air may be blown in at the mouth, the nostrils at the same time being closed, so that it may not escape that way : but the lungs are more easily filled, and natural breathing better imitated, by blowing up the nostril. VII. Let the body be gently rubbed with common salt, or with flannels

sprinkled with spirits, as rum or geneva. Dr. Fothergill of Bath advises mustard moistened with spirits. A warming-pan heated (the body being surrounded with flannel) may be lightly moved up and down the back. Fomentations of hot brandy are to be applied to the pit of the stomach,

loins, &c., and often renewed. Bottles filled with hot water, heated tiles covered with flannel, or hot bricks, may be efficaciously ap- plied to the soles of the feet, palms of the hands, and other parts of the body. The temples may be rubbed with hartshorn, and the nostrils now and then tickled with a feather; and snuff, or eau de luce, should be occasionally applied. VIII. Tobacco fumes should be thrown up the fundament; if a fumigator be not at hand, the common pipe may answer the purpose. The operation should be frequently performed, as it is of importance; for the good effects of this process have been experienced in a variety of instances of suspended animation. But should the application of tobacco smoke in this way not be immediately convenient, or other impedi- ments arise, clysters of this herb, or other acrid infusions with salt, &c., may be thrown up with advantage. IX. When these means have been employed a considerable time without success, and any brewhouse or warm bath can be readily obtained, the body should be carefully conveyed to such a place, and remain in the bath, or sur- rounded with warm grains, for three or four hours. If a child has been drowned, its body should be wiped perfectly dry, and immediately placed in bed between two healthy persons. The salutary effects of the natural vital warmth, conveyed in this manner, have been proved in a variety of successful cases. X. While the various methods of treatment are employed, the body is to be well shaken every ten minutes, in order to render the process of animation more certainly successful ; and children, in particular, are to be much agitated, by taking hold of their legs and arms frequently and for a continuance of time. In various instances, agitation has forwarded the recovery of boys who have been drowned, and continued for a considerable time apparently dead. XI. If there be any signs of returning life, such as sighing, gasping, or convulsive mo- tions, a spoonful of any warm liquid may be administered; and if the act of swallowing is returned, then a cordial of warm brandy or wine may be given in small quantities, and frequently repeated. XII. Electricity may be tried by the 'udicious and skilful, as its application neither prevents nor retards the various modes of reco- very already recommended ; but, on the other hand, will most probably tend to render the other means employed more certainly and more expeditiously efficacious. This stimulus bids fair to prove an important auxiliary in cases of suspended animation; and therefore deserves the serious regard and attention of the faculty. These methods are to be employed with vigor for three hours or upwards, although no favorable circumstances should arise ; for it is a dangerous opinion to suppose that persons are irrecover- able, because life does not soon make its appear- ance ; an opinion that has consigned to the grave an immense number of the seemingly dead, who.

might have been restored to life by resolution and perseverance. Bleeding is never to be en-,' ployed in such cases, unless by the direction of one of the

medical assistants, or some other gen tleman of the faculty who has paid attention to the resuscitating art. The Royal Humane So- ciety of London has, for a series of years, offered premiums for machines and other inventions to save mariners and other persons from drowning in cases of shipwreck, or other accidents at sea! The committee of the Society have also recom- mended several inventions for enabling persons to swim from a wreck to the shore ; particularly the cork or marine spencer, described under the article CORK, and- the Life Preserver, invented by Mr. Daniel, of Wapping. This last is a sort of bag made of water-proof leather, which wraps round the body just under the arm-pits, and may be inflated like a bladder in the space of half a minute, by blowing with the breath through a silver tube, furnished with a stop-cock, which is to be turned when the machine is full of air. DROWSE, v. a. & v.n.^\ Dut. droosen, from DROWS'IHED, n. s. I Goth.cfor, lightly, and DROWS'ILY, adv. ^>doze. To make or be

DROWS'INESS, I heavy with sleep; to

DROWS'Y, adj. j slumber; to make

heavy. Drowsihed is used by Spenser for drowsiness.

The day is spent, and cometh drowsie night, Wherf every creature shrouded is in sleepe.

Spenser. Faerie Queette. The royal virgin shook off drowsihed ; And rising forth out of her baser boure, Looked for her knight. Faerie Qucene.

Up, up, my drowsy soul ! where thy new ear Shall in the angels' songs no discord hear.

Donne. What a strange drowsiness possesses them !

Shakspeare.

They rather drowsed and hung their eyelids down, Slept in his face, and rendered such aspect As cloudy men use to their adversaries.

Id. Henry VI.

We satisfy our understanding with the first things, and, thereby satiated, slothfully and drowsily sit down.

Raleigh.

Men are drowsy, and desirous to sleep, before the fir; of an ague, and do

use to yawn and stretch.

Bacon's Natural History. In deep of night, when drowsiness Hath locked up mortal sense, then listen I To the celestial syren's harmony. Milton.

All their shapes

Spangled with eyes, more numerous than those Of Argus ; and more wakeful than to drowse, Charmed with Arcadian pipe. Id. Paradise Lost.

There gentle sleep

First found me, and with soft oppression seized My drowsed senses uncontrolled. Id.

Drunken at last, and drowsy they depart Each to his house. Dryden.

The air swarjons thick with wandering deities,

Which drowsingly like humming-beetles rise. Id.

Drowsy am I, and yet can rarely sleep.

Sidney.

He that from his childhood has made rising betimes familiar to him, will not waste the best part of his life in drowsiness and lying a-bed.

He passes his whole life in a dozed condition, between sleeping and waking, with a kind of drowsinest and confusion upon his senses. South.

What su»,ce»ur can I hope the muse will send, Whose drowsiness hath wronged the muse's friend ?

Crashato.

While thus she rested, on her arm reclined, The hoary willows waving with the wind, And feathered quires that warbled in the shade. And purling streams that through the meadow strayed, In drowsy murmurs lulled the gentle maid. Addison.

A sensation of drowsiness, oppression, and lassi- tude, are signs of a plentiful meal in young people.

Arbuthnot.

Those inadvertencies, a body would think, even our author, with all his drowsy reasoning, could never have been capable of. Atterbury.

The flowers, called out of their beds, Start and raise up their drowsy heads.

Cleaveliiiul.

Now while the drowsy world lies lost in sleep, Let me associate with the serious night, And contemplation, her sedate compeer.

Thomson.

Amidst the drowsy charms of dull delight, Year chases year with unremitted flight, Till want now following, fraudulent and slow, Shall spring to seize thee like an ambushed foe.

Dr. Johnson's Poems. A dull rotation, never at a stay, Yesterday's face, twin image of to-day ; While conversation, an exhausted stock, Grows drowsy as the clicking of a clock.

Cowper.

The drowsy dungeon-clock had numbered two, And Wallace tower had sworn the fact was truj : The tide-swoln Frith, wi' sullen sounding roar, Through the still night dashed hoarse along the shore.

Burns.

DRUB, v. a. Sen. s.ˆ Dan. druber, to kill;

DRUB'BING, n. s. jSwed. drabba; Island.

drybba, to fight. To beat soundly ; to give blows ;

also, the beating given, for which a drubbing is

the common substantive of low conversation.

He that is valiant, and dares fight, Though drubbed, can lose no honour by it.

Hudibras.

The blows and drubs I have received Have bruised my body, and bereaved My limbs of strength. Id.

The little thief had been soundly drubbed with a good honest cudgel. L' 'Estrange.

Though the bread be not mine, yet, if it had been less than weight, I should have been drubbed.

Locke.

By setting an unfortunate mark on their followers, they have exposed them to innumerable drubs and contusions. Addison.

In the rude state of society, prior to the existence

of laws, if one man gave another ill language, the

affronted person might return it by a box on the ear ;

and if repeated, by a good drubbing. Franklin.

DRUDGE, v. n. -\ Sax. dreogan ; Dutch

DRUDG'ER n. s. I draghen ; perhaps from

DRUDG'ERY, ˆ.DRAG, which see. To

DRUDG'INGLY, ailr\ labor in heavy or servile

DRUG, n. s. ./work: a drudger is he

who thus. labors, and drudgery the work done.

Shakspeare has drugge for drudge in his first fol.

edit. See the passage given below from Timon

of Athens.

My old dame will be undone for one to do her hus- bandry and her drudgery. Shakspeare.

To conclude, this drudge of the devil, this diviner, laid claim to me. Id Comedy of Errors.*

He from his first swath proceeded Through sweet degrees that this brief world afiords. To such as may the passive drugs of it Freely command. Id. Timon of Athens.

Those whom the Egyptians honoured before as lords» now they contemn as

drudges.

Bp. Hall. Contemplationi.

A high spirited man is above the world and its drudgery, and cannot pull down his thoughts to the pelting business of life. Bp. Earle.

He sits above and laughs the while, At thee, ordained his drudge, to execute Whate'er his wrath shall bid.

Milton's Paradite Lost. And to cracked fiddle, and hoarse tabour, In merriment, did drudge and labour. Hudibrat It is not poetry, that makes men poor ; For few do write, that were not so before ; And those that have writ best, had they been rich, Had ne'er been seized with a poetic itch j Had loved their ease too well, to take the pains To undergo that drudgery of brains ; Id.

Advantages obtained by industry, directed by phi- losophy, can never be expected from drudging igno- rance. Glanville.

The hard master makes men serve him for nought, •who rewards his drudges and slaves with nothing but shame, and sorrow, and misery. Tillotson.

The poor sleep little : we must learn to watch Our labours late, and early every morning, Midst winter frosts ; then, clad and fed with sparing, Rise to our toils, and drudge away the day. Otway.

To thee that drudgery of power I give ; Cares be thy lot : reign though, and let me live.

Dryden.

Paradise was a place of bliss, as well as immorta- lity, without drudgery, and without sorrow. Locke.

Were there not instruments for drudgery as well as offices of drudgery ? Were there not people to receive orders, as well as others to give and authorise them ?

L' Estrange.

You da not know the heavy grievances, The toils, the labours, weary drudgeries, Which they impose. Southern's Oroonoko.

He does now all the meanest and triflingest things himself drudgingly, without making use of any inferior or subordinate minister. Ray on the

Creation.

What is an age, in dull renown drudged o'er ! One little single hour of love is more. Granville.

Even Drudgery himself, As at the car he sweats, or dusty hews The palace stone, looks gay. Thomson's Summer. It is now handled by every dirty wench, and con- demned to do her drudgery.

Swift's Meditations on a Broomstick. A man of wit is not incapable of business, but above it. A sprightly generous horse is able to carry a pack-saddle, as well as an ass ; but he is too good to be put to the drudgery. Pope.

I knew that the work in which I engaged is gene- rally considered as drudgery for the blind, as the pro- per toil of artless industry.

Johnson. Plan of Dictionary.

But I am bankrupt now ; and doomed henceforth To drudge, in descant dry, on others' lays ;

Bards, I acknowledge, of unequalled worth ! But what is commentators' happiest praise ? Cvwper.

The poor, inured to drudgery and distress, Act without aim, think little, and feel less, And no where, but in feigned Arcadian scenes, Taste happiness, or know what pleasure means.

Id,

DRUIDS.

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Think yc, that sic as you and I, Wha drudge and drive through wet and

DRU'DGING-BOX. See DREDGING-BOX. DRUG, n.s. & v. a.^ Fr. drogue; Span. DIIUG'GET, n. s. (and Ital. droga ; pro- DRUG'GIST, pliably from Sax. drug;

DRUG'STER, JGr. rpwyjj, dry; drugs

marches, as the series of Moui, Beauvois, and other like stuffs corded, are called corded drug- gets. The plain are wrought on a loom of two marches, with the shuttle, in the same manner as cloths, camblets, and other like stuffs not corded.

DRUID, n. s. & adj. Or. fy«c, Celt, deru ; Welsh and Arm. dcrw, an oak. An ancient

properly signifying dry medicines : and hence priest of Gaul and Britain. See below.

any thing dried up or worthless. Drugget is a light, common kind of stuff: druggist and drug- ster, a seller of drugs.

Mortal drugs I have ; but Mantua's law Is death to any he that utters them. Shakspeare.

The surfeited grooms Do mock their charge with snores. — I've drugged their

possets, That death and nature do contend about them. Id.

The poore people, the good physician prescribes cheap but wholesome medicines ; not removing the consumption out of their bodies into their purses, nor sending them to the East Indies for drugs which they •can reach better out of their gardens. Fuller.

Oft they assayed,

Hunger and thirst constraining ; drugged as oft With hatefulest disrelish, writhed their jaws With soot and cinders filled. Milton's Paradise Lost.

A fleet descried

Hangs in the clouds, by equinoctial winds Close sailing from Bengal, or the isles Of Ternate and Tidore, whence merchants bring Their spicy drugs. Id.

In the names of drugs and plants, the mistake in a •word may endanger life.

Baker's Reflections on Learning. Common nitre we bought at the druggist's. Boyle. Common oil of turpentine I bought at the druyster't.

Id.

Each noble vice Shall bear a price And virtue shall a drug become. An empty name, Was all her fame, But now she shall be dumb.

Dry den's Albion.

In druggets drest, of thirteen pence a-yard, See Philip's son amidst his Persian guard. Surift.

They get the clergy below their apothecaries, the physician of the soul below the drugitert of the body.

Atterbury.

Judicious physick's noble art to gain, He drugs and plants explored, alas ! in vain. Smith.

Bright Helen mixed a mirth-inspiring bowl, Tempered with drugs of sov'reign use, to assuage The boiling bosom of tumultuous rage.

Pope's Odyssey.

But O the' important budget ! ushered in With such heart-shaking music, who can say What are its tidings ? have our troops awaked ? Or do they still, as if with opium drugged, Snore to the murmurs of th< >' Atlantic wave ?

Cowper,

For Inez called some druggists and physicians,

And tried to prove her loving lord was mad,

But as he had some lucid intermissions,

In yonder grave a druid lies

Where slowly steals the winding waves. Collins. Sage beneath a spreading oak Sat the druid, hoary chief ; Every burning word he spoke

Full of rage and .full of grief. Co-fix. It stood embosomed in a happy valley,*

Crowned by high woodlands, whero the druid oak Stood like Caractacus in act to rally

His host with broad arms 'gainst the thunder- stroke. Byron.

DRUIDS, DRUIDES, or DRUIDS, the priests or ministers of religion among the ancient Gauls, Britons, and Germans. Picard (Celtoped. lib. ii. p. 58) believes the druids to have been thus called from Druis, or Dryius, their leader, the fourth or fifth king of the Gauls, and father of Saron or Naumes. Pliny, Salmatius, Vigenere, &c., derive the name from fywc, an oak ; on ac- count of their inhabiting, or frequenting, and teaching in forests ; or because they never sacri- ficed but under the oak. Menage derives the word from the old British drus, daemon, or ma- gician : Borel,

from the Saxon dry, magician ; or from the old British dru or derw, ‘ oak,’ whence he takes the Greek word fywc to be derived; which is the most probable supposition. Gorop. Becanus, lib. i. takes druis to be an old Celtic and German word, formed from trowis or truwis, ‘ a doctor of the truth and the faith ;’ which ety- mology Vossius also approves.

The druids were the first and most distin- guished order among the Gauls and Britons; they were chosen out of the best families ; and the honors of their birth, joined with those of their function, procured them the highest vene- ration among the people. They were versed in astrology, geometry, natural philosophy, politics, and geography ; they were the interpreters of religion, and the judges of all affairs indifferently. \Vhoever refused obedience to them was declared impious and accursed. We know but little as to their peculiar doctrines ; only that they be- lieved the immortality of the soul ; and the me- tempsychosis. Their chief settlement in Britain was in the isle of Anglesea, the ancient Mona, which was well stored with spacious groves of their favorite oak. They were divided into se- veral classes. Strabo, however, only distin- guishes three kinds, bardi, vates, and druids. The bardi were the poets ; the vates, «ar«c» were the priests and naturalists ; and the druids, be- sides the study of nature, applied themselves to morality. Diogenes Laertius assures us, that

the ancient

She next decided he was only bad. , Byron

DRUGGET, a slight kind of woollen stuff, some- the druids ˆwere Uie same amon times made thread ; sometimes

*Those that have the wuoi ui «uui, anu mt v***iv ».ˆ«..e — –*

of thread, are called threaded druggets; and the Assyrians. Their garments were r,

those wrought with the shuttle on a loom of four long; and, when employed HI rcligioi

i a BIUCUI KIUU ui «WM»M cFiuii, ov • , .

all wool, sometimes half wool half Britons with the philosophers among the Greeks,

*netimes corded, but usually plain, the magi among the Persians; the *ym’*

,ave the woof of wool, and the warp among the Indians; and the Chaldeans amon

monies, they wore a white surplice. They ge- nerally carried a wand in their hands ; and wore a kind of ornament enchased in gold about their Decks, called the druid’s egg. See ANGUINUM OVUM. Their necks were also decorated with gold chains, and their hands and arms with bracelets : they wore their hair very short, and their beards remarkably long. The druids had one chief or arch-druid, in every nation, who acted as high-priest. He had absolute authority over the rest; and commanded, decreed, pu- nished, Sec., at pleasure. At his death he was succeeded by the most considerable among the survivors ; and, if there were several pretenders, the matter was ended by an election, or else de- cided by arms. The druids presided at sacri- fices, and other ceremonies ; and had the direc- tion of every thing relating to religion. The British and Gaulish youth were instructed by them. The children of the nobility, Mela tells us, they carried into caves, or the most desolate parts of forests, and kept them there, sometimes for twenty years, under their discipline. They were here instructed in the motion of the heavens, and the course of the stars ; the magnitude of the heavens and the earth ; the power and wisdom of the gods, the metempsychosis, immortality, &c. They preserved the memory and actions of great men in their verses, which they never al- lowed to be written down, but made their pupils get them by heart. In their common course of learning, they are said to have taught them 24,000 such verses. Thus their doctrines ap- peared more mysterious by being unknown to all but themselves ; and, having no book to recur to, they were the more careful to fix them in their memory.

It has been disputed, whether the druids were themselves the inventors of their opinions and systems of religion and philosophy, or received them from others. Some have imagined, that the colony of Phocians, who left Greece and built Marseilles, in Gaul, about the fifty-seventh Olympiad, imported the first principles of learn- ing and philosophy, and communicated them to the Gauls and other nations in the west of Eu- rope. But though we may allow, that the druids of Gaul and Britain borrowed some hints of their philosophy from this Greek colony, we have reason to believe that the substance of it was their own. Others have suggested, that the druids derived their philosophy from Pythagoras, which seems to be confirmed by Ammianus Marcellinus, and indeed the philosophy of the druids bore a much greater- resemblance to that of Pythagoras, than to that of any other sage of antiquity. But this resemblance may, perhaps, be best accounted for by supposing that Pytha- goras adopted some of the

opinions of the druids, as well as imparted to them some of his discoveries. And Aristotle says that the philo- sophy of the druids passed into Greece. It is therefore highly probable, and in fact directly asserted by several authors, that Pythagoras visited the druids of Gaul, and was initiated into their philosophy. From the concurring tes- timonies of several authors, it appears that na- tural philosophy was the favorite study of the druids of Gaul and Britain. According to Dio-

dorus Siculus, Strabo, Caesar, Mela, Ammianus Marcellinus, and others, they entered into many disquisitions, in their schools, concerning the form and magnitude of the universe in general, and of this earth in particular, and even concern- ing the most sublime and hidden secrets of na- ture. On these subjects they formed a variety of systems and hypotheses, which they delivered to their disciples in vetse, that they might the more easily retain them in their memories, as they were not allowed to commit, them to writ- ing. Strabo has preserved one of the physiolo- gical opinions of the druids concerning the uni- verse, viz. that it was never to be entirely de- stroyed or annihilated; but was to undergo a succession of great changes and revolutions, which were to be produced sometimes by the predominancy of water, and sometimes by that of fire. This opinion, he intimates, was not pe- culiar to them, but was entertained also by the philosophers of other nations ; and Cicero speaks of it as a truth universally acknowledged and undeniable. But they did not express theii sen- timents on these and the like heads in a plain and natural, but in a dark, figurative, and enig- matical manner. We know not what their opi- nions were about the dimensions of the universe or of the earth, but we have several reasons to suppose that they believed both to be of a sphe- rical form. This is visibly the shape and form of the sun, moon, and stars, the most conspicu- ous parts of the universe ; and the circle was the favorite figure of the druids, as appears from their houses and places of worship.

It may be thought improbable that the druids had made any considerable progress in arithme- tic, as this may seem to be impossible by the mere strength of memory, without the assistance of figures and of written rules. But it is very difficult to ascertain what may be done by me- mory alone, when it has been long exercised in this way. There is reason to think that they made use of the letters of the Greek alphabet for their calculations. Caesar, speaking of the druids of Gaul, says, ‘ In almost all other public trans- actions, and private accounts or computations, they make use of the Greek letters.’ This is further confirmed by what the same author says of the Helvetii, a people of the same origin, lan- guage, and manners with the Gauls and Briton? ‘ Tables were found in the camp of the Helvetii, written in Greek letters, containing an account of all the men capable of bearing arms, who had left their native country, and also separate ac- counts of the boys, old men, and women.’

Astronomy appears to have been one of the chief studies of the druids of Gaul and Britain. ‘ The druids,’ says Caesar, ‘ have many disqui- sitions concerning the heavenly bodies and their motions, in which they instruct their disciples.’ Mela, speaking of the same philosophers, ob- serves, ‘ That they profess to have great know- ledge of the motions of the heavens and of the stars.’ Some knowledge of this science, indeed, was absolutely necessary for fixing the regular returns of their religious solemnities, of which the druids had the sole direction. The druids computed their time by nights, and not by days, a custom which they had received from their

most remote ancestors by tradition, and in which they were confirmed by their measuring their time very much by the moon. They assembled upon stated days, either at the new or full moon ; for they believed these to be the most auspicious times for transacting all affairs of importance. Their most solemn ceremony of cutting the misletoe from the oak was always performed on the sixth day of the moon. Nay, they even regulated their military operations very much by this lumi- nary, and avoided, as much as possible, to en- gage in battle while the moon was on the wane. We are told both by Caesar and Mela that the druids studied the stars as well as the sun and moon ; and that they professed to know, and taught their disciples many things concerning the motions of these heavenly bodies.

There are still many monuments remaining in Britain and the adjacent isles which give reason to think that the ancient Britons could apply the mechanical powers so as to produce very asto- nishing effects. As these monuments appear to nave been designed for religious purposes, we may be certain that they were erected under the direction of the druids. Many obelisks or pillars, of one rough unpolished stone each, are still to be seen in Britain and its isles. Some of these are both very thick and lofty, erected on the summits of barrows and of mountains ; and some of them (as at Stonehenge) have ponderous blocks, raised aloft,, and resting on the tops of the upright pillars. We can hardly suppose that it was possible to cut these prodigious masses of stone (some of them above forty tons in weight) without wedges, or to raise them out of the quarry without levers. But it certainly required still greater knowledge of the mecha- nical powers, and of the method of applying them, to transport those huge stones from the quarry to the places of their destination, to erect the perpendicular pillars, and to elevate the im- posts to the tops of these pillars. That the Bri- tish druids were acquainted with the principles and use of the balance, we have good reason to believe, from some druidical monuments still remaining, called Lagan stones, or rocking- stones. Each of them consists of one prodi-

gious block or stone, resting upon an upright stone or rock, and so equally balanced, that a very small force, sometimes even a child, can move it up and down, though hardly any force is sufficient to remove it from its station. Some of these stones may have fallen into this position by accident, but others of them evidently appear to have been placed in it by art. That the an- cient Britons understood the construction and use of wheels, the great number of their war- chariots and other wheel-carriages is a sufficient proof; and that they knew how to combine them together, and with the other mechanical powers, so as to form machines capable of rais- ing and transporting very heavy weighˆ, we have good reason to believe.

In Germany and in the northern nations of Europe, the healing art was chiefly committed to the old women of every state ; but in Gaul and Britain it was entrusted to the druids, who were the physicians as well as the priests of these countries. Pliny says expressly, ‘ That Tiberius

Caesar destroyed the druids of the Gauls, who were the poets and physicians of that nation. The people of Gaul and Britain were probably induced to devolve the care of their health on the druids, and to apply to these priests for the cure of their diseases, not only by the high es- teem they had of their wisdom and learning, but also by the opinion which they entertained, that a very intimate connexion subsisted between the arts of healing and the rites of religion ; and that the former were most effectual when accompa- nied by the latter. It was indeed a prevailing opinion of all the nations of antiquity, that all internal diseases proceeded from the anger of the gods; and that the only way to obtain relief was to appease them by sacrifices. — That this was the practice of the Gauls and Britons, who, in some cases sacrificed one man as the most effec- tual means of curing another, is’ attested by Caesar. This gave rise also to that great number of magical rites and incantations with which the medical practice of the druids, and of most an- cient physicians was attended. The druids en- “tertained a very high opinion of the medical virtues of the misletoe, and esteemed it a remedy for all diseases. They believed it to be a spe- cific against barrenness ; a sovereign antidote against the effects of poisons ; excellent for softening and discussing hard tumors ; good for drying up scrofulous sores ; for curing ulcers and wounds; and (provided it was not suffered to touch the earth after it was cut) very effica- cious in the epilepsy. The selago, a kind of hedge hyssop, resembling savin, was another plant, much admired by the druids for its sup- posed medicinal virtues, particularly in diseases of the eyes. But its efficacy, according to them, depended much upon its being gathered under certain magical directions. They entertained a high opinion also of the herb samolus or marsh- wort for its sanative qualities ; and gave many directions for gathering it. The person who was to perform that office was to do it fasting, and with his left hand ; he was on no account to look behind him, nor to turn his face from

the herbs he was gathering. It would be tedious to relate the extravagant notions they entertained of the many virtues of the vervain, and to recount the ridiculous mummeries which they practised in gathering and preparing it, both for the pur- poses of divination and physic. These may be seen in Pliny's Hist. Nat. 1. 25. c. 9, from whom we have these anecdotes ; but who, like other Greek and Roman writers, seems designedly to represent the philosophers of Gaul and Britain in an unfavorable light. We learn from C $sar that the druids were the judges and arbiters of all differences and disputes, both public and private : they took cognizance of murders, inheritances, boundaries, and limits ; and decreed rewards and punishments. Such as disobeyed their decisions they excommunicated, which was their principal punishment; the criminal being hereby excluded from all public assemblies, and avoided by all the world ; so that nobody durst speak to him for fear of being polluted. Strabo observes, they had sometimes authority enough to stop armies upon the point of engaging, and accommodate their differences.

If the British druids made no contemptible proficiency in several parts of real and useful learning, it cannot be denied that they were also great pretenders to superior knowledge in certain vain fallacious sciences, by which they excited the admiration, and took advantage of the ignorance and credulity of mankind. These were magic and divination; by which they pre- tended to work miracles, and exhibit astonishing appearances in nature ; to penetrate into the counsels of heaven, to foretel future events, and to discover the success or miscarriage of public or private undertakings. Their countrymen not only believed that the druids were possessed of these powers, but they were celebrated on this account by the philosophers of Greece and Rome. ' In Britain' says Pliny, ' the magic arts are cul- tivated with such astonishing success, that the Britons seem to be capable of instructing even the Persians themselves in these arts. They pretend to discover the designs and purposes of the gods. The Eubates or Vates, in particular, in- vestigate and display the most sublime secrets of nature; and by auspices and sacrifices they foretel future events.' They were so famous for the supposed veracity of their predictions, that they were not only consulted on all important occasions by their own princes and great men, hut even sometimes by the Roman emperors. Stonehenge, and several other works of the druids, were believed to have been executed by the art of magic, for many ages after the destruc- tion of their whole order. The natural and ac- quired sagacity of the druids, with their long experience in public affairs, enabled them to form very probable conjectures about the event of enterprises. These conjectures they pro-

nounced as oracles when they were consulted ; and they pretended to derive them from inspect- ing the entrails of victims, observing the flight of certain birds, and other mummeries. By such arts they obtained and preserved the reputation of prophetic foresight among an ignorant and credulous people.

They worshipped the Supreme Being under the name of Esus, or Hesus, and the symbol of the oak ; and had no other temple than a wood or a grcrve, where all their religious rites were performed. Nor was any person admitted to enter that sacred recess unless he carried with him a chain, in token of his absolute dependence on the Deity. Indeed, their whole religion ori- ginally consisted in acknowledging that the Su- preme Being, who made his abode in these sa- cred groves, governed the universe; and that every creature ought to obey his laws, and pay him divine homage. They considered the oak as the emblem, or rather the peculiar residence, of the Almighty ; and accordingly chaplets of it were worn both by the druids and people in their religious ceremonies ; the altars were strewed with its leaves, and encircled with its branches. The fruit of it, especially the misletoe, was thought to contain a divine virtue, and to be the peculiar gift of heaven. It was therefore sought for on the sixth day of the moon with the greatest earnestness and anxiety; and when found, was hailed with such raptures of joy, as it almost exceeds imagination to conceive. As soon

as the druids were informed of this fortunate dis- covery, they prepared every thing ready for the sacrifice under the oak, to %vhich they fastened two white bulls by the horns ; then the arch- druid, attended by a prodigious number of people, ascended the tree, dressed in white ; and with a consecrated golden knife, or pruning- hook, cropped the misletoe, which he received in his sagum or robe, amidst the rapturous excla- mations of the people. Having secured this sacred plant he descended the tree; the bulls were sacrificed, and the Deity invoked to bless his own gift, and render it efficacious in those distempers in which it should be administered. The consecrated groves, in which they performed their religious rites, were fenced round with stones, to prevent any person's entering between the trees, except through the passages left open for that purpose, and which were guarded by some inferior druids, to prevent any stranger from intruding into their mysteries. These groves were of different forms : some quite circular, others oblong, and more or less capacious, as the votaries in the districts to which they be- longed were more or less numerous. The area in the centre of the grove was encompassed with several rows of large oaks set very close together. Within this large circle were several smaller ones, surrounded with large stones; and near the centre of these smaller circles were stones of a prodigious size and convenient height, on which the victims were slam and offered. Each of these being a kind of altar, was surrounded with another row of stones, the use of which cannot now be

known, unless they were intended as cinctures to keep the people at a convenient dis- tance from the officiating priest. Suetonius, in his life of Claudius, assures us the druids sa- crificed men; and Mercury is said to be the god to whom they offered these victims. Dio- dorus Siculus (lib. vi.) observes it was only upon extraordinary occasions they made such offer- ings ; as to consult what measures to take, to learn what should befal them, &c., by the fall of the victim, the tearing of his members, and the manner of his blood gushing out. Augustus condemned the custom, and Tiberius and Clau- dius punished and abolished it.

DR.UID.3t,, or DROIUM, in ancient geography, the principal place of the Druids in Gaul ; where they met annually in a consecrated grove, according to Cˆsar. It was also called Duro- cases ; and is now named Dreux.

DRUM, n. s. & v. n. ”") Dan. tromme ; Dut.

DRUM'FISH, n. s. trommel; Ger-m.

DRUM'MAJOR, 1 trombe ; perhaps from

DRUM'MAKER, [Arab, drub a dub, to

DRUM'MER, (beat: but in Ang.-

DRUM'STICK, J Sax. dryminga is a

soft murmuring sound ; and Skinner thinks the word is formed from the sound. An instrument of military music ; the tympanum of the ear; and, from |he hum made, a concourse of personSr A drum-major is a chief drummer.

Let's march without the noise of threatening drurm.

Shakspeare.

Drummer, strike up, and let us march away. Id.

In drums, the closeness round about, that preserv- eth the sound from dispersing, makcth the noise

come forth at the drum-hole far more loud and strong than if you should

strike upon the like skin extended in the open air. Bacon.

Tears trickling down their breasts bedew the

ground,'

And drums and trumpets mix their mournful sound.

Dryden. Now, heart,

Set ope thy sluices, send the vigorous Hood Through every active limb for my relief; Then take thy rest within the quiet cell, For thou shall drum no more. Id.

The drummaker uses it, and the cabinetmaker.

Mm-timer. The under-jaw of the drumfah from Virginia.

Wfiodward.

Such company may chance to spoil the swearing And the drummajor's oaths, of bulk unruly, May dwindle to a feeble. — Cleaveland.

Now no more the drum

Provokes to arms, or trumpet's clangor shrill Affrights the wives, and chills the virgin's blood.

Philips.

Here rows of drummers stand in martial file, And with their vellum-thunder shake the pile.

Gay. I lastly was with Curtis, among the floating bat-

t'ries,

And there I left for witnesses an arm and limb : Yet let my country need me, with Elliot to head me, I'd clatter on my stumps at the sound of the drum.

Burns.

He hates the field in which no fife or drum Attends him ; drives his cattle to a march ; And sighs for the smart comrades he has left.

Cowper.

There is no variety of notes referable to the gamut beaten in camp to summon the pioneers to in the beating of a drum, yet, if it be performed in mu- work.

sical time, it is agreeable to our ears ; and therefore The Serjeants' Call, a beat for calling the ser- this pleasurable sensation must be owing to the repe- jeants together in the orderly-room, or in camp.

The General, to give notice to tlie troops that they are to march.

The Assembly, or Troop, to order the troops to repair to the place of rendezvous, or to their colors.

The Marcli, to command them to move, always with the left foot first.

Tat-too, or Tap-too, to order all to retire to their quarters.

To Anns! for soldiers who are dispersed, to repair to them.

The Reveille always beats at break of day, and is to warn the soldiers to rise, and the sentinels to forbear challenging, and to give leave to come out of quarters.

The Retreat, a signal to draw off from the enemy. It likewise means a beat in both camp and garrison a little before sun-set, at which time the gates are shut, and the soldiers repair to their barracks, &c.

The Alarm, to give notice of sudden danger, that all may be in readiness for immediate duty.

The Parley, or Chamade, a signal to demand some conference with the enetnv.

Long March, a beat which was formerly used in England; on the sound of which, the men clubbed their firelocks, and claimed and used the liberty of talking all kind of ribaldry.

The Church Call, called, also, Beating the Bank ; a beat to summon the soldiers of a regi- ment, or garrison, to church.

The Pioneer's Call, known by the appellation of round heads and cuckolds ! come dig ; this is

tition of the divisions of the sounds at certain inter- vals of time, or musical bars. Darwin.

to the head of the colors.

The Drummers' Call, a beat to assemble the

Often in the hottest morn in summer, you may see drummers at the head of the colors, or in quar-

her on a little squat pony, with her hair plaited up behind like a drummer's, and puffing round the ring on a full trot. Sheridan.

And swiftly forming in the ranks of war ; And the deep thunder peel on peel afar ; And near, the beat of the alarming drum Roused up the soldier e'er the morning star.

Byron.

DRUM, is a martial musical instrument, in the

ters at the place where it is beaten.

The Preparative, a signal to make ready for firing.

The Warning Drum, a beat to give officers and soldiers time to assemble for their meals in camp or quarters.

The Roast-beef of Old'England, a beat to call officers to dinner.

DRUMMER, or DRUM, he that beats the drum ;

form of a cylinder, hollow within and covered at of wnom eacn company of foot has one, and

the two ends with vellum, which may be stretched sometimes two. Every regiment has a drum-

or slackened by small cords and sliding leathers major> wno has the command over the other

attached. This instrument is said to have been drums. They are distinguished from the soldiers

invented by Bacchus, who, as Polyenes reports, by ciothes of a different fashion : their post, when

gave his signals of battle with cymbals and a battalion is drawn up, is on the flanks, and on

drums ; and the Saracens, who invaded Pales- march it is betwixt the divisions, tine, first introduced it into Europe. The drums DRimBLE t,. ». A

diminutive of drum ; are sometimes made of brass. Those belonging bab]y from the noise of a sluggish stream.

to the Blues are silver. £ drumbly, or drumly, is stagnant : see below.

Kettle-drums are two sorts of large basins of ˆ £

copper or brass, rounded at the bottom and

covered with vellum or goat-skin, which is kept Take up these cloaths here quickly : where s the

fest by a circle of iron, and several holes, fastened cowlstaff ? Look, to the body of the drum, and a like number of screws to stretch it at pleasure. They are used among the horse.

We give the following account of the different thick ; muddy.

beats of the drum from James's Military Die- Then bouses drumly German water

tioriary. To mak himsei look fair and fatter,

drumble ! the landress in Datchet Mead.

Shakspeare. Merry Wivet of Windtor.

DRUMLY, adj. From drumble. Stagnant

' An' clear the consequential sorrows,

Love-gifts of Carnival signoras. Bitrnt.

DRUMMOND (William), the son of Sir John Drummond, of Hawthornden, knight of the black rod to king James I., was born in Scotland in 1585. He was educated at Edinburgh, where he took the degree of A.M. In 1606 he was sent by his father to study civil law at Bourges in France ; but, having a dislike for the .aw, he returned to his agreeable seat at Haw- thornden, where he applied himself with great assiduity to classical learning and poetry. Here he wrote his Cypress Grove, and, about the same time, Flowers of Zion, in verse. But on the death of a lady, to whom he was about to be married, he went to Paris and Rome. He travelled through France, Germany, and Italy, where he visited the universities ; and, after

an absence of eight years, returned to his native country. On the appearance of a civil war, he retired again; and is now supposed to have written his History of the Five James's, kings of Scotland, which was not published till after his death. He was steadily attached to Charles I. ; and, in apiece called Irene, he harangues the king, nobility, and clergy, about their mutual mistakes, fears, and jealousies ; and lays before them the consequences of a civil war. His attachment to the king was so strong, that when he heard of his being executed, he is said to have been over- whelmed with grief, and to have lifted up his head no more. He died in 1649, leaving behind him several children: the eldest of whom, William, was knighted by Charles II. He was the inti- mate friend of Michael Drayton and Ben Jonson; the latter of whom, at the age of forty-five, travelled from London on foot to visit him at Hawthoruden. 'An edition of his works, with his life prefixed, was printed in folio at Edinburgh in 1711. Among all the writers of the seven- teenth century, who flourished after the death of Shakspeare, there is not one whom a general reader of the English poetry of that age will regard with so much and so deserved attention, as William Drummond. His thoughts are generally bold and highly poetical : he closely follows nature, and his verses are delicately har- monious. On the death of Henry prince of Wales, in 1612, Drummond wrote an elegy entitled Tears on the death of Moeliades ; a name which that prince had used in all his challenges of martial sport, as the anagram of Miles a Deo.

DRUNK'ARD,

DRUNK'EN.

DRUNK'ENLY.

DRUNKEN'NESS.

DRUPA, or DRUPPA. See BOTANY. The cherry, plum, peach, apricot, and all other stone fruit are of this kind. The term, which is of great antiquity, is synonymous to Tournefort's fructus mollis ossiculo, ' soft fruit with a stone ;' and to the prunus of other botanists. The stone or nut, which in this sort of fruit is surroundefl by the soft pulpy flesh, is a kind of ligneous or woody cup, which contains a single kernel or seed. This definition, however, will not apply to every seed-vessel denominated drupa in the Genera Plantarum. The almond is a drupa, so is the seed vessel of the elm trees and the genus

i spun, as me

IK'ARD, -v

L'EN, f

I'ENLY, f CEN'NESS.)

See DRINK.

rnmphia, though far from being pulpy or succu- lent; the first and third are of a substance like leather, the second like parchment. The same may be said of the walnut, the pistachia nut, guetterda, quisqualis, jack-in-a-box, and some others. The seeds of the elm schrebera, stagel- laria, and the mango tree, are not contained in a stone. The seed-vessel of burr-reed is dry, shaped like a top, and contains two angular stones.

DRURY (Robert), an English mariner, and a humble but respectable author, was born in Leicestershire. In 1702, while a boy, he was ship-wrecked in the Degrave, East Indiaman, on the south side of the island of Madagascar, and lived in captivity there for fifteen years. On his return he published, in 1743, an account of the island, and of his own adventures, in a plain unadorned manner, and being corroborated as far as it went by the journal of Mr. Benbow, the son of the admiral, who was wrecked at the same time, his book has always been considered authen- tic. It was republished in 1808. Drury became porter at the India-house, and inherited some little property, but when he died is not known.

DRUSES, DRUZES, jor more properly Duruz, signifying riches, or sensual comforts, the great rewards of their faith, a remarkable nation in Palestine, inhabiting the environs of Mount Lebanon, of whose origin and history we have considerable details from the pen of M. Volney, to which we subjoin the more modern observa- tions of Messrs. Niebuhr, Burckhardt, &c.

Twenty-three years after the death of Mahomet, the disputes between Ali his son-in-law and Moaduia governor of Syria, occasioned the first schism in the empire of the Arabs, and the two sects subsist to this day: but, in reality, this dif- ference related only to power; and the Mahom- medans, however divided in opinion respect- ing the rightful successor of the prophet, were agreed with respect to their dogmas. It was not until the following century, that the perusal of Greek books introduced among the Arabs a spirit of discussion and controversy, to which till then they were utter strangers. The conse- quence was, as might be expected, by reasoning on matters not susceptible of demonstration, and guided by the abstract principles of an unintelli- gible logic, they divided into a multitude of sects and opinions. At this period, too, the civil power lost its authority; and that kind of reli- gion, which derives from it alone the means of preserving its unity, shared the same fate. The nations which had received the religion of Mahomet, mixed with it their former absurd notions ; and the errors which had anciently pre- vailed over Asia again made their appearance, though altered in their forms. The Metempsy- chosis, the doctrine of a good and

*evil principle, and the renovation after 6000 years, as it had been taught by Zoroaster, were again revived. In this political and religious confusion, every enthusiast became an apostle, and every apostle the head of a sect. No less than sixty of these were reckoned, remarkable for the numbers of their followers, all differing in some points of faith, and all disavowing heresy and error. Such was the state of these countries, when, *t*

the commencement of the eleventh century, Egypt became the theatre of one of the most extravagant scenes of enthusiasm and absurdity ever recorded in history. The following account is extracted from the eastern writers. In the year of the Hejira 386 (A. D. 996), the third caliph of the race of the Fatemites, called Hakem B' Amr-Ellah, succeeded to the throne of Egypt at the age of eleven years. He was one of the most mad and capricious princes of whom history has preserved the name, not excepting Caligula himself. He caused the first caliphs, the com- panions of Mahomet, to be cursed in the mosques, and afterwards revoked the anathema: he com- pelled the Jews and Christians to abjure their religion, and then permitted them to resume it. He prohibited the making slippers for women, to prevent them from coming out of their houses. He burnt one half of the city of Cairo for his diversion, while his soldiers pillaged the other. He prohibited the pilgrimage to Mecca, fasting, and the five prayers; and at length carried his madness so far as to desire to pass for God him- self ! He ordered a register of those who acknow- ledged him to be so, and the number amounted to 16,000! This impious pretension was sup- ported by a prophet, named Mohammed Ben Ismael, who came from Persia into Egypt, and taught that it was not necessary to fast or pray, to practise circumcision, to make the pilgrimage to Mecca, or observe festivals ; that the prohibi- tion of pork and wine was absurd; and that marriage between brothers and sisters, fathers and children, was lawful.' To ingratiate himself with Hakem, he maintained that this caliph was God himself incarnate; and instead of his name Hakem B' Amr-Ellah, which signifies governing by the order of God, he called him Hakem B' Amr-Eh, governing by his own order. Unluckily for the prophet, his new god had not the power to protect him from the fury of his enemies, for they slew him in a tumult almost in the arms of the caliph, who was himself massacred soon after on mount Mokattam, where he, as he said, had held conversation with angels. The death of these two chiefs did not stop the progress of their opinions ; a disciple of Mohammed Ben Ismael, named Hamzah Ben Ahmud, propagated them with indefatigable zeal in Egypt, in Palestine, and along the coast of Syria, as far as Sidon and Berytus. His proselytes being persecuted by the sect in power, they took refuge in the mountains of

Lebanon, where they were better able to defend themselves ; at least it is certain, that, shortly after this era, we find them established there, and forming an independent society. The difference of their opinions disposes them to be enemies; but the urgent interest of their common safety forces them to allow mutual toleration, and they have always appeared united, and have jointly opposed, at different times, the Crusaders, the sultans of Aleppo, the Mamelukes, and the Ottomans. The conquest of Syria by the latter, made no change in their situation. ; Selim I. on his return from Egypt, meditating no less than the conquest of Europe, disdained to waste his time before the rocks of Lebanon. Soliman II. his successor, incessantly engaged in important wars, either with the knights of Rhodes, the Persians,

the kingdom of Yemen, the Hungarians, the Germans, or the emperor Charles V. had no time to think of the Druses. Emboldened by this inattention, and not content with their indepen- dence, they frequently descended from their mountains to pillage the Turks. The pachas in vain attempted to repel their inroads; their troops were invariably routed or repulsed. And it was not till 1588, that Amurath III. wearied with the complaints made to him, resolved, at all events, to reduce these rebels, and had the good fortune to succeed. His general, Ibrahim Pacha, marched from Cairo, and attacked the Druses and Maro- nites, with so much address and vigor, as to force them into their strong holds in the moun- tains. Dissension took place among their chiefs, of which he availed himself to exact a contribu- tion of upwards of 1,000,000 of piastres, aud to impose a tribute which has continued to the pre- sent time.

This expedition was the epocha of a consider- able change in the constitution of the Druses. Till then they lived in a sort of anarchy, under the command of different sheiks or lords. The nation was likewise divided into two factions, such as is to be found in all the Arab tribes, and which are distinguished into the Kaisi and Yamani parties. To simplify the administration, Ibrahim permitted them only one chief, who should be responsible for the tribute, and exe- cute the office of civil magistrate ; and this governor, from the nature of his situation, acquir- ing great authority, became almost the king of the republic ; but, as he was always chosen from among the Druses, a consequence followed, which the Turks had not foreseen, and which was nearly fatal to their power. The chief thus chosen, having at his disposal the whole strength of this people, was able to give it unanimity and energy, and naturally turned it against the Turks ; who, by becoming their masters, had not ceased to be their enemies. They took care, however, that their attacks should be indirect, so as to save appearances, and only engaged in secret hostilities. About this time, viz. in the beginning of the seventeenth century, the power of the Druses attained its greatest height ; which it owed to the talents and ambition of the cele- brated Faker-el-din, commonly called Fakardin. No sooner was this prince advanced to

be the chief of that people, than he turned his whole attention to humble the Ottoman power, and aggrandise himself. In this enterprise he displayed an address seldom seen among the Turks. He first gained the confidence of the Porte, by every demonstration of loyalty and fidelity ; and as the Arabs at that time infested the plain of Balbec, and the country around Acre, he made war upon them, freed the inhabitants from their depredations, and thus rendered them desirous of living under his government. The city of Bairout was situated advantageously for his designs, as it opened a communication with foreign countries, particularly with the Vene- tians. Faker-el-din availed himself of the mis- conduct of the aga, expelled him, seized on the city, and even had the art to make a merit of this act of hostility with the divan, by paying a more considerable tribute. He proceeded in the

same manner at Saide, Balbec, and Sour ; and at length, about A. D. 1613, saw himself master of all the country as far as Adjalonn and Safad. The pachas of Tripoli and Damascus sometimes opposed him by open force, though ineffectually, and sometimes endeavoured to ruin him at the Porte by secret insinuations ; but the emir, who maintained there his spies and defenders, de- feated every attempt. At length, however, the divan began to be alarmed at the progress of the Druses, and made preparations for an expedition capable of crushing them. Whether from policy or fear, Faker-el-din did not think proper to wait • this storm. He had formed connexions in Italy, on which he built great hopes, and determined to go in person to solicit the succours they had promised him ; persuaded that his presence would increase the zeal of his friends, while his absence might appease the resentment of his enemies. He therefore embarked at Bairout; and after resigning the administration to his son AH, repaired to the court of the Medici at Florence. The arrival of an oriental prince in Italy did not fail to attract the public attention. Enquiry was made into his nation, and the origin of the Druses became a popular topic of research. Their history and religion were found to be so little known, as to leave it a matter of doubtj whether they should be classed with the Mahommedans or Christians. The crusades were called to mind ; and it was suggested, that a people who had taken refuge in the mountains, and were enemies to the natives, could be no other than the offspring of the crusaders. This conceit was too favorable to Faker-el-din for him to endeavour to disprove it ; he was artful enough, on the contrary, to pretend he was related to the house of Lorraine; and the mis- sionaries and merchants, who promised them- selves a new opening for conversion and commerce, encouraged his pretensions. When an opinion is in vogue, every one discovers new proofs of its certainty. The

learned in etymology, struck with the resemblance of the names, insist- ed that Druses and Dreux must be the same word ; and on this foundation formed the system of a pretended colony of French crusaders, who, under the conduct of a count de Dreux, had formed a settlement in Lebanon. This hypothe- sis, however, was completely overthrown by the remark, that the name of the Druses is to be found in the itinerary of Benjamin Tudela, who travelled before the time of the crusades. Indeed the futility of it ought to have been sufficiently apparent at first, from the single consideration, that had they been descended from any nation of the Franks, they must have retained at least the traces of some European language ; for a people, retired into a separate district, and living distinct from the natives of the country, do not lose their language. That of the Druses, how- ever, is almost a pure Arabic. After a stay of nine years in Italy, Faker-el-din returned to resume the government of his country. During his absence, his son Ali had repulsed the Turks, appeased discontents, and maintained affairs in good order. Nothing remained for the emir, but to employ the knowledge he had acquired, in perfecting the internal administration of govern-

ment, and promoting the welfare of the nation ; but, instead of the useful arts, he abandoned him- self to the frivolous and the expensive, for which he had imbibed a passion in Italy. He built numerous villas; constructed baths, and planted gardens; he even presumed, notwithstanding they are prohibited by the Koran, and without respect to the prejudices of his country, to em- ploy the ornaments of painting and sculpture. The consequences of this were, the Druses, who paid the same tribute as in time of war, became dissatisfied. The Yamani faction was roused into revolt, the people murmured at the expen- ses of the prince, and the luxury he displayed renewed the jealousy of the pachas. They attempted to levy greater tribute : hostilities again commenced, and Faker-el-din repulsed the forces of the pachas ; who took occasion, from this resistance, to render him suspected by the sultan himself. Amurath III. incensed that one of his subjects should dare to enter into a com- petition with him, resolved on his destruction ; and the pacha of Damascus received orders to march, with all his forces, against Bairout, the usual residence of Faker-el-din ; while forty galleys invested it by sea, and cut off all com- munication. The emir, who depended on his good fortune and succours from Italy, deter- mined at first to brave the storm. His son Ali, who commanded at Safad, bravely opposed the progress of the Turkish army, notwithstanding the great disparity of his forces ; but after two engagements, in which he had the advantage, being slain in a third attack, the face of affairs was greatly changed, and every thing went to ruin. Faker-el-din terrified at the loss of his troops, afflicted at the death of his son, and en- feebled by age and luxury, lost his courage. He sent his second son to solicit a peace of the Turkish admiral, whom he

attempted to seduce by presents ; but the admiral, detaining both the presents and envoy, declared he would have the prince himself. Faker-el-din, intimidated, took flight, and was pursued by the Turks, now masters of the country. He took refuge on the steep eminence of Niha, where they besieged him ineffectually for a whole year, when they left him at liberty : but shortly after, the com- panions of his adversity, wearied with their sufferings, betrayed and delivered him up to the Turks. He was carried to Constantinople, where Amurath, pleased to behold at his feet a prince so celebrated, at first treated him with that benevolence which arises from the pride of superiority ; but afterwards yielded to the insti- gations of his courtiers, and, in one of his violent fits of passion, ordered him to be strangled.

After the death of Faker-el-din, his posterity still continued in possession of the government, as vassals of the Turks. But this family failing in the male line at the beginning of the eigh- teenth century, the authority devolved, by the election of the sheiks, on the house of Shelah or Shihab, in which it still continues. The only emir of that house who merits notice is Melhem, who reigned from 1740 to 1759, retrieved the losses of the Druses, and restored them to that consequence which they had lost by the defeat of Faker-el-din. Towards the end of his life,

about 1754, Melhem, wearied with the cares of government, abdicated his authority, to live in religious retirement, after the manner of the Okkals ; but the troubles that succeeded occa- sioned him once more to resume the reins of government, which he held till 1750, when Ii3 died, universally regretted. He left three sons, minors : the eldest of whom ought to have suc- ceeded him : but, being only eleven years of age, the authority devolved on his uncle Mansour, agreeably to a law very general in Asia, that the people shall be governed by a sovereign who has arrived at the years of maturity. The young prince was but little fitted to maintain his pre- tensions; but a Maronite, named Sad-el-Kouri, to whom Melhem had entrusted his education, toolc this upon himself. Aspiring to see his pupil a powerful prince, that he might himself become a powerful vizier, he made every exer- tion to advance his fortune. He first retired with him to Djebail, in the Kesraouan, where the emir Yousef possessed large dominions, and there undertook to conciliate the Maronites, by embracing every opportunity to serve both indi- viduals and the nation. The great revenues of his pupil, and the moderation of his expendi- ture, amply furnished him with the means. The farm of the Kesraouan was divided between several sheiks, with whom the Porte was not •rery well satisfied. Sad treated for the whole with the

pacha of Tripoli, and got himself ap- pointed sole receiver. The Motoualis of the valley of Balbec had for some years before made several encroachments on Lebanon, and the Maronites began to be alarmed at the near ap- proach of these intolerant Mahommedans. Sad purchased of the pacha of Damascus a permis- sion to make war upon them; and in 1763 drove them out of the country. The Druses were at that time divided into two factions ; Sad united his interest with those who opposed Man- sour, and secretly prepared the .plot which was to raise the nephew, by the ruin of the uncle. At this period the Arab Daher, who had made himself master of Galilee, and fixed his resi- dence at Acre, disquieted the Porte by his progress and pretensions : to oppose him, the divan had just united the pachalics of Damas- cus, Saide, and Tripoli, in the hands of Osman and his children ; and it was evident that an open war was not very remote. Mansour, who dreaded the Turks too much to resist them, made use of the policy usual on such occasions, pre- tending a zeal for their service, while he secretly favored the enemy. This was a sufficient motive for Sad to pursue measures directly opposite. He supported the Turks against the faction of Mansour, and manoeuvred with so much ad- dress, as to depose that emir in 1770, and place Yousef in his government. In 1771 AH Bey declared war, and attacked Damascus. Yousef, called on by the Turks, took part in the quarrel, but without being able to draw the Druses from their mountains, to enter into the army of the Ottomans. Besides their natural repugnance, at all times, to make war out of their country, they were on this occasion too much divided at home to quit their habitations, and they had reason to congratulate themselves on the event. VOL. VII.

The battle of Damascus ensued ; and the Turks were completely routed. The pacha of Saide escaping from this defeat, and not thinking him- self safe in that town, sought an asylum even in the house of Yousef. The moment was un- favorable : but the face of affairs soon changed by the flight of Mohammed Bey. The emir, concluding that Ali Bey was dead, and not imagining that Daher was powerful enough singly to maintain the quarrel, declared openly against him. Saide was threatened with a siege, and he detached 1500 men of his faction to its defence ; while himself in person, prevail- ing on the Druses and Maronites to follow him, made an incursion with 25,000 peasants into the valley of Bekaa; and in the absence of the Motoualis, who had joined the army of Daher, laid the whole country waste with fire and sword from Balbec to Tyre. While the Druses, proud of this exploit, were march- ing in disorder towards the latter city, 500 Motoualis, informed of what had happened, flew from Acre inflamed with rage and despair, and fell with such impetuosity on their army as to give them a complete overthrow. Such was the surprise and confusion of the Druses, that, ima- gining themselves attacked by Daher himself and betrayed by their companions, they turned their swords on

each other as they fled. The steep declivities of Djezin, and the pine woods which were in the route of the fugitives, were strewed with dead, few of whom perished by the hands of the Motoualis. The emir Yousef, ashamed of this defeat, escaped to Dair el Kamer, and shortly after attempted to take revenge ; but, being again defeated in the plain between Saide and Sour (Tyre), he was constrained to resign to his uncle Mansour the ring-, which, among the Druses, is the symbol of command. In 1773 he was restored by a new revolution ; but he cquld not support his power but at the expense of a civil war. In order, therefore, to prevent Bairout from falling into the hands of the adverse faction, he requested the assistance of the Turks, and de- manded of the pacha of Damascus a man of sufficient abilities to defend that city. The choice fell on Ahmad, an adventurer, who, from his subsequent fortune, merits particular notice. This man was a native of Bosnia, and spoke the Sclavonian as his mother tongue. It is said, that flying from his country at the age of sixteen, to escape the consequences of an attempt to vio- late his sister in law, he repaired to Constanti- nople, where, destitute of the means of procuring a subsistence he sold himself to the slave-mer- chants to be conveyed to Egypt; and, on his arrival at Cairo, was purchased by Ali Bey, who placed him among his Mamelukes. Ahmad was not long in distinguishing himself by his courage and address. — His patron employed him on several occasions in dangerous coups de main, such as the assassination of such beys and cachefs as he suspected ; of which commissions he ac- quitted himself so well, as to acquire the name of Djezzar. With this claim to his friendship, he enjoyed the favor of Ali, until he was disturbed by an accident. The jealous Bey, having pro- scribed one of his benefactors called Saleh Bey, commanded Ahmad Djezzar to cut ofl' his head

Either from humanity or some secret friendship for the devoted victim, Djezzar hesitated, and even remonstrated against the order. But learn- ing the next day that Mohammed Bey had exe- cuted the commission, and that Ali had spoken of him not very favorably, he thought himself a lost man, and, to avoid the fate of Saleh, escaped unobserved, and reached Constantinople. He there solicited employments suited to his former rank ; but meeting, as is usual in capitals, with a great number of rivals, he pursued another plan, and went to seek his fortune in Syria as a private soldier. Chance conducted him among the Druses, where, being hospitably entertained in the house of the kiaya of the emir Yousef, he repaired to Damascus, and obtained the title of Aga, with the command of five pair of

colors, that is to say of fifty men. He was thus situated when fortune destined him to the government of Bairout. Djezzar was no sooner establisked there, than he took possession of it for the Turks. Yousef was confounded at this proceeding. He demanded justice at Damascus ; but finding his complaints treated with contempt, entered into a treaty with Daher, and concluded an offensive and defensive alliance with him at Rafaen, near Sour. No sooner was Daher united with the Druses, than he laid siege to Bairout by land, whilst two Rus- sian frigates, whose service was purchased by 600 purses, cannonaded it by sea. Djezzar was compelled to submit to force, and, after a vigo- rous resistance, gave up the city and surrendered himself prisoner. Sheik Daher, charmed with his courage, and flattered with the preference he had given him in the surrender, conducted him to Acre, and showed him every mark of kind- ness. He even ventured to trust him with a small expedition into Palestine; hut Djezzar, on approaching Jerusalem, went over to the Turks, and returned to Damascus. The war of Moham- med Bey breaking out, Djezzar offered his ser- vice to the captain Pacha, and gained his confi- dence. He accompanied him to the siege of Acre; and that admiral, having destroyed Daher, and finding no person more proper than Djezzar to accomplish the designs of the Porte in that country, named him pacha of Saide. Being now, in consequence of this revolution, superior lord to the emir Yousef, Djezzar was mindful of his past injuries, and, by a conduct truly Turkish, feigning alternately gratitude and resentment, he extorted from the emir, within the space of five years, 4,000,000 of French money (above £160,000), a sum the more astonishing as the farm of the country of the Druses did not then amount to 100,000 livres, £4000. In 1784 he made war on him, deposed him, and bestowed the govern- ment on the emir of the country of Hasbeya, named Ismael. Yousef, having once more pur- chased his favor, returned, towards the end of the same year, to Dair-el-Kamar, and even courted his confidence so far as to wait on him at Acre, from whence nobody expected him to return; but Djezzar was too wise to shed blood while there were any hopes of obtaining money : he released the prince, and sent him back with every mark of friendship. The present emir bashir is a descendant of Yousef. He pays 130 purses annually to the pacha of Tripoli, and 400 to the

pacha of Saide ; and, perhaps, 300 purses more in the way of extraordinary demands, or about £20,750 altogether. He has also to purchase, annually, the friendship of the pacha of Akri, or Acre. This revenue is derived from the whole country situated between Bilad Accar, the north decliv'ty of Mount Libanus, and the immediate neighbourhood of Akri. The internal animosities of the Druses have continued from the middle of the last century: in 1799 or 1800 some of the chiefs of one faction were put to death in the palace of the emir : and the most powerful

chief in the country in 1812, was, according to Burck- hardt, El-sheikh Beshir,of the Jonbelat tribe : he has a clear income of about £50,000 a year, while that of the emir, his nominal superior, is not above £10,000.

Neither the chief nor the individual emirs maintain troops ; they have only persons attached to the domestic service of their houses, and a few black slaves. When the nation makes war, every man, whether sheik or peasant, able to bear arms, is called upon to niarch. lie takes with him a bag of flour, a musket, some bullets, and a small quantity of powder, made in his vil- lage, and repairs to the rendezvous appointed by the governor. If it be a civil war, as sometimes happens, the servants, the farmers, and their friends, take up arms for their patron, or the chief of their family, and repair to his standard. In such cases, the parties irritated frequently seem on the point of proceeding to the last ex- tremities; but they seldom have recourse to acts of violence, or attempt the death of each other ; mediators always interpose, and the quarrel is appeased the more readily, as each patron is obliged to provide his followers with provisions and ammunition. This system, which produces happy effects in civil troubles, is attended with great inconvenience in foreign wars, as suffi ciently appeared in that of 1784. Djezzar, who knew that the whole army lived at the expense of the emir Yousef, aimed at nothing but delay, and the Druses, who were not displeased at being fed for doing nothing, prolonged the ope- rations ; but the emir, wearied with paying, con- cluded a" treaty, the terms of which were not a little rigorous for himself, and eventually for the whole nation. 'The ceremonies to which I have been a witness on these occasions,' says M. Vol- ney, ' bear a striking resemblance to the customs of ancient times. When the emir and the sheiks had determined on war at Daer-el-Kamar, criers in the evening ascended the summits of the mountain, and there began to cry with a loud voice : ' To war, to war ; take your guns, take your pistols : noble sheiks, mount your horses ; arm yourselves with thp lance and sabre; rendez- vous to-morrow at Daer-el-Kamar. Zeal of God ! zeal of combats ! ' This summons, heard from the neighbouring villages, was repeated there ; and, as the whole country is nothing but a chain of lofty mountains and deep valleys, the proclamation passed in a few hours to the fron- tiers. These voices, from the stillness of the night, the long resounding echoes, and the nature of the subject, had something awful and terrible in their effect. Three days after, 15,000 armed men rendezvoused at Daer-cl-Kamar and opera-

ti'ons might have been immediately commenced. We may easily imagine that troops of this kind no way resemble our European soldiers ; they had

neither uniforms, discipline, nor order. They are a crowd of peasants with short coats, naked legs, and muskets in their hands ; differing from the Turks and Mamelukes in that they are all foot ; the sheiks and emirs alone have horses, which are of little use from the rugged nature of the country. War there can only be a war of posts. The Druses never risk themselves in the plain, and with reason ; for they would be unable to stand the shock of cavalry, having no bayonets to their muskets. Their whole art consists in climbing rocks, creeping among the bushes and. blocks of stone ; from whence their fire is the more dangerous, as they are covered, fire at their ease, and, by hunting and military sports, have acquired the habit of hitting a mark with great dexterity. They are accustomed to sudden in- roads, attacks by night, ambuscades, and all those coups de main which require to fall sud denly on, and come to close fight with the enemy. Ardent in improving their success, easily dispi- rited, and prompt to resume their courage ; daring even to temerity, and sometimes ferocious, they possess above all two qualities essential to the excellency of any troops ; they strictly obey their leaders, and are endowed with a temperance and vigor of health, at this day unknown to most civilised nations. In the campaign of 1784 they passed three months in the open air without tents, or any other covering than a sheep-skin ; yet there were not more deaths or maladies than if they had remained in their houses. Their provisions consisted, as at other times, of small loaves baked on the ashes or on a brick, raw onions, cheese, olives, fruits, and a little wine. The table of the chiefs was almost as frugal ; and we may affirm, that they subsisted 100 days, on what the same number of Englishmen or French- men would not have lived ten. They have no knowledge of the science of fortification, the management of artillery or encampments, nor, in a word, any thing which constitutes the art of war. But had they among them a few persons rersed in military science, they would readily acquire its principles, and become a formidable soldiery. This would be the more easily effected, as their mulberry plantations and vineyards do not occupy them all the year, and they could af- ford much time for military exercises.'

The Druses are considered, throughout the Levant, as restless, enterprising, hardy, and brave even to temerity. Or.ly 500 of them have been seen to enter Damascus in open day, and spread around them terror and carnage. No people are more nice than they, with respect to the point of honor : any offence of that kind, or open insult, is instantly punished by blows of the kandjur or the musket; while, among the inhabitants of the towns, it only excites injurious retorts. This delicacy has occasioned in their manners and discourse a reserve, or, if you will, a politeness, which one is astonished to discover among pea- sants. It is carried even to dissimulation and falsehood, especially among the chiefs, whose greater interests demand greater attentions. Cir- cumspection is necessary to all, says M. Volney,

from the formidable consequences of that retalia- tion of which 1 have spoken. These customs may appear barbarous to us; but they have the merit of supplying the deficiency of regular justice, which is necessarily tedious and uncer- tain in these disorderly and almost anarchical governments. The Druses have another point of honor, that of hospitality. Whoever presents him- self at their door, in the quality of a suppliant or passenger, is sure of being entertained and lodged in the most generous and unaffected manner. M. Volney often saw the lowest peasants give the last morsel of bread they had in their houses, to the hungry traveller ; and when it was observed to them that they wanted prudence, their answer was, ' God is liberal and great, and all men are brethren.' There are, therefore, no inns in their country any more than in the rest of Turkey. When they have once contracted with their guest the sacred engagement of bread and salt, no sub- sequent event can make them violate it. Various instances of this are related, which do honor to their character. A few years ago, an aga of the janissaries having been engaged in a rebellion, fled from Damascus and retired among the Druses. The pacha was informed of this, and demanded him of the emir, threatening to make war on him in case- of refusal. The emir de- manded him of the sheik Talhouk, who had re- ceived him ; but the indignant sheik replied, ' When have you known the Druses deliver up their guests? Tell the emir, that as long as Talhouk shall preserve his beard, not a hair of the head of his suppliant shall fall !' The etnir threatened him with force ; Talhouk armed his family. The emir, dreading a revolt, adopted a method practised as juridical in that country. He declared to the sheik, that he would cut down fifty mulberry-trees a-day until he should give up the aga. He proceeded as far as a thousand, and Talhouk still remained inflexible. At length the other sheiks, enraged, took up the quarrel ; and the commotion was about to be- come general, when the aga reproaching himself with being the cause of so much mischief, made his escape without the knowledge even of Tal- houk. The Druses have also the prejudices of the Bedouins respecting birth ; like them, they pay great respect to the antiquity of families ; but this produces no essential inconveniences. The nobility of the emirs and sheiks docs not exempt them from paying tribute in proportion to their revenues. It confers on them no prero- gatives, either in the attainment of landed pro- perty or public employments. Every man, after paying his miri and his rent, is master of his property. In short, by a particular privilege, the Druses pay no fine for their succession : nor does the emir, like the sultan, arrogate to him- self original and universal property : there exists nevertheless, in the law of inheritance, an im- perfection which produces disagreeable effects. Fathers have, as in the Roman law, the power of preferring such of their children as they think proper : hence it has happened in several fami- •lies of the sheiks, that the whole property has centered in the same person, who has perverted it to the purpose of intriguing and caballing, while his relations

remain, as they well express

it, 'princes of olives and cheese ;' that is to say, poor as peasants. In consequence of their prejudices, the Druses do not choose to make alliances out of their own families. They in- variably prefer their relation, though poor, to a rich stranger; and poor peasants have been known to refuse their daughters to merchants of Saide and Bairout, who possessed from 12,000 to 15,000 piastres. They observe also, to a certain degree, the custom of the Hebrews, which directed that a brother should espouse his brother's widow ; but this is not peculiar to them, for they retain that as well as several other customs of that ancient people, in common with other inhabitants of Syria and all the Arab tribes. In short, the proper and distinctive character of the Druses, is a sort of republican spirit, which gives them more energy than any other subjects of the Turkish government, and an indifference for religion, which forms a striking contrast with thezealoftheMahommedans and Christians. They are further said to be re- markably domestic and intelligent. In the evening they sometimes assemble in the court, the area, or house of the chief of the village or family. There, seated in a circle, with legs crossed, pipes in their mouths, and poniards at their belts, they discourse of their various labors, the scarcity or plenty of their harvests, peace or war, the conduct of the emir, or the amount of the taxes ; they relate past transactions, discuss present interests, and form conjectures on the future. Their children, tired with play, come frequently to listen; and a stranger is surprised to hear them, at ten or twelves years old, re- counting, with a serious air, why Djezzar de- clared war against the emir Yousef, how many purses it cost that prince, what augmenta- tion there will be of the miri, how many mus- kets there were in the camp, and who had the best mare. This is their only education. They are neither taught to read the psalms, as among the Maronites, nor the Koran like the Mahomme- dans ; hardly do the sheiks know how to write a letter. But if their minds be destitute of use- ful or agreeable information, at least it is not pre-occupied by false and hurtful ideas; and, without doubt, such natural ignorance is well worth all our artificial folly. This advantage results from it, that their understandings being nearly on a level, the inequality of conditions is less perceptible. For, in fact, we do not per- ceive among the Druses that great distance, which, in most other societies, degrades the in- ferior, without contributing to the advantages of the great. All, whether sheiks or peasants, treat each other with that rational familiarity, which is equally remote from rudeness and servility. The grand

emir himself is not a different man from the rest : he is a good country gentleman, who does not disdain admitting to his table the meanest farmer. In a word, their manners are •those of ancient times, and of that rustic life which marks the origin of every nation ; and prove that the people among whom they are still found are yet only in the infancy of the social state.' Volney's Travels.

The opinions of Mohammed ben Ismael may foe regarded as the substance of the religion of

the Druses. They practise neither circumcision, nor prayers, nor fasting; they observe neither festivals nor prohibitions. They drink wine, eat pork, and allow marriage between brothers and sisters, though not between fathers and children- From this we may conclude, that the Druses have properly no religion ; but one class of them must be excepted, whose religious customs are very peculiar. Those who compose it are to the rest of the nation what the initiated were to the profane; they assume the name of Okjcals, which means spiritualists, and bestow on the vulgar the epithet of Djahel or ignorant; they have various degrees of initiation, the highest orders of which require celibacy. These are distinguished by the white turban they affect to wear, as a symbol of their purity ; and so proud are they of this supposed purity, that they think themselves sullied by even touching a profane person. If such eat out of their plate, or drink out of their cup, they break them ; and hence the custom, so general in this country, of using vases with a sort of cock, which may be drunk out of without touching them with the lips. All their practices are enveloped in mysteries : their oratories always stand alone, and are constantly situated on eminences : in these they hold their secret assemblies, to which women are admitted. It is pretended they perform ceremonies there, in presence of a small statue resembling an ox or calf; whence some have attempted to prove that they are descended from the Samaritans. But, besides, that the fact is not well ascertained, the ˆworship of the ox may be deduced from other sources. They have one or two books which they conceal with the greatest care : but chance has deceived their jealousy ; for in a civil war, which happened about twenty-eight years ago, the emir Yousef, who is Djahel or ignorant, found one among the pillage of one of their oratories. M. Volney was assured by per- sons who had read it, that it contains only a mystic jargon, the obscurity of which doubtless renders it valuable to adepts? Ilakem Bamr Ellah is there spoken of, by whom they mean God incarnate in the person of the caliph. It likewise treats of another life, of a place of punishment, and a place of happiness, where the Okkals shall of course be most distinguished. Several degrees of perfection are mentioned, to which they arrive by successive trials. In other respects these sectaries have all the insolence and all the fears of superstition ; they are not com- municative, because they are weak; but it is probable that, were they

powerful, they would be promulgators and intolerant. The rest of the Druses, strangers to this spirit, are wholly in- different about religious matters. The Chris- tians, who live in their country, pretend that several of them believe in the metempsychosis ; that others worship the sun, moon, and stars : all which is possible ; for, as among the Ansarians, every one, left to his own fancy, follows the opinion that pleases him most ; and these opinions are those which present themselves most naturally to unenlightened minds. When among the Turks, they affect the exterior of Mahommedans, frequent the mosques, and perform their ablutions and prayers. Among the Maronites, they ac-

company them to church, and, like them, make use of holy water. Many of them, importuned by the missionaries, suffer themselves to be bap- tised; and if solicited by the Turks, receive circumcision, and conclude by dying neither Christians nor Mahommedans.

Mr. Burckhardt confirms this general picture of former travellers. Though a sect of the Ma- hommedans, they mingle so much of the tenets of Zoroaster and the eastern Christian heretics with their religion, that it belongs as a whole to themselves only. Niebuhr has printed a cate- chism of their faith, which is principally remark- able for its affected mysteriousness on the one hand, and its positive injunction to curse its original author (a great poet) on the other. 'We are they,' says their patriarch Hamzah, 'who have been put in possession of the Faith after the religion of Mahomet, the son of Abdullah; may the curse of our Lord be upon him!'

They are a branch, it is clear, of the sect Is- mayly. ' Enquiries,' says Burckhardt, ' have often been made concerning the religious doc- trines of this sect, as well as those of the An- zeyrys and Druses. Not only European tra- vellers, and Europeans resident in Syria, but many natives of influence, have endeavoured to penetrate the mysteries of these idolaters, without success, and several causes combine to make it probable, that their doctrines will long remain unknown. The principal reason is, that few individuals among them become acquainted with the most important and secret tenets of their faith, the generality contenting themselves with the observance of some exterior practices, while the arcana are possessed by the select few. It will be asked, perhaps, whether their religious books would not unveil the mystery '(It is true that all the different sects possess books, which they regard as sacred, but they are intelligible only to the initiated. A sacred book of the An- zeyrys fell into the hands of a chief of the army of Yousef pacha, who plundered the castles of that sect in 1808;

it came afterwards into the possession of my friend Selym of Hamah who had destined it as a present to me; but he was prevailed upon to part with it to a travelling physician, and the book is now in the possession of M. Rousseau, the French Consul at Aleppo, who has had it translated into French, and means to publish it, but it will probably throw little light upon the question. Another difficulty arises from the extreme caution of the Ismaylys upon this subject; whenever they are obliged to visit any part of the country under the Turkish government, they assume the character of Mus- sulmans ; being well aware that if they should be detected. in the practice of any rite contrary to the Turkish religion, their hypocrisy, in af- fecting to follow the latter, would no longer be tolerated ; and their being once clearly known to be pagans, which they are only suspected to be at present, would expose them to the heaviest exactions, and might even be followed by their total expulsion or extirpation. Christians and Jews are tolerated because Mahomet and his immediate successors granted them protection, «md because the Turks acknowledge Christ and

the prophets ; but there is no instance whatever of pagans being tolerated.

‘ The Ismaylys, when they go to Hamah, pray in the mosque, which they never do at Kalaat Maszyad. This castle has been from ancient times their chief seat. One of them asserted that his religion descended from Ismayl, the son of Abraham, and that the Ismaylys had been possessed of the castle since the time” of El Melek el Dhaher, as acknowledged by the Firmahns of the Porte. A few years since they were driven out of it by the Anzeyrys, in consequence of a most daring act of treachery. The Anzeyrys and Ismaylys have always been at enmity ; the consequence, perhaps, of some religious dif- ferences.’

With respect more particularly to tne true religion of the Druses,’ says this intelligent tra- veller,‘none but a learned Druse can satisfy the enquirer’s curiosity. What I have already said of the Anzeyrys is equally applicable to the Druses ; their religious opinions will remain for ever a secret, unless revealed by a Druse. Their customs, however, may be described ; and, as far as they can tend to elucidate the mystery, the veil may be drawn aside by the researches of the traveller. It seems to be a maxim with them to adopt the religious practices of the country in which they reside, and to profess the creed of the strongest. Hence they all profess Islamism in Syria ; and even those who have been baptised, on account of their alliance with the Shehab family, still practise the exterior forms of the Mahom- medan faith. There is no truth in the assertion, that the Druses go one day to the mosque, and the next to the church. They all profess Islam- ism, and whenever they mix with the Mahom- medans they perform the rites prescribed by their religion. In private, however, they break the fast of Ramadhan, curse Mahomet, indulge in wine, and eat food forbidden by the

Koran. They bear an inveterate hatred to all religions except their own, but more particularly to that of the Franks, chiefly in consequence of a tradition current among them, that the Europeans will one day overthrow their commonwealth. This hatred has been increased since the invasion of the French ; and the most unpardonable insult which one Druse can offer to another, is to say to him, ‘ May God put a hat on you.’

‘ Nothing is more sacred with a Druse than his public reputation : he will overlook an insult, if known only to him who has offered it; and will put up with blows, where his interest is concerned, provided nobody is a witness; but the slightest abuse given in public he revenges with the greatest fury. This is the most remark- able feature of the national character : in public a Druse may appear honorable ; but he is easily tempted to a contrary behaviour, when he has reason to think that his conduct will remain undiscovered. The ties of blood and friendship have no power amongst them ; the son no sooner attains the years of maturity, than he begins to plot against his father. Examples are not want- ing of their assailing the chastity of their mo- thers, and towards their sisters such conduct is so frequent, that a father never allows a full grown son to remain alone with any of t’ie fe-

males of his family. Their own religion allows them to take their sisters in marriage ; but they are restrained from indulging in this connexion, on account of its repugnance to the Mahomme- dan laws. A Druse seldom has more than one wife, but he divorces her under the slightest pretext; and it is a custom among them, that if a wife asks her husband’s permission to go out, and he says to her ‘ Go;’ without adding ‘ and come back,’ she is thereby divorced ; nor can her husband recover her, even though it should be their mutual wish, till she is married again according to the Turkish forms, and divorced from her second husband. It is known that the Druses, like all Levantines, are very jealous of their wives; adultery, however, is rarely punished with death : if a wife is detected in it, she is di- vorced; but the husband is afraid to kill her seducer, because his death would be revenged, for the Druses are inexorable with respect to the law of retaliation of blood ; they know too that if the affair were to become public, the governor would ruin both parties by his extortions. Un- natural propensities are very common amongst them.

‘The Akal are those who are supposed to know the doctrines of the Druse religion ; they super- intend divine worship in the chapels, or, as they are called, Khaloue, and they instruct the chil- dren in a kind of catechism.

They are obliged to abstain from swearing, and all abusive lan- guage, and dare not wear any article of gold or silk in their dress. Many of them make it a rule never to eat of any food, nor to receive any money, which they suspect to have been impro- perly acquired. For this reason, whenever they have to receive considerable sums of money, they take care that it shall be first exchanged for other coin. The sheik El Nedjem, who generally accompanies the sheik Beshir, in his visits to the emir, never tastes food in the palace of the latter, nor even smokes a pipe there, always as- serting that whatever the emir possesses has been unlawfully obtained. There are different degrees of Akal, and women are also admitted into the order, a privilege which many avail themselves of, from parsimony, as they are thus exempted from wearing the expensive head-dress and rich silks fashionable among them.

' A father cannot entirely disinherit his son ; in that case his will would be set aside ; but he may leave him a single mulberry-tree for his portion. There is a Druse Kadhi at Daer-el Kamar, who judges according to the Turkish laws, and the customs of the Druses ; his office is hereditary in a Druse family; but he is held in little repute, as all causes of importance are carried before the emir or the sheik Beshir.

'The Druses do not circumcise their children; circumcision is practised only in the mountain by those members of the Shehab family who continue to be Mahommedans.

'The best feature in the Druse character is that peculiar law of hospitality, which forbiuˆ them ever to betray a guest. I made particular enquiries on this subject, and I am satisfied that no consideration of interest or dread of power will induce a Druse to give up a person who has once placed himself under his protection. Per-

sons from all parts of Syria are in the constant prac tice of taking refuge in the mountain, where they are in perfect security from the moment they enter upon the emir's territory : should the prince ever be tempted by large offers to consent to givf up a refugee, the whole country would rise to pre- vent such a stain upon their national reputation. The mighty Djeazar, who had invested his own creatures with the government of the mountain, never could force them to give up a single indi- vidual of all those who fled thither from his ty- ranny. Whenever he became very urgent in his demands, the emir informed the fugitive of his danger, and advised him to conceal himself for a time in some more distant part of his territory; an answer was then returned to Djezzar, that the object of his resentment had fled. The asylum which is thus afforded by the mountain is one of the greatest advantages that the inhabitants of Syria enjoy over those of the other parts of the Turkish dominions.*

‘ The Druses are extremely fond of raw meat ; whenever a sheep is killed, the raw liver, heart, &c., are considered dainties; the Christians follow their example, but with the addition of a glass of brandy to every slice of meat. In many parts of Syria I have seen the common people eat raw meat in their favorite dish the Kobbes ; the women especially indulge in this luxury.

‘ Mr. Barker told me that during his two years’ residence at Harissa and in the mountain, he never heard any kind of music. The Chris- tians are too devout to occupy themselves with such worldly pleasures, and the Druses have no sort of musical instruments.

‘The Druses have a few historical books which mention their nation ; Ibn Shebat, for instance, as I was told, gives in his history of the Califes, that of the Druses also, and of the family of Shehab. Emir Haidar a relation of the emir Beshir, has lately begun to compile a history of the Shehabs, which already forms a thick quarto volume.

‘ I believe that the greatest amount of the mi- litary forces of the Druses is between 10,000 and 15,000 firelocks ; the Christians of the moun- tain may, perhaps, be double that number ; but I conceive that the most potent pacha or emir would never be able to collect more than 20,000 men from the mountain.’ Travels, p. 200 — 204. DRUSIUS (John), a protestant writer of great learning, born at Oudenarde in Flanders, in 1555. He was designed for the study of divinity, but his father being outlawed, and de- prived of his estate, they both retired to England, where the son became professor of the oriental languages at Oxford : upon the pacification of Ghent, they returned to their own country, where also Drusius was appointed professor of oriental languages. From thence he removed to Friesland, where he was admitted Hebrew pro- fessor in the university of Franeker; the functions of which he discharged with great honor till his death in 1616. His works show him to have been well skilled in Hebrew; and the States General employed him in 1600 to write notes on trie most difficult passages in the Old Testament, with a pension of 400 florins a- year : but, being frequently disturbed in this undertaking, it was

not published till after his death. lie held a large correspondence with the learned ; among his papers there were found 2300 Latin letters.

DRUSIUS (John), the son of the preceding, was born at Franeker in 1538 ; and began to learn Latin and Hebrew at five years old ; at nine he could

read that language without points, and add them where wanted. He spoke Latin as readily as his native tongue, and could make himself understood in English. At twelve he •wrote in Hebrew extempore ; at seventeen he made a speech in Latin to king James I. in the midst of his court, and was admired by all present. He died of the stone, in 1609, aged twenty -one, at the house of Dr. W. Thomas, dean of Chichester, who gave him a considerable salary. He left several works ; as, Letters and Verses in Hebrew ; Notes on Solomon's Proverbs ; &c. And digested into alphabetical order Eliis Levita's Nomenclator; to which he added the Greek words.

DRY, adj. v. a. & v. n. ") Goth thur ; Sax.

DRY'ER, n. s. drig ; Teut. treig ;

DRY'EYED, adj. Belg. droog, fiom

DRY'LY, adv.) > Gr. rpvy»j, dryness.

DRY'NESS, ra. s. Arid ; free from

DRY'NURSE, v. a. & n. s. moisture : hence

DRY'SHOD, adj. J barren, and, figu-

ratively, jejune, deficient ; hard ; severe ; sneer- ing. The verbs seem to have been formed from the adjective.

And he seide to it, nevere fruyt come forth of thee into withouten ende ; and anoon the figc-tree was dried up : and disciplis sighen wondriden and seiden, hout anoon it driede. Widif. Matt. xxi.

Their honourable men are famished, and their mul- titude dried up with thirst. Isaiah v. 13.

Drythod to pass, she parts the floods in tway j And eke huge mountains from their native seat She would command themselves to bear away.

Faerie Queene. I will drain him dry as hay ; Sleep shall neither night nor day Hang upon his penthouse lid : He shall live a man forbid.

Shakspeare. Macbeth.

The meat was well, if you were so contented. — I tell thee, Kate, 't was burnt and dried away.

Sftakspeare. If he filled

His vacancy with his voluptuousness, Full surfeits, and the dryness of his bones, Call on him for 't. Id. Antony and Cleopatra.

Mrs. Quickly is his nurse, or his drynune, or his cook, or his laundry, his washer, and his wringer.

Shakspeare.

A dry March and a dry May portend a wholesome summer, if there be a showering April between.

Bacon.

Of two noblemen, the one was given to scoff, but kept every royal cheer in his house, the other would ask of those that had been at his table, was there never a flout or dry blow given ? Id.

There is a tale, that boiling of daisy roots in milk, which it is certain are great driers, will make dogs little. Id.

The archduke, conscious to himself how dryly the king had been used by his council, did strive to re- cover the king's affection. Id. Henry VII.

As we should take care that our stile in writing be neither dry nor empty, we should look again it be not

winding or wanton with far-fetched descriptions : either is a vice. Ben Junson.

Their new flowers and sweetness do as much corrupt as others drync&s and squalor, if they chuse not care- fully. /,/. It remaineth to treat concerning ornaments within or without tin fabrick ; a piece not so dry as the nicer contemplation of proportions : and therefore I hope therein somewhat to refresh both the reader and my- self. Wotton't Architecture

*When they have flesh, yet they must stay a time ere they can have a full meal •, unless they would eat their meat bre*4dless, and their bread dry.*

Bp. Hall. Contemplations.

I find that an evil fountain is not soon drawn dry.

Bp. Taylor.

It may be, that by this dryness of spirit, God intends to make us the more fervent and resigned in our di- rect and solemn devotions, by the perceiving of our weakness. Id.

That the fire burns by heat, is an empty dry re- turn to the question, and leaves us still ignorant.

Glanvittt. When God said,

Be gathered now, ye waters under heaven, Into one place, and let dry land appear !

Milton.

Sight so deform what heart of rock could long Dryeyed behold ? Adam could not, but wept. Id.

I rather hoped I should no more Hear from you o' th' gallanting score ; For hard dry bastings used to prove The readiest remedies of love j Next a dry diet. Hudibras.

As Romulus a wolf did rear, So he was drynvrsed by a bear. Id.

The Africans are conceived to be peculiarly scorched and terrified by the sun, by dryness of the soil, from want and defect of water.

Browne's Vulgar Errouri.

The ill effects of drinking are relieved by this plant, •which is a great dryer and opener, especially by per- spiration. Temple.

It is a dry fable, with little or nothing in it.

L' Estrange.

Twas grief no more, or grief and rage were one Within her soul : at last 'twas rage alone ; Which, burning upwards in succession, dries The tears that stood considering in her eyes.

Dryden.

Has honour's fountain then sucked back the stream ? He has : and hooting boys may dryshod pass. And gather pebbles from the naked ford. Id.

Wouldst thou to honour and preferments climb, Be bold in mischief, dare some mighty crime, Which dungeons, death, or banishment deserves ; For virtue is but dryly praised, and starves.

/

He had embarked us in such disadvantage, as we could not return dryshod.

Sidney.

A palsy may as well shake an oak, or a fever dry up a fountain, as either of them shake, dry up, or impair the delight of conscience. South.

DRY-ROT, a term or name applied to a rapid decay of any vegetable matter, when it has the appearance of being tolerably dry, but, in ge- neral, is applied only to timber when in that state, and is so named in contradistinction to the common mode of decay, by being exposed to the alternate states of wet and dry. There are a great number of causes for this species of decay : some are quite simple, others are very compli- cated ; yet, whatever may be the original cause,

simple or compound, the effects are the same, namely, to render the timber useless, by de- stroying its elasticity and toughness, rendering it insufficient to resist .ny considerable pressure, ani indeed, for any of the useful purposes to which timber is applied. When timber is in a tolerably dry state, any means which will absorb or extract its oxygen from the other component parts, will leave it in the state commonly called dry-rotten. Moist, warm situations, with little or no current of air, are the most likely to gene- rate this evil. The effluvia from timber in such a state of decay will rapidly carry its effects to the circumjacent timber, however dry it may appear ; and any sort of timber will be, in a very little time, rendered quite useless. When timber is exposed to any considerable degree of moisture and heat, fungi of various shapes and texture, according to the species of timber, and other causes, will appear upon it ; and although this fungous matter be really an effect of the dry-rot, yet it is as truly a cause of the same evil. There are no means of restoring rotten timber to a sound state, and the dry-rot can be cured, as it is called, by removing the decayed and affected parts, clearing away all the fungi, and destroying its vegetating principle, with which the hard materials, such as bricks or stone, may have been impregnated. For this purpose, a strong solution of iron, copper, or zinc, is used with advantage. This, with the admission of a large quantity of air, as in Mr. George's venti- lation system, is very advantageous. Much also may be done by cutting timber in winter, and properly seasoning it, by steeping it in water for some time, and then thoroughly drying it before it is used in building. But the following is the most approved >emedy : — let the timber, prior to its application, be immersed in a solution of cor- rosive sublimate : in the course of a week one load will be found to have absorbed

five gallons of the solution. Let it then be removed, and shortly after it becomes fit for building.

DRYADES, or DRYADS, in the heathen my- thology, a sort of deities, who, the ancients be- lieved, inhabited groves and woods. They differed from the Hamadryades; these latter being attached to some particular tree, with which they were born, and with which they died ; whereas the Dryads were goddesses of trees and woods in general. See HAMADRYADES.

DRYANDER (John), A.M. university of Lund, a Swedish naturalist, the pupil and friend of Linnaeus, was born in 1748, near Got- tenburgh, where his father was a clergyman. In consequence of the decease of his father, the care of his education devolved on a maternal uncle, Dr. Lars Montin, a member of the Stock- holm Academy. This gentleman was also the intimate friend of Linnaeus, and published under his presidency, an Inaugural Dissertation on the Genus Splachnum, reprinted in the Amoenitates Academics, vol. ii. 263. Young Dryander received his early education in the university of Gottenburgh ; but removed to Lund, where he took his degree of Master of Arts, or Doctor of Philosophy, in 1776; he published on this occasion a dissertation, Fungo.s Regno Vegetabili Viudicans, asserting the vegetable nature of these

bodies. He was afterwards a student for a short .time at Upsal, and tutor to a young Swedish nobleman. He first visited England with his countryman Dr. Solander, who introduced him to the acquaintance of Sir Joseph Banks; and- on whose sudden death, in 1782, he succeeded to the place of librarian to Sir Joseph. Mr. Dryander was also librarian to the Royal and the Linqaean Societies. Of the latter institution he was indeed one of the first founders, and drew up its laws and regulations, when in 1802 the society was incorporated by royal charter. He continued an able and active vice-president of the society until his death, which took place to- wards the end of October, 1810, in the sixty- third year of his age. The publications of Mr. Dryander on the subject of botany are very valuable, and consist of, 1. An Account of the Genus Albuca, in the Stockholm Transactions for 1784, in Swedish. 2." Observations on the Genus Begonia, in the Transactions of the Linnaean Society, vol. i. 3. On Genera and Species of Plants which occur twice or three times in Professor Gmelin's edition of Linnaeus' Systema Naturae ; Trans, of Linn. Soc. v. ii. 4. Lindsea, a New Genus of Ferns ; Trans, of Linn. Soc. v. iii. 5. A Botanical Description of the Benjamin Tree of Sumatra, Phil. Trans, v. Ixxvii. He also superintended and assisted in- the publication of Mr. Alton's Hortus Kewensis, and Dr. Roxburgh's Plants of the Coast of Coromandel. But his Catalogus Bibliothecse Historico-Naturalis Josephi Banks, 5 vols. 8vo, is his most celebrated work, and a model for all future bibliographers.

DRYANDRA, in botany, a genus of plants of the class dicecia, order monadelphia : CAT,, two-leaved; petals five; stamens nine: FRUIT three or four grained : SEEDS solitary. Species one only ; a dwarf tree of Japan.

DRY AS, in botany, a genus of the polygynia order, and icosandria class of plants ; natural order thirty-fifth, senticosae : CAL. octofid; pe- tals eight: SEEDS long and hairy with a train. Species, one only ; a native of Denmark, and sometimes found on our own mountains.

DRYRURGH ABBEY. This place was de- dicated to religious institutions so anciently as the year 522, when Modan, a presbyter and missionary was there seated ; as appears by re- cords cited in Chalmers de Statu Hominis, veteris simul ac novae Ecclesiae, b. i. p. 142 ; and King, in his Kalendar. Breviar. Aberdeen. There is no doubt that the Roman station of Trimon- tium was at the foot of the Eilden hills, in this district, about three miles distant from Dry burgh ; as appears from the Antonine Itinerary, and from General Roy's Survey and Map of Ro- man Scotland. Many coins of Vespasian, Do- mitian, and Trajan, are found in this neighbour- hood ; and a considerable part of the Roman, road is still in good preservation, passing through the parishes of Ancrum, Lillies-leaf, and Max- ton. In the abbey of Dryburgh, Chaucer, the English poet, passed some time with his friend Ralph Strode, a Welshman, a monk and student here, to whom Chaucer dedicates or addresses some of his verses. At the Reformation, the abbey lands were erected into a temporal lordship

by James VI. in favor of John, earl of Marr, K. G. and lord high treasurer of Scotland ; who gave it to Henry his third son, from whom the title descended to the present earl of Buchan, who bought the abbey lately from the heirs of colonel Tod, and has made it his principal re- sidence. It was here that James Thomson com- posed his beautiful poem of Winter, the first of his classical Seasons; having occasionally resided •with the Haliburtons of Newmains, who were then proprietors of the place. Thomas Hannah, the astronomer, was born here, in a house built in the area of the abbey, in 1662; and Allan Ramsay composed an epitaph for his tomb in Kelso church-yard, which is still extant. The re- mains of Sir Walter Scott are deposited here.

DRYDEN (John), On6 of the most eminent English poets of the seventeenth century, de- scended of a respectable family in Huntingdon- shire, was born at Aldwinkle 1631, and educated at Westminster school under Dr. Busby. Thence he was removed to Cambridge in 1650, being elected scholar of

Trinity College, of which he appears, by his Epithalamia Cantabrigiens. 4to, 1662, to have been afterwards a fellow. On the death of Oliver Cromwell he wrote some heroic stanzas to his memory ; but on the Restoration, being desirous of ingratiating himself with the new court, he wrote first a poem entitled Astraea Redux, and afterwards a panegyric on the king. On the 1st January, 1662, he addressed a poem to Chancellor Hyde ; and published in the same year a satire on the Dutch. In 1668 appeared his Annus Mirabilis, an historical poem in cele- bration of the duke of York's victory over the Dutch. These pieces at length obtained him the favor of the crown ; and Sir William Davcnant

Zimri, drawn for the duke of Buckingham, is certainly severe enough to repay all the ridicule of that nobleman. The resentment shown by the tvvo peers was very different. Lord Roches- ter, who was a coward, as well as a man of the most depraved morals, basely hired three ruffians to cudgel Dryden in a coffee-house ; but the duke of Buckingham took the task upon himself; and at the same time presented him with a purse containing a large sum of money ; telling him that he gave him the beating as a punishment for his impudence, but bestowed that gold on him as a reward for his wit. In 1682 Dryden pub- lished his Religio Laici, designed as a defence of revealed religion against Deists, Papists, &c. Soon after the accession of James II. he wjnt over to the church of Rome, and wrote two pieces in vindication of the Romish tenets: viz. A defence of the Papers written by the late king, found in his strong box ; and the celebrated poem, afterwards answered by lord Halifax, en- titled, The. Hind and the Panther. By this extraordinary step he not only engaged himself in controversy, and incurred much censure and ridicule from his contemporary wits : but on the completion of the Revolution, being, on account of his newly-chosen religion, disqualified from bearing any office under the government, he was stripped of the laurel, which, to his still greater mortification, was bestowed on Richard Flecknoe, a man to whom he had a most settled aver- sion. This circumstance occasioned his writ- ing the very severe poem called Mac-Flecknoe. Mr. Dryden's circumstances had never been affluent; but now, being deprived of this little support, he found himself reduced to the neces- sity of writing for bread. From this period, therefore, he was engaged in works of labor as well as genius, translating the works of others, &c. ; and to this necessity we stand indebted for some of our best translations. In the year he lost the laurel, he published the life of St. Francis Xavier from the French. In 1693 came out his Juvenal and Persius. In 1695 his pros version of Fresnoy's Art of Painting ; and in the year 1697 a translation of Virgil's entire work, which still stands foremost among the translations of that author. The minor pieces of this eminent writer, viz. his prologues, epilogues, epitaphs, elegies, songs, &c. are too numerous to specify here, but may all be found in the elegant editions of this poet by Sir Walter Scott,*

Malone, and Dr. Warton. His last work is his Fables, which consist of many of the most interesting stories in Homer, Ovid, Boccace, and Chaucer, trans- lated or modernised in the most elegant manner; together with some original pieces, among which is the celebrated ode on St. Cecilia's day. Dry- den married the lady Elizabeth Howard, sister to the earl of Berkshire, who survived him eight years. By this lady he had three sons, Charles, John, and Henry. Of the eldest there is a cir- cumstance related by Charles Wilson, esq. in his Life of Congreve, which seems so well attested, and is itself of so very extraordinary a nature that we cannot avoid giving it a place here. Dryden, with all his understanding, was weak enough to be fond of judicial astrology, and used to calculate the nativity of his children. OP

casting that of Charles he found, according to the rules by which he calculated, that his eighth, twenty-third, and thirty-third years were of pe- culiar omen. In his eighth year, notwithstanding his father's precautions, he went out on his birth-day to see a stag hunted, and the animal flung down on him a wall ten feet in length which was nearly fatal to him. In his twenty- third year he fell from the top of a tower in the Vatican, and never fully recovered his health ; and in his thirty-third year he was drowned in swimming across the Thames near Windsor.

Dryden died May 1701, and was buried in Westminster Abbey. The day after his death, the dean of Westminster sent a message to his widow, that he would make a present to her of the ground and all other abbey-fees for the funeral ; lord Halifax likewise sent to lady Elizabeth, and to Mr. Charles Dryden, offering to defray the expenses of our poet's funeral, and afterwards to bestow £500 on a monument in the abbey. Accordingly, on Sunday following, the company being assembled, the corpse was put into a hearse and attended by eighteen mourning coaches. When they were just, ready to move, lord Jef- ferys, son of lord chancellor Jefferys, a name dedicated to infamy, riding by with some of his companions, asked whose funeral it was ; and being told it was Mr. Dryden's, he protested he should not be buried in that private manner ; that he would himself, with lady Elizabeth's leave, have the honor of the interment, and be- stow £1000 on a monument in the abbey for him. This put a stop to the procession ; and lord Jefferys, with several of the gentlemen who had alighted from their coaches, went up stairs to the lady, who was sick in bed. His lordship repeated the purport of what he had said below ; but lady Elizabeth refusing her consent, he fell on his knees, vowing never to rise till his request was granted. The lady under a sudden surprise fainted away; and

lord Jeflferys, pretending to have obtained her consent, ordered the body to be carried to Mr. Russel's an undertaker in Cheapside, and to be left there till further orders. In the mean time the abbey was lighted up, the ground opened, the choir attending, and the bishop of Rochester waiting some hours to no purpose for the corpse. The next day Mr. Charles Dryden waited on lord Halifax and the bishop, and endeavoured to excuse his mother by relating the truth. Three days after, the under- taker having received no orders, waited on lord Jefferys; who pretended that it was a drunken frolic, that he remembered nothing of the matter, and he might do what he pleased with the body. Upon this the undertaker waited upon lady Eli- zabeth, who desired a day's respite, which was granted. Mr. Charles Dryden immediately wrote to lord Jefferys, who returned for answer, that he knew nothing of the matter, and would be troubled no more about it Mr. Dryden hereupon applied again to lord Halifax and the bishop of Rochester, who absolutely refused to do any thing in ihe affair. In this distress, Dr. Garth, who had been Mr. Dryden's intimate friend, sent for the corpse to the college of physicians, and proposed a subscription ; which succeeding, about three weeks after Mr. Dryden's decease,

Dr. Garth pronounced a fine Latin oration over the body, which was conveyed from the college, attended by a numerous train of coaches to Westminster Abbey, but in great disorder. It was interred in a private manner. After the funeral Charles Dryden sent a challenge to lord Jefferys, and repeatedly sought admittance to him to provoke a duel, or to chastise him for the above barbarous indignity, in vain. Dryden had no monument erected to him for several years, to which Mr. Pope alludes in his epitaph intended for Mr. Rowe, in this line,

Beneath a rude and nameless stone he lies.

In a note upon which we are informed, that the tomb of Mr. Dryden was erected upon this hint by Sheffield, duke of Buckingham, to which was originally intended this epitaph :

This Sheffield raised. — The sacred dust below Was Dryden once ; the rest, who does not know ?

Which was afterwards changed into the plain inscription now upon it, viz.

J. DRYDEN,

NatusAug. 9, 1631. Mortuus Mali 1, 1701. Johannes Sheffield, dux Buckinghamiensis, fecit.

VVere we to form a judgment of this celebrated writer from some of his dramatic writings, we should be apt to conclude him a man of the most

licentious morals; many of his comedies containing gross obscenity. But Congreve, whose authority cannot be suspected, has depicted him as no less amiable in his private character as a man, than he was illustrious in his public one as a poet. He was, according to this autho- rity, humane, compassionate, forgiving, and friendly ; gentle in the correction of the writings of other authors, and patient under the censure of his own ; easy of access himself, but slow and diffident in his advances to others ; and of all men the most modest, and the most easy to be discountenanced in his approaches either to his superiors or his equals. As to his writings, he has been thought to have attained the greatest general harmony in his numbers, of any of our poets.

DRYPIS, in botany, a genus of the trigynia order, and pentandria class of plants ; natural order twenty-second, caryophylleae : CAL. quin- quedentated : petals five ; the opening at the capsule as if cut round horizontally, monosperm- ous. Species one only, a native of Barbary and Italy.

DRYSDALE (John), D. D., a late eminent clergyman of the church of Scotland, was born at Kirkaldy, April 29th 1718. He soon distin- guished himself as a classical scholar, and, in 1732, was sent to finish his studies at the univer- sity of Edinburgh. In 1740 he was licensed to preach by the presbytery of Kirkaldy ; and, after having been several years employed as assistant minister of the college church at Edinburgh, was settled at Kirkliston in 1748. After continuing fifteen years in this town, he obtained a presen- tation to Lady Y ester's church, from the town- council of Edinburgh. This having been the first

time the magistrates of Edinburgh had exercised their right of presentation, a most formidable opposition was now made to his settlement. The opposition however, which was more against the measure than the mtn, being at last overcome, he was settled as minister of Lady Yester's. In 1765 the Marischal College of Aberdeen con- ferred on him the degree of D. 1). In 1766, on the death of Dr. Jardine, he was translated to the Tron church, where he became colleague to Dr. Wishart; and was also appointed one of the king's chaplains, with one-third of the emolu- ments of the deanery of the chapel royal. In 1773 he was unanimously elected moderator of the General Assembly; 'the greatest mark of respect,' says professor Dalzel, ' which an ecclesiastical commonwealth can bestow ;' and in 1784 he was

again raised to the same dignity, by a great ma-, jority. In May, 1788, he appeared in his place at the meeting of the Assembly, and acted as principal clerk the first day ; but was obliged to ask the assistance of professor Dalzel during the remaining days; and, being violently attacked with a cough, became gradually weaker,till he died on the 16th June following, aged seventy. Dr. Drysdale's sermons have been published since his death, and are esteemed a valuable addition to the public stock of instruction.

DSJEDSJAL,a sect of Mahommedan Arabs, chiefly inhabiting Mecran, a maritime province of Persia. ' Its first author,' says Mr. Niebuhr, ' was a venerable old man, who was found by some wood-cutters shut up in the middle of a tree, and having a book in his hand.' This mi- raculous origin he was informed of at Mas- kat, but ' each sect,' he adds, ' tells ridiculous stories of the others, to bring them into con- tempt.'

DSJOBLA, an ancient city of Arabia, in the

The robes which the kings then allowed to each knight, when he was dubbed, of green, or burnet, as they spake in that age, appeareth upon record.

Camden's Remains.

The king stood up under his cloth of state, took the sword from the lord protector, and dubbed the lord mayor of London knight. Haytaurd on Edward VI.

As skilful coopers hoop their tubs With Lydian and with Phrygian dubs. Hudibras.

O poet! thou hadst been discreeter, Hanging the monarch's hat so high,

If thou hadst dubbed thy star a meteor, That did but blaze, and rove, and die. Prior.

These demoniacks let me dub With the name of legion club. Swift.

A man of wealth is dubbed a man of worth •, Venus shall give him form, and Anstis birth.

Pope.

Women commence by Cupid's dart, As a king hunting dubs a hart. Cleaveland.

A plain gentleman, of an ancient family, is of better quality than a new knight, though the reason of his dubbing was meritorious. Collier on Pride.

I have on the seat behind me the constitution of

Mr. John Probert ; a knight-errant, dubbed by the

noble lord in the blue ribbon, and sent to search for

revenues and adventures upon the mountains of

Wales. Burke.

DU'BIOUS, adj. "\ Lat. dubius ; anciently

DUBIO'SITY, n. s. j duvius, from duo, two,

DUBIOUSLY, adv. (and via, a way; drawn

DTJ'BIOUSNESS, n. s. (two ways ; in doubt.

DU'BITABLE, adj. \ Doubtful ; uncertain in

DUBITA'TION, n. s. } argument or Brent; not

plain. Dubitable is also doubtful, or that may

be doubted.

Dubitation may be called a negative perception ; that is, when I perceive that what I see is not what I would see. Grew.

Men often swaliow falsities for truths, dubiosities for certainties, feasibilities for possibilities, and things

province of Yemen ; the capital of a district and impossible for possible. Browne's Vulgar Errourt. the seat of a Dola; seated on the brink of a pre- cipice, and containing about 600 houses, of con- siderable height and of good appearance. Its streets are paved.

matter Id,*

Authors writs often dubiously, even •wherein is expected a strict definitive truth.

Many of the ancients denied the antipodes ; but the experience of our enlarged navigation can now

DU'AL, adj. Lat. dualis, from duo ; Gr. Svo) ; assert them beyond all dubitation.

Chald. n, two. Expressing two.

Modern languages have only one variation, and so the Latin ; but the Greek and Hebrew have one to signify two, and another to signify more than two , under one variation the noun is said to be of the dual number, and under the other of the plural.

Clarke's Latin Grammar

DUB, v. a. &n s. Goth, dubba; Sax. dub- ben ; Fr. adouber. The Northern words mean to strike, and have been thought to allude to the

*' » . i 11 *l_ *juc »ucaA.a*

mode of making a knight by a slight blow with a of a goddess-

Id. No quick reply to dubious questions make.

Denfiam.

His utmost power with adverse power opposed, In dubious battle, on the plains of heaven. Milton.

Satan with less toil, and now with ease Wafts on the calmer wave, by dubious light. Id. Yet where truth ard knowledge are concerned in the case, I know not what fault it can be to desire the explication of words, whose sense seems dubious.

Locke. She speaks with dubiousness, not wi'.h the certainty

sword. To make a knight. To confer any kind of dignity or honor. Butler uses it as a sub- stantive for a blow.

Knight, knight, good mother ! Basilisco like. What! I am dubbed; I have it on my shoulder.

Shahspeare. He

Gave thee no instance why thou should st do treason, Unless to dub thee with the name of traitor. Id.

The jealous o'erworn widow and herself, Since that our brother dubbed them gentlewomen, Are mighty gossips in this monarchy.

Id. Richard III.

Broome.

Almanack-makers wander in generals, and talk du- , and leave to the reader the business of inter- preting. 8»ifi'

It is a common and just observation, that, when the meaning of any thing is dubious, one can no way better judge of the true intent of it, than by considering who is the author, what is his character in general, and his disposition in particular. Pope.

We also call it a dubious or doubtful proposition, •when there are no arguments on either side.

Watts s Logtck.

Now hope exalts the fisher's beating heart ; Now he turns pale, and fears his dubious art. Gay.

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When a question of orthography is dubious, that practice has, in my opinion, a claim to preference, which preserves the greatest number of radical letters, or seems most to comply with the general custom of our language. Johnson. Plan of Dictionary.

In clay-formed beds the trickling streams collect, Strain through white sands, through pebbly veins

direct ;

Or point in rifted rocks their dubious way, And in each bubbling fountain rise to day. Darwin.

Where Reason's meteor-rays, with sickly glow, O'er the dun gloom a dreadful glimmering throw ; Disclosing dubious to the' affrighted eye O'erwhelming mountains tottering from on high, Black billowy deeps in storms perpetual tossed, And weary ways in wildering labyrinths lost. Beattie.

You'll find there are such shortly, By its rich harvests, new disease, and gold j From one-half of the world named a whole new one, Because you know no better than the dull And dubious notice of your eyes and ears. Byron.

DUBITZA, a town and fortress in Bosnia, European Turkey, situated on the right bank of the Unna, near its confluence with the Save ; and opposite a fortified Austrian town of the same name in Croatia. The Austrians, in the cam- paign of 1788, twice attempted to take it by storm, and it at last surrendered ; but, at the peace of Sistov, it was restored to the Porte. Population 6000. Twelve miles north-east of Kostainitza : the Austrian town has about 1600 inhabitants.

DUBLIN COUNTY, the metropolitan county of Ireland, lies on the east coast of that country, immediately opposed to the Welsh coast : it is between 53° 10′ and 53° 37′ N. lat., and 6° 36′ W. long, from Greenwich. The boundaries are, on the north the county of Meath, on the west parts of Kildare and Meath counties, on the south the county of Wicklow, and on the east the Irish sea. Its sea-front is terminated by the Nanny Water on the north, and by Bray River on the south.

This county contains 240,113 statute acres: seventy-three parishes and fourteen parts of pa- rishes, with 693 townlands ; and is divided into eight baronies and one half barony. The surface of that part north of the river Liffey is flat and badly supplied with water, on which account it is less inhabited by gentry but more applied to agriculture: the surface of the southern side is a beautiful inclined plane, ascending gradually from the sea-shore to the foot of the Dublin and Wicklow Mountains. The soil in this part is lighter than the rich loam in the northern baronies, but this disadvantage is not felt, as from the na- tural beauty of the country south of the Liffey it is almost wholly appropriated to the demes- nes of the gentry of Dublin and to marine villas for the summer season.

The entire county may be considered as natu- rally divided into two parts, by a line drawn from the village of Newcastle to Rathfarnham, where it will form a very obtuse angle with its new di- rection, which may be represented by a line drawn from Rathfarnham to Booterstown, where the limestone crops out on the strand : all north of this line rests on a base of floetz limestone, except one patch extending from Skerries to Bal- briggan, which rests on transition rocks. Fuel

is scarce in the centre of the county, aithoug?; there are coals at Naul and an extensive turf bog at Gapistown, but the coal vein is not worked. The northern baronies are still in a very wild and uncultivated state, although much benefited by the new Drogheda road by Ashbourne : a place hitherto almost unknown. The tract be- tween the great western road near Rathcool, and the Blessington road, with the Golden Hill and Ballinscorney, rests on slaty rock. The remain- der of the county, with little exception, is of granite formation ; the field of granite commenc- ing at Williamstown strand and extending to Brandon Hill in the county of Kilkenny, having an average

breadth, in that distance, of eleven miles.

There are few good harbours on tne coast of this county ; piers have been constructed at Bal- briggan, at Howth, Sec., and an extensive asylum harbour at Kingstown, enclosing 226 acres by two piers of several kants, having a depth of twenty-six feet at low water. The llolyhead and Liverpool mail packets sail from this asylum, and it is in contemplation to connect it with Ui3 Ringsend docks by a ship canal, or else to con- vey merchandise hence to the city of Dublin by a rail-way : the distance is about six miles and a half. It was here that his majesty George IV. embarked in 1821, and a handsome obelisk, bear- ing an appropriate inscription, is erected on the spot, to commemorate the event. Kingstown harbour is too large, and the pier should have been faced with cut stone down to the founda- tion.

DUBLIN, the metropolis of Ireland, the second city in his majesty's dominions, is situated in the province of Leinster, and county of Dublin. The river Liffey, which faljs into Dublin Bay, immediately below the custom-house, divides the city into two nearly equal parts. Dublin lies seventy-two miles west of Holyhead in Wales, 303 south-west of Edinburgh, and 420 north- west of London. Long. 6° 6'. W., lat. 53° 2tf N.

Dublin is a place of great antiquity; it was anciently confined to the south side of the Liffey. In the tenth century, after the fortifications of Dublin were repaired by the Ostmen, the walls of the city, including those of the castle, did not occupy more than an Irish mile ; they extended from Wine-Tavern gate to Audeon's Arch, and were continued thence to Newgate, now Thomas-street ; they were continued to Ormond's-gate, or, as it has been since called, Worm wood- gate ; thence to the Whitworth- bridge, and along the banks of the river to Newman's Tower, nearly the present site of the south entrance of Essex-bridge ; and, from Newman's Tower, in an oblique direction, to Dame's-gale, at the west end of Dame-street. From the gate at the south-west angle of the castle, the wall ran to Nicholas-gate, and was continued thence to Newgate. The principal streets without the walls were, on the west, New- row, Francis-street, Thomas-street, and James's- street; on the south, Patrick-street, Bride-street, and Ship-street ; and on the east, Dame-street, George's-lane, and Stephen-street. That space of ground now occupied by Crane-lane, Temple- bar, Fleet-street, Lazar's-hill, or, as it is now

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calied, Townsend-street, Crampton, Aston's, George's, and Sir John llogerson's quays, &c., was then overflowed by the Liffey. On the north side

of the river there were only Church- street, Mary's-lane, Hammond-lane, and Pill- lane, then built but on one side as far as Mary's Abbey, which terminated the extent of that part of the town to the east. Grange-gorman, Stoney- batter, now called Manor-street, and Glassma- nogue, were then villages at some distance from the city; and, at the latter, the sheriffs have held their courts in times of the plague. In 1664 the inhabitants amounted to 2.565 men, and 2986 women, Protestants; and 1252 men, and 1406 women, Roman Catholics: in all 8159.

Ptolemy, who flourished about A. D. 140, says, it was anciently called Aschcled. In 155 Alpinus, whose daughter, Auliana, was drowned in the Liffey, changed the name from Aschcled to Auliana. It was afterwards named Dublana, and Ptolemy calls it Eblana. Dublana, whence Dublinum and Dublin, is evidently derived from Dub-leana, the place of the black harbour or lake, or rather the lake of the sea ; the Bay of Dublin being frequently so called. The city has had a variety of names. The Irish call it Drom-cholL-coil, ' the brow of a hazel wood/ In 181 Eogan, king of Munster, being on a royal tour, paid a visit to this place, which was then called Atha Cliath Dubb-Line, ' the passage of the ford of hurdles over the black pool.' The harbour of Dublin was likewise known by the name of Lean-Cliath, or Leam-Cliath, from Lean or Learn, a harbour ; and from Cliath or Cliabb, which literally signifies a hurdle or any thing made of wicker-work; it also signified certain wires formed with hurdles, and placed in rivers and bays by the ancient Irish, for the purpose of taking fish; whence any river or bay, wherein these wires were fixed, had the name of Cliath or Cliabb annexed to it, to signify the establishment of a fishery. Dublin, therefore, being originally built on or near one of these harbours, was anciently called Baly-lean-Cliath ; that is, the town on the fishing harbour. It is still distinguished in the Irish language by the appellations of Ath-Cliath, 'the ford of hurdles,' and Ballyath-CUath, ' the town of the ford of hurdles,' the inhabitants having formerly had access to the city, over the river, by hurdles '.aid on the low marshy grounds adjoining the water ; and this name was also extended to the north side of the river, from a temporary bridge of hurdles thrown over the Anna-Liffey, a corrup- tion of Auin Louiffa, or the swift river, so termed from the rapidity of the mountain floods. The north side was enlarged by Mac-Turkill, the Danish prince; who, notwithstanding, fixed his residence on the south side, and abandoned the northern town ; which, from the original country of the invaders, was called Eastmantown, then Ostmentown, since corrupted to Oxman- town. King Edgar, in the preface to his charter, dated 964, mentions Ireland, with its most noble city (nobilissima civitas) of Dublin. By the Fingalians, it is called Divelin, and by the Welsh Dinas Dulin, or the city of Dulin.

In 448 Alpin M'Eachard, king of Dublin, and all his subjects, are said to

have been converted to

Christianity by St. Patrick. In 499 the Ostmen, or Danes, having entered the Liffey, with a fleet of sixty sail, made themselves masters of Dublin and the adjacent country, and soon after envi- roned the city with walls. About 1170 Dermod M'Murrough, king of Leinster, having quar- relled with the other princes of the kingdom, a confederacy was formed against him by Roderic O'Connor, monarch of Ireland. Dennod ap- plied to Henry II., king of England, who sent over a number of English adventuiers, by whose assistance he was reinstated in his dominions ; in 1171 the descendants of the Danes still con- tinuing to hold possession of Dublin, it was besieged and taken by a powerful party of the English, under Raymond-Le-Gros. M'Turkill, the Danish king, escaped to his shipping ; but returned soon after, with a strong fleet, to recover the city ; he was killed in the attempt, and in hi;n ended the race of Easterling princes in Ireland. In 1172 Henry II. landed at Wa- terford, and obtained from Richard, earl Strong- bow, who married Eva, the daughter of M'Murrough, and by compact was his successor, a surrender of the city of Dublin ; where he built a pavilion of wicker-work near St. An- drew's church, then situated where Castlemarket lately stood, and there entertained several Irish princes, who voluntarily submitted to him, on condition of being governed by the same laws as the people of England. Henry also held a parliament here. In 1173 he granted his first charter to Dublin, and by divers privileges en- couraged a colony from Bristol to settle in it. In 1210 upwards of twenty Irish princes swore allegiance to king John at Dublin ; engaging to establish the English laws and customs in tne kingdom ; and in the same year courts of judi- cature were instituted. In 1216 Magna Charta was granted to the Irish by Henry III., an entry of which was made in the red book of the ex- chequer at Dublin. In 1217 the city was granted to the citizens, in fee-farm, at 209 marks per annum; and, in 1227 Henry ordained, that the charter granted by king John should be kept inviolably » In 1404 the statutes of Kilkenny and Dublin were confirmed in a parliament, held at the city, under the carl of Ormond. The charter of the city of Dublin was renewed in 1609 by James I. The civil government of the city was anciently under the management of a provost and bailiffs ; in 1308 John le Decer was appointed the first provost, Richard de St. Olave and John Stakebold bailiffs. In 1409 the title of the chief magistrate was changed to that of mayor, when Thomas Cussac was appointed to the office, Richard Bove and Thomas Shortall being bailiffs ; the office of bailiffs was change 1 to sheriffs in 1547. In 1660 Charles II. gave a collar of SS. and a company of foot-guards to the mayor ; and in 1665 he conferred the title of lord mayor on the chief magistrate, to whom he also granted £500 per annum, in lieu of the foot company. Sir Daniel Bellinghana was tli3 first lord mayor of Dublin; Charles Lovet and John Quelsh'were sheriffs the same year. In

1672 Arthur, earl of Essex, introduced new rules for the better government of the city ; and in 1683 the old Tholsel was built by Iniˆo

Jones, for the magistrates to hold their courts, assemblies, &c.

The hospital for lying-in women, founded by Dr. Bartholomew Mosse, and opened in 1757, stands on the north side of Great Britain-street. The building, designed by Cassels, is light and elegant ; a beautiful steeple rises in the centre, and the wings are formed by semicircular colon- nades on each side. Adjoining the east colon- nade is the rotunda, where balls and assemblies are held, and concerts performed for the benefit of the charity. The blue-coat hospital was founded on the west side of Queen-street, by Charles II., in 1670, for educating the children of reduced freemen of the city ; but the original building being greatly decayed, was taken down, and the new blue-coat hospital, situated on Ox- mantown-green, was begun in 1773. The front is enriched by four three-quarter Ionic columns, supporting a pediment in the centre, over which the steeple rises, embellished with Corinthian and composite columns in an admired taste. Connected with the front by circular walls, or- namented with balustrades and niches, are the school on one side and the church on the other, which form two well-proportioned wings, each crowned with a small turret ; the steeple is not yet finished. The royal hospital at Kilmainham, for the support of invalids of the Irish army, was founded by king Charles II., on a plan similar to that of Chelsea. It was completed in 1683, and cost upwards of £23,500. It is situated at the west end of the town, on a rising ground, near the south side of the river, from whence there is an easy ascent to it through a handsome avenue and park. It is of a quadran- gular form, enclosing a spacious area, laid out in grass-plots and gravelled walks ; an arcade is carried along the lower story in each square, to the entrance of the hall and chapel, which are both curiously decorated ; in the former are se- veral whole length portraits of royal personages, and other distinguished characters. Madam Steven's hospital, the foundation of which was laid in 1720, is a quadrangular building, plea- santly situated on the banks of the river, near the west end of James's-street ; the hospital for lunatics, in Bow-lane, founded by Dean Swift, and opened in 1757; Sir Patrick Dun's hospital, in which the royal college of physicians hold their meetings and examinations ; the Cork street fever hospital ; the new Meath hospital, built by Mr. Pleasants ; Mercer's hospital, in Johnson's place, founded by the amiable Mrs. Mercer; Simpson's hospital, in Great Britain-street, an asylum for blind and gouty men ; the house of industry, in Brunswick-street, for the aged and infirm ; the hospital for incurables, on the Don- nybrook-roaa ;

and the charitable infirmary, Jervis-street, are the most conspicuous in alleviating the afflictions of disease, and ministering to the numerous calls of the impoverished. There are several noble institutions also, that derive aid, either wholly, or in part, from parliament; such are the Hibernian school, in Phoenix park for the education of the children of soldiers, and the Royal Marine school, for the maintenance and education of the children of distressed sauors.

Dublin is seated in view of the sea on the east, and a fine country which swells into gently rising eminences on the north and west, while it tower? boldly up in lofty mountains, that bound the hori- zon, on the south. The city itself cannot be seen to full advantage on entering the harbour; but tht approach to it exhibits a fine prospect of the country for improvement and cultivation, inter- spersed with numerous villas, that enliven this delightful scene, which, beginning at the water's edge, is continued all over the coast to the north of the bay, as far as the eye can reach, and is finely contrasted by a distant view of the Wick- low mountains on the south, where the conical hills, called the Sugar Loaves, contribute not a little, by the singularity of their appearance, to embellish the landscape, so extensive and pic- turesque as not on be equalled by any natural scenery in Europe, except the entrance of the Bay of Naples, to which it bears a striking resemblance.

The form of Dublin is rectangular. From the royal hospital at Kilmainham, at the western ex- tremity of the town, to the east end of Townsend- street, the length is two miles aud a half, and its greatest breadth two, and it is about nine miles in circumference. It contains about 16,000 houses, whose inhabitants are estimated at 180,000.

The civil government of Dublin is executed by a lord mayor, recorder, two sheriffs, twenty- four aldermen, and a common-council composed of representatives from the twenty-five guilds. Dublin, being the seat of government, and of the chief courts of justice, has received many charters and ample privileges from the kings of England, since the reign of Henry II. Richard II. erected it into a marquisate in favor of Ro- bert de Vere, earl of Oxford, whom he also created dhke of Ireland. It is an archiepis- copal see, and sends two members to parliament. Dublin is remarkable for the breadth and ele- gance of its leading streets; from the Canal- bridge, in Baggot-street, along the north side of Stephen's-green, or by Merrion-square into Graf- ton-street and College-green, thence through Westmoreland-street, Sackville-street, Rutland- square, Gardiner's-row, and so to Mountjoy- square, is probably the most elegant succession of city avenues to be seen in any European capital ; but the back streets are a melancholy contrast, very few of them presenting the ap- pearance either of wealth or comfort. There are five handsome squares in the city, the largest of which,

called Stephen's-green, is one mile in circumference, enclosed by iron-railing, mounted on a dwarf wall, outside of which is a broad gravel-walk, protected from the carriage-way by chains and pillars. In the centre of this great level space, stands a fine equestrian statue, by Van Mort, of king George II. Merrion-square is a large rectangle, surrounded by noble mansions ; those on the north side enriched, in the basement story, by rustic work in stone ; these were built from the designs of John Ensor, esq., who laid out this fine square. Rutland- square is the Grosvenor-square of Dublin ; a few of the Irish nobility still retain their man sionshere, the noblest of which is Charlemont-

House. Considerable improvements are still carrying on in the avenues of Dublin, under the direction of the Wide-street commissioners, par- ticularly in the vicinity of St. Patrick's cathedral, decidedly the most miserable part of the city or its liberties.

Dublin is divided into four districts, each sub- mitted to the care and protection of a police magistracy, who have an office and court within their respective districts. The head office of police is in the Castle division ; to this belong thirty-one peace-officers, and to each of the other, seven. Police stations are established at conve- nient distances round the city, and a patrol of horse-police is in constant motion during the greater part of each night, even to a distance of seven miles from the city. The old archiepis- copal palace has been converted into the horse-

- barrack of the police corps.

The public buildings of Dublin are both nu- merous and noble: the most architectural is the Bank of Ireland (formerly the Parliament House) the foundation of which was laid in 1729 ; it was erected under the instruction of Sir Edward Lovet Pearce, after a design by Mr. Cassels. The original building consisted of a grand colon- nade of the Ionic order, forming three sides of a rectangular court-yard. The central colonnade is connected with the two noble porticos, forming the east and west fronts, by circular curtain walls, ornamented with three-quarter columns. These last-mentioned porticos are built from the designs of Messrs. Gandon and Parke. No part of the interior remains as formerly, except the corridors and the House of Lords, in the last of which is a fine statue of George III. by Bacon jun. The cash office stands on the site of the old House of Commons, and is a very spacious, light and beautiful apartment. The establishment for en- graving and printing of bank notes, under the direction of Mr. Oldham, exhibits a

singular specimen of ingenious mechanism; it was visited by his present Majesty during his stay in Ireland in 1821. The Gene'ral Post Office, established in 1784, stands in Sackvi.le Street ai the intersec- tion of four leading streets and adjacent to Nel- son's pillar. The portico in front, of Portland stone, is a remarkably beautiful piece of archi- tecture : the ornaments of the frieze are not exceeded by any similar designs in the city. This very large and convenient building was raised for the comparatively moderate sum of £50,000 from the design of Francis Johnston Esq. The Stamp Office, in William Street, is also a fine building of cut granite stone raised in the Wick- low Mountains.

The Castle of Dublin, now the town residence

. of the lord-lieutenants who formerly lodged at the Iloyal Hospital of Kilmainham, may be consi- dered as divided into two parts, called the upper and lower yards. The upper is a quadrangle of brick buildings, with ornamental stone archi- traves to the windows; the entrance to his excel- lency's apartments is by a fine colonnade, ante- hall and grand flight of steps; opposite to the state entrance is a handsome building, containing the apartments of the guard of honor and of several of the household ; the basement is an arcade supporting an open colonnade surmounted

by a pediment, above which rises an octagonal tower crowned by a tapering dome. This pretty building is terminated as wings, by two lofty archways of rustic-work, on the crowns of which rest statues of Justice and Fortitude. The Castle was built by Henry de Londres, arch- bishop of Dublin in 1220, but not used as the vice-regal residence until the year 1560, by com- mand of queen Elizabeth, since which time it has received so many additions that it does not present the appearance of any regular edifice, but an assemblage of irregular buildings raised for some immediate necessity. In the state apartments there is a fine room, eighty- two feet in length, called St. Patrick's Hall, having the ceiling ornamented by three characteristic pain- tings of Waldre's. Here the knights of the noble order of St. Patrick were regaled after their original institution, and here, by annual balls, the birth-day of the great patron saint of Ireland is celebrated. The lower Castle yard contains several offices, the Old Treasury, the ordnance office, &c., beside the very beautiful chapel lately erected after a design by Francis Johnston Esq. the very best specimen of modern pointed archi- tecture in the city. It is built of cut stone, highly enriched with carved heads and Gothic: pinnacles. Nor does the interior lose any of that masterly style so conspicuous in the exterior. The regal seat and front pannels of all the pews are adorned with armorial bearings in carved oak of a series of viceroys; the great window em- bellished v ;th stained glass, and the ceiling de- corated with highly enriched pendants. The first stone of the chapel was laid by his grace John duke of Bedford, in 1807, and the expense of its

erection was about £40,000. The Record Tower, adjoining the chapel, was erected by king John, its walls are fourteen feet thick : here James II. established a mint and secreted a quantity of the royal plate. Birmingham Tower, another of the flankers of the town wall, stands at a little distance from the record tower. The old building of this name having been destroyed by fire, the present unmeaning mass was erected in its stead.

The Royal Exchange contiguous to the castle, is a magnificent pile, erected after a design of Mr.Cooley ; the ground plan is simply a circle in- scribed in a square. It iswholly built of Portland- stone, has three fronts adorned with pillars and pilasters, and contains a noble area within, lighted by a beautiful and spacious dome, for the transac- tion of commercial business. In the circular ambu- latory, fronting the principal entrance door, stands a handsome statue of his late majesty in Roman military costume designed by Van Nort. Besides tha royal exchange, which is now almost dis- used for commercial purposes, there are two other handsome buildings faced with stone ap- propriated to the accomodation of merchants, the commercial buildings in College Green and the corn exchange on Burgh Quay, in the former of which the chamber of commerce hold their meetings. The Custom House is acknowledged to be one of the noblest buildings in the city; its south front towards the river is built of Portland stone, extends 375 feet, and is adorned with a beautiful portico in the centve, consisting of

four Doric columns supporting an enriched en- circular hall of sixty-four feet diameter : they are

all of equal dimensions, rather small, but lofty and well lighted. The rolls court is also in the

same building. The extent of the grand front of the four courts, presented to the quays, is 450 feet, and its depth 170. It is built of cut gra- nite, the ornamental parts being of Portland stone : the expense 13 estimated at £200,000. The inns of court, at the upper end of Ilen-

tablature and pediment, the tympanum of the latter decorated with a group of figures in alto relievo, representing Hiberr.ia and Britannia pre- senting emblems of peace and liberty. A mag- nificent dome supporting a cupola, on whose apex stands a colossal figure of Hope, rises nobly from the centre of the building to a height of 125 feet. The north front is of equal extent ; but, the

ornamented parts excepted, is entirely of granite rietta Street, occupy a

beautiful and singularly stone, which produces rather a sombre effect, original building, designed by Mr. Gandon. The only handsome apartments within for pub- The front is hewn of granite, the ornamental parts lie use are the Board room, and what is called being of Portland stone. The plan consists of the Long room. To the custom house are at- a centre and wings, each of the latter being tached large and well designed docks, much too crowned with noble pediments. In the central capacious and of too expensive a character for compartment of the three great subdivisions of the trade of Dublin. The old dock, which is the front, beautiful panels are inserted, filled quite sufficient for the present trade, is 400 feet with allegorical representations in alto-relievo; in length by 200 in breadth; the second dock the central of which represents the judicial measures 330 feet by 250, and the third or inner authorities of Ireland, receiving from queen basin is 650 in length by 300 in breadth. Ex- Elizabeth a translation of the Bible and a charter tensive stores have also been erected : the tobacco of incorporation. The door-ways of the wings store is 500 feet Ion ?j its breadth being 160. are ornamented by caryatides, the only specimen

Besides these docks which belong to government, and are leased for about £7000 per annum to private individuals, there are canal docks on both sides of the river which alone would afford abundant accommodation to all the shipping en- gaged in the Dublin trade; these, of course, are quite unemployed. These seven great basins are faced with limestone of the very best description and in a workmanlike style. The linen hall is

of this description of sculpture in Dublin. In one of the win^s is the dining hall of the benchers and students of the inns ; and in the other are the Prerogative Court and Consistorial Office, 8cc. A law library is now (1827) erect- ing, with a front of cut stone, adjacent to the back entrance to the inns on the site of the pri- mate's old city palace. There are other courts in Dublin and its vicinity. The city court-house,

a very extensive range of building, not uninter- or Sessions House, adjacent to Newgate, is an

esting in external appearance : a handsome statue of his present majesty has lately been erected

uninteresting building, and rather badly adapted to the purpose of its erection. The Court of

there by the trustees ; it was executed by Kirk. Conscience, in Coppinger's Row, where the ex- A most useful building has lately been erected, lord mayor, or his substitute, presides, is held in to be called the National Mart, or Usher's Quay, a miserable apartment in the basement story of

the object of which is to encourage the small capitalist, who is here to be supplied, not only with an immediate sale for the produce of his labor, but also with a loan, to enable him to bring something more valuable to market as a second venture.

There are two noble buildings appropriated to the accomodation of the legal profession, and to the administration of justice. The principal

the City Assembly Room: besides four Manor Courts, only one of which has a suitable court house ; and the Insolvent Court, held in a very humble description of building.

The ecclesiastical division of Dublin is into nineteen parishes, to each of which a church is attached. There are also the cathedral of St. Patrick, Christ Church, which is only collegiate though called metropolitical ; seven assistant

is the stately edifice called the Four Courts, or chapels to the parish church of St. Peter, besides

Inn's Quay : the first stone was laid in March many private chapels, which are independent of

1786, by his grace the duke of Rutland, but the

whole structure was not completed for fourteen

years after. The design which is by Cooley, but

executed by Candor, is truly noble. It consists

of a grand central building, with squares on each

the diocesan, such as those of Kilmainham Hos- pital; the Foundling Hospital; the Lying-in Hospital ; the Blue-coat Hospital ; the Marine School; Hibernian School, &c. The Roman Catholic division of parishes does not corre-

side, enclosed by ranges of lofty buildings, con- spond with that of the established church ; but

taining the different offices of records, &c. The their places of worship are numerous, and the

front of the centre is adorned with an elegant chapels in Anne Street and Exchange Street pos-

picture of six Corinthian columns, supporting a sessed of much architectural elegance. The

frieze and pediment; on the apex of the latter Metropolitan Chapel in Marlboiough Street,

stands a statue of Moses, and at each extremity when finished, will be a great ornament to the

are allegorical figures of Justice and Mercy. Behind the pediment and statues rises a circular lantern, sixty-four feet in diameter, crowned by a lofty dome. The spacious court yards on each side are enclosed in front by light and beautiful open arcades, in the centre of which are great coach ways, ornamented by groups of allegorical emblems. The four law courts are contained in

city. The great aisle is 150 feet in length, and 120 in breadth ; the exterior is still in a very unfinished state. The Quakers, Moravians, Methodists, &c., have meeting houses in various parts of the city: the number of Methodists' meeting houses is not increasing; on the contrarj one of them has been purchased for a free church, for the Protestant poor; and proposals

the central buildings, radiating from a spacious have been made for the purchase of a second

The cathedral of St. Patrick is a venerable pile, originally possessing much grace, beauty, and lightness of style. The ground plan is a single cross with four side aisles: the nave, 15(5 feet in length, is adorned with several fine monu- ments. Here is the simple slab, inscribed with an epitaph written by himself, consecrated to the memory of Swift; and an adjacent column supports an equally plain tablet, with an insciption, also from the pen of dean Swift, to Stella. The mo- numents of Dr. Marsh, the founder of the public library, called after his name, and Dr. Smyth, the endower of the Bethesda, are the most rich and beautiful designs. The south transept has lately been refitted, and in levelling the floor some curiously figured tiles, forming the steps of an ancient altar, were discovered, which, together with the remains of the altar, are left uncovered for the gratification of the public taste in matters of antiquity. The northern transept, lately rebuilt, is used as the parish church of St. Nicholas without. The choir of St. Patrick's is strikingly picturesque ; it is lighted by five lancet-shaped windows at the summit of the eastern wall, which shed an indefinite and partial light upon the various objects beneath. The organ is large and fine toned : the echo of

the chancel most grateful to the ear. The walls and panelled gallery fronts decorated with the helmets, swords, and banners of the knights of Sr. Patrick; and the oaken canopied stalls adorned with their armorial bearings, emblazoned in golden characters. Near the communion table is the monument of the great earl of Cork ; opposite is a tablet to duke Schomberg; while, amongst the fantastic relics of the place, are preserved the skull of the duke, per- forated by a musket ball, and the chain ball by which lord Loften was slain at the siege of Li- merick. St. Patrick's Cathedral was built in 1190, upon the site of a church said to have been founded by St. Patrick himself. The steeple was added in 1370, and the spire in 1749; the ball of which is 223 feet from the level of the street. The collegiate church of the Holy Tri- nity, called also Christ Church, is said to have been built in 1038, by Litricus, the son of Am- lane, an Ostman king of Dublin. Its site had been appropriated to sacred purposes by St. Patrick, who is said to have preached to the heathen in the precise vaults on which this an- cient edifice stands, these being the stores used by the Danes for lodging merchandise. The ori- ginal building was destroyed almost wholly by tire, and, with the exception of a fine Norman door-way in John's Lane, little either of the ancient architecture, or of any intelligible de- sign, is discoverable in the present mutilated structure of Christ Church. In this church the reformed service was first read in Ireland ; and here also Lambert Simnell was crowned by the title of Edward VI. St. Andrew's Church still exhibits some few traces of Norman architecture, and is worth the attention of the antiquarian. Seve- ral of the other parish churches are well designed, and executed in a masterly style : St. Werburgh's, Thomas's, and Catherine's, are not unlike each other in internal arrangements, and are all spacious and venerable. St. Werburgh's had once a handsome spire, which the parishioners VOL. VII.

removed, from an apprehension that the founda- tion was sinking. St. Paul's, lately erected, has a low and clumsy spire; St. George's possesses not only a grateful and delicate spire, but ul»o a beautiful Grecian portico, supporting a frieze and pediment; the elevation resembles that of St. Martin's, in London, but is probably less heavy, owing to the omission of the Graeco- Italian block ornaments of the latter. The parishioners of St. Michan's are about to rebuild their church, the present being decayed to a perilous extent : underneath the old church are the vaults remark- able for their antiseptic power; bodies deposited here 120 years ago are found as perfectly pre- served this moment as if they had undergone the process of embalming.

Amongst the useful institutions of Dublin are, — the Royal Dublin Society, for the encourage- ment of husbandry and the arts, established in 1731 : here public lectures are delivered by the society's professors, in geology, mineralogy, bo- tany, and chemistry : and free-schools are opened for

instruction in drawing and sculpture. The Society occupy the noble mansion of the dukes of Leinster, built from Cassel's designs, and perhaps one of the noblest private residences in Europe ; — • the Royal Hibernian Academy, for the advance- ment of the arts, built at the sole expense of Francis Johnston, Esq., now president, who be- stowed it upon the artists of Ireland, to whom his present majesty had most graciously granted a charter of incorporation (the first exhibition of the Royal Hibernian Academy took place in 1826); — and the Royal Irish Academy situated in Grafton Street, whose Transactions contain many valuable articles; in the library are several ˆvaluable MSS. The principal public libraries in Dublin are, those of the college ; the Dublin Society, rich in botanical works ; the Dublin Library Society, in D'Olier Street; and Marsh's Library, in Kevin Street. Since the erection of the Royal Hibernian Academy, the committee of the Irish Institution have felt themselves called upon to contribute their aid to the advancement of the arts in Ireland, and in consequence erected a handsome gallery in College Street, for the exhibition of the works of the old masters, a s.tuation both central and convenient.

Trinity College was founded by queen Eliza- beth, and endowed with many valuable livings by James I. The foundation was laid in 1591, and students were admitted in 1593. By the original charter, the corporation consisted of the provost, three fellows, and three scholars ; but it is now enlarged to seven senior fellows, eighteen juniors, and seventy scholars, besides the provost ; each of the junior fellows having nearly 100 pri- vate pupils to instruct, independent of the de- livery of occasional public lectures. The inde- pendent members are divided into an equal number of classes, called fellow-commoners, pen sioners, and sizars. The provost, fellows, masters, and scholars, return two members to parliament, and the provost and senior fellows alone transact all the ' nugotia collegii.' A senior fellowship is supposed to be worth about £1500 per annum. There is a limit placed to the number of pupils permitted to enter under a junior fellow in each class, viz. thirty-six; but this limit is so great

that 144 may thus be intrusted to one lecturer to instruct in the short periods of each year called terms. The scholars have the privilege of voting for representatives to parliament ; commons for five years (the duration of a scholarship) ; cham- bers at half fire and rent, and £4 per annum. They are also eligible to chapel markerships, and assistant librarianships ; but these places are few in number, and neither valuable nor permanent. The

independent members merely receive in- struction, for which they pay their tutors, the fellow-commoners sixteen guineas, the pensioner eight guineas, per annum (the sizars are exempt from charges), besides some small annual fees. The first class graduate after three years and a half, the second and third not until the expira- tion of four years. During the collegiate course quarterly examinations are held in the theatre, at a certain number of which every student is obliged to answer in the prescribed course, from which it follows that in this college no pupil can possibly graduate without having obtained a cer- tain quantity of information, while the most dis- tinguished are rewarded by the collegiate honors of premiums and certificates. The number of names on the college books has for some few years amounted nearly to 2000.

The buildings of Dublin College are numerous and elegant. The grand front, presented to Col- lege Green, is entirely of cut granite, the orna- mental parts being of Portland stone. It mea- sures 300 feet in length, is enriched by a centre beautifully relieved by four noble three-quarter Corinthian columns supporting a pediment, and terminated by two lofty pavilions, surmounted by balustrades, and adorned with graceful coupled pilasters. Within are three large squares, and one smaller, called formerly the quadrangle. The Parliament Square, 316 feet long by 212 in breadth, is enclosed by lofty buildings (four stories in height) of cut stone, terminated by the beauti- ful porticoes of the chapel and theatre, which correspond while they oppose. The quadrangle contains the dining hall, vice-provost's residence, and a corresponding building (fellows' chambers) beyond the quadrangle in the Library Square, 265 feet in length by 214 in breadth, enclosed on three sides by ancient brick buildings, chiefly in- habited by the students, but, on the fourth, by the college library, the noblest apartment in the city of Dublin. To the north of the Library Square is that usually called Botany Bay, some- what larger than any of the others, and surrounded by lofty buildings. The College Park, contain- ing about twenty acres, is planted with noble elms. Here are the New Anatomy House, and the Printing House, a beautiful little Doric build- ing. The chapel and theatre have similarly beau- tiful fronts of Portland stone, consisting of porti- coes of four Corinthian pillars supporting a pediment; behind the porticoes, arcades open into a vestibule on each side, and in the centre or which are the entrances to the great hall and chapel. The hall contains an admired monu- ment to provost Baldwin, and several fine por- traits of eminent persons, former students, amongst whom are Swift and Burke. The dimensions of the chapel are equal, but the internal arrange- ment necessarily different from those of the

theatre. The dining hall is a singular design, the front, of cut stone, is adorned with coupled pilasters, and a shallow pediment; the great door opens on a broad terrace, approached by a flight of steps the entire breadth

of the building : over the ante-hall, leading to the refectory, is the apartment in which the Historical Society hold their meetings. The library is an unpicturesque, though stately edifice : it is perforated by so many windows, that it defied the efforts of the artist to consult beauty of elevation. The chief library room (where his majesty Geo. IV. was received by the corporation) measures 210 feet in length by forty-one in breadth, is beautifully adorned with carved oak pilasters, and an in- dented frieze; while many fine busts of celebrated persons, standing on tapering pedestals, are ranged along either side : the inner, called also the Fagel Library, is fifty-two feet long, and contains the collection of a Dutch family, whose name it bears, of about 20,000 volumes. The manuscript room is over the Fagel Library : here are Persian and Arabic MSS., an autograph of king James II., and a most valuable collection of unpublished MSS. on Irish history and an- tiquities ; to the south of the library is the master's garden, being a continuation of the pleasure ground attached to the provost's house : this latter mentioned building is a very beautiful structure, built entirely of cut stone, from a design by lord Burlington. The College Museum does not contain many things of interest : there is here a curious model, by Mr. Bald, of the surface of the county of Mayo. The College Observatory is situated at Dunsink, three miles from the city, and the Botanic Garden at Beggar's Bush, about half a mile from College Green.

The College of Surgeons was endowed with a charter in 1784; the first licentiate was Thomas Wright, author of some valuable works on anatomy. It is a handsome building of cut stone ; consisting of a rusticated basement story, surmounted by a handsome facade, adorned with three-quarter columns, separated by large circular- headed windows : the present elevation is an im- provement by Mr. Murray : it stands in a com- manding position in Stephen's Green, at the corner of York Street. The School of Anatomy here is highly valued, and much visited by sur- gical students from England and Wales. The College of Physicians hold their meetings in Sir Patrick Dunn's Hospital, a noble building in Canal Street, erected at the expense of the mu- nificent testator whose name it bears. There are several private schools of anatomy in Dublin, in Park Street, Brunswick Street, &c., also well attended by students from various parts of Great Britain. Dublin possesses numerous classical schools, conducted by distinguished scholars of its university.

The river Liffey, which divides the city, is en- closed by magnificent walls of cut stone, from Ringsend to Bloody Bridge, a distance of about two miles, in which length it is crossed by seven noble bridges, six of cut stone, and one of cast iron : an additional bridge of cast iron is about to be thrown across the river, near the entrance of the Phrenix Park, and above the Royal Bar- racks ; and a magnificent arch spans the river.*

about one mile west of Bloody Bridge, called Sarah's Bridge.

Dublin is encompassed by a circular road, and enclosed between two canals of noble breadth ; these canals terminate in docks, communicating with the Liffey, capable of accomodating all the shipping that visits Dublin river, and of harbour- ing all the boats from the interior, which could be employed in transmitting the inland produce to this harbour for exportation : it is very proba- ble that most of the export trade of Ireland will yet be carried on, by means of these canals, at Dublin.

The population of Dublin has increased but little in the last twenty years, and the number of houses has rather diminished.

DUBNO, a town of Volhynia, European Russia, on the river Irwa. The great annual market of Poland, called the Contract, was for some time held here. The population was then more considerable ; at present it is not above 6600. Great numbers of Jews reside here, who carry on an extensive trade in wood, cattle, and raw produce, brought from Podolia, the Ukraine, Moldavia, &c. East of the town stands a castle, twenty-four miles S. S. E. of Lucko.

DUBOS (John Baptist), a learned and inge- nious French author, born at Beauvais in 1670. He finished his studies at Paris, and was in- trusted with the management of several import- ant affairs in Italy, England, and Holland. At his return to Paris, he obtained a prebendary ; he afterwards had a pension of 2000 livres, and the abbey of Notre Dame at Ressons, near Beauvais. He died at Paris, when perpetual secretary of the French Academy, on the 23d March 1742. His principal works are, 1. Criti- cal Reflections on Poetry and Painting, 3 vols. 12mo. 2. A Critical History of the French Monarchy m Gaul, 2 vols. 4to.

DUCAL, adj. From duke. Pertaining to a duke : as a ducal coronet.

BERTUCCIO FALIERO. (reading.) Decreed

In council, -without one dissenting voice, That Michel Steno, by his own confession, Guilty on the last night of Carnival Of having graven on the ducal chair The following words Byron.

DUCALS, letters patent granted by the ci- devant senate of Venice, or

written in the name of the senate, to foreign princes : so named be- cause the name of the doge or duke was prefixed to them.

DUCAREL (Andrew Coltee), an eminent archaeologist, was born at Caen in Normandy in 1713; but his father, removing to England, placed him at Eton, and afterwards at Oxford, where he took the degree of doctor of civil law. He became a member of Doctors' Commons, in 1743, and in 1755 was elected commissary, or official of the jurisdiction of the collegiate church of St. Catherine, near the Tower. In 1757 he was appointed librarian of the palace of Lambeth ; and the following year became com- missary of the diocese of Canterbury. He was one of the first fellows of the society of Anti- quaries. In 1762 he was elected F. R. S. ; and appointed in 1763, together with Sir Joseph Ayloffe and Mr. Astle, to methodise the records

in the State Paper office at Whitehall, and in the Augmentation office. Dr. Ducareldied at his house in South Lambeth, in May 1785. His principal works are, Anglo-Norman Antiquities, 1 767, folio ; a series of above 200 Anglo-Gallic, or Norman and Aquitaine Coins of the ancient Kings of England, &c., 1757, 4to. ; the History and An- tiquities of the Archiepiscopal Palace at Lam- beth, 4to. ; and the History of the Royal Hos- pital and Collegiate Church of St. Catherine, 4to.

DUCAS (Michael), a Greek historian who wrote a history of the empire, from the elder Andronicus to its termination. Though his style is barbarous, he relates facts not elsewhere to be found, and was an attentive observer of what passed. Nothing is known of his life except that he was often engaged in diplomatic employ- ments. His works were printed at the Louvre in 1649, folio; accompanied with a Latin version and notes. This was afterwards translated into French by Cousin, of whose History of Con- stantinople, printed at Paris, 1672, 4to., and at the Hague, in 1685, 12mo., it concludes the eighth volume.

DUCAT, n.s. \ From duke. Coins struck

DUCATOOJ/, n.s. J by dukes. See COINS. I cannot instantly raise up the gross

Of full three thousand dueats. Shakspeare.

There was one that died in debt : it was reported, •where his creditors were, that he was dead : one said, he hath carried five hundred ducats of mine iuto the other world. Bacon.

An ounce of silver, whether in pence, groats, or crowa pieces, stivers, or ducatoons, or in bullion, is, and eternally will be, of equal value to any

other ounce of silver. Locke.

DUCAT. See COINS. The origin of ducats is assigned by Procopius to Longinus, governor of Italy ; who, revolting against the emperor Justin II., made himself duke of Ravenna, and called himself Exarcha, i. e. without lord or ruler; and, to show his independence, struck pieces of money, of very pure gold, in his own name, and with his own stamp, which were called ducati. After him, the first who struck ducats were the Venetians, who called them zechini or sequins, from Zecca, the place where they first were struck. This was about A. D. 1280, in the time of John Danduli : but we have pretty good evidence, that Roger, king of Sicily, coined du-. cats as early as 1240. And Du Cange affirms, that the first ducats were struck in the duchy of Apulia. The chief gold ducats are, the single and double ones of Venice, Florence, Genoa, Germany, Hungary, Poland, Sweden, Denmark, Flanders, Holland, and Zurich. The double ducats weigh from five pennyweights seventeen grains, to rive pennyweights ten grains ; and the single in proportion. The Spaniards have no ducats of gold ; and the silver one, with them, is no real species, but only a money of account like our pound.. It is equivalent to eleven rials. The silver ducats of Florence serve there for crowns.

DUCAT-DON, a silver coin, struck chiefly in Italy ; particularly in Milan, Venice, Florence, Genoa, Lucca, Mantua, and Parma : though there are also Dutch and Flemish ducatoons. See COINS.

DUCE CREEK, called also Cross Roads and Salisbury, a town of the United States, America, in the state of Delaware, standing > on Duce Creek, - which runs into Delaware Bay. It is a celebrated wheat market, and has a flourishing trade with Philadelphia.

DUCENARIUS, Aa«vapioc, in antiquity, an officer of the Roman army, who had the com- mand of 200 men. The emperors had also du- cenarii among the procurators or intendants, called procuratores ducenarii. Some say that these had salaries of 200 sesterces ; as in the games of the circus, horses hired for 200 sesterces were called ducenarii. Others hold, that ducenarii were those who levied the 200dth penny, the officers appointed to inspect the raising of that tribute. In the inscription at Palmyra, the word occurs very often.

DUCK,n.s.,v.a.,v.n. SO From Dut. ducken ;

DUCK'ER, n. s. \adj) Swed. dyka ; Teut.

DUCK'ING-STOOL, ! and Welsh tuck;

DUCK'LEGGED, adj. [to dip or dive; from

DUCK'LING, n. s. | Goth, doggwa, wa-

DUCK'WEED, J ter. A bird of the

anas genus ; a term of endearment ; and, from the common habits of the duck, a stone made to dip in and out of the water in throwing : to dive as a duck, hence to bow ; and, as an active verb, to put under water.

The varlet saw, when to the flood he came, How without stop or stay he fiercely leapt ; And deep himself he ducked in the same, That in the lake his lofty crest was steept.

Faerie Queens.

Let the labouring hark climb hills of seas Olympus high, and duck again as low As hell 's from heaven. Shakspeare. Othello.

The learned pate

Ducks to the golden fool. Id. Timon.

Will you buy any tape or lace for your cap. My dainty duck, my dear-a ? Id. Winter's Tale. That we call duckweed bath a leaf no bigger than a thyme leaf, but of a fresher green ; and putteth forth a little string into the water, far from the bottom.

Bacon.

Back, shepherds, back ; enough your play Till next sunshine holy day ; Here be without duck or nod, Other trippings to be trod, Of lighter toes, and such court guise As Mercury did first devise. Milton.

The ducks, that heard the proclamation cried, And feared a prosecution might betide, Full twenty mile from town their voyage take, Obscure in rushes of the liquid lake. Dryden.

Thou art wickedly devout ; In Tiber ducking thrice by break of day. Id. Ducklegged, short waisted, such a dwarf she is, That she must rise on tiptoes for a kiss.

Id. Juvenal.

Ducklings, though hatched and led by a hen, if she brings them to the brink of a river or pond, presently leave her, and in they go. Ray on the Creation.

As some raw youth in country bred, When at a skirmish first he hears The bullets whistling round his ears, Will duck his head aside, will start, And feel a trembling at his heart. Swift.

She in the duckingstool should take her seat, Brest like herself in a great chair of state.

Dorset.

Reclaim the obstinately opprobious and virulent women, and make the duckingstool more useful.

Addiion's Freeholder, Every morn Amid the ducklings let her scatter corn.

Gay's Pastoral.

Neither cross and pile, nor ducks and drakes, are quite so ancient as handy-dandy.

Arbuthnot and Pope. But still 'tis rural — trees are to be seen

From every window, and the fields are green;

Ducks paddle in the pond before the door.

And what could a remoter scene show more ?

Cowper. The wanton coot the water skims,

Amang the leaves the ducklings cry, The stately swan majestic swims,

And every thing is blest but I. Burns. The love of offspring's nature's general law,

From tigresses and cubs to ducks and ducklings ; There 's nothing whets the beak or arms the claw

Like an invasion of their babes and sucklings.

Byron.

DUCK, in ornithology. See ANAS and DECOY. This fowl is furnished with a peculiar structure of vessels about the heart, which enables it to live a considerable time under water, as is ne- cessary for it in diving. This made Mr. Boyle think it a more proper subject for experiments with the air-pump than any other bird. A full grown duck being put into the receiver of an air-pump, of which she filled one third part, and the air exhausted, the creature seemed to bear it better for the first moments, than a hen or other fowl ; but, after about a minute, she showed great signs of uneasiness, and in less than two minutes her head fell down, and she appeared dying, till revived by the letting in of air. A young callow duck was afterwards tried in the same manner, and with the same issue, it being nearly reduced to death in less than two minutes. But it is ob- servable, that both birds swelled very much on pumping out the air, so that they appeared greatly larger to the spectators, especially about the crop ; it not being intended that any water fowl should live in so exceedingly rarefied air, but only be able to continue occasionally some time under water. The strongest instance of these creatures being calculated to live almost in any situation, we have in the accounts of the blind ducks in theCzirknitz Zee lake in Carniola ; which is sup- posed to communicate with another lake under ground in the mountain Savornic, and to fill or empty itself according to the emptiness or ful- ness of that lake. See CZIRKMTZ ZEE. The ducks which always frequent it in great numbers, are often carried down along with the water, and forced into the subterraneous lake to which it re- tires. In this unnatural habitation, many of these creatures undoubtedly perish, but some re- main alive. These become blind, and lose their feathers ; and in the next filling of the lake, both they and vast numbers of fish are thrown up by the water. In about a fortnight they are said to recover their sight and feathers.

DUCKING, plunging in water, a diversion anciently practised among the Goths by way of ex- ercise ; but among the Celtae, Franks, and ancient Germans, it was a sort of punishment for persons of Scandalous lives. At Marseilles and Bourbon,

before the revolution, men and women of scan- dalous life were condemned to the cale ; i.e. to be shut up in an iron cage fastened to the yard of a shallop, and ducked several times in the river. The same was done at Toulouse to blasphemers. DUCKING, a sort of marine punishment, in- flicted by the French before the revolution, on those who had been convicted of desertion, blas- phemy, or sedition. It was thus performed : The criminal was placed astride of a short thick batten, fastened to the end of a rope, which pas- sed through a block hanging at one of the yard- arms. Thus fixed, he was hoisted suddenly up to the yard, and the rope being slackened at once, he was plunged into the sea. This was repeated several times conformably to the sentence against the culprit, who had also several cannon-shot fastened to his feet. A gun was also fired to ad- vertise the other ships of the fleet, that their crews might become spectators.

DUCKING is also a penalty which veteran sailors pretend to have a right to inflict on those who, for the first time, pass the tropic of Cancer, the equator, or the straits of Gibraltar, in conse- quence of their refusal or incapacity to pay the usual fine levied on such occasions.

DUCKING-STOOL. See BRANK and CUCKING- STOOL.

DUCKO'Y, v. a. & n. s. Mistaken for de- coy : the decoy being commonly practised upon . ducks, produced the error. To entice to a snare : the snare laid.

This fish hath a slender membranous string, which he projects and draws in at pleasure, as a serpent doth his tongue : with this he duckoys little fishes, and preys upon them. Grew.

Seducers have found it the most compendious way to their designs, to lead captive silly women, and make them the duckoys to their whole family.

Decay of Piety.

DUCK Up, is a phrase used at sea by the steers-man, when the main sail, fore sail, or sprit sail, hinders his seeing to steer by a land- mark : upon which he calls out, duck up the clew-lines of these sails, that is, hale the sails out of the way. When a shot is made by a chace-piece, if the clew of the sprit sail hinders the sight, they call out duck up, &c.

DUCT, n.s. Lat. duclus, from duco, to lead. Guidance ; direction : a passage through which any thing is conducted.

This doctrine, by fastening all our actions by a fatal decree at the foot of

God's chair, leaves nothing to us but only to obey our fate, to follow the duct of the stars, or necessity of those irony chains which we are born under. Hammond.

A duct from each of those cells ran into the root of the tongue, where both joined together, and passed forward in one common duct to the tip of it.

Addison's Spectator.

It was observed that the chyle, in the thoracic duct, retained the original taste of the aliment.

Arbuthnot on Aliments.

DUCTILE, adj. } Lat. due tilis, from duc-

DUC'TILENESS, n. s. > tus, part, of duco, to lead.

DUCTIL'ITY. j Tensile ; easy to be

drawn out.

All bodies ductile and tensile, as metals, that will be drawn into wires ; wool and tow, that will be drawn into yarn or thread ; have the appetite of not discon- tinuing strong. – Bacon.

I, whan I yalue gold, may think upon The ductileness, the application ; The wholesomeness, the ingenuity, From rust, from soil, from fire ever free.

Donne

Thick woods and gloomy night Conceal the happy plant from human sight : One bough it bears ; but wond'rous to behold ! The ductile rind and leaves of radiant gold.

Dryden's JEneid.

Yellow colour and ductility are properties of gold : they belong to all gold, but not only to gold ; for saf- fron is also yellow, and lead is ductile.

Watts's Logick. He generous thoughts instils Of true nobility ; forms their ductile minds To human virtues. Philips.

Their designing leaders cannot desire a more duc- tile and easy people to work upon.

Addison's Freeholder.

Hence ductile clays in wide expansion spread, Soft as the cygnet's down, their snow-white bed ; With yielding flakes successive forms reveal, And change obedient to the whirling wheel.

Darwin.

DUCTILITY, in physics, a property possessed by certain solid bodies, which consists in their yielding to percussion or pressure, and in re- ceiving different forms without breaking. Some bodies are ductile both when they are hot and when they are cold, and in all circumstances. Such are metals, particularly gold and silver. Other bodies are ductile only when heated to a sufficient degree ; such as wax and other sub- stances of that kind, and glass. Other bodies, particularly some kinds of iron, called by the workmen red-short, brass, and some other me- tallic mixtures, are ductile only when cold, and brittle when hot. The degrees of heat requisite to produce ductility in bodies of the first kind, vary according to their different natures. In general, the heat of the body must be such as is sufficient to reduce it to a middle state betwixt solidity and perfect fusion. As wax for instance, is fusible with a very small heat, it may be ren- dered ductile by a still smaller one ; and glass, which requires a most violent heat for its perfect fusion, c(mnot acquire its greatest ductility until it is made perfectly red-hot, and almost ready to fuse. Lastly, some bodies are made ductile by the absorption of a fluid. Such are certain earths, particularly clay. When these earths have absorbed a sufficient quantity of water, to bring them into a middle state betwixt solidity and fluidity, that is to the consistence of a con- siderably firm paste, they have then acquired their greatest ductility. Water has precisely the same effect upon them in this respect, that fire has upon the bodies above-mentioned.

The ductility of metals is distinguished into three states by professor Chaptal, relative to the manner in which k is modified by various pro- cesses : viz. 1. Under the hammer : 2. Through the wire-drawer's plate ; and . 3. Between the laminating rollers. Metals ductile under the hammer he ranks thus, in the order of their duc- tility : gold, silver, copper, iron, tin, and lead. Through the wire-drawer's plate they rank in this order : gold, iron, copper, silver, tin, and lead. Some metals that are neither ductile under the hammer, nor through the plate, become very

considerably so, when an equal and gradual pressure is applied. Thus zinc

may be reduced into very thin and flexible leaves by being passed between the laminating cylinders.

DUDG'EON. Anciently dadgeon, a diminu- tive of dag ; or, says Dr. Johnson, from Germ. dolch, a dirk ; or degen, a sword. A dagger; a quarrel in which daggers are either used, or ' spoken ;' ill temper.

It was a serviceable dudgeon, Either for fighting or for drudging.

Hudibras.

Civil dudgeon first grew high, And men fell out they -knew not why. Id.

The cuckoo took this a little in dudgeon.

L'Estrangs.

DUDLEY (Edmund), an eminent lawyer and able statesman in the reign of Henry VII. who, with Sir Richard Empson, assisted in filling that rapacious monarch's coffers, by arbitrary prose- cutions of the people, on old penal statutes. They were both beheaded on the accession of Henry VIII. to pacify the clamors of the people for justice.

DUDLEY (John), duke of Northumberland, son of the above, a statesman memorable in the English history, for his unsuccessful attempt to place the crown on the head of his daughter-in- law, lady Jane Grey, who fell a victim to bis ambition ; was born in 1502, and beheaderl in 1553. Ambrose his eldest son was a brave, ge- nerous and able statesman under queen Elizabeth ; and received the appellation of the good earl of Warwick. Henry, his second son, was killed at the siege of St. Quintin. Robert, the third son, a man of bad character, was created earl of Leicester ; and was one of queen Elizabeth's favorites. His fourth son, was the unfortunate lord Guild ford Dudley, whose only crime was his being the husband of lady Jane Grey, for which he was beheaded in 1 554.

DUDLEY (Sir Robert), earl of Warwick and duke of Northumberland, was the son of Robert above-mentioned, by the lady Douglas Sheffield; and was born at Sheen in Surrey in 1573, where he was carefully concealed, to prevent the queen's knowledge of the earl's engagements with his mother. He studied at Oxford ; when his father dying, left him the bulk of his estate. Having a particular fondness for navigation, he fitted out a small squadron at his own expense, with which he sailed to the river Oronoco, and took and destroyed nine sail of Spanish ships. In 1595 he attended the earl of Essex, and the lord high admiral of England, in their expedition against the Spaniards ; when he was knighted for his gallant behaviour at the taking of Cadiz. He now endeavoured to prove the legitimacy of his

birth, in order to be entitled to his hereditary honors. But being overpowered by the interest of the countess dowager of Leicester, he applied for a licence to travel; and, being well received at the court of Florence, resolved to continue there, notwithstanding his receiving a letter of recall ; on which his whole estate was seized by king James I. and vested in the crown. He dis- covered at the court of Cosmo II., great duke of Tuscany, those great abilities for which he had been admired in England, and was at length

made chamberlain to his highness's consort. He there contrived several methods of improving shipping; introduced new manufactures ; and by other services obtained so high reputation, that, at the desire of the archduchess, the emperoi Ferdinand, in 1620, created him a duke of the holy Roman empire. He afterwards drained a vast tract of morass between Pisa and the sea ; and raised Leghorn, which was then a mean, pitiful place, into a large and beautiful town, improving the haven by a mole, which rendered it both safeand commodious ; and having engaged his highness to declare it a free port, he, by his influence and correspondence, drew many English merchants to settle and set up houses there, which was of very great service to his native country, as well as to the Spaniards. He was also the patron of learned men, and held a high place himself in the republic of letters. His most celebrated work is his Del Arcano del Mare, in 2 vols, folio.

DUDLEY (Rev. Sir Henry Bate), was born at Fenny Compton, August 25th 1745. His father, Henry Bate, was rector of St. Nicholas in Wor- cester, and of North Farmbridge, in Essex. The son also was educated for the church, and took his degrees in arts at the University of Cambridge, after which he became curate of Hendon in Middlesex. At this period of his life, however, he became entirely a man of pleasure ; but ex- hibited considerable literary talent, and estab- lished in succession.ˆ the Morning Post, and Morning Herald, newspapers. He also pro- duced some dramatic pieces, of which the prin- cipal were, The Rival Candidates, The Flitch of Bacon, and The Woodman. In the year 1781 the advowson of Bradwell juxta Mare, in Essex, was purchased in trust for Mr. Bate, sub- ject to the life of the incumbent; without waiting for whose demise, he commenced those extensive alterations and improvements of the church, par- sonage, and glebe, which are said to have cost him upwards of £28,000. But when in 1797 he applied for institution, on the death of the incumbent of the living, the bishop of London refused him on the ground of simony. Shortly afterwards the rectory lapsed to the crown, and Dr. Gamble was presented to it. This was con- sidered an exceedingly hard case, and very nearly ruined Mr. Dudley, who had now taken this ad- dition to his name in compliance with the will of a relative. In 1804 he was in some degree compensated for his loss, by a presentation to the rectory of Kilscoren in

Ireland, and the chan- cellorship of the cathedral of Ferns; to which, three years afterwards, was added the living of Kilglass, in the county of Longford. In 1812 he resigned the two Irish benefices, on being presented to the rectory of Willingham in the county of Cambridge ; and the same year was created a baronet. In 1816 he obtained a pre- bend in the cathedral of Ely. Sir Henry was at one time magistrate for seven counties in England and four in Ireland. He died at Chel- tenham, February 1st, 1824

DUDLEY, a town of England, of the county of Worcester, but insulated in Staffordshire, has a weekly market on Saturday. Most of the inha- bitants are employed in manufacturing nails, or

other articles of iron. It has two churches; and is ten miles west of Birmingham, and 120 north- west of London. It sends one member to par- liament.

DUDLEY (Robert, earl of Leicester), was the fifth son of the duke of Northumberland, and was born about 1532. He was knighted when young, and was made gentleman of the bed- chamber to Edward VI. Though involved in the criminal designs of his father, and included in the sentence of attainder passed against him on the accession of Mary, he was pardoned, and employed by that queen. After Elizabeth as- cended the throne, Dudley soon acquired the distinction of being her favorite. Offices, honors and wealth were showered on him with an un- sparing hand. He was appointed master of the horse, knight of the garter, and privy counsellor; and he received grants of the princely domains of Kenilworth, Denbigh, and Chirk castle. In 1560 the death of his wife took place at Cum- nor-hall, in Berkshire. This event, according to popular opinion, as appears from Aubrey, in- volved Dudley in the guilt of murder. If he sacrificed the life of his consort, in the hope of marrying the queen, his ambitious views were disappointed. Elizabeth, however, encouraged him to aspire to the hand of Mary of Scotland, who rejected him with disdain. In 1564 he was created baron Denbigh and earl of Leicester, and was the same year elected chancellor of Oxford university, having previously been chosen to the same office at Cambridge. About 1572 he appears to have married the baroness- dowager Sheffield, lady Douglas Howard, by whom he had children, but whom he disowned as his wife, and even compelled her to marry another person. In 1575 he gave a princely entertainment to the queen, at Kenilworth castle ; the festivities of which are described in a

picturesque manner, in the celebrated romance of Kenilworth, and, in defiance of chronology, connected with the death of Leicester's first wife. Leicester, in 1578, offended the queen by his marriage with the widow of Walter De- vereux, earl of Essex. He, however, recovered her favor, and, in 1585, was appointed, through her influence, governor of the Netherlands, then recently emancipated from the Spanish yoke. His conduct in this station did not give satisfaction to the queen, or to the states over which he presided, and he was recalled the following year. He returned to his command in June, 1587 ; but he was finally displaced a few months after, and returned to England. He was accused of misconduct by lord Buck- hurst and others ; but Elizabeth still retained so much partiality for him, that she supported him against all his enemies ; and, on the pros- pect of the Spanish invasion, in 1588, ap- pointed him commander of the forces, as- sembled at Tilbury, for the defence of the kingdom. Leicester died, on the fourth of September in that year, at Cornbury Park, in Oxfordshire, and was interred in a chapel at- tached to the collegiate church of Warwick, where a sumptuous monument was erected to his memory.

From

to bind ,

Lat. debeo, to owe.

That which is owed ; (right ; obligation ; [whatever is required

to be done or paid.

As an adjective due) is, owed ; proper; fit;

DUE, n. s. adj. & v. a.

DU'EFULL,

DUTY, n. s.

DU'TEOUS, adj.

DU'TEOUSNESS, n. s.

DU'TIFUL, adj.

DU'TIFULLY, adv.

DU'TIFULNESS, n. s.

exact; consequent to. Shakspeare uses it as an active verb ; but we have

met with no other instance. Duty is also obligation, and recipro- cal with right. What one man has a right to claim, another has a duty to yield or give.

When ye shall have done all those things which are commanded you, say, We are unprofitable ser- vants : we have done that which was our duty to do.

Luke xvii. 10. They both atone, Did duty to their lady as became.

Faerie Queene.

All which that day in order seemly good Did on the Thames attend, and waited well To doe their duefull service as to them befell.

Spenser.

This is the latest glory of their praise, That I thy enemy due thee withal. Shakspeare.

My due from thee is this imperial crown, Which, as immediate from thy place and blood, Derives itself to me. Id.

Like the Pontick sea,

Whose icy current, and compulsive course, Ne'er feels retiring ebb, tut keeps due on To the Propontick and the Hellespont.

Id. Othello. My prayers f

Are not words duly hallowed, nor my wishes More worth than vanities ; yet prayers and wishes Are all I can return. Id. Henry VIII.

Thou better know'st Effects of courtesy, dues of gratitude ; Thy half o' th' kingdom thou hast not forgot, Wherein I thee endowed. Id. King Lear.

Think'st thou that duty shall have dread to speak, When power to flatt'ry bows ? To plainness honour Is bound, when majesty to folly falls. Id.

I know thee well ; a serviceable villain ! As duteous to the vices of thy mistress, As badness would desire. Id.

There is due from the judge to the advocate some commendation and gracing, where causes are well handled and fair pleaded. There is likewise due to the public a civil reprehension of advocates, where there appeareth cuaning, gross neglect, or slight in- formation. Bacon.

The key of this infernal pit by due, And by command of heaven's all-powerful king, I keep. Milton. Paradise Lost.

And Eve within, due at her hour prepared For dinner savoury fruits.

Befriend

Us, thy vowed priests, till outmost end Of all thy duet be done, and none left out. Every beast, more duteous at her call, Than at Circean call the herd disguised. Some duties we owe to humanity, more to nearness of blood. Bp. Hall. Contemplations.

All our duty is set down in our prayers, because in all our duty we beg the Divine assistance ; and re- member that you are bound to do all those duties, for the doing of which you have prayed for the Divinn assistance. Taylor's Devotion.

Id.

Id.

Id.

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DUEL.

Mirth and cheerfulness are but the due reward of innocency of life. Mare's Divine Dialogues.

A present blessing upon our fasts is neither ori- ginally due from God's justice, nor becomes due to us from his veracity. Smalridge's Sermons.

There is a respect due to mankind, which should incline ever the wisest of men to follow innocent customs. Watts.

The duty of a collator is indeed dull, yet, like other tedious tasks, is very necessary. Johnson.

Turn on the prudent ant thy heedful eyes, Observe her labours, sluggard, and be wise : No stern command , no monitory voice, Prescribes her duties, or directs her choice ; Yet timely provident, she hastes away, To snatch the blessings of the plenteous day.

Id. Poems,

Nothing is more common than to say, when a per- son docs not behave

with due decency towards his superiours, such a one does not understand himself.

Mason.

Estates are landscapes, gazed upon awhile, Then advertised, and auctioneered away. The country starves, and they that feed the' o'er-

charged v

And surfeited lewd town with her fair dues, By a just judgment strip and starve themselves.

Cowper. Duly at my time I come,

Publishing to all aloudˆ- Soon the grave must be your home,

And your only suit a shroud. Id.

' Do as you would be done by,' and ' Love your neighbour as yourself,' include all our duties of be- nevolence and morality ; and if sincerely obeyed by all nations, would a thousand-fold multiply the pre- sent happiness of mankind. Darwin.

Whatever tenderness may be due to the errors into which they would inevitably fall in their speculations concerning the present condition of mankind, and the apparent constitution of the moral world, of which, destitute as they were of the light of revelation, they knew neither the beginning nor the end, — the Chris- tian is possessed of a written rule, delivered from on high, which is treated with profane contempt, if re- ference be not had to it upon all questions of duty.

Bp. Horsley.

Salt, duty free, is a great deal cheaper, and (as far as experiments have gone) very superior in power and permanency of effect to lime. Sir T. Bernard.

Triumphant Sylla ! Thou, who didst subdue Thy country's foes ere thou would pause to feel The wrath of thy own wrongs, or reap the due Of hoarded vengeance till thine eagles flew O'er prostrate Asia. Byron.

Forgive me ; there is something at your heart More than the mere discharge of public duties, Which long use, and a talent like to yours, Have rendered light, nay, a necessity To keep your mind from stagnating. Id.

DU'EL, n. s., v. n. & -o. a.~\ Fr. duel, from DU'ELLER, n. s. (Lzl.

duellum, i.e.

DU'ELLIST. [duo, two and bd-

DUEL'LO. J turn, war. A

fight or combat between two. Dueller and duel- list appear synonymous.

The gentleman will, for his honour's sake, have one bout with you : he cannot by the duello avoid it.

S/uikupeare.

In many armies, if the matter should be tried by duel "Detwerc :wo champions, the victory should go on the one side ; and yet, if it be tried by the gross, go on the other side. Bacon.

Victory and triumph to the Son of God Now entering his great duel, not of arms, But to vanquish by wisdom, hellish wiles.

MilUm. Who single

Duelled their armies ranked in proud an ay. Himself an army, now unequal match To save himself agaiust a coward armed, At one spear's length. Id. Agonistei.

His bought arms Mung not liked ; for his first day Of bearing them in field, he threw 'em away ; And hath no honour lost, our duellists say.

Ben Jonson. Tsvas I that wronged you ; you my life have

sought ; No duel ever was more justly fought. Waller.

Henceforth let poets, ere allowed to write, Be searched like duellists before they fight.

Dryden.

He must at length, poor man ! die dully at home, when here he might so fashionably and genteelly have been duelled or fluxed into another world. South.

If the king ends the differences, the case will fall out no worse than when two duellists enter the field, where the 'worsted party hath his sword again, with- out further hurt. Suckling.

I never read of a duel among the Romans, and yet their nobility used more

liberty with their tongues than one may now do without being challenged.

Tatler.

They perhaps begin as single duellers, but then they soon get their troops about them. Decay of Piety.

DUEL, a single combat, at a time and place appointed, in consequence of a challenge. This custom came originally from the northern nations, among whom it was usual to decide all their controversies by arms. Both the accuser and accused gave pledges to the judges on their res- pective behalf; and the custom prevailed so far amongst the Germans, Danes, and Franks, that none were excused from it but women, sick people, cripples, and such as were under twenty- one years of age or above sixty. Even ecclesias- tics, priests, and monks, were obliged to find champions to fight in their stead. The punish- ment of the vanquished was either death, by hanging or beheading, or mutilation of members, according to the circumstances of the case. Duels were at first admitted not only on criminal occa- sions, but on some civil ones, for the maintenance of rights or estates, and the like : in latter times, however, before they were entirely abolished, they were restrained to these four cases. 1. That the crime should be capital. 2. That it should be certain the crime was perpetrated. 3. The accused must by common fame be supposed guilty. And 4. The matter must not be capable of proof by witnesses.

DUEL, at present, is used for single combat on some private quarrel ; and is premeditated ; otherwise it is called a rencounter. If a person is killed in a duel, both the principals and seconds are guilty, whether the seconds engage or not. See MURDER. It is also a very high offence to challenge a person either by word or letter, or to be the messenger of a challenge. S>e LAW. The general practice of duelling, in this last sense, took its rise in 1527, at the breaking up of a treaty between the emperor Charles V. and Francis I. The former desired Francis's herald to acquaint his sovereign, that he would hence

forth consider him not only as a base violator of public faith, but as a stranger to the honor and integrity of a gentleman. Francis, too high-spirited to hear such an imputation, had recourse to an uncommon expedient to vindicate his cha- racter. He instantly sent back the herald with a cartel of defiance, in which he gave the emperor the lie in form,

challenging him to single combat, requiring him to name the time and place of encounter, and the weapons with which he chose to fight. Charles, as he was not inferior to his rival in spirit or bravery, readily accepted the challenge'; but after several messages, concerning the arrangement of all the circumstances relative to the combat, accompanied with mutual re- proaches bordering on the most indecent scurri- lity, all thoughts of this duel, more becoming the heroes of romance than the two greatest monarchs of their age, were entirely laid aside. The example of two persons so illustrious, drew such general attention, and carried with it so much authority, that it had considerable influence in introducing an important change in manners all over Europe. Duels had been long permitted by the laws of all European nations ; and, form- ing a part of their jurisprudence, were authorised by the magistrate on many occasions, as the most proper method of terminating questions with regard to property, or of deciding in those which regarded crimps. But single combats being con- sidered as solemn appeals to the omniscience and justice of the Supreme Being, they were allowed only in public causes, according to the prescrip- tion of law, and carried on in a judicial form. See BATTEL. Men accustomed to this manner of decision in courts of justice, were naturally led to apply it to personal and private quarrels. Duels, which at first could only be appointed by the civil judge, were fought without the interposi- tion of his authority, and in cases to which the laws did not extend. Upon every affront or injury, which seemed to touch his honor, a gentleman thought himself entitled to draw his sword, and to call on his adversary to make reparation. Such an opinion, introduced among men of fierce courage and high spirit, and of rude man- ners, where offence was often given, and revenge was always prompt, produced most fatal conse- quences. Much blood was shed ; many useful lives were lost ; and, at some periods, war itself has hardly been more destructive than these con- tests of honor. So powerful, however, is the dominion of fashion, that neither the terror of penal laws, nor reverence for religion, nor the 4ear of a future state, has yet been able entirely to abolish a practice unknown among the ancients, and not justifiable by any principle of reason. Its best defence only seals the greater disgrace on the parties who have recourse to it; i. e. that we must ascribe to it, in some degree, the extraordinary gentleness and complaisance of modern manners in high life, and that respect- ful attention of one man to another, which at present renders the social intercourse of life far more agreeable and decent than among civilised nations of antiquity. In other words, that gen- tlemen can only be governed by the weapons of fear and force by which, in fact, the vilest ruf- fians are at last restrained. Public- opinion,

however, is not easily controlled by civil institu- tions; for which reason it may be questioned whether any human regulations can be contrived of

sufficient force to suppress or change that false rule of honor, which stigmatises all scruples about duelling with the reproach of cowardice. The inadequate redress which the law of the land affords, for those injuries which chiefly affect a man in his sensibility and reputation, tempts many to redress themselves; and prosecutions for such offences, by the trifling damages that are recovered, serve only to make the sufferer ridicu- lous. This ought to be remedied. A court of honor might be established, especially for the army, where the point of honor is cultivated with exquisite attention and refinement, with a power of awarding those submissions and ac- knowledgments, which it is generally the object of a challenge to obtain ; and it might grow into a fashion with person of rank of all professions, to refer their quarrels to the same tribunal. In fact, as the law now stands, duelling can seldom be overtaken by legal punishment. The challenge, appointment, and other previous circumstances, which indicate the intention with which the com- batants met, being suppressed, nothing appears to a court of justice but the actual rencounter; and if a person be slain when actually fighting with his adversary, the law deems his death nothing more than manslaughter.

DUE'NNA, n.s. Spanish. An old woman kept to guard a younger.

I felt the ardour of my passion increase as the season advanced, till in the month of July I could no longer contain : I bribed her duenna, was admitted to the bath, saw her undressed, and the wonder dis- played. Arbuthnot and Pope.

DUETT, duetto, in music, a composition expressly written for two voices or instruments, with or without a bass and accompaniments. In good duets the execution is pretty equally distributed between the two parts, and the melodies so dependent on each other, as to lose every effect when separated, but to be perfectly related and concinnous when heard together.

DUFF'S ISLANDS, or DUFF'S GROUP, a range of islands in the South Pacific Ocean, discovered by captain Wilson, in the course of his missionary voyage in the Duff. They are about eleven in number, and extend fourteen or fifteen miles in a north-west to south-east direc- tion. They are of different sizes ; the smallest is apparently barren, but the largest two, which are about six miles in circumference, and situ- ated in the middle of the others, are well wood- ed. Between these two there is a small islet ; and at the end of one on the north-west part of the group rises a remarkable rock in the shape of a pillar. The natives, who are stout and well made, were shy and apprehensh e of strangers. A village was seen on the south-west side of Disappointment Island, the largest of this group. They have ornamented canoes about twelve or fourteen feet long, and about fifteen inches oroad, which seemed to be made of a single tree. Long. 167°

E., lat. 9° 57′ S.

DUFRESNE, or Du FRESNE (Charles), lord of Cange, hence often called Ducange ; a man

of letters, who did much for the history of the middle ages, especially as regards his own country, as well as for the Bazantine history. He was born in 1610, at a farm near Amiens, of a respectable family, and studied in the Jesuits' college, at that place, afterwards at Orleans and Paris. At this last place he became parlia- mentary advocate, in 1631, and, in 1645, royal treasurer at Amiens, from which place he was driven by a pestilence, in 1668, to Paris. Here he devoted himself entirely to literature, and published his great works, viz., his Glossary of the Greek and Latin peculiar to the Middle Ages and the Moderns ; his Historia Byzantina (Paris, 1680, fol.); the Annals of Zonaras ; the Numismatics of the Middle Ages, and other im- portant and valuable works. . lie died in the year 1688.

DUGDALE (Sir William), an eminent Eng- lish historian, antiquarian, and herald, born in Warwickshire in 1605. He was introduced into the herald's office by Sir Christopher Hatton ; and ascended gradually through all the degrees, until he became garter principal king at arms. His chief work is the Monasticum Anglicanum, in 3 vols. folio; containing the charters and descriptions of all the English monasteries, adorned with engravings. Nor are his Antiqui- ties of Warwickshire less esteemed . He wrote likewise the History of St. Paul's Cathedral ; a History of Embanking and Draining ; a Baron- age of England : and completed the second volume of Sir Henry Spelman's Councils, with a second part of his Glossary. He died in 1686. His son John was Norroy king at arms, and published a Catalogue of English Nobility.

DUGOMMIER (M.), a French republican general, a native of Martinique in the West Indies, where, at the beginning of the revolu- tion, he defended Fort St. Pierre against a body of troops sent from France. He was at this time a considerable proprietor, and colonel of the national guards of the island. He afterwards went to France to procure succours for the patriots. In 1793 he rapidly rose to be general of brigade ; and then commander in chief of the army in Italy, where he gained many advanta- ges with a very inferior force. He took Toulon December 19th, 1793, as commander in chief of the army of the Eastern Pyrenees, and prose- cuted the war against the Spaniards with great success. On the 1st of May, 1794, he gained the battle of Albeides, and seized Montesquieu, taking 200 pieces of cannon,

and 2000 prison- ers. In August, 1794, he defeated an army of nearly 50,000 men at St. Laurence de la Mouga, and was killed November 17th, in an engage- ment at St. Sebastian. The convention decreed that his name should be inscribed on a column of the Pantheon.

DUILLIA LEX, the Duillian law, a Roman law, enacted by M. Duillius, a tribune, A. U.C. 304. It made it a capital crime to leave the Roman people without its tribunes, or to create any new magistrate without a sufficient cause. There was another Duillian law in 392, regu- lating the interest to be paid for money lent.

DUILLIUS NEPOS (Caius), a Roman consul, the first who obtained a victory over the naval

power of Carthage, A.U. C. 492. He took fifty ships, and was honored with a naval triumph, the first that ever appeared at Rome, ihe senate rewarded his valor by permitting him to have music playing, and torches lighted, at the public expense, every day while he was at sup- per. There were some medals struck in com- memoration of this victory ; and there still exists a column at Rome, which was erected on the occasion.

DUISBURG, a town of Prussia, in the circle of Westphalia, and that part of the former duchy of Cleves which lies on the east, or right bank of the Rhine. It has two churches, three con- vents. The university founded here for Protes- tants, in 1635, was removed to Dusseldorf in 1806. Its chief manufactures are in cloth and iron. It is seated on the Roer, a little below where it falls into the Rhine. Inhabitants about 4600. It lies fourteen miles north of Dussel- dorf, and thirty-five north-west of Cologne.

DUKE, n.s.) Fr. due; Span, and Port.

DUKE'DOM. \duque; Ital. duca, from Lat. dux, duds, a duco, to lead. See the article.

And thou Bethleem, the lond of Juda, for of thee a duyk sehal go out that schal gouerne my puple of Israel. Wiclif.

The duke of Cornwall, and Regan his dutchess, will be here with him this knight.

Shakspeare. King Lear. Her brother found a wife,

Where he himself was lost j Prospero his dukedom,

In a poor isle. Id. Tempett.

Aurmarle, Surrey, and Exeter, must lose

The names of dukes, their titles, dignities.

And whatsoever profits thereby rise.

Dan. Civil Wart.

The cardinal never resigned his purple for the prospect of giving an heir to the dukedom of Tuscany.

Adduon. A prince can mak a belted knight,

A marquis, duke, and a' that ; But an honest man's aboon his .might,

Guid faith he mauna fa' that ! Burns.

DUKE, dux, was originally a Roman dignity, denominated a ducendo, leading or command- ing. Accordingly, the first dukes, duces, were ductores exercituum, commanders of armies. Under the later emperors, the governors of provinces during war were entitled duces. In after times the same denomination was also given to the governors of provinces, in time of peace. The first governor under this name was a duke of the Marchia Rhaetica, or Grisons, of whom mention is made in Cassiodorus; there were afterwards thirteen dukes in the eastern empire, and twelve in the western. The Goths and Van- dals, upon their overrunning the provinces of the western empire, abolished the Roman digni- ties wherever they settled. But the Franks, &c., to please the Gauls, who had long been used to that form of government, made it a point of politics not to change any thing therein: and accordingly they divided all Gaul into duchies and counties ; and gave the names, sometimes of dukes, and sometimes of counts, comites, to the governors of them. In England, during the time of the Saxons, Camden observes, the offi- cers and commanders of armies were called dukes, duces, after the ancient Roman manner,

without any addition. After the Conqueror came in, the title lay dormant till the reign of Edward III., who created his son Edward, first called the Black Prince, duke of Cornwall; which has ever since been the peculiar inheri- tance of the king's eldest son during the life of his father; so that he is dux natus, noti creatus. After him there were more made, in such man- ner as that their titles descended to their pos- terity. They were created with much solemnity, per cincturam gladii, cappseque, et circuli aurei in capite

impositionem. However, in the reign of queen Elizabeth, A. D. 1572, the whole order became utterly extinct ; but it was revived about fifty years afterwards by her successor, in the person of George Villiers, duke of Bucking- ham. Though the French retained the names and form of the ducal government, yet under their second race of kings there were scarcely any dukes : but all the great lords were counts, peers, or barons ; excepting, however, the dukes of Burgundy and Aquitain, and the duke of France, which was a dignity Hugh Capet him- self held, corresponding to that of maire de palais, or king's lieutenant. By the weakness of the kings, the dukes or governors sometimes made themselves sovereigns of the provinces trusted to their administration. This change happened chiefly about the time of Hugh Capet, when the lords began to dismember the king- dom, so that that prince found more competitors among them than subjects. It was even with a great deal of difficulty they could be brought to own him their superior, or to hold of him by faith and homage. By degrees those provinces, both duchies and counties, which had been rent from the crown, were again united to it. But the title duke was no longer given to the gover- nors of provinces. From that time it became a mere title of dignity, annexed to a person and his heirs male, without giving him any domain, territory, or jurisdiction over the place whereof he was duke. All the advantages therefore now consist in the name, and the precedence it gives. Modern dukes retain nothing of their ancient splendor but the coronet on their escutcheon. It is com- posed of a rim of gold, lined with ermine, and surmounted with eight strawberry leaves, in con- tradistinction from that of a marquis, which has only four strawberry leaves and four pearls. See the annexed dia- gram. They are created by patent, cincture of the sword, mantle of state, imposition of a cape, and coronet of gold upon the head, and a verge of gold in their hand. The eldest sons of dukes are by the courtesy of England styled inarquisses, though they are usually distin- guished by their father's second title, whether it be marquis or earl: and the younger sons lords, with the addition of their Christian name, as lord James, lord Thomas, &c., and they take place of viscounts, though not so privileged by law. A duke has the title of grace ; and he is styled, in heraldic language, most high, potent,

and noble prince. Dukes of the blood royal are styled most high, most mighty, and illustri- ous princes. There are also sovereigns who bear the title of duke. The title of GREAT DUKE belongs to the heir-apparent of Russia; that of ARCH-DUKE to all the sons of the house of Aus- tria, and that of AROH-DUCHESS to all the daugh- ters. See these articles.

DUKE, among Hebrew grammarians, is aa appellation given to a species of accents answer- ing to our comma.

DUKE (Richard), a clergyman and inferior poet of the last century. Dr.

Johnson says, ‘ His poems are not below mediocrity, nor have I found much in them to be praised.’ He was a native of Otterton in Devonshire, and educated at Westminster school, and Trinity College, Cambridge, where he obtained a fellowship. lie was presented to the living of Blaby in Leices- tershire in 1688, and was soon after made a prebend of Gloucester. Just previous to his death, which took place in 1710, he became pos- sessed of the valuable benefice of Witney in Oxfordshire. He was the author of Translations of some of the Odes of Horace, and some de- tached poems.

DUKE-DUKE, a title given in Spain to a gran- dee of the house of Sylva, on account of his having several duchies, from the uniting of two considerable houses in his person. Don Roderigo de Sylva, eldest son of Don Ruy Gomez de Sylva, and heir of his duchies and principalities, married the eldest daughter of the duke de 1’Infantado ; by which marriage the present duke de Pastrana, who is descended therefrom, and is grandson of Don Roderigo de Sylva, has added to other titles that of duke-duke, to dis- tinguish himself from the other dukes; some whereof may enjoy several duchies, but none so considerable ones, nor the titles of such eminent families.

DUKE’S COUNTY, a county on the south-east coast of the state of Massachusetts, comprehend- ing Martha’s Vineyard Island, Chabaquiddick Island, Norman’s Island, and the Elizabeth Islands. The chief town is Edganton. Popu- lation 3290.

DUKE OF CLARENCE’S STRAIT is a channelon the east coast of North America, bounded on the east by the Duke of York’s Islands, part of the continent, and the isles of Gravina. To the west the shore is an extensive tract of land, forming an archipelago, to which Vancouver gave the name of the Prince of Wales’s Archi- pelago.

The DUKE OF GLOUCESTER’S ISLANDS are two woody islands of the South Pacific Ocean, about five or six leagues asunder. They were visited in 1767 by captain Carteret. The most southern is of a half-moon shape, low, flat, and sandy, with a reef projecting half a mile from the south end, where the sea breaks violently : its appear- ance is agreeable, but it affords neither vege- tables nor water. There seemed also no traces of inhabitants. Many birds were seen on it, however, and they were so tame, that they readily allowed themselves to be taken. Captain Car- teret thought these islands were seen by Quiros, the Spanish navigator, in 1606. One lies in iat.

20° 38 S., long. 146° W.; the other in lat. 20° 34′ S., long. 146° 15′ W.*

DUKE OF YORK'S ISLAND, an island of the South Pacific Ocean, in St. George's Channel, which divides New Ireland and New Britain. It is situated between Cape Palliser and Cape Stephens, where the strait is about fifteen leagues broad, and has a beautiful aspect, being covered inland with lofty woods, which near the water- side are interspersed with the houses of the natives. Their canoes are very neat. Long. 151° 20′ E., lat. 4° 9′ S.

DUKE OF YORK'S ISLAND, an island in the South Pacific Ocean, discovered in 1765 by commodore Byron. It is low, and about thirty miles in circumference. There is a large lake in the centre, and the whole island is well wooded. The surf breaks violently round the coast. No inhabitants were seen. Long. 187° 30′ £., lat. 7° 56′ S.

DUKE OF YORK'S ISLANDS, a cluster of islands off the north-western coast of America. They were first discovered by Vancouver, from whom they received their present name. They extend about fifty miles in length, and twenty-five in breadth. Long. 227° 15′ to 228° 15′ E., lat. 55° 50′ N.

DUKER (Charles Andrew), a celebrated German editor and critic, was born at Unna in Westphalia in 1670. He was educated at the university of Franeker, and appointed professor of ancient history at Utrecht, where he acquired great notice. His works are, Oratio de DiflS- cultatibus Quibusdam Interpretation!? Gramma- tics Veterum ScriptorumGraecorum et Latinorum; Sylloge Opusculorum Variorum de Latinitate Jurisconsultorum Veterum; an edition of Thu- cydides ; and an edition of Florus, &c. &c. He died at Meyderick, near Duisbourg in 1752. DUL'CET, adj. \ Fr. doucet, from Lat. DUL'CIFY, v. a. I dulcis, sweet. To dulcify DUI/CIMER, n. s. Vor dulcorate, is to make DUL'CORATE, v. a. i sweet : dulcimer, an in DUL'CORATION, n.s. J strument remarkable for its sweet tones.

Ye hear the sound of the cornet, flute, harp, sack- but, psaltery, dulcimer, and all kinds of musick.

Daniel iii. 5. I sat upon a promontory, And heard a mermaid, on a dolphin's back, Uttering such duluet and harmonious breath, That the rude sea grew civil at her song.

Shakspeare.

The ancients, for the dulcoratini/ of fruit, do com- mend swine's dung above all other dung. Bacon.

Malt gathereth a sweetness to the taste, which ap- peareth in the wort : the

dulcvrativn of things is wor- thy to be tried to the full ; for that dulcoration im- portrth a degree to nourishment : and the making of things inalimental to become alimeutal, may be an experiment of great profit. Id.

A. decoction of wild gourd, or colocynthis, though somewhat qualified, will not from every hand be dul- cified into aliment, by an addition of flour or meal.

Browne. A fabrick huge

Rose like an exhalation, with the sound Of dulcet symphonies, and voices sweet.

Milton.

In colcothar, the exactest calcination, followed by an exquisite dulcification, does not reduce the remaining body into elementary earth ; for after the salt of vi- triol, if the calcination have been too faint, is drawn out of the colcothar, the residue is not earth, but a mixt body, rich in medical virtues. Boyle.

Turbith mineral, as it is sold in the shops, is a rough medicine ; but, being somewhat dulcorated, first procureth vomiting, and then salivation.

Wiseman's Surgery.

I dressed him with a pledgit, dipt in a dulcijiek tincture of vitriol. Id.

Spirit of wine dulcifies spirit of salt ; nitre or vitriol have other bad effects. Arbuthnot on Aliments.

They to the dome where smoke with curling play Announced the dinner to the regions round,

Summoned the singer blithe, and harper gay, And aided wine with du/ ce<-streaming sound.

Dr. Johnson's Poems.

High o'er the chequered vault with transient glow Bright lustres dart, as dash the waves below ; And echo's sweet responsive voice prolongs The dulcet tumult of their silver tongues. Darwin.

So well that thought the' employment seems to

suit,

Psaltery and sackbut, dulcimer and flute. O fie ! 'tis evangelical and pure : Observe each face, how sober and demure ! Cowper.

DU'LIA, n. s. AgXaa. An inferior kind of adoration.

Paleotus saith, that the same worship which is given to the prototype may be given to the image, but with the different degrees of latria and dul'ui. Stillingfleet.

DULL, adj. & v. a.^\ Got. dulla, a fool ; Sax.

DUL'LARD, n. s. dole; Swed. and Dut.

DULL'-EYED, adj. [doll; Wei. dwl; Teut.

DULL'HEAD, n. s. \duol ; Gr. SovXoe, a ser

DUL'LY, adv. \ vant. Tooke says from

DULL'NESS, n. s. J the Ang.Sax. dwolian, to thicken. Heavy, thick; stupid; awkward; sad ; melancholy ; drowsy : as a verb, to make stupid; to blunt; thicken; weaken; damp; make heavy. A dullard, or dullhead, is a block head.

This people's heart is waxed gross, and their ears are dull of hearing. Matt. xiii. 15.

For to illumine she sayd I was to dulle Aduysynge me my penne awaye to pulle. Skelton. Nothing hath more dulled the wits, or taken away the will of children from learning, than care in making of Latin. Ascham.

This people be fools and dulheads to all goodness ; but subtle, cunning, and bold in any mischief. /'/.

Now forced to overflow with brackish tears, The troublous noise did dull their dainty ears.

Spenser. O help thou my weak wit, and sharpen my dull

tongue. Faerie Queene.

Prayers were short, as if darts thrown out with a sudden quickness, lest that vigilant and erect atten- tion of mind, which in prayer is very necessary, should be wasted or dulled through continuance.

Hooker.

Such is their evil hap to play upon du#-spirited men. Id.

He that hath learned no wit by nature, nor art, may complain of gross breeding, or comes of a very dull kindred. Shakspeare.

Borrowing dulls the edge of industry. Id.

This arm of mine hath chastised The petty rebel, dulbrained Buckingham. Id»

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111 not be made a soft and dull-eyed fool. To shake the head, relent, and sigh, and yield To Christian intercessors. Id. Merchant of Venice.

What ! mak'st thou me a dullard in this act ? Wilt thou not speak to me ? Id. Cymbeline.

Here cease more questions ;

Thou art inclined to sleep. 'Tis a good dullness, And give it way. Id. Tempest.

It (drunkenness) dulleth the spirits, and destroyeth the body as ivy doth an old tree, or as the worm that "ingendereth in the kernel of the nut. Raleigh.

A dull man is so near a dead man, that he is hardly to be ranked in the list of the living ; and as he is not to be buried whilst he is half alive, so he is as little to be employed whilst he is half dead.

Saville.

Usury dulls and damps all industries, wherein money would be stirring, if it were not for the slug.

Bacon.

The princess of Germany had but a dull fear of the greatness of Spain, upon a general apprehension : now that fear is sharpened and pointed. Id.

Nature, by a continual use of any thing, groweth to a satiety and dulness either of appetite or working.

Id.

The air, if it be moist, doth in a degree quench the f;ame, and howsoever n«aketh it burn more dully.

Id.

Honours oppress weak spirits, and our sense Strong objects dull; the more the less we see.

Donne.

Meeting with Time, Slack thing, said I, Thy scythe is dull; whet it, for shame. Herbert. Correction may reform negligent boys, but not amend those that are insensibly dull. All the whet- ting in the world can never set a razor's edge on that which hath no steel in it. Fuller.

0 could I flow like thee ! and make thy stream My great example, as it is my theme ; Tho' deep yet clear, tho' gentle yet not dull ; Strong -without rage, without o'erflowing full.

Denham. Cpoper's Hill. Not that I think those pantomimes, Who vary action with the times, Are less ingenious in their art Than those who dully act one part. Hudibras. Every man, even the dullest, is thinking more than the most eloquent can teach him how to utter.

Dryden.

Shadwel alone my perfect image bears, Mature in dulness from his tender years. Id. It is not sufficient to imitate nature in every cir- cumstance dully, literally, and meanly ; but it becomes a painter to take what is most beautiful.

Id. Dufresnoy.

So was she dulled with all, that we could come so near as to hear her speeches, and yet she not perceive the hearers of her lamentations. Sidney.

Memory is so necessary to all conditions of life, that we are not to fear it should grow dull for want of exercise, if exercise would make it stronger. Locke.

Nor is the dulncss of the scholar to extinguish, but rather to inflame, the charity of the teacher. South. Why, how now, Andrew ? cries his brother droll ; To-day's conceit, methinks, is something dull. Prior.

Dull rogues affect the politician's part, And learn to nod, and smile, and

shrug with art.

Congreve.

Whoe'er has travelled life's dull round, Where'er his stages may have been,

May sigh to think he still has found The warmest welcome at an inn. Shenstone.

As turns a flock of geese, and, on the green, Poke out their foolish necks in awkward spleen, (Ridiculous in rage)! to hiss, not bite, So war their quills, when sons of Dulness write.

Young.

In England every man may be an author that can write ; for they have by law a liberty, not only of say- ing what they please, but of being as dull as they please. Goldsmith.

Dullness it is easy to despise, and laughter it is easy to repay. Johnson. Plan of Dictionary.

The punch goes round, and they are dull And lumpish still as ever ;

Like barrels with their bellies full, They only weigh the heavier. Cowper.

Could thine art

Make them indeed immortal, and impart The purity of heaven to earthly joys, Expel the venom and not blunt the dart — The dull satiety which all destroys — And root from out the soul the deadly weed which cloys ? Byron.

DULL, in the manege. The marks of a dull horse, called by the French, marquis de ladre, are white spots round the eye and on the tip of the nose, upon any general color whatsoever. Though some take these spots for signs of stu- pidity, it is certain they are great marks of the goodness of a horse ; and the horses that have them are very sensible and quick upon the spur.

DULSE, or DILLS, a kind of esculent sea- weed, eaten by the common people near Edin- burgh. See Fucus, PALMATUS.

DULWICH, a hamlet of Camberwell, five miles from London ; celebrated for its college, founded by Alleyn, the actor, in consequence of a supposed apparition of the devil. See ALLEYN. This foundation was endowed for the mainte- nance of six poor men, six poor women, and twelve poor boys; the latter of whom, when they arrive at a proper age, are either sent to the

universities, or apprenticed. This establishment is under the direction of a master (who must always be of the name of Allen), a warden, and four fellows, of whom three must be divines, and the fourth an organist. The master is lord of the manor for a considerable extent ; but both he and the warden and fellows must con- tinue unmarried, on pain of exclusion. The building was erected after a design of Inigo Jones, and contains the chapel and master's apartments in front ; the chambers for the poor men, women, and boys, are in the wings. The beautiful prospects of this village and its neigh- bourhood have made it a favorite residence of many gentry and citizens of London.

DULVERTON, a town in Somersetshire, seated on a branch of the Ex ; twenty-four miles east of Barnstaple, and 165 west by south of London. It has a market on Saturday, and a manufacture of coarse woollens and blankets. There are some lead mines near the town, but the ore is hard and barren. Market on Saturday, the toll of which is annually distributed to the poor.

DUMAS (Louis), an ingenious Frenchman, was the natural son of Montcalm, lord of Candiac, born at Nismes, in 1676. He was bred to the law, but applied himself to mathematical and mechanical studies. He invented an instru-

ment called the Bureau Typographique, to teach children reading and writing mechanically. He also devised another, for instructing them in music. On both these subjects he wrote ex- planatory treatises, besides a history of the unfortunate Mary, queen of Scots. He died in 1744.

DUMAS (Charles Louis'), a French surgeon and anatomist, who suggested considerable im- provements in the nomenclature of anatomy, lie was professor of the science at Montpelier, where he died in 1814. His works are A Treatise on Mythology, in which is proposed a new mode of classification and denomination of the muscles ; and Priacipes de Physiologic, Paris, 1806, 4 vols. 8vo.

DUMB, adj. -\ Goth, dumbs ; Saxon,

DUMB'LY, adv. f dumb ; Dan. dum; Belg.

DUMB'NESS, n. s. I and Germ, stumme, from

DUMB'-FOUND, v. a. J Heb. 2EP> ne was silent.

Mute ; incapable or deprived of speech : hence

silent, refusing to speak. To dumbfound, is to

strike dumb.

And the aungel answerde and seyde to him, for Y am Gabriel that stonde nygh bifore God, and Y am sent to thee to speke and to evangelise to thee these thingis, and lo thou schalt be doumbe. Wiclif.

It hath pleased himself sometime to unloose the very tongues even of dumb creatures, and to teach them to plead in their own defence, lest the cruelty of man should persist to afflict them. Hooker.

They spake not a word ; But like dumb statues or uubreathing stones, Stared each on other. Shakspeare. Richard III,

There was speech in their dumbness, lauguage in their very gesture : they looked as they had heard of a world ransomed or one destroyed.

Id. Winter' Tale. Silence in love bewrays more woe*

Than words, tho' ne'er so witty j A beggar that is dumb, you know,

May challenge double pity. Raleigh.

The tenants wonder at their land-lord's sonne, And blesse them at so sudden comming on, More than who vies his pence to view some trick Of strange Moroccoe's dutnbe arithmetike.

Bp. Hall. Satires, iv. 2. His gentle dumb expression turned at length The eye of Eve to mark his play. Milton.

Her humble gestures made the residue plain, Dumb eloquence persuading more than speech. «

Rosc&nimon,

Tis love, said she ; and then my downcast eyes, And guilty dumbness, witnessed my surprize. Dryden.

For he who covets gain in such excess Does by dumb signs himself as much express, As if in words at length he showed his mind.

Id. Juvenal.

They had like to have dumbfounded the justice ; but his clerk came in to

his assistance. Spectator.

Nothing is more common than for lovers to com- plain, relent, languish, despair, and die in dumb show.

Addison.

Some positive terms signify a negative idea ; blind implies a privation of sight, dumb a denial of speech.

Watts's Logick.

The dumb shall sing, the lame his crutch forego, And leap exulting like the bounding roe. Pope.

At length our migbty bard's victorious lays Fih the loud voice of universal praise j

And baffled spite with hopeless anguish dumb, Yields to renown the centuries to come.

Johnson. Prologue. Loud when they beg, dumb only when they steal.

Unless an instance has occurred of furniture's be- having in a disorderly manner, or a dumb-waiter' barking in consequence of the hydrophobia, I con- ceive such a phrase could not have been introduced.*

Sheridan.

And near, the beat of the alarming drum

Roused up the soldier ere the morning star ;

While thronged the citizens with terror dumb, Or whispering, with white lips — ' The foe ! They come ! they come !' Byron.

DUMBNESS. The most general, if not tne sole cause of dumbness, is the want of the sense of hearing. The use of language is originally acquired by imitating articulate sounds. From this source of intelligence, 'deaf people are excluded : they cannot acquire articulate sounds by the ear : unless, therefore, articulation be communicated to them by some other medium, these ushappy people must for ever be deprived of the use of language. Deafness has in all ages been considered as such a total obstruction to speech or written ˆlanguage, that an attempt to teach the deaf to speak or read was uniformly regarded as impracticable, till Dr. Wallis and some others showed that although deaf people cannot learn to speak or read by the direction of the ear, there are other sources of imitation, by which the

same effect may be produced. The organs of hearing and of speech have little or no connexion. Persons deprived of the for- mer generally possess the latter in such perfec- tion, that nothing further is necessary, in order to make them articulate, than to teach them how to use these organs. This indeed is no easy task ; but experience shows that it is practicable.

The late Mr. Thomas Braidwood, was perhaps the first who ever brought this surprising art to any degree of perfection. He began with a single pupil in 1764 ; and, since that period, has taught great numbers of people born deaf to speak distinctly ; to read, to write, to understand figures, the principles of religion and morality, &c. and even to make a rapid progress in those useful branches of education. Mr. Braidwood's principal difficulty, after he had discovered this art, was to make the public believe in the practi- cability of it. He advertised in the public papers ; he exhibited his pupils to many noble- men and gentlemen ; still he found the generality of mankind unwilling to receive his discoveries.

The first effort in this method is, to teach the pupil to pronounce the simple sounds of the vowels and consonants. He would pronounce the sound of a slowly, pointing out the figure of the letter at the same time, and making the pupil observe the motion of his mouth and throat, anxiously imitating him all the while, though at first at a loss to understand what he would have him do. In this manner he proceeded till the pupil had learned to pronounce the sounds of the letters. He went on in the same manner to join a vowel and a consonant, till at length the pupil was enabled both to speak and read. That nis pupils were taught not only the mere pro-

nunciation, but also to understand the meaning of what they read, was easily ascertained by a conversation with any of them. Of this Mr. Pennant gives a remarkable instance in a young lady of about thirteen years of age, who had been some time under the care of Mr. Braidwood. She read, she wrote well, says that writer, her reading was not by rote. She could clothe the same thought in a new set of words, and never vary from the original sense.

A new and different method, equally laborious and successful, was practised by the abbe de L'Epee, of Berlin. He began not by endeavour- ing to form the organs of speech to articulate sounds, but communicating ideas' to the mind by means of signs and characters : to effect this, he wrote down the names of things; and, by a regular system of signs, established a connexion between these words and the ideas to be excited by them. After

he had thus furnished his pupils with ideas, and a medium of communication, he taught them to articulate and pronounce. In this manner he enabled one of his pupils to deliver a Latin oration in public, and another to defend a thesis against the objections of one of his fellow-pupils in a scholastic disputation ; but it does not appear that the abbe taught his pupils to understand what was spoken. There is perhaps no word, says the abbe, more difficult to explain by signs than the verb croire, 'to believe.' To do this, he wrote the verb with its significations in the following manner : —*

~ Je dis oui par 1'esprit, Je pense que oui. \ Je dis oui par le coeur, J' aime a penser 3is<^ que oui.

*I Je dis oui par la bouche. Je ne vois pas des yeux. After teaching these four significations by as many signs, he connected them with the verb, and added other signs to express the number, person, tense, and mood, in which it is used. If to the four signs, corresponding with the lines above mentioned, he added that of a substantive, the pupil will write the word foi, ' faith ;' but, if a sign, indicating a participle used substan- tively, be adjoined, he will express la croyance, * belief;' to make him write croyable, ' credible,' the four signs of the verb must be accompanied with one that indicates an adjective terminating in able : all these signs are rapidly made, and immediately comprehended. M. Linguet, a member of the Royal Academy, having asserted that persons thus instructed could be considered as little more than automata, the abbe" invited him to be present at his lessons, and expressed his astonishment, that M. Linguet should be so prejudiced in favor of the medium by which he had received the first rudiments of knowledge, as to conclude that they could not be imparted by any other ; desiring him, at the same time, to reflect, fthat the connexion between ideas and the articulate sounds by which they are excited in the mind, is not less arbitrary than that be- tween these ideas and the written characters which are made to represent them to the eye. M. Linguet complied with the invitation ; and the abbe" having desired him to fix on some abstract term, which he would by signs com- municate to his pupils, he chose the word un-*

Je rroi

intelligibility; which, to his astonishment, was almost instantly written by one of them. The abbe informed him, that to communicate this word he had used five signs, which, though scarce- ly perceivable to him, were immediately and dis- tinctly apprehended by his scholars : the first of these signs indicated an internal action ; the second represented the act of a mind that reads internally, or, in other words, comprehends what is proposed to it; a third signified that such a disposition is possible; these, taken together,

form the word intelligible : a fourth sign trans- forms the adjective into the substantive ; and a fifth, expressing negation, completes the word required. M. Linguet afterwards proposed this question, What do you understand by metaphy- sical ideas? which being committed to writing, a young lady immediately answered on paper in the following terms : ‘ I understand the ideas of things which are independent of our senses, which are beyond the reach of our senses, which make no impression on our senses, which can- not be perceived by our senses.’

*In the Ephemerides of the Curious, we have an account of a periodical dumbness, which had continued for more than fifteen years, and had not gone off at the time the*account was written The person was son to an inn- keeper at Jesing, in the duchy of Wirtemberg. He was one night taken so ill after supper, that he could neither stand nor sit. He continued, for about an hour, oppressed with sickness, to such a de- gree as to be in danger of suffocation. At the expiration of this time he grew better ; but, during three months, he was much dejected, melancholy, and. at times, fearful. He was then suddenly struck dumb, and became unable to pro- nounce the least word, or form the least sound, though he could speak very articulately before. The loss of speech was at first instantaneous, and continued only a few minutes : but the duration of it began to lengthen every day ; so that it soon amounted to half an hour, two hours, three hours, and at last to twenty-three hours, yet without any order. And at last the return of speech kept so constant and regular an order, that, for fourteen years together, he could not speak except from noon, during the space of one entire hour, to the precise moment of one o’clock. Every time he lost his speech, he felt something rise from his stomach to his throat. Excepting this loss of speech, he was afflicted with no other disorder of any animal function. Both his internal and external senses continued sound ; he heard always perfectly well, and answered the questions proposed to him by gestures or writing. All suspicion of deceit was removed by his keeping exactly the same hour, though he had no access to any instruments by which time can be measured.*

Modern researches into this curious and in- teresting topic, instigated mainly, perhaps, by the efforts of the abbe de 1’Epee, have made us better acquainted both with the few historical facts that belong to the subject, and with the ac- tual faculties possessed by the dumb. In this country, in particular, the art of instructing these unhappy persons has been cultivated, of late years, with great success.

Aristotle notices, Hist. An. iv. 9, that deaf- ness produces dumbness, but speaks of no re- medy for this calamity. Pliny, who quotes the learned Stagirite on this subject, mentions a young painter, Q. Pedius, xxxv. 7, who was born deaf and dumb ; but through the care of a kins- man in his education, he attained considerable eminence in his art. The first person who is re- corded to have made any systematic attempts to instruct the deaf and dumb, is Pedro de Ponce, a Benedictine monk of Sahagen, in Spain. He died in 1584. The earliest publication on this subject, is a Spanish work of the early part of the seventeenth century, 1620, Reduction de las Letvas, y Arte pava ensenar a hablar los Mudos, written by the then secretary to the constable of Castile, Bonet. A brother of the constable having been born deaf, was likewise dumb, and Bonet was one of his tutors. But Sir Kenelm Digby, who saw the former in the course of his travels, ascribes the faculty he possessed of un- derstanding conversation, to the successful efforts of an ecclesiastic. ' There was a priest,' he says, ' who undertooke the teaching him to un- derstand others when they spoke, and to speake himselfe that others might understand him, for which attempt at first he was laughed at; yet, after some yeares he was looked upon as if he had wrought a miracle. In a word, after strange patience, constancie, and paines, he brought the young lord to speak as distinctly as any man whatsoever, and to understand so perfectly what others said, that he would not loose a word in a whole day's conversation. I have often dis- coursed with the priest whilst I waited upon the prince of Wales, now our gracious sovereign, in Spaine, and I doubt not but his majesty re- membreth all I have said of him, and much more; for his majesty was very curious to ob- serve and inquire into the utmost of it. He could discern in another whether he spoke shrill or low ; and he would repeat after any body any hard word whatsoever, which the prince tried often, not onely in English, but by making some Welshmen that served his high- nesse, speak words of their language, which he so perfectly echoed, that I confesse I wondred more at that than at all the rest, and his master himselfe would acknowledge, that the rules of his art reached not to produce that effect with any certainty. And therefore concluded, this in him must spring from other rules he had framede unto himself out of his attentive observa- tion, which the advantages which nature had justly given him in the sharpnesse of senses to supply the want of this, endowed him with an ability and sagacity to do beyond any other man that had his hearing. He expressed it surely, in ' a high measure, by his so exact imitation of the Welsh pronunciation, for that tongue, like the Hebrew, employeth much the guttural letters, and the motion of that part which frameth them cannot be seen or judged by the eye, otherwise than by the effect they may happily make by consent, in the other parts of the mouth exposed to view ! For the knowledge he had of what they said, sprung from his observing the motions they made, so that he could converse currently in the light, though they he talked with whispered never so softly; and I have

seen him, at the dis-

tance of a large chamber's breadth, say words after one, that I, standing close by the speaker, could not hear a syllable of.'

The next writer on the subject was Dr. John Bulvver, ' surnamed,'as he tells us, ' the Chiroso- pher,' in 1648. His tract was entitled, Philoco- phus, or the Deafe and Dumbe Man's Friend, 4 exhibiting the philosophicall verity of that sub- tle arte which may inable with an observant eie to heare what any man speaks by the moving of his lips. Upon thesame ground.with the advantage of an historicall exemplification, apparently proving that a man borne deafe and dumbe may be taught to heare the sound of words with his eie, and hence learne to speake with his tongire.' This writer was tutor to Sir Edward Gastwicke of Wellingto'n, in Bedfordshire, and Mr. William Gastwicke his youugest brother, who were both dumb. He also published, in 1644, Chirologie, or the Natural Language of the Hand; and Chiro- nomia, or the Art of Manuel Rhetorique. In 1670 Dr. Wallis inserted a Letter to Mr. Boyle on this subject, in the Philosophical Trans- actions ; and another in 1698. It is also noticed by him incidentally in his Grammatica Lingua Anglicana; and a treatise prefixed to it, De Loquela, seu de Sonorum omnium Loquelarium Formatione. In the Philosophical Transactions for January, 1668, an account is given o/ a tract published the preceding year by a M. Helmet, of Salzburgh, entitled Alphabetum Naturae.

Dr. Holder's Elements of Speech appeared in 1669, with an appendix expressly concerning persons deaf and dumb, and containing an ac count of his successful endeavours to teach Mr. A. Popham, a dumb son of colonel Popham, to speak. He was one of those persons who could hear a softer sound when the action of the tym- panum was excited by a loud one. Dr. Holder first taught him to write, and then showed him the motion of the lips necessary to pronounce each separate letter. Dr. Wallis had been suc- cessful a little earlier in the education of a youth similarly circumstanced, the son of the mayor of Northampton. In the course of a year this youth conld read ' a great part of the English Bible, and had attained so much skill as to express himself intelligibly in ordinary affairs ; to understand letters written to him, and to write answers to them, though not elegantly, yet so as to be under- stood.' In the presence of many foreigners, ' who out of curiosity had come to see him,' as well as before the court and the royal family, he had ' often not only read English and Latin, but pronounced the most difficult words of their language, even Polish itself, which they could propose to him.' Young Popham was afterwards removed to the care of Dr. Wallis ; and this cir- cumstance, together with what Dr Holder thought an unfair passage in one of Dr. Wallis's publica- tions, produced a controversy between these writers, to be found in the Philosophical Trans- actions, 1670. In Transactions, 1698, p. 353, Dr. Wallis enters fully into his own

plans, to which, it is contended by some writers, that no material addition has been since made.

We ought not here, perhaps to omit noticing the early and scarce tract of George Dalgarno, a Scottish schoolmaster, entitled Didascalocophus, or the Deaf and Dumb Man's Tutor, which was

printed in a small volume at Oxford, in 1680 His design he states to be, ' to bring the way of leaching a deaf man to read and write, as near as possible to that of teaching young ones to speak and understand their mother tongue.' 'In prosecuting this general idea,' says Mr. Dugald Stewart, ' he has treated in one short chapter, of a Deaf Man's Dictionary; and, in another, of a Grammar for Deaf Persons; both of them con- taining a variety of precious hints, from which useful practical lights might be derived by all who have any concern in the tuition of children during the first stage of their education.' See Mr. Stewart's Account of a Boy born Blind and Deaf, Transactions, Royal Society edition, vol. VII. Dalgarno had, twenty years before, given to the world a very ingenious piece, en- titled Ars Signorum, from which, says Mr. Stewart, it appears indisputably that he was the precursor of bishop Wilkins in his Specula- tions concerning ' a real character, and a phi- losophical language'. ' That Dalgarno's sug- gestions, with respect to the education of the dumb,' adds Mr. Stewart, were not altogether useless to Dr. Wallis, will be readily admitted by those who take the trouble to compare his Letter to Mr. Beverly, published eighteen years after Dalgarno's Treatise, with his Tractatus de Loquela, published in 1653. In this letter some valuable remarks are to be found on the method of leading the dumb to the signification of words ; and yet the name of Dalgarno is not once mentioned to his correspondent.'

More recent professors of this useful art /lave been Father Vannin and Mons. Per- reize, of Paris ; Mr. Heinich, of Leipsic ; Mr. Baker, of London; and Mr. Braidwood, of Edinburgh; the abbe" de l'Epe"e; and his suc- cessor the abbe Sicard ; Dr. Watson, formerly the assistant of Mr. Braidwood ; and Mr. Young, of Peckham.

We have noticed the plans of Mr. Braidwood and the abbe de 1'Epee. The latter, in the last years of his life, relinquished an object upon which he employed considerable pains at the commencement of his career, viz. teaching the dumb to use articulate sounds : the abbe Sicard, down to the year 1815, also abandoned every attempt of this kind.

In England and Scotland this has been a favorite point with professors, and Dr. Watson speaks 'decidedly of its utility, as multiplying the means of association, whereby the dumb, like all other persons, retain and digest ideas. He informs us that he constantly found deaf persons who had learnt to articulate, speaking softly to themselves ; and rehearsing words or sentences, either for the purpose of better remembering them, or of framing such expressions as would best convey their ideas. This appears very important ; and we understand that the abbe Si- card, since his visit to England in the year above named, has resumed the abbe de 1'Epee's original plan. •

This gentleman is at the head of the continen- tal system of employing artificial signs for the impression of ideas, or a set of c< nventional gestures prescribed by the teacher in the education of the dumb. In his first lessons he endeavour! VOL. VII.

to teach his pupil the relation between the names of objects and the objects themselves ; the ana- lysis of words into the letters of the alphabet ; and the particular gesture which he is to attach to each word. He now explains the meaning of collective words, as distinguished from those de- noting individual objects or parts of objects. Then he proceeds to general terms, applicable in common to a number of individuals, and to generic names comprehending a number of spe- cies ; and lastly, to the most general and abstract words, such as being, thing, object. The acci- dents, modifications, and variations of objects, as denoted by adjectives, are next taught. lie first endeavours to make his pupil conceive these qua- lities as inherent in the objects themselves, and next as being capable of being detached by a mental operation. For instance, taking several pieces of paper, each white on one side, and colored on the other with a common color, he places them on a table, before a black board, with their white sides uppermost. He then pro- ceeds to inscribe some familiar word, like HORSE, on the board, leaving sufficient in- tervals between the letters for the insertion of other letters. Then turning the sheet painted gray, so that the colored side is now uppermost, he writes the word GRAY between the letters of the former word, but in smaller characters, thus,

HoORRASrE.

This is done successively with regard to the other sheets of paper, inserting the name of its respective color between the letters of the word HORSE, which is repeated for that purpose. The gray sheet is again turned down, so that its white side is presented ; upon which the smaller letters, composing the word gray, are effaced, while the great letters, H, O, R, S, E, are allowed to remain. Thus the pupil is taught to consider the quality as part of the object, or as inherent in it. In like manner, he proceeds with other

adjectives, such as round, square, &c., ex- pressing the form of objects; writing them in the intervals of the letters composing the name of the respective objects; effacing them, and substi- tuting others in succession.

To lead the pupil to form the abstraction of the quality thus expressed, that is, to the use of the adjective as a separate word that may be ap- plied to different substantives, he employs the following diagram, the different lines of which he traces before his eyes, in order to point out the steps by which he is to arrive at this notion.

H . O R . S . E

H . O . R . S . E

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Thus obtaining separately, the two words, he afterwards unites them by a connecting line, thus:

HORSE— GRAY

In order to form this into a sentence, he in- serts the word is, instead of the line ; of which it may accordingly be regarded as the substitute, thus:

HORSE is GRAY.

Thus by making his pupils understand the nature of a verb, and afterwards teaching them that the verb can express either an existence or an action, past, present, or future, he leads them to the system of conjugation, and to all the shades 01 tenses. The varieties of significations, and of pronouns, with the corresponding affections of verbs, in regard to number and person, are con- veyed by contrivances analogous to the preceding. They proceed upon the principle of connecting together words by lines, denoting the ideas, which are the component parts of other ideas ; and writing in the place where the lines unite, or in place of the other words in a similar diagram, the name of the compound idea.

Mr. Sicard also employs a system of cyphers, written on the top of every word or member of a sentence, according to the office it performs in the sentence; by the help of which his pupils are better enabled to analyse it into its parts, dis- tinguishing the name of the object, which is either acting or receiving an action, the verb and its regimen, direct, indirect, or circumstantial ; and displaying in a similar way every part of speech.

The mere child, •while learning written words, is made to copy them himself, so thai, by dw?'~ ling upon their forms sufficiently, they make a strong impression on his mind. Then from time to time he is shown the objects, and required to write their names himself : and in these preliminary lessons, much assistance is derived from drawings of the objects. The abbe Sicard has availed himself, with much ingenuity, of this mode of denoting them. He begins, for instance, by tracing the outline of a familiar object, such as a key, on a black board, with a chalk pencil ; and placing the object itself before the eye of the pupil, he readily understands the resemblance of the design with what it is meant to represent. He does the same with other objects ; and exercises his pupil in pointing out the objects denoted by each drawing, which of course is an amusement to him. He next writes the name of each object within the outline of the figure on the board ; and after effacing the outlines, so that nothing b-it the words remain, signifies to the pupil that he is still to consider what he now sees as the representation of the drawing, that is, of the object denoted. Dr. Watson has had a set of plates engraved, containing delineations of 600 objects most generally met with. These are an- nexed to his book of Instruction of the Deaf and Dumb, in eighty octavo pages, and accompanied by a printed vocabulary, consisting of the names of all the objects represented, as also of most of the words explained in the earlier lessons, before the engravings are had recourse to. The first time of going throjgh this vocabulary, the heads or

generic names under which the objects arc classed are not regarded. But, in subsequent iessons, these are particularly attended to, and their re- lations to the subordinate specific names ex- plained.

It is also found extremely advantageous to in- struct the pupil, as soon as he is familiar with the use of letters, in the manual alphabet, as it is called ; or the expression of letters by different positions of the fingers. This is not only a very quick and ready means of communication com- monly learned at other schools ; but easily re- tained, or recovered if lost, and it furnishes an excellent substitute for the pencil, or pen and ink, when those materials are not at hand. The dumb, when properly instructed, converse thus together with the utmost rapidity.

Another mode of yet quicker intercourse has also been devised for the dumb. It is that of writing the forms of the letters by the point of the finger in the air, and on various prominent parts of the body, as the back for instance. It must, however, be recollected that, to a spectator, who stands before us, writing in the air would appear reversed, if traced in the ordinary man- ner, and this must be remedied by the letters being written in a reversed form, a method which is said to be easily acquired by practising before a looking-glass. For the particulars of Dr. Watson's course

we must refer to his Instruction of the Deaf and Dumb, by Josej h Watson, LL.D, 2 vols. 8vo. London, 1809.

A singular example of a child being born deaf and blind, has recently occurred in the per- son of James Mitchell, whose history has been narrated by Mr. Dugald Stewart, in a memoir r,"ibJisbed in the Transactions of the Royal So- ciety of Edinburgh, Vol. VII. p. 70. The cele- brated Mr. Wardrop, performed upon Ilua the operation of couching, and has also given us some valuable and interesting particulars of his case, in a separate work, entitled History of James Mitchell, a Boy, born Blind and Deaf, with an Account of the Operation performed for the Recovery of his Sight. Lond. 4lo. 1813. In the eighth volume of the Transactions of the Royal Society of Edinburgh, are to be found Additional Communications respecting the Blind and Deaf Boy, James Mitchell, by the late Dr. John Gordon ; a gentleman who had paid parti- cular attention to the case of Mitchell, and from whom Mr. Stewart acknowledges he received much information. The volume also contains a paper on the Education of James Mitchell, by Dr. Dewar.

An Asylum for Educating the Deaf and Dumb Children of the Poor, was established in the neighbourhood of London, in the year 1792, and is now under the superintendance of Dr. Joseph Watson, to whose work we have alluded. No child is admitted under the age of nine years, and fourteen is the earliest age at which they can be apprenticed.

In a report, issued in July 1820, by the com- mittee appointed for managing this establishment, the subscribers are informed that the admissions, on the average, have amounted to between forty and fifty within each year ; yet the applications have much increased. At the election, in Ja-

nuary, l8'

five are deaf and dumb. David Thomson, with ten children, five deaf and

dumb. George Franklin, with eight children, five deaf

and dumb. Silas Vokins, with seven children, five deaf and

dumb. Fourteen families, with three children, in each,

deaf and dumb.

The greater number of the successful appli- cants for admission into this asylum are natives of the metropolis, or of the adjoining counties only.

Similar institutions have been established at Birmingham and Edinburgh. In the latter, be- sides the ordinary branches of education, a cer- tain number of boys are taught the trade of shoe- making; and some profit arises from the sale of articles manufactured by them.

At the Asylum for the Deaf and Dumb at Paris, under the management of the abbe Sicard, the apprenticeship of such as are designed for trades begins on their first entering the institu- tion, under the inspection of ten different masters, viz. 1. a printer; 2. an engraver of precious stones; 3. a copper-plate engraver; 4. a drawing master; 5. a turner; 6. a Mosaic artist; 7. a tailor; 8. a shoemaker; 9. a cabinet-maker; 10. a gardener. These masters reside in the asylum, and receive their board and a regular salary. Public exercises, which the abbe Sicard gives once or twice a month, are meant to excite emu- lation among the pupils, and to make the esta- blishment known.

Institutions formed upon a similar model have been established in Holland, Germany, Russia, and Sweden.

It has been suggested that a very competent share of instruction may be imparted to a deaf and dumb pupil by any teacher who undertakes the task with the talents and temper of an ordi- nary schoolmaster, and the art of instructing the infant deaf and dumb ; by John Panncefort Ar- rowsmith, 8vo. Lond. 1823, offers some consider- able encouragement to this attempt. The editor's brother, now an artist of considerable merit, was at an early age sent, like other boys, to a common school ; with a request, on the part of his mother, that he might be treated, in every respect, like the other children. The worthy old dame to whom he was sent, exclaimed, ' How can he be taught his letters ? He cannot hear.' 'True,' replied his mother, ' he cannot hear, but

he can see. As ycu can do nothing with the ear, try what can be done with the eye. If he cannot make out the difference between the sound of a and that of b, you will acknowledge that lie is as competent as any other child to distinguish the form of one from that of the other.' And this expectation was soon proved to be correct, to the astonishment of those who ridiculed the idea ; ' for in a very little time he knew the twenty-six letters, large and small, as well as any child in the school.' Then vanished all the difficulty ; the dame and her wondering neighbours began to see, as his mother had predicted, that he would ' learn by the window, his eyes, as well as any other child could by the door, his ears.' : At this school,' proceeds Mr. Arrowsmith, ' every child went up to his governess twice in the morning

and afternoon. By constantly going up in the same manner, to look at the letters, he soon ob- served the difference between himself and the other children, by taking notice of their mouths ; so that, at length, when the letters were pointed out to him for observation, he looked up to the governess, as much as to say, what is it ? She endeavoured to gratify his curiosity, and called the letters by their names as she pointed to them; and in a few months he learnt to pronounce the alphabet, in his own way, which he does to this day.' The moment he convinced his mother that he knew every letter, she got several sets of alphabetical counters, large and small, with which he was exercised, and taught the name of every thing he could see at home and at school. By these means he constantly gained information from his school-fellows without the knowledge of his mistress.

' To those who are still incredulous, and feel an interest in the subject,' says an able writer in the Quarterly Review, ' we earnestly recommend the account which Mr. Arrowsmith gives of the plan adopted in educating his brother. And to render their conviction more certain — let them try the plan which he details. There are few neighbourhoods in which, unfortunately, a sub- ject may not be found for such a purpose. Let him be regularly sent to any village school with other children. Let him be treated, in all re- spects, like them, and we venture to predict that it will be even impossible to prevent him from acquiring the knowledge of a medium which may enable him to converse with his youthful asso- ciates. The mind is fully as active and vigorous in the one as it is in the other ; and the curiosity of a deaf and dumb child, being strongly excited by the objects which attract his attention, he can hardly fail to devise some means of obtaining from his companions the information which he wishes to procure.

' We are perfectly convinced that the deaf and dumb might he admitted, with peculiar advan- tages, into seminaries in which children who hear and speak receive their instruction. The efforts which would be made by the latter class of pupils to explain their ideas to their less fortunate as- sociates would, in the end, prove highly beneficial even to themselves. It is well known that chil- dren frequently acquire a knowledge of words without comprehending the ideas of which they are representatives. A constant association with

the deaf and dumb, would impose upon tlic:>i the necessity of acquiring a precise conception of the words which they used, for the purpose of making

them intelligible to their young com- panions. The advantages which would, inevita- bly, result from this admixture would be, there- fore, mutual, and would much more than counter- balance any imaginary excess of skill which a teacher who confines himself to the sole instruc- tion of the deaf and dumb may be supposed to possess. The admission of deaf and dumb pupils into establishments now exclusively de- voted to the reception of those who can hear and speak, could, by no possibility, retard the progress of the latter, while it would greatly facilitate the instruction of the former. Were the intercourse of the deaf and dumb to be confined, in after-life, to persons laboring under a similar misfortune, se- paiate establishments for their education would be recommended by reasons much more cogent than any which can be urged in their favor, while it is remembered that, when they leave these in- stitutions, they must converse principally, if not exclusively, with persons who hear and speak.'

DUMFRIES, or DUMFRIES-SHIRK, a county in the south of Scotland, comprehending the district of Nithsdale, the stewartry of Annandale, and the lordship of Eskdale, extending in length from north-west to south-east about sixty miles, and about thirty miles in breadth where broadest. It is bounded on the south-west by Galloway and part of Kyle : on the north-east by the counties of Roxburgh, Selkirk, and Peebles ; on the north-west by Clydesdale ; and on the south-east by Solway Frith and the marshes be- tween Scotland and England. A great part of the county is mountainous, overspread with heath, and well stocked with game of all kinds : but the valleys, through which the Esk, the Annan, the Nith, and other sma'ler rivers run, are ex- tremely pleasant ; and some of them well cul- tivated and very fertile, producing oats, barley, and wheat, in abundance, both for exportation and home consumption ; while the mountainous parts afford pasture for innumerable flocks of sheep and herds of black cattle, many thousands of which are annually exported to England. In the valleys are several natural woods and some extensive plantations of different kinds of tim- ber. In Nithsdale, are the rich lead mines of Wanlockhead, the coal mines of Sanquhar and Cairnburn, the inexhaustible lime quarries of Closeburn and Barjarg, and freestone in almost every parish. Annandale has the rich lime quarries of Kellhead and Comtongan, with plenty of free stone near the towns of Annan and Lochmaben : and in the lower part of Eskdale are limestone and coal in abundance. In some places there are indications of iron ; copper is wrought ; and in Westerkirk a a valuable mine of antimony. Besides the mineral springs of Moffat and Hartfell Spa, there are a great many wells which contain metallic or mineral impregnation. This county contains four royal boroughs, Dum- fries, Sanquhar, Annan, and Lpchmaben, several small towns and villages, and is divided into forty- two parochial districts, containing in all about 55,000 inhabitants. It sends one member to parliament. The manufactures of

snire are not very extensive. Cotton-spinning is carried on at Langholm and Annan, and also cotton-weaving at the latter place; a small iron- work has been erected at Kirkconnel ; a paper- mill, two small foundries, and several breweries and tan-works at Dumfries, and a carpet manu- factory near Sanquhai. Salt was formerly made from sleech, in the parishes of Cummertrees and Ruthwell, without paying duty, in consequence of an act of 1671 ; but the right to this exemption has been lately questioned. In 1809 the entries inwards to this county were 493 vessels, carrying 1339 men, and 18,985 tons; and 287 vessels cleared outwards, with 802 men, and 12,090 tons. Most of the inward vessels are laden with coal, and of the outward with grain. But its most valuable exports are cattle, sheep, bacon, and wool ; almost all of which, excepting the last, are sent out of it by land.

DUMFRIES, the capital of the above county, is a handsome town, situated on a ridge or rising ground, on the north-east side of the river Nith, about nine miles above its junction with the Solway Frith. Its present name appears to have been derived partly from its situation, and partly from the monastery of grey friars, that for- merly stood near the head of the street, being only a corruption of Drum friars, or ‘ the emi- nence of the friary ;’ and accordingly, till within these eighty or a hundred years, it was always spelt Drumfries. Besides the pleasantness of its situ- ation, on the side of a beautiful winding river, it is surrounded on all sides with one of the finest and best cultivated sheets of dale country that are any vJhere to be met with ; and the prospect from it is terminated, at the distance of a few miles, by a continued chain of hills, forming altogether one of the grandest natural amphi- theatres perhaps in Britain. On the north-east side of it, at some little distance, are the ruins of a chapel built by king Robert Bruce. Dum- fries appears to have been erected into a royal borough before the middle of the eleventh cen- tury, as a grave-stone was discovered some time ago bearing the date of 1079, and mentioning the person buried under it to have been a mer- chant and burgess of the town. And that it was a place of consequence in the beginning of the fourteenth century, is evident, from the circum- stance, that Edward II. called the estates of Scotland to meet there in 1307. In the above- mentioned monastery, too, king Robert Bruce killed his rival, Gumming, lord of Badenoch, with the assistance of James Lindsay and Roger Kirkpatrick, on the 5th February, 1305. The houses of Dumfries are well built and commo- dious ; the principal street extends three qnar- ters of a mile, the whole length of the town, in a direction parallel to the Nith ; and the town in general is well paved. It has two very elegant churches and an episcopal chapel, a strong prison, a hospital, an infirmary, and a narrow bridge of nine arches over the river, said to have been built by one of the three daughters and co-heiresses of Alan, lord of

Galloway. The assizes for the county, and for the shire of Gal- loway and stewartry of Kirkcudbright, are held n tlie town twice a year. It is also the place for holding the sheriff's and commissary courts,

the quarter-sessions of the peace, and the courts of the commissioners of supply. It is governed by a provost, three bailies, a dean of guild, treasurer, and twelve merchant councillors, with the deacons of the Incorporations. The corpo- ration obtained from king James I., in one of his journeys to England, a small silver tube, like a pistol barrel, called the silver gun, with his royal license to shoot for it every year ; a festival which is still kept up. The town has a weekly market on Wednesday, with two fairs in February and September, at which vast numbers of horses and black cattle are sold. Dumfries lies thirty miles W.N.W. of Carlisle, and seventy-two S. S.W. of Edinburgh.

DUMFRIES, a town of the United States, the capital of Prince William county, in Virginia. It is a port of entry and post town, and has an episcopal church and court house. It lies on the north side of Quantico Creek, ten miles from Colchester, twenty-eight north by east of Fredericsburg, and 185 south-west of Phila- delphia.

DUMONT (John), baron of Carlscroom a political and historical writer, who became a re- fugee in Holland on account of religion, and was made historiographer to the emperor of Ger- many. He died in 1726, leaving behind him several works, valuable for the facts they contain, as, Memoires Politiques, pour servir a 1'Intelli- gence de la Paix de llyswick, 4 vols. 12mo., 1699; Voyages en France, en Italie, en Malte, et en Turquie, 4 vols. 12mo., 1699; Corps Univer- sal Diplomatique du Droit des Gens, 8 vols. fol. 1726; Lettres Historiques depuis Jauvier 1652 jusqu'en 1710.

DUMOURJEZ (Charles Francis Duperier), of noble but reduced family, was born in Provence, January 25th, 1739. He entered into the French military service at the age of eigh- teen, against the same duke of Brunswick whom, after a lapse of many years, he compelled to retire from France. Having, in his twenty- second year, obtained the rank of captain, and the cross of St. Louis, he went on his travels, and among other countries visited Portugal, of which kingdom he published an account in 1767. Soon after this he was employed in Corsica, with the rank of colonel. In 1770 he was sent to Poland to assist the confederates. He was next engaged on a mission to Sweden,lmt was com- mitted in 1773 to the Bastile, from whence he was released on the death of Louis XV. During the American war he was much employed at Cherbourg, of which place he was made com- mandant. At the commencement of the revolu- tion he

distinguished himself as a patriot, was raised to the rank of lieutenant-general, and made minister of foreign affairs. When the Prussians, 100,000 strong, advanced on France, he dispersed them with a very inferior force, through the superiority of his tactics. The battle of Jemappe shortly after consolidated his triumph, and revolutionised Belgium. On his return to Paris, he found the trial of the king was in progress ; and, becoming suspected of attachment to that unfortunate prince by the terrorists, he soon retired, and replaced himself at the head of his armv. He now concluded a

treaty with the prince of Saxe Coburg for the evacuation of Belgium, while he himself deter- mined to lead bis troops to Paris, and re-estab lish the constitution of 1791. Coburg promised, if necessary, to furnish an auxiliary force, but the design was frustrated by some of the subor- dinate generals conveying intelligence of it to the convention. Commissioners were sent to arrest Dumouriez, when he took the decisive step of instantly arresting them, and handing them over to the custody of the enemy, as hos- tages for the safety of the king and his family. Finding insubordination now beginning to show itself among his troops, he resolved on quitting them, and repaired for refuge to the head- quarters of the prince of Coburg, who offered him a command, but he declined it, and retired to Switzerland. The cantons were however too near to France to render that country a safe asylum, especially as the sum of 300,000 francs was offered for his head. He afterwards retreat- ed to Hamburgh and to England, where he for some time subsisted on a pension of 400 louis, granted him by the landgrave of Hesse Casse!. He survived the restoration of the Bourbon dynasty spveral years. In 1821 he published two memoirs, addressed to the Greeks, and died in his eighty-fifth year, at Turville Park, near Henley-upon-Thames, March 14th, 1823.

DUMP, n. s. -\ Dutch dom ; Dan. dum ; DuMp'isn,«ff/. (Goth, damp ; perhaps from DUMP'LING, n. s. £dumb. Sorrow; sadness: DUMP'Y, J hence, first a melancholy

tune or air; and then any tune. The Scottish dumpy, according to Dr. Jamieson, signifies short and thick : a dumpling is a dumpy pudding. New year, forth looking out of Janus' gate, Doth seem to promise hope of new delight ;

And bidding the' old adieu his passed date Bids all old thoughts to die in dumpish spight.

Spenser.

Sing no more ditties, sing no more Of the dumps so dull and heavy ; The

frauds of men were ever so, Since summer first was leafy.

Shahspeare. Much Ado About Nothing. Visit by night your lady's chamber window With some sweet consort ; to their instruments Tune a deploring dump : the night's dead silence Will well become such sweet complaining grievance.

Sltakspeare.

Funerals with stately pomp March slowly on in solemn dump. Hudibras. Pudding and dumpling burn to pot. Dryden.

This shame dumps cause to well-bred people, when it carries them away from the company. Locke.

The squire who fought on bloody stumps, By future bards bewailed in doleful dumps.

Gay's Pastoral.

The life which I live at this age is not a dead, dumpish, and sour life ; but cheerful, lively, and plea- sant.

She, in sooth,

Possessed an air and grace by no means common : Her stature tall — I hate a dumpy woman. Byron.

DUN, adj. Sax. dun; Goth, dauckn; Welsh dwnn ; Belg. dunker. A dark tawny color : hence dark, gloomy, in a figurative sense.

Come, thick night! And pall thee in the dunnest smoke of hell.

ShakspMre.

DUN

550

DUN

He then surveyed

Hell and the gulph between, and Satan there Coasting the wall of heaven on this side, In the dun air sublime. Milton. Paradise Lost.

The cattle droop, and o'er the furrowed land, Fresh from the plough, the

rf«n-discoloured flocks Untended spreading crop the wholesome root

Thomson. Oh send them to the sullen mansions dun,

Her baleful eyes where sorrow rolls around ; Where gloom-enamoured mischief loves to dwell, And murder, all blood-boltered, schemes the

wound. Dr. Johnson'i Poems.

It changed of course ; a heavenly cameleon,

The airy child of vapour and the sun, Brought forth in purple, cradled in vermillion, Baptized in molten gold, and swathed in dun.

Byron.

DUN, v. a. & n. s. Sax. bunan, to clamor. To claim a debt with vehemence and importu- nity : a clamorous creditor.

Borrow of thy back, and borrow of thy belly : they'll never ask thee again. I shall be dunning thee every day. Bacon.

An university dun is a gentleman's follower cheaply purchased, for his own money has hired him.

Bp. Earle.

When thon dunnest their parents, seldom they, Without a suit before the tribune pay. Dryden.

They are ever talking of new silks, and serve the owners in getting them customers, as their common dunners do in making them pay. Spectator.

I remember what she won : And hath she sent so soon to dun? Sunft.

It grieves my heart to be pulled by the sleeve by some rascally dun — Sir, remember my bill.

Arbuthnot't John Bull.

Secretaries of state, presidents of the council, and generals of an army, have crowds of visitants in a morning, all soliciting for past promises ; which are but a civiller sort of duns, that lay claim to volun- tary debts. Congreve.

DUN, or BURGH, the name of an ancient spe- cies of buildings, of a circular form, common in the Orkney and Shetland isles, the Hebrides, and

northern parts of Scotland. The latter term points out the founders, who at the same time bestowed on them their natal name of borg, a defence or castle, a Suedo-Gothic word ; and the Highlanders universally apply to these places the Celtic name dun, signifying a hill defended by a tower, which plainly points out their use. They are confined to the countries once subject to the crown of Norway. With few exceptions, they are built within sight of the sea, and one or more within sight of the other ; so that on a signal by fire, flag, or trumpet, they could give notice of approaching danger, and yield a mutual succour. In the Shetland and Orkney islands they are most frequently called wart or ward- hills, which shows that they were garrisoned. They had their wardmadher, or watchman, a sort of sentinel, who stood on the top and challenged all who came in sight. The gackman was an officer of the same kind, who not only was on the watch against surprise, but was to give notice if he saw any ships in distress. He was allowed a large horn of generous liquor, which he had always by him, to keep up his spirits. Along the Orkney and Shetland shores they almost form a chain ; and by these means not only kept the natives in

subjection, but were situated commodiously for covering the landing of their countrymen, who were perpetually roving on piratical expeditions. These towers vary in their inner structure ; but externally are universally the same ; yet some have an addition of strength on the outside. The burgh of Culswick in Shetland, notwithstanding it is built on the top of a hill, is surrounded with a dry ditch thirteen feet broad ; that of Snaburgh in Unst, has both a wet and a dry ditch ; the first cut, with great labour, through the rock. The burgh of Moura is surrounded by a wall, now reduced to a heap of stones, and the inside is cylindrical, not taper, as usual with others.

DUNAN AULA, an ancient tumulus in Craignish parish, in Argyllshire, where the ashes of Olaus, the son of a king of Denmark, were deposited, near the field of battle in which he was killed many centuries ago. General Camp- bell converted this mount into a burying-place, and erected a neat monument on the top of it, in memory of his only son. The tumulus is sup- posed to have been raised before the introduction of Christianity, as the urn, containing the ashes of Olaus, was discovered under a heap of stones by the workmen ; and the practice of burning the dead was discontinued after the conversion of the ancient Caledonians.

DUNBAR, a royal borough of Scotland, in the county of East Lothian, once remarkable for a strong castle, the key of Scotland from the east, which gave shelter to Edward II. of England, in his flight from Bannockburn, but of which scarce a vestige now remains. This castle was bravely defended, in 1336, by Agnes, countess of March, sister of Randolph earl of Murray. In the absence of her husband, this heroine forced lord Montague to raise the siege and leave the country. Here are still preserved some of the Scottish

pikes, six ells long, and formed for both offence and defence. Under the rock, on which the castle stands, are two natural arches, through which the tide flows. Between the harbour and the castle is a stratum of vast basaltic columns of red grit-stone. Dunbar is remarkable for the defeat of John Baliol's army by earl Warrenne, in 1296, and for a victory gained near it by Cromwell over the Scotch in 1650. Dunbar is governed by a provost, three bailies, dean of guild, treasurer, and fifteen councillors. It joins with Haddington, North Berwick, Lauder. and Jedburgh, in sending a representative to parlia- •ment. Within the royalty there is a handsome village, called Belhaven, near which the harbour was originally built. The east pier of the pre- sent harbour was begun during the protectorship of Cromwell, who granted £3000 towards defray- ing the expense. But it was still very imperfect, and could only receive a few small vessels ; and even now, though a great deal of labor and money have since been expended in improving it, the access is difficult and the bounds small. It is defended by a battery of twelve guns, of nine, twelve, and eighteen pounders ; besides which, here are a large and convenient dry-dock, and two considerable rope-walks : ship-building is carried on to some extent. Here are a soap-work and a cotton manufactory; two iron- foundries, and spinning-mills. Its principal

trade is the exportation of corn and of kelp. It has also a tolerable trade in the fisheries. It is equi-distant from Edinburgh and Berwick-upon- Tweed, being twenty-seven miles from each.

DUNBAII (William), a celebrated Scottish poet, born at Salton, in East Lothian, in 1465. lie wrote several good poems for that age ; and he has been frequently styled the Scottish Horace. The Golden Terge, and The Thistle and the Hose, are the most admired pieces of his produc- tion. He died about 1530. Sir David Dal- rymple published an edition of his poems with notes.

DUNBARTON, the chief town of Lennox or Dunbartonshire, in Scotland, remarkable for its castle. This is a steep rock, rising up in two points, and every where inaccessible, except by a very narrow passage or entry, fortified with a strong wall or rampart. Within this wall is the guard-house, with lodgings for the officers; and from hence a long flight of stone steps ascends to the upper part of the castle, where there are several batteries mounted with cannon, the wall being continued almost round the rock. In

the middle of this upper part, where the rock divides, there are commodious barracks, with a deep well in which there is always plenty of water. Here, likewise, are the remains of a gateway and high wall, at the top of which there was a wooden bridge of communication from one rock to another. This gateway was sometimes blocked up during the intestine commotions of Scotland, so that garrisons of different factions possessed different parts of the caslle, and each had a gate towards the water. The castle stands in an angle formed at the conflux of the Clyde and Leven : so that it is wholly surrounded by water, except a nar- row isthmus, and even this is overflowed at erery spring tide : nor is there any hill or eminence within a Scotch mile of this fortress. It commands the navigation of the Clyde ; and, being deemed the key of the western Highlands, is kept in some repair, and garrisoned with invalids, under the command of a governor and some subaltern offi- cers. The government of it is worth £700 a year. There is a considerable manufactory of crown glass and bottles in the town. It has a good harbour. The vessels employ seventy seamen and carry about 2000 tons. Dunbarton was erected into a royal borough by king Alexander II.. in 1221. It containsabout 2000 inhabitants, and lies fifteen miles north-west of Glasgow, fifty-eight west of Edinburgh, and eighty-nine north of Dumfries.

DUNBLANE, a town in a parish of the same name, pleasantly seated on the river Allan, thirty miles north of Edinburgh. The battle of Dun- blane, or SherrifTmuir, was fought near it, in 1715, when the duke of Argyll defeated the rebels under the earl of Marr. It has four fairs ; in March, May, August, and November.

DUNCE, n.s. From Lat. densus, thick,— Min- sheu; or Span, tonto, stupid, — Skinner; still more probably a word of reproach introduced by the Thomists against the Scotists, from the name of Duns Scotus, as Mr. Tooke and Mr. Todd suggest ; i. e. Duns' disciples, dunces.

Dunce at the best, in streets but scarce ai.nwea

To tickle, on thy straw, the stupid crowd. Dryden.

Was Epiphanius so great a dunce to imagine a tiling, indifferent in itself, should be directly opposite to the law of God ? Stillingfltet.

Till critics blame, and judges praise, The poet cannot claim his bays. On me when dunces are satiric, I take it for a panegyric. Hated by fools, and fools to hate, Be that my motto, and my fate. Swift.

*The schools became a scene Of solemn farce, where Ignorance in stilts, His cap well lined with logic not his own, With p*arr.ot tongue performed the*

scholar's part, Proceeding soon a graduated dunce. Cowper.

DUNCOMBE (William), a laborious author, born in London in 1690. He published a Translation of Racine's Athalia, which was well received by the public, and has gone through many editions. In 1724 he was editor of the works of Mr. Needier; in 1735, of the poems of his deceased brother-in-law, Mr. Hughes, 2 vols. 12mo. ; in 1737 of the miscellanies of his younger brother Mr. Jabez Hughes, for the benefit of his widow, in 1 vol. 8vo. ; and in, 1745, of the works of the Rev. Mr. Samuel Say, in 1 vol. 4to. In 1726 he married the only sister of John Hughes, Esq. whom he long survived. In 1734 his tragedy of Lucius Junius Brutus xvas acted at Drury-lane theatre. It was published in 1735, and again in 1747. The works of Horace, in English verse, by several hands, were edited by him in 2 vols. 8vo., with notes, &c. in 1757. A second edition, in 4 vols, 12mo. with many imitations, was published in 1762. In 1763 he collected and republished Seven Sermons by Archbishop Herring, on Public Occasions ; with a Biographical Preface. He died Feb. 26, 1769, aged seventy-nine.

DUNCAN (Adam), lord viscount, a gallant British admiral, born at Dundee, in Scotland, in 1731, of .an ancient and respectable family. Being a younger son, he was brought up to the sea, and after the usual gradations was appointed a lieutenant in the navy on the 10th of January, 1755 ; and about four years after he became a commander. He received his naval education, it is said, under the auspices of lord Keppel, through whom he was appointed captain of the Valiant of seventy-four guns. He was likewise on the court-martial of that distin- guished veteran. In 1778 he was appointed to the Monarch, of seventy-four guns, one of the ships employed on the home station. .About the end of December he was ordered, with Sir George Rodney, to Gibraltar, a,nd greatly dis- tinguished himself in the encounter with the Spanish squadron under Don Juan de Langara. Not long after this captain Duncan quitted the Monarch, and in 1782 was appointed to the Blenheim of ninety guns. He continued in this ship during the remainder of the war, being constantly attached to the channel fleet, then com- manded by lord viscount Howe, and consequently proceeded with his lordship to Gibraltar in Sep- tember. When peace was settled, captain Dun- can was appointed to the Edgar of seventy-four guns, and continued in that command the three succeeding years. On the 14th of September ˆ787 he was made rear-admiral of the blue ; of the white on the 22d of September 1790 ; and

in 1T93 he became vice-admiral ; thus rising progressively till the 1st of June 1795, when he obtained the rank of admiral of the blue. Upon this last advancement he hoisted his flag on board the Venerable of seventy-four guns, aud was appointed to the command of the squadron stationed in the North Sea, and particularly des- tined to act against the Dutch, who had then a considerable naval force lying ready for service in theTexel. The mutinous spirit which, about this time, had broken out among the British sea- men in different quarters, having spread itself to the squadron under admiral Duncan, occasioned a slackening of the blockade of the Texel ; and the enemy, acquainted with his situation, prepared for sea, and in his absence, early in October, slipped out, but he soon gained intelligence of their motions, and on the llth of October, about nine in the morning, a signal was given of having discovered the enemy : after a pursuit of three hours, the British fleet came up with the Dutch ; the action commenced at about forty minutes past twelve o'clock, at which time every ship of the British had broken the enemy's line, and cut them off from getting into the Texel, the land being then distant about seven miles. While the rear was attacked by the larboard division under vice-admiral Onslow, admiral Duncan directed all his attention to the enemy's van, and his own ship, the Venerable, was in close action for nearly two hours and a half, when he observed all the mastsof theDutchadmirarsship(Vryheid) go by the board ; she was, however defended for some time after in a most gallant manner; but was at last obliged to strike to the Venerable, admiral de Winter himself being the only man left on the quarter deck, who was not either killed or wounded. The Dutch lost also their vice-admi- ral, in the ship Jupiter, and seven other ships of the line; the remainder having escaped with the greatest difficulty. The attack, on the part of the British admiral, was considered one of the most daring, and the issue of the contest one of the most important, during the war ; indeed it after- wards appeared that the Dutch fleet was designed to assist the French in their intended invasion of this country. In consequence of this very brilliant success, the gallant admiral was, on the 1st of the same month, created viscount Duncan of Camperdown, and baron Duncan of Lundie, in the shire of Perth. A pension also of £2000 per annum was granted to him, and the two next heirs of the peerage. He died in 1804. Lord Dnncan was married to Miss Dundas, daughter of llcbert Dundas, Esq. lord president of the court of session in Scotland, June 6th 1777, by whom he had several children. His first son, Mr. Henry Duncan, died at Edinburgh on the 23d December, 1787; and his second son, Robert, born in 1785, succeeded to the estate and honors. DUNCAN (Daniel), an eminent physician, born at Montauban, Languedoc, in 1649. He eceived his education at Montpelier, where he took his degree. He resided at Paris till the death of Colbert, who was his patron, after which he removed to his paternal estate at Mon- tauban; but during the persecution of the Pro- testants, in 1690, he went to

Geneva. He after- wards became successively physician to the

prince of Hesse Cassel and the king of Prussia He died in London in 1735. He wrote an Explanation of the Animal Functions ; Natural Chemistry ; Salutary Advice against the Abuse of Hot Liquors, particularly coffee, chocolate, and tea.

DUNDAS (Henry), viscount Melville, son of lord Arniston, was born in 1740, and educated at the University of Edinburgh. He was admitted, in 1763, a member of the faculty of advocates ; in 1773 became solicitor-general ; in 1775 lord- advocate; and in 1777 joint keeper of the signet for Scotland. In 1782 he was sworn of the privy council, and made treasurer of the navy ; but did not continue long in office, the coalition between lord North and Mr. Fox having displaced his party. On their return to power, he resumed office under the ministry of Mr. Pitt, to whom he firmly attached himself during their joint lives. On the passing of the act for regulating the affairs of the East India Company, Mr. Dundas was appointed president of the board of control; in 1791 he was made secretary of state for the home department; and in 1794 se- cretary at war. On the resignation of Mr. Pitt, in 1801, he also retired, and was created vis- count Melville. When the former resumed the helm of affairs, he was appointed first lord of the admiralty. In 1805 lord Melville was im- peached hefore the house of lords, of high crimes and misdemeanors in his office of trea- surer of the navy. But the evidence adduced did not directly implicate him in the malversa- tions of his deputy Mr. Trotter. He was accord- ingly acquitted. But he never afterwards held any public situation, except that of privy coun- sellor. His death took place in May 1811.

DUNDALK, a barony in the county of Loath, province of Leinster, in which is a borough, mar- ket, post, fair, and sea-port town of the same name, on a bay of the Irish channel, bearing its name. It lies above twenty-one miles five furlongs north of Drosheda, and fifty-two miles from Dublin. Lat. 53° 57'., long. 6° 42'. A handsome bridge was thrown over the Castletown River in 1822, at the end of the town. It is the assizes town, and has some trade ; it consists of one wide street near a rnile long, and some cross avenues ; has a very good market-house, a court-house, a beau- tiful specimen of Grecian architecture, after the design of the Temple of Theseus; and carries on a manufacture called Dundalk cambrics. It has been fortified (though now dismantled), as may be seen by the ruins of the walls, and a castle destroyed in 1641. In the reign of Ed- ward II. it was a royal city, and is the last where a monarch of Ireland was actually crowned and resided. It is very advantageously situated for an inland trade, and the port is very safe for shipping. The bay, which is nine miles across, and nine inland, has good moorings at all times in four to upwards of eight fathoms water, with very good land-marks either for bringing up,

or making the harbour, and in crossing the bar at high water in ordinary neap Jtides, this is fronj fifteen to eighteen feet water ; besides many other good qualities, the bay abounds with all kinds of fish customary in the channtl. A pier might be built for about £3000 at ;i place callei'

Giles-quay, which would shelter vessels waiting for tide to cross the bar, and enable the inhabi- tants to procure fuel at a cheap rate, while at present the only supply is turf from a bos: ten miles distant. Here are a charter-school of eighty-six girls ; a school of 264 children on Erasmus Smith's foundation, and an endowed classical school of high character; a Protestant church ; two Roman Catholic chapels, and two meeting-houses, one for Presbyterians, the other for Methodists. Exports, corn, live cattle, beef, and butter. Imports, coal and flax-seed. Ma- nufactures are, salt, soap, and leather ; here is an extensive barrack.

DUNDEE, a royal borough of Scotland, in Angus-shire, seated on the north-side of the Tay, about twelve miles from its mouth, forty north of Edinburgh, and twenty-three east of Perth. Its situation for commerce is very advantageous. Trading vessels of the largest burden can get into the harbour ; and on the quay there are very con- venient and handsome warehouses, as well as good room for ship-building, which is carried on to a large extent. The houses are built of stone, generally three or four stories high. The market- place or high street in the middle of the town is a spacious oblong square, from whence branch out the four principal streets, which, with a num- ber of lesser ones, are well paved. On the south side of the market-place stands the town house ; an elegant structure, with a very handsome front, piazzas below, and a neat spire over it 140 feet high. This building was finished in 1734, and contains the guild-hall, the court-room, the bank, vaulted repositories for the 'records, and the common prison, which is in the upper stoiy, and does honor to the taste and humanity of the magistrates, under whose auspices it was con- structed, being well aired commodious rooms, at the same time very strong and secure. The meal-market and shambles, which were formerly a nuisance on the High street, were removed, and in their place was erected by the nine incorpo- rated trades, on the east end of the above large square, a grand building, with a large and elegant cupola : in the ground floor of which is a very neat coffee-room, and several merchants' shops ; and in the upper stories public rooms for each trade, and a common hall fifty feet long, thirty feet broad, and twenty-five feet high; having its front to the square decorated with Ionic columns. St. Andrew's Church, also built by the incorporations, stands on a rising ground a little north from the Cowgate-street ; and has

an elegant, spire 130 feet high, with a peal of bells much admired. Dundee has also four other churches, and five ministers on the establishment. The old church, in which were originally four places of worship, had been a very magnificent building, with a large square Gothic tower or steeple, 186 feet high, on the west end of the church. It was in the form of a cross, erected by David earl of Huntingdon, brother to William]. of Scotland, and was dedicated to the Virgin Mary. This he did on his return from the third crusade (in which, with 500 of his country- men, he had accompanied Richard I. of England), A.D. 1189, in gratitude for his deliverance from several imminent dangers, and particularly from

shipwreck, by which he had nearly perished when in sight of this town. At the same time he changed its name from Alectum to Dei Donum, whence its present name is thought by many to be derived; while others maintain that its name was Duntay, or the Hill of Tay. A hill rises on the north of the town to a great height, and is called The Law of Dundee. On its top, there are evidently the remains of a camp, said to have been first erected by Edward I. of England, and last repaired by general Monk. Dundee had an old castle which was demolished by the celebrated Scotch governor Sir William Wallace, who was educated in this town, which so exasperated Edward I. that, taking the town by storm, he set fire to the churches ; and a number of the inhabitants, hav- ing taken sanctuary there, with their most valuable effects, were all burnt along with them. The desolation he brought on the church continued till the year 1787, when a noble edifice began to be built on the site of the one that was burnt down, in which the ancient Gothic of the outside is excellently united with internal modern archi- tecture, making one of the largest and neatest churches in the kingdom, and again completing the superb superstructure, as erected at the first by the earl of Huntingdon. Besides the public grammar-school, and the English schools, there is an academy, or rather college, for mathema- tics, the French and Italian languages, and the polite arts, with proper professors in the different branches, and a large apparatus for natural and experimental philosophy. This town suffered greatly last century during the civil war, being sometimes under the command of one party, and at others of another. In 1645 the marquis of Montrose took it by storm ; and in 1651, un- der the command of its provost major-general Lumsden, it vigorously opposed general Monk, who carried it by storm, September 1st, and put all in arms to the sword. And so great were the riches of Dundee, all the neighbouring gentle- men having retired to it with their best effects, as a place of safety, that every private soldier in Monk's army had nearly £6 J sterling to his share of the plunder, there being above sixty mer- chant vessels in the harbour at that time ; and the like number of vessels sailed for England loaded with the spoils of the unfortunate inhabitants The magistrates have been at great expense in enlarging and fitting up the

harbour, so as to render it of easy access, safe and commodious ; and have made the passage over the Tay, where there is a great resort, so convenient, that travel- lers with their horses can get over it at any time of tide ; a sufficient number of boats properly manned being always ready. The river Tay before Dundee is about three miles broad ; and, being sheltered by high lands on both sides, is a safe road for ships of the greatest burden. The piers are extensive, broad, and well adapted for the purposes of loading and discharging ves- sels;, and the harbour is equal to any in Scot- land. There are upwards of 160 ships of dif- ferent denominations belonging to the port, which employ upwards of 1300 seamen in the Green- land fishery, and the Baltic and the London trades. A wet-dock has been constructed on a

Tfcry extensive scale, and on the quay are several new ranges of warehouses. The principal ma- nufacture here is of linen, particularly osna- burghs, canvas, bagging, &c., for exportation, and the Dundee colored thread has long been in high repute. Two sugar-houses are also esta- blished here. Till 1745 the town had only draw- wells ; but since that period, it is most amply supplied from a large fountain of excellent wa- ter, conveyed into the town in leaden pipes, and discharged by good wells at proper distances. The salmon fishing in the Tay is of much im- portance ; and the town is well supplied with fish of various kinds, though much raised in price of late years, on account of the quantities sent to London. Dundee was the birth-place of the celebrated Hector Boethius. It possesses the privilege, separately, of returning one repre- sentative to the British parliament.

DUNDONALD CASTLE, an ancient royal castle, seated on an eminence near a village of the same name, where Robert II. the first mo- narch of the house of Stuart, resided much and at last died in 1390.

DUNFERMLINE, a royal borough of Fife- shire, Scotland, fourteen miles west of Kirkaldy, and fifteen north-west of Edinburgh. The greatest part of the town is situate on a hill which commands a view of the surrounding country. Here are the remains of a magnificent abbey and palace of the kings of Scotland, in which the princess Elizabeth, daughter of king James I. was born. In the inn of this town was the marriage bed of James VI. and his queen ; it is still entire, and is now in the pos session of the earl of Elgin. This place is noted for a manufactory of figured diapers. It is go-

verned by a provost, two bailies, dean of guild, and eighteen counsellors, among whom are the eight deacons of incorporations. The houses of Dunfermline are well built, and the size of the town is rapidly increasing. A large suburb, connected by the bridge, and road over the glen on the west, opposite to the principal street, add much to the elegant appearance of the town. This bridge is of a peculiar structure. An arch 297 feet long, twelve broad, and fifteen feet five inches high, was thrown over the burn in the bottom of the glen ; and the remaining hollow filled up by a mound of earth, sixty-eight feet six inches thick at the centre, having a gradual slope on both sides to the extremity of the stone arch below. On the top is the road, enclosed on both sides by houses forming a very neat street. On the slopes of the mound, and at the back of the houses, are very convenient hanging gardens. The church of Dunfermline was the burial place of several of our Scottish monarchs ; particularly of Mal- colm III. with his queen St. Margaret; Edgar; Alexander I. with his queen Sibilla ; David I. and his two queens; Malcolm IV.; Alexander III. with his queen Margaret; and Robert I. with his queen Isabel ; besides many other princes and nobles. About 85,000 tons of lime- stone are quarried in the neighbourhood ; and about 200,000 bolls of limeshells, and 35,000 chaldrons of lime, are sold annually ; 90,000 tons of coals are also raised, of which 60,000 are ex- ported. A beautiful specimen of the art of

weaving is preserved in the chest of the incorpo- ration. It is a man's shirt wrought in the loom, about 100 years ago, by a weaver of the name of Ingles. The shirt is without seam, and was finished by the ingenious artisan, without the least assistance from the needle. Dunfermline has ei«fht annual fairs and a market on Friday. DUNG, n. s. &v.a.~\ Sax. "cunj; Goth. DUNG-FORK, n. s. I dung; Swed. dynger, DUNG-UILL, Nfrom Teut. tingen, to

DUNG-YARD, I till land. Excrement

DusG'\,adj. J or other matter used to

fatten land. To manure with dung. Dungy is base, mean, vile.

He raiseth the poor out of the dust, and lifteth up the beggar from the dung- hill, to set them among princes. Bible. 2 Sam. ii. 8.

The poor he raiseth from the dust, Even from the dunghil lifts the just. Sandys. His dunghil thoughts, which do themselves enure To dirty dross, no higher dare aspire.

Spenser on Love. Out, dunghil! dar'st thou brave a nobleman?

Shaktpeare.

I, his brother, gain nothing under him but growth ; for the which his animals on his dunghils arc as much bound to him as I. Id. As You Like It.

We need no grave to bury honesty ; There's not a grain of it, the face to sweeten Of the whole dungy earth. Id. Winter's Tale. For dung, all excrements are the refuse and putre- factions of nourishment. Bacon's Natural History.

It was received of old, that dunging of grounds when the west wind bloweth, and in the decrease of the moon, doth greatly help.

Bacon's Natural Uiitory.

For when from herbs the pure part must be won, From gross by 'stilling, this is better done By despised dnng than by the fire or sun. Donne.

There cannot be a more evident, palpable, gross manifestation, of poor, degenerate, dunghilly blood anil breeding, than a rude, unpolished, disordered, and slovenly outside. Matsinger.

There as his dream foretold, a cart he found, That carried compost forth to dung the ground.

Dry den.

Perhaps a thousand other worlds, that lie Remote from us, and latent in the sky, Are lightened by his beams, and kindly nurst, Of which our earthly dunghil is the worst. Id. Two cocks fought a duel for the mastery of a duny~ hit. L' Estrange.

Never enter into a league of friendship with an ingrateful person ; that is, plant not thy friendship upon a dunghil : it is too noble a plant for so base a soil. South.

He soon would learn to think like me, And bless his ravished eyes to see Such order from confusion sprung, Such gaudy tulips raised from dung. Swift. Dungforks and paddles are common every where.

Mortimer.

Any manner ot vegetables cast into the dungyard.

Id.

They are not hawks or kites ; tney are only miser- able fowls whose flight is not above their dunghill or henroost. Burke.

Aye, as the dunghill may conceal a gem Which is now set in gold, as jewels should be.

Byron.

DUNGANNON, a barony in county Tyrone, province of Ulster, having in it a borough, o»ar

ket, fair, and post town of the same name ; si- tuated about fourteen miles north of Armagh, and ninety-one and a half north-west of Dublin. Lat. 54° 28', long. 7° 18'. It returns one mem- ber to parliament. The town belongs to lord Northland who has a handsome seat there. Fair days, first Thursday in February ; second Thurs- day in April ; second Monday in May ; first Thursday in July; third Tuesday in August; first Monday O. S. in October; last Tuesday in November. This town was made remarkable for the Ulster delegation of volunteers on the 15th of Feb. 1782. There is a part of the town called the New Town, the houses of which in general are too narrow. Its chief business is the linen trade. In 1816 about £2000 per week was regularly expended in that market on the pur- chase of that article. Here is a poor school endowed by the lady Northland, and a free school founded by Charles I., and endowed with 1000 plantation acres, producing .about £800 per annum. There is a good house here, and glebe of 405 acres. In this parish are the coal mines of Drumglass, leased by the primate to the Hiber- nian Mining Company for £300 per annum: the company have already expended £2000 in the erection of steam engines and other necessary apparatus for working the mines.

DUNG MEERS, in husbandry, places where soils and dungs are mixed and digested together. These consist of pits, prepared at the bottom with stone and clay, that they may hold water, or the moisture of the dung. They ought to be so situated, that the sinks and drips of the houses and barns may run into them. Into these are cast refuse, fodder, litter, dung, weeds, &c., where they lie and rot together, till the farmer has occasion for them.

DUN'GEON, n. s. Anciently donjon, the principal tower of a castle, from Cel. and Brit. dun, a hill on which towers usually stood. A close prison.

Then up he took the slumbered senseless corse, And, ere he could out of his swoon awake,

Him to his castle brought with hasty force, And iu a dungeon deep him threw without remorse.

Spenser.

No man can marvel how that tyrant blinded his captives, when he hears that he brought them imme- diately, out of a dark dungeon, into rooms that were made bright and glorious.

Bp. Hall. Contemplations.

We know not that the king of heaven hath dooomed This place our dungeon ; not our safe retreat Beyond his potent arm. Milton's Paradite Lost.

Death only can such thieves make fast As rob, though in a dungeon. Marvell.

By imagination, a man in a dungeon is capable of entertaining himself with scenes and landscapes, more beautiful than any that can be found in the whole compass of nature. < Addison.

Let Vanity adorn the marble tomb With trophies, rhymes, and 'scutcheons of renown, In the deep dungeon of some Gothic dome, Where night and desolation ever frown. Beattic.

An eye of most transparent light, That almost made the dungeon bright. Byron.

DUNIPACE, HILLS OF, two artificial mounts in a parish of the same name in Stirlingshire

said to be of great antiquity. Each of them covers about an acre of ground. The whole structure of these mounts is of earth ; but they are not both of the same form and dimensions. The more easterly one is perfectly round, resem- bling an oven, and upwards of fifty feet in height. The other bears no resemblance to the eastern one either in shape or size. At the foundation it is nearly of a triangular form ; but the superstructure is quite irregular; nor does the height thereof bear any proportion to the extent of its base. These mounts are now planted with firs, which, with the parish church of Dunipace standing in the middle between them, and the river running hard by, give this valley a very romantic appearance. The common account given of them is, that they were erected as monuments of a peace concluded in that place between the Romans and the Caledonians, and that their name partakes of the language of both people; dun signifying a hill in the old language of this island; and pax, peace, in the language- of Rome.

And we find in history, that no less than three treaties of peace were, at different periods, entered into between the Romans and Caledonians: the first, by Severus, about A. D. 210 ; the second, soon after, by his son Caracalla; and the third, by Carasius, about 280; but of which of those treaties Dunipace is a monument, we cannot pretend to dctenrine.

DUNKELD, a town of Scotland, in Perth- shire, seated on the north side of the river Tay, in a situation truly romantic, among high and almost inaccessible craggs, partly naked and partly wooded. It is the chief market town of the Highlands, and has been greatly improved with buildings by the dukes of Athol. It was the capital of ancient Caledonia. About the dawn of Christianity, a Pictish king made it the seat of religion, by erecting a monastery of Cul- dees there; which king David I., in 1130, con- verted into a cathedral : it ranked as the first in Scotland. The entire shell of the cathedral still remains, the east end serving for a parish church, on the north side of which is the burial place of the dukes of Athol. The architecture is simple and elegant, the pillars are round. The monu- ment of one of its bishops remains in the south aisle of the nave, with that of Alexander Stuart, earl of Buchan, third son of Robert II., called, for his cruelty, The Wolf of Baderioch. The tower at the west end, with a singular crack down one of its sides, adds to the picturesque appearance which the whole makes, among the venerable pines at the end of the duke's garden. His grace's seat is a neat modern building, with pleasant gardens, and a fine cascade on the water of Bran, which, in its way from the western hills, forms a fall of 150 feet, called the Rumb- ling Brig, from a narrow bridge made by the fall of two rocks across the stream. Dunkeld has four fairs, January 21, February 3, March R, and second Tuesday in November. Besides the tanning of leather, the linen manufacture has been carried on to considerable extent, for a number of years, and the manufacture of cotton goods is now also introduced. Dunkeld w fifteen miles north-west from Perth.

DUNKIRK, from dun, Celt, a hill, and kirk, Flem. a church ; a maritime town of France, in ihe department of the north, and ci-devant pro- vince of French Flanders. It is the most easterly harbour on that side of France which is next to Great Brita-n, and was originally a mean hamlet, consisting only of a few fishermen's huts. Raid- win, ea.i of Flanders, about A. D. 960, thinking the situation convenient, enlarged it into a town, and surrounded it with a wall. In the year 1322 Robert, earl of Flanders, who held it as an appendage, built a castle for its defence, which was afterwards demolished by the revolters of Flanders. Robert of Bar erected a

fortification round it, the remains of which are visible on the side next the harbour. The emperor Charles V., who held it as part of Flanders, built another castle to defend the harbour, but th's was also demolished soon afterwards. In 1558 the French, under marshal de Thermes, took Dun- kirk by storm, and almost ruined the place ; the Spaniards recovered it again in about a fortnight, and put all the French to the sword. During a peace procured for the inhabitants by Philip II. of Spain, they rebuilt their town with greater splendor than before, and flourished for some time by privateering against the Dutch; at length they fortified their town and harbour, and fitted out fifteen ships of war at their own charge. In 1634 the inhabitants agreed with those of Bergues to dig a canal, at their joint expense, for a communication between the two towns; which was some time afterwards effected. By this time Dunkirk was become the best harbour the Spaniards possessed in Flanders, which induced many foreigners to settle there ; and, it being necessary to enlarge the town, a new fortified wall was built at a considerable distance from the former. In 1646 it was besieged and taken by the prince of Conde. In 1652 it was retaken by the archduke Leopold, then governor of the Netherlands. France entering into a treaty with England, in 1655, the Dunkirkers, with views of pecuniary advantage, fitted out privateers against both these powers ; the consequence of which was, that the French, assisted by Cromwell, attacked and took it, and it was left in the hands of the English. It was even then of great importance to us ; for, during the war in which it was taken, the Dunkirkers had made prizes of no less than 250 English vessels, many of which were of great value. The fortifications were now, there- fore, improved, and a citadel built ; yet the English kept it only four years; for in 1662, two years after the Restoration, Charles II. sold this valuable acquisition to France, for the paltry sum of £500,000. It was accordingly taken possession of,a for Louis XIV., by the count d'Estrades, on the 29th November, 1662. The celebrated engineer, Monsieur Vauban, now erect- ed an arsenal here, large enough to contain all the stores necessary for fitting out and maintain- ing a large fleet; the fortifications on the land side were constructed in a mariner that was thought to render them impregnable ; and, to- wards the sea, the entrance of the harbour was strongly fortified. These works were completed in 1683; and, iu 1685, the. whole circumference

of the basin was faced with masonry, and the quays completely formed. In 1689 the fort, called the Cornichon, and some other works, were added. Upwards of thi-ty years were em- ployed in improving the fortifications. At the treaty of Utrecht, it having been made appear that the privateers of Dunkirk had, during the war then closing, taken from the English no less than 1614 prizes, valued at £1,334,375 sterling it was stipulated, that the fortifications of the city and port of Dunkirk should be entirely demolished,

and the harbour filled up ; and queen Anne deputed colonels Armstrong and Clayton to inspect the execution of this part of the treaty. A large bar was now built across the mouth of the har- bour, between the jetties and the town, by which all communication between it and the canal, which formed its entrance, was entirely cut off. The sluices were also broken up, and the mate- rials of them broken to pieces. This was scarcely accomplished, when Louis XIV. ordered 30,000 men to construct the new canal of Mardick, which in a short time they accomplished ; and thus the harbour was rendered almost as commodious as ever ; but in 1717 this likewise was rendered unserviceable. In 1720, during a great storm, the sea broke up the bar, and restored the use of the harboui in a very considerable degree. When, in 1740, Great Britain was engaged in a war with Spain, Louis XV. set about improving the advantage which Dunkirk had derived from the storm in 1720, by restoring the works and re- pairing the harbour. He rebuilt the jetties and erected new forts in the place of those which had been destroyed ; and soon afterwards espoused the cause of Spain, and became a principal in the war. But at the peace of Aix- la-Chapelle, in 1748, it was stipulated, that all the works towards the sea should be destroyed a second time; yet, in 1756, the place was again in a good state of defence. At the peace of 1763 it was once more stipulated that a Bri- tish commissary should reside at Dunkirk, to see to the destruction of this harbour. But by the peace of 1783 he was withdrawn, and the French were left to resume their works. The British, under his late royal highness the duke of York, laid siege to this tpwri in 1793, but were soon obliged to abandon it.

Dunkirk is, on the whole, a well-built town : the houses are chiefly of white brick ; but seldom consist of more than two stories. It is a place of brisk trade in fish, corn, colonial produce, and home manufactures. Its chief inconvenience is a scarcity of fresh water. The barracks are extensive and elegant ; and the churches contain some beautiful paintings. The town is ap- proached by a canal of a mile and a half in length, the port and basin being in the interior of the town ; the roadstead is at the outer ex- tremity of the canal, and formed by a sand-bank running parallel to the shore. A mound and ditch surround the town. Dunkirk was restored to the privilege of a free port by a royal ordi- nance of the 22d April, 1816. Population about 20,000. It is twerity-five miles north-east of CaJais, and forty north-west of Lisle.

DLNMORE, EAST, a post town in the county of Waterford, eighty-four Irish miles from Dub-

nn, and nine from Waterfoid city, lat.50° 8′ 17’, N. long. 7° 3’, W., is remarkable for a pier built for establishing a packet station to ply between this port and Milford Haven, from which it is distant seventy-eight nautical miles. This great work was undertaken at the expense of govern- ment, as an important step in the desirable object of improving and facilitating communication be- tween England and Ireland in 1814, from a design by A. Nimmo, Esq. and has been executed at an expense of £80,000. The packets formerly ran up the harbour or river to Cheek Point, the junction of the Suir and Barrow rivers ; and at this place were not unfrequently wind-bound. The new harbour is immediately upon the At- lantic, and, being carried into five fathoms at low water, is accessible at all times-, and may be sailed from with all winds. The pier issues from a lofty bold conglomerate rock, which has furnished all the rubble stone consumed in its formation ; and is carried in a N. N. E. direction to a distance of 1000 feet, having a base of 250 feet in breadth ; the back, being exposed to the heavy swell of the Atlantic, is paved with enor- mous blocks of stone. The inside of the pier is an upright quay wall, forty-five feet in height, faced with hewn sand-stone ; the foundations of •which were laid by the aid of the diving-bell in twenty-four feet of water. On the quay is an elegant range of vaulted apartments, containing the light keeper’s residence, coals for the steam packets, and the stores. The platform over these forms an agreeable promenade, and has a light- house at its extremity, the design of which is a fluted Doric column, copied from the pillars of the temple at Pcestum : the lantern exhibits red lights to the sea, and bright towards Waterford haven. There is a slip constructed on the inside of the pier, affording a safe and convenient place for landing and embarking at all times. On the opposite side of the harbour is a small rock-formed island, curiously perforated by natural arches; the extremity of this rock, below water, is marked by a stone beacon, connected to the island by a suspension foot-bridge of very simple construc- tion, 180 feet span. This island divides the whole enclosed space into an outer and inner harbour, the latter of which, a surface of six acres, is completely sheltered from the awful swell of the Atlantic by the.judicious position of the pier, while the outer might be so enlarged (to nine acres) as to admit line of battle ships. The harbour has fully realised expectation ; the economy observed in its construction is very conspicuous, and, during the period of the erec- tion of the pier, little or no damage was sustained by the shipping that were necessitated to seek shelter mere.

DUNMOW, LITTLE, a village in Essex. It had once a priory, and is still famous for the custom instituted in the reign of Henry III., by Robert de Fitzwalter, and now the tenure of the manor : namely, that whatever married couple will go to the priory, and swear, kneeling upon two sharp-pointed stones in the church, that they had not quarrelled, nor repented of their marriage, within a year and a duy after it took place, shall receive

from the lord of the manor a flitch of bacon. Some old records mention several that have

claimed and received it. It has been actually received so lately as since the year 1750, by a weaver and his wife, of Coggeshall in Essex. It has been demanded more recently still ; but the ceremony being attended with considerable expense to the lord of the manor, the demand is now evaded. See BACON, SERVICE OF THE.

DUNN (Samuel), an English mathematician, born at Crediton in Devonshire. He opened a school in his native town, where he gained considerable reputation as a teacher, and where he continued for several years. He afterwards re- moved to Chelsea, where he kept an academy, and became mathematical examiner for the East India service. He published an Atlas, folio ; Treatises on Book-keeping, Navigation, &c. He- died in 1792, and left his property towaids founding a mathematical school at Crediton.

DUNNEMARLE CASTLE, i.e. the castlo near the sea, an ancient fort of the Macduffs, thanes of Fife, now in ruins ; said to have bee .1 their utmost boundary to the west. It was here that lady Macduff and her children were mur- dered by the tyrant Macbeth. It was seated on the banks of the Forth, in a fine situation, now called Castle-hill.

DUNNING.(John), an eminent English law- yer, born at Ashburton in Devonshire, in 1731, where his father practised as an attorney, and where he began the studies connected with his profession. But after continuing some time witlv his father, he entered of the Temple, and was called to the bar, where he soon distinguished himself as an able lawyer and a powerful orator. He likewise obtained a seat in parliament, where he was particularly noticed on the side of the op- position. He afterwards became solicitor-general and recorder of Bristol, and chancellor of the duchy of Lancaster. In 1782 he was created lord Ashburton, but died the year following, leaving an infant son to inherit the title. His lordship was an upright lawyer, and it is re- corded of him, much to his honor, that he often pleaded the cause of the poor unsolicited, and without a fee.

DUNNOTAR CASTLE, an ancient fortress, now in ruins, built in the reign of Edward I. by an ancestor of the Marischal family. In 1661 the regalia of Scotland were lodged in it, to pre- serve them from the English army, and a garri- son, with ammunition and provisions, obtained for their defence by E. Marischal, the proprietor; who, upon joining the king's forces in England, appointed George Ogilvy, of Barras, lieutenant- governor of the fort. This trust he maintained with the greatest heroism. For though besieged and summoned to surrender by general Lambert, so early as

November 1651, he held out obsti- nately for six months, till May 1652; when, the siege being turned into a blockade, and provisions and ammunition all spent, the garrison began to mutiny, and he at last capitulated upon honorable terms ; but not till he had privately conveyed the regalia to the clergymen of Kinneff. The English not finding the regalia, shut up the governor and his wife close prisoners for years, using every means of severity and allurement to produce a discovery, but in vain. Mr. Ogilvy continued faithful to his trust till the Restoration, when he

returned the regalia to E. Marischal ; but to the disgrace of Charles II.'s administration, received no other reward for all his fidelity, sufferings, and losses, but the title of baronet, and a new coat of arms! In 1685 Dunnottar castle was em- ployed as a prison for 167 Presbyterians, who had been seized in the west of Scotland, during the persecution, and were here treated with the greatest cruelty ; the whole number of inen and women being confined during the warmest sea- son of the year, in one vault, which is still to be seen entire, and hence called the Whigs' Vault. A list of their names is on record in the sheriff court office of the county ; and a grave-stone in the church-yard of Dunnottar, placed upon those who died under the confinement, narrates the fact.

DUNSE, a market town of Scotland, in the county of Merse, containing about 2100 inhabi- tants. It is situated on a rising ground in the middle of the county, and has a weekly market for cattle. Dunse has four fairs, in March, June, August, and November, for horses, sheep, and black cattle.

DUNSINNAN, a hill of Scotland in Perth- shire, celebrated in dramatic story by the immor- tal Shakspeare. It lies partly in the parish of Collace and partly in that of Abernyte. The ruins of Macbeth's castle are still to be seen on that part of the hill which lies in Collace. ' The site of it,' says Mr. Adamson, ' was admirably chosen for a place of defence, being a conical rising on the west end of the hill, almost inaccessible ex cept on one side. The excellence of its situation had before pointed it out to Kenneth III. and other kings, as a secure place of residence. Upon the top of king's seat, there is the ruin of a circular enclosure, similar to Macbeth's castle, but much smaller. This, as it commanded a more extensive prospect than the castle, taking in a vast extent of country, great part of the sea-coast, from the mouth of the Frith of Forth, to the south Esk, probably was a watch-tower, or outpost : and from this circumstance had received its name.'

DUNS SCOTTJS (John), a Franciscan friar, commonly called Doctor

Subtilis, was born in 1274; but whether in England, Scotland, or Ire- land, has long been a matter of dispute among the learned of each nation. When a boy, he be- came accidentally known to two Franciscan friars ; who, finding him to be a youth of extraordinary capacity, took him to their convent at Newcastle. From thence he was sent to Oxford, where he was made fellow of Mertpn College and professor of divinity ; and Mackenzie says, that not less than 30,000 students came to Oxford to hear his lec- tures. His fame was now become so universal, that the general of his order sent him to Paris, in 1304, where he was honored first with the degree of B. D. then of I). D. and in 1307 was appointed regent of the divinity schools. During his res'dence here, the famous controversy about the immaculate conception of the virgin Mary arose. Albertus Magnus maintained that she was born in original sin. Scotus advanced 200 arguments in support of the contrary opinion, and convinced the university, that she was really conceived immaculate. This important nonsense continued to be disputed till 1496, after the

council of Basil, when the University of Paris made a decree, that no student who did not be- lieve the immaculate conception, should be ad- mitted to a degree. Our author had not been above a year at Paris, when his general sent him to Cologne ; where he was received with great pomp and ceremony by the magistrates and no- bles of that city, and where hf> died of an apo- plexy soon after his arrival, in 1308, in the thirty- fourth year of his age. Paul Jovius and others have reported, that Scotus was buried in an epi- leptic fit ; and that, upon removing his bones, he appeared to have turned himself in his coffin. He was doubtless one of the first wranglers of his time, admirably well versed in scholastic divinity, and a most indefatigable writer ; and, if all his huge volumes hardly contain a page now worth perusal, it was the fault of the age. lie was the author of anew sect of schoolmen called Scotists; who opposed the opinions of the Thomists. He was a most voluminous writer; his works making 12 vols. folio ; as published at Lyons by Luke Wadding, in 1629.

DUNSTABLE, a town in Bedfordshire with a market on Wednesdays ; was made a borough and market town by Henry I. who had a royal palace near the church, called Kingsbury. He also built a priory here, of which there now re- mains only a part. The front of the church is singular; the great door is under a semi-oval arch, richly ornamented with various grotesque sculptures ; the tower stands at the north-western angle of the building. The town is seated on a chalky hill. It has several good inns, it being a great thoroughfare on the northern road. It consists of four streets, intersecting each other at right angles ; and in the centre stood one of those beautiful crosses of queen Eleanor, but it was destroyed by the enthusiasts in the time of the civil wars. Here is an extensive manufacture of various articles of use and ornament in straw, particularly hats, known by the name of Dun-

stable, all over the kingdom ; and which employs a great number of women and girls. It lies se- venteen miles south of Bedford, and thirty-four north-west of London.

DUNSTAFFNAGE, an ancient castle and royal palace of Scotland, in the county of Argyll and Lome. It was a chief seat of the Scottish kings before the conquest of the Picts by Kenneth II., A. D. 843. In this place was long preserved the famous stone, the palladium of Caledonia ; brought, says the legend, out of Spain, where it was first used as a seat of justice by Ga".Hus, the son of Cecrops, contemporary with Moses. It continued here as the coronation chair till the reign of Kenneth II. who removed it to Scone Some of the ancient regalia were preserved here, but the late keeper's servants, during his infirm years, embezzled them for the silver orna- ments; and left only a battle-axe, nine feet long, of beautiful workmanship, and ornamented with silver. The castle is square ; the inside only eighty-seven feet ; partly ruinous, partly habit- able. At three of the corners are rourd towers ; one of them projects very little. The entrance is towards the sea at present by a stair-case, in old times probably by a drawbridge, which fell from a little gateway. The masonry appears

very ancient; the tops batllementecl. This pile is seated on a rock at the mouth of Loch Etive, whose waters expand within to a beautiful bay, where ships may safely ride in all weathers. Of this building, the founder of which is unknown, little remains except the outer walls, which, though roofless, are still in good order ; and within which some buildings have been erected, which serve as the residence of the laird. The duke of Argyll is hereditary keeper under the crown. — At a small distance from the castle is a ruined chapel, once an elegant building; and at one end an enclosure, a family cemetery. Op- posite to these is a high precipice, ending ab- ruptly and turning suddenly towards the south- east. A person concealed in the recess of the rock, a little beyond the angle, surprises friends stationed at some distance beneath the precipice with a very remarkable echo of any word, or even sentence, he pronounces; which reaches to the last distinct and unbroken. The repeti- tion is single, but remarkably clear. In 1307 this castle was possessed by Alexander Macdou- gal lord of Argyll, a friend to the English ; but was that year reduced by Robert Bruce, when Macdougal .sued for peace with that prince, and was received into favor. About 1455 it was the residence of the lords of the Isles ; for here James, last earl of Douglas, after his defeat in Annandale, fled to Donald, the regulus of the time, and prevailed on him to take arms and carry on a predatory war against his sovereign, James II.

DUNSTAN (St.), an Anglo-Saxon divine and statesman of the tenth century, whose history has come down to us sufficiently adorned with legends. lie appears to have been born about A. D. 925. and to have been educated at Glas- tonbury by Irish ecclesiastics. In addition to a knowledge of the Latin tongue, and the usual learning of his profession, he acquired in his youth considerable skill in music, metallurgy, and the arts of painting and carving. He con- structed an organ of brass pipes, and filled with air from bellows ; and there is preserved in the Bodleian library a drawing made by him ot Christ, with himself kneeling at his feet. He also excelled, like a modern statesman and prince of Spain, in preparing ladies' robes, to be after- wards embroidered (MS. Cleop. b. 13.). Thus accomplished, he was early introduced to the court of king Athelstan, by his uncle Athelm, archbishop of Canterbury. But some indiscretion, or the jealousy of the courtiers, compelled him to retreat from this hopeful scene ; and the disap- pointment of his prospects produced a serious fit of illness. He now took the vows at Glas- tonbury, and devoted himself with ardor to the discipline of St. Benedict. It is said that he divided between the church and the poor at this time a valuable estate bequeathed to him by a wealthy Saxon lady, as well as his paternal inheritance. To this period of his life is also attached the memorable legend of his conflicts with the spirit of darkness, who is said to have assailed him often in his cell ; till he one day caught the demon by the nose with a red-hot pair of pincers, after which he no more molested him. On the accession of Edmund, the brother

and successor of Athelstan, he was again invited to court, and the rich abbey of Glastonbury was bestowed on him. He advanced still higher in the confidence of Ed red, the next monarch, who made him his prime minister.

At the coronation feast of his successor, Edwy, this lordly ecclesiastic distinguished himself by a remarkable outrage on the person of the king. ' The popular account of this affair is, that the young prince had espoused a beautiful young lady of the royal blood, Elgiva, who was pro- nounced by the monks to be within the canon- ical degrees of affinity. Before his accession, therefore, she had been a source of dispute between the dignified ecclesiastics and the king. On the coronation-day he did not obtrude her claims upon the people ; nor, on the contrary, would he forego his private comforts in her society. When the barons were indulging themselves in the pleasures of the feast, Edwy retired to his domestic apartments, and, in the company of Elgiva and her mother, laid aside his crown and regal state. Dunstan surmised the cause of his retreat; and taking with him his creature Odo, the nominal primate, pene- trated into the interior of the palace, upbraided the prince with this untimely indulgence of his passions, and after branding his consort with the most opprobrious name of woman, brought him back with considerable violence into the nail. Mr. Turner, our able Anglo-Saxon historian, regards the transaction as a bold attempt of

Dunstan to subdue the regal power to his ambition. He represents the nobility as evincing some displeasure at the king's early departure, and the anxiety of Odo to communicate the state of their minds to Edwy. That the persons he first addressed excused themselves from undertaking this errand : and the commission devolved by a sort of general wish on Dunstan, and Cynesius, a bishop, his relative. 'But with the delivery of the message,' he observes, ' his commission must have terminated ; and on the king's refusal [if he did refuse] it was his duty to have retired. As an ecclesiastic, he should not have compelled him to a scene of inebriety; as a subject, it was treasonable to offer violence to his prince.'

' The latest, and not least able of our English historians, however, would place these events in a different light. He insists, somewhat in the spirit of the monkish writers, on this amour oeing highly disgraceful to the king; and while he represents it as ' the scandal of the age' (whose sources, in the king's disputes with the ecclesiastics, Mr. Lingard in any other instance would have readily traced), he states it as not altogether incredible that both Ethelgiva, the mother, and her daughter, whom he does not name, had sacrificed their honor to the equivocal ambition of one of them becoming queen. The nobles, he adds, accompanied their demand for the king's return with an injunction in the name of the whole assembly, for Ethelgiva to leave the court. The rest of his account does not mate- rially differ from that of former historians. But with all the unfeigned respect for his impartiality, with which the perusal of this writer's volumes has inspired us, we cannot hold him successful

in this attempt to disengage the character of Dunstan and his associates from the imputation of great indecorum.

Were the lady tlie king's mistress, and not his wife, was a dignified ecclesiastic justified in following him into her apartments? and, had the amour been ever so unbecoming, was this a species of conduct likely to detach him from it? But the story of the wife and daughter together speculating upon his affections is surely improba- ble in the highest degree: we know that the monkish writers, who furnish the only accpunt we have of the transaction, would call a wife, espoused in opposition to the will of the church, a mistress; and the sufferings of the young monarch from this interference with his affec- tions, should teach us to exercise the judgment of charity on his memory.

Dunstan was now compelled to retire to Flanders, and this was a severe blow to the monks, who were expelled from several monas- teries : but their sufferings were not of long continuance. For Edgar, the younger brother of Edwy, having raised a successful rebellion against the latter, and usurped his dominions north of the Thames, recalled Dunstan, and gave him the bishopric of Worcester, A. D. 957. From this time he was the chief confident and prime minister of king Edgar, who became A. D. 959 sole monarch of England. In 960 Dunstan was raised to be archbishop of Canterbury ; and being thus possessed of the primacy, and assured of the royal support and assistance, he prepared to execute the grand design which he had long meditated, of compelling the secular canons to put away their wives, and become monks; or of driving them out, and introducing Benedictine monks in their room. With this view, he pro- cured the promotion of Oswald to the see of Worcester, and of Ethelwald to that of Win- chester: two prelates who were monks them- selves, and animated with the most ardtnt zeal for the advancement of their order. These confederates, by their arts and intrigues, in the course of a few years, filled no fewer than forty- eight monasteries with Benedictines. But on the death of Edgar in 975 they received a check. The sufferings of the persecuted canons had excited much compassion ; and many of the nobility, who had been overawed by the power and zeal of the late king, now espoused their cause, and promoted their restoration. Elfric, duke of Mercia, drove the monks by force out of all the monasteries in that extensive province, and brought back the canons, with their wives and children ; while Elfwin duke of East Anglia, and Brithnot duke of Essex, raised their troops to protect the monks in these countries. To allay these commotions several councils were held: in which Dunstan was so hard pressed by the secular canons and their friends, that he was obliged to have recourse to miracles, we are told, to overcome their oppo- sition. St. Dunstan died A.D. 988, in the sixty-fourth year of his age, having held the bishopric of London, together with the arch- bishopric of Canterbury, about twenty-seven years.

DUNWICH, a town in Suffolk, most of

which is destroyed by the encroachments of the sea, and not one church left of eight. It has « market on Saturday; until 1832 itsent two mem- bers to parliament. The walls of the town en- close seven acres, and the remains of two gates are yet visible. It is thirty miles north-east of Ipswich, twenty-four south of Yarmouth, and ninety-nine north-east of London.

DUO, in music, a song or composition, to be performed in two parts only, one sung, the other played on an instrument, or by two voices. Also when two voices sing different parts, as ac- companied with a third, which is a thorough bass. It is seldom that unisons and octaves arc used in duos, except at the beginning and end.

DUODE'CUPLE, adj. Lzt.duo and decuplus Consisting of twelves.

Grisepsius, a learned Polander, endeavours to es- tablish the duodecuplc proportion among the Jews by comparing some passages of Scripture together.

Arbuthrwt on Coins.

DU PAN (James Mallet), a modern political writer, was born at Geneva in 1749. He was appointed through the interest of Voltaire pro- fessor of belles lettres at Cassel, and in 1783 went to Paris. During the three years sitting of the first French assembly he published a respect- able analysis of their debates. Being employed in 1792 on a confidential mission from Louis XVI. to his brothers, his estate, together with the whole of his personal property, was confis- cated. He after this wrote at Brussels a work on the French Revolution, which was highly eulogised by Mr. Burke. lie finally settled and carried on a journal in London, entitled Mer- cure Britannique. His death took place in May

1800.

DUPE, v. a. 8c n. s. Dr. Johnson says from Fr. diippe, a foolish bird, easily caught ; but the verb, to dupe, is probably the root, and may be derived from Lat. duplex, double. To cheat ; trick : one easily tricked or imposed upon.

An usurping populace is its own dupe, a mere under- workcr, and a purchaser in trust for some single tyrant. Swift.

First slave to words, then vassal to a name,

Then dupe to party ; child and man the same.

Duncan.

The throne a bigot keep, a genius quit ; Faithless through piety, and duped through wit.

Pope.

For, believe me, you will find, that in the opinion of the world there is not a fairer subject for contempt and ridicule, than a knave become the dupe of his own art. Sheridan.

I have not been thy dupe, nor am thy prey — But was my own destroyer, and will be My own hereafter. — Back, ye baffled fiends ! The hand of

death is on me — but not yours!

Byron.

DUPIN (Lewis Ellis), a learned doctor of the Sorbonne, and one of the greatest critics of his time in ecclesiastical matters, was born at Paris, in 1657. When he published the first volume of his Bibliotheque Universelle des Auteurs Ec- clesiastiques, in 1686, the liberty, with which he treated some ecclesiastical writers, gave such of- fence, that M. de Harlay, archbishop of Paris, obliged Dupin to retract many propositions, and suppressed the work. He was nevertheless suf-

ferecl to continue it, by altering the title from Uibliotheque Universelle, to Bibliotlieque Nou- velle. This great undertaking, continued in se- veral successive volumes, though sufficient to occupy the life of an ordinary man, did not hinder M. Dupin from publishing several other •works. He was professor of philosophy in the royal college ; but was banished some time from the chair to Chatelheraut, on account of the fa- mous Cas de Conscience, but was restored, and died in 1719.

DUPLICATE, v.-a., n. s. & adj. } French

DUPLICATION, n. s. yduplicatu,

DUPLICA'TURE. j from Lat.

duplex, duplicis, i. e. duo, two, and plicatus, from plico, to fold ; twice folded ; double. To make double, or enlarge by doubling ; to fold ; the second thing or number so added : for the arith- metical use of the adjective, see the example. Duplicature is synonymous with duplicate.

And some alterations in the brain duplicate that •wKich is but a single object to our undistempered sen- timents. Glanville.

What great pains hath been taken concerning the quadrature of a circle, and the duplication of a cube, and some other mathematical problems.

Hole's Origin of Mankind.

The lympLeducts, either dilacerated or obstructed, exonerate themselves into the foldings, or between the duplicatwea of the membranes.

Ray on the Creation.

Duplicate proportion is the proportion of squares. Thus, in a rank of geometrical proportions, the first term to the third is said to be in a duplicate ratio of the first to the second, or as its square is to the square of the second : so in 2, 4, 8, 16, the ratio of 2 to 3 is a duplicate of that of 2 to 4, or as the square of 2 to the square of 4. Phillipt. Harris. Bailey.

It has been found, that the attraction is almost re- ciprocally in a duplicate proportion of the distance of the middle of the drop from the concourse of the glasses. . Newton.

Nothing is more needful for perfecting the natural history of bodies, than the subjecting them to the fire ; to which end I have reserved duplicates of the most Considerable. Woodward.

The peritonaeum is a strong membrane, every where double ; in the duplications of which all the viscera of the abdomen are hid.

Wiseman's Surgery.

Will you give me leave to illustrate this affair of wit and judgment, by the two knobs on the back of my chair ? Here stands wit — and there stands judg- ment. You see they are the highest and most orna- mental parts of its frame — as wit and judgment are of ours, and like them too, indubitably both made and fitted to go together, — in order, as we say in all such ••;ases of duplicated embellishments — to answer one another. Sterne.

Clandestine marriage. This kind of sea-weed is buoyed up by bladders of air, which are formed in the duplicatures of its leaves, and forms immense float- ing fields of vegetation ; the young ones, branching out from the larger ones, and borne on similar little air-vessels. Darwin.*

DUPLICATE, in law, used for the second letters patent, granted by the lord chancellor, in a case wheiein he had before done the same ; which were therefore thought void. But it is more commonly a copy or transcript of any deed or writing, account, &c., or a second letter, written arid sent to the same party and purpose as a VOL. VII.

former, or a copy of despatches, for fear of a mis- carriage of the first, or for other reasons. — 4 Car 2. c. 10.

DUPLI'CITY, n. s. Lat. duplicis. Double- ness : the number of two.

This duplicity was ill contrived to place one head at both extremes, and it had been more tolerable to have set three or four at one. Browne's Vulgar

Erruurs.

Do not affect duplicities nor trip'icities, nor any cer- tain number of parts, in your division of things.

Watts's Logick.

DUPONDIUS, in antiquity, a weight of t%vo pounds, or a money of the value of two asses. See As. As the as at first weighed a just pondo, or libra, the dupondius then weighed two ; and hence the name. And though the weight of the as was afterwards diminished, and of conse- quence that of the dupondius also, yet they still retained the denomination. See LIBRA.

DUPORT (James), a learned English divine, was born in 1606, in Jesus' College, Cambridge, of which his father was master. He was edu- cated at Westminster School, and at Trinity College, Cambridge, where he obtained a fellow- ship. In 1632 he was appointed regius profes- sor of Greek; and, in 1641, made prebendary of Lincoln and archdeacon of Stow. He was deprived, in 1656, of his professorship for refusing the en- gagement, but recovered it at the Restoration, and resigned it again the same year in favor of Dr. Barrow. In 1664 he became D. D., and was promoted to the deanery of Peterborough. In 1668 he was elected master of Magdalen College. He died in 1679. His works are — 1. Gnomologia Homed. 2. Tres Libri Solomonis, Graeco Carmine donati, 12mo. 3. Metaphrasis Psalmorum versibus Grsecis contexta cum ver- sione Lat. 4to. 4. Musae Subsecivae seu Poemata Stromata, 8vo. In 1712 some of his lectures were printed by Needham. His father was one of the translators of the Bible.

DUPORT (Marguerite Louis Francis du Tertre), was an advocate at Paris. In 1790 he was ap- pointed minister of justice on the recommendation of La Fayette, and vainly endeavoured to adhere to the constitution which had been established. On the departure of Louis XVI. for Varennes, Duport went to the National Assembly, accord- ing to the king's directions, to deliver up the great seal ; and when the representatives enjoined him to resume it, and seal the order for the arrest of that prince, being denounced anew, he gave in his resignation. He was however involved in the proscription of the 10th of August, 1Z92, and, be- ing sent to Orleans, was condemned and executed in November, 1793, as an enemy to the liberty of the press. On hearing his sentence, he ex- claimed, ' Revolutions destroy men ; posterity •will judge them.' Duport published, in con- junction with Kerverseau, the first eight volumes of a work, entitled L'Histoire de la Revolution, par deux Amis de la Liberte.

DUPPA (Brian), a learned English bishop, born in 1589, at Lewisham, in Kent, of which place his father was then vicar. In 1634 he was instituted

chancellor of the church at Sarum, and soon after made chaplain to Charles I. He was appointed tutor to Charles, prince of Wales, anrl his brother James, duke of York; was made

bishop of Chichester; and, in 1641, translated to Salisbury, though the confusion that followed deprived him of all benefit from his promotion. Charles I. held him in high esteem, and he is said to have assisted the king in composing the Eikon Basilike. On the Restoration he was made bishop of Winchester, and lord high almoner; but died in 1662. He bequeathed large sums to charitable purposes : and published a few ser- mons, with other religious pieces.

DURA MATER, from durus, hard, and mater, a mother; called dura from its comparative hardness with the pia mater, and mater from its being supposed to be the source of all the other membranes. Dura meninx, Dermatodes. A thick and somewhat insensible membrane, formed of two layers, that surrounds and defends the brain, and adheres strongly to the internal sur- face of the cranium. It has three considerable processes, the falciform, the tentorium, and the septum cerebelli ; and several sinuses, of which the longitudinal, lateral, and inferior longitudinal, are the principal. See ANATOMY.

DURANGO, a town of Spain, in Biscay, famous for its manufacture of sword-blades and steel articles. Population 2800. Fifteen miles east of Bilboa.

DURANGO, or New Biscay, an intendancy of Mexico, extending from south to north from the mines of Guarisamey to the mountains of Carcay, north-west of the Presidio de Yanos, 232 leagues. Its breadth is unequal : near Parras it is scarcely fifty-eight leagues ; but is taken on an average at sixty-three leagues.' It does not 'appear to contain above 160,000 inhabitants, but, in this country, except through the details furnished by Humboldt in his New Spain, we are very little acquainted with this region. It is bounded on the south by New Galicia, or by the two intendancies of Za- catecas and Guadalaxara, on the south-east by a small part of the intendancy of San Luis Potosi, and on the west by the intendancy of Sonora. North and east it is bounded by an 'uncultivated country, inhabited by warlike and independent Indians. But since the end of the last

century these troublesome neighbours have been on the decline. The intendancy comprehends the northern extremity of the great table land of Anahuac, which declines to the north-east to- wards the banks of\he Rio del Norte. The ground around the city of Durangois about 1500 feet above the level of the sea. The extent of surface at this intendancy is 16,873 square leagues, DURANGO, a town of Mexico, the chief city of the intendancy of that name, is situated in the southern part of New Biscay, 170 leagues north- west from the city of Mexico, and 298 from the town of Santa Fe. It is the residence of the in- Tendant and of a bishop. The height of the ground on which the town is built is 6845 feet above the level of the sea. There are frequent .fells of snow, and the thermometer sometimes descends to 14° of Fahrenheit. The population Js estimated at 12,000. The surrounding coun- try is fertile in corn and fruits, and the fine ˆ•ˆtures abound with cattle.

DURANTA, in botany, a genus of the angio- .Dermia order and didynamia class of plants ; i.atural order fortieth, personatae : CAL. quin

quefid, superior : BER. tetraspermous : SEED, bi- Jocular. Species, three ; natives of the West Indies and South America.

DURANTE ABSENTIA (during absence)ˆ in law, is an administration granted when the exe- cutor is out of the realm, to continne in force until his return.

DURE,w. n. ~] Fr. durer ; Span.

DUR'ABLE, adj. and Port, durable;

DUR'ABLENESS, n. s. Lat. durabilis, from

I durus; Heb. in, Xhard. To last; con- tinue : durable is last- ing ; permanent : as is dureful : dureless J is the opposite to these.

DUR'ABLY, adv.

DURA'TION, n.s.

DURE'FUL, adj.

DURE'LESS, adj.

DUR' ISG, prep.

DUR'ITY, n. s.

Duration and durity express a state of hardness or permanence : during is

while any thing lasts.

For tho thingis that ben seien ben but durynge for a schorl tyme, but tho thingis that ben not seen ben eutr lasiynge. Wiclif. 2 Coi. iv.

The dureful oak, whose sap is not yet dried, Is long ere it conceive the kindling fire ;

But when it once doth burn, it doth divide Great heat, and makes his flames to heaven aspire,

9pen$er.

Stones, though in dignity of nature inferior unto plants, yet exceed them in firmess of strength, or

No less durable and mighty is the seed of God in his children regenerate, than the seed of the serpent in the unregenerate, to move and rule the will of man accordingly. MS. Note of Bradford the Martyr.

Wit is brushwood, judgment timber : the one gives the greatest flame, the other yields the durableet heat ; and both meeting make the best fire. Overlntry.

The bones of his body we may compare to the hard rocks and stones, and therefore strong and durable.

Raleigh's His/on/.

Our times upon the earth have neither certr.inty nor durability. Id.

Yet were that aptitude natural, more inclination to follow and embrace the false and dureless pleasures of this stage-play world, than to become the shadow of God. . Id.

Ancients did burn fragments of marble, which in time became marble again, at least of indissoluble durity, as appeareth in the standing theatres.

Wotton's Architecture, With pins of adamant,

And chains, they made all fast ; too fast they made And durable ! Milton's Paradise Lost.

Time, though in eternity, applied To motion, measures all things durable By present, past, and future. Id.

There indeed he found his fame flourishing, in monuments engraved in

marble, and yet more durably in men's memories. Sidney.

Such a constitution as this would make the mighty Leviathan of a shorter duration, than the feeblest creatures, and not let it outlast the day it was born in.

Locke.

If during his childhood he be constantly and rigo- rously kept from drinking cold liquor whilst he is hot, forbearance grows into a habit. Id.

Aristotle, by greatness of action, does not only mean it should be great in its nature, but also in its duration ; that it should have a due length in it.

Addison's Spectator.

A bad poet, if he cannot become immoral by the goodness of his verse, may by the durableness of the metal that supports it. Id, On Ancient Medals

The different consistence and dutabCeness of the strata whereof tliey consist, are more or If ss.

Woodward.

Duration is a circumstance so essential to happiness, that, if we conceived it possible for the joys of heaven itself to pass from us in an instant, we should find ourselves not much concerned for the attainment of them. Rogers.

The glories of her majesty's reign ought to be re- corded in words more durable than brass, Slnd such as our posterity may read a thousand years hence.

Swift.

Extieme volatile and sprightly tempers seem in- consistent with any great enjoyment. There is too much time wasted in the mere transition from one object to another. No room for those deep impres- sions, which are made alone by the duration of an idea. Shenstone.

Though art may sometimes prolong their duration, it will rarely give them perpetuity.

Johnson. Plan of Dictionary.

SIR F. Pray, madam, do you speak as to duration of time ; or do you mean that the story is tediously spun out ? Sheridan.

DURATION OF ACTION, according to Aristotle, is confined to a natural day in tragedy ; but the epopea, according to the same critic, has no fixed time. See POETRY.

DU'RANCE, > Fr. duresse, hardship, from

DU'RESSE. $Lat. durus, hard. See DU- RABLE. Applied particularly to constraint; imprisonment.

Thy Dol, and Helen of thy noble thoughts,

Is in base durance and contagious prison ;

Hauled thither by mechanick dirty hands.

Shakspeare.

There ‘s neither iron bar nor gate, Portcullis, chain, nor bolt, nor grate ; And yet men durance there abide, In dungeons scarce three inches wide.

Hudibras.

Sick nature at that instant trembled round, And mother earth sighed as she felt the wound ; Of how short durance was this new made state ; How far more mighty than heaven’s love, her hate !

Dryden.

A poor, innocent, forlorn stranger, languishing in durance, upon the false accusations of a lying, insolent, whorish woman. South.

Notwithstanding the warning and example before me, I commit myself to lasting durance.

Conyreve’s Old Bachelor.

Duresse is a plea used, by way of exception, by him who, being cast into prison at a man’s suit, or other- wise by threats, beating, &c., hardly used, seals any bond to him during his restraint. This the law holds as invalid, and supposes to be constrained. Cowell.

Our fame is in men’s breath, our lives upon Less than their breath ; our durance upon days ; Our days on seasons ; our whole being on Something which is not us ! Byron.

DURELL (David), a learned divine and critic, born in the island of Jersey, in 1728. He re- ceived his education at Pembroke College, Ox- ford, where he took his degrees in arts, but afterwards became fellow of Hertford College, of which he was appointed principal in 1757. He obtained the degree of D. D. in 1764, and about three years after a prebendal stall in the church of Canterbury. He died in 1775 He published, 1. The Hebrew Text of the Pa- rallel Prophecies of Jacob and Moses, relating

to t’ie Twelve Tribes, with a Translation and Notes, &c. 4to. 2. Critical Remarks on the books of Job, Psalms, Ecclesiastes, and Canti- cles, 4to. : which is frequently referred to by bishop Home, in his Commentary on the Psalms.

DURER (Albert), one of the first engravers and painters of his age, was descended of an Hungarian family, and born at Nuremberg, in 1471. He was also a man of letters and a phi- losopher; and was an intimate friend of Eras- mus, who revised some of his works. He was one of the first improvers of the art of engraving. In many of those prints which he

executed on copper, the engraving is elegant to a great degree. His 'hell scene,' in particular, which was engraved in 1.513, is as highly finished a print as ever was engraved, and as happily ex- ecuted. This artist understood the principles of design; his composition, too, is often pleasing ; and his drawing generally good. But he knew very little of the management of light; and still less of grace : yet his ideas are purer than could well be expected from the awkward archetypes which his country dnd education afforded. In a word, he was a man of very extensive genius ; and, as Vasari remarks, would have been an ex- traordinary artist, if he had had an Italian in- stead of a German education. His prints are very numerous. They were much admired in his own life-time, and eagerly bought up ; which made his wife urge him to spend more time upon engraving than he was inclined to do. But he •was rich ; and chose rather to practise his art as an amusement than as a business. He died in

1527.

DURESS, durities, constraint, in English law, is more particularly applied to whatever is done by .man to save either life or limb. If a man through fear of death or mayhem, is pre- vailed upon to execute a deed, or do any other legal act, though accompanied with all other re- quisite solemnities, it maybe afterwards avoided. And the same is a sufficient excuse for the com- mission of many misdemeanours. There are two sorts of duress : duress of imprisonment, where a man actually loses his liberty ; and duress per minas (by threats), where the hardship is only threatened and impending.

A man who was under duress of imprison- ment, being an illegal restraint of liberty, until he seals a bond or the like, may allege this du- ress, and avoid the extorted bond. But if a man be lawfully imprisoned, and either to procure his discharge, or on any other fair account, seals a bond or deed, this is not by duress of imprison- ment, and he is not at liberty to avoid it. 2 Inst. 482.

Duress per minas, is either for fear of loss a life, or else for fear of mayhem or loss of limb. And this fear must be upon sufficient reason: non suspieio cujuslibetvaniet meticulosi horninis, sed talis qui possit cadere in virum constantem. Bract. 1. 2. c. 5. A fear of battery (or being beaten) though never so well grounded, is no duress ; neither is the fear of having one's house burned, or one's goods taken away and destroyed ; because in these cases, should the threat be per- formed, a man may have satisfaction, by re- covering equivalent damages; but no suitable

atonement can be made for the loss of life or limb. 2 Iiw. 483.

D'URI'EY (Thomas), an eminent English sa- tirist and songster, whose name is well known, but of whose life few particulars are to be col- lected. He was born in Devonshire : but when, where, or of what family, are uncertain. He was bred to the law, which he forsook for the more agreeable employment of writing plays and songs ; and the latter he had so happy a talent both of writing and singing, that he received many favors from persons of quality on that account. The writer of the Guardian, No. 67, tells us, he remembered to have seen Charles II. leaning on Tom D'Urfey's shoulder more than once, humming over a song with him. This indeed was not extraordinary in so merry a mo- narch ; but even the phlegmatic king William could relax his muscles on hearing him sing. D'Urfey grew poor as he grew old, and prevail- ing on the managers of the playhouse to act his comedy of the Plotting Sisters, for his benefit, Addison wrote the above-mentioned paper in the Guardian, with another, No. 82, representing him in a good humored light, to procure him a full house. He died very old, in 1723.

DURHAM, a maritime county of England, is situated between the rivers Tees and Derwent, and along the German Ocean. It is bounded on the north by Northumberland, from which it ';s separated by the rivers Denvent and Tyne ; on the east by the German Ocean ; on the south Sy the river Tees, which divides it from York- ihire; and on the west by Cumberland and Northumberland. Its form is triangular, extend- ing forty-five miles in length, from its most western extremity, near the village of Kelhope, to Hartlepool on the east; and thirty-six in breadth, from the village of Stockburn in the south, to South Shields in the north. Though only a small part of the county is either of this length or breadth, it is nearly 180 miles in cir- cumference. Its superficial area includes about 610,000 acres, containing four wards, one city, 120 parishes, ten market towns, and 230 villages. It is in the diocese of its own name, and is included in the northern circuit. Durham is divided into wards, and the archdeaconry com- prehends four deaneries.

Before the Roman invasion Durham was inhabited by the Brigantes, but, after the con- quest of this kingdom, it became part of the Roman province called Maxima Caesariensis. The Anglo-Saxons included it in the kingdom of Northumberland The etymology of the present name of this county appears to be derived, according to Bede, from dun a hill, and holm an island. It is usually called thebishopric of Dur- ham, from the great power which the bishop of the diocese formerly possessed. It is, however, a palatine county, deriving its privileges from a grant made by Egfrid, king of

Northumberland, in the year 685, of all the land betwixt the rivers Wear ami Tyne, to St. Cuthbert, the apostle of the north, and to the ministers of his church for ever. Speed remarks, that the air is sharp and very piercing, and would be more so, were it not that the vapors from the German Ocean help much to dissolve the ice and snow ; yet the air is generally deemed healthy. It is milder and more

pleasant towards the sea than in other parts. The general aspect is mountainous. A ridge of hills crossing the western angle has been denominated the English Appenines. They are not, however, extremely elevated. Of the soils of this county Granger says : near the river Tees, and in some spots bordering the other rivers and brooks in this county, the soil is loamy or a rich clay ; at a further distance from these rivers and brooks, the soil is of a poorer nature, commonly termed watershaken, with here and there spots of gravel interspersed : but these are of small extent, the middle of none of them being half a mile from clay. The hills between the sea and an imagi- nary line drawn from Barnard Castle on the Tees, to Alansford on the Derwent, are for the most part covered with a dry loam, the fertility of which varies in proportion to its depth : from this line westward, the summits as well as the sides of the hills are moorish wastes. Mr. Bailey, in his Agricultural Report, remarks that the soils of this county vary in such insensible degrees, that it would be difficult to describe them in all their varieties. The principal distinctions, or heads of classification, may be taken as clay, loam, and peat. The south-east part of the county, from the Tees mouth to a few miles west of Stockton, and from thence by Redmarshal, Walviston, Elvvich, and as far north as Hart, consists of a strong fertile clayey loam. To the westward of this, as far as Sedgefield, Trimdon, and Eppleton, and northward to near Sunderland, the soil is principally a poor stubborn unfertile clay. Of the loamy soils there are different varieties, as is the case with the clayey soils just mentioned. The deep, mellow, tenacious, dry, fertile, loams are in general found in the vicinry of rivers. The limestone district, extending from nearSunderland by Houghton-le-Spring, Kelloe, Coxhoe, Ferryhill, and to Merrington, is mostly a dry but not a productive loam. The peaty soils are most prevalent in the western parts, the greatest portion of the moors that have been enclosed being of this description.*

Hartlepool, situated on a promontory, nearly encompassed by the German Ocean, which forms a capacious bay on the south side of the town, is advantageously placed for the reception of vessels, and landing of troops from the Continent. South Shields, also, sends out many vessels, and Stockton-upon-Tees is well situated for commerce.

The chief rivers which communicate with the sea are the Tyne, the Wear, and the Tees. The Tees rises iu those vast moors which separate Yorkshire

from Durham, Cumberland, Wesl- moreland, and Northumberland. Its course is at first rather inclined to the south-east, but below Darlington it turns abruptly to the north-east, and falls into the sea below Stockton in this county, which may be called its port. The \ear rises in the same wild moors, but considerably to the north of the Tees. Its course is almost parallel with it, bearing at first to the south-east, and at Bishop's Auckland turning to the north- east ; after nearly surrounding the city of Dur- ham, it flows northward to Chester-le-Street, and then inclines a little towards the east, to reach its port of Sunderland. The Wear, Mr Skrine calls the miniature of the Tees, much

resembling that river in character, though greatly its inferior in width and rapidity. The Tyne, strictly speaking, belongs to Northumberland, though it has its source in the Durham Moors. The fish in these rivers are salmon, trout, eels, dace, pike, and spartings in the Tees. The salt springs near Birtley, and the spas at Butterby and Dinsdale, are also deserving of notice. Near the water-gate, at the south side of the town of Hartlepool, is a chalybeate spring, covered every tide by the sea, and slightly impregnated with sulphur.

The mineral productions of Durham are numerous. and valuable. — The coal districts, in particular, are extensive in various parts of the county. Mr. Bailey has enumerated thirty-four collieries, which he calls Watersale Collieries, and thirty-five which he calls Landsale Collieries. From these lists it appears that the quantity of coals obtained in this county annually is 1,480,080 chaldrons of thirty-six bushels; 10,650 men are employed. In the year 1809 there were eighty-six lead- mines working in this county. Of these, twenty-three belonged to the bishop of Durham ; forty-seven, being all the mines in Teesdale, except one, to the earl of Darlington. Iron ore is found in abundance in the western parts of the coal district. The county, also, pro- duces various kinds of excellent stone forchimney- piece ornaments, mill-stones, grind-stones, &c. ; as also fire-stone for ovens, furnaces, Sec., and freestone for building; as also gray slates for rooting, &c. The cattle of Durham are in much repute ; as for form, weight, produce of milk and butter, and quickness of fattening, they are equal to any in England.

Durham sends ten members to parliament, viz. four for the county, two for the city of Durham, and four for other places. This county was the birth-place of Sir John de Baliol, founder of Baliol College, Oxford, born at Barnard castle, 1248; the venerable Bede, born at Wearmouth, or more probably at Iscomb, 672, died 735; Dr. Sir Samuel Garth ; Joseph Reed, a dramatic writer; Rev. W. Romaine, a Calvinistic clergy- man of. the

established church ; Dr. Richard Grey, author of Memoria Technica, and many other works on theology, &c.

In this county are manufactures of all kinds o1" wrought iron, foundries for casting iron and brass, glass-houses, potteries, salt, copperas, sal-ammoniac, coal tar, woollen, cotton, and linen ; some silk ribbon, and paper-mills. It abounds in noblemen's and gentlemen's seats.

Here are, likewise, several natural and artifi- cial curiosities worth the notice of travellers : as, the black halls, near Hartlepool, consisting of clusters of rocks, formed by the force and con- stant action of the waves of the sea, which have created sereral fine pointed archways and vast towers, resembling those of a cathedral. At Oxenhall are some of those curious cavities called hell-kettles ; the diameter of the largest is 1 14 feet, and that of the least seventy-five feet.

Kepier hospital, near Durham, founded in 1112, has only part of the gateway standing, a strong and handsome piece of masonry with pointed arches. Remains of several monastic buildings occur near the church at Monk Wear-

mouth ; that of Jarrow may still be traced in its ruins on the summit of an elevated ridge near the church ; and the ruins of a monastery for grey friars may be seen at Hartlepool. On the east side of the main street of Gateshead are the ruins of St. Edmund's monastery, established, according to Bede, before the middle of the seventh century ; and Finchall priory, once beautifully situated in a vale on the banks of the Wear, covers with its ruins an extensive plot oi ground. The principal existing ecclesiastical buildings are— Sedgefield church, in the Saxon style ; Bishop Wearmouth church, supposed to have been founded by Athelstan ; the parish church of Brancepeth, an ancient structure of the conventual form ; and the cathedral of Durham, begun in 1093, in the Saxon and Norman style.

Durham is also rich in civil architecture and remains : amongst the most conspicuous are Hilton castle, an ancient baronial residence of a family of that name, situated on the north side of the Wear, about three miles from Wearmouth ; its form is an oblong square, the interior consist- ing of five stories. Ravensworth castle, which seems anciently to have formed a quadrangle, having four square towers, connected by a cur- tain wall ; two of the towers are built up, and the others are in ruins. Brancepeth castle, an irregular stately pile, erected about Stephen's reign. Lumley castle, about a mile to the east of Chester-le-Street, a seat of the earl of Scar- borough; it is a quadrangle, with an area in the centre, arid at each angle are projecting turrets of an octangular form. Bishop Auckland's castle, standing on the north angle of the town, and cover- ing with its courts and offices

about five acres of ground. Raby castle, the magnificent seat of the earl of Darlington, enlarged on the basis of a more ancient castle which stood here prior to the year 1379. Barnard castle, situated on the southern acclivity of an eminence, rising with a steep as- cent from the river Tees. And the castle of the county town. See DURHAM, the city.

Roman coins have been dug up at Gateshead, on Fulwell Hill, and at South Shields, which was clearly the ad finem of Richard of Ciren- cester's Itinerary. Binchester, the seat and manor of the YVren family, is the site of the Roman station Vinovium ; and Evchester is sup- posed to be the Vindomara of Antoninus, many Roman inscriptions, and an urn of uncommon form, having been found here. The latter was nearly a yard, high and seven inches wide, hav- ing in the centre a small cup. Chester-le-Street has been supposed to be the Condercum of the Romans. It is situated on the military way leading to Newcastle. Glanibanta, near Laiiches- ter, is another, and remarkably distinct Roman station. It is of an oblong figure, 174 paces from, north to south, and 160 from east to west, within the vallum, which occupies a beautiful eminence. In some parts, the wall remains perfect ; the out- side is perpendicular, twelve feet in height, built of ashler work in regular courses, each stone being about nine inches thick, and twelve long. The site of the Pretorium is very distinctly to be traced.

Three miles west of the city of Durham, and to the right of the road, is Brandon, a village

situated in the vicinity of a high hill. On the summit is a remarkable tumulus, of an oblong form, 120 paces in circumference at the base, and about twenty-four feet in perpendicular height ; but it does not appear that this tumulus was ever opened. It is now covered with a thick planta- tion of fir, and seems a relic of British antiquity. Near Eggleston is an ancient structure, called the Standing Stones, also of this class : it origi- nally consisted of a cairn in the centre, surrounded by a trench, and encompassed by a circular arrangement of rough stones ; many of which have been removed and broken to repair the roads.

EKirham is termed a county palatine (a palatio) because the owners thereof had, in this county, the authority to use the royal prerogative as fully as the king had in his palace. Its privileges are thought to have been originally granted to the county, on account oe its bordering so near upon Scotland, in order that the inhabitants, having justice administered at home, might not be obliged to go out of their county and leave it open to

the enemy. The bishopric of Durham was dissolved, and the king to have all the lands, &c., by a statute (7 Ed. VI.) not printed. But this act was afterwards repealed (1 Mary, stat. 3, c. 3), and the bishopric newly erected, with all jurisdiction ecclesiastical and temporal an- nexed to the county palatine. The justices of the county palatine of Durham may levy fines of lands in the county ; and writs upon proclama- tion, &c., are to be directed to the bishop. (Stats. 5 Eliz. c. 27, 31 Eliz. c. 2). Writs to elect members of Parliament in the county palatine of Durham, also go to the bishop or his chancellor, to be returned by the sheriff, &c. There is also a distinct court of chancery in this county ; and the bishop is at the head of the whole adminis- tration of justice.

DURHAM, a principal city of England, the capital of the foregoing county, is sixteen miles south from Newcastle, and 259 north from Lon- don. This city was founded in 995, on the monks of Landisfarne removing to this spot, and making it the sacred depository of the relics of St. Cuthbert. It is nearly surrounded by the river Wear. Its situation, and the venerable appearance of its public buildings, strike the eye very agreeably at the southern entrance of the city. Altogether it is about a mile square, and is well paved, watched, and lighted. The mu- nicipal government is vested in a mayor, re- corder, twelve aldermen, twenty-four Cjommon- council-men, who are chosen from twelve char- tered trading companies, and an indefinite number of freemen : the corporation and free- men amounting in the whole to about 1000 electors, who return two members to parliament.

The cathedral and castle occupy the crown of an eminence, eighty feet perpendicular from the river, and enclosed by the remains of the old city walls. At the bottom flows the Wear. The slope of the hill is decorated with hanging gardens and rich meadows, and the opposite banks are clothed with wood and fruit trees. The cathedral is itself 411 feet long, the length of the nave 200 feet, and the width seventy-four ; the great cross-aisle hns an aisle towards the

east, at both ends, 170 feet in length, and fifty- seven wide; the middle tower is 214 feet high. It is divided into five aisles by four rows of pillars. The pillars are vast cylinders, twenty- three feet in circumference, and, with the whole of the interior, are adorned with carvings, exhi- biting fine specimens of the early Norman style. Near the west end is the font, an elegant marble basin, ornamented with carved red-oak. The oak-skreen at the entrance of the choir, as well as the bishop's throne, and the stalls for the bishop, dean, and prebendary, are finished in a magnificent style. The founder's tomb is on the south side of the throne. The beautiful muti- lated screen, on the eastern side of the choir, was the gift of John lord Neville. Behind the high- altar stood the shrine of St. Cuthbert, once the richest in England. The north aisle of this ca- thedral is now used as a register-office

for wills. In 1782 several parts of this structure being found in a ruinous condition, they were restored with considerable taste. The Galilee, or St. Mary's chapel, at the west end of the cathedral, is said to have been built as a place of worship for those females who were not allowed to enter the cathedral. The old Prater House is con- verted into an elegant library. The College is an oblong square, containing the deanery and prebendal houses. The kitchen here is curious, and at the upper end of it is a beautiful fountain. On the north side of the church-yard is the grammar-school, and the master's house.

Durham has six other churches, namely, St. Oswald's, an ancient structure, with a curious vaulted roof of wood, and some fine painted glass : St. Nicholas, an ancient but plain edifice, at which the corporation attend divine service : St. Mary-le-bow, built of hewn stone, in 1685 ; here the bishop and archdeacon's visitations are held : and St. Margaret's, St. Giles's, and Little St. Mary's. In the city are two Roman Catholic chapels, a quakers', presbyterian, methodist, and other meeting-houses.

On the Palace-Green stands the castle, first erected by William the Conqueror, and part of which has been repaired, and made the residence of the bishop occasionally. The great tower stands upon an artificial mount, and is of an ir- regular octagonal form, sixty-three feet in • diameter. It formerly contained four tiers of apart- ments, but nothing now remains of it except the vaults, and part of the keep. Round the mount are three delightful terraces.

The market-place is large and spacious ; in the centre is an excellent fountain, from which the inhabitants are supplied with water. A spa- cious piazza has been built, where the market for corn, provisions, &c., is held. Near it is the Guildhall, where the public meetings are convened. Among the recent improvements, are a new gaol, house of correction, county-courts, and governor's house. There are three stone bridges in this city. The New bridge was finished in 1777, at the expense of the dean and chapter. Framwellgate bridge consists of two elliptic arches, and crosses the canal. Elvet bridge is at the southern entrance to the city. Between the New bridge and St. Oswald's church are the public walks called the Banks,

which afford an agreeable retreat in fine weather An extensive cloth and carpet manufactory has been established, from funds bequeathed by a Mr.

Smith, which affords employment to a great number of men and boys. A county infirmary is also well supported. In the town are many public charities, a subscription library, and se- veral other literary and useful institutions. A neat little theatre was erected in 1791, and annual races are held in July.

Durham market on Saturday is well supplied •with corn and all kinds of provisions. Sea fish are brought from Hartlepool and Sunderland. Fairs are held on the 3 1st of March, for cattle; Whit-Tuesday, for sheep and swine ; and on the 15th of September, for horses; they each con- tinue three days.

About half a mile eastward are the remains of a fortification called Old Durham and Maiden castle ; and two miles and a half east stands Sherborn House, an hospital founded by bishop Pudsey, for a master and sixty-five lepers; in which are now maintained fifteen in-brethren, each having a separate room, good diet, a suit of clothes annually, and 40s. in money : there are also fifteen out brethren. In a deep vale, near the river, are the ruins of Finchall Abbey, founded in 11 96 for Benedictines. On the west of the city is an old cross, erected by Ralph, lord Ne ville, in memory of a battle between the English and Scots, wherein the latter were defeated with the loss of 15,000 men, and their king David II. taken prisoner.

DURHAM, a township of Connecticut, inNew- Haven county, settled from Guildford, in 1698, and incorporated in 1708. It is about twenty- two miles south-west of Hartford, and eighteen north-east of New-Haven. It was called Ca- gingchague, by the Indians ; which name a small river that chiefly rises here still bears.

DURHAM, a township of the United States, in Cumberland county, distiict of Maine, on the south-west bank of the Androscoggin, which se- parates it from Bowdoin on the north-east. It lies 145 miles north-east of Boston.

DURHAM, a post town of New Hampshire, in Strafford county, seated on Oyster river, near where it joins the Piscataqua ; twelve miles west of Portsmouth. It was incorporated in 1633. It was formerly a part of Dover, which adjoins it on the north, and was called Oyster River. . DURHAM, a county of East Australia, bounded on the east by William's River and the church lands, on the north by Manning River and Mount Royal, on the west and south by the river Hunter.

DURIO, in botany, a genus of the polyandria order, and polyadelphia class of plants : CAL. a monophyllous perianth : COR. petals five growing to the calyx ; stamina conjoined in five bodies ; germ, roundish ; style bristly, the length of the stamina : FRUIT a roundish apple every where rauricated : SEED containing mucous orilla. Species one only, a native of the East

Indies.

DURLACH, a well built town of Germany, formerly the capital of the margraviate of Baden- Durlach, now of the circle of the Pfinz and Enz, in the grand duchy of Baden. It is situated on the Pfinz, at the foot of a long and lofty range

of mountains called the Thurmberg. It was burnt down in 1689, and, though rebuilt at the peace, never regained its prosperity, it contains 4000 inhabitants, for the most part Lutherans. Here is the ducal castle of Carlsburg, an elegant church, and an academy ; but the seat of govern- ment has been removed to Carlsruhe. It is re- markable for its manufactory of porcelain. A considerable trade is also carried on in corn, madder, and tobacco. Durlach is five miles east of Carlsruhe, fifteen north-east of ilastadt, and thirty-two N. N.W. of Stutgard.

DUROBRIVvE, in ancient geography, a town of the Catyeuchlani, in Britain, now in ruins ; which lies on the Nen, between Castor and Dorn- ford, in Northamptonshire, on the borders of Huntingdonshire.

DUROBKIVJE, or DUROCOBKIV.E, a town of the Trinobantes, in Britain ; whose ruins are situated between Flamstead and Redburn, in Hertford- shire. See CATTI.

DUROBRIVIS, an ancient town of Britain, twenty-five miles west of Durovernum, or Can- terbury; now called Rochester, which, in the charter of the foundation of the church, is styled Durobrevis.

DUROC (Marshal), duke of Friuli, was born at Pont-a-Mousson in 1772, and studied in the military school of that place. His father, who was a notary, intended him for that employment; but in 1792 he became a lieutenant of artillery, and soon after emigrated into Germany. Re- turning home, we find him aid-de-camp to general Lespinasse, and engaged in that capacity, in his first revolutionary campaigns. In 1796 he was ap- pointed aid-de-camp to Buonaparte, in Italy, and distinguished himself at the passage of the Isonzo. He was also in the expedition to Egypt ; and being wounded by a cannon-ball, at the siege of Acre, returned with Buonaparte to France. Duroc after this had several important missions to Berlin, Stockholm, Vienna, and St. Peters- burgh ; in which he is said to have been re- markably successful. He was a great favorite with Napoleon, and an adroil diplomatist ; but he never acquired much military renown. He was killed by a cannon-ball at Wartschen, May 22d, 1813.— Biog. Univ.

DUROA, in botany, a genus of the monogy- nia order and hexandria class of plants : CAL. cylindrical and loped above ; the border six- parted; there

are no filaments; FRUIT a hispid apple. Species one only, a Surinam tree.

DUROTRIGES, an ancient British nation, scattered in that part of the country which is now called Dorsetshire. Their name is derived from the two British words dur, water, and trigo, to dwell ; and they got it from the situation of their country, which lies along the sea coast. It is not certain whether the Durotriges formed an independent state under a prince of their own, or were united with their neighbours the Dan- monii ; as they were reduced by Vespasian under the dominion of the Romans, at the same time, and with the same ease, and never revolted. Dorchester, its present capital, seems to have been a Roman city of some consideration, though our antiquaries are not agreed about its Roman name. It is most probable, that it was the Dur-

novaria, in the twelfth Iter of Antoninus. Many Roman coins have been found at Dorchester; the military way called Jenning Street passed through it ; and some vestiges of the ancient stone wall with which it was surrounded, and of the amphitheatre with which it was adorned, are still visible. The country of the Durotriges was included in the Roman province called Flavia Caesariensis, and governed by the president of that province, as long as the Romans kept any footing in these parts.

DURY (John), usually called Duraeus, a learned and sanguine divine of the seventeenth century, who, conceiving the project of a union of the reformed churches, obtained leave to travel from place to place in order to bring about this event. He was a native of Scotland, and ob- tained the countenance of archbishop Laud, and the prelates Bedell and Hall; but, although he met with encouragement in various parts of the continent, it is needless to say that he failed in his plans. And after this he undertook an ex- planation of the Apocalypse, which was to reunite every order of Christians. He died in 1675. DUSK, ad) , n. s., v. a. & v. n. ~\ Sued.- Goth. DUSK'ILY, adv. I dyster ; Goth.

DUSK'ISH, adj. \daucks; Dut.

DUSR'ISHLY, adv. i dtigster ; Teut.

DUSK' Y, adj. Jdus; Gr. Saa-

cioc, from Scurvy, thick, and rreia, shadow. Dark ; gloomy in color or

general appearance ; tendency to darkness ; to make or grow dark.

Dusked his eyen too, and failled his breath.

Chaucer.

From his infernal furnace forth he threw Huge flames, that dimmed all the heaven's light, Enrolled in duskish smoke, and brimstone blue.

Spenser.

Here lies the dusky torch of Mortimer, ChoKed with ambition of the meaner sort.

Shakipeare. It is not green, but of a dusky brown colour.

Bacon.

The sawdust burned fair, till part of the candle consumed : the dust gathering about the snast, made the snast to burn duskily. Id. Natural History.

Sight is not contented with sudden departments from one extreme to another; therefore rather a duskish tincture than an absolute black.

Wotton's Architecture.

Only, may the Good Spirit of the Almighty speedily dispel! all those dusky prejudices from the minds of men, which may hinder them from discerning so clear a light. Bp. Hall. Letter from the Tower.

The hills, to their supply, Vapour and exhalation, dusk and moist, Sent up amain. Milton's Paradise Lost.

Some sprinkled freckles on his face were seen, Whose dusk set off the whiteness of the skin.

Dry den.

There fierce winds o'er dusky valleys blow, Whose every puff bears empty shades away. Id. I will wait on you in the dusk of the evening with my show upon my back. Spectator.

Through the plains of one continual day, Six shining months pursue their even way ; And six succeeding urge their dusky flight, Obscured with vapours and o'erwhelmed in night.

Prior. The surface is of a dusky yellow colour.

Woodward.

While he continues in life, this dusky scene of Jior- rour, this melancholy prospect of final perdition, will frequently occur to his fancy. Berkley's Sermons.

Umbriel, a dusky, melancholy sprite,

As ever sullied the fair face of light,

Down to the central earth, his proper scene,

Repairs to search the gloomy cave of Spleen.

Pope.

By mixing such powders, we are not to expect a strong and full white, such as is that of paper ; hut some dusky obscure one, such as might arise from a mixture of light and darkness, or from white and black ; that is, a grey, or dun, or russet brown.

Newton's Opticks. Less bold, Leander at the dusky hour

Eyed, as he swam, the far love-lighted tower ;

Breasted with struggling arms the tossing wave.

And sunk benighted iu the watery grave. Darwin.

Hark ! through the silence of the cold, dull night, The hum of armies gathering rank on rank !

Lo ! dusky masses steal in dubious sight Along the leaguered wall and bristling bank

Of the armed river, while with straggling light The stars peep through the vapours dim and dank,

Which curl in curious wreaths. Byron.

DUSSARA, a fortified town of Hindostan, in the province of Gujerat. It is surrounded with twelve villages, and is the property of a Ma- hommedan zemindar, of Arabian descent. One of his ancestors who was put to death about A. D. 1 209, by the rajah of Hulwad, for having committed gowhattia (cow-killing), is held in great veneration as a saint, by the

adjacent Ma- hommedan inhabitants. His tomb is on the banks of a large tank in the neighbourhood, which is well cultivated. A force of about 2000 excellent cavalry is maintained here.

DUSSAULX (John), a French writer, born at Chartres in 1728. He was a military man in early life, but quitted the army for literary pur- suits. At the beginning of the revolution he became a member cf the convention ; and of the council of ancients. He died in 1799. His works are, 1. A Translation of Juvenal, 8vo. 2. De la Passion de Jeu, 8vo. 3. Sur la Sup- pression des Jeux de Hazard. 4. Eloge de 1'Abbe" Blanches. 5. Memoire sur les Satiriques Latins. 6. Voyage a Barrege, et dans les hautes Pyrennees, 8vo. 7. Mes rapports avec J. J. Rousseau, 8vo.

DUSSELDORF, or DUSSELDORP, a city of Westphalia, now belonging to Prussia, in the duchy of Berg, situated on the river Dussel, near its confluence with the Rhine. It is strong and well built, the elector palatine having in the early part of the eighteenth century exempted from taxes for thirty years whoever should build a house within its walls. It was taken by the French in September 1795, when the castle was greatly damaged ; but it has since been re- paired, and contains a celebrated gallery of paint- ings, which after being removed, and for some time kept at Munich, was brought back here. It is said to comprise the chef d'oeuvres of Rubens, Vandyk, Vanderwerf, and the Flemish masters. Here are also several elegant churches, an ex- cellent market-place, extensive barracks, and pleasant public walks. Dusseldorf has the academy removed hither from Duisburg in 1806, and a school for painting: it has also a collection

of casts, a physical cabinet, and a mechanogra- phic establishment. Corn, and the local manu- factures of cloth, paper-hangiugs, glass, and leather are its chief articles of trade. Popula- tion about 19,000. The fortifications were demolished after the peace of Luneville in 1801. It became, in 1806, the residence of the grand duke of Berg, and the seat of his government ; but, in 1815, it was made over with the rest of that state to Prussia, and is now the capital of a circle with 364,000 inhabitants. Twenty miles N.N.W. of Cologne, thirty north-east of Aix-la- Chapelle, and sixty-two south-west of JVIunster. DUST, n. s. &cv.a.) Goth, and Sax. dust ; DUST'MAN, n. s. >Dan. dyst ; Belg. domt ; DUST'Y, adj. j Erse, dumt. Earth, or

earthy matter; hence a mean, low state; the grave : to scatter, and to free

from, dust.

And whanne thei crieden and kesten awei her clothis and threwen dust into the eir, the tribune commaundidc him to be led into the castels and to be betun with scourgis. Wiclif. Dedis. 22.

God raised up the poor out of the dust, to set them among princes. 1 Sam. ii. 8.

All our yesterdays have lighted fools The way to dusty death. Shakspeare.

The sceptre, learning, physick, must All follow this, and come to dust.

Id. Cynibeline.

Dust helpeth the fruitfulness of trees, insomuch as they cast dust upon them : that powdering, when a shower cometh, -maketh a soiling to the tree, being earth and water finely laid on.

Bacon's Natural History.

A good heart will rather lie in the dust, than rise by wickedness. Bp. Hall. Contemplations.

Thou

Out of the ground wast taken, know thy birth ; For dust thou art, and shall to dust return. Milton.

Proclaim the truth, say what is man ! His body from the dust began ; And when a few short years are o'er, The crumbling fabric is no more.

Cotton. Visions in Verse. Arms and the dusty fields I less admire, And soften strangely in some new desire. Dryden. And therefore I am no more troubled and disturbed with all the dust that is raised against it, than I should be to see from the top of a high steeple, where I had clear air and sunshine, a company of great boys or little boys (for it is all one) throw up the dust in the air, which reached not me, but fell down in their own eyes. Locke.

Vain wretch, suppress thy knowing pride, Mortify thy learned lust :

Vain are thy thoughts while thou thyself art dtut.

Prior.

The dustman's cart offends thy clothes and eyes, When through the street a

cloud of ashes flies.

Gay.

Even Drudgery himself, As at the car he sweats, or dusty hews The palace stone, looks gay.

Tfiomson's Summer.

When stretched in dust her gasping panthers lie, And writhed in foamy folds her serpents die.

Darwin.

You a soldier ! — you're a walking block, fit only to dust the company's regimentals on ! Sheridan.

So revolves the scene ;

So Time ordains, who rolls the things of pride From dust again to diist ! Buron.

DUTCHESS, Fr. duehesse ; Ital. ducaaa ; from the low Latin formation (ducissa) of dux, duds, a general. The lady of a duke.

For certes, lord, ther n' is non of us alle That she n' hath ben a duehesse or a queene ; Now bo we caitives, as it is wel sene.

Cliaucer. Cant. Tales.

The duke of Cornwall, and Regan his dutchess, will be here. Shakspeare. Kiny Lear.

The duke was to command the army, and the dut- r.hess, by the favor she possessed, to be near her ma- jesty. Swift.

The gen'rous god who wit and gold refine?, And ripens spirits as he ripens mines, Kept dross for dutchesses, the world shall know it, To you gave sense, good humour, and a poet. Pope.

DUTCHESS COUNTY, a county of New York, on the east side of Hudson River. It has the state of Connecticut on the east, West Chester on the south, and Colombia county on the north. It is about forty-eight miles long and twenty- three broad, and contains fifteen town-ships, of which Poughkeepsie and Fish-Kill are the chief. Dutchess county sends seven representatives to the assembly of the state. In 1792 a remarkable cavern was discovered in the county, at a place called by the Indians Senascot, at

Rhynbeck. The northern partis mountainous, and the eastern hilly, with occasional lofty summits, while the remainder presents a surface much broken. Its agriculture is in the most improved state, and in manufactures it has also made considerable pro- gress. Iron ore abounds, and some ores of copper, zinc, tin, lead, and silver, have been found.

DUTCHY, n. s. Fr. duche. The territory of a duke.

Different states border on it : the kingdom of France, the dutchy of Savoy, and the canton of Bern. Addison on Italy.

France might have swallowed up his whole dutchy.

Swift.

DUTENS (Louis), was born in France in 1729, and obtained orders in the church of England ; he was appointed chaplain to the embassy at Turin, where he also held for some time the situation of charge des affaires. In 1766 he published at Paris his Recherches sur 1'Origine des Decouvertes, of which a translation soon appeared in London. The same year he was presented to the rectory of Elsdon in Nor- thumberland. In 1768 he travelled with lord Algernon Percy ; • and while abroad published an edition of Leibnitz, in 6 vols. 4to. He died in 181 2. He published besides the above : 1. Ex- plications des quelques Medailles des Grecques et Pheniciennes, 4to. 2. Journal d'un Voyage aux Villes Principales de 1'Europe. 3. Histoire de ce qui s'est passe pour etablissement d'une Regence en Angleterre, 8vo. 4. Recherchessur le terns recule de 1'usage des Voutes chez les Anciens. 5. Memoires d'un Voyageur, 5 vols. : this he likewise published in English. He also wrote the French text of the second volume of the Marlborough Gems.

DUTTAR, a district of the Seik territories, Hindostan, in the province of Lahore, situated between the thirty-first and thirty-second degrees of north latitude. The chief towns are Begwa- rah, Horizpoor, and Malpoorah.

DUTY, in the military art, is the exercise of those functions that belong to a- soldier ; with •his distinction, that mounting guard and the like, where there is no enemy directly to be en- gaged, is called duty ; but marching to meet and fight an enemy is called going on service.

DUTY, in polity and commerce, signifies the impost laid on merchandises, at importation or exportation, commonly called the duties of cus- toms; also the taxes of excise, stamp-duties, &c. Peculiar duties once laid upon aliens are now repealed. See CUSTOMS.

DUVAL (Valentine Jamerai), a person of uncommon natural talents and singular fortune, born in the province of Champagne, in 1695. After serving a farmer and shepherd several years, when about eighteen years of age he be- came keeper of the cattle belonging to hermits of St. Anne, near Luneville. Here he took every opportunity of purchasing books, with what money he received, and attending to the instruc- tions of these brothers, under whom he made a rapid progress in his studies. In this situation, he was accidentally discovered by two noblemen, while he was studying geography, under a tree, and they were so pleased with his conversation, that they introduced him to the duke of Lor- raine, who placed him in the college of Pont a' Mousson. The duke afterwards appointed him his librarian, and gave him the professorship ot< history in the academy of Luneville. He now gratefully remembered his original benefactors by rebuilding the hermitage of St. Anne, and adding a chapel and some ground to it. In 1738 he fol- lowed the grand duke Francis to Florence, and on the marriage of that prince, with the heiress of the house of Austria, he accompanied him to Vienna, where the emperor took a great delight in his conversation, and made him keeper of his cabinet of medals. He died in 1775.

DUUMVIRATE, the office or dignity of the duumviri. See the next article. The duumvi- rate lasted till A. U. C. 388, when it was changed into a decemvirate. See DECEMVIRI.

DUUMVIRI, in Roman antiquity, a general appellation given to magistrates, commissioners, and officers, where two were joined together in the same functions : such as, 1. Duumviri capitales, the judges in criminal causes. From their sentence it was lawful to appeal to the people, who alone had the power of condemning a citizen to death. These were taken from the body of the decuriones : they had great power and au- thority, were members of the public council, and had two lictors to walk before them. 2. Duum- viri municipales, two magistrates in some cities of the empire, answering to what the consuls were at Rome. They were chosen out of the body of the decuriones; their office lasted com- monly five years, upon which account they were frequently termed quinquennales magistratus. Their jurisdiction was of great extent ; they had officers who walked before them, carrying a small switch in their hands; and some of them assumed the privilege of having lictors, carrying axes and the fasces, or bundles of rods, before them. 3. Duumviri navales, two commissaries of the fleet, first created at the request of M. Decius, tribune of the people, in*

the time of the war

with the Samnites. Their duty consisted in giving order for the fitting out of ships, giving commissions to marine officers, &c. 4. Duum- viri sacrorum, two magistrates created by Tar- quin II. for performing the sacrifices, and keep- ing the Sibyls' books. They were chosen from among the patricians, and held their office for life; they were exempted from serving in the wars, and from the offices imposed on the other citizens; and without them the oracles of the Sibyls could not be consulted.

DUXBOROUGH, a town of Massachusetts, in Plymouth county, with a harbour for small vessels, and a light-house at the south extremity of the beach. It is situated south by east of Plymouth, three miles across Plymouth Bay.

DUYIVELAND,DuYVELAND, or DIVELAND, an island of the late Batavian republic, in the department of the Meuse, and ci-devant province of Zealand, lying south-east of Schonen, from which it is separated by a narrow channel. It is nine miles long from west to east, and six broad.

DWARACA (the gate), a town and celebrated temple in the province of Gujrat, Hindostan, situated at the south-west extremity of the Penin- sula. It has twenty-one dependent villages be- longing to Dwaraca, containing 2560 nouses, and a population of about 10,240 souls subject to it. This place is, at present, possessed by Mooloo Manick, who is more powerful than any other of the Oacka chieftains. The sacredness of the place attracts a rich and numerous popu- lation, and presents a safe asylum from danger. By an agreement of the 14th of December, 1807, Mooloo Manick Sumyanee, of Dwaraca, engaged with the British government not to permit, insti- gate, or connive at any act of piracy committed by any person under his authority ; and also to abstain from plundering vessels in distiess. On their part, the British engaged to afford the tem- ple at Dwaraca every suitable protection and encouragement; a free and open commerce to be permitted to vessels paying the regulated duties.

' The original and most sacred spot in this quarter of India,' says Mr. Hamilton, ' is Dwa- raca ; but, about 600 years ago, the valued image of their god Ilunchor (an incarnation of Krishna), by a manffiuvre of the brahmins, was conveyed to Daccoor, in Gujrat, where it still remains After much trouble, the brahmins at Dwaraca substituted another in its stead, which, unfortu- nately, also took a flight across a narrow arm of the sea, to the island of Bate, or Shunkodwar, about 130 years ago, and another new one was placed in the temple here.

' Dwaraca is also designated by the name of the island ; and, having been

long the residence of Krishna, the favorite Hindoo deity, is a cele- brated place of pilgrimage for the sectaries of that religion. In performing this pilgrimage, the following ceremonies take place : — On the arrival of the pilgrim at Dwaraca he bathes in a sacred stream named the Goomty, from its wind- ings; for permission to do which he pays the Dwaraca chief four rupees and a quarter ; but brahmins pay only three and a half. After this purification a visit is made to the temple, where

offerings are presented, according to the circum- stances of the devotee, and a certain number of brahmins are fed.

- *The pilgrim next proceeds to Aramra, where he receives the stamp from the hands of a brah- min, which is made with an iron instrument, on which are engraved the shell, the ring, and the lotos flower, which are the insignia of the gods. This instrument is made hot, and impressed on any part of the body, but generally on the arms ; and, by not being over-heated, generally leaves an impression on the spot. It is frequently im- pressed on young infants ; and a pilgrim may receive, not only his own stamp, but also stamps on his body for any absent friend. This stamp costs a rupee and a half.*

‘ The pilgrim next embarks for the island of Bate, where, on his arrival, he must pay a tax of five rupees to the chief, present liberal offerings to the god, and dress him in rich clothes and or- naments. The chief of Bate, who is a holy per- son, receives charge of the present, and retails it again to other pilgrims at a reasonable rate, who present it again to the deity, and it performs a similar revolution. The average number of pil- grims resorting annually to Dwaraca has been estimated to exceed 15,000, and the revenues derived to the temples a lack of rupees.

‘ Notwithstanding this existing place of pil- grimage, the most authentic Hindoo annals assert, that Dwaraca was swallowed up by the sea a few days after the decease of Krishna. This incarnation of Vishnu spent much of his time at Dwaraca, both before and after his expulsion, by Jarasandha from Mathura, on the banks of the Jumna, in the province of Delhi, which would indicate a greater intercourse between these dis- tant places, than could have been expected at so remote a period. The chalk with which the brahmins mark their foreheads comes from this place, where it is said to have been deposited by Krishna ; and from hence, by merchants, is carried

all over India.' (M'Murdo, &c.J

DWARF, n. s. & v. a. } Sax. dwerg ; Dut.

DWARF'ISH, adj. >Dan. and Scotch, di-

DWARF'ISHNESS, n. s. j verg, ordwaerg ; Ger. swerg, zwerch, crooked. A small and generally deformed person ; often, in ancient times and early poetry, a supernatural being, of no small powers ; an elf or fairy. The verb means to lessen; make dwarfish.

The champion stout,

Eftstoones dismounted from his courser brave, And to the dwarf awhile his needless spear he gave.

Spenser.

Behind her farre away a dwarfe did lag, That lasie seemed, in ever being last. Id. Sonnett.

Get you gone, you dwarf! You minimus, of hiud'ring knot-grass made.

Sluikspeare.

This unheard sauciness, and boyish troops, The king doth smile at ; and is well prepared To whip this dwarfish war, these pigmy arms, From out the circle of his territories. Id. King John.

It is reported that a good strong canvas, spread over a tree grafted low, soon after it putteth forth, will dwarf it, and make it spread.

Bacon's Natural History.

'Tis no wonder that science hath not outgrown the

dwarfislme&s of its pristine stature, and that the intel- lectual world is such a microcosm.

Glanville't Scepsis. They, but now who seemed In bigness to surpass earth's giant sons, Now less than smallest dwarfs, in narrow room Throng numberless. Milton'i Paradise Loit.

In a delicate plantation of trees, all well grown, fair, and smooth, one d warf was knotty and crooked, and the rest had it in deriaion. L' Estrange.

We should have lost oaks and cedars, and the other tall and lofty sons of

the forest, and have found no- thing but dwarfish shrubs, and creeping moss, and des- picable mushrooms. Bentley.

The whole sex is in a manner dwarfed, and shrunk into a race of beauties, that seem almost another spe- cies. Addison.

Saw off the stock in a smooth place ; and, for dwarf trees, graft them within four fingers of the ground.

Mortimer.

Other dramatists can only gain attention by hy- perbolical or aggravated characters, by fabulous and unexampled excellence or depravity, as writers of barbarous romances invigorated the reader by a giaat and a dwarf, Jnhnson.

From giant oaks, that wave their branches dark, To the dwarf moss that clings upon their bark, What beaux and beauties crowd the gaudy groves, And woo and win their vegetable loves. Darwin. This massy portal stood at the wide close

Of a huge hall, and on its either side Two little dwarfs, the least you could suppose,

Were sate, like ugly imps, as if allied In mockery to the enormous gate, which rose O'er them in almost pyramidic pride. Byron.

DWARFS. The Romans were passionately fond of dwarfs, whom they called nani, or nanae, inso- much that they often used artificial methods to prevent the growth of boys designed for dwarfs, by enclosing them in boxes, or by the use of tight bandages. Augustus's niece, Julia, was extremely fond of a dwarf called Sonopas, who was only two feet and an hand-breadth high. We have many other accounts of human dwarfs, but most of them deformed in some way or other, besides the smallness of their size. Many relations, also, concerning dwarfs we must consider as fabulous, as well as those concerning giants. 1. Jeffery Hudson, the famous English dwarf, was born at Oakham in Rutlandshire, in 1619; and about the age of seven or eight, being then only eigh- teen inches high, was retained in the service of the duke of Buckingham who resided at Burleigh on the hill. Soon after the marriage of Charles I., the king and queen being entertained at Bur- leigh, little Jeffery was served up to table in a cold pye, and presented by the duchess to the queen who kept him as her dwarf. From seven years till thirty he never grew taller ; but after thirty he shot up to three feet nine inches, and there fixed. Jeffery became a considerable part of the entertainment of the court. Sir William Dave- nant wrote a poem called Jeffreidos, on a battle between him and a turkey cock; and in 1638 was

published a very small book called The New Year s Gift, presented at court by the lady Par- vula to the lord Minimus (commonly called Lit- tle Jeffery), her majesty's servant, written by Microphilus, with a little print of Jeffery prefixed. Before this period, Jeffery was sent to France to fetch a midwife for the queen ; and, on hia

return with this gentlewoman and her majesty's dancing master, he was taken by the Dunkirkers. Jeffery had borne, with little temper, the teazing of the courtiers and domestics, and, at last, being provoked by Mr. Crofts, a young gentleman of family, a challenge ensued : and Mr. Croft«, coming to the rendezvous armed only with a squirt, the little creature was so enraged, that a real duel ensued ; and the appointment being on horseback with pistols, to put them more on a level, Jeffery, at the first fire, shot his antago- nist dead. This happened in France, whither he had attended his mistress during the troubles. He was again taken prisoner by a Turkish rover, and sold into Barbary. He probably did not remain long in slavery, for, at the beginning of the civil war, he was made a captain in the royal army and in 1644, attended the queen to France, where he remained till the Restoration. At last, upon suspicion of his being privy to the popish plot, he was taken up in 16(32, and confined in the Gatehouse of Westminster, where he ended his life in the sixty-third year of his age. 2. In the Memoirs of the Royal Academy of Sciences, a relation is given by count de Tressau, of a dwarf called Bebe, kept by Stanislaus III. king of Poland, who died in 1764, aged twenty-three, when he measured only thirty-three inches. At his birth he measured only between eight and nine inches.

Saxon, dwelian, dwolian ; Goth, dwol • (delay) ; duala, old Teut., is to stay or delay. To remain ;

DWELL, v. n. & v. a.

DWEL'LER, n. s.

DWEL'LIKG,

DWEL LINO-HOUSE,

DWEL'LING-PLACE,

continue : hence to be in fixed attention on a person or thing; to continue

speaking: as an active verb, to inhabit.

And he gede out and myghte cot speke to hem . and thei knewen that he hadde seyn a visioun in the temple, and he bekenide to hem : and he dwellide stille doumbe. Wiclif.

if thy brother that dwelleth by thee be waxen poor, and be sold unto thee, tbou shalt not compel him to serve as a bond servant. Lev. xxv. 39.

Hazor shall be a dwelling for dragons, and a deso- lation for ever. Jer. xlix. 33.

You lovers axe I now this question, Who hath the worse, Arcite or Palamon ? That on may see his lady day by day, But in prison rnoste he dwellin alway : That other wher him lust may ride or go, But sen his lady shall he never mo.

Chaucer, Cant. Tales.

He in great passion all this1 while did dwell ; More busying his quick eyes het face to view, Than his dull ears to hear what she did tell.

Spenser.

Peopl«»do often change their dwelling-places, and some must die, whilst other some do grow up into strength. Id.

The seed of God, which dwelleth in them that are born of God, neither will nor can, nor never will nor can, trespass or sin against God ; by reason whereof, they that are born of God have great cause to rejoice, seeing in themselves, through God's goodness, not only a friend, but friendliness itself towards and with God. MS. Note of Bradford the if arty r, in Cuvcrdale's Bible.

'Tis safer to be that which we destroy, Than by destruction dwell in doubtful joy.

Shakspeare.

The houses being kept up did of necessity enforce a dweller ; and the proportion of land for occupation being kept up, did of necessity enforce that dweller not to he beggar or cottager, but a man of some sub- stance. Bjcon'i Henry VII.

Why are you vexed, lady ? Why do you frown? Here dwell no frowns, no anger ; from these gates Sorrow flies far. Milton.

All dwellings else

Flood overwhelmed, and them with all their parap Deep under water roll'd ; sea covered sea, Sea without shore ! Id. Paradise L-jsl,

I saw and heard ; for we sometimes Who dwell this wild, constrained by want come forth To town or village nigh. Id. Paradise Regained.

Their cries soon waken all the dwellers near ; Now murmuring noises rise in every street. Dryden.

He preached the joys of heaven, and pains of hel., And warned the sinner with becoming zeal ; But on eternal mercy loved to dwell.

Id. Good Parson.

The force of fire ascended first on high, And took its dwelling in the vaulted sky. Id. Ovid.

We have dwelt pretty long on the considerations of space and duration. Locke.

Such was that face, on which I dwelt with jov, Ere Greece assembled stem'd the tide to Troy.

Pope.

A person ought always to be cited at the place of his dwelling-howe, which he has in respect of his habita- tion and usual residence , and not at the house which he has in respect of his estate, or the place of his birth. Ayliffe's Parergon.

And the soft quiet hamlet where he dwelt Is one of that complexion which seems made For those who their mortality have felt, And sought a refuge from their hopes decayed In the deep umbrage of a green hill's shade.' Kyron, The Sripios' tomb contains no ashes now j

The very sepulchres lie tenantless

Of their heroic dwellers : dost thou flow.

Old Tiber ! through a marble wilderness 1 Rise, with thy yellow waves, and mantle her distress !

Id.

D WIGHT (Timothy), LL.D., a learned Ame- rican divine, was born at

Northampton, in the state of Massachusetts, 4th May, 1752. His father being an opulent merchant, he was entered, at the age of thirteen, at Yale College, of which he sxibsequently became the distinguished tutor and president. He twice represented his native town in the state legislature, and, in 1795, be- came minister at Greenfield in Connecticut. He obtained great reputation as a biblical critic and preacher. Besides his theological works, con- sisting of 5 vols. 8vo., he composed, in early life, two poems, entitled The Conquest of Canaan, and Greenfield Hill ; deemed, at that time, the best productions of the American muse. Dr. Dwight died January llth, 1817, at the age of sixty-five.

DWINA, a large river of European Russia, rising in a lake of the same name, on the borders of the governments of Pskov and Tver. It passes by Veliz, Witepsk, Polotsk, Drissa, and Duna- burg, and falls into the gulf of Riga at Duna- munde, a few miles below Riga. It also com- municates with the lake of Ladoga, and with St.

Petersburg!!, by a canal which joins it to the river Louat, and is navigable throughout.

DWINA, another large river of Russia, is formed by the union of the Juchona and Jug, near the town of Ustjug, in the government of Vologda. It falls, by two arms, into the White Sea, a little to the north-west of Archangel, and is a broad and deep stream, but its mouths are choked with mud.

DWIN'DLE, v. n. } Sax. dwinan ; But.

DWIN'DLED, adj. S dwynen ; Isl. dwyna.

To decay ; to shrink ; wear away ; degenerate : as an active verb, to make less ; to break down, or into parts ; disperse.

Weary sev'nnights nine times nine, Shall he dwindle, peak, and piue.

Shakspeare. Macbeth.

Under Greenvil, there were only five hundred foot and three hundred horse left ; the rest were dwindled away. Clarendon.

Thy dwindled legs seem crawling to the grave.

Dry den.

We see, that some small part of the foot being in- jured by a wrench or a blow, the whole, leg or thigh thereby loses its strength and nourishment, and dwindle! away. Locke,

If there have been such a gradual diminution of the generative faculty of the earth, that it hath dwin- dled from nobler animals to puny mice and insects, why was there not the like decay in the production of vegetables 1 Bentley.

Proper names, when familiarized in English, dwindle to monosyllables ; whereas in other lan- guages they receive a softer turn, by the addition of a new syllable. Addison.

Physicians, with their milky cheer,

The love-sick maid and dwindling beau repair.

Gay.

Religious societies, though begun with excellent intentions, are Said to have dwindled into factious clubs.

He found the expected council was dwindling into a conventicle, a packed assembly of Italian bishops, not a free convention of fathers. Atterbury.

Our drooping days are dwindled down to nought, Their period finished ere 't is well begun. Thomson. Lost in thoughtless ease and empty show,

Behold the warrior dwindled to a beau ;

Since freedom, piety, refined away,

Of France the mimick, and of Spain the prey.

Johnson. London.

In its preventive police it ought to be sparing of its efforts, and to employ means, rather few, unfrequent, and strong, than many, and frequent, and, of course, as they multiply their puny politic race, and dwindle, small and feeble. Burke.

Will they thank the noble lord for reminding us how soon these lofty professions dwindled into little jobbing pursuits for followers and dependants, as un- fit to fill the offices procured for them, as the offices themselves were unfit to be created. Sheridan.

DYEING.

DYE, v. a. & n. s. “) Sax. deagan, to color. DYER, n. s. > Often written die. To

DYE’ING. j tinge; color; stain.

His looke was sterne, and seemed still to threat Cruell revenge, which he in hart did hyde, And on his shield Sansloy in blood lines was dyde.

Spenser. Faerie Queene. It will help me nothing

To plead mine innocence ; for that die is on me, Which makes my whit’st part black.

Shakspeare. Henry VII I.

We have dainty works of feathers of wonderful lustre, excellent dies, and many.

Bacon’s New Atlantis. So much of death her thoughts Had entertained, as died her cheeks with pale.

Milton.

He (an obstinate man) will rather suffer self-mar- tyrdom than part with the least scruple of his free- hold ; for it is impossible to dye his dark ignorance into a lighter color. Butler.

A translator dyes an author, like an old stuff into a new colour, but caa never give it the lustre of the first tincture ; as silks that are twice dyed lose their glosses, and never receive a fair color. Id.

The fleece, that has been by the dier stained, Never again its native whiteness gained. Waller.

All white, a virgin saint she sought the skies ; Tor marriage, though it sullies not, it dies. Dryden.

Darkness we see emerges into light, And shining suns descend to sable night : Even heaven itself receives another die, When wearied animals in slumbers lie Of midnight ease ; another, when the grey Of morn preludes the splendour of the day.

Id

There were some of very low rank and professions who acquired great

estates : cobblers, diers, and shoe- makers gave publick shows to the people.

Arbuthnot on Coins.

It is surprizing to see the images of the mind stamped upon the aspect ; to see the cheeks take the die of the passions, and appear in all the colours of thought. Collier of the Aspect.

Flowers fresh in hue, and many in their class, Implore the pausing step, and with their dyes Dance in the soft breeze in a fairy mass. Byron,

PART I. THE THEORY OF DYEING.

1. Dyeing is a chemical art which has for its object the extracting of the coloring particles from such substances as afford them, and trans- ferring them to certain stuffs of wool, silk, cotton, or linen. No art has profited so much from the improvements of modern chemistry as the art of dyeing has ; and it cannot be, nor ought it to be forgotten, that while we owe much to the disco- veries of our own countrymen, and the applica- tion of those discoveries to the useful arts, the art of dyeing is highly indebted to the national operations of the French chemists.

2. The origin of this art seems to be of high antiquity ; a circumstance which renders it im- possible to say to whom or to what it is to be attributed : conjecture, therefore, is all we can pretend to. As most of the materials from which coloring matter is derived are, of themselves, either of dark and disagreeable colors, or else destitute of any particular color, it is probable that, even in the very earliest ages, the lore o'

ornament, which is natural to mankind, and which is founded on the love of distinction, one of the most active principles of the human mind, would induce them to stain their vestments with various coloring ingredients, especially with vegetable juices But the means of imparting permanent dyes to cloth, and affixing to its fibres such coloring materials, as could not easily be washed out by water, or be obliterated or greatly changed by the action of air, or of certain saline substances, to which they are liable to be exposed, and which are necessary to render them clean when soiled, was an art which required the know- ledge of principles not within the reach of untu- tored men, and only to be obtained by gradual investigation, and by the lapse of a considerable portion of time.

3. According to Pliny, the Egyptians had dis- covered a mode of dyeing,

somewhat resem- bling that which we use for coloring printed linens: the stuffs, probably after having been im- pregnated with different mordants, were immersed in vats, where they received various colors. And M. Delaval is of opinion, that they were pos- sessed not only of the art of djeing, but even of that of printing on cloths.

4. The Phoenicians seem to have a strong claim to the invention of this art, and they held a decided pre-eminence in the practise of it for many ages : their purple and scarlet cloths were sought after by every civilised nation ; and the city of Tyre, enriched by its commerce, increased to an amazing extent. But her career was stopped by the vanity and folly of the eastern emperors; under whose dominion this opulent city had unfortunately fallen. Desirous of mo- nopolising the wearing of the beautiful cloths of Tyre, these tyrants issued most severe edicts, prohibiting any one from appearing in theTyrian blue, purple, or scarlet, except themselves, and their great officers of state. To this injudicious restriction is to be attributed the destruction of the Tyrian dyes. For under the impolitic restraint imposed on the consumption of the Phoenician cloths, the manufacturers and dyers were no longer able to carry on their trade ; it grew languid and expired : and, with the trade, the art itself also perished. It is generally sup- posed from the name, that the Tyrian purple, so much celebrated among the ancients, was disco- vered at Tyre, and that it contributed not a little to the opulence of that celebrated city. The liquor which was employed in dyeing the purple was extracted from two kinds of shell-fish, one of which, the larger, was called the purple, and the other was a species of whelk. Each of these species was subdivided into different varieties, which were otherwise distinguished, according to the places where they were found, and as they yielded more or less of a beautiful color. It is in a vessel in the throat of the fish that the color- ing liquor is found. Each fish only afforded a single drop. When a certain quantity of the liquor had been obtained, it was mixed with a proportion of common salt, macerated together for three days, and five times the quantity of water added. The mixture being kept in a mo- derate heat, the animal parts which happened to be mixed with it separated, and rose to the sur- face. At the end of ten days, when these opera-

tions were finished, a piece of white wool was immersed, by which means they ascertained whether the liquor had acquired the proper shade. Various processes were followed to prepare the stuff to receive the dye. By some it was im- mersed in lime-water, and by others it was pre- pared with a kind of fucus, which acted as a mordant to give it a more fixed color. Alkanet was used by some for the same purpose. The liquor of the whelk did not alone yield a durable color. The liquor from the other shell-fish served to increase its brightnesss ; and thus two opera- tions were in use to communicate this color. A first dye was given by the liquor of the purple,

and a second by that of the whelk ; from which it was called by Pliny purpura dibapha, or pur- ple twice dipped. The small quantity of liquor which could be obtained from each shell-fish, and the tedious process of its preparation and appli- cation to the stuffs, raised the price of purple so high, that in the time of Augustus a pound of wool of the Tyrian purple dye, could not be pur- chased for one thousand denarii, equal to about £36 sterling.

5. Among the Greeks the knowledge of dyeing must have been very imperfect, and little assisted by science; for the art of dyeing linen appears not to have been known in Greece before Alex- ander's invasion of India, where, according to Pliny, they dyed the sails of his vessels of dif- ferent colors. The Greeks seem to have borrowed this art from the Indians.

6. India seems to have been the nursery of the arts and sciences, which were afterwards spread and perfected among other nations. Accidents, which had a tendency to improve the art, could not fail to be multiplied rapidly, in a country, — rich in natural productions; requiring little labor for the support of its inhabitants; and the popu- lation of which was favored by the bounty of nature, and simplicity of manners, till it was op- posed by the tyranny of succeeding conquerors. But religious prejudices, and the unalterable di- vision into castes, soon shackled industry ; the arts became stationary; and it would seem, that the knowledge of dyeing cotton in that country (for silk was then unknown, or at least very scarce) was as far advanced in the time of Alexander, as it is at the present period.

7. The beautiful colors, which are observable in some Indian linens, would lead one to suppose that the art of dyeing had there attained a high degree of perfection ; but we find by the descrip- t'on which Beaulieu, at the request of Dufay, gave of some operations performed under his own eye, that the Indian processes are so complicated, tedious, and imperfect, that they would be im- practicable in any other country, on account of the great difference in the price which is paid for labor.

8. It is unquestionably true, that European in- dustry has far surpassed them in correctness of design, variety of shade, and facility of execu- tion ; arid, if we are inferior to them with respect to the liveliness of some colors, it is only to be attributed to the superior quality of some of their dyes, or perhaps to the length and multiplicity of their operations and processes. In our own country, however, the art of dyeing made no con- siderable progress till about the beginning of the

seventeenth century. Before that period our cloths were sent to Holland, to be dressed and dyed. This, however, was probably practised only in the case of particular colors. The dyeing of woollen and silken goods has indeed long since attained a considerable degree of excellence ; but the manufactures of cotton, owing to the small attraction of that substance for coloring matters, have been very deficient in this point. Till within these few years, the colors employed in the dyeing of fustians and cotton velvets were few; and, even at this day, many of them are fugitive. But it must be allowed that great im- provements have been made within these few years, from the application of chemical principles, and by a diligent investigation of the nature of coloring substances. There is however still much room for the improvement of the art, but this can only be effected by the practical dyer acquiring chemical knowledge, an acquisition now happily placed within the leach of every dyer who is capable of reading and understanding the En- glish language. It will not be necessary for our present purpose to enter into a minute examina- tion of the various theories that have been ad- vanced of the nature of colors; at the same time it may be proper, before we deduce a general theory of dyeing, to make a few observations on the common properties of coloring substances.

9. In explaining the cause of color, and the nature of coloring particles, two great inconveni- ences have arisen. First, from an attempt to illus- trate the action, which the particles of coloring substances have on the rays of light, in conse- quence of their density and thickness, without having any means of ascertaining this, and •without any regard to the attractions which result from their chemical ccmposition ; in comparing the coloring particles to mucilages and resins, from some very faint resemblances ; and in at- tempting to explain their coloring properties by conjectures, formed respecting their component parts, while these properties ought rather to be ascertained by direct experiment than explained by an imaginary composition. It was also de- parting from true theory, to ascribe to laws purely mechanical, the adhesion of the coloring particles to the substances dyed, the action of the mordants, the difference between the true or du- rable, and the false or fugitive dyes.

10. Hellot, who has written an excellent trea- tise on dyeing, seems to have erred on this subject ; and Macquer, who was amongst the first who entertained just notions respecting chemi- cal attractions, seems to have been led astray by his ideas. It appears, however, that Dufay had before observed, that the coloring particles were naturally disposed to adhere more or less firmly to the filaments which receive them; and had veryjustly remarked, that without this disposition, stuffs would never assume any color but that of the bath, and would always divide the coloring particles equally with it : whereas the liquor of the bath sometimes becomes as limpid as water, giving off all the coloring particles to the stuff; which, he

observes, seems to indicate that the in- gredients have less attraction for the water than for the particles of the wool.

1 1 . Bergman seems to have been the first who

referred the phenomena of dyeing entirely to chemical principles. Having dyed some wool and some silk in a solution of indigo, in very dilute sulphuric acid, he explains the effects he observed in the operation, by attributing them to the precipitation, occasioned by the blue particles hiving a greater affinity for the particles of the wool and silk, than for those of the acidu- lated water. He remarks that this affinity of the wool is so strong, as to deprive the liquor en- tirely of the coloring particles ; but that the weaker affinity of the silk can only diminish the proportion of these particles in the bath , and he shows that on these different affinities depend both _the permanence and intensity of the color.

12. This is the true light in which the phe- nomena of dyeing should be viewed ; they are real chemical phenomena, which ought to be analysed in the same way as all those dependent on the actions which bodies exert, in conse- quence of their peculiar nature. It is evident, that the coloring particles of bodies possess che- mical properties, that distinguish them from all • other substances ; and that they have attractions peculiar to themselves, by means of which they unite with acids, alkalis, metallic oxides, or calces, and some earths, principally alumine or pure clay. They frequently precipitate oxides and alumine, from the acids which held them in so- lution ; at other times they unite with the salts, and form supercompounds which combine with the wool, silk, cotton, or linen. And with these their union is rendered much more close by means.of alumine or metallic oxide, than it would be without their intermedium.

13. The difference in the affinity of the color- ing particles for wool, silk, and cotton, is some- times so great, that they will not unite with one of these substances, while they combine very readily with another ; thus, cotton receives no color in a bath which dies wool scarlet. Dufay prepared a piece of stuff, the warp of which was wool and the woof cotton, which went through the process of fulling, that he might be certain, that the wool and the cotton received exactly the same preparation ; but the wool took the scarlet dye, and the cotton remained white. It is this difference of affinity which renders it necessary to vary the preparation and the process, accord- ing to the nature of the substance which is in- tended to be dyed of a particular color. And these considerations ought to determine the means to be pursued for the improvement of the art of dyeing. It is highly proper to endea- vour to ascertain what are the constituent prin- ciples of the coloring particles. And in this en- quiry, the most essential circumstances are, to determine the affinities of a coloring substance ; first, with the

substances which may be employed as menstrua; secondly, with those which may, by their combinations, modify the color, increase its brilliancy, and help to strengthen its union with the stuff to be dyed ; thirdly, with the different agents which may change the color, and princi- pally with the external agents — air and light.

14. The qualities of the uncombined coloring particles are modified when they unite with a substance ; and, if this compound unites with a gtuff, it undergoes new modifications. Thus the

properties of the coloring particles of cochineal are modified, by being combined with the oxide of tin, and those of the substances resulting from this combination are again modified by their union with the wool or silk ; so that the know- ledge we may acquire by the examination of coloring substances in their separate states, can only inform us respecting the preparations that may b°, made of them ; that which we acquire respecting their combinations with substances which serve to fix them, or to increase their beauty, may inform us what processes in dyeing ought to be preferred or tried ; but it is only by direct experiment made with the different sub- stances employed in dyeing, that we can confirm our conjectures, and properly establish the pro- cess.

*15. These facts show, that the changes pro- duced by acids and alkalis on many vegetable colors, such as the chemists employ, in order to discover the nature of different substances, are owing to the combinations, which take place be- tween these coloring particles and the acids and alkalis. The compounds resulting from these may be compared to neutral salts, which possess qua- lities different from those of their component parts, but in which one of these parts may be in excess, and it8 qualities consequently predominant. This state of combination is observable between the coloring particles of cochineal and acidulous tartrite of potassa, or cream of tartar : by evapo- rating slowly a solution of this salt in a decoction of cochineal, crystals are formed, which retain a fine ruby color, much more bright and intense than that of the liquor which formed them. *.*

16. It was the opinion of Berthollet that some of the acids, particularly the nitric, after combin- ing with the coloring particles, changed the color which they at first produced, making it yellow, and finally destroying it; after which they act by means of one of their principles, viz. the oxygen. But this theory, Dr. Ure remarks, is not now tenable, since it is known that dry chlorine does not blanch dry litmus paper. 'vVben moisture intervenes, muriatic acid is formed, and oxygen evolved; to the action of which body on the color the bleaching effect is fo be ascribed. Water is the source of the dis- coloration, both in the ancient and modern pro- cess of bleaching. Blue colors are not the only ones which become red by the addition of acids, and green by that of alkalis ; most red colors, as that of the rose, for instance, are heightened by acids, and made green by alkalis ; and some preen colors, such as that of the green decoction of burdock, according to the experiments of Mr. Nose, and the green juice of Buckthorn, as is evident from the trials of Mr. Becker, are red- dened by acids.

17. This property, which is common to most of the ordinary colors of vegetables, seems to prove that there is a close analogy between their coloring particles ; and it is not without foundation, that Linnfeus supposed, that the red in vegetables was owing to an acid, and indicated its presence ; but there are also many vegetables which contain acid in a disengaged state, without their possess- ing a red color. It is therefore evident, that the coloring particles have affinities for acids,

alkalis, earths, and metallic oxides, which con- stitute a part of their chemical properties ; and in consequence of which, their colors are more or less varied ; therefore these particles form, with the stuff on which they are fixed, a compound which retains only some of their original proper- ties; they are also modified by their union with alumine, or pure clay, metallic oxides, and some other substances; as are also those new com- pounds, when they are further combined with the stuff.

OF MORDANTS.

18. The term mordant is derived from the French word mordre, which signifies to bite or corrode. In the art of dyeing, it is applied to designate all those substances employed for the purpose of facilitating or modifying the combination of the coloring particles with the stuff dyed. Dr. Bancroft, and Dr. Henry of Manchester, proposed to denominate these sub- stances by the term basis, since the action of many of them does not depend on the acid or corroding principle ; but this alteration has not been adopted. Mordants deserve the greatest attention ; as by their means colors are varied, brightened, made to strike, and rendered more durable. We shall, therefore, examine the na- ture of the action of the principal bases or mor- dants, and endeavour to determine how their at- tractions serve to unite the coloring particles with the stuff, and how they affect the qualities of the colors.

19. A mordant is not always a simple agent, for new combinations are sometimes formed by the ingredients that compose it ; so that the sub- stances employed are not the immediate agents, but the compounds which they have formed. Some- times the mordant is fixed with the coloring par- ticles, and sometimes the stuff is impregnated with it; on other occasions, both these modes are united ; and we may dye successively with liquors containing different substances, the last of which only can act on the particles with which the stuff is impregnated. The art of printing linen affords many processes, in which it is easy to ob- serve the effects of mordants; to elucidate this subject, therefore, we shall mention a few ex- amples.

20. The basis employed for linens intended to receive different shades of red, is prepared by dissolving in eight pounds of hot water, three pounds of

alum, and one pound of acetate of lead, or sugar of lead, to which two ounces of potassa, and afterwards two ounces of powdered chalk are added. The alum is decomposed by the acetite of lead, because the oxide or calx of lead combines with the sulphuric or vitriolic acid, and forms an insoluble salt which is pre- cipitated ; the base of the alum, alumine, at the same time combines with the acetous acid, or vinegar, and produces an acetite of alumine ; and the chalk and potassa answer the purpose of satu- rating the excess of acid. One of the advantages which result from the formation of the acetite of alumine is, that the alumine is retained in it by a much weaker affinity than in the alum ; so that it more easily quits its menstruum, to com- bine with the stuff and coloring particles. Another

advantage is, that the acid liquor, from which alumine is separated, has much less action on the color when it consists of the acetous, than when it consists of a stronger acid, such as the sul- phuric. In short, the acetite of alumine not having the property of crystallising, the mordant, which is thickened with starch or gum, to pre- pare it for being applied to the block on which the design is engraved, does not curdle, as it would if it contained alum capable of crystallis- ing. By attending to the operation performed upon a piece of linen cloth, we find, that when it has been impregnated by the mordant, in the manner determined by the design, it is put into a bath of madder; the whole of the cloth be- comes colored, but the tinge is deeper in those parts which have received the mordant; there the coloring particles have combined with the alumine and the cotton, so that a triple com- pound has been formed, and the acetous acid separated from its basis re- mains in the bath.

Thus the coloring particles, combined with the alumine and the stuff, are much more diffi- cultly affected by external agents, than when they are in a separate state, or combined only with the stuff, without any intermediate bond of union ; and on this property the operations, to which the cloth is afterwards subjected, are founded. After it has been maddered, it is boiled with bran, and spread upon the grass; and these operations are alternately repeated until the ground becomes white. The coloring particles, which have not united with the alumine, are altered in their com- position, dissolved, and separated, while those that have combined with it remain, and are pre- served, without alteration ; and thus, the design alone remains colored. It seems that this de- composition of the coloring particles, by ex- posure on the grass and boiling with bran, is accomplished in the same manner as that of the coloring particles of flax, and admits of the same explanation. The only difference consists in sub- stituting bran for alkalis, because they would dis- solve a part of the coloring matter,which is fixed by the alumine, and would change its color ; instead of which, the bran, having a

much weaker action on this substance, affects only the coloring par- ticles, which, by the action of the air, have been disposed more easily to solution. If, however, instead of the mordant, a solution of iron be em- ployed, similar phenomena are exhibited. The coloring particles decompose the solution of iron, and form a triple compound with the stuff; but, instead of red, we obtain from the madder, brown colors of different shades, down even to black ; and, by uniting these two mordants, alum and iron, we have mixed colors, inclining to red on the one hand, and to black on the other, such as mordore, and puce color. Other colors are also procured by substituting dyers-weed for madder; and by means of these two coloring substances, indigo, and the two mordants above mentioned, we obtain most of the different shades that are observable in stuffs which are printed.

21. The different substances which enter into the composition of a mordant remain in combi- nation till a new action is induced by the appli- cation of another substance. Thus the affinity of the stuff for one of their constituent parts pro- VOL. VII

duces a decomposition and new combinations. Biˆt even this effect is sometimes incomplete, or does not at all take place without the action of another affinity, namely, that of the coloring particles. We have an example of this in the mixture of alum and tartar, which is one of the most common mordants in the dyeing of wool.

22. M. Berthollet, having dissolved equal weights of alum and tartar, found that the solu- bility of the tartar was increased by the mixture. By evaporation and a second crystallisation, the two salts were separated, so that no decomposi- tion had taken place. Half an ounce of alum and one ounce of wool were then boiled together for an hour, and a precipitate was formed, which, being carefully washed, was found to consist of filaments of wool incrusted with earth. To this sulphuric acid was added, and the solution being evaporated to dryness, crystals of alum were produced, with the separation of some particles of carbonaceous matter. The liquid in which the wool had been boiled being evaporated, yielded only a few grains of alum ; what re- mained would not crystallise. This being again dissolved, and precipitated by means of an alkali, the alumina which was thrown down was of a slate color, became black when placed on red-hot coals, and emitted alkaline vapors. From this experiment it appears that the alum was decomposed by the wool, and that part of the alumina had combined with its most detached filaments which were least retained by the force of aggregation ; that part of its animal substance had been dissolved and precipitated by the alkali from the triple com- pound thus formed.

23. M. Berthollet made the same experiment with half an ounce of alum and two drams of tartar; no precipitation took place : he obtained ,by

evaporation a small portion of tartar, and some very irregular crystals of alum ; the re- mainder would not crystallise : this, on being di- luted with water, and precipitated by potassa, gave by evaporation a salt which burned like tartar. The wool which had been boiled with the alum felt harsh, but the other retained its soft- ness. The first had acquired from the madder a more dull, though lighter tint, but the color of the latter was more full and bright.

24. From these experiments it appears, in the first place, that the wool had begun a decomposi- tion of the alum ; that it had united with a part of the alumine ; and that even the part of the alum which retained its alumine had dissolved some of the animal matter. In the second place, that the tartar and alum, which cannot decom- pose each other solely by their own affinities, become capable of acting on each other when their affinities are assisted by that of the wool. And, in the third place, that the tartar appears principally useful for moderating the too power- ful action of the alum upon the wool, whereby it is injured ; for tartar is not used in the alum- ing of silk and thread, which have less action on the alum than wool has. As the decomposition of alum by the tartar and wool takes place in consequence of affinities which nearly balance each other, and the process must therefore go on slowly, it is useful to keep the stuff impregnated with alum and tartar for some days in a moist

place, as is generally recommended. The final effect of aluming, in whatever manner performed, and whatever chemical changes may have taken place in it, consists in the combination of alumine with the stuff : this union has probably been im- perfect, and the acids only partially separated, but becomes complete when the cloth has been boiled with madder, as in the case of printed stuffs. But an acid or an alkali may form a su- percompound with the stuff, the coloring matter, and the alumine ; for there are some colors which are changed by an acid, and restored by alkalis, or by calcareous earths, which take the acid from them, or vice versa; but this supercomposition does not take place with respect to those colors which are esteemed durable, being unchangeable by alkalis or acids, which are not strong enough to destroy their composition.

25. The attraction of alumine for animal sub- stances is not, however, merely indicated by un- certain appearances, nor supposed for the purpose of being employed in explanations, but is proved by direct experiment. M.

Berthollet united them together, by mixing an animal substance with a solution of alum ; a double exchange took place, the alkali entered into combination with the acid of the alum, and the alumine, combining with the animal substance, was precipitated. He also proved the affinity of alumine for animal sub- stances by another experiment : having mixed a solution of glue with a solution of alum, he pre- cipitated the alumine by an alkali, and the glue with which it had combined fell down along with it. This compound has the appearance of a semitransparent jelly, and dries with difficulty. Thus, in the preceding experiments, the alkali precipitated the alumine combined with the animal substance, from the uncrystallisable residue of the alum which had been boiled with the wool.

26. The affinity of alumine for most coloring substances, may also be shown by direct experi- ment. If a solution of a coloring substance be mixed with a solution of alum, a precipitation sometimes takes place ; but if to the liquor we add an alkali, which decomposes the alum, and separates the alumine, the coloring particles are then precipitated, combined with the alumine, and the liquor remains clear: this compound has obtained the name of lake. In this experiment, too much alkali must not be added, because al- kalis are capable of dissolving lakes in general. No direct experiment has however yet shown, that alumine attracts any vegetable substance except the coloring particles : its affinity for them seems much weaker than that which it has for animal substances ; hence the acetite of alumine is a better basis for cotton and linen than alum is, and upon this depend the different means employed to increase the fixity of the coloring particles of madder in the dyeing of these sub- stances.

27. Metallic oxides have so great an affinity for many coloring substances, that they quit the acids in which they were dissolved> and are precipitated in combination with them. On the other hand, all metallic oxides have the property of uniting with animal substances; and these different compounds may be formed by mixing an alkali, saturated with an animal substance,

with metallic solutions. It is dot surprising, therefore, that metallic oxides should serve as a bond of union between the coloring particles and animal substances ; but, besides the attraction of the oxides for the coloring particles, and for ani- mal substances, their solutions in acids possess qualities which render them more or less fit to act as mordants : thus, those oxides which easily part with their acids, such as that of tin, are ca • pableof combining with animal substances, with out the aid of coloring particles ; it is sufficient to impregnate the wool or silk with a solution of tin, although they be afterwards carefully washed, which is not the case with other metallic solu- tions. Some metallic substances afford, in com- bination, only a white and colorless basis ; and some by the admixture of their own color, modify that which is proper to the coloring particles ; but

in many metallic oxides, the Color varies according to the proportion of oxygen they con- tain, and the proportion of this is easily liable to change, Upon these circumstances their pro- perties in dyeing chiefly depend.

28. The affinity of metallic oxides for sub- stances of vegetable origin, seems much weaker than that which they have for animal substances : metallic solutions are, therefore, not well adapted to serve as mordants for colors in cotton or linen, except iron, the oxide of which unites firmly with vegetable substances, as is shown by iron- moulds, which are owing to a real combina- tion of this oxide. Whenever the coloring par- ticles have precipitated a metallic oxide from its menstruum, the supernatant liquor contains the disengaged acid, which is commonly capable of dissolving a portion of the compound of the co- loring substance and oxide, so that the liquor remains colored ; but sometimes the whole of the coloring particles are precipitated, when the pro- portions have been accurately adjusted : this precipitation is facilitated, and rendered more complete, by the presence of the stuff, which assists, by the tendency it has to unite with the compound of oxide and coloring particles. Un- combined metallic oxides have also a very evi- dent action on many coloring substances when boiled with them, and modify their color; the oxide of tin in particular increases the brightness and fixity of many.

29. The compounds of oxides and coloring substances are similar to many other chemical compounds, which are insoluble, when the prin- ciples of which they are formed are properly pro- portioned ; but which are capable of being supersaturated by an excess of one of the princi- ples, and thence of becoming soluble. Thus a metallic oxide, united with a coloring substance to excess, produces a liquor, the color of which will be modified by the oxides ; whereas, when the coloring matter is not in excess, the com- pound will be insoluble, or nearly so ; these effects are very evident in the combination of iron with the astringent principle. Neutral salts such as nitre, and particularly muriate of soda, or common salt, act as mordants, and modify colors ; but it is difficult to ascertain the manner in which they act. M. Berthollet found that the muriate of soda was contained, in substance, in the precipitates produced by some species 3

coloring particles, and tnat tnost precipitates retained a considerable decree of solubility ; it would seem that a small part of the salt becomes fixed with the coloring particles and the stuff. Salts with calcareous bases also modify colors ; but, as these modifications are nearly similar to those which would be produced by the addition of a small quantity of lime, it is probable that

they are decomposed, and that a little of the lime enters into combinaation with the coloring parti- cles and the stuff. By attention to this, we shall easily discern what combinations are formed by the agency of the different reactives, employed in the analysis of coloring substances ; but we must not forget, that the mordants and the color- ing particles have a mutual action on each other, which may change their properties. It is evi- dent that, by varying the mordants, we may greatly multiply the shades obtained from a co- loring substance ; even to vary their mode of application may be sufficient: thus we shall obtain different effects by impregnating the stuff with the mordant, or by mixing the mordant with the bath ; by applying heat, or using exsic- cations, for we operate upon three elective attractions ; that of the coloring particles, that of the stuffs, and that of the principle of the mordant ; and many circumstances may cause variations in the result of these attractions; circumstances which merit further explanation. Exsiccation, or drying, favors the union of the substances which have an affinity for the stuff, and the de- compositions which may result from that union ; because the water which held these, substances in solution, by its attraction, opposed the action of the stuff; but the exsiccation should be slow, in order that the substances may not be separated before their mutual attractions have produced their effect.

30. Considerable differences must be observed in the manner of employing the mordant, as the force of affinity between the stuff and the coloring matter is greater or less. When this affinity is strong, the mordant and the co- loring substance may be mixed together ; the compound thus formed, immediately enters into combination with the stuff. But, when the affi- nity between the stuff and the coloring particles is weak, the compound formed of the latter and the mordant may separate, and a precipitation take place, before it can be attached to the stuff; and hence it is, that the mordant which is to serve as the medium of union between the stuff and the coloring matter, must be combined with the former, before the application of the latter. It is from these differences that different pro- cesses must be followed in fixing coloring mat- ters on animal and vegetable productions.

31. In judging of the effects of mordants, and the most advantageous manner of applying them, it is necessary to attend to the combinations which may be formed, either by the action of the ingredients of which they are composed, or by that of the coloring matter and the stuff. It is necessary, also, to take into consideration the cir- cumstances which may tend to bring about these combinations with more or less rapidity, or that may render them more or less perfect. The action which the liquor in which the stuff is immersed

may have, either on its coior or texture, must also be considered; and to be able accurately to judge of the extent of this action, we must kno\v the

proportions of the principles of which the mordant is composed ; which of these principles remains in an uncombined state in the liquor, and the proportion or quantity which is se- parated.

32. The coloring particles have been hitherto considered only as substances capable of forming different combinations, by which their properties are modified ; but they may be altered in their composition, either by other external agents, or by the substances with which they unite. The stability of a color consists in its power of resisting the action of vegetable acids, alkalis, soap, and more especially that of the air and light; but this power varies exceedingly, accord- ing to the nature of the color and the species of the stuff'; for the same durability is not required in'the colors of silk as in those of wool. There is not much obscurity in the action of water, acids, alkalis, or soap : it is a solution brought about by these agents: and it appears that a small quantity of acid, or of alkali, sometimes unites with the compound which gives the color; because the color is not destroyed, but only changed, and may be restored by taking away this acid ; for instance, by chalk and ammoniac, or volatile alkali. But this is not the case with respect to the action of air and light.*

33. Scheele observed, that the oxygenated muriatic acid rendered vegetable colors yellow, and he attributed that effect to the property it had of taking up the phlogiston which entered into their composition. Barthollet has shown, that the properties of the oxygenated muriatic acid were owing to the combination of its oxygen with the substances exposed to its action; that it commonly rendered the coloring particles yellow; but that, by a continuance of its action, it destroyed their color ; without determining in what this action consisted. Fourcroy afterwards made several observations on the action of oxygen on the coloring particles, which throw a great deal of light on the nature of the changes they undergo, chiefly when watery solutions of them are left exposed to the air, or have been subjected to a boiling heat. He observed that, in conse- quence of the action of the air, vegetable decoc- tions formed pellicles, which lost their solubility, and underwent successive changes of color ; he marked the gradations of color thus produced, and concluded, from his observations, that oxygen entered into the composition of the coloring particles; that when it combined with them, their shade was changed; that the more they received, the more fixed did their color become ; and that the best method of obtaining permanent unchangeable colors, for painting, was to choose such as had been exposed to the action of the oxygenated muriatic acid.

3-i. In considering the effects of air on colors, it is necessary to make a distinction between those produced by metallic oxides, and those produced by the coloring particles. Berthollet is of opinion that the modifications of the former are entirely owing to different proportions of oxygen, but from

observation he has been led to

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foira a different opinion respecting the modifica- tions of the latter. He observed, that the oxygenated muriatic acid exhibited different phe- nomena with the coloring particles ; that some- times it discharged their colors, and rendered them white ; that most frequently it changed them to a yellow, fawn, or root-colored, brown, or black, according to the intensity of its action ; and that, when their color appeared only dis- charged or rendered white, heat, or a length of time, was capable of rendering them yellow. He compared the effect produced by the oxygenated muriatic acid, when the particles are rendered yellow, fawn colored, or brown, with the effect of a slight degree of combustion, and showed that they were the same ; that they were owing to the destruction of the hydrogen, which, combining with the oxygen, more easily, and at a lower tem perature than charcoal does, leaves it predomi- nant, so that the natural color of charcoal is more or less blended with that which before existed. This effect becomes very evident, when sugar, indigo, or the infusion of the gall-nut, or of sumach, are exposed to the action of oxygenated muriatic gas; the sugar and the indigo assume a deep color, and afford indisputable marks of a slight combustion; .the infusion of the gall-nut, and that of sumach, let fall a precipitate, which is not far from being pure charcoal or carbon. These appearances are analogous to those which are observed in the distillation of organised substan- ces ; in proportion as the hydrogen is extracted in the form of oil, or of gas, the substance grows yellow and at length there remains only a black coal. If the hydrogen be expelled from an oil, by heat, it grows brown, evidently in the same way. 35. Berthollet also found, by other experiments made on alcohol and ether, that the oxygen united to the marine acid, had the property of combining with the hydrogen, which abounds in these substances, and of thereby forming water. He therefore sup poses, that when the oxygenated marine acid renders a color yellow, fawn-colored, or brown, the effect proceeds from the coloring matter having undergone a slight combustion, by which more or less of its hydrogen has been converted into water; and that the charcoal, thus rendered predominant, has communicated its own color. The art of bleaching linen by means of the oxygen of the atmosphere, of the dew, and of the oxygenated marine acid, he also supposes to depend on this change of the coloring matter. The coloring particles of the flax are rendered soluble in the alkaline lixivia, the action of which ought to be alternate with that of the oxygen. These coloring particles may be afterwards preci-

pitated from the alkali, and by evaporation and drying become black, and prove the truth of this theory, both by the color they have acquired, and by the quantity of charcoal which they yield on being analysed. But the alkaline solution of the coloring matter of linen which is of a dark brown color, loses its color almost entirely, by the addition of a certain quantity of oxygenated Tiuriatic acid; and the same effect is observable in many other substances, which have assumed a color originating from a commencement of com- bustion . A piece of linen, which appears white, may grow yellow in process of time, particularly

if exposed to a certain degree of heat, if the oxygenated parts have not been removed bv a sufficiently strong lixivium. In the same man- ner, the green parts of vegetables are rendered white by the oxygenated muriatic acid, but beome yellow when boiled.

36. From these facts it appears, that oxygen is capable of whitening, or rendering paler, the coloring matters with which it unites, perhaps by having produced the effects of a slight com- bustion upon them ; or possibly these effects take place only afterwards in a gradual manner, but more rapidly, when the whole is exposed to a certain degree of heat. It is extremely probable, that in all cases a part of the oxygen unites with the coloring matter, without being combined with the hydrogen in particular, and that it is in this way that oxygen acts, in rendering the color- ing matter of flax more easily soluble in alkalis. In many other cases oxygen has evidently an influence on the changes which take place in the coloring particles of vegetables ; these particles are formed chiefly in the leaves, flowers, and inner bark of trees; by degrees they undergo a slight combustion, either from the action of the atmospheric air which surrounds them, or from that of the air which is carried by a particular set of vessels into the internal parts of vegetables.

37. Berthollet, therefore, supposes we may explain how the air acts upon coloring matters, of an animal, or a vegetable nature ; it first com- bines with them, renders them weaker and paler, and by degrees occasions a slight combustion, by means of which the hydrogen which entered into their composition is destroyed ; they change to a yellow, red, or fawn-color ; their attraction for the stuff seems to diminish ; they separate from it, and are carried off by water : all these effects, vary, and take place more or less readily, and more or less completely, according to the nature of the coloring particles ; or rather, from the nature of the properties which they possess, in the state of combination into which they have gone. The changes which occur in the colors, produced by the union of the coloring particles with metallic oxides, are effects compounded of the change which takes place in the coloring particles, and of that which is undergone by the metallic oxide.

38. The light of the sun considerably accele- rates the extinction of colors. It ought, there- fore, if this theory be well founded, to favor the combination of oxygen, and the combustion thereby induced. Sennebier, who has given many interesting observations on the effects of light on different substances, and particularly on their colors, attributes these effecis to a direct combination of light with the substances. And the effects of light on the color of wood, have long ago been noticed ; it preserves its natural appearance while kept in the dark, but when exposed to the light, it becomes yellow, brown, or of other shades. The same writer also re- marked the varieties which occur in this particu- lar in different kinds of wood, and found, tha», the changes are proportioned to the brightness of the light, and that they take place even under water, but that wetted wood underwent these changes less quickly than tiiat which was dry;

that several folds of riband were required to defend the wood completely, that a single leaf of black paperwas sufficient, but that, when paperof any other color was substituted, the change was not prevented ; a > ingle covering of white paper was insufficient, but two intercepted the action of the rays of light.

39. He extended his experiments to a great number of vegetable substances, in a manner that may serve to illustrate different phenomena of vegetation. If a well-made solution of the green parts of vegetables in alcohol, which has a fine green color, be exposed to the light of the sun, it very soon acquires an olive hue, and loses its color in a few minuses. If the light be weak, the effect is much more slow ; and in perfect darkness, the color remains without alteration, or, if any change does take place, it requires a great length of time. An alkali restores the green color ; but if the change of color in the liquor has been completed, the alkali has no effect. No change of color takes place in azotic gas, nor in a bottle which is exactly full. A bottle half full of this green solution was inverted over mercury, by Berthollet, and exposed to the light of the sun ; when the color was discharged, the mercury was found to have risen in the bottle, and consequently vital air had been absorbed, the oxygen having united with the coloring mat- ter. The precipitate which M. Sennebier men- lions was not evident ; the liquor had continued transparent, and retained a slight yellow tinge. On evaporating this liquor, its color was immedi- ately rendered darker, and became brown ; the residuum was black, and in a carbonaceous state.

40. Light, therefore, acts by favoring the ab- sorption of oxygen, and the

combustion of the coloring matter. At first, the marks of combus- tion are not evident ; the liquor retains only a a slight yellow tinge ; but, by the assistance of heat, the combustion is completed, the liquor becomes brown, and leaves a black residuum. If the vessel which holds the liquor contains no oxygen gas, the light has no effect on the color- ing matter ; azotic gas in this situation suffers no diminution. The observation, that ribands, or a single leaf of white paper, do not prevent the action of light, deserves attention, as it shows that light can pass through coverings which appear to be opaque, and exert its energy a considerable depth within. Beccaria and Sennebier have compared the effects of light on ribands of various colors ; but the differences they have observed are rather to be attributed to the nature of the coloring matters, than to the colors; for a riband dyed with Brasil-wood will lose its color much sooner than one dyed with cochineal, though the shade should be exactly the same in each.

41. Although light greatly accelerates the com- bustion of the coloring particles, and seems even necessary for their destruction in some cases, in others it is not required. It was found, by putting some plants into a dark place, in contact with vital air, that that air was absorbed by some of them ; and, also, that the rose suffers a change, and becomes of a deeper hue, when it is not in contact with vital air, probably because it con- tains a little oxygen, the combination of which

then becomes more intimate. But many flowers, when in azotic gas, retain their color in perfec- tion. The tincture of turnsole was placed in contact with vital air over mercury, both in the dark, and exposed to the light of the sun; the for- mer continued unchanged for a considerable length of time, and the vital air had suffered no diminution ; the other lost much of its color ; became red ; and the air was, in a great measure, absorbed, and a small quantity of carbonic acid was produced, which undoubtedly had occasioned the alteration of color from blue to red. From this we may form an idea of some of the changes of color, produced by a particular disposition of the component principles of regetable substances, when, by their combination witli oxygen, they undergo the effects of a slight combustion, which may generate an acid, as in the leaves in autumn, which grow red before they become yellow, and in the streaks which are seen in flowers, the vege- tation of which is becoming weak.

42. On the whole it is evident, that coloring substances resist the action of the air more or less, according as they are more or less disposed to unite with oxygen, and thereby to surfer more or less quickly a smaller or greater degree of combustion. Light favors this effect, which in many cases is not produced without its assist- ance; but the coloring matter, in its separate state, is much more prone to this combustion, than when united to a substance, such as alumine. which may either defend it by its own power of

resisting combustion, or, by attracting it strongly, weaken its action on other substances, which is the chief effect of mordants. This last compound acquires still greater durability, when i» is capa- ble of combining intimately with the stuff upon which it is deposited. Thus the coloring matter of cochineal is easily dissolved in water, and its color is quickly changed by the air ; but when united to the oxide of tin, it becomes much brighter, and almost insoluble in water, though it is still easily affected by the air, and by oxygenated muriatic acid; it resists the action of these better, however, when it has formed a triple compound with a woollen stuff. But still it is not to be inferred, that all yellow colors are owing to the carbonaceous part of the coloring substance; very different compounds are capable of producing the same colors; thus, indigo is very different from the blue of our flowers, from that of oxide of copper, and from that of Prussian blue. Berthollet does not even suppose, that oxygen may not unite in a small proportion with some coloring substances, without weakening their color, or changing it to yellow. Indigo becomes green by uniting with an alkali, with lime or a metallic oxide ; but resumes its color, and quits these substances, when it recovers a small portion of the oxygen which it had lost. The liquor of the whelk, employed to dye purple, ir naturally yellowish ; but when exposed to the air, and more especially to the sun, it quickly passes through various shades, and at length, assumes the exquisite purple color of the ancients ; and which, according to the testimony of Eudo- cia, derived its lustre and perfection from expo- sure to the sun's rays.

43. It may then be considered as a general

fact, that colors beco.Tie brighter by their union with a small portion of oxygen. It is on this account found necessary to air stuffs when they come out of the bath, and sometimes even to take them out of it from time to time, expressly for this purpose; but the quantity of oxygen which, thus becoming fixed, contributes to the brightness of the color, is very considerable in some cases and the deterioration of shade soon begins. But the action of the air affects not only the coloring matter and the stuff, but also metallic oxides, when they are employed as intermedia; because the oxides, which have at first been deprived of a part of their oxygen by the color- ing particles, may absorb it again. Those then, the color of which varies according to their pro- portion of oxygen, have thereby an influence in effecting the changes which the stuff undergoes. It is undoubtedly to this cause that the change observable in the blue given to wool, by sulphate of copper, or blue vitriol, and logwood, is to be attributed. This blue soon becomes green by the action of the air : now copper, which has a blue

color, when combined with a small proportion of oxygen, assumes a green one by its union with a larger quantity. The change which the coloring particles undergo, may indeed contribute to this effect ; but the coloring particles of the logwood, which have-themselves a dark color, should rather become brown by combustion, than grow yellow, which would be necessary in order to produce a green with the blue. It has been observed, that coloring particles in a state of combination were less disposed to be changed by the action of the air, than in an uncombined state. This is generally the case, but there are some exceptions ; an alkali, for instance, produces a contrary effect. A matrass half filled with an infusion of cochineal, was exposed to the light, over mercury; a similar matrass contained an infusion of cochineal made with a little tartar; and in a third, a small quan- tity of alkali had been added to the infusion. The second matrass appeared least altered in the same space of time, and in it the absorption bad been least considerable. In the third, the color of the liquor became first brown, and was then discharged ; and the absorption of air, though inconsiderable, was greater than in the two others. On evaporation it assumed a brown color ; and left a residuum of a yellowish brown. 44. Similar experiments having been made on different coloring substances, the alkali was found to darken their color, which grew more and more brown, and promoted the absorption of air. Madder appeared to be the only exception to this rule : its color, which became darker at first, stood better than that of the infusion made with- out alkali. The general effect of alkalis on the coloring particles is consonant to that which it produces on many other substances, such as sul- phur ; it favors the absorption of air, because it has a strong affinity for the substance which is the result of that absorption. From this effect of alkalis, a fact which has been observed by Becker may be explained ; viz. that a vegetable infusion, rendered green by an alkali, becomes gradually vellow, if left exposed to the air, and that, when uie yellow is completely formed, acids cannot restore the original color : but that this is not the

case, when a vegetable color, reddened by ah acid, has been kept in like manner for some time. Those instances in which acids have been em- ployed, which act by giving off their oxygen, must beexcepted, for in these there is an extrac- tion of the color.

45. From the above remarks on mordants it must appear very obvious that the practical dyer ought to be exceedingly careful in his selection of substances, giving the preference to those that most readily resist the action of the causes which we have specified.

46. It may not be improper to notice the action of these acids on animal substances, in consequence of its intimate connexion with the subject of mordants. It was observed by M. Brunwiser, that wood, on being exposed

to the action of the air, assumed different colors : this led him to endeavour to ascertain whence those colors arose, and to produce them by artifi- cial means. He remarked that on moistening the surface of wood, particularly young wood, with nitric acid, it assumed a yellow color; and that, by applying in the same way the muriatic and sulphuric acids, the wood assumed a violet color. Hence he inferred that, as all colors are produced by a mixture of yellow, blue, and red, all those colors which are seen in the leaves, fruits, and flowers of trees, are owing to the color- ing particles which exist in the wood, and are there kept in a state of disguise, by the action of an alkali; that the mineral acids, by taking up this alkali, set the coloring particles at liberty ; and that the fixed air, by penetrating the leaves, fruits, and flowers, produces naturally the same effect, by combining with the alkali which kept them disguised.

47. M. de la Folie informs us that having im- mersed a skein of white silk in nitrous acid of the strength generally used in commerce, the silk in three or four minutes assumed a fine jonquille yellow. He washed if several times in water, that it might not be affected by any adhering acid ; the color sustained several trials to which he submitted it, and the silk preserved its lustre unimpaired. When dipped into an alkaline solu- tion, a fine orange color was the result. Dr. Gmelin observes, that he has given a fine brim- stone color to silk, by keeping it for a day in cold nitric acid, or some hours only, when the acid was warm. Boiling with soap and water dimi- nished the brightness of this color; and it was changed to a fine lemon color, by being kept for twelve hours in an alkaline solution ; but, when the solution was employed hot, a fine gold color was produced. The different solutions of metals in nitric acid communicated a more or less deep yelloˆ to silk, as did also the solution of alumine in the same acid ; but those of the calcareous earth and magnesia had no effect whatever.

48. M. Berthollet also found, that the oxyge- nated muriatic acid has the property of tinging animal substances yellow; but that it does not give them so deep a color as the nitrous acid, and it weakens them much more than that acid when properly diluted ; so that the nitrous acid is far preferable for the different purposes of art. It, therefore, appears that the nitrous acid, di- luted with a certain quantity of water, gives silk

a yellow color, which is more or less deep, ac- cording to the concentration of the acid, its tem- perature, and the time of immersion ; that the silk must be carefully washed as soon as taken out of the acid ; that this color possesses consi- derable brightness ; and that it may be made deep without

sensibly weakening the silk, which may render the process really useful. The color may also be modified by the use of alkalis. The solutions of calcareous earth and magnesia produce no effect upon silk, because they do not contain an excess of acid ; but the solutions of alumine and of all metallic substances, produce a more or less deep yellow, because they all contain more or less excess of acid, which acts upon the silk like uncombined acid.

49. It appears likewise to have been the acid alone that dyed the animal substances yellow, in the experiments of M. Brunwiser, and not the matter extracted from the wood, as he supposed. Nor is the yellow color in these cases owing to iron, as De la Folie supposed ; for the purest nitrous acid, which contains no iron, produces it, as well as that in which the presence of that metal may be supposed to exist. Silk, when put into concentrated nitrous acid, quickly assumes a deep yellow color, loses its cohesion, and is dissolved ; during this solution, the azote, which enters into the composition of animal substances, is extricated, with a long continued efferves- cence ; if heat be applied, it expels much nitrous gas, and the liquor immediately acquires a deep color and grows brown. At this time, the oxygen of the nitric acid combines with the hydrogen which abounds in animal substances, forming the oil which is obtained from them by distilla- tion, and which renders them so inflammable. When the acid begins to act, and to render the silk yellow, the same effect should also begin to take place. M. Berthollet therefore supposes, that the yellow color arises from a commence- ment of combustion ; but that this combustion being very slight, does not sensibly weaken the silk ; if, however, the acid be a little too strong, or the immersion too long continued, or if the whole of it be not carried off by careful washing, the silk immediately becomes weak, and is burnt. It is, therefore, evident why the nitrous acid is preferable in this operation to that which is saturated with nitrous gas ; for, in the former, the proportion of oxygen being greater, it is better fitted to produce the effects of combustion, than it becomes in the state of nitrous acid. The same explanation ought to apply to the action of the oxygenated muriatic acid on animal substances; it differs, however, in some essential circumstances, which are not easily explained.

50. Silk has been observed to receive a yellow color when the oxygenated muriatic acid is em- ployed, which is much lighter than when the nitrous acid is made use of; the sulphurous acid discharges it in a great degree, but has no effect on the yellow produced by the diluted nitrous acid. The oxygenated muriatic acid has, however, a much stronger action on the silk ; it soon weakens, and even dissolves it ; and if it be left for some time in this fluid, the yellow which at first appeared grows lighter, agreeably x to what has already been remarked, that oxygen,

by accumulation, is capable of disguising the yellow color occasioned by the combustion, which it had originally induced. Berthollet has endeavoured to explain the effects which the sulphurous acid produces on colors, by the fa- cility with which it gives off its oxygen, and has compared them to those of the oxygenated mu- riatic acid ; but, although it be true that oxygen adheres much more weakly to the sulphurous than to the sulphuric acid, he does not believe that that explanation is founded in truth.

51. It appears from the observation of De ia Folie, that roses, whitened by the vapor of burn- ing sulphur, become green in an alkaline lixivium, and red in acids; and M. Berthollet has himself observed, that the sulphurous acid reddened the tincture of turnsole, which has a very fading color, but that it acted only like other acids, on infusions of fustic, Brasil-wood and logwood ; and further, that silk which has been exposed to the vapor of sulphur, exhaled the smell of sul- phurous acid, when moistened with sulphuric acid, although it could not be perceived before that odor existed. He therefore supposes, that the sulphurous acid commonly unites with the coloring particles, and with the silk, without giving off its oxygen to them, and consequently without producing any combustion ; that the product of that combination sometimes loses its color entirely, which is probably owing to the semi-elastic state of the oxygen ; but sometimes combustion may, and even commonly should take place by degrees, so that the coloring parti- cles, which have been disguised for some time, ought ultimately to leave a yellow color.

OF ASTRINGENTS.

52. Astringents deserve particular attention, not only from their great use in dyeing, but as possessing a property common to many vege- tables. Perhaps, says Berthollet, there is no property in vegetables concerning which such vague ideas have been currently received. A slight relation in taste has frequently been deemed enough to rank them in the class of astringents ; and every substance has been commonly regarded as astringent, or acerb, which turned a solution of iron black. This effect has been presumed to arise from one identical principle residing in all the bodies that produce it. Experience has sub- sequently shown, that two species of astringents ought to be admitted, viz. tannin and gallic acid. The gallic acid is obtained from gall- nuts, in which it is found in great plenty.

53. The gall-nut is an excrescence found on the young branches of the oak, and produced by the puncture of an insect. Different kinds of the gall-nut are met with, some inclining to white, yellow, green, brown, or red ; others, ash- colored or blackish. They also differ greatly in magnitude, and are 'either round or irregular, heavy or light, smootrTor covered with protube-

rances. Those which are small, blackish, knotted, and heavy, are the best ; and arc known by the name of Aleppo galls. These astringent sub- stances are almost totally soluble in water by long ebullition. Sixteen drachms afforded Neu raann fourteen of extract ; from the remaining two drachms, only four grains could be extracted

by alcohol. And the same quantity treated first with alcohol, and then with water, afforded twelve drachms and two scruples of spirituous extract, and four scruples of watery extract; the residuum weighed half a scruple more than in the preced- ing experiment. In the spirituous extract, the taste is more strong and disagreeable than in the watery extract.

54. Many other very interesting observations have been made on astringent substances, by Messrs. Scheele, Monnet, and Berthollet. The latter seems to have proved, that it is not the gallic acid which communicates the astringent properties to the substances that possess it ; that the acid itself possesses that property, in a de- gree inferior to other astringents; and that sumach, treated like the galls, in the manner described by Scheele, affords no gallic acid, though it possesses a high degree of astringency ; walnut peels, treated in the same way, do not afford any. The property which the infusion of common galls has, of reddening certain vegetable colors, appears to proceed only from the gallic acid. The infusions of sumach, or of sloe-bark, which very readily produce a black precipitate, that of walnut-tree bark, or of quinquina, did not exhibit this property ; and thence it is evi- dent, that the gallic acid does not exist in white galls ; for the infusion of these, though it deposit a copious sediment on exposure to the air, is not the gallic acid.

55. If the astringent property were owing to an individual principle distributed in different vegetables, the precipitates obtained by their means, from a solution of iron, would constantly form the same compounds, and exhibit the same appearances and properties; but the precipitate produced by galls is of a blackish blue : that by logwood has a different shade of blue; that by oak is of a fawn color, or blackish brown ; that by quinquina, a blackish green. They fall down with different attendant circumstances, and when fixed on stuffs, are discharged by alum and tartar, some much more easily than others ; and, probably, by multiplying experiments, many other remarkable differences may be discovered in the properties of these different precipitates. Astringents form with iron different species of compounds, and consequently do not derive their properties from one principle ; but there must be a property common to different sub- stances,

to enable them to act uniformly on so- lutions of iron, and to produce precipitates more or less black, and thus appearing of the same nature.

56. The metallic oxides, which unite with the coloring particles, modify their colors ; but some metallic oxides, and particularly that of iron, have colors which vary according to the quantity of oxygen they contain. Iron, when united with only a small quantity of oxygen, has a black color. If any substance, by uniting with the oxide of iron, had the property of taking from it a part of the oxygen, which it has when preci- pitated from its solution in an acid, this would be sufficient to give it a black color; and if the peculiar color of this substance were not predo- minant, or of itself inclining to black, the com- pound formed would have a black color; thus ni-

trous gas, either uncombined or weakly attached to the nitrous acid, renders solutions of iron black, and even precipitates the metal, by depriving it of a portion of its oxygen. By acting in the same manner, ammoniac produces a black precipitate with the solutions of iron ; in this case, the hy- drogen of the ammoniac forms water, by com- bining with the oxygen that is disengaged from the oxide of the iron. Galls precipitate gold and silver from their solutions, by reducing them to their metallic state; they, therefore, have the property of separating the oxygen from those metals, to which it adheres but slightly; and, from others, that portion which is retained in the weakest degree. Any infusion of galls, of itself, readily assumes a deep brown color, by exposure to the air; though it absorbs but a small quantity of vital air. The infusion of sumach, and that of woods and barks, also acquire a dark color by exposure to the air; so that when acting upon the oxide of iron, by separating a part of its oxygen, an astringent ought itself to acquire a darker color, by which the black should be assisted.

57. Various substances, which have in other respects different properties, produce black with solutions of iron. Among these, some are real coloring particles, and employed as such in dye- ing. Logwood, and even most kinds of coloring particles, form brown or blackish precipitates with iron. Sometimes the astringent effect is not instantaneous ; the color of the precipitate is at first light ; it grows deeper gradually, being darkened in proportion as the iron loses its oxygen. The infusion of fustic produces, with the solution of iron, a yellow precipitate, that grows brown by degrees, and becomes black after a considerable time. But though the pro- perty of precipitating solutions of iron black, does not indicate the presence of the same indi- vidual principle in the substances which possess it, there can be no inconvenience in calling it by the name of astringent, provided by that term is meant only a property, which is common to a great number of substances, and which they may have in various proportions.

58. The astringent principle is found to preci- pitate iron from all acids. The acids of phos- phorus and arsenic only have a stronger attraction than it has for iron. The phosphoric acid was known to have the property of separating iron from the sulphuric acid ; but all acids, except the acetous, and probably some other vegetable acids which have not been tried, redissolve the preci- pitate, and make the color disappear, until they are saturated with an alkali. It is not surprising, that the astringent principle can unite with me- tallic oxides, without having the qualities of an acid ; for animal substances, oils, even alkalis, and lime, have this property. It is well known, that it is the precipitate composed of iron and the astringent principle, which, by remaining suspended in the liquor, forms ink.

59. But although chemists considered the astringent principle as always the same, expe- rience shows, that all astringent substances are not equally proper for producing a beautiful and durable black ; it is of importance to determine which of them may be employed with the greatest success; it is, however, very difficult to make

comparative experiments on this subject with perfect accuracy, because some substances re- quire much longer boiling than others to extract their astriugency ; because a difference in their coarseness or fineness, when subjected to ebulli- tion, is sufficient to produce differences in the results; and because the coloring particles have a greater or less disposition to combine with the stuff, according to the proportion of sulphate of iron that has been made use of. Solutions of iron in different acids may produce differences in the results, according to the state of oxysenation of the iron in them, according as the proportion of that metal is greater or less, and according to the degree of strength which the different acids, when disengaged, are capable of exerting on the newly-formed compound.

60. In the dyeing of stuffs also some differ- ences will be found to arise from their greater or less attraction for the coloring particles. Dr. Lewis has proved in his excellent observa- tions on the process of making ink, that no known astringent, not even sumach, can be sub- stituted for gall-nuts. If, says M. Berthollet, too large a proportion of sulphate of iron be added to the galls, the ink becomes speedily brown, and then passes to yellow, because the astringent is destroyed by the action of the oxy- gen, which the sulphate of the iron affords, or progressively attracts from the atmosphere ; for we see that oxygen eventually destroys those coloring substances with which it is combined in too great quantities. When this accident happens from age, Dr. Lewis found that an infu- sion of galls passed over the faded

characters restored them. According to Dr. Ure, the best restorative for faded writing is a solution of ferro- prussiate of potash, faintly acidulated, or sul- phuretted hydrogen water. Dr. Lewis ascer- tained, by repeated experiments, that the best proportion for ink is three parts of gall-nuts to one of sulphate of iron ; that cherry-gum, and plum-tree gum, are as good as gum-arabic for giving the necessary consistence, and for keeping suspended the black molecules which tend to fall ; and that decoction of logwood employed instead of water for the infusion of the galls improves the beauty of the ink.

61. Mr. Beunie made many experiments to determine the best process for giving cotton a durable black. He first tried what solution of iron gave the finest black to galled cotton ; he afterwards combined different solutions, and examined the durability of the blacks which he produced; and made the same experiments on galled cotton, with other metals and semimetals; he employed in like manner a great number of astringents, and tried with them cotton which had received different preparations. He found that out of twenty-one species of astringents, oak saw-dust, the galls of the country, and yellow myrobolans, were the only substances which produced a fine black, but which was still neither so fine nor so durable as that obtained by the common galls. He also found that the oak saw- dust is preferable to the bark, employed by the dyers of thread, and, being cheaper, may be sub- stituted with advantage.

62. Messrs. Lavoisier, Vandermonde, Foui-

croy, and Berthollet, made experiments on galls, oak-bark, raspings of heart of oak, the external part of oak, of logwood, and sumach, for the purpose of forming a comparison of their quali- ties. To ascertain the portion of astringent principle contained in these different substances, they took two ounces of each separately, whicli they boiled half an hour in three pounds of water; after the first water they added a second, which underwent a similar ebullition ; and con- tinued these operations until the substances appeared exhausted : they then mixed togethf r the decoctions that had been successively ob- tained. A transparent solution of sulphate of iron, in which the proportions of water and sulphate had been exactly determined, was used. They first estimated the quantity of the astrin- gent principle, by the quantity of sulphate which each liquor could decompose, and afterwards by the weight of the black precipitate which was formed. In order to stop precisely at the point of saturation, they proceeded very slowly in the precipitation, and towards the end added the solution of sulphate only drop by drop, and ceased at the moment when the hist added quan- tity no longer augmented the intensity of the black color. When the liquor is too opaque to allow its shade of color to be distinguished, a small quantity of it is largely diluted with water, and, by adding to this a little of

the solution of sulphate of iron at the end of a glass tube, it is discovered whether or not the point of saturation has been attained : if we then wish to get the precipitate which is formed, the whole must be diluted with water very copiously.

63. This operation is an easy and accurate mode for manufacturers to determine the proper proportions of astringents, and solutions of iron. To saturate the decoction of two ounces of galls, three drachms and sixty-one grains of iron were required; the precipitate weighed seven drachms and twenty-four grains, when collected and dried. The color of the decoction of oak bark is a deep yellow ; a very small portion of sulphate of iron gives it a dirty reddish color, and a larger one changes it to a deep brown. The quantity of sulphate required to saturate the decoction of two ounces of this bark, was eighteen grains. The precipitate, collected and dried, formed coarser and more compact grains, and weighed twenty- two grains; the jnner bark of the oak afforded nearly the same result. But the decoction of the raspings of the heart of oak required for its saturation one drachm and twenty-four grains and the precipitate weighed one drachm and twenty-four grains ; the decoction of the external wood of the oak produced very little precipitate. The decoction of sumach acquired a reddish violet color, when a small quantity of the sul- phate of iron was added. The quantity required for its saturation was two drachms eighteen grains. The precipitate exactly resembled that afforded by the galls. And the decoction of logwood became of a sapphire blue color, by the addition of sulphate of iron : if the point of saturation be exceeded, the blue becomes greenish and dirty. The exact quantity required for saturation was found to be one drachm forty-eight grains, and the weight of the precipitate was two drachms twelve

grains. The different precipitations made by oak take place readily ; that by logwood, a little more difficultly, but still more easily than that which is effected by galls.

64. It was next ascertained, by trials made with cloth, that the quantity of astringent sub- stances required to give a black color of inten- sity, to an equal weight of the same cloth, was proportional to the quantities of astringent prin- ciple, which had been already estimated in each kind from the foregoing experiments ; but the black obtained by the different parts of the oak does not resist proofs of color, nearly so well as that which is produced by galls. Logwood alone seems not capable of producing so intense a black as galls or oak ; nor does the color which it produces stand the test of proofs so well as that produced by galls.

65. We shall now consider the astringent principle in regard to its property of combining with vegetable and animal substances, particu- larly the latter. Silk acquires by galling, which is an operation that consists in macerating a stuff in a decoction of some astringent substance, a weight which cannot be taken from it, or dimin- ished beyond a certain degree, by repeated washing; after which operation the stuff when put into a solution of iron is dyed black, because the astringent principle, decomposing the sul- phate of iron, forms a triple compound with the oxide of iron and the stuff which is dyed. A stuff that is galled is likewise capable of combi- ning with other coloring particles, the colors of which thereby acquire fixity, if they do not naturally possess it ; so that the astringent com- municates its durability to the triple compound, or perhaps the more complex one which is formed ; but by this union the color generally becomes of a deeper shade. The astringent principle, by combining with animal substances, renders them incapable of corruption, and tends to render their texture more compact; and in this the art of tanning consists.

66. It may be proper to take some notice here of the substance denominated tannin, which, while it has some properties in common with the gallic acid, differs from it in others. Seguin was the first who showed that astringents con- tained a peculiar substance, which, in combining with skin, gave it the properties of tanned leather, and that the tanning effect arose from the combination thus formed. Tannin may be procured by digesting gall-nuts, grape-seeds, oak-bark, or catechu, in a small quantity of cold water. The solution, when evaporated, affords a substance of a brownish-yellow color, highly astringent, and soluble in water and in alcohol. According to Mr. Brand, the purest form of tannin appears to be derived from bruised grape-seeds; but even here, he observes, it is combined with other substances, from which it is, perhaps, scarcely separable. I have never, says he, been able to obtain it of greater purity than by digesting powdered catechu in water at 33° or 34°, filtering and boiling the solution, which, on cooling, becomes slightly turbid, and is to be filtered again, and evaporated to dry- ness ; cold water, applied as before, extracts nearly pvre tannin. The most distinctive cha-

racter of tannin is that of affording an insoluble precipitate when added to a solution of isinglass, or any other animal jelly. On this property the art of tanning depends, for which oak bark is generally employed; but the barks of many other trees are frequently employed for the same purpose. Professor Proust recommends the precipitation of a decoction of galls by powdered carbonate of potassa, for obtaining tannin, wash- ing well the greenish-gray flakes that fall down with cold water, and drying them in a stove. This precipitate becomes brown in the air, brittle and shining like a tesin, and yet remains soluble in hot water. In this state the tannin, he says, is very pure. According to Berzelius, tannin consists of hydrogen 4-186 f

carbon 51-160 -f oxygen 44-654.

67. M. Berthollet considers the abundance of charcoal as the essential characteristic of the astringent principle; the hydrogen, which it contains only in small quantity, is however very much disposed partially to combine with oxygen : Hence, when an infusion of galls is left in con- tact with vital air, a small quantity of the air only is absorbed, and yet the color of the infusion becomes much deeper ; for, in conformity with the theory already laid down, the charcoal readily becomes predominant in consequence of the slight combustion, and the color is rendered deeper, and becomes brown.

68. Substances which contain much charcoal, and can undergo only a slight degree of combus- tion, ought to possess considerable durability, because charcoal does not combine with oxygen in the ordinary temperature of the air, unless its union be assisted by other attractions, and because slight variations of temperature produce no change in the dimensions of charcoal ; but, on the contrary, substances which contain much hydrogen, and in which the particles of the hydrogen are in a state of division, ought to be easily decomposed, by the combination of the hydrogen with azote or oxygen. The disunion of their parts ought to take place from small variations of temperature, because hydrogen is dilatable by heat, which the carbonaceous parti- cles are not. When, therefore, the astringent principle is combined with an animal substance, it communicates to it the properties which it derives from the charcoal ; the animal substance becomes less liable to change from slight varia- tions of temperature ; instead of growing putrid, it suffers a slight degree of combustion, by the action of the air; for the process of tanning probably could not go on in a perfectly close vessel.

69. On examining the analyses that have been made of indigo, which may be looked upon as the coloring matter least liable to change of any with which we are acquainted, it will he found that this substance leaves, in distillation, a greater proportion of charcoal than even galls themselves. M. Berthollet supposes that it is also to this abundance of charcoal, that the durability of the color of indigo is to be attribu- ted, and that the proportion of this principle is the chief cause of the difference observed in the durability of colors ; but the force of adhesior may also have great influence, for a principle

combines intimately with another sub- stance, ought to form with it a more

permanent compound, than one which has only a slight disposition to unite with it ; now the astringent principle possesses a very strong disposition to form intimate combinations, especially with animal substances.

70. Upon the same principles may be ex- plained the fixity communicated to coloring particles by alumine, and by those metallic oxides which are not liable to contain different proportions of oxygen, such as the oxide of tin, and some others. The different coloring sub- stances, capable of uniting with metallic oxides, have an action upon them, analogous to that of astringents. The oxides are deprived of more or less of their oxygen, according to the force with which they retain it, the strength of attrac- tion with which the coloring particles tend to combine with them, the proportions in which they meet with each other, and the greater or less disposition of the coloring particles towards combustion.

71. The coloring particles also suffer a change in their constitution from these circumstances: thus the solutions of iron render brown all the colors into which oxide of iron can enter, although it has only a green or yellow color in the state in which it is held in solution by acids, and this effect goes on increasing to a certain degree ; but the alteration of the coloring parti- cles may afterwards be carried so far as to spoil their color, and to diminish their tendency to combination ; the oxide of iron is then brought back to the yellow color by the oxygen which it attracts, and is capable of retaining. The action of metallic oxides and the coloring particles on each other, explains the changes observed in solutions of the coloring particles, when mixed with metallic solutions. The effect is gradual, as has been shown with respect to fustic. It sometimes happens that the mixture does not even grow turbid immediately, but loses its transparency by degrees ; the precipitation be- gins; the sediment is formed; and its color becomes gradually deeper. In producing these effects, light has sometimes a considerable share.

72. Upon the whole, we may conclude, that metallic colors should be distinguished from those which are peculiar to substances of the vegetable and animal kind: that the colors of metals are modified and changed by oxidation, and by the proportion of oxygen with which they are combined; and that vegetable and animal substances may themselves possess a peculiar color, which varies in the different states through which they pass, or they may owe their colors to colored particles, either combined, or simply mixed with them. These are the parti- cles which are extracted from different substan- ces, and which undergo different preparations, in order to render them proper for the various purposes of dying. And the coloring particles possess chemical properties which distinguish them from all other substances : the affinities which they have for acids, alkalis, earths, metallic oxide:;, oxygen, wool, silk, cotton, and linen, from the principal of

these properties. In proportion to the affinity which the coloring

particles have for wool, silk, cotton, and linen, they unite more or less readily and intimately with them : and thence arises the first cause of variation in the processes employed, according to the nature of the stuff, and of the coloring substance emplojed. And by the affinity which the coloring particles have for alumine and metallic oxides, they form compounds witli these substances, in which their color is more or less modified, and becomes more fixed, and less affected by external agents than before. This compound being formed of principles which have separately the power of uniting with vege- table substances, and more especially with animal substances, preserves this property, and forms a triple compound with the stuff; and the color, which has been again modified by the formation of this triple union, acquires a greater degree of fixity, and of indestructibility, when exposed to the action of external agents.

73. The coloring particles have often so great an affinity for alumine and metallic oxides, that they separate them from acids which held them in solution, and fall down with them ; but the affinity of ,the stuff is sometimes necessary, in order that this separation may take place. The oxides of metals, which combine with the color- ing particles, modify their colors, not only by their own, but also by acting upon their compo- sition by their oxygen. The change which the coloring particles thereby suffer, is similar to that occasioned by the air, which injures every color in a greater or less degree. In the two different principles which constitute the air or the atmos- phere, it is only the oxygenous gas that acts upon the coloring particles. It combines with them, weakening their color, and rendering it paler ; but presently its action is principally exerted on the hydrogen, which enters into their composi- tion, and it then forms water. This effect, con- tinues M. Berthollet, ought to be considered as a true combustion, whereby the charcoal which enters into the composition of the coloring par- ticles becomes predominant, and the color com- monly changes to yellow, fawn color, or brown; or the injured part, by uniting with what remains of the original color, causes other appearances of a different kind. The combustion of the color- ing particles is increased by light, and frequently cannot take place without its aid ; it is indeed in this way that it contributes to the destruction of colors. Heat promotes it also, but less power- fully than light, provided its intensity be not very great. The effects of the nitric acid, the oxygenated muriatic acid, and even the sulphu- ric acid, when they make the color of the sub- stances upon which they act pass to a yellow and even to black, are to be attributed to a com- bustion of a similar nature.

74. The effects of combustion may, however, be concealed, by the oxygen

combining with the coloring particles, without the hydrogen being particularly acted upon by it. But colors are more or less fixed, in proportion to the greater or less disposition of the coloring particles to suffer this combustion. There are some substances also capable of acting on the color of stuffs, by u stronger affinity, or by a solvent power ; and in this consists the action of acids, alkalis, and SOUL

A small "quantity of these agents, however, may sometimes form supercompounds with the stuff, and its color may be altered in that way. The oxides of metals produce in the coloring particles, •with which they unite, a degree of combustion proportioned to the quantity of oxygen which these particles can take from them. Therefore the colors, which the compounds of metallic oxides and coloring particles assume, are the product of the color peculiar to the coloring particles, and of that peculiar to the metallic ox- ide : but the coloring particles and metallic ox- ides must be considered in that state to which they have been reduced by the diminution of ox- ygen in the oxide, and the diminution of hydro- gen in the particles that produce the color. It follows from this, that the metallic oxides, to which the oxygen is only slightly attached, are not fit to serve as intermedia for the coloring particles, because they produce in them too great a degree of combustion ; instances of this kind are the oxides of silver, gold, and mercury. The oxides which undergo considerable altera- tions of color, by giving off more or less of their oxygen, are also bad intermedia, particularly for light shades, because they produce changeable colors ; examples of this kind are the oxides of copper, of lead, and of bismuth. The oxides which strongly retain their oxygen, and undergo very little change of color by the loss of a propor- tion of it, are the most suitable for this pur- pose ; such is particularly the oxide of tin, which quits its menstruum easily, which has a strong affinity for the coloring particles, and which affords them a basis that is very white, and pro- per for giving a brightness to their shades, without altering them by the mixture of another color. The oxide of zinc is possessed of some of these 'properties in a considerable degree.

75. To account for the colors, which proceed from the union of the coloring particles with the basis which a mordant gives them, we must at- tend to the proportion in which the coloring particles unite to that basis. Thus the solution of tin, which produces a very copious precipitate with a solution of coloring particles, and which thereby proves that the oxide of tin enters in a large proportion into the precipitate, has a much greater influence on the color of the precipitate, by the whiteness of its basis, than the solution of

zinc, or that of alum, which generally produce much less copious precipitates. The precipitates produced by these two last substances retain very nearly the natural tint which the coloring particles afforded. It is therefore necessary to distinguish, in the action of mordants, the combinations that may take place by their means, be- tween the coloring particles, the stuff, and the intermedium; the proportions of the coloring substances and intermedium ; the modifications of color, which may arise from the mixture of the color of the coloring particles, and of that of the basis to which they are united ; and the changes which the coloring particles may suffer, from the combustion that may be produced by the substance that is employed as an interme- dium. It is evident also, that astringents do not differ essentially from coloring particles ; but the hitter take this name, especially when employed

to produce black with oxide of iron, by restor- ing this metal to the state of a black oxide, and by their assuming a dark color from the action of oxygen.

76. The notion of an astringent supposes, moreover, the property of combining in a certain quantity with animal substances, giving them thus solidity and incorruptibility ; because these two properties are most commonly united. These again are derived from their large share of carbon, a circumstance in their composition which gives them increased tendency to solidity, and greater stability.

77. On this ingenious theory of Berthollet, Dr. Bancroft, an able writer on dyeing, has made some remarks that deserve attention. In his opinion M. Berthollet, in ascribing the decays of vegetable and animal coloring matters in general, to effects or changes similar to those of combustion, has gone much farther than is war- rantable by facts. It cannot, he thinks, be his intention, that we should apply the term of combustion to alterations which result from a simple addition of oxygen to coloring matters, with a destruction or separation of any of their component parts ; though many of the decays and extinctions of these colors evidently arise only from such simple additions of oxygen. The nitric, sulphuric, and other acids, containing oxygen, have the power not only of weakening, but of extinguishing, for a time, the colors of many tingent matters ; not by any effect which can properly be denominated a combustion, but rather by a change in their several attractions for particular rays of light ; but none of their parts being destroyed, or carried away, the addition of an alkali, or of calcareous carbonate, will ge- nerally undo such alteration, and restore the original color, by decomposing and neutralising the acid or oxygen which had caused the altera- tion.

78. Of this numerous instances might be given, it being the case of almost

all vegetable or ani- mal coloring matters. It will be sufficient to mention, that ink dropped into a glass of diluted nitric, vitriolic, or other acid, will lose its color, and that it may be again restored by adding a suitable portion of vegetable or fossil alkali ; and that this may be done several times with the same ink, and therefore the change, or loss of color, could not have been the effect of combustion. If, however, this ink had not been fixed by dye- ing in the substance either of wool, silk, linen, or cotton, and the substance so dyed had been dipped into a glass of diluted acid, a consider- able part of the coloring matter would have been dislodged, aud separated from the dyed sub stance, by its affinity with the oxygen or acid; although no combustion had taken place, the color so separated and lost could not be again restored without a second dyeing. This loss oi color would be similar to what frequently hap- pens to colors from exposure to the sun and air, by which they are gradually weakened, many of them without any other change of tint than the simple diminution of their original quantity of coloring matter ; and this continuing in the more fugitive colors, particularly that of turmeric, the cloth is soon left as white a before it had been*

dyed, without any thing like com'uastion having ever taken plane in it, or in the matter with which it was dyed. It may also be presumed , that colors are not generally impaired by any thing like combustion, from this fact, that there are but few of them which the common muriat ic acid does not injure, as much as either the nitric or the sulphuric; and as there can be no combus- tion without oxygen, and as the common muriatic acid either contains none, or what it does contain is confessedly combined with it by an affinity too powerful to be overcome by any known substance or means, it follows, that the oxygen (if it contain any) cannot be liberated so as to act in the way of combustion upon any other matter; and therefore, when the common muriatic acid changes or de- stroys the colors, it changes or destroys the af- finities upon which they depend, by producing effects different from those of combustion ; and as the changes which it produces on colors are in most cases similar to those produced by the nitric, sulphuric, and other acids known to con- tain oxygen, it is reasonable to conclude, that these also act upon colors, by producing other effects than those of combustion.

79. M. Sennebier exposed a great variety of woods to the action of the sun and air, and found ail their colors very soon affected. The white woods generally became brown, and the red and violet changed either to yellow or black. Guaia- cum was rendered green ; the oak and the cedar were

whitened, as were the brown woods gene- rally ; effects which certainly do not resemble those of combustion, any more than the bleaching of wax or tallow by exposure to the air. It is therefore evident, argues Dr. Bancroft, that the color of each particular substance depends on its constitution, producing in it a particular at- traction for certain rays of light ; and a disposi- tion to reflect or transmit certain other rays; and in this respect it may doubtless suffer very con- siderable changes from the action or combination of oxygen, without any effects similar to those of combustion. And, indeed, the changes of color which arise from the access of atmospheric air, seldom resemble those which the mere pre- dominance of blackness (the supposed natural color of carbon) would produce; though this may have been the case with the coloring matter of brown or unbleached linen, upon which the experiments of M. Berthollet seem principally to have been made. But whether the action of vital air, or its basis, in promoting the decays and colors, ought to be denominated a combustion or not, Dr. Bancroft is confident, that at least some of them are liable to be impaired, not so much by an accession of oxygen, as by the loss of it. The difference of color in arterial and venous blood had been long noticed, and numerous ex- periments have shown that the fine vermilion co- lor of the former is produced solely by vital air, which it is capable of acquiring through bladders, the coats of blood-vessels, &c. And Mr. Hassen- fratz seems to have proved, that, as this fine red color is gained by a dissolution of oxygen in the urterial blood, so it is lost, and the dark color of the venous blood restored, by a separation of the oxygen, in consequence of its forming a new combination with the hydrogen and carbon of the same.

80. Dr. Bancroft is also of opinion, that the blue color of indigo depends upon a certain portion of oxygen, for he has found that a solu- tion of indigo, by losing its oxygen, may become as pellucid, and, excepting a very slight yellowish tinge, as colorless as water, and afterwards speedily return through all the shades of yellow and green to its original deep blue, by exposure to atmospheric or vital air. Similar to this, lu remarks, is the fact long since observed by the abbe Nollet, of the tincture of archil employed to color the spirit of wine used in thermometers, and which after some time loses its color, but recovers it again upon being exposed to atmos- pheric air. This also happens to the infusion of turnsole, and to syrup of violets, which lose their colors when secluded from air, and regai-i them when placed in contact with it. He has also observed various animal and vegetable co- lors, produced solely by the contact of atmos- pheric air; and some others, which, when given by dyeing or callico-printing to wool, silk, cot- ton, &c., though unable to sustain a single day's exposure to the sun and air without manifest injury, were found to receive none from the action of strong nitric or sulphuric acids, but, on the contrary, were perceived by

being wetted with them, and even with oxygenated muriatic and sulphuric acids. But the same colors, if co- vered with linseed oil, were found to decay more quickly from exposure to the sun and air, than, if uncovered. These colors, therefore, he con- tends, could not owe their decay to the contact or combination of oxygen, because they were not only unhurt, but benefited by its concentrated powers in the nitric, the oxygenated muriatic, and sulphuric acids ; and also because they were soonest impaired when defended from the access of oxygen, by being covered with linseed oil. Probably the decays of these colors were occa- sioned by a loss of at least some part of the oxygen which was necessary to their existence^ and which the linseed oil assisted in depriving them of, by the strong affinity it has with oxygen.

81. Dr. Bancroft further observes, that, in forming systems, we are apt to draw geneial conclusions from only a partial view of facts. This M. Berthollet seems to have done, not only in ascribing the decays of vegetable and animal colors, exclusively to effects similar to those of combustion, but also in representing the oxygenated muriatic acid, as an accurate test for anticipating, in a fe v minutes, the changes which these colors are liable to suffer by long ex- posure to the action of sun and air; for, says he, though it is true, that the oxygenated muriatic acid, in weakening or destroying colors, gives up to them more or less of the oxygen which it had received by distillation from manganese; and that, by this new combination of oxygen, those affinities for particular rays of light, upon which their colors depend, are liable to be de- stroyed ; it is nevertheless true, that the change: of color so produced are no certain indication of those, which the combined influence of light and air will occasion upon colors in general ; there being several colors which are very speedily destroyed by the latter of these causes, though they resist the strongest action of the oxygenated muriatic acid, without suffering any degree of

injury or hurt. The Dr. adds, that M. Berthollet well knows, since nobody has con- tributed more to ascertain, how much the pro- perties of oxygen are diversified by each par- ticular basis to which it unites ; and that it does not, therefore, seem warrantable to imagine, that its action will not be modified by a basis so powerful as that of the common muriatic acid, or that the united properties of both should re- present or resemble those of atmospheric air upon colors, any more than they do in the lungs by respiration; where, instead of supporting life, they would instantly put an end to it.

82. These observations were made in reference to the manner in which M. Berthollet had ex- pressed himself on the subject in his Elemens de 1′ Art de la Teinture, published in 1791. A new edition of this work was published about the year 1804, in which the author has fully noticed Dr. Bancroft's arguments ; refuted some of them ; admitted the force of others in part ; and, in some respects, has availed himself of the important improvements of Dr. Bancroft.

OF THE DIFFERENCES BETWEEN ANIMAL AND VEGETABLE SUBSTANCES.

83. Before we proceed to treat of the practice of dyeing, it will be necessary to consider some of the leading differences that exist between several of the substances to be dyed, and to point out the processes through which they must pass before they will receive the colors required. The following is the substance of M. Berthollet's opinion relative to this subject : — It is now known, that the composition of animal substances is distinguished from that of vegetables, by their abounding in a particular principle called azote, which is found only in small quantities in vege- tables, as well as by their containing much more hydrogen, or base of inflammable air, than is found in the other. From these two causes, the differences observed in the distillation of animal and vegetable substances proceed : the former yield a large quantity of ammoniac or volatile alkali ; the latter afford very little, and some- times yield an acid : the former yield a great deal of oi!, the predominant principle in which is hydrogen, which is very volatile and disposed to fly off by a small increase of temperature; while the latter sometimes do not yield it in the least sensible quantity.

84. Dr. Ure in a note, p. 151, vol. I. of his translation of Berthollet's treatise, has the fol- lowing remarks on this theory. Modern re- searches do not justify this position of M. Ber- thollet. Sugar and starch, by the analyses of M.M. Gay Lussac and Berzelius, contain about as much hydrogen as fibrin does, and very little less than gelatin and albumen; while, by my analyses, wool and silk contain less hydrogen than cotton and flax. See Phil. Trans, for

1822.

I subjoin the results of my analytical experi- ments on the four principal subjects of dyeing.

Carbon. Hydrogen. Oxygen. Azote.

Wool

53-70

2-80

31-20

12-30

Silk

50-69

3-94

34-04

1T33

Cotton

42-11

5-06

52-83

Flax

42-81

5-50

51-70

The first two, independently of the azote, pos sess a marked difference of composition, from their excess of carbon and deficiency of oxygen.

85. In consequence of this composition, animal substances, when set on fire, produce a bright flame, which breaks out at the beginning, but is soon stifled by the charcoal which is formed, and which has peculiar properties ; their combustion is accompanied with a penetrating- odor, owing to the ammoniac and oil which escape unconsumed ; they are liable to putre- faction, in which process ammoniac is produced, as well as in their distillation, by a more intimate union of the azote and hydrogen ; while vege- table substances, on the contrary, undergo the vinous and acetous fermentation. It is evident, that, as animal substances contain a considerable quantity of principles disposed to assume an elastic form, they have less cohesive force among their particles than vegetables, and a greater dis- position to combine with other substances ; hence they are more

liable to be destroyed by different agents > and are more disposed to combine with coloring particles.

86. The consequence of this action on animal substances is, that they cannot bear lies, and that alkalis should be used with great caution in the processes employed for dyeing them ; where- as no danger is to be apprehended from the use of alkalis with substances of the vegetable kind. Nitric and sulphuric acids have also a consi derable action on animal substances : the former decomposes them, extricates the azote, separates the fatty matter, and forms carbonic acid or fixed air, and oxalic acid or the acid of sugar with a part of the hydrogen and a part of the charcoal ; the latter extricates the inflammable gas, probably azotic gas, and .reduces the other principles to the state of carbon. Silk bears some resemblance to vegetable substances, from its being less disposed to combine with coloring particles, and by resisting the action of alkalis and acids more powerfully; which may arise either from the same principles being more inti- mately combined in it than in wool, or, more probably, from its containing less azote and hydrogen. But, though the action of alkalis and acids upon silk be weaker than upon wool, they should still be employed with great caution, be- cause the brightness of color required in silk appears to depend upon the smoothness of its surface, which should, on that account, be pre- served unimpaired, with every possible attention. Cotton withstands the action of acids much bet- ter than flax or hemp. Even the nitric acid does not destroy it without great difficulty.

OF WOOL.

87. The value of wool, and its fitness for the different kinds of manufacture, depend upon the length and fineness of its filaments. Wool is naturally covered with a kind of grease, which preserves it from moths ; so that it is not scoured until it is about to be dyed, or formed into yarn. To scour wool, it is generally put for about a quarter of an hour into a kettle, containing a sufficient quantity of water, mixed with one- fourth of putrid urine, heated to such a degree as the hand can just bear, and it must be stirred from time to time with sticks. It is then taken

cut, put to drain, and carried in a large basket to a running water, where it is moved about until the grease is entirely separated, and no longer renders the water turbid ; it is afterwards taken out, and left to drain. It sometimes loses in this operation more than a fifth of its weight. This operation should be conducted with much care, since the more correctly it is performed, the

better is the wool fitted to receive the dye. In this process the ammonia or volatile alkali which exists in the urine, readily combines with the oil of the wool, and forms a soap, which, being soluble in water, is dissolved and carried off.

88. Wool is dyed in the fleece before it is spun, whew it is intended to form cloths of mixed colors ; it is dyed after being spun, when in tended principally for tapestry : but it is most generally dyed after having been manufactured into cloth. If wool be dyed in the fleece, its filaments, from being separate, absorb a larger quantity of the coloring particles than when it is spun ; for the same reason, woollen yarn takes up more than cloth : but cloths themselves vary considerably in this respect, according to their degree of fineness, or the closeness of their tex- ture. Besides, the variety in their dimensions, the different qualities of the ingredients employed in dyeing, and a difference of circumstances in the process, prevent us from relying 'upon the precise quantities recommended for the pro- cesses. This ought in all dyes to be attended to. It is a fact well known to dyers and others, that the coarse wool from the thighs and tails of. some sheep receives the coloring particles with great difficulty. The finest cloth is never fully penetrated with the scarlet dye, hence the in- terior of the cloth appears always of a lighter shade when cut, and sometimes almost white. For the generality of colors, wool requires to be prepared by a bath, in which it is boiled with saline substances, principally with alum and tartar ; but there are some dyes for which the wool does not require such a preparation ; then it must be well washed in warm water, and wrung out, or left to drain.

89. The surface of the filaments of wool or hair is not quite smooth ; for, although no rough- ness or inequality can be discovered, yet they seem to be formed of fine laminas placed over each other in a slanting direction, from the root of the filament towards the point, resembling the arrangement of the scales of a fish, which cover each other from the head of the animal to its tail. This peculiarity of structure is proved by a simple experiment. If a hair be held by the root in one hand, and drawn between the fingers of the other hand, from the root towards the point, hardly any friction is perceived, and no noise is heard ; but if it be seized by the point, and passed in the same manner between the fingers from the point towards the root, a re- sistance is felt, and a tremulous motion is per- ceptible to the touch, while the ear perceives a slight noise. Thus it appears, that the texture is not the same from the root towards the point, as it is from the point towards the root. This is farther confirmed by another experiment. If a nair be held between the thumb and fore- finger,

and they be rubbed against each other in the longitudinal direction of the hair, it acquires a progressive motion towards the root. This ef- fect

depends not on the nature of the skin of the finger, or on its texture, for if the hair be turned and the point placed where the root formerly was, the motion is reversed, that is, it will still be towards the root.

90. On this peculiarity of structure, which was observed by M. Monge, depend the pro- cesses of felting and fulling of hair and wool for different purposes. In the process of felting, the flocculi of wool are struck with the string of the bow, by which the filaments are detached, and dispersed in the air. These filaments fall back on each other in all directions, and, when a layer of a certain thickness is formed, they are covered with a cloth, on which the workman presses with his hands in all parts. By this pressure the filaments are brought nearer to each other; the points of contact are multiplied; the progressive motion towards the root is produced by the agitation ; the filaments entangle each other ; and the laminae of each taking hold of those of the others, which are in an opposite direction, the whole is retained in a state of close contexture.

91. Connected with this operation is that of fulling. The roughness on the surface of the filaments of wool, and their tendency to acquire a progressive motion towards the root, produce great inconvenience in the operations of spinning and weaving. This inconvenience is obviated by covering the filaments with a coat of oil, which fills up the pores, and renders the asperities less sensible. When these operations are finished, the stuff must be freed from the oil, which would prevent it from taking the color with which it is to be dyed. For this purpose it is taken to the fulling-mill, where it is beaten with large beetles, in a trough of water, through which clay has been diffused. The clay unites with the oil, which, being thus rendered soluble in water, is carried off by fresh portions of water, conveyed to it. In this way the stuff is scoured ; but this is not the sole object of the operation. By the alternate pressure of the beetles, an effect similar to that of the hands of the workman, in the operation of felting, is produced. The filaments composing a thread of warp or woof, acquire a progressive motion ; are entangled with the filaments of the adjoining threads; those of the latter into the next, and so on, till the whole be- come felted together. The stuff is now con- tracted in all its dimensions, and, participating both of the nature of cloth and of felt, may be cut without being subjected to ravel ; and, when employed to make a garment, requires no hem- ming. In a common woollen slocking web, after this operation, the stitches are no longer subject to run, and, the threads of the warp and woof being less distinct from each other, the whole stuff is thickened, and forms a warmer covering.

OF SILK.

92. Silk in its natural state is coated orer with a substance which has

generally been con- sidered as a kind of gum or varnish To this

substance the silk is supposed to owe its elasticity and stiffness. Besides this varnish, the silk usually met with in Europe is impregnated with a substance of a yellow color, and, for most of the purposes for which silk is required, it is necessary to free it from both the varnish and the coloring matter. To effect this, the silk is subjected to the operation of scouring; but it is very obvious that when the silk is to be dyed, the scouring need not be carried so far as is required where it is to remain white. Dif- ferent colors, also, will require different degrees of scouring; and this difference is generally regulated by the quantity of soap employed : 100 pounds of silk boiled in a solution of twenty pounds of soap, for three or four hours, supplying a little water occasionally because of the evaporation, will be sufficiently prepared to receive the common colors. For blue colors the proportion of soap must be greater ; and scarlet, cherry color, &c., require a still greater propor- tion, because for those colors the ground must be whiter.

93. When silk is to be employed white, it must undergo three operations. The first con- sists in keeping the hanks of silk in a solution of thirty pounds of soap to 100 of silk: this solution ought to be very hot, but not boil- ing ; when any part of the hanks immersed is entirely free from its gum, which is known by the whiteness it acquires, the hanks are to be shaken over, as the dyers term it, so that the part which was not before immersed, may undergo the same process. They are then taken out and wrung, as the process is finished.

94. In the second operation the silk is put into bags of coarse cloth, each bag containing from twenty-five to thirty pounds. A solution of soap is prepared as in the former case, but with a smaller proportion of soap. In this the bags are boiled for an hour and a half; and that they may not receive too much heat by resting on the bottom of the vessel, they must be con- stantly stirred during the operation.

95. The third operation is to communicate to the silk different shades, that the white may be rendered more pleasing. These shades are known by different names, as China-white, silver- white, azure-white, or thread-white. For this purpose a solution of soap is also prepared, of which the proper degree of strength is ascer- tained by its manner of frothing by agitation. For the China-white, which is required to have a slight tinge of red, a small quantity of anatto is added, and the silk is shaken over in it till it has acquired the shade required. In other whites, a blue tinge is given by adding a little blue to the solution of soap. The azure-white is produced by means

of indigo. To prepare the azure, fine indigo is well washed in mode- rately warm water, after which boiling water is poured upon it. It is then left to settle, and the liquid part only, which contains the finer and more soluble parts, is employed.

96. Some use no soap in the third operation, but, when the second is completed, they wash the silks, fumigate with sulphur, and azure them with river water, which should be very pure. Bui all these operations are not sufficient to give

silk that degree of brightness which is necessary, when it is to be employed in the manufacture of white stuffs. For this purpose it must undergo the process of sulphuration, in which the silk is exposed to the vapor of sulphur. But before the silk which has been thus treated is fit for re- ceiving colors, and retaining them in their full lustre, the sulphur which adheres to it must be separated by immersion and agitation for some time in warm water, otherwise the colors are tarnished and greatly injured.

97. It has long been an object of consider- able importance, to deprive silk of its coloring matter, without destroying the gum, on which its stiffness and elasticity depend. A process for this purpose was discovered by Beaume, hut, as it was not made public, others have been led to it by conjecture and experiment. The follow- ing account, given by Berthollet, is all that has transpired concerning this process. A mixture is made with a small quantity of muriatic acid and alcohol. The muriatic acid should be in a state of purity, and entirely free from nitric acid, which would give the silk a yellow color. In the mixture thus prepared, the silk is to be immersed.

98. One of the most difficult parts of the process, especially when large quantities are operated upon, is to produce a uniform white- ness. In dyeing the whitened silk, there is also some difficulty in preventing its curling; hence, it is recommended to keep it constantly stretched during the drying. The muriatic acid seems to be useful in this process, by softening the gum, and assisting the alcohol to dissolve the coloring particles which are combined with it. The al- cohol which has been impregnated with the coloring matter may be again separated from it and purified, ar«d may thus serve in future ope- rationsj arid render the process more economical. This may be effected by distillation with a mo- derate heat, in glass or stone-ware vessels.

The preparation with alum is a very important preliminary operation in the dyeing of silk. Without this process, few colors would have either beauty or durability. Forty or fifty pounds of alum, dissolved in warm water, are mixed in a vat, with forty or fifty pails of water; and, to prevent the crystallisation of the salt, the solution must be carefully stirred during the

mixture. The silk being previously washed and beetled, to separate any remains of soap, is immersed in this alurn liquor, and after eight or nine hours is wrung out, and washed in a stream of water : 150 pounds of silk may be prepared in the above quantity of liquor; but when it begins to grow weak, which may be known by the taste, twenty or twenty-five pounds of alum are to be added, and the addition repeated till the liquor acquires an offensive smell. It may then be employed in the preparation of silk intended for darker colors, till its whole strength is dissipated. This prepa- ration of silk with alum must be made in the cold ; for when the liquor is employed hot, the lustre is impaired.

OF COTTON.

99. Cotton is the down or wool obtained from the pods of the gossipium, a shrubby plant whieii

grows in warm climates. Cottons differ prin- cipally in the length of their filaments, their fineness, strength, and color. This substance has different shades, from a. deep yellow to a white. The most beautiful is not always the whitest ; it is necessary to bleach it, by processes similar to those employed in the bleaching of iinen. Or, instead of these, oxygenated muriatic acid may be employed ; and a more beautiful white thus produced, than by the ordinary way of bleaching. M. Berthollet succeeded in bleaching the yellow cotton of St. Domingo, which very obstinately letains this bad color. But, that cotton may be disposed to receive the dye, it must undergo scouring. Some boil it in sour water, but more frequently alkaline lie is used ; the cotton must be boiled in it for two hours, and then wrung out ; after which it must be rinsed in a stream of water, till the water cones off clear; it must then be carefully dried. The cotton stuffs, which are to be prepared, must be soaked for some time in water, mixed with at most one-fiftieth of sulphuric acid ; after which', they must be carefully washed in a stream of water, and dried. M. Berthollet has observed, that the acid which had been used in this opera- tion, had taken up a quantity of calcareous earth and iron, which would have injured the colors very much. Aluming and galling are generally employed in the dyeing of cotton and linen. In the preparation with alum, about four ounces of it are required to each pound of stuff; it must be dissolved with the precautions above- mentioned. Some add a solution of soda in the proportion of one-sixteenth of the alum ; others a small quantity of tartar and arsenic. The thread is well impregnated by working it pound by pound in this solution ; it is then put altoge- ther into a vessel, and what remains

of the liquor is poured upon it. This is left for twenty-four hours, and then removed to a stream of water, where it remains for about two hours, to extract a part of the alum, and is then washed. Cotton, by this operation, gains about one-fortieth of its own weight.

100. In the operation of galling, it is usual to employ different quantities of galls or other as- tringents, according to their quality, or the effect to be produced. Powdered galls are boiled for about two hours, in a quantity of water propor- tioned to that of the thread to be galled; the liquor is then allowed to cool to a temperature which the hand can bear, after which it is divided into a number of equal parts, that the thread may be wrought pound by pound; and what remains is poured upon the whole together. It is then left for twenty-four hours, when intended for black, but for other colors twelve or fourteen hours are sufficient. It may then be wrung out, and carefully dried. When stuffs are galled, which have already received a color, the operation is to be performed in the cold, that the color may suffer no injury. M. Berthollet found thatcotton which had been alumed, acquired more weight in the galling than that which had not under- gone that process; although alum adheres but in a small quantity to cotton, it communicates to it a greater power of combining, both with the as- VOL. VII.

tringent principle and with the coloring particle) of different substances.

OF FLAX.

101. Flax must undergo several preparations before it be fit to receive the dye. Of these, the watering is an operation of much consequence, from its influence on the quality and quantity of the product, and from its deleterious effects on the air. In this operation, a glutinous juice, which holds the green coloring part of the plant in solution, undergoes a greater or less degree of decomposition, according to the mode of con- ducting the operation. This matter seems to re- semble the glutinous part, that is held dissolved in the juice procured from green plants by pres- sure, which is separated along with the coloring particles by a heat approaching to that of ebul- lition, which becomes putrid, and which afford? ammonia by distillation; but it is probable, that water alone cannot sufficiently separate it from the cortical parts : whence the hemp, which has been watered in too strong a current, is deficient in its softness and pliability, &c. But if the water employed be stagnant and putrid, the hemp acquires a brown color, loses its firmness, and emits highly noxious vapors. This process is therefore performed to the greatest advantage, in watering pits situated on the banks of rivers, where the water may be changed often enough to prevent a putrefaction, that would injure the hemp, and be prejudicial to the workmen ; yet not so often as to hinder the degree of putrefac- tion which

is necessary to render the water ca- pable of dissolving the glutinous substance. To prepare flax for the dye, it must also be sub- jected to the operations of scouring, aluming, and galling, in the same manner as cotton.

PART II. THE PRACTICE OF DYEING.

102. Before we proceed to give directions for the various processes to be observed in the prac- tice of dyeing, we shall take a brief view of M. Berthollet's observations on dyeing operations in general, which cannot fail to be interesting to the practical dyer.

103. 'It may be regarded,' says he, ' as a ge- neral principle, that processes performed in a great manufactory are more advantageous than those which are insulated, since, from the subdi- vision of labor, each workman, occupied with a single object, acquires ceierity and perfection in his employment, by which means the saving of time and labor becomes very considerable.

104. This principle is particularly applicable to the art of dyeing, as the preparation which remains after one operation may often be advan- tageously employed in another. A bath from which the coloring matter has been nearly ex- tracted in the first operation may be used as a ground for other stuffs, or, with the addition of a fresh portion of ingredients, may form a new bath. The galls which have been applied to the galling of silk may answer a similar purpose for cotton or wool. From this it is evident that the limitations under which the art of dyeing labors

in some countries must tend to obstruct its pro- gress and improvement.

105. A dye-house should be situated as near as possible to a stream of water, and should be spacious and well lighted. It should be floored with lime and plaster; and proper means should be adopted to carry off water' or spent baths by forming channel? or gutters, so that every opera- tion may be conducted with the greatest attention to cleanliness.

106. The size and position of the boilers are to be regulated by the nature and extent of tlie operations for which they are designed. Except- ing for scarlet and other delicate colors, in which tin is used as a mordant, in which case tin vessels are preferable, the boilers should be of brass or copper. Brass, being less apt than copper to be acted on by means of

chemical agents, and to communicate spots to the stuffs, is fitter for the purpose of a dyeing vessel. It is scarcely neces- sary to say that it is of the greatest consequence that the coppers be well cleaned for every opera- tion; and that vessels of a large size should be furnished at the bottom with a pipe and stop-cock for emptying them ; there must also be a contri- vance above each copper to support the poles for the purpose of draining the stuffs which are im- mersed, so that the liquor may fall back into the vessel, and prevent waste.

107. Dyes for silk, where a boiling heat is not necessary, are prepared in troughs or backs, which are long copper or wooden vessels. The colors which are used for silk are extremely deli- cate. They must therefore be dried quickly, ..hat they may not be long exposed to the action of the air, and that there may be no risk of change. For this purpose, it is necessary to have a drying room heated with a stove. The silk is stretched on a moveable pole, which by the dyers is called a shaker. This is hung up in the heated chamber, and kept in constant motion to promote the evaporation.

108. For pieces of stuffs, a winch or reel mus be used; the ends of which are supported by two iron forks which may be put up at pleasure in holes made in the curb on which the edges of the copper rest. The manipulations in dyeing are neither difficult nor complicated. Their ob- ject is to impregnate the stuff to be dyed with the coloring particles, which are dissolved in the bath. For this purpose, the action of the air is necessary, not only in fixing the coloring parti- cles, but also in rendering them more vivid; while those which have not been fixed in the stuff are to be carefully removed. In dyeing whole pieces of stuff, or a number of pieces at once, the winch or reel mentioned above must be em- ployed, One end of the stuff is first laid across it, and, by turning it quickly round, the whole passes successively over it. By turning it after- wards the contrary way, that part of the stuff which was first immersed will be the last in the second immersion, and by this means the color- ing matter will be communicated as equally as possible.*

109. In dyeing wool in the fleece, a kind of broad ladder with very close rounds, called by the dyers of this country a scraw, or scray, is used. This is placed over the copper, and the wool is

put upon it for the purpose of draining and expo- sure to the~ air, or when the liquor is to be changed.

110. To separate the superabundant coloring particles, or those which have not been fixed in the stuff, after being dyed, it must be wrung out. This operation is performed with a cylindrical piece of wood, one end of which is fixed in the wall, or in a post. This operation is often re- peated a

number of times successively, for the purpose of drying the stuffs more rapidly, and communicating a brighter lustre. When, after a certain quantity of fresh ingredients is added to a liquor, and it is stirred about, it is said to be raked, because it is mixed with the rake. In dyeing, one color is frequently communicated to stuffs, with the intention of applying another upon it, and thus a compound color is produced. The first of these operations is called giving a ground. When it is found necessary to pass stuffs several times through the same liquor, each particular operation is called a dip. A color is said to be rosed, when a red color, having a yellow tinge, is changed to a shade inclining to a crimson or ruby color ; and the conversion of a yellow red to a more complete red, is called heightening the color.

111. In addition to these general remarks, we might give more minute details of the different operations which are employed in dyeing ; butr as we cannot presume that they would be of much advantage to the practical dyer, we shall not indulge in useless description. Although the manipulations of dyeing are not very various, and appear extremely simple, they require very particular attention, and an experienced eye, in order to judge of the qualities of the bath, to produce and sustain the degree of heat suited to each operation ; to avoid all circumstances that might occasion inequalities of color, to judge ac- curately whether the. shade of what comes out of the bath suits the pattern, and to establish the proper gradations in a series of shades.

112. We shall here make a few observations on the qualities and effects of different kinds of water, which may be considered as one of the most essential agents in the art of dyeing. It is almost unnecessary to remark that water which is muddy, or contains putrid substances, should not be employed ; and} indeed, no kind of water which possesses qualities distinguished by the taste, ought to be used. Water which holds in solution earthy salts, has a very considerable ac- tion on coloring matters, and it is chiefly by means of these salts. Such, for instance, are the nitrates of lime and magnesia, muriate of lime and magnesia, sulphate of lime, and carbonate of lime and of magnesia.

113. These salts, which have earthy bases, oppose the solution of the coloring particles, and. by entering into combination with many of them cause a precipitation, by which means the color is at one time deeper, and at other times duller than would otherwise be the case Waters im- pregnated with the carbonates of linn in. 1 mag- nesia, yield a precipitate when they ii re bailed; for the excess of carbonic acid which heU them in solution is driven off by the heat; the earths are thus precipitated, and adhering to the stufli

to be dyed, render them foul, and prevent the coloring matter from combining with them.

114. It is of much consequence to be, able to distinguish the different kinds of water which come under the denomination of hard-water, that they may be avoided in the essential operations of dyeing ; but to detect different principles con- tained in such waters, and to ascertain their quantity with precision, require great skill, and very delicate management of chemical operations, •which the experienced chemist only can be sup- posed to possess.

115. One of these tests is the soap solution, by which it may be discovered whether water contain so large a portion of any of these saline matters as may be injurious to the processes. Salts which have earthy bases have the property of decomposing soap by the action of double affinity. The acid of the salt combines with the alkali of the soap, and remains in solution, while the earth of the salt and the oil of the soap enter into combination, and form an earthy product which is insoluble in water, and produces the curdling appearance which is the consequence of this new combination. Water, then, which is limpid, which has no perceptible taste or smell, and has the property of dissolving soap without decomposition, is sufficiently pure for the pro- cesses of dyeing. All waters which possess these qualities will be found equally proper for these purposes.

116. But, as it is not always in the power of the dyer to choose pure water, means of correcting the water which would be injurious, and particu- larly for the dyeing of delicate colors, have been proposed. Water in which bran has been allowed to become sour, is most commonly employed for this purpose. This is known by the name of sours, or sour water. The method of preparing sourwatei is this : Twenty four bushels of bran are put into a vessel that will contain about ten hogs- heads. A large boiler is filled with water, and when it is just ready to boil, it is poured into the vessel. Soon after the acid fermentation com- mences, and in about twenty hours the liquor is fit for use. Water which is impregnated with earthy salts, after being treated in this way, forms no precipitate when boiled.

117. Mucilaginous plants are sometimes boiled in the water for the purpose of correcting it, when a froth forms that is to be carefully skimmed off as it rises. The mucilage coagu- lates, carrying with it the earths which separate on the volatilisation of the carbonic acid, as well as those that are merely mixed with the water and which render it turbid.

The salts, however, which have an earthy base, and which are in general injurious to dyeing, do, in certain cases, serve to modify the colors when the object of the dyer is to obtain deep shades. In this way, for example, a crimson hue is given to the color produced by cochi- neal.

OF DYEING BLACK.

118. We now proceed to give an account of the most useful and advantageous processes for dying different colors, and begin with the me- ffiod of dying black.

It has been justly observed, by an able writer on this subject, that absolute black being a com- plete privation of all color, can scarcely be ascribed to any body in nature, since it must then become invisible. The color so named, as com- municated by dye-stuffs, is, indeed, rather an intense blue or brown, and is generally produced by the union of these coloring matters with a ferruginous mordant, and hence it may not im- properly be termed a compound color. The juice of the cashew nut communicates a black that will not wash out, and which resists boiling- with soap or alkalis. The anacardium occiden- 'ale and the toxicodendron afford a durable dye, Out it is of a brownish hue. The juice of the sloe affords a pale tint of a brownish cast, which becomes deeper after having been repeatedly washed with soap, and afterwards wetted with a solution of alkali.- On boiling sloes, their juice becomes red, and the red tinge, which in that state it imparts to linen, is converted by washing with soap into a bluish color cf some durability. But these methods of obtaining a black color cannot be employed in dyeing, because these substances are not to be obtained in sufficient quantity, and the black which they afford is not equal to that formed by the common processes. All black colors, therefore, are the effects of combination. To produce them, the black par- ticles formed by the union of the astringent principle with the oxide of iron, held in solution by an acid, are fixed on the stuff that is intended to be dyed.

119. There are very few substances which have the property of producing of themselves a permanent black color. The juice of some plants is found to produce this effect on cotton and linen.

120. When the particles are precipitated from the mixture of an astringent and a solution of iron, they have only a blue color ; if they be then left exposed to the air, and moistened with water, their color becomes deeper, but still the blue is distinguishable. The stuff itself then contributes to increase the intensity of the black, whether it be that in this state of combination it undergoes a slight combustion, or that the coloring particles undergo a farther degree of combustion, from presenting a larger surface to the air. Without the action of the air, however, a fine black can- not be

produced ; on which account the operations are performed at different intervals, during which the stuff is taken out of the bath, that it may be exposed to the air. M. Berthollet has ascertained, that black stuffs placed in contact with pure air diminish its volume, and consequently absorb a certain portion of it.

121. Of Dyeing Woollen Black. — From the process described by Hellot, woollen cloth, to be dyed black ought to Deceive the deepest blue tint, or mazarine blue, to be washed in the river as soon as taken out of the vat, and afterwards cleansed by the fulling mill.

For every hundred pounds of stuff, ten pounds of logwood, and ten pounds of galls reduced to powder, are put into a bag, and boiled with a sufficient quantity, of water, for twelve hours. A third of this liquor is put into another copper, with two pounds of verdigris. The stuff is irn-

mersed in this, and continually stirred for two hours. The liquor should be kept hot, but it ought not to boil. At the end of two hours the stuff is taken out, and a similar portion of the liquor is put into the copper, with eight pounds of sulphate of iron. During the solution of the copperas, the fire is diminished, and the liquor is allowed to cool for half an tiourˆstirring it well the whole time. The remainder is then to be added, and, after making this addition, the bag containing the astringent matters should be strongly pressed, to separate the whole. A quan- tity of sumach, from fifteen to twenty pounds, is now to be added, and the liquor is just raised to the boiling temperature ; and when it has given one boil, it is to be immediately stopped with a little cold water. A fresh quantity of sul- phate of iron, to the amount of two pounds, is then added, and the stuff is kept in it for another hour, after which it is taken out, washed and aired ; it is again put into the copper, and con- stantly stirred for an hour. It is then carried to the river, well washed, and fulled. To soften the black color, and make it more firm, another liquor is prepared with weld. This is made to boil for a moment, and when it is cooled the stuff is passed through it. By this process, which is indeed somewhat complicated, a beautiful black color is produced.

122. T3ut the methods usually followed for dyeing black, are more simple. Cloth, which has been previously dyed blue, is merely boiled in a vat of galls for two hours. It is then kept two hours, but without boiling, in the vat

of log- wood and sulphate of iron, and afterwards washed and fulled. According to Hellot's process, a liquor is to be prepared of a pound and a half of yellow wood, five pounds of logwood, and ten pounds of sumach, for every fifteen yards of deep blue cloth ; and, the cloth having boiled in this for three hours, ten pounds of sulphate of iron are added ; the cloth is allowed to remain for two hours longer, when it is taken out and aired, after which it is again returned to the vat for an hour, and then washed and fulled.

When stuffs are to be dyed at less expense, instead of the blue ground, a brown or root-co- lored ground may be substituted. This brown or fawn color is communicated by means of the root of the walnut-tree, or green walnut-peels. The stuffs are then to be dyed black, according to some of the methods already described.

123. The proportions of the ingredients em- ployed by the English dyers are, for every hun- dred pounds of cloth previously dyed a deep blue, about five pounds of sulphate of iron, five pounds of galls, and thirty of logwood. The first step in the process is to gall the cloth, after which it is passed through the decoction of log- wood, to which the sulphate of iron has been added.

124. As a substitute for galls, the leaves of the arbutus, ura ursi, have been recommended, and employed. The leaves must be carefully dried, so that the green color may be preserved : 100 pounds of wool are boiled with sixteen pounds of sulphate of iron, and eight of tartar, for two hours; the following day the cloth is

o be rinsed as after aluming ; 150 pounds of the

leaves are then to be boiled for two hours in water, and after being taken out, a small quan- tity of madder is to be added to the liquor, putting in the cloth at the same time, whic'n is to remain about an hour and a half. It is then taken out and rinsed in water. By this process, it is said, that blue cloth receives a tolerably good black, but white cloth becomes only of a deep brown.

125. After the operations for dyeing the cloth have been finished, it is washed in a river, and fulled, till the water runs off colorless. Soapsuds are recommended by some in fulling fine cloths, but it is rather difficult to free the cloth entirely from the soap. After the cloth has come from the fulling mill, some propose to give it a dip in a bath of weld, by which it is said to be softened, and the color better fixed ; but, according to Lewis, this operation, which in other cases is of advantage, is useless after the cloth has been treated with the soap suds.

126. Of Dyeing Silk Bloa:. — In communicat- ing a black color to silk, different operations are necessary, such as boiling, galling, repairing the vat, dyeing, and softening. To give a deeper shade to silk, it is necessary to deprive it of the gummy substance of which we have already spoken. This is done by boiling it four or five hours with one-fifth of its weight of white soap, and afterwards beetling and carefully washing it. The gummy substance, before mentioned, which silk in its natural state contains, does not increase the strength of the silk, which is then called raw ; but renders it more liable to wear out, from the stiffness it imparts to it : and though raw silk takes a black color with more facility, than silk which has been scoured or divested of its gum, that black is much less perfect, and resists the re-actives calculated to dissolve the coloring matter, in a much less forcible manner.

127. In the process of galling- silk, three- fourths of its weight of galls are to be boiled for three or four hours, but the proportion must de- pend on their quality. After the boiling, the li- quor is allowed to remain at rest for two hours ; the silk is then put into the bath, and left there from twelve to thirty-six hours, when it is to be taken out, and washed in the river. But as silk is capable of combining with a great proportion of the astringent principle, or tan, from which it receives a considerable increase of weight, it is allowed to remain for a longer or shorter time, as the silk is required to have more or less additional weight. Hence to communicate to silk, what is called a heavy black, it is allowed to remain longer in the gall-liquor ; the process is repeated oftener, and the silk is dipped in the dye a greater number of times

128. While silk is preparing for the process of dyeing, the vat is to be heated, and should be occasionally stirred, that the grounds which fall to the bottom may not acquire too much heat. It should always be kept under the boiling tem- perature. Gum and solution of iron are added in different proportions, according to the differ- ent processes. When the gum is dissolved, and the liquor near the boiling temperature, it is left to settle for about an hour. The silk, which in general is previously divided into three parts,

tftat each may be successively put into the vat, is now immersed in it. Each part is then to be three times wrung, and, after each wringing, hung up to air. The silk, being thus exposed to the action of the air, acquires a deeper shade. This operation being finished, the bath is again heated, with the addition of gum and sulphate of iron, and this is repeated two or three

times, according as the black required is light or heavy. When the process is finished, the silk is rinsed in a vessel with some cold water, by turning or shaking it over.

129. Silk, after it has been taken out of the dye, is extremely harsh, to remove which it is sub- jected to the operation of softening. A solution of four or five pounds of soap for every 100 pounds of silk, is poured through a cloth into a vessel of water. The solution being completed, the silk is immersed, and allowed to remain in it for about fifteen minutes ; it is then to be wrung out and dried.

130. When raw silk is to be dyed, that which Las a natural yellow color is preferred. The galling operation must be performed in the cold, if it be desired to preserve the whole of the gum, and the elasticity which it gives to th,e silk ; but if part only of it is wished to be preserved, the galling is to be performed in the warm vat.

131. The dyeing is also performed in the cold. All that is necessary, is to add the sulphate of iron to the water in which the stuff is rinsed. By this simple process, the black dye is commu- nicated. It is then washed, beetled once or twice, and dried without wringing, that its elas- ticity may not be destroyed. Raw silk may be dyed by a more speedy process. After galling, it may be turned or shaken over in the cold bath ; and thus by alternately dipping and airing the stuff, the operation may be completed. It is then to be washed and dried as before.

132. The method of dyeing velvet at Genoa, which has been simplified and improved in France, is thus described by Macquer. For every 100 pounds of silk, twenty pounds of Aleppo galls, reduced to powder, are boiled in a sufficient quantity of water for an hour. The bath is allowed to settle till the galls have fallen to the bottom ; they are then taken out, and two pounds and a half of sulphuric acid, twelve pounds of iron filings, and twenty pounds of gum, are put into a copper, pierced with holes in all directions. This vessel is sus- pended by means of two rods passed through its handles, in the boiler, but so as not to touch the bottom. The gum is left for an hour to dis- solve, but must be stirred occasionally. If after this time the gum has not all left the pierced copper, it is a proof that the liquor is saturated with it ; but if, on the contrary, the whole has disappeared, from two to four pounds more may be added. This cullender should remain con- stantly suspended in the boiler, except when the dyeing is going on, during which time it must be removed. During these operations the boiler must be kept hot, but not allowed to boil. The gall ing of the silk is performed with one-third of its weight of Aleppo galls. The silk is al- lowed to remain in the liquor for six hours the

first time ; then for twelve ; and for the rest, secun- dum or tern.

133. Dr. Lewis remarks, that though white silk may be dyed a good black, without using either logwood or verdigris, the addition of those two ingredients contributes greatly to improve the color both in silk and in wool. But as the great use of galls in dyeing silk black renders it very expensive, it is of consequence to find some method of diminishing their quantity. M. Angle's proposes the following process : — When the silk has been carefully boiled and washed in the river, it is to be immersed in a strong decoction of green walnut-peels, and left in it till the color of the bath is exhausted. It is then taken out, slightly wrung, dried, and washed in the river. The decoction of walnut-peels is made by boil- ing a full quarter of an hour, when it is taken from the fire, and suffered to subside before dipping the silk, which has been previ- ously immersed in warm water. A blue ground is next given by means of logwood and verdigris. For every pound of silk, an ounce of verdigris is dissolved in cold water : the silk is left in this solution two hours ; it is then dipped in a strong decoction of logwood, wrung out slightly, and dried before it is washed at the river. For light blacks, galling may be altogether omitted ; but for a heavy black, half a pound of galls must be employed for every pound of silk intended to be dyed. To prepare the liquor, two pounds of galls and three of sumach are macerated in twenty- five gallons of water over a slow fire, for twelve hours. After straining, three pounds of sulphate of iron, and as much gum arabic are dissolved in it. In this solution the silk is dipped at two different times, leaving it in two hours each time, taking care to air it after the first dipping, and to dry it before giving the second fire, when it is to be again aired and dried : it is then beetled twice at the river ; after which a third fire is given it, in the same manner as before, except that it is left in the liquor four or five hours. When drained and dried, it is again beetled twice at the river. The heat during the operation must not exceed 120° of Fahrenheit's thermometer ; and before the last two fires, an addition of half a pound of sulphate of iron and as much gum arabic is to be made.

For removing the harshness that silk acquires from the black dye, M. Angles proposes that a decoction of weld should be preferred to a solu- tion of soap ; and observes that if silk be dyed blue with indigo, previous to its being dipped for black, it will take only a mealy black, but that a velvety black will be obtained,, if it be pre- pared with logwood and verdigris ; and that green walnut-peels soften the silk.

134. Of Dyeing Cotton and Linen Black. — To impart to cotton and linen a deep black dye that will resist the action of soap, is attended with considerable difficulty. Several methods have been proposed as improvements on the old pro- cess; the following, practised at Rouen, is thus described by M. d'Apligny. The stuffs are first dyed sky-blue in the

usual manner, and are then wrung out and dried. After this they are galled for about twenty-four hours, allowing four ounces

c-f galls to every pound of stuff; they are then again wrung, and well dried.

The liquor, known among dyers by the name of the black cask, is then poured into a tub, five quarts for every pound of stuff, and in this the stuffs are worked by the hand, in small portions, for about a quarter of an hour, when they are again wrung out and dried. This operation is repeated twice; adding each time a fresh quantity of the black liquor, well scummed. After this it is again aired, wung out, washed at the river, and dried carefully. For the finish- ing process, a pound of alder bark for every pound of stuff is boiled for an hour, in a suffi- cient quantity of water. About half the liquor that was used for the galling, and half as much sumach as alder bark are then added, and the whole boiled together for two hours, and then strained through a sieve. When the liquor is cold, the stuffs are worked through it for some time, occasionally airing them ; after which they are suffered to remain immersed in it for twenty- four hours, when they are wrung out and dried.

For softening them, when dry, it is customary to soak and work them in the remains of a weld bath that has been used for other colors, adding to it a little logwood. From this they are taken out and wnmg, and instantly put into a tub of warm water, into which has been poured an ounce of olive oil for every pound of stuff. They are then wrung out and dried carefully.

The same author has described another pro- cess for imparting to cotton and linen stuffs a fine and durable black. In this process the stuffs are first to he scoured as usual, galled, then alumed, ami afterwards dipped in the weld bath. When taken out of this bath, they are to be dyed in a decoction of logwood, to which a quarter of a pound of sulphate of copper has been added for every pound of stuff. After this they must be washed in the river, wrung several times but not too hard; and dyed in a madder bath, in the proportion of half a pound to each pound of stuff. That the black may not be liable to be discharged, the thread must be dipped in a bath of a solution of soap.

135. The following method practised at Man- chester is given by Mr. Wilson. A galling is made with galls or sumach ; after which the stuff is dyed with the liquor of the bath, consisting of a solution of iron in regetable acid, frequently composed of alder bark and iron, and then dipped in a

decoction of logwood with a little verdigris. This process is repeated till a deep black is ob- tained ; and it is necessary to wash and dry after each of these different operations.

136. Dr. Bancroft, says Berthollet, had an- nounced that the acid of tar was employed at Manchester for black dyes on cotton. Cnaptal, in his dyes, used pyrolignous acid ; but to Bosc we owe the details of the operation by which he himself obtained a fine black by means of that acid.

137. Fill, says he, a cast-iron boiler with pyro- lignous acid ; add to it old iron, well oxidised, and boil. The solution of the oxide will take place rapidly. When the iron grows clean, and tile solution becomes black as ink, throw the whole into a cask to be employed at need.

Prepare your cotton as usual, by giving it a blue ground. Gall ; turn the hanks of cotton through a bath of a solution of pyrolignite of iron, di- luted with tepid water.

Renew the gallings, and the turnings through the bath of pyrolignite of iron,till you have obtained a deep and brilliant black. Finish by passing your cotton through olive oil. This operation is sim- ple. Throw on some tepid water a little olive oil ; pass the cotton through this bath ; it ab- sorbs the oil ; but it must be worked for a long time in the bath to diffuse the oil equally. This process softens and gives suppleness to the cotton, as well as a great deal of brilliancy. Dry in the shade. The cottons are now of a perfect and very durable black. Every time that the bath of pyrolignite of iron has been em- ployed, it must be thrown away as useless, and the old baths are never to be added to the cask.

Bosc intimates, that the stuffs dyed by means of pyrolignous acid, retain, with much tenacity, the odor of this acid, and that they must be ex- posed to the air for some time to rid them of it, before folding them up for packing.

The application of oil, which heightens the black, and imparts softness to the stuffs, is given to those which are woven, for example, to cotton velvet, by means of brushes, which are slightly imbued with it at their surface.

Hermstadt recommends a process of Vogler, which consists in making use for a mordant of a solution of nitrate of lead, in turning the stuff through a solution of glue, and in dyeing it in a bath composed of gall-nuts, logwood, and sul- phate of iron, for which last the acetate may be substituted.

OF DYEING GRAY.

.138. Gray colors are properly the shades of black from the deepest to the

lightest. They may be produced in several ways ; the two fol- lowing are the most approved methods.

In the first method a decoction of bruised galls, and a solution of sulphate of iron are used. These ingredients must be prepared separately ; and then a part of it added to a quantity of water of a sufficient degree of heat, such as the hand can bear ; and in this the cloth or wool is to be dipped.

When it has attained the shade desired, it is taken out, and more of the decoction and solution must be added to the same bath. Into this the cloth is dipped, to give it a deeper shade. In the same manner the operator proceeds to the deepest shades, always adding some of each of the liquors : though, for black-gray and other deep shades, it is best to give the cloth previously a blue ground, more or less deep according to circumstances.

139. The second process for dyeing gray, and which is, by Hellot and others, preferred to the preceding, in consequence of the stuff taking the decoction of galls more firmly, is this. Such a quantity of powdered galls as may be thought requisite is enclosed in a linen bag and boiled in water for two hours. In this decoction the stuffs must be boiled for an hour and then taken' out. Some solution of iron is then added to the

liquor, and the stuff' passed through it, so as to produce a light shade; more solution of iron is then to be added to produce a deeper shade, and so on till the stuff acquire ;the requisite color.

If in this operation we go beyond the mark, the color must be darkened as before ; but re- peating these operations is prejudicial to the stuff, so that we should endeavour to catch the proper shade at once, by taking it occasionally out of the bath. Care must be taken that the bath do not boil, and that it be rather warm than too hot.

In whatever manner grays are dyed, they should be immediately washed in a large body of water, and the darkest may even require soap to cleanse them. It is sometimes required to give grays a tint of another color, as a nut, agate, or reddish cast. In this case, having given a tint more or less blue according to the object in- tended, the stuffs are dipped in the remains of some cochineal liquor, tha has served for dyeing either scarlet or violet, adding galls, logwood, madder, &c. ; they are then browned more or less deep with a solution of iron. For the nut gray, yellow wood and logwood are added to the galls, and the stuff is to be dyed from white.*

140. Silk takes all grays, except black-gray, without previous aluming. The bath is com- posed [of fustic, logwood, archil, and sulphate of iron. These

ingredients are varied accord- ing to the tint to be given. Thus more archil is employed for grays that are to have a red- dish cast, more fustic for those that should incline to a russet or green, and more logwood for those that are to be of a darker gray. For iron-gray logwood and solution of iron are only employed. But black-gray requires aluming; after which the silk is taken to the river, and then dipped in the weld bath. A part of this bath is thrown away, and its place supplied with logwood liquor. When the silk is impregnated with this, a sufficient quantity of solution of iron is added, and, as soon as it has acquired the pro- per shade, it is to be washed and wrung care- fully. If the gray should happen to be too dark, the silk .'is dipped in a solution of tartar, and afterwards in warm water ;sand, if by these means the color be weakened too much, the silk is again dipped in a bath of dye that is quite fresh.

141. Linen and Cotton should have a blue ground imparted to them for black-gray, iron- gray, and slate-gray, but for no other. All the shades require a galling proportionate to the gray to be produced. Gall baths that have be- fore served for other purposes are often employed. When the stuff has been galled, wrung, and dried, it is dipped in a vessel of cold water, to which is added a proper quantity of the bath from the black cask, and of a decoction of log- wood. The stuff is worked in separate portions, and afterwards washed and dried properly. Two other processes' for dyeing gray are given by M. Pileur d'Apligny, which, according to 'him, pro- duce a more permanent color. They are these.

1. The yarn is galled, dipped in a very weak »ath of the black cask, and then maddered :

2. The yarn is dipped in a very hot solution of tartar, wrung gently and dried. It is then dyed in a decoction of logwood. After this operation

it appears black ; but, on working it attentively in warm soap suds, the surplus of the dye fs discharged, and it remains of a durable slate- gray.

142. A process, says M. Berthollet, the suc- cess of which is known to us, consists in taking a very diluted solution of acetate of iron (it is suf- ficient to add a little of this acetate to a quantity of water), and a decoction of sumach, also very dilute. The cotton is passed in succession from one liquor to the other, till the wished for shade be attained. The finish is given by passing through a water slightly acidulated by sulphuric acid, otherwise the sumach gives a russet hue. By the same process may be obtained with nut- galls less lively grays; and the alder bark affords an agreeable one, which borders on hazel.

A skilful manufacturer of Rouen has conrnu- nicated to us the following

process, which he makes use of successfully for cotton velvets. A galling is given with an equal quantity of galU nuts and logwood, after which a bath of cold water is administered, and next another bath of water, in which there has been dissolved a weight of sulphate of iron, equal to the one-half of the preceding ingredients. After working the cotton about a quarter of an hour in this bath, it is rinsed in cold water, and brightened.

For this purpose a bath of tepid water is used, to which one-eightieth of decoction of weld, and a little alum, are added. The cotton is left about twenty minutes in this bath, after which it is washed in cold water, and dried.

By modifying the doses of the ingredients, grays, from pearl-gray to the deepest gray, may be thereby obtained.

For grays on printed goods, the same mordant is impressed as fora clear violet, and sumach or gall-nuts are employed according to the shade that is desired.

OF DYEING BLUE.

143. Of Dyeing Wool Blue.— There are va- rious processes employed for dyeing wool, silk, &c., of blue color, but the principal 'coloring matters made use of are indigo and woad. Ar- chil, cochineal, turmeric, and logwood, are occa- sionally used as auxiliaries. Prussian blue also has, in some cases, been successfully employed in producing some very beautiful lut fugitive shades of blue.

The vessels in which blue is dyed are called vats ; they were formerly made of wood ; in many instances they are still constructed of that mate- rial ; lead, however, has been found superior, and in modem practice, cast iron is generally used. When the vat is made of wood, the liquor must be raised to the requisite heat in another vessel, and then transferred to it, a process attended with many inconveniences ; when made of lead it is surrounded with brick work, of a single brick in thickness, which admits of a fire being placed under it for the purpose of warming the liquor.

144. Some dyers make use of iron vats which are warmed by steam, applied to the exterior of the vat; but the more common method is to' use a vessel of cast iron, and to apply a gentle fire under it as occasion may require.

Before the introduction of indigo, blue was dyed with woad, this produced a color which was tolerably permanent, but rather faint ; a very rich blue however is now obtained by the union of the two substances. The proportions in which these are used, vary according to the depth of shade reqivred. The following is the process of preparing a vat as given by Quatremere.

145. Into a vat of about seven feet and a half deep, and five and a half in diameter, are thrown two bales of pastel or woad, previously broken, and together about 400 pounds weight ; thirty pounds of weld are boiled in a copper for three hours, in a sufficient quantity of water, to fill the vat. To this decoction are added twenty pounds of madder and a basket of bran. The boiling is then continued half an hour longer. This bath is cooled with twenty buckets of water, and after it is settled, and the weld taken out, it is poured into the vat, which must be stirred with a rake all the time that it is running in, and for fifteen minutes longer.

146. The vat is then covered, and allowed to stand for six hours, when it is uncovered, and raked again for half ftn hour. The same opera- tion must be repeated every three hours. When the appearance of blue streaks is perceived on the surface, eight or nine "pounds of quick lime are added ; the color then becomes of a deeper blue, and the vat exhales more pungent vapors. Immediately after the lime, or along with it, the indigo, which has been previously ground in a mill, with a small quantity of water, is put into the vat. The quantity is to be regulated by the intensity of the shade required. If, on striking the vat with a rake, a fine blue scum arises, no other preparation is required than to stir it with the rake twice in the space of six hours, to mix the ingredients completely. Great care should be taken not to expose the vat to the air, except during the time of stirring it.

147. Vats of this description are sometimes liable to accidents. A vat is said to be repelled, when, having previously afforded fine shades of blue, it appears black, without any blue streaks ; and if qn being stirred the black color becomes deeper, the vat at the same time exhales a pungent odor ; and the stuff dyed in it comes out of a dirty gray color. These effects are as- cribed to an excess of lime.

148. Different means are employed to recover a repelled vat. Some merely reheat it ; while others add tartar, bran, urine, or madder. Hellot recommends bran and madder as the best re- medy. If the excess of lime be not very great, it is sufficient to leave it at rest five or six hours, putting in a quantity of bran and three or four pounds of madder, which are to be sprinkled on the surface, and then it is to be covered up, and after a certain interval to be tried again. But if the vat has been so far repelled as to afford a blue only when it is cold, it must be left at rest to recover, arid

sometimes must remain whole days without being stirred with ilie rake.

149. When it begins to afiu. I a tolerable pat- tern, the bath must be reheated. In general this revives the fermentation ; or it may be excited with bran and madder, and even with a basket or two of fresh pastel.

Hecquet d'Orval and Ribacourt advise to rest satisfied without raking up, if the bath be but slightly thrown back ; but if the evil has made more progress, to put into it some pounds of bran enclosed in a bag, and to diffuse through it at the same time three or four pounds of tartar in powder. The bag, after five or six hours, begins to float and is withdrawn, and the rake is used. If the vat be not yet restored, the same operation is repeated.

Quatremere says, that he has re-established a vat which he had thrown back by a surcharge of lime ; and that for this effect he contented him- self with heating twice, and leaving it then in repose for two days, after which it afforded a well characterised flower or bloom. He left it again in repose for three days ; and lastly, heat- ing it for the third time, he found it to be re-stored.

150. The second accident, to which the pastel vat is subject, is putrefaction. When this acci- dent occurs, the veins and the bloom disappear, its color becomes russet, the paste which is at the bottom rises up, the smell becomes fetid.

Quatremere asserts, that, if a pattern of a dark blue be plunged into a vat thus deteriorated, its color becomes several shades lighter. Putrefac- tion takes place in a vat, because it has not been sufficiently furnished with lime. Whenever the marks of putrefaction appear, we must hasten to correct it, by adding lime and raking up. This operation must be repeated till the vat be re- stored; but great care is required to avoid the opposite extreme.

It appears, adds M. Berthollet, that a just distribution of lime is the object which demands most attention in the conduct of a pastel vat. It moderates the fermentation of the pastel, and of the other substances that serve to disoxygenate the indigo ; for this effect, pushed too far, de- stroys the coloring particles. But too strong an action of the lime becomes too great an obstacle. It is therefore proper to wait till the excess of lime disappears, undoubtedly by the successive formation of carbonic acid, or the source of the fermentation must be increased, or a portion of the lime be saturated by a vegetable acid. Another use of the lime is to hold in solution the color- ing particles of indigo and of the pastel, which are disoxygenated. Woad is employed as well as pastel, but it appears that the preliminary preparation,

to which both are subjected, is not essential. We have seen a skilful dyer of Rouen employ for his vat the plant of woad simply dried; and assert that he derived more advantage from it than from ordinary woad.

151. The vat must be raked about two hours before dyeing, and to prevent the sediment, called paste, from occasioning inequalities in the color, a kind of lattice formed of large cords, termed a cross, is introduced ; and when wool is to be dyed in the fleece, a net with small meshes is placed over this.

The wool or cloth being thoroughly wetted with clear water, a little warm is pressed out, and dipped into the vat. where it is moved about a longer or shorter time, according as the color is required to be more or less deep, taking it out occasionally to air. The action of the air is ne-

cessary to change the green color given by the bath to a blue. In a rich bath it is difficult to give a uniform color to light blues : the best me- thod of obtaining such shades, therefore, is to use vats nearly exhausted, and of a low temperature. Woo! and cloth dyed blue, should be washed with great care, to carry off the particles not fixed in the wool, and those which are of a somewhat deep blue, ought even to be carefully cleansed, by fulling with soap, which does not alter the color. Those designed to be dyed black, ought to be treated in the same manner ; but it is not so necessary for those which are to be green, to be thus prepared.

152. The indigo vat is that which contains neither pastel nor woad. The vessel used for this preparation is a copper, which, being of a conical figure, leaves between it and the brick- work that surrounds it, and on which its brim rests, an empty space sufficient to admit of the action of the fire. Into this copper are poured about forty pails of water, in which have been boiled six pounds of salt of tartar, twelve ounces of madder, and six pounds of bran. This liquor is to be put into the vat, grounds and all : six pounds of indigo ground in water are then to be put in, and after raking it carefully the vat is to be covered. A slow fire is to be kept up round it. Twelve hours after it is filled, it is to oe raked a second time ; and so on every twelve hours, till it become blue, which it will be in forty-eight hours. If the bath be well managed, it will be of a fine green, covered with copper colored scales, and have a blue scum or flower at .the top. It may be observed, that the theory of

this vat is the same as that of the foregoing, ex- cept that the indigo is here

dissolved by alkali instead of lime. When this vat, which is much more easily managed than ihat of pastel, is in a proper state, it may be used for dyeing in the same manner as that described above.

153. M. Hellot describes two vats in which the indigo is dissolved by urine. Madder is added to it, and in the one vinegar, in the other alum arid tartar, of each a weight equal to that of the indigo. The quantity of urine ought to be considerable. The solution of indigo, de- prived of its oxygen by the urine and madder in fermentation, is due to the ammonia formed in the urine, either by the action of heat or fermen- tation. Hellot remarks, that an effervescence takes place on pouring in the solution of alum and tartar, which probably tends to stop the putrefaction. These vats are by no means com- parable with those of pastel, or indigo; much less work being despatched by them ; so that they are adapted only for small dye-houses.

154. Of Dyeing Silk Blue.— Silk is dyed blue with indigo alone, without any proportion of woad. The proportion of indigo mentioned in the prepa- ration of the indigo vat, and sometimes a larger, is Employed, with six pounds of bran, and about twelve ounces of madder. According to Macquer, half a pound of madder for each pound of potassa, renders the vat greener, and produces a more fixed color in the silk. When the vat is come to, it should be refreshed with two pounds of potassa, and three or four ounces of madder ; and, after being raked, in the course of four hours it is fit

for dyeing. The temperature should be so mode- rated that the hand may be held in it.

155. The silk, after being boiled with soap, in the proportion of thirty pounds of soap to 100 of silk, and well cleaned by repeated beetlings in a stream of water, must be dyed in small por- tions. When it has been turned once, or oftener, in the bath, it is wrung out and exposed to the- air, that the green color may change to a blue. When the change is complete, it is thrown into clear water, and afterwards wrung out. Silk dyed blue should be speedily dried. In damp weather, and in winter, it is necessary to conduct the drying in a chamber heated by a stove. The silk should be hung on a frame kept constantly in motion. To dye light shades, some employ vats that are nearly exhausted : but it ought to be observed, that the color thus obtained is less beautiful and less permanent than when fresh vats, containing a smaller quantity of indigo, are employed.

156. Some addition is required to be made to the indigo, to give silk a deep blue. A previous preparation is necessary, by giving it another color or ground. For the Turkey blue, which is the deepest, a strong bath of archil is first pre- pared. Cochineal is also sometimes used, in- stead of archil, for

the ground, to render the color more permanent. A blue is given to silk by means of verdigris and logwood, but possesses little durability. It might be rendered more permanent, by giving it a lighter shade in this bath, then dipping it in a bath of archil, and, lastly, in the indigo vat.

157. When raw silk is to be dyed blue, such as is naturally white should be selected. Being previously soaked in water, it is put into the bath in separate hanks, as already directed for scoured silks ; and, as raw silk combines more readily with the coloring matter, the scoured silk, when it can be conveniently done, should be first put into the bath. If archil, or any of the other in- gredients, are required to give more intensity to the color, the mode of application is the same as that directed for scoured silk.

There are various other methods of conducting this part of dyeing, described by M. d'Apligny, Quatremere, Bergman, Scheffer, &c., which we omit as not being of material importance to the practical dyer.

158. Of Dyeing Cotton and Linen Blue. — In communicating the blue color to these substances, the principal ingredient employed is indigo ; but Prussian blue has been found to answer extremely well. According to Le Pileur d'Apligny, says M. Berthollet, the vat for dyeing cotton and linen is capable of holding about 120 gallons. The quantity of indigo employed is usually from six to eight pounds, finely ground, and boiled in a lee drawn off from double its weight of potassa, with a quantity of lime equal in weight to the indigo. During the boiling, which is to be con- tinued till the indigo is thoroughly penetrated with the lee, the solution must be constantly stirred, to prevent the indigo from being injured by adhering to the bottom of the vessel.

159. During this process, another quantity of quick-lime, equal to the indigo, is to be slaked. Twenty quarts of warm water are added, in which

is to be dissolved a quantity of sulphate of iron, equal to twice the weight of the lime. The so- lution being completed, it is poured into the vat, which is previously half filled with water. To this the solution of indigo is added, with that part of the lie which was not employed in the boiling. The vat must now be filled up nearly to the top. It must be raked twice or thrice every day till it is completely prepared, which is generally the case in forty-eight hours, and some- times sooner, as it depends on the temperature of the atmosphere. A small proportion of bran, madder, and woad, is recommended by some to be added to this vat.

160. The process which is followed at Rouen, and described by Quatremere, is more simple. The vats, which are constructed of a kind of flint, are coated within and without with fine cement, and are arranged in one or more parallel lines. Each vat contains four hogsheads of water. The indigo, to the amount of eighteen or twenty pounds, being macerated for a week in a caustic lie, strong enough to bear an egg, is ground in a mill ; three hogsheads and a half of water are put into the vat, and afterwards twenty pounds of lime. The lime being thoroughly slaked, the vat is raked, and thirty-six pounds of copperas are added ; and, when the solution is complete, the ground indigo is poured in through a sieve. It is raked seven or eight times the same day, and, after being left at rest for thirty-six hours, it is in a state fit for dyeing.

161 . In extensive manufactories, it is necessary to have vats set at different times. In conducting the process of dyeing, the stuffs are first dipped in the most exhausted vat, and then regularly proceeding from the weakest to the strongest, if they have not previously attained the desired shade. The stuffs should remain in the bath only about five or six minutes, for in that time they combine with all the coloring matter they can take up. After they have been dipped in a vat, it should not be used again till it has been raked, and stood at least twenty-four hours, un- less it has been lately set, when a shorter period is sufficient.

162. After the stuffs have been dipped three or four times in a vat, it becomes black, and no blue or copper-colored streaks are seen on the surface after raking it. It must then be renewed, by adding four pounds of copperas with two of quicklime, after which it must be raked twice. In this way a vat may be renewed three or four times ; but the additional quantity of ingredients must be diminished as the strength of the vat is exhausted.

163. A vat which is still more simple and more easily prepared, has been recommended by Bergman. The proportion of the ingredients which he has directed to be employed is the fol- lowing : — To three drachms of indigo reduced to powder, three drachms of copperas, and three of lime, add two pints of water. Let it be well raked, and in the course of a few hours it will be in a proper state for dyeing.

1 64 . Haussmann employs a still less proportion of indigo. For about 500 gallons of water he takes thirty-six pounds of quick-lime, slaked in about twenty-five gallons of water, with which

the indigo is to be mixed in the proportion of from ten to twenty pounds, well ground. He then dissolves thirty pounds of sulphate of iron in about fifteen gallons of water. The whole is left at rest for fifteen minutes ; the vat is then filled, and gently and constantly stirred. When a deeper shade is

wanted, and particularly when linen is to be dyed, the proportion of indigo should be greater ; but the shade depends very much on the time the stuffs remain in the vat, and the times it has been used. When the vat becomes turbid, the process of dyeing must be interrupted, till it has been again raked, and the supernatant liquor become transparent. If the effects of the lime fail, a new quantity must be added; and, if the iron cease to produce the ef- fect on the indigo, a new portion must be also added, observing to have a greater quantity of lime than is necessary to saturate the sulphuric acid.

165. When the indigo appears to be exhausted, fresh portions are to be added ; the vat is to be raked several times, and allowed to settle, after which it is again fit for use. In this way Mr. Haussmann says he preserved a vat for two years ; and had it not been for the accumula- tion of sediment, which prevented the stuffs from being immersed to a sufficient depth, it might have been continued in use for a much longer time. It is proper to add, that Mr. Haussmann found, that a pattern of cloth dipped in water acidulated with sulphuric acid, immediately after it was taken out of the bath, became of a much deeper blue than a similar pattern exposed to the air, or another dipped in river water.

166. A remarkably fine blue is produced from a solution of indigo in sulphuric acid, to which the name of Saxon blue is given, from the cir- cumstance of its having been discovered at Gros- senhayn in Saxony, by counsellor Barthi, about the year 1740.

167. The following, according to Berthollet, is the process of preparing this dye by Bergman.

He employed one part of indigo to eight parts of acid, keeping the mixture in a temperature of between 86° and 104° of Fahrenheit, and he reckoned that one part of indigo, thus dissolved, was sufficient to give a deep blue color to 260 times its weight of wool. Poerner used one part of indigo to four of sulphuric acid. To prepare the wool or cloth for this bath, it is first boiled with alum and tartar. The wool receives the finest as well as fullest color during the first im- mersion; but lighter, though duller shades, may be given to other portions by the same bath when partially exhausted. The deeper shades are most advantageously given by adding the solution ot indigo to the bath, in successive portions, and raising the stuffs on the winch previously to each addition.

OF DYEING RED.

168. Red colors are known by different names according to their degrees of intensity, as crimson, scarlet, &c., besides innumerable shades that fall

xinder no particular denomination. The sub- stances usually employed in dyeing red, are cochineal, madder, kermes, lac, carthamus, Bra- sil-wood, archil, and logwood. All the-e, \N it:i

other substances which give a red color, are de- nominated by Dr. Bancroft adjective colors, from their requiring the aid of mordants to give them permanence.

169. Of Dyeing Wool Red. — When woollen stuffs are to be dyed, they are first boiled for two or three hours with alum and tartar : they are then left to drain, slightly wrung out, put into a linen bag, and carried into a cool place, where they must remain for some days. The quantities and proportions of the alum and tartar are varied according to the object of the dyer, and the shade of color which is wanted. Some recommend five ounces of alum, and one ounce of tartar to each pound of wool. By increasing the propor- tion of tartar to a certain degree, a deep and per- manent cinnamon color is produced. This arises from the yellow tinge induced by the acid on the coloring particles of the madder. Others propose to diminish the proportion of tartar, and to use only a seventh part. In conducting the process of dyeing with madder, the bath should not be brought to a boiling heat, because, at that temperature, the fawn-colored particles would be dissolved, and a different shade obtained from that which is desired. When the water is at such a temperature as the hand can bear, Hellot re- commends the addition of half a pound of grape madder for every pound of wool to be dyed. It must then be well stirred before the wool is in- troduced, which must remain for an hour with- out boiling, excepting for a few minutes towards the end of the process, that the combination of the coloring particles with the stuff may be more certain. .

170. Madder reds are sometimes rosed, as it is called, with archil and Brasil wood. In this way they become more beautiful and velvety, but this brightness is not permanent. But madder reds, even when at best, are far inferior to those obtained from lac and cochineal, and even to that produced by kermes ; but, as the expense of the materials is comparatively small, they are employed for coarse stuffs.

171. Different authors recommend different proportions of maddtr. Poerner proposes to employ one-third of the weight of the wool, while Scheffer limits the quantity to one-fourth. Poer- ner added to the alum and tartar a quantity of solution of tin, equal in weight to the tartar, and, after two hours boiling, allowed the cloth to re- main in the bath, which had been left to cool for three or four days. He then dyed it in the usual •way, and obtained a fine red. On another occa- sion he prepared the cloth by the common boil- ing, and dyed it in a bath slightly heated, with a larger

proportion of madder, tartar, and solu- tion of tin. The cloth remained twenty-four hours in the bath, and, when it had become cold, he put it into another bath, made with madder only, where it remained for twenty-four hours. By this process he got a fine red, somewhat brighter than the common, but inclining a little to yellow. Scheflfer says that he obtained an orange red by boiling wool with a solution of tin, and one-fourth of alum, and then dyeing with one-fourth of madder. A cherry color, says Bergman, is ob- tained by using one part of a solution of tin, and two of madder, without previously boiling the

wool. By exposure to the air, this color becomes deeper. By boiling the wool for two hours with one-fourth of sulphate of iron, then washing it, and afterwards immersing it in cold water with one-fourth of madder, and boiling it again for an hour, the result is a coffee color. But if the wool has not been soaked, and if it be dyed with one part of sulphate of iron and two of madder, the color is a brown approaching to red.

172. When sulphate of copper is employed as the mordant, the madder dye yields a clear brown, inclining to yellow ; and a similar color may be produced by dyeing the wool simply soaked in hot water, with one part of sulphate of copper, and two of madder. But when this mordant and dye-stuff are used in equal propor- tions, the yellow is somewhat more obscure, inclining to green ; and in both these instances, exposure to the air does not produce a darker color. Berthollet says that he employed a solu- tion of tin in various ways, both in the prepara- tion and the application of the madder ; and, by the use of different solutions of tin, he found that, although the tint was a little brighter than what is obtained by the common process, it was always more inclined to yellow or fawn color.

173. Of Dyeing Silk lied.— The red color obtained from madder has not been found of suf- ficient brilliancy for dyeing silks ; M. De la Folic, however, has given the following process for employing it for this purpose : — Haifa pound of alum is to be dissolved in each quart of hot water, to which two ounces of potassa are to be added ; after the effervescence is over, and the liquor has begun to grow clear, the silk must be soaked in it for two hours; it is then to be washed and put into the madder bath. Silk dyed in this way, he says, becomes more beautiful by the applica- tion of the soap proof. Another process is de- scribed by Mr. Gulichie, of which the following is the substance. —

174. For every pound of silk he proposes a bath of four ounces of alum, and one ounce of solution of tin. When the liquor has become clear, it is decanted, and the silk carefully soaked in it for twelve hours, after which it is to be im- mersed in a bath with half a pound of madder softened by boiling, with an infusion of galls in white wine. The bath must be kept

moderately hot for an hour, and then made to boil for two minutes. The silk, being taken from the bath, is to be washed in a stream of water, and dried in the sun. The color thus produced is said to be very permanent ; and. if the galls are omitted, its brilliancy is improved.

175. The color obtained when Brasil-wood is used, is denominated false crimson, to distinguish it from that produced by cochineal, which is much more durable, and which is styled grain crim- son. This very beautiful color is obtained by the following process : — The silk, being well cleansed from the soap, is to be immersed in an alum bath of the full strength, and to remain for a night. It is then to be washed, and twice beetled at the river. • The bath is prepared by filling a long boiler two-thirds with water, to which are added, when it boils, from half an ounce to two ounces of powdered white galls for every pound of silk. When it has boiled for a few moments, from t vo

to three ounces of cochineal, also powdered and sifted, for every pound of silk, are put in, and afterwards one ounce of tartar to every pound of cochineal. When the tartar is dissolved, one ounce of solution of tin is added for every ounce of tartar. In the preparation of this solution of tin, the following proportions are recommended by Macquer. For every pound of nitric acid two ounces of sal ammoniac, six ounces of fine grain tin, and twelve ounces of water are em- ployed. When these ingredients are mixed toge- ther, the boiler is to be filled up with cold water, and the proportion of the bath, for every pound of silk, is about eight or ten quarts of water. In this the silk is immediately immersed, and turned on the winch till it appear to be of a uniform color. The fire is then increased, and the bath is kept boiling for two hours, observing to turn the silk occasionally. The fire is afterwards put out, and the silk put into the bath, where it is allowed to remain for a few hours longer. It is then taken out, washed at the river, twice beetled, wrung, and dried.

176. Carthamus, says M. Berthollet, is used for dyeing silk poppy, a bright orange red, cherry, rose color, and flesh color. The process differs according to the greater or less tendency to flame color that is wanted. The following is his ac- count of the preparation of the carthamus bath : The yellow matter of the carthamus having been first extracted, the cakes containing the red co- loring matter are broken down and put into a trough of fir-wood, where they are several times sprinkled with finely powdered soda in the pro- portion of six pounds of soda to every hundred pounds of carthamus. The whole is then put into a small trough lined with closely

woven cloth, and having a grated bottom ; this small trough is then placed over the larger one, and water is poured on the mixture till the larger trough is full. Fresh water is poured over the carthamus and suffered to run into another trough, and so on successively, adding a little fresh soda till all the red color is extracted. These liquors are then mixed, and lemon-juice is added to give a fine cherry color, which the liquor imparts to the silk that is dipped in it. Poppy -color, given in this way, requires that the silk be immersed in a second bath, and that the colors be brightened by turning the silk several times through a bath of hot water impregnated with lemon-juice. The lighter hues of red are given by the weaker solutions of carthamus, and the lightest shades require the addition of a little soap. In dyeing silk with cartharnus the silk, after being scoured, should, for poppy or fire color, receive a ground of an- notto. The carthamus bath should be prepared at the time of using, and the process of dyeing should be conducted as speedily as possible.

177. Those who have made the nearest ap- proach towards producing a scarlet on silk, says Berthollet, begin with dyeing the silk crimson. It is then dyed with carthamus, and after that dyed yellow in a cold bath. By this process a fine color is produced, but it is not permanent, as the dye of the carthamus is affected by the action of the Air. The following is the process given by Dr. Bancroft in his Philosophy of

Permanent Colors. ‘ In a solution of murio- sulphate of tin, diluted with five times its weight of water, the silk is to be soaked for two hours; and, after being taken out, it is to be wrung and partially dried. It is then to be dyed in a bath prepared with four parts of cochineal, and three of quercitron bark. In this way a color approach- ing to scarlet is obtained. To give the color more body, the immersion may be repeated both in the solution of tin and in the dyeing bath ; and the brightness of the scarlet is increased by means of the addition of carthamus. A lively rose-color is produced by omitting the quercitron bark, and dyeing the silk with cochineal only; and, by adding a large proportion of water to the co- chineal, a yellow shade is obtained, which changes -the cochineal to the compound scarlet color.’

178. Of Dyeing Cotton and Linen Red. — Madder is employed for dyeing linen and cotton red, and even for giving them several other co- lors, by means of different mixtures. It is the coloring drug most useful for this kind of dye- ing. It is proper therefore to show, in sufficient detail, the different methods by which this dye may be rendered more permanent, beautiful, and diversified in its effects. Linen takes the color of madder with more difficulty than cotton : but the processes which succeed best, with the one, are also preferable for the other.

179. Two species of madder red, on cotton, are distinguished ; the one

called simply mad- der red, the other, possessing far more lustre, is called Turkey-red, or Adrianople-red, be- cause it was for a long time obtained from the Levant.

Vogler tried the effect of a great number of the substances employed as mordants, or in the dyeing bath, and he found that those which pro- duced the best effect were glue, ox gall, and other animal matters, as sheep's dung. IMuriate of soda rendered the color faster, but more dull. Galling likewise procured a richer color. Other astringents, sumach and pomegranate rind, for instance, produced a similar effect. A little al kali added to the alum improves it. When the stuff has passed through the different preliminary operations, it must be dyed with the best mad- der that can be procured, in the proportion of three-quarters of a pound to each pound of stuff.

The temperature of the madder bath must be raised in a gradual manner, that may require about an hour to boil after the stuff has been im- mersed in it; and, when it has boiled a few minutes, the stuff is taken out, slightly rinsed, and dyed a second time in a second bath, with the same quantity of madder ; after the second dyeing, and subsequent rinsing and drying, the stuff is commonly steeped in a solution of white soap, made just milk-warm, in the proportion of two ounces of soap to one pound of stuff. The effect of this process is to remove all the uncom- bined coloring matter, and, as is supposed, to give a higher degree of brilliancy to what re- mains. This process is completed by rinsing and drying.

180. Of all the reds produced by the use of madder, the Adrianople or Turkey-red is by far

the most beautiful : it possesses a brilliancy which can be'communicated to cotton by none of the common processes of dyeing, and has, more- over, the property of more effectually resisting the action of the different re-agents, as alkalis, soap, alum, and acids. For many years the dyeing of this color was confined to the east, and came to us through our Levant trade only. In process of time the art found its way t'rom India to the western parts of Asia, and to Greece ; and from Greece to France, whence it was brought to this country by one of the French dyers, M. Papillon, who settled at Glasgow, where, for a considerable time, he carried on with great suc- cess the business of dyeing Turkey-red.

181. M. Papillon communicated his process to the commissioners and

trustees for manufac- tures in Scotland, to be by them published at the expiration of a certain term of years. For this he received a handsome premium ; and the process was made public in the year 1803.

We need hardly mention the celebrity of the manufactory of Messrs. Monteith and Co. of Glasgow, since it is known to the world at large. The excellency and beauty of their cotton fa- brics will not soon be surpassed ; the madder- reds which they dye rival, in brilliancy and in solidity, any ever produced at Adrianople ; and the white figures, distributed over the cloth by the discharging process, surpass in purity, ele- gance, and precision of outline, the original Ban- dana outlines.

182. The art of dyeing Turkey-red has been described by different writers, who vary a little from each other in some particulars, but who agree in the leading features of the process. We prefer inserting here the account of it as given by Dr. Bancroft, as it affords us an opportunity of following it up by the insertion of some of his truly valuable remarks upon the subject in reference to the process observed at Rouen in France.

The process is very tedious, and is divided by the dyers into nine different steps.

Step 1. Cleaning. For 100 pounds of cotton take an equal weight of Alicant barilla, twenty pounds of pearl-ashes, and 100 pounds of quick- lime. The barilla must be mixed with soft water in a deep tub, which has a small hole near the bottom of it, stopped at first with a peg. — This hole is covered in the inside with a cloth supported by two bricks, that the ashes may be prevented from passing through it or stopping it up while the lie filters through it.

Under this tub is another to receive the lie ; and pure water is repeatedly passed through the first tub to form lies of different strength, which are kept separate at first until their strength is examined. The strongest required for use must swim an egg, and is called the lie of six degrees of the French hydrometer, or peseliqueur. The weaker are afterwards brought to this strength, by passing them through fresh barilla. But a certain quantity of the weak, which is of 2° of the above hydrometer, is reserved for dissolving the oil and gum, and the salt, which are used in subsequent parts of the process. This lie of 2° is called the weak barilla liquor, the other is called the strong.

Dissolve the pearl-ashes in ten pails, of four gallons each, of soft water, and the lime in four- teen pails.

Let all the liquors stand till they become quite clear, and then mix ten pails

of each.

Boil the cotton in the mixture five hours, then wash it in running water and dry it.

Step 2. Take a sufficient quantity, say ten pails (of four gallon's each), of the strong barilla water in a tub, and dissolve or dilute in it two pails full of sheep's dung ; then pour into it two quart bottles of oil of vitriol, and one pound of gum arabic, and one pound of sal ammoniac, both previously dissolved in a sufficient quantity of the weak barilla water, and lastly, twenty-five pounds of olive oil, which has been previously dissolved or well mixed with two pails of the weak barilla water.

The materials of this steep being well mixed, tramp or tread down the cotton into it, until it is well soaked; let it steep twenty-four hours, and then wring it hard and dry it.

Steep it again twenty-four hours, and again wring and dry it.

Steep it a third time twenty-four hours, after which wring and dry it, and lastly wash it well and dry it.

Step 3. This part of the process is precisely the same with the last, except that the sheep's dung is omitted in the composition of the steep.

Step 4. Boil twenty-five pounds of galls, bruised, in ten pails of river water, until four or five are boiled away ; strain the liquor into a tub, and pour cold water on the galls in the strainer, to wash out of them all their tincture.

As soon as the liquor is become milk-warm, dip your cotton hank by hank, handling it care- fully all the time, and let it steep twenty-four hours.

Then wring it carefull) and, equally, and dry it well without washing.

Step 5. Dissolve twenty-five pounds of Ro- man alum in fourteen pails of warm water, with- out making it boil; skim the liquor well, and add two pails of strong barilla water, and then let it cool until it be lukewarm.

Dip the cotton, and handle it hank by hank, and let it steep twenty-four hours, and wring it equally and dry it well without washing.

Step 6. Is performed in every particular like the last; but after the cotton is dry, you steep it six hours in the river, and wash and dry it.

Step 7. The cotton is dyed by about ten pounds at once, for which take two

gallons and a half of ox blood, and mix it in the copper with twenty-eight pails of milk-warm water, and stir it well ; then add twenty five pounds of madder, and stir all well together. Then, having before- hand put the teu pounds of cotton on sticks, dip it into the liquor, and move and turn it constantly one hour, during which you gradually increase the heat, until the liquor begin to boil at the end of the hour. Then sink the cotton, and boil it gently one hour longer ; and, lastly, wash it and dry it.

Take out so much of the boiling liquor, that what remains may produce a milk-warm heat with the fresh water with which the copper is ag;un filled up, and then proceed to make up a

dyeing liquor as above, for the next ten pounds of cotton.

Step 8. Mix equal parts of the gray steep liquor, and of the white steep liquor, taking five or six pails of each. Tread down the cotton into this mixture, and let it steep six hours, then wring it moderately and ecually, and dry it without washing.

Step 9. Ten pounds of white soap must be dissolved most carefully and most completely in sixteen or eighteen pails of warm water ; if any little bits of the soap remain undissolved they will make spots in the cotton. Add four pails of strong barilla water, and stir it well. Sink your cotton in this liquor, keeping it down with cross sticks, and cover it up and boil it gently two hours, then wash and dry it, and it is finished.

Such is the process of M. Papillon, on which Dr. Bancroft makes the following observations.

Step 1. At Rouen two courses of operations are practised to produce the Turkey-red. One is called the gray course, and the other the yellow course. In the former, the cotton, after being alumed, receives no more oil, but goes to the dyeing vessel, retaining the gray color, which naturally results from its being impregnated with alum and galls in combination. But, in the yellow course, the cotton, after being alumed, is again immersed in the oleaginous mixtures or steeps, by which it acquires a yellow color. The gray course may consist either of fifteen steeps or of nineteen, and the yellow of twenty. The first of these courses has most similitude to that of M. Papillon. At Rouen, the cleansing opera- tion is performed with a very weak lie of soda, of only one degree of thp areometer, employing 150 gallons to 100 pounds of cotton, which is to be boiled therein six hours, then drained, well rinsed in running water, and afterwards dried. This operation is intended to

free the cotton from all impure or extraneous matter ; but not to produce effects like those of bleaching by ex- posure upon the grass, which, until lately, it was believed, would lessen the durability of the colors to be subsequently dyed.

Step 2. The steep here described contains three ingredients not employed by any other person ; and one of these, the sulphuric acid, seems to indicate a want of chemical knowledge in M. Papillon, because, by neutralising the soda, it must obstruct the effect which the latter is in- tended to produce (that of rendering the oil miscible with water), or at least render a greater proportion of it necessary in order to obtain that effect. In regard to the other two ingredients, viz. the gum and sal ammoniac, the quantity of the former is by much too small to produce any considerable effect, and it is not easy to form any conjecture what purpose the latter is to answer. At Rouen, this steep is prepared by steeping twenty-five or thirty pounds of sheep's dung se- veral days in a lie of soda, marking four degrees, which is to be diluted until it amounts to forty gallons; and the dung being squeezed and broken by the hands, is afterwards made to pass through a copper pan, provided with numerous small holes, into a tub containing twelve pounds and a half of fat oil, and in this the oil and dung

are, by sufficient stirring, to be well mixed with the lie and with each other ; and, in the mixture, which contains but half the quantity of oil pre- scribed by M. Papillon, the cotton is to be steeped, &c., as directed by the latter. It is highly important that, after this and each of the succeeding operations, the cotton should be thoroughly and completely dried by a stove heat.

Step 3. At Rouen this steep is prepared by mixing thirty-eight gallons of lie of soda with ten pounds of olive oil, stirring until the mixture becomes uniformly milky ; which it will do without any separation of the oil, if the quality of the oil be suited to this use ; this they add to what may have been left of the former steep, and, after mixing them properly, they impreg- nate the cotton by the usual treatment, drying it, after an interval of twelve hours, first in the open air, and afterwards by a stove heat. This steep- ing and subsequent drying must be repeated once, twice, or three times, according to circum- stances.

Between this white steep and the following gall steep, it is the practice at Rouen to employ three salt steeps and one cleansing operation. In the first, twenty-four gallons of the lie of soda, marking two degrees and a half, are mixed in a tub with the remnant of the white steep ; and the cotton is impregnated and dried, as in the former operations. In the next the remnant of the last steep is mixed with twenty gallons of the lie of soda, marking three degrees ; and the cotton is steeped and dried as before. In the

third, the remnant of the preceding steep is mixed with twenty-four gallons of the lie of soda, marking three degrees and a half, and with this the cotton is impregnated and dried as before. The resi- duum of this steep is preserved to be used in the brightening operation.

In the cleansing operation, the cotton is steeped one hour in lukewarm water, then wrung by hand, and afterwards washed in a stream of water to remove any superfluous oil which might obstruct the equal application and uniform effect of the following gall-steep, and thereby render the color unequal. After being so washed, the cotton is dried first in the open air, and afterwards by a stove-heat.

Step 4. This constitutes the eighth operation in the gray course at Rouen, where, as well as in M. Papillon 's process, galls, in sorts, seem now to be employed. At Rouen, the cotton, as soon as it has sufficiently imbibed the soluble matter of the galls, and been very moderately wrung, is spread as expeditiously as possible in the open air, if the weather be dry, or, if not, under cover ; but the drying is always finished by a stove heat.

" Step 5. At Rouen, thirty or thirty-five pounds of the purest alum are commonly employed for this steep, with only seven pails of hot-water, adding, when the alum has been dissolved, two gallons only of the lie of soda, marking four de- grees. But when these proportions are em- ployed, the cotton is not subjected to a second steep with alum. Sometimes, however, at Rouen, two steeps with the aluminous mordants are em- ployed ; and in that case twenty pounds of alum are dissolved for the first, and fifteen for the se-

cond, leaving an interval of two days between them, during which the cotton should retain its moisture after being slightly wrung from the first steep. It should, however, be well dried before it goes into the second.

Step 6. At Rouen, the cotton is dyed in par- cels of twenty-five pounds each, and the dyeing vessel is of a quadrangular form, containing about 100 gallons of liquor. One quart of ox-blood is employed for each pound of cotton, with two pounds of Piovence madder, or one pound of this with one of Smyrna madder. Some persons, however, think it best to effect the dyeing by two separate operations, employing half the above proportion of madder for one dyeing, and half for the other; but always taking care not to dry ihe cotton between the dyeings. There are some at Rouen who give cotton another alum steep between these dyeing operations, employing for

that purpose half as much alum as was used for the first steep, and afterwards washing, &c.

Step 8. For this steep they employ at Rouen the residuum of the third salt-steep before men- tioned ; but the application of it is considered a part of the following step.

Step 9. This constitutes the fourteenth opera- tion in the first set of gray courses at Rouen ; where, after having macerated the cotton with the sikiou, they boil it for the space of five or six hours with six or eight pounds of white soap, previously dissolved in 145 gallons of water, in a vessel covered at the top, so as to leave only a very small opening for the neces- sary escape of the steam, which might otherwise occasion an explosion. The effect of this boiling with soap, is to dissolve and separate from the cotton all the yellowish-brown matter of the madder color which may have been applied to it in the dyeing operation, and thus to change the color from the dull brownish- red which it would otherwise retain, to a bright lively color, nearly equal to that of the finest cochineal scarlet, ft is only by the singular degree of fixity which the pure red part of the madder color acquires, in consequence of the operations just described, that this beautiful red can be obtained. Such, indeed, is the stability of the Turkey-red when well dyed, that it is said to sustain boiling with soap for thirty-six hours without injury.

In addition to the steps prescribed by M. Papillon, they employ another at Rouen, which is intended to make the red incline more to the rose color, and at the same time increase its vi- vacity. For this operation, with the former quantity of 100 pounds of cotton they dissolve, in 145 gallons of water, sixteen or eighteen pounds of white soap, and as soon as the liquor begins to boil, they add to it from one pound and a half to two poundr of the crystallised mu- riate of tin, previously dissolved in two quarts of water, and mixed with eight ounces of single aqua-fortis ; and having equally dispersed this mixture through the boiling solution of soap, by stirring, &c., the cotton is put in and boiled with the same precautions as in the brightening opera- tion, till the desired effect has been obtained, which is to be discovered by frequent examina- tions. Care must be taken not to employ more nitric acid or aqua-fortis than the quantity here

mentioned, lest it should decompose the soap, and cause the oil to separate and rise to the sur- face of the liquor.

1 83. We cannot leave this truly important branch of dyeing; without noticing the ingenious remarks of Mr. Thomson of Glasgow, published in ihfe eighth volume of the Annals of Philosophy, on the theory of the Turkey-red process.

He observes that silk and worsted have a natural varnish which cotton does not possess. To supply this defect, the repeated immersions, followed by exposure to the atmosphere, and to the heated air of a stove, may give the oil the proper consistency, by the absorption of oxygen, for forming a varnish, with which the coloring matter unites, and through which it may be said to shine, which causes that superior brilliancy which the goods attain when they are cleared, or, as it may be called, polished. I therefore pre- sume, that the fixedness and brilliancy of the color will depend on the quantity of oil imbibed, as every repetition of drying presents new fibres to be varnished with an additional quantity ; for I have always found, that the permanency was in proportion to the number of manipulations in the saponaceous liquor, and a proportionable free- dom could also be used in reducing or clearing. The white immersions, omitting the sheep's dung, are just applying successive coats of varnish. Clearing is never attempted from the madder copper, without immersing the goods again in soda and oil, and drying them in a stove, which I consider to be also supplying them with an additional coat.

The alkaline lie occasions a greater separation in the particles of the oil, by which it combines more closely with the fabric of the cloth. The sheep's dung in the first immersions may serve as a covering, to keep the goods moist for a con- siderable time, that they may more fully imbibe the Hquor, by preventing the evaporation from being too quick in the great heat to which they are exposed.

After the frequent immersions the cloth feels like leather, no doubt from a superfluity of liquor. It is then steeped in a lie of carbonate of soda, and afterwards well washed and dried, as a pre- paration for the galling and aluming. The astringent principle has been long known for darkening and fixing common red colors on cotton, by uniting with the earth of alum, and strengthening the basis. To the use of blood in the madder copper I attribute nothing; as in the rancid and putrid state in which I have seen it used, were it not for the prejudice of the opera- tor, it might be safely dispensed with.

In proof of the above idea, that it is only the oil uniting with the earth of alum that is of use, 1 may refer to the mode of dyeing that color in the east, quoted by Dr. Bancroft, viz. soaking their cotton in oil (no matter of what descrip- tion), during the night, and exposing it to the sun and air during the day, for seven successive days, rinsing it only in running water, and then immersing it in a decoction of galls and the leaves of sumach previous to aluming.

I would therefore request the practical dyer, who wishes to arrive at a knowledge of this un- accountable orocess, to give up the idea of ani-

malisation, if by it be meant impregnating the cloth with au animal matter, and by the power of the microscope, or any better method, look for the whole truth from some other source than chemical analysis. I am at present inclined to Iwlieve that it is a mechanical operation united to a chemical, and that the frequent immersions in the imperfect soap are equivalent to laying on the first, second, third, &c., coats, preparatory to finishing a fine painting in oil. A very eminent calico manufacturer, whom I consulted on the Turkey-red process, assured me that the only essential mordants are oil and alumina ; and that bright and fast reds, equal to any produced by the usual complicated process with sheep's dung, galls, and blood, may be obtained without these articles.

OF DYEING SCARLET.

184. Scarlet may be regarded as one of the compound colors arising from a mixture of the red and yellow coloring matters. Scarlet is the finest and most splendid of all the colors, and the great demand for it has excited several che- mists of distinction to improve and facilitate the process of producing it. We shall here briefly notice the old method of dyeing scarlet, which is still practised by some dyers, both in this country and on the continent, and then give the improved method proposed by Dr. Bancroft in his excellent treatise already mentioned.

185. We cannot, says M. Berthollet, expect to obtain the desired shade from the doses pre- scribed in the processes, from variations in the quantity of the coloring particles contained in the different kinds of fine cochineal, and par- ticularly from the solutions of tin that are used differing considerably from each other ; but the just proportions of the ingredients to be employed may be readily determined by trials in the small way, so as to obtain the shade called for ; and, if the pieces which are dyed be above or below this shade, it is net difficult to find the suitable pro- portions.

186. In the process of dyeing scarlet two operations are observed, viz. the boiling, and the reddening. The first or boiling operation is thus conducted : — For 100 pounds of cloth, a quantity of soft water is heated in a tinned boiler, till it be rather more than lukewarm, after which six pounds of cream-of-tartar are dissolved in it. When the water is a little warmer, half a pound of finely powdered cochineal is added and well mixed with the solution of tartar. Imme- diately after, five pounds of very clear solution of tin are poured in, and carefully mixed. When the bath begins to boil, the cloth is put in, and rapidly turned two or three times with the winch, then

more slowly, and is left to boil for two hours, after which it is taken out, drained, ex- posed to the'air,and washed in the running stream.

187. in preparing for the second bath the boiler must be emptied, filled again with fresh water, and, when this is near the boiling heat, five pounds and three quarters of powdered cochineal are put in and carefully mixed, and when, on ceasing to stir the liquor, a crust forms on the surface, and begins to break, thirteen or fourteen pounds of solution of tin are poured in.

Sometimes, after this, the liquor begins to ris above the brim of the boiler, which must be pre- vented by putting in some cold water. WThen the solution is well mixed in the bath, the cloth is immersed, taking care to turn the winch ra- pidly for the first two or three turns. It is then to be boiled for about an hour, pressing it down as often as it rises to the surface. After this it is taken out, exposed to the air to cool, washed in the stream, and dried.

188. On examining the proportions of cochi- neal and of solution of tin, used either in the boiling, or in the reddening, it appears that they are by no means fixed. There are some dyers, who, according to Hellot's account, succeed very well by putting two-thirds of the composition, and a fourth of the cochineal, into the boiling, aud the remaining third of the composition, with thf- remaining three-fourths of the cochineal, into the reddening. He also asserts that it does no harm to use tartar in the reddening, provided not more of it than half the weight of the cochineal be put in ; and he thinks, that it even renders the color more permanent. Some dyers do not take the cloth out of the boiling, but simply re- fresh it to make the reddening in the same bath, by pouring in an infusion of cochineal, which they have made apart, and with which they have mixed the proper quantity of composition. In this way they save time and fuel : and they affirm that the scarlet is equally fine.

189. Different authors recommend different proportion of thfe materials used in the boiling process. Scheffer prescribes one part of solution of tin for ten parts by weight of cloth, with an equal quantity of starch and of tartar as of so- lution. He remarks, that the starch tends to make the color more uniform, and he recom- mends to throw into the water, when it boils, T^g of cochineal; to agitate well; to let the wool boil in it for an hour, and then to wash it. He prescribes next, the boiling for half an hour in the bath, which serves for the reddening, with ^j of starch, j, of solution of tin, ^ of tartar, and -fa of cochineal.*

It appears, that Scheffer employs a much •mailer quantity of solution of tin than Ilellot ; but what he does employ contains much more tin.

190. Poerner describes three principal pro- cesses, according as the shade is to be more or less deep, or more or less of an orange hue, which he wishes to give to the scarlet. He varies the proportions of the solution of tin, of cochi- neal, and tartar, or omits the last ingredient.

For conducting the process of the scarlet dye in the most beneficial manner, and for varying its results, according to the end in view, the effect of each of the ingredients employed in it must be ascertained. We need not however proceed with a detail of processes which have been su- perseded by others that are from experience found to be much superior ; we shall therefore pass on to notice the important improvements in this branch of dyeing made by Dr. Bancroft, and which have obtained the approbation of the most eminent chemists, British and foreign.

191. Dr. Bancroft was struck with the thought that for a whole century no improvements had

been made in the art of dyeing scarlet. On this object he seems to have fixed his mind, and, about the year 1786, he instituted a set of experiments which were attended with the most gratifying- success.

192. Having, by frequent affusions of boiling water, extracted the whole of the coloring matter from powdered cochineal, he found that the ad- dition of a little potash to the sediment, and a fresh quantity of boiling water, extracted a new portion of coloring matter, equal to about one- eighth of what had been given out to the pure water. He repeatedly extracted this coloring matter by means of potassa, and afterwards dyed small pieces of cloth scarlet with it, which he found similar to others dyed with cochineal. It was in the course of these enquiries that he per- ceived scarlet to be a compound color, consisting of about three-fourths of pure crimson, and one- fourth of pure bright yellow. He conceived, therefore, that when the natural crimson of the cochineal is made scarlet, by the usual process, there must be a change produced, equivalent to a conversion of one-fourth of the coloring matter of cochineal from its natural crimson to a yellow color. From this he concluded that there might be a great saving of cochineal, by substituting a cheaper substance, which, at the same time, might yield a better yellow color. It was therefore his object to combine with this crimson or rose color, a suitable portion of a lively golden yellow, capable of being perma- nently fixed, and reflected by the same basis. This yellow Dr. Bancroft found in quercitron bark ; and ascertained that it possessed the advan- tage of being not only the cheapest, but the brightest

of all the yellows he had tried,

193. For the purpose of diminishing the quantity of cochineal employed in producing a scarlet dye, Dr. Bancroft made a number of experiments under the authority of government. In these experiments, the mordant used was the common dyers' spirit, or the nitro-muriate of tin, but he found that they were not attended with the advantages which he expected. In some of his earliest experiments, he remarks, that the solution of tin by means of sulphuric acid destroys the cochineal color, and this led him to reject the use of this acid, till accident brought him to dissolve a quantity of tin in muriatic acid, combined with one-fourth of sulphuric acid. The application of this solution in dyeing, was not accompanied with the corrosive effects of the muriate and nitro-muriate which he had employed in the experiments, and which proved^ unsuccessful. After trying different proportions of these acids, he found the following to answer best. In a mixture of two pounds of sulphuric acid of the ordinary strength, and about three pounds of muriatic acid, he dissolved about fourteen ounces of tin. The muriatic acid is first poured upon a quantity of granulated tin in a suitable vessel, and the sulphuric acid is added by degrees. This solution is more quickly effected by means of a sand heat ; it is perfectly colorless, and may be kept for years without precipitation. It has double the power of the common dyers' spirit ; and is produced at about one-third of the expense.

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It also raises the colors more than even the tar. trate of tin ; and does not incline the cochineal crimson to the yellow shade.

194. In using this solution as a mcidant, to produce the compound scarlet color, Dr. Ban- croft advises the following process. Nothing says he, is necessary, but to put the cloth, sup- pose 100 pounds, into a proper tin vessel, nearly rilled with water, in which has been mixed eight pounds of the murio-sulphuric solution of tin ; and, having brought the mixture to a boiling heat, about 100 pounds of cloth are immersed and turned through it as usual, by the winch, for a quarter of an hour. Then the cloth is removed, and four pounds of cochineal and two pounds and a half of quercitron-bark, both powdered, are introduced and well mixed. After this, the cloth is returned into the bath, the liquor is made to boil, and the cloth is turned as usual for fifteen or twenty minutes, by which time, in general, the color will be properly raised and the bath exhausted, when the cloth is taken out and rinsed in the ordinary way.

By this method the time, labor, and fuel, ne- cessary for filling and heating the boiler a second time are saved, the process finished much sooner than in the common way, and there is a saving of all the tartar, as well as of

two-thirds of the cost of spirit, or nitro-muriatic solution of tin, which, for dyeing 100 pounds of wool, com- monly amount to ten shillings, whereas eight pounds of the murio-sulphuric solution cost only about three shillings. There is, besides, a saving of at least one-fourth of the cochineal usually employed, and the color produced does not prove inferior in any respect to that dyed with much more expense and trouble in the ordinary way.

195. When a rose color is wanted, it may be readily obtained in this way, only omitting the quercitron bark, instead of the complex method of first producing a scarlet, and then changing it to a rose by the volatile alkali contained in stale urine, set free by potash or by lime ; and should any one still choose to continue 'the practice of dyeing scarlet without the quercitron bark, it is only necessary to employ the usual proportions of tartar and cochineal, with a suitable quantity of the murio-sulphate of tin, which, while it is cheaper, is much more effectual than the dyers' spirit.

196. The scarlet, produced from cochineal crimson and quercitron, is also attended with this advantage, that it may be dyed upon wool and woollen yarn, without any danger of its being changed to a crimson color by the' process of fulling, which always happens to scarlet dyed in the common way. Indeed, this last is no- thing but a crimsen or rose color, rendered yel- low by some particular action of the tartaric acid ; and is hence liable to be reduced to crim- son by many chemical agents, especially by soap, alkaline salts, salts of lime, &c. But where the coloring matter of cochineal is applied and fixed merely as a crimson or rose color, and is ren- dered scarlet by adding a very permanent yel- low, capable of resisting the strongest acids and alkalis, when used with solutions of tin, no such

change takes place, because the color given by cochineal, having never ceased to be crimson, cannot be rendered more so, and therefore can- not suffer by those impressions or applications which frequently change or spot scarlets dyed according to the ordinary practice. There is also a remarkable property attending the com- pound scarlet dyed with cochineal and querci- tron bark, viz. that if a piece of cloth dyed in this way be compared with another piece dyed by the usual process, both will by day-light ap- pear exactly of the same shade ; but, if they be afterwards compared together by candle-light, the former will appear at least several shades higher and fuller than the latter ; — a circumstance of some importance, when it is considered how much this and other gay colors are worn and ex- hibited by

candle-light, during a considerable part of the year.

197. To illustrate more clearly, continues Dr. Bancroft, the effects of the murio-sulphuric so- lution of tin with cochineal in dyeinsr, I shall state a very few of my numerous experiments therewith ; observing, however, that they were all several times repeated, and always with similar effects.

1st, I boiled 100 parts of woollen cloth in water, with eight parts of the murio-sulphuric solution of tin, during the space of ten or fifteen minutes; I then added to the same water four parts of cochineal, and two parts and a half of quercitron bark in powder, and boiled the cloth fifteen or twenty minutes longer; at the end of which time it had nearly imbibed all the color of the dyeing liquor, and received a very good, even, and bright scarlet. Similar ˆloth dyed of that color at the same time in the usual way, and with a fourth part more of cochineal, was found upon comparison to have somewhat less body than the former ; the effect of the quercitron bark in the first case having been more than equal to the additional portion of cochineal employed in the latter, and made yellow by the action of tartar.

2d, To see whether the tartrite of tin would, besides yellowing the cochineal crimson, con- tribute to raise and exalt its color more than the murio-sulphate of that metal, I boiled 100 parts of cloth with eight parts of the murio- sulphuric solution, and six parts of tartar, for the space of one hour; I then dyed the cloth, unrinsed, in clean water, with four parts of cochineal, and two parts and a half of quercitron bark, which produced a bright aurora color, be- cause a double portion of yellow had been here produced, first by the quercitron bark, and then by the action of tartar upon the cochineal color- ing matter. To bring back thii aurora to the scarlet color, 'by taking away or changing the yellow produced by the tartar, I divided the cloth whilst unrinsed into three equal parts, and boiled one of them a few minutes, in water slightly impregnated with potassa; another in water with a little ammoniac ; and the third in water containing a very little powdered chalk, by which all the pieces became scarlet; but the two last appeared somewhat brighter than the first, the ammoniac and chalk having each rosed the cochineal color rather more advantageously

than the potassa. The best of these, however, by comparison, did not seem preferable to the com- pound scarlet dyed without tartar, as in the pre- ceding experiment; consequently this did not seem to exalt the cochineal color more than the murio-sulphate of tin ; had it done so, the use of it in this way would have been easy, without relinquishing the advantages of the quercitron yellow.

3d, I boiled 100 parts of woollen cloth with eight parts of the murio-sulphuric solution of tin, for about ten minutes, when I added four parts of

cochineal in powder, which, by ten or fifteen minutes more of boiling, produced a fine crimson. This I divided into two equal parts, one of which I yellowed, or made scarlet by boiling it for fifteen minutes with a tenth of its weight of tartar in clean water; and the other, by boiling it with a fortieth part of its weight of quercitron bark, and the same weight of murio-sulphuric solution of tin; so that in this last case there was an addition of yellow coloring matter from the bark, whilst in the for- mer no such addition took place, the yellow ne- cessary for producing the scarlet having been wholly gained by a change and diminution of the cochineal crimson ; and the two pieces being compared with each other, that which had been rendered scarlet by an addition of quercitron yellow, was, as might have been expected, se- veral shades fuller than the other.

4th, I dyed 100 parts of woollen cloth scarlet, by boiling it first in water with eight parts of murio-sulphate of tin, and twelve parts of tartar, for ten minutes, and then adding five parts of cochineal, and continuing the boiling for fifteen minutes. This scarlet cloth I divided equally, and made one part crimson, by boiling it with a little ammoniac in clean water; after which I again rendered it scarlet, by boiling it in clean water, with a fortieth of its weight of quer- citron bark, and the same weight of murio-sul- phate of tin ; and this last, being compared with the other half to which no quercitron yellow had been applied, was found to possess much more color, as might have been expected. A piece of the cloth, which had been dyed scarlet by cochi- neal and quercitron bark, as in the first experi— ment, being at the same time boiled in the same water with ammoniac, did not become crimson, like that dyed scarlet without the bark.

In this way of compounding a scarlet from cochineal and quercitron bark, the dyer will at all times be able, with the utmost certainty, to produce every possible shade between the crim- son and yellow colors, by only increasing or di- minishing the proportion of bark. It has indeed been usual at times, when scarlets approaching nearly to the aurora color were in fashion, to superadd a fugitive yellow either from turmeric, or from what is called young fustic ; but this was only when the cochineal color had been pre- viously yellowed as much as possible by the use of tartar, as in the common way of dyeing scar- let ; and therefore that practice ought not to be confounded with my improvement, which has for its object to preclude the loss of any part of the cochineal crimson, by its conversion towards yel- low color, which may be so much more cheaply

obtained than the quercitron bark. By sufficient trials, I have satisfied

myself that the" cochineal colorSydyed with the murio-sulphuric solution of tin, are in every respect at least as durable as any which can be dyed with any other prepa- ration of that metal ; and they even seem to withstand the action of boiling soap lie some- what longer, and therefore I cannot avoid earn- estly recommending its use for dyeing rose and other cochineal colors, as well as for compound- ing a scarlet with the quercitron bark.

OF DYEINO CRIMSON.

198. The different processes employed for ob- taining the various shades of crimson, from the deepest to the lightest, may be reduced to two. Either the shade of crimson required is given to cloth previously dyed scarlet, or the cloth is at once dyed crimson. Alum, salts with earthy bases, and fixed and volatile alkalis, have the property of changing the color of scarlet to crim- son, which is the natural color of cochineal. Nothing more, therefore, is necessary, than to boil cloth dyed scarlet for about an hour in a solution of alum, proportioned in strength to the deepness of the color desired. But as other salts with earthy bases have the same property, and water contains more or less of these salts, whence it gives a proportionate rosy tinge to scarlet passed through it, particularly if it be worn, the quantity of alum necessary to obtain a crimson varies according to the nature of the water employed ; and, when well charged with these salts, it will answer the purpose of itself, without the addition of alum. If a piece of scarlet have any defects, it is most convenient to convert it into a crimson.

199. Hellot says, that he has tried soap, soda, potassa, and crude potassa ; that all these sub- stances produced the crimson desired, but sad- dened it, and gave it less lustre than alum. Am- monia, on the contrary, produced a very good effect; but, as it evaporates quickly, a consider- able quantity must be put into the bath a little more than warm, a little ammoniacal muriate, or sal ammoniac, and common potash. By this method the cloth instantly took a very bright rosy color. He thinks that it heightens the color so much as to render less cochineal neces- sary. But M. Poerner, who gives the same pro- cess, directs the scarlet to be left twenty-four hours in a cold solution of potassa and ammo- niacal muriate.

200. To dye crimson at once, a solution of two ounces and a half of alum, and one ounce and a half of tartar, to every pound of cloth, is used for the boiling : and the cloth is afterwards dyed with an ounce of cochin.eal. Solution of tin is commonly added, but in less proportion than for scarlet. The processes employed vary greatly, according as the shade required is deeper or lighter, or more or less distant from scarlet. Common salt is also used for the boiling by some dyers. For saddening crimsons, and giving them more bloom, archil and potassa are fre- quently used, but the bloom thus imparted is not permanent. Sometimes the boiling for crimson is made

after a scarlet reddening, by adding tartar and alum : and it is said, that the

wine soup color has more bloom, if both its boiling and reddening bo made after scarlet, than when it is dyed in a fresh bath. For these colors the wild cochineal may be used instead of the fine, but in greater quantity. The reddening which has been used for crimson may also be employed for purples, and other compound colors.

Both scarlets and crimsons in half-grain are made by substituting madder for half the quan- tity of the cochineal, giving the same boiling as for scarlet in grain, and following in other re- spects the processes for reddening the scarlet or crimson. Other proportions of madder may be used instead of half, according to the effect de- sired. The common madder red also acquires a greater lustre, when its boiling is mad" after a reddening for scarlet.

201. In silk the grain crimson, produced by cochineal, is distinguished from false crimson, which is obtained by Brasil-wood. Silks that are intended to be dyed crimson with cochineal, should not be boiled with more than twenty pounds of soap to 100 pounds of silk, as the slight yellow cast which silk has, when only so far scoured, is advantageous to the color. After the silk has been well cleansed from the soap, it is to be put into an alum liquor of the full strength. In this it is commonly left from the evening till the next morning ; it is then washed, and twice beetled at the river. In preparing the bath, an oblong boiler is filled with water, to about one- half or two-thirds; and, when the water boils, white galls powdered are thrown in, from half an ounce to two ounces for every pound of silk. After boiling a few moments, from two to three ounces of cochineal, powdered and sifted, for every pound of silk, according to the shade re- quired, are put in, adding afterwards an ounce of tartar, to every pound of cochineal ; and, when the tartar is dissolved, an equal quantity of the solution of tin. This solution ought to contain more tin than that used for scarlet, other- wise the colors will be too bright. Macquer directs this solution to be made with sixteen parts of nitric acid, two of ammoniacal muriate, as much fine grain tin, and twelve of water These in- gredients are mixed and the boiler is filled up with cold water. In this the silk is immediately dipped, and turned on the skein sticks till it ap- pears to be of a uniform color. The fire is then increased, and the bath made to boil for two hours, turning the silk from time to time. After this the fire is put out, and the silk put into the bath, where it is kept a few hours longer. The silk is afterwards washed at the river, twice beetled, wrung and dried. When crimsons are to be browned, they must be passed, after having been washed, through a solution of sulphate o. iron, more or less strong according to the shade required. If it should have a yellow tinge, the solution must be charged with a greater or

less proportion of decoction of fustet or Vemis's sumach. White galls should be chosen, because black ones would dull the color of the crimson ; and even too large a quantity of the white will produce the same effect. Macquer says, that the galls serve only to increase the weight of the silk : yet their general effect is to render colors

more permanent, and they are essentially ne- cessary for crimsons that are intended to he hrowned. Vinegar is employed as a test in dis- tinguishing grain crimsons from false: but it will not detect colors obtained from Brasil-wood, if they be fixed by means of solution of tin; for in this case they resist vinegar as well as those made with cochineal. A very small quantity of solution of tin is, therefore, put into the bath for dyeing siHc crimson. If the same process as that for dyeing wool scarlet were employed, the silk would lose its bloom, and acquire only a faint color. Mac-quer and Scheffer have, however, detailed processes which differ from it only in a few circumstances, for dyeing silk rose and poppy colors by solution of tin, used cold, Jhat its action on the silk might not be too powerful.

202. Brasil-wood is used for dyeing silk what is called false crimson, to distinguish it from that produced by cochineal, which is much more permanent. For this process the silk should be boiled with soap, in the proportion of twenty pounds of the latter to 100 pounds of the for- mer, and afterwards alumed. Less aluming is required for this than for grain crimson. Hav- ing washed it in running water, it is dipped in a bath, more or less charged with Brasil juice, according to the shade to be given. In the preparation of the bath hard water is preferable to soft, as it produces with the dye-stuffs a fuller crimson. Washing the silk in hard water will produce nearly the same effect. In order to make false crimson deeper, or dark red, a decoc- tion of logwood is added to the Brasil bath, after the silk has been impregnated with the latter. A little alkali may also be put in accord- ing to the shade required. But to imitate poppy or fire color, the silk must have an anotta ground, even deeper than when it is to be dyed with carthamus : after which it is washed, alumed, and dyed with the decoction of Brasil-wood, to which a small portion of soap is gene- rally added. We might here enumerate several other processes for imparting the crimson color, but the ahove, with what we have said respect- ing the dyeing of reds in general, and of scarlet in particular, render it unnecessary to enlarge.

OF DYEING YELLOW.

203. Of Dyeing Wool Yellow,— The yellow communicated to wool by weld has little perma- nency, if the wool be not previously prepared by some mordant. For this purpose alum and tartar are used, by means of which this plant gives a very pure and durable yellow. For the boiling, which is managed in the common way, Ilellot advises four ounces of alum to every pound of wool, and only one ounce of tartar; many dyers, however, use half as much tartar as alum. Tartar renders the color paler, but more lively. The weld is boiled in a fresh bath, enclosing it in a bag of thin linen, and keeping it from rising to the top by a heavy wooden cross. Some dyers boil it till it sinks to the bottom of the copper, and then let a cross down upon it : others, when it is boiled, take it out with a rake, and throw it away. From three to four pounds of weld, and,

»n some instances less, are allowed for ev

204. Both lighter and brighter shades may be obtained by dyeing after deeper ones, adding water at each dipping, and keeping the hath boiling: but light shades procured in this way are not so lively as when fresh baths are used, proportioning the quantity of weld to the depth of the shade intended to be procured. If com- mon salt be added to the weld bath, it renders its color richer and deeper : sulphate of lime, or gypsum, also deepens it: but alum renders it paler and more lively; and tartar, still paler. Sulphate of iron or vitriol makes it incline to brown.

205. According to Scheffer, by boiling the stuff for two hours with one-fourth of its weight of a solution of tin, and the same proportion of tartar, and then washing it and boiling it for about a quarter of an hour with an equal weight of weld, it will assume a fine yellow, which, however, will not penetrate the substance of cloth.

206. Poerner recommends a process similar to that used in dyeing scarlet, by which means the color is brighter and more permanent.

207. Since the introduction of the use of quercitron bark, the process of dyeing yellow has been much simplified, as may be seen from the following directions of Dr. Bancroft on the subject. He proposes that the bark should be boiled with about its own weight, or one-third more of alum, in a suitable quantity of water, for about ten minutes.

208. The substances to be dyed are previously scoured, and then immersed in the bath, ob- serving to give the higher colors first, and afterwards the paler straw colors. By this cheap and expeditious process, colors which are not wanted to be of a full or bright yellow, may be obtained. The color may be considerably heightened by passing the unrinsed stuff a few times through hot water, to which a little clean powdered chalk, in the proportion

of about a pound and a half for every 100 pounds of stuff has been previously added. The bark, when used in dyeing, being first reduced to powder, should be tied up iu a thin linen bag, and suspended in the liquor, so that it may be occasionally moved through it, to diffuse the coloring matter more equally.

209. But although this method possesses the advantages of cheapness and expedition, and is sufficient for communicating pale yellows ; to obtain fuller and more permanent colors, the common mode of preparation ought to be pre- ferred. The stuff should be boiled for about one hour, or an hour and a quarter, with one- sixth, or one-eighth of its weight of alum, dis- solved in a proper proportion of water. The stuff is then to be immersed, without being rinsed, into the dyeing bath, with clean hot water, and about the same quantity of powdered

bark tied up in a has:, as that of the alum em- ployed in the preparation. The stuff' is then to be turned as usual through the boiling liquor, cr.til the color appears to have acquired sufficient intensity. One pound of clean powdered chalk ibr every 1 00 pounds of stuff is then to be mixed with the dyeing bath, and the operation con- tinued for eight or ten minutes longer, for the purpose of raising and brightening the color.

210. To communicate a beautiful orange yel- low to woollen stuffs, ten pounds of quercitron bark, tied up in a bag, for every hundred pounds of stuff, are to be put into the bath with hot water. At the end of six or eight minutes, an equal weight of murio-snlphate of tin is to be added, and the mixture well stirred for two or three minutes. The cloth, previously scoured, and thoroughly wetted, is then immersed in the dyeing liquor, and quickly turned for a few minutes. By this process the coloring matter fixes on the cloth so effectually, that, after the liquor begins to boil, the highest yellow may be produced in less than fifteen minutes.

211. High shades of yellow, similar to those obtained from quercitron bark by the above process, are frequently given with young fustic and dyers' spirit; but this color is much less beautiful and permanent, while it is more expen- sive than what is obtained from the bark.

212. A fine bright, or golden yellow is ob- tained by employing ten pounds of quercitron bark, for each 100 pounds of cloth, the bark being first boiled a few minutes, and then add- ing seven or eight pounds of murio-sulphate of ti-i, with about five pounds of alum. The cloth is to be dyed in the same

manner as in the pro- cess for the orange-yellow. Bright yellows of less body are produced by employing a smaller proportion of bark, is well, as by diminishing the quantity of muno-sulphate of tin and alum. And indeed every variety of shade of pure bright yellow may be given by varying the pro- portions of the ingredients.

213. The lively delicate green shades, so much admired, are produced by the addition of tartar, with the other ingredients. The tartar must be added in different proportions, accord- ing to the shade which is wanted. For a full bright yellow, delicately inclining to green, it will be proper to employ eight pounds of bark, six of murio-sulphate of tin, with six of alum, and four of tartar. An additional proportion of alum and tartar renders the yellow more deli- cate, and inclines it more to the green shade; but when this lively green shade is wanted in the greatest perfection, the ingredients must be used in equal proportions. The delicate green lemon yellows are seldom required to have much ful- ness or body. Ten pounds of bark, with an equal quantity of the other ingredients, are sufficient to dye 300 or 400 pounds of stuffs.

214. Of Dyeing Silk Yellow. — Weld is seldom employed to give a yellow dye to silk, but when this is desired, the process differs a little from the former. The silk being scoured, alumed, and rinsed in the manner usual for dyeing bright colors, a bath is prepared, by boiling weld in water, in the proportion of double the weight of the silk for a quarter of an hour, and straining

off the liquor into a vat, where it is suffered fo cool till the hand can be held in it. Then tlie silk is dipped and turned, till the color is found uniform. While this is going on, the old weld is boiled with a fresh quantity 01″ water, and, after the silk has been dipped, one half of the exhausted bath is taken out, and the vat filled up with the second decoction. The temperature of the fresh bath may be a little higher than that of the former, but should not be too great, lest the color already fixed be dissolved. The stuff is to be turned as before, and then taken out of the bath. Some soda is to be dissolved in a part of the second decoction, and a larger or smaller quantity of the solution is to be added to the bath, according to the intensity of the shade wanted. The color is examined by taking out a skein, and wringing it.

215. To produce shades having more of a gold color, anotta is added in proportion to the depth of color required. Lighter shades, such as pale lemon color, are obtained by previously whitening the silk, and regulating the proportion of the ingredients of the bath by the shade required. To give a yellow, with a green tinge a little indigo is added to the bath, if the silk has not been previously azured; to prevent the greenish shade being too

deep, the silk should be more slightly alumed than usual.

216. Dr. Bancroft informs us that all the shades of yellow can be given at a cheaper rate by quercitron bark than by weld. To dye with this bark, a quantity of it powdered, and en- closed in a bag, in proportion to the shado wanted, from one to two pounds for every pound of silk, is put into the vat while the water is cold. Heat is applied, and when the bath is rather more than blood-warm, or of the tempe- rature 100°, the silk, after being first alumed, is immersed and dyed in the osual way. A deeper shade may be given by adding a small quantity of chalk or pearl-ashes towards the end of the operation. To produce a more lively yellow, a small portion of murio- sulphate of tin may be- employed, but it should be used cautiously, as it is apt to diminish the lustre of the silk.

217. To dye silk of an aurora or orange color, after having been properly scoured, it may be immersed in an alkaline solution of anotta, the strength of which is to be regulated by the shade required. The temperature of the bath should be between that of tepid and boiling water. When the desired shade is obtained, the silk is to be twice washed and beetled, to free it from the superfluous coloring matter, which would injure the beauty of the color. When raw silk is to be dyed, that which is naturally whit should be selected, and the bath should be nearly cold; for otherwise the alkali, by dissolving the gum of the silk, destroys its elasticity. Silk is dyed of an orange color by anotta, but if a red- der shade be wanted, it is procured by alum, vinegar, or lemon juice. These colors are beau- tiful, but do not possess permanency.*

218. Of Dyeing Cotton and Linen Yellow. — The processcommonly observed in dyeing cotton and linen yellow, is by scouring it in a bath prepared in a lie with the ashes of green wood. It is afterwards washed, dried, and alumed, with

one-fourth of its weight of alum. After remain- ing in twenty-four hours, it is taken out of the aluming and dried, but not washed. The cotton is then dyed in a weld bath, in the proportion of one pound and a quarter of weld for each pound of cotton, and turned in the bath till it has acquired the desired color.

219. After being taken out of the bath, it is soaked for an hour and a half in a solution of sulphate of copper, in the proportion of one- fourth of the weight if the cotton, and then im- mersed, without washing, for nearly an

hour, in a boiling solution of white soap, after which it is well washed and dried.

220. A deeper yellow is communicated to cot- ton, by omitting the process of aluming, and em- ploying two pounds and a half of weld for each pound of cotton. To this is added a dram of verdigris, mixed with part of the bath. The cot- ton is then to be dipped and worked till the color become uniform. It is then taken out of the bath, and a little solution of soda added, after which it is returned, and kept for fifteen minutes. It is then wrung out and dried.

221. Other shades of yellow may be obtained by varying the proportion of ingredients. Thus, a lemon color is dyed by using only one pound of weld for every pound of cotton, and by di- minishing the proportion of verdigris, or using alum as a substitute.

222. Dr. Bancroft recommends a superior pro- cess, and less expensive. He also objects to the use of salts of copper, as deepening the yellow. One pound of acetate of lead, and three pounds of alum, are to be dissolved in a sufficient quan- tity of warm water. The cotton or linen, after being properly rinsed, is to be soaked in this mixture, heated to the temperature of 100°, for two hours. It is then taken out, moderately pressed over a vessel, to prevent the waste of the aluminous liquor. It is then dried in a stove heat, and, after being again soaked in the alumi- nous solution, it is wrung out and dried a second time. Without being rinsed, it is to be barely wetted with lime water, and afterwards dried ; and if a full, bright, and durable yellow is wanted, it may be necessary to soak the stuff in the diluted aluminous mordant, and, after drying, to wet it a second time in the lime water. After it has been soaked for the last time, it should be well rinsed in clean water, to separate the loose particles of the mordant, which might injure the application of the coloring matter. By the use of the lime-water, a greater proportion of alumina combines with the stuff, besides the addition of a certain proportion of lime.

223. In the preparation of the dyeing bath, from twelve to eighteen pounds of powdered quercitron bark are enclosed in a bag, for every 100 pounds of stuff, varying the proportion ac- cording to the depth of shade required. The bark is put into the water while it is cold ; and, immediately after, the stuff is immersed and turned for an hour, or an hour and a half, during which the water should be gradually heated, and the temperature raised to about 120.° At the end of this time the heat is increased, and the dyeing liquor brought to a boiling temperature ; but at this temperature the stuff must remain in

it only for a few minutes. It is then taken o i', rinsed, and dried.

224. Dr. Bancroft remarks, that, when the alu- minous mordant is employed without the ad- dition of water, one soaking only, and an immersion in lime water, may be sufficient ; but he is of opinion that greater advantage is derived from the application of a more diluted mordant at two different times, or even by a more fre- quent immersion of the stuff alternately in the aluminous mordant, and lime water, and drying it after each immersion. By this treatment he found that the color always acquired more body and durability.

225. Chaptal proposes a process for communi- cating to cotton a nankeen yellow, which, while it affords a durable color, has the advantage of being cheap and simple. When cotton is im- mersed in a solution of any salt of iron, it has so strong an affinity for the oxide, that it decom- poses the salt, combines with the iron, and as- sumes a yellow color. The process recommended by Chaptal is this: — The cotton to be dyed is put into a cold solution of sulphate of iron, of the specific gravity of 1-02. It is afterwards wrung out, and immediately immersed in a lie-of potassa of the specific gravity of I'Ol. This lie must previously have been saturated with a solution of alum. When the stuff has been kept for four or five hours in this bath, it may be taken out, washed, and dried. By varying the proportion of sulphate of iron, every variety of shade may be obtained.

226. The following curious process for dyeing linen of a durable yellow, as practised in the east, is given in the Encyclopaedia Britannica The object of this process, which is tedious, is to increase the affinity between the alumina and the stuff, so that it may adhere with sufficient force to produce a permanent color. For this purpose three mordants are employed : these are oil, tan, and alum. The cotton is soaked in a bath of oil, mixed with a weak solution of soda. Animal oil, as it is found to answer best, is preferred. Glue has also been tried, and is found to answer very well. The soda must be in the caustic state, as it then combines with the oil, and produces on the cloth an equal absorption. The stuff is then to be washed, and afterwards put into an infusion of nut-galls of the white kind ; the infusion should be used hot. The tan combines with the oil, while the gallic acid carries off any alkali which may adhere to the cloth. When the stuff is re- moved from the bath, it should be quickly dried; too great an excess of galls beyond a proper pro- portion with the oil should be avoided, as it is apt to darken the color. After this preparation the stuff is to be immersed in a solution of alum ; and, in consequence of the affinity which exists between tan and alumina, the alum is decora- posed, and its earth combines with the tan

OF DYEING BROWN.

227. The substances employed in dyeing browns are very numerous, but

those chiefly used are sumach, walnut-peels, and walnut-roots.

On separating the bark from the ligneous sub- stance of the walnut-root, says Bcrthollet, in re- lating some experiments on the subject, the former

yielded in equal weight a liquor much more charged with color. The bark of the wood of walnut also exhibited properties approaching to those of walnut-peels, but its decoction formed a blackish precipitate with sulphate of iron.

Walnut-peels exercise a lively action OTI oxide of iron, dissolving it, and forming a liquor as black as ink. If boiled along with clean filings they do not attack them ; but, if left exposed to the air, the liquor becomes soon black.

The coloring matter of walnut-peels has a great disposition to combine with wool. It gives it a very durable walnut or dun color, and mordants appear to add little to its permanence, but they may vary its shades, and give them more lustre. By preparing the stuff with alum, a richer and livelier color may be obtained.

Walnut-peels are of excellent use, because they give agreeable and very durable shades, and, being employed without any mordant, they pre- serve the softness of the wool, and require but one simple, and not expensive, operation, Wal- nut-peels are gathered when the nuts are entirely ripe. Large casks or tubs are filled with them, and a sufficiency of water is poured on them to cover their surface. In this state they may be kept a year and upwards. At the Gobelins, where a very extensive and varied use is made of this ingredient, it is kept for two years before it is employed. It is found then to furnish much more color. It has a very unpleasant putrid odor.

The peels may also be used which are taken from the nuts before they are ripe ; but they do not keep so long.

228. The following are the results of M. Ber- thol let's experiments on sumach (rhus coriaria) : —

The infusion of sumach is of a dun color, bor- dering on green. It speedily becomes green in the air. When it is recent, the solution of potassa produces little change on it. The acids clear up its color, and render it yellow. Solution of alum makes it turbid, producing a scanty yellow pre-

cipitate, while the liquor remains yellow.

Acetate of lead forms instantly an abundant yellowish precipitate, which takes a brown color on its surface; the liquor remains of a clear yellow.

Sulphate of copper affords a copious yellowish- green precipitate, which, after some hours, changes to a brown-green. The liquor remained clear, and a little yellow.

Sulphate of zinc of commerce rendered the liquor turbid, blackening it, and forming a deep blue precipitate.

Pure sulphate of zinc deepened the color much less ; only a slight dun deposite, verging on brown, took place.

Muriate of soda produced no sensible change at first; but, after some hours, the liquor was a little turbid, and its color had become somewhat clearer.

Sumach acts like nut-galls on solution of silver, whose metal it reduces ; a result promoted by the action of light. We have already dwelt at suf- ficient length on the explanation of this phenome- non, as well as the general properties of astrin- gents. Sumach affords of itself a fawn-color bordering on green ; but it communicates to cot-

tou stuffs several very permanent colors, when they are combined with mordants. •

229. Sanders, or sandal-wood, is also employed for the purpose of giving a fawn-color. There are three kinds of this wood, the white, the yellow, and the red. The last only, which is a compact heavy wood, brought from the Coromandel coast, is used in dyeing. By exposure to the air it be- comes of a brown color; when employed in dye- ing, it is reduced to fine powder, and it yields ;i fawn-color with a brownish shade,, inclining to red.

The quantity of coloring matter, however, which it yields of itself is small, and it is said that it gives harshness to woollen stuffs. When it is mixed with other substances, as sumach, walnut-peels, or galls, the quantity of coloring- matter is increased; it gives a more durable color, and produces considerable modifications in the coloring matter with which it is mixed. Sandal-wood yields its coloring matter to brandy, or diluted alcohol, more readily than to water.

230. Soot communicates to woollen stuff's ;i fawn or brown color, of a lighter or deeper shade, in proportion to the quantity employed ; but the color is fading, and its affinity for wool is not great; and, besides leaving a disagreeable smell, it renders the fibres harsh. In some ma- nufactories, it is

employed for browning certain colors, and it produces shades which could not otherwise be readily obtained.

231. In dyeing with walnut-peels, a quantity proportioned to the quantity of stuff, and the intensity of shade wanted, is boiled for fifteen minutes in a copper. All that is necessary in dyeing with this substance is, to moisten the cloth or yarn with warm water, previously to their immersion in the copper, in which they are to be carefully stirred till they have acquired the proper shade. This is the process, if the aluminous mordant be not employed. In dyeing cloth, it is usual to give the deepest shades first, and the lighter ones afterwards ; but, in dyeing woollen yarn, the light shades are given first, and the deeper ones afterwards. A fresh quantity of peels is added each time.

232. Berthollet rrtade a number of experi- ments to ascertain the difference of color ob- tained from the simple decoction of walnut- peels, and the addition of metallic oxides as mordants. The oxide of tin, he informs us, yielded a clearer and brighter fawn-color than that of the simple decoction. The oxide of zinc produced a still clearer color, inclining to ash or gray. The color from oxide of lead had an orange cast, while that from oxide of iron was of a greenish brown.

233. A fawn-color, which has a shade of green, is obtained from sumach alone; but to cotton stuffs, which have been impregnated with printers' mordant, or acetate of alumina, sumach communicates a good and durable yellow.

234. Vogler employed the tincture of sanders- wood for dyeing patterns of wool, silk, cotton, and linen, having previously impregnated them with a solution of tin, and afterwards washing and drying them. Sometimes he used the solu- tion unmixed, and at other times added six or ten parts of water, and in whatever way he em-

ployed it, he obtained a poppy color. When the mordant employed was solution of alum, the

238. The process of welding is conducted in the same manner as for yellow ; but a larger

color was a rich scarlet ; with sulphate of copper quantity of weld is employed, except for the it was a clear crimson, and with sulphate of iron lighter shades, which, on the contrary, require a

still smaller proportion. For the most part, a suc- cession of shades from the deepest to the lightest is dyed at the same time, beginning with the 235. On this branch of dyeing, M. Berthollet deepest and proceeding to the lightest ; between »emarks, that simple colors form, by their mix- each dip, which lasts half an hour, or three quar- ture, compound colors ; and if the effects of the ters, water is added to the bath. Some dyers

a beautiful deep violet.

OF DYEING COMPOUND COLORS.

coloring particles did not vary, according to the combinations which they form, and the actions

give each parcel two dips, beginning the first time with the deep shades, and the second with

exercised on them by the different substances the light ones ; in that case, each parcel should present in a dyeing bath, we might determine remain a shorter time in the bath: for the very light with precision the shade that ought to result shades, care should be taken that the bath does

from the mixture of two other colors, or of the ingredients which afford these colors separately : but the chemical action of the mordants, and of the liquor of the dye bath, often changes the results ; theory, however, may always predict these effects to a certain degree.

It is not the color peculiar to the coloring matters which is to be considered as the consti- tuent part of compound colors, but that which they must assume with a certain mordant, and in a certain dye bath. Hence, our attention ought to be principally fixed on the effects of the che- mical agents employed.

It 13 in this department of dyeing that the in- telligence of the operator may be most useful, by enabling him to vary his processes, and to

not boil. A browning with logwood and a little sulphate of iron is given to the very deep greens.

The green obtained by means of the solution of indigo in sulphuric acid, is denominated Saxon green, from its having been first practised in Saxony. We shall here give the process di- rected by Dr. Bancroft for this color.

239. The most beautiful Saxon greens may be produced very cheaply and expeditiously, by combining the lively yellow which results from quercitron bark, murio-sulphate of tin, and alum, with the blue afforded by indigo

dissolved in sulphuric acid, as for dyeing the Saxon blue.

To produce this combination most advan- tageously, the dyer, for a full-bodied green, should put into the vessel after the rate of six or

arrive at the proposed end by the simplest, eight pounds of powdered bark in a bag, for

shortest, and least expensive way.

The processes for compound colors are very

every hundred pounds of cloth, with only a small proportion of water as soon as it begins to grow

numerous. We shall mention only those which warm ; and when it begins to boil, he should

most merit attention, and shall establish the principles on which they ought to be conducted by particular examples.

236. Of Dyeing Wool Green. — Green isobtain-

add about six pounds of murio-sulphate of tin, with the usual precautions, and a few minutes after about four pounds of alum. These having boiled together five or six minutes, cold water

ed by the mixture of yellow and blue ; and it is should be added, so as to bring the hea of the*

distinguished into many different shades ; but it liquor down to what the hand is able to bear,

requires experience to obtain this color uniform Immediately after this, as much sulphate of indi-

and without spots, especially in the light shades, go is to be added, as will suffice to produce the

It is possible to produce green by beginning shade of green intended to be dyed, taking care

either with the yellow or the blue dye ; but the first method is attended with some inconve- niences ; for the blue soils the linen, and a part of the yellow being dissolved in the vat, changes and makes it green ; the second method is, there- fore, preferable. It is common to employ the pastel vat, but for some kinds of green, solution of indigo in the sulphuric acid is used ; and

then the blue and yellow are either dyed separately, or all the ingredients are mixed together, to dye by a single operation.

237. Solutions of copper with yellow sub- stances may also be employed. The blue ground must be proportioned to the green which is desired ; thus, for the green 1 ike that of a drake's

to mix it thoroughly with the first solution by stirring, &c. ; arid this being done, the cloth, being previously scoured and moistened, should be expeditiously put into the liquor, and turned very briskly through it for a quarter of an hour, in order that the color may apply itself equally to every part, which it will certainly do in this way with proper care. By these means, very full, even, and beautiful greens may generally be dyed in half an hour; and, during this space, it is best to keep the liquor at rather less than a boiling heat. Murio-sulphate of tin is greatly preferable for this use to the dyers' spirit ; be- cause the latter consists chiefly of nitric acid, which, by its highly injurious action upon indigo,

neck, a ground of deep royal blue is given ; for would render that part of the green color very

parrot green, a ground of sky-blue ; for verd naissant, a ground of white-blue is necessary. After the cloths have received the proper ground, they are washed in the fulling-mill, and boiled as for common welding, but for the lighter shades the proportion of salts is diminished. Most commonly the cloths intended for the light i-nades are boiled first ; and, when these are taken out tartar a'nd alum ara added.

fugitive. But no such effect can result from the murio-sulphate of tin, since the muriatic acid has no action upon indigo; and the sulphuric is that very acid which alone is proper to dissolve it for this use.

Respecting the beauty of the color thus pro- duced, those who are acquainted with the un- equalled lustre and brightness of ithe quercitron yellows, dyed with the tin basis, must necessarilj

conclude, that the greens composed therewith, will prove greatly superior to any which can re- sult from the dull muddy yellow of old fustic ; and, in point of expense, it is certain that the bark, murio-sulphate of tin, and alum, necessary to dye a given quantity of cloth in this way, will cost less than the much greater quantity (six or eight times more) of fustic, with the alum necessary for dyeing it in the common way, the sulphate of indigo

being the same in both cases. But in dyeing with the bark, the vessel is only to be filled and heated once ; and the cloth, without any previous preparation, may be completely dyed in half an hour ; whilst in the common way of producing Saxon greens, the copper is to be twice filled ; and to this must be joined the fuel and labor of an hour and a half's boiling and turning the cloth, in the course of preparation, besides nearly as much boiling in another vessel to extract the color of the fustic ; and after all, the dyeing process remains to be performed, which will be equal in time and trouble to the whole of the process for producing a Saxon green with the bark ; so that this color obtained from bark will not only prove superior in beauty, but in cheapness, to that dyed with old fustic.

240. — Of Dyeing Silk Green. — In communi- cating to silk the green color, it requires very great caution to prevent the stuff from being spotted and striped. Silk intended for greens is boiled as for the ordinary colors; for light shades, however, it should be boiled thoroughly as for blue.

Silk is not first dyed blue like cloth ; but, after a s»rong aluming, it is washed slightly in the river, and distributed into small hanks, that it may take the dye equably; after which it is turned carefully round the sticks, through a bath of weld. When it is thought that the ground is sufficiently deep, a pattern is tried in the vat, to see if the color has the wished-for tone ; if it has not ground enough, decoction of weld is added ; and, when it is ascertained that the yellow has reached the proper degree, the silk is withdrawn from the bath, and passed through the vat as for blue.

To render the color deeper, and at the same time to vary its tone, there are added to the yellow bath, when the weld has been taken out, joice of Brasil-wood, decoction of fustet, and anotta. For the very light shades, such, as apple-green and celadon-green, a much weaker ground is given than for the other colors. For the light shades, if n»t for sea-green, it is pre- ferable to dye yellow in baths which have al- ready been used, but in which there is no Brasil- wood or fustet, because the silk, perfectly alumed, dyes too rapidly in fresh baths, and is thence subject to take an uneven color. Dr. Bancroft recommends the following process for producing Saxon green at one operation, as the most com- modious and certain : —

241. A bath is prepared of four pounds of quercitron bark, three pounds of alum, and two pounds of murio-sulphate of tin, with a sufficient quantity of water. The bath is boiled ten or fifteen minutes, and when the liquor is in tem- perature till the hand can bear it, it is fit for dyeing. By adding different proportions of sul-

phate of indigo, various and beautiful shades of green may be obtained, and the color thus pro- duced is both cheap and uniform. Care should be

taken to keep the bath constantly stirred, to prevent the coloring matter from subsiding. Those shades which are intended to incline most to the yellow, should be dyed first; and, by adding sulphate of indigo, the green, having a shade of blue, may be obtained.

242. To produce what is called an English green, and which is more beautiful than the or- dinary greens, and inore durable than Saxon green, Guhliche recommends the following pro- cess : — He gives the silk, first of all, a clear blue in the cold vat ; he steeps it in hot wa'er ; washes it in running water; passes it through a weak solution of alum ; prepares a bath with the sul- phuric solution of indigo, a little of the solution of tin, and a tincture of Avignon berry, made with a vegetable acid. lie keeps the silk in this bath till it has assumed the wished-for shade ; he then washes and dries in the shade. The lighter hues may be dyed in the sequel. The shades may be varied with more or less blue, or more or less yellow, by the proportions of the indigo solution, and of the yellow substance. When it is wished to give a goslin-green to silk, a light blue is communicated to it, either in the hot vat or in the cold ; it is passed through hot water, washed in running water, and while moist it is passed through a bath of anotta.

243. Of Dyeing Cotton and Linen Green. — To give a green color to linen and cotton yarns, it is proper to begin with scouring them well ; then they must be dyed in the blue vat, cleansed in water, and passed through the weld process.

The strength of the blue and the yellow is pro- portioned to the color that is wanted. As it is difficult to give uniformity to the cotton velvets in the ordinary blue vat, they are usually dyed yellow with turmeric, and the green is produced with solution of indigo in sulphuric acid.

244. To dye beautiful greens upon cotton, Chaptal recommends that it be first dyed of sky- blue color with indigo, dissolved by potassa and orpiment, then macerated in a strong solution of sumach, men dried and soaked in a solution of acetate of alumina, dried again, rinsed, and finally dyed with quercitron bark, in the propor- tion of twelve pounds to every fifty pounds of cotton. The quercitron is preferred to weld for this purpose, because the color of the former combines better with that of sumach.

245. M. D'Apligny recommends a method of dyeing cotton and linen of a fine sea or apple- green by means of a single bath ; it is in sub- stance as follows : — The liquor is prepared by mixing verdigris with a sufficient quantity of vinegar, and keeping the mixture in a bottle well stopped for fifteen days in the heat of a stove, and adding to it, about four hours before using it, a solution of potassa equal in weight to that of the verdigris, keeping it still hot. The cotton goods are first soaked in a warm solution,

made by dissolving one ounce of alum in five quarts of water for every pound of cotton. The good are again taken out, and, after adding the verdigris mixture, they are returned, and passed through the bath till sufficiently dyed.*

DYEING.

Linen is dyed of the shades of olive and drake's neck green, by first giving it a blue ground, then galling and dipping it in a bath of acetate of iron ; afterwards passing it through a bath of weld, combined with verdigris ; and through another containing sulphate of copper, finally brightening the color by immersion in a solution of soap.

246. The green, says M. Berthollet, obtained by giving a yellow color to a stuff which has been previously dyed blue, and afterwards washed, presents nothing obscure. The color inclines more or less to yellow, or to blue, according to the tint of blue given, and the strength of the yellow bath. The intensity of the yellow isvincreased by alkalis, by sulphate of lime, by ammoniacal salts. It is diminished by acids, alum, and solution of tin. The shades vary likewise from the nature of the yellow substance employed.

These different effects will be obtained with the same ingredients in the formation of the Saxon green, according to the process adopted. If the Saxon blue be first dyed, and the yellow color be next given separately, the effects will be analogous to those just mentioned. But if so- lution of indigo be mixed with the yellow ingre- dients, the results are not the same, because the sulphuric acid acts in this case on the coloring particles, impairing the intensity of the yellow. If a succession of shades be dyed iu a bath com- posed of yellow and the solution of indigo, the last approach more and more to yellow, because the particles of indigo become' attached to the stuff in preference to the yellow ones, which therefore become predominant in the bath.

OF DYEING VIOLET COLOR, &c.

247. Of Dyeing Wool Violet, %c.— From the mixture of red and blue are obtained violet, purple (columbine), dove-color, pansy, ama- ranth, lilac, mallow, and a great many other shades, determined by the nature of the sub- stances, whose red color is combined with a blue color, of which one becomes more or less predo- minant over the other, according to the propor- tions of the ingredients, and the other circum- stances of the process. Hellot observes, that stuff which has been dyed scarlet, takes an une- qual color when blue is to be united with it. The blue is therefore given

first, which, even for violet and purple, ought not to be deeper than the shade distinguished by the name of sky-blue ; a boiling is given with alum mixed with two-fifths of tartar; the stuff is then dipped in a bath composed of nearly two-thirds as much cochineal as for scarlet, to which tartar is always added.

248. The circumstance which distinguishes the process for purple from that for violet, is that for the former a lighter blue ground is given, and a larger proportion of cochineal is employed. These colors are frequently dyed after the red- dening for scarlet, such quantities of cochineal and tartar being added as are necessary ; the operation is managed in the same way as for scarlet. But lilacs, pigeon's necks. &c., are com- monly dipped in the boiling, which has served for violet, after alum and tartar have been added to it : the blue ground having been proportioned

to the shade required, the quantity of cochineal is also adjusted in a similar manner; a little so- lution of tin is added for some reddish shades, snch as peach blossom. It is to be observed, that, though the quantity of cochineal is dimi- nished according to the lightness of the shade required, the quantity of tartar is not lessened, so that the proportion of it, compared with that of the cochineal, is so much the greater, as the color required is lighter.

249. M. Former is of opinion, trial, to procure the colors composed of red and blue, it is advan- tageous to employ the solution of indigo in sul- phuric acid, because a great variety of shades is thus more easily obtained, and the process is not so long or expensive. But the colors thereby obtained are less durable than when the blue vat is employed. He says, however, that they have sufficient permanence, if a solution of indigo be used to which some alkali has been added.

The effects may be easily varied, by giving a preparation to the stuff with differentproportions of alum and tartar, or with solution of tin ; and by dyeing with different proportions of cochi- neal and solution of indigo.

250. A process for dyeing wool of a purple color is given by M. Berthollet, as having been communicated to him by Descroizilles. It is this : — If it be wool in the fleece which is to be dyed, one-third of its weight of mordant is re- quired; if it be a woven stuff, only a fifth is ne- cessary. A bath is prepared at a temperature which the hand can bear; the mordant is well mixed with it ; and the wool or stuff is then im- mersed. It is to be properly agitated, and the same degree of heat is to be kept up for two hburs, which may be even increased a little to- wards the end. It is then lifted out, aired, and very well washed. A new bath of pure water at the same heat is prepared; a sufficient quantity of violet wood is added to it ; the stuff is

then let down, and agitated; and the heat is urged to the boiling point, at which it is maintained for a quarter of an hour. The stuff is then lifted out, aired, and carefully rinsed. The dye is now completed. If a decoction of one pound of log- wood has been used for three pounds of wool, and proportionately for the stuffs which require a smaller dose, a beautiful violet is obtained, to which a sufficient quantity of Brasil-wood gives the shade known by the name of prune de mon- sieur.

251 . The ingenious author from whom we quote the above, thus endeavours to explain the process : —

If we may venture an opinion, without having made direct experiments on a complicated pro- cess, such as that communicated by Descroizilles, and which is still employed advantageously in some manufactories with modifications which we do not know, we would suggest the following ex- planation.

The muriate of soda is decompo«pd by the sulphuric acid, and the muriatic acid set at liberty dissolves the tin.

A portion of the tin is precipitated by the tar- taric acid, whence the deposite is occasioned. But a portion which remains in solution serves to modify the effect, as we have seen with regard

to cochineal. The oxide of copper, present in this preparation, forms blue with the coloring particles of the indigo ; the oxide of tin with the same wood gives violet, and red with the coloring matter of Brasil-vrood.

252. Of Dyeing Silk Violet, $c.— There are two kinds of Tiolet colors given to silk, these are, by the French writers on dyeing, distinguished into the fine and the false. The fine violet may be given by dyeing the silk with cochineal, and afterwards passing it through the indigo vat. The preparation and dyeing of the silk with co- chineal are the same as for crimson, with the omission of tartar and solution of tin, by means of which the color is heightened. The quantity of cochineal made use of is always proportioned to the required shade ; but the usual proportion for a fine violet color is two ounces of cochineal for every pound of silk. When the silk is dyed, it is washed at the river, twice beetled, dipped in a vat of a strength proportioned to the depth of the violet shade, and then washed and dried with precautions similar to those which all colors re- quire that are dyed in a vat. If the violet is«to have greater strength and beauty, it is usual to pass it through the archil bath, a practice which, though frequently

abused, is not to be dispensed with for light shades, which would otherwise be too dull.

253. When silk has been dyed with cochineal, as ab«ve directed, a very light shade of blue must be given it for purple. Only the deepest shades are passed through a weak vat. For those which are less so, cold water is had recourse to, into which a little of the blue vat is put, because they would take too much blue in the vat itself, how- ever weak it may be. The light shades of this color, such as pink, gridelin, and peach-blossom, are made in the same manner, with a diminution of the proportion of cochineal.

254. The spurious violets are given to silk in various ways. The most beautiful, and those most in use, are prepared with archil. The strength of the archil bath is proportioned to the color wished for: the silk, to which a beetling in the river has been given on its coming out of the soap, is turned through it round the skein sticks. When the color is thought to be deep enough, a trial is made on a pattern in the vat, to see if it takes the violet that is wanted. If it is found to be at the proper pitch, a beetling is given to the silk at the river, and it is passed through the vat as for fine violets. Less blue, or less archil, is given, according as the violet is wished to in- cline to red or to blue.

255. A violet color may be imparted to silks by immersing them in water impregnated with verdigris, as a substitute for aluming, and then giving them a bath of logwood, in which they assume a blue color ; which is converted into a violet, either by dipping them in a weaker or stronger solution of alum, or by adding it to the bath ; the alum imparts a red shade to the' color- ing matter of the logwood. This violet possesses but little beauty, or permanence, but if the alumed silk be immersed in a bath of Brasil- wood, and next in a bath of archil after washing it at the river, a color is obtained possessing a much higher degree of beauty and intensity.

M. Decroizilles' process, above related, for dye- ing wool, Was found to succeed equally well, according to his account, in communicating a violet color to silk.

256. Of Dyeing Cotton and LinenViolet, <$r. — The process in most common use for dyeing cotton and linen of the violet colors is the following:— The stuffs have first a blue ground communicated to them in the indigo vats according to the shade required ; they are then dried. After this they must be galled in the proportion of three ounces of galls to a pound : they are left for twelve or fifteen hours in the gall bath, after which, they are wrung and dried again. They are then passed through a decoction of logwood, and when well soaked are taken out, and two drachms of alum,and one of dissolved verdigris/or each pound of stuff are

added to the bath; the skeins are then redipped on the sticks, and turned for a full quarter of an hour, when they are taken out to be aired ; after which they are again completely immersed in the bath for' a quarter of an hour, then taken out and wrung. The vat which has been employed is then emptied ; half of the de- coction of logwood which had been reserved is poured in; two drachms of alum are added, and the stuff dipped afresh, until it is brought to the shade required. The decoction of logwood ought to oe stronger or weaker according to the shade required ; this violet stands the action of the air tolerably well, but is not so durable as that ob- tained by madder.

257. Permanent purple and violet colors may be given to cotton stuffs that have been dyed a Turkey-red, by adding to the alum steep a pro- portion of sulphate of iron suited to the shade required. Cotton also that has been dyed a light blue with indigo, may be changed to purple or violet by passing the stuff through a bath pre- pared with the aluminous mordant, and dyeing with madder.

OF DVEING ORANGE.

258. Of Dyeing Wool Orange. — Orange co- lors are produced by the mixture of red and yellow; and, by varying the proportions of the ingredients, an almost endless variety bf shades may be obtained.

Poerner describes a great many varieties which he obtained by employing weld, saw-wort, dyers' broom, and some other yellow substances ; as also by introducing into the preparation of the cloth, or into the bath, tartar, alum, sulphate of zinc, or sulphate of copper.

Different colors may in like manner be pro- cured from the madder, which is associated with yellow substances. It is thus that the mordores and the cinnamons are dyed ; colors commonly formed in two baths. The maddering is first given, preceded by a bath of alum and tartar as for ordinary maddering; and then a bath of weld is employed.

For cinnamon a weaker maddering is given, and commonly a bath is used which had served for the mordore. The proportions are varied according as the red or the yellow is wished to predominate. Sometimes nut-galls are added, and sometimes the color is deepened by a brown-

Occasionally the sole object is to give a reddish tone to the yellow; the stuff just dyed yellow may, in this case, be passed through a bath of madder,

more or less charged according to the intention.

*Brasil-wood is likewise employed along with *he yellow substances, and sometimes it is asso- ciated with cochineal and madder.*

When, instead of weld or other yellow sub- stances, root of walnut, walnut-peels, or sumach, are used, tobacco, snuff, chestnut, musk colors &c., are produced.

259. Of Dyeing Silk Orange. — Morrones, cinnamons, anl all the intermediate shades are given to silk, by logwood, Brasil, and fustic • a bath is prepared by mixing decoctions of these .hree woods made separately; the proportion of each is varied according to the shade re- quired, but that of fustic ought to prevail; the bath should be of a moderate temperature;, and the silk, after being scoured and alumed in the usual manner, is immersed in it. The silk is turned on the skein sticks in the bath, and when taken out, if the color be uniform, it is wrung and dipped in a second bath of the three ingredients, the proportions of which are regulated according to the effect of the first bath, in order to obtain the shade required.

For some colors blue is united to red and yellow, it is thus olives are produced : a blue ground is first given, then the yellow dye, and lastly, a slight maddering. Olive may be dyed without using the blue vat, by dipping the silk in a very strong weld bath, after being first alumed ; to this a decoction of logwood is after- wards added, and, when the silk is dipped, a little solution of alkali is put in, which turns it green, and gives the silk the olive color. The silk is repeatedly dipped in this bath until it has acquired the proper shade.

260. For the color termed russet olive, or rotten olive, fustet and logwood, without alkali, are added to the bath after the welding. If a more reddish color be wished for, only logwood is added. A kind of reddish olive is also made by dyeing the silk in a bath of fustet, to which more or less sulphate of iron and logwood are added.

261. Of Dyeing Cotton and Linen Orange.— The usual combinations of scarlet and orange, are produced with difficulty. On this head Dr. Bancroft remarks, that, as cochineal and the tin mordant cannot be advantageously employed to dye linen or cotton, it is necessary foi these sub stances solely to rely on the aluminous mordant, and to select the red coloring matter from other dye stuffs, especially from madder, with which the yellow of weld, quercitron bark, or fustic- may be combined in such proportions as may be sufficient for the requirtu color. M. Berthollet gives some processes for colors, which he regards as mixtures of red and yellow, though some of

them may more properly be considered browns or greens. The various shades of morrone are given to cotton, by first galling, and then dipping it in a bath of acetate of iron, formed by the pyroligneous acid, and afterwards in a bath of weld and verdigris, after which it is dyed with fustic, sometimes with the addition of soda and alum. It is then completely washed, passed through a strong madder bath ; then dipped in a weak solution of sulphate of copper; and, lastly, passed through a bath containing soap.

262. The shades cinnamon and mordore are thus given : the stuffs are first dyed wit]ˆ verdi- gris and weld, then dipped in a solution of sul- phate or acetate of iron, out of which they are wrung and dried. After this they are galled, allowing three ounces of galls to each pound 01 stuff, again dryed, alumed, and passed through a madder bath. They are then washed and immersed in a warm soap lie, through which they are turned till the color is sufficiently bright.

263. The shades of color usually denominated gray, have already been treated of, and the pro- cesses for dyeing them need not here be repeated.

264. Several highly respectable writers who have done great justice to the subject of dyeing have connected with their treatises on it a brief view of the process of calico printing : we should have followed their example in the present in- stance, had we not considered the subject, in its present highly improved state, as meriting a dis- tinct notice, which will be found in another part ot our work. See PRINTING, CALICO.

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DYER (John), the son of Robert Dyer, Esq. a Welsh solicitor, was born in 1700. He passed through Westminster school under the care of Dr. Friend, and was then called home to be in- strxicted in his father's profession. His genius, however, led him a different way ; for, besides his early taste for poetry, having a passion no less strong for design, he determined to make painting his profession. With this view, having studied

awhile under his master, he became an itinerant painter in South Wales, and about 1727 printed Grongar Hill. He then made the tour of Italy, where, besides the usual study, he often spent whole days in the country about Rome and Flo- rence, sketching those picturesque prospects with facility and spirit. Images from hence naturally transferred themselres into

his poetical compo- sitions : the principal beauties of The Ruins of

Rome are perhaps of this kind ; and the various landscapes in The Fleece have been particularly admired. On his return to England he published The Ruins of Rome, 1740. As his turn of mind was rather serious, he was advised to enter into holy orders ; and he found no difficulty in ob- taining them. He was ordained by the bishop of Lincoln. About the same time he married a lady of Coleshill named Ensor, whose grand- mother was a Shakspeare, descended from a brother of the great Shakspeare. His ecclesias- tical provision was, for a long time, but slender. His first patron, Mr. Harper, gave him, in 1741, Calthorp in Leicestershire, of £80 a year, on which he lived ten years; and in April 1751 exchanged it for Belchford in Lincolnshire, of £95 which was given him by lord chancellor Hardwicke. His condition now began to mend. In 1752 Sir John Heathcote gare him Coningsby, of £140 a year; and in 1756, when he was LL.B. without any solicitation of his own, obtained for him from the chancellor, Kirkby on Bane, of £110. In 1757 he published the Fleece, his greatest poetical work ; but a consumptive disorder, with which he had long struggled, car- ried him off in 1758. Mr. Dyer's character, as a writer, has been fixed by three poems, Gron- gar Hill, The Ruins of Rome, and The Fleece ; wherein a poetical imagination, perfectly original, a natural simplicity connected with and often productive of the true sublime, and the warmest sentiments of benevolence and virtue, have been universally observed and admired. These pieces were published separately in his lifetime; but, after his death, they were collected and published in one volume 8vo. in 1761, with a short account of him prefixed.

DYER (Sir James), an eminent English law- yer, chief judge of the court of common pleas in the reign of queen Elizabeth. He died in 1581, and, about twenty years after, was published his large collection of Reports, which have been highly esteemed for their succinctness and soli- dity. He also left other writings behind him relative to his profession.

DYNAMICS, from Swapiˆ, power, that branch of mechanics which has for its object the action of forces on solid bodies, when the result of that action is motion ; and in which, since all motion occupies some portion of time, we introduce time into our investigations. See MECHANICS.

DY'NASTY, n. s. Avvaˆia. Government ; sovereignty.

Some account him fabulous, because he carries up the Egyptian dynatties before the flood, yea, aud long before the creation. Hole's Origin of Mankind.

Greece was divided into several dynasties, which our author has enumerated under their respective princes.

Pope. I was detained repairing shattered thrones,

Marrying fools, restoring dynasties,

Avenging men upon their enemies,

And making them repent their own revenge.

Byron.

DYNASTY; from Swaˆrjc, Gr. a sovereign; among ancient historians, signifies a race or suc- cession of kings of the same family. Such were the dynasties of Egypt. The Egyptians reckon thirty dynasties within the space of 36,525 years ;

but most chronologers look upon them as fabu- lous.

DYRRACHIUM, in ancient geography, a town on the coast of Illyricum, before called Epidamnum, or Epidamnus, changed by the Romans to Dyrrachium ; a name taken from the peninsula on which it stood. It was originally built by the Corcyreans, and, according to Pliny, was a Roman colony. It is famous in history : its port answered to that of Brundusium, and the passage between them was very ready and ex- peditious. It was also a very celebrated mart for the people of the Adriatic ; and the free ad- mission of strangers contributed much to its in- crease.

, in the Saxon mythology, inferior goddesses, messengers of Woden, whose province it wa s to convey the souls of such as died in battle to his abode, called Valhalla, i. e. the hall of slaughter ; where they were to drink with him and their other gods, cerevisia, a kind of malt liquor, in the skulls of their enemies. The Dysae conveyed those who died a natural death to Hela, the goddess of hell, where they were tormented with hunger, thirst, and every kind of evil.

DYSART, a royal borough in a parish of the same name, on the north shore of the Frith of Forth, three miles east of Kinghorn, and eleven north of Edinburgh. Its charter was granted about the beginning of the sixteenth century, and it is mentioned, at that time, as one of the principal trading towns in Fife. Before the middle of the eighteenth century, however, its

trade had greatly declined, and it only began to revive about 1756. The church is very ancient, and is said to have been built by the Picts. The harbour is good, and the trade considerable ; employing about thirty-six vessels in the coal and foreign trade. So early as 1483 salt was manufactured here and exported to Holland. The ship-building also employs a considerable number of hands. Dy- sart has a weekly market, and fairs in May, June, August, and November.

DY'SCRASY, n. s. Atxr/cpoffia. An unequal mixture of elements in the blood or nervous juice; a distemperature, when some humor or quality abounds in the body.

In this pituitous dyscrasy of blood, we must vomit off the pituita, and purge upon intermissions.

Flayer on the Humours.

DYS'ENTERY, n. s. Fr. dysenteric, from Svarevrtpia. A looseness, wherein very ill hu- mors flow off by stool, and are also sometimes attended with blood.

From an unusual inconstancy of the weather, and perpetual changes of the wind from east to west, pro- ceed epidemical dysenteries. Arbuthnot on Ait,

DYSENTERY, DYSENTERIA ; from fop, difficulty, and tvrtpo, the bowels. The flux. A genus of dis- ease in the class pyrexise, and order profluvia ot Cullen's Nosology. It is known by contagious py- rexia ; tenesmus ; mucous stools, sometimes mixed with blood, the natural fseces being retained or voided in small hard scybala, loss of appetite, and nausea. It occurs chiefly in summer and autumn, and is often occasioned by much mois- ture quickly succeeding intense heat, where oy the perspiration is suddenly checked ; but the cause which most usually gives rise to it, is a

specific contagion ; and when it once makes its appearance, it not unfrequently spreads with great rapidity. A peculiar disposition in the atmosphere seems often to predispose, or give rise to the dysentery, in which case it prevails epidemically. The disease, however, is much more prevalent in warm climates than in cold ones. When the symptoms produce great loss of strength, and are accompanied with a putrid tendency and a fsetid involuntary discharge, the disease often terminates fatally in the

course of a few days ; but when they are more moderate, it is often protracted to a considerable length of time, and goes off at last by a gentle perspiration. When the disease is of long standing, and has become habitual, it seldom admits of an easy cure ; and when it attacks a person laboring under an advanced stage of scurvy, or pulmonary con- sumption, or whose constitution has been much impaired by any other disorder, it is sure to prove fatal. See MEDICINE.

DYSOPIA; from Svf, bad, and wˆ an eye- Depraved sight, requiring certain light, particu- lar distance, or one position. A genus of disease in the class locales, and order dysaesthesias of Cullen, containing the five following species : — 1. D. tenebrarum, requiring objects to be placed in a strong light. 2. D. luminis, in which ob- jects are only discernible in a weak light. 3. D. dissitorum, in which distant objects are not perceived. 4. D. proximorum, in which objects when near are not perceived. 5. D. lateralis, in which objects are not seen, unless placed in an oblique position.

DYSPEPSIA, or DYSPEPSY, from Svf, bad, and irnrrw, to concoct. Indigestion. Dr. Cullen arranges this genus of disease in the class neuroses, and order adynamise. It chiefly arises in persons between thirty and forty years of age, who lead either a very sedentary or irregular life.

DY'SPHONY, n. s. AvaQuvia. A difficulty in speaking, occasioned by an ill disposition of the organs.

DYSPNO'EA, n. s. Avvirvoia. A difficulty of breathing ; straitness of breath.

DYSURIA ; from SVQ, difficult, and gpov urine. Difficulty and pain in discharging the urine. A genus of disease in the class locales, and order epischesis of Cullen, containing six species : — 1. D. ardens, a sense of heat, without any manifest disorder of the bladder. 2. D spasmodia, from spasm. 3. D. compressions, from mechanical compression of the neighbour- ing parts. 4. D. phlogistica, from violent inflam- mation. 5. D. calculosa, from stone in the bladder. 6. D. raucosa, from an abundant se- cretion of mucus.

DY'SURY, n. s. Atxrgpi'a. A difficulty in making urine.

It doth end in a dysentery, pains of the haemor- rhoids, inflammations of any of the lower parts, dia- betes, a continual pissing, or a hot dysury, difficulty of making water. Harvey.

DYTISCUS, the water-beetle, in zoology, a genus of insects of the order of the coleoptera. The antennae are slender and setaceous ; the hind feet hairy, and formed for swimming.

There are 14/ species, distinguished by their antennae, the color of the elytra, &c. The hrvse of the clytiscus are often met with in water They are oblong, and have six scaly feet. Their body consists of eleven segments. The head is large, with four filiform antennae, and a strong pair of jaws. The last segments of their body have rows of hairs on the sides; and the abdomen is terminated by two spines charged with the like hairs, forming a kind of plumes. These larvae are frequently of a greenish variegated brown : they are lively, active, and extremely voracious : they devour and feed upon other water insects, and often tear and destroy each other. The perfect insect is little inferior to its larvae in voraciousness, but it can only exercise its cruelty on the young larvae ; the perfect lar- vae, like himself, being sheltered by the kind of scaly cuirass with which they are armed. This creature must be touched cautiously ; for, besides its power of giving a severe gripe with its jaws, it has under the thorax a long sharp spine, which it will drive into the fingers by the effort it makes to move backwards. The eggs of the dytisci are rather large, and are inclosed in a kind of silky duskish cod, of a strong and thick texture, in form round, and terminated by a long slender tail, of the same substance. These cous are often found in the water, and from them are brought forth the eggs and larvae of the dytisci. The strength of these cods serves the insect to defend their eggs from the voraciousness of several other aquatic insects, and even from that of their fellow dytisci. Many species of the perfect insect are common in stagnated waters, which they quit in the evening to fly about. They swim with incredible agility, using their hinder legs as oars. The elytra of the females are in general furrowed, and those of the males plain. When they first arrive at their perfect state, their elytra are almost transparent, and in many species of a beautiful dun color, mingled with shades of a greenish-brown. The best method of catching them is with a hand-net, or sieve ; for they are so nimble, and exercise their defensive weapons so often, and with such pain- ful success to those who endeavour to catch them, that they are very often obliged to let them escape; the easiest way to kill them, is to let them fall into boiling hot water, which instantly destroys them.

DYVOUR, or bare-man, in Scots law, a person who, being involved in debt, and unable to pay, to avoid imprisonment, makes cession of his effects in favor of his creditors; and does his devoir and duty to them, proclaiming him- self bare-man and indigent, and becoming debt- bound to them of all he has. The word is used in the same sense as BANKRUPT : see that article.

. DZIDZA, a town of Albania, situated on the declivity and top ot a barren mountain. The Albanian Christians have a monastery and seve- ral churches here. The arable land in the neigh- bourhood is laid out in vineyards, and the situa- tion being warm, very fine wine is produced, but there is a scarcity of fresh water. It is eigh- teen miles from Delvinaki.

EAC

BAD

E.

E, the fifth letter of the Hebrew, Phoenician, Syriac, Samaritan, Sanscrit, Greek, Latin, Ar- menian, Coptic, Georgian, German, Italian, Spanish, French, and English languages, is de- rived, say Ainsworth and Minsheu, from the Heb. n, turned, and the small line fixed to the foot ; but it seems more naturally deduced from the Phoenician g, altered by the Greeks to E ? E has two sounds ; long, as scene, and short, as m£n. It is the most frequent vowel in the English language ; for it not only is used like the rest in the beginning or end of words, but has the peculiar quality of lengthening the fore- going vowel, as cˆn, cane ; man, mane ; g5 p, gape, &c. Yet it sometimes occurs final, where yet the foregoing vowel is not lengthened ; as gone, knowledge, £dge, give. Anciently almost every word ended with e, as for can, canne ; for year, yeare ; for great, greate ; for need, neede ; for flock, flocke. It is probable that this e final had at first a soft sound, like the female e of the French ; and that afterwards it was in poetry either mute or vocal, as the verse required, till at last it became universally silent. Ea has the sound of e. long : the e is commonly lengthened rather by the immediate addition of a than by the apposition of e to the end of the word ; as men, mean ; sel, seal ; mSt, meat ; net, neat.

EACH,prore. Goth, eilih; Sax. aelch; Dut. elch ; Scot, ilk; Gr. «ica; from Heb. BPK, aish, each. — Minsheu. Either of two ; every one of :i number; corresponding with other.

Woo to you farisecs that tithen mynte and ruwe

and ech eerbe ; and leeucn doom and the charite of

God : for it bihofte to do these things and not to

leeue tho. Wiclif. Lube xi. –

Let each esteem other better than themselves.

Phil. ii. 3.

But wel I wote he lied right in dede ; Of cursing ought eche gilty mm him drede, For curse wol sle right as assoiling saveth, And also ware him of a significavit.

Chaucer. Prol. to Cant. Tales. Tis said they eat each other.

Shakspeare. Macbeth. Now I feel by proof,

That fellowship in pain divides not smart, Nor lightens ought each man's peculiar load.

Milton.

Wise Pluto said, the world with men was stored,

That succour each to other might afford. Denfiam.

Go, dear ; each minute does new danger bring.

Dryden.

Loveliest of women ! heaven is in thy soul ; Beauty and virtue shine for ever round thee, Brighl'ning each other ! Thou art all divine.

Adduon's Cato.

They are in such small spheres as to repel each other ; that is, they are applied to each other by such very small surfaces, that the attraction of the particles of each drop to its own centre is greater than its at- traction to the surface of the drop in its vicinity.

Whate'er of wonder Reynolds now may raise, Raphael still boasts»contemporary praise : Each dazzling light and gaudies bloom subdued, tlth undiminished awe his works are viewed.

Sheridan.

EACHARD (John), an eminent English di- vine, born in Suffolk about 1636. He was edu- cated at Cambridge, and became fellow of Ca- therine Hall. In 1670 he published, without his name, a piece entitled The Grounds and Occasions of the Contempt of the Clergy and Religion enquired into. He blended considerable humor with his remarks, which gave rise to a long controversy. In 1675 he was chosen mas- ter of Catherine Hall upon the decease of Dr. John Lightfoot;. and in 1676 was created D. D. by royal mandate. Besides the above work, he wrote some tracts on Mr. Hobbes's Notions. He died in 1697.

EA.CHARD (Laurence), an eminent English historian of the eighteenth century. He was educated in the university of Cambridge, and presented to the living of Welton and Elkington in Lincolnshire, where he spent above twenty years, and distinguished himself by his writings, especially his History of England, which was attacked by Dr. Calamy and by Mr.

Oldmixon. His General Ecclesiastical History, from the Nativity of Christ to the first Establishment of Christianity by Human Laws, under the emperoi Constantine the Great, has passed through several editions. He was installed archdeacon of Stowe and prebend of Lincoln in 1712. He died in

1730.

EAD (ted. ed.) in the compound, and eadig n the simple names, denote happiness or bles- sedness. Thus Eadward is a happy preserver ; Eadulph, happy assistance; Eadgar, happy power; Eadwin, happy conqueror; which Ma- carius, Eupolemus, Fausta, Forlunatus, Felici- anus, &c., do in some measure resemble. Ead may also in some cases be derived from the Sax. eath, which signifies, easy, gentle, mild.

EADMER, or EADMERCJS, an ancient English historian, whose parentage and birth-place are not well known. Being a monk, in the cathe- dral of Canterbury, he became the bosom friend and companion of two archbishops, St.. Anselm and Ralph. To the former he was appointed spiritual director by the pope. In 1120 he was sent for by king Alexander I. of Scotland, to be raised to the primacy of that kingdom ; and having obtained leave of king Henry, and the archbishop of Canterbury, he departed for Scot- land, where he was kindly received by the king ; and on the third day after his arrival was elected bishop of St. Andrew's. But on the day after his election Eadmer told the king that he was determined to be consecrated by none but the archbishop of Canterbury. Alexander declar- ing that the see of Canterbury had no pre- eminency over that of St. Andrew's, Eadmer at length sent his pastoral ring to the king, and laid his pastoral staff on the high altar, whence he had taken it ; and, abandoning his bishopric, returned to England. Some time after, however, he wrote a submissive letter to the king of Scot- land, which was accompanied by an epistle to the same purpose from the archbishop ; these letters, however, did not produce the desired ef- fect. Eadmer is most worthy of our regard for

his historical works, particularly for his excellent history of the affairs of England in his own time, from A. D. 1066 to A.. D. 1122; in which he has inserted many original papers, and preserved important facts, nowhere else to be found. This work has been highly commended, both by an- cient and modern writers, for its authenticity, as well as regularity of composition and purity of style. It is indeed more free from legendary tales than any other work of that period.

EA'GER, adj. ~\ Sax. eagor ; Fr. aigre ;

EA'GERLY, adv. ˆSpan. agrio ; Ital. agro.

EA'GERNESS, n. s. j Lye says from the Sax.

eggian, to stimulate ; a word still used (at least

egg, v. a.} in vulgar conversation. But Lat.

acer, sharp, brisk, from Gr. asig, seems the more

probable derivation of the whole. Keen ; sharp ;

ardent; acrid: hence keenly desirous; quick;

vehement; animated; impetuous.

Apt as well to quicken the spirits as to allay that which is too eager. Hooker.

The air bites shrewdly ; it is very cold. — It is a nipping and an eager air.

Shakspeare. Hamlet. With a sudden vigour it doth posset And curd, like eager droppings into milk, The thin and wholesome blood. Id.

Brutus gave the word too early, Who having some advantage on Octavius, Took it too eagerly ; his soldiers fell to spoil, Whilst we by Anthony were all inclosed.

Shakspeare.

She knew her distance, and did angle for me, Madding my eagerness with her restraint. Id.

The flesh shrinketh, but the bone resisteth, where- by the cold becometh more eager.

Bacon's Natural History.

Abundance of rain froze so eagerly as it fell, that it seemed the depth of winter had of a sudden been come in. Knolles's History of the Turks.

Covetous men need neither clock nor bell to awaken them ; their desires make them restless. Oh that we could with as much eagerness seek the true riches, which only can make us happy.

Bp. Hall. Contemplations. Of action eager, and intent of thought, The chiefs your honourable danger sought.

i Dryden's Ovid.

Eager to read the rest, Achates came.

Id. Mneid.

Have you not seen, when whistled from the fist, Some faulcon stooped at what her eye designed, And, with her eagerness the quarry missed. Dryden.

I'll kill thee with such eagerness of haste, As fiends, let loose, would lay all nature waste.

Id.

Gold will be sometimes so eager, as artists call it, that it will as little endure the hammer as glass itself.

Locke.

The eagerness and strong bent of the mind after knowledge, if not warily regulated, is often an hin- drance to it. Id.

Nor do the eager clamours of disputants yield more relief to eclipsed truth, than did the sounding brass of old to the labouring moon. Glanville's Scepsis.

Imperfect zeal is hot and eager, without knowledge.

Sprat.

To the holy war how fast and eagerly did men go, when the priest persuaded them that whosoever died in that expedition was a martyr. South.

How eagerly he flew, when Europe's fate Did for the seed of future actions wait. Stepney.

VOL. VII.

His Numidiau genius

Is well disposed to mischief, were he prompt And eager on it ; but he must be spurred.

Addisvn's Cutn. Juba livos to catch

That dear embrace, and to return it too, With mutual warmth and eagerness of love.

Id.

Detraction and obloquy are received with as much eagerness as wit and humour. Id. Freeholder.

The things of this world, with whatever eagerness they engage our pursuit, leave us still empty and un- satisfied with their fruition. Rogers.

A vulgar man is captious and jealous ; eager and impetuous about trifles. He suspects himself to be slighted, thinks every thing that is said meant at him : if the company happens to laugh, he is persuaded they laugh at him : he grows angry and testy, says something very impertinent, and draws himself into a scrape, oy showing what he calls a proper spirit, and asserting himself. Chesterfield.

Snatch not eagerly at every advantage offered by his unskilfulness or inattention ; but point out to him kindly, that by such a move he places or leaves a piece in danger and unsupported. Franklin.

To all places of general resort, where the standard of pleasure is erected, we run with equal eagerness, or appearance of eagerness, for very different reasons.

Johnson.

She sees a world stark blind to what employs Her eager thought, and feeds her flowing joys : Though Wisdom hail them, heedless of her call, Flies to save some, and feels a pang for all ; Herself as weak as her support is strong, She feels that frailty she denied so long. Cowper.

As eager runs the market-crowd, When, ' Catch the thief!' resounds aloud ; So Maggie runs, the witches follow, Wi' mony an eldritch skreech and hollow.

Burns.

Then came his fit again, which to o'ercome, 4s eagerly the barred-up bird will beat His breast and beak against his wiry dome Till the blood tinge his plumage, so the heat Of his impeded soul would through his bosom eat.

Byron.

EA’GLE, n. s. “I Fr. aigle ; Ital. and

EA’GLE-EYED, adj. I Lat. aquila; Port.

EA’GLE-SIGHTED, I aguia. Etymologists

EA’GLE-SPEED, n. s. ^-have sometimes trac-

EA’GLE-STONE, I ed this name to the

EA’GLET, | acuteness of its sight ;

EA’GLE-WINGED, adj. J sometimes to iu

swift flying (acute videndo aut volando, Fest.)

and again to its acute beak and claws (ab acu-

mine rostri et unguium. Id.) But Ainsworth says

more probably from aquilus, dun-colored, i. e

from aqua, water ; either because of a common

color or the habits of this bird. A bird of the

falcon genus. The first three compounds are

obvious in their meaning. For eagle-stone, «ee

.&TITES, and the extract. An eaglet is a young

eagle.

If you stop the holes of a hawk’s bell it will make no ring, bu a flat noise or rattle ; and so doth the aetitcs, oreaglestone, which hath a little stone in witn it. Bacon.*

This treason of kis sons did the king express in an smblein, wherein was an eagle with three eaglets ty- ring on her breast, and the fourth pecking at one cf her eyes. Daviei.

as

The snake each year fresh skin resumes,

And eagles change their aged plumes ;

The faded rose each spring receives

A fresh red tincture on her leaves :

But if your beauties once decay,

You never know a second May. Carew.

As he was quick and perspicacious, so was he in- wardly eagle-eyed, and versed in the humours of his subjects. Howel.

Every one is eagle-eyed to see Another's faults and his deformity. Dryden.
There is a lust in man no charm can tame,

Of loudly publishing his neighbour's shame ;

On eagles' wings immortal scandals fly ;

While virtuous actions are but born and die.

Harvey,

The eaglestone contains, in a cavity within it, a small loose stone, which rattles when it is shaken ; and every fossil, with a nucleus in it, has obtained the name. The analogy between a slone, thus con- taining another within it, or, as the fanciful writers express it, pregnant with another, and a woman big with child, led people to imagine that it must have great virtues and effects in accelerating or retarding delivery ; so that, if tied to the arm of a woman with child, it prevents abortion ; and if to tha leg, it promotes delivery. On such idle and imaginary vir- tues was raised all the credit which this famous fossil possessed for many ages. H ill's Materia Medico,.

Arts still followed where Rome's eagles flew.

Pope.

Abrupt, with eaglespeed she cut the sky, Instant invisible to mortal eye. Id.

Draw forth the monsters of the' abyss profound, Or fetch the' aerial eagle to the ground. Id.

Eagles are said to be extremely sharp-sighted, and» when they take flight, spring perpendicularly upward, with their eyes steadily fixed upon the sun.

Calmet.

The moles and bats in full assembly find, On special search, the keen-eyed eagle blind. And did they dream, and art thou wiser now ? Prove it — if better, I submit and bow. Cowper.

It has been said (I believe bj D'Alcmbert), that the highest offices in church and state resemble a py- ramid, whose top is accessible to only two sorts of animals, eagles and reptiles. My pinions were not strong enough to pounce upon its top, and I scorned, by creeping, to ascend its summit. Bp. Watson.

The EAGLE, in antiquity, was borne by way of ensign by several nations. The first who seem to have assumed the eagle are the Persians, ac- cording to Xenophon. It was afterwards assumed by the Romans; who, after a great variety of standards, at last fixed on the eagle, in the se- cond year of the consulate of C. Marius. Till that time, they had used indifferently wolves, leopards, and eagles, according to the humor of the commander. The Roman eagles were not painted on a cloth or flag; but were figures in re- lievo, of silver or gold, borne on the tops of pikes : the wings being displayed, and frequently a thun- derbolt in their talons. Under the eagle on the pike, were piled bucklers, and sometimes crowns. Thus much we learn from the medals. Constan- tine is said to have first introduced the eagle with two heads, to intimate that, though the em- pire seemed divided, it was yet only one body. This is proved by an eagle with two heads noted by Lipsius, on the Antonine column; as well as by the eagle having only one head on the seal of the golden bull of Charles IV. F. Menestrier

maintains that, as the emperors of the east, when there were two on the throne at the same time, struck their coins with the impression of a cross, with a double traverse, which each of them held in one hand, they did the same with the eagle, but, instead of doubling it, represented it with two heads ; in which they were followed by the emperors of the West. F. Papebroche rather in- clines to think the use of the eagle with two heads to be merely arbitrary ; though he grants it probable, that it was first introduced on the occasion of two emperors at the same time. The eagle on medals, according to M. Spanheim, is a symbol of divinity and providence ; but, accord- ing to all other antiquaries, of empire. The princes on whose medals it is most usually found are, the Ptolemies, and the Seleucidae of Syria. An eagle with the word Consecratio, ex presses the apotheosis of an emperor.

EAGLE, in ancient Irish coinage, a sort of base money, current in Ireland in the first years of Edward I., about A. D. 1272; named, like the lionines, rosades, and many other coins of the same period, from the figures with which they were impressed. The current coin of the king- dom was then a

composition of copper and silver, in a certain proportion, but so much below the standard of England, that they were not intrin- sically worth quite half so much. They were imported out of France and other foreign coun tries. When Edward was established on the throne, he set up mints in Ireland for coining good mo- ney, and decried the use of the eagles and all other kinds of base coins ; making it death, with confiscation of effects, to import any more of them.

EAGLE, in architecture, is a figure of that bird, anciently used as an attribute, or cognizance of Jupiter, in the capital and friezes of the columns of temples consecrated to that god.

EAGLE, in astronomy, a constellation of the northern hemisphere, having its right wing con- tiguous to the equinoctial. See AQUILA, and ASTRONOMY. There are also three stars, de- nominated, among the Arab astionomers, nasr, i. e. eagle, viz. 1. Nasr sohail, the eagle of cano- pus; called also sitareh jemen, the star of Arabia Felix, over which it is supposed to preside ; 2. Nasr althair, the flying eagle ; and 3. Nasr al- veke, the resting eagle.

EAGLE, in heraldry, is accounted one of the most noble bearings in armoury; and ought to be given to none but such as greatly excel in ge- nerosity and courage, or who have done singular services to their sovereigns ; in which cases they may be allowed a whole eagle, or an eagle pais- sant, or only the head or other parts thereof, in proportion to their exploits.

EAGLE, in ornithology. See FALCO.

EAGLE, BLACK, an order of knighthood, instituted in 1701, by the elector of Brandenburgh, on his being crowned king of Prussia. The knights wear an orange colored riband, to which is suspended the annexed cross.

EAG

EAGLE, WHITE, a Polish order of kniglithood, instituted in 132o by Uladislaus V. on marrying his son Casimir with a daughter of the great duke of Lithuania. The badge of this order, worn by the knights, is a gold cross of eight points, enamelled gules, bordered argent, can- toned with flames of fire ; charged in the middle with a white eagle, bearing on his breast a cross of the same, environed with the arms and tro- phies of the electorate of Saxony ; and on the other side is a cypher of the king's name, with this motto, PRO FIDE, REGE, LEGE. The whole surmounted with a small crown of diamonds. The collar is composed of golden eagles, crowned and chained. On all days, besides state days, the knights wear the

cross at the extremity of a broad blue riband scarf-wise. They have it also embroidered on the left side of their cloaks and coats.

EAGLE, RED, a very ancient order in Ba- reith, of which the mar- grave is sovereign. It is established both for mi- litary and civil persons, but is generally conferred on officers who have ob- tained the rank of lieutenants-general. The badge is a .medal of gold, of a quadrangular form, enamelled white, upon which is an eagle displayed red. It is worn scarf-wise, pendent to a broad red watered riband, edged with yellow.

EAGLE, SPREAD, signifies an eagle with two heads, as the example. But it is more heraldic to say, an eagle with two heads displayed. Ac- cording to Forney, the reason why the emperor of Germany bears an eagle with two necks, is this: on the union of the kingdom of Romania, now a province of Turkey in Europe, its arms, which were an eagle displayed sable, being the same as those of the emperor, were united into one body, leaving it two necks as they are now.

EAGLE ISLAND, an island on the South Paci- fic Ocean, on the coast of New Holland, visited by captain Cook in his first voyage, is principally .inhabited by a monstrous kind of bird, the nest of one of which measured no less than twenty-six feet in circumference and two feet eight inches in height. In the Philosophical Transactions, vol. XX. there is an account of one of these nests still larger ; but the bird to which it belonged was not seen. That which our navigators saw was built of sticks, and lay upon the ground.

EAGLESTONE. See ˆTITES.

EA'GRE, n. s. JEger, in Runic, is the ocean ; eggia, in Islandic, is to agitate ; to incite. A tide swelling above another tide, observable in the river Severn. But Dryden himself says he observed the eagre in the Trent, and this term, we well know, expresses, as a provincialism, in other parts of England, the first coming in of the tide.

Dissembled Hate or vanquished Love,

Its more than common transport could not hide.

But like an eagre rides in triumph o'er the tide.

Dryden.

EALD'ERMAN, n. s. Sax. eabenman, a Saxon magistrate ; an

ALDERMAN, which see

EALLANGIIEIRRIG, a small island in Argyleshire, situated at the mouth of Loch Rid- den, in the parish of Inverchaolain, memorable in the annals of the seventeenth century. In 1685, when the duke of Monmouth attempted an invasion of the country, the unfortunate Archi- bald, earl of Argyle, having collected an army of 3000 men, retired to this island, which he forti- fied very strongly, and here deposited his spare arms and ammunition. Soon after, upon the appearance of some ships of war, the garrison surrendered, and the whole ammunition falling into the hands of the royal party, put an end to any further hostile operations on the part of that unfortunate nobleman, who with his party, found means to escape, but was soon afterwards taken, tried for high treason, and beheaded.

EAME, ra. s. Sax. earn ; Dut. com, uncle : a word still used in the wilder parts of Stafford- shire.

Daughter, says she, fly, fly ; behold thy dame Foreshows the treason of thy wretched eame !

Fairfax.

EAR, n. S.

EAR-BORED, adj.

EAR-DEAFENING,

EAR-DRUM, n. s.

EAR-KISSING, adj.

EARLESS,

EAR-MARK, n. s. & v. a.

EAR-PIERCING, adj.

EAR-RING, n.s.

EAR-SHOT,

EAR-WAX,

EAR-WIG,

EAR-WITNESS.

the prominent part of that organ only; also the handle or prominent part of a vessel. Attention to a suit or person; the power of ascertaining sounds or harmony : also the spike of corn, or that part which contains the seed. To be, to fall, or go together by the ears, is to quarrel or scuffle, in which those or- gans sometimes obtain rough treatment. To set by the ears is to excite to strife or quarrelling. To be up to the ears is to be deeply immersed. Ear-bored is, marked in the ear ; sometimes to be so marked was a token, as among the Jews and Romans, of servitude. Ear-deafening is stunning. To ear-mark, to mark (cattle, gene- rally) on the ear. Ear-shot is the reach or compass of the ear, with regard to hearing sounds : ear-wig, a species of forficula, im- agined to creep into the ear. Ear-witness, one who has heard what he attests. Earless, with- out ears.

And he bigan to seye to hem, for in this day this scripture is fulfilled iu youre ecru. Wiclif. Luke iv.

In that tyme Jhesus weute bi comes in the Sabot dai, and hise disciplis hungriden and bigunnen to plucke the eerit of corn, and to ete. Id. Matt. xii.

His ears are open unto their cry. Pialm xxxiv. 15.

H« master shall bore his ear threw h with an awl

Exod 2S3

Sax. eare; Goth. eyr and auso; Dan. ere or oore ; ,Swed. are ; Teut. ahr, ohr ; Fr. oreille ; Ital. orec- chio ; Lat. amis. Ju- nius derives the Go- thic verb haus-jan, to hear, from the above (auso) noun, and both from the Greek owe- The organ of hear- ing; and sometimes

The frere arose, But I suppose,

Amased was his bed, He shokc his eares And from gretefeares,

He thought hym well yfled.

Sir T. More.

Poor naked men laboured one another with shagged sticks, or dully fell together by the ears at fisty-cuffs.

m More.

Sir J. Perrot ordered the Irish to mark all their cattle with pitch or ear-mark, on pain of forfeiture.

Cox. Hist. Ireland.

For feare lest we like rogues should be reputed And for eare-marked beasts abroad be bruited.

Spenser.

All present were made earwitnesses , even of each •articular branch of a common indictment. Hooker.

With gold and silver they increase his store, Ind gave the precious earrings which they wore.

Sandys.

Their warlike force was sore weakened, the city beaten down about their ears, and most of them wounded. Knolles.

An unworthie counceller is a wicked charme iu the king's eare, a sword of terror in the aduice of tyranny.

Breton. 1616.

You have heard of the news abroad : I mean the whispered ones ; for they are yet but ear-kissing ar- guments. Shahspeare.

The burst

And the eardeafening voice of the oracle, Kin to Jove's thunder. Id.

O, farewell !

The spirit-stirring drum, the ear-piercing fife,

The royal banner ; and all quality,

Pride, pomp, and circumstance of glorious war ! Id.

What fire is in my ears ? Can this be true ? Stand I condemned ? Id. Much Ado.

Aristippus was earnest suitor to Dionysius for some grant, who would give

no ear to his suit : Aristippus fell at his feet, and then Dionysius granted it.

Bacon's Apophthegms. Himself he on an earwig set ; Yet scarce he on his back could get, So oft and high he did curvet. Drayton's Nymphiad.

Princes, that will but hear, or give access To such officious spies, can ne'er be safe : They take in poison with an open ear, And, free from danger, become slaves to fear.

Ben Jonson.

Nor can I bide to pen some hungrie scence For thick-skin eares, and undiscerning eync.

Bp. Hall. Satires.

O age well thriven and well fortunate, When ech man hath a muse appropriate ; And shee like to some servile eare-boared slave, Must play and sing when and what he would have.

Id.

This gold is now grown to a calf; let no man think that form came forth casually out of the melted ear- rings : this shape was intended by the Israelites, and perfected by Aaron. Id. Contemplations.

There are some vessels, which, if you offer to lift by the belly or bottom, you cannot stir them j but are soon removed, if you take them by the ears.

Taylor's Rule of Holy Living.

He laid his sense closer, and in fewer words, ac- cording to the style and ear of those times. Denham.

The leaves on trees not more,

Nor bearded ears in fields, nor sands upon the shore.

Dryden.

Gomez, stand you out of earshot. — I have some- thing to say to your wife in private.

Id. Spanish Friar.

Better pass over an affront from one scoundrel, than draw the whole herd about a man's ears.

L'Estrange.

Fools go together by the ears, to have knaves run away with the stakes. Id,

A mean rascal sets others together by the ears with- out fighting himself. fd.

The ear being to stand open, because there was some danger that insects might creep in thereat j therefore hath nature loricated or plaistered over the sides' of the hole with earwax, to entangle insects.

Ray on the Creation.

Be not alarmed, as if all religion was falling about our ears. Burnet's Theory.

It is usual to set these poor animals by the ears.

Addison.

All Asia now was by the ears, And gods beat up for volunteers. Prior.

A quilted night cap with one ear.

Congreve. Way of the World. A pot without an ear. Swift.

Doll never flies to cut her lace, Or throw cold water in her face, Because she heard a sudden drum, Or found an earwig in a plum. Id,

I may say of him (Mr. John Smith) in Antonius's phrase, he was — dipped into justice, as it were, over head and ears ; he had not a slight superficial tinc- ture, but was dyed and coloured quite through with it.

Bp. Patrick.

In cases where there is little expected but the pleasure of the ears and eyes, the least diminution of that pleasure is the highest offence. Steels.

Eloquence, that leads mankind by the ears, gives a nobler superiority than power that every dunce may use, fraud that every knave may employ, to lead them by the nose. Bolingbroke.

If on a pillory, or near a throne, He gain his prince's ear, or lose his own. Pope.

Earless on high stood unabashed Defoe, And Tutchin flagrant from the scourge below. Id. Valsalva discovered some passages into the region of the ear-drum ; of mighty use, among others, to make discharges of bruises.

Derham's Physico- Theology.

She used to carry tales from one to another, till she had set the neighbourhood together by the ears.

Arbuthnot. A lady bestowed earrings upon a favourite lamprey ,

u.

The histories of mankind, written by eye or ear- witnesses, are built upon this principle.

Watts's Loyick. Earwigs and snails seldom infect timber.

Mortimer's Husbandry.

From several grains he had eighty stalks, with very large ears, full of large corn. Id.

4.n opera, like a pillory, may be said To nail our ears down, but expose our head.

Young.

But corn was housed, and beans were in the stack j Now therefore issued forth the spotted pack, With tails high mounted, ears hung low, and throats With a whole gamut filled of heavenly notes ; For which, alas ! my destiny severe, Though ears she gave me two, gave me no ear.

'Cowper.

He calls for Famine, and the meagre fiend Blows mildew from between his shrivelled lips, And taints the golden ear. Id.

Lit by the brilliant spark, from grain to grain Runs the quick fire along the kindling train ; On the pained ear-drum bursts the sudden crash, Starts the red-flame, and death pursues the flash.

Darwin,

EAR. See ANATOMY, Index, and DEAF, where the structure of this important organ is fully developed. Suetonius mentions the beau- ties of Augustus's ear; and ./Elian, describing the beauties of Aspasia, observes she had short ears. Martial also ranks large ears among de- formities. Among the Athenians, it was a mark of nobility to have the ears bored or perforated : but among the Hebrews and Romans it was a mark of servitude. Several naturalists and phy- sicians have held, that cutting off the ear Ten- dered persons barren and unprolific ; and this idle notion was what first occasioned legislators to order the ears of thieves, &c., to be cut off, lest they should produce their like.

EAR, in botany, is usually called spica. The flowers and seeds of wheat, rye, barley, lavender, &c., grow in ears. The stem of the ear means its tube or straw ; the knot of the ear, the lobes or cells wherein the grains are enclosed, See.

EAR, in music. See Music. In music we seem universally to acknowledge a kind of in- ternal sense, distinct from the external one of hearing; which we call a good ear. And the like distinction we should probably acknow- ledge in regard to our other senses, were our ideas of the differences equally clear. Some- thing like this is universally acknowledged with regard to a critical and accurate perception and judgment of the objects of sight; though, by a familiar metaphor, these sensations are transferred to a sense

that has no connexion with them. Thus a greater capacity of per- ceiving the beauties of painting, architecture, &c., is called a fine taste.

EAR, v. a. & v.n.-\ Norm. Fr. eare; Sax.

EAR'ABLE, adj. ˆerian; Brit, aeren ; Germ.

EAR'E.D, adj. ieren; Goth, arian ; Lat.

EAR'INO, n. s. J aro. Earth, says Mr. H.

Tooke (Diversions of Purley ii. 417, 8), is that

which one ereth, or eareth, i. e. plougheth ; the

third person of the indicative erian, ware, to ere,

eare, or plough, Erd, i. e. ered, er'd, that which

is ploughed ; the past tense of the same verb.

To till ; to plough ; to shoot into ears. Earable

is the origin of our modern word ARABLE, which

see. Earing, a plowing of land.

EAR-TRUMPETS; instruments used by persons partially deaf, to strengthen the sensation of sound. They are of various forms, and are in- tended to compensate for the want of ihe external ear, or to augment its power when the internal organs perform their functions but imperfectly. The purpose of the external ear, both in men and beasts, is to collect, by its funnel form, all the rays of sound (if we may be allowed the expres- sion), and conduct them to the internal organs, the seat of the sense of hearing. All the artificial instruments, then, ought to resemble, in form, the natural ear. In ancient times, they were made like a trumpet, of moderate size, and usually pro- vided with handles, by which they might be held up to the ear. They were so fitted that the smaller aperture entered the ear, and the wider was di- rected to the quarter from which the sound was to proceed. But these instruments were soon found inconvenient, both on account of their size and the necessity of continually holding them to the ear. Another objection was, that they did

not sufficiently conceal the defect they were dp- signed to remedy, and therefore they 'were soon thrown aside. New intruments wen.- made with- out these defects. One resembles a sm;>ll silver funnel, with a long winding channel in its inte- rior, which terminates at tiie beginning of the

au- ditory passage. On the broad, bent rim there are holes, with ribbons passing through them, to fix the machine to the external ear. A second form consists of a lackered tin tube, with numerous windings, having the narrow end communicating with the auditory passage, and the exterior, wider end made fast to the external ear. In the same way, two of these instruments might be con- nected by an elastic hoop, and fitted, at the same time, to both ears. A third instrument consists of a sort of hollow tin case, curving so as to fit the head, having a broad aperture in the middle of the front surface, and terminated by two tubes bent inwards. This hoop is so fixed under the hair, that the aperture in the middle is exactly over the upper part of the forehead, and the lateral tubes communicate with the right and left auditory passages. The great advantage of this last instrument is, that it receives directly sounds which come from before.

EARL, n. s. ˆ Sax. eorl, which Spel-

EARL'DOM, Jman and others have

EARL-MAR'SHAL, ˆthought synonymous with

ealderman ; but see Turner's Anglo-Sax, vol. ii.

233. Wachter thinks earl a diminutive of tire,

Sax.; Belg. eer ; Ger. er (ere, English): hence

seniority and priority. A nobleman who ranks

next to a marquis : an earl-marshal is a superin-

tendant of high or military solemnities.

An EARL ranks between a marquis and a vis- count. The title is so ancient, that its original cannot be clearly traced out. It is, however, certain, that among the Saxons they were called ealdormen, quasi elder men, signifying the same with senior or senator among the Romans : and also schiremen, because they had each the civil government of a division or shire. On the irrup- tion of the Danes they changed their names to eorles, which, according to Camden, signified the same in their language. In Latin they are called comites from being the king's compa- nions and associates. After the Norman con- quest they were for some time called counts, from the French ; but they did not long retain that name, though their shires are thence called counties, and their wives countesses, to this day. It is now become a mere title : their lordships have no official connexion with the government of the county ; which is now entirely devolved on the sheriff, the earl's deputy, or vice-comes. An earl is created by cincture of sword,

mantle of state put upon him by the king himself, a cap and a coronet put upon his head, and a charter in his hand. An earl's coronet is com- posed of eight pearls raised upon points, with small leaves be- tween, above the rim, as in the diagram an- nexed.

EARL MARSHAL. See MARSHAL.

EAR'LY, adj. & adv.) Sax. aerlice; Goth.

EAR'LINESS, n. s. \arla, from «/•; Goth.

and Sax. aer, soon; or ar, day-break. Soon;

precocious ; betimes. Earliness is the act or

quality of being soon.

And al the puple roos eerli to come to him in the temple, and to heere him. Wiclif. Luk. 21.

So had I spokin with them everych one, That I was of ther felaship anone ; And made forward erli for to rise, To take our weye, ther as I did devise. Chaucer.

The joyous day Jgan early to appear, And fair Aurora from her dewy bed

Of aged Tithone 'gan herself to rear, With rosy cheeks, for shame as blushing red.

Spenser.

I am a tainted wether of the flock, Meetest for death : the weakest kind of fruit Drops earliest to the ground, and so let me.

Shakspeare.

The goodness of the crop is great gain, if the good- ness answer the earliness of coming up. Bacon.

It is a curiosity to have several fruits upon one tree ; and the more when some of them come early, and some come late. Id. Natural History.

None in more languages can show Those arts, which you so early know. Waller.

I can't say whore ;

It does abhor me, now I speak the word : To do the act, that might the' addition earn, Not the world's mass of vanity could make me.

Shakspeare.

Those that have joined with their honour great perils, are less subject to envy ; for men think that they earn their honours hardly. Bacon's Essays

Winning cheap the high repute, Which he through hazard huge must earn. Milton.

Men may discern

From what consummate virtue I have chose This perfect man, by merit called my Son, To earn salvation for the sons of men. Id.

So Labeo weens it my eternal shame To prove I never earned a poet's name.

Bp. Hall. Satires

This is the great expence of the poor, that takes up almost all their earnings. Locke.

The poems gained the plagiary wealth, while the author hardly earned his bread by repeating them.

Pope on Homer. After toiling twenty days, To earn a stock of pence and praise, Thy labour's grown the critick's prey. Swift. EARNE, LOUGH, a lake of Ireland, in Ferma- nagh, Ulster, the second in that island for magni-

The next morning we, having striven with the y – T . ' — •«• »"i»gm-

sun's earliness, were beyond the prospect of the high- tude> At ls ab°ut thirty-five miles in length, but

est turrets. Sidney. ° ve.ry unequal breadth, being in some places ten,*

God made all the world, that he might be wor- and in others not above one. It is properly two shipped in some parts of the world ; and therefore, lakes, which are joined by a narrow channel at in the first and most early times of the church, what the town of Inniskilling, both branches contract- care

did he manifest to have such places erected to ing towards this point. There are a number of his honour? South, small rivers, that fall chiefly from the heights of

The princess makes her issue like herself, by in- the northern and southern confines, which after

stilhng early mto their minds religion, virtue and enriching the country, supply this large bas.n.

o- i_ • , The only outlet is a short and ranid rivpr thnt

Sickness re early old age : it teaches us diffidence ri] nQ t Jth , , i Vi

*in our earthly state and inspires us with thoughts of nV. T u ** / G, P°rt Ballyshannon.*

a future. Pope lhe LouSh abounds with pike, perch, trout, eel,

Oh soul of honour! |nd numerous other species of fresh-water fish.

Oh early heroe ! Smith's Phaedra and Hippolitus. Sa}lQon emigrate a considerable length, but are

Early submission is the truest lesson to those who usually caught at Belleek village. The beauties

would learn to rule. Goldsmith, of this lake have long been the boast of the

This method fixes the attention of children ex- country and the admiration of strangers. The

tremely to the orthography of words, and makes them vast variety of figures and assemblages, in which

good spellers very early. Franklin, nature is here displayed, can hardly be conceived,

Ike great misfortune of my life was to want an but from actual observation. The country is of

th?' were the bUn? TuY*™^8 ^ "^^ but that diversified character, which loses not by*

situation entailed on m. perortarf w3r. ? Burm ProsPect of ***** wood> islands, and mountains,*

T, „ ,. ls inconceivably picturesque and grand. The

From the earliest dawnmgs of policy to this day, islanf](, a,p sn rhi/il, „! „«,£»* ***A J***

tt_ • • , . J . J jsiduus

the invention of men has been sharpening and im- th,. fu0.. „„_ „, * – >ea>*

*proving the mystery of murder, from the first rude ^ ** al™°St lnnumerable. The natives*

essay of clubs and stones, to the present perfection of ™, ar lfc>5′ Or One tor each da7 ln the

gunnery, cannoneering, bombarding, mining. Burke. year lney are every wnere crowned with deep*

The year 1731-2, which is the earliest date of any asPinnS woods and luxuriant pastures, which

*trials for these offences, that I happen to have met ™! *ertlhty of the soil. The solitary*

with, was only thirty-two years after the act of King recesses ol mese islands are the habitation of the

William had passed, and only sixteen after that of staS and tne roebuck ; the rocky cliffs, of the

Queen Anne, and during that period there had been osPray an(i the sea eagle. The islands in some

scarcely any sensible diminution in the value of places slope gradually to the water-edge, and in

money. Sir S. Romilly. others rise in bold shores. The coasts of the

With more capacity for love than earth lake ascend gradually to lofty eminences, which

Bestows on most of mortal mould and birth, tower in solemn grandeur above the milderbeautv

His early dreams of good outstripped the truth, of the scene below

And troubled manhood followed baffled youth. EAR'NEST, adj. & n. s. > Also from the

PAT?1vr Byrm- EAR'NESTNESS, 5 Sax. verb earnian,

LARW,t;. a. { From Sax. earnian, to pur- to pursue (se.e EARN). Ardent ; intent ; warm •

kAR IKG, n.s. Jstie. To win; deserve; la- importunate; serious. As a substantive, earn- est is reality ; seriousness ; opposed to joking :

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and a pledge given to prove a serious intention, or a bargain made. Earnestness is also serious- ness, and synonymous with earnest as a sub- stantive.

Which is the eernys of cure eritage into the re- dempcioun of purchesyng into hertyng of his glory.

Wiclif. Effesies. 1.

This Palamon, when he these words herd, Dispiteously he looked and answerd, Whether saye6t this in ernest or in play ?

Chaucer. Cant. Tale. Therewith she laughed, and did her earnest end in*

jest. Faerie Queens.

He which prayetli in due sort, is thereby made the more attentive to hear ; and he which heareth, the more earnest to pray for the time which we bestow, as well in the one as the other. Hooker.

The apostles term it the handsel or earnest of that which is to come. Id.

That high All-seer, which I dallied with, Hath turned my feigned prayer on my head, And given in earnest, what I begged in jest.

Shakspeare.

You have conspired against our person, Joined with an enemy proclaimed, and from his

coffers

Received the golden earnest of our death. Id.

Why so earnestly seek you to put up that letter ? Id.

I observing,

Took once a pliant hoiir, and found good means To draw from her a prayer of ernest heart, That I would all my pilgrimage dilate, Whereof by parcels she had something heard, But not distinctively. Id. Othello.

Often with a solemn earnestness, More than, indeed, belonged to such a trifle, He begged of me to steal it. Id.

Audacity and confidence doth in business so great effects, as a man may doubt, that besides the very daring and earnestness, and persisting and importu- nity, there should be some secret binding, and stoop- ing of other men's spirits to such persons.

Bacon's Natural History. My soul, more earnestly released, Will outstrip her's ; as bullets flown before, A latter bullet may o'ertake, the powder being more.

Donne. '

Nor can I think that God, Creator wise ! Though threatening, will in earnest so destroy Us, his prime creatures. Milton.

On that prospect strange, Their earnest eyes they fixed ; imagining, For one forbidden tree, a multitude Now risen, to work them further woe or shame.

Id.

When earnestly they seek

Such proof, conclude they then begun to fail. Id. They are never more earnest to disturb us, than when they see us most earnest in this duty. Duppa.

Which leader shall the doubtful victory bless, And give an earnest of the war's success. Waller. But the main business and earnest of the world is money, dominion, and power. L'Estrange.

With overstraining, and earnestness of finishing their pieces, they often did them more harm than good. Dry den.

Take heed that this jest do not one day turn to earnest. Sidney.

Shame is a banishment of him from the good opinion of the world, which every man most earnestly desires. South.

How a man may know whether he be so in earnest \9 worth inquiry : and I think there is one unerring

mark of it, viz. the not entertaining any proposition with greater assurance than the proofs it is built upon will warrant. L-icke.

It may be looked upon as a pledge and firnt.4 of quiet and tranquillity. Snuilriilye.

We shall die in earnest, and it will not bi-c-nne

Serapronius, you have acted like yourself; One would have thought you had been half in earnest.

Addison. Marcus is overwarm ; his fond complaints

Have so much earnestness and passion in them,

I hear him with a secret kind of horror,

And tremble at his vehemence of temper.

Id. Cato.

Pay back the earnest penny received from Satan, and fling away his sin. Decay of Piety.

There never was a charge maintained with such a shew of gravity and earnestness, which had a slighter foundation to support it. Atterburit.

The mercies received, great as they are, were earn- ests and pledges of greater. Id.

And then fair Haidee tried her tongue at speaking, But not a word could Juan comprehend,

Although he listened so, that the young Greek in Her earnestness would ne'er have made an end.

Byron.

EARNEST, ARRHA. By the civil law, he who recedes from his bargain loses his earnest, and if the person who received the earnest give back, h '. is to return the earnest double. But with us, the person who gave it, is in

strictness obliged to abide by his bargain; and in case he decline it, is not discharged upon forfeiting his earnest, but may be sued for the whole money stipulated.

EAR-RING, in the sea language, is that part of the bolt-rope which at the four corners of the sail is left open, in the shape of a ring. The .two uppermost parts are put over the ends of the yard-arms, and so the sail is made fast to the yard ; and into the lowermost ear-rings, the sheets and tacks are seized or bent at the clew.

EARSH, n. s. From ear, to plough. A ploughed field. Not now in use.

Fires oft are good on barren earsltes made,

With crackling flames to burn the stubble blade.

May's Virgil.

Sax. eard, earth : that which one eareth, says Mr. Tooke. See EAR, But a similar

EARTH, ra.s.,v.a.&v EARTH'BOARD, n. s. EARTH'BORN, adj. EARTH'BOUND, EARTH'BRED, EARTH'CREATED, EARTH'CREEPING, EARTH'EN, EARTH'FED, EARTH'FLAX, n. s. EARTH'LINESS, EARTH'LING, EARTH'-LOVING, adj. EARTH'LY, adj. EARTH'MOVING, n.s. EARTH'NUT, n.s. EARTH'QUAKE, EARTH'SHAKING, EARTH'WORM, EARTH'Y, adj.

v. a.

word is found in the Oriental lan- guages, as Arab. erd; and Heb. V1K, from Xˆ, to break in pieces (Park- hurst) or crumble.

The terraqueous globe ; the world, or some modifica- tion of it. As a verb active, to hide, bury, or deposit in

the earth : as a J neuter verb, to re-

tire, or lie hid in the ground. An earth-board is a particular part of a plough : earth-created is used by Younsr for made of the earth: earth-fed means

low, abject; and this term, in composition, frequently expresses the idea of

low, or grovelling : earth-flax is a fibrous, flaxy-looking fossil : earth- ling an inhabitant of earth ; a mortal : earthnut, a pignut, or root of the appearance of a nut. The other compounds seem to require no explanation.

Nile ye deme that I came to sende pees ipto erthe : I cam not to sende pecs, but swerd.

Wiclif. Matthew 10.

I saigh whanne he badde opened the sixte seel, and lo a greet erthemouynq was maad.

Id. Apocalips 6.

The whole earth was of one language. Gen. xi. 1. Whereby he [Virgil] would insinuate that there is an igneous, luminous, or sethereal vehicle alwaies in- timately adhering to the soul, though it be much slaked or damped with the gross and crude moisture of the body during this earthly peregrination.

More. App. to Def. of Phil. Cab. fol. 134. Our common necessities, and the lack which we all have as well of ghostly as of earthly favours, is in each kind easily known. Hooker.

Great grace that old man to him given had, For God he often saw, from heaven hight, All were his earthly eyen both blunt and bad.

Speruer.

All the world by thee at first was made, And daily yet thou dost the same repair : Ne ought on earth that merry is and glad, Ne ought on earth that lovely is and fair, But thou the same for pleasure didst prepare. Id.

Nought so vile that on the earth doth live, Bat to the earth some special good cloth give.

Shakspeare. About his shelves

Green earthen pots, bladders, and musty seeds Were thinly scattered. Id.

Long mayest thou live in Richard's seat to sit, And soon lie Richard in an earthy pit. Id.

Teach me, dear creature, how to think and speak ; Lay open to my earthy gross conceit, Smothered in errors. Id.

They can judge as fitly of his worth, As I can of those mysteries which heaven Will not have earth to know. Id. Coriolanui.

But T remember now

I'm in this earthly world, where to do harm Is often laudable ; to do good, sometime Accounted dangerous folly. Id. Macbeth.

Who can impress the forest, bid the tree, Unfix his earthbottnd root ? Id.

You have scarce time

To steal from spiritual leisure a brief span, To keep your earthly audit. Id. Henry VIII.

*If you be born so near the dull-making cataract of Nilus, that you cannot hear the planet-like music of poehy ; if you have so earth-creeping a mind that it cannot lift itself up to look to the sky of poetry ; •***¥* Thus much curse I must lend you in the behalf of all poets, that while you live, you live in love, and never get favour for lacking skill of a sonnet. Sir P. Sidney.*

But from this earth, this grave, this dust, My God shall raise me up I trust. Raleigh.

The great winding-sheets that bu;-y all things in oblivion are two, deluges and earthquakes. Bacon.

Worms are found in snow commonly, like earth- worms, and therefore it is not unlike that it may like- wise put forth plants. Id. Nat. Hist.

It is heaven upon earth to have a man's mind move in charity, rest in providence, and turn upon the poles of truth. Lvrd Bacon.

Such earth-fed minds That never tasted the true beams of love.

B. Jonson.

These tumults were like an earthquake, shaking the very foundations of all, than which nothing in the world hath more of horrour. King Charles.

Peasants : — earth-bred worms ! Brewer.

Earthly greatness is a nice thing, and requires so much chariness in the managing, as the contentment Df it cannot requite. Hall.

There is many a rich stone laid up m the bowels of the earth, many a fair pearl laid up in the bosom of the sea, that never was seen, nor never shall

he.

Bp. Hall. Contemplations.

Earth up with fresh mould the roots of those auri – culas which the frost may have uncovered.

Evelyn's Calendar.

We should affirm, that all things were in all things ; that heaven were but earth celestified, and earth but heaven terrestrified ; or that each part above had influ- ence upon its affinity below.

Browne's Vulgar Erroiirs. Nor is my flame

So earthy, as to need the dull material force Of eyes, or lips, or cheeks. Denhnm's Sophy.

Wherefore did Nature pour her bounties forth With such a full and unwithdrawing hand, Covering the earth with odours, fruits, and flocks, Thronging the seas with spawn innumerable, But all to please and sate the curious taste ? Milton. When faith and love, which parted from thee

never,

Had ripened thy just soul to dwell with God, Meekly thou didst resign this earthly load Of death, called life Id.

By the earthshakmg Neptune's mace, And Tethy's grave majestic pace. Id.

Him lord pronounced, he, O indignity ! Subjected to his service angel-wings, And naming ministers to watch and tend Their earthy charge. Id. Paradise Loit.

The master saw the madness rise ; His glowing cheeks, and ardent eyes •, And, while he heaven and earth defied, Changed his hand and checked his pride. Dryden.

In ten set battles we have driven back These heathen Saxons, and regained our earth, As earth recovers from the ebbing tide Id.

The wound I make but sow new enemies ; Which, from their blood, like earthborn brethren rise.*

Id.

Was it his youth, his valour, or success, These might perhaps he found in

other men : 'Twas that respect, that awful homage paid me ; That fearful love which trembled in his eyes, And with a silent earthquake shook his soul. Id.

Those earthy spirits black and envious are ; I'll call up other gods of form more fair. Id.

The fox is earthed; but I shall send my two ter- riers in after him. Id. Spanish Friar.

This solid globe we live upon is called the earth, which word, taken in a more limited sense, signifies such parts of this globe as are capable, being exposed to the air, to give rooting and nourishment to plants, so that they may stand and grow in it. Locke.

Where there are earthnuts in several patches, though the roots lie deep in the ground, and the stalks be dead, the swine will by their scent root only whore they grow. Ray.

Upon a shower, after a drought, earthworms and land snails innumerable come out of their lurking- places. Id.

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The country, by reason of its vast caverns and sub- terraneous fires, has been miserably torn by earth- quakes, so that the whole face of it is quite changed.

Addison on Italy.

The god for ever great, for ever king, Who slew the earthborn race and measures right To heaven's great habitants ! Prior.

To earthlinys, the footstool of God, that stage which he raised for a small time, seemeth magnificent.

Drummond.

Such land as ye break up for barley to sow, Two earths, at the least, ere ye sow it bestow. Jiitsifr.

The five genera of earths are, 1. Boles. 2. Clays. 3. Marls. 4. Ochres. 5. Tripelas.

Hill's Mat. Medica.

Of English talc, the coarser sort is called plaister or parget ; the finer, earthflax, or salamander's hair.

Woodward.

As a rustick was digging the ground by Padua, he found an urn, or earthen, pot, in which there was another urn, and in this lesser a lamp clearly burning.

Wilkins.

Lamps are inflamed by the admission of new air, when the sepulchres are opened, as we see in fat earthy vapours of divers sorts. Id. Math, Mag.

It must be our solemn business and endeavour, at fit seasons, to turn the stream of our thoughts from earthly towards divine objects. Atterbury.

The plow reckoned the most proper for stiff black clays, is one that is long, large, and broad, with a deep head and a square earthboard, so as to turn up a great furrow. Mortimer.

Hence foxes earthed, and wolves abhorred the day, And hungry churls ensnared the nightly prey.

Tickel.

Sudden he viewed, in spite of all her art, An earthly lover lurking at her heart. Pope.

Now scarce withdrawn the fierce earthshaking power, Jove's daughter Pallas watched the fav'ring hour ; Back to their caves she bade the winds to fly, And Lushed the blustering brethren of the sky. Id. Poor, earth-created man ! Youny.

a thousand furies more did shake

Those weary realms, and kept earth-loving man awake.

Armstrong.

Tt is no uncommon thing for the honour of an earthly monarch to be wounded through the sides of his ministers. Mason.

The only amaranthine flower on earth Is virtue ; the only lasting treasure, truth.

Couoper.

Behold your bishop ! -well he plays his part, Christian in name, and infidel in heart ; Ghostly in office, earthly in his plan, A slave at court, elsewhere a lady's man. Id.

Man mounts on man, on camels camels rush, Hosts march o'er hosts, and nations nations crush, — Wheeling in air the winged islands fall, And one great earthy ocean covers all ! Darwin.

Earthquakes have raised to heaven the humble vale, And gulfs'the mountain's mighty mass entombed ; And where the' Atlantic rolls wide continents have

bloomed. Beattie.

Earth't coarsest bread, the garden's homeliest

roots,

And scarce the summer luxury of fruits, His short repast in humbleness supply With all a hermit's board would scarce deny. Byron.

Impart

The purity of heaven to earthly joys, Expel the venom and not blunt the dart — The dull satiety which all destroys — And root from out the soul the deadly weed which cloys. id.

How toe lit lake shines, a phosphoric sea, And the big rain comes dancing to the earth! And now again 'tis black,— and now, the glee Of the loud hills shakes with its mountain-mirth, As if they did rejoice o'er the young earthquake' birth. /,/.*

EARTH, in ancient philosophy. See CUFMIS- TRY and ELEMENT.

The EARTH, in astronomy, is one of the primary planets. See ASTRONOMY. ' Although the rela- tive densities of the earth and most of the other planets have been known a considerable time, it is but very lately that we have come to the knowledge of the absolute gravity or density of the whole mass of the earth. This, says Dr. Hutton, I have calculated and deduced from the observations of Dr. Maskelyne, astronomer royal, at the mountain Schehallien in the years 1774, 5, and 6. The attraction of that mountain on a plummet, being observed on both sides of it, and its mass being computed from a number of sec- tions in all directions, and consisting of stone ; these data being then compared with the known atti ac- tion and magnitude of the earth, gave by propor- tion its mean density ; which is to that of water as nine to two, and to common stone as nine to five ; from

which very considerable mean density, it may be presumed, that the internal parts con- tain great quantities of metals. From the den- sity now found,' adds this writer, ' its quantity of matter becomes known, being equal to the pro- duct of its density by its magnitude.'

Mr. Boyle suspected that there are great, though slow, internal changes, in the mass of the earth. He argues from the varieties observed in the change of the magnetic needle, and from the observed changes in the temperature of climates. But as to the latter, there is reason to doubt that he could not have diaries of the weather sufficient to direct his judgment. Boyle's Works, Abr. Vol. I, p. 292, &c.

Respecting the figure of the earth, the ancients had various opinions : some, as Anaximander and Leucippus, held it cylindrical, or in the form of a drum : but the most general opinion was, that it was flat ; that the visible horizon was the boundary of the earth, and the ocean the boundary of the horizon : that the heavens and earth above this ocean were the whole visible universe : and that all beneath the ocean was Hades. Of this opinion were some of the Chris- tian fathers, as Lactantius, St. Augustine, &c. Such of the ancients, however, as understood any thing of astronomy, and especially the doctrine of eclipses, must have been acquainted with the cir- cular figure of the earth ; as the ancient Babylo- nian astronomers, who had calculated eclipses long before the time of Alexander, and Thales the Grecian, who predicted an eclipse of the sun. It is now indeed agreed on all hands, that the form of the terraqueous globe is globular or very nearly so. See ASTRONOMY. This is equally evident from the eclipses of the sun and of the moon; in all of which the earth's shadow appears circu- lar upon the face of those bodies, what way soever it be projected, whether east, west, north, or south; and howsoever its diameter vary, according to the greater or less distance from the earth. The spherical figure of the earth is also

evinced from the rising and setting of the sun, moon, and stars ; all which happen sooner to those who live to the east and later to those liv- ing to the west, and that more or less so, according to the distance. So also, going or sailing to the north, the north-pole and northern stars become more elevated, and the south-pole and southern stars more depressed ; the elevation northerly increasing equally with the depression southerly ; and either of them proportionably to the distance gone. The same thing happens in going to the south. Besides, the oblique ascensions, clescen- sions, emersions, and amplitudes of the rising and setting of the sun and stars, in every latitude, are agreeable to the earth's spherical form : all which could

not happen if it were of any other figure. The globular form of the earth is farther confirmed by its having been often sailed round : the first of these important voyages was made in 1519, by Ferdinand Magellan, who accomplished it in 1124 days. In 1557 Sir Francis Drake performed the same voyage in 1056 days: in 1586 Sir Thomas Cavendish performed it in 777 days ; Simon Cordes, of Rotterdam, in 1590, in ‘ 1575 days: in 1598 Oliver Noort, a Hollander, in 1077 days; Van Schouten, in 1615, in 749 days ; Jacob Heremites and John Huygens, in 1623, in 802 days. Many others have since per- formed it, particularly Anson, Bougainville, and Cook; sometimes sailing round by the east some- times by the west, till at length they arrived again in Europe, whence they set out; and, in the course of their voyage, observed that all the phe- nomena, both of the heavens and the earth, cor- respond to, and prove this spherical figure.

The natural cause of this form of the globe is, according to Sir Isaac Newton, the great princi- ple of attraction, with which the Creator has endued all the matter in the universe; and by which all bodies, and all the parts of bodies, mutually attract one another. This is also the cause of the sphericity of the drops of rain, quicksilver, &c. The inequality of the surface of the earth, by mountains and valleys, is nothing considerable; the highest eminence being scarcely equivalent in its proportion to the bulk of the earth to the minutest protuberance on the surface of an orange. Its difference from a perfect sphere, however, is more considerable in another respect, by which it approaches nearly to the shape of an oblate spheroid ; being a little flatted at the poles, and raised about the equatorial parts, so that the axis from pole to pole is less than the equatorial diameter. What gave the first occasion to the discovery of this important circumstance was, the observa- tions of some French and English philosophers in the East Indies, and other parts, who found that pendulums, the nearer they came to the equator, performed their vibrations slower : whence it follows, that the velocity of the descent of bodies, by gravity, is less in countries nearer to the equator; and consequently that those parts are farther removed from the centre of the earth, or from the common centre of gravity. See the History of the Royal Academy of Sciences, by Du Hamel, p. 110, 156, 206; and L’Histoire de 1’Academie Roy. 1700 and 1701. These obser- vations having established the fact also stimu- lated M. Huygens and Sir Isaac Newton to in-

vestigate the cause of this phenomenon ; which they attributed to the revolution of the earth about its axis. If the earth were in a fluid state, its rotation round its axis would necessarily make it put on such a figure, because, the centri- fugal force being greatest towards the equator the fluid would there rise and swell most; and, that its figure really should be so now, seems ne- cessary, to keep the sea in the equinoctial regions from overflowing the earth about those parts. See this curious subject well

treated by Huygens, in his discourse De Causa Gravitatis, p. 154, where he states the ratio of the polar diameter to that of the equator, as 577 to 578. And New- ton, in his Principia, first published in 1686, demonstrates from the theory of gravity, that the figure of the earth must be that of an oblate spheroid, generated by the rotation of an ellipse about its shortest diameter, provided all the parts of the earth were of a uniform density, through- out; and that the proportion of the polar to the equatorial diameter of the earth, would be that of 689 to 692, or nearly that of 229, to 230, or as 9956522 to 1. This proportion of the two diameters was calculated by Newton in the fol lowing manner : having found that the centrifu- gal force at the equator is 3ˆ of gravity, he as- sumes, as an hypothesis, that the earth is to the diameter of the equator as 100 to 101, and thence determines what must be the centrifugal force at the equator to give the earth such a form, and finds it to be •$$ of gravity : then, by proportion, if a centrifugal force equal to fa of gravity would make the earth higher at the equator than at the poles by ˆ of the whole height at the poles, a centrifugal force that is ˆ of gravity will make it higher by a proportional excess, which by calculation is ˆg of the height a the poles ; and thus he discovered, that the diameter at the equator is to the diameter at the poles, or the axis, as 230 to 229. But this com- putation supposes the earth to be every where of a uniform density ; whereas if the earth is more dense near the centre, then bodies at the poles will be more attracted by this additional matter being nearer; and therefore the excess of the semi-diameter of the equator above the semi-axis, will be different. According to this proportion between the two diameters, Newton farther computes, from the different measures of a degree, that the equatorial diameter will exceed the polar by thirty-four miles and j. Neverthe- less, Messrs. Cassini, both father and son, the one in 1701, and the other in 1713, attempted to prove, in the Memoirs of the Royal Academy of Sciences, that the earth was an oblong spheroid : and in 1718, M. Cassini again undertook, from observations, to show that, on the contrary, the longest diameter passes through the poles ; which gave occasion for Mr. John Bernouilli, in his Essai d'une Nouvelle Physique Celeste, printed at Paris in 1735, to triumph over the British phi- losopher, apprehending that these observations would invalidate what Newton had demonstrated. And in 1720 M. De Mairan advanced argu- ments, supposed to be strengthened by geomet- rical demonstrations, farther to confirm the as- sertions of Cassini. But in 1735 two companies of mathematicians were employed, one for a northern, and another for a southern expedition,*

the result of whose observations and measure- ment plainly proved that the earth was flatted at the poles. The proportion of the equatorial diameter to

the polar, as stated by the gentlemen employed on the northern expedition for mea- suring a degree of the meridian, is as 1 to 0‘9891 ; by the Spanish mathematicians as 266 to 265, or as 1 to 0-99624 : by M. Bouguer as 179 to 178, or as 1 to 0-99441. As to all conclusions, how- ever, deduced from the length of pendulums in different places, it is to be observed, that they proceed upon the supposition of the uniform density of the earth, which is a very improbable circumstance ; as justly observed by Dr. Horsley in his letter to captain Phipps: ‘you finish your article, he concludes, relating to the pendulum with saying, ‘ that these observations give a figure of the earth nearer to Sir Isaac Newton’s com- putation, than any others that have hitherto been made ;’ and then you state the several figures given, as you imagine, by former observations, and by your own. Now it is very true, that, if the meridians be ellipses, or if the figure of the earth be that of a spheroid generated by the revolution of an ellipsis, turning on its shorter axis, the particular figure, or the ellipticity of the generating ellipsis, which your observations give, is nearer to what Sir Isaac Newton saith it should be, if the globe were homogeneous, than any that can be derived from former observations. But yet it is not what you imagine. Taking the gain of the pendulum in latitude 79° 50′ exactly as you state it, the difference between the equa- torial and the polar diameter is about as much less than the Newtonian computation makes it, and the hypothesis of homogeneity would re- quire, as you reckon it, to be greater. The pro- portion of 212 to 211 should indeed, according to your observations, be the proportion of the force that acts upon the pendulum at the poles to the force acting upon it at the equator. But this is by no means the same with the proportion of the equatorial diameter to the polar. If the globe were homogeneous the equatorial diameter would ex- ceed the polar by ˆ of the length of the latter : and the polar force would also exceed the equa- torial by the like part. But, if the difference be- tween the polar and equatorial force be greater than 5ˆ5 (which may be the case in an heterogeneous globe, and seems to be the case in ours), then the difference of the diameters should, according to theory, be less than 5ˆ, and vice versa, I confess this is by no means obvious, at first sight; so far otherwise, that the mistake, which you have fallen into, was once very general. Many of the best mathematicians were misled by too implicit a reliance upon the authority of Newton, who had certainly confined his inves- tigations to the homogeneous spheroid, and had thought about the heterogeneous only in a loose and general way. The late Mr. Clairault was the first who set the matter right, in his elegant and subtle treatise on the figure of the earth. That work has now been many years in the hands of mathematicians, among whom I imagine there are none, who have considered the subject atten- tively, that do not acquiesce in the author’s con- clusions. In the second part of that treatise, it is proved, that putting p for the polar force, II for the equatorial, S for the true ellipticity of the

earth's figure, and for the ellipticity of the homo- geneous spheroid,

P jj p ji

— It — d: therefore (J— 2«

n n

and, therefore, according to your observation, d~j}i. This is the just conclusion from your observations of the pendulum, taking it for granted that the meridians are ellipses : which is an hypothesis upon which all the reasonings of theory have hitherto proceeded. But, plausi- ble as it may seem, I must say that there is much reason from experiment to call it in question. If it were true, the increment of the force which actuates the pendulum as we approach the poles, should be as the square of the sine of the latitude : or, which is the same thing, the decrement, as we approach the equator, should be as the square of the cosine of the latitude. But whoever takes the pains to compare together such of the obser- vations of the pendulum in different latitudes, as seem to have been made with the greatest care, will find that the increments and decrements do by no means follow these proportions ; and, in those which I have examined, I find a regularity in the deviation which little resembles the mere error of observation. The unavoidable conclu- sion is, that the true figure of the meridians is not elliptical. If the meridians are not ellipses, the difference of the diameters may indeed, or it may not, be proportioned to the difference be- tween the polar and the equatorial force; but it is quite an uncertainty, what relation sub- sists between the one quantity and the other; our whole theory, except so far as it relates to the homogeneous spheroid, is built upon false as- sumptions, and there is no saying what figure of the earth any observations of the pendulum give.' Dr. Horsley then lays down the following table, which shows the different results of observations made in different latitudes ; in which the first three columns contain the names of the obser- vers, the places of observation, and the latitude of each ; the fourth column shows the quantity of P — n in such parts as n is 100,000, as de- duced from comparing the length of the pendu- lum, at each place of observation, with the length of the equatorial pendulum as termed by M. Bouguer, upon the supposition that the incre- ments and decrements of force, as the latitude is increased or lowered, observe the proportion which theory assigns. Only the second and the last value of p — n are concluded from com- parisons with the pendulum at Greenwich and at London, not at the equator. The fifth column shows the value of S corresponding to every value of P — n, according to Clairault's theorem :

Observers.

Places.

Lat.

p— n.

a

Bouguer Bouguer Green

Equator Porto Bello Otaheitee

0° 0′

9 34 17 29

741-8 563-2

t

Bouguer Abbe de La) Caille J

San Domingo Cape of (Good Hope & Paris

18 27 33 55 48 50

591-0 731-5 585-1

&

TheAcade-) micians i Capt. Phipps

Pello

66 48 79 50

565-9 471-2

636

EARTH.

‘ By this table it appears, that the observations in the middle parts of the globe, setting aside the single one at the Cape, are as consistent as could reasonably be expected ; and they represent the ellipticity of the earth as about 3ig. But when we come within ten degrees of the equator, it should seem that the force of gravity suddenly becomes much less, and within the like distance of the poles much greater than it could be in such a spheroid.’

The following problem com- municated by Dr. Leatherland to Dr. Pemberton, and published by Mr. Robertson, serves to find the proportion between the axis and the equato- rial diameter, from measures of a degree of the meridian in two different latitudes, supposing the earth an oblate spheroid. Let A Pap (PLATE II. MISCELLANIES) be an ellipse representing a sec- tion of the earth through the axis Pp ,- the equa- torial diameter, or the greater axis of the ellipse, being Aa ; let E and F be two places, where the measure of a degree has been taken ; these measures are proportional to the radii of curvature in the ellipse at those places ; and if C Q, C R, be con- jugates to the diameters whose vertices are E and F, C Q will be to C R in the subtriplicated ratio of the radius of curvature at E to that at F, by Cor. 1, Prop. 4, part 6, of Milnes's Conic Sections, and therefore in a given ratio to one another; also the angles QCP, RCP, are the latitudes of E and F ; so that, drawing Q V pa- rallel to Pp, QX Y W to Aa, these anglf hemg given, as well as the ratio of C Q to C R, the rectilinear figure C VQX RY is given in species; and the ratio of VC2 — ZC2 (= QX x X W) to RZa — QV2= (RX x XS) is given, which is the ratio of CA2 to CP2; therefore the ratio of CA to CP is given. Hence, if the sine and cosine of the greater latitude be each augmented in the subtriplicate ratio of the measure of the degree in the greater latitude to that in the lesser, then the difference of the squares of the aug- mented sine, and the sine of the lesser latitude, will be to the difference of the squares of the co- sine of the lesser latitude, and the augmented cosine, in the duplicate ratio of the equatorial to the polar diameter. For C q being taken in C Q equal to C R, and q v drawn parallel to Q V, Cr, and vq, CZ and ZR will be the sines and cosines of the respective latitudes to the same radius ; and C V, V Q, will be the augmentations of Cv and Cq in the ratio named. Hence, to find the ratio between the two axes of the earth, let E denote the greater, and F the lesser of the two latitudes, M and N the respective measures taken in each ; and*

/M

let P denote 3\/ — : then

'cos.2 F — P2 x cos. E . less axis*

is —

P2Xsin.2E — sin.2F greater axis

It also appears from the above problem, that when one of the degrees measured is at the equa- tor, the cosine of the latitude of the other being augmented in the subtriplicate ratio of the de- grees, the tangent of the latitude will be to the tangent answering to the augmented cosine,' in the ˆratio of the greater axis to the less. For, supposing E the place out of the

equator, then, if the semi-circle Plmnp be described, and /C

joined, and mo drawn parallel to aC : Co is the cosine of the latitude to the radius CP, and C Y that cosine augmented in the ratio before named ; YQ being to Y/, that is, Ca to Cw, or CP, as the tangent of the angle YCQ, the lati- tude of the point E to the tangent of the angle YC/ belonging to the augmented cosine. Thus, if M represent the measure in a latitude denoted by E, and N the measure at the equator, let A denote an angle whose measure is

M tan. A . less axis

cos. Ex3 ˆ — Then – is —

IM tan. K greater axis

But M, or the length of a degree, obtained by actual mensuration in different latitudes,' is known from the following table : —

Name,

Lat.

Value of M.

Toises.

Maupertuis, &c.

66° 20′

M = 57438

Cassini and)

49 22

M = 57074

La Caille]

45 00

M — 57050

Boscovich

43 00

M — 56972

De la Caille

33 18

M = 57037

Juan and Ulloa

f at the ˆ

M = 56768

Bouguer

< equa- >

M = 56753

Condamine

t tor. 3

M = 56749

Now, by comparing the first with each of the following ones ; the second with each of the fol- lowing ; and in like manner the third, fourth, and fifth, with each of the following ; there will be obtained twenty-five results, each showing the relation of the axes or diameters; the arithmeti- cal means of all of which will give that ratio as 1 to 0-9951989. If the measures of the latitude of 49° 22', and of 45° which fall within the meridian line drawn through France, and which have been re-examined and corrected since the northern and southern expedition, be compared with those of Maupertuis and his associates in the north, and that of Bouguer at the equator there will result six different values of the ratio of the two axes : the arithmetical mean of all which, is that of 1 to 0-9953467, which may be considered as the ratio of the greater axis to the less: which is as 230 to 228-92974, or 215 to 214, or very near the ratio as assigned by New- ton. Now the magnitudeˆ as well as the figure of the earth, that is, the polar and equatorial diameters, may be deduced from the foregoing problem. For, as half the latus rectum of the greater axis A a is the radius of curvature at A, it is given in magnitude from the degree mea- sured there, and thence the axes themselves are given. Thus, the circular arc whose length is equal to the radius being 57'29578 degrees, if this number be multiplied by 56750 toises, the mea- sure of a degree at the

equator, as Bouguer ha» stated it, the product will be the radius of cur vature there, or half the latus rectum of the greater axis ; and this is to half the less axis in the ratio of the less axis to the greater, that is, as 0-9953467 to 1 ; whence the two axes are 6533820 and 6564366 toises, or 7913 and 7950 English miles : and the differences between the two axes about thirty-seven miles. See Robertson's Navi-

gation, vol. ii. p. 206, &c. Suite des Mem. de 1'Acad. 1718, p. 247, and Maclaurin's Fluxions vol. IT. book i. chap. xiv. And very nearly the same ratio is deduced from the lengths of pendu- lums vibrating in the same time, in different latitudes ; provided it be again allowed, that the meridians are real ellipses, or the earth a true sphernid, which, however, can only take place in the case of a uniform gravity in all parts of the earth. Thus, in the new Petershurgh Acts, for 1788 and 1789, are accounts and calculations of experiments relative to this subject, by M. Krafft. These experiments were made at different times and in various parts of the Russian empire. This gentleman has collected and compared them, and drawn the proper conclusions from them: thus, he infers, that the length x of a pendulum that swings seconds in any given latitude X, and in a temperature of 10° of Reaumur's thermometer may be determined by this equation :

x — 439-178 +2-321 sine 2X, lines of a French foot,

OTX— 39-0043 + 0-206 sine % in English in- ches, in the temperature of 53 of Fahrenheit's thermometer. This expression nearly agrees, not only with all the experiments made on the pen- dulum in Russia, but also with those of Mr. Graham in England, and those of Mr. Lyons in 79° 50′ N. lat., where he found its length to be 431-38 lines. It also shows the augmentation of gravity from the equator to the parallel of a given latitude X : for, putting g for the gravity under the equator, G for that under the pole, and y for that under the latitude X, M. Krafft finds y = (l+ G'0052848 sine 2X) g ; and therefore G =. 1-0052848 g. From this proportion of gravity under different latitudes, the same author infers, that, in case the earth is a homogeneous ellipsoid, its oblateness must be ˆj, instead of ˆ; which ought to be the result of this hypo- thesis ; but on the supposition that the earth is a heterogeneous ellipsoid, he finds its oblateness, as deduced from these experiments, to be ˆ; which agrees with that resulting from the measurement of some of the degrees of the me- ridian. This confirms an observation of M. De la Place, that if the hypothesis of the earth's ho- mogeneity be given up, then the theory, the mea- surement of degrees of latitude, and experiments with the pendulum,

all agree in their result with respect to the oblateness of the earth. See Memoires de 1'Acad. 1783, p. 17. In the Philos. Trans, for 1791, p. 236, Mr. Dalby has given some calculations on measured degrees of the meridian, from whence he infers, that those de- grees measured in middle latitudes, will answer nearly to an ellipsoid whose axes are in the ratio assigned by Newton, viz. that of 230 to 229. And as to the deviations of some of the others, viz. towards the poles and equator, he thinks they are caused by the errors in the observed ce- lestial arcs.

The cosmogony, or knowledge of the original formation of the earth, the materials of which it •was composed, and by what means they were disposed in the order in which we see them, is a subject, which, though perhaps beyond the reach of human sagacity, has exercised the ingenuity of philosophers in all ages. To enter into the

various theories that have been formed upon this subject, would, however, not only swell this article beyond our bounds, but be fatiguing to many readers. As far as human industry has hitherto penetrated, it has been found that the substances of which the earth is composed are neither ranged in a regular series, according to their specific gravities, nor yet thrown together in total disorder, as if by accident or chance. But the depth of the earth, from the surface to the centre, is nearly 4000 miles ; and yet the deepest mine in Europe, that at Cotteberg, in Hungary, is not more than 1000 yards deep; so that little is as yet known of its interior parts. From what has been discovered, however, of those parts which lie most contiguous to our observation, naturalists have compared the structure of the earth to the coats of an onion, or the leaves of a book. And indeed, except in some of those im- mense mountains which have existed from the creation, or at least from the deluge, where the matter, from whatever cause, is more homogene- ous, the earth is found to consist of various strata or layers, which differ according to the circum- stances of climate and situation. The surface generally consists of a confused mixture of de- cayed animal and vegetable substances and earths rudely united together but, upon digging below this surface, the materials of the globe are found arranged in a more regular manner. Heaps of stone are indeed frequently found, which do not consist of layers, but are confused masses of un- equal thickness and are called rocks. The strata are generally extended through a whole country, and perhaps, with some interruptions and varie- ties, through the globe itself. When the country is flat, these extensive bodies are found most re- gular, being in that case nearly parallel to the horizon, though often dipping downwards in a certain angle ; in many places the beds have a wave, as where the country consists of gently waving hills and vales ; and here also they in general dip. In passing over the ground the soil is fqund, perhaps to the extent of a mile, mostly composed of sand ; and perhaps for another it consists chiefly of clay : which is occasioned by the

edges of the different strata lying with an ob- liquity to the horizon. By a similar projection, mountains, or ridges of mountains, are produced which commonly have what is called a back and a face, the former smoother, and the latter more rugged. It is generally found, also, that the ascent is more gradual on the one side of a mountain than on the other; and this is occasioned by the strata, which have risen above the general level of the country, being abruptly broken off. The order, number, situation with respect to the horizon, depth, intersections, fissures, color, con- sistence, &c., of these strata have been consi- dered by Dr. Woodward with great attention. The origin and formation of them all is ascribed by him to the deluge. He supposes that, at that dreadful revolution, all sorts of teriestrial bodies had been dissolved and mixed with the •waters, forming altogether, a chaos or confused mass; and he also supposes, that this mass of ter- restrial particles, intermixed with water, was at length precipitated to the bottom ; and that, in general, according to the order of gravity, the

heaviest sunk first, and the lighter afterwards. Thus were the strata formed of which the earth consists ; which, gradually attaining their solidity and hardness, have ever since continued distinct. The Doctor farther observes, that these sediments were at first all parallel and concentrical; and the surface of the earth formed of them perfectly smooth and regular; but that, in course of time, divers changes happening, from earthquakes, volcanoes, &c., the order and regularity of the strata were disturbed and broken, and thus was the surface of the earth brought to the irregular form in which it is now beheld.

The notion of the magnetism of the earth was started by Gilbert; and Boyle supposes magnetic effluvia moved from one pole to the other. Vol. I. p. 285, 290. Dr. Knight also thinks that the earth may be considered as a great loadstone, whose magnetical parts are disposed in a very strong irregular manner; and that the south pole of the earth is analogous to the north pole in magnets, that is, the pole by which the magne- tical stream enters. See MAGNET. He observes that all the phenomena attending the direction of the needle, in different parts of the earth, in a great measure correspond with what happens to the needle, when placed upon a large terrella; if we make allowances for the different disposi- tions of the magnetical parts, with respect to each other, and consider the south pole of the earth as a north pole with regard to magnetism. The earth might become magnetical by the iron ores it contains, for all iron ores are capable of mag- netism. The globe might, notwithstanding, have remained unmagnetical, unless some cause had existed capable of making that

repellent matter producing magnetism move in a stream through the earth. Now, the doctor thinks that such a cause does exist ; for, if the earth revolves round the sun in an ellipsis, and the south pole of the earth is directed towards the sun, at the time of its descent towards it, a stream of repellent mat- ter will thence be made to enter at the south pole, and issue out at the north. And he sug- gests, that the earth's being in its perihelion in winter may be one reason why magnetism is stronger in this season than in summer. This cause for the earth's magnetism must continue, and perhaps improve it from year to year. Hence, the doctor thinks it probable, that the earth's magnetism has been improving ever since the creation, and that this may be one reason why the use of the compass was not discovered sooner. See Dr. Knight's Attempt to Demonstrate, that all the phenomena in nature may be explained by Attraction and Repulsion, prop. 87.

The magnitude of the earth has been variously determined by different authors, both ancient and modern. The usual way h«s been to measure the length of one degree of the meridian, and multiply it by 360 for the whole circumference. See DEGREE. Diogenes Laertius informs us that Anaximander, who lived about A.A.C. 550, was the first who gave an account of the circum- ference of the sea and land ; and it seems his measure was used by the succeeding mathema- ticians till the time of Eratosthenes. Aristotle (lib. 2. De Ccelo) says, the mathematicians who have attempted to measure the circuit of the

earth make it 40,000 stadia : which it is thought is the number determined by Anaximander. Era- tosthenes, who lived about A. A. C. 200, was the next who undertook this business : which, as Cleomedes relates, he performed by taking the sun's zenith distances, and measuring the distance between two places under the same meridian; by which he deduced for the whole circuit about 250,000 stadia, which Pliny states at 31,500 Roman miles, reckoning each at 1000- paces. But this measure was accounted false by many of the ancient mathematicians, and particularly by Hipparchus, who lived 100 years afterwards, and who added 25,000 stadia to the circuit of Eratosthenes. Possidonius, in the time of Cicero, next measured the earth, viz. by the altitudes of a star, and measuring a part of a meridian ; and he concluded the circumference at 240,000 stadia, according to Cleomedes, but only at 180,000 according to Strabo. Ptolemy, in his Geography, says that Marinus, a celebrated geographer, attempted something of the same kind; and, in lib. i. cap. 3, he mentions, that he himself had tried to perform the business in a way different from any other before him, which was by means of places under different meridians ; but he does not say how much he made the number, for he still made use of the 180,000 which had been found out before him. Snell, professor of mathematics at Leyden, relates, from the Arabian geographer Abulfeda, who lived about A.D. 1300, that about A.D. 800 Al Mai- mon,

*an Arabian king, having collected together some skilful mathematicians, commanded them to find out the circumference of the earth. Ac- cordingly they chose the fields of Mesopotamia, where they measured under the same meridian from north to south, till the pole was depressed one degree lower ; which measure they found equal to fifty-six miles, or fifty-six and a half; so that, according to them, the circuit of the earth is 20,160 or 20,340 miles. It was long after this before any more attempts were made. At length, however, the same professor Snell, about A.D. 1620, with great skill and labor, by measuring large distances between two parallels, found one degree equal to 28,500 perches, each of which is twelve Rhinland feet, amounting to nineteen Dutch miles, and so the whole peri- phery 6840 miles; a mile being, according to him, 1500 perches, or 18,000 Rhinland feet. See his Eratosthenes Batavus. The next who undertook this measurement was Norwood, who, in 1635, by measuring the distance from London to York with a chain, and taking the sun's me- ridian altitude, June llth, O.S., with a sextant, of about five feet radius, found a degree con« tained 367,200 feet, or sixty-nine miles and a half and fourteen poles ; and thence the circum- ference of a great circle of the earth is a little more than 25*036 miles, and the diameter a little more than 7966 miles. See the particulars in his Seaman's Practice. Professor Snell's mea- surement, though very ingenious, and much more accurate than any of the ancients, being still thought liable to small errors, the business was renewed, after Snell's manner, by Picard and other French mathematicians, by the king's com- mand, using a quadrant of 3£ French feet car*

dius ; by which they found a degree contained 342,360 French feet. See Mesure de la Terre, par Picard. M. Cassini, jun. in 1700, renewed the business with a quadrant of ten feet radius for taking the latitude, and another of 3£ feet for taking the angles of the triangles ; and found a degree, from his calculation, containing 57,292 toises, or almost sixty-nine and a half English miles. The results of many other measurements are upon record ; from the mean of all which, the following dimensions are stated by Dr. Hut- ton as near the truth. The circumference 25,000 miles; the diameter 7957| miles; the superficies 198,944,200 square miles; the soli- dity 263,930,000,000 cubic miles. The seas and unknown parts of the earth, by a measure- ment of the best maps, contain 160,522,026 square miles; the inhabited parts 38,922,180; of which Europe contains 4,456,065 ; Asia, 10,768,823; Africa, 9,654,807; and America,

14,110,874.

Tacquet draws some curious inferences, in the form of paradoxes, from the round figure of the earth : as, 1. That if any part of the surface of the earth were quite plane, a man could no more walk upright upon it, than on the side of a mountain. 2. That the traveller's head goes a greater space than his feet ; and a horseman than a footman, as moving in a greater circle. 3. That a vessel, full of water, being raised perpendicu- larly, some of the water will be continually flowing out, yet the vessel still remain full ; and, on the contrary, if a vessel of water be let per- pendicularly down, though nothing flow out, yet it will cease to be full : consequently, there is more water contained in the same vessel at the foot of a mountain than on the top ; because the surface of the water is compressed into a seg- ment of a smaller sphere below than above. Tacquet's Astronomic, lib. i. cap. 2.

EARTHS, in chemistry, are such bodies as possess the following properties : insoluble in water or nearly so ; at least becoming insoluble when combined with carbonic acid : little or no taste or smell ; at least, when combined with carbonic acid : fixed, incombustible, and inca- pable, while pure, of being altered by the fire ; not altered when heated by combustibles : not convertible into metals by all the ordinary me- thods of reduction, or, when reduced by scientific refinements, possessing but an evanescent metallic existence.

Bodies possessing these qualities were ranked, till lately, among the unreducible elements, and the following nine were classified under this be- lief. l.Barytes. 2. Strontites. 3. Lime. 4. Mag- nesia. 5. Alumina, or clay. 6. Silica. 7. Glucina. 8. Zirconia. 9. Yttria. To the above •nine earthy substances, Berzelius has added a tenth, which he calls thorina.

But the brilliant discovery by Sir H. Davy, in 1808, of the metallic bases of potassa, soda, barytes, strontites, and lime, subverted the ancient ideas regarding the earths, and taught us to re- gard them as all belonging, by most probable analogies, to the metallic class. See CHEMISTRY and METALS.

EARTH FLAX. See AMIANTHUS.

EARTH-HOUSE. See ARCHITECTURE, Index.

EARTH NUTS, or GROUND NUTS. See An cms and GROUND NUTS.*

EARTH NUTS, or PIG NUTS. See BUNIUM.

EARTH PUCERONS. See PUCEKON.

An EARTHQUAKE is a sudden and violent con- cussion of the earth, generally accompanied with strange noises under ground, or in the air;

often destroying whole cities at once, throwing down rocks, altering the course of rivers, and produ- cing the most terrible devastations. Though there is hardly any country known, in which shocks of an earthquake have not at some time or other been felt, yet there are some much more subject to them than others. Northern countries, in general, are less subject to earthquakes than those situated near the equator, or in the southern latitudes; but this does not hold universally. The islands of Japan, which are situated pretty far north, are nevertheless, exceedingly liable to these dreadful convulsions. Islands, in general, are also more subject to them than continents ; but neither does this1 hold without exceptions. Particular parts of continents, and particular islands, are more subject to them than others lying in the neighbourhood, and differing little from them in external appearance. Portugal is more subject to earthquakes than Spain, and the latter much more than France; Mexico and Peru more than the other countries of America, and Jamaica more than the other Caribbee islands. Earthquakes are frequent, though not often violent, in Italy ; but in Sicily they are often terribly destructive. Asia Minor has been remarkably subject to them from the remotest antiquity ; and the city of Antioch in particular has suffered more from earthquakes than any other in that country. The same phenomena are said also to occur very frequently in the ex- tremities of Asia, even in very high latitudes.

Although no natural phenomenon is more calculated to impress the human mind with terror, and consequently to be well remembered and taken notice of, than an earthquake, yet the philosophy of them is but lately arrived at any degree of perfection ; and, even at this day, the history of earthquakes is incomplete. The de- struction occasioned by them engrosses the mind too much to admit of philosophical speculations at the time they happen ; the same thing prevents the attentive consideration of the alterations that take place in the atmosphere after the earthquake is over, and which might probably throw some light on the causes which produced it ; and the suddenness of its coming on prevents an exact attention to those slight appearances in the earth or air which, if carefully observed, might serve as warnings to avoid the destruction. From the observations that have been made, however, the following phenomena may be deduced, and reckoned pretty certain. 1. Where there ar» any volcanoes or burning mountains, an earth- quake may reasonably be expected more fre- quently than in other countries. 2. If the volcano has been long quiet, a violent earthquake is to be feared, and vice versa. But to this there are many exceptions. 3. Earthquakes are generally preceded by long droughts, biyˆ they do not always come on as soon as the drought ceases. 4. They are also preceded by electrical

appearances in the air; such are the aurora bo- realis, falling stars, &e. ; but this does not hold universally. 5. A short time before the shock, the sea swells up and makes a great noise ; fountains are troubled, and send forth muddy water ; and the beasts seem frighted, as if sen- sible of an approaching calamity. 6. The air at the time of the shock is generally calm and serene; but afterwards commonly becomes ob- scure and cloudy. 7. The shock conies on with a rumbling noise, sometimes like that of car- riages ; sometimes a rushing noise like wind, and sometimes explosions, like the firing of cannon, are heard. Sometimes the ground heaves

Serpendicularly upwards, and sometimes rolls •om side to side. Sometimes the shock begins with a perpendicular heave, after which the other kind of motion commences. A single shock is but of very short duration, the longest scarcely lasting a minute; but they frequently succeed each other at short intervals for a considerable length of time. 8. During the shock, chasms are made in the earth ; from which sometimes flames, but oftener great quantities of water, are discharged. Flame and smoke are also emitted from places of the earth where no chasms can be perceived. Sometimes these chasms are but small ; but, in violent earthquakes, they are often so large, that whole cities sink down into them at once. 9. The water of the ocean is affected even 'more than the dry land. The sea swells up to a prodigious height; much more than we could suppose it raised by the mere elevation of its bottom by the shock. Sometimes it is divided to a considerable depth, and great quantities of air, flames, and smoke, are dis- charged from it. The same irregular agitations happen to the waters of ponds, lakes, and even rivers. 10. The shock is felt at sea as well as on land. Ships are affected by a sudden stroke, as if they had run aground or struck upon a rock. 11. The effects of earthquakes are not confined to one particular district or country, but often extend to very distant regions ; though no earthquake has yet been known extensive enough te affect the whole globe at one time In those places also where the shock Is not felt on dry land, the irregular agitation of the waters above mentioned, is perceived very remarkably. All these positions are verified by the account of those earthquakes which have been particularly described by witnesses of the best character.

A terrible earthquake happened at Calabria in 1638, which affords an exception to the second general position above laid down. In Italy there had been an eruption of Mount Vesuvius five years before ; and in Sicily there had been an eruption of /Etna only two years before this earthquake The event, however, plainly showed that the cause of the earthquake, whatever it was, had a connexion not only with Mount ./Etna, which lies in the neighbourhood, but also with the volcano of Stromboli, which is sixty

miles distant. ‘ On the 24th of March,’ says Kircher, ‘we launched, in a small boat, from the harbour of Messina, in Sicily, and arrived the same day at the promontory of Pelorus. Our destination was for the city of Euphemia, in Ca- labria ; but, on account of the weather, we were

obliged to continue three days at Peloru?, At length, wearied with the deˆay, we resolved to prosecute our voyage; and, altnough the sea seemed more than usually agitated, yet we ven- tured forward. The gulf of Charybdis, which we approached, seemed whirled round in such a manner as to form a vast hollow, verging to a point in the centre. Proceeding onward, and turning my eyes to Mount /Etna, I saw it cast forth large volumes of smoke, of mountainous si ze, which entirely covered the island, and blotted out even the shores from my view. This, to- gether with the dreadful noise, and the sulphur- ous stench, which was strongly perceived, filled me with apprehensions that some more dreadful calamity was impending. The sea itself seemed to wear a very unusual appearance ; those who have seen a lake in a violent shower of rain, all covered over with bubbles, will have some idea of its agitations. My surprise was still increased by the calmness and serenity of the weather; not a breeze, not a cloud, which might be supposed to put all nature thus into motion. I therefore warned my companion that an earthquake was approaching; and, after some time, making for the shore with all possible diligence, we landed at Tropaea. But we had scarcely arrived at the Jesuits’ college in that city, when our ears we e stunned with a horrid sound, resembling that of an infi- nite number of chariots driven fiercely forward, the wheels rattling, and the thongs cracking. Soon after this, a most dreadful earthquake en- sued, so that the whole tract upon which we stood seemed to vibrate, as if we were in the scale of a balance that continued waving. This motion, however, soon grew more violent ; and, being no longer able to keep my legs, I was thrown prostrate upon the ground. After some time, finding that I remained unhurt amidst the general concussion, I resolved to venture for safety, and running as fast as I could, reached the shore. I did not search long here, till I found the boat in which I had landed, and my companions also. Leaving this seat of desola- tion, we prosecuted our voyage along the coast ; and the next day came to Rochetta, where we landed, although the earth still continued in vio- lent agitations. But we were scarcely arrived at our inn, when we were once more obliged to re- turn to our boat ; and in about half an hour we saw the greatest part of the town, and the inn in which we had set up, dashed to the ground, and burying all its inhabitants beneath its ruins. Proceeding onward in our little vessel, we at length landed at Lopizium, a castle midway be- tween Tropaea and Euphemia, the city to which we were bound. Here, wherever I turned my eyes, nothing but scenes of ruin and horror ap- peared ; towns and castles levelled to the ground ; Stromboli, though at sixty miles*

distance, belch- ing forth flames in an unusual manner, and with a noise which I could distinctly hear. But my attention was quickly turned from more remote to contiguous danger. The rumbling sound o. an approaching earthquake, which by this time we were grown acquainted with, alarmed us for the consequences. It every moment seemed to grow louder, and to approach more near. The place on which we stood began to shake most

dreadfully ; so that, being unable TO stand, my companions and I caught hold of whatever shrub grew next us, and supported ourselves in that manner. After some time, the violent paroxysm ceasing, we again stood up, in order to prose- cute our voyage to Euphemia, which lay within sight. In the mean time, while we were pre- paring for this purpose, I turned my eyes to- wards the city, but could see only a frightfully dark cloud, that seemed to rest upon the place. This the more surprised us, as the weather was so very serene. We waited, therefore, till the cloud was passed : then turning to look for the city, it was totally sunk, and nothing but a dis- mal and putrid lake was to be seen where it stood.'

In the year 1692 an earthquake happened in Jamaica, attended with almost all the terrible phenomena above stated. In two minutes it destroyed the town of Port Royal, and sunk the houses in a gulf of forty /athoms deep. It was at- tended with a hollow rumbling noise, like that of thunder : the streets rose like the waves of the sea, first lifting up the houses, and then imme- diately throwing them down into deep pits. All the wells discharged their waters with the most violent agitation. The sea burst over its bounds, and deluged all that stood in its way. The fissures of the earth were in some places so great, that one of the streets appeared twice as broad as formerly. In many places it opened and closed again, and continued this agitation for some time. Of these openings great numbers might be seen at one time. In some the people were swallowed up at once ; in others, the earth caught them by the middle, and crushed them to death, while others, more fortunate, were swallowed up in one chasm, and thrown out alive from another. Other chasms were large enough to swallow up whole streets ; and others, still more formidable, spouted up immense quan- tities of water, drowning such as the earthquake had spared. The whole was attended with stenches and offensive smells, the noise of falling mountains at a distance, &c. ; and the sky sud- denly turned dull and reddish, like a glowing oven. Yet, greatly as Port Royal suffered, more houses were left standing in it, than on the whole island besides. Scarcely a planting-house, or sugar-house, was left standing in all Jamaica. A great part of them were swallowed up, houses, people, trees, and all in one gap :

in lieu of which, afterwards appeared great pools of water; which, when dried up, left nothing but sand, without any mark that ever tree or plant had grown there- on. Although the shock was so violent, that several houses were thrown some yards out of :heir places, yet they continued stanfling. A Mr. Hopkins had his plantation removed half a mile from the place where it stood, without any con- siderable alteration. All the wells in the island, as well as those of Port Royal, from one fathom to six or seven deep, threw their water out at the top with great violence. Above twelve miles from the sea the earth gaped and spouted out, with a prodigious force, vast quantities of water into the air: yet the greatest violences were among the mountains and rocks; and it is a general opinion, that the nearer the mountains VOL. VII.

the greater the shock ; and that the cause thereof lay among them. Most of the rivers were stop- ped up for twenty- four hours, by the falling of the mountains ; till, swelling up, they formed new channels, tearing up, in their passage, trees, &c. After the great shock, those people who escaped got on board ships in the harbour, where many continued above two months : the shocks all that time being so violent, and coming so thick, sometimes two or three in an hour, ac- companied with frighful noises, like a rushing wind, or a hollow rumbling thunder, with brim- stone blasts, that they durst not come ashou;. The consequence of the earthquake was a general sickness, from the noisome vapors belched forth, which swept away above 3000 people.

In 1693 an earthquake happened in Sicily, which may justly be accounted one of the most terrible of which we have any account. It shook the whole island, and even Naples and Malta shared in the shock. It was impossible for any body in this country to keep on their legs on the dancing earth ; nay, those that lay on the ground were tossed from side to side, as on a rolling bil- low : high walls leaped from their foundations several paces, &c. The mischief it did is amaz- ing; almost all the buildings in the countries were thrown down ; fifty-four cities and towns, besides an incredible number of villages, were either destroyed or greatly damaged. Catania, one of the most famous, ancient, and flourishing cities in the kingdom, had the greatest share in the tragedy. Anthony Serrovita, being on his way thither, at the distance of a few miles, ob- served a black cloud, like night, hovering over the city, when there arose from the mouth of MontGibello great spires of flame, which spread all around. The sea all of a sudden began to roar and rise in billows ; and there was a blow as if all the artillery in the world had been at once discharged. The birds flew about, the cat- tle ran crying, and the horses stopped short, trembling ; so that he and his companions were forced to alight. They were no sooner off, but they were lifted from the ground above two palms ; when looking towards Catania, he with amazement saw nothing but a thick cloud of dust in the air. Of that

magnificent city, there was not the least footstep to be seen. S. Bouajutus assures us, that of 18,900 inhabitants, 18,000 perished therein.

The great earthquake, however, which hap- . pened on the 1st of November, 1755, at Lisbon, affords the clearest example of all the phenomena above mentioned, having been felt violently in many places both on land and at sea, and ex- tended its effects to the waters in many other places where the shocks were not perceived. At Lisbon, in Portugal, its effects were most severe. In 1750 there had been a sensible trembling of the earth felt in this city : for four years after- wards there had been an excessive drought : in- somuch that some springs, formerly very plenti- ful of water, were dried, and totally lost. The predominant winds were north and north-east, accompanied with various, though very small, tremors of the earth. The year 1755 proved very wet and rainy; the summer cooler than usual ; and for forty days before the earthquake

the weather was clear, but not remarkably so. Tne 31st of October the sun was obscured, with a remarkable gloominess in the atmosphere. On the 1st of November, early in the morning, a thick fog arose, which was soon dissipated by the heat of the sun : no wind was stirring, the sea was calm, and the weather was as warm as in June or July in Britain. And thirty-five minutes after nine, without the least warning, except a rumbling noise, like the artificial thunder in our theatres, a most dreadful earthquake shook, by quick but short vibrations, the foundations of all the city, so that many buildings instantly fell. Then,with a pause scarcely perceptible, the nature of the motions was changed, and the houses were tossed from side to side, with a motion like that of a waggon violently driven over rough stones. This second shock laid almost the whole city in ruins, with a prodigious slaughter of the people. The earthquake lasted in all about six minutes. At the moment of its beginning, some persons on the river, nearly a mile from the city, heard their boat make a noise as if it had run aground, though they were then in deep water; and at the same time they saw the houses falling on both sides of the river. The bed of the river Tagus was in many places raised to its surface. Ships were driven from their anchors, and jostled to- gether with great violence ; nor did their masters know whether they were afloat or aground. A large new quay sunk to an unfathomable depth, with several hundreds of people upon it; nor was one of the dead bodies ever found. The bar was at first seen dry from shore to shore ; but suddenly the sea came rolling in like a moun- tain; and about Belem Castle

the water rose fifty feet almost in an instant. About noon there •was another shock, when the walls of several houses that yet remained opened from top to bottom more than a quarter of a yard, and after- wards closed again so exactly, that scarce any mark of the injury was left.

At Colares, about twenty-nine miles from Lis- bon, and two miles from the sea, on the 31st October the weather was clear, and uncommonly warm for the season. About four o'clock P.M. there arose a fog from the sea, which overspread the valleys, a thing very unusual at that saason. Soon after, the wind changing to the east, the fog returned to the sea, collecting itself, and be- coming exceedingly thick. As the fog retired, the sea rose with a prodigious roaring. On the 1st November the day broke with a serene sky, the wind continuing at east ; but about nine o'clock the sun began to grow dim; and about half an hour after was heard a rumbling noise like that of chariots, which increased to such a degree, that it became equal to the explosions of the largest cannon. Immediately a shock of an earthquake was felt, which was quickly succeeded by a second and third ; and at the same time several light flames of fire issued from the moun- tains, resembling the kindling of charcoal. In these three shocks the walls of the buildings moved frorc east to west. In another situation, from whence the sea coast could be discovered, there issued from one of the hills called Fojo, a great quantity of smoke, very thick, but not very black. This increased with the fourth shock,

and afterwards continued to issue in a greater or less degree. Just as the subterraneous rumblings were heard, the smoke burst forth at the Fojo; and the quantity of smoke was always propor- tioned to the noise. On visiting the place from whence the smoke was seen to arise, no signs of fire could be perceived near it. At Oporto, near the mouth of the river Douro, the earthquake began about forty minutes past nine. The sky was very serene, when a dreadful hollow noise, like thunder, or the rattling of coaches at a dis- tance, was heard ; and almost at the same in- stant the earth began to shake. In the space of a minute or two the river rose and fell five or six feet, and continued to do so for four hours. It ran up at first with so much violence, that it broke a ship's hawser. In some parts the river opened, and seemed to discharge vast quantities of air : and the agitation in the sea was so great about a league beyond the bar, that air was sup- posed to have been discharged there also. St. Ube's, a sea-port town about twenty miles south of Lisbon, was entirely swallowed up by the re- peated shocks and the vast surf of the sea. Huge pieces of rock were detached at the same time from the promontory at the west end of the town, which consists of a chain of mountains, containing fine jasper of different colors. The same earthquake was felt over all Spain, except in Catalonia, Arragon, and Valencia. At Aya- monte (near where the Guadiana falls into the Bay of Cadiz), a little before ten o'clock, on the 1st November, the earthquake

was felt ; having been immediately preceded by a hollow rushing noise. Here the shocks continued for fourteen or fifteen minutes, damaged almost all the build- ings, throwing down some, and leaving others irreparably shattered. In little more than half an hour after, the sea and river, with all the canals, overflowed their banks with great violence, laying under water all the coasts of the islands adjacent to the city, and flowing into the streets. The water came on in vast black mountains, white with foam at the top, and demolished more than one-half of a tower at the bar, named De Canala. In the adjacent strands every thing was irrecover- ably lost ; for all that was overflowed sunk, and the beach became a sea, without the least resemblance of what it was before. Many persons perished, for, though they went aboard some vessels, yet part of these foundered ; and others being forced out to sea, the unhappy passengers were so ter- rified, that they threw themselves overboard. The day was serene, and not a breath of wind stirring. At Cadiz, some minutes after 9A.M. the earthquake began, and lasted about five mi- nutes. The water of the cisterns under ground rushed backwards and forwards, so that a great froth arose. At ten minutes after eleven, a wave was seen coming from the sea, at eight miles dis- tance, at least sixty feet higher than usual. It dashed against the west part of the town, which is very rocky. Though these rocks broke a good deal of its force, it at last came upon the city walls, beat in the breast work, and carried pieces of the building, of eight or ten tons weight, to the distance of forty or fifty yards. When the wave was gone, some parts that are deep at low water were left quite dry, for the water returned

with the same violence with which it came. At half an hour after eleven came a second wave, and after that four other remarkable ones ; the first at ten minutes before twelve, the second half an hour before one ; the third ten minutes after one ; and the fourth ten minutes before two. Similar waves, but smaller, and gradually lessen- ing, continued with uncertain intervals till the evening. At Gibraltar the earthquake was not felt till after ten. It began with a tremulous motion of the earth, which lasted about half a minute. Then followed a violent shock : after that a trembling of the earth for five or six se- conds ; then another shock not so violent as the first, which weut off gradually as it began. The whole lasted about two minutes. Some of the guns on the battery were seen to rise, others to sink, the earth having an undulating motion. Most people were seized with giddiness and sickness, and some fell down ; others were stu- pified : and many that were walking or riding felt no motion in the earth, but were sick. The sea rose six feet every fifteen minutes ; and then fell so low, that boats and all the small craft near the shore were left aground, with numbers of

small fish. The flux and reflux lasted till next morning, having decreased gradually from 2 P.M. At Madrid the earthquake came on at the same time as at Gibraltar, and lasted about six minutes. At first every body thought they were seized with a swimming in their heads; and afterwards that the houses were falling. It was not felt in coaches, nor by those who walked on foot, except very slightly ; and no accident hap- pened, except that two lads were killed by the fall of a stone cross from the porch of a church. At Magala a violent shock was felt, the bells rung in the steeples ; the water of a well over- flowed, and as suddenly retired. Saint Lucar (at the mouth of the Guadalquivir) was violently shocked, and the sea broke in and did much mis- chief. At Seville (sixteen leagues above) several houses were shaken down ; the famous tower of the cathedral, La Giralda, opened in the four sides ; and the waters were so violently agitated, that all the vessels in the river were driven ashore.

This earthquake was also felt almost as severely in Africa as it had been in Europe. Great part of Algiers was destroyed. At Arzilla (a town in Fez), about 10 A.M. the sea suddenly rose with such impetuosity, that it lifted up a vessel in the bay, and dropped it with such force on the land, that it was broken to pieces ; and a boat was found two musket shot within land from the sea. At Fez and Mequinez, great numbers of houses fell, and multitudes of people were buried in the ruins. At Morocco, by the falling of houses, many people lost their lives : and about eight leagues from the city the earth opened and swallowed up a village with all the inhabitants, who were known by the name of the Sons of Besumba, to the number of about 0000 or 10,000 persons, together with all their cattle, &c., and, soon after, the earth closed again in the same manner as before. At Sallee, a great deal of damage was done. Near a third part of the houses were overthrown; the waters rushed into the city with great rapidity, and left behind

them great quantities of fish. At Tangier th > earthquake began at 10 A.M. and lasted ten or twelve minutes. The sea came up to the walls (a thing never heard of before), and went down immediately with the same rapidity with which it arose, leaving a great quantity of fish behind it. These commotions were repeated eighteen times, and lasted till 6 P. M. At Tetuan the earthquake began at the same time it did at Tan- gier, but lasted only seven or eight minutes. There were three shocks so extremely violent, that it was feared the whole city would be de- stroyed. In the city of Funchal, in the island of Madeira, a shock of this earthquake was first perceived at thirty-eight minutes past 9 A.M. It commenced with a rumbling noise in the air, like that of empty carriages passing hastily over a stone pavement. The observers felt the floor immediately after move with a tremulous motion, vibrating very quickly. The shock continued more than a minute; during which space the vibrations, though continual, were weakened and increased in force twice very sensibly. The in- crease after

the first remission of the shock was the most intense. The noise in the air accom- panied the shock during the whole of its con- tinuance, and lasted some seconds after the mo- tion of the earth had ceased ; dying away like a peal of distant thunder rolling through the air. At three quarters past ten, the sea, which was quite calm, it being a fine day and no wind stirring, retired suddenly some paces; then rising with a great swell, without the least noise, and as suddenly advancing, overflowed the shore, and entered the city. It rose fifteen feet perpendi- cular above the high water mark, although the tide, which flows there seven feet, was then at half ebb. The water immediately receded ; and after having fluctuated four or five times between high and low water mark, it subsided, and the sea remained calm as before. In the northern part of the island the inundation was more vio- lent, the sea there retiring above 100 paces at first, and suddenly returning, overflowed the shore, forcing open doors, breaking down the walls of several magazines and storehouses, leav- ing great quantities of fish ashore, and in the streets of the village of Machico. All this was the effect of one rising of the sea, for it never afterwards flowed high enough to reach the high- water mark. It continued, however, to fluctuate here much longer before it subsided than at Fun- chal ; and in some places farther to the westward, it was hardly, if at all, perceptible.

Such were the phenomena with which this re- markable earthquake was attended in those places where it was violent. The effects of it, however, reached to an immense distance; and were per- ceived chiefly by the agitations of the waters, or some slight motion of the earth. The utmost boundaries of this earthquake to the south are unknown ; the barbarity of the African nations rendering it impossible to procure any intelli- gence from them, except where the effects were dreadful. On the north, however, we are as- sured, that it reached as far as Norway and Sweden. In the former, the waters of several rivers and lakes were violently agitated. In the latter, shocks were felt in several provinces, and

all the rivers and lakes were strongly agitated, especially in Dalecarlia. The river Dala sud- denly overflowed its banks, and as suddenly retired. At the same time a lake three miles distant, which had no communication with it, bubbled up with great violence. At Fahlun, a town in Dalecarlia, several strong shocks were felt.

Shocks of this great earthquake were felt in several places of France :

commotions of the waters were observed at Angoulesme, Bleville, Havre de Grace, &c. ; but considerable shocks were felt at Bayonne, Bourdeaux, and Lyons. In many places of Germany its effects were also very perceptible, and throughout the duchy of Holstein. In Brandenburg, the water of a lake called Libsec, ebbed and flowed six times in half an hour, with a dreadful noise, the weather oeing then perfectly calm. The same agitation was observed in the waters of the lakes Muplgast and Netzo ; and at this last place they emitted an intolerable stench. In Holland, the agitations were more remarkable. At Alphen on the Rhine, between Leyden and Woerden, in the afternoon of November 1st, the waters were agitated to such a degree, that buoys were broken from their chains, large vessels snapped their cables, smaller ones were thrown out of the water upon the land, and others lying on land were set afloat. At Amsterdam, about 1 1 A. M., the air being per- fectly calm, the waters were suddenly agitated in the canals, so that several boats broke loose ; chandeliers were observed to vibrate in the churches ; but no motion of the earth, or con- cussion of any building was observed. At Ley- den also, between half an hour after 10 and 11 A. M., the waters rose suddenly in the canals, and made several perceptible undulations. Round the island of Corsica, the sea was violently agi- tated, and most of the rivers of the island over- flowed their banks. Throughout the Milanese, shocks were felt; at Turin there was felt a very violent one, and in Switzerland many rivers turned suddenly muddy without rain. The lake of Neufchatel swelled near two feet above its natural level for a few hours. An agitation was also perceived in the waters of the lake of Zurich. At the island of Antigua, there was such a sea without the bar as had not been known in the memory of man; and after it the water at the wharfs, which used to be six feet deep, was not two inches. At Barbadoes, about 2 P. M. the sea ebbed and flowed in an unusual manner ; ran over the wharfs and streets into the houses, and continued thus ebbing and flowing till ten at night.

This agitation of waters was perceived in va- rious parts of Great Britain. At Barlborough, in Derbyshire, between 11 and 12 A. M., in a boat house on the west side of a large body of water called Pibley dam, was heard a surprising and terrible noise ; a large swell of water came in a current from the south, and rose two feet on the sloped dam-head at the north end of the water. It then subsided ; but returned imme- diately, though with less violence. The water was thus agitated for three quarters of an hour; growing gradually weaker and weaker every tune, till it entirely ceased. At Bushbridge and

Cobham in Surry, at Dunsta'\i in Suffolk, in Oxfordshire, Derbyshire, and near the city of Durham, at half after ten in the morning, the like phenomena are recorded to have appeared. At Eyam-bridge, in the Peak of Derby, the overseer of the lead mines, sitting in his writing room about

eleven o'clock, felt a sudden shock, which raised him from his chair, and shook the plaster from the sides of the room. The roof was so violently shaken, that he imagined the engine shaft had been falling in. At this time two miners were employed in carting, or drawing along the drifts of the mines, the ore and other materials to be raised up at the shafts. The drift in which they were working was about 120 yards deep, and the space from one end to the other fifty yards or upwards. The miner at the end of the drift had just loaded his cart, and was drawing it along; when he was surprised by a shock, which terrified him from his employ- ment, and while he was consulting with his fel- low-workmen what means they should take for their safety, they were surprised by a second shock more violent than the first. Another miner who worked about twelve yards below, told them that the violence of the second shock had been so great, that it caused the rocks to grind upon one another. His account was in- terrupted by a third shock, which, after an in- terval of four or five minutes, was succeeded by a fourth; and, about the same space of time after, by a fifth ; none of which were so violent as the second. They heard, after every shock, a loud rumbling in the bowels of the earth, which continued about half a minute, gradually decreas- ing, or seeming to remove to a greater distance. At White Rock in Glamorganshire, about two hours ebb of the tide, and near three quarters after 6 P. M., a vast quantity of water rushed up with a prodigious noise ; floated two large vessels, the least of them above 200 tons ; broke their moorings, drove them across the river, and almost overset them. The whole rise and fall of this extraordinary body of water did not last above ten minutes, nor was it felt in any other part of the river, so that it seemed to have gushed out of the earth at that very place. At Loch Lomond in Scotland, about half an hour after

9 A. M., all of a sudden, without the least gust of wind, the water rose against its banks with great rapidity, but immediately subsided, till it was as low as any person then present had ever seen it in the greatest summer drought. Instantly it returned towards the shore, and in five minutes rose again as high as before. The agitation con- tinued at the same rate till fifteen minutes after

10 A. M. taking five minutes to rise, and as many to subside. From fifteen minutes after ten till eleven, the height of every rise came somewhat short of that immediately preceding, taking five minutes to flow,, and as many to ebb, till the water was entirely settled. The greatest perpen- dicular height of this swell was two feet four inches. A still more remarkable phenomenon attending the earthquake in this lake was, that a large stone lying at some distance from shore, but in water so shallow that it could easily be seen, was forced out of its place in the lake upon dry land, leaving a deep furrow in the

Around all along the way in which it had moved. In Loch Ness, about half an hour after nine, a very great agitation was observed in the water. About ten the river Oich, which runs on the north side of Fort Augustus, into the head of the loch, was observed to swell very much, and run upwards from the loch with a pretty high wave, about two or three feet higher than the ordinary surface. The motion of the wave was against the wind, and it proceeded rapidly for about 200 yards up the river. It then broke on a shallow, and flowed three or four feet on the banks, after which it returned gently to the loch. It conti- nued ebbing and flowing in this manner for about an hour.

In Ireland the effects of this earthquake were confined to remarkable agitations of the water, similar to those already described.

The above are the most striking phenomena with which the earthquake of November 1st, 1755, was attended on the surface of the earth. Those which happened below ground cannot be known but by the changes observed in springs &c., which were in many places very remarkable. At Colares, on the afternoon of the 31st of October, the water of a fountain was greatly decreased : on the morn- ing of the 1st of November it ran very muddy ; and, after the earthquake, returned to its usual state both as to quantity and clearness. On the hills, numbers of rocks were split; and there were several rents in the ground, but none con- siderable. In some places where formerly there had been no water, springs burst forth, which continued to run. Some of the largest moun- tains in Portugal were impetuously shaken as it were from their foundation ; most of them opened at their summits, split and rent in a wonderful manner, and huge masses of them were thrown down into the subjacent valleys. From the rock Alvidar, near the hill Fojo, a kind of parapet was broken ofT, which was thrown up from its foundation into the sea. At Varge, on the river Macaas, during the earth- quake, many springs of water burst forth, some spouted up eighteen or twenty feet, throwing up sand of various colors, which remained on the ground. A mountainous point, seven or eight leagues from St. Ube's, cleft asunder, and threw off several vast masses of rock. In Barbary a large hill was rent in two ; the two halves fell different ways, and ouried two large towns. In another place, a mountain burst open and a stream issued from it as red as blood. At Tan- gier all the four.tains were dried up, so that there was no wster to be had till night. A re- markable change was observed in the medicinal waters of Toplitz, a village in Bohemia famous for its baths. These waters were discovered in 762 ; from which time the principal spring of them had constantly thrown out hot water in the same quantity, and of

the same qua- lity. On the morning of the earthquake, be- tween 11 and 12 A. M. the principal spring cast forth such a quantity of water, that in half an hour all the baths ran over. About half an hour before this, the spring had flowed turbid and muddy ; then, having stopped entirely for a mi- nute, it broke forth again with prodigious vio- lence, driving before it a considerable quantity

of reddish ochre. After this it became clear and flowed as pure as before. It still continues, to do so; but the water is in greater quantity, and hotter, than before the earthquake. At An- goulesme in France, a subterraneous noise like thunder was heard ; and presently after the earth opened, and discharged a torrent of water mixed with red sand. Most of the springs in the neigh- bourhood sunk in such a manner, that for some time they were thought to be quite dry. In Britain no considerable alteration was observed in the earth, except that, near the lead mine in Derbyshire, a cleft was observed about a foot deep, six inches wide, and 150 yards in length.

The shocks of this earthquake were felt most violently at sea. Off St. Lucar, the captain of the Nancy frigate felt his ship so violpntlv shaken, that he thought she had struck the ground ; but, on heaving the lead, found he was in a great depth of water. Captain Clark from Denia, in N. lat. 36° 24', between 9 and 10 A. M., had his ship shaken and strained as if she had struck upon a rock, so that the seams of the deck opened, and the compass was overturned in the binnacle. The master of a vessel bound to the American Islands, being in N. lat. 25°, W. long. 40°, and writing in his cabin, heard a violent noise, as he supposed, in the steerage; and shortly after the ship seemed as if she had been suddenly jerked up and suspended by a rope fastened to the mast head. Coming on deck, he found a violent current crossing the ship's way to the leeward. In about a minute, this current returned with great impetuosity, and, at a league distant, three craggy-pointed rocks appeared throwing up water of various colors resembling fire. These phenomena, in two minutes, ended in a black cloud, which ascended very heavily, and after it had risen above the horizon, no rocks were to be seen. Between 9 and 10 A. M. ano- ther ship, forty leagues west of St. Vincent, was so strongly agitated, that the anchors, which, were lashed, were thrown up. Immediately after this, the ship sunk in the water as low as the main chains. The lead showed a great depth of water, and the line was tinged of a yellow color and smelt of sulphur. The shock lasted about ten minutes, but they felt smaller ones for twenty-four hours. Such were the phenomena of this very remarkable and destructive earth- quake, which extended over a tract of at least 4,000,000 of square miles.

The earthquakes, which in 1783 ruined a great part of Italy and Sicily.though much more confined in their extent, than that of 1755, seem

to have been not at all inferior in violence. Sir William Hamilton thus states their effects, ‘ If on a map of Italy, and with your compass on the scale of Italian miles you measure off twenty-two,’ says this writer, ‘ and then fixing the central point in the city of Op- pido, form a circle, the radii of which will be twenty-two miles ; you will include all the towns, villages, &c., that have been utterly ruined, the spots where the greatest mortality happened, and where there have been the most visible alterations on the face of the earth : then extend your compass on the same scale to seventy-two miles, preserving the same centre, and form another circle, you will include ihe

whole country that has any mark of having been affected by the earthquake.’ A circumstance was remarked in which this earthquake differed from others, viz. that if two towns were situated at an equal distance from this centre, one on the hill, the other on the plain or in a bottom, the latter always suffered most. From the most authentic accounts received by the king of Sicily’s secretary of state, it appeared that the part of Calabria which had been most affected by this calamity, was comprehended between 38° and 39° of N. lat. ; that the greatest force of the earthquake had been exerted from the foot of those mountains of the Apennines called Dijo, Sacro, and Caulene, extending west to the Tyrrhene sea; that the towns, villages and farm-houses nearest these mountains, situated either on the hills or the plain, were totally ruined by the shock of the 5th of February about noon ; that even the more distant towns had been greatly damaged by the subsequent shocks of the earth- quakes, and effectually by those of the 7th, 26th, and 28th, of February, and that of the 1st of March ; that from the first shock of the 5th of February, the earth had been in a continual tre- mor ; and that the motion of the earth had been either whirling like a vortex, horizontal, or by pulsations, or by beatings from the bottom up- wards. This variety of motions increased the apprehensions of the miserable inhabitants, who expected every moment that the earth would open under their feet, and swallow them up. These phenomena had been attended with irregular and furious gusts of wind : and from all these causes, the face of that part of Calabria comprehended between 38° and 39° was entirely altered. See CALABRIA. The number of lives lost was estimated at 32,367 ; but Sir William Hamilton is of opinion, that, including strangers, it could not be less than 40,000. The fate of the inhabi- tants of Scilla was extremely affecting. On the first shock of the earthquake, February 5th, they had fled to the sea-shore, where they hoped for safety ; but in the night a furious wave overflowed the land for three miles, sweeping off in its re- turn 2473 of the inhabitants, among whom

was the prince himself, who were at that time either on the strand, or in boats near the shore.

Sir William Hamilton landed on the 6th of May at Pizzo in Calabria Ultra. This town is situated on a volcanic tufa, and had been greatly damaged by the earthquake of February 5th, but completely ruined by that of the 28th March. He was told that the volcano of Stromboli, which is in full view of the town, though distant about fifty miles, had smoked less and thrown up a smaller quantity of inflamed matter during the earthquakes, than it had done for some years be- fore ; and that slight shocks stil\ continued to be felt. Sir William had soon a convincing proof that this last information was true ; for, sleeping that night in his boat, he was awakened with a smart shock, which seemed to lift up the bottom of the boat, but was not attended with any sub- terraneous noise. From Fizzo he passed through a most beautiful country to Monieleone, formerly interspersed with towns and villages: but at that time they all lay in rums. Monteleone had suf- fured little on the 5th of February, but was greatly damaged on (he 28th of March. The

shocks of the earthquake came with a rumbling noise from the west, beginning usually with the horizontal motion, ana ending with the vorticose, by which last the greatest part of the buildings in this province were destroyed. Before a shock the clouds seemed to be still and motionless, but, immediately after a heavy shower of rain, a shock quickly followed. During a sliock, the peasants told him that the horses and oxen extended their legs wide asunder, that they might not be thrown down ; and that they gave evident signs of being sensible of its approach. 'I myself,' says he, 'have observed, that, in those parts which have suffered most by earthquakes, the braying of an ass, the neighing of a horse, or the cackling of a goose, always drove people out of their barracks, and was the occasion of many Pater Nosters and Ave Marias being repeated, in expectation of a shock.' From Monteleone he descended into the plain, passing through many towns and villages which had been more or less ruined according to their vicinity to the plain. The town of Mileto had not a house left standing. At some distance he saw Soriano, and the Dominican convent, a heap of ruins. Passing through the ruined town of St. Pietro, in his way to Rosarno, he had a distant view of Sicily and the summit of JEtna, which then sent forth a considerable smoke. Just before his arrival at Rosarno, he passed over a swampy plain, in many parts of which he was shown small hollows in the earth, of the shape of an inverted cone. They were covered with sand, as was the soil near them. He was informed that, during the earthquake of February 5th, a fountain of water, mixed with sand, had been driven up from each of these spots to a consi derable height. Before this appearance, he said, the river was dry ; but soon after returned and overflowed its banks. The same phenomenon had been constant with

respect to all other rivers in the plain, during the dreadful shock of the 5th of February. In the other parts where this phe- nomenon had been exhibited, the ground was always low and rushy. Between this place and Rosarno they passed the river Metauro on a strong timber bridge, 700 palms long. By the cracks made in the banks and in the bed of the river by the earthquake, it was quite separated in one part ; and, the level on which the piers were placed having been variously altered, the bridge had taken an undulated form, so that the rail on each side was curiously scolloped ; but, the separated parts having been joined again, it was then passable. Thetown of Rosarno, with the duke of Monteleone's palace, was ent:rely ruined; but the walls remained about six feei high, and were at that time fitting up as barnicks. The only building that remained unhurt at Rosarno was the town gaol, in which were three notorious villains, who would probably have lost their lives if they had remained at liberty. From Ro- sarno Sir William proceeded to Lameana, where he was conducted to the place where two tene- ments were said to have exchanged situations. These were situated in a valley surrounded by high grounds: and the surface of the earth which was removed, had probably been under- mined by rivulets from the mountains, ther plainly discernible on the bare spot, which th

tenements had quitted. Their course down the valley was sufficiently rapid to prove that it had not been a perfect level. The earthquake, he supposes, had opened some depositories of rain water, in the clay hills which surround the valley; which water, mixed with the loose soil, taking its course suddenly through the undermined sur- face, lifting it up with the large olive and mul- bery trees, and a thatched cottage, floated the whole piece of ground, with all its vegetation, about a mile down the valley, where it then stood with most of the trees erect. These two tracts were about a mile long and half a mile broad. ' I travelled,' says he afterwards, 'four days in this plain, in the midst of such misery as cannot be described. The force of the earth- quake there was so great, that all the inhabitants of the towns were buried, alive or dead, in the ruins of their houses in an instant. The town of Polistene was large, but ill situated between two rivers that were subject to overflow: 2100 out of 6000, lost their lives here on the fatal 5th of February.' At Casal Nuova the princess Gerace Grimaldi, with 4000 of her subjects, perished on the same day by the explosion. Some who had been dug alive out of the ruins, told our author, that they had felt their houses fairly lifted up without having the least previous notice. An in- habitant of Casal Nuova was at that moment on a hill overlooking the plain ; when, feeling the shock, and turning round, instead of the town he saw only a thick cloud of white dust like smoke, the natural effect of the

crushing of the buildings, and the mortar flying off. Casal Nuova was so effectually destroyed by this dreadful shock, that neither house nor street remained, but all lay in one confused heap of ruins. Castillace, and Milicusco, were both in the same situation. Terra Nuova, situated in the same plain, stood between two rivers, which, with the torrents from the mountains, nad cut deep and wide chasms in the soft sandy clay soil of which it is composed. At Terra Nuova the ravine is not less than 500 feet deep, and three quarters of a mile broad. ' Here, from the great depth of the ravine, and the vio- lent motion of the earth, two huge portions of the latter, on which a great part of the town stood, which consisted of some hundred houses, had been detached into the ravine, and nearly across it, at» about the distance of half a mile from the place where they formerly,stood ; and what is very extra- ordinary, many of the inhabitants who had taken this singular leap in their houses, were neverthe- less dug out alive, and some unhurt.' Sir Wil- liam's guide there, who was both a priest and physician, having been buried in the ruins of his house by the first shock, was immediately blown out of it and delivered by tho second. There were many well attested instances of the same circumstance having happened in different parts of Calabria. Part of the rock on which the city stood at Oppido was detached, with several houses, into the ravine : ' But that,' says Sir William, 'is a trifling circumstance in compari- son of the very great tracts of land, with planta- tions of vines and olives, which had been de- tached from one side of the ravine to the other, though the distance is more than half a mile. It is well attested, that a countryman, who was

ploughing his field in this neighbourhood with a pair of oxen, was transported with his field and team clear, from one side of a ravine to the other, and that neither he nor his oxen were hurt. Having walked over the ruins of Oppido, I de- scended into the ravine, and examined carefully the whole of it. Here I saw indeed the wonder- ful force of the earthquake, which has produced exactly the same effects as those described in the ravine at Terra Nuova, but on a scale infinitely greater. The enormous masses of the plain, de- tached from each side of the ravine, lie sometimes in confused heaps, forming real mountains, and having stopped the course of two rivers, one of which is very considerable, great lakes are already formed; and if not assisted by nature or art, so as to give the rivers their due course, must infallibly be the cause of a general infection in the neighbourhood. Sometimes I met with a detached piece of the surface of the plain, of many acres- in extent, with the large oaks and olive trees, with corn or lupins under them, growing as well and in as good order at the bottom of the ravine as their companions, from whence they were separated, do on their native soil, at least 500 feet higher, and at the distance of about three quarters of a mile. I met with whole vineyards in the same

order in the bottom, that had likewise taken the same journey. As the banks of the ravine, from whence these pieces came, are now bare and perpendicular, I perceived that the upper soil was a reddish earth, and the under one a sandy white clay, very compact, and like » «oft stone. The impulse these huge masses received, either from the violent motion of the earth alone, or that assisted with the additional one of the vol- canic exhalations set at liberty, seems to have acted with greater force on the lower and more compact stratum, than on the upper cultivated crust: for I constantly observed, where these cultivated lands lay, the under stratum of com- pact clay had been driven some hundred yards farther, and lay in confused blocks ; and, as I observed, many of these blocks were in a cubi- cal form. The under soil, having had a greater impulse, and leaving the upper in its flight, naturally accounts for the order in which the trees, vineyards, and vegetation fell, and remain at present in the bottom of the ravine. In another- part of the bottom of the ravine, there is a mountain composed of the same clay soil, and which was probably a piece of the plain detached by an earthquake at some former period : it is about 250 feet high, and 400 feet diameter at its basis. This mountain, as is well attested, has travelled down the ravine near four miles ; hav- ing been put in motion by the earthquake of the 5th of February. The abundance of rain which fell at that time, the great weight of the fresh detached pieces' of the plain, which I sxv heaped up at the back of it, the nature of the soil, of which it is composed, and particularly its situ ation on a declivity, account well for this phenomenon ; whereas the reports which came to Naples, of a mountain having leaped four miles, had rather the appearance of a miracle. I found some single timber trees also, with a lump of their native soil at their roots, standing upright in the bottom of the ravine, and which

bad been detached from the bottom of the plain above-mentioned. I observed also, that many confused heaps of the loose soil, detached by the earthquake from the plains on each side of the ravine, had actually run like volcanic lava (having probably been assisted by the heavy rain) and produced many effects much resem- bling those of lava, during their course down a great part of the ravine. At Santa Cristina, near Oppido, the like phenomena have been exhibit- ed, and the great force of the earthquake of the 5th of February seems to have been exerted on these parts, and at Casal Nuova, and Terra Nuova.' At Reggio the shock had been much less violent than in the places he had hitherto visited; and 'though there was not a house in it inhabited or habitable, yet' says he, 'after having been several days in the plain, where every building is levelled with the ground, a house with a roof, or a church with a steeple, was to me a new and refreshing

object.' In this place he had an account from the archbishop of the earthquakes of 1779 and 1780, which obliged the inhabitants, in number 16,400, to remain in barracks for several months, without having done any considerable damage to the town. He was informed also, that all animals and birds are in a greater or less degree much more sensible of an approaching shock of an earthquake, than any human being; but that geese, above all, seem to be the soonest and most alarmed at the approach of a shock ; if in the water, they quit it immediately; and will not be driven into it for some time after. The shock which damaged Reggio came on gently, so that the people had time to make their escape, and only 126 were killed ; but in the plain this shock was as instan- taneous as it was violent and destructive. On the 14th of May, Sir William Hamilton left Reggio, and set sail for Messina. He found that the shock, though very violent there, had been far inferior to what he had seen the effects of in other places. Many houses, even in the lower part of the town, were standing, and some little damaged ; but, in the upper and more elevated situations, the earthquakes seemed to have scarce had any effect. 'A strong instance (says our author) of this is, that the convent of Santa Barbara, and that called the Novitiate de Ges- niti, both on an elevated situation, have not a crack in them ; and that the clock of the latter has not been deranged in the least by the earth- quakes, which have afflicted this country for four months past, and which still continue in some degree? Notwithstanding this comparative mild- ness, the shock at Messina had been very terri- ble. All the beautiful front of the palazzate, which extended in very lofty uniform buildings, in the shape of a crescent, had been in some parts totally ruined, in others less ; and there were cracks in the earth of the quay, a part of which had sunk above a foot below' the level of the sea. During the earthquake, fire had been seen to issue from the cracks of the quay ; but our author is persuaded that this was only a vapor charged with electrical fire, or inflamma- ble air. Here also he was informed, that the plionk of the 5th of February had been from the

bottom upwards ; but the subsequent ones gene- rally horizontal or vorticose. A remarkable circumstance was observed at Messina, and through the whole coast of Calabria, which had been most affected by the earthquake, viz. that a small fish called cicirelli, resembling the English white bait, but larger, and which usually lie at the bottom of the sea buried in the sand, had, ever after the commencement of the earthquakes to the time this account was written, continued to be taken near the surface, and that in such abundance as to be common food for the poorest of the people ; whereas before the earthquakes this fish was rare, and reckoned among the greatest delicacies. Fish of all kinds also were taken in greater abundance on these coasts after the commencement of the earthquakes than before; which our author supposes to have been occasioned either by

the volcanic matter having heated the bottom of the sea, or that the continual tremor of the earth had forced them out of their retreats. At Messina, Sir William was told that on the 5th of February, and for three days following, the sea, about a quarter of a mile from the citadel, rose, and boiled in an extraor- dinary manner, and with a most horrid and alarming noise ; the water in other parts of the strait being perfectly calm. 'This,' says he, 'seems to point out exhalations or eruptions from cracks at the bottom of the sea, which may probably have happened during the violence of the earthquakes ; all of which I am convinced have here a volcanic origin.'

In various parts of South America, earth- quakes have been equally tremendous and fatal. It is remarkable that the city of Lima, the capi- tal of Peru, situated in about 12° of S. lat, although scarcely ever visited by tempests, and equally unacquainted with rain as with thunder and lightning, has been singularly exposed to the fury of earthquakes, which happen here so fre- quently, that the inhabitants are under continual apprehensions of being, from their suddenness and violence, buried in the ruins of their own houses: yet these earthquakes, though so sud- den, have their presages; one of the principal of which is a rumbling noise in the bowels of the earth, about a minute before the shocks are felt, that seems to pervade all the adjacent subter- raneous part; this is followed by dismal howl- ings of the dogs, who seem to presage the approaching danger. The beasts of burden passing the streets stop, and by a natural instinct spread open their legs, the better to secure themselves from falling. On these portents, the terrified inhabitants fly from tlieir houses into the streets with such precipitation, that, if it happens in the night, they appear quite naked; the urgency of the danger at once banishing all jsense of delicacy or shame. Thus the streets exhibit such odd and singular figures as might afford matter of diversion, were it possible to be diverted in so terrible a moment. This sudden concourse is accompanied with the cries of chil- dren waked out of their sleep, blended with the lamentations of the women, whose agonising prayers to the saints increase the common fear and confusion. The men are also too much

affected to refrain from giving vent to their terror; so that the whole city exhibits a dreadful scene of consternation and horror.

The earthquakes that have occurred at the capital of Spanish America are very numerous. The first since the establishment of the Spaniards was in 1582; but the damage was much less considerable than in some of the

succeeding. Six years after, Lima was again visited by another earthquake, so dreadful, that it is still solemnly commemorated every year. In 1609 there was a third, which overturned many houses. On the 27th of November, 1630, such prodigious damage was done in the city by an earthquake, that, in acknowledgment of its not having been entirely demolished, a festival on that day is annually celebrated. Twenty-four years afterwards, on the 3rd of November, the most stately edifices in the city, and a great number of houses, were destroyed by a simi- lar attack; but the inhabitants retiring, few of them perished. Another dreadful percussion took place in 1678; but one of the most terrible was on the 28th of October, 1687. It began at four in the morning, and destroyed many of the finest public buildings and houses, in which a great number of the inhabitants perished ; but this was little more than a prelude to what fol- lowed ; for two hours afterwards the shock returned, with such impetuous concussions, that all was laid in ruins, and the inhabitants felt themselves happy in being only spectators of the general devastation by having saved their lives, though with the loss of all their property. During this second shock the sea, retiring con- siderably, and then returning in mountainous waves, entirely overwhelmed Callao, which is at five miles distance from Lima, and all the adja- cent country, together with the miserable inhabi- tants. From this time six other earthquakes were felt at Lima previous to that of 1746, on the 28th of October, at half an hour after ten at night, when the concussions began with such violence, that, in little more than three minutes, the greatest part, if not all the buildings in the city, were destroyed, burying under their ruins those inhabitants who had not made sufficient haste into the streets and squares, the only places of safety. At length the horrible effects of the first shock ceased ; but the tranquillity was of short duration, the concussions swiftly succeeding each other. The fort of Callao also sunk in ruins; but what it suffered from the earthquake in its building was inconsiderable, when compared to the dreadful catastrophe which followed ; for the sea, as is usual on such occasions, receding to a considerable distance, returned in mountainous waves, foaming with the violence of the agitation, and suddenly buried Callao and the neighbouring country in its flood. This, however, was not entirely effected by the first swell of the waves ; for the sea retiring further, returned with still greater impetuosity, and covered both the walls and other buildings of the place; so that what even had escaped the first inundation, was totally overwhelmed by those succeeding mountainous waves. Twenty-three ships and vessels, great and small, were then in the harbour, nineteen of

which were sunk, and the other four, amon" which was a frigate named St. Fermin, were carried by the force of the waves to a consider- able distance up the country. This terrible inundation and earthquake extended to other parts on the coast, and several towns underwent the same fate as the city

of Lima; where the number of persons who perished, within two days after it began, amounted, according to the bodies found, to 1300, beside the maimed and wounded, many of whom lived only a short time in great torture.

Various theories have been invented to explain the phenomena of earthquakes. Till lately, the hypotheses of modern philosophers were much the samewitli those of the ancients. Anaxagoras supposed the cause of earthquakes to be sub- terraneous clouds bursting out into lightning, which shook the vaults that confined them. Others imagined that the arches, which had been weakened by continual subterraneous fires, at length fell in. Others derived these double con- vulsions from the rarefied steam of waters heated by some neighbouring fires (an hypothesis re- vived in modern times by M. Dolomieu) ; whilst some, among whom was Epicurus, and several of the Peripatetics ascribed them to the ignition of certain inflammable exhalations. This last hypothesis has been adopted by many of the most celebrated moderns, as Gassendus, Kircher, Schottos, Varenius, Des Cartes, Du Hamel, Hono- rius, Fabri, &c. The philosopher last mentioned, indeed supposed, that waters prodigiously rare- fied by heat, might sometimes occasion earth- quakes. The others supposed, that there are many and vast cavities under ground, which have a communication with one another : some of which abound with waters; others with va- pors and exhalations, arising from inflammable substances, as nitre, bitumen, sulphur, &c. These combustible exhalations they supposed to be kindled by a subterraneous spark, or by some active flame gliding through a narrow fissure from without, or by the fermentation of some mix- ture ; and when this happens, that they may ne- cessarily produce pulses, tremors, and ruptures at the surface, according to the number and di- versity of the cavities, and the quantity and activity of the inflammable matter. This hypo- thesis they illustrated by a variety of experiments, such as mixtures of iron filings and brimstone buried in the earth, gun-powder confined in pits, &c., by all which a shaking of the earth will be produced. Dr. Woodward suggests another hypothesis. He supposes that the subterraneous heat or'fire, which is continually elevating water out of the abyss, which, according to him, occu- pies the centre of the earth, to furnish rain, dew, springs, and rivers, may be stopped in some particular part. When this obstruction happens, the heat causes a great swelling and commotion in the waters of the abyss ; and at the same time, making the like effort against the superin- cumbent earth, that agitation and concussion of it is occasioned which we call an earthquake. M. Amontons, supposing the atmosphere to be about forty-five miles high, and that the density of the air increases in proportion to the absolute height of the superincumbent column of fluid,

shows that, at the depth of 43,528 fathoms below the surface of the earth, air is but one-fourth lighter than mercury. Now this depth of 43,528 fathoms is only a seventy-fourth part of the se- midiameter of the earth ; and the vast sphere beyond this depth, in diameter 6,45 1 ,538 fathoms, may probably be only filled with air ; which will be here greatly condensed, and much heavier than the heaviest bodies we know in nature. But it is found by experiment, that the more air is compressed, the more does the same degree of heat increase its spring, and the more capable does it render it of a violent effect ; and that, for instance, the degree of heat of boiling water in- creases the spring of the air above what it has in its natural state, in our climate, by a quantity equal to a third of the weight wherewith it is pressed. Whence we may conclude, that a de- gree of heat, which on the surface of the earth will only have a moderate effect, may be capable of a very violent one below. And, as we are certain that there are in nature degrees of heat much greater than that of boiling water, it is possible there may be some whose violence, further increased by the immense weight of the air, may be sufficient to break and overturn this solid orb of 43,528 fathoms; whose weight, compared to that of the included air, would be but a trifle.

In March, 1749, an earthquake was felt at London and several other places in Britain. Dr. Stukely, who had been much engaged in electri- cal experiments, began to suspect that pheno- mena of this kind ought to be attributed not to vapors or fermentations generated in the bowels of the earth, but to electricity. In a paper published by him on this subject, he re- jects all the above hypotheses for the following reasons: — 1. That there is no evidence of any remarkable cavernous structure of the earth ; but that, on the contrary, there is reason to presume that it is in a great measure solid, so as to leave little room for internal changes and fermentations within its substance; nor do coal-pits, when on fire, ever produce any thing resembling an earth- quake. 2. In the earthquake at London, in March 1749, there was no such thing as fire, vapor, smoke, smell, or an eruption of any kind observed, though the shock affected a circuit of fifty miles in diameter. This consideration alone, of the extent of surface shaken by an earthquake, he thought sufficient to overthrow the supposition of its being owing to the expan- sion of any subterraneous vapors. For, as small fire- balls bursting in the air propagate a sulphureous smell to the distance of several miles, it cannot be supposed that so immense a force, acting instantaneously on that compass of ground, should never break the surface of it, nor become discoverable either to the sight or the smell; besides that such a fermentation would require a long time. That such an effect, there- fore, should be produced instantaneously, can be accounted for by electricity only, which acknow- ledges no sensible transition of time, nor

any bounds. 3. If vapors and subterraneous fer- mentations, explosions, and eruptions, were the cause of earthquakes, they would absolutely ruin the whole system of springs and fountains,

wherever they had once been ; which is contrary to fact, even when they have been frequently re- peated. In the earthquake in Asia Minor, A.D. 17, which destroyed thirteen great cities, and shook a mass of earth 300 miles in diameter, nothing suffered but the cities ; neither the springs nor the face of the country being injured 4. That any subterraneous power, sufficient to move thirty miles in diameter, must be lodged at least fifteen or twenty miles below the surface ; and therefore must move an inverted cone of solid earth, the base of which is thirty miles in diame- ter, and the axis fifteen or twenty ; an effect impossible to any natural power whatever, ex- cept electricity. So in Asia Minor, such a cone must have been 300 miles in the diameter of the base, and 200 in the axis : which not all the gun-powder that has been made since the inven- tion of it, much less any vapors generated so far below the surface, could possibly effect. 5. A subterraneous explosion will not account for the manner in which ships, far from land, and even fish, are affected during an earthquake. A subterraneous explosion would only produce a gradual swell, and not give so quick an impulse to the water as would make it feel like a stone. From these circumstances the Doctor concluded, that an earthquake was a shock of the same kind as those in electrical experiments. And this hypothesis was confirmed by the phenomena attending earthquakes, particularly those in 1749 and 1750, which gave rise to this publication. The weather, for five or six months before, had been uncommonly warm ; the wind south and south-west, without ram ; so that the earth must have been in a state peculiarly ready for an electrical shock. Before the earthquake at Lon- don, all vegetables had been uncommonly forward: and electricity is well known to quicken vege- tation. The aurora borealis had been frequent about that time ; and, just before the earthquake, had been twice repeated in such colors as had never been seen before. It had also removed souther'.y, contrary to what is common in Eng- land ; so that the Italians, and those among whom earthquakes were frequent, actually foretold the earthquake. The year had been remarkable for fire-balls, lightning, and coruscations ; and these are meteors of an electrical nature. In such circumstances, nothing, he says, is wanting to produce an earthquake, but the presence of some non-electric body ; which must be had ab extra from the atmosphere. Hence he infers, that if a non-electric cloud discharge its contents upon any part of the earth, in that highly electrical state, an earthquake must necessarily ensue. As the dis- charge from an excited tube produces a commo- tion in the human body, so the discharge of elec- tric matter from many miles of solid earth must needs be an earthquake ; and the snap from the contact, the horrid uncouth noise attending it. Dr. Stukely had been

informed, that, a little before the earthquake, a large and black cloud suddenly covered the atmosphere, which probably occa- sioned the shock by the discharge of a shower. A sound was observed to roll from the Thames towards Temple-Bar before the houses ceased to nod, just as the electrical snap precedes the shock. This noise (which generally precedes

earthquakes) he thought could be accounted for only on electrical principles ; for, in a subterra- neous eruption, the direct contrary would happen. The flames and sulphureous smells, which are sometimes observed in earthquakes, might, he thought, be more easily accounted for on the supposition of their being electrical phenomena, than from their being occasioned by eruptions from the bowels of the earth. So also the sud- denness of the concussion, felt at the same in- stant over such a large surface, and the little damage also which earthquakes generally occa- sion, sufficiently point out what sort of motion it 'is; not a convulsion of the bowels of the earth, but a uniform vibration along its surface, like that of a musical string, or a glass, when rubbed on the edge with one's finger. The cir- cumstance of earthquakes chiefly affecting the sea-coast, places along rivers, &c., is a further argument of their being electrical phenomena. This is illustrated by a particular account of the direction in which the earthquake was conveyed. The last argument he uses is taken from the effects which ithad on persons of weak constitutions, who were, for a day or two after it happened, troubled with pains in the back, rheumatisms, hysterics, and nervous disorders ; just in the same manner as they would have been after an actual electrifica- tion : to some, these disorders proved fatal. The same hypothesis was advanced by Signior Bec- caria, without knowing any thing of Dr. Stukely's discoveries.

*Dr. Priestley, in his History of Electricity, observes, upon these theories, that a more proba- ble hypothesis may be formed out of them both. * Suppose,' says he, ' the electric matter to be ac- cumulated in one part of the surface of the earth, and on account of the dryness of the season not easily to diffuse itself; it may force its way into the higher regions of the air, forming clouds in its passage out of the vapors which float in the atmosphere, and occasion a sudden shower, which may further promote the passage of the fluid. The whole surface, thus unloaded, will receive a concussion, like any other conducting substance, on parting with, or receiving, a quan- tity of the electric fluid. The rushing noise will likewise sweep over the whole extent of the country. And upon this supposition also the fluid, in its discharge from the country, will naturally follow the course of the rivers, and also take the advantage of any eminences to facilitate its*

ascent into the higher regions of the air.' The Dr., making experiments with a battery on the passage of the electrical fluid over different conducting substances, and, among these, over water, — and remarking a resemblance between its passage over the surface of the water, and that which Dr. Stukely supposed to sweep the surface of the earth, when a considerable quantity of it is discharged to the clouds during an earth- quake,— immediately suspected that the water over which it passed, and which was visibly thrown into a tremulous motion, must receive a concussion resembling that which is given to the waves of the sea on such occasions. To try this, he himself, and others present, put their hands Jnto the water at the time that the electric flash passed over its surface ; and they felt a sudden

concussion given to them, exactly like that winch affects ships at sea during an earthquake. This percussion was felt in various parts of the water, but was strongest near the place where the ex- plosion was made. ' This similarity in the effect,' he snys, Ms a considerable evidence of a similarity in the cause. Pleased with this resemblance of the earthquake, I endeavoured to imitate that great natural phenomenon in other respects : and, it being frosty weather, I took a plate of ice, and placed two sticks about three inches high on their ends, so that they would just stand with ease ; and upon another part of the ice I placed a bot- tle, from the cork of which was suspended a brass ball with a fine thread. Then, making the elec- trical flash pass over the surface of the ice, which it did with a very loud report, the nearer pillar fell down, while the more remote stood ; and the ball which had hung nearly still, immediately be- gan to make vibrations about an inch in length, and nearly in a right line from the place of the flash. I afterwards diversified this apparatus, erecting more pillars, and suspending more pen- dulums, &c. ; sometimes upon bladders stretched on the mouth of open vessels, and at other times on wet boards swimming in a vessel of water. This last method seemed to answer the best of any; for the board representing the earth, and the water the sea, the phenomena of them both during an earthquake may be imitated at the same time ; pillars, &c., being erected on the , board, and the electric flash being made to pass either over the board, over the water, or over them both.' The last three hypotheses, though somewhat differing, yet agree in the main ; but, if a particular solution of the phenomena is re- quired, every one of them will be found deficient: nor does the theory of this subject appear to have been sufficiently understood to be worth pursuing much further; we only therefore add that the late Dr. Mason Goode attempts to account for the phenomena of earthquakes by the old theory of subterraneous fires.

That fires to an enormous extent, and pro- duced by various causes, may exist at different depths beneath the surface of the earth, must, he thinks, be clear to every one who has attentively considered the subject : and he

quotes a curious series of experiments, lately conducted by Sir James Hall, to prove that where the substances in which such fires occur lie profound, and are surmounted by a very deep and heavy super- incumbent pressure; and, more especially, where they, at the same time, contain large portions of elastic gases ; the effects of such fires will be pro- digiously greater, and more diversified, than where these circumstances are absent.

Earthquakes and volcanoes may be reckoned, for the most part, as this writer supposes, among the most powerful and extraordinary of these effects; and, as resulting from those chemical changes which the agency of fire principally pro- duces in the interior of the solid crust of the globe. They have, probably, little further con- nexion with electricity, he says, than as causes that occasionally destroy the equilibrium ; for al- though some authors have inferred, from the great velocity with which the shock of an earth- quake is transmitted from place to place, that its

nature must be electrical ; yet others have, with greater probability, attributed the rapid succes- sion of the effects to the operation of a single cause, acting like subterranean heat, at a great distance below the earth's surface. There are, however, some circumstances which indicate such a connexion between the state of the atmos- phere and the approach of an earthquake, as can- not easily be explained by any hypothesis. The shocks of earthquakes, and the eruptions of vol- canoes, continues Dr. G., are in all probability modifications of the effects of one common cause ; the same countries are liable to both of them ; and, where the agitation produced by an earth- quake extends farther than there is any reason to suspect a subterraneous commotion, it is proba- bly propagated through the earth nearly in the same manner as a noise is conveyed through the air. See VOLCANO.

EARWAX. See ANATOMY.

EARWIG, in zoology. See FORFICULA.

EASDALE, a small island of the Hebrides, annexed to Argyleshire, about one mile and a half in diameter. It is famous for having afforded a great quantity of slate (ardesia tegularis). This, indeed, occupies the whole island, which is also traversed in many places with basaltic veins, and thin layers of quartzose and calcareous stones.

EASE, n. s. & v. o.“l Sax. eath ; Goth, azek ;

EASE’FUL, adj. I Fr. aise; Ital. agio, which

EASE’LESS, adj. I Menage derives from Lat.

EASE-LOVING, ! otium, becoming ocium,

EASE MENT, n. s. \ogium, ogeo. Quiet; rest;

EA’SY, adj. tranquillity; peace; re-

EA’SILY, adv. I pose; freedom from pain,

EA’SINESS, n. s. J disturbance, labor, or en- gagement. The verb seems to be derived from the noun, and means to relieve, deliver, or rescue from trouble, disturbance, burden, or pain ; or to alleviate, soothe, or assuage pain or trouble. Easeful and easy are peaceful ; tranquil. Ease- less, the opposite of this. Easement is relief; assistance ; support ; and in law, a service that one neighbour has of another by charter or pre- scription, without profit ; as a way through his ground, a sink, &c.

I seye to you that to Sodom it schal be ester than to that cytee in that day. Wiclif. Luk. 10.

I will ease me of mine adversaries. Isaiah i. 24. The chambers and the stablis werin wide,

And well we werin eiid at the best. Chaucer.

She sodeinly enhaunceth them aloft. And sodeynly mischeueth all the flocke. The head that late lay easily and full soft, In stede of pylows lyeth after on the blocke.

Sir T. More.

The service of God, in the solemn assembly of saints, is a work, though easy, yet withal very weighty, and of great respect. Hooker.

Since the custom of easiness to alter and change laws is so evil, no doubt but to bear a tolerable sore is better than to venture on a dangerous remedy. Id. Complain, queen Margaret, and tell thy grief ;

It shall be eased, if France can yield relief:

Shakspeare. I spy a black, suspicious, threatening cloud,

That will encounter with our glorious sun,

Vre he attain his easeful western bed.

Id. Henry VI.

You may sooner, by imagination, quicken or slack a motion, than raise or cease it; as it is easier to make a dog go slower, than to make him stand still.

Bacon.

Sounds move swiftly, and at great distance ; but they require a medium well disposed, and their trans- mission is easily stopped. Id. Natural History. We should not find her half so brave and bold

To lead it to the wars and to the seas ; To make it suffer watchings, hunger, cold,

When it might feed with plenty, rest with ease.

Davies. Send me some tokens that my hope may live.

Or that my easeless thoughts may sleep and rest.

Donne. Believe me, friends, loud tumults are not laid

With half the easiness that they are raised.

Ben Jonson.

Old friends are best. King James used to call for his old shoes ; they were easiest for his feet. Selden. Bold adventure to discover wide

That dismal world, if any clime perhaps

Might yield them easier habitation. Milton.

Baited with reasons not unpiausible,

Win me into the easy hearted man,

And hug him into snares. Id.

An aching head will be no more eased by wearing a crown than a common night cap. Sir W. Temple.

Is it not to bid defiance to all mankind to condemn their universal opinions

and designs, if, instead of passing your life as well and easily, you resolve to pass it as ill and as miserable as you can ? Id.

Is it a small crime to wound himself by anguish of heart, to deprive himself of all the pleasures, or eases, or enjoyments of life ? Id.

That wLich we call ease is only an indolency, or a freedom from pain. L'Estrangc.

If ere night the gathering clouds we fear, A song will help the beating storm to bear ; And that thou mayest not be too late abroad, Sing, and I'll ease thy shoulders of thy load.

Dry den.

As if with sports my sufferings I could ease. Id.

The seeming easiness of Pindarick verse has made it spread ; but it has not been considered. Id.

The priest on skins of offering takes his ease, And nightly visions in his slumber sees. Id. JEneid.

With such deceits he gained their easy hearts, Too prone to credit his perfidious arts. Id.

Lucan, content with praise, may lie at ease In costly grots and marble palaces. Id. Juvenal.

Help and ease children the best you can ; but by no means bemoan them. Locke.

No body feels pain that he wishes not to be eased of, with a desire equal to that pain, and insepatable from it. Id.

The safest way to secure honesty, is to lay the foundations of it early in liberality, and an easiness to part with to others whatever they have or like them- selves. Id.

Keep your thoughts easy and free, the only temper wherein the mind is capable of receiving new infor- mations. Id.

I think the reason I have assigned hath a great interest in that rest and easiness we enjoy when asleep.

Ray.

Give to him, and he shall but laugh at your easiness ; save his life, but, when you have done, look to your own. South.

Abstruse and mystick thoughts you must express With painful care, but seeming easineis ; For truth shines brightest through the plainest dress,

Roscommujt.

EAS

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EAS

Eatiness and difficulty are relative terms, and relate to some power ; and a thing may be difficult to a weak man, which yet may be easy to the same per- son, when assisted with a greater strength. Tillobon.

We plainly feel whether at this instant we are easy or uneasy, happy or miserable. Smalridge.

Will he for sacrifice our sorrows ease ? And can our tears reverse his firm decrees ? Prior.

Not soon provoked, she easily forgives; And much she suffers, as she much believes. Id.

A marriage of love is pleasant ; a marriage of in- terest easy ; and a marriage where both meet — happy. Addison's Spectator.

When men are easy in their circumstances, they are naturally enemies to innovations. Id. Freeh.

Though he speaks of such medicines as procure sleep, and ease pain, he doth not determine their doses. Arbuthnot.

True ease in writing comes from art, not chance ; As those move easiest who have learned to dance.

Pope.

Praise the eaiy vigour of a line,

Where Denham's strength and Waller's sweetness join. Id.

This plea, under a colour of friendship to religion, invites men to it by the easiness of the terms it offers.

Rogers.

Give yourselves eate from the fatigue of waiting.

Swift.

He has the advantage of a free lodging, and some other easements. Id.

They should be allowed each of them such a rent as would make them eaty. Id.

Men make resolves, and pass into decrees, The motions of the mind ! with how much ease In such resolves, doth passion make a flaw, And bring to nothing, what was raised to law.

Churchill.

It is the fate of mankind, too often, to seem insen- sible of what they may enjoy at the easiest rate.

Sterne.

As men have their particular sins, which do most easily beset them, so they have their particular temp- tations which do most easily overcome them. Mason.

*It is easier to suppress die first desire than to sa- tisfy all that follow it. Franklin**

His scruples thus silenced, Tom felt more at ease, And went with bis comrades the apples to seize ; He blamed and protested, but joined in the plan ; He shared iu the plunder, but pitied the man.

Cowper.

EASEL, among painters, the frame whereon the canvas is laid.

EASEL PIECES are such small pieces, either portraits or landscapes, as are painted on the easel ; thus called to distinguish them from larger pictures drawn on walls, ceilings, &c.

EASING, in the sea-language, signifies the slackening a rope or the like. Thus, to ease the bow-line or sheet, is to let them go slacker ; to ease the helm, is to let the ship go more large, more before the wind, or more larboard.

EAST, n. s. & adj.~\ Sax. east ; Belg. cost ; EAST'ERLY, adj. j Swed. and

Teut. oest ; EAST'ERLING, n. s. [Goth, oust, eyst (austo, EAST'ERN, adj. f to put forth). Mr. Tooke EAST'LAND, ', thinks, from yrst, angry,

EAST'WARD. J enraged, ' those who can-

not pronounce r, usually supplying its place with a ;' but ustoth is Mod. Goth, for the morn, and Gr. cwg, the dawn, much more probable derivations. Minsheu says, ab Heb. KJTIB, & radice Kˆ% to

come or go forth. An easterling is an inhabitant of the east ; eastland, pertaining to that quarter of the world; eastward, in that direction.

He oft in battle vanquished Those spoilful, rich, and swarming Eauterlings.

Spenser.

I would not be the villain that thou thinkust For the whole space that 's in the tyrant's grasp, And the rich East to boot.

Shakspeare. Macbeth.

When the easterly winds or breeies are kept off \y some high mountains from the vallies, whereby the air, wanting motion, doth become exceeding unhealth- ful. Raleigh.

The gorgeous East, with richest hand, Pours on her kings barbarick pearl, and gold.

Milton.

The' angel caught

Our lingering parents, and to the' eastern gate Led them direct. Id.

The moon, which performs its motion swifter than the sun, gets eastward out of his rays, and appears when the sun is set. Browne's Vulgar Errours.

What shall we do, or where direct our flight? Eastward, as far as I could cast my sight, From opening heavens, I saw descending light.

Dry den.

These give us a view of the most easterly, southerly, and westerly parts of England.

Graunt's Bills of Mortality.

They counting forwards towards the East, did allow 180 degrees to the Portugals eastward. Abbot.

The eastern end of the isle rises up in precipices.

Addison.

Melancholy is a kind of demon that haunts our island, and often conveys herself to us in an easterly wind. Id.

Like eastern kings a lazy state they keep. Pope. Water he chuses clear, light, without taste or smell, drawn from springs with an easterly exposition.

Arbuthnot.

Eastern tyrants from the light of heaven Seclude their bosom slaves. Thomson.

Eastern lav there*

Kneels with the native of the furthest west ; And ./Ethiopia spreads abroad the hand, And worships. Cowper.

There mildly dimpling, Ocean's cheek Reflects the tints of many a peak Caught by the laughing tides that lave These Edens of the eastern wave.

Byron. Bride of Abydos.

EAST, one of the four cardinal points of the world ; being that point of the horizon where the sun is seen to rise when in the equinoctial. In Italy, and throughout the Mediterranean, the east wind is called the levante : in Greek avaroXy aud an-i)Xiwr»jc, because it comes from the side of the sun, air' tjXis ; in Latin, eurus.

EA'STER, n. s. Sax. eajtrie; Dut. ooster ; Germ, ostern. The day on which the Christian church commemorates our Saviour's resurrection. See below.

Didst thou not fall out with a taylor for wearing his new doublet before Easter ?

Shaktpeare. Romeo and Juliet.

Victor's nnbrother-like heat towards the Eastern churches, in the controversy about Batter, fomented that difference into a schism. Decay of Piety.

EASTER is called by the Greeks, Hacxa. »nd by the Latins Pascha, from HDS, a Hebrew word signifying passage, applied to the Jewish fe

the passover. It is called Easter in English, from the Saxon goddess Eostre, whose festival was held in April. The Asiatic churches kept their Easter upon the very same day that the Jews ob- served their passover, and others on the first Sun- day after the first full moon in tlie new year. This controversy was determined in the council of Nice ; when it was ordained that Easter should be kept upon one and the same day, which should always be Sunday, in all Christian churches in the world. But though the Chris- tian churches differed as to the time of celebrat- ing Easter, yet they all agreed in showing par- ticular respect and honor to this festival. On this day, prisoners and slaves were set free, and the poor liberally provided for. The eve or vigil of this festival was celebrated with more than ordinary pomp, which continued till midnight, it being a tradition of the church that our Saviour rose a little after midnight; but in the east the vigil lasted till cock-crowing. It was in con- formity to the custom of the Jews, in celebrating their passover on the fourteenth day of the first month, that the primitive fathers ordered that the fourteenth day of the moon, from the calendar new moon which immediately follows the 21st of March, at which time the vernal equinox hap- pened upon that day, should be deemed the pas- chal full moon, and that the Sunday after should be Easter-day ; and it is upon this account that the English rubric has appointed it upon the first Sunday after the first full moon immediately following the 21st day of March. Whence it appears that the true time for celebrating Easter, according to the intention of the council of Nice, was to be the first Sunday after the first full moon following the vernal equinox, or when the sun entered into the first point of Aries ; and this was pope Gregory's principal design in reforming the calendar, to have Easier celebrated according to the determination of the council of Nice. For finding Easter, see CHRONOLOGY.

EASTER ISLAND, an island in the South Sea, thought to have been first discovered, in 1686, by one Davis an Englishman, who called it Davis's Land. It was next visited by commodore Roggewein, a Dutchman, in 1 722, who gave it the name of Easter Island, and published many fabulous accounts concerning the country and its inhabitants. It was also visited by a Spanish ship in 1770, the captain of which gave it the name of St. Carlos. The most authentic account of this .island, however, which has appeared, is that of captain Cook and Mr. Forster, who visited it in March 1770. According to them, the island is about ten or twelve leagues in

circumference, and of a triangular figure ; its greatest length from north-west to south-east is about four leagues, and its greatest breadth two. The hills are so high that they may be seen at the distance of fifteen or sixteen leagues. The north and east points of the island are of a considerable height ; between them, on the south-east side, the shore forms an open bay, in which captain Cook thinks the Dutch anchored in 1722. He himself anchored on the west side of the island, three miles north from the south point. This, he says, is a good road with easterly winds, but a dangerous one when the wind blows from the contrary quarter,

as the other on the south-east side must be with easterly winds : so that there is no good accom- modation to be had for shipping round the whole island. The island is extremely barren ; and bears evident marks not only of a volcanic origin, but of having been not very long ago entirely ruined by an eruption. As they approached the south point, Mr. Forster informs us that they ob- served broken rocks, whose cavernous appear- ance, and black and ferruginous color, seemed to indicate that they had been thrown up by sub- terraneous fire. Two detached rocks lie about a quarter of a mile off this point ; one of them is singular on account of its shape, and represents a huge column ; and both were inhabited by mul- titudes of sea-fowls. On landing, and walking into the country, they found the ground covered with rocks and stones of all sizes, which appeared to have been exposed to a great fire, where they seemed to have acquired a black color, and po- rous texture. Several shrivelled species of grasses grew among these stones, and softened the deso- late appearance of the country. The farther they advanced, the more ruinous the face of the coun- try seemed to be. The roads were intolerably rugged, and filled with heaps of volcanic stones, among which the Europeans could not make their way but with the greatest difficulty ; but the na- tives leaped from one stone to another with sur-prising agility and ease. As they went north- ward along the island, they found the ground still of the same nature ; till at last they met with a large rock of black melted lava, which seemed to contain some iron, and on which was neither soil nor grass, nor any mark of vegetation. Not-withstanding this general barrenness, however, there are several large tracts covered with culti- vated soil, which produces potatoes of a gold yellow color, as sweet as carrots, plantains, and sugar-canes. The soil is a dry hard clay ; and the inhabitants use the grass which grows be- tween the stones in other parts of the island as a manure, and for preserving their vegetables when young from the heat of the sun. The most re- markable curiosity belonging to this island is a number of colossal statues ; of which however very few remain entire. These statues are placed only on the sea-coast. On the east side of the island were seen the ruins of three platforms of stone work, on each of which had stood four of these large statues ; but they were all fallen down from two of them, and one from the third : they

were broken or defaced by the fall. One that had fallen measured fifteen feet in length, and six broad over the shoulders : each statue had on its head a large cylindric stone of a red color, wrought perfectly round. Others were found that measured nearly twenty-seven feet, and up- wards of eight feet over the shoulders ; and a still larger one was seen standing, the shade of which was sufficient to shelter all the party, consisting of nearly fifty persons, from the heat of the sun. The workmanship is rude, but not bad, nor are the features of the face ill formed ; the ears are long, according to the distortion practised in the country, and the bodies have hardly any thing of a human figure about them. The water of this island is in general brackish, there being only one well perfectly fresh, which is towards the east

The people are of a brown color and middle size. In general they are rather thin ; go entirely naked ; and have punctures on their bodies, a custom common to all the inhabitants of the South Sea Islands. Their greatest singularity is the size of their ears, the lobe of which is so stretched out that it almost rests on their shoulder ; and is pierced with a very large hole, capable of admitting four or five fingers with ease. The chief ornaments for their ears are the white down of feathers, and rings made of the leaf of the sugar- cane, which is very elastic, and for this purpose is rolled up like a watch-spring. Some were seen clothed in the same cloth used in Otaheite, tinged of a bright orange color with turmeric. But the most surprising circumstance with re- gard to these people, is the apparent scarcity of women among them. The nicest calculation that could be made never brought the number of in- habitants in this island to be above 700, and of these the females bore no proportion in number to the males. Either they have but few females, or else their women were restrained from appear- ing during the stay of the ship. Those who ap- peared were of a very loose description. The dwellings of the natives are in general low miser- able huts, very small, and scarcely capable of containing ten persons ; but there are some of capacious size, constructed in the form of an in- verted canoe, fifty or sixty feet long, and ten or twelve broad, with several entrances on one side; scarcely any of these exceed three feet in height or width. In addition they have also a kind of subterraneous dwellings. Their canoes are few, and none capable of carrying above four men : in swimming off to vessels, they support them- selves on a matting of sugar-canes, neatly covered with rushes, four feet and a half long by fifteen inches broad. The workmanship is tolerably well executed. – Voyagers have found them ac-

complished thieves. Fish are not plentiful on the coast ; land and sea birds are far from numer- ous; the seal is the only quadruped that has been seen here. Easter Island is thirty-six miles in circumference. Long. 109° 46′ W., lat. 27° 5′ S.

EAST MAIN, that part of Labrador, or New Britain, which extends eastward of James's Bay.

EAST MAIN RIVER, a river of Canada, also called Slude, which enters James's Bay, in lat. 52° 8′ N., long. 78° 45′ W.

EAST INDIA COMPANY. See INDIA.

EASTON, a town of the United States, in Maryland, the capital of Talbot county, formerly named Talbot Court-House. It is seated on the east side of Chesapeake Bay, near the branches of the river Treadhaven, twelve miles above its con- fluence with the Choptank ; five miles south by west of Williamsburgh ; fifty south-east by south of Baltimore, and 11 8 south-west of Philadelphia.

EASTON, or EASTOWN, a township of Massa- chusetts, in Bristol county, famous for its manu- factures in iron and steel, and a manufacture of linseed oil. Easton is seated near the head of the river Raynham, six miles north-west of the town so named, and twelve west of Bridgewater. Also a township of New York, in Washington county ; and a town of Pennsylvania, the capital of 'Northampton county, seated at the mouth of

the Lehigh, on the west side of the Delaware, Twelve miles north-east of Bethlehem, and seventy north of Philadelphia.

EAST RIVER, a river, or channel, of North America, between Long Island and New York Island, and between the state of Connecticut and Long Island. It is often called Long Island Sound. 2. A river of West Florida, which runs into Pensacola Bay, in long. 86° 50′ W., lat. 30° 34′ N. 3. A river of America, which runs into the West River, in the province of Maine, in long. 67° 20′ W., lat. 44° 48′ N.

EAT, v.a.Stv.n. ~\ Sax. eatan ; Belg. EAT'ABLE, adj. & n. s. I cetan ; Goth, elan, or EA'TER, n. s. \itan; Sw.ata; Erse.

EA'TING, ie/'a; Lat. edcrc ; Or.

EA'TING-HOUSE. J tStiv. To take food ;

masticate and swallow food; devour: hence, gene- rally, to gnaw; consume ; wear or waste away ; cor- rode. Eatable means that may be, or any thing

that is, eaten.

And alle eeten the same spiritual mete, and alle drunken the same spiritual drynk, thei drunken of the same spyritual stoon folewynge hem, and that stoon was Crist. Widif. 1 Cur. x.

Locusts shall eat the residue of that which is escapr-d from the hail, and shall eat every tree which groweth.

Exodus x. 4.

The righteous eateth to the satisfying of his soul, but the belly of the wicked shall want.

Prov. xiii. 25.

And will not suffren hem by non assent, Neyther to hen yberied ne ybrent, But maketh houndes ete hem in despyte.

Chaucer. Cant. Tales.

And as of old time God decreed his wondrous be- nefits of the deliverance of his people, to be kept in memory by the eating of the passover, with his rites and ceremonies. Homilies of the Church.

Thou art past the tyrant's stroke ; Care no more to cloath and eat.

Shakspeare. Cynibeline. Thou best of gold art worst of gold ; Other less fine in carat is more precious, Preserving life in medicine potable : But thou, most fine, most Honored, most renowned, Hast eat thy bearer up. Id. Henry IV.

A knave, a rascal, an eater of broken meats. Id. The difference between a rich man and a poor man is this — the former eats when he pleases, and the latter when he can get it. Sir W. Raleigh.

Other states cannot be accused for not staying for the first blow, or for not accepting Polyphemus's courtesy, to be the last that shall be eaten up.

Bacon's War with Spain.

The Caribees and the cannibal, almost all, are eaters of man's flesh. Abbot's Description of the World.

They cannot hold, but burst out those words which afterwards they are forced to eat.

Hahewill. On Providence.

As if the lotus grew only here, the virtue of whose fruit is to cause the eaters an oblivion of all others oils.

Howeil.

As riches increase, says Solomon, so do the mouths that devour them. The master's mouth has no more than before. The owner, methinks, is like Oenus in the fable, who is perpetually winding a rope of hay, and an ass at the end perpetually eating it. Cowley.

If the taste of this fruit maketh the eaters like gods, why remainest thou a beast?

Browne9 Vulgar Errourt. Eating cares, Lydian airs. Milton.*

Credit were not to be lost By a brave knight-errant of the post, That eats, perfidiously, his word, And swears his ears through a two inch board.

Hudibras.

They entail a secret curse upon their estates, which does either insensibly waste and consume, or eat out the heart and comfort of it. Tillotson.

An hungry traveller stept into an eating -haute for his dinner. L' Estrange.

If you all sorts of persons would engage, Suit well your eatable to every age.*

King's Art of Cookery.

EATH, adj. & adv. Sax. ea$. Easy ; not difficult. An old word.

EATON, or ETON, a town of England, in Buckinghamshire. ' See ETON.

EATAW, a small river of South Carolina, which runs into the Santee. Near the source of this river, in 1781, a battle was fought between the British, under colonel Stuart, and the Ame- ricans under general Greene ; in which the former had 500 men killed and wounded ; both sides claiming the victory.

EAU DE COLOGNE, or water of Cologne, a fragrant water, made originally, and in most perfection, in Cologne. Formerly many won- derful powers were ascribed to this water, but it was probably never so much in demand as at present, in Europe and America, and number- less recipes have been given for its manufacture. It was invented by a person named Farina, in whose family the secret, as they say, continues to be preserved, since chemistry has not been able, as yet, to give the analysis of it. It is imitated, however, every whet e. The consumption of this perfume has increased much ever since the seven years' war ; and there exist, at present, fifteen manufactories of it in Cologne, which produce several millions of bottles yearly ; much, also, is manufactured at Paris, in Saxony, and other places. One of the many recipes to make eau de Cologne is the following : — Alcohol, or spirit of wine, at 30°, two pints. Oleum neroli

de cedro de cedrat cort aurant citri bergamot

•24 drops.

rosmann

Seed of small cardamum, two drachms.

Distil it in the Mary-bath, until three-fourths of

the alcohol have evaporated.

EAU DE LUCE, a fragrant alkaline liquor which was some years ago in great repute. We are told by Mr. Nicholson, in his Journal, that, having learned from a philosophical friend that the com- mon recipes for making this compound did not succeed, and that the use of mastic in it had hitherto been kept a secret, he made the follow- ing experiments to procure a good eau de luce. ' One dram of the rectified oil of amber was dissolved in four ounces of the strongest ardent spirit of the shops ; its specific gravity being -840 at 60° of Fahrenheit. A portion of the clear spirit was poured upon a larger quantity of fine powdered mastic than it was judged could be taken up. This was occasionally agitated

without heat ; by which means the gum resin was for the most part gradually dissolved. One part of the oily solution was poured in'.o a phial, and to this was added one part of the solution of mastic. No opacity or other change appeared. Four parts of strong caustic volatile alkali were then poured in and immediately shaken. The fluid was of a dense opaque white color, afford- ing a slight ruddy tinge when the light was seen through a thin portion of it. In a second mix- ture, four parts of the alkali were added to one of the solution of mastic ; it appeared of a less dense and more yellowish white than the former mixture. More of the gum resinous

solution was then poured in ; but it still appeared less opaque than that mixture. It was ruddy by transmitted light. The last experiment was repeated with the oily solution instead of that of mastic. The white was much less dense than either of the foregoing compounds, and the requi- site opacity was not given by augmenting the dose of the oily solution. No ruddiness nor other remarkable appearance was seen by transmitted light. These mixtures were left at repose for two days; no separation appeared in either of the compounds containing mastic ; the com- pound, consisting of the oily solution and alkali, became paler by the separation of a cream at the top.' In a subsequent number of the same work we find the following recipe by one of the author's correspondents, who had frequently proved its value by experience. ' Digest ten or twelve grains of the whitest pieces of mastic, selected for this purpose and powdered, in two ounces of alcohol; and, when nearly dissolved, add twenty grains of elemi. When both the resins are dissolved, add ten or fifteen drops of rectified oil of amber, and fifteen or twenty of essence of bergamot: shake the whole well together, and let the faeces subside. The solu- tion will be of a pale amber color. It is to be added in very small portions to the best aqua ammoniae purse, until it assumes a milky white- ness, shaking the phial well after each addition, as directed by Macquer. The strength and causticity of the ammoniac are of essential con- sequence. If, upon the addition of the first drop or two of the tincture, a dense opaque coagulated precipitate is formed, not much unlike that which appears on dropping a solu- tion of silver into water slightly impregnated with common salt, it is too strong, and must be diluted with alcohol. A considerable proportion of the tincture, perhaps one to four, ought to be employed to give the liquor the proper degree of opacity.'*

EAVES, n. ». plur. ~\ Sax. efese, or epese ;

EAVES'DROP, v. n. > the descents ordescend-

EAVES'DROPPER, n.s.j ing parts of a thing:

old Fr. aive, eve, was also water. The edges ot

a roof; and, colloquially, the water that drops

from them. To eavesdrop is likewise to catch

what comes from the eaves, or to listen under

windows.

Under our tents 111 play the eavesdropper, To hear if any mean to shrink from me.

Shakspeare.

His tears run clown his beard like winter drops From face of reeds. Id. Temptttt*

EBB

657

EBE

Every night he comes

With music of all sorts, and songs composed To her'unworthiness : it nothing steads us To chide him from our eaves ; for he persists, As if his life lay on't.

Id. All's Well that Ends Well. If in the beginning of winter the drops of th-J eaves of houses come more slowly down than they use, it portendeth a hard and frosty winter. Bacon.

Ushered with a shower still, When the gust hath blown his fill, Ending on the rustling leaves With minute drops from off the eaves. Milton. The icicles hang down from the eavei of houses.

Woodward.

EAVES DROPPERS are called evil members of the commonwealth, in the stat. of West. 1. c. 33. They may be punished either in the court-leet by way of presentment and fine, or in the quarter- sessions by indictment and binding to good behaviour.

EBAL, in ancient geography, a mountain of Samaria, near Shechem. Between it and Geri- zim on the south side of it, there is a valley of 200 paces. On Ebal and Gerizim (the former extremely bare and barren, and the latter extremely verdant and fertile), the Hebrews were ranked, six tribes on each, who echoed Amen to the blessings and curses pronounced by the priests in the intervening valley. Deut. xxvii, xxviii. Josh. viii. 30, &c.

EBB, n. s. & v. n. } Belg. ebbe; Sax. ebba ; EBB'ING, n. s. \ Swed. ebb ; Fr. ebe, de- scent. The reflux of the tide ; and as a verb to flow back, as the tide toward the sea. Hence, metaphorically, decline; decay; deterioration: and to fall off; decline; or waste away. Thou pinchist at my mutabilitie,

For I the lent a droppe of my richesse, And now me likith to withdrawin me.

Why shouldist thou my roialtie oppresse ? The se maie ebbe and flowin more and less,?, The welkin hath might to shine, rain, and haile.

Chaucer.

You have finished all the war, and brought all tilings to that low ebb which you speak of.

Spenser on Ireland. Though my tide of blood Hath proudly flowed in vanity till now, Now it doth turn and ebb back to the sea.

Shakspeare.

This tide of man's life, after it once turneth and declineth, ever runneth with a perpetual ebb and fall- ing stream, but never floweth again.

Raleigh's History.

Since such Love's natural station is, may still My love descend, and journeying down the hill ; Not panting after growing beauties ; so I shall ebb on with them who homeward go.

• *Donne.*

The clear sun on his wide watery glass Gazed hot, and of the fresh wave largely drew, As after thirst ; which made their flowing shrink From standing lake to tripping ebb, that stole With soft foot towards the deep. Milton.

Then with so swift an ebb the flood drove backward, It slipt from underneath the scaly herd.

Dryden's All for Love.

From thence the tide of fortune left their shore, And ebb'd much faster than it flowed before.

Id. JEneid.

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Thus all the treasure of our flowing years,

Our ebb of life for ever takes away. Hoscommon But oh, he ebbs! the smiling waves decay !

For ever lovely stream, for ever stay ! Halifax.

Hither the seas at stated times resort, And shove the loaden vessels into port ; Then with a gentle ebb retire again, And render back their cargo to the main.

Addiion on liulij. What is it he aspires to ? Is it not this ? To shed the slow remains, His last poor ebb of blood in your defence.

Id. Goto.

I do not think a philosopher obliged to account for every phenomenon in nature, or drown himself with Aristotle for not being able to solve the ebbing and flowing of the tide. Swift.

Games of chance are traps to catch school boy novices and gaping country squires, who begin with a guinea, and end with a mortgage ; whilst the old stagers in the game keep their passions in check, watch the ebb and flow of fortune, till the booby they are pillaging sees his acres melt at every cast.

Cumberland.

EBBSFLEET, anciently Wyppedsfleet, a hamlet of the Isle of Thanet, Kent, at the mouth of the river Stour, where the Saxons landed in 447 under Hengist and Horsa. In 463 a cele- brated battle was fought in this vicinity

between the Britons and Saxons, when the former were defeated. The Saxon leader Wypped, who is said to have fallen on this occasion, gave name to this hamlet.

EBENEZER, (Heb. the stone of help), the name of a field where the Philistines defeated the Hebrews, and seized on the sacred ark ; and where afterwards, at Samuel's request, God dis- comfited the Philistines with thunder and hail, and gave the Hebrews a noted deliverance. On this occasion Samuel set up a stone, and gave it this designation, to mark that the Lord had helped them ; and from it the whole field adja- cent received its name. It is said to have been about forty miles south-west of Shiloh. 1 Sam. iv. 1., and vii. 12.

EBENEZER, a town of the United States, in Georgia, the capital of Effingham county, seated on the south-west bank of Savannah River. Twenty-five miles N.N.W. of Savannah, seventy- five south-east of Louisville, and 860 south-west of Philadelphia.

EBENUS, the ebony tree. See AMERIMN UM.

EBERSBERG, a town of Upper Austria, situated on the river, and in the circle of the Traun, which is here divided into many branches, and crossed by a bridge of great length. Here is a castle said to have been built in the yeai 900 ; and in the neighbourhood was fought a severe action between the Austrians and French in May, 1809. It is eight miles north-west of Ens.

EBERSDORF, a small town of Lower Aus- tria, on the right bank of the Danube, where Buonaparte had his head-quarters previous to the battle of Aspern in May, 1809. Inhabitants 1 1 65. Eight miles E. S. E. of Vienna.

EBERSTHAL, or EBERSTAL, a town of Ger- many, in the circle of the Lower Rhine, and electorate of Mentz, two miles south of Krau- theim; but on which side of the Chirac, and

consequently whether annexed to the French republic or not, we cannot discover, as neither of these towns is to be found in the maps.

EBION, the author of the heresy of the Ebionires, was a disciple of

Cerinthus and his successor. To the errors of his master, he had added new opinions of his own. He began his preaching in Judea ; he taught in Asia, and even at Rome. His tenets infected the Isle of Cyprus. St. John opposed both Cerinthus and Ebion in Asia; and it is thought that he wrote his gospel, in the year 97, particularly against this heresy.

EBIONITES, ancient heretics, who rose in the very first age of the church, and formed themselves into a sect in the second century, denying the divinity of Jesus Christ. Epipha- nius gives a long and exact account of the origin of the Ebionites, making them to have risen after the destruction of Jerusalem, when the first Christians, called Nazarenes, went out of it to live at Pella. The Ebionites seem to have been a branch of Nazarenes: Origen distinguishes two kinds of Ebionites ; the one believing that Jesus Christ was born of a virgin, and the other that he was born after the manner of other men. The first were orthodox in every thing, except that to the Christian doctrine they joined the ceremonies of the Jewish law, with the Jews, Samaritans, and Nazarenes; together with the traditions of the Pharisees. They dif- fered from the Nazarenes, chiefly as to what regards the authority of the sacred writings; for the Nazarenes received all for scripture contained in the Jewish canon; whereas the Ebionites rejected all the prophets, and all St. Paul's epistles. They received nothing of the Old Testament but the Pentateuch; which should intimate them to have descended rather from the Samaritans than from the Jews. They agreed with the Nazarenes in using the Hebrew gospel of St. Matthew, othenvise called the Gospel of the Twelve Apostles; but they had corrupted their copy in many places ; and, particularly, had left out the genealogy of our Saviour, which was preserved entire in that of the Nazarenes, and even in those used by the Cerinthians. Some, however, have made this gospel canonical, and of greater value than our present Greek gospel of St. Matthew : See NAZARENES. Besides the Hebrew gospel of St. Matthew, the Ebionites had adopted several other books, under the names of St. James, John, and the other apos- tles : they also made use of the Travels of St. Peter, which are supposed to have been written by St. Clement.

EB'ON, n. s. > Also formerly written, EBEN.

EB'ONY, 5 Lat. ebenus ; Fr. ebene, of Gr.

'

f, ab Heb. 73 n, Minsheu. A'particularly hard, black, and heavy wood : hence any thing remarkably black or dark.

If the wood be very hard, as ebony, or lignum vitae, they are to turn, they use not the same tools they do for soft woods. Moxon's Meeh. Exer.

Oft by the winds extinct the signal lies, Ere night has half rolled round her ebon throne.

Gay.

And now the sorceress bares her shrivelled hand, And circles thrice in air her ebon wand ;

Flushed with new life descending statues talk, The pliant marble softening as they walk. Darwin. There was no want of lofty mirrors, and

The tables most of ebony inlaid

With mo:her-of-pearl or ivory, stood at hand,

Or were of tortoise-shell or rare woods made.

Byron.

EBONY. There are divers kinds of ebony : the most usual among us are black, red, and green, but authors and travellers give very dif- ferent accounts of the tree that yields this valu- able wood. The real tree, however, from which it is obtained is the AMERIMNUM EBENUS of the West Indies, which see Black ebony is much preferred to that of other colors. The best is a jet black, free of veins and rind, very massive, astringent, and of an acrid pungent taste. Its rind, infused in water, is said to purge pituita, and cure venereal disorders; whence Matthiolus took guaiacum for a sort of ebony. It yields an agreeable perfume when laid on burning coals : when green,' it readily takes fire from the abun- dance of its oil. The Indians make statues of their gods, and sceptres for their princes, of this wood. It was first brought to Rome by Pom- pey, after he had subdued Mithridates. It is now much less used among us than anciently ; since the discovery of so many ways of giving other harcj woods a black color. The cabinet- makers, inlayers, &c., make pear-tree and other woods pass for ebony, by giving them a black color, by a few washes of a hot decoction of galls; and when dry, adding ink, and polishing them with a stiff brush, and a little hot wax.

EBORACUM, in ancient geography, a famous city of the Brigantes in Britain, now called York. The emperors Septimus Severus and Constantius Chlorus resided and died in it. It was a Roman colony, and the station of the Legio Sexta Victrix. Its name in the ancient British language is Caer-frock, or Caer-effroc.

EBRBUHARITES, a sect among the Ma- hommedans, so named from their founder Ebrbuhar, a disciple of Naschibendi. They pro- fess great sanctity,

with a total dereliction of all worldly things; yet they are regarded by the other Mussulmans, as little better than heretics, because they do not go in pilgrimage to Mecca. From this labor they excuse themselves, by pretending that the purity of their souls, their sublime con- templations, extacies, &c., show them Mecca and Mahomet's tomb without stirring from their cells.

EBRI'ETY, n. s. \ Fr. ebriete ; Ital. ebrieta ;

EBRIOS'ITY, n. s. S Lat. ebrietas. Drunken- ness. Ebiiosity, Lat. ebriositas, is continual drunkenness.

That religion which excuseth Noah in surprisal, will neither acquit ebriosity nor ebriety in their in- tended perversion. ' Browne. Here laughs Ebriety more fell than arms,

And thins the nations with her fatal charms, With Gout, and Hydrops groaning in her train,

And cofd Debility, and grinning Pain. Darwin.

EBRO, a large river of Spain, the ancient Iberus, which rises in the mountains of Santillane, on the confines of Old Castile, runs through Biscay and Arragon, passes by Saragossa, and, continuing its course through Catalonia, falls

with great rapidity into the Mediterranean, about twenty miles below Tortosa. Of its two mouths

Whatsoever affairs pass such a man's hands, he crooketh them to his own ends ; which must needs be

the one to the south is artificial, and of easier often eccenirick to the ends of h'is master.

entrance than the other, which is nearly choked with mud. The stream is in general very rapid,

Bacnn'a Essay. Astronomers, to solve the phenomena, framed to*

and little adapted for navigation, being full of their conceits eccenirickt and epicycles, and a wonder- rocks and shoals : it is, however, useful in sup-

fuLe,ngi?e, of orbs'

_1 .1 in, I 1 HP HlliTP at Kio

plying the great canals of Arragon with water. Its bed is said to have been less obstructed in ancient times.

EBUL'LIENCY, n. s.) Lat.et«»i&,of bulla, EBUL'LIENT, adj. > a bubble. Rising or

EBULLI'TION, n. s. j boiling up in bub- bles. State of effervescence or swelling

D

The dissolution of gold and silver disagree ; so that Wi their mixture there is great ebullition, darkness, and, m the end, a precipitation of a black powder. Bacon.

Iron, in aqua fortis, will fall into ebullition with noise and emication ; as also a crasse and fumid exha- lation, caused from the combat of the sulphur of iron with the acid and nitrous spirits of aqua fortis.

Browne's Vulgar Errours.

When aqua fortis, or spirit of vitriol, poured upon filings of iron, dissolves the filings with a great heat and ebullition, is not the heat and ebullition effected by a violent motion of the parts ; and does not their motion argue, that the acid paits of the liquor rush towards the parts of the metal with violence, and run forcibly into its pores, till they get between its outmost particles and the main mass of the metal ? Newton.

A violent cold, as well as heat, may be produced by this ebullition, for if sal ammoniack, or any pure volatile alkali, dissolved in water, be mixed with an acid, an ebullition, with a greater degree of cold, 'will ensue. Arbuthnot on Aliments.

Song second was the ebullition of that passion which ended the forementioned school business. Burn.*

EBUSUS, in ancient geography, the greater of the two islands called Pityusae, in the Mediter- ranean, near the east coast of Spain, south-west

of Majorca. Famous for its pastures and for strictness, figs. New called Ivica. '

ECASTOR, or MECASTOR, in antiquity, an oath wherein Castor was

invoked. It was a cus- tom for men never to swear by Castor, nor the women by Pollux.

ECBATANA, in ancient geography, the royal residence and capital of Media, built by Deioces king of the Medes, according to Herodotus : Pliny says, by Seleucus ; but that could not be, because it is mentioned by Demosthenes. It was situated on a gentle declivity, twelve stadia from Mount Orontes, amd was in compass 150 stadia. Here stood the royal treasury and tombs. It was an open unwalled town, but had a very strong citadel, encompassed with seven walls within, and rising above each other. The extent of the utmost was equal to the whole extent of Athens, according to Herodotus; the situation favoring this construction, as being a gentle ascent, and each wall was of a different color.

ECCENTRIC, adj. & n. s.} Fr. eccentri-

ECCEN'TRICAL, f^tie; Ital. Span.

ECCENTRI'CITY, n. s.) and Port, eccen-

i ico ; Lat. eccentricus ; Gr. ticK^vrpwcoc, i. e. etc, » xtra, et Ktvrpov, centrum. Without, or deviat- ing from, a centre ; hence, metaphorically, irre- gular ; anomalous. Eccentricity is oddity ; habit of deviation from established rules or methods.

Bac

The duke at his return from his eccentricity, for so I account favorites abroad, met no good news.

Walton.

This motion, like others of the times, seems ecccit- trich and irregular. Kiny Charles.

lu regard of eccentricity, and the epicycle wherein it moveth, the motion of the moon is unequal. Bruwnc. They build, unbuild, contrive,

To save appearances : they gird the sphere

With centrick and eccentrick, scribbled o'er.

Cycle, and epicycle, orb in orb. Milton.

By reason of the sun's eccentricity to the earth, and obliquity to the equator, he appears to us to move un- equally. Holder.

A character of an eccentrick virtue, is the more exact image of human life, because it is not wholly exempted from its frailties. Dryden.

Then from whate'er we can to sense produce, Common and plain, or wondrous and abstruse, From nature's constant or eccentric laws, The thoughtful soul this general inference draws, That an effect must presuppose a cause. Prior.

How few are found with real talents blest ! Fewer with nature's gifts contented rest, Man from his sphere eccentric starts astray j All hunt for fame, but most mistake the way.

Churchill.

Whence is it that planets 'move all one and the same way in orbs concentrick, while comets move all manner of ways in orbs very eecentrick ?

Newton's Opticks.

Eccentricity of the earth is the distance between the focus and the centre of the earth's elliptick orbit.

Harris.

But on examining it more nearly, you find much eccentricity and confusion. It is not a monarchy in

Burke.

Try now the merits of this blessed exchange Of modest truth for wit's eccentric range. Cowper.

ECCHELLENSIS (Abraham), a learned Ma- ronite, employed in the Paris edition of the Polyglott Bible. He, however, quarrelled with two of his coadjutors, and was then employed in making an Arabic translation of the Scriptures, at Rome. While he was professor of the Oriental languages at Rome, he was chosen by the great duke Ferdinand II., to translate from Arabic into Latin, the fifth, sixth, arid seventh of Apollonius's Conies, in which he was assisted by John Alphonso Borelli, who added commentaries to them. He died at Rome, in 1664.

*ECCHYMO'SIS, n.s. EKXv/*w*

Ecchymosii may be defined an extravasation of the blood in or under the skin, the skin remaining whole. Laxations are accompanied with tumour

and ecchy- mosit. Witeman.

ECCHYMOSIS ; from texvw, to pour out, or from t£, out of, and \vpoc, juice ; an effusion of humors from their respective vessels under the in- teguments ; or, as Paulus JEgineta says, ‘ When the flesh is bruised by the violent collision of any object, and its small veins broken, and the blood is gradually discharged from them.’ This blood,

when collected under the skin is called an ecchy- mosis, the skin in the mean time remaining entire ; sometimes a tumor is formed by it, which is soft and livid, and generally without pain. If the quantity of blood is not considerable, it is usually resorbed; if much, it suppurates; it rarely happens that any farther inconvenience follows; though, in a very bad habit of body, a mortification may be the result.

ECCLESHALL, a market town of Stafford- shire, pleasantly situated on a branch of the river Sow, seven miles and a half north-west of Staf- ford, and 148 north-west from London. The houses are neat, and there is a good church and charity school. It is supposed to be named from the Latin word ecclesia, the bishop of Litchfield having formerly had a palace here. In the civil war it was garrisoned for the king, but, being af- terwards taken by the parliamentary forces, it was nearly destroyed ; after which it was rebuilt by bishop Lloyd. Market on Friday.

ECCLESIASTES, a canonical book of the Old Testament, the design of which is to show the vanity of all sublunary things. It was com- posed by Solomon ; who enumerates the several objects on which men place their happiness, and then shows the insufficiency of all worldly enjoy- ments. The Talmudists make king Hezekiah to be the author of it; Grotius ascribes it to Zo- robabel, and others to Isaiah ; but the generality of commentators believe this book to be the pro- duce of Solomon’s repentance, after he had ex- perienced the pleasures, follies, and vanities of life.

ECCLESIASTIC, adj. &n.s.\ Lat. eccle-

ECCLESIAS’TICAL, adj. $ siasticus; of,

or relating to, the church.

Is discipline an ecclesiastical matter or civil? If an ecclesiastical, it must belong to the duty of the minis- ters. Hooker.

The ambition of the ecclesiasticks destroyed the purity of the church. Burnet's Theory.

Clergymen, otherwise little fond of obscure terms, yet in their sermons are liberal of those which they find in ecclesiastical writers. Swift.

A church of England man has a true veneration for the scheme established among us of ecclesiastick government. Id.

It was justly so called ; being thus distinguished, not only from the religion of Moses, the sanctions whereof related to the present life, but also from every human scheme of moral, political, or ecclesiastical legis- lation. Beattie.

ECCLESIASTICAL COURTS. In the time of the Anglo-Saxons, there was no distinction between the lay and the ecclesiastical jurisdiction ; the county court was as much a spiritual as a temporal tribunal; the rights of the church were ascertained and asserted at the same time, and by the same judges, as the rights of the laity. For this purpose the bishop of the diocese, and the alderman, or the sheriff of the county, sat together in the county court, and had there the cognizance of all causes, as well ecclesiastical as civil; a superior deference being paid to the bishop's opinion in spiritual matters, and to that of the lay judges in temporal : and thus the pre- sence of the bishop added weight and reverence to the sheriffs proceedings. But it soon became an established maxim in the papal system of

policy, that all the ecclesiastical persons, ard causes, should be entirely subject to ecclesiastical j urisdiction only ; which was alleged to be lodged in the pope, by divine indefeasible right and investiture from Christ himself, and de- rived from the pope to all inferior tribunals. It was not, however, till after the Norman conquest, that this doctrine was received in England; when William I., (whose title was espoused by the monasteries which he endowed, and by the foreign clergy whom he brought over from France and Italy, and planted in the best preferments of the English church), established this fatal encroach- ment, and separated the ecclesiastical court from the civil. King Henry I., at his accession, among other restorations of the laws of king Edward the Confessor, revived this of the union of the civil and ecclesiastical courts. This, how- ever, was opposed by the popish clergy, who, under the guidance of that arrogant prelate archbishop Anselm, very early attacked a mea- sure that put them on a level with the profane laity ; and therefore in their synod at Westmin- ster, 3 Hen. I., they ordained, that no bishop should attend the discussion of temporal

causes ; which soon dissolved this newly effected union. And when, upon the death of Henry I., Stephen was brought in and supported by the clergy, one article of the oath imposed upon him was, that ecclesiastical persons and causes should be subject only to the bishop's jurisdiction. As about that time the contest began, about the laws of England and those of Rome, the temporal courts adhering to the former, and the spiritual adopting the latter, as their rule, this widened the breach, and made a coalition afterwards impracticable; which probably would otherwise have been effected at the reformation. Ecclesiastical courts are various; as the ARCHDEACON'S COURT, the Court of ARCHES, the CONSISTORY, the PECULIARS, the PREROGATIVE, and the great court of appeal in all ecclesiastical causes, viz. the Court of DELE- GATES. See these articles. In these spiritual courts, it must be acknowledged to their honor, that though they continue to decide many ques- tions of temporal cognizance, yet justice is in general so impartially administered, that the boundaries of their power are well known, and no material inconvenience arises from this jurisdic- tion continuing in the ancient channel. Their ordinary course of proceeding is, first, by citation, to call the party injuring before them. Then by libel, or by articles drawn out in a formal alle- gation, to set forth the complainant's ground of complaint. To this succeeds the defendant's an- swer upon oath ; when, if he denies or exteuuates the charge, they proceed to proofs by witnesses examined, and their depositions taken down in writing by an officer of the court. If the de- fendant has any circumstances to offer, in his de- fence, he must propound them in what is called his defensive allegation, to which he is entitled in his turn to the plaintiff's answer upon oath, and may from thence proceed to proofs as well as his antagonist. The canonical doctrine of purgation, whereby the parties were obliged to answer upon oath to any matter, however crimi- nal, that might be objected against them (though long ago over ruled in the court of chancery, the

genius of the English law having broken through the bondage imposed on it by its clerical chan- cellors, and asserted the doctrines of judicial as well as civil liberty,) continued till the middle of the seventeenth century, to be upheld by the spiritual courts; when the legislature was obliged to interpose, to teach them a lesson of similar moderation. By the statute of 13 Car. II. cap. 12, it is enacted, that it shall not be lawful for any bishop, or ecclesiastical judge, to administer to any person the oath usually called the oath ex officio, or any other oath whereby he may be compelled to confess,

accuse, or pursie himself of any criminal matter, whereby he may be liable to any censure or punishment. When all the pleadings and proofs are concluded, they are re- ferred to the consideration, not of a jury, but of a single judge; who takes information by hearing advocates on both sides, and thereupon forms his interlocutory decree, or definitive sentence, at his own discretion : from which there generally lies an appeal to the several stages mentioned in the articles above referred to; though, if the same be not appealed from by him in fifteen days, it is final by the statute 25 Hen. VIII. cap. 19.

ECCLESIASTICAL STATE, in geography, a name often given to the pope's dominions in Italy. They consisted before the late revolutions of the provinces of Campagna, St. Peter's Patrimony, Umbria, Ancona, Urbino, Romagna, Bologna, and Ferrara. The first five of these were erected »by the French into the Roman republic ; the last three into the Cisalpine. Avignon, and Vena- issin in France, became included in the French republic. See PAPAL STATES.

ECCLESIASTICUS, an apocryphal book, so called, from its being read in the church, ecclesia, as a book of piety and instruction, but not of infallible authority. The author was a. Jew, called Jesus, or Joshua, the son of Sirach. The Greeks call it the Wisdom of the son of Sirach.

ECCOPROTICKS, n. s. Er and soTrpoc. Such medicines as gently purge the belly, so as to bring away no more than the natural excre- ments lodged in the intestines.

The body ought to be maintained in its daily ex- cretions by such means as are eccoprotick.

Harvey on the Plague.

ECHEMIN, a river of Lower Canada, rising in the mountains to the southward of the St. Laurence, into which it falls,,two miles above Quebec. The margin is a flat rock, with only a shallow covering of soil. But there is some good land in its neighbourhood.

ECHENE1S, the remora, in ichthyology, a genus belonging to the order of thoracici. The head is flat, naked, depressed, and marked with a number of transverse ridges ; it has ten rays in the branchiostege membrane, and the body is naked. There are three species, of which the following one is the most worthy of note : — E. remora, the sucking fish with a forked tail, and eighteen striae on the head. This species is often found adhering so strongly to the sides of the sharks and other great fish, by means of the structure of its head, as to be got off with diffi- culty. It was believed, by all the

ancients, to have most wonderful powers, and to be able, by adhering to the bottom, to arrest the motion of a

ship in its fullest course ; and, in love affairs, to deaden the warmest affections of botli sexes.

ECIIEVIN, in the old French and Dutch polity, a magistrate elected by the inhabitants of a city or town, to take care of their common concerns, and the decoration and cleanliness of the city. At Paris, before the revolution, there were a pievot and four echevins; in other towns, a mayor and echevins. At Amsterdam there were nine echevins; and at Rotterdam, seven. In France they took cognizance of rents, taxes, the navigation of rivers, &c. In Holland they judged of civil and criminal causes ; and, if the criminal confessed himself guilty, they could see their sentence executed without appeal.

ECHINADES, otherwise called the Nisia Islands, a group of islets at the entrance of the gulf of Lepanto, which they almost seem to close on the side of Epirus.

ECHINITES, in natural history, the name by which authors call the fossile centronia, frequently found in our chalk pits. See CEN- TRONIA.

ECHINOPHORA, in botany, a genus of the digynia o—der, and pentandria class of plants ; natural order forty-fifth, umbellatae. The male florets are lateral, with the central one herma- phrodite : SEED one, sunk into an indurated invo- lucrum. Species two, found on flie south coast of Great Britain.

ECHINOPS, in botany, a genus of the polyga- mia segregata order, and sy ngenesia class of plants ; natural order forty-ninth, composite : CAL. uniflo- rous; COR. tubulated, and hermaphrodite; recep- tacle bristly; pappus indistinct. Species six, natives of the Levant, and south of Europe.

ECHINORINCHUS, a genus of the rermes intestina : the body is round, proboscis cylin- drical, retractile, and crowned with hooked prickles. They are found fixed firmly to the viscera of various animals, generally the intes- tines ; and often remain on the same spot during the whole life of the animal ; they are mostly gre- garious, and are easily distinguished from the taenia by their round inarticulate body. There are forty-eight species, infesting the mammalia, birds, reptiles, and fish.

E'CHINUS, n. s.) Lat. A hedge-hog; a

E'CHINATE, adj. > shell-fish set with prickles :

E'CHINATED. j in botany, the prickly head, cover of the seed, or top of any plant: in archi- tecture, a member or ornament, taking its name from the roughness of the carv;ng, resembling the prickly rind of a chestnut, or the thorny coat of a hedge-hog. Echinated is bristled, or full of prickles. This ornament is used by modern archi tects in cornices of the Ionic, Corinthian, ?nd Composite orders ; and generally set next to the abacus, being carved with anchors, darts, and ovals or eggs.

An echinated pyrites in shape approaches the echy- nated chrystalline balls. Woodward on Fouilt.

Many nodules of flint resemble in colour as well a in form the shells of the echinus or sea-urchin ; others resemble some coralloids both in form and color.*

Darwin.

ECHINUS, in zoology, a genus of insects belonging to the order of vermes mollusca. Thfi body is roundish, covered with a bony crust, and

often beset with moveable prickles; and the mouth is below and consists of five valves. There are 108 species, all natives of the sea.

1. E. esculentus, or eatable echinus, is of a hemispherical form, covered with sharp strong spines above half an inch long, commonly of a violet color, moveable, adherent to small tuber- cles elegantly disposed in rows. These are their instruments of motion by which they change their place. This species is taken in dredging, and often lodges in cavities of rocks just within low- water mark. They are eaten by the poor in many parts of England, and by persons of rank abroad. Anciently they were a favorite dish. They were the first dish in the famous supper of Lentulus, when he was made flamen Martialis, or priest of Mars.

2. E. lacunosus, or oval echinus, is of an oval depressed form ; on the top it is of a purple color, marked with a quadrefoil, and the spaces between tnberculated in waved rows ; the lower side studded, and divided by two smooth spaces. Length four inches. When clothed it is covered with short thick-set bristles, mixed with very long ones.

3- E. marinus, the sea urchin, has an arched ihell varying in its figure in different individuals : and, besides a great number of protuberances, has two remarkable apertures for the mouth and the anus.

ECHINUS TERRESTRIS, the land urchin. See ERINACEUS.

ECHITES, in botany, a genus of the mono- gynia order, and pentandria class of plants ; na- tural order thirtieth, contorts. There are two long and straight follicles : SEED pappous ; COR. funnel-shaped, with the throat naked.

ECHITES CORYMBOSA, a species of this genus, is said to yield the caoutchouc, or elastic gum according to Jacquin. See GUM, ELASTIC.

ECHIUM, viper's bugloss, in botany, a genus of the monogynia order, and pentandria class of plants; natural order forty-first, asperifolice : COR. is irregular, with the throat naked. Species twenty- seven ; none of them have any remarkable property except the E.vulgari, or common bugloss, the flow- ers of which are very grateful to bees. It is a native of many parts of Britain. The stem is rough with hairs and tubercles. The leaves are spear-shaped, and rough with hair. The flowers come out in lateral spikes. They are first red, after- wards blue; sometimes purple or white. Cows and sheep are not fond of the plant ; horses and goats refuse it.

ECHO, re. «., u.n., & v. a. Span, echo, eco ; Fr. and Port, echo; Lat. echo; Or. ijˆoj. A re- sounding or giving again of the voice or any sound. The sound returned. As a neuter verb, to resound ; be sounded back : as a verb active to send back, return, what has been uttered.

At the parting All the church echoed.

Shakspeare. Taming of the Shrew. Babbling echo mocks the hounds, Replying shrilly to the well-tuned horns, As if a double hunt were heard at once. / .'.

Wilt thou hunt ?

Thy bounds shall make the welkin answer them, And fetch shrill echoes from their hollow earth. Id.

The sound filling great spaces in arched lines, can- not be guided ; therefore there hath not been any means to in. ke artificial echoes.

Jlaron'i Natural History.

(Pamphlets are) the echoes, whereby what is done in one part of the kingdom, is heard all over

T. Ford.— 1647.

O woods, O fountains, hillocks, dales, aud bowers. With other echo late I taught your shades To answer, and resound far other song. Milton.

Custom being but a mere face, as echo is a mere voice, rests not in her unaccomplishment, until by secret inclination she accorporate herself with error.

Id. The pleasant myrtle may teach the unfortunate

Echo In these woods to resound the renowned name of a,

goddess. Sidney.

With peals of shouts the Tyrians praise the song j Those peals are echoed by the Trojan throng.

Dryden's JEneid.

Hark, how the sound disturbs imperious Rome ! Shakfcs her proud hills, and rolls from dome to dome ! Her mitred princes hear the echoing noise, And, Albion, dread thy wrath and awful voice.

Blockmore. Our separatists do but echo the same note.

Decay of Piety.

One great death deforms the dreary ground ; The echoed woes from distant rocks resound.

Prior.

Now the shrill corn-pipe, echoing loud to arms, To rank and file reduce the straggling swarms.

Tickell.

Through rocks and caves the name of Delia sounds ; Delia each cave and echoing rock rebounds. Pope.

Tis not enough no harshness gives offence ; The sound must seem an eclto to the sense. Id.

You may as well attempt to silence an echo by the strength of voice, as a wit by the force of reason. They both are the louder for it : they both will have the last word. Young.

The great and popular are very freely applauded ; but all soon grow weary

of echoing to each other a name which has no other claim to notice, but that many mouths are pronouncing it at once. Johnson.

Famine, and Pestilence, her first born son, Attend to finish what the sword begun ; And echoing praises, such as fiends might earn, And folly pays, resound at your return. Cowper.

Ye shelving rocks, dark waves, and sounding

shore, —

Ye echoed sweet the tender words he swore ! — Can stars or seas the sails of love retain ? O guide my wanderer to my arms again ! Darwin.

Lo, from the echoing axe, and thundering flame, Poison and plague and yelling rage are fled ! The waters, bursting from their slimy bed, Bring health and melody to every vale. Beattie. No solemn, antique gentleman of .rhyme,

Who having angled all his life for fame, And getting but a nibble at a time,

Still fussily keeps fishing on, the same Small ‘ Triton of the minnows,’ the sublime

Of mediocrity, the furious tame, The echo’s echo, usher of the school Of female wits, boy bards — in short, a fool ‘

Byron.

ECHO, or ECCHO, is formed from the Greek nx°C> sound. The ancients being wholly unac- quainted with the true cause of the echo, ascribed

it to several causes sufficiently whimsical. The poets pretended it was a person of that name metamorphosed, and that she affected to take up her abode in particular places, for they found that she was not to be met with every where. But the moderns, who know sound to consist in

body communicated to the contiguous air, and by that means to the ear, give a more consistent account of echo. See ACOUSTICS. A tremulous

led without destroying or diminishing its tremor ; and, consequently, a sound may be redoubled by the resilition of the tremulous body to the air. But a simple reflection on the sonorous air is not enough to solve the echo; for then every plain surface of a solid hard body, being fit to reflect a voice or sound, would redouble it ; which we find does not hold. To produce an

echo, therefore, it should seem, that a kind of concameration or vaulting were necessary, to Collect, and, by collecting, to heighten and increase, and afterwards reflect the sound; as we find is the case in reflecting the rays of light, where a concave mirror is required. In fact, as often as a sound strikes perpendicularly on a wall, behind which is any thing of a vault or arch, or even another parallel wall, so often will it be reverberated in the same line, or other adjacent ones. For an echo to be heard, there- fore, it is necessary that the ear be in the line of reflection ; for the person who made the sound to hear its echo, it is necessary he be perpendi- cular to the place which reflects it : and, for a manifold or tautological echo, it is necessary there be a number of walls, and vaults or cavi- ties, either placed behind or fronting each other. A single arch or concavity, &c., can scarcely ever stop and reflect all the sound ; but, if there be a convenient disposition behind it, part of the sound propagated thither, being collected and reflected as before, will present another echo : or, if there be another concavity, opposed at a due distance to the former, the sound reflected from the one upon the other will be tossed back again by this last, &c. Any sound, falling di- rectly or obliquely on any dense body of a smooth superficies, whether plain or arched, is reflected, or echoes, more or less. The surface must be smooth, otherwise the air, by reverberation, will be put out of its regular motion, and the sound thereby broken and extinguished. Echoes may be produced with different circumstances. For, 1. A plane obstacle reflects the sound back in its due tone and loudness, allowance being made for the proportionable decrease of the sound, according to its distance. 2. A convex obstacle reflects the sound somewhat smaller and some- what quicker though weaker, than otherwise it would be. 3. A concave obstacle echoes back the sound, bigger, slower, and also inverted ; but always according to the order of words. 4. The echoing body being removed farther off, it reflects more of the sound than when nearer ; which is the reason why some echoes repeat but one syl- lable, some one word, and some many. 5. Echo- ing bodies may be so contrived and placed, as that reflecting the sound from one to the other, either directly and mutually, or obliquely and by

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succession, out of one sound, a multiple echo or many echoes shall arise. A multiple echo may- be made by so placing the echoing bodies at un- equal distances, that they may reflect all one way, and not one on the other, by which means a manifold successive sound will be heard ; one clap of the hands like many; one ha like a laugh- ter; one single word like many of the same tone and accent; and so one viol, like many of the same kind, imitating each other. Lastly, echoing bodies may be so ordered, that, from any one sound given, they shall produce many echoes different both as to tone and intention : by which means a musical room may be so contrived,

that not only one instrument playing therein shall seem many of the same sort and size, but even a concert of different ones, only by placing certain echoing bodies so that any note played shall be returned by them in thirds, fifths, and eighths.

ECHO is also used for the place where the repetition of the sound is produced qr heard. In echoes, the place where the speaker stands is called the centrum phonicum ; and the object or place that returns the voice, the centrum phono- campticum. Echoes are distinguished into two kinds ; viz. single and tautological, or multiple. ECHO, in architecture, a term applied to cer- tain kinds of vaults and arches, most commonly of the elliptic and parabolic figures used to re- double sounds, and produce artificial echoes.

ECHO, in poetry, a kind of composition wherein the last words or syllables of each verse contain some meaning, which, being repeated apart, an- swers to some question or other matter con- tained in the verse ; as in this beautiful one from Virgil : —

Crudclis mater magis, an puer, improbus ille ? Improbus ille puer, crudelis tu quoque mater. The elegance of an echo consists in giving a new sense to the last words ; which reverberate, as it were, the motions of the mind, and by that means affect it with surprise and admiration.

ECHO, in mythology, a daughter of Aer and Tellus, who chiefly resided in the vicinity of the Cephisus. She was once one of Juno's attend- ants, and became the confidant of Jupiter's amours. Her loquacity, however, displeased Jupiter, and she was deprived of the power of speech by Juno, and only permitted to answer the questions which were put to her. Pan had formerly been one of her admirers, but he never enjoyed her favors. Echo, after she had been punished by Juno, fell in love with Narcissus ; but being despised by him pined to death, hav- ing nothing left but her voice.

ECIIOMETER, among musicians, a kind of scale or rule, with several lines thereon, serving to raeasure the duration and length of sounds, and to find their intervals and ratios.

ECIJA, or EXIJA, a considerable town of Spain, in the province of Seville, beautifully situated on the Xenil, and surrounded with small hills, which make it the warmest place of Anda- lusia. Wool and hemp are its chief riches ; but tanning and the manufacture of leather, employ a portion of its inhabitants, who, altogether, amount to 28,000. This town is the Colonia Augusta Firmia of the ancients, and many Ro- man antiquities have been discovered here. It

is said to have been formerly of great import- ance ; at present it contains six churches, sixteen convents, and fifteen hospitals ; it has also a large square with a piazza. The Xenil is crossed by a neat modern bridge ; and there is along the left bank a delightful public walk, composed of alleys, ornamented with statues. Fifty-five miles E.N.E. of Seville.

ECKHEL (Joseph Hilary), a learned Jesuit, was born at Entzesfield in Austria in 1737. Be- coming a member of the society of St. Ignatius, he was appointed keeper of the imperial cabinet of medals, and professor of archeology at Vienna. He may be regarded as the modern founder of the science of Numismatics, the principles of which are fully developed in his treatise Doc- trina Veterum Nummorum. 8 vols. fol. He died in 1798

ECKIUS (John), a learned divine, professor in the university of Ingoldstadt, memorable for his opposition of Luther, Melancthon, Carolostadius, and other leading Protestants in Germany. He wrote many polemical tracis ; and among the rest, a Manual of Controversies, printed in 1535, in which he discourses upon most of the heads contested between the Protestants and Papists. He was a man of great learning and zeal, and died in 1543.

ECKDALA, or AKDALA, an ancient, but now ruined fortress of the district of Dacca, Bengal, situated on the banks of the Luckya River, which, during the rainy-season, surrounds it with water. In 1353 Ilyas Haji, the second independent king of Bengal, of the Mahommedan dynasty, took refuge in this place from the army of the emperor of Hindostan, and defended it, till the setting in of the rains compelled the enemy to raise the siege, and the sultan Seyd Hussein made it his constant residence from the year 1499 to 1520, although Pundua was his political capital.

ECLAIRCFSSEMENT, n. s. Fr. Explana- tion ; the act of clearing up an affair by verbal expostulation.

The cclaircissemeitt ended in the discovery of the informer. Clarendon.

ECLAT, n.s. Fr. Splendor; show; lustre. Not English, says Dr. Johnson.

Nothing more contributes to the variety, surprise, and eclat of Homer's battles, than that artificial man- ner of gaging his heroes by each other.

Pope's Essay on Homer.

ECLE'CTIC, adj. eic\fKTiKos. Selecting; choo- sing at will. See below.

Cicero was of the eclectic sect, and chose out of each such positions as came nearest truth.

Watts on the Mind.

ECLECTICS, ancient philosophers, who, with- out attaching themselves to any particular sect, chose what they judged good and solid from each'. Laertius says, that they were also denominated Analogetici ; but that they call themselves Phila- lethes, i. e. lovers of truth. The founder of the Electici was one Potamon of Alexandria, who lived under Augustus and Tiberius ; and who, weary of doubting of all things with the Sceptics and Tyrrhenians, formed the Eclectic sect ; which Vossius calls the Eclcctive.

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ECLECTICS were also a certain set of physician? among the ancients, of whom Archigenes, under Trajan, was the chief, who selected from the opinions of all the other sects, that which ap- peared to them best and most rational ; hence they were called eclectics, and their prescriptions medicina eclectica.'

ECLECTICS, or modern Platonics, a sect of Christians, who arose about the end of the second century. They professed to make truth the only object of their enquiry, and to be ready to adopt from all the different systems and sects, such te- nets as they thought agreeable to it. However, they preferred Plato to the other philosophers, and looked upon his opinions concerning God, the human soul, and things invisible, as con- formable to the spirit and genius of the Chris- -ian doctrine. One of the principal patrons of this system was Ammonius Saccas, who at this time laid the foundation of that sect, afterwards distinguished by the name of the New Platonists, in the Alexandrian school. See AMMONIUS and PLATONISM.

ECLIPSE', n. s., v. a. & v. n. Fr. eclipse , Ital. eclissi, ecclessi ; Span, and Portug. eclipsi: Brit, eklips ; Lat. eclipsis ; Gr. f x\tu//ic, from £icXti7rw, to fail or depart. An obscuration of the heavenly bodies; hence, darkness, obscuration generally : to darken a luminary ; to extinguish ; cloud ; obscure ; disgrace : to suffer an eclipse.

Sips of yew, Slivered in the moon's eclipse

Shalapeare. Macbeth.

Then here I take my leave of th.ee, fair sou, Born to eclipse thy life this afternoon.

Id. Henry VI.

All the posterity of our first parents suffered a perpetual eclipse of spiritual life.

Raleigh's History.

Let the ec'ipsed moon her throne resign. Sandys. Experience we have of the vanity of human glory, in our scatterings and eclipses. King Cfnirlei.

She told the king, that her husband was eclipsed in Ireland by the no-countenance his majesty had shewed towards him. Clarendon.

Planets, planet-struck, real eclipse Then suffered. Milton's Paradise Lost.

The labouring moon

Eclipses at their charms. Id.

So though the sun victorious be, And from a dark eclipse set free, The influence, which we fondly fear, Afflicts our thoughts the following year.

Waller.

They had seen tokens of more than common great, ness, howsoever now eclipsed with fortune. Sidney.

Praise him to his father : — — Let the prince's glory Seem to eclipse, and cast a cloud on'his.

J)enham's Sophy.

Let other muses write his prosperous fate, Of conquered nations tell, and kings restored ;

But mine-shall sing of his eclipsed estate, Which, like the sun's, more wonders does afford.

Dryden.

An eclipse of the moon is wh^n the atmosphere of the earth, between the sun arid the moon, hinders th.; light 'of the sun from falling upon and being reflected by the moon : if the light of the sun is kept off. from the whole body of the moon, it is a total eelipae ; if from a part only, it is a partial one. Locke.

He descended from his Father, and eclipsed the g«ory of his divine majesty with a veil of flesh.

Calamy's Sermons,

Now if the earth were flat, the darkened moon Would seem to all eclipsed as well as one. Creech.

The places that have either shining sentiments or manners, have no occasion for them : a dazzling ex- pression rather damages them, and serves only to eclipse their beauty. Pope.

ECLIPSE. See ASTRONOMY, Index.

ECLI'PTIC, 71. s. & adj. EKXaTrriKOf. A great circle of the sphere, supposed to be drawn througn the middle of the zodiac, and making an angle with the equinoctial, in the points of Aries and Libra, of 23° 30′ which is the sun's greatest declination : relating to or described by the ecliptic.

All stars that have their distance from the ecliptick northwards not more than twenty-three degrees and a half, may, in progression of time, have declination southward, and move beyond the equator.

Browne's Vulgar Errourt.

The terraqueous globe had the same site and po- sition, in respect of the sun, that it now hath : its axis was not parallel to that of the ecliptick, but inclined in like manner as it is at present.

Woodward's Natural History.

You must conceive an imaginary plane, which, pas- sing through the centre of the sun and the earth, ex- tends itself on all sides as far as the firmament : this plane is called the ecliptick, and in this the centre of the earth is perpetually carried, without any deviation.

Bentley.

The earth's rotation makes the night and day ; The sun revolving through the ecliptick way, Effects the various seasons of the year. Blackmore.
Where with vast convolution Draco holds

The ecliptick axis in his scaly folds,

O'er, half the skies his neck enormous rears,

And with immense meandecs parts the bears.

Darwin.

ECLIPTIC. See ASTRONOMY, Index.

ECLIPTIC, in geography, a great circle on the terrestrial globe, not only answering to, but falling within, the plane of the celestial ecliptic. See GEOGRAPHY.

E'CLOGUE, n. s. EeXoyjj. A pastoral poem, so called because Virgil called his pastorals eclogues.

What exclaiming praises Basilius gave this eclogue any man may guess, that knows love is better than spectacles to make every thing seem great. Sidney.

It is not sufficient that the sentences be brief the whole eclogue should be so too. Pope.

ECLUSE, FORT DE L', a fort of Switzerland, in the district of Gex, and canton of Geneva, situated on the right bank of the Rhone, about 120 feet above the level of the river. It ad- heres in appearance to the bare rock of the Jura, which shelves over a part of its fortifi- cations, while the remainder hangs, as it were, suspended above the Rhone. Thirteen miles west of Geneva.

ECONOMIC, adj. & n. s.~\ Gr. oiKovofua.

ECONOMICAL, adj. /Sometimes writ-

*ECO'NOMIST, n. s. 4ten> ˆrom *te ˆe~*

ECO'NOMY, n. s. ./ rivation, oecono-

nomy ; but a, is not a diphthong in English, says

Dr. Johnson. The management, or government,

of a family. Hence frugality, order, regulation,

or disposition, of affairs; system of management generally. Economic is used in the same par- ticular and general way : an economist is a good or frugal manager.

In the Greek poets, as in Plautas, we see the eco- nomy and disposition of poems better observed than in Terence. Ben Jonson.

Her quickening power in every living part,

Doth as a nurse, or as a mother serve j And doth employ her economick art,

And busy care, her household to preserve.

David.

Some are so plainly economical, as even to desire that the seat be well watered, and well swelled.

Wutton's Architecture.

All the divine and infinitely wise ways of economy that God could use towards a rational creature, oblige mankind to that course of living which is most agree- able to our nature. Hammoml.

By St. Paul's economy the heir differs nothing from a servant, while he is in his minority ; so a servant should differ nothing from a child in the substantial part. Taylor.

If this economy must be observed in the minutest parts of an epick poem, what soul, though sent into the world with great advantages of nature, cultivated with the liberal arts and sciences, can be sufficient to inform the body of so great a work ?

Dryden's Dedication to the JEneid,

I have no other notion of economy than that it is the parent of liberty and ease. Swift.

In economical affairs, having proposed the govern- ment of a family, we consider the proper means to effect it. Watts.

The regard one shows economy, is like that we show an old aunt, who is to leave us something at last.

Shenstone.

Economy is the parent of integrity, of liberty, and of ease ; and the beauteous sister of temperance, of cheerfulness, and health. Adventurer.

And from the many heavy taxes required from them by the necessities of the state, have surely reason to bo economical. Franklin.

Mere parsimony is not economy. It is separable in theory from it ; and it

fact it may, or it may not, be a part of economy, according to circumstances. Ex- pense, and great expense, may be an essential pan in true economy. If parsimony were to be considered a one of the kinds of that virtue, there is however another and an higher economy. Economy is a distributive virtue, and consists not in saving, but in selecting.*

Burke.

The age of chivalry is gone, and one of calculators and economists has succeeded. Id.

From this outline a philosopher may catch a glimpse of the general economy of nature ; and like the mari- nei cast upon an unknown shore, who rejoiced when he saw the print of a human foot upon the sand, he may cry out with rapture, ‘ A God dwells here.’

Darwin.

ECOUEN, a well-built town of France, on the side of a hill, containing a number of villas be- longing to the citizens of Paris, from which it is about twelve miles distant. On an eminence towards the west extremity stands a noble castle, built in he reign of Francis I., and now belong ing to the prince of Conde. Inhabitants about

1200.

ECPHRA’CTICKS, n. t. Gr. tie and 0parru>. Such medicines as render rough humors more thin, so as to promote their discharge.

Procure the blood a free course, ventilation, and transpiration, by suitable purges and ecphractick medi- cines. Harvey.

ECS

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EDD

EC’STASY, n.s.~\ Fr. extase ; Ital. Span. EC’STASIED, adj. t and Port, ectasi ; Lat. ec- ECSTA’TIC, £ stasis; Greek, sKˆaatf, ah

ECSTATICAL. J tKTfivd), extendo. Any pas- sion by which the thoughts are absorbed, and in which the mind is for a time lost. The adjectives all mean rapt or absorbed in passion or enthu- siasm.

Follow them swiftly, And hinder them from what this ecttacy May now provoke them to.

Shakspeare. Tempest.

Now sec that noble and most sovereign reason, Like sweet bells jangled out of tune, and harsh, That unmatched form, and feature of blown youth, Blasted with ecttasy. Id. Hamlet.

Return, my soul ! from this eestacie And meditation of what thou shall be To earthly thoughts, till it to thee appear With whom thy conversation must be there.

Donne.

Would she but shade her tender brows with bay, That now lye bare in carelesse willful rage j And trance herselfe in that sweet ertacy, That rouzeth drouping thoughts of bashful age.

Bp. Hall.

He loved me well, and oft would beg me sing j Which when I did, he on the tender grass Would sit, and hearken even to ecstasy. Milton.

There doth my soul in holy vision sit, In pensive trance, and anguish, and ecstatick fit.

u.

When one of them, atter an extatical manner, fell down before an ingel, he was severely rebuked, and bidden to worship God. StUlingfleet.

These are as common to the inanimate things as to the most exstasied soul upon earth. Karris.

T may be

No longer joy there, but an ecstaty. Suckling. Whether what we call ecstacy be not dreaming with our eyes open, I leave to be examined. Locke.

The religious pleasure of a well-disposed mind moves gently, and therefore constantly : it does not affect by rapture and ecstasy ; but is like the pleasure of health, still and sober. South.

Each delighted, and delighting, gives The pleasing er-stasy which each receives.

Prior.

A pleasure, which no language can express ; An ecstacy that mothers only

feel, Plays round my heart. Philips's Distressed Mother. In trance ecstatick may thy pangs he drowned ; Bright clouds descend, and angels watch thee round.

Pope.

The very kine that gambol at high noon, The total herd receiving first from one, That leads the dance, a summons to be gay, Though.wild their strange vagaries, and uncouth Their efforts, yet resolved with one consent, To give such act and utterance as they may To ecstasy too big to be suppressed. Covoper.

Wakes from his trance, alarmed with young Desire, Finds his new sex, and feels ecstatic fire ; From flower to flower with honeyed lip he springs, And seeks his velvet loves on silver wings.

Darwin.

And let not this seem strange ; the devotee Lives not in earth, but in his ecstasy • Around him days and worlds arc heedless driven,- His soul is gone before his dust to heaven. Byron.

ECSTATIC I, E(CT

lay like men dead or asleep, deprived of all sense and motion ; but, after some time, returning to themselves, gave strange relations of what they had seen and heard.

ECTHESIS, in church history, a confession of faith, in the form of an edict, published A D. 639, by the emperor Heraclius, to pacify the troubles occasioned by the Eutychian heresy in the eastern church. He however revoked it, on being informed that pope Severinus had con- demned it, as favoring the Monothelites ; declar- ing at the same time, that Sergius, patriarch of Constantinople, was the author of it.

ECTHLIPSIS, among Latin grammarians, a figure of prosody whereby the m, at the end of a word, where the following word begins with a vowel, is elided, or cut off, together with the vowel preceding it, for the sake of the measure of the verse : thus they read mult' ille, for mul- tum ille.

ECTROPIUM, in surgery, is when the eye- lids are inverted, or retracted, so that they show their internal or red surface, and cannot suffi- ciently cover the eye.

E'CTYPE, n. s. Gr. ticrvTroc. A copy.

The complex ideas of substances are ectypes, copies, but not perfect ones ; not adequate. Locke.

EDA, or EDA y, one of the Orkney Isles, about five miles and a half long, and nearly one and a half broad, situated eight miles N.N. E. from Pomora. It consists chiefly of hills of a mode- rate height, affording excellent pasture ; and con- tains several villages, and has two good harbours or road-steads, each sheltered by a small islet, where vessels of any burden may ride in safety. There is an old chapel in ruins, and the remains of several religious bouses. Near this island are several pasture isl«3s or holms, on which are the ruins of several religious edifices.

EDA'CITY, n. s. f Lat. edacitas. Voracity ;

EDA'CIOUS, adj. S ravenousness; greediness; rapacity.

The wolf is a beast of great edacity, and digestion j it may be the parts of him comfort the bowels.

Bacon.

EDAM, a town of North Holhmd, near the Zuyder-zee, with a good harbour, formed by the river Ey. The inhabitants derive their subsis- tence partly from ship-building, and partly from salt and oil works. It is an old market for cheese, although much fallen off. Twelve miles north of Amsterdam.

EDAM, an island on the coast of Java, about two miles in circuit and very woody. Here the Dutch have several salt warehouses, and a con- vict establishment for making cordage.

EDDA, the system of the ancient Icelandic or Runic mythology, containing many curious par- ticulars of the theology, philosophy, and manners of the northern nations of Europe ; or of the Scan- dinavians who had migrated from Asia, and from whom our Saxon ancestors were descended. Mr. Mallet apprehends that it was originally compiled, soon after the Pagan religion was abolished, as a course of poetical lectures, for the use of such young Icelanders as devoted themselves to the profession of a scald or poet. It consists of two principal parts : the first containing a brief system

of mythology, properly called the Edda: and the second being a kind of art of poetry, and called scalda. The most ancient Edda was compiled by Soemund Sigfusson, surnamed the learned, who was born in Iceland about A. D. 1057. This was abridged, and rendered more intelligible, about 120 years afterwards, in the form of a dialogue, by Snorro Sturleson, who was supreme judge of Iceland in 1215 and 1222. He addˆd also the second part in the form of a dialogue, being a detail of different events transacted among the divinities. The only three pieces that are known to remain of the more ancient Edda of Soe- mund, are the Voluspa, the Havamaal, and the Runic chapter. The Voluspa, or prophecy of Vola or Fola, appears to be the text, on which the Edda is the comment. It contains, in 200 or 300 lines, the whole system of mythology, disclosed in the Edda, and may be compared to the Sibylline verses, on account of its laconic yet bold style, and its imagery and obscurity. It is professedly a revelation of the decrees of the Father of Nature, and the actions and operations of the gods. It describes the chaos, the forma- tion of the world, with its various inhabitants, the functions of the gods, their most signal ad- ventures, their quarrels with Loke, or Lak, their great adversary, and the vengeance that ensued ; and concludes with a long description of the final state of the universe, its dissolution and confla- gration, the battle of the inferior deities, and the evil beings, the renovation of the world, the happy lot of the good, and the punishment of the wicked. The Havamaal, or Sublime Dis- course, is attributed to the god Odin, who is sup- posed to have given these precepts of wisdom to mankind. It is comprised in about 120 stanzas, and resembles the book of Proverbs. The Runic chapter contains a short system of ancient magic, and especially of the enchantments wrought by the operation of Runic characters. A manuscript copy of the Edda of Snorro is preserved in the library of the university of Upsal; the first part of which has been published with a Swedish and Latin version by M. Goranson. The Latin ver- sion is printed as a supplement to M. Mallet's Northern Antiquities. The first edition of the Edda was published by Resenius, professor at Copenhagen, in a large 4to. volume, in 1665, containing the text of the Edda, a Latin transla- tion, by an Icelandic priest, a Danish version, and various readings from different MSS. M. Mallet has also given an English translation of the first part, accompanied with remarks, from which we learn that the Edda teaches the doc- trine of the Supreme, called the Universal Fa- ther, and Odin, who lives for ever, governs all his kingdom, and directs the great things, as well as the small, who formed the heaven, earth, and air ; made man, and gave him a spirit or soul, which shall live after the body shall have mouldered away ; and then all the just shall dwell with him in Gimle or Vingolf, the palace of friendship ; but wicked men shall go to Hela, or death, and from thence to Nislheim, or the abode of the wicked, which is below in the ninth world. It inculcates also the belief of se- veral inferior gods and goddesses, the chief of whom ia

Frigga, or Frea, i. e. lady, meaning

hereby the earth, who was the spouse of Odin or the Supreme God ; whence we may infer that, according to the opinion of these ancient philoso- phers, this Odin was the active principle or soul of the world, which, uniting itself with matter, had thereby put it into a condition to produce the intelligences or inferior gods, and men and all other creatures. The Edda likewise teaches the existence of an evil being called Loke, the calumniator of the gods, the artificer of fraud, who surpasses all other beings in cunning and perfidy. It teaches the creation of all things out of an abyss or chaos ; the final destruction of the world by fire; the absorption of the inferior di- vinities, both good and bad, into the bosom of the grand divinity, from whom all things pro- ceeded, as emanations of his essence, and who will survive all things ; and the renovation of the earth in an improved state.

EDDER, v. a. & n. s. Probably from edge. To bind or interweave a fence. Not in common use.

To add strength to the edge, edder it ; which is, bind the top of the stakes with some small long poles, on each side. Mortimer's Husbandry.

In lopping and felling, save edder and stake, Thine hedges, as needeth, to mend or to make.

Tuner.

E'DDY, n. s., adj. & v. a. Icel. ida ; but it is better derived from Goth, idga, to agitate: Sax. e-», backward, again, and ea, water. Water that runs contrary to the main stream : whirl. It is used also as a verb active.

My praises are as a bulrush upon a stream ; if they sink not, 'tis because they are borne up by the strength of the current, which supports their lightness ; but they are carried round again, and return on the eddy where they first began. Dry den.

And chaff with eddy winds is whirled around, And dancing leaves are lifted from the ground.

Id. Virgil.

The wild waves mastered him, and sucked him in, And smiling eddies dimpled on the main. Dryden.

So, where our wide Numidian wastes extend, Sudden the impetuous hurricanes descend, Wheel through the air, in circling eddies play, Tear up the sauds, and sweep whole plains away. Addiiun's Cute.

Tis thine to cherish and to feed The pungent nose-refreshing weed : Which, whether pulverized it gain A speedy passage to the brain, Or whether, touched with fire, it rise In circling eddiet to the skiss, Does thought more quicken and refine Than all the breath of all the Nine. Camper. Through her fine limbs the mimic lightnings dart, And flames innocuous eddy round her heart ; O'er her fair brow the kindling lustres glare, Blue rays diverging from her bristling hair. Darvrin.

The sea-tide's opposing motion, In azure column proudly gleaming, Beats back the current many a rood In curling foam and mingling flood, While eddying whirl, and breaking wave, Roused by the blast of winter, rave. Byron. EDDYSTONE ROCKS, the name of some rocks in the English Channel, so called from the great variety of contrary currents in their vicinity. They are situated nearly S.S.W. from the middle of Plymouth Sound, their distance from the port

about fourteen miles ; and from Ram-Head, the nearest point of land, twelve and a half. They are almost in the line which joins the Start and the Lizard Points ; and, as they lie in the direc- tion of vessels coasting up and down the Chan- nel, they were very dangerous, and frequently ships were wrecked on them, before the light- house was established. They are so exposed to the swells of the ocean, from all the south and west points of the compass, that the heavy seas come uncontrolled, and break on them with the utmost fury. After a storm, when the sea in general is, to all appearance, quite smooth, and its surface unruffled by the slightest breeze, the growing swell or under current, meeting the slope of the rocks, the sea often rises above the lighthouse in a ˆmagnificent manner, overtopping it as with a canopy of froth. Notwithstanding this tre- mendous swell, Mr. Henry Winstanley, in 1696, undertook to build a lighthouse on the principal rock, for the rest are under water ; and he com- pleted it in 1700. This ingenious mechanic was so confident of the stability of his structure, that he declared his wish to be in it during the most tremendous storm that could blow. Unfortu- nately he obtained his wish, for he perished in it during the dreadful storm which destroyed it, on the 27th November, 1703. In 1709 another lighthouse was erected of wood on this rock, but on a different construction, by Mr. John Rud- yard. It stood till 1755. when it was burnt. A third one, of stone, begun by the late celebrated Mr. John Smeaton, on the 2d of April, 1757, was finished 24th August, 1759; and has with- stood the rage of all weathers ever since. The rock which slopes towards the

south-west is cut into horizontal steps ; into which are dove-tailed, and united by a strong cement, Portland stone and granite, for Mr. Smeaton discovered that it was impossible to make use of the former en- tirely, as there is a marine animal that can de- stroy it ; and that he could not use the latter solely, as the labor of working it would have been too expensive. He therefore used the one for the internal, and the other for the external, part of the structure. Upon the principle of a broad base and accumulation of matter, the whole, to the height of thirty-five feet from the foundation, is a solid mass of stones engrafted into each other, and united by every kind of additional strength. The lighthouse has four rooms, one over another, and at the top a gallery and lan- tern. The stone floors are flat above, but con- cave below, and are kept from pressing against the sides of the building by a chain let into the walls. The lighthouse is nearly eighty feet high, and withstands the most violent storms, without sustaining the smallest injury. In all probabi- lity, as Mr. Smeaton said, nothing but an earth- quake can destroy it. The wooden part of it, however, was burnt in 1770, but renewed in

1774.

EDELINCK (Gerard), a famous engraver, born at Antwerp, where he was instructed in drawing and engraving. He settled at Paris in the reign of Louis XIV. who made him his en- graver in ordinary. He was also counsellor in the Royal Academy of Painting. His works are particularly esteemed for the neatness of the

engraving, their orilliant cast, and the ease ap- parent in the execution ; and to this facility is owing the great number of plates we have of his, among which are excellent portraits of many il- lustrious men of his time. Among the most admired of his prints are the following: 1. A battle between four horsemen, with three figures lying slain upon the ground, from Leonardo da Vinci. 2. A holy family, with Elizabeth, Saint John, and two angels, from the famous picture of Raphael in the late king of France's collection. 3. Mary Magdalen, from Le Brun. 4. Alex- ander entering into the tent of Darius, a large print, on two plates, from Le Brun. 5. Alex- ander entering into the tent of Darius, finished by P. Drevet, from Peter Mignard. Edelinck died in 1707, in an advanced age, at the Hotel Royal, in the Gobelins, where he had an apart- ment. His brother John was also a skilful en- graver, but died young.

EDEMATO'SE, adj. Oi%»a. Swelling; full of humors : commonly written oedematous.

A serosity obstructing the glands may be watery, edematose, and schirrous, according to the viscosity of the humour. Arbuthnot.

EDEN ; from Heb. PJ7» i. e. pleasure ; a coun- try with a garden, in which the progenitors of mankind were settled by God himself. It would be endless to recount the various conjectures as to its situation, some of which are very wild and extravagant. Moses says that ‘ a river went out of Eden to water the garden, and from thence it was parted and became into four heads.’ This river is supposed to be the common channel of the Euphrates and Tigris, after their confluence ; which parted again below the garden into two different channels, so that the two channels be- fore, and the other two after their confluence, constitute the heads mentioned by Moses. This will determine the situation of the garden to have been in the south of Mesopotamia, or in Babylonia. The garden was also called Para- dise ; a term of Persic original, denoting a gar- den.

EDEN, a river of England, which rises in West- moreland, on the borders of Yorkshire, crosses ‘the county of Cumberland, and runs into the Solway Frith, about seven miles below Carlisle. Salmon appear in the Eden in numbers, so early as December and January, and the London and Newcastle markets are supplied with early fish from this river ; but it is remarkable that they do not visit the Esk in any quantity till April, notwithstanding the mouths of the two rivers are very near each other.

EDEN, a river of Scotland, in Berwickshire, which rises in Lammermuir, joins the Tiviot at Kelso, runs along the south and south-east bor- ders of the parish of Edenham, and falls into the Tweed near Coldstream. It produces trouts and some salmon.

EDENTON, a district on the sea-coast of North Carolina, bounded on the north by the state of Virginia, on the east by the ocean, 01 the west by Halifax district, and on the south by Newbern. It is subdivided into nine counties, viz. Chowan, Currituck, Camden, Pasquotank, Perquimins, Gates, Hertford, Bertie, and Tyrrel. Its chief town is Edenton. The wood is chiefly

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pine, oak, cypress, and juniper, all of which abound.

EDENTON, the capital of the above district, is a post town and port of entry, at the head of a bay on the north side of Albemarle Sound, and at

the north-east side of the opening of Chpwan River. It is ninety -seven miles north of Newbern, 139 south-east of Petersburg!!, and 440 S.S.W. of Philadelphia.

EDER, a river of Germany, having its source on the borders of Nassau, and, after watering the county of Hesse, having its embouchure in the Fulda.

EDESSA, or VODISA, a large town of Euro- pean Turkey, in Romania, near the Vistricza, called by the Turks Moglena. In ancient times it was the residence of the Macedonian kings. It has about 12,000 inhabitants, part of whom are employed in woollen manufactures ; and is forty-four miles W.N.W. of Saloniki, and 316 west of Constantinople.

EDFU, a village of Upper Egypt, celebrated as the site of the ancient Apollinopolis Parva, and containing two temples, which present most magnificent monuments of ancient Egyptian architecture. Those of Tentyra, in Denon's opi- nion, alone could equal them. Each of the sides of the pyramidal propylon, which forms the prin- cipal entrance to the greater temple, is 100 feet in length, thirty wide, and 100 high. Many of the figures sculptured on it are thirty feet high, and executed in a very masterly and spirited style. The colors are preserved occasionally. There is a staircase in each division of 150, or 160 steps, which lead into apartments alternately thirty-one feet by ten, and seventeen by ten. Mr. Hamilton never saw more colossal sculptures than on the outer walls of this temple. They are chiefly emblematic of the beneficial influence of the sun in drawing forth and maturing the fruits of the earth. Isis is represented suckling a young child ; priests and priestesses are sometimes seen offering young children to the goddess and to Osiris. The rubbish has collected to a greater height here than on the site of any of the other towns in the Thebaid. Long. 32° 53′ 44′ E., lat. 24° 48′ 53′ N.

EDGAR, the son of Edmund I., one of the most fortunate of the Anglo-Saxon monarchs. He succeeded his brother Edwy, A. D. 959; and is said to have been rowed down the Dee, by eight kings, his vassals. He died in 975. See ENGLAND.

EDGAR ATHELING, the son of prince Edward, by Agatha, daughter of the emperor Henry II. and grandson of Edmund II. king of England. Though he was the lawful heir of the crown, and was even declared king upon the death of Harold II. he submitted to William the Conqueror, after the battle of Hastings : but afterwards retired to Scotland with his two sisters, Margaret and Christina: where they were kindly received by king Malcolm II. who married the princess Margaret. See ENGLAND.

EDGAR, a sea-port town of Massachusetts, in the United States, situated on the east side of the island of Martha's Vineyard, and reckoned the best sea-port of the island. Long. 70° 25′ W._, lat. 41°22'N.

EDGCOMD, a county of Halifax district North Carolina, bounded on the south by Pitt county ; on the south-west by Wayne county and Tar River, which affords it communication with several counties in the state, on the west by Nash county, and on the east by Martin and Halifax counties.

EDGE, n. s., v. a. & v. n. -\ Sax. ecje ;

EDG'ING, n. s. j Goth, egg, or

EDGE'LESS, adj. \ teg ; Tent, cchc ;

EDGE'TOOL, n. s. iSwed. egg; Lat.

EDGE'WISE, adr. .» acies, of Gr. a«c.

The sharp part of a blade or cutting instrument;

termination of two sloping sides ; brink ; margin ;

applied, also, to acuteness of intellect. The

verbs are derived from the noun, and the active

verb is used to signify putting forward edgewise :

and, metaphorically, to exasperate; inflame.

Edging, as a substantive, means that which

forms, or covers, the edge : bordering.

'Tis slander, Whose edge is sharper than the sword.

Shakspeare. Cymbeline. Abate the edge of traitors, gracious Lord ! That would reduce these bloody days again.

Id. Richard III.

To morrow in the battle ihink on me, A nd fall thy edgeless sword ; despair and die. Id. A harsh grating tune setteth the teeth on edge.

Bacon.

We find that subtile or edged quantities do prevail over blunt ones. Digby

on Bodies.

He that will a good edge win, Must forge thick, and grind thin. Proverb.

There sat she rolling her alluring eyes, To edge her champion's sword, and urge my ruin.

Dryden.

I must edge upon a point of wind, And make slow way. Id. Cleomenet.

Silence and solitude set an edge upon the genius, and cause a greater application. Id. Dufresnoy.

The garlaud which I wove for you to wear, And bordered with a rosy edging round. Dryden. There must be no playing with things sacred, nor jesting with edgedtools. L'Estrange.

Nurses from their children keep edgetoolt. Dorset. Edging by degrees their chairs forwards, they were in a little time got up close to one another.

Locke.

Should the flat side be objected to the stream, it would be soon turned edgewise by the force of it.

Ray.

A woman branches out into a long dissertation upon the edging of a petticoat. Add'uon's Spectator. They are edgelett weapons it hath to encounter.

Decay of Piety.

But when long time the wretches' thoughts reimed, When want had set an edge upon their mind, Then various cares their working thoughts employed And that which each invented all enjoyed.

Creech's Manil.

The rays which pass very near to the edgei of any body, are bent a little by the action of the body.

Netcton's Opticks.

We have, for many years, walked upon the edge of a precipice, while nothing but the slender thread of human life has held us from sinking into

endless misery. Rogers.

Yes, the last pen for freedom let me draw, When truth stands trembling on the edge of law.

Pope.

Some harrow their ground over, and thrn plow it upon an edge. Mortimer's Husbandry.

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I shall exercise upon steel, and its several sorts ; and what sort is fittest for edgetools, which for springs.

Moxon.

It is with wits as with razors, which are never so apt to cut those they are employed on, as when they have lost their edge. Swift.

However, if in general it be not easy to determine concerning the lawfulness of such devious proceedings, which must be ever on the edge of crimes, it is far from difficult to foresee the perilous consequences of the resuscitation of such a power in the people.

Burke.

Edge over edge expands the hardening scale, And sheaths his slimy skin in silver mail. Darwin. But see him on the edge of life.

With cares and sorrows worn ;

Then age and want, Oh ! ill-matched pair !

Show man was made to mourn. Burns.

LADY TEA. Nay, I allow even that's better than the pains Mrs. Prim takes to conceal her losses in front. She draws her mouth till it positively resembles the aperture of a poor's box, and all her words appear to slide out edgewise, as it were. Sheridan.

And you, ye crags, upon whose extreme edge, I stand, and on the torrent's brink beneath Behold the tall pines dwindled as to shrubs In dizziness of

distance ; when a leap, A stir, a motion, even a breath, would bring My breast upon its rocky bosom's bed To rest for ever — wherefore do I pause ? Byron.

EDGEFIELD, a county of South Carolina, the southernmost in the district of Ninety-Six, bounded on the north by Saluda River, which divides it from Newbury county, on the south- west by Savannah River, which separates it from the state of Georgia, on the east by Orange- burg district, and on the west by Abbeville county. The ridge of elevated land, which di- vides the waters of Saluda from those of Savan- nah River, passes nearly through the middle of the county. Edgefield county is about thirty- four miles long, and twenty-four broad.

EDGEFIELD, a town in the above county, with a court house and post office : forty miles from Abbeville ; twenty-five from Augusta, and sixty from Colombia.

EDGEHILL, a village in Warwickshire, near Kenton; memorable for the first battle fought between the forces of king Charles I., and those of the parliament in 1642. It is fourteen miles south of Warwick. See ENGLAND, HISTORY.

EDGEWARE, a town of England, in the county of Middlesex, on the borders of Hert- fordshire. It is eight miles north-west of London.

EDGEWORTH (Abbe), was born at Edge- worth's town in Ireland in 1745 ; but his father, who was a clergyman, having become a catholic, he settled with his family at Toulouse. After studying at Paris, the abbe" Edgeworth entered the fraterniiy of Les Missions Etrangeres. He was confessor to the princess Elizabeth, and thus becoming known to the unfortunate Louis XVI, he attended him to the scaffold. He made his escape in disguise afterwards, and came to Eng- land, whence he went to Mittau to attend upon Louis XV HI, and died there of an hospital fever in 1807. His letters and life were published in

1818.

EDGEWORTH (Richard Lovell), a literary gen- tleman of considerable talents, was born in 1744 at Bath, and of the same family as the foregoing.

After an education at Trinity College, Dublin, and Corpus Chnsti, Oxford, he entered the Tem- ple, but, mechanics and general literature en- gaging his attention, he formed an acquaintance with Dr. Darwin, Mr. Day, and men of similar pursuits; in 1767 he is said to have contrived a telegraph, which however he did not bring into use. After residing some years in England he went to Lyons, where he was engaged in the di- rection of some

works on the Rhone. In 1780 he became a fellow of the Royal Society. In the latter part of his life he resided chiefly on his own estate at Edgeworth's-town, in the south of Ireland, constructing rail-roads, draining bogs, &c. and in conjunction with his celebrated daughter, Miss Edgeworth, wrote a treatise on practical, and another on professional education, as well as some subsidiary works. He was also the author of An Essay on the Construction of Roads and Carriages ; A Letter to Lord Charle- mont on the Telegraph ; and various papers in the Transactions of the Royal Society and Irish Academy. He died at Edgeworth's-town, in June 1817. Mr. Edgeworth married four wives, of whom two were sisters.

EDGINGS, in gardening, the series of small but durable plants, set round the edges or bor- ders of flower-beds, &c. The best and most durable of all plants for this use, is box ; which, if well planted and rightly managed, will con- tinue in strength and beauty for many years. The seasons for planting this are, the autumn, and very early in the spring ; and the best spe- cies for this purpose is the dwarf Dutch box. Formerly, it was also a very common practice to plant borders, or edgings, of aromatic herbs ; as thyme, savory, hyssop, lavender, and the like; but these are all apt to grow woody, and to be in part, or wholly destroyed in hard winters. Daisies, thrift, or sea july-flower, and camomile, are also used by some for this purpose : but they require yearly transplanting, and a great deal of trouble, otherwise they grow out of form; and they are also subject to perish in very hard seasons.

EDHILING, EDHILINGUS, an ancient appel- lation of the nobility among the Anglo-Saxons. ' The Saxon nation,' says Nithard, Hist. lib. iv., ' is divided into three orders or classes of people ; the edhilingi, the frilingi, and the lazzi; which signify the nobility, the freemen, and the vassals or slaves.' Instead of eclhiling, we sometimes meet with atheling, or aetheling ; which appella- tion was likewise given to the king's son, and the presumptive heir of the crown. See ATHEL- ING.

ED'DISH, n. s. Sax. efcipc, a second crop of grass ; the aftermath : a ground on which a crop has grown the preceding year.

Eddish, or eadish, is the latter pasture, or grass, which comes after mowing or reaping ; otherwise called ear-grass, earsh, and etch. Dr- A. Reet.

E'DIBLE, adj. From Lat. edo. Fit to be eaten ; fit for food.

Some flesh is not edible, as horses and dogs.

Bacon.

Wheat and barley, and the like, are made eithei edible or potable by man's

art and industry.

More against Atkeum.

EDI

The edible creation decks the board. Prior.

Some of the fungus kind, gathered for edible mush- rooms, have produced a difficulty of breathing.

Arbuthnot. E'DICT, n. s. Lat. edictum. A proclamation

671 EDI

There was a holy chapel edifyed, Wherein the hermit wont to say His holy things each morn and eventide.

Spenser. My love was like a fair house built on another

Or command of prohibition ; a law promulgated. man's ground ; so that I have lost my edifice by mis- taking the place where I erected it.

Shakspeare. Merry Wives of Windsor. You shall hardly edify me, that those nations might not, by the law of nature, have been subdued by any nation that had only policy anil moral virtue.

Bacon's Holy War. God built

So spacious, and his line stretched out so far, Thai man may know he dwells not in his own; An edifice too large for him to fill. Milton.

*An exercise so beneficially edijicatory to the church**

Bp. Hall.

Our blessed Saviour told us, that we must account for every idle word, not meaning that every word not designed for edification, or less prudent, shall be reckoned for a sin. Taylor.

Life is no life, without the blessing of a friendly and an edifying conversation. L' Estrange.

He gave, he taught ; and edifyed the more, Because he shewed, by proof, 'twas easy to be poor.

Dryden.

Men have edifyed A lofty temple, and perfumed an altar to thy name.

Chapman.

Out of these magazines I shall supply the town with what may tend to their edification.

Addison't Guardian.

As Tuscan pillars owe their original to this country, the architects always give them a place in edifice raised in Tuscany. Id. On Italy.*

He must be an idiot that cannot discern more strokes of workmanship in the structure of an animal than in the most elegant edifice, Benlley,

As in order to the edification of the church, the

When an absolute monarch commandeth his sub- jects that which seemeth good in his own discretion, hath not his edict the force of a law? Hooker.

The great King of kings, Hatli in the table of his law commanded That thou shall do no murder ; will you then Spurn at his edict, and fulfil a man's ?

Skakspeare. Richard III. Severe decrees may keep our tongues in awe, But to our thoughts what edict can give law ? Dryden.

The ministers are always preaching, and the gover- nours putting out edicts against gaming and fine cloaths.

Addison.

It is the business of a sensible government to im- press all ranks with a sense of subordination, whether ihis be effected by a diamond buckle, or a virtuous edict, a sumptuary law, or a glass necklace.

Goldsmith.

If we may judge by the acts, arrets, and edicts, all the world over, for regulating commerce, an assembly of ?reat men is the greatest fool upon earth.

Franklin.

An EDICT is an order or instrument, signed and sealed by a prince, to serve as a law to his subjects. We find frequent mention of the edicts of the praetor, in the Roman law. In the ci- devant French law, the edicts were of several kinds : some importing new laws or regulations; others, the erection

of new offices ; establish- ments of duties, rents, &c. ; and sometimes articles of pacification. In despotic governments, an edict is much the same as a proclamation is with us : but with this difference, that the former has

the authority of a law from the power which sPirit of God at first conferred upon the ministers of it

issues it ; whereas the latter is only a declaration of a law, to which it refers, and has no power in itself. Edicts cannot exist in Britain, because the enacting of laws is lodged in the parliament and not in the king. Edicts are all sealed with green wax, as a sign of their being perpetual and irrevocable.

ED'IFY, v. a. "\ Fr. edifier ; Span, and

EDIFICA'TION, n.s. Portug. edificar; Italian

EDIFICA'TORY, adj. [and Lat. edificare. To

ED'IFICE, n. s. f build, applied both liter-

ED'IFIER, | ally and morally; but

ED'IFYING, n. s. j edification is principally

used in the latter sense : edificatory is tending to

edification : edifice the building or structure

raised : edifier he who builds or raises it.

Seek that ye may excel to the edifying of the church.

Bible. 1 Cor. 14. 12. He who speaketh no more than cdifieth, is undeser-

a great variety of spiritual gifts, 'Mason.

It is with infinite caution that any man ought to venture upon pulling down an edifice which has an- swered in any tolerable degree for ages the common purposes of society, or on building it up again, with-

before his eyes. Burke.

Some decent in demeanour while they preach, That task performed, relapse into themselves • And, having spoken wisely, at the close Grow wanton, and give proof to every eye, Whoe'er was edified, themselves were not.

Cotoper.

So fares he in that dreadful hour, When injured Truth exerts her power, Some new phenomenon to raise, Which, bursting on his frighted gaze, From its proud summit to the ground, Proves the whole edifice unsound. Bealtie.

E'DILE, n. s. Lat. adilis. The title of a

*J~LG WiJU rti-fCrtlVUtLi UU UlUfcC bUCbU t/l*y «t«fc»wj *•? t • I J T» L tV*

vedly reprehended for much speaking. Hooker. magistrate in o.d Rome, whose office seeins in

„ ... , , ..., . , ,- some particulars to have resembled that of our

Men are edified when either their understanding .

is taught somewhat whereof, in such actions, it be- justices ot peace

hoveth all men to consider, or when their hearts are moved with any affection suitable thereunto. Id.

The edilc, ho 1 let him be apprehended.

EDINBURGH, the metropolis of Scotland, is situated in long. 3° 14′ W. from London, and iat. 55° 57′ N. It is surrounded on all sides, except to the northward, where the ground de- clines gently towards the Frith of Forth, by lofty hills. Arthur's Seat, Salisbury Crags, and the Calton-hill, bound it on the east ; the hills of Braid, and the extensive ridge of the Pentland hills rise on the south ; and the beautiful emi- nence of Corstorphine rears its summit on the west. These hills form a magnificent amphi- theatre, in which, on elevated, though less lofty, ground, stands this flourishing city. It is said, with considerable propriety, to stand on three hills, which run in a direction from east to west; and hence its natural division into the southern, middle, and northern districts.

The origin of its name, like that of most other cities, is very uncertain. Some imagine it to be derived from Eth, a king of the Picts ; others from Edwin, a Saxon prince of Northumberland, who over-ran the whole or greatest part of the territories of the Picts about A. D. 617 ; while others derive it from the Gaelic words Dun Edin, signifying the face of a hill. The

name Edinburgh, however, seems to have been un- known in the time of the Romans. The most ancient title by which we find this city distin- guished is that of Castelh Mynyd Agned ; which, in the British language, signifies ‘ the fortress of the hill of St. Agnes.’ Afterwards it was named Castrum Puellarum, because the Pictish prin- cesses were educated in the castle (a necessary protection in those barbarous ages) till they were married. The most plausible derivation of the present name of the city seems to be that of the Northumbrian prince above mentioned. Simeon of Durham calls it Edwinesburch, and notices it as existing in the middle of the eighth century.

The most ancient part of the city, or Old Town, as itis called, stands on the middle or central ridge of the three eminences above mentioned, which is terminated on the west by a lofty and almost in- accessible rock, on which is placed the castle ; the New Town occupies an elevated plain on the north ; and the southern district is situated on a rising ground in the opposite direction. The hill on which the Old Town is built is separated from the other two districts by a valley on each side, that upon the northern side having been formerly a lake. In the progress of improve- ment, however, this lake having been drained, and streets and bridges having also been formed, these valleys are no impediment to a complete and ready communication irom one district to another.

The peculiar situation of the Old Town has often attracted attention. The principal street, which occupies the flat surface of the central hill, extends nearly in a straight line from the castle, on the western extremity, to the palace of Holyrood-house on the east. This street, which is not improperly named the High Street, measures in length from the castle gate to the palace gate, about 5570 feet, and is about ninety feet in breadth. The upper part of it is elevated about 140 feet above the level of the drained

morass of the North Loch; and, on account of the ground which it occupies gently declining to the east, is about 180 feet above the palace of Holyrood-house. The height of the houses in this quarter, has always rendered it an interesting object to a stranger visiting Edinburgh ; and perhaps the High Street of this city is not equal- led in grandeur by any street in Europe. Pa- rallel to the High Street, in the valley on the south, runs a street called the Cowgate, from ten to twenty feet in breadth. The buildings in this street, though lofty, are less elevated than those of the High Street. From the High Street down to the loch on the north, and to the Cowgate on the south, run narrow cross streets or lanes, called wynds and closes, many of which, from the abrupt descent of the ground, are extremely steep and difficult of passage ; an inconvenience not at all remedied by their width, which is rarely more than six feet.

The origin of this city is, likewise, involved in obscurity. The most absurd

and fabulous accounts have been given of its first posses- sors; and, without sharing in the credulity of the monkish writers, no credit can be given to its remote annals. Situated in that part of the country which formed the Roman province of Valentia, and which, more than any other, was the subject of wars and devastations, it is almost impossible to trace its foundation. If we are to believe our earliest historians, however, the castle was built by Camelon king of the Picts, about A. A. C. 330. It was in the hands of the Anglo- Saxons, from the invasion of Octa and Ebufa in 452, till the defeat of Egfrid king of Northum- berland in 685 by the Picts, who then repossessed themselves of it. The Saxon kings of Northum- berland reconquered it in the ninth century ; and it was retained by their successors till the year 956, when it was given up to Indulfus king of Scotland. In 1093 it was unsuccessfully besieged by the usurper Donald Bane. In 1128 King David I. founded the abbey of Holyrood-house, for certain canons regular ; and granted them a charter, in which he styled the town ' Burgo meo de Edwinesbergh, my borough of Edinburgh'. In 1174 the castle was surrendered to Henry II. of England, to purchase the liberty of king Wil- liam I. who had been taken prisoner by the English. But William afterwards entered into an alliance with Henry, and married his cousin Ermengarde ; upon which the castle was restored as part of the queen's dower.

James II. in 1450 first bestowed on the com- munity the privilege of fortifying the city with a wall, and empowered them to levy a tax upon the inhabitants for defraying the expense. This original wall of Edinburgh began at the foot of the north-east rock of the castle, where it was strengthened by a small fortress called the Well House Tower, and was carried quite across the hill, having a gate on the top as a communica- tion between the town and castle. It at first proceeded eastward in such a manner, as would have cut off not only all the Cowgate, but some part of the parliament house ; and turning to the

north-east was connected with the buildings on the north side of the High Street, at the original Netherbow Port ; but after the battle of Floddon the wall of the city was extended. It now began on the south-east side of the rock on which the castle is built. From thence it descended ob- liquely, to the West Port ; it then ascended part

them; and two persons, in the dress of the war- dens of the tower, attended to show them to visi- tors. The governor of the castle is generally a Scottish nobleman ; and there is a deputy go- vernor, who resides in the garrison ; also a fort- major, a store-keeper, master gunner, and chap- lain. In its

present improved state this castle

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of a hill on the other side, called the High Riggs; can accommodate 2000 men; but its natural

alter which it ran east with but little alteration strength of situation was not sufficient to render

in its course, to theBnsto and Potter Row ports, it impregnable, even before the invention of ar-

and from thence to the Pleasance. Here it took tillery, much less would it be capable of securin-

a northerly direction, which it kept from thence it against the attacks of a modern army provided

to the Cowgate port, after which the enclosure with cannon.

was completed to the Netherbow by the houses St. Giles’s church is a beautiful Gothic build-

Of St. Mary s wynd. For 250 years the city of ing, measuring in length 206 feet. At the west

Edinburgh occupied the same space of ground, end, its breadth is 110 feet, in the middle, 129-

In the middle of the sixteenth century, it is de- and at the east end, seventy-six. It is adorned

scribed as extending in length about an Italian mile, and about half as much in breadth. This space of ground, however, was not at that time occupied in the manner it has been since. The

with a lofty square tower, from the sides and corners of which rise arches of figured stone work ; these, meeting with each other in the mid- dle, complete the figure of an imperial crown,

houses of the Old Town were neither so high nor the top of which terminates in a pointed spire! so crowded upon each other as they are now. ””• ••«•-. These were consequences of the number of inha- bitants increasing, which occasioned the raising

of the houses to such not to be paralleled.

The whole height of this tower is 161 feet. This is the most ancient church in Edinburgh, and its tutelar saint was St. Giles, a native of Greece.

a height, as perhaps is It was at first simply a parish church, of which the bishop of Lindisfarn or Holy Island, in the The castle of Edinburgh stands on a high rock, county of Northumberland, was patron. In

accessible only on the east side. On all others it is very steep, and in some places perpendicular. It is about 300 feet high fiom its base, and 383 above the level of the sea. The entrance to this

1466, it was erected into a collegiate church by James III. At the Reformation it was di- vided into several parts. The four principal divisions form as many churches appropriated to

fortress is defended by an outer barrier of pali- divine worship ; the smaller ones to other pur- sadoes ; within this is a dry ditch, draw-bridge, and gate, defended by two batteries which flank it; and the whole is commanded by a half moon mounted with cannon. Beyond these are two gate-ways, the first of which is very strong, and has two portcullises. Immediately beyond the second gate-way, on the right hand, is a battery mounted with cannon, carrying balls of 12 and 18 Ibs. weight. On the north side are a mortar and some gun batteries. The upper part of the castle contains a half-moon battery, a chapel, a parade for exercise, and a number of houses in the form of a square, which are laid out in bar- racks for the officers. There are also other bar- racks sufficient to contain 1200 men ; a powder magazine, bomb-proof; a grand arsenal, capable of containing 8000 stand of arms; and other apartments which can contain full 22,000 more. On the east side of the square were formerly royal apartments ; in one of which king James VI. was born. In \his quarter, immediately under the square tower, is the apartment called the crown room, wherein are deposited the Scot- tish regalia; consisting of the crown, sceptre, and sword of state, which were placed here on the 26th of March, 1707. It was long doubted

poses. At the same time the religious utensils belonging to it were seized and sold by the ma- gistrates ; part of the money being applied to its repair, and the rest added to the funds of the corporation. In the steeple are three ancient bells : there is also a set of music bells, upon which tunes are played by the hand. The prin- cipal division is called the High Church, in which the general assembly sits. The church is fitted up with seats for all the great officers of the as- sembly ; and there is a throne for his majesty's commissioner. In this church is a monument to the celebrated Napier, inventor of logarithms; another to the regent Murray; and a third ˆto the great marquis of Montrose. The names of the four churches, into which St. Giles's is di- vided, are, the New, or High Church, above described; the Old

Church; the New North Church, or Haddow's Hole, so named from the Laird of Haddow having been for some time im- prisoned in it; and the Tolbooth Church. The Tron Church is an elegant structure, erected in 1641, with a spire, and stands on the south side of the High Street, between the north and soutb bridges. The spire was burnt down in 1824, having accidentally caught fire from the burning

vhether these ensigns of royalty had not been embers blown by the wind from the great tene-

removed ; but in 1818, when commissioners were appointed by his present majesty, then prince regent, to search for them, a large oaken chest in the crown room was forced open, and

ments on the west. Lady Yester's Church is situated nearly opposite to the Royal Infirmary. The Old and New Gray Friars churches are situaied on the top of the south ridge, east of

the relics of the Scottish monarchy were dis- Heriot's Hospital, nearly in the middle of the

covered. They were found in a state of the most perfect preservation, and have since been open

ancient gardens belonging to the Gray Friars. These churches are both under one roof, and

to the inspection of the public. The ciown have one common portico; but are separated by

room was neatly filled up for the exhibition of a partition wall. VOL. VII.

The Old Gray Friars was 2 X

founded about 1612, and had once a steeple. Trinity College Church was founded by queen Mary, wife of king James II. in 1461, at the same time with the Trinity Hospital. It is situated at the east end of the north loch.

Canongate Church stands near the middle of the north side of the street called" the Canongate, and was founded in 1688. It is a Gothic build- ing, in the form of a cross, and was erected at the cost of about £2400, being the accumulated principal and interest of 20,000 merks, be- queathed by a

Mr. Thomas Moodie,. for the pious purpose of building a church. In the cemetery lie the remains- of the celebrated author of the Wealth of Nations, Dr. Adam Smith; and a simple stone, erected at the expense of Burns, marks the burial place of his fellow-bard Fer- guson. St. Cuthbert's Church, or the West Kirk, stands at the western extremity of the valley which divides the New from the Old Town, near the base of the castle rock. Its architecture is by no means elegant, but a handsome spire atones for the homely appearance of the church itself. It is deemed the largest place of worship in Edinburgh. St. Andrew's Church stands on the north side of George's Street, in the New Town, surmounted with a fine spire 168 feet in height. A portico, supported by four columns of the Corinthian order, projects a few feet into the street. In the spire there is a chime of eight bells. The whole is elegantly finished, and has fine appearance. St. George's Church stands on the west side of Charlotte Square, and forms the terminating object of George's Street, from which it is seen along its whole extent. The front to the square consists of a portico, or vestibule, with four columns and two pilasters of the Ionic order, elevated on a flight of steps sixty-eight feet in width. Behind the portico rises a dome, intended as a miniature represen- tation of that of St. Paul's, London. The whole building, with the exception of the dome, which is seen to advantage in almost every di- rection round the city, has a heavy appearance, and it has often been regretted that the original design of the celebrated architect, Adam, was abandoned merely with a view to economy. The building, as it stands, cost £33,000 ; but it has since been ascertained that, according to Mr. Adam's plan, the expense would have been considerably under that sum. This church was opened for public worship in 1814, and is cal- culated to contain 1600 people. The other churches of Edinburgh, remarkable for the ele- gance of their architecture, are St. Mary's Church, situated in Bellevue Crescent, opened for worship, in 1825; St. Paul's Chapel, on the north side of York Street, finished in 1818, at an expense of £12,000; St. John's Chapel, situated a little to the south of the western extremity of Prince's Street, also finished in 1818, at an ex- pense of £15,000. St. George's Chapel, in York-place, built from a design by Robert Adam, in 1794; the Roman Catholic Chapel, at the head of Jjeith-vvalk, built from a design by Gillespie in 1813, possessing a very fine organ, and a beautiful altar-piece, painted by Vandyke; the Methodist Chapel, in NicholsonV square, built in 1814, at an expense of £5000;

Dr. Jameson's Chapel, at the south end of Ni cholson-street, founded in 1819, and finished in 1820; Dr. Hall's Chapel, terminating the east end of Broughton Street. Mr. Paxton's Chapel, in Infirmary Street; and the Relief Chapel, Cowgate. The architecture of the other places of worship in Edinburgh, is not such as to re- quire them to be particularly noticed on that account. Till of late years, the plainest and most homely

accommodation was all that was aimed at in the erection of .places of worship. Besides the churches and chapels already parti- cularised, however, there are various others in this city of great importance, either for the extent of the congregations which they contain, or the celebrity and talents of their pastors. The Scottish Episcopal Church alone has several places of worship. There are also Lady Gle- norchy's Chapel, and the Gaelic Chapel, in which latter the service is performed in the Erse lan- guage, for the benefit of the Highlanders: it was erected in 1 769, and stood on the south side of the castle ; but the congregation removed in 1815 to a more commodious place of worship, at the head of the Horse-Wynd. At present, the number of places for divine worship in Edin- burgh and Leith, distinguishing the different persuasions, is as follow: Established Church, 16; Chapels of Ease, 9; Scottish Episcopal, 7; Cameronians, 1 ; United Associate Synod of the Secession, 9; Associate Synod, 1; Original Burgher, 1 ; Original Antiburgher, 1 ; Relief, 6 ; Independents, 3 ; Baptists, 4 ; Metnodists, 2 ; Roman Catholics, 2 ; Glassites, 1 ; Sbciety of Friends, 1 ; Bcreans, 1 ; New Jerusalem Temple, 1 ; Unitarians, 1 ; Jews, 1 : in all sixty-eight. The regular established clergy connected with Edinburgh are twenty-five. The number of parishes is sixteen, nine of which are called collegiate charges, or have two ministers each joined in the discharge of the pastoral office. Besides these there are, under the control of the established church, seven of the chapels of ease, as they are called; two of which are in the Canongate, one in the old part of the town, two in the southern district, one at Stockbridge, and one in Leith.

In 1215 this city was first distinguished by having a parliament and provincial synod held in it ; but it does not appear to have been looked upon as the capital of Scotland till about the middle of the fifteenth century, when parliaments began to be held in it regularly, and when civil institutions succeeded to the rude military anarchy, which had previously prevailed. For the improvements which were introduced into the kingdom at that period, Scotland was chiefly indebted to her amiable and enlightened monarch, James I., who unfortunately fell a victim to the jealousy entertained by the nobility, of the mea- sures he projected in favor of the people. In 1329 the town of Leith, with its harbour and mills, had been bestowed upon Edinburgh, by Robert I.; and his grandson, Robert III. con- ferred upon all the burgesses the singular privi- lege of building houses in the castle, upon the sole condition that they should be persons of good fame. From the middle of the fifteenth century, its privileges continued to be increased

from various causes. In 1482 the citizens had an opportunity of liberating king James III. from the oppression of his nobles, by whom he had been

imprisoned in the castle. On this ac- count the provost was by that monarch made hereditary high sheriff within the city, an office which he continues still to enjoy. The council, at the same time, were invested with the power of making laws and statutes for the government of the city ; and the trades, as a testimony of the royal gratitude for their loyalty, received the celebrated banner known by the name of the Blue Blanket, which still exists, and is kept by the convener of the trades for the time. By the overthrow of James IV., at the battle of Flod- don, Edinburgh was overwhelmed with grief, that monarch having been attended in his un- fortunate expedition by the earl of Angus, then provost, with the rest of the magistrates, and a number of the principal inhabitants, most of whom perished in the battle. The inhabitants, alarmed for the safety of their city;, enacted that every fourth man should keep watch at night ; the fortifications of the town were renewed, and the wall extended, as we have before mentioned. After this, the inhabitants were gradually relieved from the trouble of watching at night, by a cer- tain number of militia being appointed to pre- vent disturbances. About this period, the city was almost depopulated by a dreadful plague ; so that, to stop if possible, the progress of the infection, all houses and shops were shut up for fourteen days; and some, where infected persons had died, were pulled down altogether. In 1540 the tract of ground, called the Burrough- Muir, was totally overgrown with wood, and it was sagely enacted by the town-council, that whoever would purchase as much as was suf- ficient to make a new front for his house, might extend it seven feet into the street. Thus, while the city was, in a short time, filled with wooden houses, the streets were, in many in- stances, narrowed fourteen feet.

In 1542 an English fleet of 200 sail entered the Forth ; and, having landed their forces, quickly made themselves masters of the towns of Leith and Edinburgh. They next attacked the castle, but were repulsed from it with loss; and by this were so enraged, that they not only destroyed both towns, but laid waste the country for a great way round. In 1547 Leith was again burned by the English after the battle of Pinkey, but Edinburgh was spared. Several dis- turbances happened in the capital at the time of the Reformation, of which an account will be given under the article SCOTLAND ; but none of these greatly affected the city till 1570, when the civil war took place on account of queen Mary's forced resignation. The city was then sometimes in the hands of one party, and sometimes of another ; during which the inhabitants, as may easily be imagined, suffered extremely. The earl of Morton, when regent, in 1573, built two bul- warks across the High Street, nearly opposite to the Tolbooth, to defend the city from the fire of the castle. A treaty was at last concluded between the leaders of the opposite factions ; but Kirk- aldy refused to be compreViended in it. The regent therefore solicited the assistance of queen

Elizabeth, and Sir VV. Drury was sent int<_ Scotland with 1500 foot, and a train of artillery. The castle was now besieged in form, and batte- ries raised against it in different places. The governor defended himself with great bravery for thirty-three days; but finding most of the forti- fications demolished, the well choked up with rubbish, arid all supplies of water cut off, he was obliged to surrender. The English general, in the name of his mistress, promised him honor- able treatment; but the queen of England shamefully gave him up to the regent, by whom he was hanged. Soon after, the most violent religious commotions of Scotland took place, in which the king was insulted and railed at by the clergy, seconded by the magistrates of Edinburgh, as well as the citizens. This led to various severe measures against the city and ministers, which will be detailed under the article SCOTLAND. A reconciliation, however, at length tuok place, which appears to have been satisfactory to all parties, as the king not only allowed the clergy, some of whom had been degraded, to be replaced, but in 1610 conferred various marks of his favor on the town. Another invasion from England bein- apprehended in 1558, the city raised 1450 men for its defence, among whom there are said to have been 200 tailors.*

In the beginning of the reign of Charles I., a perfect harmony seems to have subsisted between the court and the city : for in 1627 that monarch presented the city with a new sword and gown, to be worn by the provost. Next year he paid a visit to this capital, and was received by the magistrates in a most loyal manner. When this prince attempted to introduce Episcopacy into Scotland, his first step was the erection of the three Lothians, and part of Berwick into a diocese, Edinburgh being the episcopal seat, and the church of St. Giles the cathedral. Much disturbance was occasioned in 1637, by the first attempt to read the prayer-book there, and next winter the neighbouring people resorted to town in such multitudes, that the privy council thought proper to publish two acts ; by one of which they were commanded, under severe penalties, to leave the town in twenty-four hours ; and by the other, the court of session was removed to Linlithgow. The bishops on some of these occasions narrowly escaped with their lives. Notwithstanding these disturbances, however, the king again visited Edinburgh in 1641, and was entertained by the magistrates at an expense ef £12,000 Scots. It does not appear that after this the city was in any way particularly con- cerned with the commotions which followed, either throughout the remainder of the reign of Charles I., the Commonwealth, or the reign oi Charles II. In 1680 the duke of York, with his duchess, the princess Anne, and the whole court of Scotland, were entertained by the city in the Parliament House, at the expense of £15,000 Scots. At this time, it is said, that the scheme of building the bridge over the North Lough was first projected by the duke. An ad passed in 1621, that the houses, instead of being covered with straw or boards, should have

their roofs constructed of slate, tiles, or lead. This

act was renewed in 1667; and in 1698 an act was passed, regulating their height also. By this they were restrained to five stories, and the thickness of the wail determined to be three feet at bottom. In 1684, a lantern with a can- dle was ordered to be hung out in the first floor of every house, to light the streets at night. During the civil war,in 1649, the city was visited by the plague, when the infection was so vio- lent, that it was almost depopulated, and the prisoners were discharged from theTolbooth. In 1677 the first coffee-houses were licensed. The union, in 1707, had almost produced a war be- tween the two kingdoms, which it was designed to unite, and on that occasion Edinburgh became a scene of the most violent disturbances, of which an account will be found under ENGLAND. During the time the act was passing, it was found neces- sary for the guards and four regiments of foot to do duty in the city. The disturbances were aug- mented by the disagreement of the two parties in parliament ; and, notwithstanding the victory gained by the court, Sir Patrick Johnson, the provost, who voted for the union, was obliged afterwards to leave the country. In 1715 the city remained faithful to the royal cause ; the city guard was increased, and 400 men raised at the public expense. The rebels, however, made themselves masters of the citadel of Leith ; but, fearing an attack from the duke of Argyle, aban- doned it in the night. A scheme was laid for their becoming masters of the castle of Edin- burgh ; but, being discovered, it failed, and a Serjeant was hanged over the place where he had attempted to introduce the rebels. The loyalty of the city was equally remarkable in 1725, when disturbances were excited in Glasgow, and all parts of the kingdom, concerning the excise bill ; for all remained quiet in Edinburgh, and government returned thanks to the magistrates for their vigilance. In 1736, however, the city fell under the royal displeasure, in the following sin- gular manner : — Two smugglers having bean condemned to be hanged, were conducted, as usual, each Sunday to the Tolbooth church, guarded by three soldiers. Having arrived there 011 one of these occasions before the congrega- tion, one of the prisoners suddenly seized the guards, one in each hand, and the other in his teeth, calling out to his companion to fly, which he immediately did, and was never heard of afterwards. The smuggler who had thus saved the life of his companion without regard to his own, now became an object of general compas- sion ; and the guard, who led him to execution, were severely pelted by the mob. Some of the soldiers were certainly wounded in the affair, and captain Porteous, who

commanded the guard, was so much provoked, 'that he gave orders to fire, when six people were killed and eleven wounded. The evidence, however, of the fact, that the or- ders to fire were given, appears not to have been unexceptionable; nevertheless, on this ground, he was tried and condemned to be executed. The king was at this time in Hanover ; and the case of the unfortunate Porteous having been re- presented to queen Caroline then regent, she granted him a reprieve ; but such was the inve- teracy of the people against him, that they de- termined not to allow hin. the benefit of the

royal clemency. On the day that had been ap- pointed for his execution, therefore, the crowd gradually increased, shut the gates of the city, and burnt the door of the prison. They then took out Porteous, whom the magistrates found it impossible to rescue from their hands, dragged him to the grass market, the usual place of exe- cution, and hanged him on a dyer's sign-post. It was afterwards proved that a member of parlia- ment went to the commander in chief, and re- quested that he would send a party of soldiers to quell the disturbance, but was denied this request, because he could not produce a written order from the provost. The mob throughout this po- pular affair were most determined, and in every other point most orderly in their conduct. As they had not brought a rope with them, they broke open a shop where they knew one was to be had ; and having taken it, and left the money upon the table, retired peaceably. They even allowed the unhappy Porteous fifteen minutes to pray and sing psalms before hanging him. The English government felt this insult, however, deeply. A reward of £200 was offered by royal proclamation to any person who would discover those concerned ; but all efforts were insufficient to produce any discovery : the magistrates and the city therefore were now called to account. The provost was imprisoned three weeks before he was admitted to bail ; after which, he and the four baillies, with the lords of justiciary, were or- dered to London to attend the house of peers. On their arrival, after some debate, it was agreed that they should attend in their robes at the bar; but their examination was, after all, dropped. A bill, however, passed both houses, by which it was enacted, that the city of Edinburgh should be fined in £2000, for the benefit of Porteous's widow ; and the provost was declared incapable of ever afterwards serving the government.

In 1745 the city was invested by the Preten- der's army ; and, on the 17th September, was sur- prised and taken by a party of Highlanders. The inhabitants were commanded to deposit their arras at Holyrood House ; certain stores were required from the city, under pain of mili- tary execution ; and an assessment of 2s. 6d. in the pound was imposed upon the real rents. The Pretender's army guarded all the avenues to the castle, which however held out against him, and a communication was even

preserved with the city for supplies. After the battle of Culloden, the provost of Edinburgh was tried both at Lon- don and at Edinburgh, for not defending the city against the rebels ; but the jury, after having been allowed to adjourn, under heavy penalties, one day, and having been enclosed another, acquitted him. The duke of Cumberland caused, at this period,fourteenof the rebel standards to be burned at the cross. The city not having, during these commotions, elected the magistrates at the usual time, it became necessary to apply to the king for the restoration of its government. This was readily granted, the burges«es being allowed a poll ; after which an entirely new set 'of magis- trates was returned. With these transactions all interferences between the government and the metropolis of Scotland ended : the remainder of its history consists altogether of internal occur- rences.

In 1716 t'tio city bestowed a settled salary on the provost, in order to enable him to support the dignity of chief magistrate. This was at first £.SOO, but has since been augmented to £500 which his lordship still enjoys. In 1718 it was recommended to the magistrates to distinguish themselves by wearing coats of black velvet, for which they were allowed £10; but this act being abrogated, in 1754, gold chains were assigned as badges of their office, which they continue to wear.

Tumults have been frequent in Edinburgh, and too often attended with the loss of lives. Those in 1740, 1763, and 1765, were occasioned by the dearness of provisions. One in 1742 was pro- voked by the custom of robbing the sepulchres of the dead for anatomical purposes : one in 1756 by the impressment of seamen for the war then commencing with France : one in 1760 began in consequence of the footmen of gentlemen inter- rupting the performances at the theatre : one in 1778 in a mutiny of lord Seaforth's Highland regiment: one in 1779 on account of the attempt to repeal the penal laws against the papists : one in 1780 on occasion of fifty Highland re- cruits having refused to embark at Leith for their appointed destination : one in 1784 from a be- lief that the distillers enhanced the price of meal by using unmalted grain: one in 1791 from political excitement on the king's birth-day. Another on the night of 31st December, 1811, was singular for its wantonness and atrocity. A band of young men, most of them under ma- jority, but in numbers sufficient to set the regu- lar police of the city at defiance, having armed themselves with bludgeons, assembled in the streets about eleven o'clock, then crowded with people on visits to their friends, as is usual on that night of the year, and proceeded to knock down and rob every person of decent appearance that came in their

way. Their numbers pre- vented all resistance, and they kept possession of the streets till two o'clock of the morning of the new year. One watchman was killed ; and, besides being robbed, many of the citizens were dangerously hurt. The activity of the police, however, soon traced out the leaders of this out- rage : several of the rioters were seized on the spot. Four were tried and convicted, and three of these were executed on a temporary gibbet, erected on the middle of the High Street, on the 22d of April, 1812. None of them exceeded eighteen years of age.

In the autumn of 1822 Edinburgh was honor- ed by a visit from his present majesty, George IV., which drew from all quarters of the country the grandest assemblage of people that had ever congregated in this ancient metropolis. Pre- viously to his majesty's arrival, the palace of Holyrood House was repaired and fitted up with becoming elegance : triumphal arches were erected at Leith, where it was supposed he would land. A new carriage-way was formed from the great road over the Gallon Hill to the front of the palace ; the road through the park was opened ; the Weigh House, which, but for this circumstance, might have encumbered the street for years, was removed, as if by magic. A road was formed from the chain-pier at Trinity, on the supposition that the king might land there ;

and, for a month previous to the actual event, all was bustle and activity, to a degree never before witnessed in the oldest remembrance. At length, when it was known that the royal fleet had 'ac- tually anchored in Leith Roads, an indescribable multitude of all ranks, from the peer to the pea-sant, assembled on the shore to witness his ma- jesty's landing, and the procession from Leitli to Edinburgh, the order of which had been pre-viously arranged by the authorities. This was on the morning of Thursday the 15th of August. At twelve o'clock a gun from the royal yacht announced that the king had embarked in his barge, which then moved on ; and, as it passed up the harbour, the multitude rent the air with acclamations. His majesty was received on a platform, covered with scarlet cloth, by the duke of Dorset, and other peers; the judges of the supreme courts, and the magistrates of Leitli; all of whom he shook cordially by the hand. He then proceeded to an open carriage, drawn by eight beautiful bays, amid the continued cheers of the people ; and, after being seated, with the duke of Dorset and the marquis of Winchester, it drove off at a slow pace, guarded by the Royal Company of Archers, and a detachment of the Scotch Grays. The procession now moved up Leith Walk, and, when the cavalcade had ap- proached the barrier near Picardy Place, the lord provost, accompanied by the magistrates, presented his majesty with the silver keys of the city ; after which they returned to their carriages, and took their places immediately after the lord lieutenant of the county, preceded by their of- ficers. The procession then passed slowly by York Place, turned up St. Andrew's Square, and moved along Prince's Street to

the Regent Bridge, Waterloo Place. On entering this splen- did street, his majesty expressed his surprise and delight at the beautiful coup d'ceil presented by the objects before him. Arthur's Seat in the distance — the Gallon Hill at hand — buildings on every side of the most elegant structures — alt terraced with human beings. At two o'clock the royal carriage reached Holyrood House ; his majesty's arrival at which was announced by salutes of artillery from the Castle, Salisbury Crags, and the Calton Hill. After receiving the congratulations of the magistracy, and other authorilies, his majesty drove off to Dalkeith House, which had been previously prepared for his residence. Fire-works were exhibited at Charlotte 'Square in the evening ; and the fol- lowing night there was a general illumination. It would require much more space than the limits of this work permit, to detail all that passed during his majesty's visit, or describe the general enthusiasm with which he was re- ceived. The crowds of well-dressed people in the streets — the numerous clans in their various costumes — the number of equipages — ihe variety of amusements — and the universal expression of good humor and delight, which every where prevailed, will not soon be forgotten by the citi- zens of Edinburgh.

Almost the only events of importance which we need now nolice, are the great fires which oc- curred in this city in the year 1824. In June that year a fire took place, beginning at the

Royal Bank Close, which totally destroyed the houses in the upper part of the south side of the High Street, and the eastern angle of Parliament Square. This was followed by one of a still more calamitous nature in November of the same year. It began on the evening of Monday the 15th, at the head of the Old Assembly Close, and continued to increase and spread its ravages on every side with irresistible fury, till it be- came one grand and terrible conflagration, which threatened destruction to the whole of the old city. It was not subdued till it had laid the fairest part of the principal street in ruins, annihi- lated the whole houses of several lanes leading from the High Street to the Cowgate, and destroyed all the buildings of Parliament Square, except those connected with the parliament house. Fortunately the loss of life was not great. Four individuals only were killed, and twelve carried to the infirmary severely hurt. The calamity to the unfortunate persons who were rendered house- less, was also greatly lessened by a prompt and liberal public subscription on their behalf. Another fire took place in the High Street in February, 1825, which at its commencement threatened similar devastations, but the flames were happily subdued after the destruction of one large old tenement, and a few

smaller houses adjoining it. Edinburgh, like London, partook of the general mania which prevailed in 1825 for speculating in Joint Stock Companies. Stock- jobbing, for the first time, became a business or profession in the Scottish metropolis; and schemes, as wild as the celebrated South Sea Bubble in England, or Mississippi scheme in France, promised to triumph over the character- istic prudence and proverbial caution of the peo- ple. The number and the variety of the public companies, which were either set a-going or pro- jected within the short space of six months, excited astonishment for a time, but latterly they became the subject of ridicule ; and, when some of the London bubbles fortunately burst, the de- lusion became so apparent, that all further under- takings in the joint-stock line immediately ceased. That some of the companies which were estab- lished at that time may turn out productive to the parties who embarked in them it would be unfair to doubt; but many of them will even- tually prove sad lessons to individuals of the folly of rash and ill-timed speculation.

The charitable institutions and general im- provements of Edinburgh will now engage our more distinct attention. I. Of the former, the most important is Henot's Hospital, finely situated on a rising ground to the south of the Castle Hill. It owes its foundation to George Ileriot,' goldsmith to James VI., who at his death, after having provided for his relations, left to the magistrates and ministers of Edinburgh the resi- due of his fortune, amounting to £29,325 10s. l^J., ' for the maintenance, relief, and bringing un of so many poor and fatherless boys, free- men's sons of the town of Edinburgh,' as that sum should be sufficient for. It was founded in July 1628, according to a plan of Inigo Jones ; but, the work being interrupted by the civil wars, it was not finished till 1650. The expense of the building is said to have beun upwards of

£27,000, and the hospital is now possessed of an irjcome of about £5000 per annum, and is rapidly increasing. In this hospital the boys are taught English, Latin, Greek, and French, writing, arithmetic, book-keeping, mathematics, and geography ; and for any other branch of educa- tion that may be required they attend masters out of the hospital, who are paid from the funds. The age of admission is from seven to ten, and the boys generally leave the hospital at fourteen ; but, if necessary to prepare them for the univer- sity, they are retained for a longer period. Those wishing to follow any of the learned professions, are sent to college for four years after leaving the hospital, with an allowance of £30 per annum. Boys going out as apprentices to trades, are al- lowed £10 annually for five years, and £5 at the leaving of their apprenticeship. At present the number of boys is 180. The whole management is vested in a treasurer, appointed by the magis- trates of Edinburgh, under whom are a house- governor, house-keeper, and the masters in the different branches of learning. II. Watson's Hospital; so named from its founder, George Watson, who, dying a

batchelor in 1723, left £12,000 for the maintenance and education of the children and grand-children of decayed mem- bers of the Merchants' Company of Edinburgh. The scheme, however, was not put in execution ill 1738, when the sum originally left had ac- cumulated to £20,000. The present building was then erected, in which about eighty boys are maintained and educated. It stands on the south side of the city, a little to the south of Heriot's Hospital; and was erected at the expense of £5000. It is under the management of the master, assistants, and treasurer of the Merchants' Company, four old bailies, the old dean of guild, and the two ministers of the old church. The boys are genteelly clothed and liberally educated. III. The Merchants' Maiden Hospital was estab- lished by voluntary contribution in 1695, for the education and maintenance of daughters of mer- chant burgesses of Edinburgh. The governors were erected into a body corporate, by act of parliament, in 1707. The annual revenue is £3000. About eighty girls are maintained and educated ; the majority of whom, on leaving the house, receive £3 6s. 8d. But, for the encou- ragement of merit, those who are found superior to the generality in the acquisition of their edu- cation, are allowed £8 6s. Qd. IV. The Trades' Maiden Hospital was founded in 1704 by the incorporation of Edinburgh, for the maintenance of the daughters of decayed members, on a plan similar to that of the former. Mrs. Mary Ers- kine, a widow gentlewoman of the family of Marr, contributed so liberally, that she was by the governors styled joint-governess of the hospi- tal. About fifty girls are maintained in it, and, when they leave it, receive a bounty of £5 11s. l£d. V. The Orphan Hospital was planned in 1732, by Andrew Gairdner, merchant, and other inha- bitants. The revenue is inconsiderable, but the institution is supported by the contributions of charitable persons. Into this hospital orphans are received from all parts of the kingdom. About loO are maintained in it. It is situated to the eastward of the north bridge ; and is a

handsome building, consisting of a body and two wings, with a neat spire, furnished with a clock and two bells. The philanthropic Mr. Howard reckoned this institution one of the most useful charities in Europe, and a pattern for all others of the kind. VI. The Trinity Hospital was founded in 1461, by thequeen of James II. At the Reformation it was stripped of its revenues; but the regent afterwards bestowed them on the provost of Edinburgh. The hospital was after this repaired, and appointed for the reception of poor old burgesses, their wives, and unmarried children, not under fifty years of age. It is situated at the foot of Leith Wynd, and comfort- ably maintains about forty of both sexes, who have each a room for themselves. There is a small library for their amusement, and they have

a chaplain. About 100 out- pensioners have £6 a year each. The funds are under the manage- ment of the town council. VII. The Charity Workhouse was erected in 1743, by voluntary contributions. It is a large plain building, situated in the south district of the city. The only permanent fund for defraying the expense of this establishment is a tax of two per cent, on the valued rents of the city. The rest is derived from collections at the church doors and volun- tary contributions ; but, as these always fall short of what is requisite, recourse is frequently had to extraordinary collectibns. In 1813 it was found necessary to raise the assessment on the valued rents from two per cent, to five. The levy at the present time is at the rate of three and a half per cent. The number of inmates, men, women, and children, including about seventy lunatics, average from 800 to 900, and the average expense of maintaining each person is £8 2s. 5 %d. per annum. There are two other charity workhouses in the suburbs, much on the same plan with that now described ; one in the Canongate, and the other in St. Cuthbert's or West Kirk parish. VIII. Gillespie's Hos- pital, founded about 1796 by James Gillespie, of Spylaw, famous as a manufacturer of snuff in Edinburgh. Besides supporting a considerable number of aged persons of both sexes, this insti- tution educates 100 boys gratis in a school erected for that purpose.

The Edinburgh Royal Infirmary was first pro- jected in 1721, but, the proposals which were published not receiving encouragement from the public, the design was dropped till it was again taken up by the College of Physicians in 1725. After considerable difficulty and delay, £2000 was procured, and a small house was opened for the reception of the sick poor in 1729. At length, the stock having increased to £3000, a royal charter was obtained to erect the subscribers into a body corporate, and in 1738 the foundation of the pre- sent structure was laid, and the building speedily executed. From that time forward donations were constantly received in aid of its funds ; some of them of princely munificence. This establish- ment is attended by two physicians, chosen by the managers, who visit their patients daily, in presence of the students, The members of the College of Surgeons also used to attend in rotation according to seniority, but that plan lias been altered, and the patients are com-

mitted to the care of particular surgeon), chosen annually by the managers. The build- ing consists of a body and two wings, each three stories high, with an attic story, and very elegant front. The body is 210 feet long, and thirty-six broad in the middle. The wings are seventy feet long and twenty-four broad. In the different wards, 228 patients may be accom- modated, in distinct beds. There are cold and hot baths for the patients, and also for the citi- zens; but to these last the patients are never admitted. The theatre will hold upwards of 200 spectators. There is also a military ward, in consequence of which a small guard is always kept at the*

infirmary. From 3000 to 4000 pa- tients are now admitted annually; and the yearly revenue of the establishment is £5000.

The first public Dispensary of Edinburgh was founded by Dr. Duncan in 1776, for the poor whose diseases are of such a nature as to render their admission into the infirmary either unnecessary or improper. Here the patients receive advice gratis four days in the week : a register is kept of the diseases of each, and of the effects produced by the medicines employed. All patients, not improper for dispensary treat- ment, are admitted on the recommendation of the elder or church-warden of the parish where they reside. A similar establishment was founded in 1815, called the New Town Dispensary, for the accommodation of the poor in the northern parts of the city. It has also a midwifery department, under the superintendence of an able physician. Both Institutions afford gratuitous vaccine inocu- lation. The expense of the medicines and the sup- port of the general establishment at each are de- frayed by voluntary subscription. A donation of one guinea, annually, entitles the contributor to re- commend patients, and to be a governor for two years ; and five guineas confers the same privi- lege for life. Dispensaries for diseases of the eyes and ears were also established in 1822, and institutions of the same kind for other maladies exist in different quarters of the city.

The charitable institutions thus particularised are, in point of antiquity and importance, the most remarkable in the Scottish metropolis ; but there are others, also, of a very valuable nature, the mere enumeration of which will demonstrate that this city is as distinguished for humanity and benevolence, as it has long been for science and literature, aud all the arts that tend to improve and adorn life. The following flourish vigorously at the present time: — 1. 1. The Lying in Hospital. 2. The Asylum for the Blind, 3. The Lunatic Asylum. 4. The Mag- dalen Asylum. 5. The Institution for educating Deaf and Dumb Children. 6. The Repositories. 7. The Ministers' Widows Fund. 8. The Society for the Sons of the Clergy. 9. The Society for Relief of the Destitute Sick. 10. Horn's Charity. 11. Walson's Bequest. 12. Thomson's Bequest. 13. Dr. Robert Johnson's Bequest and Strachan's Legacy of Craigcook.

14. The Society for the Suppression of Begging.

15. Savings Banks. 16. The Institution for the Relief of Incurables. 17. The Association^ for the Relief of Imprisoned Debtors. 18. The House of Industry. 19. The Society for Clothing

the Industrious Poor. 20. The Society for pro- moting Religious Knowledge among the Poor. 21. The Society for the Relief of Indigent Old Men. 22. Two Female Societies for Relief of Indigent Old Women. The funds for all or most of these societies, are chiefly derived from contributions among the charitable, and the col- lections at occasional sermons.

The modern improvements of Edinburgh were commenced in 1753, at which time the city occu- pied the same space of ground that it had done for centuries before. When the foundation stone of the Royal Exchange was laid that year, there was a grand procession, and the greatest con- course of people ever remembered in Edinburgh. In 1756 the High Street was cleared by the removal of the cross ; which many regretted, as it was a very ancient and elegant building. In 1763 the first stone of the north bridge was laid; and in 1767 an act of parliament was obtained, for extending the royalty of the city over the fields to the northward, where the New Town is now situated. In 1774 the foundation of the Register Office was laid ; and so rapidly did im- provements proceed for several years, that we find in 1778 St. Andrew's Square, and the streets immediately connected with it, on the original plan of the New Town, were nearly completed. In 1784 the project for rendering the access to the town equally easy on both sides was begun to be put in execution, by laying the foundation of the South Bridge. At the same time a great improvement was made, by reducing the height of the street several feet, all the way from the place where the cross stood to the Netherbow. The street was farther cleared by the removal of the town guard-house, which had long been com- plained of as an incumbrance. The great earthen mound across the north loch, connecting ihe new and old town to the west of the North Bridge, was commenced about the same period. In 1789 the new buildings of the University were begun, but, being on a scale far beyond the means possessed for completing them, they stood for many years unfinished ; and it was not till 1815, when the exertions of Mr. John Marjori- banks, then lord provost and M. P., procured £10,000 in aid of the undertaking from parlia- ment, and a recommendation to grant the same sum annually for seven years, that plans for its completion were adopted. The next improve- ment undertaken was the alteration in the old Parliament House, which was begun by the erection of a court-room and apartments for the Barons of Exchequer, and an open arcade in the front of the old building. The original plan in- cluded, also, an additional room for the second division of the court, a library room for the advo- cates and writers to the signet, and a county hall ; all of which are now created. A new prison was intended to be built about the same time with the earliest of these improvements on the Parliament House ; but, from some objec- tions raised to the site fixed on for its erection, the design was postponed for a time; and it was not till after an act of parliament for further im- proving the city had passed, in 1814, that the building of a new

gaol was carried into effect. In 1815 Regent Bridge, over the low ground

which" divided Prince's Street from the Calton Hill, was begun, together with the adjacent buildings, and it now forms an entrance of un- equalled grandeur to the city. The new prison, begun in the same year, stands at its eastern ter- mination, and on the opposite side a public hall has been erected by the incorporated trades of Calton. On the south side are the Stamp-office and Post-office, surmounted with the royal arms, and opposite to the last is a handsome building called the Waterloo Hotel. In 1817 the old Town was much improved by the removal of the remains of the range of old houses which incum- bered the middle of the High Street. The old Tolbooth and Creech's land, the two extremities of the range, were taken down that year, and the Weigh-house followed them in 1822. In 1818 a canal was begun at the west end of the city, to be carried westward till it joined the Forth and Clyde canal about a mile beyond Falkirk. This undertaking was finished and open for trade and passage boats in 1822. Its estimated expense was £240,500, which was raised in shares of £50 each. The depth of this canal is five feet, and its width at the surface forty feet, contracting to twenty-two feet at the bottom. Few of the recent improvements promise to be so beneficial to the city and surrounding country as this. It has already had the effect of dimi- nishing the price of coals to the citizens one- third. Besides these important undertakings, many other improvements have been going on at the same time, which a volume would hardly suffice to describe with accuracy. We may, however, mention the following, as having been finished since 1813. Two elegant episcopal chapels, St. George's Church in Charlotte Square, a catholic chapel, a new merchants' maiden hospital, a luna- tic asylum, a new observatory, lord Melville's monument in St. Andrew's Square, St. Mary's Church, a house for the education of the deaf and dumb, and the Edinburgh Academy. Also numerous streets and ranges of the most elegant buildings, to the north of Queen Street, extending the city in that direction to the water of Leith, and eastward towards the town and port of Leith. The Northern District, or New Town, consists of two divisions : the one includes the property laid off for building in 1767; and the other consists of all the additional ground occupied by the buildings erected or erecting to the east, west, and north of the former. The principal street of the first division are George's Street, Prince's Street, and Queen's Street, running longitudinally in straight lines, and forming a parallelogram, which is intersected at right angles by seven streets, running north and south. This district also comprehends various elegant squares, and some of the finest public buildings. But, generally speaking, the houses are inferior to those of more recent erection in other parts of the city. The second division of the New Town comprehends the streets which descend from Queen's Street, to the north, and those which intersect them from east to west, together with all the recent im- provements*

on the earl of Moray's grounds, the Warristar grounds, and the fields in the neigh- bourhood of Stockbridge. For the elegance of its buildings and the general advantages of situa

lion and plan, tliis division has not, perhaps, its equal in the world. When the whole of the grounds now comprehended in what is called the New Town, are added to the southern and mid- dle districts, the circumference of Edinburgh, is nearly eight miles.

The tribunals of Edinburgh have, in general, splendid accommodations. The judges of the ses- sion justiciary and exchequer courts hold their sittings within the buildings called the parlia- ment house, in the great hall of which the Scot- tish parliament used to meet previous to the union. This hall is the only part of the ancient ouilding which remains in its original state, the other apartments having undergone many altera- tions within these few years. It is 122 feet long by forty-nine broad, and has a fine arched roof of oak, painted and gilded. A fine statue of the late Viscount Melville, by Chantry, stands on a pedestal near the north end of it. The court of session, before its division into cham- bers, sat in a room adjoining to the great hall, formerly appropriated for the meeting of the privy council. This apartment, after the division took place, was enlarged and fitted up for the judges of the first division, and a marble statue of the late President Blair, by Chantry, was, in 1818, placed behind the chair of the presiding judge. A new room was likewise erected for the second division, entering from the west side of the great hall ; and a statue of president Forbes, •which formerly stood in a niche in the outer hall, was removed to this room and placed behind the chair of the lord justice Clerk. This statue was executed by the celebrated sculptor Rou- biliac, at the expense of the Faculty of Advo- cates. An addition was likewise built to the Parliament House in 1819, containing two court rooms for two of the lords ordinary, and a new room for the faculty library. This library, which is one of the most valuable in Britain, now occu- pies apartments worthy of the rich and rare literary treasures which it c6ntains. The library of the writers to the signet is kept under the same roof. In the centre of the square fronting the Parliament House, there is an elegant eques- trian statue of Charles II., which has been much admired. It was cast in Holland, and cost £215. The original Parliament House buildings, as they stood prior to the recent additions and improve- ments, were begun in 1632, finished in 1640, and cost, what was then deemed, the enormous sum of £11,600 sterling. At the western ex- tremity of the new library rooms of the advocates and writers to the signet, stands a magnificent county hall, the plan of which was taken

from one of the finest models of antiquity, the temple of Erectheus, in the Acropolis of Athens. The principal entrance is taken from the Choragic monument of Thrasyllus. The interior of this building is laid out in a large hall, a courtroom, a committee room, and, in the principal floor, for the use of the freeholders of the county. The other floors are occupied as offices for the sheriff, sheriff-clerks, &c. The expense of its erection was £15,000. It was finished in 1819. The accommodations afforded for the inferior law establishment of Edinburgh, if not nearly so

splendid, are generally as commodious as those we have thus described.

The North Bridge, which forms the main pas- sage of communication between the Old and New Towns, was founded in 1763, but the contract for building it was not signed till August 21st, 1705. The architect was Mr.William Mylne, who agreed with the town council of Edinburgh to finish tin; work for £10,140, and to uphold it for ten ye;irs. It was also to be finished before Martinmas 1 ?()'.) ; but on the 8th of August that year, when the work was nearly completed, the vaults .and side walls on the south fell down, and nine people were bu- ried in the ruins. The bridge was repaired, by pulling down some parts of the side walls ; after- wards rebuilding them, and strengthening them with chain bars. The whole was supported at the south end by very strong buttresses and counterforts on each side; but on the north it has only a single support. The length of the bridge, from the High Street in the Old Town to Prince's Street in the New, is 1125 feet; the total length of the piers and arches is 310 feet. The width of the three great arches is seventy-two feet each ; of the piers thirteen feet and a half; and of the small arches, each twenty feet. The height of the great arches from the top of the pa- rapet to the base, is sixty-eight feet ; the breadth of the bridge within the wall over the arches is forty feet, and the breadth at each end fifty feet. The communication betwixt the two towns by this bridge, though very complete and convenient for such as lived in certain parts of either, was yet found insufficient for those who inhabited the western districts. Another bridge being there- fore necessary, it was proposed to raise an earthen mound, by filling up the valley with the rubbish dug out in making the foundations of houses in the New Town ; and so great was the quantity, that this was accomplished so as to be fit for the passage of carriages in less than five years. Whilst the mound was forming it sunk at different periods above eighty feet on the west side, and was again filled up : 1800 cart-loads of earth were, upon an average, laid upon this mound every day. It has been said, with justice, to be a work unrivalled by any but Alexander the Great's at Tyre.

The South Bridge is directly opposite to the North, so as to make but one street, crossing the High Street almost at right angles. It consists of twenty-two arches of different sizes ; but only one of them is visible, viz. the large

one over the Cowgate ; and even this is small, in comparison with those of the North Bridge, being no more than thirty feet wide and thirty-one feet high. This bridge was erected with a design to give an easy access to the great number of streets and squares on the south side, as well as to the coun- try on that quarter from which the city issupplied with coals. So great WHS the rage for purchas- ing ground on each side of it for building, that the areas sold by auction at £50 per foot in front. They sold higher than ever was known in any city.

Regent Bridge terminates Prince's Street, the southern boundary of the New Town, at the east. This bridge, in connexion with the adjoining buildings, is one of the most splendid of the

recent improvements. It was begun in 1815, and finished in 1819. It now forms the prin- cipal entrance into Edinburgh from the new London road, by the south side of the Calton hill. The arch over the low Calton is 'semi-cir- cular, and fifty feet wide. At the north front it is forty-five feet in height, and at the south front sixty-four feet two inches, the difference being occasioned by the ground declining to the south. The roadway is formed by a number of reverse arches on each side. The great arch is ornamented on the south and north by two open arches, supported by elegant columns of the Co- rinthian order. The whole property purchased to open up the communication to the city by this bridge cost £52,000, and the building areas sold for the immense sum of £35,000. The street along the bridge is called Warterloo Place, as it was founded in the year on which that memo- rable battle was fought, and was intended to commemorate the event.

The observatory is seated on the top of the Cal- ton hill, and is furnished with all the instruments necessary for astronomical observations. The scheme for the erection of it was first adopted in 1736; and the earl of Morton and Mr. M'Laurin, professor of mathematics, each con- tributed to its erection. The foundation stone was laid by provost Stodart, on the 25th of August 1776. But Mr. Adam the architect, conceiving the idea of giving the whole the ap- pearance of a fortification, accordingly a line was marked out for enclosing the limits of the observatory, and of having Gothic towers at the angles. Thus the money designed for the work was totally exhausted, and the observatory long remained unfinished. In 1792, however, the building was completed by the magistrates. But it was not till 1812, when the astronomical institution was founded, that it was furnished with a set of philosophical instruments. In 1818 a new observatory was

built a little to the cast of the old one. It is now under the most superior scientific management, and while we write we observe a public announcement of his majesty's having bestowed £2000 upon it to pur- chase instruments.

The palace of Holyrood House, is the only royal habitation in Scotland, that is not in ruins. It is a handsome square of 230 feet in the in- side, surrounded with piazzas. The front, facing the west, consists of two double towers joined by a beautiful low building, adorned with a double balustrade above. The gateway in the middle is decorated with double stone columns, supporting a cupola in the middle, representing an imperial crown, with a clock underneath. On the right hand is the great staircase, which leads to the council chamber and the roya apartments. These are large and spacious, and in one of them the Scottish peers meet, to elect sixteen of their number to represent them in the British parliament. The gallery is on the left hand, and measures 150 feet by 27£. It is adorned with the supposed portraits of all the kings of Scotland, from Fergus I. to James VII. In the apartments of the duke of Hamilton, which he possesses as hereditary keeper of the

palace, queen Mary's bed of crimson damask, bordered with green fringes and tassels, is still to be seen, but almost reduced to rags. Here also strangers are shown a piece of wainscot hung upon hinges, which opens in a trap-stair communicating with the apartments below. Through this passage lord Darnley and the other conspirators rushed in to murder the un- happy Rizzio. Towards the outward door of these apartments are large dusky spots on the floor, said to have been occasioned by Rizzio's blood, which could never be washed out. But a very slight degree of skill in chemistry is sufficient to perpetuate a miracle of this kind. The front of thrs palace is two stories high ; the roof flat ; but at each end the front projects, and is orna- mented with circular towers at the angles. Here the building is much higher. Great part of it was burnt by Cromwell's soldiers ; but it was repaired and altered into its present form after the Restoration. "The fabric was planned by Sir William Bruce, a celebrated architect, and executed by Robert Mylne, mason. The environs of the palace afford an asylum for insolvent debtors; and adjoining to it is a field called St. Anne's Yards ; beyond which there is an ex- tensive park, called the King's Park, which, with the Duke's Walk, and the hills of Arthur's Seat, Salisbury Crags, and St. Leonard's Hill, are all within the privilege of the sanctuary. The abbey church, built by David I. in 1128, has been long in ruins. See HOLYROOD HOUSE. About the year 1795 some of the chief rooms of the palace were fitted up for the reception of part of the royal family of France, when pro- scribed and exiled from their native kingdom.

Edinburgh is divided into ten parishes, of which there are nine in the old

city, named after the nine oldest churches, and one in the new town : besides the Canongate, and St. Cuth- bert's, or West Kirk parishes ; and those of South and North Leith; in all sixteen, included in the public enumerations of the inhabitants. It has a weekly general market on Wed- nesday, and an annual fair called Hallow Fair, in November, which lasts a week. The markets of Edinburgh are plentifully supplied with all sorts of provisions. Fresh butchers' meat, as well as fowl and fish, may be had every day ; and no city can be better supplied with garden stuffs. A remarkable instance of the plenty of provisions with which Edinburgh is supplied was observed in 1781, when several large fleets, all of them in want of necessaries, arrived in the Forth, to the amount of above 600 sail, and having on board at least 20,000 men ; yet the increased consumption of provisions, which cer- tainly ensued upon the arrival of so many strangers, made not the least increase in the rate of the markets, insomuch that several victualling ships, sent down by London merchants, returned without opening their hatches. The city mills are let to the corporation of bakers in Edin- burgh; and the bread made in the city is re- markable for its good quality. The revenue of the city, arising partly from duties of different kinds, and partly from landed property, is up- wards of £45,000 sterling per annum ; but the

places of profit and emolument at the disposal of the town council, may be estimated at not less than £30,000.

The Theatre stands nearly opposite to the Register Office, in Shakspeare Square. The building is exceedingly plain external ly,its only decorations being a statue of Shakspeare, and emblematical figures of tragedy and comedy on the top of the front. But it is elegantly fitted up within. This building was first opened as a place for

lect than numerous; but the dancing assemblies are well frequented. The Caledonian, a minor theatre, is the only other place of public amuse- ment which our limits will permit us to particu- larise. This building was originally erected for equestrian exhibitions, and called the Royal Circus. It was subsequently converted into a place of worship, but after various changes, was fitted up as a minor theatre, in 1822.

No city in the world affords greater security to

theatrical performances in 1769 ; after much op- the inhabitants in their persons and properties position from the clergy, who, for many years, than

Edinburgh. Robberies are rare, and street had displayed the greatest hostility to every murder hardly known ; so that a person may walk amusement df the kind. It was originally out at any hour of the night in perfect security, built by patent from the crown ; and the prices This, in former times, was, in a great measure, of admission were then, three shillings for the owing to the vigilance of a town-guard. In 1700 it boxes and pit, two shillings for the first gallery, consisted of 126 men. From that time it continued

embodied till the year 1805, when a new system of police was adopted. It was then reduced to an about £140. But the box seats were afterwards officer and thirty men, as a guard to the lord pro- raised to four shillings, and subsequently in 1815 vost ; and this last remnant was finally disbanded to five shillings. The seats in the pit and galleries in 1817, when the old Tolbooth was taken down,

the lower part of which had been occupied as their guard-room. The arms of this ancient body of men were the same as those used by the king's forces in general, but, in their capacity of night watchmen, they used a weapon called a lochaber axe, the use law, who, in addition to a regular company of of which had long been discontinued in every other

and one shilling for the second or upper gallery. At these rates the house could hold with ease

still remain at the old rate. In 1809 the patent was acquired by Mr. Henry Siddons, who was at that time manager, and who continued to conduct it till he died in 1815. It has since been under the management of Mr. Murray, his brother-in-

excellent performers, presents the public at inter- vals with all the actors and actresses of eminence that appear on the boards of Drury Lane and Covent Garden.

Musical Entertainments, on a scale of great ex- tent and in the highest perfection, have been fre- quent in Edinburgh, and the records of them go as far back as 1695. In 1672 a music hall was purposely erected at the foot of Niddry Street, after the model of the great Opera Theatre in Parma. This institution flourished for about seventy years, and was a favorite resort of the fashionable society of Edinburgh during the greater part of that time. Admission was ob- tained by special tickets, not transferable, and which were always gratis, except when benefits were given for the emolument of professional performers. The society, however, at length

place. In addition to the town-guard, there was also a body of Militia,

called the Trained Bands, consisting of 1600 men ; but they have also been long dissolved. The officers, however, are still elected annually, and the provost, ex officio, bears the title of colonel as their commander.

In 1805, the town-guard being found inade- quate to preserve the peace of the city and pro- tect the inhabitants in its extended state, an act of parliament was applied for, and under its sanction a new system of police was established. By this statute the city was divided into wards, and commissioners were appointed for each ward, for the purpose of assessing the inhabitants in the expense of the establishment, and for other duties. A court was also established, with a judge of police and clerk, for the trial of of- fences ; and the judge was empowered to punish

broke up, and the entertainments began to be by fine and compensation for damages, by im-

gradually neglected. The hall was then disposed of for other purposes, and, after being some time occupied as a Baptist meeting-house, it was purchased in 1812 by the Grand Lodge, and has since been known by the name of Freemasons' Hall. After the weekly concerts of this society were discontinued, subscription concerts were performed in the Assembly Rooms, George's Street, and at Corri's Rooms, formerly the Circus, now the Caledonian Theatre. Musical festivals

prisonment in jail, or by commitment to Bride- well. The examination of the offender and witnesses was taken instanter and vivS, voce, and the sentence pronounced was immediately exe- cuted. After an experiment of nearly seven years, this system was found not to answer in consequence of the extravagant powers which had been given to the court. A new bill was ac- cordingly brought into parliament, and an im- proved system was established in 1812, the office

on a plan similar to that of the Oratorios in of judge of police being abolished. The city

London, have also thrice taken place in Edin- burgh, for the benefit of the public charities. New Assembly Rooms were erected in George's

was divided into twenty-six wards, with three resident commissioners for each ; the sheriff of the county and the magistrates of the city were

Street, not unsuitable to the general elegance of appointed judges ; a superintendent was also

the other buildings in the New Town, in 1787. appointed, and various enactments provided for

The principal hall is ninety-two feet long, forty- the cleansing, watching, and paving of the streets,

two feet wide, and forty feet in height. There and for other matters of general police. This

are also a Tea Room, two Card Rooms, and a statute was further amended in 1822. In addi-

grand Saloon. Two Assemblies are held weekly tion to the superintendent there are now three

through the winter, the one a (lancing, the other lieutenants and a clerk. The expense of the

:t card assembly. The card parties are rather se- establishment for the year 1824 was £20,292 6s. 5d.

levied at the rate of one shilling in the pound on a rental of £373,736.

The town council of Edinburgh has the direc- tion of all public affairs. The ordinary council consists of twenty-five persons; the extraordi- nary, of eight, making in all thirty-three. The •whole is composed of merchants and tradesmen, whose respective powers and interests are so in- terwoven, that a sort of balance is preserved be- tween the two bodies. The members of the town-council are partly elected by members of the fourteen incorporations, partly by their prede- cessors in office. These incorporations are, the companies of the surgeons (also erected into a royal college), goldsmiths, skinners, furriers, hammermen, wrights, mascfns, tailors, bakers, fleshers, cordiners (or shoemakers), weavers, waukers, bonnet-makers, dyers, and merchants'. The lord-provost of Edinburgh, who is styled right honorable, is high sheriff, coroner, and admiral, within the city and its liberties, and the town, harbour, and road of Leith. He has also a jurisdiction in matters of death, now in desuetude. He is preses of the convention of royal boroughs, colonel of the trained bands, commander of the city guard and of the Edinburgh jail ; has the precedency of all the great officers of state and of the nobi- lity, walking on the right hand of the king, or of his majesty's commissioner, and has a sword and mace carried before him. Under him are four magistrates called bailies, whose office is much the same with that of the aldermen in London, excepting that they continue in office only one year. There is also a dean of guild, who has the charge of the public buildings, and without whose warrant no house or building can be erected within the city. He has a council to consult with a nominal treasurer, who formerly had the keeping of the town's money, which is now given to the chamberlain. These seven magistrates are elected annually ; and with the seven of the former year, three merchants' and two trades' counsellors, and fourteen deacons, making in all thirty-three, form the council of the city, and have the sole management and disposal of the city revenues. Formerly the provost was also an officer in the Scottish parliament. The magistrates are sheriffs depute and justices of the peace ; and the town council are patrons of all the churches of Edinburgh, patrons of the Uni- versity, and electors of the city's representative in parliament. They have besides a very ample jurisdiction both civil and criminal, are superiors of the Canongate,

Portsburgh, and Leith, and appoint over these certain of their own number, who are called baron bailies; but the person who presides over Leith has the title of admiral, because he has there a jurisdiction over mari- time affairs. The baron bailies appoint one or two of the inhabitants of their respective districts to be their substitutes. These are called resident bailies, and hold courts in absence of the baron bailies, for petty offences, and discussing civil causes of small moment.

In a paper communicated by the Rev. Dr. Blair to Sir John Sinclair containing an enume- ration of families and examinable persons in the parishes of the city, in 1722, the total number of

families was taken at 5979, and of persons 20,336. Adding the usual proportion of one-fourth of the examinable persons for children, the number of inhabitants would amount to 25,420 ; and allow- ing 15,000 for the suburbs, the total would be 40,420 souls. Maitland, in his History of Edin- burgh, computing from the register of burials, makes the total number within the nine parishes 48,000 ia 1753. And that this was veiy near the truth, appears from the enumeration actually made at the request of the Rev. Dr. Webster, in 1755, when the total number was found to be 57,195. But, as in this number, the inhabitants of south and north Leith were included, amount- ing to 9405, the total number of souls in the city and its environs turns out exactly 47,790, which is within 210 of Maitland's computation, and shows it to have been founded on just principles. The population of Edinburgh had increased very much within twenty years following, for the computation made by the late Mr. Hugo Arnot, in 1775, was considerably greater. The number of families in Edinburgh, Leith, &c., is stated by him at 13,806 : which multiplied by five, (supposed more just than by six), and adding 1400 for the castle, &c., the number of souls in the city and suburbs, including Leith, amounted, in 1775, to 70,630. An enumeration was made in 1791 for the statistical report of the city, which stated the total of inhabitants, including those of the suburbs and town of Leith, at 84,886. But the accuracy of this enumeration is much doubted ; because the parliamentary enumeration of 1801 makes the number of inha- bitants in Edinburgh and its suburbs, including Leith, only amount to 82,560. A similar enu- meration took place in 1811, when the return was 102,987. The last was in 1821, when the return was as follows : number of families, 29,193; males 62,099, females 76,136; total

138,235.

The chief prison, or gaol, stands on the Cal- ton Hill, and was erected about ten years ago. It is in the Saxon style of architecture, and is in length 194 feet by forty feet deep. It is divided into six classes of cells, four for

men and two for women, besides a division containing cells for condemned criminals. Each of the classes has on the ground floor a day room with a fire-place, an open arcade for exercise in bad weather, and an airing ground supplied with water. The num- ber of cells is fifty-eight, each being eight feet by six. In the centre of the building there is a cha- pel, and at the top there are four infirmary rooms for the sick. The house of the governor or cap- tain of the gaol, as he is called, is placed upon an eminence which overlooks the prison. It is a picturesque building in the Gothic style, and contains, besides the governor's apartments, a committee room for the gaol-commissioners, a school for the instruction of juvenile delinquents, &c. The whole is surrounded by a wall about twenty feet high. There is also a prison called the Canongate Tolbooth, built in the reign of James VI., chiefly occupied as a debtors' prison. Besides this there are court-houses and prisons in the other suburbs of the city, but none of them worthy of particular notice. The old Tolbooth, which stood at the north-west corner of St. Giles's

church, has been immortalised by the author of the Waverley novels, under the title of the Heart of Mid-lothian. It was built in 15G1, but, having become inadequate for modern purposes, it was pulled down in 1817. The great entrance door with its massive lock and ponderous key, and a considerable part of the circular tower in which it was placed, were, upon the demolition of the build ing, carefully removed to Abbotsford, the resi- dence of Sir Walter Scott, where it has re-assumed its venerable appearance, and forms an entrance to that beautiful but singular structure. The old Tolbooth is said originally to have been occupied as a parliament house as well as a prison. The last Scottish parliament at which majesty in per- son attended, was held in this Tolbooth, imme- diately after the coronation of Charles I. in 1633.

The Bridewell establishment of Edinburgh, on the Calton Hill, said to be one of the best of the kind in Europe, was founded in 1791.

The Exchange is a large and elegant building, with piazzas on the north side, and a court of about ninety feet square in the middle but the merchants have never made use of it to meet in, still obstinately preferring the open street as formerly. The back part of the building is used for the city chambers and dependent offices for the different departments, to which the access is by a hanging stair sixty feet in height. The Scottish Mint is kept up according to the articles of the union, with all the offices belonging to it, though no money is ever struck here. It stands in the lane called

Gray's Close, but is in a ruinous state, though still inhabited by several of the different officers, who have all free houses. The bell-man's office, however, is not a sinecure, for he regularly rings the bell. This place, as well as Holyrood House, is an asylum for debtors, but only for twenty-four hours. There are three banking companies in Edinburgh, established by statute, or by royal charters. These are the Bank of Scotland, commonly called the Old Bank ; the Royal Bank of Scotland, and the British Linen Company. 1. The Bank of Scotland, com- inonly called the Old Bank, was erected by act of parliament A. D. 1695. By the statute of erection, the company was empowered to raise d joint stock of £1,200,000, afterwards in- creased to £1,500,000 sterling, for the purpose of carrying on a public bank. The smallest share any person could hold was declared to be £1000 Scots ; and the largest sum for which any one was allowed to subscribe was £20,000 of the same money. £8,000 are declared to be the qualification necessary to entitle any one to be elected governor ; and £3000 for each director. The management of the affairs of the company was vested in a governor, deputy- governor, and twenty-four directors ; and, in choosing these managers, each proprietor was declared to have a vote for every £1000 of stock held by him. The office of this company prior to 1806 was kept down a narrow lane, at the south side of that part of the High Street called the Lawn-market ; but they have since erected for their accommodation an elegant building to the northward of the High Street, in full view of Prince's Street. This bank has branches in every considerable town in Scotland. The

original shares of this company, amounting to £83 fa. Qd., sold in 1763 at £119; in 1791 at £180; andin 1827at£l87. 2. ThelloyalBank was established in 1727. The stock of this com- pany originally consisted of the equivalent money which was due to Scotland at the union. Pro- prietors of these sums to the extent of £'111,000 were the original subscribers. But, this stock being found insufficient, a second charter was obtained in 1738, by which they were empow- ered to raise their stock to £150,000 sterling; and, subsequently, to £1,000,000. The business is managed by a governor, deputy-governor, directors, and extraordinary directors. The amount of the company's stock is at present £1,500,000 sterling; and each £100 ot stock in the market sells for £170. The Royal Bank is situated in St. Andrew's Square, New Town. 3. The British Linen Company, with a capital of £100,000, was incorporated by royal charter in 1746, with a view to encourage the linen manufacture in Scotland. By the constitution of this company, its affairs are under the manage ment of a governor, deputy-governor, and five directors. It carries on the business of banking, and promissory notes, like the two former com- panies ; and the office is situated in St. Andrew's Square. The Commercial Bank was established in 1810, and the National Bank in 1825. These two last are upon the joint

stock principle, and have a very numerous proprietary, and exten- sive capitals. The business of each is conducted like that of the other three old companies, by a board of directors. All these banks issue promis- sory notes for various sums not under £l ster- ling, payable on demand in cash, or Bank ot England notes. Two private Banking-houses also issue notes in the same way, viz. those of Sir William Forbes and Co., and Ramsay's, Bo- nars, and Co. But besides these there are several banking-houses of great reputation in Edinburgh, which do not issue small notes, but which carry on the other branches of the bank- ing trade, by transmitting money, discounting bills, and accommodating individuals with cash accounts.

The Custom-house used to be at the back of the Royal Exchange ; but some years ago the establish- ment removed to Bellevue House in the NewTown, which forms the eastern termination of Great King Street. The board consists of one resident, and two assistant-commissioners, under whom are a secretary, and various other officers. Some recent arrangements incorporate them with the establishments at Leith. The Excise-office in St. Andrew's Square has been recently purchased by the Royal Bank, the Excise board occupying Bellevue House. There are three commissioners of excise, a secretary, and numerous officers.

The Post Office forms part of the splendid buildings in Waterloo Place, and stands to the east of the arch of the Regent Bridge. It has extensive accommodation for the business of this important public establishment. A cen- tury ago the revenue of the Post-office of Scot- land was inadequate to defray the expense of keeping it up. In 1763, however, it had increased to £11,942 per annum. In 1783 it had reached upwards of £40,000; and now

(1827) it is ,£150,000. There are subordinate offices in different parts of the city.

The Edinburgh Register Office was suggested by the earl of Morton, lord register of Scotland. The earl, therefore, obtained from his majesty a grant of £12,000 out of the forfeited estates, for building a register-office, or house for keeping the records, and disposing them in proper order. The foundation was laid on the 27th of June, 1774. The building, which is one of the most beautiful of Mr. Adams's designs, was executed in a substantial manner, in about sixteen years, at the expense of nearly £40,000, and is one of the principal ornaments of the city. The lord register has the direction of the whole, and the principal clerks of session are his deputies. These have a great number of clerks under them, for carrying on the business of the court of session. The lord register is a minister of state in

this country. He formerly collected the votes of the parliament of Scotland, and still collects those of the peers at the election of sixteen, to repre- sent them in parliament.

The earliest institution of a grammar-school in Edinburgh seems to have been about 1516, and a building which had been erected for the ac- commodation of the scholars in 1578, continued, notwithstanding the great increase of their num- ber, to be used for the purpose till 1777; when the foundation of the present High School was laid on the 24th of June, by Sir William Forbes. This building is plain, but commodious. The great hall, where the boys meet for prayers, is sixty-eight feet by thirty, with commodious li- braries at each end. There are a rector and four masters, who teach about 700 scholars annually. The salaries are trifling, and the fees are 10s. 6d. per quarter, but five quarters are paid. There is also a janitor, who receives one shilling from each of the boys quarterly. To the scholars of prominent merit premiums are awarded annually, chiefly in books ; and to the dux of the highest class a gold medal, with a suitable inscription. Edinburgh Academy is the name given to an- other school erected in 1824, to the north of the Royal Circus. This establishment is under the superintendence of a board of directors; and besides a rector and four masters for the Latin classes, as in the High School, has an English master, and teachers for writing and arithmetic. There are also several other public English schools, the masters of which have small salaries in addition to the fees ; and numerous private estblishmeuts, not only for teaching English, but the learned and foreign languages, oil mode- rate terms ; so that Edinburgli affords facilities for the acquisition of learning and the various ornamental accomplishments, which are hardly to be met with upon equal terms in any other city.

Edinburgh is not a mercantile or manufactur- ing town. The merchants, in the strict sense of the word, reside principally at the port of Leith, and the support of the city depends chiefly on the consumption of the necessaries and super- fluities of life. Gentlemen of the law are a very numerous and respectable body here : country gentlemen, officers of the army and navy, travellers from all parts, and strangers •vhose object is either business or pleasure, &

and numbers of respectable families, come to Edinburgh, as a settled residence, for a time, with a view to the education of their children. There are various manufactures of paper in the neighbourhood of Edinburgh, and printing is carried on very extensively. There is also an extensive type foundry ; and within these few years the manufacture of silver plated goods, particularly of the elegant ornaments for coaches now so generally used, has been introduced and carried on to a considerable extent.

In order to contrast the different stages of metropolitan society with effect, it is not here necessary to go back to Mr. Creech's well known account of the changes which took place in Edinburgh from 1763 to 1793. It is thirty-five years since Mr. Creech wrote, and it is not going too far to say, that the changes and improvements which have taken place in this last period infinitely surpass all that pre- ceded them, and would require even a better pen than his adequately to describe them. Our limits do not permit of minute detail in matters of this kind, otherwise we could contrast and comment on individual improvements as he has done. We may remark, however, that since 1793, Edinburgh has extended to twice the size it was at that time, and has nearly doubled its population. The public undertakings to improve and adorn it, would require a volume to detail them with effect. In science, literature, and the arts, its progress has been equally extensive and remarkable. Wealth and luxury have increased in a like ratio, and the houses in some of the squares and streets, then occupied by persons of rank, fashion, and opulence, are now converted into shops or places of business for the trrdinˆ part of the community. With regard to equi- pages, servants, and modes of living, the change is perhaps as striking as that which occurred within the period of Mr. Creech's experience ; but the difference of manners and of tastes is no where so conspicuous, as in the elegance and refinement displayed in the numerous country villas, within a short distance of the city, occu- pied, durinsjthe summer months, by the different classes of citizens. In morals too, if we are to judge from the general regard paid to pub- lic opinion, and from the outward observance of all the decencies of life, by persons of every rank, there has for some years been a pro- gressive improvement ; and, when compared with the morals of 1793, those of the present day, we confess, compel us, in spite of ourselves and of all our early predilections, to award them the preference and the palm of approbation. Per- haps the prevailing fault of Edinburgh society at present is the rage which even persons of mo- derate circumstances exhibit for show and splen- dor in their domestic establishments. Accord- ing to this foible of the time, nobody is entitled to move in good society withou. a fine house, fine furniture, fine servants, and every day at his table an absurd and ostentatious display of fine wines. If this be an evil to society at large, it fortunately often cures itself by the ruin which it brings down on the heads of those who weakly and inconsiderately indulge in it

The University of Edinburgh is a sufficiently

prominent feature in its history and character to single college, which

enjoys the privilege o

deserve our distinct notice. In 1581 a grant was conferring degrees.

Dbtained from James VI. for founding a college The branches of education at present taueht in

within the city of Edinburgh; and the citizens, it are the following: 1. Literature and Philosonh,,

aided by various donations, purchased part of comprehending humanity, or Latin Greek ma

the areas, chambers, and church of the collegiate thematics, logic, moral philosophy7natu7aT phi- losophy, rhetoric, belle- ‘ and natural history.

provostry and prebends of the Kirk-a-field, other- losophy, rhetoric, belles lettres” universal history wise called Templum et PraefecturaSanctffi Maria °nrl natural v,;.,~ — « —,„_,*

in campis, as a suitable site for it. In 1583 the

2. Theology, compre- hending divinity, church history, and oriental

provost, magistrates, and council, the patrons of languages. 3. “Law, comprehending civii’Taw’ this new institution, prepared the place for the in«titnt«c -inˆ ˆ.,, .,!,,„»„ c — 1-» i _ 1 1-

reception of teachers and students ; and in Octo-

mstitutes and pandects, Scots’ law, public law, conveyancing. 4. Medicine, comprehending

her, 1583, Robert Rollock, whom they had in- dietetics, rnateria medica, and pharmacy prac” uted from a professorship in the University of tice of physic, chemistry, and chemical phar St. Andrew s, began to teach in it. Other pro- macy ; theory of physic, anatomy, and surgery • fessors were soon after elected; and Rollock theory and practice of midwifery ; medical juris- prudence, clinical medicine, clinical surgery, and military surgery. During the Summer ses-

was made principal of the College, and professor of divinity. The offices of principal and pro-

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lessor of divinity remained united till 1620. In sion lectures are given on

the following branches

1fi1T TnmpQ \7T VmvincT viciforl Slr»r\tlanrl r>r\m wii K™-^^»., ,«„! I,: ... :j •/• t- • .*

1617 James VI. having visited Scotland, com- manded the principal and regents to attend him in Stirling Castle, where they held a solemn philosophical disputation, and the king desired that their college should for the future be called

viz. botany, natural history, midwifery, clinical lectures on medicine, and clinical lectures on surgery. The principal professors and lecturers are at present thirty-one in all ; and the number of students is about 2400. The professorships

The College of King James, which name it still of church history, natural history, astronomy,

law of nature and nations, and rhetoric, are in tne gift of the crown. The professor of agri-

bears in all its diplomas and public deeds. For some time the college consisted only of the prin- cipal and four regents or professors of philoso- culture was nominated by Sir William Pulteney, phy, who each instructed one class of students the founder of the institution. The remaining for four years, in Latin, Greek, logic, mathema- tics, ethics, and physics. It was not till about

the year 1710 that the regents began to be

chairs are in the gift of the town council. Be- sides the classes here enumerated, the medical professors alternately give clinical lectuies upon

confined each to a particular profession; since the cases of the patients in the Royal Infirmary.

~v,:u .: — _. u — i 1.. _…i-j fne integrjty an(j discernment uniformly dis- played in the appointment to professorships in this university, have contributed greatly to ex- tend its reputation both at home and abroad. From confidence in the talents and industry of the professors, it has become a seat of education, not only to the youth of the nnited kingdom, but, to the honor of our country, students have been attracted to it from every nation in Europe, and from almost every civilised country on the globe. About thirty years ago, the old buildings of the college being thought quite unsuitable to the dignity of such a flourishing seat of learning, the magistrates and council set on foot a sub- scription for erecting a new

structure, according to a design of Robert Adam, Esq., architect. Most of the old fabric was in consequence pul- led down, and the new building is now in con- siderable forwardness. It is upon a superb scale, and the whole, when finished, if not the most splendid structure of the sort in Europe, will be the completest and most commodious. The estimate for completing the whole was about £63,000. The six columns in the front are not to be equalled in Britain. The shaft of each is twenty-three feet high, and three feet diameter, of one entire stone. The botanical garden be- longing to the university is situated to the north- ward of the village of Canon-mills, and consists of about twelve acres. But the funds for the support of this garden are very inadequate to the purpose, not exceeding £170 per annum.

EDINBURGHSHIRE, or MID-LOTHIAN. See MID-LOTHIAN.

which time they have been commonly styled Professors of Greek, Logic, Moral Philosophy, and Natural Philosophy. — The first medical pro- fessors instituted at Edinburgh, were Sir Robert Sibbald and Dr. Archibald Pitcairn, in 1685. For thirty years afterwards, however, a summer lecture, on the officinal plants, and the dissection of a human body, once in two or three years, completed the whole course of medical education at Edinburgh. In 1720 an attempt was made to teach the different branches of physic regu- larly ; which succeeded so well, that, ever since, the reputation of the University as a school for medicine has been undisputed. The College has a fine library, founded in 1580, by Mr. Clement Little, advocate. It is enriched by a copy of every book entered in Stationers' Hall, according to statute, and it now contains 70,000 volumes. The students of divinity, who pay nothing to this library, have one belonging to their own particular department. The museum contains a capital collection of natural curiosities, the number of which is daily increasing ; and, under the admirable management of professor Jamieson, it promises to become the most inte- resting and important in Britain. The anato- mical and obstetrical preparations are peculiarly valuable. This university having been insti- tuted after the Reformation, among a frugal people that had no love for ecclesiastical digni- ties, it differs greatly from the wealthy founda- tions which receive the name of Universities and colleges in England, or in the Catholic countries of the continent of Europe. It still consists of a

EDTT, v. a. -\ Old Fr. editer ; Lat. edo,

EDI'TION, n. s. tedere, to set forth. To

ED'ITOR, n. s. £ publish ; and hence to pre-

EDITO'RIAL, adj. J pare a work for publication.

It is now particularly applied, in our language,

to the duty of superintendence and correction,

in distinction from the original composition of a

book. –

These are of the second edition. Shakspeare.

The business of our redemption is to rub over the defaced copy of the creation, to reprint God's image upon the soul, and to set forth nature in a second and a fairer edition. South.

EDMONDSON (Joseph), a genealogist and herald painter, was appointed, in 1764, Mowbray herald extraordinary. He was also a member of the Society of Antiquaries. He died in 1786. His works are, Historical Account of the Gre- ville family, 8vo. ; A Companion to the Peerage, 8vo. ; A Body of Heraldry, 2 vols. folio ; Baro- nagium Genealogicum, or the Pedigrees of Eng- lish Peers, 6 vols. folio.

EDMUND I., king of England, the son of Edward the Elder, succeeded his brother Athel- stan, A.D. 941, and exhibited proofs of great courage and abilities during a short reign of about eight years. He was murdered by Leolf, a robber, A.D. 948. See ENGLAND.

EDMUND II., surnamed Ironside, from his strength and valor, succeeded his father Ethel- red II., A.D. 10'IG, in that part of England which was not then possessed by the Danes. He was endued with great abilities, but was murdered by the traitor, Edric, duke of Mercia, before he had reigned a year. See ENGLAND.

EDOM, Heb. onx, i. e. red ; or Esau, the son of Isaac and brother of Jacob. The name Edom was given him, either because he sold his birth-right to Jacob for a mess of red pottage, or by reason of the color of his hair and complexion. Idumaea is derived from Edom, and is often called in Scripture the land of Edom. See the next article.

EDOM, or Idumsea, in ancient geography, a district of Arabia Petraea. A great part of the south of Judaea was also called Idumcea, because occupied by the Idumseaus, upon the, Jewish

captivity. But Edom Proper appears not to have been very extensive, from the march of the Israelites, in which they compassed it on the south eastward, till they came to the country of the Moabites. Within this compass lies mount Hor, where Aaron died ; marching from which the Israelites fought with king Arad the Ca- naanite, who came down the wilderness against them. And this is the extent of the Idumsea Propria, lying south of the Dead Sea; but in Solomon's time extending to the Red Sea. — 1 Kings ix. 26.

EDRED, king of England, son of Edward the Elder, succeeded to the throne on the murder of his brother, Edmund I. (947). He quelled a rebellion of the Northumbrian Danes, and com- pelled Malcolm, king of Scotland, to renew his homage for his English possessions. Although active and warlike, he was extremely supersti- tious, and subservient to the celebrated Dunstan, abbot of Glastonbury. Edred died after a reign of nine years, and left the crown to his nephew, Edwy.

EDRIDGE (Henry), A.R.A., F.S.A.; a land- scape and miniature painter of eminence, born at Paddington, in 1768. His earlier portraits are principally drawn on paper, with black lead and Indian ink. It was in later years only that he made those elaborate and high-finished pictures, uniting the depth and richness of oil-painting with the freedom and freshness of water-colors, of which there are so many specimens in Eng- land. He died in 1821.

EDRISSI (Mohamed ben Mohamed, Scherif al) an Arabian prince and geographer of the twelfth century, who being expelled from his dominions in the south of Egypt, took refuge in Sicily, at the court of Roger II. Here he com- posed Geographical Recreations ; and construct- ed a silver globe, said to have weighed 400 Greek pounds, on which were inscribed the di- visions of the earth, so far as they were then known. His book, which has been termed Geo- graphia Nubiensis, from its containing much information relative to the eastern parts of Africa, was translated into Latin by Gabriel Sionita and John Hesvonita, and published at Paris, 4to., 1619.

EDUCATION.

ED'UCATE, v. a. ˆ Lat. eduearc, from duco, EDUCA'TION, n. s. J to lead. To bring up

from youth; instruct youth. See Hooker's fine

definition of the substantive.

Education and instruction are the means, the one by use, the other by precept, to make our natural fa- culty of reason both the better and the sooner to judge rightly between truth and error, good and evil.

Hooker.

The best time for marriage will be towards thirty, or as the younger times are unfit, either to choose or to govern a wife and family, so, if thou stay long, thou shall hardly see the education of thy children, who, being left to strangers, are in effect lost ; and better were it to be unborn than ill-bred.

Raleigh to Jut Son.

Diversity of education, and discrepancy of those principles wherewith men are at first imbued, and wherein all our after reasonings are founded.

Lord Digby to K. Digby.

If the children of religious parents, after aH Christian nurture, shall shame their education, God takes it more heinously, and revenges it more sharplv Rp. Hall. Contemplation.

Their young succession all their cares employ ; They breed, they brood, instruct and educate, And make provision for the future state.

Dry den. Virgil.

Some independent ideas, of no alliance to one an- other, are, by education, custom, and the constant diu of their party, so coupled in their minds, that they al- ways appear there together. Loˆ.he.

EDUCATION.

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What education did at first conceive, Our ripened age confirms us to believe.

Pomfret.

Education is worse, in proportion to the grandeur of the parents : if the whole world were under one mo- narch, the heir of that monarch would be the worst educated mortal since the creation.

Swift. On Modern Education.

Education at our public schools and universities is travelling in a waggon for expedition, where there is a bridle road that will take you by a short cat to Par- nassus, and the polisher has got the key of it.

Cumberland.

Lively and sensible, and having received an educa- tion somewhat above her rank, her conversation vas very agreeable. Ralph read plays to her every even- ing. Franklin.

True, and then as to her manner ; upon my word I think it is particularly graceful, considering she never had the least education : for you know her mother was a Welsh milliner, and her father a sugar baker at Bris- tol. Sheridan. EDUCATION. We have explained this term verbally. A more ample and satisfactory defi- nition has been given thus : ‘ Education is that series of means, by which the human under- standing is gradually enlightened, and the dis- positions of the human heart are formed and called forth, between early infancy a id the pe riod when a young person is considered as qua- lified to take a part in active life.’

The word education, among the ancients, seems to have had a signification different from that which is affixed to it by the moderns. Educit obstetrix, says Varro, educat nutrix, instituit paedagogus, docet magister. According to this distinction, education, institution, and instruc- tion, are as different as the midwife, the nurse, the preceptor, and the master. But other writers, both ancient and modern, have considered edu- cation in the comprehensive sense expressed in the above definition ; and as no subject is of more importance than this, it being the practical foundation of all mental acquirements, as well as of all virtue, many distinguished authors have devoted their minds to the consideration of it. Lycurgus, and others of the most eminent legis- lators of antiquity, considered a proper education as so necessary to form good citizens, that they incorporated their systems of education with the codes of laws they gave to their countrymen. But among all the legislators and authors of an- tiquity, of whose works any relics have come down to us, none appears to have written with more propriety on this subject, than the cele- brated Quintilian, who taught rhetoric in Rome under Domitian, Nerva, and Trajan.

Among the modems, the sublime Milton, and the judicious Locke, have left treatises on this important topic. The late lord Kames too was the author of an excellent tract, entitled Loose Hints on Education; and the fanciful Rousseau, whose genius and eccentricities are •well known to the public, devoted his Emilius to the consideration of this subject. To these a host of respectable modern names might be added. But we do not consider a Dictionary of Science as the proper depository for extensive speculations of this kind. Our whole work, indeed, is a course of elementary, and therefore VOL, VII.

educational treatises; what is more must be either purely speculative ; or it must involve, details which are varied with the designs of every parent, and the talents, station in life, and destiny of every young person. It will suffice,

therefore, here briefly to review the principal ancient and modern systems of education, adding a more particular account of one or two modern and material improvements.

The system of Lycurgus, however well adapted to a state just emerging from barbarism, was but a species of detached military training; designed to form the heroic at the expense of all the other virtues, and extinguishing all regard to the interest of other states as well as family and personal interests, in an exclusive spirit of sup- posed patriotism. For, in reality, his system was too confined to be truly patriotic. It had no tendency to elevate the human intellect, or to stimulate into activity many of the noblest and best affections of our nature. Had his institu- tions been preserved in their pristine vigor, the Spartans might have continued precisely the same ; but they would have been incapable of receiving the knowledge of those arts which adorn and improve mankind. The system, in- deed, of a state education has always been too cumbrous for management ; it has the appear- ance at the best of endeavouring to mould all minds into one form, and, by having a strong ten- dency to produce habitual submission to the will of one, of being highly unfavorable to public liberty. No doubt can exist which is to be preferred, the total neglect of education, or this artificial and forced method of attempting it ; but all that the state has legitimately to do is, to take care that none shall be without the means of instruction, and to leave private persons to follow the bent of their own inclinations in the employment of them . In those nations which were first civilised, the power of the parent was considered as abso- lute ; and as implicit submission was, from the first, inculcated upon the young, the labor of education was greatly diminished, and the li- mited knowledge and sentiments of the parent were very easily communicated to youth. The round of duty was less extensive, and its parts less complicated than at present. Among the Israelites, where moral education appears to have made the greatest advances, the system of duty was completely laid down in the written law ; so that all the knowledge which the age and country possessed was certainly to be gained, and the moral principles certainly to be regulated aright, where the parent employed wisely that authority which the law enforced, and which the customs of the times would otherwise have allowed.

The necessity of a tolerably correct direction of the early propensities, in order to promote do- mestic comfort, must in a great number of cases have led to such direction of them, without any view to the future advantage of the individual. But with respect to those who were to come for- wards in the employments of the state, or in any other way to be exposed to the notice of their countrymen, the advantages of early instruction in knowledge, and of the early cultivation of those qualities which the wants of the age and

country made of great estimation, were so obvious, that they appear to have led, in a variety of cases, to great attention to the work of education ; and though we have not, in many in- stances, any account of the procedures of the ancients, yet, in the few circumstances which have been recorded, we perceive that, long before any thing like a systematic plan of education was adopted, individuals made education an object of primary concern.

One grand object of moral education, so far as it respects rectitude of dispositions and affec- tions, is to cultivate the habit of self-control. Religious people, of all periods, who have pos- sessed the light of revelation, have, in a particu- lar manner, been sensible that this habit lies at the foundation of moral worth; and where the authority of the parent is generally preserved, the cultivation of thjs habit follows as a matter of course. It requires a wise choice of means to prevent filial submission from being the submis- sion of a slave, rather than of a child : but where it is acquired, and rightly directed, the founda- tion is laid for submission and obedience to the will of God ; and, where t his principle takes a firm hold on the mind, almost every thing is done that could be wished, to further the pro- gress of the individual towards moral worth. A maxim of the highest authority, now indeed, is felt in all its truth, ‘ The fear of the Lord is the beginning of wisdom.’ In reading almost the only systematic work of antiquity on the subject of education, that of Quintilian, we become convinced of the writer’s great good sense, ex- cellence of disposition, and extensive informa- tion ; and from his work, though it had a parti- cular object in view, much may be learned by the modern instructor. Most excellent principles are scattered up and down in those general parts, which amply repay our perusal, though we are seldom invited to proceed by elegance of diction, or brilliance of thought : and the different facts he mentions, give us reason to suppose that, in his time, education was in a most degraded state at Rome.

Among the moderns few names are more justlj venerated than that of John Milton. His life was devoted to study ; and part of it was em- ployed in instructing youth. Among his other works we find a Treatise on Education. He had himself been educated according to the plan long established in the English universities. The object of his directions is to exhibit a plan of ‘ a better education, in extent and compre- hension far more large, and yet of time far shorter, and of attainment far more certain, than any that had yet

been in practice.' The follow- ing is the substance of his treatise: — 'The end of learning is to cultivate our understandings, and to rectify our dispositions, by enriching our minds with the treasures of wisdom. But, in the present modes of education, this design does not appear to be kept in view. The learner of Latin is burdened with rules, themes, verses, and ora- tions ; but no care is taken to make him master of the valuable knowledge which the classics con- tain. And, when he advances farther, he is driven into the thorny paths of logic and meta- physics. So, when his studies are completed, he

is almost as destitute of real knowledge as when he first entered a school.' To render learning truly beneficial, instead of the school and univer- sity education which youth at present receive, Milton proposes that the place of both school and university be supplied by an academy, in which they may acquire all that is taught at either, except law and physic.

' Let the academy,' he says, ' afford accommo- dation for 150 persons ; twenty of whom may be servants and attendants. As many academies as are necessary may be afterwards erected on the model of this one. Let the youth who are introduced into this academy begin with learning the principal rules of grammar. In their pro- nunciation of Latin, let them follow that of the Italians, as that of the English is indistinct, and unsuitable to the genius of the language. Next read to them some entertaining book on educa- tion, such as the three first books of Quintilian, in Latin ; and Cebes, Plutarch, or some other of the Socratic discourses, in Greek ; and inspire them, by seasonable lectures, with love for learn- ing, admiration of great and virtuous characters, and a disposition to cheerful obedience. At a different hour let them be instructed in arithme- tic and geometry. Between supper and bed time instruct them in the principles of religion and the sacred history. From the writers on education, let the pupils pass to the authors on agriculture, to Cato, Varro, and Columella. Be- fore half these authors be read, they cannot but be pretty well qualified to read most of the Latin prose authors. They may now learn the use of the globes, and make themselves acquainted with the ancient and modern maps. Let them about this time, begin the study of the Greek tongue, and proceed in it as in the Latin : they will not fail to overcome, in a short time, all the difficul- ties of grammar; after which they will have access to all the treasures of natural knowledge to be found in Aristotle and Theophrastus. In the same manner they may make themselves ac- quainted with Vitruvius, Seneca, Mela, Celsus, Pliny, and Solinus. Let them next turn their attention to mathematics, beginning with trigo- nometry, as an introduction to fortification, archi- tecture, and navigation. To teach them the knowledge of nature, and the arts of life, let them have the instructions of artists and me- chanics, whose skill has been obtained by actual practice. They will now read the poets with ease and pleasure. From

these let them proceed to the moralists; after which they may be al- lowed the best Greek, Latin, and Italian drama- tic compositions. From these let them proceed to politics : let them here study the law of Moses, the admirable remains of the ancient lawgivers of Greece, the Roman tables, edicts, and pan- dects, concluding with the institutions of their mother country. Let them next be more parti- cularly instructed in the principles of theology ; having by this time acquired the Hebrew lan- guage, together with the Chaldee and the Syriac dialect, whereby they may read the Scriptures in their original tongue. Thus furnished, they will be able to enter into the spirit of the noblest historians and poets. To get by heart, and re- peat in a proper manner, passages from the writ –

ings of some of these, will have the happiest effects in elevating their genius. Let this stately edifice be crowned with logic and rhetoric. This would unite the advantages of an Athenian and a Spartan education : for the pupils should be taught the exercises of wrestling and fencing, and the whole military discipline.' Such are the sen- timents of our admired poet on education — a plan to be expected from one who was an en- thusiastic admirer of the sciences, arts, and in- stitutions of Greece and Rome ; and who, at the same time, from his religious and political prin- ciples, was no friend to the universities.

The name of Locke is almost equally calculated to excite the attention of every reader. He was capable of thinking for himself; but, unlike Rousseau, more desirous of rendering himself useful, than of being admired for singularity : he had examined without prejudice the effects of those modes of education of which he disap- proves. To render himself useful to mankind, he could descend from the heights of science to the humble task of translating TEsop's Fables.

Mr. Locke, in his Treatise on Education, pro- poses the two great objects, of preserving and strengthening the bodily constitution ; and in- forming the understanding with useful know- ledge, while we cherish good dispositions in the heart. In his oHrections on the first of these heads, he recommends plain fare, simple and light clothing, with abstinence from strong liquors, and as much as possible from medicine, together with temperance and early rising. In one thing, however, few parents will be willing to comply with Mr. Locke's advice. He not only directs that children's feet be frequently bathed in cold water ; but even wishes that their shoes were always kept in such a condition as to admit water freely. This he thinks likely to fortify the constitution in such a manner, as to render them less liable, in the course of life, to such diseases as arise from any unusual exposure to wet or cold. Whatever may be thought of this advice, his

method of cultivating the under- standing, and forming the dispositions, deservedly claims the attention of parents and preceptors. With a virtuous indignation he reprobates that . folly by which we generally corrupt the heart and spoil the temper of children, in infancy ; so as to render them incorrigible as they advance in life. On the other hand he reckons it neither necessary nor prudent to treat them with harsh- ness or severity. Let them be formed to obe- dience from their earliest years : let them be ac- customed to submit implicitly to the direction of those on whom they depend. But beware of souring their tempers, and depressing their spirits by harshness ; as well as of accustoming them to neglect their duty, except when allured to it by the hopes of reward. Inspire them with a sense of shame, and with a generous thirst for praise. Caress and honor them when they do well; treat them with neglect when they act amiss. This will produce much better effects than if you were at one time to chide and beat them ; at another, to reward them with a profu sion of foolish indulgencies.

Mr. Locke does not approve of forming chil- dren at too early an age, to that politeness and

propriety of manners which should distinguish them when they become men. This great man was of opinion that a private education is more favorable than a public one to virtue, and scarcely less favorable to learning. He advises us more particularly to keep our pupil at a dis- tance from evil example; to choose the most favourable seasons for instruction ; to enforce obedience strictly, but rarely by blows. If his engagements in life prevent the parent from superintending and directing his son's education personally, let him commit him to the care of a virtuous and judicious tutor, who is rather a man of experience in the world than of profound learning ; for it is more necessary that the pupil be formed for conducting himself with prudence in the world, and be fortified against those temptations to which he will be exposed in active life, than that his head be stuffed with Latin and logic. Mr. Locke, although his own mind was stored with Grecian and Roman literature, is against that application to ancient learning, which was then indispensably required in the education of youth. He considers languages and philosophy as rather having a tendency to render the youth unfit for acting a prudent and becoming part in life, than forming him .for it ; and he therefore insists that these should be but in a subordinate degree the objects of his atten- tion.

Curiosity, he thinks, ought to be industriously roused in the breast of the child, and cherished by meeting the readiest gratification. He should be indulged in play, while he continues to play with keenness and activity; but not suffered to" loiter about in indolence. To restrain him from fool-hardy courage, point out to him the dangers to which it exposes him : to raise him above timorous cowardice, and inspire him with manly fortitude, accustom

him from the earliest period of life to an acquaintance with such things as he is most likely to be afraid of : subject him now and then to pain, and expose him to dan- ger ; but let such trials be judiciously conducted. When, from idleness or curiosity, children treat dogs, cats, birds, butterflies, &c., with cruelty, Mr. Locke advises that they be carefully watched, and every means used to excite them to generous sensibility. Allow them to keep tame birds, dogs, &c., only on condition of their using them with tenderness. He supposes that this unhappy disposition to cruelty is occasioned, or fostered, by people's laughing when they behold the im- potent efforts of children to do mischief ; and encouraging them in maltreating those creatures which are within their reach. He censures the practice too of entertaining them with stories of fighting and battles ; and representing characters distinguished for atrocious acts of inhumanity as great and illustrious. Let such practices be refrained from, if you wish to inspire your child with generous and humane sentiments. Teach him gentleness and tenderness, not only to brutes but also to servants and companions. The en- quiries of a child ought to be answered readily, that great man insists, though his questions be put in aukward language. Curiosity is natural, and, if not repressed, he will often be excited by it to the pursuit of knowledge. Let him find

his eagerness in this pursuit a source of ap- plause and esteem. Avoid the folly of those who sport with the credulity of children, by an- swering their questions in a ludicrous or deceit- ful manner. When he attempts to reason on such subjects as are offered to his observation, be careful to encourage him : praise him if he reasons with any degree of plausibility ; even if he blunders, beware of laughing at him. With regard to amusements ; while you indulge him freely in innocent diversions, encourage him to exercise his own ingenuity in constructing them for himself. In virtue, wisdom, breeding, and learning, he comprehends all that is necessary to enable his pupil to act a respectable part in life. lu forming a boy to virtue, he advises first to inform him of the relation subsisting between human creatures and a supreme independent Being, and to teach him, that obedience and worship are due to that Being , but beware of impressing 1m mind with any notions concern- ing spirits or goblins, which may render him in- capable of bearing darkness or solitude. Next labor to impress his mind with a veneration for truth ; habituate him to a strict adherence to it; and endeavour to render him gentle and good-natured.

Good breeding forms no inconsiderable part of a good education. In teaching this, Mr. Locke advises, 1st, To inspire a youth with a disposition

to oblige all with whom he is con- versant ; next, to teach him how to express that disposition in a becoming manner. Let boiste- rous roughness, contempt of others, censorious- ness, impertinent raillery, and a spirit of con- tradiction, be banished from his temper and behaviour. But beware of leading him to re- gard the mere forms of intercourse as matters of the highest importance. Teach him that genuine good breeding is only an easy and graceful way of expressing good sense and benevolence in his conversation and deportment.

Mr. Locke advises to initiate the child in reading, as an amusement, without letting him know that he is engaged about a matter of any importance : or teach him to consider it as a high honor to be permitted to learn his alphabet; otherwise he will turn from it with disgust. Such books only as are plain, entertaining, and instructive, should at this time be put into his hands. Mr. Locke disapproves of an indis- criminate perusal of the Bible at this period of life ; but reckons it highly proper, to cause him to peruse some of its beautiful historical pas- sages, with its elegant and sample moral pre- cepts. He advises next to proceed with writing, and drawing, if the boy be not naturally incapa- ble of acquiring the latter.

The scholar must now begin an acquaintance with other languages. Yet, says Mr. Locke, let none waste their time in attempting to acquire a knowledge of Latin, but such as are designed for some of the learned professions, or for the life of a gentleman without a profession. To these last it may be useful ; to others this writer thinks it is wholly unserviceable. • But in learning the Latin tongue, he proposes, as a much happier method than burdening and perplexing a boy with rules of grammar, to make him speak it

with a tutor sufficiently master of it for that pur- pose. He proposes, that if we cannot con- veniently have the boy taught Latin by conver- sation, the introductory books should be accompanied with an English version, to which he may have recourse, for the explanation of the Latin. And he again prohibits perplexing him with grammatical difficulties, as at his ajje, it is impossible to enter into the spirit of these things

Skill in grammar, says Mr. Locke, may be useful to those whose lives are to be dedicated to the study of the dead languages : and that knowledge, which the gentleman and the man of the world may have occasion to derive from the ancient languages, may be acquired without a painful study of prosody or syntax. As the learning of any language is merely learning words ; if possible, let it be accompanied with the acquisition of some real knowledge of things; such as the nature of plants, animals, &c. He insists that the boy be not burdened and tor- mented with the composition of Latin themes and verses. Neither let his memory be oppressed with whole pages

and chapters from the classics. Suc,h ridiculous exercises have no tendency, whatever prejudice may urge to the contrary, to improve him either in the knowledge of lan- guages or of nature.

Mr. Locke, however, wishes that the French language were learned along with the Latin; and these to be accompanied with the study of arith- metic, geography, history, and chronology. Let these branches of knowledge be communicated to the learner in one of the two languages ; and he will thus, he thinks, acquire the language with greater facility. We fear, however, the difficulty of acquiring these sciences, particularly the two first, would thus be proportionably increased. One method which Mr. Locke recommends for facilitating the study of language is, to put into the youth's hand, as soon as he has acquired a tolerable knowledge of chronology, some of the most entertaining Latin historians : the interest- ing nature of the events which they relate will not fail to command his attention, in spite of the difficulty which he must find in making out their meaning. The Bible and Cicero de Officiis will be his best guides in the stud} of ethics. The law of nature and nations, as well as the civil and political institutions of his country, he also recommends as important objects, which he ought to study with the most careful attention. Rhetoric and logic, with all their rules and terms, will contribute little to render him an acute reasoner or an eloquent speaker. Cicero and Chillingworth will he more beneficial in teaching him to reason and to persuade, than all the t<-ea- tises on those arts which he can peruse, or all the lectures which he can hear.

In every art and science, Mr. Locke prefers practice and experience to rules. Natural phi- losophy, as contributing to inspire the breast with warmer sentiments of devotion, and serving many useful purposes in life, oug;ht to make a part in the young gentleman's studies. But he prefers the humble experimental writers on that subject to the lofty builders of systems. Mr, Locke does not think Greek necessary for a gen- tleman or man of the world !

He recommends dancing, as contributing to ease and gracefulness of carriage; with riding and fencing, as necessary branches of a young gentleman's education. He also advises that he should learn some mechanical trade, with the exercise of which he may agreeably fill up some of his leisure hours : and insists that he should by no means be unskilled in the management of accounts. Travelling, he thinks, will do more hurt than good to the understanding and morals of the traveller, unless deferred to a later period, than that at which young gentlemen are usually sent out.

*Dr. Watts subjoins a Discourse on the Edu- cation of Children and Youth, to his excellent Treatise on the Improvement of the Mind. It treats of, 1. Instructing children in religion, which he thinks should he attempted * as soon as they begin to know almost any thing :' 2. The improvement of their natural powers : 3. Self- government, which he proposes children to be eaily instructed in : 4. Reading and writing: 5. An employment: 6. Rules of prudence: 7. Ac- complishments in life ; among which are enu- merated the Greek, Latin, and French languages, logic, mathematics, arithmetic, algebra, geogra- phy, astronomy, natural philosophy, history, poesy, music, drawing, fencing, riding, and dancing ; in which last accomplishment the Dr. 'confesses he sees no evil,' though he thinks 4 mixed dancing has most sensible dangers,' over which 4 a wise parent will keep a watchful eye upon the child.' 8. Of evil influences, from ter- rifying stories, bloody histories, &c. 9. Of sports and diversions. 10 and 11, His two last sections, treat of the proper degrees of liberty and restraint in sons and daughters. Dr. Johnson has said, 4 Whoever has the care of instructing others may be charged with deficiency in his duty if this book is not recommended.'*

In 1762 the celebrated John James Rousseau surprised the public with his Emilius; a moral romance in 4 vols. 12mo. We quote, with very little alteration, the character given of it, by Mr. Heron, in the Encyclopaedia Britannica.

'For originality of thought, affecting senti- ment, enchanting description, and bold vehe- ment eloquence, this book,' observes this writer, 4 is one of the noblest pieces of composition, not only in the French language, but even in the whole compass of ancient and modern literature. The irregularity of his method, however, renders it a very difficult task to give an abridged view of his work. He conducts his pupil, indeed, from infancy to manhood. But instead of being barely a system of education, his work is besides a treasure of moral and philosophical knowledge. He has chosen a path, and follows it from the bottom to the summit of the hill : yet whenever a flower appears, on the right or left hand, he eagerly steps aside to pluck it; and sometimes, when he has once stepped aside, a new object catches his eye and seduces him still farther. Still, however, he returns. His observations are in many places loosely thrown together, and many things are introduced, the want of which would by no means have injured either the unity or the regularity of his work. If we attempt to icview the principles on which he proceeds, in

reprobating the prevalent modes of education, and pointing out a new course, his primary and leading one seems to be, that we ought to watch and second the designs of nature, without anti- cipating her. As the tree blossoms, the flowers blow, and the fruit ripens each at a certain period ; so there is a time fixed in the order of nature for the sensitive, another for

the intellec- tual, and another for the moral powers of man to display themselves. We in vain attemp to teach children to reason concerning truth and falsehood, concerning right and wrong, before .he proper period arrive : we only confound their notions of things, and load their memories with words without meaning ; and thus prevent both their reasoning and moral powers from at- taining that strength and acuteness of which they are naturally capable. He attempts to trace the progress of nature, and to mark in what manner she gradually raises the human mind to the full use of all as faculties. Upon the observations which he has made, in tracing the gradual pro- gress of the powers of the human mind towards maturity, his system is founded.

'As it is impossible to communicate to the blind any just ideas of colors, or to the deaf of sounds ; so it must be acknowledged, that we cannot possibly communicate to children ideas which they have not faculties to comprehend. If they are, for a certain period of life^ merely sensitive animals, it must be folly to treat them during that period as rational and moral beings. But is it a truth that they are, during any part of life, guided solely by instinct, and capable only of sensation ? Or, how long is the duration of that period ? Has nature unkindly left them to be, till the age of twelve, the prey of appetite and passion ? So far are the lacts of which we have had occasion to take notice, concerning the history of infancy and childhood, from leading to such a conclusion, that to us it appears unde- niable that children begin to reason very soon after their entrance into life. When the material world first opens on their senses, they are igno- rant of the qualities and relations of surrounding objects : they know not, for instance, whether the candle which they look at be near or at a distance ; whether the fire with which they are agreeably warmed may also affect them with a painful sensation. But they remain not long in this state of absolute ignorance. They soon ap- pear to have acquired some ideas of the qualities and relative situation of bodies. They cannot, however, acquire such ideas, without exerting their reasoning powers in a certain degree. Ap- pearances must be compared, and inferences drawn, before knowledge can be gained. It is not sensation alone which informs us of the rela- tive distances of bodies ; nor can sensation alone teach us, that the same effects which we have formerly observed will be again produced by the same cause.

4 But, if children appear capable of reasoning at a very early period, they appear also to be at a very early period subject to the influence of the passions : they are angry or pleased, merry or sad, friends or enemies, even while they hang at the breast; instead of being selfish, they are naturally liberal and social. And, if we obsetve

them with attention, we shall find that the pas- sions do not display themselves sooner than the moral sense. As it is wisely ordered, that we should not see, and hear, and feel, without being able to compare and draw inferences from our perceptions; so it is a no less certain and evident law of nature, that the passions no sooner begin to agitate the human breast, than we become able, in a certain degree, to distinguish the beauty and the deformity of virtue and vice. The child is not only capable of gratitude and attachment to the person who treats him with kindness ; he is also capable of distinguishing between gratitude and ingratitude, and of view- ing each with proper sentiments. He cries when you refuse to gratify his desires ; hut he boldly insists that he is injured when you use him cruelly or unjustly. It is indeed impossible to attend to the conduct of children during infancy, without being convinced that they are, even then, capable of moral distinctions. So little are they acquainted with artificial language, that we and they do not then well understand each other. But view their actions; consider those signs by which nature has taught them to ex- press themselves. Our limbs, our features, and our senses, are not gradually and by piecemeal bestowed as we advance towards maturity ; the infant body comes not into the world mutilated or defective : why then, in point of mental abilities, should we be for a while brutes, with- out becoming rational and moral beings till the fulness of time be accomplished? all the dif- ferences between the phenomena of manhood and those of infancy and childhood may be ac- counted for, if we only reflect, that, when chil- dren come into the world, they are totally unac- quainted with all the objects around them ; with the appearances of nature, and the institutions of society; that they are sent into the world in a feeble state, in order that the helplessness occa- sioned by their ignorance may attract the notice and gain the assistance of those who are able to help them ; and that they attain not full strength in the powers either of mind or body, nor a suf- ficient acquaintance with nature, with artificial language, and with the arts and institutions of society, till they arnve at manhood.

4 Even Rousseau, notwithstanding the art with which he lays down his system, cannot avoid ac- knowledging indirectly, on several occasions, that our social dispositions, our rational and our moral powers, display themselves at an earlier period, than that at which he wishes us to begin the cultivation of them.

‘ But though the great outlines of his system be merely theory, unsupported by facts, nay plainly contradictory to facts, yet his observa- tions on the impropriety or absurdity of the pre- valent modes of education are very often just, and many of the particular directions which he gives for the conducting of education are judi- cious. He is often fanciful, and often

deviates from the common road, only to show that he is able to walk in a separate path : yet his views are liberal and extensive : his heart seems to have glowed with benevolence : his book con- tains much observation of human actions ; dis- plays an intimate acquaintance with the motives

which sway the human heart ; and, though by no means a perfect system for education, is yet su- perior to what many other writers had before done upon the subject.'

With those who estimate with an impartial eye the value of the blessings which life affords, the business of education is a most important task. It is the formation of the heart to virtue, of the mind to cheerfulness, of the understanding to wisdom. It is the teaching a child to open his eyes to the circumstances by which he is sur- rounded ; to distinguish virtue from vice ; truth from falsehood ; beauty from deformity ; and happiness from misery : to qualify him to attri- bute neither more nor less than its proper im- portance to every acquisition and every pursuit; and, instead of being borne along by the follies and the prejudices of mankind, to raise himself above them to that degree of mental emi- nence and moral excellence, which will enable him to judge distinctly of the value of all earthly enjoyments, and, by the strength of his own faculties, to select those, and those only, which will contribute to his temporal and eternal good. Education, says Dr. Cogan, when deve- loping its influence upon the passions, intro- duces to an intimate acquaintance with number- less objects which are totally unknown lo the ignorant; and every object possesses some qua- lity of a pleasant or unpleasant nature, propor- tionably multiplying or diversifying our agree- able or disagreeable sensations. With the igno- rant, objects are comparatively few. Scenes before them are of no great extent; and even these are overlooked by the majority, whose years pass away in a kind of sensitive indolence, without apathy or affection. Sometimes, how- ever, a natural acuteness of understanding is observable among the most illiterate, accompa- nied with lively sensations and very strong affec- tions ; and when they are once aroused, by objects that appear interesting, their passions are most violent. What they know can alone ap- pear important to them — and the very little they possess is their all. Their whole souls are con- centrated in that which gives pleasure, and all the powers of body and mind are exerted to repel whatever gives pain. This will indicate the cause of that remarkable strength of passions and affections, both of the benevolent and malevolent kind, so observable in savage nations ; and the impetuosity of character so often to be met with among the active and uninformed in every nation.

The cultivated mind, by increasing its ac- quaintance with innumerable subjects, will ine- vitably discover some pleasing quality in every object of its pursuit : of consequence, both at- tention and affections are divided and

subdi- vided into innumerable ramifications ; and thus, although enjoyment may upon the whole be augmented by aggregate numbers, yet each in- dividual quality possesses but a moderate share of influence. The young and inexperienced are generally affected by simple objects. The causes of their joy or anger, sorrow or fear, are seldom complex. As the powers of the mind are more enlarged, the affections are both more diversified, and rendered more complicated. Thus, upon the perception of favors and obligations, the joy

from good becomes united with gratitude to the author of that good ; with love, veneration, and respect for his character ; with admiration at the extent of the good, or at some peculiarity in the delicacy and liberality with which it was confer- red. Experience introduces the passions of hope and fear, by teaching us the knowledge of good worth possessing, on the one hand, and the ac- cidents to which it is liable on the other. It is observable, farther, that the young and inexpe- rienced, whose habits are not yet formed, and to whom every thing is new, are most apt to be influenced by the 'introductory emotions of sur- prise and wonder. This inexperience renders things and events, which are familiar to others, new and strange to them. They are prone to be in ecstasies for acquisitions and advantages com- paratively trifling, and to be agitated by small or imaginary evils, because their imaginations have not been corrected by experience. But if these passions, from more simple causes, are fre- quently stronger in them than in others, it is equally true that their affections are less perma- nent. A rapid succession of novelties, and the immense variety which increased knowledge in-' troduces, quickly efface the preceding impres- sion. But the extent of this subject enjoins brevity. A whole encyclopaedia could scarcely do it justice. The infinite diversity of pursuits, which in this age engage the attentions of an awakened world, are accompanied by an equal diversity of predilections ; they present an infi- nite variety of qualities to the inquisitive mind, which excite their correspondent emotions and affections.

The business of education comprehends much indeed. It includes the circumstances of the child in regard to local situation, and the man- ner in which the necessaries and conveniences of life are supplied to him ; the degree of care and tenderness with which he is nursed in in- fancy; the examples set before him by parents, preceptors, and companions ; the degree of re- straint or licentiousness to which he is accus- tomed ; the various bodily exercises, languages, arts, and sciences which are taught him, and the method and order in which they are communi- cated ; the arts of overcoming prejudices, of guarding against evil influences, of conquering

temptations, and of governing himself; and it constantly regards, as of the greatest importance, the imbuing the mind with the principles of morality and religion. In different periods of society, in different climates, and under different forms of government, various institutions have naturally prevailed in the education of youth ; and even in every different family, the children must be educated in a different manner, accord- ing to the varieties in the situation, dispositions, and abilities of the parents.

The modern improvements in education have been great; they are connected with the educa- tion of all ranks, but have more particularly con- cerned our public schools, and the extension of this invaluable blessing, by economical methods, to the poor.

I. First, in order of time, stand Sunday Schools. The excellent founder of them, Mr. Robert Raikes, a gentleman of Gloucestershire

(in which county he was born 1735), seems at first to have h;id his attention engaged to the general condition of the poor, by observing the miserable moral state of the prisoners confined for less crimes in the county jail. In a letter to a gentleman who had applied to him for the particulars of the nature and origin of his plan, he thus expresses himself: —

'Some business leading me one morning into the suburbs of the city, where the lowest of the people (who are principally employed in the pin manufactory) reside, I was struck with concern at seeing a group of children, wretchedly ragged, at play in the street. I asked an inhabitant whether those children belonged to that part of the town, and lamented their misery and idleness. Ah ! sir, said the woman to whom I was speaking, could you take a view of this part of the town on Sun- day, you would be shocked indeed ; for then the street is filled with multitudes of these wretches, who, released on that day from their employment, spend their time in noise and riot, playing at chuck, and cursing and swearing in a manner so horrid, as to convey to any serious mind an idea of hell rather than any other place. We have a worthy clergyman, said she, minister of our parish, who has put some of them to school ; but upon the sabbath they are all given up to fol- low their inclinations without restraint, as their parents, totally abandoned themselves, have no idea of instilling into the minds of their children, principles to which they themselves are strangers.

'This conversation suggested to me, that it would at least be a harmless attempt, if it were productive of no good, should some little plan be formed to check this deplorable profanation of the sabbath. I then enquired of the woman if there were any decent, well-disposed women in the neighbourhood, who kept schools for teaching to read. I was presently directed to four. To these I applied, and made an agreement with them, to

receive as many children as I should send on the Sunday, whom they were to instruct in reading and the church catechism. For this I engaged to pay them a shilling for their day's employment. The women seemed pleased with the proposal. I then waited on the clergyman before-mentioned, and imparted to him my plan. He was so much satisfied with the idea that he engaged to lend his assistance by going round to the schools on a Sunday afternoon, to examine the progress that was made, and to enforce order and decorum among such a set of little heathens.

' This, sir, is the commencement of the plan. It is now about three years since we began, and I could wish you were here to make enquiry into the effect. A woman who lives in a lane where I_,had fixed a school, told me some time ago, that the place was quite a heaven upon Sundays, compared to what it used to be. The numbers who have learned to read and say their catechism are so great that I am astonished at it. Upon the Sunday afternoon the mistresses take their scholars to church, a place into which neither they nor their ancestors ever entered with a view to the glory of God. But what is yet more ex- traordinary, within this month, these little raga- muffins have in great numbers taken it into their heads to frequent the early morning prayers,

which are held every morning at the cathedral at seven o'clock. I believe there were near fifty this morning. They assemble at the house of one of the mistresses, and walk before her to church, two and two, in as much order as a com- pany of soldiers. I am generally at church, and after service they all come round me to make their bow ; and, if any animosities have arisen, to make their complaint. The great principle I in- culcate is to be kind and good-natured to each other ; not to provoke one another ; to be dutiful to their parents ; not to offend God by cursing and swearing ; and such little plain precepts as all may comprehend. As my profession is that of a printer, I have printed a little book, which I give amongst them ; and some friends of mine, subscribers to the Society for promoting Christian Knowledge, sometimes make me a present of a parcel of Bibles, Testaments, &c., which I dis- tribute as rewards to the deserving. The success that has attended this scheme, has induced one or two of my friends to adopt the plan, and set up Sunday schools in other parts of the city, and now a whole parish has taken up the object ; so that I flatter myself in time the good effects will appear so conspicuous as to become generally adopted. The number of children at present thus engaged on the sabbath are between 200 and 300 ; and they are increasing every week, as the benefit is universally seen. I have endeavoured to engage the clergy of my acquaintance that re- side in

their parishes. One has entered into the scheme with great fervor ; and it was in order to excite others to follow the example, that I in- serted in my paper the paragraph which I sup- pose you saw copied into the London papers. I cannot express to you the pleasure I often re- ceive in discovering genius and innate good dis- positions among this little multitude. It is botanising in human nature. I have often too, the satisfaction of receiving thanks from parents, for the reformation they perceive in their children. Often I have given them kind admonitions, which I always do in the mildest and gentlest manner. The going among them, doing them little kind- nesses, distributing trifling rewards, and in- gratiating myself with them, I hear, have given me an ascendancy, greater than I ever could have imagined ; for, I am told by their mistresses, that they are very much afraid of my displeasure. If you ever pass through Gloucester, I shall be happy to pay my respects to you, and to show you the effects of this effort at civilisation. If the glory of God be promoted in any, even the smallest degree, society must reap some benefit. If good seed be sown in the mind, at an early period of human life, though it shows itself not again for many years, it may please God, at some future period, to cause it to spring up, and to bring forth a plenteous harvest.'

Mr. Raikes's first effort bears date about the close of the year 1781, or the beginning of 1782 ; and the system began to extend itself in the city of Gloucester. Having tried the experiment for more than a year, he determined to invite the public attention to a scheme which he perceived to be fraught with such benefits. For this pur- pose he inserted a paragraph in a weekly news- paper, of which he was the editor and printer.

The following is a copy of this important notice : —

' Gloucester Journal, Nov. 3, 1783.

' Some of the clergy in different parts of this county, bent upon attempting a reform among the children of the lower class, are establishing Sun- day schools for rendering the Lord's day sub- servient to the ends of instruction, which has hitherto been prostituted to bad purposes. Far- mers, and other inhabitants of the towns and villages, complain that they receive more injury in their property on the sabbath than all the week besides ; this in a great measure proceeds from the lawless state of the younger class, who are allowed to run wild on that day, free from every restraint. To remedy this evil, persons duly qualified are employed to instruct those that cannot read ; and those that may have learnt to read, are taught the catechism, and conducted to church. By thus keeping their minds en- gaged, the day passes profitably, and not dis- agreeably. In those parishes where this plan has been adopted, we are assured that the be- haviour of the children is greatly civilised. The barbarous ignorance in which they had before lived, being in

some degree dispelled, they begin to give proofs that those persons are mistaken, who consider the lower orders of mankind as in- capable of improvement, and therefore think an attempt to reclaim them impracticable, or, at least, not worth the trouble.'

His statement of the good effects of his schools, caught the attention of a gentleman in Lancashire, before alluded to, who wrote immediately to Mr. llaikes, and received the letter already given. By permission of its author, this epistle was printed in one of the numbers of the Gentleman's Maga- zine for 1784 (vol. liv. p. 410). Through the medium of this publication, the plan was laid be- fore thousands of the most intelligent members of society in the kingdom. Mr. Raikes soon had to answer the enquiries of other correspondents anxious to gain information on this new and im- portant subject.

The scheme began now to be very generally known and adopted. Christians of all denomina- tions, wondering that it should never have been devised before, seemed determined to repair, as much as possible, the mischief of past neglect, by applying with the utmost diligence the benefits of this new discovery in the world of morals and religion. Several public-spirited gentlemen in the metropolis, perceiving that the system would be greatly aided by the establishment of a society, which should combine the patronage and ener- gies of all denominations of Christians, held a preparatory meeting August 30th, 1785, to take into consideration the propriety of forming a so- ciety for establishing and supporting Sunday schools for the instruction of poor children, in different parts of the kingdom. In consequence of a resolution then passed, a public meeting was holden on the 7th of September, and an institution formed, bearing the title of ' A Society for the Support and Encouragement of Sunday Schools in the different Counties of England.' This es- tablishment was exceedingly beneficial to the growing cause. By the respectability of its mem-

bers, it increased the public confidence ; by their talents it enlightened the public mind ; by their activity it stimulated the public zeal ; and, by their property, it assisted the public expendi- ture.

It was an object of importance with the com- mittee of the Sunday School Society, to engage the co-operation of episcopal authority within the pale of the established religion of the country ; arid it must be spoken to the honor of the bishops, that they promptly came forward, and cast the weight of their mitres into the scale of this good cause. Among the dignitaries of the

church, who patronised the plan, the bishops of Salisbury and Llandaff, and the deans of Canterbury and Lincoln, obtained a conspicuous place by their zeal and talents. So rapidly had the flame spread through the country, that, by the close of 1786, it is conjectured that not less than 250,000 children were every Sunday receiving instruction.

The schools were at first universally conducted by hired teachers. This entailed a load of pe- cuniary difficulty upon the plan, which, had it not been removed, must have considerably re- tarded its progress, and consequently diminished its usefulness. The Sunday School Society alone expended, during the first sixteen years of its ex- istence, no less than £4000 in the salaries of teachers. And this was not the least evil attend- ing upon purchased labor. Hireling teachers can scarcely be expected to possess either the zeal or ability of those who now engage in the work from motives of pure benevolence. Gratuitous instruc- tion was an astonishing improvement of the sys- tem ; and which does not appear to have entered into the views of its benevolent author. < If we were asked,' says a writer in the Sunday School Repository, ' whose name stood next to that of Robert Raikes in the annals of Sunday Schools, we should say, the person who first came for- ward, and voluntarily proffered his exertions, his time, and his talents, to the instruction of the young and the poor ; since an imitation of his ex- ample has been the great cause of the present flourishing state of these institutions, and of all that future additional increase which may be reasonably anticipated. At what precise period this was first introduced, does not appear, or where it commenced, so that the award of this second honor is reserved for the decision of the last day. About the year 1 800 this plan became very general through the kingdom.'*

The improvement in the mode of popular education, introduced by Dr. Bell and Mr. Lan- caster, to which we shall immediately advert in a more particular manner, must be considered as forming another era in the history of Sunday schools. The advantage derived from these useful systems, does not merely consist in a ser- vile imitation of all their arrangements, but in demonstrating to the world, more clearly than was ever shown before, that education is an art susceptible of indefinite improvement, and in exciting an ardor, before unknown, to carry it on to perfection.

The institution of Sunday schools was now become universal in this kingdom. Every city, and every town had warmly espoused the cause. Still there was one thing wanting to raise the

system to the highest degree of efficiency, and that was union. Reasoning upon the general principle, many were led to conclude, that great benefits would result to this particular case, from an association of counsel and

energy. After much private intercourse on this subject, be- tween many persons in London, a public meet ing was holden, July 13th, 1803, in the school- rooms belonging to Surrey chapel, and the Sunday School Union was then formed.

This new society commenced its operations with no less prudence than vigour. Carefully abstaining from even the appearance of a desire to interfere with the private management of any of the associated schools, it aimed to diffuse new life and energy through them all. One of its first objects was the compilation of a new spelling book, more adapted to moral and reli- gious instruction than any they could find already in existence. This production reflects no small degree of credit on its industrious compilers. The next object of the committee was to ascer- tain, by an extensive correspondence, what parts of the country were most destitute of schools. Finding, in many places, that the advantages of the system were greatly diminished by the want of method and order which prevailed in the schools, they published in 1806, 'A plan for the Formation and Regulation of Sunday Schools.'

The example of the metropolis was soon imitated by many of the large towns, and se- veral counties. Unions were formed in different parts of the kingdom, from which the happiest effects have resulted ; among which may be reckoned the establishment of new schools in neglected parts of large towns, and amidst the darkness of benighted villages ; — a fresh excite- ment given to those employed in the work of tuition ; — the diffusion of Christian affection ; — and in some instances a great improvement in the mode of instruction. The formation of the Sunday School Union must, therefore, be re- garded as an event of vast importance to the success of this valuable scheme. Surprising it is to state, but it was not until the year 1816, that the first Sunday school in America was opened at New York. The Wesleyan Metho- dist Missionaries had opened one the year previous in the heart of the island of Ceylon.

In an account like the present, the establish- ment of the Scotch Sabbath Evening Schools, ought not to be omitted, as they may be fairly stated to have arisen out of the English Sunday School Institution. The children of the poor, so far as common education is concerned, are all taught to read in the parochial schools, which are established in the southern parts of that enlightened country. Still, however, as it re- spects the observance of the sabbath, and the more direct business of religious instruction, like the children in this kingdom, they are left of course to the care of their parents, multitudes of whom, indifferent to the welfare of their own souls, feel no solicitude for the salvation of their offspring. Observing and commiserating the condition of these neglected youtn, who in great numbers spent the sabbath, and especially the sabbath evenings, in profanity and vice,

the friends of religion in Edinburgh formed the pious resolution of collecting them together on the Lord's day evenings, for the purpose of im- parting religious knowledge. They assemble at six o'clock, and are dismissed about eight ; during which time every effort is made to instruct them in the way of eternal salvation, and to urge them forward in the path of life. This admirable system commenced in Edinburgh, in the year 1787, and soon spread through all the principal towns of Scotland. How desirable that it should pass the Tweed, and be adopted in England ! There is one class of youth, to whom it might become an incalculable blessing; i. e. the elder boys and girls, who have just left other schools, and who are generally consideied as gone beyond their care. Thus abandoned, it is too commonly the case, that they lose all the little impression they have received while under instruction. Could they be collected together on a sabbath evening, to be taught by those who would interest themselves in their welfare, what a bless- ing might be expected to accrue !

Adult Schools were originally a ramification of the Sunday school system. The first school for the instruction of adult persons exclusively, was opened in the summer of 1811, in North Wales, through the efforts of the Rev. T. Charles, episcopal minister of Bala, Merionethshire. The success of the undertaking was considerable; multitudes in every district repaired to the cha- pels, or other places appropriated to the purpose, for instruction, and the most beneficial results became every where observable. Mr. Charles's own account is as follows : —

' My maxim has been for many years past to aim at great things ; but if I cannot accomplish great things, to do what I can, and be thankful for the least success ; and still to follow on with- out being discouraged at the day of small things, or by unexpected reverses. For many years I have laid it down as a maxim to guide me, never to give up a place in despair of success. If one way does not succeed, new means must be tried ; and if I see no increase this year, perhaps I may the next. I almost wish to blot out the word impossible from my vocabulary, and obliterate it from the minds of my brethren. We had no particular school for the instruction of adults exclusively, till the summer of 1811 ; but many attended the Sunday schools with the children, in different parts of the country, previous to that time. What induced me first to think of esta- blishing such an institution, was the aversion I found in the adults to associate with the children in their schools. The first attempt succeeded wonderfully, and far beyond my most sanguine expectations. The report of the success of this school soon spread over the country, and in many places the illiterate adults began to call for

in- struction. In one county, after a public address had been delivered to them on the subject, the adult poor, even the aged, flocked to the Sunday school in crowds ; and the shop-keepers could not immediately supply them with an adequate number of spectacles. Our schools, in general, are kept in our chapels ; in some districts, where there are no chapels, farmers, in the summer time, lend their barns- The adults and children are

sometimes m the same room, but placed in dif- ferent parts of it. When their attention is gained and fixed, they soon learn; their age makes no difference, if they are able, by the help of glasses, to see the letters. As the adults have no time to lose, we endeavour, befo-t tney can read, to instruct them without delay, in the first princi- ples of Christianity. We select a short portion of Scripture, comprising the leading doctrines, and repeat them to the learners, till they can re- tain them in their memories ; and which they are to repeat the next time we meet.'

Soon after this, at the second anniversary of the Bristol Auxiliary Bible Society, among other intelligence communicated to the meeting, a let- ter from Keynsham was read, which contained the following sentence : — ' We have been neces- sarily obliged to omit a great number of poor inhabitants who could not read, and therefore are not likely to be benefited by the possession of a bible.' This statement struck the attention of an individual present, by the name of William Smith. To be deprived of the inspired volume by an inability to peruse it, appeared to him worse than for a man to be dying of the plague, through ignorance of the way of applying a re- medy, which in itself was within his reach. His benevolent mind meditated upon their situation. He longed to relieve them, but scarcely dared to hope that the case admitted of relief. In this dilemma he consulted Stephen Prust, Esq. a re- spectable merchant in the city, whose name stands high in the long list of Bristol philanthro- pists ; and, in the advice and support of this gen- tleman, the scheme of Smith met the sun-shine which it wanted. He slept not a second night upon his plan, after he had received the pro- mise of his generous friend to assist him in the undertaking, before he commenced his exertions. As he was employed the next day in collecting subscriptions for the Bible Association, whenever he met with persons who could not read, he asked them if they would like to learn, provided a school should be opened. Many embraced the offer with expressions of pleasure, and their names were taken down. Two rooms were im- mediately obtained, and the work of instruction commenced. So little could the ardor of Smith endure delay, that in nineteen days after he had disclosed his mind to Mr. Prust, the school was opened with eleven men and ten women. The number rapidly increased, till, a few weeks after, some active friends to the cause of religion and humanity, met the founder of the new institution, and formed themselves into a society, bearing the title of ' An Institution for Instructing adult Persons to read the Holy Scriptures.' The

so- ciety continued to attract the attention, and engage the support of Christians of all denomina- tions ; and at length received a most valuable accession in the active co-operation of Thomas Pole, M. D., a physician in connexion with the society of Friends. Within the period of two years, this society admitted 1508 scholars, exclu- sive of 276 who were taught by schools belong- ing to several dissenting congregations.

Public adult tuition has been since somewhat modified, both at Bristol and in other places, in conformity with the aversion of the grown-up

poor to an exposure of their ignorance. The plan of private schools has accordingly been adopted, by which a few neighbours are associated together, and taught at their own habitations, or in a private manner at some convenient place. Since this period, adult schools have been esta- blished in various parts of the kingdom; at Plymouth, Salisbury, Uxbridge, Sheffield, Nor- wich, Ipswich, and other places ; and these ex- amples of benevolence have not been disregarded or unimitated by the metropolis.

But the most brilliant of all our modern dis- coveries arid improvements in this important science of sciences, is the New System of Educa- tion, which, however warmly opposed for a time, may now be regarded as established. With Dr. Bell, originally a superintendent of the Military Male Orphan Asylum at Madras, the first idea of this system clearly originated. This was a public charity resembling the Royal Military Asylum at Chelsea. A salary of 1200 pagodas, £480, was attached to Dr. Bell's office when he entered upon it, but this he declined; accepting the office solely for the sake of being more useful; it is said, in his station than he could hope to be by any other means. ' Here,' he reasoned with himself, ' is a field for a clergyman to animate his exertion, and encourage his diligence. Here, his success is certain, and will be in proportion to the ability he shall discover, the labor he shall bestow, and the means he shall employ. It is by instilling principles of religion and mo- rality into the minds of the young, that he can best accomplish the ends of his ministry : it is by forming them to habits of diligence, industry, veracity, and honesty, and by instructing them in useful knowledge, that he can best promote their individual interest, and serve the state to which they belong, — two purposes which cannot, in sound policy, or even in reality, exist apart.' With these feelings, and with this sense of duty, Dr. Bell began his task. He had to work upon the most unpromising materials. It was an esta- blished opinion, that the half-caste children were an inferior race, both in moral and intellectual faculties, as if a certain mulish obliquity of na- ture had been produced by crossing colors in the

human species. This opinion was like one of those prophecies which bring about their own accomplishment. Dr. Bell knew how deeply it was rooted, and saw but too plainly that it rested upon apparent experience ; he knew also, that these children learnt from their unhappy mothers that cunning, and selfishness, and deceit, which become the defensive instincts of a despised and degraded generation : the baleful prejudice which prevailed against them inevitably producing the vices which it pre-supposed. The boys placed under his care were in general stubborn and perverse, addicted to trick, lying, and duplicity; and those among them who were farther ad- vanced in age were, for the most part, trained in habits and customs incompatible with that method without which no system of education could proceed.

' I soon found,' says he, ' that if ever the school was to be brought into good order, it must be done, either by instructing ushers in the eco- nomy of such a seminary, or by youths from

among the pupils trained for the purpose. For a long time I kept both these objects in view; but was in the end compelled, after the most painful efforts of perseverance, to abandon en tirely the former, and adhere solely to the latter I found it difficult beyond measure to new-model the minds of men of full years, and that when- ever an usher was instructed so far as to qualify him for discharging the office of a teacher of this school, I had formed a man who could earn a much higher salary than was allowed at this charity, and on far easier terms. My success, on the other hand, in training my young pupils in habits of strict discipline, and prompt obe- dience, exceeded my expectation : and every step of my progress has confirmed and rivetted in my mind the superiority of this new mode of con- ducting a school through the medium of the scho- lars themselves.' — Experiment, first edition, p. 10.

' It is in this mode of conducting a school that the discovery consists ; this mode, which is briefly termed self-tuition, is the principle of the new school, and the new system rests wholly upon it. This is the key-stone of the arch, — the main-spring of the watch, — the moving power of the whole machine. Dr. Bell did not come to the superintendence of the Madras Asylum pre- pared with his theory, and ready to put it in execution. He found the school with an esta- blishment of one master and two ushers, and as the school increased one of the boys was added as head-teacher, so that there were four nominal masters continued to the 22d of January, 1796. But when the report was drawn up five months afterwards (June 28), and the school had in- creased farther to the number of 200, the masters were reduced to three. ' None of these masters had made a progress in letters equal to the boys in the first class/ Their duty, it is expressly stated, was not to teach, but to look after the various departments of the institution. As

teachers they had been gradually superseded, and from the 1st of June, 1795, the school was ‘ entirely taught by [the boys.’ This was one of the cases in which practice led to theory.’

Dr. Bell perceived the expense of time, labor, and punishment, which the common system of tuition requires, and, having found a remedy, perceived also wherein the principle of that re- medy lay, and as a principle acted upon it and announced it to the world. Every class had its teacher and assistant. Give me four and twenty children to-day, was a saying of Dr. Bell, and I will give you as many teachers to-morrow as you want. There was no hesitation in degrading a teacher who failed in any of the tasks required of him, and making trial of another, till one was found fit for the office; these teachers had no other occupation, no other pursuit, nothing to employ their minds but this single object; they could do that only which they were assigned to do, and they did it the better, because they themselves knew nothing more than what was perfectly level to the capacities of their pupils.

The first attempt which Dr. Bell made to in- troduce a new practice in the school, proved to him the necessity of proceeding upon this prin- ciple. At first sight of a Malabar school, his attention had been caught >w Ae manner 111

which the letters were taught in sand ; yet he could not fully establish even so simple a prac- tice as this, till he had trained boys whose minds he could command, and who, as he says, ‘ only knew to do as they were bidden, and were not disposed to dispute or evade the orders given them.” Many advantages arise from this easy improTement, besides the great and obvious saving of expense. A distinct notion of the dif- ferent form of the letters is immediately obtain- ed, and the difficulty of distinguishing those letters whose very difference of form is founded upon their similarity (b and d, p and q, for in- stance), by which children are so long perplexed, is removed at once. The scholar, at the same time, learns so much of the art of writing, as materially to facilitate his progress when he ar- rives at that class wherein it is taught.

The next improvement of the Madras school, was the oractice of syllabic reading : the child, after he had learnt to read and spell monosyl- lables, was not allowed to pronounce two syl- lables till he had acquired, by long practice, a perfect precision ; upon the common plan, chil- dren make continual blunders, in the beginning and middle, and more especially in the

termina- tion of words : to prevent this confusion, they were taught to read syl-la-ble by syl-la-ble, and, when so far advanced as to read sentences, to pause awhile at the end of every word. ‘ So much,’ says Dr. Bell, ‘ for the first minutiae : were I to pursue this subject through all its stages I should fill a volume.’ From the com mencement of his experiment, he made the scholars, as far as possible, do every thing for themselves. If a bad subject came to school, a good boy was chosen to take care of him, teach him right principles, treat him kindly, reconcile him to the school, and render him happy like the rest in his situation. The consequence of such a system was, that the boys, feeling them- selves happy, felt also that their advantage was the only object which the master had in view ; they were sure of his favor if they continued to do right, they were certain of his disapprobation and displeasure if they offended ; but knowing that he was just, and feeling that he was good, they regarded him as their friend, and benefac- tor, and common parent. An annual saving of not less than 2400 pagodas, or £960, upon the education and support of 200 boys, was pro- duced in the institution at Madras, by Dr. Bell’s regulations and improvements !

After superintending the school for seven years, he found it necessary for his health to return to Europe. The directors of the charity passed a resolution for providing him a passage in any ship in which he might wish to sail ; declaring at the same time, that, under the wise and judi- cious regulations which he had established, the institution had been brought to a degree of per- fection and promising utility ‘ far exceeding their most sanguine expectations when it was esta- blished.’

These testimonies Dr. Bell published in 1797, on his arrival in Europe, in a little duodecimo pamphlet, under the title of An Experiment in Education, made at the Male Asylum of Ma- dras j suggesting a system by which a school or

family may teach itself under the superinten- dence of the master or parent.

When the manuscript of this little work was put into the hands of the publisher, says a friend of his, whose account of the system we follow, Dr. Bell said to him, ‘ You will think me an en- thusiast ; but in a thousand years this system of tuition will spread overthe world !’ What he meant by ‘ the system ‘ is apparent both from the title and the whole tenor of the pamphlet ; — not writing in sand, not syllabic reading, nor any of the improvements in detail, but the main prin- ciple and main-spring of the whole, ‘ by which a school or family may teach itself, under the su- perintendence of the master or parent,’ the ‘new mode of conducting a school through the me- dium of the scholars themselves.’ Had Dr. Bell done no more than conceive the idea of this new system, and publish it to the world, he would have done enough. Whoever might have been the first

person to carry the system into effect, the discovery would have been his, and to have imputed it to any other person would have been as unreasonable as it would be to ascribe the great discovery of Franklin, re- specting the sameness of electricity and lightning, not to him but to the French Cure, who, while Franklin waited for the erection of a tower then building at Philadelphia, to which he might affix his metallic rod, set up a conductor accord- ing to the American philosopher's instructions, and verified Franklin's theory by thus bringing down the lightning, before it was known in Europe that Franklin had verified it himself by means of a paper- kite.'

The Charity school of St. Botolph, Aldgate, was the first place in England where Dr. Bell's discovery was adopted. ' That the principle of the new system,' says another able writer on this topic, ' essentially consists in the tuition 'of the scholars by the scholars, in classes of equal pro- ficiency, by short, easy, and perfect lessons, and not in any of the practises either introduced into the male asylum by Dr. Bell, or subsequently by Mr. Lancaster is most clearly and satisfac- torily proved by this simple criterion. Discard all the peculiar practices or contrivances of the school, and, if the tuition by the scholars be duly carried on, the difference of progress will not be greatly material. On the other hand, discard the system of tuition by the scholars, and retain all the practices, the charm ceases, subordination and diligence cannot be so readily maintained, pu- nishments must be resumed, and, after all, the school is comparatively inoperative. The system, therefore, is evidently one and the same in both cases, and in all its applications. If a Mahom- medan were to start up and apply it to the Koran, or a brahmin to the Shaster, it would be equally reasonable for them to call it the Ma- hommedan or the Hindoo system, as for Mr. Lancaster to call it Lancasterian, unless he can prove that it originated with him.'

Having thus fairly traced the new system to its inventor, we may be allowed to claim for Mr. Lancaster the great merit of having by in- defatigable zeal, first made the system generally known in England, and of having procured for it the patronage of many exalted and distinguished

individuals, with the Sovereign at their head- He opened his free school in the Borough in the year 1800vln the year 1803, in the first edition of his improvements in Education, (part 3rd. page 44) he wrote thus ; — ' I ought not to close my ac- count, without acknowledging the obligations I lie under to Dr. Bell, of the male asylum at Madras, who so nobly gave up his

time, and liberal salary, that he might perfect that institution, which flourished greatly under his fostering care. He published a tract in 1798, entitled an Expe- riment on Education, made at the male asylum of Madras, suggesting a system whereby a school or family may teach itself, under the superintendence of the master or parent. From this publication I have adopted several useful hints ; I beg lercve to recommend it to the attentive perusal of the friends of education, and of youth. I am per- suaded nothing is more conducive to the promo- tion of a system than actual experiment. Dr. Bell had 200 boys, who instructed themselves, made their own pens, ruled their books, and did all that labor in school, which among a number is light, but resting on the shoulders of the well-meaning, and honest, though unwise teacher, often proves too much for his health, and embitters or perhaps costs him his life. I much pegret that I was not acquainted with the beauty of his system, till somewhat advanced in my plan; if I had known it, it would have saved me much trouble, and some retrograde movements. As a confirmation of the goodness of Dr. Bell's plan, I have succeeded with one nearly similar in a school attended by almost 300 children.

Mr. Lancaster was afterwards vain enough to state, in the public papers, that having ' invented under the blessing of Divine Providence, a new and mechanical system of education, for the use of schools, he feels anxious to disseminate the know- ledge of its advantages through the united king- dom ;' and vanity was his complete overthrow. He had thejtnerit we have willingly ascribed to him, and, in addition to this, he invented a few eco- nomical practices in the use of slates and spelling cards, which are equally applicable to all schools conducted on the new system, and which have been adopted in Dr. Bell's school, without any denial of their origin, just as the sand-writing and syllabic spelling were confessedly borrowed from Dr. Bell. He invented also a variety of new punishments, in the application of which his scholars were made the correctors, no less than the instructors of each other; and many of which were of a nature very questionable in their bearing on the moral character ; that is, calcu- lated to make the pupils insolent, turbulent, and overbearing.

Sorry we are to add, that not only was the question of originality agitated at first with many bitter personal feelings between the friends of these parties, but it insensibly mingled itself with religious controversy. An advocate on the side of Dr. Bell, and the Madras system, says with great candor : 'We are sorry to admit that there was no great appearance of acceleration in the proceedings of the Church, till Mr. Lancas- ter started up with all the eagerness and activity of a sectary — with all the zeal of a missionary —

with all the adventitious motives and practices of a person whose

subsistence and reputation depended upon the success of his plan ; and fortified with all the countenance and support of the host of sectaries, whose eagle-eyes perceived at a glance what an opportunity was offered, at once to place the cause of humanity in oppo- sition to that of the Church, — what a glorious occasion was presented to associate in the minds of the people the ideas of charity and dissent British Review, No. 6.

Mr. Lancaster, and what was now called the British system, admitted and taught the reading of the Bible, in fact, into the schools founded upon his plan, but excluded all catechisms. ‘ Impelled by all these aids and motives, con- tinues the above writer, Mr. Lancaster soon be- came the prominent character on the canvass, and by the great mass, both of the clergy and laity, who had never heard of Dr. Bell, was consider- ed as the necessary, indeed the only instrument through whom the new system could be carried into practice. And we shall ever consider it as reflecting immortal honor on many zealous ministers of the church, that the practicability of the plan was no sooner shown by Mr. Lancas- ter, than they immediately lent him their coun- tenance; and finding to their regret that no propositions, having in view the general instruc- tion of the poor, were then circulated and enforced by the authority of the church as a body, they trusted to their own individual exer- tions to make Mr. Lancaster’s plan square as well as they could with the interests of the church. We should certainly have been glad to see her interfere sooner, as soon indeed as it was evident and publicly notified by experience that the new system imported by Dr. Bell was a practicable one for the instruction of the poor. We should then have been furnished with a stronger argument than we now possess for repelling the sneering insinuations of those, who lose no opportunity of observing, that, but for the exertions of Mr. Lancaster and his partisans, and the fear and emulation which they have excited, the prospects of general instruction for the poor would have been very different from what they now are. By whatever means, how- ever, the effect was produced, the Church is at length roused, arid those who wish to secure to the rising generation of the people a knowledge of the excellence of her doctrines, may now do so without any alloy of danger, which even the most trembling solicitude for her safety can entertain.’ The question of the comparative economy of the two schools has been thus stated: — Dr. Bell introduced the knowledge of sand-writing and syllabic spelling, which Mr. Lancaster confessedly borrowed from him. Mr. Lancaster, having first opened a large school, introduced the economical use of slates in many cases where paper-books were necessarily used at Madras. But these slates are now used in Dr. Bell’s schools. Mr. Lancaster also invented a large card, with the letters and short words printed thereon, one of which stuck against the wall serves the whole class to read from : whereas Dr. Bell prefers that each child should have a small card of its own, which it may look at and

con over at its pleasure. The difference in the first cost of these instruments amounts to about seven shillings per 100 children yearly; and the use of either is a matter of mere opinion as to the advantage of giving each child's lesson into its own hand. Many of Dr. Bell's schools use the large cards, many of Mr. Lancaster's the small ones; a few Bibles and Testaments are admitted to be as necessary in Mr. Lancaster's schools as in Dr. Bell's. So that in fact the two schools are now on a perfect equality as to expense. The use of slates, or of paper books, for writing and ciphering, depends on the res- pective tastes of the master or patrons. If they think the pride and pleasure which a child and his parents take iu looking back upon the records of the progress he has made will more than repay the expense of paper books, they will adopt them. If they think otherwise, or if their funds are very confined, they will reject them. The system will be neither the better nor the worse for their determination either way, or for the adoption or omission of the small or the large card, or for a multitude of other things, about which much noise has been made.

The Madras system has become the basis of the National Schools connected with the established church throughout the kingdom ; and large and well earned are its triumphs over the wretched- ness and ignorance of the poor. The British and Foreign School Society, into which the British system is now merged, is, on the other hand, principally in the hands of dissenters ; nor can it be denied the meed of praise for great and noble exertions in the cause of universal educa- tion. Mr. Lancaster, as we have intimated, has worn out his warmest friends in this country by his personal vanity and extravagant conduct; but the system is under very respectable and dis- interested management. It is said, by competent judges, that the pupils of the National Schools excel in reading ; while those of the British and Foreign School system are superior in their ac- quaintance with arithmetic.

But the plans of Dr. Bell were yet more ex- tended. He himself gave the public, in 1815, an interesting, though somewhat verbose, pub- lication, entitled ' Ludus Literarius : the Classical and Grammar School ; or an Exposition of an Experiment in Education, made at Madras in the years 1789 — 1796; with a view to its Intro- duction into Schools for the Higher Orders of Children,' 8vo. : and at the Charter-house, and some respectable private seminaries, the advan- tages of mutual instruction among pupils have been most successfully applied.

' In proposing,' says Dr. Bell, ' to transfer the Madras system of education into schools of a higher order, and especially into grammar schools, I make

no pretension to superior attainments in literature, nor do I presume to vie with the learned preceptors of our classical schools in skill in languages, or in sciences.

To teach a teacher ill becometh me.

- *The task I have in hand is of a less elevated description, and does not require deep erudition. It is not the science of letters, but the art of tui- tion, or the mode of communicating that science,*

of which I am to treat. I do not purpose to add to the master's stock of knowledge, but to put into his hands machinery, by which he may bring down his learning to the level of the capacity of children, disseminate his knowledge among his pupils, and by the simplest instruments, and gentlest means, establish order, check vice, and uphold virtue. For such schools I have no new discovery to develop, no new system to suggest, no improvement on the Madras invention to offer. All I propose is, to show, more particu- larly than I have heretofore done, the applicabi- lity of that invention to schools of other descrip- tions, than those in which it has long been em- ployed with uniform success. Beyond this the reader need expect nothing entirely original ; at the same time, it is true, that in the rudiments of the Latin grammar, independently of this ma- chinery, which will embrace every branch of the scholars' studies, other methods of proceeding will be recommended with regard to elementary lessons, and the introduction to syntax, parsing, and prosody, than those which are usually fol- lowed. In the principles, however, on which these processes depend, nay, perhaps in the pro- cesses themselves, the master will find nothing but what has been suggested before. He may see nothing but what he knew before, or at least will think, as soon as he has read it, that he knew before — so simple, so plain, and so true shall it be. But my solicitude is, that it may be known in the way which may avail both for the master and his pupil.'

He afterwards proceeds to propose the ' scheme of a school on the model of the Madras system,' which, as it is a key to this great improvement, in all its forms, we subjoin complete : —

' 1. The asylum, like every well regulated school, is arranged into forms or classes, each composed of as many scholars as, having made a similar progress, unite together.

' The scholar ever finds his own level, not only in his class, but also in the ranks of the school, being promoted or degraded from place to place according to his relative proficiency.

- *So much for the general formation of a school. Now more particularly of the Madras Asylum.*

‘ 2. Each class is, when preparing their lessons by themselves, paired off into tutors and pupils.

‘ Thus in a class of thirty-six scholars, the eighteen best and most trusty are tutors respec- tively to the eighteen worst.

‘ This arrangement, by no means an important link in the chain of self-tuition, is frequently dis- pensed with, and when continued lessons take place, as in the schools of the National Society, it is of course superseded.

‘ 3. To each class is attached an assistant teacher, whose business is, as the name implies, to act under, with, or for the teacher.

‘ 4. The teacher who, with his assistant, has charge of the class, as well when learning, as say- ing their lessons, and is responsible for their order, behaviour, diligence, and improvement.

4 Both the teacher, and his assistant, say their lessons with their class.

‘ 5. A sub-usher, and usher (or rather a com- petent number of ushers’), are appointed, when necessary, to inspect the school, watch over the

whole, and give their instruction and assistance wherever wanted, as the agents and ministers of the master.

‘ 6. The schoolmaster, whose province it is to direct and conduct the system in all its rami- fications, and to see all the subordinate offices carried into effect.

4 7. Last of all comes the superintendent (who may be the chaplain of the establishment, paro- chial minister, secretary, treasurer, trustee, or visitor), whose scrutinising eye must pervade the whole machine, whose active mind must give it energy, and whose unbiassed judgment must inspire confidence, and maintain the general order and harmony.

‘ What goes before comprises the system of tuition by teachers and ushers, or, as they are often called, monitors.

‘ What follows is for the purposes of precision and inspection, and as checks and instruments of discipline in the execution and superintendence

of the above plan.

‘ 8. On the front of the teachers’ and assist- ants’ books, when taken in hand, is written with ink the year and day of the month ; and through- out their books, the end of each lesson, when given out, is noted by a score with a pencil. Also the sum of the daily lessons (so noted in the marked book), and the other tasks of the day, likewise the individual proficiency of each scho- lar are entered in a register book for the master’s use, and the visitors’ reference and inspection.

‘ 9. Black book, as the boys call it, or register of such offences as require serious animadver- sion, and a weekly scrutiny by

‘ 10. A jury of twelve boys — the peers of the culprits.

‘ Under perfect instruction, and the able and impartial administration of the laws of the school, the 9th and 10th regulations become a dead let- ter; the general laws of inspection and emula- tion being found sufficient for the purpose of dis- cipline.

‘ This, in brief, is the scheme of the Madras system of education, framed on an extensive scale, and in a multiplied form, fitted for a nu- merous school.’

We can only admit his further observations ‘ On the effects of equalised classification.’

‘ 1. Equalised classification extends perfect in- struction to every member of a school.

‘ From the law of classification, by which every scholar claims and assumes his place, not according to his standing or length of time in school, but to his actual proficiency and acquire- ments, determined by a fair and constant com- petition with his school-fellows, and is ranked, by this impartial and unerring law, with those with whom he is on a footing of equality; it ne- cessarily follows that no scholar either retards others in their daily course, or is retarded him- self: his station in the school, and progress in learning, always bear a just proportion to his talents and industry. No idleness, on the one hand, is occasioned by the want of sufficient em- ployment, from his having his lessons prepared long before those with whom he is associated ; and, on the other hand, no scholar is oppressed 3y the burden of tasks, to which he is unequal,

nor his progress stayed by the length and difficulty of lessons, which he cannot overtake.

‘ Hence it is, that, in a Madras school, a com- plete acquaintance with every lesson is not, as too frequently happens, confined to scholars of su- perior parts or industry, but is extended and in- sured to every scholar in every class; hence too it is, that while there is no let or hindrance to the career of memory, judgment, or genius, there is also an end to dunces in our schools. One boy outstrips another in his gymnasium — his scholastic career ; but he who is left behind is master of the inferior ground which he occupies, as well as the other is of the superior station which he has atta;ncd. Falsa enim est querela, paucissimis hominibus vim percipiendi qua; tra- dantur, esse concessam ; plerosque vero laborem ac tempora tarditate ingenii perdere, &.c

‘ It is an unfounded complaint, that very few learners are naturally endowed with the faculty of understanding the lessons which are prescribed to them, and that most do in reality lose their labor and time from defect of genius. Quite otherwise is the fact : for you will find the gene- rality of men quick in conception, and prompt to learn. This is the characteristic of man. As birds are destined by nature to fly, horses to run, and wild beasts to be ferocious : so to us is pe- culiar the (agitation) working and sagacity of the mind. Hence it is believed, that the human soul is of celestial origin. The dull and the in- docile are no more comformable to the nature of man, than bodies which are accounted prodigies and monsters. But these are very rare. Of this fact the good promise, which the generality of children ‘display, is a sufficient proof. And, when it dies away and disappears with age, it is mani- fest that the fault does not originate in any real deficiency of nature, but arises from want of due culture. It cannot indeed be denied that one excels another in genius, and that some make greater, some less, proficiency. But none can be found who have derived no benefit from study.

‘ How happily has the Madras system of educa- tion illustrated this position, to a degree beyond the conception of the greatest minds of former times! And what an acquisition is it, to the science of instruction, that every scholar who enters a school shall derive continual and pro- gressive improvement during the period of his stay, having his understanding cultivated, and his memory exercised and improved in exact proportion to the strength of the faculties which he possesses ! No longer will even a single learner quit a school thus conducted, without having all along been duly occupied in the im- provement of his talents, and in the increase of his attainments. None will now by reason of the difficult and disproportioned course of their studies, and the ill assortment of the classes, and by imperfect instruction in the beginning, pass through the forms of their school, as those who wander through a dark and dreary wilderness, toiling and fatiguing themselves to find an exit, without a ray of light, of comfort, or of profit, to their benighted minds — a state in which many were wont

to remain till they left school. To others, and those I fear few in number, the time

comes when, after a tedious, irksome, and un- profitable process, age ripens their faculties, and they begin to understand and to relish their daily exercises, and to derive from them profit and pleasure — that profit and pleasure, which, by a sad perversion of instruction, are commonly denied them at the early periods of their studies.

‘ 2. But the new classification not only ex- tends the benefit of perfect instruction to every member of a school alike ; but also, by the love of imitation which it indulges, and feeds, and by the emulation which it creates, calls forth the exertion, and accelerates the progress, of each and every scholar.

‘ As those children, whose talents or rather ac- quirements are nearly equal, rank in the same class, a spirit of imitation and competition is kept in perpetual action. A lively degree of interest is given to all their occupations, their attention is kept constantly awake, and the se- veral powers of their minds are called forth into constant exercise, by the incessant application of two of the most powerful principles of our nature — the desire of eminence and distinction, and the dread of shame and degradation.’

Dr. Bell’s proposals for adapting Lilye’s

grammar to his new system, and his general plan of instruction with respect to the rudiments of the Latin language, occupy the latter part of his work, and we can only refer our readers to its pages for further information on this point. In conclusion, he says, ‘ What I seek, as the grand consumma- tion of my labors, and completion of my design, is to put into the hands of our learned and able masters, that new organ of the human mind which is fitted, in a wonderful degree, to minister to their ease, comfort, and utility, as well as to the satisfaction, delight, and improvement of their scholars : and by which alone they can render their institutions in future, what they have been for the past — faithful and true nurseries of youth to the good of the nation, to the character of our nobles, and to the glory of God. If so much has been done towards these ends with the former method of cultivating their rich soils, what fruit- ful crops may not comparatively be expected from the vast improvements in the art of cultivat- ing the human mind, to which the new machinery has given rise?’

We may add that a Latin, as well as Greek Grammar, has been published on the plan he re- commends, by the Charter House.

EDUCE', ». a. Lat. educo. To bring out ; extract.

That the world was educed out of the power of space, give that as a reason of its original : in this language, to grow rich, were to educe money out of the power of the pocket. Glanvtile.

This matter must have lain eternally confined to its beds of earth, were there not this agent to educe it thence. Woodward.

The' eternal art educe good from ill, Grafts on this passion our best principle. Pope.*

Just so the' Omnipotent, who turns The system of a world's concerns, From mere minutiae can educe Events of most important use ; And bid a dawning sky display The blaze of a meridian day. Cowper.

The eduction of electricity from the earth is shown by an insulated cushion soon ceasing to supply either the vitreous or resinous ether to the whirling globe of glass or of sulphur. Darwin.

EDU'LCORATE, v. a.) Fr. edulcor ; Lat. EDULCORA'TION, n. s. 1 dulcoro, a dulcis, sweet. To sweeten ; the act of sweetening, or purifying.

(Swine't dung) though not so proper for a garden, is said yet to edulcorate and sweeten fruit so sensibly, as to convert the bitterest almond into sweet.

Evelyn.

EDULCORATION, in chemistry, properly signi- fies the rendering substances more mild. It consists almost always in taking away acids and other saline substances ; and this is effected by washing the bodies to which they adhere in a large quantity of water. The washing of dia- phoretic antimony, powder of algaroth, &c., till the water comes off quite pure and insipid, are instances of chemical edulcoration.

EDULCORATION, in pharmacy, is merely the sweetening of ju\eps, potions, and other medi- cines, by adding sugar or syrup.

EDWARD FORT, a fort in Nova Scotia, in the town of Windsor in Hans county, said to be large enough to contain 100 men. It is situated on Avon River, which is navigable thus far for vessels of 400 tons: those of sixty tons can go two miles higher.

EDWARDS (George), F.R.A. SS.,was born at Stratford, in Essex, April 3d, 1694. Upon leaving school he was put apprentice to a trades- man in Fenchurch-street ; but Dr. Nicolas, a relation of his master's, having left him his books, which were removed to an apartment occupied by Edwards, he eagerly employed his leisure hours in perusing them, which entirely deprived him of all inclinations for business, and he re- solved to travel. In 1716 he visited the prin- cipal towns in Holland, and in about a month returned to England. Two years after he took a voyage to Norway, at the invitation of a gen- tleman, who was nephew to the master of the ship in which he embarked. At this time Charles XII. was besieging Fredericshall ; in consequence of which our young naturalist was confined by the Danish guard, who supposed him to be a spy employed by the Swedes. How- ever, upon obtaining testimonials of his inno- cence, a release was granted. In 1718 he re- turned to England, and next year visited Paris, by the way of Dieppe. During his stay in France he made two journeys of 100 miles each ; the first to Chalons, in Champagne, in May, 1720; the second on foot, to Orleans and Blois : but an edict happening at that time to be issued for se- curing vagrants, to transport them to America, as the banks of the Mississippi wanted popula- tion, our author narrowly escaped a western voyage. On his arrival in England, Mr. Ed- wards closely pursued his favorite study of natu- ral history, applying himself to drawing and coloring such animals as fell under his notice

EDWARD S.

A strict attention to natural, more than picturesque beauty, claimed his earliest care : birds first en- gaged his attention ; and, having purchased some of the best pictures of these subjects, he was in- duced to make a few drawings of his own ; which were admired by the curious, who encouraged fur young naturalist to proceed, by paying a good price for his labors. Among his first patrons and benefactors may be mentioned James Theo- balds, Esq., of Lambeth. Our artist, thus unex- pectedly encouraged, increased in skill and assiduity; and procured, by his application to his favorite pursuit, both a decent subsistence and a large acquaintance. In 1731 he made an excursion to Holland and Brabant, where he col- lected several scarce books and prints, and saw the original pictures of several great masters- In December 1733, by the recommendation of the great Sir Hans Sloane, Bart., president of the College of Physicians, he was chosen librarian, and had apartments in the college. By degrees he became one of the most eminent ornithologists in this or any other country. His merit is so well known in this respect, as to render any eulogium on his performances unnecessary. He never {rusted to others what he could perform himself; and often found it so difficult to give satisfaction to his own mind, that he frequently made three or four drawings to delineate the object in its most lively character and attitude. In 1743 the first volume of his History of

Birds was published in 4to. His subscribers exceeding even his most sanguine expectations, a second volume appeared in 1747. The third was published in 1750; and the fourth in 1751. This volume being the last he intended to publish, he seems to have con- sidered it as the most perfect of his productions in natural history, and wrote a curious dedica- tion of it to the great God of nature. Our author, in 1758, continued his labors under a new title, viz. Gleanings of Natural History. A second volume of the Gleanings was published in 1760. The third part, which made the seventh and last volume of his works, appeared in 1764. The whole of his works contain engravings and de- scriptions of more than 600 subjects in natural history, not before described or delineated. He likewise added a general index in French and English ; which was afterwards perfected, with the Linnaean names, by Linnaeus himself, who honored him with his friendship and corres- pondence. On St. Andrew's day, 1750, Mr. Edwards was presented, by the president and council of the Royal Society, with the gold Cop- ley medal. He was a few years afterwards elected F. R.S. and F.A. S., London; and a member of various academies of sciences and learning in different parts of Europe. His col- lection of drawings, which amounted to up- wards of 900, was purchased by the earl of Bute. After the publication of his last work, being arrived at his seventieth year, he retired from public employment to a house which he had purchased at Plaistow ; where he was afflicted \vith cancer in the eyes, and the stone, a com- plaint to which, at different periods of his life, lie had been subject. Yet, in the severest •jaroxysms of misery, he was scarcely known to VOL. VII.

utter a complaint. Having completed his eightieth year, emaciated with age and sickness, he died July 23d. 1773, lamented by a numerous ac- quaintance.

EDWARDS (Richard), a minor English poet and dramatist of considerable powers, was born in Somersetshire in 1523, and educated at Corpus Christi College, Oxford. He afterwards became a student, and graduated at Christ Church. At the beginning of the reign of queen Elizabeth, he was one of the gentlemen of the royal chapel, and teacher of the children. Much esteemed as a poet and musician by his contemporaries, his death, in 1566, was greatly lamented. He wrote Damon and Pythias, a comedy, acted at court and printed in 1570; Palemon and Arcite, a comedy acted before queen Elizabeth at Christ Church ; Sonnets to the beauties of the courts of Mary and Elizabeth in MS., in the British Mu- seum, and several poems, included in his Para- dise of Dainty Devices.

EDWARDS (John), an English divine, and con- troversial writer, born at Hertford in 1637. His father, Thomas Edwards, was a furious presby- terian, and wrote with equal zeal against the episcopalians and independents ; but, when the latter party prevailed, he withdrew to

Holland, where he died in 1646. A work of his, entitled Gangraena, exhibits a curious picture of the re- ligious divisions of that period. John received his education first at Merchant Taylor's school, London, and afterwards St. John's College, Cam- bridge, where he was chosen fellow. He married in 1676, and was soon after presented to the living of St. Peter's, Colchester. Here he con- tinued only about three years, when he removed to Cambridge, took his degree of D.D., and from this time employed himself chiefly in writing. He published a vast number of books, not a few of them practical, but the greater part on con- troversial subjects. His opinions were Calvinistic. He died in 1716. The most esteemed of his works is his Preacher, in 3 vols.

EDWARDS (Jonathan), an American divine, was born at Windsor, in Connecticut, in 1703, and educated at Yale College, where he took his degrees in arts. In 1722 he became preacher to a presbyterian congregation at New York ; and, in 1724, was chosen tutor of Yale College ; which station he resigned in 1726, and removed to Northampton to assist his grandfather, who was minister there. He remained at Northampton till 1750, when he was dismissed from his situa- tion for refusing to administer the sacrament to those who could not give proofs of their conver- sion. In 1751 he went as a missionary among the Indians, and, in 1757, was elected president of the college of New Jersey, which station he did not long enjoy; for next year, 1758, he was attacked by the small pox, which proved fatal. Mr. Edwards's works demonstrate him to hav(been an acute metaphysician, and strict Calvinist He wrote, 1. A Treatise concerning Religious Affections; 2. The Life of David Brainerd, a Missionary ; 3. Narrative of the Work of God in the Conversion of many Hundred Souls in Northampton ; 4. An Enquiry into the Modem prevailing Notion of that 1 reedom of Will, which

is supposed to be essential to Moral Agency;

5. The great Doctrine cf Original Sin defended;

6. Sermons, &c. &c.

EDWARDS (Edward), a London artist, of great ingenuity, was born in 1738, and brought up to his father's business of a chair-maker and carver.

This he soon quitted for drawing, in which he acquired skill enough to become a teacher, and by that means supported his mother when a widow, and a brother and sister. The society of arts encouraged his efforts by two premiums, for historical pictures, and in 1773 he became an associate of the Royal Academy. He now visited Italy, and on his return was employed by Mr. Horace Walpole, Mr. Hamilton of Bath, and several other gentlemen. In 1788 he became teacher of perspective in the Royal Academy, and in the course of his duties composed his Treatise on Perspective, 4to. He died in 1806 : after his death were printed his Anecdotes of Painters, 4to., with his life prefixed.

EDWARDS (Bryan), a literary gentleman prin- cipally known for his History of the West Indies, was born in 1743, at Westbury in Wilt- shire. Educated at a private dissenting semi- nary at Bristol, he acquired on the death of his father the protection of an uncle, of considerable property in Jamaica, and was placed by him under the tuition of a clergyman resident there. Together with the large fortune of his uncle, he inherited that of a Mr. Hume of Jamaica, and, becoming a considerable merchant, returned to England, and took his seat in 1796 for the bo- rough of Grampound, which he represented until his death in July 1800. He published Thoughts on the Trade of the West India Islands with the United States, 8vo. 2. A Speech on the Slave Trade. 3. History of the British Colonies in the West Indies, 2 vols. 4to. and 3 vols. 8vo. 4. The Proceedings of the governor and assembly of Jamaica in regard to the Maroon negroes, 8vo.

EDWARDS (George), a physician and political writer of respectable literary attainments, left the following productions. The Aggrandisement and National Perfection of Great Britain, 2 vols. 4to., 1787; Royal and Constitutional Regenera- tion of Great Britain, 2 vols. 4to. ; Practical Means of exonerating the public Burthens, and of raising the Supplies of War without new Taxes, 4to., both in 1790; Great and important Discovery of the Eighteenth Century, &c., 8vo. ; First Volume of the Franklinian Improvement of Medicine, 4to., both in 1791 ; Effectual Means of providing against the Distress apprehended from Scarcity, &c., 8vo. 1800 ; Practical Means of counteracting the present Scarcity, &c., 8vo. ; Political Interests of Great Britain, 8vo., both 1801; Peace on Earth, Good will towards Men, &c., 1805, 8vo. ; Measures as well as Men, &c. 8vo., 1806 ; A plain Speech to the Imperial Par- liament of Great Britain, 8vo. ; Means adequate to the present Crisis, 8vo. ; Discovery of the natural ALn. of Mankind, all in 1807 ; and The National Improvement of the British Empire, &c., 1808. Dr. Edwards uied at his house in Suffolk Street, February 17th, 1823, in the seventy-second year of his age.

EDWARDS (Thomas), an English divine, born

at Coventry iu 1729, and educated at Clare-Hall, Cambridge, of which he became fellow. He printed a translation of the Psalms in 17o5, and the year following was chosen master of the grammar-school at Coventry, besides being pre- sented to the rectory of St. John Baptist in that city. In 1759 he published a book, entitled The Doctrine of Irresistible Grace, proved to have no Foundation in the New Testament. In 1762 he became the defendant of bishop Hare's System of the Hebrew Metre against Dr. Lowth. He took the degree of D.D. in 1766, and in four years after obtained the living of Nuneaton in Warwickshire, where he died in 1785. Besides the works above noticed, he published Selections from Theocritus, with notes.

EDWARDS (Thomas), an ingenious writer, born in London in 1 709. He was bred to the bar, and became a member of the society at Lin- coln's Inn, yet he scarcely ever practised. He attacked Warburton's edition of Shakspeare in 1744, after which he published a very sharp and humorous work, entitled Canons of Criticism, with a Glossary, which went through several editions. He added to this work some sounets, and an account of the trial of the letter Y. He died in 1757. A tract of his, upon Predestina- tion, was published some time after.

EDWARDS (William), a selt-taught architect, of Glamorganshire, South Wales, whose name deserves to be recorded on account of the un- common displays of genius which he has left in that corner of the country. He held only the rank of an ordinary mason, yet, by the superior mental powers with which he was endowed, he acquired remarkable skill in the designing and building of bridges. That over the Taaf, parti- cularly, which is the segment of a circle, the chord of which is 147 feet at the surface of the water, is a monument of his abilities. William Edwards likewise exercised the calling of a methodist preacher. He died in 1789, aged seventy-one.

EDWIN'S HALL, an ancient ruinous build- ing, on Cockburn Law in Berwickshire, so named from Edwin, king of Northumberland, but said to have been originally built by the Picts. It consists of three concentric circles; the diameter of the innermost is forty feet, the wall seven feet thick ; the space between the innermost and second wall, seven feet, and that between the second and third, ten feet. The stones are very large, arid grooved into each other, having never been cemented with mortar.

EDWY, the son of Edmund I., king of Eng- land, succeeded his uncle, Edred, A.D. 955. The tragical history of this unfortunate monarch and his virtuous queen Elgiva, reflects an inde- lible stain on the character of St. Dunstan, and shows what sort of monsters were canonised as saint in the ages of superstition. See BRITAIN.*

EDYSTONE LIGHT-HOUSE. See EDDY

STONE.

EECKHOUT, anhistorical portrait painter, was born at Amsterdam in 1621, and was a disciple of Rembrandt; whose manner of designing, coloring, and penciling, he imi- tated so nearly, that it is difficult to distinguish between several of his paintings and those of his

EFF

master; his touch and his coloring are the same as Rembrandt's ; but he rather excelled him in the extremities of his figures. His principal employment was in portraits ; but his chief de- light was in painting historical subjects, which he executed with equal success. His composi- tion is rich and full of judgment; the distribution of his masses of light and shadow, is truly excel- lent; and, in the opinion of many connoisseurs, he had more transparence in his 'coloring, and better expression, than his master. He died in

1674.

EEK, 79. a. Better written EKE, which see.

EEL, n. s. Sax. and Swed. eel ; Dan. Belg. and Teut.

.Is the adder better than the eel, Because his painted skin contents the eye.

Shakspeare.

EEL, in ichthyology. See MUR&NA.

EEL-FrsHiNG. See ANGLING.

EELS, MICROSCOPIC. See ANIMALCULE. The microscopic eels in vinegar are similar to those in sour paste. The taste of vinegar was formerly thought to be occasioned by the biting of these little animals, but that opinion has been long ago exploded. Mentzelius says, he has observed the actual transformation of these little creatures into flies; but as this has never been observed by any other person, nor is there an instance of such a transformation in any other animalcule, it seems probable that Mentzelius has been mistaken in his observations.

EEL SHEAR, a forked instrument, with three or four jagged teeth, used for catching of eels ; that with the four teeth is best, which they strike into the mud at the bottom of the river, and if it strike against any eels it never fails

to bring them up.

E'EN, adv. Contracted from even. See EVEN.

Says the satyr, if you have a trick of blowing hot and cold out of the same mouth, I have e'en done •with you, L' Estrange.

EVBE, an island near the south coast of Mysol, in the Eastern Seas, having a bay on its north side, which forms a harbour. It is five or six miles in length, and birds of paradise migrate, where they are caught with bird-lime, and dried as they appear in Europe. Captain Forrest found two small villages here. Long. 127° E., lat. 2° 12'S

EFF, n. s. Commonly written eft. A small lizard. See EFT.

E'FFABLE, adj. Lat. effabilis. Expressible ; utterable.

He accommodated thereunto his universal language to make his character effable. Wallis.

EFFA'CE, v. a. Fr. effacer , Lat. ex and facio. To destroy, or mar the appearance ; blot out ; herce, to destroy, generally ; to wear away.

Nor our admission shall your realm disgrace, Nor length ofttime our gratitude efface.

Drydcn's JEncid.

Characters on dust, the first breath of wind effaces.

Locke.

It was "'dered, that his name should be effaced out of alj publick registers. Addison OH Italy.

Time, I said, may happily efface That cruel image of the king's disgrace. Prior Otway failed to polish or refine, And fluent Shakspeare scarce effaced a line.

Pope

So coin grows smooth, in traffic current passed, Till Caesar's image is effaced at last. Cuwper

Who hath bent him o'er the dead Ere the first day of death is fled, The first

dark day of nothingness, The last of danger and distress, (Before decay's effacing fingers Have swept the lines where beauty lingers^.

Byron.

EFFECT', n.s.&v. a. EFFECT'IBLE, adj. EFFECTIVE, adj. EFFECTIVELY, adv. EFFECTLESS, adj. EFFECT'OR, n. s. EFFECT'UAL, adj. EFFECT'UALLY, adv.

• Fr. effect; Ital effetto ; Span, effetto, effecto; Port, effeito , Lat. ejffectus, e ex- pletive, and facio, to make. That whicv is produced by a real or supposed cause ;

EFFECT'UATE, v. a. j completion ; reality : hence, in the plural, palpable and moveable pro- perty; hence also consequence or event accom- plished or proposed ; success ; advantage : as a verb to bring to pass ; produce ; cause ; particu- larly as an agent. Effectible means, that may be accomplished; practicable: effective is, having the power to accomplish objects or effects : effi- cient is, serviceable : effectless, useless ; impo- tent : effector, he who produces an effect, applied to the First Cause : effectual is, actually pro- ductive of effects ; practically operative of them : to effectuate, derived to us from the Fr. effectuer. is synonymous with to effect.

They spake to her to that effect. 2 Chron.

Christ is become of no effect unto you.

Gal. v. 4.

The communication ot thy faith may become ef- fectual, by the acknowledging of every good thing.

Philem. 6.

I have the taught division betwene Frende of effecte, and frende of countinuance,

Chaucer.

In shew, a marvellous indifferently composed se- nate ecclesiastical was to govern, but in effect one only man should, as the spirit and soul of the residue, do all in all. Hooker.

The reading of scripture is effectual, as well to lay even the first foundation, as to add degrees of farther perfection, in the fear of God. Id.

What form of prayer

Can serve my turn ? Forgive me my foul murther ! That cannot be, since I am still posseft Of those effects for which I did the murther, My crown, mine own ambition, and my queon.

Shaktpeare

I'll chop off my hands ; In bootless prayer have they been held up, And they have served me to effectless use. Id.

Reprov my allegation, if you can ; Or else conclude my words effectual. Id.*

No man, in effect, doth accompany with others, but he learneth, ere he is aware, some gesture, or voice, or fashion. Bacon's Natural History.

They are not effective of any thing, nor leave no work behind them. Banm.

Being consul, I doubt not t' effect All that you wish. Ben Jonson.

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Though the means cannot effect that which we de- s're ; yet God will have us use the likeliest means on our part to effect it. Bp. Hall. Contemplations.

If either the curses of men, or the endeavours of the powers of darkness, should be effectualt all would be hell. Id

Auger is the most impotent passion that accom- panies the mind of man ; it effects nothing it goes about. Clarendon.

He should depart only with a title, the effect whereof he should not be possessed of, before he deserved it.

Id.

That a pot full of ashes will still contain as much water as it would without them, is not effectible upon the strictest experiment. Browne's Vulgar Errovrs.

Nor do they speak properly who say that time con- sumeth all things ; for time is not effective, nor are bodies destroyed by it. Id.

If a mischief become public and great, acted by princes, and effected by

armies, and robberies be done by whole fleets, it is virtue, and it is glory.

Bp. Taylor.

Whosoever is an effective real cause of doing his neighbour wrong is criminal, by what instrument soever he does it. Taylor.

If any mystery, rite, or sacrament, be effective of any spiritual blessings, then this much more, as having the prerogative and principality above every thing else.

Id.

This effectively resists the devil, and suffers us to receive no hurt from him.

Taylor's Rule of Holy Living. Recovering shankers, crystallines, And nodes and blotches in their rinds, Have no effect to operate Upon that duller block your pate ? Hudibras.

State and wealth, the business and the crowd, Seem at this distance but a darker cloud ; And is to him, who rightly things esteems, No other in effect than what it seems. Dcnham. The change made of that syrup into a purple color, was effected by the vinegar. Boyle on Colours.

We commemorate the creation, and pay worship to that infinite Being who was the effector of it.

Derham.

The students of nature, conscious of her more cryptick ways of working, resolve many strange effect! into the near efficiency of second causes.

Glanville. Apology.

The institution has hitherto proved without effect, and has neither extinguished crimes, nor lessened the number of criminals. Temple.

You may see by her example, in herself wise, and of others beloved, that neither folly is the cause of vehement love, nor reproach the effect. Sidney.

He found means to acquaint himself with a noble- man, to whom discovering what he was, he found him a fit instrument to effectuate his desire. Id.

Effect is the substance produced, or simple idea introduced into any subject, by the exerting of power.

Locke.

These men's opinions are not the product of judg- ment, or the consequence of reason ; but the effects of chance and hazard, of a mind floating at all adventures, without choice, and without direction.

Id.

Sometimes the sight of the altar, and decent pre- parations for devotion, may compose and recover the wandering mind more effectually than a sermon.

South.

I took pleasure to trace out the cause of effects, and the dependence of one thing upon another in the visible -ruafon. Burst's Theory.

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Semblant art shall carve the fair effect, And full achievement of thy great designs.

To say of a celebrated piece that there are faults in it, is, in effect, to say that the author of it is a man.

Addtson

We see the pernicious effects of luxury in th.; ancient Romans, who immediately found themselw. poor as soon as this vice got footing among them.*

Addison on Italy.

The emperor knew that they could not convey away many of their effects. Id. Spectator.

A subject of that vast latitude, that the strength of one man will scarcely be sufficient effectually to carry it on. Woodward.

A fatal instance of this in our first parents we have upon sacred record ; the unhappy effect of which are but too visible in all. Mason.*

The morality of an action dopends upon the motive from which we act. If I fling half a crown to a beg- gar with intention to break his head, and he picks it up and buys victuals with it, the physical effect is good ; but, with respect to me, the action is very wrong. Johnson.

This idea he immediately carried into effect, by fix- ing a bar of iron of the depth he wanted along each side of the keel, moving upon hinges that admitted of being moved in one direction, but which could not be bent back in the opposite direction. Franklin.

A true artist should put a generous deceit on the spectators, and effect the noblest designs by easy methods. Burke.

EFFEM'INATE, udj.,v.a., v.n.^ Fr. effe- EFFEM'INACV, n. s. [& n. s.f mine ; Ital.

EFFEM'INATELY, adv,. \effeminato;

EFFEM'INATENESS, n. s. i Span, and

EFFEMINA'TION. J Port, effe-

minedo; Lat. effceminatus, effcemino ; e, expletive, andfamina, a woman. Womanish ; unmanly ; ten- der ; nice ; voluptuous. The verb seems to have been derived, in our language, from the adjec- tive.

Know ye not that the unrighteous shall not inherit the kingdom of God ? Be not deceived : neither for- nicators, nor effeminate. Bible. 1 Cor. vi. 9.

The king, by his voluptuous life and mean mar- riage, became effeminate, and less sensible of honoui

Bacon.

After the slaughter of so many peers, Shall we at last conclude effeminate peace ?

Shahspeare

As well we know your tenderness of heart, And gentle, kind, effeminate remorse. Id.

Vices the hare figured ; not only feneration, or usury, from its fecundity and superf elation, but dege- nerate effemination. Browne's Vulgar Errourt.

From man's effeminate slackness it begins, Who should better hold his plaee. Milton.

But foul effeminacy held me yoked Her bond slave : O indignity, O blot To honour and religion ! Id. Agonistes.

What' boots it at one gate to make defence, And at another to let in the foe

Effeminately vanquished 1 Milton.

So long as idleness is quite shut out from our lives, all the sins of wantonness, softness, and effeminacy are prevented. A Taylor.

The more effeminate and soft his life, The more his fame to struggle to the field.

Dryden.

Poetry — not being an art of lies — not of effemi' natenenstb\it of notable stirring courage. Sidney.

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It weakens smd effeminate tlicir minds to suffer tin-in to complain •, and if they endure sometimes crossing or pain from others, without being permitted to think it strange or intolerable, it will do them no harm to learn sufferance, and harden them early.*

Locke.

In a slothful peace both courage will effeminate and manners corrupt. Pope.

And I can feel

Thy follies too ; and with a just disdain Frown at effeminates, whose very looks Reflect dishonour on the land I love. Cowper.

But that effeminacy, folly, lust, Enervate and enfeeble, and needs must ; And that a nation shamefully debased Will be despised and trampled on at last, Unless sweet Penitence her powers renew, Is truth, if history itself be true. Id.

' I offer you a handsome suit of clothes :

' A woman's, true : but then there is a cause ' Why you should wear the' — ' What though my soul

loathes

' The effeminate ?' — Thus, after a short pause, Sighed Juan, muttering

also some slight oaths, ‘ What the devil shall I do with all this gause ?’

Byron.

EFFENDI, in the Turkish language, signifies master; and accordingly it is a title very exten- sively applied ; as to the mufti and emirs, to the priests of mosques, to men of learning, and of the law. The grand chancellor of the empire is called reis effendi.

EFFERVESCE,’ v. n. } Lat. efferoesco;

EFFERVES’CENCE, n. s. >efferveo, e and fer-

EFFEBVES’CENT, adj. jveo, to burn. To rise in chemical ebullition : to generate heat by intestine motion.

Take chalk, ignite it in a crucible, and then powder it : put it into strong spirit of nitre, ‘till it becomes sweetish, and makes no effervescence upon the injection of the chalk. Grew.

The compound spirit of nitre, put to oil of cloves, •will effervesce even to a flame. Mead on Poiions.

Hot springs do not owe their heat to any collucta- tion or effervescence of the minerals in them, but to subterranean heat or fire.

Woodward’s Natural History.

In the chemical sense, effervescence signifies an in- testine motion, produced by mixing two bodies together that lay at rest before ; attended sometimes with a hissing noise, frothing and ebullition.

Arbuthnot on Aliment i.

We have an agreeable imitation of acidulous waters, under the term of what is called the effer- vescing draught. This consists of two solutions, one of an alkaline carbonate, and the other of the citric or some other vegetable acid, which are directed to be mixed’ together, and swallowed during the act of effervescence. Dr. A. Rees.

EFFERVESCENCES are commonly attended with bubbles, vapors, small jets of the liquid, &c., occasioned by the air which then disengages itself. Sometimes, also, they are accompanied with a great degree of heat, the cause of which is not so well known. Formerly the word fer- mentation was also applied to effervescences; but now that word is confined to the motion na- turally excited in animal and vegetable matters, and from which new

combinations among their principles take place.

'jflrfj. Lat. effatus, (c privative, young). Barren; and fa- to, to bear young; disabled from producing young; worn out.

All that can be allowed him now, is to refresh his decrepit, effete sensuality, with the history of his for- mer life. South.

In most countries the earth would be so parched and effete by the drought, that it would afford hut one harvest. Bentlcy.

EFFICA'CIOUS, adj. i Old Fr. efficaisc, EFFICACIOUSLY, adv. > power ; Lat. efticax, EF'FICACY, n. s. j efticucis, from efficio,

to EFFECT, which see. Powerful; productive of

intended objects or consequences.

Whatsoever is spoken concerning the efficacy or

necessity of God's word, they tie and restrain only

into sermons. Hooker.

Whether if they had tasted the tree of life before that of good and evil, they had suffered the curse of mortality ; or whether the efficacy of the one had not overpowered the penalty of the other, we leave it unto God. Browne.

Efficacy is a power of speech which represents a thing, by presenting to our minds the lively ideas or forms. Peacham.

If we find that any other body strikes efficaciously enough upon it, we cannot doubt but it will move that way in which the striking body impels it.

Dig by on Bodies.

The apostle iells us of the success and efficacy of the gospel upon the minds of men ; apd, for this reason, he calls it the power of God urito salvation.

TiUotton.

A glowing drop with hollowed steel He takes, and, by one efficacious breath> Dilates to cube or square. Philips.

The arguments drawn from the goodness of God, have a prevailing efficacy to induce men to repent.

*Roger**

Bad as the world is, there is reason to think It would be a thousand times worse, if it were not for this institution ; the wisdom and humanity of which can never be sufficiently admired ; and which, if it •were as strictly observed as it is positively commanded, would operate with singular efficacy in advancing public prosperity, as well as private virtue.

Reattie.

EFFI'CIENCE, n. s.^ Lat. efficio. Sec

*EFFICIENCY, * EFFICACIOUS. Act or*

EFFICIENT, adj.&in.s. ('power of producing

EFFICIENTLY, adv. J effects or consequen- ces ; agency : as a substantive, efficient is sy- nonymous with causer, or with effector.

The manner of this divine efficiency being far above us, we are no more able to conceive by our reason, than creatures unreasonable by their sense are able to apprehend after what manner we dispose and order the course of our affairs. Hooker.

God, which moveth meer natural agents as an efficient only, doth otherwise move intellectual crea- tures, and especially his holy angels. Id.

Observations of the order of nature carry the mind up to the admiration of the great efficient of the world.

Hale.

That they are carried by the manuduction of a rule, is evident ; but what that regulating efficiency should be, is not easily determined. Glanville.

A pious will is the means to enlighten the under- standing in the truth of Christianity, upon the ac- count of a natural efficiency: a will so disposed, will engage the mind in a severe search. Svulh.

Logical or consequential necessity is when a thing does not efficiently cause an event hut yet by certain infallible consequences does infer it. South.

Gravity does not proceed from the efficiency of any contingent and unstable agents ; being entirely owing to the direct concourse of the power of the Author of nature. Woodward.

Your answering in the final cause, makes me be- lieve you are at a loss for the efficient.

Collier on Thought.

I look upon indolence as a sort of suicide ; for the man is efficiently destroyed, though the appetite of the brute may survive. Chetterfield.

EFFIG'IATE, v. a. ~) Lat. effigio, (e, and/n-

EFFIGIA'TION, n. s. f go, to fashion). To form

EF'FIGIES, n. s. £into resemblance; to

EF'FIGY. } image : effigies or effigy

is resemblance, generally of a rough, uncouth,

or of the French caricature kind : but our older

writers use these words more seriously, and for

' actual image,' or idea.

We behold the species of eloquence in our minds, 'he effigies or actual image of which we seek in the irgans of our hearing.

Dryden's Dufresnoy, Preface. Observe those numerous wrongs in effigy, The gods have saved from the devouring sea.

Garth.

EFFIGY is also used for the print or impres- sion of a coin, representing the prince's head who struck it.

EFFIGY, TO EXECUTE OR DEGRADE IN, de- notes the execution or degradation of a con- demned criminal, who cannot be apprehended. In France, before the revolution, they used to hang a picture on a gibbet, wherein was repre- sented the criminal, with the manner of punish- ment ; at the bottom was written the sentence of condemnation. Those who were sentenced to death were executed in effigy.

EFFINGHAM, a county of the United States, in the lower district of

Georgia, bounded by the Savannah River on the north-east, which separates it from South Carolina, and by the Ogeechee River on the south-west, which divides it from Liberty county. Chief towns, Ebenezer and Elberton.

EFFINGHAM, a township of New Hampshire, in Stafford county, seated on the Ossipee, south- east of Ossipee Pond.

EFFLORES'CENCE, n. s. } Lat. effloresco,

EFFLORES'CENCY, >e expletive, and

EFFLORESCENT, adj. jfloreo, to flower;

from flos, floris, a flower. The production of flowers ; hence any excrescence of the shape or appearance of flowers.

Where there is less heat, there the spirit of the plant is digested, and severed from the grosser juice in efflorescence. Bacon.

Excrescencies in the form of flowers.

Two white sparry incrustations, with effloretcencies .'n form of shrubs, formed by the trickling of water.

Woodward.

Yellow efflorescent sparry incrustations on stone.

Id.

It has lately been found in large quantities in a natural bason of calcareous earth at Molfetta in Italy, both in thin strata between the calcareous beds, and in efflorescence of various beautiful leafy and hairy forms. Darwin.*

A wart beginneth in the cutis, and secmoth to be an efflorescence of the serum of the blood.

Wiseman's Surgery.

EFFLORESCENCE, in chemistry, denotes the formation of a kind of mealy powder on the surface of certain bodies. Efflorescence is oc- casioned either by decomposition or drying. The efflorescence which happens to cobalt and pyrites is of the first; and that observed on the crystals of marine alkali, Glauber's salt, &c., of the latter kind. An efflorescence is sometimes also a species of crystallisation, the nature of which is not well understood ; as the beautiful vegetations which shoot up from vitriolated tartar, acidulated

either with the vitriolic or ni- trous acids, the saline spiculae, which are observed to shoot from salt butter, &c. Besides the common crystallisation of salts, all of them have the property of appearing in the form of an efflorescence, or small saline spiculae, when mixed with any thick substance, particularly lime. Whatever salt happens to be made use of, there is little or no difference in the efflores- cence. Thus, in butter very much salted, the sea-salt shoots in the form of long spiculse, though the sea-salt itself never shoots but in the form of cubical crystals. In like manner, Glauber's salt will appear in the form of an efflorescence, as well as the fossile alkali, &c., nor will the form of the crystals of the efflo- rescence be perceptibly different from those of sea-salt. The efflorescences which we see verv commonly upon walls, are in general Glauber's salt. In some cases, they are composed of fos sile alkali. The reason of these differences is not known. In almost all cases of this kind there seems to be a real growth of salt. On one spot of a plaster wall, about two feet square, which we observed particularly, this growth was very evident. The produce was a true Glauber's salt; and, by frequently taking off the efflo- rescence, eight ounces were procured; nor did the prolific virtue of the wall seem to be in the least impaired by the waste.

EFFLORESCENT IA, or rather EFFLORESCEN- TIJE TEMPUS. in botany, from effloresco, to bloom, the precise time of the year-and month in which every plant shows its first flowers.

EFFLUENCE, n. s. } Fr./wi- ; Lat. effluo,

EF'FLUX, n. s. & v. n. fefflujcus ; from e, out of,

EFFLUX'ION, n. s. j zi}djluo,jluxus,toftov(,

A flowing forth : that which flows ; emanation.

Or, as Dr. Johnson observes, the act of flowing

is more properly effluence, that which flows more

properly efflux.

There are some light effluxions from spirit to spirit, when men are one with another ; as from body to body. Bacm.

The first efflux of men's piety, after receiving of the faith, was the selling and consecrating their pos- sessions. Hammond.

By efflution and attraction bodies tend towards the earth. Browne

These scintillations are not the ascension of the air

upon the collision of two hard bodies, but rather thv

inflammable effluence discharged from tiie baches*

collided. Id.

Bright effluence of bright essence inrreate.

Milton.

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Five thousand and some odd centuries of years are effluxed since the creation.

Boyle's Seraphick Love.

Through the -copious efflux of matter, through the orifice of a deep ulcer, he was reduced to a skeleton.

Harvey.

From the bright effluence of his deed The y borrow that reflected light,

With which the lasting lamp they feed, Whose beams dispel the damps of envious night.

Prior.

Prime chearer, light ! Of all material beings, first and best '. Efflux divine ! Thomson's Summer,

EFFLU'VIUM, n. s. sing.) Lat. effluo. See EFFLU'VIA, n. s. plur. J EFFLUENCE.

Small particles that exude, i.e. flow as it were, from bodies, commonly applied in modern times to the smell or scent they yield.

*If the earth were an electrick body, and the air but *he effluvium thereof, we might believe that, from at- traction, and by effluxion, bodies tended to the earth.*

Browne.

Neither the earth's diurnal revolution upon its axis, nor any magnetick effluvia of the earth, nor the air, or atmosphere which environs the earth, can produce gravity. Woodward.

If these effluvia, which do upward tend, Because less heavy than the air, ascend ; Why do they ever from their height retreat, And why return to seek their central seat ?

Blackmore.

EFFO'RCE, v. a. Fr. e/orcer. To force; to break through by violence ; strain ; violate. In all that room was nothing to be seen,

But huge great iron chests and coffers strong j All barred with double bonds, that ne'er could ween, Them to effnrce by violence or wrong.

Faerie Queene.

Then 'gan her beauty shine as brightest sky, And burnt his beastly heart t' effbrce her chastitie.

Spenser,

The palmer lent his ear into the noise, To wheet who called so importunely ; Again he heard a more ejforted voice, That bade him come in haste. Id.

EF'FORM, v. a.) Latin, efformo. To EFFORMA'TION, n. s. $ make in any certain manner ; to shape ; to fashion.

Nature begins to set upon her work of efformation-

More.

Merciful and gracious, thou gavest us being, raising us from nothing, and efforming us after thy own image ,

Taylor.

They pretend to solve phenomena, and to give an account of the production and ejformation of the uni- verse. Ray-

EFF'GRT. Fr. effort ; most probably from the Latin fortis, strong, bold. Struggle; earnest endeavour; vehement action. It is accented by good writers on either syllable.

If, after having gained victories, we had made the same efforts as if we had lost them, France could not have withstood us.

Addison. On the State of the War. Though the same sun, with all diffusive rays, Blush in the rose, and ia the diamond blaze, We prize the stronger effort of hi& power, And always set the gem above the flower. Pope. lilackmorc himself for any grand effort. Id.

There is not so poor a book in the world, that wouM not be a prodigious effort were it wrought out entirely by a single mind, without the aid of prior investigators

Johnion. And bathing his chill temples tried to sooth

Each pulse to animation, till beneath Its gentle touch and trembling care, a sigh To these kind efforts made a low reply. Byron. Good without effort, great without a foe. Id.

EFFO'SION, n. s. Lat. effodio. The act of digging up from the ground : deterration.

He set apart annual sums for the recovery of ma- nuscripts, the effosion of coins, and the procuring of mummies. Arbuthnot.

EFFRA'IABLE, adj. Fr. effroyable. Dread- ful; frightful; terrible. A word not used.

Pestilential symptoms declare nothing a proportion- ate efficient of their effraiable nature but arsenical fumes. Harvey.

EFFRONTERY. Fr. effronterie ; Lat. effrons, shameless; from frons, front is, the forehead, often put for impudence or assurance (from modest fe- males wearing it veiled). Shamelessness ; im- modesty: contempt of reproach.

They could hardly contain themselves within one unworthy act, who had effrontery enough to commit 01 countenance it. King Charles.

A bold man's effrontery, in company with women, must be owing to his low opinion of them, and his high one of himself. Clarissa.

Others with ignorance and insufficiency have self- admiration and effrontery to set up themselves.

Watts.

His pride, that scorns to obey or to submit, With them is courage, his effrontery wit.

Cowper.

EFFULGE', v. n.-\ Lat. effulgeo, to shine

EFFUL'GENCE, n. s. > out, from e, out of, and

EFFUL'GENT, adj. jfulgeo to shine. To emit

ligbt, lustre. Effulgence is the lustre, light, or

brightness, emitted.

On tb.ee Impressed, the effulgence of his glory abides.

Milton.

Thy lustre, blest effulgence, can dispel The clouds of error, and the gloom of hell.

Blachmore.

How soon the effulgent emanations fly Through the blue gulf of interposing sky ! Id.

The downward sun

Looks out effulgent, from amid the flash Of broken clouds. Thomson' Spring*

The topaz charms the sight, Like these effulging yellow streams of light.

Savage.

The west is indeed on fire with his descending glo- ries. In what broad and effulgent day do they reveal the infatuation of the duke of Bedford ; sharpening the axe for his own neck, and for the necks of all men of rank and property in the kingdom ! Seward.

Effulgent maids ! you round deciduous day, Tressed with soft beams, your glittering bands array.

Darwin.

EFFUMABI'LITY, n. s. LJU. fumus. The quality of flying away, or vaporing in fumes. A useful word, but not adopted.

They seem to define mercury by volatility, or, if 1 may coin such a word,

effumability. Boyle.

EFFUSE', v. a. Sc n. s. } Fi. t fusion , Ital.

EFFU'SION, n. s. >Span. and Portug.

EFFU'SIVE, adj. j effusione ; Lat. e/fz-*

sio, from effundo, to pour out, i. e. e, out, and fundo, to pour. To pour out; shed; spill. Shakspeare uses effuse for effusion. The act of pouring out words or things ; the thing poured out.

When there was but as yet one only family in the world, no means of instruction, human or divine, could prevent effusion of blood. Hooker.

My heart hath melted at a lady's tears,

Being an ordinary inundation ;

But this effusion of unmanly drops,

This shower, blown up by tempest of the soul,

Startles mine eyes, and makes me more amazed.

Shakspeare. The air hath got into my deadly wounds,

And much effuse of blood doth make me faint. Id. Stop effusion of our Christian blood,

And 'stablish quietness. Id. Henry VI.

Purge me with the blood of my Redeemer, and I shall be clean ; wash me with that precious effusion, and I shall be whiter than snow. King Charles.

Such great force the gospel of Christ had upon men's souls, melting them into that liberal effusion of all that they had. Hamm. on Fundam.

He fell, and, deadly pale, Groaned out his soul, with gushing blood effused.

Milton.

Our blessed Lord commanded the representation of his death, and sacrifice on the cross, should be made by breaking bread and effusion of wine.

Taylor's Worthy Communicant.

Yet shall she be restored, since public good ' For private interest ought not be withstood, To save the effusion of my people's blood.

Dryden's Homer.

If the-tfood-gates of heaven were any thing distinct from the forty days rain, their effusion, 'tis likely, was at this same time when the abyss was broken open. Burnet's Theory.

At last emerging from his nostrils wide, And gushing mouth, effused the briny tide.

Pope's Odyssey.

The North-east spends its rage ; the effusive South Warms the wide air. Thomson's Spring.

The several irruptions of Arabs, Tartars, and Per- sians, into India were, for the greater part, ferocious, bloody, and wasteful in the extreme : our entrance into the dominion of that country was as generally, with small comparative effusion of blood ; being intro- duced by various frauds and delusions, and by taking advantage of the incurable, blind, and senseless ani- mosity, which the several country powers bear towards each other, rather than by open force. Burke.

Your myriad trains o'er stagnant oceans tow, Harnessed with gossamer, the loitering prow j Or with fine films, suspended o'er the deep, Or oil effusive lull the waves asleep. Darwin.

EFFUSION, or FUSION, in astronomy, denotes that part of the sign Aquarius, represented on celestial globes and planispheres, by the water issuing out of the urn of the water-bearer.

EFT, n. s. Sax. efeta, from Goth, vate, water. A water-lizard.

Peacocks are beneficial to the places where they are kept, by clearing of them from snakes, adders, and efts, upon which they will live.

Mortimer's Husbandry.

The crocodile of Egypt is the lizard of Italy, and the eft in our country. Nicholas.

EFT, in zoology. See LACERTA.

EFT, adv.) Sax. epr, and epcr-ona, from

EFTSOONS.' j Sax. epran, to hasten. Soon; quickly ; following soon. The Goth, eft signi- fies behind ; and our naval word aft, as well as after, afterwards, &c., are of the same family. See AFT.

But silhen thynges passed cannot be gaine called, muche oughte wee the more beware, by what occasion we iiaue taken soo greate hurt afore , that we eftesoones fall not in that occasion agayne. Sir T. More.

Eft through the thick they heard one rudely rush, With noise whereof he from his lofty steed

Down fell to ground, and crept into a bush, To hide his coward head from dying dread.

Faerie Queene. Eftsoones he gan apply relief '

Of salves and medicines. Id.

He in their stead eftsoones placed Englishmen, who possessed all their lands. Spenser's State of Ireland.

The Germans deadly hated the Turks, whereof it was to be thought that new wars should eftsoones ensue. Knolles's History.

Quite consumed with flame,

The idol is of that eternal maid ;

For so at least I have preserved the same,

With hands profane, from being eft betrayed.

Fairfax.

Eftsoons, O sweetheart kind, my love repay, And all the year shall then be holiday.

Gay's Pastorals.

EGALITE', Fr. i.e. equality; the surname assumed by Philip Bourbon Capet, the last duke of Orleans, to ingratiate himself with the repub- licans, upon the abolition of monarchy in France, in August, 1792. Neither this piece of policy, however, nor his voting for the death of his un- fortunate relation,

Louis XVI., could save him from being denounced as a conspirator against the liberty of the republic, on the 12th April, 1793, and condemned to be guillotined on the 6th November following. He was executed accordingly at five P.M., three hours after his condemnation.

EGBERT, the first king of all England, and the last of the Saxon heptarchy. He was a de- scendant of the royal family of Wessex, and a prince of great accomplishments; but, while young, he was obliged to withdraw to France, where he lived at the court of Charlemagne, till Brithric, the then king of Wessex, from whose jealousy he had fled, became obnoxious to the nobility, through the conduct of his queen. Eg- bert, who, during his exile, had acquired both the arts of war and government, was recalled to take possession of the kingdom, to which he was legal heir; was proclaimed king of Wessex in 800, and in 802 he united all the other kingdom under him, giving the whole the name of Eng- land. In about five years after, his dominions were twice invaded by the Danes, with great force, but he defeated them in both their at- tempts. He died in 838, and was succeeded by Ethelwolf. See ENGLAND.

EGEDE (Hans), a Danish missionary, who went to Greenland in 1721. He became the founder of an establishment there, over which he presided for fifteen years, and was the author of a work on the topography and natural history of Greenland, published in Danish in 1729, and afterwards translated into French and Dutch.

E G G.

He died in 1758, aged seventy-one, in the isle of Falster.

EGEDE (Paul), son of the preceding, was his assistant in the above mission ; and published a journal of his own residence in Greenland, from 1721 to 1788. He died at the age of eighty-one, June 3d, 1789.

EGENOTISO, an island in the Eastern In- dian Sea, about twenty miles in circumference, fifty miles from the north-east coast of Sumatra. Long. 104° 45′ E., lat. 0° 27′ S.

E'GER, n. s. See EAGRE. An impetuous or irregular flood or tide.

From the peculiar disposition of the earth at the bot- tom, wherein quick excitations are made, may arise those egers and flows in some estuaries and rivers ; as is observable about Trent and Homber in England. Browne's Vulgar Errours.

EGER, a river rising in Suabia, which passes by Nordlingen, and runs into the VVernitz, six miles north of Donauwert.

EGER, a large river of Franconia, which flows eastward to Bohemia, and falls into the Elbe.

EGER, an old fortified town of Bohemia, on ihe above river. It contains some manufactures ; has three annual fairs ; and in the neighbourhood is a well-known chalybeate spring. It was oc- cupied by the French in 1742, but retaken the following year. It suffered greatly by fire in 1809. Population about 8000. Seventy-six miles fro 01 Prague.

EGERIA, or .&GERIA, a nymph held in great veneration by the Romans. She was courted by Numa Pompilius ; and, according to Ovid, be- came his wife. This prince, to give his laws the greater authority, solemnly declared, before the Roman people, that they were previously sanc- tified and approved by the nymph Egeria. Ovid says, that Egeria was so disconsolate at the death of Numa, that she melted into tears, and was changed into a fountain by Diana. She was ranked as a goddess who presided over the pregnancy of women, whence some reckoned her the same with Lucina.

EGERTON (John), an eminent prelate, born in London in 1721, was the son of Henry Eger- ton, bishop of Hereford. He received the first part of his education at Eton, after which he was sent to Oriel College, Oxford. In 1745 he obtained the living of Ross in Herefordshire, and the next year a prebend in the cathedral of Hereford. He was preferred to the deanery of

Hereford in 1 750, and afterwards successively to the bishoprics of Bangor, Litchfield, and Dur- ham. He was a liberal contributor to several important public works in his diocese, and his charities were extensive. He published several sermons on public occasions ; and died in 1787.

EGERTON (Thomas), lord chancellor of Eng- land, under James I., was the natural son of Sir Richard Egerton, in Cheshire, and was born about 1540. He was educated at Oxford, whence he removed to Lincoln's Inn. He re- ceived the honor of knighthood, and was made attorney-general in 1592 ; and not long after, master of the rolls, which was followed by the office of lord-keeper. In 1603 he was appointed lord chancellor, with the title of baron Elles- niere; and in 1616 he was created viscount

Brackley, but died the year following. His Privileges and Prerogatives of the High Court of Chancery, and his Observations concerning the Office of Lord Chancellor, were published after his death.

EGEUTOS (Francis), duke of Bridgevvater, de- scended from the above nobleman, was born in 1736, bein-r the fifth son of the first duke, and the third who held that title. He succeeded his elder brother in 1.748. This nobleman exhi- bited a most enlightened and persevering spirit in his various schemes for making navigable canals for the advantage of his 'estates in Lancashire and Cheshire, and in his patronage of the cele- brated Brindley, by whom his plans were exe- cuted. The duke had the satisfaction of witnessing the entire success of his undertak- ings, prior to his death, which took place in

1803.

EGEST', v. a. i Lat. egero, egestum, from

EGEST'JON, n. s. \e, out, and gero, to bear: to carry forth. To evacuate food naturally.,

Divers creatures sleep all the Winter ; as the bear, the hedge-hog, the bat, and the bee ; these all wax fat when they sleep, and egest not.

Bacon's Natural History.

The animal soul or spirits manage as well their spontaneous actions, as the natural or involuntary exertions of digestion, egestion, and circulation.

Hate's Origin of Mankind.

EGG. Isl. cggia, to incite ; Sax. eggian ; Dan. egge : according to Minsheu all derived from Lat. ago, to compel, do, &c.

Study becomes pleasant to him who is pursuing his genius, and whose ardour of inclination eggs him for- ward, and carrieth him through every obstacle.

Durham's Physico- Theology.

EGG, n. s. Goth, and Swed. egg ; Sax. oeg; Erse, ough; perhaps from the foregoing veib, i. e. that which is excited to life by hatching.

About her rommeth all the world to begge. He asketh lande, and he to pas would bryng, This toye and that, and all not worth an egge : He would in loue prosper aboue all thyng.

Sir T. More.

Therefore think him as the serpent s egg, Which hatched, would, as his kind, grow mischievous.

Shakspeare.

An egg was found having lain many years at the bottom of a moat, where the earth had somewhat over- grown it ; and this egg was come to the hardness of a stone, and the colors of the white and yolk perfect.

Bacon.

Hear this then, ye careless ostriches, that leave you' eggs in the open sand for the sun to hatch, without the fear of any hoof that may crush them in pieces.

Bp. Hall.

There was taken a great glass-bubble with a long neck, such as chemists are wont to call a philosophi- cal egg. Boyle.

Every insect of each different kind, In its own egg, cheered by the solar rays, Organs involved and latent life displays. Blackmore.

As true wit generally consists in the resemblance and congruity of ideas, false wit chiefly consists in the resemblance and congruity sometimes of single letters, as in anagrams, chronograms, lipograms, and acros- tics : sometimes of words, as in puns and quibbles : and sometimes of whole sentences or poems, cast into the figures of eggs, axes, or altars. Adduvn.

The Aphis is in a similar manner hatched from an egq in the vernal months, and produces a viviparous offspring without sexual intercourse for nine or ten successive generations ; and then the progeny is both mak and female, which cohabit, and from these new females are produced eggs, which endure the winter ; the same process probably occurs in many other insects. Darwin.

And now the day of woe drew on apace, A day of woe to all the pigmy race, When dwarfs were doomed, but penitence was vain, To nie each broken egg, and chicken slain. Beattie.

She and her maid, had promised by day-break To pay him a fresh visit, with a dish For breakfast, of eggs, coffee, bread, and fish. Byron.

EGG, in physiology, a body formed in certain females, in which is contained an embryo, or foetus of the same species, under a cortical surface or shell. The exterior part of an egg is the shell ; which in a hen, for instance, is a white, thin, and friable cortex, including all the other parts. It is lined everywhere with a very thin, but a pretty tough membrane, which dividing at, or very near, the obtuse end of the egg, forms a small bag, where nothing but air is contained. I« new-laid eggs this follicle appears very little, but becomes larger when the egg is kept. Within this are contained the albumen, or white, and the vitellus, or yolk ; each of which have their different virtues. The albumen is a cold, vis- cous, white liquor in the egg, different in con- sistence in its different parts. It is observed, that there are two distinct albumens, each of which is enclosed in its proper membrane. Of these one is very thin and liquid ; the other is more dense and viscous, and of a somewhat whiter color; but in old and stale eggs, after some days incubation, inclining to a yellow. As this second albumen covers the yolk on all sides, so it is itself surrounded by the other external liquid. The albumen of a fecundated egg, is as sweet and free from corruption, during all the time of incubation, as it is in new laid eggs; as is also the vitellus. As the eggs of hens consist of two liquors separated one from another, and distinguished by two branches of umbilical veins, one of which goes to the vitellus, and the other to the albumen ; so it is very probable, that they are of different natures, and consequently ap- pointed for different purposes. When the vitellus grows warm with incubation, it becomes more humid, and like melting wax or fat, whence it takes up more space. For as the foetus increases, the albumen insensibly wastes away and con-

cula, is placed on the middle of the smaller portion, and therefore always appears on the su- perior part of the vitellus. Not long before the exclusion of the chick, the whole yolk is taken into its abdomen; and the shell, at the obtuse end of the egg, frequently appears cracked some time before the

exclusion of the chick. The chick is sometimes observed to perforate the shell with its beak. After exclusion, the yolk is gradually wasted, being conveyed into the small guts by a small duct. Eggs differ very much according to the birds that lay them, as to their color, form, bigness, age, and the different way of dressing them ; those most used in food are hens' eggs ; of which, such as are new-laid are best. As to the preservation of eggs, it is ob- served, that the egg is always quite full when it is first laid by the lien ; but from that time it gradually becomes less and less so, to its decay ; and, however compact and close its shell may appear, it is nevertheless perforated with a mul- titude of small holes, though too minute for the discernment of our eyes, the effect of which is a daily decrease of matter within the egg, from the time of its being laid ; and the perspiration is much quicker in hot weather than in cold. To preserve eggs fresh, there needs no more than to preserve them full, and stop the transpiration : the method of doing which is, by stopping up those pores with matter which is not soluble in watery fluids ; and on this principle it is, that ah kinds of varnish, prepared with spirit of wine, will preserve eggs fresh for a long time, if they are carefully rubbed all over the shell ; tallow, mutton fat, and even fresh butter, are also good for this purpose ; for such as are rubbed over with any of these will keep as long as those coated over with varnish. M. Reaumur observes, that hens' eggs are properly a sort of chrysalis of the animal ; their germ, after they are impreg- nated by the cock, containing the young animal alive, and waiting only a due degree of warmth to be hatched, and appear in its proper form. When eggs have been long kept, there is a road found near one of their ends, between the shell and the internal membrane ; this is a mark of their being stale, and is the effect of an evapo- ration of part of their humidity : the varnish which M. Reaumur used to the chrysalis, being tried on eggs, was found to preserve them for two years, as fresh as if laid but the same day, and such as the nicest palate could not distin- guish from those that were so.

The art of hatching chickens by means of ovens has long been practised in Egypt, chiefly in a village named Berme, and its environs. About the beginning of autumn, the natives scatter themselves all over the country ; where each undertakes the management of an oven. These ovens are of different sizes, but, in gene- ral, they contain from 40,000 to 80,000 eggs, and they usually keep them working for about six months : as, therefore, each brood takes up in an oven, as under a hen, only twenty-one days, it is easy in every one of them to hatch eight different broods of chickens. Every Bermean is under the obligation of delivering to the per- son who trusts him with an oven, only two- thirds of as many chickens as there have been

eggs put under his care; and he is a gainer by this bargain, as more than

two-thirds of the eggs usually produce chickens. This useful and ad- vantageous method of hatching eggs was dis- covered in France by the ingenious M. Reaumur; who, by a number of experiments, reduced the art to fixed principles. He found that the heat necessary for this purpose is nearly the same with that marked 32° on his thermo- meter, or 96° on Fahrenheit's. The degree of he«t which brings about the development of the cygnet, the gosling, and the Turkey pout, is the same as that which fits for hatching the Canary songster, and, in all probability, the smallest humming-bird : the difference is only in the time during which this heat ought to be commu- nicated to the eggs of different birds. After many experiments, M. Reaumur found, that stoves heated by means of a baker's oven, suc- ceeded better than those made hot by layers of dung: and the furnaces of glass-houses, and those of the melters of metals, by means of pipes to, convey heat into a room, might, no doubt, be made to answer the same purpose. As to the form of the s-toves, no great nicety is required. Nothing more is necessary but to ascertain the degree of heat, by melting a lump of butter of the size of a walnut, with half as much tallow, and putting it into a phial. This serves to indi- cate the heat with sufficient exactness : for when it is too great, this mixture will become as liquid as oil ; and when the heat is too small, it will remain fixed in a lump : but it will flow like a thick syrup, upon inclining the bottle, if the stove be of a right temper. Great attention therefore should be given to keep the heat always at this degree, and that all t'ue eggs in the stove may equally share the irregularities of the heat, M. Reaumur has invented a sort of low boxes, without bottoms, and lined with furs. These, which he calls artificial parents, not only shelter the chickens from the injuries of the air, but afford a kindly warmth, so that they take the benefit of their shelter as readily as they would have done under the wings of a hen. After hatching, it will be necessary to keep the chick- ens for some time in a room artfully heated, and furnished with these boxes; but afterwards they may be safely exposed to the air in the court- yard, in which it may not be amiss to place one of these artificial parents to shelter them, if there should be occasion for it. They are generally a whole day after being hatched, before they take any food at all. A few crumbs of bread may then be given them for a day or two, after which they will pick up insects and grass for them- selves. But, to save the trouble of attending them, capons may be taught to watch them in the same manner as hens do.

EGG HARBOUR, LITTLE, a township of New Jersey, in Burlington county, consisting of 23,000 acres. The compact part of the town- ship is called Clam Town. It has a small trade to the West Indies.

EGG HARBOUR RIVER, GREAT,' a river of New Jersey, which rises between Gloucester and Cumberland counties. After running E. S. E. a few miles, it becomes the divisional line between

Cape May and Gloucester counties, and falls into the bay of its own name. The inlet from the Atlantic Ocean lies in 39° 22'. The river abounds with sheepshead, rock-fish, perch, oysters, clams, 8tc., which find a ready market at Philadelphia. This river is navigable twenty miles for vessels of 200 tons.

EGG HARBOUR RIVER, LITTLE, or Little Inlet, lies about seventeen miles north-east of Great Egg Harbour Inlet. It receives Mulicus River which rises in Gloucester and Burlington counties, and forms part of the divisional line a few miles from the bay. It is navigable twenty miles for vessels of sixty tons.

EGG ISLAND, a small island on the west coast of Virginia, at the mouth of York River. 2. A small island in the Straits of Magellan, seven miles north-east of York Minster. 3. A small island on the north-east side of Delaware Bay, Cumberland. Long. 75° 12′ W., lat. 39° 16′ N. EGG-PLANT (solanum melongena) ; a herba- ceous annual, from a foot to eighteen inches high, a little branched, and more or less covered with a substance resembling cotton : the leaves are oval, sinuate, and petiolate ; the flowers large, white, or purplish, lateral, and frequently solitary ; but sometimes two or three are situated upon a common divided peduncle; the calyx and peduncles are furnished with a few short prickles ; the fruit is very large, smooth, and shining, and generally of a violet color, but sometimes yellow or white. It is cultivated in the warm parts of both continents, and the fruit is much used as an article of food, when cooked, which is done in various ways : in India, it is generally served up with sugar and wine, or simply sugared water; in the south of France, with olive-oil. There are several varieties, one of which bears a white fruit, exactly resembling a pullet's egg, and has been sometimes confounded with another species, which is acrid and poisonous. EGINHART, or J£GINHARD, secretary to Charles the Great, and the most ancient of the German historians. It is said, that he insinuated himself into the favor of Imma, daughter of Charles the Great, and that Charles, having dis- covered the intrigue, married the two lovers, and gave them an estate in land.

E'GLANTINE, n. s. Fr. cglantier. A spe- cies of rose ; sweet-briar.

EGLANTINE, in botany. See ROSA. EGLON, a king of the Moabites, who op- pressed the Israelites for eighteen years. See Judges iii. 12 — 14. Calmet confounds this servi- tude of the Hebrews with that under Chushan-rishathaira, making it to subsist only eight years from A.M. 2591 to 2599; whereas this servi- tude under Eglon lasted eighteen .years, and commenced A.M. 2661, and sixty-two years after they had been delivered by Othniel,

from their subjection to Chushan-rishathaim.

EGMONT, NEW GUERNSEY, or SANTA CRUZ ISLAND, one of Queen Charlotte's islands, in the South Pacific Ocean, discovered in 1595, by the Spanish navigator Mandana. He bestowed upon it the name of Santa Cruz, which was changed to Egmont by captain Carteret in 1767. It is high and mountainous throughout, being about

twenty-two miles in length, and eleven in breadth. The soil, from the abundance of small streams, produces several roots and fruits, but not in great profusion. Some of the natives are of a deep olive color, others black, and all of moderate size, with slender extremities. Their physiog- nomy is disagreeable, and tends to inspire that mistrust and dislike which their treacherous and dishonest conduct but too well justifies. They are tattooed, particularly on the back : wear white powder in their hair, and many ornaments. The men go naked, wrapping a cord several times round the belly : the women have a petti- coat which descends to the knees, and cover the head, and part of the body, with a sort of shift. Their huts are large, having windows, and are generally placed under the shade of cocoa-trees along the shore. Their arms are bows, arrows, and darts. They chew betel ; and have canoes with outrigging, formed of the trunk of a single tree, about fifteen feet long. Long. 165° 59; E., lat. 10° 46′ S.

EGMONT ISLAND, an island in the Gulf of Mexico, on the west coast of East Florida, at the entrance of Spiritu Santo Bay. Long. 82° 55′ W., lat. 27° 54′ N. Also an island in the South Pacific Ocean, six miles in length, four in breadth, low, and covered with trees. Long. 1 38° 30′ W., lat. 19° 20′ N.

EGOOCHSHAC, a harbour on the North coast of the island of Unalashka, entered by cap- tain Cook in the year 1778, who found some Russians settled here for the purpose of purcha- sing skins of the natives : they had store-houses, and a sloop of about thirty tons burden.

EGOTISM. Fr. egoisme, from Lat. pers. pron. ego ; Gr. eyv.

Egotism is the coquetry of a modern author ; whose epistles, dedicatory prefaces, and addresses to the reader, are so many affected graces, designed to draw the attention from the subject, towards himself ; and make it be generally observed not so much what he says, as what he

appears, or is, and what figure he already makes, or hopes to make in the fashionable world. Shaftesbury.

The most violent egotism which I have met with, in the course of my reading, is that of Cardinal WoUey's ; ego et rex meus, I and my king.

Spectator.

A tribe of eyotists, for whom I have always had a mortal aversion, are the authors of memoirs, who are never mentioned in any works but their own.

Id.

EGRA , a town of Bohemia, seated on a river of the same name, formerly imperial, and possessing towns and villages. It contains a great number of able artificers, and is famous for its mineral waters. General Wallenstein was assas- sinated here in 1634. The French became mas- ters of this town in 1741 ; but afterwards, being blocked up, they were forced to capitulate Sept. 7th, 1743. It is considered as a town of the greatest consequence in Bohemia, except Prague. It lies seventeen miles south-west of Elnbogen, and seventy-six west of Prague. Long. 12° 40′ E., lat. 50° 9 N.

EGRE'GIOUS, adj. > Old Fr. egrege; Ital.

EGRE'GIOUSLY, adv. J Spanish, and Ponug. egregio ; Lat. egregius i. e. e grege, separated from the flock. Remarkable ; extraordinary ; now ge- nerally used in a bad sense; but Milton (see below) and other good writers formerly applied it to eminence and merit.

He might be able to adorn this present age, and furnish history with the records of egregiout exploits both of art and valour. Moore against Atheism.

We may be bold to conclude, that these last times, for insolence, pride, and egregious contempt of all good order, are the worst. Hooker's Preface.

I suffered the pangs of an egregious death, to be stopt in, like a strong distillation, with cloaths.

Shakspeare. Ah me, most credulous fool !

Egregious murtherer ! Id. Cymbeline.

Make the Moor thank me, love me, and reward

me,

For making him egregiously an ass, And practising upon his peace and quiet, Even to madness. Id. Othello

The folly of fools', that is, the most egregious piece of folly that any man can be guilty of, is to play the knave. Tiilotson.

One to empire born ;

Egregioui prince ; whose manly childhood shewed His mingled parents, and portended joy Unspeakable. Philips

And hence the egregious wizard shall foredoom The fate of Louis and the fall of Rome. Pope.

An egregious and pregnan- instance how far virtue surpasses ingenuity. Woodward.

He discovered that, besides the extravagance of every article, he had been egregiously cheated.

Arbuthnot's John Bull.

EGREMONT, a market town, and formerly a borough in Cumberland, on a small river which falls into the Irish Sea, near the promon- tory of St. Bees, five miles S. S. E. from White- haven, and 293 north from London. The buildings in general are ancient, and many of the houses have piazzas in front. On a remark- able eminence are the ruins of a castle, in which the earl of Egremont holds a court. The town gives the title of earl to the Wyndham family. Market on Saturday, well supplied with barley and oats.

EGRESS, ? Ital. egresso ; Lat. egres.ms,

EGRESSION. 5 from e, out, and gradior, gressus to walk ; the act of going out ; departure.

Gates of burning adamant, Barred over us, prohibit all egress. Milton.

This water would have been locked up within the earth, and its egress utterly debarred, had the strata of stone and marble remained continuous.

Woodward's Natural History.

The vast number of troops is expressed in the swarms ; their tumultuous manner of issuing out of their ships, and the perpetual egression, which seemed without end, are imaged in the bees pouring out.

Pope.

E'GRIOT, n. $. Fr. aigret, perhaps from aigre, sour. A species of cherry.

The coeur-cherry, which inclineth more to white, is sweeter than the red ; but the egriot is more sour.

Bacon

EGYPT.

EGYPT, an extensive country of Africa, lying between 30° and 36° of E. long., and between •22° and 31° of N. lat. It is bounded by the Mediterranean on the north, by the Red Sea and Isthmus of Suez, which divide it from Arabia, on the east, by Abyssinia or Ethiopia on the south, and by the deserts of Barca and Nubia on the west ,• being 600 miles in length from north to south, and from 100 to 250 in breadth from east to west. Ancient Egypt is by some divided into two parts, the Upper and Lower Egypt : by others into three, the Upper Egypt, properly so called, or Thebais ; the Middle Egypt, or Heptanomis; and the Lower Egypt, the best part of which was the Delta, or that space encompassed by the branches of the Nile. The whole area of cultivable soil has been recently estimated at 1 1,000 square miles.

Egypt may with justice lay claim to as high antiquity as any nation in the world. It was most probably peopled by Mizraim the son of Ham and grandson of Noah. By its ancient in- habitants it was called Chemia, and is still called Chemi in the language of the Copts or native Egyptians. In Scripture it is generally named Mizraim ; though in the Psalms it is styled the land of Ham. To us it is best known by the name of Egypt, the etymology of which is more uncertain. Some derive it from ./Egyptus, a supposed king of the country : others say it signifies no more than 'thsland of the Copts;' Aia in Greek signifying the country, and AUCOTTTOC, Aicoptos, being easily hardened into .ˆEgyplus. The most probable opinion, however, seems to be, that it received this name from the blackness of its soil and the dark color both of its river and inhabitants ; for such a blackish color is by the Greeks called segyptios, from yi>i|/, and aiyvTTios, a vulture; and by the Latins, subvulturius. For the same rea- son other names of a similar import have been given to this country by the Greeks; such as Aeria, and Melambolus: the river itself was called Melo, or Melas ; by the Hebrews Shihor, and by the Ethiopians Siris; all signifying black.

The air and climate of Egypt are extremely warm, not only from the height of the. sun, which in summer approaches to the zenith, but from the want

of rain, and from the vicinity of those burning and sandy deserts which lie to the south. In July and August, according to M, Volney, Reaumur's thermometer stands, even in the most temperate apartments, at 24° or 25° above the freezing point ; and in the southern parts it is said to rise still higher. Hence, he says, only two seasons should be distinguished in Egypt, the cool and the hot, or spring and summer. The latter continues for the greatest part of the year, viz. from March to November, or even longer ; for by the end of February the sun is intolerable to an European at nine o'clock in the morning. During the whole of this season the air seems to be inflamed, the sky sparkles, and every one sweats profusely, even without the least exercise, and when covered with the lightest

dress. This heat is tempered by the inn>i:l ition of the Nile, the fall of the night dews and ti it- subsequent evaporation; so that some of the European merchants, as well as the natives, coin- plain of the cold in winter. The dew does not fall regularly throughout the summer, as with us ; the parched state of the country not affording a sufficient quantity of vapor for this purpose. It is first observed about St. John's day (June 24t!i , when the river has begun to swell, and conse- quently a great quantity of water is raised fro u it by the heat of the sun, which, being soon con- densed by the cold of the night air, falls down in copious dews. It might be imagined that as, for three months of the year, Egypt is in a wet and marshy situation, the excessive evaporation and putrefaction of the stagnating waters would render it very unhealthy. But this is by n:> means the case. The great dryness of the air makes it absorb vapors of all kinds with the ut- most avidity ; and these, rising to a great height, are carried off by the winds either to the south or north without communicating any of their pernicious effects. This dryness is so remarkable in the internal parts of the country, that flesh meat exposed to the open air does not putrefy even in summer, but soon becomes hard and dry like wood. In the deserts there are frequently dead carcases thus dried in such a manner, and become so light, that one may easily lift that of a camel with one hand. In the maritime parts, however, this dryness of the air is not to be expected. They discover the same degree of moisture which usually attends such situations. At Rosetta and Alexandria iron cannot be exposed to the air twenty-four hours without rusting. According to the above writer, the air of Egypt is also strongly impregnated with salts. No experiments have ever shown, that any salt was or could be diffused in the air, except volatile alkali, and this is now- known to be formed by the union of two perma- nently elastic fluids : and it is certain that a saline air would quickly prove fatal to the ani- mals who breathed it. The abundance of this kind of salt in Egypt therefore only shows that, by some unknown operation, the heat of the sun forms it from the two ingredients of earth and water, though we do not yet understand the manner, nor are able to imitate this natural operation. To

this saline property of the earth M. Volney ascribes the excessive quickness of vegetation in Egypt, which is so great that a spe- cies of gourd, called kara, will in twenty-four hours send forth shoots of four inches in length ; but, in all probability for the same reason, no exotic plant will thrive in Egypt. The merchants are obliged to send annually to Malta for their garden seeds ; for, though the plants thrive very well at first, yet, if the seed of them be preserved and sown, they always come up too tall and slen- der. In consequence of the great dryness of the air, Egypt is exempted from the phenomena of rain, hail, snow, thunder, and lightning. Earth- quakes are also seldom heard of in this country; though they have sometimes been very fatal and

destructive, particularly rne in 1112. In the Delta it never rains in summer, and very seldom at any other time. In 1761, however, such a quantity of rain unexpectedly fell, that a great number of houses, built with mud-walls, tumbled entirely down by being soaked with the water, to which they were unaccustomed. In the Higher Egypt the rain is still less frequent; but the

Eeople, sensible of the advantages which accrue •om it, always rejoice when any falls, however insufficient to answer the purpose. This defi- ciency of rain is supplied by the inundation arid dews The latter proceed partly from the waters of the inundation, and partly from the sea. At Alexandria, after sun-set, in April,' the clothes exposed to the air on the terraces are soaked with them as if it had rained. These dews are more or less copious according to the direction of the wind. They are produced in the greatest quantity by the west and north-west, which blow from the sea; but the south and south-east winds, blowing over the deserts of Africa and Arabia, produce none.

Though the climate of Egypt is far from being unhealthy, yet there are not a few diseases which seem to be peculiar to it, and to have their origin either from the constitution of the at- mosphere, or the manner of living. One of these has been supposed to be the plague ; which opinion was supported by Dr. Mead, who en- deavoured to assign a natural reason why it should take its origin in this country. But it is now universally agreed that the plague never originates in the interior parts of Egypt, but al- ways begins at Alexandria, passing successively thence to Rosetta, Cairo, Damietta, and the rest of the Delta. It is likewise observed, that its appearance is always preceded by the arrival of some vessel from Smyrna or Constantinople ; and that, if the plague has been very violent in either of these cities, the danger to Egypt is the greater. On proper enquiry, it is found to be much more a native of Constantinople ; whence it is exported by the absurd negligence of the Turks, who refuse to take any care to

prevent the spreading of the infection. As they sell even the clothes of the dead without the least ceremony, and ships laden with this pernicious commodity are sent to Alexandria, it is no won- der that it should soon make its appearance there. As soon as it has reached Cairo, the European merchants shut themselves up with their families in their khans or lodgings, taking care to have no further communication with the city. Their pro- visions are now deposited at the gate of the khan, and are taken up by the porter with iron tongs ; who plunges them into a barrel of water provided for the purpose. If they have occasion to speak to any person, they take care to keep at such a distance as to avoid touching or even breathing upon each other. By these precautions they certainly escape the general calamity, except by accident. There is a remarkable difference be- twixt the plague at Constantinople and the plague in Egypt. In the former it is most violent in sum- mer, and in the latter in winter, ending there always in June. It is also remarkable that the water carriers of Egypt, whose backs, from the natuie of their occupation, are constantly wet.

never have the plague. It appears in Egypt every fourth or fifth year, when it makes such ravages as would depopulate the country, were it not for the vast concourse of strangers who ar- rive here every year from all parts of the Turkish empire. A malady which seems in reality to be peculiar to Egypt is blindness. Thre is so com- mon at Cairo, that M. Volney informs us, out of 100 people, whom he met in the street, he might reckon twenty quite blind ; ten without the sight of one eye ; and twenty others with their eyes red, purulent, or blemished. Almost every one, says he, wears a fillet, a token of an approaching or convalescent ophthalmy. In considering the causes of this disorder, he reckons the sleeping upon terraces to be a principal one. The south wind, he says, cannot be the cause ; otherwise the Bedouins would be equally subject to it with the Egyptians themselves ; but what is with the greatest probability to be assigned as the cause, is the very poor and little nutritive food which the natives arc obliged to use. 'The cheese, sour milk, honey, confection of grapes, green fruits, and raw vegetables,' says he, ' which are the ordinary food of the people, produce in the stomach a disorder which physicians have ob- served to affect the sight : the raw onions, espe- cially, which they devour in great quantities, have a peculiar heating quality, as the monks of Syria made me remark on myself. Bodies thus nourished abound in corrupted humors, which are constantly endeavouring a discharge. Di- verted from the ordinary channels, by habitual perspiration, these humors fly to the exterior parts, and fix themselves where they find the least resistance. They therefore naturally attack the head, because the Egyptians, by shaving it once a week and covering it with a prodigiously hothead dress, principally attract toil the perspi- ration ; and, if the head receive ever so slight an impression of cold on being uncovered, this per- spiration is suppressed, and falls into the

teeth, or still more readily on the eyes as being the ten- derest parts. It will appear the more probable that the excessive perspiration of the head is a principal cause, when we reflect that the ancient Egyptians, who went bare-headed, are not men- tioned by physicians as being so much afflicted with ophthalmies; though we are informed by historians that some of the Pharaohs died blind. The Arabs of the desert, who cover the head but little, especially when young, are also very little subject to them. In this country blindness is often the consequence of the small- pox, a disorder very frequent and very fatal among the Egyptians. They are not unacquainted with inoculation, but very seldom practise it. To the same cause, viz. unwholesome food, M. Volney ascribes the general deformity of the beggars, and miserable appearance of their children ; which he says are nowhere so wretched. Their hollow eyes, pale, and puffed faces, swollen bellies, meagre extremities, and yellow skins, make them always seem as if they had not long to live. Their ignorant mothers pretend that this is the effect of the evil eye of some envious person, who has bewitched them ; and this ancient prejudice is still general in Turkey ; but the real cause is the badness of their food. In

spite of the talismans, therefore, an incredible number of their: peris.; nor is any city more fatal to the population of the neighbouring country than Grand Cairo. The venereal disease, which, for reasons best known to themselves, the inhabitants call the blessed evil, is so general at Cairo, that one half of the inhabitants are in- fected. It is extremely difficult to cure, though the symptons are comparatively very mild, inso- much, that people who are infected with it will frequently live to the age of eighty ; but it is fatal to children born with the infection, and ex- ceedingly dangerous to such as emigrate to a colder climate. Besides these, there are two un- common diseases met with in Egypt, viz. a cuta- neous eruption which returns annually; and a swelling of the testicles, which often degenerates into an enormous hydrocele. The former comes on towards the end of June, or beginning of July, making its appearance in red spots and pimples all over the body, occasioning a very troublesome itching. The cause of this distem- per, M. Volney says, is the corruption of the water of the Nile, which, towards the end of April, becomes very putrid. After this has been drunk for some time, the waters of the inunda- tion, which are fresh and wholesome, tend to in- troduce some change in the blood and humors ; whence a cutaneous eruption is the consequence. The hydrocele is most commonly attached to the Greeks and Copts ; and is attributed to the quan- tity of oil they use, as well as to their frequent hot bathing. Our author remarks, that in Syria, as well as in Egypt, constant experience has shown,

that brandy distilled from common figs, or from the fruit of the sycamore tree, as well as from the dates and the fruit of the nopal, has a most immediate effect on the testicles, which it renders hard and painful the third, or fourth, day after it has been drunk ; and, if the use of it be not discontinued, the disorder degenerates' into a confirmed hydrocele. Brandy distilled from dried raisins has not the same effect : this is always mixed with aniseeds, and is very strong, being distilled three times. The .Christians of Syria, and the Copts of Egypt, make great use of it; the latter especially drink whole bottles of it at their suppers. I imagined this an exaggera- tion ; but I have myself had ocular proofs of its truth, though nothing could equal my asto- nishment that such excesses do not produce instant death, or at least every symptom o-f the most insensible drunkenness. In Spring malig- nant fevers prevail in this country ; concerning which M. Volney mentions no remarkable par- ticular, but that eggs are a kind of poison, and that bleeding is very prejudicial. He recom- mends a vegetable diet, and the bark in very large quantity.

M. Larrey, who was the chief surgeon of Buonaparte's medical staff, divides the climate into what he calls quatre saisons constitution- nelles; the first of which commences about the 20th August, when the Nile begins to overflow its banks. From this moment until the autumnal equinox, the inundation increases ; lower Egypt is then like a sea, in which the towns and villages appear as so many islands : towards the end of September the waters retire, and the general

seed-time commences. To this season he gives the name of saison humide; the west winds and fogs then prevail, and produce ophthalmia, fever, diarrhrea, and catarrh.

His second season begins with December, and continues to the 1st March. The winds blow mostly from the east ; the nights are cold, but during the day the temperature is that of June in France. The various productions of the earth are vigorously on the increase ; the surface is spread over with the most lively tints of verdure ; the birds and other animals ' se livrent a leurs amours,' and all nature, reanimated by the mo- derate heat of the sun and the fecundity of the river, seems to grow young again. This period is healthy, if the night airs are avoided, and may justly be called, la saison fecundante.

The saison morbide of this writer extends from the beginning of March to the end of May. The east winds, which tempered "the air during the spring, now pass to the south, which they seldom quit before the end of May or beginning of June. These are the 'winds of fifty days,' blowing over the deserts, and called by the Arabs, ' simoom,' by the Turks ' samul.'

The fourth, which M. Larrey designates under the name of saison etesienne, commences about the middle of June, or just before the solstice, and continues to the overflowing of the Nile.

The winds are then variable, but, towards the end of it, fix themselves to the north, when they become regular, rising and falling with the sun. These winds, in passing over the Mediterranean, are generally supposed to carry with them aque- ous vapors to the mountains of Ethiopia or Abyssinia ; where, being condensed, they are pre- cipitated in torrents of rain, at and after the sum- mer solstice, producing that gradual and constant periodical increase of the Nile, on which the sustenance of the whole population depends. The air is now clear and dry, and, though the heat is excessive, it is the most healthy part of the year.

According to M. Yolney, who gives a very particular description of the face of the country, the entrance into Egypt at Rosetta presents a most delightful prospect, by the perpetual ver- dure of the palm trees on each side, the orchards watered by the river, with orange, lemon, and other fruit trees, which grow there in vast abun dance; and the same beautiful appearance is con- tinued all the way to Cairo. As we proceed farther up the river, he says, nothing can more resemble the appearance of the country than thp marshes of the lower Loire, or the plains of Flanders : instead, however, of the numerous trees and country houses of the latter, we must imagine some thin woods of palms and syca- mores, with a few villages of mud-walled cot- tages, built on artificial mounds. All this part of Egypt is very low and flat, the declivity of the river being so gentle, that its waters do not flow at a greater rate than one league in an hour. Throughout the country nothing is to be seen but palm trees, single or in clumps, which become more rare as you advance; with wretched vil- lages composed of huts with mud walls, and a boundless plain, which at different seasons is an ocean of fresh water, a miry morass, a verdant

field, or a dusty desert ; and on every side an extensive and foggy horizon, where the eye is wearied and disgusted. At length, towards the junction of the two branches of the river, the mountains of Cairo are discovered on the east ; and to the south-west three detached masses ap- pear, which, from their triangular form, are known to be the Pyramids. We now enter a valley which turns to the south, between two chains of parallel eminences. That to the east, which ex- tends to the Red Sea, merits the name of a mountain from its steepness and height, as well as that of a desert from its naked and savage appear- ance. Its name in the Arabic language is

Mokattam, or the hewn mountain. The western is nothing but a ridge of rocks covered with sand, which has been very properly termed a natural mound or causeway. In short, that the reader may at once form an idea of this country, let him imagine on one side a narrow sea and rocks; on the other, immense plains of sand ; and, in the middle, a river, flowing through a valley of 150 leagues in length, and from three to seven wide, which, at the distance of thirty leagues from the sea, separates into two arms ; the branches of vliich wander over a soil almost free from ob stacles, and void of declivity.

This country is still divided into two principal parts, called the Higher, or Upper, and Lower Egypt. It is subdivided into eighteen provinces.

Egypt, Higher, or Upper, says M. Savary, is only a long narrow valley beginning at Sienna and terminating at Cairo. It is bounded by two chains of mountains running from north to south and taking their rise from the last cataract of the Nile. On reaching the latitude of Cairo they separate to the right and left ; the one taking the direction of mount Colzoum, the other termina- ting in some sand banks near Alexandria; the former being composed of high and steep rocks, the latter of sandy hillocks over a bed of calca- reous stone. Beyond these mountains are deserts bounded by the Red Sea on the east, and on the west by other parts of Africa; having in the middle that long plain, which, even where widest, is not more than nine leagues over. Here the Nile is confined in its course between these in- superable barriers, and, during the time of its inundation, overflows the country all the way to the foot of the mountains ; and Mr. Bruce ob- serves, that there is a gradual slope from the bed of the river to those mountains on both sides. The baron de Tott says, that the mountains four leagues from the Nile, and facing Cairo, are only a ridge ?of rocks above forty or fifty feet high, which divide Egypt from the plains of Libya ; which ridge accompanies the course of the river, at a greater or less distance, and seems as if only intended to serve as a bank to the general inundation.

Egypt, Lower, according to M. Savary, com- prehends all the country between Cairo, the Me- diterranean, the Isthmus of Suez, and Libya. ‘ This immense plaio,’ says he, ‘ presents on the borders of its parching sands a stripe of lands, cultivated along the canals of the river, and in the middle a triangular island to which the Greeks gave the name of Delta ; at the top of the angle of which, the baron de Tott informs us, the

rocks of Libya and the coasts of Arabia open and recede from each other, towards the east and west parallel to the Mediterranean. This great extent of country from Barca to Gaza, is either overflowed by the river, or capable of being so ; which thus fertilizes in a high degree a tract of country, seemingly devoted to perpetual barren- ness, on account of the

want of rain and the heat of the climate. According to the testimonies of both Mr. Bruce and M. Volney, the coast of Egypt is so extremely low, that it cannot be dis- covered at sea till the mariners come within a few leagues of it. In ancient times the sailors pretended to know when they approached this country, by a kind of black mud brought up by their sounding lines from the bottom of the sea ; but this notion, though as old as the days of Herodotus, has been discovered to be a mistake by Mr. Bruce; who found the mud to arise while the vessel was opposite to the deserts of Barca. All along the coast of Egypt a strong current set? to the eastward.

The Egyptians, like the Chinese, pretend to an excessive antiquity, and have been said to possess records for 10,000, 20,000, or ever. 50,000 years. Thus their history is so much in- volved in obscurity and fable, that tor many ages it must be passed over in silence. The firs mortal king whom the Egyptians own to have reigned in that country, was Menes or Menas; whom some chronologers reckon the same with Mizraim, the grandson of Noah. He had been preceded, however, by a set of immortals (a fable probably founded upon the long lives of the Ante- diluvians), but who, notwithstanding their im- mortality, had left him the kingdom in a very bad situation : for the whole country except Thebais was a morass ; the people also were quite desti- tute of religion and every kind of knowledge which could render life comfortable. Menes di- verted the course of the Nile, which, before that time had washed the foot of a sandy mountain near the borders of Lybia, built the city of Memphis, instructed his subjects, and accom- plished a variety of wonders usually attri- buted to the founders of kingdoms. From the time of Menes, the Egyptian chronology is filled with a list of 330 kings, who reigned 1400 years, but did nothing worthy of notice. The first dis- tinct fact of history we find concerning Egypt, is the irruption of the shepherds, by whom the country was subdued ; but at what period this revolution happened cannot be known. The affair is thus related by Manetho. In the reign of Timaus, king of Egypt, a multitude of men, ignoble in their race, pouring from the east into Egypt, made war with the inhabitants ; who submitted to them without resistance. The shepherds, however, behaved with the greatest cruelty ; burnt the cities, threw down the temples, and put to death the male inhabitants, carrying the women and children into captivity. This people came from Arabia, and were called Hycsos, or king shepherds. They held Egypt in subjection for 259 years ; at the end of which period they were obliged, by a king of Upper Egypt, named Amosis or Thethmosis, to leave the country. This prince's father had gained great advantages over them, and shut them up in a place called*

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Abaris or Avaris, containing 10,000 acres of land. Here they were closely besieged by Amosis, with ,an army of 400,000 men, till at last an agreement was made, in consequence of which the shepherds withdrew from Etjypt with their families, to the number of 240,000; and, taking the way of the desert, entered Syria ; but fearing the Assyrians, who were then very powerful, and masters of Asia, they entered the land of Canaan, and built there the city of Jerusalem. According to Mr. Bruce, the shepherds who invaded Egypt were no other than the inhabitants of Barabra. They were, he says, carriers to the Cushites who lived farther to the south. The latter had built the many stately temples in Thebes and other cities of Egypt ; though, according to him, they had no dwelling places, but holes or caves in the rocks. Being a commercial people, they remained at home collecting and preparing their articles, which were dispersed by the Barabers, or shepherds above mentioned. These, from the nature of their employment, lived in moveable habi- tations, as the Tartars do at this day. By the Hebrews, he tells us, they were called phut but shepherds by every other people; and from the name baraber the word Barabra is derived. By their employment, which was the dispersing the Arabian and African goods all over the continent, they had become a great and powerful people ; and, from their opposite dispositions and manners, were often enemies to the Egyptians. To one Sa- latis our author ascribes the destruction of Thebes in Upper Egypt, so much celebrated by Homer for its magnificence. But this certainly cannot be the case; for Homer wrote long after the time of Joseph : and we find that even then the Egyptians held the shepherds in abhorrence, in all probability because they had been grievously oppressed by them. Mr. Bruce reckons three in- vasions of these people, viz. : 1st, that of Salatis already mentioned, who overthrew the first dy- iiasty of Egyptian kings from Menes, and de- stroyed Thebes ; 2d, that of Sabacco or So ; for, according to him, this was not the name of a single prince, but of a people, and signifies shepherds ; and 3d, after the building of Memphis, where 240,000 of them were besieged, as above men- tioned. But these accounts are inconsistent; for how is it possible that the third invasion, antece- dent to the building of Jerusalem, could be pos- terior to the second, if the latter happened only in the days of Hezekiah ? In these early ages, however, it appears that the kingdom of Egypt had been very powerful, and its dominion very widely extended ; as it is said, that the Bactrians revolted from Osymandyas,'another Egyptian king of very high antiquity, andof whose wealth the most mar- vellous accounts are given. After an unknown interval of time from this monarch, reigned Se- sostris. He was the first great warrior whose conquests are recorded with any degree of dis- tinctness. In what age of the world he lived, is uncertain. Some chronologers, among whom is Sir Isaac Newton, are of opinion, that he is

the Sesac, or Shishak, who took Jerusalem in the reign of Rehoboam. Others place him much earlier ; and Mr. Whiston supposes him to have been the Pharaoh who refused to part with the Israelites, and was at last drowned in the Red VOL. VII.

Sea. Mr. Bryant endeavours to prove that no such person ever existed; but that '<• his history, as well as that of many ancient heroes, we have an abridgment of that of the Cushites, or Babylo- nians, who spread themselves over great part of the known world, and every where brought the people in subjection to them. His reign is reckoned the most extraordinary part of the Egyp- tian history ; and the following is the least fa- bulous account that can be obtained of it. The fa- ther of Sesostris was told in a dream, by the god Vulcan, that his son, then newly born, should be lord of the whole earth. Upon the credit of this vision, his father took all the males in Egypt that were born on the same day with Sesostris, un- der his protection ; appointed nurses and pro- per persons to take care of them, and had them treated like his own child ; being persuaded that they who had been the constant companions of his youth would prove his most faithful ministers and soldiers. As they grew up, they were in- ured to laborious exercises ; and, in particular, were never permitted to taste any food till they had performed a course of 180 furlongs, upwards of twenty-two of our miles. When the king ima- gined they were sufficiently educated in the mar- tial exercises in which he designed them to excel, they were sent for a trial of their abilities against the Arabians. In this expedition Sesostris proved successful, and in the end subdued that people, who had never before been conquered, lie was then sent to the westward, and conquered the greatest part of Africa ; nor could he be stopped in his career till he arrived at the Atlantic Ocean. Whilst he was on this expedition, his father died ; and Sesostris then resolved to fulfil the prediction of Vulcan, by actually attempting the conquest of the world. As he suspected this must take up a long time, he prepared for his journey in the best manner possible. The kingdom he divided into thirty-six provinces, and endeavoured to secure the affections of his people by gifts both of money and land. He forgave all who had been guilty of offences, and discharged the debts of all his soldiers. He then constituted his brother Armais the supreme regent; but forbad him to use the diadem, and commanded him to offer no injury to the queen or her children, or the royal concu- bines. His army is said to have consisted of 600,000 foot, 24,000 horse, and 27,000 chariots. Besides these land forces, he had at sea two mighty fleets ; one, according to Diodorus, of 400 sail. Of these fleets, one was designed to make conquests in the west, and the other in the east, and therefore the one was built on the Me- diterranean, and the ether on the Red Sea. The first of these conquered Cyprus, the coast of Phoenicia, and several of the Cyclades; the other all the coasts of the Red Sea; but its progress was

stopped by shoals and difficult places which the navigators could not pass ; so that he seems not to have made many conquests by sea. With the land forces Sesostris marched against the Ethiopians and Troglodites, whom he overcame, and obliged them to pay him a tri- bute of gold, ebony, and ivory. From thence he proceeded as far as the promontory of Dira, near the straits of Babelmandel, where he set up a pillar with an inscription in sacred characters

He then marched on to the country where cin- namon grows, probably some place in India; and here he in like manner set up pillars, which were to be seen for many ages. As to his farther conquests, it is agreed by almost all au- thors of antiquity, that he over-ran and pillaged the whole continent of Asia, and some part of Europe. He crossed the Ganges, and erected pillars on its banks ; and thence is said to have marched eastward to the very extremity of the Asiatic continent. Returning thence, he invaded the Scythians and Thracians ; but authors do not agree that he conquered them. Some even affirm, that he was overthrown by them with great slaughter, and obliged to aban- don a cons derable part of his booty and military stores. But whether he had good or bad success in these parts, it is believed that he settled a co- lony in Colchis. Herodotus, however, who gives the most particular account of the conquests of this monarch, does not say whether the colony was designedly planted by Sesostris ; or whether part of his arrny loitered behind, and took up their residence in that region. From his own knowledge, he asserts, that the inhabitants of that country were undoubtedly of Egyptian descent. This was evident from the personal resemblance they bore to the Egyptians, who were swarthy and frizzle-haired; but more especially from the conformity of their customs, particularly circumcision. The utmost boundary of this monarch's conquests, however, was in the coun- try of Thrace ; for, beyond that country his pillars were no where to be seen. These pil- lars he erected in every region which he con- quered, with the following inscription, ' Sesostris, king of kings, and lord of lords, subdued this country by the power of his arms.' Besides these, «>e left also statues of himself ; two of which, ac- cording to Herodotus, were to be seen in his time ; me one on the road between Ephesus and Pho- eaea, and the other between Smyrna and Sardis; they were armed after the Ethiopian and Egyptian manner, holding a javelin in one hand and a bow in the other. The reasons given by Sesostris for returning into Egypt from Thrace, and thus leav- ing the conquest of the world unfinished, were the want of provisions for his army,

and the dif- ficulty of the passes. Most probably, however, his »-eturn was hastened by the intelligence he received from the high priest of Egypt, concern- ing the rebellious proceedings of his brother; who, encouraged by his long absence, had as- sumed the diadem, and violated the queen, and the royal concubines. On receiving an account of this, Sesostris hastened from Thrace ; and at the end of nine years came to Pelusium in Egypt, attended by an innumerable multitude of cap- tives of different nations, and loaded with the spoils of Asia. His treacherous brother, we are told, met him at the gates of the city; and Sesos- tris is said to have accepted of an invitation to an enfertainment from him. At this he drank freely, together with the queen, and the rest of the royal family. During the continuance of the entertain- ment, Armais caused a great quantity of dried reeds to be laid round the apartment where they were to sleep ; and as soon as they were reti red to rest set tire to them. Sesostris perceiving the dancer he was in. and that hi guards, over-*

charged with liquor, were incapable of assisting him, rushed through the flames, and was followed by his wife and children. In thanksgiving for his deliverance, he made several donations to the gods, particularly to Vulcan the god of fire. He then took vengeance on his brother Armais, said to be the Danaus of the Greeks, who, being driven out of Egypt, withdrew into Greece. Se- sostris now laid aside all thoughts of war, and applied himself wholly to such works as might tend to the public good, and his own future re- putation. To prevent the incursions of the Sy- rians and Arabians, he fortified the east side of Egypt with a wall, which ran from Pelusium through the desert to Heliopolis, for 187J miles. He raised also an incredible number of lofty mounds of earth, on which he constructed va- rious new towns to secure them from the in- undations of the Nile. From Memphis to the sea he dug canals which branched out from the Nile ; and not only made an easier com- munication between different places, but ren- dered the country in a great measure impassable to any enemy. He erected a temple in every city in Egypt, and dedicated it to the supreme deity of the place ; but, in the course of this great undertaking, he took care to employ none of his Egyptian subjects. Thus he secured their affec- tion, and employed the vast multitude of captives he had brought along with him : to perpe- tuate the memory of a transaction so remarkable, he caused it to be inscribed on all these temples, 4 No one native labored hereon.' In the city of Memphis, before the temple of Vulcan, he raised six gigantic statues, each of one stone. Two of them were thirty cubits high, representing himself and his wife ; the other four were twenty cubits each, and represented his four sons. He raised also two obelisks of marble 120 cubits high, with inscriptions, denoting the greatness of his power, his revenues, &c. The captives taken by Sesostris are said to have been treated with the greatest barbarity ; so that at last they resolved to deliver themselves from a

servitude so intolerable. The Babylonians particularly were concerned in this revolt, and laid waste the country to some extent ; but, being offered a pardon and a place to dwell in, they were pacified, and built a city, which they called Babylon. Towards the conquered princes, who waited on him with their tri- bute, the Egyptian monarch behaved with un- paralleled insolence. On certain occasions, he is said to have unharnessed his horses, and, yok- ing kings together, made them draw his 'chariot. One day, however, observing one of the kings who drew him to look back upon the wheels with great earnestness, he asked, what made him look so attentively at them ? The unhappy prince replied, ' O king, the going round of the wheel puts me in mind of the vicissitudes of fortune ; for as every part of the wheel is upper- most and lowermost by turns, so it is with men ; who one day sit on a throne, and on the next are reduced to the vilest degree of slavery.' This answer brought the insulting conqueror to his senses ; so that he gave over the practice, and thenceforth treated his captives with great huma- nity. At length this mighty monarch lost his sight, and laid violent hands on himself.

After the death of Sesostri« we find another

chasm of an indeterminate length in the Egyptian history. It concludes with the reign of Amasis, or Amosis; who being a tyrant, his subjects joined Actisanes the king of Ethiopia to drive him out. Thus Actisanes became master of the kingdom; and after his death follows another chasm in the history, during which the em- pire is said to have been \n a state of anarchy for five generations. This period brings us down to the times of the Trojan war. The reigning prince in Egypt was at that time called Cetes ; by the Greeks, Proteus. The priests reported that he was a magician ; and that he could assume any shape he pleased, even that of fire. This fable, as told by the Greeks, derived its origin from a custom among the Egyptians, perhaps introduced by Proteus, that of adorning and distinguish- ing the heads of their kings with the represen- tations of animals or vegetables, or even with burning incense, in order to strike the beholders with the greater awe. Whilst Proteus reigned, Paris or Alexander, the son of Priam king of Troy, was driven by a storm on the coast of Egypt with Helen, whom he was carrying off from her husband. But when the Egyptian mo- narch heard of the breach of hospitality com- mitted by Paris, he seized him, his mistress, and companions, with all the riches he had brought from Greece. He detained Helen, with all the effects belonging to Menelaus her husband, pro- mising to restore them to the injured party when- ever they were demanded ; but commanded Paris and his companions to depart out of his

do- minions in three days. In what manner Paris afterwards prevailed upon Proteus to restore his mistress, we are not told ; neither do we know any thing further of the transactions of this prince's reign nor of his successors, except what has entirely the air of fable, till the days of Sa- bacon the Ethiopian, who again conquered this kingdom. He began his reign with an act of great cruelty, causing the conquered prince to be burnt alive : nevertheless, he no sooner saw him- self firmly established on the throne of Egypt, than he became a new man ; so that he is highly extolled for his mercy, clemency, and wisdom. He is thought to have been the So mentioned in Scripture, who entered into a league with Hoshea king of Israel against Shalmaneser king of As- syria. He is said to have been excited to the invasion of Egypt by a dream, in which he was assured, that he should hold that kingdom for fifty years. Accordingly, he conquered Egypt, as had been foretold ; and at the expiration of the time above- mentioned, he had another dream, in which the tutelar god of Thebes acquainted him, that he could no longer hold the kingdom of Egypt with safety and happiness, unless he massacred the priests as he passed through them with his guards. Being haunted with this vision, and at the same time abhorring to hold the king- dom on such terms, he sent for the priests,, and acquainted them with what seemed to be the will of the gods. Upon this it was concluded, that it was their pleasure, that Sabacon should remain no longer in Egypt; and therefore he immediately returned to Ethiopia. Of Anysias, who was Sabacon's immediate successor, we have 110 particulars worth notice. After him reigned

Sethon, who was both king and priest of Vulcan. He gave himself up to religious contemplation ; and not only neglected the military class, but deprived them of their lands. At this they were so much incensed, that they entered into an agreement not to bear arms under him ; and in this state of affairs Sennacherib king of Assyria arrived before Pelusium with a mighty army. Sethon now applied to his soldiers, but in vain ; they unanimously persisted in refusing to march under his banner. Being therefore destitute of all human aid, he applied to the god Vulcan, and requested him to deliver him from his ene mies. Whilst he was yet in the temple of tha god, it is said, he fell into a deep sleep ; during which, he saw Vulcan standing at his side, anc exhorting him to take courage. He promised, that if Sethon would but go out against the As- syrians, he should obtain a complete victory over them. Encouraged by this assurance, the king assembled a body of artificers and laborers, and marched towards Pelusium. He had no occa- sion, however, to fight ; for the very night after his arrival at Pelusium, an innumerable multi- tude of field rats, entering the enemy's camp, gnawed to pieces the quivers, bowstrings, and shield-straps. Next morning, when Sethon found the enemy disarmed, and beginning to fly, he pursued them to a great distance, making a ter- rible slaughter. In memory of this

extraordinary event, a statue of Sethon was erected in the temple of Vulcan, holding in his hand a rat, with these words : ‘ Whosoever beholdeth me, let him be pious.’

Not long after the death of Sethon, the form of government in Egypt was totally changed. The kingdom was divided into twelve parts, over which as many of the chief nobility presided. This division, however, subsisted but for a short time. Psammiticus, one of the twelve, dethroned all the rest, fifteen years after the division had been made. The history now begins to be di- vested of fable ; and from this time may be ac- counted equally certain with that of any other nation. The vast conquests of Sesostris were now no longer known ; for Psammiticus pos- sessed no more than the country of Egypt itself. It appears, indeed, that none of the successors of Sesostris, or even that monarch himself, had made use of any means to keep in subjection the countries he had once conquered. Perhaps, in- deed, his design originally was rather to pillage than to conquer; and therefore on his return, his vast empire vanished. Psammiticus, how- ever, endeavoured to extend his dominions by making war on his neighbours ; but, putting more confidence in foreign auxiliaries than in his own subjects, the latter were so much offended, that upwards of 200,000 fighting men emigrated in a body, and took up their residence in Ethiopia To repair this loss, Psammiticus encouraged commeice, and opened his ports to all strangers, whom he greatly caressed, contrary to the impo- litic maxims of his predecessors, who refused to admit them into the country. He also laid siege to Azotus in Syria which held out for twenty- nine years against the whole strength of the kingdom ; from which it appears that Psammiti- cus was no great warrior. He is reported to

have sent to discover tlie springs of the Nile : and is said to have made an attempt to discover the most ancient language and religion in the world. Nechus, the son and successor of Psam- miticus, is the Qfraraoh-Nechc of Scripture, and was a prince of a_n enterprising and warlike genius. In the beginning of his reign he at- tempted to cut through the isthmus of Suez, be- tween the Red Sea and the Mediterranean ; but was obliged to abandon the enterprise, after having lost 120,000 men in the attempt. After this he sent a ship, manned with some expert Phoenician mariners, on a voyage to explore the coasts of Africa. Accordingly, they performed the voyage ; sailed round the continent of Africa : and after three years returned to Egypt, where their relation was deemed incredible. The most remarkable

wars in which this king was engaged, are recorded in the sacred writings. He went out against the king of Assyria, by the divine command, as he himself told Josiah (II Chron. xxxv. 21); but, being opposed by this king, he defeated and killed ˆhim at Megiddo ; after which he made his son Jehoiakim, king, and imposed on him an annual tribute of 100 talents of silver and one talent of gold. He then proceeded against the king of Assyria; and weakened him so much, that the empire was soon after dissolved. Thus he became master of Syria and Phoenicia ; but, in a short time, Nebuchadnezzar king of Babylon came against him with a mighty army. The Egyptian monarch, not daunted by the formidable appearance of his antagonist, boldly ventured a battle ; but was overthrown with prodigious slaughter, and Nebuchadnezzar became master of all the country to the very gates of Pelusium. The reign of Apries, the Pharaoh Hophra of Scripture, presents us with a new revolution in the Egyptian affairs. He is said to have been a martial prince, and in the beginning of his reign very successful. He took by storm the rich city of Sidosi; and, having overcome the Cypriote and Phoenicians in a sea- fight, returned to Egypt laden with spoil. This success probably incited Zedekiah king of Ju- dalt to enter into an alliance with him against Nebuchadnezzar king of Babylon. The bad suc- cess of this alliance was foretold by the prophet Jeremiah; and accordingly it happened. For Nebuchadnezzar having sat down with his army 'Before Jerusalem, Apries marched from Egypt » relieve the city; but no sooner did he per- ceive the Babylonians approaching him, than he retreated as fast as he could, leaving the Jews exposed to the rage of their merciless enemies : who were thereupon treated as Jeremiah had foretold : and by this step Apries brought upon himself the vengeance denounced by the same prophet. The manner in which these predictions were fulfilled is as follows : the Cyreneans, a co- lony of the Greeks, being greatly strengthened by a numerous supply _of their countrymen under their third king Battus styled the Happy, and encouraged by the Pythian oracle, began to drive out their Libyan neighbours, and share their possessions among themselves. Hereupon An- dican king of Libya sent a submissive embassy to Apries, and implored his protection against the Cyreneans. Apries complied with his re-

quest, and sent a powerful army to hi relief. The Egyptians were defeated with great slaugh- ter; and those who returned complained that the army had been sen*, off by Apries in order to be destroyed, that he might tyrannise without control over the rest of his subjects. This thought catching the attention of the people, an almost universal defection ensued. Apries sent Amasis, his chief minister, to bring them back to a sense of their duty. But while Amasis was haranguing and advising them to return to their allegiance, the people brought the ensigns of royalty and proclaimed him king. See AMASIS. Apries then despatched one Patarbemis, with orders to*

take Amasis, and bring him alive be- fore him. This he found impossible, and there- fore returned without his prisoner; at which the king was so enraged, that he commanded Patar- bemis's nose and ears to be cut off. This piece of cruelty completed his ruin ; for when the rest of the Egyptians, who had continued faithful to Apries, beheld the inhuman mutilation of Patar- bemis, they to a man deserted and went over to Amasis. Both parties now prepared for war; Amasis having under his command the whole body of native Egyptians ; and Apries only those lonians, Carians, and other mercenaries whom he could engage in his service. The army of Apries amounted only to 30,000, but, though greatly inferior in number to the troops of his rival, as he well knew that the Greeks were much superior in valor, he did not doubt of victory. Nay, so far was Apries puffed up with this no- tion, that he did not believe it was in the power even of any God to deprive him of his kingdom. The two armies soon met and drew up in order of battle near Memphis. A bloody engagement ensued; in which, though the army of Apries behaved with the greatest resolution, they were at last overpowered by numbers, and utterly de- feated, the king himself being taken prisoner. Amasis now took possession of the throne with- out opposition. He confined Apries in one of his palaces, but treated him with great care and respect. The people, however, were implacable, and could not be satisfied while he enjoyed his life. Amasis, therefore, at last found himself obliged to deliver him into their hands. Thus the prediction received its final completion : Apries was delivered up to those who sought his life : and who no sooner had him in their power, than they strangled him, and laid his body in the sepulchre of his ancestors. ' During these intestine broils, which must have greatly weak- ened the kingdom, but most probably before the death of Apries, Nebuchadnezzar invaded Egypt. He had been for thirteen years before this em- ployed in besieging Tyre, and at last had nothing but an empty city for his pains. To make him- self some amends, therefore, he entered Egypt, harassed the country, killed and carried away great numbers of the inhabitants, so that the country did not recover from the effects of this incursion for a long time after. In this expedi- tion, however, he seems not to have aimed at permanent conquest, but to have been induced to it merely by the love of plunder, of which he carried with him an immense quantity to Baby- lon. Some say he assisted Amasis against

Apries. During the reign of Amasis, Egypt is said to hare flourished greatly, and to have contained 20,000 populous cities. That good order might be kept among such vast numbers of people, Amasis enacted a law, by which every Egyptian was bound once a year to inform the governor of his

province by what means he gained his livelihood ; and if he failed of this, to put him to death. The same punishment he decreed to those who could not give a satisfac- tory account of themselves. This monarch very much favored the Greeks, and married a queen of Grecian extraction. To many Greek cities, as well as particular persons, he made consider- able presents. He also allowed the Greeks in general to come into Egypt, and settle either in the city of Naucratis, or carry on their trade upon the sea-coast; granting them also temples, and places where they might erect temples to their own deities. He received also a visit from Solon the celebrated Athenian lawgiver, and re- duceˆ the island of Cyprus under his subjection. The prosperity of Egypt, however, ended with the death of Amasis, or indeed before it. The Egyptian monarch had in some way incensed Cambyses king of Persia. The cause of the quarrel is uncertain ; but, whatever it was, the Persian monarch vowed the destruction of Amasis. In the mean time Phanes of Halicar- nassus, commander of the Grecian auxiliaries in the pay of Am'asis, took some private disgust ; and, leaving Egypt, embarked for Persia. He was a wise and able general, perfectly acquainted with every thing that related to Egypt ; and had great credit with the Greeks in that country. Amasis was immediately sensible how great the loss of this man would be to him, and therefore sent after him a trusty eunuch with a swift gal- ley. Phanes was accordingly overtaken in Lycia, but not brought back; for, making his guard drunk, he continued his journey to Persia, and presented himself before Cambyses, as he was meditating the overthrow of the Egyptian mon- archy.

At this dangerous crisis also, the Egyptian monarch imprudently made Polycrates, tyrant of Samos, his enemy. This prince had hitherto been remarkable for an uninterrupted course of success ; and Amasis, being at this time in strict alliance with him, wrote a letter, in which, after congratulating him on his prosperity, he told him that he was afraid lest his successes were too many, and that he might be suddenly overthrown. For this reason he advised him voluntarily to deprive himself of some portion of his happiness ; and to cast away that which would grieve him most if he were accidentally to lose it. Polycrates fol- lowed his advice, and threw into the sea a signet of inestimable value. This, however, did not an- swer the intended purpose. The signet happened to be swallowed by a fish, which was taken a few days afterwards, and thus was restored to Poly- crates. Of this Amasis was no sooner informed, than, considering Polycrates as really unhappy, and already on the brink of destruction, he re- solved to put an end to the friendship which subsisted between them. For this purpose he despatched an herald to Samos, commanding him to acquaint Polycrates, that he renounced

his alliance, and all the obligations between them ; that he might not mourn his misfortunes with the sorrow of a friend. Polycrates now at liberty,

therefore, to act against him, ac- cordingly offered to assist Cambyses with a fleet of ships in his Egyptian expedition. Ama- sis had not, however, the misfortune to see the calamities of his country. He died about A.A.C. 525, after a reign of forty-four years ; and left the kingdom to his son Psammenitus, just as Cambyses was approaching the frontiers of the kingdom. The new prince was scarce seated on the throne, when the Persians appeared . Psam- menitus drew together what forces he could, to prevent them from entering the kingdom. Carn- byses, however, immediately laid siege to Pelu- sium, and made himself master of it by the following stratagem : he placed in the front of his army a great number of cats, dogs, and other animals, that were deemed sacred by the Egyptians. He then attacked the city, and took it without opposition : the garrison, which con- sisted entirely of Egyptians, not daring to throw a dart or shoot an arrow against their ene- mies, lest they should kill some of the holy animals.

Cambyses had not long, however, taken pos- session of the city, when Psammenitus ad- vanced against him with a numerous army. Before the engagement, the Greeks who served under Psammenitus, to shew their indignation against their treacherous countryman, Phanes, brought his children, it is said, into the camp, killed them in the presence of their father and of the two armies, and then drank their blood. The Persians, enraged at so cruel a sight, fell upon the Egyptians with the utmost fury, put them to flight, and cut the greatest part of them in pieces. Those who escaped fled to Memphis, where they were soon after guilty of a horrid outrage. Cambyses sent a herald to them in a ship from Mitylene : but no sooner did they see her come into the port, than they flocked down to the shore, destroyed the ship, and tore to pieces the herald and all the crew; afterwards carrying their man- jded limbs into the city, in a kind of barbarous triumph. Not long after, they were obliged to surrender; Psammenitus thus falling into the hands of his inveterate enemy, now enraged beyond measure at the cruelties exercised upon the children of Phanes, the herald, and the Mitylenean sailors. The rapid success of the Persians struck with such terror the Libyans) Cyreneans, Barcaeans, and other dependents or allies of the Egyptian monarch, that they imme- diately submitted. Nothing now remained but to dispose of the captive king, and revenge on him and his subjects the cruelties which they had committed. This the merciless victor exe- cuted in the severest manner. On the 10th day after Memphis had been taken, Psammenitus and the chief of the Egyptian nobility were igno- miniously sent into one of the suburbs of that city Here the king being seated in a proper place, saw his daughter coming along in the habit of a slave with a pitcher to fetch water from the river, and followed by the daughters of the greatest families in Egypt, all in the same miserable garb,

with pitchers in their hands, drowned in tears, and loudly bemoaning their miserable situation. When the fathers saw their daughters in this dis- tress, all but Psammenitus burst into tears ; he only cast his eyes on the ground, and kept them tixed there. After the young women, came the son of Psammenitus, and 2000 of the young no- bility, with bits in their mouths and halters round their necks, proceeding to execution. This was done to expiate the murder of the Persian herald and the Mitylenean sailors ; for Cambyses caused ten of the Egyptians of the first rank to be publicly executed for every one of those that had been slain. Psammenitus, however, ob- served the same conduct as before, keeping his eyes stedfastly fixed on the ground, though all the Egyptians around him made the loudest lamentations. A little after this he saw an inti- mate friend and companion, now advanced in years, who, having been plundered of all he had, was begging his bread from door to door in the suburbs. Psammenitus now wept bitterly ; and, calling out to his friend by name, struck himself on the head as if he had been fran- tic. Of this the spies who had been set over him to observe his behaviour, gave immediate notice to Cambyses, who sent to enquire into the cause of such immoderate grief. Psam- menitus answered, that the calamities of his own family confounded him, and were too great to be lamented by any outward signs; but the extreme distress of a bosom friend gave more room for reflection, and therefore ex- torted tears from him. With this answer Cam- byses was so affected, that he sent orders to prevent the execution of the king's son; but they came too late, for the young prince had been put to death before any of the rest. Psam- menitus himself was then sent for into the city, and restored to his liberty : had he not indeed showed a desire of revenge, he might perhaps have been trusted with the government of Egypt; but, being discovered in some schemes against the government, he was seized, and condemned to drink bull's blood. The Egyptians were now reduced to the lowest degree- of slavery. Their country became a province of the Persian em- pire ; the body of Amasis their late king was taken out of his grave; and, after being mangled in a shocking manner, was finally burnt. But, what was felt as a still greater grievance, their god Apis was slain, and his priests ignomini- ously scourged : this inspired the whole nation with such a hatred to the Persians, that they could never afterwards be reconciled to them. As long however as the Persian empire sub- sisted, the Egyptians could never shake off their yoke. They frequently revolted indeed, but were always overthrown with loss. At last they submitted, without opposition, to Alexander the Great; after whose death, Egypt again became a powerful kingdom ; but, from the conquest of it by Cambyses to the present time, it has never been governed but by foreign princes, agreeably to the prophecy of Ezekiel, ' There shall

be no more a prince of the land of Egypt.'

On the death of Alexander the Great, Egypt, together with Libya, and that part of Arabia which borders on Egypt, was assigned to Pto-

lemy the son of Lagus, as governor, under Alexander's son by Roxana, who was then an infant. Nothing was farther from the intention of this governor, than to keep the provinces in trust for another. He did not, however, assume the title of king, till his authority was firmly established ; and this did not happen till nine- teen years after the death of Alexander, when Antigonus and Demetrius had unsuccessfully attempted the conquest of Egypt. From the time of his first establishment on the throne, Ptolemy, who had assumed the title of Soter, reigned twenty years ; which added to the former nineteen, make up the thirty-nine years which historians commonly allow him to have reigned alone. — In the thirty- ninth year of his reign, he made his son, Ptolemy Philadelphus, partner in the empire; declaring him his successor, to the prejudice of his eldest son named Ceraunus; being excited thereto by his violent love for Berenice, Philadelphus's mother. Upon this, Ceraunus immediately quitted the court ; and fled at last into Syria, where he was kindly received by Seleucus Nicator, whom he afterwards un- gratefully murdered. The most remarkable transaction of this reign was the embellishing of Alexandria, which Ptolemy made the capital of his new kingdom. See ALEXANDRIA. Ptolemy Soter died about A.A.C. 284, in the forty-first year of his reign, and eighty-fourth of his age. He was the best prince of his race ; and left behind him an example of prudence, justice, and clemency, which few of his successors fol- lowed. Besides the provinces originally as- signed to him, he added to his empire those of Caelo Syria, Ethiopia, Pamphylia, Lycia, Caria, and some of the Cyclades. His successor, Pto- lemy Philadelphus, added nothing to the extent of his empire ; nor did he perform any thing remarkable except embellishing further the city of Alexandria, enriching its library, causing the Old Testament to be translated into Greek, (See BIBLE), and entering into an alliance with the Romans. In his time, Magas, the governor of Libya and Cyrene, revolted ; and held these provinces as an independent prince, notwith- standing the utmost efforts of Ptolemy to reduce him. At last an accommodation took place ; and a marriage was proposed between Berenice, the only daughter of Magas, and Ptolemy's eldest son. The young princess was to receive all her father's dominions by way of dowry, and thus they would again be brought under the do- minion of Ptolemy's family. But, before this treaty could be put in execution, Magas died ; and then Apamea, the princess's mother, did all she could to prevent the marriage. This, however, she was not able to do : but her efforts for that purpose produced a destructive war for four years with Antiochus Theos, king of Syria, and the acting of a bloody tragedy in the family of the latter. See SYRIA. About A. AC. 246 Ptolemy Philadelphus

died ; and was succeeded by his eldest son Ptolemy, who had been married to Berenice, the daughter of Magas. In the beginning of his reign, he found himself en- gaged in a war with Antiochus Theos king of Syria. From this he returned victorious, and brought with him 2500 statues and pictures

among which were many of the ancient Egyptian idols, which had been carried away byCambyses into Persia. These were restored by Ptolemy to their ancient temples; in memory of which favor, the Egyptians gave him the surname of Euergetes, or the Beneficent. In this expedition he greatly enlarged his dominions, making himself master of all the countries that lie between mount laurus and the confines of India. An account of these conquests was given by himself, inscribed on a monument, to the following effect. ' Pto- lemy Euergetes, having received from his father the sovereignty of Egypt, Libya, Syria, Pho3nice, Cyprus, Lycia, Caria, and the other Cyclades, assembled a mighty army of horse and foot, with a great fleet, and elephants, out of Trogloditia and Ethiopia ; some of which had been taken by his father, and the rest by himself, and brought thence, and trained up for war : with this great force he sailed into Asia; and having conquered all the provinces which lie on this side the Euphrates, Cilicia, Pamphylia, Ionia, the Hel- lespont, and Thrace, he crossed that river with all the forces of the conquered countries, and the kings of those nations, and reduced Mesopotamia, Babylonia, Susia, Persia, Media, and all the country as far as Bactria.' On the king's return from this expedition he passed through Jerusa- lem, where he offered many sacrifices to the God of Israel, and ever afterwards expressed a parti- ality for the Jewish nation. At tl is time the Jews were tributary to the Egyptian monarchs, and paid them annually twenty talents of silver. This tribute, however, Onias, who was then high priest, being of a very covetous disposition, had for a long time neglected to pay, so that the arrears amounted to a very large sum. Soon after his return, therefore, Ptolemy sent one of his courtiers, named Athenion to demand the money, and desired him to acquaint the Jews that he would make war upon them in case of a refusal. A young man, however, named Joseph, nephew to Onias, not only found means to avert the king's anger, but even got himself chosen his receiver general, and by his faithful discharge of that important trust, continued in high favor with Ptolemy as long as he lived. Ptolemy Euergetes having at last concluded a peace with Seleucus, the successor of Antiochus Theos, at- tempted the enlargement of his dominions on the south side. In this he was attended with such success, that he made himself master of all the coasts of the Red Sea, both on the Arabian and Ethiopian sides, quite down to the straits of Babel-mandel. On his return he was met by ambassadors from the

Achaeans, imploring his assistance against the Etolians and Lacedemonians. This the king readily promised them : but, they having in the mean time engaged Anti- gonusking ofMacedon to support them, Ptolemy was so much offended that he sent powerful suc- cours to Cleomenes III. king of Sparta; hoping, by that means, to humble both the Achaeans and their new ally Antigonus. In this however he was disappointed ; for Cleomenes, after having gained very considerable advantages over the enemy, was at last entirely defeated in the battle of Selasia, and obliged to take refuge in Ptolemy's dominions. He was received by the

Egyptian monarch with the greatest kindness ; a yearly pension of twenty-four talents was assigned him, with a promise of restoring him to the Spartan throne : but, before this could be accomplished, Ptolemy died, in the twenty-seventh year of his reign, and was succeeded by his son Ptolemy Philopater. Thus we have seen the Egyptian empire restored to a considerable height of pJwer; and had the succeeding monarchs been careful to preserve its strength as transmitted to them by Euergetes, it is probable that Egypt might have been able to hold the balance against Rome, and after the destruction of Carthage to have prevented that haughty city from becoming mistress of the world. But after the death of Ptolemy Euergetes, the Egyptian empire, being governed either by weak monarchs, or wicked monsters, quickly declined, and from that time makes no conspicuous figure in history, except in the depravity of some of its kings, in which indeed, it may, vie with any pation

Ptoleny Philopater began his reign with the murder of his brother Magas; after which, giving himself up to universal licentiousness, the kingdom fell into anarchy. Cleomenes the Spartan king still resided at court; and, being now unable to bear the dissolute manners which prevailed there, he pressed Philopater to give him the assistance he had promised for restoring him to the throne of Sparta. This he the rather insisted upon, because he had received advice that Antigonus king of Macedon was dead, that the Achaeans were engaged in a war with the Etolians, and that the Lacedemonians had joined the latter against the Achaeans and Macedonians. Ptolemy, when afraid of his brother Magas, had indeed promised to assist the king of Sparta with a powerful fleet, hoping thus to attach him to his own interest : but now, when Magas was out of the way, it was determined by the king, or rather his ministers, that Cleomenes should not be as- sisted, nor even allowed to leave the kingdom ; and this extravagant resolution produced the desperate attempt of Cleomenes, of which an ac- count will be found in the history of SPARTA. Of the disorders which now ensued, Antiochus king of Syria, surnamed the Great, took the ad- vantage, and attempted to wrest from Ptolemy the provinces of Caelo-Syria and Palestine. But in this he was finally disappointed; and might easily have been totally driven out of Syria, had not Ptolemy been

too much taken up with his debaucheries to think of carrying on the war. The discontent occasioned by this piece of neg- ligence soon produced a civil war in his domi- nions, and the whole kingdom continued in the utmost confusion till his death, which happened in the seventeenth year of his reign and thirty- seventh of his age. During the reign of Philo- pater happened a very extraordinary event with regard to the Jews, which is recorded in the third Book of Maccabees, chap. ii. Hi. iv. v. The king of Egypt, while on his Syrian expedition, had attempted to enter the temple of Jerusalem ; but, being hindered by the Jews, he was filled witl the utmost rage against the whole nation. On his return to Alexandria, he resolved to make those who dwelt in that city feel the first effects of his vengeance. He began with publishing a

decree, which he caused to be engraved on a pillar erected for that purpose at the gate of his palace, excluding all those who did not sacrifice to the gods worshipped by the king. Thus the Jews were debarred from suing to him for jus- tice or protection. By the favor of Alexander the Great, Ptolemy Soter, Philadelphia, and Eu- ergetes, the Jews enjoyed at Alexandria the same privileges with the Macedonians In that me- tropolis the inhabitants were divided into three classes. In the first were the Macedonians, or original founders of the city, and along with them were enrolled the Jews ; in the second were the mercenaries who had served under Alexan- der; and in the third the native Egyptians. Pto- lemy now, to be revenged of the Jews, ordered that they should be degraded from the first rank, and enrolled among the native Egyptians; and that all of that nation should appear at an ap- pointed time before the proper officers, to be en- rolled among the people , that at the time of their enrolment they should have the mark of an ivy leaf, the badge of Bacchus, impressed with a hot iron on their faces ; that all who were thus marked should be made slaves ; and, lastly, that if any one should stand out against this decree, he should be immediately put to death. That he might not, however, seem an enemy to the whole nation, he declared, that those who sacrificed to his gods should enjoy their former privileges, and remain in the same class. Yet, notwithstanding this tempting offer, 300 only out of many thou- sand Jews who lived in Alexandria could be prevailed upon to abandon their religion in order to save themselves from slavery. The apostates were immediately excommunicated by their bre- thren : and this their enemies construed as done in opposition to the king's order; which threw the tyrant into such a rage, that he resolved to extirpate the whole nation, beginning with the Jews who lived in Alexandria and other cities of Egypt, and proceeding from thence to Judaea and Jerusalem itself. In consequence of this cruel resolution, he commanded all the Jews that lived in any part of Egypt to be brought in chains to Alexandria, and there to be shut up in the Hippodrome, which was a very spacious place without the city, where the people used to assemble to see horse-races and other public di- versions. He then sent for Herman master of the elephants ; and commanded him to have 500 of these animals ready against the next day, to let loose upon the Jews in the Hippodrome. But when the elephants were prepared for the execu- tion, and the people were assembled in great crowds to see it, they were for that and the succeeding day disappointed by the king's ab- sence. At last he came to the Hippodrome attended with a vast multitude of spectators ; but, when the elephants were let loose, instead of falling upon the Jews, they turned their rage against the spectators and soldiers, and destroyed great numbers of them. At the same time, some frightful appearances which were seen in the air so' terrified the king, that he

commanded the Jews to be immediately set at liberty, and re- stored them to their former privileges. No sooner were they delivered from this danger than they

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nation as had abandoned their religion; wh.'ch being granted, they despatched the 300 apostates. Philopaterwas succeeded by Ptolemy Epiphanes; and he, after a reign of twenty-four years, by Ptolemy Philometor. In the beginning of his reign, a war commenced with the king of Syria, who had seized on the provinces of Caelo-Syria and Palestine in the preceding reign. In the course of this war, Philometor was either voluntarily delivered up to Antiochus, or taken prisoner. But, however this was, the Alexandrians, despair- ing of his ever being able to recover his liberty, raised to the throne his brother Ptolemy, who took the name of Euergetes II. but was afterwards called Physcon, or the big-bellied, on account of the extraordinary size of his person, through gluttony and luxury. He was scarcely seated on the throne, however, when Antiochus Epi- phanes, returning into Egypt, drove out Physcon, and restored the whole kingdom, except Pelu- sium, to Philometor. His design was to kindle war betwixt the two brothers, so that he might have an opportunity of seizing the kingdom. For this reason he kept to himself the city of Pe- lusium ; by which, being the key of Egypt, he might at his pleasure re-enter the country. But Philometor, apprised of his design, invited his brother Physcon to an accommodation, which was happily effected by their sister Cleopatra. The brothers agreed to reign jointly, and to op- pose to the utmost of their power Antiochus, whom they considered as a common enemy. On this the king of Syria invaded Egypt with a great army, but was prevented by the Romans from conquering it. The two brothers were no sooner freed from the apprehension of a foreign enemy, than they began to quarrel with each other. Their differences soon came to such a height, that the Roman senate interposed. But, before the ambassadors employed to enquire into the merits of the cause could arrive in Egypt, Physcon had driven Philometor from the throne, and obliged him to quit the kingdom. On this the dethroned prince fled to Rome, where he ap- peared meanly dressed, and without attendants. He was very kindly received by the senate ; who were so well satisfied of the injustice done him, that they immediately decreed his restoration. He was reconducted home accordingly ; and, on the arrival of the ambassadors in Egypt, an accom- modation was negociated, whereby Physcon was put in possession of Libya and Cyrene, and Phi- lometor of all Eygpt and the island of Cyprus ; each of them being declared independent of the other. The treaty, as usual, was confirmed with oaths and sacrifices, and was broken almost as soon as made. Physcon was

dissatisfied with his share of the dominions ; and therefore sent ambassadors to Rome, desiring that the island of Cyprus might be added to his other possessions. This could not be obtained by the ambassadors ; Physcon therefore went to Home in person. His demand was evidently unjust ; but the Ro- mans, considering it their interest to weaken the power of Egypt as much as possible, adjudged the island to him. Physcon set nut from Rome with two ambassadors ; and, arriving in Greece on his way to Cyprus, he raised there a great number of mercenaries, with a design to sail im-

mediately to that island and conquer it. But the Roman ambassadors telling him that they were commanded to put him in possession of it by fair means and not by force, he dismissed his army, and returned to Libya, while one of the ambassa- dors proceeded to Alexandria. Their design was to bring the two brothers to an interview on the frontiers of their dominions, and there to settle matters amicably. But the ambassador who went to Alexandria, found Philometor very averse from compliance with the decree of the senate. He put off the ambassador so long, that Physcon sent the other also to Alexandria, hoping that the joint persuasions of the two would induce Philometor to comply. But the king, after entertaining them at an immense charge for forty days, at last re- fused to submit, and told the ambassadors that he was resolved to adhere to the first treaty. With this answer the Roman ambassadors de- parted, and were followed by others from the two brothers. The senate, however, not only confirmed their decree in favor of Physcon, but renounced their i.liance with Philometor, and commanded his ambassador to leave the city in five days. In the mean time the inhabitants of Cyrene having neard unfavorable accounts of Physcon's behariour, during the short time he reigned in Alexandria, conceived so strong an aversion against him, that they resolved to keep him out of their country by force of arms. On receiving intelligence of this resolution, Physcon dropped all thoughts of Cyprus for the present, and hastened with all his forces to Cyrene, where he soon established himself in the kingdom. His vicious and tyrannical conduct, however, increased the aversion of the Cyrenians so much, that some of them, entering into a conspiracy against him, fell upon him one night as he was returning to his palace, wounded him in several places, and left him for dead on the spot. This lie laid to the charge of his brother Philometor; and, as soon as he was recovered, took another voyage to Rome. Here he made his complaints to the senate, and showed them the scars of his wounds, accusing his brother of having employed assassins to murder him. Though Philometor was known to be a man of a most humane and mild disposition, and therefore very unlikely to have been concerned in so black

an attempt, yet the senate, being offended at his refusing to submit to their decree concerning Cyprus, hearkened to this false accusation, and not only refused to hear what his ambassadors had to say, but ordered them immediately to depart from the city. At the same time they appointed five com- missioners to conduct Physcon into Cyprus, and put him in possession of that island, enjoining all their allies in those parts to supply him with forces. Physcon having thus got together an army, which seemed to be sufficient for the ac- complishment of his design, landed in Cyprus ; but, being there encountered by Philometor in person, he was entirely defeated, and obliged to shelter himself in the city called Lapitho. Here he was closely besieged, and at last obliged to surrender. Every one now expected that Phys- con would have been treated as he deserved ; but his brother, instead of punishing, restored him to the government of Libya and Cyrene,

adding some other territories instead of the island of Cyprus, and promising him his daughter in marriage. Thus an end was put to the war be- tween the two brothers, for the Romans were ashamed any longer to oppose a prince who had given such a signal instance of his justice and clemency. On his return to Alexandria, Philo- metor appointed one Archias governor of Cy- prus. But he, soon after the king's departure, agreed with Demetrius, king of Syria, to betray the island to him for 500 talents. The treachery was discovered before it took effect; and the traitor, to avoid the punishment due to his crime, killed himself. Ptolemy, being offended with Demetrius for this attempt on Cyprus, joined Attains, king of Pergamus, and Ariarathes, king of Cappadocia, in setting up a pretender to the crown of Syria. This was Alexander Balas, to whom he even gave his daughter Cleopatra in marriage, after he had placed him on the throne of Syria. But he, notwithstanding these and many other favors, being suspected of having entered into a plot against his benefactor, Ptole- my became his greatest enemy ; and, marching against him, routed his army in the neighbour- hood of Antioch. He did not, however, long enjoy his victory ; for he died in a few days after the engagement, of the wounds he had re- ceived.

On the death of Philometor, Cleopatra, the queen, designed to secure the throne for her son. But some of the principal nobility declaring for Physcon, a civil war was about to ensue, when matters were compromised, on condition that Physcon should marry Cleopatra, that he should reign jointly with her during his life, and declare her son by Philometor, heir to the crown. These terms were no sooner agreed upon than Physcon married Cleopatra, and on the very day of the nuptials, murdered her son in her arms. This was only a prelude to the cruelties which he afterwards committed on his subjects. He first put to death all those who had shown any con- cern for the murder of the young prince. He then wreaked his fury on the Jews, whom he treated more like slaves than subjects, on ac- count of their having favored the cause of Cleo- patra. His own people were

treated with little more ceremony. Numbers of them were every day put to death for the smallest faults, and often for no fault at all, but merely to gratify his in- human temper. His cruelty towards the Alex- andrians is related under the article ALEXAN- DRIA. He divorced his queen, who was also his sister, and married her daughter, who was likewise called Cleopatra, and whom he had pre- viously ravished. In short, his behaviour was so exceedingly wicked, that it soon became quite intolerable to his subjects ; and he was obliged to fly to the island of Cyprus with his new queen, and Memphitis, a son he had by her mother. On the flight of theking, the divorced queen was placed on the throne by the Alexandrians ; but Physcon, fearing lest a son whom he had left be- hind should be appointed king, sent for him into Cyprus, and caused him to be assassinated as soon as he landed. This provoked the people against him to such a degree, that they pulled down and dashed to pieces all the statues which

had been erected to him in Alexandria. This the tyrant supposed to have been done at the in- stigation of the queen, and therefore resolved to revenge it on her by killing his own son whom he had by her. He therefore, without the least remorse, caused the young prince's throat to be cut; and, having put his mangled limbs into a box, sent them as a present to his mother Cleo- patra. The messenger with whom this box was sent, was one of his guards. He was ordered to wait till the queen's birth day, which approached, and was to be celebrated with extraordinary pomp ; and, in the midst of the general rejoicing, he was to deliver the present. The horror and detestation occasioned by this unparalleled piece of barbarity cannot be expressed. An army was soon raised, and the command of it given to one Marsyas, whom the queen had appointed general, and enjoined to take all the necessary steps for the defence of the country. On the other hand, Physcon having hired a numerous body of mer- cenaries, sent them, under the command of He- gelochus, against the Egyptians. The two armies met on the frontiers of Egypt, and a bloody battle ensued, wherein, however, the Egyptians were entirely defeated, and Marsyas was taken prisoner. Every one expected that the captive general would have been put to death with the severest torments ; but Physcon, perceiving that his cruelties only exasperated the people, resolved to try whether he could regain their affections by lenity ; and therefore pardoned Marsyas, and set him at liberty. Cleopatra, being greatly dis- tressed by this overthrow, demanded assistance from Demetrius, king of Syria, who had married her eldest daughter by Philometor, promising him the crown of Egypt for his reward. Deme- trius accepted the proposal, marched with all his forces into Egypt,

and laid siege to Pelusium. But he being no less hated in Syria than Physcon was- in Egypt, the people of Antioch, taking ad- vantage of his absence, revolted against him, and were joined by most of the other cities in Syria. Thus Demetrius was obliged to return ; and Cleopatra, being now in no condition to oppose Physcon, fled to Ptolemais, where her daughter the queen of Syria resided. Physcon was then restored to the throne of Egypt, which, notwith- standing his crimes, he enjoyed till his death, which happened at Alexandria, in the twenty- ninth year of his reign, and sixty-seventh of his age.

To Physcon succeeded Ptolemy Lathyrus, about A.A.C. 122; but he had not reigned long before his mother, finding that he would not be entirely governed by her, instigated the Alex- andrians, to drive him from the throne, and place on it his youngest brother, Alexander. Lathyrus, after this, was obliged to content himself with the government of Cyprus, which he was permitted to enjoy in quiet. Ptolemy Alexander, in the mean time, finding he was to have only the shadow of sovereignty, and that his mother Cleopatra was to have all the power, stole away privately from Alexandria. The queen used every artifice to bring him back, well knowing xhat the Alexandrians would never suf- fer her to reign alone. At last her son yielded to her intreaties ; but soon after, understanding

that she had hired assassins to despatch him, he caused her to be murdered. The death of the queen was no sooner known to the Alexandrians, than, disdaining to be commanded by a parri- cide, they drove out Alexander, and recalled La- thyrus. The deposed prince for some time led a rambling life in the island of Cos, but, having got together some ships, he, the next year, at- tempted to return into Egypt. But being met by Tyrrhus, Lathyrus's admiral, he was defeated, and obliged to fly to Myra in Lycia. From Myra he steered towards Cyprus, hoping that the inhabitants would place him on the throne, instead of his brother. But Charcas, another of Lathyrus's admirals, coming up with him while he was ready to land, an engagement ensued, in which Alexander's fleet was dispersed, and him- self killed. During these disturbances, Apion, king of Cyrenaica, the son of Ptolemy Physcon by a concubine, having maintained peace and tranquillity in his dominions during a reign of twenty-one years, died, and by his will left his kingdom to the Romans : and thus the Egyptian empire was again considerably reduced and cir- cumscribed. Lathyrus, being now delivered from all competitors, turned his arms against the city of Thebes, which had revolted from him. He marched in person against the rebels; and, hav- ing defeated them in a pitched battle, laid close siege to their city. The inhabitants defended themselves with great resolution for three years, but were at last obliged to submit, and the city was given up to be plundered by the soldiers. They left everywhere the most melancholy monu- ments of their avarice and cruelty ; so that Thebes, which till that time had

been one of the most wealthy cities of Egypt, was now reduced so low that it never afterwards made any figure. About A.A.C. 76, Ptolemy Lathyrus was succeeded by Alexander II. the son of Ptolemy Alexander I. He was first sent by Cleopatra into the island of Cos, with a great sum of money, and all her jewels, as thinking that the safest place where they could be kept. When Mithridates, king of Pontus, made himself master of that island, the inhabitants delivered up to him the young Egyp- tian prince, together with all the treasures. Mi- thridales gave him an education suitable to his birth ; but he, not thinking himself safe with a prince who had shed the blood of his own chil- dren, fled to the camp of Sylla, the Roman dic- tator, who was then making war in Asia. From that time he lived in the family of the Roman general, till news was brought to Rome of the death of Lathyrus. Sylla then sent him to Egypt to take possession of the throne. But, before his arrival, the Alexandrians had- chosen Cleopa- tra for their sovereign. To compromise matters, however, it was agreed that Alexander should marry her, and take her for his partner on the throne. This was accordingly done ; but nine teen days after the marriage he murdered her and for fifteen years afterwards showed himself such a monster of wickedness, that a general in- surrection at last ensued among his subjects, and he was obliged to fly to Pompey the Great, who was then carrying on the war against Mithridates king of Pontus. But Pompey refusing to con- cern himself in the matter, he retired to Tyre.

where he died a few months after. Alexander, while he was in Tyre, had sent ambassadors to Rome to influence the senate in his favor. But, dying before the negociation was finished, he made over by his last will all his rights to the Roman people, declaring them heirs to his king- dom : not out of any affection to the republic, but with a view to raise disputes between the Romans, and his rival Auletes, whom the Egyp- tians had placed on the throne. The will was brought to Rome, where it occasioned warm debates. Some were for taking immediate pos- session of Egypt. Others thought no notice should be taken of such a will, because Alex- ander had no right to dispose of his dominions in prejudice to his successor, and to exclude from the crown those who were of thu royal blood of Egypt. Cicero represented, that such a notorious imposition would debase the majesty of the Roman people, and involve them in end- less wars and disputes ; that the fruitful fields of Egypt would be a strong temptation to the avarice of the people, who would insist on their being divided among them ; and lastly, that by this means the bloody quarrels about the Agrarian laws would be revived. These reasons had some weight with the senate ; but what chiefly prevented them from seizing on Egypt at this time was, that they had lately taken

possession of the kingdom of Bithynia, in virtue of the will of Nicomedes ; and of Cyrene and Lybia, by the will of Apion. They thought, therefore, that if they should, on the like pretence, take possession of the kingdom of Egypt, this might too much expose their design of setting up a kind of universal empire, and occasion a formidable com- bination against them. Ptolemy Auletes, who was now raised to the throne by the Egyptians, is said to have surpassed all the kings that went before him in the effeminacy of his manners. The surname Auletes, which signifies the flute- player, was given him because he piqued himself on his skill in performing upon that instrument, and was not ashamed even to contend for the prize in the public games. He took great plea- sure in imitating the manners of the bacchanals ; dancing in a female dress, and in the same mea- sures that they used during the solemnity of their god; and hence he had the surname of the New Dionysius, or Bacchus. As his title to the crown was disputable, he being only the son of a con- cubine, his first care was to get himself acknow- ledged by the Romans, and declared their ally. This was obtained by applying to Julius Caesar, who was at that time consul, and immensely in debt. Caesar being glad of such an opportu- nity of raising money, made the king of Egypt pay pretty dear for his alliance : 6000 talents, a sum equal to £1,162,500 sterling were given partly to Caesar himself, and partly to Pompey, whose interest was necessary for obtaining the consent of the people. Though the revenues of Egypt amounted to twice this sum, yet Auletes found it impossible for him to raise it without se- verely taxing his subjects. This occasioned a gene- ra^discontent ; and, while the people were almost ready to take up arms, a most unjust decree passed at Rome for seizing the island of Cyprus. When the Alexandiians heard of this, they pressed

Auletes to demand that island as an ancient ap- pendage of Egypt ; and, in case of a refusal, to declare war against that haughty and imperious people, who they now saw, though too late, aimed at nothing less than the sovereignty of the world. With this request the king refused to comply ; upon which his subjects, already pro- voked beyond measure at the taxes with which they were loaded, flew to arms, and surrounded the palace. The king had the good fortune to escape their fury, and immediately leaving Alex- andria, set sail for Rome. In his way to that city, he landed on the island of Rhodes, where the celebrated Cato at that time was, being on his way to Cyprus, to put the unjust decree of the senate into execution. Auletes, desirous to con fer with a man of his prudence, immediately sent to acquaint him with his arrival. He imagined that, upon this notice, Cato would instantly come and wait upon him ; but the proud Roman told the messenger, that if the king of Egypt had any thing to say to Cato, he might come to his house. Accordingly the king went to pay him a visit ; but was received with very little ceremony, Cato not even vouchsafing to rise out of

his seat when he came into his presence. When Auletes had laid his affairs before this haughty republican, he was blamed by him for leaving Egypt, the richest kingdom in the world, in order to expose himself, as he said, to the indig- nities he would meet with at Rome. There, Cato told him, nothing was in request but wealth and grandeur. All the riches of Egypt, he said, would not be sufficient to satisfy the avarice of the leading men in Rome. He, therefore, ad- vised him to return to Egypt ; and strive, by a more equitable conduct, to regain the affections of his people. He even offered to reconduct him thither, and employ his good offices in his be- half. But though Ptolemy was sensible of the propriety of this advice, the friends he had with him dissuaded him from following it, and ac- cordingly he set out for Rome. On his arrival, he found, to his great concern, that Caesar, in whom he confided, was then in Gaul. He was re- ceived, however, by Pompey with great kind- ness. He assigned him an apartment in his own house, and emitted nothing that lay in his power to serve him. Notwithstanding this pro- tection, however, the Egyptian monarch was obliged to go from house to house like a private person, soliciting the votes of the sena- tors. After he had spent immense treasures in procuring a strong party, he was at last permitted to lay his complaints before the senate; but, at the same time, there arrived an embassy from the Alexandrians, consisting of 100 citizens, to acquaint the senate with the reasons of their revolt. When Auletes first set out for Rome, the Alexandrians, not knowing what was become of him, placed on the throne his daughter Berenice ; and sent an embassy into Syria to Antiochus Asiaticus, inviting him into Egypt to marry the queen, and reign in partner- ship with her. Antiochus was dead before the arrival of the ambassadors ; upon which, the same proposal was made to his brother Seleucus, who readily accepted it. This Seleucus is described by Strabo as monstrously deformed in body, ana

still more so in mind. The Egyptians nick- named him Cybiosactes, or the Scullion. He was scarcely on the throne, when he gave a signal in- stance of his avaricious temper. Ptolemy I. had caused the body of Alexander the Great to be deposited in a coffin of massy gold. This the king seized upon ; and thus provoked his wife Berenice to such a degree, that she caused him to be murdered. She then married one Archelaus, the high priest of Comana in Poutus, who pretended to be the son of Mithridates the Great; but was, in fact, only the son of that monarch's general. Auletes was not a little alarmed on hearing of these transactions, espe- cially when the ambassadors arrived, who he feared would overturn all the schemes he had la- bored so much to bring about. The embassy was headed by one Dion, a

celebrated academic philosopher, who had many powerful friends at Rome. But Ptolemy found means to get both him and most of his followers assassinated ; and this intimidated the rest to such a degree, that they durst not execute their commission, or, for some time, even demand justice for the murder of their colleagues. The report of so many murders, however, at last spread a general alarm. Auletes, sure of the protection of Pompey, did not scruple to own himself the perpetrator of them. Nay, though an action was commenced against one Ascitius, an assassin, who had stabbed Dion, the chief of the embassy above mentioned, and the crime was fully proved, yet he was ac- quitted by the venal judges, who had all been bribed by Ptolemy. In a short time, the senate passed a decree, by which it was enacted, that the king of Egypt should be restored by force of arms. All the great men in Rome were ambi- tious of this commission; which, they well knew, would be attended with immense profit. Their contests, on this occasion, took up a con- siderable time ; but at last a prophecy of the Sybil was found out, which forbade the assisting an Egyptian monarch with an army. Ptolemy, therefore, wearied out with so long a delay, re- tired from Rome, where he had made himself generally odious, to the temple of Diana, at Ephesus, there to wait the decision of his fate. Here he remained a considerable time ; but as he saw that the senate came to no resolution, though he solicited them by letters, he at last, by Pompey's advice, applied to Gabinius, the pro- consul of Syria, a man of most infamous character, and ready to undertake any thing for money. Therefore, though it was contrary to an express law, for any governor to leave his province, without positive orders from the senate and people of Rome, Gabinius ventured to trans- gress this law, upon condition of being well paid. As a recompense for his trouble, he demanded 10,000 talents; that is, £1,937,500 sterling; and Ptolemy, glad to be restored on any terms, agreed to pay that sum : but Gabinius would not stir till he had received one-half of it. This obliged the king to borrow it from a Roman (knight, named Caius Rabirius Posthumus; Pom- pey interposing his credit and authority for the repayment both of capital and interest. Gabinius now set out for Egypt, attended by the famous

Marc Anthony, 'who at this time served in the army under him. He was met by Archelaus, who, since the departure of Auletes, had reigned in Egypt jointly with Berenice, at the head of a numerous army. In the first engagemen the Egyptians were utterly defeated, and Arche- laus taken prisoner. Thus Gabinius might have put an end to the war at once ; but his avarice prompted him to dismiss Archelaus, on his pay- ing a considerable ransom ; after which, pretend- ing that he had made his escape, fresh sums were demanded from Ptolemy for defraying the ex- penses of the war. For these Ptolemy was again 'obliged to apply to Rabtrius, who would only supply what he wanted at a very high inte- rest. At last, Archelaus was*

defeated and killed, and Ptolemy again became master of all Egypt. No sooner was he firmly settled on the throne, than he put to death his daughter Berenice, and cruelly oppressed his people in order to procure the money he had been obliged to borrow while in exile. These oppressions and exactions the cowardly Egyptians bore with great patience, being intimidated by the garrison which Gabi- nius had left in Alexandria. But neither the fear of the Romans, nor the authority of Ptolemy, could make them put up with an affront offered to their religion. A Roman soldier happened to kill a cat, an animal held sacred, and even wor- shipped by the Egyptians ; and, no sooner was this sacrilege known, than the Alexandrians made a general insurrection, and, gathering together in crowds, made their way through the Roman guards, dragged the soldier out of his house, and, in spite of all opposition, tore him in pieces. Notwithstanding the heavy taxes, which Ptolemy laid on his people, it does not appear that he had any design of paying his debts. Rabirius, who, as we have already observed, had lent him immense sums, finding that the king affected delays, took a voyage to Egypt, to expostulate with him in person. Ptolemy excused himself on account of the bad state of his finances, but offered to make Rabi- rius collector-general of his revenues, that he might, in that employment, pay himself, an offer which Rabirius gladly accepted. But Ptolemy, soon after, upon some frivolous pre- tence or other, caused him and all his servants, to be closely confined. This base conduct ex- asperated Pompey as much as Rabirius ; for the former had been in a manner security for the debt, as the money had been lent it his re- quest, and the business transacted at a country- house of his near Alba. However, as Rabirius had reason to fear still worse " treatment, he took the first opportunity of making his es- cape.

To complete his misfortunes, he was prosecuted at Rome as soon as he returned, 1. For having enabled Ptolemy to corrupt the senate with sums lent him for that purpose. 2. For having de- based and dishonored the character of a Roman knight, by farming the revenues, and becoming the servant of a foreign prince, 3. For having been an accomplice with Gabinius, and sharing with him the 10,000 talents, which that pro- consul had received for his Egyptian expedition.

By the eloquence of Cicero he was acquitted ; and one of the best orations to be found in the writings of that author, was composed on this occasion. Gabinius was also prosecuted ; and, as Cicero spoke against him, he very narrowly escaped death. He was, however, condemned to perpetual banishment, after having been stripped of all he was worth ; and lived in

exile till the time of the civil wars, when he was recalled by Caesar, in whose service he lost his life. Auletes enjoyed the throne of Egypt about four years after his re-establishment ; and, at his death, left his children, a son and two daughters, under the tuition of the Roman people. The name of the son was Ptolemy, those of the daughters were Cleopatra and Arsinoe. This was the Cleopatra who afterwards became so fa- mous, and had so great a share in the civil wars of Rome. As the transactions of that queen's reign, however, are so closely connected with the affairs of Rome, that they cannot be well under- stood without knowing the situation of 'the Ro- mans at that time, we refer for an account of them to the history of ROME. With Cleopatra ended the family of Ptolemy Lagus, the founder of the Grecian empire in Egypt, after it had held that country in subjection for the space of 294 years.

Egypt now became a province of the Roman empire, and continued subject to the emperors of Rome or Constantinople. In the year 642 it was conquered by the Arabs under Amru Ebn Al As, one of the generals of the khalif Omar. In 889 an independent government was set up in this kingdom by Ahmed Ebn Tolun, who rebelled against Al Mokhadi, khalif of Bagdad. It continued to be governed by him and his successors for twenty-seven years, when it was again reduced by Al Moctasi khalif of Bagdad. In about thirty years after, we find it again an independent state, being joined with Syria under Mahomet Ebn Taj, who had been ap- pointed governor of these provinces. This govern- ment, however, was also but short-lived ; for in 968 it was conquered by Jawhar, one of the generals of Moez Ledinillah, the Fatemite khalif of Cair- wan in Barbary. No sooner was Moez informed of the success of his general, than he prepared with all expedition to go and take possession of his new conquest. Accordingly, he ordered all the vast quantities of gold which he and his pre- decessors had amassed, to be cast into ingots of the size and figure of mill-stones used in hand-mills, and conveyed on camels' backs into Egypt. To show that he was fully determined to abandon his dominions in Barbary, and to make Egypt the royal residence, he caused the remains of the three former princes of his race to be removed from Cairwan in Barbary, and to be deposited in a stately mosque erected on purpose in the city of Cairo : the most effectual perhaps of all methods to induce his successors to reside in Egypt also, as it was become an established custom among those princes, frequently to pay their respectful visits to the tombs of their an- cestors. To establish himself the more effectually in his new dominions, Moez suppressed the usual prayers made in'the mosques for the khalifs of Bag- dad, and substituted his own name in their stead.

This was complied with, not only in Egypt and Syria, but even throughout all Arabia, the city of Mecca alone excepted. The consequence was, a schism in the Mahommedan faith, which continued upwards of 200 years,

and was attended with continual anathemas, and sometimes de- structive wars between the khalifs of Bagdad and those of Egypt. Having fully established himself in his kingdom, he died in the forty-fifth year of his age, three years after he had left his dominions in Barbary ; and was succeeded by his son Abu Al Mansur Barar, surnamed Aziz Billah.

The new khalif succeeded at the ase of twen- ty-one ; and committed the management of affairs entirely to the care of Jawhar, his father's long experienced general and prime minister. In 978 he sent this famous warrior to drive out Al Aftekin, the emir of Damascus. The Egyptian general accordingly undertook the siege of that place; but, at the end of two months, was obliged to raise it, on the approach of an army of Karmatians under the command of Al Ilakem. As Jawhar was not strong enough to venture an engagement with these Karmatians, it was impossible for him to hinder them from effecting a junction with the forces of Al Aftekin. He therefore retreated, or rather fled towards Egypt with the utmost expedition ; but, being overtaken by the two confederate armies, was soon re- duced to the last extremity, He was, however, permitted to resume his march, on condition that he passed under Al Aftekin's sword and Al Hakem's lance ; and to this disgraceful condition Jawhar found himself obliged to submit. On his arrival in Egypt, he immediately advised Al Aziz to undertake an expedition in person into the east, against the combined army of the Turks, Karmatians, and Damascenes, under the com- mand of Al Aftekin and Al Hakem. The khalif followed his advice ; and advancing against his enemies overthrew them with great slaughter ; Al Aftekin himself escaped out of the battle but was afterwards taken and brought to Al Aziz who made him his chamberlain, and treated him with great kindness. Jawhar, in the mean time, was disgraced on account of his bad success ; and in this disgrace he continued till his death, which happened A. D. 990, and in the year of the Hegira 381. This year Al Aziz having received advice of the death of Saadoddawla, prince of Aleppo, sent a formidable army under the com- mand of a general named Manjubekin,to reduce that place. Lulu, who had been appointed guar- dian to Saadoddawla's son, finding himself pres- sed by the Egyptians, who carried on the siege with great vigor, demanded assistance from the Greek emperor. Accordingly, he ordered a body of troops to advance to Lulu's relief, when Man- jubekin, being informed of their approach, imme- diately raised the siege, and advanced to give them battle. An obstinate engagement ensued, in which the Greeks were at last overthrown with great slaughter. After this victory, Manjubekire pushed on the siege of Aleppo very briskly; but finding the place capable of defending itself much longer than he at first imagined, and his provi- sions beginning to fail, he raised the siege. The khalif upon this sent him a very threatening letter and commanded him to return before Alepoo

He did so; and continued the siege for thirteen months; during all which time it was defended by Lulu with incredible bravery. At last the Egyptians, hearing that a numerous army of Greeks was on their way to relieve the city, raised the siege, and fled with the utmost preci- pitation. The Greeks then took and plundered several of the cities which Al Aziz possessed in Syria; and Manjubekin made the best of his way to Damascus, where he declared himself in- dependent. Aziz, informed of this revolt, marched in person against him with a considerable army ; but, being taken ill by the way, he expired in the twenty-first year of his reign and forty-second of his age. Aiiz Billah was succeeded by his son Abu Al Mansur, surnamed Al Hakem ; who, being only eleven years of age, was put under the tuition of an eunuch of approved integrity. This reign is remarkable for nothing so much as the madness with which the khalif was seized at the latter part of it. This first manifested itself by his issuing many preposterous edicts ; but at length grew to such a height, that he fancied him- self a god, and found no fewer than 16,000 per- sons who owned him as such. These were mostly the Dararians, a new sect sprung up about this time, and so called from their chief Mohammed Ebn Ishmael, surnamed Darari. He is supposed to have inspired the khalif with this impious notion ; and, as Darari set up for a second Moses, he did not scruple to assert that Al Hakem was the great Creator of the universe ! For this reason, a zealous Turk stabbed him in the khalif 's chariot. His death was followed by a three days' uproar in the city of Cairo, during which Darari's house was pulled down, and many of his followers massacred. The sect, how- ever, did not expire with its author. He left behind him a disciple named Hamza, who, being encouraged by the mad khalif, spread it through his dominions. This was quickly followed by an abrogation of all the Mahommedan fasts, fes- tivals, and pilgrimages, the grand one to Mecca in particular; so that the zealous Mahommedans were now greatly alarmed, as justly supposing that Al Hakem designed entirely to suppress the worship of the true God, and introduce his own in its place. From this apprehension, however, they were delivered by the death of the khalif; who was assassinated, by a contrivance of his own sister, A. D. 1020. Al Hakem was succeeded by his son Al Thaher, who reigned fifteen years ; and left the throne to a son under seven years of age, named Al Mostanser Billah. In the year 1041, a revolt happened in Syria; but Al Mo- stanser having sent a powerful army into that country, under the command of one Anushtekin, he not only reduced the rebels, but considerably enlarged the Egyptian dominions in Syria. In 1054 aTurk named Al Bassasiri, having quarelled with the vizier of Al Kayein, khalif of Bagdad, fled to Egypt and put himself under the protec- tion of Al Mostanser. The latter, imagining this would be a favorable opportunity for enlarging his dominions, and perhaps seizing on

the city of Bagdad, supplied Bassasiri with money and troops. By this assistance he was enabled to possess himself of Arabian Irak, and ravaged that province to the very gates of Bagdad. On this,

Al Kayem wrote to Togrol Beg, or Tangrolipix, the Turkish sultan, to come to his assistance. The sultan immediately complied, and soon after arrived at Bagdad with a formidable army and eighteen elephants. Of this Bassasiri gave notice to Al Mostanser, and intreated him to exert himself further for his support against so power- ful an enemy. This was accordingly done, but nothing worthy of notice happened till 1058, when Bassasiri having excited Ibrahim the sul- tan's brother to revolt, Togrol Beg was obliged to employ all his force against him. This gave Bassasiri an opportunity of seizing on the city of Bagdad; and the unfortunate khalif, according to some, was taken prisoner, or, according to others, fled. Bassasiri, on his entry, caused Al Mostanser to be immediately proclaimed khalif in all quarters of the city. Al Kayem's vizier he caused to be led on a camel through the streets of Bagdad, dressed in a woollen gown, with a high red bonnet, and a leathern collar about his neck ; a man lashing him behind. Then being sewed up in a bull's hide, with the horns placed over his head, and hung upon hooks, he was beaten without ceasing till he died. The imperial palace was plundered, and the khalif himself detained a close prisoner. This success was but short lived ; for, in 1056, Togrol Beg defeated his brother Ibrahim, took him pri- soner and strangled him. He then marched to Bagdad, which Bassasiri abandoned at his ap- proach. Here the khalif Al Kayem was delivered up by Mahras, the governor of a city called Haditha, who had the charge of him ; and was immediately restored to his dignity: which Bassasiri no sooner understood, than he again ad- vanced towards the city. Against him Togrol Beg sent a part of his army under some of his generals, while he himself followed with the rest. A battle ensued, in which the army of Bassasiri was defeated, and he. himself killed. His head was brought to Togrol Beg, who caused it to be carried on a pike through the streets of Bagdad. Thus the hopes of Al Mostanser were entirely frustrated ; and from this period we may date the declension of the Egyptian empire under the khalifs. They had made themselves masters of almost all Syria; but no sooner was Bassasiri's bad success known, than the younger part of the citizens of Aleppo revolted, and set up Mahmud Azzoddawla, who immediately laid siege to the citadel. Al Mostanser sent a powerful army against him, which Azzoddawla entirely defeated, and took the general himself prisoner : soon after this he made himself master both of the city and citadel, with all their dependencies. In his new dominions he behaved with the greatest cruelty, destroying every thing with fire and sword, and making frequent incursions into the neighbouring provinces, which he treated in the same manner. This disaster was soon followed by others still more terrible. In 1066 a famine raged over all Egypt and Syria, with such

fury, that dogs and cats were sold for four or five Egyptian dinars each, and other provisions in proportion. Mul- titudes of people died in Cairo for want of food. Nay, so great was the scarcity, that the vizier had but one servant left who was able to attend him to the khalifs palace, and to whom he gave the

care of his horse when he alighted at the gate. But, at his return, he was surprised to find that the horse had been carried off, killed, and eaten by the famished people. Complaining of this to the khalif, he caused three of them who had carried off the horse to be hanged. Next day, however, he was still more surprised to hear, that all the flesh had been picked off the bones of the three unhappy criminals, so that nothing but the skeletons was left. And to such a degree of misery were the inhabitants, not only in Cairo but through all Egypt, reduced, that the carcases of those who died were sold for food at a great price. The khalif at this time is said to have showed the greatest kindness and benevolence towards his unhappy subjects; in- somuch that of 10,000 horses, mules, and ca- mels, which he had in his stables when the famine oegan, he had only three left when it was removed. The famine was followed by a plague ; and this by an invasion of the Turks under Abu Ali Al Hassan Haseroddawla, the very general who had been sent against the rebel Azzoddawla and defeated by him. He began with besieging the khalif in his own palace ; and the unhappy prince being in no condition to make resistance was obliged to buy himself off at the expense of every thing valuable that was left in his exhausted capital. This, however, did not hinder these merciless plunderers from ravaging all the Lower Egypt from Cairo to Alexandria, and committing the most horrid cruelties through that whole tract. This hap- pened in 1067 and 1068; and in 1069 and 1070 there happened two other revolts in Syria : so that this country was now almost entirely ruined. In 1095 died the khalif Al Mostanser, having reigned sixty years ; and was succeeded by his son Abul Kasem, surnamed Al Mostali. The most remarkable transaction of this prince's reign was, his taking the city of Jerusalem from the Turks in 1098 : but this success was only of short duration; for it was, the same year, taken by the crusaders. From this time to 1164, the Egyptian history affords little else than an account of the intestine broils and contests be- tween the viziers, who were now become so pow- erful, that they had in a great measure stripped the khalifs of their civil power, and left them nothing but a shadow of spiritual dignity. These contests at last gave occasion to a revolution, by which the race of Fatemite khalifs was totally extinguished : a revolution which was ac- complished in the following manner. OneShawer, having overcome all his competitors, became vizir to

Al Aded, the eleventh khalif of Egypt. He had not been long in possession of that office, when Al Dargam, an officer of rank, endeavoured to deprive him of it. Both parties quickly had recourse to arms ; and a battle ensued, in which Shawer was defeated, and obliged to fly to Nu- roddin prince of Syria, by whom he was gra- ciously received, and who promised to reinstate him in his office of vizier. As an inducement to Nuroddin to assist him more powerfully, Shawer told him that the crusaders had landed in Egypt, and made a considerable progress in the con- quest of it. He promised also, that, in case he

was reinstated in his office, he would pay Nu- roddin annually the third part of the revenues of Egypt; and would, besides, defray the whole expense of the expedition. As Nuroddin bore an implacable hatred to the Christians, he readily undertook an expedition against them, for which he was to be so well paid. He therefore sent an army into Egypt, under the command of Shawer and a general named Asadoddin. Dar- gam, in the mean time, had cut off so many generals whom he imagined favorable to Shawer's interest, that he thereby weakened the military force of the kingdom, and in a great measure deprived himself of the power of resistance. He was thus easily overthrown by Asadoddin, and Shawer reinstated in the of- fice of vizier. The faithless minister, however, no sooner saw himself firmly established in his office, than he refused to fulfil his engagements to Nu- roddin by paying the stipulated sums. Upon this, Asadoddin seized Pelusium and some other cities. Shawer then entered into an alliance with the crusaders, and Asadoddin was besieged by their combined forces in Pelusium. Nu- roddin, however, having invaded the Christian dominions in Syria, and taken a strong fortress, called Harem, Shawer and his confederates thought proper to hearken to some terms of ac- commodation, and Asadoddin was permitted to depart for Syria. In the mean time Nuroddin, having subdued the greatest part of Syria and Mesopotamia, resolved to make Shawer feel the weight of his resentment. He therefore sent back Asadoddin into Egypt with a sufficient force, to compel Shawer to fulfil his engagements : but this the vizier took care to do before the arrival of Asadoddin; and thus, for the present, avoided the danger. It was not long, however, before he gave Nuroddin fresh occasion to send this general against him.

That prince had now driven the crusaders almost entirely out of Syria, but was greatly alarmed at their progress in Egypt ; and con- sequently offended at the alliance which Shawer had concluded with them, and which he per- sisted in observing. This treaty was also thought to be contrived on purpose to prevent Shawer from being able to fulfil his promise to Nuroddin, of sending him annually a third of the revenues of Egypt. Nuroddin therefore again despatched Asadoddin into Egypt, in 1166, with a sufficient force, and attended by the famous Saladin, his own nephew. They entered the kingdom without oppo- sition, and totally

defeated Shawer and the cru- saders. They next made themselves masters of Alexandria; and, after that, overran all the Upper Egypt. Saladin was left with a considerable garrison in Alexandria ; but Asadoddin was no sooner gone, than the crusaders laid siege to that city. This at last obliged Asadoddin to return to its relief. The great losses lie had sustained in this expedition probably occasioned his agreeing to a treaty with Shawer, by which he engaged to retire out of Egypt, upon being paid a sum of money. Asadoddin v> as no sooner gone, than Shawer entered into a fresh treaty with the Franks. By this new alliance he was to attack Nuroddin in his own dominions, as he was at

that time engaged in quelling some revellers, which would effectually prevent his sending any more forces into Egypt. This treaty so provoked the Syrian prince, that he resolved to suspend his other conquests for some time, and exert his whole strength in the conquest of Egypt. By this time the crusaders had reduced Pelusium, and made a considerable progress in the king- dom, as well as in some other countries, through the divisions which reigned among the Mahpm- medan princes. In such places as they con- quered, they put many to the sword, Christians as well as Mahommedans ; selling the rest for slaves, and giving up the towns to he plun- dered by the soldiers. From Pelusium they marched to Cairo ; which was then in no posture of defence, but in the utmost confusion, by reason of the divisions which reigned in it. Shawer, therefore, as soon as he had heard of their approach, caused the ancient quarter called Mesr to be set on fire, and the inhabitants to re- tire into other parts. He also prevailed upon the khalif to solicit the assistance of Nuroddin ; which the latter was indeed much inclined to grant, as it gave him the fairest opportunity both of driving the crusaders out of Egypt, and of seizing the kingdom to himself. '"For this purpose he had already raised an army of 60,000 horse under his general Asadoddin ; and, on the receipt of Al Aded's message, gave them orders to set out immediately. The crusaders were now arrived at Cairo ; and had so closely besieged that place, that neither Shawer nor the khalif knew any thing of the approach of the Moslem army, which was hastening to their relief. The vizier, therefore, finding it impossible to hold out long against the enemy, had recourse to his old subterfuge of treaties and high promises. He sent the enemy 100,000 dinars, and promised them 900,000 more, if they would raise the siege; which they, dreading the approach of Asadoddin, very readily ac- cepted. The army of Nuroddin now approached the capital by hasty marches, and were every where received with the greatest demonstrations of joy. Asadoddin, on his arrival at Cairo, was invited by Al Aded to the royal palace, where he, with Saladin and the

other principal officers were most magnificently treated. Shawer was no less assiduous in attending punctually upon them. But, having invited the general and some others to an entertainment, he had formed a scheme of having them seized and murdered. The plot, however, being discovered, Shawer's head was cut off, and Asadoddin was made vizier in his stead. He died, however, two months and five days after his instalment, and was suc- ceeded by his nephew Saladin. The new vizier was the youngest of all the grandees who aspired to that office, but had already given some signal proofs of his valor. Some of his rivals were highly displeased with his promotion, and even publicly declared that they would not obey him. To gain these to his interest, therefore, Saladin distributed among them part of the vast treasures left by his uncle ; by which means he soon go- verned Egypt without control. Soon after his being installed into office, he totally defeated the negroes who guarded the royal palace, and had opposed his election ; by which means, and

by placing a strong garrison in the castle of Cairo, his power became firmly established. But though he had no intention of continuing in his allegiance to Nuroddin, he did not think it pru- dent at first to declare himself. He sent for his father, however, and the rest of his family, who were in Nuroddin's dominions, in order, as he said, to make them partakers of his grandeur and happiness. Nuroddin did not think proper to deny this request; though being already jealous of the great power of Saladin, he in- sisted that his family shjould consider him only as one of his geperals in Egypt. A good un- derstanding subsisted between Nuroddin and Saladin for some time, which contributed to raise the credit of the latter with the Egyptians. In 1169 Nuroddin sent him orders to omit the name of Al Aded, the khalif of Egypt, in the public prayers, and substitute that o' the khalif of Bagdad in its place. This was a dangerous attempt; as it might have produced a revolt in favor of Al Aded ; and at any rate it gave Sa- ladin an opportunity of engrossing even that small remnant of power which was left to the khalif. Al Aded, however, was not sensible of Ms disgrace : for he was on his death-bed, and past recovery, when Nuroddin's orders were executed. After his death, Saladin seized on all liis wealth and valuable effects : which consisted of jewels of prodigious size, sumptuous furni- ture, a library containing 100,000 volumes, &c. His family he caused to be closely confined ir; the most retired place of the palace ; and eithe. manumitted his slaves, or kept them for himsel

Saladin was now arrived at the highest pitch of wealth, power, and grandeur. He was, however, obliged to behave with great circumspection with regard to Nuroddin ; who still continued to treat him as his vassal, and would not suffer him to dispute the least of his commands. He relied for advice chiefly on his father Ayub, who was a consummate politician, and very ambitious of seeing his son raised to the throne of Egypt. He

*therefore advised Saladin, whilst he amused Nuroddin with feigned submissions, to take every method to secure himself*in the possession of so valuable a kingdom. Nuroddin himself, how- ever, was too great a master in dissimulation to be easily imposed on by others ; and, therefore, though he pretended to be well pleased with Saladin's conduct, he was all this time raising a powerful army, with which he was fully de- termined to invade Egypt the following year. But while he meditated this expedition, he was seized with a quinsy at the castle of Damascus, which put an end to his life in 1173. Saladin, though now freed from the apprehensions of such a formidable enemy, did not venture to assume the title of Sovereign, while he saw the suc- cessor of Nuroddin at the head of a very power- ful army. His first care therefore was to secure to himself an asylum, in case he should be obliged to leave Egypt altogether. For this purpose he chose the kingdom of Nubia ; but having despatched his brother Malek Turanshah thither, at the head of a considerable army, the latter was so much struck with the sterility and desolate appearance of the country, that he re- turned without attempting any thing. Saladin*

then sent Ms brother into Arabia Felix, to subdue that country, which had been for some time held by Abdalnabi, an Arabian prince. Malek entered the country without opposition ; and, having brought Abdalnabi to a general action, entirely defeated him, took him prisoner, and threw him into irons. He then overran and reduced under subjection to Saladin great part of the country, taking no fewer than eighty castles of considerable strength. Saladin, now sure of a convenient place of refuge, assumed the title of Sultan of Egypt; and was acknowledged as such by the preater part of the state. The zeal of the Egyp- tians for the Fatemite khalifs, however, soon pro- duced a rebellion. One Al Kanz, or Kanzanad- dowla, governor of a city in Upper Egypt, assembled a great army of blacks, or rather swarthy natives; and, marching into the lower country, was there joined by great numbers of other Egyptians. Against them Saladin despatched his brother Malek, who soon entirely dispersed them. This, however, did not prevent another insurrection under an impostor, who pretended to be David the son of Al Aded, and had collected a body of 100,000 men. But, before these had time to effect any great damage, they were sui- prisedby the sultan's forces, and entirely de- feated. Above 300 were publicly hanged, and a vast number perished in the field, insomuch that it was thought scarcely a fourth part of the whole body escaped. About this time Saladin gained a considerable advantage over the Crusaders, commanded by William II. king of Sicily. That prince had invaded Egypt with a numerous fleet and army, with which he laid close siege to Alex- andria by sea and

land. Saladin, however, marched to the relief of the city with sueh expedition, that the crusaders were seized with a sudden panic, and fled with the utmost precipitation, leaving all their military engines, stores, and baggage behind. In 1175 the inhabitants of Damascus begged of Saladin to accept the sove- reignty of that city arid its dependencies; being jealous of the minister, who had the tuition of the reigning prince, and who governed with an abso- lute sway. The sultan set out with the utmost celerity to Damascus, at the head of a chosen detachment of 700 horse. Having settled his affairs in that city, he appointed his brother Saif Al Islam governor of it ; and set out for Hems, to which he immediately laid siege. Making himself master of this place, he then proceeded to Hamah, which soon surrendered, but the citadel held out for some time. Saladin pretended that he accepted the sovereignty of Damascus and the other places he had con- quered, only as deputy to Al Malec Al Saleh, the successor of Nuroddin, and who was then linder age ; and that he was desirous of sending Azzodin, who commanded in the citadel, with a letter to Aleppo, where the young prince resided. This so pleased Azzodin, that he took the oath of fidelity to Saladin, and immediately set out •with his letter. He had not, however, been long at Aleppo before he was, by the minister's or- ders, thrown into prison ; upon which his bro- ther, who had been appointed governor of the citadel of Hamah in his absence, delivered it up to Saladin. The sultan then marched to Aleppo, VOL. VII.

but, being vigorously repulsed in several attack-. he was at last obliged to abandon the enterprise. At the same time, Kamschlegin, Al Malek's minister or vizier, hired the chief of the Batanists or Assassins, to murder him ; but the attempts made in consequence miscarried. See ASSASSINS. After raising the siege of Aleppo, Saladin re- turned to Hems, which the crusaders had invested. On his approach, however, they retired ; after which, the sultan made himself master of its strong castle. This was soon followed by the reduction of Balbec ; and these rapid conquests so alarmed the ministers of Al Malek, that, en- tering into a combination with some of the neighbouring princes, they raised a formidable army, with which they designed to crush the sultan at once. Saladin, fearing the event, of- fered to cede Hems and Hamah to Al Malek, and to govern Damascus only as his lieutenant but these terms being rejected, a battle ensuea • in which the allied army was utterly defeated, and the shattered remains of it shut up in Aleppo This produced a treaty, by which Saladin was. left master of all Syria, excepting only the cit" of Aleppo and its territory. In 1176 Saladin returned from the conquest of Syria, and made his triumphal entry into Cairo. Here, having rested himself and his troops for some time, he began to encompass the city with a wall 29,000 cubits in length, but which he did not live to finish. Next year he led a very numerous army into Palestine against the crusaders. But here his usual good fortune failed him. His army*

was entirely defeated ; 40,000 of his men were left dead on the field ; and the rest fled with so much precipitation, that, having no towns in the neighbourhood where they could shelter themselves, they traversed the vast desert between Palestine and Egypt, and scarcely stopped till they reached the capital itself. Thus the greatest part of the army perished ; and, as no water was to be had in the desert, almost all the cattle died of thirst before the fugitives arrrived on the confines of Egypt. Saladin himself seemed to have been greatly intimidated ; for in a letter to his brother Al Malek, he told him, that he was more than once in the most imminent danger; and that God, as he apprehended, had delivered him, to reserve him for the execution of some grand and impor- tant design. In 1182 he set out on an expedi- tion to Syria with a formidable army, amidst the acclamations and good wishes of the people. He was, however, repulsed with loss both before Aleppo and Al Mawsel, after having spent much time and labor in besieging these two important places. In the mean time a most powerful fleet of European ships appeared ou the Red Sea, which threatened the cities of Mecca and Medina with the utmost danger. The news of this ar- mament no sooner reached Cairo, than Abu Beer, Saladin's brother, who had been left viceroy, caused another to be fitted out with all speed under the command of Lulu, a brave and expe- rienced officer; who quickly came up with them, and a dreadful engagement ensued. The Chris- tians were defeated after an obstinate resistance, and all the prisoners butchered in cold blood. This proved such a terrible blow to the Europe- ans, that they never more ventured on a like ai-

tempt. In 1183 Saladin continued to extend his conquests. The city of Amida iu Mesopo- tamia surrendered to him in eight days ; after which, being provoked by some violences com- mitted by Amadoddin, prince of Aleppo, he re- solved to make himself master of that place. His army being now numerous, he pushed on the siege with the utmost vigor ; upon which Amadoddin capitulated, on condition of being allowed to possess certain cities in Mesopotamia, which had formerly belonged to him, and being ready to attend the sultan on whatever expedition he pleased. After the conquest of Aleppo, Saladin took three other cities, and then marched against the crusaders. Having sent out a party to reconnoitre, they fell in with a considerable detachment of Christians, whom they easily de- feated, taking about 100 prisoners, with the loss of only a single man on their side. The sultan, animated by this first instance of success, ad- vanced against the crusaders, who had assem- bled their whole army at Sepphoris in Galilee. On viewing the sultan's troops, however, and per- ceiving them to be greatly superior in strength to what they had at first apprehended, they

de- clined an engagement, nor could Saladin with all his skill force them to it. But, though he found it impossible to bring the crusaders to a decisive engagement, he harassed them greatly, and destroyed great numbers of them. He also carried off many prisoners, dismantled three of their strongest cities, laid waste their terri- tories, and concluded the campaign with taking another strong town. For three years Saladin continued to gain ground on the crusaders, yet without any decisive advantage; till 1187, when the cruel ravages committed in their territories obliged the Christians to venture a battle. Both armies, therefore, being resolved to exert their utmost efforts, a most fierce and bloody battle ensued. Night prevented victory from declaring on either side, and the fight was renewed wtih equal obstinacy next day. The victory was still left undecided; but on the third day Saladin's troops, finding themselves surrounded by the enemy on all sides but one, and there also hemmed in by the river Jor- dan, so that there was no room to fly, fought like men in despair, and at last gained a most complete victory. Vast numbers of the Chris- tians perished on the field. A large body re- tired to the top of a neighbouring hill covered with wood ; but being surrounded by Saladin's troops, who set fire to the wood, they were all obliged to surrender av discretion. Some of them were butchered by their enemies, as soon as they delivered themselves into their hands, and others thrown into irons. Among the latter were the king of Jerusalem himself, Arnold prince of Al Shawbec and Al Carac, the masters of the Tem- plars and Hospitallers, with almost the whole body of the latter. So great was the consterna- tion of the Christians on this occasion, that one of Saladin's men is said to have taken thirty of them prisoners, and tied them together with the cord of his tent, to prevent them from making their escape. The masters of the Templars and Hospitallers, with the knights acting under them, were no sooner brought into Saladin's presence,

than he ordered them all to be cut in piece-. After the engagement, Saladin seated himself in a magnificent tent, placing the king of Jerusalem on his right hand, and Arnold prince of Al Shawbec and Al Carac on his left. Then he drank to the former, and at the same time offered him a cup of snow water. This was thankfully received ; and the king immediately drank to the prinpe of Al Carac, who sat near him. ' I will not, said Saladin, suffer this cursed rogue to drink ; as that, according to the laudable and generous custom of the Arabs, would secure to him his life.' Then turning towards the prince, he reproached him with having undertaken the expedition while in alliance with himself, with having intercepted an Egyptian caravan in the time of profound peace, and massacring the people of which it was composed, &c. Not- withstanding all this, he told him, he would grant him his life, if he would embrace Mahom- medanism. This condition, however, was re- fused ; and the sultan, with one stroke of his scymitar, cut off the prince's head. This ter- rified the king of Jerusalem ;

but Saladin as- sured him he had nothing to fear, and that Arnold had brought on himself a violent death by his want of common honesty. The crusaders being thus totally defeated and dispersed, Sala- din next laid siege to Tiberias, which soon capi- tulated, as did also Acca or Ptolemais, where he found 4000 Mahommedan prisoners in chains, whom he immediately released. As the inhabi- tants of Acca enjoyed a very extensive trade, he found there not only vast sums of money, but likewise a great variety of valuable wares, all of which he seized. About the same time his bro- ther Al Malec attacked and took a very strong fortress in the neighbouihood ; after which Sa- ladin divided his army into three bodies, and soon made himself master of Neapolis, Cresarea, Sepphoris, and other cities in the neighbourhood of Ptolemais, where his soldiers found only women and children, the men having been all killed or taken prisoners. His next conquest was Joppa, which was taken by storm after a vigorous resistance. Every thing being then settled, and a distribution made of the spoils and captives, Saladin marched in person against Tebrien, a strong fortress in the neighbourhood of Sidon ; which he took by assault, after a siege of six days, and ordered the fortress to be razed, and the garrison put to the sword. From Te- brien he proceeded to Sidon, which, being de- serted by its prince, surrendered almost on the first summons. Berytus was next invested, and surrendered in seven days. Among the pri- soners Saladin found in this place the prince of a territory called Hobeil, who by way of ransom delivered up his dominions to him, and was of consequence released. About the same time, a Christian ship, in which was a nobleman of tried courage and experience in war, arrived at the harbour of Ptolemais, not knowing that it was in the hands of Saladin. The governor might easily have secured the vessel ; but neglecting the opportunity, she escaped to Tyre, where the above-mentioned nobleman, together with the prince of Hobeil, contributed not a little to re- trieve the affairs of the Christians, and enable

them to make a stand for four years longer. Saladin in the mean lime went on with his con- quests. Having made himself master of Ascalon, after a siege of fourteen days, he next, invested Jerusalem. The garrison was numerous, and made an obstinate defence ; but Saladin having at last made a breach in the walls by sapping, the besieged desired to capitulate. This was at first refused ; upon which the Christian am- bassador boldly said to him: — ‘ If that be the case, O sultan, know that we who are ex- tremely numerous, and have been restrained from fighting like men in despair, only by the hopes of an honorable capitulation, will kill all our wives and children, commit all our wealth and valuable effects to the

flames, massacre 5000 prisoners now in our hands, leave not a single beast of burden or animal of any kind belonging to us alive, and level with the ground the rock you esteem sacred, together with the temple Al Aksa. After this we will sally out upon you in a body ; and doubt not but we shall either cut to pieces a much greater number of you than we are, or force you to abandon the siege.' This desperate speech had such an effect upon Saladin, that he immediately called a council of war, at which all the general officers declared, that it would be most proper to allow the Christians to depart un- molested. The sultan therefore allowed them to march out freely with their wives, children, and all their effects ; after which he received ten dinars from every man who was capable of pay- ing that sum, five from every woman, and two from every young person under age. For the poor who were not able to pay any thing, the rest of the inhabitants raised the sum of 30,000 dinars. Most of the inhabitants of Jerusalem were escorted by a detachment of Saladin's troops to Tyre; and, soon after, he advanced with his army against that place. As the port was blocked up by a squadron of five men of war, Saladin imagined that he should easily be- come master of it But in this he found himself mistaken. For one morning, by break of day, a Christian fleet fell upon his squadron, and en- trely defeated it ; nor did a single vessel escape 'heir pursuit. A considerable number of the Mahommedans threw themselves into the sea during the engagement; most of whom were drowned, though some few escaped. About the same time Saladin himself was vigorously re- pulsed by land ; so that, after calling a council of war, it was thought proper to raise the siege. In 1188 Saladin reduced the city of Laodicea and some others, together with many strong castles; but met also with several repulses. At last he took the road to Antioch ; and having reduced all the fortresses that lay in his way, many of which had been deemed impregnable, Bohemond, prince of Antioch, was so much intimidated that he desired a truce for seven or eight months. This Saladin found himself obliged to comply with, on account of the prodigious" fatigues his men had sustained, and because his auxiliaries BOW demanded leave to return home. All these heavy losses of the Christians, however, proved in some respects an advantage, as they were thus obliged to lay aside their animosities, which had originally proved the ruin of their affairs. Those

who had defended Jerusalem, and most of the other fortresses taken by Saludir., having retreated to Tyre, formed there a very numerous body. This proved the means of preserving thai city arid also of re-establishing their affairs for ths present. For, having received powerful succours from Europe, they were enabled, in 118fJ, to take the field with 30,000 fooUand 2000 horse. Their first attempt was upon Alexandretta ; from whence they dislodged a strong party of Mahom- medans, and made themselves masters of the place with very little loss. They next laid siege to

Ptolemais; of which Saladin had Tio sooner received intelligence, than he marched to its re- lief. After several skirmishes with various suc- cess, a general engagement ensued, in which Saladin was defeated with the loss of 10,000 men. This enabled the Christians to carry on the siege of Ptolemais with greater vigor ; which place, however, they were not able to reduce for two years. This year the sultan was greatly alarmed, by an account that the emperor of Germany was advancing to Constantinople with an army of 260,000 men, to assist the other crusaders. Tins prodigious armament, however, came to nothing. The multitude were so reduced with sickness, famine, and fatigue, that scarcely 1000 of them reached the camp before Ptolemais. The siege of that city was continued, though with bad suc- cess on the part of the Christians. They were repulsed in all their attacks, their engines were burnt with naphtha, and the besieged always re- ceived supplies of provisions in spite of the ut- most efforts of the besiegers ; while a dreadful famine and pestilence raged in the Christian camp, which sometimes carried off 200 people a-day. In 1191 the Christians received power- ful succours from Europe. Philip II. of France, and Richard I. of England, arrived before the camp at Ptolemais. The latter was esteemed the bravest and most enterprising of all the generals the crusaders had; and the spirits of his soldiers were greatly elated by the thoughts of acting under such an experienced commander. Soon after his arrival, the English sunk a Mahomme- dan ship of vast size, having on board 650 sol- diers, and a great quantity of arms and provisions, going from Berytus to Ptolemais. Of the soldiers and sailors who navigated this vessel, only one person escaped ; who, being taken prisoner by the English, was despatched to the sultan with the news of the disaster. The besieged still defended themselves with the greatest resolu- tion ; and, the king of England happening to fall sick, the operations of the besiegers were delayed. On his recovery, however, the attacks were renewed with such fury, that the inhabitants found themselves under a necessity of surrender- ing the place. One of the terms of the capitula- tion was, that the crusaders should receive a very considerable sum of money from Saladin, upon delivering up their Mahommedan prisoners. With this article Saladin refused to comply ; in consequence of which. Richard caused 3000 of those unfortunate men to be slaughtered at once. After the reduction of Ptolemais, the king of England, now made generalissimo of the crusa- ders, took the road to Ascalon in order to be- siege thai place ; after which/ he intended to

make an attempt upon Jerusalem itself. Saladin, to intercept his passage,

placed himself in the way with an army of 300,000 men. On this occasion was fought one of the greatest battles of that age. Saladin was totally defeated, with the loss of 40,000 men ; and Ascalon soon fell into the hands of the crusaders. Other sieges were • afterwards carried on with success, and Richard even approached within sight of Jerusalem, in 1192, when, by the weakened state of his army, and the divisions among the officers, he was under the necessity of concluding a truce with the sultan, for three years, three months, three weeks, three days, and three hours ; soon after which Richard set out on his return to England. In 1193 Saladin died, to the inex- pressible grief of the Mahommedans, who held him in the utmost veneration. His dominions in Syria and Palestine were divided among his chil- dren and relations into many petty principalities. His son Othman succeeded to the crown of Egypt ; but, as none of his successors possessed the enterprising genius of Saladin, the history from that time to 1250 affords nothing remark- able.*

In 1250 the reigning sultan, Malek Al Salek, was dethroned and slain by the Mamelukes or Mamlouks, as they are called, a kind of mercenary soldiers who served under him. Inconsequence of this revolution, the Mamelukes became masters of Egypt, and chose a sultan from among them- selves. These Mamelukes were originally young Turks or Tartars, sold to private persons by the merchants, from whom they were bought by the sultan, educated at his expense, and employed to defend the maritime places of the kingdom. The reason of this institution originally was, that the native Egyptians were become so cowardly, treacherous, and effeminate, from a long course of slavery, that they were unfit for arms. The Mamelukes, on the contrary, made most excellent soldiers ; for, having no friends but among their own corps, they turned all their thoughts to their own profession. According to M. Volney, they came originally from Mount Caucasus, and were distinguished by the flaxen color of their hair. The expedition of the Tartars, in 1227, proved indirectly the means of introducing them into Egypt. These horrible conquerors, having slaughtered and massacred till they were weary, brought along with them an immense number of slaves of both sexes, with whom they filled all the markets in Asia. The Turks purchased about 12,000 young men, whom they bred up in the profession of arms, in which they soon at- tained to great perfection ; but at last, becoming mutinous, they turned their arms against their masters, and in 1250 deposed and murdered the sultan, Malek. The Mamelukes having thus got possession of the government, and neither under- standing nor valuing any thing but the art of war, every species of learning decayed in Egypt, and a great degree of barbarism was introduced. Neither was their empire of long duration, not- withstanding their martial abilities. The reason was, that they were originally only a small part of the sultan of Egypt's standing forces. As a numerous standing army was

necessary in a coun- try where the fundamental maxim of government

was, that every native must be a slave, they were at a loss how to act; being justly suspicious of all the rest of the army. At last they resolved to buy Chnstian slaves, and educate them in the same way that they themselves had formerly been. These were commonly brought from Circassia, where the people, though they professed Christianity, made no scruple of selling their children. When they were completed in their military education, these soldiers were disposed of through all the fortresses erected in the coun- try, to bridle the inhabitants; and, because in their language such a fort was called Borge, the new militia obtained the name of Borgites. By this expedient the Mamelukes imagined they would be able to secure themselves in the sovereignty, but they were mistaken. In process of time, the old Mamelukes grew proud, indolent, and lazy : and the Borgites, taking advantage of this, rose upon their masters, deprived them of the government, and transferred it to themselves about A. D. 1382. The Borgites, however, assumed the name of Mamelukes; and became famous for ferocious valor. They were almost perpetually engaged in wars either foreign or domestic ; and their do- minion lasted till 1517, when they were invaded by Selim I., the Turkish sultan. The Mame- lukes defended themselves with incredible valor; notwithstanding which, being overpowered by numbers, they were defeated in every engage- ment. The same year, their capital, the city of Cairo, was taken, and a terrible slaughter made of those who defended it. The sultan, Tuman Bey, was forced to fly ; and, having collected all his forces, he ventured a decisive battle. The most romantic efforts of valor, however, were in- sufficient to cope with the innumerable multitude which composed the Turkish army. Most of his men were cut in pieces, and the unhappy prince himself was at last obliged to take shelter in a marsh. He was dragged from his hiding place, where he had stood up to the shoulders in water, and soon after put to death. With him ended the glory, and almost the existence, of the Mame- Jukes, who were now every where searched for and cut in pieces.

Selim gave a specimen of his government the very day after his being put in full possession of it by the death of Tuman Bey. Having ordered a theatre to be erected, with a throne upon it, on the banks of the Nile, he caused all the prisoners, upwards of 30,000, to be beheaded in his pre- sence, and their bodies thrown in the river. But notwithstanding this horrid barbarity, he did not attempt the total extermination of the Mame- lukes, but seems to have recollected that, if he established a pacha in Egypt with the same powers with which he invested those of other parts, he would be under strong temptations to revolt, by reason of the distance from the capital. He therefore proposed a new form of govern- ment, by which the power, being distributed among the different members of the state, should preserve an equilibrium ; so that the dependence of the whole should be upon himself.

With this view he chose, from among those Mamelukes who had escaped the general massacre, a divan, or council of regency, consisting of the pacha and chiefs of the seven military corps. The foimer

was to notify to this council the orders of the Porte, to send the tribute to Constantinople, and provide for the safety of government both exter- nal and internal ; while, on the other hand, the members of the council had a right to reject the orders of the pacha, or even of deposing him, provided they could assign sufficient reasons. All civil and political ordinances must also be ratified by them. Besides this, he formed the whole body into a kind of republic ; for which purpose he issued an edict, stating : ‘ Though, by the help of the Almighty, we have con- quered the whole kingdom of Egypt with our invincible armies, nevertheless our benevo- lence is willing to grant to the twenty-four sangiacs of Egypt (see SANGIAC) a republi- can government with the following conditions. 1. That our sovereignty shall be acknowledged by the republic ; and, in token of their obedi- ence, our lieutenant shall be received as our representative, but to do nothing against our will or the republic; but, on the contrary, shall co-operate with it for its welfare on all occa- sions : Or, if he shall attempt to infringe any of its privileges, the republic is at full liberty to suspend him from his authority, and to send to our Sublime Porte a complaint against him, &c. 2. In time of war the republic shall provide 12,000 troops at its own expense, to be commanded by a sangiac or sangiacs. 3. The republic shall raise annually and send to our Sublime Porte the sum of 560,000 aslans (see ASLAN), accompanied by a sangiac, who shall have a satisfactory receipt, &c. 4. The same sum to be raised for the use of Medina, and Kiabe, or Mecca. 5. No more troops or jani- zaries shall be kept by the republic in time of peace than 14,000 ; but in time of war they may be increased to oppose our and the republic’s enemies. 6. The republic shall send annually to our granary, out of the produce of the country 1,000,000 of casiz (twenty-five occa, see OCCA), or measures of corn, viz. 600,000 of wheat, and 400,000 of barley. 7. The republic, fulfil- ling these articles, shall have a free government over all the inhabitants of Egypt, independent of our lieutenant; and shall execute the laws of the country with the advice of the mollah, or high priest, under our authority, and that of our successors. 8. The republic shall be in pos- session of the mint as heretofore ; but with the condition that it shall be under the inspection of our lieutenant, that the coin may not be adul- terated. 9. That the republic shall elect a sheik bellet out of the number of beys, to be confirmed by our lieutenant ; and that the said sheik bellet shall be our representative, and shall be esteemed by all our lieutenants, and all our officers, both of high and low rank, as the head of

the republic ; and if our lieutenant is guilty of oppression, or exceeds the bounds of his authority, the said sheik bellet shall represent the 'grievances of the republic to our Sublime Porte. But in case any foreign enemy or enemies disturb the peace of the republic, we and our successors engage to protect it with our utmost power, until peace is re-established, without any cost or expense to the republic. Given and signed by our clemency to the repub-

lic of Egypt.' Thus the power of the Mamelukes still continued in a very considerable degree, and gradually increased so much as to threaten a total loss of dominion to the Turks. During the last sixty years, the Porte having relaxed from its vigilance, such a revolution took place, that the Turkish power is now almost reduced to nothing. But to understand this we must consider the way in which the race of Mamelukes was continued or multiplied in Egypt. This is not in the ordinary way, by marriage ; on the contrary, M. Volney assures us, that 'during 550 years in which there have been Mamelukes in Egypt, not one of them has left subsisting issue; all their children perish in the first or second descent. Almost the same thing holds good with regard to the Turks ; and it is ob- served, that they can only secure the continu- ance of their families by marrying women who are natives, which the Mamelukes have always disdained. The means by which they are per- petuated and multiplied are the same by which they were first established, viz. by slaves brought from their original country. From the time of the Moguls this commerce has been continued on the banks of the Cuban and Phasis, in the same manner as it is carried on in Africa by the wars among the hostile tribes, and the misery or avarice of the inhabitants, who sell their children to strangers. The slaves thus procured are first brought to Constantinople, and afterwards dis- persed through the empire, where they are pur- chased by the wealthy. When the Turks subdued Egypt (says M. Volney), they should undoubtedly have prohibited this dangerous traffic ; their omitting which seems about to dis- possess them of their conquest, and which several political errors have long been preparing. For a considerable time the Porte had neglected the affairs of this province : and, in order to restrain the pachas, had suffered the divan to extend its power till the chiefs of the janizaries and azabs were left without control. The soldiers them- selves, become citizens by the marriages they had contracted, were no longer the creatures of Constantinople: and a change introduced into their discipline still more increased these disor- ders. At first the seven military corps had one common treasury ; and, though the society was rich, individuals not having any thing at their own disposal, could effect nothing. The chiefs finding their power diminished by this regulation, got it abolished, and obtained permission to possess distinct property, lands, and villages. And as these lands and villages depended on the Mameluke governors, it was necessary to con- ciliate them, to prevent

their oppressions. From that moment the beys acquired an ascendancy over the soldiers, who till then had treated them with disdain : and this continually increased, as their government procured them considerable riches. These they employed in creating friends. They multiplied their slaves; and, after emanci- pating them, employed all their interest to advance them in the army. These upstarts, retaining for their patrons the same superstitious veneration common in the East, formed factions implicitly devoted to their pleasure.' Thus, about 1746, Ibrahim, one of the kiayas of the

*janizaries (see KI*YA), rendered himself in reality master of Egypt ; having managed mat- ters so well, that of the twenty-four beys, or sangiacr, eight were of his household. His influence too was augmented by always leaving vacancies, in order to enjoy the emoluments himself, while the officers and soldiers of his corps were attached to his interest; and his power was completed by gaining over Rodoan, the most powerful of all the colonels, to his interest. Thus the pacha became altogether unable to oppose him, and the orders of the sultan were less respected than those of Ibra- him. On his death, in 1757, his family, i.e. his enfranchised slaves, continued to rule in a despotic manner. Waging war, however, among each other, Rodoan and several other chiefs were killed; but, in 1766, Ali Bey, who had been a principal actor in the disturbances, over- came his enemies, and for some time rendered himself absolute master of Egypt. Of this man there are various accounts. The following is given by M. Volney : — It is supposed that Ali was born among the Abazans, a people of Mount Caucasus; from whom, next to the Cir- ˆassians, the slaves most valued by the Turks are obtained. Having been brought to a public sale at Cairo, Ali was bought by two Jew brothers, named Isaac and Yousef, who made a present of him to Ibrahim. At this time he is supposed to have been about thirteen or four- teen years old, and was employed by his patron in offices similar to those of the pages belonging to European princes. The usual education was also given him, viz. that of learning to manage a horse well ; fire a carbine and pistol, and throw the djerid, a kind of dart used in the diversions of that country. He was also taught the exer- cise of the sabre, and a little reading and writing. In ail these feats of activity he discovered such impetuosity, that he obtained the surname of Djendali, or the madman; and, as he grew up, discovered an ambition proportionable to the activity displayed in his youth. About the age of eighteen or twenty Ibrahim gave him his freedom ; the badge of which among the Turks is letting the beard grow, for among that people it is thought proper only for women and slaves to want a beard. By his kind patron also he was promoted to the rank of kachef, or governor*

of a district, and at last elected one of the twenty-four beys. By the death of Ibrahim, in 1757, he had an opportunity of satisfying his ambition ; being now engaged in every scheme for the promotion or disgrace of the chiefs, and having had a principal share in the ruin of Rodoan, Rodoan's place was quickly filled by another, who did not long enjoy it ; and in 1 762 Ali Bey, then styled Sheik el Beled, having got Abdelrahman, the possessor, exiled, procured himself to be elected in his room. However, he soon shared the fate of the rest, being condemned to retire to Gaza. This town, being under the dominion of a Turkish pacha, was by no means a safe retreat; for which reason, Ali having turned off to another place, kept himself concealed for seme time, until in 1766 his friends at Cairo procured his recall. On this he appeared sud- denly in that city; and killed in one night four

of the beys who were inimical to his designs, banished the rest, and assumed the whole power to himself. Still, however, his ambition was not satisfied : and he determined to throw off his dependence on the Porte altogether, and become sultan of Egypt. With this view he expelled the pacha, refused to pay the accustomed tribute, and in 1768 proceeded to coin money in his own name. The Porte, being at that time on the eve of a dangerous war with Russia, had not leisure to attend to the proceedings of Ali Bey ; so that the latter had an opportunity of going forward with his enterprises very vigorously. His first expedition was against an Arabian prince named Hammam ; against whom he sent his favorite Mohammed Bey, xinder pretence that the former had concealed a treasure entrust- ed with him by Ibrahim, and that he afforded protection to rebels. Having destroyed this unfortunate prince, he next began to put in exe- cution a plan proposed to him by a young Venetian merchant, of rendering Gedda, the port of Mecca, an emporium for all the commerce of India; and even imagined he should be able to make the Europeans abandon the passage to the Indies by the Cape of Good Hope. With this view, he fitted out some vessels at Suez : and manning them with Mamelukes, commanded the bey Hassan to sail with them to Gedda, and seize upon it, while a body of cavalry under Mohammed Bey advanced against the town. Both these commissions were executed accord- ing to his wish, and Ali became quite intoxicated with his success. Nothing but ideas of con- quest now occupied his mind, without con- sidering the immense disproportion between his own force and that of the grand seignior. Cir- cumstances were then indeed very favorable to his schemes. The sheik Daher was in rebellion against the Porte in Syria; and the pacha of Damascus had so exasperated the people by his extortions, that they were ready for a revolt. Having therefore made the necessary prepara- tions, Ali Bey despatched, in 1770, about 500 Mamelukes to take possession of Gaza, and thus secure an entrance into Palestine. Osman the pacha of Damascus, however, no sooner heard of the

invasion than he prepared for war, while the troops of Ali Bey held themselves in readiness to fly on the first attack. Sheik Daher hastened to their assistance, while Osman fled without even offering to make the least resistance ; thus leaving the enemy masters of all Palestine. About the end of February, 1771, the grand army of Ali Bey arrived : which was supposed to consist of 60,000 men. M. Volney allows that there might be two thirds of that number, who were classed as follows : 5000 Mamelukes, constituting the whole effective part of the army ; 15,000 Arabs from Barbary on foot, constituting the whole infantry of the army. Besides these, the servants of the Mamelukes, each of whom had two, would constitute a body of 10,000 men. A number of other servants would constitute a body of about 2000 ; and the rest of the number would be made up by sutlers and other usual attendants on armies. It was commanded by Mohammed Bey, the friend of Ali. ‘ But,’ says M. Volney, ‘ as to order and discipline, these must not be mentioned .

The armies ol the Turks and Mamelukes are nothing but a confused multitude of horsemen without uniforms, on horses of all colors and sizes, without either keeping their ranks or observing any regular order.’ This rabble took the road to Acre, leaving wherever they passed sufficient marks of their rapacity and want of discipline. At Acre a junction was formed with the troops of sheik Daher, consisting of 1500 Safadians, the name of sheik Daher’s subjects, from Safad, a village of Galilee, originally under his jurisdiction. These were on horseback, and accompanied by 1200 Motualis cavalry, under the command of sheik Nasif, and about 1000 Mogrebian infantry. Thus they proceeded towards Damascus, while Osman prepared to oppose them by another army equally numerous and ill regulated. ‘ The Asiatics,’ says M. Vol- ney, ‘ are unacquainted with the elements of war. Their armies are mere mobs, their marches, ravages, their campaigns inroads, and their bat- tles bloody frays. The strongest or most adven- turous party goes in quest of the other, which frequently flies without making any resistance. If they stand their ground they engage pell mell, discharge their carbines, break their spears, and hack each other with their sabres ; for they have seldom any cannon, and when they have, they are but of little service. A panic frequently diffuses itself without cause; one party flies, the other shouts victory ; the vanquished sub- mit to the will of the conqueror, and the cam- paign often terminates without a battle. Such, in a great measure, were the military opera- tions in Syria in 1771. The combined army of AH Bey and sheik Daher marched to Damascus. The pachas waited for them ; they approached, and, on the 6th of June, a decisive action took place : the Mamelukes and Safadians .rushed on the

Turks with such fury, that, terrified at their courage, they immediately took flight, and the pachas were not the last in endeavouring to make their escape. The allies became masters of the country, and took possession of the city without opposition, there being neither walls nor soldiers to defend it. The castle alone resisted. Its ruinous fortifications had not a single cannon, much less gunners ; but it was surrounded by a muddy ditch, and behind the ruins were posted a few musqueteers; and these alone were sufficient to cneck this army of cavalry. — iAs the besieged, however, were already conquered by their fears, they capitulated the third day, and the place was to be surrendered next morning, when, at day- break, a most extraordinary revolution took place.' This was no less than the defection of Mohammed Bey himself, whom Osman had gained over in a conference during the night. At the moment, therefore, that the signal of surrender was ex- pected, this treacherous general soimded a re- treat, and turned towards Egypt with all his cavalry, flying with as great precipitation as if he had been pursued by a superior army. Mo- hammed continued his march with such celerity, that the report of his arrival in Egypt reached Cairo only six hours before him. Thus All Bey found himself at once deprived of all his expec- tations of conquest ; and, what was worse, found a traitor whom he durst not punish at the head

ofhisfoices. A Buddcn reverse of fortune now took place. Several vessels laden with corn for Sheik Daher were taken by a Russian privateer ; and Mohammed Bey, whom he designed to have put to death, not only made his escape, but was so well attended, that he could not be attacked. His followers continuing daily to increase in number, Mohammed soon becanle sufficiently strong to march towards Cairo; and, in April 1772, having defeated the troops of AH in a ren- contre, entered the city sword in hand, while the latter had scarce time to make his escape witli 800 Mamelukes. With difficulty he was enabled to get to Syria by the assistance of Sheik Daher, whom he immediately joined with the troops he had with him. The Turks under Osman were at that time besieging Sidon, but raised the siege on the approach of the allied army, consisting of about 7000 cavalry. Though the Turkish army was at least three times their number, the allies did not hesitate to attack them, and gained a complete victory. Their affairs now began to wear a«rnore favorable aspect; but the military operations were retarded by the siege of Yafa, which had revolted, and though defended only by a garden wall, without any ditch, held out for eight months. In the beginning of 1773 it capitulated, and AH Bey began to think of re- turning to Cairo. For this purpose Sheik Daher had promised him succours ; and the Russians, with whom he had now contracted an alliance, made him a similar promise. AH, however, ruined every thing by his own impatience. DC ceived by an astrologer, who pretended that the auspicious moment when he was highly favored by the stars was just

arrived, he set out without waiting for the arrival of his allies. He was also farther deceived by a stratagem of Mohammed, who had by force extorted from the friends of AH Bey letters pressing his return to Cairo, where the people were weary of his ungrateful slave, and wanted only his presence in order to expel him. AH Bey accordingly set out with his Mamelukes and 1500 Safadians given him by Daher ; but no sooner entered the desert which separates Gaza from Egypt, than he was attacked by a body of 1000 chosen Mamelukes who were lying in wait for his arrival. They were commanded by a young Bey, named Mourad ; who, being enamoured of the wife of AH Bey, had obtained a promise of her from Mohammed, in case he could bring him her husband's head. As soon as Mourad perceived the dust by which the approach of AH Bey's army was announced, he rushed upon him, attacked and took prisoner AH Bey himself, after wounding him in the fore- head with a sabre. Being conducted to Mo- hammed Bey, the latter pretended to treat him with extraordinary respect, and ordered a mag- nificent tent to be erected for him ; but in three days he was found dead of his wounds, as was given out; though some affirm, with equal probability, that he was poisoned. After the death of AH Bey, Mohammed took upon him the supreme dignity; but this change of masters proved of very little service to the Egyptians. At first he pretended to be only the defender o the rights of the sultan, remitted the usual tribute to Constantinople, and took the customary oatb

of unlimited obedience ; after which he solicited permission to make war upon Sheik Daher, the ally of All Bey. The reason of this request was a mere personal pique ; and, as soon as it was granted, he made the most diligent preparations for war. Having procured an extraordinary train of artil- lery, he provided foreign gunners, and gave the command of them to an Englishman, named Ro- hinson. He brought from Suez a cannon sixteen feet long, which had for a considerable time re- mained useless ; and at length, in February 1776, he appeared in Syria with an army equal to that which he had formerly commanded under Ali Bey. Daher's forces, despairing of being able to cope with such a formidable armament, abandoned Gaza, of which Mohammed immediately took possession, and then marched towards Fafa. The history of this siege M. Volney gives as a specimen of the Asiatic manner of conduct- ing operations of the kind. ' Yafa,' says he, ' the ancient Joppa, is situated on a part of the coast, the general level of which is very little above the sea. The city is built on an eminence, in the form of a sugar-loaf, in height about 130 feet perpendicular. The houses, distributed on the declivity, appear rising above each other, like the steps of an amphitheatre. On the summit is a small

citadel, which commands the town ; the bottom of the hill is surrounded by a wall without a rampart, of twelve or fourteen feet high, and two or three in thickness. The bat- tlements on the lop are the only tokens by which it is distinguished from a common garden wall. This wall, which has no ditch, is environed by gardens, where lemons, oranges, and citrons grow in this light soil to a most prodigious size. The city was defended by 500 or 600 Sa- fadians and as many inhabitants, who, at the sight of the enemy, armed themselves with their sabres and musquets; they had likewise a few brass cannon, twenty-four pounders, without carriages ; these they mounted as well as they could, on timbers prepared in a hurry : and, sup- plying the place of experience by hatred and courage, they replied to the summons of the enemy with menaces and cannon shot. Mo- hammed, finding he must have recourse to force, formed his camp before the town; but was so little acquainted with the business that he ad- vanced within half cannon-shot. The bullets, which showered upon the tents, apprising him of his error, he retreated ; and, by making a fresh experiment, was convinced he was still too near. At length he discovered the proper distance, and set up his tent, in which the most extravagant luxury was displayed : around it, without any order, were pitched those of the Mamelukes, while the Barbary Arabs formed huts with the trunks and branches of the orange and lemon trees, and the followers of the army arranged them- selves as they could : a few guards were distribut- ed here and there ; and, without making a single entrenchment, they called themselves encamped. Batteries were now to be erected, and a spot of rising ground was made choice of to the south- east of the town, where, behind some garden walls, pieces of cannon were pointed, at 200 paces from the town, and the firing began, not- withstanding the musquetry of the enemy, who,

from the tops of the terraces, killed several of the gunners. It is evident that a wall only three feet thick, and without a rampart, must soon have ;i large breach in it ; and the question was not how- to mount, but how to get through it. The Mame- lukes were for doing it on horseback: but they were told that this was impossible ; and they con- sented, for the first time, to march on foot. It must have been a curious sight to see them, witi their huge breeches of thick Venetian cloth, em- barrassed with their tucked up beniches, theit crooked sabres in hand, and pistols hanging to their sides, advancing and tumbling among the ruins of the wall. They imagined that they had conquered every difficulty when this obstacle was surmounted ; but the besieged, who formed a better judgment, waited till they arrived at the empty space between the city and the wall ; where they assailed them from the terraces and windows of the houses with such a shower of bullets, that the Mamelukes did not so much as think of setting them on fire, but retired under a persuasion that the breach was utterly impracti- cable, since it was impossible to enter it on horseback. Mourad Bey brought them

several times back to the charge, but in vain. Six weeks passed in this manner ; and Mohammed was dis- tracted with rage, anxiety, and despair. The be- sieged, however, whose numbers were diminished by the repeated attacks, became weary of de- fending alone the cause of Daher. Some per- sons began to treat with the enemy ; and it was proposed to abandon the place, on the Egyptians giving hostages. Conditions were agreed upon, and the treaty might be considered as concluded, when, in the midst of the security occasioned by this belief, some Mamelukes entered the town ; numbers of others followed their example, and attempted to plunder. The inhabitants de- fended themselves, and the attack recommenced : the whole army then rushed into the town, which suffered all the horrors of war ; women and chil- dren, young and old men, were all cut to pieces, and Mohammed, equally mean and barbarous, caused a pyramid formed of the heads of these unfortunate sufferers to be raised as a monument of his victory.' By this disaster the greatest ter- ror and consternation were every where diffused. Sheik Daher himself fled, and Mohammed soon became master of Acre also. Here he behaved with his usual cruelty, and abandoned the city to be plundered by his soldiers. The French merchants claimed an exemption, and it was procured with the utmost difficulty : nor was even this likely to be of any consequence ; for Mohammed, informed that the treasures of Ibra- him, Kiaya of Daher, had been deposited in that place, made an immediate demand of them, threatening every one of the merchants with death if the treasures were not instantly pro- duced. A day was appointed for making the research ; but, before this came, the tyrant him- self died of a malignant fever after two days illness. His death was no sooner known than the army made a precipitate retreat. Sheik Daher continued his rebellion for some time, but was at last entirely defeated, and his head sent to Constantinople by Hassan Pacha the Turkish high admiral. The death of Mohammed was no

sooner known in Egypt, than Mourad Bey has- tened to Cairo in order to dispute the sovereignty with Ibrahim Bey, who had been entrusted with the government on his departure from that place for Syria. Preparations for war were made on both sides ; but at last both parties, finding that the contest must be attended with great diffi- culty, as well as very uncertain in the event, came to an accommodation, by which it was agreed that Ibrahim should retain the title of Sheik El Beled, and the power should be di- vided between them. But now the beys and others who had been promoted by Ali Bey, per- ceiving their own importance totally annihilated by this new faction, resolved to shake off the yoke, and therefore united in a league under the title of the House of Ali Bey. They conducted their matters with

so much silence and dexterity, that both Mourad and Ibrahim were obliged to abandon Cairo. In a short time, however, they returned and defeated their enemies though three times their number ; but, notwithstanding this success, it was not in their power totally to sup- press the party. This indeed was owing en- tirely to their unskilfulness in the art of war, and their operations for some time were very trifling. At last, a new combination having been formed among the beys, five of them were sentenced to banishment in the Delta. They pretended to comply with this order, but took the road of the desert of the Pyramids, through which they were pursued for three days to no pur- pose. Arriving safe at Miniah, a village situated on the Nile, four leagues above Cairo, they took up their residence, and, being masters of the river, soon reduced Cairo to distress by intercepting its provisions. Thus a new expe- dition became necessary, and Ibrahim took the command of it upon himself. In October, 1783, he set out with an army of 3000 cavalry ; the two armies soon came in sight of each other, but Ibrahim thought proper to terminate the affairs by negociation. This gave such offence to Mou- rad, who suspected some plot against himself, that he left Cairo. A war betwixt the two rivals was now daily expected, and the armies continued for twenty-five days in sight of each other, only separated by the river. Negociations took place ; and the five exiled beys finding themselves aban- doned by Mourad, took to flight, but were pur- sued and brought back to Cairo. Peace seemed now to be re-established ; but, the jealousy of the two rivals producing new intrigues, Mourad was once more obliged to quit Cairo in 1784. Forming his camp, however, directly at the gates of the city, he appeared so terrible to Ibrahim, that the latter thought proper in his turn to re- tire to the desert, where he remained till March 1785. A new treaty then took place ; by which the rivals agreed to share the power between them. From that time, we have no accounts of any re- markable transaction in Egypt till the French invaded that country in 1798; and of this, with the events that followed, we shall now take a brief survey.

Among all the powers which the conduct of the French republicans brought against them, Great Britain was the most formidable ; the rulers of France, therefore, made her humiliation a

leading object in all their designs: and they were most likely to effect this by the destruction of her commerce. The French then looked for- ward, through Egypt, to the subjugation of the East Indies; and, to execute this daring and desperate undertaking, Buonaparte was appointed commander in chief of the army of the East. In this station he accordingly embarked at Toulon with about 35,000 men, and after stopping at Malta, which he plundered, he pursued his voy- age for the coast of Egypt, where he arrived on the 1st of July 1798. The army disembarked the same night, and on the 2nd they reached Alexandria, which was taken by assault on the evening

of the 5th From Alexandria the French marched for Cairo, in the course of which they had several skirmishes with the Mamelukes ; but arrived on the 20th within six miles of Grand Cairo, which surrendered on the 23d of the samp month. On the 25th the French general attacked one of the enemy's posts at Lambabe, in which about 300 of the enemy fell ; but this was only a prelude to the battle of the Pyramids, which took place on the 26th, and from the issue ot which the French appeared masters of Egypt. Of about 10,000 Mamelukes, 1000 were killed. 1000 drowned, and the rest fled, many of them wounded : 400 camels loaded with baggage, 300 horses richly accoutred, and fifty pieces of artil- lery, fell into the hands of the conquerors. But though the good fortune of Buonaparte seemed thus far to have followed him in Egypt, he soon experienced a reverse of an irreparable nature. This was no less than the destruction of his fleet: an event so disastrous to him, he appeared to have no suspicion of, and its effects, heightened by the disappointment he met with at Acre, were displayed in his future desperate conduct. After the surrender of Cairo, Buonaparte formed his army into three divisions, one of which, under Desaix, he destined for Upper Egypt, to pursue the flying Mamelukes ; another he appointed for the defence of Cairo, while he marched himself, at the head of the third, in pursuit of Ibrahim Bey, who had taken his route towards Syria with a valuable caravan. In order, however, to oppose and prevent the execution of Buonaparte's designs in Egypt, the British government entered into an alliance with the Porte, and a plan was concerted betwixt them, the chief preparations for the accomplishment of which were made in Syria, under the superintendence of the pacha Djezzar. An army from Asia Minor was to make an attack upon the frontiers of Egypt to- wards Syria, while its operations were to be favored by making a powerful diversion towards the mouths of the Nile, as well as by different assaults to be made in Upper Egypt, with the remains of Mourad Bey's army. Sir Sidney Smith sailed from Portsmouth to direct the exe- cution of this extensive plan, and to co-operate, as much as possible, towards its success, with the maritime force under his command. Care was taken, in the mean time, to block up the har- bour of Alexandria with four ships of the line and five frigates, under the command of commodore Hood, who, without the assistance of a land force sufficient to attack Alexandria, found impracticable to burn or destroy the French fleet

of transports. The report that the French ves- sels in the old port were burnt, he also found to be groundless ; and he had made no use of the light vessels sent him by the combined fleet of Turks and Russians. Buonaparte, understanding what was going on, quickly formed the design of leaving

Egypt, and of marching into Syria, for the purpose of destroying the preparations of the pacha Djezzar, and of disconcerting the plans of Sir Sidney Smith; but the result of this enter- prise proved the reverse of the hero's expectations. Jaffa, the ancient Joppa, did not surrender till it had made an obstinate defence, and even then it was only to the superiority of European tactics. From Jaffa the hitherto triumphant general marched his army, in three divisions, against St. Jean d'Acre ; but here he was obliged to stop, for the pacha, encouraged and supported by Sir Sidney Smith, baffled all his attempts upon the place, during a siege of about two months ; and, after the loss of nearly the half of his army, he was forced to return to Egypt. Perhaps, how- ever, the ultimate cause of Buonaparte's mortifi- cation at Acre, was the interception of his heavy artillery by the British, on their way from Dami- etta and Rosetta. The French troops reached Grand Cairo in twenty-six days after raising the seige of Acre; yet, in the course of this rapid march, they ravaged the whole country, burnt the harvests, destroyed the defences of the diffe- rent ports, the magazines, and every thing that could be of avail to the Turks in approaching the frontiers of Egypt, In the mean time Sir Sidney Smith, with the greatest promptitude, had con- tinued the execution of the remaining parts of the plan of operations against the French in Egypt, in which he was seconded by the increasing zeal of the Turks. Seid Mustapha Pacha had assembled, at the different ports in the island of Rhodes, the troops which were to attack Alex- andria, under the conduct of European officers ; and the combined fleet of Turkey and Britain were to sail for Egypt as soon as a convoy, to be sent by the captain pacha, then lying at anchor in the Dardanelles, should arrive at Rhodes. Buonaparte, on his part, was no less active : after subduing, in a great measure, a spirit of rebellion which had been industriously raised in the minds of the inhabitants in his absence, he turned his attention to the re-organisation of his army, which had suffered severely in the expe- dition to Syria ; and so assiduous was he in this matter, that his troops were fit for action in about three weeks. But when in the neighbourhood of the Pyramids, intending to pursue Mourad Bey in his retreat to Fayoum, intelligence was brought him from Alexandria, that a Turkish fleet of 100 ships had anchored in the bay of Aboukir, from which 3000 troops had landed, and taken the fort of Aboukir by assault, and massa- cred the garrison of 500 men. He accordingly di- rected his officers to lead their forces towards the place of landing, and appointed the first rendez- vous of the army to be at Ramanieh, on the left bank of the Nile. General Murat, with the ad- vanced guard under him, took the route to Gizeh, and the moveable column under general Menou, together witli the park of artillery and the staff, formed a junction at Ramanieh on the 20th of

July The army afterwards assembled at tli" wells between Aboukir and

Alexandria, at the latter of which places Buonaparte fixed his head quarters. The Turkish army was about 18,000 strong, but divided into two parts, and encamped on the opposite sides of a beautiful plain. When the French general came in sight of it, he imme- diately formed his columns for attack. General d'Estaing, with a body of infantry, carried the entrenched height of the enemy, which supported their right, at the point of the bayonet, while general Murat, with a body of cavalry, advan- cing rapidly into the centre of the Turkish army, prevented the junction of its different parts, and cut off their retreat ; and, by these manoeuvres, 2000 men were partly consigned to a watery grave, and partly killed by the republicans. The left division was next attacked, which made a more obstinate stand ; but, by a variety of skilful movements, the whole were at last, though with considerable loss to the French, thrown into con- fusion, and obliged to fly ; and the greatest part, thinking to reach their ships, perished in the sea. The fort of Aboukir was next summoned to sur- render, but the Turks, having no idea of capitu- lating with arms in their hands, defended it with desperate fury ; and, though general Menou be- sieged it in form, they did not yield till he had bombarded it for eight days, and reduced it almost to a heap of ruins. At last the pacha's son and 2000 men laid down their arms, and were made prisoners of war; and, in the fort, the French found 1800 men killed, and 300 wounded. This woeful reverse of fortune on the part of the Turks was beheld, it is said, by Sir Sidney Smith, while he had it not in his power to contribute in any manner, as at Acre, towards preventing it. After the surrender of the fort of Aboukir, Buo- naparte returned to Alexandria, where he recei- ved intelligence of the dismal situation of French affairs in Europe, particularly in Italy and on the Rhine, and the convulsed state of the inte- rior of France ; upon winch he resolved to leave Egypt and return home, doubtless full of the idea of attaining to that sovereignty which he afterwards reached. Admiral Gantheaume was ordered to fit out two frigates with the utmost expedition, but was not informed of their desti- nation. His future designs were known only to general Berthier, whom alone he made his con- fidential friend; though he brought with him generals Lasnes, Marmont, Murat, and Andre- ossi ; as also Monge and Berthollet of the insti- tute. Bessiers and his guides received sealed notes, not to be opened till a certain day and hour, and at a particular point of the sea shore ; which were found to contain orders for immediate embarkation. Another packet, to be opened on the day after the sailing of the frigates, nominated general Kleber to the chief command, and De- saix to that of Upper Egypt. From general Kle- ber's despatches,after the departure of Buonaparte, it appears that Mourad Bey, having passed down the Nile to El-Ganayur, was repulsed by a divi- sion of the army of Upper Egypt, commanded by general Morand. Ila\mg overtaken him in his flight, they surpiised his camp at Samahout, killed a vast number of the Mamelukes, took 20u camels with spoils, 100 horses, and an immense

quantity of military implements : Mourad him- self escaping with difficulty, and being obliged to wander through the inhospitable deserts of Upper Egypt in quest of an asylum, and the necessaries of life. This man having been a steady and formidable opponent to the French, Desaix determined, if possible, to cut him off, and, for this purpose, he quickly organised two columns of infantry, mounted on dromedaries, taking the command of one himself, and giving the other to adjutant-general Boyer, who came up with Mourad in the desert of Sediman on the 1 9th of October, after a forced march of three days. Here a desperate conflict ensued, in which the Mamelukes seemed determined to get possession of the dromedaries, but the republicans soon put them to flight and pursued them back to the de- serts. A Turkish fleet of eighteen sail had come to anchor before Damiettaon the 24th September, which, by the end of October, was increased to fifty-three sail, with Sir Sidney Smith on board the Tyger as naval commander. From this fleet, on the 1st November, about 4000 Turks were landed, who were quickly attacked by general Verdier at the head of 1000 men; and however unequal the contest would seem, the Turks, it is said, lost no fewer than 3000 men killed, 800 prisoners, including Ismael Bey the second in command, thirty-two stand of colors, and five pieces of cannon. This was succeeded by a number of battles of less note, in which the success of the French was various; and they appeared willing to evacuate Egypt upon cer- tain conditions, which were signed at El-Arish by general Kleber and Sir Sidney Smith. These, however, were afterwards rejected, through a species of policy not easily accounted for, and fresh obstacles started against the evacuation proposed ; which, in the opinion of some, was an object much to be desired by the remains of the army of the east, while the republicans re- fused that there was any occasion for such a measure, holding out that they had still 20,000 effective men in that quarter of the globe, sharing liberally in the affections of the inhabitants. Hostilities were accordingly renewed, and the gallant general Kleber, though now in unfavora- ble circumstances, after defeating the Turks with far inferior numbers, took Cairo by storm, and formed an alliance with Mourad Bey ; but was af- terwards treacherously assassinated by a janissary, while presenting the commander with a memo- rial for his perusal. Upon this, after some other generals, particularly Reynier, had declined the chief command, it was accepted of by Menou ; which, as a variance had subsisted between him and Kleber, raised suspicions that he had hired the assassin; but the dying assertions of the murderer, who was impaled alive, his right hand burnt off, and his body left to be devoured by birds of prey, demonstrated these to be ground- less. Three sheiks who were in the secret of the assassin's designs, but revealed nothing of the matter, were beheaded. Sir Sidney Smith sent

lieutenant Wright to Cairo with proposals to general Menou respecting the evacuation of Egypt ; and the general's answer was anxiously expected by the combined powers, as the grand vizier was resolved to march against the enemy

with 30,000 men, if he did not listen to the pro- posals. They were soon given to understand that he would hearken to no overtures of accom- modation which they could make ; for he had resolved to advance against Syria with the prin- cipal part of his army. This was an enterprise in which Buonaparte had failed, when opposed by Sir Sidney Smith : but Menou had lately been joined by a number of the Beys, with a view o. securing their independence, having been alarmed with the idea that the sublime Porte was deter- mined to subdue Egypt and destroy the Mame- lukes: among others, the junction of Mourad Bey was of considerable importance to Menou, on this occasion. Alexandria, Damietta, and Itosetta, were strongly fortified by Menou, who also finished the lines begun by colonel Bromley a» Aboukir, making several important addi- tions ; every place was put in such a state of defence, as appeared to defy any attack from the Turks. Great Britain, in the mean time, had determined on compelling the French troops to evacuate Egypt, that all apprehensions might be quieted respecting the East Indies from that quarter ; and, with this view, an army was or- ganised for the invasion of Egypt, the command of which was given to one of the most eminent and worthy officers of the brilliant age in which he lived, general Sir Ralph Abercromby. The ships with the troops anchored in the bay of Aboukir on the 2nd of Match, but on account of the unfavorableness of the weather they did not begin to disembark till the morning of the 8th. In order to oppose the landing of the British forces, about 4000 of the French had marched from Alexandria, and taken their station on the heights of Aboukir ; thus an action soon took place between the hostile armies, but after about two hours fighting the republicans retreated, and they were pursued to the walls of Alexandria. Passing over the skirmishing occurrences of the few following days, an action of the utmost moment took place on the 21st of March, when the French ad- vanced with their whole force, amounting to 11,000 men, and attacked the British, about four miles from Alexandria, two hours before day-break. They commenced by a false attack on the left of the British army, but were still more desirous to have turned the right of their opponents, which they attempted in vain. Nor were they more successful in their attack upon the central division. The conflict, however, was obstinate and bloody ; and though the French were completely defeated, with the loss of 3000 men killed and wounded (among whom were three generals ; Roize, who was left dead on the field, and Lanusse and Rodet, who both died of their wounds soon after), this was not effected without considerable loss on the part of the British, who had soon to lament the death of their illustrious

commander. The brave general Abercromby ‘ was mortally wounded early in the action, but continued delivering his orders with that coolness and perspicuity which ever dis- tinguished him. His situation was not known till after the battle, when, having fainted with loss of blood, he was carried on board lord Keith’s ship, where he died eight days after the

engagement, in which, like Epaminondas, and like Wolfe, he lost his life, after having led on his soldiers to a glorious victory.’ Had it not been for the inferiority of the British cavalry (the •wretched hcrses they were obliged to purchase at Marmorice Bay) to that of the enemy, whose re- treat was also covered with cannon on the top of the hills, British valor would have this day com- pleted the purpose for which it was displayed in this quarter. But general (since lord) Hut- chinson, succeeding the gallant Abercrom by as commander in chief of the British forces, was now to direct them to the expulsion or the ex- cision of the French. The town and castle of Rosetta were taken by a division of the British army under colonel Sfpencer, aided by a body of the Turks ; and early in May a strong de- tachment was sent against Cairo. On the 19th of the same month the French were attacked near Ramanieh, by a body of the Turks assisted by the British when they were repulsed, and obliged to retire towards Cairo; and about the middle of June the city of Cairo was invested on all sides by the united forces of the British and the grand vizier. On the 22nd of June the garrison of Cairo sent a flag of truce to the British general, and, after a negociation of several days, a convention was agreed to, by which the French troops at Cairo and its dependencies were to be conveyed in ships of the allied powers, and at their expense, together with their baggage, arms, ammunition, and effects, to the nearest French ports in the Mediterranean. Alexandria held out some time longer, and Menou had resolved on defending it to the last, but he was soon obliged to surrender, upon the conditions of the convention of Cairo, for him- self and the army under his command; and thus the whole of Egypt was left in the possession of the allies. After the evacuation of Egypt, by the French, the English endeavoured to effect a re- conciliation between the Mamelukes and the Turks, to restore the former government of the country : but the Turks treacherously assas- sinating a number of the beys, the remainder fled into Upper Egypt, and the Porte, being un- able to subdue them, concluded a treaty with them, allowing them the possession of that part of the country. In consequence, however, of mutinies and intestiue contentions among the Turkish troops, the Mamelukes soon returned into Lower Egypt, making the country a scene of anarchy and confusion, alternately ravaged by -the contending parties. A small body of British troops, under the command of general Fraser, again landed on the

coast of Egypt, on the 17th of March 1807, to whom the town and fortress of Alexandria surrendered on the 21st of the same month, though they were afterwards unfortunate; but as this enterprise took place in consequence of a rupture betwixt Britain and the Ottoman Porte, through the ascendancy of the French ambassador in the Turkish councils, it will fall more properly to be noticed under the article TURKEY.

At this period Mohammed Aly, the present pacha of Egypt, had recently been invested with that authority. He is a singular despot who, beginning his career in blood (for in the year

1811 he invited the Mamelukes to Cairo, and butchered them all in the citadel) has materially improved the resources of this fine country, and seems to be rapidly assimilating it to its ancient fruitfulness and prosperity. Cairo was sacked at this time by his troops, and every Mameluke in the provinces was put to death. It is said, in extenuation of this massacre, that he had received orders from Constantinople to exterminate this corps, who had at all times been troublesome, and who might take advantage of the absence of the pacha's army, a great part of which was required in Arabia for the subjugation of the Wahabees. He knew, too, that the beys were in correspondence with his enemies. Moham- med, however, could not but be gratified at the reception of such an order, the execution of which would rid him of doubtful friends and powerful enemies; and so little compunction did he feel on the occasion, that, we are told by M. Mengin, on being informed that he was re- proached by all travellers in their narratives, for this treacherous and inhuman massacre, he replied that he would have a picture of it painted, together with one of the death of the due d'En- ghien, and leave posteiity to judge which was the more barbarous.

Mohammed now turned his attention to the state of the war carrying on in Arabia against the Wahabees. His son, whom he left in command, had taken from them the city of Medina, the keys of which the pacha sent the Porte, with large presents of coffee, money, and jewels. He now also thought it time to pay his devotions at the shrine of Mecca. At Jeddah he was received with all kindness and hospitality by the shereei Ghaleb ; in return for which, either through avarice, as some think, or, as others say, on discovery that the shereef was acting a double part, he secretly ordered his son Toussoun to seize and convey him to Cairo ; while he plun- dered his palace of immense treasures, a part of which he applied to the support of the army, and, as usual, shared a part with his master, the Porte.

The pacha then entered upon one of his favo- rite projects, that of training his troops after the European system. This occasioned, in the first instance, a general conspiracy of the agas and chiefs against his authority, and the conspirators feroke at once into the city, plundering the ba- zaars and

spreading universal terror : the pacha with some difficulty quelled this revolt, and, re- munerating the inhabitants of Cairo, suspended the execution of his scheme. His son, Ibrahim Pacha, having succeeded in completely subduing the Wahabees, to signalise the event he assem- bled the whole of the pilgrims from Egypt and Syria on Mount Arafat, where with great solem- nity, and in conformity with a vow which he had made in case of success, he sacrificed SOOOcsheep, and largely distributed alms in Mecca ; he then departed for Cairo, and on his arrival received the honors of a triumph. On this occasion Mohammed also received rich presents from the grand signior, and compliments on his splendid victories.

The viceroy was now at liberty to turn his attention to the soath, and to bring the whole

country on each side of the Nile, as far as Sen- naar, under his subjection, and foi this purpose lie sent an army, under his youngest son Ismael. Of the activity and rapid progress of this young officer, his humanity and traits of generosity towards his prisoners and the conquered inha- bitants, several instances are recorded. One single act of severity, however, proved fatal to him. He had ordered, when at Sennaar, one of the chiefs of that country to be bastinadoed, who seized the first favorable occasion to avenge himself. Ismael had gone to a village at some little distance from Sennaar, with a small guard of forty men ; the chief, with a party, followed him thither, and, surprising his lodgings by night, stabbed him to the heart with a poniard, and most of his guards fell in the scuffle.

One of the objects of this expedition was that of recruiting his army with the blacks of Sennaar, Shendy, Kordofan, and the neighbouring coun- tries, wliich was accomplished to the number of from 16,000 to 18,000 men. These unhappy Peings were all of them, in the first place, vac- cinated, and were then instructed in manual ex- ercise and military evolutions, in the European mode, by some French officers. The hopes of the pacha, however, were greatly disappointed in these black troops. They were strong able-bodied men, and not averse from being taught ; but when attacked by disease, which soon broke out in the camp, they died like sheep infected with the rot ; such was the dreadful mortality that ensued, that, out of 18,000 of these unfortunate men, 3000 did not remain alive at the end of two years.

He now had recourse to a regular conscrip- tion of the Arabs or Fellahs, of whom he seized about 30,000 indiscrimately, and had them con- veyed to

Upper Egypt under a military guard. These, with the remains of the black slaves, a few Berbers, and the Mameluke officers, com- pose the pacha's present army. Twelve Euro- peans, chiefly Italians, were employed as instruc- tors ; at their head is placed colonel Leve, formerly aid-de-carap to Marshall Ney. A new conscription took place in 1814, of 15,000 more, it being the intention of Mohammed Aly to keep up an army of 40,000 men, one batta- lion of which is to be stationed at Alexandria, to be trained as marines for his navy, which is to consist of forty vessels of different rates, the seamen being entirely Arabs. His adoption of European tactics has been thought by some travellers to be preparatory to throwing off his allegiance to the Porte, to whom it is supposed he has given irreparable offence by his former protection of the Greeks : he has lately, how- ever, made the amende honorable, we presume, by his expedition against the Greeks ; and his presents to the Porte have been splendid and constant.

We again advert to the statistical and other peculiarities of this interesting country, with a view to furnishing the reader with the latest information of travellers on these points.

The nver Nile, when swelled by the rains which fa.i in Abyssinia, begins to rise in Egypt about the month of May ; but the increase is in- considerable till towards the end of June, when

it is proclaimed by a public crier through the streets of Cairo. About this time it has usually risen five or six cubits ; and, when it has risen to sixteen, great rejoicings are made, and people cry out Waffah Allah, i.e. God has given abun- dance. This commonly takes place about the end of July, or before the 20th of August ; and the sooner it takes place, so much the gieatet are the hopes of a good crop. Sometimes, though rarely, the necessary increase does not take place till later. In 1705 it did not swell to sixteen cubits till the 19th of September, the consequence of which was. that the country was depopulated by famine and pestilence. We may easily imagine, that the Nile cannot overflow the whole country of itself, in such a manner as to render it fertile. There are, therefore, innume- rable canals cut from it across the country, by which the water is conveyed to distant places, and almost every town and village has one of these canals. In those parts of the country which the inundation does not reach, and where- more water is required than it can furnish, as for watering of gardens, &c., they have recourse to artificial means for raising it from the river. Formerly they made use of Archimedes's screw, but now, in place of it, they have the Persian wheel. This is a large wheel turned by oxen, having a rope hung with several buckets which fill as it goes round, and empty into a cistern at the top. Where the banks of the river are high, they frequently make a basin in the side of them, neai which they fix an upright pole, and another with an axle across the top of that, at one end of which they hang a great

*stone, and at the other a leathern bucket ; this bucket, being drawn down into the river by two men, is raised by the descent of the stone, and emptied into a cistern placed at a proper height. This kind of machine is used chiefly in the upper parts of the country, where the raising of water is more difficult than in places near the sea. When any of their gardens or plantations want water, it is conveyed from the cisterns into little trenches, and from thence conducted all round the beds in various rills, which the gardener easily stops by raising the mould against them with his foot, and diverts the current another way as he sees occasion. The rise of the inundation is mea- sured by an instrument adapted for the purpose, called mikeas, which we translate nilometer. It is a round tower near Cairo, with an apartment, in the middle of which is a cistern neatly lined with marble. The bottom of this cistern reaches to that of the river, and there is a large opening by which the water has free access to the inside. The rise of the water is indicated by an octa- gonal column of blue and white marble, on which are marked twenty cubits of twenty-two inches each. The two lowermost have no sub- divisions , but each of the rest is divided into twenty-four parts, called digits; the whole height of the pillar being thirty-six feet eight inches. When the river has attained its proper height, all the canals are opened, and the whole country laid under water. During the time of the inundation a certain vertical motion of the waters takes place; but, notwithstanding this, the Nile is so easily managed, that many field**

lower than the surface of its waters are preserved from injury merely by a dam of moistened earth, not more than eight or ten inches in thick- ness. This method is used particularly in the Delta when it is threatened with a flood. As the Nile does not always rise to a height suffi- cient for the purposes of agriculture, the former sovereigns of Egypt were at vast pains to cut proper canals to supply the deficiency. Those which convey the water to Cairo, into the pro- vince of Fayoom, and to Alexandria, have always been best taken care of by the govern- ment.

The lands inundated by the Nile, as we have observed, are exceedingly fertile ; and though they have successively from year to year, with- out intermission, borne one and frequently two crops, and without any rational system of in- vigoration by manure or otherwise, for more than 3000 years, they still continue to do the same without any perceptible impoverishment, and without any further tillage than the adven- titious top-dressing of black slimy mould, by the overflowing of the river. But the produc- tiveness of the soil, where the inundation does not reach, has been greatly over-rated. The crops of wheat in particular are scanty, not above

five or six for one ; but for maize and dourra, or millet, the soil appears to be pecu- liarly adapted ; and these two species of grain, with rice, lentils, and various kinds of pulse, constituting the principal food of nine-tenths of the inhabitants, allowed the government, who usurped the monopoly, to export the greater part of the wheat produced. Since the peace of Europe, however, this branch of commerce has nearly ceased, in consequence of the increased ˆcultivation of that grain in other countries. At one period not less than 800 or 900 European vessels annually sailed from Alexandria, for Marseilles, Genoa, Leghorn, Trieste, Malta, and Constantinople, freighted with articles of raw produce in exchange for hard money or for the manufactures of those respective countries; while two or three cargoes were all that could be got together for England. But, in the year 1821, an experiment was made by an English mer- chant, of a cargo of linseed for crushing ; when it was found that, notwithstanding the freight (on account of the greater distance) doubled that which is paid from Russia, it would answer as a return for British exports, if relieved from the heavy quarantine duty, to which Baltic seed is not subject; this duty was accordingly miti- gated by the lords of the treasury, and, in con- sequence, the exportation direct from Egypt to England increased last .year to 25,000 quarters, and gave employment to more than twenty Bri- tish ships. An article of the very first import- ance to the commerce and manufactures of England has recently been raised in Egypt, and to such an extent as to have surpassed all ex- pectation. We allude to cotton wool, not of the usual coarse kind hitherto grown in Egypt, but of a very superior quality, raised from Brasil seed. The first essay was made by order of the pacha, in the year 1822, when the crop yielded about 25,000 bags, of two cwt. each. A few bags of this cotton, sent to Liverpool on

trial, were sold at the rate of from \d. to 13

Mohammed has recently engaged himself in opening the ancient canals and digging new ones. Among these the canal of Mahmoudiah is particularly deserving of notice, and connects the harbour of Alexandria with the Nile, at Fouah ; by which the whole produce of Egypt can be brought without danger or interruption to the pert of shipment. In the winter of 1817, when a scarcity of grain prevailed all over Europe, ships flocked to Egypt where there was abundance; but owing to the bar at the mouth of the Nile, near Rosetta, and the tempestuous weather along the coast, none of it could be con- veyed in time to the vessels that were waiting at Alexandria, to the number of 300 sail, some of which ultimately departed with half cargoes, and others went away in ballast ; thus the losses be- came incalculable, and the disputes endless. It was now that the advantages of a navigable canal were seen by the pacha, who accordingly set about the stupendous undertaking. All the laboring classes of Lower Egypt were put in requisition, and a month's pay advanced them to provide biscuit and provisions. To

each village and district was marked out the work allotted to it. The Arabs were marched down in thousands and tens of thousands, under their respective chiefs, along the line of the intended canal; and, however exaggerated it may appear, we have the best authority for stating that the number em- ployed at one time exceeded 250,000 men. In about six weeks the whole excavation wascomplet- ed,and the people returned home to their respective occupations; but in the autumn a few thousands were called upon to face parts with masonry, and make the whole navigable for vessels of con- siderable burden. This work is about forty- eight miles in length, ninety feet in breadth, and from fifteen to eighteen feet in depth. It was opened with great pomp on the 7th of De- cember 1819.

Until lately the arts and all kinds of learning were at a very low ebb among the Egyptians. Even the most simple of the mechanical profes- sions are still in a state of infancy. The work of their cabinet-makers, gunsmiths, and locksmiths, is clumsy; and their manufactures of gun- powder and sugar, though much improved are

still indifferent. The only thing in which they can be said to have arrived at any degree of perfection, is the manufacture of silk stuffs ; though even these are far less highly finished than those of Europe, and likewise bear a much higher price. One extraordinary art indeed is still extant among the Egyptians, and appears to have existed in that country from the most re- mote antiquity ; a power of enchanting the most deadly serpents in such a manner, that they allow themselves to be handled, nay even hurt and wounded severely, without offering to bite the person who injures them. Those who have this art are named PSYLLI, or serpent charmers. But the pacha has introduced colleges and academies for the instruction of youth in foreign languages and mathematics ; afforded toleration to all the European and other religious sects ; and encouraged the practice of vaccination and the surgery and pharmacy of Europe.

Mr. Bruce gives a long account of the sources of the vast quantities of marble, met with in the remains of ancient buildings in this country ; and which supplied in ancient times, we know, the materials of many of the public buildings of Italy. These he discovered during his jour- ney from Kenne to Cosseir on the Red Sea, before he went to Abyssinia. At llamra the Porphyry . Mountains and quarries begin, the stone of which is at first soft and brittle ; but the quantity is immense, as a whole day was taken up in passing by them. These Porphyry Mountains begin in the latitude of nearly 24°, and continue along the coast of the Red Sea to about 22° 30',

when they are succeeded by the marble mountains ; these again by others of alabaster, and these last by basaltic mountains. From the marble mountains our author selected twelve kinds, of different colors, which he brought along with him. Some of the moun- tains appeared to be composed entirely of red and others of green marble, and by their dif- ferent colors afforded an extraordinary spectacle. Not far from the Porphyry Mountains the cold was so great, that his camels died on his return from Abyssinia, though the thermometer stood no lower than 42°. Near Cosseir he discovered the quarries whence the ancients obtained those immense quantities of marble, with which they constructed so many wonderful works. The first place, where the marks of their operations were very perceptible, was a mountain much higher than any they had yet passed, and where the stone was so hard that it did not yield to the stroke of a hammer. In this quarry he ob- served that some channels for conveying water terminated ; which, according to him, shows that water was one of the means by which these hard stones were cut. In four days, during which our author travelled among these mountains, he says, that he had ' passed more granite, porphyry, marble, and jasper, than %vould build Rome, Athens, Corinth, Syracuse, Memphis, Alexan- dria, and half a dozen such cities.' It appeared to him that the passages between the mountains and what he calls defiles, were not natural but artificial openings; where even whole moun- tains had been cut out, in order to preserve a gentle slope towards the river. This descent

Mr. Bruce supposes not to be above one foot in fifty; so that the carriages must have gone- very easily, and rather required something to retard their velocity than any force to pull them forward. Concerning the mountains in general, he observes, that the porphyry is very beau- tiful to the eye, and is discovered by a fine purple sand without any gloss. An unva- riegated marble of a green color is generally met with in the same mountain ; and where the two meet, the marble becomes soft for a few incites, but the porphyry retains its hardness. The granite has a dirty brown appearance, being covered with a sand ; but, on removing this, it appears of a gray color with black spots, with a reddish cast all over it. The granite mountains lie nearer to the Red Sea, and seem to have afforded the materials for Pompey's pillar. The redness above mentioned seems to go off on ex- posure to the air ; but re-appears on working or polishing the stone farther. The red marble is next to the granite, though not . met with in the same mountain. There is also a red kind with white reins, and vast quantities of the common green serpentine. Some samples of that beautiful marble named Isabella, were likewise observed ; one of them of that yellowish cast called quaker color, the other of the bluish kind named dove color. The most valuable kind is that named verde antico, which is found next to the Nile in the mountains of serpentine. It is covered by a kind of

blue fleaky stone, somewhat lighter than a slate, more beautiful than most , kinds of mar- ble, and when polished having the appearance of a volcanic lava. In these quarries the verde antico had been uncovered in patches of about twenty feet square. There were small pieces of African marble scattered about in several places, but no rocks or mountains of it; so that our author conjectures it to lie in the heart of some other kind. The whole is situated on a ridge with a descent to the east and west, by which means it might easily be conveyed either to the Nile or Red Sea; while the hard gravel and level ground would readily allow the heaviest carriages to be moved with very little force. In the Red Sea in lat. 25° 3', at a small distance from the south-west coast, there is an island called the Mountain of Emeralds ; but none of these pre- cious stones are to be met with there. Here, as well as on the continent, there were found many pieces of a green pellucid substance ; but veined, and much softei than rock crystal, though somewhat harder than glass. A few yards up the mountain he found three pitt, which are supposed to have been the mines whence the ancients obtained the emeralds; but, though many pieces of the green substance above mentioned were met with about these pits, no signs of the true emerald could be perceived. The sub- stance, however, he conjectures to have been the smaragdus of the Romans. In the mountains of Cosseir, as well as in some places of the deserts of Nubia, our author found some rocks exactly resembling petrified wood. The only metal said by the ancients to be produced in •Egypt is copper. On the road to Suez are found great numbers of Egyptian flints and pebbles, though the bottom is a hard, calcareous,

and sonorous stone. Volney tells us that the stones above-mentioned, which resemble petrified wood, are to be met with here. They are in the font), he says, of small logs cut slanting at the ends, and might easily be taken for petrifac- tions, though he thought them real minerals.

*Besides camels, horses, asses, mules, sheep, black cattle, and other domestic quadrupeds, there are many wild animals in Egypt ; particu- larly tigers, hyenas, antelopes, crocodiles, apes with heads resembling those of dogs, hippopo- tamuses, ichneumons, chameleons, yellow Ihards, and a species of ra*s resembling ferrets, remark- ably useful for destroying the crocodiles' eggs. Among the feathered tribe, there are ostriches, eagles, hawks, pelicans, and water fowls of va- rious kinds, amonj which last the most remark- able is the ibis, a bird of the duck kind, which was deified by the ancient Egyptians, on account of its usefulness in destroying serpents, and noxious insects. These are numerous, and among the different species*

of serpents the cerastes, or horned viper, abounds, whose bite proves mortal, except to those who have the (secret of charm- ing it.

F. Sicard mentions two salt lakes situated in the desert west of the Delta, three or four leagues in length, and about a quarter of a league in breadth, with a solid and stony bottom. For nine months in the year they are without water ; but in winter there oozes out of the earth a red- dish violet-colored water, which fills the lakes to the height of five or six feet. This being eva- porated, by the return of the heat, there remains a. bed of salt two feet thick and very hard, which is broken in pieces with iron bars : and from these lakes ho less than 30,000 quintals of salt are procured every year.

Besides the ordinary winds before mentioned, Egypt is infested, as we have also intimated, with the destructive blasts common to all warm countries which have deserts in their neighbour- hood. These have been distinguished by va- rious names, such as poisonous winds, hot winds of the desert, Samiel, the wind of Damascus, Kamsin, and Simoom. In Egypt they are de- nominated ‘ winds of fifty days, because they most commonly prevail during the fifty days pre- ceding and following the equinox, though, should they blow constantly during one-half of that time, a universal destruction would be the con- sequence. Of these travellers have given various descriptions. M. Volney says that the violence of their heat may be compared to that of a large oven at the moment of drawing out the bread. They always blow from the south, and are un- doubtedly owing to the motion of the atmosphere orer such vast tracts-of hot sand, where it cannot be supolied with a sufficient quantity of moisture. When they begin to blow, the sky loses its usual serenity, and assumes a dark, heavy, and alarm- ing aspect, the sun laying asi le his usual splen- dor, and becoming of a violet color. This ter- rific appearance seems not to be occasioned by any real haze or cloud in the atmosphere at that time, but solely by the vast quantity of fine sand carried along by those winds, and which is so excessively subtile that it penetrates every where. The motion of this wind is always rapid, but its

heat is not intolerable till after it has continued for some time. Its pernicious qualities are evi- dently occasioned by its excessive avidity of moisture. Thus it dries and shrivels up the skin ; and, by affecting the lungs in a similar inanner, soon produces suffocation and death. The danger is greatest to those of a plethoric hajit, or who have been exhausted by fatigue ; and putrefaction soon takes place in the bodies of such as are destroyed by it. Its extreme dry- ness is such, that water sprinkled on the floor evaporates in a few minutes; all the plants are withered and stripped of their leaves; and a fever is instantly produced in the human species ‘ by the suppression of perspiration. It usually lasts three days, but is altogether

insupportable if it continue beyond that time. The danger is greatest when the wind blows in squalls, and to travellers who happen to be exposed to its fury without any shelter. The best method in this case is to stop the nose and mouth with a hand- kerchief. Camels, by a natural instinct, bury their noses in the sand, and keep them there till the squall is over. The inhabitants, who have an opportunity of retiring to their houses, in- stantly shut themselves up in them, or go into pits made in th? earth, till the destructive blast be over. The Description of a blast of this kind which overtook Mr. Bruce in the desert of Nubia is still more terrible. See SIMOOM.

The population of Egypt is composed of Franks, or Europeans, Armenians, Greeks, Syrians, Christians, Jews, Turks, Arabians, and Copts, who are supposed, on very probable grounds, to be the descendants of the ancient Egyptians. The Franks are mostly from the shores bordering on the Mediterranean, and engaged in commerce and in the pacha's new manufactories ; they do not exceed 1000, half of whom are in Alexan- dria, and the other half in Cairo. In spite of all the partiality and protection of the pacha, the Turks lose no opportunity of insulting and abus- ing these ' Christian dogs.' But our expeditions to this country seem to have resulted in two pro- visions, in favor of Europeans, that are remark- able enough: — 1. At the peace of Amiens, Sir John Stuart demanded, and succeeded in obtain ing, permission for Europeans to enter the wes- tern harbour of Alexandria, from which they had been jealously excluded, and permitted only to enter the eastern harbour, of which the water is shallow, the bottom rocky, and the anchor- age dangerous : the one was formerly called the harbour of the Faithful, and the other that of Infidels. 2. No European or Christian was formerly permitted to ride on horseback in any part of Egypt, the horse being reserved for Ma- hommedans, while the ass was deemed the pro- per animal for Christians. This indignity was also abolished by the exertions of Sir John Stuart, who stipulated that all Europeans, without dis- tinction, should be allowed to ride on horseback, which they still do.

There are about 2000 Armenians, who reside principally in the capital, where they exercise every kind of trade, and are much concerned in money transactions with the government. The Greek Christians of Syria may be reckoned ar 3000 in Cairo, and 1000 in the other cities of

Egypt : they were formerly the wholesale mer- chants who supplied the land proprietors and others with various kinds of articles, and were in general wealthy ; but the monopoly of the viceroy has very considerably

impoverished them. There are about 5000 descendants of the ancient Greek colonists, who form quite a distinct race from the modern Greeks : these people have lost their ancient language, and speak a kind of Arabic ; many of them are mariners, but in ge- neral they pursue the inferior and handicraft trades. According to the latest computations, there are about 4000 Jews in Egypt, 3000 of whom inhabit a part of Cairo, called after them the Jews' quarter, of which the streets are so narrow as to be almost impassable ; the houses are dark, crowded together, filthy, and so infec- tious that, when the plague breaks out, the first enquiry is, If it has appeared in the Jews' quarter? M. Mengin, the author of L'Histoire de 1'Egypte, sous le Gouvernment de Mohammed Aly, reckons, in Cairo, eight persons to each house, and in the provinces four. The account then stands thus :

Houses. Inhabit.

In Cairo 25,000 200,000

In the provincial towns of Alexandria, Rosetta, Da- mietta, Old Cairo, and Boulak 14,532 58,128

In fourteen provinces, con- taining 3475 villages . 564,168 2,256,272

603,700 2,514,400

Cairo being the only city of Egypt which con- tains any great accumulation of inhabitants, built by Gaubar, a general in the service of the first khalif of the race of the Fatemites of Egypt, in the year 358 of the hegira (968 of the Christian era), it was surrounded with walls by Saladin. For the last 300 years its splendor has declined considerably ; and the pa-laces of Mohammed Aly are mean and ill contrived. But here are 240 principal streets, forty-six public places, eleven bazaars, 140 schools, 300 public cisterns, and 400 mosques.

The Copts are by far the most numerous class of Christians in Egypt,, amounting at least to 160,000, of whom about 10,000 inhabit the two most populous quarters of Cairo. In towns they practise different trades, but the greater part of them labor on the lands, among the Fellahs. Under the government of the Mamelukes the Copts were employed in taking an account of, and collecting, the revenues of the villages ; and many of them still hold situations of this kind, and as writers about the court. They are aus- tere and forbidding in their manners, generally silent, and wearing an air of melancholy : but are said to be tyrannical when in authority.

The oriental race of Fellahs compose the chief part of the population of Egypt, a mixture, perhaps, of ancient Egyptians, Arabians, and Syrians ;

they approach nearest to the Copts, in general appearance and manners, but they are rigid Mussulmen, and strictly observe the rites and ceremonies laid dowu by their sheiks or VOL. VII

priests. They labor hard on the soil, and live in the most abstemious manner on dourra, dwell in cottages of unbaked bricks, are clothed in coarse woollen cloth, and sleep on mats : those in the towns exercise handicraft trades, and keep shops in the bazaars, whicli they only quit to attend the mosques. Like all orientals, they are fond of frequenting coffee-houses, and listening to the tales of pretended magicians, or the rude music of strolling singers. In meekness and apathy they cannot be exceeded.

' The tented Arab,' says an able article on Egypt in the Quarftrly Review, ' hovering with his flocks along the borders of the fertile valley of the Nile, is the same in character, manners, and customs, as he every where else is, and apparently has been, in all times since the days of the patriarchs, regarding with disdain and proud independence all other classes of mankind, but more particu- larly those of his own nation, who, in his eyes, have degraded themselves by taking up their abodes in fixed habitations, and whom he calls in contempt haty, or Arabs of the walls. Those who turn cultivators are equally despised, and considered in the light of Fellahs, with whom an alliance by marriage would be regarded as dis- honorable. The Aˆab women have fine features and complexions ; they are much fairer than the Egyptian women, and far more correct in their conduct. In cases of infidelity, the injured party takes the law into his own hands, and the culprit is generally punished with death.'

The Egyptian women, like other oriental fe- males, are the mere slaves of their husbands' or their owners' caprices ; and thus their degraded condition is one of the greatest obstacles to the civilisation of Egypt, and one of the last that will probably be removed, connected as it is with the precepts of the Mahommedan law. M. Man- gin, however, states the women of late, whether married, or slaves from Georgia, Circassia, and Mongrelia, are allowed frequently to quit the harem, and that accompanied by a confidante, under pretext of going to the bath, or of making visits, they indulge with impunity in illicit amours.

A cady, or judge, sent from the Porte an- nually, settles all lawsuits and criminal pro- secutions : under him are the sheiks and others, learned in the law. A civil process is stated to cost about 4 per cent, of the value in dispute, of which the cady takes four-fifths for himself, and gives one-fifth to the other lawyers. All minor disputes and complaints are brought before the Kiaya-bey. His officers are the Agha of the janissaries, who is charged with maintaining good order, and especially among the soldiers ; the ouali, or agha of the police, who looks after the thieves and prostitutes, on both of

whom he levies contributions for the support of himself and his myrmidons. The moteceb regulates the weights and measures ; the bache-agha has the direction of the patroles, and the spies who fre- quent the coffee-houses, bazaars, and other pub- lic places ; and, in addition to these, there is a head-man in every quarter of the city for settling disputes and preserving peace. This is said to be so effectually done, that the streets of Cairo are as safe as those of London, except on occa-

sions when the military break loose or want of pay, or to avenge themselves of some grievance. Of the information upon Egypt, afforded to us by the intelligent Dr. Clarke, the following is a summary : — In his passage from Acre to Abou- kk, he witnessed a phenomenon, formerly no- ticed, but also by some writers strenuously dis- puted. ‘ As we were sitting down to dinner, the voice of a sailor employed in heaving the lead, was suddenly heard calling ‘ half four !’ The captain, starting up, reached the deck in an in- stant; and almost as quickly puttinsj-the ship in stays, she went about. Every seaman on board thought she would be stranded. As she came about, all the surface of the water exhibited a thick black mud : this extended so widely, that the appearance resembled an island. At the same time no land was really visible, not even from the mast-head, nor was there any notice of such a shallow in any chart on board. The fact is, as we learned afterwards, that a stratum of mud, extending for many leagues off the mouths of the Nile, exi«ts in amoveable deposit near the coast of Egypt, and, when recently shifted by currents, it sometimes reaches quite to the sur- face, so as to alarm mariners with sudden shal- lows, where the charts of the Mediterranean promise a considerable depth of water. These, however, are not, in the slightest degree, dan- gerous. Vessels no sooner touch them than they become dispersed ; and a frigate may ride se- cure, where the soundings would induce an in- experienced pilot to believe her nearly aground.’ —Vol. iii. p. 13.

He left Rosetta on the morning of August 10th, and proceeded up the Nile to Cairo, then occu- pied by the English and their Turkish allies. ‘ A vessel leaving Rosetta, is driven by the wind,’ he says, ‘ with extraordinary velocity against the whole force of the torrent to Cairo, or into any part of Upper Egypt. For the purpose of her return, with even greater rapidity, it is only ne- cessary to take down the mast and sails, and leave her to be carried against the wind by the powerful current of the river. It is thus possible to perform the whole voyage from Rosetta to Bulac, the quay of

Cairo, and back again, with certainty, in about seventy hours, adistance equal to 400 miles.' — p. 32.

Of the population, fertility, and beautiful groves of Lower Egypt, our traveller speaks with his usual eloquence.

Throughout the Delta irrigation is carried to u vast extent, but it is effected, for the most part, by artificial means ; and an exaggerated idea of the effects of the Nile is conveyed by the beauti- ful description of Gray. Extensive canals on each side of the river conduct its waters to the utmost extent of their level, but the fields are many of them supplied by water-wheels, or the still simpler process of lading. The soil thus treated produces three crops in the year — clover, corn, and rice, of which the last is sown while the field is actually under water, a practice which, as Dr. Clarke observes, is alluded to by Solomon (Eccles. ii. 1). The eastern sycamore attains an enormous size, and its boughs are so bent by the prevalent winds as to make them resemble a peacock's tail. The fruit resembles

in shape the common fig, but is smaller, dry and insipid. The thermometer stood at 90° in thp shade, and the inhabitants of the country were walking about or engaged in the avocations of husbandry, in a state of perfect nakedness, and displaying a complexion of the darkest tawny. They arrived at Bulac at midnight, and were aroused the next morning with intelligence that the pyramids were in sight. What follows is in Dr. Clarke's best style.

' Never will the impression made by their ap- pearance be obliterated. By reflecting the sun's rays, they appeared as white as snow, and of such surprising magnitude, that nothing we had previously conceived in our imagination had prepared us for the spectacle we beheld. The sight instantly convinced us that no power of description, no delineation can convey ideas ade- quate to the effect produced in viewing these stupendous monuments. The formality of their structure is lost in their prodigious magnitude : the mind, elevated by wonder, feels at once the force of an axiom, which, however disputed, ex- perience confirms, — that in vastness, whatever be its nature, there dwells sublimity. Another proof of their indescribable power is, that no one ever approached them under other emotions than those of terror ; which is another principal source of the sublime. In certain instances of irritable feeling, this impression of awe and fear has been so great, as to cause pain rather than pleasure ; of which we shall have to record a very striking instance in the sequel. Hence, perhaps, have originated descriptions of the py- ramids, which represent them as deformed and gloomy masses, without taste or beauty. Persons who have derived no satisfaction from the con- templation of them, may not have been con- scious that the uneasiness they experienced was a result of their own sensibility. Others have acknowledged ideas widely different, excited

by every wonderful circumstance of character and situation; ideas of duration, almost endless; of power, inconceivable ; of majesty, supreme ; of solitude, most awful ; of grandeur, of desolation, and of repose.' — Vol. ii. pp. 44 — 46.

Dr. Clarke's description of Cairo is short, but very curious and interesting. He was sufficiently disgusted with it as the dirtiest metropolis in the world ; but the picturesque crowd in its streets, and on its canals, and the foliage of its gardens, no less than the splendid panorama seen from the heights of the citadel, had sufficient beauty and novelty to repay this inconvenience. Here, as in South America, the lizard is the harmless inhabitant of all the gardens, and is seen hanging on the walls and ceilings of the best apartments. Swarms of flies filled every dish and every drinking vessel, and the climate, though extolled as delightful by the British of- ficers who had arrived from India, appeared to Dr. Clarke only tolerable to those who could re- concile themselves to the listless and sordid in- activity of the natives and settled Franks. Dr. Clarke recognised in the funeral cries of Egypt the same mournful notes, and the repetition of the same syllables which are used, on similar occasions, by the Russians and the Irish. In his observations on the mummy-pits, he is led to

animadvert on tlie falsehood of the common opinion, that the mummies were placed upright in these cemeteries, and supposes that the words of Herodotus, which have been generally quoted to this effect, relate only to those particular mummies which were kept in the houses of their descendants. The horses of our author's Arab guides were the finest he had seen in the whole course of his travels ; and the Arab grooms were regarded by the English officers as superior to those even of their own country. These horses do not lie down at night, but sleep standing, with one foot fastened to the piquet.

Dr. Clarke supposes, from the decay of the obelisks at Alexandria, and from similar appear- ances on other ancient buildings, that granite, namely, from the decomposition of its feldspar by exposure to the atmosphere, is less calculated for works of duration than pure homogeneous marble, or even than common limestone. Of the two obelisks known by the name of Cleopa- tra's Needles, one only is now standing. A subscription was raised by several officers of our army and navy to remove to Great Britain its fallen companion, which, as it now lies on the sand, measures seven feet square at the base, and sixty-six feet in length. Lord Cavan presided in this undertaking, which was worthy of the an- cient Romans, and would, probably, have been attended with complete success, had not, for some unexplained reason, the sailors of our fleet been forbidden to assist in the

labor. Dr. Clarke gives some probable reasons why the emperor named in the inscription on the base of Pompey's Pillar is not, as is generally supposed, Diocle- sian but Hadrian, and attempts also to prove that this magnificent monument was really erected to the unfortunate general whose name tradition has assigned to it. The Arabs, it seems, call it the ruins of ' Julius Ca-sar's palace.' Our author is among the first who has done sufficient justice to the regularity of the plan of the cata- combs of Alexandria ; the chaste and awful sim- plicity of their ornaments, and the long and gloomy arcades of this subterranean city of death. Twelve large halls, besides many smaller apart- ments, surrounded with places adapted to receive bodies in a recumbent posture, are disposed in a form not very dissimilar from the ancient sym- bol of the trident, and conclude with a circular sanctuary covered with a simple dome, which is hewn, like all the rest, in the solid rock. In this part of the excavation an ornament appears, which colonel Squire took for a crescent, but which Dr. Clarke more probably apprehended to be the winged globe, which, according to Macrobius, was the Egyptian symbol of Serapis, the lord of the dead. With this visit to Alex- andria, Dr. Clarke's Egyptian travels concluded. See ALEXANDRIA.

The splendid antiquities and ancient literature of Egypt have been abundantly illustrated by recent travellers and writers. ' The labors of the Trench Institute at Cairo are entitled, perhaps, to our first notice, for their stupendous and mag- nificent Description de 1'Egypte. We may next mention Mr. William Hamilton's ˆEgyptiaca, 4to. Lond. 1809, originating with the first British expedition. In October, 1801, captain Leake

and lieutenant Hayes were appointed by general Hutchinson, to make a survey of Egypt, and of the country beyond it, if it should be found practicable; and Mr. Hamilton joined these gentlemen in their expedition. Partly, how- ever, on account of the disturbed state of the country, they were unable to proceed further south than a few hours' journey beyond Syene, to a village called Debod, opposite to which they observed the ruins of Barembre, the Parembole of the ancients ; here also they found a Greek dedication of a temple to Isis, by Ptolemy Plii- lometor and his queen. But they collected a variety of inscriptions from other parts of Egypt, to which they added drawings and descriptions of the architectural remains to which they be- longed. At Alexandria Mr. Hamilton was en- abled, in company with some other gentlemen, by examining the inscription on Pompey's pillar, in different positions of the sun, to ascertain the name Dioclesian, as that of the emperor to whom it was dedicated ; and to find some traces of the name of Pompeius, a prefect of Egypt under that emperor.

Mr. Legh visited Egypt in 1812, and extended his observations as far as Itrim, within about three days' journey of the second cataract of the Nile.

Accompanied by the Rev. Mr. Smelt, he engaged as an interpreter, on leaving Cairo for Upper Egypt, an American, of the name of Barthow, who had resided many years in the country. They sailed on the 13th January, and their first landing was at the ruined village of Benihassen, where they visited the excavations which Norden ascribes to ‘ holy hermits, who made their abodes there. ‘ The principal chamber is sixty feet in length, and forty in height ; to the south of it are seventeen smaller chambers, and probably the like number to the north. Mr. Legh says, they found it difficult to follow Mr. Hamilton’s descriptions of the paintings which cover the walls of the chambers. At Ashmou- nien, the site of the ancient Hermopolis, they partook of the enthusiasm with which Denon speaks of its splendid ruins ; but Mr. Legh ob- serves, that his delineation of them denotes the haste with which he travelled, for that the winged globe, represented by him on the frieze, does riot exist in the original. Indeed, he found that Denon is very little to be depended on, where he does not copy from preceding travellers, or from the actual fragments carried away by the French. By his own account, he has drawn and described objects seen only in galloping past them; and, at the best, laboring under the horror of a hostile visit from the Arabs or Ma- melukes. At Siout, which has succeeded to Girgeh, as the capital of Upper Egypt, they fe in with Burckhardt, travelling as Shekh Ibrahim, on his way to the Great Oasis, where a tribe of Bedouins had lately established themselves. Ibrahim Bey, the eldest son of the pacha, here receive] them with considerable civility. Reach- ing Gaw-el-Kebir, the ancient Antaeopohs, on the 28th, they found the portico of the temple still standing, in the midst of a thick grove c dates, and consisting of three ows, each ot six columns; they are eight feet in diameter, and, with their entablature, sixty-two feet high.

Legh thinks this venerable and gigantic ruin the most picturesque in Egypt ; the columns, archi- traves, and every part of the building, are covered with hieroglyphics. At the farthest extremity of the temple is an immense block of granite, of a pyramidal form, twelve feet high, and nine feet square at the base, in which is cut a niche, seven feet high, four feet wide, and three feet deep.

Our travellers were forcibly struck with the luxuriant fertility of the soil along the banks of the Nile, as contrasted with the wretched state of poverty and misery of the inhabitants. ' The fields, enriched by the Nile, teem with plenty ; the date-trees here are loaded with fruit ; cattle of every kind, poultry, and milk, abound in every village ; but the wretched Arab is com- pelled to live on a few lentils, and a small portion of bread and water, while he sees his fields plun- dered and his cattle driven away, to gratify the insatiable wants of a mercenary soldier, and the inordinate claims of a rapacious governor. After having paid the various contributions, and an- swered the numerous demands made upon him, not a twentieth of the produce of his labor falls to his own share ; and without the prospect of enjoying the fruits of his toil, the Fellah, natu- rally indolent himself, allows his fields to remain uncultivated, conscious that his industry would be but an additional temptation to the extortion of tyranny.' p. 42.

Between Cafr Saide, supposed to be the site of Chenoboscia, and Diospolis Parva, the modern How, they observed, for the first time, some crocodiles basking on the sand-banks in the river, the largest apparently about twenty- five feet long. Mr. Legh thinks Girgeh the limit below which they do not descend ; and they appear to be most numerous between this place and the cataracts. The superstitious natives, we are told, attribute the circumstance of crocodiles not being observed in the lower parts of the Nile, to the talismanic influence of the Mikkias, or Nilometer, at Cairo.

A fair wind wafted the travellers past Dendera, Koptos, and Kous, and on the 7th February they landed on the plain of Thebes, the city of a hundred gates, the theme and admiration of ancient poets and historians, and the wonder of every traveller in every age. The ruins extend from each bank of the Nile to the sides of the enclosing mountains. The objects which most powerfully attract the attention on the east%rn side, are the magnificent temple of Karnac, and the remains of the temple of Luxor; the latter of which, Mr. Legh says, mark the southern ex- tremity of the walls of the city on that side of the river. On the opposite, or western bank, are the Memnonium, the two colossal statues, and the remains of Medinet-Abou. The Necro- polis, or celebrated caverns, known as the se- pulchres of the

ancient kings of Thebes, are excavations in the mountains, covered with sculptures and paintings, still in the highest de- gree of preservation. Of these, Mr. Legh gives no description, which indeed, without engra- vings, would have Been of little use. For the most ample, laborious, and accurate details ot threse ancient ruins, says the Quarterly Reviewer,

we must still consult the learned and indefa- tigable Pococke.

The time passed by Mr. Legh at Essouan was employed in visiting the islands of Elephantina, Philae, and the cataracts. ' Elephantina,' he says, ' is celebrated for its beauty, and certainly' contains within itself every thing to make it one of the most enchanting spots in the world : woods, gardens, canals, mills, rivers, and rocks, combine to make it picturesque.' Eight temples, or sanctuaries, are crowded together on the island of Philre, though its whole length does not exceed 1000 feet, nor its breadth 400. Mr. Legh thinks, from the present state of these temples, that the system of building among the ancient Egyptians, was first to construct great masses, and afterwards to labor for ages in finishing the details of the decorations, beginning with the sculpture of the hieroglyphics, and then passing to the stucco and painting. He tells us also, that the granite quarries, at the foot of the mountains, still bear the marks of the chisel and the wedge; 'and that the unfinished obelisks, columns, and sarcophagi, which are to be seen in great profusion, show the unwearied labor and mighty schemes of the ancient inhabitants.'

The cataracts of the Nile have been repre- sented by former writers in exaggerated colors. This barrier, however, placed by nature between Nubia and Egypt, is in the highest degree mag- nificent.

' Passing upwards from Egypt, you leave the delicious gardens of the island of Elephantina, which divides the Nile into neany two equal streams; and, on the left, the romantic and ruined town of Essouan strongly reminded us of the old gothic castles in England. Beyond, the two chains of primitive mountains, lying on each side the Nile, cross the bed of the river, and form innumerable rocky points or islands to impede its course. The wild disorder of the granite rocks, which present every variety of grotesque shape, the absence of alfr cultivation, the mur- mur of the water, and the savage and desolate character of the whole scene, form a picture which exceeds all power of description.' p. 54.

The boundary of the French expedition in Egypt was marked on a granite rock a little above the cataracts ; and our travellers were ear- nestly exhorted by the Arab shekh at Essouan, not to think of proceeding further. But, as the Mamelukes were at a considerable distance, and the Bar&bras at peace with the pacha of Egypt, they proceeded, and found a population

of a character totally distinct from that of Egypt, its low sandy banks, its Copts, Arabs, Turks, and Jews. The natives are Barabras, or Berebbers, or Berberins, the same who inhabit Mount Atlas and the interior parts of Barbary, to which they have given their name ; a frugal, harmless, and honest people, subsisting chiefly on dates, millet, and a few leguminous plants ; and rigid Mahocn- medans. For the first eighteen miles, the mountains are described as hemming in the Nile, leaving but few small patches that could pos- sibly be cultivated, and these were generally plarted with dates. But we must here leave our travellers, referring the reader to Mr. Legh's Narrative for their further route. Returning

down the Nile, they again visited the neighbour- nood of Thebes, and landed at Manfalout, to examine some mummy-pits in the desert, near the village of Amabdi, of which they had heard an extraordinary account from a Greek, of the name of Demetrius. He told them, that in pur- suing some fugitives, they were suddenly ob- served to disappear. On coming to the place, they found a pit, which he and some others descended; at the bottom were fragments of mummies of crocodiles scattered about, but no fugitives to be seen. This story raised the cu- riosity of our travellers, and they determined to visit those subterraneous chambers, in which the iacred crocodiles had been interred, and which tle'od' tus was not permitted to see.

The party was composed of Mr. Legh, Mr. Smelt, the American interpreter, an Abyssinian •• err 'ant of the name of Fadlallah, and three of their boat's crew, Barabras, whom they had brought from the Cataracts. Having wandered about four hours in search of Amabdi, they at length observed four Arabs cutting wood. These people showed an unwillingness to give them any infor mation— talked of danger — and were heard to mutter that — ' if one mast die all must die' : — this, however,~did not deter the party from pro- ceeding. The story of this adventure is so well told, and so interesting, that, though rather long, we give it in Mr. Legh's own words.

' We were bent on going, and the Arabs at last undertook to be our guides for a reward of twen- ty-five piastres. After an hour's march in the desert, we arrived at the spot, which we found to be a pit or circular hole of ten feet in diameter and about eighteen feet deep. We descended without difficulty, and the Arabs began to strip, and proposed to us to do the same : we partly followed their example, but kept on our trowsers and shirts. I had by me a brace of pocket pistols, which I concealed in my trowsers, to be pre- pared against any treacherous attempt of our guides. It was now

decided that three of the four Arabs should go with us, while the other remained on the outside of the cavern. The Abyssinian merchant declined going any farther. The sailors remained also on the outside to take care of our clothes. We formed therefore a party of six: each was to be preceded by a guide — our torches were lighted — one of the Arabs led the way, — and I followed him.

‘ We crept for seven or eight yards through an opening at the bottom of the pit, which was partly choked up with the drifted sand of the desert, and found ourselves in a large chamber about fifteen feet high.

- *This was probably the place into which the Greek, Demetrius, had penetrated, and here we observed what he had described, the fragments of the mummies of crocodiles. We saw also great numbers of bats flying about, and hanging from the roof of the chamber. Whilst holding up my torch to examine the vault, I accidentally scorched one of them. I mention this trivial circumstance, because afterwards it gave occasion to a most ridiculous, though to us a very impor- tant, discussion. So far the story of the Greek was true, and it remained only to explore the galleries where the Arabs had formerly taken refuge, and where, without doubt, were deposited*

the mummies we were searching for. We had all of us torches, and our guides insisted upon our placing ourselves in such a way, that an Arab was before each of us. Though there ap- peared something mysterious in this order of march, we did not dispute with them, but pro- ceeded. We now entered a low gallery, in which we continued for more than an hour, stooping or creeping as was necessary, and fol- lowing its windings, till at last it opened into a large chamber, which, after some time, we recog- nised as the one we had first entered, and from which we had set out. Our conductors, how- ever, denied that it was the same, but on our persisting in the assertion, agreed at lust that it was, and confessed they had missed their way the first time, but if we would make another at- tempt they would undertake to conduct us to the mummies. Our curiosity was still unsatisfied ; we had been wandering for more than an hour in low subterranean passages, and felt considerably fatigued by the irksomeness of the posture in which we had been obliged to move, and the heat of our torches in those narrow and low galleries But the Arabs spoke so confidently of succeeding in this second trial, that we were induced once more to attend them. We found the opening of the chamber which we now approached guarded by a trench of unknown depth, and wide enough to require a good leap. The first Arab jumped the ditch and we all followed him. The passage we entered was extremely small, and so low in some places as to oblige us to crawl flat on the ground, and almost always on our hands and knees. The intricacies of its windings resembled a labyrinth, and it terminated at length

in a chamber much smaller than that which we had left, but, like it, contained nothing to satisfy our curiosity. Our search had hitherto been fruitless, but the mummies might not be far distant ; ano- ther effort, and we might still be successful.

‘ The Arab whom I followed and who led the way, now ˆentered another gallery, and we all continued to move in the same manner as before, each preceded by a guide. We had not gone far before the heat became excessive; for my own part, I found my breathing extremely difficult, my head began to ache most violently, and I had a most distressing sensation of fulness about the heart.

‘ We felt we had gone too far, and yet were almost deprived of the power of returning. At this moment the torch of the first Arab went out ; I was close to him and saw him fall on his side — he uttered a groan — his legs were strongly con- vulsed, and I heard a rattling noise in his throat — he was dead. The Arab behind me, seeing the torch of his companion extinguished, and con- ceiving he had stumbled, past me, advanced to his assistance, and stooped. I observed him ap- pear faint, totter, and fall in a moment — he also was dead. The third Arab came forward ˆ and made an effort to approach the bodies, but stopped short. We looked at each other in silent horror. The danger increased every instant; our torches burnt faintly; our breathing became more difficult ; our knees tottered under us, and we felt our strength nearly gone.

‘There was no time to be lost — the American, Barthow, ciied to us ‘take courage,’ and we

began to move back as fast as we could. We heard the remaining Arab shouting after us, calling us Caffres, imploring our assistance, and upbraiding us with deserting him. But we were obliged to leave him to his fate, expecting every moment to share it with him. The windings of the passages through which we had come in- creased the difficulty of our escape; we might take a wrong turn, and never reach the great chamber we had first entered. Even supposing we took the shortest road, it was but too probable our strength would fail us before we arrived. We had each of us separately and unknown to one another observed attentively the different shapes of the stones which projected into the galleries we had passed, so that each had an im- perfect clue to the labyrinth we had now to re- trace. We compared notes, and only on one occasion had a dispute, the American differing from my friend and myself; in this dilemma we were determined

by the majority, and fortunately were right. Exhausted with fatigue and terror, we reached the edge of the deep trench which remained to be crossed before we got into the great chamber. Mustering all my strength, I leaped, and was followed by the American. Smelt stood on the brink, ready to drop with fa- tigue. He called to us ' for God's sake to help him over the fosse, or at least to stop, if only for five minutes, to allow him time to recover his strength.' It was impossible — to stay was death, and we could not resist the desire to push on and reach the open air. We encouraged him to summon all his force, and he cleared the trench. When we reached the open air it was one o'clock, and the heat of the sun about 160°. Our sailors, who were waiting for us, had luckily a bardak full of water, which they sprinkled upon us, but, though a little refreshed, it was not possible to climb the sides of the pit; they unfolded their turbans, and slinging them round our bodies, drew us to the top.'

The Arab who remained at the entrance an- xiously enquired for his hahabebas, or friends ; he was told they were employed in bringing out die mummies ; the travellers then mounted their asses, and rode forward towards the boats with all speed, but were pursued ; and being brought back to Manafalout, found great difficulty in es- caping the vengeance of its inhabitants.

The accomplished, but unfortunate, Mr. Burckhardt left England on the 2d of March, 1 809, for Malta, whence he set out for Aleppo, which he reached on the 6th of July. At this place and Damascus, he spent the principal part of the next three years; during which he made a variety of excursions into the Hauran and the Lesge, visited the ruins of Palmyra and Balbec, and perfected himself in the knowledge of the religion, manners, and language of the Mahom- medan Arabs. On the 18th of June, 1812, he set out from Damascus for Cairo, avoiding the usual route of the sea coast and desert between El Arish and the borders of Egypt, and direct- ing his 'course, in the disguise of the poorest of the Bedouins, from the Holy Land, east of the Jordan, by Szalt, into Arabia Petraea, and across the great desert El Ty ; he reached Cairo on the 4th September, witli the intention of availing

himself of the first opportunity of penetrating into Africa, which the departure of a Fezzan or a Darfur caravan might afford him. Finding, however, that this was not likely soon to take place, he determined to pass the intermediate time in exploring Egypt, and the country above the Cataracts, and was thus enabled to perform two very arduous and interesting journeys into the ancient Ethiopia ; one of them along the banks of the Nile from Assouan to Dar El Mahass on the frontiers of Dongola, in the months of February and March 1813, during which he dis- covered many remains of ancient Egyptian and Nubian architecture, with Greek

inscriptions, such as are found in the temples of Philae : — the other between March and July in the following year, through Nubia to Souakim and Djedda. The details of this journey, contained in his Tra- vels, are said to be the best notices ever received in Europe of the actual state of society, trade, manufactures, and government in what was the cra- dle of all the knowledge of the ancient Egyptians.

Captain Light's Travels were published in 1818, and are chiefly valuable for the ill-executed but tolerably accurate prints of Egyptian anti- quities which they contain. He had previously contributed to Mr. Walpole's Memoirs, relating to European and Asiatic Turkey, several curious decorations in the remains of the churches of Nubia. These Memoirs,contain also some pa- pers of the late Mr. Davison, who was British consul at Algiers, and accompanied Mr. Wortley Montague to Egypt in 1763. In the great py- ramid, Mr. Davison discovered a room, before unknown, immediately over the chamber which contains the sarcophagus ; and descended the three successive wells, to the depth of 155 feet. He also well describes the catacombs of Alexan- dria. This volume likewise comprises an ac- count of the customs and manners of modern Egypt by Dr. Hume. Nor should we forget the obligations which every writer on the geography of Egypt must in future owe colonel Leake's ele- gant two-chart map of that country, comprehend- ing also a sketch of Nubia, as far as the southern cataract; the limit of all the existing antiquities.

The 'Memnon' or head of a colossal statue found at Thebes, now in the British Museum, was brought from that place to Alexandria at the joint expense of poor Burckhardt, and Mr. Salt, our consul in Egypt. It is considered the finest specimen of ancient Egyptian sculpture which has yet been discovered, and is formed of a single block of granite about ten tons in weight. Under the direction of M. Belzoui, it was moved by the sheer labor of the Arab pea- santry two miles, and, without the aid of any kind of machinery, embarked on the Nile. The French, unable to remove it, attempted to blow off with gunpowder the large mass of hair behind, forming that bushy coeffure so common on Egyptian statues, and part of the Bust ; fortunately the face has sustained no injury.

« By the indefatigable labor of (the late) M. Belzoni and Mr. Salt, the British Museum,' says the Quarterly Reviewer, ' is likely to become the richest depository in the world of Egyptian an- tiquities. They uncovered the front ol the great sphynx, when numerous pieces of ant.quity, as

unexpected as extraordinary, were developed, pieces which, for many centuries, had not been exposed to human eyes. Among other things, a beautiful monolithic temple of very considerable dimensions was discovered between the legs of the sphynx, having within it a sculptured lion and a small sphynx. In one of the paws of the great sphynx was another temple, with a sculp- tured lion standing on an altar. In front of the great sphynx were the remains of buildings, ap- parently temples, and several granite slabs with inscriptions cut into them, some entire and others brcVen. One of these is by Claudius Caesar, recording his visits to the pyramids, and another by Antoninus Pius ; both of which, with the lit- tle lions, are now in the British Museum. Se- veral paint-pots were also found fronting the sphynx, with paint of different colors in them. At Thebes, M. Belzoni made many new and curious discoveries, and found many valuable relics which had escaped the ravages of the in- vading Persians and the modern Arabs : he has also uncovered six tombs of the kings of Egypt, which for centuries had not been entered, or, in- deed, known. That of Apis he represents as uncommonly magnificent and interesting. 'It is certainly,' he says, ' the most curious and aston- ishing thing in Egypt, and impresses one with

the highest idea of the workmanship of the an- cient inhabitants. The interior, from one extre- mity to the other, is 190 feet, containing a great number of apartments and galleries. The walls are every where covered with hieroglyphics and bas-reliefs, in fresco colors, which are brighter than any color we have, and as fresh as if they had been only just laid on. But the finest an- tique in this place is in the principal chamber. It is a sarcophagus, formed of a single piece of alabaster, nine feet seven inches long, three feet nine inches wide, the interior and the exterior being equally covered with hieroglyphics and figures, hollowed with a chisel. This sarcopha- gus sounds like a silver bell, and is as transpa- rent as ire; no doubt, when I shall have it transported to England, as [hope to do suc- cessfully, it will be esteemed as one of the most precious treasures of which any European mu- seum can boast.'

The most important, however, of M. Belzoni's labors in Egypt was the opening of the second pyramid of Ghiza, known by the name of Ce- phrenes. But, for the particulars of this inter- esting operation and its results, see PYRAMIDS OF EGYPT ; and, for some recent discoveries in regard to THEBES, the article of that title.

EHRENBREITSTEIN, a once celebrated fortress of Germany, in the Lower Electorate, considered as the key of the Rhine and the Moselle, is situated near Coblentz, on the oppo- site side of the Rhine. It included three for- tresses, the chief of which was thus named, and the other two Thai and

Vallendar. The value and strength of Ehrenbreitstein have been often mentioned by travellers, but were never so fully proved, as by the resistance it made to the trench, during a siege and blockade of two years, in 1795 and 1796. In 1797 it was res- tored to Prussia ; but the works were previ- ously blown up. Though it is closely connected with the country behind the dreary district of Weteravia, it has the appearance towards the Rhine of being nearly insular, and perfectly pyramidal. The abruptness of its elevation above Coblentz, is so little diminished by the breadth of the river, that the rock may almost be said to threaten the city like a precipice ; the streets being as open to inspection from the fortress, as those of a model on a table. The only entrance into the castle from the Rhine, is by a road cut in the solid rock, under four gate- ways. So long ago as the fifteenth century, three years were spent in digging a we'l through the solid rock, to the depth of 280 feet, as is men- tioned in an inscription within the castle. The possession of this castle was confirmed to the elector of Treves, in 1660, by the treaty of Westphalia ; but as it was considered one of the keys of Germany, towards France, the governor always took the oaths to the emperor and the empire, as well as the elector. The French plenipotentiaries at Rastadt demanded the ces- sion of the fortress to the republic, which was obstinately refused by the deputies of the empire. At last it was mutually agreed that its fortifica-

tions should be demolished, but this was pro- tested against by the Austrian deputy. From that period the French troops laid siege to it, notwithstanding the armistice concluded in 1797, and closely blockaded it till the 24th of January 1799, when it surrendered. At the bottom lies the small town of Thal-Ehrenbreitstein, which contains 3500 inhabitants; and carries on a brisk trade with Coblentz, by a bridge of boats across the Rhine.

EHRET (George Dionysius), F. R.S. an eminent botanical painter, son of a gardener of the prince of Baden Durlach, was born in 1710. Visiting Paris, he was employed in the garden of plants under the celebrated Jussieu, and then came to England. lie went in 1736 to Holland, and made drawings for Cliffort of Amsterdam. Under the direction of Linnaeus, who gave him lessons in botany, he formed the figures of plants for the Hortus Cliffortianus, published in 1737, and returning to England, in 1740, finally settled here. He was patronised by the duchess of Portland, Drs. Sloane, Mead, and Fothergill, Ralph Willet, Esq., and other persons of taste. He died in 1770.

EHRETIA, in botany, a genus of the mono- gynia order, and pentandria class of plants; natural order forty-first, asperifolias : FRUIT is a bilocular berry: SEEDS solitary and bilocular; the stigma envirginated.

EHRHARTA, in botany, a genus of the mo- nogynia order, and hexandria

class of plants : CAL. is atwo-valved, abbreviated, and one-flow- ered glume : COR. a double glume, each two- valved ; the exterior one compressed, and scy- meter shaped, transversely wrinkled, and gashed at the base. There are six stamina, three on each side the pistil in a parallel line. The stigma is simple, compressed, four-tufted, and

torn at the top. Species nine, natives of the West Indies, and South America.

EJACULATE, v. a. ~\ Lat. ejaculor, from e

EJACULA'TION, n. s. £ forth, and jaculor to

EJAC'OLATORY, adj. j hurl or throw, as a dart. To dart out or shoot forth : applied metaphorically, to words or to acts of the mind. Ejaculation is used both for the act of darting or throwing out, and words (hence prayers) or things ejacu- lated : ejaculatory is throwing, or having the power of throwing out : hence, uttered shortly or suddenly, and sudden or hasty.

There seemeth to be acknowledged, in the act of envy, an ejaculation or irradiation of the eye.

Bacon's Essays.

In your dressing let there be ejaculations fitted to the several actions of dressing ; as at washing your hands, pray to God to cleanse your soul from sin.

Taylor's Guide to Devotion.

The continuance of this posture might incline to ease and drowsiness ; they used it rather upon some short ejaculatory prayers, than in their larger devo- tions. Ouppu's Devotion.

We are not to value ourselves upon the merit of ejaculatory repentances, that take us by fits and starts.

L' Estrange.

Being rooted so little way in the skin, nothing near so deeply as the quills of fowls, they are the more easily ejaculated. Grew's Museum.

The mighty magnet from the centre darts This strong, though subtile force, through all the

parts :

Its active rays ejaculated thence, Irradiate all the wide circumference. Blackmore.

He whose ejaculatory uses of God's name are not prayers for some one, will find them curses to him- self. Thomas.

EICHSFELD, a province of Prussia (in part ceded to that power by Hanover, in 1818), and part of the present principality of Calenberg. It is divided into the Upper and Lower Eichs- field, and contains 90,000 inhabitants. The othier and larger part, not belonging to Hanover, was a part of the electorate of Mentz.

EICHSTADT, a town and bishop's see of Bavaria, in the circle of the Upper Danube, situated in a valley on the Alt. The king of Bavaria conferred the title of prince of Eich- stadt on Eugene Beauharnois, his son-in-law, formerly viceroy of Italy. A convent in this town is much visited by zealous Catholics as containing a supposed relic of St. Wilibald. Population 6000. Thirty-two miles N. N. E. of Augsburg.

EICK (John Van), a celebrated Flemish painter, commonly called John of Bruges, from his birth place, flourished in the fifteenth century, and was the first who discovered the method of painting in oil. Being a chemist, he found in the course of his experiments, that, by grinding colors with liuseed or nut oil, he could form them into a solid body which would resist water, and not need the varnish used in painting in water colors or in fresco. He presented the first pic- ture painted in this manner to Alphonsus I. king of Naples, who was much pleased with it.

EIDER DUCK. See ANAS.

EIGG, an island of the Hebrides, six miles in length and from one to three in breadth, con- taining a superficial area of about eleven square miles. Kelp and wool are yielded here, together

with a few horses. The clergyman has several other small islands under his charge, and, in visiting Cannay, has to perform a voyage of twenty-four miles. There is also a resident Roman Catholic clergyman. Distant from the shore of Scotland eight miles.

EJECT,' v. a. i Fr.jetter, from Late; icio,

EJECT'ION, n. s. J ejectum ; i. e. e out, and jacio to hurl. To throw out; expel: hence to cast away ; discharge.

To have ejected whatsoever the church doth take account of, be it never so harmlesss in itself, and of never so ancient continuance, without any other crime to charge it with, than only that it hath been the hap thereof to be used by the church of Rome, and not to be commanded in the word of God, could not have been defended. Hooker.

We are peremptory to dispatch This viperous traitor ; to eject him hence, Were but our danger ; and to keep him here, Our certain death ; therefore it is decreed He dies to night. Shakspeare. Coriolanus.

Infernal lightning sallies from his throat ! Ejected sparks upon the billows float ! Sandys.

It was the force of conquest ; force with force Is well ejected, when the conquered can. Milton.

The French king was again ejected when our king submitted to the church. Dryden.

Tears may spoil the eyes, but not wash away the amiction ; sighs may exhaust the man, but not eject the burthen. South.

The heart, as said, from its contracted cave, On the left side eject the bounding wave.*

Blackmore.

Will any man say, that if the words whoring and drinking were by parliament ejected out of the English tongue, we should all awake next morning chaste and temperate. Swift.

These stories are founded on the ejection of the fallen angels from heaven. Broome.

EJECTION, in Scotish law, is the turning out the possessor of any heritable subject by force ; and is either legal or illegal.

1. EJECTION, ILLEGAL, is one person's vio- lently turning another out of possession, without lawful authority.

2. EJECTION, LEGAL, is where a person having no title to possess, is turned out by the authority of law.

EJECTMENT, in English law, a writ or action which lies for the lessee for

years, on his being ejected or put out of his land before the expira- tion of his term, either by the lessor or a stranger. It may also be brought by the lessor against the lessee, for rent in arrears, or holding over his term, &c. Ejectment of late is become an action in the place of many real actions, as writs of right, formedons, &c., which are very difficult, as well as tedious and expensive; and this is now the common action for trial of titles and reco- vering of lauds, &c., illegally held from the right owner : yet where entry is taken away by descents, fines, recoveries, disseisins, &c. an ejectment shall not be brought; whereby we find that all titles cannot be tried by this action. The method of proceeding in the action of ejectment is to draw up a declaration, and feign therein a lease for three, five, or seven years, to him that would try the title ; and also feign a casual ejector or de- fendant; and then deliver the declaration to the ejector, who serves a copy of it on the tenant in

possession, and gives notice at the bottom for of a common, piscary, &c. Cro. Jac. l/K). For

him to appear and defend his title; or that he, underwood it lies, though a pnecipe doth not

the feigned defendant, will suffer judgment by 2 Roll. Rep. 482, 483. But for uno clauso'or

default, whereby the true tenant will be turned una pecia terra, &c. without certainty of't!i< >

out of possession ; to this declaration the tenant is to appear at the beginning of next term by his

acres, and their nature, it doth not lie. 1 : Rep. 55. 4 Mod. 1. It lieth of a close, containinr

acres of land covered with water ; though not de aquae cursu. Cro. Jac. 435. 1 Brownl. 242. It also lies for a prebendal stall, after col- lation to it. 1 Wils. 14.

attorney, and consent to a rule to be made de- three acres of pasture, &c. Also of so fendant, instead of the casual ejector, and take upon him the defence, in which he must confess lease, judgment, entry, and ouster, and

at the trial stand upon the title only: but in case the tenant in possession does not appear, and enter into the said rule in time, after the declaration served, then, on affidavit being made of the ser- vice of the declaration, with the notice to appear as aforesaid, the court will order judgment to be entered against the casual ejector by default ; and thereupon the tenant in possession, by writ ha- bere facias possessionem, is turned out. On the trial in ejectment, the plaintiff's title is to be set forth from the person last seised in fee, under whom

EIGHT, adj.

EIGHTH,

EIGHTEEN',

EIGHTEENTH,

EIGHT'FOLD,

EIGIITH'LY, adv.

EIGHTIETH, adj.

EIGHTSCORE',

EIGHT'Y.

Sax. eahta, aehta ; Belˆ. agt ; Scottish and Tent. acht ; Goth, ahta, atthu, and ath; Dan. utte ; Fr. >huit ; Lat. octo ; Gr. OKTO. A word of number ; twice four. Eighth is the ordinal of eight : eightfold is eight J times the number or quan-

, .- tity; eighthly is in the eighth place; eighteen,

the lessor claims down to the plaintiff, proving eight and ten . eightscore, eight twenties; eighty, the deeds, &c., and the plaintiff shall recover ejgnt ten times told, only according to the right which he has at the And here, another

And it was don aftir these wordis almeest cightc dayes : and he took Petre and James and Jon, and he stiede into an hil to preye. Wiclif. Luke ix.

And it was doon in the eightitlie day thei camen to circumside the child, and thei clepidcn him Zacarye by the name of his fadir. Id. Luk .

And as the eyghtene on which the tower in Siloa fel doun and slough hem, gessen ye for thei weren dettouris more than alle men that dwellen in

Jerusa- lem ? Id. Luk. xiii. In the eighteenth year of Jeroboam died Abijara.

1 Kingi.

„ . .ˆ . Another yet? — A seventh ! I'll see no more ;

dow, &c., with the appurtenances in the parish And yet the eighth appears. Shahtpeare. Macbeth.

time of bringing his action. who has title to the land, may be defendant in the action with the. tenant in possession ; for the possession of the lands is primarily in question, and to be recovered, which concerns the tenant, and the title thereto |is tried collaterally, which may concern some other.

Ejectment ought to be brought for a thing that is certain ; and if it be of a manor, the manor of A, with the appurtenances ; if of a rectory, the rectory of B, &c. And so many messuages, cottages, acres of arable land, mea-

of, &c. For land must be distinguished, how much of one sort, and how much of another, &c., Cro. Eliz. 339. 3 Leon. 13. Ejectment lies of a church, as of an house called the parish church of, &c. And a church is a messuage, by

which name it may be recovered : and the de- Qh weary reckoning '.

claration is to be served on the parson who per- forms divine service. 1 1 Rep. 25. 1 Salk. 256. A rector may recover in ejectment against his lessee, on the ground of the lease of the rectory being avoided on account of his own non-resi- dence, by force of the 13 Eliz. c. 20, and the lease to the defendant, describing him as doctor in divinity, produced by him at the trial in support

He can't take two from twenty, for his heart, And leave eighteen. Id. Cymbeline.

What ! keep a week away ? seven days and nights ? Eightscore eight hours ? and lovers absent hours, More tedious than the dial eightscore times ?

Id. Othello.

Eighty odd years of sorrow have I seen, And each hour's joy wrecked with a week of teen.

Siiahspeare. In the eighth month should be the reign of Saturn.

Bacon.

Eighthly, living creatures have voluntary motion, which plants have not. Bacon' Natural Histury.*

This island contains eighttcore and eight miles in of his title/is prima fa'cie evidence of his being circuit. Sandy'* Journey*

such as he is therein described to be, so as to Among all other climacterick three are most re- avoid the lease under stat. 21 Hen. 8. C. 13. § 3. markable ; that is, seven times seven, or forty-nine ; It lies de uno messuagio sive burgagio ; but not nine times nine or eighty one ; and seven times

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de uno messuagio sive tenemento, unless it have

a vocat A. &,c. to make it good, because of the

uncertainty of the word tenement. 1 Sid. 295.

But for a messuage and tenement hath been

allowed. 1 Term Rep. 11. So indeed for a

messuage or tenement. 3 Wils. 23. 3 Mod.

328. 1 Sid. 295. but see contra, 1 East's Rep.

441, 2. It will lie for a moiety, or third part of sound> and the

a manor or messuage, &c. And for a chamber

or room of a house well set forth. 1 1 Rep. 55.

59. 3 Leon. 210. It lieth dedomo, which hath

convenient certainty for the sheriff to deliver

possession, &c. Cro. .Jac. 654. It lies of a

cottage or curtilage ; of a coal-mine, &c. but not

or the year sixty-three, which is conceived to carry with it the most considerable fatality.

Browne' Vulgar Errourt.*

If men naturally lived but twenty years, we should be satisfied if they died

about eighteen; and yet eighteen years now are as long as eighteen years would be then. Taylor.

A pedant values phrases, and elects them by the parts of speech are his servants. Overbury.

Some balances are so exact as to be sensibly turned with the eiahtieth part of a grain.

Wilkim't Math. Magic. I stay reluctant seven continued years, And water her ambrosial couch with tears ;

The eighth she voluntarily moves to part,

Or urged by Jove, or her own changeful heart.

Pope.

I thus passed 'about eighteen months in London, working almost without intermission at my trade, avoiding all expense. Franklin,

Oft, where his feathered foe had reared her nest, And laid her eggs and household gods to rest, Burning for blood in terrible array, The eiyhteen-iucb militia burst theirJway ; All went to wreck ; the infant foemen fell, When scarce his chirping bill had broke the shell.

Beattie.

EIGNE, adj. Fr. aisne. In law, denotes the eldest or first born. Here it signifies un- alienable, as being entailed.

It happeneth not seldom, that, to avoid the yearly oath, for averment of the continuance of some estate for life, which is eigne, and not subject to forfeiture for the alienation that cometh after it, the party will offer to sue for a pardon uncompelled before the time ; in all which, some mitigation of the uttermost value may weli and worthily be offered. Bacon.

EIMBECK, an old town of Hanover, on the lime, with 5000 inhabitants. It belonged to the Hanseatic confederacy, and has some manufac- tures, but is not thriving. Great part of its for- tifications were demolished by the French in 1761. Forty-eight miles S. S.W. of Brunswick.

EIMEO, or MOVEA, one of the Society Islands in the South Pacific, about ten miles in length by five in breadth. The harbour of Taloo on the north coast is the best; and here the water is so clear, that the branching of beautiful coral is visible at great depths. The island is hilly and rocky, with valleys interposed. Twelve miles west of Otaheite.

EINURA, or YENNOOR, a town in the district of South Canara, Hindostan, containing eight temples belonging to the Jain, and one to the Siva Brahmins. The former have an annual allowance of fourteen and the latter ten pagodas. There is an immense colossal image here of one of the gods of the Jains, which stands in the open air. It is formed of one solid piece of granite. The hills and neighbourhood about this place are considered unproductive.

EI'SEL, n. s. Sax. eopil. Vinegar; ver- juice; any acid. An old word.

Cast in thy mind

How thou resemblest Christ, as with sowre poison If thou paine thy taste ; remember therewithall, How Christ for thee tasted eisel and gall.

Sir T. More.

EISENACH, a principality of Germany in Thuringia, and circle of Upper Saxony, situated on the confines of Hesse. It is mountainous, and scarcely produces corn enough for the inha- bitants. Some indifferent wine is made : but it has mines of copper, iron, vitriol, and alum, with some salt springs. It gave a vote te the duke of Saxe Weimar, in the diets and assem- blies of the circle. Population 62,000. Its rivers are the Warra, Slade, Unstrut, and Fulda.

EISENACH, the capital of the above province, is situated on a rising ground near the junc- tion of the Hesse and Horsa. It has a castle in the market-place as old as the eleventh century, and formerly the residence of the princes of Eise-

nach. The streets are neat am! well built. Popula- tion 5000. On a high mountain in the immedi- ate neighbourhood stands the castle of Wartburg remarkable as the prison of Luther in 1521 when the elector of Saxony judged his temporary confinement expedient. Eisenach has a few coarse woollen manufactures. It experienced, on the 1st of September, 1810, a severe calamity, three powder waggons having exploded in the streets, and destroyed many houses. Twenty-six miles W.S.VV. of Erfurt, and forty east of Weimar. Long. 10° 20′ 15″ E., lat. 50° 58′ 55″ N.

EISENARTZ, a town of Upper Styria, con- taining 1350 inhabitants. It is

2190 feet above the level of the sea, at the foot of a hill which contains one of the richest iron mines known. This was discovered in 712, and still produces 50,000 tons of ore yearly, giving employment to 2500 miners and smelters. Ten miles north of Leoben.

EISENlBERG, a town of Germany, in the principality of Altenburg. It has a castle and a few manufactures; being situated on an eminence, near the Saale. Twenty miles west of Alten- burg, and thirty south-west of Leipsic. Popula- tion 3300.

EISENBURG, a county of Lower Hungary, on the borders of Austria and Styria, adjoining the counties of Oldenburg. Sala, and Wesprim. It is exceedingly fertile and populous, containing near 300,000 inhabitants. Its rivers are the Roab, Rabnitz, Guns, Sala, and Mur. Great part of it is covered with wood ; other parts are appropriated to pasture and the culture of the vine. The population is a mixture of Hunga- rians, Germans, Croatians, arid Jews.

EISLEBEN, the capital of the county of Mansfeld, Prussia, is chiefly remarkable as the birth place of Luther. The house in which the reformer was born and died being burnt down in 1594, it was rebuilt at the expense of the town, and is now used as a public school. Here are four churches, all Lutheran, and about 5400 inhabitants. It is divided into the Old and New Town, and the suburbs ; large vacancies having been made between the buildings, in consequence of the frequent fires that have ravaged this place . The adjacent mines of Mansfield afford employ- ment to many of the inhabitants, two miles south- east of Mansfeld, and twelve west of Halle.

EITHER, pron. & con;. Sax. egther ; Scot. ait halt ; Goth, aithwar, or uithan, i. e. eitt twar, or thera, one of them. One of two, used im- properly for each; any of an indeterminate num- ber. Used distributively as a conjunction corres- ponding with or.

And Jhesus sayed to hem, Y axe you if it is leve- ful to do wel in the sabate or yuel ; for to make saaf, ethir to leese. WicUf. Luk. vi.

We doubt whether the Lord ‘ in different circum- stances, did frame his people unto any utter dissimili- tude, either with Egyptians or any other nation.

Hooker.

Lepidus flatters both, Of both is flattered ; but he neither loves, Xor either cares for him.

Shaktpeare. Antony and Cleopatra. Henry VIII. Francis I. and Charles V.

were so provident, that scarce a palm of ground could be gotten

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by either of the three, but that the other two would set the balance of Europe upright again. Bacon.

We never heard of any ship that had been seen to arrive upon any shore of Europe ; no nor of either the East or West Indies. Id. New Atlantis.

Our infirmity will not suffer any long intention, either of body or mind. Bp. Hall. Contemplations.

Goring made a fast friendship with Digby, either of them believing he could deceive the other.

Clarendon.

In the process of natural beings, there seem to be some creatures placed, as it were, on the confines of several provinces, and participating something of either.

Hale.

Seven times the sun has either tropick viewed, The Winter banished and the Spring renewed.

Dryden.

I do not ask whether bodies do so exist, that the motion of one body cannot really be without the mo- tiou of another : to determine this either way, is to beg the question for or against a vacuum. Locke.

So like in arms these champions were, As they had been a very pair ; So that a man would almost swear, That either had been either.

Drayton's Nymp. What perils shall we find, If either place, or time, or other course, Cause us to alter the' order now assigned.

Daniel.

daces 12,530 pieces daily. The workhouse-; aro of brick, covered with thin iron plates. This is the seat of the supreme college for the ad- ministration

of the mines and foundries ot Siberia, Casan, Perm, and Orenburg, and takes cognisance of 114 foundries. There is besides a chamber for superintending the gold mines. Provisions are cheap and plentiful. Houses

2000.

EKATERTNOGRAD, a town and fortress of Asiatic Russia, in the government of Caucasus, situated on the Malka, or Balk, a little above its junction with the Terek. It was founded in the year 1776, and remained the capital of the pro- vince of Caucasus, before being constituted a government in 1785. it is the strongest place on the Caucasian line of posts. Twenty-four miles north-west of Mozdok.

EKATERINOSLAV, or CATHERINOSLAF, a town and government of European Russia, con- stituted by the empress Catherine in 1784. When Paul I. incorporated it with the Crimea he gave the whole the name of New Russia, and changed the name of this town to Nowo- Rossizsk. The present emperor, however, re- stored the division of Catharine, distributing New Russia into the three governments of Cher- son, Taurida, and Ekaterinoslav. The last, though reduced in some measure from its original

Either your brethren have miserably deceived us, or &- ig stm considerable extending from 33° 40′

vvpr rnntprc virrnp .S»«»r/ //i t'n'no – _ –

power confers virtue. Swift to Pope.

The food of the cod is either small fish, worms, crustaceous animals, such as crabs, large whelks, &c. and their digestion is so powerful, as to dissolve the greatest part of the shells they swallow. Pennant.

EJULATION, n. s. Lat. ejulatio. Outcry; lamentation; moaning; wailing.

Instead of hymns and praises, he breaks out into emulation and effeminate waitings.*

Government of the Tongue. With dismal groans And emulation, in the pangs of death, Some call for aid . Philips.

EKATERINADARA, a town in the govern- ment of Caucasus, Kuban Tartary, the capital of the Tchernornorskie, or Cossacks of the Black Sea. The late empress Catherine, after whom it is called, removed a great body of Cossacks from the banks of the Dnieper to the eastern

to 39° 20′ E. long., and from 47° to 49° N. lat., between the governments

of Poltawa, Charkov, Voronetz, the Donski Cossacks, Taurida, and Cherson, and containing about 35,000 square miles, the surface consisting for the most part of dry steppes, little susceptible of culture, except on the banks of the Dnieper, Don, Donetz, Samara, and the other rivers. The climate is mild. The chief productions are hemp, corn, millet melons, and fruits. Here are all the common domestic animals, and an unusual quantity of bees. It is divided into eight counties. The inhabitants are computed at 560,000 ; the majority deriving their subsistence from the breeding of cattle. The most intelligent and thriving part are of foreign descent, viz. Greeks, Germans, or Moldavians.

EKE, v. a. & conj. Goth, au 'tan ; Sax.eacan; Icel. auka, to increase. Spenser frequently writes

*shores of the sea of Azoph, for the purpose of tms worˆ *ek- To protract; lengthen; increase ;*

repelling the incursions of the Tartars, and supply deficiency. Hence, as a conjunction, it

granted them, in 1791, a territory of about 1000 & fls°? likewise; beside ; but is obsolete.

*fj ** vt*t Hrtlf tHirto BV&VAV iinn thnii rnaipcf nrivf**

square miles, including the isle of Taman. In the succeeding year they founded their capital, which resembles an extensive village in a forest. Each cottage has an area in front, with an avenue of the finest oaks. The inhabitants choose their own chief, and preserve the JEuropean manners. EKATERINEBURG, or CATIIERINEN- BURG, a town of Asiatic Russia, in the province of Isett, on the left bank of the river of that name, and on the eastern side .of the Uralian chain. It is surrounded by an earthen rampart, . with a chevaux de frize. Here are five churches, and several well built stone houses. The neigh- bouring mountains afford vast variety of minerals, and great works are carried on in Ekaterineburg, by the Russian government, as iron |foundries, forges, &c., \ which manufacture cannon and anchors. An immense copper coinage also pro-

Yet holt thine anker, und thou inaicst arive There bountie bereth the key of my substauncc, And ehe thou haste thy beste frende alive.

Chaucer

And eke full ofte a littell skare, Vpon a bank, her men be ware, Let in the streme, whiche with gret peine, If any man it shall restreine. Gower.

I dempt there much to have eked my store, But such eking hath made my heart sore. Sj>cnser. And eke huge mountaines from their native scat. She would command themselves to beare away.

Id. Faerie Qveene If any strength we have, it is to ill ; But all the good is God's, both power and eke will.

Id. The little strength that I have, I would it were with

you. — And mine to eke out her's.

Shahspearc. As You Like It.

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I speak too !ong ; but 't is to piece the time, To eke it, and to draw it out in length, To stay you from election.

Id. Mercltant of Venice. Now, if 'tis chiefly in the heart, That courage does itself exert, Twill be prodigious hard to prove, That this is eke the throne of love. Prior.

Your ornaments hung all, On some patched doghole eked with ends of wall.

Pope.

EKRON, a city and government of the Philistines. It fell by lot to the tribe of Judah, in the first division made by Joshua (xv. 45.) but was afterwards given to the tribe of Dan, (xix. 43.) It was situated near the Mediterranean, between Ashdod and Jamnia. Ekron was a powerful city, and it does not appear that the Jews were ever sole peaceable possessors of it: the Ekronites were the first who said that it was necessary to send back the ark of the God of Israel, in order to be delivered from those calamities which the presence of it brought upon their country. 1 Sam. v. 10. The idol Baalzebub was principally adored at Ekron. 2 Kings i. 2. &c.

ELA'BORATE, v. a. Sc adj.~\ Spanish and ELA'BORATELY, adv. (Port, elaborar ;

ELABORATENESS, n. s. £ Ital. and Lat.

ELABORATION. 3 elaborare, from

e, out, and laboro, to labor. To produce or im- prove by labor: as an adjective, highly or labo- riously finished or performed.

Formalities of extraordinary zeal and piety are never more studied and elaborate than when politicians most agitate desperate designs. King Charles

At least, on her bestowed Too much of ornament, of outward shew Elaborate, of inward less exact. Milton.

Man is thy theme, his virtue or his rage Drawn to the life in each elaborate page.

Waller.

To what purpose is there such an apparatus of ves- sels for the elaboration of the sperm and eggs ; such a tedious process of generation and nutrition ? Ray.

Politick conceptions, so elaborately formed and wrought, and grown at length ripe for delivery, do yet prove abortive. Soitth.

Some coloured powders which painters use, may have their colours a little changed, by being very elabo- rately and finely ground. Newton'i Optichs. I will venture once to incur the censure of some persons for being elaborately trifling. Bentley.

Consider the difference between elaborate discourses upon important occasions, delivered to parliaments, and a plain sermon intended for the common people.

Swift. It is there elaborately shewn, that patents are good.

Id.

They in full joy elaborate a sigh. Young. In the theatre, the first intuitive glance, without any elaborate process of reasoning, would show, that this method of political computation would justify every extent of crime. Burke.

As the glands which produce the prolific d-'st of the anthers, the honey, wax, and frequently some odori- ferous essential oil, are generally attached to the corol, and always fall off and perish with it, it is evident that the blood is elaborated or oxygenated in this pul- monary system for the purpose of these important se- cretions. Darwin.

EUEAGNUS,the oleaster, or wild olive, a genus of the monogynia order, and tetrandria class of plants ; natural order sixteenth, calyciflone : COR. none : CAL. campanulated, quadrifid, superior : FRUIT a plum below the campanulated calyx This genus must not be confounded with the oleaster

or wild olive of Gerard, Parkinson, and Ray which is only a particular species of olive, called by Tournefort and Casper Bauhine, olea sylves tris. See OLEA. There are ten species.

1. E. inermis, without thorns, is the kind commonly preserved in the gardens of this country. The leaves are more than three inches long, and half an inch broad, and have a shining appearance like satin. The flowers come out at the foot-stalks of the leaves, sometimes singly, at other times two, and sometimes three, at the same place. The outside of the empalement is silvery and studded ; the inside of a pale yellow. It has a very strong scent. The flowers appear in July, and are sometimes succeeded by fruit.

2. E. latifolia, with oval leaves, is a native of Ceylon, and some other parts of India. In this country it rises with a woody stem to eight or nine feet, dividing into many crooked branches, garnished with oval and silvery leaves, which have several irregular spots of a dark color on the surface. They are placed alter- nately on the branches, and continue all the year.

3. E. spinosa, the eastern broad-leaved olive with a large fruit, is a native of the Levant and some parts of Germany. The leaves are about two inches long, and one and Jt half broad in the middle. They are placed alternate, and are of a silver color : at the foot-stalk of every leaf there comes out a pretty long sharp thorn, which are alternately longer : the flowers are small, the inside of the empalement is yellow, and they have a strong scent when fully open.

The first and last species may be propagated by laying down the young shoots in autumn. They will take root in one year ; when they may be cut off from the old trees, and either trans- planted into a nursery for two or three years, or into places where they are to remain. The pro- per time is in the beginning of March, or early in autumn. They should be screened from high winds ; for they grow very freely, and are apt to be split by the wind, if too much exposed. The latifolia is too tender to endure the open air of this country ; and therefore must be kept in a warm stove, except during a short time in the warmest part of summer. From the flower of these plants an aromatic and cordial water has been drawn, which is said to have been successfully used in putrid and pestilential fevers.

ELJEOCARPUS, 'in botany, a genus of the monogynia order, and polyandria class of plants : COR. pentapetalous and lacerated: CAL. penta- phyllous : FRUIT a plum with a wrinkled kernel. Species five, natives of India and New Zealand.

EL.&OMELI, in ancient medicine, a sweet oil, as thick as honey, said to

flow from a tree in Syria, and to have been useful in bilious com- plaints.

EL7EOTHESIUM, in antiquity, the anoint- ing room, or place where those \lio were to

ELASTIC.

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wrestle or had bathed, anointed themselves. Ste GYMNASIUM.

ELAH.the son of Baasha, the fourth king of Israel after the separation of the ten tribes from Judah. He was murdered while in a state of rntosication, by Zimri, wiien he had reigned only two years, A. M. 3014, and A.A.C. 934.

KT.AH, in ancient geography, a valley of Israel, famous for the defeat and death of Goliath, the Philistine, by David.

ELAM, in ancient geography, a country fre- quently mentioned in Scripture, lying south-east of Shinar. In the time of Daniel, (viii. 2.) Susiana seems to have been part of it ; and, be- fore the captivity, it does not appear that the Jews called Persia by any other name. Elymae and Elymais are often mentioned by the ancients. Ptolemy, though he makes Elymais a province of Media, places Elymae in Susiana, near the sea coast. Stephanus takes it to be a part of Assyria; but Pliny and Josephus more properly of Persia, whose inhabitants, the latter tells us, sprang from the Elamites. The best commentators agree, that the Elamites, who were the ancestors of the Persians, were descended from Elam, the son of Shem. It is likewise allowed, that the inspired writers constantly intend Persia, when they speak of Elam and the kingdom of Elam.

ELA'NCE, v. a. Fr. dancer. To throw out; to dart ; to cast as a dart.

While thy unerring hand elanced Another, and another dart, the people Joyfully repeated To ! Prior.

Harsh words, that once elanced, must ever fly

Irrevocable. Id.

ELAPHEBOLIA, from tXaˆoci a deer; in Grecian antiquity, a festival in honor of Diana the huntress. In the celebration a cake was made in the form of a deer, and offered to the goddess. It owed its institution to the following circumstance : — When the Phocians had been severely beaten by the Thessalians, they resolred, by t'ue persuasion of one Deiphantus, to

raise a y>ile of combustible materials, and burn their wives, children, and effects, rather than submit to the enemy. This resolution was unanimously approved by the women, who decreed Deiphantus a crown for his magnanimity. When every thing was prepared, before they fired the pile, they engaged their enemies, and fought with such desperate fury, that they totally routed them, and

morass over the other, differing indeed principally in its age, and perhaps as the timber might be different in the proportions ef its component parts.

Darwin. Though years

Elapse, and other share as dark a doom. They but augment the deep and sweeping thoughts Which overpower all others, and conduct The world at last to freedom ! Byron.*

ELASMIS, in natural history, a genus of talcs, composed of small plates in form of spangles, and either single, and not farther fissile, or, if complex, only fissfle to a certain degree, and that in somewhat thick lamina;. Of these talcs there are several varieties, some with large and others with small spangles, which, differ also in color and other peculiarities.

ELA'STIC, adj. } Fr. elastique, from Gr.

ELAS'TICAL, > fXccrjjc, of the verb tXaw ;

ELASTICITY, n. s.j Ileb. N^HJ to impel or cast off. Springy ; energetic. The force whereby bodies restore themselves to a position from which they have been displaced.

By what elastick engines did she rear The starry roof and roll the orbs in air.

Blackmore.

If the body is compact, and bends or yields inward to pression, without any sliding of its parts, it is hard and elastick, returning to its figure with a force rising from the mutual attraction of its parts.

Newtun't Optick.*

The most common diversities of human constitu- tions arise from the solids, as to their different de- grees ef strength and tension ; in some being too lax and weak, in others too elattiek and strong.

Arbuthnot on Aliments.

A lute-string will bear an hundred weight without rupture ; but at the same time cannot exert its elasti- city: take away fifty, and immediately it raiseth the weight. Id.

A fermentation must be excited in some assignable place, which may expand itself by its eltutical power, and break through, where it meets with the weakest resistance. Bentlty.

Me emptiness and dulness could inspire, And were my elasticity and fire. Pope.

His form robust and of elastic tone,

Proportioned well, half muscle and half bone.

Supplies with warm activity and force

A mind well lodged, and masculine of course.

Coieper.

We can have no idea of a natural power, which could project a sun out of chaos, except by comparing it to the explosions or earthquakes owing to the sudden

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obtained a complete victory In .commemoration evo,ution J s or of 04ther mor

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of this unexpected success, this festival was insti- tuted to Diana, and kept with great solemnity.

ELAPHEBOLIUM, in Grecian antiquity, the ninth month of the Athenian year, answering to the latter part of February and beginning of March. It consisted of thirty days, and took its name from the elaphebolia which was celebrated in it.

ELA'PSE, v. n. Lat.elapsus. To pass away; to glide away ; to run out without notice.

vapours ;

of the power of which, under immeasurable degrees of heat and compression, we are yet ignorant. Darwin.

ELASTIC GUM, or ELASTIC RESIN. See GUM, ELASTIC.

ELASTIC VAPORS are snch as may, by any ex- ternal mechanical force, be compressed into a smaller space than they originally occupied; restoring themselves, when the pressure is taken off, to their former state, with a force exactly proportioned to that with which they were at

There is a docible season, a learning time in youth, first compressed. Of this kind are all the aerial

which, suffered to elapse, and no foundation laid, sel- · ^^ exceplion> ^ aU kinds of fumes

.om returns. «». raised by heat, whether from solid or fluid bodies.

For when an old wood perished, and produced ».-,, , .*

morass, many centuries would elapse before another Of these some retain their elasticity only when

™>d could erow and perish again upon the same a considerable degree of heat is applied to them,

ground, which would thus produce a new stratum of or to the substances which produce them ; whne

others remain elastic in every degree of cold, either natural or artificial, that has been observed. Of the former kind are the vapors of water, spirit of wine, mercury, sal ammoniac, and all kinds of sublimable salts ; of the latter, those of spirit of salt, mixtures of vitriolic acid and iron, ni- trous acid, and various metals ; and, in short, the different species of aerial fluids indiscrimi- nately. The elastic force with which any one of these fluids is endowed, has not yet been cal- culated, being ultimately greater tha'n any ob- stacle we can put in its way. Thus, if we com- press the atmospherical air, we shall find that, for some little time, it will easily yield to the force we apply ; but every succeeding moment the resistance will become stronger, and a greater and greater force must be applied in order to compress it farther. As the compression goes on, the vessel containing the air becomes hot; but no power whatever has yet been able to de- stroy the elasticity of the continued fluid in any degree ; for, upon removing the pressure, it is always found to occupy the very same space that it did before. The case is the same with aqueous steam, to which a sufficient heat

is applied to keep it from condensing into water This will yield to a certain degree ; but every moment the resistance becomes greater, until at last it will overcome any obstacles whatever. An example of the power of this kind of steam we have every day in the steam engine ; and the vapors of other matters, both solid and fluid, have frequently manifested themselves to be endowed with an equal force. Thus the force of the vapors of spirit of wine has occasioned terrible accidents when the worm has been stopped, and the head of the still absurdly tied down to prevent an ex- plosion ; the vapors of mercury have burst an iron box ; and those of sal ammoniac, volatile salts, nitrous acid, marine acid, phosphorus, &c., have all been known to burst the chemical ves- sels which confined them, in such a manner as to endanger those who stood near them. In short, from innumerable observations, it may be laid down as an undoubted fact, that there is no substance whatever capable of being reduced into a state of vapor, but what in that state is endowed with an elastic force ultimately supe- rior to any obstacle we can throw in its way. It has been a desideratum among philosophers to give a satisfactory reason for this astonishing power of elasticity in vapor, which is seemingly so little capable of accomplishing any great purpose when in an unconfined state. As air is that fluid in which, from the many experi- ments made upon it by the air-pump and other- wise, the elastic property has most frequently been observed, the researches of philosophers were at first principally directed towards it. The causes they assigned, however, were very inadequate; being founded upon an hypothesis concerning the form of the particles of the atmosphere itself, which they supposed to be either rolled up like the springs of watches, or that they consist of a kind of elastic flakes. This was followed by another hypothesis concerning their substance, which was imagined to be per- fectly elastic, and so strong that it could not be broken by any mechanical power whatever ;*

and thus they thought the phenomenon of the elasticity of the air might be explained. But an insuperable difficulty still attended their scheme, notwithstanding both these suppositions ; for it was observed, that the elastic power of the air was augmented, not only in proportion to the quantity of pressure it was made to endure, but in proportion to the desˆee of heat applied to it at the time. Sir Isaac Newton was aware of this difficulty ; and justly concluded that the pheno- mena of the air's elasticity could not be solved on any other supposition, than that of a repul- sive power diffused all around each of its particles, which became stronger as they ap- proached, and weaker as they removed from each other. Hence, the common phenomena of the air-pump and condensing-engine received a satisfactory explanation; but still it remained to account for the power shown in the present case by heat, as it could not be denied that this element had a very great share in augmenting the elasticity of the

atmosphere, and seemed to be the only cause of elasticity in other vapors. It does not appear that Sir Isaac entered into this question, but contented himself with attribu- ting to heat the property of increasing repulsion, and ascribing this to another unexplored property called rarefaction. Thus matters stood till the great discovery made by Dr. Black, that some bodies have the power of absorbing in an un- known manner the element in question, and parting with it afterwards, so that it flows out of the body which had absorbed it, with the very same properties that it had before absorption. Hence, many phenomena of heat, vapor, and evaporation, were explained in a manner much more satisfactory than had ever been attempted, or even expected before. One of these was that remarkable property of metals becoming hot by hammering; during which operation, in the doctor's opinion, the element of heat is squeezed out from between the particles of the metal, as water is from the pores of a sponge by pressing it between the fingers. Of the same nature is the phenomenon above-mentioned, that air when violently compressed becomes hot, by reason of the quantity of more subtile element squeezed out from among the particles. In this manner it appears, that heat and the repulsive power of Sir Isaac Newton are the very same; that by diminishing the heat of any quantity of air, its elasticity is effectually diminished, and it will of itself shrink into a smaller space as effectually as by mechanical pressure. In one case we have what may be called ocular demonstration of the truth of this doctrine, viz. that by throwing the focus of a strong burning lens upon a small quantity of charcoal in vacuo, the whole will be converted into inflammable air, having even a greater power of elasticity than common air in an equal degree of heat. Here there is nothing else but heat or light to produce the elastic power, or cause the particles of charcoal, which before attracted, now to repel each other. In another case we have evidence equally strong, that the element of heat by itself, without the presence of that of light, is capable of producing the same effect. Thus when a phial of ether is put into the receiver of an air-pump, and sur-

rounded by a small vessel of water, the ether boils violently, and is dissipated in vapor, while the water freezes, and is cooled to a great degree. The dissipation of this vapor shows that it has an elastic force; and the absorption of the heat from the water shows, that this element not only produces the elasticity, but actually enters into the substance of the vapor itself; so that we have not the least reason to conclude that there is any other repulsive power by which the particles are kept at a distance from one ano- ther, than the substance of the heat itself. In what manner it acts, we cannot pretend exactly to explain, without making hypotheses con-

cerning the form of the minute particles of mat- ter, which must always be very uncertain. All known phenomena, however, concur in rendering the theory now laid down extremely probable. The elasticity of the steam of water is exactly proportioned to the degree of heat which flows into it from without ; and, if this be kept up to a sufficient degree, there is no mechanical pressure which can reduce it into the state of water. This, however, may very easily be done by abstracting a certain portion of the latent heat it contains : when the elastic vapor will become a dense and heavy fluid. The same thing may be done in various ways with the permanently elastic fluids. Thus the purest dephlogisticated air, when made to part with its latent heat, by burning with iron, is converted into a gravi- tating substance of an unknown nature, which adheres strongly to the metal. If the decompo- sition is performed by inflammable air, both to- gether unite into a heavy, aqueous, or acid fluid ; if by mixture with nitrous air, still the heat is discernible, though less violent than in the two former cases. The decomposition indeed is slower, but equally complete, and the dephlogisti- cated air becomes part of the nitrous acid, from which it may be again expelled by proper means : but of these means heat must always be one ; for thus only the elasticity can be restored, and the air be recovered in its proper state. The same thing takes place in fixed air, and all other per- manently elastic fluids capable of being absorbed by others. The conclusion therefore, which we can only draw from what data we have, concern- ing the composition of elastic vapors, is, that all of them are formed of a terrestrial substance, united with the element of heat in such a man- ner, that part of the latter may be squeezed out from among the terrestrial particles; but in such a manner, that, as soon as the pressure is taken off, the surrounding fluid rushes in, and expands them to their original bulk : and this expansion or tendency to it will be increased in proportion to the degree of heat, just as the expansion of a sponge would be exceedingly augmented, if we could contrive to convey a stream of water into the heart of it, and make the liquid flow out with violence through every pore in the circumference. In this case, it is evident that the water would act as a power of repulsion among the particles of the sponge, as well as the fire does among the particles of the water, charcoal, or whatever other substance is employed. Thus far we may reason from analogy, but in all probability the inter- nal and essential texture of these vapors will for ever remain unknown. It has been ima-

that the artificial elastic fluids s;tme mechanical property with

gined by some, have not th

common air, viz. that of occupying ;i space in- versely proportional to the weights with which they are pressed : but this is found to be a mis- take. All of them likewise have been found to be non-conductors of electricity,

though proba- bly not all in the same degree. See Aiu and ELECTRICITY.

ELASTICITY. The cause or principle of elas- ticity, or springiness, is variously assigned. The Cartesians account for it from the materia sub- tilis making an effort to pass through pores that are too narrow for it. Other philosophers, in lieu of the subtile matter, substitute ether, or a fine etherial medium that pervades all bodies. Others, setting aside the precarious notion of a materia subtilis, account for elas- ticity from the great law of attraction, or the cause of the cohesion of the parts oi" solid and firm bodies. Thus, say they, when a hard body is struck or bent, so that the component parts are moved a little from each other, but not quite disjointed or broken off, or separated so far as to be out of the power of that attracting force whereby they cohere ; they must certainly, on the cessation of the external violence, spring back to their former natural state. Elasticity has also been resolved into the pressure of the atmosphere : for a violent tension, or compression, though not so great as to separate the constituent particles of bodies far enough to let in any foreign matter, must yet occasion many little vacuola between the separated surfaces ; so that upon the removal of the force they will close again by the pressure of the aerial fluid upon the external parts. See ATMOSPHERE. Lastly, others attribute the elasticity of all hard bodies to the power of resi- lition in the air included within them : and so make the elastic force of the air the principle of elasticity in all other bodies. These are clearly the mere conjectures of philosophy.

M. Libes, the author of the Nouveau Diction- naire de Physique, has in that work given a new explication of the phenomena of elasticity, which depends upon the following principles: —

1. The signs of elasticity suppose a compres- sion effected, that is, an alteration in the figure, of bodies produced by the mutual approach of the moleculae : whence it results, that bodies, whose molecular yield with a very great facility to the slightest pressure, so as to roll one over another without changing their figure, cannot give sensible signs of elasticity. Such in general are liquids. 2. When an elastic body is compressed, ,some of its integrant molecula are brought nearer to one another, while others undergo a farther separation nearly equal to the approach of the former. 3. At the haoitual degree of heat and pressure which we expedience, all bodies have a volume determined by the ratio of equality, which exists between the attractive force of their parti- cles', and the repulsive force communicated by the caloric combined with those particles.

These being granted, the re-establishment 61 solid bodies, after the compression, appears to be the result of the combined action of the caloric and of attraction. For in the moleculae brought nearer by the compression,

the repulsive force augments, and the attractive force likewise aug-

ments ; but the augmentation of the former force exceeds that of the latter. For, at the epoch of the formation of the body, such as it existed pre- vious to the compression, the repulsive force com- municated to its moleculae by the caloric, was sufficient to give the degree of separation that was peculiar to the body : it was, therefore, su- perior to the attractive force until the moment when the molecules had become so far separated as was consistent with the natural state of the body. Whence it results, that if the particles are brought nearer together by compression, that is, if they are contracted with the caloric into a smaller space, the ratio of equality which sub- sisted between the attraction and the repulsion befoie the compression, must be destroyed in favor of the repulsion ; and consequently, on the cessation of 'the compression, this surplus of re- pulsive force will act so as to separate again the moleculae brought nearer by the compression, un- til the equilibrium is re-established between the attraction and the repulsion : and this equilibrium can only be re-established, when the molecules have recovered the degree of separation which they had previous to the compression. For similar reasons the attraction will predominate over the repulsion in those particles which have suffered a farther separation than is due to the natural state : it must, therefore, act to draw the particles nearer, and re-establish the equilibrium of those forces : and this equilibrium cannot be re-established until the molecules have recovered the relative distance which they had before the compression.

This theory M. Libes applies to an elastic sphere, as an ivory ball when falling upon a plane, to a plate of steel, whose extremities are brought towards each other by bending, and to the known effects of tempered metals, &c. In explaining the elasticity of aeriform fluids, M. Libes calls in to his aid a new force. For, in this kind of substances, the repulsion having prevailed over the attraction, their particles are retained in their mutual position by the pressure of the at- mosphere. But this force, it may be observed, being constant, makes no change in the results ;ust stated ; except that, if the pressure be taken away, the particles of the gas will be separated from one another, until their relative distance at- tains a point determined by the equality between the attraction of the earth and the repulsion of those particles. Now, since all bodies contain caloric, it may be asked how it happens that all bodies are not elastic, if caloric be the principle of elasticity ?

To this M. Libes replies by the following re- marks : — 1st. Since there is

not in nature any body, either perfectly hard, or perfectly soft, there is none but what possesses some degree of elasticity. 2dl v Perceptible signs of elasticity suppose the compression effected : it is not there-

fore surprising, that bodies in which we cannot produce compression should not give any sign of elasticity. 3dly. Although caloric be the princi- ple of elasticity, it does not follow that all bodies which contain caloric must exhibit this property, 1. Too much or too little caloric may equally weaken the elastic force. The different forms which distinguish the integrant molecuke of dif- ferent bodies ; the different arrangement assumed by those moleculas, according to circumstances, may be sometimes more or less favorable, at others more or less prejudicial to elasticity. 2. Soft bodies, such as butter, humid clay, Sec., ex- perience in their soft state a commencement of solution by water, which must alter the repulsive force of their moleculae, and consequently hurt the elasticity. This is so true, that these bodies, freed from their aqueous parts, without changing their temperature, yield sensible signs of elasticity. M. Libes, instead of attempting to explain, as some would expect, why caloric is elastic, says it is not necessary .to suppose it so. • For it may communicate this property to other bodies with- out behtg so itself. This position he illustrates as follows : when dry bread is immersed in water, that bread becomes swoln, its particles being farther separated from one another : water, there- fore, by penetrating the pores of the bread, com- municates to its particles a repulsive force ; yet it would be ridiculous to conclude from hence, that the moleculae of water mutually re pel one another. In like manner, when we subject a body to the action of heat, its integrant molecules are separated from one another, and acquire a repulsive force by their combination with caloric : but this phenomenon, like the preceding, depends probably upon the concourse of several attrac tive forces, such as that of the moleculae of the caloric, that of the particles of the body for one another, and, lastly, the reciprocal attraction of the particles of the caloric and those of the body penetrated by that fluid : whence it results that the elasticity of bodiesˆby no means presupposes that of the caloric which has given rise to it. Indeed, M. Libes does not regard as completely demonstrated the existence of the fluid called caloric ; he assumes the hypothesis as a matter of convenience, which enables us to abridge the language of philosophical discussions, and to found upon our reasonings an analytical calculus. He next, therefore, proceeds to state his theory analytically ; and deduces from his formulae the following results among others. 1 . That when we compress elastic fluids, the repulsive force becomes more powerful than the attractive, and consequently when the compression ceases, the molecula: ought to return towards their first po- sition. 2. That liquids and aeriform fluids have the exclusive privilege of assuming a larger volume when the pressure o'f the atmosphere is taken away. Diet, de Phys. Retrospect, No.

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END OF VOL. VII.

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Volume VIII (Elasticity - Ezra)

The London Encyclopaedia

THE

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Sic oportet ad libnim, presertim miscellanei generis, legendum accedere lectorem, tit solct ad couvivium conviva civilis. Convivator annititnr omnibus satisfacere ; et tamen si quid apponitur, quod hujus aut illius palato non respondcat, ct hie ct ille urbane dissimulant, et alia Certain probant. ne quid contristont conviTatorem. Erasmus.

A reader should sit down to a book, especially of the mucellaaeous kind, as a • < Ml b.-h;mxl visitor does to a banquet. The master of the feast exerts himself to satisfy his guests; but if, after all his care and pains, something should appear on the table that does nut suit this or that person's taste, they politely pass it over without notice, and commend other dishes, that they mar not distress a kind host. Translation.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITAN A,

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

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THE

LONDON ENCYCLOPAEDIA.

ELASTICITY OF FLUIDS is accounted for from their particles being all endowed with a centrifugal force ; when Sir Isaac Newton (prop, xxxii. lib. 2.) demonstrates, that particles, which naturally avoid or fly off from one another by such forces as are reciprocally proportioned to the distances of their centre, will compose an elastic fluid, whose density shall be proportional to its compression ; and vice versa, if any fluid be composed of particles that fly off and avoid one another, and hath its density proportional to its compression, then the centrifugal forces of those particles will be reciprocally as the distances of their centres.

ELASTICITY OF THE AIR is the force where- with that element dilates itself, upon removing the force whereby it was before compressed. See AIR and ATMOSPHERE. The elasticity or spring of the air was first discovered by Galileo. Its existence is proved by this experiment of that philosopher : — An extraordinary quantity of air being intruded by a syringe into a hollow glass or metal ball, till the ball, with this accession of air, weighs considerably more in the balance than it did before ; upon opening the mouth thereof, the air rushes out, till the ball sink to its former weight. From hence we argue, that there is just as much air gone out, as compressed air had been crowded in. Air, therefore, returns to its former degree of expansion, upon removing the force that compressed or resisted its expansion ; con- sequently it is endowed with an elastic force. It must be added, that, as the air is found to rush out in every situation or direction of the orifice, the elastic force acts every way, or in every di- rection. The doctrine of the elasticity of the air is a considerable branch of pneumatics. The cause of this elasticity has been commonly as- cribed to a repulsion between its particles ; but this can give us only a very slight idea of the nature of its elasticity. The term repulsion, like that of attraction, requires to be defined ; and in all probability will be found in most cases to be the effect of the action of some other fluid. Thus, we find,

that the elasticity of the atmo- sphere is very considerably affected by heat. Supposing a quantity of air heated to such a degree as is sufficient to raise Fahrenheit's ther- mometer to 212°, it will then occupy a consider- able space. If it is cooled to such a degree as to sink the thermometer to 0°, it will shrink up into less than half its former bulk. The quantity 'of repulsive power, therefore, acquired by the air, while passing from one of these states to the other, is evidently owing to the heat added to or taken away from it. Nor have we any reason to suppose, that the quantity of elasticity, or repul- sive power, it still possesses, is owing to any other thing than the fire contained in jt. The VOL. VIII.— PART 1.

supposing repulsion to be a primary cause, inde- pendent of all others, has given rise to many erroneous theories, and been one very great mean of embarrassing philosophers in their ac- counting for the phenomena of electricity. ELATE, adj. & v.a.) Lat. elatus, part, of verb ELA'TION, n. s.] effero, to exalt, &c., from

e, forth, and fero, latum, to bring. Elevated ; lofty ; flushed with station or dignity. The verb seems to be derived from the adjective.

This king of kinges proud was and elat ; He wend that God that sit in majestee Ne might him nat bereve of his estat.

Chaucer. Cant. Talcs.

God began to punish this vain elation of mind l>y withdrawing his favors. Atterbury.

Oh, thoughtless mortals ! ever blind to fate ! Too soon dejected, and too soon elate ! Pope.

I, of mind elate, and scorning fear, Thus with new taunts insult the monster's car.

Id, Odyssey.

Or truth, divinely breaking on his mind, Elates his being, and unfolds his power.

Thomson.

Fair was the blossom, soft the vernal sky : Elate with hope we deemed no tempest nigh : When lo ! a whirlwind's instantaneous gust Left all its beauties withering in the dust.

Seattle.

ELATE, in botany, a genus of the monoecia order arid triandria class : CAL. none : COR. tri- petalous, with three stamina or with one pistil ; FRUIT an oval acuminated plum. Species one only, an Indian tree.

ELATER, in zoology, a genus of insects, belonging to the order of coleoptera. The an- tennas are setaceous ; and an elastic spring en- spine projects from the hinder extremity of the breast or under side of the thorax. By means of this kind of spring, the animal, when turned upon its back, contrives to leap up into the air, and so turn itself. It varies in size ; and when the insect is young, and newly metamorphosec', its elytra are of a beautiful deep red ; but in a few days they change to a much darker hue, ar/i are nearly of a chestnut color. In the state of larvae it inhabits the trunks of decayed trees, and is there transformed. With the help of its wings it issues from its prison, flutters upon flowers, wanders over the fields, and conceals itself in tbickets or under the bark of trees.

ELATE'RIUM, n. s. Lat. An inspissated juice, light, of a friable texture and an acid and pungent taste. It is procured from the fruit 8 a wild cucumber. It is a very violent and rough purge.

ELATERIUM, EXanjpiov, in botany, a genus of the monandria order, moncecia class of plants ; natural order thirty-fourth, cucurbitacece, male or- female: CAL. none : COR. salver shaped: CAI-S

B

ELA

inferior, unilocular, and bivalved. Species one only, a common plant.

ELATH, or ELOTH, in ancient geography, a part of Idumeea, situated upon the Red Sea, •which David in his conquest of Edom took, 2 Sam. viii. 14, and there established a trade to all parts of the world. Solomon built ships in Elath, and sent them thence to Ophir for gold, 2 Chron. viii. 17, 18. It continued in the pos- session of the Israelites about 150 years, till the time of Joram, when the Edomites revolted and recovered it, 2 Kings viii. 20 ; but it was again taken from them by Azariah, and by him left to his son ; 2 Kings xiv. 22. In the time of his grandson Ahaz, however, Rezin king of Syria took it, Ib. xvi. 6 ; and the Syrians kept it long; till after many changes, under the Ptolemies, it came at last into the possession of the Romans.

ELATINE, in-botany, a genus of the tetra- gynia order and octandria

class of plants ; natu- ral order fifteenth, inundatae : CAL. tetraphyllous ; the petals four: CAPS, quadrilocular, quadri- valved, and depressed. Spedes two, natives of the south of Europe.

ELATOSTEMA, in botany, a genus of the pentandria order and monoecia class of plants ; male and female: CAL. none: COR. quinquepar- lite; the stamina are five filaments: PERICARP. a very small oblong, bivalve, monospermous capsule : SEEDS single and egg-shaped.

ELBA, a small island of tiie Mediterranean, near the coast of Tuscany, in circuit about sixty miles. Its breadth is very various ; its general aspect is mountainous, and its climate mild. Here are cultivated fruits, vines, corn, and maize. The horned cattle are few, the live stock being composed of horses and mules. The exports consist of wine, fruit, and iron ore, for which the island has been noted since the days of Virgil {/En. x. 173); there are also mines of copper, and extensive quarries. It was in 1801 vested in the possession of Tuscany, and has acquired historical celebrity as the residence of Buona- parte from May 1814 to 26th February 1815, when he sailed on his last expedition to France. It has two harbours, Porto Ferrajo, the capital, and Porto Longone. The former is remarkable for the gallant defence which was made of it, by the English against the French in 1801. Elba reverted to the grand duke of Tuscany, after the departure of Napoleon. Population about 14,000. Several islets around it are uninhabited. Long, of Porto Ferrajo, 10° 19′ 35′ E. ; lat. 42° 49′ 6′ N.

ELBE, a large river of Germany, anciently the Albis, which, rising on the confines of Sile- sia, runs through Bohemia, Misnia, Upper Sax- ony, Anhalt, Magdeburg, Brandenburg, and Danneberg; and afterwards dividing the duchy of Luuenburg from that of Mecklenburg, as well as that of Bremen from Holstein, falls into the German Ocean, about seventy miles below Ham- burgh. It is navigable for great ships higher than any other river in Europe, and employs between Magdeburg and Hamburgh 500 vessels. The navigation up to Hamburgh is difficult on account of numerous sand banks, and the occasional vio- lence of the wind ; particularly the westerly winds which increase the bulk of the waters, and cause inundations ; an easterly wind on the other

hand sometimes presses its waters to the sea, and deprives the canals dependent on it of the necessary supplies. Its navigation has likewise been much impeded by the tolls imposed by the princes of the

different provinces through which it passes, there having been more than thirty between Pirna in Saxony, and Hamburgh ; but this has been greatly remedied of late.

ELBERFELD, a thriving town on the Wup- per, in the province of Berg, district of*Dussel- dorf, Prussia. The manufactures of Siamoise, lace, riband, linen, and stuffs, employ the greater part of a population of 18,000 persons. Here are also hardware and bleaching establishments of considerable extent. It is eighteen miles east of Dusseldorf, and twenty north-east of Co- logne.

ELBERT, a county of Georgia, on the tract of land between Tugulo and Broad rivers. The south-east corner of the county is at their con- fluence; on the north-west it is bounded by Franklin county. The chief town is Peters- burgh.

ELBING, a trading city of Polish Prussia, in the circle of Marienburg, situated in a fruitful level, on a bay of the Baltic Sea, called the Frischaff, or Erische Hafie, near the mouth of the Vistula. The town is large, populous, and very well built. It is divided into the old and new town, which were once well fortified, but in 1772 the works were demolished. The old town has a handsome tower, with a good college. The stadthouse and the academy are fine build- ings, with pleasant gardens. The best ware- houses are in the suburbs. No vessels larger than 100 tons burden can approach the town; but Elbing has a good export trade in corn potash, linen, butter, and cheese ; and supplies from its manufactories considerable quantities of soap, starch, oil, and tobacco to the neighbour- hood. Population 16,800. It is thirty miles south-east of Dantzic, and 100 north by west of Warsaw.

ELBOEUF, a thriving manufacturing town of France, on the Seine, in Normandy. There has been a celebrated manufacture of woollen cloths here since 1667; it has also manufactures of carpets and stockings. Ten miles south of Rouen, and sixty-five north-west of Paris. EL’BOW, n.s., v. a. &r.n.} Sax. elbose, EL’BOW-CHAIR, n. s. vfrom elb, an

 ell, and bojen,

bending, the ell being originally the length of the arm, and the bend being then at the elbow. The first joint of the arm below the shoulder ; any angle. As a verb active, to push with the elbow : hence, to encroach upon ; to drive. As a neuter verb, to point outwards in angles; to clash with. An elbow-chair is one that accommodates the elbows : elbow-room, room to extend the elbows- space enough to act in.

Straight will he come ;

Wear thy good rapier bare, and put it home : Quick, quick ; fear nothing, I'll be at thy elbow.

Shakspeare. Ot/tello. Now my sou) hath elbowroom ; It would not out at windows nor at doors. Id. Fruit trees, or vines, set upon a wall between, elbow

ELD

or buttresses of stone, ripen more than upon a plain wall. Bacon.

The natives are not so many, but that there may be elbowroom enough for them, and for the advenlives also. /'/.

His sieves half hid with elbow pinionings, As if he meant to flie with linnen wings.

Bp. Hall. Satires.

He that elbows in all his philosophic disputes must needs be very proud of own sufficiencies.

Marmyngham, 1631. If fortune takes not off this boy betimes, He'll make mad work and elbow out his neighbours.

Dryden.

A politician must put himself into a state of liberty to provide elbowroom for conscience to have its full play in. South.

What would you say should you see the sparkler shaking her elbow for a whole night together, and thumping the t-ble with a dice-box?

AddisoK. Guardian.

Swans and elbowchairs, in the opera of Diodesian, have danced upon the English stage with good success.

Gay.

In some fair evening on your elbow laid, You dream of triumphs in the rural shade.

Pope.

But elbows still were wanting ; these, some say, An alderman of Cripplegate contrived ; And some ascribe the' invention to a priest, Burly, and big, and studious of his ease.

Cowpei

And at his elbow, souter Johnny, His ancient, trusty, drouthy crony ; Tarn lo'ed him like a vera brither ; 'They had been fou for weeks thegither.

Burns. And thus upon his elbow he arose,

And looked upon the lady in whose1 cheek The pale contended with the purple rose,

As with an effort she began to speak. Byron.

ELBOW, that eminence whereon the arm rests, is by the Latins called cubitus, and the Greeks aycuty and o\£icpavov. See ANATOMY.

ELCESAITES, in church history, a sect of heretics, who appeared in the reign of Trajan. They worshipped one God, observed the Jewish sabbath, circumcision, and the other ceremonies of the law; but they rejected the Pentateuch, the prophets, and the writings of the apostles, particularly those of St. Paul.

ELCHE, a large town of Spain, in the pro- vince of Valencia, situated in a plain, abounding with palm trees. It was the Illici of the Ro- mans, and has still an ancient ducal palace. It has also some good streets and squares, but its general aspect is dull. The great church is a fine building, with a noble dome, and the bar- racks extensive and well built. There are here several poor houses and convents; the manu- factures are confined to soap and leather, which, with dates, palms, and other fruit of the neigh- bourhood, constitute its articles of trade. It has several marble fountains. Population 18,000.

ELD,r.a.,v.n.&»z.*.-\ Sax. ealb ; Scot, eld;

EL'DER, adj. & n. s. I Goth, aid, from 'the Sax.

EL'DERLY, adv. Vverb yh>an, or ih>an, to

EL'DERSHIP, n. s. i remain, stay, continue,

EL'DEST. J last, endure, delay, de-

fer,' says Mr. Tooke, 'of which it is the past participle.' Chaucer uses

eld, however, both as a verb active and neuter; see below : as a substan-

tive,it signifies old age; decrepitude ; and hence, old people. It is clearly the parent of our ad- jective OLD, which see, and in elder, eldest, we retain the original comparative and superlative. Elder, as a substantive, expresses seniority of age or office : it is also the name of a tree. Elder- ship is seniority, primogeniture. Elderly, ap- proaching old age.

Elizabeth thi cosyn, — sche also hath conseyved a sone in hir eelde, and this monethe is the sixte to hir that is clupid bareyn, Wiclif. Luke .

Rebuke not an elder, but intreat him as a father, and the younger men as brethren. 1 Tim. v. 1.

The time eke that ychaungith all, And all doth waxe and fostrid be, And alle thing destroith he ; The time that eldith our ancestours, And eldith kings and emperours.

Chaucer. Romaunt of the Rose. The time that hath alle in welde Tg elden folke had made her elde. Id.

For elde is comen unwarely upon me, hasted by thfi harmes that I have, and sorowe hath commaunded his age to be in me. Colvile.

Her heart with ioy unwonted inly sweld, As feeling wondrous comfott in her weaker eld.

Spenser. Faerie Queene.

Many nations are very superstitious and diligent observers of old customs, which they received by con- tinual tradition from their parents, by recording of their bards and chronicles, in their songs, and by daily use and ensample of their elders.

Id. Ireland.

At the board, and in private, it very well becometh children’s innocency to pray, and their elders to say Amen. Hooker.

< The controversy sprang up between Beza and Eras- tus, about the matter of excommunications, whether there ought to be in all churches an eldership, having power to excommunicate, and a part of

that eldership to be of necessity certain chosen out from amongst the laity. Id.

Thy blazed youth,

Becomes assuaged, and doth beg the alms Of palsied eld. Shahspeare .

Let still the woman take An elder than herself ; so wears she to him, So sways she level in her husband's heart. Id.

Our elders say,

The barren, touched in this holy chase, Shake off their steril curse. Id.

We will establish our estate upon Our eldest Malcolm, whom we name hereafter The prince of Cumberland. Id.

Among the Lacedemonians, the chief magistrates, as they were, so were they called, elder men.

Raleigh.

The longer it [drunkenness] possesseth a man, the more he will delight in it, and the elder he groweth the more he shall be subject to it. Id.

The blushing youth their virtuous awe disclose, And from their seats the reverend elders rose.

Sandys.

He thought it touched his deity full near, If likewise he some fair one wedded not, Thereby to wipe away the' infamous blot Of long uncoupled bed and childless eld.

Milton.

The elder of his children comes to acquire a degree of authority among the younger, by the same mean* the father did among them. Temple

ELD

The mother'! and her eldett daughter's grace, It seems, had bribed him to prolong their space.

Dryden.

That all should Alibech adore, ‘tis true : But some respect is to my birthright due : My claim to her by elderthip I prove.

Nor were the elderthip Of ArtaxerxfiS worth our least of fears. If Memnon’s interest did not prop his cause.

Rixee.

S*ys tbe goose, If it will be no better, e’en carry vour head as your elder) have done before you.

L’Ettranye.

Eldest parents signifies either the oldest men and women that have had children, or those who have longest had issue. Locke-

Flea-bitten synod, an assembly brewed Of clerks and eldert ana ; like the rude Chaos of presbytry, where laymen ride With the tame woolpack clergy by their side.

Cleveland.

The branches are full of pith, having but little wood : the flowers are monopetalous, divided into •everal segments, and expand in form of a rose : these arc, for the most part, collected into an umbel, and are succeeded by soft succulent berries, having three seeds in each. mier-

They count him of the green-haired eld. Cl»p.

Fame’s high temple stands ; Stupendous pile ; not reared by mortal hands ! Whate’er proud Rome, or artful Greece beheld, Or elder Babylon, its frame excelled. Pope.

I lose my patience, and I own it too, Where works are censured, not as bad, but new; While, if our eldert break all reason’s laws. Those fools demand not pardon but ajiplausn. Id.

ELDER-BERRIES. These berries are found to produce a greater quantity of spirit than the best xvheat. The spirit is obtained by pressing the berries, and the juice is procured in the same way as the must of the grape, and afterwards distillofl. This discovery was made by Mr. Wfhrle, of Viema.

ELDERS, or SENIORS, in ancient Jewish po- lity, were persons the most considerable for age, experience, and wisdom. Of this sort were the seventy men whom Moses associated with him- self in the

government ; such, likewise, after- wards were those who held the first rank in the synagogue, as presidents.

ELDERS, in the Presbyterian discipline, are officers, who, in conjunction with the ministers and deacons, compose the kirk-session, which formerly used to inspect and regulate matters of religion and discipline ; but whose principal business now is to take care of the poor's funds. They are chosen from among the people, and are received publicly with some degree of cere- mony. In Scotland, there is an indefinite num- ber of elders in each parish ; generally about twelve.

When a vacancy happens, it is filled up by an election made by the remaining members of the session. There is no legal limitation of the num- ber of elders : but the general understanding is, that they are not to be multiplied unnecessarily, and as their office is a gratuitous one, and is attended with some little trouble, there is never much temptation to increase them, except when there is some particular point to be carried. They are commonly selected out of that respectable class of persons who are above the lower orders, and

yet rather below the higher rank of the society o the place, though there is no definite rule, and no absolute exclusion of any body, whose cir- cumstances and character are respectable. The heritors are the proprietors of the real property within the parish. It is by them and their tenants that the sum raised for the maintenance of the poor, called the assessment, must be paid. This assessment is divided between the proprie- tors, and the tenants, according to rule., which it is needless to explain here ; but the general im- port of which is, that the proprietors are entitled to obtain relief of what is laid upon them, to the extent of one-half, from their lessees. These heri- tors are conjoined with the kirk-sessions, in the administration of the poor's funds ; that is, they are legally entitled to act along with them, but, as the first report by the general assembly states, ' the heritors, in practice, seldom or never inter- fere in regulating the concerns of the poor or the poor's funds, except in parishes where assess- ments are levied.' The ordinary funds for the support of the poor, consist of the alms collected at the church door, parochial fines, and other dues, and any sum that may have been gifted to the parish. The last are commonly small ; so that the chief fund arises from the church-door collections. The direct tax, called an assessment, is only resorted to when these resources fail. It is in this apparatus that the excellence of the Scottish system is said to consist.

The elders are held to be a class of persons admirably fitted for investigating every claim that can be made for admission upon the poor's- roll. They reside within the parish ; they either know the. claimant personally, or can easily in- quire into his character and circumstances ; and they are in that station of life to which such an employment, instead of being nauseous, is a fair ground of parochial power and importance.

ELEATIC PHILOSOPHY, among the ancients, a name given to that of the stoics, because taught at Elea.

ELEATIC SECT. The founder of this sect of philosophers is supposed to have been Xeno- phanes, who lived about the fifty-sixth Olympiad, or about A. A. C. 350. It was divided into two parties, which may be denominated metaphysical and physical ; the one rejecting, and the other approving, the appeal to fact and experiment. Of the former kind were Xenophanes, Parme- nides, Melissus, and Zeno of Elea. They are supposed to have maintained principles similar to those of Spinoza ; they held the eternity and immutability of the world ; that whatever existed was only one being ; that there was neither any generation nor corruption ; that this one being was immoveable and immutable, and was the true God ; and whatever changes seemed to hap- pen in the universe, they considered as men' appearances and illusions of sense. However, some learned men have supposed, that Xeno- phanes and his followers, speaking metaphysi- cally, understood by the universe or the one being, not the material world, but the originating principle of all things, or the true God, whom they expressly affirm to be incorporeal. Thus Simplicius represents them as merely metaphy- sical writers, who distinguished between things

natural and supernatural; and who made the former to be compounded of different principles. Accordingly, Xenophanes maintained, that the earth consisted of air and fire, that all things were produced out of the earth, and the sun and stars out of clouds, and that there were four ele- ments. Parmenides also distinguished between the doctrine concerning metaphysical objects, called truth, and that concerning physical or corporeal things, called opinion ; with respect to the former, there was one immoveable principle, but in the latter two that were moveable, viz. fire and earth, or heat and cold ; in which parti- culars Zeno agreed with him. The other branch of the Eleatic sect were the atomic philosophers, who formed their system from an attention to the phenomena of nature ; of these the most consi- derable were Leucippus, Democritus, and Pro- tagoras.

ELECAMPA'NE, n. s. Lat. helenium. A plant, named also starwort. Botanists enumerate thirty species of this plant.

The Germans have a method of candying elecam- pane root like ginger, to which they prefer it, and call it German spice. Hill's Materia Medica.

ELECAMPANE, in botany. See INULA.

ELECT, v. a., n. s., & adj. ELEC'TION, n. s. ELECTIONEERING, ELEC'TIVE, adj. ELEC'TIVELY, adv. ELEC'TOR, n. s. ELEC'TORAL, adj. ELECTORATE, n. s. ELEC'TORESS, ELEC'TRESS.

Fr. elire ; Ital. eleggere ; Span. elegir ; Port, ele- ger ,• Lat. elec- tus, eligere. To * choose ; select : used, theologi- cally, for God's choice of his Son, J the Jews, Chris-

tians, &c. : and in the same sense, as a substan- tive, for the party or parties chosen. An election, politically, is the ceremony of choosing, or too often of returning only, members of parliament: electioneering, the business, solicitations, or practices, whereby such returns are procured : elective, regulated, or bestowed, by election: exerting choice : elector, one who has a right, or power, to choose to office, or otherwise: electoral, having the right or dignity of elector, applied, in a particular sense, to certain German princes, whose dominions are called their electorate : electoress, or electress, is the wife, or widow, of an electoral prince.

Behold my servant whom I uphold, mine elect in whom my soul delighteth. Bible. Isa. xlii. 1.

Who shall lay any thing to the charge of God's elect ? Id. Rom. viii. 33.

If the election of the minister should be committed to every several parish, do you think- that they would chuse the meetest? Whitgift.

You have here, lady,

And of your choice, these reverend fathers, Yea, the elect of the land, who are assembled To plead your cause. Shakspeare. Henry VIII.

The wisdom of nature is better than of books : pru- dence being a wise election of those things which never remain after one and the self-same manner.

Raleigh,

The discovering of these colours cannot be done but out of a very universal knowledge of things : which so cleareth men's judgment and election as it is the less apt to slide into error. Bacon.

i ELE

I will say positively and resoluteiy, that jt is im. possible an elective monarchy should be so free and absolute as an hereditary. jj

For what is man without a moving mind, Which hath a judging wit, and chusing will ?

Now if God's power should her election bind, Her motions then would cease, and stand all still.

Davies.

I was sorry to hear with what partiality, and popu- lar heat, elections were carried in many places.

King Charles.

It could not but be a great comfort to Aaron, to see his rod thus miraculously flourishing ; to sec this won- derful testimony of God's favour and election.

Bp. Hall's Contemplations. Henry his son is chosen, king, though young ; And Lewis of France, elected iirst, beguiled.

Daniel.

A vicious liver, believing that Christ died for none but the elect, shall have attempts made upon him to reform and amend his life. Hammond.

Some I have chosen of peculiar grace, Elect above the rest ;. so is my will. . Milton.

Him, not thy election,

But natural necessity, begot. Id.

From the new world her silver and her gold Came, like a tempest, to confound the old ; Feeding with these the bribed electors' hopes, Alone she gave us emperors and popes. Waller. To talk of compelling a

man to be good, is a contra- diction ; for where then; is force, there can be ao choice : .whereas all moral goodness consisted! in the elective act of the understanding will.

ˆ Grew's Casmologia Sacra.

They work not e.lectively, or upon proposing to them- selves aa end of their operations. Id. Thus while they speed their, pace, the prince de- signs The new elected seat, and draws the lines. Dryden.

The last change of their government, from elective to hereditary, has made it seem hitherto of less force, and unfitter for action abroad. Temple.

Thus to regulate candidates and electors, and new- model the ways of election, what is it but to cut up the government by the roots, and poison the very foun- tain of public security? Locke.

How or why that should have such an influence upon the spirits, as to drive them into those muscles electively, I am not subtle enough to discern.

Ray on the Creation.

As charity is, nothing can more increase, the lustre and beauty than' a prudent election of objects, and a fit application of it to them. Sprat.

You see in elections for members to sit in parlia- ment, how far saluting rows of old women, drinking with clowns, and being upon a level with the lowest part of mankind, in that wherein they themselves are lowest, their diversions, will carry a candidate.

Steele.

He has a great and powerful king for his son-in- law ; and can himself command, when he pleases, the whole strength of an electorate in the empire.

Addison's Freeholder.

Since the late dissolution of the club, many persons put up for the next election. Id. Spectator.

He calls upon the sinners to turn themselves and live ; he tells us that he has set before us life and death, and referred it to our own election which we willchuae.

Rogers.

The conceit about absolute election to eternal life, some enthusiasts entertaining, have been inade remiss in the practice of virtue. Att«rl > ary.

ELECTION.

This prince, in gratitude to the people, by whose consent he was chosen, elected a hundred senators out of the commoners. Swift.

Lo ! serve us on sudden, In shape of porter, beef, and pudding, Though like electioneering comes, Strike up ye trumpets and ye drums !

Warton.

Many an honest man, before as harmless a* a tame rabbit, when loaded with a single election dinner, has become more dangerous than a charged culverin.

Goldsmith.

Counties could neither be purchased nor intimidated. But their solemn determined election may be rejected ; and the man they detest may be appointed by another choice, to represent them in parliament. Juniiu.

Man, thus endued with an elective voice, Must be supplied with objects of his choice ; Where'er he turns, enjoyment and delight, Or present, or in prospect, meet his sight.

Cowper,

There are not, in this island, one million of persons who have a vote in electing parliament-men : and yet, in this island, there are eight millions of persons who must obey the law. Seattle.

The act of parliament settled the crown on the electro* Sophia and her descendants. Burke.

ELECTION, in British polity, is the people's choice of their representatives in parliament. See PARLIAMENT. In this consists the exercise of the democratical part of our constitution : for in a democracy there can be no exercise of sove- reignty but by suffrage, which is the declaration of the people's will. In all democracies* there- fore, it is of the utmost importance to regulate by whom and in what manner, the suffrages are to be given. And the Athenians were so

justly jealous of this prerogative, that a stranger, who interfered in the assemblies of the people, was punished with death, being esteemed guilty of high treason, by usurping those rights of sove- reignty to which he had no title. ‘ In Britain,’ says Blackstone, ‘ where the people do not debate in a collective body, but by representation, the exercise of this sovereignty consists in the choice of representatives. The laws have therefore very strictly guarded against the usurpation or abuse of this power, by many salutary provisions ; which may be reduced to these three points, 1. The qualifications of the electors. 2. The quali- fications of the elected. 3. The proceedings at elections.

As to the Qualification of Electors. — The true reason of requiring any qualification, with re- gard to property, in voters, is to exclude such persons as are in so mean a situation, that they are esteemed to have no will of their own. If these persons had votes, they would be tempted to dispose of them under some undue influence or other. This would give a great, an artful, or a wealthy man, a larger share in elections than is consistent with general liberty. If it were probable that every man would give his vote freely, and without influence of any kind ; then, upon the true theory and genuine principles of liberty, every member of the community, how- ever poor, should have a vote in electing: those delegates to whose charge is committed the dis- posal of his property, his liberty, and his life. But since that can hardly be expected in persons of indigent fortunes, or such as are under the

immediate dominion of others, all popular states have been obliged to establish certain qualifi- cations ; whereby some, who are suspected to have no will of their own, are excluded from voting, in order to set other individuals, whose will may be supposed independent, more tho- roughly upon a level with each other. And this constitution of suffrages is framed upon a w.ser principle, with us, than either of the methods of voting, by centuries or by tribes, among the Romans. In the method by centuries, insti- tuted by Servius Tullius, it was principally property, and not numbers, that turned the scale ; in the method by tribes, gradually introduced by the tribunes of the people, numbers only were regarded, and property entirely overlooked. Hence the laws passed by the former method had usually too great a tendency to aggrandise the patricians or rich nobles : and those by the latter had too much of a levelling principle. Our constitution steers between the two extremes. Only such are entirely excluded as can have no will of their own : there is hardly a free agent to be found, but what is entitled to a vote in some place or other in the kingdom. Nor is comparative wealth or property entirely disre- garded in elections ; for though the richest man has only one vote at one place,

yet, if his pro- perty be at all diffused, he has probably a right to vote at more places than one, and therefore has many representatives. This is the spirit of our constitution : not that we assert it is in fact so- perfect as we have endeavoured to describe it; for, if any alteration might be wished or suggested in the present form of parliaments, it should be in favor of a more complete representation of the people. But to return to the qualifications ; and first, those of elections for knights of the shire. 1. By stat. 8 Hen. VI. c. 7 and 10, Hen. VI. c. 2. (amended by 14 Geo. III. c. 58), the knights of the shire shall be chosen of people, whereof every man shall have freehold to the value of forty shillings by the year within the county ; which (by subsequent statutes) is to be clear of all charges and deductions, except parliamentary and parochial taxes. The knights of shires are the representatives of the landholders, or landed interests of the kingdom : their electors must therefore have estates in lands or tenements within the county represented. These estates must be freehold, that is, for term of life at least; be- cause beneficial leases for long terms of years were not in use at the making of these statutes, and copyholders were then little better than vil- leins, absolutely dependent upon their lords. This freehold must be of forty shiHings annual value ; because that sum would then, with pro- per industry, furnish all the necessaries of life, and render the freeholder, if he pleased, an in- dependent man ; for bishop Fleetwood, in his Chronicon Pretiosum, written at the beginning of the eighteenth century, has fully proved forty shillings in the reign of Henry VI. to have been equal to £12 per annum in the reign of queen Anne ; and, as the value of money is very con- siderably lowered since the bishop wrote, we may fairly conclude, from this and other circum- stances, that what was equivalent to £12 in his days, is equivalent to £30 at present. The other

less important qualifications of the electors for counties in England aud Wales, may be collected from the statutes 7and d Will. 11 1. c. 25 ; 10 Ann. c. 23; 2Geo.;iI. c. 21; 18 Geo. II. c. 18; 31 Geo. II. c. 14; 3 Geo. III. c. 24, which direct,

2. That, no person under twenty-one years of age, shall be capable of voting for any member. This extends to all sorts of members as well for boroughs as counties ; as does also the next, viz.

3. That no person convicted of perjury, or sub- ornation of perjury, shall be capable of voting in any election. 4. That no person shall vote in right of any freehold, granted to him fraudu- lently to qualify him to vote. Fraudulent grants are such as contain an agreement to

recovery, or to defeat the estate granted ; which agreements are made void, and the estate is absolutely vested in the person to whom it is so granted. And, to guard the better against such frauds, it is far- ther provided, 5. That every voter shall have been in the actual possession, or receipt of the profits, of his freehold to his own use for twelve calendar months before ; except it came to him by descent, marriage, marriage-settlement, will, or promotion to a benefice or office. 6. That no person shall vote in respect of an annuity or rent-charge, unless registered with the clerk of the peace twelve calendar months before. 7. That in mortgaged or trust-estates, the person in possession, under the above-mentioned restric- tions, shall have the vote. 8. That only one person shall be admitted to vote for any one house or tenement, to prevent the splitting of free- holds. 9. That no estate shall qualify a voter, unless the estate has been assessed to some land- tax aid, at least twelve months before the election. 10. That no tenant by copy of court-roll shall be permitted to vote as a freeholder. Thus much for the electors in counties. As for the electors of citizens and burgesses, these are supposed to be the mercantile part or trading interest of this kingdom. But as trade is of a fluctuating na- ture, arid seldom long fixed in a place, it was formerly left to the crown to summon pro re nata, the most flourishing towns to send re- presentatives to parliament. So that as towns increased in trade, and grew populous, they were admitted to a share in the legislature. But the misfortune is, that the deserted boroughs con- tinued to be summoned, as well as those to whom their trade and inhabitants were transferred ; ex- cept a few which petitioned to be eased of the expense, then usual, of maintaining their mem- ber ; four shillings a-day being allowed for a knight of the shire, and two shillings for a citizen or bur- gess; which was the rate or wages established ,11 the reign of Edward III. Hence the members for boroughs now bear above a quadruple pro- portion to those for counties ; and the number of parliament men is increased since Fortescue's time, in the reign of Henry VI., from 300 to upwards of 500, exclusive of those for Scotland. The universities were, in general, not empow- ered to send burgesses to parliament ; though once, in 28 Edw. I. when a parliament was sum- moned to consider of the king's right to Scot- land, there were issued writs, which required the university of Oxford to send up four or five, and that of Cambridsre two nr three, of their most

discreet and learned lawyers for that purpose, But it was king James I. who indulged them with the permanent privilege to send constantly two of their own body to serve; for those stu- dents, who, though useful members of the community, were neither concerned in the landed nor the trading interest; and to protect in the legislature tne

rights of the republic of letters. The right of election in boroughs is various, depending entirely on the several char- ters, customs, and constitutions of the respective places, which has occasioned infinite disputes : though now, by statute 2 Geo. II. c. 24, the right of voting for the future shall be allowed according to the last determination of the house of commons concerning it; and, by statute 3, Geo. III. c. 15. no freeman of any city 01 borough (tother than such as claim by birth, marriage, or servitude,) shall be entitled to vote therein, unless he has been admitted to his free- domˆ twelve calendar months before. Sec BOROUGH.

2. As to the Qualifications of Persona to it- elected. — Some of the qualifications to be elected members of the house of commons depend upon the law and custom of parliaments, declared by the house; others upon certain statutes. And from these it appears, 1. That they must not be aliens born or minors. 2. That they must not be any of the twelve judges, because they sit in the lords' house; nor of the clergy, for they sit in the convocation; nor persons attainted of treason, or felony, for they are unfit to sit any where. 3. That sheriffs of counties, and mayors and bailiffs of boroughs, are not eligible in their respective jurisdictions, as being returning offi- cers; but that sheriffs of one county are'eligible to be knights of another. 4. That, in strictness, all members ought to have been inhabitants of the places for which they are chosen ; but, this having been long disregarded, was at length entirely repealed by statute 14 Geo. 111. c. 58. 5. That no persons concerned in the manage- ment of any duties or taxes created since 16U2, except the commissioners of the treasury, nor any of the officers following (viz. commissioners of prizes, transports, sick and wounded, wine- licenses, navy, and victualling; secretaries, or receivers of prizes; comptrollers of the army accounts; agents for regiments; governors of plantations, and their deputies ; officers of Min- orca or Gibraltar; officers of the excise and cus- toms ; clerks or deputies in the several offices of the treasury, exchequer, navy, victualling, admi- ralty, pay of the army or navy, secretaries of state,, salt", stamps, appeals, wine-licenses, hack- ney-coaches, hawkers, and pedlars,) nor any person that holds any new office under the crown, created from 1705, are capable of being elected, or sitting as members. 6. That no person having a pension under the crown during pleasure, or for any term of years, is capable of being elected or sitting. 7. That if any member accepts an office under the crown, except an officer in the army or navy accepting a new com- mission, his seat is void; but such member v capable of being re-elected. 8. That all knigh of the shire shall be actual knights, or such notable squires and gentlemen as have estates

sufficient to be knights, and by no means of the degree of yeomen. This is reduced to a still greater certainty, by ordaining, 9. That every knight of a shire shall have a clear estate of free- hold or copyhold to the value of £600 per annum, and every citizen and burgess to the value of £300, except the eldest sons of peers and of persons qualified to be knights of shires, and except the members for the two universities : which somewhat balances the ascendant which the boroughs have gained over the counties, by obliging the trading interest to make choice of landed men : and of this qualification the mem- ber must make oath, and give in the particulars in writing, at the time of his taking his seat. But, subject to these standing restrictions and disqua- lifications, every subject of the realm is eligible of common right: though there are instances, wherein persons in particular circumstances have toi-ieited that common right, and have been de- clared ineligible for that parliament, by a vote of the house of commons; or for ever, by an act of the legislature. But it was an unconstitu- tional prohibition, which was grounded on an ordinance of the house of lords, and inserted in the king's writs, for the parliament holden at Coventry, 6 Henry IV., that no apprentice or other man of the law should be elected a knight for the shire therein ; in return for which, our law books and historians have branded this par- liament with the name of parliamentum indoc- tum, or the lack-learning parliament; and Sir Edward Coke observes, with some spleen, that there was never a good law made thereat.

With respect to the clergy, their right or capacity of sitting in parliament was for a long time contested ; but at length, by 41 Geo. III. (U. K.) c. 63. it was enacted, that no person having been ordained to the office of priest or deacon, or being a minister of the Church of Scotland, shall be capable of being elected to serve in parliament as a member of the house of commons. The election of such persons is declared void ; and if any person after his elec- tion is ordained, he must vacate his seat. The penalty for any person sitting as a member, con- trary to this act, is £500 a-day : and proof of haying celebrated divine service is declared f-rima facie evidence of the party's being or- dained, &c.

3. Respecting the method of proceeding. — The third point regarding elections, is the method of proceeding therein. This is also regulated by the law of parliament, and by various statutes, all of which we shall blend together, and extract out of them a summary account of the method of proceeding to elections. As soon as the par- liament is summoned, the lord chancellor (or, if a vacancy happens during the

sitting of parlia- ment, the speaker, by order of the house, and without such order, if a vacancy happens by death in the time of a recess for upwards of twenty days,) sends his warrant to the clerk of the crown in chancery; who thereupon issues out writs to the sheriff of every county, for the election of all the members to serve for that county, and every city and borough therein. Within three dayy after the receipt of this writ, the sheriff is to send his precept, under

his seal, to the proper returning officers of the cities and boroughs, commanding them to elect their members : and the said returning officers are to proceed to election within eight days from the receipt of the precept, giving four days notice of the same ; and to return the persons chosen, together with the pre- cept, to the sheriff. But elections of knights of the shire must be proceeded to by the she riffs themselves in person, at the next county- court that shall happen after the delivery of the writ. The county-court is a court held every month or oftener by the sheriff, intended to try little causes, not exceeding the value of 40s., in what part of the county he pleases to appoint for that purpose : but, for the election of knights of the shire, it must be held at the most usual place. If the county-court falls upon the day of deliver- , ing the writ, or within six days after, the sheriff may adjourn the court and election to some other convenient time, no longer than sixteen days, nor shorter than ten ; but he cannot alter the place without the consent of all the candidates : and, in all such cases, ten days public notice must be given of the time and place of the elec- tion. And as it is essential to the very being of parliament that elections should be absolutely free, therefore all undue influences upon the electors are illegal, and strongly prohibited. As soon, therefore, as the time and place of elec- tion, either in counties or boroughs, are fixed, all soldiers quartered in the places are to remove, at least one day before the election, to the dis- tance of two miles or more : and not to return till one day after the poll is ended. Riots like- wise have been frequently determined to make an election void. By vote also of the house of commons, to whom alone belongs the power of determining contested elections, no lord of par- liament, or lord-lieutenant of a county, has any right to interfere in the election of commoners ; and, by statute, the lord warden of the cinque- ports shall not recommend any members there. If any officer of the excise, customs, stamps, or certain other branches of the revenue, presumes to intermeddle in elections, by persuading any voter or dissuading him, he forfeits £100, and is disabled to hold any office. Thus are the elec- tors of one branch of the legislature secured from any undue influence from either of the other two, and from all external violence and compul- sion. But the greatest danger is that in which themselves

co-operate by the infamous practice of bribery and corruption. To prevent which it is enacted, that no candidate shall, after the date (usually called the teste) of the writs, or after the vacancy, give any money or entertainment to his electors, or promise to give any, either to par- ticular persons, or to the place in general, in order to his being elected, on pain of being in- capable to serve for that place in parliament. And if any money, gift, office, employment, or reward, be given or promised to be given, to any voter, at any time, in order to influence him to give or withhold his vote, as well he that takes as he that offers such bribe forfeits £500, and i? for ever disabled from voting and holding any office in any corporation : unless, before convic- tion, he will discover some other offender of the

same kind, and then he is indemnified for his own offence. The first instance that occurs of election bribery, was so early as 13 Eliz., when one Thomas Longe acknowledged that he had given the returning officer and others of the borough for which he was chosen the sum of £4 to be returned member, and was for that pre- mium elected. But for this offence the borough was amerced, the member was removed, and the officer fined and imprisoned. But as this prac- tice has since taken much deeper and more universal root, it has occasioned the making of various statutes ; to complete the efficacy of •w.ach, there is nothing wanting but resolution and integrity to put them in strict execution. Undue influence being thus guarded against, the election is to be proceeded to on the day ap- pointed ; the sheriff or other returning officer first taking an oath against bribery, and for the due execution of his office. The candidates likewise, if required, must swear to their quali- fication, and the electors in counties to theirs ; and the electors both in counties and boroughs are also compellable to take the oath of abjura- tion, and that against bribery and corruption.

The principal British statutes on this subject are: 7 H. 4. c. 15 ; 8 H. 6. c. 7; 23 H. 6. c. 14; 2 W. & M. stat. 1. c. 7; 5 & 6 W. & M. c. 20; 7W.III. c.4;7&8 W. III. cc. 7, 25 ; 10&11 W.III.c.7; 12&13 W.III. c. 10; 6 Ann. c. 23; 9 Ann. c. 5; 10 Ann. cc. 19, 33; 2Geo. II.c.24; 8 Geo. II. c. 30; 18 Geo. II. c. 18 ; 19 Geo. II. c. 28; 10 Geo. III. c. 16; 11 Geo. III. c. 42; 28 Geo. III. c. 52.

The election being closed, the returning officer in boroughs returns his precept to the sheriff, with the persons elected by the majority : and the sheriff returns the whole, together with the writs for the county and the knights elected thereupon, to the clerk of the crown in chancery ; before the day of meeting, if it be a new parliament, or

with- in fourteen days after the election, if it be an oc-

casional vacancy ; and this under penalty of £500- If the sheriff does not return such knights only as are duly elected, he forfeits, by the old statutes of Henry VI., £100 ; and the returning officer in boroughs, for a like false return, £40; and they are besides liable to an action, in which double damages shall be recovered, by the later statues of king William ; and any person bribing the re- turning officer shall also forfeit £300. But the members returned by him, are the sitting mem- bers, until the house of commons, upon petition, shall adjudge the return to be false and illegal. The form and manner of proceeding upon sucli petition are regulated by statute 10 Geo. 111. c. 16. (amended by 11 Geo. III. c. 42, and made perpetual by 14 Geo. III. c. 15), which directs the method of choosing by lot a select committee of fifteen members, who are sworn well and truly to try the same, and a true judgment to give, according to the evidence. See PARLIAMENT.

Since the beginning of the reign of Henry VIII., the number of the representatives of the commons has been more than doubled. In his first parliament the house consisted only of 2’):; members ; 360 have since been added by acts ot parliament, or by the king’s charter, either cre- ating new, or reviving old boroughs. Under the provision of the acts 27 Hen. VIII. c. 26. sect. 29, and 34 & 35 Hen. VIII. c. 26. sect. 27., there were added twenty-four for Wales ; twelve pre- cisely by the first act for the counties, and twelve under the provision of the latter act for the bo- roughs. Two for the county, and two for the city of Chester, were added by stat. 34, 35, lien. VIII. c. 13. Two for the county, and two for the city of Durham, by stat. 25 Car. II. c. 9. Forty-five for Scotland, by the acts of union with that kingdom ; and 100 for Ireland, by the acts of union with that kingdom; and the re- mainder by charter.

The number of the house of commons nu therefore be stated thus : —

In the first parliament of Hen. VIII. .

Created since by positive statute .....

Created or restored by charter, &c. : viz. — By Hen. VIII. 16 : by Edw. VI. 48 : Mary, 21 : Eliz. 60 : Jac. I. 27 : Car. 1. 18 : Car. II. 2

Total

Members.

. 298 168

Of these, there are elected, under the provisions of the reform act, of 1832,

For England

— Ireland

— Scotland

— Wales

Total

471

105

53

29

658

The number of places which send members, and the numbers of knights, citizens, burgesses, and arons, respectively sent by the several counties, cities, boroughs, and places throughout the united

barons,

kingdom, will appear by the following statement :—

Counties. Membors.

117 counties

/‘England \ Ireland ‘ ˆ Scotland Wales

Total

40 32 33 12

117

143 ˆ

64 f Knights (in Scotland, also- 30 (called commissioners) of shires

J5)

252

10

Brought forward, Counties 117.

ELECTOR.

33 cities

England

Ireland Scotland

523

I 1

is

, 2

2 each 4 — 2 each

1 each

2 ,

Members 252.

Citizens.

. . 46 . . 4 . . 8 . . 3 . . 4

— 65

Burgesses

r * A

160 . . .

274

£ i > n u i <* n c i 219 boroughs, large 1 Ireland towns, and districts') Scotland

1 VVilps

. 26 . ‘. .

28

19 . .

19

14 . . .

14

ˆ * • (I ‘ N

(England 3 universities . ˆ Jreiand

. ‘. 22 each . .1 2 • ...

. . 4 . . 2

341

. 658

members.

The most important changes effected by the reform bill consist in the disfranchisement of fifty-six boroughs, in Cornwall and elsewhere, whose constituency was insignificant ; and the transfer of the elective franchise to the large ind populous manufacturing towns. By this arrangement, Manchester, Birmingham, Leeds, Sheffield, Sunderland, Devonport, Wolverhamp- ton, Bolton, Bradford, Blackburn, Halifax, Macclesfield, Oldham, Stockport, Stoke-upon- TrerU, Stroud, and Brighton return two members each to parliament; and the following places, Ashton, Bury, Chatham, Cheltenham, Dudley, Frome, Gateshead, Huddersfield, Kidderminster, Kendal, Rochdale, Salford, South Shields, Tyne- mouth, Wakefield, Walsall, Warrington.Whitby, Whitehaven, and Merthyr-Tydvil, are privileged to elect one member each. The districts of Lambeth, Marylebone, Finsbury, and the Tower Hamlets were erected into boroughs, returning two members each ; and five members are added to the Irish representation, viz. one additional to the following places, the Dublin university, Belfast, Galway, Limerick, and Waterford ; the boundaries of boroughs and districts are ex- tended, and new places admitted as contributary both in Wales and Scotland.

ELECTION OF ECCLESIASTICAL PERSONS. Elec- tions for the dignities of the church ought to be free, according to the stat. 9 Ed. II. cap. 14. If any persons that have a voice in elections, take any reward for an election in any church, college, school, &c., the election shall be void. And if any persons of such societies resign their places to others for reward, they incur a forfeiture of double the sum ; and both the parlies are ren- dered incapable of the place. Stat. 31 Eliz. c. 6.

ELECTION OF SCOTTISH PEERS. See PEERS.

ELECTION OF VERDERORS OF THE FOREST (elections viridariorum forestae), in law, a wiit that lies for the choice of a verderor, where any of the verderors of the forest are dead, or re- moved from their offices. This writ is directed to the sheriff, and the verderor is to be elected by his freeholders of the county, in the same manner as coronerr. New. Nat. Brev. 366.

ELECTOR (in Germ, churfiist, kurfust, or

wahlfiirst) was even in recent times a title of several princes of the German empire of con- siderable power and dignity. ‘ During a long period,’ says Dr. Robertson (Hist. Charles V.), ‘ all the members of the Germanic body had a right to assemble, and to make choice of the per- son whom they appointed to be their head. But, amidst the violence and anarchy which prevailed for several centuries in the empire, seven princes who possessed the most extensive territories, and who had obtained an hereditary title to the great offices of the state, acquired the exclusive privilege of nominating the emperor. This right was confirmed to them by the golden bull of Charles IV. ; the mode of exercising it was ascer- tained, and they were dignified with the appella- tion of electors. The nobility and free cities being thus stripped of a privilege which they had once enjoyed, were less connected with a prince towards whose elevation they had not contributed by their suffrages, and came to be more appre- hensive of his authority. The electors, by their extensive power, and the distinguishing privi- leges which they possessed, became formidable to the emperors, with whom they were placed almost on a level in several acts of jurisdiction. Thus the introduction of the electoral college into the empire, and the authority which it ac- quired, instead of diminishing, contributed to strengthen, the principles of hostility and discord- in the Germanic constitution.’

The seven princes above alluded to were the three ecclesiastical princes, the archbishop of Cologne, Mentz, and Treves ; and the four secu- lar, the count Palatine, the king of Bohemia, the marquis of

Brandenburgh, and the duke or' Saxony.

In 1648 the duke of Bavaria took the place of the count Palatine, who was outlawed by the emperor for having accepted the crown of Bohemia; but he was at length restored to his rank, and a new electoral dignity was created for the former, which increased the number of dectors to eight. In 1692 a ninth electorate was added by the emperor Leopold, in favour of the duke of Hanover, of the house of Brunswick Luneburgˆ From that period, to the year 1777, the electojai

college consisted of the three ecclesiastical elec- tors, Mentz, Treves, and Cologne, and the six secular, Bohemia, the palatinate of the Rhine, Saxony, Brandenburg, Bavaria, and Hanover. The dominions of the last elector palatine of the Rhine, having devolved in December 1777 to the elector of Bavaria, the electoral college was again reduced to eight members, until the peace of Luneville ; when the three ecclesiastical elec- torates were secularised, the archbishop of Ratisbon introduced as a new elector arch-chancellor, and the duke of Wirtemberg, the landgrave of Hesse Cassel, the margrave of Baden, and the grand duke of Tuscany, as duke of Saltzburg, raised to the electoral dignity. This increased the number of electors to ten, viz. the elector arch-chancellor, Bohemia, Bavaria, Saxony, Brandenburg, Hanover, Wirtemberg, Hesse Cas- sel, Baden, and Saltzburg.

This arrangement was finally destroyed, as we have seen (article DIET), in the year 1806, when the German empire was dissolved. Bavaria and Wirtemberg, on joining the Confederation of the Rhine, under the protection of the French empire, assumed the royal dignity ; Hanover was in pos- session of the French ; Baden and Saltzburg took the titles of grand dukes ; the elector arch- chancellor that of the prince primate of the Con- federacy of the Rhine : and the year following Saxony assumed the royal dignity ; Hesse Cassel was annexed to the new kingdom of Westphalia; Bohemia as part of the dominions of Austria, and Brandenburg as part of those of Prussia, reverted to these two houses as independent monarchical states. And thus the title of elector, which for so long a series of years conferred a rank equal to that of the old kings of Europe, became finally extinct.

The last electors of the German empire were, 1. Charles Theodore, baron Dahlberg, elector of Ratisbon, and arch chancellor, now prince pri- mate. 2. Frederick William III., king of Prussia, elector of

Brandenburg. 3. George III., king of Great Britain, elector of Hanover. 4. Ferdinand Joseph, elector of Saltzburg, now duke of Saltzburg. 5. Frederick II., elector, now king of Wirtemberg. 6. Charles Frederick, elector, now grand duke of Baden. 7. William IX., elector of Hesse Cassel, driven from his dominions by the French. 8. Maximilian Jo-

seph, elector, at present king of Bavaria. 9. Frederick Augustus IV., elector, at present km» of Saxony; and, 10. Francis II., elector of Bohemia, afterwards emperor of Austria.

The electors besides the power of electing an emperor, had a right to capitulate with the new head of the empire, to dictate the condi- tions on which he was to reign and to depose him if he broke those conditions. They actually deposed Adolphus of Nassau, in 1298, and Wen- ceslaus in 1401. They were sovereign and inde- pendent princes in their respective dominions, had the < privilegium de non appellando illimi- tatum,' that of making war, coining, and exer- cising every act of sovereignty. They formed a separate college in the diet of the empire, and had among themselves a particular covenant, or league, called the < Kur verein.' They had pre- cedence of all the other princes of the empire, even of cardinals, and ranked with kings. There was, however, a difference between the secular and ecclesiastical electors; none of the latter could be chosen emperor, and they were to be thirty years of age before they could attain the electoral dignity, whilst the majority of the se- cular electors was fixed at eighteen years of age, and any of them might be placed at the head of the empire ; indeed they might even vote in their own favor. The functions of the electors were exercised by deputies. The elector of Mentz was arch-chancellor in Germany ; Treves, in Gaul and the kingdom of Aries ; Cologne, in Italy; Bohemia was arch-cupbearer; Bavaria, arch-sewer, or officer who serves out the feasts ; Saxony, arch-marshal ; Brandenburg, arch-cham- berlain; Hanover, arch-treasurer. During the vacancy of the imperial throne, the elector of Saxony used to be vicar of the empire in the north, and the elector of Bavaria of the southern circles. On the demise of an emperor of Ger- many, or a vacancy ensuing in the imperial throne, the electors were summoned by the arch- bishop of Mentz to meet (generally at Frank- fort) within three months. One month was or- dinarily allowed for their determination ; if it was delayed longer they were, according to the imperial constitution, to be fed on bread and water until they had made a choice. Both their dress and functions are particularly described by Du Cange.

ELECTRICITY.

ELEC’TRE, n. s. ~\ Gr. TjXticrpov ; Latin, ELE’CTRIC, adj. electrum, amber, which,

having the quality when warmed by friction of attracting bodies, gave

ELE’CTRIC AL, ELECTRI’CIAN, n ELECTRI’CITY, ILLE’CTRIFY, v. a ELE’CTRISE, v. a. ELECTRO’METER,?I. s.

to one species of attrac- tion the name of elec- tricity, and to the bodies

that so attract the epithet electric ; which also means produced by an electric body ; and me- taphorically, rapid; powerful. Bacon uses electre for a metallic compound. An electrician is he who is skilled in electricity. To electrify, electrum and fa, to render electric, or apply elec- tricity, and to electrise, are used synonymously. Electrometer, an instrument for ascertaining the

presence and portion of electricity in any given- body.

Change silver plate or vessel into the compound stuff, being a kind of silver electre, and turn the rest into coin. Bacon.

If that attraction were not rather electrical than mag- netical, it was wondrous what Helmont delivereth concerning a glass, wherein the magistery of load- stone was prepared, which retained an attractive quality. Browne.

By eleetrick bodies do I conceive not such only as take up light bodies, in which number the ancients only placed jet and amber ; but such as, conveniently placed, attract all bodies palpable. /<*•

An eleetrick body can by friction emit an exhalation so subtile, and yet so potent, as by its emission to cause no sensible diminution of the weight of the elec.

(rick body, and to be expanded through, a sphere, whose diameter is above two feet, and yet to be able to carry up lead, copper, or leaf gold, at the distance of above a foot from the eledrich body. Newton.

When I would observe the electricity of the atmos- phere with this instrument, I thrust the pin I into the cork D, and holding the rod by

its lower eud A, pro- ject it out of a window on the upper part of a house, into the air ; raising the end of the rod with the elec- trometer, so as to make an angle of about fifty or sixty degrees with the horizon. Cavallo.

Then mark how two electric streams conspire

To form the resinous and vitreous fire. Darwin.

If a metallic point be fixed on the prime conductor, and the flame of a candle be presented to it, on electrising the conductor either with vitreous or resin- ous ether, the flame of the candle is blown from the point, which must be owing to the electric fluid in its passage from the point carrying along with it a stream of atmospheric air. Id.

But now a bride and mother — and now there !

How many ties did that stern moment tear '. From thy Sire's to his humblest subject's breast

Is linked the electrick chain of that despair, Whose shock was as an earthquake's, and opprest Thy land which loved thee so that none could love

thee best. Byron.

And the wild sparkle of his eye seemed caught

From high, and lightened with electric thought.

Id.

J. The particular branch of science denomi- nated electricity appears to have derived its name from that of the first substance in which any of its properties were discovered. This was amber, the Greek name of which is i/Xticrpov, evidently derived from 'HX«rwp, a name by which Homer designates the Sun. It has been said by some that the ancients, observing amber to possess the property of attracting light sub- stances when rubbed, termed it electrum, and that hence arose the word electricity. Those who entertain this opinion, would derive the name from the Greek verb «\KW to draw ; but this appears to us to be a very forced derivation, since amber was doubtless called by the name of electron, long before it was known to possess the magnetic property of attraction. Perhaps it was so called from its bright and shining ap- pearance. But, whatever may be the etymology of the term, it is now employed to designate that science which investigates

the attractions and repulsions, the emissions of light, and ex- plosions, which are produced, not only by the friction of vitreous, resinous, and metallic sur faces, but by the neating, cooling, evaporation, and mutual contact of a vast number of sub- stances.

•2. It is rather remarkable that, although the attractive energy of electricity has all the ap- pearance of being a very recent discovery, it has been said to be ‘ the first physical fact re- corded in the history of science. The electrical properties of amber were known and pointed out upwards of 2000 years ago ; but the subject did not engage the attention of the learned till the beginning of the seventeenth century. This was perhaps a fortunate circumstance, since it at all events prevented the science from being c louded or perverted by the ignorance of early times.

3. Dr. William Gilbert, of Colchester, appears to have been the first person who essentially contributed to the establishment of electricity us a science. In the year 1600 he published’ his work entitled De Magnete, which contains a number of experiments made with various substances, possessing the properties of amber, now termed electrics. Of Dr. Gilbert, Cavallo says that he ought to be considered as the father of electricity.

4. No further discoveries were made in this science of any importance till the year 1670, when the celebrated Mr. Boyle much enlarged the list of electrics, and by experiment discovered that their effects were much increased by warm- ing and wiping them before the application of friction, and that during the friction they emitted faint flashes of light ; this appearance he con- sidered as an additional characteristic of the electrical power.

5. Otto Guericke of Magdeburg, the inventor of the air-pump, and a contemporary with Mr. Boyle, confirmed the experiments of the latter, and much enlarged the state of electrical know- ledge. He constructed an apparatus in which the electric, a globe of sulphur, was made to revolve on an axis ; the hand was applied to it as a rubber ; and by this contrivance, which was in principle the same as the most modern con- struction of the electrical machine, he was en- abled to obtain an accumulation of electricity far beyond any thing that had been effected by his predecessors. This philosopher discovered also the principle of electrical repulsion.

6. In the year 1709 appeared the first treatise on electricity; it was the production of Mr. Hawksbee, who far exceeded his predecessors in the discoveries which he made. He was the first who observed the electric

power of rubbed glass; the flashing light of an excited electric had been observed by Boyle ; but, as Mr. Hawks- bee by his glass globe could collect the electric matter in much greater quantities than had been done before, he had the pleasure of beholding the intensity of its light, and of observing the snapping noise by which its discharges are at- tended. Some of the experiments made by Mr. Hawksbee were very curious, and deserve more notice than has hitherto been taken of them. Among others the following may be mentioned. He lined more than one-half of a glass globe with sealing-wax, and, having exhausted it of its air, he put it in motion in an appropriate frame. On applying his hand to it, for the purpose of excitation, he was surprised to observe an exact image of his hand on the concave surface of the wax, as distinctly denned as if there had been nothing but transparent glass between his eye and his hand, although the wax was in some places an eighth of an inch in thickness. When pitch was used instead of wax the effect was the same.

7. After this period the science of electricity appears to have been for some time stationary, from the discoveries of Sir Isaac Newton ab- sorbing the attention of the public ; but, soon after the death of that distinguished individual, it obtained renewed attention, and some very important discoveries were made in it by Mr

Stephen Grey, a pensioner of the Charter-house. With the date of this gentleman's experiments commenced the modern triumph of electricity. Directing his attention to the nature of electrical phenomena, he endeavoured to excite them in all known bodies ; and, though in many cases he was unsuccessful, he thus added considerably to the catalogue of electrics. Many substances, in which no attractive power was excited by rub- bing while in their natural state, became strongly attractive if excited after being moderately warmed, but lost this property as they became cold. This fact, says the late ingenious Mr. Singer, clearly pointed out a relation between the state of bodies and their power of evincing electric appearances ; and the nature of this re- lation was explained by Mr. Grey's^ subsequent experiments. Every attempt to render metals electric by friction or otherwise proved inef- fectual in the hands of Mr. Grey, as well as in those of his predecessors, when it occurred to him that, as electric light appeared to pass be- tween excited bodies and such as were incapable of excitation, the attractive power might'be also capable of communication from one to the other.

8. For this purpose Mr. Grey inserted a wire and ball, by means of a piece of cork, in the extremity of a glass tube, and, on rubbing the tube, found its attractive power was communi- cated to the wire and ball. He proceeded with this experiment until the length of the wires which he used became inconvenient. He then suspended the ball by means of pack-thread, from the tube, and found the electricity was still com- municated. The same result was obtained when the ball was suspended by the pack-thread, from a balcony twenty-six feet high : on exciting the tube small light substances were attracted by the ball from the pavement of the court below.

9. In connexion with Mr. Wheeler, Mr. Grey afterwards extended his experiments, and suc- ceeded in transmitting the electric power from his excited tube through nearly 800 feet of pack- thread, without any apparent diminution of its force. In arranging the apparatus for these ex- periments these gentlemen found that a silken

cord was incapable of transmitting the attractive power of the tube; an effect which they at first attributed to its comparative smallness, but they afterwards observed that a wire of much smaller diameter carried off the electrical effect com- pletely, and thus discovered that there are in nature various bodies differently qualified for the transmission of the electric matter, some conveying it most readily, and to a great dis- tance, and others incapable of transmitting it to any perceptible distance. The former class of bodies are now termed conductors of electricity, and the second class non-conductors, or electrics ; these terms are said to have been first applied to them by Desaguliers.

10. Soon after Mr. Grey's discovery of the difference between conductors and non-con- ductors, M. Du Fay discovered the difference between positive and negative, or, as they were for some time, and are still by some called, the vitreous and resinous electricities. This disco- very was accidentally made in consequence of

his observing, that a piece of leaf-gold, repelled by an excited glass tube, and which he endea- voured to drive about the room with a piece of excited gum copal, instead of being repelled by it, as it was by the glass tube, was eagerly at- tracted. The same was the case with sealing wax, sulphur, resin, and many other substances'. He discovered, also, that it was impossible to ex- cite a tube in which the air was condensed. He also observed, that such substances as were least susceptible of electric excitement by friction were the best conductors of electricity ; though all the bodies he tried became electric by communica- tion when placed on a non-conducting support. In this way he electrified himself, being sup- ported by silk lines, and touched by an excited glass tube; and on this occasion the abbe Nollet, who accompanied him in these experi- ments, drew the first electrical spark from the human body.

11. M. Du Fay, says Mr. Singer, has also tlic- merit of having given the first clear account of that apparent repulsion which obtains in most electric experiments, and which was first ob- served by Otto Guericke, who had noticed that the fibres of an electrified feather receded from each other, and from the tube or globe by which they had been electrified. Du Fay viewed this as the indication of a general principle in elec- tricity, which may be thus expressed. Electrified bodies attract all those that are not so, but repel them as soon as they are electrified by their con- tact.

12. The consideration of this general principle led the same assiduous philosopher to a discovery of the first importance, viz. the existence of

two distinct attractive powers, produced by the fric- tion of different substances, the one excited by rubbing glass, rock crystal, gems, wool, hair, and many other substances, he called vitreous electri- city. The other, resulting from the friction of amber, copal, gum-lac, resins, sealing-wax, Sec., he named resinous electricity. The characteris- tics of these attractive powers are, that they strongly attract each other, and produce a mutual counteraction of effect, whilst they separately act in an apparently similar manner on all un- electrified bodies: but the effect of either of them is destroyed or weakened by the approach of the other. If gold leaf be electrified by rubbed glass it immediately recedes from it, and will not again approach whilst it remains in its electric state. But in this state it is strongly attracted by any excited body of the resinous class, and will fly to sealing-wax or amber more rapidly than to an unelectnfied body. Hence it was concluded, by Du Fay, that there are two distinct electricities, each repulsive of its own particles, but having a strong attraction for those of the other. So that all bodies electrified with the vitreous electricity repel those that are simi- larly electrified, and attract such as are unelectri- fied or endowed with the resinous electricity. And the converse of this is the case with such as are possessed of the resinous electricity.

12.* The terms resinous and vitreous electrici- ty, continues the same author, were sufficiently appropriate at the time they were proposed ; but it has been since found that either kind of elec-

tricity can be obtained at pleasure, both from glass and sealing-wax, by varying the nature of the substance with which they are rubbed. Hence the vitreous electricity of Du Fay is now called positive electricity; and the resinous, negative electricity; terms first proposed by Dr. Franklin.

13. To the labors of Messrs. Grey and Wheeler, and their coadjutors Du Fay and Kollet, all subsequent electricians are highly in- debted; their means of research were extended by the improvement of electrical apparatus, ne- cessarily resulting from the discovery of conduct- ing and non-conducting power; whilst the generalisation of electric phenomena by Du Fay, and his discovery of the distinction between positive and negative electricity, was an enlarge- ment of the existing sphere of knowledge in a degree before unparalleled. From this period, indeed, the science assumed a more important aspect, its cultivators increased in number, and the communication of their

researches consti- tuted a prominent feature in the transactions of the most celebrated societies and academies of Europe.

14. It was in the year 1745 that the remarkable properties of the Leyden phial were first ob- served. This discovery was merely accidental ; yet it tended, more than any other discovery hi- therto made, to promote the progress of electri- city. The circumstances that led to this discover/ were the following : — Professor Muschenbroeck observed, that when conducting bodies were placed on glass, &c., and electrified, their elec- tricity was very soon carried off by the conduct- ing particles floating in the atmosphere ; he therefore imagined, if a conducting substance were put into a glass phial, that it could be charged much higher than in open air, as the glass would protect it from the dissipating action of the atmosphere.

15. This idea he attempted to put in practice by filling a small phial with water, which is a conducting substance. For this purpose he passed the end of a wire through the cork of the phial, so as to touch the water, and then charged the water by bringing the wire in contact with t!ie prime conductor, but found no extraordinary result from the experiment Mr. Cuneus, of Leyden, who was one of the party when the pro- fessor made the experiment, repeated it after- wards ; and, happening to hold the phial in his hand, after he had connected the wire, with the prime conductor, until the water, as he supposed, had received a full charge of electricity, and then applying his other hand to unloose the wire from the conductor, he received such a sudden shock in his arms and breast, as filled him with asto- nishment.

16. The report of such a strong effect of the electric power immediately raised the attention of all the philosophers in Europe. Many of them greatly exaggerated their accounts ; either from a natural timidity, or a love of the marvel- lous. M. Muschenbroeck, who tried the experi- ment with a very thin glass bowl, told M. Reau- mur in a letter written soon after the experiment, that he felt himself struck in his arms, shoulder, and breast, so that he lost his breath; and was two

days before he recovered from tie effects of the blow, and the terror. He added, that he would not take a second shock for the whole kingdom of France. Mr. Allamaud, who made the expe- riment with a common beer glass, said, that he lost his breath for some moments ; and then felt such an intense pain all along his right arm, that he was apprehensive of bad consequences, but it soon after went off without any inconvenience, &c. Other philosophers, on the contrary, showed their magnanimity, by receiving a num- ber of electric shocks as

strong as they could possi- bly make them. Mr. Boze wished that he might die by the electric shock, in order to furnish, by his death, an article for the memoirs of the Aca- demy of Sciences at Paris. But, adds Dr. Priest- ley, in his history of electricity, it is not given to every electrician to die in so glorious a manner, as the justly envied Richman. Public curiosity was promptly and highly excited by this disco- very, and all Europe was presently filled with itinerant exhibitors of the Leyden Jar, who ob- tained a livelihood by administering the electri- cal shock. The experiment was repeated and varied by the electricians of every country, and an explanation of the principle on which the effect depends, was offered by Dr. Franklin of Ame- rica, and Dr. Watson in England, at the same time, without the one knowing that the other was engaged in the pursuit. The propositions of these two philosophers, observes Mr. Singer, were nearly similar; but that of Dr. Franklin being the more perfect, and having a real priority of publication, was adopted, and has been since celebrated as the Franklinean Theory of Elec- tricity. He referred all electrical effects to the motion of a peculiar fluid, repulsive of its own particles, and having an attraction for all other matter. And he considered the opposite elec- tricities of glass and sealing-wax as indications of different states of this fluid : the vitreous elec- tricity being the plus or positive state, and the resinous the minus or negative state. All bodies can contain a certain quantity of electric fluid in a latent state. If this quantity be increased they become electrified positively ; if it be diminished they are rendered negative. The production of electrical effects is therefore nothing but the result of the unequal distribution, by art, of a naturally diffused fluid. Such are the leading principles of the Franklinean theory ; they have been con- sidered mathematically by Mr. Cavendish, by ./Epinus, and others, and, with some modifications, apply to most of the electrical phenomena at present known.

17. Frequent experiments, attended with close observation, were likely enough to lead to im- portant results in this interesting science ; and we have now arrived at a period in its history which is perhaps the most distinguished of any . We allude to the discovery of the identity of elec- tricity and lightning. Mr. Grey and Dr. Wall seem to have been the first who thought of the resemblance between thunder and the snapping noise which is heard when an excited electric is approached by a conducting substance. The abbe Nollet, Mr. Winckler, and others, also enumerated many resemblances between the phenomena of electricity and those of thunder ;

but they did not think of any method by which their suppositions could be brought to the test of experiment. The remarks of the abbe Nollet on this subject, considering the time at which they were made, are so striking, that we consider them well deserving of a place in the memory of every lover of the electrical science, and shall here re- cord them.

18. ‘ If/ says he, ‘ any one should take upon him to prove from a well connected comparison of phenomena, that thunder is in the hands of nature what electricity is in ours ; that the won- ders which we now exhibit at our pleasure, are little imitations of those great effects that frighten us, and that the whole depends upon the same mechanism : if it can be demonstrated that a cloud prepared by the action of the winds, by heat, by a mixture of exhalations, &c., is oppo- site to a terrestrial object; that this is the electri- fied body, and at a certain proximity to that which is not ; I avow that this idea, if it were well supported, would give me a great deal of pleasure; and,. in support of it, how many spe- cious reasons present themselves to a man who is well acquainted with electricity ! The univer- sality of the electric matter, the readiness of its action, its inflammability, and its activity in giving fire to other bodies, its property of striking externally and internally even to their smallest parts, the remarkable example we have of this effect in the Leyden experiment, the idea which we might truly adopt m supposing a greater de- gree of electric power, &c. ; all these points of analogy, which I have been some time meditating, begin to make me believe, that, by taking elec- tricity for the model, one might form to one’s self, in respect to thunder and lightning, more perfect and more probable ideas than have hitherto been offered.’

19. It is generally admitted that the French philosophers were the first to verify these con- jectures; they preceded the justly celebrated Dr. Franklin in drawing the electric matter from the clouds by means of an iron conducting rod ; but, within a month after they had done so, the American philosopher effected the same thing in a manner that never seems to have entered into their minds. Speaking of the observations of the abbe Nollet, above quoted, Mr. Singer justly remarks, that thy bear no comparison with the acute conception, sound philosophical argu- ment, and satisfactory experiments, by which Dr. Franklin has demonstrated the identity of the electric fluid, and the cause of thunder. Dr. Franklin, says he, had observed with equal atten- tion the peculiarities of the natural phenomenon, and the power to which he ascribed its produc- tion ; he enumerated the following as their lead- ing features of resemblance : —

(1.) The zigzag form of lightning corresponds exactly in appearance

with an electric spark that passes through a considerable interval of air.

(2.) Lightning most frequently strikes such ob- jects as are high and prominent, in preference to others, as the summits of hills, the masts of ships, high trees, towers, spires, &c. The electric fluid, when striking from one body to another, always passes through the most prominent parts.

(3.) Lightning is observed to strike most fre- quently into those substances that are good con- ductors of electricity, such as metals, water, and moist substances ; and to avoid those that are non-conductors.

(4.) Lightnings inflame combustible bodies. The same is effected by electricity.

(5.) Metals are melted by a powerful charge of electricity. This phenomenon is one of" the most common effects of a stroke of lightning.

(6.) The same may be observed of the fracture of brittle bodies, and of other expansive effects common to both causes.

(7.) Lightning has often been known to strike people blind. Dr. Franklin found, that the same effect is produced on animals when they are subject to a strong electric charge.

(8.) Lightning destroys animal life. Dr. Franklin killed turkies of about ten pounds weight, by a powerful electric shock.

(9.) The magnetic needle is affected in the same manner by lightning and by electricity, and iron may be rendered magnetic by both causes. The phenomena are therefore strictly analogous, and differ only in degree ; but if a'u electrified gun-barrel will give a spark, and pro- duce a loud report at two inches distance, whut effect may not be expected from perhaps 10,000 acres of electrified cloud? And is not the dif- ferent extent of these conductors, equal to the different limit of their effects? But to ascer- tain the accuracy of these ideas, let us have re- course to experiment.

Pointed bodies receive and transmit electri- city with facility; let, therefore, a pointed metal rod be elevated in the atmosphere, and insulated ; if lightning is caused by the electricity of the clouds, such

an insulated rod will be electrified whenever a cloud passes over it, and this elec- tricity may then be compared with that obtained in our experiments. Such were the suggestions of this admirable philosopher: they soon ex- cited the attention of the electricians of Europe, and having attracted the notice of the king of France, the approbation he expressed excited in several members of the French Academy a de- sire to perform the experiment proposed by Franklin, and several insulated and pointed metallic rods were erected for that purpose.

20. In this pursuit the most active persons were two French gentlemen, Messrs. D'Alibard and Delar. The former prepared his apparatus at Marly la Ville, five or six leagues from Paris ; the latter at his own house, on some of the highest ground in that capital. M. D'Ali- bard's machine consisted of an iron rod forty feet long, the lower extremity of which was brought into a sentry-box, where the rain could not come ; while on the outside it was fastened to three wooden posts by long silken strings de- fended from the rain. This machine was the first that was favored with a visit of the etherial fire. M. D'Alibard himself was not at home ; but, in his absence, he had entrusted the care of his apparatus to one Coissier, a joiner, who had served fourteen years in the army, and on whose courage and understanding he could depend This artisan had all the necessary instructions given him 5 and was desired to call some of his

neighbours, particularly the curate of the parish, whenever there should be any appearance of a thunder storm. At length the long expected event arrived. On Wednesday, 10th May, 1752, oetween two and three P. M. Coissier heard a pretty loud clap of thunder. Immediately he ran to the machine, taking with him a phial furnished with a brass wire ; and presenting the wire to the end of the rod, a small spark issued from it with a snap like that which attends a spark from an electrified conductor. Stronger sparks were afterwards drawn in the presence of

• the curate and a number of other people. The curate's account of them was, that they were of a blue color, an inch and a half in length, and smelled strongly of sulphur. In making them, he received a stroke on his arm a little below the elbow; but he could not tell whether it came from the brass wire inserted into the phial, or from the bar. He did not attend to it at the

• time; but the pain continuing, he uncovered his arm when he went home in the presence of Coissier. A mark was perceived round it, such as might have been made by a blow with the wire on his naked skin.

21. Dr. Franklin himself had an opportunity, about a month after this, of verifying his own hypothesis. . He was waiting for the erection of a spire in Philadelphia, not imagining that a pointed rod of a moderate height could answer the purpose. At last it occurred to him, that by ‘ means of a common kite he could have a readier access to the higher regions of the atmosphere than any other way whatever. Preparing, there- fore, a large silk handkerchief and two cross sticks of a proper length on which to extend it, he took the opportunity of the first approaching thunder-storm to take a walk into a field where there was a shed convenient for his purpose. But, dreading the ridicule which too commonly at- tends unsuccessful attempts in science, he com- municated his intention to nobody but his son, who assisted him in raising the kite. A consi- derable time elapsed before there was any ap- pearance of success. One very promising cloud had passed over the kite without any effect; when, just as he was beginning to despair, he observed some loose threads of the hempen string to stand erect and avoid one another, just as if they had been suspended by the conductor of a common electrical machine. On this he presented his knuckle to a key which was fas- tened to the string, and thus obtained a very evident electric spark. Others succeeded even before the string was wet ; but, when the rain had begun to descend, he collected electric fire pretty copiously. He had afterwards an insu- lated iron rod to draw the lightning into his house ; and performed almost every experiment with real lightning, that had before been done with the artificial representations of it by elec- trical machines. With this apparatus he con- nected two small bells and a pendulum between them, which were so arranged as to ring when electrified, and thus to give notice of the ap- proach of a thunder-cloud.

22. Experiments with the electrical kite were repeated in all directions, and with various suc- cesi ; in France a most brilliant display of ils

powers was made by M. de Romas. He con- structed a kite of seven feet in height, and three feet wide ; this kite he raised to the height of 550 feet by a string, in which was interwoven a fine metallic wire to render it a good conductor. On the 7th of June, 1753, when this kite was elevated, M. de Romas informs us that he drew from the conductor to which the string was at- tached sparks three inches long, and a quarter of an inch thick. On one or two occasions he met with increasing success, and was enabled to draw sparks, or rather streams,

of the electric matter from his apparatus, of a foot in length, and an inch in thickness. But on the 16th of August, 1757, M. de Romas, with an additional length of string to his kite, was still more suc- cessful. The storm at the time was not great, neither was there much thunder," and but little rain had fallen ; yet streams of lightning, nine or ten feet long, and an inch in thickness, darted from his conductor to the ground, accompanied with a noise equal to that attending the dis- charge of a pistol.

23. It was not to be expected that, in the infancy of the science, experiments on such a scale should be always conducted with safety : accidents will happen in the management of the best constructed apparatus, and ˆ the first ope- rators on atmospherical electricity received many severe and unexpected shocks. Numerous, how- ever, and dangerous as these accidents have been, there is only one instance known of their having proved fatal ; to that we have already alluded, and shall here state some of the leading particulars attending the melancholy catastrophe. Professor Richman, of St. Petersburgh, had con- structed an apparatus for making experiments on atmospherical electricity, for a work on that subject in which he was engaged. On the morn- ing of the day that terminated his mortal career he was attending a. meeting of the Academy of Sciences, and, hearing the sound of distant thun- der, he hastened home to observe his apparatus, and took with him Mr. Solokow, his engraver, that he might make any sketch required during the action of the apparatus. On inspecting his electrometer, he found it indicated 4° on the quadrant ; and, while pointing out to his friend the danger to be apprehended should it rise to 45°, a loud peal of thunder burst over the city. At this moment the professor inclined his head towards the apparatus to observe the height to which the electrometer bad risen, and while in this posture, with his hand about a foot from the conducting rod, a bull of tire, of a bluish- white color, flashed from the rod to his head, with a report equal to that of a pistol. Richman fell backwards on a chest behind him, and ex- pired in a moment. Solokow was much stunned by the discharge ; and described the ball of elec- tric fire as being about the size of his closed hand. The wires of the apparatus were meltea and scattered about the room ; the door was torn from its hinges and thrown upon the floor ; the house was filled with sulphureous vapor, the ashes were thrown from the fire- place, and the door-posts rent asunder.

24. A vein was opened in the professor's body twice, but no biood followed ; after which, they

endeavoured to recover life by violent friction, but in vain. There appeared a red spot on the forehead, from which spirted some drops of blood through the pores, without wounding the skin. The shoe belonging to the left foot was burst open, and uncovering the foot at that part, they found a blue mark ; whence it was con- cluded, that the electric matter having entered at the head, made its way out again at that foot. Upon the body, particularly on the left side, were several red and blue spots resembling lea- ther shrunk by being burnt. Many more also became visible over the whole body, and par- ticularly over the back. That upon the forehead changed to a brownish red, but the hair of the head was not singed. In the place where the shoe was burst, the stocking was entire; as was the coat «very where, the waistcoat only being singed on the fore flap : but there ap- peared on the .back of Mr. Solokow's coat long narrow streaks, which probably arose from frag- ments of the red hot wires falling on it and burn- ing off the nap. Next day, when the body was opened, the cranium was very entire, having neither fissure nor contra-fissure : the brain was sound ; but the transparent pellicles of the wind- pipe were excessively tender, and easily rent. There was some extravasated blood in it, as also in the cavities below the lungs. Those of the breast were quite sound ; but those towards the back of a brownish black color, and filled with more of the blood above-mentioned. The throat, the glands, and the small intestines, were all in- flamed. The singed leather-colored spots pene- trated the skin only In forty-eight hours the body was so much corrupted that they could with difficulty place it in the coffin. It is said that, at the time of his death, professor Richman had in his pocket seventy rubles of silver, which were not in the least affected by the lightning.

25. There was no longer any doubt re- maining as to the identity of lightning, and the electricity produced by the electrical machine ; and the great practical use made of this disco- covery was to secure buildings, ships, &c., from being damaged by lightning, by erecting on them pointed metallic rods, rising a little above the highest part of the building, and passing along it so as to communicate with the ground or the nearest water, a full account of which will be given in the course of this essay.

26. A short time previous to the event of professor Richman's death, a most remarkable attempt was made by a gentleman in Italy, to gain on the credulity of his countrymen and others, by pretending that if odoriferous sub- stances were enclosed in glass tubes, and the tubes excited, the medicinal virtues of those substances would transpire

through the glass, impregnate the atmosphere of the conductor, and thus be readily communicated to the pa- tient without being taken into the stomach. The most astonishing cures were said to have been performed by these medicated tubes ; and the inventor, J. Francisco Pivati, published an ac- count of them to the world. Both the British and French philosophers united in investi- gating the merits of Pivati's experiments, and the result was a complete failure, in every in-

stance in which the experiments were repeated, though this was done in the presence of those who pretended to have been so successful; and, in some cases, with the very apparatus they themselves had used. The theory was, conse- quently, no longer credited.

27. To enumerate, in chronological order, all the discoveries that have been made in the science of electricity, from the invention of the Leyden phial to the present period, would swell this introductory sketch far beyond its proper limits; and yet, as having so eminently contri- buted towards raising the science to its present elegant, improved, and highly prosperous state, there are several whose names it would be in- justice to pass by in silence. As the chief of these we may notice the following : Mr. Canton, an eminent English electrician, who distin- guished himself by a very successful repetition of Dr. Franklin's experiments on atmospherical electricity ; a method of electrifying the air of n room, either positively or negatively ; and par- ticularly by disproving the correctness of the theory of vitreous and resinous electricity, and showing that every electric is capable of giving it both in a positive and negative form, according to the nature of the surface of the body, and the kind of rubber with which it is excited.

This ingenious electrician made several re- markably fine experiments on electrical atmos- pheres, which led to the 'establishment of the fact, that bodies immersed in them became pos- sessed of the electricity the opposite of that of the body into the atmosphere of which they are placed.

28. In connexion with the name of Canton must be mentioned that of Beccaria, author of a work entitled Dell' Elettricismo Artificiale e Naturale, and which was translated into English in the year 1776. The discoveries of Signor Beccaria were nearly the same as those of his contemporary, Mr. Canton, although they had had no communication with each other on the subject. Beccaria also made some very impor- tant experiments on the conducting power of water; in these he

ascertained, that water is a very imperfect conductor of electricity ; that it conducts it according to its quantity, and that, when used in very small quantities, its resistance was greatest. See BECCARIA.

29. Some interesting discoveries were made in the year 1759, on the electrical qualities of silk, by Mr. Symner. An account of these he published in the Philosophical Transactions. His attention seems to have been directed to thi subject by accidentally observing, that, on pul- ling off his silk stockings in the evening, a crackling noise proceeded from them, and that in the dark they emitted sparks of fire. He found that these electrical appearances were always the strongest when a silk and worsted stocking were both on one leg, and that it was of no consequence which of them was next the skin, but that they must be of different colors, one white and the other black. Two stockings of this description, worn on the leg for the short space of ten minutes, on being pulled off, stood inflated as if the leg had been within them, and, on being drawn asunder, attracted each other at

the distance of eighteen inches. These effects are always most powerful when the stockings are new, or when newly washed. Those who choose to try this very simple experiment will find it succeed equally well if the stockings are placed one within the other, drawn a few times through the hand, and then quickly pulled asunder.

30. Mr. Kinnersly, an intimate friend of Dr. Franklin, made several experiments that contri- buted to the advancement of electricity. These related chiefly to the discovery of the two elec- tricities, the conducting power of water at dif- ferent temperatures, and the power of strong charges of electricity when passed through brass wires. In the first of these experiments he had been anticipated by M. Du Fay; but he soon perceived that Du Fay did not consider the two electricities in the same light as that in which they were viewed by Franklin, viz. positive and negative.

31. In 1757 a work appeared on electricity, entitled Disputatio Physica Experimentalis de Electricitatibus, by Mr, Wilke, of Rostock, in Lower Saxony, in which the author gives some very interesting details of his researches respect- ing the electricity developed during the melting and cooling of electrical substances, and also that produced by the

friction of different bodies. This gentleman found that, when sulphur is melted in an earthen vessel placed upon con- ductors of electricity, it is strongly electrified when taken out after it is cold ; but that it shows no signs of electricity if cooled upon electrics. Melted sealing-wax, he found, acquired negative electricity when poured into glass vessels, but positive electricity when poured into sulphur. Mr. VVilke also confirmed the experiments of Dr. Franklin and Mr. Canton on electrical atmos- pheres, and illustrated the phenomena of elec- trical light.

32. M. Alpinus, . a member of the Imperial Academy at St. Petersburgh, seems to have been the first who gave to the world a mathematical demonstration of the theory of electricity. An exposition of his treatise was published by the abbe" Hauy; and an excellent paper, on the same subject, was drawn up for the Royal So- ciety by Mr. Cavendish, before he knew any thing of the theory of M. Alpinus. The merits of M. Alpinus are certainly great, but we con- sider Cavendish as having much higher claims as an electrician ; his experiments on the con- ducting power of water and wire; his very ingenious construction of the artificial torpedo ; and above all, his success in employing elec- tricity as a chemical agent, justify this opinion.

33. The labors of Dr. Priestley, as an elec- trician, are deservedly held in the highest es- teem; the doctor brought no common share of ingenuity and perseverance to bear upon the science ; and to him we are indebted for a con- siderable number of important improvements and interesting experiments in electricity, as con- nected with chemistry; for a most excellent treatise on the History of Electricity ; an Intro- el iction to Electricity; several valuable papers on the same subject, inserted in the Philosophical Transactions; and for numerous improvements in the construction of electrical apparatus.

34. The theories of Alpinus and Cavendish were much improved on by the ingenuity of JVl. Coulomb. By those philosophers the action of the electric matter, in producing attraction or re- pulsion, was considered merely as diminishing with the. distance; but by the experiments of Coulomb it was proved that the electrical force, like that of gravity, is in tha inverse ratio of th-= squares of the distance. The instrument with which Coulomb made his experiments was of his own construction : he gave it the name of the 'torsion balance,' from the manner of its action; a description of it will be given in the course of this essay. Coulomb also made numerous ex- periments for the purpose of ascertaining the laws by which the dissipation of the electrical matter in the air is regulated ; and also to ascer- tain the

distribution of it in an overcharged body. In prosecuting these enquiries he was certainly as successful as could possibly be expected, considering the extreme delicacy of his apparatus, and the effects which the variableness of the atmosphere produces on the strongest electrical experiments.

35. To M. De Saussure we are also indebted for some remarkably fine experiments, which seem to have been made with great care, on the electricity developed during the conversion of fluids into vapor. The fluids on which he ope- rated were distilled water, spirit of wine, and ether. The same philosopher likewise made some highly interesting experiments on atmo- spherical electricity, for the verification of which he made a journey to the Alps.

36. Most of those who have devoted their attention to the study of electricity, as a science, have distinguished themselves by the invention of some new instrument, the use of which has generally led to some important discovery.

This was peculiarly the case with Sig. Volta, professor of natural philosophy at Como in Italy. He invented the electrophorus, an ingeniously constructed instrument for collecting and retain- ing the electric matter; and another called a condenser, the use of which is to accumulate, and render visible, the smallest portions of elec- tricity, natural or artificial. The celebrity of Volta, however, rests chiefly on the important improvements which he made in that branch of electricity designated GALVANISM, under which they will be fully considered.

37. We have already noticed the scientific ex- periments of Coulomb, and must here observe that Dr. Robison, late professor of natural philosophy in the university of Edinburgh, is justly entitled to a share of the honor bestowed on Coulomb, since he had, so early as the year 1769, made numerous and remarkably successful at- tempts, with an admirable electrometer of his own invention, to determine the laws of electric action. ‘Biit the professor did not publish an account of his experiments at the time they were made, which certainly gives them the appearance of posteriority. The conclusion to which Dr. Robison’s experiments led him was, that the force of electrical attraction and repulsion is nearly in the inverse ratio of the square of the distance. ‘The specific result,’ says Dr. Brewster, ‘which he obtained was, that the mutual repulsion of

two spheres, electrified in the same manner, va- ried as •, d representing the distance of

their centres ‘

38. As electricity now began to be more gen- erally cultivated, it was to be expected that great improvements in the construction of apparatus would take place. This was the case ; and the brilliant success of Van Marum of Haarlem, in experiments which had failed in the hands of others, was obviously owing to the prodigious power of the large apparatus constructed by Mr. Cuthbertson of London, and placed in Tyler’s museum at Haarlem. Some notice of these ex- periments will be taken in the course of this article ; at present it may be sufficient to state, that, whatever other philosophical instrument makers may have conceived, Mr. Cuthbertson has brought forth the most useful, because the most powerful, electrical apparatus with which we are yet acquainted.

39. Mr. Cavallo is justly entitled to respect- ful notice in every historical sketch of the rise and progress of the electrical science, to which he made many important additions. This phi- losopher made numerous experiments on atmo- spherical electricity; and also added to our stock of electrical apparatus, by his invention of the most ingeniously constructed instruments for measuring, doubling, condensing, and multiply- ing electricity.

40. There are other philosophers who have li- berally contributed to the progressive improve- ment of this branch of natural philosophy, on whose merits we cannot here dwell; but this we the less regret as their improvements and discoveries must be still fresh in the memory of those who feel an interest in the science. Among these we would simply enumerate the in- genious and laborious Nicholson, the venerable M. Hauy, Mr. Brooks, Mr. Bennet, Mr. Henley, Mr. Morgan, La Place, and the truly ingenious annalist M. Poisson.

40.* Many other names of deserved celebrity might be here mentioned, as having successfully labored in raising electricity to its present emi- nent station among the sciences ; but we must bring this part of our article to a conclusion by acknowledging our obligations to them, and inti- mating that we shall occasionally avail ourselves of their labors. This remark is meant to apply particularly to the excellent treatise on electricity by th° late Mr. George John Singer, a popular lecturer on this science. Mr. Singer’s name stands high in the

scientific world ; and com- petent judges have pronounced his Elements of Electricity and Electro-Chemistry one of the best and most original works on the subject in the English language

PART I.

ON THE PHENOMENA OF EXCITED ELEC- TRICITY.

41. The more simple methods of exciting electrics enable us to perform several pleasing and instructive experiments, without the aid of costly and complex apparatus ; the principal of these we now proceed to describe.

If two silk ribands, the one black and the other white, about two or three feet in length, and perfectly dry, be applied to each other by their surfaces, and then drawn smartly a few times be- tween the finger and thumb, or over dry silk velvet or woollen cloth, they will be found to adhere to each other with considerable force; and when separated at one end will rush together again with rapidity. Each riband, when sepa- rated, will attract any light substances to which it is presented ; and, if the experiment be made in a dark room, a flash of light will occasionally attend the separation of the ribands.

42. Sticks of sealing-wax, resin, or sulphur, when rubbed with dry woollen cloth, or fur; and tubes or rods of glass, when rubbed with silk, exhibit similar powers; and, if of sufficient size, produce, when applied within a short distance .of the face or hand, a distinct and singular sensa- tion. These effects having been first produced by the friction of amber (electron) are called electrical phenomena; and the processes em- ployed for their production, the excitation of electricity.

43. Attraction is the phenomenon most con- stantly attendant on excitation : it is therefore considered as an indication of the presence and action of electricity, and is the basis of all its tests. Electricians formerly, says Mr. Singer, employed for such trials a light wooden or metal needle, supported by its centre on a point, or a thread or feather delicately suspended. To these the excited body was presented, and, if they were attracted by it, the attraction was attributed to elec- tricity, and the excited body was called an electric.

44. This suspended needle, and every other contrivance for the same purpose, they called an electroscope, when employed to indicate the ex- istence of electricity ; and an electrometer when considered as a measure of its force ; but the latter term appears fully sufficient, since every contrivance hitherto employed to ascertain the presence of

electrical phenomena is also calcu- lated to measure their power. The most useful electrometers, for common purposes, are con- structed by suspending two narrow slips of golo leaf from the cap of a glass cylinder. When these are unelectrified they will hang parallel and contiguous ; the presence of the smallest quan- tity of electricity will cause them to diverge to- wards the sides of the cylinder.

Small balls turned from the pith of elder, and suspended bty fine threads or silver wires,ˆare sometimes substituted for the gold strips. They are less easily affected, but they are more dura- ble. The pith balls, suspended by thread or wire, are also occasionally used without a glass cylinder. But these and other electrometers will be explained hereafter.

45. Electrical phenomena are thus charac- terised by the attraction and recession of light substances ; the consequent production of motion in them, and of sensation in living bodies, and by the evolution or production of light. There are various methods by which these effects may be produced, but the following are the most ob vious sources of their production. (I .) Friction. /2.) Change of form. (3.) Change of tempera- ture. (4.) Contact of dissimilar bodies.

46. Of the first kind, viz. friction, the instances are most numerous, and, as Mr. Singer remarks, under certain limitations, universal; they may indeed be obtained by rubbing any of an exten- sive list of resinous and silicious substances; and of dry, vegetable, animal, and mineral productions. The electricity thus excited, is most readily rendered visible by its effects on the gold leaf electrometer.

47. Examples of the second kind are also very numerous. If a small quantity of sulphur be melted and poured into a conical wine glass, it will contract a little, and become electrical in cooling. A silk thread with a small hook at the end of it, or a rod of glass should be inserted in the sulphur while in a fluid state, to serve as a handle for separating it from the glass when cold. On being separated from the glass, the sulphur will exhibit other signs of electricity ; if kept in the glass it will retain its electric virtue for years, and evince it very perceptibly on every attempt to separate the two substances.

48. Mr. Henly discovered that chocolate, fresh from the mill, becomes strongly electrical, as it cools in the tin pans. It soon loses this

property, but recovers it once or twice, by being melted in an iron ladle and poured into the tin pans. When the mass becomes dry, the electricity cannot be restored by melting, unless olive oil be mixed with it in the ladle; in which case it completely recovers its electric power. M. Chaptal observed the same circumstance during the congelation of glacial phosphoric acid. Calomel also, when it fixes by sublimation to the upper part of a glass vessel, has been found strongly electrical. The condensation of vapor, and the evaporation of fluids, though apparently opposite processes, are alike sources of electrical excitation.

49. Various crystallised gems, and a stone ailed the Tourmalin, become electrical by the mere application of heat; but no other sub- stances have yet unequivocally manifested the same property ; though the effects of friction are generally increased, if it is preceded by a mode- rate elevation of temperature.

5Q. The contact of dissimilar bodies is pro- bably in all cases the real primary cause of elec- trical excitement, but it is rarely employed alone, for electricity is known to us only by its effects, which are constantly the result of an artificial arrangement, and consequently may not immedi- ately succeed the primary cause of electric powers, similar in their separate action on the electrometer, and other indifferent matter ; but exerting a mutual influence on each other, destructive of their individual properties.

51. It was at first supposed that these pheno- mena were peculiar to the substances by which they were produced ; hence the power excited by the friction of glass was termed vitreous electri- city; and that by the friction of sealing-wax, resinous electricity. It has, however, long since been proved that both powers are produced in every case of electrical excitation; and, because their mutual counteraction of effect resembles that of an affirmative and negative power, they have been styled positive and negative electricity.

52. The determination of these two states of electricity in different excited bodies, continues

Mr. Singer, is of importance to the practical electrician, and may be thus effected : — Sealing- wax when rubbed on woollen cloth is negative^' electrified. Glass, when rubbed with silk i& positively electrified. Let an electrometer be made to diverge by its being approached by an excited stick of sealing-wax : while in this state, approach it with any excited body, the electri- city of which is to be determined. If the diver- gence of the electrometer increase, the

presented body is negative ; if it be diminished, the pre- sented body is positive. In other words, all those substances that lessen the divergence occa- sioned by excited wax, are positive ; and such as increase it, negative : whilst those which lessen the divergence produced by excited glass, are negative; and such as increase it positive. Examining, by this test, the effects produced in some of the instances of excitation already con- sidered, we find the truth of the preceding state- ments, and the relation of the different electrical states to the processes by which they are pro- duced, bect>me more intelligible. Care ought to be taken to destroy the divergence of the elec- trometer after every experiment of this nature ; this is best effected by touching its cap with one end of a piece of brass wire.

53. As an illustration of the doctrine here advanced let the following simple and easily per- formed experiments be made.

(1.) Roll up a warm and dry piece of flannel, so that it may be held by one extremity, while a stick of sealing-wax is rubbed with the other. After a slight friction present the flannel to an electrometer, which will instantly diverge; while this divergence continues, bring the stick of sealing-wax near the cap, and the leaves of the electrometer will quickly collapse. Both these substances, it is obvious, are electrified by mutual friction, but their electricities are, opposite \ that of the wax being negative, and that of the flannel positive.

(2.) The electricities thus produced are equal to each other: for if the friction be repeated, and the two substances be both presented to the electrometer at the same time, no signs of elec- tricity appear: the opposite electricities, when applied together, producing a reciprocal' counter- action of effect.

(3.) If a black and a white silk riband be ex- cited in contact, in the manner already described, the black riband will be found to be negatively, and the white one positively electrified.

(4.) Take the sulphur cone described at 47, apply it and the glass separately to the elec- trometer ; the cone will be found to be negatively and the glass positively electrified.

54. From the above experiments it appears, that in all cases of excitation positive and nega- tive electricity are produced at the same time, and may be observed by the use of proper means. But it also appears that by friction with the same substance, different bodies are variously affected ; for glass rubbed with silk evinces positive elec- tricity : but wax rubbed with silk is rendered negative. Again, polished

glass, when rubbed • with silk, skin-wool, or metal, becomes positive ; but if it be excited by friction against the back of a living cat, it appears negative. Wool, silk,

or fur, rubbed against sealing-wax, are rendered positive ; but gold, silver, or tin, are by the same .frocess rendered negative. 55. Electricians have drawn up tables for

showing at one view what kind of electricity will be produced by rubbing various electrics with different substances; the following Mi-Singer gives us on the authority of Mr. Cavallo.'

The back of a cat Smooth Glass

Rough Glass Tourmalin

Hare's skin

White silk

Black silk

Sealing wax. Baked wood

Is rendered Positive Positive Positive

Negative

Positive

Negative

Positive

Negative Positive Negative Positive

Negative Positive Negative

Positive

Negative

By friction with

Every substance with which it has been hitherto tried.

Every substance hitherto tried, except the back of a cat.

Dry oiled silk, sulphur, metals.

4 Woollen cloth, quills, wood, paper, sealing-wax, white- (wax, the human hand.

Amber, blast of air from bellows.

Diamonds, the human hand.

C Metals, silk, loadstone, leather, hand, paper, baked t wood.

Other finer furs.

Black silk, metals, black cloth.

Paper, hand, hair, weasel's skin.

Sealing-wax.

I Hare's, weasel's, and ferret's skin, loadstone, brass, silver, (iron, hand, white silk.

Some metals.

C Hare's, weasel's, and ferret's skin, hand, leather, woollen- £ cloth, paper, some metals.

Silk.

Flannel.

In a note appended to the preceding table Mr. Singer says, Mr. Cavallo had inserted metals, which appeared to imply that the friction of all metals electrified sealing-wax positively; this I find is not the case : iron, steel, plumbago, lead, and bismuth, render sealing-wax negative, and all the other metals I have tried leave it positive. I have therefore made a slight alteration in the table. The least difference in the conditions of such experiments will occasion singular va- rieties of result: with the same rubber (an iron chain), positive electricity may be excited in one stick of sealing-wax, and negative in another, if the former have its surface scratched, and the latter be perfectly smooth. Many repetitions of each experiment are therefore essential to an ac- curate conclusion.

56. The result of experiments of the kind just described, Mr. Singer found to be much influenced by the state of the bodies em- ployed, and the manner in which the friction was applied to them. In general, he remarks, strong electric signs can only be produced by the friction of dissimilar bodies; but similar substances, when rubbed together so that the motion they individually experience is unequal, are sometimes electrified; and, in such cases, the substance of which the friction is lim'ted to the least extent of surface, is usually negative. This he farther remarks is the case with the strings of a violin, over a limited ,'part of which the bow passes in its whole length, and the hairs of the bow become positive.

57. From these facts he draws the following conclusions, viz. that positive and negative elec- tricity are concomitant phenomena, and that in all cases of electrical excitement, they are both produced, though one only may occasionally appear ; and that these phenomena are not pe- culiar to any distinct class of bodies, but may be produced alternately in various substances, by changing the materials or method by which friction is communicated to them.

THE COMMUNICATION OF ELECTRICITY.

58. Mr. Cavallo, speaking of communicated electricity, remarks, that under such a title falls almost all that we know of the subject : the passage of this virtue, says he, from one body to another is what causes its light; by being communicated to other bodies we see its attrac- tion; by its quick transition it melts metals, destroys animal and vegetable life ; and, in short, it is by this communication that the science is known and cultivated.

The following observations and experiments on this particular part of the subject we give from Mr. Singer, with a few necessary exceptions, preferring them to any thing we have yet seen for their appropriateness and concise- ness.

59. From the few simple experiments which we have already described the reader must be aware that electricity can be communicated or conveyed from one body to another. But- the faculty of electrical transmission is very different in different bodies ; some convey it with great rapidity; others more slowly; and there are some that appear absolutely to arrest its pro- gress. Examples of this fact are apparent in the most simple experiments. The divergence of an electrified electrometer may be destroyed, weakened, or maintained, by touching its cap with different bodies ; now, as the divergence of the electrometer is caused by its electricity, such effects can only be

produced by the relative power of the touching bodies to deprive it thereof; for so long as the electricity remains the diver- gence will continue unaltered.

60. This may be shown most satisfactorily by the two following experiments. (1.) Touch the cap of the electrified electrometer with a stick of dry glass, sulphur, or sealing-wax ; the di- vergence of its leaves will continue ; this shows therefore that these substances do not transmit electricity. (2.) Touch the cap of the electrified electrometer with a piece of wood, a rod of

any metal, a green leaf, or with the point of the finger ; its divergence immediately ceases. Such bodies therefore permit the transmission of elec- tricity.

61. By experiments of this kind it is found, that there is a gradation of effect from one class of bodies to the other. Those which transmit electricity with facility are called conductors; those whose transmitting powers are inferior, imperfect conductors; and such as have no power of transmission, non-conductors: but in general the various bodies in nature are divided into two classes only ; the remote extremes of each forming the intermediate class.

62. In the following enumeration of the prin- cipal conductors, and non-conductors, the sub- stances are placed nearly in the order of their perfection; but the determination of this cir- cumstance has not hitherto been accomplished with much precision.

CONDUCTORS. All the known metals. Well-burnt charcoal. Plumbago. Concentrated acids. Powdered charcoal. Diluted acids, and saline fluids. Metallic ores. Animal fluids. Sea water. Spring water. River water.

Ice above 13° of Fahrenheit. Snow.

Living vegetables. Living animals. Flame. Smoke. Steam.

Most saline substances. Rarefied air. Vapor of alcohol. Vapor of ether. Most of the earths. Most stones.

To the above Dr. Brewster adds powdered glass and powdered sulphur, which, he says, have been found to be conductors by the experiments of Van Swinden.

63. Many of the above mentioned substances fail to conduct electricity when they are made perfectly dry; hence it is concluded that their conducting power arises from the water they con- tain. Indeed this faculty does not permanently exist in any of the bodies enumerated, but varies and disappears with their modifications of tem- perature, 8cc. Thus hot water is a much better conductor than cold water is; the same is the case with charcoal and other substances.

NON -CONDUCTORS.

64. These are also denominated electrics, as before remarked, and occasionally insulators; but the latter term will only apply to the most perfect of them.

Shell-lac, amber, resins.

Sulphur, wax, jet.

Class and all vitrifications, talc

The diamond and all transparent gems.

Raw silk, bleached silk, dyed silk.

Wool, hair, feathers.

Dry paper, parchment, and leather.

Air, and all dry gases.

Baked wood, dry vegetable substances.

Porcelain, dry marble.

Some silicious and argillaceous stones.

Camphor, elastic gum, lycopodium.

Native carbonate of barytes.

Dry chalk, lime, phosphorus.

Ice at 1 3° of Fahrenheit.

Many transparent crystals when perfectly dry,

Ashes of animal bodies.

Ashes of vegetable bodies.

Oils, the heaviest are the best.

Dry metallic oxides.

65. The most perfect non-conductors, conti- nues Mr. Singer, become conductors by the accession of moisture; hence the necessity of preserving them clean and dry during electrical experiments. Resinous substances, raw silk, and Muscovy talc, are least liable to attract moisture, and are therefore most useful where perfect non- conductors are required.

66.. Glass [becomes moist on its surface only, and this moisture may be checked by covering it with sealing-wax or good varnish. Glass con- sequently enters most extensively into the struc- ture of an electrical apparatus ; its strength, and the facility with which it may be procured of any form, fitting it most admirably for that purpose.

67. Many substances in the preceding list lose their non-conducting power, and become con- ductors, when intensely heated. Such is the case with red hot glass, melted resin, wax, &c. ; but the most intensely heated air, if unaccompanied by flame, is not a conductor. Many fibrous substances attract water so readily, that it is abso- lutely necessary to dry and warm them before their non-conducting property appears; this is particularly the case with paper, flannel, parch- ment, leather, &c. The influence of heat on this property is, indeed, very remarkable. It is well exemplified in the following instance : Wood, in its natural state, is a conductor; if baked, its moisture is expelled, but its organisation is not altered : it is then a non-conductor. By expo- sure to a greater heat its volatile elements are dis- sipated, and its indestructible base (charcoal replete with alkali) only remains ; this is a con- ductor ; but if exposed again to heat, with access of air, it suffers combustion, and is converted into ashes and gases, which are non-conductors.

68. There does not appear any definite relation .between the chemical characters of bodies and their conducting powers; for the best conduc- tors (metals), and the best non-conductors (resins, sulphur, &c.), are alike inflammable sub- stances. The products of combustion, too, arc dissimilar in this respect : acids and alkalis conduct electricity, but the metallic oxides do not. Neither does it appear that specific gra- vity, hardness, tenacity, or crystalline arrange- ment of particles, are connected with the pownr of electrical transmision ; for similar characters of this kind are possessed by bodies of both classes. Thus

platina, the densest of bodies, i.f

a conductor; but so also are charcoal, and rare- fied air.

periments here detailed with brown, as well •« writing paper. This idea, however, does not

69. Whatever be the cause of non-conducting seem to have occurred to writers on ‘the sut power, it is evident that without its existence as *•” «°™- ™ — *1- «”.._ ^^JCL

a property of air, and other substances, electrical phenomena would be unknown ; for, if the faculty of electrical transmission existed universally, the cause of every effect of this kind would be dissi- pated and lost at the moment of its production. But, by the property of non-conductors, any ex- cited electricity which they surround is preserved ; and it is then said to be insulated. A support of glass, sealing-wax, silk, or any non-conductor, is, for the same reason, called an insulating sup- port, or an insulator ; and a piece of metal or other conductor, so supported, is named an insu- lated conductor.

70. The use of insulators and conductors in practical electricity may be exemplified by very simple experiments, which, says Mr. Singer, will form no improper introduction to the consider- ation of more important apparatus. He the following : —

(1.) Hold a sheet of writing paper before a fire till it be perfectly dry and warm ; lay it flat upon a table and rub the upper surface briskly with Indian rubber. The paper will adhere to the table, and if lifted up by one corner and pre-^ sented quickly to any flat conducting surface, as the wainscot, &c., will be attracted by and adhere to it. This adherence is occasioned by the at- traction of electricity excited on the paper, which :n its dry state is an insulator or non-conductor ; the necessity of which circumstance to the? suc- cess of the experiment is rendered evident by the paper falling down as soon as it has attracted rroisture enough to destroy its insulating pro- perty, and is further apparent from the impossi- bility of producing the same results by the friction of paper in its ordinary state of dry- ness.

(2.) Repeat the excitation of the paper in a dark room; when the paper is lifted from the table by its corner, present the knuckle of the other hand successively to various parts of its surface, a series of faint

divergent flashes of light will ensue. This light is occasioned by the transmission of the electricity excited on the paper to the hand ; and it occurs at every con- tact, because the non-conducting power of the paper prevents its transmission from one part of the surface to another, the effect existing over the whole portion that has been subjected to fric- tion.

(3.) Excite the dry sheet of paper as before, and place it upon an insulating stand, a piece of apparatus to be described hereafter, present the knuckle to the edge or under side of the metal plate, and a bright spark will appear; but a second approach will produce either a very slight effect, or none that is perceptible ; for the metal is a conductor, and it transmits the whole effect of the excited electric at once. Hence insulated conductors are employed in the electrical ap- paratus to receive or collect the diffused elec- tricity of excited bodies, and to apply it to the purposes of experiment.

till very recently. When very coarse brown paper is used, the effects produced are much stronger; nor is there in this case any necessity for the application of Indian rubber ; for if a piece of coarse brown paper, of about twelve inches long and six inches broad, be made very dry and warm, and then drawn gently three or four times between the knee and the lower part of the arm, both being covered with woollen, it will be found to be highly electrical, and will with considerable force adhere to the wainscott- ing of a room. If any conducting substance be applied to it immediately after the friction, such as the knuckle of the folded hand, or a brass ball, a strong spark will instantly dart from the paper to it, attended by the usual snapping sound. So powerfulindeed is excited brown paper, when carefully managed, that a small jar may be ives charged with it; and it has been recently pro- posed as a covering for a circular board to be used instead of a plate of glass in constructing a cheap kind of electrical machine.

PART II. ON ELECTRICAL APPARATUS.

72. Numerous, extremely beautiful, and de- licate experiments may be made in electricity with but a small quantity of apparatus, and that of a. simple form, and at a trifling expense. Such an apparatus consists chiefly of a few glass tubes, of about an inch in diameter and two or three feet long; one or two very large sticks of sealing-wax ; a few pieces of silk, old silk hand- kerchiefs answer extremely well ; a few pieces of new flannel ; some wires and balls of different sizes ; and half a dozen small balls made of the pith of elder.

But, when it is required to exhibit the more striking and important of the electrical phe- nomena, we must have recourse to a much more powerful, complicated, and consequently ex- pensive apparatus.

73. The principal article, the very fountain, so to speak, of all electrical apparatus, is what is commonly denominated the electrical machine ; of the structure,of this instrument we have various accounts in different works on electricity, but as it is not our intention to swell our pages with a repetition of what others have said before us on what is now become obsolete, we shall not put our readers to the trouble of travelling over an uninteresting description of apparatus which has nothing to recommend it but its antiquity.

74. Of the Electrical Machine, there are now various kinds in use ; these, however, may be classed under two heads, the cylindrical and the plate machine. But before entering on a par- ticular description of these we feel strongly in- clined to lay before our readers the following remarks of Mr. Singer on electrical apparatus in general.

75. The structure of an electrical apparatus, says this distinguished electrician, consists in the

71. It is rather remarkable that the ingenuity judicious arrangement of insulators and conduc- of Mr. Singer did not lead him to try the ex- tors, so that the former shall prevent the dissipa-

tion of the effects the latter are employed to col- lect or transmit ; thus the cap and leaves of the gold leaf electrometer form a conductor intended as a test of electrical action ; but to fit this con- ductor for its purpose it is insulated, being sup- ported on the glass cylinder by which the leaves are enclosed.

76. When electricity is excited by friction, the quantity of effect is, within certain limits, pro- portioned to the extent of the nibbed surface ; hence it appears that every part of that surface is concerned in the production of the general effect. Now, that this may be the case, it is essential that every part of such surface be insulating ; for friction is a progressive process, a succession of contacts ; and the effect produced by it in the first instant would otherwise be destroyed by conducting power, before a second operation could contribute to its increase. For this reason electricity is most usually excited by the friction of a conductor of limited size, against the exten- sive surface of a non-conductor.

77. An apparatus, then, properly arranged for the excitation of electricity, is called an elec- trical machine. To excite positive electricity, a glass tube, of about an inch in diameter and two feet long, is generally used ; the excitation is produced by rubbing it lengthwise by a piece of dry oiled silk, held in the hand which is made to grasp the tube. In this way both the silk and the tube are electrified ; but the electricity of the silk is destroyed by the conducting power of the hand, and that of the tube only appears. In a similar way negative electricity is procured by rubbing a large stick of sealing-wax with dry flannel or fur ; the electrical power of the sealing-wax being all that results.

78. Thus, with the most simple machinery, two processes are employed to procure the op- posite electricities, although they are at the same time both excited in each ; but, to obtain them both, it would be necessary to insulate the silk, or flannel, used as rubbers, either by employing them in a very dry state, rolled up, so as to pro- duce the friction with one extremity, at a dis- tance from the hand, or by affixing them to a glass or other non-conducting support; but neither of these methods would be convenient where many experiments are to be made. This difficulty does not occur when large surfaces of glass are employed instead of tubes as sources of exc Nation; for these may be made circular, and proper friction be communicated to them from a fixed cushion, placed on an elastic support, against which they are made to revolve.

79. We shall here give a brief description of the two forms of the electrical machine which are most generally approved of, and shall begin w;th the cylindrical machine. In point of power, the very best kind of cylindrical electrical ma- chine with which we are acquainted is the im- proved one, as constructed by the late Mr. Geo. Adams, . of Londpn, an eminent lecturer, and author of several valuable philosophical works. This machine is represented in plate I, fig. 1, ELECTRICITY. The parts of the machine, which fall more immediately under our attention are, v 1.) The electric, or the glass cylinder which is to I* excited. (2.) The mechanical contrivances by *hich it is put in motion. (3.) Try cushion uncl

its appendages. (4.) The conductor or conductors. The glass cylinder of the machine is put in mo- tion by a simple winch. This is less tiable to be out of order than those that are turned with a multiplying wheel, and also enables us to ex- cite the machine more powerfully. The cylinder, F G H I, is supported by two strong perpendi- cular pieces, D E. The axis of one cap of the cylinder moves in a small hole at the upper part of one of the supports. The opposite axis passes through

the upper part of the other support. To this axis the winch or handle is fitted. The cushion is supported and insulated by a glass pillar; the lower part of this pillar is fitted into a wooden socket, to which a regu- lating screw is adapted, to increase or diminish the pressure of the cushion against the cylinder. A piece of silk comes from the under edge of the cushion, and lies on the cylinder, passing between it and the cushion, and proceeding till it nearly meets the collecting points of the conductor. The more strongly this silk is made to adhere to the cylinder, the stronger is the degree of exci- tation. Before the cylinder, or opposite to the cushion, is a metallic tube, Y Z, supported by a glass pillar LM. This is called the conductor, arid sometimes the prime conductor. For the more conveniently trying experiments with this machine, and exhib ting the different states of the cushion and conductor, there are two wires to be fixed occasionally, the one to the con- ductor, the other to the cushion ; on the upper part of these are balls furnished with sliding wires, that they may be set apart from each other at different distances.

80. It is matter of surprise that this simple and very powerful electrical machine should have totally escaped the notice of some modern writers on the subject, who have taken much pains to describe others of far inferior import- ance. This remark is equally applicable to another form of the cylindrical machine which is but little known, but which has many good qualities to recommend it to the attention of those who prefer the cylinder to the plate ma- chine. The principle on which this machine, as well as that just described, is constructed, is that adopted by Mr. Nairne ; but whatever of im- provement ;t possesses is due, we believe, to Mr. Bywater, author of an excellent little work on electricity. The following is Mr. Bywater's own description of this machine : A A A A, fig. 2, is the board on which the supporters and pillars are erected, and by which the machine is made fast with cramps to a table. B B B B are two wooden pillars or supporters, the lower ends of which are morticed into the board A A A A, and in the upper ends of which the axis of the cylin- der C C C C turns. D D is the winch by which the cylinder is turned on its axis. EE is a piece of wood, a part of which is slided into a groove under the board A A A A, and made fast by the thumb-screw /'. GG is a glass p. liar, which is fixed to the wood EE, and supports what is called the negative conductor and rubber HH. II is another piece of wood, part of which is slided into a similar groove under the board AAAA, and is made fast by the thumb-screw ;'. K K is a glass pillar fixed into the wood 1 1, and supports the prime conductor LL ; to this con-

i'/, r-' /. rm.

ductor a number of metallic points are attached, to collect the electric fluid which flows on the surface of the cylinder. M M is a rod of brass inserted in the prime conductor, having a joint t\y which it may be raised or lowered, to suit the height of the apparatus ; this rod is a most use- ful appendage to the prime conductor. To the upper part of the rubber a piece of black silk is attached, which proceeds from thence over the top of the cylinder, to within about half an inch of the points of the wires inserted in the' prime conductor; by which means the fluid that is brought into action by the attrition of the cylin- der and rubber is prevented from being dissi- pated in the air, and carried round with the cylinder to the prime conductor. The action of the silk on the cylinder tends very much to in- creas'e the excitation of the machine, as may be seen by removing the cushion a little back from the cylinder, and leaving the silk to act upon it alone, in which case the excitation will often be found to be scarcely less than when the rubber is also in contact with the cylinder.

81. The plate machine, like the cylindrical, has had a few varieties introduced into its con- struction at different times. The largest speci- men of this instrument is that which was con- structed by Mr. Cuthbertson, for Tyler's museum, at Haarlem. The following will convey to the reader's mind some idea of the powers of this immense machine ; and its construction will be readily understood by the description which we shall add of the most improved form of the in- strument. It consists of two circular plates of glass, each sixty-five inches in diameter, and made to turn upon the same horizontal axis, at the distance of seven inches and a half from one another. These plates are excited by eight rubbers, each fifteen inches and a half long. Both sides of the plates are covered with a re- sinous substance to the distance of sixteen inches and a half from the centre, both to render the plates stronger, and likewise to prevent any of the electricity from being carried off by the axis. The prime conductor consists of several pieces and is supported by three glass pillars, fifty-seven inches in length. The plates are made of French glass, as this is found to pro- duce the greatest quantity of the electricity next to English flint, which could not be produced of sufficient size. The conductor is divided into branches which enter between the plates, but collect the fluid by points only from one side of the plate. The force of two men was required to work this machine ; but when it is required to be put in action for any length of time, four are necessary. At its first construction nine bat- teries were applied to it, each having fifteen

jars, every one of which contained about a foot square of coated glass ; so that the grand battery, formed by the combination of all these, contained 135 square feet. The effects of this machine are astonishing : but Dr. Van Marum, who princi- pally made experiments with it, imagining that it was still capable of charging an additional quantity of coated glass, afterwards added to it ninety jars of the same size with the former ; so that it now contains a coated surface of 225 feet, and the effects are found to be propor- tionable.

82. The principal objection to the plate ma- chine has hitherto been the difficulty of insulat- ing for the purpose of producing negative electricity. This objection is now removed ; and, by using the machine as constructed by Mr. Cuthbertson, both kinds of electricity are produced with ease. The following description of this beautiful and powerful instrument is given by Dr. Brewster in the Appendix to his new edi- tion ot Ferguson's Essays. Fig. 3 is a repre- sentation of this machine : A B is a circular disc of plate glass, supported upon an horizontal axis, the ends of which rest upon two upright pillars E F. By turning the winch or handle, \V, a rota- tory motion is given to the plate, which is excited by two rubbers X, Y, fixed at the opposite ends of a diameter of the circle. Each rubber consists of two cushions, which embrace the outer mar- gin of the glass plate, as shown in the figure. The conductor, which is made of brass, is shown at C D, and it is attached to the upright pillar E by the glass rod It. To the right hand of C, and above B, are seen the points for the receiving the electricity from the machine. From each rubber there proceeds to within a little of the points, a flap or double piece of oiled silk, which prevents the dissipation of the electricity.

As it is difficult to insulate the rubbers of the plate glass machine, without giving it an unseemly appearance, Mr. Cuthbertson introduced the practice of insulating the whole machine by the glass supports G, H, I, K, so that negative elec- tricity can thus be obtained as easily as positive.

83. The cylindrical machine, however, being at present in more common use than the plate machine, it is hoped the following remarks may- be of use to those who possess such an instru- ment, and particularly to such as may be dis- posed to provide themselves with it for the sake of economy. A cylindrical electrical machine ought never to be less than ten inches in diame- ter ; there are cylinders of six, seven, eight, and nine inches diameter, often neatly mounted, and sold by the philosophical instrument makers, but they are of no manner of use for the purpose of experiment, and serve only as a kind of philoso- phical toy, for the amusement of children, and that too on a very

narrow scale. To construct such machines, therefore, is an absolute waste of the materials. With a cylinder of ten inches, pro- perly managed, a tolerable exhibition may be made, but the most convenient size is from twelve to sixteen, the length of the cylinder be- ing in proportion.

84. The most powerful excitation of the ma- chine is produced as follows :— Let the machine be placed within the influence of a good fire, but not so near as to injure any of its parts by the action of the heat. With a flat round pointed knife spread a. little amalgam evenly along the cushion, and return it to its place : turn the cy- linder a few times round; then take off the cushion, and observe carefully those parts on its surface that have not been touched by the cylin- der while revolving; on these parts put a little more amalgam, and repeat the process of turning the cylinder, and supplying the defective part with amalgam, till every point of that part oi surface of 'the cushion which presses on the cy- linder appears to be properly supplied with

amalgam. Take now a piece of leather about five or six inches square, and spread over one side of it a quantity of amalgam ; throw back the silk flap, and, turning the machine gently round, apply the amalgam side of the leather to the cylinder for the space of two minutes or more, as circumstances may require, during which time the excitation will be observed to increase ra- pidly. The cylinder must next be wiped per- fectly clean with an old silk handkerchief, and afterwards with a soft dry linen cloth. Let the cushion be again removed ; and the amalgam which appears above and below the line of con- tact with the cylinder carefully scraped off, the silk flap wiped with a linen cloth, and the whole returned to its place and made fast. If now the cylinder be turned slowly round, streams of the electric fluid will be seen rushing from the silk flap round the lower part of the cylinder, at- tended with a hissing and snapping noise, while large brushes of the same, of several inches in length, may be observed flying off from the lower edge of the silk into the surrounding air.. The machine is now fit for use, and may be fastened to thq table, after which the whole of its parts are to be well wiped with a warm and dry linen cloth to free them from dust.

85. The operator, however, must not expect this high and rich state of excitation to be of long duration. The cylinder will soon cool; dust will be attracted by the action of the machine ; and the moisture produced in the air of the room by the breath of his audience, will, by their united effects, render all his efforts to produce a copious supply of

electricity entirely fruitless.

86. To remedy this defect, which gentlemen who deliver public lectures on electricity have often found to be a grievous one, provide a box of thin plate iron, ten or twelve inches long, four inches wide, and one inch and a half in depth, with a lid to fit very easily over it. In this box a piece of bar iron of about six inches in length, three in breadth, and half an inch in thickness, after being heated in the fire to a dull red heat is to be placed, the lid of the box put on, and the whole, on a suitable iron stand, placed under the cylinder, on the board of the machine in a longi- tudinal direction. The radiation of heat from the iron will effectually preserve the equality of the temperature of the surrounding air for a consi- derable length of time, and indeed for any length of time required, since, by employing two bars of iron, the one may be kept in the fire while the other is in the box, and thus no other interrup- tion in the course of the experiments will be ne- cessary beyond what is occasioned by the chang- ing of the irons. By this means the machine may be made to act in full vigor under the most dis- advantageous circumstances.

87. Dr. Brewster mentions a method used by Mr. Ronalds of aiding the excitation of the ma- chine, which he represents as being attended with the greatest advantages. He thus describes it : In the cylinder machine, the rubber is placed in front of a half cylinder of copper, which commu- nicates with a copper pipe, that serves for the support of the rubber. A very small spirit-lamp, whose burner consists of only one thread of cot- ton, is placed immediately beneath the mouth or

lower end of the copper pipe, so as to keep the rubber and the parts adjacent to it always hot and dry. Besides this contrivance, Mr. Ronalds places his prime conductor upon a glass support, so that a similar spirit-lamp may be placed below it in order to convey heat to its interior.

Mr. Ronalds remarks, that a cylinder machine thus constructed, of half the dimensions of one made upon the usual plan, is highly and perma- nently effective. The same principle may easily be applied to plate machines. The heat is sup- posed to assist the excitement by promoting the oxidation of the amalgam.

88. This method may certainly, in some de- gree, prove beneficial ; but it will be found to be in many respects inferior to the simple method above mentioned. In the first place, the radia- tion of heat will be neither so general nor so great ; in the second place, the flame-of a lamp or a candle absorbs the fluid ; and in the third place, the light,

which must necessarily be emitted from two spirit-lamps, would prove highly detrimental to the effect of those experiments which require to be performed in darkness. To which may be added, the expense of the lamps, and the spirit to be consumed.

89. Where a plate machine of large dimen- sions is used, this additional article will not be required ; for the great thickness of the glass renders it capable of retaining the heat much longer than can be done by a thin cylinder ; for which reason it must be obvious that, if cylin- ders were made much stronger than they gene- rally are, their action would be effectual for a greater length of time than it is. Opinion, how- ever, runs in favor of thin cylinders, but the consistency of such opinion remains to be shown. It is well known that the old globular machines, which were made of thick glass, when once put in a state of powerful excitation, retain that state much longer than the modern thin cylinder will do under the same circumstances.

90. The following directions for preparing the amalgam for electrical machines are given by Mr. Singer, in his treatise, already mentioned. Melt in an iron ladle two ounces of zinc with one ounce of tin, and, while this mixture is in a fluid state, pour into it six ounces of mercury ; let the whole be then put into an iron or wooden box, and agitated until it be quite cold. It must then be reduced to fine powder in a mortar, and mixed with sweet hogs' lard to the consistence of thick paste. This part of the process need not be performed till the amalgam is wanted for use. This amalgam, he remarks, answers ex- ceedingly well, but, he afterwards adds, I have since made it with a still less proportion of mercury with equal effect. The proportions may be two ounces of tin, four ounces of zinc and seven ounces of mercury. The mercury must be heated to about 300° Fahrenheit, before the fused metals are added to it. When thy amalgam has been agitated until cool, and finely powdered, it is to be mixed with hogs '-lard be trituration in a mortar; and should it at any time become hard, more lard must be added and the trituration be repeated.

91. The application of the electrical apparatus to the purpose of experiment will afford the best

illustration of its subordinate parts; and, in adopting this plan, we shall be enabled to give such an arranged view of the chief properties of 'he electrical fluid as may be of service in aiding the inexperienced electrician in making an or- derly display, instead of a series of experiments which have no regular connexion, and in which

sometimes one property, and sometimes another, is illustrated. We shall commence with some observations on the action of the machine itself, and for these we must acknowledge our obliga- tion to Mr. Singer.*

92. The machine being prepared according to the directions already given, and the cushion pressed moderately against the cylinder by the action of its adjusting screw, it may be put in motion, and the following phenomena will be observed. 1. Distinct lines of light, accompa- nied by lateral scintillations, pass from one con- ductor to the other, across that part of the cy- linder which is not covered by the silk flap ; these are called electrical sparks. 2. Bright sparks pass between either of the conductors and the knuckle, or any smooth uninsulated sub- stance presented to them at a moderate distance ; and if received on the knuckle, or any part of the body, produce a painful sensation. 3. These effects are more distinct, and the sparks from each conductor stronger, when they are taken from both at the same time. 4. The power of the spark from either the positive or negative conductor, singly, will reach its maximum when the opposite conductor is uninsulated, by sus- pending a chain or wire from it to the ground. 5. If the two conductors are connected by a wire, or other conducting substance, the most vigorous friction of the cylinder will not elec- trify either. 6. If, instead of a wire, the con- ductors are connected by a silk string on which a number of shot or metal beads are strung, at the distance of a twentieth of an inch from each other, a ‘series of bright sparks will pass between the beads as long as the turning of the machine is continued. It must be remembered, that the conductor to which the cushion is fixed shows the electrical phenomena of the cushion, and the opposite conductor, that of the electri- city of the glass cylinder ; hence the observation of their phenomena is properly an observation of the circumstances that occur in all cases when electricity is excited by friction.

93. On these very beautiful phenomena, Mr. Singer makes the following judicious obser- vations. • The first and second phenomena seem to show that the cause of electricity is corporeal ; for sensation is affected by it, and a mechanical impulse experienced, which it is difficult to as- scribe to any other than a material cause. The third phenomenon proves that there is a mutual action between the electricities excited in the opposite conductors ; since their effects are more powerful when directed at the same time to one conducting body. The fourth phenomenon shows that the same relation which is observed between the opposite electrified conductors exists also between either of them and the ground, but in a different degree. By the fifth phenomenon it is seen that positive and negative electricity,

if excited to the same extent, and united by con-

ducting matter, exhibit no electrical phenomena. The sixth phenomenon is observed to show that when the conductors are connected, the machine continues to excite electricity, but is prevented from displaying it by their mutual contact.

94. From these appearances the following ex- planation of electrical phenomena may be de- duced : — 1st. The cause of electrical phenomena is material, and possesses most of the properties of an elastic fluid. 2. This electric fluid attracts and is attracted by all other matter, and, in con- sequence of such attraction, exists in all known substances. 3d. The attraction of different bodies for the electric fluid is various, so also is that of the same body under different circum- stances, consequently the quantity of electricity naturally existing in different substances may be unequal ; and the same body may attract more or less than if alone, when combined with other matter : but its original attraction will be restored by destroying the artificial combination. 4th. From some peculiarity in the nature of the electric fluid, its attraction for common mat- ter is more influenced by figure than by sub- stance ; and consequently is stronger in extensive than in limited surfaces. 5th. From this pecu- liarity, it moves with great facility over the surface, or through the substance of some bodies, and is arrested in its progress by others. 6th. When the attraction of any substance for elec- tricity is equal to the electric fluid it contains, that substance will evince no electrical signs; but these are produced when there is either more or less electricity than is adequate to the saturation of the existing attraction : if there be more, the signs will be positive; if less, they will be negative.

95. Electrical excitation then, may be thus effected : — The bodies employed have each a certain quantity of the electric fluid proportioned to their natural attraction for it ; this they retain, and appear unelectrified so long as they remain in their natural state. And, if two such bodies are brought in contact, their natural attractions will be altered, one of them attracting more than in its separate state, and the other less ; the electric fluid thus diffusses itself amongst them in quantities proportioned to their relative attrac- tions, and hence they appear unelectrified. But if they are suddenly separated, the new distribu- tion of the electric fluid remains, whilst the ori- ginal attractions are restored, and as these are not equal to each other the bodies will appear elec- trical ; that of which the natural attraction was increased by contact, having received an addition to its quantity of electric fluid, will be positively electrified ; and the other will be negative.

96. The motion of light bodies produced by elec- tricity, is usually called attraction and repulsion, and is occasioned by the mutual attraction existing between the electric fluid and common matter. In practical electricity there are numerous me- thods of illustrating this motion ; the following are some of the principal.

(1). Fix at the end of the prime conductor a knobbed rod, and hang on it two small pith- balls, suspended by threads of equal length. The

balls will now touch one another, the threads hanging perpendicularly, and parallel to each other. But if the cylinder of the machine be turned, by turning the winch, then the pith balls will repel one another, more or less according as the electricity is more or less powerful. If the electrometer be hung to a prime conductor ne- gatively electrified, i. e. connected with the insu- lated rubber of the machine, the balls will also re- pel each other. If, in this state of repulsion, the prime conductor is touched with some conduct- ing substance not insulated, the pith balls will immediately come together. But if, instead of the conducting substance, the prime conductor is touched with an electric, as a stick of sealing wax, a piece of glass, &c., then the pith balls will continue to repel each other ; because the elec- tric fluid cannot be conducted through that electric.

(2.) Take a small downy feather or a pith ball suspended by a thread, and, holding the thread, bring the ball near an electrified conductor, either positive or negative : the ball will be attracted by the electrified conductor, and adhere to it, until its electricity is destroyed.

Such bodies as are positively electrified, tend to diffuse their superabundant fluid amongst sur- rounding substances ; and those that are negative, endeavour to acquire electric fluid : hence, either state of electricity will produce attraction ; for if light bodies are to be moved, it is indiffe- rent whether the electrified surface attracts their natural electric fluid, or the matter to which it is attached; for the attraction arises only from the different proportions of these in any two bodies, and will of course continue whilst that dif- ference exists.

(3.) Repeat the preceding experiment with a ball or feather supported by a silk thread : the light body will first be attracted to the electrified conductor, and will then recede from it ; nor can it again be brought

in contact until it has touched some conducting substance. Mr. Singer thus explains the cause of this : — The light body is here attracted for the same reason as before, but it is insulated, and consequently receives, by contact with the electrified surface, a similar electric state ; it therefore recedes from that sur- face, being attracted by the ambient air, or other surrounding bodies ; for they have their natural portion of electricity, and therefore differ from the light body, which has either more or less ; but the electrified surface does not differ from the light body, and consequently cannot attract it, till, by touching some conductor, its natural electric state is restored.

(4.) The following is a very pleasing variety of the last-mentioned experiment. — Take a glass tube, whether smooth or rough is not material, and, after having rubbed it, let a small light feather be let out of your fingers at the distance of about eight or nine inches from it. This fea- ther will be immediately attracted by the tube, and will stick very close to its surface for about two or three seconds, and sometimes longer; after which it will be repelled ; and, if the tube be kept under it, the feather will continue float- ing in the air at a considerable distance from the tube, without coming near it again, except

it first touch some conducting substance ; and, if the tube be managed dexterously, you may drive the feather through the room at pleasure. This experiment may be varied as follows : A person may hold in his hand an. excited tube of smooth glass, and another may hold an excited rough glass tube, a stick of sealing-wax, or any other electric negatively electrified, at about one foot and a half distance from the smooth glass tube ; a feather now may be let go between these two differently excited electrics, and it will leap alternately from one electric to the other.

(5.) Place a leaf of gold, silver, or other metal, on the palm of the hand, and bring it within a few inches of an electrified conductor ; it will be attracted and continue to move, alter- nately from the hand to the conductor, as long as the latter is electrified.

(6.) Suspend from the conductor, by a brass chain, a circular plate of copper, reaching to within an inch and a half or two inches of the table. Directly under this plate place ano- ther of the same form, and a little larger, on the table. Turn the machine, and the fluid will pass from the upper to the lower plate. If now small figures cut out of pasteboard, or pith of elder be introduced between the plates, they will dance about with apparent vivacity, and some- times appear to course round the edge of the lower plate. This experiment is

represented by fig. 4.

(7.) The electrical bells furnish a pleasing illustration of the attraction and repulsion of the electric matter. They are variously constructed, but the form exhibited fig. 5 ‘is the simplest. The two outer bells are suspended by brass chains ; the middle bell and the two clappers by fine silk threads. When the bells are attached to the conductor, and the machine is turned very gently, the fluid will pass along the chains to the two outer bells, but will not pass along the silk to the clappers and middle bell. Thus the outer bells being charged with an extra quantity of fluid will attract the clappers, but the moment they touch the bells they become charged, and are repelled with such force as to cause them to strike against the middle bell, on which they de- posit their electricity, and are again attracted. By this means a constant ringing is kept up while the machine is turned. From the inside of the middle bell a brass chain passes to the table, for the purpose of conveying away the fluid deposited on it by the clappers. A more ele- gant form of the electrical bells is thus made : — Fix eight bells near the edge of a circular board supported on four feet, fig. 6, having a glass pillar e, in the centre, terminated by a point g. On this point place the pointed wires used in the last experiment, hanging from one of them, as d, a small glass clapper by a silken thread ; and connecting the apparatus by a chain h, pro- ceeding from the prime conductor. On setting the machine in motion, the wire will move round, and the clapper ring the bells.

(8.) Place a pointed wire on the machine, elec- trify the inside of a dry glass tumbler by holding it over the wire whilst the machine is in motion ; place some pith balls on the table and cover them wi’h the electrified glass; they will be

alternately attracted by it and the table, and con- tinue their motion for some time. See fig. 7. An instrument is constructed on purpose for this experiment, by which the dancing of the balls may be kept up for any length of time, as it may be connected with the conductor.

(9.) Insulate a circular ring of brass so as to stand about an inch and a half from the flat sur- face of a table ; connect the brass ring with the conductor of the electrical machine, and place within it on the table, a very light and round glass ball of two inches diameter ; the ball will be attracted by the ring, touch it, and be- come electrified at the point of contact; this point will then recede and be attracted by the table, whilst another part of the ball is attracted by the ring ; and, by the

repetition of this pro- cess, the ball is made to revolve and travel round the circumference of the ring. ,

(10.) Fasten a small piece of sealing-wax on the end of a wire, and set fire to it. Then put the electrical machine in motion, and present the wax, just blown out, at the distance of a few inches from the prime conductor. A number of very fine filaments will immediately dart from the sealing-wax to the conductor, on which they will be condensed into a kind of net-work, re- sembling wool.

If the wire with the sealing-wax be fixed into one of the ""-oles of the conductor, and a piece of paper be presented at a moderate distance to the wax, just after it has been ignited, on putting the machine in motion, a net-work of- wax will be formed on the paper.

If the paper on which the wax is thus re- ceived be gently warmed, by holding the back of it near the fire, the wax will adhere to it, and thus the result of the experiment will be rendered permanent. A remarkably fine ex- periment of the same kind may be made with camphor. Let a silver spoon containing a piece of lighted camphor be made to communicate with an electrified body, as the prime conductor of a machine; while the conductor continues electrified, by keeping the machine in motion, the camphor will throw out numerous ramifi- cations, and appear to shoot like a vegetable.

(11.) Take about a dozen of flaxen threads and tie them together at top and bottom ; annex them to the conductor of the electrical machine ; •when electrified the threads will separate from each other, and the knot at the bottom rising they will assume a spheroidal figure, which will continue as long as they are electrified.

(12.) The following experiment we give as being one of the earliest made by Dr. Franklin in illustration of the principle of attraction and repulsion. Fig. 8 represents an electric jar, having a wire C D E fastened on its outside, which is bent so as to have its knob E as high as the knob A. A is a spider made of cork, with a few short threads run through it to represent its legs. It is fastened at the end of a silk thread, proceeding from the ceiling of the room, or from any other support, so that it may hang mid-way between the two knobs A and E, when the jar is not charged. Let the place of the jar upon the table be marked ; then charge the jar, by bringing its knob A in contact with

the prime conductor, and replace it in its markeu place. The spider will now begin to move from knob to knob, and continue this motion for ?, considerable time, sometimes for several hours. The inside of the

jar being charged positively, the spider is attracted by the knob A, which communicates to it a small quantity of elec- tricity ; the spider then becoming possessed of the same electricity with the knob A, is repelled by it, and runs to the knob E, where it dis- charges its electricity, and is then attracted by the knob A, and so on. Thus the jar is grad- ually discharged ; and, when the discharge is nearly completed, the spider finishes its motion.

EFFECT OF POINTS ON THE ELECTRIC FLUID.

97. The facility with which pointed bodies transmit electricity has given rise to several very delicate and beautiful experiments on the electrical apparatus, of which the following are the most deserving of attention

(1.) The Electrical Flies. — These flies are com- posed of small brass wires, fig. 9, fixed into a cap of brass, easily moveable upon an axis of the same metal, and exactly balanced, so that they may turn with the smallest force. The ends, which ought to be very sharp, are all bent one way, with regard to one another, as those be- longing to a, 6, in the figure ; though the two sets of points, constituting the two flies there represented, are contrary to each other ; so that the whole flies must have a contrary motion. Fixing the axle with the two flies upon the prime conductor, and working the machine, botli will begin to turn very swiftly, each in a direction contrary to that of the points. In this manner, with & powerful machine, several flies may be made to turn either in the same or in contrary di- rections ; and by their gradual increase or de- crease in ‘size may represent a cone or other figure ; for the course of each will be marked by a line of fire, and thus the whole will exhibit a beautiful appearance in the dark. The light is more brilliant when the ends are slightly co- vered with sealing-wax, grease, or other electric matter. The flies, in this experiment, turn the same way whether the electricity be positive or negative ; the reason of which is that in positive electricity the fluid issues from the body electri- fied, and that in negative electricity it enters into it. In the former case, the recoil of the fluid, which acts equally on the air and on the point from whence it issues, must continually urge the point the contrary way; and in negative electricity, when the point solicits a continual draught of electric matter from the air, the direct impulse of the former must also produce a motion in the point in the course in which the fluid itself moves. In vacuo no motion is pro- duced; because there is no air on which the fluid may act when it issues from the point.

(2.) The Electrical Orrery, fig. 10, is another instrument frequently

used for ‘ showing ˆthr effect of points in the transmission of the electric fluid. The principle of its action is this the ball S represents the sun, E the earth, and M the moon, connected by wires ac and b d ; is the centre of gravity between the earth n moon. These three balls and their connecting

wires are hung and supported on the sharp point of a wire A, which is stuck upright in the prime conductor B of the electrical machine ; the earth and moon hanging upon the sharp point of the wire cae, in which wire is a pointed short pin, sticking out horizontally at c ; and there is just such another pin at d, sticking out in the same manner, in the wire that connects the earth and the moon.

When the cylinder of the electrical machine is turned, these balls and wires are electrified ; and the electrical fire, flying off horizontally from the points c and d, causes S and E to move round their common centre of gravity a, and E and M to move round their common centre of gravity b. And as E and M are light, when compared with S and E, there is much less fric- tion on the point b, than S and E make about the point a. The weights of the balls may be adjusted so, that E and M may go twelve times round b, in the time that S and E go once round a.

(3.) Tlte Electrical Inclined Plane affords another and a still more beautiful illustration of the same thing, showing also that a stream of the electric matter issuing from points pos- sesses force sufficient to counteract the power of gravitation in light bodies. Fig. 11 represents the inclined plane, where A is a board of ma- hogany, fourteen inches long and four inches broad; BBBB are four glass pillars, three- tenths of an inch in thickness; the length of the two longer is seven inches, and that of the two shorter is five inches.

From the longer to the shorter pillars are stretched two fine brass wires, parallel to each other, and tightened by screws which pass through the brass balls which surmount the pil- lars. On these wires the axis of the fly C rests, the ends of which are formed like a small pulley, having a groove in them to prevent their slip- ping off the wires, and to guide the fly when in action. It is obvious that, if the fly be placed ‘on the upper part of the wires, it will roll down them by its own gravity ; but when it has reached the bottom of the plane, if the upper end of the wire* be connected with the machine while in

action, the escape of the fluid from the points will cause it to roll very rapidly up the plane till it reach the top of it. .These experiments may be varied to a great extent, and models of corn-mills, water-pumps, astronomical clocks, &c., constructed of cork and pasteboard, are readily put in action by directing against their main wheels a stream of electricity from a strong pointed wire inserted into the prime conductor.

(4.) By a fine flaxen thread attach a large downy feather to the prime conductor of the machine ; turn the cylinder gently round, and the fibres of the feather will repel each other ; approach it with a brass ball, or with the closed hand, and it will endeavour to turn itself towards the ball or hand; but present a pointed wire to it, and it will instantly shrink from it back on the conductor, as if animated, which arises from its being suddenly deprived of its electricity by the point. This experiment may be varied by inserting the brass stem of fig. 12, into one of the holes in the prime conductor.

The action of the machine will cause the hairs on the head to diverge from each other, and to stand on end.

9». Such, says Mr. Singer, are the principal phenomena of motion produced by the action of electricity; they are susceptible of almost un- limited variety, but uniformly result from the simples already stated, namely, the attraction of the electric fluid for common matter, its tendency to equal diffusion ; and the occasional interruption of these properties by non-con- ducting power and altered force of attraction.

LUMINOUS EXHIBITION OF ELECTRICITY.

99. It may be necessary to observe here that all experiments made for the purpose of dis- playing the brilliancy of the electric matter, in passing from one conducting substance to another, should be made in, a darkened room, as the pre- sence of either natural or artificial light robs them of more than half of their beauty. The articles of apparatus, too, must be all free from dust, and perfectly dry, besides being a little warm, otherwise the effect expected will not re- sult; we think it particularly necessary to ob- serve that in any experiment requiring the ex- haustion of glass vessels the above precautions are peculiarly needful, as we have seen some of the following experiments utterly fail in the hands of public lecturers merely from inattention to ‘them.

100. To render the electrical fluid luminous it must be collected in considerable quantities, and the brilliancy of the display will depend

on the particular configuration of the conducting surface over which it is made to pass. The light evolved in ordinary cases, says Mr. Singer, extends only to faint flashes and scintillations, sparks being only produced when these effects are concentrated, as they are in the electrical machine by the action of its conductors.

101. There are three circumstances that influ- ence the electric spark in its passage from one conductor to another, namely, the form of the conductors, their extent, and the nature and density of the medium through which the spark passes. The following remarks on these three circumstances we give nearly in Mr. Singer's own words.

102. The distribution of electricity on con- ductors has but little relation to their solid con- tents, and depends almost entirely on extent of surface, for the same effects are produced by the thinnest cylinder or sphere of metal as by the most compact solid body of the same form and dimensions ; it is probable that the action of in- sulated conductors consists in the ready commu- nication of their electric state to the contiguous surface of the extensive stratum of air by which they are surrounded, and to the facility they pre- sent to the discharge of that electrified stratum when an uninsulated or differently electrified body is brought near them ; for every positively electrified conductor is surrounded by a positive atmosphere, and every negative conductor with a negative atmosphere whose densities decrease as the square of their increased distance. Hence any insulated electrified body will retain its elec- trical state until its intensity is sufficient to

OTCicomc the resistance of the air, and the greater or less interval through which the spark passes is called the striking distance.

103. When the surface of the conductor is uniform, the re-action of the air around it is also uniform; but if the surface of the conductor be irregular, the tendency of the electric fluid to escape or enter it will be greatest at the most prominent parts, and most of all when these are angular or pointed. To understand this it is only necessary to recollect that every electrified conductor is surrounded by an atmosphere of its own figure, the contiguous surface of which is similarly electrified : and that electricity is not transmitted through air, but by the motion of its particles.

104. For this motion of particles is resisted by a uniform surface from

the similar action of the air around it, which is all equally capable of receiving electricity, and cannot tend to dis- tribute it in one direction more than another; the immediate electrical atmosphere of the conductor will be therefore resisted in any attempt to recede from it by a column of air which is equally opposed in every part; but if there be any prominent point on the conductor projecting into the atmosphere, it will facilitate the re- cession of the electrified particles opposite to it by removing them farther from the electrified surface, and opposing them to a greater number of such as are unelectrified.

105. The action then, of bodies that are pointed or angular, appears to consist in promo- ting the recession of the particles of electrified air, by protruding a part of the electrical atmos- phere of the conductor into a situation more ex- posed to the action of the ambient unelectrified medium, and thereby producing a current of air from the electrified point to the nearest uninsu- lating body. Hence the most prominent and the most pointed bodies are such as transmit eleptri- city with the greatest facility, for with them this condition is most perfectly obtained.

106. A spherical surface is that which, con- sidered with regard to its surrounding atmosphere, is most uniform; hence balls, or cylinders, with rounded ends, are naturally employed for insu- lated conductors, and their magnitude is propor- tioned to the intensity of the electrical state they are intended to retain; for a point is but a ball of indefinite diameter, and will act as such on very small quantities of electricity; and a ball of moderate size may also be made to act as a point by electrifying it strongly.

107. If two spheres of equal size are con- nected together by a long wire and electrified, their atmospheres vill extend to the same dis- tance, and they will of course have respectively the same intensity ; but if the spheres be of un- equal size, the atmosphere of the smallest will extend furthest, and it will necessarily have the greatest intensity; so that a longer spark can be drawn from a small ball annexed to the side of a conductor than from the conductor itself, and longer in proportion as the ball projects farther from the side. Hence the finer the point, and the more freely it projects beyond any part of the conductor to which it is annexed, the more rapidly will it receive or transmit electricity.

108. Let, for example, a fine point be fixed in the axis of a large brass ball, from beneath the surface of which it may be protruded more or less by the action of a fine screw, the effect of a ball of any size may be obtained ; when beneath the surface of the ball the point does not

act, but in proportion as it is protruded it in- creases the transmitting power, and, if projected far enough, at length entirely overcomes the in- fluence of the ball.

109. The same writer gives the following ex- periments, among others, for illustrating the in- fluence of the form and extent of the conductor on the appearance of the electric spark.

(1.) Present a brass ball of about three inches in diameter to the positive conductor of a pow- erful electrical machine ; sparks of brilliant white light will pass between them, accompanied by a loud snapping noise : to produce these sparks in rapid succession the ball must be brought near the conductor, and they then appear perfectly straight.

(2.) Annex a ball of an inch and a half or two inches diameter to the conductor, so as to project three or four inches from it; present the large ball to this, and much longer sparks will be ob- tained than from the conductor itself, but they will be less brilliant and of a zigzag form.

(3.) Substitute a small ball for that used in the former experiment; the fluid will now pass to a greater distance, but in the form of a divided brush of rays, faintly luminous, and producing little noise; this brush will even occur with larger balls, if the machine be very powerful ; it is most perfect when procured by presenting a flat imperfect conductor, as a piece of wood or paper.

(4.) Whilst a current of sparks is passing be- tween a large ball and the conductor, present, at the distance of about an inch and a half, u. sharp point at double that distance, and the sparks will immediately cease, the electric matter being silently drawn off by the point.

110. The brilliancy of the electric spark is always in proportion to the conducting power of the bodies between which it passes; hence metals are almost exclusively employed for this purpose, as wood and other imperfect conductors produce only faint red streams; yet these substances act as points with some efficacy, and the particles of dust which collect around the apparatus are often troublesome to electricians from the same cause.

111. The nature and density of the medium through which the electric spark passes has also a powerful influence on its character. Dr. Watson seems to have been the first who made experi- ments on this subject; these he conducted on a very large scale, and he describes the results

as having been very beautiful ; they will be noticed in another part of this article.

112. The following is a description of the sim- ple apparatus used by Mr. Singer for showing the effect of different gaseous mediums on the passage of electricity. It consists of a glass globe, fig. 1, plate II., of about four inches dia- meter, having two necks capped with brass ; to one of the necks a stop-cock is screwed, with a wire and ball projecting into the globe ; another

ball is attached to a wire that slides through a collar of leathers screwed to the opposite cap, so that the balls may be set at any required dis- tance from each other within the globe. This apparatus may be exhausted by connecting the stop-cock with an air-pump, and various gases may be introduced into it, or the air it contains may be rarefied or condensed, and the effect of these processes on the form of the spark exa- mined. In condensed air the light is white and brilliant; in rarefied air, divided and faint; and in highly rarefied air, of a dilute red or purple color. The effect of gases seems to be propor- tioned to their density ; in carbonic acid gas the spark is white and vivid, in hydrogen gas it is red and faint.

113. The brilliancy of the electric spark seems to be in proportion to the density of the medium through which it is made to pass. This is proved by the following experiments : — 1 . Fix with cement a short iron or platina wire within one end of a glass tube thirty inches long, so that the wire may project a little way within the tube, and fix a small brass ball on the outer ex- tremity of the wire. Fill the tube with mercury, and at the open end place a drop of ether, which secure by the point of the finger while the tube is inverted in a vessel of mercury, so as to form a Torricellian vacuum in the upper part. The ether will rise to the top ; and upon the removal of the finger^and the fall of the mercury, will ex- pand into vapor. If now electricity be trans- mitted through this vapor, it will be rendered luminous, and assume various hues according to its strength. When the spark is strong, and has to pass through some inches of the expanded Taper, the light is usi ally of a beautiful green color. 2. Take an air-pump receiver twelve or fourteen inches high, and six or seven inches in diameter ; adapt a wire, pointed at its lower ex- tremity, to the top of the receiver, letting the point project about two inches into its inside ; place the receiver on the plate of the air-pump, and electrify the wire at its top positively; whilst the air remains in the receiver, a brush of light of very limited size only will be seen, but in proportion as the air

is withdrawn by the ac- tion of the pump it will enlarge, varying its ap- pearance and becoming more diffused as the air becomes more rarefied ; until at length the whole of the receiver is filled by a beautiful blush of light, changing its color with the intensity of the transmitted electricity. 3. Into a piece of soft deal about three inches long and an inch and a half square, insert two pointed wires obliquely into its surface at nearly an inch and a half dis- tance from each other, and to the depth of an eighth of an inch ; the wires should incline in opposite directions, and the track between the points be in that of the fibres ; a spark in pass- ing from one point to another through the wood will assume different colors in proportion as it passes more or less below the surface ; and by inserting one point lower than the other, so that the spark may pass obliquely through different depths, all the prismatic colors may be made to appear at once. Sparks taken through balls of wood or ivory appear of a crimson color ; those from the surface of silvered leather are of a bright

green ; a long spark taken over powdered char- coal is yellow ; and the sparks from imperfect conductors have a purple hue. The quantity of air through which these sparks are seen also influences their appearance ; for the green spark in the vapor of ether appears white when the eye is placed close to the tube, and reddish when it is viewed from a considerable distance.

114. When metallic conductors are of suf- ficient size and perfectly continuous, they trans- mit electricity without any luminous appearance; but if the continuity be interrupted in the slight- est degree a luminous effect is produced, a bright spark occurring at every separation. Various articles of apparatus are used for the exhibition of this effect, according to the fancy of the ope- rator ; the following are those used in general by public lecturers : — 1 . The spiral tube : this in- strument is represented by fig. 2, and is com- posed of two glass tubes C D, one within another, and closed with two knobbed brass caps A and B. The innermost of these has a spiral row of small round pieces of tin-foil stuck upon its outside surface, and lying at about one-thirtieth of an inch from each other. If this instrument be held by one of the extremities, and its other extremity be presented to the prime conductor, every spark that it receives from the prime conductor will cause small sparks to appear between all the round pieces of tin-foil stuck upon the innermost tube ; which in the dark affords a beautiful spec- tacle, the tube appearing encompassed by a spiral line of fire. Fig. 3 represents several spiral tubes placed round a board, in the middle of which is screwed a glass pillar, and on the top of this pillar is cemented a brass cap with a fine steel point. In this a brass wire turns, having a brass ball at each end, nicely balanced on

the wire. To make use of this apparatus, place the middle of the turning wire under a ball proceed- ing from the conductor, so that it may receive a succession of sparks from the ball ; then push the wire gently round ; and the balls in their relative motions will give a spark to each tube, and thereby illuminate them down to the board, which from its brilliancy and rapid motion, affords a most beautiful and pleasing sight. Fig. 4 is another instrument for showing the same effect in a diversified form : the action being in this case the same as in the preceding, no further explanation is necessary. The beauty of this kind of exhibition is sometimes much in- creased by laying down the devices on glass stained of different colors. There are other methods of rendering the electric fluid visible in a very pleasing manner, some of which we shall here enumerate.

115. The luminous conductor, as represented at fig. 5, consists of a glass tube about eighteen inches long, and four in diameter, to the ends of which are cemented the hollow brass pieces D F, E B, the former having a point, C, for receiving electricity from the electrical ma- chine, while the other has a wire terminating is. a ball, G, from which a strong spark may be drawn. From each piece a knobbed wire pro- ceeds within the cavity of the glass tube. One of these brass pieces is composed of two parts, in one of which is a valve covering! a hole by

which the tube may be exhausted of its air. The whole is supported on two glass pillars fixed in a wooden frame. When this tube is exhausted of its air, and the point C set near the machine, this point will appear illuminated with a star, while the glass tube will exhibit a weak light on its inside; and, from the knobs within the glass, the appearance of positive and negative light will be evident, as the knob at D will show a bright pencil of rays, and the opposite knob a round star. If the point C, instead of being presented to the cylinder, or the positive con- ductor, be placed near the rubber or negative conductor, the appearance of the light from the internal knobs will be reversed.

116. The visible electrical atmosphere is ex- hibited by the apparatus represented at fig. 6, where G I represents the receiver with the plate of an air-pump. In the middle of the plate I F a short rod is fixed, having at its top a ball B, whose diameter is nearly two inches. From

the top of the receiver another rod AD with a like ball A proceeds, and is cemented air-tight into the neck C ; the distance of the balls from one another being about four inches. If, when the receiver is exhausted of air, the ball A be elec- trified positively, by touching the top D of the rod AD with the prime conductor, or an excited glass tube, a lucid atmosphere appears about it, which, although it consists of a feeble light, is yet very conspicuous, and very well denned ; at the same time the ball B has not the least light. The atmosphere does not exist all round the ball A, but reaches from about the lower half of it. If the rod, with the ball A, be electrified negatively, then a lucid atmosphere, like the above described, will appear upon the ball B, reaching from its middle to a small distance be- yond that side of it that is towards the ball A ; at the same time the negatively electrified ball A remains without any light.

117. Fig. 7 represents a mahogany stand, so constructed as to hold three eggs at a greater or smaller distance, according to the position of the sliding pieces. A chain C is placed at the bottom, in such a manner as to touch the bottom of the egg at B with one end, and with its other the outside coating of a charged jar. The sliding wire A at the top is made to touch the upper egg ; • and the distance of the eggs asunder should not exceed a quarter or the eighth part of an inch. The electric spark, being made to pass down by means of the discharging rod through the wire and ball at A, will, in a darkened room, render the eggs very luminous.

ACCUMULATION OF ELECTRICITY.

118. Although the electricity we have already described be sufficient for the performance of many very fine experiments, and for enabling us to investigate the nature and properties of the electric fluid ; yet the full energy of this wonderful agent can only be displayed when it is collected in great quantities, and made to operate on substances in a strongly concentrated state. This, it might be supposed, would be best effected by diffusing the electrical matter over very extensive conductors, and at once dis- charging the quantity thus accumulated, on the VOL. VIII.

subject of experiment : but such is not the case, since the extension of the surface of any conduct- ing body diminishes its intens ty. This fact i* admirably illustrated by ftlr. Smger in the fol- lowing experiment.

119. Insulate a flat metal plate with smooth rounded edges, and connect with it a pith->ball electrometer ; electrify the plate, and the balls will diverge : bring a similar plate uninsulated near that which is

electrified, keeping the.r flat surfaces parallel and opposite to each other; the balls of the electrometer gradually collapse as the plates approach, and, when they are within about half an inch of each other, the insulated plate appears unelectrified ; but, on the removal of the uninsulated plate, the original divergence is restored. See fig. 8.

120. When the insulated conductor, he adds, is electrified, its pith-balls separate, because they are in a different electrical state to the air by which they are surrounded, the fluid of wh ch they attract ; but all unelectrified bodies have the same relation to the electrified balls like tti- ambient air, and such as are conductors and con nected with the ground present a more amv > w source of matter and electricity; consequently, if such bodies are brought near the electri- fied conductor, its attraction is exerted on them, and the influence of the surrounding air is pro- portionably diminished; and if the proximity be sufficient, the attraction of the electrified sur- face will be so exclusively exerted in that direc- tion as to be imperceptible in any other.

121. In the above experiment the bodies ar not brought in contact, but only near each ottie , and consequently there is no communication < r loss of electricity, but merely a compens, t on < f its attractive power; hence, when the uninsu- lated plate is removed, the divergence of the electrometer is restored.

122. The grand instrument used by electri- cians for the accumulation of electricity is dtnc- minated the Leyden jar, or phial : its construc- tion has already been in some measure described, but it may be necessary still further to explain it, and to make some remarks on ti e pr nup.e of its action.

123. The Leyden Jar in whatever form it may be constructed is nothing more than an electric placed between two non-electrics. The following description of this remarkable instrument is from Mr. Cavallo's treatise on electricity. If, says he, to one side of an electric, sufficiently thin, as for instance a pane of glass, a piece of sealing-wax, &c., be communicated one electri- city, and to the opposite side the contrary, that plate in that case is said to be charged; and the two electricities can never come together except a communication of conducting substances be made between both sides, or the electric be broken by the power of electric attraction. When the two electricities of a charged electric are by any means united, and therefore their power, destroyed, that electric is then said to be Dis- charged and the act of union of these two oppo- site powers is called the electric discharge.

124. To avoid the difficulty of communicating electricity to an electric plate, it is customary to coat the sides of it with some conducting sub-

stance, as tin-foil, gilt paper, &c.0 by which means the charging and discharging becomes very easy ; for when the electricity is communicated to one part of the coating, it is immediately spread through all the parts of the electric that are in contact with that coating; and, when the electric is tor be discharged, it is sufficient to make a conducting communication between the coatings of both sides, to discharge entirely the electrici- ties of that electric.

125. When plates of glass are thus coated, it B of essential importance that the glass should extend two or three inches beyond the metal coatings; for, although they do not absolutely touch one another, yet, when they are electrified, the electricity will easily force a passage through the air, and by passing over the surface of the electric, from one coating to the other, render it incapable of receiving any charge.

126. If a glass plate be properly coated on both sides with a conducting substance, and if to one of these coatings be communicated some electricity, the other coating, while communica- ting with the earth, or with other conducting bodies, acquires by itself an equal quantity of the contrary electricity; but if, while one side is acquiring electricity, the opposite side does not

- 1 ommunicate with the earth, or the conducting substances, the glass cannot be charged. The reason of this is founded on the property of lodies to acquire an electricity, contrary to that possessed by a contiguous electrified body ; and the cause that hinders these two electricities from mixing, is the interposition of the glass plate which is impermeable to electricity. Although if the glass be too thin, or the charge too high, the strong attraction, between the positive and negative electricities, forces a passage through the glass and discharges it.

127. The most usual, and by far the most convenient form of the Leyden jar is that repre- sented at fig. 9. It is coated on the inside and also on the outside with tin-foil to within two inches and a half of the top. With, the inside coating a wire is connected which rises through a lid of baked wood neatly fitted into the mouth of the jar, and terminating in a smooth brass ball. The uncoated part of the jar must

be kept perfectly clean and dry, otherwise the action will be very incomplete. The coating is best fas- tened on with very strong gum water, but some electricians use common paste ; and in some in- ˆtances the tin-foil is first pasted upon paper, . nd afterwards on the glass: this is considered ; n improvement both as it respects the facility (f drying the gum or paste, and also the strength- t ning of the jar.

128. If ajar thus constructed be held in one hand by the lower part, and the knob applied to the prime conductor when the machine is in ac- tion, it will become charged in a few seconds ; and if then a communication be formed between its outside and inside coatings, by touching the ball with the other hand, a smart explosion takes place, and a peculiar and painful sensation is felt chiefly at the wrists and elbows, and across t e breast: this sensation is called the electric t hock, and it may be communicated to any number \>f individuals, holding each other by the hand

and forming the line of communication between the coatings of the jar. In this way the abbe Nollet succeeded in giving the shock to 180 of the French Guards in the king's presence.

129. When it is wished to discharge the jar without allowing the charge to pass through the body, an instrument is used called the discharging rod, which is composed of a bent wire or two branches, connected by a joint, and furnished with a glass handle. The extremities of the rod or branches are pointed, but have screws, by means of which they are fitted with balls. In dis- charging a jar with this instrument, it is held by the glass handle, and, while one end is applied to the outer coating of the jar, the other is made to approach the ball of its wire, and thus the elec- tricity passes through the metallic part of the discharger from the one coating to the other of the jar. If the extremities be without their balls the discharge is effected without noise, but other- wise there takes place an explosion, more or less loud according as the jar is more or less charged. The neatest form of the discharging rod is that represented at fig. 10; where A A is the glass handle by which it is held, and B C are the two branches with their balls.

130. When the accumulation of great quan- tities of electricity is required, the instrument then made use of is termed the electrical battery, and is composed of a number of Leyden jars connected together and placed hi an appropriate box. The most modern construction of the battery, is represented at fig. 11. It consists of twelve jars placed in a mahogany box, the bottom of which is covered with tin-foil, for the purpose of connecting together all the outside

coatings ; the inside coatings being connected together by the wires and balls that rise from their centres, and are united together at the top. On one side of the box there is a small brass hook A for the purpose of connecting the battery by means of a chain with any substance through which the discharge is to be made; this hook passes through the box and is fixed in contact with the tin- foil which connects the exterior coating of the jars.

131. A battery may also be constructed by a combination of panes of glass properly coated. Dr. Franklin formed a battery of this kind with eleven panes of common window-glass, and with it he made the greater part of his experiments.

132. In whatever form batteries are constructed they are charged and discharged in the same manner as a single jar. If one of the knobs of the battery communicate with the prime conduc- tor of the machine in a state of action, it will soon be charged ; and the discharge may be effected by making a communication between the coatings, by means of a discharging rod, or any other conductor.

133. Batteries of great size have been con- structed by different electricians, so as to accu- mulate an enormous quantity of electricity, capable of melting the hardest metals, and of putting an instantaneous termination to animal life. Dr. Priestley constructed a battery consis- ting of sixty-four jars, and containing thirty-two square feet of coated surface. Mr. Cuthbertson completed, in 1784, for the Teylerian Museum at Haarlem, a battery of 135 jars and 132 feet

of coated surface; and in 1789 he completed another battery for the same institution, consis- tingof 100 jars, and containing 550 feet of coated surface.

134. It is of the utmost importance that a practical electrician should be expert in con- structing batteries, and in coating jars himself, not only because of the expense attending the employment of others, but because they may often be at too great a distance from workmen who are accustomed to operations of this kind. A difference of opinion exists with respect to the size of the jars and the kind of glass they are to be made of. Fine ‘flint or crystal glass may be used with greater advantage than any other ; but the expense becomes a very considerable object, especially as the jars of a battery are very apt to break by the inequality of their strength ; for the force of the fluid in a battery is equally dis- tributed among all the bottles, however their

capacities may differ. Thus, if we express the quantity of charge which one jar can easily re- ceive by the number 10, we ought not to combine such a jar in a battery with another whose capacity is only 8 ; because the whole force of electricity expressed by 10 will be directed also against that the quantity of which is only 8 ; so that the latter will be in danger of being broken. It will be proper, therefore, to compare the jars with one another before putting them together in a battery.

135. Besides the consideration of the absolute capacity which each jar has of receiving a charge, the time which is taken up in charging it must also be attended to; and the jars of a battery ought to be as equal as possible in this respect as well as in the former. The thinner a glass is, the more readily it receives a charge, and vice versa ; but it does not follow that, on account of its thick- ness, it is capable of containing a greater charge than a thicker one. The reverse is actually the case : and though a thick glass cannot be charged so quickly as a thin one, it is nevertheless capa- ble of containing a greater power of electricity, jf the thickness of the glass be very great, no charge can, indeed, be given it; but experiments have not yet determined how great the thickness must be which will prevent any charge. Indeed it is a fact, that, though a thick glass cannot be charged by a weak electric machine, it may be 30 by a more powerful one ; whence it seems reasonable to suppose, that there is no real limit of this kind ; but that if machines could be made sufficiently powerful, glasses of any thickness might be charged.

136. The expense of constructing large batte- ries is an object of great importance, and has led some electricians to devise a cheaper method of making them than is commonly used. Among those who have thus labored must be mentioned Mr. Brooke of Norwich, who introduced batteries of green glass bottles, instead of flint glass jars. Some of them consisted of nine bottles; but when a greater power was required more were added. Jars would have been preferred to bot- tles, on account of their being more easily coated ; but, being less easily procured, he was content to put up with this inconvenience. The mean size of these bottles was about eight inches in

diameter; they were coated ten inches high, and made of the thickest and strongest glass that could be procured, weighing from five pounds and a half to seven pounds each. In the con- struction of a battery of twenty-seven bottles he disposed of them in three rows ; nine of the stoutest and best composing the first row, nine of the next best being disposed in the second, and the third containing the nine weakest. These were all of green glass, but not of the same kind. Some of those in the front row were composed of a glass like that of which

Frontigniac wine bot- tles are made ; and this kind of glass seemed to be by much the best, as being both harder and stronger, and less liable to break by a high charge. The second and third rows of the bat- tery consisted of bottles the diameter of which was from six and a half to ten inches, and wlucii were coated from eight and a half to eleven inches high; none of their mouths being larger than an inch and a half, nor less than three quar- ters of an inch. The bottles of which Mr. Morgan made use were not coated all over the sin- face usually coated, but slips of tin-foil were laid on of about three quarters of an inch in breadth, at the distance of about a slip between each : a circumstance which clearly shows that a perfectly continuous coating is not of essential importance. ,

137. We have already noticed that the un- coated interval of the Leyden jar should be clean and dry ; but this must be understood with some limitation, as if it be perfectly clean and so dry as to approach to warmness, an explosion will take place between the coatings over the glass, and thus occasion a loss of the charge with a great waste of time. These effects may be pre- vented by breathing on the glass through a piece of barometer tube, but much more effectually 'by pasting a slip of writing paper, an inch broad, on the inner surface of the jar, close to the upper edge of the coating. By this means the intensity of the charge is diminished at the very spot where its tendency to explode is the greatest. The breadth, however, of this rim of paper must be proportioned to the size of the jar. Some prefer varnishing the uncoated part of the jar, in which case the varnish must be of the very finest qua- lity.

138. The precarious process of charging very large batteries to a high degree of intensity is well known to those who have had to make very powerful experiments with them ; and, as frequent fractures of jars take place, it may be of impor- tance to the practical electrician to know how tu repair them when they are but slightly injured ; al- though, at the same time, we would rather pur- suade him to substitute a new jar than to undergo the very troublesome and expensive process of repairing, by cement, one that has been burst.

139. The following is the method adopted by Mr. Brooke for repairing the bottles of his battery when they become injured. Take, he says, of Spanish white eight ounces ; heat it very hot in an iron ladle, to evaporate all the moisture : and when cool sift it through a lawn sieve ; take three ounces of pitch, three quarters of an ounce of resin, and half an ounce of bees'-wax; heat them all together over a gentle fire, stirring the whole

frequently for nearly an hour; then take it off the fire, and continue the stirring till it is cold and fit for use.

140. To the above account of the electrical battery we shall here add Mr. Morgan's rules for its construction. They are the following.

141. Its connecting wires should be perfectly free from all points and edges.

142. They should be easily moveable, so that when accident has lessened the number of jars, the number of wires may be reduced so as to correspond with the remaining quantity of glass.

143. The jars should not be crowded; for in such a case, if necessity should oblige us to em- ploy jars of different heights or sizes, the tin-foil of the higher ones, being in contact with the un- coated glass of the lower ones, the insulation will thus be rendered less complete.

144. The size of the jars should not be lar.;e; for though an increase of magnitude lessens the trouble of cleaning the battery, it at the same time increases the expense of repairing damages which frequently occur,

145. The several wires should be fixed very steadily, or in such a manner as not to admit of any shaking.

146. The battery should take up the least pos- sible room ; for as it increases in size, so is the probability increased of its being exposed to the influence of surrounding conductors.

147. The strength of the charge that can be produced by either a single jar or a battery is estimated according to the number of square feet of coated surface in each. Hence arises the ne- cessity of forming a combination of jars, as single ones of convenient size cannot be obtained. One of the largest, perhaps, ever constructed was used by Mr. Singer in his lectures on elec- tricity. This jar, he informs us, was eighteen inches in diameter, and two feet in height; its external coating exposing a surface of about six square feet. The principal experiments per- formed by the aid of the electrical battery will be explained in another part of this article.

INSTRUMENTS FOR MEASURING ELECTRICITY.

148. The instruments used for the purpose of ascertaining the presence of electricity, and measuring its intensity, are denominated elec- trometers, and hold a very important place among the necessary articles of electrical apparatus. Some of these are so constructed as to be of use only in indicating the presence of electricity ; others perform the two-fold office of showing its presence, and indicating the precise degree of. its intensity at the same instant ; while others are constructed for the purpose of exactly measuring the strength of, and giving the required direction to any accumulation of the electric matter, from the charge of a small phial to that of the most powerful battery. We shall here give a very brief description of the principal of these useful instruments.

149. The first electrometer is generally allowed to have been that of the abbe Nollet ; it was composed of two silk threads, which were

made to recede from each other on being approached by an electrified body. Tne angle of the diver- gency of the threads was observed by the shadow

which they cast on a flat surface placed behind them. This was certainly a very simple appara- tus, though, at the same time, very imperfect : it was improved by Mr. Waitz, who appended small weights to the threads.

150. The electrometer of Mr. Canton con- sisted of a pair of small pith-balls suspended by very fine flaxen threads from a peg enclosed in a small box having a sliding cover fitted to it; when he used this instrument the lid was drawn off, the box held horizontally, so that the balls might hang freely. A more complicated instru- ment, but founded on the same simple principles, and containing four electrometers, is represented in fig. 12. A is the basis of the stand which supports these, and is made of mahogany. B is a pillar of wax, glass, or baked wood. To the top of the pillar, if it be of wax or glass, a cir- cular piece of wood, C, is fixed ; but if the pil- lar be of baked wood, that may constitute the whole. From this circular piece of wood pro- ceed four arms of glass, or baked wood, suspend- ing at their ends four electrometers, two of which, D, E, are silk threads about eight inches long, suspending each a small downy feather at its end. The other two electrometers, F, G, are made of very small balls of cork, or of the pith of elder; and they are constructed in the follow- ing manner: — 06 is a rod of glass about six inches long, covered with sealing-wax, and formed at top into a ring : from the lower ex- tremity of this stick proceed two fine linen threads, c c, about five inches long, each suspend- ing a cork or pith-ball d, about one-eighth of an inch in diameter. These threads should be mois- tened with a weak solution of salt. When this electrometer is not electrified, the threads c c hang parallel to each other, and the cork balls are in contact; but when electrified they repel one another, as represented in the figure. When it is inconvenient to use the insulating stand, AB, the electrometers may be easily supported by a glass rod or tube.

151. Electrometers constructed of pith of elder were employed by Mr. Cavallo in many of his experiments in electricity, particularly in those on the electricity of the atmosphere. One of these instruments is represented in figs. 1 3 and 14. The case or handle of this instrument is formed of a glass tube, about three inches in length, and three-tenths of an inch in diameter, one-half of which is coated with wax on the out- side. From one extremity of this tube, viz. that without sealing-wax, a small loop of silk pro- ceeds, which occasionally serves to hang the electrometer on a pin, &c. To the other extre- mity of the

tube a cork is adapted, which, being cut tapering on both ends, can fit the mouth of the tube with either end. From one extremity of this cork two linen threads proceed, a little shorter than the length of the tube, suspending each a little cone of pith of elder. When this electrometer is to be used, that end of the cork which is opposite to the threads is pushed into the mouth of the tube ; the tube then forms the insulated handle of the pith electrometer, as represented in fig. 13. But when the electrome- ter is to be carried in the pocket, the threads ar« put into the tube and the cork stops it, as repre-

seated in fig. 14. The advantages of this elec- trometer are, its convenient small size, its great sensibility, and its continuing longer in good order than any other. Fig. 1.5 represents a case to carry the above described electrometer in. This case is like a common toothpick-case, ex- cept that it has a piece of amber fixed on the extremity A, which may occasionally serve to electrify the electrometer negatively ; and on the other extremity a piece of ivory fastened upon a piece of amber B C. This amber serves only to insulate the ivory ; which, when insulated, and rubbed against woollen cloths, acquires a posi- tive electricity, and is therefore useful to electrify the electrometer positively.

152. Another form of the pith-ball electrome- ter is that invented by Mr. Henley ; it is simple in its construction, and extremely useful in numerous experiments, as will afterwards appear. It consists (fig. 16) of a perpendicular stern formed at top like a ball, and furnished at its lower end with a brass ferrule and pin, by which it may be fixed in one of the holes of the conduc- tor, or at the top of a Leyden jar. To the upper part of the stem, a graduated ivory semicircle is fixed, about the middle of which is a brass arm or cock, to support the axis of the index. The index consists of a very slender rod, which reaches from the centre of the graduated arch to the brass ferrule ; and to its lower extremity is fastened a small pith-ball nicely turned in a lathe. When this electrometer is in a perpen- dicular position, and not electrified, the index hangs parallel to the pillar; but when it is elec- trified the index recedes more or less according to the quantity of electricity, from the stem. Fig. 17, represents this electrometer separated from its stand, and fixed upon the prime conductor. The scale in Mr. Henley’s quadrant is divided into equal parts; but M. Achard has shown that,

when this is the case, the angle at which the index is held suspended by the electric repul- sion is not a true measure of the repulsive force ; to estimate this force truly, he demonstrates that the arc of the electrometer should be divided according to a scale of arcs, the tangents of which are in arithmetical progression.

153. One of the most useful electrometers for indicating the presence of very small portions of electricity, is that invented by the Rev. Mr. Ben- net. The common construction of this instrument is very good ; but a highly improved form of it is described by Dr. Brewster in the appendix to his new edition of Ferguson's Essays. The chief difference between this and the original construc- tion consists in the cap and stand being of brass instead of wood. He thus describes it : —

It consists of two stripes of gold leaf, m, n, suspended within a glass cylinder ABED. This cylinder has a brass cap AB, a little broader than itself, in the centre of which is a hole, «, in the inside of the cap, which receives a small wedge of wood. On each side of this wedge, two equal stripes of gold leaf, free of all rough- ness at their edges, are fixed by a little varnish ; these stripes are generally about two inches long, and about a quarter of an inch broad. The in- side of the cap A B, and the upper part of the glass cylinder, are coated with sealing-wax. On

the inside of the glass cylinder are pasted two slips of tin-foil, b, c, diametrically opposite t > each other, and rising higher than the stripes o;' gold leaf. The lower ends of the tin-foil are in contact with the brass stand D E F, which sup- ports the whole. For observing the electricity of the atmosphere, a pointed wire, C, is inserted in the brass cap A B. To use the electrometer, turn round the cap AB, till the surfaces of the gold leaf are parallel to the surfaces of the pieces of tin-foil b, c, so that the two stripes of gold leaf may hang in contact in the middle of the cylinder. Then, if a body containing a small quantity of electricity, be brought in contact with the cap AB, the gold leaves, m, n, will diverge, and their extremities will strike the slips of tin-foil b, c, and thus convey the electricity to the ground. See figs. 1 and 2, plate III.

154. There have been other improvements pro- posed on this electrometer, one of which was by Mr. Singer, and chiefly respects the mode of in- sulation. This instrument is represented in fig 3 : the following brief description of it will suffice to convey a correct idea of it. Like the preceding it is constructed with a glass cylinder, surmounted by a broad cap of either wood or metal. The in- sulation depends on a glass tube of four inches long, and one-fourth of an inch

diameter, covered on both sides with sealing-wax, and having a brass wire of a sixteenth or twelfth of an inch thick, and five inches long, passing- through its axis, so as to be perfectly free from contact with any part of the tube, in the middle of which it is fixed by a plug of silk, which keeps it in a concentric position with the internal diame- ter of the tube. A brass cap is screwed upon the upper part of this wire ; it serves to limit the at- mosphere from free contact with the outside of the tube, and at the same time to defend its in- side from dust. To the lower part of the wire the gold leaves are fastened. The glass tube passes through the centre of the cap of the elec- trometer, and is cemented there about the middle of its length. When this construction is con- sidered, it will be evident that the insulation of the wire, and also of the gold leaves, will be pre- served until the inside as well as the outside o. the glass tube become coated with moisture ; bu* so effectually does the arrangement preclude this, that some of these electrometers have re- mained for seven years without being either warmed or wiped, and have still appeared to re- tain the same insulating power as at first. No. 2 shows this electrometer complete.

155 An electrometer of common use in the administration of medical electricity, sometimes attached to the Leyden jar, and sometimes made to fit into one of the ends of the prime conductor, is termed Lane's electrometer. Fig. 4 is a repre- sentation of this electrometer : it consists ot two brass balls of equal size, one of which is con- nected with the inside coating of the jar, and the other insulated opposite to the first, yet so as I admit of its being placed in contact with it, or at any required distance from it. That wh.ch is insulated is connected by a wire with the outer coating of the jar, so as to serve as a course the discharge which, it is very obvˆus from an inspection of the figure, will take place sooner or

later, according as the balls are placed either nearer to, or farther from, each other. But be- fore we proceed to notice the discharging electro- meter, we must describe one or two others which are both ingenious and useful.

156. We have described Mr. Cavallo's pocket electrometer at No. 154, but this gentleman con- structed another portable electrometer for atmo- spherical purposes, which deserves particular notice. Its principal part consists of a glass tube CDMN, fig. 5, cemented at the bottom into the brass piece AB, by which part the in- strument is to be

held when used for the atmo- sphere ; it also serves to screw the instrument into its brass case, AC, fig. 6. The upper part of the tube, CDMN, is tapered to a small extremity, which is entirely covered with sealing-wax ; to this tapering part a small tube is cemented ; the lower extremity being also covered with sealing- wax, projects a short way within the tube CDMN; into this smaller tube a wire is ce- mented, which with its under extremity touches the flat piece of ivory H, fastened to the tube by means of a cork; the upper extremity of the wire projects about a quarter of an inch above the tube, and screws into the brass cap E F, which cap is open at the bottom, and serves to defend the waxed part of the instrument from the rain, &c.

157. A section of the brass cap is represented in fig. 7, to show its internal structure, with the manner in 'which it is screwed to the wire pro- jecting above the small tube L. This small tube and the upper extremity of the large tube, CDMN, appear like one continued piece when joined, from the sealing-wax covering them both. The conical corks, P, fig. 5, which show the electricity by their repulsion, are made very small, and suspended by very fine silver wires, shaped like rings at the top, by which they hang very loosely on the flat piece of ivory H, which has two holes in it. By this method of suspen- sion, which Mr. Cavallo says is applicable to every sort of electrometer, the friction is reduced to almost nothing, and the instrument is thus rendered sensible to a very small degree of elec- tricity. IM and KN are two narrow slips of tin-foil, fixed on the inside of the glass CDMN, and communicating with the brass bottom A B. They serve to convey that electricity which, when the balls touch the glass, is communicated to it, and, being accumulated, might disturb the free motion of the balls.

158. To use this instrument for artificial elec- tricity, affect the brass cap EF, by an electrified substance, and the divergence or convergence of the balls of the electrometer, at the approach of an excited electric, will show the quality of the electricity. The best manner to electrify this in- strument is, to bring excited wax so near the cap, that one or both of the corks may touch the side of the bottle CDMN, after which they will soon collapse and appear unelectrified. On removing the wax, they will again diverge, and remain electrified positively.

159. To try the electricity of the fogs, air, clouds, &c., by this electrometer, the electrician must unscrew it from its case, and hold it by the bottom AB, to present it to the air a little above

his head, so that he may conveniently see the balls P, which will immediately diverge if there is any electricity; i.e. whether positive or nega- tive may be ascertained, by bringing an excited piece of sealing-

wax, or other electric, towards the cap E F.

160. M. Saussure has made an improvement in this electrometer. The principal circum- stances in which his electrometer differs from Mr. Cavallo's, are : The fine wires, by which the balls are suspended, should not be so long as to reach the tin-foil which is pasted on the inside of the glass ; because the electricity, when strong, will cause them to touch this tin-foil twice con- secutively, and thus deprive them in a moment of this electricity. To prevent this defect, and yet give them a sufficient degree of motion, it is necessary to use larger glasses than those that are generally applied to Mr. Cavallo's electrometer ; two or three inches diameter will answer the purpose very well. But, as it is necessary to carry off the electricity, which may be communi- cated to the inside of the glass, and may thus be confounded with that which belongs to those sub- stances that are under examination, four pieces of tin-foil should be pasted on the inside of the glass ; the balls should not be more than ˆ of an inch diameter, suspended by silver wires, moving freely in holes nicely rounded. The bottom of the electrometer should be of brass ; for this renders it more easy to deprive them of any ac- quired electricity, by touching the bottom and top at the same time.

161. This electrometer may be used instead of the condenser of M. Volta, by only placing it ou a piece of oiled silk, a little larger than the base of the instrument : but in this case the base, and not the top, of the instrument must be brought in contact with thf substance, the elec- tricity of which is to be explored. By this in- strument it is easy to ascertain the degree of conducting power in any substance. If it is placed on an imperfect conductor, as dry wood or marble, and if the instrument is electrified strongly, and afterwards the top is touched, the electricity will appear to be destroyed ; but, on lifting up the instrument by the top, the balls will again diverge, because the imperfect conduc- tor formed with the base a kind of electrophorus, by which the electric fluid was condensed, and lost its tension, till the perfect conductor was separated from the imperfect one ; whereas, if the conductor had been more perfect, it would have been deprived of its electricity immediately on the application of the hand. It is useful to discover also the electricity of any substance, as of clothes, hair of different animals, &c. For this purpose it must be held by the base, and the substance rubbed briskly (only once) by the ball of the electrometer ; the kind of electricity may be ascertained in the usual manner. But as the top of the electrometer acts, in this case, as an insulated rubber, the electricity it acquires is always contrary to that of the rubbed body.

162. To collect a great quantity of electricity from the air, this electrometer is furnished with a pointed wire from fifteen inches to two feet Ions:, which unscrews in three or four pieces, to render the instrument mon portable, see fig. 8.

When it rains or snows, the small cover, fig. 9, is to be screwed on the top of the instrument, as by this its insulation is preserved. This indicates not only the electricity of fogs, but also that of serene weather, and enables the observer to dis- cover the kind of electricity which reigns in the atmosphere ; and, in some degree, to form an estimate of its quantity, and that under two dif- ferent points of view, the degree of intensity, and the distance from the earth ‘at which it first begins to be sensible. A conductor exhibits signs of electricity only when the electric fluid is more or less condensed in the air than in the earth. Though the air resists the passage of the electric fluid, it is not absolutely impermeable to it ; it suffers it to pass gradually, and generally with more ease in proportion as its mass is less. It is, therefore, interesting to discover at what height it is necessary to be elevated, in order to find a sensible difference between the electricity of the earth and that of the air.

163. Mr. Brooke of Norwich constructed an electrometer of a very ingenious description, and certainly valuable in its application, of which he has given a full account in his Miscellaneous Experiments ; the limits, however, within which our article must be confined, will not allow of our giving his lengthened description of the instrument. We shall, therefore, present ou« readers with a short account of another electro- meter, the invention of professor Robison of Edinburgh, which in our opinion is, in its chief essentials, much superior to that of Mr. Brooke. This beautiful and delicate instrument is repre- sented by fig. 10, where A, a finely polished brass ball of a quarter of an inch diameter, is fixed on the point of a common sewing needle about three inches long,. and as slender as can be pro- cured of that length. On the other end of the needle is fixed a ball of amber, glass, or other non-conducting substance, of about % or fths of an inch in diameter. This ball is so fixed as that the needle does not quite reach to its surface, though the ball F must be completely perforated. From the electric ball there passes a slender glass rod, F, E, L, bent at right angles at E, so that the part F E may be about three inches long,

and the other extremity L, immediately opposite to the centre of the ball A. A piece of amber G, so cut as to have two parallel cheeks, is fixed on the extremity L of the glass rod. For the prin- cipal part of the instrument, a strong dry silk thread is to be prepared by dipping it perpen- dicularly in melted sealing-wax, till it be fully penetrated by the wax, so as to retain a thin coating of it.

164. The thread, thus coated, must be kept extended, so that it may be quite straight; it must be made perfectly smooth by holding it before a fire, and rolling it on a smooth table.

, It is then to be passed through a small cube of amber, that has two holes drilled in two of its opposite faces, perpendicularly to the stalk. By these holes the cube is suspended, so as to move readily, on two fine brass pins, between the cheeks of the piece of amber at L. The waxed thread is about six inches long, and is equally divided by the amber cube. To the end B is fixed a ball of some conducting substance, as of polished metal or “-Jit cork, a quarter of an inch

in diameter. The other extremity D passes through a cork ball, so as to move with a slight friction.

165. The construction of this part of the elec- trometer is such that when F E lies perpendicu- larly to the horizon, and the stalk BD, with its balls, is allowed to hang freely, the ball B just touches the ball A, as represented in fig. 11. The ball F is fixed to one end of a glass rod F I passing perpendicularly through the centre of a graduated circle GH.O, and furnished at the opposite extremity I with a knobbed handle of boxwood. H K is the stand of the electrometer, in the head of which is a hole in which the rod FI slides smoothly but not easily. There is also adapted to the glass rod FI an index NH that turns round it. This index is placed so as to be parallel to a line LA drawn through the centre of the ball A. And, as the circle is divided into 360 degrees, 0 being marked above, and 90 on the right hand ; the index will point out the angle which the line LA makes with the vertical line. It is convenient to have another index on the rod FI turning with some friction round it, and extending considerably beyond the circle GHO.

166. When this electrometer is used for com- puting the quantum of electricity belonging to any body, it must be connected by means of a wire with the substance to be examined : the wire must be fixed into the hole of the ball F, which is in part filled by the needle; and indeed it must come in contact with the needle. The index must now be turned round by the handle I until it stand at 90°. In this position C B is horizon- tal, and the ball B contiguous to A. If in this position the

balls B and A are electrified, they do not separate till the index be turned back towards 0. In some part of this space they will separate, and the point must be carefully noted, as this is the measure of their electric power while in contact. By turning still more towards 0, the separation is increased. An assistant must now turn the long index till it be parallel to the other, and consequently to CD. On loading the cork ball D with grain weights till B D be nicely balanced in a horizontal position, and computing for the proportional length of CB and C D, we obtain an exact measure in grains of the electric force with which the balls B and A separate in this position.

167 The electrometers already described have all been found highly useful to the practical electrician, according to the peculiar nature of the course of his experiments ; but for ascer- taining the actual repulsive and attractive powers of very faintly electrified bodies, they are per- haps all excelled by the ingenious invention of M. Coulomb, a French philosopher. The con- struction of this delicate instrument, which is called the torsion balance, will be best un- derstood by a reference to the plate, where we have given a representation of it in its comPleˆ state, and of some of its parts on an enlarged scale.

Fig 1, Plate IV., is a cylinder of flint glass twelve inches in diameter, and twelve in height, covered with a plate of glass, which B made fit to it by a projecting fillet on the lower sur- face and having in it four round perforations, of

an inch and three-fourths in diameter, one of which is in the centre f, and receives the glass tubefh, which is two feet in height, and is fixed in the glass plate with cement. Into the- top of this tube is inserted the brass piece H, fig. 2, No. 3, which is perfectly cylindrical, and having a small shoulder which rests on the top of the tube into which it is cemented. This brass piece is made to fit by means of a screw on the hollow cylinder, No. 2, fig. 2, to which is joined the circular plate a b, divided into 360 degrees, and having a hole G in its centre for admitting the cylindrical pin i, No. 1, fig. 2. This pin is sur- mounted with a milled head b, from which an index io projects, having a point turned down- wards at o, to mark the divisions on ab. This pin moves with some friction in the hole G, while the cylinder moves steadily in the brass piece H. To the lower end of the pin there is attached the pincer q, resembling the end of a solid port crayon, and capable of being tightened by a sliding ring : so as to seize a fine silver wire,

while its lower end is held by a similar pincer, shown by Po, fig. 3, and tightened by the sliding ring r.

168. The stalk ro is cylindrical, and is made so heavy as to keep the wire quite straight without breaking it. Fig. 3 exhibits this pincer with the arm z C q passing through it. The length of this arm is eight inches, and it is formed of a stout silk thread, or a fine round straw coated with wax, or with lac; it is about one-tenth of an inch diameter, and six inches long, and is ter- minated by two inches of wax drawn out into a fine thread. The end q carries a pith-ball a turned very smooth, and gilded, and the other end is a small circular plane of paper covered with var- nish, and of sufficient weight to counterpoise the pith-ball a, which is from one-fourth to one-half of an inch in diameter.

1 69. Fig. 1 represents the whole of the parts of the instrument in their combined form. The arm is represented as hanging horizontally in the middle of the glass cylinder, so as to admit of its turning freely round its centre, in a circle de- scribed on the glass by a graduated slip of paper divided into 360°. When a is opposite to o on this graduated circle it is contiguous to the ball b, which hangs within the cylinder by a silk thread covered with lac, and kept steady by the piece of wood, which is seen lying on the cover, from which it is suspended. This position of the instrument is produced by turning the milled head b, which carries the index io, called the twist index, round until it points to o on the graduated circle a b, and the whole is then turned in the brass socket H, till the ball a stands at O on the graduated paper circle Q. Fig. 4 repre-

r sents a cylindrical stick of sealing-wax in the one end of which is inserted a fine brass wire erminated by a smooth ball. Fig. 5 is another part of this apparatus shown on an enlarged scale ; it consists of a plug of sealing-wax A, which is made to fit tightly into the upper part of the instrument ; through this plug of wax a wire c, hooked at the top, passes perpendicu- larly, and terminates in the finely polished me- tallic ball d; its use is to connect the electro- nie'ter v ith ether bodies.

170. We shall here add, as an illustration of the method of using this ingenious instrument, an account of Coulomb's method of determining by it the electrical repulsion of the two balls a and b when electricity was communicated to them. Having electrified the brass pin, fig. 5, it was introduced through the hole m, in the top of the cylinder, and made to touch the ball b, in contact with the ball a, thus communicating its electricity to the two balls, which consequently became electrified with the same electricity ; and, on this pin being

withdrawn, a mutual repulsion took place between the two balls, a being driven from b to a distance easily measured on the gra- duated scale, and obviously regulated by the resistance of the wire to farther torsion. After a few slight oscillations the arm will rest and tht degree of repulsion may be accurately noted. The index i o is now to be turned backwards till the ball a. come to its former position, by which movement the silver wire will be twisted, and a force produced proportional to the angle of torsion which is required to bring the ball a in contact with the ball b. By this means M. Coulomb ascertained the distance at which dif- ferent angles of torsion bring the balls in con tact after mutual repulsion ; by comparing the forces of torsion with the corresponding distance, of the balls, he obtained a measure of thek repulsive force.

171. The following are given by Dr. D. Brewster, as the results of some experiments with this curious instrument, by its inventor.

(1.) The two balls being electrified with the head of the pin, and the index of the micrometer being set to zero, the ball a was repelled by the ball b to the distance of 36°.

(2.) The silver wire being twisted by turning the index of the micrometer 126°, the ball a approached to the ball b, and stopped at the distance of 18° from it, having moved back- wards through an arc of 18°.

(3.) Having again twisted the silver wire through an arc of 567°, the two balls ap- proached, and stopped at the distance of 8° 30’.

172. Now, as the force of torsion, or the force which is capable of keeping a thread twisted to a certain degree, so as to hinder it from turning round its axis, and recovering its natural state, has been shown by Coulomb to be proportional to the angle of torsion, or the arc through which it has been twisted, we have in the first experi- ment such a force, equal to 36°; and in the second experiment, when the distance of the balls was 18°, the angle, and consequently the force of torsion, was 126° + 18 — 144° ; hence the repulsive force, at the distance of 36°, was 36° : and the repulsive force, at the distance of 18°, was 144°, or quadruple at half the distance. In the third experiment, when the distance of the balls was 8° SO’, the force of torsion was 567° ; so that, at a quarter of the distance, the repulsive force was nearly eight times as great. From this it follows, that the repulsive force of two small globes electrified either positively or negatively, is in the inverse ratio of the square* of the distance of the centres of the two globes.

173. In these experiments, the wire P / was twenty-eight inches long, and ˆ of a grain in weight,

IimJorL,fubHshfil lyr Thcma.f Icqq Sc •forv,7ˆ,

and the force necessary to twist it through an angle of 300°, when at the distance a P, was 3jB of a grain, as calculated from the formulae given by M. Coulomb in his Memoir on the force of Torsion. Hence the real forces in the preceding experiments were,

Distances of Angles and Forces Absolute Forces the Balls. of Torsion. in grains.

36° 36 3ˆ,m of a grain.

18 144 jfe

8£ 576 jk

1T4. An electrometer has been constructed by Mr. Cuthbertson, which, we think, in point of real utility, to the practical electrician, is equalled by none with which we are acquainted. Those only who have to go through the operation of melting wires before a public audience, can duly appreciate the value of this incomparable instru- ment. We have given in fig. 6 a representation of this discharging compound electrometer, as connected with a single jar, which, if it be about six inches ki diameter and twelve inches high, will be sufficient to fuse four inches of fine pen- dulum wire. A description of it may be of use to the inexperienced electrician. The base G H is an oblong square piece of mahogany of about eighteen inches long, and six in breadth : in this are three glass supports, D, E, F, mounted with brass balls, a, b, c. Under the brass ball a there is placed a brass hook ; the ball c is made of two hemispheres, the under one being fixed to the brass mounting, and the upper turned with a groove to shut upon it, so that it may be taken off at pleasure. The ball b has a brass tube fixed to it, about three inches long, cemented to the top of F ; and a hole at the top, of about half an inch in diameter, corresponding with the inside of the tube. AB is a straight brass wire, with a knife-edged centre in the middle, placed a little below the centre of gravity, and equally balanced with a hollow brass ball at each end, the centre, or axis, resting upon a properly formed piece of brass fixed in the inside of the ball c ; that side of the hemisphere towards c is slit open, to permit the

end cA of the balance to descend till it touches the ball a, and the upper hemisphere C is also so opened to permit the end c B to ascend ; i is a weight of a certain number of grains, and made in the form of a pin with a broad head ; the ball B has two holes, one at the top, and the other at the bottom ; the upper hole is so wide as to let the head of the pin pass through it, but to stop at the under one, having its shank hanging freely in b; several such pins are made to each electrometer of different weights ; k is a Henley's quadrant electrometer, and when in use it is screwed upon the top of c.

1 75. It is obvious, from the construction, that if the foot stand horizontally, and the ball B be made to touch b, it will remain in that position without the help of the weight i ; and if it should receive a low charge, the two balls b, B, will repel each other ; B will begin to ascend, and, on account of the centre of gravity being above the centre of motion, the ascension will continue till A rest upon «. If the balance be again set horizontally, and a pin t, of any small weight, be

put into its place in B, it will cause B to vest upon by with a pressure equal to that weight, so that more electricity must be communicated than formerly, before the balls will separate ; and, as the weight in B is increased or diminished, a greater or less quantity of electricity will be re- quired to effect a separation.

176. When this instrument is to be used with a jar, or battery, one end of a wire, L, must be inserted into the ball b, and the other end into a hole of any ball proceeding from the inside of a battery, or jar, as M ; k must be screwed upon c, with its index towards A; the reason of this in- strument being added, is to show, by the index continuing to rise, that the charge of the bat- tery is increasing, because the other part of the electrometer does not act till the battery has re- ceived its required charge.

177. It was formerly observed that the un- coated part of a jar might be too dry to admit of its being highly charged : the following expe- riment will illustrate the truth of this, as well as show the use of the electrometer just described in fusing wires. Every thing being prepared, as represented in the figure, with the jar M an- nexed to the electrometer, which jar may con- tain 168 square inches of coating put into B, the pin marked 15, take two inches of watch pen- dulum wire, fix to each end a pair of small pincers, as is represented at G m, hook one end to m, and the other to the wire N, communi- cating with the outside of the jar ; let the un- coated part of the jar be made very clean ard dry ; and let the prime conductor of the ma- chine, or a wire proceeding from it, touch the wire L ; if then the machine be put in

motion, the jar and electrometer will be charged, as will be seen by the rising of the index k, and, when charged high enough, B will be repelled by b ; A will descend and discharge the jar through the wire, which was confined in the pincers, and the wire will be fused and run into globules.

178. Repeat this experiment with the follow- ing variations, viz. instead of two inches of wire take eight ; and instead of loading the ball with fifteen, insert the pin weighing thirty grains; charge, as before, and a spontaneous explosion will take place between the coatings of the jar without moving the electrometer, and conse- quently the wire will remain as it was. But let the uncoated part of the jar be now a little moistened by breathing on it through a glass tube ; charge the jar again, the electrometer will operate, the charge pass through the circuit, and the whole length of the wire will appear red-hot, and be instantly fused into globules.

179. A very useful instrument, called the uni- versal discharger, was invented by Mr. Henley. It is shown in fig. 7, and consists of a maho- gany base, A A, fourteen inches long, and about four broad. B, B, are two glass pillars, cemented in two holes upon the board A, and furnished at top with brass caps, each of which has a turni%- joint, and supports a spring tube, through which the wires D, D, slide. Each of the caps is com- posed of three pieces of brass, connected so that the wires D, D, besides their sliding through tho sockets, have a horizontal and vertical motion. Each of the wires, D, D, is furnished with an

open ring at one end, and at the other it has .a brass ball, which, by a short spring socket, is slipped upon the pointed extremity, and may be removed. E is a circular piece of wood, having on its surface a slip of ivory, inlaid, and fur- nished with a foot, which slides into the socket F, in which it is made fast at any required height by the screw S. To this discharger be- longs the small press, fig. 8, the stem of which fits into the socket, instead of the circular table E On the top of the stem are two oblong boards, which are pressed together by means of two screws. Between these boards may be placed any substance which requires to be pressed while the electric fluid is sent through it. The construction of this instrument is such as to enable the operator to use it with advan- tage in numerous experiments ; particularly the oxidation of metallic leaves between slips of card paper, or of glass;

splitting small pieces of oak, firing gunpowder, &c.

CONDENSERS AND DOUBLERS OF ELECTRICITY.

180. Condensers of electricity are instruments used for the detection of very small portions of that matter, portions too minute to be rendered sensible by any of the electrometers which we have yet described. Several very ingenious elec- tricians have employed themselves in the con- struction of instruments for this purpose: the principal of these contrivances we shall now briefly describe.

181. Volta appears to have been the first who attempted any thing of this description. His condenser of electricity consists of a flat and smooth metal plate, furnished with an insu- lating handle, and a semi-conducting, or imper- fectly insulating, plane. When it is required to examine a weak electricity with this apparatus, as that of the air in calm and hot weather, which is not generally sensible to an electrometer, the operator must place the above-mentioned plate upon the semi-conducting plane, and a wire of some other conducting substance must be con- nected with the metal plate, and extended in the open air, so as to absorb its electricity; then, after a certain time, the metal plate must be se- parated from the plane ; and, on being presented to an electrometer, it will electrify it much more than if it had not been placed upon the above- mentioned plane.

182. The principle on which the action of this apparatus depends, says Mr. Cavallo, is, that the metal plate, whilst standing contiguous to the semi-conducting plane, will both absorb and retain a much greater quantity of electricity than it can either absorb or retain when separate, its capacitybeing increased in the former and di- minished in the latter case.

182.* This condenser was afterwards improved on by Mr. Cavallo, by employing a small metallic plate, about the size of a shilling, having affixed to it a glass handle covered with sealing-wax. When the larger plate appeared so slightly elec- trified by the communicated electricity as not to affect the electrometer, he then placed the small piate on the plane and touched it with the edge of the large one, holding the latter in an almost

vertical position ; the small plate was thus found to indicate a very sensible degree of electricity.

183. One of the- most convenient and elegant condensers yet contrived is that of Mr. Cuthbert- son. This instrument is shown iu fig.

9, and is composed of two metallic plates, a and b, about six inches in diameter, tightly screwed to two brass balls, but so as that one of them be fixed immoveably to a glass- pillar, as e, while the other is fastened to a brass pillarˆ) having a hinge at its lower extremity by which it can be moved back- wards into the position g. When the instrument is used, the electricity to be examined is com- municated to the insulated plate b, while it is parallel to the uninsulated plate a, and after re- maining for some time in this position the unin- sulated plate is drawn back, and the intensity of the insulated plate, a, is shown by being pre- sented to an electrometer in the usual way.

184. A modification of this instrument, called the condensing electrometer, is represented by fig. 10. In this construction the plates are smaller, and the insulated plate is attached to the cap of a gold-leaf electrometer; by this means very small degrees of electricity are dis- covered, and their intensity shown by the di- vergence of the gold leaves within the cylinder.

185. A condenser, of a remarkably simple description was proposed by Mr. Singer, and is constructed by placing three small spots of sealing-wax, at equal distances, on the lower face of the cover of an electrophorus, to serve as insulating feet, by which the cover may be supported at the distance of about the twelfth of an inch from the surface of a smooth and even table. If a Leyden jar, he adds, be now charged, and afterwards discharged, so as not to affect an electrometer, and its knob be then placed in con- tact with the condenser resting on the table for a few seconds, the small residuum of electricity in the jar will be absorbed by the condensing plate; and when this is raised from the table it will affect the electrometer with the same electricity as that with which the jar was charged.

185*. Doublers of electricity are instruments so constructed as that very small quantities of electricity may be continually doubled by them, until, being condensed, they are rendered per- ceptible by the common electrometer.

186. An instrument of this kind was invented by the Rev. Mr. Bennet, and is represented by fig. 1, plate V. It is formed by the addition of two polished brass plates, with insulating handles, to the common gold-leaf electrometer. The plates are varnished on the lower side, and the insu- lating handle of one of them, B, is fixed to the side, while that of the other, A, is placed perpen- dicularly in the centre. Though this apparatus appears to be very simple, it requires a very complex process, and has, therefore, generally given place to what are called moveable or re- volving doublers.

187. Revolving doublers appear to have been first introduced by Dr. Darwin, who claims the merit of the invention. Darwin's doubler was moved by a train of wheels, and required to be touched by the hand to place the plates in the requisite positions. This instrument was much improved by Mr. Nicholson ; a representation o»

it, in its improved form, is given in fig. 2. The whole is supported on a glass pillar six inches and a half high, and consisting of the following parts : — Two fixed plates of brass, A and C, are separately insulated and disposed in the same plane, so that a revolving plate B may pass very near them without touching. Each of these plates is two inches in diameter ; they have ad- justing pieces behind, which serve to place them correctly in the required position. D is a brass ball on which they turn, of two inches diameter, fixed on the extremity of an axis that carries the plate B. Besides the essential purpose which this ball is intended to answer, it is so loaded within on one side, that it serves as a counter- poise to the revolving plate, and enables the axis -to remain at rest in any position.

188. The use of this ingenious instrument will be best understood from the following account of it given by Mr. Nicholson in the Philosophical Transactions : — ' When the plates A and B/ says Mr. Nicholson, ' are opposite to each other, the two fixed plates A and C may be considered as one mass ; and the revolving plate B, together with the ball D, will then constitute another mass. All the experiments yet made concur to prove that these two masses will not possess the same electric state ; but that, with respect to each other, their electricities will be plus and minus. These plates would be simple, and without any compensation, if the masses were remote from each other ; but, as that is not the case, a part of the redundant electricity will as- sume the form of a charge in the opposed plates

A and B. From other experiments I find/ says Mr. Nicholson, < that the effect of the compen- sation on plates opposed to each other at the dis- tance of one-fortieth part of an inch, is such, that they require to produce a given intensity at least 100 times the quantity of electricity that would have produced it in either, if placed singly and apart.

189. The redundant electricities in the masses under consideration, will therefore be unequally distributed : the plate A will have about ninety- nine parts, and the plate C one ; and, for the same reason, the

revolving plate B will have ninety-nine parts of the opposite electricity, and the ball D one. The rotation, by destroying the contacts, preserves this unequal distribution, and carries B from A to C, at the same time that the tail K connects the ball with the plate C. In this situation, the electricity in B acts upon that in C, and produces the contrary state, by the communication between C and the ball ; which must therefore acquire an electricity of the same kind with that of the revolving plate. But the rotation again destroys the contact, and restores B to its first situation opposite to A.'

190. Here, if we attend to the effect of the whole revolution, we shall find that the electric states of the respective masses have bfeen greatly increased ; for the ninety-nine parts in A and in B remain, and the one part of electricity in C has been increased so as nearly to compensate ninety-nine parts of the opposite electricity in the revolving plate B, while the communication produced an equal mutation in the electricity of the ball. A second rotation will of course pro-

duce a proportional augmentation of these in- creased quantities, and a continuance of turning will soon bring the intensities to their maximum, which is limited by an explosion between the plates.'

191. 'If one of the parts be connected with an electrometer, more especially that of Bennet, these effects will be very clearly seen. The spark is usually produced by a number of turns between eleven and twenty ; and the electrometer is sensibly acted upon by still fewer. When one of the parts is occasionally connected with the earth, or when the adjustment of the plates is altered, there are some variations in the effects not difficult to be reduced to the general princi- ples, but sufficiently curious to excite the atten- tion of persons the most experienced in this branch of natural philosophy.

192. ' If the ball be connected with the lower part of Bennet's electrometer, and the plate A with the upper part, and any weak electricity be communicated to the electrometer, while the position of the apparatus is such that the cross piece G H touches the two pins, a very few turns will render it perceptible. But here, as in the common doubler, the effect is rendered uncertain by the condition that the communicated electri- city must be strong enough to destroy and pre- dominate over any other electricity which the plates may possess. I need scarcely observe, that, if this difficulty should be hereafter removed, the instrument will have great advantages as a multiplier of electricity in the facility of its use, the very speedy manner of its operation, and the unequivocal nature of its results.'

193. Several of the instruments we have now described appear capable of collecting and im- parting small quantities of electricity; but it may be questioned if any of them can be said to do so on a scale comparable with that of the com- mon electrophorus of Volta, which may be said to be a kind of electrical machine. Fig. 3 is a representation of this simple but highly useful article of apparatus, which any person at all skilled in the use of electrical apparatus may construct for himself by attending to the follow- ing directions. Procure two circular plates of metal, or of wood covered with tin-foil, and well rounded at the edges ; these are the conductors : between them is placed a resinous plate, formed by melting together equal parts of shell-lac, resin, and Venice turpentine, and pouring this mixture, whilst fluid, within a tin hoop of the required size, placed on a marble table, from which the plate may be readily separated when cold. This plate should be half an inch in thickness ; it is sometimes made by pouring the: mixture on one of the conductors, which is then formed with a rim for that purpose. In the cen- tre of the upper conductor is fixed a glass handle of about ten inches long, for the purpose of lift- ing it without drawing off its electricity; and, when the electric state of the lower conductor is to be examined, the whole apparatus must be placed on an insulating stand. To use the elec- trophorus, rub the upper surface of the resinous plate with a piece of dry fur ; cat's skin is

reckoned the best, and it will be excited nega- liv»ly. Place the upper conductor upon it, and then raise the same by its insulating handle ; it will be found to exhibit very faint, if any, elec- trical signs. Replace the conductor, and, whilst it lies on the surface of the excited plate, touch it with a finger or any other uninsulated conductor, and then raise it again by its handle. It will now be positively electrified, and afford a spark : if it be then replaced on the resinous plate, touched, and again raised, another spark will be procured, and this process may be repeated for a consider- able time without any perceptible diminution of effect. Jars may be charged by bringing them in contact with the conductor each time it is lifted, with an instrument of this kind only six inches in diameter. Cavallo charged a jar seve- ral times successively, and such was the strength of the charge that it was capable of piercing a card.

194. Such is the tenacity, so to speak, with which this instrument holds the electricity once excited, that some have been led to consider it as affording a perpetual source of that matter. On this opinion Mr. Cavallo makes the following just remarks : — ‘As to the continuance of this electric plate, when once excited without repeat- ing the excitation, I think there is not the least foundation for believing it perpetual, as some gentlemen have supposed it to be; it being nothing more than an excited electric, it must gradually lose its power, by continually impart- ing some of its electricity to the air, or other sub- stances contiguous to it. Indeed its electricity, although it could never be proved to be perpe- tual by experiments, lasts a very long time, it having been observed to be pretty strong several days, and even weeks, after excitation. The great duration of the electricity of this plate, I think, depends upon two causes : first, because it does not lose any electricity by the operation of putting the metal plate upon it, &c.; and, secondly, because of its flat figure, which ex- poses it to a less quantity of air, in comparison with a stick of sealing-wax, or the like, which, being cylindrical exposes its surface to a greater quantity of air, which is continually robbing the excited electrics of their virtue.’ Numerous experiments are given in the writings of electri- cians as having been performed by the aid of this instrument ; these we shall not here detail, but simply remark, that, if properly managed, it will be found capable of communicating a very high charge to tolerably sized Leyden jars.

PART III. MECHANICAL EFFECTS OF ELECTRICITY.

195. Under this part of the subject it is in- tended to give a popular view of a variety of electrical phenomena rather of a ‘general and promiscuous nature, and which, from the variety necessarily involved, could not have been conve- niently introduced under any other head. Among others we shall notice chiefly the following, viz. the direction of the electric fluid ; its influence in expanding bodies through which it is made to pass ; its power in rending solid bodies ; its agency in the combustion and oxidation of me-

tallic substances, and in inflaming numerous combustible substances.

DIRECTION OF THE ELECTRICAL FLUID.

196. From among the numerous experiments given to demonstrate, as far as it can be done the course of the electric fluid in its passages from one body to another, we select the following from Mr. Singer and others.

197. The direction of the electric fluid maybe rendered visible by taking a Leyden jar that has been rendered slightly damp by being breathed on, and placing it with its knob in contact with the positive conductor of an electrical machine in a darkened room; when the jar is fully charged, if the action of the machine be con- tinued, the fluid will be observed to pass from the internal to the external coating over the un- coated interval in luminous streams, like water overflowing from the top of a vessel kept con- stantly supplied. If the jar be removed, and its knob placed against the negative conductor, the stream will evidently pass in the contrary direc- tion. A degree of dampness on the uncoated part of the glass is necessary, in this experiment, to prevent the discharge of the jar by a sponta- neous explosion, in which case the fluid passes too rapidly from one surface to the other to allow the observer to ascertain its direction. If the moisture be not sufficient, diverging brushes of light will occasionally pass from the positive sur- face, instead of the continuous streams above mentioned.

198. Let a light wheel, the vanes of which are made of fine card-paper, be made to turn freely on its axis, a stream of electricity from a pointed wire fixed in the conductor will give it motion ; and it will move from the electrified point whe- ther its electricity be positive or negative. In this experiment the current seems to be produced by the recession of the similarly electrified air in contact with the point ; and, therefore, the cir- cumstance of the wheel turning in the same direction when the electricity is negative, cannot, as Mr. Singer has justly observed, be considered as a proof of the existence of a double current of the electric fluid.

199. Make a groove, either by bending a piece of clean card-paper, or by hollowing out a piece of baked wood, or by placing, parallel to each other, two straight sticks of sealing-wax; lay the groove upon. the plate of Henley's uni- versal discharger, and place a large pith-ball, about half an inch in diameter, so as to be at an equal distance from the two brass knobs of the discharger. The distance of these should be about four inches, and the groove placed in the line joining the knobs. If one of the wires be now connected with the outside of a charged jar, while the knob of it is brought in contact with the other wire of the discharger, so that a small spark may pass from the one knob to the other, the pith-ball will be impelled from the positive to the negative knob. In performing the above experiment Mr. Singer used pointed wires instead of knobbed ones, and assigned, as his rea- son for this, that the knobs may attract the pith- ball, whereas the stream from the pointed wire must impel it.

200. Mr. Singer in the following experiment has availed himself of the discovery of Cavallo, who observed that some mineral colors are affected by passing over them the electrical dis- charge. Color, says he, both sides of a card with vermilion, and place it upon the table of Henley's discharger ; one of the wires should be beneath the card, and the other in contact with its upper surface ; the distance of the points of the wires being one inch. If a charge be now sent through the wires, the fluid will pass from the positive wire across the surface of the card to the part over the negative wire, and will there perforate the card in its passage to that wire. The course of the fluid is indicated by a black line on the card, reaching from the point of the positive wire to the perforation ; and by a diffused black mark on the opposite side of the card around it, and next the negative wire. These effects are pretty constant, the black line always appearing on the side of the card which is in contact with the positive wire, and the per- foration being near the negative wire.

201. But the most satisfactory exhibition of the course of the fluid from the positive to the negative conductor is afforded in the next experiment, which was the contrivance of Mr. Singer, and which he himself considered as re- moving all difficulties on the subject. It has, observes he, been long known that a light float- wheel, made by inserting several vanes of card in the periphery of a cork that is made to turn freely on a pin or centre, will be put in motion by presenting it to an electrified point ; and the motion of the wheel being always from the point, whether that point was positive or negative, has been occasionally urged as an argument for a double current of the fluid ; although it is evi- dent, from what has been already stated, that a point either positive cr negative must produce a current, by the recession of the air opposed to it when similarly electrified, by its contact, which is fully adequate to the production of these ef- fects. Conjecturing that the currents of electri- fied air would not take place in this manner if the points were opposed to each other, the following arrangement was made.

202. A light float-wheel of the above descrip- tion, being mounted so as to turn freely between two upright wires, was placed on an insulated stem, and introduced between the pointed wires of Henley's discharger, which were placed ac- curately opposite to each other, and at the dis- tance of rather better than an inch from the upper vanes of their respective sides. On con- necting one of the wires with the positive con- ductor of the machine, and the other with the negative conductor, and turning the machine, vhe wheel will move in a

direction from the positive to the negative wire. On reversing the connexions, so that the wire which was negative may become positive, and that which was posi- tive be made negative the motion of the wheel will be reversed ; for it vill still move from the positive to the negative wire, thus proving that the electricity moves in that direction. A re- presentation of this wheel, with the method of using it, is given in fig. 3, where A is the float- wheel placed on the universal discharger B, the

wires of which, C, C, are directed against the floats of the wheel.

EXPANSIVE POWER OF THE FLUID.

203. The influence of the electric matter in expanding bodies through which it is sent, may be clearly illustrated by these experiments. Place a small card, or the cover of a book against the outer coating of a charged jar, ex- posing about a square foot of coated surface; put one end of the discharging rod against the card, and bring the other to the knob of the jar; the charge will pass through the card and per- forate it, producing a small bur on the side next the discharging rod, and a larger one on the side which was in contact with the coating of the jar. In the same manner, by using the more powerful charge of a battery, a perforation may be made through a quire of paper or a thin unbound book ; and, if either of these be freely suspended between the balls of the universal discharger, no motion of the paper will be produced, but the charge will pass through it without in the least disturb- ing it, for the same reason that a musket ball will pass through a door without causing it to turn on its hinges, although, under the same cir- cumstances, a very slight force would be sufficient to move it.

204. The effects produced on the card in the preceding experiment, as well as some others that have resulted when the experiment has been varied, have led some electricians to suppose that they might be viewed as indications of the course of the electric matter, and as affording no obscure proof of the existence of two fluids ; but Mr. Singer has, in our opinion, satisfactorily shown that they are produced solely by an ex- pansion of the paper.

205. The following illustration of this in- fluence is attributed to Mr. Lane, the inventor of the discharging electrometer. Roll up a piece of soft pipe-clay, in the form of a small cylinder, and insert in it two wires, so that their ends, without the clay, may be about one-fifth of an inch from one another. If a charge be sent through this clay, by connecting one of the wires with the outside of a jar, and the other

with the inside, it will be inflated by the shock passing between the two wires, and, after the explosion, will appear swelled in the middle. If the charge sent .through it is too strong, and the clay not very moist, it will be broken by the explosion, and the fragments scattered in every direction. To make this experiment with a little variation, take a piece of the tube of a tobacco-pipe, about one inch long, and fill its bore with moist clay ; then insert in it two wires, as in the above rolled clay, and send a charge through it. This tube will be burst by the force of the explosion, and its fragments will be scattered about to a great distance. If, instead of clay, the above-men- tioned tube of the tobacco-pipe, or a glass tube, which will answer as well, be filled with any other substance, either electric or non-electric, inferior to metal, on making the discharge it will be broken to pieces with nearly the same foice.

206. The expansion of fluids by electricity is truly remarkable, and often productive of some singular results. When the charge is strong, no

sclass t essel can resist its force. Beccaria placed a drop of water between two wires in the centre of 3. solid glass ball of two inches in diameter ; on passing a shock through the water the ball was dispersed with great violence. Mr. Morgan succeeded, by the same means, in breaking green glass bottles, filled with water, when the distance between the wires that conveyed the spark and the sides of the glass was upwards of two inches.

207. A single spark may be made to perforate a strong glass tube by the following simple process : fill a small phial with olive oil, and in- sert into it a pointed wire bent at right angles, so that by sliding through a cork fixed in the neck of the phial, the point of the wire may rest against any part of the inside beneath the oil : attach the phial by its wire to the conductor of the machine, and bring the knuckle or a brass ball near the outside of the phial, opposite to the point of the wire within it; a spark will pass from the point to the knuckle, and make a small hole in the glass. By varying the situation of the point, many such perforations may be made in the glass.

208. Of this very singular experiment Mr. Singer offers the following rational account. The point, he says, serves as an internal coating to a very small portion of the glass; and the charge being prevented from

extending, by the surrounding oil, the whole power of the machine is concentrated in that point, and consequently soon overcomes its resistance. Similar effects will always result when a large quantity of elec- tricity is suddenly transferred to a comparatively limited surface.

209. Make a small mortar of ivory, with a cavity of half, an inch diameter and an inch deep ; insert two wires through the sides of the mortar, so that their points within the cavity may be separated by an interval of i of an inch ; fit a cork cap so as to close the aperture as accurately as possible without friction : when a strong charge is passed through the wires, the air within the mortar will be suddenly expanded, and the cork projected to a distance with some violence.

210. Satisfactory and striking as the preceding experiments are, they appear inferior to the following : in making experiments on the effects of explosions of electricity sent through metallic bodies, Dr. Priestley found that a chain which he had used as the medium of conveying the charge was shorter after being used than it was before. This led him to try the effect of a strong charge on a definite length of chain : the charge was sent from sixty-four square feet of coated surface, through twenty-eight inches of chain, which, on being measured again, was found to be con- tracted a quarter of an inch in its whole length.

211. This experiment was repeated by Mr. Nairne with a piece of hard-drawn iron wire ten inches in length, and ˆ of an inch in diameter. Through this wire he discharged twenty- six feet of coated surface nine times ; after the sixth and the ninth time the wire was measured, and it was found to be shortened ˆ of an inch after each discharge. By farther discharges sent through it, the wire was shortened lˆjth inch.

That this contraction arose from expansion ap- peared from the wire having increased in thick- ness whilst it was diminished in length.

SOLID BODIES RUPTURED BY ELECTRICITY.

212. The simplest form, perhaps, in which this can be done, is to place on the table of Henley's discharger a piece of dry writing-paper, and pass over it, by means of the pointed wires, a powerful charge from a large jar; if the wires be placed at about two inches asunder, and so as to touch the ends of the paper, it will be torn in pieces. If, instead of the paper, a number of wafers be placed in the circuit, they will be curiously dispersed, and many of them broken to pieces.

213. Make two small holes in the opposite ends of a piece of oak, of

about half an inch long and a quarter of an inch thick ; introduce two wires into the holes, so that their extremities within the wood may be rather less than a quarter of an inch distant ; on passing a strong charge from one wire to another, the wood will be split. Several other substances that are imperfect con- ductors, such as loaf-sugar, marble, &c., undergo similar injuries, when introduced into an elec- trical circuit; and even the hardest bodies, and the most perfect non-conductors, such as glass, are perforated or broken by a strong charge.

214. Lay a piece of plate-glass of about an inch square, and half an inch thick, on the table of the universal discharger, or screw it very tightly within the press of the same; set the prints of the sliding wires opposite to each other, and against the under surface of the glass, so that the charge may pass along that surface. If now a strong charge be passed in this way, the glass will be broken into small fragments, and some of it reduced to an impalpable powder.

215. The following experiment affords a beautiful, though rather an expensive, illustration of the same principle. Charge a very large jar, and connect its external coating with that of one ten or twelve times smaller ; form a communi- cation between their internal coatings by the discharging rod, and the small jar will be broken in pieces, by the strength of the quantity of electricity thus suddenly transferred to it.

INFLAMMABLE SUBSTANCES KINDLED BY ELECTRICITY.

216. Almost all inflammable substances may be kindled by means of electricity, but those ge- nerally selected for the purpose of experiment are resin, gunpowder, rectified spirit of wine, ether, and hydrogen gas.

217. The common method of kindling resin by the electric spark is to pulverise it, and dust the powder on some dry cotton wool. Thus, if a small quantity of flax, or of cotton wool, be loosely tied on one of the knobs of the dis- charging rod, and a little finely-powdered resin dusted on it, and a jar be discharged by bringing the end of the rod thus prepared in contact with the knob of the jar, the charge will pass through the flax, or wool, and in so doing will melt and ignite the resin, and set the whole on fire. A very neat contrivance “or giving this experiment

a bette- effect is represented by fig. 4. A is a mahogany board, six inches in length, three in breadth, and half an inch in thickness. B is a

glass pillar fixed in the middle of A, and sup- porting a piece of wood C, which is three inches long, an inch and a half broad, and about three quarters of an inch thick. In each end of this piece there is a small screw-ring : the extremities of these screws just touch a wire proceeding to each of them from two small brass knobs in- serted at the ends of a shallow groove on the upper side of C ; these rings serve to hook the chains on when the instrument is used. On the back part of C stands the perpendicular piece D, in the top of which is fixed the brass pin E. To use this for the purpose of igniting resin, it is only necessary to dust the cotton with powdered resin, and hang it on the pin E, letting the lower part of it reach down to the piece C. Connect one end of C with the inside of a jar and the other end with the outside ; discharge the jar, and the fluid in passing between the two small brass knobs will inflame the resin and kindle the cotton.

218. But the inflammation of resin is rendered still more striking by the following experiment : let a flat porcelain dish be filled with water, and on the surface of the water strew a quantity of finely powdered resin ; place two wires at the opposite sides of the dish, having their ends near the surface of the water, and at about the distance of four inches from each other. Pass the charge of a large jar through this circuit, and the resin which forms a part of it will be beau- tifully inflamed.

219. The firing of gunpowder by the electrical explosion requires considerably more care and address than the firing of resin. It may, how- ever, be effected by the following method : take either a large goose-quill or a small cartridge of paper, and fill it with gunpowder ground very fine ; into this insert two wires, one at each ex- tremity, so that their ends within the quill or car- tridge may be about one-fifth of an inch from each other : this done, send the charge of a phial through the wires ; and the spark between their extremities, that are within the cartridge, or quill, will inflame the gunpowder. If the gunpowder be mixed with steel-filings, it will take fire more readily, and with a very small charge.

220. Rectified spirit of wine, or ether, may be thus inflamed by a single spark from the con- ductor of the machine when in action : hang to the prime conductor a short rod having a small knob at its end ; then pour some spirit of wine, a little warmed, into a metallic spoon ; hold the spoon by the handle, and place it so that the small knob on the rod may be about one inch above the surface of the spirit, In this situation, if a spark be taken from the knob, it will set the spirit on fire. This experiment may be varied and rendered very agreeable to a company of spectators. A person standing upon the insu- lating stool,

and communicating with the prime conductor, may hold the spoon with the spirit in his hand, and another person standing upon the floor may set the spirit on fire by bringing his finger within a small distance of it. Instead of

his finger, he may fire the spirit with a piece of ice, when the experiment will seem much more surprising. If the spoon is held by the person standing upon the floor, and the insulated person brings some conducting substance over the sur- face of the spirit, the experiment succeeds equally well. This experiment is sometimes rendered still more striking in the following manner : near the prime conductor of the ma- chine, place on the table three wine glasses; connect the first glass with the conductor by a brass chain, which will reach to the bottom of it ; and with it let the second and third be con- nected by a piece of fine brass wire, bent in the form of the letter A. Fill the first and second glasses with water, and into the third pour a little ether ; turn the machine, and with a wire, having a small ball affixed to it, draw a spark from the ether, and it will be immediately in- flamed. In this experiment the electric fluid had to pass through two distinct portions of water before it could come to the ether.

221. Hydrogen gas is generally inflamed by the electric spark in the following manner : take a brass cannon, such as is represented in fig. 5, and charge it with hydrogen gas by holding the mouth of it for about half a minute over a stone or glass bottle in which the gas is generated, and then fix the cork tightly into the mouth of the cannon. The person who is to discharge it must now stand on the insulating stool, and, holding in his hand a chain attached to the prime conductor, must, with a wire and ball held in the other hand, communicate a spark to the knob of the cannon : this spaik will pass into the in- terior of the cannon through the glass tube B, and the gas will instantly explode with a loud report, and the cork will be driven out to a con- siderable distance. This experiment may be rendered more effectual by mixing about one- third of oxygen with the hydrogen gas; or, if oxygen cannot be conveniently procured at the time, the operator may easily contrive to have some atmospheric air in the cannon, which will render the hydrogen gas more explosive.

222. The very great ease with which inflam- mable air is kindled by even a small spark of electricity seems to have suggested to M. Volta the idea of what he calls his inflammable air- lamp, an instrument which appears to have laid the foundation for the patent apparatus for ob- taining instantaneous light. This curious instru- ment is represented in fig. 6, where A is a glass globe for containing hydrogen gas ; B a glass reservoir for holding water ; and D a stop-cock, by

which a communication is formed between the water and the gas. The water passes into the globe through the pipe gg, which is fixed into the top of the reservoir A ; at s there is a cock to cut off or open a communication between the air and the jar K. N is a contrivance for holding a wax-taper ; L a brass pillar, on the top of which is fixed a ball of the same metal ; a is a pillar of glass, with a socket at the top, in which the wire b slides, having a ball screwed on the end of it. F is a cock by which the globe is filled with hydrogen gas, and which afterwards serves to confine it, and what water falls into B and A. To use this instrument,

naving filled the globe with gas, and the reser- voir A with water, turn the cocks D and s, and the water will fall into the globe, forcing up a quantity of gas, which will rise through the

226. This may be rendered very obvious by the following experiment : — Charge a large jar, and place a smooth piece of coin between the knob of the discharger and the coating of the

pipeK. “if, now! an electric spark be made to jar; when the discharge has been made, the pak from the ball m to that marked n, it will set piece of coin will be found slightly adhering fire to the gas which passes through the pipe K. to the tin-foil, by its fusion at the point of con To extinguish the lamp, first shut the cock s, tact, and will remain so as to require some force and then D. The gas is obtained in the usual to separate them.

way from diluted sulphuric acid and iron fil- 227. Dr. Franklin’s experiments on the fusing ings • and the globe is to be filled in the follow- of metals may be thus imitated -.—Take three ing manner:— Having previously filled it with pieces of window-glass, each one inch wide, and water place the foot R in a vessel of water, so three inches long, and place them contiguous that it may be covered, and the bent glass tube, to each other, with two narrow strips of gold- throuah which the gas is to be introduced, may leaf between them, so that the middle glass may pass commodiously below the foot. When the have, on each side of it, a strip of gold, with gas has displaced nearly all the water, turn the usˆendsjnrojecting a little beyond the glass, cock F, and the lamp is ready for use.

223. This instrument is sometimes constructed so as to be connected

with an electrophorus for the purpose of producing a light at pleasure. In this case the electrophorus is placed in a box beneath the vessel containing the hydrogen gas ; from this box a wire passes through a glass tube to the opening of the stop-cock. The cover of the electrophorus must be connected by a silk

Let the whole be properly secured within the press of the universal discharger; pass the charge of a large jar through the strips of gold, they will be melted and driven into the glass. The outer pieces of glass are generally broken, but the middle piece is often left entire, and is marked with an indelible metallic stain on each of its surfaces.

228. The colors produced when metals are

string with the handle of the stop-cock, so that thus fused, either on glass or paper, are some-

the same motion that opens the cock, may raise the cover of the electrophorus, and the spark that strikes from it be conveyed by the insulated wire to the stream of gas, which it inflames.

times exceedingly beautiful, and have been in some cases employed in impressing letters, and ornaments of various kinds, on silk and paper. The process observed in such cases, Mr. Singer

This effect will take place every time the stop- thus describes in his Elements : — ‘ The outline

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cock is opened, for the electrophorus will pro- duce sparks for a considerable time, without any fresh excitation; and the quantity of gas con-

of the required figure is first traced on thick drawing paper, and afterwards cut out in the manner of stencil plates. The drawing paper

sumed at each repetition of the process is very is then placed on the silk or paper intended to

small, so that a light may be obtained above a hundred times before the contents of the reser- voir are expended ; and it may then be easily replenished.

224. But by far the most remarkable effects of electricity in producing combustion, result from its action on metallic substances. This

property of the electric matter seems to have been first observed by the celebrated Dr. Frank- lin, who made several experiments on the sub- ject. These experiments were repeated and ex- tended by Mr. Kinnersly, and also by Beccaria ; and have since then been prosecuted with great accuracy by Mr. Brook, Dr. Van Marum, Mr. Cuthbertson, Mr. Singer, and others. In treat- ing on this part of the subject, we shall, as in the preceding instances, give a course of pro- gressive experiments, which may be made with an appropriate apparatus, from a single jar of a tolerably large size, up to a powerful battery, previously remarking that the whole of the ap- paratus must be in the very best state in which it can be put, otherwise disappointment, in many cases, and inaccuracy in all, will be the result.

225. The slightest indication of the fusing of metallic substances is observed in the discharge of the Leyden phial : on this occasion, if the discharge be made by means of the common discharging rod, the knob that touches the out- side coating will be found to adhere slightly to the jar after the discharge ; and this arises from »he fusing of a small portion of the tin-foil coating.

be marked ; a leaf of gold is laid upon it, and a card over that ; the whole is then placed in a press, or under a weight, and a charge from a battery sent through the gold leaf. The stain is confined, by the interposition of the drawing paper, to the limit of the design ; and in this way a profile, a flower, or any other outline figure may be very neatly impressed.'

229. In describing Cuthbertson's electrome- ter, No. 177, we made some remarks on the fusing of wire, by passing through it the dis- charge of accumulated electricity ; it may be necessary to offer here some general observa- tions on the same subject; and to give some account of the results of the experiments made by those whose names we have already enu- merated.

230 For the fusing of wires of different lengths very large batteries were formerly considered as indispensable ; but Mr. Singer observes, that, if the wire be sufficiently fine, a single jar, expos- ing a coated surface of about 190 square inches, will be sufficient to afford an example of the effect. The finest flattened steel wire, sold at the watchmakers' tool shops under the name of pendulum wire, is the best for the purpose ; harp- sichord wire not being fine enough, excepting where great power is used. Cuthbertson's Balance Electrometer should be invariably used to regulate the charge ; the circuit made as short as possible ; and the wire to be fused placed in a straight line, and held at the ends between a small forceps made of wire

231. The following is the substance of Mr. Singer's remarks on the numerous experiments of Messrs. Brook and Cuthbertson on the fusion of metallic wires. Their conclusion was, that the action of electricity on wires increases in the ratio of the square of the increased power : since two jars, charged to any degree, will meet four times the length of wire that one jar will melt; and this will be again quadrupled by doubling the height of Hie charge.

232. This law, adds Mr. Singer, I have found, obtains in all accurate experiments with mo- derate lengths of wire; and it is apparent in Mr. Cuthbertson's experiments, to some extent. His batteries usually contain fifteen jars, and one of these is just sufficient to fuse half an inch of wire of ˆth of an inch diameter : but the whole fifteen jars combined, will fuse sixty inches of the same wire. Mr. Singer made some experiments with an iron wire of ˆth of an inch diameter, on an extensive scale ; but he found that some of the charge was lost in per- vading such a considerable length of wire, so much so, that the explosion of the battery, at other times remarkably loud, was then scarcely audible. With a battery, however, of forty feet of coated surface, Mr. Singer says he frequently melted eighteen feet of the above-mentioned wire by a single explosion, and the phenomena

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na2ffiS5!Sˆrr*5» -d,Singer, of whose operates we shall here

obtained in all comparative experiments; and as soon as the discharge is made, the wire should become red-hot in its whole length, and then fa into fine globules.

234. The gradually increasing effects pro- duced are very remarkable, when, on wires of the same length and diameter, progressively .stron charges are transmitted. If the charge be verv low, it is found that the color is changed to yellow ; it then becomes blue by a higher charge • then red-hot; then red-hot and melted into balls- and, if we increase the charge still further it becomes red-hot, and drops into balls, then dis- perses in a shower of balls, and finally disap- pears with a bright flash, producing an apparent smoke, which turns out when collected to be a fine powder, consisting of the metal combined with oxygen, and weighing more than the metal which was originally fused.

235. The experiments and results already enumerated do by no means form the boundary of the power of the electric fluid ; bodies which resist the most intense heat, produced in the common way, are by it converted into oxides in a moment. Of this more will be said in a future part of this article ; in the meantime a few ex amples may be given, which properly belong to the present. The most laborious experimenters on this part of electricity have been Cuthbertson

ignited globules being dispersed in every direc- tion. This law, however, Mr. Singer found to vary with the thickness of the glass employed ;

avail ourselves, as being both numerous and valuable. The apparatus used by Mr. Cuth- bertson, and, in some of his experiments, by Mr.

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uck jars displaying the same intensity with a Singer also, may be thus described :—

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comparatively small quantity of electricity ; and consequently having, as he expresses it, less wire-melting power. Of this he produces a proof, furnished by his large Leyden jar, to which we have already alluded ; this jar, from the extent of its coated surface, ought to have melted three feet of wire, with a charge of thirty grains; but from its extreme thickness, which

236. It consists of a glass cylinder a l>, fig. 7, about eight inches high, and two inches and a half diameter, mounted air-tight with two brass caps. On the lower cap a is screwed a stop- cock, and above the cap is fixed a small roller, on which a quantity of wire, attached to a pack- thread at intervals of four inches, is coiled. A brass tube c, about three inches long, is screwed

eSlf J M V« ‘ W°Uld °nly melt mt° the CCDtre Of the uPPer caP b> ™d> by means

eighteen inches. Mr. Singer remarks, that this of a long needle, the end of the packthread and

correspondent with the conclusion of M. Ca- wire is thrust through it, and hog’s lard is placet!

™3 t t ˆquantities of electricity re- in the tube, so that the wire and

packthread

d to charge different coated jars of the same shall always move through it air-tight In this

extent, w I be in the inverse proportion of their way the wire is extended in the centre of the

thickness.

233. The fusion of wire may therefore be em- ployed as a measure of the quantity of electricity accumulated on any charged surface ; for the preceding experiments show that any given quantity of electricity will fuse the same length

cylinder, and, when one length is exploded, another may be drawn forward by means of the packthread, without opening the cylinder. For ascertaining the quantity of air absorbed during the process, a gauge, represented by A, about ten inches long, made of a glass tube, is screwed

Xf™;™ u .v IuYv f icugiu mutes long, maae oi a glass tube, is screwed

f wire, whether that surface be disposed on two into the lower end of the stop-cock and imm < 5r- idrs or onp • npTipp if moT7 v\f\ i«£t««j *L.~J. j.i.- _j • i « i

jars or one ; hence it may be inferred that the ictual intensity of a charge does not materially Kttts power in melting wire. This test is •

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sed in a vessel of quicksilver, the rise of which, when the stop-cock is opened, will be a measure of the air absorbed. The air left in the” receiver,

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tore practically useful ; for the various elec- after a number of explosions, is always found to

ometers measure only the intensity, and are as have been deprived of a portion of its oxygen ;

U)o WK »uVne jar < .M by a battefy of and, if hydrogen or nitrogen gas be substituted

iuu. vvnen the fusion of -wire* is omnl/v.rori ;ˆ ˆir.«« ~e „< i • • *i.i_*
_*._i -n

00. When the fusion of wire is employed as a test of electrical power, care should be taken that the length of the circuit be always the same,

.nd that the degrees of ignition be uniform ; for a wire may be melted with but slight variations

in place of atmospheric air, the metal will not suffer any oxidation, but will be fused, and minutely divided.

237. To accomplish the complete oxidation of metallic substances, a higher power is required

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»L?-franCe When1ve,ry different portions of than that which is merely adequate to fuse them

electricity arp nn««prl tVin-vun-V, U T-uˆ i L rm. _ f ,, . . J , X .

ectricity are passed through it. The lowest degree of perfect ignition ought therefore to be VOL. VIII

The following is a statement of the comparative strength of the charges which Mr. Cuihbertson

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ELECTRICITY

employed in exploding the wires mentioned, the length of each wire being ten inches : the coaled surface was the same in all the experiments, viz. one of his batteries of fifteen jars, exposing seventeen feet of coated surface. The column marked A, shows the diameter of the wires in parts of an inch ; B the number of grains with which the electrometer was loaded ; and C the color of the oxide deposited on the receiver : —

A. B. C.

Lead wire . . jfo . 20 . Light gray. Tin wire . . & . 30 . Nearly white. Zinc wire . . & . 45 . Nearly white. Iron wire . . ˆ . 35 . Reddish brown. Copper wire – ife • 35 • P»rple brown. Platinawire . ˆ . 35 . Black.

Silver wire . . -jfe . 40 . Black. Gold wire – • ijj • 40 . Brownish purple

238. Mr. Singer was of opinion that the charges here given by Mr. Cuthbertson were rather high, and attended with considerable risk of fracture to the jars : he repeated the experi- ments with shorter lengths of wire, and of less diameter; and with more moderate charges obtained the following results :—

A. B. C.

Gold wire -jjj 18 Purple and brown. Silver wire fa *8 Gray, brown, and green. Platina wire ˆ 13 Gray and light brown. Copper wire TˆJ 12 Green, yellow, and brown. Iron wire . ˆ5 12 Light brown. Tin wire . yjj 11 Yellow and gray. Zinc wire . ˆ 17 Dark brown. Lead wire . ˆ 10 Brown and blue gray. Brass wire . ˆ 12 Purple and brown.

239. In the above experiments Mr. Singer did not use the receiver ; the wires, which were five inches in length, were stretched parallel to the surface of a sheet of paper, and distant from it about one-eighth of an inch. Brass wire is sometimes decomposed by the electrical charge, in which caˆe its component parts, copper and zinc, are separated from each other, and appear in their distinct metallic colors when the explo- sion is made over a piece of glass. Indeed the figures of all the oxides are most beautiful when impressed on glass, although their colors are certainly less permanent.

240. This most amazing power of the electric matter is not only adequate to the oxidation of metallic substances, but is yet more remarkable in restoring oxides, already formed, to their metallic, or original state, for which purpose a very simple process will be found sufficient.

241. Into a small glass tube introduce a little of the oxide of tin ; let it cover about half an inch of the lower internal surface. Place the tube thus prepared on the table of Henley's discharger, and introduce the pointed wires at each end, that the oxide may form part of the circuit. Pass now several strong charges in suc cession through the tube, taking care to replace the oxide in its proper situation, should it be dispersed. If the charges are strong, the tube will soon become stained with the tin revived from the oxide.

242. In the same way other metallic oxides may be revived ; but if vermilion be employed,

which consists of sulphur and mercury, the mer- cury will be separated with such ease as that the charge of a moderately sized jar

will be found quite sufficient.

DECOMPOSITION OF WATER BY ELECTRICITY.

243. The decomposition of water by electri- city was first effected by Van Troostwyk and Deiman, assisted by Mr. Cuthbertson ; this they effected by means of a complicated apparatus, and a very tedious process. Their method of procedure was improved on by Dr. Pearson, and after him by Mr. Cuthbertson : but the most simple form of an apparatus for this purpose is that of Dr. Wollaston. This apparatus is thus constructed : — Two finely pointed wires of gold or platina are inserted into capillary tubes ; each wire is thrust into the tube till it nearly reaches the end of it, and the glass is softened by heat until it adheres to the wire and covers its point. The glass is then carefully ground away, till the point of the wire can be seen by the help of a magnifying glass. One of these wires is made to communicate with the ground, or with the nega- tive conductor of the machine, and the other with an insulated ball placed near the positive conductor, the two points are placed near each other in a vessel of water; when a current of sparks is discharged through the wires, a series of minute bubbles of gas will rise from the points of the gold wires, and, when collected in an inverted receiver, will explode on the-application of a lighted taper. Dr. Wollaston found by experiment, that a point ˆg of an inch in dia- meter, decomposed the water when the spark which passed from the conductor to the insulated ball was J of an inch in length ; and that a point iˆg of an inch in diameter, produced the same effect when the sparks were only ˆ of an inch in length. Hence the rapidity of the decom- position was in proportion to the limited size of the point of the wire.

244. Of the results obtained in some experi- ments made with this apparatus, Dr. Wollaston gives the following account. By transmitting a current of sparks by means of two gold points over the surface of a card a little moistened, and tinged with litmus, and placed between the points, a redness was perceived about the positive wire after a few turns of the machine. When the negative wire was placed upon the red spot i* was quickly restored to its former color. Hence he infers that the effect of an acid is produced at the positive wire ; and that this effect is counter- acted by reversing its electricity.

245. Dr. Wollaston next coated two wires with sealing-wax, so that their ends only were exposed : these he inserted into a solution of copper, and found that, on transmitting a current of sparks between them, the negative wire was

‘ coated with copper : the electricity of the wire being reversed, the copper quickly disappeared

246. When it is wished to decompose oils, alcohol, etfier, &c., a much more simple, and less expensive apparatus will be found to answer every purpose. This apparatus, which is repre- sented by fig. 8, consists of a glass tube having a platina wire projecting from the top inwards and reaching nearly to the lower end. The lower

extremity is open, and is placed in a metallic dish nearly filled with the fluid which is to he decomposed. The cylinder must be filled with the fluid as receivers are filled with water in the pneumatic trough. When charges are succes- sively sent through the wire, the fluid will be gradually decomposed, and the gaseous product rising to the upper part of the cylinder will dis- place the liquid. In all experiments of this kind the glass used ou»ht to be very strong to resist the expansion caused by the explosion.

247. Having spoken of the decomposition of water by means of the electric fluid, it maybe pro- per just to notice the process of forming water from the gases that compose it, by the action of the same agency. For this curious experiment Mr. Singer employed the apparatus represented in fig. 9, which consists of a stout globe of glass, with a stop-cock, having a wire passing through its centre to within a short distance of the cap to which the stop-cock is screwed. The globe must be exhausted by means of an air-pump, and then screwed on a receiver containing a mixtuie of osygen and hydrogen gases, furnished with a

stop-cock. When the cocks are opened, the globe will be filled with the gases ; they must then be shut, and a spark passed from the wire in the inside of the globe to the cap. A bright flash follows, and the inside of the globe becomes covered with moisture ; the cocks are then to be opened, and more gas will rush into the globe. The cocks being again closed, a second explosion may be made, which will increase the dew on the inside of the globe ; and the experiment may be repeated in this way until drops of water may be observed.

248. Such experiments as the preceding naturally led to numerous others on various liquids and also on different gaseous bodies : to

detail these would be foreign to our purpose ; yet to pass them over in silence would be to do them injustice. We shall, therefore, merely give the results of some remarkably fine experiments by Cavendish, and others, as drawn up in a tabular form by Mr. Singer. The numbers pre- fixed to some of the gases indicate the propor- tionate measures employed of each.

Atmospheric air and hydrogen . . . Oxygen and hydrogen . . . . . .

Chlorine and hydrogen

Muriatic acid and oxygen

Carbonic oxide and oxygen ....

Nitrogen and oxygen

Sulphurous acid and oxygen .... Phosphureted hydrogen and oxygen Sulphureted hydrogen and oxygen . .

Oxygen and ammonia

100 olefiant gas and 284 oxygen . . . 100 olefiant gas and 100 oxygen . . . 100 carbureted hydrogen and 100 oxygen 100 carbureted hydrogen and 200 oxygen

RESULT.

Water and nitrogen.

Water.

Muriatic acid.

Chlorine.

Carbonic acid.

Nitric acid.

Sulphuric acid.

Water and phosphoric acid.

Water and sulphurous acid.

Water and nitrogen.*

Carbonic acid and water.

Carbonic oxide and hydrogen.

Carbonic oxide and hydrogen.

Carbonic acid.

COMPOUND GASES. RESULT.

Muriatic acid Hydrogen.*

Fluoric acid Hydrogen.*

Nitrous gas Nitric acid and nitrogen.

Carbonic acid Carbonic oxide and oxygen.

Sulphureted hydrogen Sulphur and hydrogen.

Phosphureted hydrogen Phosphorus and hydrogen.

Ammonia Hydrogen and nitrogen.

Olefiant gas Charcoal and hydrogen.

Carbureted hydrogen Charcoal and hydrogen.

The results marked with a star are given on ‘.he authority of Dr. Henry and Mr. Dalton. In making the above experiments when the mixture consisted of inflammable gases with oxygen, the change was usually effected by a single” spark ; but in other cases it was found necesjary to con- tinue the current of sparks for many hours.

ELECTRICAL CONFIGURATIONS.

249. This is a most interesting and curious

branch of mechanical electricity, and one which

certainly challenges a more vigorous enquiry than

has hitherto been made respecting it. It is thought

by some that the experiments which we shall here

briefly notice afford satisfactory proof that elec-

•icity is the real cause of crystallisation. The

subject seems to have been first noticed by pro-

fessor Lichtenberg, of Gottingen, and afterwards by Mr. Bennet, Cavallo, and others.

250. Excite a plate of any resinous substance, as gum-lac, by friction, and let any metallic body of any shape whatever, a brass ring for instance, be placed upon the plate. Let the ring be then electrified with an electricity opposite to that of the plate, and afterwards removed from the plate by a stick of sealing-wax, or any other non-con- ductor. Let some powdered resin be now shaken upon the plate, then if the plate has been excited negatively, and the brass ring positively, the powder will fall only on those points of the plate that were touched by the ring, and will form radiating appearances resembling stars, while almost no powder will be found on any other part of the plate. 1ˆ on the other hand, the

plate has been electrified positively, while the ring was electrified negatively, the powdered resin will fall only on the parts of the plate which were formerly uncovered, the figures being now indicated by the absence of the powder.

251. Mr. Bennet who repeated with much care the experiments of Lichtenberg, has given the following account of the method which he adopted for rendering figures produced in this way per- manent. When it is wished to make the figures red, ‘ Take a pound of rasped Brasil wood ; put it into a kettle with as much water as will cover it, or rather more : also put in about an ounce of gum arabic, and a piece of alum about the size of a large nut ; let it boil about two hours, or till the water be strongly colored ; strain off the ex- tract into a broad dish, and set it in an iron oven, where it is to remain till all the water be evapo- rated, which with me was effected in about twelve hours ; but this depends on the heat of the oven, which should not be so hot as to endanger its burning. Sometimes I have boiled the strained extract till it was considerably inspissated before it was placed in the oven, that it might be sooner dty.

252. ‘ When it is quite dry, but not burnt, scrape it out of the dish, and grind it in a mor- tar till it be finely pulverised. In doing this, it is proper to cover the mortar with a cloth, having a hole through it for

the pestle, to prevent the powder from flying away and offending the nose, and also to do it out of doors if the weather be dry and calm, that the air may carry away the powder necessarily escaping, and which other- wise is very disagreeable. When ground, let it be sifted through a fine hair sieve, returning the coarser part into the mortar to be ground again.

253. ‘ The plate I have mostly used, was com- posed of five pounds of resin, half a pound of bees’-wax, and two ounces of lamp-black, melted together, and poured upon a board sixteen inches square, edged round with slips of wood, at least half an inch high, to confine the composition whilst fluid : the plate was thus half an inch thick, which is better than a thinner plate, the figures being more distinct. After the compo- sitionˆ is cold, it will be found covered with jmall blisters, which may be taken out by hold- ing the plate before the fire till the surface be a little melted, then let it cool again ; and upon holding it a second time to the fire, more blis- ters will appear; but by thus repeatedly heating and cooling the surface, it will at last become perfectly smooth. Some plates were made smaller, and the resinous composition confined to the form of an ellipsis, a circle, or escutcheon, by a rim of tin half an inch broad, and fixed upon a board.

254. ‘ The next thing to be done is to prepare the paper, which is to be softened in water, either by laying the pieces upon each other in a vessel of cold water, or nrst pouring a little hot water •upon the bottom of a large dish ; then laying upon it a piece of paper, so that one edge of the paper may lie over the edge of the dish, to re- main dry, th.t it may afterwards be more con- veniently taken up. Then pour more hot water upon its upper surface. Upon this place another

piece in the same manner, again pouring on more water, and thus proceed till all the pieces are laid in. By using hot water, the paper will be softened in a few minutes.

255. ‘ When the figures arc to be made, the resinous plate must lie horizontally, whilst the electricity is communicated, if the experiment requires any thing to be placed upon the plate : but it is convenient afterwards to place it in a vertical position whilst the powder is projected, lest too much powder should fall where it is not required.

256. ‘ A little of the powder may be taken between a finger and thumb, and projected by drawing it over a brush ; or, what is better, a quantity of it may be put into the bellows and blown towards the plate. Wrhen the figure is sufficiently covered with powder, let the

plate be again laid horizontally upon a table; then take one of the softened papers out of the water by its dry edge, and lay it carefully between the leaves of a book, pressing the book together, and permitting it to lie in this situation about half a minute. Then remove the paper to a dry place in the book, and press it again about the same time, which will generally be sufficient to take off the superfluous moisture. Then take up the paper by the two corners of its dry edge, and place the wet edge a little beyond the figure on the resinous plate, lowering the rest of the piece gradually till it covers the figure without sliding ; then lay over it a piece of clean dry paper, and press it gently ; let it remain a short time, and then rub it closer to the plate with a cloth ; or, which is better, press it down by means of a wooden roller covered with cloth, taking care that the paper be not moved from its first posi- tion.

257. ‘ When the paper is sufficiently pressed, let it be taken up by its dry edge, and laid upon the surface of a vessel of water, with the printed side downwards ; by this means the superfluous powder will sink in the water, and the figure will not be so liable afterwards to spread on the paper. After the paper has remained on the water a few minutes, take it up and place it be- tween the leaves of a book, removing it fre- quently to a dry place. If it be desired that the paper should be speedily dry, let the book- leaves in which it is to be placed be previously wanned, and by removing it to several places it will be dry much sooner than by holding it near a fire. By the above process, it is obvious that leather, calico, or linen, as well as paper, may be printed with these figures, and the effects of the diffusion of electricity upon a resinous plate be exhibited to those who have not leisure or inclination to perform the experiments.’

258. To the above it may be proper to add, that with a resinous plate of the kind now de- scribed, a very beautiful exhibition may be made of the different powers of positive and negative electricity. For this purpoft prepare equal quantities of red lead and resin, by weight, finely powdered and intimately mixed, by being sifted together through a fine hair sieve. Put this powder into a bottle of India rubber for use. Let now -a. small jar be charged at the positive conductor of the machine, and, with its knob,

quickly write the letter P on the resinous plate : take the bottle containing the mixed powders, and by gently striking the sides of it

between the palms of the hands, the mouth of it being directed towards the plate, which must be placed in a vertical position, project on the electrified part a little of the powder, and the letter will instantly appear, well denned, and covered with the red lead, while the resin will be dispersed. If now the whole be wiped clean off, and, with a jar charged at the negative conductor, the letter Nbe written on the plate, and the powder pro- jected as before, it will be found that the nega- tive electricity has selected the resinous particles for the formation of the letter, while those of the red lead have been rejected.

MAGNETIC EFFECTS OF ELECTRICITY.

259. The connexion between magnetism aim electricity will be fully treated of in a subse- quent part of this article ; at present we shall merely offer the following general remarks in the way of showing the amount of what was known on the subject previously to the interest- ing discoveries recently made.

200. Dr. Franklin appears to have been the first who paid any serious attention to this sub- ject. He sent the charge of some large electrical jars through fine sewing-needles ; the ends of the needles were rendered blue, and on being carefully laid on water they traversed, evincing evident proofs of polarity. The most remark- able circumstance attending these experiments was, that if the needle lay east and west when the charge was passed through it, the end which was entered by the fluid pointed to the north : but if it lay south and north, the end which lay pointing to the north would continue to do so, whether the charge entered by that end or the other; although the Dr. imagined that a still stronger charge would have reversed the poles, even in that situation, since this effect had been actually produced by lightning. The polarity he also found to be strongest when the needle received the charge while lying north and south, and weakest when it lay so as to point east and west.

261. But the experiments most to be relied on were made by Van Marum with the large machine and battery in the Tylerian museum at Haarlem. He and his assistants tried to give polarity to needles made of watch-springs, of from three to six inches in length ; and also to steel bars nine inches long, from a quarter of an inch to half an inch broad, and about a line in thickness. The result was, that when the bar was placed horizontally in the magnetic meridian, whichever way the shock entered, the end of it that stood toward the north acquired the north polarity, and the opposite end acquired the south. • If the bar, before it received the shock, had some polarity- and was placed with its poles contrary to the usuat direction, its natural polar- ity was

uniformly diminished, and often reversed ; so that the extremity of it, which in receiving the shock pointed to the north, became the north pole, &c.

262. When the bar was struck standing per- pendicularly, its lowest end became the north

pole in any case, even when the bar had previ- ously some magnetism, and was placed with the south pole downwards. Things remaining the same, the bars seemed to acquire an equal decree of magnetic power, whether they were struck whilst standing horizontally in the magnetic meridian, or perpendicular to the horizon. When the needle was placed in the magnetic equator, whichever way the charge entered, it never produced any magnetism ; but if it was passed through its width, then the needle acquired a considerable degree of magnetism and the end which lay towards the west became the north pole, and the other end the south pole. If a needle or bar, already magnetic, or a real magnet, was struck in any direction, its power was always diminished. For this experiment they used considerably large bars, one of which was 7-08 inches long, 0-26 broad, and 0-05 thick. When the shock was so strong in proportion to the size of the needle, as to render it hot, then the needle generally acquired no magnetism at all, or very little. These experiments were made with the power of a battery composed of 135 phials, containing among them about 130 square feet of coated surface.

MEDICAL ELECTRICITY.

263. The very remarkable properties of the electric fluid seem to have occasioned the appli- cation of its powers to organised bodies at an early period of its history; and the results, whether real or imaginary, gave rise to various opinions, which are now only viewe 1 as monu- ments of credulity and imposture. It is not our intention to enter here minutely into an investi- gation of this department of the science of elec- tricity; yet, although this would be improper on several grounds, we must not pass it over in silence. The application of electricity as a medical agent has recently been much revived ; but that application is, we believe, most success- fully made in the form of Voltaic electricity ; and will therefore fall, with more propriety, under consideration in another place. From the numerous respectable testimonies extant, as to the real utility of electricity in the healin.r art, we shall make a choice selection, which it is hoped will satisfy the reader, that in the hands of a skilful operator, it may be applied in nume- rous instances with certainty of success. Let it however be observed that no one ought to attempt its application who is not

thoroughly conversant with the u$e of the apparatus, and capable of forming a correct judgment, as to the strength and duration of the application.

264. Speaking of the power of the apparatus which ought to be used in the application of electricity for medical purposes, Mr. Singer justly remarks, that the machine employed ought to be such as will furnish a constant stream of sparks ; if a plate machine, it ousjht to be two feet in diameter ; if a cylinder machine, not less than ten inches, and fourteen if possible. Ma- chines called medical elec'rical machines, ar> Sometimes made on a very small so;0e, and henc the application of them onlv produce trouble, waste of time, and final disappointment.

265. In connexion with a powerful e> ctnca

machine, the auxiliary apparatus requisite for medical purposes are the following: — A jar fitted up with Lane's electrometer, by which shocks may be given of any required force. A pair of directors, each consisting of a glass han- dle, surmounted by a brass cap with a wire of a few inches in length, having a ball screwed on its extremity, which may be occasionally unscrewed and a wooden point substituted for it. When shocks are given by means of these directors, they must be applied at the opposite extremities of the part through which the charge is required to pass ; and being respectively connected by conducting wires, the one with the outside of the jar and the other with the receiving ball of the electrometer previously placed *at the requisite distance, the jar may be set to the machine, which is then put in motion until any required number of shocks has been given.

266. The insulated director is also employed

afford relief; and about one in five are perma- nently cured. 8. Opacity of the cornea. This is sometimes cured by the long continued action of electricity thrown for ten minutes a day on the eye by a wooden point. When caused by the small-pox, it is said to yield most readily. 9 Gutta serena. The method of electrifying for opacity of the cornea has been successful in some instances of gutta serena ; but there are numerous unsuccessful cases. 10. Amenorrhaea, Cases of suppressed menstruation are generally relieved by sparks and slight shocks ; but in re- tention of the menses electricity has been tried without success. 1 1 . Knee cases. In instances of pain and swelling of the knee, the applica- tion of sparks has been effectual in about one case in ten. 12.

Chronic rheumatism. Very numerous are the instances of success ; the usual application is by sparks, for ten or fifteen minutes every day. In recent cases, a few days

to give sparks, being held by its glass handle, is sometimes sufficient ; but in those of long and its ball previously connected with the con- – — ductor by a fine chain being brought near the patient, or nibbed lightly over a piece of flan- nel or woollen cloth laid on the affected part. When the eye or any delicate organ is electrified, the. ball of the insulated director is unscrewed and the wooden point applied, at the distance of about half an inch from the part. The stream of electricity which passes from the point, in such cases, produces rather a pleasant sensation than otherwise.

267. An insulated stool is sometimes em- ployed ; it should be of sufficient size to receive a chair upon it, with a resting place in front of the chair for the feet. The patient being placed on the insulated chair, and connected with the conductor of the machine by means of a chain, sparks may be drawn from any part of the body by a person who stands on the ground and pre- sents a brass ball to it.

268. The following enumeration of instances of disease in which electricity has been success- fully applied, is given by Mr. Singer as esta- blished on good authority: — 1. Contractions. Those only that depend on the affection of a nerve ; and in many of these it has been em- ployed without effect, whilst in others of long du- ration immediate relief has been obtained. 2. Rigidity. Very frequently relieved, but usually requiring some perseverance in the application, to complete the cure. 3. Sprains, relaxation, &c. Electricity may be applied in all these cases with good effect, but its application should be deferred until the inflammation has subsided. 4. Indolent tumors. Strong sparks, and slight

shocks, are often effectual. The most numerous

cases ?xe those of scirrhous testicle ; and there

are some instances of the successful dispersion

of scirrhous induration of the breast. 5. Mr.

Carpue states, that electricity is a good preven- tive against chilblains ; and mentions two in- stances in which ihey were removed by the

action of electrical snarks. 6. Epilepsy. In

several instances of persevering application, not

one successful case occurred. 7. Deafness.

Sparks thrown on the mastoid process, and

round the meatus auditorius externus, and drawn

froir> tˆio same parts on the opposite side, usual y

standing, very considerable perseverance is often required. 13. Acute rheumatism. In one case out of six a cure was effected in about a month by the application of electricity. 14. Palsy Moderate shocks, with sparks, have been occa sionally successful in about one case of paralysis in every fourteen that have been tried. 15. St. Vitus's dance has been frequently relieved by electricity. There are indeed scarcely but few diseases in which some successful instances of its application are not recorded ; but we are still in want of a scientific examination of the state- ments that have been made on this subject.

269. It appears that the nerves are most pow- erfully affected by electricity, since the effect of a discharge sent through the body is always most conspicuous in their direction. When the charge of a battery is sent through the head of a bird, the optic nerve is generally found to be injured, and often completely destroyed ; a like discharge sent through a larger animal is found to produce a universal protraction of strength, with trembling and depression. Mr. Singer says he once accidentally received a considerable charge from a battery, through the head, which produced the sensation of a violent but universal blow, followed by a transient loss of memory and indistinctness of vision, but was unattended by any permanent injury.

270. Mr. Morgan, who paid considerable at- tendon to medical electricity, has remarked, that if the diaphragm be made to form part of the circuit of a coated surface equal to two feet, fully charged, the lungs make a sudden effort, which is followed by a loud shout ; but that if the charge he small, it never fails to produce a violent fit of laughter ; and that even those whose calmness and solemnity are not easily disturbed by ludicrous occurrences, are seldom able to withstand the powers of electricity. The first effect of a strong charge on the dia phragm is frequently followed by involuntary sighs and tears, and sometimes by a fainting fit. If the charge be passed through the spine, it produces a degree of weakness in the lower ex- tremities ; so that if a person be standing at the time, he sometimes drops on his knees, or fails prostrate on the floor.

271. Numerous cases of the successful ap- plication of electricity as a medical agent have neen published by different authors ; Mr. Cavallo has related some of a very striking nature, as have also Mr- Carpue, and Mr. Ferguson, whose testimony stands high in consequence of the candor and unaffected simplicity of their nar- rations. To the above-mentioned names we must add the name of Mr. La Beaume, who has recently published an excellent little work on the Application of Galvanic Electricity in the cure of chronic diseases ; to these works the rea- der is referred for more ample information on the subject than our limits will allow us to give.

PART IV. ATMOSPHERICAL ELECTRICITY.

272. In the preceding parts of this article we have had occasion to make several references to the identity of lightning and the electricity ex- cited by artificial means ; we now proceed to show, by a selection of strictly appropriate ex- periments, that that agent which is ever active in the atmosphere which surrounds our earth, and is occasionally producing some of the most astonishing, and awfully grand phenomena of nature, is nothing more than a vast explosion of accumulated electricity.

273. The discovery of this important fact was by no means an instantaneous thing ; even some modern writers on philosophy appear to have formed opinions on die nature of lightning essen- tially incorrect ; and this is the more remarkable when it is considered that, so long ago as the days of the abbe Nollet, such remarks as the following should have been published, and read, and' verified by actual experiment soon after. ' If,' said the abb6, ' any should take upon him to prove, from a well-connected comparison of phenomena, that thunder is in the hands of na- ture what electricity is in ours ; that the wonders we now exhibit at pleasure are little imitations of those great effects which frighten us ; and that the whole depends on the same mechanism : — if it could be shown, that a cloud prepared by the action of the winds, by heat, by a mixture of exhalations, &c. is, when opposite to a ter- restrial object, that which an electrified body is, when at a certain distance from one that is not electrified ; I confess this idea, if it were well supported, would afford me much pleasure ; and to support it, how many specious reasons pre- sent themselves to a man well versed in elec- tricity. The universality of the electric matter, the rapidity of its action, its inflammability, and its activity in inflaming other bodies ; its pro- perty of striking bodies externally and internally, even to their smallest parts, the remarkable ex- ample we

.have of this effect in the Leyden ex- periment, the idea we may legitimately form in supposing a greater degree of electric power, &c. All these points of analogy, which I have for some time meditated, begin to make me be- lieve that one might, by taking electricity for a model, form to one's-self, in relation to thunder and lightning, more perfect and probable ideas than any that have been hitherto offered,'

274. This was certainly a bold hypothesis; highly creditable to the judgment of the author, and affording no obscure intimation that else – Ir.city was about to make some unprecedented degree of progress; but to Dr. Franklin un- doubtedly belongs the honor of accomplishing, by actual experiment, all that the abbe Nollet's penetrating sagacity led him to speak of in the words just quoted. In a series of letters to one of the members of the Royal Society, the Dr. first gave in detail an hypothesis to explain the phenomena of thunder and lightning by the known properties of electricity, which was soon followed by a demonstration of its truth in the most remarkable experiment ever made.

275. The following are the leading points of resemblance which Dr. Franklin observed to ob- tain between the electricity of the atmosphere and that which is produced by artificial means. (1.) The zig-zag appearance of the lightning is exactly the same as that of a strong electric spark when it passes through a considerable interval of air. (2.) Lightning generally strikes such bodies as are high and prominent, as the summits of high hills, the tops of lofty trees, high towers, spires, masts of ships, points of spears, &c., and the electric fluid always passes through the most prominent parts, when striking from one body to another. (3.) Lightning is ob- served to strike most frequently into those sub- stances that are good conductors of electricity, such as metals, water, and moist substances ; and to avoid those that are non-conductors. (4.) Lightning inflames combustible bodies. The same is effected by electricity. (5.) Metals are melted by a powerful charge of electricity. This phenomenon is one of the most common effects of a stroke of lightning. (6.) The same may be observed of the fracture of brittle bodies, and of other expansive effects common to both causes (7.) Lightning has been known to strike people blind. Dr. Franklin found, that the same effect is produced on animals when they are subjected to a strong electric charge. (8.) Lightning destroys animal life. Dr. Franklin killed turkeys of about ten pounds weight, by a powerful electric charge. (9.) The magnetic needle is affected in the same manner by lightning and by elec tricity, and- iron may be rendered magnetic by both causes. The phenomena are, therefore, strictly analogous, and differ only in degree ; and, if an electrified gun-barrel will give a spark, and produce a loud report at

two inches distance, what effect may not be expected from perhaps 10,000 acres of electrified cloud 1 And is not the different extent of these conductors, equal to the different limit of their effects ?

276. Reasoning on these strong resemblances, Franklin formed the design of erecting a conduct- ing rod by which the lightning might be drawn from the clouds, and thus afford an opportunity of ascertaining its identity with the electric fluid. ‘The electric fluid,’ said he, ‘is attracted by points ; we do not know whether this property be in lightning ; but since they agree in all the par- ticulars in which we can already compare them, it is not improbable that in this they likewise agree. Let the experiment be made.’ And doubtless he would himself have made it befoie

any other person could have anticipated him in it, but waiting for the erection of a spire in Phi- ladelphia, and his opinions becoming known, he was anticipated by the French philosophers D'Alibard and De Loe, who erected a rod such as Franklin had suggested, and succeeded in the experiment. But the honor and merit of the idea were not to be thus rent from Franklin; for in the mean time, and without any knowledge of the attempts of the French electricians, it oc- curred to him that, by sending up a kite, he could obtain a readier access to the clouds than by the longest rod which he could raise on the highest spire. He made the attempt, and, as we have before shown, was successful ; and thus was the identity of lightning with electricity satisfac- torily established.

277. In treating of the electricity of the at- mosphere it may be proper to begin with the more gentle and silent manifestations of it : thence to proceed to the consideration of its accumulated discharges in meteors and thunder-storms ; and then make some remarks on its general influence on the surface of our earth.

278. From long, correct, and patient investi- gation, it has been proved that the various lumi- nous phenomena that appear in our atmosphere, are to be resolved into the agency of electricity, although it must be allowed that, with all our knowledge of those effects, they are still sur- rounded with such difficulties, that scientific men are not quite of one mind respecting them. Of this description the aurora borealis, or northern light, must be allowed to be an instance.

279. The aurora borealis, or, as the same appearance is commonly termed, streamers, and in the Shetland Isles, the merry dancers, can seldom be seen in the southern parts of the kingdom ; and, even when seen there, the appear- ance is far less brilliant than in northern lati- tudes, where this wonderful phenomenon is the constant attendant of clear evenings, affording a great relief to the inhabitants, amid the gloom that would otherwise attend their dreary winter tights.

280. Of this kind of meteor, the late Mr. Seorge Adams has given the following concise vcconnt in his valuable lectures : — The appear- ances of the aurora come under four different descriptions. (1.) A horizontal light, like the morning aurora, or break of day. (2.) Fine, slender, luminous beams, well denned, and of dense light. These often continue a quarter, a half, or a whole minute, apparently at rest, but oftener with a quick lateral motion. (3.) Flashes pointing upward, or

in the same direc- tion with the beams, which they always succeed. These are only momentary, and have no lateral motion; but they are generally repeated many times in a minute. They appear much broader, more diffuse, and of a weaker light than the beams: they grow gradually fainter till they disappear; and sometimes continue for hours, flashing at intervals. (4.) Arches, nearly iu the form of a rainbow : these, when complete, go quite across the heavens, from one point of the horizon to the opposite point.

281. When an aurora happens, these appear- ances seem to succeed each other in the follow-

ing order : — (1.) The faint rainbow-like arches ; (2.) The beams; and (3.) The flashes. As for the northern horizontal light, it appears to consist of an abundance of flashes of beams, blended together by the situation of the observer.

The beams of the aurora borealis appear at all places to be arches of great circles of the sphere, with the eye in the centre ; and these arches, if prolonged upwards, would all meet at one point.

The rainbow-like arches all cross the magnetic meridian at right angles. When two or more appear at once they are concentric, and tend to the east and west ; also the broad arch of the ho- rizontal light tends to the magnetic east and west, and is bisected by the magnetic meridian ; and when the aurora extends over any part of the he- misphere, whether great or small, the line sepa- rating the illuminated part of the hemisphere from the clear part is half the circumference of a great circle crossing the magnetic meridian at right angles, and terminating in the east and west : moreover, the beams perpendicular to the horizon are only those on the magnetic meri- dian.

That point in the heavens to which the beams of the aurora appear to converge, at any place, is the same as that to which the south pole of the dipping-needle points at that place.

The beams appear to rise above each other in succession ; so that, of any two beams, that which has the higher base has also the higher summit.

Every beam appears broadest at or near the base, and to grow narrower as it ascends ; so that the continuation of the bounding ‘lines would meet in the common centre to which the beam tends.

281*. Now between these appearances and those of electricity, under certain circumstances, there are several points of close resemblance.

For it is found by a simple experiment that, when the electric fluid is made to pass through rarefied air, it exhibits a diffused luminous stream, which has all the characteristic appear- ances of the northern lights. There are to be seen the same varieties of color and intensity, the same undulating motion and occasional corrusca- tions ; the streams exhibit the same diversity of character, at one moment minutely divided into ramifications, and at another beaming forth in one body of light, or passing in well defined flashes ; and, when the rarefaction is high, va- rious parts of the stream assume that peculiar glowing color which occasionally appears, and which, on the whole, leaves but little room to doubt that the phenomena are produced by the passage of electricity through the upper regions of the atmosphere, although at the same time it ought to be mentioned that this opinion has been doubted by some since the accomplishment of the recent voyages of discovery to the polar re- gions.

282. It has been stated above, that this most beautiful phenomenon is seldom witnessed by the inhabitants of the southern parts of the king- dom ; to them, therefore, at all events, as well as to those who have witnessed the aurora borealis in a fainter ‘degree, the following extract from

Mr. Dalton’s description of one which he wit- nessed must be acceptable. It is taken from his Meteorological Essays.

283. * Attention,’ says Mr. Dalton, ‘ was first excited by a remarkably red appearance of the clouds to the south, which afforded sufficient light to read by, at eight o’clock in the evening, though there was no moon, nor light in the north. Some remarkable appearance being expected, a theodolite was placed to observe its altitude, bear- ing, &c.

‘ From half past nine to ten o’clock, P. M., there was a large, luminous, horizontal arch to the southward, almost exactly like those which we see in the north ; and there were some faint con- centric arches northward. It was particularly noticed that all the arches seemed exactly bisected by the plane of the magnetic meridian. At half past ten o’clock streamers appeared very low in the south-east, running to and fro from west to east ; they increased in number, and began to ap- proach the zenith apparently with an accelerated velocity ; when all on a sudden the whole hemi- sphere was covered with them, and exhibited such an appearance as surpasses all descrip- tion. The

intensity of the light, the prodigious number and volatility of the beams, the grand intermixture of all the prismatic colors in their utmost splendor, variegating the glowing canopy with the most luxuriant and enchanting scenery, afforded an awful, bnt at the same time the most pleasing and sublime spectacle. Every one gazed with astonishment ; but the uncommon grandeur of the scene only lasted about one minute ; the variety of colors disappeared, and the beams lost their lateral motion, and were converted into the usual flashing radiations ; but even then it surpassed all other appearances of the aurora, in that the whole hemisphere was co- vered with it.

284. ‘ Notwithstanding the suddenness of the effulgence at the breaking out of the aurora, there was a remarkable regularity in the manner. Ap- parently a ball of fire ran along from east to west, and the contrary, with a velocity so great as to be barely distinguishable from one continued train, which kindled up the several rows of beams one after another : these rows were situated before each other with the most exact order, so that the bases of each row formed a circle crossing the magnetic meridian at right angles ; and the se- veral circles rose one above another in such sort, that those near the zenith appeared more distant from each other than those near the horizon, a certain indication that the real distances of the rows were either nearly or exactly the same. And it was further observable that, during the rapid lateral motion of the beams, their direction in every two nearest rows was alternate ; so that whilst the motion in one row was from east to west, that in the next was from west to east.

285. ‘The point to which all the beams and flashes of light uniformly tended was, in the magnetic meridian, and, as near as could be de- termined, between 1 5° and 20° south of the zenith. The aurora continued, though diminishing in splendor, for several hours. There were several meteors seen at the same time ; they appeared below the aurora, and unconnected with it/

This brilliant display of the aurora borealis Mr. Dalton witnessed on the 13th of October.

1792.

286. Similar appearances are often seen towards the south pole, but they are said to be unattended with the same variety of color ; they are called aurora australis. A very feeble, though certainly a pleasing imitation of this remarkable phenomenon may be thus exhibited : — Take the glass vessel represented in fig. 9, resembling a Florence flask, and fitted with a valve at top by which it may be exhausted of its air :

when ex- hausted, and rubbed in the common manner used to excite electrics, it will appear luminous within, being full of a flashing light which plainly resem- bles the aurora borealis, or northern light. This phial may also be made luminous, by holding it by either end, and bringing the other end to the prime conductor ; in this case all the cavity of the glass will instantly appear full of flashing light, which remains in it for a considerable time after it has been removed from the conductor : instead of the glass phial a glass tube exhausted of air and hermetically sealed may be used, and perhaps with more advantage. The most remark- able circumstance of this experiment is, that if tho phial or tube, after it has been removed from the conductor (and even several hours after its flash- ing light has ceased to appear), be grasped with the hand, strong flashes of light will immediately appear within the glass, which often reach from one end to the other.

287. The next form of atmospherical elec- tricity that claims our attention is that which it assumes in those meteors, to which the vulgar name of falling, or shooting stars, has been given. The aurora borealis, we have said, is caused by streams of the electric fluid passing rapidly through the higher regions of the air ; and these phenomena of which we are now speaking, are, in all probability, portions of the same matter moving through a more resisting medium, since they are always observed to be in comparatively small altitudes.

288. These meteors vary considerably in their size and color, and also in the rapidity of their motion; they move in various directions, but chiefly incline towards the earth. They occur in different states of the atmosphere, but prevail most in clear frosty nights, and at other times when the winds are easterly, and the sky clear ; in the intervals also of showery weather they are frequent, and on summer evenings, when well defined clouds are seen floating in a clear atmosphere.

289. In favorable states of the atmosphere, Mr. Singer remarks, these appearances are seer. to succeed each other so rapidly, that he has often counted thirty of them in the space of an hour, and, on some occasions, twice that num- ber. The frequency of their occurrence, he thinks, indicates that they are produced by some of the usual atmospherical changes, and that the circumstance of their explosion being unattended by the fall of stones, renders it almost certain that their nature is essentially different from that of the large meteors.

290. The same gentleman offers the following as arguments in favor of the electrical origin of

these meteors : — (1.) The light cf falling stars is similar to the light of the electric spark. (2.) They occur as frequently and as irregularly as other electrical changes in the atmosphere. (3.) Their motion, like that of electricity, is exceed- ingly rapid; and the longest interval through which they strike, is traversed in an interval of time too minute to admit of measurement. (4.) They occur most frequently during, or near to those changes of weather, that are known to influence the electrical state of the atmosphere. (5.) Their direction is never constant; they occur in every part of the atmosphere, and move in almost every direction ; such is also the case with lightning. (6.) The appearance of falling stars may be accuˆ-ately imitated by electricity ; and the circumstances on which the success of such experiments depend, are such as are likely to occur in the production of the natural phe- nomena.

291. Hence if electricity be passed gradually through an exhausted receiver, it assumes, as we have already seen, the appearance of the aurora borealis ; but if an accumulation of it be sud- denly transmitted, it will pass through the receiver with the straightness and brilliance of a shooting star. This appearance also occurs most readily when the receiver is but partially ex- hausted. The imitation therefore of these two phenomena seems evidently to require the same conditions for its production, as those which obtain in nature; that is to say, the aurora occurs in those regions where the air is highly rarefied ; and the most complete imitation of it is effected in a thoroughly exhausted receiver ; falling stars take place where the air is much more dense, and the imitation of them requires a medium which offers from its density con- siderable resistance.

‘ 292. Different writers on electricity have proposed different methods of producing an imitation of these meteors, but that of Mr. Singer is undoubtedly the most effectual as well as the most elegant. He used for this purpose a glass tube, five feet in length, and about five-eighths of an inch in diameter, mounted with a brass cap at each end, and fitted at one extremity with a valve to allow of its being exhausted. When this tube was exhausted, no spark would pass through it except in a very diffused state ; but when the charge of a very large jar was employed, a brilliant spark was obtained through the whole length of the tube, resembling in appearance a shooting star.

293. There are various other luminous ap- pearances of the electricity of the atmosphere, whicf) might with propriety be described here, such as those frequently observed on the tops of spires, and the masts

of ships, and occasionally on the points of spears, &c. ; but we must not enlarge, and shall only observe respecting them, that they seem analogous to the light tha* is observed on the point of a.ny slender and promi- nent conductor, when placed within an electrical atmosphere, or brought near to an excited elec- tric. These, and similar phenomena observable in the atmosphere, have now been sufficiently treated for this department of our work. 58

294. But the most magnificent display of

atmospnerica electricity is to be seen during a thunder-storm, the particular phenomena of which we must now proceed to notice. We have already seen the most satisfactory ground for the conclusion that lightning and electricity are identical, and have adverted to most of the known means by which the latter are produced : and if the analogy be correct in the one case we may conclude it to be so in the other, although with some differences perhaps, which have hitherto been, and which may for ever remain inaccessible to human observation.

295. If then, it be asked, whence comes the electricity of the atmosphere ? it may in reply be said, that from the sum of our knowledge res- pecting meteorological phenomena, there appears good reason to conclude that the causes which produce artificial electricity, are all in full ope- ration in the masses of vapor, among which natural electricity appears active.

296. This opinion is maintained by several eminent practical electricians of the present day; it was warmly espoused by the late Mr. Singer, who advanced in support of it the following positions : — (1 .) That the electrical phenomena of the atmosphere take place, in all climates, to the greatest extent, about the period of the greatest degree of heat, when the rays of the sun have caused a considerable accumulation of vapor. (2.) Where this cause operates to the greatest extent, as, for instance, within the tropics, natural electricity is produced on the largest scale. (3.) When the natural source of evaporation is assisted by collateral causes, elec- trical changes occur with astonishing activity, as in the eruption of a volcano, or the heat im- parted to the air in its passage over large extents of hot sands, as those of Africa. (4.) By the action of winds, currents of air of different tem- peratures are often mixed, — so that such as have been heated and charged with moisture, become suddenly cooled, thus occasioning a precipitation of water, and the occurrence of electrical changes. This is often witnessed on the coast of Guinea during the existence of the harmattan. (5.) These electrical changes are every where most

frequent when the causes of evaporation and condensation suddenly succeed each other.

297. After advancing several cogent argu- ments in favor of the above facts, and noticing in a very candid manner some objections urged against the theory they are intended to support, Mr. Singer concludes with the following truly appropriate and judicious observations : — ‘ Al- though the immediate causes by which the- various phenomena of the atmosphere are pro- duced, be still far beyond our comprehension ; yet the connexion of their several effects is a sufficient demonstration that they are not purely mechanical, but subservient to the direction of supreme power and intelligence. By this means the most simple arrangement becomes the source of sublime effects. The process of evaporation which modifies the action of the sun’s rays, and conveys to every part of the earth’s surface a source of fertility, does at the same time diver- sify the appearance of the atmosphere by au endless variety of imagery, enlivening the hori- zon with the most brilliant and glowing tints.

and in all probability effecting those electrical changes, which are the precursors of the most magnificent phenomena in nature.’

298. The phenomenon of the thunder-storm itself is always one of intense interest to the electrician. Some writers on the subject of electricity have furnished us with very beautiful descriptions of a thunder-storm, but of all these we feel disposed to give the preference to that of Sig. Beccaria, as containing a neat and un- varnished statement of facts, instead of being decorated with the effusions of a poetical imagi- nation.

299. ‘ Thunder-storms/ says Beccaria, ‘ ge- nerally happen when there is little or no wind ; and their first appearance is marked by one dense cloud, or more, increasing very fast in size, and rising into the higher regions of the air; the lower surface black, and nearly level, but the upper finely arched, and well defined. Many of these clouds seem frequently piled one upon another, all arched in the same man- ner ; but they keep continually uniting, swell- ing, and extending their arches.

300. ‘ At the time of the rising of this cloud, the atmosphere is generally full of a great num- ber of separate clouds> motionless, and

of odd and whimsical shapes. All these, upon the ap- pearance of the thunder-cloud, begin to move towards it, and become more uniform in their shapes as they approach, till, coming very near the thunder cloud, they mutually stretch towards one another, immediately coalesce, and together make one uniform mass. But sometimes the thunder-cloud will swell, and increase very fast, without the conjunction of these adscititious clouds, the vapors of the atmosphere forming themselves into clouds wherever it passes. Some of the adscititious clouds appear like white fringes at the skirts of the thunder-cloud, but these are continually growing darker and darker as they approach or unite with it.

301 . ‘ When the thunder-cloud is grown to a ?reat size, its lower surface is often ragged, par- ticular parts being detached towards the earth, but still connected with the rest. Sometimes the lower surface swells into various large pro- tuberances, bending uniformly towards the earth. When the eye is under the thunder-cloud, after it is grown larger, and well formed, it is seen to sink lower, and to darken prodigiously ; at the same time that a number of adscititious clouds (the origin of which can never be per- ceived) are seen in a rapid motion, driving about in every direction under it. While these clouds are agitated with the most rapid motions, the rain generally falls in the greatest plenty ; and, if the agitation is exceedingly great, it commonly hails.

302. ‘While the thunder-cloud is swelling, and extending its branches over a large tract of coun- try, the lightning is seen to dart from one part of it to another, and often to illuminate its whole mass. When the cloud has acquired a sufficient extent, the lightning strikes, between the cloud and the earth, in two opposite places, the path of the lightning lying through the whole body of the cloud and its branches. The longer this lightning continues the rarer the cloud grows,

and the less dark is its appearance, till at length it breaks in different places, and displays a clear sky.’

303. From the circumstance of almost con- stant injury attending thunder-storms it is im- possible to witness one without some feelings of personal danger ; in this case attention to the following observations may often be of service in relieving the mind from unnecessary fear, or in suggesting the necessary steps to be taken for the prevention of accident.

304. The Place of the Explosion. — The elec- trical explosion generally takes place in the air, and at a considerable height ; but in many in-

stances it happens between the clouds and the earth. In most instances, perhaps, the lightning descends from the clouds to the earth, and the explosion is then called the descending stroke : but in some cases it is known to pass from the earth to the clouds, and is then termed the as- cending stroke : of the latter kind appears to have been the explosion which took place on the Malvern hills, in the summer of 1826, and which was attended with such melancholy consequences. A very curious instance of the ascending stroke is related by G. F. Richter, in his work on thunder. He informs us that in the cellar be- longing to the Benedictine monks of Fontigno, while the servants were employed in pouring into a cask some wine which had been just boiled : a fine light flame appeared round the funnel, and they had scarcely finished their ope- ration when a noise like thunder was heard ; the cellar w,as instantly filled with fire ; the cask was burst open, although hooped with iron , the staves were thrown with prodigious violence against the wall ; and, on examination, a hole of three inches diameter was found in the bottom of the cask.

305. The Distance of the Thunder Cloud.— This is a point of some importance to be determined ; and the interval between the flash and the com- mencement of the report furnishes the data neces- sary for the calculation. Sound travels at the rate of 1142 feet in a second : consequently, by a watch which beats and points the seconds, the distance of the cloud is easily ascertained, for the flash and the sound are really contemporaneous ; and the former requires hardly any perceptible lapse of time to travel through any ordinary dis- tance. Thus, for example, suppose the flash to occur five seconds before the sound is heard, then 1142 x 5 — 5710 •=. I mile 43C feet, vhe dis- tance of the explosion from the place of the ob- server. So far this calculation is very gratifying, but it is no criterion of safety, for it only indi- cates the distance of a discharge that has taken place : the next may render the observer incapa- ble of observation.

306. Indications of real danger. — During a thunder-storm there are certain circumstances which afford strong indications of actual danger. Such, for instance, aie a rapid approach of the charged cloud, and the almost perpendicular di- rection of the lightning. When the cloud seems to be vertical as soon as it is formed, we are ex- posed to its utmost fury ; and, when it increases In darkness as it approaches, it also indicates great danger. When the flashes strike pcrpen

dicularly, it is a certain indication that the clouds are at that height from which they may readily strike into the ground. It is also supposed that the appearance of two flashes at once indicates danger; but this is uncertain, as it may arise from an optical illusion, or the interposition of a cloud.

307. The precautions generally offered by writers on electricity, as necessary for the safety of those who are exposed to the action of a thunder-storm, may be thus enumerated. Shel- ter should not be taken under trees, hedges, &c. ; for, should they be struck, such situations are particularly dangerous ; at the same time a per- son is mucb safer at about thirty or forty feet from such objects than at a greater distance, as they are likely to operate as conductors. Large portions of water also ought to be carefully avoided if possible, and even streamlets that may have resulted from recent rain ; these are good conductors, and the height of a human being connected with them, may sometimes determine the course of the lightning. In a house the safest situation is considered to be the middle of the room ; and this situation may be rendered still more secure bystanding on a glass-legged stool : hut, as such an article is not in the possession of many people, a hair mattress, or a thick woollen hearth rug makes a very good substitute. It is very in- judicious to take refuge, as some persons do, in the cellar during a thunder storm, since the dis- charge is often found to be from the earth to the clouds, and many instances are recorded of buildings that were struck having sustained the greatest injury about the basement story. But, whatever situation is chosen, - the greatest care should be taken to avoid going near the fire-place, since the chimneys are most likely to attract the fluid, and even if there be no fire in the grate, at the time, it should be remembered that soot is a powerful conductor. The same caution is neces- sary with respect to all large metallic surfaces ; gilt furniture, bell wires, &c.

308. But the most important and useful appli- cation that has ever yet been made of the disco- veries of the electrician is in the method of se- curing buildings, ships, &c., from the effects of lightning. To the ingenuity of Dr. Franklin the world is indebted for this invention, as well as for his discovery of the identity of lightning and common electricity. He first proposed to erect a perfectly continuous metallic rod by the side of any building intended to be secured from injury by lightning : this rod was to be pointed at each ex- tremity ; to rise some feet above the highest part of the building, and to extend some feet below the foundation, in moist ground, or water if practica- ble. By such a precaution, he conceived that the house could never receive any damage ; for, whenever the lightning should happen to fall upon it, it is evident that the conductor, being of metal, and higher than any

part of the build- ing, would naturally attract it, and, by conduct- ing it to the ground, prevent that building from receiving any damage ; it being well known that electricity always strikes the nearest and best conductors.

309. As this subject is of the utmost import- ance, we shall here quote the very concise and

judicious observations of Mr. Cava o respecting it. Speaking of the proposal of Dr. Franklin, which we have just noticed, he proceeds to re- mark, that the reasonableness and truth of such an assertion has been confirmed by numberless facts, and the practice of raising such conductors has been found exceedingly useful, particularly in hot climates, where thunder storms are very frequent, and the damage occasioned by the same too often experienced.

310. In regard to the construction of such conductors, there have been some controversies among electricians ; and the most advantageous manner of using them has not, without a great many experiments, and but very lately, been ascertained. Some philosophers have asserted, that such conductors should terminate in an obtuse end, that they might tne less invite the lightning from the clouds ; for such an end will not attract electricity from so great a distance as a sharp point. But other philosophers have thought a pointed termination to be much pre- ferable to an obtuse one ; and their assertion seems, on the following accounts, to be better founded.

311. ‘A sharp-pointed conductor, it is true, will attract electricity from a greater distance than one with an obtuse point, but at the same time will attract and conduct it very gradually, or rather by a continued stream, in which man- ner a remarkably small conductor is capable of conducting a very great quantity of electricity ; whereas an obtusely terminated conductor at- tracts the electricity in a full separate body, or explosion, by which it is often made red-hot, melted, and even exploded in smoke, and by such a quantity of electricity as perhaps would not have at all affected it, if it had been sharply pointed.

312. ‘A sharp-pointed conductor certainly invites the matter of lightning easier than an obtuse one ; but to invite, receive, and conduct it in small quantities, never endangers the con- ductor ; and the object of fixing a conductor to a house, is to protect the house from the effects of, and not the conductor from transmitting the lightning.

313. ‘ It is an observation much in favor of sharp-pointed conductors,

that such steeples of churches, and edifices in general, as are terminated by pointed metallic ornaments, have very seldom been known to be struck by lightning; whereas others that have flat terminations and have a great quantity of metal in a manner insu- lated on the tops, are often struck ; and it is but seldom that they escape without great damage.

314. ‘ Besides these considerations a sharp- pointed conductor, by the same property of at- tracting electricity more readily than an obtusely terminated one, may prevent a stroke of lightning, which the latter is incapable of doing.

315. ‘A conductor, therefore, to guard a building, as it is now commonly used, should, from several considerations and experiments, consist of one iron rod about three quarters of an inch thick, fastened to the wall of the buildine, not by iron cramps, but by pieces of wood. If this conductor were quite detached from the building, and supported by wooden posts at

ihe distance of one or two feet fi§>rn the wall, it would be much better for common edifices, but it is more particularly advisable for powder- magazines, powder-mills, and all such buildings as contain combustibles ready to take fire. The upper end of the conductor should be terminated in a pyramidal form, with the ed_ges, as well as the point, very sharp : and if the conductor be of iron, it should be gilt, or painted, for two or three feet. This sharp end should be elevated above the highest part of the building (as above a stack of chimneys, to which it may be fastened) at least five or six feet. The lower end should go five or six feet into the ground, and in a direction leading from the foundation; or it would be better to connect it with the nearest piece of water, if any be at hand. If this conductor, on account of the difficulty of adapting it to the form of the building, cannot conveniently be made of one rod, then care should be taken, that •where the pieces meet, they be made to come in as perfect a contact with one another as possible ; for, as we observed before, electricity finds con- siderable obstruction where the conductor is interrupted.

316. * For an edifice of a moderate size, one conductor of the kind already described, is per- haps sufficient; but, in order to secure a large building from sustaining any damage by lightning, there should

be two, three, or more conductors, in proportion to the extent of the building.

317. ‘ In ships a chain has often been used for this purpose, which, on account of its pliable- ness, has been found very convenient, and easy to be managed among the rigging of the vessel ; but, as the electricity finds a great obstruction in going through the several links, so that chains have been actually broken by the lightning, their use is now almost entirely laid aside ; and, in their stead, copper wires a little thicker than a goose-quill have been substituted, and found to answer extremely well. One of these wires should be elevated two or three feet above the highest mast in the vessel ; this should be con- tinued down the mast, as far as the deck, where, by bending, it should be adapted to the surface of such parts, over which it may most conve- niently be placed, and by continuing it down the side of the vessel, it should be always made to communicate with the water.’

318. M. Cavallo gives, with cordial approba- tion, the following extract from the earl of Stan- hope’s learned work on electricity : — As requi- sites for the proper construction of conducting rods for the preservation of buildings from the effects of lightning he directs, (1.) ‘ That the rods be made of such substances as are the best con- ductors of electricity. (2.) That the rods be un- interrupted and perfectly continuous. (3.) That they be of a sufficient thickness. (4.) That they be perfectly connected with the common stock, f •* > -“) That the upper extremity of the rods be as acutery pointed as possible. (6.) That it be very finely tapered. (7.) That it be prominent. (8.) That each rod be carried in the shortest conve nient direction, from the point at its upper end to the common stock. (9.) That there be neither large nor prominent bodies of metal upon the top of the building proposed to be secured, but

such as are connected with the conductor bj some proper metallic communication, (to., That there be a sufficient number of high and pointed rods: and, (11.) That every part of the building be very substantially erected.’

319. For the purpose of illustrating the prin- ciple on which the thunder-rod acts, there are some very satisfactory experiments generally employed by lecturers on electricity, which it may i > e proper here to explain, and before doing which we would just observe, that the charge used on these occasions should be moderate, having found from experience that, in that part of the experiments which is intended to show the effect of interruptions in the conductor, a strong charge has injured the apparatus.

320. The simplest form in which these expe- riments are made is that known by the name of the thunder-house. This is represented by fig 10, where A is a board about three-quarters of an inch thick, and shaped like the gable end of a house. It is fixed perpendicularly upon the bottom board B, upon which the perpendicular glass pillar C D is also fixed, in a hole abov.t eight inches distant from the base of the board A. A square hole, I L M K, about a quarter of an inch deep, and nearly one inch wide, is made in the board A, and is filled with a square piece of wood, nearly of the same dimensions. This board must fit in rather easily, so that the slightest shaking may throw it out. A wire, L K, is fast- ened diagonally to this square piece of wood. Another wire, I H, of the same thickness, having a brass ball, H, screwed on its pointed extremity, is fastened upon the board A ; so also is the wire M N, which is formed into a hook at (). From the upper' extremity of the glass pillar, C D, a crooked wire proceeds, having a spring socket F, through which a double-knobbed wire slides perpendicularly, the lower knob G of which falls just above the knob H. The glass pillar D C must not be fixed very tightly into the bottom board ; but it must be fixed so as to be pretty easily moved round its own axis, by which means the brass ball G may be brought nearer or farther from the ball H, without touching the part of E F G. When the square piece of wood LM I K, is fixed into the hole so that the wire L K stands in the dotted representation I M, then the metallic communication from H to O is continuous, and the instrument represents a house furnished with a proper metallic con- ductor ; but if the square piece of wood LM I K is fixed so that the wire L K stands in the di- rection L K, as represented in the figure, then the metallic conuuctor H O, from the top of the house to its bottom, is interrupted at I M, in which case the house is not properly secured.

320.* Fix the piece of wood, L M I K, so that its wire may be as represented in the figure, in which case the metallic conductor H O is dis- continued. Let the ball G be fixed at about half an inch perpendicular distance from the ball H, then, by turning the glass pillar D C, remove the former ball from the latter ; by means of a chain connect the wire E F with the wire Q of the jar P, and let another chain, fastened to the hook O, touch the outside coating of the jar. Connect the wire Q with the prime conductor,

and charge the jar ; then, by turning the glass pillar D C, let the ball G come gradually near the ball H, and when they are arrived sufficiently near one another, the jar will explode, and the piece of wood, L M I K, will be driven out of the hole to a considerable distance from the

thunder-house. In this experiment the ball G represents an electrified cloud ; which, when it is arrived sufficiently near the top of the house A, the electricity strikes it ; and, as this house is not secured with a proper conductor, the explo- sion breaks part of it, as is seen by the violent removal of the piece of wood I M.

321. Repeat the experiment with only this variation, viz. that the piece of wood I M is si- tuated so that the wire L K may stand in the direction I M, in which case the conductor H O is not discontinued ; and then the explosion will have no effect upon the piece of wood L M, this remaining in the hole unmoved; which shows the usefulness of the metallic conductor.

322. Again, unscrew the brass ball H from the wire H I, so that this may remain pointed. With this difference only in the apparatus, repeat both the above experiments, and it will be found that Jie piece of wood 1 M is in neither case moved from its place, nor will any explosion be heard; •which not only demonstrates the preference of the conductors with pointed terminations to those with obtuse ends ; but also shows that a house furnished with sharp terminations, although not furnished with a regular conductor, is al- most sufficiently guarded against the effects of lightning.

323. This apparatus is sometimes made in the shape of a house, as represented by fig. 11; for the sake of distinctness, the side and part of the gable end A C represents that of the thunder- house, and may be used in the same manner with that above described, or more readily by the fol- lowing method : — Let one ball of the discharging rod touch the ball of the charged jar, and the ot.her knob A of the conductor A C of the thun- der-house ; the jar will then explode, and the charge will act upon the conductor just men- tioned. The conducting wire at the windows h, h, must be placed in a line. The sides and ga- ble, A C, of the house, are connected with the lower part of the house by hinges, and the build- ing is kept together by a ridge on the roof.

324. To use this model, fill the small tube a with gunpowder, and ram the wire c a little way into the tube; then connect the tube e with a large jar or battery. When the jar is charged, form a communication from the hook at C, on the outside, to the top of the jar, by the discharg- ing rod ; the discharge will fire the powder, and the explosion will throw off the roof, with the sides, back, and frout, so that they will all fall down together. Fig. 12 represents a small ram- rod for the tube a, ˆnd fig. 13 a pricker for the touch-hole at C. Philosophical and mathemati- cal instrument makers now construct

the front of the common thunder-houses as well as the , powder-houses above described, with two pieces of wood or windows, which, by being placed in proper situations, the one to conduct and the other to resist the fluid, will illustrate by one dis- charge tne usefulness of good conductors for

securing buildings or magazines from the explo- sion of thunder, as well as the danger of using imperfect ones.

325. The most elegant method of performing this experiment, however, is represented in fig 14, which exhibits a hollow pyramid of wood, composed of several pieces, having a wire through each, So that their ends may come in contact with each other, as seen at s, s, s. One corner of the pyramid must be made loose as shown at d, having the conducting wire passing nearly through it, but not quite so. The wire, passing through the rest of the pyramid, must join (by a chain) the outside coating of a Ley- den jar. If the cloud x be supported by a wire from the prime conductor, and hang half an inch from the knob g of the pyramid ; when the jar is charged, a flash will take place between x and g ; the fluid will pass along the wires s, s, s, till it comes to the break at d; there an explo- sion will take place, that will force out the corner piece d, and throw down the fabric in separate pieces.

326. The preceding experiments sufficiently illustrate the use of conductors raised on build- ings that are much exposed to the effects of thunder-storms ; but, that we may not omit any information on the subject that may be deemed useful, we shall just add Mr. Morgan's method of preventing all possible danger in these cases. The plan which Mr. Morgan proposes is that, whilst a house is being built, the foundation of each partition wall should be laid on a strip of lead, or that the strip be fastened to the sides of these partition walls. The strips should be two inches wide, and at least a quarter of an inch thick, and closely connected with each other. A perpendicular strip, on each side of the house, should rise from the conductors to the surface of the ground ; whence a strip should be continued round the house, and carefully connected with water-pipes, &c. The strips on the sides of the house should then be continued to the roof, which ought to be guarded in the same manner as the foundation. The top should be surrounded by a strip, which should be connected with every edge and prominence, and be continued to the summit of each separate chimney. It is particularly necessary to guard the chimneys ; for Mr. Morgan mentions a case, in which a house that had been guarded in most respects, according to the preceding directions, except that the chimneys were unprotected, was struck with lightning, which entered

by one of the chimneys : here it spent its fury ; but the chim- ney falling on the roof, did considerable damage. The principal objection to this method is the expense attending it ; but this may be in a great measure avoided, by making proper use of the leaden pipes, gutters, and copings, which be- long to most houses.

327. Before leaving the subject of conducting rods, we think it due to the ingenious professor Leslie of the University of Edinburgh, to notice an article on electrical theories, published by him in the Edinburgh Philosophical Journal for July, 1824. In this paper Mr. Leslie endeavours to show that thunder-rods are of no use whatever ir the' way of protecting buildings against the

effects of lightning. But lest we should in any degree misrepresent the professor's sentiments, by giving an abridged statement of them, we shall quote his own words : —

328. ' But, whatever speculations we may form in regard to electrical light, and the mode in which the point and the knob produce their different effects, we must admit that the electri- city is never communicated, in any perceptible degree, to a remote and unconnected body, but by means of a current of air ; and this established principle will enable us to estimate the real ef- fects of conductors or thunder-rods.

329. ' When two portions of air, near the point of saturation, and of different tempera- tures, are mixed, a quantity of the dissolved vapor is precipitated, and resumes its aqueous state. By this conversion the mass acquires elec- tricity; and the consequent repulsion exerted, tends to disperse the minute globules of water, which will float in the atmosphere, or rather, will descend with that slow motion which is sufficient to occasion a resistance on their large surface equal to their gravitation. If the cloud thus generated reach the ground, it will soon com- municate its electricity. If it be suspended at some height, the electrified air will stream from it in all directions; and if its formation be gra- dual, this discharge may suffice to waste its force. But when a vast cloud is suddenly formed, the aerial emission hardly impairs its electricity; and, as it is carried along, it continually ap- proaches, by its attraction, to the surface, which assumes an opposite electricity ; the air now rushes with violence, and the cloud bends faster downwards, till at last its lowest \erge reaches the ground, and a total

discharge is made. The magnitude of the stroke will evidently depend on the extent of the aqueous mass, the sudden- ness of its precipitation, and the rapidity of its descent.

330. ‘ The air1, which streams in all directions from the cloud, is dissipated among the more re- mote portions, and thus gradually communicates its electricity. Hence, from the wide dispersion, owing to the distance, the electricity of the air at the surface of the earth must be weak ; and, even in the midst of the storm, the electrometer is less affected than if placed only a yard be- hind the prime conductor. Yet the action of the thunder-rod is confined entirely to the air which immediately surrounds it, and the quantity of aerial current which it can produce, must evi- dently be inferior to what is directed to the point, when held several feet from the conductor of an electrical machine. But, to avert the stroke, it would be necessary that the whole air between the surface and the cloud should be brought suc- cessively in contact with the top of the rod. Nor is this all ; for the air will be constantly replaced by other electrified portions emitted from the cloud. The effect of the thunder-rod is there- fore, comparatively, but a drop in the ocean. It may be easily shown that, however pointed and tapered, it would require 1000 years to guard at the distance of 100 yards; if terminated with a knob, it may take 10,000 years. Such are the vaunted performances of thunder-rods, and such the advantages of their different forms! Nor

can we appeal to experience ; it nevei can be proved that thunder-rods have produced bene- ficial effects, but several instances may be cited where they have afforded no sort of protection Nay, we shall be convinced, that fully an equal proportion of the buildings armed with sue!) supposed safeguards have been struck with light- ning. But if thunder-rods are useless, they are also innocent ; and, that they provoke the shaft of heaven, is the suggestion of superstition rather than of science. The cloud exerts an attraction, indeed, upon the surface of the ground, but the force depends solely on the distance, and is not, in the least degree, affected by the shape or qua- lity of the substances below. It rolls towards the nearest and most elevated objects, and strikes indiscriminately a rock, a tree, or a spire.

331. ‘ If a thunder-rod be then a harmless, though idle, appendage to a house, why awaken uneasy apprehensions ? It might at least inspire confidence in the moment of danger ; and if happiness consists merely in idea, why not in- dulge delicious error? — Yet, though the inevit- able stroke cannot be turned aside, its destruc- tive effects may be lessened ; and an investiga- tion of the real action of thunder will conduct us to the proper principles.’ — Ed. Phil. Jour. No. XXI. pp.

25.28.

332. The above theory is certainly ingenious and worthy of attention, but it wants confirma- tion in another way than that attempted by its author. We would, with all deference to Mr. Leslie's well-known abilities, ask if he would ad- vise large fires to be kept up round powder mag- azines for the purpose of preventing them from being struck by lightning ? We do not know, either, why he advises that they should have cop- per conductors raised near them ? nor why, to save ships, ribands of copper should be ex- tended from the masts to the keel, since he affirms that the idea of diverting or dissipating the storm is wholly chimerical.

SPONTANEOUS ELECTRICITY OF THE AT- MOSPHERE.

333. Vrery numerous are the observations which have at different times been made by able ob- servers on this branch of atmospherical electri- city. We cannot here enter minutely into these, and shall therefore only offer an outline of their general results.

334. The earliest observations of this nature appear to have been those of Monnier ; his ex- periments were made with an apparatus, which consisted of a pole thirty-two feet in height, in- sulated in a piece of turf, having at its top a strong glass tube, to which a tube of tinned iron was attached, and which terminated in a point. About the middle of this tube there was fastened a fine iron wire about fifty lines long, which, without touching any other body, was connected with a silk cord stretched horizontally. He found although the atmosphere was constantly electrified more or less, yet that in dry weather the electricity increased from sun-rise, when \t was weakest, till about four o'clock in the after- noon, at which time it was strongest, gradually diminishing from that time till the dew began to fall, after which it diminished till midnight. The

snrnc results were afterwards obtained by Saus- snre and Beccaria.

335. The abbe Mazeas made several observa- tions with an atmospherical apparatus, consisting of an iron wire 370 feet long, raised about ninety feet from the ground, and properly insulated. The results of his experiments with this instru- ment were the following: — In very dry weather the wire readily attracted light bodies, if brought within three or four lines of it ; and, if the weather was not stormy,

the electricity of the air was about half as great as that of a stick of sealing- wax two inches long. When he grasped the wire in his hand, the signs of electricity disap- peared entirely, and did not return till after an interval of three or four minutes. He also found that the electricity of the atmosphere was not increased with storms and hurricanes unattended with rain ; for during a violent storm of wind, which continued uninterruptedly for three days, in the month of July, he found it necessary to place the dust within four or five lines of the conductor, before it exhibited a sensible attrac- tion. No change was produced by the different directions of the winds. In the driest nights of summer he never could observe any electricity in the air, but it began to appear in the morning at sunrise, and vanished in the evening at about half an hour after sun-set. In the month of July, in a very dry day, when the sky was se- rene, and the heat intense, he found the electri- city stronger than he had ever observed it. The dust was then attracted at the distance of ten or twelve lines from the conductor.

336. Mr. Kinnersley made several observa- tions on the electricity of the atmosphere in its ordinary state, and informs us that when the air was very dry, he found it always contained some electricity, and that he rendered this electricity visible by electrifying himself negatively, and holding in his hand a long sharp needle, which, in the dark, appeared luminous at the point.

337. Beccaria, who was particularly attentive to this subject, and made numerous experiments both with rods and kites, found that, during the three following states of the atmosphere, it afforded no sensible indications of electricity. (1.) When the weather was clear, but at the same time windy. (2.) When the sky was covered with well defined black clouds, moving slowly. (3.) During moist weather, when not actually raining. The electri-

, city was always perceptible when the sky was clear and the weather calm ; in rainy weather, and when it did not lighten, the electricity ap- peared always a little before the rain fell, con- tinued during the falling of the rain, and dis- appeared shortly after the rain ceased. The higher he raised his rods, the stronger he found these electrical signs.

338. M. de Saussure, however, has furnished us with the most extensive course of experiments on atmospherical electricity. He informs us that it is constantly varying, according to situation. It is generally strongest in elevated and insulated situations, not to be observed under trees, in Greets, in houses, or any enclosed places, though u is sometimes to be found pretty strong on quays and bridges.

It is also not so much af- fected by the absolute height of the places as

their situation; thus a projecting angle of a high hill will often exhibit a stronger electricity than the plain at the top of the hill, as there are fewei points than in the former to deprive the air of its electricity. This variation in the intensity of the electricity of the atmosphere, seems influenced by numerous circumstances, some of which it is difficult satisfactorily to account for.

339. When the weather is not serene, it is impossible to assign any rule for their variation, as no regular correspondence can then be perceived with the different hours of the day, nor with the various modifications of the air. The reason is evident ; when contrary and variable winds reign at different heights, when clouds are rolling over clouds, these winds and clouds, which we cannot perceive by any exterior sign, *do, nevertheless, influence the strata of air in which we make our experiments, and produce these changes of which ‘we only see the result, without being able to assign either the cause or its relation. Thiis, in stormy weather, we find the electricity strong, then completely gone, and in a moment after rise to its former force; one instant positive, the next negative, without being able to assign any reason for these changes.

340. M. Saussure says, that he had known these changes succeed with such rapidity, that he had not time to note them down. When rain falls without a storm these changes are not so sudden ; they are, however, very irregular, parti- cularly with respect to intensity of force ; the quality of them, too, is more constant. Rain or snow almost uniformly gives positive electricity. In cloudy weather, without rain or storms, the electricity follows generally the same laws as in serene weather. Strong winds generally diminish its intensity ; they seem to mingle together the different strata of the atmosphere, and make tiiem pass successively towards the ground, and thus distribute the electricity uniformly between the earth and the air. M. Saussure has observed a strong electricity with a strong north wind. The state of the air in which the electricity is strongest is foggy weather ;’ this is also accompanied with electricity, except when the fog is going to resolve into rain.

341. The most interesting observations, and those which throw the greatest light upon the various modifications of electricity in our atmo- sphere, are those made in serene weather. In winter, and in serene weather, the electricity is generally weakest in the evening, when the dew has fallen, until sun-rising; its intensity after- wards augments by degrees, sometimes sooner and sometimes later; but

generally before noon, it attains a certain maximum, whence it again declines, till the fall of the dew, when it will be sometimes stronger than it had been during the whole day ; after which, it will again gradually diminish during the whole night; but, it is never quite destroyed, if the weather is per- fectly serene. Atmospherical electricity seems, therefore, like the sea, to be subject to a flux and reflux, which causes it to increase and diminish twice in twenty-four hours. The times of its greatest force are some hours after the rising and setting of the sun : those when it is weakest prev- cede these periods.

ELECTRICITY.

342. M. Saussure has given an instance of this periodic flux in electricity. On the 22nd of Feb. 1785, one of the coldest days ever remembered at Geneva, the hygrometer and thermometer were suspended in the open air on a terrace ex- posed to the south-west; the electrometer, from its situation, indicated an electricity equal to what it would have shown if it had been placed on an open plain. The height of the barometer was reduced to what it would have been if the mer- cury had been constantly at the temperature of 10° of Reaumur's thermometer. The place of observation was elevated sixty feet above the level of the lake. The observations of the day preceding and following this great cold were re- gistered by him. There was a weak south-west wind during the whole three days; and it is rather remarkable, that most of the great colds, which have been observed at Geneva, were pre- ceded by, or at least accompanied with, a little south-west breeze. From the first eighteen ob- servations made during these three days, when the. sky was quite serene, we learn that the elec- tricity was pretty strong at nine} o'clock A. M. ; that from thence it gradually diminished till to- wards six o'clock P. M., which was its first mini- mum ; after which it increased till eight o'clock, its second maximum ; from whence it gradually declined till six the next morning, which was the time of its second minimum; after which, it again increased till ten in the morning, which was the first maximum of the following day; as this was cloudy, the periods were not so regular.

343. As we have hitherto but slightly noticed the method of exploring the atmosphere by the electrical kite, we shall here introduce an account of an experiment of this kind made by Mr. Cavallo, which is, in every respect, most gratify- ing and satisfactory ; at least, it will be viewed in this light by every real lover of the science of electricity ; and will, at the same time, read him a most useful lesson on the caution to be observed in making this boldest of all electrical

experiments. It must be observed, that this experiment was made when there was no thunder ; and that there had been none for three days before, nor did there happen to be any for three days after at the place where the scene occurred.

344. ‘ After,’ says Mr. Cavallo, ‘ having rained a great deal in the morning and night before, the weather became a little clear in the afternoon, ‘he clouds appearing separated, and pretty well defined. The wind was west, and rather strong, and the atmosphere in a temperate degree of heat. In these circumstances, at 3 P. M., I raised my electrical kite with 360 feet of string. After that the end of the string had been insu- lated, and a leather ball, covered with tin-foil, had been hung: to it, I tried the power and qua- l.ty of the electricity, which appeared to be posi- tive and pretty strong.

345. ‘ In a short time, a small cloud passing over, the electricity increased a little ; but the cloud being gone, it decreased again to its for- mer degree. The string of the kite was now fastened by the silk lace to a post in the yard of the house in which I lived, which was situated near Islington, and I was repeatedly charging

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two coated phials, and giving shocks with them. While I was so doing, the electricity, whicn was still positive, began to decrease, and in two or three minutes’ time it became so weak, that it could be hardly perceived with a very sensible cork-ball electrometer. Observing at the same time that a large and black cloud was approach- ing the zenith (which, no doubt, caused the de- crease of the electricity), indicating imminent rain, I introduced the end of the string through a window, in a first-floor room, in which I fas- tened it by the silk lace to an old chair. The quadrant electrometer was set upon the same window, and was, by means of a wire, connected with the string of the kite.

346. ‘ It being now three-quarters of an hour after three o’clock, the electricity was abso- lutely unperceivable ; however, in about three minutes time, it became again perceivable, but now upon trial was found to be negative ; it is therefore plain, that its stopping was nothing more than a change from positive to negative, which was evidently occasioned by the approach of the cloud, part of which by this time had reached the zenith of the kite, and the. rain also had begun to fall in large drops. The cloud came farther on, the rain increased, and, the electricity keeping pace with it, the electrometer soon arrived to 15°. Seeing now that the elec- tricity was pretty strong, I began again to charge the two coated phials, and to give shocks with

them; but the phials had not been charged above three or four times, before I perceived that the index of the electrometer was arrived at 35°, and was keeping still increasing. The shocks now being very smart, I desisted from charging the phials any longer ; and, considering the rapid advance of the electricity, thought to take off' the insulation of the string, in caso that if it should increase farther it might be si- lently conducted to the earth, without causing any accident, by being accumulated in the insu- lated string.

347. To effect this, as I had no proper appa- ratus near me, I thought to remove the silk lace, and fasten the string itself to the chair ; accord- ingly I disengaged the wire that connected the electrometer with the string, laid hold of the string, nntied it from the silk lace, and fastened it to the chair ; but while I effected this, which took up less than half a minute of time, I re- ceived about a dozen or fifteen very strong shocks, which I felt all along my arms, in my breast and legs, shaking me in such a manner, that I had hardly power enough to effect my purpose, and to warn the people in the room to keep their distance. As soon as I took my hands off the string, the electricity (in consequence of the chair being a bad conductor) began to snap between the string and the shutter ot the win- dow, which was the nearest body to it. The snappings, which were audible at a good di»» tance out of the room, seemerl first isochronous with the shocks which I had received, but in about a minute's time oftener ; so that the people of the house compared their sound to the rattling noise of a jack going when the fly is off.

348. The cloud now was just over the kite ; it was black, and well defined, of almost a cir-

cvilar form, its diameter appearing to be about 40° ; the rain was copious, but not remarkably heavy. As the cloud was going off, the electrical snapping began to weaken, and in a short time became inaudible. I went then near the string, and finding the electricity weak, but still nega- tive, I insulated it again, thinking to keep the kite up some time longer ; but observing that another larger and denser cloud was approach- ing apace towards the zenith, as I had then no proper apparatus at hand, to prevent every pos- sible accident, I resolved to pull the kite in ; ac- cordingly a gentleman who was by me began pulling it in, while I was winding up the string. The cloud was now very nearly over the kite, and the gentleman, who was pulling in

the string, told me that he had received one or two slight shocks in his arms, and that if he were to feel one more, he would certainly let the string go ; upon which I laid hold of the string, and pulled the kite in as fast as I could, without any farther observation, being then ten minutes after four o'clock.'

349. Mr. Cavallo, from the numerous experi- ments which he made with electrical kites, lays down the following results, whicb will be found correct in the generality of cases. (1.) ' The air appears to be electrified at all times ; its electri- city is constantly positive, and much stronger in frosty than in warm weather ; b\it it is by no means less in the night than in the day-time. (2.) The presence of the clouds generally lessens the elasticity of the kite ; sometimes it has no effect upon it ; and it is very seldom that it in- creases it a little. To this the above-mentioned instance is a most remarkable exception. (3.) When it rains, the electricity of the kite is ge- nerally negative, and very seldom positive. (4.) The aurora borealis seems not to affect the elec- tricity of the kite. (5.) The electric spark taken from the string of the kite, or from any insulated conductor connected with it, especially when it does not rain, is very seldom longer than a quarter of an inch ; but it is exceedingly pun- gent. When the index of the electrometer is not higher than 20° the person who takes the spark will feel the effect of it in his legs ; it ap- pearing more like the discharge of an electric jar, than the spark taken from the prime con- ductor of an electrical machine. (6.) The elec- tricity of the kite is generally stronger or weaker, according as the string is longer or shorter ; but it does not keep any exact proportion to it. The electricity, for instance, brought down by a string of 100 yards, may raise the index of the electro- meter to twenty, when, with double that length of string, the index of the electrometer will not go higher than twenty-five. (7.) When the weather is damp, and the electricity is pretty strong, the index of the electrometer, after taking a spark fiom the string, or presenting the knob of a coated phial to it, rises surprisingly quick to its usual place ; but in dry and warm weather it rises very slowly. (8.) The principal use of the electrical kite is to show the electricity of the atmosphere ; and it is perhaps the only instru- ment that will do this at all times with certainty, though several others have been invented for that purpose. But another use to which electri-

cal kites have been applied, is to bring down quantities of the electric fluid from the upper regions of the atmosphere, for the purpose of supplying that deficiency of electricity, which is supposed to be hurtful to vegetation.'

350. From numerous experiments on the spon- taneous electricity of

the atmosphere made by Mr. Read, he has drawn the following conclu- sions : — (1.) ‘That in moderate weather it is uniformly positive, and experiences an increase and a decrease in the degree of its intensity twice in twenty-four hours. (2.) That the elec- tricity is strongest about two or three hours after sun-rise, and some time both before and after sun-set ; and is in general in the weakest state between noon and four o’clock. (3.) And that this periodical electricity is obviously influenced by heat and cold.’

351. The latest experiments that have been made on this subject, on a large scale, are those by Andrew Crosse, Esq. of Broomfield, near Taunton. They were made by means of an ap- paratus the most extensive ever constructed. It consisted of a copper wire, one-sixteenth of an inch in thickness, stretched and insulated be- tween two strong upright poles measuring from 100 to 110 feet in height.

352. No pains was spared to render this appa- ratus the most extensive and perfect that has been constructed. The insulated wire was one mile and a quarter in length, but having been exposed to various depredations, and liable to injury from other causes, it was shortened to 1800 feet. Every contrivance was tried to insu- late this wire, but Mr. Crosse could not succeed in preserving the insulation during a dense fog, or a driving snow. A contrivance was adopted to lower the insulators, for the purpose of freeing them from spiders’ webs ; and it was necessary to fix the wire very securely, in order that it might be able to resist the weight of the great numbers of swallows that often perched upon it, and of wood-pigeons and owls that flew against it with considerable force. This apparatus has been in use for some years, and has enabled Mr. Crosse to draw the following conclusions, which confirm the observations of preceding authors.

353. (1.) ‘ The electricity is invariably positive during the usual state of the atmosphere, and subject to a regular increase and decrease, as stated in some of the preceding observations.

354. (2.) ‘ Fogs, rain, snow, hail, and sleet, produce changes in the electrical state of the wire. The electricity is negative when they first appear. It frequently changes to positive, in- creasing gradually in strength ; and then de- creasing in a similar manner, and changing from positive to negative every three or four minutes. Those phenomena have been so constantly ob- served, that, whenever the wire appears nega- tively electrified, it is considered as a certain indication, that either rain, snow, hail, mist, or a thunder-cloud, is approaching.

355. (3.) ‘The approach of a charged cloud at first is sometimes found to produce positive, and sometimes negative electricity) but, whatever be the kind of the electricity which first appear-, its intensity increases to a certain degree, then diminishes, and finally disappears, and is su< >

ceeded by the opposite electricity; which in- creases to a higher degree than the first had done ; it then diminishes, and vanishes, and is again succeeded by the electricity which first appeared. These alternations of positive and negative electricity are often exceedingly nume- rous, and on different occasions succeed one another with different degrees of rapidity. The electricity, in general, becomes more intense at every repetition, till a copious and dense stream of sparks issues from the atmospherical conduc- tor to the receiving-ball, stopping at intervals, and returning with redoubled force.

356. (4.) ‘ In this state of things, a strong cur- rent of air flows from the wire, and the appa- ratus with which it is connected. At every flash of lightning an explosive stream, attended by a very peculiar noise, passes between the balls and the apparatus, and brilliantly illuminates the surrounding objects, while the effects on the spectator are heightened by the successive peals of thunder, and the consciousness of being so near their cause.

357. ‘ When the electricity becomes too pow- erful to allow the observer to operate in safety, he connects the insulating wire with the ground ; along this the whole passes off silently and harm- lessly to the ground.

358. (5.) ‘ During a driving fog, or a smart rain, the wire is electrified almost as powerfully as during a thunder-storm, and the electricity exhibits similar changes.

359. (6.) ‘A weak positive electricity generally prevails in cloudy weather. It often changes to negative when rain falls ; but the positive elec- tricity re-appears when the rain has ceased to fall.

360. (7.) ‘The electricity is always stronger in clear frosty weather than during a fine summer’s day.’

361. The following table, drawn up by Mr. Crosse, exhibits the intensity of the electrical appearances of the atmosphere in different states, commencing with those in which it is most powerful : —

(1.) During the occurrence of regular thun- der clouds.

(2.) A driving fog, accompanied by small rain.

(3.) A fall of snow, or a brisk hail-storm.

(4.) A smart shower, especially in a hot day.

(5.) Hot weather succeeding a series of wet days.

(6.) Wet weather following a series of dry days.

(7.) Clear frosty weather, either in the night or day.

(8.) Clear warm summer weather.

(9.) A sky obscured by clouds.

(10.) A mackerel back, or mottled sky.

(11.) Sultry weather, the sky covered with light hazy clouds.

(12.) A cold damp night.

362. For common purposes, and occasional observations, Mr. Singer says, very simple con- trivances may be employed. A common jointed fishing-rod, having a glass stick covered with sealing-wax substituted for the smallest joint, may be occasionally projected from the upper window of a house. A pair of pith-balls must 1'e attached to a cork, in which the end of the glass stick is thrust ; and this part of the appa-

ratus is to be occasionally unmsulaled, l>y placing a pin in the cork, connected with a thin wire held in the hand. In this uninsulated state, the fishing-rod and its attached electrometer are to be held for a few seconds projecting from the window, and, whilst in this position, the pin is to be withdrawn by pulling the thin wire; this insulates the electrometer, which may be then drawn in and examined. Its electricity will be found to be contrary to that of the atmosphere.

363. The last circumstance which we shall notice respecting the electricity of the atmos- phere, is its effects on the vegetable kingdom. Much has been said relative to the merits of the question, whether the electricity of the atmos- phere has or has not an influence on the process of vegetation. It is remarkable that this should ever for one moment have been matter of doubt with any one, since it is well known that light and heat, and, in one word, the free access of the air of our atmosphere, are all essential to the general process of

vegetation. Where difficul- ties have occurred in the course of experiment on the subject, we are firmly persuaded that they relate entirely to the nfanagement of the appa- ratus employed; we can readily manage the regulations of warming, watering, and airing a small house, in which we wish to accelerate the growth of vegetable substances; but when we attempt to take, as it were, the management of the atmosphere in our own hands, and to regu- late the general process of vegetation in our fields or gardens, we must expect to meet that disappointment which is ever attendant on quit- ting the sphere of action allotted to mortals. No series of experiments, how nicely soever 'Con- ducted, can ever be expected to equal the silent, the invisible, but unerring operations of nature.

364. The first electrician who seems to have attended to this subject was Mr. Maimbray o* Edinburgh, who, in the year 1746, electrified two myrtles, during the whole month of October, for some hours every day. The consequence was, that, in the following summer, these elec- trified myrtles put forth buds and blossoms sooner than those which had been left to nature.

365. Mr. Maimbray was followed by the abbe Nollet, who made some comparative experiments on the germination of seeds under similar cir- cumstances, except that one plot was electrified three or four hours every day during the space of fifteen days. His experiments were attended with results similar to those obtained by Mr. Maimbray.

366. Experiments of a similar nature were re- peated by others, and, as was to be expected, were in general followed by the like results. Hence the effect of electricity in promoting ve- getation became universally acknowledged, till a series of well-conducted experiments, made by Dr. Ingenhousz, staggered the faith of philoso- phers in general on the subject

367. Several electricians, however, labored hard to support the credit of Ihe abbe" Nollet's system, although but with little success. Among these, the chief was the abb£ Bertholon, who wrote a work which was entirely confined to the subject. The reasoning of this author, however incorrect it may appear to many, has certainly

the recommendation of ingenuity ; and, although lie carried his

notions relative to the effects of electrical influence much farther than most are desirous of doing, we cannot perceive why these circumstances should be considered, as they have been by some, as the ground of ridicule.

368. But that our readers may form their own judgment on this subject, we shall here introduce the abbe"'s own account of the instrument with which his experiments were chiefly made, and of his method of procedure.

369. M. Bertholon commences his account by observing that there is continually and univer- sally diffused in the atmosphere, and particularly in the higher regions, a considerable quantity of the electric fluid. 'This principle,' says he, 'being granted; in order to remedy the defi- ciency of electric fluid, which is supposed hurt- ful to vegetation, we must erect on the spot which we want to fecundate the following new apparatus, which has had all possible success, and which I shall call by the name of the elec- tro-vegetometer. This machine is as simple in its construction as efficacious in its manner of acting ; and I dou.bt not but it will be adopted by all those who are sufficiently instructed in the great principles of nature/

370. The apparatus which the abbe here de- nominates his electro-vegetometer, consists of a mast or long pole firmly fixed into the ground to be able to resist the force of the wind ; at the upper extremity of this pole is fixed a wire which terminates in one or more points, for the purpose of collecting the electricity of the air, and with which is connected a long insulated conductor, terminating in five or six points directed to the ground.

371. After having described at great length the construction of this apparatus, he proceeds to observe. — ' The construction of this electro- vegetometer once well understood, it will be easy for us to conceive its effects. The electricity which prevails in the aerial regions will soon be drawn down by the elevated points of the upper extremity. This effect of the points is proved by the most decisive experiments, and is called by philosophers the power of the points.

372. ' By means of the electro-vegetometer just now described, one may be able to accumu- late at pleasure this wonderful fluid, however dif- fused in the regions above, and conduct it to the surface of the earth, in those seasons when it is either scantily supplied, or its quantity is insuf- ficient for vegetation, or, although it may be in some decree sufficient, yet it can never produce the effects of a multiplied and highly increased vegetation. So that by these means we shall have

an excellent vegetable manure or nourishment, brought down as it were, from heaven, and that, too, at an easy expense ; for, after the construction of this instrument, it will cost nothing to maintain it : it will be, moreover, the most efficacious you can employ ; no other substance being so active, penetrating, or conducive to the germination, growth, multiplication, or reproduction, of ve- getables. This heavenly manure is that which nature employs over the whole habitable earth, not excepting p en those regions which are es- teemed barren, but which, however, are often

fecundated by those agents which nature knows so well to employ to the most useful purposes. Perhaps there was nothing wanting to bring to a completion the useful discoveries that have been made in electricity, but to show this so advan- tageous an art of employing electricity as a manure.

373. ‘ Consequently, that all the effects waich we have already mentioned depend upon electri- city alone ; and, lastly, that all these effects, viz. acceleration in the germination, the growth, and production of leaves, flowers, fruit, and their multiplication, &c., will be produced even at a time when secondary causes are against it ; and all this is brought about by the electric fluid, which we have the art of accumulating over cer- tain portions of the earth, where we want to raise those plants that are most calculated for our use.

374. ‘ By multiplying these instruments, which are provided at little expense (since iron rods, of the thickness of one’s finger, and even less, are sufficient for the purpose), we multiply their beneficial effects, and extend their use ad infi- nitum.

375. ‘ This apparatus having been raised with care in the midst of a garden, the happiest effects were perceived, viz. different plants, herbs, and fruits, in greater forwardness than usual, more multiplied, and of better quality. These facts are analogous to an observation which I have often made, viz. that plants grow fast, and are most vigorous, near thunder-rods, where their situation favors their development. They like- wise serve to explain why vegetation is so vigor- ous in lofty forests, and where the trees raise their heads far from the surface of the earth, so that they seek, as it were, the electric fluid at a far greater height than plants less elevated ; while the sharp extremities of their leaves, boughs, and branches, serve as so many points granted them by the munificent hand of nature, to draw down from the atmosphere that electric fluid which is so powerful an agent in forwarding vegetation, and in promoting the different func- tions of plants.’

376. It may be proper here to add, that othen who succeeded Bertholon in his experiments, and with all his experience at their service, do not seem to have thrown any light on the sub- ject. M. Achard, of Berlin, tried the effects of electricity on a small quantity of fermented rye, which was intended for distillation. He elec trifled one-half of it ; and after five hours thr vinous fermentation had ceased in the electrified portion, while in that which was not so treated it did not cease till after the lapse of eight hoin» He then tried the effect of strong sparks upon a quantity of rye ; which, excepting in one case, which he notices, he found to accelerate the pro cess of fermentation.

MISCELLANEOUS EXPERIMENTS, &c.

377. Illuminated phosphorus, or the Bologman stone. Among: the numerous methods devised for exhibiting the effects of electrical light, per- haps the most curious is that made with the real, or more easily with the artificial Bolognian stone, or Canton's phosphorus. This phosphorus

is a calcareous substance, generally used in the form of a powder, which has the property of absorbing light when exposed to it, and after- wards appearing lucid when brought into the dark. Take some of this powder, and, by means of spirits of wine or ether, stick it all over the inside of a clear glass phial, and stop it with a glass stopper, or a cork and sealing-wax. If kept in a room perfectly darkened, it will give no light ; but let two or three sparks be drawn from the prime conductor, when the phial is kept at about two inches from the sparks, so that it may be exposed to that light, and this phial will re- ceive that light, and afterwards will appear illu- minated for a considerable time. The powder may be stuck upon a board by the white of an egg, so as to represent figures of planets, letters, or any thing else ; and these may be illuminated in the dark, in the same manner as the phial. A beautiful method to express geometrical figures with the above phosphorus, is to bend small glass tubes of about the tenth part of an inch diameter, in the shape and figure desired, and then fill them with the phosphoric powder. These may be illuminated in the manner de- scribed, and they are not so subject to be spoiled as the figures represented upon the board fre- quently are. The best method of illuminating this phosphorus, and which Mr. W. Canton ge- nerally used, is to discharge a small electric jar near it.

378. The tourmalin. — The tourmalin, or the lapis electricus of Linnaeus, is a hard semi-pel- lucid fossil, and was first observed to

exhibit electrical phenomena, on being heated and cooled. This stone is found in abundance in the East Indies, and is named the electrical stone from its possessing many singular electrical pro- perties. The properties of this stone seem to iiave been known to the ancients : Theophrastus mentions a stone which he terms the lyncuriuni, and describes it as being very hard ; susceptible of a high polish, very useful for making seals, &c. ; and possessing the property of attracting light substances. Hence there can be little doubt as to its being the tourmalin of the mo- derns. The Dutch seem to have discovered the properties of the tourmalin by observing that when placed in the fire it attracted the ashes ; hence they gave it the name of aschen-trikker.

379. But by increasing its heat it becomes electrical, and still more so by diminishing it. Its electricity appears, not over its whole surface, but only on two opposite sides, which have been styled its poles, as they are in a line with its centre, and in the same direction with its strata ; in which direction it is opaque, though semi- transparent in the other.

380. During the process of heating, the tour- ˆmalin has one of its sides electrified positively,

and the other negatively; but, while cooling, the former becomes negative and the latter positive. If heated and allowed to cool without either side being touched, the former will be positive and the latter negative, all the time it is heating or cooling. If excited by rubbing, each of its sides, or both at once may be rendered positive. I heated or cooled upon an insulated substance that substance will become possessed of the elec-

tricity contrary to that of the side of the tour- malin, which was laid on it. The electricity of both sides, or of either, may be reversed by heat- ing or cooling the stone, in contact with other bodies.

381. If a tourmalin be cut in pieces, each piece will have its positive and negative poles, as well as the whole stone. All the above pro- perties are observable in vacuo. If this stone be covered over with wax, oil, or any similar elec- tric, it will exhibit the same electric signs as without the covering.

382. In making experiments with the tour- malin, Mr. Canton observed a vivid light upon it, while heating in the dark, by which he could determine which end of the tourmalin was posi- tive or negative. When excited, it emits very strong flashes in the dark, from the positive to the negative end. Mr. Canton has also observed the

Brasilian emerald em.t light while heating in the dark. Mr. Cavallo ‘ imagines that every other precious stone will show it if its electric power be sufficiently strong ; since the light i-s a consequence of the passage of a sufficient quan- tity of electricity through the air, or other partly resisting medium.’

383. The electrical power of the tourmalin is sometimes improved, sometimes injured, some- times not in the least affected by a strong fire. Most of the above properties, which were sup- posed to be peculiar to the tourmalin, are pos- sessed by several hard precious stones, which are capable of becoming electrical by heating and cooling, and have their positive and negative sides lying in the direction of their strata, 8cc.

384. Evaporation produces electricity. — This appears to have been a discovery of Signer Volta, who observed that the evaporation of water and some other fluids, as well as certain efferves- cences, generated electricity. His experiments seem to prove that fluids, or other bodies, reduced to vapor, become electrified positively, and leave the bodies from which they evaporated, electrified negatively; and that on the other hand, when the vapors are condensed into a fluid, they become electrified negatively, and leave the bodies with which they were last in contact electrified positively.

385. The common method of illustrating this is the following : — Place on the cap of a gold- leaf electrometer a metallic dish containing a few lighted coals, and project on them a few drops of water,.whilst an insulated funnel is held about a foot or eighteen inches above. Under these circumstances the electrometer is found to be negatively electrified, and the insulated funnel positively. On this experiment Mr. Walker observes, that the vapor carries off’ the latent electricity from the electrometer ; the leaves diverge, and fly to the slips of tin-foil to supply their loss. He adds, perhaps the vapor derives its volatility from its union with electricity, for it is observable, that if insulated pith-balls be suspended in a fog or mist, they separate spon- taneously with positive electricity.

386. To electrify the air of a room. — This is an experiment which may be easily performed with a powerful machine. The room ought to be very clean, and as free as possible from

pointed metallic substances. These things being observed, place a few pointed wires in the prime conductor of the machine ; put the machine in action, and after the lapse of a few minutes the air of the room will become so impregnated with electricity as to be very perceptible to the sense of smelling, and will' readily affect a delicate electrometer, particularly if brought into the vicinity of the machine. The odor perceived on this occasion very much resembles that of oxygen gas, or of the atmospheric air in a very clear and frosty night.

387. The charge of a jar is retained in the electric. — This is proved in a very satisfactory manner hy the following experiments, which show that the coating of the Leyden jar has not quite so much to do with the charge as is gene- rally supposed. The first is given by Mr. Walker in his System of Familiar Philosophy, and is in substance as follows : — Lay a plate of Un or brass on your hand, and on it a plate of glass (rather larger than the metallic plate); on the glass lay another metallic plate, and let this communicate with the prime conductor : thus the glass may be charged. By the edge of the glass disengage it from the two plates, and place two other plates in the same situation, upon and under the glass. If now one knob of the dis- charging-rod be made to touch the under plate, and the other knob the upper plate, a discharge will ensue the same as if *lie first plates had remained in their place.

388. The same principle is thus illustrated by the Leyden jar; we give the process as directed by Mr. Singer : — Procure ajar with a double set of moveable tin-coatings, either of which may be adapted to it at pleasure ; the outer coating being a tin can large enough to admit the jar easily within it; and the inner coating a similar can sufficiently small to pass readily in the inside of the jar. The charging wire of the inner coating should be surrounded by a glass tube covered with sealing-wax, to serve as an insulating han- dle, by which the inner coating may be lifted from the jar when that is charged, without com- municating a shock to the operator. Arrange the jar with its coatings, and charge it ; it will act.in every respect as an ordinary coated jar. Charge the jar, and, without discharging it, remove the inner coating by its insulating handle; if this coating, when removed, be examined, it will be found not at all, or but slightly electri- fied : lift the jar carefully from within its outer coating, and examine that; it will evince no signs of electricity.

389. Let the jar be now fitted up with the other pair ot moveable coatings; apply the dis- charger, and an explosion and spark will follow, which clearly proves that the accumulation is retained by the attractive power of the glass, and that the coatings are only useful as

conductors to the charge.

390. Velocity of the electric fluid. — Although we have already made some passing remarks on this subject, the following detail will, we doubt not, be found interesting to the admirers of the electrical science. Several electricians of dis- tinguished merit have made experiments on the velocity of the electric fluid ; those to which we

here particularly refer were made under the direction and superintendence of Mr. Watson, who, us an eye-witness of them, drew up the account to lay before the Royal Society.

391. The first attempt of these electricians was to convey electric shocks across the river Thames, availing themselves of the water of the river as one part of the circuit through which the charge was to pass. This they accomplished on the 14th and 18th of July, 1747, by fastening a wire all along Wrestminster-bridge, at a consider- able height above the water. One end of this wire communicated with the coating of a charged phial, the other being held by an observer, who, in his other hand, held an iron rod, which he dipped into the river. On the opposite side of the river stood a gentleman, who likewise dipped an iron rod in the river with one hand ; and in the other held a wire, the extremity of which might be brought into contact with the wire of the phial.

392. When the discharge was made, the shock was distinctly felt by the observers on both sides of the river, but more sensibly by those who were stationed on the same side with the ma- chine ; part of the electric fire having gone from the wire down the moist stones of the bridge, thereby making several shorter circuits to the phial, but still all passing through the gentlemen who were stationed on the same side with the machine. This was, in a manner, demonstrated by some persons feeling a sensible shock in their arms and feet, who only happened to touch the wire at the time of one of the discharges, when they were standing upon the wet steps which led to the river. In one of the discharges made upon this occasion, spirits were kindled by the fire which had gone through the river. The gentlemen made use of wires in preference to chains, as communicating a stronger degree of electricity.

393. Their next attempt was to cause the elec- trical fluid to make a circuit of two miles, at the New River at Stoke Newington. This they per- formed on the 24th of July, 1747, at two places; at one of which the distance by land was 800 feet, and by water 2000 : in the other, the dis- tance by land was 2800 feet, and by water 8000. The

disposition of the apparatus was similar to what they had before used at Westminster- bridge, and the effect answered their utmost expectations. But as, in both cases, the observ- ers at both extremities of the chain, which ter- minated in the water, felt the shock as well when they stood with their rods fixed into the earth twenty feet from the water, as when they were put into the river ; it occasioned a doubt, whether the electric circuit was formed through the windings of the river, or a much shorter way, by the ground of the meadow ; for the experi- ment plainly showed that the meadow-ground, with the grass on it, conducted the electricity very well.

394. From subsequent experiments they were fully convinced that the electricity had not in this case been conveyed by the water of the river, which was two miles in length, but by land; where the distance was only one mile ; in which space, however, the electric matter must neces-

sarily have passed over the New River twice, and have gone through several gravel-pits, and a large stubble-field.

395. On the 28th of July, they repeated the experiment at the same place, with the following variation of circumstances : — The iron wire was, in its whole length, supported by dry sticks, and the observers stood upon original electrics ; the effect was, that they felt the shock much more sensibly than when the conducting-wire had lain upon the ground, and when the observers had likewise stood upon the ground, as in the former experiment. Afterwards, every thing else re- maining as before, the observers were directed, instead of dipping their rods into the water, to put them into th'e ground, each 150 feet from the water. They were both smartly struck, though they were distant from each other above 500 feet.

396. Their next object was to determine whe- ther the electric virtue could be conveyed through dry ground ; and, at the same time, to carry it through water to a greater distance than they had done before. For this purpose they pitched upon Highbury Barn, beyond Islington, where they carried it into execution on the 5th of August, 1747. They chose a station for their machine almost equally distant from two other stations, for observers upon the New River, which were somewhat more than a mile asunder by land, and two miles by water.

397. They had found the streets of London, when dry, to conduct very strongly for about forty yards; and the dry road at Newington about the same distance. The event of this trial answered their expectations. The electric fire made the circuit of the” water, when both the wires and the observers were supported upon original electrics, and the rods dipped into the river. They also both felt the shock, when one of the observers was placed in a dry gravelly pit, about 300 yards nearer the machine than the for- mer station, and 100 yards distant from the river: from which the gentlemen were satisfied, that the dry gravelly ground had conducted the elec- tricity as strongly as water.

398. From the shocks which the observers re- ceived, when the electric power was conducted upon dry sticks, they were of opinion, that, from the difference of distance simply considered, the force of the shock, as far as they had yet expe- rienced, was very little if at all impaired. When they stood upon electrics, and touched the water on the ground with the iron rods, the shock was always felt in their arms or wrists; when they stood upon the ground, with their iron rods, they felt the shock in their elbows, wrists, and ankles; and, when they stood upon the ground without rods, the shock was always felt in the elbow and wrist of that hand which held the conducting .v;re, and in both ankles.

399. The last investigation which these gen- tlemen made on this subject, and which required all their sagacity and address in the conduct of it, was to try whether the electric shock was per- ceptible at twice the distance to which they had before carried it, in ground perfectly dry, and where no water was near ; and also to distin- guish, if possible, the respective velocity of elec-

tricity and sound. For this purpose they fixed upon Shooter’s Hill, and made their first expe- riments on the 14th of August, 1747; a time when, as it happened, but one shower of nun had fallen during five preceding weeks. The wire communicating with the iron rod which made the discharge, was 6732 feet in length, ami was supported all the way upon baked sticks : as was also the wire which communicated with the coating of the phial which was 3868 feet long, and the observers were distant from each other two miles.

400. The result of the explosion demonstrated to the satisfaction of the gentlemen present, that the circuit performed by the electric matter was four miles, viz. two miles of wire and two of dry ground, the space between the extremities of the wires; a distance which, without trial, as they justly observed, was too great to be credited. A gun was discharged at the instant of the explo- sion and the observers had stop-

watches in their hands, to note the moment when they felt the shock: but as far as they could distinguish, the time in which the electric matter performed that vast circuit might have been instantaneous. In all the explosions where the circuit was made of considerable length, it was observed that though the phial was very well charged, yet that, the snap at the gun barrel, made by the explosion was not near so loud as when the circuit was formed in a room: so that a by-stander, says Dr. Watson, though versed in these operations, would not imagine from seeing the Hash, and hearing the report that the stroke at the extremity of the conducting wire could have been consi- derable ; the contrary whereof, when the wires were properly managed, he says, always hap- pened.

401. Still, these philosophers were desirous to ascertain the absolute velocity of electricity at a certain distance ; because though in the last ex- • periment, the time of its progress was certainly very small, if any, they were desirous of know- ing, small as that time might be, whether it was measurable : and Dr. Watson had contrived an excellent method for that purpose. Accordingly, on the 5th of August, 1 748, the gentlemen met once more at Shooter's Hill ; when it was agreed to make an electric circuit of two miles, by se- veral turnings of the wire in the same field. The middle of this circuit they contrived to be in the same room with the machine, where an observer took in each hand one of the extremities of the wires, each of which was a mile in length. In this excellent disposition of the apparatus, in which the time between the explosion, and the shock might have been observed to the greatest exactness, the phial was discharged several times ; but the observer always felt himself shocked at the very instant of making the explo- sion. Upon this the gentlemen were fully satis- fied, that through the whole length of this wire, which was 12,276 feet, the velocity of the elec- tric matter was jnstantaneous.

402. Notwithstanding all this surprising velo- city, it is certain, that both sides of a charged phial may be touched so quickly, even by tot- test conductors, that all the electric ma'ter hud not time to make the circuit, and the phial will

remain but half discharged. If the upper plate of an electrophons al-,o is very suddenly touched with the tinker, or any other conductor, a very —..ark \ill be obtained on lifting it up; though a very strong one would be got if the fin- i < kept longer upon it. But how this seem- wness can be reconciled with the immea surable velocity above mentioned, does not ap- pear. It is certain, indeed, that this fluid is

considerably resisted in its passages through or over every substance. It will even prefer a short passage in the air where it is violently re- sisted to one along a wire of very great length ; but here, as in every other case, it seems to di- vide its force, and to break through several dif- ferent passages at once.

403. The amazing velocity of the electric fluid has recently given rise to some speculations on the subject of constructing electrical telegraphs; this idea, however, appears altogether chimerical, as has been proved by some experiments made by professor Barlow, of the Royal Military Aca- demy. By employing wires of different lengths up to 840 feet, and measuring the energy of the electric action by the deflection produced in the magnetic needle, he found that the intensity ra- p.diy diminishes, and very nearly as the inverse square of the distance. Mr. Barlow also ascer- tained that the effect was greater with a wire of a certain size than with a finer one ; but at the same time, that no advantage was gained by in- creasing the diameter beyond a certain limit.

404. We have thus gone through what we consider as the essentials of electricity in ge- neral ; we have omitted several things which we consider as being now obsolete, and some also that are of too trifling a nature to deserve a place in any work pretending to respectability. It has been our aim to produce the most useful infor- mal ion on every part of the subject, and to give the whole as much interest and life as the nature of a subject, purely philosophical, would admit. It may, however, be adviseable, prior to closing the present article, to furnish our readers with the latest facts in the science of electricity, and many that follow are discoveries that are due to the period that we are now writing.

< >.v I’AIUTONNERRES, OR CONDUCTORS or LIGHTNING.

405. A very interesting report on the subject of paratonnerres, has been presented to the Royal Academy of Sciences by M. Gay Lussac. The paper is divided into two parts ; one theoretical, and the other practical, and the information con- tained in it may be regarded as the most perfect we possess on the subject.

406. The theoretical part is introduced with * ome general observations on electric matter, and of conductors ; that its velocity is at the rate of about 19.50 feet per second ; that it penetrates 1«. lies and traverses their substance, with un- equal decrees of velocity; that the resistance of a conductor increases with its length, and may exceed that which would be offered by a worse but shorter conductor ;

and that conductors of small diameter conduct worse than those of larger. The electric matter also tends always to spread itself over conductors, and to assume a

state of equilibrium in them, and becomes di- vided among them in proportion to their form, ar.d principally to their extent of surface ; and that hence a body that is charged with the fluid being in communication with the immense sur- face of the earth, will retain no sensible portion of it.

407. Gay Lussac defines a paratonnerre to be a conductor which the electric matter prefers to the surrounding bodies, in order to reach the ground, and expand itself through it ; and com- monly consists of a bar of iron elevated on the buildings it is intended to protect, and descends without any divisions or breaks in its length, into water or moist ground. When a paraton- nerre has any breaks in it, or is not in perfect communication with a moist soil, the lightning, having struck it, flies from it to some neigh- bouring body, or divides itself between the two, in order to pass more rapidly into the earth.

408. The most advantageous form that can be given to the extremity of a paratonnerre is that of a sharp cone, and the higher it is elevated in the air, other circumstances being equal, the more its efficacy will be increased, as is proved by the experiments of M.M. de Romas and Charles.

409. It has not been accurately ascertained how far the sphere of action of a paratonnerre extends ; but, in several instances, the more re- mote parts of large buildings on which they have been erected, have been struck by lightning at the distance of three or four times the length ot the conductor from the rod. According, how- ever, to the opinion of Charles, a paratonnerre will effectually protect from lightning a cir- cular space, whose radius is twice that of the height of the conductor. By increasing, there- fore, the altitude of a conductor, the space also which it will protect is augmented in pro- portion.

410. A current of electric matter, whether luminous or not, is always accompanied by heat, the intensity of which depends on the velocity of the current. This heat is sufficient to make a metallic wire red hot, or to fuse or disperse it, if sufficiently thin ; and hence we may perceive the absurdity of some attempts which have been lately made, to protect ships, by thin slips of copper nailed to the masts. The heat of the electric fluid scarce4y raises the temperature of a bar of metal, on account of its large mass ; and no instance has yet occurred of an iron bar, of rather more than half an inch square, or of a cylinder of

the same diameter, having been fused, or even heated red hot by lightning. A rod of this size would, therefore, be sufficient for a paratonnerre ; but, as its stem should rise from fifteen to thirty feet above the building, it would not be of sufficient strength at the base to resist the action of the wind, unless it were made much thicker at that part. An iron bar, about three-quarters of an inch, is sufficient for the conductor of the paraton- nerre.

411. According to Gay Lussac, a paraton- nerre consists of two parts, the stem which pio- jects in the air above the roof, and the conductor.

which descends from the foot of the- stem to the ground. The stem he proposes to be a square bar of iron, tapering from its base to the summit, in form of a pyramid, and for a height of from twenty to thirty feet, which is the mean length of the stems placed on large buildings ; the base should be about two inches and a half square. Iron being very liable to rust by the action of air and moisture, the point of the stem would soon become blunt ; and therefore, to prevent it, a portion of the top, about twenty inches in length, should be composed of a conical stem of brass or copper, gilt at its extremity, or terminated by a small platina needle, two inches long. In- stead of the platina needle, one of standard silver may be substituted, composed of nine parts of silver, and one of copper. The platina needle should be soldered with a silver solder to the copper stem ; and to prevent its separating from it, which might sometimes happen, not- withstanding the solder, it should be secured by a small collar of copper. The copper stem is united to the iron one, by means of a gudgeon, which screws into each ; the gudgeon is first fixed in the copper stem by two steady pins at right atigles to each other, and is then screwed into the iron stem, and secured there also by a steady pin.

412. The conductor should be about three- quarters of an -inch square, and, as before stated, reach from the foot of the stem to the ground. It should be firmly united to the stem, by being tightly jammed between the two ears of a collar, by means of a bolt. The conductor should be supported parallel to the roof, at about six inches distance from it, by forked stanchions, and after turnina; over the cornice of the building, without touching it, should be brought down the wall, and to which it should be fastened by means of cramps. At the bottom of the wall, it is bent at right angles, and carried in that direction twelve or fifteen feet, when it turns down into a well.

413. Since iron buried in the ground in im- mediate contact with moist earth soon becomes covered with rust, and is by degrees destroyed, the conductor should be placed in a trough filled \v;th charcoal, in the following manner. Having made a trench in the earth, about two feet deep, a row of bricks is laid on their broad faces, and on them others on edge ; a stratum of bakers' ashes (braise de boulanger) is then strewed over the bottom bricks, about two inches thick, on which the conductor is laid, and the trough then filled up with more ashes, and closed by a row of bricks laid along the top. Iron thus buried in charcoal, will undergo no change in thirty years. After leaving the trough, the conductor passes through the side of the well before alluded tos and descends into the water to the depth of at least two feet below the lowest water line. The extremity of the conductor usually termi- nates in two or three branches, to give a readier passage to the lightning into the water. If there be no well at hand, a hole must be made in the ground, with a six-inch auger, to the depth of about ten or fifteen feet, and the conductor passed to the bottom of it, placing it carefully in the centre of the hole, which is then to be filled up

with bakers' ashes, rammed down as hard as possible, all round the conductor. In a dry soil, or on a rock, the trench to receive the conductor should be at least twice as long as that fur n common soil, and even longer, if thereby it be possible to reach moist ground. Should the situation not admit of the trench being much in- creased in length, others, in a transverse direc- tion, should be made, in which small bars of iron, surrounded by ashes, are placed and con- nected with the conductor. In general, the trench should be made in the dampest, and con- sequently lowest spot near the building, and the water gutters made to discharge their waters over it, so as to keep it always moist. Too great precautions cannot be taken to give the lightning a ready passage to the ground, for it is chiefly on this that the efficacy of a paratonnerre depends.

414. As iron bars are difficult to bend accord- ing to the projections of a building, it has been proposed to substitute metallic ropes in their stead. Fifteen iron wires are twisted together, to form one strand, and four of these form a rope, about an inch in diameter. To prevent its rusting, each strand is well tarred, separately, and, after they are twisted together, the whole rope is tarred over again with great care. Copper or brass wire is, however, a better material for their con- struction than iron. If a building contain any large masses of metal, as sheets of copper or lead on the roof, metal pipes and gutters, iron braces, &c., they must all be connected with the paratonnerre, by iron bars of about half an inch square, or something less. Without this pre-

caution, the lightning might strike from the con- ductor to the metal (especially if there should be any accidental break in the former), and occasion very serious injury to the building, and danger to its inhabitants.

415. Paratonnerres for Churches. — For a tower, the stem of the paratonnerre should rise from fifteen to twenty-four feet, according to its area ; the domes and steeples of churches, being usually much higher than the surrounding objects, do not require so high a conductor as buildings with extensive flat roofs. For the for- mer, therefore, their stems, rising from three to six feet above the cross or weather-cock, will be sufficient, and being light they may easily be fixed to them without injuring their appearance, or interfering with the motion of the vane.

416. Paratonnerres for Powder-Magazines. — These require to be constructed with the greatest care. They should not be placed on the build- ings, but on poles at from six to ten feet dis- tance. The stems should be about seven feet long, and the poles of such a height, that the stem may rise from fifteen to twenty feet above the top of the building. It is also advisable to have several paratonnerres round each magazine If the magazine be in a tower, or other very lofty building, it may be sufficient to defend it by a double copper conductor, without any paraton- nerre stem. As the influence of this conductor will not extend beyond the building, it cannot attract the lightning from a distance, and will yet protect the magazine, should it be struck.

417. Paratonnerres for Ships. — The stem of a paratonnerre for a ship, consists merely of u

copper point, screwed on a round iron rod, entering the extremity of the top-gallant mast. An iron bar, connected with the foot of the round rod, descends down the pole, and is ter- minated by a crook or ring, to which the con- d'lctcr of the paratonnerre is attached, which, in this case, is formed of a metallic rope, connected at its lower extremity with a bar or plate of metal, and which latter is connected to the cop- per sheathing on the bottom of the vessel. Small vessels require only one paratonnerre; large ships should have one on the main-mast and another on the niizen-mast.

418. The late ingenious Mr. George Singer, in his excellent work on

electricity, proposed to have conductors fixed to the surfaces of masts, and the electric fluid conveyed by means of strips of metal, over the deck and the sides of the vessel; but this arrangement on many accounts is highly objectionable, and the mode proposed by Gay Lussac, or perhaps that com- monly adopted in the British navy, of conveying the electric fluid from the mast-head to the sur- face of the water, in a direct line, by means of JL series of long copper links, is the best which has hitherto been devised.

419. It is allowed from experiment, that the stem of a paratonnerre effectually defends a circle of which it is the centre, and whose radius , is twice its own height. According to this rule, a building sixty-feet square, requires only a stem of fifteen or eighteen feet raised in the centre of the roof. A building of 120 feet, by the same rule, would require a stem of thirty feet, and such are sometimes used; but it is better, instead of one stem of that length, to erect two of fifteen or eighteen feet, one placed at thirty feet from one end of the building, the other at the same distance from the other end, and consequently sixty feet from each other. The same rule should be followed for three or any greater number of paratonnerres. A plate is given in the Annals of Philosophy to illustrate this interesting subject more particularly.

ELECTRO-MOTIVE ACTION OF WATER on METALS.

420. M. Becquerel has endeavoured to ascer- tain experimentally the electrical effects pro- duced by the contact of water and metals. The effect is so small as to be easily mistaken for, or confounded with, those due to electricity pro- duced accidentally during the performance of the experiments, by contact of various parts of the apparatus, or in other ways: but taking every possible precaution, and testing his re- sults in all ways, he arrived at the conclusion that zinc, iron, lead, tin, copper, &c , communi- cated positive electricity to water ; whilst pla- tina. gold, silver, &c., gave it negative electricity. Water is therefore positive with the metals which are most positive, and negative with those which am least positive. It operates, therefore, upon oxidable metals as alkalies do in their conduct with acids, when there is no chemical action. The same phenomena take place even when a little sulphuric acid is present, and the iron and zinc are acted upon , so that chemical action in this case did not prevent the production of elec- tricity by the contact of metals and water

421. By certain changes of the surface, it was found that the mten ity of electricity produced was much affected. A plate of gold, plunged in nitric acid for a few moments, and then washed in several fresh

portions of water, produced a development of electricity much greater than before, the water still becoming negative. The same plate, plunged into a solution of potass;* and then washed, lost in a great measure its power of becoming electrified by contact with water. A plate of platinum offered similar re- sults. It is supposed, that these effects may have a distant analogy with the facts observed by M. M. Thenard and Dulong, that a new pla- tina wire, which would not heat in a current of hydrogen gas and air, acquired this property by being previously plunged for a few minutes in nitric acid, and then washed. The property of the wire continued for above twenty-four hours ; and M. Becquerel says, that the plate of gold preserved its power of becoming strongly electrified in contact with water, for several hours.

ON THE ELECTRICAL ACTIONS PRODUCED B\ THE CONTACT OF FLAMES AND METALS.

122. In place of making a complete metallic circuit, as in Seebeck's experiment; or one in which the circuit was by water or acid, as in the Voltaic pile ; the metals used were connected by a flame only, and their states ascertained by the electrometer. The flames used were those resulting from the combustion of alcohol, hy- drogen gas, or a sheet of paper. When a plate of platina was placed on the cap of the elec- trometer, and heated by one of the flames before mentioned, if the temperature was a red heat or above, the metal became negative, but below a red heat it became positive. On trying the elec- tricity of the flame, by making it . rise from a piece of wet wood on the cap of the instrument, and holding the platina in it, the reverse, as ex- pected, was found to be the case.

423. A copper wire gave the same results, and generally it appeared that all the metals had the property just described ; thus any metal, plunged into a flame of hydrogen gas, becomes negative or positive according as the temperature •s higher or lower, and communicates the con- trary electricity to the flame.

424. If the flame by which the plate of metal on the cap of the instrument is heated, be touched by a piece of wet wood instead of being insulated, the effects are more distinct : but if, instead of touching it with wet wood, it be touched with a plate of the same metal as that on the electrometer, the two portions of metal are found in different states : that heated to redness being negative, and the one heated to a less degree positive. The same effects are obtained if the two plates be of different inetals. They are also produced if the flame urged by a blow-pipe be used.

425. These phenomena may be supposed to result either from the friction of the flame on the metals, or from an electro-motive action. M. Becquerel inclines to the latter opinion, conceiving it improbable that the tranquil flame of alcohol can produce friction sufficient to suffice foi the

effect ; and not being able to account by friction for the circumstance of two pieces of metal ac- quiring different electricities in the same flame, according to the temperature. That the effect was not due to the difference of temperature existing in various parts of the same piece of metal, was proved by the entire absence of any electrical phenomena, when a plate of platinum was heated to redness in the focus of M. Fresnel's strong burning-glass. These experiments have some relation to that of M. Volta on the com- bustion of a piece of amadou at the extremity of a rod communicating with the condensing plate of an electrometer. M. Volta found, that when the apparatus was distant from habitations, the amadou became positive by taking electri- city frt m the circumambient air, from which he concluded that the atmosphere had always an excess of positive electricity.

ELECTRICAL PHENOMENA ACCOMPANYING COM- BUSTION.

426. M. Becquerel found, that on rolling up a sheet of paper, placing it in the electrometer, inflaming it, and touching the flame with a piece of wet wood that the electricity might flow away more rapidly, the paper became positively electrical. If the experiment were inverted, the paper being held in the hand, and the flame made to touch the piece of wet wood placed on the electrometer, it was found that the flame took negative electricity. Hence it may be con- cluded, that when paper is burnt, the paper be- comes positive, and the flame negative.

427. If alcohol be burnt in a copper capsule, it is found by the condenser that the capsule becomes electrified positively.

ON THE ELECTRO-MOTIVE FORCE OF CERTAIN SUBSTANCES.

428. Carburet of iron. — In electro-motive power it yields only to certain oxides of manga- nese. It is augmented by immersion into acidu- lated water, if the plate be not wiped when withdrawn. This increase of power is not dis- sipated spontaneously, but is easily lost by the action of an inferior metal, as zinc. When the latter action

diminishes that belonging to the carburet, it is resumed spontaneously in a few minutes. The Passau crucibles contain much plumbago, and possess the same properties if the clay has not been too much vitrified ; a crucible having an internal surface of 100 square inches, and a vessel of similar form made of thin lead, produced a very useful apparatus. A small in- terval was left between the leaden vessel and the crucible, and the intei^al filled with a strong acid solution. By heating the crucible, and cooling the interioi of the leaden vessel, important effects, dependent upon the difference of temperature, could be observed. •

429. Mercury. — This metal ranges between sulphuret of lead and silver; when impure it be- comes inferior even to brass, but distillation restores it to its place.

430. Iron. — Its electro-motive power is changed by oxidation, but not much. Its place is always between tin and brass.

431. Tin is superior to lead, but the least de- gree of oxidation renders it inferior. Lead, with zinc, gives greater deviations than tin, iron, brass, or copper. There is no arrangement formed with substances so near to each other, which produces so energetic a current, and it is in this respect opposed to that presented by zinc, with gold or platina.

432. Charcoal, heated until it ceases to yield flame and slowly cooled, is equal to the metals in electro-motive and conducting power. It does not retard the feeblest electric current. Its electro-motive power is variable, according to the manner in which it is cooled, and also to its ex- posure to air.

433. Oxide of tin, crystallised, produces cur- rents, with all the metals inferior to it, as zinc, lead, tin, &c. ; but none when in communication with bodies having a superior electro-motive force, as gold, silver, carburet of iron, gray manganese, Sec.— Annales de Chimie, XXXIII..

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434. List of good conductors, arranged in the order of their electro-motive power, the most powerful being first.

Charcoal after long exposure to air. Gray radiated manganese. Oxide of manganese. Uncrystallised iron pyrites. Magnetic iron pyrites. Crystallised arsenical pyrites Carburet of iron. Cubic iron pyrites. Auriferous tellurium. Gold. Platina. Copper pyrites. Limelliform tellurium. Gray cobalt. Gray copper ore. Arsenical nickel. Charcoal slowly cooled. Sulphureted protoxide of iron. Sulphuret of lead. Ren

silver ore (bright). Arsenical silver, and arsenic slightly oxi- dised. Mercury. Silver.

Tarnished antimony. Arsenic.

Sulphuret of molybdena. Crystallised oxide of tin. Tarnished copper. Antimony (bright). Charcoal extinguished in water. Nickel.

Tarnished bismuth. Brass much oxidised. Bright copper. Brass.

Crystallised protoxide of iron. Iron.

Tarnished lead. Manganese. Tin/

Bright lead.

Charcoal, instantly after extinction in water. Zinc.

ELECTRICITY.

INSULATION OF ELECTRICITY.

435. M. Haiiy, in his method of distinguish- ing precious stones, &c., joins the electric in- dications given by a gem when rubbed or pressed to its other physical characters. That these indications may be obtained more readily, M. Haiiy has invented two small instruments, very portable, and ready to furnish the two kinds of electricity. One of them is a small bar of Iceland spar, fixed to the end of a needle or lever, which is then suspended by the middle so as to be balanced by a thread of silk. When the spar is pressed between the fingers, it becomes positively electric, and then the electricity of another body, however excited, as of a gem by friction, is ascertained by its attraction or repulsion of the spar. The second instrument is formed of a piece of sealing-wax, flattened at one end so that it may stand on a table, and at the other supporting the point of a needle ; a needle of silver or copper, terminated at the extremities by beads, moves on this as on a cen- tre. To charge this apparatus, a piece of amber or sealing-wax is to be excited negatively by friction, and then by touching the needle it be- comes similarly electrified, and is then ready to indicate by attraction or repulsion the kind of electricity possessed by another body.

436. M. Haiiy has also noticed the extreme permanency of the electrical states of these two apparatuses. His attention was drawn to this circumstance, from the perfection of their action during extremely moist weather, and he was induced to make a few experiments on the

sub- ject. The permanency of the electricity excited on the spar depends on the difficulty of adhesion between it and water. In damp weather no moisture deposits on it, so that electricity given to it is perfectly retained. Even if it be dipped in water, and afterwards pressed without wiping, it becomes strongly electric, because no water adheres to its surface to conduct the power away ; and M. Haiiy at last ascertained that immersion in water was not sufficient to remove electricity previously communicated to it. The permanency, therefore, of its electrical state in the atmosphere, and the value of this property may easily be conceived. If the water be rub- bed on the surface of the crystal so as actually to wet it, then no electricity is generated by pressure, and what may have previously been generated is of course dissipated.

437. M. Haiiy has observed also, that fluate of lime and the euclax also acquired electricity by pressure, though not so powerfully as Iceland spar ; and he found them also to possess similar relations to water.

438. During his experiments on the electri- city of minerals, M. Haiiy found that the second apparatus also had the power of preserving its electric state unimpaired for a long time ; a cir- cumstance scarcely to be expected from its con- struction. In examining the apparatus, this power was found to depend on the sealing-wax foot for if that were removed and the needle hung by silk, though it readily took electricity from other bodies, yet it also soon lost it; whereas, on its pivot and foot of sealing-wax, it retained it in damp weather for hours. This ap- pears to depend on a portion of electricity,

which, when the needle is first charged, passe? on to the surface of the sealing-wax, and, re- maining there for a while, gradually returns to the needle, as its state is reduced by the action of the moist air, and supports, as it were, its electricity at a higher tension than it otherwise would have. M. Haiiy expresses this by saying that the sealing-wax ‘has the power both of con- ducting and insulating; by the first it receives a part of the electricity given to the needle, by the second it retains it, and then by the first it gives it back again to the needle when the air has taken away its own portion. The evident con- clusion from the experiments is, that the appa- ratus is always ready for use, and will act in any weather.

PLATE ELECTRICAL MACHINES.

439. A variation in the construction of plate electrical machines has been devised and prac- ticed by M. Metzger, of Siblingen, in

Schaffhouse, which seems to be a real improvement. Con- sidering that the effect desired in using the ma- chine was first highly to excite the glass, and then to collect the electricity from it, M. Metzger con- cluded that the distance between the rubber and ihe points of the conductor, in machines of the common construction,, was injurious in its effects, not only by causing the dispersion in part of the electricity excited, but by uselessly wasting the exciting surface. Plates were, therefore, mounted in a vrery compact and perfect manner, with three pairs of rubbers, placed at equal distances from each other ; the conductor also had three arms furnished with points a little in advance of each pair of rubbers, to collect the electricity in the usual manner ; and the rubbers were not attached to a surrounding frame, but to brass arms, which, proceeding from a socket through which the axis passes, diverged at equal dis- tances from each other towards the periphery of the plate : the machine has a very compact and neat appearance, and its various smaller parts are contrived with much judgment.

440. In some comparative experiments, made with a plate twenty-two inches in diameter, the superiority of three pairs of cushions over two pairs was very manifest. In £he following table the first column expresses the length in inches of the rubbers ; the second the length of the spark when two pairs of rubbers were used, and the third the length of the spark when three pairs of rubbers were on the machine.

Inches.

6 7 8 9 10

Inches.

12 14 16 18 20

Inches.

18 21 24 27 30

EXPERIMENT WITH A TOURMALINE.

441. That the tourmaline possesses electrical properties dependent on its temperature has been long known : the most elegant mode, however, of exhibiting these phenomena has been suggested by Mr. Sivriˆht. If a slice be cut from this mineral, perpendicular to the axis of the prism, and then placed upon a piece of well-polished class, on being heated to a temperature of 212° it will 1 e

found to adhere so firmly as to support the weight of the slice. The two poles of a tour- maline may also be connected in such a way as to exhibit the eifects of attraction and repulsion. To effect which, the oppositely electrified poles are furnished with metallic caps and wires, re- sembling a horse-shoe magnet ; and a light pith- ball, placed between these metallic conductors, is made to vibrate till the electric equilibrium is restored.

ELECTRICITY OF A CAT.

442. The electricity, upon rubbing the back of a cat, is well known ; and that it is rendered evi- dent by a snapping noise and sparks of light. Mr. Glover, in a letter to the editor of the Philosophi- cal Magazine, describes so intense an action of this kind, as to enable the animal to give a very sensible electric shock. This effect was obtained at pleasure by Mr. Glover, and by some friends. W hen the cat was sitting on the lap of the per- son, if the left hand was placed under the throat with the middle finger and the thumb gently pressing the bones of the animal's shoul- der, and the right harjd was placed along the back, shocks were felt in the left hand ; and when the right hand was placed under the throat, whilst the left hand rubbed the back, the shocks were felt in the right hand. When the atmosphere has been favorable, and the cat had Iain some time before the fire, the experiment always succeeded.

BOHNENBERGEN'S ELECTROMETER.

443. This instrument is intended to indicate at once the nature, as well as presence, of electricity. The exterior is formed of a cylinder of glass, about two inches and a half wide : it is closed at the top by a brass plate, from which descend two of De Luc's electric columns, each containing about 400 discs of gilt and silvered paper, about three lines in diameter, and terminated below by brass rings ; these tubes are an inch and a half distant from one another, and between them is placed a tube of glass, which, passing through the cover, in the manner of Singer's insulation, supports a wire, terminated below by two gold leaves, and above by a metallic plate. It is easy, from this disposition, to perceive that when the leaves are unelectrified they will hang mid- way between the tubes ; but when affected by the approach of electrified bodies, they will di- verge and indicate by the attraction of the leaf on the one side, on the other the nature of the charge.

ELECTRICITY PRODUCED EY CONGELATION OF WATER.

444. When water is frozen rapidly in a Leyden jar, the outside coating not being insu- lated, the jar receives a feeble electrical charge, the inside being positive, the outside negative. If this ice be rapidly thawed, an inverse result is obtained, the interior becomes negative, ar.d the outside positive. — Grothm.

IMPROVEMENT OF THE LEYD.EN JAR.

445. M. Metzger has varied the construction of Leyden jars, so as to augment their capacity with- out increasing their apparent volume. For this purpose, having two jars of proper dimensions,

he simply places one within the other, so that they shall apply pretty correctly, and thus have a capacity of charge nearly proportional to the whole surface of coating, without increasing the volume of the whole beyond that of the larger jar. Jars made slightly conical would answer well for this purpose.

ELECTRICITY ON SEPARATION OF X'ARTS.

446. In the water-proof cloths manufactured by M. Mackintosh of Glasgow, where two piece – are cemented together by caoutchouc dissolved in coal, tar, or oil, the adhesion is such, that when the two are torn asunder in the dark, there is a bright flash of electric light, similar to that pro- duced by separating plates of mica, by breaking Rupert's drops, or by breaking barley-sugar, or sugar-candy. Upon trying this experiment with different substances, it was found that flashes of light were distinctly produced by tearing quickly a piece of cotton cloth.

ELECTRIC LIGHT.

447. Having a metallic wire covered with silk, form it into a close flat spiral, taking care that the revolutions touch each other: their number may be arbitrary, more than twenty- four have not been used. The properties of this spiral, when it forms part of the Voltaic circuit, are well known ; but pass through it a charge of common electricity, such as may be taken by two square feet of coated surface, moderately charged, and a vivid light, something resembling that of an artificial fire-work, will occur, orrgi- nating from the centre of the spires : it may be seen very distinctly without darkening the cham- ber where the experiment is made. M. Leopold de Nobili, who describes this experiment, con- siders the phenomenon as perfectly new. If the wire be folded backwards and forwards, so as to form a rectangular surface,

then the electric dis- charge only produces a faint light at each corner, and this he considers as the light produced by the escape of the electricity into the atmosphere ,• but the light from the spiral is said to be so vivid and distinct, that once seen, its dissimilarity from the former must be instantly evident; he has therefore called it electro-magnetic light, be- cause of its relation to the magnetic state of the spiral, thinks that it might be made continuous if a sufficiently powerful Voltaic battery were used, and has little doubt but that the aurora borealis is such a light, elicited by the magnetic state of the earth.

ELECTRICITY EXCITED BY THE BURNING OF PAPER AND ALCOHOL.

448. M. Becqueral has found, as the re- sult of numerous experiments, that when a roll of paper is set on fire at one end, the flame thereof becomes negatively electrified, and the paper positively. He also found that when al- cohol is burned in a copper dish, the latter becomes positively electrified.

HARE'S SINGLE GOLD-LEAF ELECTROMETER.

449. This instrument consists of a glass vessel, fixed by a foot to a wooden stand, and having an aperture at the top, and also another at one side. The top is closed by a metal cap?

ELECTRICITY.

finished externally by a horizontal zinc disc, six inches in diameter, and connected internally with a single leaf of gold, cut into an acute tri- angular form, and hanging on the centre of the instrument, with the point downwards. Oppo- site to the lower end of this leaf of gold, is a ball attached to a horizontal wire, and which, passing through a screw cap fixed in the lateral opening of the glass vessel, can be made to ap- proach to, or recede from, the leaf at pleasure, the distance being estimated by a graduation of the screw into ˆ of an inch. A plate of copper, six inches in diameter, and furnished with a glass handle, generally accompanies the instrument.

450. The electricity produced by the contact of copper and zinc, is rendered sensible in the following manner : — Place the disc of copper on the disc of zinc ; take the micrometer screw in one hand, touch the copper disc with the other, and then lift this disc from the zinc. As soon as the separation is effected, the gold leaf will strike the ball, usually if the one be not more than T&, of an inch apart from the other. ' That the phenomenon arises from the dissimilarity of the

metals, is easily shown by repeating the ex- periment with a zinc disc, in lieu of a disc of copper. The separation of the homogeneous discs will not be found to produce any contact between the leaf and the ball.'

451. ' It is probable that the sensibility of this instrument is dependent on that property of electricity which causes any surcharge of it, which may be created in a conducting surface, to seek an exit at the most projecting termination or point connected with the surface ;' this dispo- sition being increased, of course, by the proxi- mity of the ball. These effects are not to be ex- pected in weather unfavorable to electricity; but in favorable circumstances they have been produced by a smaller instrument, the discs be- ing only two inches and a half in diameter.

PYRO-ELECTRICITY OF MINERALS.

452. M. L'Abbe" Haiiy has remarked, with re- gard to the electricity produced in certain crys- tals by an alteration of temperature, that it is of two kinds. The accidental circumstances which led to the discovery took place whilst he was examining some crystals of the oxide of zinc, from Limbourg, near Aix-la-Chapelle, and fragments of the acicular variety of the same mineral from Brisgau. Having placed a piece of one of these substances in a very cold window for a few moments, it was found, on examination, to be electrical. Its poles were ascertained, and the mineral then placed in a milder temperature, when the electricity soon become null ; but, being approached to a fire-place, the power was greatly renewed, but the poles were inverted.

453. These results have been verified by M. Haiiy on other crystals, especially those of the tourmaline. In taking them for examples, he has endeavoured to bring under one point of view all that passes with respect to them in the interval comprised between the limits of tempe- rature, beyond which the electric action disap- pears without return. He has given the name of ordinary electricity to that produced by heat, and extraordinary electricity to that produced by cold If, therefore, commencing at the point

where the excess of heat destroys in the tour maline the effects of the ordinary electricity, that mineral be left to cool, it will soon give signs of ordinary electricity. The action of the poles at first feebly augments to a certain degree, be- yond which it gradually diminishes, and at last disappears. With a temperature a little lower, however, the extraordinary electricity appears, and the poles resume their power, but in an in- verted order, so that the pole at first positively electrified

becomes negative, and the negative pole becomes positive.

ELECTRICITY OF THE ATMOSPHERE.

454. M. Bourdet, an ex-captain in the French service, has described in a letter, a very singular electric phenomenon which he witnessed in Po- land, December 24th, 1826. The weather, ac- cording to the Poles, had never been milder at that season of the year, no snow had been seen, nor had the usual cold weather of the north, which generally set in early in that country, then commenced. Rains and storms, however, were frequent. ‘ I was,’ says M. Bourdet, ‘with the advanced guard of light cavalry ; the commander gave me an order to halt in the rear and see that my guns were disembarrassed, and then to rejoin, as quickly as possible, the light brigade. In spite of the efforts of my mer, the guns were not cleared from the marshy ground in which they were entangled, without great labor. We were advancing across the field about nine o’clock in the evening, when a strong gust of wind suddenly arose, the sun had shone brightly during the day, and, in a few minutes after, the night became so dark that we could not see the heads of our horses. The wind blew so vio- lently that the horses stopped. At that moment the extremity of the hair on their ears became lu- minous, as well as all the longer hairs on their bo- dies except the locks on their manes and tails. All the metallic extremities of their harness, and all the metallic sharp points of the carriages of our guns, were studded with luminous points, so that one might have supposed, had it been spring, that a swarm of glow-worms had covered our horses and guns. Our quarter-master ob- served that the points of my mustachios were luminous. The same phenomenon was seen on some of the cannoneers, but none of us had our eye-lashes or hair rendered luminous. These lights remained as long as the gust of wind lasted, namely, for three or four minutes. Their color was a soft violet, and they terminated in a bright white. The horses held their heads high, their ears were erect and moving, their nostrils open and respiring, their manes and tails erected, their fore legs thrown forward and their hind ones back. Their attitude, in general, was that of animals seized with terror. During the time the wind blew, they remained at a full stop, and, when feeling the spur, some stood stock still, and others kicked, as if they had been reluctant to advance. When the wind ceased the lights disappeared, and a deluge of rain, mingled with hail, fell. But, though the obscurity continued, our horses moved on, shak- ing themselves at times, panting forcibly, and neighing ; but they continued on their march. On arriving at the advanced post, J mentioned

to my comrades tue phenomenon we had wit- nessed, and though they had been only three leagues from us, they felt nc wind, but experienced much rain. The wind we encountered had an opposite direction to the rain.

RELATION OF A REMARKABLE ELECTRICAL PHENOMENON.

455. The following relation is made by M. Allemand, of Fleuvier Neufchatel, to M. Pictet, and is published in the Bib. Univer. M. Allemand, states that on the 3d of May, about ten o'clock in the evening was caught in a violent storm of wind and rain. The thunder becoming frequent and strong, he thought it proper to close an umbrella he had with him, and hold the upper metallic point in his hand, lest it should attract the lightning. The night, dark of itself, was made more so by the great rain. Sud- denly he perceived a light from above, and looking upwards found the edge of his hat lu- minous. Supposing at the moment the hat was on fire, he, without reflection, passed his hand over the light to extinguish it. It, however, only shone more strongly, a circumstance which caused some confused ideas on the nature of the light. The hand being filled with water from the hat, on shaking it, M. Allemand saw that the interior of it shone as if it were a polished metal reflecting a strong light.

456. Being at this timfe near the farm of Chaux, about ten or twelve minutes' walk from Fleurin, and fifteen or twenty from Metiers, M. Alle- mand considered for a moment what he had best do, and concluded on continuing his pro- gress. Having once filled his hand with the electrified water with impunity, he ventured to repeat the experiment, and did it fifteen or twenty times, endeavouring to ascertain whether it had odor, or produced any decrepitation or sound ; but nothing of this kind could be per- ceived; nothing but the bright light, which seemed like a brilliant varnish on the hand. The light remained for an instant only. At a few hundred paces farther on, the light on the hat still continuing, M. Allemand was surprised by the appearance of another light, less bright than the former, on the smooth surface of the umbrella handle, at the place where generally a plate of metal is placed for the name, but which plate had been removed from this umbrella. At first the finger was passed over it to extinguish >t, but the phenomena were just as before, and

both the rubbing and rubbed surface shone brightly. Afraid of the metal about the um- brella, it was thrown down, and M. Allemand went on his way, rubbing his hat on the sleeve of his coat ; but in this

way only rendering the, light brighter. The thunder was more frequent than before, but still at some little distance. The crown of light continued until M. Allemand ar- rived near Metiers, and he attributed its cessa- tion to the high poplar trees in the neighbour- hood of that place. Stopping at Metiers only a short time, he took a guide with a lantern to find the umbrella. Having done so he sent back the man, and went on himself towards Fleurin. As the tempest had diminished, he used the um- brella ; and, as soon as the light of the lantern was sufficiently removed, he again remarked lu- minous appearances. These occurred at each end of the whalebone ribs, on the metal point which terminates them: the light was not so bright as the electric star, but they were brilliant points like a yellow red metal, highly polished, and would, M. A. remarks, have appeared very beautiful if he had been collected enough to ad- mire them. M. Allemand explains these effects by supposing the atmosphere sursaturated with electricity, and that a portion of it was conti- nually passing to the ground, thro-igh his hat, umbrella, and himself.

ILLUMINATION BY ELECTRICITY. 457. Professor Meinecke of Halle, has, in a late number of Gilbert's Annals, proposed to illu- minate halls, houses, and streets, by the electric spark, and expresses his strong persuasion that one day it will afford a more perfect and less expensive light than gas-illumination, and ulti- mately replace it. His plan is to arrange, what are called in electricity, luminous tubes, glasses, &c., i. e. insulating substances, having a series of metallic spangles at small distances from each other, along the place to be illuminated ; and then by a machine send a current of electricity through them : sometimes also partially ex- hausted glasses, as the luminous receiver, con- ductor, &c., are used. In this way professor Meinicke obtained from a tyo feet plate machine a constant light in his apartment, equal to that of the moon, and even surpassing it; and by enclosing his system of sparks in tubes filled with rarefied hydrogen gas, in which gas it is assumed that the electric spark is more than doubled in brilliancy, thinks it will be easy to enlarge the plan to any extent.

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ELECTRO-DYNAMICS, the science which treats to Electro-statics, or the science of electricity in of electricity in motion through a system of con- equilibrio. See ELECIRO-MAGNEIISM,GALVAM- ductors. It is a name used in contradistinction ISM, and ELECTRICITY.

ELECTRO-GALVANISM.

1. ELECTRO-GALVANISM, or VOLTAIC ELECTRI- CITY, may be said to owe its origin to the discoveries of an ingenious Italian philosopher, named Gal- vani, who published a Latin treatise on the sub-

- ject at the close of the last»century.

2. In the preceding article we have examined the various phenomena resulting from the fric- tion of dry bodies, which, by their mutual action on each other, tend to destroy their electrical equilibrium; and we now propose to furnish our readers with an outline of that branch of elec- tricity which has led to some of the most impor- tant discoveries and splendid triumphs connected with the progress of chemical science.

3. In the year 1790 L. Galvani, professor of anatomy at Bologna, accidentally discovered that the passage of a small quantity of electricity, through the nerve of a frog that had been recently killed, had the property of exciting distinct mus- cular contractions. He produced the same effect with atmospherical electricity ; and afterwards by the mere contact of two different metals. His discoveries were published in 1791 : he proved the phenomena to be electrical, and says, ' it you lay bare the sciatic nerve of a frog, and re- move the integuments, then place the nerve on a piece of zinc, and a muscle on a plate of gold, and connect these metals by any conducting sub- stance, contractions are produced ; but, if non- conductors are used

to” connect the metals, con- tractions are not excited.’ The experiments of Galvani received considerable attention; they were varied and extended with the greatest per- severance and address by professor Volta, Dr. Valli, Humboldt, Fowler, Monro, Robison, and many others.

4. The effects obtained in the experiments of these naturalists may be illustrated by very simple experiments. The most important facts they esta- blish are, first, that the passage of a small quantity of electricity through the nerve or nerves of any ani- mal, occasions a tremulous motion or contraction of the contiguous muscles, and sometimes an ex- tension of the limbs. This effect takes place both in living animals and such as have been recently killed, and even in the detached limbs of these last. It is produced when the transmitted elec- tricity is too weak to affect the most delicate elec- trometers, and obtains in all animals for some time after death ; their susceptibility being greatest at first, and gradually diminishing as the limbs stiffen. Animals with cold blood, as frogs and fishes, retain the power of action after death longer than others, sometimes for many hours, or even days.

5. Secondly, The same effects that are pro- duced by the passage of electricity, also result from the- contact of different metals with the nerves and muscles. If a communication be formed between any nerve and muscle by a single metal, contractions are but rarely produced, and when they appear are very feeble ; but if two me- tals are employed, in contact with each other, nK*ion is always obtained, and the effects are most considerable when the metals are most es-

sentially different; thus zinc and gold or zinc and silver, form a very active combination.

6. Thirdly, By the same means that muscular motion is excited in these trials, some of the senses are remarkably affected, as will be evident when the experiment is made on living animals.

7. The demonstration of these facts is easily effected. For the excitation of muscular motion any small animals may be employed ; the most convenient are frogs and fishes. Frogs are pecu- liarly susceptible. If one of these animals be employed alive, a piece of tin-foil may be pasted on its back, and the frog being then placed on a plate of zinc, spasmodic convulsions will be produced whenever a communication is made by a wire between the zinc and the tin-foil. This experiment will succeed either in the open air or under water.

8. M. Valli, an Italian physician, was one ot the earliest to enter on a series of Galvanic ex- periments, which he began by those that relate more immediately to animal electricity. The re- sults of these experiments he communicated in 1792 to the. French Academy of Sciences, by the members of which the experiments themselves were so much approved, that the greater part of them were shortly after repeated in the chemical laboratory of Fourcroy. They were as follows : —

9. Experiment I. — Two metallic coatings, one of lead the other of silver, were placed on a frog fastened to a table, the former on the belly of the animal, the latter on the pelvis. These me- tallic coatings having been brought into union by the means of an exciting arc of copper, very powerful convulsive movements were produced in the animal.

10. Experiment II. — The small sheet of lead, employed as one of the coatings in the former experiment, having been removed, so as to leave the abdomen bare, and the exciting arc applied in the same way as before, the convulsive move- ments took place but were not so sensible as in the other case.

1 1. Experiment III. — In employing two coat- ings of the same metal, silver or goki for instance, it was found that the effects produced by the exciting arc of copper were much weaker. When these coatings were not only of similar metals, such as copper, lead, tin, zinc, &c., but the ex- citing arc also, no effect was produced.

12. Experiment IV. — The coating placed on the abdomen having received an horizontal di- rection, insomuch that the points of contact were less numerous, the effects were proportionally diminished. As soon, however, as the coating was brought into full contact with the. surface of the abdomen, they became as powerful as be- fore.

13. Experiment V. — A frog having been skinned, and cut transversely through the middle, the nerves of the thighs were laid bare, united, and placed on a piece of gold, at the same time that the thighs themselves were brought in con- tact with a piece of silver. On the application of the exciting arc of copper, slight movements

•vere produced; as they also were when both the coatings were of silver. But when a coating of tin, lead, or copper, was substituted for

the one of silver, in which the nerves were enveloped, the movements became very violent. The fol- lowing gradation was, however, observed in the action of the metals: the lead produced the most powerful movements; next the tin ; and, lastly, the copper. In proportion as the vitality of the frog was diminished, the metals also lost the power of governing the direction of the progress of the electric fluid in the animal. The lead, tin, and zinc preserved this property the longest.

14. Experiment VI. — Plumbers' lead, placed on each side as a coating, produced no effect when employed with an exciting arc of the same description of lead; but when different qualities of this metal were selected, such, for instance, as the lead of the assayer, and plumbers' lead, an exciting arc of either of these descriptions of metal produced very singular effects. When these two kinds of lead, in changing the different metals, were no longer productive of any effect in one of these coatings, by substituting for the lead either silver, gold, bismuth, antimony, or zinc, movements of so powerful a nature were obtained, as to enable the animal to be susceptible of slight convulsions, when the above-mentioned pieces of lead, each of them of a distinct kind, were again applied.

15. Experiment VII. — A short interval of repose having been allowed to the frog, it was found to be susceptible of convulsive movements of a forcible nature, when again subjected to the same trials.

16. Experiment VIII. — The electric power being nearly exhausted in this animal, it was found that the different metals, when they pro duced by their contact new convulsions, did not, on this effect ceasing, leave to the animal the faculty of displaying fresh movements with the coatings of the different kinds of lead.

17. Experiment IX. — Lastly, the electric ac- tion disappeared totally in the following order, the plumbers' lead invariably forming one of the coatings : the assayers' lead first ceased to deter- mine the action; next the tin; next the anti- mony ; next the zinc ; next the copper ; next the gold; and finally, the silver. It ought here to be noticed, that the iron had lost its exciting quality before the antimony ; but it was not as- certained whether it had likewise been deprived of that quality before the lead and the tin.

18. Experiment X. — The zinc, in losing the exciting property by which convulsions had been produced on the frog, which had been subjected to the experiment for the space of an hour, was not capable of determining any farther move- ments when the leaden exciting arc

was placed on it. It was however remarked, that move- ments were still produced by this metal, thejno- ment the person engaged in the experiment re- moved the exciting arc, and destroyed the com- munication. This singular experiment was so often repeated, as not to leave any doubt re- specting the result.

19. Experiment XI. — The upper part of a frog, skinned and intersected transversely, having

its crural nerves armed with a piece of lead, as in the preceding experiments, was placed in a glass filled with water, while the inferior part of the animal was placed in another glass. The different parts displayed very powerful move- ments when the communication was established, by the means of a chain formed by the persons present, two of the persons present having been selected to touch, each of them, the water in one « of the -glasses. One of these individuals held in his hand a bit of metal, which he brought in contact with the coating of lead.

20. Experiment XII. — When one of the com- pany withdrew himself in such a way as to interrupt the chain, the movements were no longer perceptible.

21. Experiment XIII. — The parts of the frog having been placed in the two glasses, as in Experiment XL, the operator could not ex- cite any movement by establishing the commu- nication with his two fingers. He was equally unsuccessful when, with one hand armed with a piece of metal, he touched the body of the frog, while he placed a finger of the other hand on the metallic coating of the crural nerves. But when, having a finger placed on the inferior part of the frog, he presented the piece of metal to the coating of the nerves, very powerful move- ments were excited in the animal.

22. Experiment XIV. — When the frog was touched with a metallic exciting arc, in an insu- lated state, no sensible effect was produced ; but, when the metal ceased to be insulated, the effect was invariably veryconsiderable.

23. Experiment XV. — One of the fore legs of a rabbit having been detached from the body, the brachial nerves were denudated, and armed with a piece of sheet-lead. A piece of silver, which was to act as an exciting arc, was after- wards laid on an adjacent muscle ; and the re- sult was, that very violent convulsive motions were produced in the animal. In this experi- ment on the rabbit, as it was afterwards varied, one of the coatings being of plumbers' lead, and the other of

assayers' lead, the movements were no longer excited. When they consisted, the one of lead, and the other of iron, they pro- duced as little effect ; but when the lead, as one of the coatings, was tried with another coating, either of silver, gold, copper, zinc, or antimony, convulsive movements were pro- duced. Combined with a coating of bismuth, the coating of lead produced but very slight movements.

24. Experiment XVI. — To ascertain the state of the electricity inherent in the animal sub- jected to the experiment, it was plunged into a vessel containing one of Coulomb's electrome- ters, and successively electrified both positively and negatively. In either of these cases the ani- mal influenced the balls of the electrometer, so as not only to evince that the electricity was in a perfect state of rest, as well before as during the experiment, but also, that the system of the body on which it was made, presented in the most marked and striking manner, the phenome- non of a Leyden phial.

25. Experiment XVII. — The left crural nervo of a living frog having been bound by a strong

ligature, the animal lost the faculty of moving, 50 a natural way, the part beneath the point iviiere the ligature was tied. The nerve, how- ever, having been armed in the same manner as in the preceding experiments, the movements were excited as soon as the communication was established between the muscle and the part above the ligature.

26. Experiment XVIII. — The ligature having been made on the left crural nerve, sufficiently near to the muscle to be in contact with it, and on the right crural nerve in such a way as to render it disengaged and visible, the left part of .the animal being in a palsied state, remained

erfectly motionless, whilst the convulsive move- "inents excited by the communication were all of them confined to the right side. The above- mentioned left crural nerve having been after- wards more effectually denudated, and separated from the muscular substance by which it was surrounded, recovered its quality as a conduc- tor, and permitted the movements whicli were communicated to display themselves with con- siderable energy. When the ligature was forced back against the muscle, the limb again lost the faculty of motion.

27. Experiment XIX. — One of the crural nerves having been armed with e piece of sheet- lead, a communication was established between this nerve and the other crural nerve in an un- armed state. The result was, that very powerful convulsive movements were produced.

28. Experiment XX. — One of the above nerves, coated with two pieces of lead, at dif- ferent intervals of the muscle, was violently agitated as soon as a communication was esta- blished between the two parts by the means of an exciting arc. The same effects were observed, notwithstanding every part of the nerve was laid bare, and separated from the surrounding muscle.

29. The earliest experiments undertaken by M. Humboldt were made in the presence of M. Venturi, professor of natural philosophy at Modena, and several medical students. The brain and spinal marrow of several frogs having been bid bare, and the animals properly armed, powerful contractions were produced, by the application of the galvanic arc, in the muscles of the thorax and abdomen, together with slight contractions of those of the thigh. Violent con- vulsive movements of the eyes were at the same time perceived. The diaphragm, a muscle which is in all cases extremely sensible to galvanic irritation, was also powerfully contracted. As soon as the femoral and sciatic nerves had been irritated, violent contractions were produced in the thigh. The experiments on the heart and stomach were attended by but little effect. When, however, they were made on the heart of a dog, separated from the animal, and which had ceased to contract, that action was, in a cer- tain decree, renewed; and, in the case of the stomach, a feeble motion was induced in the parts touched by the zinc. These experiments were afterwards repeated with pretty nearly the *-ame results.

30. As the efficacy of the different substances calculated to bring about the galvanic pheno-

mena, and the modifications they induce, had attracted the attention of naturalists much mote than the effects of galvanism itself on the animal economy, Humboldt determined to direct his experiments more particularly towards the latter. The cause of galvanism ap earing to him to reside in the body of living animals, and to be merely excited to action by extraneous sub- stances, he was of opinion that the strongest light would be thrown on this subject by observing the phenomena the animal should present. Seeing that the magnetic and electric fluids, which are neither peculiar to the living body, nor secreted in its organs, as the galvanic fluid appears to be, have, notwithstanding, a decisive influence on the human body, as well in a

healthy condi- tion as in a diseased state, ought it not, he ar- gued, to be concluded that galvanic researches are equally interestng to the physician and to »'>° naturalist insomuch that the former has a right to hope that galvanism may one day be usefully employed in the cure of particular diseases ? and he adds, ‘ In the science of galvanism, as well as in every branch of natural philosophy, fact> alone are stable and certain.’

31. The following are the conclusions drawn by Humboldt from his early experiments.

32. (1.) That the effects of galvanism are almost invariably different on different parts of animals ; and that multiplied and well combined expe- riments on this subject may furnish a tolerably correct appreciation of the respective forces of the different extensor and flexor muscles.

33. (2.) That in animals with warm blood, the diaphragm is, of all the muscles, if not the most powerfully, at least the most easily irritable, it being the only one which constantly contracts with violence in the experiments without a chain. This may lead to a knowledge of the respective degrees of irritability residing in the different muscles.

34. (3.) That the living nerves and muscles are surrounded by an active and sensible atmo- sphere ; and that the action of the nerve extends beyond the points at which they are distributed.

35. (4.) That galvanism is capable of excitng movements in the organs which are altogether independent of the will, such as the heart and stomach.

36. (5.) That the galvanic fluid, proceeding from an animal with warm blood, may act efficaciously on the human nerves.

37. (6.) That the galvanic phenomena take place without the intervention of any external body, which proves that the cause by which they are produced resides in the living animal eco- nomy.

38. (7.) That these phenomena may be made apparent by the means of a chain established between two points of one and the s«me nerve, as well as in the organs brought in contact with any part of the chain.

39. (8.) and lastly. That by the discovery o* galvanism, anatomists are supplied with the means of ascertaining, in small animals, the nervous distributions w’uich are too minute fot dissection. From a co’raparison between many of the phenomena of living bodies with those o» dead

matter, Humboldt conceived the idea o-

instituting a series of experiments by which vi- tality should be, as it were, subjected to a che- mical analysis.

40. M. Humboldt's attention having been di- rected to other objects for more than two years, he did not think of publishing his experimental observations, until the work of our countryman, Fowler, on the galvanic influence, enlightened him as to the result of his experiments, which he had hitherto apprehended to be peculiar to himself, at the same time that similar ones were made by other naturalists; such, for instance, as the experiment of Mr. G. Hunter of York, which consisted in perceiving the flash of light without any contact of metals with the eyes. Humboldt now began to collect all that had appeared on this subject, from the origin of the discovery, and to compare this information with what he had himselt observed. On reading the excellent production of Pfaff on animal electricity and irritability, he found, in the very considerable number of experiments it contains, and in the important observations by which they are ac- companied, results exactly similar to those with which his own experiments had supplied him, notwithstanding a very different mode of investi gation had been pursued by their author. He was now obliged to renew his labors, and to suppress at least one-half of his experiments.

41. By the observations of Messrs. Jurine, Pictet, Scarpa, Tralles, and Volta, in whose pre- sence they were made, he corrected his ideas; and their reflections conducted him to new re- searches. After having collected all the obser- vations on irritation, and on the incitability of the sensible and irritable fibre, he began with the history of galvanism, as it led to the other researches. Finding it unnecessary to go into any length of detail, in penning down his ob- servations, the results alone being of importance, he has contented himself with po.nting out the principal ones, in a loose way, and in the order in which they presented themselves to him. This work is divided into ten sections, which, after \he introductory matter already given in sub- ˆtance, form a kind of table of the subjects they discuss, and of which the following is a brief, but faithful, analysis.

42. In the first section (he author expatiates, in general terms, on the relation between gal- vanic irritation and incitability, and on the dif-

ferent degiees of the former, which, he observes, act exclusively on organic parts provided with sensible fibres. The indirect effects on inani- m?te matter, connected with incitable bodies, have not, as yet, been experimentally demon- strated. Humboldt, with great care and attention, caused the galvanic fluid to pass through colored liquors, and through other liquors saturated with salt. These experiments he repeated with great assiduity, but could never observe the smallest alteration in the coloi, temperature, evaporability, or crystallisation of the fluids in question, on the chemical combination of which he could not perceive any change to have been effected. It did not produce any sensible ef- fect either on the electrometer, or on the inter- mediate rings of the galvanic chain, so as to indicate its strict analogy with the electric fluid.

43. In his investigation of the effects of a metal- lic stimulus on the irritable and sensible fibre, Humboldt was very solicitous to ascertain the de- gree of irritability and incitability, which has as powerful an influence on the success or failure of the experiments, as the degree of force of the sti- mulus itself. In experimenting, he therefore made choice of the most incitable animals, and found that the frogs best calculated for his purpose were young and vigorous femtles, taken imme- diately after their winter slumber, and fed, to- gether with other frogs, for some days in a warm room. By the help of art he contrived to carry the incitability to a higher degree than is re- marked in the natural state ; and this discovery may be considered as one of the most important that he made. By bathing the nerves of animals with a solution of alkaline salts, or with the oxygenated muriatic acid, he not only obtained results which had not previously been known ; but also noticed phenomena, the possibility oi which had been denied.

44. A short time after the appearance of Hum- boldt's great work, M. Pfaff published an in- teresting memoir on the subject. ' It cannot be questioned,' says this writer, ' but that vital che- mistry, which appears to be the favorite object of the meditations of the physiologists of the pre- sent day, has been elucidated, as well as greatly ex'tended in its limits, by Humboldt's experi- ments on the excitability of the muscles and nerves. The indefatigable zeal employed by that writer, together with the sagacity and spirit of observation of which he has given so many con- spicuous proofs, in a multitude of researches on physiology, must necessarily have led him to very interesting results. The inferences, however, which he draws from his experiments, as well as the explanation he gives of the phenomena he has observed, are not invariably fixed on a solid basis.'

45. The very remarkable effects produced by chemical substances on the sensible and irritable fibre, are, according to M. Pfaff, susceptible of an explanation different from the one adopted by M. Humboldt. It is for this reason that the former proposed another, which he thought more just, and, at the same time, more coincident with the different phenomena of galvanism. The following are his reasonings on this head, to- gether with the experiments on which they are founded.

46. ‘ A very important circumstance,’ he ob- serves, ‘ to which Humboldt did not pay atten- tion, in his experiments relative to the influence of chemical substances, as exciters of irritability is the effect of them as members of the galvanic chain. Among these substances may be enu- merated the different alkaline substances, acids in general, the oxygenated muriatic acid in par- ticular, and liver of sulphur. I have examined them, in the above point of view, in a series of experiments, and have found several of them to be as efficacious links of the chain, and as power- ful exciters of galvanism, as metallic substances themselves.

47. ‘The table published by M. Humboluf, of the intermediate 1 nks of the chain of his boasted exciters and conductors of animal ele

tricity, should be entirely altered, if it be intended to represent the scale of the conducting and ex- citing forces of these substances, in whatever re- lates to galvanism. Liver of sulphur, the alkaline solutions, lime-water, and the oxygenated muri- atic acid, ought to be ranked’ before all other substances, metals and charcoal excepted, and immediately after them. The blood also should be considered as possessing a great degree of energy. I have convinced myself, by repeated experiments, made attentively, and with the most scrupulous exactitude, that alkaline solutions, lime-water, the oxygenated muriatic acid, and, more particularly, liver of sulphur, produce, when brought into reciprocal action, effects equally powerful with those of two heterogeneous metals ; and that, in all the cases in which the recurrence of the contractions is ascribed to an increase of irritability, produced by a chemical action, it would be much better to ascribe this effect to the irritating property of these sub- stances, as they constitute a part of the galvanic chain.

48. ‘ They form, in a manner, a series of me- tallic exciting arcs ; and ought to be ranked among those which have the greatest affinity with

metallic substances, that is, with zinc and lead. It is on this account that their effects are so obvious, when they are combined with gold, silver, and metallic minerals. They are also very efficacious in the reproduction of the contrac- tions, when, instead of being applied in an im- mediate way to the nerves, they are simply made to correspond with them by the means of conductors. The blood and the bile ought also to be comprehended in the same class, although their effect may not be equally powerful.

49. ‘ It is well known that it suffices, for the production of convulsive movements in a very irritable frog, to employ a homogeneous metal, for instance a silver discharger, by which a com- munication is formed between the muscles and the nerves. These convulsive movements are principally produced by the metals denominated noble ; but, more especially, by metallic minerals, such as pyrites and galena, or sulphuric ore of lead. When I had formed a communication be- tween the nerve and the prepared thigh of a frog, by the means of a piece of pyrites, the convul- sions were produced, and were more particularly manifested when that substance touched the blood-vessels belonging to the nerves. When a chain was established in the thigh, and the mine- ral substance and nerve had ceased to produce any effect, the convulsions were reproduced, al- though feebly, by interposing in the chain a piece of moistened sponge, which formed, in a manner, a coating to the nerves. These effects were not usually, however, of any long duration. By moistening, afterwards, the nerve with a drop of blood taken from the frog subjected to the ex- periments, or, what amounts to the same thing, from any other, and afterwards touching the blood in question with a metallic exciter of silver 01 copper,’ placed on the thigh, very powerful convulsions were instantly produced.

50. ‘Here the susceptibility of irritation was evidently augmented by thn moistening of the nerve with the blood. It was even so to such a

degree, that a galvanic irritation of the feeblest kind became very powerfully augmented. This augmentation of the contractions was not, how- ever, to be ascribed to an immediate influence of the blood on the nerve, or on the irritability seeing that the same phenomena were manifested, precisely in the same way, when t le blood, in- stead of being immediately applied to the nerve, was simply laid on a bit of sponge, or on any other conducting body, placed orer it. The suc- cess of the above experiments depended entirely on the immediate contact of the blood ; since, whenever the nerve, or the sponge, was touched at the parts distant from it, the effect did not en- sue. To the presence of the blood ought more particularly to be ascribed the properties of

ani- mal substances, considered as members of the galvanic chain.

51. ‘In this latter point of view, the heart of the frog, still replete with blood, displayed very singular effects, at a time when the irritability was extinguished to such a. degree, that certain heterogeneous metals, such as gold and silver, or silver and copper, no longer produced any effect when brought in contact. I was enabled to reproduce very forcible contractions, by placing the heart of a frog on its nerve, and by forming a communication between it and the thigh of the animal, by the means of a metal! it exciting arc either of gold or silver. In this man- ner I established a galvanic chain, in the compo- sition of which one metallic exciter only was tvˆ be found. In another instance, it was very re- markable, that the moment the heart was touched, either by silver or by pyrites, it remained tran- quil, notwithstanding the thigh of the animal was in a convulsed state, the regularity of the system of the pulsations not being in any degree inter- rupted. Other parts of the frog, for instance, portions of its liver, .ts bowels, &c., which con- tain a less proportion of blood, did not possess an equal efficacy ; but the heart itself was sur- passed by the blood presented in substance, and more particularly in a concrete state. It was sur- prising to see the mode in which I could, by the means of a drop of blood, bestow on the nerve its vital energy; and also to observe that this drop of blood, without \mdergoing any sensible dimi- nution or change, still continued to render the same service.

52. ‘ Whatever may be the effect, however, which the blood produces, it is still surpassed by the alkalies, by the oxygenated muriatic acid, and, more particularly, by the liver of sulphur, when metallic exciters of the first class, that is, the minerals and noble metals, together with the other metallic substances, and the regulus of an- timony, cease to produce any effect, in conjunc- tion with the blood with which the nerve has been moistened. After having wiped it dry, and substituted for the blood a single drop of the deliquescent oil of tartar, very powerful convul- sive movements may be produced, by a recur- rence to the above metallic exciting substances. This galvanic chain, consisting of muscles, sil- ver, pyrites, or regulus of antimony, and of an alkali and a nerve, is as efficacious as a cham formed by muscles, silver, iron, or tin, conjointly with ;i nerve. The deliquescent oil of tannr

may be considered as an active coating of the nerve. These

phenomena present themselves agreeably to the same identical laws by which the metallic coatings of the nerves are regulated. In the above process, the deliquescent oil of tartar possesses nearly the same activity, whether the nerve, without being moistened in an immediate way, is made to communicate with the muscles by the means of any conducting body whatever, or is immediately touched by the metallic ex- citer applied to the thigh of the animal, the ex- citer in question being a bent silver probe.

53. Professor Pfaff goes on to say that ‘ the following experiments merit a particular notice. I laid a portion of muscular flesh on the nerve of a frog, on which two heterogeneous metals, silver and copper, had ceased to produce any effect, and having touched the nerve with a silver probe, which was applied to the thigh, was not enabled to produce any contractions. I now poured a drop of the deliquescent oil of tartar on the muscular flesh, and, as soon as the silver probe was brought in contact with this alkaline sub- stance, very strong convulsive movements were displayed. I laid another portion of muscular flesh on the preceding one, and brought the ex- citer towards it, but without being enabled to produce the contractions. Scarcely, however, had this latter portion of muscle been moistened and touched, as in the former instance, than they were renewed. In this way I was enabled to form several layers of a different nature ; and the effect above pointed out took place as often as the silver, or, what was still bettei, the pyrites and the regulus of antimony, came in immediate contact with the alkali. The nerve having been moistened with the deliquescent oil of tartar, a very feeble galvanic irritation, produced either by gold and silver, or by silver and copper, be- came highly exalted, even when the convulsions had not been previously excited. It remains, however, to be ascertained, whether, in this case, the deliquescent oil of tartar did not act as the most efficacious coating of the nerve. It is in this wpy that silver and copper produce fresh contractions, when, after the nerve has been coated with zinc, and the thigh of the animal laid on silver, a communication is formed be- tween them by the means of copper. In such a case, indeed, the effect is not owing to the joint operation of the copper and silver, but, on the other hand, to that of the silver and zinc, by which the humid animal parts are immediately coated. Would not an effect exactly similar be produced, if the nerve were to be moistened with the deliquescent oil of tartar? Does not this alkali, in surrounding the nerve, become a more efficacious coating than the zinc ; and, on the application of feeble exciters, such as cop- per and suver, does not the zinc itself act more powerfully by the means of an alkali, with which it is simply connected by the copper, as an in- termediate conductor ?

54. ‘ These doubts are very far from being removed by M. Humboldt’s experiments. Sup- posing the deliquescent oil of tartar to act by producing an augmentation of irritability, this effect ought also to be produced when the nerve hnf. been carefully dried, before the application

of a weaker galvanic irritation is made. This, however, is what I have not found in any of my experiments. M. Humboldt constantly applied his weakest exciters, whilst the nen-es were still moistened with the deliquescent oil of tartar, or with any other chemical substance calculated to augment the susceptibility of irritation. On this head, let the different parts of his work in which he treats of the increase of this suscepti- bility by the alkalies, be compared. He sets out by saying : ‘ I showed the galvanic flashes to several persons who could not perceive them in the experiments made by Mr. G. Hunter, by rubbing their gums, on the upper jaw, with an alkaline solution. Two pieces of gold, applied to wounds on the hack, were found to possess great efficacy, when the wounds had been touch- ed with the deliquescent oil of tartar.’ A little farther he observes : ‘ When the principal trunks of the nerves of an organ are carefully prepared, and enveloped in moist bits of blad- der, in such a way as that the irritating humidity simply moistens the muscular flesh, and the few fine nervous filaments it contains, an increase of irritability is rarely to be observed, at the same time that it is constantly produced, when the above principal trunks are moistened beneath the muscles.’ Again, he says in the following page : ‘ The vital principle will be restored in the thighs of frogs exhausted by galvanic ex- periments, by the means of the oxygenated muriatic acid, in such a way as that the irritation of metals will again produce its effect. It is re- markable, that the contractions become more powerful, when a great portion of the nerve is moistened, and touched directly by the silver/ Such are the extracts I have chosen to cite from Humboldt’s work. Now, let it be ob- served, that, in all the above cases, and more particularly in the experiments relative to the in- fluence of chemical substances on the irritability of the animal fibre, the nerves were constantly moistened by these substances. They must con- sequently, whenever the metals were applied, operate likewise as links, or members, of the galvanic chain. The consequences must there- fore be uncertain at the least.

55. ‘ I could not observe any remarkable dif- ference in the alkalies, considered as links of the galvanic chain. The deliquescent oil of tartar appeared, however, to be somewhat more effica- cious than the other substances of this nature. The effects of lime-water were not so powerful : it appeared, as it were, to preserve a medium between the alkalies and the substances to which an inferior rank is assigned. The

oxygenated muriatic acid appeared to be pretty nearly as ac- tive as the deliquescent oil of tartar. In a few cases only the latter fluid produced spasmodic contractions of a longer duration. I observed likewise, in several instances in which I em- ployed the oxygenated muriatic acid, a phenome- non which the metallic coatings of the nerves had often displayed, namely, that the contractions were manifested at no other time than when the contact of the nerve, moistened with a drop of the oxygenated muriatic acid, ceased. Here, likewise, the effects seemed to depend entirely on the immediate presence and application of

the oxygenated muriatic acid. As soon as a drop of this liquid is poured on a portion of muscular flesh, laid on the nerve, the movements are in- variably reproduced.'

56. Having entered into this detail of the ob- jections of M. Pfaff to the theory of Humboldt, we may now proceed to the analysis of a very curious memoir, read by M. Lehot at the French National Institute. Its object is to demonstrate particularly, not only the circulation of a very subtile fluid in the galvanic chain, but likewise that, in the application of the different chains to the animal arcs, there are unequivocal signs of the direction of the motion of that fluid, inso- much that it is possible to determine a priori, in a considerable number of different chains, the direction of the current. Being acquainted with this direction, as well as with the nature of the different parts of the chain, the author of the memoir in question observes, that it is reciprocally possible, in certain cases at least, to determine their respective position ; and also, by the interposition of new substances in the chain, or by a change in the disposition of the parts of which it is composed, to give a par- ticular direction to the galvanic fluid, and even to bring it into a state of repose.

57. The comprehension of these phenomena is connected with a fact which seemed to have escaped the notice of the different physiologists, namely, that the galvanic fluid is accumulated in the passage from the organs to the coatings. By a due attention to this fact, the nature of the me- tallic substances may likewise be distinguished at the distance of several yards. The galvanic influence will be sufficient to determine this. The following are the principal results of the in- teresting experiments made by M. Lehot.

58. Experiment I. — If the thigh of a frog re- cently prepared be held in one of the hands, and the nerve be brought in contact with a piece of zinc, the extremity of which is immersed in mercury, the moment the fingers of the other hand are dipped in that fluid powerful contrac- tions will be manifested in the thigh of the animal. The same result will be obtained as often as one of the following substances, namely zinc, lead, tin, mercury, bismuth, copper, silver, or plumbago, is employed as a coating to the fingers ; and one of those by which it is preceded, in the foregoing series, as a coating to the nerve. With respect to the precaution of moistening the fingers, it is absolutely indispensable ; for which reason, whenever they are described as terminating one of the extremities of the arc, they are to be constantly supposed to be in a humid state.

59. Experiment II. — If, on the other hand, the nerve be brought in contact with the mercury, and if that metal be touched with a piece of zinc, held in the moistened hand, either the contrac- tions will not be produced, or they will be ex- tremely feeble, provided there still be a certain share of susceptibility in the part. By separat- ing, however, the nerve from the mercury, or, in general, by breaking the chain at any given point whatever, the contractile movements will take place. The same results will be obtained, as often as one of the metals belonging to the se-

ries pointed out in the preceding experiment, ij employed as a coating to the fingers ; and one of those by which it is followed in that series, as a coating to the nerve. Thus, if the nerve be coated with lead, and the fingers with zinc, thero will not be any contraction when these two me- tals are brought in contact; but, if the chain be destroyed at any given point, the contractions will be manifested. If, on the other hand, the nerve being still coated with lead, the fin- gers be coated with silver, when the1 chain is formed, the galvanic contractions will take place.

60. Experiment III. — If a flat surface of zinc- be laid on the tongue, and touched with a piece of silver, held between the moistened fingers, a particular savor will instantly be perceived. Much has been said on the subject of this phe- nomenon, but it has been nowhere noticed, that it likewise takes place whenever the tongue is coated with any one of the metallic substances pointed out in the first experiment, and the fin- gers with one of those by which it is followed in the series. If, however, after the chain has been formed, it be interrupted, the savor will be no longer manifest.

61. Experiment IV. — If a piece of silver bi; laid on the tongue, and a

portion of zinc be held between the moistened fingers, as soon as the latter is brought in contact with the silver, there will not be any distinguishable sensation, or, at the least, it will be very slight. As often, however, as the chain is interrupted in any given point whatever, the savor will be perceptible. It will not in this case be so strong as in the preceding experiment, and will be more slowly communi- cated.

62. The same result will be obtained, as often as one of the metals pointed out in the first ex- periment is employed as a coating to the tongue, and one of those by which it is preceded in the list, as a coating to the fingers. Thus, by coat- ing the tongue with lead, and the fingers with zinc, and by bringing the two metals in contact, the savor will not ensue ; but, by interrupting the chain at any given point, it will be very per- ceptible. On the contrary, if, the tongue being still coated with the lead, the fingers be coated with silver, instead of zinc, and the chain established, the sensation will be instantly per- ceived.

63. Experiment V. — If the thigh of a frog be laid on a plate of silver, and the nerve on a surface of zinc or lead, the moment the coatings are brought in contact, powerful contractions will be produced. The same thing will happen whenever the coating of the nerve is made to consist of a metal selected from among those which are pointed out in the first experiment ; and that of the muscle, of another metal follow- ing it in the series.

64. Experiment VI. — If the muscle be armed with zinc, and the nerve with silver, the contrac tions will not ensue until the moment the chain is interrupted. When portions of copper, iron, bismuth, and lead are substituted for the silver, the same results are obtained.

65. In the first, third, and fifth, of the preced- ing experiments, it must have been observed, that

the phenomena were manifested the moment the galvanic circle was formed. The fluid contained in the part of the chain was put in motion, and penetrated instantly either to the tongue or to the nerve. By reversing the chain, a contrary direction must have been given to the current, seeing that the phenomena which were manifested in the second, fourth, and sixth experiments, that is, those in which the galvanic influence was not perceptible until the instant when the

chain was interrupted, were to be ascribed to a portion of the fluid, accumulated either in the tongue or in the nerves, at the points of contact of these organs with their coatings. Now, to the end that the fluid should have been thus accumulated, it was necessary that it should have penetrated the above organs in the direction of the muscle to- wards the nerves, or of the fingers towards the tongue. It is thus demonstrated, that the accu- mulation of the fluid is a sure characteristic of the direction of the current, by the help of which it may in all cases be determined.

66. In conformity to the experiments which have been detailed above, and to the galvanic facts previously known and established, it would appear that the following principles may be laid down.

67. (1.) That all exciting substances contain the galvanic fluid ; but that its quantity is very con- siderable in humid substances, and in the organs of animals, which have a very small capacity for that fluid, when compared with metallic sub- stances.

68. (2.) That, when two exciting substances are brought together, a new distribution of the gal- vanic fluid takes place ; the substance which has the least capacity losing a portion of the fluid, on which the other substance seizes. Metallic and carbonated substances, disposed in the following order, — zinc, lead, tin, mercury, bismuth, cop- per, silver, and plumbago, act in such a manner as that any one of them, when brought in con- tact with one of those by which it is followed, seizes on a portion of the fluid the latter con- tains.

69. (3.) When’ the galvanic fluid penetrates the tongue, in directing itself from its extremity towards its root, it causes in the latter part a particular savor, which is more or less strong, according to the greater or less quantity of the fluid, and to the susceptibility of the organ. But when its direction is such, that it tends to flow out of the animal arc by the tongue, it occasions a much weaker savor, which differs from the former in proportion as the quantity of the fluid put in motion is less. As the fluid, however, finds some difficulty in quitting the tonuiif, it partly accumulates in that organ; and when the cause that has given rise ‘to this accumulation ceases, then the fluid, in returning towards the root of the tongue, occasions there the galvanic savor in question.

70. (4.) When the galvanic fluid, distributed by the nerves, penetrates into the muscular sub- stance of the organs of living animals, recently separated from the animals themselves, con- 1 net ions are produced in the parts it permeates. The susceptibility being exalted, if the fluid in- herent in the organ should, from any caus«

whatever, be unequally distributed, and accumu- lated at tlie particular points, muscular move- ments will ensue. But if the susceptibility is weakened, the contractions can no longer take place, unless by the aid of a fluid extraneous to the organ.

71. At the earliest stage of the diminution of the susceptibility of the organs, the contractions are displayed, whatever may be the direction of the fluid by which they are permeated. But when the susceptibility is weakened still more, the direction of the current ceases to be indiffer- ent. When the fluid is directed in such a way as to pass from the nervous ramifications to the nerves themselves, the contractile movements are much weaker than when it receives a contrary direction; and in the former case a portion of the fluid becomes accumulated at the point where it has a tendency to flow out from the nerve. This accumulation, and this difference in the effect of the current, by which the organ is penetrated in one direction or in another, are greater in proportion as the susceptibility is less, and as the quantity of the fluid put in motion is smaller. Thus, when the susceptibility is greatly enfeebled, notwithstanding the contrac- tions may ensue, when the fluid penetrates into the organs, in the direction leading from the nerve to the muscle, they cease altogether when it permeates them in a contrary direction, it being then almost completely accumulated in the organ. The cause which has given rise to this accumulation having ceased, the fluid returns into its accustomed channel, and, having pene- trated the organs in the most favorable direction, occasions in them the muscular movements.

72. (5.) If a communication be established between two points of an animal organ, with the help of a chain composed of different substances, disposed in such a wuy as that it may not be symmetrical, relatively to the nature of the parts of which it is composed, the fluid, being une- qually solicited on the one hand and on the other, puts itself in motion, and forms a current directed towards the preponderating force.

73. (6.) If all the parts of the chain, by which a communication is established between two points of a system of organs either nervous or muscular, be reversed, a current will be pro- duced having a contrary direction to the former.

74. (7.) When the chain is symmetrical, rela- tively to the nature of the parts of which it is composed, the fluid, being equally solicited on all sides, will forbear to display any movement.

75. (8.) and “lastly. When a chain, which is calculated by its nature to

give motion to the galvanic fluid, is destroyed, that is, when an insulating body is interposed, the fluid, which had been accumulated in the organ by the formation of the chain, returns to its original situation, and a current is formed into a contrary direction to the first.

76. These principles, which form the basis of M. Lehot's. theory of galvanism, are likewise confirmed by the following experiments : —

77. If the" thigh of a frog be held in one of the hands, and the nerve coated with zinc, at the same time that the person who makes the expe- riment has his tongue armed with silver, tli«

thigh of the frog will contract as soon as the two metals are brought in contact ; but the experi- menter will not be sensible of any savor, or of a very slight one at the most. By interrupting, however, the chain, he will perceive a very dis- tinct savor, and the thigh of the frog will cease to contract. If, on the other hand, he coats his tongue with zinc, and the nerve with silver, the peculiar taste will be manifested at the moment of the contact ; and the thigh, provided its incita- bility has been weakened, will preserve a state of perfect immobility.

78. By the interruption of the chain, the mus- cular movements will be again apparent, with- out any manifestation of the galvanic taste. It will appear that this ought necessarily to happen, when it is considered that, as soon as the chain is formed, the current of the fluid takes a direction from the silver to the zinc, and, having pene- trated in a direct and immediate way into the nerve, produces contractions in the muscle, at ihe same time that it crosses the body of the per- son by whom the experiment is made, and accu- mulates on his tongue, without his being sensible of any particular savor. When, however, the chain is interrupted, the accumulated fluid re- turns to the parts it had quitted, and the savor on the tongue becomes manifest. If the tongue be coated with zinc, and the nerve with silver, the current being impelled in a contrary direc- tion, the phenomena which take place are dia- metrically opposite.

79. If two persons, holding each other by the hand, arm the tongue, one of them with zinc, and the other with silver, as soon as they bring the two metallic substances in contact, the one who has the tongue coated with zinc is sen- sible of the savor ; but this does not happen to the other. If they afterwards separate the zinc from the silver, the one

who felt the savor at the time when the chain was formed, will cease to be sensible of it on its being thus interrupted ; at the same time that it will be rendered mani- fest on the tongue of the other.

80. Finally, the animal arc may be terminated by two nerves. Thus, by placing the two thighs of a frog on a plate of glass, and establishing a communication between their muscles, by the help of a flat piece of metal, coating, at the same time, the nerve of one of them with zinc, and the other with silver ; the thigh which is armed with zinc will contract the moment a communi- cation is established between the two coatings, by the means of a rod of zinc or silver ; the inci- tability of the other thigh having been weakened, the limb will remain motionless. By interrupting the chain, however, the muscular movements will be displayed in the latter, and the former will resume a state of repose.

81. The same disposition being made as in the second experiment, and the chain established, if a given point of the muscle be brought in con- tact with the mercury, without deranging the contact of the nerve ; or if a communication be established between the muscle and the mercury, or between the muscle and the zinc, by the means of a metallic substance, the muscular movements will be instantly manifested. These phenomena are occasioned by the fluid accumu-

lated at the point of contact between the narva and its coating, which fluid returns into the mus- cle, and there gives rise to the contractions. This is shewn in the following manner : — 1 1', while the communicating metallic substance still touches the muscle and the mercury, or the mus- cle and the zinc, the latter be detached from the mercury, the contractions will not ensue, as would have happened if the fluid accumulated by the original chain, at the point of contact of the nerve and its coating, had remained there.

82. If the thigh of a frog, prepared in the customary manner, be held in one of the hands, and the nerves, as well as a few points of the muscle, be brought in contact with the mercury, the moment that fluid is touched by a bar of zinc, held in the other hand, previously mois- tened, violent contractions will be produced in the limb of the animal. This experiment conse- quently presents phenomena entirely different from those which were the result of the second experiment. The fluid, instead of having been accumulated in the nerve, appears to have flowed out by the muscle, and to have there occasioned the contractions. Such a degree of incitability may be induced, that the contractions may be altogether subdued by the double contact of the nerve and the muscle, as well in forming as in interrupting the chain.

83. If the same disposition having been made as in the sixth experiment, not only the nerve, but likewise the muscle, be made to touch the piece of silver, leaving it, however, in constant contact with the zinc, violent contractions will be manifested as soon as a communication is established between the zinc and the silver, by the means of a conducting substance. By sub- stituting for the silver either copper, plumbago, or lead, the same phenomenon will be obtained.

84. The current which is formed in a chain composed of three metallic substances, is con- stantly directed towards the extreme metal sta- tioned in front of the metal at the other extremity of the chain. The direction of the current can- not therefore depend, in any degree, on the metal by which the middle space is occupied.

85. In the chain composed of metallic and humid substances, where there are only two or three heterogeneous metals in immediate contact, the current is directed in the same way as it would be if these metals were to be regarded as independent of the rest of the chain.

86. Having placed a thin plate of zinc at the bottom of a vessel fdled w th water, and brought the tongue in contact with the extremity of a bar of tin, the other extremity of which is made to touch the plate of zinc ; if another bar of the same metal, of the same dimensions with the preceding one, be held in one of the hands, and its extremity plunged in the water, there will not be any perceptible savor. In reality, the current is, in this instance, directed in such a way as to pass through the fingers, crossing the body of the person by whom the experiment is made, to accumulate itself on the tongue. But as soon as the second bar of tin is plunged more deeply in the water, so as to touch the zinc, the savor becomes perceptible. This phenomenon, which had not hitherto been noticed, is, according

to M. Lehot, a natural result of the principles he has laid down. By bringing, he observes, the second bar of tin in contact w.th the zinc, a symmetrical chain is formed, of such a nature, that the fluid it contains must necessarily be in equilibrio. Consequently, the quantity of the fluid which had been accumulated in the pre- ceding disposition, must, unavoidably, have been dispersed, and have occasioned the sensation or flavor which was noticed. On detaching the bar of tin from the plate of zinc, without taking it out of the water, the sensation ceases to be per- ceptible, on this account, that a current

is formed which is directed in such a way as to penetrate the fingers. If the bar of tin be withdrawn from the water, the flavor will be perceptible, in con- sequence of the dispersion of the accumulated fluid.

87. Thus, to render a chain symmetrical, or to destroy it by the interposition of an insulating substance, will have the same effect relatively to the motion of the galvanic fluid. By the expla- nation which has just been given, it seems evi- dent that if, after rendering stationary the bar which touches the tongue, and the one which is held in the hand moveable, the operation be per- formed inversely, the savor will be felt in con- trary circumstances : seeing that the current will, in every such case, take an opposite direction.

88. When the extremity of the moveable bar is plunged in water, the one which is held in the moistened hand being fixed, and in contact with the plate of zinc at the bottom of the vessel, the sensation is perceptible on the tongue. But if the former be plunged still deeper, so as to be brought to touch the zinc, the savor will be no longer manifested. On detaching it from the plate of zinc, without, however, withdrawing it from the water, the sensation is again produced ; but ceases as soon as the bar is taken out of the water.

89. If the extremity of each of the two bars of tin be laid on a particular point of the tcngue, the savor will be felt at the extremity of the moveable bar, the moment its other extremity is plunged in the water, that of the fixed bar being in contact with the plate of zinc. Secondly, by plunging the moveable bar still more deeply in the water, and bringing it in contact with the plate of zinc, the savor will be felt at the point of the tongue where it is touched by the other bar. Thirdly, the instant either of the bars is separated from the plate of zinc, without being, however, taken out of the water, the galvanic savor will be dis- tinguishable at its point. Lastly, the one which was stationary in the first instance, still continu- ing so, if the moveable one be taken out of the water, the savor will be felt at the extremity of the former.

90. From the principles which have just been laid down, it is not difficult to conclude that, if a metal, taken from the given series, be employed as a bar, and one of those by which it is followed in that series a< a communicator plunged in water, the phenomena which take place in the preceding experiments will be entirely changed. Consequently, the cases in which, in the first and se; ond of the above experiments, the sensation \\ :i< manifested, are precisely those in which there

should not be any sensation, under the circum- stances above stated, and vice versa. It also fol- lows that, in the third experiment, the cases in which the savor was perceptible at the extremity of the moveable bar, are those in which, under these circumstances, it should be felt at the ex- tremity of the fixed bar, and vice versa; the current then invariably taking a contrary direc- tion.

91. Having placed the nerves of the thigh of a frog on a plate of tin, terminated by a small cavity filled with water, and the muscles on ano- ther plate of tin exactly similar, if one of the ex- tremities of an arc of zinc be brought in contact with the bottom of the cavity formed in the coat- ing of the nerve, and if the other extremity of the arc be immersed in the water contained in the cavity of the coating of the muscle, the suscep- tibility of the organs will be found to be such, that the contractions will not ensue. By plung- ing the communicator, however, still more deeply in the water, in such a way as that it may touch the bottom of the latter of the above cavities, the contractions will be instantly manifested in the animal arc. Having afterwards detached the arc of zinc from the bottom of the cavity of the coat- ing of the nerve, without, however, withdrawing it from the water, the organ becomes motionless ; but, as soon as the arc ceases to be immersed in the water, it being, at the same time, still in con- tact at its other extremity, the contractions are again produced. This experiment was frequently repeated by our author, and was constantly attended by the same result. In the latter instance, however, the contractions were invaria- bly weaker than in the former.

92. If the arc of zinc be brought in contact with the coating of the muscle, at the same time that its other extremity is plunged in the cavity of the coating of the nerve, the thigh of the frog will be forcibly contracted. By immersing it still deeper, so as that it may reach the bottom of the cavity, the contractions will cease. In detaching it, the muscular movements are usually perceptible ; but there are occasions in which the organs remain motionless.

93. The same results will be obtained as often as a more oxydizable metal is employed, to estab- lish a communication between two homogeneous coatings, formed of a weaker metal. If coatings of a metallic substance, possessing a greater capacity, be employed in conjunction with a communicator or arc, which has a less capacity, the effects which will be produced will be diame- trically opposite.

94. The experiments which have been thus detailed, lead to a very singular result, namely, that one metal may be distinguished from another without being either directly seen or felt. In reality, by

composing a chain in such a way as that it may be terminated by one of the metals described above, a current being formed which takes a particular direction, totally different from the one which it takes when the chain is terminated by another metal, it is easy to recog- nise any one given metallic substance. In this way M. Lehot was enabled to distinguish a por- tion of zinc from a piece of silver, at the extre- mity of metallic threads several vards in lengih

95 About this period professor Volta took up the subject, and philosophy has to rejoice that his mode of theorizing, although not strictly true, has contributed principally to its rapid advancement. He set out with the idea, con- trary to Galvani, that the electricity in question did not belong to the animal, but to the different metals employed. Galvani, therefore, was un- likely to produce any greater effect than what two pieces of metal could effect, because he believed the electricity to be in the animal. Volta was led to the discovery of the battery by combining a number of pieces of metal to- gether, because he was persuaded that the elec- tricity was in the metals and fluids employed.

96. He repeated the experiments of Galvani, and found that when two pieces of metals of different kinds were placed in different parts of an animal at the same time that the metals were brought in contact, or were connected by a metallic arc, as often as the contact was made, convulsions were observed. He found that the greatest effect was produced when the metals were zinc and silver. When several pairs of metals were employed, having pieces of moist cloth between them, the effect appeared to in- crease as the number of pairs.

97. This important discovery of accumulating the effects of this species of electricity was made by Volta, in 1800, and thence has been denomi- nated the Voltaic pile. The apparatus, as first made by Volta, consisted of a certain number of pairs of zinc and silver plates, separated from each other by pieces of wet cloth. Hence the arrangement was as follows : zinc, silver, wet cloth ; zinc, silver, wet cloth, and so on. The silver plates were chiefly silver coins, the plates of zinc and the pieces of cloth being of the same size. He found this pile much more powerful when the pieces of cloth were mois- tened with a solution of common salt instead of pure water. A pile, consisting of forty pairs of plates, he found to possess the power of giving a very sharp shock, similar to that of a small electric jar; and

that this effect took place as often as a communication was made between each end of the pile, and as long as the pieces of cloth remained moist..

98. An account of this discovery was com- municated to the Royal Society, and published in the Philosophical Transactions. We do not find that this celebrated philosopher made any considerable discoveries after the invention of the pile.

99. The galvanic pile invented by M. Zam- boni, and which he has called a binary pile, is composed only of two elements, namely, a metal and a fluid. The metallic elements of the pile are twenty-nine small squares of tin-foil, about half an inch long on each side, and terminated by a very fine tail, from two to three inches in length ; and the fluid elemev t is distilled water, placed in thirty watch glasses, arranged circu- larly on a table. The water in every two ad- joining glasses is connected with one of the ele- ments of tin, by placing the square portion of the tin in one glass, and the tail in the adjoining one in such a manner that the square portion is wholly immersed, while the tail merely touches the fluid. When the metallic elements are all

arranged in a similar manner, and when >~ne hrst and last glasses communicate only by means of all the intermediate ones, it will be found by making a communication between the first glass and the ground, and between the last and a good condenser, that the pile has two poles, one vitre- ous and the other resinous, the former corres- ponding to the small squares, and the latter to the long tails.

100. If the pile is constructed with elongated rectangular pieces of tin, no electricity is deve- loped when the two extremities of the rectangles are equally immersed in the distilled water of the watch glasses; but, whenever they are im- mersed unequally, the electricity exhibits itself at the poles, as in the construction already de- scribed ; the vitreous pole always corresponding to the larger surface immersed, and the resinous one to the smaller surface, so that the same pole may be rendered alternately vitreous and resin- ous, by immersing more or less of the nearest ends of the rectangles of tin.

101. When elements of zinc or copper are sub- stituted in place of the tin, the same effects are produced ; but no indications of electricity are obtained from oxide of manganese.

102. A pile constructed in the preceding man- ner does not charge the condenser instantane- ously. The electricity does not appear till about the end of half a minute, and often longer, and it then gradually

increases. This effect might be ascribed to oxidation, as the pile would then have three elements ; but at the end of several days the development of electricity was as power- ful as at the moment when the apparatus was arranged, although not the slightest trace of oxid- ation could be perceived. When zinc was sub- stituted for tin, the electricity diminished as the oxidation increased ; it then disappeared and afterwards reappeared, with an opposite charac- ter. Hence it would appear that the development of electricity in the binary pile is not owing to the oxidation of the metal.

103. A pile constructed with ten discs of tin- ned paper, without any other substance, pro- duced, in about half a minute, a deviation of a third of an inch in Bennet's electrometer, fur- nished with a condenser. The tinned face pos- sessed vitreous, and the paper face resinous, electricity. This effect invariably increased with the number of the discs.

104. Another pile of discs of tinned paper, having the paper face covered with a film of honey, in order to keep up a constant humidity, likewise gave signs of electricity, but it required from forty to fifty discs to produce the same de- gree of electricity as the preceding pile of ten discs of tinned paper ; and the electricity was besides of an opposite character, the hoi.t,y being vitreously, and the tin resinously, electrified. On the following day the electricity had rapidly di- minished, and at last it completely disappeared, the paper having been penetrated throughout with the honey, and the tin being equally in con- tact by its two surfaces with the latter substance.

105. A pile of discs of tinned paper, in which all the discs had been glued together, gave no electrical indications, because the metal was equally in contact with the paper at each of its faces.

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106. When a binary pile, like any of the pre- ceding, has become inactive, its energy may be restored, by simply raising the discs, which, by the action of the air, will diminish the influence of humidity upon one of the faces of each disc. The binary piles, indeed, do not produce any effect, unless the touching surfaces of the metallic and the fluid element are unequal.

107. The energy of the binary piles is much influenced by the conducting power of the fluid which forms the humid element. A few drops of a solution of sal ammoniac added to the distilled water, augments a little the electricity of the pile; but ifwecdhtinue to add

more, a diminu- tion of action takes place, and at last the energy of the pile is destroyed. Hence it follows, that the humid element must be an imperfect con- ductor.

108. Mr. Singer, in his first experiments, cut a number of thin slips of sheet copper, and bent them into the form of the letter U, so as to form a series of simple springs. He then introduced both legs of one of these springs into each cell of a Voltaic battery, so that it pressed forcibly against the copper surface on one side of the cell, and the ziijc surface on the other. Having, in this manner, made a regular metallic communication between every pair of plates in a battery containing fifty of three inches square, Mr. Singer filled the cells with a diluted acid, and found that, notwith- standing the total absence of insulation, water was decomposed with great rapidity, a vivid spark produced by charcoal points, and gunpowder in- flamed; and, on applying the condenser, a charge was communicated which occasioned the gold leaves of the electrometer to strike the sides of the glass.

109. This phenomenon appears the more ex- traordinary at first view, because it is well known that, if the plates are all connected together by a thin wire, the effect is almost totally destroyed ; but in such case, the opposite copper and zinc surfaces of each pair of plates are made to com- municate with each other, and consequently their electricities circulate individually, instead of be- ing propelled forward from one cell to the other. But, in the arrangement above described, the me- tallic springs are in contact with the zinc sur- face of one pair of plates, and the copper surface of another ; there is consequently no communica- tion between the opposite surfaces of any indi- vidual pair, but what arises from the association of the copper and zinc ; and, as their mutual contact produces a motion of the electric fluid from the copper to the zinc, it cannot operate as a conductor in the contrary direction. The effect is therefore only diminished in proportion as the copper spring, by placing part of the zinc plate between two copper surfaces, diminishes its electro-motive energy. This experiment appears a satisfactory proof of the electro-motive power produced by the associatio” of the metals, and of its tendency to produce ; irrent of electricity from one ex’remi j of the >attery to the other, and consequently a circulation of electric fluid when the opposite extremities are connected : it also proves that the electro-motive power is influenced by the nature of the substance interposed between the different pairs of metals, and thus accounts

in some measure for the different effect produced by different fluids. This last circumstance is an interesting subject of enquiry ; some instructive facts respecting it have been detailed by professor

Berzelius, in an account of an ingenious experi- ment madt to prove that oxidation is not the cause of th? electricity of the Voltaic apparatus. The following is extracted from his descripti6n. ‘ I took twelve tubes of glass, half an inch diameter and three inches in height, and closed at one end. I half filled them with a strong solution of submuriate of lime (such as is obtained from the residue after the preparation of caustic ammonia), and above this fluid I poured diluted nitric acid, with the precaution not to mix the liquids. I arranged these tubes in succession, and then took copper wires, round one of the extremities of each of which I had melted zinc, in order to attach a knob of that metal to that end. I immersed the zinc-coated ends of each into one of the tubes to the bottom of the submuriate, and then bent the upper ends of the respective wires so as to immerse them iu the middle of the acid of each nearest tube. This arrangment consequently formed a series in the order following : copper, zinc, sub- muriate of lime, nitric acid ; copper, zinc, &c. It is evident that the chemical affinity which produces oxidation at the common temperature, was here at the surface of that part of the copper which was iu contact with the nitric acid ; and that, if this oxidation had been the primary cause of the electricity of the apparatus, the pole of copper in this construction, ought to have possessed the same electricity (namely, the positive) as the zinc pole in the common pile. Before the extremi- ties of this small apparatus were connected, the copper continued to be constantly dissolved in the acid, which it turned blue, and the surface of the zinc remained metallic and without any perceptible change. And lastly, 1 combined the poles, by means of silver wires, passed into a tube filled with a solution of muriate of soda. But I was greatly surprised to find the effect directly contrary to what the theory, which con- siders oxidation as the cause of the electricity of the pile, had led me to expect. The solution of the copper instantly ceased, and the zinc be- came covered with a mass of white oxide, vege- tating on all sides in the form of wool. The pole of the copper produced hydrogen gas as usual, and the zinc pole caused an abundant precipitate of muriate of silver. The electric state, therefore, produced in this case an affinity, which at the ordinary temperature of the atmos- phere is inactive, and caused another very active affinity to cease, which was already in operation; and this could be effected by no other cause than that of the electricity produced by contact which occasions the electric charge of the pile, and disposes the affinities which shall be put into activity. This little apparatus was very powerful, and disengaged so large a quantity of gas, as would not have been exceeded by 100 pairs of plates. But what could be the cause of this? I exchanged ‘he submuriate foi neutral muriate ; it then produced a very mode- rate effect, corresponding with <.he number

of pairs; and, lastly, I substituted ne.'itr.i! 'rmnu!*

cf zinc instead of the muriate of lime, and then the effect was scarcely perceptible, though it continued sufficient to prevent the oxidation of the copper in the nitric acid, and to show that the conductor of the zinc pole continued always to be oxidized.' This experiment demonstrates the influence of the interposed fluid on the che- mical effects of the apparatus, which may pro- bably arise from. its action on the electro-motive power produced by the association of the metals. It indicates also, that the chemical action of the battery is never exerted but when the electric fluid circulates from one extremity to the other; and corresponds in this respect with an experiment by Sir H. Davy, in which forty compound arcs of zinc and silver were arranged in the usual order, in a series of glasses, filled with a solution of muriate of ammonia rendered slightly acid by muriatic acid ; whilst the extreme parts remained unconnected, no gas was disengaged from the silver, and the zinc was scarjely acted upon ; but when they were connected all the zinc wires were dissolved more rapidly, and hydrogen was disengaged from every silver wire. In simple Voltaic combinations, it appears essential to the production of chemical effects, that there be a transition of the elements of the interposed fluid ; and, as this may be presumed to take place also in each cell of a battery, it is perhaps one cause of the superior action of those fluids which are most readily susceptible of decompo- sition. When for instance a compound arc of zinc and platina is placed with the platina leg in u solution of silver, and the zinc leg in dilute muriatic acid, no precipitation of silver takes place unless the glasses are connected by some fluid medium, or by a metal which is soluble in the acid of the solution of silver. With arcs of platina, or gold, therefore, no effect is produced ; butjAvith any other metal, a portion of the silver or copper of the solution is revived, and a cor- responding portion of the simple connecting arc is dissolved, and occupies the place of the re- vived metal in the solution. Hence the corro- sion of the zinc plates in the Voltaic battery, and the liberation of hydrogen at the copper surfaces. From the phenomena hitherto described, it ap- pears that the primary source of the electric power of the Voltaic apparatus may be consi- dered to be the association of the metals of which it is composed ; but the cherrical effects, though probably arising from the same cause, are ob- viously influenced by the nature and action of the interposed fluid. The relation of the various parts of a Voltaic apparatus (as usually con- structed), to the various effects it produces, have been developed by the masterly experiments of M. De Luc. The ordinary apparatus consists of three constituent parts, namely, two metals and a fluid,

being usually, when arranged in a pile, copper or silver, zinc,and wet cloth, following each other in successive groups. Now, if these be regarded attentively, without any regard to Volta's theory, they may be considered as divided into ternary groups under three dif- ferent aspects. 1. Zinc and silver, with wet cloth between them. 2. Zinc and silver in mutual contact, with wet cloth on the side of the zinc. 3. Zinc and silver still in mutual contact,

but the wet cloth on the side of the silver. Either of these ternary associations may be the cause of the action of the apparatus ; but the really efficient groups may be ascertained, if each of the ternary associations are successively mounted as a pile, the different groups being separated front each other by some conductor that does not materially affect their electro-motive power. M. De Luc employed for this purpose small tripods, formed of brass wire, so bent as to touch the plates between which the tripod was placed, only at the three points of support.

110. The first dissection of the pile by this method was to form an arrangement of seventy- six groups of zinc and silver with wetted cloth between them; one group being placed first (suppose with the zinc plate lowest) ; then upon the -silver plate a tripod of brass wire ; upon that another group with the zinc plate lowest ; again, upon its silver, a tripod, upon that a third group in the same order, and so on until the whole seventy-six groups were arranged.

111. Under these circumstances the same che- mical and electrical effects were obtained, as when the apparatus was put together without the brass tripods. It therefore appeared that the efficient groups, for all the effects of the appara- tus, were an association of silver and zinc, with wetted cloth between them. To ascertain the truth of this indication, a second dissection was made. In this the two metals were placed in contact with each other, and the wet cloth in contact only with the fine plate. Suppose a pair of zinc and silver plates in contact with each other, placed on the base of the pile with the silver lowest, then a disk of wetted cloth upon the zinc, and a tripod upon the wetted cloth ; then another group of zinc and silver, with wet cloth upon the zinc ; then again a tripod, and so on, in regular order, until the seventy-six groups were arranged.

112. With this apparatus the electrical effects were produced as before ; but, though these ceased when the usual glass tube for decom- posing water was made to connect the opposite poles, not the slightest chemical effect was pro- duced.

113. From this it appears, that the condition for the production of chemical and electrical effects is different; trje latter requiring the arrangement of silver and zinc in mutual con- tact, the successive pairs being separated by 9 moist conductor, which may be in actual contact with the zinc only ; the former requiring the association of silver and zinc, with wetted cloth between them.

1 14. A third dissection of the pile was thus arranged : silver and zinc in mutual contact, wetted cloth in contact with silver : seventy-six of these groups were placed in regular order, with a tripod upon the wet cloth of each group, as in the former experiment. With this arrange- ment neither chemical nor electrical effects were produced ; the absence of electrical signs M. De Luc ascribed to the zinc plates being in con- tact on one side with the silver, and on the other with the brass of the tripod, which he regarded as a counteracting effect. The absence of chemical signs arose from the want of the condition for

their production, namely, successive associations of zinc and silver, with a fluid between them and in contact with both.

1 15. When either the continuous pile, or that composed of the efficient ternary groups, are put together with the pieces of cloth moistened with pure water, although chemical effects are pro- duced, no perceptible shock can be felt ; but, when the pieces of cloth are moistened by a solu- tion of common salt, the shock is very distinct. Hence M. De Luc concludes, that for the pro- duction of chemical effects in the circuit it is essential that the zinc undergo oxidation, and for the production of the shock it is necessary that oxidation be effected by the action of an acid.

116. M. De Luc conceived the phenomena of the pile might arise from some modification of the electric fluid which pervaded it during the oxidation of the zinc ; and as, in his experiments, he obtained more perceptible electrical indica- tions by aid of the condenser, from wires im- mersed in water, when the chemical effects and the shock were produced, he concluded that this modification of the electric fluid was attended by a retardation of its course, by which a very small quantity was enabled to produce effects which are not obtained by a much larger quan- tity when set in motion by the electrical machine.

117. This idea, it may be observed, is the very converse of that which,

from a very general and extended view of the phenomena of the Voltaic apparatus, Mr. Singer proposed.

It was indeed a natural inference at first view, from the experiment in question, when that alone was considered ; but the increased rapidity of decomposition, which always attends the in- creased operation of that influence, which is here supposed to cause a retardation of the cur- rent that occasions decomposition, is very inimi- cal to any such supposition ; and the usual phe- nomena of electrical analysis are equally at vari- ance with it.

118. When any fluid is decomposed by the action of the common electrical apparatus, the effect is always proportioned to the intensity of the current of electricity that passes through it ; and in the decomposition of water, when the metallic surface in contact with it is of moderate extent, , very strong shocks in rapid succession are required. It is to the acute intelligence of Dr. Wollaston we are indebted for the means of executing this analysis with a more moderr.te power. He enclosed the metallic conductor in g'ass, or wax, and exposed only a very small portion of its surface to the fluid. The current of electricity, being thus reduced in volume, was proportionably increased in force ; and, by ren- dering the exposed surface very minute, a suffi- cient intensity was produced, by a moderate quantity of electricity.

1 1 9. When a circuit is made through water, by wires proceeding from the opposite extre- mities of a Voltaic battery, those wires can im- part no charge to the conaenser, unless the quantity of electricity evolved by the battery is greater than the water can transmit : therefore any cause that increases the quantity, will pro- duce an augmentation of effect by this test,

whilst the column of water remains the same: or if the velocity of the electro-motion of the appa- ratus be increased, whilst the same imperfect conductor is interposed between its extremities, a similar effect must take place ; for the positive wire will receive electricity from the pile faster than it can transmit it to the water, and the ne- gative wire yields electricity to the pile more rapidly than it can receive it from the water ; so that a slight positive and negative charge will be given to the condenser by these wires respec- tively, whenever the electro-motion of the pile supplies electricity faster than the water can conduct it ; and the charge will be highest when the supply is most rapid. Now, according to Mr. Singer's principle, the most rapid electro- motion of the apparatus will be produced wher: the different pairs of plates communicate with each other through the medium of

the best con- ducting fluids : it is therefore obvious, that the result of M. De Luc's experiments, in which a more considerable charge was communicated to the condenser by wires immersed in water, when the pile was excited by a saline solution, than when it was excited by pure water, is conform- able to the above principle ; and the legitimacy of this inference is confirmed by a variation of the experiments ; for if, when the apparatus is excited by a saline fluid, the tube that connects its extremities be filled with the same fluid in- stead of pure water, no increased charge will be given to the condenser by either of the wires, because the increased electro-motion of the ap- paratus is then compensated by the increased conducting power of the fluid by which its ex- tremities are connected.

120. When different degrees of chemical ac- tion are excited in the Voltaic apparatus, by the introduction of various fluids, the more powerful the action that is produced the more transient is its duration. This circumstance is of importance in the practical application of the instrument, since it offers the means of judiciously applying various methods of experiments, and of con- tinuing the action of the apparatus during any required time. When the batteiy is charged with water, its chemical action is feeble, but it appears to continue without diminution for any indefinite length of time; by the addition of a minute quantity of muriatic acid, ˆth part for instance, its chemical action is greatly aug- mented, and still continues for a considerable period. When the proportion of acid is in- creased to a thirtieth or twentieth part, the action is considerable, but comparatively of short dura- tion. Mr. Singer says, he has found no solu- tions so advantageous as those of acids, and he prefers the muriatic acid to all others ; the nitric is indeed rather more powerful in the same pro- portion, but its cost is four times as great, and it is found that it destroys the copper plates as well as the zinc. The nitrous gas evolved by its ac- tion is also much more offensive than hydrogen, which results from the employment of muriatic acid.

121. The experiments of M. De Luc induced him to conclude, with Volta, that thf> electrical effects of the apparatus result entirely from the successive association of the different metals,

separated into pairs by some conducting sub- stance that does not interfere with their electro- motive powers. To ascertain if a liquid was essential to this effect, he mounted a pile with pieces of cloth not

moistened, and he found the electric effects were still produced, but somewhat weaker than with the wetted cloth. He then in- stituted a series of experiments, successively mounting the pile with different animal and ve- getable substances, interposed between the pairs of metal, instead of wetted cloth. Of the various substances tried, he preferred writing paper, as the most convenient of those that were efficient. The apparatus constructed in this way was found to have the same electrical indications as the common Voltaic pile, but it produced no che- mical effects, however numerous the pairs of plates ; nor was any oxidation of the zinc pro- duced by its most protracted action. These cir- cumstances led to the idea, that, by the extension of the number of groups, a kind of perpetual electric machine might be formed ; and, as in the previous trials, it had been found that the effect was rather increased by pasting the paper upon the silver or copper. Dutch gilt paper, which consists of thin copper leaf, laid upon paper, was employed instead of the usual silver, or copper plates, and moist conductors : 800 plates of tinned iron being put together with the fame number of Dutch gilt paper between them, the copper sides being all turned in one direc- tion, the combination was found to affect the electrometer more powerfully than any Voltaic battery had been ever observed to do ; but on the application of the usual glass tube With water, no chemical effect was noticed. The ap- paratus was left for a considerable time, and its action on the electrometer continued without diminution; and subsequent experience has shown that it does so for any period during which the experiment has been continued. Thus was invented a new and important Voltaic ar- rangement, highly valuable both in a theoretical and practical view : in the former, as separating the pure electrical effects of the Voltaic battery from its chemical power, and demonstrating the permanence of its electro-motive faculty : in the latter, as providing a spontaneous and perma- nent electrical machine, in which the opposite electrical states perpetually exist, without any new excitement. Besides these properties, the new apparatus promises to become an important meteorological instrument ; for the degrees of its electrical indications have been observed to vary with the different seasons of the year, and are probably influenced by some of the causes by which our atmospherical phenomena are pro- duced.

122. To distinguish this instrument from the usual Voltaic apparatus, from which it differs in many respects, M. De Luc proposed to call it ‘ the Electric Column,’ an appellation suffi- ciently appropriate, since the effects it produces are purely electrical.

123. Mr. Singer made very numerous expe- riments, on the constructions of such columns, and varied their combinations most

extensively. The materials he preferred, are thin plates of fiatted zinc alternated with writing or smooth

cartridge paper, and silver leaf. The silver leaf is first laid on paper, so as to form silvered paper, which is afterwards cut into small round plates by means of a hollow punch. In the same way an equal number of plates are cut from thin flatted zinc, and from common writing or cartridge paper. These plates are then ar- ranged in the order of zinc, paper, silvered paper with the silvered side upwards ; zinc upon this silver, then paper, and again silvered paper, with the silver side upwards ; and so on, the silver being in contact with zinc throughout, and each pair of zinc and silver plates separated by two discs of paper from the next pair. An ex- tensive arrangement of this kind may be placed between three thin glass rods, covered with seal- ing-wax, and secured in a triangle, by being ce- mented at each end into three equi-distant holes in a round piece of wood ; or the plates may be introduced into a glass tube previously well dried, and having its ends covered with sealing-wax, and capped with brass ; one of the brass caps may be cemented on before the plates are intro- duced into the tube, and the other afterwards ; each cap should have a screw pass through its centre, which terminates in a hook outside. This screw serves to press the plates closer together, and to secure a perfect metallic contact with the extremities of the column. To fill the tube with discs, it is necessary to employ a cylindrical rammer of baked wood with flat ends, and when a small number (as about half a dozen discs) are introduced, they should be thrust down, taking care to ensure their perfect contact; and the operation of the apparatus will be ensured.

124. Soon after the invention of the column, Mr. B. M. Forster discovered that, when a suffi- ciently extensive series was put together, its elec- tric power was sufficient to produce a sort of chime by the motion of a small brass ball be- tween two bells, insulated, and connected with the opposite extremities of tho column. He ronstrurted a series of 1500 groups, ana ly its agency kept a little bell-ringing apparatus in constant activity for a considerable length of time.

125. Mr. Singer contrived an arrangement which is well calculated to form a perpetual motion, by excluding, to a very considerable extent, the operation of extraneous causes of interruption, and it at the same time renders the disposition of the apparatus rather elegant. A series of from 1200 to 1600 groups are arranged in two columns of equal length, which are separately insulated in a vertical position by glass pillars constructed on his principle of insulation ; the positive end of one column is placed lowest, and the nega- tive end of the other ; and,

their upper extremities being connected by a wire, they may be considered as one continuous column. A small bell is situated between each extremity of the co- lumn, and its insulating support, and a brass ball is suspended by a thin thread of raw silk, so as to hang midway between the bells, and at a very small distance from each of them. For this purpose the bells are connected, during the adjustment of the pendulum, by a wire, that thei; attraction may not interfere with it ; and, when this wire is removed, the motion of the pendu-

lumn commences. The whole apparatus is placed upon a circular mahogany base, in which a groove is turned to receive the lower edge of a glass shade with which the whole is co- vered.

126. If acolumn of about 1000 series is placed horizontally, with each of its extremities resting on ;i old leaf electrometer, the electrometers will each «li verge; that connected with the zinc extremity of the column will be positive, that connected with the silver extremity will be negative. If the column be very powerful, the gold leaves of the electrometer will alternately strike the sides of the glass, but this motion is soon stopped by their adhering to it If the simple divergence only is produced, on touching either extremity of the column, the electrometer connected with it closes, and that at the opposite extremity has its divergence increased. This is analogous to the effect of the Voltaic battery when disposed in a similar manner ; but the motion in the co lumn is slower, which arises from the more imperfect conductors of which it is composed.

127. There is some cause, not yet perfectly developed, that appears to influence the power of the column to produce the motion of light metallic pendula. In the bell-ringing apparatus, for instance, though the motion always continues, it is much more rapid at one period than another, and the oscillations of the pendulum, though usually as uniform as that produced by mecha- nism, is on some occasions singularly wild and irregular. The frequency with which the gold leaves of an electrometer strike the sides of the glass, when connected with an electric column, is also different at different times ; the variations observed in some experiments of M. De Luc are much more considerable than we have yet noticed, with the more powerful columns of Mr. Singer's construction.

128. De Luc proposed, as an interesting ob- ject of enquiry, to make regular observations on the action of the column, and the number of os- cillations it would produce in a given time, at each observation.

For this purpose a single column of from 1000 to 2000 series may be supported vertically on an insulating pillar. A bent wire, with a ball at its lower end, is to be connected whh the upper extremity of the colunn, so as to hansc parallel with, and at some distance from it ; the ball at its lower extremity being diametrically opposite to a similar hall that is screwed into the lower cap of the column. To the same cap there is also screwed a brass fork with a fine silver wire stretched between its extremities; this is placed above the ball and projects farther from the column, so that when the pendulum moves towards the ball it strikes this wire first, and receives a kind of jerk, which prevents it from sticking. The pendulum con- sists of a gilt pith-ball suspended by a very fine silver wire, which hangs parallel to the bent

s wire, to which it is fastened at top; the arrangement is such, that the gilt pith-ball would be always in contact with the brass ball that pro- ceeds from the upper extremity of the column, if the apparatus had no electrical power; it therefore always returns to this situation, when, Rfler being attracted to the lower extremity of the

column, it discharges its electricity by striking against the cross silver wire

129. There appears every reason to believe, that the action of a well-constructed column would be permanent. There is, however, a pre- caution necessary to their constant and imme- diate action; the two ends of a column should never be connected by a conducting substance for any length of time ; for if, after such con- tinued communication, it be applied to an elec- trometer, it will scarcely affect it for some time. It is, therefore, necessary, when a column is laid by, that it be placed upon two sticks of sealing- wax so as to keep its brass caps at the distance of about half an inch from the table, or other conducting surface on which it is laid. And if a column, which appears to have lost its action by laying by, be insulated in this way for a few days, it will usually recover its full power.

130. There is another cause of deterioration which is more fatal ; it is the presence of too much moisture. If the paper be perfectly dry it is a non-conductor, and will not therefore pro- duce any action in the column ; but this perfect dryness can only be obtained by exposing the paper to a heat nearly sufficient to scorch it, and in its dryest natural state the paper will be found sufficiently a conductor, even when, by exposing the paper discs to the heat of the sun, they have been so dried as to warp considerably. When the paper is sufficiently dry, the action of the column continues without diminution; and on taking such an apparatus to pieces after it had been constructed thirty

months, no trace o. oxi- dation was evident on the zinc plates.

131. The size of the plates in the column need not be lar;je ; Mr. Singer has constructed them of various sizes, and finds no proportionate ad- vantage by extending the diameter beyond five-eighths of an inch ; they may even be constructed much smaller, and yet found to act with the greatest precision.

132. By connecting the extremities of a column of at least 1000 series, with the opposite coatings of a Leyden jar, during a period of from one to five minutes, a charge is usually communicated to it capable of affording a small but distinct spark, when the discharge is made by a wire that is not very thick.

133. Mr. Singer observes that the most exten- sive series he had ever made experiments with, consisted of 20,000 groups of silver, zinc, and double discs of writing paper. Its power was considerable. Pith-ball electrometers, with balls of one-fifth of an inch diameter, and threads of four inches Ion?, diverged to the distance of two inches and upwards, when connected with its opposite extremities. An electrometer in the centre was not affected. When either extremity of the column was connected with the ground, the electrometer attached to that extremity closed, and the central electrometer opened with the same electricity, whilst that connected with the opposite extremity had its original divergence considerably increased ; but the electro-motion was so slow, that some minutes were required to produce the full effect.

134. By connecting one extremity of the series with a fine iron wire, and bringing the end of

this near the other extremity, a slight layer of varnish being interposed, a series of minute bright sparks were obtained by drawing the point of the iron wire lightly over the varnished sur- face.

135. A jar containing fifty square inches of coated surface was charged by ten minutes con- tact with the column, so as to convey a disagree-able shock, felt distinctly in the elbows and shoulders, and by some individuals across the breast.

136. The charge from this jar could perforate thick drawing paper, but not a card. It had just power to fuse one inch of platina wire, of the

jgLjth of an inch diameter.

137. Notwithstanding the considerable electric power of this combination, it had not the slight- est chemical action ; neither the best nor worst conducting media were affected. Saline com- pounds, tinged with the most delicate vegetable colors, were exposed under the most favorable circumstances to its action, and in some instances for many days, but no chemical effect was pro- duced.

138. It therefore appears indispensably neces- sary to the chemical power of the Voltaic appa- ratus, that a liquid be interposed between each pair of its plates, whilst, for the pure electrical effects, the only condition appears to be the association of the two metals, and the connexion of the different pairs, by some conductor that does not interfere with their electron-motive power.

138*. The first experiments made upon the moist pile in this country appear to have been performed by Messrs. -Nicholson and Carlisle. After observing the effects then ascribed to the piles on bringing the wires from each end of the column in contact with a drop of water, they observed a disengagement of bubbles of some elastic fluid.

139. On closer examination they found the gas to be hydrogen. They then took a glass tube, about half an inch in diameter, into each end of which a cork was inserted, the tube being filled with water. Through each cork was introduced a brass wire, so that the ends of the wires in the glass were about an inch and three- quarters of an inch. The pile employed con- sisted of thirty-six half-crowns, and as many similar pieces of zinc, and wet pasteboard. The zinc end of the pile was then connected with one of the wires in the tube, and the silver end with the other, so that the circuit formed by the pile was separated by the water in the tube placed between them. A stream of bubbles was observed at the end of the wire, in the tube connected with the silver end of the pile. No gas was disengaged from the opposite wire, but it speedily became tarnished, first of an orange color, and ultimately black. The tube was then reversed, when it was observed that the wire, which in the first experiment became tarnished, gave out bubbles, while that which had before given out gas, in its turn became tarnished.

140. The emission of gas from the wire con- nected with the silver end of the pile was con- etant and uniform, except when a metallic circuit was formed between the ends of the pile, during

which no gas whatever appeared. It was ob- served that, when this metallic conductor was removed, the appearance of the gas was not im- mediate, since there was an interval of about two seconds between the removal of the wire and the appearance of bubbles. After the process had continued two hours and a half, a bulk of gas was produced equal to two-thirds of a cubic inch. This gas was mixed with an equal bulk of common air, and exploded on the appli- cation of a lighted taper.

141. These ingenious experimenters, supposing the phenomena in question to arise from the de- composition of the water, thought it surprising that the hydrogen should make its appearance at a distance of an inch and three-quarters from the point where the oxygen was disposed of.

142. They then made the same experiment with a tube thirty-six inches in length, but no &as was observed. When they introduced an infusion of litmus instead of pure water, they observed that the fluid in the vicinity of the wire connected with the zinc end of the pile became red, and hence were led to suppose that an acid had been produced. The fluid at the other wire was not changed, but gas, as usual, was evolved.

143. It may be proper to state that, in every apparatus constructed for practical purposes, there is a combination of three different sub- stances in contact with each other, in successive groups ; in general it is an arrangement of copper, zinc, and some conducting fluid. It is demon- strable that the primary source of the electrical power of the apparatus is the association of the two metals ; and, according to Volta, the inter- posed fluid serves only as a conductor of the effect of one pair of metals to another. As far as electricity is concerned, this opinion appears to be correct, for the electrometer is acted on, whatever be the nature of the interposed fluid, and the degree of divergence is proportioned to the number of the plates. The electrometrical effects prove also, that, the arrangement of a series of zinc and copper plates, with an inter- posed fluid, forms a conducting column, which, in its insulated state, is positive at one ex- tremity, negative at the other, and neutral in the middle. This may be easily shown by three gold-leaf electrometers, connected at the same time with an apparatus of 300 or 400 pairs of plates. The electrometer, connected with the copper extremity, will diverge with negative electricity ; that connected with the zinc end will separate to the same distance positively; while that connected with the central plate of the series will not be affected. But, if either extremity of the battery be connected with the ground by means of a wire, the leaves of the

electrometer connected with it will close ; and those of the central electrometer will open with the same electricity, and to the same extent, whilst those of the opposite extremity will have their original divergence increased.

144. Hence it appears that there is a real electro-motive property in the apparatus, by which the zinc end constantly tends to become positive, and the copper end negative ; and it is also obvious, that the extent of this operation,

at either extremity, is increased by connecting the opposite end with the ground. This last experiment, by which the central plate may bi> rendered either positive, negative, or neutral, at pleasure, proves also that the interposed fluid never acts as an insulator, for if it did so these changes could not possibly occur.

145. As the contact of either surface of the battery with the ground increases the electrical state of the opposite extremity, the same cir- cumstance may be presumed to take place with every pair of associated metals, when their sur- faces are in contact with a conducting fluid. \Vhilst the apparatus is insulated, the first zinc plate can only act on the electricity of its asso- ciate, the first copper plate ; but the second zinc plate, through the conducting interposed fluid, can act on both these, besides its companion, the copper, and may therefore become more highly positive ; and it is easy to conceive that such a repetition of action would be attended with an increase of effect, proportioned to the number •of plates; and that the electrical tension of either end must be increased by connecting the other with the ground.

146. To ascertain if this principle really ope- rated with a single combination, Mr. Singer took a pair of c.rcular plates six inches diameter, very clean and smooth, one being formed of zinc and the other of copper, and each provided with an insulating handle. When both plates were held by their insulating handles, and the zinc was successively applied to the flat surface of the copper, and after each contact made to touch the insulated plate of a condenser of six inches diameter ; twenty contacts were required to communicate such a charge to the condenser as would occasion the leaves of a very delicate electrometer to separate to a quarter of an inch. But when the

copper plate, instead of being held by its insulating handle, was simply laid on the hand, or on any similar conducting body, ten successive contacts of the insulated zinc plate, communicated a charge to the condenser, which occasioned the gold feaves to separate to the distance of more than half an inch. On re- peating these experiments, with the variation of touching the condenser with the copper plate, held by its insulating handle, and brought in contact with the zinc plate, first insulated, and then uninsulated, similar results were obtained, but with the contrary electrical state. Hence the similarity of action in a single pair of metals, and a combined series, is sufficiently proved ; and the preceding statement of the manner in which the electrical power is supposed to in- crease with the number of associated plates, is rendered highly probable.

147. So far the phenomena are sufficiently simple and consistent, for those described are not materially influenced by the nature of the interposed fluid, nor do they occur, but when the extrem.ties of the apparatus are unconnected with each other, and consequently capable of maintaining the opposite electrical states. But the chemical effects, the shock, and the power of ignition, take place only when the extre- mities of the apparatus are connected by some conductor, and are also materially influenced by

the nature of the interposed fluid. If these effects then, are produced by electricity, they can only result from its circulation in the ap- paratus ; and, as there is no reason to suppose that the electro-motive power of the associated metals ceases when there is a conducting com- munication between their opposite surfaces, but rather that it is accelerated by such a circum- stance ; that very acceleration may be the cause of the phenomena, and the effects observed cor- respond very nearly with such an idea ; for, if it be admitted that the connexion of the opposite ends of the Voltaic battery by a conductor, occa- sions a current of electricity from the positive to the negative, that current must be more rapid, in proportion as the conductor is more perfect. Now it is found that the chemical effects are most considerable, and more promptly produced in fluids of the highest conducting power ; thus the quantity of gas liberated in a given time from common water, is greater than from distilled water ; saline fluids furnish more than common water ; solutions of alkali more than saline fluids, and acids more than alkalies : and, as the effects of a simple combination are influenced by the same causes as those that operate with a series, the fluids that are susceptible of the most rapid decomposition are also most active in exciting the chemical effects of the battery, when em- ployed as the connecting medium between its plates.

148. Acids are of all other fluid bodies, ex- cepting metals, the most perfect conductors, and the chemical effect of the battery is more powerfully excited by them than by any other sub- stances ; it is possible that their chemical action on the zinc may have some share in modifying the quantity of electricity, or the rapidity of its motion ; but it is certain that the effects are not in proportion to the chemical action ; sulphuric acid, for instance, acts as powerfully on the zinc as nitric or muriatic acid, but it is not so active in producing the chemical agency of the battery : in like manner the alkalies, which exert a very trifling action on the battery, excite its powers with greater energy than many saline fluids which are more efficient as chemical agents.

149. The ignition of wire, and of charcoal in the Voltaic circuit, is conformable to this view; these substances are the most perfect conductors known, and, when made the medium of commu- nication between the opposite ends of a battery, must accelerate its electro-motive power to the greatest extent. The rapid circulation of elec-tricity, thus obtained, produces ignition, if the conductor be not too large in proportion to the quantity of electricity ; but, within this limit, the effect will be greatest with the thickest wire, because the acceleration will be more consider- able in proportion to the facility of transmission. There is, perhaps, no other view on which the continued ignition of wire, and the increased action of large plates is so intelligible.

150. The cessation of chemical agency, and igniting power, as the chemical action of the acids or other menstrua declines, may arise from the total change which then occurs in the nature of those fluids ; their conducting power is much diminished, and they may possibly, by the change

in their chemical properties, acquire some faculty of electro-motion subversive of the effect of the combined metals.

151. The extensive experiments of Messrs. Hisinger and Berzelius, confirmed by the re- searches of Sir H. Davy, had demonstrated the constant separation of oxygen, and compounds in which it prevailed, at the wire proceeding from the zinc surface, and of hydrogen and other inflam- mable matter, at that connected with the copper surface ; and, at this latter, alkali was also fre- quently found, and, from analogy, it was in con- sequence concluded, that the alkalies probably contained a considerable proportion of some inflammable substance.

152. This conjecture was confirmed by Sir H. Davy in 1807 : he found that a thin piece of potassa or soda, slightly moistened by exposure to the air, and placed between two conductors of platina, pro- ceeding from the opposite sides of a powerful Vol- taic apparatus, was resolved into a peculiar metal- lic substance highly inflammable, which appeared at the negative surface ; and oxygen gas, which was evolved at the positive surface. By an ex- tensive series of experiments, it wasishown that these bodies are, in reality, metallic oxides, and that the proportion of their constituent parts is somewhat different, being in round numbers, for potassa six parts of metallic base to one part of oxygen, nearly ; or it may be stated that potassa is composed of eighty- six parts of metal, and fourteen of oxygen in each 100 parts. The pro- portions in soda are nearly seven parts metal to two of oxygen ; or seventy-eight metal and twenty-two oxygen, in each 100.

153. The metal obtained from potassa is called potassium ; it is lighter than water in the pro- portion of eight to ten. At common temperatures it is solid, but soft and plastic. At a temperature of 150° it becomes fluid, and evaporates at a heat rather below redness. In color it nearly resem- bles silver, but it tarnishes immediately when exposed in the open air, and can only be pre- served under naphtha. Its attraction for oxygen is so powerful, that it will detach that substance from almost all its combinations ; and the result of this action is its consequent oxidation and re- conversion into potassa. If thrown into water it immediately inflames, floats upon the surface, and burns with a mixed flame of white, red, and violet ; rendering the water, in which the expe- riment is made, alkaline. Similar phenomena ensue when it is brought in contact with ice. When moderately heated in oxygen gas it in- flames and reproduces potassa. Its action on water is always attended by the decomposition of that fluid ; hydrogen is evolved, and the oxygen combines with the potassium to form potassa. By measuring the quantity of hydrogen separated from water, by the action of a given weight of potassium, the quantity of oxygen that metal com- bines with to form potassa may be readily learnt. Each grain of potassium detaches about 1-06 cubic inch of hydrogen gas, and consequently combines with half that quantity of oxygen.

154. The metal obtained from soda is named sodium ; it is rather lighter than water, nearly as 0-9348 to 1000. It has the color of silver; is less fusible than potassium, but tarnishes in air

in the same way. It is fluid at the temperature of 200°, and passes into vapor at a strong red heat. At common temperatures it is a soft metal, and a globule of it may be easily spread into a thin leaf by the action

of a knife. It decomposes water violently, and floats on its surface, but does not inflame ; the water is rendered alkaline, and, when examined, is found to contain pure soda. It acts nearly in the same manner as potassium, but with less energy, on most sub- stances, and must consequently be preserved under naphtha. When thrown on the surface of nitric acid it inflames, and burns with great bril- liance ; it also occasionally scintillates when thrown upon hot water. The proportion of oxy- gen with which it combines to form soda, may be learnt by noting the quantity of hydrogen evolved from water by a given weight of the sodium.

155. Both these new metallic substances unite with mercury in various proportions, and form amalgams which decompose water, but more slowly than the metals themselves ; these amal- gams act upon all other metals, even platina and mercury.

156. The decomposition of the alkalies may, by care and attention, be effected with a battery of fifty pairs of plates of three or four inches square ; but the results are rather uncertain : 200 plates form a very efficient arrangement; they should be excited by a weak acid mixture (about one part strong muriatic or nitrous acid, tc thirty parts of water). A plate of silver or platina being connected with the negative side of the battery, a thin piece of pure potassa or soda is to be placed upon it, and a platina or silver con- ductor, proceeding from the positive side of the battery, is to be brought in contact with the up- per surface of the alkali, which soon fuses at the points of contact : metallic globules shortly ap« pear near the negative surface, and gradually increase in size, until a crust of alkali begins b form on their surface; at this moment thep should be removed by the point of a knife, and. instantly plunged under naphtha ; or, if the ex- periment be merely intended to demonstrate their production, they may be brought in con- tact with the surface of water or nitric acid. It sometimes happens that no globules appear ; but if the contact be preserved for some time, and the alkali be afterwards raised, several will be found imbedded in its under surface. If the ac- tion of the battery be strong, it also sometimes happens that the globules inflame, and even de- tonate at the moment of their production ; it is therefore advisable not to bring the eyes too near during the experiment, or else to cover them with glasses. These experiments always require great care to insure their success, which a trifling variation in the power of the battery, purity, of the potassa, or moisture of the atmo- sphere, may prevent. —Soda is rather more diffi- cult to decompose than potassa, and therefore re- quires to be employed in thinner pieces ; the pieces of potassa should rarely exceed a quarter of an inch in thickness, and those of soda one- eighth of an inch.

157. To prevent the loss of the alkaline bases during their separation, by the powerful action of the air upon them, it has been proposed to effect

the decomposition under naphtha: the moist potassa being placed between two plates of pla- tina in a proper vessel, which is to be filled with naphtha as soon as the contact with the battery is established; in this way the action of the air is prevented, but the naphtha decomposes, and hydrogen and charcoal are liberated, which ren- ders the result less satisfactory than in the more simple form of the experiment. The most es- sential precautions are to preserve the alkali as dry as is consistent with a sufficient degree of con- ducting power, and to employ the battery in a moderate state of action, in which it does not produce a very intense heat, for that would des- troy the metallic base at the moment of its pro- duction.

158. The amalgam of potassium, or sodium, with mercury, is easily procured ; and may be ob- tained by a very moderate power. A glass tube, one-fourth of an inch diameter and three inches long, having a short platina wire sealed in one end, is to have mercury poured into it until the end of the platina wire is covered; the rest of the tube is to be filled wkh a concentrated solution of alkali, either pure or carbonated. The platina wire, surrounded by mercury, is then to be connected with the negative end of a Vohaic battery, and .the circuit completed by bringing a platina wire from the positive end, in contact with the solu- tion of alkali. Gas will be evolved from this wire, and the surface of the mercury will be greatly agitated; when the action grows weaker, the mercury may be poured into a glass of water, and the presence of the alkaline metal will be immediately indicated by the evolution of a cloud of minute bubbles of hydrogen gas, which may be collected by inverting over the mercury a small closed glass tube filled with water. This result has been frequently obtained with a battery of thirty pairs of plates of only two inches square.

159. The amalgam may be obtained more highly charged with the alkaline metal by employing a solid piece of alkali, with a small cavity on its surface, in which a globule of mercury is to be placed. The alkali is to be connected with the zinc surface of a battery, and the mercury with the copper surface ; the mercury soon becomes more

tenacious, and sometimes is converted into a soft solid mass, and in this state, if thrown into water, it produces a rapid decom- position.

160. The strong attraction of the metals of the alkalies for oxygen, renders them most active agents of chemical decomposition ; by the strongest Voltaic power they can only be ob- tained in small quantity ; and for the purpose of •experiment they are now usually procured by another process first devised by the French

hemisLs. A gun-barrel is bent nearly in the form of ‘he letter S. An iron tube of the •capacity 01 two cubic inches, having a small hole at the lower extremity and an iron stopper at the topˆ is ground into one end of the gun- liarrel, and a tube of safety is fitted to the other. The iron tube is to be filled with pure dry potassa, and the bent part of the gun-barrel nearest to it, with clean iron turnings : this part of the barrel is to Lc luted and placed in a sma’ll -blast furnace ; the

iron tube projecting out on one side, and the vacant part of the gun-barrel, with its attache <(tube of safety, charged with clean oil, or naphtha on the other. A strong heat is then to be raised in the furnace, and, when the iron turnings have attained an intense white heat, a small furnace is to be applied to the tube containing the potassa, which, being readily fused, will flow through the small hole at the bottom of the tube upon the iron turnings. The oxygen of the potassa combines with the heated iron, and the potassium condenses in brilliant lamina- in the Tacant part of the gun-barrel, which raii.t be kept cool by ice during the process. As potassa always contains water, that is also de composed, and hydrogen escapes during the ex- periment, from the tube of safety ; the cessation of this liberation of gas is the sign for removing the small furnace from the tube, and the heat being raised in the blast furnace for a few mi- nutes, a* high as possible, to expel the last portions of potassium from the iron, the whole apparatus is suffered to cool. The gun-barrel is then to be cut at the commencement of the part which has been kept cool, for there the greatest portion of potassium is usually found ; it must be detached by a chisel in as large pieces as possible, and introduced qui6kly into naphtha, a portion of which fluid it is expedient to pour into the barrel as soon as it is first opened.

161. This process is attended with some dif- ficulty, but it has been repeated successfully by many chemists in this country : a more detailed account of it may be consulted in the thirty- second volume of the Philosophical Magazine, pp. 89, and 276.

162. The composition of the fixed alkalies was entirely unknown

before these experiments, but the volatile alkali, or ammonia, had been shown to consist of hydrogen and nitrogen, in the pro- portion of three of hydrogen to one of nitrogen by volume. Now it is singular, that of three bodies, whose properties are so analogous, two should be metallic oxides, and a third a com- pound of two gases ; but there are experiments that seem to prove that either one or both of these gases contain a metallic substance, and that consequently ammonia may be, like the other alkalies, a metallic oxide.

163. Messrs. Berzelius and Pontin of Stock- holm, discovered that when mercury is placed in a Vokaic circuit with a solution of ammonia, the mercury being connected with the copper- extremity of the battery, and the ammonia with the zinc, the mercury gradually expands to four or five times its original volume, and becomes a soft solid, nearly of the consistence of butter, hiving its metallic character quite unimpaired. It is very remarkable,

164. These phenomena are very analogous to those observed with the fixed alkalies ; some sub- stance combines with the quicksilver and alters its properties materially, without imparing its metallic character ; now, according to all ex- isting analogies, this substance must be a metal, and this metal, in returning to the state of alkali, absorbs oxygen, as is seen by its action on water. Hence it appears that ammonia consists of oxygen and a peculiar metal which may be called ammonium ; but its analysis by other means evinces only the two gases, hydrogen and nitrogen ; the former of these being the lightest of all gravitating bodies, is most probably a simple or elementary substance ; and, on such a view, it would seem that nitrogen, though a gaseous body, is a compound of oxygen and a metal. . ‘

165. The amalgam of ammonium may be formed most readily by making a cavity in a moistened piece of muriate, or carbonate of am- monia, connected with the positive side of a Voltaic battery, and inserting in it a globule of mercury connected by a platina wire with the negative surface ; in a few minutes a soft amal- gam is formed ; it must be transferred into water as quickly as possible when its action on that fluid is to be observed, as it changes by the shortest possible contact of the air.

166. Sir H. Davy has observed, that the strong attraction of potassium for oxygen, enables it to decompose ammonia even more rapidly than

the Voltaic battery ; and if an amalgam of potas- sium and mercury be placed in a cavity in mois- tened muriate of ammonia, it immediately increases in size, and becomes more consistent.

167. As some of the substances called earths resemble the alkalies in various properties, it was- conjectured, that they also were metallic oxides ; and this conjecture has been partly verified by the experiments of Messrs. Pontin and Berzelius, and Sir II. Davy. If a paste be formed with water, and either barytes, strontites, lime, or magnesia ; and this paste be connected with the positive side of a Voltaic battery, and touched with an iron wire proceeding from the negative surface, the wire obtains the property of decom- posing water.

168. If a globule of mercury be placed in a cavity in the earthy body, and touched with a wire proceeding from the copper end of the battery (the paste being connected with the zinc), an amalgam will be soon formed, which has the property of decomposing water, and forming “with it a solution of the earth employed. If this amalgam be introduced into a little tube made of glass, and bent in the form of a retort, then filled with the vapor of naphtha and hermetically sealed ; on the application of heat to the end of the tube containing the amalgam, the mercury will distil over and leave the pure metal of the earth behind. This process is rather difficult, and requires great care.

169. The amalgam from barytes, strontites, and lime, may be obtained with a battery of from 100 to 200 four-inch plates, in a moderate time ; that from magnesia requires a longer continuance of the action of the battery, and the other earths ;lo not rendily yield to its powers. These metals are named from the earths of which they appear

to be the bases, as follows: namely, that from barytes, barium; strontites, strontium; lime, calcium ; magnesia, magnesium ; alumine, alu- minum ; silex, silicum, &c.

170. The decomposition of the alkalies and earths which had previously resisted every attempt at analysis, are a monument, of the importance of the Voltaic apparatus as an in- strument of chemical research ; and a proof of the ability with which it has been employed, which will be regarded with admiration and ap- plause as long as science shall continue to he cultivated.

171. The phenomena that have been described as the consequences of Voltaic decomposition obtain in every variety of experiment. Sul- phuric acid introduced into the Voltaic circuit gives off oxygen gas,

and sulphur is deposited. Phosphoric acid evolves oxygen gas, and phos- phorus combines with the negative wire. Am- monia separates into hydrogen and nitrogen with a small proportion of oxygen. Oils, al- cohol, and ether, when acted on by a powerful battery, deposit charcoal, and give off hydrogen, or carborated hydrogen. And professor Brande has shown, that when animal fluids containing'; albumen, are placed in the Voltaic circuit, the albumen is separated in combination with alkali at the negative wire, and in combination with acid at the positive wire; and that, with a powerful battery, it separates at the negative wire in the solid form ; and with a less power, in the fluid form,, so that it is probable animal secretion may depend on some such power.

Prior to an examination of the Voltaic ap- paratus there are some simple experiments that should be noticed.

172. If a wire of silver, and another of zinc, be immersed in a glass containing dilute muriatic acid, so as to remain at a little distance from each other, the zinc will give off hydrogen gas- rapidly, but the silver will produce no effect Bring the ends of the wires that are out of the acid in contact, by twisting them together ; the quantity of hydrogen given off by the zinc will be diminished, and bubbles will be evolved from the silver.

173. If zinc, iron, or copper, are employed in the same way with gold, in dilute nitric acid, similar phenomena ensue, but the gas produced is nitrous gas.

174. If a wire of iron and another of silver are immersed in a solution of copper, the iron will soon become coated with copper, but the silver will remain unchanged. Bring the wires in contact, by twisting their upper extremities together, and the silver will be soon covered with a coat of copper.

17oi Similar experiments may be made with a zinc and a silver wire, in solutions of lead or tin.

176. Dr. Wollaston, to whom we are in- debted for the last two experiments, thus ac- counts for the result : — < We know that when water is placed in the circuit of conductors ol electricity, between the two extremities of a pile, if the power is sufficient to oxidate one of the wires. of communication, the wire connected with the opposite extremity affords hydrogeu gas.

177. ‘Since the extrication of hydrogen in thi < * instance is seen to depend on electricity, ;t is probable, that in other instances, electricity may be also requisite for its conversion into gas. It would appear, therefore, that in the solution of a metal, electricity is evolved during the action of the acid upon it ; and that the formation of hydrogen gas, even in that case, depends on a transition of electricity between the fluid and the metal.

178. ‘We see moreover, in a former ex- periment, that the zinc, without contact of any other metal, has the power of decomposing water; and we can have no reason to suppose that the contact of the silver produces any new power, but that it serves merely as a conductor of electricity, and thereby occasions the formation of hydrogen gas.

179. ‘In the last experiment, also, the iron by itself has the power of precipitating copper, by means of electricity evolved during its solution; and here likewise the silver, by conducting that electricity, acquires the power of precipitating the copper in its metallic state.’

180. The experiments of this ingenious phi- losopher, by which the attraction of alkali, and the precipitation of copper on the surface of silver, were produced by the influence of negative electricity, excited by the ordinary machine, were considered by him as favoring the preced- ing explanation, and proving that oxidation must be the primary cause of electric phenomena. To Mr. Singer, who furnishes the quotation, they did not appear to favor any such supposi- tion, but rather the contrary ; for in the experi- ment with two different wires, touching each other, both produced the same chemical effects, yet, observes Mr. S., ‘if they arc electrical at all, the one is positive and the other negative, as all experiments on the association of different metals prove ; and if two wires that have no chemical action on the fluid in which they are immersed, be rendered respectively positive and negative, they are well known to produce different chemi- cal effects.’

181. But it is said the chemical effect pro- duced by the silver wire, arises from electricity communicated to it by the zinc ; and that we iiave no reason to suppose that any new power is produced by the contact of the metals. Now, if this were the case, the mere conducting com- munication of the metals would be the only condition necessary to give the silver its chemi- cal power ; but the case is widely different, the communication must be not only conducting, but

metallic, and even then no chemical effect will be produced, unless the extremities of the wires are immersed in the same liquid, or in rwo separate portions of liquid that have a con- ducting communication with each other.

182. Place two glasses filled with a solution M copper near each other. Make a compound •arc, by twisting together the end of a wire of zinc, with the end of a similar wire of silver. Connect the two glasses by placing the silver leg of the arc in one, and the zinc in the other. The zinc will immediately attract copper from Hie solution, but it does not communicate that power to the silver, though they are both closely

connected. Whilst the compound arc remains, connect the two glasses by a second arc, formed of a piece of bent wire of any kind, except gold or platina. The silver will be immediately covered with a coating of copper, and will continue to separate copper from the solution as long as the disposition of the apparatus remains the same. Now the only difference in the arrangement, that appears to have operated as a condition to the chemical power of the silver, was the provision of another conducting com- munication between the glasses, in addition to that established by the compound arc ; it there- fore appears, that the associated metals cannot serve as conductors to the effect produced ; and indeed, if they did, it would be scarcely pos- sible any accumulation of power could result from the increased number of plates in a Voltaic battery.

183. This experiment does not display any of the electric powers of a Voltaic combination ; but it shows that the association of three dif- ferent substances is essential to the chemical agency of such a combination ; and the pheno- mena will be found to correspond with some experiments of M. De Luc, on the efficient groups in the Voltaic pile. This celebrated phi- losopher found that no chemical effects were produced by any Voltaic arrangements, unless two metals were employed with a liquid between them ; and, in the experiment last described, zinc, silver, and a metallic solution were inac- tive, though in contact with each other, until the fluid was made the medium of conducting com- munication between the free extremities of the combined metals.

184. The experiment last described will suc- ceed, when the two glasses containing the me- tallic solution, are connected by any moistened conductor ; but the chemical power of the silver wire will be evinced slower, in proportion as the length of the moistened conductor is increased ; and in all experiments of the kind, the less the interval between the extremities of the com- pound arc, the more

rapid is its action on the interposed fluid. Hence, in the arrangements of Voltaic apparatus, for the purpose of che- mical decomposition, the ends of the conducting wires are placed at a greater or less distance from each other, in proportion as their action is re- quired to be more or less intense.

185. The arrangement of a simple Voltaic combination, by Mr. Sylvester, in which this effect is apparent, may be referred to. It consists of a tall glass jar filled with very dilute muriatic acid. Through a cork, placed in the neck of this jar, two wires are inserted ; the one a short straight wire of zinc, the other a long bent wire of platina, or silver ; by turning this last round, its upper end may be brought in contact with the zinc, or separated from it at pleasure. When they are separate, the zinc only is acted on ; but, as soon as they are brought in contact, the platina or silver becomes covered with bubbles of gas, which appear soonest, and are evolved in the greatest quantity, from the projecting point.

186. Notwithstanding this circumstance, the power of a simple Voltaic combination, con-

tinues to exert its effect, when the stratum of interposed fluid is considerable. If a tube of three feet long be rilled with dilute muriatic acid, and a wire of platina be inserted through a cork in one of its extremities, and a wire of zinc in the other ; on connecting the wires, gas will be soon evolved from the silver. If the tube be bent the effect will take place more slowly. Mr. Singer took two similar tubes of eighteen inches long, and connected them by a short piece of flexible pipe, so as to form together a tube of three feet in length, with a joint in the middle, which admitted of its employment either as a. straight tube, or as a siphon with a bend of any required inclination. In the open ends of this tube he placed respectively a zinc, and a platina wire ; and found that, whenever their outer ends were connected by a wire, hydrogen- was soon evolved from the piatina ; but this effect took place soonest when the tube was straight, and hence it appears that the power put in motion by these combinations, can pass more readily through any given column of a fluid in a straight line, than in any other direction.

187. It has been seen, that, when any metal is in solution in the interposed fluid, it is revived by the wire which in other cases evolves

hy- drogen ; and it has been shown, by the effect of the silver and the platina wire, that metals which have no chemical action on the interposed fluid alone, may decompose it when combined with another metal. These facts, though far from being perfectly understood, may serve to explain some chemical effects which were before rather obscure. If a zinc wire, for instance, be immersed in a solution of lead, the latter metal will be revived in the form of a metallic vegeta- tion, which increases gradually by additions to its extremities. The first separation of the lead is sufficiently intelligible ; the acid in which that metal is dissolved, having a stronger attraction for the zinc, dissolves a portion of it, and de- posits on its surface an equal portion of lead. But the lead, so revived, continues to revive more, and to receive additions at its remote ex- tremities, whilst it would have been rather ex- pected these additions would have been made on the zinc, and the vegetation that had been first formed protruded further into the fluid by that means. The contrary result is now understood to be obtained, by the revived particles of lead forming a Voltaic combination with the zinc and the surrounding fluid. This effect is analogous to that which obtains in various other instances.

188. Spread a few drops of a solution of silver upon a pane of glass, and place a small piece of platina, and a similar piece of copper wire upon it, at a little distance from each other. A vege- tation will take place about the copper wire; but no effect will be produced by the platina. Bring the wires in contact with each other, and the Voltaic combination thus formed will occa- sion a beautiful vegetation of metallic silver to surround the platina wire.

189. With a solution of tin, and wires of zinc and platina, similar phenomena occur; but a considerable time elapses, after the contact, before the vegetation appears round the platina. The immediate contact of the oxidable metal

with the metallic solution is not absolutely ne- cessary to the success of these experiments ; it is only essential that a regular V'oltaic circle, consisting of two different metals and a moist conductor be established.

190. If we take a glass tube having a piece of bladder tied over its lower extremity water tight,, and a cork inserted in its upper end with a pla- tina wire passing through it ; and the tube be filled with acetate of lead, and placed in a small cup of zinc containing dilute muriatic acid ; we shall find that, when a metallic communication is formed between this cup and the platina wire, the latter will become studded with brilliant crystals of metallic lead. In this case the oxi- dable metal has no connexion with the metallic solution but through the medium of the platina wire on the one side and moist bladder on the other.

191. Fill two similar glasses, the one with a solution of silver, the other with dilute muriatic acid ; connect them by a compound wire arc of zinc and platina ; the ziric being plunged in the muriatic acid, and the platina in the metallic solution. Immerse a second arc, formed of a bent silver wire, in the two glasses, one of its legs being in each ; after some time the zinc wire will be entirely dissolved, and the platina will be found covered with minute crystals of metallic silver, displaying a very beautiful appearance under the microscope.

192. Copper and zinc are the metals most usually employed in the construction of Voltaic apparatus, for 'their effects are greater, in propor- tion to the value of the metals, than those of any other combination. Silver and zinc, or gold and zinc, would be more powerful, but not so much so as to compensate for the increased ex- pense.

193. As the effects produced by a single pair of metals, of any size, are still exceedingly feeble, attempts were made to combine the action of several pairs. Professor Robinson arranged a series of zinc and silver plates, about the size of a shilling, so as to form a rouleau ; and on ap- plying his tongue to the edge of this, the sensa- tion experienced was more manifest than by a simple pair of metals; but its power in other respects did not appear more considerable. In this arrangement every zinc plate was necessarily between two silver plates, and every silver plate between two of zinc, with the exception of the first and last. Now it has been stated, that the contact of zinc with silver, or copper, occasions some electric fluid to flow from either of those metals to it ; and, consequently, when a single pair of metals are associated, the outer surface of the zinc appears positive, and that of the silver or

copper negative. But if both surfaces of the zinc are in contact with copper or silver, electricity will flow into it in contrary directions, so that neither surface can exhibit the effect ; and the same circumstance occurs, in a contrary order, when both surfaces of a silver or copper plate are in contact with zinc. Hence every arrangement of this kind, however numerous the pairs of metal, will exhibit at its opposite extremities the powers of a single pair of metals only.

194. Volta had the penetration to ascertain the cause of this defect in the rouleau of professor Ilobison; and his ingenuity supplied a means of obviating it. His experiments on the combi- nation of two metals with an imperfect conductor (as water or saline fluids) had taught him that the electro-motive power of these fluids inter- fered but little with the more powerful energy of the combined metals; and that in fact they acted principally as conductors to that energy. He therefore interposed imperfect conductors of this kind between a series of pairs of metal, and thus combined their power without pro- ducing a counteracting current ; for the zinc and silver, or zinc and copper, were then in contact with each other at one surface only, but the con- ducting communication existed throughout.

195. To construct an apparatus of this kind, procure a number of plates of zinc and copper, or zinc and silver, either round or square, of any size ; and an equal number of pieces of cloth, leather, or pasteboard, of the same form, but rather smaller. Soak these last in salt water, until they are thoroughly moistened ; place a plate of silver, or copper, upon the table, then upon that place a piece of zinc, and on the zinc one of the moistened discs ; upon this a second series of silver, zinc, and moistened cloth (or pasteboard) in the same order; and thus conse- cutively until a series of fifty or sixty repetitions have been placed one upon the other. Particular care must be taken to place the plates in regular order; if in the first group silver is placed lowest, zinc next, and then the moistened disc, the same disposition must be observed through- out.

196. The Voltaic pile being thus formed, let the operator moisten both his hands with brine, and grasp a silver spoon in each. If the top of the pile be then touched with one spoon, and the bottom with the other, a distant but slight shock will be felt at every repetition of the con- tacts. This shock resembles very nearly the sensation produced by a very large electrical battery weakly charged ; it is greater in propor-

tion to the number of groups of which the pile is composed. If the communication is made with any part of the face near the eyes, or with a silver spoon held in the mouth, a vivid flash of light is perceived at the moment of contact, and that whether the eyes be open or shut.

197. The power of an apparatus of this kind continues for some time, but gradually diminishes, the zinc surfaces becoming oxidated by the ac- tion of the moisture ; it therefore requires to be taken to pieces and cleaned, an operation that is very troublesome when the number of plates is considerable. This inconvenience was dimi- nished by soldering each pair of zinc and copper plates together, instead of simply laying them on each other; and a further improvement was devised by Mr. Cruickshanks, which consisted in cementing the parrs of plates in regular order, in grooves made in the side of a mahogany trough, so as to form water-tight cells between each pair. These cells being filled with water, or any con- ducting fluid, served as a substitute for the mois- tened discs used in the pile ; and, as the fluid r ‘1)5(1 be easily poured out and replaced, it re-

quired considerably less time to keep it in proper order. This form of the apparatus, which is called the Voltaic trough, or battery, has been much used in this country ; it is perhaps, on the whole the best arrangement hitherto devised, and its construction is sufficiently simple.

198. The zinc plates are made by casting that metal in an iron or brass mould ; they may be about an eighth of an inch thick. The copper need not exceed twelve or fourteen ounces to the square foot, and may be soldered to the zinc at one edge only, the other three being secured by cement in the trough.

199. The trough must have as many grooves in its sides as the number of plates it is intended to contain, which should be fewer in proportion to their size, otherwise the apparatus will be in- convenient from its weight. When the plates are not more than three inches square their number in one trough may be fifty, and the dis- tance of the grooves from three-eighths to half an inch. The trough must be made of very dry wood, and put together with white lead or cement. The plates being placed to the fire, the trough is to be well warmed, and placed ho- rizontally on a level table, with its bottom down- wards, very hot cement is then to be poured into it, until the bottom is covered to the depth of a quarter of an inch. During this process the plates will have become warm, and they are then to be quickly slided into the grooves and pushed firmly to the bottom, so as to bed them- selves securely in

the cement. In this way the plates are very perfectly cemented at the bottom, and, when this cement is sufficiently cool, a slip of thin deal is to be slightly nailed on the top edge of one of the sides of the trough, so as to overhang the inner surface about a quarter of an inch. The trough being about three quarters of an inch deeper than the diameter of the plates, there will be an interval between their top edges and the deal slip ; and, when the side of the trough to which the slip is attached is laid flat upon the table, this interval forms a channel into which very hot cement is to be poured, and it will flow between each pair of plates, so as to cement one side of all the cells perfectly. As soon as the channel is quite full of fluid cement, the strip of deal is to be torn off, and the trough inclined so as to admit the superfluous cement to run out. When this is effected, and the cement cool, a slip of deal is to be nailed on the oppo- site side and the same process pursued with that. The instrument will then be cemented in the most perfect manner, and it may be cleaned off and varnished.

200. We may notice the preparation of elec- trical cements. The various cements employed in the construction of electrical apparatus are formed principally of resin, with the addition of some substances to render it more adhesive, and less brittle. Five pounds of resin, one pound of bees'-wax, one pound of red ochre, and two table spoonfuls of plaster of Paris, when melted, and well incorporated together, form a very good cement for general purposes. One that is well adapted for cementing large Voltaic batteries, and which is cheaper, may be formed of six pounds of resin, one pound of red ochre, half a

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pound of plaster of Paris, and a quarter of a pint of linseed oil. Other cements in great vdiiety, more or less fusible, &c., may be formed by combining the preceding ingredients in various proportions. The ochre and plaster of 1'aris should be well dried, and added to the other ingredients when they are well melted.

201. It must have occurred to those engaged in a series of Voltaic experiments, to observe the early exhaustion of power and the inequality of the action under the usual construction and management of the apparatus. The lecturer on this subject has more particularly felt such in- convenience ; as during the progress of his ex- periments of elucidation he is obliged frequently to pause for explanation, during which time the power is on the decline.

202. To obviate these difficulties, Mr. Pepys has constructed a table, with drawers containing a suite of troughs, all the plates of which may be either raised out of the acid, or immersed into k, simultaneously. By means of a lever and counterpoise weight, the whole of the plates are as easily elevated as one series ; all the communications with the prime conductors being, as in the same gentleman's Voltaic dis- tharger, completed by quicksilver.

203. The troughs being enclosed within the table or chest, prevents the free escape of the acid vapors ; and, where an opportunity offers of communication with a chimney or window, a pipe may be usefully added to carry them off.

204. Fig. 1, plate I., ELECTKO-GALVANISM, represents the external figure of the case.

205. Fig. 2. The internal arrangement of the whole contents (except the communication), the front being removed.

206. Fig. 3. Side view of the same, the side of the case, and drawers being removed.

207. Fig. 4. One of the drawers, with the spring supports, or props for the plates.

208. Fig. 5. Front view of the communica- tions.

209. Fig. 6. Side view of ditto.

210. The Voltaic series consists of sixty pairs of plates, four inches square, each plate pre- senting its whole surface to the action of the acid ; they are arranged in two drawers A, A, one above the other, each drawer containing three porcelain troughs a, a, a, and each trough ten. pair of plates 6, b, b ; the plates are suspended from rods c, c, c, connecting each set of ten pairs together, and these rods drop into a square frame d, d, made to the full size of each drawer inside : the action of these frames lowers or raises the whole of the plates together, and is thus con- trived.

211. B, B, are two rods passing through the upper board or table, and resting upon the short arm of the levers C, C, fig. 2, which are of •wood ; these rods have each two pairs of pinse,/"; and which in fig. 2 are represented as employed, the plates being in action ; but in fig. 3 the contrary, the lower drawer being open, and the frames, with plates supported by their props

D, D. The drawers being first shut, the handles

E, E, of the rod B, are to be turned inwards, as «n ficj. 2, when the pins e, e, enter the openings cut in Ihe sides of the drawers at g, fig. 4, and stop

in the grooves A, A, fig. 2, cut in the square frame d, to receive them; in the mean while,, thfr shorter pins /,/, bearing upon the lower sides- of the spring props D, press their upper end or points entirely within the thickness of the drawe: on each side, and release the frames d,d. The whole weight of the plates, now bearing only upon the rods, is counterpoised by the weight wr which connects the two levers C,,C; they are gradually let down into their several partitions* and the action of the battery commences; at t.ie conclusion of the experiment the rods are again raised by the handles E,E, and when stopped, the pins e, having reached the top of the groove g, fig. 4, the handles are to be turned back into their former position, as in fig. 3 ; the props D, being now first released, shoot into the drawers, and support the frames when the pins e,e, have quitted them.

212. The communications between each trough are effected in the usual manner; but those which conduct the fluid from one drawer to the other, and from the opposite ends of the series to the upper board or table, are capable of being disengaged, and their connexions are effected under mercury, as in the Voltaic discharger.

213. They are thus arranged: i, i, t, are ivory cups containing mercury, and fixed to the drawers ; j,j,j, are platina wires depending from them, and entering the troughs ; k is a ring and wire, which effects the communication between the two drawers; and /,/, are the two wires which conduct the fluid from the opposite ends of the battery to the table, C being the copper, and Z the zinc end of the series.

214. We have stated that when the opposite extremities of a powerful Voltaic apparatus are connected by a wire, at the moment of contact a distinct spark is perceived, which occurs every time the contact is alternately broken and re- newed. If the contact is made with a wire ter- minated at the end by a piece of well-burnt charcoal, the spark is considerably more vivid. And if two wires proceeding from the opposite ends of the battery are armed with charcoal points, and brought in contact with each other, the light evolved is more brilliant and intense than any that has been procured by other arti- ficial arrangements. When the battery is power- ful, the emission of light may be kept up for a considerable time ; it is so dazzling as to fatigue the eye even by a temporary glance, and, when it ceases, leaves the most brilliantly illuminated room in apparent darkness.

215. This light appears to be principally de- rived from the immediate action of the Voltaic apparatus' and not from the combustion of the charcoal ; for, though that is partly ignited, it suffers but comparatively little waste, and the light is evolved with equal splendor when the experiment is made in gases which contain no- oxygen ; and will even take place, though with diminished energy, under water, alcohol, ether oils, and other fluids whose conducting power is> not too great.

216. The influence of the Voltaic spark on various gases may be ascertained by the appa- ratus represented at fig. 1, plate II., ELECT no- GALVANi'M,the wires within the globe being tei

minated by pointed pieces of charcoal, instead of balls, when a globe of this kind has been exhausted and filled with sulphureted hydrogen, on taking the Voltaic spark in it, the sulphur is separated, and deposited on the interior of the globe, and produces, during its separation, a very beautiful appearance.

217. Some other compound gases are similarly affected ; phosphorus

separates from phosphu- reted hydrogen, and arsenic from arsenureted hydrogen.

218. With the most powerful Voltaic batteries the striking distance of the spark, or interval at which it passes from one conductor to another, is very considerable. Mr. Children measured this effect by means of a micrometer, attached to two polished points of platina, which were inserted in a receiver containing very dry air. With 1250 pairs of plates the points were brought within one-fifteenth of an inch of each other before the spark took place. With a large apparatus employed at the London Institution, which extends to 2000 pairs of four-inch plates, points of charcoal were brought within a thirtieth or fortieth of an inch of each other before any light was evolved ; but, when the points of char- coal had become intensely ignited, a stream of light continued to play between them when they were gradually withdrawn even to the dis- tance of nearly four inch.es. The stream of light was in the form of an arch, broad in the middle and tapering towards the charcoal points ; it was ac- companied by intense heat, and immediately ig- nited any substance introduced into it ; frag- ments of diamond, and points of plumbago disappeared, and seemed to evaporate, even when the experiment was made in an exhausted receiver; though they did not appear to have been fused. Thick platina wire melted rapidly, and fell in large globules ; the sapphire, quartz, magnesia, and lime, were distinctly fused.

219 In rarefied air, the discharge took place at a greater distance, and the beam of light was made to pass through an interval of six or seven inches.

220. These phenomena may be exhibited on a smaller scale by means of 100 pairs of plates, of six inches square, an apparatus which is well suited for all experiments of fusion and ig- nition.

221. The arched form of the stream of light, passing between two charcoal points, is often very perceptible when the distance of the points does not exceed half an inch.

222. From the low intensity of the most powerful Voltaic apparatus, but little attention lo insulation is required in the transmission of its effects. The conductors employed for this purpose consist of copper wires passed through a short piece of glass tube, which serves as an insulator to hold them by. Such conductors are represented attached to the battery, and placed on a glass plate to inflame gunpowder, at fie. 2.

223. As the charcoal points usually become i”ˆnited when the battery has moderate power, almost any combustible substance may be inflamed, if placed between them. Oils, alcohol, ether, and naphtha, are decomposed when the

points are plunged into them, and inflamed when they are brought near each other upon the surface.

224. Some of the most pleasing effects of the Voltaic apparatus result from its action on me- tals; if these substances, in thin leaves, are made the medium of communication between the op- posite ends of a powerful battery, they inflame, and by continuing the contact may be made to burn with great brilliance. The best method of performing these experiments, is to suspend the metallic leaves to a bent wire proceeding from one extremity of the battery, and to bring in contact with them a broad metal plate connected with the opposite extremity; the brilliancy of the effect may be increased by covering the plate with gilt foil. Gold leaf burns with a vivid white light tinged with blue, and produces a dark brown oxide. Silver leaf emits a brilliant eme- rald-green light, and leaves an oxide of a dark gray color. Copper produces a bluish-white light attended by red sparks; its oxide is dark brown. Tin exhibits nearly similar phenomena; its oxide is of a lighter color. Lead burns with a beautiful purple light ; and zinc with a brilliant white light, inclining to blue, and fringed with red. For the distinct appearance of these colors it is essential to make the contacts with the metal; for, if charcoal be used, the brilliant white light it evolves absorbs the colors pro- duced by the combustion of the metals.

225. If a fine iron wire be connected with one extremity of a powerful battery, and its end be brought to touch the surface of some quick silver connected with the other extremity, a vivid combustion both of the wire and the quicksilver . results, and a very brilliant effect is produced.

226. If a fine iron wire of moderate length be made the medium of connexion between the extremities of the battery, it becomes ignited, and may be fused into balls; or if a platina wire is employed, it may be kept at a red, or even white, heat, for a considerable length of time ; which seems to prove that some power is continually circulating through it ; but how- ever powerful the battery, wires are never dispersed by it, as they are by the action of a charged surface.

227. If the slender wire be inserted in any fluid, and then introduced into the Voltaic cir- cuit, the fluid may be made to boil.

228. It has been noticed, that, if any two wires of different thicknesses are taken, on either of which a certain battery can produce ignition, a greater length of the thickest wire will be ignited than of that which is thinner. This effect may probably arise from the cooling in- fluence of the air, for the surface of the thin wire is most extensive in proportion to its quan- tity of metal ; and that the surrounding medium has an influence on the degree of ignition may be proved by another experiment.

229. Stretch a fine wire of platina, within- side a glass receiver, placed upon an air-pump, so that the air surrounding the wire may be re- moved or restored at pleasure. Ignite the wire to a dull red heat, by connecting its opposite extremities with the wires from a Voltaic bat- tery, of sufficient power for that purpose

Rarefy the air by the action of the pump ; and as the rarefaction proceeds, the ignition of the wire will become more vivid, until at length it obtains a glowing white heat. Admit air into the receiver, and the wire will lose its intense heat, and appear more dull than at first. Rarefy the air again, the ignition will increase. Restore it to its original density, it will again diminish. These effects may be repeated many times, and will maintain the same proportion to each other, though they are less intense at each repetition.

230. The power of a Voltaic apparatus in- creases with the number of plates it contains, within certain limits, but the limit is different for the various effects it produces, and varies also with the manner of employing the appa- ratus.

231. The effects have been stated by Volta to be in the simple ratio of the numbers, but very limited series only had been put together at the time this statement was made, and there appears to be a loss of power when very extensive ar- rangements are employed. The pure electrical effects, and the force of the shock, are found to increase with the number, and an arrangement of 1500 may be employed. The power of che- mical decomposition, and transfer, also continues to increase with the number when the battery is excited by dilute acid ; but, if it be charged with river water, the power does not increase after 400 or 500 plates. The powers of ignition have increased in exact proportion to the numbers within the limit of 100 plates, beyond that limit there appears to be a loss of power ; for Sir H. Davy found that 100 plates

ignited three inches of platiua wire, one-seventieth of an inch diameter, and 1000 similar plates, charged in the same way, ignited only thirteen inches.

232. The French chemists have investigated the ratio of increase for different numbers of plates, as indicated by the quantity of gas liberated by the decomposition of water; and they announce that the increase is as the cube root of the number of plates. The apparatus they employed, was arranged in the form of troughs of a particular construction, being part of a large apparatus constructed by order of the French government. Sir H. Davy states, that he has made similar experiments with the large combination of porcelain troughs, employed in the Royal Institution, and the results he ob- tained indicate an increase nearly as the squares, of the numbers.

233. The result of every experiment of the kind must be uncertain if a series of minute attentions are not observed, which appear to have been overlooked in those already instituted. The vessels employed for the decomposition should be of the same size and form ; the wires of the same length and thickness, and placed at equal distances from each other, in a fluid of uniform conducting power.

234. When the size of the plates is increased, their effects on perfect conductors, such as metals, charcoal, and strong acid solutions, are greatly augmented ; but their action on imper- fect conductors, as water, and various weak saline solutions, remains unaltered. If a battery, for instance, of thirty pairs of plates of

two inches square, be compared with another battery of th.rty plates, of six inches square, charged with diluted acid of the same strength ; there will be no material difference in the shock they produce, or the quantity of water they de- compose in a given time ; but the small battery will not melt wireˆor burn metals, and will scarcely produce a spark between two points of charcoal ; whilst the large battery will evolve a brilliant light between the charcoal points, deflagrate metallic leaves with rapidity, and ignite several inches of wire.

235. This remarkable fact, which appears to have been first noticed by the French chemists, is susceptible of some explanation (on the supposition that the phenomena are electrical). If a Leyden jar, for instance, having a square foot of coated surface, be applied to an electrical machine with another jar, whose coated surface is equal to four square feet ; after a certain num- ber of turns of the machine, they will both be charged, and to the same intensity, for they will equally affect an electrometer. But the large jar will contain four times

the quantity of elec- tricity that the small one does, and will fuse sixteen times the quantity of wire.

236. Now, suppose an imperfect conductor, capable of transmitting only such a quantity of electricity as is adequate to the charge of half a square foot ; and it is obvious either of the jars before mentioned would produce the same effect on such a substance ; for they both contain more than it can transmit, and its conducting power, which remains the same in both cases, limits the effect that can be produced by either. It is consequently found, that, if several different sized jars are charged to the same degree, the shock is nearly equally painful when received from either of them.

237. Mr. Cavendish has stated, that ‘ iron wire conducts 400,000,000 times better than rain or distilled water ; that is, the electricity meets with no more resistance in passing through a piece of iron wire 400,000,000 inches long, than through a column of water of the same diameter only one inch long. Sea water, or a solution of one part of salt in thirty of water, conducts 100 times, and a saturated solution of sea salt about 720 times better than rain water.’ It is there- fore probable, that the power excited by a Vol- taic apparatus, with plates of two inches square, is in quantity equal or superior to the conducting capacity of most aqueous fluids, and conse- quently no increased effect can be produced on such fluids by larger plates, which increase the quantity of that power, but not its intensity. But if a conductor be presented to the large plates, which is capable of receiving the increased quantity furnished, the effect must necessarily be greater on such conductors, in proportion to the increased impulse it may be supposed to re- ceive. These facts are capable of easy illustra- tion.

238. Let two wires, proceeding from the ex- tremities of a battery of fifty or 100 plates 01 two inches square, be plunged in separate glasses of water, if the glasses are connected by putting a finger into each of them, a shock will be felt at the moment of contact. Connect the water

in the glasses by some fibreS of moistened cot- ton, or by an inverted syphon filled with water; on repeating die contact with this arrangement, •either no shock, or a very slight one will be felt. IVlake a similar experiment with another battery of tl>e same extent, but

with plates of six inches •square. The shock will be nearly as great when the glasses are connected by moistened fibres, .as when no connexion exists between them; and •whilst the circuit exists through the moistened fibres, and the human body, if a third circuit be formed through a fine wire, several inches of it may be ignited. The imperfect conductors being incapable of conducting more than a small portion of the power excited by the large plates.

239. Whatever be the cause of the power of the Voltaic apparatus, the quantity of that power ex- cited by any given number of plates under similar circumstances, will be in direct proportion to the size of the plates ; and if the power be elec- tricity, or should obey the same law that operates with charged surfaces, the comparative action of different sized batteries, containing the same number of plates, should be, with regard to their power of igniting wire, in the proportion of the square of the increased surface ; thus if two batteries are taken, one containing fifty plates of twenty square inches surface, and the other fifty plates of forty square inches, the latter ought to ignite four times the length of wire the former can ignite. From some experiments •with plates of four inches square, and others with plates of eight inches square, made many years since, it has been stated by Dr. Wilkinson, * that the power of ignition, in batteries of the same total surface, but with plates of different sizes, increases in the proportion of the squares of the surfaces of the elementary plates, singly taken in each.' It was afterwards shown by Mr. Harrison of Kendal, that when the total surfaces are not equal, the rate of ignition must be as the sixth power of the diameters of the elementary plates, or as the cubes of their respective sur- faces.

240. It appears also from some experiments with large plates, mentioned by Sir H. Davy, that the power of ignition, for equal number of plates, probably increases in a higher proportion than the squares of their surfaces ; for twenty double plates, each exposing a surface of eight square feet, ignited more than sixteen times as much •wire as twenty double plates, having each a sur- face of two square feet.

241. Several curious galvanic experiments and observations have been published by M. Bichat, author of a very celebrated work on anatomy. In speaking of the influence of the destruction of the brain on that of the heart, after having proved, conformably to observation and experience, that it is not immediately by the interruption of the cerebral action that the heart ceases to act, he confirms this fundamental datum of physiology and pathology, by a series of gal- vanic experiments, which demonstrate that the heart is in all cases

independent of the brain.

242. ‘ These experiments,’ he observes, ‘were made by me with the most scrupulous attention, because several very respectable authors have

recently advanced MI opinion contrary to mint and have endeavoured to prove that the heart> together with the other muscles of organic hfe> do not differ, as to their susceptibility to the galvanic influence, from the different muscles of animal life. I shall begin by a detail of the ob- servations I have made on animals with red and cold blood. >.,.

243. (1.) ‘ In several experiments made on frogs, I coated the brain, on the one hand with lead, and the heart and muscles of the inferior extremities, on the other, with a long lamina of zinc, the upper end of which touched the heart, and the lower end the muscles. Having, by the means of silver, established a communication between the coatings of the muscles and those of the brain, the movements of the limbs constantly followed ; but I could not perceive any accele- ration in the contractions of the heart, when i* still continued to beat; and, when its action had entirely ceased, it did not display the smallest movement. Whichever may be the voluntary muscle that is coated at the same time with the heart, with a view to a comparison of the phe- nomena they exhibit at the moment of the metallic communication, there is constantly a marked and decided difference.

244. (2.) ‘ In the case of othef frogs, 1 coated, with a common metallic wire, on the one hand, the cervical part of the spinal marrow, in the upper region of the heart, to the end that the coating might be above the part where the nerves which proceed from the great intercostal nerve, and thence to the heart, originate ; and, on the other hand, the heart, and any one of the volun- tary muscles. I constantly noticed a result similar to the one which attended the preceding experiment, whenever the communication was established. There were invariably violent agi- tations in the voluntary muscles, without any visible alteration in the contractile movements of the heart.

245. (3.) ‘ I endeavoured to denudate the nerves which lead to the heart of frogs. Several grayish filaments, scarcely perceptible, with tke nature of which I must acknowledge I am not positively acquainted, were coated with a me- tallic substance, at the same time that the heart was made to rest on a substance of a similar nature. When the communication was estab- lished by the means of a third metal, not the smallest sensible effect was to be perceived.’

‘ 246 Dr. Wilson Philip has made some curious experiments on the influence of the Voltaic battery in obviating the effects of the division of the eight pairs of nerves. In some experiments in which the nerves of the eighth pair were divided in the neck of a rabbit, and the ends not displaced, and the animal was allowed to live some hours, it was found that food swallowed immediately before the division of the nerves, was considerably digested, even when the divided ends of the nerves had separated to the distance of a quarter of an inch from each other.

247. In other experiments in which, after the division of the nerves, the divided ends had been turned completely away from each other, little or no perfectly digested food, when the anirnai

•was allowed to live some hours, was found in the stomach : and the longer the animal lived, the smaller was the proportion of digested food in the stomach, the great mass having the ap- pearance of masticated food, which was not sensibly lessened in quantity, however long the animal lived. In an experiment in which, under some circumstances, the stomach was exposed, from the time of the division of the nerves, to the influence of a Voltaic battery sent through the lower portion of the divided nerves, its con- tents were apparently as much changed as they would have been in the same time in the healthy animal. The change was also of the same kind, the contents of the stomach assuming a dark color, and those of the pyloric end being more uniform, and of a firmer consistence than those of the central and cardiac portions of the stomach, while the whole contents became less in quantity.

248. The division of the nerves, in both ways, produced difficulty of breathing and efforts to vomit; neither of which occurred, when the stomach and lungs were brought under the in- fluence of a Voltaic battery, sent through the lower portion of the divided nerves.

249. When, under the foregoing circum- stances, the lungs had not been exposed to the Voltaic influence, and the animal had been al- lowed to live for five or six hours, they were found much aflected : in the rabbit which had been submitted to this influence, they seemed quite healthy.

250. An account of some very interesting expe- riments performed by Dr. Ure, on the body of a criminal executed in the north, was read before the Glasgow Literary Society. The paper com- mences with

some appropriate general physiolo- gical views relating to the application of galva- nism, in which the author notices particularly the researches of Dr. Wilson Philip on the relation between Voltaic electricity and the phe nomena of life. The author gives the following detail of his experiments.

251. •* The subject of these experiments was a middle-sized, athletic, and extremely muscular man, about thirty years of age. He was sus-. pended from the gallows nearly an hour, and made no conrulsive struggle after he dropped ; while a thief executed along with him, was vio- lently agitated for a considerable time. He was brought to the anatomical theatre of the Univer- sity of Glasgow in about ten minutes after he was cut down. His face had a perfectly natural aspect, being neither livid nor tumefied; and there -was no dislocation of his neck.

252. ‘ Dr. Jeffrey, the distinguished professor of anatomy, having on the preceding day requested me to perform the galvanic experiments, I sent to his theatre with this view, next morning, my minor Voltaic battery, consisting of 270 pairs of four-inch plates, with wires of communication, and pointed metallic rods with msuiitmg handles, for the more commodious application of the electric power. About five minutes before the police officers arrived with the body, the battery •vas charged with a dilute nitro-sulphuric acid, which speedily brought it into a state of intense action. The dissections were skilfully executed by Mr. Marshall, under the superintendence of the professor.

253. « Experiment I. — A large inctwon wasmade- into the nape of the neck, close below the occiput. The posterior half of the atlas vertebra was then removed by bone forceps, when the spinal marrow was brought into view. A considerable incision was at the same time made in the left hip, through the great gluteal muscle, so as to bring the sciatic nerve into sight; and a small cut was made in the heel. From neither of these did any blood flow. The pointed rod connected with one end of the battery was now placed in contact with the spinal marrow, while the other rod was applied to the sciatic nerve. Every muscle of the body was immediately agitated with convulsive movements, resembling a violent shuddering from cold. The left side was most powerfully convulsed at each renewal of the electric current. On moving the second rod from the hip to the heel, the knee being pre- viously bent, the leg was thrown out with such violence as nearly to overturn one of the assis- tants, who in vain attempted to prevent its exten- sion.

254. ‘ Experiment II. — The left phrenic ne:v was now laid bare at the owter edge of the sterno- thyroideus muscle, from three to four inches

above the clavicle ; the cutaneous incision having been made by the side of the sterno cleido-mastoideus. Since this nerve is distributed to the diaphragm, and since it communicates with the heart through the eighth pair, it was expected by transmitting the galvanic power along it, that the respiratory process would be renewed. Accordingly, a small incision having been made under the car- tilage of the seventh rib, the point of the one insulating rod was brought into contact with the great head of the diaphragm, while the other point was applied to the phrenic nerve in the neck. This muscle, the main agent of respira- tion, was instantly contracted, but with less force than was expected. Satisfied, from ample expe- rience on the living body, that more powerful effects can be produced in galvanic excitation, by leaving the extreme communicating rods in close contact with the parts to be operated on, while the electric chain or circuit is completed, by running the end of the wires along the top of the plates in the last trough of either pole, the other wire being steadily immersed in the last cell of the opposite pole, I had immediate re- course to this method. The success of it was truly wonderful. Full, nay laborious breathing instantly commenced. The chest heaved, and fell; the belly was protruded, and again col- lapsed, with the relaxing and retiring diaphragm. This process was continued, without interruption, as long as I continued the electric discharges.

255. ‘In the judgment of many scientific gentle- men who witnessed the scene, this respiratory ex- periment was perhaps the most striking ever made with a philosophical apparatus. Let it also be remembered, that, for full half an hour before this period, the ‘body had been well nigh drained of its blood, and the spinal marrow severely lacerated. No pulsation could be perceived meanwhile at the heart or wrist; but it may be supposejd that, but for the evacuation of the blood, the essential stimulus of that organ, this phenomenon might also have occurred

256. ‘ Experiment III. — The supra- orbilal nerve

was laid bare in the forehead, as it issues through the supra-ciliary foramen, in the eye-brow : the one conducting rod being applied to it, and the other to tlie heel, most extraordinary grimaces were exhibited every time that the electric dis- charges were made, by running the wire in my hand along the edges of the last trough, from the 220th to the 227th pair of plates; thus fifty shocks, each greater than the

preceding one, were given in two seconds : every muscle in his countenance was simultaneously thrown into a fearful •action; rage, horror, despair, anguish, and ghastly smiles, united their hideous expression in the murderer's face, surpassing far the wildest representations of a Fuseli or a Kean. At this period several of the spectators were forced to leave the apartment from terror or sickness, and one gentleman fainted.

257. * Experiment IV. — The last galvanic ex- periment consisted in transmitting the electric power from the spinal marrow to the ulnar nerve, as it passes by the internal condyle at the elbow; the fingers now moved nimbly, like those of a violin performer ; an assistant, who tried to close the fist, found the hand to open forcibly, in spite of his efforts. When the one rod was applied to a slight incision in the tip of the fore-finger, the fist being previously clenched, that finger extended instantly ; and, from the convulsive agitation of the arm, he seemed to point to the different spectators, some of whom thought he had come to life!'

258. An hour was spent in these experiments, when an experiment was made with the view of determining the quantity of residual air in the lungs ; after the detail of which, the author pro- ceeds as follows.

259. ' In

260. ' It is known that cases of death-like lethargy, or suspended animation from disease and accidents have occurred, where life has re- turned, after longer interruption of its functions than in the subject of the preceding experiments. It is probable, when apparent death supervenes from suffocation with noxious gases, &c., and when there is no organic defect, that a judiciously directed galvanic experiment will, if any thing will, restore the activity of the vital functions. The plans of administering Voltaic electricity hitherto pursued in such case, are, in my humble apprehension, very defective. No advantage, we perceive, is likely to accrue from passing electric

discharges across the breast, directly through the heart and lungs. On the principles so well de- veloped by Dr. Philip, and now illustrated on Clydsdale's body, we should transmit along the channel of the nerves, that substitute for nervous influence, or that power which may perchance awaken its dormant faculties. Then, indeed, fair hopes may be formed of deriving extensive benefit from galvanism ; and of raising this won- derful agent to its expected rank, among the mi- nisters of health and life to man.

261. ‘ I would, however, beg leave to suggest another nervous channel, which I conceive to be a still readier and more powerful one to the action of the heart and lungs than the phrenic nerve. If a longitudinal incision be made, as is frequently done for aneurism, through the integuments of the neck at the outer edge of the sterno-mastoi- deus muscle, about half way between the clavicle and angle of the lower jaw; then, on turning over the edge of this muscle, we bring into view the throbbing carotid, on the outside of which the par vagum and great sympathetic nerve lie to- gether in one sheath. Here, therefore, they may both be directly touched and pressed by a blunt metallic conductor. These nerves communicate directly or indirectly with the phrenic, and the superficial nerve of the heart is sent off from the sympathetic.

262. * Should, however, the phrenic nerve be taken, that of the left side is the preferable of the two. From the position of the heart, the left phrenic differs a little in its course from the right. It passes over the pericardium, cover- ing the apex of the heart.

263. ‘While the point of one metallic conductor is applied to the nervous cords above described, the other knob ought to be firmly pressed against the side of the person, immediately under the cartilage of the seventh rib. The skin should be moistened with a solution of common salt, or, what is better, a hot saturated solution of sal ammoniac, by which means the electric energy will be more effectually conveyed through the cuticle, so as to complete the Voltaic chain.

264. ‘ To lay bare the nerves above described, requires, as I have stated, no formidable incision, nor does it demand more anatomical skill, or surgical dexterity, than every practitioner of the healing art ought to possess. We should always bear in mind that the subject of experiment is at least insensible to pain ; and that life is at a stake, perhaps irrecoverably gone. And assu- redly, if we place the risk and difficulty of the operations in competition with the blessings and glory consequent on success, they will weigh as nothing with the intelligent and humane. It is possible, indeed, that two small brass knobs, covered with cloth moistened with solution of sal ammoniac, pressed above and below on the place of the nerve and the diaphragmatic region, may suffice, without any surgical operation. It may first be tried.

265. ‘ Immersion of the body in cold water ac- celerates greatly the extinction of life arising from suffocation ; and hence less hopes need be enter- tained of recovering drowned persons after a considerable

interval, than when the vital heat has been suffered to continue with little abate-

tnent. None of the ordinary practices judiciously enjoined by the Humane Society, should ever, on such occasions, be neglected. For it is surely criminal to spare any pains which may contribute, in the slightest degree, to recall the fleeting breath of man to its cherished mansion.'

266. We have hitherto confined ourselves to the effects of small batteries, but we must not omit to notice the powerful Voltaic apparatus constructed by Mr. Children, as well as the re- sults obtained by it, or the more portable as well as powerful arrangement by Mr. Pepys. In the first of these arrangements, the copper and zinc plates of the apparatus were connected together,

n the usual order, by leaden straps, six feet long by two feet eight inches broad, each plate pre- senting thirty-two square feet of surface. All the plates being attached to a strong wooden frame suspended by ropes and pulleys, which, being balanced by counterpoises, was easily lowered and elevated, so as to immerse the plates in the acid, or raise them out of it at pleasure. The cells of the battery were twenty-one in number, and their united capacities amounted to 945 gal- lons. To each pole of the battery a leaden pipe, about three-fourths of an inch in diameter, was attached by solder, and the opposite end of each pipe immersed in a basin of mercury (a separate basin for each pipe), by means of which the cir- cuit was completed, and a perfect contact ensured. The battery was afterwards improved at the sug- gestion of Dr. Wollaston, and the copper coiled completely round each zinc surface. See fig. 3, plate II. The first experiments we shall mention were made on the comparative facility with which different metals are ignited when placed in the electrical circuit. For this purpose, in each ex- periment, two wires of dissimilar metals were taken, of equal diameter and length ; one end of each was in contact with one of the basins of mercury communicating with the poles of the battery, and the other end bent to an angle, and the wires connected continuously by hooking them together. The length of each wire was eight inches, and the diameter one-thirtieth of an inch. The battery was moderately excited by a charge of one part acid diluted with forty parts of water.

267. Experiment I. — A platina and a gold wire being thus connected,

and introduced into the electrical circuit, the platina was instantly ignited, the gold remained unaffected.

268. Experiment II. — A similar arrangement of gold and silver wires. The gold was ignited, the silver not.

26° Experiment III. — The same with gold and copper. No perceptible difference in the state of ignition ; both metals were heated red.

270. Experiment IV. — Gold and iron. The iron was ignited ; the gold unchanged.

271. Experiment V. — Platina and iron. The iron ignited instantly at the point of contact next the pole of the battery. Then the platina became ignited through its whole extent. After this the iron became more intensely heated than “Jie platina, and the ignition of the latter de- creased, i

272. Experiment VI.— Platina and zinc. The ptatina was ‘ignited : the zinc was not ; but

melted at the point of contact. In a subsequent experiment, the zinc did not melt ; but the pla- tina ignited as before.

273. Experiment VII. — Zinc and iron. The iron was ignited : the zinc bore the heat without fusing.

274. Experiment VIII. — Lead and platina. The lead fused at the point of contact.

275. Experiment IX. — Tin and platina. The tin fused at the point of contact. No ignition of either wire took place in the two last experi- ments.

276. Experiment X. — Zinc and silver. The zinc was ignited before it melted : the silver was not ignited.

277. The results in every case were the same to whichever pole of the battery either wire was presented. These experiments were varied by introducing several alternations of different wires continuously connected, into the circuit, and obtained in every instance analogous results. Thus,

278. Experiment XI. — Alternations of platina and silver, three times repeated : all the platina wires were ignited, and none of the silver.

279. Experiment XII. — One zinc wire be- tween two platina : both the platina wires were ignited, the zinc not.

280. Experiment XIII. — One iron between two platina. Both the latter first ignited ; then the iron, which soon became fully heated, and fused.

281. It is unnecessary to enter into a farther detail of these experiments ; it will be sufficient to say generally, that when wires of several dif- ferent metals were introduced at once into the circuit, the order of their ignition was precisely that of the former experiments. In one experi- ment the copper was decidedly most heated.

282. To explain these phenomena, Mr. Chil- dren supposes that when a perfect communica- tion is established between the poles of the battery, the electricity circulates without produc- ing any visible effect ; but, if it meet with resist- ance in its passage, it manifests itself by chemi- cal action, by the evolution of heat, or both. Thus, if a bar of metal be connected with one pole of the battery, and its extremity immersed in a basin of mercury connected with the other pole, at the instant the surfaces come in contact, heat and light are evolved, which cease as soon as the bar, if it be of sufficient size, is fairly plunged beneath the surface of the quicksilver. If the circuit be completed by two pieces of charcoal, the evolution of heat and light is per- manent, as long as their surfaces remain in con- tact, because that contact can never be so per- fect, as to oppose no resistance to the electricity ; whereas, in the case of the bar of metal and the mercury, it soon becomes complete, and the cur- rent is then uninterrupted. Resistance, there- fore, appears to occasion the development of heat (whatever be the ultimate cause of the phenomenon), and as this must be inversely as the conducting power, when any two of the wires connected continuously are placed in the circuit, that which is the worst conductor must be most heated ; and thus platina, having the lowest conducting power, is ignited before all

the rest ; and silver, which conducts best, is not heated red when connected with any of the other metals.

283. The following experiments were made with the battery in a high state of excitation ; and Mr. Children considers them as represent- ing nearly the maximum of effect which it is ca- pable of producing. As the quantity of acid was increased from time to time, and that pre- viously added often almost spent before fresh was put in, it is not easy

to say exactly what proportion it bore to the water; perhaps the largest may be stated at about ˆ,th. On this, as on former occasions, he found a mixture of ni- trous and sulphuric acids, to produce the most powerful and permanent effects.

284. Experiment I. — Five feet six inches of platina wire, jjj, of an inch in diameter, were neated red throughout, visible in full daylight.

285. Experiment II. — Eight feet six inches of platina wire, -fa of an inch in diameter, were heated red.

286. Experiment III. — A bar of platina J of an inch square, and 2J inches long, was also heated red, and fused at the end ; and,

287. Experiment IV. — A round bar of the same metal, fjjJ0 of an inch in diameter, and 2£ inches long, was heated bright red throughout.

288. Experiment V. — Fine points of box- wood charcoal intensely ignited in chlorine, neither suffered any change, nor produced any in the gas. The result was similar when heated in azote.

289. Mr. C. next tried the power of the bat- tery to fuse several refractory substances. The subject of experiment was placed in a small cavity, made in a piece of well burnt boxwood charcoal, floating on the surface of the mercury in one of the basins before mentioned, and the circuit completed by another piece of charcoal, communicating by stout copper wire with the other basin.

290. Experiment I. — Oxide of tungsten, which (us well as other metallic oxides operated on) had beea previously intensely ignited in a char- coal crucible, in a powerful furnace, fused, and was partially reduced. The metal grayish white, heavy, brilliant, and very brittle.

291. Experiment II. — Oxide of tantalum. A very small portion fused. The grains have a reddish-yellow color, and extremely brittle.

2ˆ2. Experiment III. —Oxide of uranium ; fused, but nrrt reduced,

293. Experiment IV. — Oxide of titanium ; fused, not reduced. When intensely heated, it ‘i-iirnt, throwing off brilliant sparks like iron.

294. Experiment V. — Oxide of cerum ; fused, and when intensely heated it burnt with a large, vivid white flame, and was partly volatilised, but not reduced. The fused oxide, on expo- sure for a few hours to the air, fell into a light brown powder, containing numerous shining particles of a silvery lustre interspersed amongst it, and

exhaled an odor, similar to that of phos- phureted hydrogen.

295. Experiment VI. — Oxide of molybdena ; readily fused and reduced. The metal is very orittle, of a steel gray color, and soon becomes covered with a thin coat of purple oxide.

ELECTRO-GALVANISM.

296. Experiment VII. — Compound ore of iridium and osmium ; fused into a globule.

297. Experiment VIII. — Pure iridium ; fused into an imperfect globule,, not quite free from small cavities, and weighing 7 1 grains. The metal is white, very brilliant, and in its present state its specific gravity is 18‘6&,which must be much too low, on account of the porous state- of the globule. In the Minutes of the Experi- ments, in July 1813, mention is made of the fusion of a small portion of pure iridium into a globule weighing ˆ of a grain, which had been previously submitted to the action of a battery of 2000 plates, of four inches square, without melting.

298. Experiment IX. — Ruby and sapphire,, were not fused.

299. Experiment X. — Blue spinal ran into a slag.

300. Experiment XI. — Gadolinite, fused into globules.

301. Experiment XII. — Magnesia was ag- glutinated.

302. Experiment XIII. — Zircon from Nor- way was imperfectly fused.

303. Experiment XIV. — Quartz, silex, and plumbago, were not affected.

304. In the year 1796 M. Clouet converted iron into steel, by cementation with the diamond,, with the view of confirming the nature of that substance, and of ascertaining the exact state in which carbon exists in steel. Clouet had also previously formed steel by cementation with car- bonate of lime. Mr. Mushet repeated this ex- periment, using, instead of the carbonate, caustic lime, and obtained also what he considered to- be cast steel ; whence he concluded that the car- bon necessary to convert the iron into steel had not been furnished, as Clout supposed, by de- composition of the carbonic acid, but that it had found its way from the ignited gas of the furnace to the iron. This result occasioned suspicions of the accuracy of the deductions from the ex- periment with the diamond ; and Mr. Mushet

accordingly, at the suggestion of the editor of the Philosophical Magazine, repeated the experi- ment made at the Polytechnic School, only keep- ing out the diamond. The results (for he made several experiments), uniformly gave him good cast steel, whence he concludes that we are still without any satisfactory or conclusive proof of the steelification of iron solely by means of the diamond ; and adds that he doubts whether the diamond afforded even one particle of carbon t\> the iron. The details of both Clouet's and Mu- shet's experiments, may be found in the fifth vo- lume of the Philosophical Magazine. Sir George M'Kenzie repeated both results confirming the conclusions of the French chemist. The labors of this gentleman would at first view appear con- clusive; but, if a doubt should remain, it occurred to Mr. Pepys, that the battery would afford an experimentum crusis on the subject; and his in- genuity readily suggested a mode of making it every way unobjectionable. He bent a wire c pure soft iron, so as to form an angle in the mid die, in which part he divided it londtudinallj by a fine saw. In the opening, so formed, h placed diamond powder, securing-it in its situa-

lib

lion by two finer wires, laid above and below it, and kept from shifting, by another small wire, bound firmly and closely round them. All the wires were of pure soft iron, and the part con- taining the diamond powder was enveloped by thin leaves of talc. Tmis arranged, the appara- tus was placed in the electrical circuit, when it soon became red hot, and was kept so for six minutes. The ignition was so far from intense, that few who witnessed the experiment expected any decisive result. On opening the wire, how- erer, Mr. Pepys found that the whole of the diamond had disappeared; the interior surface of the iron had fused into numerous cavities, notwithstanding the very moderate heat to which it had been exposed ; and all that part which had been in contact with the diamond was converted into perfect blistered steel. A portion of it being heated red, and plunged into water, became so hard as to resist the file, and to scratch glass. This result is conclusive ; for as the contact of any carbonaceous substance, except the included diamond, was effectually guarded, to that alone can the change produced in the iron be referred. This experiment will also probably be deemed fatal to the opinion of those mineralogists (if any do still maintain that opinion), who class the diamond with substances of the siliceous genus. 305. When dry caustic potassa was exposed to the intense heat between the two pieces of charcoal, it fused, and appeared to decompose, throwing off a large name of the

peculiar purple color, that attends the combustion of potassium. When moist caustic potassa was placed in the circuit, the water only was decomposed.

307. The second apparatus was constructed under the immediate direction of Mr. Pepys for the London Institution, and the great portability of this gigantic galvanic spiral gives it an especial claim to the notice of the scientific world. The apparatus is shown at fig. 4.

308. The two tubs, T, T, are somewhat larger than the metallic coil. The one beneath the weight is intended as a receptacle for water, while the other is charged with dilute acid.

309. The spiral M is suspended by a cord, and balanced by the weight W ; the beam over which the cord passes being moveable on a cen-

tral axis at the top of the upright piece of timber,

310. The coil consists of two plates, each fi(t> feet in length and two feet in width ; the one cop per, and the othˆr zinc, making a superficial sur- face of 400 feet. They are rolled or wrapped round a cylinder of wood, with three strands or ropes of horse-hair between each plate, to pre- vent contact of the metals ; and, to maintain these in their situation, notched sticks are occasionally introduced in the rolling. Two conductors of copper, near three-fourths of an inch in thickness, are firmly attached to the end of each plate, from which the power is dispensed upon immersion in* the acid.

311. Rather more than fifty gallons of dilute acid are requisite to charge the receptacle in- tended for the metallic spiral ; and, to put the apparatus in operation, the coil is gradually lowered into the tub beneath. The immersion of the spiral, however, displaces a certain portion of water ; so that it is necessary to restore the equi- librium by withdrawing one of the balance- weights. In the apparatus actually employed in the theatre of the London Institution, there is but one tub employed ; but in the improved form, represented in the diagram, it may be re- moved to a vessel of water, and its maximum effect produced by a subsequent immersion in the dilute acid.

312. As a mere electrical battery, the effect to be derived from this pair of plates is compara- tively small ; but its powers as an agent for illus- trating the connexion between magnetism and electricity are truly astonishing.

313. Magnetic needles, placed at a distance of several feet from the apparatus, were readily put into motion, and deflected from their

previous position. The most singular phenomenon, how- ever, which resulted from the series of experi- ments with this extraordinary instrument, remains to be noticed : — A spiral of wire was connected with the two poles of the battery shown at C, C, and, being placed in a perpendicular direction, a steel cylinder was dropped from the upper end and this, instead of obeying the ordinary laws o gravitation, was found, after a few oscillations to take a position somewhere midway between the two extremities of the tube.

ELECTRO-MAGNETISM.

314. The connexion between galvanism and magnetism must now be examined. The term electro-magnetism has been employed to desig- nate a science which has originated since the commincement of the present century, and which nas received no ordinary attention from the con- tinental philosophers, as well as from those of our own country. Amongst those who have done most towards the development of electro- magnetism, we may especially enumerate M. Oersted, Sir Humphry Davy, and professor Barlow, and the latter of these gentlemen has published a very valuable work illustrative of the science.

315. M. Oersted, professor of natural philo- sophy, and secretary to the Royal Society of

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Copennagen, was tor many years engaged in enquiries respecting the identity of chemical, electrical, and magnetic forces ; and, as early as 1807, proposed to try ‘ whether electricity the most latent had any action on the magnet.’ At that time no experimental proofs of the peculiar opinions he entertained were known ; but his constancy in the pursuit of his object, both by reasoning and experiment, was well rewarded in the winter of 1819, by the discovery of a fact o which no previous notice had been taken ; but which, when once known, instantly drew the attention of all those who were at all able to ap- preciate its importance and value.

316. M. Oersted’s own account of this disco- very has been published in volume xvi. of the

first series of the Annals of Philosophy. It is full of important matter,

and contains in few words the results of a great number of observations ; and, with his second paper, comprises a very large part of the facts that are as yet known /elating to this subject

317. Upon the excitation of the Voltaic appa- ratus, by the proper arrangement of its plates and fluid, it is known that certain powers are given Jo its poles or extremities which enable them, when attached to an electrometer, to show by thtir divergence a certain tension of electricity ;

. or when connected together by fluids, wires, or other conducting substances, to decompose or heat them. These effects have been known for several years, and are generally attributed to electricity produced by tbe apparatus ; the effects of tension belonging to the insulated state of the poles ; those of decomposition and heating to their connected state.

318. When the two poles of such a battery or apparatus are connected by conductors of elec- tricity, the battery is discharged ; that is, the tension of the electricity at the poles is lessened, and that, according as the conducting power of the substance is more or less powerful. Good conductors, discharge it entirely and instantly ; bad conductors with more or less difficulty ; but as the instrument has within itself the power of renewing its first state of tension on the removal of the conducting medium, and that in a very short space of time, it is evident that the con- necting substance is continually performing the same office during the whole time of its contact that it did at the first moment, and this whether it be a good or a bad conductor ; and it is also evident that it must be in a different state in this situation than when separated from the apparatus. It is important at present rather to consider the action of a good conductor in discharging the battery, as the phenomena to be considered are in that case more energetic. A metallic wire, therefore, may be used to connect the two poles ; it will discharge a powerful apparatus ; and, consequently, whatever takes place in the con- necting medium is here compressed into a very small place. Those who consider electricity as a fluid, or as two fluids, conceive that a current or currents of electricity are passing through the wire, during the whole time it forms the con- nexion between the poles of an active apparatus. There are many arguments in favor of the mate- riality of electricity, and but few against it ; but still it is only a supposition ; and it will be as well to remember, while pursuing the subject of electro-magnetism, that we have no proof of the materiality of electricity, or of the existence of any current through the wire.

319. Whatever be the cause which is active within the connecting wire, whether it be the passage of matter through it, or the induction of a particular state of its parts, it produces cer- tain very extraordinary effects. If small, it be- comes heated ; and as the size of the wire is diminished, or that of the apparatus increased, the heat rises to an intense degree apparently without any limitation, except from the influence of external circumstances, or the alteration of the wire. Another effect, and it is that to which

-M. Oersted, here calls attention is, that, if brought towards a magnetic needle, it has the power of attracting and repelling it in a constant manner, and in obedience to certain simple laws.

320. If a magnetic needle be left to take its natural direction, and then a straight portion of the connecting wire be brought above it, and parallel to it, that end of the needle next the ne- gative pole of the battery moves towards the west ; and that whether the wire be on the one or the other side of the needle, so that it be above and parallel to it. If the connecting wire be sunk on either side the needle, so as to come into the horizontal plane in which the needle is allowed to move, there is no motion of the needle in that plane ; but the needle attempts to move in a vertical circle ; and but for the imperfect suspension, and the influence of the earth's magnetism, would do so. When the wiro is on the east of the needle, the pole of the needle next the negative end of the battery is elevated ; and when on the west of the needle it is de- pressed. If the connecting wire be now sunk below the level of the needle, similar attractions and repulsions take place, but in opposite direc- tions to those followed when it is above. The pole of the needle opposite the negative end of the battery now moves eastwards, whatever the position of the wire, so that it be restricted as above.

321. That these positions of the magnetic needle may be retained with more facility in the memory, professor Oersted proposed the following formula: 'The pole above which the negative electricity enters is turned to the west j under which, to the east.'

322. M. Oersted subsequently pointed out, what it is easy to see from the above experiments, that the movement of the needle took place in a circle round the connecting wire ; and though, in the description of his first experiment the quantity of declination given to the needle from the wire is expressed by an angle of so many degrees, yet it is afterwards stated to vary with the power of the battery. Whenever the needle is moved in a horizontal or ariy other circle from the position it naturally assumes, the power of the earth over it tends to restore that

position, and is consequently an active force in the pre- sent instance opposed to the power of the con- necting wire; it therefore lessens the declination the needle would otherwise have. Also when the wire is brought into the same horizontal circle with the needle, its effect over it is shown by the elevation and depression of its opposite ends ; and it is the mode of suspension combined with the earth's magnetic power that prevents it fruii; traversing in a vertical circle. But if those inter feting circumstances be removed, viz. if the sus pension be such as to allow of free motion to th needle in every direction, and the earth's mag- netism be rendered null, or counteracted

by the position of the needle, or by the vicinity of another magnet, then a much simpler idea the relative movements of the wire and needle may be obtained.

323. It is not, perhaps, easy to obtain this perfect state of apparatus, but it is not difficiil so to arrange it as to examine the movements

in one direction, and then in another. It will then be found, i.f the connecting wires of a sufficiently powerful apparatus be placed near a magnetic needle so as to pass near its centre, that the needle will arrange itself directly across the wire, whatever the previous position of the two ; that if the wire be carried round the centre of the needle, or the centre of the needle round the wire, the same relative position of the two will continue ; and that the direction of, the needle across the wire is not indifferent, but has its poles always in a constant position to the poles of the battery. If the positive pole of a battery be on the right hand, and the negative pole on the left, and a wire be stretched between, connecting them, then a needle above the wire will point the north pole from, and the south towards us ; or if below, the south pole from, and the north towards the experimenter. See fig. 5, plate II.

324. If the connecting wire and the needle be represented by two small rods named accord- ingly, and fastened permanently together, then they will represent the wire and the needle in all positions ; for, however one be placed, the other will correspond with it : or if, on the iinder side of a small square piece of glass, a line be drawn from top to bottom, the upper end being called negative, and the lower positive ; and on the upper surface a line be drawn from left to right, the left termination being named south, the right north ; then the lower line

will always represent the connecting wire, and the upper the needle. Fig. 6.

325. The needle and wire being in this posi- tion, if the wire be moved along the needle to- wards either extremity, strong attractions will take place between it and the pole, notwithstand- ing the same part of the wire be employed ; and the poles in the two positions are contrary to each other. In this case it appears that the same point in the wire has the power of attracting both the north and south pole of the needle. If while the wire is thus situated near the end of the needle, the latter be turned round, so that the pole before there be replaced by the oppo- site pole, strong repulsions will take place ; and that to whichever pole the wire has in the first instance been carried, so that the same point which before attracted both poles will now repel them both. If, when the wire is near the extre- mity of the needle where the attraction is strongest, it be moved round the end so as to go from one side to the other, keeping the same point constantly towards the needle, its attractive power over the needle will be found to increase as it approaches the end, but remains on one side of it ; will diminish as it turns the end ; will be- come “null when exactly opposed to the pole; and, as it passes on the other side, will resume repulsive powers, which will be strongest at the extremity of the pole on the opposite side to where the wire was situated at first. Fig. 7.

326. In all these cases the positions assumed by the wire and needle, whether the result of at- traction or repulsion, are the same as those be- fore described, except that the wire is now near tne end of the needle instead of the middle ; and it will be found that all the attractions and re- pulsions may be reduced to four positions of the

needle to the wire, in which it forms tangents with it. In fig. Q, the north pole ; in fig. 9, the south pole ; if in either of them the poles of the needle be reversed, the tangents remaining in the same direction, repulsion will take place. Hence, it is easy to see how any individual part of the wire may be made attractive or repulsive of either pole of the magnetic needle by mere change of position.

327. The magnetic property does not depend upon the metal employed or its form, but is ex- erted by any of them which forms the circuit between the poles : even a tube filled with mer- cury is effectual : the only difference is in the quantity of effect produced. It continues also, though the conductor be interrupted by water, unless the interruption be of great extent.

328. The magnetic influence of the wire ex- tends through all sorts of

substances, and acts on the needle beyond, just as in common magnetism. It does riot act on needles of brass, glass, or gum lac.

329. In a second paper on this subject, M. Oersted shows that not intensity, but quantity, is wanting in the Voltaic apparatus, to produce this effect most eminently. A single galvanic arc is sufficient for the purpose. A plate of zinc, six inches square, placed in a trough of copper, filled with diluted acid, enabled the wire which connected the two metals to act powerfully ; and, with a similar arrangement, the zinc plate having a surface of 100 square inches, an effect was produced on the needle at the distance of three feet. He also, in this paper, describes the con- struction of a Voltaic combination so light, that being suspended, it moved on the approach of a magnet: the motions were in accordance with what has been said, and may easily be con- ceived.

330. The results obtained by M. Oersted were immediately repeated and confirmed by a great number of philosophers in various places. Of these no one was more active than M. Ampere, in varying experiments, making new ones, and applying to them the most judicious theory.

331. The facts discovered by M. Ampere, though not numerous, are of great importance. He described an experiment, proving that the Voltaic pile itself acted in the same manner as the wire, connecting its two poles ; and constructed an instrument which, at the same time that it proved this action, was found to be of great use in experiments on currents of elec- tricity. This was merely a magnetic needle, but from the uses to which it was applied was called a galvanometer. When placed near a pile, or trough, in action, having its poles connected either by a wire, or by introducing them into one cell, it immediately moved, be- coming obedient to the battery in the same manner as to the connecting wire ; and the mo- tions were such as if the battery were simply a continuation or part of the wire. In consequence of this action, the needle becomes an instrument competent to indicate that state of an active Vol- taic pile, and the wire connecting it, which is supposed to be occasioned by currents of elec- tricity, and in which only, magnetism has yet been most perfectly discovered.

332. M. Ampere also announced the fact of tne attraction and

repulsion of two wires con- iiecting the poles of a battery ; and showed, that the magnetic needle, which had previously been used to prove the magnetic attractions and re-

mlsions of the wire, could be replaced by ano- ther connecting wire like the first. This disco- very seemed to liberate the phenomena of mag- netism from any peculiar poweY resident in the magnet, and to prove its production by electri- city alone. When by Oersted's discovery it had been shown that a wire connecting the poles of a Voltaic battery would act on a magnet, attract- ing and repelling it, just as another magnet would do, it was fair to assume that the wire possessed the powers of the magnet it supplied ; and when the second magnet was replaced by another con- necting wire, as in Ampere's experiment, and the powers and actions still remained as before, it was perfectly correct to consider these powers and actions as magnetical ; so that it became evident that magnetism could be exerted inde- pendent of magnets, as they are usually called, and of any of the means of excitation usually employed, but wholly by electricity, and in any good electrically conducting medium.

333. The phenomena with two conductors situate between the poles of the battery are as follows : — When they are parallel to each other, and the same ends of them are similarly related to the battery ; viz. when the supposed currents existing in them are in the same direction, then they attract each other ; but if the opposite ends be connected with the battery, so that the cur- rents conceived to exist in them are in opposite directions, they repel each other. If also, the one being fixed the other moveable, the cur- rents be sent, or the connexions be made, in opposite directions, then the moveable one will turn round until they are in the same direction. The contrast between these attractions and re- pulsions, and those usually called electrical, are very striking. The one take place only when the circuit is completed : the other only when it is incomplete. The attractions take place between the similar ends of the wires, and the repulsions between the dissimilar ends ; but the electrical attractions take pla>e between dissimilar ends, and the repulsions between similar ends. These take place in vacuo, but those do not. When the magnetic attraction brings the two wires together, they remain in contact ; but when electrical attraction brings two bodies together, they separate after the contact.

334. These experiments were varied in several ways by M. Ampere; and the apparatus with which they were made appears, from the plates and description published, to be very delicateˆ ingenious, and effectual. The general results drawn ur> by M. Ampere himself from

them are, (1 .) That two electrical currents attract when they move parallel to each other, and in the same direction; and repel when they move parallel to each other in a contrary direction. (2.) That when the metallic wires, traversed by these currents can only turn in parallel planes, each of the currents tends to direct the other into a situation in which it shall be parallel, and in the same *lirection. (3.) That these attractions and repul-

sions are entirely different from the ordinary electrical attractions and repulsions.

335. M. Arago stated to the Royal Academy of Sciences that he had ascertained the attrac- tion of iron filings by the connecting wire of the battery exactly as by a magnet. This fact proved not only that the wire had the power of acting on those bodies already magnetised, but that it was itself capable of developing mag- netism in iron that had not previously been magnetised. When the wire in connexion with the poles of the battery was dipped into a heap of filings, it become covered with it, increasing its diameter to the size of a goose-quill ; the instant the communication was broken at either pole, the filings dropped off; and when it was re-established, they were re-attracted. This attraction took place with wires of brass, silver, platina, 8cc., and was so strong as to act on the filings when the wire was brought near them without actual contact. It was shown not to belong to any permanent magnetism in the wire or filings by the inactivity of both when the connexion was not made with the battery ; and it was proved not to be electrical attraction by the connecting wire having no power over filings of copper, or brass, or over saw-dust. When soft iron was fused, the magnetism given was only momentary ; but on repeating the ex- periment, with some modification, M. Arago succeeded completely in magnetising a sewing- needle permanently.

336. The theory which M. Ampere had formed, to account for the magnetic phenomena of mag- nets by electrical powers only, assumed that magnets were only masses of matter, around the axes of which electrical currents were moving in closed curves. This theory led him, when in- formed by M. Arago of his experiments, to ex- pect a much greater effect if the connecting wire were put into the form of a spiral, and the piece to be magnetised were placed in its axis. Ac- cording to the theory, in a needle or magnet, pointing to the north, the currents were in the upper part from east to west. In consequence of these expectations, M.M. Ampere and Arago made experiments with spirals or helices, and the results are mentioned in M. Arago’s paper, on the communication of magnetism to iron filings in the fifteenth volume of the Annales de Chimie.

337. On twisting a wire round a rod, it may be made to pass either in one direction or the other, giving rise to two distinct but symmetrical' helices, which have been named by botanists dextrorsum and sinistrorsum. Though their diameters be equal, and the spirals which com- pose them have equal inclinations, yet they can never be superposed ; for, however they are turned about, their direction is the same. The dextrorsum, or, as we may call it, the right helix, proceeds from the right hand downwards towards the left above the axis; the tendrils of many plants exhibit instances of it, and it is almost exclusively used in the arts : the sinis- trorsum, or left helix, proceeds from the left hand downwards towards the right above the axis.

338. Having made some of these helices, or

was connected by its extremities with the poles of a Voltaic battery, and then a needle wrapped in paper placed within it ; after remaining there a few minutes, it was taken out, and found to be strongly magnetised ; and the effect of a he- lix above that of a straight connecting wire was found to be very great.

339. Then, with regard to the position of the poles in the magnetised needle, it was found that, whenever a right helix was used, that end of the needle towards the negative end of the battery pointed to the north, and that towards the positive end toward the south ; but that with a left helix, that end of the needle towards the positive, pointed north ; and the other end south.

340. In order to establish this point, the con- necting wire was sometimes formed into one helix, sometimes into two or three, which was readily done by twisting it round a glass tube, or rod,, first in one direction, then in another ; and when needles previously enclosed in glass tubes were then placed in these helices, the magnetic poles they received were always in ac- cordance with the statement just given. In one case, also, where the connecting wire had been formed into three consecutive helices, the middle one being of course different to the other two, a single piece of steel wire sufficiently long to pass through all three of them being enclosed in a glass tube was placed within them. On being again removed and examined, it was found to have six poles ; first, a north pole, a little further on a south pole, then another south pole, a north pole, another north pole, and at the further end a south pole.

341. M. Boisgeraud read a paper to the Royul Academy of Sciences, containing the detail of numerous experiments, most of which, however, are variations of Oersted's first experiments. He remarked, that connecting wires, or arcs, placed any where in the battery, would affect the needle, a. result that follows as a consequence from Oersted's and Ampere's experiments. He notices t.ie difference of intensity in the effects produced when bad electrical conductors were employed t> complete the circuit, a difference which ( )ersted himself had pointed out in the case of vater. M. Boisgeraud, however, proposed to ascertain the conducting power of different sub- stances by placing them in one of the arcs, cells, or divisions of the battery, and bringing the magnetic needle, or Ampere's galvanometer, towards another arc, viz. to the wireˆ or other connecting body, used to complete the circuit in the battery. With regard to the positions, M. Bougeraud's notices of the needle and wire, they are all confirmatory of Oersted's statements.

342. M. Ampere read another memoir on the phenomena of the Voltaic pile, and on the me- thod he intended to pursue in calculating the action of two electrical currents. He also showed the mutual action of two rectilinear elec- trical currents ; viz. of two straight portions of the connecting wires ; for it appears that the phenomena of attraction, repulsion, &c., were first observed with spiral wires. These actions, however, are exactly similar ; and the view al- ready given of them, as it relates to straight •wires, is consequently more simple than the de-

scription of the effects with spiral wires can be ; viz. considering it as a matter of experiment only, and not of theory.

343. In consequence of the view which M. Ampere had taken of the nature of magnetism as dependent simply upon currents of electri- city, it became an important object with him to ascertain the action of the earth upon such currents, excited by the Voltaic battery ; for, from his theory, he expected that it would be equally efficient in directing these currents as in directing those supposed to exist in the mag- netic needle. After some trials, he succeeded in overcoming the obstacles to delicate suspen- sion, contact, &c., and constructed an apparatus in which a part of the wire connecting the two poles of a battery was rendered so light and mo- bile as to move immediately ; the connexion was completed with the pole, and took a direction which, with regard to the earth, was always con- stant, and in accordance with M. Ampere's theory. An account of these experiments, with the appa- ratus used in them, was read to the Royal Aca- demy. The first consisted of a wire bent so as to form almost a complete circle of about sixteen inches in diameter; the two extremities were made to approach, and were placed one just be- neath the other ; and being

attached to two steel points, were connected by them with two little ba- sins of platina containing mercury, fixed so as to receive them ; only one of the points touched the bottom of the cup in which it was placed ; so that the friction was scarcely any, and the mercury se- cured a good contact. The cups were connected with other wires that passed off to the Voltaic battery; so that it was easy to make this moveable circle connect either one way or the other between the poles ; and being enclosed in a glass case, any movement it might receive was readily ob- served without danger of its resulting from any other cause than the electric action.

344. When the extremities of this apparatus were connected with the poles of a battery, the circle immediately moved, and after some oscil- lations placed itself in a plane perpendicular to the magnetic meridian of the earth ; and, on every repetition of the experiments, the same effect took place. The direction in which it moved depended upon the way in which the connexion had been made with the battery ; and if it be assumed that there is a current passing through the wire, from the positive to the negative end, the curve so arranged itself that that current always passed downwards on the eastern side, and upwards on the west. This circle moved round a perpendicular, and, therefore, only re- presented the direction of the magnetic needle : in order to represent the dip, a wire was formed into a parallelogram, and being fixed to a glass axis was suspended by fine points, and connected as before, so as to move round a horizontal axis , then this axis being placed perpendicular to the magnetic meridian,, and the wires being connected with the poles of a battery, the paral- lelogram immediately moved towards a position in the plane perpendicular to the dipping- needle ; when the communication was broken, it returned towards its first position ; and when renewed, it resumed the second, evidently indicating- the

magnetic influence of the earth over it. In con- sequence, of the difficulty of placing the centre of gravity in the centre of suspension, and keep- ing it there, this conductor did not tike its posi- tion exactly in a plane perpendicular to the dipping needle, but approached towards it till in equilibrium between the magnetic and the gravitating power of the earth.

345. M.M. Biot and Savart read a memoir to the Academy of Sciences, the object of which was to determine the law by which a connecting

wire acted on magnetised bodies. Small rectan- gular plates, or cylindrical wires, of tempered steel, were made magnetical by the double touch, and being then suspended by silk-worm threads were placed in differed positions with, and at different distances from, the wire connecting the poles of the battery. The terrestrial magnetism was sometimes combined with that of the wire, sometimes opposed to it, and sometimes neu- tralised by the vicinity of another magnet. The different positions of equilibrium, and the num- ber of oscillations of the needles, were then ob- served, and data gained, by which M.M. Biot and Savart were conducted to the following re- sult, which expresses the action exerted by a molecule of austral or boreal magnetism, placed at any distance from a very fine and indefinite cylindrical wire, rendered magnetic by the Voltaic current. Let a line pass from this molecule perpendicularly to the axis of tlie wire, the force which draws the molecule is perpendicular to this line and to the axis of the wire ; its intensity is reciprocal to the distance. The nature of the action is the same as that of a magnetised needle placed on the surface of the wire in a direction determinate and constant in its relation to the direction of the Voltaic current ; so that a mo- lecule of boreal magnetism, and a molecule of austral magnetism, would be drawn in different directions, though constantly according to the preceding expression.

346. M. Ampere noticed an effect produced by the connecting wire bent into a helix. This may be easily understood from considering that the direction of the magnetic power is always perpendicular to the conducting wire. When, therefore, the conducting wire is parallel to the axis of the helix, the power is perpendicular to that axis ; when the wire forms a circle round the axis, in a plane perpendicular to it, the power is in the direction cf the axis ; but when, as in the helix, it passes round the axis in a direction intermediate between parallelism and perpendi- cularity, the direction of the power is of course in- clined accordingly. In this case the power may be considered as composed of two portions, one perpendicular to the axis, the other parallel to it. As M. Ampere considered magnets to be assemblages of currents perpendicular to their axes, he wished, in his imitation of them, to do away with that effect due to the extension of the wire in the direction of the axis of the helix, and succeeded in this by making the wire at one end return through the helix so as not to touch it in any part ; for, in this position, its magnetic effects being contrary to those belonging to the length of the helix, and also near to them, they nearralisixl or hid each other. An imitation of

a magnet was made by forming a helix, and making the wires at the two extremities return through the centre of the helix half way, and

then pass out upwards and downwards, so as to form a perpendicular axis on which the whole might move. The extremity of a battery being connected with these two ends of the wire, the helix became magnetical, and was attracted and repelled by a magnet precisely as a real magnet would have been.

347. M. Biot's examination of the effects of magnetism, as impressed by electricity in motion, is too excellent to be passed unnoticed in our chronological account of discoveries in this science.

348. ' When the electric current, evolved from a Voltaic battery, is transmitted through any metallic bodies whatsoever, it gives them instan- taneously a magnetic virtue ; they become then capable of attracting soft and unmagnetised iron. This curious fact was discovered by M. Oersted. If we expose to these metallic bodies, a magnetic needle, they attract one of its poles, and repel the other, but only relative to the parts of their sur- face to which the needle is presented. Needles of silver or copper are not affected, but merely those susceptible of being magnetised. These effects subsist only under the influence of the electrical current. If we suspend the circulation of the electricity, by breaking off the communi- cations established between the opposite poles of the Voltaic apparatus, or even if we retard con- siderably its velocity, by joining its poles with bad conductors, the magnetic power instantly ceases, and the bodies which had received it return to their usual state of indifference.

349. ' This simple sketch already displays many new properties. All the processes hitherto employed to magnetise bodies had produced an effect on only three pure metals, iron, nickel, and cobalt, and on some of their compounds, steel for example, which is merely a carburet of iron. Till now it was never possible to render silver, copper, or the rest of the metals magnetic. But the electric current gives all of them this pro- perty; it bestows it transiently by its presence; and, as we shall presently see, it diffuses it through the whole mass, in a manner equally singular, and which has no resemblance to what is produced, when we develope magnetism by our ordinary processes, which consist in longitu- dinal friction with magnetic bars.

350. ' To produce these novel phenomena in the simplest manner, we must, with M. Oersted, establish a communication between the two ex- tremities of the Voltaic apparatus, by a simple metallic wire, which may be easily directed and bent in all directions. We place afterwards, in the neighbourhood of the battery, a very sensible magnetic needle, horizontally suspended. As soon as this is settled in the direction due to the magnetic force of the terrestrial globe, we

take a flexible portion of the conducting, or conjunctive wire, as M. Oersted calls it, and having stretched it parullel to the needle, we bring it gently near it, either from above, from below, from uit right, or from the left. We shall see an immediate deviation of the needle ; but, what is not the least remarkable circumstance, the direction of this

deviation differs according to the side by which tue conjunctive wire approaches it. Duly to comprehend this astonishing phenomenon, and to fix its peculiarities with precision, let us suppose that the conjunctive wire is extended horizontally from north to south, in the very direction of the magnetic direction in which the needle reposed, and let the north extremity be attached to the copper pole of the trough, the other being fixed to the zinc pole. Imagine, also, that the person who makes the experiment looks northward, and consequently towards the copper or nega- tive pole. In this position of things, when the wire is placed above the needle, the north pole of the magnet moves towards the west; when the wire is placed underneath, the north pole moves towards the east ; and, if we carry the wire to the right or the left, the needle has no longer any lateral deviation, but it loses its horizontality. If the wire be placed to the right hand, the north pole rises ; to the left, its north pole dips ; and in thus transporting the conjunctive wire all around the needle, in directions parallel to one another, we merely present it to the needle, by the different sides of its circular contour, without affecting in the least the proper tendency of the needle towards the terrestrial magnetic poles. Since then the deviations observed in these suc- cessive positions are first of all directed from right to left, when the wire is above the needle ; then from above downwards, when the wire is to the left ; from the left to the right, when the wire is beneath; and, finally, from below upwards when it is to the right hand, we must necessarily conclude from these effects, that the wire de- ranges the needle, by a force emanating from itself, a force directed transversely to the length of its axis, and always parallel to the portion of its circular contour, to which the needle is oppo- site. M. Oersted drew this inference from his first observations.

351. ‘ Now this revolutive character of the force, and revolutive according to a determinate direction, in a medium which like silver, copper, or other pure metal, seems perfectly identical in all its parts, is a phenomenon very remarkable, of which we had heretofore only one

singular ex- ample in the deviations which certain bodies impress on the planes of polarisation of the lumi- nous rays. The first fact of the magnetism, transiently impressed upon the conjunctive wire by the Voltaic current, might have offered itself to a vulgar observer. I do not know whether some traces of this property may not have been previously perceived and indicated ; but to have recognised this peculiar character of the force, and to have delineated it, agreeably to its pheno- mena, without hesitation and uncertainty, is the praise which truly belongs to M. Oersted, and which constitutes a condition entirely new in the movement of electricity.

352. ‘ As soon as this beautiful discovery was known in France, England, and Germany, it excited the most lively sensation among men of science. One of our colleagues, in particular, M. Ampere, ardently verified it in all its cir- cumstances. Seizing with sagacity the revolu- tive character of the’ force impressed on the con- junctive wire hp directed it with judgment, and

skilfully developed the consequences which flowed from this property. His researches, which preceded those of the other French philo- sophers, have considerably occupied the Aca- demy ; but as the order of exposition, occasioned by the mutual dependence of the phenomena, hinders me from beginning with them, I have endeavoured to compensate for this inversion by rendering justice at once, to labors which have anticipated and facilitated others.

353. ‘ In the above experiments which M. Oersted had made, the conjunctive wire is pre- sented to steel needles, previously magnetised. It may be asked, if the action then exercised is proper to the conjunctive wire, as the action of a bar of steel tempered and magnetised is pro- per to this bar, or if the action is communicated to the wire by the presence of the magnetic needle, as we see soft iron, which exercises no magnetic power of itself, acquire transiently this power in the presence of magnets? To decide this question it was necessary to examine whether a body, not magnetic in itself, but capa- ble of becoming so by influence, soft iron for ex- ample, would experience a sensible action at the approach of a conjunctive wire, traversed by the Voltaic current. This was effected by M. Arago, who showed that filings of iron are attracted by these wires ; a simple but important fact, which defines clearly one of the characters of the force by which the phenomenon is produced.

354. ‘ The first thing whicn we must determine, is the law according to which the force emanat- ing from the conjunctive wire decreases at dif- ferent distances from its axis. This enquiry has been the object of

experiments which I made along with M. Savart, already known to the Academy by his ingenious discoveries in acous- tics. We took a small needle of magnetised steel in the form of a parallelogram, and, to ensure its perfect mobility, we suspended it under a glass bell, by a single fibre of the silk- worm, and gave it at the same time a horizontal direction. Then, in order that it might be en- tirely at liberty to obey the force emanating from the conjunctive wire, we screened it from the action of the magnetism of the earth, by placing a magnetised bar at such a distance, and in such a direction, that it exactly balanced this action. Our needle was thereby placed in the same freedom of movement as if there did not exist any terrestrial globe, or as if we had been able to transport ourselves with it to a great dis- tance in space. , We now presented it to a con- junctive cylindrical wire of copper, stretched in a vertical direction, and to which we had given such a length, that its ‘extremities necessarily bent in order to attach them to the poles of the electric apparatus, should have, in consequence of their distance, so feeble an action on the needle that it might be neglected with impunity. Tin’s disposition represented therefore the effect of an indefinite vertical wire, acting on a horizontal and independent magnetic needle. As soon as the communication of the Voltaic current was completed, the needle turned transversely to the axis of the wire, conformably to the revolutive character indicated by M. Oersted ; and it set itself to oscillate around this direction, as a

clock pendulum, moved from the perpendicular, oscillates round th* vertical by the effect of gra- vitation. We counted with an excellent seconds watch of M. Breguet, the time in which a certain number of these oscillations, twenty for example, were performed ; and by repeating this observa- tion, when the wire and needle were at different distances, we inferred the decreasing intensity of the force, precisely as we determined, by the oscillations of the same pendulum, the variations of gravity at different latitudes. We thus found mat the force exercised by the wire was trans- verse to its length, and revolution, as M. Oersted liud observed ; but we discovered besides that it decreased in a ratio exactly proportional to the distance. However, the force which we thus observed was in reality a compound result ; for on dividing in imagination the whole length of the conjunctive wire, into an infinity of seg- ments of a very small altitude, we perceive that each segment ought to act on the needle, with a different energy according to its distance and direction. Now

these elementary forces are pre- cisely the simple result which it is important to KUOW ; for the total force, exercised by the whole wire, is merely the sum of their actions. Calcu- lation enables us to pass from this resultant to the simple action. This has been done by M. Laplace. He has deduced, from our observations, that the individual law of the elementary forces, exercised by each section of the conjunctive wire, was the inverse ratio of the square of the distance ; that is, precisely the same that we know to exist in ordinary magnetic actions. This ana- lysis showed that, in order to complete the know- ledge of the force, it remained to determine if the action of each section, of the wire was the same, at an equal distance, in all directions ; or if it was more energetic in a certain direction than in others. I have assured myself by delicate experiments that the last is the case.

355. ‘ What we now know of the law of the forces, is sufficient for explaining and connect- ing together a multitude of results, of which I now proceed to indicate briefly some of the most curious. For example, let us conceive as we have done above, an indefinite conjunctive wire, stretched horizontally from south to north. Let us present laterally to it a magnetic needle, of a cylindrical shape, and suspended so that it can take no movement but in the horizontal direc- tion. For greater simplicity, let us withdraw it from the influence of the terrestrial magnetism, by neutralising this influence with the action of a magnet suitably placed. This being done, when the needle rests at the same height as the wire, so as to point exactly to its axis, it is neither attracted nor repelled; but, if we raise it above the wire, it presents one of its poles to it, and makes an effort of approximation. If, on the contrary, we sink it below, the needle turns abou’., to present its other pole, and is then attracted anew. But, if we constrain it to present the same pole as at first, the needle is repelled, and the effects are precisely inverse on the right and on the left hand of the wire.

3,56. ‘ If, instead of transmitting the electrical current across a simple wire, we make it pass through tubes, plates, or other bodies of a sensi-

ble breadth, whose surfaces are composed of parallel right lines, we find that all these bodies act on the magnetic needle, as bundles of wires parallel to their length would do ; which proves that the power developed in them by the elec- trical current is exerted freely through their very substance, and is not weakened by their interposi- tion, as the radiation of heat through hot bodies is enfeebled and intercepted by the interposition of these very bodies.

357. ‘ Instead of leaving the needle in the preceding experiment at liberty to move, fix it invariably, but render the conjunctive wire move- able, by suspending it on two points ; then it will be the latter which will move towards the needle, or recede from it. In fact, it is a general law of mechanics, that re-action is always equal to action. If the wire attract or repel the needle in certain . circumstances, the needle ought in the same cir- cumstances to attract or repel the wire. This experiment belongs to M. Ampere.

358. ‘ Now, let us operate no longer with a magnetic needle on the wire placed in its posi- tion of mobility, but let us expose it to the mag- netic action of the terrestrial globe, which is known to be perfectly similar to that of a com- mon magnet whose poles are very distant. This force will likewise make the conjunctive wire move according to the same laws, at least if it be sufficiently freely suspended, and it will impress on it a determinate direction relative to the plane of the meridian, just as it would direct any other magnetic body. This result was realised by M. Ampere.

359. ‘ Finally, instead of presenting a con- junctive wire to a magnet, present two conjunc- tive wires to one another, in parallel positions. Then if the revolutive direction of the force be the same for the two wires, they will both con- cur in giving one direction to a magnetic needle placed between them ; but, if the direction of the revolutive movement be opposite in each, they will tend to turn the needle in opposite directions. These are simple consequences of the law of the forces. Now, on trying these two arrangements, M. Ampere has found that in the first the two wires come together, and that in the second they mutually repel each other. Thence we must make two inferences; first, that the wires exert on each other actions perfectly analo- gous to those which they exercise on magnetic needles ; and next that the distribution of these forces in each of their particles is analogous as to direction, with what it is in magnetic needles themselves. These two new conditions relative to the nature of the force, render this experiment very important.

360. ‘ In the different arrangements which we have just described, the conjunctive wires and the magnets attract or repel principally by their most contiguous parts; for, with regard to the rest, their distance rapidly diminishes their action. Hence it is evident that we should aug- ment the energy of the effects, if we approximate together the different parts of the conjunctive wire, preserving to them, however, the same general line of action. M. Ampere has also verified this position, by coiling’the conjunctive wire in the form of a flattened spiral, on the

plane of whose contours he acts with magnets, as on the side of a single wire.

361. ‘ Among the arrangements which he has thus formed, one of the most remarkable consists in winding the conjunctive wire around a cylin- der of wood or glass, forming an elongated spi- ral. Then the force emanating from each point of the thread, being always directed transversely to its length, becomes in each element of the spiral perpendicular to the place of the coils, and consequently parallel to the length of the spiral itself. Farther, on account of the revolu- tive character of the force, all the inner points of the different rings exercise, in the interior of tne spiral, forces which are equal, and operate in the same direction : whilst in their action exte- riorly, the forces emanating from the different points of each ring, oppose and weaken each other gently by their obliquity. Thus the result of all these actions ought to be much more ener- getic within the spiral than outside of it ; a con- sequence which actually happens. If we place in the interior of a spiral, unmagnetic steel needles, they will acquire in a few instants a permanent and very perceptible longitudinal magnetism ; whereas, if we place them without the spiral, they suffer no change. This experi- ment is due to M. Arago. Sir H. Davy, without being acquainted with it, has since succeeded in magnetising small steel needles, by rubbing them transversely on a single conjunctive wire, or even without contact, by placing them at some distance from it. This process does not differ from the preceding, except in using the force of only one wire, a force which the spiral multiplies.

362. ‘ Since the electricity developed by the friction of our ordinary machines, differs in no other respect from that evolved from the Voltaic apparatus, than that the former is retained and fixed, while the latter is in motion; we find that, whenever we cause the electricity of our machines to flow in a continuous current, it has produced absolutely the same effects as the Voltaic battery. The similarity, or rather the identity, of these two forms of electricity, is manifested likewise in the production of the electro-magnetic pheno- mena. This has been shown by M. Arago, who transmitted along the spirals of M. Ampere, no longer the Voltaic current, but a succession of very small sparks, drawn from a common elec- trical machine. Small steel needles, placed in the interior of these spirals, were thus magnetised in a few instants, and the direction of their mag- netic polarity was found to be determined in reference to the surfaces charged with the

resi- iious or vitreous electricity, precisely as happens with the copper and zinc poles of the Voltaic apparatus.'

363. We must now revert to the discoveries that were rapidly proceeding in this country. Sir Humphry Davy found, in repeating the experi- ments of M. Oersted with a Voltaic apparatus of 100 pairs of plates of four inches, that the south pole of a common magnetic needle placed under the communicating wire of platinum was strongly attracted by the wire, and remained in contact with it, so as entirely to alter the di- rection of the needle, and to overcome the mag- netism of the earth. This he could only exp'ain

by supposing that the wire itself became mag- netic during the passage of the electricity through it, and direct experiments, which were imme- diately made, proved that this was the case. He threw some iron filings on a paper, and brought them near the communicating wire, when imme- diately they were attracted by the wire, and ad- hered to it in considerable quantities, forming a mass round it ten or twelve times the thickness of the wire : on breaking the communication they instantly fell off, proving that the magnetic effect depended entirely on the passage of the electricity through the wire. The same experi- ment was tried on different parts of the wire, which was seven or eight feet in length, and about the twentieth of an inch in diameter, and the iron filings were found every where attracted by it; and, making the communication with wires between different parts of the battery, iron filings were attracted, and the magnetic needle affected in every part of the circuit.

364. It was easy to imagine that such mag- netic effects could not be exhibited by the elec- trified wire without being capable of permanent communication to steel. Sir Humphry fastened several steel needles, in different directions, by fine silver wire to a wire of the same metal, of about the thirtieth of an inch in thickness, and eleven inches long, some parallel, others trans- verse, above and below in different directions; and placed them in the electrical circuit of a battery of thirty pairs of plates, of nine inches jy five, and tried their magnetism by means of iron filings : they were all magnetic ; those which weie parallel to the wire attracted filings in the same way as the wire itself, but those in trans- verse directions exhibited each two poles, which, being examined by the test of delicate magnets, it was found that all the needles that were placed under the wire (the positive end of the battery being east) had their north poles on the south side of the wire, and their south poles on the north side ; and that those placed over had their south poles turned to the south, and their north poles turned to the north ; and this was the case whatever was the inclination of

the needles to the horizon. On breaking the connexion, all the steel needles that were on the wire in a trans- verse direction retained their magnetism, which was as powerful as ever, while those which were parallel to the silver wire appeared to lose it at the same time as the wire itself.

365. He attached small longitudinal portions of wires of platinum, silver, tin, iron, and steel, in transverse directions, to a wire of platinum that was placed in the circuit of the same bat- tery. The steel and the iron wire immediately acquired poles in the same manner as in the last experiment ; the other wires seemed to have no effect, except in acting merely as parts of the. electrical circuit; the steel retained its mag- netism as powerfully after the circuit was broken as before ; the iron wire immediately lost a part of its polarity, and in a very short time the whole of it.

366. The battery was placed in different di- rections as to the poles of the earth ; but the effect was uniformly the same. All needles placed tiansversely under the communicating

wires, the positive end being on the right hand, had their north poles turned toward the face of the operator, and those above the wire their south poles ; and on turning the wire rouud to the other side of the battery, it beiug in a longi- tudinal direction, and marking the side of the wire, the same side was always found to possess the same magnetism ; so that in all arrangements of needles transversely round the wire, all the needles above had north and south poles oppo- site to those below, and those arranged vertically on one side, opposite to those arranged vertically #n the other side.

367. It was found that contact of the steel needles was not necessary, and that the effect was produced instantaneously by the mere juxta- position of the needle in a transverse direction, and that through very thick plates of glass : and a needle that had been placed in a transverse di- rection to the wire merely for an instant, was found as powerful a magnet as one that had been long in communication with it.

368. Sir Humphry placed some silver wire of one-twentieth of an inch, and some of one-fiftieth, in different parts of the Voltaic circuit when it was completed, and shook some steel filings on a glass plate above

them : the steel filings arranged themselves in right lines, always at right angles to the axis of the wire ; the effect was observed, though feebly, at the distance of a quarter of an inch above the thin wire, and the arrangement in lines was nearly to the same length on each « side of the wire.

369. He ascertained, by several experiments, that the effect was proportional to the quantity of electricity passing through a given space, with- out any relation to the metal transmitting it: thus, the finer the wires the stronger their mag- netism.

370. A zinc plate of a foot long, and six inches wide, arranged with a copper plate on each side, was connected by a very fine wire of platinum ; and the plates were plunged an inch deep in di- luted nitric acid. The wire did not sensibly at- tract fine steel filings. When they were plunged two inches, the effect was sensible; and it in- creased with the quantity of immersion. Two arrangements of this kind acted more powerfully than one ; but when the two were combined, so as to make the zinc and copper plates but parts of one combination, the effect was very much greater. This was shown still more distinctly in the following experiment: — Sixty zinc plates with double copper plates were arranged in al- ternate order, and the quantity of iron filings which a wire of a determinate thickness took up observed : the wire remaining the same, they were arranged so as to make a series of thirty ; the magnetic effect appeared more than twice as great ; that is, the wire raised more than double the quantity of iron filings.

371. The magnetism produced by Voltaic electricity seems (the wire transmitting it remain- ing the same) exactly in the same ratio as the heat ; and however great the heat of a wire, its magnetic powers were not impaired. This was distinctly shown in transmitting the electricity of twelve batteries of ten plates each of zinc, with double copper arranged as three, ‘Jr-ough fine

platinum wire, which, when so intensely ignited as to be near the point of fusion, exhibit t-d the strongest magnetic effects, and attracted large quantities of iron filings, and even small steel needles from a considerable distance.

372. As the discharge of a considerable quan- tity of electricity through a wire seemed nv-ces- sary to produce magnetism, it appeared probable that a wire electrified by the common machine would not occasion a sensible effect ; and this was found to be the case, on placing very small needles across a fine wire, connected with a prime conductor of a powerful machine and the earth. But, as a momentary

exposure in a powerful electrical circuit was sufficient to give permanent polarity to steel, it appeared equally obvious, that needles placed transversely to a wire at the time that the electricity of a common Leyden battery was discharged through it, ought to become magnetic, and this was actually the case, and according to precisely the same laws as in the Voltaic circuit ; the needle under the wire, the positive conductor being on the right hand, offering its north pole to the face of the operator, and the needle above exhibiting the opposite polarity.

373. So powerful was the magnetism pro- duced by the discharge of an electrical battery of seventeen square feet, highly charged, through a silver wire of one-twentieth of an inch, that it rendered bars of steel two inches long, and from one-twentieth to one-tenth in thickness, so mag- netic, as to enable them to attract small pieces of steel wire or needles ; and the effect was communicated to a distance of five inches above or below, or laterally from the wire, through water, or thick plates of glass, or metal electri- cally insulated.

374. The facility with which experiments were made with the common Leyden battery, enabled Sir Humphry Davy to ascertain several circumstances which were easy to imagine, such as that a tube filled with sulphuric acid, of one- fourth of an inch in diameter, did not transmit sufficient electricity to render steel magnetic ; that a needle place 1 transverse to the explosion through air, was less magnetised than when the electricity was passed through wire ; that steel bars exhibited no polarity (at least at their extremities) when the discharge was made through them, as part of the circuit, or when they were placed parallel to the discharging wire; that two bars of steel fastened together, and having the discharging-wire placed through their common centre of gravity, showed little or no signs of magnetism after the discharge, till they were separated, when they exhibited their north and south poles opposi'e to each other, according to the law of position.

375. These experiments distinctly showed, that magnetism was produced whenever concen- trated electricity passed through space ; but the precise circumstances, or law of its production, were not obvious from them. When a magnet is made to act on steel filings, these filings arrange themselves in curves round the poles, but diverge in right lines ; and in their adherence to each other form right lines, appearing as spt^ cula. In the attraction of the filings round th«

wire in the Voltaic circuit, on the contrary, they form one coherent mass, which would probably l>e perfectly cylindrical, were it not for the influence of gravity. In first considering the subject, it appeared to Sir Humphry, that there must be as many double poles as there could be imagined points of contact round the wire ; but when he found the north and south poles of a needle uniformly attracted by the same quarters of the wire, it appeared to him that there must be four principal poles corresponding to these four quarters. Dr. Wollaston has, however, pointed out that there is nothing definite in the poles ; that the phenomena may be explained, by supposing a kind of revolution of magnetism round the wire, depending for its direction upon the position of the negative and positive sides of the electrical apparatus.

376. To gain some light upon this maUei, arid to ascertain correctly the relations of the north and south poles of steel, magnetised by electricity to the positive and negative state, Sir Humphry Davy placed short steel needles round a circle made on pasteboard, of about two inches and a half in diameter, bringing them near each other, though not in contact ; and fastening them 10 the pasteboard by thread, so that they formed the sides of a hexagon inscribed within the circle. A wire was fixed in the centre of this circle, so that the circle was parallel to the horizon, and an electric shock was passed through the wire, its upper part being connected with the positive side of a battery, and its lower part with the negative. After the shock all the wires were found magnetic, and each had two poles ; the south pole being opposite to the north pole of the wire next to it, and vice versa; and when the north pole of a needle was touched with a wire, and that wire moved round the circle to the south pole of the same needle, its motion was opposite to that of the apparent mo- tion of the sun.

377. A similar experiment was tried with six needles arranged in the same manner, with only this difference, that the wire positively electrified was below. In this case the results were pre- cisely the same, except that the poles were reversed; and any body, moved in the circle from the north to the south pole of the same needle, had its direction from east to west.

378. A number of needles were arranged as polygons in different circles round the same piece of pasteboard, and made magnetic by electricity ; and it was found that in all of them, whatever was the direction of the” pasteboard, whether horizontal or perpendicular, or inclined to the horizon, and whatever was the direction of the wire

with respect to the magnetic meridian, the same law prevailed ; for instance, when the positive wire was east, and a body was moved round the circle from the north to the south poles of the same wire, its motion (beginning with the lower part of the circle) was from north to south, or with the upper part from south to north ; and when the needles were arranged round a cylinder of pasteboard so as to cross the wire, and a pencil-mark drawn in the direc- Mon of the poles, it formed a spiral.

379. It was [erfectly evident from these ex-

periments, that as many polar arrangements may be formed as chords can be drawn in circles sur- rounding the wire.

380. Supposing powerful electricity to be passed through two, three, four, or more wires, forming part of the same circuit parallel to each other in the same plane, or in different planes, it could hardly be doubted that each wire, and the space around it would become magnetic in the same manner as a single wire, though in a less degree ; and this was found to be actually the case. When four wires of fine platinum were made to complete a powerful Voltaic circuit, each wire exhibited its magnetism in the same manner, and steel filings on the sides of the wires opposite attracted each other.

381. As the filings on the opposite sides of the wire attracted each other in consequence of their heing in opposite magnetic states, it was evident, that if the similar sides could be brought in contact, steel filings upon them would repel each other. This was very easily tried with two Voltaic batteries, arranged parallel to each other, so that the positive end of one was op- posite to the negative end of the other . steel filings upon two wires of platinum joining the extremities strongly repelled each other. When the batteries were arranged in the same order, viz. positive opposite to positive, they attracted each other; and wires of platinum (without filings) and fine steel wire (still more strongly) exhibited similar phenomena of attraction and repulsion under the same circumstances.

382. As bodies magnetised by electricity put a needle in motion, it was natural to infer that a magnet would put bodies magnetised by electri- city in motion, and this was found to be the case. Some pieces of wire of platinum, silver, and copper were placed separately upon two knife edges of platinum, connected with two ends of a powerful Voltaic battery, and a mag- net presented to them; they were all made to roll along the knife edges, being attracted when the north pole of the magnet was presented, the positive side of the battery being on the

right hand, and repelled when it was on the left hand,, and vice versa, changing the pole of the magnet. Some folds of gold leaf were placed across the same apparatus, and the north pole of a power- ful magnet held opposite to them ; the folds approached the magnet, but did not adhere to it. On the south pole being presented, they re- ceded from it.

383. Sir Humphry Davy, in continuing his researches on the magnetic phenomena produced by electricity, found that these phenomena were precisely the same, whether the electricity was small in quantity, and passing through good conductors of considerable magnitude; or, whether the conductors were so imperfect as to convey only a small quantity of electricity ; and in both cases they were neither attractive of each other, nor of iron filings, and not affected by the magnet, and the only proof of their being magnetic was their occasioning a certain small deviation of the magnetised needle.

384. Thus, a large piece of charcoal placed in the circuit of a very powerful battery, being a very bad conductor compared with the metals.

would not affect the compass needle at all, unless it had a very large contact with the metallic part of the circuit ; and if a small wire was made to touch it in the circuit, only in a few points, that wire did not gain the power of attracting iron filings ; though, when it was made to touch a surface of platinum foil coiled round the end of tho charcoal, a slight effect of this kind was pro- duced. And in a similar manner fused hydrate of potassa, one of the best of the imperfect con- ductors, could never be made to exert any at- tractive force on iron filings, nor could the smallest filaments of cotton, moistened by a so- lution of hydrate of potassa, placed in the cir- cuit, be made to move by the magnet ; nor did steel needles floating on cork on an electrised solution of this kind, placed in the Voltaic cir- cuit, gain any polarity; and the only proof of the magnetic powers of electricity passing through such a fluid, was afforded by its effect upon the magnetised needle, when the metallic surfaces, plunged in the fluid, were of consider- able extent. That the mobility of the parts of fluids did not interfere with their magnetic powers, as developed by electricity, was proved by electrifying mercury and Newton's metal fused in small tubes. These tubes, placed in a proper Voltaic circuit, attracted iron filings, and gave magnetic powers to needles ; nor did any agitation of the mercury or metal within, either in consequence of mechanical

motion or heat, alter or suspend their polarity.

385. Imperfect conducting fluids do not give polarity to steel when electricity is passed through them ; but electricity passed through air produces this effect. Reasoning on this pheno- menon, and on the extreme mobility of the par- ticles of air, Sir Humphry Davy concluded, as M. Drago had likewise done from other consi- derations, that the Voltaic current in air would be affected by the magnet.

386. Mr. Pepys charged the great battery of the London Institution, consisting of 2000 double plates of zinc and copper, with a mixture of 1168 parts of water, 108 parts of nitrous acid, and twenty-five parts of sulphuric acid ; the poles were connected by charcoal, so as to make an arc, or column of electrical light, varying in length from one to four inches, according to the state of rarefaction of the atmosphere in which it was produced ; and a powerful magnet being presented to this arc, or column, having its pole at a very acute angle to it, the arc, or column, was attracted or repelled with a rotatory motion, or made to revolve by placing the poles in dif- ferent positions, being repelled when the nega- tive pole was on the right hand, by the north pole of the magnet, and attracted by the south pole, and vice versa.

387. It was proved by several experiments that the motion depended entirely upon the mag- netism, and not upon the electrical inductive powers of the magnet ; for masses of soft iron, or of other metals, produced no effect.

388. The electrical arc, or column of flame, was more easily affected by the magnet, and its motion was more rapid when it passed through dense than through rarefied iJr, and in this case,

the conducting medium or chain of aeriform par- ticles was much shorter.

389. We must now again revert to the conti- nental philosophers. M. Von Buch, of Utrecht, while engaged in repeating the experiments of Oersted and others, obtained results according with them, except in one instance of difference with Oersted. M. Oersted says, that < if the uniting wire be placed perpendicularly to the plane of the magnetic meridian, whether above or below it, the needle remains at rest, unless it be very near the pole ; in that case, the pole is elevated when th

390. M. Von Buch, also, appears to have ascertained the effect of common electricity in producing magnetism without a previous know-

ledge of what had been done by others in that way, and succeeded in producing the effect by a smaller power than had before been used for that purpose. He found that a strong discharge was not necessary, nor even a Leyden phial ; but, fixing a helix between the prime conductor of a machine and another insulated conductor, placing a steel needle in it, and then drawing sparks from the latter conductor, the needle became magnetic. One single tr.rn of a machine, with two discs, eighteen inches in diameter, was suf- ficient to make the needle evidently magnetic.

391. In Italy, many experiments relating to magnetism by electricity had been made, and which, though new at the time to those who made them, had been previously made by others. A series was made by M.M. Gazzeri, Ridolfi, and Antinori, at Florence. The results are as follows : needles placed in helices connected with the poles of the battery received their full magnetisation in one minute. Needles on the outside of the helices would receive no magne-

iism, unless there was one or more also within, and then they became magnets with their poles j.n opposite directions to the poles of the inner magnet. The helix was changed into a square form, by having its wire wrapped round a parai- ;lelopiped; the magnetising effect remained the same.' A needle and a long wire of platina were wrapped in a sheet of tin-foil, and that part which contained the needle introduced into a .spiral of copper wire ; the circuit was then made .by the platina wire without the copper spiral ; being in connexion with either pole, the needle became magnetised. A spiral of copper wire, with a needle in it, was placed on the surface of a basin of mercury, and the mercury then made part of the circuit : the needle became feebly mag- netic. Sparks from a common machine, taken •through a helix containing a steel needle, made the needle magnetic. These philosophers ap- pear to have found that the connecting wire placed in other parts of the battery than from •end to end would not magnetise needles. There was however, probably, some mistake in this.

392. M. la Borne, in repeating Arago's experi- ments, varied the use of the helix, by making it of iron, and putting it round the straight wire, through which an electrical discharge was made. The helix in this case became the needle to be magnetised, and it was found to be a strong mag- net, the poles being in the positions so often re- ferred to. Such a

magnet is flexible and elastic, and may be doubled, lengthened, or shortened : on bringing the two poles together, its action on a magnetic needle was much diminished.

393. M. Berzelius described an experiment, which consisted in placing a thin leaf of tin, eight inches long and two inches wide, parallel .to, and in the plane of, the meridian, and in that position connecting it with the elements of a Voltaic circle. A magnetic needle brought near the lower edge of this plate was thrown 20° from the magnetic meridian. On moving it slowly upwards, it took its natural position, when level with the middle of the plate, except that it was raised at one end, and depressed at the other ; and, when near the upper edge, it moved 20° from the magnetic meridian in the opposite di- rection to what it did below. When the needle was moved up and down on the opposite side of the plate, the same deviation and effects took place, but in opposite directions. A small por- tion of the upper edge of the leaf was cut, and turned upwards, forming a projection above the edge. The needle, brought within equal distance t)f this projection and the edge, was more affected by the former than the latter.

394. Then, using a square plate of tin, and forming the connexion at opposite angles, it was found on examination that the intervening angles acted more powerfully on the needle than any other parts — ‘ a circumstance which proves,’ M. Berzelius says, ‘ that the magnetic polarity of the current goes to opposite extremities, as happens with electric polarity, and in artificial magnets.’

395. The tin band, or leaf, placed in a hori- zontal plane, and in the magnetic meridian, acted on the needle just as a wire would have done. The greatest deviation of the needle was imme- diately under or above the middle of the leaf,

and the edges acted as in the former position. The positions assumed by the needles in these experiments was exactly what would be expected The experiments received all their interest from the way in which their maker applied them to support his particular opinion, and apart from that had not much new in them, M. Berzelius thought that a round wire, when made the con- ductor, presented a more complicated case than when a square one, or a parallelepiped, was used .

396. In 1823 a paper was published by Sir Humphry Davy on the subject of electro-mag- netism, which is of too important a character to admit of abridgment. He says, ‘ Immediately after Mr. Faraday had published his ingenious experiments on electro-magnetic rotation, I

was induced to try the action of a magnet on mercury connected in the electrical circuit, hoping that, in this case, as there was no mechanical suspen- sion of the conductor, the appearances would be exhibited in their most simple form ; and I found that when two wires were placed in a basin of mercury perpendicular to the surface, and in the Voltaic circuit of a battery with large plates, and the pole of a powerful magnet held either above or below the wires, the mercury immediately be- gan to revolve round the wire as an axis, accord- ing to the common circumstances of electro- magnetic rotation, and with a velocity exceedingly increased when the opposite poles of two magnets were used, one above, the other below.

397. ‘Masses of mercury, of several inches in diameter, were set in motion, and made to revolve in this manner, whenever the pole of the magnet was held near the perpendicular of the wire ; but, when the pole was held above the mercury between the two wires, the circular motion ceased, and currents took place in the mercury in opposite directions, one to the right, and the other to the left, of the magnet. These circum- stances, and various others which it would be too tedious to detail, induced me to believe that ths passage of the electricity through the mercury, produced motions independent of the action of the magnet ; and that the appearances which I have described were owing to a composition of forces.’

398. Sir Humphry says, ‘ I endeavoured to as- certain the existence of these motions in the mercury, by covering its surface with weak acids ; and diffusing over it finely divided matter, such as the seeds of lycopodium, white oxide of mercury, &c. ; but without any distinct result. It then occurred to me, that from the position of the wires, currents, if they existed, must occur chiefly in the lower, and not the upper surface of the mercury : and I consequently inverted the form of the experiment. I had two copper wires, of about one-sixth of an inch in diameter, the ex- tremities of which were flat and carefully polished, passed through two holes, three inches apart, in the bottom of a glass basin, and perpen- dicular to it ; they were cemented into the basin, and made non-conductors by sealing-wax, except at their polished ends ; the basin was then filled with mercury, which stood about a tenth ot twelfth of an inch above the wires. The wires were now placed in a powerful Voltaic circuit. The moment the contacts were made, the phe-

nomenon, which is the principal object of this paper, occurred : the mercury was immediately seen in violent agitation ; its surface became ele- vated into a small cone above each of the wires; waves flowed off in all directions from these cones ; and the only point of rest was apparently where they met in the centre of the mercury between the two wires. On holding the pole of a powerful bar-magnet at a considerable distance (some inches) above one of the cones, its apex was diminished and its base extended : by lower- ing the pole further, these effects were still fur- ther increased, and the undulations were feebler. At a smaller distance the surface of the mercury became plane ; and rotation slowly began round the wire. As the magnet approached, the rota- tion became more rapid, and, when it was about half an inch above the mercury, a great depres- sion of it was observed above the wire, and a vortex, which reached almost to the surface of the wire.

399. ‘ In the first experiment which I made, the conical elevations or fountains of mercury were about the tenth or twelfth of an inch high, and the vortices apparently as low ; but, in the experiments made at the London Institution, the mercury being much higher above the wire, the elevations and depressions were much more con- siderable, amounting to the fifth or sixth of an inch. Of course the rotation took place of either pole of a magnet, or either wire, or both together, according to the well-known circumstances which determine these effects.

400. ‘To ascertain whether the communication of heat diminishing the specific gravity of the mercury, had any share in these phenomena, I placed a delicate thermometer above one of the wires in the mercury, but there was no imme- diate elevation of temperature; the heat of the mercury gradually increased, as did that of the wires ; but this increase was similar in every part of the circuit. I proved the same thing more listinctly, by making the whole apparatus a ther- mometer terminating in a fine tube filled with mercury. At the first instant that the mercury became electro-magnetic, there was no increase of its volume.

401 . ‘ This phenomenon cannot be attributed to common electrical repulsion ; for, m the elec- tro-magnetic circuit, similar electrified conduc- tors do not repel, but attract, each other ; and it is in the case in which conductors in opposite states are brought near each other on surfaces of mercury that repulsion takes place.

402. ‘ Nor can the effect be referred to that kind of action which occurs when electricity passes from good into bad conductors, as in

the phenomena of points electrified in air, as the following facts seem to prove. Steel wires were substituted for copper wires, and the appearances were the same in kind, and only less in degree; without doubt, in consequence of a smaller quan-. tity of electricity passing through the steel wire: and by comparing the conducting powers of equal cylinders of mercury and steel in glass tubes, by ascertaining the quantity of iron filings they attracted, it was found that the conducting powers of mercury were higher that those of steel ; the first metal taking up fifty-eight grains

of iron filings, and the second only thirty- seven.

403. ‘Again, fused tin was substituted for mer- cury in a porcelain vessel, into which wires of copper and steel were alternately ground and fixed ; the elevations were produced as in the mercury, and the phenomena of rotation by the magnet: and it was found by direct experiment, that the conducting powers of the tin, at and just before its point of fusion, did not perceptibly differ, and that they were much higher than those of mercury. Lastly, the communication was made from the battery by two tubes having nearly the same diameter as the wires, filled with mer- cury, so that the electricity, for some inches be- fore it entered the basin, passed through mercury; and still the appearances continued the same.

404. ‘ From the rapidity of the undulations round the points of the cones, I thought they would put in motion any light bodies placed above the mercury ; but I could not produce the slightest motion in a very light wheel hung on an axle ; and when fine powders of any kind were strewed upon the surface, they merely underwent undulations, without any other change of place ; and fine iron filings, strewed on the top of the cone, arranged themselves in right lines at right angles to the line joining the two wires, and re- mained stationary, even on the centre of the cone. The effect, therefore, is of a novel kind, and in one respect seems analogous to that of the tides. It would appear as if the passage of the electri- city diminished the action of gravity on the mer- cury. And that there is no change of volume of the whole mass of the mercury, appears from the experiment; and this was shown likewise by enclosing the apparatus in a kind of manometer terminating in a fine tube containing air enclosed by oil ; and which, by its expansion or contrac- tion, would have shown the slightest change of volume in the mercury : none, however, took place when the contacts were alternately made and broken, unless the circuit was uninter- rupted for a sufficient time to communicate sensible heat to the mercury.’

405. We may now direct the reader's attention to professor Barlow's admirable collection of ex- perimental illustrations of this science. Mr. Barlow published a very interesting Treatise on Magnetic Attractions in 1823, but a new edition has since appeared. We shall only advert to the last section of the third part, referring our readers to the work itself for the fullest information on the subject.

406. We may commence with the most simple experiment, and show Mr. Barlow's mode of magnetising a steel bar. Take a piece of steel wire, as for example a sewing needle, and dip its ends first into steel or iron filings, in order to ascertain that it has no magnetism already in it, which will be the case if the particles of iron do not adhere to it ; if they do, another needle must be tried, till one is found free from every species of magnetic action ; this being done, connect the ends of the battery by the conduct- ing wire, C Z and place the needle. N S, across it. fig. 10, plate II., drawing the lattei Backward and forward a few times, and it will be found to have acquired the magnetic property ; for, <*n

immersing its extremities again in the filings, they will be found to adhere to it, in the same manner as to a needle magnetised in the usual way.

407. This very interesting experiment is strictly conformable to professor Barlow's hypo- thesis ; for, according to this, the action of the .galvanic particles in the wire, being tangential, will act upon the latent magnetic particles in the .needle, in the direction of its length, and cause a displacement of them, precisely in the same manner as would be done by a magnet : and also, as in that case, the cohesive power of the steel preventing the return of the fluids to their natural state, the needle will remain magnetic.

408. This experiment was performed nearly at the same time by Sir H. Davy, and M. Am- pere ; but Sir H. Davy also succeeded in effect- ing the same with the common electrical machine, and showed that the magnetism might be excited at considerable distances, and consequently not only without rubbing the needle on the wire as we have described, but even without the contact. It requires, however, to effect this at the distances here alluded to, a very powerful apparatus,

409. If the needle be made a part of the gal- vanic circuit, or if it be

placed lengthwise of the wire, no perceptible permanent magnetic power will be developed, which is also consistent with the hypothesis ; because, in this case, the action of the wire will be transverse of the needle, which is the least favorable direction for the development of tne magnetic power; the tendency of the action being to place the poles transversely, in- stead of lengthwise.

410. To ascertain the polarity of needles mag- netised as in the last experiment, the wire and needle being placed as in the last figure, that is, the needle being above the wire, and Z denoting the zinc end of a battery of two plates only, it will be found that the extremity N will attract the south end of a compass needle, and the ex- tremity S the north end ; in short, that the north poles of the latent magnetic particles have been carried towards the left hand, and the south to- wards the right hand.

411. Let the needle now be placed under the wire, instead of being placed over it, and in other respects the process described in the last example repeated, and it will be found that the polarity of the needle will be exactly the reverse of that in the last experiment, which ought to be the case according to the principle of the preceding experi- ment ; because by this the north polarity is always carried to the left hand of the observer, who con- ceives himself to form the galvanic circuit, his head being towards the zinc end, and his face towards the magnet ; for thus, his position being now the reverse of what it was in the preceding experiment, the polarity ought to be the reverse also.

412. If we wish to magnetise a needle by p.ac:ii

the figure, viz. having its north end towards tl-e zinc extremity of the battery.

413. This is of course precisely similar to the first experiment, the only difference being that, by means of the spiral form given to the wire, the action upon the needle is repeated as many times as there are spires of the wire covered by it ; the power excited is therefore proportiouably stronger, and the magnetism more quickly com- municated. The explanation of the effect pro- duced is exactly the same as in the last experi- ment. If the direction of the contact be changed, by supposing Z to communicate with the copper side of the battery, the effect will be in all re- spects the same, except that the polarity of the needle will be reversed. The end towards Z, in this case, becoming the south instead of the north pole. Or if a spiral, having its spires turned the contrary way, as shown in fig. 12, be used, and Z be supposed to communicate witli the zinc side of the battery,

the polarity will also be the reverse of that in the first case ; viz. the poles will have the direction marked in the figure ; and if here again the contact be changed by con- necting Z with the copper side, the poles will be once more inverted, and have the same direction as at first. These facts, as we have stated above, are explained exactly in the same manner as those for the single wire.

414. In performing this experiment, Mr. Bar- low employed a glass tube about five inches in length and half an inch in diameter ; and it was observed, when the needle was placed in it, so that one half of it projected beyond the end that the moment the plates reached the acid, the needle was drawn instantly to the middle of the tube, and while the contact was continued it was held suspended in the centre of the tube when the latter was held vertically, the suspending power of the spiral exceeding the power of gravity.

415. This effect is very curious, because the needle here remains suspended in the open space, directly in the axis of the tube, and not attached to either sides as in the usual cases of suspension by attraction.

4,16. To examine the effects of a spiral con- ducting wire on a floating magnetised needle, let a wire be wound about a glass tube of about half or three-quarters of an inch diameter, and hang it within a basin of water, as shown in fig. 13, so that the surface of the water rises to about the axis of the bore ; then having pierced a small piece of cork with a needle previously mag- netised, so as just to preserve it from sinking when immersed in the basin, make the con- nexion with the battery. The needle will in- stantly be agitated, and will soon arrange itself in front of the spiral in a direction parallel to its axis, and then suddenly dart into the interior of the tube with a force nearly sufficient to carry it to the other extremity; it then returns again towards the other end, and at .engm becomes stationary in the middle of the axis, arranging it- self exactly parallel to it.

417. If the spirals have the direction shown in the figure, and Z communicates with the zinc side, the needle, if placed near the extre- mity of the tube A, will enter v/iih \is south

end ; if placed near the other extremity it will enter with its north end ; but, if the direction of the spiral be changed, the needle will enter in both cases the reverse way, as it will also if the direction of the spires remain the same, but the contact be changed. This experiment will suc- ceed equally well if the tube be placed upright in the water; the needle will then dive like a fish, and remain below till the contact is broken.

418. This entertaining and instructive experi- ment is due to Mr. Faraday ; the explanation of it by the previous hypothesis is obvious, for the north pole of the particles of the needle being car- ried to the left of an observer conceiving himself coinciding with the direction of the wire, and with his head towards Z, all the effects ought to take place precisely as above stated. M. Am- pere had assimilated a spiral wire of this kind with an actual magnet, and Mr. Faraday insti- tuted the above experiment to prove that there was not that identity which had been assumed ; for, by suspending a hollow cylindrical magnet in the same way, the needle was always attracted to the nearest extremity of its edge, and indicated no tendency to enter the tube.

419. To show the effect produced by a gal- vanic wire on steel or iron filings, we must strew a quantity of iron dust or filings on a table, and bring the connecting wire near to them, when the filings will immediately be affected by the action of the wire, some few flying towards it, and adhering to it as a magnet; and, if the wire be brought into actual contact with them, a very considerable quantity may be taken up by it, exactly the same as at the extremity of a bar magnet ; but the moment the contact is broken the filings fall.

420. In order to produce the best effect in this experiment, the wire intended to be operated upon should be smaller than the conducting part of the circuit. This latter, in all cases, is the better for being stout, at least three-sixteenths of an inch in diameter; but in this, as in several other experiments, it is best to have the extre- mities of the wires terminated by a much smaller wire, wound round the former as a spiral, or by simple contact ; for by this means, the transmis- sion being made through a smaller space, the intensity of action is proportionably increased.

421. This experiment is due to M. Arago, and it seems at first sight somewhat at variance with Mr. Barlow's hypothesis ; because we have here an appearance of actual attraction between the iron and the wire, whereas we have supposed that there is no attraction between them. A little consideration will, however, show, that in- stead of

contradicting, this fact will serve to con- firm the hypothesis in question.

422. Let us, for example, conceive W, fig. 14, to denote the section of our conducting wire de- scending vertically from the zinc end of the bat- tery ; then, the first and direct action of this wire will be to excite magnetism in any small particle of iron, n s, according to the direction indicated by the letters in the figure.

423. After which, the action of the wire will be to urge the point n in the line n n, perpen- dicular to wVV, and the point s, in the line ss, perpendicular to sW; and, in consequence of

the combined action of these forces, the particle n s ought necessarily to approach the wire in the same way as it would do by a direct attractiv e force. This effect is therefore still consistent with our hypothesis, and strongly confirmatory of it.

424. We have seen that, by giving the con- ducting wire a spiral form, its power of mag- netism is much increased ; and in the same way the power of the wire on the iron filings may be rendered very great. The best form for the spiral, however, here, is that in which the wire lies all in one plane, as was shown in a previous figure.

425. This, being connected by its two extre- mities with the poles of the battery, will take up an astonishing quantity of filings, which, by their reciprocal attraction towards each other, exhibit the most pleasing appearance.

425*. To exhibit the rotation of a magnet round a galvanic wire, let ABED, fig. 15, represent a cup of glass, wood, or any other non-conductor, and N S a small magnet, having a hole drilled at S, whereby it may be fixed by a short piece of silk S c', to the copper wire c' C, passing through the foot of the cup, and let mercury be poured into the latter till the needle floats nearly vertical. Conceive, also, Zz1 to be part of the conducting wire, descending from the zinc side of the bat- tery, and slightly immersed in the quicksilver. If now the contact be made at C with the copper side of the battery, the magnet NS begins to rotate about the wire Zz', passing towards the left hand of the observer. This rotation will be greater or less according to the power of the bat- tery, and will continue while ihere is sufficient force in the latter to overcome the resistance of die quicksilver to the motion of the magnet. If the descending wire proceed from the copper side of the battery, the motion will take place in a contrary direction, that is, from left to right.

426. Or, if the contact remain the same, and the magnet inverted, then also the motion will be reversed ; but if the contact and magnet be both reversed, the rotation will be the same as in the first instance. This highly curious and impor- tant experiment, which is due to Mr . Faraday of the Royal Institution, is immediately explained by the same hypothesis ; according to which, the ext mity N of the magnet is always acted upon by two forces, one being the galvanic force, which is tangential to the wire, and the other the tension of the silk Sc', in the direction of the needle. Let this latter be resolved into two forces, one ver*- tical and the other horizontal, and we shall find the extremity N under the influence of two hori- zontal forces, one always central and theˆther tangential. The result of which must be a rota- tion of that point about the wire ; and it will be made with the position and arrangement shown in the figure from right to left.

427. To exhibit the rotation of a galvanic wire about the magnet, let ABDE, fig. 16, be a cup or vessel of wood or glass, and N S a magnet passing tight through its foot; Zz a conducting wire descending from the 7.inc side of the battery, and rendered free to move by the chain con- nexion at g. Let mercury be poured into the vessel till the extremity of the wire is slightly

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immersed in il. Then the contact being made at C (which, by means of the wire D C, com- municates with the quicksilver) the wire gz will immediately assume a rapid rotatory motion, much greater than in the former case, the resist- ance being very considerably diminished by the mode of suspension. The direction of the mo- tion, according to the arrangement in the hgure, being from left to right, to a person coinciding in position with the magnet. It may, however, be reversed by reversing the magnet, or by changing the contact, as in the preceding cases.

428. This experiment is also due to Mr. Fa- raday, and its explanation is the same as the last; for since when the magnet is free, it will, as we have seen, revolve about the wire from right to left, it follows that, when the magnet is fixed and the wire free, the latter will revolve in

an opposite direction (the action and re-action be- tween the wire and the magnet being reciprocal), which is still, however, towards the left of a per- son supposed now as coinciding in position with the magnet, and his head to the north.

429. The resistance being very inconsiderable in this experiment, it may be exhibited in a more simple manner. For instance, instead of piercing the foot of the cup, as in the figure re- ferred to, it will be sufficient to use a tea-saucer, or any other shallow vessel, and to bring a strong magnet as near to it as possible under the table ; when the motion will take place precisely in the same manner as above.

430. By this means also we may establish a most important fact, viz. that it is indifferent, as to the result of the experiment, what may be the position of the magnet; that is to say, if we keep the extremity of it as nearly as possible under the centre of the vessel, we may hold it either vertical or horizontal, or incline it in any angle, and at any azimuth, without greatly changing the rate of the rotation ; it being always understood that the magnet should be of consi- derable length, in order that its other pole may not affect the motion of the wire.

431. The machine for the exhibition of these motions, according to Mr. Faraday's construc- tion, is shown at fig. 1, plate III. A BCD is a stand of wood, EF a brass pillar, FG a fore arm or projecting piece of brass, through the ex- tremity of which passes the wire LHK; at L there is a sort of ball and socket joint; the socket being in the upper part, and the ball fit- ting it, on the small wire L m. Both the socket and ball are amalgamated, and a piece of silk fixed to the ball, or head of the wire, passes through a hole drilled in the wire LH, and by which the smaller wire is suspended, thereby preserving the contact, and leaving to the latter a perfect freedom of motion : a b is a glass cup having a hole through its foot, into which is in- serted a copper tube, soldered to a copper disc just the size of the bottom of the glass, and which disc is cemented to the foot of the latter.

432. The wire Z z is also sobered to another copper disc, upon which the glass rests ; and by which the contact is carried on from Z to the

. quicksilver in the cup, and thence to the wire m L ; lastly, a small magnet n s is inserted into Voi. VI II.

the copper tube, passing through the stem of the glass above mentioned.

433. The foot of the cup c d is pierced, and discs of copper applied as

in the cup ub; but the wire passing through the foot is solid, and to it is fixed, by a short string, the small magnet ns, which is thus free to revolve about the de- scending wire HK; quicksilverˆ as in the pre- ceding cases, being poured into the cup, till the wire H K is slightly immersed in it at K. The contact with the battery being now made at Z and C', the motions will take place as described in the last two experiments ; viz. that the magnet ns in the one cup will revolve about the wire K, while the wire Lm will at the same time be revolving about the other magnet n s.

434. If the cup cdbe placed where the cup a b is represented, then the magnet and wire being both free, they will revolve about each other, and thus produce a pleasing variety in the expe- riment.

435. A section of this machine is shown at fig. 2.

436. Mr. Faraday also describes another ap- paratus, which requires a less galvanic action than the former to produce the rotation. This is shown at fig. 3 ; it consists of a piece of glass tube, the bottom part of which is closed by a cork, and through it is passed a small piece oi soft iron wire, so as to project above and below the cork. A little mercury is then poured in. to form a channel between the iron wire and the glass tube. The upper orifice is also closed by a cork, through which a piece of platinum wire passes, being terminated within by a loop ; another piece of wire hangs from this by a loop, and its lower end, which dips a very little way into the mercury, being amalgamated, it is pre- served from adhering either to the iron wire or the glass. Things being thus arranged, a very minute galvanic power being applied by contact with the lower and \ipper end of the apparatus, and the pole of a strong magnet being applied to the external end of the lower iron wire, the move- able wire within begins rapidly to rotate round the temporary ' magnet thus formed ; and which rotation may be inverted either by changing the contact or by inverting the magnet. Mr. Fara- day states that this instrument is so sensible that a rotation has been produced in it by two plates, each only one inch square.

437. To exhibit the rotation of a magnet on its axis by the effect of a galvanic wire, let ABDE, fig. 4, represent a cup of glass or wood, N S a magnet, having at its lower extremity a fine steel point, inserted in the agate a; b c is a thin slip of brass or ivory, having a hole through which the magnet passes freely, and by means of which it is kept perpendicular : at the upper extremity N of the magnet is a thin cylinder, as a piece of quill, forming a cup or reservoir z to receive a small quantity of quicksilver ; and into this is inserted the wire Z,

amalgamated at its lower point; and Cc is a stout wire passing through the side of the cup into the quicksilver. Then, the contact being made at C and Z, the magnet will begin to revolve on its axis, with a very astonishing velocity, and continue in mo- tion while the power of the battery lasts. ,

438. This pleasing experiment is H»«> to \[

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Amper* wnc employs onl/ a piece of platinum attached to the magnet, to produce, by its supe- rior gravity, a vertical position of the latter in the mercury ; the upper wire being then inserted into the quicksilver in the cylinder z, and the other wire into the cup C, the motion is pro- duced exactly as above described : the great- est freedom of motion is, however, given by the apparatus shown in the figure. The explanation of this rotation is very obvious according to the hypothesis we have adopted, for the tangential force of the wire, acting upon the magnetic par- ticles on the surface of the magnet, must neces- sarily produce the rotation in question.

439. To exhibit the rotation of a galvanic wire on its axis by the action of a magnet, letNS, fig. 5, be a magnet, represented as broken in the figure, but which is fixed, in the experiment, in a foot, in order to keep it vertical, and let abed be a light hollow copper or brass cylinder, hav- ing a steel point passing downwards into the agate cup/, fixed to the upper end of the mag- net, and let e be a small tube or quill fixed on the wire passing through the top of the cylinder, holding a little quicksilver, and receiving into it the descending conducting wire Z. A B is a piece of wood turned to fit on the cylindrical magnet N S, which has a hollow groove on its upper surface to receive a quantity of quicksilver, into which the lower edge of the cylinder a d is slightly immersed, the surface being covered with weak dilute nitric acid. AC is a wire passing into the quicksilver. It is obvious that thus (the contact being made at Z and C) the galvanic circuit is carried from Z through the cylinder abed, thence to the quicksilver, and hence again through the wire A E, to the other extremity of the battery, whereby the cylinder abed is made to become a part of the conducting wire ; and it will be found to revolve on its axis with a great velocity, fully equal to that of the magnet in the last experiment ; the direction of the mo- tion, with the

arrangement shown in the figure, being from left to right, to a person coinciding in position with the magnet.

440. To exhibit a quicksilver vortex by means of a galvanic wire and magnet, it is only neces- sary to take any shallow non-conducting vessel, and put into it a quantity of pure mercury, into which is to be inserted the conducting wires Z, C, proceeding respectively from the zinc and copper sides of the batteiy. And if now the north end of a strong magnet be brought under the vessel, the quicksilver round the wire C will begin to revolve about the same, forming a beau- tiful vortex ; the direction of the motion being from left to right. If the magnet be removed under the other wire, the same kind of motion will be produced, but its direction will be re- versed ; and the same change of motion will take place, of course, in each case, by changing the end of the masrnet.

441 . The explanation here is precisely the same as in the last experimpnt ; the moveable part of the conductor in this case owing its mobility to its fluid nature, whereas in the former it is due to the peculiar mode of suspension. Tin's very elegant experiment was, as we have stated in another place, first made by Sir H. Davy.

442. To exhibit the rotation of the galvanic wire, independently of the galvanic battery, we must employ the apparatus exhibited in fig. 6, where A BCD is a small copper vessel about two inches and a half high, and the same in diameter; abed is another small cylinder of copper, of the same height, soldered to the for- mer vessel at its lower end d e, a hole being left in the bottom of the former to receive it. The cylinder a bed is therefore open, and will admit a cylindrical magnet to be passed up ; and it will, at the same time, hold a quantity of dilute acid within the space A D, da be, B C : zz" is a zinc cylinder, very light, of rather less altitude than the copper one. To the cylinders a b and z / are soldered two copper wires, as shown in the figure, the upper one having a steel point proceeding from E downwards, and resting in a small metal hole at F; and consequently the cylinder z z' will be free to move upon its point of suspension at F.

443. The apparatus being thus arranged, and the acid placed in the cell as above described, Insert through the interior cylinder the north end of a strong cylindrical magnet, and balance the whole apparatus upon it, when immediately the zinc cylinder will begin to revolve with a greater or less velocity, according to the strength of the acid, the freedom of motion, and the power of the magnet. Mr. Barlow has fre- quently produced, with this simple apparatus, a motion, amounting to 120 rotations per minute. The only difference between this and the

other rotations we have described is, that the galvanic power is here produced by the apparatus itself, instead of having recourse to the battery.

444. For it is obvious that the wire from Z Z' to E, may be considered as a conductor proceed- ing from the zinc ; and the wire from a b to F, as one from the copper side of the battery ; and consequently, the same effect is to be expected here as in the preceding cases. It is unnecessary to add, that, with the north end of the magnet upwards, the motion is from left to right, and the contrary with the magnet reversed. This expe- riment is due to M. Ampere.

445. A very pleasing addition has been made to this apparatus by Mr. J. Marsh. It consists in having a second point descending from F, which is made to rest in an agate cup, fixed on the top of the magnet, fig. 7, and upon which the whole machine is balanced, having a perfect freedom of motion ; and, to preserve this balance, the magnet is placed vertically in a foot. The machine being now charged with acid, a compound motion takes place, the zinc cylinder revolving in one direction, and the copper ves- sel in another, producing thus a very pleasing effect ; the latter, however, is by no means so rapid as the other, in consequence of the weight of the acid ; and, in fact, that of the whole ma- chine being supported on the lower point.

446. To show the effect of a horse-shoe mag- net on a freely suspended galvanic wire, let Z 2, fig. 8, denote a pail of the galvanic wire, freely suspended by the chain connexion at o, proceed- ing from the zinc eud of a battery, its lower ex- tremity being amalgamated, and slightly im- mersed in a reservoir of pure mercury, having a

connexion at C with the other extremity of the gin to rotate, and in a very short time will ac- bdttery. N S is a horse-shoe magnet, posited as quire a velocity exceeding very considerably shown in thfi fisnirp. amr ˆf *V,« ™ — u;»i »_ j it . i •'

shown in the figure.

447. The contact being now made at C and 2, the hanging part of the wire, oz, will be thrown out of the mercury into the position o g'; the contact being thus broken, it falls by its own

any of the motions hitherto described.

452. It is unnecessary to say, that by changing the contact, or by inverting the magnets, the di- rection of the rotation will be also changed. The usual precaution of covering the surface of the

o 7 — j -• “•* ˆAV.V«.UI,A»_;J.I \ji wvcriug Lilt; SUiTctCG OI 1116

gravity into the mercury j by which means, the mercury with weak dilute nitric acid, will in-

contact being renewed, it is again projected, and so on with an extraordinary rapidity ; and if the position of the magnet be reversed, or the con- tact be changed, the direction of the motion will be changed also, but the effect will be the same. 448. This singular motion may be still ex-

crease the rapidity of rotation ; but it is not ˆ tually necessary in this case.

453. To exhibit the terrestrial directive quality of a galvanic wire, let AB, fig. 12, represent a piece of wood fixed to any convenient support, through which pass the two wires G,E, and

- • – • – — o — — — j ~- — uugu ‘ini,u pass me two wires i_r, r.., ana

plained by the hypothesis that has been ad- where they remain fixed. At their upper and

vanrpn r tor tnp wirp havincr Q tonr1on/*ir +/-\ -rˆoc-o 1,,,,., :• _ **i i i** •

vanced ; for the wire having a tendency to pass round the north end of the magnet to the right hand, and round the south end to the left hand, is urged by equal forces directly in a line with the open space of the magnet, the equality of the two forces preventing the rotatory motion about either, but both conspiring to give to the wire the rectilinear motion which has been described. This experiment is also due to Mr. J. Marsh.

449. If we wish to exhibit a wheel and axle rotation by means of a horse-shoe magnet, the machine represented in fig. 9 will produce this motion. A B is a rectangular piece of hard wood ;

lower extremities are soldered the small metal cups, a, b,c,d. D H I K, &c., is a part of the conducting wire, bent into the form shown in the figure, having small steel points soldered upon it at c and d. These points are inserted into the cups c, d, the upper one only resting on

the base of its cup, the other being merely brought into contact with d, by a little quicksilver placed in it for that purpose, by which means the rectangle has a great freedom of motion given to it, the only solid contact being on the point c. Mer- cury is also poured into the other cups, for the sake of a more perfect and certain communica-

,-, -T. . , ----- o— —r — Mjneci ana certain communica-

D an upright wooden pillar ; D E a piece of tion than that afforded by the mere juxta-position stout brass or copper wire ; and ab a somewhat of the wires, smaller wire, soldered upon it at E, on the lower side of which the wheel W, of thin copper, turns freely; hf is a small reservoir for mercury, sunk in the wood ; and g i a narrow channel running into it. HH is a strong horse-shoe magnet. Mercury being now poured into the reservoir fg, till the tips of the wheel are slightly im- mersed in it, and the surface covered with weak dilute nitric acid, let the connexion with the battery be made at i and D, and the wheel W will immediately begin to rotate with great ve- locity. If the contact be changed, or if the magnet be inverted, the motion of the wheel will be reversed ; but, in general, the best effect is produced when the wheel revolves inwards. The suspension of the wheel is shown in fig. 10.

This is a necessary consequence of the motion described in the last experiment, by which it was suggested, and is explained on the same principles.

450. The machine for exhibiting a compound

1 l i ,, .»°

. 454. The apparatus being thus prepared, the two wires proceeding from the copper and zinc sides of the battery, are inserted into the cups «, b, and thus the connexion is established ; first by means of the wire G with the cup c, thence by means of the contact of the points with the cup and mercury ; it is carried forward from c through the rectangle, to the cup d, whence it proceeds to the cup a.

455. We have already seen that of this con- necting wire, the part from c to d has a perfect freedom of motion upon the point at c, and will therefore obey any exciting force. This force, in the experiment in question, is the magnetic influence of the earth ; and in consequence of which the rectangle, immediately the confact is made, places its plane perpendicular to the plane of the magnetic meridian ; and to which position it will always return, after a few vibrations, if it be

drawn out of it by the hand or otherwise.

456. This arrangement of the moveable con-

, . 3 – -~ — r~ Z.W. j.iiia tuiaiigenieui 01 me moveauie con ‘heel and axle rotation, with two horse-shoe ductors is perfectly consistent with our hypo- macmets, is shown in fie-. 11. ARfin i« a «v,0<:;« o« ;„ ~v,,; _•*!.„. /• .1 -i, T

magnets, is shown in fig. 11. ABGD is a rectangular piece of board, having two grooves about half an inch deep, cut in it parallel to its length. Cp,Zq, are two wires, having cups for connexion at Z and C, and each passing

thesis, as is obvious without any farther illustra- tion than what has been given in several preced- ing experiments.

457. A differently formed wire, and a more simple mode of suspension, is shown in fig. 13.

“•6 onujjit inuuc ui suspension, is snown in nor. 13.

into its respective groove >a b, cd, filled withmer- Here abrass or copper wire, AC, rests at its bent

cury into which are sightly immersed the points end A, in a cup containing a little mercury, and ” * theSC bn fixed a

->r *v, u i iir TIT, i J , ‘ * ‘ * * “““P wwuunuw a iiuie mercury, ana

i wS* A ‘ these bemg fixed °n an is very moveable in azimuth round this point.

/ and resting upon the two supports The other end passes through the centre of a cir-

Uffht to a nnp prlcrp at -n ar»/^ <• i« SM.IA« n;A«~ ~c i_i t t .-» *

axle

•n n, r s, brought to a °finer edge at n and s, in order to reduce the friction as much as possible, and to give the greater freedom of motion. NS are two horse-shoe magnets, posited as in the

cular piece of pasteboard, and then forms spira1. turnings in the plane of this circular piece. The wire is attached by thread or silk to the paste- board disc; and at the point B it turns and cie-

_Q •., ., ... ? .’ r.” uucuu uisu, «uiu m me point t$ it turns and rte- re, with the like poles interior and exterior scends till its extremity reaches the quicksilver ne wheels. ;« +v,« „.,« r» TU. * • .• ? •

of the wheels.

451. The apparatus being thus prepared, and RW contact made at Z and C, the wheels will be-

in the cup D. The co’mmunication being now made at A and D with the battery, the spiral will immediately arrange itself, as in the last

K2

13J

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case, in a plane perpendicular to the magnetic mer.dian. Tliis experiment is originally due to .\i. Ampere, but the mode of suspension de- scribed is that of professor Van den Boss.

458. A needle, upon a different construction, also due to M. Ampere, is shown in fig. 14.

459. The directive quality of the galvanic wire has been since exhibited in a variety of ways, much more simple than that above de- scribed, of which we shall only state the fol- lowing : —

460. M. de la Rive’s apparatus consists of a small galvanic combination attached to a cork ; the plate of zinc is nearly half an inch wide, and extends about one and a half, or two inches, below its cork, its upper end passing through the same ; the slip of copper is of equal width to the zinc, but passes round it, being thus op- posed to both its surfaces, as in Dr. Wollas- tou’s construction : its upper end also appears through the cork. A piece of copper wire, covered with silk thread, is coiled five or six times, and tied together, so as to form a ring about an inch in diameter ; and the ends of the wire are connected by solder, one with the zinc, and the other with the copper slip above the cork. See fig. 15.

461. When this small apparatus is placed in water, slightly acidulated with sulphuric or ni- tric acid, the ring becomes highly magnetic, and will arrange itself in a plane perpendicular tp the magnetic meridian, or it will at least indicate a tendency to take up that position; but the escape of the bubbles, arising from the decom- position of the water,

prevents it from preserv- ing a fixed direction.

462. Its magnetic qualities, however, are more obviously shown by bringing U> it a strong mag- net. Mr. Barlow used a cyliudrical one, about three quarters in diameter, and eighteen inches in length. This being applied at the distance of several inches, the ring was immediately at- tracted or repelled accordingly, as one or the other of the poles of the magnet was presented, or accordingly as one or the other side of the wire was opposed to the latter. When the re- sult of the application is attraction, the cork will advance towards the extremity of the magnet; and if the latter be held horizontally, and in a line with the centre of the former, this will con- tinue to advance till the pole of the magnet is within the ring, and then proceed with consider- able velocity till it reaches the middle of the magnet, where it remains perfectly stationary. If now the magnet be withdrawn, and changed end for end, and re-introduced into the ring, the latter will go off from the magnet, turn itself round when quite free from it ; again advance, and settle itself as before in the centre.

463. This very simple apparatus, which may be made at the expense of about a shilling, throws great light upon the nature of the electro-magnetic action, and proves most satisfactorily, that notwithstanding the intimate relation be- tween the electro-magnetic, and simple magnetic fluids, they are not identical ; for no possible arrangement of simple magnets can be made that would lead one of them beyond the pole of another, *o <\:i

middle of the latter. At the same time all the above facts will be found perfectly consistent with the hypothesis that has been advanced; for it will be seen, when the wire and cork are in equilibrium, as above stated, that an observer will have the north end of the magnet to his left hand, and the south to his right, at equal dis- tances; and acting therefore with equal and op- posite powers ; consequently the wire itself ought to be in equilibno, and, when disturbed from, it will have a tendency to regain it, and hence be subject to all the conditions and motions that have been described.

464. As the current of electricity, produced by a Voltaic battery .when passing through a metallic conductor, powerfully affects a magnet, tending to make its poles pass round the wire, and in this way moving considerable masses of matter, it was supposed that a re-action would be exerted upon the electric current capable of producing some visible effect ; and the expecta- tion being, for various reasons, that the approxi- mation of a pole of a powerful magnet would diminish the current of electricity, the following experiment was made • — The

poles of a battery of from two to thirty four-inch plates were connected by a metallic wire, formed in one part into a helix, with numerous convolutions, whilst into the circuit, at another part, was introduced a delicate galvanometer. The magnet was then put, in various positions, and to different extents, into the helix, and the needle of the galvanometer noticed ; no effect, however, upon it could be observed. The circuit was made very long, short, of wires of different metals and different diameters down to extreme fineness, but the results were always the same. Magnets more and less powerful were used, some so strong as to bend the wire in its endeavours to pass round it. Hence it appears, that however powerful the action of an electric current may be upon a magnet, the latter has no tendency, by re-action, to diminish or increase the intensity of the former.

465. M Prechtl has a very curious experi- mental illustration of the effects of a spiral wire. He coils round a glass tube or wooden cylinder, steel-wire covering the surface as with a continu- ous sheath. To one end of this cylindric spiral, he applies the south or north pole of a magnet, and draws it along the cylinder in a straight line, parallel to the axis. In this way a magnet is formed, which possesses the following pro- perties : —

(a} Along its whole length, it has on one side the north, and on the opposite side, the south pole.

(6) These transversal magnetisms are in every point of the length of the wire-cylinder, equally strong.

(c) Both of its ends exhibit on the contrary no particular polarity, and they have no other magnetism than that which belongs to every individual point of the whole length. Thus the transversal magnet is in the same condition as the conjunctive wire of the Voltaic column.

(d) If we hold this transversal magnet over a magnetic needle in the declination-plane, it re- pels exactly like the conjunctive wire, the north pole of the needle to the right or to tˆe left, ac-

cording as the effective north pole of its trans- versal magnetism lies to the left or to the right hand ; and with greater or less force, according to the Strength of its magnetism, even to 90°.

(e) If we draw the one pole of a magnet along this transversal-magnet,

in a spiral diree- lion, the wire becomes magnetised longitudinally ; toe transversal magnetism disappears, the two poles are found at the two extremities, and it now resembles an ordinary magnetised steel wire. The longitudinal and transversal magnetisms are not compatible with each other, in their full ex- hibition.

466. Besides this transversal magnetism, with single polarity, magnets may be easily made, possessing several transversal magnetisms. Take four magnetic bars, about a quarter of an inch thick ; provide a small disc of wood, with an aperture of about an inch diameter in its centre, and four grooves, cut into one face of the disc, leading from the circumference, inwards : in these grooves the magnetic bars are to be fixed, with their narrow edge outwards, and their ends projecting into the aperture. Let a north pole alternate with a. south pole in the circle, so that the ends of the bars right opposite to each other maybe homogeneous; and adjust the whole, so that they may touch the circumference of a steel wire-coil, about half an inch diameter. We then draw this spiral wire through the opening, and between the four magnets, taking care that the cylindric coil does not revolve on its axis, but that the direction of each individual magne- tic pole remains in the same plane with the axis ; for otherwise the wire would acquire the longi- tudinal magnetism. Instead of the wire-coil, we may take a massive cylinder of steel. This will acquire, when treated in the same way, the compound transversal magnetism, without its extremities having a stronger magnetism than each of its cross sections. These transversal magnets with manifold polarities, have all the above enumerated properties of the single trans- versal magnets, but their phenomena are still more in unison with those of the electrical con- junctive wire ; for, under this manifold polarised magnet, the deviation of the needle is the reverse of that above the magnet.

467. In the following manner we may pro- duce a section of a manifold polarised transver- sal magnet in a larger rod, and with a propor- tionally greater number of poles. We take a ring of steel wire, from four to six inches diame- ter, and furnish it with as many poles as we can apply to its circumference. Lay the ring flat on a table, and apply to its outer edge the two poles of a horse-shoe magnet, that are as near each other as possible ; then remove the magnet and apply it in succession all around, at dis- tances equal to the width of its own poles. In this way it is easy to induce on a steel ring, of about five or six inches diameter, from twenty to

hirty opposite poles.

468. This steel ring, which represents a section of the manifold

polarised transversal magnet, exhibits, relatively to the greater extension and smaller number of the existing magnetisms, the phenomena which a conjunctive wire presents. In every part of it the magnetic needle, with its

north end above, stands to the right hand ; below it, to the left ; and inversely. M. Prechtl thinks that these direct results leave no further doubt concerning the magnetical condition of the con- junctive wire.

469. Although success had attended the ex- periments made to magnetise steel needles and bars by ordinary electricity when in motion, yet every attempt to occasion the deviation of the magnetic needle by a current from the machine had failed, until M. Colladon instituted his ex- periments. Conceiving that the quantities of electricity operated with had been too small, he used a battery of thirty jars, containing 4000 square inches of surface for the previous ac- cumulation of the electricity, and operated with a galvanometer constructed on Nohih's principle, having 100 revolutions of wire. The wire was covered with a double thickness of silk, and the instrument placed in a room away from that containing the battery. Two copper wires covered with silk, and suspended on silk cord, connected it with the electrical apparatus. A very fine point was soldered on to each of these wires, which were then named the extremities of the galvanometer.

470. The battery was charged : one galvanome- ter extremity was connected with the outer coating, and the other approached towards a ball in con- nexion with the inner coating. When at four or five centimetres7 distance, (an inch and a half or two inches) the needle deviated ; when at less than half that distance, the deviation was 23°, and, gradually diminishing, continued for five seconds. The direction of the deviation accorded with the course of the electricity. Every repetition of the experiment gave the same result, and when the points brought to the battery were changed, or the charge of the battery itself was altered, the di- rection of the deviation corresponded with it. The quantity of deviation varying with the dis- tance of the points was often 40° ; and the re- turn of the magnetic needle to its original posi- tion, upon the -cessation of the current, was in every instance ascertained.

471 . On making experiments with a Nairn's machine, and also with a plate machine, no ac- cumulative apparatus being used, deviations of the needle, amounting to 3° or 4°, were obtained in dry weather.

472. It was thus demonstrated that the electri- cal machine could, like

the Voltaic pile, produce a current competent to the deviation of the needle, and that the electricity accumulated in a given time in a battery, or even in a conductor, was a finite portion of that which circulated in the same time in a closed electro-motive circuit. To establish this comparison in a more definite manner, a wire of platina was soldered to the two extremities of the galvanometer, one of the junctions heated, and the other cooled; at 125°, C. (26S° F.) the needle of the galvanometer de- viated 45°, the same quantity which had been produced by the battery. Hence it appears that the galvanometer may, in certain cases, be a very useful indication of the quantities of ordinary electricity.

473. The insulation of the Jifferent turns of the galvanometer wire appearing to be an ini-

portant ‘point, M. Colladon prepaied an instru- ment, in which the wire was covered with two folds of silk, made 500 turns round the box, and had each separated from the others by oiled silk. With this instrument the effects were nearly ten- fold what they were before, and as, in the former ase, the deviation of tˆe needle, by the current from a machine, was only 3° or 4°, now it amounted to much larger quantities. When the point was at the distance of —

1 decimetre (3-937 inches) the deviation was 18°

2 ditto ditto ditto 10 4 ditto ditto ditto 5$ 8 ditto ditto ditto 3 1 metre (39-371 inches; ditto 2; so that it was rendered sensible at the distance of a metre from the conductor.

474. It should be remarked that the with- drawing action of a point is sensibly proportional to its distance from the conductor. This is con- stantly the case with a cylinder machine, but seemed to be interfered with in a plate machine by the presence of four cushions. Experiments, instituted to illustrate this point, proved the cor- rectness of this conclusion. When the motion of the cylinder machine was regular, the devia- tion remained constant as long as the experiment was continued.

Operating with the battery, and slowly ap- proaching the point, a constant deviation of 30° was obtained for sixty-five seconds. A jar, con- taining only two half-square feet of surface, deviated the needle 32°.

475. The ratios which these experiments estab- lish between the action of currents produced by electrical machines, and those of a pile or a thermo-electric arrangement, afford the means of appreciating the absolute veloc.ty with which the electricity moves in a closed electro-motive appa- ratus, when we know their electro-motive force, or the tension which may be produced by the contact of two metals, and the friction of cushions. In fact, in electrical machines, this velocity of circulation is determined by the motion of the glass plate, by which the electricity is transported to the conductors with a known velocity. If the tension of this electricity is ten thousand times stronger than the tension of a pair of Voltaic plates, having the samo surface as the cushion, and nevertheless the effects produced by the two currents on a galvanometer are the same, the velocity of circulation of the electricity from the Voltaic arrangement would be evidently ten thousand times greater than that of the rubbed part of the plate ; for it is an acknowledged opinion, thai the deviation of the magnetic needle is proportional to the quantity of elec- tricity which passes in the current.

476. Comparative experiments, made with piles and thermo-electric circuits, prove that the conduetibility of metallic wires is not in the in- verse ratio of their length. When the electro- motive force is small, a metallic circuit of mode- rate length is sufficient to stop the electric current almost entirely. The intensity of the current rapidly increases as the length of the circuit is diminished to a certain limit, depen- dent on the energy of the electro-motive force.

477. M. Colladon observes also, that although

bad conductors, as pure water for example, can- not be made part of a Voltaic circuit without stopping the motions of the galvanometer ; yet a layer of air, of more than a metre in thickness, does not always prevent this kind of action, and that the results depend upon the energy of the electro-motive force ; so that this becomes an important element, not to be neglected in ex- periments on the-conductibility of bodies.

478. Taking advantage of some stormy wea- ther, M. Colladon was enabled to obtain devia- tions of the magnetic needle by currents of atmospheric electricity, and has shown that the instrument may become a very precise and use- ful indication of the state of this agent in the atmosphere. A metallic point being raised on the observatory of the college of France, and connected with the galvanometer, whilst the other extremity of the instrument wire was communi- cated with the stem of a lightning-rod, deviations were obtained of 32°, 34°, and

37°. The direc- tion of the needle indicated negative electricity, and by dismounting the apparatus, and using an electrometer, this was found to be the case. On another occasion the deviation was from 10° to 22°, and, during the twenty minutes that the instrument was observed, the direction of the current changed two or three times. On another occasion the deviation amounted to 87°. These results were obtained with the first and least sensible galvanometer.

479. These experiments prove that the galva- nometer may be very useful in researches on atmospheric electricity. If it should be demon- strated that electricity contributes to the forma- tion of hail, this instrument would be the only one which could indicate in a precise manner the quantities of electricity withdrawn by points more or less acute and elevated, and communi- cating more or less with the soil.

480. M. Nobili's galvanometer is a curious :n- strument. Its construction is founded upon the fact discovered by Oersted, the deviation of a magnetic needle by a wire conveying a current of electricity ; and, as in most other instruments of this kind, the wire is passed several times round the frame, within which the needle is sus pended, that the effect may be proportionally increased. It differs, however, from all made before it, in the use of two needles instead 01 one : these are equal in size, parallel to each other, magnetised in opposite directions, ana fixed on a straw, so that the contrary ends of the two needles point in the same direction. Then distance from each other on the straw is regulated by the construction of the frame with its covei ing wire, in and about which they are to move. The frame of M. Nobili is twenty-two lines long, twelve wide and six high. The wire is of copper covered with silk, it is one-fifth of a line in thick- ness, from twenty-nine to thirty-feet long. It makes seventy-two revolutions about the frame. The needles are twenty-two lines long, three lines wide, a quarter of a line thick, and they are placed on the straw five lines apart from each other. An aperture is made in the tissue formed by the turns of the wire on the upper surface of the galvanometer, by thrusting them from the middle towards each side ; the lower

needle on the straw is introduced through this aperture into the interior, in consequence of which the upper needle remains a little above the upper surface of the wire. The aperture is retained open to a certain extent, to allow free- dom of motion to the needles and straw, these being suspended in the usual way from the upper extremity of

the straw. The graduated circle, on which the deviation is measured, is placed over the wire on the upper surface of the frame, having an aperture in its centre for the free passage of the needle and straw. The upper needle is the index, the lower being visible only from the sides of the instrument.

481. The sensibility of this instrument de- pends upon the addition of the upper needle. Being magnetised in an opposite direction to the lower one, it almost entirely neutralises the in- fluence of terrestrial magnetism, leaving only so much of directive power as shall induce the whole arrangement to return to a constant position when uninfluenced by electrical currents, and yet combining with the lower needle, to cause deflexion when an electrical current is passing through the wire.

482. As an illustration of the delicacy of the instrument M. Nobili observes, that it is well known if Sebeck's combination of antimony and bismuth be attached to a common galvanometer, and the point of junction be cooled, only a very slight effect is observed on the instrument; •whilst, if attached to the new galvanometer, the same influence is sufficient to make the needles revolve several times. If a piece of iron wire, five or six inches long, be used to connect the extremities of the copper wire of the instrument, by twisting the ends together, and one of the points of contact he warmed by touching it with the hand, the needle will move from 0°, and in the first oscillation extend to 90°. Even the mere approximation of the hand to the junction of the metals will produce a deviation of 20°.

483. It is necessary for the delicacy of the instrument that the needles used be magnetised as nearly as possible to the same degree, and two indications have been observed as useful in point- ing out when this is the case ; the first is the position taken up by the plane of the needles, when left to the earth's influence, this should not be in the plane of the magnetic meridian, but more or less inclined to it ; the second is the manner in which the system oscillates about its line of equili- brium. These oscillations should be very slow compared with those of a common needle.

484. In consequence of the situation of the graduated circle above, and not within the frame, the folds of the wire may be brought much nearer to each other than in the common instrument, this renders it more compact, and, from the vici- nity of the needle within to the wire, also more powerful. When fixing the graduation the zero should be placed so as to accord with the position of the needles, when left to the earth's influence ; this will not be towards the true magnetic

north, but will not be far from it, and will always be constant.

485. M. Nobili then offers a very curious il- lustration of the powers of the instrument : — ‘ It is known,’ he says, ‘ that water usually retains

itself at a lower temperature than the ambient air, the difference being sometimes 2°, and re- sulting from the evaporation of the liquid. If a bar of bismuth be made to join the two extre- mities.ˆ the galvanometer wire, and one of the points of junction be plunged into a cup of water, the needle will immediatelydeviate several degrees proving that the instrument is capable of measuring the small degree of refrigeration produced by the evaporation of the liquid. I have actually submitted one of my galvanometers for fifteen days to an experiment of this kind, the deviation was about 15° in the morning and evening, but more considerable in the course of the day. This first attempt has made me suppose that the galvano- meter might become, in the hands of an attentive and skilful philosopher, a kind of almidometer. If by means of a single couple of different me- tals, bismuth and copper, a deviation of 15° has been obtained, a much greater one would be produced by employing several pairs, conve- niently immersed in the same vessel of water ; and, perhaps, one might succeed, by increasing the scale of observation, in ascertaining more exactly the diurnal rate of evaporation. I pro- pose, also, to ascertain the effect of a current of air, excited by any means over the surface of the water used in the experiment; it would, without doubt, augment the evaporation, and, by increas- ing the difference between the temperature of the air and the water, increase the effect on the in- strument.

486. The theory of electro-magnetism remains to be illustrated. The phenomena developed were, at first view, not a little perplexing; and it was not till after repeated investigation, that, in 1820, any tangible view of the matter was fur- nished. The conducting wire was found to exert a magnetic force, not in a direction parallel to the wire itself, nor even in any plane passing through that direction, but in one that was per- pendicular to it ; and which, if circles were de- scribed in this latter plane, having the point at which it intersects the wire for their common centre, would have the direction of tangents to those circles. The following is another mode of conceiving the same thing. Imagine a cylin- der of any diameter to envelope the wire. — the wire itself being in the axis ; and conceive the surface of the cylinder to be covered on all sides with an infinite number of short lines touching the surface at different points, and situated trans- versely, that is, at right angles to its length. Suppose these lines to represent magnets, with the northern polarity of each turned in one inva- riable direction,

as we follow them round the cylinder. Then will these imaginary magnets indicate the direction and nature of magnetic forces, which emanate from the fire as long as the stream of Voltaic electricity is passing- through it. The particular direction of the trans- verse, or, as it has been termed, tangential mag- netic force will of course depend on that of the electric current in the wire, and may easily be traced in all cases by the recollection of the fol- lowing fact. Supposing the wire to be in a ver- tical position — in which case the planes of the tangential forces will be horizontal — and sup- posing the stream of positive electricity to b»

descending along the wire, which of course im- plies that the negative electricity is ascending, then that polarity which exists in the end of the magnetic needle, which naturally turns to the north, will be impelled round the wire in the circumference of a circle in a direction similar to the motion of the hands of a watch ; that is, from the north to the east, and then to the south and west. The south pole of a magnet will of course be impelled in the contrary direction. A magnetic body in the vicinity of the wire will, by the influence of this force, tend to assume a position, shown in fig. 16, similar to one of the tangential lines we have been describing as placed on the cylinder. But further, the tendency of the electric current in the wire is to induce magnetism in soft iron, or other bodies capable of receiving it ; and the magnetism so reduced has the precise direction already indicated as that which a bar previously magnetised would assume by the influence of the wire. This di- rection is shown in the figure, where N and S denote respectively the north and south poles of steel bars, situated transversely with respect to a vertical conducting wire, in which the current of positive electricity is descending, as indicated by the arrows.

487. Most of the facts which have been brought to light by Oersted are the immediate con- sequences of the above general law. Mr. Barlow's enunciation of this law is as follows : he states ‘ that every particle of the galvanic fluid in the conducting wire acts on every particle of the magnetic fluid in a magnetised needle, with a force varying inversely as the square of the dis- tance ; but that the action of the particles of the fluid in the wire is neither to attract nor to repel either poles of a magnetic particle, but a tan- gential force, which has a tendency to place the poles of either fluid at right angles to those of the other ; whereby a magnetic particle, suppos- ing it under the influence of the

wire only, would always place itself at right angles to the line let fall from it perpendicular to the wire, and to the direct on of the wire itself at that point.'

488. The transverse, or tangential action, which we have been describing is one of so extraordinary a nature, that it can be assimilated to no other principle in nature, of which we have any know- ledge. It is not, therefore, surprising that it eluded the observation of former enquirers ; al- though in the keenness of research, they almost stumbled upon the discovery. The fact which occurred to Beccaria, of the production of transverse magnetism in an iron bar, by the elec- tric discharge of a battery, had, in fact, pointed out the precise direction of this inductive force ; and the hint, if pursued, would have infallibly led to the discovery which Oersted made fifty years afterwards. It is curious that a circumstance extremely similar is on record, with regard to the observation which conducted Galvani to the dis- covery of the science which bears his name ; namely, the convulsive movements of the mus- cles of frogs, on taking sparks from a neighbour- ing prime conductor, charged with electricity. The very same fact had been noticed by Du Verney, about a century before, as appears from a memoir in the History of the French Academy

of Sciences, for 1700; but was deemed of no importance.

489. The relation which this new magnetic power bears to the electrical, was also very singu- lar and enigmatical. Considered as a magnet the conducting wire acted differently, according to the side to which magnetic bodies were presented to it What was attracted by the one side was re- pelled by the other ; and, if the power were con- ceived to be derived from the impulse of a fluid, that, fluid must be circulating perpetually round the wire in a kind of vortex, of which the wire is the axis. The consequence of such a verti- ginous motion, as Dr. Wollaston has termed it, in the magnetic fluid, would necessarily, under certain circumstances, produce rotatory motions in the parts of certain combinations of magnets and of wires. The suggestion thus thrown out by Dr. Wollaston was soon after realized, by Mr. Faraday's discovery of the rotatory movements which had been predicted, and which we have already pretty fully described. By employing mercury as part of the Voltaic circuit, and placed so as to allow of perfect freedom of motion in the conducting wire, or in the magnet, accord- ing to the nature of the experiment, and so as to obtain the action of one pole only, Mr. Faraday succeded in effecting a variety of rotations, both in the magnet and the wire, in conformity with the law above stated. If the positive electric current be

descending along the wire, the north pole of a magnet in its vicinity will revolve round it in the direction indicated by the arrows. As action and re-action are equal and contrary, the wire was seen to revolve round a fixed magnet, in a direction contrary to that in which the magnet would have moved, if the wire had been sta- tionary ; but, since these motions are to be esti- mated on opposite Sides of a common centre, the direction in the circumference will remain the same. Thus, as a north pole revolves round a descending positive electric current in the direc- tion of the hands of a watch, a wire in which a similar current is descending, will revolve in the same circular direction round a north pole placed in the centre of its motion.

490. The experiments of Mr. Faraday and professor Barlow, confirmed and extended as they have been by Barlow, Biot, and others, appeared to have conducted us to the most general fact belonging toˆ the science ; namely, the tendency to a transverse rotatory motion in the magnetic and electric fluids, when acting freely on each other. This fundamental principle once admit- ted, all the phenomena that had hitherto been discovered appeared to be easily explicable, and most of them were the immediate and necessary consequence of that principle. There was, in- deed, one particular fact, for the discovery of which we are indebted to M. Ampere, to which it was less directly applicable, and which might not, perhaps, have been deduced as one of its results. This distinguished philosopher observed, that when two conducting wires were so arranged as that one or both of them were allowed a certain freedom of motion, they either attracted or repelled each other, according as the electric current which they transmitted was moving in the same or in opposite directions in the two wires.

If, for example, two wires, which are transmit- ting currents of electricity, be situated within a certain distance, and parallel to each other; and if we suppose the currents of positive elec- tricity to be passing from left to right in both the wires, they will manifest an attraction for each other. The same tendency of attraction will also appear when the positive currents are both mov- ing in the contrary direction, that is, from right to left. But if the current in one wire is moving in a direction opposite to that of the current in the other wire, in that case a repulsive action will take place between the two wires. These were found to be constant and invariable effects of the transmission of electricity along conductors ; and they were

manifested equally, whether the two currents were obtained from separate Voltaic batteries, or were only two portions of the same current in different parts of its course.

491. To understand Ampere's theory, let us conceive a slender cylinder of iron intersected by an infinite number of planes, perpendicular to the axis, so as to divide it into as many cir- cular discs, successively applied to each other, as represented in the engraving, at fig. 17: let us now imagine that, in consequence of some unknown action among the particles composing these circles, a current of electricity is perpe- tually circulating in their circumferences, as if they had composed a Voltaic circuit. Let us suppose the direction of these currents to be the same throughout the whole series of circles : the cylinder thus constituted may be considered as a magnetic filament; that extremity in which, when uppermost, the current of positive electri- city is moving in a direction contrary to the hands of a watch, being the one which has the northern polarity, that is to say, which will, when suspended as in a compass-needle, point to the north. It is of course to be understood that the current of negative electricity revolves in the opposite direction. A magnet, then, is supposed to consist of an assemblage of similarly-consti- tuted filaments ; and, if these postulates be once granted, all the phenomena of magnetism will flow from them as corollaries ; the magnetic power will be resolved into the electrical, and be henceforth erased from the list of original physical powers.

492. The facts belonging to the science of electro-magnetism may be classed under five heads : — the first relating to the reciprocal actions of two electric currents when traversing a conducting substance : the second, to the mu- tual action occurring between electric currents and magnets : the third, to the magnetic action of the earth on electrical currents : the fourth, comprising the actions of magnets on each other : the fifth, the action of the earth on magnets. These two last divisions of the subject consti- tuted what was properly the province of the science of magnet sm ; the three former having sprung up in consequence of the discovery of Oersted, and being of an intermediate character, had received the name of electro-magnetism. Ampere proposes to comprehend them all under the title of electro-dynamics.

493. Setting out, then, from the primitive fact, thit parallel currents attract one another

when their directions are the same, and repel one another when opposite, we have to study the law of modification which these forces un- dergo when the currents deviate from strict pa- rallelism, and are

inclined to one another at various angles, and in different planes. It is evident that the whole action of the currents mnst be the combined result of the actions of all their parts; and that in order to obtain the former, in every possible case, with mathema- tical precision, it is necessary to ascertain the simple law which governs the action of those elementary portions.

494. It is evident, in the first place, that the action will be in proportion to the intensities of the currents from which that action is de- rived ; and it has been also determined, that the quantity1 of each action in each element, follows the same law as that of gravitation — namely, that it is inversely proportional to the square of the distance. The action, estimated in the di- rection of the line drawn from the one ele- mentary portion of electric current to the other, and which, for the sake of convenience, we shall term the line of junction, will be diminished by any obliquity in the direction of either of the currents — in the proportion of the radius to the sine of the angle which such direction forms with the line of junction. If, again, we consi- der the effects of a current, of which the direc- tion deviates from the plane that passes through the line of junction, and through the direction of the other current, and is situated in another plane, also passing through the line of junction, we shall find that, from being at a maximum when these two planes coincided, it will be re- duced to the proportion of the cosine of the angle they form between them. Taking all these considerations, then, into account, and com- bining them in one formula, we obtain the fol- lowing, in which a and b denote the respective intensities of the two elementary portions of each current; d their absolute distance from each other, measured of course on the line of junction ; a, /3, the angles which their respective directions make with the line of junction, and y the angle between two planes, each passing- through the direction of the respective current and the line of junction. Then the action of the two currents on each other, estimated in the di- rection of the line of junction, being expressed

A =

f- (sin. a. sin. ft. cos. y.) a

495. In the course of this investigation, Am p4re found reason to conclude that the formula thus obtained was still only an approximation to the true law ; for portions of the same, or o different currents, that were moving at very ob- lique angles, or even in the same continued line, were observed to exert a certain degree of re- pulsion on each other : he therefore introduced another term in the formula; and, as he was at first unable to ascertain the amount of its

in- fluence, prefixed to it the co-efficient k, the value of which was left for future determination. The whole formula will then stand thus : —

A— — (sin. o. sin. /3. cos. y. 4- k. cos. «. cos. ft. a*

496. Ampfere at first regarded the value of A: as exceedingly small, and thought it might safely be neglected. Subsequent researches have led him to conclude that it was equal to — J, so that the whole of that term has a negative value when the cosines of the two angles are themselves po- sitive

497. The forces of electro-dynamical action, determined by the law above stated, are subject to the same laws of composition and resolution as all other mechanical forces, and afford, there- fore, equal facilities for mathematical investiga- tion. Many consequences important to the theory of particular facts are deducible from this consideration. Thus the action of a small por- t:on of conducting wire, bent into any number of flexures and contorted forms, provided they do not extend to any great space, upon a distant current of electricity, will be equivalent to that of a similar wire proceeding in a straight course between the two extreme points of the contorted wire.

498. Another corollary deducible from the general law is, that the total action of a con- ducting wire of infinite length upon any portion of an electric current, moving in a direction pa- rallel to the wire, is in the simple inverse ratio of the shortest distance intervening between the two currents — that is, of the line drawn from one to the other, which is perpendicular to both. This consequence had been already deduced by Laplace, and was verified by direct experiment by Biot, as well as by Ampere.

499. Setting out from the simplest case, where a simple attractive or repulsive power is mani- fested, namely, that in which two currents are rectilineal, and in parallel directions, and in which the action is at its maximum in point of degree, we proceed to consider the variations which a change of inclination will produce. Let us first suppose one of the rectilinear cur- rents, or wire which conveys it, to be inclined, as is shown at fig. 18, at a certain angle, and in a plane which does not pass through the other wire, or channel in which the other current is moving. In this case, a compound force, or at least one that may be resolved into two forces, is called into action. Let us suppose a line m

n, fig. 18, drawn between the points, in each wire, which are the nearest to each other; a line •which will, of course, be perpendicular to both the wires, and which may be called the line of junction : the points m, n, where this line meets the wires, will divide each wire respectively into two portions. Those portions of the wires, as a and b, or c and d, in which the currents are both moving, either towards those points or from them, will be attracted towards each other, — an action which will at first tend to turn them on the line of junction mn, as an axis, in planes perpendicular to that axis, so as to diminish the angle which they form, and to bring them into the parallel positions indicated by the dotted lines ; and will also tend to make the two wires approximate. The former portion of this force, which produces a rotatory action, may be termed a directive force ; the latter, which tends to the approach of the wires ii the direction of the line of junction, may be termed the approximate

force. This last force commences when the two wires are at right angles, and attains its maximum when they are brought by the directive force into a parallel position. When the corresponding portions of the wires, on the con- trary, form an obtuse angle, the approximative force is negative, and is so in the greatest degree when the wires are parallel, with their current, moving in opposite directions.

500. This action will be considerably modi- fied if, instead of supposing the two currents to be of equal length, and crossing one another at the line of junction, we take only a very limited portion of a rectilineal current, situated wholly on one side of the other current, which is itself of indefinite length ; and we may now, for the sake of greater simplicity, assume them to be both in the same plane. If we analyse the forces which act on each side, and on each part of the limited portion of the current, the one set being attractive and the other repulsive, we shall find that the resultant is a force which will impel it in a direction perpendicular to itself, in the plane common to the currents, and so as to preserve its parallelism ; and this will happen, whatever be the angle of inclination of the less cur- rent to the greater. Indeed we might show by ex- periment the direction in which the shorter wires will tend to move by the action of the current in the lower wire, supposed to be of indefinite length. The direction of this progressive tendency will be determined by that of the currents. When they are parallel to each other, they tend to ap- proach or to separate, according as the direction of the currents is similar or dissimilar. When at right angles to each other, and the positive current in the shorter wire is receding from the longer wire, the shorter wire will be urged for- wards in the same direction as the positive cur- rent is moving in the longer wire ; and, vice verssl, it will be urged in the

opposite direction when the current of positive electricity is moving towards the longer wire. Such then would be its motion were it free to move in all directions; tut, if its motion be limited, in that plane, to a movement of rotation round one of its extremi- ties, the same force will produce its continual revolution, with a uniformly accelerated velocity round this axis ; because the force itself is in- dependent of the angle of inclination of the currents, and is, therefore, uniformly exerted during the whole period of its revolution. It is to be observed, however, that the two cases we have here supposed, in which the effec of a straight current of indefinite length can be limited to a small portion of another current on one side only, are such as are not easily realised in practice. The difficulty lies in disposing of the remain:ng portions of the current, so that they shall not interfere with the effects intended to be produced. The only mode of obtaining this object is to provide for their subdivision and branching off in different directions, at the end which is nearest to the current whose action we are studying; so that these different portions shall act in opposite ways, and thus neutralise each other's effects. This object may be accom- plished most conveniently and effectually by allowing the ends of the smaller portions of

wire to dip in mercury; which will not only carry off the stream of electricity in various directions, but also allow of perfect freedom of motion.

501. Let us now investigate the action of currents moving in the circumference of a circle, which may be examined by means of a con- ducting wire bent into such a form, that its ex- tremities come very near each other, but are pi evented from touching by being covered with silk, or other insulating substances. The force acting on such a wire, while it is transmitting electricity by the influence of a rectilineal cur- rent in the vicinity, will tend to bring it into such a position, as that its plane shall coincide with that of the rectilineal current, and so that the direction of the currents in the adjacent por- tions may be the same. In this position, these adjacent portions attract each other, while a re- pulsion is exerted between the straight current and that in the remoter part of the circle, which moves in the opposite direction. These two forces are, therefore, opposed to each other ; but the attractive force prevails, on account of the greater vicinity of the attracting than of the re- pelling portions. That portion of the original force which made the plane turn upon itself, so as to bring it into

parallelism with the straight current, must be regarded as the directive force. It is here composed of two forces, the one attrac- tive, the other repulsive, but which, acting on opposite sides of the axis of rotation, concur in their effect. Thus while the approximative force is the difference of the two forces, the directive force is equal to their sum.

502. It will be easily understood, that forces of a similar kind are the result of the action of the circular current on the straight wire ; and that the latter is urged to assume a position in the same plane with the former, and so that the ad- jacent currents may be in similar directions.

503. The action of a circular current upon a small portion of a straight current at right angles, or otherwise inclined to the plane of the former, and lying wholly on one side of it, will be some- what modified. If the direction of the straight current, when prolonged, pass near the centre, the forces which act upon it will be nearly balanced, and no re-action will result; if it be near to the circumference the action of the ad- jacent portion will predominate, and we shall obtain results analogous to those which we have traced with regard to straight wires. Revolving motions will result either in the straight wire or in the circular one, according to their positions, and according to the direction of the fixed points which may limit their movements. The direction of the motion is determined by the circumstances of the approach or recession of the current to or from the same point, as we have before ex- plained.

504. Having considered the action of a circu- lar on a rectilineal current, we may now study the reciprocal action of two circular currents. When the centre of the one lies in the plane of the other circle, a directive force will operate, tending to bring its whole circumference into that plane, and to assume a new position ; and when, in this position, the resultant of all the

forces which are in operation will be an attrac- tion or a repulsion, according as the cur- rents in the adjacent portions of the circum- ferences are moving in the same, or in opposite directions.

505. If the two circular currents be situated opposite to each other, so that the centre of the one be in a line perpendicular to the plane of the other, and passing through its centre, similar phenomena will take place with respect to the directive and approximative forces ; which will produce, in the first place, a tendency to paral- lelism, and then either attraction or repulsion For each position of the centres intermediate to the two former, we shall find a particular posi- tion of

equilibrium in planes inclined at a cer- tain angle, whose intersection is exterior to the circles themselves. This position of equilibrium is determinate, and excludes the possibility of any continued rotatory or revolving motion.

506. It is an important preliminary to the study of Ampere's theory to obtain correct ideas of the action of the two circular currents upon one another, because such currents are supposed, in his hypothesis, to be the elements of all mag- netic action. This magnetic action may be re- garded as the resultant of the forces exerted by every part of the circular currents ; and as con- stituting two forces emanating from its centre, and being of an opposite species on each side of the plane of the circle. If we suppose the circle to occupy a vertical plane passing nearly through the eye of the observer, placed v\ ithout the circle, and the current of positive electricity to be pass- ing downwards on the side next to the spectator, and upwards on the remoter side, then the force exerted on the side to the right of the plane, con- sidered as a magnetic force, will correspond to the northern polarity, or to a polarity belonging to that end of the compass which turns to the north. The force extending to the left, will, of course, correspond to the southern or opposite polarity. When two circular currents are brought together on the sides where similar po- larities reside, they repel each other, because the two currents are then moving in opposite direc- tions in each ; but, when the dissimilar polarities are presented to each other, attraction takes place, because the currents are then similarly directed.

507. The intensity of all these forces is much increased wh<"i the powers of several circles are combined, which may be obtained by bending the conducting wire so as to compose a spiral ; the successive coils of which will conspire together in producing the respective polarities on each side : spirals thus constituted act exactly as magnets whose poles might be supposed to be situated in the centre of each disc.

508. But the imitation of magnetic bodies is rendered still more complete, when the turns of the wire are made, not in the same plane, but on the surface of a cylinder, so as to form a helix instead of a spiral. If the wire, after having formed a helix, be bent back so as to return in a straight course in the interior of the cylinder, with the usual precautions against contact, we obtain a very perfect accordanop wirn the theory already examined.

509. We come now to the subject of terres- trial magnetism. If we assume that the action of the solar rays on successive parts of the torrid zone, from east to west, produces currents of po- sitive electricity in that direction, and which may be regarded as collectively circulating in what may be called the magnetic equator ; attended, as they must always be, by counter-currents of negative electricity in the same equator, but in • the opposite direction ; and also that these cur- rents have the same properties and modes of ac- tion with all other electrical currents, — then there must result, as a necessary consequence, a two- fold polarity, apparently belonging to the earth, and directed to the poUs of this magnetic equator.

510. It is to be observed, that as that 'polarity, which is situated near the north pole of the earth, results from a current moving in a direc- tion similar to that of the hands of a watch, it will have the properties of a southern polarity, in the sense in which we have invariably used the term; that is, it will attract the north pole of a magnet, and repel the south pole ; while actions the reverse of this will take place in the southern hemisphere. It is unnecessary to re- mark, how exactly this theory accords with all the known facts relative to the action of the earth on magnets. The directive power which acts on magnets on the surface of the earth, is the result, not of any real influence proceeding from that part of the earth to which their poles point, but of the action of the currents at the magnetic equator, and the tendency of the currents in the magnet itself to turn it, so that they shall attain the position of equilibrium we have already adverted to, in considering the mutual action of two cir- cular currents. This position is precisely the plane which is perpendicular to the line of mag- netic direction ; that is, to the axis of the dip- ping needle: for as the electric currents in the needle are at right angles to its axis, it follows that when they arrange themselves in conformity with the equatorial currents of the earth, that are circulating east and west, that axis and the whole needle will point to the north and south — as we find they actually do.

511. The nature of this influence is more clearly discernible when it is exhibited in its sim- plest form, on a single circular current, which, as we have seen, may be regarded as the ele- ment of a magnet. A conducting-wire bent into the form of a circle, when free to move, always assumes, by the electro-magnetic action of the earth, a position in a plane descending to the south, intersecting the horizon in a line passing east and west, and inclined to it at an angle which is the complement to the dip ; that is, in a plane which is perpendicular to

the magnetic meridian. Its northern and southern polarities are equally real with that of a magnetic needle ; but appertain to an imaginary axis passing through the centre of the circle and perpendicu- lar to its plane. The direction of the currents on its south side, or that nearest the equator, is similar to those in the earth's equator — that is, from east to west (the positive current being always understood as denning the direction).

All these circumstances are sufficiently illus- trated in the theory we have been endeavouring to explain, and of which we shall furnish expe- rimental data in referring to the apparatus con. trived by Mr. Barlow, and employed in tht theatre of the London Institution.

512. The same phenomena are observed, if the course of a moveable wire be that of a pa- rallelogram ; or, indeed, any plane figure which returns into itself, as well as if it were a circle. By varying these forms, we are enabled to ob- serve and distinguish the effects of the earth's influence on wires which are parallel to the direc- tion of the dip, and on such as are at right angles.

513. The action of the earth on spiral con- ducting wires is precisely similar in kind to that of single circles, but it is more powerful in de- gree. Helices are, in like manner, found to obey the terrestrial influence, just as magnets do when placed in similar circumstances as to freedom of motion, provided the electrical currents which they convey are of sufficient intensity. Conti- nued progressive, or even rotatory motion may be obtained by the same influence, in conduc- tors whose motions are limited to certain planes, either in parallel directions, or round an axis. So that, in fact, every experiment that has been tried, and a great variety has been devised by the ingenuity of numerous experimentalists, has served but to confirm the correctness of Am- pere's views of the theory of magnetism. It is easy to distinguish whether the motion of any part of a Voltaic circuit is the effect of the influ- ence of the earth, or merely of the other portions of the same circuit, by reversing the communi- cations with the ends of the pile or battery em- ployed : in the former case, the direction of the motion is immediately reversed by this change ; and in the latter case, the action continues the same as before.

514. Ampere is far from supposing that the successive action of the solar rays on the equa- torial regions of the earth is the sole cause of the electric currents that circulate in them. Internal changes, taking place in the earth itself, must also concur in producing them ; for it would otherwise be impossible to account for the ob- served variations in their effects. The diurnal variations may, however, fairly enough be

attri- buted to the alternate changes of temperature occurring in different parts of the torrid, and even of the temperate zones.

515. The phenomena of magnetic induction, whether effected by currents of electricity passing through a conducting body, or by a magnet in which such currents are assumed to exist, are also in perfect conformity with this hypothesis. A conducting wire tends to the determination of currents in the same direction as those which it conveys itself, in all the magnetisable bodies in its vicinity : these currents continue to circulate with more or less permanency, after the removal of the current which originally determined them. In soft iron they soon disappear : in steel they continue to maintain themselves, and give rise to permanent magnets. The polarities thus in- duced will have transverse directions with respect to that of the current to which thev owe their

origin, for the reasons we have already so fully explained.

516. Numerous facts have induced Ampere to conclude, that the circulation of electric currents peculiar to magnets takes place round each par- ticle of the magnetic body ; he has also adopted the opinion that these currents pre-existed, in the bodies susceptible of magnetism, before this pro- perty was imparted to them ; but, as they were moving in every variety of direction, they neu- tralised each other, and could produce no exter- nal effect. It is only when a determinate direction has been given to them, either by another magnet or by a Voltaic current, that they become capable of exerting any magnetic action.

517. By a very curious experiment, Ampere has proved, that a powerful electric current has a tendency to excite similar currents in neigh- bouring bodies, not generally susceptible of magnetism. A copper wire of considerable length was rolled round a cylinder, so as to form a coil, all the turns of which were separated from each other by silk riband. Within this spiral coil a ring of brass was freely suspended by a fine metallic thread, passing through a small glass tube, which was placed between the threads of the copper coil. The circumference of the ring, in every part, was thus brought very near to the copper wire, through which a powerful Vol- taic current was made to pass. Under these circumstances the brass wire was attracted or re- pelled by a magnet, in the same way as it would have been had it

formed part of the same Voltaic circuit. The action, indeed, was but feeble, and Ampere, in his first trials, failed in his endeavours to render it sensible ; but, on persevering in the attempt, his success, at last, was complete and unequivocal.

518. A simple circular current, or what will act still more powerfully, a spiral coil, when presented to a magnet exhibits phenomena precisely analogous to those afforded by the ends of magnets ; acting as north poles on one side, and as south poles on the other. If the currents in these spirals be reversed, the polarities on each side are in consequence immediately reversed ; what was before a north, now becomes a south pole ; and vice versa.

519. But the simple circular conducting wire or ring exhibits, in consequence of the vacant space in its centre, phenomena which neither the spiral coil, of which the turns occupy the whole disc of the circle, nor any magnetised iron can produce. M. De la Rive contrived, upon this principle, a very pretty and instructive experi- ment, which is noticed in another part of this ar- ticle. A floating conducting ring being placed so as to encircle a magnet, but in such a way as that the currents in each did not accord, was re- pelled along the magnet till it reached its end ; when it spontaneously turned half round, and was then attracted by the magnet, again encircled it, and proceeded to settle itself round the mid- dle of its length, where it remained in equili- brio.

520. A still more perfect accordance with magnetic phenomena is presented by the helia- cal arrangements which we have denominated

Voltaic magnets. These possess regular poles at both ends ; the one being north, the other south : which poles are immediately changed into the opposite kinds, by merely reversing the course of the current. They obey the action of magnets which are presented to them, are attracted and repelled, and assume determinate positions with respect to the magnet, just as if they were ordi- nary magnets : of which, indeed, they possess all the essential properties, and for which they may be substituted in almost every form of experi- ment.

521. The phenomena of revolving motions, effected either in magnets or in wires, by their mutual action, as first discovered by Mr. Faraday, and as afterwards extended by Ampere, Barlow, Savary and others, and which have been regarded by most philosophers as indicative of the rotatory tendency being an ultimate fact, will be found, on attentive examination, to be not only in strict accordance with, but to be direct consequences of Ampere’s theory. Instead of

constituting objections to that theory, as was at one time supposed, they have proved, in fact, to be amongst the strongest confirmations of its truth. It would extend this article to too great a length were we to engage in the detail of the circumstances of each experiment, so as to follow all the particular applications of the theory, and trace their agreement with the observed results ; but the general principles on which they are to be accounted for have already been sufficiently explained. It is also to be remarked, that Am- pere ascertained, by Suitable variation in the experiments, that trˆe rotatory movements, although strictly deducible from his own theory of the constitution of magnets, where the action of the portion of conducting wire was alone taken into account, were generally, in a much greater degree, the effect of electric currents taking place in the mercury, into which the ex- tremities of the wire were immersed, and the re-action of which on the wire produced a con- siderable repelling force. He found it, indeed, as impracticable in mechanism, as it was impos- sible in theory, to produce rotation without em- ploying fluid conductors in some part of the Voltaic circuit.

522. To take one of the simplest cases of elec- tro-magnetic action, let us suppose a vertical conducting wire, in which the positive current is descending, presented to a magnetic bar sus- pended by its centre, so as to mcve freely in a horizontal plane, and which has assumed its usual position in the magnetic meridian by the influence of the earth. In this position, all the currents contained in the magnet are ascending on its western, and descending on its eastern side. The former will therefore be repelled, and the latter attracted by the wire, and the magnet will so arrange itself that the middle of its attracting side shall be opposite to the wire.

523. When two magnets, on the other hand, are presented to each other, end to end, it will depend upon the direction of the currents be ng similar or dissimilar at the adjacent ends, whe- ther attraction or repulsion will take place ; the former happens when the uorth and south poles are opposite to each other: the latter when simv-

lar poles front each other. The first case may be illustrated by two watches laid the one above the other, so that the dial of the one may be in contact with the back of the other ; the hands will then, in both watches, be moving in the same direction. The second case is represented by their being laid face to face, when it will be seen that

the motion of the hands are now in op- posite directions.

524. But the attractive or repulsive forces are not merely produced by currents at the ends of the mangets ; they are the result of the action of all the currents from one end to the other of each magnet. We must regard the total action as composed of the attraction or repulsion of one whole side of the one to one whole side of the other ; and of a similar attraction or repulsion between the two other sides : while the contrary action is excited between those respective sides which may be differently grouped. Tims, call- ing the east and west sides of a magnet the sides which face those points, when its axis is in its natural position in the magnetic meridian, the east side of the one will attract the east side of the other, and repel the west side : the west side will, in like manner, attract the west and repel the east. The tendency of this action is to bring the two eastern sides parallel, and as near to each other as possible : when this position has been attained, the north pole of each magnet will be adjoining to the south pole of the other, and the attractive action will be at its maximum. The same must be understood, mutatis mutandis, of the repulsive action, which is greatest when the east side of the one is parallel and adjoin- ing to the west side of the other ; in which case the two poles of the same name in each magnet are adjoining to each other.

525. The attentive consideration of these com- binations of forces will explain a difficulty which at first might be apt to startle us. When the north end of one magnet is directly opposed to the south end of another, the ad acent currents run in similar directions, and there is, therefore no difficulty in understanding how attraction takes place : but if the one magnet be moved a little to one side, and brought in a parallel di- rection, till the two ad acent ends have iust past one another, \ve then find that such a coincidence of adjacent currents no longer takes place : on the contrary the eastern side of the one, where the current is descending, is close to the western side of the other, having an ascend- ing current. Repulsion therefore, as it would seem, should now take the place of attraction : whereas we find that, under these circumstances, the two poles still exert a powerful attraction. The reason, however, will appear when the ac- tions of all the other currents, besides those that are immediately adjacent, are taken into account. It will then be found that the repelling posi- tions belonging to the two magnets are, in con- sequence of the great obliquity of their actions, much less powerful than the attractive portions, which act at a creater angle.

526. Mr. Ruxton has published a new theory of Ciectro-magnetism in a work of Mr. Partington's, '.o which it may be advisable briefly to call

the leader's attention. He says, ' I have at all times

been particularly averse to the basis upon which the present theory of electro-magnetism is founded, where there is supposed to exist a strong analogy, if not a comple identity, be- tween the electric and magnetic fluids ; and also to the many unnatural modifications which have been resorted to in prder to support the above position. I allude to the various routes which the electric fluid has been supposed to take in its transmission through a conductor connected with the two poles of a galvanic battery, in order to account for the deflection of a magnetised needle exposed to its influence, while it is a well-known fact that electricity invariably takes the most di- rect and shortest route in its transmission through any conducting substance.

527. ' Naturam expellas furca tamen usque re- curret,' says Horace ; and in this instance it is ve- rified. For even with the assistance of these assump- tions, and many others, which are not only irrecon- cileable with the known and established laws of nature, but even incongruous to each other, we are unable to account for many of the most interest- ing phenomena of the science. It would be wrong to reject any hypothesis without giving some grounds of object on, and I shall therefore endeavour to show, that though these two pro- perties may, in an unqualified sense, be made to agree and to possess similar attributes, yet nei- ther of these argues a physical identity, or even analogy. It is true, they may be made to agree, but this only in a bare definition, inasmuch as they may both be defined to be properties of natural bodies; but this must not be taken as a general definition, as it would lead to the pre- sumption of a co-existence of these two properties in all bodies, whilst, in fact, the metallic bodies are those only where. n they are found in combina- tion : the non-metallic bodies, though evidently possessing the electric principle, seem destitute of the magnetic. Hence we draw our primary distinction, that electricity is a general physical property of all bodies, and that magnetism is a particular property of metals.

528. ' If electricity and magnetism were iden- tical, their phenomena should be similar, and should be exerted under similar circumstances.

529. ' Electricity is capable of exerting attrac- tions and repulsions, and magnetism possesses the same attributes ; but this parity exists merely in the unqualified ideas of mere attraction and repulsion, without adverting to the particular circumstances under which these phenomena are made sensible, or the particular objects upon which their influence is exerted.

530. ‘ Electricity appears to attract all bodies, but repels itself. Thus, when a body in its na- tural state of electricity is brought within the influence of another body which contains a quantity of the electric principle redundant to its natural capacity, the first body will abstract the fluid from the second, and be attracted by it until they both become similarly electrised, when they will be repelled.

531. ‘ From these premises, we draw the con- clusion that the attractive and repulsive qualities of electricity are dependent upon the different re- lative proportions of this principle in each confin- ing body, with respect to its capacity, and to Jie

different relative proportions contained in both bodies with respect to one another.

532. ‘ But in magnetism these qualities are ex- erted under a complete dissimilarity of circum- stances; for, on two magnetic bodies being brought within the sphere of’ each other’s action, we find that the different parts of the several bodies act differently upon each other ; hence, •hat part of the magnetised body which we de- nominate the north pole, attracts that part of a similar body denominated the south pole, and, fe converse, any two of these similar and corre- sponding parts in different bodies repel each other. From this we may infer, that the attrac- tions and repulsions exerted by magnetic bodies are dependent upon different modes of action, being exerted in different situations in similar bodies, and not from any difference in the rela- tive proportions of the magnetic principle existing in the different bodies, as is the case in electricity.

533. ‘ The dissimilar modes of action employed by electricity and magnetism, in exerting their attractive and repulsive qualities, may be eluci- dated by the following experiment : If a piece of steel, highly magnetised, be brought within a short distance of another piece of steel in its natural state, the latter will be powerfully at- tracted ; and, until being drawn into close con- tact with the former, they will both exhibit a si- milarity of magnetic phenomena, and remain in that situation until d.sturbed by some extrinsic agent. Whereas, in order that these properties of attraction and repulsion exerted by magnetism should coincide in their modes of action with electricity, a mutual attraction should at first take place between the two bodies until both become equally magnetic, when they should be mutually repelled.

534. ‘ So far I have merely mentioned those properties of electricity which, from a too hasty observation, might appear also to obtain generally in magnetism ; but I might adduce many proper- ties in each of these which are not found in the other. This might, however, lead to a disquisi- tion which would form an octavo volume, and I must therefore refrain from trespassing on your valuable pages.

535. ‘ Though the renouncement of the princi- ple of identity of electricity and magnetism is a sufficient denial of the present theory, it will be found that, even with the admiss on of this prin- ciple, it would be incapable of accounting for many of its most brilliant phenomena. Among these arˆ the interesting experiments of the atr- traction of two parallel galvanised wires, when the route of the electric fluid is similar ; and their repulsion, when the electric fluid in each passes in a contrary direction. Another peculiarity which theorists have been unable either to recon- cile or smother, is the fact, that if a piece of soft iron be placed in a tube of glass, and herme- tically sealed, the whole being enclosed in a spiral conducting wire, on the galvanic stream passing through the spiral, the enclosed piece of iron will become strongly magnetic ; if we admit this as the immediate effect of electricity, we must deny the impermeability of glass by the electric fluid, and with it the theory of the Leyden jar, and in fact endanger the whole science of electricity.

536. ‘ The admission of an analogy existing be- tween electricity and magnetism, seems the effect of. a too superficial observation and hasty con- clusion, and the notion seems first to have arisen from the circumstance that lightning has been known sometimes to destroy the polarity of mag- netised needles, at others to have magnetised pieces of steel which had not before any sen- sible magnetic properties. After the observa- tion of these facts, and when the identity of lightning and electricity was afterwards estab- lished, it was presumed that common electricity would necessarily produce the same effects : this is found to be the case, and steel may be mag- netised either by the Voltaic pile, or by the elec- tric machine.

537. ‘ But, though electricity is thus capable of exciting magnetism in iron and other metals, still this property is not confined to electricity, for the same effect is produced by filing, drilling, twisting, and several other mechanical means. Electricity ought, therefore, merely to be consi- dered as one of the various means which nature employs to excite the latent magnetic properties of metals.

538. ‘ Having so far premised, I shall now en- deavour to show that the phenomena of electro- magnetism are merely some of the most

simple operations of nature, and that they involve nr/ difficulties but what are easily explained by her most simple laws.

539. ‘ If we admit of magnetism being an essen- tial property of metals, as no magnetic pheno- mena are sensible to our observation, except under particular circumstances, we must necessarily infer that this property exists in a latent state, which must arise from the natural disposition of the parts of the metal being unsuitable to the circulation of the magnetic fluid ; a necessary precedent to any magnetic phenomena.

540. ‘ That some metals are more easily mag- netised than others is a well-known fact, and this frequently obtains in similar metals which have been differently operated upon ; this must be ascribed to the above cause, viz. : — to the differ- ent organisation of different metals. Thus the latent magnetic principle in steel may not only be brought into action by means of electricity, but the same may > be effected by a blow, twist- ing, &c., and by being rubbed upon an already excited magnet; whilst, to excite the latent mag- netic principle inherent in gold, silver, brass, and other metals,- the transmission of an electric stream across the metal seems invariably neces- sary : this, by disturbing the mutual cohesion of the parts of the metal, and by opening a free passage for its own circulation, at the same time, effects a similar arrangement for the circulation of the heretofore latent magnetic fluid.

54 1 . ‘If the electric force thus employed be but small, and the parts of the metal through which it has been transmitted not sufficienfly removed without their mutual sphere of attraction, the magnetism excited will be but temporary ; for, immediately upon the discontinuance of the elec- tric stream, the parts of the metal by their natural attraction will resume their original arrangement, and the magnetic principle will again become quiescent. If, however, the elec-

trie stream, transmitted through the metal lie sufficiently strong to effect a total alteration of the relative situation of its parts, the circulation of the magnetic stream will remain constant. However, the permanence of the circulation of the magnetic stream does not seem so much to depend upon the intensity of the electric stream, as to its direction, with respect to the internal structure of the metal through which it has been transmitted.

542. ‘ Under the impression that all metals contained the magnetic principle in some degree, and also that the conducting wire, connected with the two sides of a battery, is actually mag- netic during the transmission of the electric fluid, as is demonstrated by several indubitable experiments, I was led to suppose, that the de- flection of a magnetic needle, and the other phenomena of electro-magnetism, were not the immediate effects of electricity, but of the tem- porary magnetism excited in the conducting wire, during the transmission of the electric fluid.

543. * With this view, I undertook a series of experiments with different conductors of galvan- ism (avoiding the metals as being capable of magnetic excitation), supposing that as these non-metallic conductors were incapable of ex- erting magnetic influence, they would produce no disturbance in the needle during their trans- mission of the electric fluid; and these expec- tations were very satisfactorily realised ; for on attaching any of these conductors to the poles of the battery, and presenting the needle, not the least sensible deflection was produced; but, on removing these, and substituting metallic con- ductors, a deflection of 90° immediately ensued.

544. ‘ In applying this position to electro- magnetism, it will not be necessary to recapitu- late the experiments which have not only appeared in most of the journals of science, but have also appeared compiled in a volume. Neither will it be necessary to apply it minutely to any of the experiments, as from its simplicity the experimenter may, by substituting artificial magnets upon a wire, instead of exciting its inherent magnetism by means of the transmission of the electric fluid, perform several of the most pleasing experiments ; and this would obtain universally, were he capable of adjusting his magnets with as much precision as is effected by electricity.

545. Before quitting this part of our iubject, in which every care has been used to give to each individual experimenter his due proportion of praise, it may be proper to slate that electro-magnetism is less indebted to Sir Humphrey Davy than is generally sup- posed, as will he seen by reference to a note from that distinguished individual to the Editor. He says “you have over-rated what I have done in the science. M. Oersted is the parent, and the very little I have done was a consequence of his original discovery.” It must however be borne in mind that Sir Humphrey communicated much valuable information to the Royal Society on the subject, and that most of Mr. Faraday’s Apparatus resulted from previous hints

furnished by the illustrious President of that Society.

546. When two electrified spheres an- made gra- dually to approach each other, and when there does not exist between the species and the quan- tities of electricity which they possess, the par- ticular relation which would be established by their contact, the thickness of the electric stra- tum at the points nearest each other, on the two surfaces, becomes greater and greater, and in- creases indefinitely as their distance diminishes. It is the same with the pressure exerted by the electricity against the mass of air intercepted b'etween the two spheres ; since the pressure, as we have mentioned above, is always proportional to the square of the thickness of the electric strata. It must at last then overcome the resis- tance of the air, and the fluid, in escaping under the form of a spark or otherwise, must pass, previous to the contact, from the one surface to the other. The fluid thus accumulated, before the spark takes place, is of a different nature, and of nearly equal intensity on each of the spheres. If they are electrified, the one vitre- ously and the other resinously, it is vitreous in the first and resinous in the second ; but when they are both electrified in the same manner, vitreously for example, there arises a decompo- sition of the combined electricity upon the sphere which contains less of the vitreous fluid than it would have in the case of contact ; the resinous electricity, resulting from, this decomposition, flows towards the point where the spark is pre- paring, and, on the contrary, the other sphere, which contains more vitreous electricity than it would have after the contact, remains vitreous over its whole extent.

547. The phenomena are no more the same after the two spheres have been brought in con- tact together, and are then removed, however little, from each other. The ratio which then exists between the total quantities of electricity with which they are charged, causes to disappear in the expression of the thickness, the term which before became infinitely great for a distance in- finitely small, and no spark takes place. The electricity of the points nearest each other upon the two spheres is then very feeble, for very small distances, according to a law which cal- culation determines, and its intensity is nearly the same on both spheres ; but, when they are unequal, this electricity is vitreous on the one, resinous on the other ; and it is always upon the smallest that it becomes of a nature contrary to the total electricity, which is conformable to the observations related above.

548. In general, all the varieties of these phe nomena depend on the relation which we est blish between the radii of the two spheres, also between the quantities of electricity wit' which they are charged. We may even dete mine these proportions in such a manner, tha at a certain distance, the thickness of the electric stratum on the small sphere may be almost cor slant, so that this sphere may remain near

other, almost as if it were not exposed to an\ action, not from the weakness of ..the electricit on the other sphere, but in consequence of a sor of equilibrium which is then established betwe

its action upon the smallest, and the re-action of this upon itself. In this case, the electricity diffused over the large sphere is vitreous in cer- tain parts, resinous in others, and its thickness in different points presents very considerable variations. M. Poisson has determined the proportions of volume and of electric charge necessary to produce these phenomena; and in this respect, as we have formerly observed, his analysis has anticipated the observations.

549. To cpmplete the case of two electri- fied spheres, placed in presence of each other, M. Poisson has calculated the changes which the greater or less distance produces on the state of the points most distant from those where the contact takes place. In this respect, he has found, that, in proportion as the two spheres ap- proach each other, the thicknesses of the electric stratum in these points tend more and more to- wards the values which they would have at the instant of contact. As they arrive at this limit, however, but very slowly, it hence follows, that even at very small distances, they differ yet much from what they would be, if the contact or the spark actually took place. Hence we conclude also, that the spark, when it takes place at a sensible distance, changes suddenly the distribution of the electricity over the whole extent of the two surfaces, from the point where it is produced, even to that which is diametri- cally opposite. This re-action is easily verified by experiment : we have only to fix, at certain distances from each other, a long and insulated conductor, couples of linen threads, with pith- balls suspended to them, and to communicate to this conductor a certain quantity of electricity, by which the threads may be made to diverge ; if we then draw successively, several sparks by the contact of an insulated sphere, whose vo- lume is not too small, all the threads will be observed to be disturbed, and shaken in a man- ner by each explosion, in whatever part of the conductor it is produced.

550. For the particular case in which the two electrified spheres are removed to a great dis- tance from each other, in relation to the radius of any one of them, M. Poisson has discovered formulae, which express in a very simple manner the thickness of the electric stratum, in any point of their surfaces. We shall here state these formulae as

they enable us to explain distinctly why conducting bodies, when they are electri- fied, seem to attract or repel each other, although from the manner in which electricity is distri- buted among them, and from its mobility in their interior, we cannot suppose that these phe- nomena indicate any sensible affinity which it nas for their substance Let r, ;•', represent the radii of the two spheres; call e,e', the thick- nesses of the strata which the quantities of elec- tricity they possess would form upon their sur- faces if they were left to themselves, and exempt from all external influence ; call a the distance of their centres, and place them so far from each other that the radius / of one of them be very small compared with a, and with a — r. Lastly, '•et u, u', denote the angles formed with the dis- tance a, by the rad i drawn from the centre of each sphere to any point on their surfaces, then

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the thicknesses E, E', of the electric stratum in these points will be expressed approximately by the following formulae : — E— 22 — 2

— — ar r (a2 — 2 a r cos. u \ r3)

E' = e'

2 a3

(1 — Scos.V)

551. Here, as in the experiments of Coulomb, the angles u, u, are reckoned from the points A and a, in which the surfaces of the two spheres would touch each other, if we brought them to the point of contact. The difference of symme- try in these expressions is owing to this, that the approximation from which they arise supposes the radius r' of the second, very small com- pared with the distance a — r,- which separates its centre from the surface of the other.

552. If it is required, for example, from these formulae to determine the state of an insulated, but not electrified sphere, which we present to the influence of another sphere charged with a certain quantity of electricity, we have only to suppose e' nothing in the equation of the second sphere, and it will then become

E' = 3!rTcos. u' + (3 cos.'u* — l)ll| a? L. 6 a J

553. At the point a, on the line A a, between the two centres, the angle u' is nothing. In this point then we have

3 e i3 / 5 r' cos.«=l;andE' = —

554. The thickness E', then, has always a con- trary sign to that of e, that is to say, that the electricity on this point, in the sphere of which the radius is r', is of a nature contrary to that which covers the sphere of which the radius is r.

555. At the point d, diametrically opposite to the preceding, the angle u' is equal to 180°, which gives

3e r'z / 5 r' cos. u' – – 1 ; and E' = + — (ˆ1 –

556. This value of E' has always the same

5 r' sign with that of e ; for the factor — is a frac-

• > a

tion far smaller than unity, since the distance a is supposed very great, compared with the radius r' ; then the electric stratum will be in this point of the same nature as upon the other sphere.

557. Thus we see arising out of the theory the important result which we have until now only established by experiment, but while a sphere c, not electrified, is placed in presence of another sphere C, electrified vitreously, for example, the combined electricities of c are partly decomposed; the resinous electricity that results flowing towards the part of c which is nearest to C, and the vitreous electricity towards the part which is farthest from it.

558. The thicknesses of the stratum in these two points are to each other in the ratio of

3a

tol— -— ; 3a

they are nearly equal, then, since a is supposed very great in relation to r'.

559. Hence it may be conceived that there must be upon the sphere c a series of points, in which the thickness of the electric stratum is

nothing, and which form a curve of separation between the two fluids. The locus of these points will be found by putting the general expression of the thickness E' equal to zero, which gives the condition

5 r'

0 r= cos. u' + (3 cos.* u' — 1) — – .

560. If the distance a were altogether infinite, compared with the radius r', the second member of this equation would be reduced to cos. if ; consequently, this cosine would be 0, which would give u' := 90°. The line of separation of the two fluids would then be the circumference of the great circle, of which the plane is per- pendicular to the line of the centres.

561. But if a is not infinite, it is at least very

great relatively to r'. Thus, the factor 7 will

still be a very small fraction, and the true value of cos. t/ will be equally so. We may, there- fore, in calculating, neglect 'the product of
—

by cos.* u', compared with the product of this same quantity by unity. With this modification the equation resolves itself and gives

,, , 5r'

Cos. u — — –

6a

In this case the line of separation of the two fluids is still a circle whose plane is perpen- dicular to the line of the centres; but the distance of this plane from the centre of the sphere, in the place of being nothing, is equal to

5 r'* T* cos. \f or — — , this distance being taken from

c to a, towards the electrified sphere C.

562. In considering only the degree of the equation which determines generally cos. «', there would seem to be two values of this cosine which would satisfy the conditions of our problem; but it will clearly appear, that one of those roots should necessarily be greater than unity, and, consequently, will not have here any real appli- cation, as it would correspond to an arc u', which is imaginary.

563. When we now consider how various, how delicate, and how detached from each other, are the phenomena this theory embraces ; with what exactness, also, it represents them, and fol- lows, in a manner, all the windings of experi- ment, we must be convinced that it is one of the best established in physics, and that k bestows on the real existence of the two electric fluids the highest degree of probability, if not an ab- solute certainty. But what is not less valuable for science, it teaches us to fix, by exact defini- tions, the true meaning which we must attach to certain elements of the electrical phenomena, which are too often vaguely enunciated, or even confounded, with others; although the know- ledge of each of them, individually, is indispen- sable to form a correct and general idea of the phenomena.

564. The first of these elements is the species, vitreous or resinous, of the electricity which exists at tlie surface of an electrified body, and at every point of this surface. This is deter- mined by touching it with the proof plane, and presenting this to the needle of the electroscope,

already charged with a known species of elec • tricity.

565. The second element is the quantity of this electricity accumulated on every point, or, what comes to the same thing, the thichiess of the electric stratum. This we still measure by touching the body with the proof plane, and communicating the electricity acquired by this contact to the fixed ball of the electric balance ; the moveable one having been previously charged with electricity of the same nature. The force of torsion necessary to balance the electric re- action communicated by the plane to the fixed ball, is at equal distances proportional to the quantity of electricity which it possesses, or, what is the same thing, to the thickness of the electric stra- tum on the element of the surface which it has touched.

566. The third element which it is of impor- tance to consider in the phenomena, is the at- tractive or repulsive action exerted by each ele- ment of the electric stratum upon a particle of the fluid situated at its exterior surface or beyond this surface. This attraction or repulsion is directly proportional to the thickness of the electric stratum on the superficial element which attracts or repels, and is inversely proportional to the square of the distance which separates this element from the point attracted or re- pelled.

567. In fine, the last element to be considered, and which is a consequence of the preceding ones, is the pressure which the electricity exerts against the external air in each point of the sur- face of the electrified body. The intensity of this pressure is proportional to

the square of the thickness of the electric stratum.

568. By adhering strictly to these denomina- tions, there will be no risk of falling into error from vague considerations ; and if we also keep in mind the development of electricity by in- fluence at a distance, we shall then find no diffi- culty in explaining all the electric phenomena.

569. To place this truth in its full light, we shall apply it to some general phenomena which, viewed in this manner, can be conceived with perfect clearness, but which, otherwise, do not admit but of vague and embarrassed explica- tions. These phenomena consist in the motions which electrified bodies assume, or tend to as- sume, when they are placed in presence of each other, and in which they appear as if they really acted upon each other by attraction or by repulsion. But it is extremely difficult to conceive the cause of these movements, when we consider that, ac- cording to the experiments, the attraction and repulsion are only exerted between the electric principles themselves, without the material sub- stance of the body, provided it be a conductor, having any influence on their distribution or their displacement. We cannot hence admit, that the particles of the electric principles, what- ever they may be, really attract or repel the material particles of the bodies. It is absolutely necessary, therefore, that the attractive and re- pulsive actions of these principles, whatever they are, be transmitted indirectly to the material bodies', by some mechanism which it is of ex- treme importance to discover, as it is the true

key to these phenomena. But we shall see that this mechanism consists in the re-action produced by the resistance which the air and non-con- ducting bodies in general oppose to the passage of electricity.

570. For the sake of greater simplicity, we may first confine ourselves to the consideration of two electrified spheres A and B ; the one A fixed, the other B moveable. Three cases may arise which it is necessary to discuss separately.

1 . A and B non-conductors.

2. A a non-conductor, B a conductor.

3. A a conductor, and B a conductor.

571- In the first case, the electric particles are fixed upon the bodies A and B, by the un- known force which produces the non-conduc- tibility. Unable to quit these bodies they divide with them the motions which their reciprocal action tends to impress upon themselves.

572. The forces then which may produce the motion of B, are, (1 .) The mutual attraction or repulsion of the fluid of A upon the fluid of B. (2.) The repulsion of the fluid of B on itself. But it is demonstrated in mechanics, that the mutual attractions and repulsions exerted by the particles of a system of bodies on each other, cannot impress any motion on its centre of gravity ; the effects of this internal action then destroy themselves upon each of the spheres ; there cannot result from it any motion of the one towards the other; and the first kind of force, therefore, is the only one to which we need pay any attention. If the electricity is distributed uniformly over every sphere, each of them attracts or repels the other as if its whole electric mass were collected in its centre. Thus, if we call a the distance of their centres ; r, r1 ‘, their radii ; e, e’, the thicknesses of the electric strata formed upon their surfaces by the quanti- ties of electricity introduced into them ; the electric mass of each of them will be 4 ir r2 e, 4 ir r1 e’, TT being the semi-circumference of which the radius is equal to unity, and the at- tractive or repulsive force will be expressed by

16»r»Kr’r/2ee’ v ,

3 , K being a co-efficient which

expresses the intensity of the force when the quantities a, e, e’, are each equal to the unity of their species. This force transmits itself di- rectly to the two spheres, in consequence of the adhesion by which they retain the electric par- ticles. We see, from this expression, that the force must become nothing, if e or e’ be nothing, that is, if the one of the two spheres be not pri- mitively charged with electricity. During the motion it suffers no alteration but what arises from the distance, because the two spheres being supposed of a perfectly non-conducting sub- stance, their reciprocal action produces upon them no new development of electricity.

573. In the second case, where A is a non- conductor, and B a conductor, the sphere B suffers a decomposition of its natural electrici- ties by the influence of A. The opposite elec- tricities which result from this decomposition unite with the new quantity which has been in- troduced, and dispose themselves together ac- cording to the laws of the electric equilibrium.

Here the motion of B towards A may be re- garded under two points of view.

574. Suppose, first, that without disturbing the electric equilibrium of B, we extend over us surface an insulating stratum, solid, without weight, and which may remain invariably at- tached to it. The electricity of B, unable to escape, will press as it were against this stratum, and, by this means, transmit to the particles of the body the forces by which it is urged. The forces which then act upon the system will be, (1.) The mutual attraction or repulsion of the fluid of Aon the fluid of B. (2.) The repulsion of the fluid of B upon itself, a repulsion, how- ever, which cannot produce any motion upon the centre of gravity of B. (3.) The pressure of the fluid of B upon the insulating envelope, a pressure, again, which being exactly counterba- lanced by the re-action of this coating, produces still no motion whatever. The first force, then, is still the only one to which we need pay any attention.

575. When the distance a of the two spheres is very great, relatively to the radii of their sur- faces, the decomposed electricities of B, are dis- tributed almost equally over the two hemispheres situated on the side of A, and on the opposite. In that case the actions which they suffer on the part of A are nearly equal, and destroy each other ; all the force the'n is produced by the quan- tities of external electricity, 4irr2e, 4:rr'V intro- duced into the two spheres, which, acting as if they were wholly collected in their centres, the

f u _-,i

force becomes still

576. When the two spheres are very far from each other, the co- efficient K may be considered a > constant, and the attractive or repulsive force va- ries not but in consequence of a change in the distance a. ,But this is only an approximation ; for, to consider the matter rigorously, the electri- cal state of the conducting sphere B varies in proportion as it approaches A, on account of the separation which this produces in its natural electricities. Hence also the reciprocal action of the two spheres ought to vary in a very com- plicated manner, and it is probably to this that we must ascribe the error which appears in the experiments of Coulomb, at very small distances, when calculated by the simple law of the square of the distance.

577. The supposition of an insulating envelope, without weight, serves

here merely to connect the electric fluid with the material particles of the body B, and we may always regard as such the little stratum of air with which bodies are or- dinarily enveloped, and which adheres to their surfaces. Yet the same result may be obtained without the aid of this intermediary ; but, in that case, we must consider the pressures pro- duced upon the air by the electricities which exist at liberty in B. These electricities, in effect, as well those that have been introduced, as those that are decomposed on it, move towards the surface of B, where the air stops them by its pressure, and prevents their escape ; they dis pose themselves then under this surface, as their mutual action and the influence of the body A require, resting, for this purpose, against the

air, which prevents them from expanding. But, reciprocally, they press this air from within out- wards, and tend to fly off with a force propor- tional to the square of t!ie thickness of the elec- tric stratum in every point. Decompose these pressures in the direction of three rectangular axes of the co-ordinates JT, y, z, the one x being in the direction of the straight line already alluded to, joining the centres of the two spheres, and add together all the partial sums ; it will then be found, as we shall show presently, that, in the direction of the co-ordinates y and z, they amount to nothing, and there only remains, therefore, a single resulting force, directed in the straight lineC c, that is, towards the centre of the sphere A. When the spheres are very distant from each other, compared with the radii of their surfaces, the decomposed electricities of B press the external air, in opposite directions, with a force nearly equal, and their effects destroy each other almost exactly. There only remains, then, the effect of the quantities e, e’, introduced into the two spheres, and from this there results an excess of pressure in the direction of the lines

of the centres, and expressed by , K being

a constant quantity for the two spheres, that is, exactly the same as was obtained by the other method. It is evident, besides, that this expres- sion is subject to the same limitation, since the pressures produced by the electric stratum against the external air, ought to vary with the quantity of natural electricity decomposed on B by the influence of A, in proportion as the two spheres approach each other.

578. The third case in which A and B are both conductors, is resolved exactly upon the same principles, either by imagining the two electrified surfaces covered with an insulating envelope, and calculating the reciprocal actions of the two fluids which are transmitted by means of this cover to the material particles*; or in con- sidering the pressures produced on the external air by the two electric strata, and calculating the excess of these pressures in the direction of the line which joins the two centres ; only, in this case, the attractive or repulsive force of these two spheres will vary in proportion as they ap- proacn each other, not only by the difference which thence arises in the intensity of the elec- tric action, but still farther by the decomposition of the natural electricities which will be going on in the two conducting bodies A and B.

579. To render the mathematical exactness of these considerations evident, we shall, for the preceding case, go through the calculation of the pressures exerted against the air byithe quan- tities of electricity introduced or developed on the two spheres. For this purpose take, first, on the sphere A, any point whatever which we may denote by M. The pressure exerted at this point against the air, depends on the thickness of the electric stratum there. In this manner, the pressure for any point of either sphere calculated for the unity of the surface, will be represented by ft E* upon the first, and A- K‘2 upon the second, E E’ being taken from the previous formulae. We shall now develope, successively, these two expressions. In the first piacf , .is thr pressure k E* varies from one noint

to another with the thickness of the electric stra- tum, we cannot suppose it the same, but in a very small space all round the point M, a space which must be considered as a superficial ele- ment of the sphere, and which we shall call «; thus the expression K E2 being calculated for the unity of surface, the pressure npon the small superficial element u will be K w Ea. Tms pres- sure acts perpendicularly to the spherical surface A, in the direction of the radius C M ; decom- pose it then into three others, parallel to three axes of the rectangular co-ordinates x,y, z, which have their origin at the centre C ; the first, x, being in the direction of the straight line, Cc, which joins the centres of the spheres, and the two others perpendicular to this line. To effect this decomposition, we must multiply the normal pressure K E2 by the cosines of the angles which the radius C M forms with the co-ord.nates

x,y, z ; that is, by — ,

— since, in the for-

mula of p. 84, we have represented by r the va- lue of the radius C M of the sphere A. We shall thus have the three following component parts

parallel to the co-ordinates x ; K —u E*

y

parallel to the co-ordinates y ; K —

parallel to the co-ordinates z ; K – ta Ea

But we must observe, first, that it is absolutely of no use paying any attention to the two last, be- cause the efforts which each of them makes, on the whole extent of the surface, mutually destroy each other, on account of the symmetrical dis- position of the electricity relatively to the axis of the co-ordinates x, which joins the two cen- tres. If we consider, in effect, the force, for

example, K -w E2 for the point M, situated in

the figure under the plane of the co-ordinates r,y, weshallfind above this plane, another point M' si- tuated quite similarly, and of which the co-ordi- nates x, y, z, will consequently be the same, with this only difference, that z will there be negative, on account of its opposite situation rela- tive to the origin of the co-ordinates. For this second point, the element w, and the pressure K Es, will be also absolutely the same ; ta on account of the symmetry of the surface of the sphere A; E* on account of the symmetrical disposition of the electricity round the axis of the co-ordinates x, which joins the centres of the two spheres A and B ; but the component force which proceeds

parallel to the co-ordinates z, will be — K – w E*, on account of the negative sign of z.; this force and its analogous one + K —o > E2 being equal,

and in opposite directions, will mutually destroy each other, and a similar equilibrium will be equally obtained, in this kind of pressure, for all the other couples of points M, M'. which cor- respond on the two sides of the plane of x,y. 581. A similar process of reasoning will prove

that the forces K 2-u > E2 will destroy each other two

and two, upon corresponding points, taken on two sides of the plane of x, z, and of which the co-ordinates will be f x, + y> H~ * f°r tne one> and \ x, — y •+• z for the other.

582. It remains, then, to consider the com- ponents of the pressures, taken parallel to the co-ordinates x; that is, parallel to the straight line which joins the centres Cc, of the two spheres ; and, indeed, from the symmetrical dis- position of electricity round the straight line, it is evident that it cannot have any motion but in this single direction ; and, consequently, these components alone must produce the tendency of the two spheres towards each other.

583. To obtain, in the simplest manner, the sum of all these components, it must be remarked,

that their general expression K —

that their intensities are equal in the points re- latively to which the co-ordinate x is the same, and which are consequently situated upon one small circle, parallel to the plane of the co-ordi- nates y, z. Besides, as all these points are equally distant from the line of the centres, it is clear that the total result of the equal forces which are applied to them will be in the direction of this line ; consequently, this will also be the direc- tion of the general result of all the efforts of this kind exerted upon the whole surface of the sphere A.

584. To obtain now, easily, the sum of all these forces, parallel to the line of the centres, which is here that of the co-ordinates x, let us begin by join- ing together the values of x which are equal and contrary : for the thicknesses E, of the electric stratum on the two hemispheres of A being al- most equal, from the supposition that the two spheres are very distant, the pressures cor- responding to opposite values + x anˆ — •* > must be almost equal also ; and, as the compo- nents which they give parallel to the co-ordi- nates x are in a contrary direction, their sum must be reduced to a very small quantity. To introduce this circumstance, call E, what E be- comes when we change f x into — x ; then the expressions of the corresponding components parallel to the co-ordinates x will be,

On the side of the ˆ x Tending to move

positive co-or- £ + K— u E* the air in the dinates x, j direction A B

On the side of the ~\ x Tending to move

negative co-or- > — K— «Ea the air in the dinates — x, 3 direction B A

585. We preserve the superficial element u always of the same value, as it is exactly alike in the two cases, on account of the symmetrical form of the sphere on the two sides of the plane of the co-ordinates y, z ; adding these two com- ponents to each other, with their actual sign, their sum will express the element of the total result- ing force, which tends to carry the air in the di- rection A B. This, then, will be

K — « (E* — E2), or, what is the same thing,

(E-E).

586. But, from the preceding formula, we have generally

er

or r(a2 — 2ar cos. a + r3) To change --x into — x, + cos. u must be-

come — cos. u, because cos. w~— ; for this se- cond case, then, we shall have

ar r (a?--2ar cos. w f r3) consequently, by subtracting these equations fron, each other, we have

i 1

(a2 + 2«r cos. u + r*)3

ET? — •^~ Cj _-

(a'—Zarcos.u or, what is the same thing, and is better adapted for approximations,

- -

E — Erz

_> (l+^cos u+— \>

V W fl^ X

(

587. Since we suppose the two spheres very dis- tant from each other, compared with the magni-

tude of their radii, – will be a very small frac-

tion ; hence we may develope this expression for E— E into a converging series of the ascending

powers of— , this will be effected by the binomLl

theorem ; and taking only the first power of ,

which, in the case we are considering, will con – tain an infinitely great proportion of the tota; result, compared with the other powers, it will become

e’r’a t „ 3r 3r J

E — Ezi — jl — cos. u — 1 — cos. u > or i a a

_, _, — 6r’Vcos. u or by reduction k. — h, — – 7, — •

or

This value of E— E must now be multiplied by E + E, to form the factor E2— E4 which enters into the expression of the total resulting force ;

yit but since E— E is already of the order — , it is

evident that, in E f E we must confine our selves to the terms which are not divided by a , this limitation reduces the value of E + E to 2 e, and employing this to multiply E — E, there results

— 12eeV*

E»— E”n — 5 – cos. M. a1

588. It only remains to substitute this value in the expression of the resulting force parallel to the co-ordinates x, which we have found equal to

ff:.™ (E8— E2) for the superficial element »;

and by putting for —its value cos. u, the ex-

pression will become

— 12Kee’r’* ,

- i— – w cos.’ *.

it will be directly proportional then to the quan- — ities 47rVe, 4irr/2e’ of external electricity which

589. Each of these partial results is proportional to the superficial element u, and to the square of the cosine of the angle, which these elements form with the axis of the co-ordinates x. But, if we compare them together upon different spheres, this angle will always be expressed by the same values ; for the equal values of u, however, the superficial element u will vary in magnitude pro- portionally to the square of the radius r of the sphere. Consequently, the sum of all the va- lues of the factor w cos.* a, extended to every sphere, will only vary from each other in the ratio of the square r1; it may be represented then by K’r*, K’ being a constant and numerical co- efficient which may be found, and which, in reality, is found by the processes of the integral calculus. Supposing it known then, the total- result of the pressures parallel to the co-ordi-

. — 12KK’ee’rV»

nates x will be r . 11 J

a3

It will tities

they possess, and inversely proportional to the square of the distance of the two centres. When the quantities of electricity given to the two spheres are of the same nature, whether vitreous or resinous, the values of e and of e’ must be con- sidered as having the same sign. In that case the expression (1) is negative; that is to say, according to what has been previously admitted, that, in this case, the air which surrounds the sphere A, is more pressed in the direction B A, than in the direction AB. It will not then press equally the sphere A, as it did before it was electrified ; it will press it less on the side which is most distant from the other sphere, since it is in that direction that the electric reaction is the strongest. Consequently, if the sphere A is at liberty to move, and deprived of its weight, or if its weight be sustained by a thread of suspension, it will put itself in motion from the side where the atmospheric pressure has become the weakest, that is to say, that it will recede from the other sphere B.

590. The contrary would happen, according to our formula, if the quantities e, e', of electricity in- troduced into the two spheres were of a different nature, for then it would be necessary in the cal- culation to give to them different signs. The for- mula (1), which represents the total result of the pressures exerted against the air parallel to the line of the centies, will then become posi- tive ; that is to say, according to what has been already agreed on, the external air will be more pressed in the direction A B, than in that of B A ; the sphere A will move then in the diiection in •which the external pressure will have become the weakest, that is towards the sphere B, agree- ably to observation.

591. We have hitherto only considered the effect of the pressures round the sphere A, but the same reasonings and calculations will apply to the other sphere ; only we must then employ, in- stead of E and E, the expressions of the elec- tric strata which correspond to them, and which we have seen to be

It might be shown for this case, as well as for the other, that there cannot be any inequality of pressure but in the direction of the co-ordinates x; then comparing the points of the surface, which correspond to the two sides of the plane of the co-ordinates y, z, we shall find that the element of the resulting force of the pressures parallel to the co-ordinates x, is in general ex-

pressed by

K.JW'

E'3 — E*2) in representing bj

E ' what E' becomes when we change + x into — T, that is to say, + cos. u into — cos. u, the angle u' being here reckoned from the point a, situated on the side of A upon the line of the centres. By next considering the spheres as very distant, we shall obtain in the same manner the value of E' — E'. Approximating no farther

than the first power of – , this will give E' — E'

cos. u'. We have then only to take

E | E' — 2e', and putting these values in the expressions of the partial resulting force, it will

— 1 2Kee'rV cos.2w

become — = It may be de-

a2

monstrated as above, that the sum of the factors at cos.a u' will be proportional to the square of the radius of the sphere B, and may besides be represented by KV2; K' being the same nume- rical co-efficient we have already employed. For the total resulting force then, the expression will

E' = e'-'

cos. u'f

finally become — , that is, exactly

the same which we have obtained for the other sphere, which ought to be the case, since in these sort of phenomena action and re-action are always equal. Here, as in the example imme- diately above, the positive sign of the expression will signify that the resulting force of the pres- sures exerted against the air round the sphere B, is directed towards the other sphere, and the negative sign will signify that this resulting force is directed the opposite way. The first case will take place when the electric charges e e' are of a contrary nature ; in that case, the sphere B will advance from the side where the atmospheric pressure is weakest, that is towards A ; the other case will happen when the electric charges e e' are of the same nature, then B will recede from A.

592. The common expression for the result of the pressures vanishes for both the spheres, when e or e' is nothing, that is, when one of them is in the natural state. This seems to indicate that they would then neither approach nor recede from each other, while, in reality, we know that in this case they always approach. This ap- parent contradiction is owing to the degree of approximation at which we stopped our de- velopment of the above expression. We have supposed our two spheres very distant from each other, compared with the radii of their surfaces ; the result of this is, that whatever be the quan- tity 47rr2e, 47rr'V of external electricity which we have introduced into each of them, it will

r\ 3 cos2u') distribute itself almost uniformly over the two

hemispneres, anterior and posterior ; so that the

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iiffeienee of the pressures exerted against the air bv these two hemispheres, which is the only cause of motion, will be very small ; and it is to this degree of minuteness that we have con- fined our approximations in developing E2 — E”. 593. If, however, the one of the two spheres, B for example, is only electrified by the influence of the other, which we always suppose very distant, the development of its natural electricities will be still very feeble, and of the same order of minuteness with that to which we have confined our approximations; but this weak electricity still dividing itself between the two hemispheres of B, in a manner nearly equal, as in the ex- ample immediately above, the difference of pres- sures round the two hemispheres will become very minute in a still lower degree — will become a quantity of the second order of minuteness, and, consequently, cannot be found in our de- velopments, such as we have limited them. To obtain it complete, we must not, in the calcula- tion of E’ + E’ confine ourselves to quantities,

T

independent of—, but take its whole value.

We shall then have, first of all,

3er* , 5erV

E — e — – cos. u + -—, (1 — 3 cos.2 u’) a Z d

then changing + a* into — x, or f cos. u’ into — cos. u’t we shall have,

Ser’cos.w’ 5erV ,

E’ = e’ + – ~s – + ˆ3 (1 — 3 cos.2 M)

then adding these two expressions,

E’

— 2e’ +

(1 — 3 cos.8 u’).

594. This complete value of E’ \ E%‘will now no more vanish when e’ is nothing ; but it will be seen that the terms which remain are of the order of those which we have neglected in our first approximation. Making, then, here e’ equal to nothing, it remains,

E’ + E ‘ = =

(1 — 3 cos.V)

we also find, as before,

6er2 ,

E — E •= . — — cos. u’ a?

with these values, the expression of the paitial resulting force

ILf^’(E”— E%‘2), or K w’ (E”— E,‘2) cos. u’

becomes

30Ke2rV

3

. u cos.2u’(l — 3 cos.2w’).

595. It only remains to take the sum of it over all the extent of the surface of the sphere B; but, in this operation, the variable factor, w’ cos.2 u’ (1 — 3 cos.2 /**), will give a result proportional to the square of the radius /of the sphere B, and which we may consequently represent by K” r‘2, K** being a constant numerical co-efficient dif- ferent from K’; thus, the total resulting force

. , — 30KK*e2r4r‘3

will at last be ; .

er

596. This force, then, will be an order of mi- nuteness, much inferior to that which we obtained ai first, when e’ was not supposed to be nothing, since the radii there are divided by the fifth

power of the distance of the centres of the two spheres, instead of the simple square which we had in the other approximation. It is obvious, that experiments of this kind, made with the electric balance, by charging only one of the balls, might produce an error as to the true law of the phenomena, if the theory did not throw light upon them ; for one might be led to con- clude from them, that the apparent attraction de- termined in this case is not reciprocally as the square of the distance of the centres of the two spheres, which nevertheless

would be contrary to the truth : consequently, when it is meant to put this simple law of the sqbare to the test, the balls must not be allowed to approach so near to each other, that the electricity developed by their re- ciprocal influence, may bear any sensible pro- portion to the quantities of external electricity introduced into them ; and this is the reason that, in these experiments, it is always more certain to employ, instead of balls, small circular discs of gilt paper ; for, on account of the thinness of -these discs, the quantities of vitreous or resinous electricity developed at their surfaces, having scarcely any room to separate from each other, their actions on the exterior bodies must be always nearly alike, and cannot, therefore, alter the results any more than if their development had not taken place.

597. The theory, which we have thus explained in regard to spheres, applies equally well to bodies of any form whatever; but here the difficulty of the analysis prevents us from anticipating any thing but the general effects which the different pressures produce, without our being able to reduce them to numbers. Here it will suffice to have established the general mode of reason- ing applicable to all the questions of this kind, and to have followed out the whole develop- ment for the single case, which analysis has been able as yet completely to surmount.— We shall add, that before the theory had ac- quired its actual precision, it could not be clearly conceived how the attractions and repulsions, which in reality only take place between the elec- trical principles themselves, were communicated to the material particles of the electrified bodies; and philosophers were reduced to the necessity of denoting this effect by the vague word tension, which represented the electricity like a kind of spring placed between the bodies and tending to make them approach or recede. A few mis- cellaneous illustrations, including the latest and most important discoveries, must conclude our article.

NEW GALVANIC BATTERY FOR MEDICAL PURPOSES.

598. The object of this battery is to increase the galvanic power, ad libitum, and to continue it for a great length of time, without any fresh excitation. Thes£ most desirable results are ef- fected by a metallic and a semi-metallic sub- stance, combined with another less oxidable metal, the surfaces of which are acted on by one or two mineral acids diluted with pure water. The power and duration obtained by these means are very great, though contrary lo the hitherto acknowledged laws of galvanism, which require

•wo dissimilar metals and one interposed fluid 10 (levelope the galvanic influence. This appa- ratus is designed for philosophical experiments on animals, and for the use of an operator in full practice. It is not only capable of increased power, but, by a simple contrivance, it perpe- tuates its action to almost any length of time for a succession of operations ; these advantages are obtained by the shape and position of the plates ; for, instead of being square and stationary, as in the common battery, they are circular and made to revolve on an axis at the will of the operator. As only one segment of the circle is used at one time, several different operations may be effected in each revolution of the entire circle, without the trouble of wiping any part of the circle. A constant stream of galvanic fluid may thus be exhibited almost ad infinitum, and the unpleasant effluvia arising from the frequent addition of acid, as in the common mode, is pre- vented. The apparatus being concealed from view, in a handsome covered box, cannot give alarm to the most timid patient. The greatest iacility is afforded in removing the oxide from i he surfaces of the plates by a few revolutions round its axis, and the virtue of the acid solution in the cells remains in full strength for a very long time.

599. M. La Beaume's portable galvanic bat- tery consists of a box containing four series of plates, and four divisions made with pieces of glass and baked wood, which are inter posed to divide the box for the plates; the ends of each series are connected by a hole in the plates, so that a connecting wire is not re- quired. There is also a space for a bottle of acid. The inside of the box cover contains the apparatus necessary for the galvanic operation. By a few simple directions the battery may be preserved in good order for some months, or even years. The cover, after the apparatus is taken out of it, is placed on the box, and, sliding into a groove, is fastened by a pin.

600. Another portable galvanic battery for suspended animation. This apparatus possesses a very great galvanic power in a small compass, and its action can be perpetuated for as long a time as may be necessary, which is accomplished by the combination of different metals. It con- sists of 300 or 400 plates in a box about three feet long, three inches deep, and three inches wide ; the circular plates are about the size of half a crown, and when the apparatus is taken out, the box is filled with diluted nitric acid, and the row of stringed plates is placed horizon- tally on the two supports of the battery.

601. A third portable galvanic battery in- tended to be used in suspended animation from drowning, &c., is contained in a walking-stick, for the convenience of town or country practi- tioners, when no conveyance can be immediately obtained for a larger battery. This

galvanic ap- paratus is contained in a hollow stick, with three divisions ; the first division contains a bottle of acid, salt, and linen rap, covered by a metal cap affixed to the handle of the stick, and which is to lie used as a cup to mix the acid with watei. The second division is composed of two parts, one sliding on the other by means of a groove ;

when opened, it forms a pair of galvanic batte- ries of 300 or 400 plates of .combined metal, which are connected together by an arched wire. The third division, which is the smaller end of the stick, contains a small lancet, the conducting wires, &c., and is also held by the hand during the operation. This stick contains all that is necessary for the galvanic process except water, which can be obtained on the spot. The power of this battery is rendered equal to the following, by the combination of the plates, the strength of the acid, and the horizontal position of the plates, which prevents the circuit of communica- tion being formed by the expressed moisture of the interposed cloths, which must result from a perpendicular position of the pensile pile, as in- vented by professor Aldini, and improved by Dr. de Sanctis.

602. The most poitable battery consists of a series of plates of the for id and size of a shilling ‘ or a sixpence ; each pair being intersected by a piece of cloth, on the principle of professor Al- dini ; and this battery is more powerful than his, because the semi-metal is combined with one of the other metals. This battery consists of 200 or 300 plates, and may be conveyed with per- fect ease in the pocket.

ELECTRICITY DEVELOPED IN CAPILLARY ATTRACTION.

603. M. Becquerel is said to have demon- strated, that there is a sensible development of electricity during the ascent of liquids in capil- lary tubes. He first obtained this result by in- creasing the sensibility of Schweigger’s galvano- meter. He placed three of these instruments together, so that the magnetic needle of the middle one deviates from its ordinary direction, by the lateral effects produced upon each of its poles by the contrary poles of the two other needles. From this arrangement it follows, that, when an electric current passes into the apparatus, tending to bring the needle into the plane of the magnetic meridian, the middle needle will be as much less retarded in its process as the poles, opposite to its own, of the other two needles are more remote from it, consequently, the oscilla- tions will have a wider extent than if there were only one galvanometer.

604. In order to observe the electricity of ca- pillary action, M. Bacquerel could not employ glass, as it is not a conductor of electricity

; but he employed sponge of platinum, aud small pieces of charcoal. Pure hydrochloric acid, much diluted with water, is poured out into the platinum dish, which communicates with one of the ends of the wire of the galvanometer ; and into the dish is plunged sponge of platinum, which is fixed at the other end of the wire. At this contact there is produced an electric current, which goes from the sponge to the acid, and the direction of which is contrary to that of the cur- rent which would have been obtained if the acid had been attacked by the metal. As the inter- stices of the sponge are filled with the fluid, the current diminishes, and it ceases when the sponce has absorbed all the liquid whHi it can contain. SoTY\etim.—s the current takes another direction, but the cause of that is not known.

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The same effect is produced with nitric acid, but it is less marked. The same result was obtained with a small piece of charcoal, prevented from touching the platinum by a band of papier Joseph.

ELECTRICITY DEVELOPED IN SOLUTIONS AND MIXTURES.

605. By means of the same apparatus, M. Bec- querel has discovered that an electrical current goes from the acid to the water, when sponge of platinum, that has imbibed distilled water, is plunged into the dish of platinum, containing hydrochloric acid.

606. In order to observe the electricity of so- lutions of alkalies in water, he fixed in the pla- tina pincers a fragment of hydrate of potassa or soda, enveloped in papier Joseph, and then plunged it into distilled water in the platina cup. A current was thus produced from the water to the alkali.

607. M. Becquerel also found that electricity was developed during the mixture of sulphuric and nitric acids.

ELECTRICAL EFFECT.

608. The following effect is attributed by Mr. Fox, who observed it, to electricity. A piece of iron pyrites was fastened with a piece of brass wire in a moss-house, the moss being damp. On the following day, the wire was found broken and excessively brittle, and, in those parts in contact with the pyrites, much corroded. On one occasion, after the brass wire had been fastened once or twice round a piece of iron pyrites, and had remained for some days en- veloped in damp linen,

the constituents of the brass wire were separated, and it was converted into copper wire coated with zinc.

CONDUCTION OF ELECTRICITY BY AMADOU.

609. It is remarked, in a late number of the Journal de Physique, that the effect of a piece of amadou, in drawing off electricity from charged surfaces, is equal to that of a metallic point. For this purpose, it requires to be dry ; and, it may be observed, that at the time a number of fibres rise up and point towards the elec- trified surface. For the rapid abstraction of electricity, it requires, however, that besides offering points, the body should possess a high conducting power, which was not previously known to belong to this substance.

EFFECT OF VOLTAIC ELECTRICITY UPON AL- COHOL.

610. M. Lindersdorff produced an ethereal fluid by the action of the Voltaic pile upon alco- hol ; and, by continued electrisation, a mixture of equal parts of alcohol and liquid ammonia lost, its inflammability, and acquired a bitter flavor, yellow color, and nauseous odor.

IMPROVEMENT UPON THE DRY PILE OF ZAM- BONI.

611. In constructing the dry galvanic pile of Zamboni with tinned paper and black oxide of manganese, M. Zamboni recommends the use of tinned paper, which, when disposed alone in

the pile, has the same polarity as wntn it it em- ployed along with oxide of mangflbese. The reason of this is, that a pile of tinned paper has electrical poles. But, whatever be the kind of paper which is used, the pile always increases in energy, and its polarity always coincides with that of a pile of tinned paper and oxide of man- ganese, when the paper has been impregnated with a solution of sulphate of zinc, and after- wards dried. In preparing the paper, M. Zam- boni avails himself of a dry season. He spreads the solution of sulphate of zinc over the face of the paper which is not covered with tin, and having dried it, but without taking away from the paper its own natural humidity, he covers this face with very dry oxide of manganese. The pile being thus constructed, it is carefully defended from the air. If the paper is not fine and unsized, a little alcohol should be added to the solution of sulphate of zinc. The best man- ner of preserving the pile, as Zamboni has ascer- tained by long experience, is to enclose it in a glass tube, whose diameter is somewhat greater than that of the discs, and to run into the intermediate space a moderately warm cement of wax and turpentine. A pile of 2000 discs, constructed in this manner, gives a

spark visible in day-light. M. Zamboni recommends the perfect insulation of all the parts of the pile that require to be in- sulated.

THERMO-ELECTRICITY.

612. It was proved, by professor Sebeck, that antimony, brought into contact with another metal, and nequaliy heated, would cause the magnetic needle to deviate from its meridian. With a view to ascertain this fact, and to in- vestigate whether this property was restricted to antimony, or extended to other metals, the following experiments were made.

613. (1.) A parallopiped of antimony was procured, about fifteen inches long, and one inch square. This bar was prepared by treat- ing crude antimony with sulphate of potassa and tartrate of potassa. A slip of copper was at- tached to both ends of the antimony. It was kept in close contact with the antimony by means of copper rings. This bar was laid in the direction of the magnetic meridian. A needle was placed on the antimony, and the ends of the bar were successively heated by a spirit-lamp. When the heat was thus applied to the south end, the magnetic needle imme- diately, and strongly, deviated to the east. The extent of this deviation depends on the length, mobility, and strength of the needle. It has been seen as much as 68°. When the heat spreads more uniformly through the metal, the deviation decreases, and the needle gradually returns to the magnetic meridian.

614. Supposing the deviation to the east at its maximum, the lamp burning under the end facing the south, if it then be removed, and placed under the end facing the north, the devi- ation to the east will decrease, and it will change into a deviation to the west.

615. In general, if the heat is applied under the north end of the ˆar, the needle will deviate to the west.

ELECTRO-MAGN ETIS

M.

PROFBSSOR CUMMING'S TABLE OF THERMO- ELECTRICS.

616. In the following table of thermo-elec- trics, by professor Gumming, each substance is positive to all below, and negative to all above it, two being used together.

Bismuth, Cobalt, Brass," Charcoal, ? Mercury,? Silver, Copper, Plumbago, S Nickel, i Tin, Gold, Iron, >

Platina, Lead, Zinc, Arsenic, $

Palladium, Rhodium, Antimony.

ANALOGY BETWEEN THE PHENOMENA OF GAL- VANISM AND THOSE OF FERMENTATION.

617. M. Schweigger has observed this analogy in the following points : —

618. (1.) Galvanic piles, like fermentable mixtures, exhibit their effects only by the reci- procal action of three different bodies.

619. (2.) The products of galvanic action are two, an oxidated body, and a hydrogenated body. The same happens with the products of fermen- tation, which are alcohol and carbonic acid.

620. (3.) The presence of electro-negative bodies favors the decomposition of water, whilst, according to Dobino, a similar effect goes on in fermentation.

EXPERIMENTS ON THE IGNITIOM OF WIRE.

621. The following experiments on the igni- tion of wires are very interesting. Being con- nected with the phenomena of caloric developed in the action of the galvanic battery, they may be acceptable as a contribution towards that mass of facts which will at some future period assume a more scientific form.

622. In these experiments, Mr. Murray used four porcelain troughs, each containing ten cells, and each cell supplied with one and a half fluid ounce of the strongest nitrous acid, being filled up with water to the depth of two-thirds, and properly mixed with a glass rod. Nitrojs acid, in this proportion, he has ever found best calculated for the development of galvanic ac- tion. Fifteen to eighteen inches of fine platinum wire may be readily ignited. He of course used the triad (four inches square), for which we are indebted to the sagacity of that ingenious and profound philosopher, Dr Wollaston.

623. When sulphuric acid is employed, as is done most injudiciously by some, in mixture with the nitrous acid, the vapor is perfectly in- tolerable, and much of the action is no doubt lost and expended in vapor, and in the great tem- perature developed at the same time.

624. In connexion with the subsequent detail, it may be proper to mention, that a riband of a platinum foil, was suspended from one of

the con- ductors, and brought in contact with the mer- curial surface (that metal being contained in a shallow glass-basin), while the other one is plunged into the mercury, deflagrates with great brilliancy, and oscillates like a pendulum.

625. We may now state generally, that steel and platinum wires may be intensely ignited, in alcohol, ether, and its vapor, oil of olives, naph- tha, and sulphuret of carbon. Mr. Murray has not succeeded in igniting these in water, and

concludes that it is owing to the superior con- ducting property of that fluid. The degree of ignition, all circumstances being the same, will correspond with the .elations in which the me- dium containing the wire stands to conduction.

626. Platinum and steel wires may be ignited in, carbonic acid gas, hydrogene, cyanogene, and olefiant gas.

627. Gold wire was wrapped round platinum in all its extent; and this double wire placed as the uniting wire between the conducting rods It was ignited throughout, and the fusion of the gold wire supervened, the gold being collected into little spheres of a prolate form, at equal distances, and appearing like a row of beads.

§28. Steel wire was, in like manner, entwined with gold wire* It also was ignited in its whole extent ; the gold wire was fused, and exhibited the bead-like form.

629. Platinum was woven with copper wire. The platinum wire was ignited throughout ; the copper wire not undergoing fusion nor even ignition.

630. It may here be remarked, that, in the ignition and combustion of steel wire, for in- stance, the fusion is primarily confined to the sur- face, and the fused scale or film may, perhaps, not penetrate more than one-third the diameter of the wire, while the remaining part may not have undergone the least physical change. The fused matter formed itself into spherules, with regular intervals. This appears to be a curious phenomenon ; and it will also be observed that, when the calorific heat is short of ignition, the steel wire will be blued in patches.

631 . Steel wire was doubled for one-half its extent ; the single and denuded part was alone ignited.

632. Platinum wire was doubled for one-half its extent ; and that part

only which was single could be ignited.

633. Steel wire was partly enveloped in gold wire; only that portion of the steel wire which was void of the gold wire could be ignited ; the part encased in the folds of the gold wire was partially blued, and was rendered magnetic.

634. Copper wire was twisted round platinum wire, for half the length of the latter. The un- covered platinum was alone ignited. Copper wire was twisted around steel wire in the manner of the preceding ; the naked steel wire was ignited alone. Steel wire was twisted round platinum wire, for one-half its length ; only that portion of the platinum wire excepted^ from the steel could be ignited.

635. Peculiar phenomena are connected with these exhibitions. When the second wire is carried through the whole extent of the uniting wire, ignition is superinduced throughout ; but when only partial, the ignition is confined to the denuded portion.

636. Copper, platinum, and copper wires, were linked together, and made the communi- cating chain. The platinum placed between the copper wires was ignited alone.

637. Platinum, copper, and platinum wires, exhibited, on the tract of either platinum wire, ignition, while the intermediate copper wire re- mained dark and unignited.

638. In the case of steel, copper, and steel wires (so linked together), the steel wire on each side was ignited, while the copper wire remained unaltered.

639. In the chain of platinum, steel, and pla- tinum wires, the platinum wires were exclusively ignited, and the steel unignited.

640. In that of steel, platinum, and steel, the intermediate link of platinum was ignited, and the steel wire on each end remained without ignition.

641. In a ghain of gold, steel, and gold, the gold wires on each end were ignited and fused, and the intermediate steel was not ignited.

642. In one formed of steel, gold, and steel wires, the central one of

gold was exclusively ignited.

643. Mr. Murray next tried spiral coils of platinum and steel, of various diameters, and found that they were ignited, though curvilinear, in the same manner as if the wires were not curved.

644. The preceding experiments seem to prove, that the caloric developed in galvanic action, has no relation with the medium in which the ignition takes place; and that it is evolved in some inverse ratio of the conducting properties of the uniting wire.

645. The phenomena of ignition in links of various metals united into a chain, seem con- nected with the passage of a material agent through them, displaying its powers in greater or less ignition, according as the passage is in- terrupted, or its fire more or less retarded, and, of course, as the amount of the resistance. The agent or agents, therefore, developed in transitu from pole to pole, will swell into igni- tion, if the conducting power of the medium traversed is low, or even burst its metalline con- fine, and expend its impetus in all the brilliancy of an intense combustion. The gold, platinum, and copper wires, were ˆth of an inch in dia- meter; and the steel the finest harpsichord wire.

DESCRIPTION AND USE OF A VERY SENSIBLE ELECTROMETER, FOR INDICATING THE KIND OF ELECTRICITY WHICH is APPLIED TO IT.

646. Some years back, M. Behrens published the Description of an Electrometer, which in- dicates the kind of electricity that is presented to it; but it appears to have been forgotten, with the dry electrical columns, which formed an es- sental part of the apparatus. The electrical perpetual motion of Zamboni is similar to this electrometer, and M. Butzengeigerwas employed to execute one of them, which we may proceed to describe.

647. A cylindrical vessel of glass about two inches and a half in diameter, and three and a half high, has fitted to it a brass cap, from which two small dry electrical columns descend into the vessel, and are attached to the cap by screws, so that the one has its positive and the other its negative pole, making a slight projection above the cap. Each column is composed of 400 discs of gold and silver paper, glued together, and three lines in diameter, so as to fill two tubes of varnished glass. Each of thesa tubes •s terminated below by a ring of brass, projecting a little and rounded, which is in electrical com-

munication with the discs. When the brass cao is in its place, the

columns descend verticall”, and the lower ring is one-fourth of an inch di» tant ‘from the bottom of the glass. The axes of the columns are one inch and seven lines dis- tant, but. may be brought nearer one another. From the centre of the cap rises a tube of glass, varnished within and without, and within the tube is a brass wire kept iti the axis by a cork, but touching the tube no where else. At the lower end of the brass wire is suspended a piece of gold leaf, two inches and a half long and three lines wide, exactly in the middle of the interval between the two columns, and parallel to their axis, if they are accurately vertical. At the upper end of the brass wire is a small brass ball, upon which may be screwed one of the discs of a condenser, as in the electrometer of Volta. By this arrangement, the electrical columns which Behrens had placed without the glasˆ which defends the gold leaf from the agitations of the air, are placed within the glass, so that their position is not only better preserved, but they are defended so completely from mois- ture, dust, &c., that they retain the same eler trical intensity.

648. This electrometer is used in the following manner : — The cap of metal is put in commu nication with the ground by means of a metallic wire, and by touching the brass ball, any acci- dental electricity is discharged, which may be long to this part of the apparatus. If the skin is dry, the touch of the finger is not suffi cient. As the gold leaf is suspended between the columns, at the level of the rings of metal which terminate them, the one positively and the other negatively, the gold leaf is attracted equally on both sides, and remains quietly in the middle in its ordinary state ; but if, by means of the metallic wire, we communicate to it the weakest degree of electricity, the lower extremity of the gold leaf is attracted by the ring which possesses an electricity opposite to that which is commifnicated. Having come in con- tact with this ring, it is successively repelled and attracted by the opposite ring. This oscillatory motion continues till the gold leaf attaches itself to one of the columns, from which it may be easily detached by touching the brass wire, so as to dis- sipate its electricity, and by shaking the instru- ment. In order to determine the nature of the electricity, the upper poles of the two columns which project above the brass cap have the signs + and — upon them, and the electricity re- quired is that which is indicated by the sign of the column towards which the gold leaf first moves, or which it first touches, when the elec- tricity is stronger.

649. By this electrometer, strong and weak degrees of electricity may be equally w—41 ex- amined. In the first case, the electrified body is made to approach slowly and at a distance the ball of the electrometer, till the gold leaf is put in motion towards one of the

columns. If, for example, we bring an excited stick of sealing-wax to the distance of about three feet from the ball, we shall observe a motion of the gold leaf towards the column marked — It we bring it to a less distance, it will strike tl>e column, from which it may be easily detached.

by bringing the wax still nearer. In the second case, the electrified body must be moved much nearer the ball, and brought into contact with it, if necessary, till the gold leaf is put in action. This degree of electricity is so weak, that it would be absolutely insensible in the ordinary electrometer of Bennet.

650. When the electricity is still feebler, we may advantageously employ a condenser adapted to the instrument. The circular plate, on the margin of which is screwed the ball of the elec-

/trometer, replaces the cover of the condenser, and a plate of disc furnished with a glass handle, and which is placed above the first, represents the base. These plates are covered with a thin coating of amber varnish on the faces which are brought into contact. If we wish to try a very weak electricity, we first touch, in order to deprive it of its electricity, the inferior plate, or the wire which carries the ball; we then place above it the other plate, and.afterwards touch the lower plate or its wire, with the body whose electricity we wish to examine, touching, at the same time, the upper plate, in order to deprive it of its electricity. The upper disc is then removed by its glass handle, and we observe towards which of the two small columns the gold leaf is carried, and the sign marked upon this column will indicate the kind of electricity., If, for example, we put in contact with the lower surface of the lower plate of the condenser a small disc of zinc, about three-fourths of an inch in diameter, and press it against this plate, without touching the plate with the finger, and if we touch at die same time the upper disc of the condenser, to deprive it of its electricity, and if we afterwards remove the disc of zinc on one side, and on the other side the upper plate, we shall observe the gold leaf approach the column marked minus. A similar effect will be observed, if we put in contact with the disc of the apparatus the metallic side of a piece of silvered paper.

651. It will often be more convenient to put the body we wish to examine in contact with the upper and moveable plate, and touching

the inferior plate, to deprive it of its electricity, preceding in other respects as we have already described. The electricity, however, which the instrument now indicates, will be opposite to that which is communicated to the upper plate, because, by this method, the plate united to the instrument forms the base of the condenser.

652. If the body which we examine cannot be conveniently put in immediate contact with the lower plate of the condenser, a communica- tion with it may be formed, by means of a me- tallic wire, with an insulating handle, the rest of the operation being the same as before.

ELECTRO-MAGNETIC EFFECTS OF ALKALIES, ACIDS, AND SALTS, BY M. YELIN.

653. The magnetic needle used by M. Yelin was nearly 1-5 inch long, and 008 of an inch in diameter. It weighed little more than half a grain, and was delicately suspended by a spider's web, from a rod passing through the top of a glass cylinder, so that it could be raised or low ered at pleasure, The bottom of the instrument

is a piece of card-board, on which circles are marked and divided, indicating the number of degrees through which the needle may have moved.

654. The conductor, whose state was to be indicated by this needle, was sometimes a band of tin 0'4 of an inch broad, and 24 inches long ; sometimes a brass-wire helix, which, being brought up close beneath the needle, formed a kind of condenser, and rendered the action more sensible.

655. (1.) The tin band was placed under the needle, both being parallel to the magnetic me- ridian; a small glass was filled with muriatic acid; the end of the band, towards the austral pole of the needle, was plunged into the acid, and, in a few moments after, the other extremity was immersed; immediately the austral pole went to the east. The experiment being re- peated, except that the end of the band, cor- responding to the boreal of the needle, was first immersed ; the austral pole went to the west. When, in place of muriatic acid, a solution of ammonia, mineral alkali (soda), or sal-ammonia, was used, the results were exactly the same ; but if a solution of vegetable alkali (potassa) was used, the deviations were all in the opposite directions. Pure water produced no effect, but 5ˆ of acid made it active. All solutions of salts, or acid, thus applied, produced an effect upon the needle. It appears in these cases that, according as the first contact is

made to the right or left, an ar- rangement of molecules is established in the fluid, proper to form a species of pile of which the two poles are very distinct, and that the whole of this little pile is reconstructed in the opposite direction, when the contact is made in the oppo- site way.

656. Place the needle over the condenser, the wires of the latter and the needle being parallel to the magnetic meridian; hold a cylinder of zinc in perfect contact with each end of the wire of the condenser, the arrangement will then be zinc, brass, zinc; plunge the cylinder corresponding with the austral pole of the needle into muriatic acid, and then plunge the other into the same acid, the austral pole of the needle will go to- wards the east. Repeat the experiment with nitric acid and fresh cylinders of zinc ; now the austral pole of the needle will go towards the west. These and other results are the same, whether the conductors are put in contact wit the metals before or after their immersion in the fluid.

657. The needle condenser and metal ba (zinc), being as before, let the glass be filled wit a solution of potassa, then immerse the end of the bar corresponding to the austral pole of the needle, and afterwards the other bar; the austr pole will deviate to the east. Take the bars out of the solution, but without changing their posi- tion in the hands, and, as soon as the needle

at rest, introduce them again beginning wit the bar corresponding to the boreal pole of needle ; the needle (the austral pole) will n deviate to the west. Take the bars out of the fluid, and, without changing them from hand to hand, turn them so that the ends which were before immersed in the liquid, shall now be in contact

witn the extremities of the condenser wire, then repeat the above experiments, and the same re- sults will be obtained. Finally, if the bars, being well cleaned, are changed from hand to hand, and the experiments again repeated, the same results will be produced.

658. But now, preserving the apparatus as it was, change the solution of potassa for very pure muriatic acid. The zinc bar, corresponding to the boreal pole, being fust immersed in the acid, the austral pole will go eastward. Remove that bar from the ac'd which was last plunged in, and a little while after, the other bar, and without changing them at all in the hand, wait till the needle is quiet; commence by the bar corre- sponding to the boreal pole; at the moment when that which

agrees with the austral pole shall touch the acid, the needle (the austral pole) will deviate towards the west, and it will go in the same direction as often as the experiment is repeated, whether the operation be begun on the right or on the left hand.

659. If the bars be then well washed and dried, and restored to the ends of the condenser wire they were in contact with before, but with that part which was before immersed, now in contact with the wire, and the immersions and experiment be repeated, one of these two things will happen : either the needle will constantly move to the east, whichever bar is first immersed, or the action will be very doubtful or null.

660. If, instead of turning the bars, they are changed one for the other, the needle will go constantly to the west, whichever bar is first immersed ; but the previous results may be at any time restored by re-changing the bars, and then the needle will go to the east.

661 . The faculty thus acquired by the bars of zinc, of becoming positive or negative, accord- ing as they are plunged either first or last in the acid, they preserve some time. They may be washed, dried, and held in the hand, without losing their state, and hence particular precau- tions are required in making delicate experi- ments with the metals.

662. This faculty is hot communicated either to the fluid or to the extremities of the condenser wire. All the metals which become magnetome- ters by muriatic acid, as well as all the acids which produce an electro-magnetic action with homogeneous metals, produce the same pheno- mena.

663. These experiments may be compared, with interest, with the observations of M. Volta, that a band of wet paper, making part of the conductor of his pile, becomes charged with electricities, which it preserves some time ; with that of M. Gautheret, who thought he remarked something similar in the conducting wires of the pile; and with that of M. Hitter on his secondary piles, the phenomena of which M. Volta attribu- ted to the electro-motive action of the alkalies and salts interposed. ‘A very decided electric charge may be remarked in the metals interposed between the conductor and the fluid ; they are both unipolar, i. e. charged each with a single electricity, which tney retain for some time, and this electricity is constantly positive in one, and negative in the other. They form, therefore, the

elements of a species of pile, ot which the extre mities may be

detached without losing their elec- tricity; and, in consequence of this property, i call it a secondary pile, with mobile unipolar extremities.

664. ‘ I have sometimes succeeded, with bars of some length, in obtaining distinct poles at each extremity, so that when the bars were turned, opposite results were presented by the needle ; bull have not been able to discover the condition of this phenomenon, so as to be able to produce it at pleasure”.’

665. M. Yelin remarks, however, that he has never yet been able to ascertain the existence of free magnetism, or electricity, in any of these bars. Many other experiments are given in tables, which we have not room to notice, though they are of great interest. The bars M. Yelin used were -275 of an inch in diameter, and 2‘75 inches long. — JBii. Univ. xxiii. 38.

TERRESTRIAL MAGNETISM.

666. The following curious electro-magnetic experiment was exhibited by Dr. Birkbeck, at the London Institution. A hollow elobe of wood, fifteen inches in diameter, was first accurately turned, and, from the equator towards each ex- tremity of its axis, grooves were cut parallel to the equator, at the distance of 4|° from each other, like parallels of latitude, and another, rather deeper, groove from one pole to the other, along a meridian half-round.

667. Beginning now at the equator with the middle of a wire, about ninety feet in length, and one-tenth of an inch in diameter, which just fitted the grooves, it was carried round in the successive circles tow.ards each pole,, making an abrupt turn from one circle to another along the meridian groove above-mentioned. From the point where the wire arrived at the poles, it was carefully bound with silk, and returned back again to the equator along the same meridian. The two ends of the wire being thus brought together, they proceeded to a little distance from the globe, where they terminated. By this means the effect of the short abrupt turnings of the wire along the meridian towards the poles, is coun- teracted by wire returning back again from the poles to the equator, leaving thereby only the parallel wires active when the two extremities are connected with the battery.

668. The globe being thus far formed, it is covered with zones, in the usual way, so as to exhibit to appearance a common fifteen-inch ter- restrial globe, the wire being completely hidden. But this covering is so laid on that, instead of the terrestrial pole coinciding with the poles formed by the wire, the latter is brought into lat. 75° N., and long. 76°

40′ W., which is the situ- ation which Mr. Barlow conceives will best agree with the observed bearings of the needle in most parts of the world. Things being thus adjusted, the globe is placed on a large cup near the bat- tery, so as to admit of its being placed in any position, or so as to bring any part to the zenith, without the encumbrance of the usual brazen meridian and horizon. A needle is now sus- pended over the globe, leaving it free to take any dip ; while, by means of a silk suspension, it is

also free to take any direction ; lastly, the needle is insulated from the action of terrestrial mag- netism, by opposing to it the north end of a small bar magnet in the line of the dip. By this means the needle retains its magnetic power, but is under no magnetic influence.

669. The extremities of the curves being now connected with the poles of the battery, the globe immediately becomes strongly active upon the needle, causing it to assume the same dip, and the same direction, with respect to the arti- ficial globe, as the actual needle does in the corresponding part of the earth itself, at least to a very considerable extent. Thus, if we bring the Island of Ascension to the zenith, the needle is found perfectly horizontal, with a slight wes- terly variation. If we bring London to the zenith, we find the dip about 70°, and 24° or 25° of westerly variation ; if the globe is again shifted in position, so as to bring Cape Horn in the zenith, the dip is about 60° the contrary way, that is, with the south end below; and the variation about 30° easterly, and so on with various other places.

670. The purpose of this experiment is to show, that what we have hitherto considered as the magnetism of the earth, may be only modi- fied electricity, and to illustrate, experimentally, the theory advanced by M. Ampere, who attri- butes all magnetic phenomena to electrical results.

ROUSSEAU'S APPARATUS.

671. M. Rousseau, who has been occupied several years in the construction of dry Voltaic piles, has conceived the idea of employing those instruments to appreciate the different degrees of conducting power of the substances arranged in the class of bad conductors of electricity. For this purpose he has contrived the apparatus we are about to describe. The dry pile, which forms the principal part of it, is

made of discs of zinc and tin-foil, separated by pieces of parchment, soaked in a mixture of equal parts of oil of pop- pies and essence of turpentine ; the whole is covered laterally with resin, to prevent the con- tact of the air. The base of the pile communi- cates w,th the ground. Its upper extremity may be connected by a metallic wire with an insu- lated vertical pivot, carrying a weakly magnetic needle, balanced horizontally. On a level with the needle, and distant from the pivot, about half the length of the latter, is a metallic ball, also insulated, but communicating with the pile. It is evident that, by this arrangement, the elec- tricity accumulated at the upper pole of the pile is communicated to the needle and the ball ; and consequently repulsion ensues, tending to sepa- rate the needle, which is moveable, from the ball which is stationary. If we place the pivot and the ball in the magnetic meridian, the needle touches it, and remains at rest as long as the ap- paratus is not connected with the pile ; but the instant the communication is established between them, the needle is repelled ; and, after some os- cillations, takes its position of equilibrium, de- fending on its magnetic power and the energy of the pile. These two quantities remain constant for a considerable time, with the same apparatus,

as may be ascertained by determining the angle which the needle makes with the magnetic meri- dian, after it has assumed a fixed position, by means of a divided circle adapted to the cage which covers it. A simple conducting needle, suspended by a metallic wire of proper diameter and length, might be substituted for the magnetic one; bat M. Rousseau's apparatus is much more convenient, and sufficiently sensible for the kind of effect which it is his object to measure.

672. To usq it for ascertaining different de- grees of conducting power, it is sufficient to place the substance submitted to experiment in the electrical current, taking care that the thick- ness which the electricity has to pass through be always equal. If the flow of the quantity of electricity necessary to produce the greatest de- viation be not instantaneous, the time required by the needle to assume its fixed position may be taken as the measure of the degree of the con- ducting power of the substance employed.

673. To submit liquids to this kind of exami- nation, M. Rousseau places them in small me- tallic cups, communicating by their foot with the needle and the ball : he then places in the liquid one of the extremities of the metallic wire, covered with gum lac, that the same surface of metal may always be in contact with the fluid, and measures the duration of'the needle's motion from the moment when

the communication is established with the pile by the other extremity of the wire.

674. By submitting the fixed vegetable oils employed in the arts and in domestic economy to this kind of proof, M. Rousseau has established a very singular fact, which may be useful in commerce; it is, that olive oil possesses a very* inferior degree of conducting power to that of all other vegetable or animal oils, which never- theless present, in all their physical properties, the strongest analogies to that substance. For instance, every thing being equal in both cases, olive oil required forty minutes to produce a certain deviation, while poppy oil, or the oil of the beech-mast, required only twenty-seven seconds to produce the same deviation. One-hundreth part of any other oil added to oil of olives re- duces the time to ten minutes. It would, there- fore, be easy to discover, by means of this instru ment, the smallest traces of any oil fraudulently mixed with oil of olives.

675. If the proportion of the foreign substance be considerable, the difference of time necessary to produce the maximum of effect would no longer be sufficiently great, and could not be measured with sufficient precision to indicate the proportion of the elements, but the apparatus might easily be modified so as to adapt it to this kind of determination.

676. The solid fats are worse conductors than the animal oils, arising, no doubt, from the large proportion of stearine contained in the former ; for M. Rousseau is satisfied, by comparative trials with stearine and elaine, prepared by M. Chevreul, that the conducting power of the latter much exceeds that of the former. The fat of an animal becomes a worse conductor in proportion to the age of the individual which affords it.

677. By means of the same apparatus, we

may also observe a considerable difference between resin, gum-lac, and sulphur, the most insulating of all known substances, and silk, crystal, and common glass.

678. M. Rousseau has not found any differ- ence in the conducting power of liquids, whether spirituous or aqueous, acid, alkaline, or neuter, the time required by the needle to arrive at the maximum of deviation being too short, in every case, to ascertain the inequality of

its duration. But a modification of the apparatus, similar to

that for determining the proportions in an olea- ginous mixture, would easily point out tl > at difference.

679. It would be equally possible, and very curious, to try the effect of the two kinds of elec- tricity on different substances ; all that would be necessary would be to place the two poles alter- nately in connexion with the ground. Accord- ing to Ermann's results, it is probable that a difference would be found between most sub- stances.

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ELECTRO-STATICS, the science which treats of electricity in equilibrio, as distinguished from electro-dynamics, which relates to the effects of electricity in motion through a continued system of conductors.

ELECTRUM, Gr. qXeicTpov. Amber, &c.

ELECTRUM, Lat. 'HXeerpov, Gr. Electrum, according to Ovid, was that resinous substance now called amber; of which there are two kinds, the white and the yellow. Sometimes its color approaches to a hyacinthine red. Also, accord- ing to Pliny (lib. xxx. cap. 4), a mixture of gold and silver, of which the fifth part was silver. According to other ancient writers, they had three varieties of substances called electrum, that were used in the arts; namely, glass, a compound metal, and succinum. In the Homeric poems elec- trum is often mentioned, which seems to have been succinum, the yellow or white amber. Ac- cording to Eustathius the ancients used some- times to call gold by this name, probably from its brilliancy, the word jj\€«:ru>p signifying

the sun. Pliny thinks that the alloy is the same that Homer mentions in the fourth book of the Odyssey, in describing the palace of Menelaus, which he says was ornamented with gold, elec- trum (i/Xlicrpov), silver, and ivory. The scholiast upon Aristophanes, supposes that the electrum of Homer was glass, but there is nothing in any of his works to warrant such a supposition, for glass is not designated by any character. It is more probable that electrum was yellow amber, which has a resplendent sunny brilliancy accord- ing with its Greek name ; and Herodotus mentions that succinum or amber was known to the ancients. Pliny says, all gold is naturally alloyed by silver in various proportions ; some containing a tenth, some a ni nth, and some an eighth part. Wherever the silver amounts to a fifth of the mass, the com- pound is called electrum ; this alloy may also be prepared artificially, by adding to gold the re- quisite proportion of silver. But if this latter exceeds a fifth of the whole, the mass ceases to be malleable. The nature of electrum is to reflect a richer lustre by lamp-light than pure silver does. That which is native has also the additional property of detecting poisons, iride- scent rings passing rapidly over the surface of the cup, accompanied by a noise like that of hot metal plunged in water.

Electrum was not only used for ornamental plate, but was occasionally employed for coin, at least for medals. Thus Lampridius, in his life of Alexander Sever us, says that that prince caused medals to be struck in honor of Alex- ander the Great, both of electrum and gold. (Etectreos aliquantos, sed plurimos tamen au- reos.) The Romans themselves appear to have preferred the white lustre of silver to the yel- low ladiance of gold, &c. probably this taste together with the ivaperfection of the art of as- saying, as practised by them, aided also by an idle superstitious notion of the efficacy of elec- trum in detecting poison, contributed to give to this alloy a temporary celebrity. Modern taste, however, prefers the native lustre of the noble metals in all their puuty to any alloy of them with each other, nor is it probable, that the Roman electrum will ever again be met with at

the mint or on the sideboard.' There are many coins of this alloy of the kings of Bosphorus, some small ones of Syracuse, and many Celtic and of ancient Gaul.

ELECTUARY, n. s. Fr. and Belg. ekctuaire; Ital. elettuario; Span, and Port, letuario; Lat. ekctuarium; all from Gr. «XtKT)jpioj>, ficXt-yw, eligo, to choose — Minsheu. But Vossius and Gesner prefer EjcXayfta, from ficXux"!', to lick ; as the etymology. A form of medicine made of conserves and powders, in the consistence of honey. The modern

pharmacopoeias treat of these articles as confections.

We meet with divers electuaries, which have no in- gredient, exct-pt sugar, common to any two of them.

Boyle.

Electuaries made up with honey or syrup, when the consistence is too thin, ferment : and when too thick, candy. By both which the ingredients will be altered or impaired. Quiticy.

ELEEMOSYNA ARATRI, ELEEMOSYNA CA- RUCARUM, or pro aratris, in our ancient cus- toms, a penny which king Ethelred ordered to be paid for every plough in England towards the support of the poor. It is sometimes also called eleemosyna regis, because first appointed by the king.

ELEEMOSYNARIUS, in old records, the almoner, or officer who received the eleemosy- nary rents and gifts, and distributed them to charitable uses. See ALMONER.

ELEEMOS'YNARY, n. s. & adj. Gr. aXˆo- •nvri ; ab sXtoy, compassion. One who lives upon alms : as an adjective it means given in charity or living upon it.

It is little better than an absurdity, that the cause should be an eleemosynary for its subsistence to its effects, as a nature posterior to and dependent on itself. Glanville's Scepsis.

In the year 1430, it appears that the eleemosynary boys, or choristers, of that monastery acted a play. Warton. History of English Poetry.

EL'EGANCE, n. s.~\ Fr. elegance; Ital.

EL'EOANCY, f eleganza ; Lat. elegantia,

EL'EGANT, adj. telegans, ab eligere, to

EI/EGANTLY, adv. J choose. The beauty of

propriety, not of greatness, says Dr. Johnson.

Rather that which is selected or chosen because

it pleases : hence applied particularly to objects

of taste. Milton uses the adjective for accurate

in discernment, or nice in taste.

St. Augustine, out of a kind of elegancy in writing, makes some difference. Raleigh's History.

They describe her in part finely and elegantly, and in part gravely and sententiously. Bacon.

Lovers are anxious to trick themselves out ; to be spruce iu their apparel ; to have their locks neatly combed and curiously curled ; to adorn their shoes with elegant ties j to be point device in all their accoutrements. Burton.

Now read with them those organic arts which enable men to discourse and write perspicuously, elegantly, and according to the fittest style of lofty, mean, or lowly. Milton.

In a poem elegantly writ, I will not quarrel with a slight "custake.

Jtweommon. M

ELE It

These questions have more propriety, and elegancy, understood of the old world. Burnt t.

My compositions in gardening are altogether Pimla- nck, and run into the beautiful wildness of nature, without the nicer elegancies of art. Spectator.

Polite with candour, elegant with ease. Pope. Whoever would write elegantly, must have reganl to the different turn and juncture of every period : there must be proper distances and pauses.

Pope's Odyssey, Notes. There may'st thou find some elegant retreat.

London.

The elegant arts owe their choicest beauties to a taste for the contemplation of nature. Percival.

If we can direct the lights we derive from such exalted speculations upon the humbler field of the imagination, whilst w« investigate the springs, and trace the courses of our passions, we may not only communicate to ths t aste a sort of philosophical soli- dity, hut we may reflect back on the severer sciences some of the graces and elegances of taste, without which the greatest profi ciency in those

sciences will always have the appearance of something illiberal.

Burke. This cap to my cousin I owe ;

She gave it, and gave me beside, Wreathed into an elegant bow, The riband with which it is tied. Cowper.

And that vice,

Though well perfumed and elegantly dressed, Like an unburied carcass tricked with flower*, Is but a garnished nuisance, fitter far For cleanly riddance, than for fair attire. Id.

His infant muse, though artless, was not mute : Of elegance as yet he took no care ; For this of time and culture is the fruit ; And Edwin gained at last this fruit so rare ; As in some future verse I purpose to declare.

Beat tie.

ELEGIT, in law, a writ of execution, which lies for a person who has recovered debt or da- mages ; or upon a recognizance in any court, against a defendant who is not able to satisfy the same in his goods.

EL'EGY, n. s. ˆ Fr. elegie; Ital. Span. ELE'GIAC, adj. >and Lat. elegia,of Gr.fXe-yoc, ELE'GIAST, n. s. j complaint or grief. A plain- tive or funeral poem. An elegiast, or elegist, is a writer of such poems.

He hangs odes upon hawthorns, and elegies upon brambles, all forsooth deifying the name of Rosalind.

Sha/upeare.

So on Meander's banks, when death is nigh, The mournful swan sings her own elegy. Dryden.

Let elegiac lay the woe relate, Soft as the breath of distant flutes. Gay s Trivia. ELEGY is derived from the Greek tXtytia ; but who was the inventor of elegiac poetry is not known. Horace acknowledges himself ignorant of it. Among the Latins, the principal writers of elegiac verse were Propertius, Ovid, and Ti- bullus ; the latter of whom is esteemed by Quin- tilian the best elegiac poet; but the former is preferred by the younger Pliny. Among the Greeks, Callimachus, Parthenius, and Eupho- rion, were the principal writers of elegy. See POETRY.

EL'EMENT, n. s. & v. a.-\ Fr. element; ELEMENTAL, adj. 9 Span. Port,

and

ELEMENTAR'ITY, n. $. £ Ital. elcmento ; ELEMENT'ARY, adj. J Lat. elementum.

2 ELE

According to Vossiu* from old I>at. tieo, (oleo), cresco, to increase; because all things are sup- posed to proceed from certain elements. A first, or constituent principle : hence an ingredient or constituent part; and that which is proper, or agreeable, to a person or thing. The verb, derived from the noun, is used by our old writers for to compound with elements, to con- stitute. Sometimes ' the element,' when used alone, signifies the air. Elementarily is simplicity of nature ; the state of being uncompounded : elementary, having but a single or simple prin- ciple ; initial ; made of, or belonging to, the elements.

We, when we were children, were in bondage under the elements of the world. Gal. iv. 3.

The heavens and the earth will pass away, and the elements melt with fervent heat. Peter.

Every parish should keep a petty schoolmaster, which should bring up children in the first elements of letters. Spenier.

With religion it fareth as with other sciences ; the first delivery of the elements thereof must, for like con- sideration, be framed according to the weak and slen- der capacity of young beginners. Hooker.

If nature should intermit her course, those princi- pal and mother element! of the world, whereof all things in this lower world arc made, should lose the qualities which now they have. Id.

He (a courtier) is not, if he be out of court, but, fish-like, breathes destruction, if out of his own ele- ment. Sir T. Overbury.

The king is but a man : the violet smells to him as Tt doth to me ; and the element shews to him as it doth to me. Shaktpeare.

The king,

Contending with the fretful elements,

Bids the wind blow the earth into the sea,

Or swell the curled waters. Id. King Lear.

Who set the body and the limbs

Of this great sport together as you guess ?

One sure that promises no element

In such a business. Id. Henry VIII.

We are simple men ; we do not know she works by charms, by spells, and such daubry as is beyond our element. Shafupeare.

A prince should watch that his reason may not be so subdued by his nature, as not to be so much a man of peace as to be a jest in an army ; nor so much a man of war, as to be out of his element in his council.

Saville.

Here be four of you, able to make a good world ; for you are as differing as the four elements. Bacon. Not all, as if some perished by this,

But so as all in you contracted is :

As of this all, though many parts decay,

The pure, which elemented them, shall stay.

Donne. Have not all souls thought,

For many ages, that our body's wrought

Of air, and fire, and other elements ?

And now they think of new ingredients. Id.

Sure it is but an elementary fire that goes out ; that which is celestial continues.

Bp. Hall. Contemplations. Our torments may, in length of time,

Become our elements. Milton.

Leeches are by some accounted poison, not properly, that is by temperamental contrariety, occult form, or so much as elemental repugnancy ; but, inwardly taken, they fasten upon the veins, and occasion an effusion of blood. Browne.

A very large class of creatures in the earth, far above the condition of elementarily.

Browne’s Vulgar Errourt. He from his flaming ship his children sent,

To perish in a milder element. Waller.

A man may rationally retain doubts concerning the number of those ingredients of bodies, which some call elements, and others principles. Boyle.

Whether any one such body be met with, in those said to be elemented bodies, I now question. Id.

There is nothing more pernicious to a youth, in he elements of painting, than an ignorant master.

Dry den.

If dusky spots are varied on his brow. And streaked with red, a troubled colour show ; That sullen mixture shall at once declare Winds, rain, and storms, and elemental war.

Dryden’s Virgil.

All rain water contains in it a copious sediment of terrestrial matter, and is not a simple elementary water. ˆa#-

They sLew that they are out of their element, and that logick is none of their talent.

Baker on Learning.

The elementary salts of animals are not the same as they appear by distillation. Arbuthnot on Aliments.

Soft yielding minds to water glide away, And sip with nymphs their elemental tea. Pope.

Simple substances are either spirits, which have no manner of composition, or the first principles of bodies, usually called elements, of which other bodies are compounded. Watts.

First the fine forms her dulcet voice requires, Which bathe or bask in elemental fires. Darwin.

Peace! heaven-descended maid, whose powerful

voice

From ancient darkness called the morn j Of jarring elements composed the noise, When Chaos, from his old dominion torn, With all his bellowing throng, Far, far was hurled the void abyss along. Beattie.

ELEMENTS, in astronomy, are those principles deduced from astronomical observations and calculations, and those fundamental numbers which are employed in the construction of tables of the planetary motions. Thus, the elements of the theory of the sun, or rather of the earth, are his mean motion and eccentricity, and the motion of the aphelia. The elements of the theory of the moon are its mean motion ; that of its node and apogee, its eccentricity, the inclination of its orbit to the plane of the eclip- tic, &c

ELEMENTS, in physics, the first principles of which all bodies in the system of nature are com- posed These are supposed to be few in num- ber, unchangeable, and by their combinations to produce that extensive variety of objects to be met with in the works of nature. There seems to be in reality some foundation for this doctrine ; for there are some principles evidently exempted from every change or decay, but which can be mixed or changed into different forms of matter. A person who surveys the works of nature in an inattentive manner, is apt to form a contrary opi- nion, when he considers the numerous tribes of fossils, plants, and animals, with the wonderful variety that appears among them in almost every instance. He is thence induced to conclude, that nature employs a vast variety of materials in pro- ducing such prodigious diversity. But let him

enquire into the origin of this apparent diversity) and he will find that those bodies which seam the most different from each other are at bottom nearly the same. Thus the blood, chyle, milk, urine, &c., as well as the various solid parts of animals, are all composed of one particular sub- stance. The same simplicity appears in the ori- ginal composition of the nourishment of vegeta- bles, notwithstanding the variety among them with respect to hardness, softness, elasticity, taste, odor, and medical qualities. They chiefly depend, for these, upon water and the light of the sun. Reflections of this kind suggested an idea of several principal elements of which all other bodies are composed, which by their va- rious combinations furnished all the

variety of natural bodies. Democritus, Aristotle, and other great philosophers of antiquity, fixed the number to four, which have retained the name of elements ever since. These are, fire, air, earth, and water ; each of which they imagined was naturally dis- posed to hold its own place in the universe. Thus, the earth, as heaviest, naturally tended towards the centre, and occupied the lower parts ; the water, as approaching next to it in gravity, was spread chiefly on the outside of the earth ; the air, being more subtile and rare, occupied the middle place ; while the fire, being still more subtile and active, receded to the greatest dis- tance of all, and was supposed to compose the planets and stars. This system was extended to all the productions of nature. The older che- mists, with Paracelsus at their head, pretend to speak of four elementary bodies, salt, sul- phur, earth, and mercury : but when we at- tempt to form an idea of what they mean, we find it very confused; and that their expressions concerning them are enveloped in so much obscurity, that they cannot be comprehended. Some have attempted to prove that the elements, whatever they are, must necessarily be invisible or imperceptible by any of our senses. An en- quiry into their number or properties, therefore, must be attended with very little success ; and all the knowledge we can have upon the subject must be drawn from a view of their combina- tions, and reasoning analogically from the trans- mutations we observe to take place in nature. We find that all the different kinds of air are composed of that invisible and subtile fluid named heat, united in a certain way with some other substance : by which union the compound acquires the properties of gravitation, expansion, rarefaction, &c.; for pure heat, unless when united with some terrestrial substance, neithei gra-vitates nor expands. This is evident from the phenomena of the burning glass, where the light concentrated in the focus will neither heat the air nor water, unless it meets with something with which it can form a permanent union Heat, therefore, is justly to be considered as one of the original elements, being always cap- able of uniting with bodies, and of being ex- tricated from them unchanged, while the same bodies are by their union with it changed into various forms ; water, for instance, into vapor or ice, both of which return into their original state by the abstraction or addition of heat in a certain degree. Hence some have concluded that

there are only two elements in th° universe: and tins opinion we find adopted by count I)e Tressan, in his essay on the Electri: Fluid.

According to this doctrine, two primitive ma- terial substances seem to exist in nature ; one that incessantly acts, and to which it is essential to be in motion ; the other absolutely passive, and whose nature it is to be inert, and move en- tirely as directed by the former. According to the doctrines which long prevailed among che- mists, there are three things that seem to be un- changeable, viz. earth ; carbon, or charcoal ; and that invisible, though terrestrial and gravitating pr.nciple, the basis of chlorine. In our experi- ments (say the French chemists) on earth, we find that, though vitrified by the most intense fire, it may be recovered in its proper form ; and some very pure earths cannot be changed even in the focus of the most powerful mirror. In like manner we may dissipate charcoal in vacuo by the solar rays, and the compound is hydrogenous gas ; we may decompose this com- puund by a metallic calx, and we have our char- coal again unchanged, for all metals contain charcoal in substan:?. Let us try to destroy it by common fire, and we have it then in the fixed air produced, from which it may be recovered unchanged by the electric spark. With the supposed basis of chlorine, the case is still more difficult, for we cannot by any means procure a sight of it by itself. Modern chemistry reckons fifty-two elements, but as these are only bodies, which the present state of instruments, Ike., prevent us from decomposing, their number is continually changing, and we therefore refer the reader to our articles CHEMISTRY, MINER- ALOGY, &c.

ELEMI, n. s.

This drug is improperly called gum elemi, being a resin. The genuine elemi is brought from Ethiopia in fiattish masses, or in cylinders, of a yellowish co- lour. It is very rare in Europe, and supposed to be produced by a tree of the olive kind. The spurious, or American elemi, almost the only kind kuown, is of a whitish colour, with a greater or less greenish or yellowish tinge. It proceeds from a tall tree, which the Brazilians wound, and collect the resin.

Hill'i Mat. Med.

ELEMI, a resin, which exudes from incisions made, in dry weather, through the bark of the amyris elemifera, a tree which grows in America. It is wrapped in flag leaves, in long roundish cakes, semitransparent, and of a yellow color. It has a faint fragrance.

ELEMI, in the materia medica. See AMYRIS.

ELENCH, n, s. J Old Fr. elenche ; Lat.

ELF.NCHIZE, v. n. Selenchus; Greek, £\«-yx°C> an argument or sophism. To elenchise used only (as far as we have found), by Ben Jonson, is to argue ; construct sophisms.

TIP. Hear him problematize . PRU. Rless us, what's that ! Tip. Or syllogize, clenchize. '" Ben Jonton.

The first delusion Satan put upon Eve, and his •whole tentatiou might he the same eleneh continued, as when he said. Ye shall not die ; that was, in his equivocation, you shall not incur present death.

Browne's Vulgar Errowi.

Discover the fallacies of our common adversary, that old sophister, who puts the most abusive elenches on us. Decny if Piety.

ELENCHUS, in antiquity d kind of ear- rings set with large pearls.

ELENCHUS, in logic, by the Latins called ar- gumentum and inquisitio, is a vicious or falla- cious argument, which deceives under the ap- pearance of a truth ; the same with what is otherwise called sophism.

ELE'OTS, n. s. Some name Jhe apples in request in the cyder countries so; not known by that name in several parts of England.

Mortimer's Husbandry.

EL'EPHANT, n. s. \ Fr. elephante , Span.

ELEPHAN'TINE, adj. J and Port, elefante ; Lat. elephas ; Gr. £X£0a£ , as Hyde suggests, from Arab, phil, a mountain ; and Vossius has a si- milar conjecture. A genus of the mammalia class of animals, more particularly described in the ensuing article.

The elephant hath joints, but not for courtesy ; His legs are for necessity, not flexure. Shahtpeare

High o'er the gate, in elephant and gold, The crowd shall Caesar's Indian war behold.

Dry den' i Virgil.

The fan shall flutter in all female hands, And various fashions learn from various lands ; For this shall elephants their ivory shed, And polished sticks the waving engines spread.

Gay

Dear architect of fine chateaux in air, Worthier to stand for ever if they could. Than any built of stone, or yet of wood, For back of royal elephant to bear ! Cowper

ELEPHANT, in zoology. See ELEPHAS.

ELEPHANT, AMERICAN. See MAMMUTH.

ELEPHANT BEETLE. See SCARAB.EUS.

ELEPHANT Hoc. See TAPIR.

ELEPHANT, KNIGHTS OF THE, an order of knighthood in Denmark, conferred upon none but persons of the first quality and merit. It is also called the order of St. Mary. Its institu- tion is said to have been owing to a gentleman among the Danish croises having killed an ele- phant in an expedition against the Saracens in 1184; in memory of which, king Canute in- stituted this order ; the badge of which is a towered elephant, hung on a watered sky-colored riband, like the George in England.

ELEPHANTA, a small but very remarkable island on the west coast of Hindostan, five miles and a half from Bombay, in an easterly direction ; its circumference cannot be more than five miles ; a neat village near the landing place contains all its inhabitants, who, inclusive of women and children, number about 100. To deduce the era of the fabrication of its celebrated cave or temple is not so easy a task ; but it was, no doubt, posterior to the great schism in the Hindu religion, which, according to the Puranas, happened at a period coeval with our date of the birth of Christ. It is under the protection of the India Company, and pays about £56 an- nually to the government ; the surplus revenue furnishes their simple clothing. An elephant of black stone, large as the life, is seen near the landing place, from which the island probably took its name. The cave formed in a hill of stone, is about three-quarters of a mile from the beach ; its massy roof is supported by rows of columns regularly disposed, but of an order dif-

NATURAL WMTQBX.

ler Elephas. Jlit £iff>/umt

Hliini«-i-ii>s .

J. Starr sculp •

ferent from any in use with us ; gigantic figures in relief are observed on the walls ; these, as well as the columns, are shaped in the solid rock, and by artists, it would appear, possessed of some ability, and unquestionably of astonish- ing perseverance. They are very massive, short in proportion to their thickness, and their capi- tal bears some resemblance to a round cushion pressed by the superincumbent mountain, with which they are also of one piece. The floor of the apartment is generally full of water, its pavement or ground-work not permitting it to be drawn off, or to be soaked up. For it is to be observed, that even the cavern itself is not visitable after the rains, until the ground of it has had time to dry into a competent hardness. Several of the columns have been levelled, and the figures mutilated, as Mr. Goldingham was informed by the Portuguese, who were at the trouble (and no small one) of dragging cannon up the hill for the better execution of this exploit. The cave at Elephanta is not now in use as a temple, nor is it a place of pilgrimage, or possessed of a sacerdotal establishment; al- though neighbouring individuals make occasional offerings of prayers and oblations. Consider- ing the pains bestowed on it, it must, at some period of time, have been held in greater esti- mation ; but the brahmins in general disregard imperfect or mutilated images.

Various have been, and are to this day, the conjectures respecting the Elephanta Cave. Those who attempt to deduce its origin from the Egyptians, from the Jews, or from Alexander the Great, appear to give themselves much un- necessary trouble. The striking resemblance in several particulars of the figures in the cave to the present Hindoo race, would induce those who, from history as well as from observation, have reason to believe they have preserved the same customs from time immemorial, to imagine that the ancestors of these people were its fabri- cators ; but those who are in a small degree ac- quainted with their mythology, will be persuaded of it ; nor is a much greater extent of know- ledge requisite to enable us to discover it to be a temple dedicated principally to Siva, the destroyer or changer.

ELEPHANTINA, called also Ghezirat-el-Sag, or the ‘ flowery island,’ an island of the Nile, in Upper Egypt, described by captain Light as a perfect paradise. ‘ It must be confessed that we find beauty by comparison ; and this must excuse all travellers in their particular praise of spots, which elsewhere would not, perhaps, call forth their eulogy. Though the season of the year was approaching to the greatest heat, shade was every where to be found amongst the thick plantations of palm trees, which surrounded and traversed the island.

Amongst these the modern habitations showed themselves, whilst the eye often rested on the ancient temples still existing. Every spot was cultivated, and every person employed ; none asked for money ; and I walked about, greeted by all I met with courteous and friendly salams. The intercourse I had with the natives of Assuan was of a very different nature ; and in spite of French civilisation and . French progeny, which the countenances and complexion of manv of the younger part of the inhabitants

betrayed, I never received marks of attention without a demand on my generosity.' — Travels, pp. 52, 53.

ELEPHANTIASIS, so named from the legs of people affected with this disorder growing rough and wonderfully large, like the legs of an elephant, is a disease that mostly attacks the feet. It is known by the skin being thick, rough, wrinkly, unctuous and void of hair, and mostly without the sense of feeling. It is said to be contagious. Cullen ranks it in the class cachexiae, and order impetigines. At first very severe pain is felt in one of the in- guinal glands, which, after a short time, becomes hard, swelled, and inflamed. No suppuration, however, ensues ; but a red streak may be observed running down the thigh from the swelled gland to the leg. As the inflammation increases in all the parts, the fever gradually abates, and perhaps, after two or three days' continuance, goes off. It, however, returns again at uncertain periods, leaving the leg greatly swelled with varicose turgid veins, the skin rough and rugged, and a thickened membrana cellulosa. Scales appear also on the surface, which do not fall off, but are enlarged by the increasing thickness of the mem- branes; uneven lumps, with deep fissures, are formed, and the leg and foot become at last of an enormous size.

A person may labor under this disease many years ; and perhaps the chief inconvenience he will experience is the enormous bulky leg which he drags about with him. The incumbrance has, indeed, induced many to submit to an amputa- tion ; but the other leg then frequently becomes affected. See MEDICINE.

ELEPHANTINE, in Roman antiquity, an appellation given to the books wherein were re- gistered the transactions of the senate and magis- trates of Rome, of the emperors, or generals of armies, and even of the provincial magistrates ; the births and classes of the people, and other things relating to the census. They are supposed to have been so called, from the leaves being made of ivory.

ELEPHANTOPUS, in botany, a genus of the polygamia segregata

order, and syngenesia class of plants : natural order forty-ninth, compositae : CAL. quadriflorous, with hermaphrodite florets ligulated or plain ; receptacle naked ; the pappus bristly. Species six, one an oriental herb, the rest West India plants.

ELEPHAS, the elephant, in zoology, a genus of quadrupeds belonging to the order bruta. The characters, as defined by Linnaeus and Gmelin,are these : * He has no fore teeth in either jaw, and no tusks in the lower jaw ; the tusks of the upper jaw are very long, and stretch far out of the mouth : has a long, extensible, and flexible, cartilaginous trunk, or proboscis, on the nose, which is capable of laying .hold even of very minute objects. The body is almost naked.' There is only one known species, called by way of distinc- tion from the American elephant, which is quite a different genus, E. maximus, or the great ele- phant. He is the largest of all land animals. From the front to the origin of the tail he is gene- rally about sixteen feet long, from the end of the trunk twenty-five feet, and about fourteen feet high. The circumference of the legs is about six feet. These are the largest dimensions liiii

the animal differs in size in different countries ; in some not exceeding seven feet in height. The eyes are small in proportion to the size of the head. The muzzle is very different from that of any other quadruped : it is nothing but the origin of a long trunk which hangs between the two large tusks; the mouth appears behind the trunk, which serves in place of an upper lip, and the under lip terminates in a point. The feet are short, round, clumsy, and only distinguishable by the toes. The trunk is, properly speaking, the nose extended, and terminated by a couple of nostrils. But, besides serving as an organ of smell, the trunk performs all the functions of a strong and dexterous arm. The trunk of an ele- phant is about eight feet long, five feet and a half in circumference near the mouth, and one foot and a half near the extremity : it is a pipe of an irregular conical figure, and widened at the end : the superior side of the trunk is convex, and fur- rowed transversely ; and the inferior side is flat, and has two longitudinal rows of small protu- berances resembling the tentacula of the silk-worm and most other caterpillars. The upper part of the trunk corresponds with the extremity of the nose in other quadnipeds, and answers the same intent on ; the inferior part serves as an upper lip, including the nostrils at the same time. For the trunk is a continued canal, di- vided into two cavities by a longitudinal parti- tion : these

cavities ascend along the fore part of the upper jaw, where they make a turn inward, and descend into the palate, terminating in two separate orifices ; they have likewise each a separate orifice at the end of the trunk. At the place where these cavities make a turn, and be- fore they enter into the bones of the head, there is a moveable cartilaginous plate situate in such a manner as enables the animal to shut the canal, and to prevent the water with which it occasion- ally fills the trunk from entering into the passage of the nose, where the organs serving for the sen- sation of smell are placed. The elephant can move the trunk in all directions ; he can extend or shorten it at pleasure, without altering the diameters of the two canals within. By this means respiration is not interrupted, whatever be the situation of the trunk ; and the water is allowed to remain till the animal chooses to throw it out by an expiration. Each canal is lined with a smooth strong membrane, and the surface of the trunk is covered with another strong membrane or skin. The substance con- tained between the exterior and interior mem- branes, is a composition of longitudinal and transverse muscles, which serve to extend and contract the length of the trunk. At the extre- mity of the trunk there is a concave protuberance, in the bottom of which are the two passages of the nostrils. The inferior part of the protuberance is thicker than the sides, and the superior part is stretched out like a finger about, five inches Ions;; which, together with the edges of the whole extremity of the trunk, takes on different figures according to the necessities of the animal. It is by this orˆan that th« animal lays hold of food or other substances ; and he manages it with as much dexterity as a man does his hand, taking up grain* of rorn. or the smallest piles of grass.

and conveying them to his mouth. When he drinks, he thrusts his trunk into the water, and fills it by drawing in his breath and exhausting the air : when the trunk is thus filled with water, he can either throw it out to a great distance, or drink it by putting the end of the trunk in his mouth. The two large tusks, which some call the horns, of the elephant, are of a yellowish color, and extremely hard. The bony substance of which they are composed is known by the name of ivory, and much used in different branches of manufacture. The ears are very large, and re- semble those of an ape. The skin of the elephant lias but few hairs on it, placed at great distances from each other. It is full of wrinkles, like those on the palm of a man's hand, besides many chapped and greasy ridges. The female has two dugs, one on each side of the breast.

The female elephant has not, like other quadru- peds, the orifice of the vagina adjacent to the anus ; for it is situated nearly in the middle of the belly, about two and a half or three feet dis- tant from the anus.

Naturalists, as well as tra- vellers, agree in affirming that the male organ of the elephant exceeds not either in length or diameter that of a horse. Although, for this rea- son, Buffon, Linnaeus, and other eminent writers, have made their coition a subject of considerable controversy, yet, as they have since been observed to cover like the horse, the subject is not worth pursuing. As to the time of gestation, which Buffon limits to nine months, the best modern authorities consider it to be about twenty months. They bring forth but one at a lime ; which, on coming into the world, is as large as a wild boar, and is furnished with teeth : however, the large tusks do not make their appearance till some time after, and at the age of six months they are several inches long. Elephants of this age are as large as an ox in a natural state.

Elephants, even in a savage state, are peaceable and gentle creatures. They never use their wea- pons but in defence of themselves or their com- panions. Their social dispositions are so strong, that they are seldom found alone, but march al- ways in large troops : the oldest and most ex- perienced lead the van ; the young and the lame keep in the middle ; and those of the middle age walk in the rear. The females carry their young on their tusks, embracing them at the same time with their trunk. They seldom march in this regular order but when they reckon the journey dangerous, such as an expedition to cultivated lands, where they expect to meet with resistance. On other occasions they are less cautious ; some of them falling behind or separating from the rest, but seldom so far as to be beyond the reach of assistance from their companions. It is dan- gerous to offer them the least injury ; for they run straight upon the offender ; and, though the weight of their body be great, their steps are so large, that they easily outrun the swiftest man, whom they either pierce with their tusks, or seize with their trunk, dart him in the air, and then trample him under their feet. Travellers who frequent these countries kindle large fires, and beat drums during the night, to prevent their ap- proach. After being once attacked by men, or falling into any ambush, they never forjet the in-

jury, but search for every opportunity of revenge. As they are probably endowed with a more ex- quisite sensation of smell than any other animal, owing to the great extent of their nose, they can scent a man at a very great distance, and trace him by his footsteps. Elephants are peculiarly fond of the banks of rivers, deep valleys, and marshy grounds, especially when well shaded with trees. They delight in

drawing up water into their trunks, even when they do not drink it, and amuse themselves in dashing it around. They cannot endure cold, and are equally averse to heat. To avoid the scorching sun, they retire to the thickest and most shady parts of the forest. The bulk of their bodies is so enormous, that they do not choose to go into deep waters so fre- quently as some other quadrupeds; although the length of their trunk, which they can raise straight up to respire, is a great advantage in swimming. Their ordinary food is roots, herbs, leaves, the tender branches of trees, fruits, and grains ; but they abhor flesh or fish. As they devour a large quantity of food in a short time, they often shift their pasture ; when they meet with cultivated grounds, they make a prodigious desolation, and destroy more plants by their feet than they use for nourishment ; which last is very considerable, amounting to 1 50 pounds of herbage every day : by this means, as they constantly graze in large troops, they lay waste whole fields in an hour. The Indians and negroes employ every art to prevent them from visiting their cultivated lands, making great noises, and burning large fires round their fields. However, these precautions are not always sufficient to prevent the elephants from visiting them. They chase away the do- mestic animals, put the men to flight, and some- limes even throw down their habitations. Ele- phants are hardly susceptible of fear : the only method to stop their course is by fire or fire- works, the effects of which being sudden and quickly repeated, the elephants frequently turn back ; and, when one runs, all the rest instantly follow him.

In Ceylon, where these noble animals princi- pally abound, a considerable trade is carried on in live elephants. They are caught in various snares, and then exported to different parts of India, where they fetch a considerable price. ‘ At Gannither.eY says Dr. Davy, in his interest- ing work on Ceylon, ‘ close to the foot of the mountain, we went off the road about half a mile over paddy-fields, to visit an elephant snare, situated in a narrow part of the valley. The snare is merely a square space of small dimen- sions surrounded by strong palisades, having a tree in the middle and one narrow entrance. The manner in which elephants are here taken is very simple. The wild animals are first driven to Kandy, and then, if approved of, to this place. When an elephant enters the enclosure, he is fastened to the tree by means of a noose, and his feet are properly secured by strong ropes. From the enclosure he is led to an adjoining spot ; a shed is built over him ; his feet are tied firmly to the trees, and he is not allowed to lie down. We found six elephants in progress of taming — their limbs more or less shack.ed, according to the subjugation effected. They were all ex-

tremely lean, and miserable objects to look at. More than half of those caught, die during their confinement : they seem to pine for the lost bless- ing of liberty ; they refuse to eat, and generally die of starvation. If they can be prevailed on to take food, the difficulty of the task is got over, and they are soon tamed. Great as the mortality is in this instance, it is small in proportion to that which takes place in a large snare, such as is used in the low country.'

Our author then refers to the following account of the large snare used in the low and maritime countries, in Mr. Cordiner's Travels in Ceylon. The hunt alluded to took place near the elephant snare at Kotaway, only a few miles distant from Tengalle. The governor and his suite attended on this occasion, and the whole of the party em- ployed was not fewer than 3000 persons. The whole of this multitude surrounded the forests in which elephants are discovered to abound, with a chain of fires placed on moveable stands, so as to be brought closer, according as the elephants are driven nearer to the centre. The distance between the fires may at first have been 100 paces, which is gradually reduced to about ten paces. The more the elephants are confined, the more vigilant the hunters must become, and prepared to repel their efforts to escape, by advancing the fires, and by loud shouting. At the end of two months, they thus become enclosed in a circle, of which the wide entrance of the snare forms a part, and are at last brought so near to it, that, by the exertions of the surrounding multitude, they can be made close prisoners in a few hours. It is now that all those who are desirous of wit- nessing the capture resort to the scene of action.

An idea of the enclosure may be formed by drawing, on a piece of paper, the outline of a wide funnel. A little way within the wide end, a palisade runs across, in breadth 600 feet, con- taining four open gates, at which the elephants enter. A view of two of these is commanded from a bungaloe, erected for spectators on pillars thirty feet from the ground. The enclosure is formed of the strongest trees on the island, from eight to ten inches in diameter, bending inwards, sunk four feet into the ground, and from sixteen to twenty feet high above it. They are placed at the distance of sixteen inches from each other, and crossed by four rows of powerful beams, bound fast to them with pliant canes. To this palisade are added supporters more inclined, several feet asunder, augmenting the strength of the fence. The part of it in which the elephants are first enclosed is 1 800 feet in circumference : but it communicates with a smaller fold, 100 feet in length, and forty broad, through which a rivulet passes, five feet in depth, and nearly fills the enclosure. The elephants enter this place of confinement at only one gate ; and beyond the water the fence

gradually contracts, terminating in a strong passage, five feet broad, and 100 feet long.

When the first enclosure is completely stocked, the four gates are closed and secured with strong stakes. Then another chain of fires and torches is formed within the enclosure, and the perse cuted animals are driven forward in like manner- into the smaller fold.

« At sunrise,' continues Mr. Cordiner, < we became spectators of a most extraordinary sight. So great a number of enormous animals crowded into so small a compass, is a spectacle rarely to be seen. Pressing heavily upon one another, incapable of almost any movement but convul- sions of distress, their paroxysms of anguish could not be contemplated without emotion. No person could find language to express his feelings. All were struck dumb with a species of astonishment hitherto unexperienced. The most hazardous part of the business remains, that of seizing on the elephants at the end of the long passage, which is the only outlet from the water snare. They are driven in one by one, making furious efforts to regain their liberty on finding themselves prisoners. When they reach the gate at the end, strong beams are inserted across the passage behind, to prevent them from retreating. Men then approach, and bind their hind legs with great ropes, and five or six turns of smaller cordage are passed round their necks. While these operations are going on, a man stands before the gate of the passage, tickling the ele- phant's trunk, and diverting his attention. In this manner they are secured, yet accidents frequently happen at this time. On the present occasion, one unfortunate man tumbled into the passage, and was instantly trampled to death under the feet of an enraged elephant. They frequently press against one another in the water snare and the passage with so much violence, that some are squeezed to death, or drop down dead with fatigue.'

When tht wild eiepnant is complete.) n;u- ncssed, two tame elephants, trained to the busi- ness, are brought to the gate, and placed one on each side of it. These immediately survey the prisoner whom they have to conduct, feel his mouth to know whether or not lie has tusks, and lay hold of his proboscis to ascertain what degree of resistance he is likely to make. Ropes are passed through the collar of the wild elephant, and made fast to similar collars on each side of the tame ones. The bars of the gate are then unloosed, and drawn out ; and the wild captive darts forward directly between the two tame ele- phants :

he can, however, only advance a little way, as the ropes securing his hind legs still continue fastened to the strong stakes of the toil. In this situation he remains, until the riders mounted on the tame elephants have drawn tight the cords, which bind him to the necks of his half-reason- ing conductors.

During this operation, he endeavours to undo with his trunk some of the knots which have been made, and often attempts to give a destructive blow to the diminutive creatures so actively engaged in confirming his captivity. But the two tame animals, who are vigilantly observant of all his motions, never fail to prevent him from doing any mischief, by gently lowering his pro- boscis with their own : if he continue long refractory, they batter him with their heads, and at last produce the most obsequious submission. The nooses of the ropes are then opened, leaving Ins hind leˆs at freedom, and himself entirely d.sengaged from the snare. The two tame ele- ;»‘iants press rlose on each side of him, and pro-

ceed, in pompous procession, to the garden of stalls, where they deliver up their cnarge to experience another species of hardships. The marching off of this venerable trio is a sight truly magnificent, and exhibits a noble specimen of the skill of man, united with the sagacity ot the elephant.

In this manner the prisoner is conducted to a grove, where, if he is of an ordinary size, he is sufficiently secured by being placed lengthwise between two trees, to one of which his hind legs are bound, and one of his fore legs to the other. A more complicated apparatus of ropes and stakes is necessary for those which are remarkable for strength and fury. The tame conductors then move away to secure another captive. An ele- phant may frequently be tamed in eight or ten days, though in other instances, months are re- quired. When tamed, they are marched round to Jaffnapatam, there sold by public auction, and thence exported to the opposite continent.

The elephant, when tamed, is the most friendly and obedient of all animals : he is entirely at- tached to the person who feeds and takes care of him. In a short time he understands signs, and the sound of his master’s voice. He distin- guishes the language of passion, of command, of satisfaction, and acts accordingly. He receives his orders with attention, and executes them with alacrity, but without precipitation. He easily learns to bow his knees and lower his body, for the convenience of those who mount him He lifts burdens with his trunk, and as- sists those who are loading him in layinsc them on nis oack. He delights in shining narness and trappings. When yoked in a

cart or waggoji, ne Dulls equally and cheerfully, unless he be abused by injudicious chastisements. His guide is ge- nerally mounted on his neck, with a small rod of iron, sharp at the point, in his hand ; he directs his motion by pricking him on the ears and head ; but for the most part a word is sufficient A tame elephant will do more labor than six horses, but he requires a proportional quantity of food. They are the principal beasts of burden in many parts of Africa and the East Indies. They carry sacks and bundles of all kinds on their necks, backs, and tusks. They seldom lose or damage any thing committed to their care : they will stand on the edge of a river, take bundles off their necks and tusks, lay them care- fully in a boat wherever they are desired, and try with their trunk whether they are properly si- tuated ; if they be loaded with casks they go in quest of stones to prop them and prevent them from rolling. When the elephant is properly managed he lives very lonsr, even in a state of slavery and labor. That some have lived in this state 130 years is pretty well authenticated. In a natural state they often exceed 200 years, and propagate their species till they are 120 : It i? thirty years before they come to their full growth. The elephants inhabit India, and some of its greater islands, Cochin China, and some of the provinces of China. They abound in the southern parts of Africa, from the river Senegal to the Cape ; and from thence as high as Ethiopia on the other side. They are found in the greatest numbers in the interior parts, where there arc

vast forests, iwar the sides of rivers. The wild elephants of Ceylon live in troops or families, distinct and separate from all others, and seem o avoid the strange herds with peculiar care. When a family removes from place to place, the targest tusked males put themselves at the head, and if they meet with a large river are the first to pass it. On arriving on the opposite bank they try whether the landing place is safe : if it be, they give a signal of a note from the trunk as if it were the sound of a trumpet, on which the remaining part of the old elephants swim over; the little elephants follow, holding one another by locking their trunks together, and the rest of the old ones bring up the rear. In the woods is often seen a solitary male elephant, wandering like an outlaw, banished from the herd and all the race. In this solitary state, as if in a state of desperation, they are very dangerous. A single man will put to flight whole herds of social ele- phants : the solitary one fears not his presence, but will stand firm, putting his power to defiance. Elephants are not domesticated in Africa as in the more civilised parts of Asia, although they are much more numerous. In some parts of Africa they swarm so, that the negroes are ob- liged to make their habitations under ground for fear

of them. They are killed and eaten by the natives, and the trunk is said to be a deli- cious morsel. In the Philosophical Transactions for 1799, we find some curious particulars re- lative to the natural history of the elephant, by Mr. Corse, who, during his residence in India, had investigated the subject with considerable attention. A female elephant nas been known to forget her young one in the short space of two days' separation, and to repel its advances. It is also said, that an elephant which had escaped i'rom its confinement suffered itself to be again trepanned, and reconducted to its state of cap- tivity. According to Mr. Corse, both male and female elephants are divided by the natives of Bengal into two castes, viz. koomareah and the merghee ; the former consisting of the large or full bodied kind ; the latter of the more slender, with longer legs and proportionably thinner trunk. The merghee is also a taller animal than the koomareah, but not so strong. Many indis- tinct varieties are again produced from the in- termixture of these two breeds. A large trunk is always considered as a great beauty in an ele- phant, so that the koomareah is always preferred, not only on this account, but for his superior strength in carrying burdens, &c. The torrid zone appears to be the natural clime of the ele- phant, and the most favorable for the production of the largest and hardiest race ; and, when this animal migrates beyond the tropics, the species degenerates. Elephants are taken on the Malabar <:oast, as far north as the territories of Coorgah Rajah, but these are considered by Mr. Corse as much inferior to the Ceylonese elephant. In some female elephants the tusks are so small as not to appear beyond the lip, whilst in others they are large and long. In both sexes the grinders are very much alike. The largest tusks, and those which furnish the best ivory, are found in a variety of the male elephant, called daun- telaU,. from this circumstance, in opposition to

another called mooknah, whose tusks do not exceed those of some females- An elephant is considered perfect when his ears are larg« and rounded, not ragged or indented at the margin : his eyes of a dark hazel color, free from specks : the roof of his mouth and his tongue without dark or blackish spots of any considerable size : his trunk large : his tail long, with a tuft of hair hanging almost to the ground. His fore-feet must have five nails on each, and the hinder ones four ; his head well set on and carried rather high : the arch or curve of his back rising gra- dually from the shoulder to the middle, and thence descending to the insertion of the tail. All his joints must be firm and strong. In one va- riety of the elephant the tusks point downwards, projecting only a little way beyond the trunk. The tusks in elephants are fixed very deep in the upper jaw; and the root or upper part, which is hollow, and filled with a core, goes as high as the insertion of

the trunk, round the margin of the nasal opening of the throat, which opening is just below the protuberance of the forehead.

The elephant breathes through this opening, and by its means sucks up water into his trunk : between it and the roots of the tusks there is only a thin bony plate. The first or milk tusks of an elephant are shed between the first and second year, when scarcely two inches in length. The time when the tusks cut the gums varies considerably; some young elephants have tusks at five months, and others not till seven ; yet these deciduous tusks are formed in a foetus arrived at its full time. A young elephant was observed to shed one of its milk tusks, on the 6th of November, 1790, when only about thirteen weeks old, and the other on the 6th of December the same year : about two months after, the per- manent ones cut the gums ; and on the 1 9th of April, 1791, they were an inch long. Another young elephant was sixteen months before he shed his milk tusks ; so various is the time of this process. The permanent tusks of the female are small, compared with those of the male ; and do not take their rise so deep in the jaw. The tusks are increased by layers of ivory arising in- ternally from the core on which they are formed ; similar to the growth of the horns of some ani- mals. The largest elephant tusks Mr. Corse ever saw, in Bengal, did not exceed the weight of 72 Ibs. avoirdupois : at Tiperah, they seldom weigh more than 52 Ibs. each. But those brought from other parts to the India-house, far exceed either of these weights, some of them weighing 150 Ibs. each. Mr. Corse supposes these to come from Pegu. The Asiatic elephant is s#id to be larger than the African; yet the ivory dealers in London affirm that the largest tusks come from Africa ; and that they are of a better texture, and less liable to turn yellow than the Indian ones. From the earliest accounts in his- tory, the eastern nations have employed elephants in war; Alexander the Great was the first Euro- pean who ever mounted an elephant. He carried a number of them into Greece, which Pyrrhus employed some years after against the Romans at the battle of Tarentum. Both the Gieeks and Romans soon learnt to get the better of those monstrous animals : they opened their ranks and

allowed them to pass through ; neither did they attempt to hurt them, but threw darts, &c., at their guides. Now that fire-arms are the prin- cipal instruments of war, elephants, who are ter- rified at the noise

and flame, instead of being useful, would only embarrass and confuse an army. However, in Cochin and other parts of Malabar, and in Tonquin, Siam, and Pegu, where fire-arms are little understood, they are still used in battle. The guide sits astride upon the neck, and the combatants sit or stand upon the other parts of the body. They are also ex- tremely serviceable in fording rivers, and carry- ing over the baggage on their backs. After the keepers have loaded them with several hundred weight, they fasten ropes to them ; of which the soldiers taking hold, either swim or are drawn across the river. In time of action, they some- times fix a heavy iron chain to the end of their trunks, which they whirl round with such agi- lity, as to make it impossible for an enemy to approach them at that time. Another use they still have for this creature in war, is to force open the gates of a city or garrison which is closely besieged. This he does by forcing him- self against them with his whole weight, till he has burst the bars : to prevent which, most of the garrisons in this country have large spikes stuck in their gates, that project to a considerable distance. But these prodigious animals are kept, more for show and grandeur than for use, and their keeping is attended with a very great expense ; for they devour vast quantities of pro- vision, and must sometimes be regaled with a plentiful repast of cinnamon, of which they are excessively fond. It is said to be no uncommon thing with a Nabob, if he h.s a mind to ruin a private gentleman, to make him a present of an elephant, which he is ever afterwards obliged to maintain at a greater expense than he can afford : as, by parting with it, he would certainly fall under the displeasure of the grandee, besides for feiting all the honor which his countrymen think is conferred upon him by so respectable a pre- sent.

EL'EVATE, v. a. kpart. adj. ˆ Fr. elever ;

ELEVA'TION, n. s. > Span, elevar ;

EL'EVATOR. j Port, alavan-

tar : Ital. and Lat. elevare ; from levis, light, i.e. easily lifted. To lift up ; also to make light ; lessen by detraction. For the particular use of elevation, see the article following.

When the judgments of learned men are alledged against you, what do they but either elevate their credit, or oppose unto them the judgments of others as learned ?

Hooker.

All which different derations of spirit unto God arc contained in the name of prayer. Id.

His style was an elegant perspicuity, rich of phrase, but seldom any bold metaphors j and so far from tumid, that it rather wanted a little elevation. Wotton. To mischief swift, hope elevates, aud joy

Brightens his crest. Milton.

On each side an imperial city stood, With towers and temples proudly elevate On seven small hills. Id.

Some latitudes have no canicular days, as those which have more than seventy-three degrees of nor- thern elevation, as Nova Zembla.

Vulgar Etrwirt.

Where the hand is used to the plough and the spade, the head is seldom elevated to sublime notions, or exercised in mysterious reasoning. Locke.

Angels, in their several degrees of elevation abov* us, may be endowed with more comprehensive facul- ties. Id.

We are therefore to love him with all possible ap- plication and elevation of spirit, with all the heartˆ soul, ami mind. Norrit.

This subterranean heat or fire, which elevat's the water out of the abyss. Woodward.

The disruption of the itrata, the elevation of some, and depression of others, did not fall out by chance, but were directed by a discerning principle. Id,

Those among the nobles who wished for a reforma- tion in religion, dreaded his severity, and others con- sidered the elevation of a churchman to the highest office in the kingdom as a depression of themselves. liobertton. Hittory of Scotland.

Kings are naturally lovers of low company. They arc so elevated above the rest of mankind, that they must look upon all their subjects as on a level.

Burke.

The elevation of the mind ought to be the principaJ end of all our studies, which, if they do not in some measure effect, they are of very

little service to us.

Id.

Some headless hero, or some Caesar, shows — Defective only in his Roman nose ; Exhibits elevatiimt, drawings, plans, Models of Herculanean pots and pans ; And sells them medals, which, if neither rare Nor ancient, will be so, preserved with care.

Cowj > er.

ELEVATION OF TH*. HOST, in the church of Rome, that part of the mass where the priest raises the host abˆve his head for the people to adore.

ELEVATOR, in anatomy, the name of several muscles, so called from their serving to raise the parts of the body to which they belong.

ELEVATOR, in surgery, an instrument for raising depressed portions of the skull. Besides the common elevator, several others have been invented, as, for instance, the tripod elevator, and another, which* was first devised by M. I. L. Petit, and afterwards improved by M. Louis: but as all the best modern surgeons give the prefer- ence to the common one, which is most simple and is found to answer every desirable purpose, we shall not undertake the description of these more complicated instruments. The common ele- vator is in fact a mere lever, the end of which is somewhat bent, and made rough, in order that it may be less apt to slip away from the piece of bone which is to be raised. This instrument may be used by forming a fulcrum for it, either in the hand which holds it, or on the fingers of the other hand ; or the operator may make a fixed point for it on the edge of the opening made with the trephine, or of that which the accidental violence has occasioned. See TRE- PANNING.

ELEVEN, adj. 3 Sax. aer.ulepen (srn, one,

ELEV'ENTH. $ and lypan, to leave), one left, i. e. above ten, or after tlie enumeiation of ten, as Skinner suggests. SCO-TWELVE.

And thei bithoughten on his wordis, and thei ge- den agen frc the graue ; and teelden allc these thingia to '.he sllmtne and to allc othere.

Widif. tuA 24.

E L E U S I N I A.

Had I a dozen sons, and none less dear than Mar- cms, I had rather eleven die nobly for their country, than one voluptuously forfeit out of action.

Shakspeare.

In the eleventh chapter he returns to speak of the building of Babel. Raleigh's History.

I know not wherein Lewis the Eleventh shewed himself unwitty, but in the charge which he gave to his son, to learn no more Latin. Bp. Hull.

ELEUSINIA, in Grecian antiquity, a festival held in honor of Ceres, every fourth year by some states; by others every fifth. The Athe- nians celebrated it at Eleusis, whence the name. Here stood the memorials of her presence and »f her bounty ; the well, Callichorus, by which she had rested, in the reign of Erectheus; the stone on which she sat, named the sorrowful; the Rharian plain, where barley was first sown ; and the threshing floor and altar of Triptolemus, a herdsman whom she instructed in the culture of that grain, the use of which succeeded to acorns. The mystic temple, provided by Pericles for the solemnity, was unequalled for beauty and magnitude. The profane or uninitiated were for- bidden to enter it on any pretence ; and any in- trusion was punished with death. The chief priest, ItpoavTi]c, was taken from the Eumol- pidae, a holy family at Athens, descended from Eumolpus, a shepherd and favorite of Ceres. He was enjoined celibacy, and wore a long gar- ment, and a wreath of myrtle. Under him, be- sides many of inferior station, was the torch- bearer, cad6v%oc, who had likewise his hair bound with a fillet; the priest, who officiated at the altar, thence called o tin /Sw/jw ; and the sacred herald, K»jpt)£. The latter was of a family which claimed the god Mercury and Aglauros the daughter of Ce- crops for its ancestors. The secrecy in which the mysteries were enveloped was so strict, that no person was allowed even to name the hierophant by whom he had been initiated. Public abhor- rence and detestation awaited the babbler, and the law condemned him to death. The Athe- nians at first suffered none but citizens to be ini- tiated into these mysteries. This regulation, which compelled Hercules, Castor, and Pollux, to become citizens of Athens, was strictly ob- served in the first ages of the institution, but af- terwards all persons, barbarians excepted, were freely initiated. The Eleusinia were divided into the greater and lesser mysteries. Mv

wearing garlands of flowers, called, Nr/itpa cr t/«pa, and having under their fret Aiog Kutiiov, Jupiter's skin, which was the skin of a victim offered to that god. The person who assisted was called vSpavos, from t»5a>p water, which was used at the purification, and they themselves were called fivarai, the initiated. A year after the initiation at the less mysteries they sacrificed a sow to Ceres, and were admitted in the greater, and the secrets of the festivals were solemnly re- vealed to them, from which they were called eˆopoi and tTroirrai, inspectors. This festival was observed in the month Boedromion or Sep- tember, and continued nine days from the 15th till the 23rd. During that time it was unlawful to arrest any man or present any petition, on pain of forfeiting 1000 drachmas, or, according to others, on pain of death. If any woman rode to Eleusis in a chariot, she was obliged by an edict of Lycurgus to pay 6000 drachmas. The design of this law was to destroy all dis- tinction between the rich and poor citizens. When the season approached, the mystse, or per- sons who had been initiated only in the lesser mysteries, repaired to Eleusis to be instructed in the ceremonial. The first day was called ayopˆtoc, an assembly, because the mystae then first assem- bled together. The service for the opening of the temple, with morning sacrifice, was performed. The ritual, which was called Petroma, and con- sisted of two stones exactly fitted, was then pro- duced. The mysterious record was replaced ifter the reading, and closed up until a future festival. The principal rite was nocturnal, and confined to the temple and its environs. The mystae waited without, with impatience and ap- prehension. Lamentations and strange noises were heard. Flashes of light and of fire rendered the deep succeeding darkness more terrible. They were beaten, and perceived not the hand. They beheld frightful apparitions, monsters, and phantoms of a canine form. They were filled with terror, became perplexed and unable to stir. The scene then suddenly changed. The propylaea or vestibules of the temple were opened and the curtains withdrawn. They were intro- duced by the hierophant and daduchus, and the former showed them the mysteries. The splen- dor of the illumination, the glory of the temple and of the images, the singing and dancing which accompanied the exhibition, all contri- buted to sooth the mind after its late agitation, and to astonish the wondering devotee. After this inspection, called avro-ˆia, they retired, and others advanced. The succeeding days were employed in purification, in sacrifice, in pom- pous processions, and spectacles, at which they assisted, wearing myrtle crowns. The second day was called aXaSf fiwrai, i. e. to the sea, you that are initiated ; because they were commanded to purify themselves by bathing in the sea. On the third day sacrifices, and chiefly a mullet, were offered ; also barley from a field of Eleusis. These oblations were called tova,

and held so sa- cred that the priests themselves were not per- mitted to partake of them. On the fourth day they made a solemn procession, in which the KaXaGiov, or holy basket of Ceres, was carried about in a consecrated cart, while on every side

the people shouted xM?f At|/*ijrtp, Hail Ceres ! After these followed women called iciToˆopot, who carried baskets, in which were aesamum, carded wool, grains of salt, a serpent, pomegra- nates, reeds, ivy boughs, certain cakes, &c. The fifth was called ‘H rwv Xapuradtav »;/*« pa, the torch day ; because on the following night the people ran about with torches in their hands, it was usual to dedicate torches to Ceres, and contend who should offer the biggest, in commemoration of the travels of the goddess, and of her lighting a torch in the flames of mount /Etna. The sixth day was called IaK%oc, from Iacchus, the son of Jupiter and Ceres, who accompanied his mother in her search after Proserpine, with a torch in his hand. From that circumstance his statue had a t«rch in his hand, and was carried in solemn procession from the Ceramicus to Eleusis. The statue, with those that accompanied it, called IaexaywT°* > was crowned with myrtle. In the way nothing was heard but singing and the noise of brazen kettles as the votaries danced along. The way through which they issued from the city was called Itpa oSog, the sacred way ; the resting place was I«pa ffvicr), from a fig-tree, which grew in the neighbourhood. They also stopped on a bridge over the Cephisus, where they derided those that passed by. After they had passed this bridge, they entered Eleusis by a place called pv?uci} «

1800 years, and were at last abolished by the emperor Theodosius.

ELEUSIS, the modern Lefchimo, was, in ancient geography, a town of Attica, between Megara and the Piraeus, and celebrated for the festivals of Ceres; rites not finally extinguished in Greece until the invasion of Alaric the Goth. Eleusis, on the overthrow of its goddesses and the cessation of its mysteries, became soon an obscure place, without character or riches. For some ages, however, it was not entirely forsaken The port was small and of a circular form ; the stones of one pier were seen by Chandler above water, and the corresponding side was traced. About half a mile from the shore he found a long hill which divided the plain. In the side next the sea were

traces of a theatre, and on the top cisterns cut in the rock. In the way to i . some masses of wall and rubbish, partly ancieitf were standing, he says ; and beyond some othe • ruins a long broken aqueduct crossed to the mountains. The Christian pirates had infested, the place so much, that in 1676 it was aban- doned. It is now a small village at the eastern extremity of the rocky brow, on which was once a castle, and is inhabited by a fev Albanian families, employed in the culture o: the plain. The mystic temple at Eleusis was planned by Ictinus, the architect of the Par- thenon. Pericles was overseer of the building It was of the Doric order ; the cell so large as to admit the company of a theatre. The columns on the pavement within, and their capitals, were raised by Conebus. Metagenes, of Xypete, added the architraves and the pillars above them which sustained the roof. Another completed the edifice. This was a temple in antis, or with- out exterior columns, which would have occu- pied the room required for the victims. The aspect was changed to Prostyles, under Deme- trius, the Phalerian ; Philo, a famous architect, erecting oAportico, which gave dignity to the fabric, and rendered the entrance more commo • dious. The site was beneath the brow, at th; east end, and encompassed by the fortress. Som? marbles, which are uncommonly massive, and some pieces of the columns, remain on the spot. The breadth of the cell is about 150 feet ; the length, including the pronaos and portico, is 216 feet ; the diameter of the columns, which are fluted six inches from the bottom of the shafts, is six feet and more than six inches. The temple was a decastyle, or had ten columns in the front, which was to the east. The peribolus, or enclo- sure, which surrounded it on the north-east and on the south side, measures 387 feet in length from north to south, and 328 feet in breadth from east to west. On the west side it joined the angles of the west end of the temple in a straight line. Between the west wall of the en- closure and temple and the wall of the citadel was a passage of forty-two feet six inches wide, which led to the summit of a high rock at the north-west angle of the enclosure, on which are visible the traces of a temple in antis, in length seventy-four feet six inches from north to south, and in breadth from the east to the wall of the citadel, to which it joined on the west, fifty-four feet. It was perhaps that sacred to Triptolernus.

This spot commands a very extensive view of the plain and hay. Ahout three-fourths of the cot- tages are within the precincts of the mystic

temple, and the square tower stands on the ruined wall of the enclosure. At a small dis- tance from the north end of the enclosure is a heap of marble, consisting of fragments of the Doric and Ionic orders, remains, it is likely, of the temples of Diana Propylea and of Neptune, and of the Propyleum or gateway. Wheeler saw some large stones carved with wheat ears and bundles of poppy. Near it is the bust of a co- lossal statue of excellent workmanship, maimed, and the face disfigured; the breadth at the shoulders, as measured by Pococke, five feet and a half; and the basket on the head above two feet deep. It probably represented Proser- pine. In the heap are two or three inscribed pedestals ; and on one are a couple of torches, crossed. Another cross seems to have belonged to the statue of a lady, who was hierophant or priestess of Proserpine, and had covered the altar of the goddess with silver. A well in the village was perhaps that called Callichorus, where the women of Eleusis were accustomed to dance in honor of Ceres. A tradition prevails, that, if the broken statue be removed, the fertility of the land will cease. The modern town does not con- tain more than thirty houses.

ELEUTHERIA, a festival, celebrated at Plataea, in honor of Jupiter Eleutherius, or the assertor of liberty, by delegates from almost all the cities of Greece. Its institution originated in this :— After the victory obtained by the Grecians, under Pausanias, over Mardonius the Persian general, in Plateea, an altar and statue were erected to Jupiter Eleutherius, who had freed the Greeks from the tyranny of the barbarians. It was further agreed upon in a general assembly, by the ad- vice of Aristides, the Athenian, that deputies should be sent every fifth year, from the different cities of Greece, to celebrate Eleutheria, fes- tivals of liberty. The Plataeans celebrated also an anniversary festival in memory of those who had lost their lives in that famous battle on the sixteenth of the month Maemacterion, a proces- sion was made with a trumpeter at the head, sounding a signal for battle. After him followed chariots loaded with myrrh, garlands, and a black bull, and certain free young men, as no signs of servility were to appear during the so- lemnity, because they in whose honor the fes- tival was instituted had died in the defence of their country. They carried libations of wine and milk in large-eared vessels, with jars of oil, and precious ointments. Last of all appeared the chief magistrate, who, though not permit- ted at other times to touch iron, or wear gar- ments of any color but white, yet appeared clad in purple, and, taking a water pot out of the city chamber, proceeded through the middle of the town, with a sword in his hand, towards the sepulchres. There he drew water from a neigh- bouring spring, and washed and anointed the monuments, after which he sacrificed a bull upon a pile of wood,

invoking Jupiter and infernal Mercury, and inviting to the entertainment the »ouls of those happy heroes who had perished in *he defence of their country. After this he

f^iaXrjjc, savs Minsheu, J incubus, the night-mare.

filled a bowl with wine, saying, I drink to those who lost their lives in the defence of the liberties of Greece. There was also a festival of the same name observed by the Samians in honor of the god of love. Slaves also, when they obtained their liberty, kept a holiday, which they called eleutheria.

ELF, n. s. &cv.a. *} Sax. selfe ; Goth, and ELF'IN, n. s. & adj. \ Tent, alf ; Swed. alf- ELF'ISH, adj. (war; Brit, eilf; Belg.

ELF'-LOCK, n. s. f alve ; a Gr. tTriaXrqc or ELF'-QUEEK, EL'VISH, adj.

Skinner derives the Saxon word from ahleopan, Saxon, to leap. The male of a fairy; a spirit of the woods or mountains ; a demon ; a dwarf. To elf is to entangle or ravel the hair as elves were supposed to do ; and elf-locks are hair so ravelled. Elfin it a diminutive of elf; or, as an adjective, synonymous with elfish, and signifies of or belonging to elves.

In olde dayes of the King Artour, Of which that Bretons spoken gret honour All was this lond fulfilled of Faerie ; The .E/f-quene with hire joly compagni Danced ful oft in many a grene mede.

Chaucer. Cant. Tales.

Now when that idle dream was to him brought, Unto that elfin knight he bade him fly, Where he slept soundly. Spenser.

Through this house give glimmering light, By the dead and drowsy fire ; Every elf, and fairy sprite, Hop as light as bird from briar. Shakspeare.

My face 111 grime witli filth, Blanket my loins, elf all my hair in knots. Id.

Thou elvish markt, abortive, rioting hog ! The slave of nature, and the son of hell ! Id.

This is that very Mab,

That plats the manes of horses in the night, And cakes the elf-locks in

foul sluttish hairs, Which, once untangled, much misfortune bodes.

Id.

No muse hath been so bold, Or of the latter or the old, Those elvish secrets to unfo'.d, Which lie from others reading.

Drayton. Fairy elves,

Whose midnight revels by some forest side, Or fountain, some belated peasant sees Or dreams he sees. Milton.

From the like might proceed the fears of polling elvelocks, or complicated hairs of the head.

Browne's Vulgar Erromt. The king of elfs and little fairy queen Gamboled on heaths, and danced on every green.

Dry den.

That we may angels seem, we paint them elves ; And are but satires to setup ourselves. /

However it was civil, au angel or elf ; For he ne'er could have filled it so well of himself

Swift.

Ye sylphs and sylphids to your chief give ear ; Fays, fairies, genii, elves, and demons htar. Pope.

Drawn by conceit from reason's plan, How vain is that poor creature, man ' How pleased is every paltry elf To prate about that thing himself. Churchill, How from the yielding touch and rolling eyes The piles immense of human science rise . —

mind gigantic stops the puny Elf, And weighs and measures all things but himself.

Darwin.

Here, seen of old, the elfin race With sprightly vigils marked the place ; Their gay processions charmed the sight. Gilding the lucid noon of

night. Id.

ELF ARROWS, in natural history, a name given to the flints anciently fashioned into arrow- heads, and still found fossile in Scotland, America, and several other parts of the world : they were believed to be shot by fairies, and that cattle were sometimes killed by them.

ELGIN or ELGYN, a royal borough of Scot- land, and formerly a bishop's see, is situated on the river Lossie, about six miles north of the Spey. The name is probably derived from Helgy, general of the army of Sigurd, the Norwegian earl of Orkney, who, about 927, conquered Caithness, Sutherland, Ross, and Mo- ray. It is said that he built a town in the south of Moray, which it is probable was Elgin. Many Norwegian princes were also named Hel- gy, and the inscription upon the town seal is, ' S. commune civitatis de Helgyn,' engraved in Saxon characters, in a style earlier than the middle of the sixteenth century. In the reign of William the Lion, Elgin had a royal fort. Its most ancient charter in the archives is from Alexander II. in 1234, granting a guild to the burgesses with extensive privileges. Elgin is a good town, and has many of the houses built over piazzas; but, excepting its great cattle fairs, has little trade. It is principally remarkable for its ecclesiastical antiquities. The cathedral, now in ruins, has been formerly a very magni- ficent pile. The west door is richly ornamented. The choir is very beautiful, and has a fine light gallery running round it. At the east end are two rows of narrow windows, in an excellent Gothic taste. The chapter house is an octagon ; the roof supported by a fine single column with neat carvings of coats of arms round the capital. There is still a tower on each side of this cathe- dral ; but that in the centre, with the spire and whole roof, are fallen in; and form awful frag- ments, mixed with the battered monuments of knights and prelates. The cathedral was founded by Andrew de Moray, in 1224, on a piece of land granted by Alexander II. ; and his remains were deposited in the choir, under a tomb of blue* marble, in 1244. The great tower was built principally by John Innes, bishop of this see, as appears by the Latin inscription cut on one of the. great pillars. At the west end of the town are to be seen the ruins of an ancient castle, in which Edward Bruce surprised an English garrison early in the fourteenth century. Elgin .s a royal borough, and unites with Banff, Cul- len, Inverary, and Kintore, in returning a mem- ber to parliament. The burgesses resident in the town are alone eligible to the magistracy. Sixty-three miles and a half north-west from .Aberdeen, and 144 north from Edinburgh. Po- pulation between 3000 and 4000. The parish of Elgin is about ten miles in length and six in 1 readth. Population of the town and parish,

ELGIN MARBLES. These admirable works of

ancient art, recently purchased by the public of the earl of Elgin, are derived chiefly from the temple of Minerva, in the Acropolis at Athens, originally known as the Hecatompedon, or of an hundred feet, on account of its breadth ; and Parthenon, or Temple of the Virgin, from the character of its patroness. This edifice was erected under the administration of Pericles, by Phidias, and artists and architects employed under him, about B. C. oOO. It was wholly built of white marble, and the plan was that which is technically called octastyle peripteral ; that is to say, it was an oblong colonnade, having eight columns in the porticos, front and back, and fifteen down each side, exclusive of those at the angles ; within the columns, at about the distance of nine feet, was the wall of the cella, or interior of the temple; and this cella was a peristyle, that is, it had a row of columns forming an internal colonnade ; this colonnade in the Parthenon seems to have supported a gallery.

The interior was divided into two parts : that towards the east, or front, was the place of wor- ship, and occupied about two-thirds of the length — here stood the statue of the goddess; the division to the west was called the opistho- domos, and it was here that the public treasures were kept.

The pediments or triangular spaces over the portico, were adorned with groups of .statues. Pausanias says, ‘ the pediment of the front, or entrance, represented the birth of Minerva; and that of the back the Contest of Minerva and Nep- tune for Attica.’ Att. c. 24. The Acropolis is entered from the westward, and, of course, the west end of the temple is that which first presents itself to the observer ; and the east end was, at the earliest modern period when we have any record of it, shut in and built round with Turkish houses : from these two circumstances it has happened that travellers mistook the west for the front, and the east for the back, and they, therefore, erroneously applied what Pausanias had said of the one to the other, and, having once fallen into this error, they went on, moulding, by their own ingenious fancies, the remains of the groups of the several pediments into some kind of consistency with his relation.

So obstinately long-lived was this error, that though the ingenious and accurate Stuart, in the second volume of his beautiful and valuable Sur- vey of Athens, establishes, beyond all doubt, that the principal front and entrance were to the east- ward (as indeed was the case in

all ancient tem- ples), yet, from not consulting the original Greek, he adopts, as to the subject of the sculptures of the pediments, the common error, and argues as if Pausanias had said the west instead of the entrance, which is his real expression. This point has been, of late, fully explained and de- cided by the work of the Chevalier Visconti on the Elgin marbles, London, 1816.

The height of the statues in the pediments varied in size, according to the increasing height of the cornice xmder which they were placed, from about seven feet to twelve ; but as the pf- diment at each angle came, of course, to a point, erect figures of even the lowest stature could not be introduced ; but the artist overcame this

difficulty with admirable skill, for the statues nearest the angles were recumbent, with their feet, towards the angles ; next came sitting figures, then figures in higher attitudes, and lastly, to- wards the centre, the chief figures of the com- position upright and at full length. The next portion of the temple which we are to examine is the entablature, which surmounted the entire colonnade. The frieze of this entablature was composed of the well known Doric architectural ornaments called triglyphs, and of sculptured ornaments called metopes, placed alternately, the triglyph being over the centres of each column and of each intercolumniation, and the metopes occupying the intervals ; each of these metopes consisted of a block of marble about three feet square, representing in bold high-relief the combat of a Lapitha with a Centaur. This subject was, on account of Theseus, who had overcome the Centaurs, one >f national interest with the Athenians, and it seeios to have been a very favorite subject in all sculptures of this period. It was depicted, as Pliny tells us, on the sandals of Minerva in the temple ; it orna- mented, as we still see, the frieze of the temple of Theseus, and it was again introduced in the frieze of the temple of Phigalia, which was built by Ictinus, one of the architects employed under Phidias on the Parthenon.

Another part of the Parthenon to which we must direct the attention of our readers is the frieze of the cella, or interior; this was an unin- terrupted series of sculpture in blocks of marble about three feet high, that ran round the upper part of the wall, which, as we before stated, was about nine feet within the external row of columns; this frieze, with peculiar taste and judgment, represented, in Very low-relief, the Panathenaic Procession, the highest festival of the Athenians, the

solemnity in which the whole people conveyed, in solemn pomp, to this very temple, the sacred veil that was to be suspended over the statue of the goddess within.

These are the three classes of sculptures which adorned the exterior of the temple, and have alone come down to posterity ; and it may not be here improper, though it is •somewhat premature, to observe that the perfect statue of the pediment, the high-relief of the metope, and the low-relief of the frieze, include the only three species of which the art of sculpture is capable. In the pediments, which not only admitted, but required, on account of the situation as well as of the sub- jects, the boldest and noblest efforts of his art, Phidias represented divinities and heroes in full wrought statues of the colossal size, grouped with all the variety of attitude, expression, and senti- ment. In the metopes, which, from their situation between the triglyphs, and their distance from the eye, ran the risk of being indistinct, he em- ployed the highest relief of which there is any instance extant ; in fact these groups are almost statues, and adhere to the blocks of marble by a very slight contact : but in the wall of the cell, which was surrounded by the ambulatory, this high-relief would have had two ill effects — it would have jetted out unpleasantly over the heads of the spectators, and prevented their having a perfect view of its composition, and as the only

light by which it could be seen was reflected broken, and unequal (being admitted through the intercolumniations), the violent shadows of a high-relief would have perplexed and defeated the artist's design ; for this situation, therefore, he employed relief so very low, that though it is the most exquisite and striking work of the ancient chisel, and though it expresses action, light, and shade in the highest perfection, it does not, in any part, project above an inch, and, in truth, exhibits all the force of relief with all the smoothness and delicacy of a drawing.

These details will at once prepare our readers to see how this great artist joined to the most fertile fancy, the truest taste, and the most perfect architectural science ; and to understand the im- portant acquisitions to our English school of sculpture, which the following list of the Elgin marbles presents.

We now, therefore, insert an abstract of the official catalogue, drawn up from the notes of the learned Visconti, of all the articles of the Elgin collection ; and afterwards insert various testimonies to their value both as antiques and as works of art.

From the Parthenon there are ninety-two pieces, of which six statues or fragments of sta- tues are stated to be from the eastern pediment, five from the western pediment, and six, the places of which (Report 71) are not ascertained. Of the metopes in high- relief there are fourteen. Of the frieze of the cell, in low-relief, there are, in all, fifty-two pieces, viz. twelve from the east end, fourteen from the north side, one from the west, fourteen from the east, and ten whose places are not ascertained.

Lord Elgin has also obtained a variety of other articles of considerable curiosity and value, which are stated in the same document, and are included in his lordship's offer to the public, viz. From the Temple of Victory there are four pieces of high-relief. — From the triple Temple of Erecthexis, Minerva Polias, and Pandrosa, eighteen architectural specimens. — Seven archi- tectural Doric specimens from the Propylea, Parthenon, &c. — Three pieces from the theatre of Bacchus. — Thirteen detached heads or frag- ments of heads. — Thirty-five detached pieces of various sculpture. — Eleven marble and three bronze urns ; and some hundreds of vases, dug up in or near Athens. One of the bronze urns was found in what is called the tomb of Aspasia. — Eight altars. — Thirteen sepulchral pillars or cippi. — Forty-four casts in plaster of Paris of the friezes of the Parthenon, the temple of Theseus, and the Choraic monument of Lysicrates.

In a collection so extensive, there must be a great variety in the worth and beauty of the ar- ticles ; though there is scarcely one that is not in a high degree curious and interesting : but it is to the sculptures of the Parthenon that the collection owes its chief reputation and most transcendant value. Before the splendor of their beauty every thing else fades away, and, com- pared with them, this crowd of minor antiquities appears almost worthless. But, at the head of all, in excellence, the best judges have placed two statues, one of which occupied the left cor- ner of the eastern, and the other the same place

in the western, pediment. The situation in which these statues were placed in the original composition, would not have led us to imagine that they had been the peculiar objects of the artist's care, and yet they certainly excel, not only all that has been found in the same temple, but, in the best opinions, all the statues in the world. The humble situation, if we may use the expression, which they occupied in the pe- diment, is probably the cause of their present superiority ;

they were more sheltered from the injuries of time or accident, and, although much mutilated and weather-worn, they exhibit such a degree of excellence as leaves us at a loss to conceive any higher degree of merit, or to ima- gine how the rest of the composition could be kept on a scale of excellence answerable to these subordinate parts. But our readers will be glad to hear what our superior artists and con- noisseurs say of these admirable sculptures.

We follow the House of Commons' Report of their testimony : — Mr. Nollekens rates these marbles in the same class with the finest sculp- tures of Italy, and beyond any thing that this country before possessed ; and he adds, that the Theseus is, in his opinion, equal to the Apollo Belvedere. — Report, p. 30.

Mr. Flaxman considers the Elgin marbles as the finest works of art which he has seen ; and he especially places the Theseus in the first order of merit : but, when the Theseus is com- pared with the Apollo Belvedere, Mr. Flaxman would prefer the latter, because the Theseus is a mere representation of nature, fine nature in- deed, but mere nature; and the Apollo is a higher effort of the art, namely, an attempt at the perfection of ideal beauty. — Report, p 30.

Mr. Westmacott considers the whole collection as of the first class of art, but the Theseus and Ilissus he thinks unequalled — they are infinitely superior to the Apollo Belvedere, because they unite the greatest dignity of style with the greatest truth of nature, and that the Apollo is merely an ideal figure. He cannot readily determine which he prefers, the Theseus or the Ilissus : the back of the Theseus is the finest thing in the world, and the front of the Ilissus is not sur- passed by any known work of art. — Report, p. 33.

On this very just observation of Mr. West- macott's it is worth remarking, that the parts of each statue which he thus distinguishes, are those in which the surface happens to be most perfect, and in which of course the hand of the original master is more distinctly visible.

Mr. Chauntry, though he does not state dis- tinctly that he prefers these statues to the Apollo, seems to consider them as higher specimens of the art. The characters of the works, he truly observes, are not comparable ; the Elgin statues are groups in the simplest and grandest style of nature. The Apollo is a single figure, wrought out with a degree of finish that would have been mischievous in the former. At the same time Mr. Chauntry remarks, that though these statues have all this grand simplicity of nature, and are calculated to

produce the greatest effect in the distant position for which they were intended, they are yet executed with a degree of finish

which is quite surprising, and which yet de- *tacted nothing from the magnificence of their local effect. — Report, p. 37.

Mr. Rossi considers the Theseus and Ilissus as superior to the Apollo and Laocoon, and he adds the important verbal testimony of Canova, with whom he had personally visited the marbles. ‘ that they were as fine things as he had ever seen.’ — Report, p. 37.

Mr. Wilkins, a gentleman of taste and learn- ing, and of well-merited eminence in his own profession as an architect, ranks the Elgin mar- bles ‘ in the very highest order of art.’ — Report, p. 43.

Not less decisive was the opinion of Mr. West, the late president of the Royal Academy, and Sir Thomas Lawrence, without whose opinion the ‘Committee appear (very properly) to have thought their Report would not be satisfactory to the public.

The president considered the Theseus and Ilissus, the Torso of Neptune, and the Horse’s Head, as in the first class of dignified art em- ployed on the finest specimens of nature. The Apollo and Torso of the Belvedere, and the Laocoon, as specimens of systematic art — the production of ideal form by mechanical prin- ciples.— Report, p. 59. And he states, both in his evidence, and in a letter subjoined to the Pursuits, with a modesty and force which do equal honor to himself and these marbles, that he has worked from them, as a student, for his own improvement. — Pursuits, p. 52. That he has patiently drawn the most distinguished of them, the same size of the marbles ; that he has introduced their spirit and forms, as far as he was capable of catching them, into his own com- positions ; and he adds : —

‘ Had I been blessed with seeing and studying these emanations of genius at an earlier period of life, the sentiment of their pre-eminence would have animated all my exertions; and more character, and expression, and life, would have pervaded all my humble attempts in his- torical painting.’ — Pursuits, pp. 54, 55.

We cannot refuse ourselves the pleasure of extracting another passage of his letter, in which this amiable old man poured forth his giatitude for the benefit which lord Elgin has conferred on the arts of his country.

‘ In whatever estimation the arts of the present day shall be held by those of future ages, your lordship must be remembered by the

present, and be recorded by those to come, as a bene- factor, who has conferred obligations, not only on a profession, but upon a nation ; and as having rescued from the devastation of ignorance, and the unholy rapine of barbarism, those unrivalled works of genius, to be preserved in the bosom of your country, which a few centuries more might have consigned to oblivion.' — Pursuits, p. 52.

The opinion of Sir Thomas Lawrence is marked by that fine genius and taste which those who know him finid in his conversation, and which all admire in the efforts of his pencil.

He considers the Elgin marbles as in the very highest class of art; and after having made himself minutely acquai?ited with the chefs-

r

d'oeuvre in the gallery of the Louvre, he pro- nounces the Elgin statues to be of a higher class than the Apollo ; because, as he judiciously marks the distinction, there is in them a union of fine composition and grandeur of- form, with a more true and perfect expression of nature, than there is in the Apollo, or in any other of the most celebrated statues ; — there is in them all that beautiful and harmonious variety which is produced in the human form by the alternate repose and action of the muscles; and it is im- possible, he adds, after looking at the Elgin statues, to look at the casts of other celebrated works, without being struck by the inferiority of the latter in this respect.

The earl of Aberdeen, in his evidence, which is of considerable length, and which does the greatest credit to his candor, learning, and good taste, rates them in the highest class of art.

And finally, Canova, the most celebrated sculptor of modern times, in addition to his verbal expressions of admiration, left, in a letter to lord Elgin, his recorded judgment of them.

London, Nov. 10, 1815.

' Permit me to express the sense of the great gratification which I have received from having seen in London the valuable antique marbles, which you have brought hither from Greece. I think that I can never see them often enough : and, although my stay in this great capital must be extremely short, I dedicate every moment that I can spare to the contemplation of these celebrated remains of ancient art. I admire

in them the truth of nature united to the choice of the finest forms. Every thing here breathes life, with a veracity, with an exquisite knowledge of art, but, without the least ostentation or parade of it, which is concealed by consummate and masterly skill. The naked is perfect flesh, and most beautiful in its kind. I think myself happy in having been able to see with my own eyes these distinguished works ; and 1 should feel perfectly satisfied if I had come to London only to view them Upon which account the ad- mirers of art, and the artists, will owe to your lordship a lasting debt of gratitude, for having brought amongst us these noble and magnificent pieces of sculpture ; and for my own part I beg leave to return you my own most cordial ac- knowledgments.'

' Nothing, perhaps, after all,' however, says the Quarterly Reviewer, ' will surprise the com- mon observer more than the extraordinary praises which are lavished upon what appear to them to be little better than mutilated and shape- less fragments — to their eyes in no degree orna- mental, and to their judgments of no kind of utility. It must be confessed that the details of those sculptures have been greatly and lament- ably degraded ; but there remains enough amply to gratify the eye of taste, and to guide and form the powers of the student. It should be recol- lected, in considering this point of the subject, that not one of the great statues of the ancient world was found in a perfect state. The Venus de Medicis is in, we know not how many, pieces, and both the arms, at least, are modern — of the Apollo, the most perfect of ancient sculptures, VOL. VIII.

one hand and one arm are modern, and both the legs were broken. Of the beautiful Ceres, one of the most exquisite remains of antiquity, the head, though undoubtedly antique, does not belong to the body. The Torso, every one knows, is a mere trunk, without limbs or head. The Barberini Faun, which we have heard called the most perfect statue in the world, wants the legs and hands. The Laocoon has been restored ; and, in short, all those admirable specimens of the arts, when first found, would have excited to the common observer the same disappointment, though in various degrees, which the Elgin marbles have excited in some ordinary visitors ; but it is with them as with the cartoons ami frescos of Raphael, if disappointment clouds the first. visit, it vanishes at the second ; and, bv a more constant examination of those divine models, a purity of taste and accuracy of judg- ment grows up in the mind of the student, till at .last, not his fancy, but his judgment, supplies the deficiencies, and repairs the damages of ac- cident and time.

' Who is there, however unskilled in the arts, who can, for any time,

look on the representation of the Panathenaic procession without tin highest intellectual delight, that festival of the metropolis of the civilised world, connected with all the delicious remembrances of Athenian history, designed by the hand of Phidias, from the living procession in which Pericles, and So- crates, and Aspasia walked, and exhibiting on the marble which we may now call eternal, the noblest moral recollections with the most ex- quisite forms of natural beauty ; — who is there, we say, who can look at this admirable work without feeling that expansion of the heart, that exaltation of the mind, which it is the first and proudest office of the fine arts to create.' v. These marbles were finally secured to the public for the sum of £35,600, we believe, and are deposited in the British Museum. Manj foreigners are said to have already come into this country, solely for the purpose of seeing them ; and casts from the whole collection have been sent to Bavaria, to Wirtemberg, to Russia : others have been ordered for Florence. ' The school of sculpture,' adds the critic we have before quoted, ' will soon be in England.'

ELI, Heb. ˆy, i. e. offering, high priest of Israel, and the last of the judges except Samuel, succeeded Samson, about A. M. 2848 ; and A.A.C. 1156. His too gentle government, particularly towards his sons, :the practisers of the greatest wickedness, and the consequent misfortunes of his family and the commonwealth, are recorded in 1 Sam. iv. xiv. and xxii. He died in the for- tieth year of his government, and ninety-eighth of his age; A. M. 2888, and A. A. C. 1116.

ELIAS, or ELIJAH, from "?K, God, and H% the Lord, an eminent prophet of Israel, who escaped the common lot of mankind, by not suffering death; being translated, about A. M. 3108, and A. A. C. 896. His miracles, persecutions, and ascension to heaven, are recorded in 1 Kings xvii — xxi. ; 2 Kings i. and ii.

ELICHMAN (John), a native of Silesia in the seventeenth century, who practised physic

at Leyden, and was remarkable for his know- ledge of sixteen languages. He supported an opinion, that the German and Persian languages were derived from the same origin. His Latin translation of

the Tablet of Cebes, with the Ara- bic version and the Greek, was printed at Ley- den in 1640, under the care of Salmasius, who prefixed thereto a very ample preface.

ELICHPOOR, a town and district of the pro- vince of Berar, Hindostan. It belongs to the nizam, and lies between the twentieth and twen- ty-second degrees of northern latitude : it is se- parated from the territories of the Berar rajah by the river Burda. The capital was formerly the chief town of all Berar, and is said to have been founded in very ancient times, by rajah Elloo ; it stands on a branch of the Burda, and is a for- tified place. lu 1772 it was besieged by the Mahrattas, who retired upon payment of the tri- bute : it was then governed by a deputy of the nizam, who bore the title of nabob, and in the year 1777 endeavoured to establish his indepen- dence ; but he was soon surrounded by the troops of the former, and was killed in battle. His family being made prisoners, all his property was confiscated. It is still governed by a de- puty, who has charge of the district.

ELIC'IT, v. a. & adj. ˆ Lat. elicw, elicitum, ELIC'ITATE, v. a. \ to draw out. To strike ELICITA'TION, n. s. 3 or bring out by labor or art. The verbs are synonymous : as an ad- jective elicit means brought into action, or actual existence.

It is the virtue of humility and obedience, and not the formal elicit act of meekness ; meekness being ordinarily annexed to these virtues. Hammond.

The schools dispute whether, in morals, the exter- nal action superadds any thing of good or evil to the internal elicit act of the will. South.

That elieitatiun which the schools intend, is a dedu- cing of the power of the will into act : that drawing which they mention, is merely from the appetibility of the object. Bramhall.

Although the same truths may be elicited, and ex- plicated by the contemplation of animals, yet they are more clearly evidenced in the contemplation of man.

Hole's Origin of Mankind.

He elicits those acts out of the meer lapsed state of human nature. Cheyne.

ELIDE', v. a. I FT. elider; Lat. elido, eli- ELI'SIOX, n. s. S sus; to strike

off; to break off or from : hence to break in pieces.

We are to cut off that whereunto they, from whom these objections proceed, fly for defence, when the force and strength of the argument is elided.

Hooker.

The cause given of sound, that it would be an elision of the air, whereby, if they mean any thing, they mean a cutting or dividing, or else an attenu- ating of the air, is but a term of ignorance.

Bacon's Natural History.

You will observe the abbreviation and elisions, by which consonants of most ibdurate sounds are joined together, without any softening vowel to intervene.

Swift.

ELIGIBLE, adj. J Lat. eligibilis, eligo, ELIGIBILITY, n. s. j to choose. Fit to he chosen ; preferable. Eligibility is worthiness, or legal fitness to be chosen.

Certainty, in a drop distress, is more eligible than suspense. Clarissa.

The business of the will is not to judge concerning the nature of things, but to choose them in conse- quence of tho report made by the understanding, as to their eligibility or goodness. Fiddes's Sermons.

A British ministry ought to be satisfied, if, allow- ing to every particular man that his private scheme is wisest, they can persuade him, that next to his own plan, that of the government is the most eligible.

Addison's Freeholder.

Did they really think, that going on with the war was more eligible for their country than the least abatement of those conditions 1 Swift.

Through tomes of fable and of dream, I sought an eligible theme ; But none I found, or found them shared Already by some happier bard. Cowper.

ELIHU, from Heb. ˆX and Kin, i. e. he is my God, the son of Barachel the Buzite, a de- scendant of Buz, the son of Nahor, Abraham's brother, and the youngest of Job's friends who visited him in his

affliction. His remarkable speech to Job, and his senior friends, is recorded in the thirty-second and five following chapters. From some passages in that speech, particularly in chap, xxxiii. ver. 4 and 6, as well as from the propriety of the sentiments expressed in it, and the signification of the name Elihu, and more especially from the Almighty himself being in- troduced as the next speaker, some commenta- tors have supposed, that our Saviour is meant by this personage. Others have supposed that Elihu was the author of the book of Job, from the fifteenth and sixteenth verses of chap, xxxii. where he seems to speak of himself as the writer of the narrative, and of the effect of his words upon Job's three senior friends. But these two verses are indeed evidently a parenthesis, and cannot, by any construction of language, be reck- oned a part of the speech, which precedes and follows them.

ELIMINATE, v. a. \ Fr. eliminer ; Lat.

ELIMINA'TION, n. s. S elimino, from e and

limen, the threshold of a door; to put beyond

the door ; to banish : hence to set free ; liberate.

Eliminate my Spirit, give it range Through provinces of thought yet unexplored, Teach me by this stupendous scaffolding, Creation's golden steps, to climb to Thee.

Young.

ELIOTT, or ELLIOT (George Augustus), Lord Heathfield, was the youngest son of Sir Gilbert Eliott, Bart, of Stobbs, in Roxburghshire, where lord Heathfield was born in 1718. He received the first rudiments of his education under a pri- vate tutor ; and was early sent to the university of Leyden. Being designed for a military life, he was sent from thence to the celebrated Ecole Royale du Genie Militaire, conducted by the great Vauban, at La Fere, in Picardy, where he laid the foundation of what he so conspi- cuously exhibited at the defence of Gibraltar. He returned to Scotland in 1735, in the seven- teenth year of his age, and was introduced by his father to lieutenant-colonel Peers, of the twenty- third regiment of foot, then lying at Edinburgh. He was accordingly entered as a volunteer in that regiment, where he continued for a year or more : he then went into the engineer corps at

Woolwich, where he continued till 1740, when his uncle Colonel Eliott appointed him his adjutant of the second troop of horse grenadiers. With these troops he went upon ser- vice to Germany, and was with them in a va- riety of actions. In this regiment he bought the rank of captain and major, and after- wards purchased the lieutenant-colonelcy from Colonel Brewerton, who succeeded to his uncle. Soon after this he was appointed aid-de-camp to George II., and was distinguished for his military skill and discipline. In March 1759 he quitted the second troop of horse grenadier guards, being selected to raise, form, and disci- pline, the first regiment of light horse, called after him Eliott's regiment. As soon as they were raised and formed, he was appointed to the command of the cavalry in the expedition on the coasts of France, with the rank of brigadier general. After this he passed into Germany, where he was employed on the staff, and greatly distinguished himself in a variety of movements; particularly at the battle of Minden, where he headed the second line of horse under the mar- quis of Granby ; and where his regiment dis- played a strictness of discipline, an activity and enterprise, which gained them signal honor. From Germany he was recalled in 1762, for the purpose of being employed as second in com- mand in the memorable expedition against the Havannah. On the peace in 1763 his regiment was reviewed by the king, when they presented to his majesty the standards which they had taken from the enemy. Gratified with their fine discipline and high character, the king appointed it a royal regiment, naming it the 15th, or King's Royal Regiment of Light Dragoons. In 1774 he was appointed to succeed general A'Court as commander in chief of the forces in Ireland ; but he soon solicited to be recalled. He accordingly was so, and appointed to the command of Gibraltar in a fortunate hour for the safety of that important fortress. His gallant defence of this besieged rock is too well known to every Englishman, and too intimately con- nected with English history, to need a separate description here. See ENGLAND, HISTORY OF. On his return to England, the gratitude of the British senate was as forward as the public voice in giving him that distinguished mark his merit deserved. Both houses of parliament voted a unanimous address of thanks to the general. The king conferred on him the honor of Knight of the Bath, with a pension during his own and a second life of his own appointment ; and on June 14th, 1787, his majesty advanced him to the peerage by the title of Lord Heathfield, Baron Gibraltar, permitting him to take, in ad- dition to his family arms, the arms of the fortress he had so bravely defended, to perpetuate to futurity his noble conduct. He died at his chateau at Aix-la-Chapelle, on the 6th of

July, 1 790, in the seventy-third year of his age, of a second stroke of the palsy ; after having for some •weeks preceding enjoyed a tolerably good share of health, and an unusual flow of spirits. His remains were brought to England, and buried at Heathfield in Sussex, where a monument is erocted to his memory.

ELIPHAZ ; from “78, and P£5, i. e. the strength of God ; the eldest of Job’s three uncharitable friends. From his being styled the Temanite, it is evident that he was a descendant of Esau, by Teman, the son of Eliphaz, and grandson of Esau, the first duke of Edom.

ELIQUATION, in chemistry, an operation by which a more fusible substance is separated from one that is less so, by means of a heat sufficiently intense to melt the former, but not the latter. Thus an alloy of copper and lead may be sepa- rated by a heat capable of melting the latter, but not the former.

ELIS, or ELBA, in ancient geography, a fertile district of Peloponnesus, famous for raising flax, which equalled that of Judea in fineness, though not so yellow, and grew no where else in Greece.

ELIS, the capital of the above district, situated on the Peneus, which ran through it. It was the country of Phaedo the friend of Plato, and of Pyrrho the founder of the Pyrrhonists. This city owed its origin to a union of small towns after the Persian war. It was not encompassed im- mediately with a wall ; for it had the care of the temple at Olympia, and its territory was solemnly consecrated to Jupiter. To invade or not pro- tect it was deemed impiety ; and armies, if marching through it, delivered up their weapons, which, on their quitting it, were restored. Amidst warring states this city enjoyed repose, was resorted to by strangers, and flourished. It was a school for Olympia, which was distant thirty-seven miles. The athletic exercises were performed there, before the more solemn trial, in a gymnasium, by which the Peneus ran. There also was the town-hall, in which extemporary harangues were spoken and compositions recited. It was hung round with bucklers for ornaments. A way led from it to the baths through the Secret of Silence ; and another to the market-place, which was planned with streets between porticoes of the Doric order adorned with altars and images. Among the temples one had a cir- cular peristyle or colonnade ; but the image had been removed and the roof was fallen in the time of Pausanias. The theatre was ancient, as was also a temple of Bacchus, one of the deities prin- cipally adored at Elis. Minerva had a temple in the citadel, with an image of ivory and gold made by Phidias. At the gate leading to Olympia was the monument of a person, who was buried, as an oracle

had commanded, neither within nor without the city. The structures of Elis, Dr. Chandler observes, seem to have been raised with materials far less elegant and durable than the produce of the Ionian and Attic quarries The ruins are of brick, and not considerable, consisting of pieces of ordinary walls, and an oc- tagon building with niches, which, it is supposed, was the temple with a circular peristyle. These stand detached from each other, ranging in a vale southward from the wide bed of the river Peneus; which, by the margin, has several large stones, perhaps reliques of the gymnasium. The citadel was on a hill, which has on the top some remnants of a wall.

ELISHA, or ELISˆUS; from Heb. ““5K am: J71£”, i. e. the salvation of God; the son of'Sha-

phat, an eminent prophet of Israel, the disciple and successor of Elijah. His call, with (us various miracles and prophecies, are recorded in 1 Kings, xix. xxi. ; 2 Kings, ii. — viii. and xiii. He died much lamented by Joash king of Israel, A. M. 3165, and A. A. C. 839.

ELISHAH, the son of Javan, and grandson of Japhet, is supposed by chronologists to have been the progenitor of the inhabitants of Eolia, in Lesser Asia, and of Elis and Alisium in Pelo- ponnesus. •

ELI'SION. See ELIDE.

ELIX'ATE, v. a. ˆ Lat. elixare, to boil : but

ELIXA'TION, n. s. \ all etymologists derive

ELIX'IJU j elixir, so written in Fr.

Ital. Span. Port, and Lat. from the Arabic; Mr.

Thomson says, from the Arab, al uxseer. Elix-

ation is the act or state of boiling. Elixir is a

supposed quintessence, ‘ or the philosopher's

stone, or one of the names thereof. Some take

it for the chemical powder of production,' says

Minsheu. ' The word signifieth force or strength,'

he adds. It is used for any cordial.

No chymist yet the elixir got, But glorifies his pregnant pot, If by the way to him befal Some odoriferous thing, or medicinal.

Donne.

What wonder then, if fields and regions here Breathe forth elixir pure ! Milton'* Paradise Lost.

— Bring Quintessence of elixer pale,

Out of sublimed spirits minerall.

Bp. Hall. Satires.

Even to ourselves, and more perfect animals, water performs no substantial nutrition ; serving for refri- geration, dilution of solid aliments, and its elixution in the stomach. Browne.

In the soul, when the supreme faculties move regularly, the inferior passions and affections follow- ing, there arises a serenity infinitely beyond the highest quintessence and elixir of worldly delight.

South,

For when no healing art prevailed, When cordials and elixirs failed, On your pale cheek he dropped the shower, Revived you like a dying flower. Waller.

When we see men grow old, and die at a certain time one after another, from century to century, we laugh at he elixir that promises to prolong life to a thousand years. Dr Johnson,

ELIXIR, in medicine, is defined by others, a compound tincture extracted from many effica- cious ingredients. The difference between a tincture and an elixir seems to be this, that a tincture is drawn from one ingredient, sometimes with an addition of another to open it and to dispose it to yield to the menstruum ; whereas an elixir is a tincture extracted from several in- gredients at the same time.

EXIZABETH, queen of England, daughter Henry VIII. and Anne Boleyn, was born at Greenwich, September 7th, 1533. She was early

instructed in the learned languages, first by Gnndal, and afterwards by the celebrated Roger Ascham. She acquired likewise considerable knowledge of the Italian, Spanish, and French, languages. Dr. Grindal was also her preceptor m divinity, which she is said to have studied with uncommon application and industry. That -Lhzabeth became a Protestant, and her sister

Mary a Papist, was the effect of that cause which determines the religion of the most of mankind ; namely, the opinions of those by whom they are educated : and tins difference of opinion, in their tutors, is not at all surprising, when we recollect, that their father was of both religions, and of neither. But the studies of Elizabeth were not confined merely to languages and theo- logy ; she was acquainted with the political history of the ancients ; and was also well skilled in music. After the short reign of her brother Edward, our heroine being then about twenty years of age, and her bigoted sister acceding to the crown, Elizabeth experienced a considerable degree of persecution, so as to be even appre- hensive of a violent death. She was imprisoned ; and we are told inhumanly treated. At last, by the intercession of king Philip of Spain, she was set at liberty ; which she continued to enjoy till, on the death of her sister, she, on the 17th of November, 1558,- ascended the throne of Eng- land. Her political history as a queen, is uni- versally known and admired. See ENGLAND. But her attention to government did not sus- pend her pursuit of learning. Ascham, in his Schoolmaster, tells us, that, about 1563, five years after her accession, she being then at Windsor, ‘ besides her perfect readiness in Latin, Italian, French, and Spanish, she read more Greek in one day than some prebendaries of that church did read Latin in a whole week.’ She employed Sir John Fortescue to read to her Thucydides, Xenophon, Polybius, Euripides, ˆschines, and Sophocles.— Ballard, p. 219. That the Latin language was familiar to her, is evident from her speech to the university of Oxford, when she was near sixty ; as well as from her spirited answer to the Polish ambassador in 1598. ‘ But,’ says Walpole, ‘ a greater instance of her genius, and that too in Latin, was her extempore reply to an insolent prohibition delivered to her from Philip II. by his ambassador, in this tetrastic.

Te veto ne pergas bello defeudere Belgas : QUJE Dracus eripuit, nunc rcstituantur oportet : Quas pater evertit, jubeo te condere cellas : Religio papae fac restituatur ad unguem.

‘ She instantly answered him, with as much spirit as she used to return his invasions,’

Ad Graecas, bone rex, fient mandata kalendas. Being pressed by a

Romish priest, during her persecution, to declare her opinion concerning the real presence of Christ's body in the wafer, she answered, it is said,

Christ was the Word that spake it; He took the bread and brake it; And what that Word did make it, That I believe and take it.

Sir Walter Raleigh having wrote on a window,

Fain would I climb, yet fear I to fall ; She immediately wrote under it.

If thy heart fail thee climb not at all.

Worthies of Devonshire, 261. Elizabeth was doubtless a woman of singulai capacity and extraordinary acquirements ; and, if we could forget the fate of her cousin, queen Mary, and of her own favorite, Essex, together with the burning of the anabaptists ; in short,

could we forbear to contemplate her character through the medium of religion and morality, we might pronounce her the most illustrious of illustrious women. See ENGLAND, MARY, and SCOTLAND. She died at Richmond the 24th March, 1602, aged seventy, having reigned forty-four years, and was interred in the chapel of Henry VII. in Westminster Abbey. Her suc- cessor, James, erected a magnificent monument to her memory. She wrote, 1 . The Mirrour or Glass of the Sinful Soul. This was translated out of French verse into English prose, when she was eleven years old. It was dedicated to queen Catherine Parr. Probably it was never printed ; but the dedication and preface are preserved in the Sylloge epistolarum, in Hearne's edition of Livii Foro-Juliensis, p. 161. 2. Prayers and Meditations, &c. ; dedicated to her father, dated at Hatfield, 1545, MS. in the royal library. 3. A Dialogue out of Xenophon, in Greek, between Hiero a king, yet some time a private person, and Simonides, a poet, as touch- ing the life of the prince and private man ; first printed from a MS. in her own hand writing, in the Gentleman's Magazine, for 1743. 4. Two Orations of Isocrates, translated into Latin. 5. Latin Oration at Cambridge, preserved in the king's library, in Hollingshed's Chronicles, p. 1206; and in Fuller's History of Cambridge, p. 138. 6. Latin Oration at Oxford; in Wood's History and Antiquities of Oxford, lib. i. p. 289; also in Dr. Jebb's Appendix to his Life of Mary, Queen of Scots. 7. A Comment on Plato. 8. Boethius de Consolatione Philosophise,, trans- lated into English, 1593. 9. Sallustius de Bello Jugurthino, translated

into English, 1590. 10. A Play of Euripides, translated into Latin, Cat. of Royal Auth. 11. A Prayer, for the use of her fleet in the great expedition in 1596. 12. Part of Horace's Art of Poetry, translated into English, anno 1598. 13. Plutarch de curiosi- tate, translated into English. 14. Letters on various occasions to different persons ; several Speeches to her Parliament ; and a number of other pieces.

Dr. Lingard, the Catholic historian, has given us a character of this princess which displays the usual research and elaborate care of his work. It is perhaps, as a whole, a fair specimen of his History of England. We subjoin the prin- cipal part of it.

' In the judgment of her contemporaries,' he says, ' and that judgment has been ratified by the consent of posterity, Elizabeth was numbered among the greatest and most fortunate of our princes. The tranquillity which, during a reign of nearly half a century, she maintained within her dominions, while the neighbouring nations were convulsed with intestine dissensions, was taken as a proof of the wisdom or the vigor of her government : and her successful resistance against the Spanish monarch, the many injuries which she inflicted on that lord of so many kingdoms, and the spirit displayed by her fleets and armies, in expeditions to France and the Netherlands, to Spain, to the West and even to the East Indies, served to give to the world an exalted notion of her military and naval power. When she came to the throne, England ranked

only among the secondary kingdoms; before her death it had risen to a level with the first nations in Europe.

' Of this rise two causes may be assigned. The one, though more remote, was that spirit of commercial enterprise, which had revived in the reign of Mary, and had been carefully fostered, in that of Elizabeth, by the patronage of the sovereign, and the co-operation of the great. Its benefits were not confined to the trading and sea-faring classes, the two interests more imme- diately concerned. It gave a new tone to the public mind : it diffused a new energy through all ranks of men. Their views became ex- panded : their powers were called into action : and the example of successful adventure furnished a powerful stimulus to the talent and industry of the nation. Men in every profession looked forward to wealth and independence : all were eager to start in the race of improvement.

' The other cause may be discovered in the system of foreign policy, adopted by the minis- ters ; a policy, indeed, which it may be difficult to reconcile with honesty and good faith, but wnich, in the result,

proved eminently success- ful. The reader has seen them perpetually on the watch to sow the seeds of dissension, to foment the spirit of resistance, and to aid the efforts of rebellion, in the neighbouring nations. In Scotland the authority of the crown was almost annihilated ; France was reduced to an unexampled state of anarchy, poverty, and dis- tress : and Spain beheld with dismay her wealth continually absorbed, and her armies annually perishing, among the dikes and sand-banks of the Low Countries. The depression of these powers, if not a positive, was a relative benefit. As other princes descended, the English queen Appeared to rise on the scale of reputation and power.

‘ In what proportion the merit or demerit of these and of other measures should be shared between Elizabeth and her counsellors, it is im- possible to determine. On many subjects she could see only with their eyes, and hear with their ears; yet it is evident that her judgment or her conscience frequently disapproved of their advice. Sometimes, after a long struggle, they submitted to her wisdom or obstinacy; some- times she was terrified or seduced into the surrender of her own opinion : generally a com- promise was effected by mutual concessions. This appears to have happened on most debates of importance, and particularly with respect to the treatment of the unfortunate queen of Scots. Elizabeth may perhaps have dissembled : she may have been actuated by jealousy or hatred : but, if we condemn, we should also remember the arts and frauds of the men by whom she was surrounded, the false information which they supplied, the imaginary dangers which they created, and the despatches which they dictated in England to be forwarded to the queen through the ambassadors in foreign courts, as the result of their own judgment and observation.

‘ It may be, that the habitual irresolution of Elizabeth was partially owing to her discovery of svich practices : but there is reason to believe that it was a weakness inherent in the constitu—

tion of her mind. To deliberate appears to have been her delight: to resolve was her torment. She would receive advice from any; from foreigners as well as natives, from the ladies of her bed-chamber no less than the lords of her council : but her distrust begot hesitation ; and she always suspected that some interested motive lurked under the pretence of zeal for her service. Hence she often suffered months, sometimes years, to roll away before she came to a conclu- sion : and

then it required the same industry and address to keep her steady to her puipose, as it had already cost to bring her to it. The ministers, in their confidential correspondence, perpetually lamented this infirmity in the queen ; in public they employed all their ingenuity to screen it from notice, and to give the semblance of wisdom to that which, in their own judgment, they characterised as folly.'

He then notices her alleged parsimony, and ascribes it, principally, to the lavish expendi- ture incurred by her foreign policy.

' An intelligent foreigner,' he continues, ' had described Elizabeth, while she was yet a subject, as haughty and overbearing : on the throne she was careful to display that notion of her own im- portance, that contempt of all beneath her, and that courage in the time of danger, which were characteristic of the Tudors. She seemed to have forgotten that she ever had a mother : but was proud to remind both herself and others that she was the daughter of a powerful monarch, of Henry VIII. On occasions of ceremony she appeared in all her splendor, accompanied by the great officers of state, and with a numerous retinue of lords and ladies dressed in their most gorgeous apparel. In reading the accounts of her court, we may sometimes fancy ourselves transported into the palace of an eastern princess. When Hentzner saw her she was proceeding on a Sunday from her own apartment to the chapel. First appeared a number of gentlemen, barons, earls, and knights of the garter; then came the chancellor with the seals, between two lords carrying the sceptre and the sword. Elizabeth fol- lowed : and wherever she cast her eyes, the spec- tators instantly fell on their knees. She was then in her sixty-fifth year. She wore false hair of a red color, surmounted with a crown of gold. The wrinkles of age were imprinted on her face ; her eyes were small, her teeth black, her nose prominent. The collar of the garter hung from her neck ; and her bosom was un- covered, as became an unmarried queen. Behind her followed a long train of young ladies dressed in white ; and on each side stood a line of gen- tlemen pensioners, with their gilt battle-axes, in splendid uniforms.'

The traveller next proceeded to the dining room. Two gentlemen entered to lay the cloth, two to bring the queen's plate, salt, and bread. All, before they approached the table, and when they ret ; red from it, made three genuflexions. Then came a single and a married lady, perform- ing the same ceremonies. The first rubbed the pl-ite with bread and salt : the second gave a morsel of meat to each of the yeomen of the guard, who brought in the different courses ; and at the same time the hall echoed to the

sound of twelve trumpets, and two kettle-drums. But the queen dined that day in private ; and, after a short pause, her maids of honor attend in procession, and, with much reverence arid solemnity, took the dishes from the table, and carried them into an inner apartment. Yet while she maintained this state in public and in the palace, while she taught the proudest of the nobility to feel the distance between them and their sovereign, she condescended to court the good will of the common people. In the coun- try they had access to her at all times;, neither their rudeness nor importunity appeared to of- fend her : she received their petitions with an air of pleasure, thanked them for their expres- sions of attachment, and sought the opportunity of entering into private conversation with indivi- duals. Her progresses were undoubtedly under- taken for pleasure : but she made them subser- vient to policy, and increased her popularity by her affability and condescension to the private inhabitants of the counties in which she made her temporary abode.'

' From the elevation of the throne, we may now follow Elizabeth into the privacy of domes- tic life. Her natural abilities were great : she had studied under experienced masters ; and her stock of literature was much more ample than that of most females of the age. Like her sister Mary, she possessed a knowledge of five lan- guages : but Mary did not venture to converse in Italian, neither could she construe the Greek Testament, like Elizabeth. The queen is said to have excelled on the virginals, and to have understood the most difficult music. But danc- ing was her principal delight : and in that exer- cise she displayed a grace and spirit which was universally admired. She retained her partiality for it to the last: few days passed in which the young nobility of the court were not called to dance before their sovereign ; and the queen her- self condescended to perform her part in a gal- liard with the duke of Nevers, at the age of sixty-nine.'

' It is seldom that females have the boldness to become the heralds of their own charms : but Elizabeth by proclamation announced to her people, that none of the portraits, which had hitherto been taken of her person, did justice to the original : that at the request of her council she had resolved to procure an exact likeness from the pencil of some able artist : that it should soon be published for the gratification of her loving subjects : and that on this account she strictly forbad all persons whatsoever, to paint or engrave eny new portraits of her features without license, or to show or publish any of the old portraits, till they had been reformed according to the copy to be set forth by authority. The courtiers soon discovered how greedy their sovereign was of flattery. If they sought to please, they were careful to admire : and adula- tion the most fulsome and extravagant,

was ac- cepted by the queen with gratitude, and rewarded witli bounty. Neither was her appetite fot- praise cloyed, it seemed rather to become more craving, by enjoyment. After she had passed her grand climacteric she exacted the same homage to her faded charms as had been paid to

her youth; and all who addressed her were still careful to express their admiration of her beauty in the language of oriental hyperbole.

‘ In her temper Elizabeth seemed to have in- herited the irritability of her father. The least inattention, the slightest provocation, would throw her into a passion. At all times her discourse was sprinkled with oaths : in the sallies of her anger it abounded with imprecations and abuse. Nor did .she content herself with words: not only the ladies about her person, but her courtiers and the highest officers in the state, felt the weight of her hands. She collared Hatton, she gave a blow on the ear to the earl-marshal, and she

spat on Sir Matthew , with the foppery

of whose dress she was offended.

‘ Elizabeth firmly believed, and zealously up- held, the principles of government established by her father, the exercise of absolute authority by the sovereign, and the duty of passive obedi- ence in the subject. The doctrine, with which the lord keeper Bacon opened her first parlia- ment, was indefatigably inculcated by all his successors during her reign, that, if the queen consulted the two houses, it was through choice, not through necessity, to the end that her laws might be more satisfactory to her people, not that they might derive any force from their assent. She possessed by her prerogative what- ever was requisite for the government of the realm. She could, at her pleasure, suspend the operation of existing statutes, or issue proclama- tions which should have the force of law. In her opinion the chief use of parliaments v> as to vote money, to regulate the minutiae of trade, and to .egislate for individual and local interests. To the lower house she granted, indeed, freedom of debate ; but it was to be a decent freedom, the liberty of ‘ saying aye or no ;’ and those who transgressed that decency were liable, we have repeatedly seen, to feel the weight of the royal displeasure.

‘ The historians, who celebrate the golden days of Elizabeth, have

described with a glowing pencil, the happiness of the people under her sway. To them might be opposed the dismal picture of national misery, drawn by the catholic writers of the same period. But both have taken too contracted a view of the subject. Reli- gious dissension had divided the nation into jpposite parties, of almost equal numbers, the oppressors and the oppressed. This est'mate of " England's Maiden Queen," though from ihe pen of a Catholic historian, and as such highly creditable to his liberality, conveys but a very imperfect notion of the character of Elizabeth. In the present day evtn the respect which attends a royal diadem would not for a moment have en- sured the toleration of her licentious amours, and in many respects she closely resembled her royal namesake. It is evident that neither Elizabeth nor her ministers understood the benefit of civil and religious liberty. The prerogatives which she so highly prized, have long since withered away : the bloody code which she enacted against the rights of conscience, has ceased to stain the pages of the statute book : and the result has proved, that the abolition of despotism and intolerance adds no less to the stability of the throne, than to the happiness of the people.'

ELIZABETH PETROWNA, empress of Russia, was the second daughter of Peter the Great, and bom in 1709. The testamentary disposi- tion of this monarch was in favor of her suc- cession to the throne, and she was urged to avail herself of the infancy of Ivan, who had been declared emperor under the regency of his father and mother, Anthony afnd Elizabeth of Meck- lenburg. Her surgeon, Lestoff, seems to have decided her to assert her claim, by sending to her a picture, representing her on one side seated upon an imperial throne, and on the other be- headed on a scaffold. On the night of the 6th of December, 1741, she went to the quarters of the Preobashenki regiment of guards, who immediately declared her empress. A detach ment accompanied her to the palace, where they arrested the regent prince and princess and the young Ivan ; and by six o'clock in the morning she was proclaimed empress by a bloodless re- volution. Elizabeth now became indolent and voluptuous. On her accession she made a vow never to inflict a capital punishment; and, re- solving to pass her days unmarried, she nomi- nated her nephew, Charles Peter Ulric (after- wards Peter III.) her successor. She, however, openly indulged in the most licentious amours, and her favorites, in fact, ruled her people. She is said to have had no fewer than eight natural children by them. With all this she was most scrupulously devout, and practised with great exactness all the ceremonies of her church. In 1756 Russia joined Austria and France against the king of Prussia ; and the troops of the latter so hardly pressed upon him as to bring

him to the brink of destruction, when the death of Eli- zabeth changed the entire prospect of affairs. This took place in December, 1761, in the fifty- second year of her age.

ELIZABETH, in geography, a township of Penn- sylvania, in Lancaster county, eighteen miles north-west by west of Lancaster, and eighty-four west by north of Philadelphia.

ELIZABETH CAPE, a cape on the island which forms the north-east point of the entrance into Cook's inlet. Vancouver describes this coast as composed of high land, before which lie three small islands and some rocks ; the cape is itself the largest and the most western of these islands, which appear to afford a navigable channel be- tween them and the main land, in an east and west direction ; though between the cape and the middle island some low lurking rocks were dis- cerned, which had the appearance of being con- nected with a cluster above the surface of the sea, lying south-east from the cape, at the distance of three or four miles ; to the south-west of the middle island is another cluster of rocks, both above and beneath the water. Long. 208° 53′ E., lat. 59° 9′ N. Also a cape on the coast of Main.

ELIZABETH CASTLE, a fortress of the island of Jersey, built on a rock in the east side of St. Aubin's Bay, which is insulated with the flowing of the tide. It is 663 paces distant from St. Heliers.

ELIZABETH CITY, a county of Virginia, be- tween the rivers James and York, bounded by Warwick and York counties on the west, and Chesapeake Bay on the east and north. It is

eighteen miles long, and eight broad. Point Comfort is the southern extremity of the county.

ELIZABETH ISLAND, an island in the straits of Magellan, near the shore of Patagonia. It was visited by Bougainville, who describes its coasts as high and steep. Water and wood are both scarce, and a small sort of heath is the only thing that can be used as fuel here. Long. 71° 45′ W., lat. 52° 50′ N.

ELIZABETH ISLANDS, sixteen small islands of Massachusetts, on the south-east side of Buzzard's Bay, extending south-west from Barnstaple county, and bearing north-west from Martha's vineyard. Cattahunk, Nashawn, Nashawenna, Pasqui, and Pinequese, are the chief of them. They belong to Duke's county, and lie between long. 70° 38′ and 70° 56′ W., and between lat. 41° 24′ and 41° 32′ N.

ELIZABETH RIVER, a river of the United States, the south head water of which rises from the Great Dismal Swamp, and running through Virginia falls into James River. A navigable canal was begun to be dug in 1797, to connect this river with the Pasquotank, which is four- teen miles distant. The canal company are in- corporated by the legislatures of Virginia and North Carolina.

ELIZABETH-TOWN, a post town of New Jersey, in Essex county, seated on a rivulet which runs into Arthur Kull, six miles south of New- ark, and fifteen south-west by west of New York. It is one of the oldest towns in the state, having been purchased of the Indians so early as 1 664. It has two handsome churches, one for the Pres- byterians and one for the Episcopalians ; and is fifty-eight miles N. N. E. of Philadelphia, and twelve south-west by west of New York.

ELIZABETH-TOWN, a post town of Maryland, capital of Washington county, formerly called Hagar's Town, seated in the vale of Coneco- cheaque, six miles from the Potomac. It is regu- larly built, and has an Episcopalian, a Presby- terian, and a German Lutheran church ; with a courthouse, gaol, &c. It carries on a good trade with the western county ; and lies 175 miles west by south of Philadelphia, and fifty north-west of Baltimore.

ELK, n. s. Sax. aelc ; Swed.e/g; Goth, alg; Ital. and Span, alee, from Gr. U\KTJ, strength, according to Watcher. The moose deer.

The elk is a large and stately animal of the stag kind. The neck is short and slender j the ears nine inches in length, and font in breadth. The color of iu coat in Winter is greyish, in Summer if. is paler. The horns of the male elk are short and thick near the head, where it by degrees expands into a great breadth, with several prominences in its edges.

Hill.

And, scarce his head

Raised o'er the hcapy wreath, the branching elk Lies slumbering silent in the white abyss.

T/tomson.

ELK, in zoology. See CERVTS.

ELK, in geography, a navigable river of the United States, on the eastern shore of Maryland, which rises in Chester county, Pennsylvania, nnd running S. S.W. thirty-three miles, falls into

Chesapeake Bay, on the south side of Tur- key Poir.t.

ELK, a short navigable river in Tennessee, and Georgia, which rises in Tennessee, near the head waters of Duck River, and, running soxithˆwest, falls into the Tennessee at Muscle shoals.

ELKHORN RIVER, a river of Louisiana, which enters the La Plata about forty miles above its junction with the Missouri. It has a clear gravelly channel, and is about 100 yards wide at its mouth.

ELKRIDGE, a town of Maryland, United States, on the south bank of Patapsco River, eight miles north-west of Baltimore.

ELKTON, a town of Maryland, United States, at the head of Chesapeake Bay, and the capital of Cecil county. It is situated at the confluence of the head branches of the Elk, and enjoys considerable advantages from the carrying trade between Baltimore and Philadelphia. Thirty- seven miles south-west of Philadelphia.

ELL, n. s. Sax. eln (and frequently so written by our elder authors) ; Goth, aul , aulin ; Swed. aln; Teut. elle; Belg. el; Lat. ulna ; Gr. w\tvi). Both the last words, according to Vossius, being spoken of the arm as a measure of length. A measure containing in length one yard and a quarter. ,

The wtorld produces for every pint of honey, a gallon of gall ; for every dram of pleasure, a pound of pain ; for every inch of mirth, an ell of moan ; and as the ivy twines around the oak, so do misery and misfortune encompass the happiness of man.

Burton. Acquit thee bravely, play the man ;

Look not on pleasures as they come, but go ; Defer not the last virtue ; life’s poor span

Makes not an ell by trifling in thy woe. Herbert.

Upon their wedding-day Mr. Spectator and she had but half an ell of face betwixt them ; and thy my very worthy predecessor, Mr. Serjeant Thin, always maintained to be no more than the true oval propor- tion between man and wife. Spectator.

They are said to make yearly forty thousand pieces of linen cloth, reckoning two hundred elU to the piece. Addison.

The. ELL is a measure different in different countries, by which cloths, stuffs, linens, silks, &.c., are usually measured. The ells most frequently used with us are the English and Fle- mish ; the former containing three feet nine in- ches, or one yard and a quarter ; the latter only twenty-seven inches, or three quarters of a yard ; so that the ell English is to the Flemish ell as five to three. In Scotland the ell contains thirty-seven two-tenths English inches.

ELLAGIC ACID. The deposit which forms in infusion of nut-galls, left to itself, is not com- posed solely of gall c acid and a matter which colors it. It contains, besides, a little gallatfc and sulphate of lime, and a new acid, which was pointed out for the first time by M. Chevreul in 1815, an acid on which M. Braconnot made observations in 1818, and which he proposed to call acid ellagic, from the word galle, reversed. Probably this acid does not exist ready formed in nut-galls. It is insoluble ; and, carrying down with it the greater part of the gallic acid, forms the yellowish crystalline deposit. But boiling water removes the gallic acid from the ellacic ; whence the means of separating them from one another.

ELLIPOMACROSTYLA, in natural history, from «\Xi;rijc» imperfect ; / iaepof, long ; and

ELLIPOPACHYSTYLA, in natural history, from eXXiTTije, imperfect; ira%vc, thick; and •rvXoc, a column, q. d. an imperfect crystal with a thick column ; a genus of crystals the bodies of which are composed of an hexangular column, < onsiderably thick and short, affixed irregularly at one end to some solid body, and terminated at the other by an hexangular pyramid. There

ELLIPSE, or ELLIPSIS, in geometry. See CONIC SECTIONS.

ELLIPSIS, n. s. -\ Fr. ellipse ; Italian

ELLIP'TIC, adj. telisse ; Span, and Port.

ELLIP'TICAI, telipse, from Gr. tX-

ELLIP'TICALLY, adv.) Xturot? (from tic out, or empha't. and XaTnn, to fail, Parkhurst). A figure of speech whereby something implied in a

sen- tence is omitted : one of the conic sections, cal- led also an oval; but originally termed an el- lipse or ellipsis by Apollonius, because in this figure the squares of the ordipates are less than, or defective in, the rectangles, under the pa- rameters and abscisses.

The words are delivered by way of ellipsis, Rom. iv. 18. Hammond.

The planets could not possibly acquire such revo- lutions in circular orbs, or in ellipses very little eccen- trick. Bentley.

On the cylinder inclined, describe an ellipsis pa- rallel to the horizon. Wilkini'i Dtsdalus.

Since the planets move in elliptir.k orbits, in one of whose foci the sun is, and by a radius from the sun describe equal areas in equal times, which no other law of a circulating fluid, but the harmonica! circula- tion, can account for ; we must find out a law for the paracentrical motion, that may make the orbits ellip- tick. Cheyne's Phil. Prin.

In animals, that gather food from the ground, the pupil is oval or elliptical ; the greatest diameter going transversely from side to side. Id.

Earths round each sun with quick explosions burst, And second planets issue from the first ; Bend, as they journey wish projectile force, In bright ellipses their reluctant course. Darwin.

ELLIS (George), F.ll.S. and F.S.A., an in- genious miscellaneous writer, was born in Lon- don in 1745, and educated at Westminster school.

He afterwards went to Trinity College, Can – bridge, and was one of the writers of the ceh – brated ' Rolliad/ a satirical publication agaii st the administration of Mr. Pitt; but he after- wards became attached to that statesman, ; nd was appointed secretary to lord JVIalmesbury, oa the embassy to Lisle. Mr. Ellis died in 18 6. His works are: 1. Specimens of the En ly English Poets, 3 vols. 8vo. 2. Preface, Not s, and Appendix, to a Translation of Le Grand's Fabliaux, 2 vols. 8vo. 3. Specimens of English Metrical Romances, 3 vols. 8vo.

ELLIS (John), F. R. S., a zoological and botani- cal writer, was born in London about 1710 ; and, applying himself very early in life to scientific observations, discovered the animal nature of corals and corallines, on which subject he pub- lished an Essay, 4to. in 1 755. He distinguished himself in botany by an account of new plants from America; a description of the Confervce, and a dissertation on the Varnish Tree of Japan He also wrote an account of Coffee, a descrip-

tion of the Mangostan and Bread Fruit, and Directions to Voyagers for bringing home Vege- table Productions. He was also the author of various papers in the Transactions of the Royal Society. Lord chancellor Northington gave him the place of agent for West Florida and Dominica. He died in 1776. His Natural History of uncommon Zoophites, was published by his daughter.

ELLISIA, in botany, a genus of the mono- gynia order, pentandria class of plants, natural order twenty-eighth, luridse : COR. monopetalous and funnel-shaped ; the berry carnous and bilo- cular : SEEDS two, muricated or set with small raised points, the one higher than the other. Species one only, an annual of Virginia.

ELLORE, or ELURA, one of the northern Circars of Hindostan, is situated between 16° and 17° of N. lat. Ellore and Condapilly occupy the whole of the space between the Krishna and the Godavery. Its superficial con- tents are estimated at 2700 square miles, exclu- sive of the high mountainous region on the west. The principal towns are Ellore, Colaircotta, and Gundgoli.

ELLORE, the capital of the above district, is situated on the northern side of the Colair Lake, through which it has lately been proposed to carry a canal from the Godavery to the Kistnah. It possesses a small fort, and formerly had a military cantonment in its vicinity.

ELLSMERE, a market town of Shropshire, sixteen miles north-west of Shrewsbury, and 169 north-west from London. Its pr ncipal traffic is in malt, the culture of barley being particu- larly attended to in its neighbourhood. It de- rives its name from an extensive lake, or mere, covering 100 acres, and exceedingly well stocked with fish, and its banks ornamented with a well- built town on one side, and the mansion and park, called Oatley, on the other. From the Castle-hill, on which there is one of the finest bowling-greens in the kingdom, there is a dis- tinct view of nine different counties. The church has a square tower, with eight bells. Market on Tuesday.

ELLWANGEN, once the capital of a distric

of this name, is now the chief town in the de- partment of the Rocher, in the kingdom of Wir- temberg, and situated in a pleasant valley on

the Jaxt. It is small, but well built, and contains 2100 inhabitants. The catholic university here has been united with the protestant one of Zubiii'^en. Thirty-two miles north of Ulm.

KL1AVOOD (T.), an early quaker, and an associate of Milton the poet, published, in his twenty-second year, An Alarm to the Priests on a Message from Heaven to warn them. In 1665 he lodged with Milton at Chalfont, Bucks, and became the occasion of his writing Paradise Regained, by observing, on the return of the Paradise Lost, which the poet had lent him to read, ' Thou hast said much of Paradise lost, but what hast thou to say of Paradise found?' The life of Mr. Ellwood was almost wholly spent in controversy, and his zeal and perse- verance in his opinions rendered him constantly liable to the conventicle, and other persecuting laws. In 1705 he published the first part of Sacred History, or the Historical Parts of the Old Testament; and in 1709 Sacred History, &c., of the New Testament. His other works ;ire numerous; one of them, entitled The Foun- dation of Tithes Shaken, attracted much atten- tion at the time. He also published Davideis, the Life of David, King of Israel, a poem ; and died in 1713, aged seventy-four. His life, written by himself, affords several interesting particulars of the early history of his sect. ELM, n. &. } Sax. elm ; Fr. ulme, and orme ; ELM'y, adj. 5 Lat. ulmus. A tree, formerly used to support the vine. See ULMUS.

Thott art an elm, my husband ; I a vine; V hose weakness married to thy stronger state, Makes me with thy strength to communicate.

Shahspeare. The rural seat,

Whose lofty elmt and venerable oaks, Invite the rook, who high amid' the boughs, In early Spring, his airy city builds. Thomson.

Through the sandy soil Of elmy Ross or Devon's myrtle groves.

Dyer. Fleece.

The simple spire and elmy grange. T. Warton.

Round the tall elm the flattering ivies bend, And strangle, as they clasp, their struggling friend.

Darwin.

ELM, in botany. See ULMUS. The elm is a timber of peculiar property and singular use in situations where it is continually exposed either to the wet, or to be kept dry. Its grain being rough and curly, causes it to

be not liable to split. If felled between the months of Novem- ber and February, it is found to have no sap, and is of peculiar service in mast-making

ELMACINUS (George), author of a History of the Saracens, was born in Egypt towards the middle of the thirteenth century. His history begins with Mahomet, and continues to the year of the hegira 512, answering to A. D. 1134; in which he sets down year by year, in a very concise manner, whatever regards the Saracen empire, intermixed with some passages relating to the eastern Christians. He was son to Yaser Al Almid, secretary to the council of war under

the sultans of Egypt for forty-five years ; and in 1238, when his father died, succeeded him in his place, though professing Christianity. His history of the Saracens was translated from Arabic into Latin by Erpinius; and printed in these two languages in folio, at Leyden, in 1625. Erpinius died before the publication.

ELMINA, or ST. GEORGE DEL MINA, the capital of the Dutch settlements on the Gold Coast of Africa, and one of the most respectable fortresses in that neighbourhood, was built ori- ginally by the Portuguese, who made it the ca- pital of their settlements upon this coast in 1481. In 1637 it was taken by the Dutch, and ceded to them afterwards by treaty. From this time the Dutch claimed the sole dominion of the Gold Coast, but were soon forced by the English to resign that pretension.

Elmina stands on a peninsula, formed by a small river running nearly parallel with the sea, and the castle has two approaches, one from the town, where it is strengthened by a double ditch, over which are drawbridges ; the other adjoining the river, where is a small gate, at an elevation of about twelve feet, to which an ascent is formed by a steep ladder. A fort is built on an emi- nence adjoining named Conradsburg or St. Jago, and this may be considered the key of Elmina. The town is large and dirty, and the river, though small, will admit vessels of 100 tons bur- den at high water. It repulsed a respectable English force in 1781 ; but this is attributed to a want of concert between the commanders. The surrounding country is, for the most part, open and flat, and the soil light, though, in some places, of a heavy clay. The inhabitants consist of traders, fishermen, and persons employed as servants to traders ; some among them are wealthy. There are likewise many mulattoes in respectable circumstances here, who support a number of slaves, performing the duties of car- penters, masons, and blacksmiths. The place is supposed, altogether, to contain 15,000 inhabi- tants. In 1808 the Dutch

governor was killed in a conspiracy ; but he is said to have been a very turbulent and imprudent man. Duringthe invasion of the Ashantees, the inhabitants of Elmina favored that people, and delivered up to them- some of the Fantees who fled to the place. The Fantees, on this, assembled after- wards in great force, but were unable to make any impression upon Elmina. Its trade, pre- vious to these disturbances, was brisk, consisting in slaves and gold, with a little ivory, brought from the interior. Long. 2° 30′ W., lat. 5° 10* N.
ELMSLEY (Peter), a learned divine and phi- lologist, was born in London in 1773, and edu- cated at Westminster school, whence he removed to Christ Church, Oxford, and took the degree of M. A. in 1797. Soon afterwards he entered into orders, and was presented to the chapelry of Little Horkesley in Essex, but is said to have bestowed all its emolument on his curate. Mr. Elmsley had a respectable private fortune, and after the peace of 1815 went to Italy, and was employed with Sir Humphry Davy in super- intending the development of the papyri found at Herculaneum. To Mr. Elmsley was left the choice of the MSS. but the experiment proved

a failure. He settled at Oxford on his return, and took the degree of D. D. In 1823 he was appointed principal of Alban Hall, and Camde- nian professor of History; but died of a decline in 1825. Dr. Elmsley was the editor of some of the plays of Euripides and Sophocles, and a writer in the Quarterly Review.

ELOCA'TION, re. s. Lat. elocatus (e, out, and locate, to place.) Placing out or from home.

This may without sin or blame be forborne — when the child either by general permission or former elo- cution shall Le out of the parents' disposing.

Bp. Hall.

ELOCUTION, n. s. J Fr. elocution; Ital.

ELOCU'TIVE, adj. J efocutione ; Span, elo- cution ; Lat. elocutio (e, out and loquar to speak). Fluent or forcible speech ; the power or faculty of using fluent speech.

A travelled doctor of physick, of bold, and of able elocution. Wot Ion.

Whose taste, too long forborne, at first essay Gave elocution to the mute, and taught The tongue nnt made for speech to speak thy praise.

Milton.

Preaching in its elocutive part is but the conception of man. Felthum.

The third happiness of this poet's imagination is elocution, or the art of cloathing or adorning that thought so found, and varied, in apt, significant, and sounding words. Dryden.

And again, as she is a lady of very fluent elocution, you need not fear that your first child will be bora dumb, which otherwise you might have some reason to be apprehensive of. Spectator.

ELOCUTION. See ORATORY.

EL'OGY, n. s. i French eloge, and eiogiste ;

EL'OGIST. J Span. Port, and Ital. elogio ; Lat. elogium ; Gr. tv\oyia(ev and \eyuv, to speak well.) A commendatory speech often used sy- nonymously with, and having the same etymo- logy as eulogium ; but often also applied in a more general sense.

She did not want a passionate elogist as well as an excellent preacher. Wotton.

Buckingham lay under millions of maledictions, which at the prince's arrival did vanish into praises and elogies. Wotton.

If I durst say all I know of the elogies received con- cerning him, I should offend the modesty of our author. Boyle.

Some excellent persons, above my approbation or elogy, have considered this subject.

Holder's Elements of Speech.

E'LOIGNE, v. a. Fr. eloigner. To put at a distance ; to remove one far from another. Now disused.

From worldly care himself he did eloin,

And greatly shunned manly exercise.

Faerie Queene.

Ill tell thee now, dear love ! what thou shah do To anger destiny, as she doth us ; How I shall stay though she eloigne me thus, >

And how posterity shall know it too. Donne.

ELON, the twelfth judge of Israel, and the second after Jephthah, succeeded Ibzan, about A. M. 2830 ; or, according to Alstedius, 2771. He was of the tribe of Zebulon, and, after go- verning the republic ten years, died about A.A.C.

67.

ELONG' v. a. ˆ Old Fr. ehlon-

E.LONG'ATE, v. a. & v. n. >ger (to delay) ;

ELONGA'TION, w. s. j Sax. lengian, to

prolong ; Lat. ehngo. To defer ; protract ; set far off, in place or time. Elongate, as a neu- ter verb, means to go off to a distance.

The distant points in the celestial expanse appear to the eye in so small a degree of elongation from another, as bears no proportion to what is real.

Glanville's Scepsis.

The first star of Aries, in the time of Melon the Athenian, WPS placed in the very interseclion, which is now elongated and moved eastward twenty-eight degrees. Browne.

About Cape Frio in Brasilia, the south point of the ••.ompass varied twelve degrees unto the west ; but elongating from the coast of Brasilia, towards the shore of Africa, it varied eastward.

Id. Vulgar Errours. Upon the roof the bird of sorrow sat,

Elonging joyful day with her sad note,

And through the shady air the fluttering bat

Did wave her leather sails. G. Fletcher.

To this motion of elongation of the fibres, is owing the union or conglutination of the parts of the body, when they are separated by a

wound.

Arbuthnot on Aliments.

Elongations are the effect of a humour soaking upon a ligament, thereby making it liable to be stretched, and to be thrust quite out upon every little force.

Wiseman's Surgery.

ELONGATION, in astronomy, the digression or recess of a planet from the sun, with respect to an eye placed on our earth. The term is chiefly used in speaking of Venus and Mercury ; the arc of a great circle intercepted between either of these planets and the sun being called the elongation of that planet from the sun.

ELOPE' v. a. > Sax. hleapan; Belg.

ELOPE'MENT, n. s. jloopen; Swedish, lopaˆ; Goth, leipa ; Gr. \uirta, to leave. To run away or off from : to escape from ; forsake. Applied particularly to the running away of husband or wife with a mistress or lover.

An elopement is the voluntary departure of a wifj from her husband to live with an adulterer, and with whom she lives in breach of the matrimonial vow. Ayliffe'i Parergon.

It is necessary to treal women as members of the body politic, since great numbers of them have eloped from their allegiance. Additon's Freeholder.

What from the dame can Paris hope ?

She may as well from him elope. Prior.

The negligent husband, trusting to tho efficacy of his principle, was undone by his wife's elopement from him Arbu'.hnot.

The fool whose wife elopes some thrice a quarter, For matrimonial solace dies a martyr. Pops.

Is he not thine own,

Thyself in miniature, thy flesh, thy bone ? And hopost thou not ('tis every father s hope) That, since thy strength must with thy years elope, And thou wilt need some comfort to assuage Health's last farewell, a staff in thine old age, —

Cowper.

An ELOPEMENT, in law, frees the husband from an obligation to allow the adulteress any ali- mony out of his estate ; nor is he chargeable for necessaries for her of any kind. However, the bare advertising a wife in the gazette, or other public paper, is not a legal notice to persons ui general not to trust her ; though a personal no-

tice given by the husband to particular persons over to France, for tne purpose of attaining a is said to be good.— An action lies, and large perfect knowledge of the civil and canon law, in damages may be recovered against a man for fhe university of Paris, where he afterwards be- carrying away and detaining another man's came a professor. Returning to Scotland, he

entered into holy orders, was soon appointed official of Glasgow, and afterwards of St. An- drews. He was admitted a member of the king's council, and soon after promoted to the see of Ross. He was translated from this to the dio- cese of Aberdeen about the year 1484, and was

wife.

ELOPS, n. *. Gr. tXotf/. A fish. See Acci- PENSER; reckoned, however, by Milton among the serpents.

Scorpion and asp, and amphisbcna dire, Cerastes horned, hydrus, and elops drear, And dipsas. Milton's Paradise Loit.

EL'OQUENCE, n. s. 3 Latin, eloquentia.

EL'OQUENT, adj. / See ELOCUTION. The

EL'OQU ENTLY, adv. * act or power of speak-

also appointed to the high office of chancellor of the kingdom. When James IV. ascended the throne he was chosen ambassador to the emperor Maximilian, and he was the means of terminat-

ing well or fluently : the adjective and adverb ing an enmity which had long existed between

the Dutch and Scotch. The bishop was no less the zealous patron of learning ; and it was through his influence that James IV. applied for and obtained a bull from the pope for the estab- lishment of a university at Aberdeen. King's College, of which he is generally considered as the founder, was undertaken and completed by his exertions ; and at his death he bequeathed large sums of money for its support. He died in 1514, in the eighty-third year of his age. He wrote a history of Scotland, which is among the MSS. of Sir Thomas Fairfax, in the Bodleian library at Oxford.

ELSE, pron. & conj.) Saxon, eller-, alyp ;

ELSE'WHERE, adv. S Goth, alia, ellar,elegar ; Dan. ellers ; Swed. eller, alias. According to Mr. H. Tooke, the Saxon words eller and alyp are the imperative of alej-an and alypan, to dis- miss. Other one besides ; otherwise. Else- where, is in any other place.

And no man putteth newe wyn into olde hotels, ellis the wyn schal berste the hotels.

Wiclif. Mark 2. But I would now, Comen with you,

In counsayle yf you please, Or ellys nat Of matters that

Shall set your heart at ease.

Sir T. More. They which elsewhere complain, that injury is of-

strictly follow this meaning

The Lord of hosts doth take away the captain of fifty, and the honorable man, and the counsellor, and the cun- ning artificer, and the eloquent orator. Isaiah, iii. 3. Action is eloquence, and the eyes of the ignorant More learned than the ears. Shakspeare. Coriolanui.

Athens or free Rome, where eloquence Flourished since mute. Milton.

At the New Exchange they are eloquent for the •want of cash, but in the city they ought with cash to supply their want of eloquence. Spectator.

Eloquence must flow like a stream, that is fed by an abundant spring, and not spout forth a little frothy water on some gaudy day, and remain dry the rest of the year. Bolingbroke.

His infant softness pleads a milder doom, And speaks with all the

eloquence of tears. Heigh.

True eloquence is good sense, delivered in a natural and unaffected way, without the artificial ornament of tropes and figures. Baker.

O death ‘. all eloquent, you only prove What dust we dote on, when ‘tis man we love.

Pope.

Fit words attended on his weighty sense, And mild persuasion flowed in eloquence.

Id. Odyssey.

Great is the power of eloquence ; but never is it so great as when it pleads along with nature. Sterne. And on that cheek, and o’er that brow,

So soft, so calm, yet eloquent, The smiles that win, the tints that glow,

But tell of days in goodness spent. Byron. ELOQUENCE. See ORATORY.

ELORA, or ELURA, a town in the province of fered to the meanest minister, when the magistrate

Aurungabad, near Dowletabad, Hindostan, and named on the spot Verrool. About a mile to the east of this town are some remarkable excava- tions in a mountain, consisting of Hindoo temples and mythological symbols, which in magnitude, and perfection of execution, excel any thing of the kind in India. They are described at great length in the sixth volume of the Asiatic Researches, and appear to have been dedicated to Siva or Mahadeva. The brah- mins on the spot -assert that they were formed by Eeloo, rajah of Ellichpoor 7914 years ago. The rajah’s successors probably added other temples; and the cistern still retains its fame and sanctity, under the appellation of Sewalla koond. This, with the temple, is one of the many objects of found elsewhere. Hindoo pilgrimage. Long. 7C°0’E., lat. 19° 56′ N

ELPHINSTONE (William), a Scottish pre- late and distinguished statesman, was born at Glasgow in 1431, and received his education at the university of that city. After which he went

appoiateth him what to wear, think the gravest pre- lates no competent judges where it is fit for the mi- nister to stand. Hooker.

In forming a judgment, lay your heart* void. of foretaken opinions ; else whatsoever is done or said will be measured by a wrong rule. Sir P. Sidney.

To stand stained with travel, and sweating with desire to see him ; thinking of nothing else, putting all affairs else in ohlivion, as if there were nothing else to be done but to see him.

Shakspeare. Henry IV.

As he proved that Pison was not Ganges, or Gchon, Nilus, so where to find them elsewhere he knew not. Raleigh's History.

There are here divers trees, which are not to be Abbot's Description of the World.

He says, 'twas then with him, as now wiih you, He did it when he had nothing else to do. Uenham.

Let us no more contend nor blame Each other, blamed enough elsewhere. Milton.

Should he or any e'v search, he will find evidence of ihc Divine- V. ';.; .,> ... Hate's Origin of Manhirtd.

ELS 139

They rub the frozen parts with snow, or else cast the whole body into water, by which means) the whole body is crusted over with ice.

Boyle. An account of Freezing, made in 1662.

What ways are there whereby we should be as- sured, but either by an internal impression of the no- tion of a God upon our minds, or else by such external and visible effects as our reason tells us must be at- tributed to some cause. Tillotsun.

If it contradict what he says elsewliere, it is no new or strange thing. '"•

None ever was a great poet that applied himself much to any thing else. Sir W. Temple.

Bestow, base man, thy idle threats elsewhere ; My mother's daughter knows not how to fear.

Dry den.

The fool is blind to those blemishes in his charac- ter which are conspicuous to every body else.

Mason.

ELSHEIMER (Adam), a celebrated painter, bora at Frankfort on the Maine in 1574. He was first a disciple of Philip Uffenbach a Ger- man ; but going to Rome he soon became cele- brated for-landscapes, history, and night-pieces, with small figures. His works are but few; and the great pains he bestowed in finishing them raised their prices so high that they are seldom to be found but in the cabinets of princes. He was of a melancholy turn, and sunk under the embarrassments of his circumstances, in 1610. James Ernest Thomas, of Landau, was his disciple ; and imitated his style so nicely, that their performances are not easily distin- guished.

ELSIMBURG, or HELSIMBURG, a port town of Sweden, in the province of Gothland, and territory of Schonen, seated on the side of the Sound, seven miles east of Elsinore. It was formerly a fortress belonging to the Danes ; but all the fortifications were demolished in 1679, and there is only one tower of a castle which remains undemolished. Long. 13° 20′ E., lat. 56° 2′ N.

ELSINEUR/ELSINOOR, ELSINORE, or HEL- SINGOER, a port town of Denmark, seated on the Sound, in the isle of Zealand, twenty miles north of Copenhagen. It was a small village, con- taining a few fishermen's huts, until 1445, when it was made a staple town by Eric of Pomera- nia ; who conferred upon the new settlers consi- derable immunities, and built a castle for their defence. From that period it gradually increased in size and wealth, and is now the most com- mercial place in Denmark, next to Copenhagen. It contains about 7000 inhabitants, amongst whom are a considerable number of foreign merchants, several British establishments, and the consuls of the principal nations trading to the Baltic. The passage of the Sound is guarded by the fortress of Cronborg, which is situated upon the edge of a peninsular promontory, the nearest point of land from the opposite coast of Sweden. It is strongly fortified towards the shore by ditches, bastions, and regular intrench- ments ; and toward the sea by several batteries ; but it was found, in 1801, incapable of resisting tne passage of a fleet. Every vessel, as she passes, lowers her top-sails, and pays a toll of one per cent, on the value of her cargo at Elsineur. The product of the toll has been differently stated ;

it varies from £120,000 to £150,000 sterling. The number of vessels is estimated at about 10,000 ; and one and a quarter per cent, is said to be levied on all vessels but the British, French, Dutch, and Swedish.

ELSTER , the name of two rivers of Germany, one of which, called the White Elster, rises in the south of Saxony, and holding a northern course, near Leipsic, falls into the Saale. A considerable pearl-fishery is carried on on its banks near Oelsnits. The Black Elster rises to the eastward in Lusatia, and, after a north- easterly course, falls into the Elbe six miles above Wittenburg. Near the influx of this river Blucher crossed the Elbe on the 3rd October 1813, and marched to the memorable battle of Leipsic.

ELSTOB (William), a celebrated Saxon scholar and critic of the last century, was born at Newcastle in 1673#and received his education at Eton, at Catherine Hall, Cambridge, and sub- sequently at Queen's College, Oxford, whither he removed for the sake of his health. He obtained a fellowship in 1696, and was admitted M. A. in the following year. In 1701 he trans- lated the Saxon homily of Lupus into Latin, with notes, and was soon after appointed rector of the united parishes of St. Swithin and St. Mary Bothaw, London. In 1709 he published The Homily on St. Gregory's Day, in Saxon, with a Latin translation; and died in 1714. He had formed the design of publishing a col- lection of the laws of the Anglo-Saxons, with a Latin version and notes of various authors. He had also transcribed the Anglo-Saxon translation of Orosius, by Alfred the Great, a specimen of which was printed in 1699, under the title of Hormesta Pauli Orosii. He left a learned sis- ter, Elizabeth Elstob, who published a Saxon grammar.

ELVAS, one of the most important towns of Portugal, is situated in the province of Alentejo, a few miles from the frontiers of Spanish Es- tremadura. It is built on a mountain, and forti- fied. The streets were once handsome, and the houses neat ; but the whole place has a decayed appearance. There is a cistern here so large that it will hold water enough to supply the whole town six months. It is conveyed to it by a magnificent aqueduct, three miles in length, sustained in some places by four or five high arches, one upon another. Elvas was bombarded by the French and Spaniards in 1706, but with- out effect. It has generally a garrison of 1000 men, and the population is about 16,000. The king founded an academy here, in 1733, foi young gentlemen. Elvas is seated near the Gua- diana ; fifty miles north-east of Evora, and 100 east of Lisbon.

ELU'CIDATE, v. a. ~\ Fr. elucider ; Latin,

ELUCIDA'TION, n. s. >elucido ; e and lucido,

ELU'CIDATOR. J to shine. To make

clear, bright, or plain.

Obscurity is brought over them by the course of ig- norance and age, and yet more by their pedantical elucidatory. Abbot.

To elucidate a little the matter, let us consider it.

Bnylc.

We shall, in order to the elucidation of this matter, subjoin the following experiment. W.

ELUCTATION, n. s. Lat. eluctalus, ducturi. A bursting or struggling forth ; escape.

There is nothing more acceptable to the ingenious, thau this noble eluctation of truth. Browne.

ELUDE', v. a. \ Lat. e.ludo ; e, and ludo, deceive. To escape by stratagem : elu iposs.ble, or likely, eluded ; elusion, escape by artifice or fraud ; elusive and elusory, deceptiv*-, tendency to impose upon or cheat.

It m«i be feared that they are but Parthian flights, ambustai e retreats, and elusory tergiversation.

Browne's Vidyar Errours.

The passion of some lovers is such that it eludes the rigrrof their fortune, and baffles the force of a blow, waich neither feels, because each receives it for the sake of the other. Taller.

Several pernicious vices, notorious among us, escape >it etude the punishment of any law yet invented.

Swift.

There is not any common place more insisted on thui the happiness of trials by juries ; yet, if this blessed part of our law be eludible by power and arti- fice, we shall have little reason to boast. Id.

An appendix, relating to the transmutation of •netals, delects the impostures and elusions of those who have pretended to it. Woodward's Nat. Hist.

He who looks no higher for the motives of his con- duct than the resentments of human justice, whenever he can presume himself cunning enough to elude, rich enough to bribe, or strong enough to resist it, will be under no restraint. Rogers.

Me gentle Delia beckons from the plain, Then, hid in shades, eludes her eager swain ; But feigns a laugh to see me search around, And by that laugh the willing fair is found.

Pope.

Elusive of the bridal day, she gives Fond hopes to all, and all with hopes deceives.

Id.

Rut the king's eagerness to obtain liberty eluded all their vigilance. Robertson. Hist, of Scotland.

Whilst Amaryllis turns with graceful ease Her blushing beauties, and eludes the breeze. — Sylphs! if at noon the fritillary droops, With drops nectareous hang her nodding cups.

Darwin.

ELVELA, in botany, a genus of the natural order of fungi belonging to the cryptogamia class of plants. The fungus is turbinated, or like an inverted cone.

ELU'TE, v. a. Lat. eluo. To wash off. The more oily any spirit is, the more pernicious ; because it is harder to be eluted by the blood.

Arbuthnot on Aliments.

ELUTRIATE, v. a. Lat, elutrio. To de- c-.iut, or strain out.

The pressure of the air upon the lungs is much less than it has been computed by some ; but still it is something, and the alteration of one-tenth of its force upon the lungs must produce some difference in elutriating the blood as it passes through the lungs.

Arbuthnot on Air.

Though coal an 1 clay are frequently produced in this manner, yet I have no doubt but that they are likewise often produced by elutriation. Darwin.

ELUTRIATION, in chemistry, an operation performed by washing solid substances with water, stirring them well together, and hastily pouring off the liquid, while the lighter part remains suspended in it, that it may thereby be

separated from the heavier part. By this ope- ration metallic ores are separated from earth, stones, and other unmetallic particles adhering to them.

ELY, a city of England, in the county of Cambridge, situated on the river Ouse, in a marshy district called the Isle of Ely. Its Saxou. name was Suth Gurwa, but, according to Bede, it obtained the name Elig, or Elye, from the abundance of eels produced in the fens and waters of the neighbourhood. It consists of one principal street, and some smaller and very irre- gular ones. Its chief interest, as a city, is derived from its venerable Anglo-Norman cathedral, which extends in length 517 feet, having a tower at the west end 270 feet in height. Ely was

first constituted a bishopric in the year 1109. The cathedral is clearly the work of different ages, and displays a curious mixture of the circular, and the English or pointed, styles of architecture. That part of the tower which is termed the Lantern is particularly admired. This is the only city of England not represented in parliament. Mr. Bentham's celebrated description of the cathe- dral is one of the most elegant works of the kind in our language. Here is a free school supported by the dean and chapter, and a charity school founded in the last century. The neighbourhood is productive, and laid out very largely in garden- ground. The market is weekly, and there are two annual fairs. It is fourteen miles north of Cambridge, and sixty-six north of London.

The Isle of Ely is a royal franchise, in which the bishop of this diocese exercises a civil juris- diction, which extends to his appointment of a judge of assize and the other magistrates; so that the twelve judges of England have no circuit or jurisdiction here. When a special commission was issued, some few years ago, to try some riot- ers at Ely, it was found that the king could grant no legal power to try offences within the isle, apart from the bishop, whose chief justice was therefore included in the commission. Strictly speaking the Isle of Ely, according to Bentham, is that large tract of highland encompassed with fens, which were formerly overflowed with water, of which Ely is the principal place, and gives name to the whole : in which are included also the villages of Stretham and Thetford, Wilburton, Hadenham, Sutton, Mepal Wenham, Wentford, Whichford, Downham, and Chetisham, making collectively but one island. Littleport, Covenay, and Stretney, though sometimes reckoned part of it, were in their original state disjoined by small intervals of fenny ground, and therefore were distinct islands of themselves. This tract is about seven miles in length, and four in breadth. But the whole district now called the Isle of Ely, ex- tends from the bridge at Tyd on the north to Upwere on the south, twenty-eight miles in length ; and from Abbot's or Bishop's Delf on the east, to the river Nene, near Peterborough, on the west, twenty-five miles in breadth. This district, besides the places above mentioned, in- cludes several considerable towns and villages, as Wisbeach, Whittlesey, Doddington, March Leverington, Newton, Chatteris, &c.

ELY, ELIE, or ELLIE, from a liche, Gaelic, i. e. out of the sea ; an ancient royal borough, in

a parish ol the same name, on the south coast of Fife, built so near the sea that it washes the walls in some places, and seems to threaten to resume what it gave, if tradition be true, that the town was originally built out of it. It has an excellent harbour, the deepest in the Frith, except that of Brunt Island. It has been the means of saving many a ship, cargo, and sea- man, that would otherwise have been driven out of the Frith. Vessels of considerable size are built; and manufactures of checks, bed- ticks, and ropes, are carried on in Ely. Rubies have been found on the shore.

ELYDOBIC PAINTING, from sXaiov oil, and vdwp, water; in the fine arts is a method of painting in a vehicle composed of oil and water. This method was invented by M. Vin- cent, of Montpetit. It takes its name from the before quoted Greek words, denoting oil and water, both these liquids being employed in its execution. Its principal advantages are, that the artist is able to add the freshness of water-colors, and the high finishing of miniature, to the mellowness of oil-painting, in such a manner that the work appears like a large picture seen through a concave lens.

The following is the manner of proceeding : a piece of very fine linen, or white taffety, is sized with starch in the most equal manner possible, on pieces of glass about two inches square, in order that the cloth may be without wrinkles. When these are sufficiently dry, a layer of white lead, finely ground in oil of pinks or poppies, the whitest that can be procured, is to be applied on them with a pallet-knife. To this layer, when dry enough to admit of scraping, more is to be added, if necessary.

As it is of very great importance, for the pre- servation of this kind of painting, that the layers be free from oil, that they may better imbibe the colors laid on them, it is necessary that their surface be made very smooth, and that it be very dry and hard. The artist is next to procure a circle of copper, about two inches diameter and one-fourth of an inch in height, extremely thin, and painted black on the inside. This circle is to contain the water on the surface of the picture.

Water distilled from rain or snow is prefer- able to any other ; ordinary water, on account of the salts which it contains, being pernicious to this mode of painting. The colors are to be finely Ievigate4 between two oriental agates, carefully preserved from dust, and mixed with oil of poppies, or any other cold siccative oil, which should be as limpid as water.

All the colors being ground, are to be placed in small parcels on a piece of glass, and covered with distilled water. The materials being thus prepared, the subject to be painted is to be faintly traced with a black-lead pencil on one of the pieces of cloth abovementioned. The tints are then to be formed on the pallet from the little heaps under the water; and the pallet placed, as usual, in the left hand. The picture is to be held between the thumb and fore-finger, supported by the middle finger, and the neces- sary pencils the third and little fingers. The hands rest on the back of a chair to give a full

liberty of bringing the work nearer to, or remov- ing it far from the eye.

After having made the rough draft, with the colors still fresh, the circle of copper, which is to surround the picture, is to be fitted exactly to the surface. Distilled water is then poured within this circle till it rises to the height of one- eighth of an inch, and the eye is held perpendi- cular over the object. The third finger of the right hand, while painting, should rest on the internal right angle of the picture. The work is then to be retouched, the artist adding color and softening as he finds requisite. As soon as the oil swims on the top, the water is poured off, and the picture carefully covered with a watch- glass, and dried in a box by a gentle heat. When dry enough, it is to be scraped nearly smooth with a knife, the artist repeating the former me- thod till he is satisfied with his work.

It is at this period that the advantage of this new method particularly shows itself for the pur- pose of finishing ; as the water poured on the picture discovers every fault of the pencil, and gives the power of correcting and perfecting it with certainty. When the work is finished, it is put under a fine glass, from which the external air is excluded, and then it is dried by means of a gentle heat.

ELYMAIS, the capital of Elam, or Persia. We are told, 1 Mac. vi. 1, that Antiochus Epi- phanes, having understood that there were very great treasures lodged in a temple at Elymais, determined to plunder it ; but the citizens, get- ting intelligence of his design, made an insurrec- tion, forced him out of the city, and obliged him to fly. The author of the second book of Mac- cabees, ix. 2, calls this city Persepolis, in all probability because formerly it was the capital of Persia ; for it is known, from other accounts, that Persepolis and Elymais were two very dif- ferent cities, the latter situated upon the Eulaeus, the former upon the Araxes.

ELYMUS, in botany, a genus of the digynia order and triandria class of

plants : CAL. lateral, bivalved, aggregate, and multiflorous. Species twelve, of which three are common in England. ELY'SIUM, n. s. > Lat. See the article. ELY'SIAN, adj. > The place assigned by the heathens to happy souls; any place exqui- sitely pleasant.

To have thee with thy lips to stop my mouth, So sliould'st thou either turn my flying soul, Or I should breathe it so into thy body, And then it lived in sweet Elysium.

Shakspeare. Hen. VI.

The river of life, through midst of heaven, Rolls o'er elysiam flowers her amber stream. Milton. Pleasures which no where else were to be found, And all Elysium in a spot of ground. Dryden.

Admiring Proserpine through dusky glades Led the fair phantom to Elysian shades, Clad with new form, with finer sense combined, And lit with purer flame the ethereal mind.

Darwin.

O who of man the story will unfold, 'Ere victory and empire wrought annoy, In that elysian age, misnamed of gold, The age of love, and innocence, and joy, When all were great and free ! man's sole employ To deck the bosom of his parent earth. Seattle.

EMA

ELYSIUM, EXvtrioc, in the ancient mythology, Searchers cannot tell whether this emaciation or was, represented as u nlace in the inferi, or lower leanness were from a phthisis, or from a hecdc fever, world, furnished with fields, meads, agreeable woods, groves, shades, rivers, &c., whither the

souls of the virtuous were supposed to go after inquiry of the sea's reciprocation this life. Orpheus, Hercules, and .Eneas, were Downed therein, said to have descended into Elysium in their life-time, and to have returned again, Virgil, lib. vi., v. 638. Virgil assigns Elysium to patriots who died for their country, to those of pure lives, to truly inspired poets, to the inventors of arts, and to all who have done good to mankind. Homer describes the 'RXixriov irediov, Odyssey, lib. iv.

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Virgil introduces Anchises, saying,

Exinde per amplum

Mittimur Elysium, et pauci Ixta arva tencmus : Donee longa dies perfecto temporis orbe Concretam exemit labem, purumque reliquit jEthereum sensum, atque aural simplicis ignem. Has omnes, ubi mille rotam volvere per annos, Lethaeum ad fluvium Deus evocat agmine niagno : Scilicet immemores supera ut convexa revisant, Rursus et incipiant in corpora velle reverti.

JEiieid, lib. vi., v. 743.

The Elysian fields were, according to some, in the Fortunate Islands, on the coast of Africa. Others place them in the island of Leuce. Virgil says they were situated in Italy. According to Lucian, they were near the moon ; or, in the centre of the earth, if we believe Plutarch.

ELZEVIRS (Lewis, Bonaventure, Abraham, Lewis, and Daniel), five celebrated printers at Amsterdam and Leyden, who, in the neatness and elegance of their small characters, greatly excelled all their predecessors. Their Virgil, Terence, and Greek Testament, have been reckoned their master-pieces ; and, indeed, justly gained them the reputation of being the best printers in Europe. The first Lewis Elzevir began business at Leyden in 1590, and was re- markable for being the first who observed the

EMANA'TION, n, *. ,- EMANA'TIVE, adj. i' EM'ANE, v. n.

distinction between the v consonant and u vowel, unconstrained.

Graunt.

He emaciated and pined away in the too anxious

although not

Browne.

To those whe are past the meridian of life, and have dry skins, and begin to be emaciated, the warm- bath, for half an hour, twice a week, I believe to be eminently serviceable in retarding the advances of age. Darwin.

EMAC'ULATE, v. a. > Lat. emaculo, from

EMACULA'TION, n. s. > e, privative, and ma- cula, a stain or spot. To make clean ; take out spots or stains.

Others have taken great pains with him [Tacitus] in emactdating the text. Hales.

EM'ANATE, v. n.\ Fr. e/nawer; Lat. ema

EM'ANANT, adj. I ware, from e, and manoy to run in a small stream. To proceed or issue from ; emane has the same signification ; emanant is issuing from something else.

The experience of those profi'i'-le and excellent emanations from God, may be, and commonly are, the first motive of our love. Taylor.

The first act of the divine nature, relating to the world, and his administration thereof, is an emanant act: the most wise counsel and purpose of Almighty God terminate in those two great transient or emanant acts or works, the work of creation and providence. Hale't Origin of Mankind.

It is against the nature of emanative efforts to sub- sist but by the continual influence of their causes.

Glanville.

Another way of attraction is delivered by a tenuous emanation, or continued effluvium, which, after some distance, retracteth unto itself; as in syrups, oils, and viscosities, which spun, at length retire into their former dimensions. Browne.

Such were the features of her heavenly face ; Her limbs were formed with such harmonious grace ; So faultless was the frame, as if the whole Had been an emanation of the soul. Dryden.

The actions, which naturally flow from such a well- formed mind, please us also, as the genuine marks of it ; and being, as it were, natural emanations from the spirit and disposition within, cannot but be easy and

which had been recommended by Ramus and other writers long before, but never regarded. Daniel died in 1680 or 1681 : and, though he left children who carried on the business, is esteemed the last of his family who excelled in it. He published the last of their typographical catalogues in seven parts.

EMA’CIATE,t>.a. &.n.Stadj. > Lat. and EMACIA’TION. 5 Ital. ema-

ciare ; e, and maceo, from Gr. /iaicpoc, long ; ac-

Locke.

Swift, in his proposals for a Chamber of Fame, says, ‘ All news-writers are excluded, because they consider fame as it is a report which gives foundation to the filling up their rhapsodies, and not as it is the emanation or consequence of good and evil actions.’

Taller.

Aristotle said, that it streamed by connatural result and emanation from God, the infinite and eternal Mind, as the light issues from the Sun. South.

Each emanation of his fires

cording to Vossius because bodies as they become ™* ^1™ °? ı!?L? 2[image] SlTi lean, or lose their breadth, appear to increase their length. To deprive of flesh ; to waste ; to become meagre or lean : as an adjective, sunk ;

heart he prompts, each charm he can create ; Whate’er he gives, are given for you to hate. Pope. We may even seem to hear the Supreme Intelli-

deprived of flesh: emaciation is the state of one *ence/>ve *» commission to the spirits which

emaned from him.

grown lean.

Men after long emactatiny diets wax plump, fat, and almost new. Bacon.

All dying of the consumption, die emaciated and -pan. Graunt’s Billt of Mortality.

Sir W. Janes. But wisdom loves the calm and serious hour,

When heaven's pure emanation beams confessed ; Rage, ecstacy, alike disclaim her power,

She wooes each gentler impulse of the breast.

Beattie.

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EMANCIPATE, v. a. } Fr. emanciper ;

EMANCIPATION, n. s. S Spanish, emancipare;

EMAN'CIPATOR. J Ital. and Lat. eman-

cipare, from e, from, manu, the hand, and ca- perv, to take. To take from the hand or power ; to free from labor or servitude ; to set at liberty ; an emancipator is he who bestows freedom on another.

Having received the probable inducements of truth, we become emancipated from testimonial engagements.

Browne.

Obstinacy in opinions holds the dogmatist in the chains of error, without hope of emancipation,

Glanville's Scepsis.

By the twelve tables, only those were called unto the intestate succession of their parents that were in the parents' power, excluding all emancipated children. Ayliffe's Parergon.

They emancipated themselves from dependence.

A ibuthnot.

By the former, he has emancipated property ; by the latter, he has quieted conscience ; and, by both, he has taught that grand lesson to government and subject — no longer to regard each other as adverse parties. Burke.

When a proposal is made to emancipate or relieve, you hesitate, you deliberate for years, you temporise and tamper with the minds of men ; but a death-bill must be passed off hand, without a thought of the consequences. Byron.

Let us refute the sophisms of both, and first of the emancipators. Merits of the Catholics, Sfc.

EMANCIPATION, in the Roman law, the setting free a son from the subjection of his father ; so that whatever moveables he acquired belonged as property to him, and not to his father, as be_- fore emancipation. Emancipation put the son in a capacity of managing his own affairs, and of marrying without his father's consent, though a minor. Emancipation differs from manumission, as the latter was the act of a master in favor of a slave ; whereas the former was that of a father in favor of his son. There were two kinds of emancipation, viz.

EMANCIPATION, EXPRESS, where the father declared before a judge, that he emancipated his son. In performing this, the father was first to sell his son imaginarily to another, whom they called pater fiduciarius, father in trust ; of whom being bought back again by the natural father, he manumitted him before the judge by a verbal declaration.

EMANCIPATION, TACIT, by the son's being promoted to some dignity, by his coming "of age, or by his marrying, in all which cases he became his own master of course.

EMAS'CULATE, v.a. & adj. > Lat. e, and

EMASCULA'TION. S masculus, from

mas, a male. To deprive of manhood or virility ; hence, to deprive of strength or fortitude : as an adjective, emasculate signifies weakened, effemi- nate, unmanned.

When it is found how many ewes, suppose twenty, one ram will serve, we may geld nineteen, or there- abouts ; for if you emasculate but ten, you shall, by promiscuous copulation, hinder the increase.

Graunt.

From wars and from affairs of state abstain ; Women emaxculate a monarch's reign. DryAen. VOL. VIII.

Dangerous principles impose upon our understand- ings, emasculate our spirits, and spoil our temper.

Collier.

EMBABE, a small town of Egypt, opposite to Boulac, the port of Cairo. It produces ex- cellent butter, and the fertile plains around enable it largely to supply Lower Egypt with a species of lupine. Near this place was fought, in 1798, the battle between Buonaparte and the Mamelukes, commonly called the Battle of the Pyramids, in which the former forced the latter to retire into Upper Egypt.

EMBALE', v.a. Fr. emballer ; Germ, cm- ballen. To make up in bales or parcels.

Below her arm her weed did somewhat train, And her straight legs most bravely were embaled In golden buskins of costly cord wain. Faerie Queene.

EMBALM', 3 Fr. embaumer ; Span, and

EMBALM'ER. j Port, embalsamar ; Ital. imbal- samare, from Lat. balsamum, balm, the prin- cipal ingredient used in preserving the dead among the ancients. Minsheu. See BALM. To impregnate with balm or aiomatics ; to pre- serve from destruction or putrefaction.

So Joseph died, and they embalmed him, and he was put in a coffin in Egypt. Bible. Gen. 1. 26.

The Romans were not so good embalmers as the Egyptians, so the body was utterly consumed.

Bacon's Nat. Hist. I would show future times What you were, and teach them t' urge towards such :

Verse embalms virtue, and tombs or thrones of

rhymes Preserve frail transitory fame as much

As spice doth bodies from corrupt air's touch.

Donne. Muse ! at that name thy sacred sorrows r.hed ;

Those tears eternal that embalm the dead. Pope.

Though time still wears us, and we must grow old, Such men are not forgot as soon as cold, Their fragrant memory will outlast their tomb, Embalmed for ever in its own perfume. Cowper.

EMBALMING is the opening a dead body, and filling it with

odoriferous and desiccative drugs and spices, to prevent its putrefying. The Egyptians excelled all other nations in the art of preserving bodies from corruption ; for some, that they have embalmed upwards of 2000 years ago, remain entire to this day, and are brought into other countries as great curiosities. They are said to have drawn out the brains with an iron scoop at the nostrils, and to have thrown in medicaments to fill up the vacuum : they also took out the entrails, and having filled the body with myrrh, cassia, and other spices, except frankin- cense, proper to dry up the humors, they pickled it in nitre, in which it lay for seven y days. The body was then wrapped up in bandages of fine linen and gums, and was delivered to the kindred of the deceased, entire in all its features, the very hairs of the eye-lids be ng preserved They used to keep the bodies of their ancestors, thus embalmed, in mausoleums magnificently adorned. The Egyptians also embalmed birds, &c. The prices for embalming were different- the highest was a talent, the next twenty-nine minae ; but those who could not afford this ex- pense, contented themselves with infusing, bj means of a svrinsfe. a liquor extracted from t'it

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cedar, and wrapping up the body in salt of nitre ; the oil thus preyed upon the intestines, so that when they took it out, the intestines came away with it, dried, and not in the least putrefied; the body being enclosed in nitre, grew dry, and nothing remained besides the skin glued upon the bones. The modern Egyptians are said to wash the body several times with rose-water, and after- wards to perfume it with incense, aloes, and other odors, of which they are by no means sparing; they then bury it in a winding-sheet, made partly of silk and partly of cotton, and moistened with some sweet-scented water or perfume. This they cover with another cloth of unmixed cotton, to which they add one of the richest suits of clothes of the deceased. See MUMMY.

EMBANKMENT, in civil engineering, is a mound, dam, or wall of earth, or other materials applied to the direction or protection of water courses, or the preservation of land from the encroachments of the sea. It may also form the boundary of a dock or reservoir, and be the foundation of roads or railways.

The history of the earliest civilised state in the world, Egypt, must

have taught mankind at a very remote period the value of alluvial deposits; ana hence the importance of some species of embankment. The whole of that country, we know, is divisible into absolute deserts, and a soil rendered highly fertile from this source. Babylon was in the same situation with regard to the character of her fertile soil. It was a saponaceous clay irrigated by the waters of the Euphrates : a causeway leading over these low grounds to her celebrated bridge, is one of the most famous embankments upon record. All the early civilised nations indeed seem to have chosen alluvial plains and valleys as their fa- vorite residences — 'plains well watered every where,' as the Scripture so well expresses it: and where the soil by its mingled warmth and moisture should more quickly and amply repay their rude toil.

The Greeks, inhabiting a rocky and hilly country, interspersed with rich vales, but having a soil generally light and sandy, or a calcareous subsoil, had little occasion for embankments of any kind, and have left therefore but few traces of the art of constructing them. According to Potter, lands were enclosed with a ring-fence, or boundary mark ; but most of the country was open pasture. Solon regulates the depth of water, and decrees that ' he who digs a ditch, or makes a trench nigh another's land, shall leave so much distance from his neighbour as the ditch or trench is deep.'

The Romans were the first scientific agricul- turalists ; their greatest men in the camp and in the city, and some, of their most able writers, we know devoted themselves to this science. Of the surface of Italy the immense valley of the Po and the marshy plain of Terracino constitute capital features ; and the embankments on the former as well as those on the Tiber, of many stadia in length, are striking memorials of the Roman art of embanking. Cato gives directions for opening the furrows of sown fields, and clear- ing them so as the water might find its way readily to the ditches; and for wet-bottomed

lands he directs to make drains three feet broad at top, four feet deep, ami one foot and i quarter wide at the bottom ; to lay them with stones ; or, if these cannot be got, with willow rods, placed contrary ways, or twigs tied together (Cap. 43). Columfila directs both open and covered drains to be made sloping at the sides, and in addition to what Cato says respecting the water way of coˆered drains, directs to make the bottom narrow, and fit a rope made of twigs to it, pressing the rope firmly down, and putting some leaves, or pine branches over it, before throwing in the earth. Pliny says, the ropes may be made of straw, and that flint or gravel may be used to form the water-way, filling the excavation half full, or to within eighteen inches of the top.

To advert again for a moment to the east, wnere, if agriculture has been pursued with very little science, the importance of irrigation is at least well known and appreciated, Dr. Davy, in his account of the interior of Ceylon, describes an artificial mound or embankment, forming the lake or tank of Kandelle, which seems to rival the most celebrated works of this kind in history. This lake, wholly of artificial construction, is from three to four miles in circumference, and, like that of Minere, says he, skirted with green plains.

‘ The embankment by which the water is con- fined is a mile and one-third long. It extends nearly in a straight line, from a rocky hillock at one extremity, to a high ledge of rock at the other. Its perpendicular height may be about twenty feet ; at its base it may be 150, or 200 feet, wide. Its face towards the lake is naked, sloped at an angle of about 45°, and composed of stones that rise one above the other like steps. The stones are of the same size nearly ; from two to three feet long, about two high, and from one to two wide. They are of the same kind as the ad oin- ing rock. It is, perhaps, worth remarking, that they have no sharp angles or asperities of surface; they have the appearance of quarried stones, ren- dered thus smooth by the action of the elements in long process of time. On the land-side the slope is very gentle, and the embankment is of gravel and earth. The stone face of the embank- ment is shaded by trees of great size ; the other side is covered with large forest-trees and thick underwood, in most places impenetrable. Besides the great embankment, there is a small one de- tached from it about a quarter of a mile, and nearly at right angles to it, similarly con- structed.

‘ The great outlet or sluice is constructed with much art and of vast strength ; the channel is be- neath a platform of masonry that pro ects into the lake about six feet beyond the line of the em- bankment, and is about twenty-four feet long. It is built of oblong stones, from five to seven feet long, well wrought and nicely adapted to each other without cement. The top of the platform is flat ; it contains a small cylindrical well, com- municating directly with the channel below, and in which the water, in passing, rises of course to the level of the lake. The water, passing through the embankment, appears on the other side gush- ing out in a noble stream through two apprtures

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formed by a transverse mass of rock supported by three perpendicular masses. The transverse mass, which is now cracked in two, is about twelve or fourteen feet long, and four or five thick; and the other masses are of proportional size. The water rushing out in a

considerable volume with great force, dashing amongst rocks beneath, in a deep gloomy shade produced by overhanging trees, makes altogether a very striking scene. The work itself has a simple grandeur about it which is seldom associated with art; it looks more like a natural phenomenon than the design of man.'

Agriculture was introduced by the Romans into every conquered province, and practised by the sol- diers of their armies wherever they were stationary. Caesar speaks of its being introduced into this country by colonies from Belgium, who cultivated the sea-coasts (about B.C. 150), while the natives were driven into the interior. Be this as it may, we have numerous traces of the embankments of Roman agriculture ; and to that people is doubt- less owing the general diffusion of ;he art in Britain. They perhaps first confined the chan- nel of the Thames ; and the embankments of Romney Marsh in Kent, as well as several noble mounds in the fenny part of Cambridgeshire, have been attributed to them.

But Holland and Flanders exhibit a scene of noble triumphs arising from this art. The em- banked lands are here called polders, and consist of various areas reclaimed from the sea; the surface of which, once secured from the tide, be- comes the most productive of earthy soils without any manure. The newly formed lands, before this embankment, are called schorres. They are flooded at every tide by the water of the sea, and are augmented by mire, pieces of wood, rushes, sea-weeds and other marine plants decayed and putrid, also by shells and fishy particles which the ebb always leaves behind in considerable quantity. This growing soil soon produces various plants and grasses, and improves daily. When such lands have acquired a crust or sur- face of black earth, three or four inches deep, they may be embanked and fallowed. Those are the most productive which have been deep- ened in their soil by the augmentations of the sea; and experience proves that, in the corners and hollows, where, from an obstructing boun- dary, the greatest quantity of mire has been deposited, the soil is doubly rich and good, and cannot be impoverished by the crops of many years. In some instances the embankments are made on the part of government, in others by companies or individuals, under a grant of a spe- cific tenure (generally twenty-one years), rent free, or according to circumstances, at some moderate annual payment. The polder of Snaerkskirke, near Ostend, contains about 1 300 acres. It is of late formation, and was over- flowed by a creek with its minor branches every spring tide. By constructing two banks and a flood-gate, at the creek, the sea is excluded and the space subdivided .>y roads and laid out in fields, of thirteen acres each, surrounded by ditches. The bank is fifteen feet in

height, thirty feet in the base, and ten feet across the top : the land which has been reclaimed by it was let for

a sheep pasturage at COO francs (£25) ‘vr nnniim, and was thrown up by the farmer a > untenable. Upon being dried by this summary improve- ment, the lots of which are 100, of thirteen acres each, and were sold by auction at an average of 7000 francs (£291. 13s. 4rf.), each would now bring nearly double that rate.

Another polder, called the Great Moor, reco- vered through the spirited exertions of M. Hyrwein, contains 2400 acres. Attempts had been made to recover it by the Spaniards in 1610, but without success. This marsh was seven feet below the level of the surrounding land ; to drain it, therefore, it became necessary to surround the whole with a bank of eight feet in height, above the level of the enclosed ground, formed by the excavation of a fossae, fifteen feet wide and ten feet deep, which serves to conduct the water to the navigable canal ; — to construct mills to throw the water over the bank into the fossee ; and to intersect the interior by numerous drains, from eight to twelve feet wide, with a fall to the respective mills, to which they conduct all the rain water, and all the soakage water which oozes through the banks.

In North and South America embankments have been attempted in the neighbourhood of all the principal rivers as fast as settlers have accu- mulated; and some of the most interesting- in the world are those of the Mississippi, ex- tending from near its mouth at Balize, several hundred miles up the country ; and protecting a most fruitful soil for sugar-canes.

The true mathematical principles of all these erections has been thus well stated by a contem- porary : — ‘ The pressure of still water against the sides of the vessel containing it being as its depth, it follows, that a bank of any material whatever, impervious to water, whose section is a right angled triangle, and the height of whose perpen- dicular side is equal to that of the water it is to dam in, will balance or resist this water, what- ever may be the breadth of the surface of the latter; and, therefore, that as far as width or ex- tent is concerned, it is just as easy to exclude the Atlantic Ocean as a lake or a river of a few yards in width.’

The modern embanking system of England, though at first, and when he was a private gen- tleman, discouraged as we have seen by CROM- WELL (vide that article), was first patronised by him, afterwards a? protector of the common- wealth : during which 425,000 acres of fen land were recovered in Lincolnshire, Cambridgeshire, and Kent, by

colonel Vermuyden a Fleming, and an officer who had served immediately under the protector. The oldest embankment in Eng- land is unquestionably that of Romney Marsh, as to the construction of which, Dugdale re- marks : ‘ that there is no testimony left to us from any record or historian.’

Embankments from the sea; from an inlet or bay of water ; from the course of rivers ; and from the floods common in fenny districts; are all clearly distinct operations. For the first, the earthen mound is in most general use and applies both to sea lands overflowed by every spring tide, and to alluvial plains inundated by every flood It is generally sel out

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in a direction parallel to the shore, or to the general turns of a river, but not to its minute windings : and it is placed farther from or nearer to the latter, according to the quantity of water in time of floods, the rapidity of the current from the declivity of the bed, the straight course of the stream, and the intended height of the hank. The two sides of such a mound are ge- nerally formed in different slopes. That towards the land is always the most abrupt, but can never be secure if more so than 45° ; that towards the water varies from 45° to 15°; the power of the bank to resist the weight of the water, as well as to break its force when in motion, being inversely as its steepness. The power of water to lessen the gravity of bodies, or in other words, to loosen the surfaces over which they flow or stand, is also lessened in a similar ratio. The mound is thus exhibited : —

The construction of this embankment is very simple, and consists ordinarily of taking the earth by barrows or carts on rollers from the general surface to be protected, or from a colla- teral excavation, distant at least the width of the mound from its base line, and heaping it up in the proper form. The surface is then protected with turf, well rolled in order to bind it. When an excavation is made it serves the same pur- poses as an open drain in the earthen wall here- after described; and similarly constructed sluices or valves are introduced on a larger scale. Some- times also the interior water is drawn off by wind-mills, and thrown over the mound into the river. This is very common both in Cambridge- shire and Huntingdonshire, and might be greatly improved on by employing steam-engines for entire districts. Nature herself seems to dictate the mode imitated in Holland for preserving the apper part of their embankments. After the tides of the

Po have left a mere strip of sand, it be- comes quickly covered with vegetation in which the elymus arenarius, triticum junceum, and various species of juncus are conspicuous. As these and the debris of shells with which they are mingled decay, the fibrous roots of good grass flourish and soon occupy their place. The wicker- work embankments of Holland, studded with brush-wood, are clearly but an improvement upon this. The forming a bank of branches filled with sand and shells has also been suggested ; and regularly constructed of frame timber, the section of which would resemble a trussed roof : each truss being joined in the direction of the bank of rafters, and the whole inside and surface stuck full by branches. To retain it firm, piles would require to be driven into the sand, to the “ppcr parts of which would be attached the trusses. The height of such a barrier would require to be several feet above that of the highest spring- tides ; and the more its width at base exceeded the proportion of that of an equilateral triangle the better. A more economical mode, and one therefore, suited to a less extensive scale of

ration, is to intersect a sandy shore in all direc- tions, with common dead, or wicker-work hedges, formed by first driving a row of stakes six or eight feet into the ground, leaving their tops ;hree or four feet above it, and then weaving among these stakes branches of trees, or the tops of hedges. Encyclop&dia Britannica, Supplement.

Embankments of the above kind are the most common of any ; they appear on all parts of the continent, and the eastern shore of England, richly covered with grass and often with trees. Their sections vary from a scalene triangle of ten feet in base, and three feet in height, as on the Forth near Stirling, and the Thames at Fulham, to a base of 100 feet, and a height of ten feet, as in the great bank near Wisbeach. Many of the great rivers of Germany and Holland are em- banked in this way, when so fa* from the sea as to be out of the reach of the tide ; as the Vistula at Marienwerder, the banks of which, near Dantzic, are above fifteen feet in height; the Oder, the Elbe, &c. Sometimes the earthen mound is assisted by the previous construction of a puddle ditch or clay wall of about four or five feet wide, in the centre of its highest part, and in the direction of its length. When this is well worked no water will penetrate it; and it may save the accumulation of materials in the bank itself. A great object here is to dig this ditch sufficiently deep to penetrate through the porous stratum, and come in contact with an argillaceous soil, or that which water will not penetrate. It is thus shown : —

Here c is the clay wall, p the porous, and r the retentive, stratum. In particular situa- tions, where it is an object to conceal the slope from

the eye, the steepest part is placed next the water, as above ; but this is certainly the weakest mode of protecting the land : by the difference of the weight of the triangle of water which would rest on the longer in comparison with that which rests on the shorter slope. A slope next the water of 45° or 50° is sometimes paved or causewayed with stones or timber. In Holland this pavement is often formed of planking or bricks ; but in England generally with stones, and the mortar used is either cement which will set under water, or plants of moss firmly rammed between them. The objection to such banks is their expense, and their lia- bility to be undermined invisibly by the admis- sion of the water through crevices.

The concave sea-wall is a protected embank- ment formed against abrupt and earthy shores, and consists of a wall, varying in thickness, and the inclination of its surface, according to cir- cumstances. M. Belidor, in his Traite de Tly- draulique, professes to give the exact curve which the section of such a wall ought to have, in order to resist loose earth, and which is somewhat greater than where the earth behind the wall is suooosed to be chiefly firm. Examples of such

walls occur in the Caledonian Canal; but the finest in the world are said to be those of granite which embank the Neva at St. Petersburgh.

One of the noblest attempts at a sea embank- ment in this, or perhaps any other country, was that commenced by W. A. Madocks, Esq. M. P., in 1807, to unite the counties of Merio- neth and Cardigan by a mound across an estuary and embouchure of the Glasslyn. In 1802 this gentleman had constructed a wall or bank, by which he recovered 1800 acres of good alluvial soil from spring tides, and let them at from 30s. to 50s. per acre. He now contemplated the idea of gaining the whole bay or mouth of the stream, here two miles wide ; extending to nearly 4000 acres of alluvial and sandy earth ; and uniting, as we have said, the two counties. This would have rendered practicable a new line of road from Worcester along the top of his embank- ment, through the town of Tre Madoc, to the newly-formed harbour of Porthdynlleyn ; by which forty miles of road would have been saved between Dublin and London, and fifty between Dublin and Bath. His first operation consisted in forming an immense bridge of flood- gates in the solid rock of the shore, to admit the exit of the river; when the mound was com- menced from both shores. The greater part of its materials were argillaceous rock broken into small pieces, mixed with

clay and thrown down so as to take their own slope. An iron rail-way was formed along the work as it extended and led to the quarries and excavations. After three years' exertion the work was brought within fifty yards of meeting in the middle, but the rapi- dity of the influx and reflux of the tide hore made the progress to its completion very diffi- cult. To this, unfortunately, was now added pecuniary difficulties, which closed the under- taking, when it was calculated that £20,000 would have finished it. Sir Hugh Middleton, it is said, entertained a similar project as to this part of the country.

The earthen-wall of various inland districts is also to be considered as a species of embank- ment, although often erected by temporary oc- cupiers of lands for the mere purpose of enclo- sing and subdividing them. It best applies to lands occasionally, but rarely overflown, or in- \mdated ; and is set out in a direction parallel to the river or shore. It is generally commenced from four to five feet wide, and built of turf with the grass side inwards, the middle being filled with earth ; and finishing in about a foot or eighteen inches breadth at top, and at about five or six feet in height. As a collateral drainage inside such wall, and at the distance of three or four feet, a small open ditch is formed, out of which the water is let through the wall by tubes, or tunnels of boards, with a valve opening on their exterior extremity. When the flow of water from without approaches, it shuts the valve, which remains in this state till the flood subsides ; when, the height of the water within being greater than that without, it opens the valve and flows off. These are common enough in the drier parts of the fenny districts of Lin- colnshire and Cambridgeshire ; and in Caernar- vonshire 1800 acres were, in 1804, completely

protected in this way on the estate of Tre Madoc already mentioned.

Here w is the wall, d the inner open d -ain, and t the tube or wooden tunnel through which its redundant waters are carried off.

River embankments are formed for protecting the existing course of their waters ; for changing or accommodating that course to particular cir- cumstances, and sometimes for altering or di- verting it altogether.

Piers or guards are common modes of pro- tecting the opposite bank when, in a crooked stream, or from some other cause, an obstacle accumulates. Mr. Marshall- has discussed the proper kind of defences to be adopted in this case, in his Treatise on Landed Property : but they are to be used with great caution, and are only to be justified where the obstruction itself cannot, as Smeaton recommends it should, be removed from the opposite bank ; or where, as is sometimes the

case, it arises from an island of sand or gravel thrown out by the river near its middle, and which the interested parties perhaps cannot agree to remove. The case of buildings also being in danger may justify such a pier for immediate protection : if such breaches, how- ever, are taken in time, a few loads of loose stones will generally effect a better remedy.

In forming a permanent land-guard of this kind, Mr. Marshall recommends, that the foundation be laid pretty deep, to guard against any accidental scoopings. The wall ought to be carried up dry, or without mortar, the stones being laid with their ends outward, their inner ends pointing to the same centre, like those of an arch, and to be backed with gravel or earth, rammed in firmly behind, as the facing is carried up. The coping or uppermost course of the stones is to be securely bound with thick tough sods, eight or ten inches deep, whose surfaces, when beaten down ought to lie even with that of the stone-work ; and similar sods require to be laid, with a gently rising slope, until they unite smoothly with the natural turf of the land to be defended ; so that the waters of floods, when they rise above the stone-work, may have no abruptness to lay hold of, but may pass away smoothly over the surface of the land, as they commonly do over smooth greensward, without injury. Finally, the stones are to be beaten forcibly into the bank, with a rammer, a mallet, or a small battering-ram, adapted to the purpose ; thus rendering the whole compact and firm, to resist the current. Where vacancies or fissures still appear, long splinters of stone are to be driven in, as wedges, to increase the firm- ness, and prevent the current from tearing out an unguarded stone. It follows, in course, that the largest and longest of the stones ought to be uˆeil

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v/nere the greatest resistance is known to be re- quired.

The sheath, or laud-guard of loose stones, which this author also recommends, and which is the mode already mentioned as approved by Smeaton, is applicable where the river is con- fined in the part where it is required to be bent, by rocks or otherwise, to an unaltered channel ; as it frequently is, in subalpine situations; as also where a deep pool occurs, in that part, in low water, so as to render it difficult to get a proper foundation for a pier. Where the foot of the injured bank is covered with a pool at low water, shelve off the brink of the bank, and shoot down loose stones from the top of it ; suf- fering them to form their own slope, in the action of falling, and by the operation of succeeding floods, continuing to pour them down until the bank be

secured, at least from minor floods, and then slope back the upper part, to give freedom to floods of higher magnitude.

Where, in flat countries, and surrounded by a raluable soil, a river is very circuitous, and much land may be gained or protected by a more rapid efflux of the water, its course must be either straightened or abandoned. The best plan in general is to find an entirely new bed or course for the river ; otherwise, when it passes alternately through new soil, and through a part of its old bed, its action on surfaces which are so different in regard to induration ends, if great care is not taken, in holes and gulleys in the new bank, which require to be constantly filled up and repaired. The embankment used in straightening the course of rivers is always the mound, with a clay wall in the centre, varying in width according to the depth of the different parts of the old bed which it has to intersect, and the materials are obtained from excavations.

The hundred feet drain and other great outlets of the Bedford Level have been all constructed on the principle of straightening the water courses ; which the late Mr. Rennie is said to have proposed to carry to a still greater exten- tion in. that district. One beautiful triumph of art in this neighbourhood, has at length been com- pleted in the Eau Brink Cut, an entirely new outlet for the ancient Ouse. The bed of the old river was abandoned about five years ago, and it now presents the singular sight of being silted up, for nearly eight miles together, higher than the level of the adjacent lands. Tufts of vegetables appear all along, and in a few years, together with the whole neighbouring country being rescued from floods, this site will yield valuable cultivable soil.

Embankments that are designed to serve as the foundation of rivers are generally mounds without the clay section we have described. The earth, in such cases, is allowed to take its own slope on both sides, which is commonly from 40° to 45°, and the width at top is regulated by that of the intended road or rail-way. The material's are excavated from ditches, or yielded by the adjacent surface on each side. In Holland such roads are generally bounded by trees wnich form an excellent guide at night to the eye of the tiavelle in flat countries. The tirst operation, where it can be accomplished, is

to lay a foundation, three or four feet thick, of branches or faggots of copsewood, in order that the mound may sink in a body. Then, the direction of the mound being marked out by a line of poles, the

harrowing or carting of the earth is carried on from end to end, until it reaches the proper height and width ; leaving the slopes at the sides to form themselves, or as- sisting them by puddling them with water. See ENGINEERING

EMBA'R, v. a. From em and bar. To shut; to enclose.

Themselves for fear into his jaws to fa1!, He forced to castle strong to take their flight ; Where fast embarred in mighty brazen wall, He has them now four years besieged to make them thrall. Spenser.

Translating the mart unto Calais, he embarred all further trade for the future. Bacon's Henry VII.

If this commerce betwixt heaven and earth were

not

Embarred, and all this traffic quite forgot, She, for whose loss we have lamented thus, Would work more fully and powerfully on us.

Donne. In form of airy members fair embarred,

His spirits pure were subject to our sight.

Fairfax.

EMBA'RGO, ra. *. Span, embargar. A pro- hibition to pass; in commerce, a stop put to trade.

He knew that the subjects of Flanders drew so great commodity from the trade of England, as by embargo they would soon wax weary of Perkin.

Bacon's Henry VII.

After an embargo of our trading ships in the river of Bourdeaux, and other points of sovereign affront, there did succeed the action of Rheez. Wotton.

Wit is its own remedy. Liberty and commerce bring it to its true standard. The only danger is the laying an embargo. The same thing happens here as in the case of trade ; impositions and restrictions reduce it to a low ebb ; for nothing is so advan- tageous to it as a free port. Shaftesbury.

I was not much concerned, in my own particular, for the embargo

which was laid upon it. Dryden.

This is a very delicate subject for gentlemen to speak on ; it lays an embargo on the house. No man can put himself into the ungracious state of opposing the repeal of afflicting taxes. Who can deny to the poor family the boon of getting their candles cheap?

Sheridan.

An EMBARGO is an arrest on ships or mer- chandise, by public authority ; or a prohibition of state, commonly on foreign ships, in time of war, to prevent their going out of port, sometimes to prevent their coming in, and sometimes both for a limited time. The king may lay embargoes on ships, or employ those of his subjects, in time of danger, for the service and defence of the na- tion; but they must not be for the private advantage of a particular trader or company; and, therefore, a warrant to stay a single ship is no legal embargo. No inference can be made from embargoes which are only in time of war, and are a prohibition by advice of council, and not at prosecution of parties. If goods be laden on board, and after an embargo or restraint from the prince or state comes forth, and then the master of the ship breaks ground, or endeavours to sail, if any damage accrues he must be re-

sponsible for the same ; the reason is, because his freight is due, and must be paid, even though the goods be seized as contraband.

EMBARK', v. a. & n. } Fr. embarquer ;

EMBARKA'TION.) Span, embarcarse,

from em, i. e. in and barca, a small vessel. — Min-

sheu. To put or go on shipboard : and hence,

to engage, or engage another in any affair.

The king had provided a good fleet, and had caused a body of 3000 foot to be embarked on those ships. Clarendon.

The French gentlemen were very solicitous for the embarcation of the

army, and for the departure of the fleet. Id.

Of mankind, so numerous late, All left, in one small bottom swam embarked.

Milton.

Straight to the ships tineas took his way, Embarked his men, and skimmed along the sea.

Dryden's &neid, I should with speed embark, And with their embassy return to Greece.

A. Phillips.

Embarked in death, thy passage will be dark ; and the shore, on which it will land thee, altogether strange and unknown. Mason.

But to our tale : the Donna Inez sent

Her son to Cadiz only to embark ; To stay there had not auswered her intent.

Byron.

EMBAR'RASS, v.a.) Fr. embarasser, EMBAR'RASSMENT, n. s. 5 one of the com- pounds of bar, to stop. See BAR. To perplex; entangle ; retard : hence, to distress. ,

I saw my friend a little embarrassed, and turned away. Spectator.

But here a mean

Observe, nor the large hound prefer, of size Gigantic, he in the thick-woven covert Painfully tugs, or in the thorny brake Torn and embarrassed bleeds. Someroille*

Let your method be plain, that your hearers may run through it without embarrassment, and take a clear view of the whole. Watts'* Logick.

To embarrass justice by a multiplicity of laws, or to hazard it by confidence in our judges, are, I grant, the opposite rocks on which legislative wisdom has ever split. Goldsmith.

Charles endeavoured to break this, and to embar- ratt Henry by another inroad of the Scots.

Robertson. History of Scotland.

And merely “tend to show how greatly Love is Embarrassed at first starting with a novice. Byron.

EM’BASE, v. a. From em and base. To make base ; vitiate ; depauperate ; lower ; im- pair.

Joy of my life, full oft for loving you I bless my lot, that was so lucky placed ;

But then the more your own mishap I rue, That are so much by so mean love embased.

Spenser.

Clear and round dealing is the honour of man’s nature, and mixture of falsehood is like alloy iu coin of gold and silver, which may make the metal work the better, but it embaseth it : for these winding and crooked courses are the goings of the serpent ; which goeth basely upon the belly and not upon the feet.

Lord Bacon.

I have no service or ignoble end, in my present labour, which may, on either side, restrain or embate the freedom of my poor judgment. Wotton,

I will rather chuse to wear A crown of thorns., than to exchange that of gold for one of lead, whose en- based uexibleness shall be forced to bend.

King Charles

A pleasure high, rational, and angelical ; a pita- sure embased with no appendent sting ; but such a one as being honey in the mouth, never turns to gall or gravel in the belly. South.

EMBASS’ADOR,N See AMBASSADOR. Old EMBASS’ADRESS, {Vr.embassadeur. One sent EM’BASSAGE, t on a national or public

EM’BASSY. J errand : hence any dig-

nified or important messenger. The custom of our language is to write embassage and em- bassy, for the message, business, or commission ; ambassador, or ambassadress, for the parties sent.

Fresh embassy and suits,

Nor from the state nor private friends, hereafter, Will I lend ear to. Shakspeare. Cori'jlanus.

Nimble mischance, that art so light of foot, Doth not thy embassage belong to me ; And am I last that know it ? Id. Richard III. When he was at Newcastle he sent a solemn 3m- bassage unto James king of Scotland, to treat and conclude a peace with him. Bacon's Henry VII.

Was it not for your sakes that he (Moses) thrust himself into the midst of that smoke and fire, which ye feared to see afar off? Was he not now gone, alter so many sudden embassages, to be your leaguer with God ? Bp. Hall. Contemplations.

He sends the angels on embassies with his decrees.

Taylor.

Mighty Jove's embassador appeared With the same message. Denham.

Myself, my king's embassador will go. Dryden. The peace polluted thus, a chosen band He first commissions to the Latian land, In threatening embassy. Id. JEneid,.

A bird was made fly with such art to carry a written embassage among the ladies, that one might say, If a live bird, how taught ? If dead, how made ?

Sidney.

With fear the modest matron lifts her eyes, And to the bright embassadress replies.

Garth's Ovid.

Nothing can be said to display the imperious ar- rogance of a base enemy, which does not describe with equal force and equal truth the contemptible figure of an abject embassy to that imperious power.

Bur he.

EMBATTLE, v. a. & n. From battle. To range or be ranged in order or array of battle.

The English are embattled : To horse ! you gallant princes, strait to horse !

Shakspeare.

I could drive her from the ward of her reputation, her marriage-vow, and a thousand other her defences, which now are too strongly embattled against me.

Id.

The night

Is shiny, and they say we shall embattle By the second hour of the morn. Id.

On their embattled ranks the waves return, And overwhelm the war ! Milton'* Paradise Lott, The prince who leads embattled thousands forth, And with a nod commands the universe, Knows not the language to make thee obey. Howard.

Embattled nations strive in vain The hero's glory to restrain : Streams armed with rocks, and mountains red witL

fire, In vain against his force consvire. Prior.

EMB

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A band uudaunted, and inured to toil* Shall compass thec around, die at thy feet, Or hew thy passage thro' the embattled foe. And clear thy way to fame. Somervile.

They are gone.

Gone with the refluent wave into the deep — A prince with half his people ! Ancient towers, And roofs embattled high, the gloomy scenes, Where beauty oft and lettered worth consume Life in the unproductive shades of death, Fall prone. Cowper.

And, 'midst the horrors shrined of midnight storm

The fiend Oblivion eyes thee from afar, Black with intolerable frowns her form,

Beckoning the embattled whirlwinds into war.

Beattie.

EM’BAY, v.a. From baigner to bathe, Fr. To bathe ; wet ; or wash. Not used.

In her lap a little babe did play His cruel sport ;

For in her streaming blood he did embay His little hands, and tender joints cmbrew.

Faerie Queene.

Every sense the humour sweet embayed, And, slumbering soft, my heart did steal away.

Id.

From bay. To inclose in a bay; to land- lock.

If that the Turkish fleet Be not insheltered and embayed, they’re drowned.

Shafupeare.

EMBDEN, a considerable sea-port and for- tified town of the kingdom of Hanover, situated on the river Embs or Ems, at its influx into the North Sea. It was long subject to Prussia; and, having a spacious harbour, has often been the object of patronage in regard to its trade. It was created a free port in 1751, and an East India trading company was established in 1769, but it did not flourish. Great benefit accrued to Embden, during the wars of the French revo- lution, from the neutrality of its flag. The harbour admits, at high water, vessels of thirteen feet of draught ; and the roadstead offers a safe anchorage for the largest ships of war, little more than a mile from the town. Ship-building is carried on here ; and a considerable export of oats, barley, butter, and cheese. The inhabi- tants are in general Calvinists. A canal is cut to Aurich, situated twelve miles to the south- west.

EMBEL’LISH,u.a.j Fr. embellir, from EMBEL’LISHER, n. s. > Lat. belliu, fine, hand EMBF.L’LISHMEXT.) some. To adorn, beau- tify, or ornament. Embellishment is often used sarcastically for exaggeration or falsehood. See the extract Irom Atterbury.

How much more beauteous had the fountain been, Embellished with her first created green ; Where crystal streams through living turf had run, Contented with an urn of native stone.

Dryden’s Juvenal.

The names of the figures that embellished the dis- courses of those that understood the art of speaking, are not the art and skill of spcakin? w, 11. Locke.

That which was once the most beautiful spot of Italy, covered with palaces, embellished by emperors, and celebrated by poets, has now nothing to shew but ruins- Addison on Italy.

Cultivate the wild licentious savage With wisdom, discipline, and liberal arts, The embellishments of life. Id. Cato.

Apparitions, visions, and intercourses of all kinds between the dead and the living, are the frequent and familiar embellishments of the legends of the Ro- mish church. Atterbury.

Painting and sculpture are express imitations of visible objects ; and where would be the charms of poetry, if divested of the imagery and embellishments which she borrows from rural scenes? Percioal.

And as for you, my lady Squeamish, Who reckon every touch a blemish, If all the plants th»t can be found Embellishing the scene around Should droop and wither where they grow, You would not foel at all — not you. Cowper.

EMBERIZA, in ornithology, a genus of birds belonging to the order of passeres. The bill is conical, and the mandibles recede from each other towards the base ; the inferior mandible has the sides narrowed inwards ; the upper one has a hard knob within. Species about seventy- seven. The most remarkable are :—

1. E. citrinella, the yellow-hammer, with a blackish tail, the two outward side-feathers marked on the inner edge with a sharp white spot. It is a bird of Europe, and visits the houses in winter ; it builds its nest on the ground on meadows.

2. E. hortulana, the ortolan, has black wings ; the first three feathers on the tail are white on the edges, the two lateral are black outwardly. The orbits are naked and yellow towards the in- ferior mandible. It feeds principally upon the panick grass ; grows very fat ; and is reckoned a great delicacy by epicures. These birds are found in several parts of Europe. In some parts it makes the nest in a low hedge ; in others on the ground. The female lays four or five grayish og’jrs, and in general has two broods in a year. To fatten these birds for the table, they are placed in a chamber lightened by lanterns ; where, not

knowing the vicissitudes of day and night, they are constantly fed with oats and mil- let ; and grow so fat, that they would certainly die if not killed in a critical minute. They are a mere lump of fat; of a most exquisite taste, but soon apt to satiate.

3. E. miliaris, the gray emberiza, is of a grayish color, spotted with black in the belly, and the orbits are reddish. It is the bunting of English authors, and a bird of Europe.

4. E. nivalis, the great pyed mountain finch of Ray, and the snow bird of Edwards, has white wings, but the outer edge of the prime feathers are black ; the tail is black, with three white feathers on each side. These birds are called in Scotland snow-flakes, from their appearance in hard weather and in deep snows. They arrive in that season among the Cheviot hills, and in the Highlands, in large flocks. They appear in the Shetland islands ; then in the Orkneys ; and multitudes of them often fall, wearied with their flight, on vessels in the Pentland Frith. Their appearance is a certain fore-runner of hard wea- ther, and storms of snqw, being driven by the cold from their common retreats. They visit at that season all parts of the northern hemisphere, Prussia, Austria, and Siberia. They arrive very poor and return fat. In Austria they are caught and fed with millet, and, like the ortolan, grow excessively fat.

5. E. oryzivora, or the rice bunting, with the head and whole under side of the body black ; hind part of the neck in some pale yellow, and in others white ; coverts of the wings and pri- maries black, the last edged with white ; part of the scapulars, lesser coverts of the wings, and rump white ; back black, edged with dull yellow ; tail of the same colors, and each feather sharply pointed; the legs are red. The head, upper part of the neck, and back, of the female, is yel- lowish-brown, spotted with black ; the under part of a dull yellow ; the sides thinly streaked with black. These birds are very numerous in the island of Cuba, where they commit great ra- vages among the early crops of rice, which pre- cede those of Carolina. As soon as the crops of that province are more advanced, they quit Cuba, and pass over the sea in numerous flights, and appear in Carolina in September, while the rice is yet milky. Here they commit such de- vastations, that forty acres of that grain have been totally ruined by them in a short time. They

arrive very lean, but soon grow so fat as to fly with difficulty. They continue in Carolina not much above three weeks, and retire when the rice begins to harden. They come into Rhode Island and New York in the end of April, or the second week in May, frequenting the borders of fields, and living on insects, &c.? till the maize is ready, when they peck holes in the sides of the husks, which leaves room for the rain to get in, and effectually spoils the plants. They continue there during the summer, and breed ; returning, as autumn approaches, to the southward. The males and females do not arrive together; the females come first. They are esteemed the most delicate birds of those parts ; and the male is said to have a fine note.

6. E. schoeniclas, the reed sparrow, has a black head, a blackish-gray body, and a white spot on the quill-feathers. It inhabits marshy places most commonly among reeds. Its nest is very artificially contrived, being fastened to four reeds, and suspended by them like a hammock, more than three feet above the water ; the cavity of the nest is deep but narrow ; and the materials are bushes, fine bents and hairs. It lays four or five eggs of a bluish-white, marked with irregular purplish veins, especially on the larger end. It is a bird much admired for its song; and sings most in the night.

EM'BERS, n. s. plur. Sax. aemyrua ; Goth. emmyria ; Isl. einmyria; Swed. askmeria; Teut. ammer, from Sax. el, fire, and myria, ashes, cinders. Hot ashes.

Take hot embers, and put them about a bottle filled •with new beer, almost to the very neck : let the bottle be well stopped, lest it fly out ; and continue it, re- newing the embert every day for the space of ten days. Bacon's Natural History.

Good deeds in this life are coals raked up in em- bers, to make a fire next day. Overbury. While thus heaven's highest counsels, by the low Footsteps of their effects, he traced too well, He tost his troubled eyes, embers that glow Kow with new rage, and wax too hot for hell.

Crashaw.

If the air will not permit, home stiil removed place will fit.

While glowing embers through the room Teach light to counterfeit a gloom. He said, and rose, as holy zeal inspires ; He rakes hot embers, and renews the fires.

Dryden's Virgil.

These scenes, their story not unknown Arise, and make again your own ; Snatch from the ashes of your sires The embers of your former fires. Byron.

EM’BER-DAYS,n.s.-l Sax.ymbren. The

EM’BERING, n.s. . > first two substantives

EM’BER-WEEK. j are synonymous. Of

ember-week, Dr. Johnson says, the origin has been much controverted : some derive it from embers or ashes strewed by penitents on their heads; but Nelson decides in favor of Mareschal, who derives it from ymbren or em- bren a course or circumvolution. A week in which an ember-day falls.

The ember-days at the four seasons are the Wednes- day, Friday, and Saturday after the first Sunday in Lent, the feast of Pentecost, September 14, Decem- ber 14. Common Prayer.

For causes good no many ways, Keep emberings well, and fasting days ; What law commands, we ought to obey, For Friday, Saturn, and Wednesday. Tusser

Stated times appointed for fasting are Lent, and the four seasons of the year called ember-weeks.

Ayliffe’i Parergon.

EMBER-WEEKS, by the canonists, are called quatuor anni tempora, the four cardinal seasons, on which the circle of the year turns ; and hence Henshaw takes the word to have been formed, viz. by corruption, from tempora. They are now chiefly taken notice of, on account of the ordination of priests and deacons ; because the canon appoints the Sundays next succeeding the ember weeks, for the solemn times of ordination; though the bishops may ordain on any Sunday or holiday.

EMBEZ’ZLE, v. a. 1 A corruption of im-

EMEEZ’ZLEMENT, n. s. $ becile Dr. Johnson says ; but it seems better derived from Old Fr. besler or embesler to filch. To pilfer, steal ; dis- honestly appropriate : hence to squander or waste.

He had embezzled the king’s treasure, and extorted money by way of loan from all men. Hayward. When thou hast embezzled all thy store,

Where’s all thy father left ? Dryden’s Pert.

EMBEZZLEMENT. For protecting masters against embezzlements by their clerks and ser- vants, stat. 39 Geo. III. cap. 35, enacts, That servants or clerks, or persons employed for the purpose, or in the capacity of servants or clerks, who shall, by virtue of such employment, re- ceive or take into their possession any money, goods, bond, bill, note, banker’s draft, or othw valuable security or effects, for, or in the name, or on account of, their master or employer, and who shall fraudulently embezzle, secrete, or make away with the same, or any part thereof; every such offender shall be deemed to have feloniously stolen the same from his master or employer, for. whose use, or on whose account, the

(tanker’s drafts, or other valuable security, was or were no otherwise received into the posses- sion of his or their servants, clerk, or other per- son so employed ; and every such offender, his adviser, procurer, aider, or abettor, being thereof lawfully convicted or attainted, shall be liable to be transported to such part beyond the seas as his majesty, by and with the advice of his privy council, shall appoint, for any term not exceed- ing fourteen years, in the discretion of the court before whom such offender shall be convicted or adjudged.

EMBIA’ZE, v.a. ˆ Fr. blasonner. See EMBLAZ’ON, v. a. \ BLAZE. To adorn with EMBLA/ONRY, n. s. 3 glittering embellish- ments ; to exhibit in glaring colors, and par- ticularly with heraldic honors or ensigns.

Nor shall this blood be wiped from thy point, Bat thou shall wear it as a herald’s coat, T emblaze the honour which thy master got.

Shakspeare.

We find Augustus, for some petty conquest em- bltuoned by the poets to the highest pitch.

Hahewill on Providence. He from the glittering staff unfurled The imperial ensign, streaming to the wind, With gems and golden lustre rich emblaxed, Seraphick arms and trophies.

Miltun'i Paradise Lett. Him round

A globe of fiery seraphim inclosed With bright emblazonry and horrent arms. Id.

No weeping orphan saw his father's stores, Oar shrines irradiate, or embluxe the floors.

Pope.

Now high in air, the imperial standard waves, Emblazoned rich with gold and glittering gems, And like a sheet of fire through the dun gloom Streaming mcteorous. Someroille.

EM'BLEM, n. s. & v. a. -\ Yi.emlleme ; Ital.

EMBLEMATIC, adj. /Span. Portug. and

EMBLEMAT'ICAL, adv. \]&.. emblema ; Gr.

EMBLEMATICALLY, I *jt/3Xi}/m, from the

EMBLEM'ATIST. J vnrh t/^JoXXttrflat,

to insert, i.e. tv and /3aXXu to thiow. An orna- ment inserted or thrown into a piece of work- manship : to represent by emblems : emblematic and emblematical are representing pictorially, or by emblems ; emblematist he who invents or uses them.

She had all the royal makings of a queen, The rod, and bird of peace, and all such embtenu, Laid nobly on her. Shalupeare. Henry VII.

Poets can boast of nothing but a lean visage peering out of a seam-rent suit, the very emHems of beggary. Ben Jonson.

If you draw your beast in an emblem, shew a land- scape of the country natural to the beast.

Peacham un Drawing. Gentle Thames,

The mighty master's emblem, in whose face

Sate meekness, heightened with majestick grace.

Denham.

ITicse fables are still maintained by symbolical writers, emblcmatuti,

and heralds.

Brmcne’t Vulgar Errrurt.

Others have spoken emblematically and hierogliphi- cally, as the Egyptians; and the phoenix was the hierogliphick of the sun. Id.

The primitive sight of elements doth fitly emblem that of opinions. Glaneille’t Sceptit.

The poets contribute to the explication of reverses purely emblematical, or when the persons are alle- gorical. Addison.

In the well framed models, With embleinatick skill and mystick order, Thou thew’dst where towers on battlements should

rise,

Where gates should open, or where walls should com- pass. Prior.

He took a great stone, and put it up under the oak, emblematically joining the two great elements of ma- sonry. Swift.

Some when they die, die all ; their mouldering

clay,

Is but an emblem of their memories ; The space quite closes up through which they passed.

Young.

Sweet stream, that winds through yonder glade, Apt emblem of a virtuous maid — Silent and chaste she steals along, Far from the world’s gay busy throng. Cowper.

Now as these were emblematic exhibitions, they must have been as well adapted to the purposes of sculpture as of poetry, which indeed does not seem to have been uncommon, since one compartment of figures in the shield of ˆEneas represented the regions of Tartarus. Darwin.

Instructive emblem of this mortal state !

Where scenes as various every hour arise In swift succession, which the hand of fate

Presents, then snatches from our wondering eyes.

Seattle.

And, bright around with quivering beams beset, Her emblem sparkles o'er the minaret. Byren.

An EMBLEM, is a kind of painted senigma, which, representing some obvious history, in- structs us in some moral truth. See ./ENIGMA, &c, Such is that very significant image of Screvola holding his hand in the fire ; with the words. ' Agere et pati fortiter Romanum est, To do and suffer courageously is Roman.' The emblem is somewhat plainer than the aenigma. Gale de- fines emblem an ingenious picture, representing one thing to the eye, and another to the under- standing. The Greeks also gave the name EM- BLEMS, inp\ifftaTa+ from c/i/3aXXav, to insert, to inlayed or Mosaic works, and even to all kinds of ornaments of vases, moveables, garments, &c. Cicero, reproaching Verres with having plun- dered statues and fine wrought works from the Sicilians, calls the ornaments fixed to them, and which on occasion might be separated, em- blemata.

EMBLEMENTS, in English law, Fr. from em- blaver, q. d semer en bl£, to sow with wheat, is a term strictly signifying the profits of lands sown ; though sometimes used more largely for any profits arising, and growing naturally from the ground; as grass, fruit, &c.

If a tenant for life sow the land, and die be- fore harvest, his representatives shall have the emblements to compensate for the labor and ex- pense of tilling, manuring, and sowing the lands, and also for the encouragement of husbandly ; and not he in reversion. But if the tenant for years sow the land, cvid before severance the term expires, or the estate for life be determined by the tenant's own act, as by forfeiture for waste committed, or if a tenant during widow- hood think proper to marry, then the lessor, or h? in reversion shall have the emblements, and not

the lessee. The advantages of emblements are extended to the parochial clergy by 28 Hen. VIII. cap. 11.

All the cases of emblements turn upon the point of uncertainty ; since

the tenant could not possibly know when his landlord would de- termine his will, and therefore could make no provision against it ; and having sown the land, which is for the good of the public, upon a rea- sonable presumption, the law will not suffer him to be a loser by it. But it is otherwise, and upon reason equally good, where the tenant himself determines the will ; for in this case, the landlord shall have the profits of the land. Co. Litt. 55, 56.

Emblements are distinct from the real estate in the land, and are subject to many, though not all, the incidents attending personal chattels. They were devisable by testament before the statute of wills (Perk. sec. 412); and at the death of the owner, shall vest in his executor, and not his heir ; they are forfeitable by out- lawry in a personal action (Bro. Abr. tit. emble- ments, 21 ; 5 Rep. 116); and by the statute 11 Geo. II. cap. 19, though not by common law (1 Roll. Abr. 666), they may be distrained for rent arrear. Although the emblements are as- sets in the hands of the executor, are forfeitable upon outlawry, and distrainable for rent, they are not in other respects considered as personal chattels ; and particularly, they are not the ob- ject of larceny, before they are severed from the ground. 3 Inst. 109.

Where a lord enters on his tenant for a for- feiture, he shall have the corn on the ground. 4 Rep. 21. Though if a feme copyholder for her widowhood sows the land, and before seve- rance takes husband, so that her estate is deter- mined, the lord shall have the emblements ; yet if such a ferae copyholder, durante viduitate, leases for one year according to custom, and the lessee sows the land, and afterwards the copy- holder takes husband, the lessee shall have the corn. If a husband holds lands for life, in right of his wife, and sow the land, and after she dies before severance, he shall have the emblements. Dyer, 316. 1 Nels. Ab. 701. And where the wife has an estate for years, life, or in fee, and the husband sows the land, and dies, his exe- cutors shall have the corn. 1 Nels. 702. But if the husband and wife are joint-tenants, though the husband sow the land with corn, and dies before ripe, the wife, and not his executors, shall have the corn, she being the surviving joint- tenant. Co. Lit. 199.

A widow endowed with lands sown, shall have the emblements, and not the heir. 2 Inst. 81. And a tenant in dower may dispose of corn sown on the ground ; or it may go to her executors, if she die before severance. 2 Inst.

80, 81.

If a tenant by statute-merchant sow the land, and before severance a

casual profit happens, by which he is satisfied, yet he shall have the corn. Lands sown are delivered in execution upon an extent, the person to whom delivered shall have the corn on the ground. 2 Leon. 54. And judgment was given against a person, and then he sowed the land, aiid brought a writ of error to re-

verse the judgment, but it was affirmed; an-1 adjudged mat the recoverer shall have the corn. 2 Bulst. 213.

When a disseisor sows the land, and after- wards cuts the corn, but before it is carried away ,the disseisee enters, the disseisee shall have the corn. Dyer, 31. 11 Rep. 52. A person seised in fee of land dies, having a daughter, and his wife privement enseint with a son ; the daughter enters and sows the land, and before severance of the corn, the son is born ; in this case the daughter shall have the corn, her estate being lawful, and defeated by the act of God ; and it is for the public good that the land should be sown.

If a man seised in fee-simple sows land, and then devises the land by will, and dies before severance ; the devisee shall have the corn ; and not the devisor's executors. Winch. 52. Cro. Eliz. 61. If a person devises his lands sown, and says nothing of the corn, the corn shall go with the land to the devisee : and when a man seised of land, in fee or in tail, sows it, and dies without will, it goes to the executor, and not to the heir. 10 Ed. IV. 1 b. 21 H. VI. 30 a. 37 H. VI. 35 b. A devisee for life dies, he in remainder shall have the emblements with the land.

EMBOD'Y, v. a. & v. n. Em and body. To put into or invest with a bodily, corporeal, or material shape ; to draw together soldiers into a body ; to be united in one body or mass. Eke enrooted deep must be that tree,

Whose big embodied braunches shall not lie,

Till they to heaven's hight forth stretched bee.

Spenser. Faerie Queene.

The local militia when not drawn out and embodied, shall be entitled to the same pay, clothing and al- lowances, as the regular militia are when not em- bodied ; and when drawn out and embodied, shall be entitled to the same pay, clothing, and allowances, for themselves and families, as his majesty's other militia forces when drawn out and embodied.

Local Militia Act, 48 Geo. HI. c. 3.

If there be no such thing as a. disembodied spirit would not our Lord have shewn them their error ? Instead of this he confirms them in their opinion, &c.

Clarke on Luke xxiv. 37.

EMBOLD'EN, v. a. & v. n. To encourage or be encouraged; to strengthen or feel confirmed in resolution.

Shall vain words have an end ; or what embolden- eth the* that thou aniwerest ? Job xvi. 3.

Shall not the conscience of him which is weak be emboldened to eat those things which are offered to idols ? 1 Cor. viii. 10.

Yet nathemore by his bold hartie speach

Could his blood-frozen hart emboldened bee,

But through his boldness rather feare did reach. Spenser. Faerie Queene.

Nothing emboldens sin so much as mercy.

Shahspeare.

E'MBOLISM, n. s. Gr. £/t/3o\iEMBLEM. Intercalation ; in- sertion of days or years to produce regularity and equation of time.

The civil constitutions of the year were after differ- ent manners in several nations ; some using the sun s year, but in divers fashions ; and some following the moon, finding out cmbolinnu or equations, even to the

addition of whole months, to make all as evet as they could. Holder on Time.

EMBOLISM, or EMBOLISMUS. As the Greeks made use of the lunar year, which is only 354

Averse they fly, or -with rebellious aim Chase him from thence :

needless their impious deed, The huntsman knows him by a thousand marks, Black and imbost. Somerville't Chase.

While thus through all the stages thou hast pushed

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days, in order to bring it to the solar, whi < ; Qf treeship_first a seedling, hid in grass ;

365 days, they had every two or three years an Then twig ˆ then sapiing . and, as century rolled

embolism, i. e. they added a fifteenth lunar Slow after century, a giant-bulk

month every second or third year, which ad- of girth enormous, with moss-cushioned root

ditional month they called «/i/3o\t/i««oc, emboli- inci'us, because inserted, or intercalated.

E'M BOLUS, n. t. Gr. tˆoXoc- Any thing inserted and acting in another, as the sucker in a pump.

Our members make a sort of an hydraulick engine, in which a chemical liquor, resembling blood, is driven through elastick channels by an embolus, like the heart. Arbuthwt.

EMBOSOM, 17. a. Em and bosom. To re- ceive into the bosom, heart, or affections : hence to enclose ; to shelter.

Hi? house embotnmed in the grove, Sacred to social life and love. Pope.

EMBOSS', 17. a. Fr. emboister, embosquer ; Ital. imboscare. To enclose, as in a box or bush.

The knight his thrilliant spear again essayed In hii brass-plated body to emboss. Spenter.

And in the way, as she did weep and wail, A knight her met, in mighty arms embossed.

Id. Faerie Quecne. Like that self-begotten bird ,

In the Arabian woods embost.

Milton’s Ayonistes.

EMBOSS’, 17. a. & v. n.) Fr. embosser, bosse, EMBOSS’MENT. \ a protuberance. To

cause to rise or swell in tumors, or other pro- jections : hence to sculpture in relief.

Oh, he is more mad

Than Telamon for his shield ; the boar of Thesialy Was never so embost. Shakspeare.

Tiir.on hath made his everlasting mansion Upon the beached vergo of the salt flood ; Which once a-day, with his embossed froth, The turbulent surge shall cover. Id. Timon.

Thoa art a bile,

A plague sore, or embossed carbuncle, In my corrupted blood. Id. King Lear. I wish also, in the very middle, a fair mount, with three ascents and alleys, enough for four to walk abreast ; which I would have to be perfect circles, without any bulwarks or embossments.

Bacon’s Essays.

Botrhes and blains must all his flesh emboss, And all his people. Milton’s Paradise Lost.

When a deer is hard run and foams at the mouth, he is said to be embost : a dog also, when he is strained with hard running, especially upon hard ground, will have his knees swelled, and then he is said to be embost, from bosse, French, a tumour.

Hanmer.

All crowd in heaps, as at a night alarm The bees drive out upon each other’s backs, T’ embost their hives in clusters.

Dryden. Don Sebastian. Then o’er the lofty gate his art embossed Androgeo’s death, and offerings to hi* ghost.

Id. Virgil.

They are at a loss about the word pendentis ; some fancy it expresses only the great embossment of the figure, others believe it hung off the helmet in alto relievo. Addison on Italy.

Upheaved above the soil, and sides embossed With prominent wens globose — till at the last The rottenness, which time is charged to inflict On other mighty ones, found also thee. Cowper.

EMBOTHRIUM, in botany, a genus of the monogynia order, and tetrandria class of plants : CAL. none, COR. four linear-oblique petals; stamina four very short filaments ; antherae large, oblong, seated within the cavity of the petal. Pericarp a round unilocular follicle, sharpened at both ends : SEED four or five in number, egg- shaped, and compressed. Species eight elegant shrubs of New Holland and South America, bear- ing white and red flowers.

EMBOTTLE, 17. a. Fr. bouteille. To include in bottles; to bottle.

Stirom, firmest fruit Embattled, long as Priamean Troy Withstood the Greeks, endures. Philips. EMBO'WEL, 17. a. Old Fr. emboullecz, from bowel. To eviscerate ; to deprive of the entrails; to exenterate.

Embowelled will I see thee by and by ; Till then, in blood, by noble Percy lye.

Sliakspeare. The schools,

Embowelled of their doctrine, have left off The danger to itself. Id.

The roar

Embowelled with outrageous noise the air, And all her entrails tore. Milton's Paradise Lost. Fossils and minerals that the emlotoelled earth

Displays. Philips.

EMBOWER, v. n. & v. a. Em and bower. To receive or dwell within a bower ; to build as a bower; to encircle as within a bower.

The small birds, in their wide bough* embowering Chaunted their sundry tunes. Spenser.

On the mingling boughs they sit embowertd

All the hot noon. Thomson.

Look where he comes — in this embowered alcove Stand close concealed, and see a statue move : Lips busy, and eyes fixed, foot falling slow, Arms hanging idly down, hands clasped below, Interpret to the marking eye distress, Such as its symptoms can alone express. Cowper,

EMBRACE’, v. a., v. n. & ra. s. ˆ Fr. embras- EMBRACE’MENT, n.s. f ser ; Ital. ab-

EMERA’CER. j braciure ; Lat.

brachium, the arm. To enclose, or take within the arms; to fondle; hence to seize with ardor, and to comprehend generally: as a neuter verb it is used by Shakspeare for to join in ar em- brace. As a noun embrace and embracement are (alike, a fond clasping or enclosing within the arms; hence admission or reception; com- prehension; enclosure.

And fyrst vppon the louely shall she smile, And frendly on the cast her wandering e.ves, Embrace the in her armes, and for a whyle. Put the and kepe the in a fooles paradise.

S.r T. J/«rr.

Here, between the annic=, Joel’s drink together friendly, and embrace.

Sha/tspeare.

Let me embrace with old Vic«ntio ; And wander we to see thy honest son, Who will of thv arrival be full joyous. Id.

Fenton, Heaven give thee joy ! What cannot be eschewed, must be embraced.

Id.

I would freelier rejoice in that absence, wherein he won honour, than in the embracements of his bed, where he would shew most love. Id. Coriolania.

I take it, your own business calls on you, And you embrace the occasion to depart. Id. The parts in man’s body easily reparable, as spirits, blood, and flesh, die in the embracements of the parts hardly reparable, as bones, nerves, and membranes. Bacon’s Natural History. At first, her mother earth she holdeth dear, And doth embrace the world, and worldly things.

Dames.

Nor can her wide embracements filled he. Id. Yet are they the greatest embracers of pleasure of any other upon earth ; and they esteem of pearls as pebbles, so they may satisfy their gust, in point of pleasure or revenge. Howel.

Thames, the most loved of all the ocean's sons By his old sire, to his embraces runs. Denham.

Low at his feet a spacious plain is placed, Between the mountain and the stream embraced.

Id.

There cherishing one another with dear, though chaste embracementi, with sweet, though cold kisses, it might seem that Love was come to play him then without darts. Sidney.

These beasts, fighting with any man, stand upom their hinder feet, and so this did, being ready to give me a shrewd embracement. Id.

They who are represented by the wise virgins, em- braced the profession 01 the Christian religion, as the foolish virgins also had done. Tillotton.

Embrace again, my sons ! be foes no more ; Nor stain your country with her children's gorn.

Dryden.

And I Have unbiasedly embraced wh'it, upon a fair inquiry, appeared so to me. If I must believe for myself, it is unavoidable that I must understand for myself. Locke.

If a man can be assured of any thing, without hav- ing r-xamined, what is there that he may not embrace for truth ? Id.

Can you e'er forget

The fond embraces, and repeated blessings Which you drew from him in your last farewell ?

Addison. Eternity will not efface

Those records dear of transports past ; Thy imag-e at our last embrace ;

Ah ! little thought we ‘twas our last !

Burn*.

EMBRA’SURE, n. s. Fr. embrasure. An aperture in the wall, through which the cannon is pointed; part of a bmtlement.

EMBKASURI-,, if. architecture, the enlargement made of the aperture of a door or window, on the inside of the wall ; its use being to give the greater play for the opening of the door or case- ment, or to admit the more light.

EMBR’AVE, v. a. From brave. To decorate ; to embellish ; to deck ; to grace ; to adorn. Not now in use.

So, both agree their bodies to engrave j The great earth’s womb they open to the sky, And, with sad cypress, seemly it embrave.

Faerie Queene.

EM’BROCATE, v. a.) FT. embrocation, from

EMBROCA’TION, n. s. J Gr. £^/3p«x£lv l- e- tv

and Pptxtiv, to damp or wet. To moisten with

medicinal applications: the act of so- doing; or

the lotion is an embrocation.

I returned her a glass with oil of roses and vine- gar, to embrocate her arm.

Wiseman on Inflammation.

We endeavoured to ease by discutieat and emol- lient cataplasms, and embrocations of various sorts.

Id. Surgery.

An EMBROCATION, in surgery and pharmacy, is an external kind of remedy, which consists in an irrigation of the part affected, with some proper liquor, as oils, spirits, &c., by means of a woollen or linen cloth, or a sponge, dipped in the same.

EMBROI’DER, v. a. j Fr. broder, a com- EMBROI’DERER, n. s. \ pound of emandBRoi- EMBROI’DERY, n. s. 3 DER, which see. To border or

decorate with ornaments ; to diversify with raised needlework : embroiderer is the par- ty executing this kind of work; and embro'- dery, the work performed : hence also, variegated colors generally.

Blue silk and purple, the work of the embroiderer.

Eccies. Write,

In emerald tuffs, flowers purfled, blue and white, Like saphire, pearl, in rich embroidery, Buckled below fair knighthood's bending knee. , Shakspeare.

We see in needleworks and embroideries, it is more pleasing to have a lively work upon a sad and solemn ground, than to have a dark and melancholy work upon a lightsome ground : judge, therefore, of the pleasure of the heart by the pleasure of the eye.

Bacon.

Quality alone should only serve to make a shew in the embroidered part of the government , but igno- rance though never so well born, should never be admitted to spoil the public business. Saville.

Such an accumulation of favours is like a kind of embroidering, or lifting of one favour upon another.

Wotton.

Envy rages as much in a sordid affected dress, as in all the silks and embroideries which the excess of the age and the folly of youth delight to be adorned with. Clarendon.

Embroidered so with flowers it had stood That it became a garden of a wood. Waller. Let no virgin be allowed to receive her lover, but in a suit of her own embroidering.

Spectator, No. 606.

If the natural embroidery of the meadows were helpt and improved by art, a man might make a pretty landskip of his own possessions. Id. No. 414.

Next these a youtl.ful train their vows expressed, With feathers crowned, with gay embroidery dressed.

Pope.

Embroidered purple clothes the golden beds, This slave the floor, and that the table spreads.

Id.

How sweetly mutable yon orient hues, As morn's fair hand her opening roses strews ; How bright, when Iris blending many a ray, Binds in embroidered wreath the brow of day.

i« u work in gold, silver, or silk rnent of the Upper Alps. It is walled, and Us thread wrought by the needle upon cloth, stuffs, a citadel erected by Louis XIV. Embrun was or muslin into various figures. In embroidering

formerly anarcluepiscopal see, but is now un.ted

, .

stuffs the work is performed in a kind of loom ; w.th that of Aix. Population 3150. Fifty-five brains* the more the piece is stretched, the miles south-west of Grenoble. easier it is worked. As to muslin, they spread it upon a pattern ready designed; and some-

times, before it is stretched upon the pattern, it is

EM'BRYO, n.s. i Tr.embryon; Span.

EM'BRYOS, n. t. & adj. >embrion ; Ital. embri- EMBRYOT'IC, adj.) one ; Lat. embryo;

starched to make it more easy to handle. Em- Qr £juˆpwov> i.e. tv in (yaerrpof, the belly) /Spvov, broidery on the loom is less tedious than the growing. Any thing in an imperfect but grow- other, in which, while they work flowers, all the ing state, applied particularly to the human threads of the muslin, both lengthways and f^^

breadthways, must be continually counted ; but, The briasiog ˆ of Hving creatures may be ^^ on the other hand, this last is mucl i lerated> if the ^^yg Hpeneth and perfecteth sooner.

points, and susceptible of greater variety. Uottre too much milled are

scarcely susceptible of this ornament, and in effect we seldom see them em- broidered. The thinnest muslins are left for this purpose ; and they are embroidered to the greatest perfection in Saxony. By stat. 22 Geo. II. c. 36, no foreign embroidery, or gold and

Bacon.

The earth was formed, but in the womb as yet Of waters, embryon immature involved Appeared not. Milton'i Paradise Lott.

Hot, cold, moist, and dry, four champions

fierce

. . , ˆ r mas

silver brocade, shall be imported, upon pam of Their gmbryon atoms nd burnt and enalt of J

for mastery, and to battle bring

Id.

conformation, before the bir'.h of the parent, or be so much as

Browne's Vulgar Errours. And yet if it comes in question, whether a plant.

being forfeited and burnt, and penalty

for each piece. No person shall se 1, or exp > can ˆ the name Q

to sale, any foreign embroidery, gold or silvt • called an ˆ

thread, lace, fringe, brocade, or make up the

same into any garment, on Painr°f having ˆ it for- ˆ ˆ ˆ ˆˆ ˆ uii > wn(finer a

feited and burnt, and penalty of | that ,ies ready formed in the seefU have life . whe.

embroidery, &c., may be seized and I l ther the embryo of an cgg before in:ubation, or a man

the mercer, &c., in whose custody it was found, in a SWOOD without sense or motion, be alive, or no?

shaT torteitflOO.

EMBRO'IL, v.a. Fr. broulller. To disturb; confuse : distract ; throw into commotion ; to involve in dissension or discord.

I had no passion, design, or preparation to embroil my kingdom in a civil war. King Charles.

Humour next, and chance,

And tumult and confusion, all embroiled,

And discord with a thousand various mouths.

Milton.

When she found her venom spread so far, The royal house embroiled in civil war, Raised on her dusky wings she cleaves the skies.

Dri/den.

Supposing a government wherein the person of the chief magistrate is not thus sacred ; yet this doctrine of the lawfulness of resisting all unlawful exercises of his power, will not upon every slight occasion indanger him, or embroil the government ; for where the injured party may be relieved, and his damages repaired by appeal to the law, there can be no pre- tence for force. Locke.

The Christian antiquities at Home, though of a fresher date, are so embroiled with fable and legend, that one receives but little satisfaction.

Addison on Italy.

it is easy to perceive, that a clear distinct settled idea does not always accompany the use of so known a word, as that of life is. Locke.

In that dark womb are the signs and rudiments of an embryo world Burnet's Tfteory.

When the crude embryo careful nature breeds, See how she works, and how her work proc eds.

Blackmore.

The company little suspected what a noble work I had then in embryo. Swift.

While the promised fruit Lies yet a little t/mbryo, unperceived Within its crimson folds. Thomson's Spring.

Some, bounded to a district-space, Explore at large man's infant race, To mark the embryotic trace

Of rustic Bard ; And careful note each opening grace,

A guide and guard. Burnt.

Sylphs ! as you hover on ethereal wing, Brood the green children of parturient spring ! — Where in their bursting cells my embryont rest, T cliarzp you, guard the vegetable nest. Darwin. EMDEN, city at the mouth of the river

EMBROIL', v.a. Em and broil, to roast on the ˆms, in the principality of East Friesland,

fire. See BROIL.

the "rst commercial city of Hanover. It

That knowledge, for which we boldly attempt to ?onta'ns a population of 1 1,000 souls, and rifle God's cabinet, should, like the coal from the jts university is much respected for its learn- altar, serve only to embroil and consume the sacri- ing- Emden is a free port, carries on much legious invaders. Decay of Piety, trade in herrings, and its commerce is likely to

EMBROTHEL, v. a. Brothel, brodel. To be extended by the junction of the rivers Ems

and Rhine.

enclose in a brothel.

Men, which chuse

Law practice for mere gain, boldly repute, Worse than embrotheled strumpets prostitute.

Donne. EMBRUN, an old town of France, situated on

EME, n. s. Sax. eame. Uncle. Now ob- solete. See EAME.

Whilst they were young, Cassibelan their erne, Was by the people chosen in their stead ; Who on him took the royal diailcm,

a 3teep rock near the Durance, in the depart- And goodly well it long Hue governed.

EME

£‘07

EME

a- ˆ

EMKNDA’TION,M.S. f lalian, emeydatione ;

EMENDA’TOR, n. s. £ Latin, emendatio. See

EMEN’DATORY, adj. J AMEND. To correct. Emendation is the correction made ; and emen- dator, he who makes it; emendatory, is correc- tive.

Have us excused, that we no better do, Another time to emende it if we can.

Mystery of Candlemas Day.

The. Roman emendatort of Gratian themselves know not how to trust it. lip. Cosin.

The essence and relation of any thing in being, is fitted beyond any emendation, for its action and use ; and shews it to proceed from a mind of the highest understanding. Grew.

He had, what is the first requisite to emendatory criticism, that intuition by which the Poet’s intention is immediately discovered. Johnson.

EM’ERALD, n. s. Fr. emeraude; Ital. sme- raldo ; Span, and Port, esmeralda; Teut. and Belg. schmarugd; Lat. smaragdus ; Arab, zma- rad ; Armen. zmaragthos ; Gr. apapaydoc, from the verb apapaaaoi, luceo, to shine. A precious stone of considerable beauty and value.

Do you not sec the grasses how in colour they excel the emerald ? Sidney.

The emerald is a bright grass green ; it is found in fissures of rocks, along with copper ores.

Woodward on Fossils.

Nor deeper verdure dies the robe of Spring, When first she gives it to the southern gale, Thau the green emerald shows. Thomson's Summer.

The emerald is evidently the same with the ancient smaragdus; and, in its most perfect state, is perhaps the most beautiful of all the gems. The rough emerald is usually of a very bright and naturally polished sur- face, and is ever of a pure and beautiful green, with- out the admixture of any other colour. The oriental emerald is of the hardness of the saphire and ruby, and is second only to the diamond in lustre and brightness. Hill on Fossils.

With verdant light the modest emeralds glow, Blue sapphires glare, and rubies blush below ; Light piers of lazuli the dome surround, And pictured mochoes tesselate the ground.

Darwin.

In noon's bright blaze thy vermil vest unfold, And wave thy emerald banner starred with gold. Id. Throned in her emerald-cur, see Spring appear ! (As fancy wills the landscape starts to view) Her emerald-car the youthful Zephyrs bear, Fanning her bosom with their pinions blue.

Beattie. Light be the turf of thy tomb '

May its verdure like emerald* be : There should not be the shadow of gloom, In ought that reminds us of thee. Byron.

EMERALD. This genus contains two species, the prismatic and rhomboidal.

Prismatic emerald, Euclase of Haiiy. Its colors are green, of various shades, and some- times sky blue. It is found only crystallised. The primitive form is a prism of 133° 24'. Lustre splendent. Cleavage perfect in the direc- tion of the smaller diagonals of the prism". Transparent. Refracts double. Harder than quartz, but softer than topaz. Easily frangible. Specific gravity 2'9 to 3-3. Loses transparency, ana then melts before the blow-pipe. Its con- stituents are 35 to 36 silica, 18 to 19 alumina,

14 to 15 glucina, 2 to 3 iron, and 27 to 31 loss. The last is chiefly water, ;md in some measure alkali. Found in Peru and Brasil. It is a beau- tiful mineral, but two brittle for jewellery.

Rhomboidal emerald, of which there are two sub-species, the precious emerald and the beryl. Precious emerald is well characterised by its green color, of various depths. It is generally crystallised. The

primitive form is an equian- gular six-sided prism, on which various trunca- tions are found. Lustre splendent. Cleavage straight and four-fold. Transparent. Moderate double refraction. Nearly as hard as topaz. Specific gravity 2‘6 to 2‘77. Heated to a mode- rate degree, it becomes of a blue color, but recovers its tint on cooling. At a high heat, it fuses into a white vesicular glass. Its consti- tuents are silica 64-5, alumina 16, glucina 13, oxide of chrome 3-25, lime 1*6, water 2. It occurs in drusy cavities, along with iron pyrites, calcareous spar, and quartz, in veins that tra- verse clay-slate. The most beautiful emeralds come from Peru. As a gem it is valued next to the ruby. The emerald is perhaps the most beautiful of all the gems ; and according to Wal- lerius, when heated in. the fire, changes its color to a deep blue, and becomes phosphorescent ; but recovers its green when cold. When pulve- rised it has a white appearance, and with borax melts to a very thin and colorless glass. It becomes electric by being rubbed, and some have the property of the tourmalin, viz. of being electrified by heat, and in that state attracting ashes or other light substances; though after having attracted the ashes, they retain them with- out any signs of repulsion. Pliny mentions twelve different kinds of these precious stones; though it appears, from the vast size of some of them, that they must have been only certain kinds of green spar, or other green stone, which at that time went under the name of emerald among the ancients. Theophrastus, however, mentions one four cubits long and three broad likewise an obelisk composed of only four emeralds, the whole length being forty cubits, and the breadth from four to two.

EMERGE/i;. n. ˆ Lat. emerge, from e privative and mergo, to plunge. To rise out of a fluid ; to issue ; roceed ; to rise into view, and hence out of obscurity. Emergence and emergency are the act of rising in this way ; also (metaphorically) any sudden casualty or occurrence. Emersion is confined to the rising out of a fluid or out of obscurity ; as in its par- ticular application to the re-appearance of a star. Emergent is proceeding or issuing forth, from something; and is sometimes used for sudden, casual, unexpected.

The man that is once hated, both his good and his evil deeds oppress him ; he is not easily emergent.

Ben Junton.

All the lords declared, that, upon any emergent oc- casion, they would mount their servants upon their horses. Clarendon.

Immediately the mountains huge appear Emergent, and their broad

bare backs upheave Into the clouds. Milton

EME

EME

Most of our rarities have been found oat by casual emergency, and have been the works of time and chance rather than of philosophy. Glancille's Scepsis.

We have read of a tyrant, who tried to prevent the emergence of murdered bodies.

Browne'* Vulgar Errourt.

The time was in the heliacal emersion, when it be- comes at greatest distance from the sun. Id.

The emergency of colours, upon coalition of the par- ticles of such bodies, as were neither of them of the colour of chat mixture whereof they are ingredients, it very well wor'.h our attentive observation.

Boyle on Colours.

They emerged, to the upper part of the spirit of irine, as much of them as lay immersed in the spirit.

Boyle.

Thetis, not unmindful of her son, Emerging from the deep, to beg her boon, Pursued their track. Dryden's Homer.

The stoics held a fatality, and a fixed unalterable course of events ; but then they held also, that they fell out by a necessity emergent from, and inherent in, the things themselves, which God himself could not alter. South.

The mountains emerged and became dry land again, when the waters retired. Buntet's T/teory.

In any case of emergency, he would employ the whole wealth of his empire, which he had *hus amassed together in his subterraneous exchequer.

Addiion's Freeholder.

If the prism was turned about its axis that way, which made the rays emerge more obliquely out of the second refracting surface of the prism, the image soon became an inch or two longer, or more.

Newton's Opticks.

The white colour of all refracted light, at its very first emergence, where it appears as white as before its incidence, is compounded of various colours. Id.

When, from dewy shade emerging bright, Aurora stre.aks the sky with orient light, Let each deplore his dead. Pope's Odyssey.

Then from ancient gloom emerged A rising world. Thomson's Summer.

In this situation of Europe, Scotland, which had hitherto wasted her strength between France and England, emerged from her obscurity, took her station in the system, and began to have some influence upon the fate of distant nations.

Robertson. History of Scotland. As one, who, long detained on foreign shores, Pants to return, and when he sees afar His country's weather-bleached, and battered rocks, From the green wave emerging, darts an eye Radiant with joy towards the happy land ; So I with animated hopes behold. Cowper.

— Hither, emerging from yon orient skies, Botanic Goddess ! bend thy radiant eyes ; O'er these soft scenes assume thy gentle reign Pomona, Ceres, Flora, in thy train. Darwin.

From silent mountains, straight, with startling

sound,

Torrents are hurled ; green hills emerge ; and lo, The trees with foliage, cliffs with flowers are crowned ; Pure rills through vale* of verdure warbling go ; And wonder, love, and joy, the peasant's heart o'er-

flow- Beattie.

EMERSION, itr pstronomy, is used when the •un, moon, or other planet, begins to rc-app ear, after its having been eclipsed, or hid by the in- terposition of the moon, earth, or other body. The difference of longitude is sometimes found by observing the immersions and

emersions of the first of Jupiter's satellites. The immersions are observed from the time of Jupiter's being in

conjunction with the sun to his opposition ; and the emersion from the opposition to the conjunc- tion; wh*ich two intervals are usually six months each and divide the year between them.

EMERSION, in physics, the rising of any solid above the surface of a fluid specifically heavier than itself, into which it had been violently im- merged or thrust. It is one of the known laws of hydrostatics, that a lighter solid being forced down into a heavier fluid, immediately endea- vours to emerge; and that with a force equal to the excess of weight and quantity of the fluid above that of an equal bulk of the solid. Thus, if a solid be immerged in a fluid of double its specific gravity, it will emerge again till half its bulk or body be above the surface of the fluid.

E'MERODS, ra. s. \ Corrupted in pronun-

E'MEROIDS. $ elation from hemorrhoids,

oi/ioppoifoc- Painful swellings of the hemorr- hoidal veins ; piles.

He destroyed them, and smote them with emerods.

1 Sam.

EMERSON (William), a celebrated mathe- matician, was born in 1701, at Hurworth, near Darlington. In the earlier part of his life he at- tempted to teach a few scholars ; but he soon discontinued the pursuit; and, satisfied with a moderate competence left him by his parents, devoted himself to a studious retirement. Towards the close of 1781 he disposed of the whole of his mathematical library to a bookseller at York ; and on May 20th, 1782, died of a lin- gering and painful disorder at his native village, aged eighty-one. Mr. Emerson was a recluse of singular habits and temper ; coarse, proud, and affecting frivolous singularities. To his ma- thematical acquirements he added considera- ble skill in the science of music, but was a poor performer. He wrote, 1. The Doctrine of Fluxions ; 2. The Projection of the Sphere, ortho- graphic, stereographic, and gnomonical ; 3. The Elements of Trigonometry ; 4. The Principles of Mechanics ; 5. A Treatise of Navigation on the Seas; 6. A Treatise of Algebra, in two books ; 7. The Arithmetic of Infinites, and the differential method, illustrated by examples ; 8. Mechanics, or the Doctrine of Motion; 9. The elements of Optics, in four books; 10. A Sys- tem of Astronomy; 11. The Laws of Centri- petal and Centrifugal Force; 12. The Mathema-

tical Principles of Geography ; 13 Cyclomathe- sis; or an easy Introduction to the several branches of Mathematics ; 14. A short Comment on Sir Isaac Newton's Principia ; to which is added, A Defence of Sir Isaac against the Ob- jections that have been made to several parts of his Works.

EMERY, a sub-species of rhomboidal co- rundum. Its color is intermediate between grayish-black and bluish-gray. It occurs massive and disseminated, and also in granular concre- tions. Lustre glittering and adamantine. Frac- ture fine-grained uneven. Translucent on the edg˚s. So very hard as to scratch topaz. Spe- cific gravity 4-0. Its constituents are 86 alumina, 3 silica, 4 iron, and 7 loss. In Saxony it occurs in beds of talc and steatite. It occurs abun- dantly in the Isle of Naxos, and also at Smyrna. It is used for polishing; hard minerals and metals Its fine powder is obtained by trituration and

clutriation. It is also sometimes very red, and then usually contains veins of gold. Dr. Lewis supposes that some kinds of emery may contain platina. For its use in various manufactures, emery is ground in mills, and the powder sepa- rated into parcels of different degrees of fineness by washing ; distinguished into first, second, and third qualities : the first being that which remains longest suspended in water, the others, such as sink sooner in the same liquor, which is pourea from them, with the finer kind swimming in it and afterwards allowed to settle. Emery thus prepared is of great use to different artificers in polishing and burnishing iron and steel works, marble, cutting and scalloping glass, &c.

EMERY (John), an actor of eminence, was bora at Sunderland, in the palatinate of Durham, Dec 22, 1777, and educated at Ecclesfield in York- shire, where he acquired that knowledge of the provincial dialect which afterwards contributed so much to his celebrity. In the unsophisticated rustic or the stupid dolt he was excellent ; while in some parts, written purposely for him, such as Tyke in the School of Reform, and Giles in the Miller's Maid, his acting was truly terrific and appalling. The portraying of rough nature, fine simplicity, and strong passion, was his forte. In private life he was much esteemed ; he died in January, 1822.

EMETIC, n. s. } Gr. «/xmicoc, from the

EMET’ICAL, adj. / verb t/«w, to throw forth ;

EMET’ICALLY, adv. 5 to vomit. A medicine provoking vomits.

EMETICS. See MEDICINE. Emetics may be arranged under those derived from the vegetable, and those from the mineral kingdom. From the vegetable kingdom are numbered ipecacuanha, scilla maritima, anthemis nobilis, sinapis alba, asarum Europaeum, nicotiana tabacum. From the mineral kingdom, antimony, the sulphates of zinc and copper, and the subacetate of copper. To these may be added ammonia, its hydro-sul- phuret, and the tartar emetic. The preparations of mercury are seldom employed as emetics. The sulphate, or turpeth mineral, has been chiefly used, but its operation is violent.

EMETIN, in chemistry, the vegetable basis of ipecacuan root which is thus procured. Di- gest ipecacuan root, first in ether and then in alcohol. Evaporate the alcoholic infusion to dry- ness, redissolve in water, and drop in acetate of lead. Wash the precipitate, and then, diffusing it in water, decompose by a current of sulphu- rcted hydrogen gas. Sulphuret of lead falls to the bottom, and the emetin remains in solution. By evaporating the water this substance is ob- tained pure.

Emetin forms transparent brownish-red scales. It has no smell, but a bitter acrid taste. At a heat somewhat above that of boiling water, it is resolved into carbonic acid, oil, and vinegar. It is soluble both in water and alcohol. It is pre- cipitated by protonitrate of mercury and corrosive sublimate. Half a grain of emetin acts as a powerful emetic, followed by sleep ; six grains *omit violently, and produce stupor and death.

EMICATION, n s Lat. emicatio. Spark- .‘ing; flyiug off in small particles, as sprightly liquors.

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Iron, in aqua fortis, will fall into ebullition, with noise and emication, as also a crass and fuinid exhala- tion. Browne.

EMICTION, n. s. From Latin, emiclum. Urine ; what is voided by the urinary passages.

Gravel and stone grind away the flesh, and effuse the blood apparent in a sanguine emiction.

Harvey on Consumptions.

EMIGRATE, v. a. & adj. ˆ Latin, emigro,

EM’IGRANT, n. s > from e & migro,

EM’IORATION. j to wander. To

remove from a place ; generally applied to removing from one country to another. An emigrant is he who thus removes.

We find the originals of many kingdoms either by victories, or by emigrations, or intestine commotions.

Hale.

These emigrants were to receive pay and subsist- ence for some years at the public expense.

Robertson.

The gnats of this country are produced in greater numbers in some years than others, and are then seen in swarms for many evenings near the lakes or rivers whence they arise ; and, I suppose, emigrate to up- land situations, where fewer of them are produced.

Darwin.

EMIGRATION. This is a topic connected with another very important branch of political economy, that of POPULATION, upon which we are not disposed to express all our opinions until we can support them with that degree of proof of which we consider them to be capable. At present we assume the popular basis of this interesting subject, that population, in all the settled countries of Europe, presses hard upon the means of subsistence ; so hard that, with all the local attachments and sympathies of man- kind, thousands at this moment are seeking in our own country, the most eligible mode of leaving it for distant shores, and hoping to find, in the cultivation of the very wilds of nature, more of certain subsistence and ultimate com- fort, than in their native and still beloved country.

But is this, in itself, an evil ? We mean, the propensity of mankind to jostle one another (we know of no equally intelligible mode of ex- pressing what we would convey) in old countries ; and thus producing by re-action the exploration and settlement of new ones? We think not. While it may arise immediately from some errors that are reproachful to human nature and human governments, it may also be a part of the wise dispensations of Providence to accomplish the further peopling of the earth, and the more ex- tended happiness of man.

We therefore regard emigration as among the best of expedients in the hands of a wise go- vernment, for correcting the ordinary surplusage of population ; and we would, with all deference, submit that the discreet application of such an expedient, in a country like our own, is pecu- liarly called for at the present time. What others have regarded as ‘a great and radical evil,’ afflicting society with ‘ the want of food,’ we would endeavour to exhibit as a principle of expansive good, designed to stimulate the rulers of a country to more enlarged ideas of

the government of it; particularly as designed to teach the scu ice of governing such a country

as our own in times of peace : and ultimately to impress upon us this great truth, that mankind at large, to be governed happily, must and will finally be governed but as the various branches of one universal family.

We reason iu this way, with regard to man- kind, considered as a whole. The thinly-peopled parts of the earth have always hitherto been more in number and wider in extent than what are called the thickly-peopled parts. If you have one China, for instance, upon the earth, you have a Russia, and a Turkey in Europe and in Asia, over the face of which all the existing inhabitants of China might be distributed, and travellers in half a century would scarcely per- ceive a difference in those statistical and moral wastes. At home, if we have one Ireland we have two Canadas (to say nothing of other pro- mising appendages of our empire) ; and, if these hints of what might be done by way of equalising population and subsistence, be thought specu- lative, look, we say, at an accomplished and matter-of-fact proof, that where any sufficient portion of mankind is duly regarded as one family, they will always find a portion of the one earth we inhabit, abundantly sufficient to maintain them. Look at our children, the United States of North America. We were of one family : some of our children we persecuted for their religion, and th«y went thither; others of them were discontented, or behaved ill at home, and they followed, or were sent after them ; at last a general family quarrel took place between the mother country and these distant establishments, and they have now therefore settled themselves as an independent family. But still neither they nor we can blot out the fact from history (why should either wish to do it ?) that they were and are our children ; and if we could for a moment admit that we were at this time a decayed and exhausted people at home, we should insist that these new and rising states of the west present an indubitable proof that those parts of the earth which Providence has placed under one control are wide enough for one family. Looking at them and ourselves as branches but of one system of public polity, they are multiplying faster than was ever recorded in history, while they are receiving annually large accessions of population from our shores, and those of Europe generally ; and have as yet not explored several thousands of miles of the geographical territory they claim, and are

capable of defending. We might further advert to old and decayed Spain — ready and worthy to perish as a nation, -on one side of the Atlantic, and Mexico, Peiu, Colombia, and the central states of America, her children, on the other : or to Portugal, whence, in point of fact, the king and government have emigrated before the people (and they are not likely to have preferred the worse country) on the right hand and Brasil on the left. If all this has been done, we say, with the earth, in our own time and memory almost, when mankind have been almost universally quarrelling, and much of it in direct connexion with these quarrels, what might not be done if men could learn to agree?

In fact, upon this subject, we must be allowed

to quote an anecdote of the life of the late bishop Watson. Being told of the tendency and ge- neral arguments of a certain celebrated work on the alarming increase of our population : ‘ I laid it down,’ he says, ‘ for even admitting his theory that population has a tendency to increase in particular circumstances beyond the means of subsistence ; as God and nature say, ‘ In- crease,’ it is our clear and indisputable duty not to attempt to stop the one, but TO AUGMENT THE OTHER.’ We contend, therefore, that the history and experience of the last two centuries, go to prove that the resources of mankind, considered as a whole, are unbounded by any calculation we can make, or that is ever likely to become prac- ticable ; or that our duty to our own people, and those of all other countries, as far as we nave power, is not to check population, but to increase the means and happiness of our fellow-men : we cannot check population in the virtuous and ‘ honorable’ method in which God has appointed it to increase, without increasing vice, and with vice, misery. While we cannot earnestly desire and industriously endeavour to promote and economise the means and happiness of mankind, without increasing virtue, teaching and practising religion in its best forms ; leading others, and being led ourselves, from suffering man to a wise and benevolent God.

It will not here be out of place to icview briefly what the modern investigation of the doctrine of population seems to have established.

1 . Then it would appear to be proved by the united evidence of ancient history and recent discovery ; it is forced upon our belief by all that we hear, or read, or see, or feel ; that it is the uniform tendency of population in every known stage of society, from the earliest to the most advanced, to press against the actual or available supply of food.

2. Population, even while it presses against the existing provision of subsistence, lias a uniform tendency to keep within the powers of the soil, if the natural order of things is not counteracted by human neglect or impolicy. Because before the productive powers of any tolerably fertile soil can be nearly exhausted, the people in the regular progress of social com- munities must have become colonial, commercial, manufacturing; must be collected into large towns and cities ; must require soldiers, ma- riners, servants, 8cc. ; in short, must have reached that state of society in which population does riot increase with rapidity.

3. During the alternate progress of popula- tion and subsistence, the pressure of the former by a previous increase of people is necessary to stimulate the community to a further production of food : so that the pressure of population against the means of subsistence, instead of being the cause of most of the miseries of hu- man life, is in well-governed states the cause of all public happiness, industry, and prosperity. The pi essure against subsistence ensures indus- try, industry ensures increase of produce, in- crease of produce again encourages population ; and these alternate oscillations of the balance are calculated not to disjoin, but to unite and strengthen the structure of society. If with this

‘.ast view of the beneficial effects of the principle of population as inherent in our nature, we con- nect the indubitable facts of the large colonies that accrue to all extensively civilised and com- mercial people ; and the existing state and capa- bilities of our own country in this respect, before alluded to, the modern doctrine of population, admitting all its facts with regard to rapid in- crease, stimulates us to gratitude and exertion, not to alarm and despair.

It should stimulate us to avail ourselves of our colonies : to regard the whole territorial dominions of Great Britain and its dependencies as one integral government, one common soil. Let the government so regard it ; and, removing all foreign and inequitable laws in the colonies, and approximating them as much as possible to the institution of the mother country in their entire condition, encourage respectable, and give facilities of removal to poorer emigrants. In fact, so complete an illustration of our views of this important topic is presented in the existing situation of Ireland on the one hand) and our dominions in North America on the other, that we shall content

ourselves in this paper with abridging a luminous statement of the facts on this subject which has lately appeared in the Edinburgh Review.

Ireland then, at this moment (1827), has an alarming portion of its people habitually involved in the most squalid and abject poverty. The witnesses examined by the late committees of the houses of lords and commons on the state of Ire- land, all concur in representing the population as excessive, and the condition of the poor as wretched in the extreme. Above 6,000,000 of peasantry are hutted over the face of the country. Their cabins are not superior, perhaps not equal, to the wigwams of the American Indians ; they are destitute of chimneys, and of any thing that can be called furniture ; many families are with- out either beds or bed-clothes; the children, generally in rags, are often absolutely naked ; and, whenever the potatoe crop becomes even in a slight degree deficient, which is found to be the case once every five or six years, the scourge of famine and disease is felt in every corner of the country ! Mr. Maurice Fitzgerald, M. P., in- formed the committee on the Employment of the Irish Poor, that ‘ he had known the peasantry of Kerry quit their houses in search of employment, offering to work for the merest subsistence that could be obtained, for two-pence a day, in short for any thing that would purchase food enough to keep them alive for the next twenty-four hours.’ Mr. Tighe mentions, that ‘ the number of persons in Ireland supported by charity is quite incon- ceivable ; they must be supported either by charity, or by pillage and plunder ; to the want of employment I attribute every thing that afflicts and disgraces the country.’ (Report p. 158.) ‘ In the part of the country (Cork) with which I am best acquainted,’ says Mr. O’Dris- choll, ‘ the condition of the people is the very worst that can possibly be ; nothing can be worse than the condition of the lower classes of laborers, and the farmeis are not much better. The land is overpeopled and exhausted.’ (Report on the State of Ireland, p. Sao”1 Dr. Rogan, a nhysician

of eminence, employed by government to report on the state of disease in the north of Ireland, states, in his valuable work on the Fever in Ulster, that ‘throughout the extensive counties of Tyrone, Donegall, and Derry, the population is only limited by the difficulty of procuring food. Owing to the universal adoption of the cottier system, and to the custom of dividing farms among sons at the death of the father, the labor- ing classes are infinitely more numerous than are required for the purposes of industry. Under these circumstances, they are engaged in a con- stant struggle for the bare necessaries of life, arid never enjoy its comforts,’ (p. 8). And, not un- necessarily to multiply references, we shall only further subjoin the following extract

from the evi- dence of Dr. Doyle, the catholic bishop of Leigh- lin. ‘The population is immediately increased, as every one must perceive, by improvident marriages ; but those marriages themselves, in my opinion, result in a great measure from the ex- treme poverty of the people ; for that poverty has paralyzed their energies ; it has prevented them from taking such an interest in creating a respecta- ble situation for themselves in life, as menpossess- ed of some property always feel; for those wretched people say their state cannot be worse when mar- ried than before, and hence they go together. Their depression throws them together, like savages in a wood. It is a frightful state of so- ciety ; and, when it is considered, it fills me with so much pain and horror, that I have frequently prayed to God, if it were his will, rather to take me out of life than to leave me to witness such evils.’ (Report, p. 208).

Statements to the same effect might be pro- duced from other quarters : but the obvious and pressing question is, What is to become of the wretches who are thus situated ? They can ob- tain no employment in the towns, which are al- ready gorged with unemployed inhabitants : and it is therefore quite evident, that if they are not carried to some other country, or in some way provided for, the landlords will either not be able to continue the system they have begun, and the reign of pauperism and degradation will in conse- quence be perpetuated, or the ejected paupers will transport themselves to Great Britain, and lay the foundations of the same wretchedness here that is now universal in their own country. It is thus clear, hat, in whatever point of view this subject may be considered, it is of paramount importance to the people of Britain. But we need not reason hypothetically on the subject. The process of equalisation has already com menced. ‘ We believe that it is not too much to say,’ observes the Edinburgh Review, No. 89, ‘that at this moment from a fourth to a third part of the laborers in the west of Scotland and the west of England consist of Irishmen. The latter have almost entirely supplanted the Scotch and English laborers in all those departments in which strength is of moˆe importance than skill; and they are rapidly gaining on them in the others. The consequence is, that a double injury is in- flicted upon the native population of Britain. In the first place, their wages are reduced by the competition of the Irish ; and, in the second place, their opinions with respect to what is necen

sary for their comfortable and decent subsistence, are lowered by the contaminating influence of ex- ample, and by familiar intercourse with those who are content to vegetate in tilth and misery. Pn»- viously to the increased facilities of conveyance af- forded by means of steam navigation, the expense of the passage from Ireland to Britain, trifling as it was even then, formed a serious obstacle to the influx of Irish poor. But this expense has now been reduced to almost nothing ; and it consists with our knowledge, that thousands of poor crea- tures have been landed from the steam-packets at Liverpool and Greenock within these two years, the cost of whose conveyance from Ireland did not exceed from 4d. to 6d. each !'

The member for Glasgow, Mr. Campbell, in- formed the committee of the house of commons, that be had good reason to think, from the re- ports of well-informed gentlemen, that there are at present not less than 40,000 Irish established in Glasgow and its immediate vicinity. And the gentlemen of Lanarkshire have, in a report on the state of the county, which they transmitted to government on the 23d of September last, par- ticularly called the attention of ministers to this circumstance. They state, that the want of em- ployment, so severely felt at present by the la- borers and tradesmen of Glasgow, Paisley, &c., has been greatly aggravated by the continued in- flux of Irish paupers, who can bear almost every sort of privation ; and they farther state, that the natives of the country are endeavouring to escape from their competition, by emigrating in great numbers to America, leaving their places to be occupied by the half-famished hordes that are daily pouring in.

Such are the crying evils and calamities which peremptorily call for attention on the one hand. Government has been engaged, we are happy to find, in investigating them patiently : as also in considering the kind of remedy likely to be af- forded by a judicious plan of emigration on the other. The report of a select committee of the ho'-j-e of commons on emigration, which was printed in May last, distinctly recommends as- sisting the transmission of the Irish poor in considerable numbers to our North American dominions : and the Edinburgh Review wisely presses its being attempted on an adequate scale. Mr. Bowman Felton, one of the legislative counsellors of the province of Lower Canada, states that it could support 6,000,000 of wheat consumers: at present it does not contain above 460,000 inhabitants. And though there are dis- advantages incident to extensive districts, from want of markets, and the injudicious mode in which the lots already occupied have been laid out, there can, at all events, be no doubt that, were it necessary, from 300,000 to 400,000 emi- grants might be advantageously located there.

Upper Canada has a noble range of country, which stretches from Lake Simcoe and the rivers Trent and Severn westward, to Lake Huron and the St. Clair River, and southward to Lake Erie, and part of Lake Ontario, with an unoccupied soil of extraordinary fertility, capable of pro- ducing the most luxuriant crops of grain. ‘ The climate,’ says Mr. Bouchette, surveyor-general of Lower Canada, ‘ is so particularly salubrious,

that epidemic diseases, either among men or cattle, are almost entirely unknown. Its in- fluence upon the fertility of the soil is more generally perceptible than it is in Ix)wer Ca- nada, and is supposed to be congenial to vegetation in a much superior degree. The winters are shorter, and not always marked with such rigor as in the latter. The duration of the frost is always accompanied with a fine clear sky, and a dry atmosphere. The spring opens, and the resumption of agricultural labors takes place from six weeks to two months earlier than in the neighbourhood of Quebec. The sum- mer heats rarely prevail to excess, and the au- tumns are usually very friendly to the harvests, and favorable for securing all the late crops.’ The ground on the shores of lake Ontario and lake Erie, as far west as the junction of the Thames with the St. Clair Lake, is laid out in townships, and partly settled. But the popula- tion is so very thin, as not, on an average, to amount to more than sixteen persons to a square mile in the settled townships ; while the fertility of the soil is such, that 120 persons to a square mile would not be a dense population. To the north of the river Thames, along the banks of the river St. Clair, and the shores of lake Huron, round to the river Severn, and from thence to the river that joins Lake Nippissing and Lake Huron, is a boundless extent of country that is entirely unoccupied. The interior of this space has hitherto been but imperfectly explored ; but the banks of the St. Clair and the shores of Lake Huron afford the finest situations for settlements. The soil is, in many places, of the greatest fer- tility, the rivers and lakes teem with fish, and every variety of the best timber is found in the greatest profusion. In 1783 the settlers in Upper Canada were estimated at only 10,000. In 1820 they amounted, according tˆ Mr. Gourlay, to upwards of 134,000; and may now probably amount to nearly 200,000 — a miserably small population for a country that could comfortably support many millions of inhabitants.

In Nova Scotia and New Brunswick the win- ter is more severe than in Upper Canada, and they are a good deal infested with fogs and mists. But their greater proximity to England, and their favorable situation for the fishing business, give them also great advantages.

With regard to the probable expense of this procedure, it has been

ascertained that emigra- tions to Canada were conducted from Glasgow and its neighbourhood in 1821, by a committee of management, at the rate of £2 18s. per head, including provis ons, which were then low. Any number, it is supposed, might be transferred from Scotland to Quebec at the present time for £3 5s. or £3 10s. per head, making ample provision for contingencies. From Ireland it has been calculated that emigrants might be con- veyed to lots of profitable land in Lower Canada from £4 to £4 10s. all expenses included.

On the whole, therefore, we are disposed to think, says the able writer we have already quoted, that the expenses consequent upon the transportation of 1,000,000 of emigrants from Ireland to America, and disposing of them there, might be fairly estimated as under, viz.

EMI

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EMI

Expense of conveying 33,000 em; grants to Cape Breton, and esta- blishing them there (passage oir. and internal conveyance £3 5s. establishment £10 10s.), £13 15s. each .; £454,000

Expense of conveying 133,000 emi- grants to Nova Scotia, &c. (pas- sage, &c. £3 10s., establishment £10 10s.) £14 each . . . 1,862,000

Expense of conveying 350,000 emi- grants to America, and furnishing them with a little money, £H 8s. each ;.»," 2,940,000

Expense of conveying 484,000 emi- grants to Lower and Upper Cana- da and establishing them there (passage, &c. £5 5s., establish- ment £12 10s.), £17 15s. each . ,8,591,000

Total expense of conveying 1 ,000,000 ' of emigrants to America, and esta- blishing them there . . £13,847,000 ' This is undoubtedly a very considerable sum ; but, considerable as it is, we have no hesitation in saying that, though it were twice as great, it would be well and advantageously laid out in securing the object in view. Look at the alter- native under which this question is placed. If, on the one hand, we incur the expense conse- quent upon the prosecution of emigration on the large scale we have proposed, we shall relieve Ireland of the surplus population by which she is now oppressed and beggared, and shall enable means to be adopted for securing her future and rapid improvement, at the same time that we shall protect and secure our

own population from being overrun and degraded by the influx of Irish poor : but if, on the other hand, we refuse

to incur tnis expense, and allow matters to re- main on their present footing, it is idle to talk of the improvement of Ireland : her misery will be rendered perpetual ; and every year thousands of starving wretches will be cast upon our shores, till our people have been sunk, in consequence of their influx, to the same level of hopeless mi- sery as the Irish, and the scourge of universal mendicity has avenged centuries of misgovern- ment !'

We must finally be allowed to quote Mr. Malthus himself as arguing for the necessity of occasional emigration.

' If,' says he, in 1817, ' from a combination of external and internal causes, a very great sti- mulus should be given to the population of a country for ten or twelve years together, and it should then comparatively cease, it is clear that labor will continue flowing into the market, with almost undiminished rapidity, while the means of employing and paying it have been essentially contracted. It is precisely under these circum- stances that emigration is most useful as a tem- porary relief; and it is in these circumstances that Great Britain finds herself placed at present. Though no emigration should take place, the population will by degrees conform itself to the state of the demand for labor ; but the interval must be marked by the most severe distress, the amount of which can scarcely be reduced by any human efforts ; because, though it may be miti- gated at particular periods, and as it affects par- ticular classes, it will be proportionably extended over a larger space of time and a greater number of people. The only real relief in such a case is emigration ; and the subject at the present mo- ment is well worthy the attention of the govern- ment, both as a matter of humanity and policy.' — On Population, vol. ii. pp. 304, 305.

Return of the number of persons who have emigrated from Great Britain and Ireland to the British colonies and to the United States of America, in each year from 1825 to the 31st of December, 1832, distinguishing the ports from which they have sailed, and the countries to which such emigration took place : —

1825.

1826.

1827.

1828.

1829.

1830.

1831.

1832.

To the British Colonies in

America ....

8,741

12,818

12,648

12,084

13,307

30,574

58,067

66,339

To the Cape of Good Hope

114

116

114

135

197

204

114

196

To the Australian Colonies

485

903

715

1,056

2,016

1,242

1,561

3,733

To the United States

5,551

7,063

14,526

12,8,7

15,678

24,887

23,418

32.872

Total ....

14,891

20,900

28,003

26,092

31,198 56,007

83,160

103,140

EM IMS, ancient inhabitants of the land of Canaan beyond Jordan, towards the Dead Sea; who were defeated by Chedorlaomer and his allies. Moses tells us (Gen. xiv. 5) that they were beaten in Shaveh Kirjathaim; which was in the country of Sihon conquered from the Moabites. Josh. xiii. 19 — 21. The Emims were a warlike people, of a gigantic stature, and very numerous. The Moabites cut off most of .them, and incorporated with the rest, when they seized their country. Deut. ii. 10, 11.

EM'INENCE, n. s. . Fr. eminent ; Italian,

EM'INENCY, ˆSpan. and Port, emi-

KM'INENT, adj. Snente ; Lat.emtncns,from

EM'INENTLY, adv. 'e out, and maneo ; Gr.

fitvw, to stand. Loftiness of place, or station ;

conspicuousness : eminence is also a title applied

particularly to the Romish cardinals.

Thou hast built unto thec an eminent place.

Ezekiel,

These two were men of eminency, of learning as well as piety. Stillin? fleet.

EMI 2

Censure is the tax a man pays to the public for being eminent. Swift.

First let the Kennel be the huntsman's care,

Upon some little eminence erect,

And fronting to the ruddy dawn. SomenUle.

Whosoever shall look heedfully upon those who are eminent for their riches, will not think their condition such as that he should hazard his quiet, and much leas his virtue, to obtain it. Johnson.

I was once told by a great master that no man ever excelled in painting, who was eminently curious about pencils and colours. Id,

As his own eminence was founded upon the power of the church of Rome, he was a zealous defender of that superstition. Robertson. History of Scotland.

There is no one particular that I know of wherein self-knowledge more eminently consists, than it does in this. Mason.

The road to eminence and power from obscure con- dition, ought not to be made too easy, nor a thing too much of course. If rare merit be the rarest of all rare things, it ought to pass through some sort of pro- bation. The temple of honour ought to be seated on an eminence. If it be open through virtue, let it be remembered too, that virtue is never tried but by some difficulty and some struggle. Burke.

Strange, that such folly, as lifts bloated man To eminence fit only for a god, Should ever drivel out of human lips, Even in the cradled weakness of the world !

Cowper.

Ye cherub train, that brought him on his way, O leave him not 'midst tumult and dismay ; Fur now youth's eminence he gains : But what a weary length of lingering toil remains !

Beattie.

EvncEjiCE, an honorary titte. The decree of pope Urban VII., appointing that the cardinals should be addressed by this title is dated January 10th, 1630. They then laid aside the titles of iUustrissimi, and reverendissimi, which they had Lome before. The ci-devant grand master of Malta was likewise addressed under the quality of eminence. Popes John VIII., and Gregory VII., ?ave this title to the kings of France. The emperors have likewise borne it.

I'.MIIl, a title of dignity among the Turks, signifying a prince. This title was first given to the caliphs ; but, when they assumed the title of sultans, that of emir remained to their children ; as that of Caesar among the Romans. At length the title was awarded to all who were descended from Mahomet by his daughter Fatimah, and who wear the green turban instead of the white. The Turks also call the viziers, bashaws, or governors of provinces, by this title.

EMIT, v. a. * Lat. emitto, from e forth and

EM’ISSARY, \mitto; Gr. /«0tuj; Chald. ˆBD

Eitis’siox. > to sen(j. To send forth, issue

or give out ; eject : an emissary is one sent forth ;

also in a technical sense one that emits or sends

out.

Tickling causeth laughter : the cause may be the emission of the spirits, and so of the breath by a flight /rcm titillation. Bacon.

Clifford, an emissary and spy of the king’s, fled ovi:r into Flanders with his privity.

Bacon’s Henry VII. You sh..!l neither rat nor sleep’, So, nur foiili your window peep,

With your emissary eye, To fetch in the forms go by.

Ben Jonson’s Undent.

Populosity naturally requireth transmigration and emission of colonies. Browne’s Vulgar Errours.

Cover them with glasses ; but upon all warm and benign emissions of the sun, and sweet showers, give them air. Evelyn.

Affection, in the state of innocence, was happily pitched upon its right object ; it flamed up in direct fervours of devotion to God, and in collateral emis- sions of charity to its neighbour. South.

Pay sacred reverence to Apollo’s song, Lest wrathful, the far-shooting god emit His fatal arrows. Prior.

These baths continually emit a manifest and very sensible heat; nay. some of them, at some times, send forth an actual and visible flame.

Woodward’s Natural History.

The soil, being fruitful and rich, emits steams, consisting of volatile and active parts.

Arbuthnot on Air.

Wherever there are emissaries, there are absor- bent vessels in the skin ; and, by the absorbent vessels, mercury will pass into the blood.

Id. On Aliments.

That a citation be valid, it ought to be decreed and emitted by the judge's authority, and at the instance of the party. Ayliffe.

The Jesuits send over emissaries, with instructions to personate themselves members of the several sects among us. Swift.

In some lime-stones the living animals seem to have been buried as well as their shells during some great convulsion of nature ; these shells contain a black coaly substance within them, in others some phlogiston or volatile alkali from the bodies of the dead animals remains mixed with the stone, which is then called liver-stons as it emits a sulphurous smell on being struck. Darwin.

Water in descending down elevated situations, if the outlet for it below is not sufficient for its emission, acts with a force equal to the height of the column, as is seen in an experimental machine called the philosophi- cal bellaws, in which a few pints of water are mado to raise many hundred pounds. Id,

EMLYN (Thomas), a Unitarian minister, •born at Stamford in Lincolnshire, in 1663. After receiving a preparatory education, he became chaplain to the countess of Donegal, a dissenter, whom he accompanied to Ireland. In 1683 he returned to England, and was chosen minister of a congregation at Lowestoff. In 1691 he re- moved to Dublin, at the invitation of Mr. Boyce, to be his assistant ; but venturing to preach Arian doctrines the Dublin synod suspended him from the ministry; on which he wrote a book entitled, An humble Enquiry into the Scripture Account of Jesus Christ. For this, a prosecution was instituted against him, and, the jury having found him guilty of blasphemy, he was sentenced to pay a fine of £1000 and to suffer one year's im- prisonment. The fine was afterwards commuted for £70, but he remained two years in confine- ment. After his release he went to London, where he officiated to a small congregation for a few years. He died in 1743. Besides the above work, he wrote, 1. Tracts on Socinianism; 2. Vindication of the Worship of the Lord Jesus Christ, on Unitarian principles, 8vo. ; 3. The supreme Deity of God the Father demonstrated;

EMMET.

4. A Treatise on Baptism ; 5. Inquiry into the original authority of 1 John v. 7, &c.

EMMA, daughter of Richard II., duke of Normandy, and mother of Edward the Confessor, king of England. She was first married to Ethelred, who was obliged to go to Normandy with his sons Alfred and Edward, upon the in- vasion of the kingdom by the Danes. After his death she married Canute. See ENGLAND. During the reign of her son, the earl of Kent accused her of an improper intercourse with her relation, the bishop of Winchester, on which, to prove her innocence, she is said to have walked barefoot over burning ploughshares, without being hurt.

EMMERICH, a neat town of Prussia, situated in a fruitful plain on the right bank of the Rhine. Population 4000. Five miles north-east of Cleves.

EM'MET, n. s. Sax. aemette; Belg. emte ; Teut. ameise, from the Sax. verb ameran to pro- vide. Another name for the ant. See ANT.

EMMET (Thomas Addis), an eminent Irish lawyer and patriot, was born in the city of Cork, in Ireland, in 1765. He was placed at the uni- versity of Dublin, where he obtained an optimd, was designed for the profession of medicine, and pursued his medical studies at Edinburgh. The death of his elder brother, a member of the Irish bar, induced him to pass to the study of the law. He went to London, read two years in the Temple, and attended the courts at Westminster. On his return to Dublin he commenced practice, and soon obtained distinction and business. The ce- lebrated Curran was one of his circuit and term companions. Being of an ardent character, and enthusiastically Irish, he early imbibed an anti- pathy against British connexion. When the so- cieties of united Irishmen were revived in the year 1795, Emmet joined the association, and soon became a leader. Their object was revolution, and an independent government for Ireland. Emmet acted as one of the grand executive committee of the societies, who consisted of at least 500,000 men. March 12, 1798, he was arrested, and committed to prison at Dublin, as a conspirator, by the vice- regal government, along with Oliver Bond, doctor Macneven, and other chiefs of the disaffected party. In July, after a severe confinement, an interview took place beetween Emmet and lord Castlereagh, at Dublin castle, and it was agreed that he and the other state prisoners should be permitted to go to the United States, as soon as they had disclosed their plans of revolution, and the projected alliance between the united Irish- men and France. These disclosures were made in a memoir, delivered August 4, but without the confession of any names,

which were inflexibly refused by the writers. They were, soon after, examined in person before the secret committees of both houses of the Irish parliament. Instead, however, of being sent to the United States, Em- met and nineteen more were, early in 1 799, landed in Scotland, and consigned to fort George, a fortress in the county of Nairn. Here they were liberally treated, but their detention lasted three years. At the expiration of that period, the list of pardons arrived, including the name of every prisoner except Emmet. The governor of the

fortress released him, notwithstanding, taking all the responsibility. Emmet, and his exemplary wife, who had shared unremittingly his imprison- ment, both in Ireland and Scotland, were landed at Cuxhaven from a British frigate, spent the winter of 1802 in Brussels, and that of 1803 in Paris. In October, 1804, they sailed from Bor- deaux for the United States, and arrived in New York on the llth of the next month. Emmet, then about forty years of age, at first hesitated between the professions of the law and medicine; but his friends determined him to undertake the former. George Clinton, then governor of the state of New York, induced him to abandon his original plan of settling in Ohio, and to remain in the city of New York. He was admitted to the bar ot once, by special dispensation, and reached the first ranks of the profession in a short time, by indefatigable industry and fervid eloquence. In the course of a few years he rivalled in business and fame the most eminent of the American lawyers. Occa- sionally the ardour of his temperament and the vivacity of his recollections betrayed him into party politics, but his general career and charac- ter were those of a laborious, able, and most suc- cessful pleader, an energetic and florid orator, and a courteous gentleman. In 1812 he was ap- pointed to the office of attorney-general of the state of New York. His death took place in the 63rd year of his age, in a remarkable way, Nov. 14,1827, while attending the trial of an important cause at New York, in the circuit court of the United States, he was seized with an apoplectic fit, which put an end to his existence the following night. A deserved tribute of public respect was paid to his memory. During his imprisonment at fort George, Emmet wrote an Essay towards a History of Ireland, which was printed at New York in the year 1807.

EMMIUS (Ubbo), a learned professor, born at Gretha, in East Friesland in 1547, and chosen rector of the college of Norden in 1579; from which place he was ejected in 1587, for refusing to subscribe the Confession of Augsburg. In 1588 he was made rector of the college of Leer ; and when the city of Groningen confe- derated with the United Provinces, the magis- trates appointed him rector of that college : which employment he filled with the highest re- putation for nearly

twenty years.' The college being erected into a university, he was the first rector. He wrote Vetus Graecia illustrata, 3 vols. ; Decades Rerum Frisicarum ; and many other valuable works. He died in 1625.

EMOL'LIENT, n. s. & adj.) Yr.emollir; Lat.

EMOLLI'TION, n. s. ji emollire, from r,

expletive, and mullis ; Gr. /jaXaicoc soft, from the verb paXaaab) ; Heb. ybo to sooth. That which softens, supples or soothes certain parts or solids of the body ; the act of softening or suppling.

EMOL'UMENT. Fr. emolument ; Lat. emolu- mentum, from molo to grind ; emolument origi- nally signifying the grist gained by the miller for grinding corn, &c. : and hence profit, advantage, remuneration generally.

EMOTION, n. s. Fr. emotion, from Latin emoveo, emotus, e and moveo to move, rouse, ex- cite. Emotion is vehemence, or its consequence, disturbance of mind.

The first great sub-division, then, which I would form of the internal class, is, into our intellectual •tales of mind, and our emotion*. The latter of these classes comprehends all, or nearly all, the mental states, which have been classed by others under the head of active powers. Dr. T. Brown.

And when winds are at war with the ocean, As the breasts I believed in with me,

If their billows excite an emotion

It is that they bear me from thee. Byron.

EMPALE', v.a. Fr. empaler, a compound of em and pale. To enclose, fence, or fortify, with pales ; also to pierce with a pale or stake.

Round about her work she did empale With a fair border wrought of sundry flowers.

Spenser.

Keep yourselves in breath, And when I have the bloody Hector found, Empale him with your weapons round about.

Shakspeare.

All that dwell near enemies empale villages, to save themselves from surprise. Raleigh's Etsays.

They have empaled within a zodiack The free-born sun, and keep twelve signs awake To watch his steps ; the goat and crab controul And fright him back. Donne.

The English empaled themselves with their pikes, and therewith bare off their enemies. Hayward.

Impenetrable, empaled with circling fire, Yet unconsumed. Milton's Paradise Lost.

Who can bear this, resolve to be empaled ? His skin flead off, and roasted yet alive ?

Southerns .

Let them each be broken on the rack ; Then, with what life remains, empaled and left To writhe at leisure round the bloody stake.

Addiion.

Nay, I don't believe they will be contented with hanging ; they talk of empaling, or breaking on the wheel. Arbuthnot.

EMPALEMENT, from in and palus, Lat. a stake, an ancient barbarous punishment, which consisted in thrusting a stake up the fundament. It is mentioned by Juvenal. It was often inflicted under Nero, and continues to be so in Turkey, and in Arabia.

EMPALEMENT OF A FLOWER, the same with calyx.

EM'PANNEL, v.a. & n.s. From the Fr. panne, a piece of parchment on which the names of persons summoned as jurors are written. To summon or form a jury : as a noun it has been used for the list or parchment itself; but panel is the more usual word in modern times.

I shall not need to empannel a jury of moralists or divines, every man's own breast sufficiently instruct- ing him. Government of the Tongue.

EM PA’RLANCE, n. s. From Fr. purler, sig- nifieth, in law, says Cowell, a desire or petition in court of a day to pause what is best to do : and it is sometimes used for the conference of a jury in the cause committed to them : in a general sense it means parley.

Talus forth issuing from the tent,

Unto the wall his way did fearlesse take, To weeten what that trumpit’s sounding ment, VVhpr • tliat same damzell loudly him bespake, And oliuwud that with his lord she would emparlance make. Speiuci’. Faerie Qucenc

EMPAS’SION, v. a. a or en, and pas-

EMPAS’SIONATE, adj. Jsion. To move or fill with passion : strongly affected or moved.

With the near touch thereof in tender heart, The Briton prince was sore cmpassionate. Spenter. Unto my eyes strange shows presented were,

Picturing that which I in mind embraced,

That yet those sights empusiion me full near. Id. So, standing, moving, or to height upgrown,

The tempter, all empastioned, thus btgan. Milton.

EMPEDOCLES, a celebrated philosopher and poet, born at Agrigentum, in Sicily. He followed the Pythagorean philosophy, and ad- mitted the metempsychosis. He constantly appeared with a crown of gold on his head. Yet Aristotle says, that he was a great lover of liberty, extremely averse to state and command, and that he even refused a kingdom that was offered him. His principal work was a Treatise, in verse, on the Nature and Principles of Things. Aristotle, Lucretius, and the ancients, make the most magnificent eulogiums on his poetry and eloquence. He taught rhetoric ; and often alle- viated the anxieties of his mind, as well as the pains of his body, with music. It is reported, that his curiosity to visit the flames of the crater of ./ Etna proved fatal to him. Some maintain that he wished it to be believed that he was a god ; and that his death might be unknown he threw himself into the crater and perished in the flames. His expectations, however, were frustrated ; and the volcano, by throwing up one of his sandals, discovered to the world that Em- pedocles had perished by fire. Others report that he lived to an extreme old age ; and that he was drowned in the sea about A.A.C. 440.

EMPE’OPLE, v. a. From em and people. To form into a people or community.

He wondered much, and ‘gan enquire What statety building durst so high extend Her lofty towers unto the starry sphere, And what unknown nation there empeopled were ?

Spenser.

EM’PEROR, n.s.-v Fr. empereur ; Span. EM’PERESS, or / and Port, emperador; Ital. EM’PRESS, j > and Lat. imperator, from

EM’PERY, i impero, to command, i. e.

EM’PJRE. Jin and paro,’ to make

ready or prepare, the first command given to the Roman soldiers previous to marching. — Adams. A high monarchical title. Emperess and em- press are its feminines : empery and empire, the authority possessed, or dominion governed by an emperor.

But the iewis crieden and seiden, if thou delyver- ist this thon art not the empouris frend.

Wiclif. Jon. 19.

Like to an eagle in his kingly pride, Soring through his wide empire of the aire, To weather his broad sailes.

Spenser. Faerie Queena. Sextus Pompeius

Rath given the dare to Caesar, and commands The empire of the sea.

Shakspeare. Antony and Cleopatra* Take on you the charge And kingly government of this your ‘ar.i Not as protector, steward, substitute,

But as successively from blood to blood, Your right of birth, your empery, your own. Id.

Charles the empcrour, Under pretence to see the queen his aunt,

Makes visitation. Id. Henry VIII.

Lavinia will I make my emperess, Rome's royal mistress, mistress of my heart. Id. Long, long, may you on earth our empress reign, Ere you in heaven a glorious angel stand. Davies.

Let your nimble feet

Tread subtile circles, that may always meet In point to him ; and figures, to express The grace of him, and bis great emperess,

Ben Jonso*.

They are the moths and scarabs of a state, The bane of empires, and the dregs of courts, Who to endear themselves to an employment, Care not whose fame they blast. Id.

Empress of this fair world, resplendent Eve.

Milton.

A nation extended over vast tracts of land, and numbers of people, arrives in time at the ancient name of kingdom, or modem of empire. Temple.

The emperor one day took up a pencil which fell from th<5 hand of Titian, who was then drawing his picture; and, upon the compliment which Titian made him on that occasion, he said, Titian deserves to be served by Caesar. Dryden.

Yet, London, emprets of the northern clime, By an high fate thou greatly didst expire. Id.

Assert, ye fair ones, who in judgment sit,

Your ancient empire over love and wit. Howe.

To give pain is the tyranny, to make happy, the

true empire of beauty. Steele.

Wisdom, thou sayest, from heaven received her

birth ;

Her beams transmitted to the subject earth : Yet this great emprest of the human soul, Does only with imagined power controul, If restless

passion, by rebellious sway, Compels the weak usurper to obey. Prior.

What are riches, empire, power, But larger means to gratify the will ? The steps on which we tread, to rise and reach Our wish. Congreve.

The pride of nature would as soon admit Competitors in empire as in wit ; Onward they rush at Fame's imperious call, And less than greatest would not be at all.

Churchill.

I am provoked at the contempt which most histo- rians show for humanity in general : one would think by them that the whole human species consisted but of about 150 people, called and digni&ed (commonly very undeservedly too) by the titles of emperors, kings, popes, generals, and ministers. Chesterfield.

An emperor in his night-cap would not meet with half the respect of an emperor with a crown.

Goldsmith.

It became the common belief, that a prince would arise at that time in Judea, who would change the face of the world, and extend his empire from one end of the earth to the other. Robertson's Sermons.

Mourn him, thou Sun, great source of light! Mourn, empress of the silent night ! And you, ye twinkling starnies bright,

My Matthew mourn ! For through your orbs he's ta'en his flight,

Ne'er to return. ' Burnt.

Taking in the whole view of life, it is more safe to live under the jurisdiction of severe but steady reason, thaa ander the empire of indulgent, but capricious passion. Knrhe.

Folly such as yours,

Graced with a sword, and worthier of a fan, Has made, what enemies could ne'er have done, Our arch of empire, steadfast but for you, A mutilated structure, soon to fall. Cowper.

Whence Reason's empire o'er the world presides. And man from brute, and man from man divides ; Compares and measures by imagined lines Ellipses, circles, tangents, angles, sines. Darwin.

Fallen are the trophies of Assyrian power, And Persia's proud dominion is no more ; Yea, though to both superior far in fame, Thine empire, Latium, is an empty name.

Beattie.

The great extent of the Roman empire was one chief ca>\se of that despotism which came at last to prevail in 't. Id.

EMPEROR, among the ancient Romans, signified a general of an army, who, for some , extraordinary success, had been complimented with this appellation. Thus Augustus, having obtained no less than twenty victories, was as often saluted with the title emperor ; and Titus was denominated emperor by his army after the reduction of Jerusalem. Afterwards, it came to denominate an absolute monarch or supreme commander of an empire. In this sense Julius Caesar was called emperor : the same title descended with the dignity to Octa- vius, Tiberius, and Caligula ; and afterwards it became elective. The title emperor does not, and cannot, add any thing to the rights of sove- reignty: its effect has only been to give precedence and pre-eminence above other sovereigns. It has been sometimes disputed, if emperors have the power of disposing of the regal title. They have certainly sometimes taken upon them to erect kingdoms : thus Bohemia and Poland are said to have been raised to that dignity : thus also, the emperor Charles II. in 877, gave Pro- vence to Boson, putting the diadem on his head, arid decreeing him to be called king, ut more priscorum imperatorum regibus videretur do- minari. And the emperor Leopold erected ducal Prussia into a kingdom in favor of the elector of Brandenburg; though several of the kings of Europe refused to acknowledge him in that capacity, until the treaty of Utrecht in 1712. In the east, the title and quality of emperor are more frequent than among us : thus, the sove- reign princes of China, Japan, Mogul, Persia, &c., have been called emperors. In 1723 the czar of Muscovy assumed the title of emperor of all the Russias, and procured himself to be recognized as such by the princes and states of Europe. In the west, the title was long re- strained to the emperors of Germany. The first who bore it was Charlemagne, who had it con- ferred upon him by pope Leo III. having indeed had all the power before. The imperial prero- gatives were formerly very extensive. At the close of the Saxon race, A. D. 1 024, they exer- cised the right of conferring ecclesiastical bene- fices in Germany ; of receiving the revenues of them during a vacancy ; of succeeding to the effects of intestate ecclesiastics; of confirming or annulling the elections of the popes-; of assembling councils, and of appointing them to decide concerning the affairs of the church; of conferring the title of king on their vassals ; of

granting vacant fiefs ; of receiving the revenues of the empire ; of governing Italy as its proper sovereigns ; of erecting free cities, and of esta- blishing fairs in them; of assembling the diets of the empire, and of fixing the time of their duration ; of coining money, and conferring the same privilege on the states of the empire ; and of administering both high and low justice •within the territories of the different states : but in the year 1437 they were reduced to the right of conferring all dignities and titles, except the privilege of being a state of the empire ; of preces primaries, or of appointing once during their reign a dignitary in each chapter or reli- gious house; of granting dispensations with respect to the age of majority ; of erecting cities, and conferring the privilege of coining money; of calling the meetings of the diet and presiding in them. To which some have added. 1. That all the princes and states cf Germany were obliged to do them homage, and swear fidelity to them. 2. That they or their generals had a right to command the forces of all the princes of the empire, when united together, &c. The kings of France were anciently also called em- perors, at the time when they reigned with their sons, whom they associated to the crown. Thus Hugh Capet, having associated his son Robert, took the title of emperor, Robert that of king ; under which titles they are mentioned in the History of the Council of Rheims, by Gerbert, &c. King Robert is also called emperor of the French by Helgau of Fleury. Lewis the Gross, upon associating his son, did the same. The kings of England had likewise anciently an im- perial title, as appears from a charter of king Edgar : Eeo Edgarus Anglorum basileus, omni- umque regum iusularum oceani quae Britanniam circumjacent, &c. imperator et dommus. — Napoleon Buonaparte, the late emperor of the French, when he assumed that title, in 1804, not only exercised the ancient imperial prerogative of making kings, but obliged the head of the German empire to resign his dignity as Emperor of Germany. See DIET, ELECTOR, and NAPO- LEON.

EMPETRUM, berry-bearing heath. A genus of the triandria order, and dioecia class of plants. Male CAL. tripartite : COR. tripetalous ; stamina long ; the styles nine : BERRY nine-seeded. Two species, of which the E. nigrum, which bears the crow crake berr es, is a native of Britain. It grows wild on boggy heaths and mountains. Children sometimes eat the berries ; but, when taken in too great quantity, they are apt to occasion a headache. Grouse feed upon them. When boiled

with alum, they afford a dark purple dye. Goats are not fond of it. Cows, sheep, and horses, refuse it.

EMPH'ASIS, n. t. ~\ Fr. emphase; Span. EMPHAT'IC, adj. (and Port, emphasi ;

EMPHAT'ICAI., I Ital. enfasi , Lat. COT-

EM PHAT'ICALLY, adv. Jp/iusis; Gr. tp

Oh, that brave Caesar' — l,i choaked with such another emphasis.

Shak*pturc.

What is delivered of the incurvity of dolphins, must be taken emphatically, not really, but in appear- ance, when they leap above water, and suddenly shoot down again. Bruwne.

It is commonly granted, that emphatical colours are light itself, modified by refractions. Boyle on Col,

Emphasis not so much regards the time as a cer- tain grandeur, whereby some letter, syllable, word, or sentence is rendered more remarkable than the rest, by a more vigorous pronunciation, and a longer stay upon it. Holder.

Cellars and granaries in vain we fill.

With all the bounteous summer's store ; If the mind thirst and hunger still,

The poor rich man 's emphatically poor.

Cotrley.

How emphatically and divinely docs every wor 1 proclaim the truth that I have been speaking of !

South.

These questions have force and emphasis, if they be understood of the antediluvian earth.

Bnmet't Theory.

Where he endeavours to dissuade from carnivorous appetites, how emphatical is his reasoning ! Garth.

In proper and emphatick terms thou didst paint the blazing comet's fiery tail. Arbuthnot. John Bull.

Are they not his by a peculiar right, And by an emphasis of interest his, Whose eye they fill with tears of holy joy, Whose heart with praise, and whose exalted mind With worthy thoughts of that unwearied love, That planned, and built, and still upholds a world So clothed with beauty for rebellious man ?

Cowper

Thus vowed she at the hallowed shrine, Though rashly, though without design- And altered not, for modest dread, The last empJiatic word, to wed ; Which but to hear, much more to speak, With blushes paints a virgin's cheek. Sheridan.

EMPHYSE'MA, n. s. \ Gr. t/^wcrij/ta, from

EMPHYSEM'ATOUS, adj. $ ipfyvoau), to inflate. A humor of the body; bloated; stuffed.

Emphysema is a light puffy humor, easily yielding to the pressure of the finger, arising again in the instant you take it off. Wiseman.

The signs of a gangrene are these : the infiani- mation loses its redness, and becomes duskish and livid ; the tenseness of the skin goes off, and feels to the touch flabby or emphysematous ; and vesications, filled with ichor of different colours, spread all over it.

Sharp's Surgery.

EMPHYSEMA is a windy tumor, generally occasioned by a fracture of the ribs, and formed by the air insinuating itself, by a small wound, between the skin and muscles, into the substance of the cellular or adipose membrane, spreading itself afterwards up to the neck, head, belly, and other parts, much after the manner in which butchers blow up their veal. See MEDI- CINE.

EMPIE'RCE, v. a. From pierce. To pierce into; to enter into by violent appulse.

The weapon bright. Taking advantage of his open jaw,

Ran through his mouth with so importune might, T: at oeep etnpierced his darksome hollow maw.

Spenser.

EMPI'GHT,p-e£. and part. From to pight, 01 pitch. See PITCH. Set; fixt; fastened

But he was wary, and ere it empight [n the meant mark, advanced his shield atween.

Spenser.

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EMPIRE, in political geography, a large extent of land, under the jurisdiction or government of an emperor. See EMPEROR. 1. In ancient history we read of four great empires, viz. 1. That of the Assyrians, Chaldeans, and Baby- lonians ; 2. of the Medes and Persians ; 3. of the Greeks; and 4. of the Romans. The first subsisted from the time of Nimrod, who founded it A.M. 1800, according to the computation of Usher, to Sardanapalus their last king, in 3257, and consequently lasted above 1450 years. The empire of the Medcs commenced under Arbaces, A.M. 3257 ; was united to that of the Babylo- nians and Persians under Cyrus, A.M. 3468, and ended with the death of Darius Codomannus in 3674. The Grecian empire lasted only during the reign of Alexander the Great, beginning in A.M. 3674, and terminating with the death of this conqueror in 3681, when his conquests were divided among his captains. The Roman em- pire commenced with Julius Caesar, when he was made perpetual dictator, in A. U.C. 708, A.M. 3956, and A. D. 48. The seat of the em- pire was removed to Byzantium by Constantine, A.D. 334, and the east and west were still con- sidered as united under the title of the Roman empire though mostly governed by two different series of emperors, till the total overthrow of the latter under Augustulus, by the Goths, A.D. 476. The Western empire was not revived even in name, till the year 800, when Charles the Great, of France, was proclaimed emperor by the Ro- mans. From this epoch the east and west formed two separate empires ; that of the east, governed by Greek emperors, commenced A.D. 802 : and, being gradually weakened, terminated under Constantine Palaeologus in 1453. The western empire was afterwards known by the appellation of the ejnpire, or German empire. Antiquaries distinguish between the medals of the upper and lower or base empire. The curi- ous only value those of the upper

empire, which commences with Caesar or Augustus, and ends A.D. 260. The lower empire comprehends nearly 1200 years, reckoning down to the destruction of Constantinople in 1453. They usually distinguish two ages, or periods of the lower empire: the first beginning where the upper ends, viz/ with Aurelian, and ending with Anastasius, including 200 years ; the second be- ginning with Anastasius, and ending with the PalaBologi, which includes 1000 years.

EMPIRE, EASTERN. See CONSTANTINOPLE.

EMPIRE, WESTERN. See GERMANY, and ROME.

EMPIR'IC, n. s. } Fr. emplrique; Ital. KMPIR'ICISM, f Span, and Port, empi-

EMPIR'ICAL, adj. trico; from the Gr. e/t- EMPIR'ICALLY, adv. ˆ Tretpiicoc, from e/timpta, experience. See the article subjoined.

The name of Hippocrates was more effectual to persuade such men as Galen, than to move a silly empirick. Hooker.

The most sovereign prescription in Galen is but empirick to this preservative. Shakspeare.

And are manned

With ten empirics, in their chamber Lying for the spirit of amber. Ben Jonson,

By fire

Of sooty coal, the empirick alchymist Can turn, or holds it possible to turn, Metals of drossiest ore to perfect gold. Milton. '/hat every plant might receive a name, according ato the diseases it curcth, was the wish of Para celsus; a way more likely to multiply empirickt than herbalists. Browne.

We shall empirically and sensibly deduct the causes of blackness from originals, by which we generally observe things denigrated.

Browne's Vulgar Errours. The' illiterate writer, empirick-like applies To each disease unsafe chance remedies ; The learned in school, when science first began, Studies with care the anatomy of man. Dry den.

Such an aversion and contempt for all manner of innovators, as physicians are apt to have for empirlcks, or lawyers for pettifoggers.

Swift.

No ; we waited, till the morbid strength of our boulimia for theit physic had exhausted the well- stored dispensary of their empiricism. It is impossible to guess at the term to which our forbearance would have extended. Burke.

EMPIRICS, in medical history, are a sect of physicians, who contended that all hypotheticil reasoning respecting the operations of the animal economy was useless, and that observation and experience alone were the foundation of the art of medicine.

The origin of this sect is variously stated by different writers of antiquity. The empiric phy- sicians themselves seem to have considered Acron of Agrigentum, a contemporary and rival of Empedocles, in the seventieth olympiad, as their founder ; and Pliny has asserted the same opinion, m his sketch of the history of medicine. The best historians refer the establishment of this sect to about the 123rd olympiad; but they are not agreed as to the individual who first pro- mulgated the doctrine of empiricism. Galen and others have ascribed the origin of the sect to Philinus of Cos, a disciple of Herophilus, to whom he was said to be indebted for the first hints of his system. Celsus, however, asserts, that Serapion was the first who maintained this doctrine. He was born, and practised medicine, at Alexandria, and appears to have been con- temporary with Philinus. Observation, record, and the substitution of similar means, were the three fundamental resources of the art of medi- cine, according to the empirics ; and these were denominated by Glaucias, and others, the tripod of medicine (rpiTrac rj/c iarpucTJe). Compared with this species of investigation, how futile are the speculations, misnamed philosophy in the schools, relative to elements, and essences, which had no existence, except in the imagination of the disputants. For it must be observed, that the ancient empirics did not disregard the die • tates of reason and reflection ; they only depre- cated the application of them to circumstances out of the reach of the senses, and beyond the scope of experiment.

EMPIS, in zoology, a genus of insects belong- ing to the order diptera ; of which the characters are these : the proboscis is of a horny substnnce, bivalve, reflexed under the head and breast, and longer than the thorax.

EMP

BMP

EMPLASTER, v. a. & n. s. » Fr. emptdtre ;

EMPLAS’TIC, adj. i Span, emplas-

tro ; Lat. emplastrum ; Gr. «/«fl-\o(Trpo»«, from c/i*Xaff

All emplatters, applied to the breast, ought to have a hole for the nipples. Wiseman’s Stagery.

Resin, by its emplastick quality, mixed with oil of roses, perfects the concoction. Id.

Emplastick applications are not sufficient to defend a wound from the air. Arbuthnot on Air.

They must be cut out to the quick, and the sores emplattered with tar. Mortimer’t Husbandry.

EMPLE’AD, v. a. From em and plead. To indict ; to prefer a charge against ; to ac- cuse.

To terrify and torture them, their tyrannous mas- ters did often emplead, arrest, cast them into prison, and thereby consume them to worse than nothing.

Hayward

\ntiquity thought thunder the immediate voice o» Jupiter, and empleaded them of impiety that referred it to natural casualties. Glanville’s Scepsis.

Since none the living villains dare emplead,

Arraign them in the persons of the dead. Dryden.

EMPLEURUM, in botany, a genus of the moncecia tetrandria class and order. Male CAL. four-cleft : COR. none : stigma cylindric : CAPS. opening at the side: SEED one, arilled. There is one species, a shrub of the Cape.

EMPLOY’, v. a & n. s.~\ Fr. emploier ; Sp.

EM PLOY* ABLE, adj. {emplear ; from Lat.

EMPLOY’ER, n. t. i implere, to fill (the

EMPLOY'MENT. ' time). To occupy ;

to engage in business or work ; used with in, about, upon, and less properly with to ; applied both to time, persons, and things : employ, as a substantive, signifies business, public or private ; and is synonymous with employment : employ- able, fit to be, or that may be employed.

Jonathan and Jahaziah were employed about this in .tier. Ezra, x. 15.

The money was employed to the making of gallies.

2 Mac. Call not your stocks for me ; I serve the king,

On whose employment I was sent to you.

Shakspeare. King Lear.

ITiose profitable agents, whose industry either fitteth them abroad for public employment, or employeth them, after due maturity, in the fit service of the com- monwealth. Bp. Hall.

Their principal learning was applied to the course of the stars, and the rest was employed in displaying the brave exploits of their princes. Temple.

for thrice, at least, in compass of the year,

Thy vim-yard must employ the sturdy steer

To turn I he glebe. Dryden's Virgil.

To study nature will thy time employ ;

Knowledge and innocence are perfect joy.

Dryden.

The labor of those who felled and framed the timber employed about the plough must be charged on labor. Locke. ,

The proper business of the understanding is not that, which men always employ it to. Id.

Labor in the beginning gave a right of property, wherever any one was pleased to employ it upon what was common. /

Lest animosities should obstruct' the course of justice, 'f one of their own number had the distribu-

tion of it, they have always a foreigner for this em- plot/. Addison on Italy.

This is a day in which the thoughts of our coun- trymen ought to be employed on serious subjects.

Addisoris Freeholder. On the happy change, the boy Employed his wonder and his joy. Prior.

The cleanly cheese-press she could never turn ; Her awkward fist did ne'er employ the churn. Gay.

The honours and the burdens of great posts and employs were joined together. Atterbury.

If any station, any employment upon earth be ho- nourable, theirs was. Id.

Leaders on each side, instead of intending the public weal, have their hearts wholly set to get or 10 keep employments. Swift.

Present to grasp, and future still to find,

The whole employ of body and of mind. Pope.

That man drives a great trade, and is owner or employer of much shipping, and continues and in- creases in trade and shipping. Child on Trade.

The objections made against the doctrine of the chymists, seem employable against this hypothesis

Boyle.

Jesus Christ is furnished with superiour powers to the angels, because he is employed in superiour works, and appointed to be the sovereign Lord of all the visible and invisible worlds. Watts.

His high station in the church placed him in the way of great civil employments; his abilities were equal to the greatest of these ; nor did he reckon any of them to be above his merit.

Robertson. History of Scotland.

Time, with all its celerity, moves slowly on to him whose whole employment is to watch its flight.

Johnson. The prospect, such as might enchant despair,

He views it not, or sees no beauty there ;

With aching heart, and discontented looks,

Returns at noon to billiards or to books,

But feels, while grasping at his faded joys,

A secret thirst of his renounced employs. Cowper.

EMPOI'SON, v. a. ˆ Fr. empoisonner ; from EMPOI'SONER, n. s. >em and POISON, which EMPOI'SONMEXT. j see. To kill or destroy by poison.

Mushrooms cause the incubus, or mare in the stomach, therefore the surfeit of them may suffocate and empoison. Bacon.

He is vehemently suspected to have been the pot- toner of his wife thereby to make vacant his bed.

Bacon's Henry VII.

Leaving no means Tin attempted of destroying his son, that wic>ed servant of his undertook to empoison him. Sidney.

Even in the peaceful rural vale, Truth, weeping, tells the mournful tale, How pampered Luxury, Flattery by her side, The parasite empoit(/ning her ear, With all the servile wretches in the rear, Looks o'er proud property, extended wide.

Burnt.

EMPORIjE, a double city of the Hither Spain near the Pyrenees : separated by a wall ; one part occupied by the Greeks of Phocaea, whence originally are the Massilienses ; the other by na- tive Spaniards, to whom was added by Augustus a Roman colony. It is now called AMPCRIAS; which see.

EMPOR'IUM, n. s. Lat. emporium; Gr t/trropiov ; s/iTTopoc, is a merchant, from iv and Trtipw, to pass over ; to travel. A place of con- course for merchants ; a mart for trade.

And while this tamed emporium we prepare, The British ocean shall such triumphs boast,

That those who now disdain our trade to share, Shall rob like pirates on our wealthy coast. Dryden.

I take the prosperous estate of this great emporium to b”. owing to those instances of charity. Atterbury.

EMPORIUM, in ancient geography, the name of two cities in Italy, near Placentia ; the one well fortified, and guarded by a strong garrison, at which Hannibal met a repulse : the other Hannibal took and plundered. They are now thought to be Ponte Nura, in Placentia.

EMPO V’ERISH, v. a. } Fr. empauvre ; Ital.

EMPOV’ERISIIER, n. s. > empoverire ; Span.

EMPOV’ERISHMENT. 3 and Port, empobrecer ; from Fr. pauvre, which from Lat. pauper, poor. To make poor ; depauperate : an empoverisher is one who makes poor, wastes, or deteriorates.

Being paid as it is, now some, and then some, it is no great burden unto her, nor any great empoverish- ment to her coffers. Spenser. State of Ireland.

Your’s sounds aloud, and tells us you excel No less in courage than in singing well ; While, unconcerned, you let your country know, They have empoverished themselves, not you.

Waller.

Since they might talk better as they lay together, they empoverished their clothes to enrich their bed, which, for that night, might well scorn the shrine of Venus. Sidney.

For sense of honour, if it empoverisheth a man, it is, in his esteem, neither honour nor sense. South.

Fresh roses bring,

To strow my bed, ‘till the empoverished Spring Confess her want. Prior.

All appeals for justice, or appellations for favour or preferment to another country, are so many grievous impoverishments. Swift’s View of Ireland.

They destroy the weeds and fit the land for after- crops, being an improver, and not an empoverisher of land. Mortimer.

EMPO’WER, v. a. From em and power. You are empowered, when you please, to give the final decision of wit. Dryden’t Juvenal, Dedication. The government shall be empowered to grant com- missions to all Protestants whatsoever. Swift.

Does not the same power that enables them to heal, empower them to destroy? Baker on Learning.

The duchess of Munster obtained a patent, empow- ering him [Mr. Wood] to coin 180,000 pounds of halfpence and farthings for the kingdom of Ireland. Johnson. Life of Swift.

[James I.] obtained an act by which he was em- powered to summon such as had obtained crown lands during the three last reigns, to produce the rights by which they held them.

Robertson. History of Scotland. EMTRISE, n. s. Fr. emprise ; an abbrevia- tion of enterprise. Hazardous or chivalrous undertaking.

Therefore whylome t” knights of great emprise The charge of justice given on trust,

That they might execute her judgments wise, And with their might beat down licentious lust, Which proudly did impugn her sentence iu»t.

Spemer. Faerie Queene. Noble minds, of yore, allied were In brave pursuit of chivalrous emprise. Id,

A double conquest mutt you make, If you atchieve renown by this emprise. Fairfax.

Fierce faces threatening wars ; Giants of mighty bone, and bold emprise. Milton.

Thus, ‘till the sun had travelled half the skies, Ambushed we lie, and

wait the bold empriie.

Pope.

EMPTION, n.s. Old Fr. emption; Lat. emptio ; from the verb emo, emptus, to buy. The act of purchasing; or a purchase made.

There is a dispute among the lawyers, whether Glaucus his exchanging his golden armour with the brazen one of Tydides, was emption or commutation. Arbuthnot on Coins.

EMPTY, v. a. & n. & adj. ˆ Sax. rembrij;, EMP'TIER, n. s. > aembnan,to make

EMP'TINEESS. J void. To ex-

haust ; evacuate ; deprive of contents ; to be- come exhausted or void : an emptier is one who makes any thing or place void ; emptiness the state of vacuity.

The pit was empty, there was no water in it.

Genesis.

Seven empty ears blasted with the east wind. Id, Israel is an empty vine. Hosea.

The emptier* have emptied them out, and married their vine-branches. Nahum, ii. 2.

They beat him, and sent him away empty.

Matthew.

Heres hore aren shad overtimeliche upon my hed : and the slacke skinne tremblethe of mine empted bodie. Colvile.

Himself he frees by secret means unseen, His shackles empty left, himself escaped clean.

Spenser.

I did never know so full a voice issue from so empty a heart ; but the saying is true, the empty vessel makes the greatest sound. Shakspeare.

Art thou thus boldened, man, by thy distress, That in civility thou seem'st so empty'! Id

Boundless intemperance, In nature is a tyranny : it hath boen The untimely emptying of the happy throne, And fall of many kings. Shaktpeare. Macbeth.

His coffers sound

With hollow poverty and emptinets. Shakspeare. How comes it that so many worthy and wise men depend upon so many unworthy and empty headed fools ! Raleigh.

Foure things are grievously empty : a head without brains, a wit without judgment, a heart without ho- nesty, and a purse without money. Bp. Earle.

He alledges that satyrs carried platters full of fruit in their hands; but if they had been empty handed, had they been ever the larger satyrs ? Dryden.

Yet all the little that I got, I spent ; And still returned as empty as I went. Id.

Nor could another in your room have been, Except an emptiness had come between. Id.

Yet this insignificancy in their words, when they come to reason concerning either their tenets or inte- rest, manifestly fills their discourse with abundance of empty unintelligible noise and jargon, especially in moral matters. Locke.

Where cities stood,

Well fenced, and numerous, desolation reigns, And emptiness ; dismayed, unfed unhoused. The widow and the orphan stroll. Philip*.

If you have two vessels to fill, and you empty one to fill the other, you gain nothing by that ; there still remains one vessel empty. Burnet.

His answer is a handsome way of exposing an empty, trifling, pretending pedant ; the wit lively, the satyr courtly and severe, Feltun.

The ordinary air in which we live and respire, is of so thin a composition, that 10,149 parts of its di-

mensions are mere emptinets and nothing ; and the romf.ining one only, material and real substance.

Bentley.

Mr. Boyle has showed, that air may be rarefied above 10,000 times in vessels of glass ; and the heavens are much emptier of air than any vacuum we can make below. Newton.

I have always observed that your empty vessels sound loudest. Swift.

Form the judgment about the worth or emptiness of things here, according as they are or are not of use, in relation to what is to come after. Atterbury.

Pleased in the silent shade with empty praise.

Pope.

Eternal smiles his emptinets betray, As shallow streams run dimpling all the way. Id. The Euxine Sea is conveniently situated for trade, by the communication it has both with Asia and Eu- rope, and the great navigable rivers that empty themselves into it. Arbuthnot.

Sheep are often blind by fulness of blood : cut their tails, and empty them of their blood. Mortimer.

Since pulpits fail, and sounding-boards reflect Most part an empty ineffectual sound, What chance that I, to fame so little known, Nor conversant with men or manners much, Should speak to purpose, or with better hope, Crack the satiric thong ? Cowper.

Hope sets the stamp of vanity on all That men have deemed substantial since the fall, Yet has the wondrous virtue to educe From emptiness itself a real use. Id.

Blaze round each frosted rill, or stagnant wave. And charm the Naiad from her silent cave ; Where, shrined in ice, like Niobe she mourns, And clasps with hoary arms her empty urns.

Darwin.

Their sceptre broken, and their sword in rust, Have yielded to the stranger : empty halls, Thin streets, and foreign aspects, such as must Too oft remind her who and what enthrals, Have flung a desolate

cloud o’er Venice’ lovely

walls. Byron.

EMPU’RPLE, v. a. From em and purple. To make of a purple color; to discolor with purple.

Now in loose garlands, thick thrown off, the bright Pavement, that like a sea of jasper shone, Empurpled with celestial roses smiled. MictGK.

The deep, Empurpled ran, with gushing gore distained.

Philipi.

EMPU’ZZLE, v. a. From em and puzzle. To perplex ; to put to a stand.

It hath empuxzled the enquiries of others to appre- hend, and enforced them unto strange conceptions to make out. Browne.

EMPYE’MA, n. s. Fr. empyeme; Gr. tp- irvnpa, from tv, within, and irviav, pus. A collec- tion of purulent matter in any part of the body, but more particularly in the cavity of the chest. See MEDICINE, Index.

An empyema, or a collection of purulent matter in the breast, if not suddenly cured, doth undoubtedly impel the patient into a phthisical consumption.

Harris.

There is likewise a consumption from an empyema, after an inflammation of the lungs. Arbuthnot.

EMPY’REAN, «. s. & adj. } Fr. empyrce ;

EMPY’RF.AL, adj. Mtal., Span, and

JPort.

EMPY’REUM, n.s.

cielo

pireo; Lat. emporium, from Gr. luirtapoc, i. e. tv and TTvp, fire. The highest heaven, supoosed to consist of pure fire.

Under his burning wheel The stedfast empyrean shook throughout, All

but the throne itself of God.

Milton. Paradise Lett,

NW went forth the morn, Such as in highest heaven, arrayed in gola Empyreal. Id.

And fix our engines, and our ensigns, Upon the fixt stars' vast dimensions, • And prove if they are other suns, As some have held opinions, Or windows in the empyreum, From whence those bright effluvia come Like flames of fire. Butler,

But empyreal forms, howe'er in sight Gashed and dismembered easily unite.

Tichell.

Go, soar with Plato to the empyreal sphere, To the first good, first perfect, and first fair.

Pope.

How nitrous gas from iron ingots driven Drinks with red lips the purest breath of heaven ; How, while conferva from its tender hair Gives in bright bubbles empyrean air, The crystal floods phlogistic ores calcine, And the pure ether marries with the mine.

Darwin.

EMPYRE'UM, n. s. } Fr. empyreme ; EMPYREUMAT'IC, adv. > Greek, enTrvpevpa, EMPYREUMAT'ICAL, j from the verb tp-

Trrpaw, to burn. The burning or boiling of oils,

or other matters that give an offensive smell.

Empyreumatic is having this burnt, oily smell or

taste.

Empyreumatical oils, distilled by strong fires in re- torts, may be brought to emulate essential oils drawn in limhicks. Boyle.

It is so far from admitting an empyreum, that it burns clear away without leaving any cinders, or a dust about it. Harvey.

The hopes of an elixir insensibly evaporate, and vanish nuo air, or

leave in the recipient a foul em- pyreum. Decay of Piety.

EMPY'ROSIS, 7i. 5. Gr. £ˆ7rvpow. Confla- gration ; general fire.

The former opinion that held these cataclysms and empyroses universal, was such as held that it put a total consummation unto things in this lower world, especially that of conflagration. Hale.

EMRUN, or EMBRUN, an ancient town of France, the chief place of a district, in the depart- ment of the Alps : it is situated on the Durance, in the midst of fertile vallies, and is chiefly remarkable for its cathedral. Inhabitants about

3000.

EMS, a considerable river of Westphalia, which rises in the principality of Paderborn, and flows through Munster and East Friesland. It finally discharges itself by two arms into the bay of Dollart in the North Sea, a little below Embden. It has a mouth of noble breadth, arid the tide, rising for a number of miles, renders it an important medium of transport.

EMS, a celebrated Watering-place in the duchy The apostle exhorts the Corinthians to an holy and

it Nassau, on the river Lahn. The environs are general emulation of the charity of the Macedonians,

beautiful. As early as 1583 it was used as a in contributing freely to the relief of the poor saints

watering-place. The mineral waters at Ems are at Jerusalem. . South.

warm — from 70° to 118° Fahr. ; they are of the Aristotle allows that some emulation may be good,

saline class, containing large quantities of car- an(1 mav be f°uud in some good men ; yet envy he

bonic acid gas, and are used with much effect in utterlv condemns, as wicked in itself, and only to be

chronic catarrhs ulmonar comlaints dis found in wicked mind8′ SPratt-

chronic catarrhs, pulmonary complaints, diseases of the stomach, arising from phlegm and acidity, gout, and some diseases of the urinary vessels. vour ul)on a meeting which owes its original to a

promise myself you will look with an eye of fa-

.

See Die Heilquellen zu Ems, Coblentz. 1821 , by Vogler. Near Ems is a grotto, similar to the Grotto del Cane, near Naples, the vapours from which cause asphyxia. About 50,000 bottles of

tual emulation among its members, who shall show the most profound respect for your paper. Spectator.

Good Howard, emulous of the Grecian art. Prior.

It is likewise attended with a delirium, fury, and

se aspyxa. out ,000 ottles of ------- ‘ ,”••” “,”•”

the water of Ems are sent away annually *” ‘nvoluntary lauShter’ the convulsion emulating this

¥}»/I/TTT TI • — rr v motion. Arbuthnot.

EM’ULE, v. a. EM’ULATE, v. a. & EMULA’TION, n. s. EM’ULATIVE, adj. EM’ULATOR, n. s. EM’ULOUS, adj. EM’ULOUSLY, adv.

French, emulir ; Span, emular ; It. | emulare ; Latin, •eemulor, from Gr. afii\a, a contest. To rival ; strive with for excel-

lence; hence to imitate or equal generally. Shakspeare uses the adjective emulate for ambi- tious. Emulative is disposed, or tending to, rivalry.

Mine emulation

Hath not that honour in’t it had ; for where I thought to crush him in an equal force, True sword to sword, I’ll pitch at him some way, Or wrath or craft may get him. Id.

What madness rules in brainsick men, When for so slight and frivolous a cause, Such factious emulations shall arise ! Id.

Whose glorious deeds, but in the fields of late, Made emulous missions ‘mongst the gods themselves, And drave great Mars to faction. Id.

In superiours it quencheth jealousy, and layeth their competitors and emulators asleep. Bacon.

I would have

Him emulate you : ‘tis no shame to follow The better precedent. Ben Jonson’s Catiline. What the Gaul or Moor could not effect, Nor emulous Carthage, with their length of spite, Shall be the work of one. Id.

Nothing will more try a man’s grace, than ques- tions of emulation. Bp. Hall. Contemplations. Whether some secret and emulatory brawls passed

motion. Arbuthnot.

What though no weeping loves thy ashes grace, Nor polished marble emulate thy face. Pope.

Each of the rivals courted him with emulation • he knew it to be his interest to keep the balance even, and to restrain both, by not joining entirely wiih either of them. Robertson. History of Scotland.

Rhyme, except some religious pieces that are in print, I had given up ; but meeting with Ferguson’s Scottish Poems, I strung anew my wildly-sounding lyre with emulating vigour. Burns.

Peace (if insensibility may claim A right to the meek honours of her name) To men of pedigree ; their noble race, Emulous always of the nearest place To any throne, except the throne of grace.

Cowper.

True emulation, especially in young and ingenuous minds, is a noble principle ; I have known the hap- piest effects produced by it ; I never knew it to be productive of any vife. In all public schools, it is, or ought to be, carefully cherished. Beattic.

SNEER. Why, ‘tis certain, that unnecessarily to mortify the vanity of any writer is a cruelty which mere dulness never can deserve ; but where a base and personal majignity usurps the place of literary emulation, the aggressor deserves neither quarter nor pity.

EMULGE>. a.} EMUL'GENT, adj. ><

Sheridan. Fr. emulgente ; Latin,

O ‘ ‘

j — t/- i emulgeo, emulgens ; e and

EMUI/SION, n. s. j emulgeo; Gr. a/wXyw. To milk out. Emulgent is milking or draining out. Emulsion, a form of medicine, by bruising-oily seeds and kernels, and drawing out their

CTJMHUOT suuie Beurei auu einuiuiury urawis [jassuu j -• «.i***-i, «, • *“t>

between Zipporah and Miriam, or whether now that substances with some liquor, that thereby bc-

Jethro and his family were joined with Israel, &c. the exceptions were frivolous. Id.

She is in perpetual diffidence, or actual enmity with her, but always emulous and suspectful of her. Howel's Vocal Forest.

As long as the world lasts, and honour and virtue and industry have reputation in the world, there will

comes milky.

It doth furnish the left emulgent with one vein.

Browne.

Through the emulgent branches the blood is brought to the kidneys, and is there freed of its serum.

, Chcyne.

The aliment is dissolved by an operation

j — Kiui tinmriu is uissuivcii uy

>e ambition and emulation and appetite in the best bling that of making an emulsion; in which operation

and most accomplished men who live in it.

Clarendon.

By strength

They measure all, of other excellence Not emulous, nor care who them excels.

Milton.

So tempt they him, and emulously vie To bribe a voice, that empires would not buy.

Granvilk.

Those fair ideas to my aid I'll call, And emulate my great original. Dryden.

A noble emulation heats your breast, And your own fame now robs you of your rest : Good actions still must be maintained with good, Ai bodies nourished with resembling food. Id

the oily parts of nuts and seeds, being gently ground in a marble mortar, are gradually mixed with some watery liquor, or dissolved into a sweet, thick, turbid, milky liquor, resembling the chyle in an animal body.

Arbuthnot.

EMUNCTORIES, n. s. Fr. emunctoire ; Ital. emuntorio; Lat. emunctoria ; from e and mungo ; Gr. pvˆm, jtvyw. To wipe the nose. Those parts of the body where any thing excre- rnentitious is separated and collected for eject- ment.

There ar<ˆ receptacles in the body of man, and emuncturiet to drain them of superfluous choler.

More

Superfluous matter dcflows from the body under iheir proper emunctories. Browne's Vulgar Errourt.

Discoursing of the lungs, I shew that they are the grand emunctory of the body ; that the main end of respiration is continually to discharge and expel an excrementitious fluid out of the mass of blood.

Woodward's Natural History.

The regimen in quinsies, which proceed from an obstruction of the glands, must be to use such warm liquors as relax those glands, such as, by stimulating, open the emunctoriet to secrete the humour.

A rbuthnot.

EMUNCTORIES, in anatomy, are chiefly the kidneys, bladder, and most of the glands.

EN, an inseparable particle, says Dr. Johnson, borrowed by us from the French, and by the French from the Latin in. Many words are uncer- tainly written with en or in. In many words en is changed into em for more easy pronunciation. Ben Jonson had previously noticed that ' the letters i and e have such nearness in our tongue as oftentimes to interchange places.' En abounds in our older writers. Mr. Todd has very well suggested, that the uncertainty with respect to en or in might be removed by due at- tention to the etymology of words. ' Thus, as entire is admitted to be derived from the French zntier, the form of intire should not be observed ; thus enquire, as being from the French enquirer, seems preferable to inquire, from the Latin ira- quiro ; and enclose, from the French enclos, to the Latin inclusus; while, on the other hand, include is directly from the Latin include.'

ENA'BLE, v. a. From en and ABLE, which see. To empower ; make able, or competent. If thou wouldst vouchsafe to overspread

Me with the shadow of thy gentle wing,

I should enabled be thy acts to sing. Spenser.

This purifying of wit, this enriching of memory enabling of judgment, and enlarging of conceit, which commonly we call learning; under what name soever it be directed, the final end is, to lead and draw us to as high perfection as our degenerate souls (made worse by their clay lodgings), can be capable of.

Sir P. Sidney.

The improvement of the understanding is for two ends : first, our own increase of knowledge ; secondly, to enable us to deliver and make out

that knowledge to others. Locke.

His great friendship with God might enable him, and his compassion might incline him. Atterbury.

He points out to him the way of life, strengthens his weakness, restores his lapses, and enable* him to walk and persevere in it. Rogeri.

The authority of an umpire, which had been un- warily bestowed upon him, and from which the Scots dreaded no dangerous consequences, enabled him to execute his schemes with greater facility.

Robertson, History of Scotland.

ENACT, v. a.) From en and ACT, which

ENACTOR, n. s. $ see. To act; perform ; ac- complish ; establish by legal acts ; represent by action. Shakspeare uses enactors (fol. edit.) in the last sense.

There are dreadful punishments enacted against thieves Sir T. More.

In true balancing of justice, it is flat wrong to pu- nish the thought or purpose of any before it be enacted. Spenier.

Valiant Talbot, above human thought, Enacted wonders with his sword and lance.

Shakspeare

It is enacted in the laws of Venice, If it be proved against an alien. He seeks the life of any citizen, The party ‘gainst the which he doth contriv*. Shall seize on half his goods Id.

I did enact Hector. Id.

The violence of either grief or joy, Their own enactors with themselves destroy. Id. The senate were authors of all counsels in the state ; and what was by them consulted and agreed, was proposed to the people, by whom it was enacted or commanded. Temple.

He acts also contrary to his trust, when he either employs the force, treasure, and offices of the society, to corrupt the representatives, and gain them to his purposes : or employs them to bring in such, who have promised beforehand what to vote, and what to enact. Locke.

The great author of our nature, and enactor of this law of good and evil, is highly dishonoured.

A tterbwry.

Next, while on pausing step the masked Mimes Enact the triumphs of forgotten times, Conceal from vulgar throngs the mystic truth, Or charm with Wisdom's lore the initiate youth,

Darwin.

' Hath God indeed given appetites to man, And stored the earth so plenteously with means. To gratify the hunger of his wish ; And doth he reprobate, and will he damn, The use of his own bounty ? making first So frail a kind, and then enacting laws So strict, that less than perfect must despair? '

Cowper.

ENA'LLAGE, n. i. Gr. Ij/oXXayij. A figure in grammar, whereby some change is made Oi the common modes of speech, as when one mood or tense of a verb is put for another.

The grammarians too have a kind of enallage, whereby one part of speech, or one accident of a word, is put for another. Such is the change of a pronoun, as when a possessive is put for a relative, e. gr. suus for ejus ; or of a verb, as when one mood or tense is put for another. Dr. A Rees.

ENA'MBUSH, v. a. From ambush. To hide in ambush ; to hide with hostile intention. They went within a vale, close to a flood, whose

stream

Used to give all their cattle drink, they there enam- bushed them. Chapman's Iliad.

ENAM'EL,v. u.,v.n. &n. s. } From en and

ENAM'ELLER, n. s. >AMEL, which

EMAM'ELLING. j see. French

emailler ; Span, and Port, esmultar. To inlay ;

fix colors by fire ; variegate with colors. As a

neuter verb, to practice inlaying or enamelling

As a substantive, it means the substance or work

on which this art is performed. See below

Let dainty wits cry on the sisters niue, That, bravely masked, their fancies may be told : Or, Pindar's apes, flaunt they in phrases fine, Enamelling with pyed flowers their thoughts of gold.

Sir P. Sidney.

Thy graces and good works my creatures be ; I planted knowledge and life's tree in thee ; Which, oh ! shall strangers taste ? must I, alas ! Frame and enamel plate, and drink in glass ?

Donna

Down from her eyes welled the pearles round, Upon the bright enamel of her face ;

Such honey drops on springing flowers are found. When Phoebus holds the crimson morn in chare.

Fair/a,

ENAMELLING.

Higher than that wall, a circling row Of goodliest trees, loaden with the fairest fruit, Blossoms, and fruits at once of golden hue, Appeared with gay enamelled colours mixed.

Milton.

Though it were foolish to colour or enamel upon the glasses of telescopes, yet to gild the tubes of them may render them more acceptable to the users, without lessening the clearness of the object.

Boyle.

There are various sorts of coloured glasses, pastes, enamels, and factitious gems. Woodward on Fossils.

See Pan with flocks, with fruits Pomona crowned ; Here blushing Flora paints the enamelled ground.

Pope.

His ears and legs,

Fleaked here and there, in gay enamelled pride, Rival the speckled pard. Somerville.

These calces, therefore, when mixed with the enamel flux, are melted in crucibles, once or oftener, and the deep coloured opaque glass, thence resulting, is ground into impalpable power, and used for enamel.

Darwin.

Ah, why should the glittering stream

Reflect thus delusive the sceue ? Ah, why does a rosy-tinged beam

Thus vainly enamel the green 1 Sheridan. The substance of the enamel is a fine white opaque glass, the material of which will be presently men- tioned. This is bought in lump by the enamellen, and is first broken dowu with a hammer, then ground to a sufficiently fine powder, with some water in an agate mortar. Dr. M. Good.

On most enamellingt, and especially on this, it is necessary also to counter-enamei the under concave surface of the copper-plate, to prevent its being drawn out of its true shape. Id.

ENAMELLING, in painting and the fine arts, is the art of variegating with colors laid upon or into another body. Also a mode of painting, with vitrified colors, on gold, silver, copper, &c., and of melting it at the fire, or of making divers curious works in it at a lamp. This art is of so great antiquity as to render it difficult or impossible to trace it to its origin. It was evidently practised by the Egyptians, from the remains that have been observed on the ornamented envelopes of mummies. From Egypt it passed into Greece, and afterwards into Rome and its provinces, whence it was pro- bably introduced into this country, as various Roman antiquities have been dug up in different parts of Britain, particularly in the Barrows, in which enamels have formed portions of the orna- ments. The following are instances in proof of the antiquity of the art in this country: a jewel found at Athelney in Somersetshire, and pre- served at Oxford, bears witness to it, and, by an inscription upon it, there is no doubt it was made by order of Alfred. The gold cup given by king John to the corporation of Lynn in NorfolK, proves that the art was known among the Normans, as the sides of the cup are em- bellished with various figures, whose garments are partly composed of colored enamels. The tomb of Edward the Confessor in Westminster Abbey, built in the reign of

Henry III.,- is orna- mented with enamels ; and a crosier of William of Wykeham, in the time of Edward III., exhibits curious specimens of the application of the art of enamelling.

VOL. VIII

Enamels are verifiable substances, and are usually arranged into three classes, namely, the transparent, the semitransparent, and theopaqu;;. The basis of all Kinds of enamel is a perfect! v transparent and fusible glass, which is rendered either semitransparent or opaque by the admix- ture of metallic oxides. M. Klaproth, some years ago, read to the Royal Academy of Sciences of Berlin a very elaborate paper, the result of much research, ‘ On the pastes, colored glasses, and enamels of the ancients.’ From this we learn that the art of coloring glass seems to be of nearly the same antiquity as the invention of making it, which is proved, not only from writ- ten documents, but likewise by the variously colored glass corals with which several of the Egyptian mummies are decorated. This art supposes the possession of some chemical know- ledge of the metallic oxides, because these are the only substances capable, as far as we now know, of producing such an effect. Still a dif- ficulty occurs : what were the means and pro- cesses employed by the ancients for this purpose .’ as they had no acquaintance with the mineral acids, which at present are usually employed in the preparation of metallic oxides.

It is, however, certain that the art of giving various colors to glass must have obtained a con- siderable degree of perfection, as Pliny mentions the artificial imitation of the carbuncle, which was, at that time, a gem in the highest estimation. During the reign of Augustus, the Roman archi- tects began to make use of colored glass in their Mosaic decorations : thus it is known that an application of glass pastes was resorted to in a villa built by the emperor Tiberius on the island of Capri. Several specimens of this coming into the possession of Klaproth, were subjected, by that able chemist, to a chemical analysis ; and he has detailed a very particular account of the several processes which he performed to ascertain the component parts of the different colored glasses found in the ruins of the above- mentioned villa. His first attempt was upon the antique red glass, of which the color is described as of a lively copper red. The mass was opaque and very bright at the place of fracture ; and, of two hundred grains finely triturated, he found the constituent parts to be,

Grains.

Silex 142

Oxide of lead ... 28 Oxide of copper . . 15 Oxide of iron ... 2 Alumine ... 5

Lime 3

Loss

200

On comparing the external characters of this red glass paste with the cupreous scoriae of a lively brown red, such as is sometimes obtained on melting copper ores ; M. Klaproth imagines that the ancients did not compound the above- mentioned paste directly from its constituent parts, but instead of them employed, per haps, copper scoriae. And he adds, on this

supposition, they had nothing more to do than to select the best colored pieces to fuse and cast them into plates.

In green glass he found the constituent parts the same as in the red, but in different propor- tions. Both receive their color from copper ; and the reason why this metal produces in the one a red, and in the other a green color, de- pends on the different degrees of its oxigenation ; it being an ascertained fact, that copper, in the state of a suboxide, that is, only half saturated with oxygen, produces a reddish enamel, but, when fully saturated with oxygen, the enamel yielded is green.

M. Klaproth next analysed the blue glass paste, in which he found, next to the silex, that the oxide of iron is the most predominating article. He expected to find that the color had been given by cobalt, but could not discover the smallest trace of it, and therefore he infers that its blue color entirely depends on the iron. This excited in him no surprise, knowing that iron, under certain circumstances, \is capable of pro- ducing a blue enamel, as is clearly exhibited by the beautiful blue colored scoriae of iron, which are frequently met with in the highly heated furnaces on smelting iron stones. Our object in referring to these experiments is the fact that the colored glass pastes of the ancients agree, in many respects, with modern enamels.

White enamels are composed by melting the oxide of tin with glass, and adding a small quan- tity of manganese to increase the brilliancy

of the color. The addition of oxide of lead or antimony produces a yellow enamel ; but a more beauti- ful yellow may be obtained from the oxide of silver. Reds are formed by an intermixture of the oxides of gold and iron, that composed of the former being the most beautiful and per- manent. Greens, violets, and blues are formed from the oxides of copper, cobalt, and iron ; and these, when intermixed in different propor- tions, afford a great variety of intermediate colors. Sometimes the oxides are mixed before they are united to the vitreous bases. Such are, accord- ing to this author, the principal ingredients em- ployed in the production of various enamels; but the proportions in which they are used, as well as the degree and continuance of the heat necessary to their perfection, constitute the se- crets of the art. Besides these there are pro- bably other substances occasionally used in the composition of enamels, and it has been asserted that the peculiar quality of the best kinds of Ve- netian enamel is owing to the admixture of a particular substance found on Mount Vesuvius, and ascertained to be thrown up by that volcano.

The principal quality of good enamel, and that which renders it fit for being applied on baked earthenware or on metals, is the facility with which it acquires lustre by a moderate heat, or cherry-red heat, more or less, according to the nature of the enamel, without entering into complete fusion. Enamels applied to earthen- ware and metals possess this quality. They do not enter into complete fusion ; they assume only the state of paste, but of a paste exceedingly firm ; and yet when baked one might saˆ *Jiat they had been completely fused. There a:3two methods

of painting on enamel : on raw or on baked ena- mel. Both these methods are employed, or ma) be employed, for the same object. Solid colors capable of sustaining the fire necessary for baking enamel ground, may be applied in the form of fused enamel on that which is raw, and the artist may afterwards finish with the tender colors. The colors applied on the raw material do not require any flux ; there is one, even, to which silex must be added ; that is, the calx of copper, which gives a very beautiful green : but, when you wish to employ it on the raw material, you must mix with it about two parts of its weight of silex, and bring the mixture into combination by means of heat. You afterwards pulverise the mass you have thus obtained, in order to em- ploy it. To obtain good white enamel, it is of great importance that the lead and tin should be very pure. If these metals contain copper or antimony, as is often the case, the enamel will not be beautiful. Iron is the least hurtful.

Of colored Enamels. — All the colors may be produced by the metallic

oxides. These colors are more or less fused in the fire, according as they adhere with more or less strength to their oxygen. All metals which readily lose their oxygen, cannot endure a great degree of heat, and are unfit for being employed on the raw ma- terials.

PURPLE. — This color is the oxide of gold, which may be prepared different ways, as by precipitating, by means of a muriatic solution of tin, a nitro-muriatic solution of gold much diluted in water. The least quantity possible of the solution of tin will be sufficient to form this precipitate. The solution of tin must be added gradually, until you observe the purple color begin to appear : you then stop, and, having suf- fered the color to be deposited, you put it into an earthen vessel to dry slowly. The different solutions of gold, in whatever manner precipi- tated, provided the gold is precipitated in the state of an oxide, give always a purple color, which will be more beautiful in proportion to the purity of the oxide, but neither the copper or silver with which gold is generally found al- loyed injure this color in a sensible manner : it is changed, however, by iron. The gold pre- cipitate, which gives the most beautiful purple, is certainly fulminating gold, which loses that property when mixed with fluxes. Purple is an abundant color, it is capable of bearing a great deal of flux ; and in a small quantity communi- cates its color to a great deal of matter. It ap- pears that saline fluxes are better suited to it than those in which there are metallic calces. Those, therefore, which have been made with silex, chalk, and borax, or white glass, borax, and a little white oxide of antimony, with a little nitre, as I have already mentioned, ought to be employed with it. Purple will bear from four to twenty parts of flux, and even more, accord- ing to the shade required. Painters in enamel employ generally for purple a flux which they call brilliant white. This flux appears to be a semi-opaque enamel, which has been drawn into tubes, and afterwards blown into a ball at an enameller's lamp. These bulbs are afterwards broken in such a manner, that the flux is found

In small scales, which appear like the fragments of small hollow spheres. Enamel painters mix this flux with a little nitre and borax. This mat- ter, which produces a very good effect, was em- ployed without attempting to decompose it. Jt may be a very fusible common white enamel which has been blown into that form. It is to be remarked, that purple will not bear a strong heat ; and the color is always more beautiful if the precipitate is ground with the flux before

it has become dry.

RED. — We have no metallic oxide capable of giving directly a fused red ; that is to say, we have no metallic calces which, entering into fusion and combining, under the form of tran- sparent glass, with fluxes or glass, give directly a red color. To obtain this color, it must be com- pounded different ways, as follows : — Take two parts, or two parts and a half (you may, how- ever, take only one part) of sulphate of iron and of sulphate of alumine, fuse them together in their water of crystallisation, and take care to mix them well together. Continue to heat them to complete dryness, then increase the fire so as to bring the mixture to a red heat. The last operation must be performed in a reverberating furnace. Keep the mixture red until it has every where assumed a beautiful red color, which you may ascertain by taking out a little of it from time to time, and suffering it to cool in the air. You may then see whether the matter is suffi- ciently red : to judge of this it must be left to cool, because while hot it appears black. The red oxides of iron give a red color ; but this co- lor is exceedingly fugitive ; for, as soon as the oxide of iron enters into fusion, the portion of oxygen, which gives it its red color, leaves it, and it becomes black, yellow, or greenish. To preserve, therefore, the red color of this oxide in the fire, it must be prevented from vitrifying and abandoning its oxygen. I have tried (says M. Clouet) a variety of different substances to give it this fixity, but none of them succeeded except alum. The doses of alum and sulphate of iron may be varied. The more alum you add the paler will be the color. Three parts of alum to one of sulphate of iron give a color which ap- proaches a flesh-color. It is alum also which gives this color the property of becoming fixed at a very strong heat. This color may be em- ployed on raw enamel ; it has much more fixity than the purple, but not so much as the blue of cobalt. It may be washed to carry off the super- fluous saline matter, but it may be employed also without edulcoration ; in that state it is even more fixed and more beautiful. It does not re- quire much flux ; the flux which appeared to me to be best suited to it is composed of alum, mini- um, marine salt, and enamel sand. This flux must be compounded in such a manner as to render it sufficiently fusible for its objects : from two or three parts of it are mixed with the color. In general three parts of flux are used for one of color; but this dose may, and ought to be varied according to the nature of the color and the shade of it required. Red calx of iron alone, when it enters into fusion with glass, gives a color which seems to be black ; but if the color be diluted with a sufficient quantity of glass, it

at last becomes of a transparent yellow. Thus the color really produced by calx of iron com- bined with glass is a yellow color, but

which being accumulated becomes so dark, that it ap- pears black. In the process above given for making the red color, oxide of iron does not fuse ; and this is the essential point ; for, if this color is carried in the fire to vitrification, it be- comes black or yellowish, and disappears if the coat be thin, and the oxide of iron present be only in a small quantity.

YELLOW. — Though yellow may be obtained in a direct manner, compound yellows are pre- ferred because they are more certain in effect. and more easily applied, than the yellow which may be directly obtained from silver. The compound yellows are obtained in consequence of the same principles as the red color of iron. For this purpose we employ metallic oxides, the vitrification of which must be prevented by mix- ing with them other substances, such as refrac- tory earths or metallic oxides difficult to be fused. The metallic calces which form the basis of the yellow colors are generally those of lead ; as minium, the white calx of lead, or litharge, the white calx of antimony, called diaphoretic antimony ; that called crocus metallorum is also employed. This regulus pulverised, and mixed with white oxide, gives likewise a yellow. The following are the different compositions used : one part of the white oxide of antimony, one part of the white oxide of lead, or two or three ; these doses are exceedingly variable ; one part of alum and one of sal-ammoniac. When these matters have been all pulverised and mixed well toge- ther they are put in a vessel over a fire sufficient to sublimate and decompose the sal-ammoniac ; and when the matter has assumed a yellow co- lor the operation is finished. The calces of lead mixed in a small quantity either with silex or alu- mine, also with the pure calx of tin, exceedingly white, gives likewise yellows. One part of the oxide of lead is added to two, three, or four of the other substances above mentioned. In these different compositions for yellow you may use also oxide of iron, either pure or that kind which has been prepared with alum and vitriol of iron ; you will then obtain different shades of yellow. From what has been said, you may vary these compositions of yellow as much as you please. Yellows require so little rlux that one or two parts, in general, to one of the color are sufficient. Saline fluxes are improper for them, and espe- cially those which contain nitre. Tney must be used with fluxes composed of enamel-sand, oxide of lead, and borax, without marine salt. A yellow may be obtained also directly from silver. All thlse mixtures may be varied, and you may try others. For this purpose you may use sulphate of silver, or any oxide of that metal mixed with alumine or silex, or even with both in equal quantities. The whole must be gently heated until the yellow color appears, and the matter is to be employed with the fluxes pointeil out

for yellow. Yellow of silver, like purple, cannot endure a strong heat ; a nitric solution 01 silver may be precipitated by the ammoniacal phosphate of soda, and you will obtain a yellov prec.pitate v.hich may be used to paint in that

color with fluxes, which ought then to be a little harder. Besides the methods above mentioned, the best manner of employing the oxide of silver is, in my opinion, to employ it pure : in that case you do not paint but stain. It will be suffi- cient then to lay a light coating on the place which you wish to stain yellow, and to heat the article gently to give it the color. You must not employ too strong a heat : the degree will easily be found by practice. When the article has been sufficiently heated, you take it from the fire and separate the coating of oxide, which will be found reduced to a regulus. You will then ob- serve the place which it occupied tinged of a beautiful yellow color without thickness. It is chiefly on transparent glass that this process sue ceeds best. Very fine silver filings produce the same effect : but what seemed to succeed best in this case was sulphate of silver well ground up with a little water, that it may be extended very smooth. From what has been said, it may readily be seen that this yellow must not be employed like other colors ; that it must not be applied till the rest have been fused ; for, as it is exceedingly fusible and ready to change, it would be injured by the other colors ; and as the coating of silver, which is reduced, must be removed, the fluxes would fix it, and prevent the possibility of its being afterwards separated. Working on glass is not attended with this inconvenience, because the silver yellow is applied on the opposite side to that on which the other colors are laid.

GREEN. — Green is obtained directly from the oxide of copper. All the oxides of copper are good ; they require little flux, which even must not be too fusible : one part or two of the flux will be sufficient for one oxide. This color agrees with all the fluxes, the saline as well as the metallic, which tends to vary a little the shades. A mixture of yellow and blue is also used to produce greens. Those who paint figures or portraits employ glass composed in this manner ; but those who paint glazed vessels, either earth- enware or porcelain, employ, in general, copper green. Independently of the beautiful green co- lor produced by oxidated copper, it produces also a very beautiful red

color. This beautiful red color produced by copper, is exceeding fugitive. The oxide of copper gives red only when it contains very little oxygen, and approaches near to the state of a regulus.

Notwithstanding the difficulty of employing this oxide for a red color, a method has been found to stain transpa- rent glass with different shades of a very beautiful red color by means of calx of copper. The pro- cess is as follows : you do not employ the calx of copper pure, but add to it calx of iron, which, for that purpose, must not be too much calcined ; you add also a verv small quantity of calx of copper to the mass of glass which you are desirous of tinging. The glass at first must have only a very slight tinge of green, inclining to yellow. When the glass has that color you make it pass to red, and even a very dark red, by mixing with it red tartar in powder, or even tallow. You must mix this matter well in the glass, and it will assume a very dark red color. The glass swells up very much by this addition. Before it is worked it must be suffered to settle, and become compact ; but as soon as it has fully assumed the color it

must be immediately worked, for the color does not remain long, and even often disappears while working ; but it may be restored by heating the glass at the flame of a lamp. It is difficult to make this color well, but when it succeeds it is very beautiful, and has a great deal of splendor. By employing the calx of copper alone, for the processes above mentioned, you will obtain, when you succeed well, a red similar to the most beau- tiful carmine. The calx of iron changes the red into vermilion, according to the quantity added. If we had certain processes for the making of this color, we should obtain all the shades of red from pure red to orange, by using, in different prqpor- tions, the oxide of copper and that of iron. The calx of copper fuses argil more easily than silex : the case is the same with calx of iron. If you fuse two or three parts of argil with one of the oxide of copper, and if the heat be sufficient, you will obtain a very opaque enamel, and of vermi- lion red color. The oxide of copper passes from red to green, through yellow, so that the enamel of copper, which becomes red at a strong heat, may be yellow with a weaker heat. The same effect may be produced by deoxidating copper in different degrees : this will be effected according as the heat is more or less violent. The above composition might, I think, be employed to give a vermilion red color to porcelain. The heat of the porcelain furnace ought to be of sufficient strength to produce 'the proper effect. The calx of iron fused also with argil, in the same propor- tions as the calx of copper, gives a very beautiful black. These porportions may, however, be varied.

BLUE. — Blue is obtained from the oxide of cobalt. It is the most fixed of all colors, and becomes equally beautiful with a weak as with a strong heat. The blue produced by cobalt is more beautiful the purer it is, and the more it is oxidated. Arsenic does not hurt it. The saline fluxes which contain nitre are those best suited to it : you add a little also when you employ that flux which contains a little calcined borax, or glass of borax, though you may employ it also with that flux alone. But the flux which, according to my experiments, gives to cobalt- blue the greatest splendor and beauty is that composed of white glass, which contains no me- tallic calx, of borax, nitre, and diaphoretic anti- mony well washed. When this glass is made for the purpose of being employed as a flux for blue, you may add less of the white oxide of antimony : a sixth of the whole will be sufficient.

VIOLET. — Black calx of manganese, employed with white fluxes, gives a very beautiful violet. By varying the fluxes the shade of the color may also be varied. It is very fixed as long as it re- tains its oxygen. The oxide of manganese may produce d fferent colors ; but for that purpose it will be necessary that we should be able to fix its

oxygen in it in different proportions. How to effect this has, perhaps, never yet been discovered. These are all the colors obtained- from metals. From this it is evident that something still re- mains to be discovered. We do not know what might be produced from the oxides of platina, tungsten, molybdena, and nickel : all these oxides are still to be tried ; each of them must produce a color, and perhaps red, which Is obtained

neither directly nor with facility from any of the metallic substances formerly known and hitherto employed.

Having laid before the English artists the re- sult of M. Clouet's Researches, as they were presented to the French National Institute, of which he was an associate, we add a few general observations taken from those of our own coun- trymen, who have made the subject of enamel- ling their study and employment. The most beautiful and expensive color known in this branch of the art is an exquisitely fine, rich, and purplish tinge, given by the salts and oxides of gold, especially the purple precipitate formed by tin in one form or other, and the nitro- muriate of gold, and. also by fulminating gold. This fine color, however, requires much skill in the artist to be fully brought out. Other and commoner reds are given by the oxides of iron, but this requires the mixture of alumine, or some other substance refractory in the fire ; otherwise what would, under proper circumstances, be a. full red will degenerate into a black.

Yellow is either given by the oxide of silver alone, or by the oxides of lead and antimony, with similar mixtures to those required with iron. The silver is as tender a color as gold, and as readily injured or lost in a high heat. Green is given by the oxide of copper, or it may also be produced by a mixture of yellow colors. Blue is given by cobalt, and this seems the most certain of all enamel colors, and as easy to be managed. Black is produced by a mixture of cobalt and manganese. 'The reader,' says Mr. ' Aikin in his Chemical Dictionary,

ble that the whole may evaporate completely in a moderate heat, and leave no carbonaceous matter in contact with the color when red-not, which might affect its degree of oxidation, and thence the shade of color which it is intended to produce. As the color of some of the vitrified metallic oxides, such as that of gold, will stand only at a moderate heat, while others will beai and even require a higher

temperature to be properly fixed, it forms a great part of the technical skill of the artist to apply different colors in their proper order; fixing first those shades which are produced by the colors that will endure the highest degree of heat. The outline of the design is first traced on the enamel ground, and burnt in ; after which the parts are filled up gradually with repeated burnings to the last and finest touches of the tenderest enamel.'

Those who paint on enamel, on earthenware, porcelain, &c., must regulate the fusibility of the colors by the most tender of those employed, as, for example, the purple. When the degree which is best suited to purple has been found, the other less fusible colors may be so regulated (by additions of flux), when it is necessary to fuse all the colors at the same time, and at the same degree of heat. You may paint also in enamel without flux ; but all the colors do not equally stand the heat which must be employed. If the enamel, however, on which you paint be very fusible, they may all penetrate it. This manner of painting gives no thickness of color ; on the contrary, the colors sink into the enamel at the places where the tints are strongest. To make them penetrate, and give them lustre, a pretty strong fire will be necessary to soften the enamel, and bring it to a state of fusion. This method cannot be practised but on enamel com- posed with sand, which is called enamel-sand, as already mentioned. It may be readily seen, also, that the colors and enamel capable of en- during the greatest heat will be the most solid, and the least liable to be changed by the air.

The following method of filling up engraving on silver with a durable black enamel, is prac- tised in Persia and India : —

They take half an ounce of silver, two ounces and a half of copper, three ounces and a half of lead, twelve ounces of sulphur, two ounces and a half of sal-ammoniac. The metals are melted together, and poured into a crucible, which has been before filled with pulverised sulphur, made into a paste by means of water ; the crucible is then immediately covered, that the sulphur may not take fire, and this regulus is calcined over a smelting-fire, until the superfluous sulphur be burned away. This regulus is then coarsely pounded, and, with a solution of sal-ammoniac, formed into a paste, which is rubbed into the engraving on silver plate. The silver is then wiped clean, and suffered to become so hot under the muffle, that the substance rubbed into the strokes of the engraving melts and adheres to the metal. The silver is afterwards wetted with the solution of sal-ammoniac, and again placed under the muffle till it becomes red-hot. The engraved surface may then be smoothed and polished without any danger of the

black sub- stance, which is an artificial kind of silver ore,

either dropping out, or decaying. In this man- ner is all the silver-plate brought from Russia ornamented with black engraved figures.

The town of Limoges was very celebrated in Ihe twelfth and thirteenth centuries for the excel- lence of its enamels on various metals. In 1 1 97, tables, vases, basins, tabernacles, candelabra, crosiers, &c., enriched with enamels, were called opus de Limogia, labor Limogiae, opus Lemo- viticum, and are still known to dealers in curi- osities of this nature as enamels of Limoges.

The principal artists who have excelled in this beautiful department of the fine arts are Prima- ticcio and Maitre Roux, who introduced a pure taste in arabesques, and other pictorial orna- ments, which were beautifully executed in enamel. Rafiaelle and Michel Angiolo also gave designs for enamels on porcelain and earth- enware, many of which are still called Raffaelle's ware, or china. Enamelling on metal is of later invention, and is attributed to the French, par- ticularly the smaller and more elegant subjects of history, poetry, and fancy. The first artist who distinguished himself in this latter depart- ment, and, in fact, as its inventor, was Jean Toutin, a goldsmith at Chateaudun. He was succeeded by his disciple Gribelin, who was also an excellent artist and workman. Dubie, a goldsmith, made excellent enamels in the galleries of the Louvre. Morliere, a native of Orleans, but who practised at Blois, followed soon after ; and was much admired for his miniature enamels for rings and watch-cases. He had for a disciple Robert Vauquer of Blois, who surpassed ail his predecessors, particularly in his coloring; he died in 1670. Pierre Chartier, also of Blois, was a celebrated enamellist, particularly in flowers. Jean Petitot, who died in 1691, sue*- ceeded as an enamelist of high repute, and prac- tised in England, where his works are well known, and deservedly admired. Bordier fol- lowed in the same line, and also practised in this country ; as did Louis Hance and Louis de Guernier. Zinck, a Swede, has also obtained a high reputation for the excellence of his works ; as did an artist of the name of Boit, whose cha- racter as an artist is given in Walpole's Anec- dotes of Painters. One of his enamels is there mentioned as being of the extraordinary dimen- sions of twenty-two inches by sixteen ; which have, however, been*

exceeded by our native artists Bone and Muss. We have also to notice, as eminent practitioners in this art, Schnell, who died in 1704; Sophia Cheron, in 1711; Chat-lion, in 1732 ; Ism. Mengs, in 1761 ; Nel- son, in 1770; Meytens, a Swede, in 1770; Rouquet, who practised in England, and wrote upon the arts ; Liotard, Duran, Paguier.

ENAM'OUR, v. a. \ Span, and Port, ena-

ENAM'ORADO. S morur ; Ital. inamorare,

from en and AMOUR, which s«e. To inspire or inflame with love; taking of before the object. But Milton and Shakspeare use it without ; an enamorado is one desperately in love.

An pnanwrado neglects all other things to accom- plish his delight. Sir T. Herbert.

Affliction is enamoured of thy parts, And thou art wedded to calamity. Shahtpeare.

You are very near my brother in his love : he is enamoured on Hero. / /.

Or should she, confident, As sitting queen adored on beauty's throne, Descend with all her winning charms begirt, To enamour, as the zone of Venus once Brought that effect on Jove, so fables tell.

Milton.

He, on his side,

Leaning half-raised,, with looks of cordial love Hung over her enamoured.

Id. Paradise Lost. Your uncle cardinal Is not so far enamoured of a cloyster, But he will thank you for the crown. Dryden. Strange fondness of the human heart,

Enamoured of its harm ! Strange world, that costs it so much smart,

And still has power to charm. Cowper,

Various and strange was the long-winded tale ; And halls, and knights, and feats of arms displayed ; Or merry swains, who quaff the nut-brown ale, And sing enamoured of the nut-brown maid.

Beat tie.

ENARRATION, n.s. Lat. enarro. Expla- nation; exposition.

I might further yet confirm this truth by an anato mical enarration of the several compounding parts of these limbs. Smith on Old Age.

ENARTHRO'SIS, n.s. "Ev and opfyov. The insertion of one bone into another to form a joint.

Enarthrosis is where a good round head enters into a cavity, whether it be a cotyla, or profound cavity ; as that of os coxae, receiving the head of the os fe- moris ; or glene, which is more shallow, as in the scapula, where it receives the humerus. Wiseman.

ENARTHROSIS, in anatomy, is a species of Di- arthrosis. See ANATOMY.

ENA'UNTER, adv. An obsolete word, ex- plained by Spenser himself, to mean lest that. Anger would not let him speak to the tree,

Enaunter his rage might cooled be,

But to the root bent his sturdy stroke. Spenser.

ENAS'CENT, adj. > From e, and nascent ;

ENATE'. 5 Lat. nascor, Tiascens,

rising ; springing or rising forth.

The parts appertaining to the bones, which arise out at a distance from their bodies, are either the adnate or enate parts. Smith on Old Age.

Thus when in holy triumph Aaron trod,

And offered on the shrine his mystic rod ;

First a new bark its silken tissue weaves,

New buds emerging widen into leaves ;

Fair fruits protrude, enascent flowers expand,

And blush and tremble round the living wand.

Darwin.

ENCA’GE, v. a. From en and cage. To shut up in a cage; to coop up ; to confine.

He suffered his kinsman March, Who is, if every owuer were right placed, Indeed his king, to be encaged in Wales, There, without ransom, to lie forfeited.

Shakspeare.

Like Bajazet encaged, the shepherd’s scoff, Or like slack-sinewed Sampson, his hair off.

Donne.

ENCAMP’, v. n. 3 Fr. camper. From EXCAMP’MENT. n. s. Jen and CAMP, which

see. To pitch tents, or form a camp : hence, to

settle or dwell for a time.

He encamped at the mount of God. Exod. xiii. 5.

ENCAUSTIC PAINTING.

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Their enemies served to improve them in their en- campments, weapons, or something else. Grew,

When a general bids the martial train Spread their encampment o’er the spacious plain, Thick rising tents a canvas city build.

Gay’s Trivia.

A feudal kingdom was properly the encampment of a great army ; military ideas predominated, military subordination was established.

Robertson. History of Scotland.

Among the regulations concerning encamp- ment, published in Britain by authority, the fol- lowing are particularly to be attended to. ‘ On the arrival of a brigade, or a battalion, on the ground destined for its camp, the quarter and rear guards of the respective regiments will im- mediately mount ; and, when circumstances re- quire them, the advanced picquets will be posted. The grand guards of cavalry will be formed, and the horses picketed. The men’s tents will then be pitched,

and, till this duty is completed, the officers are on no account to quit their troops or companies, or to employ any soldier for their own accommodation. Necessaries are to be made in the most convenient situations, and the utmost attention is required in this, and every other particular, to the cleanliness of the camp. If circumstances will allow the ground on which a regiment is to encamp to be previously ascer- tained, the pioneers should make these, and other essential conveniences, before the corps arrives at its encampment. Whenever a regiment re- mains more than one night in a camp, regular kitchens ‘are to be constructed. No tents, or huts, are to be allowed in front, or ˆbetween the intervals ‘of the battalions. A spot of ground for this purpose should be marked out by the quarter-master, with the approbation of the com- manding officer. On arriving in a camp which is intersected by hedges, ditches, unequal or boggy ground, regiments will immediately make openings of communication, of sixty feet in width. The ground in front of the encampment is to be cleared, and every obstacle to the move- ment of the artillery and troops is to be removed. Commanding officers of regiments must take care that their communication with the nearest grand route is open and free from impediments.’ The arrangement of tents in a camp is nearly the same all over Europe ; which is, to dispose them in such a manner, that the troops may form with safety and expedition. To answer this end, the troops are encamped in the same order as that in which they are to engage the enemy, which is by battalions and squadrons ; hence, the post of each battalion and squadron must necessarily be at the head of its own encampment. Gustavus Adolphus, king of Sweden, was the first who formed encampments according to the order of battle. By this disposition the extent of the camp, from right to left of each battalion and squadron, will be equal to the front of each in line of battle ; and consequently, the extent from right to left, of the whole camp, should be equal to the front of the whole army when drawn up in line of battle, with the same intervals between the several encampments of the battalions and squadrons, as are in the line. Each regiment posts a subaltern’s guard at eighty yards from

the colors to the officer’s tent, called the quarter- guard ; besides a corporal’s guard in the rear, called the rear-guard. Each regiment of horse or dragoons has also a small guard on foot, called the standard-guard, at the same distance. The grand guard of the army consists of horse, and is posted about a mile or a mile and a half distance towards the enemy. In a siege, the camp is placed all along the line of circumvallation, or rather in the rear of the approaches, out of can- non-shot. The army faces the circumvallation, if any, that is, the soldiers have the town in their rear. It is of great consequence, that a

camp have a commodious spot of ground at its head, where the army, in case of surprise, may in a moment be under arms, and in a condition to repulse the enemy ; as also, that there be a con- venient field at a small distance, and of a suf- ficient extent to form in advantageously, and move with facility.

ENCANTHIS, in surgery, a tubercle arising either from the caruncula lachrymalis, or from the adjacent red skin ; sometimes so large, as to obstruct not only the puncta lachrymalia, but also part of the sight or pupil itself. See SUR- GERY.

ENCARPIA, Gr. tvKapma, in architecture, flower-work, or fruit-work, on the corners of pillars.

ENCA'VE, v. a. From en and cave. To hide as in a cave.

Do but encave yourself,

And mark the fleers, the gibes, pad notable scou:s,

That dwell in ev'ry region of his face ;

For I will make him tell the tale anew.

Shakipeare.

ENCAUSTIC PAINTING, Lat. encausticus. ; Gr. 'EveawTje?/. The art of painting in en- caustic is a manner of painting which is executed with the operation of fire. Ancient authors often make mention of this species of painting, and which, if it had been described simply by the word encaustic, which signifies executed by fire, might be supposed to have been a species of enamel painting. But the expres- sions encausto pingere, pictura encaustica, ceris pingere, picturam inurere, by Pliny and other ancient writers, make it clear another species of painting is thereby meant. We have no ancient pictures of this description, and therefore the precise manner adopted by the ancients is not completely developed, though many moderns have closely investigated the subject, and de- scribed their processes. At what time, and by whom, this species of painting was first invented, is not determined by antiquaries, although it ap- pears to have been practised in the fourth and fifth centuries. Count Caylus and M. Bachelier, a painter, were the first of modern times who made experiments in this branch of art, about the year 1749. Some years after this, Count Caylus presented to the Academy of Painting at Paris his ideas and experiments on the subject of the ancient manner of painting in encaustic. In 1754 the count had a head of Minerva

painted ty M. Vien, after the process described by him- 5”i f, and presented it to the Academy of Sciences in 1 755. This success induced M. Bachelier to recommence his experiments, in which he sue-

ceeded better than formerly ; but his manner of painting in encaustic differed from the ancients, as described by Pliny, and therefore he was un- successful, inasmuch as he did not discover the real ancient manner ; after this he made some other experiments on the same subject, differing from the process as described by Caylus and others.

Pliny, in a passage relating to encaustic painting, distinguishes three species: — 1st, that in which they used a style, and painted on ivory or polished wood (cestro in ebore)”; for which purpose they drew the outlines on a piece of the aforesaid wood or ivory, previously soaked or imbued with some certain color ; the point of the style or stigma served for this operation, and the broad end to scrape off the small fila- ments that arose from the outlines, and they con- tinued forming outlines with the point till they were finished. 2nd. The next manner appears to have been, where the wax previously impreg- nated with color was spread over the surface of the picture with the style, and the colors thus prepared were formed into small cylinders for use. By the side of the painter was a brasier for keeping the styles continually hot, with the points of which they laid on the colors when the outlines were finished, and spread them smooth with the broad end, and thus they proceeded till the picture was finished. 3rd. The manner was by painting with a pencil in wax liquefied by fire : by this method the colors contained a con- siderable hardness, and could not be damaged either by the heat of the sun or the deleterious effects of sea water. It was thus that they painted their ships with emblems and other pic- tures, and therefore it obtained the name of ship- painting. The last process was to smooth and polish the picture ; — thus far Jhe ancients.

Few of late years have made more experi- ments in this mode of painting than the inge- nious Mrs. Hooker of Rottingdean, in the county of Sussex, who has, in this instance, united prac- tice with theory ; and, for her very successful exertions in this branch of the polite arts, was presented with a gold palette by the Society for the Encouragement of Arts, &c., of London. Her account is printed in the tenth volume of the So- ciety’s Transactions for the year 1792, when Miss Emma Jane Greenland. Her first communica- tion with specimens

of this mode of painting was made in the year 1 786, one of which is pre- served in the Society's rooms at the Adelphi, and is worth the attention of the artist. This honor- able testimony of the society's approbation did not occasion any relaxation in this indefatigable lady's endeavour to attain excellence, and she therefore, in the year 1807, made a farther com- munication to the Society of the result of no less than fifty experiments per day, during more 'han four months ; and to theory Mrs. Hooker 'tas added much practical knowledge, having painted several pictures very successfully. The following account combines th» results of this lady's two communications to the Society, which, in honor to her extraordinary merits and exer- tions in this curious branch of the fine arts, should be called the Hookerian mode of en- ranstir paintincr.

Method of preparing and applying a compo- sition for painting, in imitation of the ancient Grecian manner, as practised by Mrs. Hooker : — Put into a glazed earthen vessel four ounces and a half of gum arabic, and eight ounces or half a pint (wine measure) of cold spring water : when the gum is dissolved, stir in seven ounces of gum mastich,, which has been washed, dried, picked, and beaten fine. Set the earthen vessel containing the gum, water, and gum mastich, ov«?r a slow fire, continually stirring and beating tnem hard with a spoon, in order to dissolve the gum mastich : when sufficiently boiled it will no longer appear transparent, but will become opaque and stiff like a paste. As soon as this is the case, and the gum, water, and mastich are quite boiling, without taking them off the fire, add five ounces of white wax, broken into small pieces, stirring and beating the different ingre- dients together till the wax is perfectly melted and has boiled ; then take the composition off the fire, as boiling it longer than necessary would harden the wax, and prevent its mixing so well afterwards with water. When the composition is taken off the fire, and in the glazed earthen vessel, it should be beaten hard, and whilst hot (but not boiling) mix with it by degrees a pint (wine measure) or sixteen ounces more of cold spring water; then strain the composition as some dirt will boil out of the gum mastich, and put it into bottles. The composition, if properly made, should be like a cream, and the colors, when mixed with it, as smooth as with oil. The method of using it is to mix with the compo- sition, upon an earthen palette, such colors in powder as are used in painting with oil, and such a quantity of the composition to be mixed with the colors as to render them of the usual con- sistency of oil colors, then paint with fair water.

The colors, when mixed with the composition, may be laid on either thick or thin, as best suits your subject, on which account this

composition is very advantageous where any particular trans- parency of coloring is required ; but in most cases it answers best if the colors are laid on thick, as they require the same use of the brush as if painting with body colors, and the same brushes as used in oil painting. The colors, if grown dry when mixed with the composition, may be used by putting a little water over them; but it is less trouble to put some water when the colors are observed to be growing dry. In painting with this composition the colors blend without difficulty when wet, and even when dry the tints may easily be united by means of a brush and a very small quantity of water. When the painting is finished, put some white wax into a glazed earthen vessel over a slow fire, and when melted, but not boiling, with a hard brush cover the painting with the wax, and when cold take a moderately hot iron, such as is used for ironing linen, and so cold as not to hiss if touched with any thin? wef, and draw it lightly over the wax. The painting: will appear as if under a cloud till the wax and whatever substance the picture is painted upon are perfectly cold ; but if when so the painting should not appear sufficiently clear, it may be held before the fire at such a distance as to melt the wax slowly ; or the wax may be

melted by holding a hot poker at such a dis- tance as to melt it gently, especially over such parts of the picture as should not appear suf- ficiently transparent or brilliant : for the oftener heat is applied to the picture the greater will be the transparency and brilliancy of coloring; but the contrary effect would be produced if too sudden or too great a degree of heat is applied, or for too long a time, as it will draw the wax too much to the surface, and may likewise crack the paint. Should the coat of wax put over the painting when finished appear in any part un- even, it may be remedied by drawing a mode- rately hot iron over it again as before mentioned, or even by scraping the wax with a knife ; and should the wax, by too great or too' long an application of heat, form into bubbles at parti- cular places, by applying a poker heated, or even a tobacco pipe made hot, the bubbles will subside; or such defects may be removed by drawing any thing hard over the wax, which will close any small cavities. When the picture is cold rub it.with a fine linen cloth. Paintings may be executed in this manner upon wood, having first pieces- of wood let in behind, across the grain of the wood, to prevent its warping, can- vas, card, or plaster of Paris. The plaster of Paris requires no other preparation than mixing some fine plaster of Paris in powder with cold water the thickness of cream ; then put it on a looking-glass, having first made a frame of bees'- wax oji the looking-glass, the form and thickness of which you wish the plaster of Paris to be, and when dry take it off, and there will be a

very smooth surface to paint upon. Wood and canvas are best covered with some gray tint mixed with the same composition of gum arabic, gum mastich, and wax, and of the same sort of colors as before mentioned, before the design is begun, in order to cover the grain of the wood, or the threads of the canvas. Painting also may be done in the same manner with only gum water and gum mastich prepared the same way as the mastich and wax; but instead of putting seven ounces of mastich, and, when boiling, adding five ounces of wax, mix twelve ounces of gum mastich with the gum water, prepared as mentioned in the first part of this receipt : before it is put on the fire, and when sufficiently boiled and beaten, and a lit- tle cold, stir in by degrees twelve ounces, or thiee-quarters of a pint, wine measure, of cold spring water, and afterwards strain it. It would be equally practicable to paint with wax alone, dissolved in gum water in the following manner. Take twelve ounces, or three-quarters of a pint, wine measure, of cold spring water, and four ounces and a half of gum arabic, put them into a glazed earthen vessel, and, when the gum is dis- solved, add eight ounces of white wax. Put the earthen vessel, with the gum water and wax, upon a slow fire, and stir them till the wax is dissolved and has boiled a few minutes ; then take them off the fire, and throw them into a basin, as by remaining in the hot earthen vessel the wax would become rather hard ; beat the gum water and wax till quite cold. As there is but a small proportion of water, in comparison to the kjoantity of gum and wax, it would be necessary, »n mixing this composition with the colors, to

put also some fair water. Should the composi- tion be so made as to occasion the ingredients to separate in the bottle, it will become equally serviceable if shaken before used to mix the colors.

Another very serviceable quality in the vehicle for painting was discovered by Mrs. Hooker, which was, that the composition which had re- mained in a bottle since the year 1792, in which time it had grown dry and become as solid a substance a« ‘,vax, returned to a cream-like con- sistence, and became again in as proper a state to mix with colors as when it was first made, by putting a little cold water upon it, and suffering it to remain on a short time. ‘ I also lately found,’ says this ingenious lady, ‘ some of the mixture composed of only gum arabic water and gum mastich, of which I sent a specimen to the Society of Arts in 1792; it was become dry, and had much the appearance and consistency of horn. I found, on letting some cold water re- main over it, that it became as fit for painting with as when the composition was first pre- pared.’

J. Chr. Werner, of Newstadt, in Germany, found the following process

very effectual in making wax soluble in water : — For each pound of white wax he takes twenty-four ounces of potassa, which he dissolves in two pints of water, warming it gently. In this lie he bo Is the wax, cut into little bits, for half an hour ; at the end of this time he takes it from the fire and lets it cool. The wax fixes itself at the surface of the liquor in the form of a white saponaceous mat- ter, which, being triturated with water, produces a sort of emulsion which he called wax milk, or encaustic wax, and may be applied to pictures, furniture, or leather, a-fter having well cleaned them : in an hour after the application the arti- cle should be rubbed with a piece of woollen cloth, which will cause the pictures to have a better effect, and the furniture to acquire a pecu- liar brightness. Another advantage of this prepa- ration of wax is, that it can be mixed with all kinds of colors, and consequently be applied in a single operation. It is also useful to fix water colors.

The following important observations are translated from the Italian of the chevalier Lorg- na, who has deeply investigated the subject, in a small but valuable tract called, Un Discorso sulla Cera Punica. The anc ents, says this au- thor, according to Pliny, used three species of painting, and in all three they used fire ; so that to paint with encaustic, or with a burning appli- cation, abbrucciamento, is derived from a Greek word.

We have never thoroughly known the nature of the Punic wax, which was anciently used, and which, after all, was the essential ingredient of the ancient painting in encaustic. The chevalier praises the genius and industry of M. Requeno and M. Bachelier, who have also treated this subject, but who have not fully succeeded in finding out the true way of making the said wax, then quotes the passage of Pliny on the method of making it, Punica fit hoc modo, Sec. see Pliny's Nat. Hist. 1. 21, c. 14, and asserts, with many other writers, that Pliny's nitre is not the nitre of the moderns, properly so called, b .t it

is the natron of the ancients, viz. the native salt which is found crystallised in Egypt and other hot countries, in sands surrounding lakes of salt water ; it must not be mistaken for the natron of the new nomenclature of our college of physi- cians, which is the new name of the mineral alkali.

In the plains of Lower Egypt, which were once covered by the sea, in the environs of the salt lakes of that country, at Tripoli, at Tunis, as also in the adjacent parts of ancient Carthage, the natron, that same natron which, under the name of nitre, the Carthagin ans, according to Pliny, used in preparing their wax, is to this day extracted, and hence it was called Punic wax.

I began now, says Lorgna, successively to try my experiments, first with three parts of wax and one of natron, and then with four of wax, and so on till I used twenty parts of white melted wax \v.;th one only of natron, with as much water as was just sufficient to melt the natron. I held the mixture; in an iron vessel over a slow fire, stirring it gently with a wooden spatula, till the two sub- stances thickened by evaporation, and, in closely uniting, the mass by degrees assumed the con- sistence of butter, and the color of milk. I re- moved it then from the fire, and put it in the shade to let it harden, and to perfect itself in the open air. This natron was extracted from the lie of kali of Malta, evaporated till it was dry ; it may also be extracted from the kali of Spain, Sicily, Sardinia, and from that of Tunis and of Tripoli', which may be procured without much difficulty. The wax being cooled it liquefied in water, and a milky emulsion resulted from it like that which could be made with the best Ve- netian soap.

Pliny, in another place, c. 7, 1. 23, gives fur- ther directions for the manner of using caustic on paintings on walls ; but, as it concerns the antiquary more than the artist, I have forborne from making the quotation. It begins at these words, ' Ut parietis siccato cera Punica,' &c.

As to making use of this wax in painting in encaustic the chevalier says, that magnificent and repeated experiments were made in the apartments of the Count Giovanni Battista Ga- sola, by the Italian painter Signor Antonio Pac- cheri. He dissolved the Punic wax, when it was not yet so much hardened as to require to be igni resoluta, as expressed by Pliny, with pure water lightly infused with gum arabic, instead of sar- cocolla, male incense, mentioned by Pliny. He afterwards melted and mixed his colors with this wax so liquefied as he would have done with)il, and proceeded to paint in the same manner; nor were the colors seen to run or alter in the least ; and the mixture was so flexible that the pencil ran smoother with it than it would have done with oil. The painting being dry, he used the caustic over it, and nabbed it with linen cloths, by which the colors acquired a peculiar vivacity and brightness which they had not be- fore the caustic and the rubbing had been ef- fected.

ENCEINTE, n. s. Fr. enceinte ; Lat incinso, * > enclose. In fortification, is the interior wall Or rarnpart which surrounds a place, sometimes composed of bastions or curtains, either faced

or lined with brick or stone, or only made of earth. See ENSIENT.

The enceinte is sometimes only flanked by round or square towers, which is called a Roman wall.

James.

ENCEN'IA, n. s. plural. Gr. tyicavivia (nai- vof, new). Festivals in celebration of the found- ing of certain temples or public places. See the following article.

Besides those verses in the Oxford books, which he could not help setting his name to, several of his compositions came abroad under other names. The Encaenia, and public Collections of the University upon State Subjects, were never in such esteem, either for elegy or congratulation, as when he contributed most largely to them. Johnson's Life of Smith.

ENCENIA. These were festivals anciently kept in honor of the building of certain cities or great towns. The Jews kept one on the day on which the temple was dedicated, and the Christians thus celebrated the consecration of their churches. At Oxford it has signified in modern times the ceremonies and solemnities instituted in honor of founders or benefactors of colleges.

ENCHA'FE, v. a. Fr. eschauffer. To enrage ; to irritate ; to provoke.

The wind-shaked surge, with high and monstrous

main,

Seems to cast water on the burning bear, I never did like molestation view On the enchafed flood. Shakspeare. Othello.

ENCHAIN'. Fr. enchainer, from en and CHAIN, which see. To chain or fasten together : hence, to bind ; hold under power ; subject.

The one contracts and enchains his words, speaking pressingly and short ; the other delights in long- breathed accents. Hoteel.

What should I do ! while here I was enchained, No glimpse of god-like liberty remained. Dryden.

ENCHANT’, v. a. \ Fr. enchanter;

ENCHANT’ER, n. s. I Span. encantar ;

ENCHANT’ING, adj. lltal. and Lat. in-

ENCHANf INGLY, adv. Ccuntare, from in and

ENCHANT’MENT,n. S. 1 Canto, tO Sing,

ENCHANT’RESS, n. s. fern, because magical charms were often composed in verse, and sung by the enchanter. To influence or subdue by charms or spells : hence, to delight extremely ; to enrapture ; the derivations all follow one or other of these senses.

The Turki thought that tempest was brought upon them by the charms and enchantments of the Persian magicians. Knolles.

And now about the cauldron sing, Like elves and fairies in a ring, Enchanting all that you put in. Shakspeare. Fell banning hag! enclumtrest, hold thy tongue,

Id.

One whom the music of his own vain tongue Doth ravish like enchanting harmony. Id.

He’s gentle ; never schooled, and yet learned , full of noble device ; of all sorts enchantingly beloved.

Id.

If the king had not been persuaded of the strength of his charm, he had not sent so far, and paid so dear for it ; now he trusts more to his enchantment, than to the forces of Moab and Midian.

Bp. Hall. Contemplations.

These powerful drops thrice on the threshold your, And bathe with this enchanted juice her door ;

That door where no admittance now is found,

But where my soul is ever hovering round. Gran.

Arcadia was the charmed circle, where all his spirits for ever should be enchanted. Sidney.

From this enchantress all these ills are come ˆ

You are not safe ‘till you pronounce her doom.

Dryden.

I have it by certain tradition, that it was given to the first who were it by an enchantress. Tatler.

Such phasms, such apparitions, are excellencies which men applaud in themselves, conjured up by the magick of a strong imagination, and only seen within that circle in which the enchanter stands.

Decay of Piety.

Gladio, by valour and stratagem, put to death ty- rants, enchanters, monsters, and knights. Spectator.

John thinks them all enchanted : he enquires if Nick had not given them some intoxicating potion.

Arbulhnot.

Warmth of fancy will carry the loudest and most universal applause, which holds the heart of a reader under the strongest enchantment. Pope.

Too dear I prized a fair enchanting face ;

Beauty unchaste is beauty in disgrace. Id.

Oft with the enchantress of his soul he talks, Sometimes in crowds distressed. Thomson.

This life, sae f;«‘s I understand, Is a’ enchanted fairy land, Where pleasure is the magic wand,

That, wielded right, Makes hours like minutes, hand in hand,

Dance by fu’ light. Burnt.

Perhaps loose Luxury's enchanting smile

Shall lure my steps to some romantic dale, Where Mirth's light freaks the' unheeded hooie

beguile, And airs of rapture warble in the gale. ,

Beattie.

ENCHASE, v. a. Fr. enchasser ; the same originally with encase ; Gr. tv and natpa, a chest. Originally to enclose one body within another ; to insert in ornamented cases, and to emboss or engrave ornaments ; and hence, to ornament, adorn generally.

Whaf seest thou there"? King Henry's diadem, Enchased with all the honours of the world !

Shakspeare. When was old Sherewood's head more quaintly

curled,

Or looked the earth more green upon the world, Or nature's cradle more enchased and purled T

Ben Jonson.

And yet no doubts the poor man's draught control! ; He dreads no poison in his homely bowl : Then fear the deadly drug, when gems divine Enchase the cup, and sparkle in the wine. Dryden.

Like polished iv'ry, beauteous to behold ; Or Parian marble, when enchased in gold. Id.

Words, which, in their natural situation, shine like jewels, enchased in gold, look, when transposed into notes, as if set in lead. Felton.

ENCHEA'SON, n.s. Old law. Fr. encheason. Cause ; occasion.

And for this encheason the prince was, in the life of kis father, stnte thither, to the»ende that the authe- ntic of his presence should refraine euill disposed parsons fro the baldness of their former outerages.

Sir T. More.

Certe«, said he, well mote I should to tell Tbe fond encheason that me hither led.

Faerie Queenc.

ENCHIRI'DION, n. s. Lat. enchiridrum ; from Gr. tv and x«p, the hand. A small book (which one may carry in the hand) ; a manual.

Erasmus I take to have written the most and best that ever man wrote ; yet almost all were first sent abroad in very few sheets, or small enchiridions.

Boyle.

ENCIR'CLE, v. a.) Old French, encerckr, ESTCIRCLET, n. s. J from en and CIRCLE, which see. To surround; environ. Encirclet, is a ring ; a circle.

In whose encirclets if ye gaze, Your eyes may tread a lover's maze. Sidney. That stranger guest the Paphian realm obeys, A realm defended with encircling seas. Pope.

Encircled in her clasping arms,

How have the raptured moments flown ! How have I wished for fortune's charms,

For her dear sake, and her's alone ! Buna. He spoke, — to Heaven his arms repentant spread, And kneeling bowed his gem-encircled head.

Darwin.

Lo ! where the stripling, wrapt in wonder, roves Beneath the precipice o'erhung with pine And sees, on high, amidst the' encircling groves, From cliff to cliff the foaming torrents shine : While waters, woods, and winds, in concert join, And Echo swells the chorus to the skies. Beattie.

ENCLA'SP, v. a. From en and clasp. To clasp ; embrace.

When shall my soul, in silent peace,

Resign life's joyless day ; My weary heart its throbbings cease, Cold mouldering in the clay ? No fear more, no tear more, To stain my lifeless face ; Enclasped, and grasped

Within thy cold embrace ! Burns.

ENCLITES, 7i. s. } Gr. tyicXirwca of «y- ENCLIT'IC, adj. > K\WO>, I incline. Parti- ENCLIT'ICS, n. s.) cles which throw back the accent

upon the foregoing syllable.

It is- observed too often, that men of wit do so much employ their thoughts upon fine speculations, that things useful to mankind are wholly neglected, and they are busy in making emendations upon some enclites in a Greek author, while obvious things, that every man may have use for, are wholly overlooked.

A ddison.

There are three enclitic particles in the Latin, viz. que, ne, and ve ; ,but in the Greek many, as T», /u», fjiti, fie, ?«, ffti, ?)}, orouf, on), Ti, yi, *‘A»’» TOTI, and others. Dr. A. Rees.

ENCLOSE, v. a. j Fr. ‘enclorre ; Lat. in- ENCLO’SER, n. s. \cludo ; i. e. in and claudo, Eucr.osuRE. 3 dausus, to shut up. From en and close. To environ ; surround; encircle ; hence to part off from other things or property ; to appropriate. Enclosure is the act of enclos- ing or separating off ; the state of being, and the space or ground enclosed.

The fourth row a beryl, and an onyx, and a jasper they shall be set in gold in their enclosings.

Ex. xxvih. 20.

And all, that else this world’s enclosure base Hath great or glorious in mortal eye, Adorns the person of her Majesty. Faerie Queene.

Enclosures began to be frequent, whereby arable land was turned into pasture. Bacon’s Henry VII.

The protector caused a proclamation to be set forth against enclosures, commanding, that they who had sncloted lands, accustomed to lie open, should lay them open again. Hayiaard.

If God had laid all common, certainly Man would have been the’ encloter ; but since now God hath impaled us, on the contrary, Man breaks the fence. Herbert

Let no man appropriate what God hath made com- mon ; that is against justice and charity, and by mi- raculous accidents God hath

declared his displeasure against such enclosure. Taylor.

Lest, thus encompassed with funereal gloom. Like me, ye bend o'er some untimely tomb, Pour your wild ravings in Night's frighted ear, And half pronounce heaven's sacred doom severe.

Beattie.

ENCO'RE, adv. French. Again ; once more. * A word used at public shows when a singer, or fiddler, or buffoon, is desired by the audience to do the same thing again.' — Dr. Johnson. We have retained this singular definition of our great lexicographer, written, as it would seem,

The membranes are for the comprehension or en- when he was disappointed of some compliment

of this kind. This adverb, however, has become

closure of all these together. Wilkin*.

As much land as a man tills, and can use the pro- the parent of a verb ; see the instance, duct of, so much he by his labour encloses from the

Locke.

common.

For the young, during its enclosure in the womb, there are formed membranes inveloping it, called se- cundines. R<*y.

This expresses particularly the enclosure of the wa- ters within the earth. Burnet's Theory.

Tis not the common, but the enclosure must 'make him rich. South.

They are to live all in a body, and generally within the game enclosure ; to marry among themselves, and to eat no meats that are not prepared thnr own way. Addison's Spectator.

For enclosing of land, the usual way is with a bank set with quick. Mortimer's Husbandry.

The peer now spreads the glittering forfex wide, T* enclote tne lock; now joins it, to divide. Pope.

Then snug enclosure* in some sheltered spot, Where frequent hedges

intercept the eye, Delight us, happy to renounce awhile, Not senseless of its charms, what still we love, That such short absence may endear it more.

Cowper.

ENCO’MIUM, n. s.~\ Gr. eycu/uoy, from ENCO’MIAST, (the verb tyKWfuaZv

ENCO’MIASTIC, adj. I to praise. Panegyric; ENCOMIAS’TICAL. 3 praise. An encomiast, } e who speaks or proclaims praise. Encomias- tic, encomiastical; laudatory, panegyrical.

The Jesuits are the great encomiasts of the Chinese.

Locke.

How eagerly do some men propagate every little encomium their parasites make of them!

Government of the Tongue. A vile encomium doubly ridicules ; There’s nothing blackens like the ink of fools. Pope.

To the same notes thy sons shall hum or snore, And all thy yawning daughters cry encore.

Dunciad.

Dolly, in her master’s shop, Encores them as she twirls her mop.

. Whitehead.

ENCOUNTER, v. a., v. n. & > Fr. encon- ENCOUNT’ERER, n. s. [n. s. $trc ; Spanish and Port, encontrar, from Latin, in, and contra, against ; opposite. To engage or run against ; to meet front to front, or in opposition; ap- plied to casual as well as premeditated conflicts.

The lion will not kick with hU feet, but he will strike such a stroke with his tail, that he will break the back of his encounterer with it. Afore.

Putting themselves in order of battle, they encoun- tered their enemies. Knolles’s History of the Turks.

I am most fortunate thus to encounter you : You have ended my business, and I will merrily Accompany you home. Shakspeare. Coriolanus.

Encounter so.

As doth the fury of two desperate men, Which, in the very meeting, fall and die. Id.

Our wars

Will turn into a peaceful comic sport, When ladies crave to be encountered with. Id. See they encounter thee with their hearts' thanks ; Both sides are even. Id. Macbeth.

Oh these encounterers ! so gilt of tongue, They give a coasting welcome ere it comes ; And wide unclasp the tables of their thoughts To every ticklish leader. Id. Troilutand Cressida.

Two black clouds

With heaven's artillery fraught, come rattling on Over the Caspian ; then stand front to front,

ENCOM'PASS, v. a. J From enand COM- Hov'ring a space, 'till winds the signal blow ENCOM'PASSMENT, n. s. S PASS, which see. To To join their dark encounter in mid air. Milton.

surround; enclose; move round; encircle.

Look how my ring encompasseth thy finger ; Ev'n so thy breast encloseth my poor heart.

Shakspeare. Finding liy this encompassment and drift of question,

Jurors are not bound to believe two witnesses, if the probability of the fact does reasonably encounter them. Hale.

As many as are the difficulties which virtue has to encounter in this world, her force is yet superior.

Shaftesbury.

Which way soever we turn, we are encountered with '**• clear evidences and sensible demonstrations of a IVo strong ligaments encompass the whole head of Dejty. Tillotson.

That they do know my son, come you more near.

the femur. Witeman's Surgery.

Poetic fields encompass me around, And still I seem to tread on classic ground.

Addison.

Onward sweeps the rolling host ! Heroes of the' immoital boast ! Mighty Chiefs ! Eternal shadows ! First flowers of the bloody meadows Which encompass Rome, the mother Of a people without brother ! Byron.

•Thou stronger may'st endure the flood of light, And, while in shades I chear my fainting sight, Encounter the descending excellence. Dryden.

Pallas the' encounter seeks ; but ere he throws To Tuscan Tiber thus addressed his vows : O sacred stream, direct my flying dart, And give to pass the proud Halesus' heart. Id.

The doctrines of the reformation have kept the field against all encotmterert. Atterbury.

Those who have the most dread of death, must be content to encounter with it, whether they will or no.

Wake.

Propitious Pallas, to secure her care, Around him spread a veil of thickened air. To shun the' encounter of the vulgar crowd.

Pope.

An equality is not sufficient for the unity of cha- racter ; 'tis further necessary, that the same spirit ap- pear in all sorts of encounters. Id.

O ! shun, ye noble train The rude encounter, and believe your lives Your country's due alone. Somermle.

ENCOUR'AGE, v. a. ˆ Fr. encourager,

EKCOUR'AGEMENT, n, s. £ Ital. incorragiare,

ENCOUR'AGER. 3 a compound of en

and courage. To inspirit ; embolden ; animate with courage or strength.

They encourage themselves in an evil matter.

i Ps. Ixiv. 5.

Kinds of musick encourage men and make them warlike, or make them soft and effeminate. Bacon.

I would neither encourage the rebels, nor discourage the protestants' loyalty. King Charles.

Where art is encouraged it will soon rise high, and go far ; and not suffer a channel of the sea to stay it from the presence of a more bountiful (patronage.

Bp. Hall.

For wHen he dies, farewel all honour, bounty, All generous encouragement of arts. Otway's Orphan.

Live then, thou great encourager of arts, Live ever in our thankful hearts. Dryden.

But, on the contrary, his own confession, bringing always with it perfect impunity, should be, besides, encouraged by some marks of approbation. Locke.

As the pope is a master of polite learning, and a great encourager of arts ; so at Rome these arts im- mediately thrive, under the encouragement of the prince. Addison.

Such strength of heart

Thy conduct and example gives ; nor small

Encouragement Godolphin, wise and just. Philips.

The reproach of immorality will lie heaviest against an established religion, because those who have no religion will profess themselves of that which has the encouragement of the law. Rogers.

Genuine Christianity is distinguished above all other religions by the mildness of its spirit ; the enemy of every practice which hardens the heart ; the encourager of every virtue which renders the cha- racter humane. Robertson. Sermons.

C. SURF. To be sure, I once thought the lady seemed to have taken a fancy to me ; but, upon my soul, I never gave her the least encouragement : — be- sides, you know my attachment to Maria. Sheridan.

Planters of trees ought to encourage themselves, by considering all future time as present; indeed, such consideration would be a useful principle to all men in their conduct of life, as it respects both this world and the next. Bp. Watson.

The day before, fast sleeping on the water, They found a turtle of the hawk's-bill kind,

And by good fortune, gliding softly, caught her, Which yielded a day's life, and to their mind ˆ

Proved even still a more nutritious matter,

Because it left encouragement behind : Byron.

ENCROACH', v. a., v. n. & n. s. ˆ Fr. accro- ENCROACH'ER, n. s. C cher ; Spa-

ENCROACH'MENT. 3 nish, corche-

tar ; from French, croc, and Spanish, corchete, a hook. To draw away or seize another's posses- sions : hence, as a neuter verb, to creep on gra- dually ; to pass bounds; generally applied to the gradual invasion of another's right; taking on before the subject.

Those Irish captains of counties have encroached upon the queen's freeholders and tenants. Spenser.

The superstition that riseth voluntarily, and by degrees mingleth itself with the rites, even of every divine service, done to the only true God, must be considered of as a creeping and encroaching evil.

Hooker. This hour is mine ; if for the next I care, I grow

too wide, And do encroach upon death's side. Herbert.

They fabled how the serpent, whom they called Ophion, with Eurynome, the wide Encroaching Eve perhaps, had first the rule Of high Olympus. Milton's Paradise Lost.

Bui this usurper his encroachment proud Stays not on man : to God his tower intends Siege and defiance. Id.

Tisiphone, let loose from under ground, Before her drives diseases and affright ; And every moment rises to the sight, Aspiring to the skies, encroaching on the light.

Dryden.

As a man had a right to all lie could employ his labour upon, so he had no temptation to labour for more than he could make use of : this left no room for controversy about the title, nor for encroachment on the right of others. Locke.

The ancient Romans made many encroachments on the sea, and laid the foundations of their palaces within the very borders of it. A ddison on Italy.

The bold encroaches on the deep

Gain by degrees huge tracts of land, Till Neptune with one general sweep,

Turns all to barren strand. Swift.

Intrigue and refinement were feeble fences against the encroachments of military power.

Robertson. History of Scotland. As Envy pines at good possessed, So Jealousy looks forth distressed

On good that seems approaching ; And, if success his steps attend, Discerns a rival in a friend,

And hates him for encroaching. Cawpˆr. Such dire encroachments to prevent in dine, Demands the critic's voice — the poer's rhyme, Can our light scenes add strength to holy laws ?

Sheridan, His empire also was without a bound —

'Tis true, a little troubled here and there, By rebel pachas, and encroaching giaours, But then they never came to ' the Seven Towers.'

Byron.

ENCUM'BER, v. a. } Fr. encombrer ; It. ENCUM'BERMENT, n. s. > ingombrare ; from en ENCUM'BRANCE, n. s. 3 and CUMBER, which

see. To impede; clog; accumulate d-fficulties;

hence to embarrass ; burden : encumbrance is

ENCRATHVE, or ENCRATITES, in church an impediment, load, excrescence or useless ad-

history, heretics who appeared towards the close dition. of the second century; they were called Encra- tites, or Continents, because they gloried in ab- staining from marriage and the use of wine and animal food.

Much was the man encombred with his hold, In feare to lose his weapon in his paw, Ne wist yett how his talaunts to uul'old.

Spenser. Faerie Qucenc*

ENCYCLOPAEDIA.

The best advizement was of bad, to let her Sleepe out her fill without eneomberment, For gleepe, they sayd, would make her battill better.

Id.

We have, by this many years' experience, found that exceeding great good, not encumbered with any notable inconvenience. Hooker.

Philosophers agreed in despising riches, at best considering them as unnecessary encumbrances of life.

Temple. Encumbered with his vest, without defence.

Dryden.

Dead limbs are an encumbrance to the body, instead of being of use to it. Addaon't Freeholder.

The god awaked,

And thrice in vain he shook his wing, Encumbered in the silken string. Prior.

In respect of the encumbrancei of a living, consider whether it be sufficient for his family, and to main- tain hospitality. Ayliffe.

Strip from the branching Alps their piny load, The huge encumbrance of horritick woods. Thornton. The rose had been washed, just wished in a shower,

Which Mary to Anna conveyed, The plentiful moisture encumbered the flower,

And weighed down, its beautiful head. Cowper. Here wealth had done its utmost to encumber With furniture an exquisite apartment, Which puzzled nature much to know what art meant.

Byrun.

ENCY'CLICAL, adj. 'EyicvicXucoc. Circular ; sent round through a large region.

This council was not received in patriarchal sees, which is evident from Photius's encyclical epistle to the patriarch of Alexandria. Stillingfleet

ENCYCLOPEDIA, n. s. j Fr. encychpe-

ENCYCLOPJE'DY, > die ; Gr. tvKvt\o-

ENCYCLOPJE'DIST. j iraiSiia, from ty,

KVK\OQ, a circle, and iraidua, science. The circle of the sciences : a system of knowledge or learn- ing. An encyclopaedist is a writer in, or conduc- tor of, an encyclopaedia.

In this encyclop&dia and round of knowledge, like the great wheels of heaven, we must observe two circles, that while we are daily carried about, and whirled on by the swing and rapt of the one, we may maintain a natural and proper course in the so' cr wheel of the other. Browne't Vulgar Errours.

Every science borrows from all the rest, and we cannot attain any single one without the encyclopaedy.

Glanville.

This art may justly claim a place in the encyclo- paedia, especially such as serves for a model of edu- cation for an able politician. Arbuthnot.

It became the only resource of the reader, — to have recourse to Chambers's Dictionary ; — or to the still more stupendous performance of the French encyclo- pedut*. Dr. Hutton.

ENCYCLOPEDIA, a term nearly synonymous with Cyclopaedia, but preferred to it as more expressive, in denominating the present work.

The late learned printer, Mr. Bowyer, justly observes, that the preposition en makes the meaning of the word more precise : for cyclopaedia may de- note ‘ the instruction of a circle,’ as Cyropaedia is ‘ the instruction of Cyrus,’ whereas in ency- clopaedia the preposition determines the word to be from the dative of cyclus, ‘ instruction in a cir- cle.’ And Vossius, in his book De Vitiis Ser- monis, has observed, ‘that cyclopaedia is used by some authors, but encyclopaedia by the best.’

We have pledged ourselves to give some ac- count of the principal works of this kind which have appeared iri our language. If we advert to an earlier work or two, in other languages, it will not, we apprehend, be unacceptable to our readers.

The first work, then, to which this designa- tion was expressly given, appears to be that of Alfarabius, an Arabian writer of the school of Bagdad, in the tenth century. It is described by Casiri (Bibliotheca Arabicc-Hispana Escu- rialensis) in his account of the Arabian authors of this period, as a work ‘ ubi Scientiarum Arti- umque liberalium Synopsis occurrit, una cum accurata et perspicua earum notitia, definitione, divisione, methodo.’ A complete list of the encyclopaedias of the fifteenth and sixteenth cen- turies is to be found in the Bibliotheca Realis Philosophica of Lipenius, torn. i. pp. 436-7. These works rather aimed at a systematic digest of science in a series of systems, more or less comprehensive, than at embracing the whole circle of knowledge and miscellaneous litera- ture. The most important among the early works of this kind was the Encyclopaedia of J. H. Alstedius, professor of philosophy at Weissem- bourg, and which first appeared in 1620. It is mentioned with approbation by Leibnitz nearly a century after its appearance. The second edi- tion, in two large volumes, folio (1630), is di- vided into thirty-five books. Books i. to iv. are introductory, and contain sketches of the studies and pursuits requisite to the understanding of the rest. Books v. to x. are on Philology. Books xi. to xx. on Speculative; and books xxi. to xxiv. on Practical Philosophy; xxv. xxvi. and xxvii. embrace the subjects, Theology, Ju- risprudence, and Medicine ; xxviii. xxix. xxx. the Mechanical Arts; and xxxi. xxxii. xxxiii. xxxiv. xxxv. History, Chronology, and Miscel- lanies. For an early work of this kind there is certainly great merit and comprehensiveness in this arrangement. But none of the encyclo- paedias had hitherto attempted an alphabetical digest of science.

This was first given to the world by Dr. Harris, under the title of a Lexicon Technicum, or Universal Dictionary of the Arts and Sciences, explaining not only the Terms of Art, but the Arts themselves, Lond.

1710; and which be- came the foundation, in fact, of all the succeeding works of this nature. Still it was restricted, principally, to the physical and mathematical sciences.

The Cyclopaedia of Chambers, which appeared in 1728, was the earliest attempt to arrange the whole compass of human knowledge in an al- phabetical form. His plan was complicated, but indicative ff great mental powers in the author, and considerable research. He did not attempt to exhibit every science as a perfect whole, or in one treatise : but first laying down for his guidance a detailed scheme of all the various branches of knowledge (which he pre- fixes to his work), he gave each branch or ra- mification of science the explanation it seemed to him to require, and depended upon an extensive system of references, from one to the other, to establish their unity. In his preface,

which has been much admired, he thus con- cludes : —

‘ The ultimate view of a work of this kind should be the forming of a sound mind, i. e. ac- quiring a system of perceptions and motions agreeing to the system of things, or in the rela- tions thereto intended by its author. The end of learning and study is not the filling of our heads with other men’s ideas ; that is an enrich- ment which may prove for the worse : richness is only a matter of secondary consideration; soundness is the first. There are many manures which the husbandman dares not use by reason they would corrupt the land, at the same time they enriched it, and lay the foundation of a disease which would in the end impoverish, and make it spend itself in unprofitable weeds.

‘ But it must be owned, men’s heads are not so easily filled ; the memory is not so tenacious as we may imagine ; ideas are transient things, and seldom stay long enough with us to do either much good or harm : ten to one but what we read to-day is most of it forgot again to-morrow. And what chiefly makes new ideas of any signi- ficancy is their extending and enlarging the mind, and making it more capacious and sus- ceptible. But neither is this enlargement the last aim ; but is chiefly of use, as it contributes to the increasing our sensibility, to the making our faculties more subtle and adequate, and giving us a more exquisite perception of things that occur; and thus enabling us to judge clearly, pronounce boldly, conclude readily, distinguish

accurately, and to apprehend the manner and reasons of our decisions. To which end several things may conduce that are not so much direct matters of knowledge as collateral to it ; for in- stance, much of the school-philosophy, which, by exercising and exciting the mind, has a kind of instrumental tendency to sharpen its facul- ties, and needs only be read, not retained, to produce its effects.

‘ But even this does not amount to the full and adequate end of knowledge : this is only improving the organ ; and there must be some farther end in such improvement. No man sharpens his weapon on the sole consideration of having it sharp, but to be the fitter for use. Briefly then, our faculties being only so many inlets whereby, and according to the measure whereof, we receive intimations of the Creator’s will, and the effects of his power and action, all the improvements made in them have a ten- dency to subject us more entirely to His in- fluence and direction ; and thus make us con- spire, and move more in concert with the rest of His works, to accomplish the great end of all things, in which our happiness and perfection consists ; the perfection of a single nature arising in proportion as it contributes to that of the universe.’

Chambers’s Cyclopaedia consisted of two folio volumes, of which five editions were published in eighteen years. A supplement, consisting also of two volumes, folio, edited, and chiefly com- piled by Dr. Hill, was published in 1754. The late Dr. Abraham Rees it is well known became the final editor of this work, and extended it, in the great undertaking of th:s kind to which he

devoted almost twenty years of his life, — ‘ mea- sured,’ as he tells us, ‘ not by fragments of time, but by whole days of twelve or fourteen hours,’ to. the unparallelled length of thirty-nine 4to. volumes, — unparalleled, of course, we mean, in an English work of this kind. As we have commenced with a criticism on the comparative propriety of the two leading terms of our title and his, it appears but just to extract Dr. Rees’ defence of the one he adopted.

‘ The word cyclopaedia is not of classical authorry, though frequent enough among modern writers, to have got into several of our diction- aries. Some have censured us for having called the present work by this name ; not considering that names and titles of books, engines, instru- ments, &c., are in a great measure arbitrary ; and that authors make no scruple even of coining new words on such oocasions, when there are no old ones to their mind. Thus it is Dr. Hooke calls his fine book of microscopical observations, Mi- crographia ; Wolfius his book on the air, Aero- metria ; Drake, his book of anatomy, Anthropo- logia,

&c.; all of them words of modern, if not of their own fabric ; and on no better authority stand the names of half our later inventions, as microscope, telescope, barometer, thermometer, micrometer, &c. But it is suggested, the word cyclopaedia is ambiguous, and may denote the science of a circle, as well as the circle of sciences : we answer, that as custom, the only sovereign rule of language, has determined the word to the latter sense, it is no more chargeable with ambiguity than a thousand other words of received .use ; no more, for instance, than micrometer, which might either denote a little measure, or a measure of little things.' Rees' Cyclopedia, Article CYCLOPEDIA.

Various Universal Dictionaries of the Arts and Sciences appeared in the middle of the last century ; as that of Barrow, in 2 vols. fol. 1751 and 1754, containing a bad translation of D'Alembert's Preliminary Discourse to the French Ency eloped ie; Owen's New and Com- plete Dictionary of Arts and Sciences, 4 vols. large 8vo. 1754 ; the Complete Dictionary of Arts and Sciences, edited by a Dr. T. \V illiams, Rev. Henry Croker, &c.; and a Universal History of Arts and Sciences, or a Comprehensive Illus- tration of all Sciences and of all Arts, by Dr. De Coetlogon, 2 vols. fol. 1745 : this latter work, it appears furnishing the first hint of the plan of the Encyclopaedia Britannica. In the mean time a translation of Chambers's Cyclo- paedia in France suggested to the booksellers of that country the idea of the celebrated Encyclo- pedic of D'Alembert and Diderot.

The Encyclopaedia Britannica was from the first distinguished by its method tof giving all the principal sciences in distinct and consider- able treatises ; and, while its execution was at this period inferior, the superiority, as it has been thought, of its plan, obtained for it increas- ing popularity throughout all its editions. The first consisted of only 3 vols. 4to. and was completed in 1771 ; the second extending to 10 vols. 4to. appeared between 1778 and 1783, and included two subjects not hitherto embraced in any modern work of tke kind (at the sug-

END

END

gestion, it is said, of the duke of Buccleugh), biography and history. The third edition, in 18 vols., received the important aid and large contributions to its physical science, by Pro- fessor Robison, and was edited by Mr. Colin, Macfarquhar, and the present bishop Gleig. A

fourth, h’fth, and sixth edition of this work have since appeared with minor improvements, and extending it to 20 vols. 4to. But its noble sup- plement, in 6 vols. 4to., is certainly its ‘ better half.’

Having thus redeemed our pledge of furn.‘sh- ing a sketch of the history of our principal En- cyclopaedias, we may, perhaps, without any illiberality advert to the singular inconsistencies and contradictions with regard to the facts and experiments of science, which seem to constitute the great objection to any very extended work of this kind. Were we to attempt to point these out m the works tf our predecessors, it would be without the slightest disrespect for their ‘ labors : they are assignable, for the far greater part, to that very progress of science to which such works contribute largely. But, during the publication of one of them, the whole science of chemistry, for instance, became revolutionised : and the old system was entitled, at the end of the work, to no more consideration in a schedule of science, than were the evanescent republics and kingdoms of Napoleon’s erection, to a place on the map of Europe. While the very excel- lence and incomparably superior execution ‘of the supplemental wing to the other extended work of this description, throws the whole of the elder part of the edifice into shade.

ENCY’STED, adj. % Kv-ric, a bag. Enclosed in a vesicle or bag.

Encyited tumours borrow their names from a cyst or bag in which they are contained. Sharp’s Surgery.

END, v. a., v. n. & n. s. ~] Sax. ent>; Belg.

END’ER, n. *.

EXD’IXG,

END’LESS, adj.

END’LESSLY, adv.

END’LESSNESS,

EXD’LONG, adv.

END’MOST, adj.

END’WISE, adv.

elude ; to arrive at the utmost point of time or space ; to cease ; to die

: as a substantive, it means the point where a course of action or pursuit terminates, or to which it is directed ; the extreme point of time, space, or length : hence, cessation ; limit ; ultimate state or doom ; death. End-day is used by our oldest writers for the last day, and the day of death : thus also our au- thorised ve-sion of the Bible uses the word end. See the instance quoted. An-end means on an end : in Norfolk we have heard an early stirring housewife described as ‘ up-an-end be- tiir.es,’ or early on her feet, i. e. busy, ‘and not a-bed ; and thus we may understand Shakspeare’; ‘ slave, still an-end,’ still here, about me. End- long, is lengthways ; in a straight direction. Endmost, at the farthest, or remotest end : end- wise, erectly ; on an end.

The seruaunt dwellith not in the hous withouteu eende, but the sone dwellith v/ithouten eende.

Widif. Jon. 8.

& Teut. ende ; Goth. ende ; Swed.

Bi paience renne we to the bateil purposid to us, biholdynge in to the maker of ftith and the parfayt endcre lesu. Id. Ebreuis 11.

And God said unto Noah, the end of all flesh is come before me. Bible, Gen. vi. J3.

Jacob had made an end of commanding his sons.

Genesis.

They have ended all my harvest. Ruth.

Mark the perfect man, and behold the upright, for the end of that man is peace. Psalmt.

The end of the commandment is charity. 1 Tim.

at his ende-day he was buried there.

R. Gloucester.

But after labours long, and sad delay, Brings them to joyous rest, and endless bliss.

Spenser.

Wisdom may have framed one and the same thing to serve commodiously for divers ends, and of those ends any one may be

sufficient cause for continuance, though the rest have ceased. ‘ Huoker.

None of the heathens, how curious soever in search- ing out all kinds of outward ceremonies, could ever once endeavour to resemble herein the church’s care for the endless good of her children. Id.

He would in one battle end the quarrel with them, either win or lose the empire. Knolles.

O, that a man might know The end of this duy’s business ere it come ! But it sufficeth that the day will end.

Shukspeare. My guilt be on my head, and ther’s an end ‘ Id.

All the priests and friars in my realm, Shall in procession sing her endless praise. Id.

Stayest thou to vex me here ? Slave, that, still an end, turns me to shame ! Id.

Thus I clothe my naked villainy With old odd ends, stolen forth of Holy Writ, And seem a saint. Id. Richard III.

The lord of Stafford dear to-day had bought Thy likeness; for instead of thee, King Hany, This sword hath ended him. Id. Henry IV.

Except thou desire to hasten thine end, take this for a general rule, that thou never add any artificial heat to thy body by wine or spice, until thou find that time hath decayed thy natural heat. Raleigh.

In dealing with cunning persons, we must ever consider their ends to interpret their speeches ; and it is gooi? to say little to them, and that which they least look for. Bacon.

Her only end is never-ending bliss ; Which is, the eternal face of God to see, Who last of ends, and first of causes is j And to do this, she must eternal be. Dairies. If the world’s age and death be argued well By the sun’s fall, which now tow’rds earth doth bend, Then we might fear, that virtue, since she fell So low as woman, should be near her end. Donne.

The tropick circles have,

Yea, and those small ones, which the poles engrave, All the same roundness, evenness and all The endlessness of the Equinoctial. Id.

Only let our merchants take heed, lest they go so far, that they leave God behind them ; — lest they end their prosperous adventures, in the shipwreck of a good conscience. Bp. Hall.

Yet happy were my death, mine ending West, If this I could obtain, that breast to breast, Thy bosom might receive my yielded spright.

Fairfax.

There was a purpose to reduce the monarchy to a republick, which was far from the end and purpose of that nation. Clarendon.

Hear and mark To what end I have brought thee hither. Milton.

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The angel ended, and in Adam's ear, So charming left his voice. Milton.

All our glory extinct, and happy state,' Here ewallowed up in endlest misery ! Id.

Yet vainly most their age in study spend ; No end of writing books, and to no end. Den/iam. As it is pleasant to the eye to have an endless prospect, so it is some pleasure to a finite understand- ing to view unlimited excellencies. Tdlotson.

Then ease your weary Trojans will attend, And the long labours of your voyage end.

Dryden.

Heaven, as its instrument, my courage sends ; Heaven ne'er sent those who fight for private ends.

Id.

Then spurring at full speed, ran endlong on, Where Theseus sat on his imperial throne. Id.

The supreme power cannot take from any part of his property without his own consent : for the pre- servation of property being the end of government, and that for which men enter into society, it neces- sarily

supposes and requires, that the people should have property, without which they must be supposed to lose that, by entering into society, which was the end for which they entered into it. Locke.

There would be an end of all civil government, if the assignment of civil power were by such institution.

Id.

His sovereignty, built upon either of these titles, could not have descended to his heir, but must have ended with him. Id.

My God, my father, and my friend, Do not forsake me in my end. Roscommon.

Others are apt to attribute them to some false end or intention. Addition's Spectator.

I mark the various fury of the winds : These neither seasons guide, nor ord r binds : They now dilate and now contract their force j Various their speed, but endless is their course.

Prior.

Though God's promise has made a sure entail of grace to all those who humbly seek, yet it no where engages that it shall importunately and endlessly renew its assaults on those who have often repulsed it.

Decay of Piety.

For when success a lover's toil attends, Few ask if fraud or force attained his ends.

Pope.

Each pleasing Blount shall endless smiles bestow, And soft Belinda's blush for ever glow. Id.

The causes and designs of an action are the begin- ning : the effec's of these causes, and the difficulties met with in the execution of these designs are the middle ; and the unravelling and resolution of these difficulties, are the end. Broome of Epic Poetry.

Speakers, whose chief business is to amuse or de- light, do not confine themselves to any natural order, but, in a cryptical or hidden method, adapt every thing to their ends. Watti.

It is required that they should first study and un- derstand the lessons, before they are put upon read- ing them properly : to which end each boy should have an English dictionary to help him over difficul- ties. Franklin. But now being lifted into high society,

And having picked up several odds and ends Of free thoughts in his travels for variety,

He deemed, being in alone isle, amongst friends.

Byron.

ENDAM'AGE, v. a. } Fr. endymmager: ENDAM'AGEMENT, n. s. S from en and damaw. To mischief; injure ; prejudice. VOL. VL'I

Nor ought lie cared whom he endamaged

By tortuous wrong, or whom bereaved of right.

Spenser.

It cometh sometime to pass, that a thing unne- cessary in itself doth notwithstanding appear conve nient to be still held, even without use, lest by reason of that coherence which it hath with somewhat most necessary, the removal of the one should endamai/e the other. Hooker.

Where your good word cannot advantage him, Your slander never can endamage him. Sha/isprare.

These flags of France that are advanced here, Have hither marched to the endamagement. Id.

The trial hath endamaged thee no way j

Rathsr more honour left, and more esteem,

Milton.

The being rightfully possessed of great power and riches, exceedingly beyond the greatest part of iKe sons of Adam, is so far from being an excuse, much less a reason, for rapine and oppression, which tin; endamaging another witho\i authority is, that it is a great aggravation of it : for the exceeding the bounds of authority is no more a right in a great, than in a petty officer. Locke.

When an erroneous opinion is published, the pub- lick is endamaged,

and therefore it becomes punishable by the magistrate. South.

A great alteration doth seldom any wise endamayc or disorder the globe. Woodward. Nat. Hist.

ENDAN'GER, v.a,. 1 From en and danger.

ENDAN'GERMENT, n s. S To put to hazard or peril : a state of hazard.

He — bade his servant Talus to invent Which way he enter might without endanyerment.

Spenser.

He that turneth the humours back, and maketh the wound bleed inwards, endangereth malign ulcers.

Racon.

He finds it best for his people to exercise their faith that the serpents may bite, and their bitings may en- vjenoin, and that this venom may endanger the Is- raelites. Bp. Hall. Contemplations.

Every one desires his own preservation and happi- ness, and therefore hath a natural dread of every thing that can destroy his being, or endanger his hap- piness. Tillatson.

My kingdom claims your birth ; my late defence, Of our endangered fleet, may claim your confidence.

Dryden.

Volatile salts never exist in an animal body ; the heat required to make them volatile, endangers the animal. Arbuthnot.

The interest endangered is our title to heaven.

Rogers.

ENDEAR', -o. a. 3 From en and DEAR,

ENDEAR'MENT, n. s. J which see. To make dear or beloved ; also to make dear in the sense of costly, high in price : endearment occurs chiefly in the former sense.

All those instances of charity which usually endeur each other, sweetness of conversation, frequent admo- nition, all significations of

love, must be expressed towards children. Taylor.

And in the mixture of ail these appears

Variety, which all the rest endears. Denham.

Is not the separate property of a thing the great cause of its endearment amongst all mankind ?

South.

The only thing that can endear religion to your practice, will be to raise your affections abovo this worlil. Wake..

Her first endearments, twining round the soul.

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Such are the vicissitudes of the world, through all its parts, that day and night, labour and rest, hurry and retirement, endear each other. Johnson.

Those bodies, which, when full of life and beauty, lay in their arms, and were their joy and comfort, when dead and putrid, become but the more loathsome from remembrance of former endearments. Burke.

And these were not of the vain kind which cloys, For their* were buoyant spirits, never bound

By the mere senses, and that which destroys Most lovo ; possession, unto them appeared A thing which each endearment more endeared.

Byron.

ENDEAVOUR, v. a., v. n. & n. t. > Old. Fr.

ENDEAV’)I;RER, S indevoir,

from devoir or debuoir, duty; from Lat. debeo, debitus, to owe. To attempt ; strive ; labor to a particular purpose or end, taking after before the object : as a substantive, endeavour signifies effort,

attempt, whether to attain or avoid.

Heaven doth divide The state of man in divers functions, Setting endeavour in continual motion.

Shakspeare.

How many endeavour that, not without danger of curses and uproar, which was voluntarily tendered unto Moses. Bp. Hall. Contemplations.

They take very unprofitable pains who endeavour to persuade men that they are obliged wholly to despise this world and all that is in it, even whilst they them- selves live here. Clarendon.

To prayer, repentance, and obedience due, Though but endeavoured with sincere intent, Mine ear shall not be slow, mine ear not shut.

Milton.

Such an assurance as will quicken men's endeavours for the obtaining of a lesser good, ought to animate men more powerfully in the pursuit of that which is infinitely greater. Tillotson.

The bold and sufficient pursue their game with more passion, endearuur, and application, and therefore often succeed. Temple.

He appears an humble endeavourer, and speaks honestly to no purpose. Rymer't Tragedies.

I take imitation of an author to be an endeavour of a later poet to write like one who has written before him on the same subject. Dryden.

This is tLe hinge on which turns the liberty of in- tellectual beings, in their constant endeavours after, and steady prosecution of, true felicity. Locke.

For the reason of this wonder, he attempts it by mechanism, and endeavours to make it out by atomical aporrheas, which, passing from the cruentate cloth or weapon to the wound, and being incorporated with the particles of the salve, carry them in their embraces to the affected part. Glanvillc.

She could not make the least endeavour towards the producing of any thing that hath vital and organical parts. Roy.

About three hundred persons were condemned to the galleys, and

treated most cruelly in them, upon no other pretence, out because they would not change their religion, and had endeavoured to make their es- cape out of France. Burnet.

I could wish that more of our country clergy would endeavour after a handsome elocution. Addison.

Of old, those met rewards who could excel ; And those were praised, who but endeavoured well.

Pope.

To (mdeavour to work upon the vulgar with fine s*ose, is like attempting to hew blocks with a razor.

Id.

In order to a full acquaintance with ourselves, we must endeavour to know not only what we arr, but what we shall be. Mason.

To be idle and to be poor have always been re- proaches, and therefore every man endeavours with his utmost care to hide his poverty from others, and his idleness from himself. Johnson.

ENDEAVOUR RIVER, a river on the north-east coast of New Holland, with a bar at its mouth, and not having depth of water for vessels to sail more than a mile above the bar. At low water there is not above nine or ten feet water on the bar, and not more than seventeen or eighteen at high tide. The soil in the neighbourhood is not considered productive, but turtles are met with here in abundance.

ENDEAVOUR STRAIT, a narrow sea or channel between New Guinea and New Holland, abou'c ten leagues in length and five broad, except at the north-east entrance, where it is contracted by Prince of Wales's Islands. It is about thirty miles long by fifteen wide, but contracts to not more than a mile in width at the east entrance. It was navigated by Torres as early as 1606.

ENDE'MIAL,a$.^ Fr. endemique ; Gr.

ENDEM'IC, >tv5»j/«oc, from iv and

ENDEM'ICAL.) #»j/*oc, the people. Pe-

culiar to a country or common among a people.

We may bring a consumption under the notion of a pandemick, or

endemick, or rather a vernacular disease, to England. Harvey.

Solenander, from the frequency of the plants springing up in any region, could gather what ende- mial diseases the inhabitants were subject to. Ray.

What demonstrates the plague f be endcmial to Egypt, is its invasion and going off at certain seasons.

Arbuthnot.

ENDE'NIZE,r.a. From denizen. To make free ; to enfranchise.

The English tongue hath been beautified and en- riched out of other tongues, by enfranchising and ende- nizing strange words. Camden.

ENDIAN, a town in the province of Kuzistan, Persia, occupying both banks of the river Tab, which is here 240 feet broad. It is surrounded by wells which are nowhere above three feet thick ; and is about two miles in circuit. Its trade is with Bassora and Bebahan. Population 4000 or 5000.

ENDINGEN a town of Baden, situated near the Rhone, seven miles north-west of Friburgh; having about 2700 inhabitants.

E'NDIVE, n. s. Fr. endive ; Lat. intybum. A plant.

Endive, or succory, is of several sorts ; as the white, the green, and the curled. Mortimer.

ENDORSE', v. a. } Fr. endosser, from Lat-

ENDORSE'MENT, n. s. / in and dormm, the back.

EN DOSS', v. a. 5 To place on the back,

by writing or otherwise. See the extract from Milton. Chiefly applied in modern times com- mercially, or to writing on the back of a ne- gotiable instrument or bill of exchange.

A shield, in which he did endoss

His dear Redeemer's badge. Spenser,

A French gentleman speaking with an English of the law salique, the English said that was meant of the women themselves, not of males claiming by women. The French gentleman sai-'l, Whrre do yea

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hnd t.nat gloss ? The English answered, Look on the backside of the record of the law salique, and there you shall find it endorsed. Bacon's Apophthegm,

The' endorsement of supreme delight, Writ by a friend, and with his blood.

Herbert.

Chariots, or elephants endorsed with towers Of archers. Milton's Paradise Regained.

Upon credential letters was endorsed this superscrip- tion, To the king who hath the sun fnt his helmet.

Howel.

All the letters I can find of yours I have fastened in a folio cover, and the rest in bundles endorsed.

Swift to Pope,

ENDOW, v. a. ˆ Fr. douar ; Span, -and ENDUE' v. a. > Port, dotar; Lat. indotare,

ENDOW'MENT,W.S. J to give a portion to a daughter, &c., from dos, dotis, a portion. Skin- ner says that endue is a corrupt method of writ- ing endow. To enrich with a portion or with excellence of any kind. An endowment is a property, revenue, or giftk bestowed or appro- priated.

Leah said, God hath endued me with a good dowry.

Genesis.

He shall surely endow hei to be his wife. Exodus. Endue them with thy holy spirit.

Common Prayer.

Wisdom was Adam's instructor in Paradise : wis- dom endued the

fathers, who lived before the law, with the knowledge of holy things. Hooker.

These banished men that I have kept withal, Are men endued with worthy qualities. Shahspeare.

I do not think

So fair an outward, and such stuff within, Endows a man but him. Id. Cymbeline.

Who fights

With passions, and overcomes them, is endued With the best virtue, passive fortitude.

Massingcr.

[at first with two fair gifts Created him endowed ; with happiness And immortality ; that fondly lost, This other served but to eternize woe.

Milton.

With what ease,

Endued with royal virtues as thou art, Might'st thou expel this monster from his throne ?

Id.

Whatsoever other knowledge a man may be en- dowed withal, he is but an ignorant person who doth not know God, the author of his being. Tillotton.

Every Christian is endued with a power, whereby he is enabled to resist and conquer temptations. Id. A chapel will I build, with large endowment.

Dryden.

An alms-house I intend to endow very handsomely for a dozen superannuated husbandmen. Addison.

Among those who are the most richly endowed by nature, and accomplished by their own industry, how few are there whose virtues are not obscured ? Id,

God did never command us to believe, nor his ministers to preach, any doctrine contrary to the rea- son he hath pleased to endow us with. Swift.

Our souls therefore must be of a more excellent na- ture than theirs ; and from the power of thought with which they are endowed. Mason.

Stephen Potts, a young rustic, just broke from school, and of rustic education, with endowment! rather above the common order. Franklin.

Where will you find a race like theirs, endowed With all that man e'er wished, or Heaven bestowed ?

Cowper.

Endued with reason only to descry His crime's and follies with an aching eye; With passions, just that be may prove, with pain, The force he spends against their fury vain. Id.

ENDRACHT'S LAND, or Concord, a large but low and sterile tract of the west coast of New Holland, in which is a spacious bay, wh-idt the French have called after the celebrated English navigator Dampier : he had previously given it the appellation of Shark's Bay.

ENDRIE, a town in the district of Easteni Caucasus, Asiatic Russia, situated on the river Akatsch, about twenty miles from the Caspian Sea. It consists of nearly 3000 houses, and is the common property of several Tartar princes, who acknowledge the authority of the Russians. Here are several mosques, an Armenian church, and two Jewish synagogues. The Jews are very enterprising in commerce ; and a great trade is carried on in slaves and plunder, as all persons and their property kidnapped by the neighbour- ing tribes are sold or redeemed here. Eridrie is acknowledged a free town by all the nations of Caucasus. It was formerly called Baal or Balek, but having been defended against the Arabs, by a governor called Endrie, became known by his name. It was burnt by the Russians in

1722.

ENDURE', v.n.&v. a. j Fr. endurcr, from

ENDUR'ANCE, n. s. S Lat. durare ; Ileb.

ENDUR'ER. 3 in, to inure to bard-

ship. To bear or brook evil; to last; remain: as an active verb, undergo ; sustain ; bear pa- tiently; support: endurance is, continuance in grief; patience; or continuance generally.

For how can I endure to see the evil that shall come unto my people ? Or how caa I endure to seo the destruction of my kindred ? Esther viii. 6.

Doth the crown endure to every generation ?

Proverbs.

Labour not for the meat which perisheth, but for that meat which endwreth unto everlasting life.

John.

And therewithal the king- no longer enduring to sittc vp, laide him down on his right side, his face towarde them : and none was there present that coulde refrain from weeping. Sir T. More.

Some of them are of very great antiquity and con- tinuance, others more late and of less endurance.

Spenser's Ireland.

They are very valiant and hardy ; for the most part great endwers of cold, labor, hunger, and all hardiness. Spenser.

Taking into the city all such things a* they thought needful for the enduring of the siege, they destroyed all the rest. Knolles's History.

By thine own toague thou art condemned, and

must Endure our law. Shakspeare. Cymbeline

I should have taVn some pains to bring together Yourself and your accusers, and have heard you. Without endurance further. Id. Henry VIII.

The hardness of bodies is caused chiefly by the jejuneness of the spirits, and their imparity with the tangible parts, which make them not only hard, but fragile, and less enduring of pressure. Bacon.

Our great English lords could not endure that any kings should reign in Ireland but themselves ; nay, they could hardly endure that the crown of England should have any power over them. Davia

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When a hf art is hardened with any passion, it will endure much, ere it will yii-ld to relent.

lip. Hall. Contemplations.

So dear I love him, that with him all deaths I could endure ; without him, live no life. Milton. Great things of small

One can create ; and in what place soe'er

Thrive under evil, and work ease out of pain,

Through labour and endurance. Id.

The deer endureth the womb but eight months, and is complete at six years. Browne's Vulgar Errours. I wish to die, yet dare not death endure.

Dryden.

The gout haunts usually the easy and the rich, the nice and the lazy, who grow to endure much, because they can endure little. Temple.

Their fortitude was most admirable in their pre- sence and endurance of all evils, of pain, and of death.

Id.

By being able to repeat measures of time, or ideas of stated length of duration in our minds, we can imagine duration, where nothing does really endure or exist. Locke.

I would fain know whether that man takes a ra- tional course to preserve himself, who refuses the en- durance of these higher troubles, to secure himself from a condition infinitely more miserable ? South.

But I who ne'er was blessed by Fortunes hand, Nor brightened ploughshares in paternal land ; Long in the noisy town have been immured, llespired its smoke, and all its cares endured. Gay.

The love of praise, howe'er concealed by art, Reigns more or less, and glows in every heart j The proud to gain it toils, and toils endure, The modest shun it, but to make it sure. Yining.

When disappointment snaps the clue of hope, And through disastrous night they darkling grope, With deaf endurance sluggishly they bear, And just conclude that ‘ fools are fortune’s care.’

The enduring record bears the artist’s name, Demands his honors, and asserts his fame.

Sheridan. Thou chief star !

Centre of many stars ! which makest our earth Endurable, and temperest the hues And hearts of all who walk within thv rays !

Byron.

ENDYMION, in fabulous history, a shepherd son of TEthlius and Calyce. It is said that he required of Jupiter to gra-nt to him to be always young, and to sleep as much as he would; whence came the proverb of Endymionis som- num dormire, to express a long sleep. Diana saw him naked as he slept on Mouot Latmos ; and was so struck with his beauty, that she came down from heaven every night to enjoy Ins com- pany. Endymion married Chromia daughter of Jtonus : by whom he had three sons, Paeon, Epeus, and /Eolus, and a daughter called Eury- dice. The fable of Endymion’s amours with Diana, or the moon, arose from his knowledge of astronomy ; for as he passed the night on some high mountain, tu observe the heavenly bodies, it came to be reported that he was courted by the moon. Some suppose that there were two of that name; the son of a king of tLHs, and the shepherd or astronomer of Caria. The people of Heraclea maintained that En- dymion died on Mount Latmos, and the Eleans pretended to show his tomb at Olympiain Pelo- ponnesus.

E’NECATE, v. a. Lat. encco. To kill ; to destroy.

Some plagues partake of such a pernicious degree

of malignity, that, in the manner of a most presen-

taneous poison, they enecate in two or three hours,

suddenly corrupting or extinguishing the vital spirits.

Harvey on the Playve.

ENEMA; Gr. tviri/jn, to inject; a clyster. A well known form of conveying both nourishment and medicine to the system, by injection through the anus, under certain morbid circumstances, such as occur

in lock-jaw, diseased oesophagus, &c. By these means the body can be supported for a few weeks, while an attempt is made at effecting a cure. It is composed, in such cases, of animal broths, gruels made of farinaceous seeds, mucilages, &c. As a form of medicine, clysters are no less useful ; and, according to the intention with which they are prescribed, they are either of an emollient, anodyne, or purgative nature.

EN'EMY, n. s. Tr.ennemi; Span, cnennjzu , Ital. inimico; Lat. inimicus ; i.e. in privative, and amicus, a friend. A foe, public or private ; one that is averse from, or dislikes : applied in a particular sense theologically, i. e. to Satan, the great enemy of God and man.

Netheless brynge ye hidur tho myn enemy s that wolden not that I regned on hem ; and sic ye before me. Wiclif. Luk 19.

And at the laste deeth the enemy schal be distried, for he hath maad suget alle thiugis undir hise feet.

Id. 1 Cor. 15.

I say unto you, love your enemies. Matt.

Defend us from the danger of the enemy.

Common Prayer. Kent in disguise,

Followed his enemy king, and did him service Improper for a slave. Shakspeare. King Lear. All these statutes speak of English rebels and Irish enemies, as if the Irish had never been in condition of subjects, but always out of the protection of the law. Davies on Ireland.

They were thine enemies that raised thee to the cross •, how can they he other than thy friends, that are enemies to thy most cruel and indign crucifiction.

Bp. UaM.

Tis now no time to dally, The enemy begin to rally ; Let us that are unhurt and whole Fall on, and happy man be 's dole.

Butler. Httdibras.

Pride destroys all symmetry and grace, and affec- tation is a more terrible enemy to fine faces than the small-pox. Hughes.

A man's wisdom is his best friend ; folly his worst enemy. Sir W.

Temple.

By asserting the scripture to be the canon of our faith, I have unavoidably created to myself enemies in the papists directly, because they have kept the scripture from us what they could.

Dryden. Pref. to Reliaio Laid. It stands her* stigmatized by the apostle, as a tem- per of mind rendering men so ilctestably bad, that the great enemy of mankind neither can nor desires to make them worse. South.

The enemy thinks of raising threescore thousand men for the next summer. Addison on the War.

He that designedly uses ambiguities, ought to be looked on as, an enemy 10 truth and knowledge.

Locke.

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Bold is the critick, who dares prove These heroes were no friends to love ; And bolder he who dares aver, That they were enemies to war. Prior.

Now the first steps to this are seldom thought worth our care ; sometimes not taken notice of ; so that the enemy is frequently got close up to us, and even within our trenches, before we observe him. Mason.

The sights he was accustomed to behold,

The wild seas, and wild men with whom he

cruised,

Had cost his enemies a long repentance, And made him a good friend — but bad acquaintance. Byron. Don Juan.

EN’ERGIZE, v. a. “} Tr.energie; Ital. ENERGET’IC, adj. \ energia, enargia ; Sp.

ENERGET’ICAL, jˆand Port, energia;

ENERGETICALLY, adv. CGr. ivipfiia, of snyov, ENER’GIC, adj. f work. ‘ Effectual

EN’ERGY, n. s. j operation.’ — Min-

sheu. < Efficient faculty or act.' — Wilkins. To energize is to excite to forcible and effective ac- tion ; energic and energetic, are powerful in effect.

They are not effective of any thing, nor leave no •work behind them, but are energies merely ; for their working upon mirrours, and places of echo, doth not alter any thing in those bodies. Bacon.

These miasms entering the body, are not so ener- getich as to venenate the entire mass of blood in an instant. Harvey.

God thinketh with operation infinitely perfect, with an omnipotent as well as an eternal energy.

Grew.

Swift and ready, and familiar communication is made by speech; and, when animated by elocution, it acquires a greater life and energy, ravishing and captivating the hearers. Holder.

Whether with particles of heavenly fire The God of nature did his soul inspire ; Or earth, but new divided from the sky, And pliant still, retained the’ ethereal energy.

Dryden.

Matter, though divided into the subtilest parts, moved swiftly, is senseless and stupid, and makes no approach to vital energy. Ray-

Who did ever, in French authors, see The comprehensive English energy 1

Roscommon.

Beg the blessed Jesus to give an energy to your imperfect prayers, by his most powerful intercession.

Smalridge.

In all your lines let energy be found, And learn to rise in sense, and sink in sound.

Garth.

How can concussion of atoms beget self-conscious- ness, and powers

and energies that we feel in our minds ? Bentley.

Many words deserve to be thrown out of our lan- guage, and not a few antiquated to be restored, on account of their energy and sound. Swift.

What but God !

Inspiring God ! who, boundless spirit all, And unremitting energy, pervades, Adjusts, sustains, and agitates the whole.

Thomson.

‘ Who would have supposed,’ said he, ‘ Franklin to be capable of such a composition ? What painting, •what energy, what fire! he has surpassed the original.’

Franklin.

They (the works of malice and injustice) are finished with a bold masterly hand ; touched as they

are with the spirit of those vehement passions that

call forth all our energies. Burke,

Thy language at this distant moment shows

How much the country to the conqueror owes:

Expressive, energetic, and refined,

It sparkles with the gems he left behind. Cowper.

Rouse the dull ear, the hoodwinked eye unbind.

And give to energy the public mind. Darwin.

And now, expanded to the beams of truth,

New energies and charms unknown before

His mind discloses. Beattie.

Nought's more sublime than energetic bile, Though horrible to see, yet grand to tell,

Like ocean warring 'gainst a rocky isle — And the deep p?.ssions flashing through her form Maoe her a beautiful embodied storm. Byron.

ENEKGUMENS, in church history, persons supposed to be possessed by the devil, concern- ing whom there were many regulations among the primitive Christians. They were denied bap- tism and the eucharist, in some churches ; but, though they weri under the care of exorcists, they were allowed the public prayers of the church, and were permitted to be present. See EXOR- CISM.

ENERVE', v. a. ~\ Old Fr. enerver ;

ENERV'ATE, v. a. & adj. > Span, enervar ; Lat.

ENERVA'TION, n. s. j enervo, enervarc. To weaken ; break the force of; make powerless. Enervation is the act of weakening, or state of being weakened ; effeminacy

Great empires, while they stand, do enervate and destroy the forces of the natives which they have subdued, resting upon their own protecting forces.

Bactm. We shall be able to solve and enerve their force.

Digby.

Such object hath the power to soften and tame Severest temper, smooth the ruggedest brow, Enerve, and with voluptuous hope

dissolve.

Milton.

If that sheepish softness, which often enervates those who are bred like fondlings at home, be care- fully to be- avoided, it is principally so for virtue's sake; for fear lest such a yielding temper should be too susceptible of vicious impressions, and expose the novice too easily to be corrupted. Lucke.

On each enervate string they taught the note, To pant, or tremble through au eunuch's throat.

Pope.

Footmen exercise themselves, whilst their enervated lords are softly lolling in their chariots.

Arbuthnot and Pope.

Fancy enervates, while it sooths, the heart, And, while it dazzles, wounds the mental sight : To joy, each heightening charm it can impart, But wraps the hour of woe in tenfold night.

Beattie.

ENERVATION is the act of destroying the force, use, or office, of the nerves, either by cutting them, or weakening them with debauchery.- Ex- cess of wine, and other strong, hot, spirituous liquors, enervates, or weakens the nerves. Too great abstinence has the same effect. A mo- derate use of these and other stimuli strengthens them.

ENESEI, or YEXESEI, a town and river of Siberia. The latter rises in the borders of Chinese Tartary, and, taking a northein course, runs iufp the Frozen Ocean. The town of this name is io

the government of Tobolsk, and seated on the river. It is fortified, of considerable size, and populous ; having a jurisdiction over an exten- sive tract, which yields a tribute of furs to the government.

ENFEE'BLE, v. a. En, expletive, and FEEBLE, which see. To weaken ;

deprive of power or strength.

My people are with sickness much enfeebled.

Shakipeare. I've belied a lady,

The princess of this country ; and the air on't Revengingly enfeeblet me. Id. Cymbeline.

Some employ their time in affairs below the dig- nity of their persons ; and being called by God, or the rcpublick, to bear great burdens, do enfeeble their understandings by sordid and brutish business.

Taylor't Rale of Holy Living. Much hath hell debased, and pain Enfeebled me, to what I was in heaven !

Milton.

Sure, nature formed me of her softest mould, Enfeebled all my soul with tender passions, And sunk me even below my own weak sex.

Additon* • Abandoned all to soft Fnone's charms,

He to oblivion doomed the listless day ; Inglorious lulled in Love's dissolving arms.

While flutes lascivious breathed the' enfeebling lay.

Beattie.

ENFE'OFF, v. a. \ Low Lat. feoffitmen- ENFE'OFFMENT, n. s. \ turn. To invest with any dignities or possessions ; a law term.

If the eldest son enfeoff the second, reserving ho- mage, and that homage paid, and then the second son dies without issue, it will descend to the eldest as heir, and the seigniory is extinct. Hale.

ENFE'OFFMENT, n. s. From enfeoff. The act of enfeofl-ing ; the instrument or deed by which one is invested with possessions.

ENFETTER, v. a. From fetter. To bind in fetters ; to enchain. Not in use.

His soul is so enfettered to her love, That she may make, unmake, do what she list.

Shaktpeare.

ENFIELD (William), LL.D., an elegant and admired miscellaneous writer, born at Sud- bury in 1741. He was early destined for the ministry, and received his education at the aca- demy of Dr. Ashworth, a protestant dissenter at Daventry. When about twenty-two years of age he was chosen minister by the congregation at Benn's Garden, Liverpool ; and soon gained considerable reputation. During his residence at Liverpool he published two volumes of ser- mons, and a collection of hymns and family prayers, which met with a favorable reception. He removed to Warrington about 1770, having been appointed tutor and lecturer in the belles lettres at Warrington academy ; a station which he filled for several years with unremitted assiduity. Among many useful books which he compiled, the Speaker, composed of pieces of recitation from the best and most approved authors, has gained him considerable celebrity. He also published — The Preacher's Directory; The English Preacher, a collection of sermons from the most celebrated authors, in 9 vols. 1 2mo. ; Biographical Sermons on the principal characters in the Old and New Testament ; and

a number of single sermons on particular occa- sions. His attention having been engaged by the controversy relative to literary property, he also wrote a pamphlet on that subject. He like- wise published a history of Liverpool. Besides the above works, he published, during his resi- dence at Warrington, Institutes of Natural Phi- losophy, theoretical and experimental, in 1 vol. 4to. ; and about this time the university of Edinburgh conferred on him the degree of LL. D. After the dissolution of the academy at Warring- ton, in 1783, Dr. Enfield continued two years in that town in the capacity of a private tutor ; but in 1785 he was chosen pastor of the Octagon meeting-house at Norwich. Not long after this, he gave up the labors of private tuition and de- voted himself entirely to literary pursuits, and the duties attendant on his pastoral charge. He undertook and executed the laborious task of abridging Brucker's History of Philosophy, which he published in 2 vols. 4to. in 1791 ; and it has been admitted that the tenets of the differ- ent sects of philosophers were never exhibited with greater perspicuity and elegance. To the Biographical Dictionary, published under the inspection of Dr. Aikin and others, our author was an extensive contributor. He died on the 3rd of November, 1797, in the fifty-seventh year of his age.

ENFIELD, a township of New Hampshire, in Grafton county, eleven miles south-east of Dart- mouth College. It had 724 citizens in 1790, chiefly farmers.

ENFILA'DE, v. a. & n. s. Fr. enfilade, en- filer ; en and filer (Lat. filum).

To draw out in file or threads; to extend lengthways; hence to sweep along a straight line with musquetry or ar- tillery ; a military term.

The avenues, being cut through the wood in right tines, were enfiladed by the Spanish cannon.

Expedition to Carthageita.

In conducting the approaches at a siege care must be taken that the trenches be not enfiladed from any work of the place. To enfilade, is to sweep the whole length of any work, or line of troops, with the shot of artillery or small anu >. Jamet.

ENFILADE, in the art of war, is used in speaking of trenches, or other places which may be scoured by the enemy's shot along their whole length. In conducting the ap- proaches at a siege care must be taken that the trenches be not enfiladed from any work of the place.

ENFINE, formerly Antinoe, a city of Egypt, built by Adrian in honor of his infamous favorite Antinous. It is situated towards the middle of Upper Egypt, and still contains several stately monuments of antiquity. This city was anciently very magnificent. It was about half a league in circumference, having two principal streets forty- five feet wide, intersecting each other at right an- gles, and running through its whole length. The others we»e more narrow, but equally straight ; the two largest having gates at each end, part of which still remain. According to the Nubian geographer it was called the City of the Magi, because Pharaoh is said to have caused the Ma- gicians to come thence to his court. Near it were the ruins of Abydos, where there was an

oracle of the god Besa, one of the most ancient in Egypt, and which was still famous in the time of Constantius. The ruins of the gates are the most beautiful pieces of architecture to be met with in this place. The handsomest has three vaulted entries ; the middle one being forty feet high, twenty-two wide, and twenty thick ; the other two smaller. Each of the facades of this edifice is ornamented with four pilasters in bas relief, with Corinthian capitals, the acanthus leaves of which have a considerable projection. It was surrounded by eight Corinthian columns, of which only one now remains, but the pedestals of the rest

are still entire. Besides these, there are heaps of rubbish in different parts of the town, apparently the remains of ancient temples or palaces. All these seem to have been bordered by a colonnade, forming a portico on each side, where the inhabitants might walk secure from the heat of the sun. One of the squares was or- namented with four large Corinthian pillars, three of which are destroyed all but the bases. The fourth is quite entire, about fifty feet high, and the shaft composed of several stones. The pedestal has a Greek inscription, much defaced, dedicating it to the emperor Alexander Severus, to whom the senate of ALEXANDRIA had already dedicated the famous column mentioned under that article. These four other columns were

Sker away as swift as stones Enforced from the old Assyrian slings. Id.

In this point charge him home, that he affects Tyrannick power :• If he evade us there, Enforce him with his envy to the people, And that the spoils got on the Antiates Were ne'er distributed. Id. Coriolanus.

All revoke

Your ignorant election ; enforce his pride And his old hate to you. Id.

If thou did'st put this sour cold habit on, To castigate thy pride, 'twere well, but thou Dost it enforcedly: thoud'st courtier be, Wert thou not beggar. Id. Timon.

More than I have said, The leisure and enforcement of the time Forbids co dwell on. Id. Richard III.

lie that contend eth against these enforcements, may easily master or resist them. Raleigh's History.

A just disdain conceived by that queen, that so wicked a rebel should prevail against her, did move and almost enforce hor to send over that mighty army.

Dairies on Ireland.

The personal descent of God himself, and his as- sumption of our flesh to his divinity, was an enforce- ment beyond all the methods of wisdom that were ever made use of in the world. Hammond.

When a man tumbles a cylinder or roller down an hill, 'tis certain that the man is the violent enforcer of the first motion of it. Id.

He prevailed with him, by enforcing the ill conse-

therefore probably raised in honor of that em- quence of his refusal to take the office, which would

peror after his victories over the Persians ; for the foliage of the oak, with which the first stone or ihe shaft is decorated, was a sign of victory among the Romans. Towards the end of the fourth century the city was peopled by Chris- tians ; and Palladius assures us that there were at that place twelve convents of virgins, and several others inhabited by monks. In the en-

be interpreted to his dislike of the court.

Clarendon.

He now defies thee thrice to single fight, As a petty enterprise of small enforce. Milton. The rewards and punishments of another life, which the Almighty has established as the enforcements of his law, are of weight enough to determine the choice.

Locke. To avoid all appearance of disaffection, I have

virons there are still several Coptic monasteries care to enforce loyalty by ˆ invincible argumeM.

Swift.

The most effectual grace is freely offered, to encou- rage and assist our obedience : advantages which no

possessed by monks equally miserable and igno- rant. The Nubian geographer informs us, that the city was surrounded by a well cultivated

country, abounding in fruits and harvests ; but human laws have to enforce the observance of them.

these have now given place to sands and barren

deserts.

ENFI’RE. v. a. From fire. To fire; to set on tire; to kindle. Obsolete.

So hard those heavenly beauties be enfired, As things divine least passions do impress.

Spenser.

ENFORCE’, v. a., v.n.&n.s.\ En, exple ENFORC’EDLY, adv. * tive, and force.

ENFORCE’MENT, n.s. (To strengthen,

Masun.

ENFO’ULDRED, adj. From Fr. foudre. Mixed with lightning. Obsolete.

Heart cannot think what courage and what cries, With foul enfouldred smoak and flashing fire, The hell-bred beast threw forth unto the skies.

Faerie Quesne.

ENFRANCHISE, v. a. \ En and FRAN-

ENFRAN’CHISEMENT, n.s. i CHISE, which see. To set free from slavery, custody, 01 the disad-

ENFOR’CER. J invigorate, in vantages of being an alien : to invest with the

stigate, provoke, urge, compel : as a verb neuter, privileges of freedom.

to attempt by force ; to approve ; evince. The derivations follow these meanings.

• Fear gave her wings, and rage enforced my flight Through woods and plains. Faerie Queene.

The idle stroke, enforcing furious way, Missing the mark of his misaimed sight, Did fall to ground. Id.

Which laws in such case we must obey, unless there be reason shewed, which may necessarily en- force that the law of reason, or of God, doth enjoin the contrary. Hooker.

For competence of life I will allow you. That lack of means enforce you not to evil.

Slui/upeure.

His mistress

Did hold his eyes lockt in her crystal looks. — Belike, that now she

hath enfranchised them, Upon some other pawn for fealty. Shakspeare.

Never did captive with a freer heart Cast off his chains of bondage, and embrace His golden uncontrouled enfranchisement. Id.

Men, forbearing wine, come from drinking healths to a draught at a meal ; and, lastly, to discontinue al- together ; but if a man have the fortitude and resolu- tion to enfranchise himself at once, that is the best.

Bacon’s Essayt.

But think that death hath now enfranchised thee, Thou hast thy expansion now and liberty. Donne.

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The English colonies, and some septs of the Irishry, enfranchised by special charters, were ad- mitted to the benefit of the laws. Davies.

Romulus was the natura. parent 01 ail those people that were the first inhabitants of Rome, or of those that were after incorporated and enfranchised into that name, city, or government. Hale.

If they won a battle, prisoners became slaves, and continued so in their generations, unless enfranchised by their masters. Temple.

He that is by charter made denizen of England, is said to be enfranchised; and so is he that is made a citizen of London, or other city, or burgess of any town corporate, because he is made partaker of those liber- ties that appertain to the corporation. Cowel.

These words have been enfranchised amongst us.

Watts.

Cities gradually acquired wealth, a considerable share of the public,taxes was levied on them, the in- habitants grew in estimation, and, being enfranchised by the sovereign, a place in parliament was the conse- quence of their liberty, and of their importance.

Robertson. History of Scotland.

ENFRO'ZEN, partlcip. From frozen. Con- gealed with cold. Not used.

Yet to augment the anguish of my smart,

Thou hast enfroxen her disdainful breast.

That no one drop of pity there doth rest.

Spenser.

ENGADINA, a territory of the Orisons among the Alps ; extending along the banks of the river Inn, from its source to the Tirolese. It is divided into the Upper and Lower.

ENGADINA, LOWER, has a fertile soil and produces corn and fruits abundantly. It is sub- divided into three communities. Cernetz is the chief town.

ENGADINA, UPPER, is a beautiful district, but on account of its elevation produces little else but rye and barley, the cold weather setting in early and ending late. Even in summer, the air is often very piercing and the corn much hurt by hoar frost. Hence the Italian proverb, ' Engadina terra fina, se nou fosse la pniina ;' i. e. ' Engadina would be a fine country were there no frost.' It is subdivided into two com- munities. Zuts is the capital.

ENGAGE', u.a.&v.n. ? Fr. engager; Ital.

ENGAGE'MENT', n. s. lingaggiare. En arid gage. See GAGE. To bind, or be bound, to fulfil or accomplish certain engagements. Hence to make liable to a debt ; pledge or hazard life in a service ; unite, attach, employ, induce, or persuade ; as well as to encounter, fight : and, as a neuter verb, to conflict ; embark or enlist in any affair. Engagement has a similar diversity of application.

I have engaged myself to a dear friend,

Engaged my friend to his mere enemy,

To feed my means.

Shakspeare. Merchant of Venice.

The commemorating the death of Christ, is the professing ourselves the disciples of the crucified Sa- viour ; and that engngeth us to take up his cross and follow him. Hammond.

This is the greatest engagement not to forfeit an op- portunity. /^_

.Before I engage myself in giving any answer to this objection of inconsumptible lights, I would set the effect cerUinly averred

Upon advertisement of the Scots army, the ear. of Holland was sent with a body to meet and engage with it. Clarendon.

To every duty he could minds engage, Provoke their courage, and command their rage.

Waller.

Our army, led by valiant Torrismond, Is now in hot engagement with the Moors.

Dryden.

His beauty thete, and those his blooming age, The rest his house and his own fame engage. Id.

For I shall sing of battles, blood, and rage, Which princes and their people did engage. Id.

Tis not indeed my talent to engage In lofty trifles, or to swell my page With wind and noise. • Id. Pcrsitu.

The merchant's wife, who abounds in plenty, is not to have downright money ; but the mercenary part of her mind is engaged with a present of plate.

Spectator. Good-nature engages every body to him.

Addison.

So shall I court thy dearest truth, When beauty ceases to engage ;

So thinking on thy charming youth, I'll love it o'er again in age. Prior.

This practice may be obvious to any who impar- tially, and without engagement, is at the pains to ex- auiine. Swift.

Play, either by our too constant or too long en- gagement in it, becomes like an employment or pro- fession. Rogers.

Encouraged by despair, or obstinate To fall like men in arms, some dare renew Feeble engagement, meeting glorious fate On the firm

land. Philips.

We have been firm to our allies, without declining any expence to which we had engaged ourselves, and we have even exceeded our engagement.

A tterbury.

We have, in expence, exceeded our engagements.

Id.

The rebel knave, who dares his prince engage, Proves the just victim of his royal rage. Pope.

Or a certain sweetness of disposition, and agree- ableness of manner, that is naturally engaging?

Mason.

Sir Humphry, shooting in the dark, Makes answer quite beside the mark : No doubt, my dear, I bade him come, Engaged myself to be at home, And shall expect him at the door Precisely when the clock strikes four. Cowper. Yet hence, alas ! insolvencies ; and hence Thn' nnpitied victim of ill judged expence, From all his wearisome engagements freed, Shakes hands with business, and retires indeed.

Id.

ENGANO ISLE, an island, about thirty miles in circumference, lying off the south-west coast of the Island of Sumatra, in lat. 5° 20′ S., long. 102° 20′ E. The male inhabitants go naked, and are fairer and taller than the Malays : their hair is black,' which the men cut short, and the women wear long and turned up. They also wear a piece of plantain leaf round the waist Both men and women wear a ring of cocoa-nut, or leaves, in large holes at their eais. Their canoes are formed of planks sewed together and have out-rigging and sharp ends. They will hold six or seven men. They always carry lances made of hard wood and about seven feet long not only as weapons, but for the purpose of

striking fish. Some of these are tipped with pieces of bamboo made sharp, and the concave part filled with fish-bones and shark's teeth.

Some are armed with pieces of bone made sharp and notched, and others pointed with bits of iron and copper. The soil of the island is for the most part a red clay, and the productions the same as on the coast of Sumatra. No rice has been seen among the inhabitants, nor have cattle or fowls of any kind been observed here. .Their houses are circular, raised on posts, floored with planks, and about eight feet in diameter. The Malays are said formerly to have believed that the inhabitants of this island were all females. An expedition was fitted out in 1645 from Bata- via, for the purpose of exploring this island ; and it brought away sixty or seventy of the inhabi- tants, male and female. The former died soon after their arrival at Batavia, refusing to eat any other food than cocoa nuts; but the women were tractable and docile. In 1771 a vessel sent by the governor and council of Bencoolen, landed here ; but owing to the petty thefts of the natives, and the imprudent conduct of the crew, hostili- ties soon arose between them which frustrated the purpose of the expedition. Large plantations of cocoa-nut trees were discovered on the shore with several spots of ground cleared for cultiva- tion. Canoes came off to the ship, with cocoa- nuts, sugar-canes, toddy, and a species of yam.

ENGA'OL, v. a. From gaol. To imprison ; to confine.

Within my mouth you have engaoled my tongue, Doubly portcullised with my teeth and lips.

Shakspeare.

ENGA'RRISON, v. a. From garrison. To protect by a garrison.

Neptune with a guard doth engarrison her strongly.

Howel.

ENGASTRIMYTHI, in Pagan theology, the Pythians, or priestesses of Apollo, who delivered oracles from within, without any action of the mouth or lips. The ancient philosophers, &c., are divided upon the subject of the engastrimythi. Hippocrates mentions it as a disease ; others will have it a kind of divination ; others attribute it to the possession of an evil spirit; and others to art and mechanism. M. Scottus maintains, that the engastrimythi of the ancients were poets, who, when the priests could not speak, supplied the defect by explaining in verse what Apollo dic- tated in the cavity of the basin on the sacred tripod.

ENGEL (J. J.), a German philosopher, whose writings possess the happy art of treating the most abstruse subjects in a clear and popular

manner. His Der Philosoph fiir die Welt, i. e. Philosopher for the World, and his Ideen zu einer Mimik, i. e. Ideas on Dramatic Art, are striking illustrations of this remark. He died in 1799. His works were published together in 12 vols. 8vo, at Leipsio, in 1801.

ENGEN, a town of Baden, once fortified and that has sustained several sieges. In the late revolutionary wars, it was occupied first by Moreau in 1796, at the period of his celebrated retreat; then in March, 1799, by general Jourdan; and again by Moreau in May, 1800, when he defeated the Austrians in this neighbourhood. It

is not a large place, and has a population of only about 1000 inhabitants. Twenty two-miles west of Constance.

ENGEN'DER, v. a. & v. n. Fr. engendrer ; en and gender. To procreate between two sexes ; to produce from, cause, or bring forth : as a neuter verb, to be caused or produced .

When that -A prilis with his shouris sole

The drought of March had percid to the rote, And bathid every veyn in such licour, Of which vertue engendrid is the flour. Chaucer. Oh nature ! thou, who of the self-same mettle, Whereof thy proud child, arrogant man, is pufft, Engender' 'st the black toad and adder blue.

Shakspeare.

The presence of a king engenders love Amongst his subjects and his loyal friends. Id. Say, can you fast? Your stomachs are too young, And abstinence engenders maladies. Id.

Again, if souls do other souls beget; Tis by themselves, or by the body's power :

If by themselves, what doth their working let, But they might souls engender every hour ?

Davies.

This bastard love is engendered betwixt lust and idleness. Sidney.

Thick clouds are spread, and storms engender there.

Dryden.

Vice engenders shame, and folly broods o'er grief.

Prior.

It unloads the mind, engenders thoughts, and ani- maˆes virtue. Addison.

.Many vices, engendered or nourished by prosperity, delivered them (thfi Romans) over to the vilest vaco of tyrants that ever afflicted or disgraced human na- ture. Robertson. Sermons.

If ever thou hast felt another's pain, If ever, when he sighed, hast sighed again, If evor on thy eyelid stood the tear, That pity had engendered, drop one here.

Cowpcr. Yes, the hours

Are silently engendered of that day When she, who built 'gainst Attila a bulwark, Shall yield, and bloodlessly and basely yield Unto a bastard Attila. Byron.

ENGHEIM, ENGHIEN, or ENGHUIN, a town of the Netherlands, in Hainault; famous forabat- tle fought near it, commonly called the battle of Steenkirk, between the British under king Wil- liam III. and the French under marshal Luxem- burgh ; in which the latter were victorious ; and general Mackay, the victor at Killicrankie in 1689, was killed. The great Conde" also obtained a victory here ; which was the origin of the ducal title which it gives to a prince of the house of Bourbon Conde". Here is a noble palace, park, and gardens. Enghien lies fifteen miles south-west of Brussels. Population about

3000.

ENGHIEN (Louis Antoine Henry, duke d'), was born in the year 1772. He was the son of the duke of Bourbon, and grandson of the prince de Conde, of whom Dr. Johnson re- marked in his tour to Paris that he was a grand- sire at thirty-nine; the fact was, however, still more extraordinary, for (as he was born in 1736) he was a grandfather at thirty-six. This young prince emigrated with his amiable and respectable father in 1 789, after the capture of the Bastile, when he was hardly seventeen years of age ;

and he served in the army of Conde' with the most brilliant reputation, adored by his own soldiers, and respected for his courage,

his courtesy, and his conduct, even by the republi- cans. This army exhibited the singular spec- tacle of three generations of heroes, fighting with equal courage and almost equal activity in the same field. After seven campaigns the treaty of Luneville put a period to its services. — It was disbanded, and, in 1801, when his father and grandfather came to England, the duke d'Enghien retired to the chateau of Ettenheim, a country residence situated close to the town of that name in Suabia.

An ardent and romantic passion for the prin- cess Charlotte de Ilohan-llochefort, to whom it is supposed he was secretly married, induced the duke to reside at Ettenheim ; where his only occupations were the sports of the field, the embellishment of his little domain, and the oc- casional society of her who shared and sweetened his exile. So domesticated was this young prince, and so attached to his retirement, that, till the fatal night in which he was dragged from it to assassination, he never quitted it but once, when he made an excursion to visit some of the beautiful scenes of ˆSwitzerland ; but home was still more beautiful to him, and after a short tour he hastened back to Ettenheim.

For the following sketch of the sequel of this seizure, we are indebted to a spirited article in the Quarterly Review.

< On the night of the 15th of March, 1804, about 12,000 French troops, under the direction of Caulaincourt and the immediate command of generals Ordener and Fririon, crossed the Rhine in two or three divisions, and surrounded the town of Ettenheim and the residence of the prince. The duke had been apprised a day or two before that some design against him was on foot in France. He could not believe it ; he was living, in a friendly country, a most peaceable and inoffensive life, under the security of his own innocence, and under the protection of the laws of nature and of nations : he could not believe it ; and the assassins found that no kind of precaution had been taken against them.

' When the duke heard them surrounding the house, and breaking down the outward gates, he jumped from bed, and he and a footman named Joseph immediately armed themselves with fowling-pieces. The officers and other parts of his family soon joined him. The stairs of the castle were straight and narrow, so that from the first landing-place an obstinate defence might be made against the assailants. The duke, not- withstanding the time of the night, and the sud- denness of the attack, preserved the most perfect coolness, and made the ablest dispositions for resistance ; his officers and servants were to load the

fowling-pieces under cover, while he, alone, at the head of the stairs, successively discharged them, with an effect the more to be relied upon from his being an excellent shot.

‘ The house was soon surrounded ; the assail- ants broke the lower door, and seemed to be about to ascend the stairs, where some of them would have received the reward of their temerity, when the duke’s first gentleman, a baron Grin-

stein, threw himself upon him, caught him in his arms, and exclaiming, that all resistance was vain, dragged him into a room which opened upon the head of the stairs. The assailants seized the opportunity; they rushed forward, and the duke, still palsied by the prudent care of Grinstein, was, with all the other persons in the room, made prisoner. It has never, to this hour, been ascertained whether the baron was actuated by a criminal motive ; the fact of his interference is all we can vouch for ; the duke would certainly have been finally overpowered, and one cannot help wishing, on the first im- pression, that he had had the satisfaction of dying amidst his dying enemies with his arms in his hand ; but Providence ordained for him a still nobler fate and fraught with a nobler lesson. Had he died in that midnight scuffle, the atrocity of Buonaparte might have been doubted ; the cool heroic devotion of the young and gallant victim would not have been tried and proved ; the deep and lasting indignation of Europe would not have been excited ; aad the retributive justice of heaven, in the fete of Mural anJ Buonaparte, would have wanted its highest efLvt, its most exemplary vindication.

‘ When the French entered the room, their first question was, Which of you is the duke d’Enghien ? no answer was made ; none of the prisoners were more than half dressed, except Grinstein, who it seems had gone to bed that night without taking off his clothes. Seeing him completely dressed, while the others were nearly as they had sprung out of bed, the French fancied, or pretended to fancy, that he was the duke. If he had had the honesty and presence of mind to say, I am the duke, he would have been carried to Strasburgh : — probably no harm would have happened to him, and the prince might have been saved. Grinstein, however, though he received a hint to this effect, was silent ; and the French marched the whole party out of Ettenheim. The town was by this time in a state of consternation, and the princess Charlotte de Rohan alarmed at the noise, having risen and run to a window, saw, but it is supposed without recognising him, the duke dragged past her house, with no other covering but a waistcoat and loose trowsers, and a pair of slippers.

‘At a little distance from Ettenheim, they halted at a mill where was the burgomaster of the town, whether it was he or the duke’s secretary (who had followed his master and begged to be allowed to share his fate) who pointed out the duke to his guards, is doubtful, but he was now known. He asked to be allowed to send his valet back for linen, clothes and money, — it was granted, — on the servant’s return, he dressed himself, and they proceeded. They passed the Rhine between Cappell and Reinau, at which latter place there were carriages waiting for them. The French wanted to place Grinstein in the duke’s carriage, but he refused to be so accompanied ; and insisted upon hav:ng ihe brave and faithful servant who had endeavoured to assist him in the defence of the house. On their arrival at Strasburgr, the prisoners were con- fined in the citadel, and it would seem that the

jailers had not yet final orders as to the disposal of the duke ; probably Caulaincourt had not re- turned from Offenbourg, whence he had directed the operation. The prince was, however, res- pectfully treated that day ; but in the middle of the night his bed was surrounded by gendarmes, who forced him to rise and dress himself with all haste, as he was about to go a journey. He asked for the attendance of the faithful Joseph : he was told he would not need it. He asked to take some linen : he was answered that two shirts would suffice. This sufficiently explained to him his intended fate. He’ distributed to his attendants, who had now assembled round him, all the money he had, except one rouleau, and a few loose pieces of gold and silver ; and, after he had affectionately taken leave of them, they were excluded from the apartment ; but they heard for some minutes the noise of the preparation for departure, and amongst the rest the clank of the chains with which they had the needless bar- barity and insolence to confine his arms.

1 He was five days and five nights on the road, during the whole of which time he was confined to his carriage, and almost without food. At the ord inary rate of travelling he might have reached Paris in seventy hours ; so that some precautions must have been taken that he should arrive in the evening. It was about half-past five in the evening of the 20th of March that the young prince arrived at the castle of Vincennes, when he was delivered into the hands of the governor, who, at first, as well as the other persons, was ignorant who he was. By one of those slight incidents, which sometimes add an interest to a

scene already deeply important, it happened that the wife of the governor was the daughter of the duke's nurse, and she recognised her foster- brother ; overwhelmed with sorrow and con- sternation, she had yet the presence of mind not to betray herself, and retired, unobserved, except by her husband, to give vent to the emotions of terror and grief, and to endeavour to consider how she could be of use to the unhappy prince. The name of the royal prisoner was however soon whispered, and, as he complained of hunger and fatigue, all the inhabitants of the castle, even the officers and men of the regiment in garrison there (s'empresserent), vied with each other in showing him Attention. This alarmed the persons to whom the direction of the crimi- nal was committed ; the regiment was immedi- ately ordered under arms, and marched off to the heights of Belle V7ille, where it bivouaqued for that nisrht.

' In the meanwhile, a mock tribunal assembled in one of the rooms of the castle. We devote to the scorn and detestation of posterity these bloody and cowardly assassins. They were

General Hulin, President.

Colonel Bazancourt.

Colonel Barrois.

Colonel Guiton.

Colonel Ravier.

Colonel Rabbe.

Captain D'Autancourt, Judge Advocate.

Captain Molin, Secretary. All,' says the sentence, ' named by the general m chief, Mural, governor of Paris.'

' The members of this court had received the notice to attend not more than an hour before the appointed time, and they did not, with the exception of the president, know for what purpose they were summoned. Nor was it necessary they should ; the sentence was ready drawn before they arrived, and the grave was actually dug before the court was assembled ! Worn out with fatigue, the victim was asleep on a soldier's bed on tht floor of his dungeon, when he was called to attend the court. He was awakened with great difficulty, and he entreated to be allowed to sleep again ; but, as soon as he was made to understand that his hour was come, he shook off his fatigue, and

prepared with a dignified alacrity for the last scene of his agony. He was introduced into the room where the court was sitting. He was asked his name : he told it. He was asked whether he had not borne arms against France : he answered that he had served the king ; but when they were about to propose some other questions, he said he sup- posed he had told enough for their purpose, and that he would answer no more. Ho was then led away, and Hulin produced the sentence ready drawn up, and laid it before the astonished members for their signature. The whole scene had been so sudden — their ignorance of what they came for — of whom they were to try — the name of the young victim, which fell like a thunderbolt amongst them ; all contributed to disorder their minds, and the ferocious threats of Hulin, the organ of Buonaparte and Murat, the latter of whom was present in the castle to exe- cute them, overwhelmed their consciences, and they signed the fatal paper. We do not pretend to excuse their meanness, but we know that some of them set no bounds to their self-re- proaches, and to the remorse with which they recollected that terrible scene. The bloody Hulin said, with atrocious sang froid, ‘ if the prince had not told us his name we should have been prettily puzzled what to do, as there was no .one who could identify him.’ This wretch was soon after, as the price of blood, rewarded with the office of governor of Paris, vacated by Murat’s promotion to an imperial principality. In this pretended trial no witnesses were pro- duced, nor any evidence but some papers, which are stated in the sentence to have been secretly read to the court before the prisoner was intro- duced.

‘ The moment the sentence was signed, the duke was led down to death. The night was pitch dark ; the executioners could not see their victim, nor their own leaders, nor one another. The duke asked for a priest, it was refused ; — he then knelt down near a square stone wnich happened to be there, crossed his arms, bent his head, and was for a few moments absorbed in devotion. He then requested that a lock of his hair, which he had cut off and folded up, might be delivered to the princess de Rohan — no answer being made, he exclaimed, ‘ Is there no French soldier who will perform this last office to a dying comrade ?* One of the guard cried, I will ; he received the little parcel ; but neither that nor the generous soldier was ever neard of more.

During all this time, two persons stood on the rampart above the

ditch, leaning over the parapet ; to them the duke's demands were re- ferred, and they, from time to time, directed the operations of the people below — these two per- sons are supposed to have been Murat and Savary — Murat — the hour came when he must have remembered this dreadful scene with bitter sympathy ! At last, a little before midnight, the duke was placed in the ditch, with his back to the wall ; he asked to give the fatal word of command — he was refused. At ten paces the soldiers could not see him ; a lantern was there- fore brought, which he himself tied to his but- ton-hole. At the word fire, the duke rushed forward on the muzzles of the musquets, and fell dead at the feet of his executioners. The body was immediately taken up — unstripped and even unexamined — and flung carelessly into the grave, which had been dug before the trial. A stone was thrown into the grave near the prince's head. It has been said that this was the cowardly vengeance of one of the executioners, whose cruelty was not assuaged even by the vic- tim's blood ; but the person who tilled the grave declared, that he had himself thrown in the stone as a mark to know the body hereafter. A little dog of the poodle kind had accompanied the duke ; in the confusion of the trial and raurder he was not thought of, but on the return of light he was found howling on the grave of his mas- ter. The poor creature was with difficulty re- moved from the spot; a gentleman purchased him from the man who had taken him, and pro- tected him for many years out of affection to the memory of the unhappy prince.'

Our readers will excuse us for adding, from the same source, a few words descriptive of the finding the remains of the duke.

'On the 20th March, 1816,— the twelfth an- niversary of the murder — a commission, ap- pointed by the king of France, attended at Yin- cennes to search for the grave. The man who had been employed to dig and fill it up was still alive, and several persons who had visited it shortly after the event, recognised the spot. After digging about four feet deep, the boot of the right leg was discovered, and then the rest of the body successively, and lastly the head, and the stone which, before the grave was opened, the laborer stated that he had thrown in. All the bones were found. Their position showed that the body had been carelessly thrown in. It was lying rather on the face, with the head downwards, the left leg and arm bent under the body, and the right leg extended and the right arm elevated. It had been stated, by the laborer, 1 efore the search began, that the body had not 1 een rifled ; and in consequence of this inform- ation, the Chevalier Jacques — (who had been

aide-de-camp to the prince, and accompanied him to Strasburg, but

had been then separated from him and brought to Paris alone, where he suffered a long and rigorous imprisonment) — declared what the duke had about him when they parted, and what of course ought to be found in the grave ; and it is impossible to de- scribe the deep interest, the solemn impatience in which the commissioners, who stood around the trench, awaited each successive report of the surgeons who stood in it, and who examined every thing as the earth was turned up.

‘ They found about the middle of the skeleton a mass of metallic matter, of the size of a watch, but so decayed, that but for some small iron keys and a seal with the arms of Conde which ad- hered to it, it would have been hardly recog- nized;— the seal was perfect. A small red morocco purse with eleven pieces of gold and five pieces of silver. Seventy pieces of gold coin, the contents of a rouleau which M. Jacques had handed to him at the moment of their sepa- ration— the fragments of the seal of red wax on the ends of the rouleau were found, which bore the impression of the seal of M. Jacques. A ring and chain of gold, which M. Jacques de- clared the prince always wore about his neck, and which was found around the vertebral bones of the neck. In short, no doubt remained that the remains were those of the duke d’Enghien — they were accordingly placed in a coffin, and deposited, with the usual ceremonies of religion, in the chapel of the castle of Vincennes.

‘Thus concludes the history of this bloody tragedy,’ says oui critic, ‘ the excuses for the per- petration of which only show us that Buona- parte’s impudence was equal to his cruelty. The whole charge against the duke was, that he was in league with England in a conspiracy against Buonaparte; — if it had been true, Buonaparte had no right to violate treat ies and the laws of nations to seize him — he had no riyht to try him before a packed court, chosen by Murat — to condemn him without a single wit- ness being heard against him — and to execute him in the depth of night, with no other light to guide the ‘executioners than a lantern fastened to his button-hole. But the alleged fact is altoge- ther false. It is well known that England’ had no hand in the French conspiracies against him, — it is equally well known that the duke d’Enghien was wholly unconnected with, and ignorant of them.’

ENGIA, EGINA, or EYINA, an island of European Turkey, in the gulf so called, near the coast of the Morea; anciently called Oenone, -fligina, and Myrmidonia, It is about thirty miles in circumference. Many fine relicts of antiquity are still to be seen on it. See /EGINA*

ENGINEERING

EN”GINE,n.s. &v.a.”* Fr. engin; Ital.

ENGINEER’, > ingegno, inganno ;

EN’GINERY. * Span, enguno ; Port.

engento ; Lat. ingenium, a device or contrivance. A machine, instrument, or tool of art; applied in various particular senses, as to military tor- turing, steam-engines, &c. Enginery has a general application, but is particularly used by Milton for artillery, and the art of managing it. An engineer is either a maker or conductor of engines. Chaucer uses the word engine as a verb, signifying to torture.

And right anon the mimstres of the town, Han heut the carter, and sore him pined, And eke the hosteler so sore engined, •

That they beknew hir wickedness anon, And were anhanged by the neck Don.

Chaucer. Cant. Tales. Tlecken you neuer of her fauoure sure : Ye may in clowds as easily trace an hare, Or in drye lande cause fishes to endure, And make the burnyng fyre his heate to spare, And all thys worlde in compace to forfare, As her to make by craft or engine stable, That of her nature is euer variable.

Sir T. More.

For ‘tis the sport to have the engineer Hoist with his own petard.

Shakspeare. Hnmle’.

The sword, the arrow, the gun, with many terrible engines of death, will be well employed. Raleigh.

Prayer roust be divine and heavenly, which the Jevil with all his engines so violently opposeth.

Duppa’s Rules far Devotion. This is our engine, towers that overthrows ; Our spear that^mrts, our sword that wounds our foes.

Fairfax. We saw the loe

Approaching, gross and huge, in hollow cube Training his dev’lish enginery. Milton.

Some cut the pipes, and some the engines play ; And some more bold, mount ladders to the fire.

Dry den.

They had the' especial engines been, to rear His fortunes up into the state they were. Daniel.

Him thus enraged, Descrying from afar some engineer, Dext'rous to guide the' unerring charge, designed, By one nice shot, to terminate the war. Philips. An author, who points his satire at a great man, is like the engineer who signalized himself by this un- generous practice. Addison.

Had the vast sums which have been laid out upon operas, without skill or conduct, and to no other pur- pose but to suspend or vitiate our understandings, been disposed this way, we should now perhaps have an engine so formed as to strike the minds of half the people at once in a place of worship, with a forgetful- ness of present care and calamity, and a hope of end- less rapture, joy, and hallelujah hereafter.

Spectator.

He takes the scissars, and extends The little engine on his fingers' ends. Pope.

Such an army, however, far from being an engine at the king's disposal, was often no less formidable to him than to his enemies.

Robertson. History of Scotland. Whenever our neighbour's house is on fire, it can- not be amiss for the engines to play a little on our

own. Better to be despised for too anxious appre- hensions, than ruined by too confident a security.

Burke.

Who, kindHng a combustion of desire, With some cold moral think to quench the fire ; Though all your engineering proves in vain, The dribbling stream ne'er puts it out again.

Cowper, Self-moving engines by unbending springs

May walk on earth, or flap their mimic wings.

Darwin.

An ENGINEER, in the military art, is more properly said to be ‘ an officer who has the care and construction of all works of both defence and attack.’ Many things are requisite to form a good engineer. He should be a man of quick parts, vigilant, brave, active, and ingenious ; and he ought to be particularly well skilled in the theory of all those sciences \rhich belong to his art. His knowledge of fortification ought to be such as not only to enable him to discover the defects of a place, but to find a remedy for them ; as also how a place maybe most advantageously attacked or effectually defended . V\ hen at a siege he has narrowly surveyed the place, he is to make the result known to the general ; acquainting him what part he judges to be the weakest, and where approaches may be most successfully made. His business is also to deli- neate the lines of circumvallation and contraval- lation, taking all the advantages of the ground ; to mark out the trenches, places of arms, bat- teries, and lodgments, and that so as none of th .? works be flanked or discovered from the place. Thus it is evident that the art of an engineer stands in need of many others; its object is s> extensive, and its operations attended with sj many various circumstances, that it is scarcely possible for a man to make himself master of t by experience alone, even though born with all the advantages of genius and disposition that could be supposed necessary for the kriowledg ? and practice of such an art. Experience, it must be allowed, is often more beneficial than all the precepts in the world ; but, with all its advan- tages, it has also its defects : the fruits of experi- ence are of slow growth ; and the engineer who has contented himself with pursuing only that method of instruction, will often find himself puzzled at the moment when he should act. Much, however, of what experience would teach, through errors committed, may be learned at the expense of others from theory. The fundamental principles of this art are found in arithmetic, algebra, geometry, mechanics, hydraulics, &c. ; and how fluently soever we may express our- selves in speaking, or writing, we can never give so perfect an idea as by an exact drawing ; often therefore, in fortification, both are wanted ; for which reason the art of drawing is indispensably necessary for engineers.

‘ To the qualities above mentioned,’ says major James, ‘ must be added activity and vigilance, both which are absolutely necessary in all opera- tions of war, but especially in the attack of such places as are in expectation of succours. The

besieged must have no time allowed them for consideration ; one hour lost at such a juncture often proves irreparable. It is by their activity and vigilance, that engineers often bring the besieged to capitulate, much sooner than they would have done if those engineers had not pushed on the attack with firmness and resolu- tion. Want of vigilance and activity often pro- ceeds from irresolution, and that from weakness of capacity.' The office of engineer requiring such great natural qualifications, so much know- ledge, study, and application, it is but reasonable that he should be exempted from all other duty, and that his pay should be suitable to the merits of his station. The word may be said to be of modern date ; for, in the year 1600, persons act- ing as engineers were called trench-masters ; and in 1622 Sir William Pelham, and after him Sir Francis Vere, officiated as trench-masters in Flanders. In 1634 an engineer was called camp-master-general, and sometimes engine- master, being always subordinate to the master of the ordnance ; but about 1650, captain Thomas Rudd had the title of chief engineer to the king. In 1807 the corps of royal engineers in England consisted only of one colonel in chief, one colonel in second, one chief engineer, three colonel com- mandants, six colonels, twelve lieutenant-colonels, &c. ; nor is the present establishment of this corps much larger.

ENGINEERINO, CIVIL, in contradistinction to the same profession attendant on military works, is of considerable importance to society ; the occupation of the civil engineer embraces pre- eminently canals and their attendants, reser- voirs, locks, basins, aqueducts, tunnels, bridges, docks and buildings in water, erecting beacons and light-houses, the cutting and forming roads, making iron rail-roads, &c. &c. To make the expert engineer requires considerable talent in the individual, joined to great personal firmness, and cautious enterprise. He should be a mathe- matician of the first order, with a ready aptitude of extending its powers to practical purposes ; experienced in local nature, with science at com- mand competent to assist and improve her.

The cutting of canals is in point of importance the first in order of his pursuits, and is of a very early date : for we find the Cnidians, a people of Asia Minor, projecting an undertaking of this nature : they wished the isthmus, which joined their territory, to connect itself with the continent. The oracle was consulted, and it was interdicted (Herodotus, 1. i. c. 174). Ba- sins and canals were formed in Bneotia, says Strabo, supplied by the lake Copais. The great river Euphrates was connected with the Tigris by means of a canal. A branch was also formed by Trajan near Coche, to join the same river. The Greeks, as well as the Romans, formed the design of making a canal across the

Isthmus of Corinth, which joins Achaia, for the purpose of obtaining a passage by the Ionian Sea. A similar plan was projected between the Euxine and Caspian Seas. The Roman generals were fully impressed with the utility of canals, of which they executed many, as the ruins now existing demonstrate They connected the Rhine with the losel, and also the former river with the

Moselle. Savary says, the cana.s in Egypt amounted in number to eighty, but they were more for the purpose of irrigation than com- munication. The Nile was joined to the Red Sea by an artificial channel ; the work was com- menced by Necos, who was followed by Sesos- tris and Darius; but the latter relinquished the undertaking on the information reaching him, that the Red Sea being so much above the level of the land in Egypt, it would be difficult if not impossible to prevent the overflowing of the banks, and consequent inundation of the country Under Ptolemy II. the undertaking was com- pleted. Its width was upwards of 100 cubits, reckoning twenty-two inches to each cubit ; and its depth sufficient to allow of the navigation of the largest vessels. By this canal India was en- riched with the commerce of Egypt, Persia, and the coast of Africa. China, in her institutions hostile to art, has nevertheless encouraged the making of c;ui :ls ; and, their convenience having aided in supplying a ready transit of her com- modities, bl:e has, more perhaps from cunning than a wish to develope the powers of the human mind, intersected her country with them. The canal which runs from Canton to Pekin is in length upwards of 800 miles, and was executed about 700 years since : it has no locks, tunnels, or aqueducts, and when stopped by mountains, or other impediments, a rolling bridge is resorted to, and sometimes inclined planes. These rolling bridges consist of a number of cylindrical rol- lers which turn easily on pivots, and are some- times put in motion by a windmill, so that the same machinery serves a double purpose, that of working the mill, and drawing up vessels. In this manner they draw their vessels from the canals on one side of the mountain to the other. In Europe, the nurse of science and the arts, to which in a great measure must be referred the successful completion of all great works, artificial rivers have abounded. In the year 1666 Louis XIV. gave directions for constructing a plan to connect the ocean with the Mediterranean by the canal of Languedoc. This was a bold under- taking if it be considered that all the details connected with it were to be created ; every thing was new ; Francis Riquet was the engineer, and he lived to complete it. This canal is upwards of sixty-four leagues in length, and is furnished with 104 locks, it runs through rocks in some places of 1000 paces in extent, in others it passes valleys and bridges by means of aqueducts of vast height. It joins the river

Garonne near Thoulouse and terminates in the lake Tau, which extends it to the Port of Cette. It was begun by forming a large reservoir 4000 paces in cir- cumference and twenty-four deep, which was supplied by water issuing from the mountain Noire.

In Germany, and the Low Countries, canals form the principal means of communication be- tween one place and another. The canal of Bruges runs to the sea at Ostend, and is extended to Ghent, Brussels, Antwerp, and many other places : it is in depth sufficient to allow of mer- chantmen coming to the warehouse of its owner. These canals pass into the very streets of the above-named towns ; indeed in all Flamlers and

Holland, in towns of any importance, the streets are intersected by the canals. In the line of the canal the street is sufficiently wide to admit of two commodious roads on its sides, which are not unfrequently planted with double rows of trees.

Canal navigation in England may almost be said to have been commenced by the late duke of Bridgewater in the year 1759 ; since which time, the internal commerce having increased with the development of the industry of the people, canals have been cut in all directions, and afford a ready transit to every populous part of the island.

We propose to treat this and the various branches of civil engineering mentioned in this paper in a practical manner. The engineer en- trusted with the making of a canal should be regarded as having so much of the projectors' interest at stake that the fullest confidence should be placed in him. The preliminaries to an un- dertaking of this nature, consist in forming a minute survey of every part of the country through which the line of the canal is proposed to pass ; and this should be done in the first instance by the principal engineer : all the great heights should be accurately noted and ascer- tained ; memorandums should be taken of all objects within the districts through which it is intended to pass ; rivulets and mill-streams marked so as easily to be referred to ; and the breadths of the various summits or ranges of high and low land that are to be passed accurately ascer- tained. When a survey is so far accomplished, a rough sketch or map should be prepared, laying down to a scale every principal object within the proposed line. This map will enable the projectors to see

the various obstacles to be en- countered in the work. When so much is ac- complished, the advisable height of the summit- level of the canal must be ascertained in order to find the number and fall required in the several locks necessary to be constructed on its line, the proposed summit-level should be traced along the hills and ranges of high land, to see how far it is practicable to reduce it to the required height by filling up the low land by the excavated earth, or by deep cutting or tunneling. When the summit-level is finally determined on, and the line of the proposed canal, all springs and rivulets which rise above or cross this line should be traced, and the quantity of water they dis- charge accurately gauged : this part of the work is of the very greatest importance, as it may be turned to considerable account in affording a supply of water to the line in its neighbourhood. Mr. Eytelwein, engineer to the king of Prussia, has shown many important facts connected with this part of the subject, deduced from experience and mathematical investigation ; and Dr. Young has given them to the public through the medium of the Journals of the Royal Institution ; or see Nicholson's Journal, vol. iii. p. 25. In setting out the canal a good spirit level with tele- scopic sights is required for tracing the levels, and when traced they are marked particularly by what is termed a bench-mark, which is no more than stakes driven into the ground at usually ths distance of every two or three chains, with

their tops exactly projecting above the earth so much as to ascertain the top-water level. After this line shall have been thus traced, and the bench-marks fixed, it should '>e accurately re- vised, and all sudden bends in its > ;virse rectified, so as to produce an easy undulating curve ; it would be desirable to get the line os straight as possible, but ranges of high-land, ai.d property of particular descriptions, sometimes intervene which prevents it. In such cases, as in the former for instance, it is often found more desirable to bend the line than to have recourse t, deep cutting or tunneling : in the latter description may be included gentlemen's parks, gardens, &c., and where canal acts protect such property, the line must of course vary so as to pass round them. The widths and depths of canals vary in refer- ence to the boats intended to work in them ; thirty feet is a good width at the summit-level ; and it is sometimes varied with us to as low as eighteen feet. In Holland they make theirs from fifty to seventy feet, and somet es more. The Bruges Canal is eighty feet wide and sixteen feet deep. The slopes to the sides of canals are of considerable importance, and this consideration has given rise to many speculations, which have added very little to the stock of information already collected. Mr. Eytelwein has recom- mended that the breadth at the bottom should

be two-thirds of the depth, and at the surface ten-thirds ; the banks will then be in general capable of retaining their form. The area of such a section is twice the square of the depth, and the hydraulic mean depth two-thirds of the actual depth. See Nicholson's Journal, vol. iii. p. 33. The practice in our canals is to so ap- portion the side slopes that one foot in depth will give a horizontal base of one foot and a half. The depth of the water must be in some measure deduced from the nature of the soil to be cut through, and the draught of the boats to be em- ployed on it. The average depth of our canals is between four and eight feet, and the banks are made one foot higher than the water is intended to stand in them. The fall given to a canal, in order to produce a stream or velocity in the water, varies with the local difficulties to be overcome ; and, since inland navigation is determined to a precise point or place, the navigator calculates little upon the velocity of the stream downwards, knowing if it were made great what he might save in going down it would be lost in returning. Four inches in a mile is conceived to be a good fall for a canal eighteen feet upon the summit- level, and seven feet at bottom, and four feet deep : the velocity of the stream in such a canal is, according to Professor Robinson, seventeen inches in a second at the surface, fourteen in the middle, and ten at the bottom : from such a de- duction it will not be difficult to extend the cal- culation to canals of greater or less dimensions. This conclusion is, however, only true of a straight river flowing through an equable channel ; and as our canals are seldom straight for a mile to- gether, but vary their course as frequently as change of place presents new difficulties, it fol- lows, that the banks of the canals will be more often in a curved direction than a straight one ; and Mr. Eytelwein anticipating such a

circumstance, remarks, ' that the velocity is greater near the concave than the convex side ; a circumstance probably occasioned by the centrifugal force accumulating the water on that side.'

When a canal is accurately marked out, and the bench-marks firmly fixed, if it be found difficult to keep the bench-marks in their places, holes must be dug to supply their places, and the bench-marks put up as the excavating proceeds. When the works have arrived at this state, calcu- lations should be made of stuff wanted, or to be spared, upon the line, in order to its being re- moved with as little labor as possible. The top- soil and turf removed, allows of the canal line being easily worked upon.

The ground-men, excavators, or navigators, as they are called, are in some districts also called hag-masters ; to these people the digging is let, at per cubic yard, according to the nature of the soil to be excavated, and the distance it is to be removed. Their tools consist of (if in a clayey or loamy soil) a grafting tool, the handle of which is rather long, with a narrow blade of iron, forming the segment of a circle, with its concave side turned inwards, firmly riveted to the handle, and very thin at the lower end ; the size varies to the caprice of the workman : they are usually about ten or eleven inches long, and six or seven inches wide. In some soils, gravel for instance, the same kind of tool is called a shovel; its blade is ground away till its lower end approaches an apex, the diverging sides from which form the slant ones, and make nearly an equilateral triangle. They have also a scoop to throw water, pickaxes, and wheel-barrows. The latter differ materially from the common machine of that name : it is framed of oak, the two sides form the handles, and also diverge away and admit the wheel between their opposite ends. Into the sides, two stout feet are framed and cross-braced: the whole is fixed together by stout bearers mor- tised into the sides. The bottom is lined com- monly with inch elm boarding, and the sides slant all round, and are about six inches deep. The wheel is usually of cast iron, very light, and its edge not more than an inch in thickness. The beauty of the barrow consists in its lightness, and should not exceed forty pounds in weight, including the wheel. The laborer wheels the soil away in his barrow by a kind of tram-road made of planks, these being easily adjusted to all required positions.

Among the first works to be excavated should be the foundations for all locks, basins, and bridges, also the culverts and drains which are to pass under the canal. The work should be com- menced as early in the spring of the year as possible, in which case many parts may be ac- complished in sufficient time to allow of its settling and getting firm and dry before the winter season arrives, which, if severe, may delay its progress, and destroy such as may have been too recently set about.

The soils, through which the different lines of the canal is intended to pass, should be pierced and proved to ascertain their nature, and if good water-tight stuff, its extent traced, for on this must be determined where, and in what quantity, pud-

dling may be required for the banks; for to pre- vent leakage in a canal, is that in which thi engineer will display his greatest sagacity. Po- rous soils, or soils requiring puddle-lining, consist of gravel, sand, loose or open rock, or other earths that will let water easily through ;

or earths in which rats or moles take up their habitation, or such as is much perforated by worms.

Some engineers have made use of strong clay for puddling, but it has been seldom found to answer the purpose, particularly to side linings ; in lining the bottoms of canals it has a better chance of succeeding. It holds so much water, that exposure to the air evaporates it, and consequently it cracks, which renders it unfit for a safe and water-proof coating, which i

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having been previously determined on, three feet is generally left to be supplied by the pud- dle-lining. In cutting down the slope, all ex- traneous matter should be carefully taken away, such as roots of trees and plants; all vermin holes should be well stopped and secured, and indeed every thing which is thought at all likely to disturb the coating about to be added ; and when ready it should be worked down quite straight by the excavator's spade, and rendered tight and sound. After so much is done, the lining may be proceeded in, which consists in spreading on a coat of the puddle, varying from seven to twelve inches in thickness, all through the canal line, which is ready to receive it; and when tli is coat is properly laid, and to the satis- faction of the resident overseer, it should be sprinkled with water, and remain till the following day, when a second coat should be added, and so on, till the coating has assumed the necessary and required thickness; and when done it should be neatly smoothed down, and the water may be let into the canal.

The necessity of particularly attending to the puddle-lining cannot be too much impressed upon all those who may be concerned in canal works.

Leakage in a canal is attended with so many embarrassing consequences ; among them, loss of water is not the least, dilapidations of the embankments, and perhaps their being wholly car- ried away ; for when percolation takes place, and that through made or artificial ground, its solidity is of very short duration. Nevertheless, it is but too often carelessly done ; and this circum- stance has led to an enormously extra expense, besides disgust in the contiguous land-owners, who have found their grounds constantly inun- dated by the leakage.

A canal is said to be performed by level cut- ting when the natural state of lands through which it has to pass is tolerably level, and ap- proaching to a good summit-level to the next locks, both above and below it ; when a line is to be cut through such grounds, nature is said to 'avor the undertaking, and it is, perhaps, truly said, for in Flanders and Holland the canals require no other consideration than in performing them in this way, and in them few locks are required, as a good summit-level may be accom- plished by embankmen's, which are there called dikes. These, in countries like Holland, are of great consequence, and are commonly made wide and handsome, planted with rows of trees on their sides, and sometimes even paved ; they are, in fact, the high roads of communication between one part of the country and another, and afford to the public the greatest accommodation, in giving them a dry and commodious road through- out the year, which could not otherwise be easily obtained in such swampy lands, which are more than half the year overflown by the swelling of the Rhine, and the consequent increase of water in the canals.

The Dutch have the credit of having invented the compost or puddling: it is true, their canals are all so lined, and indeed without it, in canals such as theirs, it would be totally impracticable to prevent their leaking. Their embankments, «r dikes, are sometimes raised twelve feet, or VOL, VIII.

higher, above the neighbouring land, and the top-water level reaches within two feet of the top of the dike. The difficulty of keeping in tfie water, in such high embankments, must be great, where nothing but earth is applied for the pur- pose ; but the Dutch puddle appears to make a complete barrier. The writer of this article has examined the principal dikes in Holland and the Low Countries, and he invariably found they were coated with puddle, and in a similar manner to the way described above for weak or infirm embankments, except, perhaps, that they are more neatly done than with us, and they use a kind of marly clay in the compost, which is often rejected by our engineers. Indeed, canal making, in Holland, is a system interwoven with the nature of the country. It would be a complete swamp if it were not for the canals : they perform the double purpose of facilitating inland naviga- tion, and draining the country.

Plate I. fig. 1, ENGINEERING, is the section of a canal, showing it under circumstances of level cutting. A A the line of the contiguous ground ;

B, B, the artificial embankments ; C C the width of the cut at top, and D D at bottom. The external slopes can be so formed as to be used for the towing paths. With respect to the slopes

C, D, they are determined upon the principles already stated as prevailing among our best en- gineers for that purpose, viz. for every foot in depth, giving a horizontal base of one foot and a half; and it follows, from such received data, that a canal six feet deep will require its sides to be sloped three feet, and, if it should be eighteen feet wide at the top water level, it would be fifteen feet at the bottom : hence may be deduced very useful proportions for canals of greater di- mensions, in which may be combined the prac- tice found of utility in the smaller ones

Canals are cut through so many variations in the ground's surface, that it would be impossible to anticipate them all : it is intended here, how- ever, to notice two other cuttings, which will, in some measure, allow of great extension of application. When the ground slopes down u> the projected eanal line it is called side-lyin-r ; and, if a canal be forming through such ground, the work is said to be doing in side-lying ground. Plate I. fig. 2, shows the section of a canal for such cutting. A A the sloping line of the ground ; B, B, the embankments to be raised ; C C the width of the cut at top, and D D the width at bottom. It is of some importance to so arrange the cutting, that the ground excavated from the canal be equal to make up the embank- ments on its sides : it is impossible that it should be so in all cases, but a great expense may be saved if a calculation be made of it previously to setting out the summit-level of the work, as then the removal of the soil may be wheeled to the parts where it is most required, which will pre- vent heaps collecting about the works, which generates slovenliness, and sometimes the greatest inconvenience. Deep cutting arises when the canal approaches a hill, or the side of one, which it is intended to pass by deep or open cutting rather than by tunneling. Plate I. fiˆ. 3, repreˆ sents the section of a canal by deep cutting ; A A the inclined ground to be passed ; C C,

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width of canal at top, and D D the width at bottom ; the sets-off I, 1, are generally appro- priated in such cuttings for the towing-paths, and are called by the navigators berms. They are also found to be exceedingly useful as a pro- vision to prevent the loose ground which rolls down from

the upper banks B and C from falling into the canal. It is in cutting in such situations that the ability of the engineer displays itself; he has often to contend with all the difficulties of a bad stratification, in which, frequently, the percolating waters become so great as to stop the proceedings. In such cases, pumps are had recourse to ; but it sometimes happens, never- theless, thac he has no place into which he can convey the superfluous water, or, if he has, he is not sure that it will not increase his difficulties, rather than remove them. To offer expedients for such circumstances is impossible; they must be met by the experience and resources of mind of him to whom the work is confided, and it will be well or ill performed, in proportion as his ex- perience and talent predominate.

Canals of great traffic must be furnished occa- sionally in their course with passing places. They consist in giving an increase of breadth to the water way of the canal, so as to admit of boats resting by the way, without incommoding the navigation; every canal has them, and the only precautions are, that they be made in as convenient places as can be, to promote the con- venience of the traffic; hollow and low places are generally selected as the most eligible, and near to the locks and basins if possible. By such places being formed, the public derive ac- commodation, as it admits of a ready transit of produce and industry to the inhabitants in its neighbourhood. Reservoirs to canals, in most cases, are indispensable, in order to the keeping up a supply of water in its line ; they are arti- ficial collections, getting their water from every source in their neighbourhood; their size mun be regulated by the quantity of water they are intended to contain, and that by the line of work which it may be intended to supply. They should be placed in situations so as to contain an equable quantity throughout the year, and so contiguous to the canal, as to admit of an easy communication with it at all times. Wherever the reservoir is to be constructed, all the varia- tions of the ground's surface should be exactly noted down; the nature of the soil proved, in order to ascertain, if bad and porous, where, and in what quantity, lining or puddling may be re- quired for it. The water flowing through all springs, brooks, and rivulets, which it is deter- mined to divert, to supply the reservoir, should be exactly gauged, and also the depth of the rains which usually fall All such particulars being ascertained, the excavation may be com- menced ; the same process is to be followed as has been recommended for the same kind of work in canals. The sloping of the banks is made rather more oblique than is practised for canals, commonly to every foot in depth a horizontal base of two feet, and, if the exca- vation be in a strong clay, the horizontal base is tiade as much as three feet. The lining is per- ior.Tied in a similar manner to the way pointed

out for such work in canals. Every reservoi should be furnished with a gauge, indicating exactly the quantity of water that it can supply, &c. ; if

the gauge be a wooden post fixed in the reservoir, it might be accurately divided, so as to show, by its divisions, the water lost by evapo- ration, or taken for the canal ; and this gauge would exhibit at once how the supply kept pace with the consumption. In the event of an excess of water flowing into the reservoir, which cir- cumstance should always be anticipated in its construction, many plans have been suggested for disposing of it ; the most usual way, however, of providing for a ready exit to such excess, is to form a weir or weirs, sometimes called tumbling bays, frequently at the corners, if the form of the reservoir be square ; if round, or a compound figure, at such places as is best adapted to its ready discharge. It will appear quite obvious, that the size and number of the tumbling bays must be regulated by the estimated quantity of water they may be called upon to discharge, or the greatest inconvenience may follow; as in the event of their being too small or too few in number, in great swells of the springs arising from unusual rains, &c., the sides of the reservoirs may be overflown, to the destruction of its banks and perhaps to the effect of blowing up and car- rying away the canal works in its neighbourhood. The construction of a tumbling bay consists in forming a vertical syphon in the embankment of the reservoir, composed of well-wrought masonry or brick, properly cemented, to which a hori- zontal communication is opened by the side of the embankment of the reservoir. The whole workmanship should be done in the most com- plete and perfect manner; the bottom of the syphon should enter a culvert constructed in a similar way, which culvert or drain should be arched above and below, and be built upon an easy descent, so as to promote an easy discharge of its contents. The culverts are frequently carried under the bottom of the reservoir, in which case it will be essential to keep them suffi- ciently low to admit of the lining being thick enough to secure its water-tight qualities. In cases in which rivulets or other streams are di- verted to the supply of the reservoir, a somewhat different construction will be required than when it is fed by springs; this difference principally consists in an alteration of the approach bv which the water is to enter ; such water is pre- viously collected into a branch, or, as it is termed, a feeder, which is in fact a canal of smaller di- mensions than the principal one. This feeder is constructed so as to promote a current in its waters to the head of the reservoir, which it enters by a weir or gates, the sides or piers of which should be' formed of masonry, built on a piled foundation, in carrying up the work, which should be of large stones well joined, and the walls battering back from the line of their base, and somewhat curved in their whole height. The tops should be coped with broad slabs of gra- nite or free-stone, dovetailed together, or wel cramped. The bottom of the weir should be formed by an inverted arch of masonry, well bedded in strong clay or puddle compost. The gates should be made of strong oak. with lower

and upper sills, framed with rails and cross braces, hxed in the stone sides by bars of iron. An iron upper rail should traverse the top side of the whole. The gate or weir should be in height a few inches above the summit level of the re- servoir, that the water from the fteder may flow over the bar of iron attached to the upper sill. The reservoir supplies]the canal by means of a pipe of cast iron, or other metal, or stone. This pipe is furnished with a cock which works on an endless screw, and is so adjusted as to be easily turned by the overseer of the reservoir. Mr. Longbottom obtained a patent for the construction of reservoirs (see Repertory, vol. 4. p. 145), the only novelty in which was, he de- pended for a supply of water to the rains falling upon the earth1s surface, which he proposes to collect together into one or more reservoirs ; the words of the patent run thus : ‘ my intention is calculated to supply canals, ponds, sluices, towns, or any other place wanting water, by making re- servoirs upon high and moorish ground, or any other suitable place which are to be supplied in manner following.’ He adds farther, that ‘ he found that in twelve months there fall upon a superficial foot of land 3-33 cubical feet of rain- water, exclusive of exhalation, so that upon a statute acre there fall to the amount of 145,054,80 or thereabouts ;’ again, he says, ‘ I can convey water falling upon 3500 acres into reservoirs :’ for instance, ‘ I make a reservoir of 100 statute acres in the most eligible situation, from which open drains, or sluices are made in the most proper places for receiving water running from the surface of the grounds in rainy weather, which, according to calculation, will be nearly equal to 5076 cubic feet per acre, or 91,800 cubic feet per annum, brought into the reser- voir, except in loss by soakage ; this may be done without any prejudice to rivers or mills. The area of a reservoir of 100 statute acres is 4,356,000 superficial feet, and the average depth 9-75 ; the parts are not included, so that 4,356,000 the area by 9, gives 39,204,000, as contained in the reservoir of reserved water.’ For conducting such water into the canal or sluice, he says, ‘I make two aqueducts of stone or brick for con- veying the water out of the reservoir, from the bottom when the water falls perpendicular from its surface into the space of a large circle of stone-work, with which the openings of the aque- ducts communicate; in each of these I fix a paddle or clough equal to an opening of fifteen inches by twelve inches, which is raised by a screw fixed to it, and moving upright in a piece of iron fixed across atthe upper part of it; upon it is a square box including a female screw, in which the other moves, which is turned round by four small hand-levers fixed to the square box, and which rests upon a small iron bar, which raises the screw and also the paddle, to the fol- lowing heights, viz. : with an opening of three inches by twelve inches may be delivered 317,952 cubic feet of water

in twenty-four hours; with one of six inehes by twelve inches, 630,730 feet; with one nine inches by twelve inches, 927,936 feet: with one twelve inches by twelve inches 1,222,560 feet; and one twelve inches by fifteen inches, 1,512,000 feet, or aless, or a greater quan-

tity, in proportion to the opening and velocity. The quantity of water required to be let out of the reservoir may be regularly ascertained, by fixing at the head of the screw a pointer, and an index above it accurately divided into inches and parts; and, as the paddle is raised by the screw fixed to it, the pointer at the end sliding upon the index will show the quantity of water dis- charged upon every division of it as set forth ; as at three inches in height, 317,952; at six inches, 630,730; at nine inches, 927,936 ; and so in proportion to all the several proposed eleva- tions.' This specification concludes with directions for forming smaller reservoirs, in winch many ingenious suggestions are developed. The re- servoirs here treated of have been considered as formed by embankments, which, in porous soils, have been recommended to be lined with puddling; in some, however, such embankments will not answer the purpose, in such cases the whole must be walled with brick or masonry, and if of the former, the greatest care should be taken that they be well laid, and of great sub- stance, with puddle-linings behind them ; the ce- ment should be of fresh stone lime (and if ground instead of slaked with water the better,) mixed with sharp sand, and the mortar prepared for use only as wanted. The walls should batter back in their height, with a small curvature out- side, diminishing in thickness as they ascend, and finish finally at the top to two bricks and a half. The whole should be coped with granite, with the meetings fastened by dovetails. If it be determined to form the walls in masonry, which, in some situations, may be eligible from the abundance of stone at hand, the same plan in the form of the wall should be had recourse to ; and also, in previously lining the embank- ments, the ashlerings should be in as large pieces as may be conveniently obtained, and all venty or bad stones rejected. The joinings should be as close as possible, with very little cement between them : the whole should be coped, as is directed before, for walls of bricks. Most of our canals are supplied by reservoirs somewhere in their course, so that an engineer can scarcely an- ticipate a work of canal-making without feeling that he may be called upon to exert his talents to the forming of a reservoir. Reservoirs that hare been lately formed to canals are — one at Ripley for the Cromford Canal ; another at Mil- stone for the Grand Junction ; also, at Ainsworth for the Nottingham; at Marsden for the Hud- dersfield ; at Littleborough on the Leicestershire Canal. The Rudyerd Vale supplies the branch of the Caldon and Mersey, and occupies up- wards of 150 acres, and is more than thirty feet high. The St. Ferriol reservoir to the canal of Languedoc occupies a space of 590 acres; the walls of which are covered with ashlerings of freestone.

Locks, or pound locks, in the consideration of which many important circumstances develope themselves in the work of a canal, are the barriers by which the water is kept to its summit-level; in the several reaches on its line they also ope- rate as toll bars for collecting the tolls payable on navigating it: they are placed as frequently on the line of the canal as the several levels require

them, and make a kind of step in the line throughout its course. They have been the great desideratum in canal- making among the moderns, as by the making of which, waters have been pent up in the reaches between them, supplying the means of navigation through high and low lands, from one part of the kingdom to another. In setting out a lock care ought to be taken to get their falls as equal as possible, and this can only be done by the previous care taken in ad- justing the summit-level of the canal. The lock comprises of itself a chamber and two pairs of gates; the former is made of length and width adequate to admit one or more boats at a time either in ascending or descending the canal ; this is effected by letting the water out of the chamber ; if it be ascending, by opening the lower gates : but it is not usual to keep the lower gates of a lock shut, so that a boat or boats coming up the canal can be immediately towed into the lock, which, when in this state, is said to be empty, although it contains as much water at least as is in the lower reach of the canal; when boats have thus entered the lock, the lower gates are loosened, and the paddles of the upper gates are gradually raised, which admit the water to rush into the chamber of the lock : the velocity of the stream soon closes completely the lower doors : and when they are shut, the upper gates are re- gularly opened till the water has completely filled the lock, which it does in a very short time, and becomes at rest between the lower gates and the upper reach of the canal. The tolls being paid to the overseer of the locks, the boats are towed out, and if no others are waiting to descend tha canal, the lower gates are opened and the upper ones are again closed, when the lock empties itself and regains its former state. It will be perceived, that the upper line of the caml will lose its waters in proportion to the working of the locks, hence it becomes desirable to make them as small as possible; and it is also of importance that they should be of the same size throughout the line of the canal, that the loss at each lock may be equal, in which case the supply to be anticipated may be correctly ascer- tained. In the approaches to all locks, both above and below them, there should be mule resting places, provided with oaken piles driven down close to the embankments, which they may be made to

support, with their upper ends crossed by strong whaling boards of oak, bolted with iron bolts to the heads of the piles. If the whaling boards have large iron rings fixed in them, the bargemen will have the advantage of fastening their barge to them during the time they may have to wait for passing the lock. Twenty-five-ton boats, according to Mr. Fulton, consume, in ascending a lock of eight feet rise, 163 tons of water, and in descending the same, 103 tons; now, if such a datum be correct, it •would enable an engineer to make very accurate calculations of the loss in water in all his several locks upon the proposed line of the canal ; that more water should be lost by ascending a lock than in descending, appears probable, although the same space requires filling in both cases; but it does not appear so obvious, how so great a difference as sixty tons can take place; but this

could be settled by a reference to the draft of the boat employed, knowing that it displaces as much water as its cubical contents, if it be laden adequately: these are all investigations pressing on the consideration of the engineer. Plate I. fig, 4, is the ground plan of a lock ; A, A, A, A, strong piers of masonry or brickwork bonded into the wing walls, F, F, F, F; B the chamber of the lock; C,C, the gates; D,D, the side walls of the chamber; £, E, the vertical syphons to take off the superfluous water from the head of the lock. The building of a lock requires the utmost attention in all its constructive partis; when the form is traced out, and the top soil removed, the ground should be proved to ascertain its nature, and if soft and porous the foundations should be piled all through, the tops of the piling should be regularly sawn down and planked with oak of not less than three inches in thickness; which planking will form the platform on which the walls are to stand ; in forming the foundation wall, some attention must be had to the inverted arch, which composes the flooring of the chamber of the lock. See section, plate I. fig. 5. The inverted arch, K, should be formed of hewn stone of small curvature ; its thickness in the centre about two-thirds of that of its spring; the joints of the voissoirs are also all traced from the centre of curvature of the arch, and also the springing line; the bottom of the arch should lie upon a good lining of puddle, and the joints of the stones should be well cemented so as to be water- tight; the abutments, or bottom of the side-walls of the chamber, should be of twice the thickness to what they are above, and should rack-back in ascending; linings of puddle will be judiciously employed in covering the earth of the embank- ment behind the chamber walls. Lock walls are usually parallel to each other, and the lock vary- ing in width from fourteen to eighteen feet, and in length from seventy to ninety feet. The plan, {plate I. fig. 4) is conformable to this proportion: the side walls of the chamber batter back as they approach the coping at their tops, about six inches from their perpendicular; and if they were made to have a slight curvature in their height, they would be much stronger for it. In building the piers, as shown in the plan at A, it is

necessary to observe, that they should be out of large blocks neatly worked and hollowed out to admit of the gates working in them. The wing vvaMs should be raised in a similar way to the walls of the lock, except that no provision is re- quired in them to recede an inverted arch, as the approach or breast of the lock requires no sucn. protection. Apertures should be made through the side walls of the wings to admit of the su- perfluous "water entering the culvert through the syphon, us seen in the plan at E, and in the sec- tion by the dotted lines ; and if the culvert be bent in its course, this water, if it be required, may be made to enter the chamber of the lock, a circumstance of some importance when there is a scarcity of water. When the lock is so far formed, and its syphons and culverts made, the lock sills should be put down; they consist in forcing into the ground, at the two ends of the bottom of the chamber of the lock, a row of narrow piles extending from one side to the o.her:

they'shouldbe driven as close together as possible, and, when so driven, they will form a chain across the two ends of the lock; in this state their tops should be sawn off quite ievel and smooth, and a sheeting, as it is called, of good oak or cast iron should be bolted on them ,with iron bolts, to form the lock sill for the gates to move upon, and also to protect the approaches to the lock. In the wing walls there should be in- serted in their progress some large blocks of stone, projecting somewhat from the face of the ash- lering of the wall, and called bumping stones, for the boats to strike against as they enter the approaches to the lock. The lock wa^ls and those of ths wings should be coped with gra- nite, firmly fixed and cramped. The gates C, C, are made in two parts, and form at their meeting an obtuse angle; they move in the hollow quoin stones, and by means of iron joggles fitted into sockets, which should be let into the hollow quoin stones of the piers A. Plate I. fig. 5, is the sec- tion of the lock; GG the granite coping; HH the top of the sloping side walls; II the base of the sloping wall ; K the inverted arch at the bottom of the lock; L,L, the syphons of masonry or cast iron, worked up in the wing walls at the head of the lock to carry off the overflowing water; MM the culvert or drain; N a cesspool to receive any matter carried by the water through the culvert, to prevent its overflowing or stopping up; O,O, the horizontal apertures in the wing walls communicating with the syphons L, L. These apertures should be made a few inches below the top-water level, and if formed in stona composed of a large block perforated quite thrcrugh, and the size of the opening regulated by the quantity of water to be discharged, but they might be formed of cast iron with the best success. It will be unnecessary to add, that all the work of a lock requires the materials and workmanship of the

very best quality, and the engineer will more develope his constructive talent in adjusting its form and the mode of putting the materials of which it is to be formed together, than he can in any other of the arrange- ments arising out of the works connected with canal construction. Plate I. fig. 6, is a pair of lock gates: they are shown to a larger scale than the plan or section of the lock which accompa- nies them, in order to exhibit the mode of their framing more obviously. They should be made of good seasoned oak, free from vents or sap, and are composed of several pieces known by the following designations: P, P, the balance beams; Q,Q,Q,Q, the rails; R,R,R,R, the vertical- stiles; S,S,S,S, the braces ; T,T, the paddle holes; and they are finally covered by oak planking, grooved into the bottom rail and the balance beam at top, the joints of which are also rebated, or grooved and tongued. In some lock gates the boarding is fitted in diagonally, in which case the braces may be dispensed with ; but greater strength can be accomplished by framing them as shown in fig. 6, and there will be also a saving of wood. The scantling of the timber in the lock gates may be varied to meet the pressure they may have to sustain, but it will be indiscreet to attempt making them too light. The rails , should not be less for ordinary purposes

than ten inches in depth and six inches and a half in thickness, and this would be a very good scantling for the stiles R,R,R,R; and, supposing the planking to be two inches and a half, thy cross braces S,S,S,S, would be properly propor- tioned to be left seven inches on the face by four inches in thickness. The balance beam, whicli also forms the top rail of the gates may be made somewhat larger in scantling than the lower framing, and the stiles might be framed into it. If this beam was made at its smallest end eight inches square, and at its opposite end ten inches and a half, it would act as a good balance to the gates,and give them great strength. The boarding- should be flush on the upper side, and well spiked to the middle rail and also the braces. The projecting edges on the inside of the gates of the rails and braces should be splayed downwards in order to the water running quickly off them, and the balance beam should be weathered on its top edge. The iron work lo the gates consists merely of its hinges, the sockets of which are previously inserted in the stone quoins of the wing walls. In fixing the iron work it should be made to lap quite over the outside stiles arid be bolted with iron bolts, with nuts, and screws. Sometimes the bottom of the gates is shod by plates of cast iron, and these plates are also continued up the centre stiles, and it must add great additional strength to the framing. Some Imve recom- mended the giving to the external form of loc. gates a small degree of curvature, supposing, no doubt, that by such curvature they wonlJ give additional strength to the gates; but the momen- tum of form would be more than surpassed by the loss of strength in the materials, as cutting wood purposely circular so*

crosses its grain as to leave it with very little strength at its joining, besides a double expense in the actual cost of the gates themselves. It has been deemed proper to notice this circumstance to prevent theoretical engineers from disappointing themselves in the application of curvatures to wooden framings in which strength is sought; for it will lose strength by such curvature in a ratio of greater propor- tion than it can possibly gain it, which will b;j easily discovered by an inspection of the state of the fibre in circular wood framing.

The paddle holes T,T, are small openings left in each gate, generally about twenty inches square, and to which a small door is fitted ; they are found of the greatest utility in preventing a too sudden swell in filling the chamber of the lock, and also in removing a portion of the pres- sure of the water from the gates when they are required to be opened in letting a boat descend the canal. They are so adjusted to the boarding of the gates that they can be easily raised or lowered by the overseer or' tin-: locks. This is done by supplying a guard bar to the top of the gate, which isoperated upon by a rack and pinion, that has the effect of lowering or raising the pad- dle-doors at pleasure. Amidst the considerations arising out of the detail of a lock, it will be proper to notice that in long lines, and on which there is great traffic, sometimes there arises too great a scarcity of water to supply the upper reaches, in consequence of which many expedient! have been recommended, arid some have been had

recourse to, to avoid the inconvenience. On the Grand Junction Canal reservoirs have been made, to collect the waste water of the lockage, to which a steam engine has been erected, which pumps the water, after having emptied itself into the reservoir, back again into that part of the canal from which it has been lost. And there has been also another expedient recommended to remove the same inconvenience, under the designation of side ponds. A side pond or ponds consist in forming, on the right and left of the chamber of the lock, a number of projecting cis- terns, varied gradually in their, elevation, begin- ning a small distance from the bottom, at the lower end of the lock, and stepping up to the upper end or head of the lock, provided with paddle doors. These cisterns, in capacity, are made so as to contain all the water, or nearly so, that passes the upper gates on a boat or boats, ascending or descending the lock. When the chamber of the lock is full, the highest paddle- doors are opened, and the water empties itself into the cisterns right and left, and so on till all the cisterns are full, observing to shut the doors of the cisterns as the water retires in the lock ; and this is done till the chamber of the lock is so

emptied as to allow of its lower gates being opened. When the boat ascends or descends the canal, it will be seen by this plan that very little waste or consumption of water by lockage can accrue, except that which must necessarily be so by allowing a sufficient quantity in the bottom of the lock to keep the boat afloat and level with the lower level of the water of the canal. Mr. Playfair, an architect who gave rise to this invention, obtained a patent for it in July 1791 ; the specification of which may be seen in the Repertory, vol. iii. p. 303. In the patent the application is supposed to be employed under the following circumstances, for example : ‘ a lock is supposed to be constructed twelve feet deep, sixty feet long, and six feet wide,’ and it is calculated that the quantity of water required to fill such a lock, to enable it to pass a boat is 4320 cubic feet, and in ascertaining what water may be necessary for supplying the canal, allow- ing for waste by evaporation and soakage, it is found (according to the number of boats that may be expected to pass), that there will not be above 800 cubic feet for each ; and hence, it is added, it will be necessary to save five-sixths of the whole ; to do which ten cisterns are directed to be made, each of which must be one foot deep, and each have a surface of 360 feet super- ficial. The aperture or entrance to the lowest cistern must be one foot above the level of the water in the lower part of the canal, and eleven feet under the level of the high water ; the se- cond cistern two feet above the level of low water, and the third three feet, and so on. It has been deemed desirable to quote so much of Mr. Playfair’s specification to illustrate the application of side ponds, and it cannot fail of producing a conviction of their great utility to canal locks, whenever there is reason to anticipate a want of water, as generally the greatest source of its loss is by the lockage. By the application of side ponds, this inconvenience may be, in a

great measure, superseded, and at no great additional expense to the works.

BASINS. — These are formed in all towns to which the canal has a communication, in order to make a commodious place for the boats to un- load their cargoes and to take in fresh ones. Their size varies according to the importance of the town, or to the trade carried on at it. Sur- rounding the basins, a spacious area of ground should be gotten to admit of warehouses, cranes, toll-houses, and other stowage for goods, being built with adequate space for all the vehicles employed in the trade to receive a ready transit and exit in their business about the basin. Con- venient approaches should be formed to the wharfs for carts, and also roads with the shortest and readiest way of their departing when laden or unladen. The toll-house should be placed near the principal entrance to the basin, and should consist of two or more rooms for the keeper, with an office and weighing bridge. In the office should be written, in legible characters, the different tonnage and other charges to be collected, by the keeper, of the

persons who trade on or about the basin of the canal. The con- struction of a basin consists in forming a cham- ber or head, sufficiently capacious to admit of boats resting in it, with room to unload and re- tire. The size, as before observed, must be com- mensurate to the number of boats expected at the basin. The embankments should be quite level with the wharfs, on contiguous ground, and about one fool higher than top-water level. The termination of the basin is generally made to form a bow or semi-circle on the plan. All§the enbankments are faced by walls of masonry or brick, and the tops should be coped with large blocks of granite. In raising the facings to a ba- sin, the same precautions should be had recourse to which have been previously recommended in the construction of the chamber of a lock ; for instance, if a soft and porous soil, piling must be employed in the foundations, with a covering of oaken plank, and the earth embankment must be covered with a puddle-lining previously to raising the walls of the facing. The walls should be of great thickness at the bottom, racking back on their outsides and battering over on their in- sides ; and their slope will require to be in pro- portion and parallel to the canal embankment, in order to the general surface of the lines approxi- mating together. In carrying up the facing walls, nevertheless, a few niches of curvature to produce a swell internally in their height, would add greatly to their strength in resisting pressure. A basin must also be provided with a weir, sy- phon, or waste gate, in order to discharge the water constantly flowing into it from the upper reaches of the canal by waste of lockage, &c If it be determined to discharge this water by a weir or syphon (perhaps more than one may be necessary), culverts should be made to receive the water and discharge it at the most convenient places ; these culverts require executing in the most substantial manner to prevent their blowing up by the weight of water they may be called on to discharge. They should have also some cess- pools in their course to receive any solid or other

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matter floated into them through the weir or sy- phon. Some basins are released from overflow- ing by a waste gate ; this is the case with the basin to the Oxford canal at Oxford. This basin is so near the river Isis as to admit of an easy communication with it; and, availing itself of this circumstance, the bank between them has been pierced through, and the embankment at the piercing right and eft has been faced by ma- sonry. See plate I. fig. 7. From the waste gate, VV, the walls right and left are splayed off at the embankments of the canal approaching the basin, and turned circular at their opposite ends, a rebate is left in the masonry for the gates to hang in at W W. The tops of the walls are coped with strong freestone, and the gates X are of oak, but without paddles. Returning again to the basin, it will be necessary to observe that guard-rails are found necessary to be fixed against their walls to prevent the boats from striking against them. The guard-rails consist of a series of strong oaken piles driven down into the bed or bottom of the basin, slanting to the side of it at intervals of about ten feet ; and on their facing near their tops are broad planks or rails of oak strongly bolted to them with iron bolts. These generally form a continued chain, traversing the whole facing or embankment of the basin. Iron rings are fixed into the rails or piles at convenient intervals, for the purpose of allowing the barge- men to lash their boats to, while taking out their cargoes. In some cases large stones are worked in the walls for this purpose, and called bumping- stones, to which rings may be fixed for the lash- ing to of the boats.

It will be necessary, in this place, to notice the several contrivances had recourse to for sup- porting the water in a canal, against accidents to its embankments, and other unforeseen events ari- sing out of the imperfection of the means em- ployed for such purpose. Safety-gates are among the expedients made use of in such a dilemma ; they are a contrivance for stopping the water in a long line of a canal when there is danger of the embankments giving way. Plate I., fig. 8, shows the plan of a safety gate or gates : P, P, the walls of masonry or brickwork built in each opposite bank of the canal; R, II, R,R, piers of masonry to strengthen their extreme ends; E,E, small projec- tions worked up to stop and hinge the gate to ; K sinkings in the wall to admit of the gate laying in flush with the wall; D the safety-gate. The plan is shown with two gates, one for the pur- pose of supporting the water in the upper, and one also for the lower reach of the canal ; and these can be shut as required by the repairs to be done, whether up or down the canal. These gates move upon the same principles as lock- gates, and require a similar contrivance, excepting that they are commonly in a

single gate only. The walls of the safety-gate should be built on piled foundations of adequate substance at bot- tom, racking back outside, and battering inside, with a slight curvature : they should also be coped at their tops. The gates should be of good sound oaken wood, and prepared in a simi- lar manner to lock-gates. See plate I., fig. 6. Advantage is sometimes taken, for the purpose of economy, of forming the safety-gates in the

pier walls about the bridges, if bridge > ot masonry happen in eligible places for the purpose. They are of the greatest utility on a canal, arjd claim particular attention in arranging the most eligible site for their erection ; and their mode of building _ should be of the most substantial kind. They are indispensable in long levels, to protract dila- pidation, where the cuttings are much embanked

There is also a contrivance of a similar nature called stop-gates, the construction of which does not differ materially from the safety-gate, except in its being made to lie flat at the bottom of the canal, instead of being balanced above, as is the case with safety-gates. The mode of raising the stop-gate is by a chain, which is fixed to the gate under water, and, when it is required to be raised, the chain is used for that purpose. Stop-planks are also often employed on canals for stopping water; they are a very simple contri- vance, and consist in previously working up walls in the two opposite banks, formed with a groove or chase, into which the stop-planks are forced, and pressed down to the bottom of the canal. These answer the purpose effectually on narrow canals. Stop-bars are another contrivance, simi- lar in manner to stop-planks, the walls for which are grooved to receive the bar. These are used as toll-bars, at the toll-offices on the canal line, and are to be so contrived as to be opened and shut by the overseers attending at the toll-houses. They may be esteemed the turnpike gates of a canal.

Aqueducts are frequently employed on a canal. for the purpose of extending it over rivers, and between two opposite ridges of high land. For this latter purpose they were often erected by the Romans, to convey water for their baths and fountains, as the ruins of many of which, still in existence, fully demonstrate. But the Roman aqueducts were never intended for any other purpose than to convey water for the people's use ; hence they were confined in their dimen- sions, and were a little more than long narrow walls, with a void through them as a passage for the water. The aqueduct at Chapanost, near Lyons, is raised upon arches of masonry, on the tops of which is a narrow channel for the water, arched over at top, the size of which is six feet high and three feet wide, lined in the inside with a lining of strong cement about six inches in thickness, which is quite perfect even at this time. There is another at Montpelier, which passes the river De Baunon, and crosses the val- ley, of a similar construction. Louis le Grand

ordered an aqueduct, which is built after the same manner, and which conveys the water to Versailles. They are also numerous in every part of Italy, and wherever else the Romans ex- tended their power ; but since the discovery of Galileo, which demonstrated the important effects of the weight and pressure of the atmosphere, aqueducts in the Roman manner have become useless ; as his discoveries showed that water would not only elevate itself to the syphon line, but might be raised to about thirty-four feet above that line, by the means only of the atmospheric: pressure.

Plate II. fig. 1, ENGINEERING, is the plan of a design of an aqueduct bridge to cross a navii

gable river, supposed of 300 feet wide. A, A, the piers ; B,B, the wing piers and walls ; CC C the water way ; the longitudinal dotted lines show the course of the aqueduct in the superstructure. Fig. 2 is the elevation : it has been deemed proper to show a bridge of this description, with some reference to architectural design, which is too often neglected, when the expense would not be increased by attending to it, as whether a stone or brick is placed in one way or another, there can be no difference in its expense by such placing, but in this placing arises all the difference between the artist and the artisan. Fig. 3 is the cross section of the bridge ; C the spring of the centre arch, showing the splaying sides and its intrados : H the solid masonry above the springing line; D, D, the embankments and towing-path to the aqueduct ; E E the width of the water way at top ; F F the width of the water way at bottom. The rounded parapets 1,1, are proposed toTje raised above the towing path right and left, as a protec- .tion to the passengers moving on the sides of the aqueduct. The construction of an aqueduct bridge requires all the talents necessary to be displayed in the erecting of other bridges, with the additional skill of giving to the road way water-tight qualities. The piers of a bridge of this description should stand on piled founda- tions, in order to give them the greatest firmness, and the usual process of erecting pieces of ma- sonry in water should be followed. Caissons, or water-tight boxes, should be made to raise the piers in, until they are built above the top-water level ; the abutment piers should be formed be- hind a coffer-dam, and the whole of these parts of the substructure should be raised to a similar height previously to raising the centering on which the arch is to be built. For a particular descrip- tion of the caisson, coffer-dam, and other details connected with bridge-building, see the article MASONRY.

Stone is the eligible material for building aqueducts, inasmuch as a greater

firmness will result to the parts, and without a firmness and equilibration in it, the aqueduct will be subject to leakage and dilapidation. The embankments at the two opposite ends or wings should turn somewhat outwards, to allow of more easy ap- proach, as is common in most bridges. The sides or banks of the aqueduct, crossing the bridge, should be formed of solid masonry or brick-work, and of good substance, battered over as they ap- proach their tops, and somewhat curved, which will add to their strength and solidity. The edges of the wall should be coped, and the banks or towing-paths paved. The lining of the aque- duct should be conducted in a similar manner to puddling, excepting only it should not be com- mon lining of that nature. Parker's cement makes an excellent lining, and is perfectly water- tight : this might be laid on the masonry to a consistence of about an inch in thickness, smoothly spread, to the face of which a coating of common puddling might be applied, which together would be a secure protection against leakage.

The multiplication of canals in every part of the country, with the experience arising out of it, has produced the application of new buildings of various kinds in aid of them : and there has*

been an aqueduct erected to the Shrewsbury Canal, composed almost wholly of cast-iron, and which may be considered as the first of the kind ever formed. In the Rev. Mr. Plimley's Report of the Agriculture of Shropshire, is the following account of it : — ' The canal passes the valley of Tern at Long, for a distance of sixty- two yards, upon an aqueduct made of cast-iron, excepting only the nuts and screws, which are of wrought iron ; and I believe this to be the first aqueduct for the purposes of a navigable canal which has ever been composed of this metal. It has completely answered the intention, although it was foretold that the different degrees of heat and cold would be such as to cause expansion and contraction,' from which it was concluded to be improper for this purpose. It is necessary only to observe, that the objections to iron were founded in fact, as all metals are more or less influenced in their form by different degrees of temperature ; and it was extremely probable, in the situation of an aqueduct, which is exposed so much to the vicissitudes of heat, cold, and oxidation, that it might turn out to be improper for that purpose. Time can only be the test of the propriety of establishing aqueducts of cast iron. Nevertheless, there are several at this time erecting, but, in some of these, there is a greater combination of stone, and also of wood, than has been employed in the one at the valley of Tern. Mr. Fulton, in his treatise on canal navigation, proposes that the ' hutments and piers should be raised of stone, after which it will be neces- sary to extend pieces of timber across the span, and each to be traced back and covered with planks, to form a stage or scaffolding ; on this is fixed the iron work of the aqueduct which may be all cast in open sand, and of the following dimensions ; for

instance, the span 100 feet, and the versed sine of the arch one-sixth of the span ; then three segments of a circle, each in three pieces, about thirty-six feet long, eight inches by four inches diameter, and to be united ; then three straight bars to extend from one pier to another, to be of the above diameter, may also be cast in three pieces, and which bars are to ex- tend along the tops of the segments to the piers, and form a line parallel to the horizon. The bars and segments to be united by perpendicular stir- rups, ten or fifteen feet distant from each other. The mortise in the lower end of the sturup, being thirteen inches long, will be sufficient to secure the segment, and leave room for a hole two inches square, through which a cross brace is to pass and fasten the segment at proper distances. The brace to have a mortise cast on each side of the stirrup, in order to allow of ti

seams pitched. On the plates composing one side of the trough, brackets about three feet from the top must be cast and fixed, in order to sup- port the horse-path : perpendicular rails, eight feet long, being raised from the arms of the bot- tom plates "will support the outside of the horse- path. It is added, that, by pursuing this method of forming an aqueduct of cast iron, very few patterns will be required; two will be sufficient for the trough-plates, and but few will be required for the springs, rails, and spurs.

Mr. Jessop undertook a most stupendous work of this kind on the Ellesmere Canal, for crossing the Dee River, in which are employed nineteen ponderous pillars of stone, at fifty-two feet dis- tance from each other, the centre one of which is 126 feet high. On the tops of these pillars are supported a number of elliptical cast-iron ribs, which, by means of uprights and horizontal bars, support an aqueduct of cast iron 329 yards long, twenty feet wide, and six feet deep, formed of massy sheets of cast iron cemented and riveted together, having,. on its southern side, an iron platform for the horse or towing path. It will be necessary to observe, drat every aqueduct ought to be provided with stop-gates at the most convenient parts of its length, as well as syphons or other means to drain off the water if required, for repairs or accidents. The stop-gates will be necessary to effect this purpose, and provision should be made for their erection in the first beginning of the work. They are most usually placed at the approaches or wings of the aque- duct.

Tunnels, or subterraneous passages, are now become familiar, as a means of conveying canals through ridges of high ground and mountains; they are also formed as roads through hills and under the beds of great rivers, to keep up easy communications between parts otherwise in- accessible, except

by circuitous routes. Per- forations for this purpose were not unknown to the ancients, for we find the Romans fre- quently making them in order to carry forward their aqueducts. For this purpose they were not required on a large scale, but, although small, they gave rise to the practicability which, to the ingenious, was a sufficient stimulus to cre- ate the means of performing greater undertakings ; and which has now been acquired and effected through the multiplied local impediments which have presented themselves to inland navigation. The first subterraneous canal or tunnel ever made for the navigation of boats, was at Beziers, on the Languedoc Canal in France ; and it is believed the first in England was at Worsley, by the late duke of Bricl gewater, but this was to establish a communication to his coal mines only. However, there are now almost as many tunnels as there are canals, and the business of making them is so well understood, that they are set about with as few preliminaries as the deep cutting of a cana'l.

Previously to beginning a tunnel, the hill through which it is to be formed should be bored in several parts, to ascertain the nature of the soil to be excavated. This being well ascertained, the needful tcols and machinery can be collected, that the work may proceed without delays. In

setting out a tunnel, it is necessary to observe, that it must be quite straight from one end to the other. It tracing the line of it over the surface of the high ground, a number of small round poles are made use of, their tops painted white, to give them a more obvious direction to the sight : these are set up firmly with braces, at about 150 yards rtpart, and called, by the navi- gators, excavators, or mi.iers' bench-marks. When the line of the tunnel is accurately traced out, another row of bench-marks should be fixed parallel and opposite to the first, at a small dis- tance vertically from the greatest diameter of the tunnel. These bench-marks will be the places where the shafts or pits are to be sunk, for the purpose of assisting the excavators or miners, and also of allowing the soil to be raised through. In sinking the shafts, which should be at least seven feet in diameter, and as deep perpendicu- larly as the lowermost line of the bottom of the tunnel, a kirb should be made of wood, consisting of two circular ribs, and placed four or five feet from each other, and boarded over. With this kiib the shafts can be sunk to any proposed depth, without danger of the ground giving way; and the steining of the sides of the shafts with brick-work may or may not be had recourse to, in proportion to the strength of the soil, which, if good, may be supported by braces and planks only. If the places of the shafts are all marked out at the time of the tracing of the tunnel line, and sunk a small distance into the surface of the hill, they will, in the event of the bench-marks being broken down, remain as guides to the excavator.

After the work has arrived so far, and every other needful arrangement is

made, in collecting machinery for removing the soil, the work should be begun by cutting down the headings on each side of the hill intended to be perforated ; which should be excavated, and the soil removed, to allow of getting quite up to the approaches of the tunnel. When the approaches are made, the form of the tunnel should be traced on the sec- tion of the hill, either by a mould or otherwise. The work having so far proceeded, the perforating is to commence; and this is done by opening a communication from the first or second shaft into the ground in the line of the tunnel, and work- ing opposite to it right and left. Preparation should now be made at the top of the shaft for raising up the soil, and this is done in several ways, the most common of which is to station at the top four or more men, standing on a platform raised three or four feet from the ground ; these men turn the handle which is at both ends of a roller, and to which a rope is fastened, with a square bucket or buckets appended to each end of it ; they are so regulated in size, as that two can move in the shaft or pit at once : the men in working the roller, that is by turning it round, raise one bucket while another descends, and in this manner they keep raising the soil as fast as it is excavated. In some cases, a horse-gin or turn-beam is employed, similar to those used at coal mines. As the tunneling proceeds, the upper ground should be well propped with planks, and every part secured ; as the miners advance in the line, abundance of ribs also

should be prepared to turn the arch of the tunnel upon, and moulds and trammels made for the inverted arch forming the bottom.

The section of a tunnel consists in forming an inverted arch at its bottom, composed of masonry or brickwork : this arch is generally the segment of a circle, and is laid on a good bed of puddling. On the two ends of this arch rise the soffit arch of the tunnel, which in figure is commonly a simple catenaria, a parabola, or ellipse, of suffi- cient elevation to admit of boats riding easily through it. Plate II. fig. 4, is the section of a tunnel : A the inverted arch at bottom ; B, B, the foundations of the soffit arch D, D; E the shaft or pit for taking up the soil excavated from the tunnel; F, F, the guard-rails and chock- blocks fixed to the sides of the tunnel to keep off the boats. The dotted line at C is the drain or sough to convey away the percolating waters ; G the soil to be rammed in upon the soffit arch. Plate TI. fig. 5, is the plan of the inverted arch to a larger scale. This arch is commonly wrought with a trammel rod, which consists, if executed in brickwork, in setting up a vertical piece of wood, to which another piece is adjusted by a centre which allows of an easy motion right and left, and describes the figure of the segment by its motion. A is the trammel rod ; B the verti- cal shaft to which it is fixed. The trammel can be shifted at pleasure, and is an easy contrivance for forming inverted arches. Plate II.

fig. 6, is the section of the soffit arch of a tunnel to a larger scale, showing it with its centering. The beam A may be fixed upon the chock-blocks previously worked into the inverted arch, at F, fig. 4. The queens D, D, may be notched into the back of the beam A, or mortised through it and wedged with sliding wedges. The strutts B, B, may be of one and a half or two inch deal, bolted with nuts and screws to the ribs G, G, and to the queens D, D. The same bolt which fastens the st'xtts to the ribs, may be made also to fasten the lap-joints in the ribs ; the straining beam O may be in two thicknesses put on to each side of the ribs and heads of the queens, with a shoulder to the latter, and one bolt in each will suffice to fasten the whole. The meeting of the centre or rib, at the apex E, should be lapped and bolted with a nut and screw. This may be braced if required. The void F will be found useful to the workmen, in allowing them an easy access into the tunnel to notice the state of the work, and also to see if any settlement is taking place in the center- ing, &c., which if found weak, cross-braces may easily be fixed in it.

It is not common to make a horse-path in a tunnel, and this is one of the greatest inconve- niences attending on boats passing through them, as the bargemen are obliged to scramble through as they can, by placing their hands against the walls, and pushing on their boat in any way. It would be perfectly easy to remove this inconve- nience, by making the diameter of the tunnel somewhat larger, and working into the walls, one foot above the top water line, or if it were be- low that line it would not much signify, a num- ber of iron brackets, projecting from the brick- work about three feet ; on these brackets could be laid cast iron plates sufficiently strong to ad-

mit of horses passing over them. On the edge of this platform should be a small cast-iron rail ; or there could be uprights at all the brackets, with a perforation in their tops, to admit of a rope or chain passing through them, which would act as a guard-chain or rope to the horse-path. The tops of the iron plates might be covered with a strong soil and gravel for the horses to walk upon, and thus would be removed one of the greatest de- fects in the navigation of a tunnel.

The centering ribs should be made in three or more parts, and they should be so adjusted to- gether, that on the parts approaching one another they should produce the required arch, when they may be fixed w,th nuts and screws, taking care that the meetings be tight and close. The lower or inverted arch being turned a small way, the ribs for the soffit arch may be placed, three or four of which will be enough at a time ; and these are fixed on a piece of timber called a sleeper, which is fastened at the base of the pit, and upon the chock-blocks ; as the ribs are raised and adjusted to their places, their upper edges must be covered with laths to support the bricks of the tunnel arch. When the first yard of the arch is turned, the ground above

the brick-work of the part formed must be well rammed and filled up, till it is as sound and firm as possible, and this must afterwards be repeated all through the work. After this is done and finished, more ribs must be placed and lathed, and the arching again begun. The workmen now look at their work with more firmness, as they see and comprehend it more completely : they begin now at each end of the already erected arch, one set of workmen working one way, and one set another, which they continue till an- other yard be done, which is filled up and ram- med as before. It will be sometimes necessary, to avoid the effects of the percolating waters, to make at intervals, or wherever it becomes troublesome, cross-drains or soughs running quite under the tunnel, into which an opening can be made for the water to empty itself, and which may be carried off, or turned into the ˆlower reach of the canal.

After three or more yards of the tunnel are completed, the work should be left to settle and get firm : this will be effected in a week or two, according to the state of the weather and the nature of the soil in which the tunnel has been made. If the above circumstances be at all favorable, a week will be sufficient ; the nuts and screws may then be taken out of the ribs, and the first part of the tunnel centering taken down to be fixed in another part, and this may be continued all through the work, which will produce a great saving in ribs, &c. Stiff clays are the best for forming tunnels through, as they require less shoring and other suppoits than looser soils ; in some siliceous and argillaceous soils the expences of shoring sand supporting the ground above, with the danger attending the work afterwards, is of more expense and diffi- culty, than at once beginning the work by open cutting, which in an instance or two has been obliged to be had recourse to, after many attempts at perforating such soils. The expense of canal tunneling, as well as others, must vary as the earth varies through which it is intended to be

made; in favorable circumstances, pretty accu- rate estimates might be formed ; and as a refer- ence, the following account, taken from Dr. Rees' Cyclopedia, article, Canal of the Tunnel at Blis- worth, on the Grand Junction Canal, will suffice, as being one of the latest which has been finished. ' The internal width is sixteen feet and a half, the depth below the water-line to the inverted arch which forms the bottom is seven feet, and the soffit, or crown of the arch, is eleven feet above the same line. The side walls are the segments of circles of twenty feet radius, the top arch one of eight feet radius. The side, or top walls, are seventeen inches in thickness, or two bricks ; and the bottom, or inverted arch, thirteen inches in

thickness, or one brick and a half; every fifth course of the top arch, and every eleventh of the side walls, is composed of two heading bricks, or wedge-like, one inch thick on the inside, and three at the back ; also every fifth and eleventh course as above (but between the courses of heading bricks), composed of bricks laid obliquely across the others, the front and back corners be- ing cut off for that purpose in the making, for more effectually breaking the joints of the work obliged to be done in such short lengths. The mortar that was used was composed of one bushel of Southam lime (blue lias), and three of good sand ; six inches under the water-line, on each side of the tunnel, slide-rails, of five inches square, were placed to keep the barges off the walls, and fixed by pieces of oak let into the wall below them, which rails project nine inches from the wall, and have at every nine feet a chock of wood upon the rails for the bargemen to set their pole against for shoving their barges along. It is added, that this tunnel was contracted for at £15 13s. per yard running. The soil, principally, through which it was made was a hard blue clay, with two or three thin rocks in it : sufficient head- ings had been executed several years before at the company's expense. The same contractors were paid 10ˆd. per cubic yard for excavating the deep cutting at one end of the tunnel, and lid. a yard for the other. The expenses of driving the headings were from 36s. to 42s. 6d. per yard running ; nineteen shafts, or tunnel pits, some of them sixty feet deep, were sunk for the use of the above tunnel, which cost about 30s. per yard in depth, including the steining.' From such data very probable estimates may be calcu- lated, taking into account the different prices of labor and materials where such a work is proposed to be effected. The success attending tunneling having been generally complete for canals, under- takings of the same nature have been proposed for various other improvements in our inland communications. Highgate was fixed upon as one for this purpose, which certainly presented a spot in every way eligible for the undertaking, and from which the public might have derived considerable accommodation. The heading of this tunnel was begun on the Holloway side of Highgate, and extended about 350 yards with about thirty yards of vertical cutting. The whole was marl and strong blue clay, with a compact- ness that required very little propping; every thing in nature was favorable to the success of this tunnel, and the work went on with adequate

effect till the arching commenced. It is too well known, that this arch has now given way, and it is for the engineers concerned in it to say, why. — It could not have failed by reason of the soils in which it was formed, as their compactness ren- dered their bearing on the arch of little or no importance. The shape of the arch made it ca- pable of supporting ten times what was ever upon it, if the bricks had received adequate at- tention in their bonding. If it failed for want of sufficient foundation, it is to be regretted :

the inverted arch was not adequate for that purpose, as a very slight inspection will demonstrate. And if it fell down for want of support in this quarter, it must have been from the engineers' ignorance of the nature of the pressure in such arches. Arches formed of common bricks, when they are to assume a large diameter, require the utmost attention in their construction. The brick of the common size is too small to make any figure as a voissoir in such arches, "as it will not allow of falling into the radii of their curva- ture ; if such arches exist, it is by virtue of the cement more than by reason of the shape of the materials of which they are formed. In the tun- nel now making across Hyde-park, for conveying the superfluous water from the neighbourhood ot Paddington, the bricks which are to form the arch are moulded into the shape of wedges, and are called joggle-bricks ; the form of the joggle- brick is previously determined by drawing its shape from the centre of curvature of the arch, of which it is to form a voissoir, and they may be varied, as the figure of the arch is composed of more than one centre of curvature ; hence the parabolic arch will require joggle-bricks of one pattern for the top, and of another for the sides, such an arch being composed of different seg- ments.

Bridges have continued to be erected through every succession of time, and are a leading point in developing the progress of science and the arts, as they appear generally well or ill con- trived in proportion as they have advanced. Ar- cuation, within these last fifty years, has received deductions, arising from mathematical investiga- tions, which has ranked it very high among the late discoveries made in science. It has now been shown that the voissoirs of an arch can be given that form, in relation to the whole matter surrounding them, as to produce an equilibrated figure : and this discovery has so far extended itself as to supply the principle by a table, formed by Dr. Hutton, which sets forth its quantities to every species or degree of curvature. The bridges, to which the attention of engineers, however, is commonly called, are simple build- ings, applied to the purposes of a canal ; they consist, most frequently, of wood, and their beauty consists in making them light, but ade- quately strong.

Of the different species of canal bridges the draw-bridge is the most common ; it consists of the following particulars : plate I., fig. 9, is the plan of a drawing-bridge; D the canal to be passed. The foundations, right and left of the canal, are supplied either by brick-walls, built battering, or by a row of four or more piles of oak, forced down into the embankment, with a

broad oak-rail on their tops, splayed away to receive the two end-rails of

the platform of the bridge. B, B, the embankments to the bridge. G the platform of the bridge. E the vertical posts, fixed on the bank of the canal, a little be- nind the hinges of the bridge; on the top of these posts are two long tapering pieces F, called the balance-beams, which turn up by means of. hinges near their middle, the small ends being connected with the platform of the bridge by means of chains at their further end, and which the heavy ends of the balance-beams are made to counterpoise. When such a bridge is re- quired to be raised for a boat to pass it, it is ne- cessary to take hold of the chains appended to the large ends of the balance-beams, which, being only just counterpoised, are easily pulled up, and when raised, the chains are hooked to the upright posts, to prevent accidents, and the bridge remains suspended.

*Bridges, called swivel-bridges, are sometimes made use of on canals ; they are much more expensive, and may be easily put out of order by the want of attention in using them ; they consist of a platform of wood covered with planks, which is made about half as long again as is required for the bridge : one end of the platform is made light and the other heavy, for the purpose of counterpoise, and the additional weight to the heavy end is produced by means of stowing large stones or pigs of iron at it, so that the bridge, when in its place, or at rest, may attain an equilibrium. At a point of about one-F/th of its length from the heavy end, a round piate is fixed, with an iron axis or pin standing up to enter a hole in the platform, which is pre- pared to receive it ; and on this pin the bridge is suspended, and which is also its centre of motion ; and, in order to prevent impedimenta in turning the bridge round, a number of iron balls, two inches and a half or three inches in diameter, are let into the round plate, both above and below, to act as rollers to lessen the friction on the plates. The banks are formed with a kind of recess to receive the bridge when moved from across the canal. The two ends of the platform, in order to allow of this horizontal motion, are struck into two arcs, the centres of which are the axis or pin in the centre of the friction-plates. At Brussels, and in other parts of Flanders, they have a kind of drawing-bridges composed wholly of iron : they are made some-what similar to our drawing-bridges, except that they are raised by a cast-iron wheel with cogs ; this wheel is about three feet in diameter, and is firmly fixed in the bank, and, by being turned by a handle, raises the platform. It takes up much less room than our drawing or swivel- bridges, and answers every purpose. There are nine or ten to be seen at Brussels, constantly in motion, as ships or craft are passing up the canal. Some of these iron bridges are cut in two in the centre, with wheels in each bank, so *hat by working the wheels a few degrees a ship may pass the canal, by its masts entering through the space left by raising the two platforms. This kind of bridges are made necessary from the great width of the canals in comparison of ours. The occupation bridge, —it Rotterdam, is*

of this last description, and consists of two sepy/- rate segments, each supported independently ;. and, when up for the craft to pass, a void is made between the meetings of the segments by which the masts enter. The convenience of such bridges is obvious, as the towing can go OD without removing the line ; foot passengers also can pass by the bridge while in motion, as the opening between the meetings is never so wide but a person may step over it. The canals in Flanders, Holland, and every part of France abound in ingenious light bridges : their draw- ing-bridges are on a scale the engineers of this country have not an idea : there are some over streams 120 feet wide, moved by wheels witli more ease than our little ones of twenty feet are by balance-beams.

The bridges of masonry on canals consist of one arch generally, with the difference only, of making its span as much more than the canal as to admit a towing-path under it. The towing- paths are made commonly on the lower side of the canal. The bridges over the canal at Pad- dington have towing-paths on both sides, and this, when there is room to do it, is a great con- venience ; besides adding additional strength to the abutments of the bridge. Guard-rails should be fixed to the wings and approaches of the bridge, and also to the embankments under the bridge, to keep the boats from damaging the works.

Docks, from at first be.ng only a simple con- trivance at arsenals for the purpose of building or repairing a single ship, have extended them- selves to a magnitude in capacity competent to contain whole fleets. In splendor the docks created in London, and at many of the out-ports, are a monument which excel the famous port Pireus in Greece, or Alexandria in Egypt, a.s much, or more, than we have excelled the Greeks and Romans in all the facilities to navigation, and the grandeur of our naval architecture. The Greeks and Romans no doubt have far sur- passed us in all the elegancies of taste and inven- tion in the fine ar:s : in these arts they have combined and given form to matter, which could have resulted only from a higher degree of feel- ing, united to juster notions of nature, than the coldness of our climate and habits can perceive, or hardly give power to copy. But if we are behind in the fine arts, which, as mere copyists, we must be contented to be : in supplying all manner of facilities to commerce (in which we excel all nations, ancient and modern), in erect- ing the immense docks and warehouses inland, which we have done to receive and house safely the produce of the world, and to an extent ade- quate for that purpose, we have formed a monu- ment at once of our genius, wealth, and skill, which will be as famous in the page of science as Vie monuments of Athens and Rome are now in the volume of the arts. A dock consists in the first place of a basin commensurate to its intended purpose. A canal communicates there- with, supplied with an entrance-lock and gates. The building of a dock embraces all the skill applied to buildings in water. The

embank- ments nre to be traced out in the same manner as is done for canal lines, by setting up bench-

marks to indicate the plan upon the ground. The whole of the embankments of a dock are supported by walls of masonry or brick-work ; and, as the docks for ships require a great draught of water, they must be made in depth adequate to allow of ships of burden riding in them in safety : in consequence of which the depth of the docks must be great in comparison of canals. The London docks are upwards of twenty feet deep. In raising the walls on the sides of such reservoirs (as they may be called), it will be ob- vious that the greatest care must be taken. The foundations of walls for works of this nature should be formed of double or even treble rows of piles ; and the inside row, which runs parallel to the embankment, should be grooved on their opposite sides, and be forced into the ground as close together as possible ; and, after being so driven, stiles of yellow fir wrought should be driven down into the groove made in each pile, so that the whole inside piling may form a con- tinued chain throughout its whole extent. The planking to form the platform for the wall, should be all scorched previously to being laid upon the heads of the piling, and the joints or meetings of the planking should be crossed or dove-tailed together. If the walls be to be built of bricks, care should be taken to have them of the best quality, and as square and even as can be ; and, in order to strengthen their bond in the wall, tiers of Dundee granite should occasionally oe incorporated. The walls themselves should be for a height of twenty feet, of fifteen bricks in thickness at the bottom, on planking racking- back on the side next the earth embankment, and battering on the inside of the dock, with tiers of bond of Dundee granite at every twen- tieth course throughout the height. The slope of the wall should be in proportion to a scale before recited for lock-walls of canals; and a curvature or swell should be formed in the inside section of the wall in the proportion of two inches to every six feet : the walls should, finally, finish at their tops to four bricks in thickness, and the whole be crowned by blocks of Dundee or other granite, as a coping. The mortar used for these kinds of works ought to be particularly looked after, in order to its being of good quality, or very little solidity will result to the work. The ground stone lime with washed siliceous earth, the for- mer as fresh as possible, is the most likely to prove a good cement. The Roman cement, or Parker's, is of great utility in some parts of dock-works. The docks, as Helyoetsluys, are formed with clinkers cemented by Dutch tarras : it has tiers of bond traversing at every four feet, vertically, composed of black marble neatly wrought, which in every other stone goes quite through the wall, and the top of the wall is coped with

large slabs of the same marble. The work of these docks from the smallness of the bricks (about six inches long, three in width, and one and a half inch in thickness), and the joint having very little cement in it, makes the whole appear uncommonly neat, and which is not less solid. These docks are about eighteen feet perpendi- cular in depth, the side slopes from their base five feet eight inches. The opposite end to the tunal of communication is formed into a bow or

crescent. The walls all round this dock have a slight swell or curvature in their height. The canal leading to a dock generally branches out of its side, and is walled in a similar manner to the dock itself, and at its upper end or head is contracted by the walls being bent into a circular shape till they meet or intersect the wing walls of the lower end of the chamber of the lock. The lock is the pound or chamber through which the ship or ships enter from the sea or river to which the dock is contiguous : to docks of con- sequence the locks are made from thirty to forty feet wide, about eighteen feet deep, and 150 feet long. They have gates at both ends, which require the utmost skill in contriving them for tidal-rivers. The bottom of the lock is formed by an inverted arch of masonry in a similar man- ner to that of canal-locks, except on a larger scale, and of course of a more ponderous nature. The walls are raised battering similar to those of the docks, and, finally, coped at their tops, weirs, syphons, waste-gates, and culverts, are all of use 'to dock-work, and must be called in as the na- ture of the situation requires them Wherever it is intended to form docks a large site of ground should be selected, in order to admit of abun- dance of room for all kinds of stowage and ware- houses being built thereon; for without abun- dance of room very little accommodation can be expected by creating docks on such sites. The necessity of room in such concerns will more obviously appear by considering the space occu- pied by the docks themselves in the three great concerns now effected in London. See DOCKS.

After docks, there is another appendage equally flowing from our great maritime power, and which consists in creating artificial piers or break-waters, projecting into the sea for t'ne purpose of giving security to vessels at anchor against the violence of winds and currents, ?t such places where it has been deemed eligiHe to form ports or places for ships to anchor at. The late Mr. Smeaton was the first engineer amongst us who embraced, in the boldness of his genius, the requisite science for such under- takings, which has had the efi'ect of establishing his reputation beyond the chance of a failure. Every part of the country exhibits something of his contrivance, either in canals, br.dges, har- bours, or machinery ; and, of course, every thing from such authority is of importance, inasmuch as it may teach those who have now to follow him how true fame may be acquired and become imperishable.

It is extremely difficult to give precise ideas for buildings connected with sea-ports and their harbours; for in such places the natural vicissi- tudes are what offer the impediments, and they must be met, in the various ways in which they present themselves, by the skill and enterprise of him to whom such buildings may be con- fided. There have been piers or break-waters erected at many of our ports extending an im- mense distance out into the sea ; for instance, at Sheerness, Ramsgate, &c. : and there have been also several on the opposite coast ; the one at Cherbourg is pre-eminent for boldness and genius. See CHERBOURG. Some account of Mr. Bentham's plan, adopted at Sheerness Pier,

will be seen under the head of Buildings in Water, in our article MASONRY. The great na- tional work in Plymouth Sound is peihaps on a scale far beyond any thing of the kind ever set about in the world before. We have happily to record its completion. See our article PLYMOUTH. The erection of beacons and light-houses is a branch of the royal pieiogative. The king has the exclusive power, by commission under his great seal. He can order them to be erected, not only upon the royal demesnes, but upon the lands of the subject; which power of the crown is usually vested, by letters patent, in the office of the lord high admiral. And if the owners of the land, or any other person, shall destroy them or take them down, he shall forfeit and pay £100, and in case of inability to pay it, be ipso facto outlawed. By statute, 8 Eliz. c. 13, the corporation of the Trinity House were em- powered to set up any beacons or sea-marks wherever they might think them necessary, and in them now almost the whole business, respect-ing the management of beacons, light-houses, &c., is vested. The beacon is a simple contri- vance, of very early origin, as we find frequent mention made of such objects, not only in the Scriptures, but in ancient history, and particu- larly in the early part of our own. Beacons consisted chiefly in erecting on high places marks whereon were fixed barrels containing pitch or other combustible matter, which, by night operated as a warning, by being lighted, and by day they gave notice of the approach of an enemy, by the volumes of smoke emitted. By the discovery of gunpowder, such expedients have been discontinued; as rockets and other contrivances are found to answer the purpose infinitely better. A light-house is a different kind of building to a beacon, inasmuch as it re- quires greater constructive excellence in the erection. Its use is chiefly to warn mariners, when navigating in the night, from approaching too near certain parts of the coast known as dangerous, either by rocks, shoals, or currents ; and it is also a land-mark by day. These struc- tures are of great national importance, and, as such, cannot receive too much attention, either in

forming them in the most substantial manner, or supplying them with the best lights. A light- house, as now erected, consists of an upright shaft of masonry or brick-work, built hollow in the inside, in which are winding stairs leading to its summit. The top is generally surmounted by a cornice of stone, with a space left suffi- ciently large to admit a single person safely to walk round upon it. On the top of the whole fabric is erected a lantern, often from twelve to fourteen feet high, and six or seven feet in dia- meter, in the inside of which is a frame, to which are suspended, in various angles, and in as many elevations, a number of lamps and reflectors ; the lamps vary from ten to as many as fifteen in some light-houses. Such a body of light and that reflected with the greatest power on an immense height, as they most frequently are, creates a surprising effect, which is disco- vered at sea by mariners when many leagues off, and \vhich enables them to shape their course arcorrlmgly.

The Eddystone light-house was erected by the late Mr. Smeaton, and in this is employed, per- haps, more ability than in any similar structure in existence, arising out of the difficulty of erect- ing any thing in such a perilous situation. Mr. Winstanley began a light-house on the Eddy- stone rock in 1696, which he was four years in finishing, which was formed wholly of wood. The following notices respecting his operations may not be unacceptable. The first summer was spent by Mr. Winstanley and his people in making twelve large hole in the rock, and fas- tening as many irons, to hold the future w(ork. In the course of the next summer, a solid body or round pillar, twelve feet high, and fourteen feet in diameter was completed. In the third year it was increased to sixteen feet in diameter from the foundation, and the whole building was raised, which was eighty feet to the vane. In the fourth year, the diameter of the pillar was en- compassed in a new work, four feet in thickness, and the building raised forty feet higher when the light was exhibited. This building was formed almost wholly of timber, and it did not meet with any accident till 1 703, when stand- ing in need of repair, Mr. Winstanley came to see it ; and having been among his friends pre- viously to going off with his workmen, to view the repairs, the danger was intimated to him, and that one day or other the light-house would certainly be overset : he replied, ‘ He was so well assured of the strength ef his building, he should only wish to be there in the greatest storm that ever blew under the face of the heavens, that he might see what effect it would have on the structure.’ Mr. Winstanley was but too amply gratified in his wish ; for while he was there with his workmen, that dreadful storm began, which raged the most violently upon the 26th of November, 1703, in the night ; and of all the accounts of the kind with which history furnishes us, we have none that exceeded this in Great Britain, or was more injurious or extensive in its devastion. The next morning, November 27, when the violence of the storm had in some*

measure subsided, so that it could be seen whether the light-house had suffered by it, nothing appeared standing, but, upon a nearer inspection, some of the large irons whereby the works were fixed upon the rock ; nor were any of the people, or any of the materials, ever heard of afterwards.

The next light-house, built on the Eddystone, was by Mr. Rudyerd : it was finished in 1709, and destroyed by fire in 1755. It was now deemed eligible to erect a superior building, if possible, and one not so likely to meet its destruc- tion, either by the violence of the sea, or the effect of fiie, as both the former had been destroyed by one or the other. Mr. Smeaton was em- ployed, and, contrary to the received and popular opinion, that no building could be made to stand except one formed of wood, he showed a contrary design, and boldly projected a lighthouse of stone. He himself says, ' he shall endeavour so to form it and put it together, that, by a similarity of construction, no mar shall be able to tell him at what joint it should overset; for if at any given height tlir

uppermost course was then completed safe, it became more safe by another course being laid upon it; and though that upper course were somewhat less in weight, and in the total cohe- sion of its parts, than the former, yet every course, from the first foundation, was less and less subject to the heavy stroke of the sea.' This building was formed to resist the effect of both wind and water, and these acting on it oc- casionally in a most tremendous way. The light-house is wholly of cut-masonry, about six- teen feet in diameter at bottom, and diminishing upwards conically ; it is seventy-three feet six inches in height, measuring from the rock on which it stands to the top of the cornice. Mr. Smeaton chose a curve for this structure with its concavity turned outwards, and the judicious- ness of such a choice is now fully established. From the top of the cornice to the base of the lantern is seven feet six inches, and from thence to the summit of the ball seventeen feet six inches, which, together, make a total height for this structure of ninety-eight feet six inches. See also BELL ROCK LIGHT-HOUSE.

The form of such buildings has involved con- siderable intricacy of mathematical investigation. M. La Grange has calculated that a cylinder is the strongest form for resisting flexure, which is contrary to the known fact, and could be only- deduced from the intricacy of the investigation. If it were calculated what would be the best form for a wooden column, which to a certain depth was always to remain exposed to the •water, it would be found that a cone or pyramid would possess the greatest possible strength for supporting the pressure of the water; and for resisting the wind also, the

figure must be made more acute than it would otherwise be necessary for resisting the water only. The Plymouth break-water has justly been considered as one of the finest pieces of hydraulic engineering in existence. It is about one thousand seven hundred yards in length, and the principle on which it is made to resist the operation of the waves is shown in our plate BREAK-WATER, fig. 3. It consists of an inclined plane, formed of loose stones thrown promiscuously from the flat- bottomed vessel fig. 1. A large block of about ten tons is there shown in the act of being discharged from the platform. An enlarged view of the carriage and platform is given at rig. 2.

The forming of roads is of considerable im- portance to every well regulated country ; and although it has been, perhaps, too much ne- glected in our own, it is now receiving that at- tention which its importance requires. We shall devote to the important subject of high roads, a separate article, embracing the latest improve- ments. See ROADS.

The origin of iron or rail-roads may be traced back to the year 1680. About that period coal came to be substituted for wood as fuel in Lon- don and other places : the consequence was, that at the mines the greatest inconvenience ac- crued in conveying the coal from them to the ships, as well as immense expense in horses and machinery for the purpose; to remove which, waggon roads were made, consisting of wooden

rails or ledges, which the waggons were formed to move upon, from which improvement it was found that a single horse could easily draw a waggon on these rails, which previously required three or more horses to be employed to effect by the common roads; and~it was also drawn more quickly, arising fromlaying down the frames upon an easy descent, which was always done.

In 1738 this invention was farther improved by substituting cast-iron rails instead of the old wooden ones ; but owing to the old fashioned waggons continuing to be employed, which were of too much weight for "the cast- iron, they did not completely succeed in this first at- tempt. However, about the year 1768, a simple contrivance was attempted, which was to make a number of smaller waggons and link them to- gether ; and, by thus diffusing the weight of one large waggon into many, the principal cause of the failure in the first instance was removed, be- cause the weight was more divided upon the iron. In 1797 these roads having impressed the minds of intelligent men as of great importance, numerous essays appeared, setting forth their utility, and as many plans for rendering them of permanent construction. See Dr. Anderson's Recreations, Nicholson's Journal, Repertory, &c. &c. Hence cast-iron rail-roads became a second desideratum to canals, excepting only that the invention is due to

Englishmen. After this time the cast-iron rail-ways began to be constructed as branches to canals, and in some places as roads of traffic from one place to another, established upon permanent principles, so as to produce a permanent revenue to the un- dertakers. In surveying a line to set out a rail- way upon, it will be necessary, as a preliminary step, to ascertain, as accurately as the nature of the thing admits, the quantity of lading expected to traverse each way upon its line ; because in forming the slope or descent, this will be the datum on which to ground a medium for effecting the required purpose most easily. If it should turn out that as much lading is expected one way as the other, with a preponderance at pe- riods only, the railing must in such a case be set out in levels or in lines nearly level, and t? e ascents and descents made by planes inclined accordingly. Previously to beginning any part of the work, that is of laying the sleepers, &c., for the iron-rails, a rough sketch or section of all the different routes intended to be passed by the rail-way should be made; from which, and a view of the ground, the engineer will be enabled to determine the place, and also the extent cf the inclined planes which will be required in passing the steeper parts or the rising ground to which these planes are to be employed : it will always be desirable to get them as short as the site of the place will admit. In tracing out the line of a rail-road, the following method is pursued by our best engineers : they begin at the highest point, using a chain (of 100 links), and also berms, or bench-marks, and targets, as they are called. The chain is stretched out upon the ground, one end being held at the point of the deepest turn, and the other turned round upon the face of the descent until a point

marked by this end is found, which is one link ower than the upper end, CM nearly so. The cnain is still carried forwards t.ll its hinder end reaches the point last determined. The other end is then moved^ and another point is ascer- tained one link lower than the last, and the ope- ration is so continued, by which a line having the regular descent of one link to each chain will be traced out on the site of the intended rail- road. The bench-marks are to be put in at each successive observation to mark the place found, and if it turn out irregular and crooked, the ope- ration must be again repeated till the line ap- pear more regular and without any sudden bends or crooks which must be always removed and made undulating and easy, as it will pre- vent unnecessary friction in the wheels of the carriages against the ribs of the rails. The rail- road when first marked out has a stake or mark set up at every chain in length, and these marks are the guides by which the workmen begin the operation of putting down the roads. When sudden valleys present themselves, approaching to higher

ground, it will be necessary so to con- duct the line as to cut into the hill at each side, and the cutting from the latter will be useful in raising the road-way of the former. On ap- proaching rivers or brooks which it is deter- mined to pass, it will be necessary to keep up the rail-road to a higher level by embankments, and on passing the water to raise a platform on purpose for it, composed of piers of masonry or columns of iron, with a covering of iron also to receive the rails ; or a bridge, similar to an aqueduct bridge, will answer the purpose. Rail-ways may be divided into single and double: by the former it is understood that a single road only is to be formed ; by the latter, that two or more are to be made for the ready pas- sage of waggons up and down the road. Single roads are generally made, including horse and at- tendant paths, four yards wide ; and double ones vary from six to eight yards wide, exclusive of all the common appendages to such roads of drains, fences, &c. &c. In forming permanent rail-ways stone-sleepers are necessary. These consist of pieces of good sound free-stone, with their upper faces wrought fair, and should weigh from 150 to 200lbs. each, with their ends, which come together wrought smooth, so that the joints may be firm and close. The work of setting the sleepers must commence as soon as the road has received a tolerable surface in point of regula- rity. In cases in which there has been much making up or embanking the ground, short piles (as shown plate 2, fig 7, B, B,) should be driven down to receive the stone sleepers, taking care to let the head of the pile come exactly under each meeting or joint of the stone-sleeper.

In commencing the work of laying down the stones, great exactness will be necessary in order to the iron-rails lying firmly on them ; when one of the stone-sleepers is laid in the proper place for one side of the rail -way, and nicely bedded and rammed down, another is to be laid at four feet distance from it, and bedded in a similar way. When these two stones are laid, they will operate as guides for proceedine in laying more stones, right and left, which should

be carried forward together. A,A, plate II. fig. 7 represent the stone-sleepers : B, B, the piles or blocks for supporting the sleepers in infirm ground ; C, C, the sections for the cast-iron rails. Every tram or rail-road must be provided with passing places ; a passing place consists in form- ing large plates of cast-iron, in such a manner as to admit of common rails being joined to them, and which will allow the waggons travers- ing the road to pass off into another or adjoining tract. Plate II. fig. 8, shows a passing place for a double rail-road drawn to a quick sweep: but the turning or passing place need not be of such acuteness in general, but may follow a more obtuse shape, as best suits the nature of the place to be passed. Plate II. fig. 8, represents the plan of the two meeting cast-iron plates, D, D ; these plates should be accurately modelled in wood for the founder ; and they should be so adjusted as that one model may serve for as many

passing places as possible on the line of the proposed road ; F,F, shows the joints where the common rails meet the passing ones ; E, E, are moveable iron tongues placed in the centre of the passing plate, D D ; which allow, by turning them round on a centre, of being re- moved to either side of the plate to keep the wheels of the waggons in the tract required ; so that a waggon may go on either side of the road by putting the tongue in the opposite direction. The side rails are shown at G, G ; these consist of common side rails, except only that they must be modelled and founded to the intended shape of the passing place. II H shows the horse-path of the rail-road at the passing place. Plate II. fig. 9, exhibits a single length of a com- mon rail for a road, with its projecting margin, K, to keep the waggon wheels in the tract ; as also the grooves, I, I, through the ends or meet- ings to allow of their being fastened to the stone sleepers. The common method of fastening the cast-iron rails to the stone-sleepers, consists in previously making in the stone an octangular perforation opposite to every joint intended in the cast-iron rails, into which a trunnion of good sound oak is fitted, with the grain of the wood presenting its section uppermost. The perfora- tions to receive the oaken trunnions should be made quite through the stone, in order to pre- vent the effects of the frost, which, if not through, the water lying in the hole will become frozen, expand, and shiver the stone into pieces. When the iron rails are nicely arranged upon the bearers or sleepers, they are to be fixed down by driving an iron key pointed at its lower end, so as to allow of .its being driven into the oaken trunnion; the iron key has a head projecting similar to the letter T: and its lower shaft is made exactly in size to fill the void or groove left in the ends of the iron rails, as shown at I, I, fig. 9. The common cast-iron rails for roads are formed in lengths of about three feet each ; they are made about four inches wide upon the flat, or that part intended for the wheel of the waggon to move upon, and which is about one inch in thickness, sloped off a little to the horse- tract : the projecting rim rises two inches and a half from the flat or bottom of the rail ; in its centre forming the segment of a circle projecting

Xipwards about an inch only at its meetings (See tig. 9). The cast-iron plates at the passing places should be made somewhat stronger than the common rails, as at the passing places there' is the greatest wear and tear upon the whole line. The iron moveable tongues E, E, fig. 8, should be of wrought iron, and made about two feet six inches or three feet long, standing up upon the plate equal in projection to the highest part of the rim, K, of the common rails. It should be on a good strong axis or pin, that it may be strong and yet allow of being easily turned round, which it will

require to be every time the waggons are passing by the different tracks up and down the rail-way. In passing deep descents, pieces of cast or wrought iron must be provided, called sledges or slippers ; these are provided to be placed under the wheels of the waggons, to prevent their too rapid de- scent, and are similar in principle to the same kind of instrument made use of, and appended to our road-waggons, for putting under the wheels on their going down a hilL When the whole iron rail- way is fixed, and levelled to the satis- faction of the engineer, it will be necessary to begin to prepare the horse and attendant paths ; the ˆoundation of the former should be, if pos- sible, composed of good lime-stone, broken into small fragments, and strewed to the consistence of at least from ten to fourteen inches in thick- ness, rather convex towards the centre of the path, upon this large screenings of gravel should be laid : the attendant path should he firm and regular, with a gravelly surface. The horse-tract and rails ought to be always kept clear and free from soil, which is constantly collecting on rail- roads of great traffic ; and they ought also to be properly drained and kept dry at all seasons of the year ; as on this, in a great measure, will depend their substantiality, and of course their utility.

With respect to the waggons employed on iron rail-roads, those in most general use are so constructed, that their weight, including their lading, does not exceed three tons and a quarter. This is found by experience to be the most eli- gible size : as the rail-roads retain their shape without much dilapidation, by the use of wag- gons equal to such weight. The wheels of the waggons are made of cast iron, two feet five inches high, having twelve spokes, which in- crease in width as they approach the hub, or centre of the wheel. The hub is eight inches long, and receives an axle of wrought iron, the rims of the wheels are two inches broad. The axles of the wheels are fixed at two feet seven inches distance from each other ; the bodies of these waggons are seven feet nine inches long, four feet five inches wide, and two feet four inches deep ; and this sized waggon is calculated to contain the quantity of coal, or other matter, equivalent, with the waggon added to it, to make a weight altogether amounting to three tons and a quarter, as before stated, as the most eligible weight to move upon a cast-iron rail- road. In the Philosophical Magazine, July, 1811, are the following remarks concerning wag- gons, and also rail-roads, from which some idea may be formed of the utility of such roads. VOL. VIII.

The waggons on our cast-iron rail-roads, have not received the improvements of which they are capable ; but, with their present disadvantages, the following facts will evince the great saving of animal force to which rail-ways have given rise : First, with a declivity of one inch and a quarter per yard, one horse takes downwards three waggons, each containing two tons : second, in another place, with a rise of one inch and six-tenths per yard, one horse takes two tons up- wards. Third, with eight

feet rise in sixty-six yards, which is nearly one-fourth of an inch per yard, one horse takes two tons upwards. Fourth, on the Penrhyn railway (same slope as above), two horses draw downwards four waggons, con- taining one ton of slate each. Fifth, with a slope of fifty-five feet per mile, one horse takes from twelve to fifteen tons downwards, and four tons upwards, and all the empty waggons. Sixth, at Ayr, one horse draws on a level, five waggons, each containing one ton of coal. Seventh, on the Surrey rail-way, one horse, on a declivity of one inch in ten feet, is said to draw thirty quar- ters of wheat. From these cases, and the known laws of mechanics, we may, perhaps, safely in- fer, that where the apparatus is tolerably good, and well constructed, and the slope ten feet per mile, two horses may draw five tons upwards, and seven tons downwards.

In cases in which inclined planes are to be had recourse to, to carry the rail-road over high ground (and there are several now passing such ridges), the mode pursued in raising the waggons may not be unacceptable. The com- mon plan is by a perpetual chain suspended at each end : it is so contrived, that the waggons disengage themselves the moment they arrive at the upper or lower extremity of the inclined plane. In some cases, the laden waggons des- cending, serve as a power to bring up the empty ones; but where there is an ascending as well as a descending traffic on the rail-way, steam-en- gines, water-wheels, or other machinery, to an- swer the same purpose, are used. ‘ At Chapel le Frith, there is an inclined plane of 550 yards. On the proposed rail from Glasgow to Berwick several inclined planes will be required, the summit of that rail-way being 753 feet above the level end of Berwick quay.’ As to the ex- pense of rail-ways, they are inconsiderable, in comparison of canals. According to Mr. Ful- ton, ‘ the cost of a single rail-road, with sufficient crossing places for a descending trade, was esti- mated at£},600 per mile.’ In Dr. Anderson’s recreations, £l,000 is mentioned as the estimate for a double one. However, Mr. Fulton’s is most likely to be the nearest to accuracy, as his calculations were made from actual observa- tion, and embraced the whole minutiae of such a work.

The principal rail-ways in England and Wales are the Liverpool and Manchester, thirty miles in length, which is just completed; the Cardiff and Merthyn, twenty-six miles and three- quarters long and runs near the Glamorgan- shire canal ; the Caermarthen ; the Sexhowry, twenty-eight miles, in the counties of Mon- tnouth and Brecknock ; the Surrey, twenty six miles; besides several in the north of England,

ENGIRD7, v. a. En and gird. To engird encircle ; surround.

My heart is drowned with grief, My body round engirt with misery ; For what's more miserable than discontent ?

Shaktpeare.

ENGLAND.

ENGIRT', v. a. En and girt. To encircle ; environ; engird.

That gold must round engirt these brows of mine.

Shaktpeare,

Id.

So white a friend enyirtt so white a foe.

ENGLAND

ENGLAND, Lat. Anglia, the southern and most important division of the island of Great Britain, is of a triangular form ; and from the south Foreland in Kent, which is the eastern point of the triangle, to Berwick-on-Tweed, which is the northern, its length is 345 miles; from that point to the Land's End in Cornwall, which is the western point of the triangle, it is 425 ; and the breadth thence to the south Fore- land is 340 miles. Its superficial extent is esti- mated at upwards of 50,000 square miles, or above 32,000,000 of statute acres. England is bounded on the north by Scotland, north-east and east by the German Ocean, south by the English Channel, and west by St. George's Channel, the principality of Wales, and the Irish Sea.

England contains forty counties, twenty-four cities, 160 boroughs, two universities, and eight cinque-ports. Wales has twelve counties and tourteen boroughs. The counties return 158 knights ; the cities fifty citizens ; the boroughs 335 burgesses ; the universities four representa- tives ; and the cinque-ports eight barons to parliament. The circuits of the judges, six in number, are called, the Home circuit, the Norfolk, the Oxford, the Midland, the Western, and the Northern circuits. Middlesex, Chester, and the Isle of Ely, were not included in these circuits. The two grand ecclesiastical divisions, or pro- vinces, are those of the archbishoprics of Canter- bury and York.

We should not here perhaps pass over, with- out some notice, the circumstance of several of the counties having certain portions detached, and surrounded by districts belonging to other coun- ties. This is the ease in the following instances : Shilford, which is a political and statistical part of

Berkshire, is actually in Oxfordshire ; as also is Langford, belonging to the same county ; and on the south-western borders of Berks, this county and a portion of Wiltshire are intermixed, near Titcombe and Oxenwood. Northampton- shire on the southern border contains a portion of Buckinghamshire : and Caversfield, in this latter county, is involved in Oxfordshire. The south- ern and south-western districts of Gloucestershire are so intermixed with the north-eastern portions of Somersetshire as often to create considerable difficulty in discriminating them ; while Holwell, which belongs to Somersetshire, is some distance in the county of Dorset. Gloucestershire has like- wise a portion situate in Wiltshire ; this is the case with respect to Myntey. Cascob, encom- passed by parts of the county of Radnor, the Futhog Hills in Monmouthshire, and Farlow and the Clee Hills in Shropshire, all belong to the county of Hereford. Coleshill Green, belonging to Herts, is surrounded by parts of Buckingham-

shire. Everton, belonging to Huntingdonshire, is actually in Bedfordshire. The parish of Lilling- stone Lovell, in Oxfordshire, lies within the county of Northampton; as also does Boycot, likewise a part of Oxon. The reader, in casting his eye over the map of Shropshire, will also be struck with the singular appearance of Hales Owen and the Leasowes being in Staffordshire, together with the hamlet of Oldbury, belonging to the parish of Bridgenorth in the hundred of Stoddesden. Staffordshire also appears to have taken a portion of Worcestershire; while this" county engrosses a portion of its neighbouring province Warwickshire; and Warwickshire again contains part of Worcestershire. Part of Wilt- shire is in Berks. Lastly, the county of Wo- cester seems singularly insulated by a portion of Gloucestershire ; and parts of Herefordshire are encompassed by the western boundaries of Wor- cestershire. The Isle of Thanet it is well known is a part of the county of Kent.*

The reader is referred to our article BRITAIN, for the general statistics of the island and its po- litical history to the period of the final settlement of its Saxon conquerors here, under Egbert. We now resume the statistics and the history of England, distinctly considered, until the latter merges in that of Great Britain under king James I

PART I. STATISTICS OF ENGLAND.

England, in its general appearance, as in its size, claims the palm of superiority over the rest of our island. It is far more minutely cultivated than either Scotland or Wales. There is no topic on which an Englishman may more proudly exult than the scenery of his native country. If, in particular points of natural grandeur, other countries, and even other parts of Great Britain, may outvie England, she presents a union of the agreeable with the grand and imposing, of the confirmed works and triumphs of art,

with the magnificence of nature, no where else to be found. We are not destitute of the lofty moun- tain, the craggy rock, and the dark moor, as an occasional contrast to scenes more attractive in their individual features. We have also our ar- chitectural antiquities, great in ruin, and still greater in the moral and patriotic associations connected with them. But in the gentle undula- tions of hill and vale, crowned with wood, fertile in corn, or overspread with cattle; in the high cul- tivation and elegant disposition of our scenery, we are unrivalled. No where is there such a source of scenic beauty in rural and general opuence.

In our article BRITAIN we have noticed the great mountain ranges of England. Of about

seventy forests, mostly planted by the first Nor- man kings, not more than four remain : Windsor, New Forest, Dean Forest, and Sherwood Forest; and there are now scarcely any woods which do not belong to some nobleman's or gentleman's seat, or are not attached to some of the royal palaces. Neither is the face of the country so much diversified with lakes, meres, or fens, as formerly. The district now most properly designated as the Fens is comprised in the con- tiguous parts of Northamptonshire, Lincolnshire, Cambridge and Huntingdon, with the northern borders o(Norfolk and Suffolk. But the improve- ments in agriculture, and the practice of drainage in general, have converted numerous extensive portions of fenny and marshy districts into arable land. There are, however, several beautiful and extensive lakes ; particularly those of Cumber- land, Westmoreland, and Lancashire, which are not exceeded, in extent or picturesque effect, by many others in the known world.

Espriella, speaking of the small but exquisitely beautiful lake called Brotherwater, remarks, 'I have never seen a single spot more beautiful or more rememberable. The mountain behind it- — is one of the highest in the country, and forms a cove, in which a single old mansion stands in a green field among old trees. The most rigid Jeronymites could not wish for a place of more total seclusion. Out of this lake flowed a little river, clear, rapid, and melodious ; we crossed it, and our path lay along its banks. How often did 'I stop and look back, and close my eyes to open them again, as if repetition could better impress the landscape upon remembrance than continuity ! The delight/ 1 felt was mingled with sorrow by a sense of transitoriness ; — it was even painful to behold scenes so beautiful, knowing that I should never behold them more.' We must allow this pseudo-traveller, but real poet, to describe another of our lakes : that

of Keswick. ‘ There is something in this place,’ says he, ‘ more like the scenes of enchantment in the books of chivalry than like any thing in our ordinary world, — a building, the exterior of which pro- mised all the conveniences and elegancies of life, surrounded with all ornamental trees, in a little island, the whole of which is one garden, and that in this lovely lake, girt round on every side with these awful mountains. Immediately behind it is the dark long western mountain called Brandelow : the contrast between this and the island, which seemed to be the palace and garden of the Lady of the Lake, produced the same sort of pleasure that a tale of enchantment excites ; and we beheld it under circumstances which heightened its wonders, and gave the scene something like the unreality of a dream. It was a bright evening, the sun shining and a few white clouds hanging motionless in the sky. There was not a breath of air stirring, — not a wave, a ripple, or wrinkle on the lake ; so that it became like a great mirror, and represented the shores, mountains, sky, and clouds, so vividly that there was not the slightest appearance of water. The great mountain-opening, being re- versed in the shadow, became a huge arch, and through that magnificent portal the long vale was seen between mountains, and bounded by

mountain beyond mountain : all this in the water, the distance perfect as in the actual scene, — the single houses standing far up in the vale, the smoke from the chimneys, — every thing the same, the shadow and the substances joining at their bases, so that it was impossible to distin- guish where the reality ended and the image began. As we stood on the shore, heaven and the clouds and the sun seemed lying under us ; we were looking down into a sky, as heavenly and as beautiful as that over head ; and the range of mountains, having one line of summit under our feet and another above us, were sus- pended between two firmaments.’

The most extensive plains of England are, as we have noticed, in the eastern and southern shores of the island. The great centre plain spreads from the banks of the Thames to those of the Humber, and even beyond that river. It therefore includes a great part of Essex, Suffolk, and Norfolk, with the margins of the bordering counties ; thus embracing nearly the whole east- ern side of England. The Wealds of Kent, Surrey, and Sussex, form another extensive plain, stretching from Ashworth, in the first county, to Petworth in the last ; and separating the South Downs, and the northern range of chalk hills in Surrey and Kent. Its length is between sixty and seventy miles, and its surface about 1000 square miles. The wide-spread district, called Salisbury Plain, is an open country, resembling the Sussex Downs.

The principal vales of England, denominate.! after its greater rivers or towns, and the scenes of its greatest fertility, are, beginning northward,

those of Carlisle in Cumberland, encompassing that city ; that of Coquet, in Northumberland, through which a river of that name flows, and greatly noted for its agricultural luxuriance. The vale of the Tyne, in the southern part of the same county, richly and beautifully variegated. The vale of Stockton, embracing both banks of the rapid Tees. The vale of York, one of the most extensive and fertile in the kingdom, con- taining 12,000 square miles of surface, intersect- ing that county from north-west to south-west, is separated from the vale of Stockton by a narrow district of almost imperceptibly rising ground. It stretches thence to the Humber, and is re- freshed by the numerous rivers and streams which are tributary to the northern Ouse. This luxuriant vale abounds in timber, and affords ample returns of agricultural products. A branch watered by the river Derwent, diverges towards the north-east, and separates the Wolds from the eastern Moorlands. The vale of the Mersey in- cludes the margins of Lancashire and Cheshire ; while much of the central regions of this last county form that of the Dee. The. valley of the Severn is an extensive tract of rich land, com- mencing near the borders of Wales, and, traversing Monmouthshire, Shropshire, and Gloucestershire, is divided by slight elevations into the district of Worcestershire, and the vales of Gloucester and Evesham. A great proportion is appropriated to pasture.

In the west of England, the most attractive vales are those of Exeter and Taunton : the for mer, stretching from the Tiverton nil's to the sea,

is watered by the rivers Exe and Otter; and comprises about 200 square miles : the latter, separated from that of Exeter by a ridge of high land, extends in an opposite direction to the Bristol Channel. Ayleshury stands in a vale, abounding in rich pasturage, and watered by the Thames as it flows through Buckinghamshire The Trent also has its vales, particularly in that part of the county of Nottingham which borders on Lincolnshire and Leicestershire.

The rivers of England have been enumerated in the article BRITAIN ; more particular descrip- tions of their courses belong to their respective places in the alphabet: and the canals of this country form a large feature in our article INLAND NAVIGATION.

No country is richer, for its size, in mineral waters. Those of Bath, Buxton, Bristol, and Cheltenham, have already fallen under our no- tice :

Harrowgate, Matlock, Scarborough, and Tunbridge Wells complete the catalogue of the principal ones, and will each be found distinctly treated. At Gloucester a chalybeate spring has recently been discovered, more strongly impreg- nated than either those of Cheltenham or Leamington. We must not omit to notice the aluminous chalybeate water of the S. S. W. of the Isle of Wight. This contains sulphate of iron and sulphate of alumen : there are also some portions of carbonic acid gas, sulphate of lime, sulphate of magnesia, sulphate of soda, muriate of soda, and silicia : but these ingredients are rendered wholly imperceptible to the palate by the superior portions of iron and alumen. These impregnations are much stronger than are to be met with in any other mineral water of England ; and even than those of Hertfell-water in Scotland. The sulphureous waters of Gilsland, in Cumber- land, consist of muriate of soda, sulphureted hy- drogen gas, azotic gas, and carbonic gas. The

saline waters ol Leamington Priors, in Warwick- shire, are also in considerable repute and n,uch frequented. The medicinal springs issuing ironi the Malvern Hills in the counties of \Vorcester Gloucester, and Hereford, are of various quah ties ; but principally chalybeate. They do IK, contain any uncombined vitriolic acid, volatil alkali, or metallic salt ; but are slightly im- pregnated with fixed air, some common air, selenites, and a little unneutralised calcareo'is earth.

There is a chalybeate spring at Southampton, at the bottom of Orchard Street, resembling that of Tunbridge Wells. The component parts are steely particles, marine salts, an oily matter, an ochreous substance, a volatile vitriolic spirit, too subtile for analysis, and a simple fluid. The Nottington mineral spring, near Weymouth, contains hepatic, phlogisticated, and fixed air, the digestive salt of Sylvius, ve- getable alkali, magnesia, Sec., and strongly re- sembles the Moffat water in Scotland.

Of the ever-varying but healthy climate of this country we have observed that July and August are its warmest, and December and January its coldest months. In the former Fahrenheit's thermometer seldom rises above 85° or 86°, the general maximum of the year being 81° or 82° ; and in the latter it seldom sinks lower than 14° or 15°, though it has been known to descend below 0°. The thermometer has been long sup- posed to attain the greatest height a little west of the metropolis ; but this, as we shall presently show, is a mistake. The north-eastern counties are subject to a greater degree of cold than those on the north-west. The north and south of England differ less in the temperature of winter than in that of summer. The greatest and least heights of the thermometer, at the following places, have been thus given : —

Liverpool.

Middlewich.

Lancaster.

London.

Dover.

Sidmouth.

Derby.

Greatest height

86°

78°

82°

81°

86°

76°

78°

Least height

22

21

18

20

16

20

19

The following is another calculation of the mean temperatures of London and York, reckon- ing the spring to begin with March and end with May, and each of the following seasons to contain three months.

LONDON.

Spring . Summer . Autumn . Winter .

Annual mean

46-9°

62 59-4 40-5

51-9

YORK.

Spring .

Summer .

Autumn . Winter

Annual mean .

Dr. Young states the mean temperature of the six winter months, from October to March, in-

clusive, at London, to be 43-5° ; while at Daw- lish, on the south coast of Devonshire, it is 45-3°, and at Ilfracombe, on the shore of the Bristol Channel, as high as 59°. From November to March the mean temperature, at London, is 42-6°; at Penzance, in Cornwall, 48-1°. From January to March, at London, 37-9° ; at Pen- zance, 48-5° ; and at Sidmouth, in Devonshire, 41 '7°. During February and March, in the me- tropolis, 41-5°; at Clifton, 42-5°. From Octo- ber to December, in the capital, 47° ; and at Sidmouth, 45-7°. In the most sheltered parts of Devonshire the mean winter temperature exceeds that of London by about 1-5°; while, during the coldest months, the temperature at Penzance is, according to this writer, higher than at London by 4-5°.

Mr. Howard, who has directed his particula- attention to the climate of London and its neigh- bourhood, observes, in regard to the law of tem- perature in such climates as ours, that it is probable the mass of air is similarly affected by the sun's rays, and that the proportion of heat

which it derives from the direct passage of the rays is the same in all

seasons. ‘ The accumula- tion of heat,’ says he, ‘ near the surface of the earth, which we always experience from con- tinued sunshine, is evidently due to the stoppage of the rays at that, surface, and to their multiplied reflexions and refractions, in consequence of which they are as it were absorbed and fixed, for a time, in the soil and in the incumbent atmo- sphere. By this process the earth, when in a cold state in the end of winter, becomes gradually heated to a certain depth as the warm season advances. On the other hand, when the sun declines, in autumn, the soil thus heated acts as a warm body on the atmosphere, and gives out again the heat it has received.’ Howard on the Climate of London, vol. ii. pp. 131, 132. ‘Were it not for this effect on the part of the earth,’ Mr. Howard continues, ‘the heat indicated by the thermometer would probably, on a long average (to obviate the remaining irregularities caused by clouds, rain, wind, and evaporation), be precisely at its maximum and minimum at the solstices, and at the mean at the equinoxes. For the power of the sun is proportionate to the quantity of parallel rays falling on a given area of the earth’s surface. And this quantity is greatest when they are vertical, and diminishes as they become more oblique ; till in a perfectly horizontal position of the rays it is null.”

It results from these causes, that the maximum and minimum temperatures of our climate, in place of coinciding with the solstices, are re- moved to a whole month after them ; and, in like manner, tne mean temperature of the year is de- veloped about a month after either equinox. In consequence of this fact, which is fairly deduced from actual observation, Mr. Howard is led to propose a new division of the seasons, more consonant with the actual phenomena on the earth’s surface amid which we live, than the pre- sent, which has regard only to the remote causes of temperature, and not to the actual tempera- ture which exists around us. This natural division is effected by ‘removing the beginning of the seasons fifteen days from their respective present situations, and placing them at that dis- tance before the equinoxes and solstices.

‘ By this arrangement, Spring would begin the 6th of March, at the temperature (for London) of 39‘94°, would occupy ninety-three days, and end on the 6th of June, at the temperature of 50-08° — the temperature having risen 18-14°. Summer on the 7th of June, and last ninety-three days ; during which space the mean temperature (of London) will have risen from 58-08° to 64-75°, or 6-67°, and have declined again 6-59°. Autumn, on the 8th of September, at 58-16°, and have ninety days ; during which the mean temperature will have declined 18-35°. Winter, comprehending eighty-nine days (or in leap- years ninety), would begin 7th of December. — During this season the mean diurnal temperature having fallen 5-36 (viz. to 34-45°), would have again risen 5-49°, or to 39-94°, on the 5th of March, the concluding day of the season.’— Vol. ii. p. 130.

We must here notice the singular fact esta- blished by Mr. Howard, from comparing his own observations at Plaistow, Stratford, and Totten-

ham Green, with those recorded in the Philoso- phical Transactions for thirty years, and which were made at the Royal Society's apartments in London, that the temperature of the air in this metropolis is regularly raised by artificial sources of heat to 2° on the annual mean above that of the immediate vicinity.

Mr. Howard's explanation of this singular difference is the following : ' That the superior temperature of the bodies of men and animals is capable of elevating, in a small proportion, the mean heat of a city or populous tract of country in a temperate latitude, is a proposition which will scarcely be disputed. Whoever has passed his hand over the surface of a glass hive, whether in summer or winter, will have per- ceived how much the little bodies of the col- lected multitude of bees are capable of heating the place that contains them. But the proportion of warmth which is induced in a city by the population, must be far less considerable than that which emanates from fires, the greater part of which are kept up for the very purpose of preventing the sensation attending the escape of heat from our bodies. A temperature equal to that of spring is hence maintained, in the depth of winter, in the included part of the atmos- phere, which, as it escapes from the houses, is constantly renewed : another and more consider- able portion of heated air is constantly poured into the common mass from the chimneys ; to which, lastly, we have to add the heat diffused in all directions from the foundries, breweries, steam-engines, and other manufacturing and culinary fires.' Vol. ii. p. 104. To these direct additions of extraneous heat, Mr. Howard also adds the augmentation derived in summer, from the accumulation of the natural temperature by the artificial condition of the city.

The excess of the city temperature is least in spring and greatest in winter, and seems to be- long entirely 'to the nights, which average 3°^ wanner than the country, while the heat of the days, owing without doubt,' as he says, ' to the in- terception of a portion of the solar rays by a con- stant veil of smoke, falls, in a mean of years, about a third of a degree short of that in the open plain.' The following is the proportional superiority of the London temperature in the twelve different months.

January . February . March April

May . June . July August September October . November December

The mean temperature of London, according to Mr. Howard, is 48° 30′ of Fahrenheit, or about 2° less than has usually been supposed. This varies, he

says, in different years as much as 4° 30', and the variations, he very singularly con- tends, are periodical, and appear to recur in

cycles of seventeen years. We cannot afford space for the detail of the circumstances which led him to form this opinion; but extract from the summary of the work an abridged enunciation of the fact : —

' We may consider one of these cycles as commencing either with 1790 or 1800, and end- ing with 1806 or 1816. In either case, a year of mean temperature begins the cycle, in which the coldest year falls at the end of ten years, and the warmest at the end of seven years, reckoning from the coldest, and thus alternately ; both together including a complete revolution of" mean temperature from its highest to its lowest extreme (or vice versa, from the lower to the higher), and back again. The year 1816, which was the coldest of a cycle, appears to have had parallels in 1799 and 1782; and there is every reason to conclude, from present appearances, that the warm temperature of 1806 will re-ap- pear in 1823, which will probably be the warmest, and 1833 the coldest, upon the whole year, of a cycle of seventeen years, beginning with 1807.' Vol. ii. p. 289. The greatest heat to which the climate of London is liable is 96°; the greatest cold is — 5° : thus the full range of the thermo- meter is not less than 100°.

A temperature above 80° is almost always

followed, either in our own or the neighbouring districts, by thunder-storms, which, in their turn, are succeeded by rain and a reduction of heat. Owing to our insular situation, and other causes, ' even in the coldest season of the year the medium of the twenty-four hours, upon a long average, does not fall below the freezing point. Continued frost, in winter, is therefore, always an exception to the general rule of the climate.' p. 292. The following is the mean temperature of the different months, in whole numbers, in the vicinity of London : January 34°, February 39°, March 41°, April 46J, May 55°, June 58°, July 62°, August 61°, September 56°, October 50°, November 40°, December 37°. 1 — The mean annual range is 72°. The mean diurnal range, or difference between the day and night is 14°; and this varies in the different months as follows, beginning with January, 8°, 10°, 12°, 15°, 17°, 18°, 17°, 17°, 16°, 13°, 10°, 8°. Before we dismiss these comparative estimates of the temperature of our climate, we may com- pare from the respective works of Dr. Forbes, on the climate of Penzance, and Mr. Howard's Treatise, the mean temperature of the year in London and Penzance. Both works rank with our most accurate and

faithful histories of the weather.

I. — Mean Temperature.

Jan.

Feb.

Mar.

April

May.

June.

July.

Aug.

Sep.

Oct.

Nov.

Dec.

London . . .

34

39

41

46

55

58

62

61

56

50

40

37

Penzance . .

41

44

44

49

56

60

62

61

58

53

46

43

II. — Extreme Temperature,

Jan.

Feb.

Mar.

April

May.

June.

July.

Aug

Sep.

Oct.

Nov.

Dec.

S Max. London { Miu

56 8

57 11

73 18

80 22

87 29

88 36

96 39

83 37

85 26

73 24

62 17

,56 14

c Max. Penzance £Min-

56 19

58

26

62 28

68 32

74 42

78 45

78

52

78 50

74

42

68 37

69 28

58 22

It appears, from documents contained in Dr. Forbes's Essay, that the temperature of Pen- zance retains the same proportional superiority in the colder months over all the places usually esteemed the mildest in our island ; for instance, the sea-coast of Devonshire, the Isle of Wight, Clifton, Ike. ; a fact which well accounts for, anu justifies, the resort of consumptive invalids to the western extremity of Cornwall.

In thirteen years the thermometer, at 7 A. M. at Penzance, has only been thirty-seven times below the freezing point ; consequently frost is stated to be of rare occurrence ; and the exercise of skating entirely unknown among the young men of the place. The average number of days in the year on which snow falls is very little more than two and a half; and, out of the four-

teen years, four are recorded on which no snow fell. As the most unequivocal proofs of the peculiar mildness of the winters, Dr. Forbes, at the end of his paper, gives lists of exotic and indigenous plants growing in the vicinity of Penzance; among which are several which we are not accustomed to see out of the green- house. In the open grounds two crops cf pota- toes are often produced in the year. But the most striking feature of the climate in this dis- trict seems to be its equability.

During the prevalence of north and north-east winds, the barometer is generally highest in England, and lowest when it blows from the op- posite points. Its highest range is from May to August : and the following are the extreme and mean results of seven different places.

1

Derby.

Dover.

Keswick.

Liverpool.

Middlewich.

Sidmouth.

York.

Greatest j Mean > height

'Least y i

30-48 29-74 28-34

30-95

?9-9

28-48

30-28 29-55 28-33

30-95 29-74 28-6

31 29.5 28

30-61 29-93 28-81

30-75 29-7 28-6

ENGLAND.

279

In estimating the mean neight of the barometer in London and the neighbourhood, Mr. Howard 'akes the result of twenty years at Somerset House, viz. 29-823 inches ; and that of his own ten years observation. The mean of the greatest elevations of the mercury in 'each month for the ten years, is 30-305; and of the greates.t depres- sions 29-188. The mean of the maxima of each year is 30-555, and of the minima 28'557. The mean

annual range is therefore 1-998 inches. The extreme range in the ten years is 2-49. The greatest elevation in the ten years occurred on the 24th of February, 1808, viz. 30-71 ; and the greatest depression on the 29th of January, 1814, viz. 28-22. The former condition took place during a moderate north-east wind, and the lat- ter during strong southerly gales.

Mr. Howard has established another curious fact in his researches : viz. the decided influence of the moon on the barometer. By comparing the results of that instrument at the different phases, for a period of ten years, he found that the mercury 'suffers a depression of about a tenth of an inch, by the influence of the new and full moon respectively ; while, at the first and third quarters, the moon's influence is, in respect of position in her orbit, neutral, producing nei- ther elevation nor depression in the barometer.' p. 226. And, by comparing the barometric in- dications during different periods of the moon's declination, he ascertained that the quicksilver stands considerably above the mean, while the moon is south of the equator, and, in a like pro- portion, below it, while she is to the north of the equator. On further examining the tempe- rature, winds, rain, &c., in the different periods answering to these varied affections of the moon's path, he ascertained, as might indeed have been expected, that these suffered corresponding, but certainly less uniform, changes.

Our winds blow with the greatest constancy, as well as strength, from the west and south- west, as is evinced by the leaning of the trees, in all parts exposed to its influence, towards the opposite quarters. This is thought to arise from the situation of the island with respect to the Atlantic and the Continent, and the difference of ˆ atmospheric temperature between them at cer- tain seasons of the year. Next to these, the east and north-east winds are the most prevalent. It generally blows least from the south and north-west. So great is the inconstancy, how- ever, that in summer it often blows from several points of the compass in the same day. In the maritime parts of England, especially in the south, during warm and settled weather, the sea- breeze prevails in the middle of the day, and the land-breeze, morning and evening. In the neighbourhood of London Mr. Howard's observa- tions are, 1 .A wind from the north or between that and the east prevails on an average seventy-four out of the 365 days of the year ; the extremes being ninety-six and fifty-eight days. 2. A wind from east to west prevails fifty-four days, varying in different years from seventy-two to thirty-four days. 3. A wind from south to west 104 days, varying from 123 to seventy-eight. 4. A wind from west to north 100 days, varying from 124 to eighty-three. 5. Variable winds obtain about

thirty-three days, or tne remainder of the year, being for the extremes of fifty-one to seventeen days.

Mr. Howard has a valuable observation on the ‘ apparent anomaly of a north-west wind, predominating in our wettest season in summer, and a south-west during the autumnal rains.’ ‘ I conclude,’ he says, ‘ from a careful review of the cases, that the former is not the carrier but the condenser of the vapor, which appears to be introduced, at intervals only, from the south and south-east. When the surplus vapor has been disposed of in rain on these occasions, the north- west resumes its sway, the atmosphere recovers its transparency, — ‘ et claro cernes silvas Aqui- lone moveri,’ Virg. but it is usually not long be- fore the returning clouds indicate the near approach of a new supply of vapor.’

- *In the decline of the year, the rain appears to originate in a somewhat different way. The great body of the atmosphere is then usually moving with some force from south-west to north-east, while the sun is declining to the southward. An air already turbid from begin- ning precipitation, is further charged below by an excess of evaporation from the agitation of much watery surface over which it passes. Every calm interval then affords its shower, fol- lowed by wind and evaporation again : and a succession of gales by night, and cloudy days, characterise the approach to the hibernal season.’ — Vol. ii. p. 211.*

Mr. Dalton estimates the average quantity of rain that falls throughout England at 31-3 inches : at Ware it has been averaged during five years at 23-6 inches. Mr. Howard gives it in London and the neighbourhood at somewhat above 25-0 inches. But the Royal Society during eleven years at only 21-25 inches. The quantity is dis- tributed, throughout the year, according to Mr. Howard, in the following proportions :

January

February

March

April

May

June

July .

August .

September

October .

November

December

Inches.

1-95 1-48 1-29 1-69 1-82 1-92 2-63 2-12 1-92 2-52 2-99 2-42

The following years have been the wettest of a series of twenty-three years, and in the order in which they are put down, viz. 1816, 1797, 1807, 1802; and it further appears that 'the warm years were uniformly dry, or below the average in rain, and the cold years uniformly wet, or above the average.' The proportion of rain by day and night is very different, being n less than one-third more in the latter period, — a fact which has been verified in d fferent parts of the kingdom, and which is, doubtless, a bene- ficent arrangement of that same Providence, which has appointed the day for labor, and the flight for rest. The greatest quantity of rain col-

lected in one diurnal space was 2-C5 inches, on 26th of June, 1816. The average number of days on which any rain falls is 148, — an im- mense proportion, and strikingly exhibiting the wetness of our climate.

In considering the comparative humidity of different months and seasons, Mr. Howard con- firms the popular adage of ' forty days' rain after St. Swithin' (15th of July), and comes to the conclusion, that although the notion will be found fallacious, if put to the test of experience at any one station in our island ; yet that, ' in a majority of our summers, a showery period, which, with some latitude as to time and local circumstances, may be admitted to constitute daily rain for forty days, does come on about the time indicated by this tradition.' The fact itself is accounted for by the proximity of the summer solstice ; as the second rainy period of the year is accounted for by the proximity of the winter solstice. In respect of the influence of particu- lar winds in causing rain, Mr. Howard shows, by calculation, what was before generally known by common observation, that north-east winds are our dry-weather winds, and south-east our wet. The winds from west to north are, also, •more or less connected with our fair weather, while those between the south and west have no decided connexion with either wet or dry wea- ther. These remarks, however, are intended to apply only to London and its vicinity, or, at most, to the central parts of the island : the in- fluence of the particular winds in the south-

western extremity of Great Britain is very dif- ferent. It may be further observed, after this author, that in the three dry years, 1807, 1808, and 1815, the proportion of north-easterly to south-easterly winds was nearly double, being 211 of the former, to 108 of the latter: while, in the wet years, 1810, 1812, 1814, and 1816, the proportion of the former to the latter was only as 323 to 269. In the wettest year of the series (1816) the south-easterly winds actually exceeded those from the north and east.

In an estimate of the moisture of this climate we must not omit to notice the dew, which Mr. Dalton estimates at an average annual depth of about six inches. The evaporation of South Britain he estimates at twenty-three inches.

The soil, of the southern parts of Great Bri- tain is extremely various. The downs of Sussex and the west, like the wolds of Yorkshire, are calcareous. Somersetshire, Devonshire, and Cornwall, contain a boundless variety of downs, rocks, marshes, heaths, and vales, intermixed in almost every direction ; the most luxuriant slopes being not unfrequently crowned by the most barren summits. The soil of the midland counties is more uniform, being generally a strong loam, though sandy soils cover a large space in Not- tinghamshire, and calcareous earth abounds in many parts of Northampton. That species of ferruginous soil called fed land by the farmers, is also found in these districts. Staffordshire and Derbyshire have large tracts of peat or moss ; but Norfolk is almost entirely a sandy loam, ex- cept in the eastern part, where clay appears. In the wealds of Kent, Sussex, and Surrey is the

greatest surface of unbroken clay land. Clay also abounds with other strong soils in the north : the highest ranges are of course rocky, and abound with peat ; lower down is a lighter loam.

The woodland counties are Kent, Surrey, Sussex, Hampshire, Worcestershire, and Ches- hire, with parts of Oxfordshire, Berkshire, Lei- cestershire, and Northamptonshire, to which may be added, a portion of Yorkshire. The western side of the island is, in general, better wooded than the eastern. The timber of England and Wales has been estimated as equal in value to two years' rent of the land. It consists princi- pally of the noble oak, the ash, elm, lime, beech, chestnut, sycamore, maple, birch, alder, abele, hornbeam, aspin, and poplar.

The entire quantit y of land in England and Wales has been estimated at 37,334,000 acres : giving for England 32,134,000, and for Wales 5,200,000. The uncultivated portions (including towns, villages, roads, and waters) at 6,714,000 acres, leaving nearly 31,000,000 of acres, covered with profitable timber, or devoted to agricultural improvement. The Board

of Agriculture states that 12,000,000 of acres are employed in pastu- rage, and 4,000,000 for the dairy. About 40,000 acres are occupied as hop-grounds and nurse- ries ; and 50,000 as pleasure-grounds, and fruit and kitchen-gardens. The land in an actual state of tillage has also been estimated at 12,000,000 of acres; of which about 3,200,000 are sown with wheat. Mr. Arthur Young, how- ever, estimates this last quantity at 3,399,326 acres : Dr. Colquhoun states the property annu- ally created in Great Britain and Ireland, by agriculture, at £216,817,624. Mr. Middleton, in his Agricultural Survey of Middlesex, takes the whole value of this produce in England and Wales, in 1800, at £126,690,000. The number of farms has been taken at 2,000,000. The rental of land appears to be about £28,000,000 sterling, and the amount of tithes £2,193,994.

Mr. Comber, in his work on National Subsis- tence, gives the following computation of the land under cultivation in England and Wales ; and its mode of being cultivated. It will be found to differ little from that we have adopted :

Acres.

Wheat 3,300,000

Barley and rye . . . 1,000,000 Oats and beans . . . 3,000,000 Clover, rye, grass, &c. . . 1,200,000 Roots and cabbage cultivated

by the plough . '. 1,200,000

Fallow 2,300,000

Hop-grounds . . . 34,000

Nursery-grounds . . 9,000

Fruit and kitchen-gardens . 41,000

Pleasure-grounds . . 16,000

Land depastured by cattle . 1 7,000,000 Hedgerows, copses, and woods 1 ,600,000 Ways, water, &c. . . 1,300,000

Commons and waste lands . 5,094,000

Total 37,094,000

Grazing, dairy, and arable land divide the occupations of the farmer. In the first the conn-

ties of Leicester, Lincoln, Northampton, par's of Yorkshire and Durham, with Somersetshire, are conspicuous. The dairy counties are Che- shire, Gloucestershire, Shropshire, Wilts, Bucks, Devonshire, Dorsetshire, Essex, Suffolk, Cam- bridgeshire, Derbyshire, and Yorkshire. The arable farms of greatest extent are found in Nor- thumberland, Durham, Yorkshire, Norfolk, Suf- folk, Kent, Surrey, Sussex, Essex, Hertfordshire, Hampshire, Bedfordshire, and Berks.

Wheat, our most important grain, is grown in ill the last-mentioned districts, to the extent of 3,200,000 acres, which yield about twenty bush- els on an average per acre. The barley counties are Norfolk, Suffolk, Cambridge, Bedfordshire, Leicestershire, Nottingham, and Berkshire, with , the upper parts of Herefordshire, Warwickshire, and Shropshire. Oats are grown in the northern and fenny tracts of the eastern and midland counties. Rye, which is not so much cultivated as formerly, is found in the higher and sandy soils of the hilly districts : as are peas. Beans flourish in all the strong lands of the kingdom : and clover, tares, and sainfoin are, like potatoes, every where to be found. The last, however, attain their greatest perfection in Lancashire and Cheshire. Turnips are also considered, in most counties, a general crop, and frequently adopted instead of the naked fallow of the old farmers. Cabbages are in some districts grown as food for cattle. Hemp and flax are also occasionally cultivated. Hops distinguish Kent, Sussex, and Surrey; they are also grown in Essex, Hamp- shire, Nottinghamshire, Worcestershire, and Herefordshire : but Farnham (Surrey) has long been noted for the best of these precarious crops. Seeds and medicinal plants of various kinds are reared on a large scale in several parts of Eng- land ; as canary-seed, in the Isle of Thanet ; coriander and carraway, in Essex ; mustard, in Durham, the Isle of Ely, and Essex ; rape, in the counties of York and Lincoln ; poppy-seed and saffron, in Essex and Cambridgeshire ; madder and woad, in Kent ; and chamomile, in Derbyshire. Apples, pears, plums, cherries, peaches, apricots, nectarines, currants, goose- berries, raspberries, and other garden fruits are produced in great plenty throughout the country; but the wet weather, and the changeable nature of our climate generally, are injurious to their perfection. Artichokes, asparagus, cauli- flowers, cabbages, coleworts, brocoli, peas, beans, kidney-beans, spinage, beets, lettuce, celery, endive, turnips, carrots, potatoes, mushrooms, leeks, onions, and shallots (though several of them not indigenous), are now, in a manner, naturalised to our soil, and are raised in great plenty in our kitchen-gardens.

The orchards of Worcestershire, Herefordshire, Tiloucestershire,

Somersetshire, and Devonshire, supply the manufacturers of cyder and perry, or other parts of the country, with fruit. Marshall estimates that the four counties of Worcester, Gloucester, Hereford, and Monmouth, yield annually about 30,000 hogsheads of cyder; 10,000 of which, besides 1000 hogsheads of perry, and 1500 tons of fruit, are the produce of ine first county alone. The export of fruit from '.nat county has amounted to 2000 tons annually.

Kent is distinguished for its cherries and filberts; the latter of which occupy some hundred acres of land near Maidstone.

The increase of the expense of cultivating land in England, in modern times, is a subject of some interest to many of our readers. The Board of Agriculture has thus exhibited the averages of three distinct and distant years, which speak for themselves.

Average Expense of Cultivating 100 Acres of Land, for the following Years.

1790.

1803.

1813.

£ s. d.

£ s. d.

£ s. d.

*Rent Tithe Rates Wear& i Tear *

88 6 3i 20 14 If

17 13 10

15 13 5£

121 2 7i 26 8 Oi- 31 7 7|

22 11 10i

161 12 7f 38 17 3i 38 19 2f

31 2 10J

Labor Seed Manure

85 5 4| 46 4 10i

48 0 3

118 0 4 49 2 7 68 6 2

161 12 11J

98 17 10

37 7 OJ

Team Interest

67 4 10

22 11 11J

80 8 Oi 30 3 8|

134 19 8|

50 5 6

Taxes

18 1 4

Total

*411 14 11**

547 10 Hi

771 16 43

First among the valuable animals of England ranks its breed of various descriptions of horses. The whole number kept in Great Britain has been estimated at 1,500,000, and includes every valuable variety of that noble animal. The breeds of cattle in various parts of the kingdom have been also cultivated with the greatest care. The entire number of the live stock of this kind in Great Britain is about 5,500,000. Sheep are also objects of great attention and importance throughout England. The introduction of Me- rinos, and the astonishing modern extent of our manufactures, have together operated as a power- ful stimulus in this branch of grazing. Long- wooled sheep abound on the eastern side, and in the low tracts of the island. The annual produce of their wool has been estimated at 137,000 packs, of 240 Ibs. each. Short-wooled sheep are kept on all the upland districts, both of England and Wales. Their wool is fine ; and the num- ber of them is taken at nearly 15,000,000. That of the long-wooled sheep at

between 4,000,000 and 5,000,000. The annual produce of short wools is supposed to amount to 231,000 packs. If the lambs be added, the total number will amount to 26,000,000, and their wool to more than 400,000 packs.

Animals of inferior consequence are— the patient and degenerated ass, whose numbers are much diminished; the mule; the deer; the goat; the English mastiff and bull-dog ; the fox ; and the hare. The wild-cat is still found in some of the mountainous and woody parts, as well as the badger, otter, marten, several species of the weasel tribe, the squirrel, mole, dormouse and hedge-hog. No wild animals of an important size remain in any part of the kingdom; and the reptiles and numerous insect tribes a

paratively harmless. The English birds of prey are chiefly of the eagle and hawk kinds ; but the former are not frequently found : and the bustard, sometimes weighing from twenty to twenty-five pounds, may be considered as the largest of the British birds. The golden-crested wren is the least. The most admired of our songsters is the nightingale; the wheatear is the most delicate bird brought to table. Of wild fowl, the most useful are the goose, duck, teal, and widgeon, vast numbers of which are caught annually in the fens, and supply an extensive article of food . Birds of passage annually visit both North and South Britain; among which are the snipe, woodcock, and several species of plover. Game is plentiful in most counties. Poultry and do- mestic fowls we need hardly observe are every where seen. Many parts of the coast are well stocked with water-fowl and shell-fish ; particu- larly lobsters, crabs, and oysters. The rivers, lakes, and sui rounding seas, abound also with a great variety of other fish. The most common of those in ou rivers and inland waters are the salmon, trout, pike, eel, perch, carp, stur- geon, and char. On the southern coast the migratory pilchard, and maclrerel (which are only caught near the southern part of the island), abound, while herrings are common to all parts. Other much esteemed fish are the turbot, cod, sole, ling, halibut, plaice, haddock, whiting, smelt, mullet, doree, and bret. The shark is oc- casionally seen, and the whale visits the northern coast, where also the seal and the sun-fish appear. The fisheries round our coasts, and those of Ire- land, including inland fisheries, amount in annual value to about £3,000,000 in England and Wales : in Great Britain, including Ireland, at least £10,000,000. See FISHERIES.*

It has been estimated that the private property vested in the mines and minerals of England and Wales cannot be less in value than £68,000,000 sterling ; and that in the whole of Great Britain, including Scotland and

Ireland, the value is at least £75,000,000. Iron, copper, lead, tin, salt, alum, coals, stones of various kinds, lime, chalk, slate, &c., are found in vast quanti- ties ; and the new discoveries in chemistry have extracted many valuable productions from our minerals and fossils. But the eastern and southern parts of the kingdom are wholly desti- tute of these treasures. Gold has been dis- covered in particular spots, but in too small quantities to defray the expense of obtaining it ; and silver is only to be met with in conjunction with lead or copper ore. Iron is our staple metal, and coal most abundant. Black-lead is a useful production, almost peculiar, it is said, to this country. Rock-salt is a considerable article of export. Marble, spar, and excellent stone for building, are common ; together with fullers-earth and the finest clay.

The valuable article of coal abounds most in Northumberland, Cumberland, Durham, and Yorkshire ; but Westmoreland is destitute of it entirely. Derbyshire, Staffordshire, Shropshire, Leicestershire, and Warwickshire, contain nu- merous reins. Gloucestershire, Somersetshire, and Monmouthshire, in the west, possess fossil coal, as also does Bovey Heath, in pevonshire.

It also extends into various parts of the princi pality. In 1792 it was computed that 64,724 men and boys were engaged in raising or con- veying coal on the rivers VVeare and Tyne ; and Dr. Thompson states the length of the Newcastle coal formation, from north to south, at twenty- three miles, and its medium breadth at eight miles ; giving a superficial extent of more than 180 square miles, or 557,568,000 square yards. The thickness of all the seams at present worth working, is said to be about ten yards. The whole quantity of coal in this district, therefore, amounts to 5,575,680,000 cubic yards. More than 2,000,000 of chaldrons are annually ex- ported. This, including the waste, the above writer computes at 37,000,000 of cubic yards ; and, by dividing the whole quantity in the for- mation by this, the quotient shows that these mines may be worked at the same rate, for 1 500 years, before they will be exhausted. By making the requisite reductions for what has already been worked, and other circumstances affecting the consumption, amounting to one-third of the whole, he concludes, that this formation will supply coal, at the present rate of expenditure, for 1000 years from the present time.

The iron districts are the northern parts of Lancashire, Derbyshire, Gloucestershire, and v Shropshire. It is also obtained in Northumber- land, Cumberland, and Durham ; as well as in Yorkshire, Staffordshire, Worcestershire, Wilt- shire, Somersetshire, Devonshire, and Mon- mouthshire. The iron mines of England and Wales, yield together 200,000 tons of pig-iron. Lead is chiefly obtained in Northumberland, Cumberland, Westmoreland, Durham, York- shire, Derbyshire, Somersetshire, and

Devon- shire. Those of Derbyshire are the most ancient lead-mines in the kingdom, having been worked by the Romans. The present produce annually is about 600 tons. But those near Alston, on the borders of Cumberland and Northumberland, yield double that quantity. Britain has been considered, from a still earlier period, as the depo- sitory of tin. This, at present, is exclusively confined to the south-west promontory of the island, which yields abo\it 300 tons annually. The people employed in the various processes by which this metal is obtained, are stated at the number of 10,000 ; and the yearly value of the produce at £500,000. Copper is found in various parts of the great chain of mountains which ex- tend from Cumberland to Cornwall, and in the Isle of Anglesey. The principal mines are in Derbyshire, Anglesey, Cornwall, and Devon- shire. Mr. Grenfell states, that the mines of Cornwall and Devonshire, yield about 80,000 tons of ore annually ; affording not above 8000 tons of copper, the worth of which may be esti- mated at about £1,200,000.

Zinc appears in Derbyshire; alum in York- shire; gypsum in Derby and Nottingham ; fullers- earth in Surry, Berks, and Bedfordshire ; potters- clay in Staffordshire, and at Purbeck, Dorset- shire ; superior slate is found in the north of England, and in Cornwall, Devonshire, and Leicestershire.

The principal salt mines of this kingdom are those of Northwich, Cheshire. They were dis-

covered in 1670; but the salt-springs of that county were known to the Romans; the whole annual produce of these mines is about 60,000 tons. The brine-springs in the vicinity of Nampt- wich and Middlewich, in the same county, contain about twenty-five per cent, of the fossil, and yield about 45,000 tons annually of fine white salt. Worcestershire, also, contains some productive springs; those of Droitwich yield

600,000 bushels annually. Salt is also found in a spring at Weston, Staffordshire.

Our quarries of stone, as being wholly four.cl in the hilly districts or on the western side of the kingdom, are of course not available for the ordinary purposes of building at a distance : the produce of them, altogether, compared with that of the mines and iron-works, is not considerable ; as appears from the following return of the

PROFITS of the QUARRIES, MINES, and IRON-WORKS, in 1810, in the counties where they are principally situated : extracted from the

parliamentary .papers on the property tax.

Counties.

Quarries.

Mines, as well of Coal as of Iron, Copper, Tin, and Lead.

Iron- works.

£

£

£

Cheshire ....

877

Coal and iron 9,568

8,354

Cornwall .' .

2,147

Tin and copper 106,028

Cumberland

952

Coal 32,466

656

Derbyshire

1,959

Coal and iron 18,678

34,613

Devonshire

3,907

Tin, copper, and iron . . . 10,830

13,043

Durham .

1,668

Chiefly coal 51,071

12,259

Yorkshire . – . . ;

3,800

Chiefly coal . . . . • . 34,506

7,859

Lancaster . . .

3,248

Coal and iron 30,813

18,726

Northumberland

3,796

Chiefly coal 45,013

17,420

Shropshire

1,706

Coal and iron 21,058

6,430

Staffordshire

327

Coal and iron 21,366

8,393

Warwickshire .

—

Iron 250

16,715

Flintshire

—

Coal 14,019

Glamorganshire

—

Coal and iron 28,057

29,660

Monmouthshire

—

Coal and iron 11,980

2,362

Other counties ‘ (•• • -i i

4,573

47,788

46,182

Total.

28,960

483,491

222,672

Sir Frederick Eden in 1812 supposed £116,000,000 to be the annual amount of British manufactures insurable in Great Britain. These he distributed as follows : — British manufactures for home consumption; namely, woollens £11,000,000; cotton goods £6,000,000 ; leather £12,000,000 ; flax £2,000,000 ; hemp £2,000,000 ; glass £2,000,000 ; paper £1,500,000 ; porcelain and pottery £2,000,000 ; silk £3,000,000 ; hardware £6,000,000 ; beer £10,000,000 ; sp'rits £4,000,000 ; soap £1,500,000 ; salt £1,000,000 ; candles £2,000,000; miscellaneous articles £10,000,000; making a total of £76,000,000: to which he adds, of Britisii manufactures for exportation, £40,000,000. The value of foreign merchandise deposited in warehouses, shops, &c., and either paid for or virtually paid by debts owing to this country by foreigners, has been estimated at £33,000,000 in England and Wales; at £40,000,000 in Great Britain and Ireland.

Of these the manufacture of woollens of dif-

ferent kinds is the most ancient, and has been considered the staple fabric of the country. Though introduced as early as the time of the Romans, it dated its pre-eminence from the reign of Edward III., and is, at present, chiefly confined to the southern division of the island. The value of the articles annually produced is about £18,000,000, and the number of persons employed in them about 500,000. The cotton manufacture was introduced about the middle of the seventeenth century, and, at the commence- ment of the eighteenth, did not employ an eightieth part of its present hands. It is now unrivalled in any other country. Manchester, Preston, Bolton, Blackburn, and Wigan, are now its principal seats in England. The annual value of this manufacture to Great Britain is estimated at £20,000,000 ; and the number of individuals employed in it at 600,000. The linen manufacture, partly superseded by that of cotton, does not now exceed in annual value £2,000,000, or £2,600,000.

The following is an exhibition of the rise, progress, and present state of the cotton manufacture in Great Britain. From 1770 to 1780 the importation of cotton wool averaged 5,735,575 Ibs. per annum; from 1781 to 1790 about 18,000,000 Ibs. weight; and from 1791 to 1801 about 32,000,000. And the following is a statement of the quantity imported in each of the

twenty- two years 1802 — 1823, distinguishing the several countries whence imported and the number of bags and bales from each respective country

COTTON WOOL IMPORTED FROM

Years.

United States of America.

Brasils and Portugal.

East Indies.

West Indies, &c.

Total No. of Bags &Bales.

Total in Ibs. weight.

«2

‘0.00

*/ i— i t- **

1802

107,494

74,720

‘ 8,535

90,604

281,383

77,393,600

£ £

a t

1803

106,831

76,297

10,296

45,474

238,898

59,921,990

& > <

1804

104,103

48,588

2,661

86,385

241,637

70,506,355

et V

*• a

1805

124,279

51,242

1,983

75,116

252,620

72,229,537

2%

oo »*

1806

124,939

51,034

7,787

77,678

261,738

75,157,530

•V 0 >

- _ =

1807

171,267

18,981

11,409

81,010

282,667

86,206,870

£ ** • o

1808

37,672

50,442

12,512

67,512

168,138

22,676,740

g

£ J =

1809

135,000

1G«,170

35,764

103,511

442,382

117,775,530

g

O v .

1810

240,516

149,535

79,382

92,186

561,173

136,570,735

^..sS

1811

128,192

‘ 118,514

14,646

64,789

326,141

91,662,535

•3 ^2

1812

95,331

98,714

2,617

64,563

261,215

63,027,570

a .2 i § a \

1813

1 Q 1 A

37,721

AQ (\f\f\

137,168

d C1 Cf\f\

1,421

1 O Cf\f\

73,218

nK.r\C\

249,503

OQ7" Kf\f\

49,820,530

en fA C. 0 > TO

Iol4

1815

vDjjUUU

201,000

91,200

lOjOUU

24,300

,OUU

54,900

^o/,OUU

371,400

oy, 1 40, o« o

96,720,370

90,537,350

1816

166,000

124,000

31,000

49,000

370,000

94,140,330

90,350,230

1817

195,560

114,490

117,955

49,155

477,160

125,132,230

110,532,210

1818

219,950

160,200

247,300

57,850

660,300

177,257,375

112,235,750

1819

212,250

125,450

178,300

31,070

545,070

150,735,728

110,235,570

1820

301,200

179,700

57,300

31,950

577,150

143,637,325

128,735,235

1821

- 300,100

121,050

29,700

37,250

488,100

128,573,275

128,527,725

1822

330,000

143,200

19,300

40,650

533,150

139,797,735

140,795,375

1823

448,070

148,070

38,650

33,610

668,400

180,233,795

150,325,795

The following is an account of the official value of the cotton wool imported ; the number of bags and bales, and the official value thereof re-exported ; and the official and declared real value of the quantity of cotton yarn and of cotton manufactures exported to all parts of the world, except Ireland, in each of the ten years, 1814 — 1823.

The official values imply a fixed <-alue assigned by the government in 1694; and may or may not have a relation to the real value of the present time ; but they are important and interesting as denoting an increase or decrease of quantity.

EXPORTED.

Official value

Raw.

Value of Yarn.

Value of Manufactures.

Years.

ported.

Bags.

Value.

Official.

Real.

Official.

Real.

1814

2,030,862

366,270

1,119,850

2,791,248

16,690,366

17,393,796

1815

3,335,564

397,664

808,853

1,674,021

21,699,505

19,124,061

1816

3,160,075

30,000

343,768

1,380,486

2,628,448

16,335,124

13,072,758

1817

4,161,824

22,700

721,430

1,125,257

2,014,181

20,357,147

14,178,021

1818

5,767,547

60,000

1,245,781

1,296,776

2,385,305

21,627,936

16,643,579

1819

4,871,513

65,800

1,085,536

1,585,753

2,516,783

16,876,206

12,388,833

1820

4,957,057

27,500

370,610

2,022,153

2,826,643

20,704,600

13,843,569

1821

4,347,258

51,000

1,062,302

1,898,695

2,307,830

21,639,493

13,786,958

1822

4,731,252

58,700

1,279,263

2,353,317

2,700,437

24,566,920

14,534,253

1823

6,241,561

39,700

707,312

2,425,419

2,625,947

24,117,549

13,751,415

By the first of the above statements it appears that the total quantity of cotton wool imported in the nine years 1814 — 1823, ha.« amounted to about 1,235,000,000 Ibs. weight, and the stock on hand at the close of the year 1814 naving been about 24,000,000 Ibs., it makes a total quantity of 1,260,000,000 Ibs. weight in the nine years to be accounted for : which has been disposed of in the following manner, viz. 1,062,000,000 Ibs. weight taken for spinning; 105,000,000 ditto re-exported in a raw state; and 92,000,000 Ibs. remaining on hand at the close of the year 1823.

Government used much exertion, in the seven- teenth century, to improve and extend the manu- facture of silk, which was greatly promoted by the settlement of the French refugees in London, Canterbury, &c. Spitalfields is, to this day, the principal place where silk weaving consti- tutes the employment of the population : it occu- pies about 30,000 people in that district of the metropolis. Coventry, Derby, Leek, and Mac- clesfield, also participate in this manufacture. The value of the whole produce has been stated at £4,200,000; and the persons employed, com- prising a great number of women and children, is about 70,000.

The manufacture of stockings, chiefly con- fined to the counties of Nottingham, Leicester, and Derby, is most extensive in the first two counties. It has been computed that more than 20,000 persons in Leicestershire are employed in producing hosiery to the value of £1,500,000 annually. The goods made in Nottinghamshire are chiefly silk and cotton.

But our hardware is the most celebrated of our existing manufactures : 95,000 tons of iron, worth in the raw state £5,000,000 sterling, are supposed to be annually devoted to this object ; and the men employed in working this metal to amount, at least, to 200,000. The seats of the great hardware manufactories are at Birmingham, Sheffield, and London (see CUTLERY), where,

exclusively, much of the finer and more valuable work is performed. At Birmingham, and tat: contiguous district of about fifteen luiles ettd» way, it is estimated that 100,000 persons aie engaged in the larger works. The brass foundry, which is principally confined to that town, is supposed to employ nearly 10,000 popple; the button trade from 7000 to 10,000 ; brace-making 1000 ; the jewellery and gilding business, from 6000 to 7000 ; and the burnishing line nearly 20,000! The aggregate annual value of Bir- mingham articles has been stated at £2,000,000.

Sheffield and its neighbourhood are distin- guished for the making of steel, and the manu- facture of cutlery and files ; as well as for plated goods. The whole are supposed to occupy about 30,000 of its inhabitants, and to be worth, annually, £1,200,000. The entire annual value of articles made of iron in England and Wales is taken at £10,000,000 sterling ; and the number of people employed, at 200,000 : brass and copper articles at £3,000.000, and the people employed on them at 50,000 : steel, plated, and hardware goods, and toys at £4,000,000, and the people employed at 70,000.

This view of the importance of our hardware manufacture will be confirmed by adverting to the following statement from returns made to the house of commons of its value annually, as an export, during the years 1830 — 1.

METALS AND HARDWARE EXPORTED FROM BRITAIN, DURING THE YEARS FOLLOWING.

HARDWARE AND CUTLERY.

1830.

1831

Bar Iron and unrought Steel Unwrought Iron . . .

Tons. Dec. Yalue.

13,369 1,410,936 89,182 27,951

Tons. E 16,799 I

93,547 30 227

ec. ‘ alue.

620,631

-

18.32..

British Tin Foreign do. . .....

Cwte.

21,762 12,225

Clocks and watches, with various jewellery articles, and cut glass, are manufactured to great perfection in the metropolis ; where also all the best astronomical, optical, and other scientific instruments are exclusively made. Here alone also is the beating out of gold leaf engaged in. The plate glass and mirrors of England now rival any in the world : the value of this manu- facture is estimated at £1,000,000, and the people engaged in it at 40,000.

Tanneries are of frequent occurrence in Eng- land : one of the most extensive in the metro- polis engages also in the manufacture of Morocco leather, importing its superior goat skins direct from Mogador. The value of the various leather articles, annually made, such as shoes, gloves, harness, saddlery, &c., has been estimated at nearly £10,000,000.

The manufacture of earthenware and porce- lain has greatly improved in this country of late.

The best clay used in Staffordshire and Worces- tershire, the seat of these manufactures, is brought from the Isle of Purbeck, and the coasts of Dor- set and Devon. Thousands of tons of flint are also sent hither from the chalk-pits of Kent, and other materials from Cornwall. The principal places in the pottery district of Staffordshire, are Burslem and Etruria, the latter the pro- perty of Mr. Wedgewood, to whose family the Staffordshire potteries are much indebted. The annual value of this manufacture is £2,000,000; the persons employed in it about 40,000. Nearly 40,000 tons of shipping are employed in con- veying the materials for it to Liverpool, and about 30,000 in exporting or conveying coastwise the finished articles. Superior porcelain is also made at Worcester, Derby, Colebrook-dale, in

Shropshire, and Swansea.

Paper, which was once largely imported, is now a valuable export, and principally manu-

factured within a circle of eighty miles from the metropolis. It is supposed to amount, as a ma- nufacture, to the annual value of £1,000,000. Manufactures of a more restricted nature, or in- ferior extent, we can hardly be expected to par- ticularise. That of gunpowder, however, is worthy of notice, as also that the government cer- ta nly excels private manufacturers in making this article; distilleries, sugar-refineries, soap-houses, vitriol, copperas, and white lead manu- factories; salt-works, roperies, breweries, hat-

manufacturers, &c. &c., are other occupations of the English manufacturing population, which are important to the comfort of every class of society. In the construction of carriages (see our article COACH-MAKING) we have also arrived at distin- guished success, and export this elegant manu- facture largely.

The following table exhibits the progressive increase of production in some important articles which we cannot more particularly enumerate.

STATEMENT of the thousands of BRICKS and TILES; pounds weight of TALLOW and SPERMACETI CANDLES ; and of HARD and SOFT SOAP, and STARCH, charged with Excise Duty in each of the Years 1782—1823. 1830-1.

Years.

Thousands.

Ibs. of Candles.

Ibs. of Soap.

Ibs. of Starch.

Bricks.

Tiles.

Tallow.

Wax.

Hard.

Soft.

1782

The duty on Bricks and

50,760,922

194,001

40,908,579

—

6,936,145

1783

Tiles commenced Sep-

48,445,439

184,864

28,427,641

2,342,932

5,378,017

1784

tember 1st. 1784.

49,585,424

132,456

32,965,595

2,868,813

6,714,049

1785

358,783

56,045

46,113,705

258,588

33,076,540

2,812,470

6,271,041

1786

495,649

68,379

47,868,820

305,322

33,967,547

2,749,717

6,610,685

1787

635,785

82,997

47,730,489

333,396

31,998,634

2,885,229

5,951,689

1788

668,180

74,352

50,471,669

341,440

34,843,210

2,711,201

6,069,634

1789

590,279

63,903

51,524,711

322,353

35,970,363

2,546,723

6,395,066

1790

711,191

69,006

51,999,301

385,518

37,288,126

2,775,706

6,973,665

1791

749,855

74,097

54,418,211

401,544

38,949,389

2,969,272

7,775,835

1792

807,956

74,895

54,880,096

466,577

40,116,109

2,818,191

8,454,761

1793

908,890

76,672

59,101,046

486,616

40,359,760

2,634,844

7,277,771

1794

787,673

84,963

59,440,087

515,994

44,841,692

2,514,235

7,921,623

1795

559,266

68,048

58,072,944

526,415

44,142,747

2,660,637

8,620,938

1796

633,008

80,214

56,117,750

460,449

43,466,468

2,754,496

1,913,854

1797

517,708

71,770

58,651,846

439,618

43,591,644

2,635,176

3,142,488 –

1798

516,804

66,748

61,061,176

484,775

47,637,593

2,503,388

7,312,730

1799

421,322

58,255

64,374,528

573,844 ‘

47,987,135

2,580,643

5,878,709

1800

543,061

69,873

61,721,251

575,388

46,867,555

2,339,125

2,879,315

1801

674,669

78,867

62,854,082

596,596

45,687,930

1,928,130

301,968

1802

698,597

61,915

64,753,726

544,581

46,518,400

2,377,122

2,541,472

1803

842,075

86,477

69,041,070

586,223

53,174,226

3,018,825

4,857,129

1804

795,686

90,321

68,369,863

571,168

51,367,419

2,625,004

3,802,257

1805

845,646

93,599

73,674,559

609,827

56,831,640

3,087,220

3,362,202

1806

933,304

88,717

71,093,286

684,347

58,678,031

3,086,680

3,677,611

1807

831,386

82,004

75,584,249

711,859

60,967,571

3,126,122

4,224,127

1808

841,710

86,310

73,453,857

701,413

64,725,251

3,643,879

4,094,651

1809

779,295

86,803

59,600,379

683,670

53,590,887

3,553,978

3,059,906

1810

874,373

89,530

71,144 004

737,868

63,282,665

4,279,309

3,741,503

1811

950,547

90,631

73,160,119

737,411

61,009,792

3,277,543

3,979,685

1812

939,611

91,711

75,429,839

771,333

62,002,776

4,045,406

3,216,006

1813

912,036

93,328

69,053,888

749,976

60,177,702

3,835,752

1,770,942

1814

758,123

83,647

73,286,138

827,655

61,264,182

3,898,005

3,871,306

1815

778,390

80,850

77,826,636

874,819

68,723,292

4,466,354

4,146,436

1816

696,705

71,857

81,052,198

850,148

70,451,190

4,544,961

2,867,087

1817

697,276

71,671

77,933,227

881,247

64,735,555

3,793,243

2,423,507

1818

812,582

79,356

77,251,728

862,896

67,983,858

4,415,873

3,398,051

1819

1,065,066

94,747

80,834,344

833,446

69,221,108

4,747,173

4,198,332

1820

979,768

86,815

82,474,500

851,447

74,278,637

5,303,660

4,351,138

1821

964,419

80,265

87,369,173

880,760

78,914,979

5,614,200

4,411,303

1822

977,212

71,387

89,255,555

861,328

80,932,043

5,786,637

5,041,884

1823

1,119,236

73,803

97,243,368

871,230

88,352,216

6,525,744

5,912,840

1830

1,090,805

68,547

117,157,916

10,209,519

6,992,890

1831

1,096,696

66,763

108,956,030

9,641,907

6,782,218

ENGLAND.

287

Return of the Official Value of British and Irish Produce and Manufactures, and of Foreign and Colonial Produce and Manufactures, exported from Great Britain, distinguishing the several countries, together with the Imports into Great Britain from the same countries, for the year

ending 5th of January, 1833 : —

COUNTRIES.

UNITED KINGDOM.

Official Value of Imports.

O British and Irish Produce and Manufactures.

fficial Value of Expoi Foreign and Colonial Merchandise.

•ts. Total Exports.

£. s. d.

£. s. d.

£. s. d.

£. s. d.

Russia

4,696,972 12 5

1,746,972 12 5

856,856 14 8

2,603,829 7 1

Sweden

212,639 18 1

91,587 5 1

67,788 12 8

162,375 17 9

Norway Denmark

91,678 10 1 110,981 7 2

92,599 1 1 173,280 1 11

58,225 5 6 ‘ 83,423 8 3

150,824 6 7 256,703 10 2

Prussia

1,200,102 7 5

264,618 2 1

594,684 12 10

829,302 14 11

Germany . Netherlands

201,165 8 3 1,276,080 13 0

7,667,147 0 3 3,179,298 13 6

1,806,480 8 9 3,270,927 0 11

9,473,627 9 0 6,450,225 14 5

France

3,056,154 12 4

635,927 13 5

256,081 19 7

892,009 13 0

Portugal, Azores, and Madeira .

520,616 18 8

2,251,584 3 0

68,197 17 1

12,319,782 0 1

Spain and the

Canaries «••

1,293,924 0 4

1,036,623 17 3

318,038 7 8

1,354,662 5 4

*Gibraltar **

19,668 7 0

879,282 3 7

121,340 18 3

1,000,723 1 10

Italy

1,475,304 6 10

4,528,154 10 4

820,651 1 0

5,348,805 11 4

Malta

63,550 2 10

257,537 8 8

20,485 2 6

278,022 11 2

Ionian Islands .

187,185 11 4

71,592 13 2

13,383 8 7

84,976 1 9

Turkey and Con- tinental Greece

759,797 19 1

2,113,928 9 2

95,777 3 2

2,209,705 12 4

Morea and Greek

Islands .

29,273 6 9

28,563 12 0

1,743 11 10

30,307 3 10

Guernsey .Jersey, Alderney, & Man

202,940 14 7

445,410 2 4

126,435 1 2

571,845 3 6

.Egypt, Ports on the ! Mediterranean

275,547 19 7

236,189 15 3

2,068 9 9

238,258 5 0

Tripoli, Barbary, and Morocco

45,986 5 9

759 10 0

4,950 16 11

5,710 6 11

W. coast of Africa

299,105 0 5

352,182 17 9

155,275 19 7

507,458 17 4

Hape of Good Hope

183,481 14 2

351,107 13 3

28,940 6 1

380,047 19 4

E. coast of Africa

2,328 17 0

[Jape Verde Islands St. Helena

44,r)12 3 8

123 17 6 28,439 6 3

75 3 8 3,030 9 10

199 12 31,469 16 1

Mauritius

724,285 8 2

268,963 16 4

11,984 17 9

280,948 14 1

East Indies and

China

7,920,182 3 9

6,521,532 10 7

426,068 0 7

6,947,600 11 2

New South Wales,

Van Diemen's

Land, and Swan

River

191,841 3 2

427,378 18 8

149,735 11 0

577,114 10 5

New Zealand and

South Sealslan.

6,442 10 0

4,0.56 12 6

815 8 3

4,872 0 9

British Northern

Colonies

1,532,582 19 0

2,858,514 19 9

271,975 9 3

3,130,490 9 0

British W. Indies

8,448,839 8 7

3,729,521 14 3

258,764 6 4

3,988,286 0 7

Foreign de.

615,594 7 2

2,186,482 5 7

48,762 14 11

2,235,245 0 6

United States .

8,970,342 8 3

12,007,208 8 11

588,965 9 0

12,596,173 17 11

Mexico

160,751 12 3

1,112,916 12 11

138,852 4 10

1,251,768 17 9

Guatemala .

8,065 4 6

Colombia

25,243 14 1

476,768 0 0

22,964 17 4

499,732 17 4

States of the Rio

de la Plata .

476,272 14 10

582,C86 6 4

8,224 8 10

590,310 15 2

Chili

21,030 16 11

1,057,621 17 2

10,842 2 8

1,068,463 19 10

Peru

42,377 9 3

624,639 11 10

21,392 9 3

646,032 1 1

Brazil

2,278,059 18 4

2,392,662 8 4

39,002 8 7

2,131,664 16 11

Whale Fisheries

273,800 19 9

1,914 0 0

1,914 0 0

Total . £

49,727,108 14 6

60,686,364 12 10

10,745,126 9 7

71,431,491 2 r>

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ENGLAND.

TABLE I. — A STATEMENT of the official value of MERCHANDISE annually imported into GREAT BRITAIN from all parts of the World, since 1700.

Years.

East Indies and China.

British

Vest Indies.

Ireland.

All other parts.

Total.

Amount of Customs Duty.

Value of Gold Coined.

£

£

£

£

£

£

£

1710

536,616

625,112

282,731

3,309,318

4,753,777

1,340,596

7,524,105

1720

669,866

859,102

364,925

3,577,802

6,471,697

1,553,417

2,737,637

1730

949,126

1,179,305

327,951

4,325,235

6,781,817

1,628,458

10,511,953

1740

990,474

1,383,778

368,947

4,735,013

7,478,212

1,532,092

2,691,626

1750

952,927

1,257,098

589,855

4,489,703

7,289,582

1,297,844

8,725,921

1760

987,511

1,693,234

705,411

5,261,827

8,647,983

1,716,306

11,662,216

1770

1,464,562

2,445,000

1,119,747

6,769,779

1 1,799,094

2,207,584

8,419,390

1771

1,882,165

2,931,524

1,554,708

7,839,927

14,208,324

2,642,129

**637,796*

1772

2,473,152

3,405,087

1,382,649

7,247,787

14,508,719

2,525,596

843,853

1773

1,933,096

2,836,093

1,378,666

6,374,788

12,522,643

2,439,007

1,317,645

1774

1,386,984

3,561,267

1,602,242

7,927,373

14,477,876

2,567,770

4,685,624

1775

1,091,845

3,627,881

1,624,020

8,472,623

14,815,855

2,481,031

4,901,219

1776

1,468,077

3,300,644

1,653,511

6,217,197

12,439,429

2,480,403

5,006,398

1777

1,834,221

2,791,928

1,653,032

6,369,653

12,648,834

2,229,406

3,680,995

1778

1,526,130

3,010,930

1,482,157

4,956,325

10,975,532

2,162,681

350,438

1779

716,323

2,830,560

1,547,179

6,442,950

11,537,012

2,502,274

1,696,117

1780

970,726

2,6^5,910

1,743,417

5,491,187

10,812,240

2,723,920

1781

2,526,339

1,858,537

1,629,522

6,709,215

12,723,613

2,791,428

876,794

1782

626,319

2,506,251

1,498,420

5,720,858

10,341,828

2,861,563

698,074

1783

1,301,495

2,891,895

1,611,904

7,316,941

13,122,235

2,848,320

227,083

1784

2,996,652

3,405,120

1,777,984

7,093,121

15,272,877

3,326,639

822,126

1785

2,703,940

4,354,421

2,012,288

7,208,750

16,279.399

4,592,091

2,488,106

1786

3,156,687

3,443,390

2,170,964

7,015,031

15,786,072

4,076,911

1,107,382

1787

3,430,868

3,783,289

2,221,748

8,368,149

17,804,024

3,673,807

2,849,056

1788

3,453,897

4,088,453

2,184,964

8,299,896

18,027,170

3,780,770

3,664,174

1789

3,350,148

3,906,404

2,404,786

8,159,864

17,821,202

3,357,000

1,530,711

1790

3,149,770

3,890,'»27

2,573,747

9,516,442

19,130,886

3,764,483

2,660,521

1791

3,698,713

3,691,038

2,479,269

9,800,752

19,669,782

3,925,386

2,456,566

1792

2,671,547

4,183,066

2,622,733

10,182,012

19,659,358

3,988,591

1,171,863

1793

3,499,023

4,392,158

2,284,920

9,080,636

19,256,717

3,947,372

2,747,430

1794

4,458,475

4,782,616

2,749,900

10,297,903

22,288,894

3,521,230

2,558,895

1795

5,760,795

4,099,291

2,636,705

10,239,898

22,736,689

3,535,184

493,416

1796

3,372,689

3,966,763

2,764,879

13,082,988

23,187,319

3,612,725

464,680

1797

3,942,384

4,309,164

3,113,585

9,648,873

21,013,956

4,055,608

2,000,297

1798

7,626,930

5,418,541

2,735,686

12,076,732

27,857,889

5,570,676

2,967,565

1799

4,284,805

6,161,504

2,770,731

13,620,392

26,837,432

7,498,615

449,962

1800

4,942,275

7,369,287

2,312,824

15,946,219

30,570,605

6,763,298

189,837

1801

5,424,441

8,435,795

2,360,289

16,575,032

32,795,557

5,871,201

450,240

1802

5,794,906

8,531,175

3,133,945

13,983,292

31,442,318

6,058,627

437,019

1803

6,349,294

6,132,001

2,887,923

12,683,246

27,992,464

7,179,621

596,445

1804

5,214,842

7,681,646

•2,747,209

13,657,793

29,201,490

8,35.),871

718,397

1805

6,072,313

6,720,444

3,010,609

14,341,262

30,344,628

9,084,458

54,615

1806

3,755,395

8,815,329

3,281,428

12,983,754

28,835,907

9,733,814

405,105

1807

3,401,700

7,980,000

3,527,813

13,975,144

28,854,658

9,207,735

•

1R08

5,853,450

8,777,963

3,968,400

11,029,530

29,629,353

8,797,823

371,774

1809

3,366,343

7,703,452

3,602,117

19,100,495

33,772,409

10,289,807

298,946

1810

4,709,870

8,258,173

3,522,840

24,655,254

41,136,135

10,819,151

316,935

1811

4,106,300

8,452,287

3,385,675

12,682,328

28,626,580

9,436,322

312,264

1812

5,602,358

7,487,314

3,671,504

11,834,250

28,595,426

10,029,747

519,722

1814

6,304,096

8,496,850

3,939,017

17,729,825

36,559,788

10,960,777

, —

1815

8,042,292

8,527,020

4,167,597

15,242,731

35,989,650

10,526,704

.

1816

8,312,591

7,546,842

3,730,644

10,515,601

30,105,678

8,396,236

.

1817

7,687,328

8,021,203

4,054,729

14,201,972

33,965,232

9,807,901

4,275,337

1818

7,342,800

8,347,235

4,290,612

20,151,305

40,135,952

10,034,749

2,862,374

1819

7,544,462

7,887,670

3,944,101

14,249,510

33,625,748

9,388,510

3,574

1820

7,567,678

8,011,335

4,999,342

15,936,210

36,514,564

8,660,803

949,516

1821

6,256,210

7,977,835

6,028,496

15,535,075

35,797,617

9,145,110

9,520,760

1122

5,123,000

7,691,388

4,873,610

16,617,972

34,305,985

10,663,617

5,356,787

1823

6,918,540

7,971,146

5,871,000

19,654,562

40,415,248

10,406,438

759,748

1824

\

5,588,146

41,729,486

10,239,740

4,065,075

The Statement of Gold coined prior to 1771 includes the entire quantity in each reign, since the Restoration of Charles II. in 16C3.

ENGLAND.

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TABLE II. — A STATEMENT of the Official Value of MERCHANDISE annually exported from GREAT BRITAIN to all parts of the World, since 1700. Showing also the proportion of Colonial and Foreign produce in each year since 1783 ; and tons of shipping cleared outwards in each year since 1770.

East Indies

British

f_l-_ J

All other

*T <-v*i1*

Proportion of

Tons of Ship-

Years.

and China.

West Indies.

ireianu.

parts.

lotal.

Colonial & "Fo-

ping cleared

ei?n produce

*Outwards**

£

£

£

£

£

le-exported.

1710

100,422

298,040

246,378

5,452,288

6,097,128

1720

97,941

303,117

344,325

6,273,886

6,919,179

£

1730

107,310

298,569

469,135

6,902,100

7,771,115

1740

193,353

258,608

657,956

7,947,289

9,057,196

1750

465,992

421,984

803,428

8,439,287

10,130,991

1760

736,358

741,850

1,095,603

10,173,928

12,447,639

1770

1,045,986

1,146,028

1,947,645

11,565,603

15,705,262

682,754

1771

1,184,824

1,214,167

2,416,186

14,203,303

19,018,480

942,448

1772

941,361

1,440,127

2,168,692

13,169,988

17,720,168

996,561

1773

845,707

1,335,773

2,227,648

11,966,302

16,375,430

931,987

1774

546,213

1,418,814

2,347,897

12,975,562

17,288,486

877,884

1775

1,040,642

1,717,229

2,452,672

11,115,820

16,326,363

956,606

1776

726,398

1,604,535

2,458,119

9,966,651

14,755,703

946,331

1777

785,825

1,256,636

2,200,689

9,248,880

13,491,030

932,855

1778

1,199,827

1,151,068

2,816,633

7,091,367

12,258,895

826,336

1779

703,191

1,166,725

2,639,954

9,028,705

13,538,575

792,021

1780

1,116,341

1,751,827

2,284,384

7,496,064

12,648,615

885,137

1781

595,131

1,024,447

2,072,777

7,649,961

11,342,296

679,094

1782

1,467,844

1,271,981

1,917,072

8,360,493

13,017,390

851,512

1783

701,473

1,796,982

2,430,473

10,539,358

15,468,287

1,039,045

1784

730,858

1,370,066

1,634,770

11,998,570

15,734,062

3,846,434

1,050,487

1785

1,153,532

1,235,528

2,168,914

11,559,975

16,117,649

5,035,358

1,236,219

1786

2,242,038

1,336,063

1,961,789

10,766,176

16,305,866

4,475,493

1,327,449

1787

1,551,209

1,733,265

2,342,543

11,242,772

16,869,789

4,815,890

1,349,420

1788

1,430,633

1,766,454

2,424,901

11,850,260

17,472,248

4,747,518

1,340,689

1789

1,957,177

1,763,937

2,314,562

13,304,872

19,340,548

5,561,043

1,611,333

1790

2,386,320

1,986,201

2,265,769

13,481,831

20,129,121

5,199,037

1,548,207

1791

2,272,066

2,649,066

2,470,463

15,340,400

22,731,995

5,921,976

1,696,023

1792

2,437,887

2,922,119

2,372,867

17,172,427

24,905,200

6,130,349

1,739,300

1793

2,721,793

2,695,220

1,943,325

1 3,029,842

20,390,170

5,784,417

1,357,234

1794

2,924,829

3,632,762

2,480,476

17,710,016

26,748,083

8,386,043

1,600,817

1795

2,382,033

2,460,888

2,608,464

19,819,168

27,270,553

8,509,126

1,527,597

1796

2,377,376

3,223,268

2,895,445

19,529,979

28,026,068

8,923,848

1,733,074

1797

2,288,115

3,144,363

2,431,554

18,451,381

26,315,713

9,412,610

1,501,052

1798

1,145,736

5,198,369

2,972,941

20,972,983

30,290,029

10,657,476

1,684,900

1799

2,436,373

5,947,427

2,082,720

23,186,829

33,640,357

9,556,144

1,717,325

1800

2,860,397

4,087,112

3,738,502

27,434,108

38,120,120

13,815,838

2,130,322

1801

2,946,257

4,385,505

2,947,346

27,489,715

37,768,823

12,008,635

2,150,501

1802

2,929,816

3,925,613

3,538,642

31,017,895

41,411,966

14,437,952

2,087,789

1803

2,733,013

2,380,203

3,363,256

23,962,023

31,438,495

9,323,257

2,019,382

1804

1,766,268

4,281,735

3,380,258

25,023,106

34,451,367

10,515,574

2,051,135 i

1805

1,669,215

3,832,430

3,758,054

25,048,846

34,308,545

9,950,508

1,900,609

1806

1,936,954

4,733,815

3,543,082

26,313,334

36,527,184

9,124,479

2,053,713

1807

1,884,437

4,578,877

3,978,487

24,124,770

34,566,571

9,395,283

2,050,013

1808

1,933,223

5,928,769

4,597,638

22,094,637

34,554,267

7,863,204

1,654,944

1809

1,647,627

5,975,127

4,619,686

38,044,460

50,286,900

15,194,334

2,230,902

1810

1,717,118

4,790,143

3,212,016

36,149,582

45,869,859

10,945,313

2,862,801

1811

1,664,522

4,122,920

4,568,418

22,053,812

32,409,671

8,279,698

2,203,585

1812

1,779,212

4,767,31 1

5,262,197

31,434,453

43,243,173

11,998,179

2,206,420

1814

1,699,125

6,315,073

4,265,831

44,354,200

55,624,229

20,499,347

2,447,298

1815

2,093,464

6,915,989

3,557,873

48,415,737

60,983,063

16,930,439

2,759,720

1816

2,204,978

4,607,589

3,025,527

41,422,371

51,260,467

14,545,933

2,317,736

1817

2,794,634

6,762,069

3,620,453

39,946,036

53,123,202

11,534,616

2.645,370

1818

3,195,826

5,784,553

4,061,572

43,815,976

56,857,927

12,287,275

3,072,409

1819

2,421,764

4,490,010

4,072,181

35,951,151

46,935,105

11,278,077

2754,055

1820

3,390,397

4,a52,513

3,387,794

46,601,910

51,733,113

11,490,340

2,598,654

1821

4,427,331

5,069,372

4,285,641

41,301,178

55,083,522

11,971,150

2,575,152

1822

4,100,693

4,146,463

4,i92,718

44,523,260

56,963,134

10,510,521

2,695,130

1823

4,355,438

4,622,805

4,501,386

42,755,219

56,234,663

9,948,372

2,610,787

1824

5,006,639

63,225,272

11,506,665

3,182,776

TABLE III. — STATEMENTS, exhibiting the total Official Value of MERCHANDISE annually Imported into, and Exported from GREAT BRITAIN, to and from all parts of the World since 1700. Showing I. the proportion to and from the EAST INDIES and CHINA, British Colonies in the WEST INDIES, and SOUTH AMERICA, and IRELAND (Vide — the three first columns in each of the two preceding Statements); and II. the proportion to and from all other parts of the WORLE (Vide — the fourth column in each of the two preceding Statements.)

Years.

Imported.

Exported.

Excess of

Import.

Exported.

Imported.

Excess of Export.

£

£

£

£

£

£

1710

1,244,459

644,840

599,619

5,452,288

3,309,318

2,142,970

1720

1,893,893

745,293

1,148,600

6,273,886

3,577,802

2,696,084

1730

2,456,582

875,014

1,581,568

6,902,100

4,325,235

2,576,865

1740

2,743,200

1,109,907

1,633,292

7,947,289

4,735,013

3,212,276

1750

2,799,880

1,691,414

1,108,476

8,439,287

4,489,703

3,949,584

1760

3,386,156

2,573,71 1

812,445

10,173,928

5,261,827

4,912,101

1770

5,029,315

4,139,659

889,656

11,565,603

6,769,779

4,795,824

1771

6,368,397

4,815,177

1,553,220

14,203,303

7,839,827

6,363,376

1772

7,260,928

4,550,180

2,710,748

13,169,988

7,247,787

5,922,201

1773

6,147,855

4,409,128

1,738,727

11,966,302

6,374,788

5,591,514

1774

6,550,493

4,312,924

2,237,569

12,975,562

7,927,383

5,048,179

1775

6,343,746

5,210,545

1,133,203

11,115,820

8,472,623

2,743,197

1776

6,422,232

4,789,052

1,633,180

9,966,651

6,217,197

3,749,454

1777

6,270,181

4,243,150

2,036,031

9,248,880

6,369,653

2,879,227

1778

6,019,217

5,167,528

851,689

7,091,367

4,956,325

2,135,042 i

1779

5,094,062

4,509,870

684,192

9,028,705

6,442,950

2,585,855

1780

5,320,053

5,152,552

167,501

7,496,064

5,491,187

2,004,877

1731

6,014,398

3,692,335

2,352,063

7,649,961

6,709,215

2,940,746

1J82

4,620,970

4,656,897

— 35,927

8,360,493

5,720,858

2.639,635

1783

5,805,294

4,928,928

876,36fi

10,539,359

7,316,941

3/222,418

1784

8,179,786

3,735,492

4,444,364

11,998,570

7,093,120

4,905,450

1785

9,070,649

4,557,674

4,512,975

11,559,975

7,208,750

4,351,225

1786

8,771,041

5,539,690

3,231,351

10,776,176

7,015,031

3,751,145

1787

9,435,875

5,627,017

3,808,858

11,242,775

8,368,149

2,874,623

1788

9,727,274

5,621,988

4,105,285

11,850,260

8,299,896

3,550,354

1789

9,661,338

6,035,676

3,625,662

1 3,304.873

8,159,864

5,145,008

1790

9,614,444

6,638,290

2,976,154

13,481,831

9,516,442

3,965,389

1791

9,869,030

7,391,595

2,477,435

15,340,400

9,800,752

5,539,648

1792

9,477?346

7,732.873

1,744,473

17,172,427

10,182,012

6,990,415

1793

10,176,181

7,360,338

2,815,743

13,029,842

9,080,636

3,949,209

1794

11,990,991

9,038,067

2,952,924

17.710,016

10,297,903

7,412,113

1795

12,496,791

7,451,385

5,045,406

19,819,168

10,239,898

9,579,270

1796

10,104,331

8,496,088

1,708,242

19,529,978

13,082,988

6,446,991

1797

11,365,083

7,864,332

3,500,751

18,451,381

9,648,873

8,802,508

1798

15,781,157

9,317,056

6,464,111

20,973,000

12,076,732

8,896,251

1799

13,217,040

10,467,528

2,749,512

23,186,830

1.3,620,392

9,566,437

1800

14,624,386

10,686,012

3,938,374

27,434,107

15,946,220

11,487,889

1801

16,220,525

10,279,108

5,941,417

27,489,715

16,575,032

10,914,682

1802

17,459,025

10,394,071

7,054,955

31,017,895

13,983,292

17,034,603

1803

15,309,218

8,476,472

6,832,745

23,962,023

12,683,246

11,278,777

1804

15,643,697

9,428,261

6,215,436

25,023,105

13,657,793

11,365,313

1805

15,803,365

9,259,700

6,543,667

25,048,845

14,341,258

10,707,584

1806

15,852,153

10,213,8,01

5,638,302

26,313,384

12,983,754

13,329,580

1807

14,909,514

10,441,801

4,467,713

24,124,770

13,975,144

9,149,625

1808

18,599,823

12,459,630

6,140,193

22,094,637

11,029,530

11,065,107

1809

14,671,912

12,242,440

2,429,472

38,044,460

19,100,495

18,943,965

1810

16,480,881

9,720,277

6,760,604

36,149,582

24,655,254

11,494,338

1811

15,944,262

10,355,859

5,588,303

22,053,812

12,682,328

9,371,484

1812

16,761,175

11,808,720

4,952,455

31,434,453

11,834,250

19,600,103

1814

18.829,963

12,270,030

6,559,934

44,354,200

17,729,825

26,024,375

1815

20,736,910

12,567,326

8,169,583

48,415,737

15,242,731

33.173,006

1816

19,590,077

9,838,094

9,752,983

41,422,373

10.515,601

30,906,772

1817

19,763,260

13,177,166

6,586,094

39,946,036

14,201,972

25,744,064

1818

19,984,647

13,041,951

6,942,696

43,815,976

20,15J,305

23,664,671

! 1819

19,376,231

10,983,955

8,392,276

35,951,150

14,249,510

21,701,C40

, 1820

20,578,355

11,131,104

9,447,151

40,601,910

15,936,210

24,665,700

.' 1821

20,262,541

13,782,344

6,480,198

41,501,178

15,535,075

25,966,103

1822

17,688,013

12,439,894

0,248,139

44,523,260

16,617,972

27,905,290

i

*»

ENGLAND.

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The following Statement, extracted from the Custom-House Report, also ordered to be printed by the House of Commons, on the 2d of April, 1819, shows the amount of the shipping belonging to the British empire, with the exception of SCOTLAND and IRELAND (for which see those articles) with their tonnage, and jche number of men and boys usually employed in navigating them. On the 30th of September of the three following years, these were,

1816

1817

1818

Vessels.

Tons.

Men.

Vessels.

Tons.

Men.

Vessels.

Tons.

Men.

England . .

17,442

2,152,968

134,060

17,082

2,077,338

127,749

17,164

2,080,416

129,389

Isle of Guernsey

65

7,237

494

63

6,758

446

65

7,776

510

Jersey .

77

7,992

636

79

8,167

589

85

8,967

636

Man .

369

9,335

2,315

343

8,764

2,155

348

8,896

2,449

Brit. Plantations

3,775

279,643

16,859

3,571

243,632

15,471

3,483

221,860

15,121

Total

21,728

2,457,175

154,364

21,138

544,659

146,410

21,145

2,327,915

148,105

An Account of the number of Vessels, with the amount of their Tonnage, that belonged to the several Ports of the British Empire on the 31st December, 1829, 1830, and 1831 respectively.

United Kingdom Isles of Guernsey, Jersey, and Man British Plantations

Total ....

1

Vessels

329.

Tons.

1

Vessels

330.

Tons.

1

Vessels

331.

Tons.

18,618 492 4,343

2,168,356 31,603 317,041

18,675 499 4,547

2,168,916 32,676 330,227

‘18,942 508 4,792

2,190,457 33,899 357,608

23,453

2,517,000

23,721

2,531,819

24,242

2,581,964

Vessels employed in foreign trade. — In the yaar 1831 there were entered inwards in the Ports of the United Kingdom 14,488 British ships (2,367,322 tons, employing 131,627 men, and 6085 Foreign vessels (874,605 tons), employing 47,453 men; and there cleared out in the same period 13,791 British ships (2,300,731 tons), employing 132,004 men, and 5927 Foreign ships (896,051 tons, employing 47,009 men.

The government of England is that of her universal and vast empire : — a mixed monarchy, consisting of the KING, who has the prerogative of convening, proroguing, and dissolving parlia- ment; creating peers ; assenting to, or rejecting, all bills that pass the houses of lords and com- mons ; appointing every member of the magis- tracy and executive government, together with the bishops of the established church ; and who has the supreme command of the army and navy : the house of PEERS, consisting of the lords spi- ritual and temporal, the English temporal peers having an hereditary right to sit in the house (but an election being made of Scottish and Irish peers), and their number, therefore, being li- mited by no existing law : and the house of COMMONS, elected by the people under the four denominations of knights, citizens, burgesses, and barons. The English peers amount to about 400 ; and the members of the house of commons for England, to 471 ; but while we now write (April 1832) a bill has passed through the Commons and been read a first time in tht House of Lords

which diminishes the amount See ELECTION.

The house of commons is distinguished from that of the peers by the right of originating or levying the taxes, and the election of its own members, who are the constitutional guardians ot the public purse ; and who, therefore, never suffer the lords to make any alteration in money bills.

Bills, which have passed both houses (for they

are so denominated throughout their several stages in each), receive the royal assent, and be- come Acts of Parliament, constituting the statute law of the land. Bills of a general description may originate in either house, and are transmitted to the other for discussion, where they may either be altered or entirely rejected. When altered, the amendments must be communicated to the house in which the bill originated, for approba- tion ; and having passed both houses, no further alteration can take place. The royal assent must be then given to it in the state in which it is presented, or withheld altogether. See AS- SENT. An act of parliament thus made is ‘ of the highest earthly authority which this king- dom acknowledges. It has power to bind every subject in the King’s dominions, and even the king himself, if particularly named therein. It cannot be altered, amended, dispensed with, suspended, or repealed, but by the same forms, and by the same authority of parliament which gave it existence.’ For more minute particulars of the privileges and duties of PARLIAMENT, see that article ; for those of the Courts of Law, see COURT and LAW.

The king, by his judges, is not only supposed to be present in aii the courts when they assem- ble ; but for the more perfect conservation of the public peace, he is represented at all times, con- stitutionally, by his sheriff of each county. ‘As the keeper of the king’s peace,’ says Mr. Justice Blackstone, ‘ the sherilf is the first man in the county, and superior in rank to any nobleman

therein, during his office. He may apprehend, and commit to prison, all persons who break the peace, or attempt to break it, and may bind any one in a recognizance to keep the king’s peace. He may, and is bound ex-officio, to pursue and take all traitors, murderers, felons, and other misdoers, and commit them to gaol for safe cus- tody. He is also to defend his county against any of the king’s enemies, when they come into the land ; and for this purpose, as well as for keeping the peace and pursuing felons, he may command all the people of his county to attend him, which is called

the posse comitatus, or power of the county; which summons every person above fifteen years of age, and under the degree of a peer, is bound to attend upon warn- ing, on pain of fine and imprisonment. Yet he cannot exercise the office of a justice of the peace, for then this inconvenience would arise, that he should command himself to execute his own precepts.' — 1 Commentaries, 343.

Juries, justices of the peace, of whom several are put in commission for each county, the co- roner, and the constable, complete the general outline of our legal authorities. The duty of the justice of the peace is very general and constant ; he is to put the greater part of the statute law in execution, to take charge of highways, the poor, vagrants, treason, felonies, riots, the preservation of game, &c.; and examine and commit to pri- son all who disturb the peace, or disquiet the king's subjects, removing them to the county gaol for tr.al at the sessions, held quarterly before the united justices of the county, or at the next county assizes, for trial before the judge of as- size, according to the offence. See CORONER and CONSTABLE.

The trial by jury is considered one of the most decided features of the triumph of liberty and intelligence in the executive branch of our con- stitution. Twelve respectable men of the county, or neighbourhood, where a crime is committed, and who are best qualified for the office, are constituted the judges both of the law in its ap- plication, and of the entire facts of every crimi- nal case. When a man is charged with any ca- pital offence, and committed to the county gaol by the magistrates of the district, the charge must first be examined by the GRAND JURY, whose province it is to ascertain if there be suf- ficient grounds for exposing the person accused to a public trial ; for, in the eye of the law, he is considered innocent till it be fully proved to the contrary. Unless a bill of indictment there- fore be found against the prisoner, by a majority of this jury, he is immediately discharged, and can never be again indicted for the same offence.

In proceeding to a trial, the person accused is furnished with a list of the PETTY JURY, as it is called, who are to be his final judges, and is allowed in open court to object to any against whom he can assign reasons for their not being admitted, until twelve unexceptionable men are found ; and, in order to secure all possible im- partiality in the trial, if the person indicted be a foreigner, half the jury are also to be foreigners, if the accused person so desire. They are then sworn that they shall well and truly try, and de- liverance make between the king and the pri-

soner whom :hey shall have in charge, according to the evidence. On these juries the prisoner rests his cause, and the verdict they pronounce is final.

After they have heard the evidence, the prisoner's defence, the comments of the judge on the testimony given, his exposition of the nature of the crime, and the bearings of the law upon it, under every possible aspect, they are confined, without meat, drink, or candle, till the whole are unanimous in acquitting or condemn- ing the prisoner. Trial by jury, as thus consti- tuted, is evidently one of the greatest bulwarks of our freedom. It remains only to be com- pleted by the allowance of counsel to a prisoner in every case. If one of the jury die, while they are locked up, the prisoner is acquitted. This institution has been selected for imitation by all the modern states who have asserted their liberty.

The greatest crime known to the English law is high treason, and it is accordingly punished with peculiar severity. The several offences which come under that denomination were li- mited, by the statute 25th Edw. III., to seven distinct branches, of which, the compassing and imagining the king's death, and the conspiring to levy war against his authority, were the prin- cipal. Other treasons have since been added, relating to papists, falsifying the coin, or other royal signatures, and for the security of the pro- testant succession in the house of Hanover. Two new treasons were created during the late reign (36 Geo. III. ch. 7), viz. that of compassing and imagining to depose the king, and conspiring to levy war to force the crown to change its mea- sures and its councils. The sentence of the law against this offence is, that the offender shall be hanged, drawn, and quartered ; and forfeit his lands and goods to the king. The humanity of modern times, however, has dispensed with the literal application of this punishment. Persons convicted of high treason are first hung till they are dead, they are then taken down and decapi- tated, and the drawing and quartering are wholly disused.

Petty treason is when a wife murders her husband, a servant his master or mistress, an ecclesiastic a prelate, or one to whom he owes obedience, the punishment for which is, to be drawn on a sledge to the gallows and hanged. Felony includes murder, robbery, forging, maiming, or stabbing with a sharp instrument, &c. ; for all which the law awards the sentence of death ; a circumstance to which much atten- tion has been of late excited. Some ameliora- tion of these severe enactments are already accomplished ; others are said to be intended by the executive. See LAW. Murderers are executed within forty-eight hours from the pas- sing of the sentence, and their bodies dissected. The sentence for robbery, unless attended with circumstances of brutality, is frequently com- muted for either transportation, or imprisonment on board the hulks. Fines, imprisonment with hard labor, pillory, and whipping, are the chief punishments assigned by the law for minor offences.

We are indebted to Mr. Capper's Topogra- phical Account of England and

Wales for the following

ENGLAND,

293

STATEMENT exhibiting the counties of ENGLAND and WALES, arranged in order of their legal juris- diction, with the numerical ratio of their total population ; the number of divisional meetings or petty sessions, and of acting magistrates in each county.

1 CIRCUITS.

•s _ -o

COUNTIES. . ,2 ,2

S~ 3 «« a.

S o 0

fc Si

No. of Petty

Ses- sions.

No. of acting Magis- trates,

CIRCUITS.

•s a

Is!

COUNTIES. . ,2 J2

B

*3 *O O*

No. of Petty Ses- sions.

No. of

acting Magis- trates.

MIDDLESEX. 1144

13

200

r Buckingham f . . 134

10

136

|

'Hertford 130

12

95

Bedford 84

6

41

H '

(Essex (Chelmsford) 245

14

148

M

3

Huntingdon . . 49

3

22

o

Kent (Maidstone) 426

14

168

o

in <

Cambridge . . . 122

11

83

X

*1 Sussex * f Horsham) 233*

16

134

1

Isle of Ely (Ely) . 9

j

1

^Surrey f (Kingston) 399

11

165

•

*Norfolk **(Thetford) 344*

33

154

C Berks J (Reading) 132

9

93

ˆSuffolk (Bury St.Ed'.)270

16

110

Oxford 134

13

59

York and City . .1176

52

251

a

Worcester . . . 184

13

90

•

Durham 208

16

74

a

Stafford 342

8

62

a

Northumberland i . ~

o <

Salop (Shrewsbury) 206

11

109

M

(NewcastleSfTown) 5

7

43

Hereford . . . 103

12

136

tf

Cumberland (Carlisle)

5

55

Monmouth ... 72

10

39

O

K

Westmoreland (Appleby)

4

32

1 Gloucester . . . 336

18

179

L Lancaster . . . 1053

16

100

rNorthampton . . 163

9

79

< * t

‘Chester 270

8

79

Rutland (Oakham) 18

1

7

”

1 Flint (Mold) . . 55

7

24

a

z

Lincoln and City . 283 Nottingham & Town 187

16 10

110 85

c/1 ^

f <

u ‘

1 Montgomery (Welsh Pool) .Denbigh (Ruthin) 78

9 8

37 36

r

IB

a

Derby .... 213 Leicester Sc Borough 175 City of Coventry . 29 Warwick . . . 245 r Hants (Winchester) 282 Wilts (Salisbury) 222 Dorset (Dorchester) 144

6 6

14 11 16 9 20

54 52 10 51 110 91 63 167

ˆ £ Cardigan ... 59 w 1 Pembroke . . 75 o < ˆ Caermarthen . 92 10 ˆ v_Haverford West 4 § f Glamorgan (Cardiff) 104 ˆ < Brecon .... 44 g (. Radnor (Preisteign) 23

9 7 8

9 6 6

46 67 39

77 43 21

\ Cornwall § (Launceston) City of Bristol . . 53

16

99

a en r Anglesey (Beaumaris) < Caernarvon . . 59

4 5

22 31

I. Somerset || (Taunton) 355

16

130

§ ˆ C Merioneth (Bala Dolgelly) 6

23

** There are 183 cities and towns in England and Wales which have magistrates who lay claim to an exclusive jurisdiction, but most of them exercise only a concurrent jurisdiction with the ma- gistrates of their respective counties, and some of them none at all. All the places holding separate assize are included in the circuits' jurisdictions. The numerical ratio of the total population of the several counties has been inserted for the purpose of more distinctly marking the ratio of crime in comparison therewith, in the respective counties. In the counties where the name of the assize town and county is different, the assize towns are inserted within a (parenthesis) : where no notict is taken, the assizes are held at the town of the same name as the county, and in those marked with the following notations the Lent assizes in April are held permanently at the places inserted within the parenthesis ; and the Summer assizes in August at the places affixed to their respective counties as follows, viz. —*

- *For SUSSEX, at Lewes. || For SOMERSET, alternately at Bridgewater*

f For SURREY, alternately at Guildford and and Wells.

Croydon. H For BUCKINGHAM, at the town of Buckingham.

*J For BERKS, at Abingdon. ** For NORFOLK, at the city of Norwich. § For CORNWALL, at Bodmin.*

The king is the head of the established church, •which in England and Wales is episcopal ; and K has been styled, from the period at which our Henry VIII. assumed this title, his most sacred majesty. His ecclesiastical power is, however, rather external than universal, in the church ; at least it is confined in practice to the appointment of the bishops, the disposal of livings, and the regulation of the convocation, or public synod. See BISHOP.

The clergy, under the rank of archdeacon (there described), are, rectors,

vicars, curates, and

deacons ; and these constitute the efficient part of the officers of the church. They enjoy the privileges of not being liable to fill any civil or military office ; they can only be fined to the amount of their temporal estates ; nor are they assessed with the rest of the inhabitants of a pa- rish for the repairs of highways, the expenses of watching, prosecuting for robberies, &c. The whole annual income of the clergy of the church, in South Britain, has been esti- mated at £3,000,000. No established church has ever been more distinguished for the learn-

ing and ability of its members ; or for the libe- rality with which its great power and political influence have been exercised with regard to other sects.

Dissenters are very numerous in England ; but there is no accurate mode of estimating their total numbers. Some of their own body have suggested that one-half of the persons who re- gularly frequent any place of worship dissent from the establishment. They sometimes act in London in a recognised body of the three denominations of Presbyterians, Independents, and Baptists, whose ministers meet at Red Cross Street library ; and are considered in their ad- dresses to the crown, and other communications with the government, as a species of representa- tives of all the dissenters. But the Presbyterians rank in modern times among the smallest of the dissenting sects. The most numerous is that of the Wesleyan Methodists; next to these perhaps, including England and Wales, the Calvinistic Methodists ; then the Independents, perhaps ; and then the Baptists, Particular, or Calvinistic, and Arminian or General. The Friends or Quakers are it is well known not very numerous, nor increasing, the Moravians, Swedenborgians, and Unitarians are other small sects, but in- clude many respectable individuals. For their legal situation see the article DISSENTERS.

In the education of the country, the estab- lished church now takes the precedence due to its station. Committeesof the house of commons have also contributed in no small degree to enlighten the public mind upon this topic. The first of their Reports, dated June 1816, contains various state- ments of the proportion of the poor, who were then destitute of the means of instruction. In the neighbourhood of Covent Garden, the pro- portion was 679 uneducated out of 829. In Southwark, of 12,000 children between the age of five and fourteen, 6000 were unprovided with the

means of instruction ; but of all ignorant and abandoned districts, St. Giles's was found beyond comparison the worst ; containing more than half the Irish in the metropolis, whose children, in number about 3000, were not only uneducated, but after the age of seven or eight trained to begging and thieving almost univer- sally. The whole number of children in the metropolis, unprovided with education, was com- puted at more than 100,000, while not less than half a million of the population were equally destitute in the country.

The National Society at the period of the second Report of the committee had estab- lished but one great school, that of Baldwin's Gardens, in Gray's Inn Lane : it had contributed to the erection or enlargement of more than 200 schools, by pecuniary grants, varying from £15 to £100, and amounting in particular cases to £200, and even £300. Above 500 teachers, male and female, are trained on Dr. Bell's plan ; and distributed over from 1000 to 1500 schools, containing nearly 200,000 children receiving education on this system. The majority of these have adopted Dr. Bell's plan without re- ceiving any other aid than a supply of elemen- tary beoks ; the conditions on. which the society furnished them being that the hturgy and cate- chism of the church of England should be fol-

lowed, and that no religious tracts, except those sanctioned by the Society for Promoting Christian Knowledge, should be admitted into the schools. The practice of the society, however, is by no means illiberal. In regard to expense, nothing can be more gratifying than to find that, even at the highest, it does not exceed (Evidence, p. 268) 1 2s. per head per annum.

The British and Foreign School Society was found equally active and liberal according to its means, It had expended, on the laudable object of promoting instruction for the poor universally, the sum of £20,000 previously to the year 1816 ; of which one individual alone (who conceals his name from all parties but the treasurer) sub- scribed no less than £3000. Its annual expense in training male and female teachers is from £2000 to £3000 a year, and it is connected with from 400 to 500 schools whom it supplies with them throughout the kingdom. About 400,000 children are supposed, according to these reports, to receive instruction by Sunday Schools, in London.

The labors of the education committee were closed with its third Report in June 1818. They here observe that the discussion excited by the enquiry had greatly improved the administration of institutions for the education of the poor; but that much remained to be done ; the efforts of private benevolence being almost entirely confined to towns, and the aid of government being wanted in the thinly peopled districts, to the extent, at least, of the purchase or erection of a school-house, leaving the annual

expense to be defrayed by private subscriptions. The com- mittee further recommend a connexion between such schools and the established church ; ob- serving that the anxiety of the poor for the edu- cation of their children, was not only unabated, but daily increasing.

A superior education is to be obtained in Eng- land by the public or grammar schools, or at the numerous and very respectable private Acade- mies every where established. The great public schools are Eton, Harrow, Westminster, and Winchester ; to which are to be added, in London, St. Paul's, Merchant Taylors' School, and the Charter-House. Here the classics are a promi- nent object of instruction, and while provision is made by the founders for a certain number of ooys to be educated on the foundation, youths of the first rank join them, and pay liberally for participating the advantages of these estab- "ishments. The Universities of Oxford and Cambridge are entirely restricted to the members of the established church. A new University, designed to embrace all the religious denominations of the country, has been recently completed in the Metropolis. We give a very accurate delineation of the edifice, embracing its complete state, which a want of funds has prevented the proprietors carrying into effect.

The general charities and charitable institu- tions of England are also numerous and un- rivalled. Amongst these, religious and moral institutions seem to claim the pre-eminence. But we cannot undertake to particularize the half of them. The most celebrated are The Society for Promoting Christian Knowtedge. The British and Foreign Bible Society

The London Missionary Society.

The Church Missionary Society.

The Baptist Missionary Society.

The Wesleyan Missionary Society.

The National Society for the Education of the

Poor.

The British and Foreign School Society. The African Institution. The Society for Bettering the Condition of the

Poor.

The Literary Fund. Among the principal Hospitals are,

St. Bartholomew's, West Smithfield.

Bethlem, now in St. George's Fields.

St. Luke's, Old Street.

Guy's, Southwark.

The Lock Hospital, Hyde Park-Corner.

The London Hospital, Whitechapel Road.

j'he Magdalen Hospital, St. George's Road.

The Middlesex Hospital, Berner's Street.

The Foundling.

The Fever Hospital.

The principal Dispensaries of the metropolis. The General Dispensary, Aldersgate Street. The City Dispensary. The Finsbury Dispensary. Thd Vaccine Institution and Dispensary.

The principal Aims-Houses are, The Haberdashers'. The Mercers'. The Skinners'. The Ironmongers'. The East India Company's, &c

The School Charities.

Christ's Hospital, or the Blue Coat School. Marine Society. School for the Indigent Blind. Deaf and Dumb Asylum. Debtors' Children. Ladies' Charity School. Masonic Charity. Raines's Charities.

There are also three colleges or alms-houses on an enlarged scale, under a master and incor- porated officers, in the neighbourhood of London, viz. Bromley, Morden, and Dulwich Collegf-s. We can only add, that the example of these nu- merous and splendid establishments of the me- tropolis is nobly followed up in the various county and other local hospitals, dispensaries, and public charities of every kind throughout the country. Many of the most flourishing re- ligious-institutions are aided materiallyby the Aux- iliary Societies and associations of the provinces. The army and navy of England at the close of the late war are thus exhibited by Dr. Colquhoun. Land forces, or men in arms in the" British Empire, including the Re- gular Army and Foreign Corps, the British and Irish Militias, the Local (^ ^j 137 Militia and Volunteers of Great [Britain ;

with the Militia and Fen- cibles in the Colonies and Depen- dencies . . • i ...

Brought over 721,187

Navy and Marines 179,920

Native Army in India, including the

India Marine Forces 160,913

Total armed Force of the British

Empire . 1,062,020

The peace, however, has of course reduced these establishments.

The entire amount of the regular troops, pro- vided for by parliament in 1819, was 91,823, including 11,340 men then added, in conse- quence of a disturbed state of the country ; but exclusive of the regiments employed in the terri- torial possessions of the East India Company. The whole number of seamen and marines em- ployed at one period of the late war was taken at 184,000 men. They do not now exceed

50,000.

The revenue of Great Britain, whether we re- gard its past and existing resources, its encum- brances, or its future stability, is a very exten- sive and momentous topic of consideration. We can only advert briefly to its history and present state.

The average revenue of Great Britain, under king William III. was about £4,000,000. This was a period of difficulties and of a disputed succession, it will be remembered : under queen Anne an augmentation to £5,000,000 took place, and eventually to £6,000,000. During the reign ef George I. the revenue rather exceeded £7,000,000, and a gradual increase is to be observed towards the middle of the century. The revenue during the reign of George III. is thus exhibited.

In 1761 it was

1764 . . .

1767 . . .

1770 . . .

1773 . . .

1776 . . .

1779 . . .

1782 . . .

1785 . . .

1788 . . .

1791 . . .

1792 . . .

1793 . . .

1794 . . .

1795 . . •

1796 . . .

1797 . . .

1798 . . .

1799 . . .

1800 . . .

1801 . . .

1802 .

£8,800,000

9,250,000 9,200,000 9,510,000 10,066,661 10,265,405 11,192,141 12,593,297 14,871,520 15,572,971 16,631,000 19,382,435 17,674,395 17,440,809 17,374,890 18,243,876 18,668,925 20,518,780 23,607,945 29,604,008 28,085,829 28,221,183

The following is a view of the income of our government from taxes and loans since that period to 1817, and the public expenditure, during the same period. They exhibit the greatest amount of taxation ever sustained by this, or perhaps any other country, and the nature of our expenses at the same time, during unexampled periods of public exertion.

PUBLIC INCOME OF GREAT BRITAIN IN EACH YEAR, FROM 1803 TO 1817 INCLUSIVE.

1803. 8,024,681

1804. 9,362,127 21, 477, 403 3,518,545 1,467,283 4,429,106 1,277,391 162,524 3,665,063

1805. 10,174,213 23,193,515 4,062,284 1,536,481 4,508,752 1,424,994 212,159 4,546,883

1806. 10,819,637 24,080,663 4,278,538 1,451,772 4,821,206 1,490,968 198,912 6,162,558

1807. 10,592,606 24,680,640 4,401,660 1,432,789 5,151,660 1,472,870 129,993 10,158,007

18,771,989

3,326,753

1,307,941

4,468,131

1,256,801

Crown lands, tax on pensions, &c. •

142,441 378,326

Total raised by taxes

37,677,063 351,507 11,950,000 2,611,600 9,89,824

45,359,442 432,645 13,209,251 6,185,900 276,425

49,659,281 378,648 25,130,404 1,926,900 495,530

53,304,254 496,010 19,699,263 27,100 263,782

58,390,225 774,694 15,257,211 7,735,40(. 121,955,

Loans, actual receipts .... Increase of outstanding Exchequer bills . Unclaimed dividends and various receipts Exchequer bills funded ....

Total money raised . Deduct loan and lottery for Ireland . And charges of the collection of revenue .

Total applicable to the service of Great Brit.

52,879,994 2,117,444 1,955,368

65,463,763 3,733,291 2,135,176

77,590,763 3,211,062 2,257,185

73,790,409 1,768,000 2,375,828

82,279,482 3,681,251 2,699,048

48,807,182

59,595,296 72,122,516

69,646,581

75,899,183

Customs ..... Excise ....«••

1808. 10,600,776 25,592,813 4 680 071

1809. 12,016,451 23,470,546 5,305,782 1,511,550 6,840,551 1,558,409 288,202 12,413,803

1810. 12,438,243 25,796,008 5,505,632 1,418,337 6,233,161 1,709,065 76,916 13,504,004

1811. 11,038,148 26,078,197 5,236,020 1,333,432 6,006,865 1,685,936 150,276 13,234,896

1812. 11,895,195 23,531,736 5,273,907 1,368,128 6,091,948 1,796,586 72,123 13,140,231

1,582,732

Assessed taxes .....

5,915,623 1,476,558

Crown lands, tax on pensions, &c. . Property tax .....

Total raised by taxes

276,073 11,413,561

61,538,207 457,620 10,102,620 5,150,300 766,225 4,000,000

63,405,294 454,819 14,675,668

242,104 7,932,100

66,681,366 469,616 13,242,356

405,816 8,311,000

64,763,870 302,387 16,636,375 3,205,500 253,867 7,013,700

63,169,854 373,396 29,268,586

• *3,914,600*

1,263,402 5,431,700

Loans, actual receipts .... Increase of outstanding Exchequer bills . Unclaimed dividends and various receipt Exchequer bills funded ....*

Total money raised . . Deduct loan and lottery for Ireland . And charges of the collection of revenue .

Total applicable to the service of Great Brit. Customs .....

82,014,972 2,589,166 2,816,568

86,709,985 2,921,527 2,886,201

89,110,154 92,180,699 5,294,416; 4,432,292 2,934,876 3,096,581

103,421,538 2,888,500 3,273,242

76,068,238

30,902,257

80,880,862 84,651,826

97,257,969

1813.

£11,985,900

25,272,414

1814. 12,835,834 26,471,224 5,778,579 1,285,982 6,725,790

2,051,92S

41,325

i 14,493,535

1815. 11,360,19(27,206,80(

6,139,58ˆ

1,084,251 6,524 ,76(1,755,891 244,02′ 14,978,55

1816.

> 9,177,59] i 23,595,26 > 6,184,28i I 1,127,92$ > 6,129,971*

) 1,659,85,

I 249,62!

7 12,039,15

1817. 12,713,588 1 22,829,364) 7,101,767) 1,163,320 ! 6,500,000

> 1,644,929

) 242,251 1 2,519,416

5,473,409

1,303,398

*6,570,461 1,912,114 * 87 ,705 14,320,43(*

Crown lands, tax on pensions, &c. .

Total raised by taxes Lottery, net profit ..... Loans, actual receipts .... Increase of outstanding Exchequer bills Unclaimed dividends and various receipts Exchequer bills funded ...

Total money raised . Deduct loan and lottery for Ireland . And charges of the collection of revenue

Total applicable to the service of Great Brit

66,925,33ˆ

278,66(35,050,57′ 2,110,40(831,48′ 15,755,70

» 69,684,195

5 356,10″

\ 36,078,04′

) 10,424,90(

I 300,641

t 69,294,07

1 304,65 1 39,421,95

i 260,17

J 60,163.69

2 234,68 9 8,939,80 3,208,40 3 438,47

3 54,714,625 1 196,689

D — 0 14,000,OOC B 925,575

120,952,65 744,14 3,504,93

7 116,843,88

} 5,953.98 B 3,573,26

) 109.280,86 5 1

No dedu(

li 72,985,055) 69,836,889

(Ireland ii include.! in the above.)

lion, the above being the et sums collected.

116,703,57

9 107,316,64

3 «

PUBLIC EXPENDITURE OF GREAT BRITAIN IN EACH YEAR, FROM 1803 TO 1817, BOTH INCLUSIVE.

i

1803.

1804.

1805.

1806.

1807.

] nterest on debt,funded and unfunded

£17,861,341

18,698,307

20,022,068

20,524,718

21,021,772

Management of ditto . ...

235,891

253,375

256,483

275,108

278,594

Sinking fund ....

6,287,941

6,521,394

7,181,482

7,829,589

8,908,673

Civil list

898,000

1,519,842

958,000

958,000

958,000

Various pensions and allowances .

408,889

336,007

381,263

479,976

392,324

Civil government of Scotland

79,502

79,705

86,918

83,750

85,359

Bounties . . .

308,335

359,980

401,613

345,119

536,948

Courts of justice, militia, &c.

172,301

570,479

512,700

393,752

413,711

Navy, ordnance, and army .

21,106,334

31,054,186

36,219,012

35,706,582

36,175,060

Subsidies .....

—

—

—

—

180,000

East India Company .

1,000,000

—

1,000,000

1,000,000

—

Miscellaneous services

1,800,500

1,161,156

2,115,334

1,706,676

1,195,448

Total

50,159,034

160,554,43

69,084,873

69,303,270

70,145,889

1808.

1809.

1810.

1811.

1812.

I nterest on debt,funded and u nfunded

£20,986,595

21,356,248

21,785,732

21,806,900

23,051,918

Management of ditto . . . .•

195,972

204,645

203,044

211,177

214,481

Sinking fund

9,523,339

10,155,105

10,783,018

11,511,486

12,433,345

Civil list

958,000

958,000

958,000

958,000

1,019,538

Various pensions and allowances .

398,921

391,093

395,114

394,321

532,693

Civil government of Scotland

85,470

90,954

118,186

109,693

112,748

Bounties . . . .

473,458

604,061

583,281

399,822

392,915

Courts of justice, militia, &c.

554,689

460,349

406,526

430,997i 432,115

Navy, ordnance, and army .

39,777,854

42,073,316

43,247,044

47,967,547′ 49,740,1 Jl

Subsidies .....

1,400,000

2,050,000

2,060,192

2,977,747 5,315,528

East India Company .

1,500,000

—

1,000,000

500,000 2,500,000

Miscellaneous services

1,461,359

1,441,722

1,236,451

1,348,446 2,993,243

Total

77,315,657

79,785,493

82,776,588

88,616,136 98,738,635

1813.

1814.

1815.

1816.

1817.

Interest on debt,funded and unfunded

£24,224,349

26,409,083

28,357,733

27,614,939

31,583,058

Management of ditto .

220,153

221,589

284,673

278,189

275,735

Sinking fund ....

14,145,242

12,710,706

12,798,226

13,422,749

14,596,685

Civil list Various pensions and allowances .

1,028,000 428,067

1,246,857 463,299

1.028,000 436,989

1,028,000 611,413

1,191,169 1,032,952

Civil government of Scotland

113,176

114,032

126.614

128,515

130,646

Bounties . . . .

228,741

244,308

247ˆ903

247,133

330,046

Courts of justice, militia, &c. ,,

594,812

545,510

206,633

196,779

201,900

Navy, ordnance, and army .

54,870,672

60,237,851

43,282,432

25,225,620

17,523,328

Subsidies .....

11,294,416

10,024,623

11,035,248

1,731,140

7,502

East India Company .

2,000,000

—

—

—

—

Miscellaneous services

1,717,132

1,856,236

3,187,477

3,776,163

2,369,800

*Total . * .*

110,864,760

114,074,094

100,991,928

74,260,640

69,242,821

These statements form a history of our finances since 1803. The deficiency of revenue in 1817 was met by a large issue of exchequer bills. In 1818 the revenue improved by nearly £2,000,000 ; but there still remained a deficiency of £13,000,000, which necessitated a recourse in that year to temporary expedients ; and, in the

year 1819, there were a loan and a vote of addi- tional taxes, to supply this.

We may now compare with the foregoing the following table, extracted from the Financial Accounts, printed and laid on the table of the house of commons, for the year 1832.

Net Public Income and Expenditure of the United Kingdom of Great Britain and Ireland, in the year ending 5th January, 1832.

Income or Revenue.

Total.

Expenditure.

Total.

ORDINARY REVENUES AND RECEIPTS. Customs ‘ . Excise .... Stamps .... Taxes .... Post Office One Shilling and Sixpence, and Four Shillings on Pen- siqns and Salaries Hackney Coaches, and Hawkers and Pedlars Small Branches of the King’s Hereditary Revenue Surplus Fees of regulated Public Offices Poundage Fees, Pells Fees, &c

OTHER RECEIPTS. Imprests and other Monies . Monies received from the East India Company . . Money received from the Bank of England on ac- count of Unclaimed Divi- dends ....

Excess of Expenditure over Income ....*

£.

16,516,271 16,303,025 6,947,829 4,864,343 1,530,205

38,888 46,565 4,051 37,926 4,539

FUNDED DEBT.

Interest and Management of Permanent Debt Terminable Annuities .

Total Charge of the { Funded Debt . J

UNFUNDED DEBT. Interest on Exchequer Bills

Civil List Charges Pensions .... Salaries and Allowances Courts of Justice Miscellaneous Charges on the Consolidated Fund Mint Establishment . Bounties for encouraging the growth of Hemp and Flax in Scotland

Army .... Navy .... Ordnance .... Miscellaneous,chargeableupon the Annual Grants of Par- liament ....

£.

24,372,894 3,318,688

27,691,582 649,833

28,341,416 511,314 437,568 86,334 276,924

217,324 16,349

2,956

29,890,18 3 7,216,293 5,689,858 1,472,944

2,854,013

46,293,646 29,367 60,000

41,426

46,424,440 698,857

47,123,298

47,123,298

Abstract of the Net Produce of the Revenue of Great Britain, in the Years ended on the 10th October, 1831, and the 10th October, 1832.

Years ended October 10,

Increase.

Decrease.

1831.

1832.

£.

£.

£.

£.

Customs

15,577,687

15,201,299

376,388

Excise

14,896,521

14,956,307

59,786

Stamps . . Post Office

6,484,580 1,393,011

6,528,843 1,313,000

44,263

80,011

Taxes Miscellaneous

4,945,110 439,479

5,022,324 387,039

77,214

52,440

Deduct Increa

43,736,388

•

43,408,812

181,263

508,839 181 263

Decrease on the Year

327,576

ENGLAND.

299

An Account of the state of the Public Funded Debt of the United Kingdom on the 5th of January, 1832.

GREAT BRITAIN.

Debt due to the South Sea Company at 3 per cent. .....

Old South Sea Annuities . New South Sea Annuities South Sea Annuities, 1751 Debt due to the Bank of England Bank Annuities created in 1726 Consolidated Annuities Reduced Annuities . :.

Total, at 3 per cent. Annuities at 3J per cent., anno 1818

Reduced Annuities, do

New 3£ per cent. Annuities

Total, at 3£ per cent. 4 per cent. Annuities, created 1826 . New 5 per cent. Annuities

Great Britain .

IRELAND.

Irish Consolidated Annuities, at 3 per cent. Irish Reduced Annuities, do. .

Total, at 3 per cent. 3J per cent. Debentures and Stock Reduced 3£ per cent. Annuities New 3£ per cent. Annuities

Total, at 3$ per cent. Debt due to the Bank of Ireland, at 4 per

cent

New 5 per cent. Annuities

Debt due to the Bank of Ireland, at 5 percent,

Ireland .

Total, United Kingdom .

£.

3,662,784

3,497,870

2,460,830

523,100

14,686,800

876,050

348,017,532

123,604,712

12,553,755

63,386,707

138,078,982

2,673,545 145,078

1 4,520,904

1,277,768

11,672,700

6,661 1,015,384

£.

497,329,679

214,019,445

10,804,595

462,736

722,616,456

2,818,624

27,471,373 1,615,384 1,022,045

32,927,428

£755,543,884

UNFUNDED DEBT.

The total amount of Exchequer Bills outstanding on the 5th of January, 1832, £27,123,350

‘ The effect of the national debt on the general internal circumstances of the country, and on the intercourse between man and man involved in all the transactions of business,’ argues a late writer in the Quarterly Review, ‘ is not, perhaps, as correctly understood as might have been ex- pected, in a country where a national debt has so long existed. If an individual has a rental of £5000 per annum ; and pays, in direct or indi- rect taxes, £1000 per annum, which he would not pay but for the existence of the national debt, he is, in point of fact, not the possessor of £5000 per annum, but of £4000. If a servant receives twenty pounds wages, and pays, in direct or indirect taxation, twenty per cent., in point of fact his real wages are only sixteen pounds instead of twenty. If this illustration were pursued, it would be found that every person, the payer of direct or indirect taxes, must be so much the poorer in consequence of this national debt; but nevertheless that — admitting, for the sake of argument, that the debt could be so ad- justed, that every man should only pay a certain amount, which should be exactly twenty per cent., — all parties would remain in the same re- lative positions towards each other, as if no debt existed. Now, let the case be supposed — that, in a country where no taxes exist, a proprietor of land

has a rental of £5000 a-year, and a mort- gage of £20,000 at five per cent, upon his pro- perty— he would be precisely in the same situa- tion as an English landlord, whose real income would be £4000 and not £5000 per annum. The effect, therefore, of the national debt, if it could be duly adjusted, would be to make every member of the community nominally poorer, as to real income, but yet to keep all of them equally rich with respect to each other; and this most important condition must be remembered, that the debt would exclusively fall on those parties who paid taxes, directly or indirectly. If population were not redundant, — if the demand for the services of the laboring classes were pro- portioned to the supply of labor — those classes would suffer the least from the operation of the national debt, because they would secure them- selves by an adequate rate of wages from any burden of the debt, which could fall on them beyond their fail share, as direct or indirect payers of taxes. But when population is re- dundant, they have no compensating remedy of this sort.

‘ The main inconvenience arising from the na- tional debt consists in the utter impossibility, with any ingenuity of legislation, of adjusting the different proportions of that debt, which par- ticular classes should in equity contribute, so Eermaiiently, as not to admit of occasional dis- >cations of such contributions; for, of course, when from such dislocation, in itself unavoidable, any one class is called upon to pay more, in point of fact, of the general debt than its own fair share, the distress and injury of all who belong to it must be the result. It is perfectly well known that every human being sustains a weight of air of great magnitude, but that, from the equality of the pressure on every part of his body, he moves about as if the pressure did not exist. The moment, however, that that uniform

and balanced pressure is removed from any one part, then it is that the weight of the atmosphere is felt, and, as every person conversant with the elements of natural philosophy knowsˆ would, if suffered long, injure, if not destroy the human frame. This analogy would be applicable at all points to the national debt, if that debt were not in its essence an evil; for if the debt could be adjusted to every person with that mathematical accuracy with which nature has adjusted the pressure of the air, it is not a paradox to say that much of the inconvenience of the debt would cease to be felt. But the main and the essential evil lies behind; it is this: that under a system of national debt, a thousand circumstances re- quire to be directed by legislation, which would find their own level without legislation, but for the existence of this universal mortgage ; and nothing is more to be regretted than that the speculative remedies suggested by ingenious men for the annihilation of the debt, by a concurrent sacrifice on the part of all classes of the commu- nity, involve measures infinitely more compli- cated, even than those which are necessary for adjusting the practical inconveniences inseparable from its existence.’

This writer afterwards insists — ‘ Forthe current expenditure the existing government is respon- sible— for the establishments, for their necessity, for their efficiency; but for the payment of the interest of the national debt, it has no individual character of responsibility. To provide for that payment is the business of the nation at large. Its amount is not regulated by discretion, which is the case in establishments. It remains, for the most part, one and the same immutable, a fixed quantity, and must remain so until, on the one hand, it be discharged, or, on the other hand, it be diminished; — two alternatives, the one of which, is all but impossible, and the other, it is to be feared, more than improbable, with the ex- ception of the effect of a small real sinking-fund. This mode of presenting for observation the Fi- nancial Accounts of the year saddles the govern- ment exclusively with an odium to which (as already contended) it has no exclusive claim. The proportionate extent and influence of the national debt, as compared with the current ex- penditure of government, will be appreciated by any person who will take the trouble of inspec- ting our scale. If it be necessary that the ministers of the day should be considered as stewards of this great national mortgage — as a kind of committee appointed to communicate on the subject of it to parliament and to the country — why should they not appoint an exclusive day for its consideration, and thereby rid themselves of that unreal responsibility which the present system of confused and blended accounts gratu- itously throws upon them ? We beg not to be understood as taking any extravagantly dark and gloomy view of the national debt, which we would thus desire to see separated from the current expen- diture of the government establishments; on the contrary, we would ask if it be not, after all, a plain truth, that this country, at the present moment (depressed as it maybe), is ten times more able to support and maintain its present debt, and its present establishments, than it would have been

able to maintain one-fourth part of that debt and of those establishments in the reign of queen Anne? M;xy not a period arrive, at which this country may be able to sustain a debt twice as great, without one-twentieth part of the inconveni- ence now endured, collectively and individually ? Undoubtedly, no man of fair information and com- mon candor will deny that these questions may be reasonably answered in the affirmative. He may, indeed, doubt as to the existence of any future period when sucb speculations may be realised. With respect to public debt, the country have learnt a lesson which will not be easily forgotten; they have learnt that, to carry on a war-expendi- ture much greater than the current supplies of the year, must inevitably entail upon posterity a charge and inconvenience,

which ought to make the country more than unwilling to consent to the recurrence of such anticipation of future re- sources. Occasions may arise in which no sacrifice ought to be considered as too great. Such have arisen heretofore; and mighty sacrifices have pur- chased good too great to be estimated in pounds, shillings, and pence.

Sic species terris, vitae sua forma, suusque Dishonor, — IPSA sibi tandem sic reddita MENS est.'

If national honor and the good of man again re- quire such a sacrifice, undoubtedly it ought again to be made; but if ever it be so made, it will be made with a more accurate appreciation of the consequences than was felt by those whose mea- sures incurred the existing debt, or by the people, who were strictly, and all but unanimously, con- sentient to the enactment of those measures.

' If a private individual, a country gentleman, for example, has a rental of £6000 per annum, and a rent-charge upon it of £4000 per annum, his expenditure, if he be a prudent man, is necessarily limited to his real surplus,

namely £2000; and if he has the reputation of having a rental of £6000, and an ac- knowledged expenditure of only £2000, sup- posing that he has no special motives for economy, he sustains the imputation of niggard- liness, from the apparent disproportion between his income and expenditure. Precisely the con- verse effect takes place with respect to the go- vernment: the government having an income of £60,000,000 per annum, more than £40,000,000 of which, if duly analysed, will be found to belong to the annual charge of the existing debt, has the reputation of being criminally lavish with respect to its establishments, the expenses of which are blended together, most gratuitously and unfortunately, with the interest of the debt. If the accounts were kept strictly separate, the extent of the expenditure for which the govern- ment were really responsible would be found to be less than one-third of the whole; whereas now, the line of distinction between the two is not in the slightest degree preserved.' But we shall return to the subject under the article FUNDS.

The ˆoor laws of England are amongst the most serious burdens of the people. In three years, ending 1750, they averaged only £692,000 in England and Wales : in three years, ending- 1815, £6,147,000. But wheat, it is to be ob- served, was only 4s. 5d. per bushel in the former case, and 12s. 8d. in the latter. It is stated that the number of persons receiving relief is greater by far in this country than it ever has been in any other at any period, being, on a rough calculation, one in every eleven of the population.

A report of the committee of the house of commons on the Poor Laws in 1817 exhibits the following detailed returns on this subject both for London and the country.

I. — RETURN of POOR-RATES from London, Westminster, and Southwark, being from the Parishes within the Bills of Mortality, delivered to Parliament 21st of February, 1817.

Total raised in the metropolis by poor's rate, and smaller rates, such as church-rate, highway-rate, &c. .... Charitable donations for parish schools and other purposes .

Expenditure.

Year Ending

Easter 1813.

Easter 1814.

25th March

1815.

£

446,542 18,983

£

501,952

19,620

£

489,321 20,160

370 518

401,954 17..416 10,837 113,574

380,281 17,433 6,613 103,807

Lawsuits, removals, expenses of overseers, and other officers Families of militia-men Church-rate, highway-rate, county-rate, &c.

Total . v . . ' ;

Number of Poor relieved permanently. In workhouses .... Out of workhouses (without reckoning the children) . Parishioners relieved occasionally, either in or out of work- houses

15,324 12,916 98,903

497,661

543,781

508,134

13,389 12,654

40,993

13,373 13,762

69,332

12,341 13,341

70,322

67,036

96,467

96,004

302

ENGLAND.

IL — 'Returns applicable to the Kingdom at large.

Year Ending

Total money raised by Poor-rate; and in a smaller de- gree, by church-rate, highway-rate, county- rate, &c., in England and Wales .....

To these sums are to be added charitable donations, whether arising from land or money, managed by the clergy, church- wardens, or overseers ; annual average ....

Expenditure.

For the maintenance and relief of the poor Lawsuits, removal of paupers,

and expenses of overseers, or other officers .....

Families of militia-men and other militia charges Church-rate, county-rate, highway-rate, Sec.

Number of Persons relieved by this Expenditure. Poor permanently relieved in workhouses ....

Poor permanently relieved out of workhouses (without reckoning children) .....

Parishioners relieved occasionally

Total of paupers relieved

Easter 1813.

Easter 1814.

25th March

1815.

- *£.*

£.

£.

8,651,438

8,392,728

7,460,855

238,310

238,310

238,310

6,679,658

6,297,331

5,421,168

325,107 246,202 1,614,871

332,966 188,576 1,692,990

324,665 105,394 1,657,627

8,865,838

8,511,863

7,508,854

97,223

94,085

88,115

434,441 440,249

430,140 429,770

406,887 400,971

971,913

953,995

895,973

The property liable to poor-rate consists of the land and houses of England, the annual rent of which, under the latest estimate, is .....

Deducting for various allowances and abatements, the fractional sum . . •

£51,898,424

1,898,424

Remains . £50,000,000 The total sum expended on the relief of the poor in 1821-2, ending Easter of the

latter year was £6,358,703

The total poor-rate expended in 1831 amounted to £6,798,888

The history of our poor laws is a very inte- resting and important study. Our law takes notice of the poor, 1st. Byimpotency and defect; as the aged or decrepid, fatherless, or mother- less ; poor under sickness, and persons who are idiots, lunatics, lame, blind, &c. ; these the overseers of the poor

are to provide for. 2dly. Poor by casualty ; such as housekeepers, de- cayed or ruined by unavoidable misfortunes ; poor persons overcharged with children ; laborers disabled, and these, having ability, are to be set to work ; but if not able to work, they are to be relieved with money. 3dly. Poor hy prodigality and debauchery, also called thriftless poor ; as idle slothful persons, pilferers, vagabonds, strum- pets, &c., who are to be sent to the house of correction, and be put to hard labor, to maintain themselves ; or work is to be provided for them that they do not perish by want ; and if they become impotent by sickness, or if their work will not maintain them, there must be an allow- ance by the overseers of the poor for their sup- port. There is no man so indigent or wretched, but he may demand a supply sufficient to all the necessities of life, from the more opulent part of the community, by means of the several statutes enacted for relief of the poor. 1 Black. C'o/nm.131.

The poor of England, till the time of Henry VIII., subsisted entirely upon private benevo- lence and the charity of well-disposed Christians; and the poor in Ireland have, to this day, no re- lief except from private charity. By an ancient statute, 23 Edw. III., cap. 7, it was enacted, that none should give alms to a beggar able to work. It appears by the Mirror, that at the common law, the poor were to be ' sustained by parsons, rectors of the church, and the parishioners; so that none of them die for default of sustenance.' And by stats.15 Ilich.II.,cap.6 ;4 Hen. IV., cap. 12, impropriators were obliged to distribute a yearly sum to the poor parishioners, and to keep hospitality. By stats. 12 Rich. II., cap. 7; 19 Hen. VII., cap. 12, the poor were directed toabide in the cities and towns wherein they were born, or such wherein they had dwelt for three years ; which seems to be the first rudiment of parish settlements.

No compulsory method, however, was marked out for the relief of the poor, till the slat. 27 Hen. VIII., cap. 25 ; under which provision was ordered to be made for the impotent poor. Be- fore that time, the monasteries were their prin- cipal resource; and among other bad effects, which attended these institutions, it was not,

perhaps, one of the least, though frequently esteemed quite otherwise, that they supported and fed a very numerous and very idle poor ; whose sustenance depended upon what was daily distributed in alms at the gates of the religious houses. But, upon the total dissolution of these, the inconvenience of thus encouraging the poor in habits of indolence and beggary, was quickly felt throughout the kingdom ; and abundance of

statutes were made in the reign of king Henry VIII. and his children, for providing for the poor and impotent; which, the preambles to some of them recite, had of late years greatly increased. These poor were principally of two sorts ; sick and impotent, and therefore unable to work : idle and sturdy, and therefore able, but not willing to exercise any honest employment. To provide, in some measure, for both of these, in ard about the metropolis, Edward VI. founded three royal hospitals ; Christ's and St. Thomas's, for relief of the impotent, through infancy or sickness ; and Bridewell, for the punishment and employment of the vigorous and idle.

But these were far from being sufficient for the care of the poor throughout the kingdom at large ; and, therefore, after many other fruitless experiments, by stat. 43 Eliz. cap. 2, overseers of the poor were appointed in every parish, whose office and duty are principally these: first, to raise competent sums for the necessary relief of the poor, impotent, old, blind, and such other being poor, and not able to work, and them only ; and, secondly, to provide work for such as are able and cannot otherwise get employ- ment; butvthis latter part of their duty, which, according to the wise regulations of that salutary statute, should go hand in hand with the other, is now most shamefully neglected. 1 Black. Comm. cap. 9, pp. 359. 460.

Mr. Justice Blackstone states, at considerable length, the evils arising from what he considers as a deviation from the original purpose of the poor laws, by accumulating all the poor in one workhouse; a practice which he condemns as destructive of the industry and domestic happi- ness of the poor. He also reprobates the sub- division of parishes ; the plan of confining the poor to their respective districts ; and the laws passed since the Restoration ; as having given birth to the intricacy of our poor laws, by mul- tiplying and rendering more easy the methods of gaining settlements; and, inconsequence, creating an infinity of expensive law-suits between con- tending neighbourhoods, concerning those, set- tlements and removals. He now proceeds to state the general heads of the law relative to the settlement of the poor ; which, he truly observes, by the resolutions of the courts of justice thereon, within a century past, are branched into a great variety. ' And yet,' he concludes, ' notwith- standing the pains that have been taken about these laws, they still remain very imperfect, and inadequate to the purposes they are designed for ; a fate that has generally attended most of our statute laws, where they have not the foun- dation of the common law to build upon. When the shires, the hundreds, and the tithings were kept in the same admirable order in which thev

were disposed by the great Alfred, there were no persons idle, consequently, none but the impotent that needed relief; and the stat. 43 Eliz. cap. 2 seems entirely founded on the same principle But when this excellent scheme was

neglected and departed from, we cannot but observe, with concern, what miserable shifts and lame expe- dients have from time to time been adopted, in order to patch up the flaws occasioned by this neglect. There is not a more necessary or cer- tain maxim, in the frame and constitution of society, than that every individual must contri- bute his share, in order to the well-being of the community ; and, surely, they must be very de- ficient in sound policy, who suffer one-half of a parish to continue idle, dissolute, and unem- ployed ; and at length are amazed to find that the industry of the other half is not able to maintain the whole.' 1 Black. Comm. cap. 9. The average sum applied to the relief of the poor for the years 1748, 1749, 1750, was £690,000 per annum. In 1776 it amounted to £1,531,000, an increase far beyond what the rise in the prices of corn would justify ; in 1783, 1784, 1785, to £2,000,000, though the average price of corn had fallen during the nine inter- mediate years.

In the year 1795 a change took place in the administration of the poor laws, which has com- pletely altered the state of the country. This was a winter of unusual scarcity. The price of corn, per quarter, which for the three preceding years had stood at £2 14s., averaged more than £4 during the whole of 1795 and 1796. As the returns of labor could not be expected to keep pace with such a sudden rise in the necessaries of life, distress was universal ; and there ap- peared as claimants for parochial relief, not only the infirm and aged, but the able-bodied and industrious, who had few of them ever before resorted to the parish, and that only dur- ing temporary illness and disability. It was at this season of acknowledged difficulty, that the county magistrates, first in Berkshire, and after- wards in other parrs of the middle and south of England, agreed to relieve the poor according to a fixed and uniform scale, regulated by the price of bread ; and issued a table, which professed to show, at one view, what should be the weekly income of the laboring poor, which it fixed in a certain ratio, according to the price of bread and the size of the family. Whatever the man's labor produced less than the provisions of this table required, was made up by the parish, whose compliance was subsequently enforced by the legislature; and the justices were empowered, under certain conditions, to order relief out of the workhouse, and to those who possessed pro- perty of their own. 36 Geo. III. cap. 23.

The practical operation of this system has been thus illustrated. Every laborer is pre- sumed lo require a gallon loaf of standard wheaten bread, weekly, for every member of his family, and one over ; i. e. four loaves for three persons ; seven for six. A B has a wife and four children ; he claims seven gallon loaves, costing, we will suppose, 12s. But his wages are only 9s. ; therefore the parish supplies him

•with 3s. weekly. C D has a wife and six chil- dren ; he requires nine gallon loaves, or 14s. 8d. He earns 10s. ; the parish makes up the rest. E F is so idle and disorderly, that no one will employ him ; but he has a wife and five chil- dren, and requires eight gallon loaves for their support. His allowance, then, is 9s. in lieu of the wages which he ought to earn, and 5s. or 6s. to make up the deficiency of these wages.

The distress which followed the spring of 1815, the consequent increase of the poor-rates, and the difficulty of meeting them, brought our existing system into full operation, and led to a long and diligent enquiry into the whole subject before a committee of the house of commons, in the session of 1817. From the returns which were 'hen made from the manufacturing towns of Birmingham, Manchester, Coventry, &c. ; and also from many districts solely agricultural, it clearly appeared that the excess of demand above the funds prepared to answer it, was not merely a theoretical evil, but one which some districts had already experienced, and to which all were more or less rapidly approach- ing. In Manchester, according to the report of the committee, the relief given to the out-door poor increased, within ten years from 1805, to £14,000, instead of £8000 per annum ; and the whole expenditure, from £16,000 to £27,000, in the most moderate years ; in dear seasons, one^ third more. In Birmingham the increase in ten years was one-third, being £20,000 in 1806, £30,000 in 1816. Distraint for rates became very general ; and every distraint was felt to be a wasteful encroachment upon the national re- sources.

' Whether the assessment,' said the committee, ' be confined to land and houses, as at present, or other denominations of property be made prac- tically liable to the same charge, the committee feel it their imperious duty to state their opinion, that, unless some efficacious check be inter- posed, there is every reason to think that the amount of the assessment will continue, as it has done, to increase, till at a period, more or less remote, according to the progress the evil has already made in different places, it shall have absorbed the profits of the property on which the rates may have been assessed ; producing thereby the neglect and ruin of the land, and the waste or removal of other property, to the utter subversion of that happy order of society so long upheld in these kingdoms.

' The gradual increase which has taken place both in the number of paupers, and in the as- sessment for their support, can hardly fail to have arisen from causes inherent in the system itself; as it does not appear to have depended entirely upon any temporary or local circum- stances. Scarcity of provisions, and a dimi- nished demand for particular manufactures, have occasioned, from time to time, an increased pressure in

particular parishes. But, by com- paring the assessments in the two counties in this kingdom, in which the largest portion of the population is employed in agriculture, namely, Bedfordshire and Herefordshire, it will be seen that there has been the same progressive aug- mentation in the amount of the assessments, as

may be observed to have taken place in the manufacturing counties.'

i

j

Money Ex-

Average

pended on

Expen-

Paupers, in

diture

Expen-

Expen-

the year end-

on Pau-

diture

diture

ing Easter

pers,

1803.

1815.

1776omitting

1783-4-

fractions.

5.

County of) Hereford $

£10,593

16,727

48,067

59,255

Bedford

16,662

20,977

38,070

50,370|

By this table, it appears, that the charge on the rates, in 1815, not in two or three counties only, but taking England throughout, was double its amount in 1795 ; though, in 1815, the price of corn had sunk to a moderate average. A comparison of these rates in the five following years, i. e. to 1820, as digested in the poor-rate returns, ordered to be printed in July 1821, shows the same alarming tendency to increase.

Expended for the

Average

Years.

Relief of the

Price of Corn

Poor.

per Qr.

£.

**. d.*

1815

5,418,845

70 6

1816

5,724,506

61 10

1817

6,918,217

87 4

1818

7,890,148

90 7

1819

7,531,650

82 9

1820

7,329,594

69 5

By this table, it will appear, that as the price of corn in 1815 and 1820 was the same, the amount of the rates ought likewise to have been the same, with the addition of 10 per cent, for increase of population. It ought, therefore, to have been 6,000,000 in 1820, according to the scale of 1815. But it is 7,000,000, giving 1,000,000, or one-sixth of the whole, as the

actual growth of five years. We shall have an oppor- tunity of pursuing this important subject further hereafter ; documents sufficient have been now laid before the reader to show its legal and sta- tistical basis. We have only room to observe, that a plan of fixing the maximum of these rates was laid before parliament in 1821 ; but clogged with so many objectionable alterations in the law of settlement, that it met with little at- tention. Mr. Malthus makes the following im- portant objections to the very nature of this plan : ‘ Under such a law, if the distresses of the poor were to be aggravated tenfold, either by the increase of numbers, or the recurrence of a scar- city, the same sum would invariably be appro- priated to their relief. If, in the meantime, the statute which gives the poor a right to support, were to remain unexpunged, we shall add to the cruelty of starving them, the injustice of still professing to relieve them. If this statute were expunged or altered, we should virtually deny the right of the poor to support, and only retain the absurdity of saying that they had a right to a certain sum.’ On Population, III., p. 353

This objection, says an able writer in the Sup- plement to the Encyclopaedia Britannica, equally applies to an amendment which has been since proposed, to render the maximum a gradually decreasing maximum, by subtracting from its amount 10s. or 12s. per cent, annually, till the whole was extinct. To any one acquainted with the manner in which the affairs of a parish are and must be conducted, taking the country at large, such impossibilities must occur in the execution of a law of this nature, as render it quite undeserving attention as a national measure. The business of overseer, for the first half of the year, would go on smoothly enough. By that time, three-fourths of the legal assessment would probably be spent. Then all, whatever might be their wants, must be put on short allowance, and future claimants excluded. But each of such claimants would justly consider that he haJ as good a right to be supported in the hour of need, as those who happened to be visited with misfortune a few months before ; and those whose mischance it was to be in distress when the fixed sum was collected and expended, would be particularly ill used on being refused assist- ance, while so many others around them had enjoyed this advantage. If such a measure were passed, it would be virtually repealed in half the parishes of the kingdom before the expiration of five years. Besides, there is nothing in any measure of this, kind, which tends to stem the progress of pauperism ; nothing to prevent the numbers from annually increasing, which require public assistance. All the channels by which the main stream is supplied, as described in the begin- ning of this article, remain the same ; why, then, should we expect that the stream itself should

grow narrower, or cease to overflow its bounds ? If, then, the sum collected were to be divided among all who might be in want, however their number might increase, great misery must ensue;

•Ve add on this subject the following more recent STATEMENT, showing the amount 01 the PAROCHIAL ASSESSMENTS, in each county of ENGLAND and WALES in the year ending March 25th, 1 ” 23, distinguishing in column

and all the blame of it would be laid, not with- out much apparent justice, to the charge of the society, which undertook the support of the poor, yet supplied them so sparingly, that they must necessarily die of hunger and disease. ‘ The only measure which can be considered as either politically wise, or practically efficient, is one which shall gradually annihilate the system by attacking directly its vita! principle, and striking at the root of the disease.’

Mr. Malthus, therefore, proposes that a regu lation should be made, declaring, that no child, born from any marriage taking place after the expiration of a year from the date of the law, and no illegitimate child, born two years from the same date, shall ever be entitled to parish assistance. And, to give a more general know- ledge of this law, and to enforce it more strongly on the minds of the lower classes of people, the clergyman of each parish should, after the pub- lication of bans, read a short address, stating the strong obligation on every man to support his own children ; the impropriety, and even immorality, of marrying without a prospect of being able to do this ; the evils which had re- sulted to the poor themselves, from the attempt which had been made to assist, by public insti- tutions, in a duty which ought to be exclusively appropriated to parents, and the absolute neces- sity which had, at length, appeared of abandoning all such institutions, on account of their produ- cing effects totally opposite to those which were intended. ‘ This would operate as a fair, dis- tinct, and precise notice, which no man could well mistake ; and, without pressing hard upon any particular individuals, would at once throw off the rising generation from that miserable and helpless dependence] upon the government and the rich, the moral as well as physical conse-ˆ quences of which are almost incalculable.’

No. 1. The proportion levied on lands.

2. The proportion levied on dwelling-

houses.

3. The proportion levied on mills and fac-

tories.

4. The proportion levied on manorial pro-

fits, &c.

5. Total.

5. The number of inhabited houses in each county.

7. The number of inhabited houses in each

county assessed at £50, but under £110 per annum.

8. The number of inhabited houses in each

county assessed at £110, but under £160 per ancum.

9. The number of inhabited houses in each

county assessed at £160 and all above.

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E N G L A JM u.

STATEMENT.

Counties in order of Total Population. No. 1.

No. 2.

No. 3.

No. 4.

No. 5.

No. 6.

No. 7.

No. 8

No. 9

LONDON. 1 Middlesex . 38 WESTMINSTER. 2 Lancaster . 12 3 York, W. Rid. 5 4 Devon ... 1 5 Kent ... 7 6 Surrey ... 25 7 Somerset . . 6 8 Norfolk . . 2 9 Stafford . .17 10 Gloucester . 11 11 Essex ... 4 12 Southampton . 10 13 Lincoln . . 3 14 Warwick . .19 15 Suffolk ... 8 16 Chester . .18 17 Cornwall . .14 18 Sussex . . .13 19 Wilts ... 9 20 Derby ... 29 21 Durham . . 37 22 Salop ... 16 23 Northumberl. . 34 24 York, E. Rid. 24 25 Nottingham . 30 26 Worcester . . 26 27 York, N. Rid. 20 28 Leicester . . 33 29 Northampton . 15 30 Cumberland . 35 31 Dorset ... 27 32 Oxford ... 22 33 Buckingham . 21 34 Berks ... 28 35 Hertford . . 32 36 Cambridge . 23 37 Hereford . . 31 38 Bedford . . 36 39 Monmouth . 40 40 Westmoreland 4 41 Huntingdon . 39 42 Rutland . . 42

EKGLAND WALES

TOTAL

£

38,116

157,791 185,658 175,412 257,917 83,585 136,841 224,977 99,715 95,286 225,493 145,278 166,761 89,726 214,667 89,797 87,235 217,246 132,358 75,068 67,914 75,619 54,022 70,537 57,613 65,031 76,105 91,200 132,002 43,503 70,744 98,714 102,610

76,70o

73,608 78,285

ff nod

£

512,903

107,738 65,887 47,461 106,452 148,026 32,398 50,248 27,145 51,786 44,080 42,926 21,874 37,923 38,965 20,660 16,787 37,049 22,323 12,220 20,114 13,497 17,998 33,260 20,215 13,379 8,623 18,415 11,667 12,625 14,572 18,657 13,738 18,593 19,553 13,826 6,436 6,387 4,72 3,15 4,83 1,01

£

38,769

49,375 61,826 2,624 8,258 19,672 1,993 4,205 6,024 5,538 6,205 2,529 4,067 9,618 5,286 5,219 2,196 4,269 2,682 1,727 6,332 1,167

8,128 2,602 2,863 3,384 1,177 373 581 894 1,353 869 1,659 2,145 2,455 1,464 208 644 669 607 438 50

£

503

11,574 8,597 1,927 1,159 1,355 3,350 2,728 7,376 1,288 1,235 293 418 2,399 829 1,537 6,318 692 1,390 1,320 12,536 2,590 4,038 610 630 1,820 360 313 1,266 1,518 1,513 393 379 715 318 .592 98 142 1,330 155 137

£

590,291

326,478 281,969 227,425 373,787 252,639 174,582 282,158 140,257 153,897 277,013 191,026 193,118 139,667 259,748 117,213 112,537 259,256 158,753 90,336 106,900 92,873 84,187 107,009

81,32]

83,615 86,266 110,306 145,516 58,540 88,182 118,634 118,387 98,158 95,935 94,167 63,767 73,437 29,932 28,447 41,110 12,425

17,170 117,197 18,502 176,449 154,314 71,416

70,50 T

64,790 61,852 62,274 63,319 60,881 49,978 49,516 53,818 55,012 42,773 47,094 43,873 36,283 41,702 40,054 32,973 38,863 31,526 34,930 35,022 34,734 35,765 34,775 32,503 27,246 25,926 25,594 24,786 24,705 23,178 20,869 20.061 15,412 13,211 9,243 8,878 3,589

4,111 11,965 5117 2125 752 414 814 3,105 2,201 80 107 819 358 479 83 224 58 154 38 646 95 78 51 79 272

127 190

95 54 56

91 74 87 185 162 92 17 9 12 32 24 5

822 1568 981 132 20 4 50 338 390 2 8 119 41 19 1 8

571 173 597 41 9 1 35 175 102

3 32 11 10

12

2

5 1 25 2 4

14 2

6

2

7

1

7

2 2 4

f

10

1

j

1

4

2

2

1 3 3

2 2

1

66,264 23,210 24,52 35,70 11,35

2

2

3

4,351,22 251,02

1,740,13 22,81

242,152 5,237

87,748 3,16

6,421,26 282,23

1,951,973 136,18

35,733 74

3608 2

2626

4,602,25

1,762,95

247,39(

90,90

6,703,50

2,097,066 35,708J361

2627

% Tne population return of 1821, represents 2,088,156 houses in England and Wales as being inhabited in that year, another return made to parliament in the session of 1823, represents 437,626 out of that number charged with duty, on the assessed taxes in the year ending April 5th, 1822, the total value assessed being £10,168,574, and the amount of the assess- ment £l, 180,250, about half of which amount is contributed by the 41,945 houses enume- rated in the above statement. 202,628 farm houses occupied by tenants, and used bon& fide for husbandry, — exempt leaving the occupiers of 1,447,902 out of the 2,088,156 houses inhabited in 1821 to be. too impoverished to contribute to direct taxation.*

There is another topic connected with the financial and statistical History of England, to which we may be allowed to advert, and on which we can supply some interesting details in this place, although in a preceding article we have in part anticipated it, — that of our numerous

Assurance and Insurance Societies for lives, and against the casualties of fire, shipwreck, &c.

The following are the companies for the as- surance for lives, and insurance against fires, losses by shipwreck, &c., enumerated in the latb work of Mr. Babbage on this subject.

Name of Office.

Fire Life.

Capital.

Capital paid up.

Table «f Mortality.

Proportion of Profit given to Assured.

Periods of Division.

JRrr\S .

F &L F&L F& L

L

F &L L L

L

F &L L L L F &L F &L F&L F&L L

L F&L L L

F &L F&L L L

L

F&L L F &L L

F &L L

Prop. Prop. Mixed

Mixed Mixed

Prop. Mixed

_Trop. Mixed Mixed Mixed Prop. Prop. Mixed ˆMixed Mixed

Mixed Prop. Mixed Mixed

Mixed Mixed Prop. Mixec

Mixec

Prop. Mixec Mixec Prop.

Prop.

Mixec

£

1,000,000 1,000,000 5,000,000

None

1,200,000 240,000 1,000,000

1,500,00)

1,000,OOD

200,000

None

1,000,000 745,000 1,000,000 2,000,000 1.000,000 750000

1,000,000

£

Same as Guardian Northampton

None None

100,000 500,000

None

120,000 60,000 100,000

$ 150,000 > t 10 per cent. J

100,000 50,000

None

100,000

Alliance .... Amicable . . . Atlas . ...

5 About 3s. less > t than North. $ Northampton

Seven -Eighths

Unknown Unknown None

Two-thirds

None Three-fourths

Every Year

7 Years 5 Years

10 Years

7 Years

7 Years Unknown

$ Five or $ 7 Years 7 Years 7 Years

7 Years 7 Years

5 Yeais 7 Years 5 Years

British Com. .

Eaele .

Northampton

Economic . . . Equitable . . . European . . . Exchange Royal Globe

Northampton

Northampton Northampton

None None

1,000,000 200,000 100,000 75,000 $ 100,000)

(10 p. c. paid $

Guardian .... Hope . •. . .

Northampton Northampton

Northampton

Unknown Two-thirds

Four-8fths None One-fifth

Imperial .... Law Life ....

Lon. Assurance London Life) Association) Medico -Clerical

Norwich Union Palladium . . . Pelican

None Unknown

None

2,000,000

None

Northampton

None

80,000

Northampton Northampton Northampton

Northampton

Four fifths None

Provident . . . Rock

250,000 2,000,000

25,000 5 200,000)

**25pd.on50$*

Two-thirds

None Four-fifths

Sun

University . . . Union

600,000 300,000

60,000 30,000

Northampton

United Empire . West of Engld. Westminster . .

Two fifths None None

600,000

5 10 p. c. under > t Northampton S Northampton

These companies may be considered as con- stituted on three different plans. The first is, where all the assurers for the whole term of life are mutually responsible. They participate in the profits, and are subject to calls to replace any loss or deficiency in the funds. This responsi- bility, however, is merely nominal, as a large jurplus fund must necessarily accumulate from the circumstances already noticed so highly fa- vorable to the o ffices. A capital to commence with is wholly unnecessary, as the receipts con- tinue to be annually paid in, and are placed at interest in the public securities, long before any large demands can take place, and there is no danger of losses occurring from bad debts. Of societies founded on this principle of mutual assurance, there are established in London the Amicable, Equitable, the London Life Assurance and Norwich Life, and in these the assurers are entitled to share in the profits ; but they do not share in the whole of them, one-third being generally reserved.

The second principle on which institutions of this kind are founded, is that of a number of

persons forming a company, and raising a capital among themselves, as a guarantee for the payment of all contracts or policies which they may effect. Security to the assured, and freedom from res- ponsibility, are the supposed advantages held out by this plan ; in consideration of which the rates charged are generally as high as the prece- ding, though the exact sums only, named in the po- licies, are paid on the deaths of the parties, without additions or deductions. The offices which have adopted this plan are the Albion, British Com- mercial, Eagle, Globe, London Assurance, Pe- lican, Royal Exchange, Sun, West of England, Westminster. Whatever advantages may be supposed to attach to these offices, the assurer most undoubtedly pays very high for a security, that is merely nominal, or at least unnecessary ; but we suppose the greater number of the as- surers are proprietors, and as such share in the profits of the concern.

The third principle consists of a combination of these two. The proprietors subscribe a capital, relieve the assured from all loss and responsi- bility, take one portion of the profits to pay the

-\

interest of the capital, and give the assured, at certain intervals, the remainder. The Rock, the Alliance, the Guardian, the Palladium, and some others, are founded on this principle, which is, perhaps, as good as any other, though it curtails the amount of the additions which would other- wise be made to those assurers who are not pro- prietors, or holders of shares.

From a table given by Mr. Morgan, the actuary of the Equitable, formed from above 150,000 instances, Mr. Babbage concludes that forty- seven is about the average age at which persons assure ; that is to say, as many persons assure later in life than this age, as under it; that about one-third commence between forty and fifty — nine-tenths between thirty and seventy ; that about one-fifteenth of the whole are under twenty when they commence ; that on a life aged forty-six, the profits per cent on the pre- miums demanded by the several following offices, are as follows :

.£. s.

Alliance . . . . 30 2 Amicable . . . . 25 5 British Commercial . .166 - Crown 25 5

Economic . . . . 16 2 Equitable . . . . 29 2 European . . . . 21 5 Guardian . . . . 25 1 London Assurance . . 26 7 Medico-Clerical . . . 29 7 Norwich Union . . . 19 3

Sun 30 9

United Empire . . .219

University 23 2

West of England . .162

Before, however, we can judge accurately of

the comparative advantages to the assurers, this

table must be viewed in conjunction with the

proportion of those profits which is returned to

them in the shape of a bonus ; the mode of

assigning that proportion ; the periods at which

it is so assigned ; and the periods at which the

assurers become entitled to participate in those

profits.

Mr. Babbage says, that the only two compa- nies (and ihey are those which probably rank highest in public estimation and importance) that have yet assigned a bonus to the assured, by adding a certain per centage to the amount of the policies, are the Equitable and the Rock. In this, we apprehend, he must be mistaken ; at least, he is inconsistent with his own statement, wherein he had just told us that all but the ten proprietary companies profcss to make certain returns of their profits ; perhaps, however, they may not yet have made a commencement of ful- filling their professions. The Rock is a young establishment compared witli the former, and only made its first dividend of profits in the year 1819, thirteen years after its establishment, when it is stated to have added twenty per cent, to those policies which had existed ten years. The Equitable, at ••arious periods since the year 1782, and in two periods of ten years each

ending in 1820, added to each policy, existing at tl e former date, 185 per cent., the average Addition of ten years being £23 2s. 6d. per

cent. The conclusion drawn from this com- parison is important.

‘ A difference of £3 2s. 6d. on £20, or nearly one-sixth between two offices, may not appear very great ; and it may perhaps be expected that, on a larger experience, they will approximate much more nearly to each other. That there are very sufficient reasons why this cannot be the case, and that the relative advantages of the two offices are not truly estimated by the numbers 20, and 23J, I shall now proceed to show. In order to render this matter, which is of con- siderable importance, more clear, I shall suppose two assurance offices to commence at the same time, one on the plan of the Equitable, the other on that of the Rock and some others ; that each makes by its business a clear profit of £300,000 every ten years ; each office awards two-thirds of the profits to the assured, but one of them, immediately on each division, transfers one-third of the profits to a body of proprietors.

‘ By tracing the progress of these offices through, a considerable period of years, we shall see the important result produced by the deduction of one-third of the profits for the payment of those who guarantee the capital.

At the end of the first ten years, both offices divide a profit of £300,000, and two-thirds 0 this are added to the policies of the assurers at both offices ; but at the Equitable, the other third increased during the next ten years, suppose it only at three per cent., amounts to £134,392; and at the second division, the profits of the Equitable are greater than those of the other office by this sum.*

‘ The following table will show the sums added, at intervals of ten years, by an office on the plan of the Equitable : — At the end of the first ten years . . £200,000 At the end of the second ten years . 289,595 At the end of the third ten years . . 329,730 At the end of the fourth ten years . . 347,709 At the end of the fifth ten years . . 355,764 At the end of the sixth ten years . . 359,373 ‘ Whilst at an office in which one-third of the profit is paid to proprietors, the constant sum of £200,000 can only be added at the decennial period of division ; and, in the course of sixty years, the assurers have received additions of nearly £682,000 at one office above those given by the others.

‘ Nor is this the whole difference ; for although two-thirds is the sum nominally divided amongst the assured, since that sum is only payable on the death of their respective nominees, it is not really equal to two-thi.ds, and is, in fact, dif- ferent for different ages. Thus suppose three assurers of the ages of twenty, thirty-five, and sixty, and that £100 is the addition awarded to each of their policies, the present value of that sum to each of these parties is £34 9s. 9d., £42 3s. Id. and £61 7s. 9d., respectively; and even when the same sum is added to a policy on a life aged eighty, it is worth in present money only £82 2s. Wd. ; this inequitable mode of appor- tioning them is not however so disadvantageous in a system of mutual assurers, because the re- served surplus again accumulates for the benefit of the assured at the next period of division.

ENGLAND.

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‘These facts show that the two-thirds, appa- rently given to the assured, are in reality not equal to one-half the total profits ; at the same time they explain the cause of the large additions made at the Equitable, and show that it cannot be expected that any of an eqxial extent can ever be made by any society burdened with a per- manent proprietary.’

It is deserving of notice, that up to the year 1820, the Equitable added to a policy of

Equitable, ˆ

> added to policies.

twenty years’ date, 77 per cent ; to one of thiity years’ date, 161 per cent; to one of forty years’ date, 280 per cent. ; and to one of fifty years’ date, 401 per cent.

It would be tedious to give an abstract even of what the various offices promise to do with the profits. The following, however, is a summary of about one-half of them, as given by Mr.iJab- bage : —

Rock,

Provident,

Union,

Alliance,

Guardian,

Norwich Union,

Provident,

United Empire,

Economic,

European,

Atlas,

Law Life,

London Life,

3 added to policy, or applied to diminish premium.

f added to policies in proportion to amount of premiums paid.

I added to policies and interest on bonus paid annually.

I a .reversionary sum equal to present bonus added to policy.

Amicable,

Palladium,

Hope,

Imperial,

applied to diminishˆ premium, or paid immediately.

j a sum equal to the average annual payment, received by the society during tlu 5 last five years, divided amongst those who die in every year.

added to policies on the most equitable principles of division.

unknown.

‘ Those offices which merely add the bonus tc the policy are wrong on both the grounds which interest the public. In the first place, they

ap- pear to give as a bonus a larger proportion than they in reality do give, and they also distribute that bonus very unequally ; the older lives having a much larger portion than the younger. In some cases, an old life will receive twice as much as a Young one, and yet the same rate per cent is awarded to each.'

The following table shows the periods at which the division of profits takes place at the respec- tive offices mentioned therein : —

Alliance "}

Asylum, > five years.

United Empire, 3

Medical and Clerical, five or seven years. Equitable, Crown, Economic, Hope, Imperial, Law Life, Amicable, London Life, Atlas, European, Guardian, Norwich Union Palladium, Rock, Provident. Union: See ASSURANCE.

We shall add to these statistical details what- ever njay seem necessary to give a complete picture of the existing state of the empire under the article GREAT BRITAIN.

ten years.

unknown

yearly.

seven years.

PART II. HISTORY OF ENGLAND.

1. Of England under the Anglo-Saxons. — We have seen (article BRITAIN) the entire success of the arms of Egbert. The kingdoms of the Hep- tarchy that were allowed to retain their name had lost all independent existence ; and Egbert became sole master of England about the year 8"27. A favorable opportunity was now offered to the Anglo-Saxons of becoming a civilised people, as they were at peace among themselves, and seemed free from any danger of a foreign invasion. But this flattering prospect was soon overcast. Five years after Egbert had established his new monarchy, the Danes plundered the isle of Sheppey, and made their escape with safety. Encouraged/ by this success, next year they landed from a fleet of thirty-five ships. They were encountered by Egbert at Charmouth in Dorsetshire.

The battle was obstinate and bloody. Great numbers of the Danes were killed, but the rest made good their retreat to their ships. They next entered into an alliance with the Britons of Cornwall; and, landing two years alter in that country, made an irruption into Devonshire. Egbert met them at Henges- down, and totally defeated them ; but before he had time to form any regular plan for the de- fence of the kingdom, he died, and left the go- vernment to his son Ethelwulf. The reign of Egbert on the whole was most fortunate and glorious. Dr. Lingard contends, however, that there is not sufficient authority for supposing that lie gave himself the title of the first king of England, and thinks that Henry of Huntingdon means by Monarcha Britannicus nothing more than ' Bretw'ilda,' a title which the most eminent and powerful of the princes of the Saxon Hep-

tarchy had long borne. It is clear, however, according to the admission of this writer, that he extended the authority of his original kingdom of Wessex over the far greater part of the island.

The new king was weak and superstitious. He began with dividing the kingdom, which had so lately been united, with his son or brother Athelstan. To the young prince he gave the counties of Essex, Kent, and Surrey ; a division which, though it might have been productive of bad consequences at another time, was perhaps in part adopted for safety, and through fear of the Danes. These piratical barbarians im- pelled by the hope of plunder, scarcely ever failed of paying England an annual visit ; and, though they met with many previous repulses, had on the whole gained sufficient ground in 851 fora body of them to take up their winter quar- ters in England. Next year they received a strong reinforcement of their countrymen in 350 vessels; and advancing from the isle of Thanet, where they had stationed themselves, they burnt London and Canterbury. Having next put to flight Brithric the governor of Mercia, they marched into the heart of Surrey, laying waste the whole country through which they passed. Ethelwulf, though little inclined or fitted for military enterprises, was now obliged to take the field. He marched against the Danes at the head of the West Saxons, and gained an indecisiye and bloody viclory over them ; for the enemy still maintained a settlement in the isle of Thanet. They were also attacked by Ealher and Hudda, governors of Kent and Surrey; both of whom they de- feated and killed. Afterwards they removed to the isle of Shepey, where they took up their winter quarters, with a design to extend their ravages

the next year. In this deplorable slate of his kingdom Ethelwulf undertook a pilgrim- age to Rome, whither he carried his fourth and favorite son Alfred, then only six years of age. Some of our historians state that this prince hud been previously sent to Rome at the age of four under the care of the bishop of Winchester. Be this as it may he certainly accompanied his father at this time, and the pontiff Leo IV. is said at EthelwulPs desire to have conferred on him the royal unction with the ceremony of confirmation. Having passed a year at Rome Ethelwulf made a grant of 300 mancuses (about £37 10s. ster- ling) annually to the papal see. See MANCUS. On his return through France, he married Judith, daughter of the emperor Charles the Bald, who after the marriage, was crowned and seated on a throne beside her husband, at Rheims. This is the first instance of a female coronation in our history, and the West Saxons are said to have exhibited great distaste of the ceremony. When Ethelwulf landed in England, he found that his eldest son Ethelbald had conspired with the bishop of Sherburne, the ealdorman of Somer- set, and others, to deprive him of the throne. Athelstan had died in the interim, and Ethelbald had in virtue of his deputed authority assumed the government of the provinces formerly committed to that prince. This strengthened his hands, and the monkish parent agreed to transfer to the heir apparent the kingdon. of Wessex, and content himself with the eastern provinces formerly go-

verned by Athelstan. Immediately after this he is said to have summoned the states of his king- dom, and conferred on the clergy a perpetual donation of tithes, for which they had con- tended for several centuries. It seems more probable, however, that this transaction, whatever it may in reality have amounted to, took place before his journey to Rome : as it clearly was from the first recognised throughout the kingdom of Wessex, and the grant was extended by a coun- cil held at Winchester (Lingard says in 855) to all the clergy of the Saxon nations. This con- cession was deemed so meritorious, that the people of both states now thought themselves secure of the favor of heaven ; and therefore neglected to use the natural means for their safety. They even agreed, that, notwithstanding the desperate situation of affairs, the revenues of the church should be exempted from all burdens ; even from those imposed for the immediate de- fence of their respective territories.

Ethelwulf died two years after his return,"and left the kingdom of Kent by will to his second son Ethelbert, and that of Wessex to Ethelbald, Ethelred, and Alfred, in succession. Ethelbald now, therefore, continued to govern the kingdom of Wessex, and his brother Ethelbert was placed in possession of the eastern provinces.

The former, who had strenuously objected to his father's marriage with Judith of France (then not more than twelve years of age), now gave his hand to the young widow ; but his people were so scandalised at this incestuous match, that he was compelled to submit to a separation, and she retired to her native country. This lady's history is still further, however, connected with that of England : as through a subsequent marriage with Baldwin, the forester of France and earl of Flanders, she became the mother of Matilda, the wife of William I. and gave to this country a long line of kings.

Ethelbald survived his father about seven years, but no further transactions of his reign appear in our histories. By the unanimous consent of the great council of Wessex, though contrary as we have seen to his father's will, he was succeeded by his next brother Ethelbert, whose reign was, however, also short and unin- teresting. But in his person the whole of his father's dominions were again united under one sceptre. The Danes or northmen, the year pre- vious to his death, penetrated to the city of Winchester and plundered it ; but were defeated on their retreat by the ealdormen of Hampshire and Berkshire. In Kent and the isle of Thanet, as well as in North umbria, they were successful.

Ethelred I. succeeded to his brother in the year 866; and the whole of his reign was dis- turbed by the irruptions of the Danes. The king defended himself with great bravery, being seconded in all his military enterprises by his brother Alfred. In this reign, the Danes first induced the East Angles to enter into an alliance with them, and furnish them with horses, to make an irruption into Northumberland, where they seized upon York. Osbright and /Ella, two Northumbrian princes who attempted to rescue the city, were defeated and killed. En- couraged by this success, the northmen pene-

trated into Mercia, took up their winter quarters at Nottingham, and thus threatened the kingdom with a total subjection. From this post, how- ever, they were dislodged by Etnelred and Alfred, who forced them to retire into Northum- berland. Their restless disposition, however, did not suffer them to continue long in one place. They broke again into East Anglia; defeated and took prisoner Edmund the tributary king, whom they afterwards murdered; and committed every where the most barbarous ravages. In 871 they advanced to

Reading; from whence they in- fested the neighbouring country by their incur- sions. The Mercians, desirous of recovering their independence, refused to join Ethelred with their forces ; so that he was obliged to march against the Danes, attended only by the West Saxons, his hereditary subjects. Several actions ensued, in which the Danes were said to be un- successful; but, being continually reinforced from their own country, they became every day more and more formidable to the English. During the confusion and distress in which the nation was now involved, Ethelred died of a wound he had received, and left to his brother Alfred a king- dom almost totally subdued by foreigners.

Alfred ascended the throne in 871, being then only twenty-two years of age. His great virtues and shining talents saved his country from that ruin which seemed a) most unavoidable. His exploits against the Danes, his dangers and general cha- racter, have already engaged our attention under the article ALFRED. Having settled the nation in such a manner, that he may be justly esteemed the founder of the monarchy, as well as of the free constitution of England, he died in 901, leaving the kingdom to his second son Edward the elder. And here we may conveniently com- pare the comparative accuracy of Mr. Hume and Dr. Lingard. We have examined the au- thorities of the latter with regard to Alfred suffi- ciently to believe that whenever that prince is con- cerned, Mr. Hume is to be followed with caution. 'I he splendid qualities of a prince who, in a ! arbarous age, and amid scenes of devastation, though constantly tortured by the agony of an inward disease, displayed a taste and an intellect so far above his contemporaries, have inspired the historian with a partiality which has blinded him to the defects of his idol. Alfred's conduct in the first years of his reign was far from blame- less. He is accused of having given full scope to the indulgence of his passions. There is good authority for saying, that he neglected the administration of justice, and treated the com- plaints of his subjects with contempt. Even in the exercise of his military and political func- tions, negligence, as well as imprudence, may be traced. He was more than once surprised, and he more than once forgot himself, so far as to purchase with money that tranquillity which successful valor can alone procure. We mention these things, not to detract from the glory of that great prince, but to show how far Mr. Hume dis- regarded facts, in representing him as free from blemish. Alfred ripened with his years : ad- versity did not teach him in vain. He fled from his tli rone, only to re-ascend it more completely fitted for the discharge of all his duties. But the events which drove him from the throne ap-

pear, from, tne narrative oe Hume, to be not a little mysterious. The

sovereign of England — harassed indeed by foreign invaders, but exerting himself against them with success for several years, and not meeting with any signal disaster, all at once, without any great battle, without any cause assigned except the despair of his people, and no immediate reason for their despair, ex- cept the capture of Chippenham, — becomes a fugitive, seeking safety in woods and morasses. The apparent mystery which hangs over this revolution, disappears, when we keep in view three circumstances, which are generally over- looked. 1st. Alfred, in strict propriety of speech, was not king of England. Northumbria, Mercia, and East Anglia had retained a sepa- rate, though not independent, existence under Egbert. In the U«ie of Ethelred, Northumbria and East Anglia were conquered by the Danes. In 874 Mercia had the same fate. The con- nexion of these provinces with the English crown was thus annihilated. Alfred's authority, there- fore, never extended beyond the limits of Wessex, and perhaps some adjacent districts of East Anglia : so that it was not the king of England who was driven from his throne, but a king of Wessex, who had an enemy in the heart of his dominions, and was surrounded by enemies on every side. 2dly. Alfred's military operations had not been attended with that success, which the declamatory language of historians, leads us to ascribe to them. This is proved by the ne- cessity, to which he often found himself reduced, of trying to buy a peace, and by the footing which Gothrun obtained in Essex. 3dly. The circumstance which was the immediate cause of the subversion of Alfred's throne was a militaiy operation of Gothrun, by which the king was compelled to seek his personal safety in flight, all his followers were dispersed, and no means were left to his subjects of joining in any regular plan of defence. This event is one of the most curious in our history ; we shall extract Dr. Lingard's account of it. ' This sudden revo- lution arose from the policy of Gothrun, me most artful of the Northmen. That chieftain, on his retreat out of Wessex, had fixed his resi- dence at Gloucester, and rewarded the services of his veterans by dividing among them the lands in the neighbourhood. But, while this peaceful occupation seemed to absorb his attention, his mind was actively employed in arranging a plan of warfare, which threatened to extinguish the last of the Saxon governments in Britain. A winter campaign had hitherto been unknosvn in the annals of Danish devastation : after their summer expedition, they had always devoted the succeeding months to festivity and repose : and it is probable that the followers of Gothrun were as ignorant as the Saxons of the real design of their leader. On the first days of the year 878 they received an unexpected summons to meet him on horseback at an appointed place : on the night of the 6th of January they were in possession of

Chippenham, a royal villa on the left bank of the Avon. There is reason to believe that Alfred was in the place when the alarm was given : it is certain that he could not be at any great dis- tance. From Chippenham Gothrun dispersed his cavalry in different directions over the neigh-

bouring counties : the Saxons were surprised Joy the enemy before they had heard of the war : and the king saw himself surrounded by the barbarians without forces and almost without attendants At first he conceived the rash de- sign of rushing on the multitude of his enemies; but his temerity was restrained by the more con- siderate suggestions of his friends, and he re- solved to reserve himself for a less dangerous and more hopeful experiment. To elude sus- picion, he dismissed the few thanes who were still near his person, and endeavovired, alone and on foot, to gain the centre of Somersetshire. There he found a secure retreat in a small island, situated in a morass formed by the conflux of the Thone and the Parrel, which was afterwards distinguished by the name of Ethelingey, or Prince's Island.

' Though the escape of Alfred had disappointed the eager hopes of the Danes, they followed up their success with indefatigable activity. The men of Hampshire, Dorset, Wilts and Berkshire, separated from each other, ignorant of the fate of their prince, and unprepared for any rational system of defence, saw themselves compelled to crouch beneath the storm. Those who dwelt near the coast, crossed with their families and treasures to the opposite shores of Gaul ; the others sought to mitigate by sub- mission the ferocity of the invaders, and, by the surrender of a part, to preserve the remainder of their property. One county alone, that of Somerset, is said to have continued faithful tj the fortunes of Alfred : and yet, even in the county of Somerset, he was compelled to con- ceal himself in the fens, while the ealdorman jEthelnoth with a few adherents wandered in the woods.'

Mr. Hume is scarcely less inaccurate in nar- rating the steps by which Alfred re-ascended the throne. He tells us the story of Alfred's dis- guise as a harper, under which he entered the Danish camp, and remained for some days in the tent of Gothrun. The tale is pretty, but it was unknown to Alfred's contemporaries, and appeared for the first time two centuries after his death. Mr. Hume represents the

Danes as taken by surprise, and as submitting almost without resistance ; ‘ taking advantage of his previous knowledge of the place,’ says Mr. Hume (vol. i. p. 83), ‘ he directed his attack against the most unguarded quarter of the enemy. The Danes, surprised to see an army of English whom they considered as totally subdued, and still more astonished to hear that Alfred was at their head, made but a faint resistance, notwithstanding their superiority of numbers, and were soon put to flight with great slaughter.’ Dr. Lingard shows that they were not surprised, and that they fought with desperate valor. See Lin- gard, vol. i. p. 186.

The beginning of Edward’s reign was dis- turbed by those intestine commotions from which the wise and politic Alfred had taken so much pains to free the nation. EthelwaUl, son to king Ethelbert, claimed a riˆht to the throne, and took possession of Winburne, where he seemed deter- mined to hold out to the last extremity. On the approach of Edward, however, with a powerful

army, he first fled into Normandy, and afterwards into Northumberland, where the Danes, lately subdued by Alfred, but very impatient of peace, readily declared for him. Ethelwald having thus connected himself with the Danish tribes, went to Denmark, whence he returned with a great body of these banditti, and was- joined by the Danes of East Anglia and Mercia. He made an irruption into Gloucester, Oxford, and Wilts ; and, having ravaged the country, retired with his booty before the king could approach him. Ed- ward revenged himself by leading his forces into East Anglia, and ravaging it in like manner He then ordered his army to retire : but the Kentish men, greedy of plunder, staid behind, and took up their quarters at Bury. Here they were assaulted by the Danes; but made so obstinate a defence, that though their enemies gained the victory, it was bought by the loss of their bravest men, and among the rest of the usurper Ethelwald. The king, now freed from the attempts of so dangerous a rival, concluded an advantageous peace with the East Angles. He next engaged in reducing the Northumbrians, and for this purpose equipped a fleet, when the latter thinking the whole of the king’s forces were on ship-board, entered his territories with all their troops. The king, however, was better prepared than they expected. He attacked them on their return at Tetenhall, in Stafford shire, put them to flight, recovered the booty, and pursued them with great slaughter into their own country. The rest of Edward’s reign was a scene of continued and successful actions against the Northumbrians, East Angles, the Danes of Mercia, and others from Denmark. He fortified Chester, Eddesbury, Warwick, Cherbury, Buck- ingham, Towcester, Maldon, Huntingdon, and Colchester, and

vanquished the celebrated Thur- ketil, a Danish chieftain whom he obliged to re- tire into France. He also subdued the East Anglians, Northumbrians, and several tribes of tlie Britons ; and even obliged the Scots to make submissions. He died in 925, and was succeeded by Athelstan his natural son.

This prince ascended the throne without much opposition, as the legitimate children of Edward were too young to rule a nation so much exposed both to foreign invasion and domestic broils. The etheling Alfred, however, a nobleman of conside- rable power, entered into a conspiracy against him. It is said, that this nobleman was appre- hended upon strong suspicion only, but without any certain proof. He offered to swear to his innocence before the pope ; and in those days it was supposed that none could take a false oath in presence of such a sacred person, without being visited by an immediate judgment from God. Alfred was accordingly conducted to Rome, and took the oath required of him before pope John X. The words were no sooner pronounced, we are told, than he fell into convulsions, of which he expired in three days. The king, fully convinced of his guilt, confiscated his estate, and made a present of it to the monastery of Malmesbury. This accident proved the means of establishing the authority of Athelstan in England. But finding the Northumbrians bore the English yoke with impatience, he gave Sithric, a Danish no-

bleman, the title of king of Northumberland ; ami, to secure his friendship, gave him his own sister Editha in marriage. This was productive of bad consequences. Sithric died the year after his marriage with Editha; upon which Anlaf and Godfrid, Sithric's sons by a former marriage, assumed the sovereignty without wait- ing for Athelstan's consent. They were, how- ever, soon obliged to yield to the superior power of that %monarch. The former fled to Ireland ; and the latter to Scotland, where he was pro- tected by king Constantinc III., who was im- portuned by Athelstan to deliver up his guest, and even threatened with an invasion if he did not comply. Constantiue, detesting such treach- ery, advised Godfrid to make his escape. He did so, turned pirate, and died soon after. Athel- stan, resenting this conduct of Constantine, in- vaded Scotland, and reduced him, it is said, so low, that he was obliged to make the most humble submissions. This, however, is denied by all the Scottish historians. Constantine, after the departure of Athelstan, entered into a confede- racy with Anlaf, who subsisted by his piracies, and with some of the Welsh princes who were alarmed at the increase of Athelstan's power. The confederates made an irruption into England at once; but Athelstan meeting them at Brunap- burgh, or Brumbsbury in Northumberland, gave them a total overthrow. Anlaf and Constantine made their escape with difficulty, leaving the greater part of their men dead on the field of battle. After this period, Athelstan enjoyed his crown in tranquillity. He passed a remarkable law, for the encouragement of commerce; viz. that a merchant who had made three long voyages on his own account, should be admitted to the rank of a thane or gentleman ; and died in 941, after reigning sixteen years.

He was succeeded by his brother Edmund I On his accession he found the kingdom disturbed by the restless Northumbrians, who were, how- ever, soon reduced ; and Edmund ensured the peace of the kingdom, by removing the Danes from Mercia, where they had been allowed to settle, as he found they took every opportunity to introduce their countrymen into the kingdom. lie also conquered Cumberland from the Britons. This country, however, he bestowed upon Mal- colm king of Scotland, upon condition that he should do homage for it, and protect the north of England from all future incursions of the Danes. Edmund was unfortunately murdered in Glouces- ter by one Leolf a notorious robber. This man had been formerly sentenced to banishment; yet had the boldness to enter the hall where the king himself dined, and to sit at table with his attend-

ants. "Edmund immediately ordered him to leave the room. The villain refused to obey; upon which the king leaped upon him, and seized him by the hair. Leolf then drew a dagger, and gave the king a wound, of which he instantly died, A. D. 946, in the sixth year of flis reign.

As the children of Edmund were too young, his brother Edred succeeded to the throne. The beginning of ..his reign, as well as those of his predecessors, was disturbed by the rebellions and incursions of the Northumbrian Danes. On the Appearance of Edred with an army, however, they

immediately submitted; but before the king withdrew his forces, he laid waste their territories by way of punishment. No sooner had he de- parted, than they rose in rebellion a second time. They were again subdued ; and the king took effectual precautions against their future revolts, by placing English garrisons in all their towns, and appointing an English governor to watch their motions, and suppress their insurrections. In the reign of Edred, the celibacy of the clergy first began to be preached under the patronage of Dunstan. This pretended saint had obtained such an ascendancy over Edred, who was natu- rally superstitious, that he not only directed him in affairs of conscience, but in the most impor- tant matters of state. He was placed at the head of the treasury; and, being thus possessed of great oower at court, was enabled to accomplish the most arduous undertakings. Professing himself a partisan of the most rigid monastic rules, and having introduced celibacy among the monks of Glastonbury and Abingdan, he endeavoured to render it universal among the clergy throughout the kingdom. The monks generally embraced the pretended reformation ; after which they in- veighed bitterly against the vices and luxury of the age. When other topics of defamation were wanting, the marriages of clergymen became a sure object of invective. Their wives received the appellation of concubines, or some other more opprobrious name. The secular clergy, on the other hand, who were numerous and rich, defended themselves with vigor, and endeavoured to retaliate upon their adversaries. The people were thrown into the most violent ferments ; but the monks-, being patronised by Edred, gained ground greatly upon their opponents. Their progress, however, was somewhat retarded by the king's death, which happened in 955 after a reign of nine years. He left children ; but, as they were infants, his nephew Edwy, son to Ed- mund, was placed on the throne

The new king was not above sixteen or seven- teen years of age, at his accession. His reign is only remarkable for the tragical story of

his queen Elgiva. She was a princess of the royal blood, with whom Edwy was deeply enamoured, but, being his second or third cousin, was within the degrees of affinity prohibited by the canon law. Edwy, however, hearkening only to the dictates of his passion, married her, contrary to the advice of the more dignified ecclesiastics. The monks on this occasion were particularly violent; and Edwy therefore determined not to second their ambitious projects. But he soon found reason to repent his having provoked such dangerous enemies. On his coronation day, while his nobility were indulging themselves in riotous mirth in the hall where they had assembled, Edwy withdrew to another apartment, to enjoy the company of his beloved queen and her mother. Dunstan guessed the reason of his ab sence ; with unparalleled assurance he burst into the queen's apartment; and upbraiding Edwy with his lasciviousness, as he termed it, pusheci him back into the hall where the nobles, were as- sembled. The king determined to resent such a daring insult. He required from Dunstan an account of the administration of the treasury

during the late reign. The monk, probably un- able to give a just account, refused to give any; upon which Edwy accused him of malversation in his office, and banished him the kingdom. We have noticed the general accuracy of our modern historian Dr. Lingard. On this subject, in

tercepted by a party of soldiers sent for th&t purpose by the primate. Nothing but her most cruel death could now satisfy this wretch and his accomplices. She was hamstringed at Gloucester, and expired in a few days. The minds of the English were at this time so much sunk in su-

a previous article (see DUNSTAN), we presumed perstition, that the monstrous inhumanity above

to question it: and, on reflection must consider his whole account of this ecclesiastic as tainted

mentioned was called a judgment from God upon Edwy and his spouse for their dissolute life, i. e.

with prejudice and grossly partial to his own their virtuous love to each other. They even

church. He is introduced to us as a young thane, whose thoughts a dangerous sickness turned from worldly pursuits to the monastic state, and whose zeal, disinterestedness, and charities, while he served the church of Glastonbury, attracted public notice. Not a word is uttered concerning

proceeded to rebellion against their sovereign ; and having raised to the throne Edgar, tht younger brother of Edwy, at that time only thir teen 'years of age, they soon put him in posses- sion of Mercia, Northumberland, and East Anglia. Edwy being thus confined to the soutli-

the early licentiousness of which he is accused ; ern counties, Dunstan returned, and took upon nay, the prudence of his biographer robs him of him the government of Edgar and his party; the glory of all those exploits, which gave him his but the death of Edwy soon removed all difficul- power while he lived, and after his death placed ties, and gave Edgar peaceable possession of the him on the list of the saints. Why are we not government. Dr. Lingard's view of the events told of the cell in which he secluded himself subsequent to Dunstan 's exile is thus given :— from the world? a cell in which he could neither 'Soon after this transaction Edwy appears to stand erect, nor stretch out his limbs during re- have married, an event which might have been pose. Why is the noted adventure of the devil and expected to put an end to the connexion between the red-hot pincers passed over in total silence ? him and his mistress. Whether on that occasion These circumstances are essential to a faithful Ethelgiva was committed to the care of her re- picture of the age and of the individual; and lations or of her husband, we are ignorant; but they stand upon authority, which Dr. Lingard in the king, either instigated by his passion, or other cases deems unobjectionable. Why then moved by her solicitations, carried her off by are they omitted? Because in the present day force, and placed her in one of the royal farms, they would not contribute to Dunstan's fame. Archbishop Odo undertook to remove the scandal, Again, the synod which met at Colne to discuss by enforcing the punishment which the laws

the keenly agitated question concerning the pre- tensions of the monastic orders, the floor fell in ; some were killed, many were hurt : the beam on which Dunstan's chair stood, was the only one that did not give way. These facts Dr. Lingard admits : but he blames the historians who sus- pect and accuse Dunstan as the author of the catastrophe. The charge, he says, is a mere fic-

awarded against women living in a state of con- cubinage.

Accompanied by his retainers, he rode to the place, arrested Ethelgiva, probably in the absence of her lover, conducted her to the sea-side, and put her on board a ship, in which she was conveyed to Ireland. At his return to court he waited on Edwy, and in respectful and affectionate language endeavoured to justify his

tion. It is no fiction. It is only an inference; own conduct, and to sooth the exasperated mind and, whether it be just or not, is a fair subject of of the young prince.' (pp. 234, 235). Elgiva

dispute. Dr. Lingard's zeal for the reputation of Dunstan has led him to give a new coloring to the transactions of Edwy's reign. He has cor-

or Ethelgiva, is here provided with a husband of whom history knows nothing. This writer, indeed, supposes the mother to have been the ob-

rected Hume in some minute particulars; yet, ject of Edwy's attachment, and, as she had a upon the whole, the general features of Edwy's daughter, he is entitled to infer that she once had story are delineated by that author more faithfully a husband. But history makes no mention of

than by Dr. Lingard.

On Dunstan's departure the whole nation was in commotion about his sanctity, and the king's im- piety. These clamors as they had been begun, so they were kept up and increased by the clergy, till at last they proceeded to the most outrageous vio- lence. Archbishop Odo sent a party of soldiers to the palace.

her face with a red-hot iron ; after which they carried her by force into Ireland, there to remain in perpetual exile. The king, finding it in vain to resist, was obliged to consent to a divorce from

this husband : he might have been dead at the time of Edwy's accession. The supposition, that it was the mother whom Edwy loved, is so far as we know unwarranted. Dr. Lingard gives us no authority for it: and in the absence of clear proof to the contrary, we are entitled to hold that a youth of seventeen or eighteen was

They seized the queen, and burnt more likely to become enamoured of the daughter

than of the mother. Two other important cir- cumstances, quite new

in history, are also con- tained in this passage; the marriage of Edwy, and his carrying off Elgiva by force. They rest

her, which was pronounced by Odo. A catas- upon the authority of two passages in two manu- trophe still more dismal awaited Elgiva. She script lives of St. Oswald, the one anonymous, had been cured of her wounds, and had even the other written about ninety years after Eadmer found means to efface the scars with which her by Senatus, prior of Worcester. The anony- persecutors had hoped to destroy her beauty, mous writer says, ‘ Rex, sub uxore propriaaltcram She then came to England, with a design to re- adamavit, quam et rapuit.’ The words of Se- turn to the king, whom she still considered as her natus are, ‘ Rex exarsit in quandam, quam spreta husband. Unfortunately, however, she was in- fide tori • subintroductam habebat;’ and then he

goes on to mention Dunstan’s opposition and banishment. These authorities seem the weakest that could be imagined. The force used against Elgiva is hinted at only by the anonymous bio- grapher of Oswald ; and the words of Senatus ‘ spreta fide tori’ are vague enough to admit of more than one interpretation. There is no spe- cification of person in either; so that the authors appear to have had no accurate knowledge of what they pretend to relate. If Senatus be in- terpreted as insinuating that Edwy was married, then, contrary to Dr. Lingard’s narrative, this marriage preceded the banishment of Dunstan; and Edwy must be supposed to have involved himself without any reason in a matrimonial en- gagement, at the very moment he was so vio- lently attached to another as to forget every ordinary calculation of prudence. The suppo- sition of his carrying off Elgiva by force is alto- gether inconsistent with acknowledged facts. Elgiva’s feelings and circumstances were not such as to render violence necessary. To make force requisite, she must have been in the custody of Dunstan’s faction : and we know that she was not in their power, till Odo sent her to Ireland. From the nature of the case, therefore, as well as from the weakness of the evidence adduced, we cannot admit, that Edwy carried off Elgiva by force, or that he was married to another. And we are confirmed in this conclusion by consi- dering, that neither of these circumstances has been mentioned by the monkish historians of the age. Their silence on such topics is decisive. Had it been possible to have magnified any of Edwy’s failings into the crime of adultery, they would not have spared him and his mistress that reproach. It is remarkable too how gently the

outrage of Odo is represented as being ‘ an en- deavour to enforce the law.’

*The reign of Edgar, proved one of the most for- tunate in the English history. He took the most effectual methods both for preventing tumults at home and invasions from abroad. He quartered a body of disciplined troops in the north, to repel the incursions of the Scots, and to keep the Nor- thumbrians in awe. He built a powerful navy ; and that he might keep the seamen in the prac- tice of their duty, as well as present a formidable front to his enemies, he commanded the fleet from time to time to make *he circuit of .his do- minions. The greatness of Edgar, which is much celebrated by our historians, is mainly to be at- tributed to the harmony which reigned between him and his subjects; and the reason of this perhaps was, that he espoused all the measures suggested by Dunstan and the monks, who had acquired a great ascendancy over the people. He enabled them to accomplish their favorite scheme of dispossessing the secular canons of the monasteries, and consulted them not only in ecclesiastical, but also in civil affairs. On these accounts he is celebrated by the monkish writers with the highest praise : though it is plain, from «ome of his actions, that he was a man who could be bound neither by the ties of religion nor hu- manity. He broke into a convent, and carried off by force a nun of the name of Editha. His spiritual instructor, Dunstan, for this offence, obliged the king, not to separate from his mistress,*

but to abstain from wearing his crown for seven years ; Edgar, however, was not to be satisfied with one mistress. Happening to lodge at the house of a nobleman who had a very beautiful daughter, he without ceremony asked her mother to allow the young lady to pass a night with him. She promised compliance : but secretly ordered a waiting maid, named Elsteda, to steal into the king’s bed when the company were gone, and to re- tire before day-break. Edgar, however, detained her by force, till day-light discovered the deceit. His love is said to have been now transferred to this girl ; who became his favorite mistress, and maintained great ascendancy over him till his marriage with Elfrida. The circumstances of this marriage were yet more criminal than those above mentioned. Elfrida was daughter and heiress to the earl of Devonshire. The fame of her exquisite beauty was spread over all England ; and Edgar formed a design of marrying her. He communicated his intention to earl Athelwold his favorite; and ordered him to visit the earl of Devonshire, and give him an opinion of Elfrida. Athelwold went as he was desired; but fell so deeply in love with the young lady, that he re- solved to sacrifice his fidelity to his passion. He returned to Edgar

and reported, that her charms were by no means extraordinary, and would have been totally overlooked in a woman of inferior station. He observed, however, that he thought her parentage and fortune made her a very ad- vantageous match; and therefore, if the king gave his consent, he would himself make propo- sals to her father. Edgar consented, and Athel- wold was married to Elfrida. After this event he used his utmost efforts to keep his wife from court, that Edgar might have no opportunity of observing her charms. The king, however, soon informed of the truth, told Athelwold that he in- tended to pay him a visit, and to be made ac- quainted with his new wife. The earl could make no objection; he only desired a few hours to pre- pare his house; and, confessing the whole intrigue to Elfrida, begged of her not to attempt to exert her influence over the king. The lady, however, was not so easily reconciled to being duped of a crown : she is said to have taken particular pains at the toilet, and Edgar immediately conceived a violent passion for her. To gratify it he se- duced Athelwold into a wood, under pretence of hunting, where he stabbed him with his own hand, and afterwards married his widow. The reign of this tyrant is remarkable for the great encouragement it offered to foreigners to settle in the realm. They corrupted, it is alleged, the former simple manners of the nation: but of this there seems to be no great reason to boast. Their more extended intercourse certainly tended to enlarge their views, and cure them of illiberal prejudices and rustic manners. Another re- markable incident of this reign is, the extirpation of wolves from England. The king took great pleasure in hunting and destroying these animals. At last he found they had taken shelter in the mountains and forests of Wales. Upon this he changed the tribute imposed upon the Welsh princes by Athelstan, into an annual tribute 01 300 wolves' heads; which produced such dili- gence in hunting them, that they \vpre at Ian ex-

terminated. Edgar died in 958, after a reign of sixteen years.

He left a son, Edward, whom he had by his first wife the daughter of earl Ordmer; and another named Ethelred, by Elfnda. She proved, as might have been expected, ambitious, haughty, treacherous, and cruel. The principal nobility, therefore, were greatly averse from the succession of her son Ethelred, which would unavoidably throw considerable power into the hands of his mother, as he was only seven years of age. Ed- ward was therefore selected for the prince, at

fifteen years of age. But Elfrida opposed his ad- vancement with all her influence; until Dunstan overcame every obstacle, by anointing and crowning him at Kingston; upon which the whole kingdom submitted to his authority. The only remarkable occurrence in this reign was the final victory obtained by the monks over the secular clergy, who were now expelled from the convents. Though this had been nearly accom- plished by Edgar, the secular clergy had still those partisans in England who made considera- ble opposition ; but these were now silenced by the pretended miracles, and authority of Dun- stan. Edward lived four years after he was raised to the throne, in perfect submission to his council at the head of which were the ecclesiastics. Incapable of any treacherous intention himself, he suspected none in others. Though his step- mother, in particular, had opposed his succession, he had always behaved towards her with the great- est respect; and expressed on all occasions great affection for his brother Ethelred. Being one day hunting in the neighbourhood of the castle •where Elfrida resided, he paid her a visit unat- tended by hjs retinue : and, after mounting his horse to return, requested some liquor to be brought him. While he was holding the cup to his head, we are told, a servant of Elfrida stabbed him behind. The king, finding himself wounded, clapped spurs to his horse; but soon becoming faint, from the loss of blood, he fell from tha saddle, and his foot being entangled in the stirrup he was dragged along till he expired. His body was found by his attendants, and privately in- terred at Wareham. His subjects bestowed upon this amiable prince the appellation of martyr, and fancied that miracles were wrought at his tomb. Elfrida built monasteries, and submitted to many penances to atone for her guilt; but even in that barbarous age she could never re- gain the good opinion of the public.

After the murder of Edward, his brother Ethelred II. succeeded to the throne without op- position. As he was a minor, the Danes began to renew their incursions. They first, in 981, landed at Southampton from seven vessels; and, having ravaged the country, retired with impu- nity carrying a great booty with them. In 987 they made a similar attempt on the west coast, whicli was attended with success. Thus encouraged they landed in Essex, and, having defeated and killed Crithnot a prince of that county, laid waste all the neighbouring provinces. In this extremity Ethelred, surnamed, on account of his prepos- terous conduct, the Unready, bribed the enemy with £10,000 to depart the kingdom; according to advice said to have been given to him by Si-

ricius archbishop of Canterbury, and some of the degenerate nobility. It was attended with the success that might have been expected. The

Danes appeared next year off the eastern coast. But, in the mean time, the English had deter- mined to assemble, at London, a fleet capable of repulsing the enemy, and only failed of success through the treachery of Alfric duke of Mercia. Having been formerly banished the kingdom, and finding great difficulty in getting himself re- stored to his former dignity, he now trusted not to his services or the affections of his country- men, but to the influence he had over his vassals, in the midst of the public calamities. These he seemed determined to promote as far as he could. The English had formed a plan for surrounding and destroying the Danish fleet ; when Alfric not only gave the enemy notice of the design, but deserted with his squadron the night before the engagement. Ethelred, in revenge, took Alfgar, Alfric's son, and ordered his eyes to be puc out. It was found, however, impossible to deprive Alfric of the government of Mercia. In 993 ' the Danes under the command of king Sueno, or Sweyn, and the Norwegians conducted by Olaus, sailed up the Humber, and destroyed all around them. A powerful army was assembled to oppose these invaders; but through the treachery of the three leaders, all men of Danish extraction, the English were totally defeated.

Encouraged by constant success, the Danes at length entered the Thames in ninety-four vessels, and laid siesje to London. The inhabitants, however, made a brave defence, and the besiegers were obliged to retire. In revenge they laid waste Essex, Sussex, and Hampshire; and, seizing the horses of these districts, were enabled to penetrate into the more inland counties, and threatened the entire kingdom with subjection. Ethelred and his nobles had now recourse to their former expedient. They sent ambassadors to the two northern kings, to whom they promised subsistence and tribute, provided they would, for the present, put an end to their ravages and depart the kingdom. These terms were agreed to, and the Danes peaceably took up their quar- ters at Southampton. Olaus even paid a visit to Ethelred, and received the rite of confirmation from the English bishops. The king also made him many presents ; and Olaus promised never more to molest the English territory ; which pro- mise he religiously observed. After 'the depar- ture of Olaus with his Norwegians, Sueno, though less scrupulous, was obliged also to leave the kingdom. But this compromise procured only a short relief. The Danes soon re-appeared in the Severn, and having ravaged Wales, as well as Cornwall and Devonshire, sailed ro'.nd, and, entering the mouth of the Tamar, completed the ruin of the two counties. Then, returning to the Bristol Channel, and penetrating into the interioi by the Avon, they carried fire and sword into Dorsetshire. In 998 they changed the seat of the war, and, after ravaging the Isle of Wight,

entered the Thames and Medway, where they laid siege to Rochester, and defeated the Kentish men. After tins victory the whole province was made a scene of slaughter and devastation. These miseries forced the English to consult for com-

mon defence ; but the weakness of the king, the divisions among the nobility, the treachery of some, the cowardice of others, and the want of concert in all, frustrated every endeavour ; and their fleets and armies either came too late to attack the enemy, or were repulsed with disgrace. Devoid both of prudence and unanimity, they once more had recourse to their old expedient, and offered the Danes a large sum if they would conclude a peace and depart. These ravagers now required the payment of £24,000, which the English submitted to give, and thus procured a temporary relief. The Danes were also engaged by another motive to depart from England at this time. They were recalled by their countrymen in Normandy, who were hard pressed by Robert king of France, and found it difficult to defend their settlements against him. It is probable also that Ethelred, observing the close connexion of the Danes with one another, was desirous of procuring an alliance with that formidable peo- ple. For this purpose, being a widower, he paid his addresses to Emma, sister to Richard II., duke of Normandy. They were accepted ; the princess came over to England, and was married to the king, A.D. 1001.

Though the Danes had been long established in England, and the similarity of their language with that of the Saxons had invited them to an early union with the natives ; they had as yet found so little of civilised manners among the English, that they retained all their ancient ferocity, and valued themselves only on their character for bravery : and the English princes had been so well acquainted with their superi- ority in this respect, that Athelstan and Edgar had been accustomed to keep in pay large bodies of Danish troops. These mercenaries attained to such a height of luxury, according to the old English writers, that they combed their hair once a-day, bathed themselves once a-week, changed their clothes frequently, and by these effeminate arts, as well as by their military cha- racter, rendered themselves so agreeable to the fair sex, that they debauched the wives and daughters of many English families. They were of course also ready always to betray them to the foreign Danes, and to associate themselves with every straggling party which came from the

continent. The animosities between the native English and the settled Danes, had, from these causes, risen to a great height ; when Ethelred, from that bar- barous policy commonly adopted by weak princes, resolved upon a general massacre of the latter. On November 13th, 1002, secret orders were despatched to commence this bloody busi- ness every where on the same day, and the fes- tival of St. Brice, which fell on a Sunday, the day on which the Danes usually bathed them- selves, was chosen for this purpose. His barba- rous orders were executed with the utmost exact- ness. Neither sex nor age was spared. Even Gunilda, sister to the king of Denmark, who had married earl Paling, and had embraced Christi- anity, was, by the advice of Edric earl of Wilts, seized and condemned to death by Ethelred, after seeing her children and husband butchered before her face. This unhappy princess, in the agonies of her despair, foretold that her murder would

soon be avenged by the total ruin of the English. On the subject of this massacre, Mr. Hume says, ' Almost all the ancient historians speak of this massacre of the Danes as if it had been universal, or as if every individual of that nation throughout England had been put to death. But the Danes were almost the sole inhabitants in the kingdoms of Northumberland and East Anglia, and were very numerous in Mercia. This representation of the matter seems highly improbable. Great resistance must have been made, and violent wars ensued, which was not the case. The ac- count given by Wallingford, though he stands single, must be admitted as the only true one. We are told that the name of lurdane, lord Dane, for an idle lazy fellow, who lives at other people's expense, came from the conduct of the Danes who were put to death. But the English princes had been entirely masters for several generations; and only supported a military corps of that nation. It seems probable, therefore, that these Danes only were put to death.'

The prophecy of Gunilda was exactly fulfilled. In 1003 Sueno and his Danes, who wanted only a pretence to renew their invasions, appeared off the western coast, and threatened vengeance for the slaughter of their countrymen. The English took measures for repulsing the enemy ; but were defeated through the treachery first of Alfric, and then of Edric, a still greater traitor, who had married the king's daughter, and succeeded Alfric in the command of the British armies. The Danes, therefore, ravaged the whole country. Agriculture was neglected, a famine ensued, and the kingdom was reduced to the utmost degree of misery. At last the infamous expedient of buying a peace was again resorted to ; and the departure of the Danes was purchased in 1007 at the ˆexpense of £30,000. The English endea-

voured to employ this interval in making prepa- rations against their return, which they had rea- son soon to expect. A law was made, ordering the proprietors of eight hides of land to provide themselves of a horseman and a complete suit of armour; and those of 310 hides to equip a ship for the defence of the kingdom. By this means a formidable armament was raised. There were 243,600 hides in England, and the ships equip- ped were therefore very numerous. The cavalry was 30,450 men. All hopes of success from this equipment, however, were disappointed by the factions, animosities, and dissensions of the no- bles. Edric had caused his brother Brightric to advance an accusation of treason against Wolf- noth governor of Sussex, the father of the famous earl Godwin ; who, knowing the power and ma- lice of his enemy, deserted with twenty ships to the Danes. Brightric pursued him with a fleet of eighty sail ; but his ships being shattered in a tempest, and stranded on the coast, he was sud- denly attacked by Wolfnoth, and all his vessels were destroyed. The treachery of Edric frustrated every plan of future defence, and the whole navy was at last scattered. By these fatal miscarriages, the enemy had leisure to overrun the whole king- dom. They had now, indeed, obtained such a footing, that they could hardly have been ex- pelled, even though the nation had been unani- mous. But so far did dissension prevail, that the

governors of one province refused to march to the assistance of another ; and were at last terrified from assembling their forces for the defeuce of their own. At last another peace was bought with £48,000; but this did not procure the usual temporary relief. The Danes, knowing that they were masters, took the money, and con- tinued their devastations. They levied a further contribution of £8000 on the county of Kent alone ; murdered the archbishop of Canterbury, who had refused to countenance this exaction, and made all the English nobility give hostages for their good behaviour. At last, Ethelred him- self, dreading equally the violence of the enemy and the treachery of his own subjects, fled, in 1013, into Normandy, whither he had already sent his queen Emma, and her sons Alfred and Edward. The duke received his unfortunate guests with a generosity which does honor to his memory. The king had not been above six weeks abroad, however, when he heard of the death of Sueno, and received an invitation from the prelates and nobility to resume the kingdom. But his imprudence was incurable. His son-in law Edric, notwithstanding his repeated treasons, still retained such

influence at court, that he in- stilled into the king jealousies of Sigefert and Morcar, two of the chief nobles of Mercia. Edric enticed them into his house, where he murdered them ; while Ethelred partook of the infamy of this action, by confiscating their estates, and con- fining the widow of Sigefert in a convent. She was a woman of singular beauty and merit ; and in a visit which was paid her, during her confine- ment, by prince Edmund the king's eldest son, she inspired him with so violent an affection, that he released her from the convent, and soon after married her without his father's consent.

In the mean time, Canute, the son and suc- cessor of Sueno, proved an enemy no less terrible to the English than his father had been. He ravaged the eastern coast with merciless fury ; and put ashore all the English hostages at Sand- wich, after having cut off their hands and noses. He was at last obliged to return to Denmark, but, in a short time, he returned, and continued his depredations along the south coast. He then broke into the counties of Dorset, Wilts, and Somerset ; where an army was assembled against him under the command of prince Edmund and duke Edric. The latter still continued his per- fidious machinations ; and, after endeavouring in vain to get the prince into his power, dissipated the army, and then deserted to Canute with forty vessels. Edmund was not disheartened by this treachery, lie again assembled his forces, and was in a condition to give the enemy battle. Ethelred, however, had now such frequent expe- rience of the treachery of his subjects, that he had lost all confidence in them He remained in London, affecting sickness, but, in reality, from an apprehension that they intended to buy their peace by delivering him up to his enemies. The army called aloud for their sovereign to march at their head against the Danes, and, on his refusal, they were so discouraged, that all the preparations which had been made became inef- fectual for the defence of the kingdom. Edmund, deprived of all regular resources for the mainte-

nance of the soldiers, was obliged to commit similar ravages to those practised by the Danes; and after making so many fruitless expeditions into the north, which had submitted entirely to Canute's power, he returned to London, where he found every thing in confusion by the king's death.

Ethelred II. died in 1016, after an unhappy reign of thirty-five years ; and was succeeded by his eldest son Edmund II., surnamed Ironside. He possessed abilities sufficient to have saved his country from ruin, had he come sooner to th«> throne : but it was now too late. He bravely opposed the Danes, however, notwithstanding every disadvantage ; till, at last, the nobility of both nations obliged their

kings to come to a compromise, and divide the kingdom between them by treaty. Canute reserved to himself Mercia, East Anglia, and Northumberland. The southern parts were left to Edmund. This prince survived the treaty only about a month, being murdered at Oxford by two of his chamberlains, accomplices of Edric. After the death of Ed- 'mund, nothing was left for the English but sub- mission to Canute. The least scrupulous of mankind, however, dare not, at all times, openly commit injustice. Canute, therefore, before he seized the dominions of Edwin and Edward, the two sons of Edmund, suborned some of the nobility to depose, that, in the last treaty with Edmund, it had been agreed that, in case of Ed- mund's death, Canute should either be successor to his dominions, or tutor to his children. This evidence, supported by the great power of Ca- nute, was sufficient to obtain his election as king of England. It is observable, says Dr. Lingard, that the ancient writers almost always speak of our kings as elected. Edwy's grandmother, in her charter (Lye. App. IV.), says he, was chosen ' gecoren.' A remnant of this custom still obtains in our coronation ceremony, in which the people have the monarch proposed to their choice. Mr. Tur- ner says, ' that the Norman conquest terminated the power of the Witenagemot, and changed the crown for an hereditary succession.' But this is to be doubted.

2. Of England under the Danish princes. — Immediately after Canute's accession to the throne, he sent the two sons of Edmund to the court of Sweden, on pretence of their being educated there ; but charged that prince, it is said, to put them to death as soon as they arrived. The Swedish monarch did not comply with this re- quest; but transferred them to the care of Ste- phen, king of Hungary. The elder Edwin was afterwards married to Stephen's sister; but, he dying without issue, that prince gave his sister- in-law, Agatha, daughter of the emperor Henry II., in marriage to Edward, the younger brother; and she bore him Edgar Atheling ; Margeret, afterwards queen of Scotland ; and Christina, who retired into a convent. Canute was obliged at first to make great concessions to the nobility, but he afterwards put to death many of those in whom he could not put confidence ; and, among the rest, the traitor Edric, whom he cut down before his nobles with a battle axe, and his body was thrown into the Thames. Further to conci- liate the people, he married Emma the widow oi

Ethelred II., promising that he would leave the children he should have by that marriage heirs to the crown after his decease. The English were at first displeased with Emma for marrying the mortal enemy of her husband ; but at the same time were glad to find at court a sovereign to whom they were accustomed, and who had already formed connexions with them : and thus Canute, besides securing by his marriage an alli- ance with Normandy, gradually acquired, by the same means, the confidence of his new subjects. The most remarkable transaction of his reign, besides those mentioned under the article CA- NUTE, is his expedition to Scotland against Mal- •coim II., whom he forced to do homage for the •.•ounty of Cumberland, which the Scotch at that time possessed. After this Canute passed four years in peace, and died at Shaftsbury ; leaving three sons, Sweno, Harold, and Canute.

The letter written by this prince to his sub- ects from Rome, as preserved by Spelman, is an .nteresting memorial of the age and of his own character; —

‘ Canute, king of all Denmark, England, and Norway, and of part of Sweden, to Egelnoth the metropolitan, to archbishop Alfric, to all the bishops and chiefs, and to all the nation of the English, both nobles and commoners, greeting. I write to inform you that I have lately been at Rome, >o pray for the remission of my sins, and for tne safety of my kingdoms, and of the nations that are subject to my sceptre. It is long since I bound myself by vow to make this pilgrimage ; but I had been hitherto prevented by affairs of state, and other impediments. Now, however, I return humble thanks to the almighty God, that he has allowed me to visit the tombs of the blessed apostles Peter and Paul, and every holy place within and without the city of Rome, and to honor and venerate them in person. And this I have done, because I had learned from my teachers, that the apostle St. Peter received from the Lord the great power of binding and loosing, with the keys of the kingdom of heaven. On this account I thought it highly useful to solicit his patronage with God.

‘ Be it moreover known to you, that there was, at the festival of Easter, a great assemblage of noble personages with the lord the pope John, and the emperor Conrad, namely, all the chiefs of the nations from mount Gargano to the nearest sea, who all received me honorably, and made me valuable presents ; but particularly the em- peror, who gave me many gold and silver vases, with rich mantles and garments. I therefore took the opportunity to treat with the pope, the em- peror, and the princes, on the grievances of my people, both English and Danes ; that they might enjoy more equal law, and more

secure safeguard in their way to Rome, nor be detained at so many barriers, oor harassed by unjust ex- actions. My demands were granted both by the emperor, and by the king Rodulf, to whom the greater part of the barriers belong : and it was enacted by all the princes, that my men, whether pilgrims or merchants, should, for the future, go to Rome and return in full security, without detention at the barriers, or the payment of un- lawful tolls.

‘ I next complained to the pope, and expresses my displeasure that such immense sums were extorted from my archbishops, when, according to custom, they visited the apostolic see to ob- tain the pallium. A decree was made that this grievance should cease. Whatever I demanded, for the benefit of my people, either of the pope, or the emperor, or the princes, through whose dominions lies the road to Rome, was granted willingly, and confirmed by their oaths, in the presence of four archbishops, twenty bishops, and a multitude of dukes and nobles. Wherefore I return sincere thanks to God, that I have success- fully performed whatever I had intended, and have fully satisfied all my wishes.

‘ Now, therefore, be it known unto you all, that I have dedicated my life to the service of God, to govern my kingdoms with equity, and to observe justice in all things. If, by the vio- lence or negligence of youth, I have violated jus- tice heretofore, it is my intention, by the help of God, to make full compensation. Therefore I beg and command those to whom I have con- fided the government, as they wish to preserve my friendship, or save their own souls, to do no injustice either to rich or poor. Let all persons, whether noble or ignoble,obtain their rights accord- ing to law, from which no deviation shall he allowed, either from fea of me, or through favor to the powerful, or for the purpose of supplying my treasury. I have no need of money raised by injustice.*

‘ I am now on my road to Denmark, for the purpose of concluding peace with those nations who, had it been in their power, would have de- prived us of both out crown and our life. But God has destroyed their means : and will, I trust, of his goodness preserve us, and humble all our enemies. When I shall have concluded peace with the neighbouring nations, and settled the concerns of my eastern dominions, it is my intention to return to England, as soon as the fine weather will permit me to sail. But I have sent you this letter beforehand, that all the peo- ple of my kingdom may rejoice at my prosperity. For you all know that I never spared nor will spare myself, or my labor, when my object is the advantage of my subjects.

‘ Lastly, I entreat all my bishops, and all the sheriffs, by the fidelity which they owe to me and to God, that the church-dues, according to the ancient laws, may be paid before my return ; namely, the plough-alms, the tithes of cattle of the present year, the Peter-pence, the tithes of fruit in the middle of August, and the kirk-shot at the feast of St. Martin, to the parish church. Should this be omitted, at my return I will punish the offender by exacting the whole fine appointed by law. Fare ye well.’

Sueno, the son of Canute by his first marriage with Alfwena, daughter of the earl of Hamp- shire, was, on the death of that prince, crowned in Norway ; Canute, whom Emma had borne, was in possession of Denmark ; and Harold, who was full brother to Sueno, was at that time in England. This prince succeeded to the crown of England ; though it had been stipulated that Emma’s son Canute should be considered the heir. But the former, being on the spot, obtained

possession of his father’s treasures, and all the resources of the government. As Canute, how- ever, was supported by earl Godwin, a civil war was likely to ensue, when a compromise was made ; by which it was agreed, that Harold should reign in London, and over all the pro- vinces north of the Thames, while the possession of the south should remain to Canute. Till that prince should appear, and take possession of his dominions, Emma fixed her residence in Win- chester, and ruled in the name of her son. Ha- rold reigned four years, during which time, the •only memorable action he performed was a most infamous piece of treachery. — Alfred and Ed- ward, the two sons of Emma by Ethelred, paid a visit to their mother in England. But in the mean time, earl Godwin being gained over by Harold, a plan was laid for the destruction of these princes. Alfred was accordingly invited to London by Harold, with many professions of friendship; but when he had reached Guildford, about 600 of his train were murdered in the most cruel manner, he himself was taken prisoner, his eyes were put out, and he was conducted to the monastery of Ely, where he soon after died. Edward and Emma, apprised of the fate which awaited them, fled beyond sea, the former into Normandy, the latter into Flanders ; while Ha rold took possession of all his brother’s dominions without opposition. — He died in April 1039.

Canute II., surnamed the Hardy, and hence commonly called Hardicanute, succeeded his brother Harold without opposition. His govern- ment was extremely violent and tyrannical. It was, however, but of short duration. He died In 1041 of a debauch at the marriage of a Danish ord.

3. Of England under the restored Saxon line. — After the death of Hardicanute, a favorable opportunity was offered to the English, for shaking off the Danish yoke. Sueno, king of Norway, the eldest son of Canute, was absent ; and, as the two last kings had died without issue, there appeared none of that race whom the Danes could support as successor to the throne. For this reason, the eyes of the nation were naturally drawn towards prince Edward, who happened to be at court when the king died. But it was feared that his succession would be opposed by earl Godwin, who was by far the most powerful nobleman in the kingdom. A declared animosity subsisted between the prince and Godwin, on account of the connexion of the latter with the murderers of his brother Alfred ; and this, it was thought, he never would forgive. But common friends interposed, and, representing the necessity of a good understanding, obliged them to lay aside these animosities, and to concur in restoring liberty to their native country. Godwin only stipulated that Edward, as a pledge of his sincere reconciliation, should promise to marry his daughter Editha. This proposal was agreed to : Edward was crowned king of England, and mar- ried Editha, but the marriage proved a source of discord. Editha, though an amiable woman, could never obtain the confidence and affection of her husband. It is even said, that during the whole course of her life, he imposed upon him- self a vow of continence: a species of behaviour

highly celebrated by the monkish writers of the age, and which contributed, in no small degree, to his acquiring the titles of Saint and Confessor. Though the neglect of his daughter could not fail to awaken Godwin's former enmity, it was necessary to choose a more popular ground on which to vent his complaints. He therefore be- gan to censure the influence which the Normans had in the public affairs, and a declared oppo- sition took place between him and these favorites. In a short time this animosity broke out into great violence. Eustace, count of Bologne, ha- ving paid a visit to the king, passed by Dover on his return, where, one of his train being refused access to a lodging, he wounded the master of the house in the affray, and his townsmen revenged the insult by the death of the stranger. The count and his train now took arms, and slew the opponent of their countryman. A tumult ensued : near twenty persons w»re killed on each side ; until Eustace, being overpowered with numbers, was

obliged at last to fly. He com- plained to the king, who gave orders to earl Godwin, in whose government Dover lay, to punish the inhabitants. But this nobleman re- fused to obey the command, and endeavoured to throw the whole blame on Eustace and his followers. Edward was displeased, and threat- ened to make him feel his resentment, in case he finally refused to comply. Upon this, Godwin assembled a powerful army, in pretence of re- pressing some disorders on the frontiers of Wales, and marched directly towards the king's residence at Gloucester. Edward, perceiving his danger, for he was unattended by any considerable force, applied to Siward, duk £ of Northumberland, and Leofric, duke of Mercia, to hasten to "him with their followers. Godwin, in the mean time, suffered himself to be deceived by negociations, till the king's army became so powerful, that he was not able to cope with it. He was therefore obliged to fly with his family to Flanders, where he was protected by earl Baldwin, together with his three sons, Gurth, Sueno, and Tosti ; the last of whom had married Baldwin's daughter. Ha- rold and Leofwin, two other sons of Godwin, took shelter in Ireland. After the flight of this turbulent noble, he was proceeded against as a traitor by king Edward. His estates, and those of his sons were confiscated ; queen Editha was confined in a monastery ; and the great power of this family, which had become formidable to the crown itself, seemed to be totally overthrown. Godwin, however, soon found means to retrieve his affairs. Having hired several ships, and manned them with his followers, he attempted to make a descent at Sandwich. The king, informed of his preparations, also equipped a fleet which Godwin could not resist ; he therefore retreated into the Flemish harbours. On his departure, the English dismissed their armament. This God- win had expected, and therefore kept himself in readiness for a favorable opportunity. He imme- diately put to sea, and, sailing to the Isle of Wight, was joined by Harold with a squadron which he had collected in Ireland. Being thus master of the sea, Godwin entered the harbours on the southern coast, seized all the English ships, and, being joined by great numbers of his former

vassals, sailed up the Thames, and appeared be- fore London. The approach of such a formi- dable enemy threw the whole city into confusion. The king alone seemed resolved to defend him- self to the last ; but the interposition of many of the nobility, together with the submission of Godwin himself, at last produced an accommo- dation. It was stipulated that the earl should give hostages for his good

behaviour, and that all foreigners should be banished the kingdom ; after which Edward, sensible that he had no power to detain the hostages, sent them over to his kinsman the young duke of Normandy. Soon after this reconciliation, Godwin died as he was sitting at table with the king. He was succeeded in the government of Wessex, Sussex, Kent, and Essex, and in the office of steward of the house- hold, a place of great power, by his son Harold, a man no less ambitious than his father; and, as he was of much greater abilities, he became a more dangerous enemy to Edward than even Godwin himself had been. The kingknew no better expedient to prevent the increase of Harold's power, than by creating him a rival in the per- son of Algar, son of I.eofric, duke of Mercia, whom he invested with the government of East Anglia. Harold, however, after some disputes, ultimately got the better of his rival, and banished him the kingdom. Algar, returning soon after with an army of Norwegians, invaded East An- glia ; but his death in a short time freed Harold from all further apprehensions from that quarter. His power was still further increased soon after, by the accession of his brother, Tosti, to the go- vernment of Northumberland ; and Edward, apprehensive that he would attempt to usurp the crown after his death, resolved to appoint a suc- cessor. He therefore sent a deputation into Hungary, to invite over his nephew, Edward, son to his elder brother, who was the only remaining heir of the Saxon line. That prince accord- ingly came over with his children, Edgar Athe- ling, Margaret, and Christina, but died a few days after his arrival. This event threw the king into greater perplexity than ever. Being resolved to exclude Harold, if possible, he had formerly designed to nominate his kinsman, William, duke of Normandy, as his successor; but finding that the English would more easily acquiesce in a sovereign of the Saxon line, he had sought his brother's descendants. The death of his nephew, however, at this time, and the inexperience of young Edgar, made him resume his former in- tentions in favor of the duke of Normandy, though his aversion to hazardous enterprises en- gaged him to postpone their execution. Harold, in the mean time, increased his popularity by all possible means. He had no suspicion of the duke of Normandy as a rival ; but, as he knew that a son and grandson of earl Godwin were in the hands of -that prince, he feared that they might be made use of as checks upon his ambition, in case he attempted afterwards to ascend the throne. He therefore prevailed upon Edward to consent to the release of these hostages ; and, having obtained his acquiescence, set out for Normandy, to bring them to England, attended by a numerous retinue. The motives of this journey of Harold's are, however, very obscure. VOL. VIII.

The Norman writers say that he was sent on 3 message from Edward to the duke of Normandy, stating that he had nominated him his successor : others that he was merely making an occasional excursion along the channel, when driven over to the coast of France. Being driven, however, by a tempest on the dominions of Guy, count of Pon- thieu, he was detained prisoner, and an exorbi- tant sum demanded for his ransom. Harold found means to acquaint William with his situa- tion, when the duke of Normandy, desirous of gaining Harold over to his party, commanded Guy to restore him to his liberty. Upon this Harold was immediately delivered over to the Norman ambassador, and conducted to Rouen. William received him with great ap- parent friendship, but soon acquainted him with his pretensions to the English crown, and asked his assistance in the execution of his scheme. Harold was surprised, but, being in the duke's power, feigned a compliance with his desires, and promised to second to the utmost of his ability the will of king Edward. Still more to secure him to his interest, William promised him his daughter in marriage, and required him to confirm his promise of friendship by an oath. Harold readily complied ; and, to make the oath more binding, William is said privately to have conveyed under the altar on which it was taken, reliques of some of the most revered martyrs ; and when Harold had performed the ceremony he showed him the reliques, and admonished him to observe his solemn engagement. Harold, however, was no sooner at liberty, than he found himself master of casuistry sufficient to excuse the breaking of an oath, which had been extorted from him ; and which, if kept, might be attended with the subjection of his country to a foreign power. He continued to practise every art to increase his own popularity ; and availed him self with great adroitness of two occurrences at this time, which exhibited him to advantage. The Welsh had for some time made incursions into England, and had lately annoyed that king- dom so much, that Harold determined to under- take an expedition against the invaders. Having prepared some light armed foot to pursue them into their fortresses, cavalry to scour the open country, and a squadron of ships to attack them by sea, he reduced them to such distress, that they were obliged to purchase peace by sending the head of Griffin, their prince, to Harold, and submitting to the government of two Welsh noblemen appointed by Edward. The other incident was no less honorable to Harold. Tosti, his brother, had been created duke of Northum berland ; but, being of a tyrannical disposition had treated the inhabitants with great cruelty and they rose in rebellion against him. Morcar and Edwin, two brothers, grandsons of the greal duke Leofric, joined in the insurrection ; and thr former, being elected duke, advanced with an

army to oppose Harold, who had been com missioned by the king to reduce and punish this faction. Before the armies engaged, Morcar en deavoured to justify his conduct, and represented to Harold, that Tosti had behaved in such a manˆ ner, that no one, not even a brother, could defend him without infamy : that the Northumbrians

were willing to submit to the king, but required a governor that would pay some attention to their privileges, and they trusted that Harold would not defend in another that violent conduct froir. which his own government had always been free. This speech, accompanied with a detail of well supported facts, induced Harold to abandon his brother's cause ; and, returning to Edward, he persuaded him to pardon the Northumbrians, and confirm Morcar in his government. He even married the sister of that nobleman, and, by his interest, procured Edwin, the younger brother, to be made governor of Mercia. Tosti, in a rage, departed the kingdom, and took shelter in Flanders with Baldwin, his father-in-law ; while William of Normandy saw that now he had nothing to expect from Harold, who plainly intended to secure the crown for himself.

Edward died in 1066, aged sixty-five, and was succeeded by Harold II., with as little opposi- tion as if he had been the lawful heir. The very day after Edward's death, he was anointed and crowned by the archbishop of York. The whole nation seemed happy to swear allegi- ance to him. But he did not long enjoy that station, to obtain which he had taken so much pains, and for which he seemed to be well fitted. His brother, Tosti, provoked at his success, ex- erted against him every enemy whom he could influence. The duke of Normandy was also en- raged to tin last degree at his perfidy ; but, before he commenced hostilities, sent an embassy to England, upbraiding Harold with his breach of faith, and summoning him to resign the king- dom. Harold replied, that the oath with which he was reproached had been extorted by the well-grounded fear of violence, and for that rea- son could never be regarded as obligatory : that he never had any commission, either from the late king or the states of England, who alone could dispose of the crown, to make any tender of the succession to the duke of Normandy ; and if he, a private person, had assumed so much authority, and had even voluntarily sworn to support the duke's pretensions, the oath was unlawful, and it was his duty to take the first opportunity of breaking it: that he had ob- tained the crown by the unanimous suffrages of the people ;

and should show himself totally un- worthy of their favor, did he not strenuously maintain those liberties with which they had en- trusted him; and that the duke, if he made any attempt by force of arms, should experience the power of a united nation, conducted by a prince, who, sensible of the obligations imposed on him by his royal dignity, was determined that the same moment should put a period to his life and to his government. This answer was ac- cording to William's expectations ; and he there- fore had already made preparations for invading England. lie was encouraged and assisted in this enterprise by Howel, countof Brittany, Bald- win, earl of Flanders, the emperor Henry IV. and pope Alexander II. The latter declared Harold a perjured usurper ; denounced excommunica- tion against him and his adherents ; and sent William a consecrated banner, and a ring with one of St. Peter's hairs in it. He was ultimately enabled to assemble a fleet of 300 vessels, on

board of which were embarked 60,000 men, and many distinguished personages. To embarrass the affairs of Harold more completely, William excited Tosti, in concert with Harfager, king of Norway, to infest the English coasts ; and the confederates, having collected a fleet of 350 ships, sailed up the Humber, and committed great de- predations in the neighbourhood. They were opposed by Morcar, earl of Northumberland, and Edwin, earl of Mercia, who were, however, de- feated. But Harold having, on the news of this invasion, assembled a considerable army, engaged the enemy at Strandford, and, after a bloody battle, was declared victor. Tosti and Harfager were killed in the action, and their fleet fell into the hands of Harold, who generously allowed Olaus, the son of Harfager, to depart with twenty vessels. lie had scarcely accomplished his vie tory, when news were brought that the Norman., were landed in Sussex. Harold's expedition had at this time considerably weakened his army. The action itself had cost him his bravest men ; and he disgusted the rest by refusing to distribute the spoils among them He hastened, however, by rapid marches, to repel the new invader ; but, though he was reinforced from London and other places with fresh troops, his friends were dis- pirited. Gurth, his brother, a man of great pru- dence and bravery, became apprehensive of the event ; and entreated the king to avoid, for a time, a general engagement ; or at least not to hazard it in person. But Harold was deaf to every thing like delay or compromise. Accordingly on the 13th October, 1066, . the two armies met near Hastings, in Sussex, and prepared to decide, 'n the memorable battle of that name, who was to be master of England.

The night before the battle was passed very differently in the two camps. The English are said to have spent it in riot and disorder; the

Normans in prayer. When, in the norning, both armies prepared for battle, William divided his into three lines ; the first, headed by Montgo- mery, consisting of archers and light armed in- fantry; the second, commanded by Martel, of his bravest heavy battalions, ranged in close order; his cavalry, at whose head he placed him- self, formed the third line, and were so disposed that they stretched beyond the infantry, and flanked each wins. Having given the signal of battle, the whole of his forces moved forward at once, and singing the famous song of Roland, a peer of Charlemagne's, advanced with alacrity upon the enemy. Harold had taken advantage of arising ground, and, having constructed trni- ches to secure his flanks, resolved to stand upon the defensive, and to avoid all action with theiS'or- man cavalry, his own being inferior. The Kentish men were placed in the van ; the Londoners guarded the standard ; and the king, accom- panied by his valiant brothers, Gurth and l.eof- win, dismounting from horseback, placed himself at the head of his infantry, and expressed a resolu- tion to conquer or perish. The first attack of the Normans was desperate, but was received with great valor by the English : and after a furious conflict, which remained long undecided, the for- mer, overcome by the difficulty of the ground, and hard pressed by the enemv, began to give

way. Confusion was rapidly spreading among his troops, when William hastened, with a select band, to their relief, and restored their courage. The English then began to waver ; and, the duke ordering his second line to advance, renewed the attack with fresh forces. Finding that the ene- my, aided by the advantage of ground, and ani- mated by the example of their prince, still made a formidable resistance, he suddenly commanded his forces to retreat. The artifice succeeded ; the inexperienced troops of Harold were allured from their vantage ground, and, heated by the action, precipitated themselves into the plain. William now ordered the infantry to face about, and the cavalry to advance at the same instant upon their pursuers. The English were at once repulsed and driven back to the hill with great slaughter ; where, however, being rallied again by the brave Harold, notwithstanding their loss, they maintained their post, and continued the combat. The duke tried the same stratagem a second time, with the same success ; but, even after this doubtful advantage, he found a great body of the English, who, in firm array, seemed determined to dispute the victory with him. He therefore ordered his heavy-armed infantry to advance, while his

archers, placed behind, galled the enemy, who were exposed by the situation of the ground. By this arrangement he at last pre- vailed. Harold was slain by an arrow, while fighting with great bravery at the head of his men. His brothers shared the same fate ; and the English, discouraged by their fall, gave ground On all sides, and were pursued with great slaugh- ter by the Normans. Thus was gained this de- cisive and hard-fought battle, which' lasted from morning till sunset. William had three horses killed under him ; and it is said to have cost him nearly 15,000 Normans. The loss was still more considerable on the English side. On the dead body of Harold being brought to the victor, he restored it, without ransom, to his mother.

We cannot better introduce, than in this place, those Supplementary Observations on the Anglo- Saxon period of our history, which the researches of modern writers (particularly Mr. Turner and Dr. Lingard), enable us to make.

Throughout the Anglo-Saxon period, Dr. Lin- gard has enjoyed the advantage of Mr. Turner's previous labors. Milton, it will be remembered, describes the various struggles for power Muring this portion of our history, as not more worthy a distinct narrative than the conflicts of kites and crows ; and it was long the habit of our histo- rians to neglect it accordingly. Hume disposes of the six centuries of important events which it in- volves— its connexion with the foundations of our monarchy, the history of parliament, the genius of our laws and language, the trial by jury, &c., in one-third of his first volume. But to Mr. Tur- ner and Dr. Lingard are we indebted for what may now be regarded as a complete illustration of H« claims. Of no portion of our annals may the student of English history obtain a more ac- curate knowledge in his mother tongue ; and the valuable information these gentlemen unite to furnish, is a lasting memorial of the importance of exploring the most thorny paths of history.

This period occupies nearly the whole of the first volume of Dr. Lingard's work, in 4to.

The writer here exhibits the ancient union of an elective with an hereditary character in our monarchy. The cyning, or king, was the noblest of the ethel, or noble-born. Before the light of Christianity had penetrated their superstitions in each of the Saxon dynasties, he could trace his origin to Woden. A religious veneration thus surrounded his person and family, which it be- came one of the first efforts of the Christian priesthood to continue, in coronation ceremonies and episcopal consecration. But the witan, or

witenagemot, regularly elected the prince be- fore'he could be crowned. Looking with what- ever feelings of regard and hope on the family of tlieir former chiefs, they decreted upon the particular branch of it most eligible for the va- cant throne. Hence we find, in the same corona- tion ceremonies, an elective rite of ' recognition,' as it has been called in modern times. The con- temporary biographer of Dunstan (apud Boll, torn. iv. Maii 344), says ' ab universis Anglorum principibus communi electione.' He also inti- mates that Wessex and Mercia had not yet coalesced into one kingdom : ' ut in utraque plebe regum numeros nominaque suppleret electus?

The witenagemot, the embryo of our modern parliament, was an assembly of the great ' and wise men,' ooth of church and state. The Anglo- Saxon kings call them * meorum sapientium archontum, conciliatorum meorum, my witan,' &c. Their functions were both legislative and judicial. But Dr. Lingard can find nothing representative in the character of any of its mem- bers. They were principally the spiritual and temporal thanes who held lands immediately of the crown, and who could command the ser- vices of those military vassals, without whose assistance the laws of that period could not have been executed. The signatures of many of their acts and decisions, which have come down to us, do not exceed thirty in number, according to this writer, and never amount to sixty. They usually consist of the names of the king and his sons, and sometimes that of the queen ; those of a few bishops and abbots, one or two abbesses, and about the same, number of temporal and spiritual lords. There exists no proof that the accompanying vassals were admitted to any share in their deliberations, although they are frequently ' mentioned as looking on and ap- plauding.'

Dr. Lingard disputes the representation of Mr. Hume and others, who regard the Norman Conquest as introducing the feudal system into this country. He traces the germs of that system in the earliest periods of the Anglo-Saxon go- vernment; and contends, that they flourished in full luxuriance long before its termination. At the conquest, its various obligations and services only changed their names. In illustration of the strong tie by which the Saxon vassal held himself bound to his lord (the root of all the other feu- dal obligations), our autUor adverts to the me- morable story of the murder of Cynewulf, kinˆ of Wessex. This story will also illustrate another feature in the Anglo-Saxon character the for;;

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city of their revenge. Thirty-one years after the death of Sigebyrcht, the predecessor of Cyne- wulf, Cyneheard, his brother, returned to the neighbourhood of Winchester to avenge his death. He was accompanied by eighty-four adherents.

‘ It chanced one evening that the king left Winchester with a slender retinue, to visit a lady at Merton, to whom he was warmly attached. Cyneheard stole silently from his retreat, fol- lowed with caution the footsteps of the monarch : and in the dead of the night surrounded the re- sidence of his mistress. Cynewulf was asleep : his attendants were dispersed in the neighbour- ing houses. At the first alarm he arose, seized ais sword, and descended to the door, where he descried his enemy; and, springing forward, aimed a desperate blow at the head of Cyne- jieard. The wound, which was but slight, was quickly revenged by the weapons of the con- spirators. Roused by the noise of the comba- tants, and the shrieks of the women, the king’s attendants hastened to his assistance : but they found him breathless, and weltering in his blood. It was in vain that Cyneheard offered them their lives and possessions. They scorned his pro- posals : and, after a long conflict, were all slain, with the exception of a Briton, who, in quality of hostage, had been detained in the court of Cynewulf; even he was severely wounded.

‘ Early in the morning the news arrived at Winchester. The earldoman Osric, and Wiverth the thane, immediately mounted their horses, and rode to Merton, followed by their retainers. Cyneheard met them at the gate to justify his conduct, and solicit their friendship. He pleaded the obligation of revenging the wrongs of his family : asserted his claim to the throne : of- fered them valuable possessions, and bade them recollect that many of his friends were their kinsmen. ‘ Our kinsmen,’ they replied, ‘ are not dearer to us than was our lord. To his mur- derers we will never submit. If those who are related to us wish to save their lives, they are at liberty to depart.’ ‘ The same offer,’ returned the followers of Cyneheard, ‘ was made to the king’s attendants. They refused it : we will prove to day that our generosity is not inferior to theirs.’ Impatient of delay, Osric forced the barrier : he was opposed with the most desperate intrepidity; and the battle was terminated only by the failure of the combatants. Of Cyne- heard’s eighty-four companions one alone was saved. He was found among the slain, covered with wounds, but still alive ; and owed his pre- servation to this fortunate circumstance, that he was the godson of Osric.’

We have noticed Dr. Lingard's efforts to rescue the memory of the celebrated Dunstan from obloquy. Mr. Turner confirms our protestant antipathy to the character of this intriguing and ambitious ecclesiastic. He shows him to have Jeen a principal artificer in that system of pious frauds, by which the church obtained so lucra- tive an ascendancy over our Anglo-Saxon princes ; and respecting which, it is his only excuse that his education would render him in part the dupe and the victim of them. He seems to have been born for better things; and was certainly better

employed in painting ' a robe for a lady, which she afterwards embroidered,' than in following his sovereign into the privacy of domestic life, and dragging him back to an Anglo-Saxon ban- quet— although it was a coronation feast But this outrage, and the subsequent cruelties said to be committed by Dunstan, partly on Elgiva, or Ethelgiva, Dr. Lingard, we have seen, in sub- stance denies; and attributes almost incredible vice to the character of the ycang prince, to re- lieve that of the monk.

The copious ' Appendix I.' on the polity, feu- dal customs, ranks, laws, &c. of the Anglo- Saxons, is a very valuable portion of Dr. Lin- gard's work. We have adverted to some of his remarks on the prevalence of the feudal system amongst them. In their administration of jus- tice he discovers the origin of most of our pre- sent courts of law. The ' sac and soc' was the lowest species of jurisdiction, perpetuated in the manorial courts of the Normans, and in our pre- sent courts leet and courts baron. The hundred inotes assembling every month, under the pre- sidency of the ealdorman or reeve, decided the more weighty affairs of the hundred, and was a public meeting for transacting and confirming important private business. Once a year ai» extraordinary meeting of the hundred mote w?.s held, at which every male above twelve years of age was required to be present; and, on fome occasions, the ealdorman called to his assistance the wise men of the neighbouring hundred, or the third part of the county — the ' tything.' The shire mote was of still higher dignity, and was held twice a year, in spring and autumn. All great proprietors of land were summoned, and the bishop and ealdorman, or earl, presided with equal authority. Here the laws of the witenagemot were recited ; a definite judgment pronounced in all ordinary suits ; and vows of obedience renewed to the king. The witenage- mot, under the presidency of the monarch, had an unlimited control over the whole system. We should gladly extract this writer's entertain- ing account of the criminal proceedings of these courts, and particularly of the trials by ordeai, but our limits only permit a reference to them. The Anglo-Saxon crimes were those

of every semi-barbarous people, drunkenness, theft, and homicide ; the love of vengeance, and the per- petuation of family feuds. Their excellencies — personal courage, and a devoted attachment to their chiefs, and their own political institutions.

In fine, on the comparative merits of Mr. Hume and Dr. Lingard, as historians, let the reader compare the account given by the former of the introduction of Christianity (it is a delicate sub- ject for both writers) into the kingdoms of the Anglo-Saxon octarchy, with the following simple and animated passage of Dr. Lingard's work.

' At the death of Cealwin, Ethelbert had ac- quired (by what means we are not informed) the dignity of Bretwalda, and his authority was ad- mitted by all the Saxon princes south of the Humber. While in possession of this dignity, he received intelligence that forty strangers had landed on the Isle of Thanet. These were Augustine and his associates, partly Gauls, partly Italians, whom pope Gregory the Great

hail sent for the benevolent purpose of convert- ing tne pagans. Ethelbert could not be unac- quainted with the Christian religion. It was probably the religion of the majority of the British slaves in his dominions : it was certainly professed by his queen, Bertha, the daughter of Charibert, king of Paris. The Saxon prince re- ceived the missionaries under an oak, in an open field, at the suggestion of his priests, who told him that in such a situation the spells of the fo- reign magicians would lose their influence. At the appointed time Augustine was introduced to the king. Before him were borne a silver cross, and a banner representing the Redeemer ; be- hind him his companions walked in procession, and the air resounded with the anthems which they sung in alternate choirs. As soon as the interpreter had explained the object and motives of their mission, .Ethelbert replied that he had no wish to abandon the gods of his fathers for a new and uncertain worship : but that as the in- tention of the strangers was benevolent, and their promises were inviting, they might preach with- out molestation, and should be supported at his expense. This favorable answer filled them with joy ; and they proceeded to Canterbury, chant- ing as they went, the following prayer : — ' By thy great mercy, O Lord, turn away, we beseech thee, thy anger from this thy city and thy holy temple, for we are sinners — hallelujah.' On the feast of Pentecost, in the year 597, Ethelbert

professed himself a Christian, and received the sacrament of baptism ; and, on the following Christmas, 10,000 of his subjects followed the example of their sovereign.' Vol. I- pp. 80 — 2.

The corresponding passage in Hume is intro- duced in his best manner, offering a fair picture of the pagan superstitions and political prejudices, which were subdued in this peaceful extension of the faith. The reflections of Gregory on the sight of some British youths exposed as slaves at Rome, and the professions of Ethelbert above alluded to, are admirably wrought into the nar- rative; but ought our readers to forget, that one- half of it is defiled by extracts from the corres- pondence of Gregory and Augustine, which no considerate parent would suffer to be read in his family ; and that for the satisfaction of our young gentlemen who consult this historian for a know- ledge of these events still more objectionable matter is appended in a long Latin note.

The conversion of Northumbria followed that of Kent, through the marriage of the daughter of Ethelbert to Edwin. Mr. Hume admits the ability and prudence of this prince, his hesitation about receiving the Christian doctrine, and his severe and long examination of its evidences. But the narrative of Bede, after which he here writes, ('see his margin), contains the following beautiful episode on the claims of the Christian religion.

' Having taken his resolution, Edwin called an assembly of his witan, or counsellors, and re- quired each to state his sentiments on the sub- ject. The first who ventured to speak was Coiili, ihe high priest, who, instead of opposing, ad- vised the adoption of the foreign worship. His moth'e was singular. No one, he said, had served the gods more assiduously than himself, and yet few had been less fortunate. He was

weary of deities who were so indifferent or so ungrateful, and would willingly try his fortune under the new religion. To this profound theo- logian succeeded a thane, whose discourse, while it proves the good sense of the speaker, exhibits a striking picture of national manners. He sought for information respecting the origin and destiny of man. ' Often/ said he, 'O king, in the depth of winter, while you are feasting with your thanes, and the fire is blazing on the hearth iu the midst of the hall, you have seen a bird pelted by the storm, enter at one door and escape at the other. During its passage it was visible ; but whence it came, or whither it went, you knew not. Such, to me, appears the life of man. He walks the earth for a few years ; but what pre- cedes his birth, or what is to follow after his death, we

cannot tell. Undoubtedly, if the new religion can unfold these important secrets, it must be worthy our attention.'

' Paulinus, the missionary, now explained the principal doctrines of Christianity, and Coiffi de- claring himself a convert, headed a party to set fire to the neighbouring pagan temple of God mundham.' All this our popular historian dis misses by noticing only the conduct of t'ue priest Coiffi.

We are surprised, however, that this intelligent writer affords us no summary of the state of tht arts, and such sciences as were cultivated among the Anglo-Saxons. Can he have forgotten their love of music? Their cathedral chanting ? Their illuminated missals, and other MSS. ? Or their architecture? On these interesting topics we have only room for a few extracts from the important work of Mr. Turner.

Of their music and ecclesiastical chanting, the historian of the Anglo-Saxons, says, they ' had the instruments of chords, and wind-instruments. In the drawings on their MSS. we see the horn, trumpet, flute, and harp, and a kind of lyre of four strings, struck by a plectrum. In one MS. we see a musician striking a four-stringed lyre, while another is accompanying him with two flutes, into which he is blowing at the same time. In the MSS. which exhibit David and three mu- sicians playing together, David has a harp of eleven strings, which he holds with his left hand while he plays with his right fingers ; another is playing on a violin or guitar of four strings with a bow ; another blows a short trumpet, sup- ported in the middle by a pole, while another blows a curved horn. This is probably the repre- sentation of an Anglo-Saxon concert.

' The chord instrument like a violin was per- haps that to which a disciple of Bede alludes, when he expresses how delighted he should be to have ' a player who could play on the cithara, which we call rotse.' Of the harp, Bede men- tions, that in all festive companies it was handed round, that every one might sing in turn. It must have therefore been in very common use.

' Dunstan is also described by his biographer to have carried with him to a house his cythara ' which, in our language, we call hearpan.' He hung it against the wall, and one of the strings happening to sound untouched, it was esteemed a miracle.

' The oigan was in use among the Anglo-Sax-

ons. Cassiodorus and Fortunatus mention the word organ as a musical instrument, but it has been thought to have been a collection of tubes blowed into by the human breath. Muratori has contended that the art of making organs like ours was known in the eighth century only to the Greeks; that the first organ in Europe was the one sent to Pepin from Greece in 756 ; and that it was in 826 that a Venetian priest, who had discovered th$ secret, brought it into France. A passage which I have observed in Aldhelm's poem, De Laude Virginum, entirely overthrows these theories ; for he, who died in 709, and who never went to Greece, describes them in a manner which shows that he was acquainted with great organs made on the same principle as our own :

Maxima millenis auscultans organa flabris Mulceat auditum ventosis follibus iste Quamlibet auratis fulgescant caetera capsis.

This is literally, ' Listening to the greatest organs with a thousand blasts, the ear is soothed by the windy bellows, while the rest shines in the gilt chests.' Dunstan, great in all the knowledge of his day, as well as in his ambition, is described to have made an organ of brass pipes, elaborated by musical measures, and filled with air from the bellows. The bells he made have been men- tioned before. About the same time we have the description of an organ made in the church at Ramsey. ' The earl devoted thirty pounds to make the copper pipes of organs, which, resting with their openings in thick order on the spiral winding in the inside, and being struck, on feast days, with the strong blast of bellows, emit a sweet melody, and a far-resounding peal.'

' In 669 Theodore and Adrian, who planted learning among the Anglo-Saxons, also introduced into Kent the ecclesiastical chanting, which Gre- gory the Great had much improved. From Kent it was carried into the other English churches. In 678 one John came also from Rome, and taught in his monastery the Roman mode of sing- ing, and was directed, by the pope, to diffuse it amongst the rest of the clergy, and left written directions to perpetuate it. Under his auspices it became a popular study in the Saxon monas- teries. We have a pleasing proof of the impres- sive effect of the sacred music of the monks, in the little poem which Canute the Great made upon it. As the monarch, with his queen and courtiers, were approaching Ely, the monks were at their devotions. The king, attracted by the melody, ordered his rowers to approach it, and to move gently while he listened to the sounds which came floating through the air from the church on the high rock before him. He was so delighted by the

effect, that he made a poem on the occasion, of which the first stanza only has come down to us. There are many ancient MSS. of the Anglo-Saxoc times, which contain musical notes.'

He thus describes, after Muratori, what is

known of their mode of illuminating books :

' The Anplo-Saxons were fond of beautifying their MSS. with drawings with ink of various co- lors, colored parchment, and sometimes with gilt letters. The Gospels, Nero, D. 4., exhibit a

splendid instance of these ornaments. The Franco-theotisc Gospels, Calig. A. 7., are also highly decorated. Many Saxon MSS. in the Cotton Library exhibit very expensive, and wh'at in those days were thought beautiful, illumi- nations. The art of doing these ornaments has been long in disuse; but some of the recipes for the materials have been preserved. They prepared their parchment by this rule : ' Put it under lime, and let it lie for three days , then stretch it, scrape it well on both sides, and dry it, and then stain it with the colors you wish.' To gild their skins we have these directions:— 1 Take the red skin and carefully pumice it, and temper it in tepid water, and pour the water on it till it runs off limpid. Stretch it afterwards, and smooth it diligently with clean wood. When it is dry, take the whites of eggs, and smear it therewith thoroughly ; when it is dry, sponge it with water, press it, dry it again and polish it; then rub it with a clean skin, and polish it again, and gild it.'

' Their methods for preparing gold for their gold writing may be mentioned, as they were in fact so many chemical experiments. One me- thod : — ' File gold very finely, put it in a mortar, and add the sharpest vinegar; rub it till it be- comes black, and then pour it out. Put to it some salt or nitre, and so it will dissolve. So you may write with it, and thus all the metals may be dissolved.'

' The gold letters of the Anglo-Saxon MSS. are on a white embossment, which is probably a calcareous preparation. Modern gilding is made on an oil size of yellow ochre, or on a water size of gypsum, or white oxide of lead, or on similar substances. For gilding on paper or parchment, gold powder is now used as much as leaf gold. Our ancestors used both occasionally. Another method of ancient chrysography : — ' Melt some lead, and frequently immerge it in cold water. Melt gold, and pour that into the same water, and it will become brittle. Then rub the gold filings carefully with quicksilver, and purge it carefully while it is liquid. Before you write,

dip the pen in liquid alum, which is best purified by salt and vinegar.' Another method :— ' Take thin plates of gold and silver, rub them in a mortar with Greek salt or nitre till it disappears. Pour on water, and repeat it. Then add salt, and so wash it. When the gold remains even, add a moderate portion of the flowers of copper and bullock's gall ; rub them together, and write and burnish the letters.' Other methods are men- tioned, by which even marble and glass might be gilt. These descriptions are taken by Mura- tori from a MS. of the ninth century, which contains many other curious receipts on this subject.'

Of their architecture Mr. Turner observes.

' The arts of life are found to flourish in pro- portion as their productions are valued and re- quired. When the Anglo-Saxons became con- verted to Christianity, they wanted monasteries and churches. And this demand for architectural ability would have produced great perfection in the art, if the state of the other arts and sciences had permitted a due cultivation of genius in this; but no single art can atta;n perfection if

every other be neglected, or if general ignorance enfeeble and darken the mind. Patronage there- fore, though it called forth whatever mechanical labor and barbarian taste could fabricate, could not miraculously create taste and regular science. The love of sublimity is more congenial to the rude heroism of infant civilisation, and there- fore our ancient architecture often reached to the sublime; but while we admire its vastness, its solidity, and its magnificence, we smile at its irregularities, its discordancies, and its ca- price.

' The chief peculiarities of the Anglo-Saxon architecture, of which several specimens, though in fragments, exist, are declared to be a want of uniformity of parts, massy columns, semicircular arches, and diagonal mouldings. Of these the two first are common to all the barbarous archi- tecture of Europe. But the semicircular arches and diagonal mouldings seem to have been more peculiar additions to the Saxon building. That the round arches were borrowed from Roman buildings, is the prevailing sentiment. It is at least a fact, that the Saxons must have seen them among the numerous specimens of the imperial architecture which they found in England.

The universal diagonal ornament, or zig-zag moulding, which is a very distinguishing trait of the Saxon architecture, is found disposed in two ways; one with its point projecting outwards, and the other with its point lying so as to follow the lines which circumscribe it, either horizontal, perpendicular, or circular. On this singular ornament an etymological remark may be hazarded, as it may tend to elucidate its origin. The Saxon word used to denote the adorning of a building is gefratwian, or fraetˆvan ; and an ornament is fraetew ; but froetan signifies to gnaw or to eat; and upon our recollecting that the diagonal or- nament of Saxon building is an exact imitation of teeth, we can hardly refrain from supposing that the ornament was an intended imitation of teeth. Frjetwmand fraetwung, which they used to signify ornament, may be construed fretwork, or teeth-work. The teeth which the Saxon diago- nals represent, are, I believe, marine teeth. If so, perhaps they arose from the stinging of teeth of the large sea animals. We will mention a few of the ancient Saxon buildings we meet with, and show how they are described.

' In 627 Paulinus built the first Christian church, in Northnmbria, of wood ; it was after- wards rebuilt on a larger scale, and with stone : he also built a stone church at Lincoln. His church at York was not very skilfully erected : for in less than a century afterwards, Wilfrid found its stony offices half destroyed; its roof was permeable to moisture. It had windows of fine linen cloth, or latticed wood-work ; but no glazed casements, and therefore the birds flew in and out, and made nests in it. So Bede says of his church at Lincoln, that though the walls were standing, the roof had fallen down.

' In 676 Benedict sought cementarios or ma- sons, to make a church in the Roman manner, which he loved. But the Roman manner seems not to express the Roman science and taste, but rather a work of stone of the large size which the Romans used. It was finished in a year after its

foundation. At this period glass-makers were not known among the Saxons. But Benedict had heard of them, and he sent to Gaul for some, to make latticed windows to the porticoes and caenaculum of the church. From those whom he employed the Saxons learned the art.

' In the seventh century Cuthbert built a monastery, which is described. From wall to wall it was of four or five perches. The outside was higher than a standing man. The wall was not made of cut stone, or biicks and cement, but of unpolished stones and turf, which they had dug from the spot. Some of the stones four men could

hardly lift. The roofs were made ot wood and clay.

‘ About 709 Wilfred flourished. He, like many others, had travelled to Rome, and, of course, beheld the most valuable specimens of ancient art. He brought thence some masons and arti- ficers. Though he could not imitate these, lie sought to improve the efforts of his countrymen. The church of Paulinus at York he completely repaired. He covered the roof with pure lead, he washed its walls from their dirt, and by glass windows (to use the words of my author), he kept out the birds and rain, and yet admitted light. At Rapon he also erected a church with polished stone, adorned with various columns and porticoes. At Hexham he made a similar building. It was founded deep, and made of polished stones, with many columns arid porti- coes, adorned with great length and height of walls. It had many windings, both above and below, carried .spirally round. It was superior to any edifice on tliis side of the Alps. “In the in- side was a stony pavement, on which a workman fell from a scaffold of enormous height.

‘ In 716 we read of Croyland monastery. The marshy ground would not sustain a stony mass. The king, therefore, had a vast number of piles of oak and alders fixed in the ground, and earth was brought in boats nine miles off to be mingled with the timber and the marsh, to complete the foundation.

‘ In 969 a church was built. The preceding winter was employed in preparing the iron and wooden instruments, and all other necessaries. The most skilful artificers were then brought. The length and breadth of the church were mea- sured out ; deep foundations were laid on account of the neighbouring moisture, and they were strengthened by frequent percussions of the rams. While some workmen carried stones, others made cement, and others ruistd both aloft by a machine with a wheel. Two towers with their tops soon rose, of which the smaller was visible on the west in front, of the church. The larger in the middle with four spires, pressed on four columns, connected together by arches passing from one to the other, that they might not sepa- rate. It is supposed that many specimens of ancient Saxon architecture yet remain ; as part of St. Peter’s at Oxford, part of St. Alban’s abbey church, Tickencote church, near Stamford in Lincolnshire, the porch on the south side of Shireburn minster, Barfreston church in Kent, Iffley church, and some others. But the works and delineations of professional men must be consulted on this subject.’

4. Of England, from the period of the Nor- man conquest, until the accession of Henry II. — Nothing could exceed the terror of the English upon the news of the defeat and death of Harold. As soon as William passed the Thames at Wal- lingford, Stigand, the primate, made submissions to him in the name of the clergy ; and before he came within sight of London, all the chief nobility, including Edgar Atheliny himself, came and submitted to the conqueror. William readily accepted of the crown upon the terms offered him; viz. that heshould govern according to the established customs of the country. He could indeed have made what terms he pleased ; but, though in reality a conqueror, he chose rather to be thought an elected king. For this reason he was crowned at Westminster, by the archbishop of York, and took the u«ual oath, that he would protect and defend the church, observe the laws of the realm, and govern the kingdom with im- partiality. The English historians complain of the most grievous oppression by William and his Normans. Whether the conqueror willingly gave the English opportunities of rebelling against him, in order to have a pretence for oppressing them afterwards, is uncertain; but the beginning of his reign cannot justly be blamed. The first disgxist against his government was excited among the clergy. William could not avoid rewarding those numerous adventurers who had accompa- nied him in his expedition. He first divided the lands of the English barons who had opposed him, among his Norman barons : but as these were insufficient, he quartered the rest on the rich abbeys, until some other opportunity of pro- viding for them should offer. This last step was highly resented by the clergy. The whole na- tion was soon after disgusted, by seeing all the real power of the kingdom placed in the hands of the Normans. The king disarmed the city of London, and other places which appeared most warlike and populous, and quartered Norman soldiers wherever he dreaded an insurrection. Having thus secured England, as he imagined, from any danger of a revolt, he determined to pay a visit to his Norman dominions. His brother Odo, bishop of Bayeux, and William Fitz-Osborne, were appointed regents in his ab- sence; and to secure himself yet farther, he re- solved to carry along with him those of the English nobility in whom he had least confidence. William set sail for Normandy in March, 1067; but his absence produced the most fatal conse- quences. Discontents and murmurings were every where multiplied ; secret conspiracies were entered into; hostilities were commenced in many places ; and every thing seemed to threaten a speedy revolution. William of Poictiers, a Nor- man historian, throws the blame entirely on the English. He calls them a

fickle and mutinous race, while he celebrates with the highest enco- miums the justice and lenity of Odo's and Fitz- Osbonie's administration. On the other hand, the English historians tell us, that the regents took all opportunities of oppressing the people, with a view to provoke them to rebellion, anc to enrich themselves on their submission. Be this as it may, a secret conspiracy was formed among the English for a general massacre of the

Normans, and the vassals of the earl of Coxo actually put him to death because he refused to head them in the enterprise. The conspirators had already taken their final resolution, and fixed on Ash Wednesday, during the time of divine service, for the intended massacre. But the sudden return of William disconcerted all their schemes. Having received intelligence of their bloody purpose, he hastened to England. Such of the conspirators as had been more open in the scheme fled, and this confirmed the accusa- tion against those who remained. William from this period not only lost all confidence in his English subjects, but regarded them as irrecon- cileable enemies. He raised a vast number of fortresses in the country, until he no longw dreaded the tumultuous efforts of the multitude; and determined to treat the whole as a coi. quered nation. One of his most decided stepv of this kind was the revival of the tax of Dan – gelt, which produced great discontents. The in- habitants of Exeter and Cornwall revolted; bui were soon reduced. A more dangerous rebellion broke out in the north; but this was also quashed, and the English became sensible that farther resistance was vain. Their easy submis- sion after the battle of Hastings had inspired the Normans with contempt ; their commotions after wards had rendered them objects of hatred; and they were now deprived of every means which could make them either feared or beloved^ Many fled into foreign countries; and amot^ the rest Edgar Atheling, who made his escape to Scotland, with his two sisters, Margaret and Christina. They were well received by Malcolm III., who soon after married Margaret, and re- ceived a great number of other exiles with kind- ness. The people at large, though unable to make any open resistance, did not fail to gratify their resentment against the Normans privately. Seldom a day passed, but the bodies of their assassinated conquerors were found in the woods and high-ways, without any possibility of bring- ing the authors of their death to justice. This made the Normans themselves begin to wish for tranquillity and security : and several of those entrusted with great commands, desired to be dismissed from the service of the crown. Wil- liam was obliged to allure many to his service by the largeness of his bounties. The conse- quences were, fresh exactions from the English, and new insurrections on their part

against their masters. The Norman power, however, was too well founded to be finally shaken, and every at- tempt of the English to regain their liberty served only to rivet their chains. The county of Nor- thumberland, which had been most active in these insurrections, now suffered most severely The whole of it was laid waste, the houses were burned, the instruments of agriculture destroyed, and the inhabitants dispersed. On this ocasion it is said that above 100,000 persons perished either by the sword or famine. The estates of the English gentry were next confiscated, and bestowed on the Normans. Thus most of the ancient and honorable families were reduced to ruin, and the English found themselves totally excluded from honors and preferments. William thus at last broke their spirit and received ng

farther trouble from them. He found himself, however, throughout the latter part of his life unhappy through the dissensions of his own family. Robert, his eldest son, surnamed Curt- hose, from the shortness of his legs, was a prince who inherited all his own bravery and ambition. He had formerly been promised by his father the government of the province of Maine in France, and was declared successor to the dukedom of Normandy. He demanded the fulfilment of several of these promises ; but William gave him a flat denial, observing, that ‘ it was not his custom to throw off his clothes till he went to bed.’ Robert declared his resentment; and openly ex- pressed his jealousy of his brothers William and Henry. An open rupture soon occurred. The two young princes, one day, sportively threw water upon him as he passed through the court; and Robert inflamed by one of his favorites con- strued this frolic into a studied indignity. He drew his sword, and ran up stairs with an intent to take revenge. The whole castle was quickly in a tumult; and it was not without difficulty that the king himself could appease it. He could not, however, allay the animosity which from that moment prevailed in his family. Robert, at- tended by several of his confederates, withdrew to Rouen that night, hoping to surprise the cas- tle; but his design was defeated by the governor. The popularity of the prince, however, engaged all the young nobility of Normandy, as well as of Anjou and Brittany, to espouse his quarrel ; even his mother is supposed to have supported him in his rebellion by secret remittances. The contest continued for several years; and William was at last obliged to have recourse to England for support against his own son. Accordingly he led an army of Englishmen over to

Normandy, where he soon compelled Robert and his adhe- rents to quit the field, and was reinstated in his dominions. Robert then took shelter in the cas- tle of Gerberoy, which the king of France had provided for him, and where he was shortly after besieged by his father. As the garrison was strong, they made a gallant defence, and many skirmishes and duels were fought under its walls. In one of these the king and his son happened to meet; but being both concealed by their hel- mets, they attacked each other with fury. The young prince wounded his father in the arm, and threw him from his horse. The next blow would probably have put an end to his life had he not called for assistance. Robert instantly re- cognised his father's voice, leaped from his horse and raised him from the ground. He then pros- trated himself, it is said, asked pardon for his offences, and promised for the future a strict ad- herence to filial duty. The king was not so easily appeased ; and no doubt his resentment was heightened by the disgrace of being overcome. He therefore gave his malediction to his son ; and re- turned to his own camp on Robert's horse. After some recollection however, he became reconciled to the prince and took him with him into England. William returned in 1081 ; and being now freed from his enemies at home and abroad di- rected the formation of the celebrated DOMESDAV- iiooK. See that article. He reserved a very air. pie revenue for the crown ; and, in the general

distribution of land among his followers, kept possession of no fewer than 1400 manors in dif- ferent parts of the country. No king of England was ever so opulent; none was able to support the splendor of a court to such a degree ; none had so many places of trust and profit to bestow ; and consequently none ever had more implicit obedience paid to his commands. He delighted greatly in hunting ; and, to indulge himself in this with the greater freedom, he depopulated Hampshire for thirty miles, making the wretched outcasts of the villages no compensation for such an injury. In the time of the Saxon kings all no- blemen had a right to hunt in the royal forests; but William appropriated the whole of these to himself,and published the first severe game laws. The killing of a boar, a deer, or even a hare, was punished with the loss of the delinquent's eyes; while the killing of a man might be atoned for by paying a moderate fine. The riches of his ministers, as we have intimated, were in propor- tion. Odo, bishop of Bayeux, William's brother, was so rich that he resolved to purchase the papacy. For this purpose, during the king's ab- sence he equipped a vessel in the Isle of Wight, on board of which he sent immense treasures, and prepared for his embarkation. He was de- tained, however, by contrary winds,

till William, being informed of his designs, resolved to pre- vent the exportation of so much wealth. Re- turning from Normandy, he came to England at the very time his brother was about to go on board. He immediately ordered him to be made prisoner; but his attendants, respecting the bishop's character, scrupled to execute his com- mands; so that the king was obliged to seize him with his own hand. Odo appealed to the pope : but the king replied, that he did not seize him as bishop of Bayeux, but as earl of Kent : and in that capacity, demanded an account of his administration. He was therefore sent pri- soner to Normandy ; and, notwithstanding all the threats of Gregory VII., was detained in custody during the remainder of William's reign. Soon after this, William experienced a severe blow in the death of his queen Matilda ; and, almost at the same time, received information of a general insurrection in Maine. Upon his arrival on the continent, he found that the insurgents had been secretly excited by the king of France, who took all opportunities of lessening the Norman power. His indignation on this account was also in- creased by the accounts he received of somo railleries thrown out against him by the French monarch. William, who was become corpulent, had been detained in bed by sickness ; and Philip was heard to say, that he only lay in of a big belly. This so provoked the English monarch that he sent him word, he would soon be up, anC at his churching present such a number of tapers as would set the kingdom of France in a flame. He accordingly levied a powerful army ; and, en- tering the Isle of France, destroyed every thinˆ with fire and sword. He took the town of Mante and reduced it to ashes. But a period was now to be put at once to the conquests and the life of this great warrior. His horse happening in this neighbourhood to set his fore feet on some hot ashes, plunged violently, and the king was thrown

forward, and bruised on the pommel of the saddle. Being advanced in years, he felt appre- hensive of the consequences, and ordered him- self to be carried in a litter to the monastery of St. Gervaise. Here his illness increased ; and, becoming sensible of the approach of death, he discovered great remorse on the review of his life, and endeavoured to make compensation by pre- sents to churches and monasteries. He also gave orders for the liberation of several English no- blemen, and was prevailed upon to restore his brothet Odo, against whom he was much incensed. He left Normandy and Maine to his eldest son Robert. He wrote to Lanfranc, the primate, to crown

William king of England. To Henry he bequeathed nothing but the possessions of his mother Matilda ; but foretold, that one day he would surpass both his brothers in power and opulence. He expired on the 9th of September 1087, in the sixty-third year of his age, in the twenty-first of his reign over England, and fifty- fourth over that of Normandy.

The character of William I., given by the Saxon Chronicler, is striking. ‘ If any one wish to know what manner of man he was, or what wor- ship he had, or of how many lands he was lord, •we will describe him as we have known him: for •we looked on him, and some while lived in his herd. -King William was a very wise man and very rich, more worshipful and strong than any of his fore-gangers. He was mild to good men, who loved God : and slack, beyond all bounds, to those who withsaid his will. — He had earls iu his bond, who had done against his will: bishops he set off their bishoprics : abbots off their ab- botrie: and thanes in prisons : and at last he did not spare his own brother Odo. Him he set in prison. Yet among other things we must not forget the good frith (peace) which he made in this land : so that a man, that was good for ought, might travel over the kingdom with his bosom full of gold without molestation : and no man durst slay another man, though he suffered never so mickle evil from the other. He ruled over England : and by his cunning he was so tho- roughly acquainted with it, that there is not a hide of land, of which he did not know both who nad it and what it was worth : and that he set down in his writings. — But he also set many deer-friths : and he made laws therewith that •whoever should slay hart or hind, him man should blind.’ ‘ His countenance,’ says Dr. Lingard, ‘wore an air of ferocity, which, when he was agitated by passion, struck terror into every be- holder. The story told of his strength at one period of his life, almost exceeds belief. It is said that sitting on horseback he could draw the string of a bow, which no other man could bend even on foot. Hunting formed his favorite amusement.’ The reader has seen the censure passed upon him for his deer-friths, and game- laws : nor will he think it undeserved, if he re- member the circumstance already named of afforesting so much of Hampshire. The memory of this act of despotism has been perpetuated in the name of the New Forest, which it retains at the present after the lapse of 75C years.*

William, surnamed Rufus, from his red hair, was in Normandy at the time of his father’s

death. He no sooner received the letter fiom Lanfranc, than he set out for England ; where he arrived before the news of that event.

Sen- sible that his brother Robert had a preferable title, he used the utmost despatch in getting himself crowned and established on the throne. The English were so effectually subdued, that they made no opposition, but the Norman barons were attached to Robert, who was brave, open, and generous. Even his predominant fault of indolence was not disagreeable to those haughty nobles, who affected an almost total in- dependence of their sovereign. William, on the other hand, was violent, haughty, and tyrannical. A strong conspiracy therefore arose against him ; and Odo, bishop of Bayeux, undertook to con- duct it. Many of the most powerful nobility were concerned ; and, as the confederates expected large succours from Normandy, they retired to their castles, and put themselves in an offensive posture. William, sensible of his danger, en- deavoured to engage the English on his side, by promising the mitigation of their hardships. Robert, in the mean time, through his natural indolence, neglected to give his allies proper assistance. The conspirators were obliged to submit. Some of them were pardoned but most of them fined and their estates bes- towed on the barons who had continued faithful to the king. William, freed from this danger, thought no more of his promises to the English. He proved a greater tyrant than his father ; and after the death of Lanfranc, who had been his preceptor, and kept him within some bounds, he gave full scope to his rapacity. Not content with oppressing the laity, he invaded the privi- leges of the church ; which in those days were held most sacred. He seized the temporalities of the vacant bishoprics and abbeys, and openly put up many of them to sale. These proceedings occasioned great murmurs, but the terror of his authority for a while preserved tranquillity. In 1090 the king thought himself strong enough to attempt the conquest of Normandy, which at that time was in the greatest confusion through the careless administration of Robert. Several of the barons had revolted, and were encouraged by the king of France. Robert also imagined he had reason to fear the intrigues of his brother Henry, whom for 3000 merks he had put in possession of Cottentin, nearly a third part of the duchy. He therefore threw him into prison : but when he found himself threatened with an invasion from William he gave Henry his liberty, and made use of his assistance in suppressing the insurrections of his subjects. But William was no sooner landed in Normandy, than the nobility on both sides interposed, and a treaty of peace was concluded. In this treaty Henry, finding his interests entirely neglected, suddenly retired to St. Michael's Mount, a strong fortress on the coast of Normandy, and infested the neighbour- hood with his incursions. He was besieged by his two brothers, and obliged to capitulate; after which, bains deprived of all his dominions, he wandered about for some time in

great poverty. The peace between his brothers, however, was of short duration. Hostilities had occurred between England and Scotland, and these terminated ia

the death of Malcolm III ; after which new broils ensued with Normandy. William's ra- pacity prompted him to encroach upon his brother's territories, and to use a very extraordi- nary expedient to accomplish his designs. Ha- ving gone to Normandy to support his partisans, he ordered an army of 20,000 men to be raised in England, and conducted to the sea coast as if they were to be immediately embarked : but when they came there, instead of embarking, they were forced to pay the king 10s. a man ; after which • they were dismissed. With this money William engaged the king of France to depart from the protection of Robert ; and bribed many of the Norman barons to revolt. He was called from Normandy, however, by an irruption of the Welsh ; and, having repulsed them, was prevented from attempting other en- terprises by a conspiracy of his barons. In 1096, however, the superstition of Robert .put the king of England in possession of those do- minions which he had not beerr able to conquer by force of arms. The crusades were now commenced, and Robert was desirous of under- taking an expedition into the Holy Land. As money for this purpose was wanting, he mort- gaged his dominions to his brother for 10,000 merks. The king raised the money by violent extortions on his subjects ; forcing even the con- vents to melt their plate, in order to furnish the quota demanded of them. He was then put in possession of Normandy and Maine ; and Robert with a magnificent train set out for the east. After the death of Lanfranc, the king had re- tained in his own hands the revenues of Canter- bury, as he had done those of many other bish- oprics ; but falling into a dangerous illness, he was seized with remorse ; and the clergy repre- sented to him that he was in danger of eternal perdition if he did not make atonement for the sacrilege of which he had been guilty. He therefore instantly resolved to supply the vacancy of Canterbury ; and sent for Anselm abbot of Bee, who was much celebrated for his piety, to fill that see. This the abbot refused with great earnestness ; fell on his knees, it is said, wept, and intreated the king to change his purpose ; and when he found him obstinate in forcing the pastoral staff upon him, kept his fist so hard clenched that it required the utmost violence of the by- standers to open it, and force him to receive that ensign of spiritual dignity. William soon after recovered his health, and with it his violence and

rapacity. As he now spared the church no more than before, a quarrel with Anselm soon ensued, which became more dangerous to the king, on account of the great character for piety which the primate had acquired. William was engaged in almost perpectual contests with this prelate. When these were pretty well settled, the king, who had undertaken an expedition into Wales, required Anselm to furnish him with a certain number of soldiers. The primate regarded this as an invasion of the rights of the church ; and therefore, though he durst not refuse com- pliance, sent the men so miserably accoutred, that the king threatened him with a prosecution. Anselm on this demanded restitution of the church revenues which the k'my ˆad seized, and

appealed to Pope Urban II. The quarrel, at last, became so violent that the primate found it dangerous to remain in England. He desired and obtained the king's permission to retire be- yond sea. On his departure his temporalities were immediately confiscated ; but Urban re- ceived him as a martyr, and even threatened the king with excommunication. William, however, proceeded without regarding the threats of the Pope ; who he knew was at that time much en- gaged with the crusades. Though his acqui- sition of Maine and Normandy had brought him into perpetual contests with the haughty and turbulent barons who inhabited those coun- tries, and raised endless tumults and insurrec- tions ; yet William seemed intent on extending his dominions either by purchase or conquest. The earl of Poictiers and Guienne had resolved upon an expedition to the Holy Land ; and, for this purpose, had put himself at the head of a vast multitude, consisting, according to some historians, of 60,000 horse, and a much greater number of foot. Like Robert of Normandy, he offered to mortgage his dominions for money sufficient to conduct this multitude into Asia. The king accepted this offer : and had prepared a fleet and army to take possession of these do- minions, when an unfortunate accident put an end to his projects and his life. He was engaged in hunting, the sole amusement, and the principal occupation of princes in those rude times. Walter Tyrrel, a French gentleman remarkable for his skill in archery, attended him in this recreation, of which the New Forest was the scene. William had dismounted after a chase ; and Tyrrel, im- patient to show his dexterity, let fly an arrow at a stag which had suddenly started. The arrow glanced from a tree, and struck the king to the heart. He instantly fell down dead ; and Tyrrel, terrified at the accident, clapt spurs to his horse, hastened to the sea shore, and embarked for France, where he joined the crusade that was setting out from that country. This happened on the 2nd of August, 1100, after he had

reigned thirteen years, and lived about forty. His body was found in the wood by the country people, and buried without ceremony at Winchester. Dr. Lin- gard says, ‘ by whose hand the king fell, and whe- ther the arrow was directed against him by acci- dent or design, are questions which cannot be satis- factorily answered. The report, which obtained credit at the time, was, that William, following a wounded deer with his eyes, held his hand near his face to intercept the rays of the sun, and that at the same moment an arrow from the bow of Walter Tyrrel, a French knight, glancing from a tree, struck him in the breast. It was added that the unintentional homicide, spurring his horse to the shore, immediately crossed to the continent : and a pilgrimage, which he after- wards made to the Holy Land, was attributed to remorse, and construed into a proof of his guilt. But Tyrrel always denied the charge : and after his return, when he had nothing to hope or fear, deposed upon oath in the presence of Suger, abbot of St. Dennis, that, he never saw the king on the day of his death, nor entered that part of the forest in which he fell. If William perished by treason (a supposition not very improbable)

it was politic in the assassin to fix the guilt on one, who was no longer in the kingdom. This at least is certain, that no enquiry was made into the cause or the manner of his death : whence we may infer that his successor, if he were not convinced that it would not bear investigation, was too well pleased with an event which raised him to the throne, to trouble himself about the means by which it was effected.’ Vol. I. p. 486. By the death of William, the crown of right devolved to Robert his eldest brother. But what Robert had formerly lost by indolence, he was now deprived of by superstition, being absent in the crusade. Henry being in the forest with William, when the latter was killed, immediately hurried to Winchester, and secured the royal treasure. William de Breteuil keeper of the treasure, arrived almost at the same instant, and opposed his pretensions ; telling him that the money belonged to his elder brother, who was now his sovereign, and for whom he was deter- mined to keep it. But Henry, drawing his sword, threatened him with instant death if he dared to disobey him ; and others of the late king’s retinue, who came every moment to Win- chester, joining the prince’s party, he was obliged to desist. Henry lost no time in accomplishing his purpose. In less than three days he was crowned king of England by Maurice bishop of J-ondon. Present possession supplied every de- ficiency of title ; and no one dared to appear in defence of the absent

prince. The beginning of Henry's reign promised to be favorable to English liberty ; owing chiefly to the fear of his brother. To conciliate the affections of his subjects, he passed a charter to remove many of the grievous oppressions which had been com- plained of during the reigns of his father and brother. He promised, that at the death of any abbot or bishop, he never would seize the reve- nues of the see or abbey during the vacancy, but would leave the whole to be reaped by the successor ; and that he would never let to farm any ecclesiastical benefice, or dispose of it for money. To the laity he pledged himself that upon the death of any earl, baron, or military tenant, his heir should be admitted to the pos- session of his estate, on paying a just and lawful relief, without being exposed to those enormous exactions which had been formerly required. He remitted the wardship of minors; and al- lowed guardians to be appointed, who should be answerable for the trust. He engaged not to dispose of any heiress in marriage but by advice of all the barons ; and if any baron intended to give his daughter, sister, niece, or kinswoman, in marriage, it should only be necessary for him to consult the king, who promised to take no money for his consent, nor ever to refuse permission, unless the person to whom it was proposed to marry her should happen to be his enemy. He granted his barons and military tenants the power of be- queathing by will their money or personal estates ; and, if they neglected to make a will, he promised that their heirs should succeed to them. He also renounced the right of imposing moneyage, and levying taxes, at pleasure, on the farms which the barons kept in their own hands ; and he made general professions of moderating fines, &c. He

offered a pardon for all offences; and remitted all debts due to the crown. On the behalf of the vassals of the barons, he stipulated that they should enjoy the same privileges which he granted to his own barons ; and promised a general con- formation to, and observance of, the laws of king Edward . To give greater authenticity to these concessions, a copy of the charter was lodged in one of the abbeys of each county. Henry, far- ther to increase his popularity, degraded and imprisoned Ralph Flambard bishop of Durham, who had been the chief instrument of oppression under his brother. He sent for Anselm, who was then at Lyons, inviting him to return and take possession of his dignities. Anselm returned : but when Henry proposed to him to do the same homage to him which he had done to his brother, the king met with an absolute refusal. During his exile, Anselm had assisted at the council of Bari : where, besides fixing the controversy be- tween the Greek and Latin churches concerning the procession of the Holy Ghost, the right of election to church

preferments was declared to belong to the clergy alone, and spiritual censures were denounced against all ecclesiastics who did homage to laymen for their sees and benefices, and on all laymen who exacted it. The rite of homage, by the feudal customs, was, that the vas- sal should throw himself on his knees, put his joined hand between those of his superior ; and should, in that posture, swear fealty to him. See FEUDAL TENURE. But the council declared it execrable, that pure hands, which could create God, and offer him up for the salvation of man- kind, should be put, after this humiliating man- ner, between profane hands, which, besides being inured to rapine and bloodshed, were employed, day and night, in impure purposes. To this decree, therefore, Anselm appealed ; and declared, that so far from doing homage for this spiritual dignity, he would not even communicate with any ecclesiastic who paid that submission, or who accepted of investitures from laymen. Henry durst not persist ; and therefore desired that the controversy might be suspended, and messengers be sent to Rome to accommodate matters with the pope, and obtain his confirmation of the laws and customs of England. The king now took anothei step, which seemed capable of confirming his claims to the crown without any danger of a rival. The English remembered with regret their Saxon monarchs, and compared the liberty they enjoyed under them with the tyranny of the Normans. Some descendants of that favorite line still remained ; and among the rest Matilda, the niece of Edgar Atheling Upon her the king fixed his eyes as a proper consort, by whose means the breach between the Saxons and Nor- mans might be cemented. A difficulty, however, occurred, because she had been educated in a nunnery. T' e affair was examined by Anselm in a council o palates and -nobles summoned at Lambeth. Matilda there proved, that she had put on the veil, not with a design of entering inte a religious life, but merely in imitation of a custom familiar to the English ladies; who could only protect their chastity from the brutal violence of the Normans by taking shelter under that habit, which, amid the horrid licentiousness of tne times,*

•was yet generally revered. The council, sensible that even a princess had otherwise no security for her honor, admitted this reason as valid.' They pronounced that Matilda was still free to marry; and her nuptials with Henry were celebrated by Anselm with great solemnity and pomp. While Henry was thus rendering himself popular at home, his brother Robert, who had loitered away a twelvemonth in Italy, where he married Sibylla daughter of the count of Conversana, arrived in England in 1101, to put in his claim to the crown. His fame on account of the exploits he had performed in Palestine was so

great, that even yet he was joined by many noblemen of the first rank, and the whole nation seemed prepos- sessed in his favor. But Henry having paid his court to Anselm, retained by his means the army in his interest, and marched with them to Ports- mouth, where Robert had landed his forces a few days before. The armies lay for some time in sight of each other ; when an accommodation was effected through the mediation of Anselm and the nobles. It was agreed by this treaty, ˆthat Robert should resign his pretensions to England, and receive in lieu of them an annual pension of 3000 marks; that if either of the princes died without issue, the other should succeed to his do- minions ; that the adherents of each should be par- doned ; and restored to all their possessions either in Normandy or England ; and that neither Robert nor Henry should henceforth encourage, receive, or protect, the enemies of each other. The two princes separated with mutual marks of friendship ; but next year, Henry, under various pretences confiscated the estates of almost all the noblemen who had favored his brother. Robert, enraged at the fate of his friends, ventured to come to England to remonstrate against it. But he met with such a cool reception, that, appre- hending his liberty to be in danger, he was glad to make his escape by resigning his pension. This infringement of the treaty was followed the next year by an invasion of Normandy by Henry, at the desire as it was alleged of Robert's own subjects. See NORMANDY. The event of this war was the defeat and captivity of Robert; who was henceforth deprived not only of all his dominions, but of his personal liberty. He lived twenty- eight years a prisoner, and died in the castle of Cardiff, in Glamorganshire. It is said by some writers that he was deprived of his sight by a red-hot copper basin applied to his eyes, and that king Henry appeased his conscience by founding the monastery of Reading. The con- quest of Normandy was completed in 1106; and next year the controversy between the king and primate, concerning the investitures of clergymen and their doing homage to princes was resumed. The king was very sensible that it was not his in- terest to quarrel with such a powerful body as the clergy were at that time; on the other hand, he fully understood the necessity of guarding the prerogatives of the crown from their encroach- ments. While, therefore, he avoided an open -apture with Anselm he obstinately refused to give up the privileges which had been enjoyed by his predecessors. On the first arrival of the primate, the king had avoided the dispute in the manner already mentioned. A messenger was

despatched to Rome, to compromise matters with the pope. The messenger returned with an ab- solute refusal of the king's demands.

One of the reasons given by the pope on this occasion, was thus expressed : ‘ It is monstrous that a son should pretend to beget his father, or a man to create his God : priests are called gods in scripture, as being the vicars of God: and will you, by your abominable pretensions to grant them their investitures, assume the right of creating them ?’ Henry was not yet convinced ; but as he was determined to avoid, or at least to delay the coming to any dangerous extremity with t!i .: church, he persuaded Anselm, that by farther nu- gociations he should be able to compound matte s with the pope. Messengers were therefore u second time despatched to Rome from the kinˆ, and from Anselm, who wanted to be fully assured of the pope’s intentions. They returned with letters expressed in the most arrogant aiul positive manner both to the king and to the pri- mate. The king suppressed the letter written to himself; and persuaded the three bishops, by whom it was sent, to assert, upon their episcopal faith, that the pope had assured them of his pri- vate good intentions towards king Henry, and of his resolution not to resent any future exer- tion of his prerogative in granting investitures ; though he himself scrupled to give his assurance under his hand, lest other princes should copy the example and assume a like privilege. An- selm’s two messengers, who were monks, affirmed that it was impossible this story could have any foundation ; but their word was not deemed equivalent to that of three bishops; and the king, as if he had finally gained his cause, proceeded to fill the sees of Hereford and Salisbury, arid to invest the new bishops in the usual manner. Anselm, however, gave no credit to the assertions of the king’s messengers; and therefore refused not only to consecrate, but even to communicate with them ; and the bishops themselves, finding they were become universally odious, returned the ensigns of their spiritual dignity. The quarrel continued between the king and the pri- mate, till the latter, sensible of his dangerous situation, desired leave to make a journey to Rome, in order to lay the case before the pope. This permission was easily obtained ; but no sooner was the primate gone, than Henry confis- cated all his revenues, and sent another messenger to negociate with the pope. The new messenger told his holiness, that his master would sooner part with his crown than the right of granting in- vestitures. ‘ And I,’ replied the pope, ‘would rather lose my head than allow him to retain it.’ At last, however, the following compromise was made. Before bishops took possession of their dignities,they had formerly been accustomed to pass through two ceremonials : from the hands of the sovereign they received a ring and a crosier as the symbols of their office, and this was called their investiture ; they also made those submis- sions to the prince, which were required of vassals by the rites of the feudal law, and

which received the name of homage. The pope, therefore, was for the present contented with Henry's resigning his right of granting investitures, by which the spiritual dignity was supposed to be conferred;

and he al.owed the bishops to do homage for their temporal properties and privileges. After this the pope directed Anselm to communicate with the prelates who had already received investitures from the crown ; and he only required of them some submissions for their past conduct. He also granted to Anselm a plenary power of remedying every disorder which he said might arise from the barbarousnessofthe country. About the same time the marriage of priests was pro- hibited ; and even laymen were not allowed to marry within the seventh degree of affinity. By this contrivance the pope augmented the profits which he reaped from granting dis- pensations, and likewise those from divorces. For as the art of writing was rare, and parish registers were not regularly kept, it was not easy to ascertain the degrees of affinity even among people of rank ; and any man who had money to pay for it might obtain a divorce, on pretence that his wife was more nearly related to him than was permitted by the canons. A decree was also published, prohibiting the clergy to wear long hair ; and the king, though" he would not resign his prerogatives to the church, very wil- lingly cut his hair in the form which was required of him, obliging all the courtiers, at the same time, to follow his example. From the time of this compromise, in 1107, to the year 1190, no- thing remarkable distinguished this reign, except some slight commotions in Normandy; but in this last year prince William, the king's only son, was drowned off the coast of Normandy ; and Henry was so much affected, that he is said never afterwards to have smiled, or recovered his wonted cheerfulness. It is probable, however, that the death of this prince was an advantage to the nation, as he had often expressed the utmost hatred to the English, and threatened, that when he came to the throne, lie would make them draw the plough, and turn them into beasts of burden. These prepossessions he inherited from his father ; who, though he pretended, when it might serve his purposes, to value himself on being a native of England, showed, in the course of his government, extreme prejudices against his countrymen. All hopes of preferment to eccle- siastical as well as civil dignities were denied to the English during his reign, and any foreigner, whatever his character, was sure of the preference. The charter, which the king had at first granted,

fell so much into neglect and oblivion, that in the following century, when the barons desired to niake it the model of the great charter which tiiey exacted from John, they could only find one copy ot it in England; while the grievances, proposed to be redressed by it, continued in their full extent, and were felt every where. As Henry had no legitimate children, except Ma- tilda, whom, in 1120, he had betrothed, though only eight years of age, to the emperor of Germany, he was induced to marry a second time, in hopes of having sons. He accordingly allied himself with Adelina, the daughter of Godfrey, duke of Louvaine, and niece to pope Calixtus II But she brought him no children; and, in 1135 the king died in Normandy, from eating too plentifully of lampreys; having lived sixty- serea years, and reigned thirty-five.

By the will of the deceased monarch, his daughter, Matilda, became heiress of all his do- minions. She had been married, after her first husband's death, to Geoifrey Plantagenet, eldest son of the count of Anjou, by whom she had one son, named Henry; but as Geoffrey had given umbrage to the king of England in several instances, no notice was taken of him in the will. The nobility had already sworn fealty to her; and the foremost, to show this mark of submis- sion to the king's will, had been Stephen, son of the count of Blois, who had married Adela, the daughter of William the Conqueror. He had been married to Matilda, daughter and heiress of Eustace, count of Boulogne ; who brought him, besides that feudal sovereignty of France, a vast property in England. By this marriage, Stephen also acquired a new connexion with the royal family of England ; for Mary, his wife's mother, was sister to David, king of Scotland, and to Matilda, the first wife of Henry and mo- ther of the empress. Henry likewise imagining, that by the aggrandisement of Stephen, he strengthened the interest of his own family, had enriched him with many possessions ; but, in- stead of this, it appeared by the event, that he had only put it the more in his power to usurp the throne. No sooner was Henry dead, than Stephen hastened from Normandy to England. The citizens of Dover and Canterbury shut their gates against him; but when he arrived at Lon- don, the populace, instigated by his emissaries im- mediately proclaimed him king. The archbishop of Canterbury refused to give him the royal unction ; but this difficulty was obviated by Stephen's brother, the bishop of Winchester. Hugh Bigod, steward of the household, made oath before the primate, that the late king, on his death-bed, had discovered a dissatisfaction with his daughter Matilda, and had expressed his intention of leaving the count of Boulogne heir to all his do- minions; and the bishop, either believing, or pretending to believe this

testimony, gave Ste- phen the royal unction. Very few of the nobility attended the coronation ; bul none opposed his accession openly. Stephen, to establish himself on the throne as firmly as possible, published a charter, in which, like his predecessors, he made liberal promises to all ranks of men. To the clergy, he promised that he would speedily fill all the vacant benefices, and never would levy any of the rents during the vacancy. To the nobility he gave liberty to hunt in their own fo- rests ; and to the people, a remittance of the tax of danegelt. He also engaged to restore the laws of Edward the Confessor. Having seized the king's treasure at Winchester, amounting to £100,000, he increased his army by mercenary soldiers from the continent ; and procured a bull from the pope, confirming his title to the English throne. Matilda, in the mean time, was endea- vouring to recover her rights; but for some time she met with no success, either in England or Normandy. Her husband Geoffrey himself was obliged to conclude a peace with Stephen, on condition of the king's paying him an annual pension of £5000. Robert, earl of Gloucester was the first who shook the power of the usurper He was natural son to the late king ; a man of

great nonor and ability, and very much attached to the interests of Matilda. When Stephen ascended the throne, he offered to do him homage, and take the oath of fealty ; but with a condition, that the king should maintain all his stipulations, and never invade any of the earl's rights or dignities. With this condition Stephen was obliged to comply, on account of the great power of this nobleman, though he knew that it was meant only to afford him a- favorable oppor- tunity of revolt. The clergy imitated Robert's example; and annexed to their oath of alle- giance the condition, that they were only bound as long as the king defended the ecclesiastical liberties, and supported the discipline of the church. The barons, in return for their submis- sion, were still more pertinacious. Many of them required to have the right of fortifying their castles, and putting themselves in a posture of de- fence ; and with this exorbitant demand the king was forced to comply. All England was imme- diately filled with fortresses; which the nobles gar- risoned either with their vassals, or with licentious soldiers, who nocked to them from all quarters. The whole kingdom became, therefore, a scene of rapine and devastation. Internal wars were carried on by the nobles in every quarter; the barons even assumed the right of coining money, and of exercising, without appeal, every act of jurisdiction ; and the inferior gentry, as well as the people, rinding no defence from the laws, during this total suspension of sovereign power, were obliged, for their immediate safety, to pay court to some neighbouring chieftain, and to purchase his protection by submitting to his ex- actions. In 11 37 the earl of Gloucester, hav- ing projected an insurrection, retired beyond sea, sent the king a defiance, and solemnly re- nounced his allegiance. The next year David, king of Scotland, appeared with an army in de- fence of his niece's title ; and penetrating into Yorkshire, committed the greatest devastations. He was defeated, however, with great slaughter at Northallerton, by the northern barons, who had raised a powerful army ; and this success so much overawed the malcontents in England, that Stephen's power might yet have become stable, had he not engaged in a contest with the clergy. He had seen the mischief arising from the liberty he had granted of fortifying so many castles : he, therefore , determined to abridge this as much as possible; and, for that purpose, began with those erected by the clergy. Tak- ing advantage of an affray, which had arisen at court, between the

retinues of the bishop of Salisbury and the earl of Brittany, he seized the bishops both of Salisbury and Lincoln, threw them into prison, and obliged them to deliver up the castles which they had erected. This pro- duced such a violent commotion, that the op- portunity seemed favorable to the pretensions of Matilda. On the 22d of September, 1139, she landed in England, with Robert, earl of Glou- cester, attended only by 140 knights ; but her partisans daily increased, and she was soon in a condition to meet Stephen with an equal foice. Numberless minor encounters happened in the interior. War was spread through every quarter ; and the turbulent barons having, in a great mea-

sure, shaken off the restraint of government, uncle: the pretended sanction of fighting in the cause of their country, redoubled their oppressions and devastations. Their castles became receptacles of licensed robbers ; who, sallying forth day and night, spoiled the open country, and plundered the villages and towns. They tortured captives to make them reveal their treasures, or sold their persons into slavery ; and set fire to t'ie most respectable houses, after pillaging them of every thing. The land, in consequence, was now left extensively untilled; the instruments of husbandry were abandoned, and a famine reduced the na- tion to a most deplorable state. A decisive battle between the competitors for the crown seemed, at last, to be the best hope of the nation. Stephen had marched his forces to relieve the city of Lincoln, and the earl of Gloucester led a body of troops to assist those of Matilda's party, who were besieging that place. The two armies engaged on the 2d of February, within sight of the city, and a desperate conflict ensued. At last, Stephen's army was defeated. He himself, at one period, was left without attendants, and fought on foot in the midst of his enemies; assaulted by multitudes, and resisting their attacks with great bravery. For some time he forced a passage with his battle-axe, but that breaking, he drew his sword, and furiously assailed his antagonists; until at length, this weapon also failing him, he was obliged to surrender himself prisoner. He was conducted to Gloucester, and though at first treated with respect, was in a short time thrown into irons, and in the month of March Matilda was crowned at Winchester with great solemnity. She now determined to repress the power of the nobles, but was destitute of policy or prudence sufficient to accomplish so difficult an under- taking, and a conspiracy was formed against her. The bishop of Winchester detached a party of his friends and vassals to block up the city of London, where the queen resided; measures were at the same time taken to instigate the Londoners to a revolt, and to seize her person. Matilda, hav- ing timely notice of this, fled to

Winchester. Here she was soon after besieged by the bishop ; but the town being distressed by famine, she made her escape: while the earl of Gloucester, endea- vouring to follow her, was taken prisoner, and exchanged for Stephen. Matilda being at length obliged to take shelter in Oxford, Stephen re- ascended the throne: again, however, the civil war broke out with redoubled fury. Many bat- tles were fought, and both parties were at times involved in great difficulties. Matilda, it is said, escaped from Oxford at a time when the fields were covered with snow, by being dressed in white, with four knights, . her attendants, dressed in the same color. Another time Ste- phen was surprised by (he earl of Gloucester at Wilton, and made his escape with the utmost difficulty. At last Matilda was obliged to quit the kingdom ; and the death of the duke of Glou- cester soon after, seemed to give a fatal blow to her interests. In 1155, however, prince Henry, her son by her husband Geoffrey, came over to England, to dispute, once more, Stephen's pre- tensions to the crown. After some success on his first landing, he was opposed by Stephea

with a powerful army, and matters seemed again likely to come to the decision of a general en- gagement. But while the two armies were within a quarter of a mile of each other, a treaty was proposed by the interposition of William, earl of Arundel, and the death of Eustace, Stephen's «on, which happened in the course of the nego- tiation, facilitated its conclusion. It was agreed that Stephen should reign during his life, and lhat justice should be administered in his name; jhat Henry, on Stephen's death, should succeed to the kingdom: and that William, Stephen's son, should inherit Boulogne and his patrimonial estate. This treaty filled all England with joy ; and after the barons had sworn to it, Henry left England, and Stephen returned to the peacaable enjoyment of his throne. His reign, however, was but short, as he died on the 25th of October,

1154.

5. Of England under tfie House of Planta- genet. — Henry II. was on the continent besieg- ing a castle of one of the mutinous barons, when news was brought him of Stephen's death. But, as he had no reason to suppose that his title would be disputed, he did not abandon his enterprise till the place was reduced. He then set out on his journey, and was received in England with the greatest cordiality. The first acts of his reign promised a happy administration. He dis-

missed at once the mercenary soldiers who had committed the greatest disorders; ordered all the castles which had been erected since the reign of Henry I. to be demolished, except a few which he retained in his own hands ; and called in the adulterated coin which had been struck during the reign of Stephen. Resuming many of the benefactions which had been made to churches and monasteries, he gave charters tq several towns, and granted the citizens their free- dom and privileges independent of any superior but himself. These charters became an impor- tant ground-work of English liberty ; for thus a new order, namely, the more opulent of the people, began to claim a share in the administra- tion, as well as the nobility and clergy. Thus the feudal government also was at first impaired ; and freedom, as well as property, more equally diffused. Henry, on his accession to the English throne, found himself possessed of very extensive dominions on the continent. In right of his father, he possessed Anjou, Touraine, and Maine ; in that of his mother Normandy; in that of his wife, Cuienne, Poictou, Saintogne, Auvergne, Perigord, Angoumois, and Limousin. Soon after he an- nexed Brittany to his other states, by marrying his son, who was yet a child, to the heiress of Brittany. His teiritories composed above a third of the French monarchy, and were by far the most opulent part of it ; so that Henry, though nominally a vassal to the king of France, was greatly his superior in power ; and, when Eng- land was added tc these, Louis VII. had great repson to consider him capable of becoming a powerful enemy. The king of England, however, soon became a kind of stranger in his continen- tal dominions; and his subjects there, consider- ing their allegiance as more naturally due to their superior lord, always looked up to the king of France with attachment, and acknowledged him

to be the chief of their nation. Their immediate lord was often at too great a distance to protect them ; and a commotion was more easily raised than quelled in any part of his extensive domi- nions. But the wise and vigorous administra- tion of this prince counterbalanced in a great measure these disadvantages ; and he maintained a surprising tranquillity throughout his domi- nions during the greatest part of his reign. In the task to which he first devoted himself, i. e. circumscribing the power of the barons, he found no great difficulty ; but, when he attempted to control the clergy, he met with the most violent opposition. That body had carried their inde- pendence on the civil power so far, that they now seemed to aim at nothing less than a liberty to commit any crime with impunity. During the reign of Stephen, they had extorted an immu- nity from all but ecclesiastical penalties, and that grant they were resolved to maintain. It may

easily be supposed, that a law which thus screened their delinquencies contributed to in- crease them ; and it has accordingly been said that not less than 100 homicides were committed by men in holy orders, within a period of ten years after the king's accession. Henry did not commence his more important attempts to re- medy this state of things during the life of Theobald, archbisbop of Canterbury, who was a man of a mild character, and had the merit, during the former reign, of having refused to crown Eustace, Stephen's son. He died in 1162 ; and the king now selected the celebrated Thomas a Becket, his chancellor, to fill the vacant see. The new archbishop was the first man of English pedigree, who, since the Nor- man conquest, had risen to any considerable station. Before his instalment as archbishop he had been for some time archdeacon of Canterbury, but had never taken priest's orders, and occupied himself of late with the king's political affairs altogether. He had even just successfully con- cluded a campaign, in which he took the com- mand of a considerable force, in Normandy. While we may blame his subsequent conduct, it is but fair to state the allegations of the Catho- lic historians : — that Becket, at this time, most reluctantly accepted the proffered mitre ; that on the king's first intimation of the offer to him he observed, ' that he had not much the appearance of an archbishop, and that, if the king were serious, he must beg permission to decline the preferment, because it would be impossible for him to perform the duties of the SiUration, and, at the same time, retain the favor of his bene- factor.' Henry, however, was inflexible : he had hesitated on whom to bestow the see for thirteen months, and probably did not think his former humble companion serious : the papal legate, Henry of Pisa, is said to have added his entreaties, and Becket was induced to acquiesce No sooner, however, was he invested with thi« high dignity, than he totally altered his conduct, and assumed all those austerities, and that apparent humility of demeanor, which would recommend him to the superstitious and ignorant multitude, He at once resigned the office of chancellor without consulting the king ; and seems to have thought that as the king intended to abridge the ecclesias-

t ical power, he had best himself become the aggres- sor, and exhibit, at once, his own determuuition u> maintain it. He therefore summoned the earl of Clare to surrender the baronry of Tunbridge; which, ever since the conquest, had remained in the family of that nobleman; but which, as it had formerly belonged to the see of

Canterbury, his predecessors, as the primate contended, were prohibited from alienating. William de Eyns- tbrd, a military tenant of the crown, was also patron of a living which belonged to a manor held of the archbishop of Canterbury; and Becket, without regard to that chieftain's right, presented one Laurence to the living, who was violently expelled by Eynsford. Becket, upon this, excommunicated the latter, who complained to the king that he, who held in capite of the crown, should, contmry to the practice established by the Conqueror, and maintained ever since by his successors, be subjected to such a sentence without the previous consent of the sovereign ; and Henry commanded Becket to absolve Eyns- ford. The haughty primate, however, answered, that it belonged not to the king to inform him whom he should absolve, and whom excommu- nicate : but after all he was, in this case, obliged to comply with the king's orders. Henry per- ceiving now that the crown was in danger, through the superstition of the people, of falling totally under the power of the clergy, resolved to exert himself to the utmost against their scan- dalous usurpations. Among other modes of aggrandisement they had inculcated the necessity of penance as an atonement for sin ; and having introduced the practice of paying them largte sums, as an equivalent for penances, the crimes of the people had become a source of important revenue to the priests : the king computed, that, by this invention alone, they levied more money from his subjects than what flowed from all the funds and public taxes into the royal exchequer. To ease the people of so heavy and arbitrary an imposition, the king required, that a civil officer of his appointment should be present, in all ecclesiastical courts, and should for the future give his consent to every composition made for spiritual offences. About this time, also, Henry had an opportunity of proceeding against the clergy on another ground. A clergyman of Worcester having debauched a gentleman's daughter, murdered her father; and the king required that he should be delivered up to the magistrate. Becket pleaded the privileges of the church ; confined the criminal in the bishop's prison, lest he should be seized by the king's officers ; and maintained that no greater punish- ment could be inflicted on him than degradation. The king then demanded that, immediately after he was degraded, he should be tried by the civil power; but the primate asserted, that it was iniquitous to try a man twice upon the same accusation, and for the same crime. Upon this, Henry summoned an assembly of all the prelates in England; and put to them this decisive ques- tion : — Whether or not they were willing to submit to the ancient laws and customs of the kingdom ? The bishops unanimously replied, that they were willing, saving their own order. The king was provoked at this equivocal answer. Voi. VIII.

He left the assembly with evident marks of dis- pleasure ; and required the primate instantly to surrender the castles of Eye and Berkham. The other prelates were terrified ; but Becket con- tinued inflexible ; however, he was at last pre- vailed upon, by the interposition of Philip, the pope's legate and almoner, to retract the saving clause, and promise, without any reserve, to observe the ancient customs. But the king- was not now to be satisfied with general promises. He was determined that the ancient laws and customs should be defined, as well as the pri- vileges of the clergy. He therefore summoned a council of the clergy and nobility at Clarendon, to whom he submitted this important affair. Many excellent legal propositions were here drawn up, which were afterwards known by the title of the Constitutions of Clarendon. By these it was enacted, that clergymen accused of any crime should be tried in the civil courts ; that laymen should not be tried in spiritual courts, except on the testimony of legal and reputable witnesses; that the king should ulti- mately judge of ecclesiastical and spiritual ap- peals ; that the archbishops and bishops should be regarded as barons, and obliged to contribute to the public expenses like other persons of their rank; that the goods forfeited to the king should not be protected in churches or church-yards by the clergy; and that the sons of villeins should not take orders without the consent of the r lord. These, with some others of less consequence, to the number of sixteen, were subscribed by all the bishops present, and even by Becket himself ; though he at first showed considerable reluctance to sanctioning them. Nothing now remained but to obtain their ratification by the pope ; but in this the king was disappointed. The pope, with the utmost indignation, rejected them ; and, out of sixteen, admitted only six, which lie thought were not important enough to deserve censure. Becket was also now mortified to the highest degree. He retracted his consent to the constitutions, redoubled his austerities, and even refused to execute any part of his sacerdotal function till he had obtained absolution from his holiness. Henry, considering these humiliations as insults offered to himself, desired the pope to send him a legate. He did so ; but annexed a clause to his commission, by which he was j-ro- hibited from acting against the archbishop of Canterbury. The king on this sent back the commission to the pope ; and, being exasperated beyond all patience, commenced prosecution, against Becket. He first sued him for some lands belonging to his primacy; and Becket being detained by sickness from coming into court, his non-attendance was construed into disrespect. The primate afterwards defended his cause in person ; but all his goods and chattels were confiscated, and the bishop ol Winchester was obliged to pronounce the sen tence. Another suit was

commenced against him for £300, which he had levied on the honors of Eye and Berkham, and the primate agreed ˆto 'give securities for the payment of the sum. The next day a third suit was commenced against himforlOOO merks, which the king had lent him; and, upon the back of these, a still greater demand

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\sas made ; namely, thai Becket should give an account of the money he had received and expended during the time he was chancellor. This was computed at no less than 40,000 merk?; and the primate, unable either to give an account, or to find securities, took the following extra- ordinary method of evading the difficulty : — He arrayed himself in his episcopal vestments ; and, with the cross in his hand, went to the royal palace. Having entered an apartment near the council-room, he sat down holding up the cross as his banner and protection. The king, who sat in an inner apartment, ordered by proclamation all the prelates and nobility to attend him ; to whom he loudly complained of Becket's insolence. The whole council joined in condemning his un- accountable pride; and determined to expos- tulate with him about his inconsistency concern- ing the constitutions of Clarendon. But all these messages, threats, and arguments, were to no purpose. Becket put himself, in the most solemn manner, under the protection of t u supreme pontiff, and appealed to him against any penalty which his iniquitous judges in Eng- land might think proper to inflict. Then leaving the palace, he asked the king's immediate per- mission to quit Northampton ; but being refused, he secretly withdrew, and at last found means to cross over to the continent.

Becket was received with the greatest marks of esteem, as well by the king of France, who hated Henry, as by the pope, whose cause he had so strenuously defended ; nor is it to be forgotten that there was at this period a schism in the papacy itself; and Becket had decided for the strongest and ultimately successful side. Henry at the same time sent ambassadors to the pope, who were treated with coolness and con- tempt, while Becket was honored with the great- est marks of distinction. These favors bestowed upon an exile and perjured traitor (for such had been Becket's sentence of condemnation in Eng- land) irritated the king to such a degree, that he rashly resolved to throw off at once all depen- dence upon the papal see. He

accordingly issued orders to his justiciaries, inhibiting, under severe penalties, all appeals to the pope or ,he archbishop ; and forbidding any of them to receive mandates from them, or to apply to them for any ecclesiastical authority. He further declared it treasonable to bring over from either of them any interdict upon his kingdom. In secular clergymen he made this punishable by the loss of their livings, and castration ; in re- gulars, by the amputation of their feet ; and in laymen, by death. On the other hand the pope and the archbishop did not fail to issue their fulminations in such a manner as to shake the foundations of the king's authority. Becket ex- communicated by name all the king's chief ministers, who had been concerned in sequestrat- ing the revenues of his see, and all who obeyed or favored the constitutions of Clarendon. He even threatened to excommunicate the king him- self, if he did not speedily repent ; and had not the pope been threatened every day with the machinations of the antipope, whose pretensions he was afraid the king of England might support, that terrific sentence would certainly have been

*pronounced. At first, Henry paid little regara to these measures ; but afterwards, when he found that his authority over his subjects was endangered by them, and that his rivals on the continent were prepared to take advantage of their effects, he began to desire a reconciliation. This the pope and Becket also desired when they found their utmost efforts of such little present influence. At length, by the mediation of the pope's legate, the differences were adjusted, the king declared to be reconciled to the papal see, and Becket re- instated in that of Can- terbury. On the recovery of his dignity, the primate behaved with his former arrogance. He returned in great state to England, and made a splendid progress through Kent. As he ap- proached Southwark, the clergy, gentry, and all ranks of people came forth to m*t him, and celebrate his triumph. Being thus confident, as he thought, of the support of the people, he resolved to make his enemies feel the effects of his vengeance. He suspended the archbishop of York, who had crowned Henry's eldest son in his absence, and excommunicated the bishops of London and Salisbury, with some of the principal nobility and prelates who had assisted at that ceremony. One man he excommunicated for having spoken againt him, and another, it is said, for having cut off the tail of one of his horses. The excommunicated prelates hastened with their complaints tn the king, then in Nor- mandy ; and he, having (as we have seen, article BECKET), dropped some expressions intimating his impatience and surprise that ' no one would rid him of this turbulent priest,' his supposed will was quickly accomplished. Becket fell*

beneath the blows of four assassins, who came from Normandy to England on this bloody errand, and who dashed out his brains on the pavement of his own cathedral.

The story of this murder is told in Dr. Lin- gard's best manner : — ' The next day, about two in the afternoon, the knights abruptly entered the archbishop's apartment, and neglecting his salutation seated themselves on the floor. It seems to have been their wish to begin by inti- midation : but if they hoped to succeed, they knew little of the intrepid spirit of their oppo- nent. Pretending to have received their com- mission from Henry, they ordered the primate to absolve the excommunicated prelates. He replied with firmness, and occasionally with warmth, that if he had published the papal letters, it was with the royal permission: that the case of the archbishop of York had been reserved to the pontiff: but that he was willing to absolve the others on condition that they pre- viously took the accustomed oath of submitting to the determination of the church. It was sin- gular that of the four knights, three had, in the days of his prosperity, spontaneously sworn fealty to him. Alluding to this circumstance, he said as they were quitting the room, ' knowing what has passed between us, I am surprised you should come to threaten me in my own house.'— ' We will do more than threaten,' was their reply. — ' When they were gone his attendants loudly expressed their alarms : he alone remained cool and collected, and neither in his tone or j;cs«ure

betrayed the slightest symptom of apprehension. In this moment of suspense the voices of the Tnonks singing vespers in the choir struck their ears, and it occurred to some one that the church was a place of greater security than the palace. The archbishop, though he hesitated, was borne along by the pious importunity of his friends : but when he heard the gates close behind him, he instar-tly ordered them to be re-opened, say- ing, that the temple of God was not to be for- tified like a castle. He had passed through the north transept, and was ascending the steps of the choir, when the knights with twelve com- panions, all in complete armour, burst into the church. As it was almost dark, he might, if he had pleased, have concealed himself among the crypts, or under the roof : but he turned to meet them, followed by Edward Grim, his cross- bearer, the only one of his attendants who had not lied. To the vociferations of Hugh of Hor- sea, a military subdeacon, ' Where is the traitor'?' no answer was

returned : but when Fitzurse asked, ‘ Where is the archbishop ?’ he replied : ‘ Here I am, the archbishop, but no traitor. Reginald, I have granted thee many favors. What is thy object now? If you seek my life, I command you, in the name of God not to touch one of my people.’ When he was told that he must instantly absolve the bishops, he answered, ‘ Till they offer satisfaction, I will not.’ — ‘ Then die !’ exclaimed the assassin, aim- ing a blow at his head. Grim interposed his arm, which was broken, but the force of the stroke bore away the primate’s cap and wounded him on the crown. As he felt the blood trickling down his face, he joined his hands, and bowed his head, saying, : ‘ In the name of Christ and for the defence of his church I am ready to die.’ In this posture, turned towards his murderers, without a groan and without a motion, he awaited a second stroke, which threw him on his knees : the third laid him on the floor at the foot of St. Bennet’s altar. The upper part of his scull was broken in pieces : and Hugh of Horsea planting his foot on the archbishop’s neck, with the point of his sword drew out his brains, and strewed them over the pavement/

The king was thrown into the utmost con- sternation on hearing of Becket’s murder. He foresaw that the primate’s death would accom- plish what his most violent opposition during his life could never have done, and gave him- self up to bitter regret; for three days he is said to have refused his usual food ; till at last his courtiers were obliged to break in upon his solitude, and induce him to acquiesce in an event which could not possibly be recalled. The pope was with some difficulty made sensible of his innocence ; but refused to be reconciled to him, except on condition that he should be- come more obedient to the holy see. The murderers, according to Hume, after performing the penance imposed on them by the Pope, con- tinued to possess, without molestation, their honors and their fortunes, and even regained the good opinion and countenance of the public. There is no proof of this. On the contrary, they were ordered to make a pilgrimage to Jerusalem, where most, if not all of them, died.

Henry, with a view to divert his own mind, as well as that of the people, to a different ob- ject, now undertook an expedition into Ireland, and totally reduced that country. See IRELAND. Scarcely was he returned from this war, and the dangerous controversy in which he had engaged with the church of Rome, when he found him- self involved in the most unnatural contest with his children, to whom he had always, behaved most affectionately. He had ordered Henry his eldtit son to be anointed king; and had destined him for his successor in England, Normandy, Anjou, Maine, and Touraine”. Richard, his second son, was invested with the duchy of Guienne and

county of Poictou : Geoffrey, his third son, inhe- rited, in right of his wife, the duchy of Brittany; and the new conquest of Ireland was destined for John, his fourth son, for whom he had also negociated a marriage with Adelais, the only daughter of Hvmbert, count of Savoy and Mau- rienne ; stipulating that he should receive as a dowry, very ct nsiderable demesnes in Piedmont, Savoy, Bressc, and Dauphiny. This extending greatness of Henry's family alarmed the king of France; and he therefore now excited prince Henry to demand of his father, the immediate resignation either of the crown of England, or the duchy of Normandy. When the king re- fused to comply with this extravagant demand, the prince made his escape to Paris, where he was protected by the French monarch. This was in 1173; and the same year, queen Eleanor, finding herself on disagreeable terms with the king, encouraged her two younger children, Geoffrey and Richard, to demand the territories designed them, and fly to the court of France. The queen herself designed to accompany them, and had disguised herself in male attire for that purpose, when she was seized and confined by Henry's order. The licentious barons in the mean time wished for a change of government; and hoped, under young and inexperie ced princes, to renew their former depredations. In the midst of this universal defection, however, the Eng- lish monarch retained his usual intrepidity, and prepared with vigor for the possible contest. As he could depend on the fidelity of very few of his nobility, he was obliged to enlist in his service a number of desperate mercenaries, called Braben- fons, or Brabanciones, a race of Netheiiand soldiery, infamous for rapine ; and 20,000 of these, with a few forces furnished by his faithful barons, composed the whole of his army. With these, however, he totally overthrew the schemes of his enemies or. the continent ; but, being de- sirous of putting an end to the war, he the same year, 1173, agreed to a conference with the king of France. At this interview, Henry offered his children the most advantageous terms. He in- sisted only on retaining the sovereign authority in all his dominions. To Henry he offered half the revenues of the crown of England, with va- rious strong places in that kingdom; or, if he chose rather to reside in Normandy, half the re- venues of that duchy, with all those of Anjou. He made a like offer to Richard in Guienne ; he promised to resign all Brittany to Geoffrey ; and, if these concessions were not deemed sufficient, agreed to add to them whatever the pope's legates,

wlio \v'.Te present, s'lould require of him. The conference, however,

was broken off by the vio- lence of the earl of Leicester; who not only re- proached Henry in the most indecent manner, but even put his hand to his sword, as if threat- ening violence against him. In the mean time, most of the English nobility united in opposition against their sovereign ; and an irruption made into the north of England at this time, by Wil- liam kin? of Scotland, assisted their rebellious schemes. The earl of Leicester soon after in- va-led Suffolk at the head of a body of Flemings, but they were repulsed with great slaughter, and the earl himself was taken prisoner. The king of Scotland, who had been repulsed, now agreed to a cessation of arms, but broke the truce, and again invaded England with an army of 80,000 men. Henry in the meantime, to reconcile him- self thoroughly to the church, performed pe- nances at the tomb of Becket. As soon as he cnme within sight of the cathedral of Canter- bun-, he alighted from his horse, walked bare- foot into the town, and prostrated himself before the shrine of the newly made saint. He remained a whole day in prayer and fasting, and watched the relics all night; made a grant of £.50 a-year to the convent for a constant supply of tapers to illuminate the shrine ; and assembled a chapter of the monks, before whom he disrobed himself, putting a scour-re into each of their hands, and presenting his bare shoulders to their strokes. Next day he received absolution ; and, depart- ing for London, had the agreeable news brought to him of the defeat and captivity of William of Scotland. The victory r>roved decisive in Hen- ry's favor. The English barons, who had re- volted, or were preparing for a revolt, instantly, therefore, delivered up their castles to the victor, and the kingdom was in a few weeks restored to perfect tranquillity. Prince Henry, who was ready to embark with a considerable army to join the English rebels.abandoned all thoughts of the enter- prise ; and soon after a treaty was concluded with the king of France, in which Henry granted his children much less advantageous terms than had been rejected by them. The principal were, some pensions for their support, castles for their residence, and an indemnity to all their adhe- rents The greatest sufferer by this war was William, king of Scotland. He was compelled to sign a treaty, by which he obliged himself to do homage to Henry for his kingdom. It was also agieed that his barons and bishops should do homage to the English crown, and that the fortresses of Edinburgh, Stirling, Berwick, Rox- burgh, and Jedburgh, should be delivered into the hands of the conqueror till these stipulation were performed. This treaty was executed most punctually on the 10th of August, 1175, in the cathedral of York.

Her.ry was thus freed from all his greater troubles at home and

abroad for five years, during which several salutary laws were made. But, in 1180, the ambition of his children involved him in fresh calamities. Richard, who had been in- vested by his father with the sovereignty of Gui- enne, refuse-! to do homage to his elder brother, and young Henry and Geoffrey, uniting their arms. invaded his dominions. While the king was en-

deavouring to compose these differences, he found himself once more conspired against by all las children. The conspiracy, however, was defeated by the death of prince Henry in 1183. He had retired to Mattel, a castle near Turenne, where he was seize;! with a fever ; and, perceiving the approaches of death, was struck with remorse for his undutiful behaviour to his father. He sf nt a messenger to the king, who was not far distant, expressing contrition for his faults, and entreated the favor of a visit, that he might at least die with the satisfaction of having received forgiveness. But the king, who had so often experienced his son's ingratitude and violence, conjecturing that his sickness was feigned, dared not trust himself in the prince's hands. Soon after, however, re- ceiving intelligence of his death, and proofs of his sincere repentance, he was affected with the deepest sorrow. This prince, who died in the twenty-eighth year of his age, left no posterity. His brother Richard succeeded to his dom nions, and soon discovered as turbulent a spirit. He refused to give up Guienne, which Henry had designed for his fourth son, John; and even made preparations for carrying on war against his fa- ther and brother Geoffrey. Henry sent for Elea- nor, his queen, the heiress of Guienne, to whom Richard, either dreading an insurrection in her fa- vor, or out of a sense of duty, willingly yielded up the territory, and retired peaceably to his father's court. This breach, however, was no sooner made up, than Geoffrey demanded Anjou to be added to his dominions in Brittany. This the king refused; upon which he fled to the court of France, and prepared to levy an army against his father, but was soon after killed in a tourna- ment. His death gave few, except the king, any uneasiness ; for he was universally hated, and is said to have been known among th'e people by the name of the Child of Perdition. The wi- dow of Geoffrey, soon after his decease, was de- livered of a son, named Arthur, who was invested in the duchy of Brittany, under the guardianship of Henry his grandfather, who, as duke of Nor- mandy, was also superior lord of that territory. Philip II., king of Frarce, as lord paramount, disputed for some time, his title to this wardship ; but was obliged to yield to his claim, the Britons preferring the government of Henry. Other causes inflamed the dissension between the two monarchs, and Philip once more seduced Richard from his duty. He insisted that his marriage with

Adelais, Philip's sister should be imme- diately completed, and threatened to enforce his pretensions with a formidable army. This occa- sioned another conference at the usual place of meeting, between Gisors and Trie, under an elm, that is said to have shaded more than an acre. In the midst of this conference the archbishor of Tyre appeared before the assembly in a miser- able hab't, and begged assistance against t1 e infidels, who, under Saladm, had almost tota'lv expelled the Christians from Asia. His intelli- gence was so dismal, that the kings of France and England are said to have at once laid aside their animosity, and both of them immediately took the cross. But Richard, who had Ion wished to have all the "lory of such an expedi- tion to himself, oould not bear to have even bi«c*

father for a partner in the undertaking. He therefore entered into a confederacy with the king of France, which obliged Henry to give up all thoughts of the crusade, to defend his own dominions. The event of the war proved very unfortunate for Henry, who lost several towns, and narrowly escaped falling into the hands of the enemy. At last a treaty was concluded at the intercession of the duke of Burgundy, the count of Flanders, and the archbishop of Rheims, but upon terms very humiliating to the king of England. It was agreed, that Richard should marry the princess Adelais, and be crowned king of England during the lifetime of his father; that Henry should pay 20,000 merks to the king of France, as a compensation for the charges of the war ; that his own barons should engage to make him observe this treaty, and, in case of his violating it, join Philip and Richard against him ; and that all his vassals who had espoused the cause of Richard should receive an indem- nity. These terms, mortifying as they were, Henry bore with patience ; but when, upon re- ceiving a list of the barons that were to be par- doned, he found his own son John, who was his favorite, among them, he could no longer sup- port his grief. He broke out into the most la- mentable expressions of despair, cursed the day in which he received his miserable being; and bestowed on his ungrateful children a maledic- tion which he could never afterwards be prevailed upon to retract. Soon after he fell into a linger- ing fever occasioned by his grief; of which he died on the sixth of July, 1189, in the fifty-eighth year of his age, and thirty-fifth of his reign. His natural son, Geoffrey, who alone had behaved dutifully towards him, attended his corpse to the nunnery of Fontevrault, where it lay in state in the abbey church. Next day Richard, who came to visit the dead body of his father, was

struck with remorse at the sight; and some writers state, that at his approach, thej)lood gushed out at the mouth and nostrils of the corpse.

*Richard I. succeeded his father without op- position, and, on his accession, set his mother Eleanor (who had been again confined) at liberty. A romantic desire for adventures, and an im- moderate zeal for the external rites of religion, were the ruling passions 01 *he time. By the first of these Richard was inflamed to the highest degree, and therefore behaved as if the whole design of his government had been to attempt the recovery of the Holy Land from the infidels. The superstition of the people showed itself in a most violent and tragical manner, on the very day of the king's coronation. The Jews were the objects of universal hatred, so that Richard had issued orders forbidding any of them from appearing at that ceremony. But some of them, bringing him large presents from their nation, presumed, notwithstanding these orders, to ap- proach the hall in which he dined. Being discovered, they were exposed, to the insults and injuries of the bystanders ; in consequence of which they fled, and were pursued by the peo- ple. A report was spread that "the king had given orders to massacre all the Jews. This supposed "OTxraaTifl was executed in the most cruel itanncr. Multitudes were slaughtered in*

the city of London, and this example was followed in most of the chief towns in England. Five hundred Jews had retired into York castle for safety ; but, finding themselves unable to defend the place, they murdered their wives and child- ren— threw the dead bodies over the wall against their enemies, who attempted to scale it — and then, setting fire to the houses, perished in the names. The gentry in the neighbourhood, who were all indebted to the Jews, ran to the cathedral, where their bonds were kept, and made a solemn bonfire of them before the altar.

Richard immediately began to take measures for his expedition into Palestine. His father had left him 100,000 merks; and this sum he aug- mented by every possible expedient, however pernicious to the public or dangerous to his own authority. He made sale of the revenues and manors of the crown, and several offices of the greatest trust and power. Liberties, charters, castles, were given to the best bidders. His friends warned him of the danger attending his venality ; but he told them he would sell the city of London itself, if he could find a purchaser. A zealous preacher of those times, being em- boldened to remonstrate against the king's con- duct, advised him to part with his three daughters, pride, avarice, and sensuality. To this

Richard readily replied, ‘ You counsel right, my friend : and I have already provided husbands for them all. I will dispose of my pride to the templars ; my avarice to the monks ; and as for my sensu- ality, the clergy shall share that among them.’ At length the king, having collected together a sufficient supply, and even sold his superiority over Scotland for a moderate sum, set out for the Holy Land ; whither he was impelled by re- peated messages from the king of France, who was ready to embark in the same enterprise. An account of his exploits in this expedition is given under the articles ACRE, CYPRUS, and EGYPT. Having at last concluded a truce with Saladin, he set out on his return for England. He was, however, at a loss how to proceed. He durst not return by the way he came, as this would have put him in the power of the king of France, between whom and himself an irrecon- cileable enmity had taken place. He, therefore, decided upon a more northern course, and took shipping for Italy, but was wrecked uear Aqui- leia. Thence he travelled towards Ragusa, and resolved to make his way through Germany in the habit of a pilgrim. But his expenses and liberalities having betrayed his rank, he was ar- rested by Leopold duke of Austria, who actually loaded him with chains. This prince had served under Richard at the siege of Acre, where hav- ing received some disgust, he took this base method of revenge. Henry VI., emperor 01 Germany, was then also an enemy to Richard, on account of his having married Berengaria, the daughter of Tancred king of Sicily. He, there- fore, offereu a large sum of money to Leopold to deliver his captive up to him. Meantime Eng- land was in great confusion. Richard had left it under the direction of Hugh bishop Oi Durham, and Longchamp bishop of T’y. The tempers of these prelates being ven different.

preat animosity arose between them. Longchamp at last arrested his colleague, and obliged him to lesign his power. The king, by many letters, commanded Longchamp to replace his coadjutor, but to no purpose. \ hen the situation of the king became uncertain, Longchamp tyrannised \o such a degree, that John, the king’s brother, thought proper to oppose him. He then left the kingdom ; and upon this the archbishop of Rou en was made justiciary in his room. The king of France, informed of these dissensions, strove to increase them as much as possible ; and had even almost prevailed upon John to throw off his allegiance, by promising to put him in pos- session of all Richard’s continental dominions. Hut when the English received the news of Richard’s captivity, a general

indignation was excited against his enemies, among whom the greatest and most artful was his own brother John. On the very first invitation from the court of France, he went abroad, and held a consultation with Philip, the object of which was the perpetual captivity of his brother. He promised to de- liver into Philip's hands a great part of Normandy; and, in return, he received the investiture of all Richard's transmarine dominions : it is even said, that he did homage to the French king for the crown of England. In consequence Q? this treaty, Philip invaded Normandy, and made considerable progress in the conquest of it. He was, however, at last repulsed by the earl of Leicester, who was now returned from the Holy Land, and a truce was concluded on condition of the French king receiving 20,000 merks, and the English putting four castles into his hands as security for the payment.

John, who had come 'over to England, met with still less success in his enterprises. He was only able to make himself master of the castles of Windsor and Wallingford ; but when he came to London, and demanded the kingdom as heir to his brother, of whose death he pretended to have received certain intelligence, he was rejected by all the barons, and measures were taken to oppose and subdue him. The defence of the kingdom was so well provided for, that John, after some fruitless efforts, was obliged to con- clude a truce with his opponents ; and, before the termination of it, he thought proper to retire to France, where he openly acknowledged his alliance ˆ with Philip. At last the efforts of Richard's enemies proved ineffectual to detain him in captivity. He was brought before the diet of the empire at Worms, where the emperor Henry charged him with many crimes and mis- demeanors ; but the king replied with so much spirit and eloquence, that the German princes exclaimed loudly against the conduct of the emperor; the pope threatened him with ex.com- munication; and Henry, who had hearkened to the proposals of the king of France and prince John, found that it would be impossible for him to execute their base purposes, or detain the king of England any longer. He therefore con- cluded a treaty with him for his ransom, at the price of 1 50,000 merks (about £300,000 of our money), of which 100,000 merks were to be paid immediately, and sixty-seven hostages delivered for the rer.iaindcr. The money for the kind's

ransom was most cheerfully raised by the English and the churchmen were in this instance most liberal to their sovereign. The churches and monasteries melted down their plate to the amount of 30,000 merks ; the bishops, abbots, and monks, paid a fourth part of their yearly rent; the parochial clergy contributed a tenth part of their tithes ; and, the requisite sum being collected, queen Eleanor and

Walter archbishop of Rouen set out with it for Germany — paid the money to the emperor and duke of Austria, at Mentz — and, delivering them hostages for the remainder, freed Richard from his captivity. His escape was very critical. Henry had been de- tected in the assassination of the bishop of Liege, a'nd in an attempt of the same nature on the duke of Louvame ; and finding himself extremely ob- noxious to the German princes, on account of these practices, he had determined to seek the alliance of the French king, and to detain Richard in prison notwithstanding the sum he had received. He therefore gave orders that the king of England should be pursued and arrested ; but he had, happily, already embarked at the mouth of the Scheldt, and was out of sight of land when the emperor's messengers reached Antwerp. The king of France no sooner heard of Richard's deliverance than he wrote to John, his confederate : 'Take care of yourself : the devil is broke loose.'

King Richard returned from captivity on the 20th of March 1194, and was received with the utmost joy by his subjects. He had been but one day landed, when his treacherous brother John came to make his submission. At the in- tercession of queen Eleanor he was received into favor. ' I forgive him,' said the king, ' and hope I shall as easily forget his offences as he will my pardon.' Richard was impatient to revenge himself on the king of France, and therefore in- stantly made war upon him. But, though both kings were inflamed with the most violent resentment,they found it impossible to engage their powerful barons heartily in their cause. The war, therefore, produced no remarkable event ; and, in 1195, was concluded by a truce for five years. On some slight occasion it was ready to break out anew, when the pope's legate interposed, and a treaty was about to be concluded. King Richard, in the mean time, was wounded by an arrow at the siege of Chalus, a castle of Limoges. The wound was not in itself dangerous ; but, being unskilfully treated, a mortification ensued, and the king expired on the 9th April 1199, in the tenth year of his reign and forty-second of his age. By his will he left the kingdom to his brother John, but distributed a fourth part of his treasure among his servants.

John succeeded to the crown of England without opposition, but soon found his affairs embarrassed on the continent. The king of France, who, during the life of Richard, had always supported the pretensions of his brother, now afforded similar support to the claims of prince Arthur, the son of Geoffrey, then about twelve years of age. There was in this, however, so evident a regard to his own interest, that Constantia, the mother of the young prince, submitted herself and her son at once to Join.,

who detained them in Mans. The new king was weak, tyrannical, cruel, and treacherous. He is represented as exhibiting almost every bad quality of a prince ; and his conduct soon ren- dered him universally odious. Imagining him- self secure on the side of France, he indulged his passion for Isabella, the daughter and heiress of the corait of Angouleme, although his queen, the heiress of the family of Gloucester, was still living, and Isabella was contracted to the count de la Marche. John persuaded the count de Angouleme to carry offhis daughter from her hus- band, at the same time that he procured a divorce from the queen. Thus he at once incurred the displeasure of the pope, and of the count de la Marche, and a powerful confederacy was formed against him. John had neither courage nor po- licy sufficient to keep his barons in awe : he now, therefore, hired a number of ruffians, whom he called his champions, to fight duels with them on the slightest pretences : but they in general declined to meet their opponents, as far below their rank, and dangerous combinations were formed against the king's authority. The murder of prince Arthur rendered John still more gene- rally detested. The young prince with his mo- ther had fled to the coxirt of France, where they were received with the greatest kindness, and ihe enterprises of the French forces on their behalf were attended with considerable success ; when Arthur himself had the misfortune to be taken prisoner : all the other captives were sent to England, but the prince was shut up in the castle of Falaise, and from that time was never heard of. It was universally believed that John had murdered him with his own hand ; and this inflamed the general resentment against him to such a degree, that he soon after lost all his French provinces. In 1205 the duchy of Nor- mandy itself was conquered by Philip, and John was forced to fly with disgrace to England. The king now resolved to wreak his vengeance upon the barons, who, he pretended, had de- serted his standard in Normandy. For this reason he levied large sums on their estates, in order, as he said, to undertake an expedition to the continent. This expedition, however, he se- veral times capriciously deferred ; and, having once ventured out to sea, returned again without making the smallest attempt. At last he landed at Rochelle, and burnt the city of Angiers ; but, hearing that the enemy were preparing to op- pose him, he returned without attempting any thing further. Such irresolute and cowardly behaviour increased the disgust of all ranks of his English subjects; but the Norman princes had so far extended the prerogatives of the crown, that the barons, however discontented,

durst not yet attempt to change the form of go- vernment. By entering into controversy with the church John completed his ruin. The clergy, who had for some time acted indepen- dently of the crown, and obtained in general a confirmation from the pope of their elections of each other, were still not unanimous among themselves. The election of the archbishops had been a subject of continual dispute be- tween the suffragan bishops arid the Augustine monks. At this time the see of Canterbury

became vacant, and me Augustine monks, in a private manner, elected Reginald, their superior, to this high office. The bishops in vain ex- claimed against the election, as a manifest inno- vation of their privileges : a furious theological contest was the only result : but John now very imprudently espoused the cause of the suffragan bishops; in consequence of which De Grey, bishop of Norwich, was also chosen archbishop of Canterbury. The cause was appealed to Home; and pope Innocent III., seizing with avidity an opportunity of extending his power, commanded the monks to choose a third arch- bishop, in the person of cardinal Stephen Lang- ton, an Englishman, then at the court of Rome. The power of nominating an archbishop of Can- terbury (a person at this period of almost equal authority with the king) was an acquisition to the papal authority not to be slighted. John, however, was resolved not to submit to this; but he had not judgment sufficient to conduct his opposition. He violently expelled the monks from their convents, and seized upon their re- venues. The pope threatened in return to put the whole kingdom under an interdict. The prelates therefore now threw themselves on their knees before the king, and in the most earnest manner entreated him to avoid the resentment of the holy tribunal, by receiving the primate of the pope, and restoring the monks to their con- vents. John, on this, broke out into the most violent invectives. He swore by God's teeth (his usual oath), that if the kingdom was put under an interdict he would banish the whole body of the clergy, and confiscate all their pos- sessions. The pope at last, finding he might do it with safety, issued forth his threatened sen- tence. The consequences that ensued are at this period of the world almost incredible. A stop was immediately put to divine service ; and the administration of all the sacraments, except baptism. Throughout England the church doors were shut, and the images of the saints laid on the ground. The dead were refused Christian burial, and were thrown into ditches and on the highways ; while marriage was celebrated in the church-yards, and the people prohibited the use of meat and their ordinary amusements, as in times of public penance. The clergy affected to de- plore the unhappy state of the nation, of which they were so largely

the cause ; while John, in revenge, imprisoned all their concubines, and treated the adherents of Langton with the ut- most rigor. His furious and misguided efforts proved, however, totally ineffectual. He had scarcely a friend in the whole nation ; and in 1 209, therefore, the pope derioxinced a sentence of personal excommunication against him. This was soon followed by another, absolving all his subjects from their allegiance, and declaring every one to be excommunicated who had any commerce with him at his table, council, or even in private conversation. The king, exasperated by these indignities, wreaked his vengeance on his unhappy subjects, who>e affections he ought rather to have attempted to conciliate. The pope, therefore, further proceeded to execute the full measure of his wrath on this prince, by be- stowing his kingdom on Philip of France. H**

ENGLAND.

even published a crusade All over Europe a-ˆiinst the king of England, exhorting the nobility, knights, and men of every condition to take up arms against him as an usurper, and to enlist under the French banner. Philip was not less active on his part : he summoned all the vassals of the crown to attend him at Rouen ; and having collected a fleet of 1700 vessels, was ready, in 1213, to invade England. But the pope had now in his turn overstretched his power ; and had the nation been governed by a pnnce of any common prudence or resolution, the domineering influence of the clergy would have been for ever broken. The people, how- ever superstitious, were not disposed to submit tamely to be given away by the pope from one master to another, and this, added to the natural antipathy subsisting between the French and English, brought around John, in spite of his previous tyranny, an army of 60,000 men. But the pope was too good a politician to suffer matters to be carried to extremities. He pro- mised himself more advantages from the sub- mission of John than from an alliance with Philip ; and therefore sent over his legate to England, under pretence of conferring with the barons, but in reality to hold a conference with the English monarch. He represented to this forlorn prince the numbers of the enemy, the hatred of his own subjects, and the secret confederacy there was every where against him ; intimating that there was but one way to secure himself from the impending danger — namely, to put himself under the protection of the pope, who was a merciful father, and ever willing to receive a penitent. The abject and irresolute spirit of John submitted to this piece of arro- gance : he took an oath to obey whatever the pope should command ; and in consequence of this added another, the most extraordinary per- haps in the annals of

history. It was expressed in the following words : ‘ I, John, by the grace of God king of England, and lord of Ireland, in order to expiate my sins, from my own free will, and the advice of my barons, give to the church of Rome, to pope Innocent, and his successors, the kingdom of England, and all other preroga- tives in my crown. I will hereafter hold them as the pope’s vassal. I will be faithful to God, to the church of Rome, to the pope my master, and his successors legitimately elected. I pro- mise to pay him a tribute of 1000 merks ; to wit, 700 for the kingdom of England, and 300 or the kingdom of Ireland.’ This oath was taken by the king before all the people kneeling, and with his hands held up between those of the legate. Having then agreed to re-instate Lang- ton in the primacy, he received tht crown, which he had been supposed to have forfeited ; while the legate, to add to his former insolence, trampled under his feet the tribute which John had consented to pay. The king of France, enraged at this behaviour of the pope, now re- solved to execute his project of conquering Eng- land, in spite of him and all his censures. His tieet, however, was attacked in their harbours by the English, who took 300 vessels, and de- stroyed about 100 more; while Philip, finding M impossible to prevent the rest from falling into

the hands of the enemy, set fire to them himself, and was thus obliged to give up all hopes of success.

John, thus freed from immediate danger, re- commenced the cruel and tyrannical measures which had before rendered him odious to his subjects. His scandalous subjection to the clergy now gave the barons an opportunity of exerting themselves to reduce the enormous prerogatives of the crown. Their designs were also facilitated by the concurrence of Langton, the primate, who seems to have shown a sincere and remark- able regard for the interests of the kingdom. At a synod of his prelates and clergy, convened in St. Paul’s, on pretence of examining into the losses of some bishops who had been exiled by John, he privately conferred with a number of barons, to whom he expatiated upon the vice and injustice of their prince. He showed them a copy of Henry the First’s charter, the only one in the kingdom, which had been buried in the rubbish of an obscure monastery, and exhorted the barons to insist on a renewal of it. This they solemnly swore to do. The same agreement was aftei- wards renewed at a more numerous meeting of barons summoned by Langton at St. Edrnonds- bury. Here it was resolved, that at Christmas they would prefer their common petition in a body ; and in the mean time they separated with a design to put themselves in a posture of de- fence, and enlist men. In the beginning of January, 1215, they repaired to London, ac- coutred in their military garb and

equipage, and presented their petition to the king, alleging that he had promised to grant a confirmation of the laws of Edward the Confessor, at the time he was absolved from his excommunication. John resented their presumption ; and required a pro- mise under their hands and seals, that thev would never demand, or attempt to extort, such pri- vileges for the future. This they refused with such unanimity and resolution, that the king de- sired time to consider their demands. He pro- mised, that, at the festival of Easter, he would give a positive answer to their petition ; and offered them the archbishop of Canterbury, the bishop of Ely, and the earl mareschal, as sure- ties for fulfilling his engagements. The barons accepted of his securities, and departed peace- ably ; but John had no design of complying with their desires. He had recourse to the clergy, whose power he had seen and felt in so many instances, and basely courted their favor, by granting them a charter, establishing those rights of which they were already in the posses- sion. To ingratiate himself still farther with this body, he took the cross, and appealed to the pope against the usurpation of the barons. The pope wrote letters to England, reproaching the primate and bishops with favoring these dissen- sions ; and commanded them to promote peace between the parties. He exhorted the barons to conciliate the king, not with menaces, but with humble entreaties ; and promised, upon their obedience, to interpose his own authority in fa- vor of such of their petitions as he should find to be just. At the same time he annulled their association, and forbade them to enter into any confederacy for the future. To these romon-

etrances the barons paid no regard, knowing that the fulminations of the court of Rome would be of little avail, unless they were seconded by the clergy. After waiting till Easter, when the king promised to return them an answer, they Tnet by agreement at Stamford. Here they as- sembled a force of above 2000 knights, and a prodigious number of foot soldiers, and then marched to Bracklcy, about fifteen miles from Oxford, where the court then resided. John, on hearing of their approach, sent the archbishop of Canterbury, the earl of Pembroke, and others of his council, to know the particulars of their application. The barons delivered a schedule containing the chief articles of their demands, founded on the charters of Henry and Edward ; but which were in the highest degree displeasing to the king. He burst into a furious passion, asked the barons why they did not also demand his kingdom, and swore that he would never comply

with such exorbitant requisitions. The confederates then chose Robert Fitzwalter for tlieir general ; whom they dignified with the title of ‘ Mareschal of the army of God and of the holy church.’ They laid siege to Northampton, fook Bedford, and were joyfully received in London. They wrote letters to all the nobility and gentry who had not yet declared in their fa- vor, threatening their estates with devastation in case of refusal or delay. In the mean time the king was left at Odiham in Surry, attended only by seven knights. He vainly endeavoured to avert the storm by the mediation of his bishops and ministers. He appealed to Langton against the barons, not suspecting that he was engaged in the confederacy ; and desired him to fulminate the church censures against those who had made war upon their lawful prince. Langton declared that he would pass no censure where he found no delinquent ; but said, that much might be done, if the king would dismiss some foreign auxiliaries which he had lately brought over. Upon this, John disbanded a body of Germans and Flemings, whom he had hitherto retained in h is service, and Langton refused to excommunicate a single baron. The king, being now defence- less, was obliged to comply with the demands of his subjects. A conference was accordingly ap- pointed, and all things were adjusted for this most important treaty. The king’s commis- sioners met the barons at a place called Runny- mead, between Staines and Windsor ; a spot which is yet held in reverence as that on which the standard of freedom was first erected in England. Here the king signed MagnaCharta; the maxims of which continue in force to this day, and are regarded as the great bulwark of British liberty. See MAGNA CHARTA.

This charter, however, at the time that it was made, secured liberty to the clergy, barons, and gentlemen, much more than to the bulk of the people, who did not for a long time obtain any privileges of importance. Freedom of elections was secured to the clergy ; and it was deter- mined, that fines on them for any offence, should be laid on in proportion to the estates, and not the value of their benefices. The privileges se- cured to the barons were, either abatements in <)i« rigor of the feudal laws, or relief from

arbitrary and ambiguous decisions before the courts. It was also decreed, that barons should recover the lands of their vassals, even though forfeited by felony, after having been in posses- sion of the crown for a year and a day ; and no tax was to be imposed without consent of the great council of the nation, excepting in case of the captivity of the king, the knighting of his eldest son, or marrying his eldest daughter. No land belonging to any baron was to be seized for a crown debt, unless the possessor had not per- sonal property

enough to pay it ; neither was any vassal to be allowed to sell so much of his land as to incapacitate him from performing the necessary service to his lord. It was also de- termined that, when the great council of the na- tion was called, the prelates, earls, and barons, should be summoned by a particular writ, and the lesser barons should receive a summons from the sheriff. In favor of the people it- was stipu- lated, that they should have from the barons all the immunities and privileges granted by the king to the former. Merchants were to be al- lowed to carry on their business without any arbitrary tolls or impositions, and to go out of the kingdom and return at pleasure. The goods of every freeman were to be disposed of accord- ing to his will ; or, if he died intestate, the nearest heir should succeed him. No carts, horses, or wood, were to be taken by the crown officers without the consent of the owner. The king's courts were to be stationary, and no delay to be made in doing justice to every one ; no freeman should be taken or imprisoned, dis- possessed of his free tenement, outlawed, or ba- nished, unless by the legal judgment of his peers, &c. It was likewise stipulated, that London should remain in the hands of the barons, and the tower be consigned to the primate, till the 15th of August following; or till the articles of the charter should be fulfilled. To give the more security for this, the king allowed them to choose twenty-five of their own number, to whose authority no limits were set either in ex- tent or duration. If any complaint were made of a violation of the charter, either by the king or his officers, any four of the barons might ad- monish the king to redress the grievance; and, if satisfaction were not obtained, they might as- semble the whole council of twenty-five ; and they, in conjunction with the great council, were empowered to compel him to fulfil the charter. In case of his resistance, they had liberty to levy war against him, attack his castles, and use every kind of violence, except against his person, or those of the queen or children. All men through- out the kingdom were bound, under the penalty of confiscation, to swear obedience to the twenty- five barons ; and the freeholders of each county were to choose twelve knights, whose business it was to report such evil customs as ought t6 be redressed in terms of Magna Charta. But al- though John had thus obliged himself by writ- ing, to allow liberty to his subjects, he had no disposition to suffer them to enjoy it. The sense of subjection to his own vassals sunk deep in his mind. He became sullen, silent, and re- served. He shunned the society of his former friends ; and retired to the Isle of Wight, as if

to hide his disgrace in solitudf ; but, in reality, to meditate revenge against his enemies. He now, therefore, sent to the continent to enlist a great body of mercenary troops, and made com- plaints to the pope of the conduct of the barons. The pontiff is said warmly to have espoused his cause ; a bull was sent over, annulling the whole charter ; at the same time the foreign troops ar- riving, the king once more found himself in a condition to demand his own terms from his subjects. The barons had made no preparations for war, not suspecting the introduction of a foreign enemy. The king, therefore, was for some time undisputed master of the field, and the most horrid cruelties were committed by his army. The nobility, who had been most active in procuring the great charter, fled with their families to Scotland, where they obtained the protection of king Alexander II. by doing ho- mage to him. The barons, being totally unable to raise an army capable of contending with that of John, applied to their old enemy Philip of France, offering to acknowledge his eldest son Louis for their sovereign, on condition of his protecting them from the fury of John and his mercenaries. This proposal the French king accepted with joy ; and, twenty-five hostages which he demanded being sent over, began to make the most diligent preparations for an ex- pedition, regardless of the menaces of the pope. The first troops who came to the assistance of the barons, were only a body of 7000 men ; but, soon after, Louis, with a powerful army landed at Sandwich. The effect of this invasion was, that most of John's foreign troops deserted, re- fusing tc serve against the heir of their monar- chy. Many considerable noblemen also left his cause, and Louis daily gained ground. He ad- vanced to London, where the barons and burghers did him homage, and took the oath of allegiance, after he had sworn to confirm the liberties and privileges of the people. His imprudence, hov – ever, in preferring on all occasions his French to his English subjects, soon excited jealousies, and proved very prejudicial to his cause. These were greatly increased by the confession of the count de Melun, one of his courtiers, who de- clared on his death-bed, that it was Louis's de- sign to exterminate the English barons as traitors, and to bestow their dignities and estates upon the French nobles who had accompanied him. A considerable desertion took place among Louis's party; so that John once more found himself in a condition to make an effort for the crown. He resolved to penetrate into the heart of the kingdom ; and, for this purpose, departed from Lynn, and took the road towards Lincoln- shire at the head of a great body of troops. He became entangled, however, in the marshy dis- tricts of that singular part of the country : his road was described as lying along the shore, but the period of its being regularly overflowed by the tide,*

was either through design or negli- gence concealed from him, and he lost all his carriages, treasure, and baggage by the influx of the sea. He himself escaped with the utmost difficulty, and arrived at the abbey of Swines- head ; where his grief for the loss he had sus- tained, and the distracted state of his affairs,

threw him into a fever, which soon appeared to be attended with fatal symptoms. He died at Newark in the year 1216, the fifty-first of his age, and eighteenth of his reign, leaving two legitimate sons : Henry, who succeeded him on the throne, and was about nine years of age; and Richard, who was about seven. He left also three daughters ; Jane, married to Alex- ander II. king of Scotland ; Eleanor, countess of Pembroke ; and Isabella, married to the em- peror Frederic 11.

The earl of Pembroke when John died was mareschal of England, and at the head of the army; in times of such turbulence, of conse- quence, he was regarded as at the head of the state. Having continued faithful to his late fa- ther-in-law in his greatest reverses of fortune, he now determined to support the authority of the infant prince Henry ; and carried him, therefore, immediately to Gloucester, where the ceremony of his coronation was performed by the bishops of Bath and Winchester, in the presence of Gualo the papal legate, and as many of the nobles as could be assembled.

The young prince was obliged to swear fealty to the pope, and renew the homage which his father had done for the kingdom ; after which the earl of Pembroke was chosen protector. Till he arrived at years of maturity, the transactions of Henry Ill's reign therefore can only be con- sidered as those of his tutors. Pembroke, a nobleman, it appears, of unspotted honor and integrity, caused him to grant a new charter of liberties, consisting of the concessions extorted from John, with sorce alteralkxns ; and the next year it was renewed, with additional articles. Thus these famous charters embodied thf. sub- stance of most of our present legal maxims; and they were, during many generations, esteemed the ramparts of national liberty and indepen- dence. Securing the rights of all orders of men, they were anxiously defended by all, and became the basis of the English constitution; a kind of contract, which both limited the authority of the king, and ensured the conditional allegiance of his subjects. If often violated, they were stll re-claimed and re-enforced by the nobility and the people ; and, as no precedents were supposed valid that infringed them, they rather acquired, than lost authority, from the frequent attempts to subvert them. These charters were wisely made use of by Pembroke as arguments to dravv off the malecontent

barons from their allegiance to Louis. He insisted that, whatever jealousy they might have entertained against the late king, a young prince, the .ineal heir of their juicient monarchs, had now succeeded to the throne, without inheriting either the resentments or the principles of his predecessor : That the desperate expedient, which they had employed, of calling in a foreign potentate, had, happily for them, as well as for the nation, failed of success ; and it was still in their power, by a quick return to their duty, to restore the independence of the kingdom, and secure that liberty for which they so zealously contended : that, as all past offences of the barons were now buried in oblivion, they ought, on their part, to forsret their complaints against their late sovereign ; who, it' he had been

anywise blameable in his conduct, had left to his son the salutary warning to avoid his paths : And that, having now obtained a charter for their liberties, it was their interest to show, by their conduct, that that acquisition was not incompati- ble with their allegiance; and that the rights of the king and people, so far from being hostile and opposite, might mutually support and sustain each other. These considerations, enforced by Pembroke's known character of constancy and fidelity, had a very great influence on the barons. Most of them began to negociate with him, and many actually returned to their duty. Meantime Louis continued to disgust those of his own party by the preference which he visibly gave to the French. Though he went over to France, therefore, and brought fresh succours, he found that his influence was much weaker than before, by the desertion of his English confederates ; and that the death of John had, contrary to his ex- pectations, occasioned the total ruin of his af- fairs. In a short time Pembroke was so much strengthened by deserters from Louis's party, that he ventured to invest Mount Sorrel; though, upon the approach of the count de Perche with the French army, he desisted from that enter- prise. The French general immediately marched to Lincoln ; and, being admitted into the town, laid siege to the castle, and soon reduced it to extremity. Pembroke summoned his forces from every quarter, in order to relieve this important place ; and appeared so much superior to the French, that they shut themselves up within the city. But the garrison of the castle, having re- ceived a strong reinforcement, made a vigorous sally upon them, while the English army as- saulted them from without. The French were totally routed ; the count de Perche with only two persons more were killed ; but many of the chief commanders, and

*about 400 knights, were made prisoners. On the news of this event, Louis raised the siege of Dover, and retired to London ; where he received intelligence of a new disaster, which at once put an end to his hopes. A French fleet, which carried a strong reinforce- ment, had appeared on the coast of Kent ; where they v/ere attacked and repulsed with considera- ble loss, by Philip D'Albiney. He is said to hove gained the victory by the following strata- gem. Having got the wind of the French, he came down upon them with violence ; and, throwing in their faces a great quantity of quick- lime, which he purposely carried on board, they were so blinded as to be disabled from defending themselves. This misfortune urged the barons who yet adhered to Louis, to make their imme- diate submission to Pembroke ; and Lonis him- self, finding his affairs desperate, was glad to make his escape home. He therefore concluded a peace with the Protector, and promised to" evacuate the kingdom ; only stipulating, in re- turn, an indemnity to his adherents, and a resti- tution of their honors and fortune**

The king, on arriving at his majority, was found much less fitted to govern the English than his education might have taught them to anticipate. Though his temper was mild and humane, he was very weak, fickle, and irresolute. His subjects were disgusted by the caresses he

bestowed on foreigners ; and this feeling rose to such a height, that the barons refused to assemble in the general council at his desire. When com- manded to do so, they sent a message to Henry desiring him to dismiss his foreign advisers; otherwise they would drive both him and them out of the kingdom. Nothing, however, of great moment occurred till 1255, when the pope in- volved this young monarch in a scheme for the conquest of Naples, which for many years was productive of great expense and trouble, as well as disgrace to the nation. The court of Rome had reduced the kingdom of Sicily to the same state of feudal vassalage which she affected to exercise over England ; but Mainfroy, a usurper, under pretence of governing the kingdom for the lawful heir, had seized the crown, and was re- solved to resist the pope's authority. The latter therefore, finding that his own force alone was not sufficient to maintain his ascendancy, first had recourse to Richard, earl of Cornwall, the king's brother, who was considered the richest prince in Christendom. To him the pope offered the kingdom of Sicily, upon the sole condition of his conquering it from the usurper. Richard being too wise or too irresolute to accept this offer, the pope next applied to Henry, and offered him the crown of Sicily for his second son Edmund. Dazzled by the proposal, and without either re- flecting

on the consequences, or consulting his brother or the parliament, Henry gave the pope unlimited credit to expend whatever sums he thought necessary for the conquest of Sicily : and his holiness of course was not backward in exert- ing this privilege. He now also, in aid of it, asserted his apostolical authority to the utmost, in extorting money from the English. A crusade was published, requiring every one who had taken the cross against the infidels, or even vowed to advance money for that purpose, to support the war against Mainfroy, whom the pope accused of being a more terrible enemy to the Christian faith than any Saracen. A tenth on all the ecclesiastical benefices in England was levied for three years ; and orders were given to excommunicate the bishops who did not make punctual payment. A grant was made to the king of the goods of intestate clergymen, as well as of the revenues of vacant benefices and of non-residents. These taxations, however grievous, were submitted to with little murmuring ; but another suggested by the bishop of Hereford ex- cited the most violent clamors. This prelate, who at that time resided at Rome, drew bills on all the abbots and bishops of the kingdom, to the amount of no less than 150,540 merks, which he granted to Italian merchants in consideration of the money they had advanced for the support of the Sicilian war. As it was apprehended that the English clergy would not easily submit to such an extraordinary demand, a commission was given to Rustand, the pope's legate, to use his authority. An assembly of the prelates and ab- bots was accordingly summoned ; who, on hear- ing the state of affairs, and the amount drawn on them by the united papal and regal authori'y, were struck with the utmost surprise and indig- nation. A violent altercation took place ; duri £ vthu-h the legate told them, that all ecclesiastical

benefices were the property ot the pope, and that he might dispose of them as he pleased. The aflair ended, however, in the submission of the clergy ; but the barons still continued refractory, and for some time answered the king's demands of supplies with expostulations ; urging his par- tiality to foreigners, and the various injuries the nation had sustained from the servants of his crown. The great council of the liation, which had lately obtained the name of parliament, was there- fore dissolved, and another called, but with as little success as before. The king, however, had in- volved himself in so much debt, that a large sup- ply was absolutely necessary ; and, as this could not l>e obtained from parliament, he was now reduced

to the humiliating expedient of making a personal application to such of his subjects as he thought most attached to him. At length the barons, perceiving his exigencies, seemed wil- ling to afford him relief; and, upon his promising to grant them a plenary redress of grievances, a very liberal supply was obtained, and he renewed their charters with more than usual solemnity. All the prelates and abbots were assembled with burning tapers in their hands; Magna Charta was read in their presence ; and they denounced sentence of excommunication upon all who should infringe upon its decisions. They then extinguished their tapers on the ground, exclaim- ing, ‘ May every soul that proves false to this agreement so consume and corrupt in hell.’ The king subjoined, ‘So help me God, I will in- violably keep all these things, as I am a man, as I am a Christian, as I am a knight, and as I am a king crowned and anointed.’ No sooner, however, had Henry received the supplies pro- mised, than he forgot this solemn engagement, again put his confidence entirely in foreign counsellors, and evaded or broke through all the charters he had given. This conduct rendered him so obnoxious to the barons, that Simon Mountfort, earl of Leicester, a man of a violent and ambitious temper, determined to attempt an innovation in the government. He formed a powerful confederacy against the king, and the designs of the conspirators were so effectually matured, that, in 1258, when Henry had sum- moned a parliament in expectat.on of receiving supplies for his Sicilian project, the barons ap- peared in the hall completely armed. The king, struck with this unusual appearance, asked them what was their purpose, and whether they in- tended to make him their prisoner? Roger Bigod, earl Mareschal, answered in the name of the rest, that he was not their prisoner; that they even intended to grant him large supplies, in order to fix his son on the throne of Sicily ; that they only expected some return for this ex- pense and service; and that as the kins; had fre- quently made submissions to the parliament, had acknowledged his past errors, and still al- lowed himself to be carried into the same path, h«> must now yield to more strict regulations, and confer authority on those who were able and wil- ling to redress the public grievances. Henry in- stantly assured them of his intentions to grant them all possible satisfaction ; and for that pur- pose summoned another parliament at Oxford, to digest the new plan of government, and to

elect proper persons who were to be entrusted with the chief authority. This assembly, after- wards called the mad parliament, went very expeditiously to work in the business of refor- mation : twenty-four barons were appointed, with supreme authority, to reform abuses, and Leicester was placed at their head. Their first

step was to order four knights to be chosen out of each county, who should examine into the state of their respective constituents, and should attend at the ensuing parliament tt give information of their complaints. They or- dained that three sessions of parliament should be regiilarly held every year ; that a new high sheriff should be elected annually ; that no wards nor castles should be entrusted to foreigners, no new forests made, nor the revenues of any coun- ties let to farm. These constitutions were so just, that some of them remain to this day. But the parliament having thus obtained the sovereign power, took care not to part with it again. They not only protracted the time of their sitting un- der various pretences ; but at last had the effron- tery to impose an oath upon every individual of the nation, declaring an implicit obedience to all the statutes executed, or to be yet executed, by the barons who were thus appointed as rulers. They not only abridged the authority of the king, but the efficacy of parliament also ; giving up to twelve persons the whole parliamentary power between each session. These usurpations were «rst opposed by the knights of the shire, whom they themselves had appointed, and who had for some time begun to be regularly assembled in a separate house, to consider of the national griev- ances. The first of them was the conduct of the twenty-four rnlers. They represented that, though the king had performed all that was required of him, the barons had hitherto done nothing on their part that showed an equal regard for the people ; that their own interest and power seemed the only aim of all their decrees ; and they now called upon the king's eldest son, prince Edward, to interpose and save the sinking nation. The prince was at this time about twenty-two years of age, and by his active and resolute conduct had inspired the nation with great hopes. He told those who made the application to him, that he had sworn to the late constitutions; and, on that account, though they were contrary to his own private opinions, he was resolved not to infringe them. At the same time, however, he sent a message to the barons, requiring them to bring their undertaking to an end, or other- wise to expect the most vigorous resistance to their usurpation? . On this the barons published a new code of 'aws, which, though it contained little that was material, would, it was supposed, for a while dazzle the eyes of the people, until •they could take measures to strengthen their authority. In this manner, under various pre- tences, they continued their power for three years ; until the whole nation loudly condemned their treachery, and the pope at last absolved the king and his subjects from the oath they had taken to obey them. Soon after this a parlia- ment was called, and the king was re-instated in his former authority. For a time, at least, the barons were obliged to submit, but the earl of

Leicester having joined the Welsh, who at this time made an irruption into England, the kingdom was reduced to the most deplorable situation. The pusillanimity of the king prevented any proper or decisive method being pursued for extricating the country from its difficulties ; at last, how- ever, a treaty was concluded with the barons on the following disgraceful terms. They were restored to the sovereignty of the kingdom, took possession of all the royal castles and fortresses, and even named the officers of the king's house- hold. On this they summoned a parliament to meet at Oxford, to settle the plan of their go- vernment; and now it was enacted, that the authority of the twenty-four barons should con- tinue not only during the life of Henry, but also during that of prince Edward. The latter, however, utterly rejected this scheme, and a civil war immediately ensued. The prince was at first successful ; but his impetuosity occa- sioned the loss of a battle, in which his father and uncle were taken prisoners, and he himself was ob- liged soon after to surrender to the ambitious earl of Leicester. After this the king was reduced to the most deplorable situation. His partisans were disarmed, while those of the earl kept themselves in an offensive posture. Leicester seized the estates of no fewer than eighteen of his own colleagues the barons ; engrossed to himself the ransom of all prisoners ; monopo- lised the sale of wool in foreign markets ; and at last ordained that all power should be exer- cised by nine persons, who were to be chosen by three, or the majority of them ; these three be.ng the earl of Leicester himself, the earl of Gloucester, and the bishop of Chichester. At last, the miserable condition to which the king and kingdom were reduced, proved the means of settling the government on a more secure foundation. Leicester, to secure himself, was obliged to have recourse to an aid, till now en- tirely unknown in England, namely, that of the body of the people. He called a parliament, where, besides the barons of his own party, and several ecclesiastics who were not proper tenants of the crown, he ordered returns to be made of two knights from every shire; and afso deputies from the boroughs, which had been hitherto con- sidered as too inconsiderable to be allowed any share in the legislation.

This parliament was called on the 20th of January 1256; and in it we find the first out- line of an English house of Commons ; an in- stitution which has ever since been justly con- sidered as the bulwark of British liberty. The new parliament was far from being so compliant to Leicester as he had expected. Many of the barons who

had hitherto adhered to his party, were disgusted with his boundless ambition; and the people began to wish for the re- establishment of royal authority. Leicester, at last, to make a merit of what he could not pre- vent, released prince Edward from his confine- ment, and had him introduced at Westminster hall, where his freedom was confirmed by the unanimous voice of the barons. But though Leicester had all the popularity of restoring the prince, he was yet politic enough to keep him guarded by his emissaries. At last, however,

he found means to make his escape. The earl of Gloucester, disgusted with Leicester,had retired from court, and went to his estates on the bor- ders of Wales. His antagonist pursued him, and to give the greater authority to his arms, carried the king and prince of Wales along with him. This furnished young Edward with the opportunity he had so long desired. Being furnished by the earl of Gloucester with a horse of extraordinary swiftness, he escaped from his guards, who were not able to come up with him ; and the appearance of a body of troops belonging to Gloucester soon put an end to their pursuit. The prince no sooner re- covered his liberty, than the royalists joined him from all quarters, and an army was soon assem- bled which Leicester could not withstand. This nobleman now found himself in a remote quarter of the kingdom, surrounded by his enemies and debarred from all communication with his friends by the river Severn, whose bridges Edward had broken down. In this extremity, he wrote to his son to hasten to his assistance from London, and the latter advanced to Kenil- worth; but here he was surprised, and his army entirely dispersed by prince Edward. The young prince, immediately after this victory, advanced against Leicester himself; who, ig- norant of the fate of his son's expedition, had passed the Severn in boats. He was by no means able to cope with the royalists, being outnumbered by them considerably, and was defeated at Evesham with great slaughter. Lei- cester himself, though he begged for quarter, was slain, together with his eldest son Henry, and about 160 knights and gentlemen. The old king had been purposely placed by the rebels in the front of the battle, where he was wounded and in great danger of being killed ; but, crying out, 'I am Henry of Winchester your king,' he was preserved and consigned to a place of security by his son. The body of Leicester being found among the dead, was barbarously mangled and then sent to his widow. This victory proved decisive in favor of the royal party. Almost all the barons hastened to make their submissions, and opened their gates to the king. The Isles of Axholme and Ely indeed ventured to hold out, but were at last reduced, as well as the castle of Dover, by the valor of prince

Edward. Baron de Gourdon, also main- tained himself for a time in the forests of Hamp- shire, and by his depredations obliged the prince to lead a body of troops against him. Edward attacked him in his camp, and, in the ardor of ac- tion, leaped over the trench with a few followers, and encountered Gourdon himself in single com- bat. The victory was long disputed between them ; hut ended at last in the prince's favor, who wounded his antagonist, threw him from his horse, and took him prisoner. He not only granted him his life ; but introduced him that very night to the queen at Guildford, procured his pardon, and was ever after faithfully served by him. In 1271 prince Edward, having set tled the affairs of the kingdom, undertook an expedition to the Holy Land, where he signa- lised himself by many acts of •valor. The king's health declined visibly after the departure

of his son ; and at last, worn out with cares and the infirmities of age, he expired at St. Edmonds- bury on the 16th of November, 1272, in the sixty-fourth year of his age and the fifty-sixth of his reign.

Prince Edward had reached Sicily in his re- turn from the Holy Land, when he received an account of his father's dead) ; at which he ex- pressed much concern. As he knew that Eng- land was at that time in a state of perfect tranquil- lity, he was in no haste to return, but spentnearly a year in France before he made his appearance in his native country. Here he was received on his arrival with the utmost joy, and crowned at Westminster by Robert archbishop of Canter- bury, on the 19th of August, 1274. He imme- diately applied himself to the correcting of those disorders which the civil commotions, and weak administration of his father, had introduced. A system of strict justice, bordering on severity, w»s introduced and kept up through the whole of his reign. The Jews were the only part of his subjects whom Edward oppressed. Many arbitrary taxes were levied upon them ; 280 of them were hanged at once for adulterating the coin; the goods of the rest were confiscated, and all of them banished the kingdom. In 1276 the king undertook an expedition against Lewellyn prince of Wales, who had refused to do homage for his crown, but the conquest of that country was not fully accomplished till 1283 ; after which the principality of Wales was annexed to the crown of England, and thenceforth gave a title to the king's eldest son. See WALES. In 1286 the settlement of Wales appeared so com- plete,

that the king went abroad in order to make peace between Alfonso III. king of Ar- ragon, and Philip IV. of France, who had a dispute about the kingdom of Sicily. He suc- ceeded in his negociations ; but, staying abroad three years, he found that many disorders had been introduced in his absence. Robbery and murder were frequent in every part of England ; but the corruption of the judges was of still more dangerous consequence. Edward sum- moned a parliament, and brought them to trial ; when all of them except two, who were clergy- men, being convicted of mal-practices, were fined, and deposed from their office. The amount of the fines levied upon them was above 100,000 merks ; an immense sum in those days. The king afterwards made the new judges swear they would take no bribes ; but the deposing and fining the old ones was the most effectual lesson. In 11291 king Edward began to medi- tate the conquest of Scotland, which employed him during the rest of his life; but which, though the attempt was productive of distress to both nations, he was never able to accomplish. See SCOTLAND. At the same t me he was en- gaged in expensive contests with France; and tliese multiplied wars and preparations for war, by obliging him to have frequent recourse to par- liamentary supplies, became the remote causes of great and important changes in the government. The parliament was modelled into the form which has continued ever since. As a great part of the property of the kingdom, by the introduction of commerce and improvements in agriculture, was

transferred from tne barons to the inferior ranks of the people, their consent became necessary for raising the supplies. The king accordingly issued writs to the sheriffs, enjoining them to send to parliament along with two knights of the shire, two deputies from each borough within then county, provided with sufficient powers from their constituents to grant such demands as they should think reasonable fo" the safety of the state. The charges of these deputies ,vere to be borne by the boroughs which sent them ; and so far were they at first from considering this as an honor, that nothing could be more displeasing to any borough than to be thus obliged to send a deputy, or to any individual than to be thus chosen. The authority of the commons, however, gradually in- creased. Their union gave them weight; and it became customary among them, in return for the supplies which they granted,to present petitions to the crown for the redress of grievances. The more the king's necessities increased, the more he found it necessary to give them an early redress ; till, from requesting, the commons proceeded to demanding; and, having all the property of the nation, they began also to be possessed of the power. Edward, commonly called the I. though in reality the IV. of

the name, as he is styled by Marcel, died of a dy- sentery at Carlisle, on the 7th of July, 1307, as he was leading a considerable army into Scot- land. He was succeeded by his son Edward, whom he had charged with his dying breath to prosecute the war, and never to desist till he had finally subdued that kingdom. But the new king was of a different disposition from his father. The Scotch gradually recovered their power, and in 1314, gave the English such a terrible defeat at Bannockburn, that for many years after, no superiority of numbers could en- courage them to look the Scotch in the face. See SCOTLAND.

Although Edward II. was a weak rather than an ill-meaning prince, his reign was one con- tinued series of quarrels with his turbulent sub- jects. Like a man born more to be governed than to govern, he ruled throughout by certain favorites. The first of these was Piers Gaveston, the son of a Gascon knight of some distinction, who had honorably served the late king, and who, in reward for his services, had obtained an esta- blishment for his son in the family t-f the prince of Wales. To be the favorite of a king is no doubt a sufficient offence to other courtiers. Numberless faults were therefore found with Gaveston by the barons. When the king: went over to France to espouse the princess Isabella, to whom he had been long contracted, thi« minion was left guardian of the realm, with veiy ample powers ; and when the queen, who was of an imperious and intriguing spirit, arrived, Gaveston fell under her displeasure, on account of his ascendancy over the kins:. A conspiracy was therefore formed against him, at the head of which were the queen, and the earl of Lancaster, the most opulent and powerful nobleman in England. Edward, unable to resist such a com- bination, was at last obliged to banish Gaveston; but recalled him some time after, when a civil war ensued; and the nobility, having seized

Gavestou, put him to death. Edward trans- ferred his attachment to a new favorite, Hugh le .Oospenser, or Spenser, a young man of a noble family, some merit, and very considerable ac- complishments. His father was a person of re- spectable character, and being admitted to share the king's favor, Edward dispossessed some of the more turbulent lords of their estates, to be- stow them upon this family. The earls of Lan- caster and Hereford flew, on this, to arms. Sen- tence was procured from parliament of perpetual exile against the two Spensers, with a forfeiture of all their estates. At last the

king took the field at the head of 30,000 men, and pressed the earl of Lancaster so closely, that he had not time to collect his forces ; flying from one place to another, he was at last stopped on his way towards Scotland, and made prisoner. A court martial being summoned, he was immediately condemned as a traitor, and executed on an eminence near Pomfret, with circumstances of the greatest indignity. The Spensers now triumphed for some time over their enemies; most of the forfeitures were seized for their use, and they are said to have been guilty of many acts of rapine and injustice. But a more for- midable enemy to them soon avowed herself. Queen Isabella fled to France, and refused to return to England till Spenser was removed f : om the court, and banished the kingdom. She was at this time carrying on a criminal intrigue with a young noble named Moitimer. Her court therefore became a sanctuary for all the malecontents who were banished, or who chose io come over; and her opposition to the Spen- sers made her popular in England. When she thought her plans sufficiently matured, she set sail from Dort, accompanied by a force of 3000 men. Landing without opposition on the coast of Suffolk, on the 24th of September, 1326, the people rose in one general revolt in her favor. The unfortunate king had placed some depend- ence on the garrison of Bristol, which was under the command of the elder Spenser; but they mutinied against their governor, and that unfor- tunate favorite, being delivered up, was hanged on a gibbet in his armour ; his body was afterwards cut in pieces and thrown to the dogs, and his head exhibited on a pole in Winchester. Young Spenser did not long survive his father. He was taken, with some others who had followed the fortunes of the wretched king, in an obscure convent in Wales. The queen ordered him to be immediately led forth, and he was executed, amidst the insults of herself and the populace, on a gibbet fifty feet high. His head was trans- mitted to London, where it was received by the citizens with brutal triumph, and fixed on the bridge. In the mean time the king, who hoped to find refuge in Wales, was delivered up to his adversaries, who conducted him to the capital amidst the reproaches of the people, and con- fined him in the Tower. Charges were soon exhibited against him to the parliament, alleging his incapacity to govern, his indolence, his love of pleasure, and his being swayed by ev.l coun- sellors. His deposition was quickly voted, and, » pension being assigned for his support, his son Edward, a youth of fourteen, was chosen to suc-

ceed him. The queen was appointed regent during the minority. After this, we find the deposed monarch consigned successively to the custody of the earl of Lancaster, and the lords Berkeley, Mautravers,

and Gournay, who were entrusted with the charge of him each for a month. While he was in Berkeley's custody, he was used with some degree of humanity ; but under Mautravers and Gournay, every species of indignity was practised upon him. One day, it is said, when Edward was to be shaved, they ordered cold and dirty water to be brought from a ditch for that purpose. Taking advantage, finally, of lord Berkeley's sickness, which pre- vented him from attending the' king, they came to Berkeley Castle and took possession of live king's person. One night, while they had him in charge, the inmates of the castle heard the most horrid shrieks, proceeding from his apart- ment. The next morning his dead body was exhibited, and the citizens of Bristol were called in to witness that it showed no external marks of violence. But the features of the countenance were dreadfully distorted ; and these wretches were, at the time, reported to have despatched him by thrusting a red-hot iron up his body. When the ensuing revolution deprived their pro- tectors of power, they fled the kingdom. Gour- nay was at last seized at Marseilles, delivered over to the seneschal of Guienne, and put on board a ship with a view of carrying him over to England ; but he was beheaded at sea, by secret. orders, as was supposed, of some nobles and prelates in England, who were anxious to pre- vent any discovery which he might make of his accomplices. Mautravers concealed himself for some years in Germany; but naving rendered some services to Edward III. he ventured to approach his person, threw himself on his knees before him, and received a pardon. Mortimer, it is said, confessed, before his death, that he in- stigated, and Gournay and one Ogle actually committed, this murder.

By the murder of Edward II. the government fell entirely into the hands of the queen and her paramour. The parliament, which raised young. Edward to the throne, had indeed appointed twelve persons as his privy council, to direct the operations of government ; Mortimer excluding himself under a show of moderation : but he at the same time secretly influenced all the mea- sures that came under deliberation. As this influence began very soon to be perceived, and the queen's criminal attachment to Mortimer was universally known, both quickly became obnoxious to the people. The first attack upon Mortimer's power was during an irruption of the Scotch, when the favorite prevented the young king from attacking the enemy. Though it is very probable that the English army would have been destroyed, by attacking the enemy in so advantageous a post as the Scotch at that time oc- cupied, Mortimer was accused of having allowed the Scotch to make their escape : and the general disgust on this account was increased by his concluding a peace with that kingdom, by which

the English renounced all title to the sovereignty of Scotland for the sum of 30,000 merks. Mor- timer soon after seized and executed the earl c»t

Kent, brother to Edward II., who, supposing him to be still alive, had formed u design of re-iustating him. The execution was so sudden, thai the young king had not time to interpose in his uncle's behalf; and Mortimer soon after seized this nobleman's estate for his own use, as he did also the immense fortunes of the Spen- sers. Edward, finding the power of this favo- rite a continual restraint upon himself, resolved to shake it off. The queen and Mortimer had for some time chosen the castle of Nottingham for their residence. It was strictly guarded, and the keys of the gates were carried every night to the queen. It was therefore agreed between the king and some of the barons, who secretly en- tered into his designs, to seize upon them in this fortress. Sir William Eland the governor was induced to admit them through a subterraneous passage, which had been formerly contrived for an outlet, but was known only to one or two. Through this passage the noblemen in the king's interest entered the castle in the night-time; and Mortimer, without having it in his power to make any resistance, was seized in an apartment adjoining to that of the queen. The parliament, which was then sitting, condemned him, without either permitting him to make his defence, or examining a single witness. He was hanged on a gibbet at a place called Elmes, about a mile from London. A similar sentence was passed against some of his adherents, particularly Gournay and Mautravers, who escaped as above-mentioned. The queen, who was perhaps the most culpable of the whole, was screened by the dignity of her station. She was, however, deposed from all share of power; and confined for life to the castle of Risings, with a pension of £3000 a year. She lived twenty-five years after her de- position, the king paying her an annual visit of ceremony. Edward III. proved the most war- like, and one of the most successful, princes that ever sat on the English throne. He first at- tempted to raise Edward Baliol to the sovereignty . of Scotland ; but this he found impossible fully to accomplish. He next formed a project of in- vading and conquering France, to the sovereignty of which he pretended a right. So little success intended his first operations that, on his return to England, he found the nation very much discon- tented, and himself harassed by his numerous creditors, without any sufficient resource for paying them. Not dispirited, however, though disappointed, he endeavoured to

divert the minus of his people from the past, by various acts of arbitrary power. Finding the tower of London negligently guarded on his arrival, he imprisoned the constable and all his 'inferior officers, treat ng them with the greatest sever. ty. He then fell upon the sheriffs and collectors of the revenue, whom lie dismissed from their employments, and appointed an enquiry into their conduct to be made by persons, who, knowing the kintr's humor, were sure to find every one guilty who came before them. The keeper of the privy seal, the chief justice, the mayor of London, the bishops of Chichester and Litchfield, with the chancellor and treasurer, were also deposed and imprisoned. In this career of resentment and injustice, however, he found himself opposed by

the archbishop of Canterbury, whom he had ap- pointed to collect the taxes for the support of the French war. That prelate, happening to be Absent at the time of the > king's arrival, did not immediately feel the effects of his resentment. Being informed, however, of his humor, he issued a sentence of excoinmunication against all who should exercise violence against the persons or estates of clergymen, or who infringed those pri- vileges secured by the great charter, or who should accuse a prelate of treason, or any other crime, in order to bring him under the king's displeasure. A regular combination was formed against the king by the clergy, with the primate at their head ; who, to excite the indignation of the people as much as possible, reported that the king intended to recal the general pardon, and the remission of old debts, which had been granted, and to impose new and arbitrary taxes without consent of parliament. In a letter to the king, the archbishop also informed him, that there were two powers by which the world was governed, viz. the holy pontifical apostolical dignity and the regal authority ; of which the clerical power was evidently the supreme, as the priests were to answer even for the conduct of kings at the last judgment ; and were, besides, the spiritual fathers of all the faithful, kings and princes not excepted; having, also, a heavenly charter, entitling them to direct their wills and actions, and to censure their transgres- sions. On this the king resolved to mortify him, by sending no summons to him when the parlia- ment was called : but the prelate, undaunted by this mark of resentment, appeared before the gates of the parliament-house, with his crosier in his hand, demanding admittance as the first peer of the realm. This application was rejected for two days, but at last complied with ; and the parliament now seemed inclined to abridge tiie king's authority considerably. They began with observing, that as the great charter had been violated in many points, particularly by the il legal imprisonment of many freemen, and the seizure of their

goods ; it was necessary to con firm it anew, and to oblige all the chief officers of the law and others, to swear to the observance of it. It was also required that, whenever any of the great offices became vacant, the king shoulc} fill them up by the advice of his council, and the consent of such barons as should be found to be at the time in the neighbourhood ot the court. They also enacted that, on the third day of every session, the king should resume all such offices into his own hand, excepting those of the justices of the two benches, and the barons of exchequer; that the ministers should for the time be reduced to private persons-; that they should in that condition answer before parlia- ment to any accusation preferred against them ; and that, if they were found in any respect guilty, they should be finally deprived of their offices, and others appointed in their stead. Ir. return for such ample concessions, the king was offered a grant of 20,000 sacks of wool ; and such was his urgent necessity, that he was com- pelled to accept of it upon these terms. SHI' however, he determined to adhere to his eneas^- ments no longer than till his difficulties ivere re

moved. Though the agreement, therefore, was ratified in full parliament, he secretly entered a protest, that, as soon as his convenience per- mitted, he would, from his own authority, re- voke what had been extorted from him. This protest was afterwards confitvaed by a public edict, in which he asserted, that the above statute Lad been made contrary to law ; that it was pre- judicial to the prerogatives of the crown, which he had only dissembled when he seemed to ratify .t ; that in his own breast he had never assented to it ; and that from thenceforth it had no force or authority. This exertion of arbitraiy power, which might have been expected to have oc- sioned much clamor, was not taken notice of by any of the subsequent parliaments ; so that in the course of two years, Edward had more than regained his entire authority, and obtained a more than virtual repeal of the obnoxious statute. Having thus settled matters to his satis- faction, the king resumed his expedition against France. In his absence the Scotch invaded Eng- land, but were entirely defeated at Durham, and their king, David IT. taken prisoner. Edward, in the mean time, was obtaining a succession of victories on the continent, in which his son Ed- ward, surnarned the Black Prince, was equally conspicuous with himself. But for the wars of Edward III. and the exploits of this prince, see CRESSY, FRANCE, and SCOTLAND.

In the first of these articles we have followed the general account of that great triumph of British valor. The following is Dr. Lingard's animated picture of the same scene: — ' Never, perhaps, were preparations for battle made under circumstances so truly awful. On that very day the sun suffered a partial eclipse ; birds in clouds, the precursors of a storm, flew screaming over the two armies : and the rain fell in torrents, accompanied with incessant thunder and lightning. About five in the afternoon the weather cleared up : the sun in full splendor darted his rays in the eyes of the enemy, and the Genoese setting up three shouts, discharged their quarrels. But they were no match for the English archers, who received the volley in silence, and returned their arrows in such numbers, and with such force, that the cross-bow men began to waver. The count d' Alenpon, calling them cowards, 9rdered his men to cut down the runaways; but he only added to the disorder. Many of his knights were unhorsed by the archers, and as they lay on the ground, were dispatched by the Welshmen, who had armed themselves with long knives for that purpose. At length the passage was cleared ; the count on one side, and his colleague, the earl of Flanders, on the other, skirted the English archers, while a numerous body of French, Germans, and Savoyards, forced their way to the men at arms, under the command of the prince. The second division im- mediately closed for his support: but the con- flict grew fierce and doubtful, and Sir Thomas Norwich was sent to request a reinforcement. Edward, who, from a windmill, watched the chances of the battle, and the movements of the armies, enquired if his son were killed or wounded. The messenger replied, ' No :' ' Then,' said he, ' tell Warwick that he shall have no VOL. VIII.

assistance. Let the boy wear his spuis,. He and those who have him in charge, shall earn the whole glory of the day.' This answer was hailed as a prediction of victory, and infused new courage into the combatants.

' The king of France was impatient to join the count d'Alencon : but the archers in his front opposed an impenetrable barrier. At each charge he lost the bravest of his attendants; hn horse had been killed under him ; and his friends advised him, but in vain, to retire. At length it began to grow dark : his brother and the earl or Flanders had fallen ; and the battle was evi- dently lost, when John of Hainault, telling him to reserve himself for victory on some other occasion, laid hold of his bridle, and led him away by force. With a small retinue of five barons, and sixty knights, he escaped to the city ol' Amiens. The flight of Philip did not terminate the contest. Many of the French continued in detached bodies to charge their

adversaries ; but as their efforts were made without concert, they generally ended in the destruction of the assail- ants. As the darkness increased, the fight gra- dually ceased; the voices of men, seeking tiie banners from whioh they had wandered, were no longer heard: and the English congratulated themselves on the repulse of the enemy. The king, ignorant of the extent of his victory, or- dered fires to be kindled, and forbade his men to quit their posts. Eager to testify his approba- tion of the prince, he sprang to meet him, and. clasping him in his arms, exclaimed : ' Fair son, continue your career. You have behaved nobly. You have shown yourself worthy of me and the crown.' The young Edward sank on his knees, and modestly attributed all the merit to his father.

- *The darkness of the night was succeeded by a dense mist in the morning, which equally in- tercepted the view : and to gain information, the king sent out, before sun-rise, a detachment of 3,000 men. They soon found themselves in the midst of a body of militia from Beauvais and Amiens, which, ignorant of the preceding events, had marched all night to overtake the army. These men, unsuspicious of danger, and unpre- pared for battle, were massacred almost without resistance. A similar mistake proved equally fatal to the archbishop of Rouen, and the grand prior of France, with a numerous body of knights. As the day cleared, thousands or Frenchmen were discovered inˆthe fields, who had passed the night under the trees and hedges, in the hope of finding their lords in the morn- ing. These, too, were butchered by the English cavalry, so that the carnage of the second is asserted to have exceeded that of the former day. At noon the king ordered the lords Cobham and Stafford to examine the field of battle. They took with them three heralds, to ascertain from the surcoats of the knights, and two secretaries to record, the names and rank of those who had fallen. In the evening they presented to thf king eighty banners, and a catalogue of eleven princes, 1,200 knights, and 30,000 persons ot inferior condition. A truce of three days was proclaimed, to allow the enemy time to bury their dead : and Edward assisted, in mourning;*

at the funeral service in the cemetery of Mon- •enay.

- *Among the slain the most distinguished was John, king of Bohemia. Age had not chilled in him the fire of youth: though blind, he placed himself in the first division of the French ; and as the issue grew dubious, ordered the four knights, his attendants, to lead him into the hot- test of the battle, ‘ that I, too,’ said he, ‘ may have a stroke at the English.’ Placing himself in the midst of them, and interlacing their bridles, they spurred forward their horses, and were almost immediately slain. The reader will pro- bably consider the Bohemian monarch as fool- ishly prodigal of his life. By the writers of the age his conduct has been extolled as an instance of unparalleled heroism. His crest, three os- trich feathers, with the motto, ‘ Ich dien,’ — I serve — was adopted by the prince of Wales, and has been always borne by his successors.’ The ‘ Black Prince died on the 8th of June, 1376, and the king survived only about a year. He ex- pired on the 21st June, 1377, and was succeeded by his second son, Richard.*

Richard II. being only eleven years old when he ascended the throne, the government was vested in the hands of his three uncles the dukes of Lancaster, York, and Gloucester. The dif- ferent dispositions of these noblemen, it was thought, would cause them to check the designs of each other. Lancaster was neither popular nor enterprising ; York was indolent and weak ; and Gloucester turbulent, popular, and am- bitious. Discontents first arose among the com- mon people. They had now acquired a share of liberty sufficient to inspire them with a desire for more, and this desire was greatly increased by the discourses of one John Ball, a seditious preacher. He went about the country, teaching that mankind were all derived from one com- mon stock ; and that all of them had equal right to liberty and the goods of nature, of which they had been deprived by the ambition of a few in- solent rulers. These doctrines were greedily swallowed by the populace, whose minds were farther inflamed by a new imposition of three groats a-head upon every person in the kingdom above fifteen years of age. This had been granted as a supply by parliament, and was no doubt necessary on account of the many expen- sive wars in which the kingdom was engaged ; but its evident injustice, in laying no more bur- den upon the rich than the poor, excited the ut- most lesentment of the people. The manner, top, of collecting this tax, soon furnished them with an occasion of revolt. It began in Essex, where a report was industriously spread that the peasants were to be destroyed, their houses burned, and their farms plundered. A black- smith, well known by the name of Wat Tyler, was the first that excited them to arms. The tax-gatherers coming to this man’s house

while he was at work, demanded payment for his daughter. This he refused, alleging that she was under the age mentioned in the act. One of these fellows offered to produce a very inde- cent proof to the contrary, and at the same time laid hold of the maid. This the father resented, by immediately knocking out the ruffiian's brains

with his hammer. The bystanders applauded the action ; and exclaimed that it was high time for the people to take vengeance on their tyrants, and to vindicate their native liberty. The whole country flew to arms, and the insurgents soon amounted to about 100,000 men. They advanced to Blackheath, where they sent a message to the king, who had taken shelter in the tower,' de- siring a conference with him. Desirous of com- plying with their demands as far as possible, the young prince and his advisers were alike intimi- dated by their behaviour. But in the mean time they had entered the city, burning and plunder- ing the houses of such as were obnoxious for their power or riches. Their animosity was par- ticularly levelled against the lawyers, to whom they showed no mercy. The king at last, know- ing that the tower was not able to resist their assaults, went out among them, and desired to know their demands. To this they made a hum- ble remonstrance ; requiring a general pardon, the abolition of slavery, freedom of commerce in the market towns, and a fixed rent instead of those services required by the tenure of ville- nage. The king granted alHhese requests ; and charters were made out by which the grant was ratified. In the mean time, however, another body of the insurgents had broke into the tower, and murdered the chancellor, the primate, .md the treasurer, with some other officers of distinc- tion. They then divided themselves into dif- ferent bodies, and took up their quarters in various parts of the city. At the head of one-of these was Wat Tyler, who led his men into Smithfiel3, where he was met by the king, who invited him to a conference under pretence of hearing and redressing his grievances. Tyler ordered his companions to retire till he should give them a signal, and boldly ventured to begin a conference with the king in the midst of his retinue. His demands were, that all slaves should be set free ; that all commonages should be open to the poor as well as to the rich ; and that a general pardon should be passed for the late outrages. Whilst he made these demands, he now and then lifted up his sword in a mena- cing manner : which insolence so raised the in- dignation of William Walworth, lord mayor of London, that, without considering the danger to which he exposed the king, he struck down Tyler with a blow of his mace ; when one of the king's knights riding up, dispatched him with his sword. The rebels, seeing their leader fall, prepared themselves to take revenge. Their bows were already

bent for execution ; when Richard, though not sixteen years of age, rode up to them, and with admirable presence of mind, cried out ; ‘ Wrhat, my people, will you kill your king? Be not concerned for the loss of your leader. I my- self will now be your general. Follow me into the field, and you shall have whatever you desire.’ The multitude immediately desisted, and fol- lowed the king into the fields, where he granted them, by charter, the same concessions he had before made to their companions. These char- ters, however, were soon after revoked, and the people reduced to their old situation. The cour- age and address which Richard had discovered in quelling this dangerous tumult, excited great*

hopes of him in the nation ; but, in proportion as he advanced in years, these hopes were blasted ; and his want of capacity and judgment appeared in all his undertakings. He justly for- feited the attachment of the people, by allowing the parliament to revoke the charters of enfran- chisement and pardon which had been granted ; and suffering their ringleaders to be put to death without any form of trial. Among his nobles, supposing himself to be in too great subjection to his uncles, particularly the duke of Gloucester, he attempted to shake off the yoke, by raising others to a greater degree of power. His first favorite Robert de Vere, earl of Oxford, a young man of agreeable person, but dissolute in his behaviour, soon acquired an absolute ascendarcy over his mind. He first created him marquis of Dublin, then duke of Ireland, transferring to him the entire sovereignty of that island by patent. He then «gave him in marriage his cousin-german, the daughter of the earl of Bedford ; but soon after permitted him to divorce her for another lady, of whom he became enamoured. He became even- tually the dispenser of all the king’s favors to such a degree, that a conspiracy was formed against him ; at the head of which were, Mow- bray, earl of Nottingham, Fitz-Alan, earl of Arun- del, the earls of Northumberland, Salisbury, and Warwick. Vere was impeached in parliament; and though nothing of moment was even alleged against him, he was condemned, and deprived of all his offices. The royal authority itself was another object of attack. Under pretence that the king was yet unable to govern the kingdom, they appointed a commission of fourteen persons, to whom the sovereignty was to be transferred for a year. This measure was urged forward by the duke of Gloucesterˆ and none but his own faction were admitted as members of the com- mission. The king at first endeavoured to gain over the parliament to his interests, by influen- cing the sheriffs of each county, who were then the only returning officers. This measure failing, he applied to the

judges. They declared that the commission which had deprived the king of his authority was unlawful, and those who procured or advised it, were punishable with death ; but their sentence was quickly opposed by decla- rations from the lords. The duke of Gloucester in the meantime appealed to arms : his partisans appeared at Haringay Park near Highgate, at the head of a body of men sufficient to intimidate the king and all his adherents; and began by de- manding of the king »the names of those who advised him to the late rash measures. A few days afterwards they appeared armed in his pre- sence, and accused by name the archbishop of York, the duke of Ireland, the earl of Suffolk, and Sir Robert Tresilian, one of the judges who had declared in his favor, together with Sir Nicholas Bember, as public and dangerous ene- mies to the state. The duke of Ireland fled into Cheshire, where he attempted to raise a body of forces ; but was quickly obliged to fly into Flan- ders, on the arrival of Gloucester with a superior army. Soon after, the king was obliged to sum- mon a parliament, where an accusation was drawn up against five of his counsellors. Of these, only Sir Nicholas Bember was present;

and he was quickly found guilty, condemned, and executed, together with Sir Robert Tresilian, who had been discovered and taken during the inter- val. Lord Beauchamp of Holt also was soon al'te ,• condemned and executed; and Sir Simon Burlev shared the same fate, though the queen continued for three hours on her knees before the duke 01 Gloucester, imploring his pardon. Such un- paralleled insolence in a subject could not pass unpunished. In 1389, the king, at an extraor- dinary council of the nobility assembled after Easter, desired, to the surprise of all present, to know his age. Being told that he was upwards of two and twenty, he alleged that it was then time for him to govern without help ; and that there was no reason why he should be deprived of those rights which the meanest of his subjects enjoyed. The lords answered, in some confusion, that he had certainly an undisputed right to take upon himself the government of the kingdom. 1 Yes,' replied he, ' I have long been under the government of tutors; and I will now first show my right of power by their removal.' He tiie.'i ordered Thomas Arundel, whom the commission- ers had lately appointed chancellor, to give up the seals ; which he next day delivered to Will lam Wickham, bishop' of Winchester. He next removed the duke of Gloucester, the earl of War- wick, and other lords of the opposition, from the council; and all the great officers of the house- hold, as well as the judges. The king being thus left at liberty, .rapidly advanced for some lime in the affections of the people. It does not appear indeed, that he ever gave

them cause of com- plaint; but a severe and vigorous administration was the great requisite at this period, and this demanded an energy of mind which Richard did not possess. The duke of Gloucester frequently spoke with contempt of his person and govern- ment, and suggested the lawfulness of throwing off all allegiance to so pusillanimous a pnnce. The king being informed of his conduct, at last formed a resolution of ridding himself of him. He ordered him to be arrested, and sent over to Calais, where there was no danger of his beiiv.j rescued by his numerous adherents. The earls of Arundel and Warwick were seized at the same time; and a new parliament, which the king knew would be obedient to his will, was sum- moned at Westminster. Here the commission of fourteen, who had usurped the royal authority, was annulled for ever; all those acts which had condemned his former ministers were repealed ; and the general pardon, which the king had given, when he assumed the government into his own hands, was revoked. Several of Gloucester's party were condemned and executed, and at last that nobleman himself was called to take his trial; but he had before been privately dis- patched '. After the destruction of the duke of Gloucester and the heads of his party, a misun- derstanding arose among the noblemen who had joined in the prosecution. The duke of Hereford appeared in parliament, and accused his grace of Norfolk of having spoken seditious words against the king. Norfolk denied the charge, gave Here- ford the lie, and offered to prove his innocence by single combat. The challenge was accepted ; but on the day appointed for the duel, the king

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would not suffer the combatants to engage, but commanded both of them to leave the kingdom. Norfolk he banished for life, but the duke of Hereford only for ten years. The former retired to Venice, where, in a short time he died. Hereford behaved in a resigned and submissive manner; and the king consented to shorten the time of his banishment four years : he also grant- ed him letters patent, ensuring him of the enjoy- ment of any inheritance which should fall to him during his absence. Upon the death of his father, the duke of Lancaster, however, which happened shortly after, Richard revoked these letters, and kept the estate to himself. This last injury inHamed the resentment of Hereford, and he now formed the bold design of dethroning the king. He was a great favorite both with the army and

*people ; was immensely rich, and connected by blood or alliance with all the great families of the nation. The king at the same time, it is said, gave himself up to an idle, effeminate life ; and bis ministers followed his example. The number of malecontents daily increased, and only waited f jr a favorable opportunity to put their schemes in execution : this opportunity soon offered. The earl of March, presumptive heir to the crown, having been appointed the king's lieutenant in Ireland, was slam in a skirmish with the Irish ; which so incensed Richard, that, unmindful of his precarious situation at home, he went over to that country with a considerable army, in order to revenge his death. The duke of Lancaster (for this title Hereford assumed on the death of his father) hearing of the king's absence, instantly embarked at Nantz ; and with a retinue of only sixty persons in three small vessels, landed at Ravenspur in Yorkshire. The earl of Northum- berland, who had long been a malecontent, together with Henry Percy, his son, who, from his ardent valor, was surnamed Hotsjmr, imme- diately joined him, and the people flocked to his standard in such numbers, that in a few days he was at,, the head of 60,000 men. Richard, in the meanLme, continued in perfect security in Ire- land. Con*rary winds for three weeks prevented his receiving any news of the rebellion which was begun in England. He landed therefore at Mil- ford Haven without suspicion, attended by about 20,000 men ; and immediately found himself opposed by an overwhelming force. To com- plete his difficulties, his army gradually deserted till he was at last obliged to compromise with the duke of Lancaster, or rather to submit to whatever terms he pleased to prescribe. The duke would not enter into any treaty with him ; but carried him to London, where he was con- fined a close prisoner in the tower; formally deposed by parliament, or rather by the duke of Lancaster, and at last put to death. The manner of his death is variously related. According to some, eight or nine ruffians were sent to the castle of Pomfret, whither the unhappy prince had been removed, in order to dispatch him. They rushed unexpectedly into his apartment ; but Richard, knowing their design, resolved to sell his life as dear as possible, and wresting a pole-ax from one of the murderers, killed four of them; but was at lenzth overpowered and killed. Others relate that he was starved in prison ; and*

that, after he was denied all nourishment, he prolonged his life fourteen days, by feeding on the flocks of his bed. He died in 1399, in the thirty-fourth year of his age, and twenty-third of his reign, during which, the famous reformer Wickliff first published his doctrines. See

The Protestant accounts of this great man's rise are numerous : it is a subject, perhaps, upon which a Catholic historian should also be heard. Dr. Lingard thus introduces it : —

It is about the year 1360 that the name of Wyclirfe is first mentioned in history. He was then engaged in a fierce but ridiculous controversy with the different orders of friars. They had been established in England for more than a century : and by their zeal, piety, and learning, the usual concomitants of new religious institu- tions, had deservedly earned the esteem of the public. Some taught with applause in the universities ; many lent their aid to the parochial clergy in the discharge of their ministry ; several had been raised to the episcopal dignity ; and others had been employed in difficult and im- portant negociations by their sovereigns. The reputation and prosperity of the new orders awakened the jealousy of their rivals. Fitz- Ilalph, archbishop of Armagh, openly accused them before the pontiff; and Wyclirfe, treading in the footsteps of Fitz-Ralph, maintained at Oxford that a life of mendicity was repugnant to the precepts of the gospel, and that the friars in practice and doctrine were involved in the guilt of fifty heresies. The men, whom he attacked, endeavoured to justify themselves by the example of Christ, who was supported by the alms of his disciples ; and Wycliffe replied by this nice dis- tinction : that Christ, though he received, did not ask ; while the friars, not content with spontane- ous offerings, exhorted others by their importunity and falsehoods. This controversy had no imme- diate result : but it is mentioned as the origin of that violent hostility to the friars which Wycliffe displayed in every subsequent stage of his life.

Archbishop Islip had founded Canterbury Hall, in Oxford, for a warden and eleven scholars, of whom eight were to be secular clergymen, the warden and three others to be monks, taken from his own convent at Christ Church. In 1365, by means with which we are not ac- quainted, Wycliffe superseded Woodhall the warden, and, with the approbation of the founder, expelled both him and his monks. Islip died the next year : his successor Simon Langham, al- leging that the appointment of Wycliffe was contrary to the charter of foundation, and had beeii obtained at a time when his predecessor, from age and infirmity, was incapable of business, commanded the new warden to make place for the old ; and, on his refusal, sequestrated the re- venues of the hall. Wycliffe appealed to the pope, and commissioned one of the fellows to prosecute the appeal. After a tedious process, judgment was given against him : both he

and his associates were expelled in turn ; and the king's approbation was obtained to sanction the whole proceeding. To his disappointment at this decision has been attributed, perhaps rashly.

Wycliffe's subsequent opposition to the papal authority. He had obtained the honorary title of one of the king's chaplains, and as such stre- nuously maintained in the university the rights of the crown against the pretensions of the pon- tiff. His name stands the second on the list of commissioners, appointed to meet the papal en- voys at Bruges, for the purpose of adjusting in an amicable manner the disputes between the two powers. He was afterwards preferred to a prebend in the colleg.ate church of Westbury. He already possessed the rectory of Fylingham, which he exchanged for that of Lutterworth, both in the diocese of Lincoln.

To accept of preferment was so contrary to the principles which he afterwards taught, that it is probable he had not yet determined to embrace the profession of a reformer. He continued, however to lecture at Oxford, and imitated in his manner of life the austerity of the men whom he so warmly opposed. He always went barefoot, and was clad in a gown of the coarsest russet. By degrees he diverted his invectives from the friars to the whole body of the clergy. The popes, the bishops, the rectors, and curates, smarted successively under the lash. Every clergyman was bound, he contended, to imitate the Saviour in poverty, as well as in virtue. But clerks possessioners, so he termed the beneficed clergy, did not imitate the poverty of Christ. They were choked with the tallow of worldly goods, and consequently were hypocrites and antichrists. By falling into sin they became traitors to their God : and of course forfeited the emoluments of their cures. In such cases it became the duty of laymen, under pain of damnation, to withhold from them their tithes, and to take from them their possessions. To disseminate these and si- milar principles, he collected a body of fanatics, whom he distinguished by the name of poor priests. They were clad like himself, professed their determination never to accept of any bene- fice, and undertook to exercise the calling of itinerant preachers without the licence, and even in opposition to the authority of the bishops.

' The coarseness of Wycliffe's invectives, and the refractory conduct of his poor priests, soon became subjects of astonishment and complaint. In the last year of Edward, while the parliament was

sitting, he was summoned to answer in St. Paul's before the primate and bishop of London. He obeyed ; but made his appearance between the two most powerful subjects in England, the duke of Lancaster, and Percy the lord mareschal. Their object was to intimidate his opponents : and the attempt was begun by Lancaster, who ordered a chair to be given to Wycliffe. Court- ney, the bishop of London, replied that it was not customary for the accused to sit in the pre- sence, and without the permission, of his judges. A vehement altercation ensued, and the language of Lancaster grew so abusive, that the populace rose in defence of their bishop, and had it not been for his interference, would have offered violence to his reviler. Though the duke ,ped with his life, his palace of the Savoy ttas pillaged in the tumult which has been already Described. Wycliffe found it necessary to make

the best apology in his power, and was permitted to depart with a severe reprimand, and an order to be silent for the future on those subjects, which had given so much cause for complaint.'

6. Of England under the House of Lancaster. — After sentence of deposition had been pro- nounced on Richard by both houses of parlia- ment, the throne being vacant, the duke of Lan- caster stepped forth; and having crossed himself on the forehead and on the breast, and called on the name of Christ, gave in his claim to the throne ' in the name of Father, Son, and Holy Ghost, as descended by right line of blood from Henry III.' This claim was founded on a false'assump- tion that Edmund earl of Lancaster, son of Henry III., was really the eldest brother of Edward I. ; but that, by reason of some deformity in his per- son, he had been deprived of the succession, and Edward the younger brother imposed on the nation in his stead. The duke of Lancaster in- herited from Edmund, by his mother, the right which he now pretended to the crown ; though the falsehood of the story was so generally known, that he thought proper to mention it >nly in ge- neral terms. No opposition, however, was made to the validity of his title in parliament; and thus commenced the differences between the houses of York and Lancaster, which were not terminated but by many bloody and ruinous conflicts. The reign of Henry IV. was little less than a conti- nued series of insurrections. In the very first parliament he called, no fewer than forty chal- lenges were given and accepted by different barons ; and though Henry had ability and ad- dress enough to forbid these duels from being fought, it was not in his power to prevent con- tinual insurrections and combinations against himself. The most formidable one was conducted by the earl of Northumberland, and commenced A. D. 1402. The occasion of it

was, that Henry denied the earl liberty to ransom some Scots prisoners, who had been taken in a skirmish with that nation. The king was desirous of detaining them in order to increase his demands upon Scot- land in making peace ; but as the ransom of pri- soners was in that age looked upon as a right belonging to those who had taken them, the earl thought himself injured. The injury appeared the greater, Northumberland considering the king as indebted to him both for his life and crown. He now resolved therefore to dethrone Henry ; and to raise to the throne young Mortimer, who was the true heir, being the son of Roger Morti- mer earl of March, whom Richard II. had de- clared his successor. For this purpose he en- tered into an alliance with the Scots and Welsh, who were to make an irruption into England at the same time that he himself was to raise what forces he could to join them. But when all things were prepared, the earl found himself un- able to lead on the troops, by a sudden fit of ill- ness with which he was seized at Berwick. On this, young Percy, surnamed Hotspur, took the command, and marched towards Shrewsbury, in order to join the Welsh. But the king had hap- pily a small army with which he intended to have acted against the Scots ; and knowing the importance of celerity on such an occasion, in- stantly hurried down, to give battle to the rebels.

fie approached Shrewsbury before a junction with the Welsh could be effected ; and gladly availed himself of the impatience which foolishly urged Percy to seek an engagement. The even- ing before the battle he sent a manifesto to Henry ; in which he renounced his allegiance, set the king at defiance, and enumerated all the griev- ances of which he imagined the nation might justly complain. He reproached him, and very justly, with perjury; for Henry, on his first land- ing in England, had sworn upon the gospefe, before the earl of Northumberland, that he had no other intention but to recover possession of the duchy of Lancaster, and that he would ever re- main a faithful subject to king Richard. He aggravated his guilt, in first dethroning and then murdering that prince; and in usurping on the title of the house of Mortimer ; to whom, both by lineal succession and the declarations of par- liament, the throne, then vacant by Richard's death, of right belonged. Several other heavy charges were brought against him ; which, at that time, were productive of no other effect than to irritate tne king and his adherents to the utmost. The armies on each side were in number about 12,000 ; and as both leaders were men of known bravery, an*

obstinate engagement was expected. The battle was fought on the 20th of July 1403 ; and never was a conflict more terrible or deter- mined. At last Percy being killed by an un- known hand, the victory was decided in favor of the royalists. There are said to have fallen on that day near 2300 gentlemen, and 6000 private soldiers, of whom near two-thirds were of Percy's army. The earl of Northumberland having re- covered from his sickness, and levied an army, was on his march to join his son ; but being opposed by the earl of Westmoreland, and hear- ing of the defeat of the earl at Shrewsbury, he dismissed his forces, and came with a small re- tinue to the king at York. He pretended that his sole intention was to mediate between the contending parties ; and the king thought proper to accept of his apology, and grant him a pardon. The other rebels were treated with equal lenity ; and none of them, except the earl of Worcester and sir Richard Vernon, who were regarded as the chief authors of the insurrection, perished '"> y the hands of the executioner. This lenity, n jwever, was not sufficient to keep the kingdom quiet ; one insurrection followed another almost during the whole of this reign ; but either through Henry's vigilance, or the bad management of the conspirators, they never could bring their pro- jects to bear. This reign is also remarkable for the first capital punishment inflicted on a cler- gyman of high rank. The archbishop of York having been concerned in an insurrection against the kinjr, and happening to be taken prisoner, was beheaded without either indictment, trial, or defence ; nor was any disturbance occasioned by diis summary execution. But the most re- markable transaction of this period, was the in- troduction of the absurd and cruel practice of burning for heresy. Henry, while a subject, was thought to have been very favorable to the doc- trines of Wickliff; but when he came to the throne, finding his possession of it very insecure, ho availed himself of the superstition of the people

as an auxiliary to his authority, and determined to pay his court to the clergy. There were hi- therto no penal laws against heresy ; not indeed through the liberality of the court of Rome, but through the stupidity of the people who were content for ages with the absurdities of the esta- blished religion. But when the learning and genius of Wickliff had once broke the fetters of prejudice, the ecclesiastics called aloud for the punishment of his disciples; and Henry resolved to gratify them. He engaged parliament to pass a law for this purpose, by which it was enacted, that when an heretic, who relapsed, or refused to abjure his opinions, was delivered over to the secular arm by the bishop or his commissaries, he should be committed to the flames in the pre- sence of the populace. This

weapon did not re- main long unemployed in the hands of the clergy. William Sautre, rector of St. Osithe's in London, had been condemned by the convocation of Can- terbury : his sentence was ratified by the house of peers; the king issued his writ for the ex- ecution; and he was burnt alive in 1401. The doctrines of Wickliff, however, gained ground very considerably in England. In 1405 the commons, who had been required to grant sup- plies, proposed to the king to seize all the temporalities of the church, and employ them as a perpetual fund to serve the exigencies of the state. They insisted that the clergy pos- sessed a third of the lands of the kingdom ; that they contributed nothing to the public bur- dens; and that their exorbitant riches tended only to disqualify them from performing their ministerial functions with proper zeal and at- tention. When this address was presented, the archbishop of Canterbury, who then attended the king, objected that the clergy, though they went not in person to the wars, sent their vas- sals and tenants in all cases of necessity ; while at the same time they themselves who staid at home were employed night and day in offering up their prayers for the happiness and prospe- rity of the state. The speaker answered with a smile, that he thought the prayers of the church but a very slender supply. The arch- bishop, however, prevailed in the dispute; the king discouraged the application of the com- mons; and the lords rejected the bill which the lower house had framed for despoiling the church of her revenues. The commons were not discouraged by this repulse. In 1410 they returned to the charge with more zeal than be- fore. They made a calculation of all the ec- clesiastical revenues, which, by their account, amounted to 485,000 merksa-year, and included 18,400 ploughs of land. They proposed to di- vide this property among fifteen new earls, 1500 knights, 6000 esquires, and 100 hospitals; besides £20,000 a-year, which the king might keep for his own use; and they insisted that the clerical functions would be better performed than they were by 15,000 parish priests, at the rate of seven merks a piece of yearly stipend. Tins application was accompanied with an ad- dress for mitigating the statutes against the Wickliflfites or Lollards, so that the kine knew very well from what source it csme. lie gave the commons, however, a severe reˆ-iy ; and

further to satisfy the church that he was in earnest, ordered a Lollard to be burnt before the dissolution of parliament. The king had now been for some time subject to fits, which continued to increase, and gradually terminated his life. He expired at Westminster in 1413, in the forty-sixth year of his age, and' thirteenth of his reign.

Henry IV. was succeeded by his son Henry V. whose martial talents and character had at first occasioned unreasonable jealousies in the mind of his father. The active spirit of Henry restrain- ed from its proper exercise had therefore broken out in every kind of extravagance and dissipation. It is reported that he scrupled not to accompany his riotous associates in attacking passengers on the streets and highways, and robbing them. No sooner, however, did he ascend the throne, than he is said to have called together his former companions, to acquaint them with his intended reformation, and exhort them to imitate his ex- ample : but he stricly prohibited them, till they had given proofs of their sincerity in this parti- cular, to appear any more in his presence. Those of his father's wise ministers, who had checked his riotous disposition while prince Henry, found that they had, unintentionally, been paying the highest court to their future sovereign; and were received with all the marks of favor and confi- dence. The chief justice, who on one occasion had actually imprisoned the prince, met with praises instead of reproaches for his past con- duct, and was exhorted to persevere in the same rigorous and impartial execution of the laws. The king was not only anxious to repair his own misconduct, but also to make amends for those iniquities, into which policy or necessity had betrayed his father. He expressed the deepest sorrow for the fate of king Richard, rewarded his most attached friends, and performed his funeral obsequies with solemnity. He took into favor the young earl of March, though his competitor for the throne ; and gained so far on his gentle and unambitious nature, that he remained ever after sincerely attached to him. The family of Percy was also restored to its fortune and honors ; and the king seemed desirous to bury all dis- tinctions in obli'vion. Men of merit were pre- ferred, of whatever party they had been, until all men were unanimous in their attachment to Hen- ry ; and the defects of his title were forgotten in the personal regard which he inspired. The only party which he was not able to bend to his mea- sures, or with which the clergy, rather, would not suffer him to agree, was the new sect of Lollards. These reformers were now gaining such ground in England, that the established priesthood were alarmed, and Henry resolved to execute the laws upon them. The head of that party was sir John Oldcastle, lord Cobham ; a nobleman who had distinguished himself by his valor and military talents on many occasions, and ac- quired the esteem both of the late and pre- sent king. His high character and zeal for the new sect pointed him out to Arundel arch- bishop of Canterbury, as a proper object of ecclesiastical fury, and he therefore applied to Henry for permission to indict him. The king desired him first to try gentle methods, and un-

dertook to converse with lord Cobham himself upon religious subjects. He did so, but could not prevail, and therefore abandoned Cobham to his enemies. He was immediately condemned to the flames as a heretic : but having found means to make his escape, he raised an insurrec- tion ; which was suppressed, without any other consequence than that of leaving a stain on the character of the new sect. Lord Cobham him- self made his escape, but four years afterwards was taken and executed. Immediately after, the most severe laws were enacted against the Lol- lards. It was declared, that whoever was con- victed of Lollardy, besides suffering capital punishment according to the laws formerly esta- blished, should also forfeit his lands and goods to the king ; and that the chancellor, treasurer, justices of the two benches, sheriffs, justices of the peace, and all the chief magistrates in every city and borough, should take an oath to use their utmost endeavours for the extirpation of heresy. Notwithstanding these denunciations, the very parliament which enacted them, viz. that of 1414, when the king demanded a supply, renewed th6 offer formerly pressed upon Henry IV., and entreated the king to seize all the eccle- siastical revenues, and convert them to the use of the crown. The clergy were greatly alarmed. They could offer the king nothing of equal value. They agreed, however, to confer on him all the priories alien, which depended on capital abbeys in Normandy, and which had been bequeathed to them when that province was united to Eng- land. The most effectual method, however, of warding off the blow, was by persuading the king to undertake a war with France, to recover the provinces which had formerly belonged to England. This was agreeable to the dying in- junction of Henry IV., who advised his son never to let the English remain long in peace, which was apt to breed intestine commotions ; but to employ them in foreign expeditions, by which the prince might acquire honor, the nobi- lity in sharing his dangers might attach them- selves to his person, and all the restless spirits find occupation. The natural disposition of Henry sufficiently inclined him to follow this advice, and the civil disorders of France gave him the fairest prospect of success. Accord- ingly, in 1415, the king invaded France at the head of 30,000 men. The rapid progress of this army will be found related under the article FRANCE. He had espoused the king's daughter, and conquered the greatest part of the kingdom. His queen was delivered of a son named Henry, whose birth !was celebrated by the greatest re- joicings both at London and Paris; and the infant prince seemed to be universally regarded as heir to both monarchies. But Henry's glory, when it seemed to be approaching the summit, was blasted at once by death, and all his mighty projects vanished. He was gradually reduced by a fistula, which the surgeons of the day

could not cure; and expired on the 31st of August, 1422, in the thirty-fourth of his age, and tenth of his reign.

Henry VI. succeeded to the throne while an infant not yet a year old, and his reign abounds, as we might expect, with the most dismal ac-

counts of misfortunes and civil wars. His new relatives soon began to dispute about the admi- nistration during his minority. The duke of Bedford, one of the most accomplished princes of the age, was appointed by parliament pro- tector of England, defender of the church, and first counsellor to the king. His brother, the duke of Gloucester, was afterwards selected as regent, while he conducted the war in France ; and to limit the power of both brothers, a council was named, without whose advice and approbation no measure could be carried into execution. France itself was now in the most desperate situation. The English were masters of almost the whole of it. Henry VI., while an infant, was solemnly invested with regal power by legates from Paris; so that Charles VII. of France succeeded only to a nominal king- dom. With all these advantages, however, the English daily lost ground in that country ; and in the year 1450 were totally expelled from it. See FRANCE. It may easily be imagined, that such a train of bad success would produce dis- contents at home. The duke of Gloucester was envied by many on account of his station. Among these was Henry Beaufort, bishop of Winchester, great uncle to the king, and the legitimate son of John of Gaunt, brother to Richard II. This prelate, to whom the care of the king's education had been committed, was a man of considerable capacity and experience, but of an intriguing and dangerous disposition. He had frequent disputes with the duke of Gloucester, and the duke of Bedford in vain employed both his own authority and that of parliament to reconcile them : their mutual ani- mosities embarrassed the government for several years. The sentiments of the two leaders were particularly divided with regard to France. The bishop embraced every prospect of accommoda- tion with that country ; and the duke of Glou- cester was for maintaining the honor of the English arms, and regaining whatever had been lost. Both parties called in all the auxiliaries they could. The bishop resolved to strengthen himself by procuring a proper match for Henry, at that time twenty-three years old ; and then bringing over the queen to his interests. Accord- ingly, the earl of Suffolk, a nobleman whom he knew to be steadfast in his attachments, was sent over to France,

apparently to settle the terms of a truce which had then been beˆun, but in reality to procu-e a suitable match for the king. The bishop and his friends had cast their eye on Margaret of Anjou, daughter of Regnier, titular king of Sicily, Naples, and Je- rusalem ; but without either real power or pos- sessions. She was considered as the most ac- complished princess of the age, both in mind and person ; and it was thought would, by her own abilities, be able to supply the defects of her husband, who appeared weak, timid, and ouperstitious. The treaty was therefore hastened on by Suffolk, and soon after ratified in Ens- land. ˆ The queen came immediately into the oishop's measures : Gloucester was deprived of ill real power, and every possible method adopted to render him odiou>. One step taken for this purpose was to accuse his duchess of

witchcraft. She was charged with conversing with one Bolingbroke, a priest and reputed ne- cromancer, and also with Mary Gourdemain, supposed to be a witch. It was asserted that these three, in conjunction, had made an image of the king in wax, which was placed before a gentle fire : as the wax dissolved, the king's strength was expected to waste ; and upon its total dissolution h:s life was to be at an end. This accusation was readily believed in a supersti- tious age. The prisoners were pronounced guilty ; the duchess was condemned to do pe- nance and suffer perpetual imprisonment ; Bo- lingbroke, the priest, was hanged, and the wo- man burnt in Smithfield. The bishop, called also the cardinal, of Winchester, was resolved to carry his resentment against Gloucester to the utmost. He procured a parliament to be sum- moned, not at London, which was too well affected to the duke, but at St. Edmundsbury, where his adherents were sufficiently numerous to overawe every opponent. ,As soon as Glou- cester appeared he was accused of treason, and thrown into prison; and on the day on which he was to make his defence, he was found dead in his bed, though without any signs of violence upon his body. The death of the duke was universally ascribed to the cardinal, who himself died six weeks after, testifying the utmost re- morse, we are told, for the bloody scene in which he had so recently acted. But some writers assert that Gloucester died a natural death : and Dr. Lingard says that his supposed remorse respecting the death of the duke of Gloucester is a fiction which we owe wholly to the imagination of Shakspeare. What share the queen had in these transactions is uncertain ; but most people believed that without her know- ledge the duke's enemies durst not have ven- ventured to attack him. The king himself shared in the general ill will, and he never had the art to remove the suspicion. His great incapacity was every day more apparent ; and a pretender to the

throne made his appearance in 1450, in the person of Richard duke of York. All the males of the house of Mortimer were extinct; but Anne, the sister of the last earl of March, having espoused the earl of Cam- bridge, who had been beheaded for treason in the rei°n of Henry V., had transmitted her latent, but not yet forgotten claim, to her son Richard. This prince, descended by his mother from Philippa, only daughter of the duke of Cla- rence, and second son of Edward III. stood plainly in order of succession before the king, who derived his descent from the duke of Lan- caster, third son of that monarch. The duke was a man of valor and abilities, as well as of some ambition ; and he thought the weakness and unpopularity of the present reign afforded a favorable opportunity to assert his title. The en- sign of Richard was a white rose, that of Henry a red one ; and these gave their names to the two factions, who were now about to drench the kingdom in blood. After the cardinal of Win Chester's death, the duke of Suffolk, who ha perhaps also been concerned in the assassina- tion of Gloucester, governed every thing with uncontrollable sway. His conduct excited the

jealousy of the other nobility, and every odious or unsuccessful measure was attributed to him. The duke, however, boldly called upon his ene- mies to show an instance of his guilt. The house of commons immediately opened against him a charge of corruption, tyranny, and treason. He was accused of being the cause of the loss of France — of persuading the French king, with an armed force, to invade England — and of be- traying the secrets of state. The popular re- sentment against him was so strong, that Henry, to secure him as much as possible, sentenced him to five years banishment. This was con- sidered by his enemies as an escape from jus- tice. The captain of a ship was therefore em- ployed to intercept him in his passage to France. He was seized near Dover, his head struck off on the side of a long boat, and his body thrown into the sea.

The complaints against Henry's government were heightened by an insurrection, headed by one John Cade, a native of Ireland. He had been obliged to fly over into France for his crimes ; but, on his return, seeing the people prepared for violent measures, he assumed the name of Mortimer ; and, at the head of 20,000 Kentish men, advanced towards Blackheath. The king sent a message to demand the cause of their rising in arms. Cade, in the name of the community, answered, that their only aim was to punish evil

ministers, and procure a re- dress of grievances for the people. On this a body of 15,000 troops were levied, and Henry marched with them in person against Cade, who retired on his approach, as if he had been afraid of coming to an engagement. He lay in ambush, however, in a wood, not doubting but he should be pursued by the king's whole army : but Henry was content with sending a detachment after the fugitives, and returning to London him- self; upon which Cade issued from his ambus- cade, and cut the detachment in pieces. Soon after, the citizens of London opened their gates to the victor, and Cade, for some time, main- tained great order and regularity among his fol- lowers. He always led them out into the fields in the night-time, and published several edicts against plunder and violence of any kind. He was not, however, long able to keep his people in subjection. He beheaded the treasurer, lord Say, without any trial ; and soon after, his troops committing some irregularities, the citizens re- solved to shut their gates against him. Cade endeavouring to force his way, a battle ensued, which lasted all day, and was ended only by the approach of night. The archbishop of Can- terbury and the chancellor, who had taken re- fuge in the Tower, being informed of the situa- tion of affairs, drew up, during the night, an act of amnesty, which was privately dispersed among the rebels. This had such an effect, that in the morning Cade found himself abandoned by the greater part of his followers, and retreat- ing to Rochester, was obliged to fly alone into the woods. A price being set on his head by proclamation, he was discovered and slain by one Alexander Eden; who, in recompense for his service was made governor of Dover Castle. The court now began to entertain suspicions that

the insurrection of John Cade had not happened merely in consequence of his own machinations and ambition, but that he had been ins.igated thereto by the duke of York. As he was about this time expected to return from Ireland, and a report took place that he was now to assert his right by force of arms, orders were issued in the king's name to deny him entrance into England. This was prevented by his appearing with no more than his ordinary attendants ; but though he thus escaped the present danger, he saw the necessity of instantly proceeding in support of his claim. His partizans were instructed to dis- tinguish between his right by succession, and by the laws of the kingdom. The adherents of Lancaster maintained, that though the advance- ment of Henry IV. might be looked upon as irregular, yet it was founded upon general con- sent ; or even allowing it to have been at first invalid, it had now been for a long time esta- blished, and acquired solidity of

consequence ; nor could the right of succession at any rate be pleaded for the purpose of overthrowing the ge- neral peace and tranquillity of the kingdom. The principles of liberty as well as the maxims of true policy had been injured by the house of York ; while the public were bound to those of Lancaster, no less by political than moral duty, in consequence of the oaths of fealty that had been so often sworn to them ; the duke of York himself having repeatedly sworn allegiance to them, and thus renounced those claims which he now brought forward to disturb the public tran- quillity. On the part of the duke of York, it was replied, that the good of the people required the maintenance of. order in the succession of princes ; that by adhering constantly to this rule, a number of inconveniences would be pre- vented which must otherwise ensue ; and though that order had been broken through in the case of Henry IV. it was never too late to remedy any pernicious precedent. It would indeed be a great encouragement to usurpers, if the imme- diate possession of power, or their continuance in it for a few years, could convert them into legal princes ; and the people must be in a very miserable situation, if all restraints on violence and ambition were taken off, and full liberty given to every innovator to make what attempts he pleased. They did not in'deed deny that time might confer solidity on a goverment originally founded in usurpation ; but a very long course of years was not only required for this purpose, but a total extinction of those who had any just title. The disposition of Richard II. and ad- vancement of Henry IV. were not legal acts, but the effects of mere levity in the people ; in which the house of York had acquiesced: from neces- sity, and not from any belief of the justice of their cause ; nor could this be ever interpreted into any renunciation of their pretensions ; nei- ther could the restoration of the true order of succession be considered as an encouragement to rebellion, but as the correction of a former abuse by which rebellion had been encouraged . Besides, the original title of Henry IV. was founded entirely on present convenience; and even this was now entirely shifted to the house of York. The present prince was evidently incapable of

governing the kingdom by reason of his imbe- cihi . , so that every thing was governed .either b , corrupt ministers or an imperious queen, who engaged the nation in foreign connexions entirely contrary to its interests ; while, on the other hand, the true heir of the crown was a prince of ap- proved judgment and experience, and

a native of England, who, by his restoration, would un- doubtedly correct all those abuses of which there was now such just reason to complain. In this dispute it was evident that the house of York had the better in point of argument : nevertheless, as a prince of the house of Lancaster was in imme- diate possession of the throne, and could not be charged with any crime, the cause of the former was less generally interesting; especially as it must always have been uncertain, a priori, whether the duke of York would have governed any better than king Henry. After his return from Ireland, however, the former used all his power and influence to foment the discontents which had for some time prevailed in the king- dom; and the conduct of the next parliament manifested the success of his intrigues. A violent attack was made upon such noblemen as were known to be most in favor with the king. The house of commons presented a petition against the duke of Somerset, the duchess of Suffolk, the bishop of Chester, lord Dudley, and several others of inferior rank ; praying not only that the king would remove them from his council, but that he would prohibit them from coming within twelve miles of the court. Henry, not daring to refuse this petition altogether, consented to banish all those of inferior rank, whom the commons had specified, but only for a year ; and this too on condition that he had no use for their assist- ance in quelling any rebellion. But he rejected a bill for attainting the late duke of Suffolk, and proposed some other measures which seemed to militate against the court, though it had passed both the house of lords and the house of com- mons. Encouraged by this disagreement between Henry and his parliament, the duke of York raised an army of 10,000 men, with whom he marched towards London, demanding a reforma- tion in government, and the removal of the duke of Somerset. This first enterprise, however, proved unsuccessful ; the gates of the city were shut against him, and he was pursued by the king at the head of a superior army. On this he re- tired into Kent ; and, as there were many of his own friends in the army of the king, a conference took place, in which Richard still insisted upon the removal of the duke of Somerset, and his submitting to be tried in parliament. This re- quest was in appearance complied with, and Somerset arrested : the duke of York was then persuaded to wait upon the king in his pavilion; but, on repeating his charge against the duke, he was surprised to see the latter come out from be- hind the curtain, and offer to maintain his inno- cence. Richard perceiving that he had not sufficient interest to ruin his adversary, pretended to be satisfied, and retired to his seat at Wigmore in Wales. During the time he resided there, a better opportunity was given him of accomplish- ing ms designs than he could have hoped for. The king fell into a kind of lethargic disorder,

which greatly increased his natural imbecility- Richard now had interest enough to get himself appointed protector, with power to hold parlia- ments at pleasure ; with which high office he was no sooner invested, than he turned out all the Lancastrian party from their offices, and sent the duke of Somerset to the Tower : but, on the recovery of the king, which happened not long after, he himself was dismissed from his employ- ment, the duke of Somerset released, and the ad- ministration once more put into his hands. On this the duke of York levied an army, merely, as he pretended, to enforce the reformation of government and the removal of Somerset. Thus Henry was obliged to face him in the field. A battle ensued at St. Alban's ; in which the royalists were defeated, and the duke of Somerset, the chief partizan of their cause, killed in the action. The king himself was wounded, and took shelter in a cottage near the field of battle ; where he was taken prisoner, but was afterwards treated with great respect and kindness by the duke of York ; and Henry, though now only a prisoner treated with the forms of royalty, became pleased with his situation. But his queen, a woman of a bold and masculine spirit, could not bear their present degradation. She therefore excited the king once more to assert his riuht by force of arms ; and, after several manoeuvres, the duke of York was obliged to retire from court. A nego- ciation for peace was at first set on foot, but the •mutual distrust of both parties broke it off. The armies met at Bloreheath on the borders of Staf- fordshire, on the 23d of September, 1459; and the Yorkists at first gained some advantages. But when a more general engagement was about to ensue, a body of veterans who served under the duke of York deserted to the king; which so intimidated the duke's party, that they separated the next day without striking a blow. The duke of York fled to Ireland ; and the earl of Warwick, one of his ablest and best supporters, escaped to Calais, with the government of which he had been entrusted during the late protectorship. The York party, though thus in appearance sup- pressed, only waited a favorable opportunity of retrieving their affairs. Nor was this long want- ing. Warwick having met with some success at sea, landed in Kent ; and, being there joined by other barons, marched up to London amidst the acclamations of the people, and soon found him- self in a condition to face the royal army. An engagement ensued at Northampton on the 10th of July 1460 ; in which the royalists were entirely defeated, and the kin j, again taken prisoner. The duke of York then .openly laid claim to the crown ; and on this occasion the first glance of a spirit of national liberty is said to have appeared in the house of lords. The caust of Henry and the duke of York was solemnly debated ; and the latter, though a conqueror, did not absolutely gain his cause. It was

determined that Henry should possess the throne during his life ; and that the duke of York should be appointed his successor, to the exclusion of the prince of Wales, then a child. Though the royal party now seemed destitute of everv resource, the queen still re- tained her intrepidity. She fled into Wales, where she endeavoured to raise another army.

The northern barons, provoked at the southern ones for settling the government and succession to the crown without their consent, soon furnished her with an army of 20,000 men. Another battle was fought near Wakefield Green, on the 24th of December, 1460. The Yorkists were defeated, and the duke himself was killed in the action. His head was afterwards cut off by the queers orders, and fixed on one of the gates of York, with a paper crown, in derision of his title. His son, the earl of Rutland, a youth of seventeen, was taken prisoner, and killed in cold blood by lord Clifford, in revenge for his father's death, who had fallen in the battle of St. Alban's. After this victory, Margaret marched towards London, to set the king at liberty ; but the earl of Warwick, who now put himself at the head of the Yorkists, led about the captive king, in order to give a sanction to his proceedings. He en- gaged the queen's forces at St. Alban's ; but, through the treachery of lord Lovelace, who de- serted during the heat of the engagement with a considerable body of forces, Warwick was de- feated, and the king fell once more into the hands of his own party. The submission of the city of London seemed now to be the only thing wanting to complete the queen's success ; but Warwick had secured it in his interests, and the citizens refused to open their gates to the queen. In the mean time young Edward, eldest son of the late duke of York, put himself at the head of his father's party. He was now in the bloom of youth, remarkable for his bravery and the beauty of his person. He defeated Jasper Tudor, earl of Pembroke, at Mortimer's Cross in Hereford- shire. The earl himself was taken prisoner, and immediately beheaded by Edward's orders. After this, the latter advanced to London ; and, being joined by the remainder of Warwick's army, he soon obliged Margaret to retire, en- tered the city amidst the acclamations of the peo- ple, and was crowned king on the 5th of March,

1461.

7. Of England under the House of York. — Queen Margaret,

notwithstanding her misfor- tunes, still continued undaunted. She retired to the north, where she was soon joined by such numbers, that her army amounted to 60,000 men. She was opposed by young Edward and War- wick at the head of 40,000 ; and both armies met near Teuton in Yorkshire, on the 29th of March, 1461. A bloody battle ensued, in which the queen's army was totally defeated ; and as Ed- ward, prompted by his natural cruelty, had ordered no quarter to be given, 40,000 of the Lancastrians were slain in the field or in the pursuit. Edward is said to have obtained this victory principally through a violent storm of snow blowing full in the face of the queen's army, and almost incapacitating them for the use of their arms. After this disaster the queen fled to Scotland with her husband and son ; whence, assisted by the king of France, she again entered England at the head of 5000 men. Her little fleet, however, was dispersed by a tempest, and she herself escaped with the utmost difficulty by entering the mouth of the Tweed. Soon after, a defeat, which her few forces sustained at Hexham, seemed to render her cause desperate ; and the

cruelties practised upon her adherents rendered it very dangerous to befriend her. The house of Lancaster, in fact, was now in its wane, so that Margaret was obliged to separate from her hus- band. The king, protected by some of his friends, remained in Lancashire for a twelve- month; but, being at last discovered, he was thrown into the Tower and kept close prisone. The queen fled with her son to a forest, where she fell into the hands of banditti, who stripped her of her rings and jewels, and treated her with the utmost indignity. A quarrel which happened among them about the division of the spoil, af- forded her, however, an opportunity of escape into another part of the forest, where she wandered for some time. At last, when spent with hunger and fatigue, she saw a robber approaching her with a drawn sword in his hand. Finding it im- possible to escape, she took the resolution of putting herself under his protection. Advancing towards him, therefore, and presenting the young- prince, ' Here,' said she, ' my friend, I commit to your care the safety of your king's son.' -This address so much surprised the man, that, instead of offering her any injury, he professed himself devoted to her service ; and, after living for some time concealed in the forest, she was conducted by him and his associates to the sea-side, where: she found a ship which conveyed her to Flanders. On her arrival she went to her father's house, and awaited in this retreat some years an opportunity of retrieving her affairs.*

Edward, in the mean time, believing himself securely possessed of the throne, gave a loose to his favorite passions ; one of which was an

im- moderate love of women. To divert him from this, the earl of Warwick, to whom he was in- debted for his crown, advised him to marry. Edward consented, and sent him over to the con- tinent to negociate a match with the princess of Savoy. The negociation proved successful ; but, in the mean time, the king had privately espoused Elizabeth Woodville, daughter of Sir Philip Woodville, who had married the duchess of Bed- ford after the death of her first husband. Edward had in vain employed the arts of seduction against this lady before he married her; but un- fortunately the match was concluded just at the time that the earl of W a/wick had proved suc- cessful in his negociation with the princess of Savoy. The minister therefore returned full of indignation against his sovereign : and Ed- ward, forgetting the just reason for offence he had given him, determined to remove him from his councils. Warwick was likewise dis- gusted by the favor shown to the queen's party. A plan of revenge was, therefore, now conceived ; and a most powerful combination was formed against Edward ; to accomplish which, War- wick not only employed all his own influence, which was very extensive, but likewise that of the duke of Clarence, Edward's brother, to whom the earl had allied himself by giving him his daughter in marriage. Various circumstances of the time also favored this scheme. The inha- bitants of the neighbourhood of St. Leonard's in Yorkshire, complained that the duties levied for that institution, and which had been originally appointed for pious purposes, were secreted by

the managers. As the clergy were concerned in this affair, they attempted to silence their anta- gonists by ecclesiastical Culminations ; upon which the latter took up arms, fell upon the offi- cers of the hospital, and having massacred them, proceeded towards York, to the number of 150,000. In the first skirmish, the insurgents had the misfortune to lose their leader, who was instantly executed. They, however, still conti- nued in arms, and in a short time appeared in such numbers as to become formidable to the government. Henry, earl of Pembroke, was first sent against them with a body of 5000 men ; and having taken Sir Henry Nevil, one of their leaders, prisoner, instantly put him to death : this was soon revenged by a similar doom being pronounced on himself, on his being defeated and taken prisoner. His defeat had been occa- sioned by a disagreement with the earl of De- vonshire ; in consequence of which the latter had gone off with his troops. The king enraged at

this, now caused Devonshire to be executed in a summary manner, but this was of no service to his cause ; a new body of insurgents appeared •mder Sir Robert Welles, son to a nobleman of that name. The latter, to secure himself from ill suspicion of disloyalty, fled to a monastery ; "jut he was soon enticed from thence, and put to death. His son soon after shared the same fate, being defeated ano! taken prisoner by Ed- war J, who instantly ordered him to be beheaded, along with Sir Thomas Launde, and other per- sons of distinction. Notwithstanding this ap- pearance of a general insurrection, the king had so little suspicion of the loyalty of Warwick and Clarence, that he employed them in raising troops to quell the insurgents. Instead of executing their commission with fidelity, however, they joined the malcontents with all the forces they could raise ; but, disconcerted by the defeat and death of Welles, they retired to Lancashire, in hopes of being joined by lord Stanley, who had married the earl of Warwick's sister. Disappoint- ed in this, they were obliged to disband their army and fly into Devonshire, whence they set sail for the continent. Upon their arrival at Calais, the deputy-governor, whom Warwick had left, refused him admittance ; nor would he even allow the duchess of Clarence to land, though she had been deli veredof a son on board only a very few days before. He, however, made an apology to Warwick for this behaviour, and the latter pretended to be reconciled, but immediately left the place, having seized some Flemish ves- sels which he found in the neighbourhood. As a very close alliance subsisted between War- wick and the duke of Burgundy, the king of France now received him with the greatest marks of esteem. A reconciliation also took pbce between him and the unfortunate queen Margaret, and a French fleet was prepared to reconduct them to England. They landed together at Dartmouth, with a small body of troops, while Edward was in the north suppressing an Insurrection. In less than six days Wai-wick found himself at the head of 60,000 men. Ed- ward was now, in his turn, obliged to fly the kingdom. Having narrowly escaped an attempt made upon his person by the marquis of Mon-

tague, he embarked for Holland, on board % small fleet at Lynn in Norfolk. While at sea, he was chased by some ships belonging to the Hanse Towns, then at war both with France and England; but at length, landed safely on the Flemish coast, where he met with but an indif- ferent reception from the duke of Burgundy, with whom he had lately entered into an al- liance. Warwick, in the mean time, advanced to London, and once more released and placed Henry VI. on the throne. A parliament was called, which solemnly confirmed the king's title ; Warwick himself being dignified by the people with

the title of the king-maker. All the attainders of the Lancastrians were reversed, and every one was restored who had lost either honors or fortune by his former adherence to Henry's cause. Edward's friends fled to the continent, or took shelter in monasteries : but his party was not yet destroyed. After an ab- sence of nine months, being seconded by a small body of troops granted him by the duke of Burgundy, he made a descent on llavenspur in Yorkshire, and first met with little success; but his army increasing on his march, he was soon in a condition to appear before the capital. The unfortunate Henry was now again, there- fore, dislodged from his throne, and the hopes of Warwick were almost totally blasted by the defection of Clarence, Edward's brother. War- wick knew his forces to be inferior to those of Edward, but placed great dependence on his own generalship. He, therefore, advanced to Barnet, within ten miles of London, where he resolved to give battle to Edward. The latter soon came up with him, and on the 14th of April 1471, a most obstinate and bloody conflict ensued. Edward, as usual, had ordered no quarter to be given ; and, obtained the victory through a mistake of a borly of Warwick's forces, who fell with fury on their own party in- stead of the enemy. The earl himself was slain, together with his brother, and 10,000 of his bra- vest followers. The queen was just then re- turned with her son from France, where she had been soliciting supplies. She had scarcely time to refresh herself from the fatigue of the voyage, when she received the fatal news of the death of Warwick, and the total destruction of her party. Her grief now, for the first time, it is said, ma- nifested itself by tears ; and she immediately took sanctuary in the abbey of Beaul eu in Hampshire. Here she found Tudor, earl of Pembroke, Courtney, earl of Devonshire, the lords Wenlock and St. John, with some other men of rank, willing to assist her. On this as- surance, she resumed her courage ; and, advan- cing through the counties of Devon, Somerset, and Gloucester, increased her army every day. At last, however, she was overtaken by the vic- torious Edward at Tewkesbury, on the banks of the Severn. The queen's army was totally de- feated; the earl of Devonshire and lord Wen- lock were killed in the field ; the duke of Somerset, and about twenty other persons ot distinction, who had taken shelter in a church, were dragged out, and beheaded; about 3000 of the party fell in battle, and the army was en- tirely dispersed. Queen Margaret and her son

being taken prisoners, and brought to the king, the latter asked the

prince, in an insulting manner, how he dared to invade his dominions ? The young prince replied, that he came thither to claim his just inheritance; upon which Ed- ward struck him on the face with his gauntlet. The dukes of Clarence and Gloucester, lord Hastings, and Sir Thomas Gray, taking this blow as a signal for violence, hurried the prince into the next apartment, and there despatched him with their daggers. Margaret was thrown into the Tower along with her husband Henry, who expired in that confinement a few days after. It was universally believed that he was murdered by the duke of Gloucester, though of this there is no direct evidence. Margaret was ransomed by the king of France for 50,000 crowns, and died a few years after in that coun- try. Edward being now freed from all his enemies, began to punish those who had ap- peared against him. Among the various cruel- ties he committed, the manner in which he put his brother, the duke of Clarence, to death, was perhaps the most remarkable. The king, hap- pening to be one day hunting, a servant of the duke killed a white buck, which was a great favorite of'the owner of the park, named Burdet, who vexed at the loss, broke out into a passion, and wished 'the horns of the deer in the belly of the person who advised the king to that insult. For this exclamation, Burdet was tried for his life, and executed at Tyburn. The duke of Clarence exclaimed against the iniquity of this sentence ; upon which, he was arraigned before the house of peers, found guilty, and condemned to death. The only favor granted him was to have the choice of his death ; and this is said to have been a singular one, namely, to be drowned in a butt of Malmsey wine. But the whole of this story respecting Clarence, is very differently told by some writers. Having lost his duchess in 1476, he is said to have aspired to the hand of Mary, heiress of the late duke of Burgundy, and thus to have excited the jealousy of his brother. At this time, two of the servant? ot the duke, Stacey and Burdet, were accused ot practising magic, of having calculated the nati- vities of the king and princes, and of having cir- culated seditious songs. Clarence interfered upon their trial, we are told, to establish their innocence, and the day after their execution in- troduced their confessor into the council-chamber to confirm it by the'ir dying declarations. When the king learnt these particulars, he upbraided the duke with insulting the administration of jus- tice ; and, in the presence of the lord mayor of London and the sheriffs, committed him to the Tower. A long bill of attainder against him appears in Rot. Parl. vi. 193, 4. Dr. Lingard says he died in the Tower; but 'the manner of his death has never been ascertained.' The rest of the reign of Edward affords little else than a history of the king's amours. Among his many mistresses, the celebrated Jane Shore deserves some mention. Historians represent

her as ex- tremely beautiful, cheerful, and of uncommon intellect and generosity. The king, it is said, •was no less captivated with her mind than with her person : if ever she importuned him it was

in favor of the unfortunate. After the death of Edward, she attached herself to lord Hastings ; and, when Richard III. cut off that nobleman as an obstacle to his ambitious schemes, Jane Shore was arrested as an accomplice, on the ri- diculous accusation of witchcraft. This, how- ever, terminated only in a public penance ; excepting that Richard rifled her of all her little property; but, whatever severity might have been exercised towards her, it appears that she was alive, though sufficiently wretched, in the reign of Henry VIII., when Sir Thomas More saw. her poor, old, and shrivelled, without the least trace of her former beauty, Howe, in his tragedy of Jane Shore, has adopted the popular story, related in the old historical ballad, of her perishing by hunger in a ditch, where Shore- ditch now stands. But Stowe assures us that street was so named before her time. The king died on the 9th of April 1482, in the forty-se- cond year of his age, and the twenty-first of his reign, counting from his first assuming the crown. Besides five daughters, he left two sons; Edward, prince of Wales, his successor, then in his thirteenth year; and Richard, duke of York, in his ninth.

On the death of Edward IV. the kingdom was divided into new factions. The queen's family, which, during the last reign, had come into power, was become obnoxious to the old nobi- lity, who considered them as their inferiors. The king had endeavoured to prevent these ani- mosities from coming to a height, by desiring, on his death-bed, that his brother Richard, duke of Gloucester, should be entrusted with the re- gency ; and recommended peace and unanimity during the minority of his son. But the king was no sooner dead, than the former resentment between these parties broke out with violence ; and the duke of Gloucester was resolved to profit by these contentions. His first step was to get himself declared protector of the realm; and, having arrestei the earl of Rivers, the king's uncle and guardian, he met young Edward in his way from Ludlow Castle, where the late king had resided during the latter part of his reign, and respectfully offered to conduct him to Lon- don. Having thus secured the king, he next obtained possession of his brother's person. The queen had retired with this child into West- minster Abbey ; and it was with extreme reluc- tance, that she delivered him up, at the inter- cession of the primate and the archbishop of York. In the course of a few days, Gloucester conveyed the two princes to the Tower, under pretence of guarding them from danger; and soon after this spread reports of their illegiti- macy ; and, by pretended

obstacles, put off the young king's coronation. Lord Stanley first began to suspect his designs, and communicated his suspicions to lord Hastings, who had long been firmly attached to the king's family. Hast ings would not at first give credit to the surmise of his frrend, but he soon had a fatal proof OT the truth of it. On the 13th of June, 1483, he was hurried out of the council-room in the Tower by Gloucester's order, and beheaded on a log ot timber. The soldiers who carried him off, made a bustle, as if an attempt had been made to*

rescue him ; and one of them made a blow at lord Stanley's h

This scene is well drawn by Dr. Lingard. — In the morning Buckingham, with several lords a.nd gentlemen, and Shaw with principal citizens, proceeded to the palace, and demanded an audience. The protector affected to be surprised at their arrival : expressed apprehensions for his safety ; and when at last he showed himself at a window, appeared before them with strong marks of embarrassment and perturbation. Bucking- ham, with his permission, presented to him an address, which, having been afterwards embodied in act of parliament, still exists for the informa- tion of posterity. It is styled the considera- tion, election, and petition, of the lords spiritual and temporal, and commons of this realm of England : and after an exaggerated picture of the former prosperity of the kingdom, and of its

misery under the late king, proceeds thus : ' Also we consider how the pretended marriage betwixt the above-named king Edward and Elizabeth Gray, was made of great presumption, without the knowing and assent of the lords of this land, and also by sorcery and witchcraft committed by the said Elizabeth and her mother Jacquetta, duchess of Bedford, as the common opinion of the public voice and fame is throughout all this land, and hereafter, if and as the case shall re- quire, shall be proved sufficiently in time and place convenient : and here also we consider how that the said pretended marriage was made pri- vily and secretly, without edition of bans, in a private chamber, a profane place, and not openly in the face of the church after the law of God's church, but contrary thereunto, and the laudable Custom of the church of England : and how also that at the time of the contract of the said pre- tended marriage, and before and long after, the said king Edward was and .stood married and

troth plight to one dame Eleanor Butteler, daughter of the old earl of Shrewsbury, with whom the said king Edward had made a pre-contract of matrimony long time before he made the said pretended marriage with the said Eliza- beth Gray in manner and form aforesaid : which premises being true, as in very truth they be true, it appeareth evidently that the said king Edward, during his life, and the said Elizabeth, lived to- gether sinfully and damnably in adultery against the law of God and of his church. Also it appear- eth evidently and followeth, that all the issue and children of the said king Edward be bas- tards, and unable to inherit or to claim any thing by inheritance, by the law and custom of England.' Next is recited the attainder of the duke of Clarence, by which his children were debarred from the succession, and thence it is inferred that the protector is the next heir to Richard, late duke of York. 'And hereupon,' continues the petition, ' we humbly desire, pray and require your noble grace, that according to this election of us the three estates of your land, as by your true inheritance, you will accept and take upon you the said crown and royal dignity, with all things thereto annexed and appertain- ing, as to you of right belonging, as well by in- heritance as by lawful election.'

' The protector was careful not to dispute the truth of these assertions. But he replied with modesty, that he was not ambitious ; that royalty had no charms for him ; that he was much at- tached to the children of his brother, and resolved to preserve the crown that it might grace the brow of his nephew. ' Sir, returned the duke of Buckingham, 'the free people of England will never crouch to the rule of a bastard, and if the lawful heir refuse the sceptre, they know where to find one who will cheerfully accept it.' At these words Richard affected to pause ; and after a short silence replied, 'that it was his duty to obey the voice of his people ; that since he was the true heir, and had been chosen by the three estates, he assented to their petition, and would from that day take upon himself the royal estate, pre-eminence, and kingdom of the two noble realms of England and France, the one from that day forwaid by him and his heirs*

to rule, the other by God's good grace and their good help to get again and subdue.'

After this farce was acted, Buckingham, on the 24th of June, 1 483, waited on the protector with the offer of the crown, which with great af- fected modesty, he declined; till being told, that the people, in case of his refusal, must look out for one that would be more compliant, he ac- cepted the government of England and France, with a resolution, as he said, to defend the one and subdue the other. The first step taken by the new king, it is said, was to send orders to Sir Robert Brackenbury, governor of the Tower, to put the young princes to death. But this he refused ; and answered, that he knew not how to embrue his hands in innocent blood. A fit in- strument for this purpose, however, was not long wanting. Sir James Tyrrel readily undertook the office, and Brackenbury was ordered to re- sign the keys to him for one night. Tyrrel, with three associates, Slater, Deighton, and Forest,came therefore, in the night to the door of the cham- ber where the princes were sleeping, and while he waited on the outside, the others smothered them with the bolster and pillows ; after which they exhibited their bodies to Tyrrel, who or- dered them to be buried under a heap of stones at the foot of the stairs. These circumstances are said to have been confessed in the succeeding reign, though the perpetrators escaped punish- ment The bodies of the two princes were at that time sought for without success ; but in the time of Charles I. the bones of two young per- sons, answering to their age, were found in a spot not unlikely to be that where they were buried, and which, being supposed to be the re- mains of these unfortunate princes, were buried under a marble monument in Westminster Abbey.

Richard having thus, as he imagined, secured himself on the throne, attempted to strengthen his interest by foreign alliances, while he pro- cured the favor of the clergy at home by most un- limited indulgence ; but he soon found his power threatened from an unsuspected quarter. The duke of Buckingham, who had been so instru- mental in raising him to the throne did not think himself sufficiently rewarded. Having demanded some confiscated lands in Hereford, to which his family had an ancient claim, Richard but partially and reluctantly complied with his re- quest, so that a coolness soon ensued between them, and in a short time this powerful noble- man was in heart a traitor to Richard's cause. He is said to have deliberated for some time whe- ther he should assume the crown himself or set up another claimant. At length he determined on the latter; and resolved to declare for Henry earl of Richmond, the only

surviving branch of the house of Lancaster, who was at that time an exile in Brit- tany. He had long lived abroad, and was once delivered over to the ambassadors of Edward IV, who were preparing to carry him to England, when the duke of Brittany, who had betrayed him, repented, and took him from the ambassa- dors just as they were embarking with him on ship-board. The cruelty of Richard now inclined the people to favor his pretensions ; and, to give them additional strength, a match was projected

betwixt him and the princess Elizabeth, the eldest daughter of Edward IV. When Richard first began to entertain doubts of the fidelity of Buckingham, he sent for him to court, deter- mined to sacrifice him to his safety, but Bucking- ham, instead of obeying the summons, fled into Wales, and raised a considerable army. Richard hastened to meet him with all the forces he could command, when the march of Buckingham being retarded by an uncommon inundation of the Severn, his troops were so disheartened, that they almost all deserted him ; he was obliged to fly for safety to the cottage of an old servant named Banister, in Shropshire, and Richard set a price upon his head. The cupidity of Banister was tempted, it is said, and he betrayed Buckingham to the sheriff of the county, by whom he was seized and conducted to Richard at Salisbury, who caused him to be forthwith beheaded in the market-place. The earl of Richmond, in the mean time, had set sail from St. Maloes, with a body of 5000 men ; but after his arrival in Eng- land, receiving the disagreeable news of Buck- ingham's misfortune, he set sail again for Bre- tagne ; while Richard, emboldened by his suc- cess, determined to confirm his title to the throne by calling a parliament. At present, matters were so circumstanced, that the parliament had no other resource than to comply with his de- sires, and acknowledge his right to the crown. An act was therefore, passed, confirming the illegitimacy of Edward's children ; and an at- tainder was confirmed against the earl of Rich- mond ; the duties of tonnage and poundage were granted to the King for life ; and his only son Edward, then about twelve years of age, was created prince of Wales. In return for these concessions, Richard passed several popular and conciliatory laws. He paid his court also to the qtfeen dowager with such assiduity and success, that she left her sanctuary, and put herself and her daughters into his hands. He had already married Anne, the second daughter of the earl of Warwick, and widow of Edward prince of Wales, whom he himself had murdered ; but she having borne him but one son who died about this time, he considered her as an obstacle to his ambitious projects, and is said to have taken her off at this time : as he knew of a projected match between the earl of

Richmond and the princess Elizabeth, which would make the rivalship of the former still more formidable, he now resolved to obtain a dispensation from the pope for marry- ing her himself. The queen dowager is even said to have come into this scheme, while the princess rejected his addresses with abhorrence. Before, however, he could accomplish this union he received news of Richmond's preparations for embarking for England. These being completed, he set sail from Harfleur in Normandy, and landed without opposition, on the 17th of August. 1485, at Milford Haven in Wales. Richard, in the mean time, had posted himself at Nottingham. Sir Rice ap Thomas and Sir Walter Herbert being commissioned to oppose his rival in Wales ; the former immediately deserted to him, and the latter made but a feeble resistance. The usurpe- now, therefore, resolved to meet his antagonist at once, and to risk every thing on the event of a

battle. Richmond, on the other hand, though he had not above 6000 men, and the king nearly double that number, did not decline the combat, encouraged chiefly by the promises of lord Stan- ley to join him with a body of 7000 men, with which he hovered near the intended field of action, not far from Leicester. The king entrusted his van to the duke of Norfolk, while he himself, with the crown on his head, took the command of the main body. Lord Stanley in the mean time posted himself on one flank between the two armies, while his brother Sir Will.am took his station directly opposite. As his intention of either joining the enemy or keeping neutral dur- ing the time of the engagement was now far from being doubtful, Richard sent him orders to join the main body; which not being complied with, the tyrant determined to put to death his son, who had been left with him as a pledge of Stan- ley's fidelity. He was persuaded, however, to defer the execution till after the engagement, that Stanley might thereby be induced to delay his

Kurpose of joining the enemy. This he did not >ng do ; and by joining Richmond's forces, en- tirely decided the fortune of the day. The tyrant now perceiving his situation to be desperate, and seeing his rival at no great distance, rode towards him with great fury, in hopes that either Henry's death or his own would decide the victory. He killed Sir W. Brandon the earl's standard bearer ; dismounted Sir John Cheyney ; and was within reach of Richmond, when Sir William Stanley breaking in with his troops, Richard was sur- rounded and overwhelmed by numbers. His body was afterwards found in the field, covered with the

8. Of England under the house of Tudor. — Two days after the battle, Henry gave orders to confine Edward Plantagenet, earl of Warwick, son of the unfortunate duke of Clarence, and to release the princess Elizabeth, who had been con- fined in the Tower, He then advanced by slow marches to the city of London, where he was very satisfactorily received. He was crowned king of Englanl on the 30th of October, 1485 ; and, to heighten the splendor of that occasion, be- stowed the rank of knights banneret on twelve per- sons, and conferred peerages on three. Jasper earl of Pembroke, his uncle, he created duke of Bed- ford ; Thomas lord Stanley his father-in-law, earl of Derby ; and Edward Courteney, earl of Devon- shire. At the coronation likewise appeared a new institution, which the king had established for per- sonal security as well as pomp ; a band of fifty ar- chers, who were denominated Yeomen of the Guard. But, lest the people should take um- brage at this step, as if it implied a diffidence of his subjects, he declared the institution to be perpetual. The ceremony of the coronation was performed by cardinal Bourchier, archbishop of Canterbury. On the 18th of January, 1486, he married the princess Elizabeth ; an occurrence

celebrated in London with greater appearance o« joy than either his entry or his coronation had been. Henry remarked, with displeasure, this general favor borne to the house of York ; and the suspicions arising from it, not only d.sturbed his tranquillity during the whole of his reign, but produced a disgust toward his consort, and poi- soned his domestic happiness. A long course of civil wars had rendered the people turbulent and factious; and the king's violent animosity to the house of York, irritated their proneness to re- bellion. Early in his reign, instead of endea- vouring to conciliate the affections of the oppo- site party, he always strove to quell them by absolute force. For this purpose, soon after his accession, he passed into the north of England, where the Yorkists were very numerous. In his journey thither, he received intelligence of an insurrection raised against him by lord Lo^l and Sir Henry and Sir Thomas Stafford, who were marching to besiege the city of Worcester. The rebels dispersed, however, on the offer of a ge- neral pardon ; and lord Lovel submitted to the king's mercy. The Staffords took sanctuary in the church of Colnham, near Abingdon ; but it was found, or asserted, that it had not the privi- lege of protecting rebels. The elder was there- fore brought out, and executed at Tyburn ; but the younger, pleading that he had been misled, received a pardon. This success was soon after followed by the birth of a prince ; whom Henry named after the celebrated king Arthur, said to have been the direct ancestor of the house of Tudor. None of these occurrences, however,

seemed fully to reconcile the hearts of the Eng- lish to their sovereign. His extreme severity still continued towards the house of York : many of its popular adherents had been treated with great cruelty, and deprived of their fortunes under pretence of treason; a general resumption had likewise been made of the grants made by the princes of that house. It was likewise uni- versally believed that the queen herself met with harsh treatment. Hence, notwithstanding the politic and vigorous administration of Henry, the people generally made little scruple of openly expressing their disapprobation of his conduct and government ; and one rebellion seemed to be extinguished only to give birth to another. At the commencement of his reign, the king had confined the duke of Clarence's son, as has been mentioned. This unfortunate youth, who was generally recognised as the earl of Warwick, was, through long confinement, entirely unac- quainted with the affairs of the world. But he was now made use of to disturb the public tran- quill.ty. The queen dowager was, with much reason, suspected to be at the bottom of this con- spiracy ; but not choosing to interfere openly in it, she employed one Simon, a priest of Oxford, to prosecute her designs. Having found a lad about fifteen years of age, named Lambert Simnel,who, from his graceful air and appearance, seemed ca- pable of personating a man of quality, he in- tructed him to assume the title of Richard duke of York, second son of Edward IV., who, it was said, had secretly made his escape from thp cruelty of his uncle. Heating afterwards a new report that Warwick had escaped from the

Tower, and observing that this news was re- ceived with general satisfaction, he changed his plan of imposture, it is said, and made Simnel personate that unfortunate prince. This pliant and able youth was, therefore, found to speak familiarly of many occurrences, as happening to him in the court of Edward. But as the impo- sition was not calculated to bear a close scrutiny, he was removed to Ireland; and no sooner pre- sented himself to the earl of Kildare the deputy, claiming his protection as the unfortunate earl of Warwick, than he is said to have shaken the loyalty of that nobleman, who, with several others, began to consult as to their line of duty, and ex- pressed a strong belief in Simnel's story. In proportion as it was spread it obtained credit. Simnel was lodged in the castle of Dublin ; the inhabitants universally took an oath of allegiance to him, as the true descendant of the Plantage- nets ; he was crowned with a diadem taken from the statue of the blessed virgin, and proclaimed

king by the title of Edward VI. : the whole king- dom followed the example of the capital. This event so much alarmed Henry, that he would have gone over to Ireland to quell the rebellion, had he not been afraid of the machinations of the queen dowager in his absence. He was there- fore resolved to confine her for life in a monas- tery : under pretence, however, of its being on account of her having formerly delivered up the princess her daughter to king Richard. The queen murmured against this treatment of her mother in vain : the king persisted in his reso- lution, and she remained in confinement till the time of her death, which happened some years after. The next measure was to show Warwick to the people. He was taken from the Tower, and led through the principal streets of London ; after which he was conducted in solemn proces- sion to St. Paul's, where great numbers were assembled to see h m. Still, however, they pro- ceeded in Dublin to honor their pretended mo- narch ; and he was crowned with great solemnity in the presence of the earl of Kildare, the chan- cellor, and the other officers of state. At last, being furnished by the duchess of Burgundy with a body of 2000 veteran Germans under the com- mand of Martin Swart, a brave and experienced officei, he proceeded to invade England. Land ing in Lancashire, he marched thence to York, expecting that, as in Ireland, the people would rise and join him every where. But, in this he was deceived : they were unwilling to connect themselves with a body of foreigners ; and were besides kept in awe by the reputation of Henry. Lord Lincoln, therefore, who commanded the rebel army, determined to bring the matter to a speedy issue. Accordingly he met the royal army at Stoke, in the county of Nottingham. An obstinate engagement ensued, but the royal forces obtained a complete victory. Lord Lincoln, with 4000 private men, fell in the battle ; and Simnel with his tutor Simon were taken prisoners. The latter, being a priest, could not be tried by the civil power, and was only committed to close confinement. Simnel was pardoned, and made a scullion in the king's kitchen, whence he was afterwards advanced to the rank of falconer, in which employment he died. Henry being now VOL. VIII.

freed from danger, determined to take ample vengeance on his enemies. For this purpose he took a second journey into the north; where find- ing many delinquents, he exacted heavy fines from all who could pay them ; levying them, as well as indicting capital punishment, mt by the or- dinary judges, but either by commissioners ap- pointed for the occasion, or by sentence of a court-martial. Having thus re-established his authority, he determined to recommend himself to his subjects by affecting a military disposition. He seems, however, never to have had an inten- tion of prosecuting

*foreign conquests; though, to please the people, he frequently gave out that he intended to invade France, and recover the continental possessions of England. Under these pretences, particularly that of assisting the Bre- tons, whom the king of France had lately sub- dued, and who had applied to him for relief, he persuaded his parliament to grant him a consi- derable supply. The counties of Durham and York, who had always been discontented with Henry's government, and still farther provoked by the oppressions under which they labored after the extinction of Simnel's rebellion, opposed the commissioners sent by the king to levy the taxes. When the latter applied to the earl of Northum- berland for assistance in the execution of their office, instead of being able to enforce the levying of the tax, he himself was attacked and put to death by the insurgents. This act of violence committed by themselves, seemed to render the insurgents desperate, so that they now prepared openly to resist the royal power, under the con- duct of Sir John Egremond. This ill-conducted and precipitate scheme, however, met with no success. Henry instantly levied a considerable force, which he committed to the charge of the earl of Surrey ; by whom the rebels were quickly defeated. Sir John Egremond fled to the duchess of Burgundy, who protected him. The Bretons now urgently applied to Henry for as- sistance, their distresses becoming every day more galling, and as he had obtained the*subsidy under the pretext of invading France, he found himself obliged to attempt something. With this view he set sail for Calais with an army of 25,000 foot and 1600 horse, of which he gave the command to the duke of Bedford and the earl of Oxford. Negociations for peace were even now, however, secretly begun, and commissioners were appointed to consider the terms, it is said, three months before Henry set out for the conti- nent. As the love of money was his ruling pas- sion, and the possession of Bretagne was a great object to France, an accommodation soon took place between the parties. The king of France engaged to pay Henry £200,000 as a reimburse- ment for the expenses of his expedition, and stipulated at last, to pay him and his heirs an annual pension of 25,000 crowns more. The au- thority of Henry now seemed so firmly established, as to leave no reason to dread any rival ; but the duchess of Burgundy, resenting the depression of her family, and exasperated by her repeated disappointments, resolved to make a final effort against him. For this purpose, she had recourse to the same kind of expedient that had succeeded so well in Simnel's case. She propagated a re-*

port that her nephew Richard Plantagenet, duke of York, had escaped from the Tower, where his elder brother was murdered, and that he still lay somewhere concealed. Finding this well re- ceived, she soon found a young man who as- sumed his name and character. This person was the son of one Osbeck, or VVarbeck, a con- verted Jew, who had been in England during the reign of Edward IV. His name was Peter ; but it had been corrupted aftet the Flemish manner into Peterkin, or Perkin. It was by some be- lieved, that Edward, among his amorous adven- tures, had an intrigue with Warbeck's wife, •which might account for the great similarity of features between Perkin and that monarch : for such there certainly was. The duchess of Bur- gundy is said to have found this youth well suited to her purposes. His graceful air, easy manners, and elegant conversation, rewarded her lessons, and were capable of imposing upon any hut those who were privy to the imposture. The kingdom of Ireland was selected, as in the former imposture, for Perkin's first appearance. He landed at Cork, under the name of Richard Plantagenet, and was soon followed by the cre- dulous multitude. He wrote letters to the earls of Desmond and Kildare, to join him, and dis- persing every where the intelligence of his escape from his uncle Richard's cruelty, soon became an object of the public favor. Those who were disgusted with the measures of the king, were of course prepared to join Perkin, amongst whom were many of Henry's favorites, who had contributed to place him on the throne. All their attempts, however, were frustrated by the vigilance of the king, and most of the con- spirators of any note were taken and executed. Perkin finding it in vain to attempt any thing in England, went to the court of James IV. in Scotland. Here he was received with cordiality, and that prince exhibited his confidence in his pretensions so far, that he gave him in marriage lady Catherine Gordon, daughter to the earl of Huntley, and a near relation of his own. But he in vain attempted to support his claims to the throne of England, and on the conclusion of peace between the two kingdoms, Perkin was obliged to leave Scotland. He now went to Flanders ; and meeting with but a cool reception resolved to make an effort on the disposition of the people of Cornwall, who had lately risen on account of a new tax. On his first appearance, he was joined by about 3000 men, with whom he laid siege to Exeter. Henry, however, having marched against him with a considerable army, Perkin's heart failed him, though his followers now amounted to 7000, and he took shelter in a monastery. His wife fell into the conqueror's hands ; who placed her in a respectable situation near the queen's person, which she enjoyed

till her death. Perkin being persuaded to deliver himself into Henry's hands, was compelled to sign a confession of his imposition and history ; but this was so defective and contradictory, that little reeard was paid to it. His life was granted him; but he was detained in custody, and keepers w?ro appointed to watch his conduct. From these, however, he at length broke loose ; and flying to the sanctuary of Sheen, pat him-

self into the prior's hands. Here he was again prevailed upon to deliver himself up to the king, and was committed to the tower, where engaging in a correspondence with the earl of Warwick for their joint escape, both of them were condemned and executed.

The arguments most favorable to the claim of Warbeck are thus brought into view by Dr. Lin- gard. '1. He was acknowledged as duke of York by Charles of France, by James of Scot- land, and by Margaret of Burgundy. If it be said that the object of Charles was to distress Henry, Jamts, at least, ought to have been con- vinced of the real character of Warbeck, before he would give him his kinswoman in marriage ; and the conduct of Margaret, who was less liable to be deceived, must prove, that he was really her nephew, or that she knowingly promoted an imposture. But in the latter supposition what could be her object ? Her niece was queen of England, and the children of that niece were pre- sumptive heirs to the crown. Would she attempt to disinherit her own family, in favor of an unknown and obscure adventurer?

' 2. Henry, with all his arts and intrigues, could never form a plausible account of the origin and adventures of Warbeck. The stories circulated with his connivance bear evident marks of uncer- tainty and falsehood. There were two methods by which he might have successfully detected the imposture. He might have ascertained the death of the princes in the tower by the apprehension and examination of the reputed assassins : or after the surrender of Warbeck, he might have confronted him with his own queen and her sisters. Their testimony would have decided the question. If then he adopted neither of these measures, it is an argument that he dared not. He must have known that both of the brothers were not put to death by their uncle, and that the younger had escaped, and now claimed the crown. Such, in short, are the arguments of those who maintain the cause of the adventurer.

' To me, however,' says this writer, ' the argu- ments against the identity of Warbeck with Richard, duke of York, appear greatly to pre- ponderate. 1. From the preceding pages it has been seen that the

“death of the two pnnces was believed by all those who were most interested to know the truth, by their mother Elizabeth, and their uncle Richard, by the partisans of the house of Lancaster, and those of the house of York, and even by Henry himself, as late at least as the summer of 1487, when he offered to marry their mother to the king of Scots, and their two sisters to his two sons. Four years later, a young man appears in Ireland, and professes to be the younger of the two princes, who were believed to be dead. Was it not incumbent on him to prove his pretensions, to show how he had escaped from the murderers, to what place he had been conveyed, and where and how he had spent the eight years which had elapsed since his supposed death ? yet all this was kept a profound secret. Even in his proclamation at the head of the Scottish army, when it was so much for his interest that the English should be convinced of his claim, he contents himself with asserting, that in his tender age he had escaped by God’s great

might out of the tower of London, had been secretly conveyed over sea to other dirers countries, and had remained there certain years as unknown.’ Does not this meagre account, in circumstances when the clearest proofs were required, betray a secret consciousness that his history would not bear investigation ?

‘ 2. His assertions seem to have been generally disbelieved by the nation. The persons who adhered to him in France, were most, if not all of them outlaws : and the gentlemen who were attainted on his account in England, seem to have suffered, not so much for having admitted his pretensions, as for their attempts to ascertain who he was, which Henry ascribed to a treason- able disaffection towards himself. After that period no person of note attached himself to the pretender. When he landed on the coast of Kent, he was immediately repulsed ; when he entered England successively at the head of a Scottisli army, and was in a condition to protect his friends, not an individual repaired to his stand- ard; and when he afterwards assumed the com- mand of the Cornish insurgents, he did not debauch a single gentleman from his allegiance to Henry. It is not credible that the numerous partisans of the house of York would have remained quiet on all these occasions, unless they had reason to believe him an impostor.

‘ 3. This is strongly corroborated by the con- duct of Henry. Would

his jealousy have spared the real duke of York, when he had him once in his power? Would he have exhibited him to the gaze of the populace on the road, or of the citi- zens of London, of whom many could have recognised his features ? Would he have suffered him to roam at liberty through the palace at Westminster for six months, exposed to the daily view of the queen, her sisters, and the principal nobility? After his flight and recapture, would not the king have gladly employed that plausible pretext for getting rid of so dangerous a compe- titor ? Whoever compares his conduct to the earl of Warwick with his conduct to Warbeck, will be convinced that as he knew the former to be a real Plantagenet, so he believed the latter to be no other than an impostor.

‘ 4. But how are we to account for the ac- knowledgment of his claim by foreign powers ? It may be observed that, if the union of the two roses by the marriage of Henry and Elizabeth, had satisfied many of the Yorkists, there still existed a party, which through enmity to the house of Lancaster, sought to raise to the throne the young earl of Warwick. At its head was the duchess of Burgundy. She first patronised the imposture of Simnel, afterwards that of War- beck. If either had succeeded, there would have been little difficulty in removing the phantom, to make place for the reality. The conduct of Charles VIII. proves nothing more than his wish to distress and intimidate Henry. He had pre- viously attempted to raise the friends of War- wick : when that failed, Warbeck, probably at his instigation, solicited the aid of the Yorkists in Ireland ; and, on their refusal, was invited to the French court as heir to the English crown. But the event proved that this invitation had no other object than to induce Henry to sign the

treaty. From the moment that was accomplished Perkin received no countenance from the king of France. With respect to the king of Scotland” there seems to have been much also of policy in the reception which he gave to the adventurer. It was argued, that if Perkin were successful, he could refuse nothing to the prince who had placed him on the throne ; that if he were not, Henry would still make advantageous offers to James, to detach him from the cause of his rival. On this account, says Polydore, the king, whe- ther it were through error and pity, or only through dissimulation, began to show him great honor, &c., p. 597. The consideration of these circumstances has left little doubt on my mind that Warbeck was an impostor/

To Henry VII. much of the modern civilisa- tion of the English nation, is said to be owing. He throughout his reign strenuously

endeavoured to depress the nobility and clergy, and to exalt and humanise the people. In the feudal times, every nobleman was possessed of a certain num- ber of vassals, over whom he had, by various methods, acquired an almost absolute power; and, therefore, upon every slight disgust, he was able to influence them to join him in a revolt. Henry considered, that the giving of his barons a power to sell their estates, which were before ,unalienable, must greatly weaken their interest. This liberty, therefore, he gave them; and it proved highly pleasing to the commons. His next scheme was to prevent their giving liveries to many hundreds of their dependents, who were thus kept like the soldiers of a standing army to be ready at the command of their lord. By an act passed in this reign, none but menial ser- vants were allowed to wear a livery ; and this law was enforced under severe penalties. With the clergy, Henry was not so successful. The number of criminals of all kinds who found protection in monasteries and other places ap- pointed for religious worship, seemed to indicate little less than an absolute toleration of all vice. Henry used his interest with the pope to get these sanctuaries abolished, but to no purpose. All that he could procure was, that if thieves, murderers, or robbers, registered as sanctuary men should sally out and commit fresh offences, and retreat, in such cases they might be taken out of the sanctuary, and delivered up to justice. In 1500, the king's eldest son Arthur was mar- ried to the Infanta Catharine of Spain, which marriage had been projected and negociated seven years. But the prince dying in a few months, the princess contracted a second mar- riage with his younger brother Henry, who was created prince of Wales. Henry himself is said to have made all the opposition to this arrange- ment of which a youth of twelve years of age was capable ; but as the king persisted in his resolution, the marriage was eventually solem- nised under a dispensation from the pope. In the latter part of the king's reign, his economy degenerated into avarice. His two ministers Empson and Dudley, perfectly qualified to second his avaricious views, committed to pri- son by indictment all persons whom they in- tended to oppress; and they seldom obtained their freedom but by paying heavy fines, which

were called mitigations and compositions. By degrees the very forms of law were omitted; and the property of his subjects, confiscated in

*the most arbitary and open manner, was transferred to the royal treasury. — Henry VII. died of the gout in his stomach, A. D. 1509, having lived 'ifty-two years, and reigned twenty-three. In his reign was built the celebrated vessel, called the Great Harry, which cost £14,000. This was properly speaking, the first ship of the royal navy. Before this period, when the king wanted a fleet, his expedient was to hire the vessels of the merchants. **

Henry VIII. ascended the throne when he was about eighteen years of age, under almost every advantage which a prince could possess. He had a well-stored treasury, an undisputed title, and was at peace with all the powers of Europe. Commerce and arts had been some time intro- duced into England, where they met with a fa- vorable reception. The young prince himself was of elegant person and manners, expert in all the accomplishments and martial exercises of the day ; and beloved by all his subjects. He was also an adept in divinity we are told, at the age of seventeen. These advantages, however, seemed to have been united with a most capri- cious and tyrannical disposition ; and however fortunate some of his measures proved, it is im- possible that his general motives or the means to which he could resort to accomplish his pur- poses, can be approved by any good man. One of his first and best acts was to punish Empson and Dudley, who were obnoxious to the people, as instruments of the late king's rapacity. As they could not be impeached merely for execut- ing the will of the king, they were accused of having entered into a treasonable conspiracy to seize by force the administration of government ; and though nothing could be more improbable, the general prejudice against them was so great, that they were both condemned and executed. In 1510 Henry entered into a league with pope Julius II. and Ferdinand, king of Spain, against Louis XII. of France. In this alliance Henry was the only disinterested person. He promised himself nothing but the glory which he hoped would attend his arms, and the title of Most Christian King, which the pope assured him should be transferred to him from the king of France. The pope was desirous of wresting from Louis some valuable provinces which he possessed in Italy, and Ferdinand was anxious for a share in the spoil. Henry, on summoning his parliament, proclaimed his determination to annex the kingdom of France to the crown of England ; and was readily furnished with large supplies. It was in vain that one of his more prudent counsellors objected, that conquests on the continent would only drain the kingdom without enriching it ; and that England from its situation, was not fitted to enjoy extensive empire. The young king, deaf to all remon- strances, and hurried away by his military

ardor, resolved immediately to begin the war. But after several attempts, which were rendered un- successful by the mismanagement of those who conducted them, a peace with France was con- cluded on the 7th August, 1514. Henry's arms

were more fortunate in Scotland, where James IV. with the greatest part of the Scots nobility, and 10,000 men, were cut off in the battle of Flowden. See SCOTLAND. Henry in the mean time, elevated with his success, continued to la- vish his treasures in pleasure, and in further expensive preparations for war. The ministers originally selected for him by his father were now disregarded ; and his confidence was en- grossed by Thomas, afterwards Cardinal Wolsey, who aided and flattered him in all his favorite pursuits. See WOLSEY. The king having soon exhausted the treasures left him by his father, as well as the supplies which he could obtain from his parliament, consulted with Wolsey upon new methods of replenishing his coffers. This mi- nister's first scheme was to obtain a large sum from the people under the title of benevolence; though no title could be more improperly ap- plied as it was not granted without the greatest murmurings and complaints. Having exacted also a considerable sum from the clergy, Wolsey further applied to the house of commons; but they only granted half the money he demanded. The minister highly offended, desired to be heard in the house, but they replied, that none could be permitted to sit and argue there, except their own members. Soon after, the king having occasion for new supplies, attempted, by Wol- sey's advice, to procure them by his prerogative alone, and issued out commissions to all the counties of England for levying 4s. in the pound from the clergy, and 3s. 4d. from the laity. This stretch of power was soon opposed, and a general insurrection threatened the royal autho- rity. Henry endeavoured to pacify the people by circular letters ; in which he declared, that what he demanded was only by way of benevo- lence. The city of London, however, still hesi- tated, and in some parts of the country open resistance was manifested. This was at last suppressed by the duke of Suffolk ; but Wol- sey was blamed by both the king and council for his precipitate advice. To reinstate himself in the king's favor, Wolsey made him a present of the noble edifice of White Hall, then called York Palace, at Westminster, assuring him, that from the first he had intended it for the king's use. In order to have a pretext for amassing further wealth, Wolsey next undertook to found two new colleges at Oxford ; and for this purpose received every day fresh grants from the pope and the king. The former gave him liberty to suppress several monasteries, and make use of their re- venues for the erection of his new edifices ; which proved a fatal

precedent for the pontiff's interests, as it taught the king to seize on the monastic revenues whenever he stood in need of money. Wolsey now continued for a consider- able time to enjoy the king's unlimited confi- dence ; and as no monarch was ever more des- potic than Henry VIII., no minister was ever more powerful than this churchman. His ex- traordinary elevation, served only to render his speedy fall the more conspicuous. He had long indeed known the king's capricious temper ; but like most other royal favorites imagined himself unusually secure. The cause of his overthrow was connected with the question of the king'

divorce, and the dawning change in the religion of the country. The doctrines of the Reforma- tion propagated by Luther in 1517, had gained considerable ground in England, and many pro- fessed a belief in them, notwithstanding the se- vere persecution which had been carried on against heretics. The clergy had become so ex- ceedingly corrupt, and were immersed in such ignorance, that they were universally hated even by their own party, while no regard at all was paid to their decisions, or rather they were looked upon with the utmost abhorrence, by the re- formers. Even the papal authority, though still very great, had within the last ten years de- clined very sensibly The marriage of Henry with his late brother's wife, was a transaction which all the religionists of the day agreed unequivocally to censure ; and as it was only sanctioned from the first by a dispensation from the pope, it had been frequently objected to on public occasions. The states of Castile are said to have opposed a marriage betwixt the emperor Charles and the English princess Mary, Henry's daughter, urging, among other things, the ille- gitimacy of her birth. The same objection after- wards occurred on opening a negociation with France for a marriage with the duke of Orleans. Nor were these Henry's only motives. The queen was six years older than himself, her per- sonal charms were decayed, and his affection lessened. All her children had died in infancy except the princess Mary ; and Henry was, or pretended to be, greatly affected with this. Ano- ther point of the utmost importance was the suc- cession to the crown, which any question con- cerning the legitimacy of the king's marriage would involve in confusion ; and the king of Scotland would step in as the next heir. But above all, Henry was influenced by a passion he now entertained for Anne Boleyn, a maid of honor to the queen. See BOLEYN. In this sta- tion Henry had frequent opportunities of seeing her, and finding her virtue inflexible, he was

ob- stinately bent upon the divorce. He now, there- fore, sent his secretary to Rome to obtain from Clement VII. a bull for dissolving his marriage with Catharine. That he might not seem to en- tertain any doubt of the pope's prerogative, he insisted only on some grounds of nullity in the . bull granted by Julius II. for the accomplishment of the marriage. In the preamble to this bull, it had been said, that it was granted only upon the solicitation of Henry ; though it was known that he was then a youth under twelve years of age : it was likewise asserted, that the bull was necessary for maintaining the peace between the two crowns ; though it is certain that there was no appearance of a quarrel between them. These false premises seemed to afford a good pretence for dissolving it ; but, as the affairs of Europe then stood, the pope was involved in the utmost perplexity. Queen Catharine was aunt to the emperor, who had lately made Clement himself a prisoner, and whose resentment he still dreaded : besides, he could not, with any degree of prudence, declare the bull of the former pope illicit, as this would give a mortal blow to the doctrine of papa\ infallibility. On the other hand, Henry was his protector and friend ; the

dominions of England were the chief resource from whence his finances were supplied ; and the king of France, some time before, had obtained a bull of divorce in circumstances nearly similar. In this exigence he endeavoured to spin out the affair by negociation ; and, in the mean time, sent over a commission to Wolsey, in conjunc- tion with the archbishop of Canterbury, or any other English prelate, to examine the validity of the king's marriage, and of the former dispen- sation ; granting them also a provisional dispen- sation for his marriage with any other person. When the pope's message was laid before the English council, they considered that the advice and authority thus given by the pope might easily be hereafter disavowed ; and that a clandestine marriage would totally invalidate the legitimacy of any issue from it which the king might have. Fresh messengers in consequence were dispatched to Rome, and evasive answers returned ; the pope not imagining that Henry's passion would last through the course of a tedious ecclesiastical controversy. But in this he was mistaken. The king, in the first place, had been taught to dis- pute as well as the pope, and valued himself greatly on his knowledge of theology ; to his ar- guments, secondly, he felt the power of adding threats, telling his followers that the English were too well disposed to withdraw from the holy see ; and that if he continued uncomplying, the whole kingdom, with himself, would be disposed to deny obedience to a pontiff that had treated him with falsehood and duplicity. The king is said even to have asked his

holiness, whether, if he were not permitted to divorce his present queen, he might not have a dispensation for having two wives? Perceiving Henry's eager- ness, the pontiff at length sent his cardinal legate Campegio, to London ; who, with Wolsey, opened a court for trying the legitimacy of the king's marriage with Catharine, and cited the king and queen before them. The trial com- menced the 31st May, 1529 ; and both parties presented themselves. The king answered to his name when called : but the queen, instead of answering to hers, rose from her seat, and, throw- ing herself at the king's feet, made a very pathe- tic harangue ; which her dignity, her virtue, and misfortunes, rendered still more affecting. She told her husband, ' That she was a stranger in his tominions, without protection, without coun- cil, and without assistance; exposed to all the injustice which her enemies were pleased to im- pose upon her : that she had quitted her native country, without any other resource than her connexions with him and his family; and that, in- stead of suffering thence any violence or iniquity, she had been assured of having in them a safe- guard against every misfortune : that she had been his wife during twenty years ; and would here appeal to himself, whether her affectionate submission to his will had not merited other treat- ment than to be thus, after so long a time, thrown from him with indignity : that she was conscious, — he himself was assured — that her virgin honor was yet unstained when he received her into his bed ; and that her connexion with his brother had been carried no farther than the mere ceremony of marriage : that their parents, the kings of England

and Spain, were esteemed the wisest princes of their time, and had, undoubtedly, acted by the best advice, when they formed the agreement for that marriage, which was now represented as so criminal and unnatural : and that she acquiesced in their judgment, and would not submit her cause to be tried by a court, whose dependence on her enemies was too visible, ever to allow her any hopes of obtaining from them an equitable or impartial decision.' Having thus spoken, the queen arose, and, making the king a low reve- rence, left the court ; nor would she ever again appear in it. The legate having again summoned her, declared her, on her refusal, contumacious, and the trial proceeded. But when the business seemed to be nearly decided, Campegio, on some frivalous pretence^, prorogued the court, and referred the cause to the see of Rome. Wol- sey appeared, at this time, to be in the same di- lemma with the pope.

On the one hand, he was solicitous to gratify the king, who had distin- guished him by so many marks of favor ; on the other he feared to offend the pope, whose servant he more immediately was, and who likewise had power to punish his disobedience. By attempt- ing to please each party, he fell under the dis- pleasure of both ; so that he was at last left without a friend. It is quite clear also that the cardinal had not the ordinary foresight of a states- man, in regard to the probable issue of these dis- putes. The king was displeased on account of his not entering into his cause with the warmth he thought he had reason to expect ; Anne Bo- leyn imputed to him the disappointment of her hopes ; while the queen and her friends expressed the greatest indignation against him, on account of the part he had openly taken in the divorce. While in this unhappy situation, the king sent him a message by the dukes of Norfolk and Suf- folk, demanding the great seal : the cardinal re- fused to deliver it, till Henry wrote him a letter, on receipt of which it was instantly given up. It "?as bestowed on Sir Thomas More ; a man who, with great literary talents, was possessed of integrity, capacity, and virtue of rare occur- rence. Wolsey was now commanded to depart from York palace, which was seized by the king. AH his furniture and plate were also seized, and he was directed to await the king's pleasure at Esher, a country seat which he possessed near Hampton. One disgrace followed another; he was thought too near the court in the county of Surry, and was ordered to return to his see : at last his fall was completed by a summons to London to answer a charge of high treason. This he at first refused to answer, as being a car- dinal. However, being at length persuaded, he set out on his journey, but was taken ill, and WOLSEY.

After the death of Wolsey, the king, by the advice of Cranmer, submitted the legality of his marriage to all the principal universities of Eu- rope (seo CRANMER), and made no scruple of assisting their deliberatiorfs by liberal gifts of money. To a subdeacon he is said to have given a-crown, to a deacon two crowns, and to others in proportion to the importance of their influence or opinions. Being thus fortified by the opinions of the universities, and even of the Jewish-rahbies

(for them also he had consulted), Henry began to think he might safely oppose the pope on this or any question. He began by reviving in par- liament an old law against the clergy, by which all those who had submitted to the authority of the pope's legate were condemned to severe penalties. The clergy, to conciliate the king's favor, were obliged to pay a fine of £118,000. A confession was likewise extorted from them, that the king, and not the pope, was the supreme

head of the church and clergy of England. An act was soon after passed against levying the first fruits, or a year's rent of all the bishoprics that fell vacant. After this the king privately married Anne Boleyn, at W'hite-hall ; and, on her preg- nancy becoming apparent, publicly owned her for his wife, and passed with her through London with extraordinary magnificence. The streets were strewed with flowers, the walls of the houses hung with tapestry, and an universal joy seemed to be diffused among the people. The unfortunate Catharine, perceiving all further opposition to be in vain, retired to Ampthill near Dunstable, and afterwards to Kimbolton Castle, where she died. Her marriage with Henry was finally pronounced invalid by the archbishop of Canter- bury. The pope was no sooner informed of these proceedings, than he passed a sentence declaring Catharine to be the king's only lawful wife ; re- quiring him to take her again, and denouncing censures against him in case of a refusal. But Henry, knowing that his subjects were entirely at his command, resolved to dare even a total sepa- ration from the see of Rome, In 1534 he was declared head of the church by parliament ; the authority of the pope was abolished ; all tributes formerly paid to the holy see were declared ille- gal ; and the king was entrusted with the collation to all ecclesiastical benefices. The nation came into the king's measures with joy, and took an oath called the oath of supremacy. All the cre- dit which the popes had maintained over England for ages was now at once overthrown ; and none seemed to repine at the change, except those who were immediately interested by their dependence on the papacy. But though the king thus sepa- rated from the church of Rome, he by no means adhered to the doctrines of Luther, which had been lately published. He had written a book against this celebrated reformer, which the pope pretended greatly to admire ; and honored king Henry, on its account, with the title of Defender of the Faith. This character he seemed to be determined to maintain, and therefore persecuted the reformers most violently. Many were burnt for denying the popish doctrines, while others were executed for maintaining the pope's supre- macy. The courtiers knew not which side to take ; both the new and old religions were equally persecuted ; and as both parties equally courted the favor of the king, he was, by that means, enabled to assume a greater degree of absolute authority. As the monks had all along shown the greatest resistance to his ecclesiastical character, Henry resolved to deprive them at once of the power of injuring him. He accordingly empowered Cromwell, secretary of state, to send commissioners into the several counties of England to inspect the monasteries ; and to report, with

rigorous exactness, the conduct of such as were found in them. This employment was readily undertaken by various creatures of the court ; and they are said to have discovered astonishing disorders and depravity in many of the religious houses ; entire convents are said to have been composed of women abandoned to lewdness; friars were accomplices in their crimes, pious frauds were every where committed to increase the devotion and liberality of the people; and cruel and inveterate factions were maintained be- tween the inhabitants. Thus a general horror was excited against these communities ; and the icing, in 1536, suppressed the lesser monasteries 376 in number. Their revenues, computed at £32,000 a-year, were confiscated to the king; besides their plate and other goods, computed at £100,000 more. In 1538 the greater monaste- ries were also demolished. The better to recon- cile the people to this great innovation, accounts were published of the detestable lives which the friars led in their convents. The relics also, and other objects of superstitious veneration, were now brought forth and became objects of derision to the reformers. See RELICS. On this occasion was demolished the noted shrine of Thomas a Becket, commonly called St. Thomas of Canter- bury. See BECKET. The riches of it were in- conceivable when broken down ; the gold with which it was adorned, is stated to have filled two large chests that eight strong men could scarcely carry out of the church. The king, on the whole, suppressed 645 monasteries, of which twenty- eight had abbots who enjoyed a seat in parlia- ment ; with ninety colleges, 2374 chantries and free chapels, and 110 hospitals. The whole re- venue of these establishments amounted to £161,100. The indignation excited at Rome, by such an uninterrupted course of sacrilege, maybe easily imagined. In 1535 the king had exe- cuted bishop Fisher, who was created a cardinal while in prison, and Sir Thomas More, for deny- ing his supremacy. When this was reported in Italy, numerous philippics were published, com- paring the king of England, to Caligula, Nero, Domitian, and the most wicked tyrants of anti- quity. Clement VII. died about six months after he had threatened the king with a sentence of excommunication ; and Paul III. who suc- ceeded him, entertained some hopes of an ac- commodation. But Henry was now so much accustomed to domineering, that the quarrel was incurable. The execution of Fisher was consi- dered so violent a measure, that at last the pope passed all his censures against the king, citing him and all his adherents to appear in Rome within ninety days to answer for their crimes. If they failed, he excommunicated them; deprived the king of his realm ; subjected the kingdom to an interdict ; declared his issue by Anne Boleyn illegitimate; dissolved all the leagues which any Catholic

princes had made with him, and, giving his kingdom to any invader, commanded the no- oility to take up arms against him. His subjects at large, in that case, he freed from all oaths of allegiance ; cut off their commerce with foreign states; and declared it lawful for any one to seize and to make them slaves, or to convert their effects to his own use. But these censures were

now rather passed than denounced openly. The pope delayed the publication of this bull, till he should find an agreement with England totally desperate, and till the emperor, who was then hard pressed by the Turks and Protestant princes of Germany, should be in a condition to carry the sentence into execution. But in 1538, when news arrived at Rome that Henry had suppressed the monasteries, the pope published this im- portant bull. Libels were again dispersed in which he was compared to the most furious per- secutors of antiquity : Henry, it was said, had declared war with the dead, whom the Pagans themselves had respected; was at open enmity with heaven ; and had engaged in professed hos- tility with all the saints and angels. Above all, he was reproached with his resemblance to the emperor Julian, whom, it is said, he imitated in his apostasy and learning, though he fell short of him in his morals. But these terrible fulmi- nations had now lost their effect. Henry had long ago denied the supremacy of the pope, and had appealed from him to a general council. Now however, when a general council was summoned at Mantua, he refused to be subject to it, because it was called by the pope, and lay entirely under the subjection of that spiritual usurper. He en- gaged his clergy also to make a declaration to this purpose, and prescribed to them many alterations with regard to their ancient tenets and practises. It was expected that his opposition to the church of Rome would have made him finally fall in with the doctrines of the reformed; but though he had been gradually changing the theological system in which he was educated, he was as po- sitive and dogmatical in the few articles he re- tained, as if the whole fabric had continued entire and unshaken; and though he stood alone in his opinion, the flattery of courtiers had so much inflamed his tyrannical arrogance, that he thought himself entitled to regulate by his own standard, the religious faith of the nation. The point on which he chiefly rested his orthodoxy was the most absurd in the whole schedule of popish doctrine, namely, that of transubstantia- tion. All departure from this he held to be a damnable error ; and nothing, he thought, could be more honorable for him, than, while he broke off all connexion with the Roman pontiff', to maintain, in this essential article, the purity of the Catholic faith. In 1539 a parliament was called, which met on the 28th of April. The

chancellor opened it by informing the house of lords, that it was the king's earnest desire to ex- tirpate from his kingdom all diversity of opinions with regard to religion; and as this enterprise was difficult, he desired them to choose a com- mittee from among themselves, who might frame certain articles, and communicate them after- wards to parliament. The lords named the vicar general Cromwell, now created a peer, the arch- bishops of Canterbury and York, the bishops of Durham, Carlisle, Worcester, Bath and Wells, Bangor and Ely. This committee itself, however, proved to be so agitated with diversity of opinions, that it could come to no conclusion. The duke of Norfolk then moved, that since there was no hope of having a report from the committee, tht articles of faith proposed to be established should

be reduced to six, and a new committee be ap- pointed to frame an act with regard to them. As this peer was understood to speak the king's mind, his motion was immediately complied with ; and after a short prorogation, the bill of the six articles, or the bloody bill, as the protes- tants justly termed it, was introduced; and having passed the two houses, received the king's assent. By this law the doctrine of the real pre- sence was established ; the communion in one kind ; the perpetual obligation of vows of chastity; the utility of private masses; the celi- bacy of the clergy; and the necessity of auricular confession. The denial of the real presence sub- jected the person to death by fire, and to the same forfeitures as are incurred in cases of treason. It even did not admit the privilege of abjuring ; a cruelty unknown to the inquisition itself. The denial of any of the other articles, even though recanted, was punishable by the forfeiture of goods and chattels, and imprisonment during the king's pleasure : an obstinate a herence to error, or a relapse, was adjudged to be felony, and punishable by death. The marriage of priests was subjected to the same punishment. Their commerce with women was, for the first offence, forfeiture and imprisonment; and for the second, death. Abstaining from confession, and from receiving the eucharist at the accus- tomed times, subjected the person to fine, and to imprisonment during the king's pleasure ; and if the criminal persevered after conviction, he was punishable by death and forfeiture. Com- missioners were to be appointed by the king for inquiring into heresies and irregular practices ; and the criminals were to be tried by jury. Par- liament having thus surrendered all the eccle- siastical privileges of the nation, next proceeded to surrender

their civil ones also. They gave to the king's proclamations the same force as to statutes enacted by parliament, and thus by one blow made a total subversion of the English constitution ; and to render the matter if pos- sible worse, they framed this law as if it were only declaratory, and intended to explain the na- tural extent of the royal authority. They after- wards pretended, indeed, to make some limita- tions to the regal power ; and enacted, that no proclamation should deprive any person of his lawful possessions, liberties, inheritances, &c., nor yet infringe any common law or laudable custom of the realm. But this, after their late conduct, was mere verbiage.

As soon as the act of the six articles had passed, the Catholics were extremely vigilant to inform against offenders ; and, in a short time, no fewer than 500 persons were thrown into pri- son, but some of the chief officers of state remon- strating against the cruelty of punishing a number of them, they were all set at liberty ; and soon after this, Henry, as if he had resolved to give each party the advantage by turns, granted every family per- rrission to possess a translation of the Bible, newly made. In 1 540 the king again complained to parliament of the great diversity of religious 'cnets which prevailed among his subjects ; a grievance, h« affirmed, which ought the less to be endured, because the scriptures being now published in English, ought universally to be the

standard of belief. But he had appointed, he said, some bishops and divines to draw up a list of tenets, and was determined Christ and the truth should have the victory ; a result which lie clearly seems to have expected more from this new book of his doctors, than from the publica- tion of the scriptures. Cromwell, as vicar ge- neral, also made a speech in the upper house ; and the peers in return told him, that he deserved to be vicar general to the universe. This year also the king suppressed the only religious order remaining in England, viz. the knights of Malta, or St. John of Jerusalem. This order had by their valor done great service to Christen- dom ; and very courageously chastised the rising power of the Turks. During the general sur- render of the religious houses in England, they refused to give up their noble revenues to the king; and Henry, who would endure no society that professed obedience to the pope, and felt, notwithstanding his late acquisitions, the need of fresh supplies, had recourse to parliament for their dissolution. He also now demanded a very considerable supply from the nation itself, through the parliament. The commons, how- ever, were more lavish of the blood of their fel- low-subjects, than of their money ; and it was not without murmuring that the grant could be obtained. The king all this time continued to punish the protestants with unrelenting severity,

for breaking the law of the six articles, and the papists who denied his supremacy; which gave occasion to a foreigner at the time to say, that those who were against the pope were burned, and that those who were for him were hanged. The king even seemed fond of display ing that tyrannical impartiality, which reduced both parties to subjection. He executed this year three protestants and three papists, tied to- gether. The latter declared that the most griev- ous part of their punishment was the being coupled to such heretical miscreants as suffered with them. In 1542 Henry proceeded to the further dissolution of colleges, hospitals, and other foundations of that nature. The courtiers had been dealing with the presidents and gover- nors to make a surrender of their revenues to the king, and had succeeded with eight. But there was an obstacle to their farther progifs ; it had been provided by the local statutes of most of these foundations, that no president, nor any fel- lows, could make such a deed without the una- nimous consent of all the fellows. This consent would not have been easily obtained ; but th—. parliament annulled these statutes, and the re- venues of the houses were delivered over to the rapacity of the king. Henry also now extorted from several of the bishops a surrender of their chapter lands ; by which means he pillaged the sees of Canterbury, York, and London, exten- sively. He engaged the parliament, however, to mitigate the penalties of the six articles, as far as regarded the marriage of priests, which was now only subjected to a forfeiture of goods, chattels and lands during life : but he was still bent on maintaining a rigid purity in speculative opinions. He had appointed a commission, consisting of two archbishops, and several bishops of both provinces, together with a considerable*

number of doctors of divinity; and, by virtue of his ecclesiastical supremacy, had charged them to choose a religion for his people. Before the commissioners had made any progress in this undertaking, the parliament passed a law, by which they ratified all the tenets which these divines should establish with the king's consent. One clause of the new statute, however, seemed to savour somewhat of the spirit of liberty. It was enacted that the ecclesiastical commissioners should establish nothing repugnant to the laws and statutes of the realm. But in reality this . proviso was inserted by the king, to serve his own purposes. By introducing confusion and con- tradiction into the laws, he became more entirely the master of every one's life and property; and as the ancient independence of the

church still gave him jealousy, he was well pleased, under color of such a clause, to introduce appeals from the spiritual to the civil courts. For the same reason he would never promulgate a body of canon law; and encouraged the judges on all occasions to interpose in ecclesiastical causes, wherever they thought the law or the prerogative concerned. At last armed by the authority of parliament, or rather by their acknowledgment of his spiritual supremacy, the king's commis- sioners selected a system of tenets for the assent and belief of the nation. A small volume was first published, under the title of The Institution of a Christian Man, which was received by the convocation, and made the infallible standard of orthodoxy. In this book the points of justifica- tion, faith, free-will, good works, and grace, were discussed in a manner somewhat favorable to the opinions of the reformers ; while the sacraments, which a few years before were only allowed to be three, were now increased to seven, conform- ably to the Catholic sentiments. Throughout the whole of this book the king's caprice is very dis- cernible ; and it may in reality be regarded as his composition. For Henry, while he made his opinion an universal rule, would himself submit to no authority whatever, not even to that which he had himself established. This same year the people had a farther instance of his inconsistency. He ordered a new book to be composed, called the Erudition of a Christian Man, and published it as a model of orthodoxy, without even asking the consent of the convocation. He was no less positive in his new creed than he had been in his old one ; the only doctrine which he uniformly inculcated was that of passive obe- dience ; and he expected the faith and practice of the nation to veer round regularly at his sig- nal. But while the king was thus spreading his own books among the people, both he and the clergy seem to have been perplexed with regard to the scriptures. A review had been made by the ecclesiastical synod of the new translation of the Bible ; and bishop Gardiner had proposed, that instead of employing English expressions throughout, several Latin words should still be preserved, because they contained, as he pre- tended, such peculiar energy and significance, that they had no correspondent term in English. Among these were ecclesia, penitentia, pontifex, contritus, &c. But as thw mixture would ap- pear extremely barbarous, and was evidently cal-

culated for no other purpose than to retain the people in their ancient ignorance, the proposal was rejected. The knowledge of the people, however, seemed to be still more dangerous than their ignorance ; and the king and parliament, soon after the publication of the scriptures, re- tracted the concession which they had formerly made, and prohibited all but gentlemen and merchants from perusing

them. Even that liberty was not granted without an apparent hesitation, and dread of the consequences. These persons were allowed to read, ‘ so it be done quietly and with good order.’ And the preamble to the act sets forth, ‘ That many se- ditious and ignorant persons had abused the liberty granted them of reading the Bible ; and that great diversity of opinion, animosities, tumults, and schisms, had been occasioned by perverting the sense of the Scriptures.’ The mass book also passed under examination ; but little alteration was as yet made in it. Some doubt- ful or fictitious saints only were struck out, and the name of the pope was erased. The latter precaution was also used with every new book that was printed, and even every old one that was sold. The word pope was carefully omitted or blotted out ; as if that precaution could abolish the term from the language, or cause the people to forget that such a person existed. About this time also, the king prohibited all plays and interludes ridiculing popery. In this tyrannical manner Henry proceeded with regard to ecclesiastical affairs. In other respects his con- duct was equally violent. With regard to his domestic concerns, history scarcely affords his parallel. His affection for Anne Boleyn was carried to such a height, that he procured an act, excluding from the succession the issue of queen Catharine in favor of the children of Anne Boleyn; and they failing, of the king’s other heirs. An oath acknowledging the legality of this new line of succession was enjoined, under penalty of imprisonment during the king’s plea- sure, and forfeiture of goods and chattels. AH slander against the king and his new queen, or their issue, was subjected to the penalty of treason or misprision of treason. The unfortunate queen Catharine died at her retreat at Kimbolton, in 1536. On her death-bed she wrote a most pa- thetic letter to the king, in which she forgave him all the injuries she had received, and re- commended to him in the strongest terms their daughter, the princess Mary. This letter affected Henry so much, that he could not read it with- out tears ; but the new queen is said to have exulted on hearing of the death of her rival. Her triumph, however, was but short, Catharine died in January or February. Anne was delivered of a dead male child, a circumstance which seems much to have increased her capricious master’s rising dissatisfaction with her. In her letters afterwards, written from the Tower, she states her knowledge of another ‘ affection’ of his ‘ already settled,’ and adverts to Henry’s knowledge of her ‘ suspicion therein.’ There was certainly also a levity of temper, and extreme gaiety of behaviour, about the young queen, which gave an opportunity to her enemies of inflaming the king’s jealousy After being satiated with the possession of he

for six years, perhaps Henry really doubted her fidelity ; but his doubts were more probably confirmed by the beauty of Jane Seymour, with whom he had now fallen in love, and whom he married the day after the execution of Anne Boleyn. The guilt of the latter is among the historic doubts, which no research, perhaps, will now fully solve. Mr. Turner in his recent History of the reign of Henry VIII. seems to have held the balance upon the subject most impartially ; and we cannot here do better than exhibit so fair a specimen of his work.

‘ Instead of a rhetorical vindication of Anne Boleyn,’ says this writer, ‘ we will calmly col- lect such authentic circumstances as bear upon the accusation against her, which can now be explored, and leave their effect to the considera tion of the reader. She was accused of unchastity with her brother and four other persons. We may without undue partiality leave the inces- tuous imputation to such calumniators as San- ders and cardinal Allen, to believe and to enjoy. The greater and the more improbable the crime, the greater evidence common reason for common safety requires. But as no direct testimony of the commission of such an offence was in the present case adduced, we must in justice fo the memory of the sufferers, discredit this allega- tion ; unless we chuse to class ourselves amongst those common receivers and retailers of social scandal, to whom all ages have attached an un- sparing and a wise contempt.

‘ On the charge of dishonorable intimacy with Mark Smeaton, who, like David Rizzio with the queen of Scotland, had been admitted as a mu- sician to her society, there is the accusing tes- timony of his confession on his arraignment. In her conversation with Sir William Kingston, in the Tower, she asserted that he was never in her chamber, but at Winchester, where she had sent for him to play on the virginal ; and that she had never spoken with him since, till the Sa- turday before her arrest, when she found him standing in the window of her presence chamber. Her further account admitted that he ventured to make that intimation of passion, which it is diffi- cult to conceive that one so inferior could presume to utter to a queen, and to the wife of a man so formidable as Henry had now begun to be, without some intelligible encouragement. The offence with Norris she resolutely denied. It was sug- gested to him, that the king highly valued him, and would pardon him, if he acknowledged the

criminality. He asserted her innocence, and was ordered for execution. It was first reported to her that he had confessed against her. Her exclamation on this account, rather implying a more than usual concern, was, ‘ O Norris ! hast thou accused me ? Thou art in the Tower with me, and thou and I shall die together ! ‘ But she described a conversation with him, that from a queen, with her husband alive, implies an in discretion of which she herself could as little calculate the consequences, as be always certain to command them. That Norris was nourishing an improper liking for her, was even mentioned to herself by one of those accused, who could not have duly respected her, to have made such a mischievous observation to her own ear. Of

Sir Francis Weston, she acknowledged that nc had explicitly declared his love to her — a daring art of beginning treason in him to his queen, which it was dishonor in her not to have imme- diately punished — especially from a married man ; and yet it was both forgiven and remem- bered ; for she suffered him to continue in his courtly station. Nothing particular appears concerning Brereton.

‘A bad woman, lady Rochfort, the wife of the accused brother, had in her suspicious jea- lousy reported those tales and surmises to the king, which brought destruction on/ her husband. Any assertion of a woman who was base enough to be procuring by it the ruin of the man she was united with, came so contaminated with its own wickedness, that no sound or honorable mind ought to have heard it without abhorrence of the utterer, and disbelief of her veracity. The more impressive communication was that of lady Wingfield in her last sickness to a con- fidential domestic. She had been in the queen’s service, and was sworn to have mentioned that she had discovered her frailty ; and some one imparted the disclosure to Henry.

‘ Such an overwhelming change could hardly occur to one whose bodily frame, from its very beauty, was and must have been delicate, with- out disordering effects. It brought hysterical affections upon her, which though unthinkingly characterised by some as levity, can only in- crease our sympathy for one so totally unbe- friended, as to have no kind or soothing assis- tance near her, in a crisis that must have agitated, like an earthquake, the least exercised sensibility. The persons she most disliked were those whom too jealous power, too apt at these moments to be looking only for legal condem- nation, appointed to attend her ; as if even guilt ended all claims to commiseration or benevolence. She repeated during her confinement her assevera- tions of her innocence, though at times with some expressions which were not unequivocal. She was taken privately to

Lambeth, to be examined again, as to the validity of her marriage ; and it is stated, that she confessed some fresh and lawful impediments which are not explained, but on which Cranmer pronounced the nuptials to be void. This looks again like some attempt to save her life ; but if it were so, some evil counsel intervened to avert the royal mercy. The fatal warrant for executing the legal sen- tence was issued. The archbishop was named by the king to be her confessor, and he visited her as such on the 16th of May. At that time the governor of the Tower had received no orders for her execution. The idea of her banishment was afloat. She then expected life, and said she was going to Antwerp. Two days after- wards appearances changed. Her death was sternly resolved, for reasons not disclosed, and her spirit gathered strength, as the certainty be- came fixed, and the time advanced. She col- lected all the force of her cultivated mind, and on the 19th of May ascended her scaffold in the Tower, with a pious intrepidity that suppressed every worldly wish or agitation, and made to the assembled company this unaffected speech : ‘ Good Christian people ! I am come hither to

die; for according to the law, and by the law 1 am judged to die; and therefore I will speak nothing against it. I am come hither to accuse no man, nor to speak any thing of that whereof I am accused and condemned to die. But I pray God save the king, and send him long to reign over you ; for a gentler or more merciful prince was there never : and to me, he was ever a good, a gentle, and sovereign lord. And if any person will meddle with my cause, I re- quire them to judge the best. And thus I take my leave of the world and of you all, and I heartily desire you all to pray for me. () Lord ! have mercy upon me ! To God I commend my soul.’ These words she uttered with a smiling countenance; then kneeling down, with a fervent spirit, said, ‘ To Jesus Christ I commend my soul. Lord Jesu ! receive my soul! ‘ and re- peating these words very often, suddenly the stroke of the sword terminated her earthly existence.

He adds afterwards, ‘ the mind that wishes to be impartial after reviewing all the circumstances that have reached us, will perhaps incline to think, that a state of academical neutrality as to her guilt, is preferable to either a belief or a denial of its existence; admitting at the same time that she may have been an instance of the justness of Ganganelli’s remark, that the virtues in some persons are too often but like flashes of lightning, which shine and disappear in the horizon they illuminate. If Polydore Virgil believed her guilty, Melancthon hesitated to think so. That Smeaton should plead guilty ;

and that two grand juries of gentlemen of dif- ferent counties should have seen evidence enough on one side to put the four individuals, who had no privilege of peerage, on their trials ; that a common jury of another class of persons, on hearing the whole case, should have given their verdict of conviction on such an arraignment ; and that the house of lords, the highest order of subjects in the nation should attaint her also on the same charge and circumstances, present such a concurrence of judgments upon oath and honor, of both the nobility, gentry, and others of the land, as to compel us, however unwilling, to hesitate before we can discredit what they united to think was sufficiently proved. But at the same time when we recollect on the other hand, the absence of such direct proof as would have satisfied bystanders, and precluded doubt ; the improbability that she would have risked the forfeiture of such an exalted rank ; the constancy of her previous virtue, during six years severe probation ; the king's jealousy of his honor, and certain indignation ; the peril of the crime ; the continual probability of its detection ; her search- ing examinations adding no discovery; her solemn denials ; her exculpation by Norris ; her courageous death ; her general good conduct, and her public character ; the balance fluctuates as we hold it ; judgment pauses ; and every ho- norable feeling seems to urge to leave the ques- tion in that charitable uncertainty with which time, accidents, and history have combined to involve it.'

A.nne was beheaded by the executioner of Calais, who was reckoned more expert than any in Eng- land ; and Henry married his beloved Jane Sey-

mour. His satisfaction, however, was of no long continuance : for the queen becoming pregnant shortly after marriage, died in two days after the birth of the child ; who being a son, was bap- tised by the name of Edward. As this lady had been as much beloved by Henry as any of his wives, his grief for her loss is said to have been considerable. However, it did not hinder him from entering very soon afterwards into a new matrimonial scheme; in which he met witii many difficulties. He first made proposals to the duchess dowager of Milan, niece to the em- peror and to Catharine his own former queen ; but as he had behaved so ill to the aunt, it was not to be supposed that his addresses could prove agreeable to the niece. On this he demanded the duchess dowager of Longueville, daughter of the duke of Guise ; but on making the pro- posal to the French monarch, Francis I. he was informed that the princess had been already be- trothed to the king of Scotland. Negotiations were afterwards entered into for a German match ; and the princess of Cleves was proposed by Cromwell, on account of the great interest her father had with the

Protestant princes. Henry had also become enamoured of her person from a picture of her he had seen ; but this proved ultimately so flattering, that when the negotiation was finished, and the bride arrived in England, Henry revolted at the match, and described her in his disappointment as a great Flanders mare, to whom he could never bear the smallest affec- tion. The matter was still worse, when he found that she could speak no language but that of her own country, of which he was entirely ignorant. Notwithstanding these objections, however, he re- solved to complete the marriage, telling Crom- well, that since he had gone so far he must now put his neck into the yoke. The fact was, that the friendship of the German princes was now more than ever necessary to Henry ; and it was supposed, that the affront of sending the prin- cess back might be resented. His aversion, however, soon increased, and he now determined to part both with his queen and prime minister. Cromwell had long been an object of aversion to the nobility, who hated him on account of his obscure birth. See CROMWELL. He had also fallen under the displeasure of both Protestants and Papists ; the former hating him on account of his concurrence with Henry in their persecu- tion, and the latter looking upon him as the greatest enemy of their religion. To these circum- stances, was added the excitement of a new passion of Henry's, who had been smitten with Catha- rine Howard, niece to the duke of Norfolk. By the insinuations of this lady and her uncle, Crom- well's ruin was accomplished ; and he was con- demned without either trial or examination. His death was succeeded by the dissolution of the marriage with the princess of Cleves. The princess parted from him with great indifference : and accepted of £3000 a year as a compensation, but refused to return to her own country after the affront she had received. The king's mar- riage with Catharine Howard now followed, and the event may be regarded as a providential pun- ishment upon this tyrant. His insinuations against the virtue of the unfortunate princess of

Cleves, were amply repaid oy tne actual infi- delities of his new queen. So happy indeed did he imagine himself in this match, that he publicly returned thanks for his conjugal felicity, when information concerning the queen's incon- • nence was given to Cranmer by one Lascelles, whose sister had been servant to the duchess dowager of Norfolk. He described not only her disgraceful amours before marriage, but af- firmed that she ever since had continued the same criminal practices. Two of her paramours were arrested, and

confessed their crimes : the queen also confessed her guilt before marriage, but denied ever being false to the king's bed. She was beheaded on Tower-hill, along with the viscountess of Rocheford, who had been a con- fident in her amours, and who, as the principal instrument in the destruction of Anne Boleyn, died unpitied. To secure himself from any farther disasters of this kind, Henry now passed a most extraordinary law, enacting that any one who should know, or strongly suspect any guilt in the queen, might within twenty days, disclose it to the king or council, without incurring the pe- nalty of any former law against defaming the queen ; though at the same time every one was prohibited from spreading the matter abroad, or even privately whispering it to others. It was also enacted, that if the king married any woman, who had been incontinent, taking her for a true maid, she should be guilty of treason if she did not pre- viously reveal her guilt to him. These laws af- forded considerable diversion to the people, who DOW said that the king must look out for a widow ; as no reputed maid would ever run the risk of incurring the penalty of the statute. This in truth happened to be the case ; for about a year after the death of Catharine Howard, he married, for his sixth wife, Catharine Parr, widow of Nevil, lord Latimer. This lady being favorable to the doctrines of the reformation, and having the boldness to tell Henry her mind, is said to have hazarded her life by her zeal occasionally. The furious monarch, impatient at the least contra- diction, complained to Gardiner, and others, of her freedom, and articles of impeachment were even drawn up against her. But these were ren- dered abortive by the prudence and address of the queen. See PARR. Henry all this time had tyrannised over his nobility in the most cruel manner. Irritated by the conduct of cardinal Pole, he had long confined the countess of Salis- bury, his mother, and the last of the house of Plantagenet. She was now executed with cir- cumstances of great barbarity. Confined without trial, when brought to the scaffold she refused to lay her head on the block, telling the executioner, that if he would have her head, he must win it in the best way he could : she then ran about the scaffold, pursued by the headsman who aimed many fruitless blows at her neck before he was able to put an end to her life. Soon after, lord Leonard Grey was likewise executed for treason. The last victims of the king's injustice and cruelty were the duke of Norfolk and his son, the earl of Surry. The former had served the king with fidelity, and the latter was a young man of the most promising hopes. His qualifi- cations, however, were no security against the

violence of Henry's temper. He had dropped some expressions of

resentment against the king's ministers, who had displaced him from the go- vernment of Boulogne ; and the whole family had become obnoxious to his displeasure, on account of the late queen. Orders were now therefore, given to arrest both the father and son. The duchess dowager of Richmond, Surry 's own sister, was among the number of his accusers ; and Sjr Richard Southwell, his most intimate friend, charged him with infidelity to the king. Surry denied the charge, and challenged his accuser to single combat. This favor was denied him ; and, notwithstanding his eloquent and spirited defence, he was condemned and exe- cuted on Tower-hill. The duke of Norfolk in vain endeavored to mollify the king by letters and submissions. An attainder was found against him, though the only crime his accusers could allege was, that he had once said that the king was sickly, and could not hold out long ; and that the kingdom was likely to be torn between the contending parties of different persuasions. Cranmer, though engaged for many years in an opposite party to that .of Norfolk, and though he had received many and great injuries from him, would not sanction this prosecution ; but retired to his seat at Croydon. The death warrant, however, was made out and immediately sent to the lieutenant of the tower ; but a period was put to the cruelties and violence of the king by his death, on the 14th January, 1547, the night before Norfolk was to have been executed.

Henry was succeeded by his son Edward, a boy of nine years of age. The most remarkable transactions of his reign are those which concern religion. The restraint which Henry VIII. had imposed upon the Protestant cause was now taken off; and the disciples of the new religion ,as it was called, not only under the auspices of archbishop Cranmer, maintained their doctrines openly, but soon became the prevailing party. Henry had fixed the majority of his son at eighteen years of age ; and in the mean time, appointed sixteen executors of his will, to whom, in the interim, he entrusted the government of the king and king- dom. This will he imagined would be obeyed as implicitly after his death as if he had been alive. But the first act of the executors was to choose the earl of Hertford, afterwards duke of Somerset, protector of the realm; in him was lodged all the regal power, together with the pri- vilege of naming whom he pleased for his privy- council. The duke of Somerset had long been reckoned a secret partisan of the reformers ; and immediately on his elevation to this dignity, began to reform the abuses of the ancient reli- gion. Under his direction and that of Cranmer, therefore, the reformation was carried forward and compleied. The only person of consequence who opposed this was Gardiner, bishop of Win- chester ; and, to the

disgrace of their own prin- ciples, the reformers now showed that they could persecute as well as the papists. Gardiner was committed to the Fleet prison, where he was treated with great severity. He was afterwards sent to the tower ; and having been confined there two years, was commanded to subscribe several articles, among which was one confessing

the justice of tiis own imprisonment. To all the articles but this, he agreed to subscribe; but that did not give satisfaction. He was then committed to close custody ; his books and papers were seized ; all company was denied him, and he was not even permitted the use of pen and ink. The bishops of Chichester, Worcester, and Exeter, were in like manner deprived of their offices ; those of Landaff, Salisbury, and Coven- try, only escaped by sacrificing the most con- siderable of their revenues. The libraries of Westminster and Oxford were ordered to be ransacked and purged of the Romish legends, missals, and other superstitious volumes ; in which search, great devastation was made even in useful literature. Many volumes clasped in silver were destroyed for the sake of their rich bindings; many of geometry and astronomy were supposed to be magical, and destroyed on that account ; while the members of the univer- sity, trembling for their own safety, in vain opposed themselves to these Vandal ravages. A commission was next granted to the primate and others, to search after all anabaptists, heretics, or contemners of the new liturgy. Among the num- bers who were found guilty on this occasion was one Joan Boucher, commonly called Joan of Kent ; who was so obstinate in pestilential errors that the commissioners could make no impres- sion upon her. She maintained an abstruse metaphysical sentiment, that Christ, as man, was a sinful man ; but, as the Word, he was free from sin, and could be subject to none of the frailties of the flesh with which he was clothed. For maintaining this doctrine she was condemned to be burnt as a heretic. The young king, who, it seems, had more humanity than his teachers, refused at first to sign the death-warrant : but at last, overcome by the importunities of Cranmer, he reluctantly complied ; declaring, that if he did wrong, the sin should be on the head of those who had persuaded him to it. The pri- mate, after making another unsuccessful effort to reclaim the woman from her opinions, com- mitted her to the flames. Some time after, Van Paris, a Dutchman, was condemned to death for Arianism. He suffered with great intrepidity, and is said to have hugged the faggots that were consuming him. The rest of this reign

affords only a history of intrigues and cabals. The pro- tector was first opposed by his own brother admiral Sir Thomas Seymour, who had married Catharine Parr the late king's widow. She died soon after the marriage; and he then made his addresses to the princess Elizabeth, who is said not to have been averse to the match. His brother the duke, being informed of his ambiti- ous projects, caused him to be attainted of high- treason, and at last condemned and executed. Somerset himself was sometime afterwards de- prived of his office by Dudley, duke of Northum- berland ; and was in his turn accused of treason, and beheaded. Not satisfied with the office of protector, which he assumed on the death of Somerset, this ambitious nobleman formed a scheme of engrossing the sovereign power alto- gether. He represented to Edward, who was now in a declining state of health, that his sisten-

Mary and Elizabeth, who were appointed by Henry's will to succeed, in failure of direct hurs to the crown, had both been declared illegiti- mate by parliament ; that the queen of Scots his aunt stood excluded by the king's will ; and being an alien also, lost all right of succeeding. The three princesses being thus excluded, the succession naturally devolved to the marchioness of Dorset, eldest daughter of the French queen, Henry's sister, who had married the earl of Suffolk after her first husband's death. The heir of this lady was lady Jane Grey, universally respected, both on account of the charms of her person, and the virtues and endowments of her mind. The king, who was accustomed to sub mit to the political views of this minister, agreed to have the succession submitted to his council, where Northumberland hoped to secure an easy concurrence. The judges, however, who were appointed to draw up the king's letters patent for this purpose, warmly objected to the measure, and gave their reasons. They begged that a par- liament might be summoned, both to give it force, and to free its partisans from danger ; they said that the form was invalid, and would not only subject the judges who drew it, but every counsellor who signed it, to the pains of treason. Northumberland could not brook their demurs ; he threatened them with his authority, called one of them a traitor, and said he would fight with any man in his shirt in such a just cause as that of lady Jane's succession. A method was therefore found of screening the judges from danger, by granting them the king's pardon for what they should draw up ; and at length the patent for changing the succession was completed, the princesses Mary and Elizabeth were set aside, and the crown settled on the heirs of the duchess of Suffolk; she herself being contented to forego her claim. For some time the king had lan- guished in a consumption. After this settlement of the

crown, his health visibly declined every day, and little hopes were entertained of his re- covery. His physicians were now dismissed by an order of council ; and he was put into the hands of an ignorant old woman, who undertook to restore him to health. After the use of her medicines, all his bad symptoms greatly in- creased. He felt a difficulty of speech and breathing; his pulse failed, his legs swelled, his color became livid. He expired at Greenwich, on the 6th of July, 1553, in the sixteenth of his, age, and seventh of his reign.

After the death of Edward, very little regard was paid to the new patent by which lady Jane Grey had been declared heir to the throne. The undoubted title of Mary, notwithstanding the scandalous behaviour of her father and his ser- vile parliaments, was generally acknowledged by the nation. Northumberland, however, was resolved to put the late king's will in execution. He therefore carefully concealed the death of the king, in hope of securing the person of Mary, who, by an order of council, had been required to attend her brother during his illness ; but she, being informed of his death, immediately pre- pared to assert her rights. Northumberland then, accompanied by the duke of Suffolk, the earl of

1'einbroke, and' some other noblemen, saluted lady Jane Grey queen of England. She was \ ith difficulty, however, brought into the mea- sure of accepting the crown, and reluctantly suffered herself to be conveyed to the tower, where it was then usual for the sovereigns of England to pass some days after their accession. Mary, who had retired to Kenning-hall, in Nor- folk, found herself, in a very few days, at the head of 40,000 men ; and lady Jane, after an in- effectual attempt of her friends to raise a mili- tary force, resigned, in ten days, the sovereignty. Northumberland, finding his affairs desperate, at- tempted to quit the kingdom. But he was stopped by the band of pensioner guards ; sur- rendered himself to Mary ; and was, soon after, tried and executed for treason, with Sir John Gates and Sir Thomas Palmer, two of his politi- cal tools. Sentence was also pronounced against lady Jane Grey and her husband lord Guildford. Mary entered London July 31st, in company with her sister the princess Elizabeth, and was at once peaceably settled on the throne. Soon, however, her people found reason to repent their attachment to her. Though she had at first solemnly promised to defend the religion and laws of her predecessor, her authority no sooner became firmly established, than she resolved to restore tie old

religion. Gardiner, Bonner, and the other bishops who had been imprisoned or deprived during the last reign, were taken from prison and reinstated in their sees. On pretence of discouraging controversy, the queen, by her prerogative, silenced all preachers throughout England, except such as should obtain a particu- lar license, and this she was resolved to give only to those of her own persuasion. The greater part of the foreign protestants left the kingdom. Soon after, the queen called a parliament, which seemed willing to concur in all her measures. They at once repealed the statutes with regard to religion, that had passed during the reign of Ed- ward VI., and the national religion was placed on the footing on which it stood at the death of Henry VIII. To strengthen the cause of the catholics, and give ,the qjieen more power to establish the religion to which she was attached, a proper match was to be sought for her. Her affections were said to be engaged to Courtenay, earl of Devonshire ; but he was thought to be at- tached to the princess Elizabeth, and received the attention of the queen with indifference. The next person proposed as a match for her was cardinal Pole ; but he was now in the decline of life, and Mary declined to open any negociation on the subject. At last, Philip II. of Spain, son to the emperor Charles V., was considered eligible by the queen and her friends. He was then in the twenty-seventh year of his age : but when her intentions with regard to him became known, the greatest alarm took place throughout the na- tion, and the commons presented so strong a re- monstrance against a foreign alliance, that the queen dissolved the parliament. To obviate clamor, however, the articles of marriage were drawn up with the most careful consideration of the interests of England. It was agreed, that though Philip should have the title of king, the

administration should be entirely in the queen; that no foreigner should be capable of holding any office in the kingdom ; nor should any inno- vation be made in the laws, customs, and privi- leges of the people : that Philip shouJd not carry the queen abroad without her consent, or any of her children without the consent of the nobility. £60,000 a-year were to be settled upon her as a jointure ; and the male issue of this marriage were to inherit Burgundy and the Low Countries as well as the crown of England : in case of the death of Don CarlosxPhilip's son by his former mar- riage, without any heir, the queen's issue should inherit all the rest of the Spanish dominions also. It is but justice to Guardini, who drew these ar- ticles, to observe, that when Elizabeth afterwards contemplated a foreign marriage, she referred to this treaty as the most satisfactory precedent that could be found. All these concessions, however, were

not sufficient to quiet the popular appre- hensions : they were considered merely as words of course, which might be retracted at pleasure ; and the whole nation murmured against a trans- action which was considered dangerous to its in- dependence. An insurrection was raised by Sir Thomas Wyatt, a Roman catholic, at the head of 4000 men, who marched out of Kent towards London, publishing a declaration against the Spanish match and the queen's evil counsellors. Having advanced as far as Southwark, he re- quired that the queen should put the Tower of London into his hands ; that she should deliver four counsellors as hostages ; and, to ensure the liberty of the nation, should marry an English- man. But his force was by far too small to sup- port such demands ; and he wasted so much time without attempting any thing of importance, that the popular ferment subsided, his men abandoned him gradually, and he was at last obliged to sur- render himself. His followers were promptly brought to justice ; fifty of the Londoners, who had joined the rebels, were hung in various parts of the metropolis; eight or ten suffered in Kent; 400 more were conducted with ropes about their necks into the queen's presence, and there re- ceived their pardon. Wyatt himself was con- demned and executed. This rebellion had almost proved fatal to the princess Elizabeth, who for some time past had been treated with neglect : and a letter of advice to her was produced on the trial of Wyatt. An important letter written by her to the king of France (whose ambassador Noailles had warmly encouraged the late insurrec- tion) was also placed in the hands of the queen ; and Elizabeth seems at least to have wavered in her allegiance to her sister. Mary had never forgotten the quarrel between their mothers ; and the declaration made after her own accession, recognizing Catharine's marriage as legal, neces- sarily pronounced Elizabeth illegitimate. She was likewise obnoxious on account of her re- ligion, which Elizabeth at first had not prudence to conceal. She was now committed to the Tower, and underwent a strict examination be- fore the council ; but WTyatt declared her inno- cence on the scaffold, and, after a short confine- ment, the queen found herself under a necessity of releasing her. To get rid of so troutlesome a

rival, however she was offered in marriage to the duke of Savoy; and Elizabeth declining the proposal, she was committed close prisoner to Woodstock. The rebellion proved fatal to many persons of distinction. The Tower and prisons were filled with nobility and

gentry, who be- came objects of royal vengeance on account of their credit and interest with the people. Sir Nicholas Throgmorton was tried in Guildhall; but as no satisfactory evidence appeared against him, the jury gave their verdict in his favor. The queen was so much enraged, that she re-com- mitted him to the Tower, summoned the jury before the council, and at last sent them all to prison, fining them afterwards, some £1000, and others £2000 each. Sir John Throgmorton, brother to Sir Nicholas, was condemned and ex- ecuted, upon evidence which had been already rejected as insufficient. But of all those who perished on this occasion, none excited such uni- versal compassion as the unfortunate lady Jane Grey, and her husband, lord Guildford Dudley. They had already received sentence of death, and two days after the execution of Wyatt, orders were sent them to prepare for eternity. Lady Jane, who had long been in expectation of this, received the news with heroic resolution. The place intended at first for their execution was Tower- hill ; but the council dreading the effects of the people's compassion for their youth, beauty, and innocence, ordered lady Jane to be beheaded within the Tower. The duke of Suf- folk, whose ambition had been the cause of his daughter's unhappy fate, was soon after tried, condemned, and executed. Sir Thomas Grey also lost his life on the same account : but the cruel spirit of Mary was still unsatisfied ; and to disable the people from further resistance, general musters were ordered, and commissioners seized their arms. Notwithstanding Mary's unpopu- larity, however, the rebellion of Wyatt so mate- rially strengthened the hands of government at last, that a parliament was assembled, for the purpose of gratifying the queen's wishes in regard to her marriage with Philip. The emperor Charles V., to facilitate this object, sent over to England 400,000 crowns, to be distributed among the members in bribes and pensions ; a practice of which there had hitherto been no example in England. The queen, notwithstanding her bigotry, now resumed the title of Supreme Head of the Church, which she had dropped three months before ; and Gardiner made a speech, in which he proposed that they should invest her with a legal power to dispose of the crown, and appoint her successor. But the parliament, how- ever obsequious in other respects, did not choose to gratify their sovereign in a measure by which the kingdom of England might become a province of the Spanish monarchy. They would not even declare it treason to imagine or attempt the death of the queen's husband during her life- time, though they agreed to ratify the articles of mar- riage : and, previous to his arrival, it was thought proper to dismiss both houses. Soon after this the marriage of Philip and Mary was solemnised ; •but as the former had espoused her merely with a view to become

king of England, he no sooner found this an empty title, than he showed a total

want of affection for the queen. He passed most of his time at a distance from her in the Low Countries ; and seldom wrote to her except when he wanted money.

The enemies of the state being supposed to be suppressed, those of the Catholic faith were next persecuted, and the old sanguinary laws were revived. Orders were given that the priests and bishops who had married should be ejected ; that the mass should be restored ; the pope's authority re-established ; and that the church and its privileges, all but their goods and estates, should be put on the same footing on which they were before the commencement of the Reforma- tion. Several of the gentry and nobility, how- ever, having already possessed themselves of the church lands, it was found inconvenient, and7 indeed impossible, to make restoration of them. The persons who chiefly promoted these measures were Gardiner, bishop of Winchester, and car- dinal Pole, a kinsman of Henry VIII., who had now returned from Italy. The latter was for tolerating the Protestants ; but the former, per- ceiving that rigorous measures would be most agreeable to the king and queen, declared him- self against it. That he might not, however, appear in person at the head of the persecution, he consigned that office to Bonner, bishop of London, a man of a sanguinary disposition. The bloody scene began by the execution of Hooper., bishop of Gloucester, and Rogers, prebendary of St. Paul's. These were quickly followed by others, of whom the principal were archbishop Cranmer, Ridley, bishop of London, and Lati- mer, bishop of Worcester. (See those articles.) These persecutions becoming at last odious to the nation, the perpetrators of them wished to throw the blame upon others. Philip endeavored to fasten the whole reproach upon Bonner ; but that bishop retorted on the court. A bold step was now taken to introduce a court similar to the Spanish inquisition, that should be empowered to try heretics, and to condemn them by its own authority. But even this was thought a method too dilatory in the present exigence of affairs. A proclamation was issued against books of heresy, treason, and sedition, declaring, that whosoever had such books in his possession, and did not burn them without reading, should suffer as a rebel. This was attended with the execution of such numbers, that at last the magistrates, who had been instrumental in these cruelties, refused to give their assistance any longer. It was com- puted, that during this persecution, 277 persons suffered by fire, besides those punished by im- prisonments, fines, and confiscations. Among those who were burnt were one archbishop, four bishops, twenty-one other

clergymen, eight lay gentlemen, eighty-four tradesmen, 100 husbandmen, fifty-five women, and four children. The only remarkable transaction of this reign with regard to civil affairs was the loss of Calais, which had been in the possession of the English for upwards of 200 years. See CALAIS. This loss filled the whole kingdom with complaints, and the queen is said • to have been excessively grieved at it. She was heard to say, that, when dead, the name of Calais would be found engraved on her heart. She died in 1558 of a

lingering illness, after a reign of five years, four months, and eleven days.

On the death of Mary, the princess Elizabeth succeeded without opposition. She was at Hat- field when news of her sister's death arrived ;

parative for regaining his authority over the Ne- therlands, the revolted provinces having beei; strongly supported by Elizabeth. The fleet pre- pared at this time was superior to any thing then ex- isting in the world ; and no doubt being entertained

court became the sources of extreme misery to her for some time before her death. She had caused her favorite and lover, the earl of Es- sex, to be accused of high treason. See ES- SEX. And though his execution could i ot be called unjust, the queen's affection after his death is said to have returned to such a de- gree, that she thenceforth gave herself entirely over to despair. She refused food and suste- nance ; continued silent and gloomy ; and lay

upon which she hastened to London, where she of its success, it was ostentatiously stiled the In- was received with unusual joy. Her qualifica- vincible Armada. The miserable issue of this lions for government were never exceeded in her expedition, and the total failure of the mighty own sex, and have been rarely equalled in the hopes of Philip, are related under the article other. While her superior judgment led her to ARMADA. The spirit and courage of the English choose proper ministers, she ever exhibited au- were now excited to attempt invasions in their thority enough to keep her subjects in awe. turn ; which they executed in numerous descents The restraints also to which she had been sub- on the Spanish coast. The frequent advantages jected during her sister's reign, had taught her

so they obtained by sea it would be tedious to re- well to conceal her sentiments, that she had be- late ; but they gradually formed the character, come a mistress of dissimulation ; which, how- and laid the foundation of all the subsequent ever it must qualify our moral estimate of her triumphs, of the British navy : it will suffice to character, proved occasionally of great service to observe, that the naval commanders of this reign her government. She completed the reforma- are still considered as some of the boldest and most tion, and placed the religion of England upon enterprising men England ever produced. Eliza- the plan on which it at present subsists. This beth reigned with increasing glory till 1603 ; but was accomplished with little difficulty ; for the her personal passions and the government of her persecutions of Mary's reign had much increased the aversion of the people to popery. In the time of Edward VI. they had been compelled to embrace the protestant religion, and their fears induced them to conform ; but almost the whole nation had now become protestants from choice. The reformation was confirmed by act of parlia- ment in 1559 ; being the fourth change of the established religion in England in thirty-two years. While the queen and her counsellors

were employed in settling the religious affairs of the for ten days and nights upon a carpet, leaning on nation, negociations were carried on for a peace cushions. Her vexation was doubtless also in- between England and France : this was .at last creased by perceiving the attentions of her cour- concluded on the following terms, viz. that Henry tiers gradually transferred from herself to James should restore Calais at the expiration of eight her expected successor. Tormented with perpetual years; that in case of failure he should pay heat in her stomach, attended with unquenchable 500,000 crowns, and Elizabeth's title to Calais thirst, she drank without ceasing, but refused the still remain; that foi the payment of this sum assistance of her physicians. As her death evi- he should find the security of eight foreign mer- dently approached, Cecil and the lord admiral chants, not natives of France; and until that desired to know her sentiments with regard to security was prepared he should deliver five the succession. To this she replied, that as the hostages. If during this interval Elizabeth crown of England had always been held by should break the peace with France or Scotland, kings, it must devolve upon ' no rascal : a king she should forfeit all title to Calais ; but if should succeed her, and who could that be but Henry made war on Elizabeth, he should be her cousin of Scotland?' Being then advised obliged to restore the fortress immediately. This by the archbishop of Canterbury to fix her pacification was soon followed

by an irrecon- thoughts on God, she replied that her thoughts cileable quarrel with Mary queen of Scots ; a did not in the least wander from him. Her quarrel not extinguished but by the death of the voice soon after left her ; she fell into a lethargic Scottish princess ; and connected with circum- slumber, which continued some hours ; and she stances of treachery, hypocrisy, and dissimula- expired gently without a groan, on the 24th of tion, on the part of Elizabeth, which stain her March, 1602-3, in the seventieth year of her age, memory with indelible disgrace. See the articles and forty-fifth of her reign. MARY and SCOTLAND. Elizabeth having at last The kingdoms of Scotland and England, or the disposed of her rival, began in 1587 to make whole of Great Britain, now fell under the do- preparations for resisting a Spanish invasion, minion of one sovereign, by the accession of which was now threatened. Hearing that Philip James VI. of Scotland to the throne of Eng-

s secretly fitting our a navy to attack her, she land. He derived his title from being the grand- Francis Drake with a fleet to pillage his son of Margaret eldest daughter of Henry VII. and destroy his shipping. (See the article and, on the failure of all the male line, his right

ARE). But though this retarded the intended in- was become incontestable. Although the legisla-

England for a whole twelvemonth, it by tive union of the two countries did not immedi-

$ induced Phihp to abandon his design, ately take place ; they have, ever since this period,

t interval he continued his preparations been governed by one sovereign: we therefore

! greatest assiduity, more especially as the shall resume and conclude the history of both

ion ot hngland seemed to be a necessary pre- under the article GREAT BRITAIN.

NEW ENGLAND.

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ENGLAND, a small island in the Pacific, near the north coast of New Guinea. Long. 131° 36′ E., lat. 0° 48′ N.

ENGLAND, LITTLE, beyond Wales, in geogra- phy, is a portion of country lying along the south-western coast of South Wales, remarkable for being inhabited by the descendants of a colony of Flemings who came over from Flan- ders, and settled here in the reign of king Henry I. Camden states, that the occasion of their emigration was an inundation of the sea, which overflowed a great part of the Low Countries. But Dr. Evans and other writers have suggested, with more probability, that it was the policy of that wise monarch to place here a people opposite in their language, manners, and opinions to the Welsh, to assist in his favorite project — the sub- jugation of the country. Another colony from the same country was incorporated with the first, in the time of Henry II., to which were added numerous Anglo-Normans, and others from the English army. At first these people were confined to the commot of Rhos, which district still more particularly retains the name of Little England beyond Wales. But their numbers increasing in the course of time, they spread along the whole coast, from the lordship of Comes to the mouth of the river Tave. This part of the principality is, to the present day, divided into two districts, denominated English- ery and Welshery. The latter, occupied by the original inhabitants, contains the cantreves of Comes, Cilgerran, part of Arberth, and Dew- island. The former comprises the remainder of Arberth, and the cantreves of Rhos, Castel-Mar- tins, and Doughleddy ; and is inhabited by the descendants of the Flemings. Like their ancestors, they aie hardy, industrious, and adventurous. The dispositions of the two people are equally striking and adverse. While the Welsh are hot, easily irritated, and obstinately tenacious ; these are not easily provoked, and are averse from contention and litigation. Both are distinguish- able by their mode of dress, manner of living, the style of their buildings, particularly in their churches, and the names they respectively give to places. All these strongly point out the line of demarcation between them. In the Welshery, not a word of English is heard spoken, while in the next village within the Englishery, not a word of Welsh. The language of the latter district is not much different from the common dialect of England, except in some parts of Rhos and Castle-Martin. The two people avoid all com- merce as much as possible, mutually considering each other in a degrading light ; and even a pathway will divide them in the same parish. To such an extent was this personal detestation carried among the lower classes, even in modern times, that a matrimonial connexion between the opposite parties was rare, and considered an unfortunate event. The Flemings, however, eventually proved a blessing to Wales, as well as England, by their introduction of the woollen manufactures. And a work, which proves their industry and improving spirit, is yet

visible in a road of great extent made by them in this neigh- bourhood, and still called Fleming's way. Dr. Evans's South Wales.

VOL. VIII.— PART 2.

ENGLAND, NEW, a country of North America, thus first named by captain Smith in 1614, forms • the north-east part of the United States, bounded by Canada on the north, by New Brunswick and the Atlantic on the east, by the Atlantic and Long Island Sound on the south, and by New York on the west. It comprises the states of Vermont, New Hampshire, Massachusetts (in- cluding the district of Maine), Rhode Island, and Connecticut. Although each of these states have in, and since the union, become important integral portions of the United States of North America, and will, in their alphabetical places, receive due attention in this work, there are sufficient traces of the distinctive character of New England still remaining in their history as well as in their internal polity, to demand some separate con- sideration.

The face of the country is uneven, and it may be deemed, on the whole, high and hilly, though its mountains are comparatively small. They run nearly north and south, in ridges parallel to one another. The westernmost range begins in the county of Fairfield, and, passing through the counties of Litchfield and Berks, unites with the Green mountains at Williamstown, in the north-west corner of Massachusetts, being se- parated only by the narrow valley of Hoosack river. The highest part of this range is Togh- konnuck mountain in Egremont, the south-wes- tern corner of the same state. Over this moun- tain, elevated probably more than 3000 feet above the ocean, runs the boundary between Massachu- setts, Connecticut, and New York. The second range is that of the Green mountains. See our article AMERICA. The third range has the same commencement with the second at New Haven, in a delightful eminence called the East rock, and passing through the counties of New Haven, Hartford, and Hampshire, extends into Canada. The Blue hills in Southington, mount Tom, which is the principal eminence, mount Holyoke, and mount Toby in Sunderland, are the principal summits of this range south of New Hampshire. This range, which is precipitous and romantic, crosses Connecticut River just below Northamp- ton and Hadley in Massachusetts. There is a fact related by Dr. Dwight respecting these mountains, which seems to throw some light upon the nature of those hitherto unexplained explosions, that are heard in mountainous coun- tries. Such an explosion, about forty years ago, was heard by the inhabitants of Kinsdale town- ship, in New England, from West River Moun- tain, on the Connecticut. Upon

repairing to the place, they discovered that a metallic substance had been forced from the heart of the mountain, the hole which it had made being about six inches in diameter. A few trees which stood near were almost covered with the substance which had been ejected, and which consisted chiefly of melted and calcined iron ore, strongly resembling the scoria of a blacksmith's forge. The same substance was found upon the rocks and the face of the hill in several places, having evidently been propelled in a liquid or semi- liquid-state. It appears clear that this explosion was volcanic.

The south or eastern range begins at Lym&

in Connecticut, and forms the eastern boundary of the Connecticut valley, until it unites with the last-mentioned range in the county of Hamp- shire ; but is less distinctly marked by eminences than the others. The chief single mountains are Saddle Mountain in Massachusetts, computed to be about 4000 feet above the sea, Watchusett in the county of Worcester, Aschutney in the state of Vermont, Monadnock in New Hamp- shire, and the White Mountains in the same state, of which the highest summit is Mount Washington, probably between 10,000 and 11,000 feet above the ocean, and the highest land in theUnited States. This mountain is covered during a great part of the. year with snow, and is seen in fair weather at the distance of ninety miles from the sea, and 160 from its base.

New England abounds in cataracts ana cas- cades ; those of the White Mountains being singularly romantic and beautiful. The principal rivers are the Schoduck, Penobscot, Kennebeck, Amanscoggin, Saco, Piscataqua, Merrimack, Parkers, Charles, Taunton, Providence, Thames, Connecticut, Hooestonnuck or Stratford, Onion, La Moille, and Missisconi. The largest of these are Penobscot, Kennebeck, Merrimack, and Con- necticut. The chief lakes are Champlain and Memphremagog, lying partly in Vermont and partly in New York ; Winnipisiogee and Um- bagog in New Hampshire ; Sebago, Moosehead, Willeguenguagun, and Chilmacookor Grand lake in Maine. The most important and useful har- bours are those of Machias, Frenchman's Bay, Wiscasset, Portland and Wells, in Maine ; Pis- cataqua in Hampshire ; Newbury Port, Salem, Marble head, Boston, Provincetown, and New Bedford,

in Massachusetts Proper ; Newport, Bristol, and Providence, in Rhode Island ; and New London, New Haven, and Black Rock in Fairfield, in Connecticut. Burlington Bay is the most considerable harbour in lake Champ- lain, on the Vermont shore.

An extraordinary phenomenon respecting this lake we must be here allowed to insert from Dr. Dwight's Travels in New England, vol. ii. p. 95. 'Friday morning, Oct. 18th, we rode to the south end of the lake accompanied by Mr. Whettlesey to examine a rock of which a singular, not to say an incredible, opinion prevails in the vicinity., Our road, for near half a mile, lay on a natural causeway, about thirty feet in breadth, which separated the lake in two parts, and was formed of earth, probably washed up by its waves. The rock, which was the particular object of our curiosity, is said, by inhabitants long settled here, to have moved a considerable distance from the spot where .it anciently stood, towards the south-western shore. You will not suppose we considered this story as founded either in truth or good sense. However, having long believed it to be prudent, and made it a regular practice, whenever it was convenient, to examine the foundation of reports credited by sober men, I de- termined to investigate t'lis, as I saw that it was firmly believed by several discreet persons. One particularly, a man of unquestioned reputation, and long resident near the spot, declared, that about forty years since, the top of this rock, at the ordinary height of the water, was at least two

feet below its surface, and fifteen or twenty rods farther from the causeway than when we saw it. The shore has unquestionably remained as it then was ; for the trees and stumps standing on the causeway are older than any man now living, and the space between them and the lake is very narrow, scarcely extending fifteen feet from the trees.

'The top of the rock is now at' least two feet above the water. This height it is declared to have gained imperceptibly, year by year, for many years, in consequence of its advancing towards the shore, and standing continually in water more and more shallow. The water is evidently of the same depth now as formerly, as is proved by the appearance of the shore.

' When we came up to the rock, which was standing where the water was scarcely knee-deep, we found a channel behind it, towards the deeper water, formed in the1 earth, about fifteen rods in length. It was serpentine in its form, and was sunk from two to three feet below the common level of the bottom on its borders. In the front of the

rock the earth was pushed up in a heap, so as to rise above the water, declining, however, at the distance of a few inches, obliquely and pretty rapidly. Not far from this rock we saw another, much less, attended by the same phe- nomena, except that they were diminished in proportion to its size. The whole appearance of each was just as one would expect to find, if both had actually removed from their original places towards the shore, throughout the length of their respective channels. How these chan- nels were formed, or by what cause the earth was heaped up in front of these rocks, I must leave to the divination of others. The facts I have stated, as I believe, exactly.'

The climate of New England is considered very healthy, one in seven, it is said, living te the age of seventy years, and about one in thir- teen or fourteen to eighty years and upwards. The most prevalent winds are the north-west, west, and south-west ; but the- east, and north- east winds, which are insalubrious, occur fre- quently at certain seasons of the year, particu- larly in April and May, on the sea-coasts. The coldest winds of all are from the west ; and Dr. Dwight has some curious remarks on their origin. 'These winds, Fays he, are purer than any others ; a fact universally remarked through- out this country. During their prevalence the lungs are feasted and the frame invigorated, in such a manner as is never experienced at any other season. Their influence on plants, also, is entirely peculiar. It is customarily said, by those who have long cultivated tobacco, that its leaves, are perceptibly thicker and heavier, after a north-west wind has blown two or three days, than at any other time ; and such a season is considered, by skilful cultivators, as the best for cutting this plant. When grass has been mowed at such a season, I have observed the scythes to be covered with its juice, so thick and viscid, and adhering so tenaciously to the scythe, as to oblige the mowers to employ the whetstone, not for the sake of giving the scythe an edge, but to remove the glutinous substance with which it was covered. During the preva-

lence of these winds, wood burns more rapidly, and with a more vivid flame. The flame, also, makes frequeptly a small explosion (if I may be allowed the term), resembling strongly that of a musket, discharged at a .ery great distance. All these facts, as it seems to me, are easily ex- plicable on the supposition, that the north-west winds have their origin in the superior legions of the atmosphere. If this

opinion be admitted, we cannot, I think, be at a loss for leasons why they are instantaneously, and, in the winter, severely cold ; why they commence with violence and terminate suddenly ; why they are remark- ably pure and healthy ; why in a singular man- ner they facilitate combustion; why they are wholly free from terrene exhalations; why, in many instances, they condense clouds imme- diately vertical, some time before they are per- ceived to blow on the surface ; why they carry clouds, at times, toward the south-east, without interrupting at all the blowing of a south-west wind ; and why in the month of March, during which the westerly winds almost regularly pre- vail, all kinds of wood shrink, and become dry, in a greater degree than in the most intense heat of our summer sun. Particularly, the peculiar degree of cold, experienced in this country, seems to be explicable on this ground only. Every man, accustomed to read even newspapers, knows that the air, at a moderate distance from the earth, is usually much colder than near the surface. This fact has been so often proved by ascending high mountains, and by rising into the atmos- phere in balloons ; and is so evident from the ice and snow, always visible, even under the equator, at great, elevations, that few persons are ignorant of it. Every degree of cold experienced in this country, must naturally be expected from winds, which have their origin in a superior region.' Travels, vol. i. pp. 44, 45.

The weather is less variable in New England than in the middle, and especially the southern states of the Union, and more so than in Canada. The extremes of heat and cold are, according to Fahrenheit's thermometer, from 20° below to 100° above 0 ; the medium being from 48° to 50°. The quantity of water which annually falls here is from forty-two to forty-eight, and yet they suffer here more from drought than in England, where the an- nual quantity of water is estimated at about twenty- four inches. Hence it is inferred that the at- mosphere is remarkably dry, and thus some have accounted for its, singular salubrity. Winter commonly commences, in its severity, about the middle of December; sometimes earlier, and sometimes not till Christinas. The diseases most prevalent are alvine fluxe, St. Anthony's fire, asthma, atrophy, catarrh, colic, inflammatory, slow, nervous, and mixed fevers, pulmonary con- sumption, quinsy, and nieumatism. Dr. Dwight observes that asuccession of cold years have proved peculiarly unfavorable to healtn in New England ; the spotted fever, which was a new disease, and the spurious peripneumony, which had never before been known to be endemic there, having ravaged great part of the country, at a late period of this kind. The latter indeed became a for- midable*

scourge to the people; heads of families, the men especially, having been swept away in

such unprecedented numbers, that more children had been made orphans than at any preceding time since the country was colonised ; and there was every reason to fear that it would pervade the Union; for, beginning in Connecticut in 1812, it had. in the course of three years, spread extensively over Virginia and Ohio.

The soil exhibits every diversity from barren sands to the richest loams and clays. The hills art covered with brown loam intermixed with gravel, and are very favorable to grazing ; in the western parts of the country, wheat, and all other kinds of grain and fruits appear suited to the climate. The clayey soils, when well manured, are also very productive. A rich loam, varying towards clay, is prevalent in Connecticut, and is favorable to every kind of cultivation. Sand is generally found on the plains; and the yellow pine plains, which are a mixture of sand and gravel, are friendly to every production that does not require a richer soiL The white pine plains are usually co.-ered with loam, and these, as well as some of the last-mentioned in the same condition, are un- commonly fertile. The valleys are a rich mould ; and the intervals, bordering the various streams, are generally sands formed by earth deposited by the floods in the spring, and are of the richest quality. Generally speaking, New England seems better adapted for grazing than for grain, though a sufficient quantity of the latter is raised for home consumption, if we except wheat which is largely imported, particularly into Massachu- setts, from the middle and southern states. Indian corn, rye, oats, barley, buck-wheat, flax, and hemp, generally succeed very well. Fruits of every kind, which suit a temperate climate, may be obtained in abundance. The summer heat brings to perfection peaches, apricots, and nectarines. Orchards of apple-trees cover a considerable part of the whole country, and cyder is the common drink of the inhabitants. Pears, plums, cherries, currants, gooseberries, whortleberries, blackberries, bilberries, &c., abound. Perry is made in some parts of the country, but not in great quantities. Various species of the hickery and hazle-nuts, and chest- nuts, are plentifully furnished by the southern half of New England. In travelling through the forests of New England (which, even in the old states of America, still occupy no small portion of the soil, notwithstanding the improvident destruction of wood) Dr. Dwight was forcibly struck with the wisdom of divine providence displayed in the decay of the foliage. Were the leaves, when they fall, to go through the usual processes of fermentation and putre- faction, like other vegetables, the atmosphere would be rendered so unwholesome that it would be

impossible for man either to inhabit or to clear a forested country. But the juices are exhaled before the leaves fall ; they lie lightly on the ground, so as to permit a free circulation of air : so far from being offensive in their decay, they have even a peculiar fragrance, which poets have sometimes noticed among the melancholy charms of autumn ; the mould into which they are con- verted ‘ appears to be the beˆt of all manures, being suited to more kinds, and producing higher degrees of vegetation than any other.’

2C2

The pioneers of civilisation bivouaque, or, in the true phrase, squat, in full assurance of their sa- lubrity, in the woods; and endemial diseases are unknown there till men, collected in societies, prepare the way for and induce them, by their improvidence, their errors, their injurious habits, or their crimes. For example, no country abounds more with small lakes and ponds than New England : they are supplied by subjacent springs ; the water is cool, sweet and pure ; and the margins are university healthy ground. Dr. Dwight could not, after ‘ very extensive en- quiries,’ discover a single exception to this fact ; but where dams have been raised, and artificial mill-ponds constructed, remittent and autumnal fevers have become endemic to an alarming de- gree. The mongrel cedar appears to shed its leaves here in a manner which has not yet been observed in any other tree. It resembles in its growth a spreading oak of moderate size — which in Europe would be an enormous tree. In au- tumn red spots, not unlike roses at a little dis- tance, but generally larger, are dispersed over it : upon examination it is found that these are small twigs, the growth of the existing, or per- haps the preceding, year, which die together with their leaves, assume a red or reddish-brown color in their decay, and fall ; so that the tree sheds its leaves not singly but with the spray

from which they spring, exchanging annually, according to Dr. Dwight’s observations, about a third of its foliage, in this manner. Singular as the fact is, it seems heretofore to have passed unnoticed, and the author could find no person able to give him any account of it : but he had opportunities of examining and verifying it him- self in his different journeys.

Gardening is much improved, and its produc- tions are daily varying

and increasing. But the most important production of New England is grass. The high and rocky ground is in many parts covered with clover, and affords excellent pasture to some of the finest cattle in the world. The quantity of butter and cheese made for ex- portation is very great. Considerable attention is now paid to the raising of sheep; and the wool is in a state of progressive improvement. The principal exports of New England are mackarel, salmon, cod, and other fish ; whale- oil and whale-bone, timber, masts, boards, staves, hoops and shingles ; horses, mules, salted beef, and pork, potash, pearlash, flax-seed, apples, cyder, corn, butter, and cheese.

New England is considered one of the most populous parts of the United States ; its states, in 1790, contained 1,009,522 persons ; in 1800, 1,233,041. The following is

TABLE I.— The Free \Vhite population of the New England States, the Free Persons of Colour,

and the Slaves, in 1830.

Free White

Free Colored

States.

Persons.

Persons.

Slaves.

Total.

Maine ....

398,263

1,190

2

399,455

New Hampshire . .

268,721

604

3

269,328

Vermont ....

279,771

881

280,652

Massachusetts . . .

603,359

7,048

1

610,408

Rhode Island . . .

93,621

3,561

17

97,199

Connecticut . . .

289,603

8,047

25

297,675

Total

1,933,338

21,331

48

1,954,717

:

TABLE II.— The classification of the productive Inhabitants of each State ; the number of Persons engaged in Agriculture, Commerce, and Manufactures, in each of the United States ; together with the proportion which each class forms of the whole Population.

States.

Persons engaged in

Agriculture.

Commerce.

Manufactures.

Number.

Propor- tion.

Number.

Propor- tion.

Number.

Propor- tion.

Maine

55,031 52,384 63,460 12,559 50,518 50,951

18-5 21-4 12-1 15-1 18-1 21-6

4,297 1,068 13,301 1,162 3,581 776

1-5

•4

2-5 1-4 1-3

•3

7,643 8,699 33,464 6,091 17,541 8,484

2-5 3-5 6-4 7-3 6-4 3-6

New Hampshire . . . . Massachusetts

Rhode Island . .

Connecticut .

Vermont ... .

Total

289,903

24,185

81,922

,

NEW ENGLAND.

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TABLE III. — The States in the order of their Population in 1830, with the Population in 1800,

1810, and 1820.

States.

1800.

1810.

1820.

1830.

Rate of Increase.

Massachusetts .... Maine

422,845 151,719

472,040 228,705

523,287 298,335

610,408 399 955

16.64 33 88

Connecticut .... New Hampshire . . .

251,002 183,858

154,465

261,94-2 214,460

217,8Q5

275,248 244,161 235 764

297,675 269,328 80 652

8.14 10.30 10 04

Rhode Island ....

69,152

76,931

83,059

97,199

17.01

New England States and

Territories ...

•

1,233,041

1,471,973

1,6.09,854

1,955,217

1

The great body of the inhabitants consists of land-holders and cultivators of the soil. As they possess in fee-simple the farms which they culti- vate, they are all naturally attached to their country ; and the cultivation of the soil makes them robust and healthy. New England has been not unaptly denominated a nursery of men ; and hence are annually transplanted, into other parts of the United States, thousands of its na- tives. They are almost universally of English descent ; and to this circumstance, as well as to the general attention that has been paid to edu- cation, it is owing that the English language has been preserved among them in so considerable a degree of purity. A succession of New Eng- land villages, says the intelligent traveller from whom we have quoted other observations in this article, composed of neat houses, surrounding neat school-houses and churches, adorned with gardens, meadows, and orchards, and exhibiting the universally easy circumstances of the inhab- itants, is, at least in my own opinion, one of the most delightful prospects which this world can afford. ' You are to understand, that every man in this country, almost without an exception, lives on his own ground. The lands are uni- versally holden in fee- simple ; and descend by law to allˆthe children in equal shares. Every farmer in Connecticut, and throughout New England, is therefore dependent for his enjoy- ments on none but himself, his government, and his God ; and is the little monarch of a do- minion, sufficiently large to furnish all the sup- plies of competence, with a number of subjects as great as he is able to govern. In the cultiva- tion of his farm he gratifies his reason, his taste, and his hopes ; an—! usually finds the gratification at least sufficient for such a world as this. Here he can do every thing which is right, and no man can with impunity do any thing to him that is wrong. If he is not in debt, an event ne- cessary only from sickness or decrepitude, he is absolutely his own master, and the master of all his possessions.'

The New Englanders are tall, stout, and well made. Their education, laws, and situation, serve to inspire them with high notions of liberty, of which they are jealous in some cases, perhaps, to excess. A chief foundation of freedom in the New England states is a law, by which intestate estates descend to all the children, or other heirs, :'n equal proportion ; and hence it happens that

the people of New England enjoy an equality of condition, that is unknown to any other part of the world. They are described as being

gene- rally frugal, industrious, and inured to habits of sobriety and temperance. Learning is as much dif- fused among all ranks of people in New England perhaps as in any other part of the globe ; which is owing to the establishment of schools in every town. In these schools, generally supported by a public tax, are taught the elements of reading, writing and arithmetic ; and in some of tin: principal and more wealthy towns they introduce the superior branches of grammar, geography, and other sciences. Literature is also encouraged and diffused by the circulation of newspapers and periodical publications, and by the estab- lishment of reading societies and parochial li- braries. Curiosity, and a- desire of information, are very prevalent in New England ; and the common people, it is said, are distinguished by attention to strangers. In former times the New Englanders were strict, to a degree of punc- tiliousness, in their observance of the sabbath; and hence, as well as from some other traits of their character, they acquired the character of a superstitious and bigoted people. But a ca- tholic, tolerant spirit, occasioned by a more en- larged intercourse with mankind, has of late much increased, and is becoming universal. 'If,' .says Dr. Morse, 'they do not go beyond the proper bounds, and liberalise away all true re- ligion, of which there is very great danger, they will counteract that strong propensity in human nature which leads men to vibrate from one ex- treme to its opposite.'

The custom still prevails, transmitted to the present race from their ancestors, of annually celebrating fasts and thanksgivings. In spring, the governors of the several New England states, Rhode Island excepted, proclaim a day of fasting, humiliation, and prayer; and in autumn, after harvest, they appoint a day of public thanks- giving. Many of the women are handsome. Those who have enjoyed the advantages of a good education are numerous, genteel, and agreeable in their manners, and spri-jhtly and sensible in their conversation. It is the laudable practice here among all ranks of females to ac- custom themselves at an early period to the management of domestic concerns. Employ- ment at the needle, in cookery, and at vhe spin-. ning-wheel, is honorable. The « omen in country

towns manufacture the greater part of the clothing of their families. Their linen and woollen cloths are excellent. Among the amusements of the people of New England is dancing, of which the young people

of both sexes are extremely fond. The athletic and healthy diversions of cricket, foot-ball, quoits, wrestling, jumping, hopping, foot-races, and prison-bars, are uni- versally practised in the country, and some of them in the most populous places, and by people of almost all ranks. Of the religion of the New Englanders, and of the provision that is made for the support of it, we have already spoken under the article AMERICA. We may here however observe, that the constitution of these states especially provides against the making of auy law respecting an establishment of re- ligion, or prohibiting the free exercise of it. And, in the constitution of all the different states, religious liberty is a fundamental principle.

' All countries,' as Dr. Dwight says, ' contain restless inhabitants; men impatient of labor; men, who will contract debts without intending to pay them : who had rather talk than work ; whose vanity persuades them that they are wise, and prevents them from knowing that they are fools ; who are delighted with innovation ; who think places of power and profit due to their peculiar merits ; who feel that every change from good order and established society will be beneficial to themselves ; who have nothing to lose, and therefore expect to be gainers by every scramble ; and who, of course, spend life in disturbing others, with the hope of gaining something for themselves. Under despotic governments they are awed into quiet; but in every free commu- nity they create, to a greater or less extent, con- tinual turmoil ; and have often overturned the peace, liberty, and happiness of their fellow- citizens. In the Roman commonwealth, as be- fore in the republics of Greece, they were emptied out, as soldiers, upon the surrounding countries ; and left the sober inhabitants in com- parative quiet at home. It is true they often threw these states into confusion, and sometimes overturned the government. But if they had not been thus thrown off from the body politic, its life would have been of a momentary du- ration. As things actually were, they finally mined all these states : for some of them had, as some of them always will have, sufficient talents to do mischief; at times very extensive. The Graccni, Clodius, Marius, and Marc Antony, were mer of this character. Of this character is every demagogue, whatever may be his cir- cumstances. Power and profit are the only ul- timate objects which every such man, with a direction as steady as that of the needle to the pole, pursues with a greediness unlimited and inextinguishable.

' Formerly the energetic government esta- blished in New England, together with the pre- vailing high sense of religion and morals, and the continually pressing danger from the French and the savages, compelled the inhabitants into habits of regularity and good order,

not sur- passed, perhaps, in the world But since the American revolution our situation has become l??E fv.-orable to the existence, as well ns to the

efficacy, of these great means of internal peace, The former exact and decisive energy of the go- vernment has been obviously weakened. From our ancient dangers we have been delivered, and the deliverance was a distinguished blessing ; but the sense of danger regularly brings with it a strong conviction that safety cannot be preserved without exact order, and a ready submission to lawful authority. The institutions and the habits of New England, more I suspect than those of any other country, have prevented or kept down this noxious disposition; but they cannot en- tirely prevent either its existence or its effects. In mercy, therefore, to the sober, industrious, and well-disposed inhabitants, Providence has opened in the vast western wilderness a retreat, sufficiently alluring to draw them away from the land of their nativity. We have many troubles even now : but we should have many more if this body of foresters had remained at home.' — vol. ii. pp. 441 — 443.

Dr. Dwight assures us, that ' fewer capital crimes have been committed in New England since its establishment, than in any other country on the globe (Scotland perhaps excepted), in proportion to the number of inhab.tants.' Yet of the laborer in New England, he says, ' Almost every man of this character is either shiftless, diseased, or vicious. And yet employment is found every where, and subsistence is abundant and easily obtained. The price of labor is also very high, a moderate day's work being usually purchased at a dollar. Every healthy, industrious, prudent man, may therefore live almost as he wishes, and secure a competence for old age.' Nevertheless he affirms, that few of these men are very industrious, fewer economical, and fewer still virtuous. The mechanics he describes as being, in all respects, of a different character. Perhaps it will be found, that np to a certain de- gree in society, morals, as well as manners, im- prove at every step of the ascent ; for character i ecomes of more importance, when there Is more to lose and more to hope ; and men some- times become respectable in proportion as they feel their own respectability. Another .class who are important missionaries of civilisation in South America, and whose services cannot easily as yet be dispensed with in many parts of the United States, are portrayed in dark colors. Speaking of the persons who are employed in peddling articles of small value about the coun- try, Dr. Dwight says, ' the consequences of this employment, and of all others like it, are gene- rally malignant, and that it has had an unhappy influence on both the morals and manners of the people.' ' Men,' he

says, ‘ who begin life with bargaining for small wares, will almost invariably become sharpers. The commanding aim of every such man will soon be to make a good bargain, and he will speedily consider every gainful bargain as a good one. The tricks of fraud will assume in his mind the same place which commercial skill and an honorable system of dealing hold in the mind of a merchant. Often employed in disputes, he becomes noisy, pertinacious, and impudent.

‘ The spirit of subdividing,’ he afterwards a

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*happy consequences in the state o\ society in New England. Offices are multiplied to a useless degree, and beyond the ability of the country to fill them with advantage. Yet the fact, that so many of these subdivisions have been made, becomes a powerful reason for making more. He, who voted for the last, claims the suffrage of him who has been profited by that vote, in his own favor. In this manner a silly and deplo- rable ambition becomes a source of multiplied mischiefs to the community. Small parishes are unable, without serious inconvenience, to keep *heir churches in repair, and support their mi- nisters. Small towns are often obliged to send diminutive representatives, because they can send no other. Small counties have often very imper- fect courts, because they have no materials out of which to constitute better. Representatives also are in this manner multiplied beyond every ra- tional limit. In most of the New England states the number is twice, and in Massachusetts at least three times as great as either experience Or common sense would justify.’ — vol. i. p. 146.*

‘ The county of Hampshire, after having ex- isted as a fine Doric column of industry, good order, morals, learning, and religion, in Massa- chusetts for more than a century, was by an un- wise legislature broken into three parts. Of its ruins were formed the three counties, of Franklin on the north, Hampshire in the middle, and Hampden on the south ; each of them extending through the original breadth of the county of Hampshire. One political purpose, intended to be accomplished by this disruption, was to de- stroy the firm order and sound principles of the inhabitants. How far this plan will succeed time alone can discover. From analogy it may be concluded, or at least rationally feared, that the inhabitants will lose some part

of their ele- vation of character. Little counties almost of course have little officers, and little concerns ; and the existence of these is but too commonly followed by a contraction of views, a diminution of measures, a destruction of influence, and a deterioration of character.' — vol. ii. p. 258.

New England was first settled by persons driven by religious persecution from their native country, and the inhabitants still exhibit traces of their descent from the Puritans. The first attempt to form a regular settlement here was at Sagaha- dock in 1607 ; but, in the following year, the whole number of those who survived returned to England. The first company that laid the foun- dation of the New England states, planted them- selves at Plymouth, in November 1620; though this appellation was given to North Virginia by captain Smith in August 1614. The founders of the colony consisted of 101 persons. In 1640 the importation of settlers ceased, in consequence of the abatement of persecution in England. At this time the number of emigrants who had tra- versed the seas in 298 vessels, from the com- mencement of the colony, amounted to 21,200 men, women and children, forming, perhaps, about 4000 families. In 1760 the number of inhabitants in Massachusetts Bay, New Hamp- shire, Connecticut, and Rhode Island, amounted probably, to 500,000. Morse's Gazetteer.

ENGLECHERIE, ENGLESCH£KY,OT ENGLE-

SCHYRE, in old English law, the quality of being an Englishman. If a man were privately slain or murdered, he was anciently accounted franci- gena (which comprehended every alien, espe- cially the Danes) till englecherie was proved, i.e. till it was made to appear that he was an Eng- lishman. Bracton, lib. iii. This' custom is traced to the reign of Canute, who having con- quered England, at the request of his nobles, sent back his army into Denmark, only reserving a guard for his person (see ENGLAND) ; and made a law, that if any person was murdered, lie should be supposed to be a Dane, if he was not proved to be an Englishman. In default of such proof, if the murderer was unknown, or had made his escape, the township where the man was slain should be charged to pay sixty-six marks into the exchequer : or, if that sum could not be raised thence, it was to be paid by the hundred. After this law, which was continued by William the Conqueror, for the like security to his own Normans, whenever a murder was committed, it was necessary to prove the party slain an Englishman, that the penalty of sixty- six marks might not be charged on the village. The manner of proving the person killed to he an Englishman was by two witnesses, who knew the

father and mother, before the coroner, &c. Englecherie was finally abolished by statute 14 Edw. III. cap. 4.

ENGLEFIELD (sir Henry Charles), F. R. S. the last baronet of a family settled at the village 'and manor of this name, near Reading, ever since 1272. Sir Henry Englefield was born in 1752, and succeeded to the baronetage in 1780. Tn 1788 he was elected a fellow of the Royal Society, and the year following of that of the Antiquaries. His numerous and elegant contri- butions to the Archjeologia are a lasting inonu- hient of h's erudition and taste. Besides these and various papers in the Philosophical Transac- tions, and the Transactions of the Linnaan Society (of which he was also a member), he published Tables of the apparent places of the Comet of 1661; and a tract On the Deter- mination of the Orbits of Comets according to Boscovich and De la Place, 4to. 1793; A walk through Southampton, with plates of its anti- quities, 8vo. 1801 ; A Description of the prin- cipal Picturesque Beauties and Geological Phe nomena of the Isle of Wight, 4to, and folio 1816 ; and a metrical translation of the Andria of Terence. On the decease of marquis Townsend he was for a short time president of the Anti- quarian Society. He died March 21st, 1822, at his house in May Fair.

ENGLEFIELD BAY, a deep bay on the western shore of Queen Charlotte's Island. It was so called by Vancouver, after the above sir Henry Enc;lefield.

EN'GLISH, n. s., adj. & v. a. Sax. enjlep; Teut. englisch ; Goth, englisk ; Fr. anglois. See the article ENGLAND. The people of England ; the language of Fngland ; of or relating to England : as a verb, to translate into that Ian guage.

He hath neither Latin, French, nor Italian ; and you may come into the court, and swear that I have a poor pennyworth in the Engliih, Shakrpearf.

The hollow instrument terebra, we may engl'uh piercer. Bacon.

Their English tongue reacheth along the east coast into the farthest parts of Scotland j and the people thereof are called — the English.

"Camden's Remains.

We find not a word in the text can properly be ren- dered anise, which is what the Latins call anethum, and proporly englished dill. Browne.

Of English talc, the coarser sort is called plaister, or parget ; the fmjr, spoad. Woodward.

ENGLISH BIBLE. In the article BIBLE, we have given an account of the formation of the sacred canon of the Old and New Testaments. The English versions of the Scriptures, however, tvere felt to be sufficiently important to demand separate consideration.

The earliest portion of Scripture that ever appeared in the language of this country was a translation of the psalms into Saxon by Ad- helm or Adelme, the first bishop of Sherborne, about the year 706. A Saxon version of the four gospels was made by Egbert, bishop of Lin- disfern, who died A. D. 721 ; and, a few years after, the venerable Bede translated the entire Bible into that language. Nearly 200 years after Bede, king Alfred executed another translation of the psalms, either to supply the loss of Ad- helm's (which is supposed to have perished in the Danish wars), or to improve the plainness of Bede's version. A Saxon translation of the Pen- tateuch, Joshua, part of the books of Kings, Es- ther, and the apocryphal books of Judith', and the Maccabees, is also attributed to Elfric or Elfred, who was archbishop of Canterbury, A. D. 995.

Several centuries now elapsed, during which the Scriptures appear to have been buried in oblivion, the general reading of them being pro- hibited by the papal see. The first English trans- lation of the Bible known to be extant was exe- cuted by an unknown individual, and- is placed by archbishop Usher to the year 1290 : of this there are three manuscript copies preserved in the Bodleian library, and in the libraries of Christ Church and Queen's Colleges, at Oxford. Towards the close of the following century, John de Trevisa, vicar of Berkeley in the county of Gloucester, at the desire of his patron, lord Berkeley, is said to have translated the Old and New Testaments into the English tongue. But, as no part of this work appears ever to have been printed, the translation ascribed to him is sup- posed to have been confined to a few texts, which we're painted on the walls of his patron's chapel at Berkeley castle, or which are scattered in some parts of his works, several- copies of which are known to exist in manuscript.

Nearly contemporary with Berkeley was1 the celebrated John Wickliffe, who, about the year 1380, translated the entire Bible from

the La- tin Vulgate into the English language as then spoken, not being sufficiently acquainted with the Hebrew and Greek languages to translate from the originals. Before the invention of printing, transcripts were obtained with difficulty, and copies were so rare, that, according to the registry of William Alnewick, bishop of Norwich, in 1429, the price of one of Wickliffe's Testa- ments was not less than four marks and forty

pence, or £2 16s. Qd., a sum equivalent to more than £40 at present. This translation of the Bible, we are informed, was so offensive to those who were for taking away the key of knowledge and means of better information, that a bill was brought into the house of lords, 13 Rich. II., A. D. 1390, for the purpose of suppressing it. On which the duke of Lancaster, the king's un- cle, is reported to have spoken to this effect : 1 We will not be the dregs of all, seeing other nations have the law of God, which is the law of our faith, written in their own language.' At the same time he declared in a very solemn manner, ' That he would maintain our having this law in our own tongue against those, whoever they should be, who first brought in the bill.' The duke was seconded by others, who said, ' That if the Gospel, by its being translated into Eng- lish, was the occasion of running into error, they might know that there were more heretics to be found among the Latins than among the people of any other language. For that the decretals reckoned no fewer than sixty-six Latin heretics ; and so the Gospel must not be read in Latin, which yet the opposers of its English translation allowed.' Through the duke of Lancaster's in- fluence the bill was rejected ; and this success gave encouragement to some of Wickliffe's fol- lowers to publish another and more correct translation of the Bible. But in the year 1408, in a convocation held at Oxford by archbishop Arundel, it was decreed by a constitution, ' That no one should thereafter translate any text of Holy Scripture into English, by way of a book, or little book, or tract ; and that no book of this kind should be read, that was composed lately in the time of John Wickliffe, or since his death.' This led the way to great persecution, and many persons were punished severely, and some even with death, for reading the Scriptures in English. For the first printed English translation of the Scriptures we are indebted to William Tindal, who, having formed a design of translating the New Testament from the original Greek into English, removed to Antwerp in Flanders for this purpose. Here, with the assistance of the learned John Fry, or Fryth, who was burned on a charge of heresy in Smithfield in 1552, and a friar, called Wm. Roye,who suffered death on the same account in Portugal, he finished it, and in the year 1526 it was printed either at Antwerp orHam- burgh, without a name, in a

*middle sized 8vo. volume, and without either calendar, references in the margin, or table at the end. Tindal an- nexed a pistil at the close of it, in which he ‘ desyred them that were learned to amende if ought were found amysse.’ Le Long calls this ‘the New Testament translated into English, from the German version of Luther ; ‘ but for this degrading appellation he seems to have no other authority besides a story related by one Cochlseus, an enemy of the reformation, with a view of depreciating Tindal ‘s translation. M:my copies of this translation found their way into England ; and to prevent their dispersion among *he people, and the more effectually to enf< rce the prohibition published in all the dioceses against reading them, Tonstall, bishop of London, purchased all the remaining copies of this edition.*

ENGLISH BIBLE.

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and all which he could collect from private hands, and committed them to the flames at St. Paul’s cross. The first impression of Tindal’s translation bfiing thus disposed of, several other numerous editions were published in Holland, before the year 1530, in which Tindal seems to have had no interest, but which found a ready sale, and those which were imported into England were ordered to be burned. On one of these occasions, Sir Thomas More, who was then chancellor, and who concurred with the bishop in the execution of this measure, enquired of a person who stood accused of heresy , and to whom he promised in- demnity, on consideration of an explicit and sa- tisfactory answer, how Tindal subsisted abroad, and who were the persons in London that abetted and supported him; to which enquiry the here- tical convert replied, ‘ It was the bishop of London who maintained him, by sending a sum of money to buy up the impression of his testa- ment.’

In 1530 a royal proclamation was issued, by the advice of the prelates and clerks, and of the universities, for totally suppressing the transla- tion of the Scripture, corrupted by William Tin- dal. The proclamation set forth, that it was not necessary to have the Scriptures in the English tongue, and in the hands of the common people ; that the distribution of them, as to allowing or denying it, depended on the discretion of their superiors ; and that, considering the malignity of the time, an English translation of the Bible would rather occasion the continuance, or increase of errors, than any benefit to their souls. How- ever, the proclamation announced the king’s in- tention, if the present translation were abandoned, at a

proper season, to provide that the Holy Scriptures should be by great, learned, and ca- tholic persons, translated into the English tongue, if it should then seem convenient. In the mean time, Tindal was busily employed in translating from the Hebrew into the English the five books of Moses, in which he was assisted by Miles Co- verdale. But his papers being lost by shipwreck in his voyage to Hamburgh, where he designed to print it, a delay occurred, and it was not put to press till the year 1530. It is a small 8vo., printed 'at different presses, and with different types. In the preface he complained, that there was not so much as one i in his New Testament, if it lacked a tittle over its head, but it had been noted, and numbered to the ignorant people for an heresy, who were made to believe, that there were many thousand heresies in it, and that it was so faulty as to be incapable of amendment or correction. In this year he published an an- swer to Sir Thomas More's Dialogue, containing his reasons for the changes he had introduced into his translation. The three former editions of Tindal's English New Testament being all sold off, the Dutch booksellers printed a fourth in this year, in a smaller volume and letter. In 1531 Tindal published an English version of the prophet Jonah, with a prologue, full of invective n/rninst the church of Rome. Strype supposes that before his death he finished all the Bible but the Apocrypha, which was translated by Ro- gers ; but it seems more probable that he trans- lated only the historical pa~'s.

In 1534 was published a fourth Dutch edition, or the fifth in all, of Tindal's New Testament, in 12mo. In this same year Tindal printed his own edition of the New Testament in English, which he had diligently revised and corrected ; to which is prefixed a prologue ; and at the end are the pistils of the Old Testament, closing with the following advertisement : — ' Imprinted at Antwerp, by Marten Emperour, anno M. 1). xxxiv.' Another edition was published this ye.ir, in 16mo. and printed in a German letter. Hall says, in his Chronicle, printed during the rei'j,u of Henry VIII. by Richard Grafton, the bene- factor and friend of Tindal ; ' William Tindal translated the New Testament, and first put it into print ; and he likewise translated the five books of Moses, Joshua, Judicum, Ruth, the books of Kings, and books of Paralipomenon, Nehemiah, and the first of Esdras, and the prophet Jonas; and nomoreof the Holy Scriptures.' Upon his return to Antwerp, in 1531, king Henry VIJl. and his council, contrived means to have h,m seized and imprisoned. After long confineaient he was condemned to death by the emperor's decree in an assembly at Augsburgh ; and m 1536 he was strangled at Villefort, near Biussels, the place of his imprisonment, after which his body was reduced to ashes. He expired, pray- ing repeatedly and

earnestly, ‘ Lord, open the king of England’s eyes.’ Several editions of his Testament were printed in the year of his death. Tindal had little or no skill in the Hebrew, and therefore he probably translated the Old Testa- ment from the Latin. The knowledge of lan- guages was in its infancy ; nor was our English tongue arrived at that degree of improvement which it has since attained ; it is not, therefore, surprising, that there should be many faults in this translation which need amendment This, indeed, was a task, not for a single person, but requiring the concurrence of many, in circum- stances much more favorable for the execution of it than those of an exile. Nevertheless, al- though this translation is far from being perfect, few first translations, says Dr. Geddes, will be found preferable to it.

In 1535 the whole Bible, translated into Eng- lish, was printed in folio, and dedicated to the king by Miles Coverdale, a man greatly esteemed for piety, knowledge of the Scriptures, and di i- gent preaching; on account of which qualities king Edward VI. advanced him to the see of Exeter. In his dedication and preface, he ob- serves to this purpoˆ, that, as to the present translation, it was neither his labor nor his desire to have this work put into his hand ; but ‘ when others were moved by the Holy Ghost to under- take the cost of it,’ he” was the more bold to en- gage in the execution of it. Agreeably, there- fore, to desire, he set forth this ‘ special ‘ trans- lation, not in contempt of other men’s translation, or by way of reproving them, but humbly and faithfully following his interpreters, and that under correction. Of these, he said, he used five different ones, who had translated the Scriptures not only into Latin, but also into Dutch. He further declared, that he had neither wrested uor altered so much as one word for the maintenance of any manner of sect, but had with a clear con-

*science purely and faithfully translated out of the foregoing interpreters, having only before his eyes the manifest truth of the Scriptures. But because such different translations, he saw, were apt to offend weak minds, he added, that there came more understanding and knowledge of the Scripture by these sundry translations, than by all the glosses of sophistical doctors ; and he therefore desires, that offence might not be taken, because one translated ‘ scribe,’ and another ‘ lawyer,’ one ‘ repentance,’ and another ‘ pe- nance,’ or * amendment.’ This is the first Eng- lish Bible allowed by royal authority ; and also the first translation of the whole Bible printed in*

our language. It was called a < special ' transla- tion, because it was different from the former English translations; as Lewis has shown by comparing it with Tindal's. It is divided into six tomes or parts, adorned with wooden cuts, and furnished with Scripture references in the margin. The last page has these words: — 'Prynted in the yeare of our Lorde, M. D. xxxv. and fynished the fourth day of October.' Of this Bible, there was another edition in a large 4to., 1550, which was republished, with a new title, 1553 ; and these, according to Lewis, were all the editions of it. Coverdale, in this edition of the English Bible, prefixed to every book the contents of the several chapters, and not to the particular chapters, which was afterwards the case : and he likewise omitted all Tindal's prologues and notes. Soon after this Bible was finished, in 1536, lord Cromwell, keeper of the privy seal, and the king's vicar-general and vicegerent in ecclesiastical matters, published injunctions to the clergy by the king's authority, the seventh of which was, that every parson, or proprietary of any parish church within this realm, should, before the 1st of August, provide a book of the whole Bible, both in Latin and in English, and lay it in the choir, for every man that would, to look and read therein ; and should discourage no man from reading any part of the Bible either in Latin or English, but rather comfort, exhort, and admo- nish every man to read it, as the very word of God, and the spiritual food of a man's soul, &c. In 1537 another edition of the English Bible was printed by Grafton and Whitchurch, at Hamburgh, as some think; or, as others suppose, at Malborow, or Marpurg in Hesse, or Marbeck, in the duchy of Wittenberg, where Rogers was superintendant. It bore the name of Thomas Matthewe, and it was set forth with the king's most gracious licence.

In the following year an injunction was pub- lished by the vicar-general of the kingdom, or- daining the clergy to provide, before a certain festival, one book of the whole Bible, of the largest volume in English, and to set it up in some convenient place within their churches, where their parishioners might most commodi- ously resort to read it. A royal declaration was also published, which the curates were to read in their several churches, informing the people, that it had pleased the king’s majesty to permit and command the Bible, being translated into their mother tongue, to be sincerely taught by them, and to be openly laid forth in every parish church.

In the course of the year 1 538 a quarto edition

of the New Testament, in the Vulgate Latin, and Coverdale’s English, bearing the name of Holly- bushe, was printed, with the king’s l.cence, by James Nicholson. Of this another more correct edition

was published in 1539, in 8vo., and dedi- cated to lord Cromwell. In 1538 an edition in 4to. of the New Testament, in English, with Erasmus's Latin translation, was printed with the king's licence, by Redman. In this year it was resolved to revise Matthewe's Bible, and to print a correct edition of it. With this view Grafton went to France, where the workmen were more skilful, and the paper was both better and cheaper than in England, and obtained permis- sion from Francis I. at the request of king Henry VIII. to print this Bible at Paris. But, notwith- standing the royal licence, the inquisition inter- posed, and issued an order, dated December 17th, 1538, summoning the French printers, their English employers, and Coverdale, the corrector of the work, and prohibiting them to proceed ; and the impression, consisting of 2500 copies, was seized, confiscated, and condemned to the flames. Some chests, however, of these books, escaped the fire, by the avarice of the person who was appointed to superintend the burning of them ; and the English proprietors, who had fled on the first alarm, returned to Paris as soon as it subsided, and not only recovered some of these copies, but brought with them to London the presses, types, and printers, and, resuming the work, finished it in the year 1539.

In 1539 another Bible was printed by John Byddell, called ' Taverner's Bible,' from the name of its conductor, Richard Taverner ; who was educated at Christ Church, Oxford, patronised by lord Cromwell, and probably encouraged by him to undertake the work, on account of his skill in the Greek tongue. This is neither a bare revisal of the English Bible just described, nor a new version ; but a kind of intermediate work, being a correction of what is called ' Matthewe's Bible,' many of whose marginal notes are adopted, and many omitted, and others inserted by the editors. It is dedicated to the king.

In the year 1540 two privileged editions of the Bible, which had been printed in the preceding year, issued from the press of Edward Whit- church. Lewis mentions three other impressions of the ' Great Bible,' which appeared in the course of this year ; two printed by Whitchurch, and one by Petyt and Redman. Cranmer wrote a preface for the editions of the year 1540, from which we learn the opinions and practice of those times. In May of this year the curates and pa- rishioners of every parish were required, by royal proclamation, to provide themselves with the Bible of the largest volume before the feast of All Saints, under the penalty of forty shillings for every month during which they should be without it. The king charged all ordinaries to enforce the observance of this proclamation ; and he apprised the people, that his allowing them the Scriptures in their

mother-tongue was not his duty, but an evidence of his goodness and liberality to them, of which he exhorted them not to make an ill use. In May 1541 one edition of Cranmer's Bible was finished by Richard Grafton ; who, in the November following, com-

pleted also another Bible of the largest volume, which was superintended, at the king's com- mand, by Tonstal, bishop of Durham, and Heath, bishop of Rochester.

After the death of Cromwell the English trans- lation was represented to the king as very erro- neous and heretical, and destructive of the harmony and peace of the kingdom. In the convocation, assembled in February 1542, the archbishop, in the king's name, required the bishops and clergy to revise the translation of the New Testament, which, for that purpose, was divided into fourteen parts, and portioned out to fifteen bishops ; the Apocalypse, on account of its difficulty, being assigned to two. Gardiner clogged this business with embarrassing instruc- tions, and Cranmer, clearly perceiving the reso- lution of the bishops to defeat the proposed translation, procured the king's consent to refer the matter to the two universities, against which .he bishops protested ; but the archbishop de- clared his purpose to adhere to the will of the king. With this contest the business terminated ; and the convocation was soon after dissolved. The Romish party prevailed also in parliament, which enacted a law that condemned and abo- lished Tindal's translation, and allowed other translations to remain in force, under certain re- strictions. After the passing of this act, Grafton, the king's printer, was imprisoned ; nor was he released without giving a bond of £300 neither to print nor sell any more English Bibles, till the king and the clergy should agree on a translation. In 1544 the Pentateuch was printed by John Day and William Seres; and in 1546 the king prohibited by proclamation the having and read- ing of Wickliffe's, Tindal's, and Coverdale's translations, and forbad the use of any other than what was allowed by parliament.*

Soon after the accession of Edward VI. the stat. 34 and 35 Henry VIII. c. 1 was repealed, and a royal injunction was published, that not only the whole English Bible should be placed in churches, but also the paraphrase of Erasmus in English to the end of the four evangelists. It was likewise ordered, that every parson, vicar, curate, &c., under the degree of a bachelor of di- vinity, should possess the

New Testament, both in Latin and English, with the paraphrase of Erasmus upon it ; and that the bishops, &c., in their visitations and synods should examine them, how they had profited in the study of the Holy Scriptures. It was also appointed, that the epistle and gospel of the mass should be read in Eng- lish ; and that on every Sunday and holiday, one chapter of the New Testament in English 'should be plainly and distinctly read at matins, and one chapter of the Old Testament at even-song. During the course of this reign eleven impres- sions of the whole English Bible were published, and six of the English New Testament ; besides an English translation of the whole New Testa- ment, paraphrased by Erasmus. The Bibles were reprinted, according to the preceding editions, whether Tindal's, Coverdale's, Matthewe's, Cran- mer's, or Taverner's; that is, with a different text, and different notes. But it is doubted, in the preface to king James's translation, whether there were any translation, or correction of a translation, made by king Edward's divines. '.',./.

In 1562 the ' Great Bible,' viz. that of Cover- dale's translation, which had been printed in tl.e time of Henry VIII. and also in the time of king Edward, was revised by archbishop Parker, and reprinted for the use of the church ; and this was to serve till that projected by his grace was ready for publication.

The English reformers, driven to Geneva, dur- ing the persecutions of queen Mary's reign, pub- lished, in 1557, an English New Testament, printed by Conrad Badius ; the first in our lan- guage which contained the distinction of verses by numerical figures, after the manner of the Greek Testament, which had been published by Robert Stephens in 1551. R. Stephens, indeed, published his figures in the maigin ; whereas the Geneva editors prefixed theirs to the begin- ning of minute subdivisions with breaks, after our present manner.

In 1560 the whole Bible in [4 to. was printed at Geneva by Rowland Harle; some of the re- fugees from England continuing in that city for this purpose. The translators were bishop Co- verdale, Anthony Gilby, William Whittingham, Christopher Woodman, Thomas Sampson, and Thomas Cole; to whom some add John Knox, John Bodleigh, and John Pullain ; all zealous Calvinists, both in doctrine and discipline : but the chief and the most learned of them were the three first. Professing to observe the sense, and to adhere as much as possible to the words of the original, and in many places to preserve the Hebrew phraseology, after the unremitting labor and study of more than two years, they finished their translation, and published it; with an epistle dedicatory to the queen, and another, by way of preface, to their brethren of England, Scotland, and Ireland. Besides

the translation, the editors of the Geneva Bible noted in the margin the diversities of speech and reading, es- pecially according to the Hebrew ; they inserted in the text, with another kind of letter, every word that seemed to be necessary for explaining any particular sentence ; in the division of the verses, they followed the Hebrew examples, and added the number to each verse ; they also noted the principal matters, and the arguments, both for each book and each chapter ; they set over the head of every page some remarkable word or sentence, for helping the memory ; they in- troduced brief annotations for ascertaining the text, and explaining obscure words; they set forth with figures certain places in the books of Moses, of the Kings, and Ezekiel, which could not be made intelligible by any other description ; they added maps of divers places and countries, mentioned in the Old and New Testament ; and they annexed two tables, one for the interpretation of Hebrew names, and the other containing all the chief matters of the whole Bible. Of this translation, there were above thirty editions in folio, 4to., or 8vo., mostly printed by the queen's and king's printer, between the years 1560 and 1616. Editions of it were likewise printed at Geneva, Edinburgh, and Amsterdam. To some editions of the Geneva Bible (as to those ot 1599 and of 1611) is subjoined Beza's translation of the New Testament, Englished by L. Tomp- on.

In the vear 1568 the Bible, proposed oy

ENGLISH BIBLE.

archbishop Parker three years before, was com- pleted. This edition, according to Le Long, was undertaken by command of queen Elizabeth ; and it is mentioned by Strype, to the honor of the archbishop, that he had resolution to perform what Cranmer, as opposed by the bishops of his days, had in vain endeavoured to accomplish. In this performance, distinct portions of the Bible, at least fifteen in number, were allotted to select men of learning and abilities, appointed, as Fuller says, by the queen's commission ; and, accord- ingly, at the conclusion of each part, the edition of 1568 has the initial letters of each man's name to the end of the first epistle to the Corinthians ; e. g. at the end of the Pentateuch, W. E. for William, bishop of Exeter, whose allotment ended there ; at the end of Ruth, R. M. for Ri- chard Menevensis, or bishop of St. David's, to whom pertained the second allotment ; and so of the rest. But it still remains uncertain, who, and whether one or more, revised the rest of the New Testament. Eight of the persons employed were bishops ; whence the book was called the ' Bishops' Bible,' and the ' Great English Bible.' The archbishop employed other critics to com- pare

this Bible with the original languages, and with the former translations ; one of whom was Laurence, a man famous in those times for his knowledge of the Greek, whose castigations the Bishops' Bible followed exactly. His grace also sent instructions concerning the method which his translators were to observe ; and recommended the addition of some short marginal notes, for the illustration or correction of the text. But the particulars of these instructions are not known. This Bible was printed and published in 1568, in a large folio size, and with a beautiful English letter, on royal paper ; and embellished with several cuts of the most remarkable things in the Old and New Testaments, and in the Apo- crypha, with maps cut in wood, and other en- gravings on copper. It has numerous marginal references and notes, and many useful tables. It ulso has numerous insertions between brackets, and in a smaller character; which are equivalent to the italics afterwards used by James's transla- tors. Dr. Geddes is of opinion, that italic sup- plements were first used by Arms Montanus, who died in 1598. The several additions from the vulgar Latin, inserted in the Great Bible, are omitted ; and verse 7 of 1 John v. which was before distinguished by its being printed in a different letter, is here printed without any dis- tinction ; and the chapters are divided into verses. In the following year, 1569, it was again pub- lished in large 8vo., for the use of private families. This Bible was re-printed in 1572, in large folio, with several corrections and amendments, and several prolegomena; this is called Matthew Parker's Bible.

In the year 1582 the Romanists first printed an English New Testament at Rheims : it was translated, not from the original Greek, but from the Latin Vulgate. The editors (whose names are not known) retained the words azymes, tu- nike, holocaust, pasche, and a multitude of other Greek words untranslated, under the pretext of wanting proper and adequate English terms, by which to render them ; and thus contrived to render it unintelligible to common readers.

Hence the historian Fuller took occasion to re~ mark that it was ' a translation which needed to be translated ; ' and that its editors, ' by all means labored to suppress the light of truth under one pretence or other.' Our learned coun- tryman, Thomas Cartwright, was solicited by Sir Francis Walsingham, to refute this transla- tion ; but, after he had made considerable pro- gress in the work, he was prohibited from pro- ceeding further by archbishop Whitgift ; \ho, judging it improper that the defence of the doc- trine of the Church of England should be com- mitted to a puritan, appointed Dr. William Fulke in his place. By him the divines of Rheims were refuted with great spirit and abi- lity. Fulke's work appeared in 1617; and, in the following

year, Cartwright's confutation was published under the auspices of archbishop Abbot; both of them were accompanied with the Rhemish translation of the New Testament. The Old Testament was translated from the Vul- gate at Qouay (whence it is called the Douay Bible), in two volumes 4to., the first of which appeared in 1609, and the second in 1610. An- notations are subjoined, which are ascribed to one Thomas Worthington ; the translators were Wil- liam (afterwards cardinal) Allen, Gregory Martin, and Richard Bristow. This translation, with the Rhemish version of the New Testament above noticed, forms the English Bible, which alone is used by the Romanists of this country.

The only English version that remains to be noticed, is the authorised translation now in use, which is commonly called King James's Bible.

A resolution being formed, in consequence of a request made by Dr. Reynolds, head of the Nonconformist party, to king James I. in the conference held at Hampton Court, 1603, that a new translation, or rather a revision of what was called the Bishops' Bible, printed in 1568, should be made, fifty-four translators, divided into six classes, were appointed for the accomplishment of this important work. Seven of these appear to have died before the work commenced, as only forty-seven are found in Fuller's list. The names of the persons, the places where employed, and the proportion of work allotted to each class, and the rules laid down by king James for their direction, we give chiefly from Fuller's Church History, book x. p. 44, &c.

Dr. Reynolds's request in the Hampton Court conference, and king James's answer, were as follows :

Dr. Reynolds. — May your majesty be pleased that the bible be new translated : such as are ex- tant not answering the original. [Here he gave a few examples.]

Bishop of London — If every man's humor might be followed, there would be no end of translating.

The King. — I profess I could never yet see a bible well translated in English ; but I think, that of all, that of Geneva is the worst. I wish some special pains were taken for a uniform translation, which should be done by the best learned in both universities ; then reviewed by the bishops ; presented to the Privy Council ; lastly, ratified by royal authority, to be read in> the whole Church, and no other.

The bishop of London in this, as in every

E N G L I S H B I B L E. 3!>?

WESTMINSTER, 10. — The PENTATEUCH : the Story from JOSHUA, to the first book of the CHRONI- CLES, exclusively.

Dr. Andrews, fellow and master of Pembroke Hall, in Cambridge ; then dean of Westminster, rt- terwards bishop of Winchester.

Dr. Overall, fellow of Trinity College, master of Katharine Hall, in Cambridge ; then dean of St. Paul's, afterwards bishop of Norwich.

Dr. Saravia.

Dr. Clarke, fellow of Christ College, in Cambridge, preacher in Canterbury.

Dr. Laifield, fellow of Trinity, in Cambridge, parson of St. Clement Danes. Being skilled in archi- tecture, his judgment was much relied on for the fabric of the tabernacle and temple.

Dr. Leigh, archd«acon of Middlesex, parson of All-hallow's, Barking.

Master Burgley.

Mr. King.

Mr. Thompson.

Mr. Bedwell, of Cambridge, and (we think) of St. John's, vicar of Tottenham, nigh London.

CAMBRIDGE, 8. — From the first of the CHRONICLES, with the rest of the Story, and the HAGIOGRA-

PHA, viz. JOB, PSALMS, PROVERBS, CANTICLES, and ECCLESIASTES. Master Edward Lively. Mr. Richardson, fellow of Emmanuel, afterwards D. D., master, first of Peter House, then of

Trinity College.

Mr. Chaderton, afterwards D, D. fellow, first of Christ College, then master of Emmanuel. Mr. Dillingham, fellow of Christ College, beneficed at , in Bedfordshire, where he died a

single and a wealthy man.

Mr. Andrews, afterwards D. D. brother to the bishop of Winchester, and master of Jesus College. Mr. Harrison, the Rev, vice-master of Trinity College.

Mr. Spalding, fellow of St. John's, in Cambridge, and Hebrew professor therein. Mr. Bing, fellow of Peter House, in Cambridge, and Hebrew professor therein.

OXFORD, 7. — The four greater PROPHETS, with the LAMENTATIONS, and the twelve lesser PROPHETS.

Dr. Harding, president of Magdalen College.

Dr. Reynolds, president of Corpus Christi College.

Dr. Holland, rector of Exeter College, and King's professor.

Dr. Kilby, rector of Lincoln College, and Regius professor.

Master Smith, afterwards D.D. and bishop of Gloucester. He made the learned and religious

preface to the translation.

Mr. Brett, of a worshipful family, beneficed at Quainton, in Buckinghamshire. Mr. Fairclowe.

CAMBRIDGE, 7. — The Prayer of MANASSEH, and the rest of the APOCRYPHA.

Dr. Duport, Prebend of Ely, and master of Jesus College.

Dr. Brainthwait, first, fellow of Emmanuel, then master of Gonvil and Cains Colleges.

Dr.. Radclyffe, one of the senior fellows of Trinity College.

Master Ward, Emmanuel, afterwards D.D. master of Sidney College, and Margaret professor.

Mr. Downs, fellow of St. John's College, and Greek professor.

Mr. Boyce, fellow of St. John's College, prebend of Ely, parson of Boxworth in Cambridgeshire

Mr. Ward, regal, afterwards D.D. prebend ofChichester, rector of Bishop Waltham, in Hampshire

OXFORD, 8. — The four GOSPELS, ACTS of the APOSTLES, and APOCALYPSE.

Dr. Ravis, dean of Christ Church, afterwards bishop of London.

Dr. Abbot, master of University College, afterwards archbishop of Canterbury.

Dr. Eedes.

Mr. Thomson.

Mr. Savill.

Dr. Peryn.

Dr. Ravens.

Mr. Harmer.

WESTMINSTER, 7. — The EPISTLES of ST. PAUL, and the CANONICAL EPISTLES.

Dr. Barlowe, of Trinity Hall, in Cambridge, dean of Chester, afterwards bishop of Lincob

Dr. Hutchenson.

Dr. Spencer.

Mr. Fenton.

Mr. Rabbet.

Mr. Sanderson.

Mr. Dak ins.

For the better ordering of their proceed- ings, his Majesty recommended the following rules, to be most carefully observed by them :

1. The ordinary bible read in the church, commonly called the Bishops' Bible, to be fol- lowed, and as little altered as the original will permit.

2. The names of the prophets, and the holy writers, with their other names in the text, to be retained as near as may be, accordingly as they are vulgarly used.

3. The old ecclesiastical words to be kept, viz. as the word church not to be translated congre- gation, &c.

4. When any word hath divers significations, that to be kept which hath been most commonly used by the most eminent fathers, being agree- able to the propriety of the place, and the analogy of faith.

5. The division of the chapters to be altered either not at all, or as little as may be, if neces- sity so require.

6. No marginal notes at all to be affixed, but only for the explanation of the Hebrew or Greek words, which cannot, without some circumlocu- tion, so briefly and fitly be expressed in the text.

7. Such quotations of places to be marginally set down, as shall serve for the fit reference of one Scripture to another.

8. Every particular man of each company to take the same chapter, or chapters ; and having translated or amended them severally by himself, where he thinks good, all to meet together, con- fer what they have done, and agree for their jrrt what shall stand.

9. As any one company hath despatched any one book in this manner, they shall send it to the rest, to be considered of seriously and judiciously; for his Majesty is very careful in this point.

10. If any company, upon the review of the book so sent, shall doubt, or differ upon any places, to send them word thereof, note the places, and therewithal send their reasons: to which, if they consent not, the difference to be compounded at the general meeting, which is to be of the chief persons of each company, at the end of the work.

11. When any place of special obscurity is doubted of, letters to be directed by authority, to send to any learned in the land, for his judg- ment in such a place.

12. Letters to be sent from every bishop to the rest of his clergy, admonishing them of this translation in hand ; and to move and charge as many as, being skilful in the tongues, have taken pains in that kind, to send his particular obser- vations to the company, either at Westminster, Cambridge, or Oxford.

1 3. The directors in each company to be the deans of Westminster and Chester for that place, and the King's professors in Hebrew and Greek in each university.

14. These translations to be used, when they agree better with the text than the bishop's bible, viz.Tindal's, Matthews', Coverdale's,Whitchurch, Geneva.

Besides the said directions before-mentioned, three or four of the most ancient and grave di- vines in either of the universities, not employed

in translating, to be assigned by the vice-chancel- lor upon conference with the rest of the heads. to be overseers of the translations, as well Hebrew as Greek, for the better observation of the fourth rule above specified.

‘ And now after long expectation and great desire,’ says Mr. Fuller, ‘ came forth the new translation of the bible (most beautifully printed) by a select and competent number of divines appointed for that purpose ; not being too many, lest one should trouble another ; and yet many, lest many things might haply escape them. Who neither coveting praise for expedition, nor fearing reproach for slackness (seeing in a business of moment, none deserve blame for convenient slowness), had expended almost three years in the work, not only examining the channels by the fountain, translations with the original, which was absolutely necessary, but also comparing channels with channels, which was abundantly useful in the Spanish, Italian, French and Dutch (German) languages. — These, with Jacob, rolled away the stone from the mouth of the well of life : so that now, even Rachel’s weak women may freely come both to drink themselves, and water the flocks of their families at the same Leave we then, those worthy men now all gathered to their fathers, and gone to God, how ever they were requited on earth, well rewarded in heaven for their worthy work. Of whom, as also of that gracious king that employed them, we may say, Wheresoever the Bible shall be preached or read in the whole world, there shall also this that they have done be told in memo- rial of them.’

This Bible was begun in 1607, but was not completed and published till 1611 ; and there are copies of it which, in their title pages, have the dates 1612 and 1613. This translation was corrected, and many parallel texts added, by Dr. Scattergood, in 1683 ; by Dr. Lloyd, bishop of London, in 1701 ; and afterwards by Dr. Paris, at Cambridge; but the most complete revision was made by Dr. Blayney, in the year 1769, under the direction of the vice-chancellor and delegates of the university of Oxford ; in which, 1. The punctuation was thoroughly re- vised. 2. The words printed in italics examined, and corrected by the Hebrew and Greek origi- nals. 3. The proper names, to the etymology of which allusions are made in the text, trans- lated, and entered in the margin. 4. The heads and running titles corrected. 5. Some material errors in the chronology rectified ; and 6. The marginal references re-examined, corrected, and their number greatly increased. Copies of this revision are those which are termed, above, the most correct copies of the present authorised version.

- *Those who have compared most of the Euro- pean translations with the original,' says Dr. A. Clarke, 'have not scrupled to say, that the Eng- lish translation of the Bible, made under the direction of king James the First, is the most accurate and faithful of the whole. Nor is this its only praise : the translators have seized the very spirit and soul of the original, and expressed this almost every where with pathos and energy. Besides our translators have not only made a*

standard translation, but they have made their translation the standard of our language: the English tongue in their day was not equal to such a work — ' but God enabled them to stand as upon mount Sinai,' to use the expression of a learned friend, 'and crane up their country's language to the dignity of the originals, so that after the lapse of 200 years, the English Bible is, with very few exceptions, the standard of the purity and excellence of the English tongue. The original from which it was taken, is, alone, superior to the Bible translated by the authority of king James.' This is an opinion, in which my heart, my judgment, and my conscience coincide.' We might add numerous similar testimonies, but must restrict ourselves to those of the learned layman Selden, bishop Walton, bishop Horsley, Dr. Geddes, a Catholic, and Dr. Doddridge, the celebrated dissenting commentator.

JOHN SELDEN. ' The English translation of the Bible is the best translation in the world, and renders the sense of the original best, taking in for the English translation the Bishops' Bible as well as king James's . The translators in king James's took an excellent way. That part of the Bible was given to him, who was most excellent in such a tongue : as the Apocrypha to Andrew Downs ; and then they met together, and one read the translation, the rest holding in their hands some Bible, either of the learned tongues, or French, Spanish, Italian, fcc. If they found any fault, they spoke ; if not, he read on. There is no book so translated as the Bible for the pur- pose. If I translate a French book into English, I turn it into English phrase, not into French- English. II fait froid ; I say, 'tis cold, not, makes cold. But the Bible is rather translated into English words than into English phrase. The Hebraisms are kept, and the phrase of that language is kept.'

BISHOP WALTON. — ' The last English trans- lation made by divers

learned men at the com- mand of king James, though it may justly con- tend with any now extant in any other language in Europe, was yet carped and cavilled at by djvers among ourselves ; especially by one, who being passed by, and not employed in the work, as one, though skilled in the Hebrew, yet of lit- tle or no judgment in that or any other kind of learning, was so highly offended that he would needs undertake to show how many thousand j laces they had falsely rendered, when as he could hardly make good his undertaking in any one ! '

BISHOP Hons-LEY. — ' When the translators in James the First's time began their work, they prescribed to themselves some rales, which it may not be amiss for all translators to follow. Their reverence for the sacred Scriptures induced them to be as literal as they could, to avoid ob- scurity ; and, it must be acknowledged, that they were extremely happy in the simplicity and dig- nity of their expressions. Their adherence to the Hebrew idiom is supposed at once to have enriched and adorned our language ; and, as they labored for the general benefit of the learned and the un- learned, they avoided all words of Latin original, when they could find words in their own language, even with the aid of adverbs and prepositions, which would express their meaning.'

DR. GEDDES. — 'The highest eulogmms have been made on the translation of James the First, both by our own writers and by foreigners. And indeed, if accuracy, fidelity, and the strictest at- tention to the letter of the text, be supposed to constitute the qualities of an excellent version, this of all versions must, in general, be accounted the most excellent. Everj sentence, every word, every syllable, every letter and point, seem to have been weighed with the nicest exactitude, and expressed either in the text, or margin, with the greatest precision. Pagninus himself is hardly more literal ; and it was well remarked by Robert- son, above a hundred years ago, that it may serve for a lexicon of the Hebrew language, as well as for a translation.'

DR. DODDRIDGE. — 'On a diligent comparison of our translation with the original, we find that of the New Testament, and I might also add that of the Old, in the main, faithful and judicious. You know, indeed, that we do not scruple, on some occasions, to animadvert upon it ; but you also know, that these remarks affect not the fun- damentals of religion, and seldom reach any fur- ther than the beauty of a figure, or at most the connexion of an argument.'

ENGLISH COVE, a bay or harbour on the south- west coast of New Ireland, so called by captain Carteret, who anchored here in 1767. Oysters and cockles of large size are found among tlie rocks, and fish are every where plentiful. Scor- pions, centipedes, and snakes, were also seen ; with abundance of vegetables. The trees grow to an enormous size: the cocoa-nut and the wild nutmeg are in great perfection. Here is also a large blackbird, whose cry resembles the barking of a dog. Two small quadrupeds, sup- posed to be dogs, were observed by Carteret ; and some deserted huts, but none of the natives were seen. Seven miles N.N.W. of Cape St. George.

ENGLISH HARBOUR, one of the best harbours of the island of Antigua, on the south shore, a mile south-east of the mouth of Falmouth har- bour. It is fortified, and has a royal navy-yard and arsenal, with conveniences for careening ships of war. Long. 61° 27′ 30″ W., lat. \7° X 25″ N.

ENGLISH ISLAND, or Long Island, a small island on the coast of Natolia, at the entrance of the gulf of Smyrna, so called from certain En- glishmen who landed for amusement having been murdered here. Long. 26° 24′ E. lat. 38° 3tf N. ENGLISH LANGUAGE. See GRAMMAR and LANGUAGE

ENGLISH LITURGY. The history of the pre- sent liturgical service of the Church of England may be thus concisely presented to the reader.

Prior to the reign of Henry VIII. the whole liturgy of the Church was sung or said in Latin ; but in 1536 he ordered the apostles' creed, the Lord's prayer, and the ten commandments, to be translated into English for the use of the com- mon people. 'In 1545 the liturgy was also permitted in English,' says Fuller, ' and this wsu the farthest pace the reformation stept in the reign of Henry the Eighth.'

In the first year of Edward VI., 1547, it was recommended to certain grave and learned

bishops and others, then assembled by order of the king, at Windsor Castle, to draw up a com- munion service, and to revise and reform all other offices in the divine service : this service was accordingly printed and published, and strongly recommended by special letters from Seymour, lord protector, and the other lords of the council. The persons who compiled this work were the following : —

1. Thomas Cranmer, archbishop of Canterbury.

2. George Day, bishop of Chichester.

3. Thomas Goodrick, bishop of Ely.

4. John Skip, bishop of Hereford.

5. Henry Holbeach, bishop of Lincoln.

6. Nicholas Ridley, bishop of Rochester.

7. Thomas Thirlby, bishop of Westminster.

8. Doctor May, dean of St. Paul's.

9. John Taylor, then dean, afterwards bishop of

Lincoln.

10. Doctor Haines, dean of Exeter.

1 1 . Doctor Robinson, afterwards dean of Dur- ham.

12. Doctor John Redman, master of Trinity

College, Cambridge.

13. Doctor Richard Cox, then almoner to the king, and afterwards bishop of Ely.

This was what Fuller calls the first edition of the Common Prayer. Some objections having been made to this work by Calvin abroad, and some learned men at home, particularly in refe- rence to the Commemoration of the D«ad, the use of Chrism, and extreme Unction, it was ordered by a statute in parliament (5 and 6 of Edward VI.), that it should be faithfully and godly perused, explained, and made fully perfect. The chief alterations made in consequence of this order were these : the General Confession and Absolution were added, and the Communion Service was made to begin with the Ten Com- mandments ; the use of oil in confirmation and extreme unction was left out, also Prayers for the Dead ; and certain expressions that had a tendency to countenance the doctrine of trans- substantiation. The same persons to whom the compiling of the Communion Service was en- trusted, were employed in this revision, which was completed and published in 1548. On the accession of queen Mary, this Liturgy was abo- lished, and the

Prayer Book, as it stood in the last year of Henry VIII., commanded to be used in its place. In the first year of the reign of queen Elizabeth, 1559, the former Liturgy was restored, but it was subjected to a further revision, by which some few passages were altered, and the petition in the Litany, for being delivered from the tyranny, and all the detestable enormi- ties of the bishop of Rome, left out, in order that conscientious Catholics might not be pre- vented from joining in the common service. This being done, it was presented to parliament, and by them received and established, and the act of uniformity, which is usually printed with the Liturgy, published by the queen's authority, and sent throughout the nation. The persons employed in this revision were the following : —

1 . Master Whitehead, once chaplain to queen Anna Bullcin

2. Matthew Parker, afterwards archbishop of

Canterbury.

3. Edmund Grindall, afterwards bishop of Lon-

don.

4. Richard Cox, afterwards bishop of Ely.

5. James Pilkington, afterwards bishop of Dur-

ham.

6. Doctor May, dean of St. Paul's and master

of Trinity College, Cambridge.

7. Sir Thomas Smith, principal secretary of

state.

Of these Drs. Cox and May were employed on the first edition of this work, as appears by the preceding list.

In the first year of king James, 1604, another revision took place, and a few alterations were made, which consisted principally in the addition of some prayers and thanksgivings, some alter- ation in the rubrics relative to the Absolution, to the Confirmation, and to the office of Private Baptism, with the addition of that part of the Catechism which contains the Doctrine of the Sacraments. The other additions were A Thanks- giving for diverse Benefits — A

Thanksgiving for Fair Weather — A Thanksgiving for Plenty — A Thanksgiving for Peace and Victory, and A Thanksgiving for Deliverance from the Plague. See the Instrument in Rymer, vol. xvi. p. 565, &c. When the work was thus completed, a royal pro- clamation was issued, bearing date March 1st, 1604, in which the king gave an account of the Hampton Court Conference, the alterations that had been made by himself and his clergy in the book of Common Prayer, commanding it, and none other, to be used throughout the kingdom. See the Instrument, Rymer, vol. xvi. p. 575.

In this state the book of Common Prayer con- tinued till the reign of Charles II. who, the 25th of October, 1660, granted his commission under the great seal of England, to several bishops and divines, to review the book of Common Prayer, and to prepare such alterations and additions as they thought fit to offer. In the following year the king assembled the convocations of both the provinces of Canterbury and York, and authorised the presidents of those convocations, and other, the bishops and clergy of the same, to review the said book of Common Prayer, &c., requiring them, after mature consideration, to make such alterations and additions as to them should seem meet and convenient. This was accordingly done : several prayers and some whole services added, and the whole published with the act of Uniformity in the 14th of Charles II. 1661 ; since which time it has undergone no farther revision. ENGLISH NEIGHBOURHOOD, a settlement of the United States, in New Jersey, situated on the north- east branch of Hackinsack River.

ENGLISH POINT, a cape in the river St. Law- rence on the coast of Canada. Long. 51° 45′ W,, lat. 49° 40. N. — There is another cape of this name on the south coast of Newfoundland. Long. 53° 29′ W., lat. 46° 49′ N.

ENGLISH REACH, a reach in the straits of Ma- gellan, about nine miles across between Cape Holland and Cape Gallant.

ENGLISH ROAD, a road in the island of Eooa or Middleburgh, in the South Pacific, with

Long. 174° 34′ W.,

twenty-five fathoms water. »t. 21° 20′ S.

ENGLUT, Fr. engloutir, a compound of en and GLUT, which see. To swallow up ; to fill ; to pamper.

Whose grieved minds, which choler did englut, Against themselves turning their wrathful spight.

Spenser.

Being once englutted with vanity, he will straight- way loath all learning. Ascham's Schoolmaster. Neither my place, nor ought I heard of business, Hath raised me from my bed ; nor doth the general Take hold on me : for my particular grief Engluts and swallows other sorrows. Stiakspeare.

Certainly, thou art so near the gulf, Thou needs must be englutted. Id. Henry V. ENGO'RE, v. a. From en and gore. To pierce ; to prick. Not used.

As savage bull, whom two fierce mastiffs bait, When rancour doth with rage him once engore, Forgets with wary ward them to await, But with his dreadful horns them drives afore.

Spenser.

ENGORGE', v. a. & n. Fr. engorger; Ital. ingorgiare ; Lat. ingurgitare, from in and gurges, originally a whirlpool, and thence a devouring glutton. To swallow ; devour : and, as a neuter verb, to feed voraciously; riot in food.

Then fraught with rancour and engorged ire, He cast at once him to avenge for all. Spenser.

That is the gulf of greediness, they say, That deep engorgeth all this world is prey. Id.

Greedily she engorged without restraint, And knew not eating death.

Milton's Paradise Lost.

ENGRAFT, v. a. \ From en and GRAFT,

ENGRAFT/ED. $ which see. To insert a cion into the stock or stem of a plant : graft is the more common -verb.

Real friendship is a slow grower ; and never thrives, unless engrafted

upon a stock of known and reciprocal merit. Chesterfield.

ENGRAIL, v. a. From Fr. grele, hail. To variegate; to spot as with hail. A word now used only in heraldry, for to indent in curve lines.

jEacides then shews

A long lance, and a caldron, new, engrailed with twenty hues. Chapman's Iliad.

Polwheel beareth a saultier engrailed. Carew.

ENGRAILED, aline of par- tition, by which ordinaries are diversified, composed of semi- circles, the teeth or points of which enter the field. As argent, a bordure engrailed, azure; name, Bird.

ENGRA'IN, v. a. From en and grain, die deep ; to die in grain.

See thou how fresh my flowers being spread, Dyed in lilie white and crimson red, With leaves engrained in lusty green. Spenser.

ENGRAFPLE, v. a. From en and grapple. To close with ; to contend with ; hold on each other.

There shall young Hotspur, with a fury led, Engrapple with thy son, as fierce as he. Daniel.

; ENGRAPPLE, in naval warfare, is a manoeuvre de- signed to retain an enemy's vessel in some parti- Vot. VIII.

To

cular position for the purpose of boarding. When an opportunity offers of grappling across a ship's bows, or stern, so as to allow raking her fore and aft, the battle is usually but of short duration • it being nearly impossible for a crew to stand to their guns while subject to so destructive a fire. Generally when a commander is intent on boarding his opponent, he has his yard-arms supplied with small grapnails, which, being lowered down at pleasure, hook in amongst the enemy's rigging, and thus prevent her from retiring to avoid the boarders. Sometimes poles, having long barbs at their ends, are used for the same purpose ; these are chiefly managed by the forecastle men, and have their butts lashed to the davit, or to the cat-head. Whatever con- trivance may be in use for engrappling, it is ex- pedient that the implement be every where sufficiently solid or firm to retain its hold, and to resist the hatchet, otherwise it will be

speedily cut away; thus, all grapnails should be sus- pended by means of chains, passed through blocks at the yard-arms ; nor should the tackle, by which they are acted upon, be hauled tight until the points of the grapnails may be firmly hooked among the shrowd-hawsers, or some such substantial part of the enemy's rigging, which he could not, with safety to his masts or yards, cut away, Where it is practicable, a very strong chain is passed round the whole of the shrowd- hawsers of that mast, respectively, opposite which the vessel is engrappled ; or, if that be too hazardous, the .chain-plates rnay be secured in a similar manner. It is evident, that were the former to be all included, the enemy must cut away every support on that side his mast, before he could extricate himself ; in the latter instance, as the chain-plates are of iron, and very sub- stantial, nothing but the chain, whereby they are embraced, giving way, could afford the means of separation.

Ships sometimes become fortuitously engrap- pled, by the flukes of their anchors hooking among the rigging of the vessels opposed to them ; this however, is seldom permanent; for, as the en- grappling arises from accident, a lift, or heave of the sea, will ordinarily set the parties at liberty, either by tearing away whatever hitches upon the fluke, or by causing the latter to unhook itself. It should ever be well considered by a commander, how far the safety of his ship may become questionable in the attempt to approach his opponent, when there is much swell. The practice of engrappling is, indeed, but rarely re- sorted to in ships of the line, or even by frigates ; but is extremely common among privateers.

ENGRA'SP, v. a. From en and grasp. To seize ; to hold fast in the band; to gripe.

Now 'gan Pyrocles wax as wood as he, And him affronted with impatient might ; And both together fierce engrasped he, Whiles Cuyon standing by, their uncouth strife does see. Spenser.

ENGRA'VE,r.a. } Fr. engrever; Belg. and ENGRA'VER, n. s. } Teut.greuew; Sax. jpavec, Sfiapan, to excavate or dig out. , To cut or score into ; hence to depict on copper or other hard materials ; to impress ; imprint : and, in an ob- solete sense, to put into a grave ; to inter.

ENGRAVING

Engrave the two stones with the names.

Ejcodia xxviii. 11.

Her ivory forehead, full of bounty bravs, Like a broad table, did itself dispread,

For love his lofty triumphs to cur/rave, And write the battle of his great godhead.

Faerie Qwene.

The son had charge of them, now being dead, In seemly sort their corses to engrave, And deck with dainty flowers their bridal bed.

Spenser.

At first he engraved his image in the table of man's heart; Adam blurred the image, but, through God's mercy, saved the tablet. Bp. Hall's Contemplationt.

(Moses) more hates the golden calf, wherein he sees engraven the idolatry of Israel, thaii he honours

means of fluoric acid, on stone called litho- graphy, and some other minor branches of the same art. See GEM SCULPTURE, MEDALLURGY, ETCHING, &c.

The importance and utility of engraving are acknowledged by every person of taste and knowledge, and its rank among the fine arts is high and indisputable. It multiplies the works of other artists and preserves them to posterity, and records the talents of eminent artists by an art which requires equal talent and scarcely less genius;. The hieroglyphics of the Egyptians, in the British museum, are also a species of engra- ving; and among the Etruscan antiquities in that collection are two specimens of the art exe-

the tables of stone, wherein God had engraven uis com- cuted at a very remote period, a representation

of which forms the frontispiece to one of the volumes of Strutt's Dictionary of Engravers.

The art of engraving is of high antiquity; it originally consisted of rude delineations, ex- pressed by mere outlines, such as those which

Herodotus describes as having been traced upon the shields of the Carians. Bezaleel and Aho- liab are mentioned in the book of Exodus as ‘ filled with wisdom of heart to work all manner of work of the engraver.’ The art of engraving seals or signets is also very ancient, and was practised by the earliest nations of antiquity. The earliest writers mention engraved seals and seal rings as among the most esteemed decora- tions of great personages; and there are still

mandments. Id.

Images are not made in the brain itself, as the pen- cil of a painter or engraver makes the images in the table, but are imprinted in a wonderful method in th«» soul. Hale.

As touching traditional communication, and tradi- tion of those truths that I call connatural and engraven, I do not doubt but many of those truths have had the help of that derivation. Id. Origin of Mankind.

It will scarce seem possible that God should en- grave principles, in men’s minds in words of uncer- tain signification. Locke.

We may as well think the use of reason necessary to make our eyes discover visible objects, as that there should be need of reason, or the exercise thereof, to make the understanding see what is originally engraven in it, and cannot be on the understanding, before it be many of their works remaining equal to any pro-

perceived by it. Id.

O’er all, the heaven’s refulgent image shines ; On either gate were six engraven signs. Addison.

Our Saviour makes this return, fit to be engraven in the hearts of all promoters of charity. Atterbury. Names fresh engraved appeared of wits renowned ; I looked again, nor could their trace be found. ‘

Pope.

Words of eternal truth proclaim, All mortal joys are vain :

A diamond pen engraves the theme Upon a brittle pane.

Watts on a Pane of Glass.

Thy saints proclaim thee king ; and in their hearts Thy title is

engraven with a pen Dipped in the fountain of eternal love. Cowper.

His brow was like the deep when tempest-tost ;

Fierce and unfathomable thoughts engraved Eternal wrath on his immortal face, And where he gazed a gloom pervaded space.

Byron. IS

duction of the later ages.

Engraving, as now practised for the multipli- cation of copies by the means of printing from engraved plates and blocks of wood, is an art chiefly of modern invention ; having its origin no earlier than the middle of the fifteenth century ; and was unknown till after the invention of the art of painting in oil. The most ancient mode of obtaining prints or impressions on paper appears to have been from engraved or carved wooden blocks; therefore, engraving on wood for this purpose bears the palm of antiquity. For this invention we are indebted to the brief-mahlers, or manufacturers of playing cards, who practised the art in Germany about the beginning of the fifteenth century. To the same source may be traced the first idea of moveable types, which appeared not long after; for the brief-mahlers did not confine themselves entirely to the print- ing and painting of cards, but produced also

ENGRAVING is, more particularly, the art of subjects of a more devout nature; many of

depicting by incisions, in any matter or sub- which, taken from the Scriptures, are still pre-

stance, but particularly on plates of metal, blocks served in German libraries, with the explanatory

wood, hard stones, &c., for the purpose of text lacing the figures : the whole engraved in

producing certain impressions from them, which wood. Thus a species of books was formed ; of

called prints. It is divided into several which Historia Sancti Johannis, Ejusque Visiones

other branches, or classes, according to the mat- Apocalyptic, and Historia Veteris et Novi Tes-*

on which it is performed, and the manner of tamenti, which is known to collectors by the

ecution : as engraving on stones for seals, sig- name of The Poor Man's Bible. These short

nets, &c., which is called gem sculpture ; die mementos were printed only on one side, and

for coins, medals, &c., called medal- two of them being pasted together had the ap-

urgy ; on copper and steel plates, after various pearance of a single leaf. The earliest of these

modes, as line engraving, etching or engraving wooden cuts that have reached our times is one

i of aquafortis, mezzotinto engraving representing St. Christopher carrying the infant

scraping, aquatmta engraving, stipple or dot, Jesus over the sea, and bears the date of 1423.

which is a manner of engraving in imitation of This curious relic of ancient art is preserved in

chalk ; engraving on wood, on steel, on glass by a convent at Buxheim, near Menningen ; it is of

a folio size, illuminated in the same manner as the playing cards ; and at the bottom is the fol- lowing inscription : —

Christopheri faciem die quacunque tueris,

Ilia nempe die morte mala non morieris.

Millesimo CCCC ° XX ° tertio.

On the invention of wooden types, that branch of the brief-mahlers' business, so far as it re- garded the making of books, was gradually dis- continued ; but the art itself of engraving upon wood continued in an improving state; and towards the end of the fifteenth, and the

begin- ning of the sixteenth, century, it became the custom of almost all the German painters to en- grave copies of their designs on wood as well as on copper. Hence the freedom and artist-like character of the old engravers. The works of Albert Durer, in this style of engraving upon wood, are justly held in the highest esteem. Besides Germany, Italy, France, and Holland, have produced many eminent artists of this de- scription; but for boldness of conception, and for spirit in the execution, the works of Christo- pher Jergher, who worked under the direction, and engraved from the works of Rubens, who doubtlessly occasionally assisted him, stand pre- eminent.

*The invention of that species of the art which is distinguished by the appellation of chiaroscuro engraving, appears also to be justly claimed by the Germans, being first practised by Mair, an artist of that country ; one of whose prints bears the date of 1499. Many admirable works of this kind have been produced in France ; and in Italy, Parmigiano, Titian, and other great mas- ters, have practised it with the greatest success. In Germany, about the year 1450, prints from engraved copper-plates first made their appear- ance. The earliest date known of a copper-plate is 1461 ; but however faulty the print may be in respect to drawing, or defective in point of taste, the mechanical part of the execution of it has by no means the appearance of being one of the earliest productions of the graver. There are also several other prints in select collections, evidently the work of the same master, in which the impressions are so neatly taken from the plates, and the engravings so clearly printed in every part, that, according to all appearance, they could not be executed in a much better manner in the present day, with all the con- veniences which the copper-plate printers now possess, and the additional knowledge they must necessarily have acquired in the course of three centuries. We may therefore fairly conclude that if they were not the first specimens of the engravers' workmanship, they were much less the first efforts of *he copper-plate printers' ability.*

It is likewise to be observed, that Martin Schoen, who is said to have worked from 1460 to 1486, was apparently the scholar of Stoltzhirs; for he followed his style of engraving, and copied from him a set of prints, representing the pas- sion of our Saviour. Now, allowing Stoltzhirs to have preceded his disciple only ten years, this carries the era of the art back t« 1450, as was said above. There is no ground to suppose that

it was known to the Italians till at least ten years afterwards. The earliest prints that are known to be theirs are a set of the seven planets and an almanack by way of frontispiece ; on which are

directions for finding Easter from 1465 to 1517 inclusive : and we may be assured, that the engravings were not antedated, as the almanack would have thus been less valuable. These prints must therefore have been executed in 1464, which is only four years later than the Italians claim. The three earliest Italian en- gravers are Maso, Finiguerra, a celebrated painter, Boticelli, and Baldini. If we are to refer these prints to any of the three, we shall naturally conclude them to be the work of Fini- guerra or Baldini ; for they are not equal either in drawing or in composition to those ascribed to Boticelli, which we know at least were de- signed by him ; and, as Baldini is expressly said to have worked from the designs of Boticelli, it will appear most probable that they belong to Finiguerra. With respect to the invention of etching, it seems to be not well known to whom it is to be ascribed. One of the most early spe- cimens is the print by Albert Durer, known by the name of the cannon, dated 1518, and thought by some, with little foundation, to have been worked on a plate of iron. Another etching by the same artist is Moses receiving the tables of the law, dated 1524. It was also practised in Italy soon after this by Parmigiano, in whose etchings we discover the hand of the artist work- ing out a system as it were from his own imagi- nation, and striving to produce the forms he wanted to express. We see the difficulty he labored under ; and cannot doubt, from the exa- mination of the mechanical part of the execution of his works, that he had no instruction ; and that it was something entirely new to him. If the story is true, that he kept an engraver by profession in his house, the novelty of the art is rendered so much the more probable. He died in 1540. As to that species of engraving in which the modes of etching and cutting with the graver are united, it must have been found ne- cessary immediately upon the invention of etch- ing ; it was, however, first carried to perfection by Gerard Audran, and is now almost univer- sally practised, whether the work is in strokes or in dots. Engraving in dots, now called stippled engraving, is a very old invention, and the only mode discovered by the Italians. Agostino de Musis, commonly called Augustine of Venice, a pupil of Marc Antonio, used it in several of his earliest works, but confined it to the flesh, as in the undated print of an old man seated upon a bank, with a cottage in the back ground. He flourished from 1509 to 1536. We also find it in a print of a single figure standing, holding a cup and looking upwards, by Giulio Campag- nola, who engraved about the year 1516. The back ground is executed with round dots, made apparently with a dry point. The figure is out- lined with a stroke deeply engraved, and finished with dots, in a manner greatly resembling those prints which Demarteau engraved at Paris in imitation of red chalk. The hair and

beard are expressed by strokes. Stephen de Laulne, a native of Germany, followed the steps of Cam-

pagnola; and many of his slight works are exe- cuted in dots only. John Boulanger, a French artist, who flourished in the middle of the last century, and his contemporary Nicholas Van Plattenberg, improved greatly on this method, and practised it with much success. It is only, however, of late, that it has been considered as an object worthy of general imitation. John Lutma executed this kind of work with a ham- mer and a small punch or chisel. Engraving in mezzotinto was invented about the middle of the seventeenth century ; and the invention has generally been attributed to prince Rupert: but the editor of Parentalia (p. 214) asserts that Sir Christopher Wren was the first inventor of the art of graving in mezzotinto ; which was after- wards prosecuted and improved by his royal highness prince Rupert. See also Elmes's Life of Wren, p. 108, where the same fact is also re- corded. See MEZZOTINTO. Engraving in aqua- tinta was originally the invention of Le Prince, a French artist. His process was for a long time kept secret ; and his prints, it is said, were at first sold for drawings. That he carried the art to a very great degree of perfection, seems evident, from the prints which he executed being still admired as the finest and best specimens of this mode of engraving. He appears, however, to have been only acquainted with the powdered grain, and the common method of stopping out. This art was first practised in England by Mr. Paul Sandby; and by him it is believed to have been communicated to Mr. Jukes, whose works display the proficiency that has been attained in aquatinta, which, though now generally prac- tised all over Europe, is most successfully so in Britain. To the account we have given of this art under the article AQUATIXTA, we shall add a few farther observations under the different modes of engraving on copper.

ENGRAVING ON COPPER. — The most ancient as well as the most legitimate and beautiful mode of practising the art, is that which is called line- engraving, or engraving proper ; and is the art of cutting lines upon a copper-plate, by means of a steel instrument called a graver or burin, without the use of aqua-fortis. This was the first way of producing copper-plate prints that was practised, and is still' much used in histori- cal subjects, portraits, and in finishing landscapes.

The tools necessary for this art are the graver or burin, of which there are various sorts, a scraper, a burnisher, an oil-stone, a sand-bag, or cushion for sunporting the plate, an oil-rubber, and some good charcoal The graver is an instrument made of tempered steel, of the form of a quad- rangular prism, about one-tenth of an inch thick, fitted into a short wooden handle. They are square and lozenge-shaped. The first are used in cutting broad strokes, the other for fainter and more delicate lines. In making the incision, it is pushed forward by the hand in the direction of the line required. The scraper is a three-edged tool, also of steel, about six inches long, having three sharp edges, and is used for rubbing off the burr or barb raised by the graver. The burnisher is about three inches long, and is used for soften- ing or reducing lines that are two deep, or for burnishing out any scratches or holes in the

copper : it is formed of hard steel rounded and polished. The oil-stone is for whetting the gravers, etching-points, &c. The sand-bag, or cushion, about nine inches diameter, is for lay- ing the plate upon, for the conveniency of turning it in any direction, but is seldom used by artists. The oil-rubber and charcoal are for polishing the plate. As great attention is required to whet the graver, particularly the belly of it, care must be taken to lay the two angles of the graver, which are to be held next the plate, flat upon the stone, and to rub them steadily till the belly rises gra- dually above the plate ; otherwise it will dig into the copper, and then it will be impossible to keep a point, or executethe work with freedom. For this purpose the right arm must be kept close to the side, and the fore finger of the left hand placed upon that part of the graver which lies uppermost upon the stone. In order to whet the face, the flat part of the handle should be placed in the hollow of the hand, with the belly of the graver upwards, upon a moderate slope, and the extremity rubbed upon the stone till it has an exceedingly sharp point. When the graver is too hard, as may be known by the frequent breaking of the point, it should be tempered by heating a poker red-hot, and holding the graver upon it, within half an inch of the po'int, till the steel changes to a light straw color ; then put the point into oil to cool ; or hold the graver close to the flame of a candle till it be of the same color, and cool it in the tallow. Be not hasty in temper- ing ; for sometimes a little whetting will bring it to a good condition, when it is but a little too hard. To hold the graver cut off that part of the handle which is upon the same line with the belly, or sharp edge of the graver, making that side flat, that it may be no obstruction. Hold the handle in the hollow of the hand, and, extending your fore finger towards the point, let it rest on the back of the graver, that you may guide it

flat and parallel with the plate.

To lay the design upon the plate, after you have polished it fine and smooth, heat it so that it will melt virgin wax ; with which rub it thinly and equally over, and let it cool. Then the design which you are about to lay on must be drawn on paper with a black-lead pencil, and laid upon the plate with its penciled side upon the wax ; then press it, and with a burnisher go over every part of the design, and when you take off the paper you will find all the lines which you drew with the black-lead pencil upon the waxed plate, as if it had been drawn on it ; then with a sharp-pointed tool trace the design through the wax upon the plate, and you may then take off the wax, and proceed to work. Let the table or board you work at be firm and steady ; upon which place your sand-bag with the plate upon it, and, holding the graver as before directed, proceed in the following manner : — For straight strokes move the right hand forwards, leaning lightly where the strokes should be fine, and harder where you would have them broader. For circular or crooked strokes hold the graver firmly, moving your hand or the plate as you see convenient. Learn to carry the hand with such dex terity, that you may end your stroke as finely as you began it ; and if you have occasion to make

one part deeper or blacker than another, do it by degrees : and take care that your strokes be not too close nor too wide. In the course of your work scrape off the roughness which arises with your scraper, but be careful not to scratch the plate ; and, that you may see your work properly as you go on, rub it with the oil-rubber, and wipe the plate clean, which takes off the glare of the copper, and shows what you have done to advantage. Any mistakes or scratches in the plate may be rubbed out with the burnisher, and the part levelled with the scraper, polishing it again lightly with the burnisher or charcoal. Having thus attained the use of the graver, according to the foregoing rules, you will be able to finish the piece by graving up the several parts, and advancing gradually with the stronger, till the whole is completed. The dry point, or needle (so called because not used till the ground is taken off the plate) is principally employed in the extremely light parts of water, sky, drapery, architecture, &c.

After all, in the conduct of the graver and dry point, it is difficult to lay down rules which shall lead to eminence in the art. Every thing

seems to depend on the habit, disposition, and genius of the artist. A person cannot expect to excel, very much in engraving who is not a good mas- ter of design, and he ought to be well acquainted with perspective, the principles of architecture, and anatomy. He will by these means be able, by proper gradations, of strong and faint tints, to throw backward and bring forward the figures, and other objects of his picture or design, which he proposes to imitate. To preserve equality and union in his works, the engraver should always sketch out the principal objects of his piece before he undertakes to finish them. In addition to the rules already given, we may observe, that the strokes of the graver should never be crossed too much in the lozenge manner, particularly in the representations of muscles or flesh, because sharp angles produce the unpleasing effect of lattice-work, and take from the eye the repose which is agreeable to it in all kinds of picturesque designs. There are exceptions to this rule, as in the case of clouds, the representation of tempests, waves of the sea, the skins of hairy animals, or leaves of trees, in which this method of crossing may be admitted.

In managing the strokes, the actions of the figures, and of all their parts, should be con- sidered, and, as in painting, it should be observed how they advance towards, or recede from the eye; and the graver must, of course, be guided according to the risings or the cavities of the muscles or folds, making the strokes wider and fainter in the light, and closer and firmer in the shades ; thus the figures will not appear jagged, and the outlines may be formed and terminated without being cut too hard. However, though the strokes break off where the muscle begins, yet they ought always to have a certain connexion with each other, so that the first stroke may often serve, by its return, to make the second, which will show the freedom and taste of the artist. In engraving the muscles of the human figure, the effect may be produced in the lighter parts by what are called long pecks of the gravers, or by

round dots, or by dots a little lengthened, or, what will be better, by a judicious mixture of these together. With regard to the hair, the engraver should begin his work by laying the principal grounds, and sketching the chief shades with a few strokes, which may be finished with finer and thinner strokes to the extremities. In the representation of architecture, the work ought not to be made too black, because as the edifices are usually constructed with stone, marble, &c., the color, being reflected on all sides, does not pro- duce dark shade, as is the case of other substan- ces. Where sculpture is to be represented, whit • points must not be put in the pupils of the eye. of the figures, and in engravings after paintings ; nor must the hair

or beard be represented as in nature, which makes the locks appear flowing in the air, because, as is evident, in sculpture there can be no such appearances.

For engraving a series of parallel lines, which are either all equidistant, or approximating towards each other in regular gradation, from a great to the most minute distance, such as the blue part of .a sky, water, or in plates of machi- nery, architecture, &c., where a smooth flat tint is required, nothing has yet equalled the ruling- machines invented by the late Mr. Lowry, about thirty years since. They are thus described by Mr. Landseer, in his Lectures on Engraving, delivered at the Royal Institution in 1806, and since published : — 'The next mode of engraving that solicits our attention is that invented by Mr. Wilson Lowry. It consists of two instruments, one for etching successive lines, either equi- distant, or in just gradation, from being wide apart to the nearest approximation, ad infinitum; and another, more recently constructed, for stri- king elliptical, parabolical, and hyperbolical curves, and in general all those lines which geometricians call mechanical curves, from the dimensions of the point of a needle to an extent of five feet. Both of these inventions combine elegance with utility, and both are of high value, as auxiliaries of the imitative part of engraving; but as the auxiliaries of chymical, agricultural, and mechanical science, they are of incalculable advantage. The accuracy of their operation, as far as human sense, aided by the magnifying powers of glasses, enables us to say so, is per- fect; and I need not describe the advantages that must result to the whole cycle of science from mathematical accuracy.' The whole of Mr. Lowry's works, as well as those of his school, are proofs of the accuracy of these opinions.

MEZZOTINTO ENGRAVING, orScRAPiNG. — This art, which is of modern date, is recommended by the ease with which it is executed, especially by those who understand drawing. Mezzotinto prints are those which have no strokes of the graver, but whose lights and shades are blended together, and appear like drawing in Indian ink. They are different from aquatinta, b'ut, as both resemble Indian ink, the difference is more easily perceived than described. Mezzotinto is applied to portraits and historical subjects, and aquatinta is chiefly used for landscape and architecture. The tools necessary for mezzotinto scraping are the grounding tool, burnishers, and scrapers. To lay the mezzotinto ground, lay your plate, with

a piece of flannel under it, upon the table ; hold the tool in your hand perpendicularly, lean upon it moderately hard, continually rocking your hand in a right line from end to end, till you have wholly covered the plate in one direction ; next cross the strokes from side to side, after- wards from corner to corner, working the tool each time all over the plate in every direction, -almost like the points of a compass ; taking care not to let the tool cut (in one direction) twice in one place. This done, the plate will be full, and would, if it were printed, appear completely black. Having laid the ground, take the scrapings of black chalk, and with a piece of rag rub them over the plate, or the plate may be smoked with candles. Now take the drawing, and, having rubbed the back with red chalk-dust mixed with flake white, proceed to trace it on the plate. To form the lights and shadows, take a blunt needle and mark the outlines only, then scrape off the lights in every part of the plate as clean and smooth as possible, in proportion to the strength of the lights in your drawing, taking care not to hurt the outlines. The use of the burnisher is to soften the extreme light parts after the scraper is done with ; such as the tip of the nose, forehead, linen, &c., which might otherwise, when proved, appear rather misty than clear.

Another method used by mezzotinto scrapers is to etch the outlines of the original, and the folds in drapery, making the breadth of the shadows by dots, which having bit to a proper depth, with aquafortis, they take off the ground used in etch- ing, and having laid the mezzotinto ground, pro- ceed to scrape as above described. When the plate is ready, send it to the copper-plate printer and get it proved. When the proof is dry, touch it with white chalk where it should be lighter, and with black chalk where it should be darker ; and, when the print is retouched, proceed as be- fore for the lights ; and for the shades use a small grounding tool ; prove it again ; and so proceed to prove and touch till it is entirely to your mind.

Mr. Robert Lawrie, in the year 1776, proposed to the Society for the Encouragement of Arts, Manufactures, &c., a new method of printing mezzotinto prints in colors, for which he received H premium of thirty guineas. He says he was induced to attempt this method owing to the great expense attending the execution of good engravings, which had more than answered his most sanguine expectations. In this manner animals, plants, &c., for illustrating natural his- tory, may be finished in their proper colors, very much like drawings, and greatly resembling nature. The plates will also admit of being repaired so as to furnish a large impression. The following is an explanation of his method : —

A copper-plate with an etched or engraved outline, dotted next the lights, and filled in with mezzotinto ground, is printed in colors after na- ture, or from a picture, by the following process: The plate being warmed, in the usual manner, the colors are applied by means of stump camel hair pencils to the different parts, as the subject suggests ; it is then wiped with a coarse gauze Canvas, any other being improper ; after this it is

wiped clean with the hand, and, being agaic warmed, is passed through the press. The colors are mixed with burnt linseed oil, and those ge- nerally usˆd by painters are proper.

The invention of mezzotinto engraving is generally attributed to prince Rupert; but in Elmes's Life of Sir Christopher Wren, p. 108, it is given to that eminent architect. ' The mode of impressing pictures by light and shade on copper, commonly known by the name of en- graving in mezzotinto, owes its improvement if not its origin to Wren.' The journals of the Royal Society for October 1, 1662, record that Dr. Wren presented some cuts done by himself in a new way, whereby he could almost as soon do a subject on a plate of brass or copper as an- other could draw it with a crayon on paper. On this subject the editor of Parentalia speaks with decision, that 'he was the first inventor of the art of graving in mezzotinto ; which was afterwards prosecuted and improved by his royal highness prince Rupert, in a manner somewhat different, upon the suggestion, as it is said, of the learned John Evelyn, Esq.'

AQUATINTA ENGRAVING. — Aquatinta is a me- thod of producing prints very much resembling drawings in Indian ink. The principle of the process consists in corroding the copper with aquafortis in such a manner that an impression from it has the appearance of a tint laid on the paper. This is effected by covering the copper with a powder, or some substance which takes a granulated form, so as to prevent the aquafortis from acting where the particles adhere, and by this means cause it to corrode the copper par- tially and in the interstices only. When these particles are extremely minute, and near to each other, the impression from the plate appears to the naked eye exactly like a wash of Indian ink ; but when they are larger the granulation is more distinct : and, as this may be varied at pleasure, it is capable of being adapted with success to a variety of purposes and subjects.

This style of Engraving was invented by a French artist of the name of St. Non, who flou- rished about 1662, and communicated it to Jean Baptiste le Prince, a painter and etcher who was born at Paris in 1733, and died in 1781, who engraved many plates in this way. It

was introduced into England and greatly improved by Paul Sandby. It is not much used at present.

Woon ENGRAVING. — The art of ergraving on wood is not only of very ancient date, but is a legitimate, beautiful, and artist-like mode of operation, for the production of prints, particu- larly for books. The first engravers on wood whose names have reached our times are William Pluydenwurff and Michael Wolgemuth, who en- graved the cuts of the Nuremburg Chronicle which was published in folio in 1493, which are marked with all the stiffness and inaccuracy which characterise the works of the German art- ists of that time.

Albert Durer, as we have intimated, also prac- tised the art of wood engraving with great success, which began now to assume a higher character ; and, as far as regards the executive part, he brought it to a perfection which has hardly been equalled by any succeeding artist.

Bewick of Newcastle, Harvey his pupil, the operation of the tool. The next object is now to Thompsons (brothers), Branston, and other living polish the surface. The polishing mill is an

artists, have carried this art to the highest per- fection.

ENGRAVING ON STEEL is performed in nearly a similar way to engraving on copper. For etch- ing on steel, the plate or block is bedded on

extremely simple machine, consisting of a cir- cular horizontal plate of cast iron, about four- teen inches in diameter, put into very rapid mo- tion by a large wheel turned by an assistant. In a copper cup, filled with solder, the diamond is

glaziers' putty, and etched with a needle through now imbedded ; and the stem of the cup being a ground of Brunswick black in the common way. fixed in a pair of screw tongs, the instrument is Messrs. Perkins and Heath have carried the art placed on the skive (polishing wheel), which is of engraving on plates of softened steel, after- charged with olive-oil and diamond dust, and wards hardened by a scientific process, to a great whirling swiftly round polishes the face. The degree of perfection. diamond is then ready for engraving, which can

ENGRAVING ON STONE, is a recent invention be done only by pieces of the same stone. Ru- now in great vogue. It is cheap, and, when well bies, sapphires, and topazes, are cut and formed performed, produces impressions of great beauty the same way on a copper wheel, and polished in imitation of chalk, mezzotinto pen and ink, with tripoh diluted in water. As to agates, ame- and even of etching. See LITHOGRAPHY. thysts, emeralds, hyacinths, granites, rubies, and

ENGRAVING, or ETCHING, ON GLASS is per- others of the softer stones, they are cut on a leaden formed by laying on a ground consisting of a wheel, moistened with emery water, and polished thin coat of bees' wax, and drawing the design with tripoli on a pewter wheel. Lapis lazuli, therein with an etching needle. It is then to be opal, &c., are polished on a wooden wheel. To covered with sulphuric acid, sprinkled over with fashion and engrave vases of agate, crystal, lapis powdered fluor spar or fluoric acid. It must be lazuli, or the like, a kind of lathe, like that used taken off after four or five hours, and cleaned with by pewterers, is used to hold the vessels, which oil of turpentine. are to be wrought with proper tools : that of the

ENGRAVING ON PRECIOUS STONES is the re- engraver generally holds the tools, which are presenting of figures, or devices in relievo or in- turned by a wheel ; and the vessel is held to dented, on divers kinds of hard polished stones, them to be cut and engraved, either in> relievo The ancients excelled in this art ; there being or otherwise ; the tools being moistened from divers antique agates, cornelians, and onyxes, time to time with diamond dust and oil, or at which surpass any thing of that kind the mo- least emery and water. To engrave figures or derns have produced. Pyrgoteles among the devices on any of these stones, when polished, Greeks, and Dioscorides under the first emperors such as medals, seals, &c., they use a little iron of Rome, are the most eminent engravers we wheel, the ends of whose axis are received within read of : the former was so esteemed by Alexan- two pieces of iron, placed upright, as in the der, that he forbad any body else to engrave his turner's lathe ; and to be brought closer, or set head : and the head of Augustus, engraven by further apart, at pleasure ; at one end of the axis the latter, was deemed so beautiful, that the sue- are fitted the proper tools, which are made fast ceeding emperors chose it for their seal. All the with a screw, and the stone is presented to them polite arts having been buried under the ruins of by the hand to be worn or cut to their required form, the Roman empire, the art of engraving on stones SOME ACCOUNT OF THE ART, AND OF THE BEST met with

the same fate. It was retrieved in Italy ENGRAVERS. — The art of engraving in this coun- at the beginning of the fifteenth century, when try, like the practice in every other country, one John of Florence, and after him Dominic of commenced and increased with civilisation and Milan, produced engravings of this kind little knowledge. Under Alfred the Great the art inferior to those of the ancients. From this time met with great encouragement, and remains of such sculptures became common in Europe, and the art, as practised in his days, are still in ex- particularly in Germany, but they were mostly istence. There is still preserved in the Museum inferior productions. In this branch of engrav- at Oxford, a valuable jewel of this period, re- ing, the diamond is now generally used to cut presenting St. Cuthbert, the back of which is the softer stones, as rubies, cornelian, &c. This ornamented with foliage very skilfully engraved. being the hardest of all, however, can only be The principal engravers in the line manner, ‘ cut by its own substance. The operation of taken chronologically, are Martin Schoengauer, cutting is commenced by imbedding the diamond or Schoen, born at Colmar about 1455, and died in strong cement, fixed at the end of a stout there in 1499. His principal works are religious spindle-shaped stick about a foot long, with that subjects from his own designs; Tomrnaso or portion only projecting which is requ;red to ‘be Mazo Finiguerra, born at Florence in 1418, and removed. Another diamond is employed to died there in 1500; Israhel Von Mecheln or cut with, fixed as the former, with one of the Mecken, born at Meckenen on the Meuse about solid angles projecting. The greatest care is the year 1450, and died 1523 ; Bacio Baldini taken of the valuable dust and fragments, a box and Sandro Boticello, called Filipepi, painter being placed underneath with two upright iron and engraver, born at Florence in 1437, died in pegs fixed on the sides, for the workman to sup- 1515. To these two artists are attributed the port the sticks against, while, with a short re- first certain engravings after the Italian masters. peated stroke, he wears away the stone to its In the cabinet of M. Paignon Dijonval at Paris, required form. This being done, the cement is were nine fine prints by the latter. They are in softened by heat, and the position of the diamond the style of Andrea Mantegna ; Michel Wohlge- is changed, so as to bring a fresh part under the muth died in 1519 ; Albert Durer, or Albrecht

Thurer, bon at Nuremburg in 1471, died in 1.528; the number of line engravings by tliis great artist amount to nearly a hundred, and are

among the choicest specimens of the art ; Albert Altdorfer, born at Altdorfer in Bavaria, about the year 1488, died at Ratisbon in 1538. His engrav- ings are mostly after his own pictures ; Andrea Mantegna, painter and line engraver, born at Pa- dua in 1431, died September 15th, 1517 ; Marc Ant. Ilaymondi, about 1527, who engraved after Michel Angiolo, Raffaelle, Mazzuoli, Raibolini, and other eminent Italian masters ; AgostmoVene- ziano, surnamed de Musis, about 1620, who en- graved after Michel Angiolo, RafFaelle, all of which are dated. He was reckoned one of the first engravers in France, and inscribed his works A. Venetien ; Nicolas Belin da Modena, and Giov. Ghisi Montovanto, who flourished about 1530; Luc Damesz, died in 1533; Giov. Giac. Caraglio and Marco Da Ravenna, about 1540; Giul. Bonasone, born at Bologna in 1498, died at Rome in 1564. He engraved many excellent plates after Michel Angiolo, particularly the last judgment, Pontormo, Raffaelle, Giulio Romano, Caravaggio, Mazzuoli, and Titian. Eneas Vicus, George Vens, Henrid Aldegraf, and Jean Sebast. Bcehm, about 1550 ; Adrian, Charles, William, and John Collaert ; Adrian the father was born at Antwerp in 1520, and designed and engraved many excellent plates after his own designs, as well as from the works of De Vos, Stradan, Ru- bens, Wattelet ; Adam and George Ghisi, the latter born at Mantua in 1516 ; Lambert Suter- mann, Fagivoli Franco, and Virgilius Solis, about 1560 ; Corneille Cost and Martin Rota, about 1569, the latter, born at Sevenigo in Dal- matia, engraved the Last Judgment after Michel Angiolo, in 1569, and other excellent perform- ances ; Giov. B. Cavalaris, about 1574, engraved the Adoration of the Shepherds after Bronzino, in 1 565 ; a large plate of the Miracle of the Loaves, after Raffaelle, and other fine works ; Steph. de Laurie, born at Orleans in 1510, and died at Strasburg in 1590. He engraved nu- merous fine plates ; Jerome Bang, Paul Flynt, and Ger. Jode, about 1596 ; Conrad Jode and Jean Sadeler, who engraved many plates after Albert Durer, Heintz, de Vos, Spranger, &c., died in 1600; Francois Aspruck, about 1601 ; Agost. Caracci, whose numerous prints embellish the finest collection, was born at Bologna in 1558, and died in 1602; Jean Saenredam, born at Leyden in 1570, and died in 1607, engraved many fine plates after Caravaggio, Baroccio, Van Mander, Cornelius Bloemart, &c. ; Nicolas De Bruyn, about 1610; Philippe Galle died in 1612; Daniel Kellerthaler about 1613 ; Che- rubino Borghesiano Albert!, born in 1552, died in 1615, was a fine engraver and painter of the Roman school, who engraved many works after his own designs ; nine of Michel Angiolo's pic- tures in the Capella Sistina; St. Jerome in the Desert, after the same great master ; many after Raffaelle, also after Baroccio, Vanni, and' other fuasters of the

Italian school ; Henri Goltzius, a celebrated line engraver, painter, and engraver on wood, born at Mulbrecht in 1588, died at Haerlem in 1617 ; he engraved a numerous col- lection after his own desitms, the works of Raf- faelle, Palma, Stradan, Spranger, and a great

number of portraits of illustrious characters; Theodore Galle about 1 620 ; Ambroise Bonvi cino about 1622 ; Francois Villamena, born at Assisi in 1566, died at Rome in 1626 ; engraved many fine plates after his own designs, after Raffaelle, Baroccio, Fensoni, Lanfranc, Albano, Muziano, Veronese, and other eminent Italian masters; Henri de Goudt, born at Utrecht in 1585, died in 1630; he was a painter as well, and engraved his own designs, some from Elshei- mer, &c. ; Pierre Lastman, a painter of the Dutch school, born at Haerlem in 1562, and en- graved several plates after Rembrandt, was the first who attempted, in 1626, the union of color to his prints, but with very little success ; Robert Van Voerst about 1628, who, among other por- traits, engraved one of Sir Kenelm Digby, for Overton the publisher; Giles Sadeler about 1629 ; an engraver of several plates after Albert Durer, Heintz, De Vos, Spranger, and other masters of the Flemish school ; Crisp, de Paas, Schelte a Bolswert, Paul Pontius, known by the number and excellence of his works ; Lucas Vorstermann, and Pierre de Ballin, about 1630; Jacques Matham, died in 1631 ; Pierre Jade, died in 1634 ; Luc. Kilian,died in 1637 ; Abra- ham Bloemars, born at Gorcum in 1567, died in 1647; John Payne, who died in 1648, is ac- counted the first Englishman who engraved in the line manner; he executed several portraits after Mytens, and other Elemish portrait pain- ters; Giuseppe Zarlati, Jean Frederic Greuther, who distinguished himself by engraving after the Florentine masters ; Girol Rossi, Conrad Mari- nus, Jacques Neefs, Pierre Nolpe, Henri Snyers, who engraved much after Rubens ; Conrad de Dalen, Conrad Caukerken, Pierre Clouet, and Pierre Jode, about 1650; Fr. Sneyders, died in 1657; Giuseppi Battista Gallestruzzi, a painter and engraver, born at Florence 1618; Jacq. Bellange, Pierre de Bleek, and Pierre Lombard, about 1660; Conrad Meyssens, about 1662; Theodore Matham, about 1663 ; Michel L'Asne, died in 1667 ; John Umbach and Michel Nata- lis, about 1670; Et. Baudet, who engraved many of the pictures of the Caracci, Albano, Poussin, Mignard, Bourdon, &c., flourished about 1664 ; Nic. Pithau died in 1671 ; Jean L'Enfant died in 1678 ; Charles Aud ran died in 1671 ; Robert Nanteuil died in 1678; Reg. Zeemann, Daniel Danckerts, J. Munichuysen, Elias Hainzelmann, and Anton. Blooterling, about 1680 ; Fr. Spierre, died in 1681 ; Guillaume Chateau died in 1683 ; Conrad Blcemart, about 1686 ; Guillaume Rous- selet died in 1686; Cl. Melan died in 1688; Corn,

de Visscher about 1690; Philippe Kilian died in 1696; Conrad Meyer died in 1698; Antoine Masson died in 1700 ; Gerard Audran, a most able artist and celebrated engraver, died in 1 703 ; Ge'rard Edelinck, born at Antwerp in 1627, died at Paris in 1707 ; Antoine Trouveau about 1707; Conrad Vermeulen about 1707 Jean Baptiste Nollin about 1710; Louis Au- dran died in 1712 ; Jean Jacques Thurneiser died in 1718; Jean Ulric Kruns died in 1719, Philippe Thomassin about 1 720 ; Michel Dos- sier about 1720; Etienne Picart, Ben Audran, died in 1721 ; Jean Henri Tischbein the elder, and Jean Louis Aberli, about 1 722 ; Et. Des- rochers about 1723; Arn. Westerhout died in

*1*25; Louis Simoneau died in 1727; Charles Simoneau and Jean Bapt. Poilly, died in 1728 ; Fran9- Chereau, Martin Bernigeroth, and Ber- nard Picart, 1735 ; Jean Henri Staerklin died in 1736, who was peculiarly celebrated for engrav- ing in miniature ; his son, Jean Rodolphe, died in 1756, who followed his father to a still higher degree of perfection ; Jean Goerne died in 1738 ; Louis Desplaces died in 1739 ; Henri Simon Thomassin about 1741 ; Jacques Christophe Le Blond, died in 1741 ; Charles Dupins died in 1742; Robert Audenaert died in 1743; Gio- vanni Canossa died in 1747; Jean Guillaume Wolfgang died in 1748; Nicolas Henri Tardieu died in 1749 ; Pierre Drevet, the father and son, who both died in 1749; Jean Admiral, Jacques Aliamet, Laurent Cars, Et. Fessard, Jean Jacques Flipart, Th. Major, and Jean Ouvrier, about 1750; Jacq. Andre Friederick died m 1751; Jacques Frey died in 1752; Gaspard Duchange died in 1754 ; Georges Margin Preis- sler died in 1754 ; Nicholas de Larmessin, Bart. Crivellari, about 1755 ; Jean Audran died 1756 ; Philippe Andre" Kilian died in 1759; J. Ph. Le Bas died in 1760 ; Jean Michel Liotaid, and Jean Adam Schweickart, about 1760; Je"remie Jacques Sedelmayer died in 1761 ; Louis Seru- gue died in 1762: Jean Daulle died in 1763; Nicolas Beauvais died in 1763; Jean Jacques Balechou died in 1764 ; Antoine Faldoni died in 1765; Conrad Ploos van Amstel, born at Amsterdam in 1732, and was the inventor of the art of imitation of all sorts of drawings, colored or plain, to a great perfection. He engraved many imitations of the drawings of Wouver- mans, Sachtleven, Van Dyck, Ostade, Mieris, Goltzius, Van Goyen, Brauwer, &c. ; Gustave Andre Wolfgang, Jerome Sperling, and Cl. Drevit, about 1 766 ; Jean M. Bernigeroth, Marc Pitteri, and Jean Elie Riedinger, born at Ulm, died at Augsburg in 1767 ; a very eminent pain- ter and engraver of*

animals and landscapes ; Chretien Frederic Boethius, about 1764 ; Lor. Zuchi, about 1 768 ; Jean Ch. Francois died in 1769; Jean El. Nilson, about 1769; Jacques Houbraiken, born at Dortdrechtin 1698, died in 1780; one of the finest engravers of portraits that ever lived ; Jean Savant in 1770 ; Fran- cois Basan, A. B. Barbaza, Jean Barry, Fran- cesco Bartolozzi, born at Florence in 1730, died in London, 1807, one of the first engravers who practised the art of stipple or chalk engraving •with any success. His works are very numer- ous, and are distinguished by delicacy and taste rather than force.

Among other eminent artists who practised this art, are : Jonathan Spilsbury, who engraved several of Angelica Kauffmann's works; W. Ryland, Rob. Menageot, G. F. Schmidt, Just. Preissler, Dan. Berger, C. Feller, P. W. Tom- kins, Bichard, J. R. Smith, W. Dickinson, the two Facius's, J. Parker, Caroline Watson, H. Kingsbury, R. Macuard, T. Burke, G. Ward, U. P. Carey, Saillier, G. Sharp, V. M. Picot, Bettilini, P. Simon, Howard, G. Wilkinson, N. Pollard, C. Tomkins, Madame Prestel, J. M. Delatre, G. Graham, H. Sinzenich, Schiavonetti, &c, J. F. Bause, Jean Beauvarlet, Beavit, Salv. Carmona, G. Catini, G. B. CecchinL, Chevillet,

Clemens, R. Cooper, Dom. Cunego, Nic. de Launay, William Ellis, Et. Figuel, Fab. Gautier, Dagoty, Pierre de Geust, Jacques Gilberg, Jean Hall, Antoine Hemery, Martin, Jan. Mas.- in, Arch. Macduff, Massard, Chr. de Meche'en, P. E. Moitte, J. G. Miiller, Et. Mulinan, J. Mart Preissler, Reinier, Andre Rossi, F. Selma, Jacq. Schmutzer, Rob. Strange, J. K. Sherwin, Jacq. Nicolas Tardieu, Porporati, Sim. Fres. Ravenet, Giov. Volpato, Rosaspina, Henri Vin- keles, Josue" Wagner, Jean Georges Wille, Wil- liam Woollet, Raffaelle Morghen, Pierre Ducx)s, Pierre Paul Montagniti, several members of the family of Haid, Jean Etienna, and Jean Michel Liotard, Unger, the father and son ; Daniel Cho- doweicki, the two Brands, the two Crusius's, Jean Guillaume Meil, Salomon Gessner, three Hack- erts, Christian Gotslieb Geyser, Carle and Henri Guttenberg, Angelica Kauffmann, Stoelzel, Cle- ment Kohl, Adam Bartsch, Schlotterbeck, Jean Henri Lips, Schubert, Schnorr, Boettcher, Dur- mer, Pfeiffer, Wrenk, Pichler, Geiger, &c. &c.

Among eminent English engravers are Robert Walker, born in Somersetshire in 1572, who en- graved in aquafortis and mezzotinto ; William Faithorne, born in London in 1620, and died in 1691, an excellent engraver of portraits; Robert White, born in 1645, died in 1704, portraits; J. Beckett, born in Kent in 1653, landscape, por- trait and history ; John Smith, the celebrated mezzotinto engraver,

born in London in 1654, and died in the same city in 1722, of whose numerous and excellent works the cabinet of M. Paignon Dijonval at Paris alone contained nearly 1300 ; John Faber, born 1684, died 1756 ; also an eminent engraver in mezzotinto; William Hogarth, born in London in 1698, died in 1764, line engraver of his own inimitable works ; Ar- thur Pond, engraver in aquafortis, born in 1700, died about 1758; Thomas Worlidge, celebrated for the delicacy and effect of his etchings, in the manner of Rembrandt, born at Peterborough in 1700, died at Hammersmith in 1766; Francis Hayman, better known as a painter ; James Mac Ardell, mezzotinto, born in Ireland about 1720, died in London in 1765; Thomas Smith of Chichester, and his brothers John and George, landscapes ; they were also painters. Captain William Bailly, aquafortis ; Richard Houston, born in 1728, died in 1775, mezzotinto ; John Greenwood, born at Boston about 1730, died about 1770, chalk and mezzotinto; William Wynn Ryland, born at London in 1732, died there in 1783, line and chalk ; William Woollett, born at Maidstone 1735, died in London 1785 ; one of the most eminent line engravers that ever lived; Richard Brookshaw, born» 1736, and practised much in France, where he engraved, in mezzotinto, Louis XVI. as dauphin, and as king with Maria_ Antoinette in 1775, and other French portraits ; John Dixon, born about 1740, mezzotinto; John Hall, born about 1740, line engraving; John Raphael Smith, born in London 1740, very eminent in mezzotinto, and a good portrait painter in crayons ; John Keyse Sher- win, born about 1746, chalk; Paul Sandby, Hi A. a landscape painter, and very eminent in aquafortis and aquatinta; Robert Pollard dic

and died an alderman of London in 1 804, line ; Josiah Boydell, his nephew, also an alderman of London, line ; William Dickenson, born about 1750, mezzotinto and chalk; James Gil'ray, line, and peculiarly celebrated as the most eminent caricaturist of his day ; James Fittler, born in London in 1753, eminent as a line engraver; William Ward, born about 1750, mezzotinto; J. Plimmer, who practised about 1760, aquafor- tis; Thomas Rowlet, aquafortis, about 1760; Robert Dodd, aquafortis and aquatinta, about 1770 ; Robert Thew, aquafortis and chalk, about 1786. The names of Vertue, Strange, Woollett, Byrne, Middiman, Milton, Sharpe, Lowry, and other eminent engravers of the English school, are known and honored wherever the arts are culti- vated or understood.

Among the best engravers on wood, we must particularly mention Pierre Schaeffer or Schoifer, whose colored figures in his celebrated Psalter (fol. 1457) prove that this mode of engraving, the invention of which is commonly attributed to Hugo Da Capri, had its rise in Germany. It is very probable that Martin Schcen, Michel Wolgemuth, and Guillaume Plydenwurfe en- graved on wood about the middle, and at the end of the fifteenth century. The first artist in this line who can be mentioned with certainty is Jean Schnitzer, who wrought about 1480. Phil- lery, who lived near the end of the fifteenth cen- tury, is the first engraver on wood who practised in the Netherlands. Among other eminent wood engravers are Ad. Gampertin, about 1490 ; Rigm. Philesius, about 1508; Math. Grunwald died in 1510; Hugo Da Carpi, about 1510; Albert Altdorfer, about 1511; Agostino Veneziano de Musis, about 1514; Jean Balding in 1516; Jean Burgmayer died in 1517; Albert Durer died in 1528, of whose works the Baron de Heinechen has given a complete catalogue; Albert Glockenthon in 1510; Jean Gulden- mund about 1526 ; Antoine Da Trento in 1530 ; Balthazar Peruzzi died in 1536 ; Henri Vogtherr died in 1537 ; Jean Springinklee died in 1540 ; Jean Brosshammer in 1542 ; Rodolphe Speckle in 1543 ; Jean Kulenback died in 1545 ; Daniel Beccafumi died in 1549; George Pens died in 1550; Jean Schaeuflin died in 1550; Pierre Gatin, about 1550 ; Erhardt Schoen, about 1550; Jean Sdbastien Bo?hm, about 1550; the brothers Hopfer ; Henri Aldegraf, about 1551; Conrad Gesner, about 1550, who engraved na- tural history, marked his works with the word Fo ; Lucas Van Leyden died in 1553; Jerome Resch died in 1556 ; Jean Bochsbergen, about 1560; Gietleughen De Courtray about 1550; Jacques Kerver about 1560; Virg. Solis died in 1562 ; Sigfried Feyerabendt, about 1569,of which name and familywere many engravers ; S.Vichem about 1570 ; Christophe Chrieger in 1572 ; Chris- tophe Sichem in 1573; O. Goujeon, in 1575; Salomon Bernhard, in 1580; Dupont, in 1583; Itrenze, about 1585 ; Luc. Muller de Cranach, died in 1586; Jean Rogel, about 1588; Leon. Norsino, in 1590 : Christophe Stimmer,in 1590; Marc Claseri, in 1590; Jost. Aman died in 1591 ; Jacques Zuberlin, about 1595; Christo- phe Coriolan, in 1600 ; Andre' Andriani, died in '1623; Gio. Georg. Nivolstella, died in 1624;

Barthe'lemi and Jean Baptiste Coriolan, about 1630; Christophe Jegher, 1637; Etienne Du Val, in 1650 ; Pierre le Sueur the elder, in 1698; the two Papillons, died in 1710, and 1724; Pierre le Sueur, jun. died in 1716 ; Gonzalez van Hayden, died in 1720; Kerkhal, about 1720; El. Porcelius died in 1722; Vincent le Sueur died in 1743; Jean Baptiste Jackson, about 1745; Giuseppe Maria Moretti

died in 1746; Giovanni Battista Canossa died in 1747 ; Mau- rice Roger, about 1747 ; Pierre le Sueur died in 1750; Nicolas le Sueur died in 1764; Elis le Sueur in 1765; Antoine Marie Zanetti, who died in 1767, endeavoured to revive the peculiar man- ner of Hugo Da Carpi: Nicolas Caron, Jean Baptiste Papillon, the two M. M. Unger, Beug- net, Dugoure, &c.

The principal English engravers on wooa are mentioned in the early part of this article.

WORKS ON ENGRAVING. — For treatises on this elegant and useful art, see Strutt's Dictionary of Engravers ; Bryan's Dictionary of Painters and Engravers ; Meadow's Lectures on Engraving, London, 8vo. 1811. Of the earlier writers are Felibien's Principes de 1'Architecture et des autres Arts, qui y dependent. Id£e generate d'une Collection complete d'Estampes ; Christ, Diction- nairedes Monogrammes; Papillon, Histoire de la Gravure en Bois.

In English, Sculptura; or, the History ana Art of Chalcography and Engraving in Copper, by John Evelyn, Lond. 12mo. 1663, 8vo. 1755. The Art of Engraving and Etching, with the way of printing Copper-plates, by M. Faithorne, Lond. 1702. Sculptura historico-technico ; or, the History and Art of Engraving, extracted from Baldinucci, Florent, Le Compte, Faithorne, the Abecadario Pittorico, and other authors, Lond. 4to. 1747, 1766, and 1770. An Essay upon Prints, containing Remarks upon the Principles of Picturesque Beauty,- the different kinds of Prints, and the Characters of the most noted Masters, illustrated by Criticism upon particular Pieces : to which are added some Cautions that may be useful in collecting Prints, by Gilpin, Lond. 8vo. 1767, 1768, and 1781.

Among the Dutch the principal writer is Gerard Lairesse, who, in the thirteenth book of his Grand Livre des Peintres, has treated of the art of engraving with great ability.

Of German writers on engraving may be cited the seventh section of the second part of the work of Koeremon, entitled De la Nature et de 1' Art. The twelfth section of the second part of the first volume of the work of M. Prangen, which is entitled Essai sur la Formation d'une Academic des Beaux Arts. The work called Sur 1' Etude de la Gravure, par Louis Fronhofer, which is printed in the Memoires de 1' Aca- de"miede Baviere, Munich, 8vo. 1781.

Among the theoretical works on this art worth consulting must he numbered le Dictionnaire de Chiffres, et de Lettres ornees a 1' usage

de tous les Artistes, contenant les vingt-quatre Lettres de 1′ Alphabet, combinees de maniere a y rencontrer tous les noms et surnoms entrelaces, par M. Pouget, Paris, 1766 ; Le Pastel en Gravure, in- vente” et execute’ par Louis Bonet, compose de huit £preuves qui indiquent les diffe”rens degrees,

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Paris, 8vo. 1760 ; Nouvelie Maniere de faire des Gravures de differentes Couleurs, £ la ma- niere du Dessin, par J. J. Bylaert.

On aquatinta, or prints in imitation of washed drawings, L’ Artde Graver au Pinceau; nouvelle Mdthode plus prompte qu’aucune de celles qui sont en usage, qu’on peut exe”cuter facilement sans avoir 1′ Habitude du Burin, ni de la Pointe, mise au jour par M. Stapart, 12mo. Paris, 1773. This work is translated into German by Harem- peter, Nuremburg, 1780. Bosse has also given a section of his work to the same subject.

Upon the history of engraving the student may consult with profit, Comminciamento e Pro- gresso dell’ Arte d’intagliar in rame, da Filippo Baldinucci, Firenze, 4to. 1686 ; with the Sup- plements of Dom, Maria Manni, Firenze, 1761 ; Abr6gd Historique de 1’Origine et des Progres de la Gravure, et des Estampes en Bois et en Tailledouce, par le Major Humbert, Berlin, 8vo. 1752 ; Histoire de la Gravure, jusqu’au temps d’Albert Durer, printed in the tenth volume of the Journal des Arts de M. De Muzz. Also a dis- sertation in the twenty-fifth volume of La Nou- velle Bibliotheque des Belles Lettres, sur 1’His- toire de la Gravure en Allemagne, depuis son invention jusqu’a l’a» 1500; Essai d’une His- toire de la Gravure, depuis sa premiere origine, suivi de celle des Progres de cet Art, dans les Nouvelles des Arts et des Artistes, p. 276. See ARTS, MEZZOTIFTO, MONOGRAM, LITHOGRAPHY, SCHOOLS, PRINTS, &c.

ENGRIE’VE, v. a. From en and grieve. To pain ; vex ; afflict.

The gnawing anguish, and sharp jealousy. Which his sad speech infixed in my breast,

Rankled so sore, and festered inwardly, That my engrieved mind could find no rest.

Fierie Queene.

Aches, and hurts, and cords, do engrieve either towards rain, or towards frost.

Bacon's Natural History.

ENGROSS', v. a. ˆ Fr. engraisser. From

ENGROSS'ER, n. s. > en and the Lat. crassus.

ENGROSS'MENT. j Thick ; fat ; large : hence to enlarge ; increase ; make thick ; fatten : hence also to seize largely, or in the gross ; to copy largely or very legibly; to buy up goods largely ; occupy a market : an engrosser is he who pur- chases largely to resell at his own price : engross- ment, exorbitant acquisition or appropriation; a full or final copy of a written instrument.

But more happy he than wise, Of that sea's nature did him not avise ; The waves thereof so slow and sluggish were, Engrossed with mud, which did them foul agriese. That every weighty thing they did upbear.

Faerie Queene.

Not sleeping, to engrot his idle body ; Sut praying, to enrich his watchful soul. Shakspeare.*

If them engrossett all the griefs as thine, Thou robbest me»of a moietv.

Id.

Here is the' indictment of the good lord Hastings, Which in a set hand fairly is engrossed. Id.

Our thighs are pack't with wax, our mouths with

honey •

We bring it to the hive ; and, like the bees, Are murdered for our pains ! This bitter taste Yield his engrossments to the dying father. Id,

Though pillars, by channeling, be seemingly ett- grotted to our sight, yet they are truly weakened in themselves. Wotton.

Nothing more troubled Israel, than a fear lest the two brethren should cunningly engross the government to themselves. Bp. Hall's Contemplations.

A new sort of engrossers, or forestallers, having the feeding and supplying this numerous body of workmen in the woollen manufactures, out of their warehouses, set the price upon the poor landholder. Locke.

Those two great things that so engross the desires and designs of both the nobler and ignobler sort of mankind, are to be found in religion ; namely, wisdom and pleasure. South.

A dog, a parrot, or an ape. Or some worse brute in human shape, Engross the fancies of the fair. Swift.

Those held their immoderate engrossments of power and favour by no other tenure than presumption.

Id.

A clerk, foredoomed his father's soul to cross, Who pens a stanza when he should engross. Pope.

From the letters that passed between him and Pope, it might be inferred they, with Arbuthnot and Gay, harl engrossed all the understanding and virtue of mankind. Johnson. Life of Swift.

The earl of Angus, in order to divert him from business, gave him an early taste for such pleasures as afterwards occupied and engrossed him more than became a king. Robertson's History of Scotland,

War and the chase engross the savage whole ; War followed for revenge, or to supplant The envied tenants of some happier spot. Cowper.

You mourned for ruined man, and virtue lost, And seemed to feel of keen remorse the wound, Pondering on former days by guilt engrossed, Or in the giddy storm of dissipation tossed. Beattie.

ENGROSSING, in law, the writing a deed over fair and in proper legible characters. Among lawyers it more particularly means the copying of any writing fair upon parchment, or stamped paper.

ENGROSSING, in law, also denotes the getting into one's possession, or buying up, large quan- tities of corn, or other dead victuals, with

intent to sell them again. This must of course be in- jurious to the public, by putting it in the power of one or two rich men to raise the price of pro- visions at their own discretion. Spreading rumors with intent to enhance the price of hops, saying in the hearing of hop planters, dealers, and others, that the stock of hops was nearly exhausted, and that there would be a scarcity of hops, &c., with intent to induce them not to bring their hops to market for sale for a long time, and thereby greatly to enhance the price. — Engrossing large quantities of hops, by buy- ing from many persons, certain quantities with intent to resell the same for an unreasonable profit, and thereby to enhance the price. — Get- ting into hand large quantities, Ly contracting with various persons for the purchase, with in- tent to prevent the same being brought to mar- ket, and to resell at an unreasonable profit, &c. — Engrossing hops then growing, by forehand bargains, with like intent. — Buying all the growth of hops on certain lands, in certain parishes, by forehand bargains, with intent to sell at an un- reasonable price, &c. Rex v. Waddington. 1 East's Rep. 143 — 169. — In which case it was ruled that to forestal. any commodity which is

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become a common victual and necessary of life, or used as an ingredient in the making or pre- servation of any victual, though not formerly used or considered as such, is an offence at com- mon law. Indictment for engrossing a great quantity of fish, geese and ducks, held bad, without specifying the quantity of each. Rex v. Gilbert. 1 East Rep. 583. So the total engross- ing of any other commodity, with intent to sell it at an unreasonable price, is an offence indict- able and fineable at the common law. Cro. Car. 232. And the general penalty for this of- fence, as well as for FORESTALLING and REGRA- TI NG (which see), by the common law (for all the statutes concerning them were repealed by 12 Geo. III. c. 71.) is, as in other minute mis- demeanors, discretionary fine and imprisonment.

1 Hawk. P. C. 235. Among the Romans these offences, and other mal-practices to raise the price of provisions, were punished by a pecu- niary mulct. ' Poena vigifjti aureorum statuitur adversus eum, qui contra annonam fecerit, so- cietaternve coierit quo annona carior fiat.' Stat.

2 & 3, Edw. VI. c. 15. seems yet in force; pro- hibiting butchers, brewers, bakers, poulterers, cooks, and fruiterers, from conspiring not to sell victuals, but at certain prices, on penalty of £10 for the first offence, £20 for the second, £40 for the third, &c. ; and if such conspiracy be made by any company, or body corporate, the corpo- ration shall be dissolved. See MONOPOLY and CORN LAWS.

ENGUA'RD, v. a. From en and guard. To protect ; to defend ; to surround as guards. Not used.

A hundred knights ! yes, that on every dream He may engvard his dotage with their powers, And hold our lives at mercy.

Shaktpeare. King Lear.

ENHANCE',) Fr. hausser, haut, which, ENHANCE'MENT, J according to Wachter, are the same with the Sax. hethe, height ; and proba- bly from Lat altus, high. To raise up or ad- vance literally or metaphorically ; to aggravate : enhancement is either of value or of ill.

And thou Cafarnaum art enhaunsid til to hevene thou schalt be drenchid till into hello.

Widif. Luk. 10.

Both of them high at once their hands enhanced, And both at once their huge blows down did sway.

Spenser.

Their yearly rents are not improved, the landlords making no less gain by fines than by enhancement of rents. Bacon.

To believe or pretend that whatever our hearts in- cite is the will of God within us, is the principle of villainy that hath acted in the children of disobedience, enhanced and improved with circumstances of greater impudence than the most abominable heathens were guilty of. Hammond.

What is it but the experience of want that enhances the value of plenty ? L'Estraage.

The desire of money is every where the same : its vent varies very little, but as its greater scarcity en- hancet its price, and increases the scramble. Locke.

Jocular slanders have, from the slightness of the temptation, an enhancement of guilt.

Government nf the Tonyve.

The remembrance of the difficulties we now undergo, will contribute to enhance our pleasure. Atterbury That gratitude and temperance iu our use*

Of what he gives unsparing and profuse.

Secure the favour, and enhance the joy, That thankless waste and wild abuse destroy.

Cmoper Then Cupid, to enhance the prize,

Gave all his little arts could reach : To dart Love's language from the eye» He taught — 'twas all was left to teach.

Sheridan.

ENHARMONIC, in music. The Greeks had three different species of music; the diatonic, the chromatic, and the enharmonic. This last was esteemed by much the most agreeable and powerful of the three ; but the difficulty of its execution rendered its duration short, and later artists were upbraided for having sacrificed it to their indolence. It proceeded upon lesser in- tervals than either the diatonic or chromatic; and as the chromatic semitone is still less than the diatonic, the enharmonic intervals must have consisted of that semitone divided into parts more minute. In Rousseau's Musical Dic- tionary, article ENHARMONIQUE, the reader may see how that interval was found in the tetra- cho > ds of the ancients. It is not easy for modern ears, inured to intervals so widely different, to imagine how a piece of music, whose transitions were formed either chiefly or solely upon such minute divisions, could have such wonderful ef- fects ; yet the melody of speech, which rises or falls by intervals still more minute than the en- harmonic, when properly modulated and applied with taste, has an astonishing power over the soul. Modern melody being built upon har- mony, derived from the harmonics of a funda- mental-base, we have no instruments with quarter-tones, or which can furnish a base to an enharmonic melody, if we had the power of framing and executing it with the voice or violin. We have, therefore, only two genera in our music, which two genera, the diatonic, consisting of five tones and two semi-tones in the octave, such as the key of C natural supplies upon keyed instruments ; and the chromatic, consist- ing entirely of semi-tones, twelve in number,

such as moving from any given note to its octave by semi-tones will furnish.

ENHARMONIC DIESIS, is an interval whose ratio is Vg n 21 2 + 2m. See DIESIS.

ENHARMONIC DEGREE OF ARISIOXENUS, other- wise his diesis quadrantalis, was a quarter of the major tone, or 26 2 + i f + 2ˆ m.

ENHARMONIC DEGREE OF EUCLID, otherwise his diesis quadrantalis, was three-thirtieths of a minor fourth, or 25§ 2 + i f + 21 m.

ENHARMONIC DITONE OF EUCLID was twenty-four thirtieths of a minor fourth, or 203 £ S + 4f-f-17f m.

ENHARMONIC QUARTER OF A TONE, is th«: same with enharmonic diesis, above.

ENHYDRUS, in natural history, a genus of siderochita or crustated ferruginous bodies, formed in large and mostly empty cases, en- closing a small quantity of an aqueous fluid. Of this genus there are only two species: 1. The thick shelled enhydrus, with black, reddish, brown, 'and yellow crusts. 2. The thinnte'*

iht .led kind, with yellowish-brown and purple crusts ; neither of which ferments with aqua- fortis or gives fire with steel.

ENJEDIM. (George), in biography, a Uni- tarian author, who flourished in the sixteenth century, in Hungary, whence he removed to Transylvania, and became a superintendent of the Unitarian churches. He died in the year 1597, and was regarded as one of the best writers in what is called the Socinian cause. His principal work was Explicatio Locorum Scripturas Veteris et JVovi Testamenti, ex quibus Dogma Trinitatis stabiliri solet, 4to. The first impression was burnt by the public authorities ; but a new edition was afterwards published in the Netherlands. Moreri.

EN1F, in astronomy, a fixed star of the third magnitude, in Pegasus's mouth.

ENIG'MA, n.s. ~\ Fr. cnigme ; Span.

*ENIGMATICAL, adj. * Port. and Ital.ewzgwja; ENIGMATICALLY, adv. ˆLat. enigma; Gr. at- ENIG'MATIST, n. s. J wyjua,from aivtrro/ iat, to speak darkly. A dark or obscure speech or saying ; a riddle. The adjective and adverb fol- low this sense : an enigmatist is he who makes or proposes enigmas.*

Your answer, sir, is enigmatical. Shakspeare. Faith here is the assent to those things which come to us by hearing, and are so believed by adherence, or dark enigmatical knowledge, but hereafter are seen or known demonstratively. Hammond.

Enigmatical deliveries comprehend useful verities ; but being mistaken by liberal expositors at first, they have been misunderstood by most since.

Browne's Vulgar Err ours.

Whilst they affect enigmatical obscurity, they puzzle the readers of their divulged processes.

Doyle.

The dark enigma will allow A meaning; which, if well 1 understand, From sacrilege will free the god's command.

Dryden.

That I may deal more ingenuously with my reader than the above-mentioned enigmatist has done, I shall present him with a key to my riddle. Addison.

Athenacus gives instances of the enigmatical propo- sitions in use at Athens, and of the forfeitures and rewards upon the solution or nonsolution.

Broome's Notes on the Odyssey. Homer speaks enigmatically, and intends that these monsters are merely the creation of poetry. Broome.

A custom was amongst the ancients of proposing an enigma at festivals, and adjudging a reward to him that solved it. Pope.

This page of Providence quite new, And now just opening to our view, Employs our present thoughts and pains, To guess and spell what it contains : But day by day, and year by year. Will make the dark enigma clear. Cowper.

Unlike the enigmatic line,

So difficult to spell, Which shook Belshazzar at his wine

The night his city fell. Id,

ENIGMA. In the article ./ENIGMA are in- serted some of the most curious specimens of this species of composition. Junius defines an enigma to be an obscure parable, or allegory; and makes two kinds : the one greater, rendering the sentence more intricate and knotty, by a multitude of words; the other lesser, consisting

of only one or two remote words, or allusions ; as in Isaiah xi. i. where Jesus Christ is called "li'J surculus, rod, or branch. The best Latin collec- tion of verbal enigmas, is that of Giraldi, as re-published by Reusner Leorinus, France, 1602.

ENIGMAS, PAINTED, are representations of the works of nature or art, concealed under hu- man figures drawn from history or fable. Thus Jesus Christ, in the middle of the doctors, re- presents the Bible, &c. It is easier to find good subjects for enigmas in figures than in words, inasmuch as painting attracts the eyes, and ex- cites the attention to discover the sense. The subjects of enigmas in painting are to be taken either from history or fable ; the composition here is a kind of metamorphosis, wherein, e. g. human figures are changed into trees, and rivers into metals. This conversion, however, does not depend merely on caprice ; there must be something of suitableness, and even erudition to authorise it. Thus the battle of Constantine against Maxentius may be taken for the subject of an enigma, to represent the game of chess : the sign which appeared in the heavens with the words, 'in hoc signo vinces,' may properly enough represent the secret of this game, which consists in saving the king. It is much easier, however, to turn mythology into enigmas, than history.

ENJOIN', v. a. I Fr. enjirindre ; Lat. in-

ENJOIN'MENT, n. s. \jungere. To join (a com- mand) to any person or thing ; to lay a com- mand upon; direct; order: enjoinment is direction ; command.

To satisfy the good old man, I would bend under any heavy weight
That he'll enjoin me to.

Shakspeare. Much Ado about Nothing.

Monks and philosophers, and such as do conti- nually enjoin themselves. Bacon's Natural History.

If God enjoined oidinary fire, they had sinned to look for celestial ; now he commanded only the fire which he sent. Bishop Hall's Contemplations.

I see God enjoining them to send ; but enjoining it, uoon their instance. fd

Yearly enjoined, some say, to undergo

This annual humbling certain numbered days,

To dash their pride and joy for man seduced.

Milton.

Critical trial should be made by publick enjoinment, whereby determination might be settled beyond debate. Browne's Vulgar Errours.

It endeavours to secure every man's interest, by en joining that truth and fidelity be inviolably preserved,*

Tillotson. Slight weie the tasks enjoined him by his lord,

To hold the stirrup or to bear the sword ;

To tune his lute, or, if he willed it more,

On tomes of other times and tongues to pore

Byron.

ENJOY', v.a. Sav. n. } Fr. jouir, enjouir;

ENJOY'ER, n. s. > Lat. gaudere ; to be

ENJOY'MENT. 5 glad (the g being soft-

ened into j.). To feel with pleasure ; to obtain the practice of; to please; gladden; taking the reciprocal pronoun: as a neuter verb, to live happily.

Creatures are made to enjoy themselves, as well as to serve us. More.

Edward the saint, in whom it pleased God, right- eous and just, to let England see what a blessing sin and iniquity would not suffer it to enjoy. Hooker,

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Pleasure is nothing but the intermission of pain, the enjoying of something I am in great trouble for till I have it. Selden.

An absurd way of enjoying ourselves at meals is, where the bottle is plied without being called for, where humour takes place of appetite, and the good company are too dull, or too merry, to know any en- joyment in their senses. Fuller.

He, who, to enjoy

Plato's elysium, leaped into the sea, Cleombrotus. Milton's Paradise Lost.

Then I shall be no more ! And Adam, wedded to another Eve, Shall live with her enjoying, I extinct. Id. Health is the soul that animates all enjoyment of life ; which fade, and are tasteless, if not dead with- out it. Sir W. Temple.*

In our pursuit of the things of this world, we usually prevent enjoyment, by expectation ; we antici- pate our own happiness, and eat out the heart and sweetness of worldly pleasures, by delightful fore- thoughts of them. TMotian.

His hopes and expectations arc bigger than his en- joymenti. Id.

The obligation any one is under, by virtue of such enjoyment, to submit to the government, begins and ends with the enj-tyment ; so that whenever the owner, who has given nothing bat such a tacit con- ssut to the government, will, by donation, sale, or otherwise, quit the said possession, he is at liberty to go and incorporate himself into any other common- wealth. Locke.

When a man shall, with a sober, sedate, diabolical rancour, look upon and enjoy himself in the sight of his neighbour's sin and shame, can he plead the in- stigation of any appetite in nature ? South.

Covetousness, by a greediness of getting more, de- prives itself of the true end of getting : it loses the enjoyment of what it had got. Sprat.

A contented mind is the greatest blessing a man can enjoy in this world ; and if in the present life his happiness arises from the subduing of his desires, it will arise in the next from the gratification of them,

Addison.

I could enjoy the pangs of death, And smile in agony. Id. Cato.

He shall never truly enjoy his present hour, who never thinks on his last. Young.

Every man is rich or poor, according to the pro- portion between his desires and enjoyments. Of riches, as of every thing else, the hope is more than the en- jnyment. Johnson.

It cannot reasonably be doubted, but a little miss, dressed in a new gown for a dancing-school ball, receives as complete enjoyment as the greatest orator, who triumphs in the splendour of his eloquence, while he governs the passions and resolutions of a numerous assembly. Hume.

It is the dignity of our natures, that we are capa- ble of knowing and enjoying him that made us.

Mason. Me fruitful scenes and prospects waste

Alike admonish not to roam ; These tell me of enjoyments past,

And those of sorrows yet to come. Cowper, ENKIND'LE, v. a. From en and KINDLE, which see. To fire ; inflame ; rouse to passion ; incite.

Do you not hope your children shall be kings, When those who gave the Thane of Cawder to me, Promised no less to them ?

• That trusted home,

Might yet enkindle you unto the crown. Shakspeare.

Edmund, enkindle all the sparks of nature, To quit this horrid act. Id. King Lear.

ENLARGE', v. a. & v. n. "> Fr. enlargir ;

ENLARGE'MENT, n. t. >frora en and large.

ENLARGE'R. J To make greater;

increase ; exaggerate ; amplify ; diffuse ; hence to deliver from limits or bondage.

If thou boldest thy peace at this time, then shall there enlargement and deliverance arise to the Jews from another place. Esther iv. 14.

O ye Corinthians, our mouth is open unto you, our heart is enlarged. 2 Cor. vi. 11.

It hath grown from no other root than only a desire to enlarge the necessary use of the word of God, which desire hath begotten an errour, enlarging it farther than soundness of truth will bear. Hooker.

Though she appear honest to me, yet at other places she enlargetk her mirth so far, that there is shrewd construction made of her. Shakspeare.

Lieutenant, At our enlargement what are thy due fees 1 Id.

Enlarge the man committed yesterday, That railed against our person. Id. Hen. V.

The caliphs obtained a mighty empire, which was in a fair way to have enlarged, until they fell out among themselves. Raleigh.

The king afterwards enlarged the constant obedience of the city with enlargement both of liberties and of revenues. Haytcard.

It is a miserable thing, when governours humour the people in their sins ; and instead of making up the breach enlarge it. Bp. Hall's Contemplations.

They appointed the chancellor of the exchequer to enlarge upon any of those particulars. Clarendon.

He concluded with an enlargement upon the vices and corruptions which were got into the army. Id.

This is that science which would truly enlarge men's minds, were it studied. Locke.

Could the mind, as in number, come to so small a part of extension or duration as excluded divisibility, that would be the indivisible unit, or idea ; by repe- tition of which it would make its more enlarged ideas of extension and duration. Id.

Tis the property of all true knowledge, especially spiritual, to enlarge the soul by filling it ; to enlarge it without swelling it- to make it more capable, and more earnest to know, the more it knows. Sprat.

This is a theme so unpleasant, I delight not to enlarge on it j rather wish the memory of it were extinct. Decay of Piety.

There never were any islands, or other consider- able parcels of land, amassed or heaped up ; nor any enlargement, or addition of earth, made to the conti- nent by the mud that is carried down into the sea by rivers. Woodward.

The commons in Rome generally pursued the enlargement of their

power by more set quarrels of one entire assembly against another. Swift.

The wall, in lustre and effect like glass,

Which o'er each object casting various dyes,

Enlarges some, and others multiplies. Pope.

And all who told it, added something new ;

And all who heard it made enlargements too. Id.

This is not solely owing to the enlargement of the iris of the eye, since that is performed in an instant, but to this law of sensation, that when a less stimulus is applied (within certain bounds) the sensibility increases. Darwin.

Had he never left this spot, his notions might have remained the same as at first ; and had he travelled but a little way from it, they would not perhaps have received any material enlargement. Beattie

It was such pleasure to behold him, such

Enlargement of existence to partake Nature with him, to thrill beneath his touch,

To watch him slumbering, and to see him wake.

Byron.

ENLARGE, in the manege, is used for making a horse go large, that is making him em- brace more ground than he before covered. This is done when a horse works upon a round, or upon volts, and approaches too near the centre, so that it is desired he should gain more ground, or take a greater compass. To enlarge your horse, you should prick him with both heels, or aid him with the calves of your legs, and bear your hand outwards- If your horse narrows, he is enlarged with pricking him with the inner heel, and sustaining him with the outer leg, in order to press him forwards, and make his shoul- ders go. Upon such occasions the riding-mas- ters cry only

large, large.

ENLIGHT', v. a. -\ From en and LIGHI,

ENLIGHTEN, v. a. > which see. Sax. en-

ENLIGHTEN'ER, n. s. } hhtan. To illuminate ;

supply with light : hence to quicken or improve

vision; and metaphorically to instruct; afford

knowledge to ; cheer ; gladden.

His eyes were enlightened. Sam.

God will enlighten my darkness. Psalms.

Those who were once enlightened. Hebrews. As the sun shineth to the whole world, so there is no faith but this one published, the brightness whereof must enlighten all that come to the knowledge of the truth. Hooker.

How easy is it for him that made the eye of man and beast, to dim or enlighten it at his pleasure.

Bp. Hall's Contemplations. O, sent from heaven,

Enlightener of my darkness ! gracious things Thou hast revealed. Milton's Paradise Lott. The more a body is near to the eyes, and the more d\rectly it is opposed to them, the more it is enlight- ened ; because the light languishes and lessens, the farther it removes from its proper source.

Dryden's Dufresnoy.

Love never fails to master what he finds ; The fool enlightens, and the wise he blinds. Id. The head truly enlightened will presently have a wonderful influence in purifying the heart. Sprat.

This doctrine is so agreeable to reason, that we meet with it in the writings of the enlightened hea- thens. Spectator.

Tis he who enlightens our understanding, corrects our wills, and enables us to subdue our affections to the law of God. Rogers.

Wit from the first has shone on ages past, Enlights the present, and

shall warm the last.

Pope.

Sir, I confess, I feel a sentiment of deep indigna- tion, when I hear (I take it from report) that this scrap of nonsense was uttered to one of the most enlightened of the human race. Sheridan.

ENLI'NK, v. a. From link. To chain to; to connect.

Enlinkt to waste and desolation.

Shakspeare. Henry V.

ENLFVEN, v.a.\ A compound of LIVE,

ENLI'VENER, n. s. } which see. We had an

older word, enlive, of the same sense. To give

life or spirit to ; to quicken ; gladden. An en-

livener, is that which animates or invigorates.

But fire, the' enlirener of the general frame, Is one, its operation still the same : Its principle is in itself ; while ours Works, as confederates war, with mingled powers

Dryd&i.

These great orbs thus radically bright, Primitive founts and origins of light, Enliven worlds denied to human sight. Prior. In a glass-house the workmen often fling in a small quantity of fresh coals, which seems to disturb the fire, but very much enlivens it. Swift.

It is content of heart

Gives Nature power to please ; The mind that feels no smart

Enlivens all it sees. Cowper.

Improving thus fast, perhaps, by degrees, We may see rolls and butter spread under the trees. With a small pretty band in each seat of the walk; To play little tunes and enliven our talk. Sheridan.

The rose was yet upon her cheek, But mellowed with a tenderer streak : Where was the play of her soft lips fled ? Gone was the smile

thai enlivened their red.

Byron. Siege of Corinth.

ENLIST. From list. Fr. liste ; Ital. lista ; Sax. lisan. To enter on the roll or list of some particular calling or service.

Besides this body of regular troops, there are strag- glers, who, without being duly enlisted and enrolled, do infinite mischief to those who are so unlucky as to fall into their hands. Aiidiinm.

A story in which native humour reigns Is often useful, always entertains. A graver fact, enlisted on your side, May furnish illustration, well applied.

Cowper.

ENLU'MINE, v. n. See ILLUMINE. To il- luminate ; to enlighten. Not in use.

For having yet, in his deducted spnght, Some sparks remaining of that heavenly fire,

He is enlumined with that goodly light, Unto like goodly semblance to aspire. Spenser. EN'MITY, n. s. Fr. inimitie. In, not, and amity. See ENEMY. State of opposition or un- friendliness ; aversion j malice ; malevolence.

Know ye not that the friendship of the world is en- mity with God ? James iv. 4.

They shall within this hour, On a dissention of a doit break out In bitterest enmity. Shakspeare. Coriolanus. Between thee and the woman I will put Enmity; and between thine and her seed : Her seed shall bruise thy head, thou bruise his heel.

Milton.

How far those controversies, and appearing enmities of those glorious creatures, may be carried, is not my business to shew or determine. Dryden.

And here we have the plain difference between the state of nature and the state of war, which, however some men have confounded, are as far distant as a state of peace, good will, mutual assistance and preser- vation, and a state of enmity, malice, violence, and

mutual destruction, are one from another. Locke.

You must firmly be convinced, that every sin you commit sets you at enmity with heaven, and will, if not forsaken, render you incapable of it. Wake.

He who performs his duty in a station of great power, must needs incur the utter enmity of many, and the high displeasure of more. A tterbury.

He had too much merit not to excite some jealousy j too much innocence to provoke any enmity. Burke.

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ENMA'RBLE, v. a. From en and marble. To turn to marble ; to harden. Obsolete.

Their dying to delay,

Thou dost enmarble the proud heart of her, Whose love before their life they do prefer.

Spenter.

ENME'SH, v. a. From en and mesh. To net ; to entangle ; to entrap.

So will I turn her virtue into pitch ; And out of her own goodness make the net That shall enmeth them all. Shutuspeare. Othello.

ENNA, in ancient geography, the modern Castro Giovani, a city of Sicily, seated on an eminence in the middle of the island, whence, according to Diodorus, it was called the Navel of Sicily. It was one of the strongest places in the island, and remarkable for the beautiful plains, fruitful soil, and numerous lakes and springs, of its vicinity. Diodorus informs us, that Ceres was born in this district ; and that she first taught the inhabitants of Enna the art of agriculture. He adds, that the rape of Proserpine by Pluto happened near Enna, while the young goddess was gathering flowers in a neighbouring meadow. The Euneans showed a large cavern, which, as they believed, opened of itself, to make the god a way to his infernal kingdom. Hence originated the worship which the Sicilians paid to these two divinities ; the magnificent temple which Gelo erected to Ceres in this city; and the solemn festival, which the Syracusians annually cele- brated near the fountain Cyane, supposed to have sprung up when the earth opened under Pluto's feet. The temple of

Ceres was famous 2. ;d resorted to from all parts. The waters of this •ieighbourhood were also in high repute for their limpidity and salubriousness.

ENNEACHORD, in ancient music, an instru- ment with nine strings.

ENNEACRUNOS, q. d. the nine fountains, in ancient geography, a fountain of Greece, in Altica, constructed by order of Pisistratus, at the foot of mount Hymettus, the waters of which were conveyed through nine pipes or channels into the town. See CYCLE OF THE MOON.

ENNEADECATERIS, in chronology, from tvvta, nine, and StKa, ten, a cycle of nineteen years. The Jews, Athenians, and other nations, who wished to accommodate the lunar month to the solar year made use of this cycle ; allowing to seven of the years thirteen, and to the rest, twelve months each.

ENNE'AGON, n. s. Evvta and yuvia. A figure of nine angles.

ENNEAHEDRIA, in natural history, a genus of columnar, crystalliform, and double-pointed spars", composed of a trigonal column, terminated at each end by a trigonal pyramid. Of this genus there are several species, distinguished by the length or shortness of the column and pyra- mids, none of which give fire with steel, but all of them ferment with aquafortis. See SPAR.

ENNEANDRIA, in botany, from iv via, nine, and avj/o, a man. The ninth class in Linnaeus's sexual system ; consisting of plants which have hermaphrodite flowers with nine stamina or male organs. See BOTANY.

ENNERIS, in ancient ship-building, a name given to gallevs, or vessels, which had nine tiers

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of rowers. They were of a very considerable size, and rose high above the water. The tes- seracontes were a species of vessels of this fabric ; that of Philopater had forty rows of oars, that of Ptolemy Philadelphus, had thirty ; and some others which are spoken of, had twenty rows. It has been disputed, however, by many, whether such large vessels as these were ever actually built. Meibom gives great reason to believe that they really were, though he, at the same time, alleges against Salmasius, and the admirers of the works of the ancients, that very few vessels were built larger than these enneres,

or nine tiered ones, and seems to prove it from Livy, Plutarch, and Polybius. This writer has given the rules of this ancient naval architecture, and is of opinion, that by imitating it at present, modern galleys and galleasses might be built much more conveniently both for strength, cele- rity, and cheapness.

.ENNIS, the assizes town of the county of Clare in Ireland, is situated on the river Fergus, in the barony of Islands : it is a post, market, borough, and fair town; is 142 miles south-west of Dublin, and twenty-five from the city of Limerick. The population, twenty years ago, was rated at 9000, at present it does not amount to 7000. Here are a church, a Roman Catholic chapel, one Methodist ineeting-house, an old mar- ket-house, and a handsome court-house, with a town-hall. A new gaol is just now erected, after the designs of Mr. Behan, and the old one con- verted into a linen hall. The chief trade consists of sales in corn, flannel, and linen. There is a per- manent barrack at Clare Castle, two miles from Ennis, and a race course at Ballycorree, at which annual meetings are held in June. Good lime-stone, for building and for burning is readily procured in the vicinity. The charitable institu- tions are the County Infirmary and the Fever Hospital, to which may be added a poor-school of 100 children, supported by the London Hibernian Society. The great obstacle to the improvement of this town is the natural obstruc- tion of the river Fergus. The suggestions for remedying this disadvantage are, either to cut a canal of sixty-four perches in length, from Ennis, by which means the Shannon boats might reach the town, while, at present, they only come to the port of Clare: or, to open a canal from Ennis to Scariff Bay in the Shannon. The first design, that of cutting through the rock at Clare, is decidedly preferable. Besides the public in- stitutions and buildings already existing there is a diocesan, and two private classical schools in the town, and the inhabitants, generally, are attached to education.

ENNISCORTHY, a market, post, and fair town in the county of Wexford, in Ireland, on the river Slaney, situated seventy-six miles and a quarter from Dublin. It has a barrack for two companies of infantry, a church and glebe of twenty-three acres, a Roman Catholic chapel one Methodist, and one Quaker meeting-house. Here was an ancient abbey ; and a very fine old castle is still in good preservation; it was built by king John, besieged by Cromwell in 1649, is now the property of lord Portsmouth, and is in habited by his lordship's agent. Enniscorthy*

being the head of the navigation, is a good market for corn, which is sent hence either to Wexford, seventeen miles, or to Ross, twenty-four miles, for exportation. The parish of Enniscorthy is a union of five, and contains about 12,000 acres, and a population of 4000 souls.

ENNISFALLEN, or INNISFALLEN, a luxuri- ant and beautiful isle in Killarney Lake, Kerry, Munster, containing about twenty-two acres, where travellers generally dine, in a sort of hall, fitted out by the proprietor, in one of the aisles belonging to an ancient abbey, now in ruins.

ENNISKILLEN, the chief town of the county of Fermanagh, in Ireland, is situated upon Lough Erne, partly in the barony of Magheraboy, and partly in that of Tyrkenedy. It is a borough, market, post, and fair, town, 100 English miles from Dublin, and thirty from Ballyshannon. The Enniskilleners occupy a remarkable place in the history of the civil wars in Ireland. There is a dragoon regiment, which is always recruited in this town, called the Enniskilleners ; and the noble family of Cole derive the title of earls from this place. The town is situated on an island between the upper and lower lakes, and is ap- proached by two good bridges, lately rebuilt. Here are the remains of the Maguires castle, now converted into an artillery barrack ; a large but ancient church in a commanding situation ; and an excellent market-house, adorned with a steeple built in 1792, and containing a spacious assem- bly-room. Contiguous to the market-house are the corn exchange and butter-market, the latter rebuilt in a handsome style by the corporation in 1807. The court-house is a respectable building, lately re-built, and adorned by a handsome, though rather heavy, portico in front. At the east entrance of the town stands the gaol, large and well-designed, but a grievous interrup- tion to the otherwise beautiful scenery of the neighbourhood, being planted, in all its dismal, dreary, awkward, loneliness, in the very centre of the foreground in the view of Enniskillen. Near the gaol, but in a more elevated situation, stands the County Infirmary, a commodious and rather architectural building. The town consists of one long and well-proportioned street, with several smaller avenues at right angles to the main one. Enniskillen being the principal pass from Ulster to Connaught, easily defensible from its insular position, and possessing an excellent market, is made the head quarters of the military. The barrack here is extensive, but appears rather too low and too near the water to be healthy. There are many good houses in Enniskillen ;

many resident gentry ; a public journal, spiritedly conducted and supported ; annual balls ; periodi- cal theatricals ; and yearly meetings on the face- course, which is about one mile from the town. The neighbourhood of Enniskillen is thickly inhabited by resident gentry, the beautiful scenery of Lough Erne attracting them to its banks. The villa of Killyhevlin, on the narrow channel be- tween the lakes, is the most romantic and pic- turesque amongst many. One mile from the town is Castlecole, the seat of Lord Belmore. The house, considered the noblest private man- Bon in Ireland, is built of Portland stone, after Voi, VIIL

a design of J. Wyatt, Esq. in 1791, at an ex- pense of £100,000. The offices, built lately, are of yellow sand-stone, raised at the quarry of Slushill, of a durable quality, bright yellow color, and easily worked. This stone is not suf- ficiently appreciated by the Enniskilleners; per- haps, it was not much known until lately. It is admirably calculated for building, possessing a beautiful color, and is equal in all respects to Portland stone. To the west of the town, about a quarter of a mile distant, stands the endowed school of Portora. The house is spa- cious but the situation greatly exposed, nor can any hope of shelter be derived from plantations, as the house crowns the highest summit of the hill. At the foot of the hill, on which the school is erected, are the picturesque ruins of Portora Castle, once the palace of the bishops of Cloghan. In days of Irish chivalry these ruins witnessed the sacrifice of many victims at the altar of false honor. Portora Castle was the place of embarka- tion processions to Devinish Island.

When the intended improvements in the lake navigation shall have been completed, Ennis- killen will, in all probability, increase rapidly in trade and population; it possesses already many natural advantages besides the protection of a munificent patron.

ENNIUS (Quintus), an ancient Latin poet, born at Rudii, a town in Calabria. He came first to Rome, when M. Portius Cato was ques- tor, whom he had instructed in the Greek lan- guage in Sardinia, and by his genius gained the favor of the most eminent persons in the city. According to Horace, Enmus never applied himself to writing till he had drunk freely of wine. Hence he contracted the gout, of which he died, A. A. C- 9. He was interred in Scipio's sepulchre, who caused a statue to be erected to him upon his monument. lie endeavoured to introduce the treasures of the Greek tongue among the Latins, and was the first among the Romans who made use of heroic verses. He wrote the Annals of Rome ; he translated several tragedies from the Greek, and wrote others, besides several comedies. We have only some fragments of his works, which were first collected

by the two Stephens, and afterwards published at Naples, with a learned commentary, by Jerom Columna, in 4to. 1590 ; and reprinted at Amster- dam in 1707, 4to. with additions by Hesselius.

ENNO'BLE, v.a. J From en and noble. Fr,

ENNOBLE'MENT,W.S. \ ennoblir ; Lat. nobilis, & notum, known. To raise to nobility; dignify; elevate ; make famous or illustrious.

Now, O thou sacred Muse ! most learned dame, Fayre ympe of Phoebus and his aged bryde, The nourse of Time and everlasting Fame, That warlike handes ennoblest with immortall name, Spenser. Faerie Queene.

Begin then, O my dearest sacred Dame, Daughter of Phoibus and of Memorye, That doest ennoble with immortall name, The warlike worthies from antiquitye, In the great volume of eternitye. Somervile,

Many fair promotions Are given daily to ennoble those, That scarce some two days since were worth a noble,

Shakspeare,

The Spaniards could not as invaders land in Ire- land, but only ennobled some of the coasts thereof, with shipwrecks. Bacon.

He added, during parliament, to his former crea- tions, the ennoblement or advancement in nobility of a few others. Id.

None so lovely, sweet and fair, Or do more ennoble love. Waller.

The eternai wisdom enriched us with all ennoble- ments, suitable to the measures of an unstraitened goodness. Glanettle.

Spite of all the fools that pride has made,

Tis not on man a useless burthen laid ;

Pride has ennobled some, and some disgraced ;

It hurts not in itself, but as 'tis placed ;

When right, its view knows none but virtue's bound ;

Wh«-.n wrong, it scarcely looks one inch around.

StUlinyflect.

God raised up the spirit of this great person, and ennobled his courage and conduct with the entire over- throw of this mighty host. South.

What can ennoble sots, or slaves, or cowards ? Alas ! not all the blood of all the Howards. Pope.

What does he not, from lusts opposed in vain, And self-reproaching conscience ? He foresees The fatal issue to his health, fame, peace, Fortune, and dignity -, the loss of all, That can ennoble man, and make frail life, Short as it is, supportable. Cowper.

Ye Elements ! — in whose ennobling stir

I feel myself exalted — can ye not

Accord me such a being ? Do I err

In deeming such inhabit many a spot ? Though with them to converse can rarely be our lot.

Byron.

ENNON. See BEN-HINNOM.

ENNS, a populous town of Upper Austria, seated on an eminence near the confluence of the Enns and the Danube. It is well built, and fortified, having an arsenal and two castles. Inhabitants about 4400. Forty-two miles E. S. E. of Passau, and eighty west of Vienna.

ENNS, a river of Austria, which, rising in the duchy of Saltsburg, flows through Styria, and forms the boundary between Upper and Lower Austria. It falls into the Danube at the town of Enns, and is navigable in the lower part of its course, but it has several cataracts in Styria.

ENNUI, a French word almost naturalised, and used to express a listless state of insipi- dity and inactivity of body and mind. The aversion from ennui, or the desire of intellectual emotion, is described by Helvetius, in his work On Mind, as a very powerful and general spring of conduct.

ENOCH, the son of Jared and father of Methuselah, was born A. M. 622. At the age of sixty-five he begat Methuselah, and lived 300 years after, and had several sons and daughters. Enoch walked with God ; and, after he had lived 365 years, ‘ he was not, for God took him.’ Some construe these words, as if they intimated that Enoch died a natural death, because in reality he lived not near so long as the other patriarchs of those times ; or as if God, to secure him from corruption, had taken him early out of this world. But the generality of the fathers and commentators assert that he died not, but was translated out of the sight of men, as Elijah was. The apostle Paul shows very clearly that Enoch was translateˆ and did not see death. Heb xi.

5. The Rabbis maintain that, when Enoch was translated to heaven, he was admitted into the number of the angels, and is the person generally known by the name of Michael.

ENOCH, THE PROPHECY OF, an apocryphal book, ascribed to Enoch. That Enoch was a prophet will admit of no doubt ; he named his son Methuselah (ifitt, he dieth, and rV?ttT, it, or he, cometh), in this character; and Me- thuselah died in the same year in which ven- geance was executed on the old world by the coming of the flood. The apostle Jude cites the language of Enoch, ver. 14, 15, but upon this passage interpreters have been very much di- vided ; and the question has been, Whether the apostle took this passage out of any particular book written by Enoch, which might be extant in the first ages of the church ? whether he received it by tradition? or lastly, by some parti- cular revelation ? Some have supposed, that he read it in the book ascribed to Enoch, which, though apocryphal, might contain several truths that St. Jude, who was favored with a super- natural degree of understanding, might make use of to the edification of the faithful. The ancients greatly esteemed this work. Tertullian expresses his concern, that it was not generally received. St. Augustin allows, indeed, that Enoch wrote something divine, because he is cited by St. Jude: but he says that the authority of this book is doubtful, and that it cannot be proved that it was really written by Enoch. It lay a long time buried in oblivion, till the learned Joseph Scaliger recovered a part of it. Scaliger, Vossius, and other learned men, attribute this work to one of those Jews who lived between the time of the Babylonish captivity and that of Jesus Christ. Others are of opinion, that it was written after the rise and establishment of Christi- anity, by one of those fanatics with whom the primitive church was filled, who made a ridicu- lous mixture of the Platonic philosophy and the Christian divinity. Enoch is famous even in heathen story: the eastern writers, Arabic and Persian, speak very

highly of the prophet Enoch or Edris, as they call him; they say he received from God the gift of wisdom and knowledge ; and that God sent him thirty volumes from heaven, filled with all the secrets of the most mysterious sciences. Upon the writings of these eastern authors, the book called the Prophecy of Enoch was probably fabricated.

ENOCH, in ancient geography, a city said to have been built by Cain in the land of Nod, where he and his family settled, and called after the name of his son Enoch. Gen. iv. 16, 17. Moses places it, according to our translation, on the east of Edeti ; and Ptolemy mentions a city called Anuchtha in Susiana, or Chusistan, a country lying eastward from Chaldea, which the learned Huet supposes to have been the same with that built by Cain. But it seems very improbable that the city of Enoch, built before f.he flood, should either withstand the deluge or retain its ancient name, after so great a change in the surface of the earth Besides, Susiana being a very fertile and pleasant country, it is not likely that Cain should be banished thither, but rather to some barren and desolate land, remote

from the place of his nativity, and separated by mountains, or other natural impediments, from intercourse with his relations. As there was another Enoch (see the preceding article) besides the son of Cain, it is not improbable that the city Ar, uchtha, mentioned by Ptolemy, might have taken its name from him, whose memory would be held in veneration, or from some other Enoch or Anoch, who might have lived after the flood. Grotius and Junius are of opinion, that the country into which Cain retired was the desart of Arabia; but as this country lies on the west, and not on the east of Eden, it is said, that the words which we translate < on the east' of Eden signify nothing more than ' before' or ' over against' Eden, according to the translation of the Septuagint. According to this opinion, the land of Nod must have been Arabia Deserta, or some part of it, and not Susiana. Wells's Sacred Geography.

ENOR’MITY, n. s. -\ Fr. Ital. and Span.

ENOR’MOUS, adj. (ˆenorme ; Lat. enormis,

ENOR’MOUSLY, adv. (e and norma, a builder’s

ENOR'MOUSNESS,W.S. 3 square. State of being

beyond rule or law ; hence great depravity ; gross

corruption : enormous is out of rule ; beyond

measure ; irregular.

O heartless fooles, haste here to our doctrine, Leauc off the wayes of your enarmitie. Barclay.

We shall speak of the particular abuses and enormi- tiet of the government. Spenser. State of Ireland.

That this law -will be always sufficient to bridle or restrain enormity, no man can warrant. Hooker.

I shall find time

From this enormous state, and seek to give Losses their remedies.

Shakspeare. King Lear. Wallowing, unwieldy, enormous in their gait.

Milton. Nature here

Wantoned, as in her prime ; and played at will Her virgin fancies, pouring forth more sweets, Wild above rule, or art, enormous bliss ! Id.

There are many little enormities in the world, which our preachers would be very glad to see removed ; but at the same time dare not meddle with them, for fear of betraying the dignity of the pulpit.

Addison's Guardian.

One who could never espouse a notion so enormously absurd and senseless, as that the world was framed by chance. Woodward.

When those who have no opportunity to examine our faith, see the enormoutncss of our works, what should hinder them from measuring the master by the disciples ? Decay of Piety.

The enormous part of the light in the circumference of every lurid point, ought to be less discernible in shorter telescopes than in longer, because the shorter transmit less light to the eye. Newton's Opticks.

It is not a bare speculation that kings may run into enormitiei ; the practice may be proved by example.

Swift.

A giant shepherd here his flock maintains, Far from the rest, and solitary reigns, A form enormous ! far unlike the race Of human birth, in stature, or in face.

Pope's Odyssey.

1 say it is impossible that so sensible a people, under such circumstances, should have lived so long by the smoky, unwholesome, and enormously expensive light of candles. Franklin.

The envy and discord which were introduced into

the families of Jacob and Elkanah, by a plurality of wives", are but imperfect pictures of the enormities oc- casioned by the same practise under masters less virtuous, and in ages more dissolute and luxurious.

Robertson's Sermons. Thus harmony and family accord Were driven from Paradise ; and in that hour The seeds of cruelty, that since have swelled To such gigantic and enormous growth, Were sown in human Nature's fruitful soil.

Cowper.

And even where Nature loads the teeming plain With the full pomp of vegetable store, Her bounty, unimproved, is deadly bane : Dark woods and rankling wilds, from shore to shore, Stretch their enormous gloom. Beattie.

And yet vice, however it may surprise by its novelty or enormity, is by no means an object of laughter, even to those who perceive in it all the absurdities I have specified. Id.

ENOS, the son of Seth, and father of Cainan was born, A.M. 235. Moses tells us, Gen. iv- 26, that then ' men began to call upon the name of the Lord ;' or, as others translate it, that ' Enos began to call upon the name of the Lord;' or was the first observer of social rites and ceremo- nies in external worship. This worship was kept up and preserved in Enos's family, while Cain's was plunged in all kinds of immorality and impiety. Several Jews are of opinion, that idolatry was first introduced into the world in the time of Enos. They

translate the Hebrew thus, ‘ Then men began to profane the name of the Lord.’ Good men, to distinguish themselves from the wicked, began to take upon them the quality of sons or servants of God ; for which reason, Moses, Gen. vi. 1, 2, says, that the sons of God, that is to say the descendants of Enos, who had hitherto preserved the true religion, seeing the daughters of men, that they were fair, took them wives of all which they chose. Enos died at the age of 905 ; A. M. 1140.

ENOUGH’, adj. n. s. & adv. Sax. jenoh ; Goth. ganah ; Dut. and Teut. gkenog ; Swed. gnog ; Ang.Sax. genog, according to H. Tooke, from the past participle genoged, of the verb geno gun, to increase. Minsheu derives it through the Or. iicavog, sufficient, from Heb. 51J7, ghanagh, to satisfy. In sufficient measure or degree ; so as to satisfy or suffice. As a substantive, that which satisfies or suffices : as an adverb, in a sufficient degree. It slightly qualifies also by augmenta tion or diminution, as in the phrases good or well enough : enow is its plural.

The walls of the church there are enow contented to build ; the marbles are polished, the roofs shine with gold, the altar hath precious stones to adorn it, and of Christ’s ministers no choice at all. Hooker.

RICH. Why do we linger thus ? I cannot rest, Until! the white rose that I weare, be dyede Euen in the luke-warme blood of Henries heart.

YORKE. Richard, ynough : I will be King, or dye. Shakspeare’s King Henry VI. Part 3.

Henceforth, I’ll bear Affliction ‘till it do cry out itself, Enough, enough, and die.

Sltdkspeare. King Lear.

I am apt enough to think, that this same binariutn of a stronger and a weaker, like unto masculine and feminine, doth hold in all living bodies. Bacon.

And then, as tho' she could not make cnmo, Himself his various rainbow did allow. Donne. If three days were little enough to prepare them to receive the law, how is all our life short enough to prepare for the reckoning of our observing it?

Bp. Hall's Contemplation.*

Balac and his Moabites had wit enough to fear, not wit enough to prevent judgment. Id.

Man had selfish foes enow besides, That, day and night, for his destruction wait.

Milton.

He hath riches sufficient, who hath enough to be charitable. Sir T. Browne.

Tis eniiugh for me to have endeavoured the union of my country, whilst I continued in public employ- ments. Temple.

The earth hath since born enow bleeding witnesses, that it was no want of true courage. Sidney.

My conquering brother will have slaves enow To pay his cruel vows for victory. Dryden.

Why would'st thou go, with one consent they cry, When thou hast gold enough, and Emily ? Id.

When there was not room enough for their herds, they by consent separated, and enlarged their pas- ture. Locke.

It is sometimes pleasant enough to consider the dif- ferent notions which different persons have of the same thing. Addison.

There are at Rome enow modern works of architec- ture to employ any reasonable man. Id.

They are now in prison at Florence ; and, as it is said, treated hardly enough. Id. on Italy.

It would be enough to damp their warmth in such pursuits, if they could once reflect, that in such course they will be sure to run upon the very rock they mean to avoid. Swift.

Enough for me that to the list'ning swains, First in those fields I sung

the silvan strains.

Pope.

O grant me, heaven, a middle state, Neither too humble nor too great; More than enough for nature's ends, With something left to treat my friends. Mallet. Young men are apt to think themselves wise enough, as drunken men are apt to think themselves sober enough. Chesterfield.

I have seen enough of presuming ignorance, never to venerate wisdom but where it actually appears.

Goldsmith.

Public securities are with us become a kind of money, and pass as readily at the current price as gold or silver. Wherever any profitable undertaking offers itself, however expensive, there are never want- ing hands enow to embrace it. Hume.

Similar to this if on a foggy night a person turns his back to a candle and lanthorn, he will see a mon- strous shadow of himself delineated on the fog, which is dense enough to reflect a part of the candle-light in the vicinity of the shadow. Darwin.

ENPIE'RCE,v.a. From en and pierce. To transfix.

I am too sore enpierced with his shaft To soar with his light feathers. Shaktpeare.

ENRAGE'. Fr. enrager ; en and RAGE, which see. To irritate ; provoke highly.

The justice of their quarrel should not so much en- courage as enrage them, being to revenge the dis- honour done to their king, and to chastise deceitful enemies. Hayward.

Enraged at this, upon the ba-.vd I flew ; And that which most enraged me was, 'twas true.

Walth.

His system of reformation satisfied none of Iiis subjects. Some were enraged because he had pro- ceeded so far, others murmured because he proceeded no farther. Robertson's History of Scotland.

ENRA'NGE, v. a. From en and range. To place regularly ; to put into

order.

As fair Diana, in fresh summer's day, Beholds her uyuiphs enranged in shady wood.

Faerie Queene.

ENRA'NK, v. a. From en and rank. To place in orderly ranks.

No leisure had he to enrank his men. Shahspeare. ENR API", v. a.) Lat. raptor e ; to carry ENRAP'TURE, v. a. S off or away. To trans port with ecstasy or pleasure. See RAPT.

I myself

Am, like a prophet, suddenly enrapt To tell thee, that this day is ominous.

Shah-ipeare.

Nor hath he been so enrapt in those studies as to neglect the polite arts of painting and poetry.

Arbuthnot and Pope.

If his general thoughts on women were such as he exhibits, a very little sense in a lady would enrapture, and a very little virtue would astonish him.

Johnson's Life of Swift.

There is scarcely any earthly object gives me more — I do not know if I should call it pleasure — but something which exalts me, something which enrap- tures me — than to walk in the sheltered side of a wood, or high plantation, in a cloudy winter day, and hear the stormy wind howling among the trees, and raving over the plain. Burns.

Ye winged hours that o'er us past, Eniaptured more, the more enjoyed,

Your dear remembrance m my breast, My fondly-treasured thoughts employed. Id. Charmed with her words the Muse astonished

stands, The Nymphs enraptured clasp their velvet hands.

Darwin.

Fret not thyself, thou glittering child of pride, That a poor villager inspires my strain : With thee let Pageantry and Power abide ; The gentle Muse haunt the sylvan reign ; Where through wild groves at eve the lonely swain Enraptured roams, to gaze on Nature's charms.*

Beattie.

ENRAV'ISH, v. a.) From en and ravish. ENRAV'ISHMEXT, n. s. \ To throw into ecstasy or delight : to transport with pleasure.

What wonder,

Frail men, whose eyes seek heavenly things to see. At sight thereof, so much enravished be ? Spenser. They contract a kind of splendor from the seem- ingly obscuring vail, which adds to the enravishments of her transported admirers. Glanmlle's Scepsis.

ENRHE'UM, v. n. Fr. enrhumer. To have rheum through cold.

The physician is to enquire where the party hath taken cold or enrheumed. Harvey.

ENRICH', v. a. > Fr. enricher ; Ital. ar- EXRICH'MEXT, n. s. Srichlre; Span, enrique- cer; from en and rich. To make wealthy or productive ; to fertilise ; and figuratively, to store the mind with knowledge.

The king will enrich him with great riches, and will give him his daughter. 1 Sam. xvii. 25.

Henry is able to enrich his queen, And not to seek a queen to make him rich.

Shahspeare,

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ENR

There is not any one among them that could ever enrich his own understanding with any certain truth, or ever edify others therein. Raleigh's History.

I have procured a translation of that book into the general language, not without great and ample addi- tions, and enrichment thereof.

Bacon's Holy War.

Great and glorious Rome, queen of the earth, So far renowned, and with the spoils enriched Qf nations. Milton's Paradise Regained.

Those are so unhappy as to rob others, without en- riching themselves. Denham.

See the sweet brooks in silver mazes creep, Enrich the meadows, and supply the deep.

Blackmore.

The dunghil having raised a huge mushroom of short duration, is now spread to enrich other men's land. Swift.

As words grow old, and new ones enrich the lan- guage, so there is a constant succession of dress.

Gay.

It is a vast hindrance to the enrichment of our un- derstandings, if we spend too much of our time and pains among infinities and unsearchables. Watts.

Henry undermined his barons by encouraging them to sell their la< Is, which enriched the commons, and gave weight ii» the legislature unknown to their pre- decessors. Robertson's History of Scotland.

Here ragged Avarice guards with bolted door His useless treasures from the starving poor ; Loads the lorn hours with misery and care, And lives a beggar to enrich his heir. Darwin. In the foolishness of their hearts, they imagined that the maintenance and well doing of the indus- trious poor were objects of greater consequence than the enrichment of a few individuals, by any improve- ment in the implements of trade which threw the •workmen out of employment, and rendered the la- bourer unworthy of his hire. Byron.

ENRICHING PLANTS, a term used by Tull and other farmers to designate such plants as are found to improve land, rather than to exhaust it, and in consequence of which the same piece of land will produce a good crop of corn, though it would, without the assistance of their having been planted on it, have yielded a very poor one. The mystery of this difference between plants, some of which are found to burn up, that is, impoverish lands, while others enrich it, and leave it fitter for succeeding crops than they found it, is explained by Mr.

Tull. This author having observed, that breaking the earth, by digging or horse-hoeing between the plants, gave them great increase, found that it was this prac- tice that enriched the earth : and that, while corn and such plants as stand close, and cannot be hoed between, impoverish the ground, and suffer no means of enriching it again to be used, there were some other things, the crops of which being planted thinner, gave room to the earth to be ploughed, dug, or hoed between, and that these were the plants which were called the en- riching kind by the farmers; and the whole secret lay in this, that the hoeing, ploughing, or otherwise breaking the earth between them, in order to kill the weeds, enriched the ground greatly more, in proportion, than these plants exhausted it; and the consequence was, that though they had thriven very well, yet the earth was left richer than before, notwithstanding all that they had imbibed from it. — Tull's Horse- hoemg Husbandry.

ENRID'GE, v. a. From ridge. To form with longitudinal protuberances or ridges.

He had a thousand noses,

Horns walked and waved like the enridged sea : It was some fiend. Shakspeare. King Lear.

ENRI'NG, v. a. From ring. To bind round ; to encircle.

Ivy so

Enrings the barky fingers of the elm. Shakspeare. ENRI'PEN, v. a. From ripe. To ripen ; to mature ; to bring to perfection.

The Summer, how it enripened the year : And Autumn, what our golden harvests were.

Donne.

ENRO'BE, v. a. From robe. To dress ; to clothe ; to habit ; to invest.

Her mother hath intended,

That, quaint in green, she shall be loose enrobed, With ribbands pendant, flaring 'bout her head.

Shakspeare.

ENROL', v. a. \ From en and roll. Fr. ENROL'MENT, n.s. S enroller.

To involve; en- wrap ; to enter or insert on a roll ; hence to re- cord or leave in writing : an enrolment is either the act of enrolling, or the register or record made.

There be enrolled amongst the king's forces about thirty thousand men of the Jews. 1 Mac. x. 36.

From his infernal furnace forth he threw Huge flame, that dimmed all the heaven's light, Enrolled in duskish smoak and brimstone blue.

Faerie Queene.

He swore consent to your succession ; His oath enrolled in the parliament.

Shakspeare.

As God is careful to maintain the glory of his miraculous victory, so is Moses desirous to second him ; God by a book, and Moses by an altar and a name. God commands to enrol it in parchment ; Moses registers it in the stones of his altar.

Bp. Hall's Contemplations.

The king himself caused to be enrolled, and testified by a notary publick ; and delivered the enrolmentt, with his own hands, to the Bishop of Salisbury,

Davies on Ireland. Laws, which none shall find Left them enrolled ; or what the spirit within Shall on the heart engrave.

Milton's Paradise Lost. The champions, all of high degree, Who knighthood loved, and deeds of chivalry, Thronged to the lists, and envyed to behold The names of .others, not their own enrolled.

Dryden.

We find ourselves enrolled in this heavenly family as servants, and as sons. Sprat.

Heroes and heroines of old, By honour only were enrolled Among their brethren of the skies ; To which, though late, shall Stella rise.

Swift.

Mentes, an ever-honoured name of old, High in Ulysses' social list enrolled.

Pope's Odyssey.

ENROLMENT, in military affairs, signifies the registering of such persons as, being enlisted, or appointed, are placed upon the rolls of any par- ticular regiment, troop, or portion of the mili- tarj establishment. The act of enrolment seems to be held necessary in pi oof of a soldier's hav- ing become a servant of the state ; equally so with the circumstance of his having received pay,

or some money, however trifling, in advance. For it does net appear reasonable, that a sol- dier should be punished for absenting himself from that employ in which he has not received either pay or subsistence. }t is not, however, to be understood, that, after being duly enlisted in the presence of a magistrate, the recruit is at liberty to quit the party by whom he has been entertained : far otherwise ; but enrolment is necessary to his being fully treated as a soldier. In some instances, especially in the service of the East India Company, the whole of the re- cruits are lodged at a general depot, under the charge of officers, but without being attached to any particular regiment until their arrival in India : in the mean while they are formed into squads, under the immediate control of non-commissioned officers, by whom they are trained in the rudiments of military discipline. We cannot with strict propriety say, that such men are enrolled ; nor, indeed, is this term applicable until they are in a certain degree fixed in some particular company, and entered upon its mus- ter-roll, as well as upon the long-roll of the re- giment.

ENRO'OT, v. a. From root. To fix by the root ; to implant deep.

He cannot so precisely weed this land, As his misdoubts present occasion : His foes are so enrooted with his friends, That, plucking to unfix an enemy, He doth unfasten so and shake a friend.

Shakspeare.

ENRO'UND,t>.a. From round. To environ; to surround ; to encircle ; to enclose.

Upon his royal face there is no note How dread an army hath enruunded him.

Sliakspeare.

*ENS, n. *. 3 Lat. em, entitas, from Gr. twai, ENT'ITY. 5 to be. Being ; essence ; a particu- lar species of being.*

All eruptions of air, though small and slight, give an entity of sound, which we call crackling, puffing, and spitting ; as in bay salt and bay leaves, cast into the fire. Bacon.

— Humour (as 'tis ens) we thus define it To be a quality of aqua water ; And, in itself, holding these properties. Moisture or fluxure. Ben Jonson.

God's decrees of salvation and damnation, both Romish and reformed affix to men's particular entity, absolutely considered without any respect to de- meanours. Hammond's Fundamentals,

Here entity and quiddity, The souls of defunct bodies fly.

Hudibras.

Dear hope, earth's dowry and heaven's debt, The entity of things that are not yet : Subt'lest, but surest being. Crashaw.

Fortune is no real entity, nor physical essence, but a mere relative signification. Bentley.

But Reproduction, when the perfect Elf Forms from fine glands another like itself, Gives the true character of life and sense, And parts the organic from the chemic Ens.

Darwin.

ENS POSITIVUM, and ENS REAI.E, terms used iu the schools by metaphysicians, synonymously with ens, for entity, as above defined, by way of distinction from

ENS RATIONIS, an imaginary being, or a thing that exists only in the imagination.

ENS, or ENNS, in geography, a river and also a town of Germany. See ENNS.

ENSAF'FRON, v. a. From en and stffron ; Fr. sqfran ; Ital. suffer ano ; which according to Junius is from Gr. %apaiv-fiv, to exhilarate. To make or color like saffron ; to make of a deep yellow color.

Phoebus in the chair, Entsaff'roning sea and air, Makes vanish every star. Drummond.

ENSA'MPLE, n. s. & t>. a. Old. Fr. ensample ; Ital. essempio. See EXAMPLE, which is now used. Pattern; subject of; imitation. The verb is used by Spenser for to exemplify.

Th erf ore if I Lord and maister, haue waishun youre feet, and ye schulen waische oon anotheris feet. For I haue gouunensawnpfe to you, that as I haue doa to you, so do ye. Wiclif. Jon. 19.

Ye have us for an ensample. Phil. iii. 17.

Such life should be the honour of your light ; Such death, the sad ensample of your night.

Spenter.

I have followed all the ancient poets historical first, Homer, who, in the person of Agamemnon ensampled a good governor and a virtuous man. Spenser.

Such as would be willing to make use of our en- sample to do the same thing, where there is iiot the same necessity, may not be able to vouch our practice for their excuse. Sanderson.

ENSA'NGUINE, v. a. Lat. sanguis ; Fr. ew- sanglanter. To smear with gore ; to suffuse with blood.

With cruel tournament the squadrons join, Where cattle pastured late ; now scattered lies, With carcasses and arms, the ensanguined field Deserted. Milton's Paradise Lost.

Then sudden all the base ignoble crowd. Loud clamouring, seize the helpless, worried, wretch, And, thirsting for his blood, drag different ways His mangled carcass on the' ensanguined plain.

Somervile.

ENSCHE'DULE, v. a. From schedule. To insert in a schedule or writing.

You must buy that peace With full accord to all our just demands, Enscheduled here. Sltakspeare. Henry V.

ENSCO'NCE, v. a. From en and sconce. To cover as with a fort ; to secure.

I myself sometimes, hiding mine honour in my necessity, and fain to shuffle, to hedge, and to lurch ; and yet your rogue will ensconce your rags, your cat-a- mountain looks under the shelter of your honour.

S/takspeare.

We make trifles of terrours, ensconcing ourselves in seeming knowledge. U.

She shall not see me, I will ensconce me behind the arras. Id. Merry Wives of Wind&rr.

A sort of error to ensconce

Absurdity and ignorance. Hudibras.

This he courageously invaded, And having entered barricadoed, Ensconced himself as formidable As could be, underneath a table. Id.

ENSE'AM, v. a. From en and seam. To sew up ; to enclose by a seam or juncture of needle- work.

ENSIGN.

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A name engraved in the revestiary of the temple, one stole away, and ensnamcd it in his thigh.

Camden.

ENSEA'R, v. a. From en and sear. To cau- terise ; to stanch or stop with fire.

Ensear thy fertile and conceptious womb ;

Let us no more bring out t' ingrateful man.

S/uikspeare.

ENSEMBLE (Fr. together). In music this adverb has been used substantively, and re- ceived in the French musical technica, accord- ing to Rousseau, with a very extensive significa- tion. To regard an object in its ensemble or totality, is to consider the effect which the se- veral parts produce when united in a whole. It is only in the execution of a piece of music that this term is applicable, when the

performers are so perfectly together in time and tune, seeming to be all so much animated by one soul, that • they communicate exactly to the ear, all that the eye can see in the score.

The being ensemble, or together, does not merely depend on the accuracy with which each reads his part, but in the intelligence with which he feels its peculiar character and connexion with the whole ; whether in the exactitude of phraseology, the precision of the movements, or seizing the instant and degree of pianos and fortes : or finally, in the nice attention to such ornaments, which .he author has thought so ne- cessary as to be indispensable. It is in vain for musicians to have abilities, they can never be together without an intelligence of the au- thor's designs, and perfectly understanding each other : for it would be impossible to keep to- gether a band of performers that are deaf, or in the execution of music in a style with which they are totally unacquainted. It belongs to the masters, conductors, and leaders of an orchestra, to guide, check, or accelerate individual per- formers, and to keep them together in the aggre- gate, which is always the office of a judicious first violin, who, by a certain firmness and energy in his manner, strongly impresses the character of the piece in every ear. The vocal part • is subordinate to the base and the time : the first violin ought to watch and follow the voice ; the repienos should listen to, and be guided by, the first violin: and, finally, the harpsichord or piano-forte, at an opera where the composer is supposed to sit, should be the principal and most important guide of the whole. In general, the more character there is in the style, periods, phrases, melody, and harmony, the more easy it will be to seize the ensemble ; because the same idea, strongly impressed on all minds, will pre- side in the whole execution. On the contrary, when the music says nothing, and nothing is heard but a succession of notes without mean- ing, then, as there is no whole to which each performer can refer his part, tie ensemble goes ill. This (says M. Rousseau) was the reason •why French performers cou.d .lever be together. ENSEELED, in falconry, a term applied to a hawk that has a thread drawn .hrough her upper eye-lid, and made fast under her beak, to take away the light.

ENSHI'ELD, T7.«. From en and shield. To shield ; to cover ; to protect.

These biack masks

Proclaim an enshield beauty, ten times louder Than beauty could display. Shakapeare.

ENSHRI'NE, v.a. From en and shrine. Tc enclose in a chest or cabinet ; to preserve and secure as a thing sacred.

He seems

A phoenix, gazed by all, as that sole bird. When to enshrine his reliques in the suu's Bright temple, to Egyptian Thebes he flies.

Milton.

The sots combine With pious care a monkey to enshrine.

Tate's Juvenal.

Fair fortune next, with looks serene and kind, Receives 'em, in her ancient fane enshrined.

Addifon.

Ambition searches all its sphere Of pomp and state, to meet thee there. Increasing avarice would find Thy presence in its gold enshrined. Parnell.

EN'SIENT, adj. Fr. enceinte. Pregnant. A. died without issue born, but leaving his wife ensient, or big with child. Biackstone.

ENSIGN', n. s.) Fr. enseigne ; Span.

ENSIGN'-BEARER, n. s. \ \emena; Ital. insegna, from Lat. insigne, i. e. in and signum, a mark or sign. The standard flag, or badge of a regiment; any signal or badge : the officer who carries the ensign.

He will lift up an ensign to the nations from far.

Isaia/t v.

The Turks still pressing on, got up to the top of the walls with eight ensigns, from whence they had re- pulsed the defendants, Knolles's History.

Hang up your ensigns, let your drums be still.

Shahspeare.

Instead of lifting up their ensigns and marching towards Canaan, they sit them down and lift up their voice and cry. Bp. Hall's Contemplations.

If it be true that the giants ever made war agains heaven, he had been a tit ensignbearer for that com pany. Sidney.*

Princes that fly, their sceptres left behind,

Contempt or pity, where they travel, find ;

The ensigns of our power about we bear,

And every land pays tribute to the fair. Waller.

The marks or ensigns of virtues contribute, by their nobleness, to the ornament of the figures ; as the deco- rations belonging to the liberal arts, to war, or sacri- fices. Dryden.

Men taking occasion from the qualities, wherein they observe often several individuals to agree, range them into sorts, in order to their naming under which individuals, according to their conformity to this or that abstract idea, come to be ranked as under ensigns.

Locke. Right, says an ensign; and, for ought I see,

Your faith and mine substantially agree ;

The best of every man's performance here

Is to discharge the duties of his sphere. Cowper.

ENSIGN. See COLORS, FLAG, STANDARD, &c. The Turkish ensigns are horses' tails ; those of the Europeans are of silk, wkh various figures colors, arms, and devices thereon.

The ENSIGN is the lowest commissioned officer in a company of foot, subordinate to the captain and lieutenant. It is a very honorable post for a gentleman at his first coming into the army : he is to carry the colors both in assault, day of battle, &c., and should not quit

but with his life : he must always carry them himself on his left shoulder : only on a march he may have them carried by a soldier, if the ensign is killed, the captain must carry the colors in his stead.

Though there are two stands of colors to each regiment, only one of

them is properly called ‘ the ensign.’ The flag, consisting of the union only, is called the king’s color, and always takes post of the other, which being in general of the same color as the facings of the corps, and Gearing any device or motto, by which it is dis- tinguished, is appropriately called ‘ the regi- mental ensign.’ In case of defeat, the ensigns bearing the colors were once instructed very carefully to collect as many of the fugitives as possible, for the purpose of rallying the corps, or, at least, of preventing it from being further disgraced by the loss of their facings, which for- merly was an inseparable consequence annexed to the loss of the colors. This regulation must often have produced considerable enthusiasm; as we may reasonably conclude, that the attack made by a regiment under such a privation, (which could only be remedied by its taking the co- lors of its opponents), must be of the most arduous description.

ENSIGN, NAVAL, a large standard, or banner, hoisted on a large pole, erected over the poop, and called the ensign staff. The ensign is used to distinguish the ships of different nations from each other; and to characterise the different squadrons of the navy. The display of an en- sign in presence of a strange sail is considered a mark of civility during time of peace, and in time of war serves to distinguish between friends and foes. During the latter period, such vessels as do not hoist their ensigns may be rea- sonably suspected to be privateers, or to be de- sirous of evading every kind of communication. So long as the ensign remains hoisted, during an engagement, the ship is to be considered in a state of defiance ; but when it is lowered, she is said to strike; that is, to give up the contest, and to submit, as a prize to her opponent. It occasionally happens that a ship’s ensign staff, or the haul-yards by which the ensign is hoisted to the mizen-peak, is shot away ; this does not indicate submission ; on the contrary, the annals of warfare exhibit many instances of extraor- dinary courage in individuals, who, at such mo- ments, have run aloft, or even stood on the poop, there to sustain a portion of the .ensign as a token of the most determined opposition.

In the British service are three ensigns, namely, the white, the red, and the blue ; the first is divided into equal portions, by a broad St. George’s cross of red, of which the upper canton, or quarterns filled up with the union. The second and third are both plain, with the excep- tion of the union in the same canton. These indicate the rank of the admiral under which a ship of war is commissioned or employed. Thus, an admiral of the white bears a white, or, as it is commonly called, a St. George’s ensiiˆn, at the main top-gallant mast head ; a vice-admiral of the white has one at the fore-top gallant mast head ; and a rear-adn?iral one at the mizen top- gallant mast

head : the same rules of precedence

obtain, with the admirals, vice-admirals, and rear-admirals of the red and blue respectively ; each bearing a flag of his proper color at that mast head corresponding with his rank. When fleets are separated into squadrons or divisions, each ship assumes for the time the ensign of that admiral who commands the squadron, or division, in which it acts. The same is observed by all vessels acting under any particular port- admiral; all under his authority invariably bearing an ensign conformable to his designa- tion, whether of the white, red, or blue.

O/"ANCIEXT ENSIGNS, that of the Persians, ac- cording to Xeuophon, was a golden eagle on a white flag; the Corinthians bore a Pegasus, or winged horse, on theirs ; the Athenians an owl ; the Messenians, the Greek lelter M ; the Lace- daemonians, the A. The Romans had a great diversity of ensigns ; the wolf, minotaur, horse, boar, and at length the eagle, which they retained : this was first assumed in the second year of the consulate of Marius. See EAGLE. In the rus- tic age of Rome, the eiwign was nothing more than a wisp of hay carrier; on a pole, as the word manipulus properly signifies. The ensign of the horse was not solid, as the others, but con- sisted of a cloth, somewhat like our colors, dis- tended on a staff; on which the names of the emperors were generally inscribed. The religi- ous care the soldiers took of their ensigns was extraordinary : they worshipped them, swore by them, and incurred certain death if they lost them. The Turks and Tartars make use ot horses' tails for their ensigns, whose number dis- tinguishes the rank of their commanders : for the sultan has seven, and the grand vizier only three, &c.*

over as a slave : enslavement is the state of servi- tude or slavery : enslaver, he who reduces another to slavery.

No man can make another man to be his slave, un- less he hath first enslaved himself to life and death, to pleasure or pain, to hope or fear : command those passions, and you are freer than the Parthian king. Taylor's Rule of Holy Living. The conquered also, and enslaved by war,

Shall, with their freedom lost, their virtue lose.

Miltun.

The more virtuously any man lives, and the less he is emlaved to any lust, the more ready he is to enter- tain the principles of religion.

TMotson.

Long draughts of sleep his monstrous limbs enslave ; He reels, and falling nils the spacious cave.

Dryden.

A man, not having the power of his own life, cannot hy compact, or his own consent, enslave himself to any one, nor put himself under the absolute arbitrary power of another, to take away life when he pleases.

Locke.

He is certainly the most subjected, the most en-flat-eil , who is so in his understanding. /'/.

The children of Israel, according to their method of sinning, after mercies, and thereupon returning to a fresh enslavement to their enemies, had now passed seven years in cruel subjection. South.

*While the balance of power is equally held, the ambition of private men gives neither danger nor fear, nor can possibly erulave their country. Sirift**

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ENT

What indignation in her mind, Against enslavers of mankind . Id.

The English considered the Scots as vassals who lad presumed to rebel ; and the Scots, in their turn, regarded the English as usurpers who aimed at en- tlaviny their country.

Robertion's History of Scotland.

His country's wrongs, and his despair to save her,

Had stung him from a slave to an enslaver. Byron.

ENSNARE', v. a. From en and snare. To entrap ; to bring into snares or difficulties. Is there, in human form, that bears a heart

A wretch ! a villain ! lost to love and truth ! That can, with studied,

sly, ensnaring art. Betray sweet Jenny's unsuspecting youth ?

Bnrnl.

There, proof against prosperity, awhile They stood the test of her ensnaring smile, And had the grace in scenes of peace to show The virtues they had learned in scenes of woe.

Cowper.

Can selfishness the liberal heart control ? Is glory there achieved by arts, as foul As those that felons, fiends, and furies plan? Spiders ensnare, snakes poison, tygers prowl ; Love is the godlike attribute of man. O teach a simple youth this mystery to scan.

Beat tie.

ENSUE', v. a. & n. Fr. ensuivre ; Ital. se- guire, from Lat. sequor. To follow ; pursue ; as a neuter verb, to succeed in consequence, or course of time.

Flee evil and do good ; seek peace, and ensue it.

Common Prayer.

Then do no further goe, no further stray, But here ly downe, and to thy rest betake, The ill to prevent, that life ensewen may.

Spenser. Faerie Queene.

Let this be granted, and it shall hereupon plainly ensue, that the light of scripture once shining in the world, all other light of nature is therewith in such sort drowned, that now we need it not. Hooker.

The man was noble j But with his last attempt he wiped it out, Destroyed his country, and his name remains To the ensuing age abhorred. Shaktpeare.

Bishops are placed by collation of the king, without any precedent election or confirmation ensuing.

Hayward.

But now these Epicures begin to smile, And say, my doctrine is more safe than true ;

And that I fondly do myself beguile, While these received opinions I

entue. Davies. Of Worse deeds worse sufferings must ensue.

Milton.

With mortal heat each other shall pursue ; What wars, what wounds, what slaughter shall ensue !

Dryden.

Impute not then those ills which may ensue To me, but those who with incessant hate Pursue my life. Rowe's Ambitious Stepmother.

Then grave Clarissa graceful waved her fan ; Silence ensued, and thus the nymph began. Pope. Self-knowledge is the subject of the ensuing Trea- tise.— A subject, which the more I think of, the more important and extensive it appears. Maton.

ENSURE', v. a. \ From en arid sure, q. v. ENSU'RANCE, n.s. (also, and more commonly, ENSU'RANCER, £ written insure. To ascer ENSU'RER, J tain; make certain; secure

against ; exempt from hazard ; bind by promise

of marriage. Ensurance or ensurer are synony- mous. See our article INSURANCE. The vain ensurancers of life,

And they who most performed, and promised less.

Even Short and Hoboes, forsook the unequal strife.

Dryden.

A mendicant contracted with a country fellow for a quantity of corn, to ensure his sheep for that year.

L'Estrange.

It is easy to entail debts on succeeding ages, but how to ensure peace for any term of years is difficult enough. Swift.

Sense, mere, dull, formal Sense, in this gay town Must have some vehicle to pass her down, Nor can she for an hour ensure her reign, Unless she brings fair Pleasure in her train.

Churchill.

Nor was the rigour of his mind to be softened but with the

appearance of extraordinary fortitude in his enemies, which, by a sympathy congenial to his own virtues, always excited his admiration, and ensured his mercy. Burke.

ENT (Sir George), an eminent English phy- sician, born at Sandwich, in Kent, in 1604. He was educated at Sidney College, Cambridge ; and afterwards, travelling into foreign countries, received the degree of M. D. at Padua. After his return he obtained great practice, was made president of the college of physicians in London, and was at last knighted by Charles II. lie was intimate with Dr. Harvey ; whom he de- fended in a piece entitled, Apologia pro Circu- latione Sanguinis, contra ./Emilium Parisanum. He also published, Animadversiones in Thrus- toni Diatribam ; and some observations in the Philosophical Transactions. Glanville, speak- ing of the modern improvements in anatomy, ranks Sir George Ent with the most celebrated discoverers in that science. Sir George Ent died in October, 1680.

ENTA'BLATURE, n. s. } From table. The

ENTA'BLEMENT, n. s. } architrave, frieze, and cornice of a pillar : see below.

Now these two knobs, or top ornaments of the mind of man, which crown the whole entablature — being, as I said, wit and judgment, which of all others, as I have proved it, are the most needful — the most prized — the most calamitous to be without, and con- sequently, the hardest to come at. Sterne.

ENTABLATURE, in architecture, is that part of an order of column which is over the ca- pital, comprehending the architrave, frieze, and corniche. The word is formed of tabulatum or intabulamentum. The entablature is sometimes called the trafieation, and by Vitruvius and Vig- nola ornament. It is different in the different orders; indeed, it consists of the three grand parts or divisions above mentioned, in all ; but those parts consist of a greater or less number of particular members or sub-divisions, as the orders are more or less rich. Vignola makes the entablature a quarter of the height of the whole column, in all the orders.

In the Tuscan and Doric, the architrave, frieze, and corniche, are all of the same height ; in the Ionic, Corinthian, and Composite, the whole entablature being fifteen parts, five of them are allowed for the architrave, four for the frieze, and six for the corniche. See IONIC, CORINTHIAK &c. and COLUMN.*

ENTABLATURE or ENTABLEMENT, is some- times also used for the last row of stones on the top of the wall of a building, whereon the tim- ber and covering rest. As this is frequently made to project beyond the line of the wall to carry off the rain, some authors call it in Latin stillicidium, or drip. Such an entablature does not stand out far enough ; it lets the water fall on the foot of the wall.

ENTABLER, in the manege, the fault of a horse, whose croupe goes before his shoulders in working upon volts ; which may be prevented by taking hold of the right rein, keeping the right leg near, and removing the left leg as far from the horse's shoulders as possible. This is always accompanied with another fault called ACULER, which see.

ENTAIL, v. a., v. n. & n. s. Fr. entailkr ; Ital. intagliare, from Fr. tailler, to cut. To settle an estate so that it must descend in a particular line ; to fix inalienably : also, in an obsolete sense, to carve ; and, as a verb neuter, to cut : as a substantive, it means the estate entailed, or rule of descent; likewise (obsolete) inlay ; engraver's work.

Well it appeared to have been of old A -work of rich entail, and curious mold, Woven with anticks and wild imagery.

Faerie Queene.

The mortal steel, dispiteously entailed, Deep in their flesh, quite through the iron walls, That a large purple stream adown their giambeaux falls. Id.

I here entail

The crown to thee and to thine heirs for ever.

Shahspeare.

None ever had a privilege of infallibility entailed to all he said. Digby on -Bodies.

The intemperate and unjust transmit their bodily infirmities and

diseases to their children, and entail a secret Curse upon their estates. Tillotson.

Had Richard unconstrained resigned the throne, A king can give no more than is his own : The title stood entailed, had Richard had a son.

Dryden.

When it shall appear that infallibility is entailed upon one set of men of any denomination, or truth confined to any spot of ground , the name and use of orthodoxy, as now it is in fashion every where, -will in that one place be reasonable. Locke.

What ! though a long patrician line ye claim, Are noble souls entailed upon a name ?

Paul Whitehead.

Not satisfied with having obtained a hereditary right to their fiefs, which they formerly held during pleasure, their ambition aimed at something bolder ; and by introducing entails, endeavoured, as far as human ingenuity and invention can reach that end, to render their possessions unalienablc and everlast- ing. Robertson's Hist, of Scotland.

ENT'AME, v. a. From en and tame. To tame ; to subjugate ; to subdue.

Tis not your inky brows, your black silk hair, Your bugle eyeballs, and your cheek of cream, That can entame my spirits to your worship.

Shakspeare.

ENTANGTE, v. a. i A word, accord-

ENTANGLEMENT, n. s. $ ing to Dr. Johnson, of uncertain etymology. Junius derives it from tongs ; to tangle being, as he says, to hold with tongs : Skinner says from Goth, tangl, a vwig Mr. Todd deduces it from Goth, tagl,

hair ; and Mr. Thomson from gmdwmglt, to coilr from wickle, a fold. To enwrap, ensnare ; hence to involve in difficulty or embarrassment ; to distract.

The Pharisees took counsel how they might entangle him in his talk. Matt. xxii. 15.

No man that warreth entangleth himself with the affairs of this life. 2 Tim. ii. 4.

Now all labour

Marrs what it does, yea very force entangles Itself with strength.

Shakspeare. Antony and Cleopatra. The duke, being questioned, neither held silence as he might, nor constantly denied it, but entangled him- self in his doubtful tale. Hayward.

He knew not how to wrestle with desperate con- tingencies, and so abhorred to be entangled in such.

Clarendon.

The most improved spirits are frequently caught in the entanglements of i tenacious imagination.

Glanville's Scepni.

I suppose a great part of the difficulties that perplex men's thoughts, and entangle their understandings, would be easily resolved. Locke.

It is to fence against the entanglements of equivocal words, and the arts of sophistry, that distinctions have been multiplied. Id.

There will be no greater entanglements, touching the notion of God and his providence. More.

Seek'st thou for hounds to climb the rocky steep, And brush the entangled corert, whose nice scent O'er greasy fallows and frequented roads, Can pick the dubious way ? Somervile

Laws are generally found to be nets of such a tex- ture, as the little creep through, the great break through, and the middle .sized are alone entangled in.

Shetis tone.

With what address the soft Ephesians draw Their sable net-work o'er entangled hearts.

Young.

I cannot but lamest thy splendid wit Entangled in the cobwebs of the schools.

Cowper.

I with a smile would tell the entangled fair, I envied even the vines a lodging there ; Then twist them off, and soothe with amorous play Her breasts, and kiss each rosy mark away.

Sheridan.

ENTELECHIA, EvnXtKiia, of perfect, a Greek term, which Aristotle uses in defining the soul; and which, as not occurring in any other author, has given the critics and philosophers great perplexity. See SOUL. Her- molaus Barbarus is said to have consulted the devil about 'it ; after which, in his paraphrase on Themestius, he renders it by perfectihabia ! not a whil clearer. Cicero defines entelechia Tusc. Quest, lib. i. c. 1, to be, 'a certain, con- tinued, and perpetual motion ;' whence it would seem, that Aristotle took the soul for the mode of the body ; a continuous motion being, doubt- less, a mode of body.

The common Peripatetics hold entelechia to signify act, and under it suppose the form of the compound or animal to be understood. Others, i. e. the latest Peripatetics, agree, that the act, or entelechia, whereby Aristotle meant to .explain the nature of the soul, is some mode of body or motion.

ENTEND, v. a. See "INTEND. To sketch or draw out ; to mean or design.

Now wol I pray mekely every person discrete, that redeth or hereth this lityl tretise to have my rude ententing excused, and my superfluite of wordes, for two causes. A strolabie, 1391.

I wol entend to winning if I may, And not entend our things to declare, For, brother min, thy wit is al to bare To understand, although I told hem thee.

Chaucer. Cant. Tales.

ENTER, v. a. & v. n.~\ Fr. entrer ; Span.

EK'TERING, n. s. (and Port, entrar; It.

EN'TRANCE, i entrare ; Lat. intrare,

EN'TRY. J i e. inter ire, to go in,

or enter within. To come or go into a place or institution : hence to introduce, or initiate into a business or design : as a neuter verb, to come or go in ; to penetrate mentally ; engage or be ini- tiated in. An entry is a place of entrance.

That thing that entrith into the mouth defoulith not a man, but that thing that comith out of the mouth defoulith a man. Wiclif. Matt. 15.

Aftir the custom of the presthod, he went forth by lot and entride into the temple to encensen.

Id. Luk 1.

But while he spak these thingis, a cloude was maad and ouerschadewide hem, and thei dredden whannc thei entriden into the cloude. Id. Luk 9.

It is laid waste, so that there is no house, no en- tering in. Isaiah.

He charged them to keep the passages of the hilly country ; for by them there was an entrance into Ju- dea. Judith.

Be not slothful to go and to enter "to posses the land. ' Judges.*

Each goodly thing is hardest to begin ;

But entred in, a spacious court they see,

Both plaine and pleasaunt.

Spenser. Faerie Queene.

He nought was moved at their entraunce bold, For of their coming woll he wist afore. Id.

Since we are so far entered, let us, I pray you, a little devise of those evils by which that country is held in this wretched case, that it cannot, as you say, be recured. Spenser's Ireland.

Whence are you, sir ? Has the porter his eyes in his head, that he gives entrance to such companions ? Pray, get you out. Shakspeare.

The reason, that I gather, he is mad,

Is a mad tale he told to-day at dinner,

Of his own door being shut against his entrance.

Id. All the world's a stage,

And all the men and women merely players ;

They have their exits and their entrances. Id.

They of Rome are entered in our counsels,

And know how we proceed. Id. Coriolanus.

Mr. Phang, have you entered the action ?

—It is entered. Id. Henry IV.

He that travelleth a country before he hath some entrance into the language, goeth to school, and not to travel. Bacon's Essays.

Some there are that know the resorts and falls of business, that cannot sink into the main of it ; like a house that hath convenient stairs and entries, but never a fair room. Bacon.

The day being come, he made his entry : he was a man of middle stature and age, and comely. Id.

Bathing and anointing give a relaxation or emolli- tion ; and the mixture of oil and water is better than either of them alone, because water entereth better into the pores, and oil after entry softeneth better.

Id. Natural Hittory.

From the first entrance of this king to his reisr., never was king either more loving, or better bolovfd. Hayward. Edward 'VI.

Palladio did conclude, that the principal entrance was never to be regulated by any certain dimpnsions, but by the dignity of the master. Wotton.

St. Augustine, in the entrance of one of his ser- mons, makes a kind of apology.

Hnkewill on Providence.

The earl of Holland we have had occasion to mea- tion before in the first entrance upon this discourse.

Thought following thought, and step by step led on, He entered now the bordering desert wild, And with dark shades and rocks environed round, His holy meditation thus pursued. Milton.

Other creature here, Beast, bird, insect, or worm, durst enter none.

Id.

O pity and shame, that those who to live well Entered so fair, should turn aside ! Id.

Many are the ways that lead

To his grim cave, all dismal '. yet to sense

More terrible at the entrance than within. Id.

Agues and fevers are entered promiscuously, yet in the few bills they have been distinguished.

Graunt.

Though selfishness hath defiled the whole man, yet sensual pleasure is the chief part of its interest, and therefore, by the senses it commonly works, and these are the doors and the windows by which ini- quity entereth into the soul. Baxter.

A straight long entry to the temple led, Blind with high walls, and horror over head.

Dryden. Let this, and every other anxious thought,

At the entrance of my threshold be forgot. Id.

This is that which, at first entrance, baulks aud cools them : they want their liberty. Locke.

The eldest being thus entered, and then madn the fashion, it would be impossible to hinder them.

Id.

Where diligence opens the door of the understand- ing, and impartially keeps it, truth is sure to find both an entrance and a welcome too. South.

Gentlemen did not care to enter into business 'till after their morning draught. Toiler.

We proceeded through the entry, and were neces- sarily kept in order by the situation. Id.

The French king hath often entered on several ex- pensive projects, on purpose to dissipate wealth.

Addison on the War.

As soon as they once entered into a taste of plea- sure, politeness, and magnificence, they fell into a thousand violences, conspiracies, and division.

Addison.

Andrew Doria has a statue erected to him at the entrance of the doge's palace, with the glorious title of deliverer of the commonwealth. Id,

The lake of Constance is formed by the entry of the Rhine. Id.

He is particularly pleased with Livy for his man- ner of telling a story, and with Sallust for his enter- ing into eternal principles of action. Id.

By the entry of the chyle and air into the blood, by the lacteals, the animal may again revive.

Arbuthnot on Aliments.

A king of repute and learning entered the lists against him. Atterburi/.

They were not capable of entering into the numer- ous concurring springs of action. Watts. And there he lay, full length, where he was flung,

Before the entrance of a clift-worncave, With just enough of life to feel its pain. And deemed that it was saved, perhaps, in vain.

ENTERDE'AL, n. *. From entre and deal. Reciprocal transactions. Obsolete.

For he is practised well in policy. And thereto doth his courting most apply ; To iearn the enterdeal of princes strange, To mark the latent of counsels, and the change Of states. Hubberd's Tale.

ENTERITIS, from tvrtpov, the intestine. Inflammation of the intestines. It is a genus of disease in the class pyrexiae, and order phle- ghmasix- of Cullen, being known by the pre- sence of pyrexia, a fixed pain in the abdomen, costiveness, and vomiting This disease is prin- cipally occasioned by acrid substances, indurated faeces, long-continued and obstinate costiveness, spasmodic colic, and a strangulation of any part of the intestinal canal ; but another very general cause is the application of cold to the lower ex- tremities, or to the belly itself. It is a disease which is most apt to occur at an advanced period of life, and is very liable to a relapse. Dr. Gregory has remarked, that a purgative medicine has often been known to operate as soou as a blister, applied to the belly, began to rise, which had not acted previously : and this observation is still more commonly verified, after a free eva- cuation by blood-letting. See Edinburgh Me- dical and Surgical Journal, vol. i. p. 64. Some practitioners have attempted to open a passage for the faeces, by mechanically distending the large intestines, by throwing up five, six, or seven pints of warm water with an injecting syringe. This expedient may be useful in spas- modic colic ; but it is objectionable, in enteritis, on several grounds. Such distension can only be accomplished in the colon, or great gut; whereas the obstruction by inflammation is com- monly in some portion of the small intestines, and therefore out of the reach of the enema. In the next place, any forcible distension of an inflamed and thickened canal, if it could be ac- complished, would rather conduce to an increase of the inflammatory condition, then to lessen it by the removal of faeces. In a word, all mea- sures applied to the inflamed intestine should be mild ; since forcible ones cannot but augment the inflammation, upon which the impeded function of the organ depends. By way of clyster, therefore, a little common salt, magnesia vitriolated, or

infusion of senna, with gruel or warm water, will probably answer every good purpose that can be expected from such an ex- pedient. Tobacco smoke has been often in- iected, when milder means have failed, or infu- sions of tobacco ; but their success, we believe, has not 'often been experienced. Indeed, to- bacco injections are liable to produce great sickness and irritation, if that herb be not used in very small quantities. The extreme sickness which often accompanies enteritis, and by whicli every thing that is taken into the stomach, whe- ther liquid or solid, is rejected, renders it diffi- cult, in some cases, to produce any effect upon the bowels by internal medicine. In this case, the irritability of the stomach may be , quieted by the saline effervescing draught, or by a small opium pill, or, if this be rejected, by an opiate given in a clyster; after which, the necessary laxative medicines may be retained, and accom-

plish the intended object. It should be observe-!, however, that the stimulus of opium will prove rather injurious than useful, while the inflamma- tion is unsubdued. See MEDICINE.

Where the inflammation has risen from stran- gulated hernia, the operation, by which the strangulation is removed, and the intestine re- turned into its place, can alone save the life of the patient. See HERMA.

ENTERLA'CE, v. a. Fr. entrelasser. To intermix ; to interweave. See LACE.

This lady walked outright, 'till she might see her enter into a fine close arbor : it was of trees, whosi branches so lovingly enterlaced one another, that it could resist the strongest violence of the sight.

Sidney.

ENTERO'CELE, n. s. Lat. enterocele. A rupture from the bowels pressing through or dil- ating the peritonaeum, so as to fall down into the groin. The remedy in such cases, is chiefly by trusses and bolsters.

If the intestine only is fallen, it becomes an entero- cele ; if the omentum or epiploon, epiplocele ; and if both, enteroepiplocele. Sharp's Surgery.

ENTERO'LOGY, n. s. "Eyrepov and X6>c. The anatomical account of the bowels and inter- nal parts.

ENTERO'MPHALOS, n. s. 'Evrtpov and opQaXoc. An umbilical or

naval rupture.

ENTERPA'RLANCE, n. s. Fr. entre and purler. Parley ; mutual talk ; conference.

During the enterparlance the Scots discharged against the English, not without breach of the laws of the field. Haytcard.

ENTERPLE'ADER, n. s. Entre and plead. The discussing of a point incidentally falling out, before the principal cause can proceed. For example : two several persons, being found heirs to land by two several oncers in one coun- ty, the king is brought in doubt whether livery ought to be made ; and therefore, before livery be made to either, they must enterplead ; that is, try between themselves who is the right heir.

ENTERPRIZE, n. s. & v. a. \ Fr. entrc-

ENTERPRIZER, n. s. 5 prize, entre-

prendre, from Lat. prehendere, to seize or take hold. An undertaking involving some degree of boldness or hazard : to attempt an essay or busi- ness of this kind, the verb being derived from the noun.

Now is the time to execute mine enterprises to the destruction of the enemies. Judith ii. 5.

In goodly garments, that her well became, Fair marching forth in honourable wise, Him at the threshold met, and well did enterpriee.

Speraer.

Whet on Warwick to this enterprise. Shakspeare.

They commonly proved great enterprisers with hap- py success. Hayward on Edward VI. Unanimous they all commit the care

And management of this main enterprise

To him their great dictator. Milton.

Nor shall I to the work thou enterpriiest Be wanting, but afford thee equal aid. Id.

The day approached, when fortune should decide The important enterprise, and give the bride.

JJryden.

An epick poem, or the hercick action of some great commander, enterpriied for the common food and

honour of the Christian cause, and executed happily, may be as well written now, as it was of old by the heathens. Id,

Princes were only chiefs of those assemblies, by whose consultations and authority the great actions were resolved and enterprised. Temple.

Vanity and resentment -were the great springs of all his undertakings, and his neighbours easily found the way, by touching these, to force him upon many rash and inconsistent enterprises.

Robertson's History of Scotland,

Is he confident, bold, and enterprising ? Ambition appears to be the secret spring. Mason.

A world is up in arms, and thou a spot Not quickly found, if negligently sought, Thy soul as ample as thy bounds are small, Endurest the brunt, and darest defy them all : And wilt thou join to this bold enterprise A bolder still, a contest with the skies?

Cowper.

She knows not, says he, of this enterprise : and I go without bidding her farewell : for I call the gods to witness, that I cannot support the sight of a weep- ing mother. Beattie. ENTERTA'IN, v. a ˆ Fr. Span, and ENTERTA'INER, n. s. > Port, entretenir ; ENTERTA'IN MENT, n. s. j Ital. intratenere, from Lat. intra, within (as in a house), and tenere, to detain. To receive hospitably ; treat; converse with ; deal

with as a guest : hence to receive and reserve in the mind, with pleasure or otherwise ; to amuse, divert.

Be not forgetful to entertain strangers ; for thereby some have entertained angels unawares. Heb. xiii. 2.

Arrived there, the little house they fill, Ne look for entertainment where none was ; '

Rest is their feast, and all things at their will ; The noblest mind the best contentment has.

Faerie Queene.

How many men would you require to the furnish- ing of this which you take in hand ? And how long space would you have them entertained?

Spenser's Ireland.

Heaven, set ope thy everlasting gates, To entertain my vows of thanks and praise.

Shaktpeare.

You, Sir, I entertain for one of my hundred j only I do not like the fashion of your garments.

Id. King Lear. I'll weep and sigh,

«.nd, leaving so his service, follow you, So please you entertain me. / (/. Cymbeline.

Have you an army ready, say you ?

A most royal one. The centurions and their

charges distinctly billeted, already in the entertain- ment, and to be on foot at an hourV warning.

Id. Coriolanus.

Because all men are apt to natter themselves, to entertain the additions of other men's praises is most perilous. Raleigh.

He was, in his nature and constitution of mind, not very apprehensive or forecasting of future events afar off, but an

entertainer of fortune by the day.

Bacon's Henry VII.

Because he that knoweth least is fittest to ask questions, it is more reason, for the entertainment of the time, that he ask me questions than that f ask you. Id. New Atlantis.

The captains did covenant with the king to serve him with certain numbers of men, for certain wages and entertainment. Davits.

The first entertainment of this message would make a stranger think Balaam wise and honest.

Bp. Hall's Contemplations. With British bounty in his ship he feasts The Hesperian princes, his amazed guests, To find that watery wilderness exceed The entertainment of their great Madrid.

Waller.

It is not easy to imagine how it should at first gain entertainment, but much more difficult to con- ceive how it should be universally propagated.

Tillotson.

Passions ought to be our servants, and not our masters ; to give us some agitation for entertainment, but never to throw reason out of its seat. Temple.

Many who pretend to be wise by the forms of being grave, are apt to despise both poetry and music, as toys and trifles too light for the use or entertainment of serious men. Sir W. Temple.

Reason can never permit the mind to entertain probability in opposition to knowledge and certainty.

Locke.

His head was so well stored a magazine, that no- thing could be proposed which he was not readily fur- nished to entertain any one in. LI.

You shall find an apartment fitted up for you, and shall be every day entertained with beef or mutton of my own feeding. Addison.

They were capable of entertaining themselves on a thousand subjects,

without running into the common topicks. Id.

A great number of dramatick entertainments are not comedies, but five-act farces. Guy.

He shows both to the guests and to the entertainer their great mistake. Smalridge.

It is little the sign of a wise or good man to suffer temperance to be transgressed, in order to purchase the repute of a generous entertainer. Atierbury.

The history of the Royal Society shows how well philosophy becometh a narration : the progress of knowledge is as entertaining as that of arms.

Felton on the Classichs. This purpose God can entertain towards us.

Decay of Piety.

David entertained himself with the meditations of God's law, not his hidden decrees or counsels. Id.

In gardens, art can only reduce the beauties of na- ture to a figure which the common eye may better take in, and is therefore more entertained with.

Pope's Preface to the Iliads.

He was always careful of his money, and was there- fore no liberal 'entertainer ; but was less frugal of his wine than of his meat. Johnson's Life of Swift.

I returned, somewhat astonished, to the ship, but still without entertaining the slightest suspicion.

Franklin.

SIR BENJ. Yet no man lives in greater splendour. They tell me, when he entertains his fiiends, he will sit down to dinner with a dozen of his own securities ; have a score of tradesmen waiting in the anti-cham- ber, and an officer behind every guest's chair.

• J. SURF. This may be entertainment to you, gentle- men, but you pay very little regard to the feelings of a brother. Sheridan.

ENTERTFSSUED, adj. Entre and tissue. Enterwoven or intermixed

with various colors or substances.

The sword, the mace, the crown imperial, The entertissued robe of gold and pearl.

Shahtpeare.

ENTHRA'LL, v. a. From en and THRALL, which see. See INTHRALL. To enslave; shacklu.

Books are not seldom talismans and spells, By which the magic art of shrewder wits Hold an unthinking multitude enthralled. Covper.
ENTHRONE', v. a. > From en and ENTHRONIZA'TION, n. t. 5 throne. To place on a throne or regal chair ; to invest with sove-reign authority.

Mercy is above this sceptered sway ; It is enthroned in the hearts of kings ; It is an attribute to God himself. Shakspeare.

On a tribunal silvered, Cleopatra and himself, in chairs of gold, Were publicly enthroned. Id.

Not a few, in these latter times, have been raised to such a confidence of the speedy accomplishment of this new Kingdom, as if they did already see the clouds breaking under the glorious feet of their re- turning Saviour, and the chairs of this blessed state set ready for their enthronisatian. Bp. Hall.

This pope was no sooner elected and enthroned, but that he began to exercise his new rapines.

Ayliff'e't Parergon.

Beneath a sculptured arch he sits enthroned, The peers, encircling, form an awful round.

Pope.

So sits enthroned in vegetable pride Imperial Kew by Thames's glittering side ; Obedient sails from realms unfurrowed bring For her the unnamed progeny of spring.

Darwin.

ENTHU'SIASM, n. s. ~\ Fr. enthusiasme ;

ENTHU'SIAST, f Span, and Ital. entu-

ENTHUSIAS'TIC, adj. I siasmo ; Gr. tvOa-

ENTHUSIAS'TICAL, ˆ(nacr/toc, from tv in, and &oc God. Belief of being divinely inspired or influenced ; confidence or warmth of opinion. See below.

He pretended not to any seraphick enthusiastical vaptures, or inimitable unaccountable transports of devotion. Calamy.

Imaging is, in itself, the very height and life of poetry, which, by a kind of enthusiasm, or extraordi- nary emotion of soul, makes it seem to us that we behold those things which the poet paints. Dry den.

At last divine Cecilia came, Inventress of the vocal frame ; The sweet enthusiast, from her sacred store, Enlarged the former narrow bounds, And added length to solemn sounds, With nature's mother-wit, and arts unknown before.

Id.

Enthuriasm is founded neither on reason nor divine revelation, but rises from the conceits of a warmed or overweening brain. Locke.

An enthusiastick or prophetick style, by reason of the eagerness of the fancy, doth not always follow the even thread of discourse. Burnet.

An enthusiast in religion stumbles at the ordinary occurrences of life, if he cannot quote Scripture ex- amples on the occasion. Steele.

Chapman seems to have been of an arrogant turn, and an enthusiast in poetry.

Pope's Preface to the Iliad.

The same enthusiasm, that dignifies a butterfly or a medal to the virtuoso and the antiquary, may ˆconvert controversy into quixotism. Percival.

At last, sublimed To rapture and enthueiastick heat, We feel the

present Deity. Thomson.

Enthusiasm is a beneficent enchantress, who never exerts her magic but to our advantage, and only deals about her friemlly spells, in order to raise imaginary beauties, or to improve real ones. Fitzosborne.

He still retained a portion of his former enthusiasm ; and, being fond of argument, we frequently disputed together. Franklin.

His mind was fraught with independence, magna- nimity, and every manly virtue. I loved and admired him to a degree of enthusiasm, and of course strove to imitate him. Burnt.

I was a good deal noted for a retentive memory, a stubborn sturdy something in my disposition, and an enthusiastic idiot piety. Id.

No man, who is not inflamed by vain glory into enthusiasm, can flatter himself that his single, unsup- ported, desultory, unsystematic endeavours are of power to defeat the subtle designs and united cabals of ambitious citizens. Burke.

Religion is among the most powerful causes of en- thusiasm. Id.

Ye devotees to your adored employ, Enthusiasts, drunk with an unreal joy, Love makes the music of the blessed above, Heaven's harmony is universal love. Cowper. And still the stage by mimic art displays

Historic pantomine in modern days ;

And hence the enthusiast orator affords

Force to the feebler eloquence of words. Darwin.

But she, who set on fire his infant heart, And all his dreams, and all his wanderings shared And blessed, the Muse, and her celestial art, Still claim the enthusiast's fond and first regard.

Beattie.

ENTH usi ASM,Ev0«(na

The word is derived from the Greek tvBtof, or (vOsf, a man animated in an extraordinary manner wi.th the Spirit of God ; in whom God is, or whom he animates. Whence the verb ivQuoutZu, or tv9s, and the noun iv9saiafffios, enthusiasm, and £v08(rta?-»jf,

enthusiast, a person subject to such transports.

Enthusiasm is more particularly denned by M. de Piles to be a transport of the mind, by which it is led to think and imagine things in a" sublime, surprising, yet probable manner. The sublime he thinks a necessary ingredient in the definition, as being the proper effect and produc- tion of enthusiasm.

This is the enthusiasm felt in poetry, oratory, music, painting, sculpture, &c. (see the next ar- ticle); but the enthusiasm which belongs to works of art is very different from that attributed to the sibyls and priestesses of the oracles, and heathen gods, which was little else but fanaticism and consisted principally in grimace, and con- tortions of the body.

Mr. Locke with his usual acumen observes that there is a degree of assent which, with some men, has the same authority as either faith or reason; and that is enthusiasm which, laying by reason, would set up revelation without it; whereby, in effect, it takes away both reason and revelation, and substitutes in the room of it the ungrounded fancies of a man's own brain, and assumes them for a foundation, both of opinion and conduct. Immediate revelation being a much easier way for men to establish their opi- nions, and regulate their conduct by, than the tedious labor of strict reasoning, it is no wonder that some have been very apt to pretend to it ;

especially in such of their actions and opinions as they cannot account for by the ordinary methods of knowledge and principles of reason. Hence we see that in all ages men in whom melancholy has mixed with devotion, or whose conceit of themselves has raised them into an opinion of a greater familiarity with God than is allowed others, have often flattered themselves with the persuasion of an immediate intercourse with the Deity, and frequent communications with the Divine Spirit. The mind being thus prepared, whatever groundless opinion comes to settle itself strongly upon the fancy, is an illumination from the Spirit of God ; and, whatsoever odd action such persons find in themselves an inclina- tion to do, that impulse is concluded to be a call or direction from heaven, and must be obeyed.

' This,' says he, ' I take to be properly enthu- siasm ; which, though

rising from the conceit of a warm and over-weening brain, works, where it once gets footing, more powerfully on the per- suasions and actions of men than either reason or revelation, or both together ; men being most forwardly obedient to the impulses they receive from themselves. When men are once got into this way of immediate revelation, of illumination without search, and certainty without proof, reason is lost upon them; they are above it; they see the light infused into their understanding, and they cannot be mistaken : like the light of bright sunshine, it shows itself, and needs no other proof but its own evidence ; they feel the hand of God moving them within, and the impulses of the spirit, and cannot be mistaken in what they feel But, of this seeming and feeling,' it is ?. perception of an inclination to do something, or of the Spirit of God moving that inclination : these are two very different perceptions, and should be carefullydistinguished.' Essay on the Understanding, book iv.

Enthusiasm is denned by Dr. Hartley (Obs. on Man) to be a mistaken persuasion in any person that he is a peculiar favorite with God ; and that he receives supernatural marks thereof. The vividness of the ideas of this class easily gene- rates this false persuasion in persons of strong fancies, little experience in divine things, and narrow understandings (and especially where the moral sense, and the scrupulosity attending its growth and improvement, are but imperfectly formed), by giving a reality and certainty to all the reveries of a man's own mind, and cementing the associations in a preternatural manner. It may also be easily contracted by contagion, as daily experience shows ; and indeed more easily than most other dispositions, from the glaring language used by enthusiasts, and from the great flattery and support which enthusiasm affords to pride and self-conceit. ' The ingredients,' says lord Lyttleton, in his Observations on the Con- version, &c., of St. Paul, ' of which enthusiasm is generally composed are, great heat of temper, melancholy, ignorance, credulity, and vanity, or self-conceit.'

Hume makes some just reflections on the dif- ferent influences of enthusiasm and superstition, on government and society. ' The true sources of enthusiasm,' he observes, 'are hope, pride,

presumption, a warm imagination, together with ignorance. Superstition is favorable to priestly power, and enthusiasm not less, or rather more, contrary to it than sound reason and philosophy. Secondly, Religions which partake of enthusiasm are, on their first rise, more furious and violent than those which partake of superstition ; but in a little time become more gentle and moderate. When enthusiasm rises to that height as to in- spire the deluded

fanatic with the opinion of divine illuminations, and with a contempt for the common rules of reason, morality, and pru- dence, it produces the most cruel disorders in human society ; but its fury is like that of thunder and tempest, which exhaust themselves in a little time, and leave the air more calm and serene than it was before. When the first fire of en- thusiasm is spent, men naturally, in all fanatical sects, sink into the greatest remissness and cool- ness in sacred matters ; there being no body of men among them, endowed with sufficient au- thority, wh,ose interest is concerned to support the religious spirit : no rites, no ceremonies, no holy observances, which may enter into the com- mon train of life, and preserve the sacred princi- ples from oblivion.' He observes, thirdly, ' that superstition is an enemy to civil liberty, and en- thusiasm a friend to it.'

E'NTHYMEME, n. s. EvQvpnpa. An ar- gument consisting only of an antecedent and con- sequential proposition; a syllogism where the major proposition is suppressed, and only the minor and consequence produced in words.

Playing much upon the simple or lustrative argu- mentation, to induce their enthymemet unto the people, they take up popular conceits. Browne.

What is an enthymeme, quoth Cornelius ? Why, an enthymeme, replied Crambe, is when the major is indeed married to the minor, but the marriage kept secret. Arbuthnot and Pope.

ENTHYMEME, in logic and rhetoric, an ar- gument consisting of two propositions, an antece- dent and a consequent deduced from it. The word is formed of the verb evQvpeiffQat, to think or conceive, a compound of ev and 0v/toc, mind.

Aristotle calls it the rhetorical or probable ar- gument; the schools, the imperfect syllogism, in contradistinction from the perfect, which consists of three propositions, and is called the dialectical argument. It must be observed, however, that the enthymeme is really a perfect syllogism in the mind, and only imperfect in the expression, because one of these premises is suppressed, as being sufficiently clear and obvious, and easily supplied by the understanding of those with whom we discourse.

Thus, in every right-lined triangle, the three angles are equal to two right ones ; that, conse- quently, they are so in an isosceles triangle, is an enthymeme ; the proposition, that an isosceles triangle is a

right-lined triangle, being omitted, as being sufficiently known and granted. The enthymeme is said to be the most simple and elegant of all argumentations; being what a man, in arguing closely, commonly makes, without at- tending at all to the form. Thus, that verse remaining of Ovid's tragedy, entitled Medea, contains an enthymeme : ' Servare potui, perdere

an possum rogas : ' I was able to save you ; con- sequently to have destroyed you.' All the beauty would have been lost had all the proposi- tions been expressed; the mind is displeased with the rehearsal of what is no ways necessary. Sometimes, also, the two propositions of an en- thymeme are both included in a single proposi- tion, which Aristotle calls an enthymematical sentence, and gives this instance of it : ' Mortal, do not bear an immortal hatred.' The whole enthymeme would be, 'Thou art mortal; let not, therefore, thy hatred be immortal.'*

ENTICE, v. a. ˆ Old. Fr. enticer ;

ENTICE'MENT, n. s., /Goth, tegia; Swed. ta-

ENTICE'R, igi°; Ang.-Sax. teogan,

ENTICE'INGLY, adv. 3 or tiletan, probably from Lat. tego ; Gr.

If a man entice a maid that is not betrothed, be shall surely endow her to be his wife.

Exodus xxii. 16.

The readiest way to entangle the mind with false doctrine, is first to entice the will to wanton living. Ascham's Schoolmaster.

Suppose we that the sacred word of God can at their hands receive due honour, by whose enticement the holy ordinances of the church endure every where open contempt 7 Hooker.

He (the poet) doth not only shew the way, but giveth so sweet a prospsct into the way, as will entice any man to enter into it. Sir P. Sidney.

In all these instances we must separate intreaty and enticements from deceit or violence. Taylor.

The bee with honied thigh, That at her flowery work doth sing, And the waters murmuring, With such consort as they keep, Entice the dewy feathered sleep. Milton. And here to every thirsty wanderer. By sly enticement gives his baneful cup, With many murmurs mixt. . Id.

So sang the syrens, with enchanting sound,

Enticing all to listen, and be drowned. Gianoille.

She strikes a lute well, and sings most enticingly.

Addison.

ENTICK (John), M. A., a miscellaneous com- piler, was born in 1713. At the age of eighteen he engaged in a controversy with Woolston, against whom he wrote The Evidence of Christi- anity proved from Facts, which is mainly a translation from Houteville. He was subse- quently a schoolmaster near London ; and wrote for the booksellers a Naval War, a History of the Seven years' War, an enlarged edition of Maitland's History of London, &c. &c. In the last of these works is a history of Wilkes's pro- ceedings with the city of London, Entick being one of his party. He also compiled a Latin and English Dictionary, and an English Spelling Dictionary, of which great numbers were for some years sold. He had also a share in com- posing the new Week's Preparation, and the Whole Duty of Man. He died in 1773.

ENTIEK, m the manege, is used for a sort of resty horse that refuses to turn, and is so far from following or observing the hand that he resists it. If your horse is entier, and refuses to turn to what hand you will, provided he flies, or parts

'noie, enure, or uuuruK.eii nurse. IE, adj. ~\ Fr. entier ; Span, en- E'LY, adv. f tiro ; Ital. intcro or in- E'NESS, n. s. t tegro ; Lat. integer, in- E'TY, n. s. J tegru, from in, not, and

from the heels, you have a remedy, by putting the Newcastle on him ; that is, a cavesson ma<1e after the duke of Newcastle's way. The word is French, and is also used among them to denote a stone-horse.

This term, in its common acceptation, is ap- plied to a horse that refuses to turn, and whose refusal proceeds from the awkwardness and stiff- ness of the body and limbs, and sometimes fro'ji malice

and bad habits. In some cases a hurt in his foot, leg, or shoulder, may be the cause of his refusing to turn to that side where he feels any pain. A hurt in his reins or haunches, a curb or spaving, which, by hindering him to bend and rest upon his hocks, may make him guilty of this disobedience. These are evils which art can do little towards curing. The term entier, in its figurative sense, in which it is always to be understood in horsemanship, means a stiff horse, or one that is not suppled, and therefore refuses to turn, from the pain and diffi- culty which he finds in putting himself into a proper posture. Accordingly the Italians, from whom the terms of horsemanship are chiefly taken and adopted, or naturalised, by other na- tions, figuratively call a stiff and undisciplined horse a whole, entire, or unbroken horse.

ENTIRE, adj. ˆ Fr. entier ; Span, en-

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ENTIRE'S

ENTIRE'TY, n. s.) tegr

tango, anciently tago, Gr. 0tyw, to touch. Un- touched; unbroken ; whole ; full, 'complete: hence metaphorically, honest ; firm ; faithful ; impartial ; and, in an obsolete sense, inward. Entireness and entirety mean completeness ; the whole : also honesty, firmness, and intimacy of friend- ship.

Then back to fight again, new breathed and entire.

Spenser.

Which when his pensive lady saw from far, Great woe and sorrow did her soul assay,

As weening that the sad end of the war, And 'gan to highest God entirely pray.

Faerie Queene.

The church of Rome hath rightly considered that public prayer is a duty entire in itself, a duty requisite to be performed much oftener than sermons can be made. Hooker.

Love 's not love,

When it is mingled with regards that stand Aloof from the entire point.

Shahspeare. King Lear.

Euphrates, running, sinketh partly into the lakes of Chaldea, and falls not entirely into the Persian sta.

Raleigh.

He run a course more entire with the king of Arra- gon, but more laboured and officious with the king of Castile. Bacon.

It is not safe to divide, but to extol the entire, still in general. Id. Collection of Good and Evil.

Sometime the attorney thrusteth into the writ the uttermost quantity ; or, else setteth down an entirety, where but a moiety was to be passed. Bacon.

Entireness with wicked consorts is one of the strongest chains of hell, and binds us to a participa- tion both of sin and punishment.

Bp. Hall's Contemplation.*

No man had ever a heart more entire to the king, the church, or his country j but he never studied the easiest way to those ends. Clarendon.

ENTOMOLOGY.

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Wrath shall be no more Thenceforth, but in thy presence joy entire.

Milton.

Here finished he, and all that he had made Viewed, and beheld ! all was entirely good. Id.

In an arch, each single stone, which, if severed from the rest, would be perhaps defenceless, i« suffi- ciently secured by the solidity and entireness of the •whole fabrick, of which it is a part. Boyle.

A a action is entire when it is complete in all its parts, or, as Aristotle describes it, when it consists of a beginning, a middle, and an end. Spectator.

An antique model of the famous Laocoon is entire in those parts where the statue is maimed.

Addiion on Italy.

Entire and sure the monarch's rule must prove, Who founds her greatness on her subjects' love.

Prior.

Water and earth, composed of old worn particles and fragments of particles, would not be of the same nature and texture now with water and earth corn- posed of entire particles in the beginning. Newton.

Chyle may be said to be a vegetable juice in the stomach and intestines ; as it passeth into the lac- teals it grows still more animal, and when it has cir- culated often with the blood, it is entirely so.

Arbuthnot.

General consent entirely altered the whole frame of their government. Swift.

The more entirely the inferior creation is submitted to our power, the more answerable we should seem for our mismanagement of it. Pope.

This is the natural consequence of the union and entirety of their interest. Blaekttone.

The ministers of earthly princes too often do this ; and it would be happy if all the ministers and am- bassadors of the heavenly King were entirely clear ot the imputation. Mason.

ENTITLE, v. a. Fr. entituler, from en and title. To give title or discriminating appellation to ; to inscribe or superscribe ; to give a claim to : and hence to grant a thing as claimed by title, or right.

Besides the Scripture, the books which they call ecclesiastical were thought not unworthy to be brought into publick audience, and with that name they entitled the books which we term Apocryphal.

Hooker.

Next favourable thou, Who highly thus to entitle me vouchsafest Far other name deserving 1

Milton's Paradise Lost. But we, descended from your sacred line, Entitled to your heaven, and rites divine, Are banished earth. Dryden's Viryil.

This is to entitle God's care how and to what, we please. Locke.

How ready zeal for party is to entitle Christianity to their designs, and to charge atheism on those who will not submit. /(;.

God discovers the martyr and confessor without the trial of flames and tortures, and will hereafter entitle many to the rewards of actions which they had never the opportunity of performing. Addison.

He entitled himself to the continuance of the divine protection and goodness, by humiliation and prayer.

A tterbury.

We have been entitled, and have had our names affixed at length to whole volumes of mean produc- tions. Swift.

Hardly even is the penitent sinner saved ; thus dif- ficult is that duty, by which alone he can be reconciled to his Creator, and entitled to the mercies of the gospel. Roger.*

ENTITY. See ENS.

ENTOI'L, v. a. From en and toil. To en- snare ; to entangle ; to bring into toils or nets.

He cut off their land forces from their ships, and entailed both their navy and their camp with a greater power than theirs, both by sea and land. Bacon.

ENTCXMB, v. a. From en and tomb. To put into a tomb ; to bury.

Processions were first begun for the interring of holy martyrs, and the visiting of those places where they were entombed. Hooker.

The cry went once for thee, and yet it may again, If thou wouldst not entomb thyself alive, And case thy .reputation in a tent. Shahspeare.

They within the beast's vast womb,

The choice and flower of all their troops entomb.

Denham.

We know where things and men must end at last,

A moral (like all morals), melancholy, And ‘ Et sepulchri immemor struts domes’ Shows that we build when we should but entomb us.

Byron.

ENTOMOLOGY.

ENTOMOLOGY (tvro/tov, an insect, i.e. an animal cut into, from ev in, and rffivia to cut ; and Xoyoc, a discourse), that branch of the sci- ence of zoology which treats of insects. These animals clearly derive both their Greek and Latin name (insecta), and thence our English name, insects, from the many segments or joints that ap- pear in their different bodies, a peculiarity which led the older naturalists to class them ‘with, vermes, Crustacea, and other subdivisions of the animal kingdom, whose more important charac- teristics have induced most naturalists of modern times to treat them distinctly. Some of the Oriental languages gave their name to these tribes from an equally obvious distinction, i. e. their feet and motions : hence the Hebrew tWl. a creeping or crawling animal, a designation re- vived in the modern myriapoda class. The il- Voi.. VIII.

lustrious Linnets definition of insects, indeed, is oriental in its first and most accurate clause. Animalcula polypoda, spiraculis lateralibus res- pirantia, cute ossea cataphracta ; antennis mobi- libus sensoriis instruuntur Syst. Nat. ed xii. ‘ Polypod animalcula, breathing by lateral spira- cles, armed throughout with an osseous skin, and whose heads are furnished with moveable sensitive antennae.’

The character of insection, however, as dis- tinguishing this part of animal nature, has been more familiar to us in the west : it meets the eye on a moment’s inspection of the wasp, the bee, or the fly ; and is more or less present through all the genera. Pliny adopted it from Aristotle, in- cluding amongst these animals, on account of this characteristic, even the apods, which the Greek philosopher had expressly distinguished

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from them and these writers were followed in ilicis and polonicus ;

and above all from those of this respect by every succeeding author until the the coccus cacti, the cochineal insect. Humbohlt appearance of the great Swedish naturalist. calculates the value of cochineal to South America

Insects form unquestionably the most nume- as an export at 32,000 arobas, or upwards of rous class of animals. Of their interest and im- portance as a study the reader will judge far more in accordance with his own previous habits and pursuits than from any thing we can state of their's. ' In his tarn parvis tamque fere- nullis quae ratio! Quanta vis! Quam inex- tricabilis perfectio!' Pliny exclaims; and al- though Bulfon has sneered at the thought of the Creator of the world being ' busied in regulating the economy of a hive of bees,' or ' the wings of a beetle/ true philosophy

Discerns

A ray of heavenly light, gilding all forms Terrestrial in the vast anil the minute ; The unambiguous footsteps of the God, Who gives its lustre to an insect's wing, And wheels his throne upon the rolling worlds.

We shall submit to the reader I. A popular INTRODUCTION on the character and importance of these numerous tribes, and here endeavour to

£500,000 sterling. Lac is also the produce of a species of coccus. The whole of the silk manufactured in Europe, and the greater part of that used in China, is obtained from the

millions of spinning-worms

That in their green shops weave the Uiooth-haired

silk

To deck her sons.

While the refuse of the same material forms a beautiful paper for which the Chinese are cele- brated.

Such is a brief summary of the useful qualities of these tribes. The lessons of foresight, in- dustry, and skill to be learned from insects, and still more those of their parental instincts, will not fail to add to their interest with every well regulated mind.

‘ The lord of the creation,’ as Messrs. Kirby and Spence observe, ‘ plumes himself upon his powers of invention, and is proud to enumerate

make our System as intelligible as possible to the various useful arts and machines to which

ordinary readers. II. The ANATOMY and ME- TAMORPHOSES of Insects. III. Their CLASSI- FICATION, including the more particular descrip- tion of their orders, and genera. IV. The HIS- TORY of ENTOMOLOGY as a science.

PART I. INTRODUCTORY.

These animals are useful, if they are also occasionally injurious to agriculture. They are in many instances important borers and opera- tors in the subsoil and interior of the earth, which they loosen and perforate with air-holes; those which feed upon the roots of grasses and other plants devour in ordinary seasons only so much as is necessary to make room for fresh shoots; those which torment the cattle occa- sionally act as the useful phlebotomists of over-fed animals : while innumerable tribes be- come a kind of scavengers to nature, removing

they have given birth, not aware that ‘ he who teacheth man knowledge’ has instructed these despised insects to anticipate him in many of them. The builders of Babel doubtless thought their invention of turning earth into artificial stone, a very happy discovery ; yet a little bee had practised this art, using indeed a different process, on a small scale, and the white ants on a large one, ever since the world began. Man thinks that he stands unrivalled as an architect, and that his buildings are without a parallel among the works of the inferior orders of animals. He would be of a different opinion did he attend to the history of insects : he would find that many of them have been architects from time immemorial; that they have had their houses divided into various apartments, and containing staircases, gigantic arches, domes, colonnades, and the like ; nay, that even tunnels are excavated by them so immense, compared with their own size, as to be twelve times bigger than that pro-

an immense mass of nuisances and deformi- jected by Mr. Dodd to be carried under the

ties from the face of the earth : other tribes fur- nish food to fishes

and birds.

But in extensive regions of the east the locust is the food of man ; and the grubs of the palm- weevil, and cerambyx damicornis are in request as a delicacy both in the East and West Indies. Even the white ant is eaten in Africa. The honey and the wax of the bee, however, outrival all the other insect contributions to the food and comfort of man. We have treated of them at considerable length under the article APIS. The extensive use of wax in all ages is well known, says an elegant writer on this subject, but it is less generally understood that wax is not the

Thames to Gravesend. The modern fine lady, who prides herself on the lustre and beauty of the scarlet hangings which adorn the stately walls of her drawing-room, or the carpets that cover its floor, fancying that nothing so rich and splendid was ever seen before, and pitying her vulgar ancestors, who were doomed to unsightly white-wash and rushes, is ignorant all the while that, before she or her ancestors were in existence, and even before the boasted Tyrian dye was dis- covered, a little insect had known how to hang the walls of its cell with tapestry of a scarlet more brilliant than any her rooms can exhibit, and that others daily weave silken carpets, both

produce of the bee alone ; the war insect of in tissue and texture infinitely superior to those China is a very different creature, a species of she so much admires. Other arts have been cicada in the larva state, and which, with the equally forestalled by these creatures. What addition of a vegetable oil, forms tlie mixture of which the candles of that country consist. Donov. !)>•. China. Nor ought we to forget the direct benefit« to medicine which are yielded by the

invaluable canth;i rides ; or those derived to the arts from the dyˆi of the gall-fly, and the coccus

vast importance is attached to the invention of paper ! For nearly 6000 years one of our com- monest insects has known how to make and apply it to its purposes ; and even pasteboard, superior in substance and polish to any we can produce, is manufactured by another. We

imagine that nothing short of human intellect can be equal to the

construction of a diving-bell or an air-pump — yet a spider is in the daily habit of using the one, and what is more, one exactly similar in principle to ours, but more ingeniously contrived ; by means of which she resides unwetted in the bosom of the water, and procures the necessary supplies of air by a much more simple process than our alternating buckets ; and the caterpillar of a little moth knows how to imitate the other, producing a vacuum, when necessary for its purposes, without any piston besides its own body. If we think with wonder of the populous cities which have employed the united labors of man for many ages to bring them to their full extent, what shall we say to the white ants, which require only a few months to build a metropolis capable of containing an in- finitely greater number of inhabitants than even imperial Nineveh, Babylon, Rome, or Pekin, in all their glory ?'

And are insects aflso occasionally and largely injurious, as we suppose, to man ? This should stimulate us to become acquainted with their character and habits. They are enemies not to be despised with impunity. Man himself is their frequent food ; they inflict various diseases on him as well as the inferior animals; and following him into every species of habitation, they attack his person, his clothes, and his rest. In this country the bite and numbers of the gnat are frequently no trifling evil ; in the New World the musquito is found in every degree of latitude. But in hot countries the bite of the latter becomes intolerable. Dr. Clarke speaks of the bodies of himself and his companions, in spite of gloves, clothes, and handkerchiefs, being rendered one entire wound, and that the consequent excessive irritation and swelling excited a considerable degree of fever. In a most sultry night, when not a breath of air was stirring, exhausted by fatigue, pain and heat, he sought shelter in his carriage ; and, though almost suffocated, could not venture to open a window for fear of mus- quitos. Swarms nevertheless found their way into his hiding-place, and, in spite of the hand- kerchiefs with which he had bound up his head, filled his mouth, nostrils, and ears. In the midst of his torment he succeeded in lighting a lamp which was extinguished in a moment by such a prodigious number of these insects, that their carcasses actually filled the glass chimney, and formed a large conical heap over the burner. Mr. Jackson states that after a fifty miles' journey in Morocco they would not suffer him to rest, and that his face and hands appeared, from their bites, as if he was infected with the small pox in its worst stage.

The fire-ant and the scorpion of warmer climes often inflict mortal wounds ; and there seems to be a human gad-fly which deposits its eggs in the skin of man, penetrates deeper if disturbed, and often

becomes so troublesome as to occasion death. We cannot particularise the insect-ene- mies of the horse, the ox, or the sheep, but the tabanus of Linne is described by Bruce as far more terrible in Abyssinia than the most feroci- ous of the larger animals. ‘ The appearance, /lay the very sound of it, occasions more trepi-

dation, movements, and disorder, both in the human and brute creation, than whole herds of the most ferocious wild beasts, in tenfold greater numbers than they ever are, would produce. As soon as this plague appears and their buzzing is heard, all the cattle forsake their food, and run wildly about the plain till they die worn out with fatigue, fright, and hunger. No remedy re- mains for the residents on such spots, but to leave them the black earth, and hasten down to the sands of Atbara, where they remain while the rains last. Camels, and even elephants and rhi- noceroses, though the two last coat themselves with an armour of mud, are attacked by this winged assassin, and afflicted with numerous tu- mors. All the inhabitants of the sea coast of Melinda down to Cape Gardefan, to Saba, and the south of the Red Sea, are obliged, in the be- ginning of the rainy season, to remove to the next sand to prevent all their stock of cattle from being destroyed. This is no partial emigration ; the inhabitants of all the countries from the mountains of Abyssinia northward, to the con- fluence of the Nile and Astaboras, are once a year obliged to change their abode and seek protection in the sands of Beja; nor is there any alterna- tive or means of avoiding this, though a hostile band were in the way capable of spoiling them of half their substance.’ ‘This fly,’ says Mr. Kirby, ‘ is truly a Beelzebub ; and perhaps it was this, or some species related to it, that was the prototype of the Philistine idol, worshipped under that name, and in the form of a fly.’

Our own agriculturists have no adversaries so terrible as several species of insects. The Hessian fly (M. pupilionis, f) is very destructive to wheat and rye, and has occasionally been a source of great alarm. The rapid multiplication of the fly is thus calculated by Leuwenhoeck : ‘ Let us suppose, that in the beginning of June there shall be two flies, a male and a female, and the female shall lay 144 eggs, which eggs, in the beginning of July, shall be changed into flies, one half males and the other half females, each of which females shall lay the like number of eggs ; the number of flies will amount to 1 0,000 ; and, supposing the generation of them to pro- ceed in like manner another month, their num- ber will then be more than 700,000, all produced from one couple of flies in the space of three months.’ Dr. Dwight, in his Travels in New England, relates accounts of the Hessian fly (ti- pula), destroying the crops of entire districts,

and rendering it impossible to cultivate a parti- cular variety of wheat. It made its first appear- ance in New England in 1787, and advanced at the rate of twenty miles a year. A caterpillar called the palmer-worm appeared in 1770. Its march was from west to east ; walls and fences were no obstruction to its course, nor indeed was any thing else, except the sides of trenches. It destroyed, rather than devoured, ascending a stalk of grass, or grain, cutting it off in a moment, and, without staying to eat any part of it, rapidly repeating the same process on all which stood in its way. The meadows, where it most abounded, appeared as if they had been mown with a dull scythe; and the grain, as if it had been reaped with a sickle which had gaps, and therefore had

cut the stalks in a scattering, slovenly manner. In some places, immense multitudes of these animals died in the trenches, which were formed to stop their progress, and were left uncovered. The mass soon became fetid and loathsome ; and was supposed in several instances, to produce a fever, distressing, and sometimes fatal. The can- ker-worm, another caterpillar, lives on apple- trees, and entirely strips them of their leaves in the course of four weeks. A sort of grasshopper appears occasionally in vast numbers, and not only eats every thing of the vegetable kind, but even ‘ the garments of laborers hung up in the field while they are at work, which they destroy in a few nours.’ — Dr. Dwight’s Travels, vol. ii. p. 384.

The gryllus genus, comprehending various grasshoppers, as they are called, locusts, and crickets, are also very injurious to agriculture. A species, apparently peculiar to New England, is mentioned by Dr. Dwight, as appearing periodically. He says, ‘ As I had no opportu- nity of examining them, I cannot describe their form or their size. Their favorite food is clover and maize. Of the latter, they devour the part which is called the silk, the immediate means of fecundating the ear, and thus prevent the kernel from coming to perfection. But their vo’racity extends to almost every vegetable, even to the tobacco plant and the burdock. Nor are they confined to vegetables alone. The garments of laborers, hung up in the field while they are at work, these insects destroy in a few hours, and with the same voracity they devour the loose par- ticles which the saw leaves upon the surface of pine boards, and which, when separated, are termed saw-dust. The

appearance of a board fence, from which the particles had been eaten in this manner, and which I saw, was novel and singu- lar, and seemed the result, not of the operations of the plane, but of attrition, the cause of which I was unable to conjecture. At times, particu- larly a little before their disappearance, they col-, lect in clouds, rise high in the atmosphere, and take extensive flights, of which neither the cause nor the direction has hitherto been discovered. I was authentically informed in Shaftsbury, that some persons, employed in raising the steeple of the church in Williamstown, were, while stand- ing near the vane, covered by them ; and saw at the same time vast swarms of them flying far above their heads. The customary flight of grasshoppers rarelv exceeds four or five yards, and their wings are apparently so weak as to forbid excursions extended much beyond these limits. It is to be observed, however, that they customarily return, and perish on the very grounds which they have ravaged.' Travels, 8cc. vol ii. p. 385. The plant-louse, vine-fretter, or puceron, (aphis) is a very common insect, the numerous species being denominated from the trees and plants which they infest. The males are winged, and the females without wings; they are vivi- parous, producing their young alive in the spring : and also oviparous, laying eggs in the autumn. As 'these insects derive their nourishment from the juices of the plants which they infest, nature has wisely ordained that the females should lay eggs in the autumn, though they bring forth their yo-uig alive all the spring and summer months.

This is to prevent them from being starved for the want of food in winter. The young burst forth from their eggs in spring as soon as there are leaves to subsist upon. Their noxious effects are well known to the gardener. They some- times migrate, and suddenly fall in showers on spots that were until then free from their ravages. The aphides sometimes settle upon the tops of beans, covering them so thickly as to make them appear quite black : in such cases the crops may often be preserved by cutting off the tops, a practice which is likewise adopted, indepen- dently of this pest requiring it, for the purpose of increasing the yield of beans. The rose-tree is, after a mild spring, greatly injured by a species of aphis (A. rosae.) If it were not for the nume- rous enemies to which the aphis is exposed, their wonderful fecundity is such that the leaves, branches, and stems of every plant would be totally covered with them. Myriads of insects of different classes, of different genera, and of dif- ferent species, seem to be]»oduced for no other purpose than to devour the aphis. On every leaf inhabited by them we find caterpillars of different kinds. These feed not upon the leaves, but upon the pucerons, whom they devour with an almost incredible rapacity. Some of these larvae are

transformed into insects with two wings, others into flies with four wings, and others into beetles. While in the larva state one of these glutinous insects will suck out the vitals of twenty pucerons in a quarter of an hour. Reaumur supplied a single caterpillar with more than 100 pucerons, every one of which it de- voured in less than three hours.

The beetle, scarabseus melolontha, deposits eggs in the ground by burrowing. From each of these proceeds, after a short time, a whitish worm with six legs, a red head, and strong claws, which is destined to live in the earth under that form for four years, and there undergoes various changes of its skin, until it assumes its chrysalid form. These creatures, sometimes in immense numbers, work between the turf and the soil in the richest meadows, devouring the roots of the grass to such a degree that the turf rises, and will roll up with almost as much ease as if it had been cut with a turfing-knife : and underneath, the soil appears turned into a soft mould for above an inch in depth, like the bed of a garden. In this the grubs lie, in a curved position, on their backs, the head and tail uppermost, and the lest of the body buried in the mould. Such are the devas- tations committed by the grubs of the cockchafer, that a whole field of fine flourishing grass, in the summer time, will become in a few weeks withered, dry, and as brittle as hay, by these grubs devour- ing the roots, and gnawing away all those fibres that fastened it to the ground. The turnip-beetles (generally haltica nemorum) called by farmers the fly and black-jack, were calculated to destroy of the turnip crops of Devonshire alone, in 1786, plants to the value of £100,000. The hop- grower has been said to be wholly at the mercy of insects. The roots of the plants are subject to the attack of a species of moth, known by the name of the ‘ ghost’ (hepialus humuli, F.) ; a small beetle (haltica concinna) attacks the young shoots; and upon the presence or absence of aphides depends the whole crop of the year.

Of the locusts the Mahommedan doctors record a speech to Mahomet, says Bochart, < We are the army of the great God ; we produce ninety-nine eggs; if the hundred were completed •we should consume the whole earth and all that is in it.' The Hebrew word ronK, a locust, is probably from the root D3"), he multiplied, be- came great, mighty, &c., because of the immense swarms of these animals by which different countries, especially in the east, are

infested. They multiply faster than any other animal, per- haps, in the creation, a circumstance frequently alluded to in Scripture. Their large open mouth is furnished with two jaws, having four incisive teeth, which traverse each other like scissars, being calculated by their mechanism, to bite or cut. Volney gives the following account of this scourge of God : — ' Syria partakes, together with Egypt and Persia, and almost all the whole middle part of Asia, in that terrible scourge ; I mean those clouds of locusts of which travellers have spoken ; the quantity of which is incredible to any person who has not himself seen them, the earth being covered by them for several leagues round. The noise they make, in browsing the plants and trees, may be heard at a distance, like an army plundering in secret. Fire seems to follow their tracts. Wherever their legions march, the verdure disappears from the country, like a curtain drawn aside ; the trees and plants, despoiled of their leaves, make the hidous appearance of winter instantly succeed to the bright scenes of spring. When these clouds of locusts take their flight, in order to surmount some obstacle, or the more rapidly to cross some desert, one may literally say, that the sun is darkened by them !' Baron de Tott has furnished a similar account.

Dr. Shaw was a witness of their devastations in Barbary, in 1724. Their first appearance was in the end of March, when the wind had been southerly for some time. In the beginning of April their numbers were so vastly increased that, in the heat of the day, they formed themselves into large swarms that appeared like clouds, and darkened the sun. In the middle of May they began to disappear, retiring Into the plains to deposit their eggs. In June the young brood began to make their appearance, forming many compact bodies of several hundred yards square ; which afterwards, marching forward, climbed the trees, walls, and houses, eating every thing that was green in their way. The inhabitants, to stop their progress, laid trenches all over their fields and gardens, which they filled with water. Some placed large quantities of heath, stubble, and such like combustible matter, in rows, and set them on fire on the approach of the locusts. But all this was to no purpose ; for the trenches were quickly filled up, and the fires put out, by the great numbers of swarms that succeeded each other. A day or two after one of these was in motion, others that were just hatched came to glean after them, enawing off the young branches, and the very bark of the trees. Dillon says, ‘ Locusts are continually seen in the southern parts of Spain, particularly in the pastures and remote uncultivated districts of Estremadura, but in general are not taken notice of, if not very

numerous, as they commonly feed upon wild herbs, without preying

upon gardens and culti- vated lands, or making their way into houses. The peasants look on them with indiffe ence while they are frisking about in the field, neg- lecting any measure to destroy them till the dan- ger is immediate, and the favorable moment to remedy the evil is elapsed Their yearly num- ber is not very considerable, as the males are far more numerous than the females. If an equal proportion were allowed only for ten years, their numbers would be so great as to destroy the whole vegetative system. Beasts and birds would starve for want of subsistence, and even mankind would become a prey to their ravenous appetites. In 1754 their increase was so great, from the multitudes of females, that all La Mancha and Portugal were covered with them, and totally ravaged. The horrors of famine were spread even farther, and assailed the fruitful provinces of Andalusia, Murcia, and Valencia. During the four years they committed such havoc in Estremadura, the love-apple, or lycopersicon solanum of Linnseus was the only plant that escaped their rapacious tooth, and claimed a respect to its root, leaves, flowers, and fruit. Naturalists may search for motives, which 1 am at a loss to discover; the more as I saw millions of them light on a field near Almaden, and devour the woollen and linen garments of the peasants, which were lying to dry on lh«j ground. The curate of the village, a man cf veracity, at whose house I was, assured me, fiat a tremendous body of them entered the church, and devoured the silk garments that adorned the images of the saints, not sparing even the varnish on the altars. About 10 o'cloik, when the warmth of the sun has cleared their wings from the dampness of the night, the females seem uneasy at the forwardness of the males, who continuing their pursuit, they rise together 500 feet high, forming a black cloud that darkens the rays of the sun. The clear atmospheie of Spain now becomes gloomy, and the finest sum- mer day of Estremadura more dismal than the winter of Holland. The rustling of so many millions of wings in the air seems like the tiees of a forest agitated by the wind. I once ?aw a cloud of them go over Malaga, and move towards the sea, and pass over it, for about a quarter of a league, to the great joy of the inhabitants, svho concluded they would soon be drowned ; but, to their disappointment, they suddenly veered about towards the coast, and pitched upon an uncultivated space surrounded with vineyards, which they soon after quitted.'

Sometimes the coldest climates are thus deso- lated. In 1650 a cloud of them was seen to enter Russia in three different places, which from thence passed over into Poland and Lithuania, where the air was darkened by their numbers. In some places they were seen lying dead, heaped one upon another, to the depth of four feet: in others

they covered the surface like black cloth, the trees bent with their weight, and the damage they did exceeded all computation. At a later period, in Languedoc, when the sun became hot, they took wing and fell upon the corn, devouring both leaf and ear, and that with such expedition,

that in three hours they would consume a whole field. After having eaten up the corn they at- tacked the vines, the pulse, the willows, and lastly the hemp, notwithstanding its bitterness. Sir H. Davy informs us that the French govern- ment, in 1813, issued a decree with a view to occasion the destruction of grasshoppers. Mo- rocco, from 1 778 to 1 780, was terribly devastated by them, every green thing was eaten up, not even the bitter bark of the orange and pome- granate escaping — amost dreadful famine ensued. — The poor were seen to wander over the country, deriving a miserable subsistence from the roots of plants ; and women and children followed the camels, from whose dung they picked the indigested grains of barley, which they devoured with avidity : in consequence of this, vast num- bers perished, and the roads and streets exhibited the unburied carcases of the dead. On this sad occasion, fathers sold their children, and husbands their wives. When they visit a country, says Mr. Jackson, speaking of the same empire, it behoves every one to lay in provision for a fa- mine, for they stay from three to seven years. When they have devoured all other vegetables, they attack the trees, consuming first the leaves and then the bark. From Mogador to Tangier, before the plague in 1799, the face of the earth was covered by them, — at that time a singular incident occurred at El Araiche. The whole region, from the confines of Sahara, was ravaged by them ; but on the other side of the river El Kos not one of them was to be seen, though there was nothing to prevent their flying over it. Till then they had proceeded northward ; but upon arriving at its banks they turned to the east, so that all the country north of El Araiche was full of pulse, fruits, and grain, exhibiting a most striking contrast to the desolation of the adjoin- ing district. At length they were all carried, by a violent hurricane, into the Western Ocean ; the shore, as in former instances, was covered by their carcases, and a pestilence was caused by the horrid stench which they emitted : — but when this evil ceased, the devastations were followed by a most abundant crop.

The description of these ravages is given no where more accurately

than in various parts of Scripture : that of the prophet Joel has been often quoted (ii. 2 — 10, 20). The later one of the Apocalypse is equally fine. ‘ And the sound of their wings was as the sound of chariots, of many horses running to battle.’ The reader may compare with these Mr. Southey’s picture of their flight, —

Onward they came, a dark continuous cloud Of congregated numbers numberless, The rushing of whose wings was as the sound Of a broad river headlong in its course Plungfd from a mountain summit, or the roar Of a wild ocran in the autumn storm Shattering its billows on a shore of rocks.’

But the white ants are, as Linne” observes, ‘ the preat calamity’ of both Indies. A similarity runs through the proceedings of the whole tribe ; but the large African species, called by Smeathman termes bellicosus, is the most formidable. These live in large clay nests, from whence they exca- vate tunnels all round, often to the pylori of

several hundred feet; from these they will df- scend a considerable depth below the foundation of a house, and rise again through the floors ; or, boring through the posts and supports of the building, enter the roof, and construct there their galleries in various directions. If a post be a convenient path to the roof, or has any weight to support, which how they discover is not easily conjectured, they will fill it with their mortar, leaving only a trackway for themselves, and thus, as it were, convert it from wood into stone, as hard as many kinds of free-stone. In this manner they soon destroy houses, and some- times even whole villages when deserted by their inhabitants, so that in two or three years not a vestige of them will remain. They are not less expeditious in destroying the wainscoting, shelves, and other fixtures of a house than the house itself. With the most consummate art and skill they eat away all the inside of what they attack, except a few fibres here and there which exactly suffice to keep the two sides, or top and bottom, connected, so as to retain the appearance of solidity after the reality is gone ; and all the while thev carefully avoid perforating the surface, unless a book or any other thing that tempts them bbould be standing upon it. Kaempfer, speaking ol the white ants of Japan, gives a remarkable instance of the rapidity with which these miners proceed. Upon rising one morning he observed that one of their galleries of the thickness of his little finger had been formed across his table; and, upon further examination, he found that they had bored a passage of that thickness up one foot of the table, formed a gallery across it, and then pierced down another foot into the floor : all this was done in the few hours that intervened between his retiring to rest and his

rising. They make their way also with the greatest ease into trunks and boxes even though made of mahogany, and destroy papers and every thing they con- tain, constructing their galleries and some imes taking up their abode in them. Hence, as Hum- boldt informs us, throughout all the warmer parts of equinoctial America, where these and other destructive insects abound, it is infinitely rare to find papers that go fifty or sixty years back. In one night they will devour all the boots and shoes that are left in their way ; cloth, linen, or books are equally to their taste.

Mr. Forbes, on surveying a room which had been locked up during an absence of a few weeks, observed a number of advanced works in various directions towards some prints and drawings in English frames ; the glasses appeared to be un- commonly dull, and the frames covered with dust. ‘ On attempting,’ says he, ‘ to wipe it off, I was astonished to find the glasses fixed to the wall, not suspended in frames as I left them, but completely surrounded by an incrustation ce- mented by the white ants, who had actually eaten up the deal frames and back boards, and the greater part of the paper, and left the glasses upheld by the incrustation or covered way, which they had formed during their depredation. At the hazard of some prolixity, as well as of anticipating the more systematic parts of this ar- ticle, vve have thus endeavoured to impress the reader with the claims of these tribes on the

attention of mankind. If they are diminutive, we may add, they are in proportion beautiful and inimitably finished in their structure ; if perplex- ing to the superficial and hasty observer to ar- range and classify, they present a corresponding reward for the zeal and application of the natu- ralist in their endless varieties of form, color, and habits ; sufficiently approximating to afford a fair outline of distinction, sufficiently various to furnish perpetually fresh discoveries of the eco- nomy of nature. ‘ We shall venture to affirm,’ says a warm admirer of this science already quoted, ‘ that from a knowledge of the characters, transitions, metamorphoses, and the various modes of life these little beings are destined to pursue, he will obtain a more intimate acquaint- ance with the great laws of animated nature, than can possibly be derived from the contem- plation of any other tribe in the creation.’ Do- novan.

‘ With what view is the study of the mathe- matics so generally recommended ?’ says Mr. JKirby, ‘ Not certainly for any practical purpose — not to make the bulk of those who attend to them

astronomers or engineers. But simply to •exercise and strengthen the intellect — to give the mind a habit of attention and of investigation. Now for all these purposes, if I do not go so far as to assert that the mere ascertaining of the names of insects is equal to the study of the ma thematics, I have no hesitation in affirming that it is nearly as effectual ; and, with respect to giving a habit of minute attention, superior. Such is the intricacy of nature, such the imper- fection of our present arrangements, that the dis- covery of the name of almost any insect is a problem, calling in all cases for acuteness and attention, and in some for a balancing of evi- dence, a calculation of the chances of error, as arduous as are required in a perplexed law-case ; and a process of ratiocination not less strict than that which satisfies the mathematician. In proof of which assertion I need only refer any com- petent judge to the elaborate disquisitions of Laspeyres, called for by one work alone on. the lepidopterous insects of a single district — the Wiener Verzeicfmiss, which occupy above 200 octavo pages, and must have cost the learned author nearly as much labor of mind as the Ditctor Dubitantium did bishop Taylor.

Popular descriptions of the insect tribes, we may further observe, have been found on some important practical occasions insufficient to dis- criminate them. Travellers, agriculturists, and officers of government on foreign stations, igno- rant of entomology as a science, often furnish us with the same kind of exaggerated and unintelli- gible accounts of their habits as abound in the writings of naturalists before the systematic improvements of Linn6. Mr. Kirby supplies two remarkable instances of this. ‘ One of the greatest pests of Surinam, and other low regions in South America, is the insect called in the West Indies, where it is also troublesome, the chigoe (pulex penetrans, L.), a minute species, to the attacks of which I shall again have occasion to advert. This insect is mentioned by almost all the writers on the countries where it is found. Not fewer than eight or ten of them have endea-

voured to give a full description of it, and some of them have even figured it ; and yet, strange to say, it was not certainly known whether it was a flea (pulex) or a mite (acarus), till a competent naturalist undertook to investigate its history, and, in a short paper in the Swedish Transactions, proved that Linne was not mistaken in referring it to the former genus.

‘The second instance of the insufficiency of popular description is even more extraordinary. In 1788 an alarm was excited in this country by the probability of importing, in cargoes of wheat from North America, the insect known by the name of the Hessian fly,

whose dreadful ravages will be adverted to hereafter. However the insect tribes are in general despised, they had on that occasion ample revenge. The privy council sat day after day, anxiously debating what mea- sures should be adopted to ward off the danger of a calamity more to be dreaded, as they well knew, than the plague or pestilence. Expresses were sent off in all directions to the officers of the customs, at the different outports, respecting the examination of cargoes, — despatches written to the ambassadors in France, Austria, Prussia, and America, to gain that information of the want of which they were now so sensible: and so im- portant was the business deemed, that the mi- nutes of council, and the documents collected from all quarters, fill upwards of 200 octavo pages. Fortunately England contained one il- lustrious naturalist, the most authentic source of information on all subjects which connect natu- ral history with agriculture and the arts, to whom the privy council had the wisdom to apply ; and it was by Sir Joseph Banks's entomological knowledge, and through his suggestions, that they were at length enabled to form some kind of judgment on the subject. This judgment was after all, however, very imperfect. As Sir Joseph Banks had never seen the Hessian fly, nor was it described in any entomological system, lie called for facts respecting its nature, propagation, and economy which could be had only from America. These were obtained as speedily as possible, and consist of numerous letters from individuals; essays from magazines ; the reports of the British minister there, &c. &c. One would have sup- posed that, from these statements, many of them drawn up l«y farmers who had lost entire crops by the insect, which they profess to have ex- amined in every stage, the requisite information might have been acquired. So far, however, was this from being the case, that many of the writers seem ignorant whether the insect be a moth, a fly, or what they term a bug. And though, from the concurrent testimony of several, its being a two- winged fly seemed pretty accurately ascertained, no intelligible description is given from which any naturalist can infer to what genus it belongs, or whether it is a known species. With regard to the history of its propagation, and economy, the statements were so various and contradictory that, though he had such a mass of materials be- fore him, Sir Joseph Banks was unable to reach any satisfactory conclusion. Nothing can more incontrovertibly demonstrate the importance of studying entomology as a science.'

*Another singular i nstance of the effect of ign**

ranee in entomology is supplied in the Edinburgh Philosophical Journal of 1824. ‘ Several recent travels in Persia present a frightful picture of the effects of the puncture of a parasitical insect which occurs in that country, and more especially at Miana, a small town on the route from Tauris to Teheran. According to M. Dupre, this town is surrounded by rivers, which render a resi- dence there insupportable in summer, from the quantity of troublesome insects which are gene- rated, and especially the mallah, a sort of tick, which produces death,’ he says, ‘ unless the per- son punctured by it carefully avoids animal food and acid or fermented liquors, and makes use of sugar, which is the only effectual remedy. It shuns the light, and does not occur in nouses newly built. M. M. Kotzebue agrees with Du- pre’ in his account of the fatal effects of its punc- ture. Morier and other travellers give their opinion that this formidable insect is not a bug or tick ; and, as it was of importance to deter- mine the truth, M. Fischer of Waldheim obtained specimens of this alleged enemy of mankind, through the Russian ambassador in Persia, M. de Mazarovitch, and Mr. Galley, an English gentleman resident in the country. He deter- mined it to be a tick, or one of those parasitic insects belonging to the family of acaridae, such as occur in all countries upon dogs, oxen, and other animals ; and finally proved that the acci- dents described by the travellers, above alluded to, have no connexion with the puncture of this insect, but have arisen from a sort of malignant pustule or anthrax, caused by the intensity of the heat in summer in this marshy country, espe- cially in strangers. The symptoms enumerated agree precisely with those manifested by the dis- ease in other countries, in the south of France for example, where it is equally attributed to the puncture of a venomous insect. The furia in- fnrnalis, which Linnaeus had been induced, from similar prejudices, to admit as the cause of a sort of gangrenous pustule, is no doubt in the same predicament ; the true cause of this dis- ease in Sweden being to be sought for in the heats of summer exerting their influence upon a marshy country.’ Journal de Pharmacie, No. 5, May i824.

In all ages of the world, therefore, we find that the insect tribes have forced themselves on human attention : in this introductory part of our paper we shall only advert to the notice they have received from eminent persons of all coun- tries prior to this study being digested into any thing like a science.

We have adverted to the early and frequent allusions to insects in the sacred writings. Pro- fessor Lichtenstein suggests, (Linn. Trans, iv. 5l) that .Moses in Lev. xi. 20, distinguishes the clean insects of the Fabrician genera, gryllus, .ocusta, truxalis, and acheta, which a

person unobservant of those animals would undoubt- edly have confounded ; if this conjecture be well founded, it argues a corresponding discrimina- tion of course, in the Jewish people at this period. The prophetic symbolical insects are also worth attention ; the tormenting and innumerable Egyptiaa and African nations are compared to a

fly ; the well-established and cultivated Assy- rians to the bee; insatiable destroyers of various nations to the locusts; Isa. vii. 18; Joel ii,; Rev. ix. 3 ; et infra. Solomon has sent many a sluggard, we may hope, to the ant; and seems to have treated this branch of natural history systematically; 1 Kings iv. 33.

Hippocrates, who flourished in the eightieth Olympiad, or fifth century before the Christian era, is said by Pliny to have written on insects, who quotes some remains of his entomological observations.

To Aristotle, the great ornament of the suc- ceeding age, we owe the foundation, as the pre- sident of the Linnean Society has observed, of that knowledge of the animal kingdom which we now possess. No one can peruse his inesti- mable History of Animals, without confessing the writer' intimate knowledge of the great arcana of nature.*

This is an elementary work, embracing a wide and comprehensive view of the whole animal creation, and does not, except on particular oc- casions, descend to the description of particular species. The insect tribe obtains his attention, however, in several parts of it. In the seventh chapter of his first book, he says, that the namt tvrofia is generic, or that of a family, and that they constitute one of his four orders of exsan- guineous animals, and points out with accuracy in what respect they differ from the mollusca, Crustacea, and testacea, the other three families of this class of animals. By exsanguineous he means only that they have no red blood, for he speaks generally to their bodies being retained in a state of moisture by other fluids. The first chapter of the fourth book affords a definition of the essential character of insects, which con- sists in the incisions or cuts either on the back or belly, and sometimes on both, by which their bodies appear to be almost divided into two or more parts.

In that portion of his work which is more par- ticularly devoted to insects, Aristotle enters very fully into all that was known by him of their economy ; and describes them as consisting of three parts, the head, trunk, and belly or abdo- men ; the second part, or trunk, is denominated an intermediate portion, corresponding with the back

and breast in other animals ; and he also mentions as a character of insects that they are furnished with feet. The subsequent passages describe different genera, or, as he terms them, tribes of insects, in which he treats of those which fly, and those which walk. Among those furnished with wings, he speaks of some having these parts entirely naked, and others that have them protected by a sheath, or covering,, as in the beetle kind ; as he furthermore states, that in some beetles these sheaths divide or open when the insect flies, and that in others they are in- separably united. The insects which have naked wings, he observes, possess either four, as in the bee, or two, like the musca or common fly. Some of those with four naked wings have stings at the end of the body, while beetles, and insects with two naked wings, are destitute of this ap- paratus; but some of the latter, he tells us,

have a proboscis or instrument at the mouth, by means of which they draw blood from other animals. The horns before the eyes (by which he means the antennae) attract his observation, and those of the papiliones and grylli are par- ticularly described. In his remarks on the dif- jerent structure of the feet, those formed for

C Coleoptera. Pedetica . Astomata .

leaping are exemplified by those of the locust. and are compared to the posterior feet of spring- ing animals. The humming noise of certain in- sects in their flight, the eruca, and miscellaneous observations on the peculiarities of these animals occupy the rest of this chapter. Mr. Kirby thus exhibits a Table of this great writer's system : —

fPtersta vel Ptilota

j

lˆDiptera Pteerota simul et Aptera C Myrmex . . ˆAptera (. Pygolampis

Orthoptera saltatoria Latr.

Hemiptera Latr. Psychae . . Lepidoptera.

f Majora Neuroptera L. Orthoptera. Tetraptera < Cursoria Latr.

t_ Opisthocentra Hymenoptera. f Minora . . Musca, Tipula, Sfc. <

Emprosthocentra Culex, Stomoxys. v. Tabanus. Sfc.

Formica L.

Lampyris L.

*‘ It may be further stated,’ says this author, * that Aristotle perceived also the distinction be- tween the mandibulata and hamtellata of modern authors ; for he observes, that some insects having teeth are omnivorous; while others, that have only a tongue, are supported by liquid food. He appears to have regarded the hymenoptera, or some of them, as forming a third, subclass ; since he clearly alludes to them, when he says that many have teeth, not for feeding, but to help them in fulfilling their instincts. How far Aristotle’s ideas with regard to genera and species had attained to any degree of preci- sion, is not easily ascertained ; in other respects his knowledge of insects was more evident. As to their anatomy, he observes that their body is usually divided into three primary segments, — head, trunk, and abdomen ; that they have an in- testinal canal, — in some straight and simple, in others contorted, — extending from the mouth to the anus ; that the orthoptera have a ventricle or gizzard. He had noticed the drums of the cicada, and that the males only are vocal. Other in- stances of the accurate observation of this great man might be adduced, but enough has been said to justify the above encomiums. His prin- cipal error was that of equivocal generation.’*

A cursory perusal of Aristotle’s labor on this subject, say our most eminent modern entomo- logists, always astonishes us ; not only from their general consistency, but from their accordance with the entomological definitions of the best modern systematists : and while the opportuni- ties of this great philosopher under the patronage of Alexander, and his own transcending qualifi- cation for the cultivation of science will account for much of what we find in his writings, when we reflect on the slow manner in which all hu- man knowledge is attained and developed, we must be convinced that the science ot nature must have made some considerable advance- ments before his time ; and that he has derived many advantages from consulting- the works of more ancient naturalists, whose labors have been lost.

Other ancient writers on insects, quoted by Athenreus, are Speusippus and Leonides, pupils of Plato and Aristotle. Xenocrates, who lived hi the 110th Olympiad, treated also of insects, in

his six books on Nature. Theophrastus, too, :i disciple of Plato and

Aristotle, notices insects in his writings ; and Antigonus, who flourished under Ptolemy II. in a work published at Leipzic in 1791, alludes to the habits of insects.

JElian, in his HEPI ZQQN IAIOTHTO2, with- out entering in a methodical manner into the history of any tribe, appropriates several chap- ters to particular kinds of these animals, which are described with considerable accuracy ; as, the scorpion for instance, oKopTriwv ; ants, pvp- prjicwv; spiders, apa.\v>t; crickets, rtrrtywv; the generation of wasps, vtpi rijc otynicwv ytvifftue ; of cantharides, rS>v raXsewv KavOapidtav, &c. The poet Phile also called, from his superior knowledge of natural history, ‘ Phile Sapien- tissimi,’ pleasingly describes the manners of the cicada, and the bees, Ttrriywv and /uXtir&v. He entertains the idea of ./Elian, that the cicadae, by which he means the cricket (not the insect named cicada by Linnaeus), lived on dew ; and that the female was mute, while the male ‘ enchanted the grove with the harmony of song.’ He speaks also of the lampyris, and other in- sects. The beautiful ode of Anacreon to the cicada is well known.

Other Greek writers who followed Aristotle within a few centuries, in treating upon insects, were Democritus, Neoptolemus, Aristomachus , Philistus, Nicander, Dionysius, Mago, Empe- docles, Callimachus, Apollodorus, Eriphilus Erasistratus, Asclepius, Themiso, Posidonius the stoic, Meander of Priene, Euphronius of Athens, and Meander of Heraclea, and Hesodius, who bring us down to the time of Pliny. Aristo- machus, of Soli, is said to have written on Bees from the result of sixty years’ attention to their economy.

Contemporary Latin writers of this era were, Pub. N. Figulus, M. T. Varro, Hyginus, Sarcana, Celsus Cornelius, ˆEmilius Macer, Virgil, Naso, Columella, Julius Aquila, Tarquilius, Umbritius, Cato Censorius, Domitius, Calvinus, Melissus, Favonius, Fabianus, Mutianus, Nieiclius, and Manilius. No one of these contributors to this science, is, however, of moment. Pliny him- self is but a compiler on the basis of Aristotle’s \ystem.

From the time oˆ ./Elian until the downfal oil

the Roman empire, although the study of insects seems not to have been totally abandoned, we are ignorant of any progiess being made

in it. Between this period and the middle ages, the names of Titus, / Etius, Alexander, Onbasius, Trailian, Paulus JEgineta, Lucius Apuleius, Athenaeus, Oppianus, Marcus Aurelius Olympius, St. Ambrosius, Epiphanius Cyprius, Decius Magnus Ausonius, Aˆmilius Marcus, Merboldus, and Cassiodorus Isiodorus, occur as writers upon insects, but their works are rather memorials of the interest and ignorant wonder ever excited by these tribes, than correct descriptions of any portion of them.

From the ninth to the twelfth century the Ara- bian botanists, Rhazes, Avicenna, Avenzoar, and Averrhoes, were occasional writers on entomo- logy, and at about the latter period Hildegardis de Pingiia wrote four books, entitled Physica St. Hildegardis, published in 1533 and 1544 in folio. Shortly after this period appeared the obscure writers, Myrepsus, Platerus, and Lianus.

Parts of the zoological work of Albertus Mag- nus, ‘ De Animalibus,’ &c., who died in 1280, relate to insects. His work was first printed at Venice in the year 1519. In the thirteenth cen- tury, also, appeared a celebrated French natu- ralist, Bellonacensis, who wrote on insects. In the beginning of the sixteenth century, Gregorius wrote his excellent German work, on birds and fishes and insects, of which there is a Latin edition. In 1549 appeared a work of Agricola, entitled De Animantibus subterraneis, in which is a new systematic arrangement of insects. He classes them in three principal divisions, i. e. those which walk, those which fly, and those which swim; describing under each class several species. In the middle of the same century, 1552, Edward Wotton, M.D. of London, pub- lished De Differentiis Animalium ; a work in- cluding some intelligent observations on insects. A small French work of 1555, under the title of Libri de Piscibus Marinis, by Rondeletius of Montpelier, treats mainly, as the title intimates, on fishes, and other aquatic animals ; but it also includes insects, and accompanies some of the descriptions of them with rude figures cut in wood. Lesser states that there was in his time, in the library of the Jesuits at Ratisbon, a copy of this work in two volumes ; on the margins of the leaves of which are large notes in the hand-writing of Gesner. Toward the close of this century appeared Gesner’s contributions to this science, entitled Serpentium et Insectorum Li- bellus ; Xenocrates de Natura, Libri sex : cura Gesneri, &c. He was esteemed the most diligent enquirer into nature that his age produced ; but, on the whole, he has slightly treated the subject of insects.

The voluminous work of the learned Ulysses Aldrovandus was first published in 1602. The treatise De Animalibus Insectis, is a folio

volume of several hundred pages, and forn,& part of his larger work on animals. ‘ Aldrovandus,’ says Mr. Donovan, ‘ was not merely a compiler ; he availed himself of the labors of former wri- ters, and in this respect with less servility, and certainly with more candor, than many who ad- vance this objection against him : for he genc- rallv refers to his authorities. In the Arnceni-

tates Academicae, Forskal considers him as ; n indefatigable compiler, celebrated for the number of his works, but who thought he had acquitted himself in collecting together the undigested observations of the ancients. We cannot avoid ex- pressing other sentiments ; and, notwithstanding that he has fallen into many errors of his prede- cessors, this work entiiles his memory to respect. In this pursuit he expended large sums of money (see our article ALDROVANDU&), travelling for information, and in the employment of artists, as he was, unfortunately, himself deficient in the talent of drawing. During the spa<:e of thirty years, he is said to have paid 200 florins annually to a painter, solely occupied in tht delineation of insects. From the fatigue of these and similar researches, this indefatigable man was deprived of sight in his old age. He divided insects into two primary orders, the terrestrial and the aquatic; the first called favica, the other non- favica. These he again subdivided into many orders ; the characters of which are determined by the number, nature, and position ˆoth of the wings and feet. If the representations of the insect tribes, from the general minuteness of their characters, are more rudely expressed in the work of Aldrovandus, than the figures of the larger animals, which his volumes contain, this defect is less imputable to the liberality of Al- drovandus than the cupidity of ths artist, and the existing state of the art. The best book of this period, in our own country, is Mouffet's Insec- torum Theatrum, seve minoium Animalium Theatrum, 1634; and it has only cuts on wood. For the space of nearly a century after this, copper-plates were rarely introduced. This work is professedly an improvement on that of Dr. Wotton, begun in 1550, continued by Gesner, and afterwards published in its present form by Mouffet.

The next work to that of Aldrovandus, in histo- rical order, is the Historia Animalium Sacra, of Wolfang Frenzius, published in 1612, containing much original observation. After Agricola, he distributes insects into three classes, which he names ae’rea, aquatica, terrea, et reutantia ; and exceeds in accuracy most of his predecessors. The work of Fabius Columna, Aquatilium et Terres- trium aliquot Animalium Observationes, printed at Rome in 1 61 6, relates, in some degree to insects ; and, before we arrive at the illustrations of Hoef- nagle, we have a work to notice from the pen of Archibald

Simpson, the first work on entomology published in North Britain, and bearing the follow- ing title, Hieroglyphica Animalium Terrestrium, &c., quae in Scripturis Sacris inveniuntur et plurium aliorum, cum eorum interpretation ibus, 4to.

We now arrive at a period when the aid of painting, and the talents of some of its most suc- cessful professors, were devoted to the illustra- tion of entomological works. The first of those which appeared with this decided improvement was a thin quarto, containing 226 miscellaneous figures of insects, published under the title of Diversae Insectorum volitantium Icones ad vivum depictae, per D. .1. Hoefnagie, typisque mandatoe 4 N. J. Vischer. Four years after appeared the work of Mouffet which we hav»> already noticed; and which had £00 wood cuts.

This work is divided into two parts, the first containing twenty-nine chapters, the latter forty- two, under which are described the several tribes of insects, known among the early writers by the names of vespis, muscis, papilionibus, cicindela, olattis, cantharide, bupresti, meloe, &c., terms familiarised to the Linnaean scholar, but which are not always applied by Linnaeus to the parti- cular tribes of insects, designated by these names in the work before us. Hollar, another artist, gained considerable reputation in 1646, by his iconical work, Muscarum, Scarabaeorum Ver- miumque variae figure et formae omnes prime ad vivum coloribus depictze et ex collectione Arun- deliana, &c., published at Antwerp. The draw- ings were preserved in the Arundel cabinet; the plates are etchings in the usual style of the artist. In the same year appeared a compila- tion of a Dr. Johnson, entitled Historia Naturalis ; in which the insects, occupying one book out of four, are illustrated by twenty-eight plates en- graved on copper by the author. In 1658 ap- peared an English translation of MourTet's work ; and in the same year Goedart's first Dutch work on insects, afterwards translated by Dr. Mey, minister of Middleburgh, under the title of Metamorphoses et Historia Naturalis Insecto- rum; a second volume was translated by M. P. Veezaerdt, minister in Zealand, who added some remarks of his own. For the space of about twenty years Goedart devoted great attention to the study of insects, and followed them through their progressive changes with great precision : Another translation of this latter part was after- wards published by Dr. Mey, with a farther addition of notes. Lister allows those annotators no credit for their labors : ' Goedart,' he observes, '

left his writings in Dutch : his Latin interpreters,' says he, ' have added comments indeed, but were men wholly ignorant in natural history, and their comments are mere rhapsodies, and alto- gether impertinent to the explication of any one history of Goedartius.' Dr. Lister re-arranged and corrected this work, and added at the same time many original observations. In 1664 a quarto, relating to insects as Objects of Micro- scopical Observation, was published by Power; and the following year Hook's Micrographia, treating of Minute Insects. In 1667 C. Merret published, in London, the earliest book treating exclusively of British insects, emitted Pinax rerum naturalium Britannicarum, continens Vegetabilia, Animalia, et Fossilia, in hac Insula reperta inchoatus. It contains a brief catalogue of such species as were known to Dr. Merret, with a concise descriptive sentence, by way of name. In the first volume of the Transactions of the Entomological Society of London, an account of the insects enumerated is given by Haworth.

A work entitled Tractatus Physicus de Taran- tula, which appeared in the year 1668 at Lyons, is, though a respectable description of this curious insect, a small duodecimo of seventy pages. The same year was published in London, the general work of an English entomologist, Charleton, under the title of Onomasticon Zoicon, plurio- rumque animalium differentias et nomina pro- pria pluritjus linguis cxponens, in which we

have a systematic arrangement of insects, after the manner of Aldrovandus. There is a mantissa of this work printed in folio in Oxford in 1677.

Another elementary work on entomology was published at Leipsic, the year after the first part of Charleton's work appeared, in quarto, entitled Dissertatio de Insectis in Genere, &c. Jacob Wolff.

Redi's Experimenta circa Generationem In- sectorum, for the tune in which it appears (1671), is described by Mr. Donovan as an interesting little book. 'Its- author combats the doctrine of equivocal generation, maintained among the ancient philosophers, and deduces its fallacy from a variety of experiments and observations, of great critical accuracy ; in the course of which he demonstrates that every living creature is pro- duced from an egg. The same work contains about thirty figures of the Ike peculiar to par- ticnlar birds, such as the pigeon, swan, pie, heron, &c. The same writer also published his work on the generation of insects in his native language, Esperienze in torno alia Generazione degl' Insetti, 1688. There are several other useful tracts by Redi on natural history.'

We now come to the era of Swammerdam and Ray, who first excited the attention of naturalists to the necessity of a more perfect system of entomology, and who both suggested their meta- morphoses as the natural basis for a system. Swammerdam's original work was first printed in 1669 in Dutch, with a Latin title. It was illustrated with thirteen copper-plates. Many years elapsed before its merits were in any man- ner acknowledged > and it was not until after his death that it was translated into the French language. This was shortly after followed by an English, and other editions. Swammerdam divided his insects into four groups, the charac- ters being taken from their metamorphosis and economy. The first undergo no change, such as spiders, anisci, &c. (The Crustacea, Myriapoda, Arachnoida, and Acari, of the moderns). The second includes those which, after leaving the egg, appear under the form of the perfect insect, but have no wings, in which state they eat and grow, till, having shed their skin, they appear in the winged form, and are capable of propagating their kind (The modern orders Orthoptera, Dermaptera, Dictuoptera, Hemiptera, and some of the Neuroptera). In the second group are comprehended those insects which appear, when hatched from the egg, under the form of a cater- pillar, which, when full grown, changes into a chrysalis, where it remains until the parts are fully developed. The insects included under this head are, the orders Coleoptera and Aptera. The fourth group comprehends those which, having attained their pupa state, do not divest themselves of th«ir skin, namely, the Hymenop- tera and Dipt era.

Claude Perrault, one of the most learned exotic entomologists of his age, author of several very valuable papers in the Memoirs of the French Academy, published a folio work in Paris, enti- tled Memoires pour servir a 1'Histoire Naturelle des Animaux, 1671.

We cannot detail the numerous minor illus- trations of the insect economy which now

appeared. Among the most remarkable are Dr. Lister's papers and work on spiders, relating chiefly to those indigenous in England, and arranged and designated by concise specific characters The last is in quarto, and was printed at London in 1678 ; the appendix, De Araneis addenda et emendanda, &c. in 1681. There is a translation of this work in the German language, by F, W. H. Martini, printed in 1778. In 1682 this gentle- man printed, at York, Johannes Godartius

of Insects, done into English, and methodised, with the addition of notes; the figures etched upon copper by Mr. F. PI. The name of Lister does not appear ; but the initials at the close of the address to the reader are M. L. The impression consisted, as the preface acquaints us, but of 150 copies, which were intended only for the curi- ous; and, in the course of nearly 130 years, it may be naturally concluded many of these must have been lost. The notes in this book are very copious. In 1685 an edition of Goedart, by Lis- ter, appeared in Latin. In this work Dr. Lister has distributed his materials of the work into a new form of arrangement, the merits of which are too obvious, not to be noticed as an important im- provement in entomology. He divides them into ten sections, as follow: — 1. Those with erect wings, and angulated pupae : Butterflies. 2 Those with horizontal wings, proceeding from caterpillars, called by Goedart, Geometry. 3 Those with deflexed wings : Moths. 4. Libellu- Iffi, or dragon-flies. 5. Bees. 6. Beetles. 7. Grasshoppers. 8. Flies with two wings. 9. Onisci, or millepedes. 10. Spiders.

In 1691 Mad. M. S. Maerian, or Graffinn, the wife of John Andrew Grafh'nn, of Frankfort, published Der Raupen wunderbare verwan- delung und sonderbare blumen-nahrang, which relates principally to European insects, of the order Lepidoptera. In early life this lady had imbibed a taste for the study of insects, from being occupied at times in painting these objects as ornaments to her flower-pieces. The task of painting insects she performed with tolerable accuracy; yet there is a stiffness in the out- line, and 'a peculiar exuberance af style, incom- patible with any faithful resemblance of nature.' Many of her original drawings are preserved in the British Museum.

In 1687 the celebrated Leuwenhoek produced his Anatomia seu interiora rerum, cum Anima- iarum turn Inanimatarum, ope et beneficio ex- quisitissimorum microscopiorum detecta. One of the first papers of this acute observer appears in the eighth volume of the Philosophical Transac- tions, and is entitled A Specimen of some Observations made by a Microscope contrived by M. Leuwenhoek. His communications to the •world after this became numerous : we refer the curious reader to Transactions of the Royal So- ciety, from the eighth to the thirty-second volume ; and to various publications printed at Leyden and Delft in 1686, 1693, 1697, 1704, fccc., for the most valuable of them. Geyereus, in

1687, wrote a treatise on the medical effect of Spanish flies (cantharides), entitled Tractatus Physico-medicus de Cantharidibus.

In 1658 Stephen Blankaart, a physician of Am- sterdam, published a work, entitled Schon Berg der Rupsen, Wormen, Maden en vliegende Dier- kensdaaruitvoort-kommende; the plates of which are admirably executed. It treats of the larvae of various insects ; but Frisch and Lyonet con- sider it but a superficial production. A second edition was published at Leipsic in 1690.

Three years after, Germany and the north of Europe being overrun with prodigious swarms of locusts, several naturalists of ability examined and published upon the structure of that animal. The most considerable of these productions were that of Hebenstreit, De Locustis immenso ag- mine ae'rem nostrum implentibus, et quid porten- dere putentur, and consists of sixty-five pages and one plate : and that of Ludolphus, entitled, Dissertatio de Locustis, anno prseterito immensa copia in Germania visis, cum diatriba, qua sen- tentia autoris de O'l^tP defenditur. The last is a folio of eighty-eight pages, embellished with figures.

But we must pass to the more important works of Ray and Petiver in England, and those of the indefatigable Reaumur in France ; works which are consulted to the present day, and serve in no small degree to sustain the reputation of this science. In 1702 Petiver produced the first decade of his Gazophylacium naturae et artis, the publication of which was carried on progressively till for about ten years after, during which the work was extended to ten decades, each contain- ing plates exclusive of the classical and topical catalogues. This work relates to insects among other animals, plants, and fossils. About twelve months before the author's death, which happened in 1718, there was, however, another work

Erinted by him under the title of Papilionum ritanniae Icones, &c. A work was published by Ray relating to English butterflies on this branch of science in 1705, under the title of Methodus Insectorum,seu inmethodum aliqualem digesta; which must be considered only as the introduc- tion to the great work Historia Insectorum, which the world received in 1710, through the care of Dr. Derham ; for Ray did not live to see it pub- lished. Insects are in this work defined to be animals, having their bodies divided more or less by incisions. The first division, a/wrajtop^wra, undergo no change, and consist of, 1. Airoda, or those without legs, under which he compre- hended the class vermes (anneleides Cnvier), and some intestinal worms (entozoa) ; 2. Pedata, in- cluding the classes arachnoida, myriapoda, in- secla ametabolia, and some of the Crustacea malacostraca edriophthalma. The second division, (ic ra/ xop^wra, pass through the state of larvae, and contain all the insecta

metabolia.

Mr. Kirby supplies us with the following di- gested Table of this able naturalist's system : —

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The intransmutabilia, or order of those which do not pass through any metamorphoses, and other valuable suggestions of this scheme, are due to Air. Willoughby, the friend of Ray. There is an appendix to this work by Lister, Appendix de Scacabaeis Britannicis, &c. Ray includes certain tribes of the vermes with insects, from which they are separated by Linnaeus; it is possible that Raj might conceive, what has been since proved, that some of them at least are the larvae of in- sects.

*M. Reaumur published the first volume of his * Metnoires pour servir a 1'Histoire des Insectes,' at Paris, in the year 1732 ; the five succeeding volumes appeared between that period and 1742, the whole work containing 200 plates of illus- trations, and contributing materially to promote the study of entomology throughout Europe. Some papers in the Transactions of the French Academy, and the Commerc. Literar. of Nurem- berg, by Maupertuis and others, had a similar tendency. In 1742 also appeared the first vo- lume of the celebrated Albertus Sebae, entitled Locupletissimi rerum Naturalium Thesauri accu- rata descriptio, et Iconibus Artificiosissimis, Expressio Latinfe et Galhce, folio. The three succeeding volumes appeared before 1765.*

We are thus conducted to the important la- bors of Linne or Linnaeus, in whose writings this study first received that scientific form of / arrangement which, in regard to its great outlines, it has ever since retained. In 1735 appeared the first edition of his Systema Naturae, sive regna tria naturae systematice proposita per classes, ordines, genera, et species; which dis- tributes insects into four orders, according to the number and form of their wings, viz. 1. Co- LEOPTERA, or insects with covered wings. 2. ANGIOPTERA, those with naked or uncovered wings (i. e. the modern orders lepidoptera, tn- •choptera, hymenoptera, and diptera). 3. HEMIP- TERA, comprehending the modern orders hemip- ttra, homoptera, orthoptera, and dictuoptera. A. APTERA, including the orders now named aptera, thasyrfura, and anoplura, as well as the classes Crustacea, myriapoda, and arachnoida, and part of the classes vermes and echinodermata. In the subsequent editions of this work, the vermes and echinodermata are separated, and constitute, with the true mollusca, and the entozoa, his class vermes.

In 1780 Linn6 published his twelfth and last edition of the Systema Nature, in which he di- vides insects into seven orders, deducing the characters from the wings, and still retaining the Crustacea, myriapoda, and arachnoida, amongst the apterous insects. They were as follows :

Order I. COLEOPTERA (from icoXtoc, « sheath, and trrepiv, a wing), including those insects hav- ing crustaceous shells or elytra, which shut to- gether and form a longitudinal suture down the back. In many, the abdomen is wholly covered by these elytra ; in others partially.

Order II. HEMIPTKRA (from rˆiiav, half, and irrtpbv). These animals have their elytra half crustaceous, and half membranaceous, or of a

matter intermediate between leather and mem- brane. •Order III. LEPIBOPTERA (from XfTrJf, a scale,

and TTTtpov). Insects with four wings imbricated with scales.

Order IV. NEUROPTERA (from vtvpov, a nerve, andwrtpov). Insects with four transparent wings, reticulated with nerves.

Order V. HYMENOPTERA from VUTJV, a mem- brane, and impov). Insects with four naked membranaceous wings.

Order VI. DIPTERA (from Svta, two, and impov). Insects with two wings.

Order VII. APTERA (from a, without, and irrtpbv.) Insects destitute of wings.

He now also divided the coleoptera into three classes, distinguished by their antennae; i. e. 1. Those having their antennae clavated, or gradually increasing. 2. Those having their antennae fili- form. 3. Those whose antennae is setaceous.

Other systematic writers appeared between these intervals ; and the history of what is pro- perly the Science of Entomology we propose to resume at the conclusion of this paper. It will be sufficient to state in this place that no other arrange- ment is so universally intelligible to men of science as that of this great author, for no other has permanently maintained its ground. We shall not, however, omit to place before the reader the relative merits of other systems, that he may form his own judgment of them, and of the modern state of this science. At present our system is that which we have just detailed, with the single exception of rejecting the class CRUSTACEA (clearly not an insect class), and which we refer to CANCERS, MONOCULUS, and ON iscus, in our alphabetical arrangement ; and distinguishing or adding a few genera from more modern writers, some of which have been disco- vered since the death of Linne, and all of which he would, as we humbly conceive, have himself admitted.

The list of orders, classes, and genera, will therefore stand thus : —

Order I.— COLEOPTERA.

Class i. Antermte clavated or gradually increasing.

GENERA.

1. Scarabaeus.

2. Lucanus.

3. Dermestes.

4. Hister.

5. Byrrhus, including anthrenus, Fabricius.

6. Gyrinus.

7. Attelabus.

8. Curculio.

9. Silpha, including nitidulu opatrum, F.

10. Coccinella.

11. Tritoma, F. (new).

Class ii. Antenna filiform. GENEK.*

1. Bruchus.

2. Cassida. 3» Ptinus.

4. Chrysomela, including cryptocfphalus,

F.

5. Hispa.

6. Meloe, including notoxut l\tta, F.

7. Tenebrio, the blaps, F.

8. Lampyris.

9. Mordella. 30. Staphy/imw.

Class in. Antenna setaceous.

GENERA.

1. Cerambyx

2. Leptura.

3. Cantharis.

4. Elater.

5. Cicindela.

6. Buprestis.

7. Dytiscus, including hydrophilus F.

8. Carabus.

9. Necydalis. 1O. Forficula.

Order II.— HEMIPTERA. GENERA.

1. Blatta.

2. Gryllus.

3. Cicada.

4. Notonecta.

5. Nepa.

6. Cimex.

7. Aphis.

8. Chermes.

9. Coccus. 10. Thrips.

Order III.— LEPIDOPTERA.

GENERA.

1. Papilio.

2. Sphinx.

3. Phalaena.

Order IV.— NEUROPTERA.

GENERA.

1. Libellula.

2. Ephemera.

3. Phryganea.

4. Hemerobius.

5. Panorpa.

6. Raphidia.

Order V.— HYMENOPTERA.

GENERA.

1 . Cynips.

2. Tenthredo.

3. Sirex.

4. Ichneumon.

5. Sphex.

6. Chrysis.

7. Vespa.

8. Apis.

9. Formica. 10. Mutilla-

Order VI.— DIPTERA.

GENERA.

1. Oestrus.

2. Tipula.

3. Musca.

4. Tabanug.

5. Culex.

6. Empis.

7. Conops.

8. Asilus.

9. Bombylius.

10. Hippobosca.

Order VIL— APTERA.

GENER.*

1. Lepisma.

2. Podura.

3. Pediculus.

4. Pulex. “. Termes.

The above belong to the insecta class, or insects proper of Cuvier and Leach.

6. Acarus.

7. Phalangium.

8. Aranea.

9. Scorpio.

The above belong to the arachnoidea class of Cuvier, Lamarck, and Leach.

10. Scolopendra.

11. Julus.

The above belong to the myriapoda class of Cuvier and Leach.

PART II.

ANATOMY AND METAMORPHOSES OF INSECTS.

It will here be necessary to exhibit an outline of the general anatomy and progressive changes of these tribes, to make the systematic description of them intelligible to the general render.

The external organic parts of insects are four, i. e. caput, the head; truncus, the trunk; abdomen, the abdomen ; and artus, the limbs or extre- mities.

i. CAPUT. — The head, which is an important part of most insects, is distinguishable into 1. oculi, the eyes, including the stemmata, ocelli, or little eyes, as they are sometimes called ; 2. antennse, the horns ; 3. os, the mouth. Inter- nally it contains the medullary substance, or brain. It is, in most insects, sufficiently distinct from the thorax, but closely connected with the latter in all the coleoptera order. There are, in fact, two principal modes of connexion between the head and thorax of insects ; one in which the point of contact is solid, and the motion de- pends upon the shape of this part ; another in which the articulation is formed by a ligament In the articulation of the head by contact of the solid parts, the head has commonly, at the part answering to the neck, one or two smooth tuber- cles, which are received into correspondent cavi- ties on the anterior part of the thorax. This is the case with the genera scarabreus, lucanus, cerambyx, and most other coleoptera : hence they have the power of moving the head back- ward or forward, and of directing the mouth downward. Sometimes, in this mode of articu- lation, the posterior part of the head is rounded, and turns on its axis in a correspondent socket on the anterior part of the thorax, as in the brentus, &c. The axis of motion is then in the centre of the joint, and the mouth of the insect can be directed either upward or downward, or to the right and left. A third sort of solid art;cu- lation occurs when the head is truncated behind, and joins by a flat surface either to a tuberc'e of the thorax or to another flat and corresponding surface, as is seen in many of the hymenoptera and diptera. In some kinds of the Fahrichm attelabi, this solid articulation is accomjil'shfil

by another means : the head of the insect termi- nates in a round tubercle behind, which is received into a correspondent cavity of the

thorax, and the inferior edge of this cavity is notched : by this means the motions of the head are limited to one dire'.tion.

The forficula, mantis, and blatta, exhibit the ligamentous connexion of the head and thorax. In this mode of articulation, the motions of the head are remarkably free, being confined only backwards by the projection of the back. The muscles which move the head are situated within tne tnorax.

1. Of the eyes of insects. — Most have two, situated in the anterior part of the head; but jeveral of the aptera order more ; scorpions, for instance, having six, and spiders from six to eight. And in different tribes of insects they vary greatly both in situation and appearance. They have been, therefore, distinguished into oculi approxi- mati, placed close together ; colorati, of a diffe- rent color from that of the head ; concohres, of the same color with the head ; contigui, touching one another ; fusciati, marked with different colored stripes ; fenestrati, having the pupil glassy and transparent ; hemispherici, convex, like the section of a globe ; inferi, placed on the under side of the head ; interrupti, broken, but continued above or below ; lunati, crescent- shaped ; obliterate, having the pupil scarcely dis- tinguishable ; pedunculati, or stipitati, elevated on a stalk or peduncle ; ovules, egg-shaped ; simplices, furnished with but one lens ; verticales, placed on the crown of the head.

But the most important distinction of the eyes is into simple and compound ; the latter being almost peculiar to themselves, and generally pos- sessed by those insects which have but two eyes. They are reticulated, and, when magnified, are found divided into a great number of hexagonal compartments, or lenses, slightly convex, and often separated by small furrows containing a species of eyelash. Leuwenhoek reckons in each eye of the libellula, or dragon-fly, 12,544 lenses, or in both 25,088; the pictures of objects painted on such organs of vision must, of course, be some millions of times less than the images pictured on the human eye : while there is no doubt that insects still smaller have eyes adapted to discern objects some thousands of times less than themselves. To the naked eye these nume- rous lenses appear like net-work. Beside these eyes, many of the neuropterous and hymenop- terous families have three small shining convex points placed in the middle of the head, called, by entomologists, stemmata, the utility of which •was long doubted : but they are now pre'ty generally acknowledged to be also organs of sight. They are simple in their structure, and seem designed for viewing remote and larger objects ; the other eyes smaller and nearer ones.

2. Of tfie antenna. — Of these there are in ge- neral two, placed on the fore part of the head. They are peculiar to insects, and are plainly dis- tinguishable from the tentaculae of the vermes in being crustaceous ; and from the palpi of insects which are more numerous and placed near the mouth. The antennae are of great moment in distinguishing the various kinds of insects :

Linn£ has formed i Is genera upon this distinc- tion principally. We shall enumerate and ex- plain the several different forms of them.

Setaccte are those which grow gradually taper towards the extremity. Tiliformes, such as are of the same thickness througnout. Moniliformes filiform, like the preceding, but consist of a series of round knobs, like a necklace of beads. Cla- vate such as gradually increase in size towards the extremity. Capitate are clavata, but have the extremity somewhat round. Fissile are capitata ; but have the capitulum, or knob, di- vided longitudinally into three or four parts, or lamina;, as in the scarab bei. Perfoliatx, are also capUattz; but have the capitulum horizontally divided, as in the dermestes. Pectinatte, so called from their similitude to a comb, though they more properly resemble a feather, as in the moths and elateres. This is most obvious in the male. Furcate, or forked, having the last joint divided into parts. Aristate, such as have a la- teral hair, which is either naked or furnished with smaller hairs, as in the fly. Breviores, those which are shorter than the body. Longiores, those which are longer than the body. Mediocres, those which are of the same length with the body : the last three varieties are distinguishable in the ceram- byces.*

The use of these organs is yet unascertained. There is nothing analogous to them in other ani- mals, which has induced some naturalists to sup- pose them to be the organ of some extremely •»licate sense unknown to us : some respectable Taoderu writers have thought them to be the seat of hearing, others of smelling, and Mr. Huberboth of touch and smell.

The activity with which these organs are used, and the abundance of medullary nerves which connect them throughout with the brain, indicate the importance of them to the insect economy. Some insects which have the antenna smal have the palpi very large, as if they were intended to answer the same purpose, or partake of the same sense, as the antennae, and thus, by their mutual aid, supply the deficiency of the latter : the larvae of certain insects again which have palpi have no antennae, and others in the same state have antennae and no palpi.

Mr. Donovan says, < The antennae appear to us to be rather connected with the organ of hearing than either that of feeling or smelling. The pal- pi, we have little doubt, are the organs of feeling, both from their texture and the manner in which insects are oftentimes observed to make use of them in touching their aliments ; and the organs of smelling in insects, however singular it may be imagined, we conceive to be no other than the apertures disposed on each side the thorax and body. By the organs of hearing, we do not mean to consider them as external ears, but as being in some manner auxiliary to the organ of hearing, the seat of which we suspect to be con- tiguous to the base of the antennae, the spot in which the same organ has been discovered in the cray-fish. They may answer this and some other purpose likewise.'

Bonnet thinks the antennae the organ of smell. ' Different insects,' he observes, ' have an exqui- site sense of smelling, the organ of which is yet

undiscovered. May it not reside in the an- tennae ' Iˆhmann, from the result of experi- ments on this subject, denies that the antenme are the olfactory organ. He made an opening an inch wide in the side of a glass vessel, and surrounded the edge with wax, so that a close covering could be applied. An aperture was made in this covering, through which either the whole head, or the antennae only, of an insect could be introduced. By means of a tube the glass was filled with penetrating odors, vapors, or heated air ; but neither the fumes of sulphur nor burnt feathers produced the smallest effect on butterflies, bees, or beetles, whose antenna; were exposed to them.

He supposes, with Mr. Donovan, that the spi- racula are the seat of smelling. ' That insects possess the faculty of smell. ng, says an able writer in the Edinburgh Review, No. XII., ' is clearly demonstrated. It is the most perfect of all their senses. lieetles of various sorts, nitidultf, the different species of dermestes, sylphce Jlies, $c., perceive, at a very considerable distance, the smell of ordure and dead bodies, and resort in swarms to the situations in which they occur, either for the purpose of procuring food or de- positing their eggs. The blue flesh-fly, deceived by the cadaverous odor of a species of arum, alights on its flower. But though we can thus easily prove the presence of the sense of smell among insects, it is much more difficult to dis- cover the seat of that particular sense. Several naturalists have supposed that it resides in the antennae. Dumeril, in a dissertation published in 1 799, attempts to prove that it must be

situ- ated about the entrance of the stigmata or respi- ratory organs, as Baster had previously supposed. His arguments, however, did not induce Latreille to relinquish the former opinion, which places it in the antenna5.'

He has assigned the following reasons for his belief : 1 . The exercise of smell consists only in the action of air, impregnated with odorifer- ous particles, on the nervous or olfactory mem- brane, which transmits the sensation. If insects be endowed with an organ furnished with similar nerves, and with which air, charged with odori- ferous particles, comes in contact, such an organ may be regarded as that of smell. Should the antennae present a tissue of many nerves, what inconvenience can result from supposing that this tissue is capable of transmitting odor? Would not this hypothesis, on the contrary, be more simple and more consonant to anatomical prin- ciples than that which fixes the seat of smell at the entrance of the stigmata? Besides, this last mode of explanation will not, I presume, suit the crustaceous animals, which so nearly approach to insects. 2. Many male insects have their an- tennae more developed than the females ; a cir- cumstance easily explained, if these organs are allowed to be the seat of smell. 3. Certain it is that most of those inserts which live or deposit their eggs on putrid animal or vegetable matters, stagnant waters, &c., are almost uniformly dis- tinguished by a greater development of the anten- nae ; such, for instance,as the rcarabseus, dermestes, silpha, clems, tenebrio, tipula, bibio, &,c. These, requiring a more perfect sense of smell, are VOL. VIII.

suitably organised, 4. A great number r-f insects which are entirely rapacious have simple an- tennae, and those which are sedentary have none at all; such, for instance, as some of the acari, and a considerable part of Lamarck's arachnoidx. 5. Insects discover their haunts and food by the sense of smell. Latreille deprived several in- sects of their antennae, and found they instantly fell into a state of insensibility, and seemed to know neither their habitations nor their food, though placed close by them. Were- such expe rimentsas this prosecuted the question might soon be decided: by coating the antennae of insects with varnish, and placing them near their natural food, it might easily be known whether the antenna were the organs of smell ; if they were the animal could not be supposed to find its way to the food, and vice versa. 6. Nerves terminate the antennae, the articulations of which, though externally covered with a pretty thick membrane, are hol- low, lined with a soft substance, frequently of a. watery consistence, the extremities of which, when exposed to the air, may receive impressions from it.

Mr. Kirby mentions a singular circumstance respecting the antennae of the eucera, or long- horned bee, 'which,' says he, 'to the best of my knowledge has never before been noticed andwhich may possibly lead to the discovery of the use of these organs. Placed under a powerful magni- fier, the last ten joints appear to be composed of innumerable hexagons, similar to those of which the eyes of these insects consist. If we reason from analogy this remarkable circumstance will lead us to conjecture that the sense, of which this part so essential to insects is the organ, may bear some relation to that conveyed by the eyes. As they are furnished with no instrument for receiv- ing and communicating the impressions of sound, similar to the ear, that deficiency may be supplied by extraordinary means of vision That the stemmata are of this description seems very probable ; and the antennas may, in some degree, answer a similar purpose : the cir- cumstance just mentioned furnishes a strong; presumption that they do this, at least in the case of these males ; else why do they exhibit that peculiar structure which distinguishes the real eyes? .....

That insects do hear, by whatever organ, seems abundantly established. Lehmann states that, on observing a spider descend from the ceiling of a room by its thread in quest of a female, while 'he was reading, he began to read aloud : the animal, alarmed at the noise, retreated upwards ; he was silent, and it returned ; on again reading aloud, it testified alarm and as- cended its thread ; nor was its apprehension of danger dispelled, until familiarised with the sound or conquered by the object of its pursuit. This author deprived crickets, which are animals noted for acuteness of hearing, of the antennae; yet they were equally sensible of sound as before. By an experiment of Huber's, it seems that a queen bee deprived of her antenna?, loses, if not her fecundity, all the ordinary characteristics by which she is known in the hive. Amputating on.- of the antennae of a queen he found was iiOi ;ii- tended with any perceptible effect. Privation of

both, however, produced very singular conse- quences. M. Huber cut them from a queen whose fecundation had been retarded, so that she laid none but the eggs of males. ' From that moment a marked alteration in her conduct w'as seen ; she traversed the combs with extraordinary rapidity, scarcely had the workers time to recede before her ; and, instead of the care which a per- fect queen displays

in depositing her eggs in those places alone suitable for their exclusion, she dropped them at random without selecting proper cells : she retired to the most solitary parts of the hive, seeming to avoid the bees, and long remained motionless. Several workers, however, followed her there, and treated her with the most evident respect. She seldom required honey from them ; but, when that was the case, she directed her trunk with a kind of uncertain feeling, sometimes on the head and sometimes on the limbs of the workers ; and if she did reach their mouths it was by chance. Queens leave their hive but once in their whole lives, which is for the purpose of obtaining impregnation ; they remain voluntary prisoners ever afterwards, unless in leading out a swarm. This queen, how- ever, seemed eager to escape ; she rushed towards the opening of the hive, but, finding it too small for her exit, she returned at'.er fruitless exertion. Notwithstanding the symptoms of delirium by which she was agitated, the workers never ceased to pay her the same attention as they invariably do their queens, though she received it with indifference.' There is clearly a field of very interesting research still open to intelligent ento- mologists on this mysterious subject.

3. Of the mouth. — To the peculiarities in the structure of this part of the head a great degree of importance is attached by many of the modern systems of entomology having founded their es- sential characters, and Fabricius his classification of insects upon them. It consists of the follow- ing principal parts : —

i. The labrum, or labium, inferius, is the ter- minating portion of the mouth below, and some- times lengthened so as to form the instrument called ligula. It is frequently bifid, and has the posterior pair of feelers placed at the base.

ii. The labium super ius, or upper lip, is situated above the jaws,' as in the scarabaeus and gryllus, and is of a membranaceous nature, transverse, soft, and moveable. Linne" and Fabricius are said sometimes to have confounded the upper lip with the clypeus, or shield of the head. « The two parts may be distinguished by one invariable character.' says Mr. Samoulle, — 'the clypeus is fixed, and forms a portion of the head; the upper lip is moveable, and is placed more for- ward.'

iii. Lingua, the tongue, in some insects is taper and spiral, as in the butterfly ; in others it is fleshy, resembling a proboscis, and tubular, as in the fly. It constitutes the whole mouth in lepidopterous insects ; and consists of two fila- mentous pieces, which are externally convex, concave within, and connected longitudinally by a suture

along the middle both above and be- neath. These, in uniting, form a cylinder, through which are drawn up the nectareous juices of the flowers on which such insect subsist.*

The two pieces, being not very closely united, may be separated by a needle's point. When me insect takei its food, this tube is exserted; at other times it is deposited between the palpi in spiral folds.

iv. The iiHtndibulf, or mandibles, are two horny substances placed one at each side of the mouth, below the upper lip. They have a lateral motion, while the upper and lower lip move up and down, as in other animals ; and differ from the maxillae, with which they are often con- founded, by not having any of the palpi or feelers attached to them.

v. The maxilla, or jaws, are two small pieces of a membranaceous consistency, indented at the extremity, and nearly all ciliated at the inner edge. They have a lateral motion, and are some- times distinguished, as to their form, into dentate, i. e. set with sharp-pointed processes ; forcipate, pincer-shaped ; furcate, forked ; lunutate, thick in the middle and smaller towards the base and the apex ; prominentes, placed straight before the head.

vi. The haustdlum, or the sucker, is formed of two or more very small and delicate filaments, en- closed iu a sheath of two valves.

vii. The rostrum, or beak, also forms the prin- cipal part of the mouth in many of the hemip- terous order of insects. It is moveable, articulated, and bent under the breast. The beak within is hollow, and contains, as in a sheath, three or more very delicate bristles, the points of which these insects introduce into the body of the ani- mal, or substance of the plants, from which they derive their sustenance. In the cicada, nepa, and cimex, this part is very distinguishable.

viii. The proboscis is a trunk inserted in place of a mouth, in dipterous insects. It is a fleshy, retractile, single, often a cylindrical, instru- ment ; the end forming two lips of a soft sub- stance, and supposed, from the delicacy of their teguments, to possess the faculty of taste (as in the common fly) in an exquisite degree.

ix. Palpi, the feelers, are small, moveable, filiform, appendages to each side of the mouth in most insects, and resemble the antenna1, but are more distinctly articulated. They, as their name implies, are supposed to be the organs of touch, and vary in number in different tribes, being either two, four, or six, and are commonly inserted at

each side the exterior part of the jaw. In those insects which have but one pair, they are situated generally on the upper lip ; when •there are two or more, the posterior ones are generally on the lower lip ; and in some insects they are inserted at each side of the haustellum. Composed of joints, more or less numerous, they exhibit a considerable affinity to the antennas, and they are endowed with equal, and even more, extensive powers of motion. They serve therefore like the antennae, where they are found, as an essential character in the distinction of genera; for in several of the fulgorae, cicadas ci>nices, nepa;, &c., of Linnaeus, there are none : they abound most in the carnivorous tribes.

x. The galete, or shields of the mouth, are two membranaceous appendages, of a large size an

orgaus of the mouth, conjointly with the lips. Thej are very distinct in the gryllus genus.

xi. The clypeus, or shield of the head, in coleop- terous insects, corresponds with the frons or front of the head in other orders. In the scarabseus genus it is advanced more or less upon or over the mouth, and in some forms a sort of cap, the rim of which extends so far over the head as to conceal the mouth beneath. The anterior edge of the clypeus is sometimes mistaken for the upper lip.

ii. TRUNCUS, the trunk : the second principal external division of an insect, comprehends that portion of its organs which is situated between the head and the abdomen ; or the thorax, the col- lar, the pectus, the sternum, and the scutel.

1. The thorax is a term sometimes applied to the whole trunk, excepting the scutel ; in a strict sense it includes only the dorsal part of the trunk, or that portion of the superior surface which lies between the head and the base of the wings. This in some insects of the orders coleoptera and hemiptera, for instance, is a single piece ; in that of lepidoptera it comprehends se- veral segments, and often still more in the order hymenoptera. The first or anterior segment, in those consisting of several pieces, has been called

2. The collar ; but in admitting this, as it has been observed by Mr. Donovan, the coleopterous and hemipterous orders of insects can have no thorax. ‘ This will be rendered plain, when we consider that

in the latter kinds of insects the first pair of legs arises from what is usually un- derstood by the lower surface of the thorax ; the interior segment, in hymenopterous insects, cor- responds with the whole thorax in the former, for the first pair of legs arises from it in exactly the same manner. In the former, the thorax of a single piece is immediately succeeded behind by a scutel, while in the hymenoptera and lepidop- tera a large plane of one or more joints inter- venes between the true thorax and the scutel ; and it is to this last-mentioned dorsal space that the term thorax is assigned. Hence it is evi- dent that the language of entomology in this point is not altogether consistent ; because what we denominate the collar, in hymenoptera, is the thorax in coleoptera ; and in coleoptera we find nothing analogous to the thorax of the other or- der, except the collar.' Those insects which have a single thorax, or the first segment in such as are of a compound nature, have the first pair of legs arising from the lower surface, and in this part appear the muscles that move the head, as well as this pair of legs. The thorax in different kinds of insects varies in its shape considerably ; in some it is armed with spines, in others denti- culated, &c., and affords very marked generic and specific distinctions.

3. Pectus, the breast, the third segment of the body, is that to which the four posterior feet are attached, and in which the wings of lepidopte- rous insects originate. It is usually divided longitudinally at the anterior part by the ster- num. In the coleoptera and hemiptera orders, the wings and elytra are placed more immedi- ately on the back, and the breast contains the muscles that move the wings, and give action to the four posterior legs. This part is capable of

being compressed and dilated considerably, as appears in the butterfly and moth tribes ; a power supposed to arise from the action of some siren-; muscles, which also assist the flight of these in- sects.

4. The sternum, or the breast-bone, is that middle part of the breast which is situated bt- tween the base of the four posterior legs. It terminates the body of insects sometimes ante- riorly in an acute angle ; in others it appears bilobate : but in the far greater number ends ob- tusely. The sternum is not remarkable either for its magnitude or figure.

5. The scutel, or escutcheon (scutellum, Linn.), is a lobe-like process, situated at the posterior part of the thorax, in scutellate insects. It is. not always of the same form, but generally of a sub-triangular figure : as in the coleopterous tribes for instance, its deviations inclining more or less to heart-shaped, with the tip pointing backwards, as in

some of the hemiptera. In several of them thi; posterior end is armed with spines, or denti- culations ; this, however, is not usual. The scutel is more variable in point of size than iu figure ; in some instances it is so small as almost to escape notice, in others it is very conspicuous : covering the middle, and even expanding over the back, so as to conceal the wings and their cases.

iii. The ABDOMEN, the third principal division, or posterior part of an insect's body, is composed of annular joints, or segments, varying in . um- ber in different insects, and comprehending, as appendages, cauda, the tail ; and aculeus, the sting. Its general form is also various and dis- criminated into aquale, when it is of the same breadth with the thorax ; barbatum, having tuffs of hair at the sides or extremity ; falcatum, shaped like a sickle ; petiolatum, attached to the thorax by means of a slender elongated tube ; planum, flat in the under part ; sessile, attached to the thorax in its whole breath, &c. The upper part of the abdomen is the tergum, or back ; the inferior, venter, the belly; and the opening at the posterior part, the vent : in most insects tlie extremity is occupied with the organs of genera- tion. The motion of the abdomen is most visible in those insects of the hymenopterous tribe, which have that portion of the body pediculated, and is accomplished by muscles inserted in the rings.

1 . Cauda, the tail, is a name given to any ap- pendage which terminates the extremity of the abdomen, called aristata, when it terminates in a slender thread ; foliaceous, spreading out like a leaf, as in the blatta ; forcipata, shaped like a for- ceps ; setacea, bristle-shaped, as in the podura ; biseta, having two slender attenuated setae, &c.

2. Aculeus, the sting, is an instrument of pro- tection or offence, denominated simplex, when it has but one dart ; compositus, having two or more darts; exsertus, projecting, or not lying within the body ; retractilis, capable of being drawn in, as in bees and wasps; reeonditus, always hid in the body, or seldom thrust out ; vaginatus, en closed in a bivalve sheath. In some tribes ot insects it exists in the male, in others in the fe- males only ; but it is seldom met with in both sexes.

iv. ARTUS, the limbs or extremities, are, 1. Pedes, the legs. 2. Ala, the wings.

\ . Pedes, the legs, or true feet of winged in- sects never exceed six ; though in the larvae state many have more : and the aptera, or wingless tribes, particularly the julus and scolopendra ge- nera, have twenty, fifty, and some of them thrice that number of feet. The scorpio, aranea, and phalangium of these tribes, have eight. The parts of the legs are femur, the thigh ; tibia, the shank ; and tarsus, the foot. Femur is the first or upper joint, which is arcuatum, bent like a circular arch; dentatum, having a margin with indentations ; hispidum, set with short rigid bris- tles ; incrassatum, growing thicker in the middle ; spinosum, set with spines; muticum, without spines ; or taltatorium, thick and formed for leaping, as in the locust tribe. That part which connects the thigh to the body is called its basis. The tibia, or shank, the second joint, is that part of the leg which varies its form most, according to the use which is made of the pedes. Tar- sus, the foot, or last joint, consists of several arti- culations, which vary in number according to the insect's mode of life. To the apex of the tarsus are attached the claws, ungues.

The pedes as a whole are discriminated, ac- cording to their shapes and uses, as cursorii, formed for running; mutici, without claws or spines ; natatorii, compressed and formed for swimming, as are the dytiscus and hydrophilus genera ; saltatorii, with thick thighs fitted for leaping, rs are the curculio tribes ; serrati, toothed like a saw ; spinosi, set with large spines.

2. Ale, the wings, demand our particular at- tention, as forming the basis of the Linnsean ar- rangement.

(1.) These vary, in different insects, from two to four, and are generally attached to the lateral part of the breast, next to the lower margin of the thorax. They are always in pairs, always uniform in size and appearance, and always in a corresponding situation on each side of the in- sect. But in those which have two pairs, the first, reversing our carriage-wheel mechanism, are larger than those behind : they are also generally of paler hues and marks. Insects have been often described as boneless, but to the remarka- ble skeleton of nerves which constitute the platform, so to speak, of the wings, Dr. Leech has recently given the name of pterigostea, or wing- bones. They vary very much in dis- position, but the true wing consists of these and two thin and closely un.ted membranes which enclose them. The variety in the disposition of the nerves appears on a comparison of the wing of the common house-fly (musca

domestica) with that of the panorpa, or the ephemera ; or the win:: of the forficula (earwig), which consists of a series of single nerves, with the elaborately wrought lattice-work of the wing of the libellula. We cannot notice other varieties of the wings, such as in the color and texture of their coating. The coleoptera have two membranous wings, which fold upon each other, forming a plait, or double, at their external margin ; the fold being accommodated by a peculiar joint in the main rib of the wing, and by the peculiar disposition of the nerves in the middle. In the hemiptera the wings generally fold longitudinally, without

any transverse double, so that in expansion these parts open like a fan : in the forficula, however, the wing is doubled across as ir, the coleoptera. The rvings of the lepidoptera are neither doubled across nor folded longitudinally; they are en- tirely flat, and incapable of contract. on and dila- tation. In the papilio genus they are endowed with the power of erection, which is not the case in the phalsna genus, which have the lower wings concealed under the anterior pair, the latter being laid in a flat position over them. The neuroptera in general have the wings flat ; this is not invariable : they are constantly mem- branaceous. and reticulated with nerves. In the hymenoptera the wings are membranaceous, generally flat, but sometimes folded, when the insect settles, as in the wasp genus.

Dipterous insects, and var.ous kinds of the hymenoptera may be said to possess the power of flight in a more perfect degree than any other class of animals ; although the muscles that assist in these movements are not well ascer- tained. The loud buzzing of these insects, when flying, is occasioned, as it is believed, by the wings and halteres or balancers striking against each other. The noise of the cricket, locust cerambyx, leptura, &c., by the friction of Jhe wings, or the base of the wing-cases striking against the posterior edge of the thorax.

Terms distinguishing the wings, according to their form, figure, texture, construction, &c., are acuminate, terminating in a subulated apex ; caudata, when the hinder wings are extended into processes ; crenate, having the margin notched ; ungulate, having the margin angular ; denticulate, set with teeth ; digitate?, divided to the base nearly like fingers ; integrte, without indentations; incurvate, the anterior margin bent like an arch ; nervusa, full of nerves or vessels; reticulate, the nerves disposed like net- work, as in the libellula; maculata;, or picttz, spotted or marked with colored spots, bands, &c. ; variegate, of different colors ; radiate, the nerves diverging like rays ; ocellatee, marked with one or more ocelli, or eye-like spots, of

which the central is termed the pupil, the exterior one the iris; plans, which cannot be folded up; pli- catiles, that admit of being folded up at pleasure ; patentes, extended horizontally; erectte, such as stand erect when the insect is at rest ; incum- bentes, which rest on the upper part of the abdo- men ; deflate, such as are partly incumbent, or simply bent down, &c.

(2.) The halteres, or poisers, are two globular bodies in insects of the order diptera ; placed on slender stalks behind the wings, and seated on thg thorax: and so called because they are generally supposed to keep the insect steady in its flight

(3.) The elytra, or wing-cases, of the coleop- terous tribe, two in number, have often been confounded with the wing itself. They are, however, entirely distinct, both in their position and structure. They are of a substance resembling leather, and for the most part moveable, open- ing by a longitudinal suture along the middle of the back, and are extended or raised up when the insect is in flight. Their parts are the base, the apf.r, the nmrgo, or outer rim next the belly, and the sutura, the part where the elytra meet,

and form a line in the midd'e of the back from ihe base to the apex ; and they are, as a whole, distinguished into — lineata, marked with de- pressed lines; punctata, marked with very small dots ; pubescentia, covered with hair ; rugosa, wrinkled ; hispida, set with short bristles ; scabra, rough, with hard raised points; spinosa, the margins set with spines; dentata, set with tooth- like processes ; pramorsa, the apex terminating obtusely ; sinuata, hollowed as if scooped out ; subulata, linear at the base, and pointed at the apex ; Integra, completely covering the back ; dimidiata, covering but half the back ; intcquulia, the surface not flat ; immarginata, without a mar- gin, or distinct rim ; muricata, rough with rigid jpines ; striata, slightly channelled ; convexa, convex, &c.

The INTERNAL ANATOMY and SECRETIONS of Insects next demand some consideration, and the most important organs that here present themselves for consideration are the brain, the stomach, and the spiracles.

1. Linn6, although he does not deny the existence of a medullary thread, or brain, in the head of insects, as some have supposed,

states that he never could discover it to be organised ; and hence says, that the hippobosca equina, or horse-fly, will run, live, nay even form a union with the opposite sex, after being deprived of its head, to say nothing of many others, which are capable of living for a considerable while in a decapitated condition. From the investigations of Cuvier it is, nevertheless, obvious, that independently of a nervous medullary thread, insects have a brain distinctly organised, from which this thread and other nerves arise, and that its seat is in the head, as in the more noble tribes. The existence of a true brain in insects was believed by many writers before the time of Linnaeus, and by some after ; but, generally speaking, the opinion of this celebrated natura- list was assented to, and enquiry ceased, till the .subject was revived by Fabricius, who is said to be the first that discovered the true brain of insects. Cuvier, however, it was that finally established the true doctrine of nature on this subject. From him we learn that the brain is not constantly of the same structure in insects ; in some tribes this organ consists of one lobe, in others of two, and in others again of four ; and the nerves arising from them differ, also, very materially in different families, and sometimes even in the same genera. But besides this dissimilarity, there is another circumstance far more ˆremarkable ; the form of the brain and medullary nerves in certain insects are ascertained to undergo a considerable change, as well as the external organs, in passing from the larva; to the perfect state. Their muscles are fibres formed of fasciculi, adapted principally to but two kinds of motion, that of flexion and extension : they have strictly no salivary glands, but secrete a fluid resembling saliva in certain floating vessels of the mouth: the organ of deglutition we have already described.

2. Digestion is carried on by means of a stomach and an intestinal canal, of various forms ;».nd powers in different insects. For the most part they have a single stomach, but sometimes it is

double, and sometimes manifold. It also varies according to the nature of the food on which thp insect lives; in those which subsist on ve»-etab!; juices, it is often membranaceous, as in the bee; in those which feed on animal substances, as the bug, boat-fly, &c., it is muscular ; in others the stomach is nothing but a continuation of the oesophagus, as in the cockchaffer, beetles, &c., which feed on leaves and roots. The double stomach is found in the coleopterous tribe, which feed on other insects, as the cicindela, carabua, &c. ; the first of the two is muscular, after the manner of a gizzard ; the second, a long mem- branaceous canal. Insects, such as the cricket and grashopper, which have many stomachs, seem to employ them much

after the manner of the ruminating animals ; some for the reception and digestion of food, others for its mastication and final appropriation.

3. Respiration is now well known to be carried on in insects by means of their nume- rous spiracles, which receive the air; and other vessels, called trochees and bronchia, proceeding from these pores by the sides serve for its expiration. Malpighi, Swammerdam, and Reau- mur, discovered that in the caterpillar there are two air-vessels, called tracheae, which extend throughout the whole length of the insect ; from these proceed an infinite number of ramifications which are dispersed in various directions through the body; but the principal are those which form a direct communication between the tracheal vessels and the openings in the sides of the body. Of these there are nine on each side placed nearly at equal distances, one extremity termi- nates in the orifice of the spiracle, and the other enters the principal tracheal vessel disposed nearest, or on that side of the body. These lateral or spiracular vessels seem calculated for the reception of air ; they are of a cartilaginous nature, and when cut preserve their figure; they are constantly observed in a temperate state of moisture, and communicate, in many insects, in the form of considerable vesicles, at their junction with the principal tracheae. A caterpillar, ac- cording to Bonnet, maybe retained a considera- ble time under water, without destroying the principle of life, and will recover soon after being taken out of the water, when it has lain till all apparent signs of life have ceased. A caterpillar partially immersed in water, or with two or three of the spiracles remaining in the open air, does not become torpid for a considera- ble time. One caterpillar lived eiuht days sus- pended in water, with only two of its anterior spiracles in the air. During this time it was observed, that when the insect moved itself, little streams of bubbles issued from the spiracles on the left side ; from this and other experiments, however, it appeared that the anterior pair of spiracles, together with the posterior pair, are of the greatest use in respiration.

' It has been remarked,' says Mr. Donovan, ' that when we consider the <:rcat solidity of the cases or cones of certain kinds of insects, it in not easy to conceive how they can live several months under the earth in spaces so confined, and almost impervious to the air. If respiration was absolutely necessary to their existence, ant?

indeed if they did respire, the same situation seems to preclude a continuance of the operation, as the air would soon he corrupted, and unfit for the offices of life.

- *But though it is difficult to ascertain the res- piration of some insects at certain periods of existence, except from its effects in preserving life, which from analogy and collateral circum- stances we are assured must depend on this cause, there are others to which respiration seems necessary in a very extraordinary degree. Many instances of this might be adduced; but in no tribe is this more clearly shown than in those of the aquatic kinds. There are a number of the latter which are obliged to keep their tails sus- pended on the surface of the water for this reason, and in proof of which, if they be plunged entirely under water, they become agitated and uneasy, first endeavouring to escape and rise again to the air, or, if prevented, shortly fall to the bottom and die. Some aquatic beetles resist the trial for a considerable time, while their larvae can support the privation of air only for a few minutes. A remarkable evidence of the same kind occurs in the larvae of musca pendula, which, though they live in the mud at the bottom of the water, have the power of extending the tube of the tail to a great length, in order to ele- vate it to the surface of the water; and the extre- mity of it is furnished with a tuft of fine hairs, which preserves that part buoyant on the surface, •while the creature remains in a state of qui- escence. A similar verticillated organ is placed at the tip of the tail in the larva of musca cha- meleon, which also lives in the water ; this is expansile or retractile at the pleasure of the insect; •when at rest the expanded tail rests upon the sur- face of the water, the remainder of the body being suspended in that element with the head downwards; and, when it is inclined to descend, it has only to retract or close up the rays of the tail to effect its purpose ; an expansion of the tail will again raise the larva to the surface. Upon anatomical examination, it has been found that the body of this last mentioned larva con- tains two large tracheal vessels : these air-vessels extend from the head to the tail, terminate in the respiring tubes, and receive the air from them. The larva quits the water when the time of its transformation approaches, and enters into the earth, where the skin hardens and forms a case, in which the pupa is formed : soon after the change, four tubes or horns are seen projecting from the case, which some suppose to be the organ for communicating air to the interior parts of the insect: they are*

connected with little vesicles which are filled with air, and by which it is conveyed to the spiracles of the pupa. The larvae of gnats, and various other little aquatic insects of the same kind, are furnished with small tubes that play on the surface of the water, and convey the air from thence into the body of the insect.'

4. Of the general circulation and ordinary se- rretions of insects, little is definitively known. There is evidently a contraction and dilatation of vessels observable in caterpillars ; but the fluid which is supposed to supply the place of blood is not of the usual color; for which reason insects

were reckonec by the ancients as animalia exsan- guia, bloodless animals. Swammerdam states that he has seen vessels issuing from the dorsal vessel in the silk-worm, and even succeeded in injecting them with a colored fluid ; and Reau- mur, in the caterpillar of the saw-fly of the rose (hylotoma rosae, Lat.), observed, besides the dorsal vessel, a ventral one of similar form, in which also was one of similar form, in which also was a pulsation, but slower than that of the other. This he supposes may be the principal trunk of the veins. Bonnet thought he discovered a simi- lar vessel in a large caterpillar, but with all his attention could perceive no motion in it. Reau- mur also thought he perceived in the grub of musca vomitaria, in which he in vain looked for the dorsal vessel, a fleshy part which exhibited alternate pulsations; and when with, a pair of scissars he made a lateral incision in the insect, amongst other parts that came out, there was one that had movements of contraction and dilata- tion for several minutes, — this experiment was repeated with the same result upon several grubs. Dr. Geer, as quoted by Kirby, saw the appear- ance of blood-vessels in the leg of the larva of a Phryganea L. (as Lyonet did in those of a flea) ; and in the transparent thigh of ornithornia avicu- laria he discovered a pulse like that of an artery. Baker, whose only object was to record what he saw, speaks of the current of the blood being re- markably visible in the legs of some small bugs : what he meant by that term is uncertain, but they could not be spiders, which he had just distin- guished. This author has likewise seen a green fluid passing through the vessels of the wings of grass-hoppers; and M. Chabrier is of opinion that insects possess the power of propelling a fluid into the nerves of their wings and withdrawing it at pleasure, as they are elevated or depressed. Mr. Kirby, hpwever, contends that no circula- tion exists, in insects properly so called. Lyonet, he observes, traced the course of so many hun- dred nerves and bronchia long after they became visible to the unassisted eye, and which weie a thousand times smaller than the

principal blood- vessels, opening into so large an organ as the supposed heart of insects might be expected to be, could never discover any thing like them. His most painful researches, and repeated at- tempts to inject them with colored liquors, were unable to detect the most minute opening in the dorsal vessel, or the slighest trace of any artery or vein proceeding from or communicating with it. Cuvier tried all the known modes of injec- tion with equal want of success ; and was led to the conclusion, that insects have no circulation ; that their dorsal vessel is no heart, and therefore ought not to be called by that name : that it is rather a secretory vessel, like many others of that kind in those animals. As to the nature of the fluid that it secretes, and its use, he thinks it impossible, from our present information on the subject, to form any satisfactory conclusion. Marcel de Serres informs us — which further proves that it can be no real heart — that this vessel may be totally removed without causing the immediate death of the insect. This opinion, adds Mr. Kirby, receives further confirmation from the mode in which respiration is performed

ir. Usects. In those animals that have a circu- lation, this takes place by means of lungs or gills; thus we find, even in the Crustacea and arachnoida so nearly related to insects, that the organs of this function are true gills; whereas in insects, though in some of their states their respiratory tubes are branchiform, yet they are not gills, and the respiration is by tubes and spiracles.

There is, however, a real blood in insects, or at least a nutritive fluid, which may properly be called by this name, as entomologists contend, al- though it does not circulate by means of a vas- cular system. The chyle formed for their food is not absorbed by lacteal vessels, but transpires through the pores of the intestinal canal into the general cavity of the body ; where, as Cnvier ob- serves, the blood for want of a circulating system not being able to seek the air, the air goes through the blood. That is, being here exposed to the influence of the oxygen in the air-vessels, it becomes, though retaining its color, a different fluid from what it was before, and analogous to blood in its use and office. In many insects, if we break only an antenna or a leg, a drop of fluid flows out at the wound. In larvae, the fluid which bathes all the internal parts and organs is not only sufficient for their nutriment, but a large quantity of seemingly superfluous blood remains that is not wanted for this purpose. In the

arachnoids, however, there seems to be a real cir- culation. See the account of that genus in our systematic description.

5. The distinction of sex is a portion of insect anatomy equally curious. The same difference in this respect exists in insects as in other animals, and they even appear more disposed to increase their species than most others : many of them, when perfect, seeming to be created for no other purpose but to propagate their species. Thus the silk- worm, when it arrives at its perfect or moth state, is incapable of eating, and can hardly fly : it endeavours only to propagate its species ; after which the male-immediately dies, and the female as soon as she has deposited her eggs.

The males and females of many insects are with difficulty distinguished. In some genera, however, they differ so widely, that an unskilful person might easily take the male and female of the same insect for different species ; as, for in stance, in the phalcena humuli, piniaria, russula; each sex of which differs in color. This dissimi- larity is still more apparent in some insects, in which the male has wings and the female none ; as in the coccus, lampyris, phalaena antiqua, bru- mata, lichenella. And as most insects remain long in copulation, as we may see in the tipula and silk-worm, the winged males fly with the wingless females, and carry them about from one place to another, as in the phalaena antiqua. It is, however, no certain rule that, when one insect of the same species is found to have wings, and the other to be without them, the former must necessarily be the male and the latter the female. The aphides, for instance, are an exception ; and besides these, individuals of both sexes, and of the same species, are found without wings, as the carabi majores, tenebriones, meloes, cimices. The gryllus pedestris is likewise destitute of wings ; and might have passed for a gryllus in

its pupa state, had it not been seen in copulation ; for it is well known that no insect can propagate its species till it arrives at its last or perfect state. In the different states which precede the perfect condition, it should also be remarked that there are no sexual organs, or at least none that are developed. At least this is the fact with regard to most insects : for ‘ among the cimices,’ says Mr. Donovan, ‘ there can be no doubt in out- own mind from actual observation, that the semi-nymphs of certain species do uniˆe wita their mates, and afterwards become winged in- sects. We are not without suspicion that many of the grylli, like the pedestris, possess the same faculty, and are afterwards furnished with wings.’

The male is, in most of the insect tribes, smaller than the female ; but

this difference varies con- siderably. In lepidopterous insects the female is only perceptibly larger than the- other sex in general ; in the ant it is six times larger than the male : in the coccus twelve or fifteen times, and in the termes the female is at least 200 timers larger than the male. In many of the larger tribes of beetles (geotrupes) the head of th.; males is embellished with one, two, or more dis- tinct and prominent horns, which, in a number of species, are very considerable in size ; while the head of the female has only a few slight protube- rances instead of horns, and is sometimes even destitute of them. The antennae of male moths, again, are almost invariably larger or more deeply pectinated than in the female, and this difference may be traced from the broad feather antenna- of the largest bombyces, to the setaceous a'.iterime of the noctuae : however slightly the antennas of the male appear pectinated, those of the female will be found still less so. The abdomen in this order is also smaller than that of the female. The sexual organs of insects are usually placed at the extremity of the abdomen. But this is not al- ways the case ; there are insects, and among those the spiders, which have the male organs placed at the tip of the feelers, one at the extre- mity of each ; every individual of these creatures being furnished with two. The female organ is beneath the abdomen. ' Araneus mas palpos habet clavatos, qui penes sunt, juxta os utrinque unicum, quae clavae sexum nee speciem distin- guunt ; et fcemina vulvas suas habet in abclomine juxta pectus. Huic vero si unquam vere dixeris, ' Res plena timoris amor :' si enim procus inaus- picato accesserit, fnemina ipsum devorat; quod etiam sit, si non statim se retraxerit.' In the libellulae (dragon-flies), the males have the sexual organ situated under the breast, while that of the female is at the extremity of the abdomen. But except at the period of their amours the sexual organs of insects are not perceptible, those of the male at other times are drawn within the body.

Besides the male and female, a third sex exists in some insects called neuter. As these have not the distinguishing parts of either sex, they may be considered as eunuchs or infertile. We know of no instance of this kind in any other class of animals, nor in vegetables, except in the class syngenesia, or in the opulus. This kind o. sex is only found among those insects which form themselves into societies, as bees, wasps, and

ants : and here these kinds of eunuchs are real slaves, as on them lies

the chief business of the economy. Each family of bees has one female only (called the queen), many males, and an almost innumerable quantity of neuters. See APIS. The same economy nearly takes place in wasps, where the young females, which are im pregnated in the autumn, live through the win- ter, and in the spring propagate their species ; but the queen, together with all the males, perish in the winter. See VESPA. Among ants the neuters form a hill in the shape of a cone, that the water may run off it, and place those which are in the pupa state on that side of it which is least exposed to the heat of the sun At a con- siderable distance from these are found the habi- tations of the males and females, 'o whom the most ready obedience is yielded by the neuters, till a new offspring succeeds, and then they oblige them to quit their habitations. But those ants which live entirely under ground, provide better for themselves in this respect : for a little before their nuptials, they quit their habitation of their own accord, and after swarming, in the manner of bees, they copulate in the air; and each, retiring to some new habitation, founds a new family. See FORMICA.

No hermaphrodites have as yet been discovered among insects. There is something very singular, however, in the propagation of the aphides. A female aphis, once impregnated, can produce young, which will continue to produce others without any fresh impregnation, even to the fifth or sixth progeny; after which a new impregna- tion must take place. See APHIS.

Neither the males nor females of insects in general are remarkably faithful : that is, they deviate occasionally into amours with other spe- cies. This is particularly observable in the coc- cinella gemis. The hybrid insects thus produced are unfruitful : they resemble the female most in face, and the male parent in spots and colors.

The METAMORPHOSES of insects have attracted the attention of mankind from an early period, and were the fruitful source of fabulous and amatory allusions, known to every reader of Ovid and Anacreon. Nor are the splendid religious systems of the east without their due share of allusion to these singular changes : — 'A priest who has drunk wine shall migrate into a moth or fly, feeding on ordure,' say the Institutes of Menu. ' He who steals the gold of a priest shall pass a thousand times into the bodies of spiders. If a man shall steal honey, he shall be born a great stinging gnat ; if oil, an oil-drinking beetle ; if salt, a cicada; if a household utensil, an ichneumon fly.'

All insects, except those of the aptera order, are continually

undergoing some transformation. Insects change first from the (ovum) egg, into the (larva) caterpillar, or maggot; then into the (pupal chrysalis; and lastly, into the (imago) fly, or perfect state. During each of these changes, their appearance differs as much as night and day. The insect, as soon as it came out of the egg, was by former entomologists called eruca ; but as this)••. synonymous with the botanic name .lisyrnbrium, it was changed by Litmseus for the tfrp larva.

1. Larva, a name expressive of the insect's being, in this state, as it were masked, having its true appearance concealed. Under this mask or skin the entire insect, such as it afterwards ap- pears when perfect, lies concealed, enveloped only in its tender wings, and putting on a soft and pulpy appearance ; insomuch that Swammer- dam was able to demonstrate the butterfly with its wings to exist in a caterpillar, though it bore but a faint resemblance to its future perfection. The insect, therefore, in this state, undergoes lit- tle other alteration but the change of its skin. The larva; are, for the most part, larger than the insect when perfect, and are very voracious. The caterpillar of the cabbage-butterfly eats double what it would seem to require from its size ; but its growth is not adequate to- its voracity.

2. Pupa. — The insect in this state was formerly called chrysalis, or aurelia : but, as the appear- ance of gilding is confined to a few butterflies only, the term pupa has been adopted in its stead ; because the lepidoptera, especially resemble an infant in swaddling clothes ; and in this state all, except those of the hemiptera class, take no nourishment.

3. Imago is the third state. This name is given by Linnaeus to the third change, in which the insect appears in its proper shape and colors ; and, as it undergoes no more transformations, it is called perfect. In this state it flies, is capable of propagating its species, and receives true antennae; which before, in most insects, were scarcely apparent.

As the shape of the pupa is different, in differ- ent classes of insects, it assumes different names ; thus it is called coarctata, when it is round, and. as it were turned, without the least resemblance of the structure of the insect; as in the diptera : obtecta, when it consists as it were of two parts, one of which surrounds the head and thorax, and the other the abdomen : incompleta, when they have wings and feet, but are not capable of moving them; as in most of the hymenoptera: semicomplcta, in which they walk or run, but have only the rudiments of wings : complcta, in which they immediately

obtain the perfect form of the insect, without undergoing any more change : as in those of the aptera class, except only the flea. The bed-bug also belongs to this class.

The spider undergoes frequent transformations, though only in the color of its skin. The scolo- pendrae, when yountr, have fewer feet than when they are full grown. All insects, as soon as they undergo the third change, are arrived at their full growth; nor do we find any difference in the size of the same species of insect in the same countries, unless, during its caterpillar state, it has not had a sufficiency of proper food .

Such is a general outline of their metamor- phoses. Many speculations of modern entomo- logists on their causes and progress are more curious than determinate of either.

Dr. Herold, the advocate of what is called the new hypothesis, thinks the successive skins of the caterpillar, the pupa-case, the future butter- fly, and its parts and orpans, except those of sex, which he discovered in the newly excluded larva, do not pre-exist as £prnnjs "nut are turned ?uc-

cessively horn the rete nuicosum, which itself is formed anew upon every change of skin from what he denominates the blood, or the chyle, after it has passed through the pores of the intes- tinal canal into the general cavity of the body, where, being oxygenated by the air-vessels, it performs the nutritive functions of the blood. He attributes these formations to a vis formatrix (Bildende Kraft.) The caul, or epiploon (Fett- masse), the corps graisseux of Reaumur, &c., which he supposes to be formed from the super- fluous blood, he allows, with most physiologists, to be stored up in the larva, that in the pupa state it may serve for the development of the imago. But he differs from them in asserting that in this state it is destined to two distinct purposes,— first, for the production of the muscles of the butterfly, which he affirms are generated from it in the shape of slender bundles of fibres; and, secondly, for the development and nutrition of the organs formed in the larva, to effect which, he says, it is dissolved again into the mass of blood, arid, being oxygenated by the air-vessels, becomes fit for nutrition, whence the epiploon appears to be a kind of concrete chyle.

We find it impossible, as Mr. Kirby observes, to conceive how, by the action of second causes, without the intervention of the first cause, the butterfly should be formed in the caterpillar, unless it pre-exists there as a germe or foetus. ‘ Is it not clear/ asks Dr. Virey, in his lively manner, ‘as Blumenbach and other physiologists maintain, that there is a formative power, a nisus formativus, which organises the embryo? Admi- rable discovery !’ says he, ‘ which teaches us that the foetus forms itself because it forms itself! as if you should affirm that the stone falls because it falls ! Had Dr. Herold considered what Bon- net says, with as much good sense as modesty,’ observes the English writer above quoted, ‘he would never have imagined that his discovering the organs of the butterfly one after the other at certain periods in the caterpillar, was any sound argument against their pre-existence and co-exis- tence as germes. ‘ Organs,’ says that amiable and excellent physiologist, ‘ that have no exis- tence as to us, exist as they respect the embryo, and perform their essential functions ; the term of their becoming visible is that which has been erroneously mistaken for the period of their existence.’ This has been Dr. Herold’s grand error; he mistook the commencement of the appearance of the organs of the butterfly for that of their existence, and yet the early appearance of the sexual organs ought to have led him to a conclusion the reverse of that which he has adopted. Dr. Virey has observed, with gieat trutn, that ‘Every being has a peculiar and unique nature, which would be impossible if the body was composed of parts made at several intervals, and without a uniform power that acts by concert.’

We cannot go far into the various speculations of entomological writers on this intricate subject. The common and best supported hypothesis is, that every caterpillar, at its first exclusion, con- tains within itself the germe of the future butter- fly and of all its envelopes, which, successively prrscn’ing themselves, are thrown off, till it ap-

pears in perfection and beauty, with all its pans and organs, when no further development take1′ place.

The whole class of insects is strictly ovipa- rous. Some tribes, indeed, bring into the world living young ones, and have on that account been considered as viviparous, but they are few and the denomination is incorrect, for the embryos of none of these are nourished, as in the true viviparou animals, within a uterus by means of a placenta, but receive their development within true eggs which are hatched within the body of the mo- ther. Leuwenhoek found eggs in the abdomen of a female scorpion ; and Reaumur has made

similar observations with regard to the flesh-fly (musca carnaria), and other viviparous flies as they have been called. A similar mode of pro- duction takes place also in vipers and some other reptiles, which have hence been denomi- nated ovo-viviparous, to distinguish them from the true viviparous animals — the class mammalia.

By far the larger portion of insects then is oviparous in the ordinary acceptation of the term. The ovo-viviparous tribes at present known are scorpions; the flesh-fly, and several other flies; a minute gnat belonging to Latreille's fa- mily of tipularite ; some species of coccus ; some bugs (cimicidae;) and most aphides, which last also exhibit the singular fact of individuals of the same species being some oviparous and others ovo-viviparous, the former being longer in pro- portion to the latter. But Bonnet is of opinion that the eggs of the first are not perfect eggs, but a kind of cocoon, which defends the larva, al- ready formed in some degree, from the cold of winter. When excluded from the body of the mother, or from the eggs, some insects appear nearly in the form of their parents, which, with a very slight alteration, they always retain ; others, and the greater number, assume an appearance totally different from that of their parents, which they acquire only after passing through various changes. It is to these last, which have chiefly engaged the attention of entomologists, that the title of metamorphoses has been often restricted .

Insects, as to their original mode of appear- ance, may be divided therefore, into —

i. OVO-VIVIPAKOUS, sub-divided into

1. Larviparous, proceeding from the matrix of the mother in the state of larvse, as the scorpion (scorpio} ; the flesh-fly (musca); the plant-louse (aphis), &c.

2. Pupiparous, remaining in the matrix of the mother during the larva state, and coming forth in that of pupa, as the forest-fly (hippobosca equina) ; the sheep-louse (melaphagus minus} ; the bat-louse (nycterioia vespertilionis), &c. All other insects are,

ii. OVIPAROUS:

And first of the latter. By far the greater number of insects extrude their eggs singly, a longer interval elapsing between the passage of each egg in some than in others. In those tribes which place their eggs .in groups, such as most butterflies and moths, and many beetles,

they pass from the ovaries usually with great rapidity ; while in the ichneumonida , spkegida, a'.stri, and other parasitic genera, which usually deposit their eggs singly, an interval of some minutes, hours, or perhaps even days, intervene?, between the

extrusion of each egg. A few diptera extrude them in a sort of chain or neck-lace, each egg being connected by a glutinous matter with that which precedes and follows it. Insects of the diptera order also, like frogs and toads, commit their eggs to the water, imbedded in masses of jelly. Dr. Derham describes two different kinds of them, in one of which the eggs were laid in parallel rows end to end, and in another in a sin- gle row, in which the sides were parallel. The mode of exclusion of the eggs of the blattae, which, according to Mr. Kirby, are engaged for a whole week in the business of oviposition, is very singular : the female deposits one or two large suboviform capsules, as large as half their abdomen, rounded on one side, and on the other straight and serrated, which at first is white and soft, but soon becomes brown and hard. This egg-case, as it may be called, contains sixteen or eighteen eggs arranged in a double series, and the cock-roaches when hatched, make their es- cape through a cleft in its straight side, which shuts so accurately when they have quitted it, that at first it appears as entire as before.

Those insects that deposit their eggs in groups often protect them with a kind of covering. Thus the lycosa toccata, Latr., a kind of spider, sur- rounds her eggs with a silken bag, in which she constantly carries them about with her, defend- ing them to the last extremity. Many other spi- ders, indeed nearly the whole tribe, fabricate similar pouches of various sizes and texture. Madam Merian gives an account of two species of blatta, which she affirms carry an egg-pouch about with them ; one species (B. gigantea), she describes as carrying its eggs in a globular pouch •r web like certain spiders, and the other in a bag, which when alarmed it drops, and makes off. But this admirable paintress of natural ob- jects was not always correct in her statements : it seems very improbable, from the habits of those species of which we know the history, that any of them should spin a pouch of web for their eggs.

Most commonly the female insect leaves her cluster of eggs without any other covering than the varnish with which in this case they are usually besmeared. Either they are deposited in summer, and will

soon be hatched, or they are of a substance calculated to encounter and resist the severities of the season. But many species, whose eggs are more tender, or have to resist the cold and wet of winter, defend them in the most ingenious manner with a clothing of different kinds of substance. Cassidis viridis, a tortoise beetle, Rosel tells us, covers her groups of eggs with a partially transparent membrane. Arctia salicis F., a moth, common on willows, wholly conceals hers with a white frothy substance, which, when dry, is partly friable and partly cottony, and, being insoluble in water, effectually protects them from the weather. The female of lophyrus pini, a saw fly, having by means of her double saw made a suitable longitudinal incision in the leaf of a fir, and placed in it her eggs in a single row end to end, stops it up with a green frothy fluid mixed with the small pieces of leaf detached by her saws, which, when dry, becomes friable; a necessary precaution, since these eggs

are extremely brittle. Arctia chrysorrhaa, hy- pogymna dispar, and several other moths, sur- round theirs with an equally impervious and more singular clothing — hair stripped from their own bodies. With this material, which they pluck by means of their pincer-like ovipositor, they first form a soft couch on the surface of some leaf : they then place upon it successively layers of eggs, and surround them with a similar downy coating, and, when the whole number is deposited, cover the surface with a roof of hairs, which can- not be too much admired ; for those used for the interior of the nest are placed without order, but those employed externally are arranged with as much art and skill as the tiles of a roof, and as effectually keep out the water, one layer resting partly on the other, and all having the same di- rection, so that the whole resembles a well-brushed piece of shaggy cloth or fur. When the mother has finished this labor, which often occupies her for twenty-four hours, and sometimes even twice that period, her body, which before was extremely hairy, is almost wholly naked — she has stripped herself to supply clothing to her offspring, and having performed this last duty she expires. The female moths, which thus protect their eggs, are often furnished with an extraordinary quantity of hair about the anus for this express purpose ; and Reaumur conjectures, that the singular anal patch of scales resembling those of the wings, but considerably larger, which is found in the female of lasiocampa pityocampa, is destined for the same purpose. Reaumur, ii. 97, 159. Reau- mur had once brought to him a nidus of eggs clothed still more curiously : they surrounded a twig in a spiral direction, like those of lasiocampa neustria, but were much more numerous, and were thickly covered with fine down, not pressed close, but standing off

horizontally, which as- sumed much the same appearance as a fox's tail would if twisted spirally round a branch. A similar procedure was observed by Dr. Geer in some species of aphides (A. alni and A. pruni), which covered their eggs with a white cottony down detached from their belly by means of their hind legs. In this case, however, the eggs were separately coated with the down, but there was no general covering to the group. Several insects make the leaves and other parts of plants serve as coverings for their eggs.

The number of eggs laid by different species of insects, even of the same natural family, is ex- tremely various. Mr. Kirby has collected the following astonishing facts on the subject of their fertility. The pupiparous insects may be regar- ded as producing only a single egg ; musca meri- diana L. a common fly, lays two ; others six or eight ; the flea twelve ; the burying beetle (necry- phorus vespillo) thirty ; May-flies (tricfiopttra K.) under 100 ; the silk-worm moth about 500 ; tie great-coat moth (cossus ligniperda), 1000; a<-i- rus americanus more than 1 000 ; the tiger-mo Ji (callimorpha caja), 16,000 ; some cocci 2000, others 4000 ; the female wasp at least 30,000 ; the queen bee varies considerably in the number of eggs that she produces in one season, in some cases it may amount to 40,000 or 50,000, or more ; a small hemipterous insect, resembling a little moth (aleyrodes proktella Latr.), 200,000.

But all these are left far behind by one of the white ants (termes fatale F. betlicosus Snieath), the female of this insect extruding from her enor- mous matrix not less than sixty eggs in a minute, which gives 3600 in an hour, 86,400 in a day, 2,419,200 in a lunar month, and the enormous number of 211,449,600 in a year : probably she does not always continue laying at this rate : but ·f the sum be let as low as possible, it will exceed that produced by any other known animal in the creation.

2. In the second, or larva state, or immediately after exclusion from the egg, insects are soft, without wings, and in a shape usually somewhat like worms. In English we have no common term that applies to the second state of all insects, but have applied several to that of different tribes. Thus we call the colored and often hairy larvae of butterflies and moths caterpillars ; the white and more compact larvae of flies, many beetles, &c., grubs or maggots ; and the depressed larvae of many other insects worms. In this period,

during which they eat, as we have said, voraciously, and cast their skin several times, insects live a shorter or longer period, some only u few days or weeks, others several months or years. Peculiarities of the larvae state of insects belong rather to their systematic description ; but •we may observe that the larvae of most hemip- terous insects at present known are furnished with six legs, antennas, and organs of the mouth, as in the perfect insect from which they originate ; and agree with them in most other respects, ex- cept in being entirely destitute of wings. The larvae of the mantes are carnivorous ; those of the grylli feed on plants and farinaceous matter ; the nepae are aquatic, and subsist on water insects ; the cimices, inhabitants of the land, and a most extensive tribe, are entirely carnivorous, and, like that odious and well-known insect of the same genus, the common bug, derive their suste- nance from the blood and juices, extracted by means of their proboscis, from the bodies of other animals, those of the largest kinds, and man not excepted. The caterpillars of the but- terfly, sphinx, and moth tribes, form a very numerous series; and these, from a variety of concurrent circumstances, have been more par- ticularly observed than any others.

The greater part of those lepidopterous insects which come forth in the spring or summer perish or disappear at the approach of winter. There are few, the period of whose life exceeds that of a year.

Caterpillars are uniformly hatched from the egg, and at first are small and feeble, but grow in strength as they increase in size. The body of the caterpillar consists of twelve rings ; the head is connected with the first, and is hard and crustaceous. No caterpillar of the moth or but- terfly has less than eight, or more than sixteen ; those which have more than sixteen belong to some other order of insects. The six anterior feet, or those next the head, are hard and scaly, pointed and fixed to the first three rings of the body, and are in number and texture the same in all lepidopterous larvae. The posterior feet are soft, flexible, or membranaceous ; they vary both in figure and number, and are observable

only in the caterpillar state, the perfect insect having only six feet, the rudiments of which are the six anterior scaly feet before mentioned. These spurious feet ire either smooth or hairy, soft to the touch, or hard, like shagreen. On each side of the body are nine small oval aper- tures, which are considered as the organs of res- piration, and are called spiracles. The head is covered with a shelly substance, and on each side are five or six small black spots, which are supposed to be the eyes. Some caterpillars grow to a very large

size.

The changes of the caterpillar, whose life is one continued succession of metamorphosis, are thus detailed by Mr. Donovan : — ‘ It often moults its skin before it attains its full growth. This is the more singular, because when it moults it is not simply the skin that is changed ; for we find in the exuvia the skull, jaws, and all the exterior parts, both scaly and membranaceous, which compose its upper and under lip ; its antenna., palpi, and even those crustaceous pieces within the head, which serve as a fixed basis to terior legs, and in general the traces of all that. is visible in the external figure of the caterpillar. The change in the caterpillar is effected by the creature’s withdrawing itself from the outer skin as from a sheath, when it finds itself incommoded from being confined within a narrow compass. But to accomplish this change is the work of some labor and time. Those caterpillars who live in society, and have a kind of nest or habi- tation, retire thither to change their skin, fixing the hooks of the feet, during the operation, firmly in the web of their nest. Some of the solitary species spin at this time a slender web, to which they affix themselves. A day or two before the critical moment approaches, the insect ceases to eat, and loses its usual activity; in proportion as the time of its change approaches, the color of the caterpillar declines in vigor, the skin hardens and becomes withered, and is soon incapable of receiving those circulating juices by which it was heretofore nourished and sup- ported. The insect is now seen at intervals with its back elevated, or with the body stretched to the utmost extent: sometimes raising its head, moving it from one side to another, and then letting it fall again. Near the change the second and third rings are seen considerably swollen. By these internal efforts, the old parts are stretched and distended as much as possible, an operation attended with difficulty, as the new parts are all weak and tender. However, by repeated exertions, all the vessels which con- veyed nourishment to the exterior skin are disen- gaged, and cease to act, and a slit is made on the back, generally beginning at the second or third ring. The new skin may now be just per- ceived, being distinguished by its freshness and brightness of color. The caterpillar then presses the body like a wedge into this opening, bv which means it is soon torn down from the first to the fourth ring : this renders it large enough for the caterpillar to pass through. The cater- pillar generally fasts a whole day after each moulting, for it is necessary that the parts should

acquire a certain degree of consistency before its organs can perform their ordinary functions. Many perish under that operation. The cater- pillar always appears much larger after it has quitted the exuvia than before ; for the body had grown under the old skin till it was become too large for it,iand the parts being soft they were much compressed, but as soon as this skin is cast off, the parts distend, a/ id with them the new skin, which is yet of a flexible and tender texture, so that their increase in size at each moulting is considerable. Some caterpillars in changing their skin alter very much in color and appearance, sometimes the skin from being smooth becomes covered with hair, or spines, or tubercles, and others that are in one stage hairy have the skin smooth in the next. No sex is is developed in the caterpillar state.

*The caterpillars 6f lepidopterous insects seem destitute of all means of defence, and are the prey of birds and other voracious creatures. Nature has not, however, left the whole tribe in this defenceless state, some kinds are armed with strong and powerful spines disposed in a ver- ticillate manner round the annulations of the body, and which, if they be insufficient to annoy others, serve at least, in some measure, as the means of self-protection. There are others, Chiefly the inhabitants of the warmers climate, .vhose bodies present an armament of spines not unlike that of the hedge-hog or porcupine, and these placed in such a formidable manner as must either forbid the approach of other small creatures, or punish their temerity. Some few of the North American species are of this de- scription. In others we see the rings tubercu- lated, and every tubercle beset with ramose spines, the branches of which, intertexting with each other, form an almost impenetrable net-work of spines. Others again are thickly clothed with spines and hair intermingled, which may be suf- ficient to guard them against the attack of some of their inferior enemies. Some species with the body covered only with a thin skin, and therefore appa- rently exposed to the annoyance of every other, have the jaws so powerful, and the disposition so ravenous and fierce, that they constantly attack, *nd most commonly with success, the larva of other species much larger than themselves. At the extremity of the body, in the larvae of the sphin- ges, is a remarkable recurvate spine or horn, formidable in appearance, but harmless in its nature, and which is vulgarly supposed to be its weapon of defence. These insects, or at least some of them, are not, however, without the means of annoyance, for it appears they possess the ability of discharging from their mouth or vent a foetid liquor, the scent of which, should it fall on the skin, cannot easily be removed even by washing, and which may be supposed powerful enough to repel other insects. This ability*

in the sphinx tribe of caterpillars is admitted on the authority of some credible authors ; the like circumstance is more commonly observed in the larvae of some species of tenthredo. The cater- pillars of many insects of the butterfly tribe feed close to the ground, or under the surface, sub- sisting on the lower parts or roots of plants ; and, for this reason, many kinds are seldom seen, and others remain unknown, The most cuvinus

tribes of larva among the hymenopterous genera are those called the gall-flies. Those vegetable excrescences, of a globular form, which appear on the leaves and foot-stalks of the oak at' par- ticular seasons of the year, and which in autumn have acquired the size of a cherry or a sinali plum, its color a bright red, and forming a pleasing contrast with the verdure of the leaves, are the habitations formed by the punctures of the gall-fly, in which the eggs were deposited, each singly in its globule by the parent, and each of those excrescences at this season, on being opened, will be found to contain a larva ; a small worm of a cylindrical form and without feet. An amazing number of species of this fly (cynips) construct their dwellings, and subsist on the juices of the oak; many others attack in like manner the maple and the willow. The larva is found in a cavity in the centre of each excrescence, in the shape of a small nucleus.

3. The insect advancing from its larva to its pupa state ceases eating ; fixes itself in a secure place ; and now its skin separates once more, and discloses an oblong body. In this state most insects eat no food ; are incapable of loco- motion ; and if opened seem filled with a watery fluid, in which no distinct organs can be traced. Externally, however, the shape of the pupa of different tribes varies considerably, and different names have been applied to them. Those of the beetle and bee tribes are covered with a meir- braneous skin, enclosing in separate and distinct sheaths the external organs, as the antennae, legs, and wings, which are consequently not closely ' applied to the body, but have their form foi the most part clearly distinguishable. To these Aristotle originally gave the name of nymptue, which was continued by Swammerdam and other authors prior to Linne, who calls them incom- plete pupae, and has been adopted by many English writers on insects.

Butterflies, moths, and some of the two-winged tribes are in their pupa state also enclosed in a similar membranous envelope ; but their le s, antennae, arid wings, are closely folded over, the breast and sides ; and the whole body enclosed in a common case or covering of a horny con- sistence, which admits a much less distinct view of the organs beneath it. As these pupae are often tinged of a golden color, they were called from this circumstance chrysalides by the Greeks, and aureliae by the Romans, both which terms are in some measure become Anglicised ; and, though not strictly applicable to ungilded pupae, are still often given to those of all lepidopterous insects. It is these which by Linne are deno- minated obtected pupae.

We have observed that most insects eat no food in the pupa state. This qualification is necessary because a considerable number (the tribe o£ locusts, cockroaches., bugs, &c.) not only greatly resemble the perfect insect in form, but are equally capable with it of eating and moving. As these insects, however, cast their skins at stated periods, and undergo changes, though slight, in their external and internal conformation, they are regarded also as being subject to meta- morphoses. These pupae may be subdivided into two classes ; first, those comprised, with some exceptions, under the Linnasan aptera, which

m almost every respect resemble the perfect insect, and were called by Linne complete pupte ; and secondly, 'hose of the Linnaean order he- miptera, which resemble the perfect insect, except in having only the rudiments of wings, and to which the name of semi-complete pupae was applied by Linne, and that of semi-nymphs by some other authors. There is still a fifth kind of pupae, which is not, as in other instances, excluded from the skin of the larva, but remain concealed under it, and were hence called by Linne coarctate pupsc. These, which are peculiar to flies and some other dipterous genera, may be termed cased nymphs. When, therefore, we employ the term pupa, we may refer indifferently to the third state of any insect, the particular order being indicated by the context, or an explana- tory epithet. The terms chrysalis (dropping aurelia, which is superfluous), nymph, semi-nymph, and cased-nymph, on the other hand, definitely pointing out the particular sort of pupa meant : .1 ust as in botany ,the common term pericarp applies to all seed-vessels, the several kinds bekig desig- nated by the names of capsule, silicule, &c. The

envelope of cased-nymphs, which is formed by the skin of the larva, considerably altered in form and texture, may be conveniently called the puparium ; but to the artificial coverings of different kinds, whether of silk, wood, or earth, &c., which many insects of the other orders fabricate for themselves previously to as- suming the pupa state, and which have been called by different writers, pods, cods, husks, and beans, I shall continue the more definite French term cacon, anglicised into cacoon. After re- maining a shorter or longer period, some species only a few hours, others months, others one or more years, in the pupa state, the enclosed insect now becomes mature in all its parts, bursts the case which enclosed it, quits the pupa, and enters upon the fourth and last state.

4. We now see it (unless it be an apterous species) furnished with wings, capable of pro- pagation, and often under a form altogether different from those which it has previously bone — a perfect beetle, butterfly, or other insect. This Linne termed the image state, and the ani- mal that had attained to it the imago, because, having laid aside its mask, and cast off its swad- dling-bands, being no longer disguised or con- fined, or in any respect imperfect, it is now become a true representative or image of its species. This state is in general referred to when an insect is spoken of without the restricting terms larva or pupa.

'Strictly,' says Mr. Kirby, 'these [metamor- phoses] ought rather to be termed a series of developments. A caterpillar is not, in fact, a simple but a compound animal, containing within it the germe of the future butterfly, enclosed in what will be the case of the pupa, which is itself included in three or more skins, one over the other, that will successively cover the larva : as this increases in size these parts expand, present themselves, and are in turn thrown off, until at length the perfect insect, which had been con- cealed in this succession of masks, is displayed in its genuine form. That this is the proper ex- planation of the phenomenon has been satisfac-

torily proved by Swammerdam, Malpighi, ant! other anatomists. The first mentioned illustrious naturalist discovered, by accurate dissections, not only the skins of the larva and of the pupa, incased in each other, but within them the very butterfly itself, with its organs indeed in an almost fluid state, but still perfect in all its parts. Of this fact we may convince ourselves without Swammerdam's skill, by plunging in vinegar or spirit of wine a caterpillar about to assume the pupa state, and letting it remain there a few days for the purpose of giving consistency to its parts ; or by boiling it in water for a few minutes. A very rough dissection will then enable us to de- tect the

future butterfly; and we shall find that the wings, rolled up in a sort of cord, are lodged between the first and second segment of the caterpillar; and the antennae an>l trunk are coiled up in front of the head ; and that the legs, however different their form, are actually sheathed in its legs. Malpighi discovered the eggs of the future moth in the chrysalis of a silk-worm only a few days old, and Reaumur those of bombyr dispar, even in the caterpillar, and that seven or eight days before its change into the pupa. A caterpillar, then, may be regarded as a loco-mo- tive egg, having for its embryo the included but- terfly, which after a certain period assimilates to itself the animal substances by which it is sur- rounded ; has its organs gradually developed ; and at length breaks through the shell which en- closes it. Swammerdam, whose observations have proved that the analogy is not so complete as had been imagined, speaking of the metamor- phosis of insects, uses these strong words : — 'This process is formed in so remarkable a manner, in butterflies, that we see therein the resurrection painted before our eyes, and exemplified so as to be examined by our hands.' 'The parallel holds perfectly,' contends Mr. Kirby, ' between the insect and the man. The butterfly, the repre- sentative of the soul, is prepared in the larva for its future state of glory ; and if it be not de- stroyed by the ichneumons and other enemies to which it is exposed, symbolical of the vices that destroy the spiritual life of the soul, it will com? to its state of repose in the pupa, which is its Hades ; and at length, when it assumes the image, break forth with new powers and beauty, to its final glory and the reign of love. So that in this view of the subject well might the Italian poet exclaim : —

' Non v'accorgete voi.che noi siam' vermi

Nati a format 1'angelica farfalla ?'

PART III.

CLASSIFICATION OF INSECTS ; INCLUDING THEIR. MORE PARTICULAR DISTINC- TIONS.

ORDEU I. COLEOPTEUA. The coleoptera order (from KoAsoc, a sheath and irrepov, a wing,) consists of insects whose elytra or wing-cases are hard or crustaceous, and meet with a longitudinal division down the cen- tre of the back. The wings are mostly two in number. The mouth is closed above by the clypeus, and below by the lips. It is generally furnished with two mandibles, two jaws, aud from two to six palpi or feelers. The feet are six

in number and perfect, but in the antennae is the greatest diversity in shape and formation ; the skin is hard and horny, and on each side are nine spiracula : one on the thorax and eight on the abdomen.

The larvae have six feet near the head, two eyes, often short antennae, and two jaws; the shape of the head is various, but they have always nine spiracula. In the larger genera this state is retained for three or sometimes four years, but they mostly change into the pupa in twelve or fourteen months. The rapidity of their move- ments depends on their food ; those that devour the roots of plants, &c., are the slowest, those which make living animals their food the swiftest. After having remained in the pupa state for from six weeks to as many months, the skin bursts and the perfect insect appears.

The genera of this order may be conveniently arranged into the following classes: 1. Those with their antenna clavated. 2. With the an- tennae filiform. And 3. With the antennae se- taceous. The first comprises the scarabceus, lucanus, dermestes, hister, byrrhus, gyrinus, atte- labus, curculio, silpha, and coccinella. The second class consists of the bruchus, casseda, ptinus, chrysomela, hispa, meloe, tenebrio, lam- pyris, mordella, and staphylinus. The third con- tains the cerambyx, leptura, cantharis, elater, cicindella, buprestes, dy tiscus, carabus, necydalis, and forficula.

Class I. — Antenna clavated, or club-shaped.

Genus 1. Scarabttus. — Gen. char, antennae club-shaped, the club lamellated ; palpi four ; mandibles corneous, seldom having teeth ; feet six, having the second joint of the first pair com- monly dentated. Of this species upwards of eighty are found in this country. Of the species the most remarkable is the S. Hercules : it mea- sures sometimes five or six inches in length ; the elytra have a smooth surface, of a bluish-gray color, sometimes nearly black, marked with se- veral black spots of different sizes; the head and limbs are coal-black. From the upper part of tiie thorax proceeds an enormous horn, sharp at the tip, where it curves slightly downwards, marked beneath by two or three denticulations, and furnished with a fine velvet-like pile : from the front of the head proceeds also a strong horn, about two-thirds the length of the former. This species is a native of South America, where great numbers are said to be sometimes seen on the tree called the mammaa, rasping the rind off the slender branches by

working nimbly round them with the horns, till they cause the juice to flow, which they are said to drink to intoxica- tion. The female is destitute both of the frontal and thoracic horn, but in other points she resem- bles the male. •

Another well known species is the S. melon- lontha, the cockchaffer; of this species the head is testaceous, the thorax hairy, the tail inflected and with a triangular white spot at each incisure of the abdomen. This insect generally makes its appearance in May, and is most plentiful on the hawthorn. It has sometimes been seen in such prodigious quantities as almost to strip the trees of their foliage, and to produce mischiefs ap- proaching the devastations occasioned by the locust tribe. In 1688 swarms were brought by

a south-west wind to Galway in Ireland Thence they penetrated into the inland parts about twelve miles north of Galway, and here and there in the adjacent country appeared among hedges in the day-time, hanging by the boughs in clusters. In this posture they conti- nued during the heat of the sun ; but towards evening they would disperse and 1y about with a humming noise, and in such vast numbers that they darkened the air for the space of two or three miles square. Persons travelling on the roads, or abroad in the fields, found it very uneasy to make their way through them, as they would strike against their faces in their flight with such force as to make the place smart, and leave a slight mark behind them. In a short time they had so entirely destroyed all the leaves of the trees, that the whole country, though in the mid- dle of summer, was left as bare as in the depth of winter; and the noise they made in gnawing the leaves made a sound much resembling the sawing of timber.

The most beautiful of the scarabaeus genus is the S. Auratus ; common in England in the hottest parts of summer. It is about the size of a com- mon garden beetle, but of a flatter shape, and of the most beautiful brilliant golden green color, the elytra being striped towards their points by three or four slight white streaks; its larva is com- monly found in the hollows of old trees, and sometimes in the earth of ant-hills. It remains three years before it changes to a pupa, out of which the insect emerges in a short time.

Genus 2. Lucanus. — Gen. Char, antennae, club-shaped, club-perfoliate, jaws prominent and dentated, feet the second joint of the last pair dentated, the body oblong. The principal species is the L. cervus, or stag-beetle. Jaws bifurcated at the tip with many internal teeth.- This is the largest of the European coleoptera, sometimes measuring two inches and a half in length. Its general color is a deep

chestnut, the thorax, head, and jaws, are of a deeper and brighter color, the legs and under parts raven black, and the true wings of a pale brown. This remarkable insect is chiefly found in oak plantations, delighting in the honey-dew, so fre- quent on the leaves of that tree. The com- monly supposed female appears so different from the male, that it has by some authors been considered as a distinct species. It is not only smaller, but totally destitute of the long jaws ; instead of which it has a pair of veiy short curved ones ; the head is also of considerably smaller diameter than the thorax.

Genus 3. Dermestes. — Antennae club-shaped, club-perfoliate, the three end joints longer than the rest, thorax convex, and but slightly mar- ginated, head bending inward, and partly covered by the breast. Gmelin divides the dermestes genus into two families ; the first including those with the jaw bifid, the second such as have the jaw armed with a single tooth. The insects of this genus, as well as of the hister and byrrhi, if touched, contract their legs and antenna; and counterfeit death. The larva; feed on decayed animals, and are very injurious to meat, skins, furs, and even to books. But the species most tremendous in its ravages is the bostrychus typo- graphus of Fabricius in its larva state. It feeds or

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the soft inner bark of trees, but attacks them in such vast numbers, that 80,000 are sometimes found in a single tree, and though the bark be bartered, and the trees immersed in snow—water, it remains unhurt in its burrowed habitation. The tree attacked by these insects first becomes yellow—leaved, then the boughs perish at the top, and the tree itself soon dies entirely. This in— sect is most common in

Germany, and the Hart- forests show incontrovertible proofs of its de- structiveness. In 1665 it was peculiarly preva- lent, and in 1783 the trees destroyed were at least 1,500,000 in these forests alone. The mines were stopped for want of a supply of wood, and the inhabitants threatened with con- sequent ruin. Happily, however, cold and moist seasons destroyed this tremendous pest, and till 1796 they were comparatively few. They then, however, recommenced their attacks, and threatened devastation to the few fir trees that were left.

Genus 4. Hister. — Antennas club-shaped, club solid, bottom joint compressed and bent, head drawn under the thorax, wing-cases shorter than the body, feet the second joint of the first pair dentated. The insects of this species are generally found in dung.

Genus 5. Byrrhus. — Antennae shorter than the thorax, and gradually thickening towards the top, which is compressed : palpi, short and somewhat ovate, the last joint thick and long, body somewhat ovate, and convex above : scu- tellum minute. They are found in sand-pits, &c., in the summer, when they are very common. Species 1 . B. pilula, a brown insect with black interrupted stria. Fabricius has distinguished a portion of this genus as the authienus, which is thus described : — Antennae shorter than the thorax ; club sold ; palpi filiform short ; body orbiculate ovate ; scutellum very minute ; max- illae and lip bifid. These insects are generally found on flowers, and though small, are hand- somely colored. The larvae prey on carcases, skins, and dried animal substances, and they remain in this state nearly twelve months. The perfect insects are seen in the spring. Species 1, anth. scrophulariae black j thorax and sides grey ; elytra three gray transverse bands, suture and marg'n red- lutescent.

Genus 6. Gyrinus — Antennae cylindrical and very short ; jaws horny and acute ; eyes so di- vided as to appear as four ; four hind feet com- pressed for swimming. The principal species, G. natator, commonly known as the whirl- beetle, is found

running swiftly on the surface of stagnant water, and frequently striking against one another in the circles it so swiftly describes. They are always found in company with several others of their own species, wheeling round and round with the greatest rapidity, seeming to form assemblies for the purpose of enjoying their ‘ mazy dance’ in the warm sun-beams. If you approach too near, they quickly dive, carrying with them a bubble of air, which appears in the water like quicksilver. When caught, they emit a rancid smell that infects the fingers for a con-siderable time ; but no other species of the gy-rinus has this property. The larva is furnished on each side of every abdominal ring with a long,

slender, hairy, acute process ol the substance or the ring, through which an air-tube winds; the last ring but one has four of these pipes, and longer than the rest. These are its respiratory organs.

Genus 7. Attelabus. — Antennae moniliform, thickest at the top ; head inclined, and acumi- nated behind. A. betuleti, is found on the hazel, the leaves of which are rolled up by the larva into a cylinder. The anatomy of this species is curious ; the alimentary canal is moderately long, the stomach shaggy, and the small intestine cldviform inversely : there is no gizzard, but there are three pairs of bile vessels. See AT- TELABUS in the body of the work.

Genus 8. Curculio. — Antennae club-shaped, situated on the rostrum ; feelers four, filiform. Several of this species, particularly C nebulosus, are difficult to procure, on account of their re-semblance to the bodies on which they may be found : the C. nebulosus by its gray color, spotted with black, so near’y resembling the earth, is seldom taken. See CURCULIO.

Genus 9. Silpha. — Antennae various, some- times thickening by degrees, at other limes ter- minated by a solid or perfoliate club ; wing- cases covering most of the abdomen, marginated ; body oval. The insects of this genus feed on dead carcases and

excrements, whence they have a foetid smell, and when taken discharge a black liquor of a most disgusting kind, and which greatly accelerates putrefaction. The larvae live entirely on the earth, generally near dung-hills and dead carcases.

The most noted species is S. vespillo, the color of which is black ; the wing-sheaths con- siderably shorter than the abdomen, marked by two ferruginous transverse bars ; the general length of the animal is about three-quarters of an inch. The vespillo seeks out some decaying animal substance in which it may deposit its eggs, and, in order to their greater security, con- trives to bury it under ground Three or four of these insects, working in concert, have been known to bury the body of a mole in the space of an hour, so that not a trace of it has appeared above ground. They scoop out the earth all round and below the animal which thus gra- dually sinks down, and while the gi ave-diggers are invisible, we nevertheless see the body care- fully and silently interred. The eggs are white, and of an oval shape ; the larvae, when full grown, are about an inch long, of a yellowish- white color, with an orange-colored bar, across the middle of each ring. Each of these larvae forms for itself an oval cell in the ground, in which it changes to a yellowish chrysalis or grub, out of which, in about three weeks, proceeds the perfect insect. Fabriciu.3 has divided this g^nus into the sylpha, nitidula, and opatrum. The nitidula he describes as having clavated an- tennae ; club solid ; wing-cases marginated ; head prominent; thorax marginated and flat. The species of this genus are numerous, subject to great variety, and therefore require minute ex- amination.

The opatrum is thus described : antemwe mo- niliform, thickening towards the tip ; wing-cases marginated • head orominent; thorax marginated

and flat. The insects of this genus are found in

sandy situations in May, June, and July.

Germs 10. Loccinella. — Antenna; club-shaped; club solid, the palpi maxillary, and terminated by a large hatchet-shaped joint; body hemi- spherical ; breast and wing-cases marginated ; abdomen flat. This is the genus commonly known by the name of the lady-bird. So great is the variety of species in this enus, that on close examination scarcely three specimens will be found alike. Small as are the e insects, they are difficult to destroy ; without injuring their shape and beauty, they will bear a long immer- sion in spirits, and though they appear dead, will afterwards recover. 'One morning,' says Mr. Kirby, ' I observed on my study window a little lady-bird, yellow with bl vck dots (coccinella twenty-two punctata L.) "You a.e very pretty, said I to myself, and I should like to have a col- lection of such creatures. Immediately I seized my prey, and not knowing how to destroy it, I immersed it in geneva ; leaving it in this situation a day and a night, and seeing it with- out mo'ion, 1 concluded it was dead, and laid it in the sun to dry. It no sooner, however, felt the warmth than it began to move, and after- wards flew away. From this time I began to attend to insects.' The larvse of this genus feed chiefly on the aphides or plant-lice, and are very serviceable in clearing vegetables of the myriads with which they are often infested.

'As the locust-eating thrush,' says Mr. Kirby, * accompanies the locusts, so the coccinella seems to pursue the aphides; for I know no other rea- son to assign for the vast number that are some- times, especially in the autumn, to be met with on the sea-coast, or the banks of large rivers. Many years a

Genus 11. Tritoma, Fabr. — Antennae cla- vated ; club perfoliate ; lip emarginate, anterior ; palpi hatchet-shaped ; body greatly raised ; thorax flat.

Of this genus there is but one British species T. bipustulatum, which inhabits fungi ; the color is black, with a scarlet ring on the shoulder of t!;e wing-cases.

Class II. — Antenna filiform, or of equal thickness throughout.

‘, . Bruchus. — Antennae filiform ; palpi

filiform and equal ; lip pointed. This genus ;a very destructive to peas, particularly at a late period of their growth ; indeed, «o persever- ingly laborious is the female, that she will fre- quently deposit an egg in every pea of the pod* she visits, and thus entirely destroy them. In this country, their numbers being smalt, the damage is seldom very considerable ; but in North America the bruchus pisi commits the most alarming ravages, so as, in some instances, to destroy all hopes of a crop. ‘ No wonder then,’ observes Mr. Kirby, ‘that Kulrn should have been thrown into such a trepidation upon discovering some of these pestilent insects in a parcel of peas he had brought over from that country, lest he should be the instrument of introducing so fatal an evil into his beloved Sweden. In 1780 an alarm was spread in some parts of France, that the people had been poisoned by eating worm-eaten peas, and they were, there- fore, forbidden to be sold, but the fears of the public were removed by the discovery that it was a species of bruchus that had bored the peas. Another species, B. pecticornis, devours the peas in China and Barbary, and a legumin- ous seed, much used when boiled as food for horses in India, known to Europeans by the name of gram, but in the Tamul dialect called koloo, and by he Moors cooltee, is the appro- priate food of a fourth kind of bruchus, related to the last, but having the antennae, which in the male are pectinated, much shorter than the body. This is perhaps B. scutellaris, of Fabricius. A parcel of this seed brought over to this country by captain Green was filled with the insect, and several of the grains contained two or more of the larvae. The plant appears to be a kind of phaseolus, from the peculiarity of the foliage.’

Genus 2. Cussidtt. — Antennae moniliform; wing-cases and thorax marginated ; head mostly covered by the thorax; body gibbous above, flat and maiginated

beneath. Of this genus there are several British specimens, whose colors, though brilliant and beautiful in the live insect, fade, and in some instances .totally disappear after its death. The larvas of these insects are peculiar for their Hottentot habit of covering themselves from the rays of the sun, and pro- bably from the birds, by a parasol formed of their own excrements, and they are also fur- nished by nature with an apparatus, by means of which they can raise or drop their cove dt their convenience. The instrument by which they effect this, says Mr. Kirby, is an oval fork, upon which they deposit their excrement, and which is sometimes turned up, and lies flat upon their backs; at others forms different angles, from very acute to very obtuse, with their body ; and occasionally is unbent, and in the same direction with it. Its anus is remarkably situated, being on the back of the last segment of the body, and not at or under its extremity, as obtains in most insects. By means of such a position, the excrement, when it issufts from the body, instead of being pushed away and falling, is lifted up above the back in the direction of the head. When entirely clear of the passage, it falls, and is retained, though slightly, by its viscosity. Th«

grub next, by a movement of its segments, con- ducts it from die place where it fell, to the vicinity of the Head. It effects this by swelling the segment on which the excrement is depo- sited, and contracting the following one, so that it necessarily moves that way. Although, when discharged, it has a longitudinal direction, by the same action of the segments the animal contrives to place every grain transversely. Thus, when laid quite bare, it will cover itself in about two hours. There are often many layers of these grains upon the back of the insect, so as to form a coat of greater diameter than its body. When it becomes too heavy and stiff, it is thrown off, and a new one begun. The ca’ssida bidens is remarkable for two curious horns, one within another, that rise perpendicular from the

centre of the sutures of the elytrum, and thus give a very peculiar appearance to the creature.

Genus 3. Ptinus. — Antennae filiform, the last joints slightly larger; thorax nearly round, not marginated ; head partly concealed by the thorax. The genus Ptinus, like that of dermestes, con- sists of small insects, which, in general, have similar habits, living both in their larva and com- plete state among dry animal substances, and some species of dry wood, committing much havock among the older articles of furniture, which they pierce with innumerable holes, thus causing a slow but gradual destruction. Mr. Curtis found the grub of the ptinus fur in a coat, which it alone had nearly destroyed, mak- ing holes and channels in all parts of it ; and Linne tells us, that they will sometimes entirely deprive a fur of its hair. A remarkable pro- perty of this genus is, that, though their food is of so dry a nature, their bodies are always full of juices. A beam of oak, according to Messrs. Kirby and Spence, when it has sup- ported the roof of a castle 500 years, is as much to their taste as the soft inner bark to the more epicurean dermestes, and they would sooner feast on the herbarium of Brunsfelsus than on the greenest herbs that grow. The grub of the ptinus will feed for months on a chair that has been baked before the fire for half a century, and from which the chemist's retort could scarcely extract a drop of moisture, and will yet have its body as well filled with fluids as that of a leaf-fed caterpillar. To this genus belong the well known death-watch, the ptinus fatidicus of Linne, the anobium tesselata of Fabricius. It is chiefly in the advanced state of spring that this alarming little animal commences its sound, which is no other than the call or signal by which the male and female are led to each other, and which may be considered as analogous to the call of birds ; though not owing to the voice of the insect, but to its beating on any hard sub- stance with the shield or fore-part of its head. The prevailing number of distinct strokes which it beats, is from seven to nine, or eleven ; which very circumstance may

perhaps add, in some degree, to the curious character which it bears among the vulgar. These sounds or beats are given in pretty quick succession, and are re- peated at uncertain intervals : and in old houses, where the insects are numerous, may be heard at almost every hour of the day ; especially if VOL. VIII.

the weather be warm. The sound exactly re- sembles that which maybe made by beating moderately hard, with the nail on the table. Tlit"- insect is of -a color so nearly resembling that of decayed wood, viz. an obscure grayish brown, that it may for a considerable time elude the search of the enquirer. It is about a quarter of an inch in length, and is moderately thick in proportion, and the wing-shells are marked with numerous irregular variegations of a lighter or greyer cast than the ground-color. Ridiculous, and even incredible as it may appear, it is an animal that may in some measure be tamed ; at least it may so far be familiarised as to be made to beat occasionally, by taking it out of its con- finement, and beating on a table or board, when it will readily answer the noise, and will con- tinue to beat as often as required.

We must be careful not to confound this ani- mal, which is the real death-watch of the vulgar, emphatically so called, with a much smaller in- sect, of a very different genus, which makes a sound like the ticking of a watch, and continues it for a long time without intermission. It he- longs to a totally different order, and is the termes pulsatorium of Linnaeus.

Genus 4. Chrysomela. — Antennae monili- form ; palpi six; thorax marginated, but not the elytra; body ovate. The insects of this genus are noted for their shining and splendid colors, they live principally on leaves, but do not eat the nerves or fibres. Their larvae are in general of an oval shape, somewhat elongated and soft, with six feet near the head. In the larva state they also feed on the leaves of trees and plants, the pulp and tender parts of which they devour, rejecting the fibres ;

some kinds infest the coty- ledons only, and are very destructive. In the perfect state, they are found chiefly in woods and gardens. Many of these insects are slow in motion, but some kinds have the posterior legs formed for leaping, and some of them, when caught, emit an oily liquor of a disagreeable smell. See CHRYSOMELA in the body of this work.

Insects of this genus mostly ascend plants by means of the cushions of hair with which the underside of the joints of their tarsi is covered, and the C.tenebricosa (bloody-nosed beetle), and the C. goellingensis, will, with these curious sup- porters, walk with their back downwards, thus supporting themselves against the attraction of gravity. One of the most remarkable species is the C. populi, having the body ovate ; thorax bluish ; elytra red, tipped with black. This insect inhabits Europe generally, and destroys the leaves of the ash and poplar. But the most remarkable peculiarity is exhibited by the larva, which is varied with black and white, and fur- nished with very peculiar sce'nt organs. ' On each of the nine intermediate dorsal segments of its body, is a pair of black elevated conical tubercles, of a hard substance ; from all of which, when touched, the animal emits a small drop of a white milky fluid, the smell of which, De Geer observes, is almost insupportable, being inexpressibly strong and penetrating; and, as the drops proceed at the same instant from all the eighteen horns, they form a curious spectacle. The insect, however, does not waste tHs pre-

cious fluid ; each drop, instead of falling, after appearing for a moment, and dispensing its per- fumes, is withdrawn again within its receptacle till the pressure is repeated, when it reappears.' Kirby and Spence, vol. ii. 246. From this genus Fibricius separates the genus CRYPTOCEPHALUS, which see.

Genus 5. Hispa. — Antenna cylindrical, approx- ir t ite at the base, and seated between the eyes, ptupi fusiform, thorax and elytra spinous gene- rally.

Most of the hispa genus are natives of extra European climates; those found in Europe occur in the winged state on the leaves and roots of different kinds of grass ; their larvae and trans- formations are unknown.

The four species of the hispa tribe known to Linnaeus^ were atra, testacea, sanguiniollis, and mutica, the last of which was not however then considered as appertaining to that genus, being referred by Linnaeus to the dermestes family, under the specific name of clavicorn:s. This is however now replaced with the hispa, and the number of species is about twenty-five.

Genus 6. Meloe. — Antenna moniliform, thorax nearly round; elytra soft, flexible, and shorter than the abdomen ; head inflected and gibbous.

This genus is mostly found in spring, feeding on the ranunculus, or in open sandy fields, and its ova have an agreeable smell. This tribe is found from Sweden and Spain to Russia, and the shores of the Mediterranean. Of registered spe- cies, Britain possesses the largest proportion; but there are thought to be more in Spain. The most remarkable species is the meloe proscara- baus (oil-beetle), having deep yellow drops of an animal oil at all its joints. As these insects feed upon acrid plants, such as the crowfoot or ranun- culus, it is probable that this fluid partakes of the nature of their food, and is very acrimonious, and thus may put to flight its insect assailants or the birds, from neither of which it could other- wise escape, being a very slow and sluggish ani- mal. The larvse of this insect are said to be para- sitical, upon the authority of De Geer. He ob- served, according to Mr. Kirby, the insect deposit in the earth one or two considerable masses, con- taining an infinite number of very minute orange- colored eggs, adhering to each other, which in about a month were hatched,

and produced a number of small hexapods, distinguished by two pairs of anal sete and a proleg, by means of which they could move readily upon glass, as I have myself seen : these little animals precisely corresponded with one found by the latter author Upon syrphus intricaria ; and, when that fly was placed amongst them, they immediately attached themselves to it, so as to leave no doubt of their 'dentity. A congenerous species had been de- te« ted upon wild bees, and described by Linne under the name of pediculus apis. De Geer is so thoroughly to be depended upon, for his veracity and accuracy of observation, that we cannot suppose there is any incorrectness in his state- ment. If the mass of eggs be, as he represents it, of the size of a hazel nut, it must have been the product of a very large insect : in confirm- ation of this opinion it may be further observed, that the larva of the kindred genus cantharis Lat.

agrees with it in having anal setae, though it appears to differ ;u having only two conspicuous segments in the trunk. Those which infest wil(! bees, make their first appearance upon acrid plants, which the tieloe likewise feeds upon; from whence with woiderful agility they leap upon the andrenae that visit these flowers. Still, however, it is so contrary to the analogy of nature for the larva of the great beetle to feed on the little bee, and tnat these creatures should be for the first part of their lives fed on insects, and afterwards on animal food, that it is much to be wished that some skilful insect-anatomist would carefully dissect the meloe; or, perhaps by digging round the roots of the ranunculuses, and other acrid plants, the larva of that beetle- might be discovered in a late stage of growth, and so this mystery be cleared up.

This genus is distinguished by Fabricius from the notoxus and lytta, and in this arrangement he is followed by Dr. Marsh ; indeed the improve- ments of the writer first named, as noticed in this treatise, are almost universally adopted by the adherents to the Linnaean system.

The notoxus is thus described : — antenna fili- form ; feelers four, securiform ; jaws having one tooth each. N. monoceros is remarkable as having the thorax projecting like a horn over the head. It may be often seen buzzing about the sea shores of Wales.

The characters of the lytta are antenna filiform ; feelers four ; the hind pair clavated ; thorax round; //eat/ bent down and gibbous; wing-cases soft and flexible. The well-known blistering fly (lytta vesicatoria) belongs to this genus. See LYTTA.

Genus 7. Tenebrio. — Antenna moniliform, last joint round; thorax slightly convex and mar- ginated ; head standing out ; elytra somewhat rigid. A well-known species is T. molitor, which is entirely black; thighs anterior thick ; an insect often seen in houses, proceeding from a larva commonly known by the name of meal-worm, from its being so frequently found in flour, &c.; it is of a yellowish-white color, about an inch loner, slender-bodied, and of a highly-polished surface, and is considered as the favorite food of the nightingale, in its captive state, and said to remain two years before it changes into a chry- salis. The meal-worm, though its usual food is flour, has been voided both by male and female patients; and, in one instance, is said to have occasioned death. How these grubs should get into the stomach it is difficult to say, perhaps the egprs may have been swallowed in some prepa- ration of flour. But that the animal should have been able to sustain the heat of that organ, so far exceeding the temperature to which it is usually accustomed, is the most extraordinary circum- stance of all.

From this genus Fabricius has distinguished the BLAPS, which he thus defines: — Antenna; filiform; palpi four ; • thorax slightly convex, and marginated; he ad standing out ; wing-cases some- what rigid; wings mostly wanting. The most noted species is the blaps-mortisaga. It is a coal-black insect, measuring about an inch in length, of rather slow motion, and distinguished by the remarkably pointed appearance of th«

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undivided wing-sheaths, which at their extremi- ties project a little beyond the abdomen; and the insect is totally destitute of real, or under wings. It is usually found in dark neglected places, beneath boards, in cellars, &c., and, if handled, especially if crushed, diffuses a very unpleasant smell. Pliny represents this beetle, when applied with oil extracted from the cedar, as an infallible remedy for otherwise incurable ulcers

Genus 8. Lampyris. — Antenna filiform; feelers four; wing-coses flexible; thorax flat semi-orbicu- lar ; head concealed under the thorax ; abdomen sides having papillary folds, the females mostly destitute of wings, and resembling larvas.

The lampyris noctiluca, or glow-worm, is a highly curious and interesting animal. It is seen during the summer months as late as the close of August, if the season be mild, on dry banks, about woods, pastures, and hedgeways, exhibit- ing, as soon as the dusk of the evening com- mences, the most vivid and beautiful phosphoric splendor, in form of a round spot of considerable size. The animal itself, which is the female insect, measures about three-quarters of an inch in length, and is of a dull earthy-brown color on the upper parts, and beneath more or less tinged with rose-color ; with the two or three last joints of the body of a pale, or whitish-sulphur color. It is from these parts that the phosphoric light above-mentioned proceeds, which is of a yellow color, with a very slight cast of

green : the body, exclusive of the thorax, consists of ten joints or divisions. The larva, pupa, and complete female insect scarcely differ perceptibly from each other in general appearance, but the phosphoric light is strongest in the complete animal. The glow- worm is a slow-moving insect, and in its manner of walking frequently seems to drag itself on by starts, or slight efforts as it were. The male is smaller than the female, and is provided both with wings and wing-sheaths : it is but rarely seen, and it seems, even at present, not very clearly determined whether it be luminous or not. The general idea among naturalists has been that the splendor exhibited by the female in this species is ordained for the purpose of attracting the male. This circumstance is ele- gantly expressed in the lines of Mr. Gilbert White, in his History of Selburae : —

The chilling night-dews fall ; away, retire .

For sec, the glow-worm lights her amorous fire !

Thus, ere night's veil had half obscured the sky,

The impatient damsel hung her lamp on high :

True to the signal, by love's meteor led,

Leander hastened to his Hero's bed.

It is certain however that in some species of -his genus, the male as well as the female is luminous, as in the L. halica, which is a native of our own country also> though less common than in the more sultry countries of the south. Aldrovandus describes the winged glow-worm as having its wing-shells of a dusky color, and at the end of the body two brilliant fiery spots like the flame of sulphur.

In Italy this flying glow-worm is extremely plentiful; and we are informed by Dr. Smith, Jnd other travellers, that it is a very common practice for the ladies to stick them by wa of

ornament in different parts of their head-dres«

during the evening hours.

The common or wingless glow-worm mav be very successfully kept, if properly supplied with moist turf, grass, moss, &c., for a considerable length of time ; and, as soon as the evening com- mences, will regularly exhibit its beautiful efful- gence, illuminating every object within a small space around it, and sometimes the light is so vivid as to be perceived through the box in which it is kept. This insect deposits its eggs, which are small and yellowish, on the leaves of grass, &c.

' Authors who have noticed the luminous parts of the common female glow-worm,' says Mr. Kirby, ' having usually contented them- selves with stating that the light issues from the three last ventral segments of the abdo- men, I shall give you the result of some ob- servations I once made upon this subject. One evening, in the beginning of July, meeting with two of these insects, I placed them on my ham1. At first their light was exceedingly brilliant, s:> as to appear even at the Junctions of the \ipi-or ordorsal segments of the abdomen. Soon afi. r I had taken them, one withdrew its light altoi'e- ther, but the other continued to shine. While it did this it was laid upon its back, the abdomen forming an angle with the rest of its body, and the last or anal segment being kept in constant motion. This segment was distinguished by two round and vivid spots of light, which, in the specimen that had ceased to shine, were the last that disappeared, and they seem to be the first. parts that become luminous wheh the animal is disposed to yield its light. The penultimate and ante-penultimate segments, each exhibited a transverse band of yellow radiance, terminated towards the trunk by an "obtusely- dentated line, a greener and fainter light being emitted by the rest of the segment.'

Though many of the females of the different species of lampyris are without wings and even elytra (in which circumstance they differ from all other apterous coleoptcra) this is not the case with all. The female of L. Italica, a species com- mon in

Italy, is winged ; and when a number of these moving stars are seen to dart through the air, in a dark night, nothing can have a more beautiful effect

With respect to the remote cause of the lumi- nous property of insects, continues this interest- ing writer, philosophers are considerably divided in opinion. The disciples of modern chemistry have in general, with Dr. Darwin, referred it to the slow combination of phosphorus secreted from their fluids by an appropriate organisation ; and entering into combination with the oxygen supplied in respiration. This opinion is very plausibly built upon the ascertained existence of phosphoric acid as an animal secretion ; the great resemblance between the light of phosphorus in slow combustion and animal light; the remarkably large spiracula in glow-worms ; and upon the statement that the light of the glow-worm is ren- dered more brilliant by the application of heat and oxygen gas, and is extinguished by cold and by hydrogen and carbonic acid gases. From these last facts Spallanzani was led to regard the lumi- nous matter as a compound of hydrogen and

Carbureted hydrogen gas. Carradori having "found that the luminous portion of the belly of the Italian glow-worm (lampyris Italica) shone in vacuo, in oil, in water, and when under other cir- cumstances where the presence of oxygen gas was precluded, with Brugnatelli ascribed the property in question to the imbibition of light separated from the food or air taken into the body, and afterwards secreted in a sensible form. Lastly, Mr. Macartney having ascertained, by ex- periment, that the light* of a glow-worm is not diminished by immersion in water, or increased by the application of heat ; that the substance affording it, though poetically employed for lighting the fairies' tapers, is capable of inflam- mation if applied to the flame of

a candle or red- hot iron ; and when separated from the body ex- hibits no sensible heat on the thermometer's being applied to it — rejects the preceding hypo- theses as unsatisfactory, but without substituting any other explanation ; suggesting, however, that the facts he observed are more favorable to the supposition of light being a quality of matter than a substance.

Some experiments made by the Rev. R. Shep- pard on the glow-worm are worthy of being re- corded. One of the receptacles being extracted with a pen-knife continued luminous ; but on being immersed in camphorated spirit of wine, became immediately extinct. The animal, with one of its receptacles uninjured, being plunged into the same spirit, became apparently lifeless in less than a minute; but the receptacle continued luminous for five minutes, the light gradually disappearing. Having extracted the luminous matter from the receptacles, in two days they were healed, and filled with lu- minous matter as before. He found this matter to lose its luminous property, and become dry and glossy like gum, in about two minutes ; but it recovered it again on being moistened with sa- liva, and again lost it when dried. When the matter was extracted from two or three glow- worms, and covered with liquid gum-arabic, it continued luminous for upwards of a quarter of an hour.'

Mr. Murray remarks that, in a box in which glow- worms were kept, five luminous specks were found secreted by the animal, 'which seemed to glow, and were of a different tinge of light. One put into olive-oil at eleven, P. M. continued to yield a steady and uninterrupted light until five o'clock the following morning, and then seemed, like the stars, to be only absorbed by superior effulgence. The luminous spherical matter of the glow-worm is evidently enveloped in a sac or capsule perfectly diaphanous, which when rup- tured discloses it in a liquid form, of the consis- tency of cream. M.Macaire, he observes, in the Bibliotheque Universclle, draws the following conclusions from experiments made on the lu- ininous matter of this

animal : that a certain de- gree of heat is necessary to their voluntary phosphorescence — that it is excited by a degree of heat superior to the first, and inevitably destroved by a higher — that bodies which coagu- late albumen take away the power — that phos- phorescence cannot take place but in a gas con- taining no oxygen — that it is not excited by

common electricity, but is so by the Voltaic pil<" — and lastly, that the matter is chiefly composed of albumen.

Genus 9. Mordella. — Antenna monilitorm ; thorax round ; palpi four ; when frightened it draws its head under the thorax; elytra narrower towards their point, slightly curved, and before the thighs is a plate at the base of the abdomen. M. aculeata is the most common of the British species, measuring from a quarter to half an inch in length: color entirely black ; surface smooth : the abdomen compressed, and terminating in a sharp spine, extending beyond the wing-sheaths : the legs are rather long, and the insect, when disturbed, has the power of leaping or springing to a small distance. It is usually found on plants, in gardens and fields. It is observed to vary occasionally in color, having the wipg- sheaths sometimes marked by two transverse, cinereous, bars.

Genus 10. Staphylinus. — Antenna moniliform; feelers four ; elytra half as long as the body ; wings folded up under the elytra ; tail not armed with a forceps, furnished with two exsertile vesi- cles. The insects of this genus are extremely ra- pacious, devouring not only the insects of other genera, but frequently each other. Many of them, when attempted to be caught, turn up the tail. The jaws are very strong, with which they bite and pinch very hard : most of them are found in damp moist places, and a few upon flowers. A well-known species is the black soldier, or S. murinus, the color of which is cinereous ; abdomen and legs deep black. It is found in this country, among decayed carcases and dung. The shells are blue, and polished beneath. The larva is six- footed, naked, and of a pale hue. The head

and three first segments of the abdomen chestnut-brown ; tail with two jointed bristles, and a cylindrical tubercle beneath. The great rove-beetle, S. olens, presents a striking and rather terrific ap- pearance, when, with its large jaws expanded, and its abdomen turned over its head like a scorpion, it menaces its enemies, and thus preserves itself from numerous attacks.

Class III. — Antenna- setaceous, or growing gradually thinner from base to point.

Genus 1 . Cerambyx. — Antenna setaceous ; palpi four ; thorax either spinous or gibbous ; wing-cases linear. This is a numerous genus, it has there- fore been divided into several genera by later writers. The larvs mostly live in wood, which they perforate and consume, and are the favorite food of the woodpecker. The antennae of several of this genus are four times their length. In the larva state they are sometimes eaten ; in the West Indies these larvae are collected by the negroes as an article of luxury for the tables of their owners, and are in great esteem. Many of these insects possess a powerful odoriferous smell, similar to that of the European species moschatus. A well-known British species is the C. moschatus. Color, shining green ; antenna of a moderate size and blue ; thorax spinous. This insect is found on the willow in European countries, and is gene- rally known in England by the name of goat- chafer, or musk-beetle, which last it merits par- ticularly, the insect emitting a powerful smell of

musk when alive. Length, including the antennae, about three inches.

Genus 2. Leptura. — Antenna setaceous ; palpi four, filiform; wing-cases sloping off to a point; thorax somewhat cylindrical. Most of the leptura genus are furnished with legs of considerable length, and run

with much speed and activity ; they are found on flowers. A common British species is the L. aquatica, of a tine golden-green color, with the posterior thighs clavated and den- tated ; the antennae blackish, with a pale testaceous tint at the joints; head with a line down the middle; thorax grooved ; body beneath downy ; legs obscure, testaceous. Common in Britain, and other parts of Europe, on aquatic plants, particularly the nymphaea.

Genus 3. Cantharis. — Antenna filiform; wing- cases flexible; abdomen sides having papillary folds; thorax generally marginated. This is an extremely rapacious tribe, preying even on its own kind. C. biguttata is a handsome insect, and is furnished with two red vesicles at the base of the abdomen, and two at the base of the thorax, which are raised or depressed alternately. It is common on various plants in the woods of Britain in the months of May and June.

Genus 4. Elater. — Antenna filiform ; feelers four, hatchet shaped ; mandibles notched or bifid at their extremities. These animals having very short legs, when laid upon their backs, says Mr. Kirby, cannot, by their means, recover a prone position. To supply this seeming defect in their structure, Providence has furnished them with an instrument which, when they are so circum- stanced, enables them to spring into the air and recover their standing. If you examine the breast (pectus) of one of these insects, you will observe between the base of the anterior pair of legs a short and rather blunt process, the point of which is towards the anus. Opposite to this point, and a little before the base of the inter- mediate legs, you will discover in the after breast (postpectus) a rather deep cavity, in which the point is often sheathed. This simple appa- ratus is all that the insect wants to effect the above purpose. When laid upon its back, in your hand if you please, it will first bend back, so as to form a very obtuse angle with each other, the head and trunk, and abdomen and metathorax, by which motion the mucro is quite liberated from its sheath; and

then, bending them in a con- trary direction, the mucro enters it again, and, the former attitude being briskly and suddenly resumed, the mucro flies out with a spring, and the insect rising, sometimes an inch or two, into the air, regains its legs, and moves off.

The antennae are lodged in a cavity, scooped out of the under side of the head and thorax, to preserve them from injury when the insect falls after its singular leap. The larvse reside in de- cayed wood. The elater noctilucus, or fire-fly of St. Domingo, is a most remarkable creature. This insect, continues Mr. Kirby, which is an inch long, and about one-third of an inch broad, gives out its principal light from two transparent eye-like tubercles placed upon the thorax; but there are also two luminous patches concealed under the elytra, which arp nctf visible except when the insect is fiying, at which time it ap-

pears adorned with four brilliant gems of the most beautiful golden-blue lustre : in fact, the whole body is full of light, which shines out be- tween the abdominal segments when stretched. The light emitted by the two thoracic tubercles alone is so considerable, that the smallest print may be read by moving one of the insects along the lines; and in the West India islands, par- ticularly in St. Domingo, where they are very common, the natives were formerly accustomed to employ these living lamps, which they called cucuy, instead of candles, in performing their evening household occupations. In travelling at night they used to tie one to each great toe; and, in fishing and hunting, required no other flam- beau. And, according to P. Martire, ' many wanton wilde fellowes' rub their faces with the flesh of a killed cucuius, as boys with us use phosphorus, ' with purpose to meet their neigh- bours with a flaming countenance,' and derive amusement from their fright.

Genus 5. Cicindella. — Antenna setaceous, palpi six, filiform ; the posterior ones hairy : mandibles projecting with many dents ; eyes pro- minent ;

thorax rounded and marginated. These insects are alike noted for their beauty and rapacity, preying, with ravenous ferocity, ou all smaller insects that fall in their way. The larva is soft and white, and commonly lurks in a hole, drawing in whatever prey may come near. Species C. campestris green, the elytra having five dots, white. Inhabiting sand-pits.

Genus 6. Buprestis. — Antenna; serrated, and the length of the thorax^ee/ers four, filiform, wit.ii the last joint obtuse and truncated ; head cartly drawn under the th-rax, Of a I! the coleopterous genera there is none the species of which are so generally rich, resplendent, and beautiful, as those of buprestis; and these, in their first state, derive their nutriment from the produce of the forest, in which they sometimes remain for many years before they assume the perfect state, as if, says Mr. Kirby, nature required more time than usual to decorate these lovely insects. The prin- cipal species is B. gigantea, the grub of which is ascertained to have existed in the wood of a deal table more than twenty years.

Genus 7. Dytiscus. — Antenna setaceous; palpi six, filiform ; hind feet swimmers, with minute claws. The insects of this genus may be taken in ponds, ditches, &c., at ever)' season of the year ; they are therefore very numerous, and de- serving of considerable attention. 'The larvye of most are furnished with anal appendages or swimmers, but some, not being possessed of such organs, never rise from the bottom. See our article DYTISCUS. From this is derived the genus Jiydrophilus, which is thus described : — Antenna clavated; club perfoliate; hind feet formed for swimming, as the above dytiscus genus. The larvee of this genus are the crocodiles of the ponds, killing not only insects, but small dace, minnows, &c. The principal species is the hy- drophilus piceus, the color of which is black, the sternum channelled and spiny. The only insects certainly known to spin an egg-pouch, like the spiders, are the hydrophili. That of the great water-beetle (hydrophilus piceus) was long ago

described and figured by Lyonnet ; and a more

detailed account of it has since been given by M. Miger, which we extract from Messrs. Kirby and Spence. In form it somewhat resembles a turnip when reversed, since it consists of a pouch of the shape of an oblate spheroid, the great diameter of which is three-quarters of an inch ; and the small half an inch, from which rises a curved horn, about an inch long and terminating in a point. The animal is furnished with a pair of anal spinners, which move from right to left, and up and down, with much quickness and agility : from these spinners a white and gluti- nous fluid appears to issue, that forms the pouch, which it takes the animal about three hours to construct. The exterior tissue is produced by a kind of liquid and glutinous paste, which, by desiccation, becomes a flexible covering, im- permeable to water ; the second, which envelopes the eggs, is a kind of light down of great white- ness, and keeps them from injuring each other. The tissue of the horn is of a silky nature, porous and sinning, and greatly resembling the cocoons of Icpidoptera. This part, contrary to what Lyonnet supposes, appears calculated to admit the air, the water soon penetrating it when sub- merged. At its base is the opening prepared for the egress of the larvae, when hatched, which is closed by some threads, that, by means of the air confined in the cocoon or pouch, hinder the water from getting in. This nidus does not rioat at liberty in the water till after the eggs are hatched, the parent animal always attaching it to some plant. By means of this anomalous process for a beetle, which this insect is in- structed by providence thus to perfect, the pre- cious contents of its little ark are secured from the action of the element which is to be the theatre of their first state of existence, from the voracity of fishes, or the more rapacious larvae of its own tribe, until the included eggs are hatched, and emerge from their curious cradle.

The larva lives in still waters and ponds, its nead is smooth and of a dark brown color, with six feet placed on the back and a tapering tail. In the month of July it attains to its full size, and leaving the water creeps to a heap of dung, and buries itself in a deep hole underneath, lying coiled up in a circle, and thus changing to the chrysalis or pupa state. About the middle of August the perfect insect makes its appearance.

Genus 8. Carabus. — Antenna: filiform; palpi six last joints thick and truncated ; thorax heart-shaped, truncated at the point, and marginated ; v-ing-cases marginated. Mr. Marshani has de- scribed 109 British species of this tribe, which are mostly found on the ground, or under stones, &c. The whole of this genus are very voracious, preying on all insects they can overcome; when taken they discharge a brown, fetid, and caustic liquor; many of them want wings, and their larvae reside in putrid wood, mosses, See.

One 'of the most destructive of this species is the C. sycophanta- The grub takes up its sta- tion ;n the nests of bombyx, and fills itself so full that it appears ready to burst.

Another celebrated insect of this tribe is the bombardier, for an account of which, see CA-

P A HI'S.

G^nus 9. Necydat'u. — Anjenna setaceous: \ ulpi four, filiform ; wing-cases smaller than the

wings. This genus is generally found in woods, in their perfect form ; but the larvae are unknown. In some the thorax is black, in others yellow ; the elytra are generally black, and lighter to- wards the middle, which often contains a yellow, or lemon-colored spot.

Genus 10. Forjicula. — Antenna setaceous; feelers filiform, but unequal ; wing-cases shortei than the abdomen and cut short off' at their tips ; abdomen

armed with forceps. The well known earwig, (forficula auricularis) belongs to this genus.

The two sexes differ in the shape and bulk of the abdomen, as well as the forceps at the ex- tremity of the abdomen. The female is distin- guished by the superior size of the abdomen. The eggs are large, white, and glossy; and the larvae, when hatched, considerable in pro- portion to the magnitude of the egg from which they are excluded. Few of the insect tribe evince more attention to their young than the females of the forficulie. They are parti- cularly careful to deposit their eggs in places of security, and are often seen sitting on them for hours together ; and they are also known to regard the infant brood with tenderness, the young remaining in society with the parent some time after being produced from the egg.

ORDER II. — HEMIPTERA.

Most of the insects of this order are provided with a long beak or rostrum, beut inwards to- wards the chest ; tlieir wing-cases are soft, and cross each other with a portion of the anterior margins.

Genus 1. Blattu. — Antenna: setaceous, head bent inward, feelers unequal, wing-cases flat, ivings flat and coriaceous, thorax flattish and margined, feet cursorious, tail having two horns on the top. The principal species is the B orientalis, originally a native of South America, but now too well known in Europe by the name of the cock-roarh. It frequents kitchens and all warm parts of a house, and devours all sorts of vegetable provi- sions. It generally conceals itself in the day time, and runs quickly if discovered, or a light is brought near them. See BLATTA.

Genus 2. Gryllus. — Antenna, filiform, Aeadbent inward and having jaws ; palpi filiform ; wings four, deflected and rolled, under pair folded, hind feet saltatores, and all furnished with two claws. To this genus belongs the devouring locust, of which we have already treated in the introduction to this

treatise, we shall therefore only give the following account of their ravages in Transylvania, Walla- chia, Moldavia, Hungary, and Poland, in 1747 and 1748, from the sixty-fourth number of the Philosophical Transactions.

'The first swarms entereo. into Transylvania in August, 1747 : these were succeeded by others, which were so surprisingly numerous that, when they reached the Red Tower, they were full four hours in their passage over that place : and they flew so close that they made a sort of noise in the air by the beating of their wings against one another. The width of the swarm was some hundreds of fathoms, and its height or density may be easily imagined to be more considerable , inasmuch as they hid the sun, and darkened the sky, even to that degree, vrhen they flew low.

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Coccus cat aphractus . V. VMLP471

London tfubliahed- t\y Thomas Tfc>0, 73.Che

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that people could not know one another at the distance of twenty paces; but, whereas they were to fly over a river that runs in the valleys of the Red Tower, and could find neither rest- ing-place nor food ; being at length tired with their flight, one part of them lighted on the un- ripe corn on this side of the Red Tower, such as millet, Turkish wheat, &c.; another pitched on a low wood, where, having miserably wasted the produce of the land, they continued their journey, as if a signal had actually been given for a march. The guards of the Red Tower at- tempted to stop their irruption into Transylvania by firing at them ; and, indeed, where the balls and shot swept through the swarm, they gave way and divided ; but, having filled up their ranks in a moment, they proceeded on their journey.

In the month of September, some troops of them were thrown to the ground by great rains and other inclemency of the weather ; and thoroughly soaked with wet, they crept along in quest of holes in the earth, dung, and straw ; where, being sheltered from the rains, they laid a vast number of eggs, which stuck together by a viscid juice, and were longer and smaller than what is commonly called an ant's egg, very like grains of oats. The females having laid their eggs, die, like the silk-worm ; and we Transylvanians found by experience, that the swarn which entered our fields by the Red Towtr, did not seem to intend remaining there, but w?re thrown to the ground by the force of the wild, and there laid their eggs : a vast num- ber of which being turned up and crushed by the ploigh, in the beginning of the ensuing spring, yielded a yellowish juice. In the spring of 1748. certain little blackish worms were seen lying in he fields and among the bushes, stick- ing togeher, and collected in heaps. These were negected entirely, and unnoticed through- out the wnter; but the subsequent June disco- vered wht these worms were ; for then, as the corn sown in spring was pretty high, these crea- tures bega; to spread over the fields, and became destructive to the vegetables by their numbers. Then at logth, the country people, who had slighted th warning given them, began to re- pent of ther negligence ; for, as these insects were now lispersed all over the fields, they could not e extirpated without injuring the corn. At tht time they differed little or nothing from our ccnmon grass-hopper, having their head, sides, md back, of a dark color, with a yellow belly, ar.d the rest of a reddish hue. About the rrddle of June, according as they hatched, soonr or later, they were generally a finger's lengtl or somewhat longer, but their shape and coir still continued. Towards the end of June, tey cast off their outward cover- ing, and then plainly appeared that they had wings, very lik the w'ings of bees, but as yet unripe, and un

bers increased daily; they took circular flights of twenty or thirty yurds square, until they were

joined by the rest ; and, after miserably laying waste their native fields, they proceeded elsewhere in large troops. \V heresoever these troops happened to pitch, they spared no sort of vegetable : they eat up the young corn and the very grass, but nothing was more dismal than to be- hoid the lands in which they were hatched ; for they so greedily devoured every green thing thereon before they could fly, that they left the ground quite bare.'

Genus 3. Cicada. — Antenna; setaceous ; wings four, and formed of membrane; beak bent in- ward ; feet saltatores.

The cicada live on various kinds of plants ; the larvae are entirely destitute of wings, which in the pupa begin to appear; in other respects they resemble the perfect insect. The larva; dis- charge a kind of froth from the body, under which they conceal themselves; they 'are fur- nished with six feet, and are very active. The males, in general, chirp like the cricket ; and some of the larger kinds of the tettigonia possess two peculiar drum-like organs, which emit a loud and incessant noise at the pleasure of the insect, as is particularly exemplified in some of the Chi- nese and North American cicada. The mosT magnificent species is the C. Indica, the color i which is black, with a yellow stripe, and toward.' the extremity of the abdomen an orange stripe elytra brown olive, with red veins. A singta species only has been discovered, which was taken in Bengal about ten years ago, and is now deposited in the imperial cabinet of Vienna.

Genus 4. Notonecta. — Antenna short; wings four, folded across, and coriaceous at the top ; beak bent inwards; hinder feet natatores.

The insects of this genus live in stagnant waters, and prey on aquatic animalcula: the larvae and pupae are six-footed and active, the former have the rudiments of wings, the others none. There are seventeen species.

The insects of this genus obtained the name of notonecta?, from the singular manner in which they swim on the back. This situation seems admirably adapted to its feed ing, which is on the under sides of plants that grow on the surface of the water; its motions are very nimble, diving down at the instant of alarm, and rising again to the surface when the danger is past; the tw;, hind legs serving for paddles.

Genus 5. Nepa. — Antenna short; wings four, folded across, and coriaceous inside; beak bent inwards; two forefeet cheliform; rest cursorii.

When these insects arrive at their full size, they are sometimes nearly an inch in length, and nearly half as broad. The antennae appear in the place of the fore legs, and are armed with forceps. The nepas are, of all animals, tha «oost tyranni- cal; like wolves, among a flock of harmless sheep, they destroy a vast number more than their wants .require. If a nepa be placed in a basin of water with thirty or forty libellula worms, each as large as itself, it will destroy them all in a very short space of time, getting on their backs, and piercing them through the tody with the rostrum.

Genus 6. Aphis. — Antenna: setaceous '. m—r

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four, or sometimes none; feet cursorii; rostrum bent inward ; abdomen armed with two small horns. We have already treated of this destructive and numerous genus in our article APHIS, to that therefore we must refer the reader.

Genus 7 Cimtt. — Antenna longer than the thorax, which is margined; wings folded cross- wise, the upper ones coriaceous in part; back flat; feet cursorii. The insects of this genus mostly feed on the juices of plants, and have all a most

disagreeable smell. Both larvae and pupae have six feet; the former has no wings, the latter has rudiments of them. The species best known (at least in the metropolis) in England is the C. lectuarius, or bed-bug, which we have already noticed under CIMEX and BUG, which see.

Genus 8. Chermes. — Rostrum seated on the pectus ; antenna, longer than the thorax ; the four wings are deflected; thorax gibbous; feet salta- tores. There are twenty-four species, the chief of which are described in our article CHERMES.

Genus 9. Coccus. — Antenna filiform; the ros- trum proceeding from the breast; the belly, or abdomen, bristly behind ; the two wings of the male are erect; the female has none. See Coccus in the body of the work.

Genus 10. Thrips. — Rostrum very small; an- tenna, about the length of the thorax; abdomen curved upwards; the four wings straight, narrow, and slightly crossed.

The insects of this genus are small, and found mostly on plants and various flowers. — The thrips is highly injurious and destructive to fruit-trees, but particularly the grape or vine. The most effectual method of destroying them is probably that of frequent washing with water, by the engine or otherwise, every evening; as, when performed in the heat of the sun, the vines are materially injured by it. But when the ber- ries begin to color, it is to be wholly discontinued, as after that it destroys the fruit.

Where there is a neglect of washing the trees, the thrips generally makes its appearance. In such cases, these insects may, without much difficulty, be destroyed by the fumigation of tobacco and damp hay ; the plants or trees being well washed after it.

ORDER III. — LEPIDOPTERA.

The insects of this order are the butterflies and moths, and have all four wings, covered with a kind of scales resembling feathers, and reflecting the most brilliant colors.

Genus 1. Papilio. — Antenna club-shaped, gradually ; wings erect, and meeting upwards ; flying only in the day. This numerous and ele- gant tribe has been tastefully divided into fami- lies by Linne in the following manner : —

The first division is formed of equites, distin- guished by the shape of their upper wings ; which are longer if measured from their posterior angle to their anterior extremity," than from the same point to the base. The equites are divided into Troes or Trojans (distinguished by having red or blood- colored spots or patches on each side their breasts) and Achivi, Greeks, without red marks on the breast, and of gayer colors in general than 'he former.

The second division is formed of heliconii,

which are distinguished by wings that are narrow and entire, frequently naked or semi-transparent; the upper ones oblong, the lower ones very short.

The third division is formed of the Danai, so called from the sons and daughters of Danaus. They are divided into Danai candidi, which have whitish wing- s ; and Danai festivi, in which the ground-coior is never white, and the wings are variegated.

The fourth division is formed of the nymphales, distinguished by the edges of the wings being scolloped or indented. It is subdivided into the nymphales gemmati, in which the wings are marked with eye-shaped spots; and nymphales phalerati, without those spots.

The fifth division is formed of the plebeii. These are commonly smaller than the preceding kinds of butterflies, and are subdivided into rurales and urbicolae : the wings of the former are marked with obscure spots; those of the latter have for the most

part transparent spots.

We shall now give a brief description of a few of the most beautiful species of this elegant tribe.

(1 .) P. brassica, common butterfly. The wings rounded and white ; tip of the upper pair brown. It proceeds from a yellowish caterpillar freckled with bluish and black spots, and which changes during autumn into a yellowish-gray chrysalis, affixed in a perpendicular direction to some wall, tree, or other object.

(2.) P. io, peacock-butterfly ; so called flora the peacock's eyes which it bears above, .bur in number, one upon each wing. Its winfs, very angulous, are dark underneath ; above thiy are of a reddish dun color. The upper oneshave on their superior edge two black oblong spts, with a yellow one between the two. At their .'xtremity is found the eye, large, reddish in th: middle, surrounded with a yellow circle, accompanied by a small portion of blue towards the exfirior side. On that same side, following the direcion of the margin, there are arranged five or six \nite spots. The inferior wings are browner, and fcive each a large eye of very dark blue in the raddle, sur- rounded by an ash-color circle. The caterpillar of this butterfly is of a deep black, dtted with a little white.

(3.) P. iris, purple emperor. Win's indented, and brown, with a blue gloss, havig a whitish interrupted band on each side ; with?ach a single eye ; the eyes on the upper pair »lind above. Found in our own gardens, and in Europe gene- rally. The male is spotted withwhite on the upper wings, and is without the ev. The larva is green with two horns, and obliae pale lines.

(4.) P. macliaon, is an insect f the greatest beauty, and is commonly known -y the name of the swallow-tailed butterfly. C«or a beautiful yellow, with black spots aloncr K1 edsces of the superior wings : all the winss at bordered with a deep edging of black, decor^d by a double row of crescent-shaped

spots, otrhich the upper row is blue, and the lower yebw. The under wings are tailed, and are maled at the inner angle or tip with a round re spot, bordered with blue and black. The lacte are of a green color, encircled with numeJus black bands

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spotted with red, and furnished with a pair of short horns, which it occasionally protrudes.

(4.) P. priamus. Wings indented, silky ; upper pair green above, with a black disc and edge ; lower ones with from four to six black spots. This Linnaeus considered as the most beautiful of the whole papilionaceous tribe. It measures more than six inches from wing's end to Wing's end ; the upper wings are velvet-black, with a broad band of the most beautiful grass-green drawn from the shouider to the tip, and another on the lower part of the wing, following the shape of that part ; the lower wings are of the same green color, edged with velvet-black, and marked by four spots of that color, while at the upper part of each, or at the part where the upper wings lap over, is a squarish orange-colored spot; the thorax is black, with sprinklings of lucid green in the middle ; and the abdomen is of a bright yellow or gold color. On the under side of the animal the distribution of colors is some- what different, the green being disposed in cen- tral patches on the upper wings, and the lower being marked by more numerous black as well as orange spots. It is a very rare insect, and is a native of the island of Amboyna.

Genus 2. Sphinx. — Antenna thickest in the middle; tongue generally stretched out; palpi two; wings

deflected. The species of this genus are the largest of the lepidoptera order ; they fly fast, and mostly in the evening. They derive their generic name sphinx from the posture of the larvae of several large species, which are often seen in an attitude much resembling that of the Egyptian statues, viz. with the fore parts eleva- ted and the rest of the body flat to the leaf. The most remarkable species is the sphinx atropos, or death's-head hawk-moth, but in England it is rather rare. It is thus described by Dr. Shaw : — The upper wings are of a fine dark gray color, with a few slight variations of dull orange and white ; the under wings are of a bright orange cclor, marked by a pair of transverse black bands ; the body is also orange-colored, with the sides marked by black bars, while along the top of the back, from the thorax to the tail, runs a broad blue-gray stripe ; on the top of the thorax is a very large patch, of a most singular appear- ance, exactly resembling the usual figure of a skull, or death's-head, and is of a pale gray, varied with dull ochre and black. When in the least disturbed, or irritated, this insect emits a stridulous sound, something like the squeaking of a mouse ; and from this circumstance, as well as from the mark above mentioned on the tho- rax, it is held in much dreau f.v the vulgar in several parts of Europe, its HJ pearance being regarded as an ill omen. The caterpillar, from which this curious sphinx proceeds, is in the highest degree beautiful, and far surpasses in size every other European insect of the kind, measur- ing sometimes nearly five inches in length, and being of a proportional thickness ; its color is a bright yellow ; this sides are marked with a row of seven most elegant broad stripes or bands, of a mixed violet and sky-blue color ; the tops of these bands meet on the back in so many angles, and are varied on that part with jet-black specks; on the last joint of the body is a horn or process,

not in an erect position, but hanging or curving over the joint in the manner of a tail, having a rough surface, and a yellow color. This cater-

pillar is principally found on the potatoe and the jessamine, which are its favorite food. It changes into a chrysalis in the month of September, reti- ring for that purpose deep in the earth; the perfect insect emerging in the following June or July. The noise of this insect is remarkable, in- asmuch as it seems to have the power of affect- ing the bees in such a manner as to disarm them of their fury, and thus enables her to procure her favorite honey with perfect impunity. ' Tins cry does not appear to be produced by the wings, for when they and the thorax are held down the noise only increases. Schrseter says that the animal, when it utters its cry, rubs its tongue against its head ; and Reaumur found, after the most minute examination, that sound was pro- duced by the friction of the palpi against the tongue. When, by means of a pin, the spiral tongue was unfolded, the cry ceased ; and when the palpi were prevented from touching it, it again stopped ; and, upon removing one of them only, though it continued, it became much more feeble. Huber, however, denies that it is pro- duced by the friction of the tongue, but as he has stated no reasons for this opinion, his mere assertion cannot be allowed to counterbalance Reaumur's experiments.'

Genus 3. Phalana. — 'Antenna setaceous, and gradually tapering ; tongue spiral ; wings denect- ed. The moths of this genus fly only at night, and obtain their food from the nectar of flowers ; the larvae feed voraciously on the leaves of plants. This genus includes the bombyx of Fabricius- Of this almost innumerable tribe of insects, \ve can select here but a few specimens.

(1.) The first species would undoubtedly be the silk-worm, P. mori ; but this insect is of sufficient importance to demand a separate arti- cle; we shall therefore refer our readers to PUA- LJENA and SILK- WORM.

(2.) P. atlas, the largest and most splendid of the phalapnae yet known: its wings are falcate, varied with yellow, white and brown, with a transparent spot on each, and two on the upper one. The extent

of the wings of this insect mea- sures between eight and nine inches; the ground colour is a fine deep orange-brown, and in the middle of each wing is a large triangular trans- parent spot ; each of these transparent parts is succeeded by a black border, and across all the wings run lighter and darker bars, exhibiting a very fine assortment of varying shades; the up- per wintrs are slightly curved downwards at their tips, and the lower wings are edged with a bor- der of black spots, on a pale buff-colored ground ; the antennae are widely pectinated, with a quad- ruple series of fibres, exhibiting a highly elegant appearance. This insect is found in America and the East Indies.

(3.)P. sarcitella. — Wings cinereous, thorax with a white dot on each side. This belongs to the division tinea, and is found in skin-cloths and woollen furniture ; to which it proves terribly destructive. These moths construct the abode in which they reside of the grains of wool or other materials, which they gnaw off. Their food is of

the same substance ; and every step they advance, feeling themselves incommoded by the wool in their way, they gnaw a smooth passage for them- selves, thus making terrible devastation. Hence these species are among the most destructive of the tribe. The most costly articles of fur are those which are not worn every day ; and for this very reason they are most exposed to their attacks.

ORDEK IV. — NEUROPTERA.

The insects of this order have four membra- naceous wings generally transparent. At the tail they have often pincers but no sting.

Genus 1. Libellula. — Antenna short and slen- der ; maxilLe more than two ; lip trisected ; wings extended ; tail of the male having pincers. The eyes

of this genus are finely adapted for microscopic examination, and by the assistance of a good instrument it will be seen that the eye is divided into a number of hexagonal cells, each of which forms a complete eye. The external parts of these eyes are so perfectly smooth, that, like so many mirrors, they reflect the images of all surrounding objects. Leuwenhoeck says, there are 12,544 lenses on each eye of the libel- lula. If one of these groups of eyes be nicely taken from the head of the insect, washed clean, and placed before the microscope, its structure is elegantly seen, and it becomes an object worthy of the highest admiration. Each of the eyes is an hexagon, and has the same effect as a convex lens in forming the image of an object placed before it, lessening and beautifying it. The whole of this beautiful tribe is exceedingly ravenous, and may be generally seen hovering over stagnant waters in pursuit of its prey. The amours of the libellulaj are carried on in a pe- culiar and violent manner. The male hovers on the wing till a female makes her appearance ; he then watches an opportunity of seizing her by the head with those pincers with which his tail is armed. In this manner he travels through the air, till the female, yielding to superior strength, forms her body into a kind of circle ; hence the libellulae are frequently seen coupled in the air, exhibiting the form of a ring. The female afterwards retires to some stagnant water, where, by the assistance of a stick or reed, she lovers herself down backwards, till the tip of the tail is immerged a little in the water ; she is then seized with a tremor of the body, during which she deposits the egg in the water. The tail is withdrawn from the water, by contracting the annuli ; and, by the pressure of these upon each other, the egg is gradually forced from the ovary to the extremity of the tail ; whence it is separated by shaking that part in the water. The eggs are of a white color, resembling those produced by the common blow-fly. Of all the insect tribes none are greater enemies of their follow tribes than these libellulse, and none are provided with more powerful and singular instruments of assault. They pursue

prey in every state, and in the larva are furnished with two pairs of strong jaws covered by a kind of •nask. The whole of this apparatus is so sin- gular and admirable that we cannot refrain from •2′ving the following account of it from Messrs.

Kirby and Spence′s interesting and elegant work ; — ‘ In other larvae the lower lip is usually small and inconspicuous, and serves merely for retaining the food and assisting in its deglutition ; but in these it is by far the largest organ of the mouth, which when closed it entirely conceals ; and it not only retains, but actually seizes the animal′s prey, by means of a very singular pair of jaws with which it is furnished. Conceive your under lip (to have recourse, as Reaumur on another occasion, to such comparison) to be horny instead of fleshy, and to be elongated per- pendicularly downwards, so as to wrap over your chin and extend to its bottom — that this elonga- tion is there expanded into a triangular convex plate, attached to it by a joint, so as to bend up- wards again and fold over the face as high as the nose, concealing not only the chin and the first mentioned elongation, but the mouth and part of the cheeks: conceive moreover, that to the end of this last-mentioned plate are fixed two other convex ones, so broad as to cover the whole nose and temples, — that these can open at plea- sure, transversely like a pair of jaws, so as to expose the nose and mouth, and that their inner edges where they meet are cut into numerous sharp teeth or spines, or armed with one or more long and sharp claws : — you will then have as accurate an idea as can be given of the strange conformation of the under lip in the larva of the tribes of libellulina ; which conceals the mouth and face precisely in this manner. You will probably admit that your own visage would present an appearance not very engaging while concealed by such a mask ; but it would strike still more awe into the spectators, were they to see you first open the two upper jaw-like plates, which would project from each temple like the blinders of a horse ; and next, having by means of the joint at your chin let down the whole apparatus and uncovered

your face, employ them in seizing any food that pre=ented itself, and conveying it to your mouth. Yet this procedure is that adopted by the larvae provided with this strange organ. While it is at rest, it applies close to and covers the face. When the insects would make use of it, they unfold it like an arm, catch the prey at which they aim by means of the mandi- buliform plates, and then partly refold it so as to hold the prey to the mouth in a convenient po- sition for the operation of the two pairs of jaws with which they are piovided. Reaumur once found one of them thus holding and devouring a large tadpole ; a sufficient proof that Swam- merdam was greatly deceived in imagining earth to be the food of animals so tremendously armed and fitted for carnivorous purposes. Such an underlip as I have described is found in the tribe of dragon-flies (libellulina), varied, however, considerably in its figure in the different genera. You will admire the wisdom of this admirable contrivance when you reflect that these larvae are not fitted to pursue their prey with rapidity, like most predaceous animals ; but that they steal upon them, as De Geer observes, as a cat doe? upon a bird, very slowly, and as if they counted their steps ; and then, by a Midden evolution of this machine, take them as it were by surprise, when they think themselves safe.'

The larva remains in the same state about a year before it attains its full size ; and, when the period of its transformation has arrived, repairs to the margin of the pond inquest of a convenient si- tuation. It here attaches itself to a plant 01 piece of c'ry wood ; and the skin, which has gradually be- come parched and brittle, at length splits opposite the upper part of the thorax, and the perfect insect makes its appearance. L. grandis is the largest of this genus found in Britain. The fore part of the head is yellow ; the eyes brown, and so large that they meet at the top of the head. The tho- rax is of a dun color, with four oblique bands on each side of

a lemon color. The abdomen is reddish, often spotted with white and black upon the top and bottom of each segment ; the small appendices which terminate the abdomen are very long ; the wings have more or less of a yel- low complexion, and are distinguished by a brown spot on the exterior edges. The colors of the insect vanish when dead. The larvae of these insects are peculiar for the manner in which they swim, and force themselves along in the water. In most creatures this is done by means of either fins, or arms, or legs; some, indeed, swim along by striking with the tail, but this curious animal moves forward by means of a kind of force-pump in its tail. By means of this curious mechanism it spirts out, with considera- ble force, the water it has previously sucked up, and the stream thus serves to propel it along.

Genus 2. Ephemera. — Antenna; short and sub- ulated ; palpi four, short and filiform ; mouth having no mandable; jaws membranaceous and short, and connected with the lip ; two large stemmata above the eyes ; wings erect, lower part very small ; tail setaceous. Proverbially short as is this creature's life, in the state of a perfect in- sect; in the larva and pupa states the ephemera live one or two years, and some species, it is believed, live even three years from the time of hatching from the egg state, before they arrive at the perfect form. The larvae are found in the water, wherein they constantly reside, and are the favorite food of fishes. They are active, fur- nished with six legs, a tail, six lateral fins, or gills, and prey on smaller insects. The pupae, like the larvae, arc carnivorous, and resemble the former state, except in having the moments of the wings apparent. The ephemeras are so abundant in some countries, that they are used for the purpose of manure, the species vulgata especially. This is the common practice with the husbandmen in Carniola. They are also very numerous on some parts of the Rhine, the Maes, and Isel. The season of their appearance in such multitudes continues, however, only for about three days annually. See the article EPHEMERA.

Genus 3. Hemerobius. — Antenna setaceous ; mandible straight and horny ; maxilla cylindrical and cleft ; lip forward and entire ; palpi four, fili- form ; u- ings deflected ; thorax convex. The spe- cies of this genus in all their stages feed upon small insects, especially the aphides ; their larves have six feet ; in most species they are oval and hairy ; the pupae are inactive, and enclosed in a case. The eggs are deposited on leaves in the midst of aphides, and the larvae attain their growth in fifteen or sixteen days. The most remarkable

species is the H. crysops; the wings of which arc- hyaline with green veins and brown spots; body variegated black and green. The larva of this in- sect feeds on the aphides, among which it makes terrible havoc, and invariably covers itself with the skins of those it has slain. From the head to the tail, this pigmy destroyer is covered with a thick coat, or rather mountain, composed of the skins, limbs, and down, of these creatures. Reau- mur, in order to ascertain how far this covering was necessary, removed it, and put the animal i to a glass with raspings of paper ; and, in the space of an hour, it had clothed itself with a coat of twice the usual thickness.

Genus 4. Phryganea. — Antenna long and bristly; mandible short, corneous, arched, and sharp ; maxilla; membranaceous ; palpi four ; stem- mata three; wings incumbent; hinder ones folded. A principal species is P. grandis. Wings brown- testaceous, with cinereous spots. One of the largest of the European phryganeye : it usually measures an inch, or more, in length, and lias very much the general aspect of a phalsna; the upper wings are gray, marked by various darker and lighter streaks and specks, and the under wings are yellowish-brown and semi-transparent. The larva, which measures nearly an inch ai>d three-quarters in length, is of a flesh-colored gray, with brown head and legs, and inhabits a tube composed of pieces of bark, small frag- ments of grass-stalks, or other substances. Like other larvae of this genus, it is known by the name of cadew, or caddis, worm, and is fre- quently

used by anglers. When arrived at its full growth it fastens the case or tube to the stem of some water-plant, or other convenient sub- stance, in such a manner as to project a little above the surface of the water, and casting its skin changes to a pupa of a lengthened, shape, displaying the immature limbs of the future phryganea, which emerge in the space of a fort- night.

The larvae in question, says Mr. Kirby, are well known to fishermen by the title of caddis-worms, and, if you take them out of the water, you will observe that they inhabit cases of a very singular conformation. Of the larva itself, which some- what resembles the caterpillars of many lepidop- tera, nothing is to be seen but the head and six legs, by means of which it moves itself in the water, and drags after it the case in which the rest of the body is enclosed, and into which on any alarm it wholly retires. The construction of these habitations is very various. Some select four or five pieces of the leaves of grass, which they glue together into a shapely polygonal case ; others employ portions of the stems of rushes, placed side by side so as to form an elegant fluted cylinder ; some arrange round them pieces ol leaves like a spirally-rolled riband ; others en- close themselves in a mass of the leaves of any aquatic plants united without regularity; and others again form their abode of minute pieces of wood either fresh or decayed. These are usually open at each end. Since they must reside in these cases, when they are become pupre. till the time of their final change approaches, if they are left open, how are the animals, now be- come torpid, to keep out their enemies? Or, if

.hey are wholly closed, how is the water, which is necessary to their respiration and life, to be introduced? These sagacious creatures know how to compass both these ends at once. They fix a grate or

portcullis to each extremity of their fortress, which at the same time keeps out in- truders and admits the water. These grates they weave with silk spun from their anus into strong threads, which cross each other, and are not so- luble in water. One of them, described by De Geer, is very remarkable. It consists of a small thickish, circular lamina of brown silk, becoming as hard as gum, which exactly fits the aperture of the case, and is fixed a little within the mar- gin. It is pierced all over with holes disposed in concentric circles, and separated by ridges which go from the centre to the circumference, but often not quite so regularly as the radii of a circle, or the spokes of a wheel. These radii are transversed again by other ridges, which follow the direction of the circles of holes ; so that the two kinds of ridges crossing each other form compartments, in the centre of each of which is a hole

One forms a horn-shaped case composed of grains of sand, so equal in size, and so nicely and regularly gummed together, the sides through- out being of the thickness of one grain only, that the first time I viewed it I could scarcely per- suade myself it could be the work of an insect. The case of P. bimaculata, which is less arti- ficially constructed of a mixture of mud and sand, is pyriform, and has its end curiously stopped by a plate formed of grains of sand, with a central aperture. Other species construct houses which may be called alive, forming them of the shells of various aquatic snails of dif- ferent kinds and sizes even while inhabited, all of which are immoveably fixed to it, and drag- ged about at its pleasure : a covering as singular as if a savage, instead of clothing himself with the squirrel's skin, should sew together into a coat the animals themselves. However various may be the form of the case externally, within it is usually cylindrical and lined with silk, and even those that are most careless about the nature of the materials of their houses, are solicitously attentive to one circumstance respecting them, namely, their specific gravity. Not having the power of swimming, but only

of walking at the bottom of the water by aid of the six legs at- tached to the fore part of the body which is usually protruded out of the case, and the insect itself being heavier than water, it is of great importance that its house should be of a specific gravity so nearly that of the element in which it resides, as while walking neither to in- commode it by its weight, nor by too great buoy- ancy ; and it is as essential that it should be so equally ballasted in every part as to be readily moveable in any position. Under these circum- stances our caddis-worms evince their proficiency in hydrostatics, selecting the most suitable sub- stances, and, if the cell be too heavy, gluing to :.t a bit of leaf or straw ; or, if too light, a shell or piece of gravel. It is from this necessity of regulating the specific gravity, that to the cases formed with the greatest regularity we often see attached a seemingly superfluous piece of wood, leaf, or the like.

Genus 5. Panorpa. — Antenna filiform; palpi four ; rostrum cylindrical and corneous ; mandi- ble no teeth; jaws bifid at the point; lip long, and covering the whole mouth ; the male having a tail chelated. P. communis is, as its name imports, the most familiar of all the species. It is frequently seen in our meadows during the early part of the summer. It is a long-bodied fly, of a moderate size, with four transparent wings, elegantly variegated with deep brown spots ; the tail of the male insect, which is gen^ rally carried in an upright position, is furnisher1 with a forceps.

Genus 6. Raphidia. — Antewue filiform, and o; the same length with the thorax, and cylindrical , palpi four, short, and filiform ; mandible arched and corneous, dentated ; jaw corneous and ob- tuse; lip corneous, round, and entire; wings deflected ; female's tail setaceous. This genus is said to walk on the knees. Species R. notata, having wings, with a brown marginal spot; a body black, head with a testaceous spot; legs testaceous : appendage of female as long as the body.

ORDER V. — HYMENOPTERA.

The insects of this order are all furnished with four membranaceous wings, and a mouth, having maxillse. Some of the females are provided with a sting concealed within the abdomen, and fur- nished with a poison-bag ; others have an ovi- duct, with which they pierce wood, &c., to deposit their eggs. The larvae have, some no feet, others sixteen ; they change to pupae incom- pletae, which are enclosed in cases. Some of the insects live in societies, some entirely alone.

Genus 1. Cynips. — The mouth is armed with jaws, but has no proboscis; the sting is spiral, and concealed within the body. The cynipes pierce the leaves of plants with their sting, and deposit their eggs in the wound ; the extravasated juices rising around, form a gall, which gradually becomes hard, and in this the larva lives, and feeds, and changes into & pupa. Thus are pro- duced the galls so V31«iable in commerce as a principal ingredient in ink, and in dyeing. See the articles CYNIPS, and GALLS, in the body of our work.

Genus 2. Tenthredo. — Palpi four, filiform, and unequal ; mandible toothed, corneous, and arched ; jaws obtuse at the point ; lip cylindrical and tri- sected. The larvae have from fourteen to twenty- eight feet, and a round head ; and, if touched, roll themselves together. In this state, their food is the leaves of plants. When about to enter the pupa state, they make a net-work case, within which they remain as pupae for the greater part of the winter. The species are very numerous, and appear to be migratory. In August, 1782, they were observed in Norfolk to come over the sea by the fishermen and farmers, and on the beach and cliffs they might be taken up by shovels- full. It has, however, been thought that they only come from Lincolnshire. An impor- tant species is the T. lutea, which is of a yellow color mostly, and has five yellow antennre. It proceeds from a large green larva, with a double row of black specks on each side, and a dusky line down the back, bounded on each side by yellow. It

feeds on various species of willow

Order

Sirea: gag-as

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Cyrups qufircus . Ot-der Ztiptercts

Chrysis ign <&4i-tiele CHRYSIS

Bombyifais major- .

Thoina*

J. Stony sculp.

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alder, and beech: The parchment-like case in which it envelopes itself in autumn is of a pale . yellowish-brown color ; and the chrysalis, which is of a pale dusky, or brownish cast, exhibits the limbs of the future fly, in size equal to a common wasp, and of a yellow color, bound with black ; the antennae rather short, and strongly clavated.

Genus 3. Sirex. — Antenna filiform ; joints twenty-four; palpi four, hind ones long and cla- vated; mandible thick, short, corneous, and dentated ; jaw ciliated ; wings lanceolate, and not folded ; abdomen sessile, terminating in a poison- stijig, or oviduct, exserted, serrate, and stiff. The largest and finest species is the S. gigas, the ab- domen of which is yellow at the base and tip ; the body blue-black, and about the size of that of a hornet. This insect frequents the pines, and has a strong conspicuous sting. The larva, which measures about an inch and a quarter in length, is of a yellowish-white color, and inha- bits decayed firs ; it bears some resemblance to the beetle larvae, but is thinner, and has a short black spine at the tip of the abdomen. It changes to a chrysalis in the month

of July, first envelop- ing itself in a slight silken web, of a whitish color. The chrysalis is of a lengthened shape, with the future insect very distinctly character- ised. If the change to chrysalis takes place in summer, the fly is produced in about three weeks ; but if at the close of autumn, the animal continues a chrysalis the whole winter emer- ging in the following spring. The male insect is considerably smaller than the female, and may be farther distinguished by the want of the cau- dal tube ; and the tip of the abdomen is of a black color.

Genus 4. Ichneumon. — Antennae setaceous; mouth having straight membranaceous maxilla, bifid, rounded at the apex, corneous, dilated, and ciliated ; mandible corneous, arched, and acute, but without teeth; lip cylindrical, corneous, emarginated, and toward the apex membrana- ceous ; palpi four, filiform and unequal.

The species included in this genus amount, in Britain alone, to 800; Linne seems to have so named it from the parasitical habits of the insects ; and the similarity of the services they perform, to those of the Egyptian deity of this name.

They deposit their eggs' in the larvse or pupse of other insects, and both animals proceed to- ward their subsequent states, in many instances, together; but the invaded insect never attains its perfect growth, for these parasites feed on its substance. When their larvse are full grown they burst the skin in various places, and, spinning themselves up in a small oval silken case, change into pupae ; the whole number forming a groupe on the shrivelled body of the caterpillar which had afforded them nourishment ; and, after a cer- tain period, emerge in the state of complete ich- neumons. One of the most familiar examples of this process, is afforded by the well-known caterpillar } f the common white or cabbage butterfly ; which, in the autumnal season, may be frequently observed to creep up some wall, or other convenient surface, in order to undergo its own change into chrysalis ;

but, in the space of a day or two, a numerous tribe of small maggots

will be seen to emerge from it, and immediately proceed to envelope themselves in distinct yellow silken cases ; the whole forming a groupe around the caterpillar. The ichneumons proceeding from these are the species called by Linnaeus ichneumon glomeratus : their color is black, with yellow legs : they usually make their appear- ance in about three weeks from the time of their spinning themselves up. Other small species of ichneumon pierce the skins of newly-changed chrysalides of butterflies and moths, in which their larvae remain during their own incomplete state ; as the ichneumon puparum of Linnaeus, a very small species, of a gilded green color. Others, again, are so very small that the female pierces even the eggs of moths and butterflies, and deposits her own in each ; as the ichneumon ovulorum of Linnaeus, one of the smallest of the whole tribe : it is of a black color, with rufous legs, and long filiform antennae. Some ichneu- mons are of a very considerable size, and the females of these select some larger caterpillar for their victim; as those of the larger sphinges, such as the S. ligustri, convolvuli, &c. ; or one of the large and middle-sized moths, as the pha- laena vinula, quercus, &c. These large ichneu- mons are generally bred in small numbers, and sometimes the female deposits but a single egg in the selected caterpillar. This may be in- stanced in the. I. ramididus, the larva of which is thus bred in the caterpillar of the sphinx ligustri : it is a very large ichneumon, of a dull yellowish color, with a cast of brown on the thorax, and with the antennae and abdomen tipped with black : the abdomen is also of a falciform shape, curving downwards, and compressed on the sides. I. luteus is a large species, nearly allied to the for- mer, and of similar manners.

The seeming severity of the process ordained by nature, for giving birth to the genus ichneu- mon, may be much diminished by supposing, (what all the ensuing phenomena seem to imply) that, after the

first operation of piercing the skin, and depositing the eggs, is performed by the female ichneumon, the caterpillar feels no acute pain ; the enclosed enemies feeding only on its juices, and evidently sparing the more important organs; so that it loses its life by a gradual decay.

' From the observations hitherto made by ento- mologists,' again to adopt the valuable observa- tions of Mr. Kirby, ' it would appear that the great body of the ichneumon tribe is principally employed in keeping within their proper limits the infinite host of lepidopterous larvse, destroy- ing, however, many insects of other orders ; and, perhaps, if the larvae of these last fell equally under our observation with those of the former, we might discover that few exist uninfested by their appropriate parasite. Such is the activity and address of the ichneumonidte, that scarcely any concealment, except, perhaps, the waters, can secure their prey from them; and neither bulk, courage, nor ferocity, avail to terrify them from effecting their purpose. They attack the ruthless spider in his toils : they discover the re- treat of the little bee, that for safety bores deep into timber; and though its enemy ichneu- mon cannot enter its cell, by means of her

long ovipositor she reaches the helpless grub, which its parent vainly thought secured from every foe, and deposits in it an egg, which pro- duces a larva that destroys it. In vain does the destructive cecidomyia of the wheat conceal its larvae within the glumes that so closely cover the grain . three species of these minute benefactors of our race, sent in mercy by Heaven, know how to introduce their eggs into them, thus prevent- ing the mischief they would otherwise occasion, and saving mankind from the horrors of famine. In vain, also, the cynips by its magic touch pro- duces the curious excrescences on various trees and plants, called galls, for the

nutriment and defence of its progeny: the parasite species attached to it discovers its secret chamber, pierces its wall, however thick, and commits its destroy- ing egg to its offspring. Even the clove-weevil is not secure from the legumen of that plant ; nor the wire-worm in the earth, from their ichneu-monidan foes. Others are not more secure by the repulsive nature of the substance they in- habit, for two species, at least, of ichneumon know how to oviposit in stercoraceous larvae without soiling their wings or bodies. An idea of the services rendered to us,' adds this gentle- man, ' by those ichneumons which prey upon noxious larvae, may be formed from the fact, that out of thirty individuals of the common cabbage caterpillar (the larvae of papilio bras$ic<£) which Reaumur put into a glass to feed, twenty- five were fatally pierced by an ichneumon (I. globatus). And if we compare the myriads of caterpillars that often attack our cabbages and brocoli with the small number of butterflies of this species which usually appear, we may con- jecture that they are commonly destroyed in some such proportion.

Genus 5. Sphex. — Antenna filiform ; palpi four; mandible incurved, corneous, and dentated; jaw entire; lip corneous with amembranaceous point; sting concealed. The insects of this genus live in sand-banks; they feed on umbelliferous plants; the larvae inhabit and feed on the dead bodies of insects in which the mother deposited her eggs. The insects are the most rapacious of this order, and, attacking • indiscriminately whatever insect comes in. their way, soon overcome it with their poisonous sting.

One of the most handsome species is the fas- ciata, the color of which is black with two white bands on the abdomen, the first broken ; the tail white, thorax black covered down ; the fore-mar- gin is marked with a white line ; the wings are white but tipped with brown.

Genus 6. Chrysis. — Antenna filiform, bent, with twelve joints ; mouth armed with jaws, but no

proboscis; abdomen arched, with a scale on each side; wings plain; body appearing as if gilt (whence the name) ; anus dentated, and armed with a sting, which is somewhat exserted. These insects, when alarmed, roll themselves up into a ball; and, exposing nothing but a hard scaly skin," thus enter with impunity the nests of the stinging hymenopterae, and deposit their eggs without injury to themselves. See our article CHRYSIS.

Genus 7. Vespa (the wasp). — Antemut fili- form, f rst joint elongated and cylindrical ; mouth

corneous, having the maxilla compressed, without proboscis; palpi four, unequal and filiform; eyes lunated ; body smooth ; with the sting concealed ; and the upper wings plicated.

This genus comprehends, in Gmelin's Systema Naturae, 159 species. In general they are re- markable, like the apis, for the dexterity with which they construct their nests, which in those of many species is of great size; for always living in society ; and for their depredations on the bee and other tribes of insects, particularly flies.

V. vulgaris, the common wasp, has four wings and six feet ; its body is yellow with black tri- angular spots ; the common wasp breeds in the ground. There is another and fiercer but hap- pily very rare kind, which breeds in woods and mountains; they are larger, have broader bodies, and much more black about them ; their sting is remarkably larger in proportion to their back. Reaumur (Hist. Acad. Sc. Paris, 1719), and Derham (Phil. Trans, No. 382. p. 53. or Abr. vol. viii. p. 404), distinguish three sorts of wasps; viz. the queens or females, the males, and the common laboring wasps, called mules, which ac- cording to Reaumur, are neither males nor females, and consequently barren. The queens, of which there is a considerable number, though fewer than the males, and of course much fewer than the neutral or laboring wasps, are much longer in the body, and larger than any other wasp ; they have a large heavy helly, corres- ponding in size to the

prodigious quantity of eggs with which they are charged. The males are less than the queens, but longer and larger than the common wasps, which are the smallest of the species : they have no stings, with which both the queens and common wasps are furnished. There are in one nest two or three hundred males, and as many females ; but their number depends on the size of the nest; and Dr. Der- ham observed that the males were bred, or at least mostly resided, in the two cells or partings, between the combs, next to the uppermost cell. The antennae or horns of the male wasps are longer and larger than those of either of the other sorts; but the chief difference, says Dr. Derham, consists in their parts of generation, which are altogether different from those of other wasps. The mules are the laborers of the nest, employed in procuring materials, and in con- structing them, as also in procuring provisions for the other wasps and their young.

Almost every person must have seen the esta- blishment made under ground by the common wasp. It is a kind of subterraneous city, which at certain seasons of the year contains many thousands of inhabitrnts, and is constructed nearly with the same ingenuity and elegance as that of the honey-bee. Like it, it is internally formed with combs consisting of a number of hexagonal cells, all enveloped under one com- mon covering, and constructed with great art. In this particular they even excel the bee, which contents itself with the cover afforded by the hive, or with the trunk of a rotten tree, in their wild state.

Though wasps generally make choice of some large hole under ground for the, 'instruction of

their nest, they have nevertheless much labor to undergo in removing protuberances, and carry- irg away earth, till it is brought to that spherical

i.gure which suits their purposes. This work completed, they next construct that paper-like covering with which the whole hive is lined. The combs in which the cells are lodged next claim their attention. These are ranged horizontally in different stories, sometimes twelve or fifteen above each other, all supported by colonnades, between which all the citizens of this subter- raneous commonwealth are seen at times to walk like men in the streets of a town. The cells of the wasps are not constructed with that geome- trical skill which has been so often admired in those of the bee ; but they are not on that account the less adapted to the purposes they are des- tined to serve. Each comb has only a single range of cells, with their mouths opening below. They are intended, not for the reception of honey, but for the habitation of the young, which are fed twice or thrice a-day, by morsels carried in by the parents. For the more commodious reception of its food, each of the larvse has its head turned downwards opposite to the mouth of its cell, ready to receive its meal when offered. There are, however, many varieties in the con- struction of wasp-hives, all suited to the views of the different species that inhabit them. Some have only a single row of cells, placed vertically, like those of the bee, the mouths facing the sun : the reason of this variety seems to be, that some kinds require the heat of the sun to hatch their eggs ; an advantage which could not be obtained were there more rows of cells, or were they placed in a different manner.

Reaumur observes that when the females that have survived the winter begin, at the return of spring, to lay their eggs, they first lay those which hatch mules, and at this time they build cells of a smaller size to lodge the eggs from which they are produced : they afterwards build larger cells, and fill them with the largest eggs, which are those of the males and females. This writer says, that the copulation of the males and fe- males is visible, and he has given a particular account of it ; observing that it is performed in October, like that

of all other flies. When win- ter begins, the wasps destroy all the eggs, and all the young ones without exception ; all the mules and males which have been employed in this work, being unfurnished with provisions, perish ; and none survive, except some few fe- males, which, according to Reaumur, were fe- cundated in October, and raise a new colony in spring.

The V. crabro, or hornet, has its thorax black on the fore part, and unspotted, the incisures of the abdomen being marked with a double con- tiguous black spot. This species is much more formidable than the common wasp, and of con- siderably larger size ; its sting is often produc- tive of serious consequences. Its color is a tawny yellow, with ferruginous and black bars and variegations. The nest is generally built in the cavity of some decayed tree, 01 immediately beneath its roots ; and not unfrequently in tim- ber-yards. It is of smaller size than that of the wasp, and of a somewhat globular form, with an

opening beneath ; the exterior shell consisting of more or fewer layers of the same strong pa- per-like substance with that prepared by the wasp : the cells are also of a similar nature, but much fewer in number, and less elegantly com- posed. The hornet, like the wasp, is extremely voracious, and preys on honey, fruit, and al- most any kind of fresh animal substances which it can obtain.

Ray describes a peculiar species of wasp, which builds a small nest, usually fixed to a beam of some old building, and has only one aperture, which is about half an inch wide, and serves for the wasps to go in and out at. This opening is always exactly opposite to that part of the hive where it adheres to the beam. The hive or nest is covered with a thin membranace- ous substance, resembling paper, of a brown color, with streaks of white, disposed in regular circles. The whole nest is about three inches in diameter, and is usually composed of about nine crusts ; when these are cut away, there ap- pears a round comb in the centre, and a smaller

above it, fixed up by a pedicle arising from the centre of each. In every one of these cells, which are hexagonal, as those of the common wasp, is reared one worm, which, in fine, be- comes a wasp. This species of wasp is also larger than the common one. An elegant nest is attributed by Latreille in the Annales du Mu- seum National d'Histoire Naturelle, No. 4, to the Vespa Holsatica of Fabricius, which is found both in England and France as well as in many other parts of Europe. It does not much ex- ceed the size of an egg, but is of a more globular form, and consists of several concentric bells, with considerable intervals between each, the interior alone being entire, and furnished with a small round orifice ; the rest reaching only about two-thirds from the base of the nest. In the centre of the complete or entire bell is situated the congeries of cells, built round a small cen- tral pillar attached to the base : the cells are not very numerous, and their orifices look down- wards. It is generally attached by its base to old thatch or roofing.

Of the ichneumon wasp, which are smaller than all the others, but have the same colors generally, Ray mentions thirty-two species. They usually live in the holes of mud-walls, and make a sort of porch of mud before the door of their cells. This is the wasp usually found issuing from the body of the common cabbage caterpillar. See the Ichneumon genus.

Genus 8. Apis (the bee). — Having devoted a considerable portion of space to the separate consideration of this important insect, we shall only complete our system by defining its gene- ric characters ; which are — antenna filiform ; mouth horny, corneous, having the maxilla;, and labium membranaceous at the apex ; tongue in- flected ; palpi four, unequal and filiform ; wings not folded : aculeus in the females and neuters concealed in the abdomen. Mr. Kirby in his excellent Monographia Apum Angliae, 2 vols. 8vo., has described upwards of 200 indigenous species of this genus. See APIS.

Genus 9. Formica (the ant). — This genus we have

also treated distinctly. See ANT and

•ISO

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FORMICA. We therefore only state its generic characters. Antenna filiform ; palpi four, and unequal, having cylindrical articulations, on a submembranaceous cylindrical lip ; between the thorax and the abdomen is a small erect scale ; the sting is concealed in the abdomen, and pos- sessed only by the females and neuters ; which latter are apterous, and have no wings.

Genus 10. Mutilla. — Antenna filiform; palpi four, of which the articulations are obconic, seated on the top of the lip ; maxilla membran- aceous at the tip ; the lip projecting obconic ; most species are apterous; the body is pubescent; thorax retuse behind ; the sting pungent and concealed. Between forty and fifty species have been described.

Remarkable species are, M. helvola, of a pale claret-red color, the abdomen is cylindrical, pubescent at the tip ; and the thighs are com- pressed : it inhabits Southern Africa. M. coc- cinea. Scarlet; abdomen marked with a black belt. It inhabits North America. The wings are black, but in general it is an apterous insect. M. antiguensis. Scarlet; tip of the abdomen black, with white streaks, inhabiting Antigua. The M. coccinea is said to be not the least for- midable of armed insects. It is happily not very common, but the females appear in Mary- land, in July and August. A person stung by one of them, is said by Mr. Forster, to have lost his senses in five minutes afterwards, and to have become so ill in consequence, that his life was despaired of.

ORDER VI. — DIPTERA.

This order, indebted for its name (Sic, twice, or double, and irrtpov, a wing) to Aristotle, em- braces all insects which have but two wings, with

halteres, poisers, or balancers, at their base. The mouth is furnished with a proboscis, con- nected in some genera with a vag na, in others with two palpi, but having no maxilla. The eyes are large and reticulated. Some are vivipa- rous ; others oviparous. The larvae vary much in different genera. Generally they do not cast their skins, and they commonly appear like a small worm ; the likeness to which is heightened by the animal having no feet, and in some species by the head being soft, like the body. Others differ in having the head scaly. They are some- times blunt at the anterior part ; and acute be- hind : in other instances pointed at both ends. Many Vve in watery places ; others feed on the juice of vegetables ; others again on decayed animal matter. The hippobosca, a genus of this order, does not appear to have any larva. The nerves of the larvae, in some of the muscae, as M. chamaeleon, &c. (stratiomys, Fabr.) have some resemblance to those of the larva of scarabaeus nasicornis.

Genus 1. (E&trus. — Antenna short, setaceous; the haustellum drawn within the lips, which are thick, and without palpi, having a small passage ; the vagina membranaceous, cylindrical, and ob- tuse, having generally three short, flexible setae. The larva of the cestri deposits its eggs in various parts of the bodies of cattle, which, when hatched, produce the most painful tumors. Some lay their eggs under the skin of cows or oxen, which they perforate for that purpose :

others enter the intestines of horses by the vent; and others, again, deposit them in the nostrils and skin of sheep, rein-deer, &c. The larva of oestrus bovis is brown, and consists of eleven segments, with transverse rough interrupted lines. That of equi, known by the name of bots, deposits its eggs on the ha.rs of horses, and always on those parts which are most likely to be licked with the tongue, and are thus conveyed into the stomach. The eggs of (E.haemorrhoidalis are laid on the lips of horses, occasioning a titil- lation, which causes the animal, when attacked by it, to move its head violently, and gallop about with every symptom of

distress : this larva is carried into the intestines like the former, and is voided with the dung when its period of change to the pupa state approaches. The larvae are without feet, short, thick, soft, and annulate, and often furnished with small hooks. Twelve species have been described.

The earliest writers on the science of entomo- logy paid attention to the habits of this formi- dable genus. The celebrated Reaumur, in par- ticular, was a close observer of its habits. He repeated the experiments of Vallisnieri respect- ing the CE. ovis, equi, and hsemorrhoidalis species, and fully confirmed all he had said respecting them; accompanying the account, in his Me- moirs, with ample details of their appearance and habits, and his descriptions with much, better representations of them than his predecessor. Madame de Breaute", an abbess, in whose praise he enlarges, at length furnished him with an op- portunity'of getting the larva of the (E. bovis from some of the cows belonging to her convent ; and on them he made his observations. Among other remarks, in this interesting memoir, he mentions, that by a singular chance he observed a line of small air-bubbles arranged along the side of the insect, and placed opposite to the spiracula, being entangled in the pus, which every where covered its surface, and correspond- ing in number and position to these openings ; which would seem to prove that these spiracula are designed, not for the admission of air, as is generally conceived, but in reality for its exit ; the air being received by a cartilaginous tube opening at one end of the insect, viz. that extre- mity which is placed next the external opening of the skin, and which becomes the tail part of the future insect, the larva being, in reality, in- verted in the abscess. He very candidly ob- serves, however, that he could not force any air through these apertures, by holding the larva under water, and compressing it with the fingers. He also noticed, that the opening in the skin, through which the larva breathes and evacuates, is considerably enlarged about the period of its exit, by the

animal's raising itself in the abscess, and pressing against it ; and after some days of this discipline, the aperture being enlarged, he works himself through by successive efforts, and falls to the ground. This excellent observer particularly mentions also their launching them- selves from the back of the animal at an early hour of the morning in preference to any other part of the day. The perfect insect, he observes, could not be induced to take any kind of food or nourishment, though he presented it with n great variety.

Linne" first arranged the members of this ex- traordinary family under the title of oestrus, being acquainted only with the five European fpecies, CE. bovis, tarandi, haemorrhoidalis, na- salis, and ovis : but his characters of these are so appropriate, as to be retained by the most accurate writers to the present day. Through the whole of his life he had never met with the true fly produced by the ox-bot, but had con- stantly taken a very dissimilar one which infests the horse for it. This insect, indeed, is, accord- ing to Mr. Clarke, truly rare. Vallisnieri had never seen but one, and that was mutilated. Reaumur, with uncommon pains, had raised two or three to the perfect state of a fly, and in- forms us, that to effect his purpose more com- pletely, he employed a cow-herd to collect for him, promising him the price of half a day's labor for each he should bring ; but out of thirty procured by this means not one lived.

The real larva of the CE. bovis possesses neither the aculei, lips, or marginal setse, of the other tribes. It has a species of hooks attached to its body, in the place of legs, and these enable it both to move about in the abscess it forms at pleasure, and to crawl out when ripe. It also renders the use of the tentacula, observable at the small end in the other species, not necessary in this. The pain it seems to inflict in deposit- ing its eggs, is very

severe. When one of a herd of cattle is attacked by this fly, it is easily known by the extreme terror and agitation of the whole number. The unfortunate object of the attack runs bellowing from among them to some distant part of the heath, or the nearest water. The tail, from the severity of the pain, is held with a tremulous motion straight from the body ; and the head and neck stretched out to the utmost. The rest, from fear, generally follow to the water, or disperse to different parts of the field. If oxen are yoked to the plough, when attacked by this fty, it is attended with real danger to the drivers : since they become perfectly uncontrol- able, and will often run with the plough directly forwards through the hedges, or whatever ob- structs their way.

The singular scene attending such an attack, was long ago described by Virgil :

Est lucos Silari circa, ilicibusque virentem

Plurimus Alburnum volitans, cui nomen asilo Romanum est, oestron Graii vertere vocantes : Asper, acerba sonans : quo tola exterrita sylvis Diffugiunt armenta ; furit mugitibus asther Concussus, sylvaeque, et sicci ripa Tanagri.

Georg. lib. iii. vcr. 146 — 151.

TJie strongest and healthiest beasts, says an able paper in the third vol. of the Transactions of the Linnaean Society, seem constantly to be preferred by this fly ; and their possessing them in their backs is considered as a criterion of goodness with the dealers in cattle : the tanners observe, that their best and strongest hides have the greatest number of bot-holes in them. The whole of this family of insects appear to have a strong dislike to moisture ; since the animals find a secure refuge, when they get into a pond or brook, where the other flies which annoy them follow without hesitation, but the oestri rarely or never: and during very cold, rainy, or windy VOL. VIII.

weather, they are not to be seen. Among the country-people, the larva? of this insect are com- monly known by the name of warbles, wornuls, or wormuls, or more properly bots.

Of the oestrus equi, or large horse-bot, this writer says, 'These larvae attach themselves to every part of the stomach, but are in general most numerous about the pylorus, and are some- times, though much less frequently, found in the intestines. They hang most commonly in clus ters; being fixed by the small end to the inner membrane of the stomach, where they adhere by means of two small hooks or tentacula. When removed from the stomach, they will attach themselves to any loose membrane, and even tc the skin of the hand ; for tins purpose, they draw- back their hooks almost entirely within the skin, till the two points of these hooks come close to each other; they then present them to the mem- brane, and keeping them parallel till it is pierced through, they expand them in a lateral direction ; and afterwards, by bringing the points down- wards, or towards themselves, they include ;i sufficient piece of the membrane with each hook, and thus remain firmly fixed, for any length of time, without any farther exertion from the animal.

' All those bots which feed on the mucous membranes lining the canals of the body, are provided with these tentacula ; whilst those which inhabit beneath the skin, will be found univer- sally without them. The oestrus of the sheep has them also, but uses them only in passing over the membranes on which it lives, making them a fixed point to which it draws up its body, and thus secures its passage along those smooth and lubricated surfaces of the nostrils. The larva of this bot, when very young, is of a cy- lindrical figure, of a pellucid ruby red, and op- pears without spines to the segments. As it acquires an increase of size, it assumes a more flattened appearance, becomes whiter ; and the spines, which are tipt with black, become very visible, being placed in double lines, and are di- rected towards the tail, or truncated end of the larva. Their food is probably the chyle, which,

being nearly pure aliment, may go almost wholly to the composition of their bodies without any excrementitious residue ; though, on dissection, the intestine is found to coritain a yellow or greenish matter, which is derived from the color of the food, and shows that the chyle, as they re- ceive it, is not perfectly pure. The slowness of their growth, and the purity of their food, must occasion what they receive in a given time to be proportionably small ; from whence probably arises the extreme difficulty there is found in de- stroying them by any medicine or poison thrown into the stomach. Opium, tobacco, or the drastic purgatives, which often bring away in abundance the common worms of the intestines, produce little or no effect on these.'

The larvae of the large horse bot, we are told in the same able paper, attain their full growth in May, and are coming from the animal from the lattei end of that month to the latter end of June. On dropping to the ground, they explore some con- venient retreat, cnange to the pupa, and in about six or seven weeks the fly appears.

The important injuries sustained from this quarter at some seasons by our agriculturists will warrant our extracting some further particulars of the habits of this genus :

' The mode pursued by the parent fly, to ob- tain for its young a situation in the stomach of the horse, is truly singular, and is effected in the following manner : — When the female has been impregnated, and the eggs are sufficiently ma- tured, she seeks among the horses a subject for her purpose ; and advancing on the wing, she holds her body nearly upright in the air, and her tail, which is lengthened for the purpose, curved inwards and

upwards. In this way, she approaches the part where she designs to deposit the egg; and, suspending herself for a few seconds before it, suddenly darts upon it, and leaves the egg adhering to the hair ; she hardly appears to settle, but merely touches the hair with the egg held out on the projected point of the abdomen. The egg is made to adhere by means of a glutinous liquor secreted with it. She then leaves the horse at a small distance, and prepares a second egg ; and poising herself before the part, deposits it in the same way. The liquor dries ; the egg becomes firmly glued to the hair ; and this pro- cess is repeated by various flies, till 400 or 500 eggs are sometimes placed on one horse. The horses, when they become used to this fly, and find it does them no injury, as the tabani and co- lopes, by sucking their blood, hardly regard it, and do not appear at all aware of its insidious Y>bject.

' The inside of the knee is the part on which these flies are most fond of depositing their eggs, and, next to this, on the side and back part of the shoulder, and less frequently on the extreme ends of the hairs of the mane. But it is a fact worthy of attention, that the fly does not place them promiscuously about the body, but con- stantly on those parts which are most liable to be licked with the tongue ; and the ova, therefore, are scrupulously placed within its reach. Whe- ther this be an act of reason or instinct, it is cer- tainly a very remarkable one ; and one should suspect, if it was the latter, it ought to direct the performance of the act in one way only. Which- ever of these it may be, it is without doubt one of the strongest examples of pure instinct, or of the most circuitous reasoning, any insect is capa- ble of. When they have remained on the hairs four or five days, they become ripe, after which time the slightest application of warmth and moisture is sufficient to bring forth in an instant the latent larva. At this time, if the tongue of the horse touches the egg, its operculum is thrown open, and a small active worm is produced, which readily adheres to the moist surface of the tongue, and is from thence conveyed

with the food to the stomach.

' It is fortunate for the animals infested by these insects, that their numbers are limited and kept within bounds, by the hazards they are ex- posed to. I should suspect near a hundred are lost for one that arrives at the perfect state of a fly. The eggs, in the first place, when ripe, often hatch of themselves ; and the larva, without a nidus, crawls about till it dies; others are sub- ject to be washed off by the water, or are hatched

by the sun and moisture thus applied together ; when in the mouth of the animal, they have the dreadful ordeal of the teeth and mastication to pass through ; and on their arrival at the sto- mach, they may pass, mixed with the mass of food, into the intestines ; and when full grown, on dropping from the anus to the ground, a high road or water may receive them ; if on the com- mon, they are in danger of being crushed to death, or of being picked up by birds, which so constantly for food attend the foot-steps of the cattle. Such are the contingencies by which nature has prevented the too great increase of their numbers, and the total destruction of the animals they feed upon.'

The perfect fly has a great aversion to cold and moisture, and never pursues the horse into the water.

The larva of the astrus luemorrhoidalis, or small horse-bot, is in many respects like the for- mer, and occupies the same situation in the sto- mach of the horse. It is distinguished not only by its smaller size, but by being nearly or quite destitute of spines, on leaving the rectum ; when full grown, it is of a reddish-green color, and in about two days assumes the pupa state.

' I have not seen any writer,' says the paper we have already quoted in this article, ' who has conjectured the real mode in which this fly de- posits its ova ; which having discovered, by re- peated opportunities of witnessing it, I can speak

of with certainty. The part chosen by this insect for this purpose is the lips of the horse, which is very distressing to the animal from the excessive titillation it occasions : for he immediately after its touch rubs his mouth against the ground, his fore legs, or against a tree ; or, if two are standing together, they often rub themselves against each other.

' At the sight of this fly the horse appears much agitated, and moves his head backwards and forwards in the air, to balk its touch, and prevent its darting on the lips; but the fly, watching for a favorable opportunity, deposits its eggs from the point of the abdomen, and he con- tinues to repeat his attacks on the lip, till the enraged animal endeavours to avoid it, by gal- loping away to a distant part of the field. If it then continues to follow, or teaze him, his last resource is in the water, where the astrus is never observed to pursue him. The teazing of other flies may sometimes occasion a motion of the head similar to this ; but it should not be mistaken for it, as it is never in any degree so violent as during the attack of the oestrus.

' At other times I have seen this fly get be- tween the legs of the horse whilst he is grazrhg, and then make his attack on the lower lip. The titillation occasions the horse to stamp violently with his fore-foot against the ground, and he often strikes with his foot as though aiming a blow at the fly. They also sometimes hide themselves in the grass ; and, as the horse stoops to graze, they dart on the mouth or lips, and are always observed to poise themselves during a few se- conds in the air, while the egg is preparing on the point of the abdomen. When several of these flies are confined in a close place, they have a particularly strong fusty smell, such as

we feel when anima s are confined in a close place : and I have observed both sheep and horses, when teazed by them, to look into the grass, and smell it very anxiously ; and, if by these means they discover the fly, they immediately turn aside, and hasten to a distant part of the field. The eggs of this species appear of a darker color than the former, and are provided with i petiolus, or foot-stalk from the small end, the opposite being obtuse, and provided with an operculum; it is also ribbed in a transverse di- rection, unlike the eggs of the preceding species. Our ancestors imagined that poverty or bad food engendered these animals, or that they were the offspring of putrefaction. In Shakspeare's Henry the Fourth, part 1st, the hostler at Rochester says, ' peas and beans are as dank here as a dog, and that is the next way to give poor jades the bots ; ' and the miserable nag of Petruchio is said to be so ' begnawed with the bots.' When the animal is kept from food, the bots are also ; and, it is natural to suppose, are then the most troublesome; whence arose the idea, that po- verty or bad food could engender them.

' Of the oestrus veterinus. This insect was known to Linnaeus, who gave it the name of nasalis, from an idea of its entering the nostrils of the horse, and depositing its eggs in the fauces : 'Habitat in equorum fauce per nares intrans.' Linn. Syst. Nat. 2, p. 969, which as it could not well do without destroying its own wings, is pro- bably as much a fable as the ' mire per anum intrans,' of the preceding species. We have seen four chrysalides of this fly, which were uniformly found under the dung of horses, which leads to a suspicion that they also inhabit the stomach of this animal. The larva is at present unknown ; but if it inhabited the fauces of the horse, it would produce such troublesome symptoms as could not easily escape the notice of those whose business it is to attend to the diseases of cattle. Such a disease, however, has never been de- scribed ; nor after an extensive opportunity, both in the dead and living subject, have I ever seen a hot in the fauces of the horse. Perhaps the

bots of the stomach, having crawled to the fauces in search of food, after the death of the animal, might have given rise to this idea ; they may have even accidentally bred there ; for there is little room to doubt, that these animals can live in any part whatever of the alimentary canal, or the passages leading to it. For a figure of this fly, see also the plate of the cestri.

' Of the (zstrus ovis* About the middle of June I procured some full-grown larvae of the oestrus ovis, from the inside of the cavities of the bone, which supports the horns of the sheep. They are nearly as large as those of the large horse-hot, of a delicate white color, flat on the under-side, and convex on the upper, having no spines at the divisions of the segments, though provided with two curved hooks at the small end. The other extremity is truncated, with a small prominent ring or margin, which seems to serve the same purpose, though in an inferior degree, as the lips of the CE. equi and hcemorr- hoidales, by occasionally closing over, and clean- ing the horny plate of respiration. When this

margin opens, after closing over the plates, a slight snap is sometimes heard, from the sudden admission of air. When young, those larvae are perfectly white and transparent ; except the two horny plates, which are black : as they increase in size, the segments of the upper side become marked with two brown transverse lines ; and some spots are observable on the sides. They move with considerable quickness, holding with the tentacula as a fixed point, and drawing up the body towards them. On the under side of the larva is placed a broad line of dots, which, on examination with glasses, appear to be rough points, serving, perhaps, the double purpose of assisting their passage over the smooth and lu- bricated surfaces of these membranes, and of ex- citing also a degree of inflammation in them where they rest, so as to cause a secretion of lymph or pus for their food. I have mostly found these animals in the horns and frontal si- nuses ; though I have remarked that the mem- branes lining these cavities were hardly at nil inflamed, while those of

the maxillary sinuses were highly so. From this I am led to suspect they inhabit the maxillary sinuses, and craw!, on the death of the animal, into these situation.–; in the horns and frontal sinuses. The breeds of these, like the CE. bovis, do not appear confined to any particular season ; for quite young and full-grown larvae may be found in the sinuses at the same time. When full grown, they fall through the nostrils to the ground, and change to the pupa state, lying on the earth, or adhering by the side to a blade of grass. The fly bursts the shell of the pupa in about two months.

' The manner in which this species deposits its ova, which we have often seen, has not, we believe, ever been described ; nor is it easy to see, though standing close to the animal at the time, exactly in what way this is accomplished, owing to the obscure color and rapid motions of the fly, and the extreme agitation of the sheep : but from the motions of the sheep afterwards, and the mode of defence it takes to avoid it, there is little doubt that the egg is deposited in the inner margin of the nostril. The moment the fly touches this part of the sheep, they shake their heads violently, and beat the ground with their feet, holding their noses, at the same time, close to the earth, and running away, earnestly looking on every side, to see if the fly pursues : they also may sometimes be seen smelling to the grass as they go, lest one should be lying in wait for them; which if they observe, they gallop back, or take some other direction, as they cannot, like horses, take refuge in the water : to defend themselves against its attacks, they have recourse to a rut, or dry dusty road, or gravel-pits, where they crowd together during the heat or the day, with their noses held close to the ground ; which renders it difficult for the fly, who makes his attacks on the wing, to get at the nostril. [imagine, the nostril, from repeated attacks of the fly, and the consequent rubbing against the ground, becomes highly irritated and sore ; which occasions their touch to be so much dreaded by the sheep.'

This writer afterwards observes ' there is no

medicine at present known that will detach them from the stomach, or intestines, though there are not wanting abundance of infallible nostrums for this purpose among the very numerous pro- fessors of horse medicine. An easy and effectual mode for the CE. equi, is to destroy the eggs which are deposited on the hairs, and are readily seen and removed by a pair of scissars, or a brush and warm water.' It appears from Reau- mur, that in France the grooms when they observe any bots about the anus of a horse or in its dung, thrust their hand into the passage to search for more : a precaution that gives great pain to the animal without any use ; for when the bots are passing through the body they have ceased to feed. In Sweden, according to De Geer, they take the more effectual method of cleansing the mouths and throats of horses of these insects with a particular kind of brush.

In the sheep, says our English entomologist, it would be much more difficult to prevent or destroy them by any of these means, particularly if they are situated in the maxillary sinuses; as, in this case, even trepanning them would be in- sufficient, as they would probably lie concealed in the convolutions of the turbinated bones. Perhaps the removal of the sheep to a distant pas- ture, during the months of June and July, whilst the greatest part of the bots are yet on the ground, in a chrysalis state, and not bringing them on such ground again, till the setting in of winter, would be the means of destroying them most effectually ; and this process, repeated for two or three years successively, in places where they are particularly troublesome, might prove eventually useful to the farmer : the Laplanders migrate annually with their rein-deer, on account of the bot which infests them.

On the other hand, he adds ' A physiological view of

their effects will perhaps best justify their existence. The larvae of the aestri, when applied under proper restrictions, and only to a certain extent, may be of greater utility than from our present very limited knowledge of them we are able to discover ; but we may ven- ture to remark, that their effect in keeping up a considerable degree of irritation in the mem- branes, on which they are situated, may perhaps not inaptly be compared to that of a perpetual issue, or blister. Nor is there wanting abundant proof of the utility of local irritations, in pre- venting the access, as well as in effecting the cure of disorders. We often see a formidable disease quickly removed by blistering the skin, or by irritating the mucous membranes of the stomach, or intestines, by a vomit or purge. The appearance of exanthematous eruptions on the skin, and the formation of local abscesses, from the same cause of partial irritation, often relieve a general disorder of the system. The mucous membranes, and the skin, possess this power, when irritated, in a more eminent degree than all the other parts of the body, and it is to these the- larvae of the astri are applied. Irritating the membranes of the stomach, by such means, in other animals, would excite nausea and vomit- ing ; but the horse, not possessing this power, his stomach is peculiarly fitted for the stimulus of such inhabitants.'

From the temporary madness produced in oxen by the attack of this genus, the Greeks ap- plied the term to any sudden fit of passion or fury, calling such ebullitions, we are told, an ' oestrus.' In the third volume of the Linnaean Transactions, the species of this genus are all figured. Having dwelt so much at large upon the British species, we may now briefly describe all the others known.

Cuniculi. Black ; wings brown ; thorax black as far as the middle, behind, and base of the abdomen with yellowish hairs. It inhabits Georgia. It deposits its eggs in the skins of hares and rabbits. It is twice as large as die CE. bovis. The sides of the abdominal seg- ments are yellow; the body .beneath is black. The larvae are browi ; every where rough,

with very minute prickles.

Buccatus. Gray ; face white, dotted with black. It inhabits Carolina, and is a large insect.

Tarandi. The wings of this species are im- maculate ; thorax yellow, with a black band ; the abdomen is fulvous, tipt with black. It inhabits Lapland. Deposits its eggs on the back of rein-deer which produce larvae often fatal to them.

Trompe. Wings white ; body black, with ci- nereous hairs ; thorax with a deep black band. It inhabits Lapland, and on the rein-deer.

No animal is on the whole, perhaps, so cruelly tormented by oestri as the rein-deer. Ten of these it is said will put a herd of 500 into the greatest consternation. They cannot stand still for an instant; but resort to puffing, blowing, changing their posture, stamping, and tossing themselves about in all directions. The ovipositor of the fly is similar to that of the ox-breeze, con- sisting of several tubular joints which slip into each other. It follows these noble animals over precipices, and through the valleys to the cloud- capped summit of the Alps.

Antilopte. Wings with a brown band and dots; body hairy, tawny-gray ; abdomen with three rows of blackish spots. It inhabits Asia, and deposits its eggs on the back of the antelope.

Fasciculosus. Downy, yellow ; tail with three tufts of blackish hairs. This is a Siberian in- sect.

Hominis. The body of this species is entirely brown. It inhabits South America. It deposits its eggs under the skin, on the bellies of the na- tives. The larvae, if it be disturbed, penetrates deeper, and produces an ulcer, which frequently becomes fatal. Gmelin was the first writer who included this species in the Linnaean system.

Genus 2. Tipula. — Antenna generally fili- form ; haustellum having no vagina : the mouth armed with a

short membranaceous proboscis, grooved on the back and receiving a bristle : feelers two incurved, equal, and filiform.

The smaller species of this genus are so much like gnats that the ablest entomologists have sometimes confounded them : but the structure and organs of the heart, the conformation of the mouth, &c., are decidedly different.

The larger species are found in our 'meadow during summer, having legs three times the length of their body. They are on the whole ugly

creatures. The head is small, and the neck short; the reticulated eyes of a greenish or purple color, and so large, that they cover almost the whole surface of thfe head. Reaumur sup- poses that two very lucid specks, on the anterior part of the breast, are eyes, though placed in so very singular a manner ; the wings of this crea- ture are long, but narrow, and seem scarcely well proportioned to its size; they are transparent, but have a slight cast of brown ; and their ribs, when viewed by the microscope, appear beset with scales, or feathers, in the manner of those of the gnat kind. There are no ailerons, or petty wings at the origin of these ; but they have two very fine balancers or mallets, with long pedicles, and round heads; the stigmata of the corslet are four. Each ring of the body is composed of two half cylinders, which are joined into one, by means of a membrane, which gives them room to distend or close up at pleasure.

The smaller kinds are numerous, and of great variety. These are frequent in all places, and at all seasons of the year ; the spring shows us immense clouds of them, and even the coldest winter's day exhibits great numbers of them in the sun-shine. None of the larvae have legs, but all have a regular scaly head, with two horns before and

dentated behind. Those from which the larger tipulae are produced live under ground, and are fond of marshy places, but any ground will do that' is not often disturbed. They usually are found at about an inch under the surface, and are so plentiful in some places as greatly to injure the herbage. There is frequently found in the hollows of the stumps of old trees, a sort of earth which seldom produces any vegetables ; yet the female flies of this species well know that, their young will find a proper subsistence there ; and there are usually found great numbers of them in these places.

Genus 3. Musca. — Antenna generally short; mouth furnished with a soft exserted fleshy pro- boscis ; two equal lips ; haustellum bristled ; two short palpi, generally, sometimes none.

Gmelin, in his edition of the Systema Naturae, describes 550 species of this genus, which he divides into two families, viz. A, with two short feelers ; and B, without any feelers. The latter, however, includes only eleven species of the vast number already mentioned. These grand sec- tions are again separated into still smaller divi- sions. Thus the family A is divided into six sections, and that of B into two. Dr. Shaw, also, assorts this genus into divisions according to the form of the antennae, which are either simple, without any lateral hair or plume; or armed, that is, furnished with a lateral hair or plume. These divisions, or sections, are still farther di- vided, according to the more or less downy or hairy appearance of the insects.

Although the number of known species in this genus is large, yet it is probable that it bears no proportion to the number that is still unknown, or that, at present, has not been arranged under specific characters. Mr. Harris, in his English Entomology (and England is not by any means productive of this insect, in comparison with some other countries), has described a greater number of specie's than Linnaeus enumerated as

existing in the world. Tl.e southern countries of Europe afford a much greater variety of species than those that are more north : in hot climates in general, they are always numerous, and, in a multitude of instances, they multiply to a decree that is almost intolerable. The species are°ex- tremely diversified in their external form, their structure, their organisation, their metamorpho- sis, and all their habits. Generally the larvae 01 this genus present a worm-like aspect, sometimes blunt at the anterior part and acute behind, and at others pointed at both ends. Several live in watery places and devour insects ; others feed on corrupt animal matter, or on vegetable juices. The larva of musca vermileo preys on insects, and in its mode of entrapping its prey imitates the manners of myrmeleon formicarius, like that ferocious insect forming a circular den in the sands which it inhabits, and watching in an aperture at the bottom for the unwary insects that unfortunately wander too close to its cavity. But of all the peculiarities related of the musca tribe, nothing appears in any degree so extra- ordinary as the history of the larva of musca tenax, recorded on the authority of Linnaeus, sanctioned by that of Fabricius. The larva is represented as a brown maggot with a long tail, which latter is extensile, and consists of a double tube, the exterior annulated into nume- rous segments, and the interior slender and ter- minated by a circle of hairs, surrounding a spi- racle. This maggot is seen in muddy stagnant waters, drains, and other similar places; and is, according to Linnaeus, a frequent inhabitant ot the turbid pulp used in the operation of paper- making. Hence it is often in this state exposed to the action of the wooden mallets used in this process, as well as squeezed in the strongest presses, and yet it survives uninjured these seem- ingly destructive operations. This circumstance is described in a paper entitled Miracula Insec- torum, inserted in Am. Acad. 3, p. 331, and though purporting to be the production of Ema- nuel Avelin, obtained the sanction of Linnaeus. The same observation is confirmed in the Sys- tema Naturae.

A singular appearance is exhibited in the structure of the nervous system of musca putris. The brain is situated immediately above the ori- gin of the oesophagus behind the head ; it? is very large in proportion to the rest of the body. The anterior part is notched, posterior rounded, and appears altogether as if formed of two lobes. A pair of nerves arises from the anterior part of the brain, proceeds forward, and is distributed to the mouth. These nerves become conspicu- ously large previously to distribution. Poste- riorly the brain presents an aperture which af- fords a passage for the oesophagus : the nervous part, situated at the sides, may be regarded as cords which produce the medulla, and all below the oesophagus as the medulla itself. Musca tenax (Linn.) in the perfect state has a small brain, formed of two lobes, which are situated very near together, but distinguished by a longitudi- nal furrow; the anterior part produces a large nerve, which is afterwards distributed to the antennae and the proboscis. Many of these tribe!) act the useful part of cleansing the face of nature

of corruption and various nuisances. No sooner does the life depart from an exposed • animal body than the histers come and pierce the skin. Next follow the flesh-flies ; some, that no time may be lost (as tnusca carnaria, &c.), depositing upon it their young already hatched ; others (M. caesar, &c.), covering it with millions of eggs, whence, in a day or two, proceed innumerable devourers. ' An idea of the despatch made by these gourmands,1 says Mr. Kirby, ' may be gained from the combined consideration of their numbers, voracity, and rapid development. One female of M. carnaria will give birth to 20,000 young ; and the larvae of many flesh-flies, as Redi ascertained, will in twenty-four hours devour so much food, and grow so quickly, as to increase their weight 200 fold ! In five days after being hatched they arrive at their full growth and size ; which is a remarkable instance of the

care of Providence in fitting them for the part they are destined to act : for if a longer time was required for their growth, their food would not be a fit aliment for them, or they would be too long in removing the nuisance given in charge to them to dissipate. Thus we see there was some ground for Linnets assertion, under M. vomitoria, that three of these flies will devour a dead horse as quickly as would a lion.'

White wheat is very liable to the depredations of M. pumilionis. The stalks in which the larva is lodged do not advance in growth, but con- tinue in a very dwarfish state, hence the insect itself has obtained its specific name. The stalks become yellow early in the summer, and soon after die away ; but others usually spring up on the same root, and supply their place. This in- sect first attracted notice in our own country in 1791, when it excited a considerable degree of alarm, being mistaken for the Hessian fly, that has done so much injury in America. An ac- count of this insect has been given by Mr. Mark- wick in the Linnaean Transactions ; but the first description of the pumilionis, and of the mis- chief caused by it, was given in the Transactions of the Royal Academy of Sciences at Stockholm, for the year 1778, by M. Bjerkander, who dis- covered it on the young shoots of rye early in the spring.

M. vermileo is remarkable for practising a method exactly similar to that of the Hemero- bius formicaleo, in order to obtain its prey; ex- cavating a circular pit or cavity in the dry san'l; concealing itself, waiting the arrival of any small insect which may happen to fall into it, and, after absorbing its juices, throwing out the exhausted remains to a considerable distance from the ca- vity. This larva seems to have been first ob- served and described by Reaumur, in the Me- moirs of the French Academy for the year 1752. It assumes the state of a chrysalis by casting its skin, which of itself rolls to the hinder part of the body : the chrysalis is of a dull reddish color, and is rounded or clubbed at the upper part, suddenly tapering from thence to the extremity, and, after lying nine or

ten days, it gives birth to the perfect insect. A writer in Nicholson's Journal calculates, that, in its ordinary flight, the common house-fly (iiiusca dotnesticn JL.) makes with its wings about COO strokes, which carry it

five feet every second. But, if alarmed, rw states their velocity can be increased six or seven fold 'or to thirty or thirty-five feet, in the same period. In this space of time a race-horse, it has been observed, could clear only ninety feet, which is at the rate of more than a mile in a minute. Our little fly, in her swiftest flight, will in the same space of time go more than the third of a mile.

Genus 4. Tabanus. — Antenna cylindrical, short, and close, with seven articulations; the mouth has a fleshy proboscis, terminated by two equal lips ; the rostrum is furnished with two awl-shaped palpi, placed on each side of, and parallel to, the proboscis. Vagina univalve, with five setae. The tabani nourish themselves with the blood of horses and cattle ; and some think the larvae are aquatic, though De Geer as- serts they live under ground. Gmelin, in his edition of the Linnaean System, enumerates thirty-eight species. These insects very much resemble the musca. Generally they have eyes of striking colors, which fade soon after their death ; and dull, plain', bodies. T. bovinus, greenish eyes ; marked down the back by a series of large, whitish, triangular spots, and on each side is a similar appearance, but less distinct than that of the dorsal row, is the largest of the British species, and, like others of its species, is seen generally in the hottest part of the day, during the middle and the decline of summer. It is very troublesome to cattle, and will attack man. Its larva is large and dusky yellowish, like that of a tipula, marked by transverse blackish streaks or rings ; residing under ground in moist meadows, &c. ; and changing into a cylindric brownish chrysalis, with a roundish or slightly pointed extremity, from which, within a month, proceeds the per- fect insects.

Genus 5. Culex (the gnat.) — Antennee fili- form and approximate ; vagina exserted, uni- valve and flexible ; setae five ; palpi two, compris- ing three articulations.

These insects subsist on the blood and juices of larger animals, which they suck by means of their proboscis. In the larva state they live in stagnant waters, and in such neighbourhoods, therefore, this insect abounds. They have a small cylindrical respiratory tube near the tail. The pupa is incurvated and subovated with respira- tory tubes near the head. The larvae are very curious in their conformat' jn : the body consists of nine segments, which become gradually smaller from the head towards the extremity. The head is very large, and furnished on each side with a pair of pointed forceps, or hooks, with which it seizes its prey. The tail terminates in a tubular opening, at the tip of which are four ovate scales, two of which exceed the others in size. At the end of the body, near the tail, is a small elevated respiratory tube, which the crea- ture frequently raises above the surface of the Mater, while the head remains suspended down- wards. The color of the larva is brownish, ex- tremely pellucid, and its motions remarkably lively. When first hatched, the larva is ex- tremely minute, and in the space of fourteen days from its birth attains its full size, its length being then about half an inch..

C. hamorrhoidalis (Brown), abdominal mar- gin fringed with rufous hairs (Fabr.), is the largest of the gnat tribe, and a native of Cayenne. The antennae are beset with thick verticillate hairs, the first joint naked, and of a shining blue color; head brown, with the crown shining blue; legs blue, thighs testaceous beneath ; wings white, with a brown rib.

C. pipiens — Cinereous with eight brown rings (Linn.

Fn. Suec., &c.), is the common gnat of this country, and inhabits Europe and the greater part of Asia and America, about watery places. It is every where known by its shrill buzzing noise, and severe puncture. It appears in im- mense numbers in Lapland during their summer. The antenna of the male are pectinated. Ac- cording to Kalm the mosquitos are a variety of this insect.

Humboldt (Personal Narrative) observes that the geographical description of the culiers of South America does not at all appear to be de- pendant on the heat of the climate, the excess of humidity, or the thickness of the forests, but on local circumstances difficult to characterise. He says, that almost every stream has its peculiar species.

We have noticed in our introduction some of the ravages of this tribe.

Several species of this genus have a severe bite, but few are to be compared to the common gnat (culler pipiens, L.). In certain districts of France, Reaumur informs us that he has seen people whose arms and legs have become quite monstrous from wounds inflicted by gnats ; and in some cases in such a state as to render it doubtful whether amputation would not be ne- cessary. In the neighbourhood of the Crimea, the Russian soldiers are obliged to sleep in sacks to defend themselves from the mosquitos; and even this is not a sufficient security, for several of them die in consequence of mortification produced by the bites of these furious blood- suckers.

In this country gnats follow us to all our haunts, intrude into our most secret retirements, assail us in the city and in the country, in our houses and in our fields, in the sun and in the shade : nay, they pursue us to our pillows, and either keep us awake by the ceaseless hum of their droning pipe, and their incessant endea- vours to fix themselves upon our face, or some uncovered part of our body. In the year 1736, we are told they were so numerous, that vast columns of them were seen to rise in the air from Salisbury cathedral, which at a distance re- sembled columns of smoke, and occasioned many people to think that the cathedral was on fire. A similar occurrence, in like manner giving rise to an alarm of the church being on fire, took place in July 1812, at Sagan in Silesia. In the following year at Norwich, in May, at about six o'clock in the evening, the inhabitants of that city were alarmed by the appearance of smoke issuing from the upper window of the spiie of the cathedral, for which at the time no satisfac- tory account could be given, but which was most probably produced by the same cause. And in the year 1766, in the month of August, they ap- peared in such incredible numbers at Oxford as

to resemble a black cloud darkening the air and almost totally intercepting the rays of the sun. One day, a little before' sunset, six columns ot them were observed to ascend from the boughs of an apple tree, some in a perpendicular and others in an "oblique direction to the height of fifty or sixty feet. Their bite was so envenomed, that it was attended by violent and alarming in- flammation : and one when killed usually con- tained as much blood as would cover three or four square inches of wall. Spenser seems to have witnessed a similar appearance of them : —

As when a swarm of gnats at eventide Out of the fennes of Allan doe arise, Their murmuring small trumpets sownden wide, While in the air their clustering army flies, That as a cloud does seem to dim the skies j Ne man nor beast may rest or take repast For their sharp wounds and noyous injuries. Till the fierce northern wind with the blustering blast Doth blow them quite away, and in the ocean cast.

Our readers have often heard of the annoy- ances of- the mosquito and gnat tribes in hot countries : but they seem endowed with the pri- vilege of resisting any degree of cold, and of bearing any degree of heat. In Lapland their numbers are so prodigious as to be compared to a flight of snow when the flakes fall thickest, or to the dust of the earth. The natives cannot take a mouthful of food, or lie down to sleep in their cabins, unless they be fumigated almost to suffocation. In the air you cannot draw your breath without having your mouth and nostrils filled with them; and unguents of tar, fish-grease, or cream; nets steeped in fetid birch oil, are scarcely sufficient to protect even the case- hardened cuticle of the Laplander from their bite. This seemingly unfavorable circumstance may be con- sidered, in another point of view, however, as constituting one of the advantages of the country, being, in the words of Linne^ Lapponum calamitas felicissima ; since the legions of larvae which fill the lakes of Lapland form a delicious and tempting repast to innumerable multitudes of aquatic birds ;

and thus contribute to the support of the very nation which they so strangely in- fest.

The mosquito, so much dreaded by the inha- bitants of the West Indies, and America, is sup- posed to be a variety of the common European gnat, which derives additional vigor from the warmer and moister atmosphere of those regions.

Genus 6. Empis. — Antennce setaceous; mouth furnished with an inflected haustellum and pro- boscis ; haustellum with a single-valved sheath and three bristles ; feelers short and filiform.

This genus is carnivorous, and subsists on flies and other small insects,, which they seize with their feet, and pierce with their rostrum, to suck the blood and juices. Some are found on flowers, in the winged state. None of the larvae are known, and little of its economy.

Genus 7. Conops. — Antennce clavated, the clava accuminated ; moutfi furnished with a projecting geniculate proboscis.

The insects of this genus are found remark- ably active in gardens, where they subsist on the nectareous juices of flowers. The head is larga

and nearly hemispherical; the eyes large, and almost oval, and the antennas formed of three articulations, the middle one of which is long and cylindrical, the last joint terminating in a little point. The larvae are unknown. The males have on the antepenultimate ventral segment a singular process, varying in length and shape in the different species, standing nearly at right an- gles with the belly convex towards the trunk and concave towards the anus. De Geer supposes that this, with the anal extremity, forms a for- ceps with which this fly seizes its female.

The genus is divided in the Linnsan system into two families ; the first of which includes those species which have the sheath of the sucker single-valved, abbreviated, and enclosing a single bristle; the other those with the sheath consist- ing of two equal valves, and which is geniculated both at the base and in the middle. The latter are the myopae of Fabricius. In the Fabrician Supp. Ent. Syst. the Linnaean conops subcoleop- tratus is described under the new genus, thereva.

Genus 8. Asilus. — Antenna filiform; month furnished with a straight, horny, bivalve haustel- lum, gibbous at the base.

The chief food of these insects is supplied by various species of the dipterous and lepidopte-

The habits of these animals, which form a connecting link between the wasp and hive-bee tribes, have been well illustrated by Reaumur and M. P. Huber. The population of their nests may be divided into four orders of individuals : the larger females; the small females; the males; and the workers. The larger females, like the female wasps, are the original founders of the re- public. They are often so large that by the side of the small ones, or the workers, which in every other respect they exactly resemble, they look like giants opposed to pigmies. They are ex- cluded from the pupa in the autumn ; and pair in that season, with males produced from the eggs of the small females. They pass the winter under ground, and, as appears from an observa- tion of M. P. Huber, in a particular apartment, separate from the nest, and rendered warm by a carpeting of moss and grass, but without any supply of food. Early in the spring (for they make their first appearance as soon as the catkins of the sallows and willows are in flower), like the female wasps, they lay the foundation of a new colony without the assistance of any neuters, which all perish before the winter. In some in- stances, however, if a conjecture of M. de la Billardiere be correct, these creatures have an

vous orders. But they also attack cattle. They assistant assigned to them. He says, at this

are always upon the chase : they seize their prey with their anterior legs and immediately apply their haustellum. When at rest their wings are generally incumbent on the abdomen, which is long, small, and often hairy toward the feet, which terminate in small claws. Their larvae feed in the earth, on the roots of plants : they change into a pupa cotirctata beset with setae.

These are the wasp flies of some writers ; the species described by Gmelin are very numerous, of which the chief are, A. algirus which has the body entirely brown, and inhabits Africa. Fa-

season (the approach of winter) he found in the nest of apis sylvarum (Kirby) some old females and workers, whose wings were fastened together to retain them in the nest by hindering them from flying ; these wings in each individual were fastened together at the extremity, by means of some brown wax. The large female, besides having the care of the young brood, and the col- lecting of honey and pollen, is principally em- ployed in the construction of the cells in which her eggs are to be laid ; which M. P. Huber seems to think, though they often assist in it, the

bricius and Gmelin. A. astuans is a native of workers are not able to complete by themsalves.

North America, is cinereous, and has the three last segments of the abdomen white. Linne and Gmelin. A. testivus inhabits Europe; the color i> cinereous, with three black lines on the thorax; legs black; shanks testaceous. Schrank. Sco- poli describes a variety in which the legs are en- tirely black. The motions of A. crabroniformis, the hornet-fly, are curious. This insect lives upon the smaller flies. When we are walking it will alight just before us, as soon as we come up it flies a little further, and will thus be our avant- courier for the whole length of a field. This usually takes place when a path

lies under a hedge; and perhaps the object of this manoeuvre may be the capture of prey. Our motions may drive a number of insects before us ; and so be instrumental in supplying it with a meal. Other species of the genus are said by Mr. Kirby to have the same habit.

Genus 9. Bombylius (humble-bee). — Antennee subulated, united at the base ; mouth having a long setaceous, straight, bivalve haustellum; valves unequal, with three seta? ; two short hairy palpi.

The humble-bee seizes on the nectareous juice of flowers, %\hic!i it sucks flying. Ray reckons nineteen species, but Linnaeus only five. See BOMRYUUS.

So rapid is the female in this work, that to make a cell, fill it with pollen, commit one or two eggs to it, and cover them in, requires only the short space of half an hour. Her family at first con- sists only of workers, which are necessary to as- sist her in her labors; these appear in May and June; but the males and females are later, and sometimes are not produced before August and September.

A small kind of female amongst the humble bees, must now be noticed. Like those of the wasps and hive-bees, these minor queens produce only male eggs, which come out in time to fer- tilise the young females that found the vernal colonies. M. P. Huber suspects that, as in the case of the female bee, it is a different kind of food that developes their ovaries, and so distin- guishes them from the workers. They are gene- rally attended by a small number of males, who form their court.

M. Huber, watching at midnight the proceed- ings of a nest, which he kept under a glass, ob- served the inhabitants to be in a state of great agitation : many of these bees were engaged in making a cell ; the queen-mother of the colony, as she* may be called, who is always extremely jealous of her pigmy rivals, came and drove them away from the cell ; — she in her turn was

driven away by the others, which pursued her, beating their wings with the utmost fury, to the bottom of the nest. The cell was then con- structed, and some of them at the same time oviposited in it. The queen returned to the charge, exhibiting similar signs of anger ; and chasing them away again, put her head into the cell, when seizing the eggs that had been laid, she was observed to eat them with great avidity. The same scene was again renewed, with the same issue. After '.his one of the small females returned and covered the empty cells with wax. When the mother-queen was removed, several of the small females contended for the cell with indescribable rage, all endeavouring to lay their eggs in it at the same time. These small females perish in the autumn.

Of an intermediate size, between the large and small females, the males may be known, by their longer, more filiform, and slenderer antennae; by the different shape, and by the beard of their mandibles. Their posterior tibiae also want the corbicula and pecten that distinguish the indivi- duals of the other sex, and their posterior plantae have no auricle. We learn from Reaumur that the male humble bees are not an idle race, but work in concert with the rest to repair any da- mage or derangement that may befal the common habitation.

The first fruits of the queen-mother's vernal parturition are the workers, and they assist her as soon as they are excluded from the pupa, in her various labors. To them also is committed the construction of the waxen vault that covers and defends the nest. When any individual larva has spun its cocoon and assumed the pupa, the workers remove all the wax from it ; and as soon as it has attained to its perfect state, which takes place in about five days, the cocoons are used to hold honey or pollen. When the bees discharge the honey into them, upon their return Irom their excursions, they open

their mouths, and contract their bodies, which occasions the honey to fall into the reservoir. Sixty of these honey-pots are occasionally found in a single nest, and more than forty are sometimes filled in a day. In collecting honey, humble-bees, if they cannot get at that contained in any flower by its natural opening, will often make an aper- ture at the base of the corolla, or even in the calyx, that they may insert their proboscis in the very place where nature has stored up her nectar. M. Huber relates a singular anecdote of some hive-bees paying a visit to a nest of humble-bees placed under a box not far from their hive, in order to steal or beg their honey ; which places in a strong light the good temper of the latter. This happened in a time of scarcity. The hive- bees, after pillaging, had taken almost entire possession of the nest. Some humble-bees which remained in spite of this disaster, went out to collect provisions ; and bringing home the sur- plus after they had supplied their own immediate wants, the hive-bees followed them, and did not quit them till they had obtained the fruit of their labors. They licked them, presented to them their proboscis, surrounded them, and thus at last persuaded them to part with the contents of Jieir honey-bazs. The humble-bets after this

flew away to collect a fresh supply. The hive- bees did them no harm, and never once showed their stings; so that it seems to have been per suasion rather than force that produced this sin- gular insttmce of self-denial. This remarkable ma- noeuvre was practised for more than three weeks ; when the wasps being attracted by the same cause, the humble-bees entirely forsook the nest. The workers are the most numerous part of the community.

M. Huber gives one most astonishing instance of the ingenuity of these insects, which we cannot omit. He put under a bell-glass about a dozen humble-bees without any store of wax, along- with a comb of about ten silken cocoons, so un- equal in height that it was impossible the mass should stand firmly. Its unsteadiness disquieted the humble-bees

extremely. Their affection for their young led them to mount upon the cocoons for the sake of imparting warmth to the enclosed little ones, but in attempting this the comb tot- tered so violently that the scheme was almost impracticable. To remedy this inconvenience, and to make the comb steady, they had recourse to a most ingenious expedient. Two or. three of the bees got upon the comb, stretched themselves over its edge, and, with their head downwards, fixed their fore feet on the table upon which it stood, whilst with their hind feet they kept it from falling. In this constrained and painful posture, fresh bees relieving their comrades when weary, did these affectionate little insects support the comb for nearly three days ! At the end of this period they had prepared a sufficiency of wax with which they built pillars that kept it in a firm position : but by some accident afterwards they got displaced, when they had again recourse to their former manoeuvre for supplying their place; on this operation they perseveringly continued, until M. Huber, pitying their hard case, relieved them by fixing the object of their attention firmly on the table.

Sir George Mackenzie makes the following observations on the vision of humble-bees, which seem to illustrate other peculiarities of their eco- nomy. ' Happening to observe a number of humble bees entering the door of a dark out- house, I had the curiosity,' says he, ' to examine where they had their nest, and I went in, leaving the door half open. I saw the bees coming from a hole in the floor near the wall, and the instant they arrived at the margin of the light admitted by the door, they took_ wing, although at the dis- tance of several feet from the spot from which they usually rose into the air. I varied the po- sition of this margin or division between the light and darkness, but this made no difference, the bees in every case beginning their flight as soon as they reached the light. While the door was open, I noticed that the bees which arrived appeared to be completely puzzled by the altera- tion of the position of the door. Some

of them alighted, and wandered about in all directions on the floor, crossing repeatedly the direct path to the nest, but never following it. A very few, by accident apparently, got close to the wall, and reached the nest. Those which chanced to alight near the same part of the door by which ti.ey had been accustomed to enter, immediately

went through, but from the position of the door, ihey passed in the direction opposite their nest. As soon as they got within the door, they be- came as much puzzled as the others. Many flew away, as if to try a new route homewards. As soon as I shut the door, remaining in the inside, the bees on entering, turned directly towards the hole in the floor; and none of them going, at- tempted to fly till they reached the light. I was cruel enough to repeat the experiment several times, and each time to keep the homeward- bound laborers in suspense and difficulty, for some minutes. These facts seem to prove that bees, although by some means they rapidly and unerringly traverse the air, cannot discover a track on the ground, when the usual marks are removed. They did not discover it even when they met other bees coming out, a proof that they have no means of communication, but that each insect depends on its own instinct exclu- sively.

' I made an experiment on the hive-bee, by lifting the hive, and placing it a few yards, three or four, from the place where it usually stood. I was of course stung for my pains ; but I had the satisfaction to see the returning bees pass quite close to the hive where it now stood, and go on to the spot where it had stood when they left it. They seemed not only puzzled but angry, and I was obliged to keep at a respectful distance. When the hive was replaced, those bees that had left it after its first removal, stopped for a little at the place where they had quitted it ; but in a few minutes all seemed to be quiet and regular as formerly. I

removed another hive in the evening, when none of the inhabitants were abroad, and in the morning there was no resumption of confusion whatever.' — Edinburgh Philosophical Journal.

Genus 10, Hippobosca. — Antenna filiform ; mouth with a short, cylindrical, bivalve haustel- lum ; the valves equal ; feet armed with several claws ; the body flat and hard. Scopoli adds, that the rostrum has only one bristle. Geoffrey observes, that the hippoboscae are the only dip- terous insects that want stemmata, except the culices, and that their antennae are setaceous, and composed of a single hair. According to Schaeffer, the abdomen is as broad as the thorax.

Reaumur has denominated the hippoboscae, ' mouches arraigne'es.' It is also called in Nor- mandy ' mouches bretonnes ; ' and elsewhere, ' mouches d'Espagne.' In England they bear the name of spider-flies, horse-flies, the largest species being extremely troublesome to horses. They abound in woods and marshy places, and are generally found attached to the bodies of quadrupeds and birds, on the juices of which they live. In the act of feeding they thrust their acute probosc s into the skin, which occasions a smart like a flea-bite, and they become so firmly attached by their numerous claws, that it is scarcely possible by any effort to remove them, without tearing away portions of the flesh. The species are not numerous. They do not appear to have any larva ; but are the produce of an egg which partakes of the two-fold character of being at the same time an egg and a pupa. The female, at distant intervals, deposits an egg,

which in magnitude is nearly equal to the whole bulk of its parent's body : the figure of it is oval, with an excavated depression at the lower end ; the color, at its first exclusion, is milk-white, ex- cept a large black spot on the fore part, from which it afterwards becomes brown, and then of a jet black, with a very high polish. This change in color marks the progressive advancement of the insect enclosed towards its maturity of for- mation, the

parts becoming gradually developed. The egg deposited in autumn acquires its deepest color in the summer following, at which time the insect bursts from its confinement in the winged form. The principal species is, H.equina. Wing- obtuse ; thorax variegated ; feet armed with four claws. Linn, (horse spider-fy, Donov. Br. Ins.) It inhabits Europe, and is of a disgusting form, flat, hard, and not easily killed by pressure. The head is brown; thorax brown, varied with yel- lowish, and a band of the same down the mid- dle ; wings hyaline, with a brown spot near the outer margin ; legs annulated with yellow and brown. Length about three-quarters of an inch. No insect is more tormenting to the horse than this. Attaching itself frequently under the belly, behind the hind legs, it will goad the quickest animal to madness; its movements are generally sideways or backward, like those of the crab.

ORDER VII. — APTERA.

The simple definition of this order is, wings, none; the genera are variously divided. Linn6 himself included, as we have stated, the Crus- tacea in this part of his system. The older writers, Gesner, Aldrovandus, and Johnson, had placed the Crustacea between the fishes and mol- lusca. Fabricius divided the Crustacea from insects, and formed several distinct classes for their reception. In the Supplement to his En- tomologia Systematica, the following is given as his final arrangement : —

Class polygonata. Many maxillae within the lip.

Genus 1. Oniscus, 2. Ligia, 3. Idotea, 4. Cy- mothoa, 5. Monoculus.

Class kleistagnatha. Many maxillae, closing the mouth. Lip none.

Genus 1. Cancer, 2.Calappa, 3. Ocypode, 4. Leucosia, 5. Parthenope, 6. Inachus, 7. Dromia, 8. Dorippe, 9. Orithyia, 10. Portunus, 11. Ma- tuta, 12.Hippa, 13. Symethis, 14. Limulus.

Class exochnata. Many maxillae outside the lip, covered by the palpi.

Genus 1 . Albunea, 2. Scyllarus, 3. Pallinurus, 4. Palaemon, 5.Alpheus, 6—Astacus, 7. Penaus, 8—Crangon, 9. Pagurus, 10. Galathea, 11. Squil— la, 12. Posydon, t3. Gammarus.

The most prejudiced of Linne's followers, says Dr. Leach, now admit that they have characters sufficient to establish them as a distinct class. ' Crustacea,' says Mr. Kirby, ' agree with insecta in having a body divided into segments, furnished with jointed legs, compound eyes, and antennae. Their nervous system also is not materially dif— ferent, and they are both oviparous. They differ from them in having the greater insections of the body less strongly marked ; in the greater num— ber of legs on the trunk, the anterior ones per— forming the office of maxillae ; in their eyes

usually on a moveable footstalk ; their palpige— rous mandibles ; and their four antennae, at least in the great majority. But the principal difference consists in the internal organisation and the fountains of vitality; for the Crustacea have a double circulation, the fountain of which is a heart in the middle of their thorax. They have too a kind of gizzard and liver, at least the deca— pods, and their respiration is by gills. Genuine insects terminate their existence after they have laid their eggs ; but the Crustacea live longer and lay more than once.' See our articles CANCER, MONOCULUS, ONISCUS, &c.

Although the adjective apterous is frequently applied more generally, no insect, it should be observed, can be included in the aptera of the Linnaean system, unless both sexes, when arrived at their last state of being, are destitute of wings. No insect of this order, except the common flea, is

supposed to undergo those successive changes which are usual in most other insects. They are almost entirely produced from the egg in their perfect form, and cannot therefore be said to have any larva. In the flea, however, the small worm which corresponds with the larva in other insects is clearly ascertained ; and if we may place sufficient reliance on the evidence of certain naturalists, one or two more of the apterous ge- nera exist for a short period in a state somewhat analogous either to the larva or pupa. Leu- wenhoek observed that the mite was oviparous, laying very small oval whitish eggs, from which proceeded the young animals, resembling their parents in all respects, except in the number of their legs, these being only six in number, instead of eight; and after they cast their skin, another pair of legs appear, a fact that evidently implies two periods of transformation, the first of which may be compared with that of larva. An ad- vancement, or progressive increase in the number of feet, is also well known to take place in species both of the julus and scolopendra genera, after they are produced from the egg state. The julus fabulosus, when first excluded, is furnished with three pairs of legs, which are situated at each side near the head ; some days after about fourteen become visible, and the remainder, to the amount of 120 on each side, are gradually acquired af- terwards. The same remark will apply to cer- tain species, if not the whole of the scolopendra genus. Scorpions are produced by the female parent in a Hying state ; they are at first very small and white, and become of a darker hue in a few days ; these, like the spiders cast their skin as they increase in size.

Our countryman, Dr. Leach, has contended that the first five of the Linnaean genera of this order, are the only insects, properly speaking, to be found in it, i. e. the lepisma, podura, pe- diculus, pulex, and termes. The genera, acarus, phalangiuni, aranea, and scorpio, he refers to his class arachricida. Genera cancer, monoculus, and oniscus, to the crustacca ; scolopendra and julus, to myriapoda. We

adopt the names of these classes in our subdivision of this order, liut make no further alteration in the system of Linne*.

Class I. — TNSECTA. Dr. Leach defines this class as having uniformlv

six legs; a head distinct from the body, arid fur nished with two antenna; : they are all produced from eggs. Some undergo no metamorphosis, others but a partial change, whilst the remainder pass through three stages of existence, after hav- ing been hatched from the egg.

Genus 1. Lepisma. — Gmelin, to whom the admirers of Linne" are indebted for one of the best editions of the Systema Naturae, defines this genus as having four palpi, two of which are setaceous, and two capitated ; the lip membra- naceous, roundish, andaemarginated ; antenna, se- taceous ; body imbricated with scales ; tail ending in setaceous bristles ; legs six, and formed for running.

This character combines the more essential parts of that of Fabricius. Lamarck proposes further alteration; and Latreille, in whose ar- rangement they form the first family (lepis- mense) of the order thysanoura, divides them into two distinct genera : lepisma and machilis. The true lepisma, according to the new definition, has the antennas inserted between the eyes, the body flat, and the tail ending in three equal bristles.

This genus walks and runs. In the genus machilis (which moves by skipping) the an- tennae are seated under the eyes, the body con- vex, and the middle bristle of the tail larger than those at the sides. All the species, except, the L. saccharinum, are natives of Europe. In their various states of growth they prey on decayed wood, and moist or rotten substances ; and are most commonly found in damp cellars, neglected water-courses, and similar situations.

L. saccharinum is scaly, silvery ; tail triple, and

originally a native of America, whence it has been introduced and naturalised in Europe. The antennae are as long as the body, which is oblong and tapering ; tail terminating in three bristles, and two pairs of smaller ones beneath. It secretes itself among books, old furniture, &c., and runs, when disturbed, with great agility : it is often found in sugar, and is thus supposed to have found its way to Europe. In some places 'of this country it is common under stones ; its eight pairs of strings (one on each ventral seg- ment of the abdomen) give it, says Kirby, a wonderful power of leaping. The L. polypoda also, inhabiting among stones and rubbish on sandy sea-shores, possesses the faculty of leaping in the same way to a prodigious height. Linne" only described another species, viz. L. terrestria : naked, tail triple.

Gmelin notices the close affinity this species bears to the podura tribe. It is entirely white and cylindrical, with obtuse antennae half the length of the antenna. Fabricius adds L. vi!- losa, brown, with a triple, villous tail, a native of China ; L. collaris, black, with a snowy band on the neck and end of the abdomen : tail triple and villous, an inhabitant of the South American Islands : and L. lineata, tail triple, body brown, with two white fillets. Natives of Helvetia.

Genus 2. Podura. — Antemue filiform ; palpi, four, subclavate; lip bifid ; two eyes, composed of eight facets ; the body scaly ; tail forked, bent under the body and acting as a spring ; from which the genus has its name, podura or spring- tailed : it has six legs, formed for running.

There are thirty species enumerated by Gmelin, all comparatively small insects, found in general in damp places, under stones, on the bark of trees, &c. When disturbed they suddenly spring to a small distance by the help of their spring which is

ordinarily doubled under the ab- domen, and thrown out during the act of leaping. They feed on the leaves of various plants. Their spring will even enable these animals to leap on water. A minute species P. aquatica is sometimes found in boundless numbers on the water of hollows and ruts. When disturbed they re- semble in their leaping up the appearance of steel-filings or 'gunpowder suddenly thrown into motion. One species, sminthurus fuscus, Lat. besides the caudal fork has another singular organ which seems designed to prevent its falling off from a perpendicular surface. Between the ends of the fork is an elevated cylinder or tube from which this little creature can protrude at pleasure two long filiform transparent threads, covered with a slimy secretion.

Genus 3. Pediculus (the louse). — Antenna, length of the thorax ; mouth with a retractile re- curved sucker without proboscis ; no palpi ; two eyes; the abdomen depressed; six legs formed for running.

The insects of this genus live by extracting animal juices. Some infest the bodies of quad- rupeds, others of birds, and some even of in- sects themselves. It must, however, be observed, that many insects, infesting other animals, have sometimes been referred to the genus pediculus, which, in reality, belong to those of acarus, mono- culus, &c. Gmelin enumerates sixty-six species.

Leuwenhoeck has proved that the nits or eggs of ordinary lice are not hatched until the eighth day after they are laid; and that they never commence laying them until a month old : he also ascertained that a single louse may in eight weeks witness the birth of 5000 de- scendants. A pedicular disease (phthiriasis), is said to have carried off Antiochus Epiphanes, Sylla, two of the Herods, and the emperor Maximian. Mr. Kirby, however, disputes this, because, as he contends, this genus is never subcutaneous, for which he quotes the authority of Mead and Willan ' If these ob- servations be allowed their due weight, he con- tinues, it will follow, that a disease produced by animals residing under

the cuticle cannot be a true phthiriasis, and therefore the death of the poet Alcman, and of Pherecydes Syrius the phi- losopher, mentioned by Aristotle, must have been occasioned by some other kind of insect.' For speaking of the lice to which he attributes these catastrophes, he says that they are produced in the flesh in small pustule-like tumors, which have no pus and from which when punctured they issue. For the same reason, the disorder which Dr. He- berden has described in his Commentaries, from the communications of Sir E. Wilmot, under the name of morbus pedicularis, must also be a dif- 'erent disease, since, with Aristotle, he likewise "epresents the insects as inhabiting tumors, from fchich they may be extracted when opened by a teedle. He says, indeed, that in every respect)'iey resemble the common lice, except in being whiter; but medical men, who were not at the

same time entomologists, might easily mistake an acarus for a pediculus. Dr. Willan, in oue case of prurigo senilis, observed a small number of small insects on the patient's skin and linen. They were quick in their motions, and so minute that it required some attention to discover them. He took them at first for small pediculi ; but under a lens they appeared to him rather to be a nondescript species of pulex; yet the figure he gires has not the slightest likeness to the latter genus, while it bears a striking resemblance to the former. It is not clear whether his draughtsman meant to represent the insect with six or eight legs : if it had only six, it was pro- bably a pediculus ; but if it had eight, it would form a new genus between the acarida and the hexapod aptera. Dr. Bateman in reply to some queries put to him at my request, by our com- mon and lamented friend Dr. Reeve, relates that he understood from Dr. Willan, in conversation, that the insect in question jumped in its motion. This circumstance he regards as conclusive against its being a pediculus ; but such a conse- quence does not necessarily follow, since it not seldom happens that insects of the same genus either have ox have

not this faculty ; for instance, cyphon hemisphaericus, acarus scabiei, &c. Dr. Willan has quoted with approbation two cases from Amatus Lusitanus, which he seems to think correctly described as phthiriasis. In one of them, however, which terminated fatally, the cir- cumstances seem rather hyperbolically stated — I mean, where it is said that two black servants had no other employment than carrying baskets full of these insects to the sea ! !'

Genus 4. Pulex (the flea). — Antenna project- ing, and moniliform ; no palpi or maxillae ; a long, inflected proboscis, covered at the base with two ovate laminae; the sheath two-valved, five-jointed, and containing one bristle ; lip rounded, and fringed with reflected prickles ; eyes two ; abdo- men compressed ; legs six, formed for leaps.

This genus is oviparous, and the common species, P. irritans, deposits its nits on animals that afford them a proper food ; these, being round and smooth, usually slip straight down, unless detained by folds, or other inequalities of clothes, hairs, &c. They lay their eggs, not all at once, but ten or twelve in a day for several days successively, which eggs will be afterwards found to hatch successively in the same order. These eggs first produce a white worm, of a shining pearl color, which feeds on the scurfy substance of the cuticle, the downy matter gathered in the piles of clothes, or like substances. In a fortnight they come to a tolerable size, and are very lively and active : if at any time dis- turbed, they roll themselves into a kind of ball. Soon after they creep, after the manner of silk- worms, with a very swift motion. When arrived at full size, they hide themselves as much as pos- sible, and spin a silken thread out of their mouth, wherewith they form a small round bag, or case, white within as paper, but without always dirty. Here, after a fortnight's rest, the animalcule bursts out, transformed into a perfect flea ; leav- ing its exuviae in the bag. While it remains in the bag it is milk-white, till the second day be- fore its eruption ; when it becomes colored, yrows

hard, and gets strength ; so that, upon its first delivery, it springs nimbly away. — Phil. Trans. No. 249.

The flea may easily be dissected in a drop of water, and by this means the stomach and bowels, with their peristaltic motion, may be discovered very plainly, as also their testes and penis, with the veins and arteries, though minute beyond all conception. Mr. Leuwenhoeck affirms also, that he has seen innumerable animalcules, shaped like serpents, in the semen masculinum of a flea. Baker's Micros, p. 191, and 194. On dissection, this animal is far from being a disagreeable ob- ject. It is covered with curious black shelly scales or plates, admirably jointed, and folded one over another in such a manner as to comply with all the nimble motions of the creature. They are all also curiously polished, and set round the edges with short spikes in a very regular man- ner. Its neck is finely arched ; the head also is very extraordinary ; for from the snout part of it there proceed the two fore-legs, and between these is placed the piercer or sucker, with which it penetrates the skin to obtain its nutriment. Its eyes are large and handsome, and it has two short horns or feelers. It has four other legs joined all at the breast. These, when it leaps, fold short one within another, and, then exerting their spring at the same instant, they carry the creature to a surprising distance. Aristophanes ridicules Socrates for having measured the leap of a flea. (Nubes, act i. sc. 2). Scientific men have however persevered in ascertaining the wonderful power and strength of this little crea- ture, which will leap two hundred times the length of its own body, unaided, as we see, by wings. Mr. Kiiby (vol. iv. p. 188) furnishes us with the following anecdotes of the strength of this species. — Mouffet relates that an ingenious English mechanic, named Mark, made a golden chain of the length of a finger, with a lock and key, which was dragged by a flea ; —

he had heard of another that was harnessed to a golden chariot, which it drew with the greatest ease. Another English workman made an ivory coach with six horses, a- coachman on the seat with a dog between his legs, a postilion, four persons in the coach, and four lacqueys behind — which also was dragged by a single flea. At such a spectacle one would hardly know which most to admire, the strength and agility of the insect, or the patience of the workman. Latreille mentions a flea, of a moderate size, dragging a silver cannon on wheels, that was twenty-four times its own weight, which, being charged with powder, was fired without the flea appearing alarmed.

The legs have several joints, are very hairy, and terminate in two long and hooked sharp claws. The flea lodges its piercer or sucker between its fore legs, and includes a couple of darts or lancets, which, after the piercer has made an entrance, are thrust farther into the flesh, to make the blood flow from the adjacent parts, and occasion that red round spot, with a hole in the centre of it, vulgarly called a flea-bite This piercer, its sheath opening sideways, and the two lancets within it, are very difficult to be seen, unless the two fore-legs, between which they are hid, be cut off close to the head : for the flea rarely puts out

its piercer, except at the time of feeding, but keeps it folded inwards ; and the best way of seeing it is by cutting off first the head, and then the fore-legs, when it is usually thrust out in convulsions.

- Dear Miss,' said a lively old lady to a friend of mine (says Mr. Kirby), who had the misfortune to be confined to her bed by a broken limb, and was complaining that the fleas tormented her, ' dont you like fleas 1 Well, I think they are the prettiest little merry things in the world. — I never saw a dull flea in all my life.' The celebrated Willoughby kept a favorite flea ; which used at stated times to be admitted to suck the palm of his hand ; and

enjoyed this privilege for three months, when the cold killed it. And Dr. Town- son, from the encomium which he bestows upon these vigilant little vaulters, as supplying the place of an alarum and driving us from the bed of sloth, would seem to have regarded them with feelings much more complacent than those of Dr. Clarke and his friends, when their hopes of passing ' one night free from the attacks of ver- min,' were changed into despair by the informa- tion of the laughing sheik, ' that the king of the fleas held his court at Tiberias :' or than those of M. M. Lewis and Clarke,' who found them more tormenting than all the other plagues of the Missouri country, where they sometimes compel even the natives to shift their quarters.

P. penetrans, the chigoe of South America, has a proboscis as long as the body. The body is of a reddish-brown color; abdomen of the female, when gravid, orbicular, and swollen to nearly a hundred times its usual size. It is very trouble- some in the sugar colonies, penetrating into the skin of the inhabitants, particularly of the negroes, where it lodges its eggs, and causes malignant, and often fatal, ulcers.

'All disputes,' observe Messrs. Kirby and Spence, ' concerning the genus of this insect, would have been settled long before Swartz's time (who first gave a satisfactory description and figure of it, proving it to be a pulex, as has been observed above), had success attended the pa- triotic attempt of the Capuchin friar, recorded by Walton in his History of St. Domingo, who brought away with him from that island a colony of these animals, which he permitted to establish themselves in one of his feet ; but unfortunately for himself, and for science, the foot entrusted with the precious deposit mortified, was obliged to be amputated, and with all its inhabitants committed to the waves.' According to Ulloa, and his opinion is confirmed by Jussieu, there are two South American species of this mis chievous insect. It is described as generally at-

tacking the feet and legs, getting without being felt, between the skin and the flesh, usually under the nails of the toes, where it nidificates and lays its eggs ; and, if timely attention be not paid to it, which, as it occasions no other uneasiness than itching, (the sensation at first I am assured is rather pleasing than otherwise), is sometimes neglected, it multiplies to such a degree, as to be attended by the most fatal consequences, often, as in the above instance, rendering amputation necessary, and sometimes causing death. The female slaves in the West Indies are frequently

employed to extract these pests, which they do with uncommon dexterity. Yarico, so celebrated in prose and verse, performed this kind office for honest Ligon, who says, in his History of Barba- does, ' I have seen ten,' chigoes, ' taken out of my feet in a morning, by the most unfortunate woman Yarico, an Indian woman.'

For thepulex arborea of Reaumur see PULEX.

Genus 5. Termes. — Antennas, generally monili- form ; mouth haying two maxillae, corneous, with a horny quadrifid lip, linear acute fringes, and four equal palpi ; eyes two. Linnaeus enumerates three, and Gmelin eight, species.

Some termites have obtained the name of white ants, from their mode of living in large communities, and constructing habitations, like those of the ants. But the termites excel the latter decidedly in their sagacity and acts of government. In its emigrating state we should also notice that this creature certainly has wings, and is therefore not with perfect accuracy in- cluded in the apterous order. Smeathman, who remarks this, insists that this is the perfect state of the whole of the T. bellicosa. Dr. Shaw also says that he has seen winged T. pulsatoria. The European species of termes are very

small compared with tho'se of warmer regions ; and, instead of being gregarious, as in those climates, are usually found single. Of these, the most known is the T. pulsatorius of Linnaeus, a small insect of a whitish color, distinguished by Der- ham and the earlier naturalists by the appellation of ' pediculus pulsatorius.' During the months of summer it is common in houses, particularly in decayed wainscots, and is remarkable for emitting a long-C' itinued sound, resembling the ticking of a watch ; it is commonly met with in collec- tions of dried plants, &c., to which it is very in- jurious. On account of its tender frame, it cannot bear the slightest pressure, and it is very quick in its motion. When magnified, the head appears large, the eyes conspicuous, of a beauti- ful golden color, and divided into innumerable hexagonal convexities ; the antennae long and se- taceous; the palpi two in number, moderately long, and terminating in a large club-shaped top ; the thorax rather narrow, and the abdomen obtusely oval ; the thighs, or first joints of the legs, thick, the remaining ones slender, and the feet furnished with very small claws. The whole animal is beset with scattered hairs. This insect, according to the observations of Dr. Derham, when first hatched from the egg, is white, oval, and very small, exactly resembling a common mite ; furnished with eight legs, and beset with long hairs. After a certain time it casts its skin, and appears in the form already described. De Geer found on each side of the thorax the appear- ances of rudiments of wings, resembling a pair of oblong scales. Derham thinks that the ticking sound of these animals is analogous to the call of birds to their mates during the breeding season ; and this, says Dr. Shaw, as well as the sound produced by the ptinus fatidicus, or death-watch, seems to prove in a convincing manner, that in- sects possess the faculty of hearing.

The community of the T. bellicosus, the most remarkable exotic of this genus, consist of one male and one female generally (the common

parents of the whole), and of three orders of m-

sects of very different species apparently, but really the same, who constitute the great common-wealth, or rather monarchy, of their nests.

Previous to breeding, it is said, a most sur-prising change takes place in the body of the queen or breeding animal. The abdomen of this female, in the T. bellicosus especially, begins gradually to extend and enlarge to such an enor- mous size, that an old queen will have it in- creased so as to be fifteen hundred, or two thousand times the bulk of the rest of her body ; and twenty or thirty thousand times the bulk of a laborer. Mr. Smeathman conjectures the ani- mal is upwards of two years old, when the abdo- men is increased to three inches in length ; and has sometimes found them of nearly twice that size. The abdomen is now of an irregular oblong- shape, being contracted by the muscles of every segment, and is become one vast matrix full of eggs, which make long circumvolutions through an innumerable quantity of very minute vessels, that circulate round the inside in a serpentine manner, which would exercise the ingenuity of a skilful anatomist to dissect and develop. This singular matrix is not more remarkable for its amazing extension and size, than for its peristaltic motion, which resembles the undulating of waves, and continues incessantly without any apparent effort of the animal ; so that one part or other alternately is rising and sinking in perpetual suc- cession, and the matrix seems never at rest, but is always protruding eggs to the amount of sixty in a minute ; or 80,000 and upward in one day of twenty-four hours. These eggs are instantly taken from her body by her attendants (of whom there are always in the royal chamber, and the galleries adjacent, a sufficient number in waiting), and carried to the nurseries, which in a great nest may some of them be four or five feet dis- tant in a straight line, and consequently much farther by their winding galleries. Here, after they are hatched, the young are attended and provided with every thing necessary, until they are able to shift for themselves, and take their share of labor.

The different insects of this species resemble each other in form, in their manner of living, and in their good and bad qualities : but differ as much as birds in the manner of building their habitations or nests, and i n the choiceof the materials of which they compose them. There are some which build upon the surface of the ground, or part above and part beneath ; and one or two kinds, perhaps more, that build on the stems or branches of trees, sometimes aloft, at a vast height.

Of every community, however, there are three orders ; first, the working insects, which, for brevity, we shall generally call laborers ; next the fighting ones, or soldiers, which do no kind of labor ; and, last of all, the winged ones, or perfect insects, which are male and female, and capable of propagating.

The nests of the T. bellicosus are so nume- rous all-over the island of Bananas, and the ad- jacent continent of Africa, that it is scarcely possible to stand upon any open place, such as a rice plantation, or other clear spot, where one of

these buildings is not to oe seen within fifty paces, and frequently two or three are to be seen almost close to each other. In some parts near Senegal, as mentioned by Monsieur Adanson, their number, magnitude, and closeness of situ- ation, make them appear like the villages of the natives. These buildings are usually termed hills, by natives as well as strangers, from their outward appearance, which is that of little hills more or less conical, generally pretty much in the form of sugar-loaves, and about ten or twelve feet in perpendicular height above the common surface of the ground. These hills continue quite bare until they are six or eight feet high ; but in time the dead barren clay, of which they are composed, becomes fertilised by the genial power of the elements in these prolific climates,

and the addition of vegetable and other matters brought by the wind ; and in the second or third year the hillock, if not over-shaded by trees, becomes, like the rest of the earth, almost covered with grass and other plants; and in the dry season, when the herbage is burnt up by the rays of the sun, it is not much unlike a very large hay-cock. Every one of these buildings consists of two distinct parts, the exterior and the interior. The exterior is one large shell in the manner of a dome, large and strong enough to enclose and shelter the interior from the vicis- situdes of the weather, and the inhabitants from the attacks of natural or accidental enemies. It is always, therefore, much stronger than the in- terior building, which is the habitable part, di- vided with a wonderful kind of regularity and contrivance, into an amazing number of apart- ments for the residence of the king and queen, and the nursing of their numerous progeny ; or for magazines, which are always found well filled with stores and provisions. From these habitations, galleries again ascend, and lead out horizontally on every side, and are carried under ground near to the surface a vast distance ; for if you destroy all the nests within 100 yards of your "house, the inhabitants of those which are left unmolested farther off, will nevertheless carry on their subterraneous galleries, and invade the goods and merchandises contained in it by sap and mine, and do great mischief if you are not very circumspect.

It has been observed, that there are, in every one of these communities, three orders of in- sects ; of these the working insects or laborers are always the most numerous ; in the termes bellicosus there seems to be 100 laborers to one of the fighting insects or soldiers. They are in this state about one-fourth of an inch long, and twenty-five of them weigh about a grain ; so that they are not so large as some of our ants. The second order, or soldiers, have a very different form from the laborers, and have been by some authors supposed to be the males, and the for- mer neuters ; but they are, in fact, the same in- sects, only they have undergone a change of form,

and approached one degree nearer to the perfect state. They are now much larger, being half an inch long, and equal in bulk to fifteen of the laborers. There is now likewise a most remarkable circumstance in the form of the head and mouth ; for in the former state, the mouth

is evidently calculated for gnawing and holding bodies ; but in this state the jaws being shaped just like two very sharp awls, a little jagged, they are incapable of any hing but piercing or. wounding : for which purposes they are very effectual, being as hard as (a crab's claw, and placed in a strong horny head, which is of a nut-brown color, and larger than all the rest of the body together, which seems to labor under great difficulty in carrying it ; on which account perhaps the animal is incapable of climbing up perpendicular surfaces. The third order, or the insect in its perfect state, varies its form still more than ever. The head, thorax, and abdo- men, differ almost entirely from the same parts in the laborers and soldiers; and, besides this, the animal is now furnished with four fine, large, brownish transparent wiius, with which it is at the time of emigration to wing its way in search of a new settlement. We may open twenty nests without finding one winged insect, for those are to be found only just before the com- mencement of the rainy season, when they undergo the last change, which is preparative to their colonisation.

In the winged state they have also much altered their size as well as form. Their bodies now measure between six and seven-tenths of an inch in length, and their wings above two inches and a half from tip to tip, and they are equal in bulk to about thirty laborers, or two soldiers. They are now also furnished with two large eyes, placed on each side of the head, and very conspicuous ; if they have any before, they are not easily to be distinguished. Probably in the two first states, their eyes, if they have any, may be small, like those of moles ; for as they live, like these animals, always under ground, they have as little occasion for these organs, and it is not to be wondered at that we do

not dis- corer them ; but the case is much altered when they arrive at the winged state, in which they are to roam, though but for a few hours, through the wide air, and explore new and distant regions. In this form the animal comes abroad during, or soon after the first tornado, which, at the latter end of the dry season, proclaims the approach of the ensuing rains ; and seldom waits for a second, or third shower, if the first, as is gene- rally the case, happens in the night, and brings much wet after it. The quantities that are to be found the next morning all over the surface of the earth, but particularly on the waters, are as- tonishing ; for their wings are only calculated to carry them a few hours, and after the rising of the sun not one in 1000 is to be found with four wings, unless the morning continues rainy, when here and there a solitary being is seen winging its way from one place to another, as if solicitous only to avoid its numerous ene- mies ; particularly various species of ants which are hunting on every spray, on every leaf, and in every possible place, for this unhappy race, of which probably not a pair in many millions get into a place of safety, fulfil the first law of nature, and lay the foundation of a new com- munity.

When the T. bellicosi get into a chest or trunk, containing clothes and other things ; if

the weight above is great, or they are afraid of ants or other enemies, and have time, they carry their pipes through, and replace a great part with clay, running their galleries in various di- rections. The tree termites, indeed, when they get within a box, often make a nest there, and being once in possession, destroy it at their leisure. When the termites attack trees and branches in the open air, they sometimes vary the man- ner of doing it. If a stake in a hedge has not taken root and vegetated, it becomes their bu- siness to destroy it. If it has a good sound bark round it, they will

enter at the bottom, and eat all but the bark, which will remain and exhibit the appearance of a solid stick (which some vagrant colony of ants or other insects often shelter in, till the winds disperse it); but if they cannot trust the bark, they cover the whole stick with their mortar, and then it looks as if it had been dipped into thick mud that had been dried on. Under this covering they work, leaving no more of the stick and bark than is barely suf- ficient to support it, and frequently not the smallest particle ; so that upon a very small tap with your walking-stick, the whole stake, though apparently as thick as your arm, and five or six feet long, loses its form, and, disappearing like a shadow, falls in small fragments at your feet.

The first object of admiration which strikes one upon opening their hills, is the behaviour of the soldiers. If you make a breach in a slight part of the building, and do it quickly with a strong hoe or pick-axe, in the space of a few seconds a soldier will run out, and walk about the breach, as if to see whether the enemy is gone, or to examine what is the cause of the at- tack. He will sometimes go in again, as if to give the alarm ; but most frequently in a short time, is followed by a large body, who rush out as fast as the breach will permit them ; and so they proceed, the number increasing, as long as any one continues battering their building. It is not easy to describe the rage and fury they show. In their hurry they frequently miss their hold, and tumble down the sides of the hill, but recover themselves as quickly as possible ; and, being blind, bite every thing they run against, and thus make a crackling noise ; while some of them beat repeatedly with their forceps, upon the building, and make a small vibrating noise, something shriller and quicker than the ticking of a watch. If they got hold of any one, they will in an instant let out blood enough to weigh against their whole body ; and, if it is the leg they wound, you will see the stain upon the stocking extend an inch in width. They make their hooked jaws meet at the first stroke, and never quit their hold, but suffer

themselves to be pulled away leg by leg, and piece after piece, without the least attempt to escape. On the other hand, keep out of their way, and give them no interruption, and they will in less than half an hour retire into the nest, as if they supposed the wonderful monster that damaged their castle to be gone beyond their reach. Before they are all got in, you will see the laborers in motion and hastening in various directions toward thtr breach, every one with a burden of mortar in his mouth, ready-tempered. This they stick upon

the breach as fast as they come up, and do it with so much despatch and facility, that although there are thousands, or rather millions of them, they never stop or embarrass one another ; and you are most agreeably deceived, when, after an apparent scene of hurry and confusion, a regular wall arises, gradually filling up the chasm. While they are thus employed, almost all the soldiers are retired quite out of sight. A renewal of the attack, however, instantly changes the scene. At' every stroke we hear a loud hiss ; and on the first the laborers run into the many pipes and gal- leries with which the building is perforated, which they do so quickly that they seem to vanish, for in a few seconds all are gone, and the soldiers rush out as numerous and as vindictive as be- fore.

' The white ant of India is particularly fond of burrowing in the mud walls of the Indian houses. ' My attention' says a late correspon- dent of the Edinburgh Philosophical Journal, ' was one morning attracted by the appearance of a wet spot on the colored wall of my apartment, at a season, and in a situation, to preclude the supposition of this having been occasioned by rain, or by accident. This led me to examine the spot, and, on slightly touching it, the plaster gave way, and I discovered that a part of the wall behind was hollow. From this I concluded that there was a nest of ants lodged in it; and, on looking narrowly, I heard a sound produced by a rapid succession of strokes, a mimic alarm- beat, and immediately a great number of white ants came to the place, with their mouths filled

with wet mud, with which they repaired the breach in a few minutes. Their whole proceed- ings were so curious and interesting, that I fre- quently amused myself with pulling down what they repaired, and observed that there was al- ways an alarm-beat before they came to build it up.'

Class II. — ARACHNOIDA.

Linne" in his arrangements of all the animals of the phalangium, aranea, creanis, and scorpio genera, under the aptera order has been followed by a no less distinguished modern anatomist than Cuvier.

Dume'ril, in his Zoologie Analytique, has also placed the arachrioida with the apterous insects. He arranges the genus : 1 . Ixodes Latr. with Pediculus and Pulex ; the other genera he has placed in a peculiar family : 2. Aranea; 3. My- gale ; 4. Phrynus ; 5. Scorpio ; 6. Chelifer ; 7. Galeodes ; 8. Phalangium.

Lamarck, in his Systeme des Animaux sans Vertebres, has included amongst the arachnoides, the myriapoda, and certain animals which Dr. Leach considers as forming a subclass of insects. The same writer in his Extrait du Cours, &c., has- placed the arachnoida with some genuine insects and myriapoda ; but he has formed for them a separate order, which he terms arachnoides palpati, and disposes them into the following groups of Kenera : — •

i. PYCNOGONIDES.

Genus 1. Nymphum ; 2. Phoxichilus; 3. Pyc- nogonum.

II. ACAHIDES.

- Parasiticte.

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ENTOMOLOGY.

49;

a. Sir legs.

Genus 4. Astoma; 5. Leptus; 6. Caris.

b. Eight legs.

Genus 7. Uropoda; 8. Argas ; 9. Ixodes; 10. Acarus.
** Vagebundtz.

a. Landt

Genus 11. Oribata; 12. Smaris; 13. Chey-1 letus; 14: Bdella; 15. Erythraeus; 16. Trom- bidium.

b. Aquatic.

Genus 17. Elais ; 18. Limnocharis; 19. Hy- drachna.

III. PHALANGIDES.

Genus 20. Si'o; 21. Trogulus; 22. Phalan gium; 23. Galeodes.

IV. SCORPIONIDES.

Genus 24. Chelifer; 25. Scorpio; 26. The- lephonus; 27. Phrynus.

V. ARANEIDES.

Genus 28. Aranea ; 29. Mygale. The following classification is that lately sug- gested by Dr. Le; ch in the third volume of the Zoological Miscellany.

Order I. — POLYMKROSOMATA. Body composed of a series of segmeats ; abdomen not peduncu- lated ; mouth furnished with didactyle mandibles and with maxillse ; eyes two, four, six, or eight ; legs eight.

Order II. — DIMEROSOMATA. Body composed of two segments; the abdomen pedunculated; mouth furnished

with mandibles and maxillae ; eyes six or eight.

The term Arachnoida explain^ the leading fea- ture of this genus ; apa^v?/, a spider ; and adoc, likeness or resemblance to ; the Linnaean genera are,

Genus \ . Phalangium. — Antenna: none ; mouth furnished with corneous mandibles, the second joint with a sharp moveable cheliferous tooth ; palpi filiform ; eyes two, on the crown, and two at the sides ; legs eight ; the abdomen generally rounded.

Nineteen species have been enumerated ; di- vided into A, having a mouth with a tubular kuus- tellum ; B, having no haustellum. They are all well armed, and generally malignant in disposition ; but very various in point of size, and of degrees of ugliness in their appearance.

The most common species in Europe and America is P. opilio, of the family B. It is of a pale blue color ; wanders about at night, and preys on smaller insects. It may be observed, during autumn, in gardens, about walls, &c. ; it is remarkable for its plump, but at the same time flattish orbicular body, and extremely long and slender legs. The feet are setaceous, and nearly as fine as hair, consisting sometimes of more than forty joints ; those toward the ex- tremity being very minute (scarcely discernible), and terminating with a single claw : they are capable of any, even a spiral, inflexion, and, in conjunction with their eight legs, give them an equal hold of eight almost equidistant paces. Their legs are generally so carried that the body appears suspended or elevated to a considerable height above the surface on which the animal rests; the eyes are situated on the top of the head, and resemble two very minute glassy globules. VOL. VIII,

There are other species wh:chhave fifty joints in their tarsi.

Those of the family A sometimes have four feelers as the P. grossipes, histrum, and spinipes ; others

have but two, as the P. bulanarum.

Genus 2. Aranea. — Antenriff, none; moutli having short corneous maxilla ; the lip rounded at the tip ; palpi two, incurved, jointed, and very sharp at the end ; those of the male clavate ; eyes eight, rarely six ; legs eight ; abdomen ovate, vil- lous, and furnished at the tip with textorial pa- pillae : 123 species, chiefly inhabitants of Europe and America, have been enumerated. We have treated them at considerable length in the article ARANEA.

Respecting the gigantic A. aviculuria, or bird- catching spider, we may add, however, a remark or two. This enormous spider is not uncommon in many parts of the East Indies and South America; where it resides among trees, frequently seizing on small birds, which it destroys by wounding with its fangs, which in- ject poison-, and afterwards sucking their blood. The slit or orifice near the tip of the fangs in spiders, through which the poisonous fluid is evacuated, and the existence of which has some- times afforded so much matter of doubt among naturalists, is in this species so visible, that it may be distinctly perceived without the assist- ance of a glass. This animal appears to admit of some varieties, differing both in size and color ; or rather, it is probable that several species, really distinct, have been often confounded in the works of naturalists under one common title. Mr. Jackson found in Morocco (Travels, second edit.) the A. tendenaman, with venomous powers equally, or perhaps more formidable. The in- sect is described to be about the size and color of a hornet, only of a rounder shape: and spins a web so fine as to be nearly invisible. The wound it makes is said to be so poisonous, that a person bitten survives but a few hours. In the cork forests, the sportsman, eager in the pursuit of game, frequently carries away on his garment this fatal insect, which is said always to make towards the head before inflicting its deadly wound.

That spiders have the power of reproduijlng their legs, and the mode in which this takes place, was

first made known by that accurate observer of nature, Sir Joseph Banks. He was writing one evening in his study, when one of the web- spinning spiders, of more than the middle size, passed over some papers on the table, holding a fly in its mouth. Much surprised to see a spider of this description walking about with its prey, and being struck with somewhat unusual in its gait he caught it, and placed it within a glass for ex animation, when, instead of eight, he perceived it had but three legs, which accounted for the inability of the creature to spin its web.; but the curious circumstance of its having changed its usual economy, and having become a hunt- ing- instead of a spinning spider, as well as a wish to learn whether its legs would be re- newed, induced him to keep the animal in the glass, from which it could not escape, and to observe its conduct. On the following morning the animal ate two flies given to it, by sucking

out the juices, but left the carcases entire. Two or three days afterwards it devoured the body and head of a fly, leaving only the wings and legs. After this time it sometimes sucked and sometimes ate the fly given to it. At first it con- sumed two flies in a day, but afterwards not more than one in two days. Its excrement, which it voided, was at first of a milk-white color, but afterwards the white had a black spot in the centre, of a more solid appearance than the surrounding fluid. Soon after its confine- ment it attempted to form a web on the side of the vessel, but performed the business very slowly and clumsily, from the want of the proper num- ber of legs. In about a fortnight it had com- pleted a small web, upon which it generally sat. A month after having been caught, it shed its skin, leaving the slough on the web. After this change five new legs appeared, not half as long as the other three legs, and of very little use to the animal in

walking. These new members, however, extended themselves a little in three days, and became half as long as the old ones. The web was now increased, and the animal con- tinued immoveably sitting on it in the day time, unless drawn from it, or attracted by a fly thrown to it as its usual provision. Twenty-nine days afterwards it again lost its skin, leaving the slough hanging in the web, opposite to a hollow cell it had woven, so as to prevent it from being completely seen when lodged in it. The legs were now larger than before the change of skin, and they grew somewhat longer still in three or four days, but did not attain the size of the old legs. The animal now increased its web, and being put into a small bowl as a more commo- dious residence, soon renewed a better web than the first. In this state it was left on the first of November. No further observations of it appear to have been recorded.

' The principal use of the araneadce, in the economy of nature,' says Mr. Kirby, ' seems to be that of preventing the too great increase of insects.'

It has lately been discovered, that the web of a species of spider, common in caves in Pennsyl- vania, possesses a narcotic power ; and it has been administered with success in the treatment of certain fevers. This spider, of which M. Hentz has figured a large female, with a description of the parts of the mouth, and the disposition of the eyes, belongs to the genus tegenaria of M. vValckenaer, or to that of aranea, properly so called, of M. Latreille. M. Hentz proposes to give it the specific name of T. medicinalis. It is black, tinged with blue, and its abdomen pre- sents about ten pale and livid spots, as well as a line, towards its anterior extremity. In some individuals the legs are marked with black spots. The author is of opinion that the webs of all the species of the same genus in America are equally narcotic. It would be interesting to make some experiments upon those of the European spiders, with the view of determining whether they possess the same property. — Journal Acad. Nat. Sciences of Philadelphia, vol. ii.

Genus 3. Acarus. — Mouth with no proboscis; haustellum included in a bivalve, cylindric sheath ; palpi two equal, and of the length of

the haustellum ; eyes two, placed at the side of the head ; legs eight. Gmelin, in the last edition of Linnaeus's system, reckons eighty-two species ; Fabricius forty: of which, some are inhabitants of the earth, others of water; some live on trees and plants, others among stones ; on the bodies of animals and even under their skin. Aristotle (Hist. Anim. 1. v. c. 32. Oper. torn. i. p. 857. Ed. Du Val.) mentions the acarus bred in wax, as the least object of human sight.

(1.) Of those injurious to agriculture, Mr. Lon- don observes, the red-spider is the acarus tellurius L. and the same name is also applied by gar- deners to the scarlet acarus (A. holosericeu*, L.) the only two British species of the genus which infest plants, and to which perhaps they do more injury than all other insects put together. Watering over the leaves is the well known pre- ventive and remedy : the water should be applied to both sides of the leaf in a finely divided state, and with great force, so as to dash the insects to the ground. For this purpose Read's syringe is the most efficient implement at present in use. The sheep-tic (A. reduvius,) the dog-tic (A. r*ci- nus,) the cheese-mite (A. siro), and the itch-mite (mite de la gale^ Fr.), (A exulcerans, L.), which inhabits the ulcers of the itch, are the principal species mentioned by Linnaeus ; but some natu- ralists consider that every animal, and most plants, have their peculiar species of acarus. The harvest-bug is considered by some an acarus, and by others a phalangium.

(2.) Dr. Adams conjectures that acari may be the cause of certain cases of ophthalmia. Sir J. Banks, in a letter to that gentleman, relates that some seamen belonging to the Endeavour brig, being tormented with a severe itching round the extremities of the eye-lids, one of them was cured by an Otaheitan woman, who with two small splinters of bamboo extracted from be- tween the cilia

abundance of very minute lice, which were scarcely visible without a lens, though their motion when laid on the thumb- was distinctly perceived. Le Jeune, a French physician quoted in Mouffet, describes a case, in which what seemed a different species, since he calls them rather large, infested the white of the eye, exciting an intolerable itching.

Linne was of opinion that many contagious diseases are caused by acari. With respect to the dysentery and the itch, he affirms that it had been manifested to his eyes. Rolander, a student in entomology, while he resided in the house of the illustrious Swede, was attacked by the disease in question, which quickly gave way to the usual remedies. Eight days after, it re- turned again, and was as before removed. A third time at the end of the same period, he was seized with it. All the while he had been living the same as the rest of the family, who had ne- vertheless escaped. This of course occasioned no little enquiry into the cause of what had hap- pened. Linne1 aware that Bartholinus had at- tr'buted the dysentery to insects, which he pro- fessed to have seen, recommended it to his pupil to examine his fseces. Rolander, following this advice, discovered in them innumerable animal- cules, wliich upon a close examination proved to be acari. It was next a question how he alone

came to be singled out by them ; and thus he accounts for it. It was his habit not to drink at his meals ; but in the night growing thirsty, he often sipped some liquid out of a vessel made of juniper wood. Inspecting this very narrowly, he observed, in the chinks between the ribs, a white line, which when viewed under a lens he found to consist of innumerable acari, precisely the same as those he had voided. Various ex- periments were tried with them, and a prepara- tion of rhubarb was found to destroy them most effectually. He

afterwards discovered them in vessels containing acids, and often under the bungs of casks. In the instance here recorded, the dysentery, or diarrhoea, was evidently pro- duced by these acari.

After stating some questionable cases in which acari are supposed to have been connected with, if not the cause of scabies, Mr. Kirby says, ' I shall now produce two instances where acari were evidently concerned. Dr. Mead, from the Ger- man epheme/ides, relates the miserable case of a French nobleman, from whose eyes, nostrils, mouth, and urinary passage, animalcules of a red color, and excessively minute, broke forth day and night attended by the most horrible and ex- cruciating pains, and at length occasioned his death. The account further says, that they were produced from his corrupted blood. This was probably a fancy originating in their red color : but the whole history, whether we consider the size and color of the animals, or the places from which they issue, is inapplicable to larva or maggots, and agrees very well with acari, some of which, particularly A. uutumnalis, are of a bright red color. The other case, and a very similar one, is that recorded by Mouffet of lady Penruddock ; concerning whom he expressly tells us, that acari swarmed in every part of her body — her head, eyes, nose, lips, gums, the soles of her feet, &c., tormenting her day and night, till, in spite of eveiy remedy, all the flesh of her body being consumed, she was at length relieved by death from this terrible state of suffering. Mouffet attributes her disease to the acurus sca- hiei , but from the symptoms and fatal result it seems to have been a different and much more terrific animal. He supposes, in this instance, the insect to have been generated by drinking goat's milk too copiously. This, if correct, would lead to a conjecture that it might have been the A. lactis, L.' These cases, as he says, will demonstrate that acari, as well as pediculi are the causes of diseases in the human frame : he proposes to distinguish generally all acarine dis- eases by the name aearioiis.

Genus 4. Scorpio. — Antenna none ; legs eight,

besides two chelae, or hands, seated on the fore-part of the head ; eyes eight, three of them on each side of the thorax, and two on the back ; palpi two, projecting cheliform ; lip bifid, cauda long, jointed, and terminated by a sharp crooked sting; on the underside, between the breast and abdomen, are two instruments resembling a comb. All the genera are armed with a slightly pungent sting ; none of them, however, are dangerous, except in hot climates ; they prey upon worms, spiders, flies, &c. ; and even on one another with considerable fury.

There are ten species, all of which are of warmer climates than our own. According to M- Maupertuis, they are all viviparous ; the bod" of the pregnant female exhibiting, when dissected, between forty and fifty young. Each of these is separated from the rest by a thin membrane, while all are united by a common filament. This philosopher, in order to ascertain the strength of their venom, bred a great number toge- ther, and let them loose upon dogs and other animals, and he found that sometimes the sting was so poisonous as to cause the whole body of the wounded animal to swell, the consequences of which were frequently violent reaching, convulsions, and death. At other times he found the stings of the same species almost harm- less. They cast their skins, like spiders, occa- sionally.

Leuwenhoek discovered an opening on each side of the sting for the emission, as he supposes, of poison, which he thinks is only discharged when that weapon is buried in the wound it makes. The principal species is,

S. (iftr ; African scorpion. The combs have thirteen teeth ; the hands are slightly heart-shaped and hairy. It inhabits Persia, India, and some parts of Africa. The body is of a glossy brown- ish-black ; the incisures of the .abdomen yellow ; the first joint of the tail serrate. None are so remarkable for size and the malignity of their poison as this. It has been seen ten inches long, when measured from the end of the claw to the extremity of the tail. The general color being of a dark brown, it is not

easily distinguished from the rotten wood and furniture under or within which it lurks. The tail is the reservoir which contains the poison, which is deposited near the extremity, from which it is ejected through two very small holes, one on each side the tip of the sting. These are so very minute, as to elude the sight of any but a very accurate observer, with the assistance of glasses. This species is very much dreaded in Africa, where the activity of the venom is frequently productive of serious evils. Most families in Morocco, which is much infested with this reptile, keep a bottle of scorpions, infused in olive oil, which is used whenever any person is stung by them; for though, it is said, the scorpion carries an anti- dote in itself, it is not always to be caught, as it often stings a person while asleep, and disappears before he awakes, or thinks of looking for it ; in which case the body of the live scorpion cannot be procured. It is necessary to bind the part, it possible, above the place stung, then to cauterise, and afterwards scarify the puncture, to prevent the venom from pervading the system ; this me- thod is sometimes effectual, and sometimes fails, according to the situation of the part wounded, or the nature of the scorpion, some being more poisonous than others ; but where the flesh of the reptile can be procured, the cure is said to be far more certain.

Class III. — MYRIAPODA.

The insects we class under this modern nania were included by Linne" in the two genera that follow, namely, scolopendra and jnlus. Fabriciuh, in the Supplement to his Entomologia Systematic;

placed them in a particular class named mitosata, comprehending all the species under the generic appellations ot Linne. G. Cuvier, in hisTahleau

Elcmentaire, also arranges the n»yriapoda with insects, in which he was followed by C. Dumeril, who has, however, adopted the new genera pro- posed by Latrei'le. In his later work he has placed them in a peculiar order of the class ARACHNIDES, which he has denominated MY- RIAPODA; and has divided them into two families, namely,

Fam. I. CHILOGNATHA. Genera 1. Glomeris. 2. Julus. 3. Polydesmus. 4.Pollyxenus.

Fam. II. SYNGNATIIA. Genera 5. Scutigera. 6. Scolopendra.

Lamarck arranged them with the arachnides, into three genera, 1. SCOLOPENDA; 2. SCCTI- GERA • 3. JULI:S ; and, in his last work, he had adopted a fourth genus, POLLYXENUS.

Dr. Leach says, ' All the myriapoda have their head distinct from the body, furnished with two antennae. Mandibles simple, incisive. All or most of the segments of the body furnished with two or four legs. The nervous system is composed of a series of ganglia, one in each segment of the body : these ganglia are brought into communication with each other by a longitudinal bundle of nerves ; or, as it is generally, but improperly, denominated, by a spinal marrow.'

Genus 1 . Scolopeudra. — Antenna setaceous ; palpi two, filiform and united between the jaws ; lip toothed and cleft ; body long, depressed, con- sisting of numerous transverse segments ; legs numerous ; generally as many on each side as there are segments of the body. Of thirteen known species, three are common to this country. In Latin these animals have obtained the name of centipedes, from the number of their feet or legs ; one of the species having literally \ 00 legs on each side. Some of this genus live beneath the bark of decayed trees, or are found below stones and garden boxes ; others inhabit fresh and salt waters ; and they are all remarkable for the quickness of their general motions, and of that with which they seize other

insects.

It has been asserted that, when some scolo- pendra are cut to pieces, the segments, like those of the polypi, are capable of reproduc- ing entire animals, but the fact is not certain. Mr. Maloet relates the history of a man, who for three years had a violent pain at the lower part of the forehead, near the root of the nose , at length he felt an itching, and after- wards something moving within his nostril, which he brought away with his finger ; it was a worm of the centiped kind, an inch and a half long, which ran swiftly. It lived five or six days among tobacco. The patient was free of his pain ever after. Mr. Littre mentions a like case, in 1708, of a larger centiped voided at the nose, after it had thrown the woman, in whose frontal sinus it was, into convulsions and almost de- prived her of reason. Hist. Acad. Science, 1753.

Remarkable species are: — (1.) S. coleoptra. Having fourteen long legs on each side ; the body scutellate. It is found in many parts of Europe. The antennas are yellow, and as long_

as the body; the tnighs are prickly, and the shanks rough. (2.) 8. gigantea. Having seven- teen legs on each side ; tail with two hooked styles. An American insect. (3.) S. clypeata. Having thirty legs on each side ; the body brown and rough; the head shielded. This is for.nd in Tranquebar. The body is divided into sixteen narrow segments, which are substriate and rough, with raised dots; the head is covered with a rounded entire shield; the antennae are short and pale ; the legs pale ; and the tail is emarginate. (4.) S. electrica. Having seventy legs on each side; the body is linear. It inhabits Europe, and our own country, in decayed wood, and shines in the dark. The body is very flat, tawny, with a black line down the back. (5.) Phos- phoreu. Having seventy-six legs on each side. It is an Asiatic insect, and shines like a glow- worm in the dark. The head is ovate, yellow- ish, with two grooved lines, and another trans- verse one ; the antennae are subulate and ferru- ginous, with

fourteen articulations; the body is filiform, and about as thick as a goose-quill, purplish, with two parallel lines. It has been known to fall from the air into a vessel sailing on the Indian Ocean, 1000 miles from any land. (6.) S. occidentalis. Having 123 legs on each side. It inhabits America. The body is ferru- ginous ; the antennse have fourteen articulations. (7.) S. Gabrielis. Having 148 legs on each side ; the body is yellowish. It inhabits Italy, and is four times as large as the S. electrica. The an- tennas are short, of fourteen articulations ; the tail semi-oval, with an appendage and two short styles.

Genus 2. Julus. — Has the lip crenated and emarginated ; palpi two, and filiform ; body long, semi-cylindrical, and consisting of numerous transverse segments ; legs numerous. Fabricius, who has supplied many new species, distin- guishes it merely by the lip and antennse ; the first of which, he observes, is crenated and emar- ginate, and the latter moniliform : the structure of the body, legs, &c., constitute a secondary character. Most of them can move backwards or forwards with equal facility.

The species are ascertained chiefly by the number of legs. Such as (1.) J. ovatus. Legs each side twenty. Lin. Inhabits the seas of Europe. (2.) J. complanatus. Legs each side thirty; body flattish ; tail pointed. Fabr. J. com- planatus, Linn., DeGeer, &c. Scolopendra Julacea, Scop. Native of Europe. Linne describes the antennae of this insect as being clavated, which is the case, though slightly. (3.) J. depressus. Legs each side thirty ; body flattish ; tail rounded and entire. Fabr. An Indian species of very large size, the head of which is brown, and the segments rough, gray, and prominent each side. Lund. (4.) J. Indus. Legs each side 115. Lin. Inhabits India. (5.) J. sabulosus. Legs each side 120. Linn. J. glabro, &c. Ray. Found on the nut in Europe. (6.) J. maximus. Legs each side 134. Linn. A large species found in South America. Savi has described a J.fcctidissimus, which emits a yellow foetid fluid from its body, which stains the skin red, so that neither friction nor washing will

immediately remove it.

PART IV.

HISTORY OF ENTOMOLOGY AS A SCIENCE.

We cannot regard entomology as entitled to rank with the sciences until the arrangements of the immortal Linne" had assimilated it with those other natural tribes, upon whose structure and economy his labors have thrown such essential light. As we have noticed the first and last edi- tions of his Systema Naturae in our introduction, we shall now specify a few entomological works that appeared between them.

In 1736 and 1737 the entire works of Swam- merdam were first published under the title of Biblia Naturae, sive Historia Insectorum Belgiae, cum versione Latina, H. D. Gaubii, et vita auc- toris, per A. Boerhaave. Such was the apathy of the public, in regard to works of this descrip- tion, that no bookseller would venture to print this work at his own risk ; and the means of Swammerdam were inadequate to its production. At the death of the writer, M.Thevenot, his friend, became possessed of his papers, and among the rest of the MS. of the Biblia Naturae. After remaining with him some time, it passed into the hands of Du Verney, an able anatomist, who de- posited it for another considerable period in his own cabinet, until the illustrious Boerhaave pur- chased and gave it to the world.

Linne himself, at this period, wrote several tracts on the subject of entomology ; which are printed in the Transactions of the Royal Society of Upsal. One of these appeared in 1739, under the title of Om Renaras Bromskulor i Lapland ; and another dated Stockholm, in the same year, Tal om Markwardighter uti Insecterne. In 1746 we find a paper, jointly the

production of Lin- nasus and De Geer, relative to the lantern-ily of China (fulgora candeleria) ; and about the same time his Fauna Suecica, an enlarged and im- proved edition of which was published in 1761. The elegant panorpa coa, a scarce species at that period, foims the subject of a small Linnaean paper in 1747. His dissertations Miracula In- sectorum, and Noxa Insectorum, bear the same date, 1752 : they were both printed at Upsal, and the latter is particularly valuable, from the object in the contemplation of the writer. Six years after this he produced a dissertation called Pan- dora Insectorum ; the year after, a paper on the coccus ; and in 1761 his Fundamenta Entomo- logies, a book, in those days, of considerable value as an elementary work, or introduction to this study. A translation of it by W. Curtis was printed at London in 1772. His last entomological paper is upon the genus pausus, a coleopterous insect distinguished by the magnitude of its an- tennae.

In 1738 Lesser, a clergyman of Nordhausen, published a work entitled Insecto-Theologia, oder Vernunft und Schriftmassiger Versiich wie cin mensch durch aufmercksame Betrachtung derer sonst wenig geachteteu, Insecten, &c. Frankfort und Leipzig, 8vo. It was translated into French by Lyonet in 1742, and is chiefly remrukable for its grave attempts to rectify the abuse of insects in theology ; in which he points out the gross outrage on reason committed by

the pagans, in making certain insects the idols of their worship ; and remarks how much more absurd it must appear, that the Jews and even Christians should have followed their example. He tells us that the Jews are accused of stating many wonderful things relative to insects ; such as that Solomon and his workmen employed a worm to shape the stones of the temple, which insect, named schamii, cut and broke them to pieces in places where applied. They add that it was the figure of a grain of barley, and was kept in a leaden box, because, had it reached any rocks, it would have cleft and destroyed them. Among the legends of Catholic superstition he

selects other equally remarkable anecdotes. Baldus, he says, in order to prove the real presence in the eucharist, relates that a number of bees being found on holy ground, paid it homage, and carried a portion of it respectfully to their hive. And that St. Francis, once walking in a garden, saw a grasshopper, which immediately quitted the plant it sat upon, and perched on his hand ; he ordered it to sing to the praises of God, and, with a pretty loud voice, it immediately began a very fine psalm !

The folio work of L' Admiral, entitled Naaw- keurige Waarneemingen van Gestaltverwisse- lende gekorwene Diertjes, was published at Am- sterdam in 1740. It contains a series of elabo- rately finished etchings of European insects, comprehending about fifty species of the larger lepidopterous tribes. These are represented in a heavy but ingenious manner, in various atti- tudes, on branches of the different kinds of plants on which they feed. The work was begun in numbers, and intended to contain 100 plates and 400 pages of letter-press. But this design was never completed. There are few copies with more than twenty-five plates, and about five pages of letter-press. Mr. Donovan had a copy containing thirty-two plates, and twenty pages.

In 1741 was published Schaeffer's Icones Insectorum circa Ratisbonam Indigenorum, in 3 vols. 4to., the plates being colored. His classi- fication differs from that of Linne, and ap- proaches to that proposed by Geoffrey. Hi divided insects into seven orders, which he termed classes : 1. Coleoptero-macroptera, those with their elytra crustaceous through their whole length, and extending beyond the abdomen wheft closed. 2. C. microptera, those with crustaceous elytra, shorter than the abdomen. 3. Half-hyme- noptera, such as have their elytra half crustaceous, 01 becoming toward their extremities membrana- ceous. 4. Hymeno-lepidoptera, insects with transparent or membranaceous wings, imbricated with scales. 5. Hymeno-gymnoptera, those with four naked membranaceous wings. 6. Diptera, insects with two wings. 7. Aptera, those with- out wings.

In 1743 Mr. George Edwards, of London, published the first volume of his Natural History of Uncommon Birds, and of some other rare and undescribed animals, 4to. Three other volumes appeared in the course of eight years, in which many insects are figured.

In 1 744 was published at Stockholm, by De Geer, a little work in 8vo., entitled Tal om nyttan,

som Insectere ochderas sharshadande, tilskynda oss, pointing out the advantages of cultivating the natural history of insects. It is considered the first work that appeared on this subject.

In 1746 a miscellaneous work appeared at Nuremberg, Der Montalich-herausgegebenen In- secten Belustigung, by Rosel of Nuremberg, a miniature painter of genius. The work is in 4to. Two other volumes appeared in 1749 and 1755. To these a fourth was added by a relation (Klee- mannir), after his death in 1761 ; and after that period three other parts.

About 1749, or perhaps earlier, appeared ano- ther English entomological work by Benjamin Wilks, entitled the English Moths and Butter- flies, together with the Plants on which they feed and are usually found. The greater portion of this work is copied from the most celebrated foreign writers of the day ; but the imposition was not discovered until pointed out by Rosel, in the third volume of his Insecten Belustigung. Wilks also published Twelve new Designs of But- terflies, a work of but little use in point of sci- entific information, though sometimes quoted.

The first volume of the important work of baron Charles De Geer, entitled Memoires pour servir a 1'IIistoire des Insectes, was printed at Stockholm in 1752, and was received with great satisfaction by

every competent judge : the con- tinuation was expected with impatience ; but nine years elapsed before the second volume ap- peared, and it was altogether twenty-six from its commencement to its termination. It was com- pleted in 1778, a year which also closed the au- thor's life.

The system developed in the last volume of De Geer's Memoirs, and that of Geoffroy pub- lished in his Histoire Abrege"e des Insectes, 1764, are the connecting links between the arrangement first proposed by Linnaeus and the more modern systems : as De Geer's, however, was only given to the world in his last volume, published eleven years after the last edition of the Systema Naturae, we may here exhibit that of Geoffroy. Its prin- cipal merit consists in dividing the coleoptera into primary sections, according to the number of the joints of the tarsi. He comprises all the in- sect tribes in the six following classes : 1 . Cole- optera; 2. Hemiptera; 3. Tetraptera alis fannaceis; 4. Tetraptera alis nudis; 5. Diptera; 6. Aptera. The first class corresponds with the Linn<£an coleoptera ; the second is more accu- rately regulated by the form of the proboscis ; the tnird agrees with the lepidoptera, having the wings covered with fine powder ; the naked wing- tribe unite the neuroptera and hymenoptera ; the diptera and aptera are the same with the Linnaean orders.

And now (1767) we come to the date of the last edition of Linnets system. It is in this, as in almost every other department of natural history, invaluable for its perspicuity and sim- plicity. Building his orders on the character of a single set of organs, the wings, and the varie- ties of his genera, on the character of particular parts of the head, especially of the antennas, it is astonishing how nearly his artificial arrangement approaches a natural one. There are, indeed, as Dr. Leach has justly observed, other characters

which ought not to be neglected ; and although they may be too minute to be regarded by the superficial observer, yet the man of science, who wishes to

study the philosophy of classification, can have no doubt as to the superior accuracy of modern investigation and description which take into consideration every possible character, external as well as internal. ' The simplicity of the general distribution proposed by Linnaeus,' continues this able writer, ' the celebrity of his name, and the princely patronage under which he wrote, conspired, with other favorable circum- stances, to render the science more universally cultivated, admired, and respected about his time, than it appears to have been at any former period. Much credit is undoubtedly due to this great man for his entomological labors. We must not, however, be so unjust as he was, and neglect to acknowledge the merits of his prede- cessors, who wrote under less favorable circum- stances, but nevertheless excelled in this depart- ment of science ; and to whom Linnaeus stands in a very high degree indebted. In the works of Aristotle and Pliny, in those of Aldrovandus and Swammerdam, as well as in those of our countrymen, Ray, Willoughby, Lister, and va- rious others (whose works we have noticed), we perceive, with some variations, the grand outline on which he has founded his arrangement. It was from these valuable sources that he gained the materials, from which he has selected, with pro- found judgment, and the greatest success, the valuable matter, carefully and industriously separating the dross. The characters of his orders and genera are to be found in several earlier publications, as are descriptions of many of the species. But he has concentrated these scattered rays of science, with so much skill and industry, that we must admit, that to him the science is indebted for that firm foundation on which it now rests. His style throughout is con- cise and expressive, but in many instances it is so laconic, that it is impossible even to guess at the animals described.'

We should not omit to notice the lasting be- nefit conferred' on natural history by Linne, in the happy invention of the nomen triviale, the trivial name, in which he expresses the peculiarity of any species

by a single term added to its generic appellation. These names are current like money, it has well been observed, and of similar \itility to the proper names of men.

The application of trivial names to the butter- fly and moth tribes in the Systema Naturae, will be a striking instance of their utility. To pre- vent confusion the genus phaleena is distributed into sections, distinguished by the terms of bom- byces, nocttur, geometrec, tortrices,pyralides, tinae, and alucitte. The bomlyces and noctua;, which are so much alike, that the females of the bom- byces are with great difficulty distinguished from the noctuae, are named promiscuously. All the geometrae have their names terminating in aria and ata, according as their antennae are setaceous or pectinated : — The tortrices, in aria; the pyra- lides, in alis; the tinnae, in ella; and the aluci- tae, in dnrti/ln , so that it is evident, from the termination, to what section the insect is to be referred .

Butterflies are divided into sections, by the names of equites, heliconii, danai, nymphales, and plebeii. In the vast multitude of butterflies, the greatest part of which are foreign and extra European, and to whose food and manner of life we are utter strangers, it was impossible to give significant trivial names. Linnaeus, therefore, by way of simile, has taken the names of the equites from the Trojan history. These consist, as it were, of two troops or bodies : of which one contains the sable, and as it were mourning no- bles, having red or bloody spots at the basis of their wings. These receive names from the Trojan nobles ; and as Priam was king of Troy, the most splendid among these bear his name. The other body, ornamented with a variety of gay colors, are distinguished by the names of the Grecian heroes ; and, as in both armies there were kings as well as officers of an inferioi rank, those

elegant butterflies, whose hinder wings re- sembled tails, were distinguished by some royal name. Thus, when Paris is mentioned (know- ing from history that he was a Trojan, and of royal blood) we find him among those of the first section ; i. e. those of a sable color, spotted

GENERAL CLASSES.

S-d

I. Winged. <

ORDERS.

i. Four uncased wings.

ii. Two cased wings.

in the breast with reJ, and having their hinder wings resembling tails. When Agamemnon is named, we remember him to be a noble Greek, and find him among those nobles which have variegated and swallow- tailed wings. But when Nereus is spoken of, we readily know him to be- long to the last section, having wings but no tails. The second class, which contains the heliconii, derive their names from the muses, as Urania. The names of the sons and daughters of Danaus are bestowed on the third section. And as these species are subdivided into two other sections, viz. the white and parti- colored, the system is so arranged, that the white ones preserve the names of the daughters of Danaus, and the parti-colored ones those of the sons of JEgyptus : so that it is evident from the name itself to what section the butterfly is to be re- ferred. The names of the fourth section, nym- phales, are taken from various nymphs of antiquity ; and those of the fifth, plebeii, from different men among the ancients, whose names are worthy of remembrance.

We may now conveniently exhibit the system of De Geer :—

PARTICULAR CLASSES OR GENERA.

1. Scaled wings. Spiral tongue. (Lepidoptera.)

2. Membranous naked wings. No teeth or

tongue. (Trickoptera epkcmerina.)

3. Membranous equal recticulated wings.

Teeth. (Rest of neuroptera.)

4. Membranous unequal wings. Having teeth

and sting, or borer, in the female. (Hy-
menoptera.)

5. Membranous wings. Tongue bent under

the breast. (Homoptera.)

6. Membranous wings. Elytra, half coriaceous

and half membranous, crossed. Tongue bent under the
breast. (Hemiptera; leach.)

7. Membranous wings. Elytra coriaceous, or

semi-crustaceous, aliform. Having teeth.
(Orthoptera.)

8. Membranous wings. Elytra hard and crus-

taceous. Having teeth. (Coleoptcru.)

Jil, Without wings.-

This system conforming in its basis to that of
Linne, by forming its classes and orders on the
organs of flight, anticipates the system of Fabri-
cius in discriminating its final groups, by the in-
strument of manducation. It is probable that the
prominence thus given to these instruments,

9. Membranous wings. Poisers. A tongue.. No

teeth. (Diptera.)

10. Membranous wings. The male has neither poisers,

teeth, or tongue. The female has a tongue in the breast, but no wings. (Coc CMS, L.) iv. Subject to meta- (11. Wingless. Tongue. Six legs. (Aphanip

tcra.)

C 12. Wingless. Head and trunk distinct. Six legs. (Hexapod aptera, termes, psocus.)

13. Wingless. Head united to the trunk. Eight

or ten legs. (Octoped aptera, arachnida, Crustacea'.)

14. Wingless. Head and trunk distinct. Four-

teen legs or more. (Polypod aptera, crus- tacea.)

iii. Two uncased wings.

morphosis. \

v. Not subject to metamorphosis.

might suggest to Fabricius the idea of making them discriminative of all insects.

Entomological works become now so nume- rous, that we can only notice the new systems, or considerable improvements : in 1770 appeared, in 8vo, A Catalogue of British Insects, by J. R.

Forster, wno accompanied captain Cook, round the world. It was simply a list of Latin names of insects, amounting to about 1000 species ; the greatest number of the British tribes hitherto enumerated. This was intended as a prodromus to a general work on the Insects of Britain : the following year the author gave the world his Novae Insectorum Centuriae, which, with the fore- going, are the only entomological works he ever published. The avowed purpose of the latter work, as the reader is informed in the preface, was to give a

description of 100 insects not men- tioned in the latest work of Linne. The insects he includes are partly indigenous, some are from China, and others from South America. The greater number of them are coleoptera, and are arranged after the manner of Linne, though the genera anthribus and cistela are taken from Geoffrey.

A work was also published this year, in one volume, containing descriptions in French and English, with an index of Linnaean names, illus- trated by colored copper-plates, entitled Illustra- tions of Natural History, wherein are exhibited Figures of Exotic Insects, &c.. by D. Drury. The plates form a miscellaneous assemblage of beautiful exotic insects from an extensive collec- tion possessed by Mr. Drury. Three years after the publication of the first volume, a second came out; and the third which concludes the work in 1782. Besides those figured and de- scribed in the three volumes published, Mr. Drury had reserved specimens as materials for a fourth, amongst which were a vast number of curious species from the interior of Africa, and other parts of the world rarely visited by Europeans. Mr. Drury's cabinet contained in the whole about 11,000 species of insects, at that time the largest collection known, which he is said to have ob- tained by transmitting printed directions in various languages for gathering and preserving them; offering six-pence per insect for all, from the size of a honey-bee upwards. This was sold by public auction, and produced JtGOO. The British specimens were purchased by Mr. Donovan.

Approaching the era of Fabricius, we ought perhaps to notice the labors of one or two most accurate observers of insects to whom entomo- ogy is much indebted. Conspicuous among these is Reaumur, the most valuable of whose physiological experiments, perhaps, were those relating to the concoctive powers of the stomach in granivorous and carnivorous birds ; but who acquired his greatest fame as an entomologist. Besides a number of curious papers on this sub- ject, in the Memoires of the Academy, he pub- lished a very elaborate work, entitled Memoires

pourservir a L'Histoire Naturelle des Insectes, in six vols. 4to. 1734 — 1742. This work was the 'abor of many years, and the result of innume- rable observations made in his garden, in which he kept insects of all kinds that he might exa- mine their generation, changes, and mode of life. His friend Bonnet, who communicated for some time his observations to Reaumur, was also a distinguished physiologist in this department of nature. Lyonet's elaborate engraviries in his Tra:te AnatomiqueJe la Chenille, printed in Holland in '762, were also a valuable addition

to the stores of this science. His treatise is de- dicated solely to the anatomy of the caterpillar, which lives in the willow (phalaena cossus), upon the dissections of which this author enters with such minuteness of investigation, that his des- criptions of this object occupy rather more than 600 quarto pages. The plates, eighteen in num- ber, with the exception of the first, which repre- sents the microscope employed in his examinations, are entirely appropriated to the representations of the muscles, tendons, fibres, medullary vessels, spiracles, &c., every part of which throughout the whole animal are exhibited in their natural and magnified appearance. These plates nearly resembling mezzotinto, are finished specimens of the stipple style of engraving then prevalent.

A work illustrated by a similar style of en- graving was Sepp's Beschouwing der woridern gods in de minstgeachte schepzelen of Neder- landsche Insecten, begun in the year 1762 ; it is dedicated entirely to the more uncommon moths and butterflies of Holland ; the descriptions are in the Dutch language, and the plates are ad- mired for their delicacy of execution.

In 1775 J. C. Fabricius, a pupil of Linne", first announced the principles of his celebrated arrange- ment of these tribes, under the title Systema Entomologiae ; a classification, founded on the organs of deglutition and mastication. This sys- tem, which has undergone several modifications, has

been named the Cibarian and the Maxillary system. Insects of every description were at first comprehended by it in eight classes, to which the several names of eleutherata, ulonata, synis- tata, agonata, unogata, glossata, ryngota, and antliata, were assigned. This work, exhibiting great original genius as well as accurate obser- vation, obtained for its author that high repute and patronage which induced him to devote himself to entomological studies for a number of years, during which, several other works of his ap- peared on the same subject, among which were his Species Insectorum, Entomologia Systema- tica, &c. ; in all which his new mode of classifica- tion was established with progressive improve- ment. His Supplementum Entomologia- Sys- tematicae gives the outline of his system in its latest state. In this work he divides genuine insects into the following Orders, which he named classes.

Class I. ELEUTHERATA — Maxilla; naked, free, bearing palpi.

Class II. ULONATA. — Maxillae covered by an obtuse galea, or mouth-piece.

Class III. SYNISTATA. — Maxillae elbowed at their base, and connected with the labium.

Class IV. PIEZATA. — Maxillae corneous, com- pressed, often elongate.

Class V. ODONATA. — Maxillae corneous, den- tated. Palpi two.

Class VI. MITOSATA. — Maxillae corneous; no palpi.

Class VII. UNOGATA. — Maxillae corneous, un.'uiculated.

Class VIII. POLYGOXATA. — Maxillae many, within the lip.

Class IX. KLEISTAGNATA. Maxillae many, without the lip.

Class X. EXOGNATA. Maxillae many, outside rhe lip covered by the palpi.

Class XI. GLOSSAT-A. Mouth with a spiral tongue reflexed between the palpi.

Class XII RYNGOTA. Mouth with a rostrum and articulated sheath.

Class XIII. ANTLIATA. Mouth with an in- articulate haustellum.

The first of the classes of this system contains the order . Coleoptera ; the second, the orders Orthoptera, Dermaptera, and Dictyoptera; the third, the orders Thysanura, Tricttoptera, and a part of the Neuroptera; the fourth, the order Hymenoptera ; the fifth, the Neuroptera ; the sixth, the class Myriapoda ; the seventh, the class Arach- noida; the eighth, ninth, and tenth, the class Crustacea; the eleventh, the order Lepidoptera ; the twelfth, the orders Hemiptera and Omoptera; the thirteenth, the order Diptera.

This able entomologist was also the author of various tracts on entomology in the Latin and German languages ; and of two principal intro- ductory works, Genera Insectorum, and Philo- sophia Entomologica. The most valuable part of his system is its mode of distinguishing the genera, which has been largely adopted by more modern writers; while its general arrangement, though at first popular, has been almost as gene- rally abandoned. It 1 777 appeared another new, but short-lived system : that of Scopoli con- tained in his Introductio ad Historian! Naturalem, in which he divides insects into five tribes, under the strange appellations of, 1. Swammer- dami-lucifuga, 2. Geoffroy-gymnoptera, S.lloeselii- lepidopte.ru, 4. Reaumurii-proboscidea, 5. Frischii- coleoptera ; identifying each tribe by the name of that author who has, in his opinion,

been most successful in the explanation of it. The lucifuga includes the lice ; gymnoptera, his halterata, acu- ieata,a.nd caudata: Lepidoptera, the moths and but- terflies; the proboscidea is divided into terres- trial and aquatic, and the coleoptera he divides into those inhabiting water, und those the land.

In the same year appeared, at Leipsic, the early part of the large systematic work of J. A. E. Goeze, called Entomologuche beytrage zu des Ritter Linne zwblfteri ausgabe des Natur Systems, which was continued in part still 1783.

The elementary work of Juries Barbut, pub- lished in 1751, entitled The Genera Insectorum of Linnaeus, exemplified by various Specimens of English Insects, is an illustration of the Lin- nsean system not uninteresting to the English reader; but the author does not seem to have been aware of the great additional contribu- tions to this science which had been made on the continent, since the publication of Linnaeus's last work.

In 1788 this science was considerably in- debted to Gmelin for an enlarged edition of the Systema Naturae, which combined the valuable information furnished by the labors of various naturalists of the first consequence since the time of Linne. In the entomological part, the editor was considerably indebted to the writings of Fabricius ; for while he rejects his classification, his orders, and most of his genera, he has copied no small portion of his new species. He has, in many instances, described the same species twice

or three times, under differeat names, according to Dr. Leach : ' but we are surprised,' he adds, ' that his errors are so few, when we consider that he was but a closet compiler.'

Olivier, the next systematic writer of con- sequence, and one of the ablest of the French entomologists, retains the Linnaean arrangement in his Entomologie, ou Histoire Naturelle des Insectes

; from the title of which we infer, that its author proposed to have treated on every class and order, and, in conformity with the first part, to have accompanied the whole with figures. Several fasciculi or numbers were published, amounting, altogether, to about three volumes ; the whole of which, however, are confined to the order coleoptera, and even that remains incom- plete. So far as it does proceed, the work is valuable. Olivier is also the author of several other entomological writings. In the Journal d'Histoire Naturelle, he has a memoir, Sur 1'Uti- lite de I'etude des Insectes, relativement a 1'Agriculture et aux Arts. He is also the pro- poser of a methodical division of insects, in the Dictionnaire Entomologique. According to this plan, insects are to be divided into four parts, namely, 1. Insects with four wings, 2. Insects with two wings and two wing-cases ; 3. Insects with two wings ; 4. Insects without wings in either sex. These are subdivided into eight orders, the characters of which are taken from the mouth. In 1791 appeared the first volume of the Transactions of the Linnaean Society of London, and contained the following papers : 1. On the Phalaena Bombyze Lubricepeda of Linnasus, and some other species allied to it ; by T. Marsham, Esq. 2. Some Observations on the Natural History of Curculio Lapathi and Silpha grisea of Linnaeus; by W. Curtis, Esq. 3. Account of a Singular Conformation in the Wings of some Moths, by Esprit Giorna. 4. Descriptions of two new Species of Phalaena, by L. Bosc ; and, under the head of extracts from the minute book, an account of a new Buprestis, communicated by Mr. Dryander. The institu- tion of this society has much promoted the study of this as of every other branch of natural history. In 1792 was commenced, and continued with great spirit for many years, a mon hly publication, entitled The Natural History of British Insects, by Mr. Donovan. The design of this undertak- ing was to afford scientific and general descrip- tions, accompanied by appropriate colored figures of every insect discovered in this country; and so far as that desirable object could be accom- plished, in all

their various states of transforma- tion. Mr. D. in 1809, says ‘ Without incurring the charge of presumption, the writer believes he may be allowed to observe that the present constitutes the most copious work of its kind that has hitherto, or probably ever may be under- taken, as an elucidation of the entomology of Britain.’ We have been indebted to it for much information and pleasure in the investigation of this science. It was continued to the extent of eighteen volumes. In 1798 and 1800 Mr. Do- novan also enriched this science with his two valuable works on oriental entomology, entitled The Natural History of the Insects of China and India, the former containing many subjects col-

lected by the embassy under lord Macartney, and the latter, also from the first sources of ori- ginal information, being more immediately intended to elucidate the entomological produc- tions of the British possessions in India.

The year 1792 also gave birth to O. F. Mul- let’s celebrated work, Entomostraca seu Insecta testaceaquae in aquis Daniae et Norvegiae reperit, descripsit et Iconibus illustravit, O. F. Miiller. Frankfurti, 4to. In this volume, all the Entro- mostraca, which Linne” had comprehended under the generic title monosculus (excepting his cancer salinus and stagnate), are arranged as follows :

I. MONOCULI. * Univalves. Gen. I.Amy nome;

2. Nauplius. ** Bivalves. Gen. 3. Cypris ; 4.

Cy there; 5. Daphnia. *** Crustacei. Gen. 6. Cyclops; 7. Polyphemus.

II. BINOCULI. * Univalves. Gen. 8. Argulus ;

9. Caligus; 10. Limulus. ** Bivalves. Gen. 11. Lynceus.

What Mr. Donovan calls ' a valuable systematic paper,' proposing 'a new arrangement of the papilios,' by Mr. William Jones, occurs in the second volume of the Transactions of the Lin- naean Society, printed at London in 1794. 'The object of this communication is to point out, that the shape of the wings, which form a principal character with Linnaeus, in his distribution of this genus into families, though various at the first view, approach each other so gradually, that it is impossible to draw from them the distin- guishing line between each family. The number of species known to Linnaeus is estimated at rather more than 274, whereas the writer ob- serves, he had seen above 1000 in various cabi- nets, and about 400 more represented in various publications ; and, from an attentive examination of these, is induced to offer the following amend- ments to the characters of each family, as defined by Linnaeus. The latter author describes the equites as having ' the upper wings longer from the posterior angle to the point than to the base ; and the antennae often filiform :' this is corrected by saying, ' the upper wings are longer from the posterior angle to the point than to the base, occasioned by having four nerves instead of three, visible in eve-y other family. The palpi frequently only a brush; under wings, with a connecting nerve in the centre, and without an abdominal groove.' — Heliconii. (Wings narrow, entire, often naked, or deprived of scales ; the upper wings long, the inferior short.' Linn. To this character is added, that the upper wings have ' a connecting nerve in the centre, very slightly grooved to admit the abdomen, which is in gene- ral long, as are also the antennae. — Danai. 'Wings entire.' Linn. Addition: 'the under with a connecting nerve in the centre, and a deep abdominal groove; palpi projecting.' — Nym- phaks. 'Wings denticulated. Linn. Addition: ' the under without a connecting nerve in the centre, and with a deep abdominal groove; palpi projected.' — Plebeii. ' Small rurales ; spots on the wings obscure.' Linn. Addition : ' tho- rax and abdomen slender ; under wings without a connecting nerve ; antennae clubbed

:' and

these are divided into two sections, those with long, weak, flexible tails; and those without tails, and having the wings entire. — Plebeii urbi- colce. 'Spots on the wings for the most part transparent.' Linn. These, Mr. Jones divides into three families, according to the following character : — * Thorax and abdomen short, thick, or broad; under wings without a connecting nerve; antenna; uncinated, or crooked at the extremity. * * With upper wings pointed at the extremity, and long in proportion to their width. *** Upper wings less extended, and together with their under wings more rotund ; their mar- gins entire. There still remain some papiliones, which do not rank with any division above- mentioned : these are generally of a large size, without an abdominal groove ; have no connect- ing nerve ; their antennae generally acuminated ; and the veins of both upper and under wings extending from their root to the extremity nearly in straight lines. The author of this paper con- stitutes these as a new family, under the name of romani.'

Mr. Dryander's second volume of Catalogus Bibliothecae Historico-Naturalis, Josephi Banks, baroneti, &c., comprehending the entomological works of that invaluable library, is here worth notice. It issued from the press in 1796. The arrangement of the insects is very classical and original (a modification of that of Lmn^), and the descriptions most excellent. In 1796, also, P. A. Latreille, whom Dr. Leach calls ' the first of entomologists,' produced his Precis des Carac- teres des Genres, a work which commences a new era in the science of entomology, and, in which, for the first time, the distribution of insects, Crustacea, &c., into families, is indicated. The genera are characterised by their organs of mastication.

As we cannot further detail the progress of this science annually, we may here pursue the development of this most important modern system : —

In 1803 this distinguished writer furnished an interesting paper to the first volume of the Annales du Museum d'Histoire Naturelle, com- menced this year. It was entitled Observations sur quelques Guepes, et description d'une larve et d'une espece ine"dite de Casside. In the third volume of the same work appear two papers by Latreille. 1. Observations sur 1'Abeille parietine, &c., et Considerations sur le genre auqu' elle se rapporte. 2. Des Langoustes du Museum Na- tional d'Histoire Naturelle.

In 1809 Latreille produced the first volume of his Genera Crustaceorum et Insectorum, Paris, 8vo. Two more volumes appeared during the following year, and a fourth in 1809. This is characterised by Dr. Leach as by far the best systematic work of the kind hitherto published : and the article INSECTA, in the Supplement to the Encyclopaedia Britannica, is pronounced (article ENTOMOLOGY) to be founded on the outline of Latreille's system; but the plan of the editor seems to have been afterwards changed ; it pre- sents no such outline, and was evidently furnished by another writer.

The Annales du Museum, torn. XI, contains Notice Biograph. sur J. C. Fabricius. 'Tar la-

treille. And vol. XII. of the same work, for 1 809, 1 . Nouvelles Observations sur la maniere dont plusieurs insectes de 1'ordre hymenopte-e pourvoient a la subsistance de leur posterity ; par Latreille. This memoir consists of some very interesting observations on the economy of the genera bembex, philanthus, anthophora, and parnopes. Tom. XIII., Latreille sur le genre Anthidium de Fabricius, &c., in which the spe- cies are well described.

In 1810 this writer published Considerations sur 1'Ordre Naturelle des Crustaces des Arach- nides, et des Insectes, 8vo. 'A most excellent little manual for the scientific student' (Leach). Vol. XIX. of

the Annales du Museum contains a Memoire by Latreille, entitled Sur un Insecte que les Anciens r^putoient fort venimeux, et qu'ils nommoi'ent Bupreste, in which he attempts to prove the buprestis of the ancients to have been a meloe, or at least of the same natural family.

Memoires du Museum, &c., torn. III., 1817, contains, 1. Introduction a la Geographic gene- rale des Arachnides et des Insectes, ou des Cli- mats propres a ces animaux, par P. A. Latreille. 2. Considerations Nouvelles et Generates sur les Insectes vivant en Socie"te, par le m£me.

The last important work of this writer on entomology with which we are acquainted, is the

third volume of Le Regne Animal, &c., by Cu- vier, in which he was indebted to Latreille for Les Crustaces, Les Arachnides, et Les Insectes. The Crustacea are arranged into five orders, viz. 1. Decapodes, comprehending our orders brachy- ura and macroura. 2. Stomapodes, including squilla. 3. Amphipodes, embracing our first division of the edriophthalma, or those with com- pressed bodies. 4. Isopodes, under which he has placed the onisci of Linne, or our edriophthal- raa, with depressed bodies. 5. Branchiopodes, or the entomostraca of Mu'ller. The arachnoi'da he divides into two orders. 1. Pulmones (un- ogata, Fabr.). 2. Tracheennes ; but the charac- ters have not directed his classification rigorously. The myriapoda he has placed with the insects, of which they form the first order. To the orders given in his Genera Insectorum, he has added rhipiptera (strepsiptera, Kirby), which is placed between the hymenoptera and the diptera.

Mr. Kirby has denominated this the Eclectic System. It is founded on a consideration of the entire structure of these interesting tribes, which he divides by classes into natural groups from the order to the genus. Mr. Kirby has given very valuable tables, both of the orders and sub- ordinate groups of this system, from which we can

only find space for the following :—

CLASS.

ORDER.

FAMILY.

TRIBE.

f I. Crustacea.

C Pulmonarire. < II. Arachnida. < f.

1

C I. Myriapoda. \

r Sedenta- \ rise. Araneides • • -\ Pedipalpse. * Scorpionides. v Vagantes. Pseudoscorpiones. Holetra

/'Territelae. iTubitelse. < Inequitelae. 1 Orbited. vLaterigradiE.

^Trombidites. * Ricinisc. '\ Hydrachnellae. vMicrophthirae.

Chilognatha. Chilopoda. Lepismena3.

3.

Parasita. j

Mandibulata. Edentula.

4.

Suctoria.

III. Insecta.

5.

Coleoptera.

•<

6.

Orthoptera.

7.

Hcitiiptera.

8.

Neuroptera.

9.

Hymenoptera

10.

Lepidoptera.

11.

Rhiphiptera.

1

L12.

Diptera.

Lamarck afterwards (Anim. Invertebr. Arti- cul. Ann. du Mus. 1821) proposed a fourfold arrangement of his classes into 1. Crustacea. 2. Insecta. 3. Crustaceo- Arachnida. 4. Arach- nida ; inserting the polypods in the Crustacea, and the parasita in the arachnida, under the name of pedicularia. He also divides the in- secta into mandibulata and haustellata, making a separate order of the pupipara.

We feel bound before we close this sketch to notice the labors of Clairville,Dume'ril, Lamarck, and CUVIER, on the continent of Europe; and those of our own intelligent countrymen, Dr. Leach, Messrs. Kirby and Spencc, and M'Lcay.

In 1798 Clairville published a most interest- ing work on the insects of Switzerland, entitled Entomologie Helvetique, in which he has thus distributed them : —

ORDER I.— PTEROPHORA. With wings.

A MANDIBULATA. With jaws. Sect. 1. Elythroptcra. Wings crustaceous.

2. Deratoptera. Wings coriaceous.

3. Dictyoptera. Wings reticulated

4. Phleboptera. Wings veined.

B. HAUSTELLATA. With a. sucker. Sect. 5. Halteriptera. Wings with a balance. 6. Lepidoptera. Wings covered with powder

Sect. 7. Hemimeroptera. Wings half obscure, half diaphanous.

ORDER II.— APTERA. Without wings.

A. HAX;STELI,ATA. With a sucker. Sect. 8. Rophoteira. With a sharp rostrum.

B MANDIBULATA. With jaws. Sect. 9. Pododonera. Runners.

The first volume treats of 'the Curculionida, and illustrated by some very beautiful plates. Vol. II. which appeared in 1806, of the Carabi- dct and Dyticida. Both are valuable and almost essential additions to an entomological library.

In 1800 Cuvier, with the assistance of Du- me>il, gave to the world his Lemons d'Anatomie Comparee, Paris; in which the anatomy of in- sects is largely treated, and a new arrangement of them proposed. They are divided into those with jaws, such as grathapftres, neuropteres, hymenopteres, coleopteres, and othopteres ; and, secondly, into those that want jaws, hemipteres, lepidopteres, diptcres, and apteres. In 1803 Cu- vier contributed a Dissertation critique sur les espe"ces d'Ecrevisses connues des Anciens, el sur les noms qu'ils leur ont donnes ; to the second volume of the Annales du Museum.

We have noticed the appearance of his Com- parative Anatomy in 1805 : it will mark the relative estimation of insects in this system to observe here, that the whole animal kingdom is divided by this naturalist into four great types : —

1. VERTEBROSA. — Animals which have their brain and the principal part of their nervous system enclosed within vertebrae, and their mus- cles attached to a bony skeleton.

2. MOLLUSCA. — Those that have no skeleton ; whose muscles are attached to their skin, and whose nervous system is irregular in its form and distribution.

3. ANNULATA. — Those that have no skeleton; whose muscbis are attached to their skin, which is hard, or to processes proceeding from it ; and whose nervous system consists of a series of knots or ganglia, brought into communication by two longitudinal nervous cords.

4. RADIATA or ZOOPHYTES. — Those whose bo- dies are radiated, and in whom no nervous sys- .tom has been discovered, and who have but one opening for the reception and rejection of their food.

The Annulata, in which he obtained the in- valuable assistance of Latreille, includes the in- secta of Linne".

Lamarck's Systeme des Animaux sans Verte- bres, is dated Paris, in the ninth year of the revolution (1801). This accurate observer of nature proposes to divide insects into three pri- mary classes: namely, 1. Those with mandibles and jaws. 2. Those with mandibles and a kind of trunk. 3. Those without mandibles, but having a trunk or sucker. The first of these classes contains the coleoptera, orthoptera, and neuroptera ; the second is confined to the single order hymenoptera ; and the third includes the lepidoptera, hemiptera, diptera, and aptera. The coleoptera are subdivided into three families, according to the number of joints in the feet, as those with five joints in all the feet ; those with five joints in each of the four anterior feet, and

four in those of the posterior pair. Most of the Linnaean aptera are removed to a class preceding the insecta ; the only genus admitted into the aptera of Lamarck being the pulex. These are certainly valuable suggestions in the philosophy of arrangement.

The Rev. W. Kirby first appeared, we believe, as a writer on entomology, in the fourth volume of the Linnaean Transactions, to which he con- tributed— 1. Amophila, a new genus of Hyme- nopterous Insects, including the Sphex sabulosa «f Linne". 2. History of Tipula Tritici, and Ichneumon Tipulae, &c. His next production was characterised by Dr. Leach as 'the only pureiy scientific work on entomology, that had appeared in Britain since the time of Ray.' It was published in 1802, in two vols. octavo, and entitled Monographia apum Angliae ; a Disserta- tion on the Bees of England. The author com- mences with an introduction, in which he gives a general view of the rise and progress of this branch of entomology, with remarks on the vari- ous works treating of the subject, definitions of the terms used in describing the genera and spe- cies by different authors ; and, after pointing out the confusion that had reigned throughout the order hymenoptera, proposes a new set of terms, with comments on terminology in general. The characters of the order hymenoptera, with the

generic characters, &c., are next given, inter- mixed with remarks on the economy of each group. Under the head Addenda we have re- marks on other hymenopterous genera : and, at the end of the first volume, a series of outline plates, explaining the various parts of the mouth, &c., peculiar to each subdivision. The second volume treats of the species, with occasional re- marks on the peculiar economy of each. The descriptions are minute, and extremely accurate. ' It is a fact worth relating,' says Dr. L., ' that Latreille, the first of entomologists, at the same time wrote on the subject, and established simi- lar divisions with those proposed by Kirby, con- sidering each, however, as a peculiar genus. Kirby formed from the Linnsan genus apis two genera, apis and melitta, which answer to La- treille's two families, apiarise and andrenetae. Latreille's divisions are more numerous and more correct than those of Kirby ; but this arose no doubt from the longer experience of the author, and the greater extent of his collec- tion.'

But the work by which this gentleman is best known is his Popular Introduction to Entomo- logy, or the Elements of the Natural History of Insects, in 4 vols, published in conjunction with his friend Mr. Spence. Vol. i. appeared in 1815 ; vol. ii, in 1817, and here the labors of his coadjutor almost entirely cease ; vols. ii. and iii., containing his system and the his- tory of this science, appeared in 1826, and are particularly valuable. We have been in- debted to them for many interesting facts in this paper.

Dr. Leach also first appeared as a writer on entomology in the Transactions of the Linnrean Society: the volume for the year 1814 contains An Essay on the British Species of Meloe, with Descriptions of two Exotic Species, by W. E.

Leach. His next work known to us is, The Zoological Miscellany ; or Descriptions of New, Rare, or Highly Interesting animals, by ^William Elford Leach. Illustrated with Colored Figures, by R. P. Nodder. Vol i. It contains descrip- tions and figures of several new and curious genera and species of insects. A second volume was published in 1815. Dr. Leacn has also distinguished himself as a contributor to the D'c- tionnaire des Sciences Naturelles, Sec., par plu- siers Professeurs du Jardin du Roi, &c., of our French neighbours : the articles on Insects were written by professor Dumeril ; those on Crus- tacea by Dr. Leach, as correspondent of the French Museum. Dr. Leach is likewise the author of the article CRUSTACEA and several valuable papers on natural history in the Edinburgh Encyclopaedia of Dr. Brewster, and of the articles ANNULOSA and ENTOMOLOGY in the Supplement to the Encyclopaedia Britannica. On the whole, and to justify our preference of the system of the immortal Swede, ' entomology,' to adopt the language of Mr. Spence, ' is under

the greatest obligations to Illiger in Germany Latreille in France, [Donovan, Kirby, Leach, and Spence, we may add, in England] ; who, having had the good sense to reject the useless while they retain the valuable parts of the Fabri- cian system, are laboring, by the institution of new genera built upon firm and intelligible cha- racters, to extricate the science from the chaos into which that author has unwittingly reduced it. Fabricius's system has now had a fair trial of upwards of thirty years, and it was at one time universally followed on the continent ; yet so far is experience from having confirmed the asser- tion of its author, ' that the Linnaean system is only calculated to introduce confusion into the science,' that the very system professing to dissi- pate that confusion is even now fast sinking into oblivion, while the Linnaean orders and generic characters, with such improvements as reason and analogy suggest, and as Ltnnc h; in- self would have approved, are reverted to by the most acute and learned entomologists of

the

ENTRAI'L, v. a. From en and TRAIL, which see. To mingle, diversify, interweave. Ob- solete.

Over him, art striving to compare With nature, did an arbor green dispred,

Framed of wanton ivy, flowering fair, Through which the fragrant eglantine did spread, His pricking arms entrailed with roses red.

Faerie Queens. A little wicker basket, Made of fine twigs, entrailed curiously, In which they gathered flowers.

Spenser's Prothal.

ENTRAILS, n. s. plur. Fr. entr 'allies ; Span. entranas, from Gr. tvrtpa, i. e. tvrof, within, or Lat. intra, within. The intestines, or inward parts.

A precious ring that lightens all the hole, And shews the ragged entrails of this pit.

Shakepeare.

What, h«th thy fiery heart so parched thine entrails, That not a tear can fall ? Id. Henry VI.

The earth hath lost

Most of her ribs, as entrails; being now Wounded no less for marble than for gold.

Ben Junson.

The entrails are all without bones ; save that a bone is sometimes found in the iieart of a stag.

Bacon'g Natural History.

1 tear that hardened heart from out her breast, Which with her entrails makes iny hungry hounds a

feast. Dryden.

Every capacious galleon's womb was filled With what the womb of wealthy kingdoms yield, The new world's wounded entratlt they had tore, For wealth wherewith to wound the old one morn.

Mareell.

He had brought to light but little of that treasure, that lay so long hid in the dark entrails of America.

Locke.

The huntsman now, a deep incision made, Shakes out with hands impure, and dashes down Her reeking entraili and yet quivering Iieart.

Somervile.

ENTRA'NCE, v. From en and trance. Fr. transe ; Lat. trunseo, to pass over, or from one

region to another. To inspire with ecstasy ; make insensible to outward objects.

With delight I was entranced, and carried so far from myself, as that I am sorry that you ended so soon. Spenser.

Adam, now enforced to close his eyes, Sunk down, and all his spirits became entranced.

Milton.

And I so ravished with her heavenly note, I stood entranced, and had no room for thought ; But all o'erpowered with ecstasy of bliss, Was in a pleasing dream of paradise. Dryden. Wit too copiously poured out, agitates the hearer with emotions rather violent than pleasing j every one shrinks from the force of its oppression ; the company sits entranced and overpowered ; all are astonished, but nobody is pleased. . Johnson.

Some to the fascination of a name Surrender judgment hoodwinked. Some the style Infatuates, and through

labyrinths and wilds Of error leads them, by a tune entranced. Cowper. To it the live-long night there sings A bird unseen — but not remote : Invisible his airy wings, But soft as harp that Hour! string?

His loug^entrancing note ! Byron.

ENTRANCE OF HOUNDS is a phrase used by sportsmen, to express the instruction of them in the art of hunting. This is thus described by Mr. Daniel and others.

*The time of entering hounds is when they are about twelve months old ; when, being brought up from their walks, they should be kept separate from the pack. They are then to be taught to take the water and swim ; they are to be laid abroad in the heat of the day, to inure them to fatigue and exercise. ; and they must be frequently led through flocks of sheep and warrens, to ust; them to be und*er command, and to know that they are t6 run at nothing but what the huntsman orders . They must be carefully instructed each to know his own name, the voice of the huntsman, and the notes of the horn ; and finally, to use their own language in A proper manne r. When young*

hounds well know and answer to their names, they should be put into couples, and walked out amongst sheep ; and if any be particularly snap- pish, leave the couples loose about their necks in the kennel, till they are more reconciled to them. If any of them should be very trouble- some, couple them to old hounds, always avoid- ing coupling two dogs together, if possible, and taking care that the couples be tight enough to prevent their heads being slipped out of the col- lar. After being walked out frequently amongst the sheep, they may be uncoupled a few at a time, and such as offer to run after them should be well chastised ; the cry of ware, sheep, will afterwards stop them, without further

application of the whip ; but if once suffered to taste the blood, it will be difficult to reclaim them. If young and old hounds are aired together, let the former be in couples ; they are always ready for mischief, and idleness may induce even the latter to join in it. It may be as well to air the young hounds in the country where they are designed to hunt, as they thus acquire some knowledge of it, and will more readily find their way home. Young hounds should be entered as soon as you can ; in woodlands and grasslands, it will of Bourse be earlier than in corn countries. Sport in fox-hunting cannot be said to begin before October; but in the two preceding months a pack is either made or spoiled. The best time of entering them is about noon, on a fair warm day ; for if they be entered in the morning, they will give out when the heat of the day comes on, and betake themselves to shady places to rest and sleep. Accordingly it is said that hounds should be entered in the heat of the day, and about October or November, for hare-hunting, the weather being then temperate, and young hares that have not been hunted being then more easily taken for their encouragement. A neces- sary caution is also added, never, at the entering of young hounds, to help them to kill the hare with grey-hounds, for this will deter the hounds from putting their noses to the ground, or trying to hunt her themselves. Take the most advanced, that the game may not stand long before them, and let them be well rewarded when all is over. This ought to be repeated at least once a week, for two months successively ; by this means they will be so fleshed and seasoned with what game you may enter them at, that they will never afterwards leave off the pursuit. Hounds, after they are two years old, should be hunted three times a week, if they feed well, and may be kept out the greatest part of the day to try their stout- ness. The new hounds should always be entered with the best and staunchest hounds that can be had ; and there is not to be one barking dog suffered in the fifild on this occasion.

Whatever the hounds are finally intended for, it has

been said that the hare is the best game to enter them at, because, in this chase, they will learn all the turns and doubles that they can possibly meet with in any other k'ind, and how to come to the holla. They will learn also from this, to have a perfect and nice scent, and hard feet, by being used to high ways, beaten paths, and dry hills. On the other hand, it has been maintained, that young hounds should always

be entered at their own game ; because it is a strange contradiction to enter them at a hare, and then to/;ut them to pieces for afterwards hunting the hare. Most dogs like that scent best, which they were first blooded to ; and if blood of the fox be of so much service, that of the hare can- not be deemed a matter of indifference. It is, therefore, without doubt most rational to use them to that scent only, which it is intended they should hunt.

Nature will instruct them how to hunt : art is only necessary to prevent their hunting what they ought not to hunt. Should any young hounds be very fond of hare, let some be found sitting, and started before them, they will soon be checked and cease to run after them. If they are to be steadied from deer, they should often see deer, and they will not regard them. After this probation, a cub should be turned out before them, with some old hounds to lead them on, and they will not long give trouble. After young hounds stoop to a scent, are become handy, know a rate, and stop easily, put them, a few only at a time, into the pack after the old ones have been hunted and had blood ; let them be taken the first day where they are certain of finding.

Hounds should be low in flesh when hunting commences; because, the ground being generally hard at that season, they are liable, if lusty, to be shaken. If foxes are plentiful, take the young, with some of the steadiest of the old hounds, where there is least riot, and, should you there find a litter of foxes, the young hounds will be so much improved as to need little subsequent instruction. If any cubs be run to ground, and blood be not then wanted,

let them be brought home, and they will be serviceable, should blood be necessary at any time for the young hounds. Frequent hallooing is of use with young hounds, as it keeps them forward, prevents their being lost, and from hunting after the others : the more, therefore, a fox is seen and hallooed, the better. Young hounds are thus made eager, and taught to exert themselves.

At their first entering, hounds cannot be en- couraged too much : when they are handy, love a scent, and begin to know what is right, it will be soon enough to chastise them for doing wrong; in which latter case, one severe beating will save much trouble. The whipper in should use his voice as well as his whip when he flogs a hound, and take care that the stroke precedes the rating ; and he should remember, that the smack of the whip is often as serviceable as the lash to one who has already felt it. The day after young hounds have had blood is a proper time to take them where there is riot, and, if they merit it, to chastise them : it is always best to correct them when they cannot help knowing what they are corrected for. When hounds go out for this pur- pose, it should be at a late hour ; as the worse the scent is, the less inclinable will they be to run it, and the stopping of them will be more easy and immediate.

Upon the day when a tox is proposed to be turned out, young hounds should draw small covers and furze brakes, where are hares or deer ; a little rating and flogging, before they are en- couraged to vermin, teaches them both what

they should not and what tney should do. A hound that hears a voice which has often rated Kim, and the whip he has often felt, ought to stop : when hounds are rated, and do not answer the rate, they should be coupled up immediately, and made to know the whipper-in. A most essential point in rendering

hounds obedient is to make them understand you; and therefore the language should be appropriate and uniform. Yorng hounds should be hunted in large covers to tire them out, provided the whipper-in can easily get at them ; but when there is much riot there are no openings, the purpose will not be answered, unless you have a body of old hounds to carry on the right scent : for the young hounds, as soon as the ground becomes foiled, will be scattered about the cover, hunting old scents, and will not proceed fast enough to tire themselves. Besides,, every fox-hound will leave a bad scent of a fox for a good one of either hare or deer, unless he has been made steady from both. Young hounds are all given to riot ; but the better they are bred, the less trouble will they be likely to give : high bred fox-hounds love their own game best: they should hare little rest; one day they should be hunted in large covers, where foxes are plentiful ; the next, they ought to be walked out amongst hares and deer, and stopped from riot ; and the day following be hunted again as before. By this management young hounds will soon become steady.

At first young hounds should be entered to vermin only; and they should be used, as early as possible, to the strongest and thickest wood's and furzes, and they will seldom be shy of them afterwards. By being awed from hare and deer, and being taught to hunt only vermin, hounds will stop at a word, because that word will be understood by them ; and a smack of the whip will spare the inhuman trouble of cutting hounds in pieces for faults, which, if entered at hare, they have been invited to commit. In hare- hunting, the hounds, when first entered, must have all the advantages given them that can be. When the hare is put up from her form, it must be observed which way she went, and the scent must be left to cool a while, and then they must be laid in, and helped as much as can be, oy wind, view, holla, or pricking the passage ; nor will it be amiss, for the first time, to give them a hare tired the same morning in her course.

Some are of opinion that the best way to enter young

hounds is, to take a live hare, and trail her upon the ground, sometimes one way, and sometimes another, and then to draw her off to a convenient distance, and hide her, that the dogs, taking the scent, may follow all the traces through which she was drawn, and at length find her. It has been said, however, that beating the hare up from her seat is a shorter way than trailing her from her feed to her form.

The huntsman ought well to understand the nature and disposition of his hounds in finding out the game ; for some hounds are of that tem- per, that when they have found the scent, they will run forward with it, not making any noise, nor show of the tail ; others, when they have found a head, will show the game ; and some, having found the footings of the beast, will prick

up their ears a little, and either bark, or only wag their ears, or the hinder part of their bodies. This difference of natural disposition the hunts- man is particularly to observe in the young and newly entered pack, otherwise he will never un- derstand them, nor ever be able to hunt them to any credit or advantage.

For entering the hound at hart or buck, he should be in the prime of grease, for then he cannot stand up, or hold the chase so long. The forest pitched upon should have all the relays at equal distances, as nearly as may be ; but then the young hounds should always have some old staunch ones to eater them, and they should be led to the farthest and last relay, and the hart or buck should be hunted to them. Being come up, the old hounds should be uncoupled ; and when they have found the hart, and well entered the cry, then the young ones are to be uncoupled also ; and if any of them are found to lag behind, they must be whipped and beaten forward.

In whatever place the hart is killed, the neck should be immediately flayed, and the hounds re- warded ; for it is always best to do this while the flesh is hot. Another very good method of entering

hounds at the buck, is to take one in the toils or nets, and to wound one of his legs, so as to disa- ble him from running either very swiftly or very far: then let him loose, and first let a blood-hound trace the creature, then let loose all the young hounds ; and when they have run down the animal, reward them with the neck. Some enter their hounds with a toil : but this is a bad way ; for the hart being in this case always in sight, and not able to run an end, makes a great num- ber of doubles and turnings : this is verv diffe- rent from the chases they are to meet with after- wards , and when they find a hart run in the common way, straight forward, and out of sight, they will leave the chase, as unlike that by which they were taught. Daniel's Rural Sports.

ENTRAP', v. a. Old Fr. entraper, from en and TRAP, which see. To catch in a snare or trap ; to ensnare, involve, beguile.

An injurious person lies in wait to entrap thee in thy words. Eccles. viii. 11.

Misfortune waits advantage to entrap The man most wary, in her whelming lap.

Faerie Queene. Take heed, mine eyes, how ye do stare

Henceforth too rashly on that guileful net ; In which, if ever eyes entrapped are,

Out of her bauds ye by no means shall get.

Spenser, The fraud of England, not the force of France,

Hath now entrapi the noble-minded Talbot.

Shakspeare.

He sought to entrap me by intelligence. Id.

Nor hounds alone this noxious brood destroy ;

The plundered warrener full many a wile

Devises to entrap his greedy foe,

Fat with nocturnal spoils. Somervile.

ENTREAT, v.a. &n.^ Fr. trailer; see

ENTREAT'ANCE, n. s. £ TREAT. This word

ENTREAT'Y, J seems to have had

originally a meaning synonymous with treat, to

behave towards ; then it was applied to treating

with, as in a treaty ; and then in its common

meaning, to beg. As a verb active it now sig

nifies to solicit, prevail with ; as a verb neuter,

to rtffer or submit a treaty ; to discourse, make petition. Entreatance is petition, solicitation, and is synonymous with entreaty.

The Lord was entreated of him, and Rebecca his wife conceived. Gen. xxv. 21.

Isaac entreated the Lord for his wife.

Id. xxxv. 21.

Whereas thy servant worketh truly, entreat him not evil. Eccles. vii. 20.

Alexander was the first that entreated peace with

Mac.

The garden of Proserpino this hight, And in the midst thereof a silver seat,

With a thick arbour goodly overdight, lu which she often used, from open beat, Herself to shroud, and pleasures to entreat.

Faerie Queene.

I have a wife, whom, I protest, I love ; I would she were in heaven, so she could Entreat some power to change this currish Jew.

Sltakspeare.

My lord, I must entreat the time alone. — God shield I should disturb devotion. Id.

Must you, sir John, protect my lady here ? Entreat her not the worse in that I pray You use her well. Id. Henry VI.

If my weak orator

Can from his mother win the duke of York Anon expect him here ; but if she be Obdurate to entreatiei, God forbid We should infringe the holy privilege Of sanctuary. Id. Ricfiard III.

The Janizaries entreated for them, as valiant men.

Knollei.

The most admirable mystery of nature is the turn- ing of iron, touched with the loadstone, toward the north pole, of which I shall have farther occasion to entreat. Hakewill.

Heretofore they have been wont to be sued to, and entreated for without their own entreaty ; now their misery makes them importunate.

Bp. Hall's Contemplation.*

These two entreatance made they might be heard, Nor was their just petition long denied. Fairfax.

Well I entreated her, who well deserved : I called her often ; for she always served : Use made her person easy to my sight, And ease insensibly produced delight. Prior.

It were a fruitless attempt to appease a power, whom no prayers could entreat, no repentance recon- cile.

Rogers.

ENTRECASTEAUX (d'), a French offi- cer and circumnavigator, of the last century, received the command of two frigates, La Recher- che and L'Esperance, with which he sailed in quest of the unfortunate M. de la Perouse in 1791. He left Brest on the 27th of September, and died at sea July 20th, 1793. The expedition proceeded on its voyage without success, as to its grand object, and, after having sailed round the world, returned to France in 1794.

ENTREMETS, n. s. Fr. Small plates set between the main dishes.

Chards of beet are plants of white beet trans- planted, producing great tops, which, in the midst, have a large white main shoot, which is the true chard used in pottages and entremets. Mortimer.

ENTRE MINHO DOURO is an important pro- vince of Portugal, so called from its situation between the rivers Minho and Douro. It is bounded on the north by Gallicia, a province of Spain; on the east by Trazlos Montes and Spain;

on the south by the province of Beira, from which it is separated by the Douro ; and on the west by the Atlantic Ocean ; and extends from 40° 50' to 42° N. lat., and from 8° 55' to 7° 55' W.' long., being seventy miles in length, and fifty-two °in breadth. It contains 963 parishes, 1460 churches, 1130 convents, six sea-ports, and 800,000 inhabi- tants. It is altogether the most fertile, and the most populous territory in the kingdom. Its numerous and fine valleys are shaded by beautiful trees, and watered by limpid streams. Its air is pure and healthy ; and it produces corn, wine, oil, and flax, in great abundance, together with large flocks of sheep, and plenty of game and fish. The principal towns are Braga, Oporto, Viana, Amarante, Guimarsens, Ponte de Lima, and Pezo de Regna. Its rivers are the Minho, Lima, Neiva, Cavado, Ave, and the Douro, or Duero, augmented by the Tamega; all of which run west into the sea.

ENTREPAS, in the manege, a broken pace or going, that is neither walk nor trot, but has some- what of an amble. This is a pace or gait of such horses as have no reins or back, and go upon their shoulders; or, of such as are spoiled in their limbs.

ENTREVAUX, a town of France, in tne de- partment of the Lower Alps, and chief place of a canton, in the district of Castellane, on the Var, near the ruins of Glandeves; fifteen miles north- east of Castellare.

ENTROCHUS, in natural history, a genus of extraneous fossils, usually about an inch long, and made up of a number of round joints, which, when separate and loose, are called trochilae : they are composed of the same kind of plated spar as the fossil shells of the echini, which is usually of a bluish-gray color, and very bright where newly broken; they are all striated from the centre to the circumference, and have a cavity in the middle. The entrochi are found of all sizes, from that of a pin's head to a finger's length, and the thickness of one's middle finger ; and are plainly of marine origin, having often sea-shells adhering to them. They seem to be the petrified arms of that singular species of the sea star-fish, called stella arborescens.

ENTRUST', t-. a. En and TRUST, which see. To treat with confidence; commit to. See INTRUST.

It proves that my father was not mistaken when he supposed me too young to be entrusted with the ma- nagement of important affairs. Franklin.

ENTRY, in English law, is the taking posses- sion of lands or tenements with a title of entry ; it is also used for a writ of possession, where a man takes possession personally, or by his attor- ney. There is said to be a right of entry, and a title of entry.

Entry may also be defined, an extrajudicial and summary remedy, against certain species of injury by ouster, used by the legal owner, when another

person, who hath no right, hath previ- ously taken possession of lands or tenements. In this case, the party entitled may make a formal but peaceable entry thereon, declaring that thereby he takes possession ; which notorious act of ownership is equivalent to a feodal investiture by the lord : or he may enter on any part of it

in the same county, declaring it to be in the name of the whole. Lit. § 417. But if it lies in different counties, he must make different entries. Also, if there be two disseisors, the party disse- ised must make his entry on both ; or if one disseisor has conveyed the lands with livery to two distinct feoffees, entry must be made on both. Co. Litt. 252. If the claimant be deterred from entering by menaces or bodily fear, he may make claim as near to the estate as he can, with the like forms and solemnities : which claim is in force for only a year and a day. Litt. § 422. But this if repeated once in the space of every year and a day (which is called continual claim), has the same effect with, and in all respects amounts to a legal entry. The remedy by entry takes place in three only of the five species of ouster, viz. abatement, intrusion, and disseisin ; for, as in these, the original entry of the wrong doer was unlawful, they may therefore be reme- died by the mere entry of him who hath right. But, upon a discontinuance, or deforcement, the owner of the estate cannot enter, but is driven to his action : for herein the original entry being lawful, and thereby an apparent right of posses- sion being gained, the law will not suffer that right to be overthrown by the mere act or entry of the claimant. Yet a man may enter on his tenant by sufferance : for such tenant hath no freehold, but only a bare possession; which may be de- feated, like a tenancy at will, by the mere entry of the owner. But if the owner thinks it more expedient to suppose or admit such tenant to have gained a tortious freehold, he is then reme- diable by writ

of entry, ad terminum qui pre- teriit.

By the statute of limitations, 21 Jac. I. c. 16, it is enacted, that no entry shall be made by any man upon lands, unless within twenty years after bis right shall accrue. And by stat. 4 and 5 An. c. 16, no entry shall be of force to satisfy the said statute of limitations, or to avoid a fine levied of lands, unless an action be thereupon commenced within one year after, and prosecu- ted with effect.

A WRIT OF ENTRY is a possessory remedy, which disproves the title of the tenant or posses- sor, by showing the unlawful means by which he entered, or continues possession. Finch, L. 261. The writ is directed to the sheriff, requiring h;m to ' command the tenant of the land, that he' ren- der [in Latin, praecipe quod reddat] to the demandant the land in question, which he claims to be his right and inheritance; and into- which, as he saith, the said tenant had not entry, but by (or after) a disseisin, intrusion, or the like, made to the said demandant, within the time limited by law for such actions ; or that upon refusal he do appear in court on such a day, to show where- fore he hath not done it.' This is the original process, the praecipe, upon which all the rest of the suit is grounded ; wherein it appears that the tenant is required, e ther to deliver seisin of the lands, or to show cause why he will not. This cause may be either a denial of the fact of having entered by or under such means as are suggested, or a justification of his entry, by reason of title in himself, or in those under whom he makes claim ; whereupon the possession of the land is VOL. VIII.

awarded to him who produces the clearest right to possess it. Writs of entry are of divers kinds, distinguished into four degrees, according to which the writs are varied. The first degree is a writ uf entry sur disseisin, that lieth for the dis- seisee against a disseisor, upon a disseisin done by himself; and this is called a writ of entry in the nature of an assise. Second. A writ of entry sur disseisin in le per, against the heir by de- scent,

who is said to be in the per, as he comes in by his ancestor; and so it is if a disseisor make a feoffrnent in fee, gift in tail, Sac., the feoffee and donee are in the per by the disseisor. Third. A writ of entry sur disseisin in le per et cui, where the feoffee of a disseisor maketh a feofftnent over to another; when the disseisee shall have this writ of entry sur disseisin, &c., of the lands in which such other had no right of entry but by the feoffee of the disseisor, to whom the disseisor demised the same, who unjustly, and without judgment, disseised the demandant. 1 Inst. 238.

These three degrees thus state the original wrong, and the title of the tenant who claims under such wrong. If more than two degrees (that is two alienations or descents) were past, there lay no writ of entry at the Common Law. For, as it was provided for the quietness of men's inheritances, that no one, even though he had the true right of possession, should enter upon him who had the apparent right by descent or other- wise, but he was driven to his writ of entry to gain possession ; so, after more than two descents, or two conveyances were passed, the demandant, even though he had the right both of possession and property, was not allowed this possessory action ; but was driven to his writ of right, a long and final remedy, to punish his neglect in not sooner putting in his claim while the degrees subsisted; and for the ending of suits, and quiet- ing of all controversies. 2 Inst. 153. But by the stat. of Marlbridge, 52 Hen. III. c. 30, it was provided, that when the number of alienations or descents exceeded the usual degrees, a new writ should be allowed, without any mention of degrees at all. And accordingly, fourthly, a new writ has been framed, called a writ of entry in the post, which only alleges the injury of the wrong-doer, without deducing all the inter- mediate titles from him to the tenant; stating it in this manner, that the tenant had not entry, unless after, or subsequent to, the ouster, or injury done by the original dispossessor ; and rightly conclud- ing, that if the

original title was wrongful, all claims derived thence must participate of tht same wrong. Upon the latter of these writs it is (the writ of entry sur disseisin in the post), that the form of our common recoveries of landed estates is usually grounded.

In order to regain possession of lands by entry, &c., the manner of entry >s thus : — If it be in a house, and the door is open, you go into it, and say these words, — I do hert enter, and take pos- session of this house. But if the door be shut, then set your foot on the groundsel, or against the door, and say the before words : and if it be land, then go upon the land, and say, 'I here enter and take possession of this land,' &c. If another do it for you, he must say, ' I do here

enter, &c., to the use of A. B.' And it is neces- sary to make it before witnesses, and that a memorandum be made of it. Litt. 385. Co. Lit. 237, 238. Where an ejectment will lie, the con- fession of lease, entry, and ouster is sufficient in all cases, except in the case of a fine with procla- mations, in which case it is necessary to prove an actual entry; and the lessor of the plaintiff directing one to deliver a declaration to the tenant in possession, will not amount to such an entry. See EJECTMENT.

As to entries to make execution, &c., where a person is in a house with goods, &c., the house may be entered when the doors are open, to make execution. Cro. Eliz. 759. But it must be averred that the goods were in the house. Lutw. 1428, 1434. And a man cannot enter into a house, the doors being open, to demand a debt, unless he aver that the debtor is within the house at the same time. Cro. El. 6, 8. So

entry may be made on a tenant where rent is in arrear, to take a distress, &c. See EXECUTION, RENT, &c. ENTRY, AD COMMUNEM LEGEM, at Common Law, is the writ of entry which lies where tenant for term of life, or for term of another's life, or by the curtesy, &c., aliens and dies; he in the reversion shall then have this writ against whom- soever is in possession of the land. New. Nat. Br. 461.

ENTRY, AD TERMINUM^OI PRETERIIT, at a term that has eaded. A writ of entry anciently brought against tenant for years, who held over his term, and thereby kept out the lessor. But an ejectment is now the common mode of pro- ceeding; and by stat. 4 Geo. II. c 28, tenants for term of years, &c., holding over after demand made, are subject to double rent.

ENTRY, IN CASU CONSIMILI, in like case, is a writ that lies for him ia reversion by stat. W. 2. c. 24, against tenant fc* life, or tenant by the curtesy, who aliens in fee, &c.

ENTRY, IN CASU PROVISO, in the case pro- vided. Where a tenant in dower aliens in fee, or for term of life, or of another's life; then he in the reversion shall have this writ, provided by the stat. of Glouc. 6 Ed. I. c. 7, by which statute it is enacted, ' that if a woman alien her dower in fee, or for life, the next heir, &c., shall recover by writ of entry.' — See title DOWER. And the writ may be brought against the tenant of the freehold of the land, on such alienation, during the life of the tenant in dower, &c. — New. Nat. Br. 456. The above four writs of entry may all be brought either in the per, or in the cui or post.

ENTRY, in Scotch law, refers to the acknow- ledgment of the title of the heir, &c., to be admitted by the superior.

ENTRY, BILL OF, in commerce. In making entries inwards, it is usual for merchants to in- clude all the goods they have on board the same ship in one bill, though sometimes they may happen to be upwards of twenty several kinds : and, in case the goods are

short entered, additional or post entries are now allowed ; though formerly the goods so entered were forfeited. As to bills of entry outwards, or including goods to be exported, upon delivering them, and paying the customs, you will receive a small piece of parch- ment called acocket; which testifies your pay-

ment thereof, and all duties for such goods. If several sorts of goods are exported at once, of which some are free, and others pay customs; the exporter must have two cockets, and therefore must make two entries; one for the goods that pay, and the other for the goods that do not pay custom. Entries of goods on which a drawback is allowed, must likewise contain the name of the ship in which the goods were imported, the im- porter's name, and time of entry inwards. The entry being thus made, and an oath taken that the customs for those goods were paid as the law directs, you must carry it to the collector and comptroller, or their deputies ; who, after exa- mining their books, will grant warrant, which must be given to the surveyor, searcher, or land- waiter, for them to certify the quantity of goods; after which the certificate must be brought back to the collector and comptroller, or their depu- ties, and oath made that the said goods are really shipped, and not landed again in any part of Great Britain. See BILL OF ENTRY.

ENTWINE', v. a. En and twine. To wreath or twist together. See INTWIXE.

With silvery gossamer entwined Stream the luxuriant locks behind. Darwin. None knew nor how, nor why, but he entwined Himself perforce around the hearer's mind ; There he way stamped, in liking, or in hate, If greeted once ; however brief the date That friendship, pity, or aversion knew, Still there within the inmost thought he grew.

Byron.

ENVEL'OPE, v. a. & n. s. Fr. enveloper ; Ital. invilupo. The word was formerly spelt envolupe, and

seems derived from the Latin involvo, involui, to roll up in, through the French and Italian languages. To enwrap, involve, cover, line. Taking the accent on the last syl- lable, as a substantive, it signifies the outward cover, wrapper, or fold.

His iron coat, all overgrown with rust, Was underneath, enveloped with gold, Darkened with filthy dust. Faerie Queene.

The best and wholesomest spirits of the night envelop you, good provost.

Shakspeare. Measure for Jfeafure. A cloud of smoke envelops either host, And all at once the combatants are lost : Darkling they join adverse, and shock unseen, Coursers with coursers justling, men with men.

Dryden.

It is but to approach nearer, and that mist that en- veloped, them will remove. Locke.

Nocturnal shades

This world envelop, and the inclement air Persuades men to repel benumbing frosts.

Philips.

Send these to paper-sparing Pope, And, when he sits to write.

No letter with an envelope Could give him more delight. Swift.

ENVELOPE, in fortification, a work of earth sometimes in form of a simple parapet, and at others like a small rampart with a parapet : it is raised sometimes on the ditch, and sometimes beyond it.

ENVEN'OM, v. c. From en and venom. To taint with poison; deteriorate or Disease with

poison or venom : hence to enrage ; exasperate ; as well as to make odious, or detestable.

The treacherous instrument is in thy hand, Unbated and envenomed. Shakfpeare.

Oh, what a world is this, when what is comely Envenoms him that bears it ! Id. As You Like It.

As sin is always dangerous ; so most, when we bring it into God's sight : it envenometh both our per- sons and services, and turns our good into evil.

Bp. Hall's Contemplation*. Alcides, from Oechalia crowned With conquest, felt the envenomed robe, and tore, Through pain, up by the roots Thessalian pines.

Milton.

With her full force she threw the pois'nous dart, And fixed it deep within Amata's heart ; That thus envenomed she might kindle rage And sacrifice to strife her house and husband's age.

Dryden.

Nor with envenomed tongue to blast the fame Of harmless men. Philips.

Of temper as envenomed as au asp, Censorious, and her every word a wasp.

Cowper.

ENVI'RON, v. a. } Fr. environner ; Old EN'VIRONS, n. s. pi. S Fr. engyronner, from Lat. in and gyrus ; Gr. tv and yvpoc, a circle ; within the circle. To enclose ; encircle ; sur- round ; envelope : environs are neighbouring parts or places ; it is a word never used in the singular.

But whanne ye schulen see Jerusalem be enuy rowned

with an cost : thanne wit ye that the desola cioun of it schal neighe. Wiclif. Luh 21.

Now be that here multiplied be 360 sithes ; and than theiben 31500 miles, every of eight furlongs, aftre miles of oure contree. So moche hathe erthe in round- ness, and of heights enviroun, aftre my opynyoun and myn undirstond.ynge. Sir John Mandeville.

Within the environing rocks stood the city.

Sandys.

Methought a legion of foul fiends Environed me and howled in mine ears.

Shahspeare.

May never glorious sun reflect his beams Upon the country where you make abode ! But darkness and the gloomy shade of death Environ you, 'till mischief and Despair Drive you to break your necks. Id. Henry VI.

I stand as one upon a rock, Environed with a wilderness of sea.

Shakspeare.

The country near unto the city of Sultania is on every side environed with huge mountains. Knolles.

The manifold streams of goodly navigable rivers, as so many chains, environed the same site and tem- ple. Bacon.

Since she must go, and I must mourn, come night, Environ me with darkness whilst I write. Donne.

I did but prompt the age to quit their clogs, By the known rules of ancient liberty. When straight a barbarous noise environs me.

Milton. Thought following thought, and step by step led

on,

He entered now the bordering desart wild, And with dark shades and rocks environed round, His holy meditation thus pursued. Id.

God hath scattered several degrees of pleasure and pain in all the things that environ and affect us, and blended them together in almost all our thoughts.

Locke.

The soldier, that man of iron, Whom ribs of horrour all environ.

Cleaveland.

ENULON, from iv, and ov\ov, the gums The internal flesh of the gums, or that part o- them which is within the mouth.

ENU'MERATE, v. a. i French, enumerer ;

ENUMERATION, n. s. 3 Span, and Port, enu- merar ; Lat. enumero, from numerus, a number. To reckon up distinctly or singly ; to number.

Whosoever reads St. Paul's enumeration of duties must conclude, that well nigh the business of Christi- anity is laid on charity. Sprat.

You must not only acknowledge to God that you are a sinner, but must particularly enumerate the kinds of sin whereof you know yourself guilty.

Wake's Preparation for Death.

Besides enumerating the gross defect of duty to the queen, I shew how all things were managed wrong.

Swift.

The chemists make spirit, salt, sulphur, water, and earth their five elements, though they are not all agreed in this enumeration of elements. Watts.

ENUN'CIATE, v. a. ^ Fr. enoncer ; Lat.

ENUNCIA'TION, n. s. tenuncio, i.e. e and

ENUN'CIATI VE, adj. £ nuncio, to relate, from

ENUN'CIATIVELY, adv.Jnuncius, a messenger. To declare distinctly ; proclaim ; relate : enun- ciative is declarative, expressive ; and the ad- verb corresponds.

Preaching is to strangers and infants in Christ to produce faith ; but this sacramental enunciation is the declaration and confession of it by meu in Christ, de- claring it to be done, and owned, and accepted, and prevailing. Taylor.

It remembers and retains such things as were never at all in the sense ; as the conceptions, enunciations, and actions of the intellect and will.

Hate's Origin of Mankind.

This presumption only proceeds in respect of the dispositive words, and not in regard of the enunciative terms thereof. Ayliffe.

A sentence always implies one complete proposition, or enunciation of thought ; but every sentence does not confine itself to a single proposition.

Irving's Elements.

ENUNCIATION is the utterance and combina- tion of the elements, and the consequent pro- nunciation of syllables, words, &c., as contra- distinguished from the tones, and tuning of the voice, and all that belongs to the melody of speech.

The perfection of enunciation consists in, 1. Distinctness, or the clear and perfect formation of the respective elements by right motions and positions of the organs of the mouth, accom- panied by proper degrees of energy and impulse to impress those elements fully and contradis- tinctly on the ear. 2. Articulation, or the act of combining and

linking together of the respec- tive elements, so as to form them into intelligible syllables and words, capable of being again com- bined into clauses and sentences for the proper conveyance of our ideas, thoughts, and determi- nations. 3. Implication, or the combination and apparent union of words in oral utterance, which are graphically separated ; and by which, with- out injury to the intelligible distinctness of the respective words, all differences of auditory im- pressions are removed between monosyllabic and polysyllabic composition in language.

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Mr. Sheridan, in his lectures, confounds arti- culation not only with distinctness hut with enun- ciation generally, and even with idiomatic pro- nunciation, Lect. ii. p. 21. 8vo. edit. But, not to insist upon the important axiom, that the very admission of synonyms is inconsistent with the progress and communication of scientific truth, if such were the use to which the term articula- tion were to be applied, why did the English grammarian go to the Greek language and to the science of anatomy to borrow a name for an idea which he had already a good and familiar English word fully and completely to convey ? Articulation in anatomy signifies the juncture of bones, or that flexible combination of joints or elementary portions into a limb, or of limbs into a body, by which the unity of the whole is con- stituted, without injury to the individuality of the parts. Or how came he to look out for a super- numerary name to one idea, while another idea equally indispensable to his science (for the com- bination of elements is as necessary to speech as their formation) without any separate or specific designation?

A good enunciation consists in that clear and accurate delivery of verbal language, by which the requisite qualities of distinctness and articu- lation are combined and modified ; and the due proportions and alterations of sound and inter- ruptions, constituting the specific relations of letters, syllables, members, clauses, and sen- tences are preserved.

ENUNCIATTTE ORGANS, those portions and members of the human mouth, by the motions, positions, and contact of which specific character is superadded to the original impulses of voice, so as to render them communicable signs of dis- tinct ideas. See ORGANS OF SPEECH.

EN'VOY, n s. Fr. envoye, from envoyer, to send, or Ital. inviare, from Lat. in and via, a way. A public messenger. See below.

Now the Lycian lots conspire With Phoebus ; now Jove's envoy through the air Brings dismal tidings. Denham.

Perseus sent envoys to Carthage, to kindle their hatred against the Romans. Arbttthnol on Coins.

The watchful sentinels at ev'ry gate, At ev'ry passage to the senses wait ; Still travel to and fro the nervous way, And their impressions to the brain convey Where their report the vital envoys make, And with new orders are commanded back.

Elackmore.

ENVOYS from the courts of Britain, France, Spain, &c., to any petty prince or state, such as the princes of Germany, the ci-devant republics of Venice, Genoa, &c., go in quality inferior to that of ambassadoZB ; and such a character only do these persons bear, who are sent from any of the principal courts of Europe to another. There are envoys ordinary and extraordinary, as well as ambassadors ; they are equally under the protec- tion of the law of nations, and enjoy all the pri- vileges of

ambassadors ; only differing in this, that the same ceremonies are not observed towards them. The quality of envoy extraordinary accord- ing to Wicquefort, is very modern ; more modern than that of resident : the ministers invested therewith, at first, took on them most of the state

of ambassadors ; but they have since been taught otherwise. In the year 1639 the court of France made a declaration, that the ceremonies of conducting envoys extraordinary to their audience in the king and queen's coaches, &c., should be no longer practised. S. Justiniani, the first envoy extraordinary from Venice, after that regulation, offering to cover in speaking to the king of France, it was refused him ; and that monarch declared, that he did not expect his envoy extraordinary at the court of Vienna should be regarded any otherwise than as an or- dinary resident. Since this time, those two kinds of ministers have been treated alike.

ENURESIS,in medicine an involuntary flow of urine. It is arranged in the class locales and order aponeuroses of Cullen and contains in his method of arrangement two species : 1. E. atonica, the sphincter of the bladder having lost its tone by some previous disease, debility, or neglect. 2. E. ab irritatione vesicse, from irri- tation of the bladder, as in the stone, gravel or various venereal complaints. See MEDICINE. EN'VY, v. a.t v. n. & ». s."J Fr. envier ; It. EN'VYING, n. s. I invidiare ; Span.

EN'VIABLE, adj. { embidiar ; Lat. in-

EN'VIER, n. s. fvidere (in and vi-

EN'VIOUS, adj. j cfeo),to look sharp -

EN'VIOUSLY, adv. J ly after ; hence to

watch another man's fortunes. To observe ano- ther's happiness or excellence with hatred or grief; to grudge ; to feel pain at another's good : or the

pain felt in this unhappy way. Hence, also, as a noun, rivalry, malice, in a general sense, ill repute. Envying is synonymous with envy, as a substantive ; enviable is liable or exposed to envy.

Moises seith, I schal lede ghou to envy that ghe be no folk, that ghe be an unwise folk, I schal sendc ghou into wraththe. Wiclif. Romaynes 10.

Envy thou not the oppressor, and chuse none of his ways. Prov. iii. 31.

Be not thou envious against evil men.

Id. xxiv. 19.

Envye forsothe commendeth noughte his reson, that he hath in hain, be it never so trusty. Chaucer.

In seeking tales and informations Against this man, whose honesty the devil And his disciples only envy at, Ye blew the fire that burns ye.

Shahtpeare. Henry VIII. Still in thy right hand carry gentle peace, To silence envious tongues. Id.

All the conspirators, save only he, Did that they did in envy of great Caesar.

Shakspeare.

Madam, this is a meer distraction ; You turn the good we ofler, into envy. Id.

I have seen the fight,

When I have envied thy behaviour. Id.

Men had need beware how they be too perfect in compliments ; for that enciers will give them that at- tribute, to the disadvantage of their virtues.

Bacon.

Edward Plantagenct should be shewed unto the people ; to discharge the king of the envy of that opi- nion and bruit, how he had been put to death

privily.

Id.

A man that is busy and inquisitive is commonly enviout ; for to know much of other men's matters cannot be, because all that ado may concern his own

estate ; therefore it must needs be that he taketh a kind of play-pleasure in looking upon the fortunes of others ; neither can he that mindeth but his own busi- ness find much matter for envy ; for envy is a gadding passion, and walketh the streets, and doth not keep at home : ' Non est curiosus idem sit malevolus.

Bacon.

He that is not industrious envieth him that is — and he that standeth at a stay when ethers rise, can hardly avoid motions of envy. Id.

They, in an enviable mediocrity of fortune, do happily possess themselves.

Carew's Survey of Cornwall.

Any superiority is a mark of envy. Had Moses and Aaron been but fellows with the Israelites, none / lad been better beloved. Bp. Hall's Contemplation.*

Damned spirits, being fallen from heaven, endeavour enviously to obstruct the ways that may lead us thither. Duppa.

He that loves God is not displeased at accidents •which God chuses, nor envies at those gifts he bestows.

Taylor.

Who would envy at the prosperity of the wicked, and the success of persecutors ? Id.

All preferments in church and state were given by him, all his kindred and friends promoted, and all his enemies and enviert discountenanced. Clarendon.

If enry, like anger, did not burn itself in its own fire, and consume and destroy those persons it possesses, before it can destroy those it wishes worst to, it would set the whole world on are, and leave the most excellent persons the most miserable. Id.

I envy no man that knows more than myself, but pity them that know less. Sir T. Browne.

They weened

To win the mount of God, and on his throne To set the ennler of his state, the proud Aspirer ; but their thoughts proved fond and vain.

Milton.

A man of the most envious disposition that ever infected the air with his breath, whose eyes could not look right upon any happy man, nor ears bear the burden of any man's praise. Sidney.

Johnson, who, by studying Horace, had been acquainted with the rules, seemed to envy others that knowledge. Dryden.

Sure you mistake the precept, or the tree j Heaven cannot envious of his blessings be. Id. You may see the parliament of women, the little cnvier of them to one another. Id.

Envy is a repining at the prosperity or good of another, or anger and displeasure at any good of ano- ther, which we want, or any advantage another hath above us. Ray on the Creation.

Envy and cavil are the natural fruits of laziness and ignorance ; which was probably the reason, that in the heathen mythology, Momus is said to be the son of Nox, and Somnus of Darkness and Sleep.

Addison.

A woman does not envy a man for fighting with courage, nor a man a woman for her beauty.

Collier of Envy.

Envy, to which the ignoble mind 's a slave, Is emulation in the learned or brave. Pope.

You cannot envy your neighbour's wisdom, if he gives you good counsel ; nor his riches, if he supplies you in yr>ur wants ; nor his greatness, if he employs it to your protection. Swift.

How enviously the ladies look, When they surprise me at my book ! And sure as they be alive at night, As soon as gone, will shew their spight. Id.

High stations tumult, but not bliss create. None think the great unhappy, but the great • Fools gaze and envy ; envy darts its sting, Which makes a swain as wretched as a king.

Young.

Envied, yet how unenviable ! what stings Are theirs ! One breast laid open were a school Which would unteach mankind the lust to shine or rule. Byron.

ENWHE'EL, v.a. From en and wheel. To encompass ; to encircle. A word probably pe- culiar to Shakspeare.

Hail to thee, lady ! and the grace of heaven, Before, behind thee, and on ev'ry hand Eiiwhcd thee round. Shafapeare. Othello.

EN'WOMB, v. a. From en and womb. To make pregnant ; bury as in the womb.

Me then he left enteombed of this child, This luckless child, whom thus ye see with blood.

Spenser.

I'm your mother ;

And put you in the catalogue of those That were enwombed mine. Shakspeare.

Or as the Afric Niger stream enwombs Itself into the earth, and after comes, Having first made a natural bridge to pass, For many leagues, far greater than it was , May't not be said, that her grave shall restore Her greater, purer, finer, than before ? Donne. ENWRAP, v. a. En and wrap ; or Lat. rapio, to ravish, transport. To involve; envelope; en- trance with passion.

His hideous tayle then hurled he about, And therewith all enurrapt the nimble thyes Of his froth-foray steed.

Spenser. Faerie Queene. This pearl she gave me I do feel 't and see 't ; And though 'tis wonder that enwraps me thus, Yet 'tis not madness. Shakspeare.

The society of wicked men, especially in their sins, is mortally dangerous: while we will not be parted, how can we complain, if we be enwrapped in th^ir condemnation 1 Bp. Hall.

For if such holy song Enwrap our fancy long Time will run back, and fetch the age of gold.

Milton.

ENZINAS or DRYANDER (Francis), a pro- testant writer of the sixteenth century, was born at Burgos, in Spain, about the year 1515. He was educated in Germany, and became a zealous disciple of Melancthon, who thought very highly of his talents, and wrote to archbishop Cranmer in his favor in the year 1548. He published a Spanish translation of the New Testament which he dedicated to the emperor Charles V. ; and for which he suffered imprisonment fifteen months. He escaped in the year 1545, and went to Calvin at Geneva. He published A History of the State of the Low Countries, and of the Religion of Spain, which is rare.

ENZINAS (John), brother of the above, resided at Rome for some time, and, becoming a convert to the protestant religion, was setting out for Germany to join his brother, when he was ac- cused of heresy,

and thrown into prison. He refused to retract what he had said before the pope and cardinals ; but boldly avowed and jus- tified his opinions, for which he was condemnel

to be burnt alive, a sentence which was put into execution at Rome in the year 1545.

EOBANUS (Helius), in biography, a modern Latin poet of celebrity, was born in 1488, on the confines of Hesse, and hence obtained the name of Hessus. His parents were so poor, that it has been said he was born in the open air under a wide spreading tree ; but his education was not neglected. He was taught Latin at a small school, and pursued his studies at the university of Erfurt, where he afterwards taught the belles lettres till the year 1526, when Melancthon pro- cured him an invitation from the city of Nurem- berg. Here he taught for seven years, and then returned to Erfurt, where his reputation was so high, that he is said to have had 1500 scholars. Even this, however, produced such trifling emo- lument, that he was often laboring under the greatest poverty. He at length obtained through fiie interest of Philip, landgrave of Hesse, a situation at the university of Marpurg, where he died on the 5th of October 1540. Camerarius wrote his life, and praises his application to labor, and his poetical talents, but he is said to have been a hard drinker.

EO'LIPILE, n. s. From (zolus and pila. A hollow ball of metal with a long pipe ; which ball, filled with water, and exposed to the fire, sends out, as the water heats, at intervals, blasts of cold wind through the pipe. See ./EOLIPE.

Considering the structure of that globe, the ex- terior crust, and the waters lying round under it, both exposed to the sun, we may fitly compare it to

an eoiipile, or an hollow sphere with water in it, which the heat of the fire rarities, and turns into vapours and wind. Bwnet's Theory of the Earth.

EOOA, EAOOWE, or MIDDLEBURG, the most eastern of the Friendly Islands in the South Pacific Ocean. It is about thirty miles in circuit, and stands high, particularly on the north-east coast side. The north-west part consists of valleys, meadows, and plains. This island abounds with sugar-canes, bananas, and shaddocks, and various vegetables are cultivated in the finest plantations, disposed with much regularity. The quadrupeds are few. The inhabitants are of a light chestnut brown color, and approaching in size nearly to the European. Their features are mild and pleasing ; their hair black and strongly curled ; and the men clip their beards by means of two sharp mussel shells. Though these islanders are not devoid of shrewdness, they have shown much honesty towards the ships which have visited them. Their arms are clubs, spears, bows of a peculiar construction, and arrows five or six feet long, ingeniously wrought. Matting and cloth of different quality are made here in considerable quantities, which the inhabitants eagerly offer in traffic, and are said to be suffici- ently exorbitant in their demands. The women sing simple airs in a minor key; and sometimes in parts : their voices are very soft and agreeable. This island was discovered in 1643, by Tasman, who called it Middleburgh. Long. 171° 30' E., lat. 21° 24' S.

EOOAIGEE, one of the Friendly Islands, four miles east of Tongataboo.

EONIANS, in church history, the followers of Eon, a wild fanatic of the province of Bretagne,

in the twelfth century, who conceived that he was the son of God, and ordained to judge the quick and the dead. He was solemnly con- demned by the council at Rheims, in 1148, at which pope Eugenius III. presided, and ended his days in a miserable prison. He left a num- ber of followers, whom persecution, so weakly and cruelly employed, could not persuade

to abandon his cause, or to renounce his absurdity, which, says Mosheim, one would think could never have gained credit but in Bedlam.

EORAPIE POINT, the northern promontory of the island of Lewis, sometimes called the bull of Lewis, lies in long. 2° 54′ W. from Edinburgh; lat. 58° 35′ 30* N.

EORIA, in mythology, a feast celebrated by the Athenians in honor of Erigonus, who by way of punishment, for their not avenging the death of his father Icarus, engaged the gods to inflict this curse on their daughters, that they should love men who never returned that passion.

EOROOMANAIA, an islet of the Friendly Islands.

EORSA, one of the smaller Hebrides between Icolmkill and Mull.

EOY, a small island of Scotland, in the He- brides, between Barry and South Uist.

EOSTRE, in mythology, a goddess of the Saxons, to whom they sacrificed in April, called the month of Eostra ; and thence the name of Easter, which the Saxons retained after their con- version to Christianity, applying it to the festival celebrated in commemoration of our Saviour's resurrection.

EPACRIS, in botany, a genus of the mono- gynia order, pentandria class of plants : CAL. a five-parted perianth : COR. monopetalous and tubular : stamina, five very short filaments : CAPS. roundish, quinquelocular, quinquevalvular, and gaping : SEED numerous and very small. Species four, natives of New Holland, the most beautiful is the E. grandiflora with a shrubby woolly stem, ever-green alternate leaves, and noble crimson flowers, pendulous and scentless.

EPACT, n. s. Old Fr. epucte ; Gr. eiraKTOQ. An astronomical number. See below.

As the cycle of the moon serves to shew the epacts,

and that of the sun the dominical letter, throughout all their variations ; so this Dionysian period serves to shew these two cycles both together, and how they proceed or vary all along, 'till at last they accomplish their period, and both together take their beginning again, after every 532d year. Holder.

Divide by three ; for each one left add ten \

Thirty reject : the prime makes epact then.

Harrii.

EPACTS, ANNUAL, are the excesses of the solar year above the lunar. Hence, as the Julian solar year is 365 days 6 h., and the Julian lunar year 354 days 8h. 48' 38″, the annual epact will be 10 days 21 h. 11' 22″; or nearly eleven days. Thus this epact of four years is fourteen days, and so of the rest ; and thus, the cycle of epacts expires with the golden number, or lunar cycle of nineteen years, and begins with the same :

The following table contains the golden num- bers, with their corresponding epacts, till the year

1900.

EPA

TABLE OF GREGORIAN EPACTS.

EPA

Golden

Numbers.

Epacts.

Golden Numbers.

Epacts.

I

0

XI

20

IP

11

XII

1

III

22

XIII

12

IV

3

XIV

23

V

14

XV

4

VI

25

XVI

15

VII

6

XVII

26

VIII

17

XVIII

7

IX

28

XIX

18

X

9

I

0

As the new moons fall on the same day every nineteen years, so the difference between the lunar and solar years is the same every nineteen years. And because the said difference is always to be. added to the lunar year, to makp it equal to the solar year, hence the said difference respectively belonging to each year of the moon’s cycle is called the epact of that year. Upon this- mutual respect between the cycle of the moon and the cycle of the epacts, is founded this rule for finding the Julian epact, belonging to any year of the moon’s cycle. Multiply the year given of the moon’s cycle into eleven ; and if the product be less than thirty, it is the epact sought ; and if the product be greater than thirty, divide it by thirty, and the remainder of the

dividend is the epact. The difference between Julian and Gre- gorian years being equal to the excess of the solar above the lunar year, or eleven days, the Grego- rian epacf of one year is the same with the Julian epact for the preceding year.

EPACTS, MENSTRUAL, are the excesses of the civil or kalendar month above the lunar month. Suppose e. gr. it were new moon on the 1st day of January ; since the lunar month is 29 days 12 h. 44' 3′, and January contains 31 days, the menstrual epact is 1 day 11 h. 15' 57*.

EPAMINONDAS, a celebrated Theban ge- neral, the son of Polymnus. He studied phi- losophy under Lysis, a Pythagorean philosopher; was taught music by Dionysius and Olympio- dorus ; and was from his infancy inured to all the exercises of body and mind. He saved the life of Pelopidas, who received in battle seven or eight wounds ; and contracted a strict friendship with that general which lasted till his death. At his persuasion, Pelopidas delivered Thebes from the yoke of the Spartans, who had rendered themselves masters of Cadmea. Epaminondas, being made general of the Thebans, gained the celebrated battle of Leuctra, in which Cle- ombrotus II. the valiant king of Sparta, was killed. He then ravaged the enemy's country, and caused the city of Messina to be rebuilt and peopled. At length the command of the army was given to another, because Epaminondas had kept his troops in the field four months longer than he had been ordered by the people ; but, in- stead of retiring in disgust, he now served as a common soldier, and so nobly distinguished him- self, that the Thebans, ashamed of having de^ p rived him of the command, restored him to his

post, in order to carry the war into Thessaly where his arms were always victorious. A war breaking out between the Elians and the inhabi- tants of Mantinea, the Thebans took the part of the former. Epaminondas then resolved to en- deavour to surprise Sparta and Mantinea; but not succeeding he gave the enemy battle, in which he received a mortal wound

with.a javelin tne bearded iron remaining in the wound.. Know- ing that it could not be drawn out without occa- sioning immediate death, he would not suffer it to be touched, but continued to give his orders; and on his being fold that the enemy were en- tirely defeated, I have lived long enough, he cried, since I die without being conquered; and at the same time he plucked the javelin from his wound, and expired A. A. C. 363.

EPANELEPSIS, Eiravalri^ic, or Epanadi- plosis, in rhetoric, the repetition of the same word in the beginning of one sentence, and at the end of another. Thus Virgil' writes,

Ambo florentes xtatibus, Arcades ambo.

Such, also, is the expression of Plautus (Amph. Act ii. Sc. 2, v. 21): ' Virtue contains all things: he wants no good thing who has virtue.' The figure is the same, though the principle is less honest, which occasions the advice given by the writer in Horace (Epist.i., 1. 65). 'Get money, if you can, honestly ; but, however, get money.' This figure adds force to an expression, when the principal thing designed to be conveyed is thus repeated, so as to leave its impression last upon the mind. And the beauty is heightened, when the sentence has an agreeable turn arising from two opposite parts ; as in Cicero's compliment to Caesar (Pro Marcell. c. 6) : ' We have seen your victory terminated by the war: your drawn sword in the city we have not seen.'

EPANORTHOSIS, or Correction, in rhe- toric, a figure by which the orator revokes and corrects something before alleged, as too weak, and adds something stronger and more confor- mable to the passion by which he is agitated. The word is formed of op0og, right, straight; whence op0ow, I straighten ; avopflow, tiravopdow, I redress, straighten, correct; and tiravopBua^, correction. Accordingly the Latins call it cor- rectio and emendatio.

This figure is used in different ways. Some- times one or more words are recalled by the speaker, and

others substituted in their room. At other times, without recalling what has been said, something else is introduced as more suita- ble : instances of both kinds follow. Such, e. gr. is that of Cicero for Crelius : ' O stultitia ! stulti- tiamne dicam, an impudentiam singularem ? Oh folly ! folly shall I call it, or rather intolerable impudence?' And in the first Catilinarian : ' Quamquam quid loquor? Te ut ull ares fran- gat? Tu ut unquam te corrigas? Tu ut ullam fugam meditere ? Tu ullum ut exilium cogites ? Utinam tibi istam mentem dii immortales dona- rent !' Thus, also, Terence, in the Heautontimo- rumenos, introduces his old man Menedemus, saying : — ' Filium unicum adolescentulum Habeo. Ah ! quid dixi habere me? imo habui, CFireme. Nunc habeam necne, incertum est.1 ' I have an only son, Chremes. Alas! did I say

that I have ? I had indeed ; but it is now uncer- tain, whether I have or not.'

EPAULE EN DEDANS, in the manege, a mo- dern French lesson, which, rendered into English, denotes that attitude in which, as the horse goes forward, he is so bent through his whole frame, that if he goes to the right, he must cross the right fore-leg over the left, and so vice versa ; or, in the language of the manege, his inner shoulder, or leg, over the outward. The old masters worked their horses upon circles, when they in- tended to supple the shoulders and haunches ; but to this made of working upon circles, it has htely been objected that it constrains the fore- part too much, and throws the horse upon his shoulders. To remedy this evil, M. de la Guer- riniere, an accomplished horseman at Paris, in- vented the lesson called epaule en dedans, and established it in his manege. This new method, however, differs very little from the old practice, to which it owes its origin, and from which it is

extracted and formed. The only objection against the circle is, that the horse, when worked circu- larly, has his haunches too much at liberty, by which means the weight of his, body is thrown upon his shoulders, which are thereby impeded in their motion; and the animal compelled to work in a manner directly opposite to what he should do. The blame, however, instead of being laid on the circle, should have been as- cribed solely to the false and senseless manner in which horses were formerly worked in it; when heavy large bits and cavessons were used, with which the heads of horses were loaded, and brought down to a level with their knees, so that they carried them, like rams, when they fight, and batter one another with their foreheads. Had these old practitioners known the advantage, and, indeed, the necessity, of raising the head, in order to press and bend the haunches, and of doing this by means of a snaffle with double reins, one being tied over the withers, the opposite side to which the horse is to turn, the head would at once have been raised, the out- ward shoulder brought in, and the horse bent from nose to tail ; but this discovery was re- served for Sir Sidney Meadows, who has made many important improvements in the art of horsemanship. Berenger's History, fyc., of Horsemanship, vol. ii.

EPAU'LET, n. s. Fr. epaulette. A military shoulder- knot or ornament.

Their vanity was dazzled and seduced by military liveries, cockades and epaulets. Burke.

EPAULETTES, a kind of military shoulder- knots. Those for the soldiers are of the color of the facing, with a narrow yellow or white tape round it, and worsted fringe ; those for the officers are made of gold or silver lace, with a "rich fringe ; they are badges of distinction worn on one or both shoulders. The following are the gradations of rank as distinguished by epau- lettes in the navy. Masters and commanders have one epaulette on the left shoulder. Post captains under three years, one epaulette on the right shoulder : and, after having

been post cap- tains three years, two epaulettes. Rear-admirals have one star on the strap of the epaulette, vice- admirals two stars, and admirals three.

EPAULEMENT, in fortification, is a kind of breastwork to cover the troops in front, and sometimes in flank. In a siege, the besiegers generally raise an epaulement of eight or ten feet high, near the entrance of the approaches to cover the cavalry, which is placed there to support the guard of the trenches. These works are sometimes made of filled gabions, or fascines and earth.

EPEE (Charles Michael de 1'), was the son of the king's architect, and born at Versailles, France, in 1712. He received an education for the church; and, after finishing his studies, ob- tained a canonry in the cathedral of Troyes. At the age of twenty-six he is said to have refused a bishopric. His life was principally devoted to the instruction of the dumb ; an art which he first derived, it is said, from a Spanish treatise which he accidentally met with. The abbe L'Epee, however, had the merit of bringing this impor- tant alleviation of human infirmity into more general use, and making it the object of national institutions. He inherited from his father an income of about £400 a year, of which he ex- pended only a fourth part on himself, employ- ing the remainder for the benefit of his pupils. He died December 23d, 1789, and his plans were followed up by the abbe Sicard. His funeral oration was pronounced by the abbe Fauchet, preacher to the king. He was the author of an Account of the Cure of Marianne Pigalle ; and an Elementary Treatise on the Instruction of the Deaf and Dumb.

EPERIES, a town in the lower county of Scharosch, Hungary, on the river Tartza. It is of an oblong shape, with regular fortifirations, and a population of 7400, of mixed German, Bohemian, and Hungarian origin. The trade consists in linen, cattle, corn, and wine. The inhabitants are catholics, and a bishopric was es- tablished here in 1803. Here is also the seat of a high court of judicature. Fifteen

miles north of Caschau.

EPERNAY, a town of Champagne, remark- able for the excellent wine of its neighbourhood, and containing manufactures of woollens, and hardware. It was taken by Henry IV. in 1592, when marshall Biron was killed by a cannon ball. It is agreeably situated on the Marne. Fourteen miles south of Rheims.

EPEUS, a descendant of Endymion, the in- ventor of the battering ram, an engine of great service in sieges to make a breach. He is said to have built the Trojan horse, and founded the city Metapontum.

An EPHA, or EPHAH, HSK as a measure for things dry, was equal to three pecks, three pints, twelve inches and four tenths.

EPHEBJEUM, in antiquity, the place where the ephebi or youth exercised : or, as some say, where those who designed to exercise met, and agreed what kind of exercise they should con- tend in, and what should be the victor's reward.

EPHEBI, among the ancient Athenians, a de- signation given to their young men when they arrived at eighteen years of age, at which time they had their names entered in a public register.

EPHEDRA, in botany, a genus of plants of the monadelphia order and dioecia class. MALB

CAL. bifid amentum; COR. none : stamina seven, anthera four inferior, and three superior : FEM. CAL. bipartite and five fold ; pistils two : SEEDS two, covered by the calyx and resembling a berry. Species two, 1. E. dystachya, sea-grape. A native of the south of Europe, with the pe- duncles opposite. 2. E. monostachya horse-tail. A. native of Siberia, with many peduncles and solitary aments.

EPHE'MERA, n. s.) Gr. trf/upfe from

EPHE'MERAL, adj. > ij/«pa, a day. A fever

EPHE'MERIC. 3 that terminates in a

day : an insect that lives only one day : diurnal ;

beginning and ending in a day.

This was no morn than a mere bubble or blast, and like an ephemeral fit of applause. Wotton.

EPHEMERA, the day-fly, in entomology, a genus belonging to the order of neuroptera. It has no teeth or palpi ; there are two large pro- tuberances above the eyes ; the wings are erect, the two hind ones being largest ; and the tail is bristly. These flies, which take their name from the shortness of their life, are distinguished into several species. Some live several days, others do not take flight till the setting of the sun, and live not to see the rising of that luminary. Some exist but one hour, others but half that time. The ephemerae, before they flutter in air, have in some respects been fishes. They remain in the states of larva and chrysalis for one, two, or three years. The chrysalis only differs from the larva by having cases for wings on its back. Both have on their sides small fringes of hair, which, when put into motion, serve them as fins. Nothing can be more curious than the plying of those little oars in the water. Their abdomen is terminated, as well as in their state of flies, by three threads. These larvae scoop out dwellings in the banks of rivers ; small tubes made like siphons, the one serving for an entrance, the other affording them an outlet. The banks of some rivers are often perforated with them. When the waters decrease, they dig fresh holes lower down, to enjoy their element the water. The season and hour when the chrysalides of the different species of the ephe- merae turn into flies, maintain a kind of regula- rity. The heat, the rise or fall of the waters, accelerate, however, or postpone their final dis- play. The ephemerae of the Rhine appear in the air two hours before sunset. These flies are hatched almost all at the same instant, in

such numbers as to darken the air. The most early of those on the Maine and Seine in France, do not begin to fly till two hours after sunset, in the middle of August. They are seen fluttering and sporting on the brink of their tomb. The glare of light attracts them, round which they perform a thousand circles with amazing regularity. Their coming together for the purpose of generation can alone be surmised, the shortness of their life requiring that all their functions should be pro- portionable to its duration. Some naturalists suppose, that the males impregnate the eggs after the manner of fishes. The females, by the help of the threads of their tails, and the flapping of their wings, support themselves on the surface of the water, and in that almost upright situation drop their eggs in clusters. One single female will lay 700 or 800 eggs, which sink to the bot-

tom. When the flies have propagated, they die and fall by heaps, and the land and water are strewed with them to a considerable thickness.

EPHE'MERIS, n. s.) Gr. t0ijppic, tj^tpa,

EPHE'MERIST, n.s. J as above. A journal ; an account of daily transactions ; an account of the daily motions and situations of the planets. An ephemerist is one who consults the planets, or who studies or practises astrology.

When casting up his eyes against the light. Both month, and day, and hour he measured right ; And told more truly than the ephemeris ; For art may err, but nature cannot miss. Dryden.

The night before he was discoursing of and slight- ing the art of foolish astrologers, and genethiacal ephemerists, that pry into the horoscope of nativities.

Howel.

EPHEMERIS, in astronomy, is a table calcu- lated to show the state of the heavens for every day at noon

; or the places wherein all the planets are found at that time. From these tables the eclipses, conjunctions, and aspects of the planets, are determined; horoscopes or celestial schemes constructed, &c. In England, the Nautical Al- manac, or Astronomical Ephemeris, published annually by anticipation, under the direction of the commissioners of longitude, is the most con- siderable. In France celestial ephemerides veer.-; published by M. Desplaces every ten years, from 1715, to 1745; they were afterwards continued by the abbe Caille, with many additions.

EPHE'MERON-WoRM, ra. s. From tyjj/«- fov and worm. A sort of worm that lives but a day.

Swanrmerdam observes of the ephemeron-wormi , that their food is clay, and that they make their cells of the same. Derham.

EPHESUS, an ancient city of Ionia, greatly celebrated on account of its temple of Diana, and as the most famous mart as well as the me- tropolis of Asia Minor. The ancient city stood about fifty miles south of Smyrna, near the mouth of the river Cayster, and the shore of the Icarian sea. It was anciently known by the different names of Alopes, Ortygia, Merges, Smyrna, Tra- cha?a, Samornion, and Ptela. It was called Ephesus, according to Heraclides, from Efqffoc, permission ; because Hercules, says that writer, permitted the Amazons to live and build a city in that place. Others tell us that Ephesus was the name of the Amazon that founded that city ; Pliny, Justin, and Orosius, unanimously affirm that it was built by an Amazon ; while others bestow this honor upon Androclus, the son of Codrus, king of Athens, who was the chief of the lonians that settled in Asia.

The lonians first settled at Ephesus under the conduct of Androclus, who drove out the Carians and Leleges, by whom those places were pos- sessed at'his arrival. The city whether built by him, or by one Croesus or Ephesus, long before the Ionic migration, as others maintain, became soon the

metropolis of Ionia. It was at first go- verned by Androclus and his descendants, who assumed the royal title, and exercised the regal authority over the new colony : whence, even in Strabo's time, the posterity of Androclus were styled kings, and allowed to wear a scarlet robe, with a sceptre, and all the ensigns of royalty. In

process of time, a new form of government was introduced, and a senate established, which con- tinued till the usurpation of Pythagoras, who lived before Cyrus the Great. Having d riven out the senate, and taken all the power into his own hands, he filled the city with blood and rapine, not sparing even those that fled to the temple of Diana for shelter. Pythagoras was succeeded by Pindarus, who bore the same sway in the city, but treated the citizens with more humanity. In his time Ephesus being besieged by Croesus king of Lydia, he advised the inhabitants to devote their city to Diana, and fasten the wall by a rope to the pillars of her temple. They followed his advice, and were, from reverence to the goddess, not only treated with great kindness by Croesus, but restored to their former liberty, and Pindarus, being obliged to resign his power, retired to Pe- loponnesus. The other tyrants of Ephesus men- tioned in history are Athenagoras, Comas, Aris- tarchus, and Hegesias: of whom the last was expelled by Alexander, who, coming to Ephesus, after having defeated the Persians on the banks of the Granicus, bestowed upon Diana all the tributes which the Ephesians had paid to the Persians, and established a democracy in the city. Soon after it fell into the hands of Lysi- machus, who caused the ancient city to be de- molished, built a new one in its place at a vast expense, and in a more convenient situation, and nearer the temple. But so reluctant were the inhabitants to quit their ancient habitations, that the founder of the new city caused all the drains that conveyed the water into the neighbouring fens and the Cayster, to

be privately stop’ped up ; so that the city, on the first violent rains that fell, was in great part laid under water ; many of the inhabitants were drowned, and those who re- mained were in this manner constrained to retire into the new city. In the war between Mithri- dates and tba Romans, they sided with the former, and, by his direction, massacred all the Romans that resided in their city; for which bar- larity they were severely fined by Sylla; but af- terwards treated with lenity, and suffered to live according to their own laws, as is plain from several ancient inscriptions and medals. The Ephesians were much addicted to superstition, sorcery, and curious arts, as the Scripture styles them ; whence came the proverb Ephesian letters, signifying all sorts of spells or charms. In the time of the apostle Paul, Ephesus re- tained a great portion of its ancient grandeur. But in the time of the emperor Justinian, it was so complete a ruin that he filled Constantinople with its statues, and raised his church St. Sophia upon its columns. It has since been almost ex- hausted.

Towards the end of the eleventh century, a Turkish pirate, named Tangripermes, settled there. But the Greek admiral, John Ducas, defeated him in a bloody battle, and pursued the flying Turks up the Meander. In 1306 it was among the places which suffered from the exactions of the grand duke Rpger : and two years after it surrendered to sultan Saysan, who, to prevent future insurrections, removed most of the inha- bitants to Tynaeum, where they were massacred. The Ephesians are only a few Greek peasants,

living in extreme wretchedness, dependence, and insensibility.

The chief ornament of Ephesus was the tem- ple of Diana, built at the common charge of all the states in Asia, and for its structure, size, and furniture, accounted among the wonders of the world. This edifice was situated at the foot of a mountain, and at the head of a marsh ; which place they chose, if we believe Pliny, as the least subject to earthquakes. Here they in- curred, however, a vast

expense in making drains to convey the water that came down the hill into the morass and the Cayster. Philo Byzantius tells us that in this work they used such a quan- tity of stone, as almost exhausted all the quarries in the country ; and these drains or vaults are what the present inhabitants take for a labyrinth. To secure the foundations of the conduits or sewers, which were to bear a building of such prodigious weight, they laid beds of charcoal, according to Pliny, well rammed, and upon them others of wood. The temple was 425 feet in length, and 200 in breadth, supported by 127 marble pillars seventy feet high, of which twenty-seven were most curiously carved, and the rest polished. These pillars were the works of so many kings, and the bas-reliefs of one were done by Scopas,the most famous sculptor of antiquity ; the altar was almost wholly the work of Praxiteles. Cheiromo- crates, who built the city of Alexandria, and offered to form mount Athos into a statue of Alexander, was the architect employed on this occasion. The temple enjoyed the privilege of an asylum, which at first extended to a furlong, was afterwards enlarged by Mithridates to a bow- shot, and doubled by Marc Antony, so that it took in part of the city : but Tiberius, to put a stop to the many abuses and disorders that at- tend privileges of this kind, revoked them all, and declared that no man guilty of any wicked or dishonest action should escape justice, though he fled to the altar itself. The priests who offi- ciated in this temple were held in great esteem, and trusted with the care of sacred virgins, or priestesses, but not till they were made eunuchs. They were called Estiatores and Essenae, had a particular diet, and were not allowed to go into any private house. They were maintained out. of the profits accruing from the lake Selinusius, and another that fell into it, which must have been very considerable, since they erected a golden statue to one Artemidorus, who being sent to Rome, recovered them after they had been seized by the farmers of the public revenues. All the lonians resorted yearly to Ephesus, with their wives and children, where they solemnised the festival of Diana with great

pomp and mag- nificence, making on that occasion rich offerings to the goddess, and valuable presents to her priests. The Asiarchae mentioned by St. Luke (Acts xix. 31), were, according to Beza, priests who regulated the public sports annually per- formed at Ephesus in honor of Diana; and were maintained with the collections made during the sports. The great Diana of the Ephesians, as she was styled by her blind adorers, was, accord- ing to Pliny, a small statue of ebony, made by one Canitia, though believed by the superstitious to have been sent down from heaven by Jupiter.

This statue was first placed in a niche, which, as we are told, the Amazons caused to be made in the trunk of an elm. Such was the first rise of the veneration that was paid to Diana in this place. In process of time, the veneration for the goddess daily increasing among the inhabitants of Asia, a most stately and magnificent temple was built near the place where the elm stood, and the statue of the goddess placed in it. This was the first temple ; but not quite so sumptuous as the second, though reckoned, as well as it, one of the wonders of the world. The second (above described) was remaining in Pliny's time, and in Strabo's ; and is supposed to have been destroy- ed in the reign of Constantine, pursuant to the edict of that emperor commanding all the tem- ples of the heathens to be demolished ; the for- mer was burnt the same day that Alexander was born, by one Erostratus, who owned on the rack, that the only thing which had prompted him to destroy so excellent a work, was the desire of transmitting his name to future ages. Alexan- der offered to rebuild the temple at his own ex- pense, provided the Ephesians would agree to put his name on the front ; but they received his offer in such a manner as prevented the resent- ment of that vain prince, telling him, that ' it was not fit one god should

build a temple to ano- ther.' The pillars and other materials that had been saved out of the flames, were sold, with the jewels of the Ephesian women, who on that oc- casion willingly parted with them ; and the sum raised from thence served for the carrying on of the work till other contributions came in, which, in a short time, amounted to an immense treasure. Of this wonderful structure there is nothing at present remaining but some ruins, and a few broken pillars, forty feet long and seven in dia- meter. There are two vast gateways of a theatre, and some walls of brick, faced with marble slabs, supposed either to have formed a part of the temple of Diana, or of the church of St. John ; and a large portal, formerly leading to the citadel, wholly built with Roman tiles, faced with po- lished marble. Over the gateway, above a very rich frieze, are three pieces of exquisite sculpture, one of them representing the bringing of the . body of Patroclus to Achilles.

EPHET./E, from «0t»j/u, I send forth, in an- tiquity, magistrates among the Athenians, insti- tuted by king Demophoon, to take cognisance of murder and manslaughter, and chance-medley : their original number was 100, of whom fifty were Athenians, and fifty Argians ; but Draco new- modelled the court, excluded the Argians from it, and made it to consist of fifty-one Athe- nian s.

E'PHOD, n. s. ."ISK A soil of ornament worn by the Hebrew priests. See below.

He made the ephod of gold, blue, and purple, and scarlet, and fine twined linen. Exodus vsxix. 2.

Arrayed in ephods • nor so few As are those pearls of morning dew, Which hang on herbs and flowers. Sandyt.

It is an unusual sight for Israel to see a linen ephod upon the bier. Bp. Hall's Contemplations.

EPHOD, Hebrew via^, was evidently the prin cipal article of those figurative garments of

salvation, for the forming of which, to array the high priest, Moses was very particularly in- structed by God. Compassed about with the ephod, the high priest not only bore the names of the twelve tribes of Israel upon his shoulders, as above noticed, but also in the breast-plate upon his heart, with Urim andThummim in the midst of them. Many passages of the Old Testament history demonstate the importance of the ephod. See particularly 1 Sam. xxiii. 8 — 12 ; xxviii. 6 ; xxx. 7. In two of these passages David appears enquiring at the ephod as in the presence of God, and receives -direct answers irom God. From these passages some affirm that the Jewish kings had a right to wear the ephod, and to consult the Lord by Urim and Thummim ; but the generality of commentators are of opinion that neither David, Saul, nor Joshua, nor any prince of Israel, dressed themselves in the high priest's ephod, in order to consult God of themselves ; but that when David says 'bring me hither the ephod,' he must be understood as saying, ' put on the ephod.' Grotius believes that the high priest turned the ephod or breast-pl'ate towards David's face.

EPHORI, in Grecian antiquity, magistrates established in ancient Sparta to balance the regal power. The authority of the ephori was very great. They sometimes expelled and even put to death the kings, and abolished or suspended the power of the other magistrates, calling them to an account at pleasure. There were five of them, or as others say nine. They presided in the public shows and festivals. They were en- trusted with the public treasure, decided on war and peace ; and were so absolute, that Aristotle makes their government equal to monarchy. They were established by Lycurgus, according to the generality of authors : though this is de- nied by others, who date their origin 1 30 years after the time of that legislator. Thus Plutarch, in his Life of Cleomenes, ascribes their insti- tution to Theopompus king of Sparta, which is also confirmed by the .authority of Aristotle.

EPHORUS, an orator and historian of Cumre in

^E,olia, about A. A.C. 352. He was disciple to Isocrates, by whose advice he wrote a history of all the battles between the Greeks and bar- barians, for 750 years. It was greatly esteemed by the ancients ; but is now lost.

EPHRAIM, onsK, Heb. i. e. fruitful, the second son of the patriarch Joseph, was born in Egypt about A.M. 2293, and was adopted along with his elder brother Manasseh, by their grand- father Jacob, among the progenitors of the tribes of Israel; when a remarkable preference was given to Ephraim.

EPHRAIM, in ancient geography, one of the divisions of Palestine by tribes. Ephraim and the half tribe of Manasseh are blended together by the sacred writer ; and it only appears that Ephraim occupied the more ^southern, and the half tribe of Manasseh the more northern parts, but both seem to have extended from the Jordan to the sea.

EPHRAIM, or the EPHRAIMITES, the descen- dants of Ephraim, and the principal tribe of the ten, which separated from Judah. It is remark- able, that both under the judges and kings of

Israel, this tribe produced more of the rulers than any other. Joshua, Deborah, Abdon, and Samuel, among the judges, and Jeroboam, Na- dab, and several other kings of Israel were of this tribe; agreeably to Jacob's prophecy, Gen. xlviii. 19.

EPHRATAH, or Bunker's Town, a small town of the United States, in Pennsylvania, the principal settlement of the religious sect, called Bunkers or Tunkers. It lies twelve miles north of Lancaster, and sixty west of Philadel- phia.

EPHRATHITES, a name synonymous with Ephraimites, and frequently applied to persons of that tribe (see

Judg. xii. 5., 1 Sam. i. 1 .) as well as to the natives of Bethlehem-Ephratah.

EPHREM (St.), an ancient Christian writer, in the fourth century, deacon of Edessa, was born at Nisibe, in Syria, hence styled Syrus. He was greatly esteemed by St. Basil, and St. Gregory of Nice. He wrote against the opinions of Sa- bellius, Arius, Apollinarius, the Manichees, Sec. ; and acquired such reputation, by his piety and his works, that he was called the doctor and prophet of the Syrians. He died in 378. The best editions of his works are, that of Oxford, in 1708, in folio, and that of Rome, from 1732 to 1736, in Syriac, Greek, and Latin, 6 vols. folio.

EPHREMI CODEX, in biblical literature, is a manuscript of the New Testament, written on vellum, and supposed to be of high antiquity. It is 'Codex Regius 1905,' noted in the cata- logue of MSS. in the royal library in Paris IX., and in all the four parts of Wetstein's Greek Testament by the letter C. It is particularly described by Griesbach in his Symbolae, p. iii. — liv. The first part of it contains several Greek works of Ephrem the Syrian, written over some more ancient writings, which had been erased, though the traces are still visible, and in most places legible. These more ancient writings were the whole Greek Bible. The New Testament has many chasms, which are specified by Wetstein. Besides these chasms, it is in many places ille- gible. Wetstein contends that this MS. was written before the year 542, though his arguments are not wholly decisive. Its readings, like those of all other very ancient MSS., are in favor of the Latin ; but no proof can be given that this has been corrupted from the Latin version. It has been altered by a critical collector, who, ac- cording to Griesbach, must have lived many years after the time in which the MS. was written, and has probably erased many of the ancient readings. Kuster was the first who procured extracts from it, and he inserted them in his edition of Mill's Greek Testament. Wetstein has repeatedly collated it with very great ac- curacy; and the numerous readings, which he has

quoted from it, greatly enhance the value of his edition. A fac-simile of the characters of this MS., which is written without accents, is given by Montfaucon in his Palaeographia Graeca. It has many marginal notes, written in uncial letters without accents. In this MS. the disputed, or rather spurious verse, John v. 4, is written, not in the text, but as a marginal scholion. Wet- stein supposed, that this was one of the MSS. which were collated at Alexandria in 616 with

the naw Syriac version ; but, though this does not appear to have been the case, it is certainly as ancient as the seventh century. Wetstein argues, from a marginal note to Heb. viii. 7, that it was written before the institution of the feast of the purification of the virgin Mary, that is, before the year 542. March's Michuelis, vols. ii. and iii.

EPHRON, in ancient geography, a place of Palestine, in the tribe of Judah, about fifteen miles from Jerusalem, according to Eusebius and Jerome. Also, a mountain of Palestine, on the confines of the tribes of Judah and Benja- min, according to the book of Joshua. And, a large and strong town of Judea, in the half-tribe of Manasseh, on the other side of Jordan, over- against Scythopolis. It was situated near the torrent of Jabok. This town was taken and sacked by Judas Maccabaeus, and razed to its foundations.

EPHYBOR, in antiquity, an officer in the Athenian courts of justice, who provided the plaintiff and defendant with equal water hour- glasses. When the glass was run out, they were not permitted to speak any farther ; and, there- fore, whilst the laws quoted by them were re- citing, or if any other business intervened, the glasses were stopped.

EPHYRA, in ancient geography, a town of Greece, in Thesprotia, a province of Epirus ; mentioned by Velleius, Paterculus, and Strabo ; the latter of whom says, that it was afterwards called Cichyrus. Also, a town of Greece, in the Pelasgiotide, a country of Thessaly. This town was also called

Cranon. Steph. Byz. Also a town of the Peloponnesus, in Arcadia. Steph. Byz. Also, a town of the Peloponnesus, in the territory of Elis, situated on the river Selleis. This place was famous for the deadly poisons which it produced.

EPIACUM, in ancient geography, a town of Albion, in the country of the Brigantes, accord- ing to Ptolemy. Camden places it at Elchester, on the river Berwent ; Horsley at Hexham, in Northumberland ; and Baxter supposes it was originally written Pepiacum, and places it at Papcastle, in Cumberland. i

EPI BAT jE, £7rt/3arm among the Greeks, ma- rines, or soldiers, who served on board the ships of war. They were armed in the same manner as the land forces, only that more of them wore heavy armour.

EPIBATERION,from «7rt/5aivw, to go abroad, a poetical composition, in use among the Greeks. When any person of condition returned home, after a long absence, he called together his friends, and rehearsed a copy of verses, wherein he returned solemn thanks to the gods for his happy return ; and ended with an address by way of compliment to his fellow citizens.

EPIBATERIUM, in botany, a genus of the hexandria order and monoecia class of plants : CAL. a double perianth, the outward one with six leaves, very small : the-inner one three times larger than the former, with three egg-shaped leaves : COR. six petals, smaller than the interior calyx and roundish : STAM. six capillary fila- ments, crooked, and as long as the petals : ANTH roundish. Species one only ; a native of th« Po-

lynesian Isles : PERICARP, three roundish, mo- ,' nospermous plums : SEED a kidney-shaped com- pressed nut, somewhat furrowed. #' E'PIC, adj. Lat. epicus ; iirof. Narrative ; comprising narrations, not acted, but rehearsed. It is usually supposed to be heroic, or to contain one great action achieved by a hero.

Holmes, whose name shall live in epic song,

While music numbers, or while verse has feet.

Dryden.

The epic poem is more for the manners, and the tra- gedy for the passions. Id.

From morality they formed that kind of poem and fable which we call epic. Broome.

EPIC, or HEROIC, POEM, a poem expressed in narration, formed upon a story partly real and partly feigned ; representing, in a sublime style, some signal and fortunate action, distinguished by a variety of great events, to form the morals, and affect the mind with the love of heroic virtue. We may distinguish three parts of the definition, namely, the matter, the form, and the end. The matter includes the action of the fable, under which are ranged the incidents, episodes, characters, morals, and machinery. The form comprehends the way or manner of the narration, whether by the poet himself, or by any persons introduced, whose discourses are related : to this branch likewise belong the moving of the passions, the descriptions, dis- courses, sentiments, thoughts, style, and versifi- cation; and besides these, the similes, tropes, figures, and, in short, all the ornaments and decorations of the poem. The end is to im- prove our morals and increase our virtue. See POETRY.

EPICEDION, from tirt upon, and KrjSof, funeral, in Greek and Latin poetry, a poetical composition, on the death of a person. At the obsequies of any man of figure, there were three kinds of discourses usually made; that rehearsed at his bustum, or funeral pile, was called nenia ; that engraved on his tomb, epitaph ; and that spoken in the ceremony of his funeral, epicedion. We have two beautiful epicedions in Virgil, that of Euryalus and that of Pallas.

EPICE'DIUM, n. s. EirucrjStof. An elegy; a poem upon

a funeral.

You from above shall hear each day One dirge dispatched unto your clay ; These, your own anthems, shall become Your lasting epicedium. Sandys'* Paraphrase.

EPICHARMUS, an ancient poet and philo- sopher, born in Sicily, and a disciple of Pytha- goras. He is said to have introduced comedy at Syracuse in the reign of Hiero. Horace com- mends Plautus for imitating this poet, in fol- lowing the intrigue so closely as not to give the readers or spectators time to trouble themselves with doubts concerning the discovery. He wrote likewise treatises concerning philosophy and medicine. None of his entire works have been preserved, but some of his apophthegms have come down to us and deserve remembrance ; such are the following : ' To die is an evil ; but to be dead is no evil.' ' Every man's natural disposition is his good or evil daemon.' 'He who is naturally inclined to good is noble, thoi gh his mother was an Ethiopia^.' ' Be sober in

thought, be slow in belief; these are the sinews of wisdom.' 'The gods set up their favors at a price, and industry is the purchaser.' ' Live so as to be prepared either for a long life or a short one. He died aged seventy, according to Laertius, who has preserved four verses in- scribed on his statue.

EPICHIREMA, t7rtX«pVa, in logic, an ar- gumentation, consisting of four or more propo- sitions, some of which are proofs of others. The oration of Cicero for Milo may be thus re- duced to the epichirema : — ' Those who way-lay a man to kill him, it is lawful for him to kill, as is allowed by the laws of nature and nations, and by the practice of the best men; but Clodius way-laid Milo with that view, as appears from his forming an ambuscade before his country-house, and from his provision of weapons, sol- diers, &c.' Therefore it was lawful for Milo to kitl Clodius.

EPICHIROTONIA, among the Athenians. It was ordained by Solon, that once every year the laws should be carefully revised and ex- amined ; and, if any of them were found unsuit- able to the present state of affairs, they should be repealed. This was called tTrixtipoTovia TW vofuav, from the manner of giving their suffrages by holding up their hands.

EPICCENE, in grammar, a term applied to nouns, which, under the same gender and termi- nation, mark indifferently the male and female species. Such in Latin is aquila, vespertilio, &c., which signify equally a male or female eagle or bat. Grammarians distinguish between epicoene and common. A noun is said to be common of two kinds, when it may be joined either with a masculine or a feminine article ; and epicoene, when it is always joined to one of the two arti- cles, and yet signifies both genders.

EPICRISIS, 1 7a»cpi

EPICTETUS, a celebrated Stoic philosopher, born at Hierapolis in Phrygia, in the first cen- tury, was the slave of Epaphroditus, a freed man and one of Nero's guard. Domitian banishing all philosophers from Rome, about A. D. 94, Epictetus retired to Nicopolis in Epirus, where he died in a very advanced age ; and, after his death, the earthen lamp he had used sold for 3000 drachmas. He was a man of great modes- ty ; and used to say, ' That there was no need to adorn a man's house with rich hangings or paintings, since the most graceful furniture is temperance and modesty, which are lasting or- naments, and will never be the worse for wear.' Of all the ancient philosophers, he seems to have made the nearest approaches to true morality, and to have had the most just ideas of God and providence. He always possessed a cool and serene mind, unruffled by passion ; and used to say, that the whole of moral philosophy was included in these words, support and abstain. One day his master Epaphroditus strove in a frolic to wrench his leg ; when Epictetus said, with a smile, free from any emotion, 'If you go on, you will certainly break my leg :' the former

redoubling his effort, and striking it with all his
to be dismissed as of no value. The end of

strength, at last broke the bone ; when Epictetus
all speculation ought to be, to enable men to

only added, ‘ Did not I tell you, Sir, that you
judge with certainty what is to be chosen, and

would break my leg ?’ No man was more expert what to
be avoided, to preserve themselves free

at reducing the rigor of the maxims of the from
pain, and to secure health of body, and

Stoics into practice. He conformed himself
tranquillity of mind. Accordingly the young

strictly, both in his discourse and behaviour, to
should apply to the study of it without delay,

the manners of Socrates and Zeno. He waged continual
war with fancy and fortune ; and it is

nor should the old be ever weary in the pursuit of ,
it. As nothing ought to be dearer to a phi-

an excellence peculiar to him, that he admitted
losopher than truth, he should prosecute it by all
the severity of the Stoics without their sour- the
most direct means, devising no fictions him- self,
nor suffering himself to be imposed upon by the
fictions of others, neither poets, orators,

ness, and reformed Stoicism as well as professed it.
Besides vindicating the immortality of the soul as
strenuously as Socrates, he declared openly against
suicide, the lawfulness of which was maintained by
the rest of the sect. Arrian, his disciple, wrote a
long account of his life and death, which is lost ;
and preserved four books of his discourses and his
Enchiridion, of which

nor logicians ; making no other use of the rules of rhetoric or grammar, than to enable him to speak or write with accuracy and perspicuity, and always preferring a plain and simple to an ornamented style. A wise man will embrace such tenets, and only such, as are built upon

there have been several editions in Greek and experience, or upon certain and indisputable Latin; and, in 1758, a translation of them into axioms. Philosophy consists of two parts: — English was published by the learned and in- physics, which respect the contemplation of na- ture ; and ethics, which are employed in the re- Lat. epicureus. A fol- gulation of manners. Of these, the latter is the

genious Miss Carter. E'PICURE, n. s.-j

EPICURE'AN, adj. f lower of Epicurus ; a man most important ; the knowledge of nature being

EPICUR'ISM, (given to luxury: epicu- only necessary as a means of promoting the hap-

EPICU'RIZE, v. n. J rean is luxurious : epicu- piness of life. Philosophers have added a third

rism, bellyism, gross pleasure : to epicurise is to part, dialectics; which ought to be rejected, as

feed like an epicure.

Then fly false thanes, And mingle with the English epicures,

Shakspeare.

Tie up the libertine in a field of feasts, Keep his brain fuming ; epicurean cooks, Sharpen with cloyless sauce his appetite. Id.

Here you do keep a hundred knights and squires ; Men so disordered, so debauched, and bold, That this our court, infected with their manners, Shews like a riotous inn ; epicurism and lust Make it a tavern or a brothel. Id. King Lear.

The epicure would have pleasure and long life, though in opposition both to God's will, and his own good. Bp. Hall.

Some good men have ventured to call munificence, the greatest sensuality, a piece of epicurism.

Calamy's Sermons.

The epicure buckles to study, when shame, or the desire to recommend himself to his mistress, shall make him uneasy in the want of any sort of know- ledge. Locke.

There is not half so much epicurism in any of their most studied luxuries, as a bleeding fame at their mercy. Government of the Tongue.

While I could see thee full of eager pain, My greedy eyes epicurized on thine. Flatman. In my opinion, the body natural may be compared to the body politic ; and, if this be so, how can the epicurean'* opinion be true, that the universe was formed by a fortuitous concourse of atoms ? Swift. EPICUREAN PHILOSOPHY. The doctrine, or

only productive of thorny disputes, idle quibbles, and fruitless cavilling. In order to facilitate the pursuit of knowledge, a few plain maxims and rules may be useful. Truth is of two kinds ; that which respects real existence, and that which consists in a perfect agreement between the con- ception of the mind and the nature of things. In order to judge rightly concerning truth, it is necessary to use some criterion, or instrument of judging. This criterion will vary according to the nature of the object which the mind contem- plates. In judging of natural and moral objects the three instruments employed are sense, precon- ception, and passion. The maxims, or canons, pertaining to sense, are four : first, that the senses can never be deceived, and consequently, that every perception of an image, or appearance, is true ; that is, that the perception or simple ap- prehension, and its efficient cause, the species or image flowing from the object, really

agree. Secondly, opinion or judgment s consequent upon perception, and admits of truth or false- hood. Perceptions or sensations, are the effect of •real extemal phenomena ; but, when the mind judges concerning these appearances, the opinion may be either right or wrong. Thirdly, every opinion is to be admitted as true, which is attest- ed, or not contradicted, by the evidence of the senses, after a careful and deliberate examination of every circumstance which can be supposed to affect the question. Fourthly, an opinion

system of philosophy maintained by Epicurus contradicted, or not attested by the evidence of and his followers, is thus stated in the compre- "^ hensive and elaborate detail of Brucker in his H story of Philosophy, as translated and abridged by Dr. Enfield : and consists of three parts, Phi-

the senses, is false. Thus the opinion of a Plenum must be false, because it contradicts the evidence of the senses, which attest that there is such a thing as motion. Concerning the second

losophy in general, Physics, and Ethics. Philo- instrument of judgment, viz. 7rpoX»?^ic> or pre-

sophy is the exercise of reason in the pursuit and attainment of a happy life ; whence it follows, that those studies, which conduce neither to the acquisition nor the enjoyment of happiness, are

conception, four canons may be laid down. First, that all preconceptions are derived from the senses, either by immediate impression, as of an individual man ; by enlargement or diminu-

tson, as of a giant or dwarf ; by resemblance, as of an unknown city to one which has been seen ; or by composition, as of a centaur. Secondly, preconception is necessary to enable us to reason, enquire, or judge of any thing. Thirdly, pre-

conceptions, or universal notions, are the princi- ples of all reasoning and discourse ; and we easily refer to these in comparing one thing with another. If these notions be agreeable to nature, and distinctly conceived, artificial reasoning will be unnecessary. Fourthly, truths, not self-evi- dent, are to be deduced from manifest pre-con- ceptions ; or, where the relation of ideas is ob- scure, it is to be made evident by the intermedi- ate use of some acknowledged principle. The third instrument, passion, or affection, which comprehends pleasure and pain, admits of the following four evident maxims. First, all pleasure to which no pain is annexed, is for its own sake to be pursued. Secondly, all pain, to which no pleasure is annexed, is for its own sake to be avoided. Thirdly, that pleasure, which either prevents the enjoyment of a greater pleasure, or produces a greater pain, is to be shunned. Fourthly, that pain, which either removes a greater pain, or procures a greater pleasure, is to be endured. As to the use of words, two canons are sufficient. First, in speaking, use terms in common use, and in the sense in which they are commonly understood. Secondly, in hearing, or reading, attend carefully to the signification which the speaker or writer affixes to his terms. Attention to these maxims would prevent much obscurity and confusion, and terminate many disputes. By these rules Epicurus undertook to conduct his followers into the secrets of nature, and to lay open to them the origin of things.

Epicurus adopted a variety of wild and fan- ciful hypotheses, which evince his incapacity of solving the grand problem concerning the origin and formation of the world. But the greatest defect of this system is the attempt of its author to account for all the appearances of nature, even those which respect animated and intelli- gent beings, upon the simple principles of matter and motion, without introducing the agency of a Supreme Intelligence, or admitting any other idea of fate, than that of blind necessity inherent in every atom, by which it moves in a certain direction. Hence he leaves unexplained

those appearances of design, which are so manifest in every part of nature, and absurdly supposes, that the eye was not made for seeing, nor the ear for hearing. Besides the idea which he gives of the nature of the gods, whose existence he admits, as similar to man ; and of their condition, as wholly separate from the world, and enjoying no other felicity except that which arises from inactive tranquillity ; falls infinitely short of the true con- ception of an intelligent Deity.

EPICURUS was born at Gargettium in At- tica, about A. A. C. 340, in the 109th Olympiad. He settled at Athens, on a fine estate he had bought ; where he educated a great number of disciples, who all lived in common with their master. The respect which his followers paid to his memory is admirable : his school was never divided, but his doctrine was followed aa an oracle. His birth-day was still kept in Pliny's

time ; the month he was born in was observed as a continual festival ; and they placed his picture every where. Hence he was falsely charged with perverting the worship of the gods, and inciting men to debauchery ; on which he wrote several books of devotion ; recommended the veneration of the gods, sobriety, and chastity ; and died of a suppression of urine, aged seventy- two.

We may thus briefly trace the subsistence and progress of the Epicurean school, after the death of its founder. From Epicurus the charge of it devolved upon his friend Hermachus ; and it was continued in succession by Poiystratus, Ba- silides, Protarchus, and others. The sect sub- sisted, in a depraved and degraded state, till the decline of the Roman empire. It entered Rome, indeed, in consequence of the opposition excited against it by the Stoics in Greece, under a heavy load of obloquy. This was much increased by the vehemence with which Cicero (De Fin. 1 ii. Tusc. Qu. 1. 1. 3. Fam. Ep. xiii. 1. Oral, in Pison. c. 22) inve.ghed against this sect, and by the easy credit which he gave to the calumnies in- dustriously circulated against its

founder. It was, however, patronised by several persons of distinction in Rome, and particularly by Atticus, the bosom friend of Cicero. Nevertheless, the true doctrine of Epicurus was not fully stated by any Roman writer, till Lucretius, with much accuracy of conception and clearness of method, as well as with great strength and elegance of diction, unfolded the Epicurean system in his poem, De Rerum Natura, On the Nature of Things. The Epicurean sect, though much de- generated from the simple manners of its foun- der, continued to flourish through a Ions: course of years under the Roman emperors. This was owing in. part to the freedom of manners which it permitted, and in part to the boldness with which it combated superstition ; but principally to the strict union which subsisted among the members of this school, and the implicit deference which they unanimously agreed to pay to the doctrines of their master. The succession of disciples in this sect was, as Laertius attests (1. x. § 9) uninterrupted, even when other schools be- gan to fail. In many places the doctrine of Epicurus was publicly taught, and at Athens the Epicurean school was endowed with a fixed stipend. Among the learned men of this period there were some, whose whole concern was to transmit the tenets and maxims of Epicurus un- corrupted to posterity ; and others who held the memory of Epicurus in high estimation, and in many particulars adopted his doc- trine, and who, therefore, may not improperly be ranked in the class of Epicureans. The principal of these are, Pliny the elder, Celsus, Lucian, and Diogenes Laertius. After the re- vival of letters, at a much later period, there were not wanting several learned men, who, finding little satisfaction in the obscure and subtle spe- culations of metaphysics, had recourse to the doctrine of Epicurus, as the true key to the mys- teries of nature. The first restorer of the Epi- curean system among the modems was Daniel Sennert, an eminent physician of Wittemberg, who flourished at the beginning of the seventeenth

century. Sennert, however, confounded the cor- puscles of the more ancient philosophers with the atoms of Democritus and Epicurus, and held that each element has primary particles peculiar to itself. The same doctrine was taught, with some inconsiderable variations, by Chrysos- tom Magnenus, professor of medicine in the university of Pavia, who, in the year 1646, pub- lished A Treatise on the Life and Philosophy of Democritus. His system was rendered ob- scure by an attempt to unite the incompatible dogmas of Epicurus and Aristotle. The ablest and most successful attempt towards the revival of the physical and moral philosophy of Epicu- rus was made by Peter Gassendi, who, besides a variety of other learned treatises, wrote a life of Epicurus, in which he undertakes to rescue that philosopher from the load of calumny under which his memory had lain for many ages, as well as to give a fair and impartial representation of his doctrine. The most celebrated followers of Gassendi were Francis Bernier, a physician of Montpelier, who wrote an Abridgement of Gassendi's Philosophy, Par. 1678, and Walter Charlton, an Englishman, who wrote a treatise, entitled Physiologia Epicuro-Gassendo Char- letoniana, London, 1654, in which he attempts to establish natural science upon atomic princi- ples. Indeed, the doctrine of atoms and a vacuum has been embraced by the most eminent philosophers. Huygens applies it to explain the cause of gravitation, and Newton admits it into his theory of natural philosophy. Diogenes LaertHts, 1. x. Lucretius de Rerum Nutura. Stan- ley's Hist. Phil, part xiii. Gassendm de Vita et Moribus Epicuri. (Brucker's Hist. Phil, by EnMd)

EPICYCLOID, in geometry, is a curve gene- rated by a point in one circle, which revolves about another circle, either on the concavity or convexity of its circumference, and thus differs from the common cycloid, which is generated by the revolution of a circle along a right line ; though the latter has sometimes been assimilated with the former, by considering the right line as the circumference of a circle whose diameter is infinite. The invention of

epicycloids is ascribed to M. Roemer, the celebrated Danish astronomer.

EPICYCLE, a circle on a circle, in the ancient system of astronomy, was a subordinate orbit, or circle, which moved on the circumference of a larger one, which latter was called the deferent. By means of this epicycle, one motion, apparently irregular, was resolved into two that were circu- lar and uniform ; and, when the observed motirn was so irregular and complicated as not to be represented by one epicycle, the method was to add others, till a nearer approximation was ob- tained. This system owed its origin to a preju- dice that seems to have been extremely ancient, in favor of uniform and circular motion ; and the problem that chiefly occupied the astrono- mers in those times, was to assign the proper proportion of the deferent and epicycle which should approximate nearest to the actual obser- vations. The representation made by this con- centric theory of the solar inequalities in longi- tude, was as follows :

Let C be the centre both of the earth and of the circle FED, and let H G k be a smaller circle, called an epicycle, whose centre B moves uniformly in the circumference F B D from west to east, or in consequentia, while the sun moves also uniformly, and with the same velocity, in the circumference of the epicycle, in anteceden- tia in the upper part, but in consequentia in tl.e lower. If the point G of the epicycle, called the apogee, as being most distant from the earth, be supposed, at the beginning of the anomalisti- cal revolution, to be placed in the point A of O F produced ; and if when it comes to G the arch G H be taken similar to F B, the point H will be the place of the sun when the centre of the epicycle has moved from F to B. If then in O F, to which B H is parallel, w* take O E =. B H, and on E, as a centre, with the distance EA — CF, describe the circle A HP, the sun would be seen from E to move in this circle equably; for the angle AEH is equal to the angle F C B ; but seen from C, the centre of the earth, he w.ll appear to move in it inequably, for the angle AC H in the

first semicircle of ano- maly, that is, in the passage of the sun from A to P, is always less than AEH or FCB:. and his true place H will be less advanced in longi- tude than his mean B. When, again, the centre of the epicycle, or the mean place of the sun, having described a semicircle of the epicycle, will be found in P, the perigee of the orbit A H P, and his mean and true places B and H, will be seen from C to coincide as they did in A, the apogee; but in the sun's passage from P to A, that is, in the second semicircle of ano- maly, his true place H, as seen from C, will be always more advanced in longitude than his mean place B; for in this semicircle the angle PCH is always greater than PEH in DCB. The angle EHC, or BCH, which is the difference between the mean and true places of the sun, is called the equation of the orbit, as being that quantity which, added to the true motion A C H of the planet in its orbit AH P, in the first semi- circle of anomaly, and subtracted from it in the opposite semicircle, will render it equal to the mean motion A EII or F C B; and it is evident that the equation, or difference, will be greatest in N or M, where the centre B of the epicycle is 90° distant from either apsis. Any lines drawn from E, the centre of the orbit AHP, to thp true place of the sun in II, and from C the centre of

the earth, and of the deferent F B D, to the mean place of the sun in B, are equally called the line of the mean motion of the sun, because these lines are always parallel, and mark the same point in the zodiac; and any line drawn from C to the true place of the sun, is the line of the sun's true motion.

EPIDAURUM, EPIDAURUS, or EPITAURUM, m ancient geography, a town of Dalmatia, on the Adriatic, built 430 years after the destruction of Troy; a considerable town formerly, but now reduced to a

small village. See KAGUSA.

EPIDAURUS, in ancient geography, a town of Argolis, in Peloponnesus, on the Saronic Bay, south of the promontory Spiraeum ; called sa- cred, because of the religious veneration paid to jEsculapius, whose temple stood five miles from the town. Epidaurus stood in a recess of the bay, fronting the east ; being enclosed by high mountains reaching the sea, and rendering it dif- ficult of access. It had several temples, and in the acropolis or citadel was a remarkable statue of Minerva. The grove of yEsculapius was en- closed by mountains, within which all the sacri- fices as well of the Epidaiirians as of strangers were consumed. One was called Titthion ; and on this the god, when an infant, was said to have been exposed, and to have been suckled by a she goat. Beyond the temple was the dormitory of the suppliants, and near it a circular edifice called the Tholus, built by Polycletus, of white marble. The grove, besides other temples, was adorned with a portico, and a fountain remark- able for its loof and decorations. The bath of JEsculapius was one of the benefactions of An- toninus Pius, while a Roman senator ; as was also a house for the reception of pregnant wo- men and dying persons. The remains are heaps of stones, pieces of brick wall, and scattered fragments of marble ; besides some churches or rather piles of rubbish, being destitute of doors, roofs, or any kind of ornament. The statue of ./Esculapius was half the size of that of Jupiter Qlympius at Athens. It was made of ivory and gold ; and, as the inscription proved, by Thrasy- medes, son of Arignotus of Paros. He was re- presented sitting holding his staff, with one hand on the head of a serpent, and a dog lying by him. Two Argive heroes, Bellerophon combat- ing with the monster Chimaera, and Perseus se- vering the head of Medusa, were carved on the throne. Many tablets described the cures per- formed by the deity, yet he had not escaped contumely and robbery. Dionysius deprived him of his golden beard, affirming that it was very unseemly in him to appear in that manner, when his

father Apollo was always seen with his face smooth. Sylla amassed the precious offer- ings belonging to him, and to Apollo and Jupiter at Delphi and Olympia, to pay his army before Athens. A few fragments of white marble, ex- quisitely carved, are in the heap of the temple. In the second century six marbles remained, on which were written in the Doric dialect, the names of men and women who had been pa- tients of the god, with the distemper each had labored under, and the remedies he had di- rected. Dr. Chandler found only a couple of votive inscriptions, and two pedestals of statues, VOL. VIII

one of which represented a Roman, and \v:is erected by the Epidaurians. The stadium was near the temple, and was of earth. At the upper end were seats of stone, but these were continued along the sides only a few yards. A vaulted passage leading underneath into the area, now choked up, was a private way by which theAgo- nothetae, or presidents, with the priests and per- sons of distinction, entered. Two large reser- voirs remain, made by Antoninus for the recep- tion of rain-water. Beyond them is a dry water- course, and in the mountain side, on the right hand, are the marble seats of the theatre, over- grown with bushes. The springs and wells by the ruins are now supposed to possess many ex- cellent properties. To these and a good air, with the recreations of the stadium, and the me- dicinal knowledge and experience of the priests, may be attributed both the recovery of the sick, and the reputation of ^Esculapius.

EPIDEMIA, in Grecian antiquity, festivals kept in honor of Apollo and Diana, at the stated seasons, when those deities, who could not be present every where, were supposed to visit dif- ferent places in order to receive the vows of their adorers.

EPIDEM'IC, (from tiri and £»//u>e, amongst the people) signifies a disease or state of sickness that prevails for a period in a vicinity, district, or tract of country. It originates always in tran- sient external influences which gradually produce

such changes in the bodily system, as finally bring on the sickness. Many epidemics appear to arise from some peculiar morbid matter in the atmosphere, brought by particular winds ; such are the influenza and others of that class. The most fatal epidemic that visited Europe for many years was the cholera morbus of 1830 and

1831.

They're citizens o' th' world, they're all in all ; Scotland's a nation epidemical. Cleaveland.

He ought to have been busied in losing his money, or in other amusements equally laudable and epide- mick among persons of honour. Swift.

Of all things, wisdom is the most terrified with epi- demical fanaticism, because, of all enemies, it is that against which she is the least able to furnish any kind of resource. Burke.

EPIDENDRUM, in botany, a genus of the diandria order, and gynandria class of plants ; natural order seventh, orchidese. The nectarium is turbinated, oblique, and reflexed: the COR. spreading without spur. This plant produc-s the vanilla, which is used in making chocolate., It is a native of Mexico, and some parts of the East Indies. It is a parasitic plant ; the leaves of which greatly resemble the vine, and are about eighteen inches long, and three broad. The flowers are white intermixed with stripes of red and yellow. These are quickly succeeded by pods, at first green, but afterwards yellow. The pods of the best vanilla are long, slender, and well filled with seeds. If opened, when fresh, the cavity of the pod is found to contain a humid substance that is black, oily, and balsamic, of such a strong smell, that it frequently cause* head-aches, and even a sort of temporary intoxi- cation. The season for gathering the pods be-

gins about the end of September, and lasts till tlie end of December. They are dried in the sliade ; and when dry are rubbed with oil of co- coa or calba, to render them supple, and to pre- vent them from becoming brittle. This fruit is only used for perfuming chocolate. In New Spain it is reckoned unwholesome, but in Eng- land, and other countries, it is a constant ingre- dient ; and perhaps its noxious qualities may be corrected by the sea air. In those countries where they grow, the plants are easily propagated by cuttings. In this country they require to be kept in a stove, and placed near some American tree, round which they may climb for support.

EPIDERMIS. See ANATOMY and SKIN.

EPIDICASIA, among the Athenians. Daugh- ers inheriting their parent's estate, were obliged to marry their nearest relation ; which gave oc- casion to persons of the same family to go to law with one another, each pretending to be more nearly allied to the heiress than the rest. The suit was called firiducactof Sticr) ; and the virgin, about whom the relations contested, tTrifoicac.

EPIDIDIUM, in ancient geography, the name given by Ptolemy to that peninsula of the western coast of Scotland, called Cantyre and Knapdale ; and now forming part of the county of Argyle. It included the isles of Islay and Jura, which the Roman geographer consi- dered as being part of it. The peninsula might at an- early period have been an island ; such changes has the sea made upon our surge-beat coasts : for ' Dr. Smith derives this name from a similar Celtic word, signifying the isle of the Picts, who at that time were the principal inhabitants of that part of Scotland.' Sir John Sinclair's Stat. Acct. vol. x. p. 519. Mr. Baxter imagines the Pepidii, synonymous with Epidii, to have de- rived their name from the British word

Papidi- auc, which signifies any thing shaped like a flute or pipe, as was the peninsula of Cantyre, the country of the Pepidii. From the southern point, called the mull of Cantyre, promontorium Epi- dium, the coast of Ireland may be plainly seen ; it being only sixteen miles to the south foreland in Coleraine.

EPIDIDYMIS. See ANATOMY.

EPIDOT./E, deities who presided over the growth of children ; worshipped by the Lacedae- monians, and invoked by those who supposed themselves persecuted by ghosts, &c.

EPIGLOTTIS. From em, upon, and yXwrnc, the tongue. The cartilage at the root of the tongue that falls upon the glottis or superior open- ing of the larynx, and closes it at the time of swallowing, so that nothing may pass into the lungs. See ANATOMY.

EPIGONI, the sons of the seven Grecian he- roes who fought in the first Theban war. The war of the Epigoni is famous in ancient history. It was undertaken ten years after the first. The sons of those who had perished in the first war, reso'ved to avenge the death of their fathers, and marched against Thebes, under the command of Thersander ; or, according to others, of Alcmreon the son of Amphiaraus, about 1307 years before Christ. The Argives were assisted by the Corin- thians, the people of Messenia, Arcadia, and Megara. The Thebans had engaged all their

neighbours in their quarrel, as in one common cause. These two hostile armies met and en- gaged on the banks of the Glissas. The fight was obstinate and bloody, but victory declared for the Epigoni, and some of the Thebans fled to Illyricum, with Leodamas their general, while others retired into Thebes, where they were soon besieged, and forced to surrender. In this war jEgialeus was the only prince of the seven who was killed, and his father Adrastus was the only one who escaped alive in the first war. The his- tory of this war, as Pausanias observes,

was written in verse ; and Callinus, who quotes some of the verses, ascribes them to Homer, and says, that next to the Iliad and Odyssey, he had never seen a finer poem. The descendants of the ve- teran Macedonians, who served under Alexander the Great, and who had children by Asiatic wo- men, were also called Epigoni.

EPIGRAM, n. s. -\ FT. epigramme ;

EPIGRAMMAT'IC, adj. f Lat. epigramma, of

EPIGRAMMAT'ICAL, { Gr. tin and ypa^w, to

EPIGRAM'MATIST.) write. A short poem

or inscription, generally terminating in some

witty point. See below.

A college of witcrackers cannot flout me out of my humour : do'st thou think I care for a satire or an epi- gram. S/iakspeare.

What can be more witty than the epigram of Mjore upon the name of Nicolaus, all ignorant physicia that had been the death of thousands ?

Peacharn of Poetry.

Such a customer the epigrammatist Martial meet withal, one who, after he had walked through th fairest street twice or thrice, cheapening jewels, plate rich hangings, came away with a wooden dish.

Peacham.

Our good epigrammatical poet, old Godfrey of Win- chester, thinketh no ominous forespeaking to lie in names. Camden.

Our epigrammatarians old and late, Were wont be blamed for too licentiate.

Bp. Hall'i Satires.

There were certain fairies in the old regions of

poetry, called epigrams, which seldom reached above the stature of two, or four, or six lines, and which, being so short, were all turned upon conceit, or some sharp hits of fancy or wit. Sir W. Temple.

He is every where above conceits of epigrammatick wit and gross hyperboles : he maintains majesty in the midst of plainness ; he shines, but glares not j and is stately, without ambition. Addison.

I writ An epigram that boasts more truth than wit. Gay.

A jest upon a poor wit, at first might have had an epigrammatist for its father, and been afterwards gravely understood by some painful collector. Pope.

Attainment is followed by neglect, and possession by disgust ; and the malicious remark of the Greek epigrammatist on marriage, may be applied to every other course of life, that its two days of happiness are the first and the last. Johnson.

Unfinished here an epigram is laid, And there a mantua-maker's bill unpaid.

Sheridan.

EPIGRAM, tirtypappa, originally signifies in- scription. Epigrams derive their origin from those inscriptions placed by the ancients on their tombs, statues, temples, triumphal arches, &c. These, at first, were only simple monograms ; af- terwards increasing their length, they made them in verse, to be the more easilv retained : TT°-

dotus, arid others, have transmitted to us several of them. Such little poems retained the name of epigrams, even after the design of their first institution was varied, and the people began to use

them for the relation of little facts and acci- dents, the characterising of persons, &c. Some critics require the epigram constantly to close with something poignant and unexpected, to which all the rest of the composition is only preparatory ; while others, on the contrary, maintain that the thought should be equally diffused throughout the poem without laying the whole stress on the close ; the former is usally the practice of Mar- tial, and the latter that of Catullus. The Greek epigrams have scarcely any thing of the point or briskness of the Latin ones ; those collected in the Anthology have most of them a remarkable air of ease and simplicity, attended with some- thing just and witty. Though they want the salt of Martial, yet they are not insipid ; however the general faintness and delicacy of the pleasan- try in them, has given occasion for a Greek epi- gram, or epigram a la Greque, to denote, among the French, an epigram void of sharpness. We suhjoin one or two of the best examples of the epigram : On the miracle of turning the water into wine at Cana. John ii.

Vidit et erubuit lympha pudica Deum.

From MARTIAL. When Arria from her wounded side To Pxtus gave the reeking steel, I feel not what I've done — she cried ; — What Paetus is to do, I feel.
BY DR. DODDRIDGE,

On the motto to his family arms, ' Dum vi- vimus vivamus.'

Live while you live, the epicure would say,

4nd seize the pleasures of the present day.

Live while you live, the sacred preacher cries,

And give to God each moment as it flies.

Lord, in my views let both united be ;

I live in pleasure when I live to Thee.

See also a beautiful epigram of Dr. CLARKE'S in our

account of his life.

EPIGASTRIC REGION, in anatomy, one of those portions into which the cavity of the ab- domen is divided. ' The epigastric region,' says Winslow, 'begins immediately under the appen- dix ensiformis at a small superficial depression, called the pit of the stomach, and in adult sub- jects ends above the navel at a transverse line, . supposed to be drawn between the last false ribs on each side. This region is subdivided into three parts, one middle, named epigastrium, and two lateral, termed hypochondria. The epigas- trium takes in all that space which lies between the false ribs of both sides ; and the hypochondria are the spaces covered by the false ribs.' Sect. 7. 79, and 80.

E'PILEPSY, n. s.) 'ETrtXij^c- A convul-

EPILEP'TIC, adj. \ sive motion of the whole body, or some of its parts, with a loss of sense. Epileptic, convulsed with epilepsy, or liable to this disease.

A plague upon your epileptick visage ! Smile you my speeches, as I were a fool ?

Shakspeare.

My lord is fell into an epilepiy : This it the second fit. Id. Othello.

Melancholy distempers are deduced from spirits drawn from that cacochymia ; the phrcnitis from cho- lerick spirits, and the epilepsy from fumes.

Floyei on the Humours.

Epileptichs ought to breathe a pure air, unaffected with any steams, even such as are very fragrant.

Arbuthnat on Diet.

One of these sleep-walkers I have frequently seen : once she smelt of a tube rose, and sung, and drank a dish of tea in this state ; her awaking was always attended with prodigious surprise, and even fear;

this disease had daily periods, and seemed to be of the epileptick kind. Darwin.

Unless with people who too much have quaffed,

And have a kind of wild and horrid glee, Half epileptical, and half hysterical : Their preservation would have been a miracle.

Byron.

EPILEPSY. See MEDICINE.

EPJLLA, a town of Spain, in Arragon, on the Xalon. Population 3200. Seventeen miles west of Saragossa.

EPILOBIUM, the willow-herb, in botany, a genus of the monogynia order, and octandria class of plants ; natural order seventeenth, calycanthe- mae: CAL.quadrifid; petals four; CAPS, oblong in- ferior ; SEED pappous or downy. There are thirteen species; several of them natives of Britain. They grow in marshes, or under hedges in moist and shady places; having blossoms generally of a red color, and sometimes of considerable beauty. The most remarkable are, 1. E. angustifolium, or rosebay willow-herb. An infusion of the leaves has an intoxicating quality, as the inhabitants of Kamptschatka have learned. These people also eat the white young shoots which creep under the ground, and have a sort of ale brewed from the dried pith of it. The down of the seeds has been lately manufactured, by mixing it with cotton, or beaver's hair. 2. E. hirsutum. The top-shoots of this plant have a very delicate fragrancy ; but so transitory, that before they have been gathered five minutes, it is no longer perceptible. Horses, sheep, and goats eat this plant ; cows are not fond of it ; swine refuse it.

E'PILOGUE, n. $. Fr. epilogue ; Lat. epilo- gus. The poem or speech at the end of a play.

If it be true that good wine needs no bush, 'tis trite that a good play needs no epilogue ; yet to good wine they do use good bushes, and good plays

prove the better by the help of good epilogues. Shakspeare.

Are you mad, you dog ? I am to rise and speak the epilogue.

Dryden.

EPILOGUE, in oratory, the conclusion of a dis- course, ordinarily containing a recapitulation of the principal matter delivered.

Tlie EPILOGUE, in dramatic poetry, is addres- sed to the audience, after the play is over, by one of the principal actors; and usually contains some reflections on certain incidents in the play, especially those in the part of the person that speaks it. Having somewhat of pleasantry, it is intended to compose the passions excited by the representation.

EPIMEDIUM, barren-wort, in botany, a genus of the monogynia order, and tetrandria class of plants; natural order twenty-fourth, corydales. Nectaria four, cup-shaped, and lying on the petals: COR. tetrapetalous ; CAL. dropping off;

EED vessel a pod. The only species is the E. alpinum, a low herbaceous plant, with a creeping root, having many stalks about nine inches high, each of which has three flowers, composed of four leaves placed in the form of a cross. Their color is reddish, with yellow stripes on the border.

EPIMENIDES, an ancient poet and philoso- pher, born at Gnossus in Crete. Contrary to the custom of his country, he always wore his hair long; which, according to some, was because he was ashamed of

being thought a Cretan : and indeed he does not seem to have had a high opinion of his countrymen, if that verse cited by St. Paul 'The Cretans are always liars, evil beasts, slow bellies/ be his, as is generally believed. His reputation was so great over all Greece, that he was esteemed a favorite of the gods. The Athenians being afflicted with the plague, and commanded by the oracle to make a solemn lustration of the city, sent Nicias, the son of Niceratus, with a ship to Crete, to desire Epi- menides to come to them. He accepted their invitation, accompanied the messengers to Athens, performed the lustration of the city, and the plague ceased. Here he contracted an acquain- tance with Solon, who consulted him on the regulation of the Athenian commonwealth. He is said to have looked on the port of Munychia, and said, ' How blind is man to future things ! for did the Athenians know what mischief will one day be derived to them from this place, they would eat it with their teeth.' This prediction was thought to be accomplished 270 years after, when Antipater constrained the Athenians to admit a Macedonian garrison into that place. On his leaving Athens, the citizens offered him many valuable presents and honors, and appointed a • ship to carry him back to Crete : but he would accept of nothing except a branch of the sacred olive preserved in the citadel ; and desired the Athenians to enter into an alliance with the Gnossians. Having obtained this, he returned to Crete, where he died soon after, aged 157 years ; or, as the Cretans pretended, consistently with their character, 299 years. He was also a poet, and wrote verses on the Genealogy of the Gods, on the Building of the ship Argo, and Jason's Expedition to Colchis, and concerning Minos and Rhadamanthus. He wrote also in prose, Concerning Sacrifices and the Common- wealth of Crete. St. Jerome likewise mentions his Books of Oracles and Responses. The Lace- daemonians procured his body, an 1 preserved it among them by the advice of an oracle ; and Plu- tarch tells us that he was reckoned the seventh wise man by those who refused to admit Perian- der into the number.

EPIMETHEUS, in fabulous history, a son of Japetus and Clymene, who married Pandora, by whom he had Pyrrha, the wife of Deucalion. He had the curiosity to open the box which Pandora had brought with her, and thence issued a train of evils, which from that moment have never ceased to afflict the human race. Hope only remained at the bottom of the box, and it is she alone which comforts men under misfortunes. Epimetheus was changed into a monkey by the gods, and sent into the island Pithecusa.

EPIMETRON, tin and prpov, measure, m

Roman antiquity, an allowance given to the tax-gatherers in the Roman provinces, over and above the just quantity of wine or grain they were obliged to furnish. The epimetron, or over- measure, was different in different provinces, being always greater in those that were remote. The different kinds of things wherein it was given made likewise a difference in the quantity allowed. The reason of allowing an epimetron, or over-measure, was to make good the leakage of the wine, and waste of grain, that would necessarily happen by transporting it to Rome. The provinces whose taxes were converted into money, and paid in specie, were free from epi-metron.

EPINAL, a town of Lorraine, France, the capital of the department of the Vosges. The river Moselle divides it into two parts ; it is well built, has a few manufactures, and a good trade in cattle and timber. Population 7500. Ten miles north-west of Remiremont.

EPINAY, a town of France, between Lille and Douay, containing about 2000 inhabitants.

EPINGEN, a town of Germany, in the duchy of Baden, with 2450 inhabitants. It is eighteen miles S. S. E. of Heidelberg.

EPINY'CTIS, n. *. Gr. ijrivwcrif. A sore at the corner of the eye.

The epinyctit is of the bigness of a lupin, of a dusky red, and sometimes of a livid and pale colour, with great inflammation and pain. Wiseman's Surgery.

EPIPHANIUS (St.), an ancient father of the church, born at Besanducan, a village in Pales- tine, about A. D. 332. He founded a monastery near the place of his birth, and presided over it. He was afterwards elected bishop of Salamis;, when he took part with Paulinus in opposition to Meletius, and ordained in Palestine, Paulinian, the brother of St. Jerome; on which a contest arose between him and John, bishop of Jerusa- lem. He afterwards called a council in the island of Cyprus, in which he procured a pro- hibition of the reading of Origen's writings ; and earnestly endeavoured to prevail on Theophilus, bishop of Alexandria, to engage St. Chrysostom to declare in favor of that decree : but, not meet- ing with success, he went himself to Constanti- nople, where he would not have any communi- cation with St. Chrysostom; and formed the design of entering the church of the apostles, to publish his condemnation of Origen ; but, being informed of the danger to which he would be exposed, he resolved to return to Cyprus : buf died at sea in 403. His works were printed in Greek at Basil, 1544, in folio; and afterwards translated into Latin, in which language they have often been reprinted. Petavius revised and corrected the Greek text by two manuscripts, and published it together with a new translation at Paris in 1622. This edition was reprinted at Cologne in 1682.

EPI'PHANY, n. s. Fr. epiphoncme ; Ital. Span, and Port, epifonema ; Gr. iTrujiavtia, man- ifestation. A church festival, celebrated on the twelfth day after Christmas, in commemoration of our Saviour's being manifested to the world. Thou

Glorifiedst poverty,

And yet soon after riches didst allow,

By accepting kings' gifts in the Epiphanie ;
Deliver, and make us to both ways free !

Donne.

The EPIPHANY was not originally a dis- tinct festival, but a part of that of the nativity of Christ, which being celebrated twelve days, the first and last of which were high days of solem- nity, either of these might properly be called epiphany, as implying the appearance of Christ in the world. The word in the original Greek, tTTupana, signifies appearance or apparition; and was applied, as some suppose, to this feast, on account of the star which appeared to the magi. The offerings of the wise men to the infant Jesus are commemorated on epiphany, or twelfth-day. St. Jerome and St. Chrysostom take the epiphany for the day of our Saviour's baptism, when he was declared to men by the voice from heaven. Matt. iii. 17. And accordingly it is still observed by the Cophta; and Ethiopians in that view. Others contend that the feast of Christmas was held ii» divers churches on this day ; which had the denomination epiphany from our Saviour's first appearance on earth at that time. The word is used among the ancient Greek fathers, not for the appearance of the star to the magi, but for that of our Saviour to the world : in which sense St. Paul uses it, in his Second Epistle to Timo- thy, i. 10.

EPIPHONE'MA, n. s. Gr. tm^v^a, tin and ovf, to call. An exclamation ; a conclu- sive sentence not closely connected with the words foregoing.

I know a gentleman, who made it a rule in read- ing to skip over all sentences where he spied a note of admiration at the end. If those preachers who abound in epiphonemas would but look about them, they would find one part of their congregation out of countenance, and the other asleep, except perhaps an old female beggar or two in the aisles ; who, if they be sincere, may probably groan at the sound.

Swift.

The synonymous parallelism, which repeats the sense of a former clause in different words, is con- sidered as one kind of epiphonema by Demetrius Pha- lereus, as it is placed by him among the embellishments of style. Abp. Newcome.

EPIPHONEMA, ETrt^wvt^a, exclamation, in rhetoric, a sententious exclamation, frequently added after a narrative, or rehearsal of any thing remarkable ; containing usually a lively, close reflection on the subject there spoken of, and intended to give it greater force, and render it more affecting to the hearers. Such is that of St. Paul, when, after discoursing of the rejection of the Jews, a i i the vocation of the Gentiles, he cries out, ' O tne depth of the wisdom and know- ledge of God!' This figure is frequently ex- pressed in a way of admiration. Such is that of Cicero, when, aft e : having observed, that all men are desirous of living to an advanced age, but uneasy under it when attained, he makes this just reflection upon their conduct : — ' So great is their inconstancy, folly, and perverseness !' (Cic.

EPIPHORA, in medicine, the watery eye ; a genus of diseases in the class locales, and order apocenoses of Cullen. The humor which flows

so copiously from the eye, in epiphora, seems to come not only from the lachrymal gland, but from the whole surface of the caruncula lachry malis, and of Melibomius's glands. It is gene- rally occasioned by some external blow, by sand, acrid fumes, and the like, or by some disease, as the scrofula, measles, small-pox, &c. ; or it arises from an obstruction in the lachrymal canal, so that the tears cannot pass to the nose. See MEDICINE.

EPPPHYSIS, n. s. 'EiriQvffif. Accretion ; the part added by accretion ; one bone growing to another by simple contiguity, without any pro per articulation.

The epiphysit of the os femoris is a distinct bonfl

from it in a child, whereas in a man they do entirely unite. Wiseman.

EPIPHYSIS. See ANATOMY.

EPIPLOCELE, in medicine, a kind of her- nia, or rupture, in which the omentum subsides into the scrotum.

EPIPLOOMPHALON, an hernia umbili- calis, proceeding from the omentum, falling into the region of the navel.

EPIRUS, a district of ancient Greece, bounded on the east by Etolia, on the west by the Adria- tic, on the north by Thessaly and Macedon, and on the south by the Ionian Sea. According to Josephus, it was first peopled by Dodanim, the son of Javan, and grandson of Japhet. The people were very warlike : but they remained in a savage state long after their neighbours were civilised ; whence the islanders used to threaten their offenders with transportation to Epirus. Their horses were in great request among the ancients ; as well as the dogs produced in one of the divisions called Molossus, called by the Romans Molossi. The history of Epirus com- mences with the reign of Pyrrhus, the son of Achilles, by Deidamia, the daughter of Lyco- medes, king of Scyros. He is said to have behaved with great bravery at the siege of Troy ; but, it appears, with no less barbarity. After the city was taken, he killed the old king Priam with his own hand ; threw Astyanax, the son of Hec- tor and Andromache, headlong from a high tower; and sacrificed Polyxena, the daughter of Priam, on the tomb of his father. He carried Andromache with him into Epirus, where he set- tled by the advice of the famous soothsayer Helenus, one of Priam's sons, who had served during the Trojan war both under his father and himself. But the most remarkable period of the history of Epirus is the reign of Pyrrhus II., who made war upon the Romans. He was invited into Italy by the Tarentines; and embarked about A. A. C. 280. After having escaped many dangers by sea, he landed in that country, and with great difficulty gained a

victory over the Romans; he was afterwards, however, utterly defeated by them, and obliged to return into his own country. See ROME. To retrieve his honor, he then undertook an expedition against Mace- don ; where he overthrew Antigonus, and at last made himself master of the whole kingdom. He then formed a design of subduing all the other Grecian states ; but met with such an obstinate resistance at Lacedsemon, that he was obliged to drop the enterprise ; and was soon after killed at

the siege of Argos by a woman, who, from the wall, threw a tile upon his head. Deidamia, the grand- daughter of Pyrrhus, was the last who sat on the throne of Epirus. She is said to have been murdered after a short reign ; upon which the Epirots formed themselves into a republic. Under this government Epirus never made any considerable figure, but seems rather to have been dependent on the kingdom of Macedon. The Romans having conquered Philip, king of that country, restored the Epirots to their ancient liberty ; but they, forgetful of this favor, soon after took up arms in favor of Perseus. As a punishment for this ingratitude, the Romans ga\ e orders to Paulus Ernilius, after the reduction of Macedon, to plunder the cities of Epirus, and level them with the ground. This was executed throughout the whole country on the same day, and at the same hour. The booty was sold, and each foot soldier had 200 denarii, that is £6 9s. 2d., and each of the horse double this sum; 100,000 men were made slaves, and sold to the best bid- der, for the benefit of the republic. Nor did the vengeance of Rome stop here ; all the cities of Epirus, to the number of seventy, were disman- tled, and the chief men of the country carried to Rpme, where they were tried, and most of them condemned to perpetual imprisonment. After this terrible blow, Epirus never recovered its ancient splendor. Upon the dissolution of the

Achaean league, it was made part o.f the province of Macedon; but, when Macedon oecame a dio- cese, Epirus was made a province of itself, and called the province of Old Epirus, to distinguish it from New Epirus, another province lying east of it. On the division of the empire, it fell to the emperors of the east, and continued under them till the taking of Constantinople by the Latins, when Michael Angelus, a prince nearly related to the Greek emperor, seized on Etolia and Epirus, of which he declared himself despot, or prince ; and was succeeded by his brother Theodorus, who took several towns from the Latins, and so far enlarged his dominions, that, disdaining the title of despot, he assumed that of emperor, and was crowned by Demetrius, arch- bishop of Bulgaria. Charles, the last prince of this family, dying without lawful issue, bequeathed Epirus and Acarnania to his natural sons, who were driven out by Amurath II. Great part of Epirus was afterwards held by the noble family of the Castriots ; who, though they were masters of all Albania, yet styled themselves princes of Epirus. Upon the death of the famous George Castriot, surnamed Scanderbeg, Epirus fell to the Venetians, who were soon dispossessed of it by the Turks; in whose hands it still continues, being now included in ALBANIA, which see. EPIS'COPACY, n.s.) Lat. episcopates. EPIS'COPA L, adj. V Government of or by

EPIS'COPATE, n. s. J bishops ; of or relating to bishops : episcopal is the office or dignity of a bishop.

The plot of discipline sought to erect a popular authority of elders, and to take away episcopal juris- diction. Hooker.

The bishops dun* not contest with the assembly in jurisdiction ; so that there was little more than the name of epitcopacy preserved. Clarendon.

Prelacy itself cannot be proved by prescription, since episcopacy is not prescribed by any time what- soever. Ayliffe.

These qualities, at length, deservedly conducted you to the episcopate. Arnold.

The apostle commands Titus not only to be a pattern of good works himself, but to use his episcopal authority in exhorting every rank aud order of men.

Roger*, The father, who designs his babe a priest ,

Dreams him episcupal/y such at least. Cuwper.

EPISCOPACY is that form of church govern- ment in which diocesan bishops are established, as distinct from, and superior to priests or pres- byters. The ministers of religion have long been distinguished into different orders; but it has been much controverted whether the distinc- tion be of divine or human right. See the article BISHOP.

EPISCOPALIANS, in church history, an appellation given to those who prefer the epis- copal government and discipline.

EPISCOPALIANS, SCOTCH, differ from those of England, upon some particular ecclesiastical points. In an account of the episcopal church of Scotland, drawn up by one of its members, it is observed, that the real tenets of the Scotch episcopalians, or members of what was once the established church of Scotland, seem to be very imperfectly understood. During the Reforma- tion from popery, there was little order or decency observed in the worship of the reformed church ; but this was abolished in the reign of James VI., and episcopacy established on very liberal principles. The episcopal form of wor- ship now obtained the sanction of the most respectable part of the nation, and it continued to flourish under the patronage of government, till it was overthrown by the zealots for the national covenant. It was, however, restored in 1662, and prevailed, in some measure, for twen- ty-seven years, till, through the influence of the advocates for the prince of Orange, it was again overthrown. Here it is to be remarked that, even while established and supported by govern- ment, the Scotch episcopal church had no public liturgy: the English book of Common Prayer was indeed made use of by the first reformers, and there seems little reason to doubt but that John Knox himself sometimes countenanced set forms of prayer, and encouraged clerical subordi- nation; but his successor, Andrew Melvil, a man greatly inferior to him in learning and knowledge, introduced an equality among the clergy, and, at the same time, was so successful in exciting the indignation of the people against the liturgy,

that when an attempt was made to modify the prayer book, so as it might be used by the church of Scotland, the solemn league and covenant was entered into : and the ruin of the unfortunate Charles was the result. The episco- palians were treated with some degree of severity during the reign of William III., on account of their scrupulously declining to proffer the same allegiance to him which they had sworn to king James. They were prohibited, it is said, from officiating on the sabbath day, except in their own hired houses, where they received such friends as chose to come in unto them. Their worship was conducted in this manner, praying

either extempore, or from premeditation, till queen Anne ascended the throne, after which the English liturgy was gradually introduced into Scotland, under the authority of an aot of parlia- ment, passed on the 3rd of March, 1712 ; one clause of which was, ' to prevent the disturbing of those of the episcopal communion in that part of Great Britain called Scotland, in the exercise of their religious worship, and in the use of the liturgy of the church of England.' It was pub- licly known,however, that they were much attached to the house of Stuart, tn consequence of which, when the rebellion broke out in 1715, they were laid under several restraints ; but these were nei- ther of a severe nature, nor of any long continu- ance, for in 1720 their places of worship were as numerous as they had been formerly, and they were attended by members of the most eminent and respectable characters in the kingdom, of whom not a few held appointments under govern- ment. Before this time Dr. Sancroft, archbishop of Canterbury, with five other bishops, who were extremely popular, being deprived of their sees for refusing their allegiance to king William, occasioned a schism in the church of England. Among other matters of dispute, different opi- nions were entertained respecting the nature and design of the Lord's supper, and the controversy infected the episcopalians in Scotland. At such a critical period, the introduction of

prayers into public worship in behalf of departed friends was certainly, to call it no worse, a very impolitic measure, every thing savoring of popery being held in the utmost abhorrence. After the death of Dr. Rose, the proscribed bishop of Edinburgh, in 1720, such of the presbyters as had been pro- moted to the episcopal dignity opposed the dio- cesan form of church government, and a proposal was made of a college of bishops to govern the whole church ; but for the adoption of this scheme the annals of history could furnish no precedent, and of course many of the most en- lightened bishops were successful in their oppo- sition to it. An undue attachment to the family of Stuart was long a general charge against the Scotch episcopalians, insomuch that it has been regarded by many as their most distinguishing tenet ; but the public opinion of this matter was not a little exaggerated. That the Almighty, and not the people, is the ruler of princes, they have uniformly maintained ; and this shows that in as far as a republican or levelling spirit has been imputed to them, it has been without foundation. Various restraints were, from time to time, laid on the Scotch Episcopalians, with a view to cut off their attachment to the Stuart family; but, by an act passed in 1792, these were happily re- moved, and, with other dissenters, they were al- lowed the enjoyment of free toleration. About this time the oaths of abjuration and allegiance were taken by the generality of the Scotch epis- copal clergy. The writer above noticed, whom we have chiefly followed in this account, also observes, that there are in Scotland chapels quite distinct from the Scotch episcopal church, where the liturgy of the church of England is used by clergymen ordained either in England or Ireland but that these chapels are strictly and properly .independent of each other, and under the guar-

dianship of no bishop ; so that those who attend them might, with much more propriety, be styled congregationalists than episcopalians.

EPISCOPIUS (Simon), a learned author of the seventeenth century, and a great supporter of the Arminians, was born at Amsterdam in 1583. In 1612 he was chosen professor of divi- nity at Leyden, in the room of Gomarus, who resigned; and in this station he entered eagerly into the Arminian controversy. The states of Holland having invited Episcopius to take his place at the Synod of Dort, he went thither ac- companied by some remonstrant ministers ; but the synod would not allow them to sit as judges, nor to appear in any other capacity than as per- sons summoned before them : they submitted, were deposed, and banished. They then retired to Antwerp, but Episcopius returned to Holland in 1626, and was made minister of the church of Remonstrants at Rotterdam. In 1634 he was chosen rector of the college founded by the Ar- minians at Amsterdam, where he spent the remainder of his days. He died in 1643, of a retention of urine. His works make two volumes in folio, of which the second consists of posthu- mous publications.

E'PISODE, n. s.i Gr.smffuSe. An inci

EPISOD'IC, adj. > dental narrative, or digres-

EPISOD'ICAL. j sion in a poem, separable from the main subject, yet rising naturally from it.

Episodical ornaments, such as descriptions and narrations, were delivered to us from the observa- tions of Aristotle. Dryden.

I discover the difference between the episodick and principal action, as well as the nature of episodes.

Notes on the Odyssey.

The poem hath no other episodes than such as na- turally arise from the subject. Addison's Spectator.

EPISPA'STIC, n. s. ETTI and airaw, to draw. Drawing or blistering.

The matter ought to be solicited to the lower parts, by fomentations, bathing, epispasticks, and

blistering.

Arbuthnot.

EPISPASTICS, in medicine, are topical reme- dies, which, being applied to the external parts of the body, attract the humors to them.

EPISTATES, ETris-artc, derived from ITTI, over, and tT*;/it, I stand, in antiquity, a person who has the command and direction of an affair, or of a people. The term is used in speaking of the government of Athens, where the epistates was the senator in command for that day, or whose turn it was to preside that day. The constitution was this : the ten tribes of Athens, formed by Clisthenes, elected every year, by lot, each of them fifty senators, which made a senate of 500. Every tribe had the precedence in its turn, and surrendered it again successively to another The fifty senators in office were called prytanes the particular place where they assembled, pryta- neum ; and the term, or duration of their office, viz. thirty-five days, prytanea. During these thirty-five days, ten of the fifty prytanes presided weekly, under the name of proedri ; and of these proedri there was one to preside each day of the week, under the title of epistates. No person was allowed to hold his office more than once in his whole life, lest he should acquire too much

the taste of dominion : the senators of all th other tribes still voted, according to the order the lot had given them ; but the prytanes laid the business before them, and the epistates took their votes and opinions. Of the ten proedri of each week, there were but seven that could preside each his day in the quality of epistates ; the ten proedri elected the seven prytanes.

EPISTAXIS. From wrafo, to distil from. Bleeding at the nose, with pain, or fulness of the head. A genus

of disease arranged by Cullen in the class pyrexiae, and order haemorrhagiae.

EPISTEMONARCH, in the ancient Greek

church, an o ^icer of erreat dignity, who had the care of every thing relating to faith, in the quality of censor : the office was nearly similar to that of master of the sacred palace at Rome.

EPI'STLE, n. s.\ Fr. epistre ; Ital. Span.

EPI'STOLARY,«

When loose epistle* violate chaste eye*, She half consents who silently denies. Dryden.

The EPISTLES of the New Testament may be thus exhibited : —

I. A Table of St. PAUL'S EPISTLES, in the order of time, with the places where, and the times when

they were written.

Epistles. Places. A. D.

1 Thessalonians >

2 Thessalonians $

Galatians Corinth or Ephesus I Nea,r Jhe , end °J

(or the beginning of

Ephesus The beginning of Macedonia

Macedonia, or near it, Before the end of

Macedonia About October

Corinth About February

Rome About April

Rome About May

Rome Before the end of

Rome Before the end of

Rome Before the end of

Rome, or Italy, In the spring of

1 Corinthians

1 Timothy Titus

2 Corinthians Romans Ephesians

2 Timothy

Philippians

Colossians

Philemon

Hebrews

52

52 53 56 56 56 57 58 61 61 62 62 62 63

II A Table of the SEVEN C..THOL c EPISTLES, so called because they were •written to Christians in general, and the Revelation, with the places where and the times when they were written.

Epistles. Places.

The Epistle of St. James Judea The 2 Epistles of St. Peter Rorce

61 or beginning of

St. John's 1st Epistle His 2d and 3d Epistles Fhe Epistle of St. Jude The Revelation of St.

Ephesus Ephesus Unknown

About Between

Ephesus

A.D.

62

64 80

80 and 90 60 or 65

95 or 96

See Lardner's Credibility of the Gospel History, vol. xvi. and vol. xvii.

The learned are not absolutely agreed as to the dates of these several epistles, nor the places whence they were written. It would lead us too far to examine and produce the various authori- ties and arguments that have been used for set- tling these particulars ; we need only mention that Dr. Doddridge dates the first Epistle to the Corinthians about the year 57 ; and the second Epistle in 58 ; those to the Ephesians, Philip- pians, Colossians, and Philemon, in 63 ; the first to Timothy, in 58 or 65 ; the second to Timothy, in 66 or 67 ; the Epistle to Titus, between St. Paul's first and second imprisonment at Rome ; the Epistle of St. James, in 60 or 61 ; the first of Peter in 61 ; the second in 67 ; that of St. Jude some time after the second of Peter, according to Dr. Mills in the year 90.

As to the general design of these several epis- tles, it is observed by Dr. Doddridge, that the Epistle to the Romans is intended to fix in the minds of the Christians, to whom it is addressed, a just sense of the excellency of the gospel, and to engage them to act in a manner agreeable to their profession of it ; the Epistles to the Corin- thians are designed to resolve some important

queries proposed by them, and to correct the various criminal irregularities and disorders of which they were guilty ; the principal design of the Epistle to the Galatians was to assert and vindicate the apostle's authority and doctrine, and to confirm the churches of Galatia in the faith of Christ, especially with respect to the im- portant point of

justification ; to expose the errors that were introduced among them, and to revive those principles of Christianity which he had already taught them. In the Epistle to the Ephesians, that apostle endeavours to establish them in the faith ; and, to this end, to give them more exalted views of the divine love and the excellence of Christ; to show them that they were now, though Gentiles, made partakers of equal privileses with the Jews ; to encourage them by his own example and concern for their welfare ; and to engage them to the practice of duties becoming their Christian character. The Epistle to the Philippians is designed to comfort them under the concern they felt on his acccount ; to check a party-spirit that had broken out among them, and to promote union and affection ; to guard them against the seduction of judaising

teachers ; to support them under their trials, and :o inspire them with an ambition of excelling in ornamental and distinguished spiritual attainments. The Epistle to the Colossians is designed to excite them to a temper and conduct worthy of their sacred character, and to secure them from the influence of those Pagan sophists, or Jewish bigots, who endeavoured to seduce them from the purity of the Christian faith. The two Epis- les to the Thessalonians are intended to confirm Ihem in their adherence to the Christian faith, and to engage them from the sufferings they had already endured, and the extraordinary character they had hitherto maintained, to make great ad- vances, and to excel still more in religion and virtue ; and also to rectify some erroneous appre- hensions they entertained about the coming of Christ, and to direct them in the proper exercise of Christian discipline. The first Epistle of Ti- mothy was partly intended to direct him in managing the affairs of the church, and choosing proper persons

for the various offices it required ; and partly to caution him against the influence of judaising teachers, to urge him to pay a con- stant regard to the interests of practical religion, and to animate him to diligence, fidelity, and zeal. The second epistle prepares Timothy for the sufferings that awaited him, forewarns him of the apostasy that was beginning to appear in the church, and animates him to the persevering dis- charge of every part of the ministerial office. The Epistle to Titus contains a variety of prudent instructions and cautions. The design of the Epistle to the Hebrews was to confirm the Jew- ish Christians in the faith and practice of the gospel, which they might be in danger of deserting through the insinuation or ill-treatment of their persecutors. St. James, in his epistle, aims to correct those errors, both in doctrine and practice, into which the Jewish Christians had fallen, which might otherwise have produced fatal conse- quences; and then to establish the faith, and animate the hope, of sincere believers, under their present and approaching sufferings. The Epis- tles of St. Peter are designed to induce the Chris- tian converts, in various parts of the world, to maintain a conduct inoffensive and amiable ; to support them under their trials, and to encourage their constancy, notwithstanding the artifices of false teachers, and the persecution of their most inveterate enemies. The leading design of St. John, in his first epistle, is to evince the vanity of faith separate from morality ; to inspire the minds of Christians with mutual charity, and to guard them against the snares and efforts of An- tichrist, and of all who were endued with his spirit. The Epistle of Jude describes the characters of the false teachers, represents the divine judgments which such persons had reason to expect, and thus cautions Christians against being perverted by them. See Doddridge's Family Expositor, vol. iv. v. and vi. in the general introduction prefixed to each epistle.

EPISTLES AND GOSPELS, in the liturgy of the church of England, are select portions of scrip- ture taken out of the writings of the evangelists and apostles,

and appointed to be read in the communion service, on Sundays and holydays. They are thought to have been selected by St.

Jerome, and by him put into the lectionary. It is certain they were very anciently appropriated to the days whereon they are now read, as they are commented upon in the homilies of several an- cient fathers, preached upon those days, to which these portions of Scripture are now affixed. See COLLECT.

EPI'STOLARY, adj. From epistle.

I shall carry on au epistolary correspondence be- tween the two heads. Additon.

EPISTROPHE, En-KTrpo^i;. In rhetoric, a figure wherein that which is supposed of one thing is strongly affirmed of another, and the repetition of the same word occurs at the end of each member or sentence.

E'PITAPH, n. s. Fr. epitaphe ; Ital. Span. and Port, epitasio, epitaphio ; Lat. epitaphium ; Gr. ETrira^ioc- An inscription upon a tomb.

Live still, and write mine epitaph. Shakspeare.

Some thy loved dust iu Parian stones enshrine, Others immortal epitaphs design ; With wit and strength that only yields to thine.

Smith.

In vain advertisements the town o'erspread ; They're epitaphs, and say the work is dead. Young. Where are the epitaphs our fathers read ?

Save a few gleaned from the sepulchral gloom Which once-named myriads nameless lie beneath, And lose their own in universal death. Byron.

EPITAPH is derived from tiri, upon, and raoe, a sepulchre. It has been disputed whether the ancient Jews inscribed epitaphs on the monu- ments of the dead ; but it is certain some of very ancient date

are found amongst them. The Athe- nians put only the name of the dead with the epithet ^pjjToc good, or qpwc hero, and the word %atp£, signifying their good wishes. The name of the deceased's father and his tribe were fre- quently added. The Lacedaemonians allowed epitaphs to none but those who had died in battle. The Romans inscribed their epitaphs to the manes, diis manibus ; and frequently intro- duced the dead, by way of prosopopoeia, speak- ing to the living ; of which we have a fine in- stance wherein the dead wife thus bespeaks her surviving husband : —

Immatura pert ; sed tu, felicior, annos Vive tuos, conjux optime, vive meos. The epitaphs of modern times too often consist of fulsome compliments and expressions of res- pect, which were never applied to the deceased while in life. Hence the English proverb, ' He lies like an epitaph ;' and the French, ' Menteur comme une epitaphe.' Labbe has made a good collection in French, entitled Tresor des Epi- taphes : Camden, Weaver, and several others have selected our English epitaphs ; the Elegant Extracts of Dr. Knox, also contain abundance.

EPITAPH is also applied to certain eloges, ei- ther in prose or verse, composed without any intent to be engraven on tombs ; as that of Alexander,

Suffic.it huic tumulus, cui non sufficeret orbi* ; and that of Newton,

Isaacum Newton,

Quern immortalem

Testamur Tempus, Natura, Coelum ;

Mortalrm hoc marmor

Fatetur.

EPI

EPITASIS, in ancient poetry, the second part of a dramatic poem, wherein the plot, entered upon in the protasis, or first part, was carried on, heightened, and worked up, till it arrived at its full height, called catastasis.

EPITASIS, in medicine, the increase of a disease or beginning of a paroxysm, particularly in a fever.

EPITHALA'MIUM, n. t. E*i and SoXa/wc, a couch, or bed : a nuptial song ; a compliment upon marriage.

I presume to invite you to these sacred nuptials : the epiihalamntm sung by a crowned muse. Sandys.

The forty-fifth psalm is an epithalamium to Christ and the rhurch, or to the lamb and his spouse.

Burnet.

rAeEpiTHALAMiiTM, among the Jews, was sung at the door of the bride, by her friends and com- panions, the evening before the marriage. Among the Greeks it was sung as soon as the married couple were going to bed, and attended with shouts and stamping of the feet. They returned in the morning, and, with the same song a little altered, saluted them again. The evening songs were called tiriQa\apia coi/iqrtica ; the morning salutes tTTidaXafiia tytprtca. This was the prac- tice amongst the Romans also.

E'PITHEM, n. *. Gr. ^7r»0»j/ia. A liquid medicament externally applied.

Epithemt, or cordial applications, are justly applied unto the left breast. Browne's Vulgar Errowt.

Cordials and epithemi are also necessary, to resist the putrefaction, and strengthen the vitals.

Wiseman.

An EPIT.HEM in pharmacy, is a remedy of a spirituous

or aromatic kind, applied externally to the regions of the heart, liver, &c., to strengthen and comfort, or correct some intemperature of the part.

E'PITHET,n. *. Fr. epithete ; Ital. Span, and Port, cpiteto ; Gr. tirtQirov, tvi and TiBnpi, to place. An adjective denoting any quality good or bad : as, the verdant grove, craggy mountain, &c. Hence a title or name.

For which of my good parts did yon first suffer love for me ?

Suffer love ! a good epithet : I do suffer love in- deed ; for I love thee against my will. Shakspeare.

There seldom occurs a hard laboured expression, or a redundant epithet ; all his verses exemplify his own definition of a good style ; they consist of proper words in proper places. Delany.

I affirm with phlegm, leaving the epithet* of false, scandalous, and villanout to the author. Swift.

The epithet of shades belonged more properly to the darkness than the refreshment. Decay of Piety.

EPITHETS, in poetry and rhetoric, are often annexed to substantives by way of ornament, not to make up an essential part of the descrip- tion. Nothing, says Aristotle, tires the reader more than too great a redundancy of epithets, or epithets placed improperly ; and yet nothing is so essential in poetry as a proper use of them. See POETRY.

EPITOME, n.s.^ Old Fr. epitome; Ital.

EPIT'OMISE, v. a. > Span. Port, and Lat. epi-

EPIT'OMISER, n.s. J tome,epitonia;Gr.iiriToprj, »TT» and riftvu, to cut off. Abridgement; abbre- viature; compendious abstract: to epitomise,

from the noun, is to abridge ; abstract : epito- miser, or epitomist, he who abstracts or abridges.

This is a poor epitome of yours, Which, by the interpretation of full time, May shew like all yourself.

Shakspeare. Coriolama.

Who did the whole world's soul contract, and drove Into the glasses of your eyes ; So made such mirrours and such spies, That they did all to you epitomise. Donne.

Epitomes are helpful to the memory, and of good private use ; but set forth for publick monuments, accuse the industrious writers of delivering much im- pertinency. Wotton.

When that epitomiser of Trogus had to the fnll described and set out king Ptolemy's riot, as a chief engine and instrument of his overthrow, he adds fid- dling and dancing. Burton.

Both this Brennus, and another famous captain Britomarus, whom the epitomitt Florus aud others mention. Milton.

It would be well, if there were a short and plain epitome made, containing the most material hrads.

Such abstracts and epitomes may be reviewed in their proper places.

Watts'* Improvement of the SJinrl.

If the ladies take a liking to such a diminutive rac< , we should see mankind epitomised, and the whole species in miniature. Addison.

We have epitomised many particular word*, to thn detriment of our tongue. Id. Spectator.

EPITRITUS, in prosody, a foot consisting of three long and one short syllable. Of these, grammarians reckon four kinds : the first con- sisting of an iambus and spondaeus, as salutan- tes ; the second of a trochaeus and spondaeus, as cSncItati ; the third of a spondseus and an iambus, as communicans ;

and the fourth of a spondaeus and trochaeus, as incantare".

EPITROPE, in rhetoric, a species of con- cession; one of the figures of sentences, which grants one thing to obtain another more advan- tageous. It is either real or feigned ; and either the whole of a thing, or only a part is granted. Of the use of this ligure we have examples in Cicero's defence of Ligarius, who was accused by Tubero for having joined with Pompey in the civil war between him and Caesar, cap. 1 ; and in the affair of Roscius, where the proof depended upon circumstances ; and when Ci- cero, who defended him, enquires what reason could be alleged for his committing so black a crime, as to kill his father cap. 27. Cicero has also given us an example of a feigned or ironical concession in his defence of Flaccus, cap. 38 ; when interceding for him on account of his former good services, in the time of Catiline's, conspiracy, he says in the way of irony, if such things are to be overlooked, 'let us appease the ghosts of Lentulus and Cethegus ; let us recall those who are in exile, and let us be punished for our too great affection and love for our country.' To these feigned concessions we may refer such modes of reasoning, by which the orator both justifies a charge brought against him, upon the supposition of its being true ; and also proves that the charge itself is false. Thus Cicero, in his defence of Milo, represents ihe taking off of Clodius, with which Milo was ac- cused, as a glorious action ; after ho ha> shown

(hat Milo's servants did it without the knowledge of their master. Cap. 10 and 27.

EPITROPUS, a kind of arbitrator, whom the Greek Christians under the Turks elect to ter- minate their differences, and avoid carrying them before

the Turkish magistrates. Anciently the Greeks used the term ewtrpojroc in the same sense as the Latins did procurator, viz. for a commissioner or intendant. Thus the commis- sioners of provisions in the Persian army are called by Herodotus and Xenophon epitropi. In the New Testament tiriTpoirog denotes the stew- ard of a houshold. rendered in the vulgate pro- curator.

EPIZEUXIS, in rhetoric, a figure wherein the same word is repeated with vehemence in the same sense, without any other intervening, and suited to express anger, surprise, sorrow, &c. : thus age, age ; adeste, adeste ; and that of Virgil, Nunc, uunc insurgite remis, are instances of it. Thus also, when Cicero would express his indignation against Antony for having been the chief instrument in bringing on the civil war; he says to him : ' You, you, Antony, pushed Csesar upon the civil war.' (Philip, ii. c. 22). Thus he tells Catiline in his first invective against him : ' You live, and live, not to lay aside, but to pursue, your wicked design.' (Ibid. cap. 2). See also Matthew xxiii. 37. The use of this figure shows the earnestness of the speaker, and the great concern of his mind about what he says.

E'POCH, a certain fixed point of time, ren- dered famous by some remarkable event, from whence, as from a root, the ensuing years are numberec or computed. As there is no astro- nomical consideration to make one epoch prefer- able to another, their constitution is purely arbitrary; and therefore various epochas have been used at different times and among different uations.

Their several epochal or beginnings, as from the creation of the world, from the flood, from the first olympiad, from the building of Rome, or from any remarkable passage or accident, give us a pleasant prospect into the histories of antiquity and of former ages. Holder on Time.

Time is always reckoned from some known parts of this sensible world, and from some certain epochs

marked out to us by the motions observable in it.

Locke.

These are the practices of the world, since the year sixty ; the grand epoch of falsehood as well as de- bauchery. South. Time, by necessity compelled, shall go

Through scenes of war, and epochas of woe. Prior.

For their farther improvement, and a little to vary their studies, let them now begin to read history, after having got by heart a short table of the principal epochal in chronology. Franklin.

EPO'DE, n. s. Fr. epode ; Gr. t™dof. The stanza following the strophe and antistrophe.

Strophe, antistrophe, or epode, were a kind of stanzas framed only for the musick. Milton.

The EPODE is said to have been the invention of Archilochus, and was anciently sung by the priests, standing still before the altar, after all the turns and returns of the strophe and anti- strophe, and was not confined to any precise

number or kind of verses. The epode is now a general name for all kinds of little verses that follow one or more great ones, of what kind soever they be : and in this sense, a pentameter is an epode after an hexameter. And as every little verse, which, being put after another, closes the period, is called epode ; hence the sixth book of Horace's odes is entitled Liber Epodwn, a book of epodes, because the verses are alternately long and short, and the short ones generally, though not always, close the sense of the long one.

EPONA, in mythology, a goddess mentioned in some ancient inscriptions, concerning whose name and offices antiquarians differ. Some think that she derived her name from a city called Epona. Keysler supposes, that her name was derived from nriros, a horse, and that she was worshipped as the

protectress of these animals.

EPOPE'E, n. s. Eiroiroi. An epic or he- roic poem.

Tragedy borrows from the epopee, and that which borrows is of less dignity, because it has not of u« own. Dryden's Virgil.

EPPING, a market town, in the county of Essex, formerly a hamlet of Waltham Abbey, and long noted for its forest or royal chase, for- merly called the Forest of Essex, but now ge- nerally known by the name of Epping Forest, which reaches to within five miles of the metro- polis. The provision market is held on Friday, and the cattle market on Thursday. It lies se- venteen miles N. N. E. of London, and is noted for excellent butter made in its neighbourhood.

EPPING, a township of the United States, in Rockingham county, New Hampshire, taken from the north-west part of Exeter, and incor- porated in 1741. It lies six miles north-west of Exeter, and twenty-three west of Portsmouth.

EPPINGEN, a town of Germany, in the late palatinate of the Rhine, on the Elfatz, ten miles west of Heilborn, and eighteen S. S. E. of Hei- delberg.

EPROUVETTE, is a French machine, of which there are several varieties, used for prov- ing the strength of gunpowder. The principle of this invention , in whatever form it may be applied, is to ascertain how far a certain measure or weight of gunpowder is capable of overcoming the resistance either of a certain weight, or of a spring, whose pressure against the explosion is computed. The former is evidently the most regular, and, consequently, the best adapted to military purposes, wherein the strength of the powder is often of the greatest moment, not only on account of the advantages gained by the greatest concentration of force, but because in the mortar and howitzer practice it is necessary to have a very accurate knowledge of the powers of expansion in the powder when ignited; by which means

shells may be thrown, with the greatest precision, to any intended distance; whence the explosion takes the greatest possible effect.

In our arsenals, an eight-inch mortar is ordi narily employed as an eprouvette ; being charged with two ounces of powder, and an iron ball of sixty-four pounds, the latter should be projected at least 150 feet ; the elevation of the piece being 45% and the bed being placed perfectly hori-

tontal. We consider this to be a fair standard ; though some powder made from the best mate- rials, and fresh from the mill, will sometimes exceed even 180 feet; while, on the other hand, weak powder, that is, such as has not been kept very dry, or that has beeti re-stored, will rarely make a range equal to 120, and generally not exceeding even 110 feet.

The above mode of proof relates to cannon- powder ; that intended for the use of musketry is ascertained by an eprouvette of a different de- scription ; namely, a musket barrel, of which the interior is highly polished. This should, with a charge of only four drachms, impel a steel ball through fifteen wet elm boards, each a quarter of an inch in thickness, and placed at three quarters of an inch asunder ; the first being thirty-nine feet and ten inches distant from the muzzle of the barrel. We must confess this exact number of inches in the distance, appears to be more fastidious than necessary, for we are apt to believe, that in experiments of this nature, the odd two inches, necessary to complete the fortieth foot, would by no means derange the process.

The French eprouvette for cannon-powder comes very close to our's, they using a brass ball of sixty pounds (French weight) whose diameter is seven

inches and nine points, or three quarters of a line (French measure), with one line of windage (or space between the shot and the sides of the bore). The chamber holds precisely three ounces ; which quantity of their best powder will throw the ball full 180 yards; their re-stored powder throwing it about 160 yards. But Mons. Lombard's experiments give a result of 250 yards, with the powder now manufactured at the French mills ; the eprouvette being always ele- vated to 45°.

EPSOM, a village of Surrey, about eighteen miles south-west of London, long famous for its mineral waters. These were discovered in 1618; and are not yet impaired in virtue. When eva- porated todryness, the waters of this spring yield a residuum of which about five-sixths is sulphate of magnesia with a little muriate of lime and magnesia occasionally mixed ; but there is no- thing sulphurous or metallic ever found in this spring.

The Epsom salts were formerly obtained by boiling down the waters of this spring ; but they are now procured entirely from sea water, which, after being boiled and the muriate of soda sepa- rated, deposit numerous crystals, consisting chiefly of the sulphate of magnesia, and which are sold under the name of ' salts,' or ' Epsom salts.' On the downs, near the village, are annually horse races; but the inns and bowling-greens are not so much frequented as formerly. In Hudson's Lane was Epsom Court, an ancient Saxon seat, long ago converted into a farm.

EPSOM, a township of the United States, in Rockingham county, New Hampshire, east of Pembroke ; incorporated in 1727. It is ten rriles east of Concord, and forty-five north-west of Portsmouth.

EPULATION, n. s. Lat. epulatio. Ban- quet; feast.

Contented with bread and water, when he would

dine witn Jove, and pretended to ejmlatim, he de- sired no other addition than a piece of cheese.

Broume'i Vulgar Erroart,

EPULIS, from tin, upon, and oeXa, the gums, in surgery, a tubercle on the gums. There are two kinds ; one of a benign nature and free from pain ; the other more malignant, being very troublesome, and occasionally becoming, accord- ing to the descriptions of surgical writers, of a cancerous quality. Some of the excrescences are represented as having a narrow pedicle, while others are connected with the gum by means of a broad base. The best plan of treatment con- sists in extirpating an epulis, as soon as the na- ture of the case manifests itself. The object may be accomplished either with caustic, or the knife. The latter mode is that to which we should ge- nerally give the preference, because attended with the greatest degree of certainty, ard not more pain.

Some writers advise us to tie the excrescence, when its neck is narrow. However, in such a case, the knife, or a pair of scissars, might also be very conveniently employed.

EPULO, in antiquity, a minister of sacrifice among the Romans. The pontifices, not being able to attend all the sacrifices performed at Rome to so many gods as were adored by that people, appointed three ministers, whom they called epulones, because they conferred on them the care and management of the epula, feasts in the solemn games and festivals. To them be- longed the ordering and serving the sacred ban- quet, offered on such occasions to Jupiter, &c. They wore a gown bordered with purple like the pontifices. Their number was augmented from three to seven, and afterwards by Caesar to ten. Their first establishment was in A.U.C. 558, under the consulate of L. Furius Purpureo, and M. Claudius Marcellus.

EPULO'TIC, n. s. E7rotAo>r«icoc. A cica- trising medicament.

The ulcer, incarned with common sarcoticks, and the ulcerations about it, were cured by ointment of tutty, and such like epulotick*.

Witeman on Inflammation,

EPULUM, in antiquity, a holy feast prepared for the gods in times of public danger. The feast was sumptuous, aud the gods were formally in- vited and attended ; for the statues were brought on rich beds furnished with soft pillows, called pulvinaria. Thus accommodated, their godships were placed on the most honorable part of their couches. The care of the epula belonged to the epulones, and the gods were plentifully served with the richest dainties, as if they had been able to eat! but the epulones performed that function for them, and doubtless were competent proxies. No wonder that Pliny solicited Trajan to be ad- mitted of their order.

EPWORTH, a market town and parish of England, in the isle of Axholm, county of Lin- coln. It is irregularly built, and has a manufac- ture of sacking and bagging. A weekly market and two annual fairs are held here. Population 1502. Eleven miles north of Gainsborough, and 159 north of London. Here were born Messrs. John and Charles Wesley, the celebrated foun- ders of methodism.

E'QUABLE, adj.) Lat. aquabilis. Equal E'QUABLY, adv. >to itself; even; uniform EQTJABIL'ITY, n. s. j in respect to form, mo tion, or temperament. Equability is uniformity; « venness of temper or condition.

lie would have the vast body of a planet to be as elegant and round as a factitious globe represents it ; tc be every where smooth and equable, and as plain as the elysian fields. Bentley.

For the celestial bodies, the equability and con- stancy of their motions argue them ordained by Wis- dom. Ray.

Nothing abates acrimony of the blood more than an equable motion of it, neither too swift nor too slow

; for too quick » motion produceth an alkaline, and too slow an acid acrimony. Arbuthnot.

The equability of the temperature of the air ren- dered the Asiaticks lazy. Id. on A IT.

If bodies move equably in concentrick circles, and the squares of their periodical times be as the cubes of their distances from the common centre, their centri- petal forces will be reciprocally as the squares of the distances. Cheyne.

In his other works is found an equable tenour of easy language, which rather trickles than flows.

Johnton'i Life of Swift.

E'QUAL, adj., n. s., & v.a. ") E'QUALIZE, v. a. EQUALIZA'TION, n. s.

EQUAL'ITY, f"Sir T. More

E'QUALLY, adv. for equal ; see

E'QUALNESS, n. s. J the instance

below) ; Ital. equate ; Span. Ygual ; Port. Igoal ; Lat. aqualis. Alike in quality, or quantity; adequate to: hence even, uniform, just, exact, impartial, equitable, indifferent. An equal is one neither superior nor inferior in station, ex- cellence, or other qualities implied or expressed : to equal or equalise is to make a person or thing equal to some other ; hence to reward, recom- pense fully ; raise to a deserved rank or situa- tion. Equalisation, equality, and equalness, signify the state of being alike.

If thou be among great men, make not thyself equal with them. Eccles.

I profited in the Jews' religion above many my equals in mine own nation. Gal. i. 14.

They made the married, orphans, widows, yea, and the aged also, equal in spoils with themselves. Mac.

He would make them all equals to the citizens of Rome. 2 Mac. ix. 15.

Richarde, the third sonne, of whom we nowe en- treate, was in witte and courage eyall with either of them. Sir T. More.

One whose all not equals Edward's moiety.

Shakipeare.

That our stars unreconcileable should have divided Our equalness to this. Id.

He is enamoured on Hero : I pray you, dissuade him from her ; she is no equal for his birth.

Id. Much Ado About Nothing. We shall use them,

A* we shall find their merits and our safety May equally determine. Id. King Lear.

Equality of two domestick powers, Breeds scrupulous faction.

Id. Antony anil Cleopatra.

In equality of conjectures, we are not to take hold of the worse ; but rather to b« glad we find any hope, that mankind is not grown monstrous. Sir P. Sidney.

It is a hard thing for a man, willingly and gladly to see his equals lifted over his head, in worth and opinion. Bp. Hall't Contemplations.

They had depressed Moses, God advances him : they had equalled themselves to Moses, God prefers him to them. Id.

That would make the moved body, remaining what it is, in regard of its bigness, to equalise and fit a thing bigger than it is. Digby.

The Scots trusted not their own numbers, as equal to fight with the English. Clarendon.

Equal lot May join us ; equal joy, as equal love.

Milton.

One shall rise.

Of proud ambition ; who, not content With fair equality, fraternal state, Will arrogate dominion undeserved Over his brethren. Id. Paradise Lost.

To equalise accounts we will allow three hundred years, and so long a time as we can manifest from the Scripture. Browne.

Measure out the lives of men, and periodically de- fine the alterations of their tempers, conceive a regu- Fr. egal (a larity in mutations, with an equality in constitutions, j word used by and forget that variety which physicians therein dis- I Chaucer and cover- Ia- Vulgar Errours.

Although there were no man to take notice of it, every triangle would contain three angles equal to two right angles. Hall.

Ye lofty beeches, tell this matchless dame, That if together ye fed all one flame, It could not equalise the hundredth part Of what her eyes have kindled in my heart.

Waller.

Nor you, great queen, these offices repent, Whicli he will equal, and perhaps augment. Id. She sought Sicheus through the shady grove, Who answered all her cares, and equalled all her love.

Dryden.

Each to his proper fortune stand or fall, Equal and unconcerned I look on all : Rutilians, Trojans, are the same to me, And both shall draw the lots their fates decree.

Id. JEneid.

It is not permitted me to make my commendation equal to your merit. Id. Fables. Dedication.

Though I have said before, that all men by nature are equal, I cannot be supposed to understand all sorts of equality : age or virtue may give men a just precedency. Locke.

If the motion of the sun were as unequal as of a ship, sometimes slow, and at others swift ; or, if be- ing constantly equally swift, it yet was not circular, and produced not the same appearances, it would not help us to measure time more than the motion of a comet does. Id.

A little wit is equally capable of exposing a beauty, and of aggravating a fault ; and though such a treat- ment of an author naturally produces iniiignation in the mind of an understanding reader, it has, how- ever, its effect among the generality of those whose hands ft falls into, the rabble of mankind being very apt to think that every thing which is laughed at, with any mixture of wit, is ridiculous in itself.

Addiion.

Those who were once his equals, envy and defame him, because they now see him their superior ; and

those who were once his superiors, because they look upon him is their equal. !&•

To my dear equal in my native land, My plighted vow I gave : I his received : Each swore with truth, with pleasure each believed : The mutual contract was to heaven conveyed.

Prior.

— They who are not disposed to receive them, may let them alone, or reje.ct them ; it is equal to me.

Cheyne’t Phil. Prin.

Think not of me : perhaps my equal mind

May learn to bear the fate the gods allot me.

Smith.

The covetous are equally impatient of their condi- tion, equally tempted with the wages of unrighteous- ness, as if they were indeed poor. Rogers.

According to this equality wherein God hath placed all mankind, with relation to himself, in all the rela- tions between man and man there is a mutual de- pendance. Swift.

I know no body so like to equal him, even at the age he wrote most of them as yourself.

Trumbull to Pope.

Mark by what wretched steps th<;ir glory grows ; From dirt and sea-weed as proud Venice rose : In each how guilt and greatness equal ran, And all that raised the hero sunk the man. Pope. I trust in thee, and know in whom I trust :

Or life or death is equal ; neither weighs ;

All weight in this — O let me live to thee !

Young.

A man’s genius is always, in the beginning of life, as much unknown to himself as to others ; and it is only after frequent trials, attended with success, that he dares think himself equal to those undertakings in •which those who have succeeded have fixed the ad- miration of mankind. Hume.

Two of those nearest equal in their spelling to be put together. Let these strive for victory ; each pro- pounding ten words every day to the other to be spelled. ^rankitn.

I have never conceived — that their ease, and their

same altitude towards the west, after the meri- dian passage : the mean between the above quantities will be the instant marked by the clock at the moment the sun or star was on the meridian. The operation, however, supposes, that the declination of the object has not varied during the elapsed interval, but this with the sun seldom happens. The observation, therefore, must be corrected by a table, or by a direct cal- culation.

7

Let P in the diagram be the elevated pole, Z the zenith, S the sun, S B an arc parallel to the horizon HO, so that the points B and S have the same altitude ; P S the polar distance of the sun in the morning, P B its polar distance in the evening (supposed to have become less). When the sun in the afternoon arrives at the point B, whose altitude suppose 20°, the same as the morning, the hour angle Z P B, or the distance of the sun, and its hour angle from the meridian P Z, will be greater than the morn- ing hour angle Z PS. We have, therefore, two triangles, Z P S, Z P B, which have each the side P Z common, and the sides Z S, Z B, each equal to 70°, since they are the complements of the altitudes, 20° in each case. The sides PS, P B, differ by a quantity which is equal to the change of the sun's declination in the interval between the two observations. If the two triangles be resolved

satisfaction, and their equalization with the rest of seParately, the two hour angles will be found

their fellow-subjects of Ireland, are things adverse to the principles of that connection. Burke.

EQUAL ALTITUDES, in astronomy, afford one of the most certain methods of determining time,

different : the half of this difference is the cor- rection, which must be applied to the middle point of time to obtain the exact instant of the sun's passage over the meridian. This cor- rection is given in the annexed table, which is

j .1 . • • .1 p it ictuuii is uiveu 111 uie aiiiiexcu uiuie, WIULII is

and thus ascertaining the error of a clock or * i t ^ i , j-*- /• T « « chronometer. For this purpose all that is neces- taken fr°m the last edltl°n °f Lalande S Astr°-

sary is to observe the instant the sun or star is at any altitude towards the east, before the meri- dian passage ; and the instant must likewise be marked when the same object attains exactly the

nomy. It is calculated from the following dif- ferential analogy.

Sx /tang, latitude tang. dec. © \

30 \siii. hour-angle — tang, hour-angle'

EQUAL ALTITUDES.

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CORRECTION TABLE OF EQUAL ALTITUDES, FROM LALANDE'S ASTRONOMY

Argument half the elapsed time.

. Sun's Long.

h. in.

1 40

h. m.

2 0

h. m.

2 20

h. m.

2 40

h. m.

3 0

h. m.

3 20

h. m.

3 40

h. m

4 0

Sun’s Long.

h.in.

140

li.ni.

2 0

h.m.

220

h.m.

240

h.m.

3 0

h.m.

320

h.m.

340

b.m.

4 0

Log. of Dhirn. Mot. in Declin.

.S. D.

S. D.

O 0

Sub.10

20

J. 0

Sub. 10

20

15-58 15-28 14-60

15-80 15-50 14-81

16-07 1576 15-06

16-39 16-08 15-36

1676 16-44 1571

17-19 16-86 16-11

17.68 17-35 16-57

18-24 17-90 17-10

15-84 14-13 11-98

0. 0

AddlO

20

o-oo

096 1-82

o-oo

093 176

o-oo

0-90 170

o-oo

085 1-62

o-oo

0-81 1-53

o-oo

075 142

o-oo

069 131

o-oo

0-62 1-18

3-1529

3-144-j 3T247

13-52 12-06 10-22

1372 11-24 10-37

13-95 12-44 10-55

14-23 1269 1076

14-55 12-98 11-00

14-92 13-31 11-28

15-35 13-69 11-61

I. 0 Add1O

20

2-49 2-90 297

2-41 2-81

2-88

2-32

2-70 277

2-21 257 264

2-09 243 249

1-95 2-27 2-32

179 2-08 213

1-61 3-0915 187,3-0419 1-922-9701

H. 0

Sub.10

20

III. 0

Add 10

20

8-04 5-55

2-83

8-15 5-62

2-87

8-29 572 2-92

8-45 5-83 2-98

8-65 5-97 3-05

8-87 6-12 3-12

9-12 6-29 3-22

o-oo

3-21 6-27

9-41 6-50 3-32

II. 0

AddlO

20

2-68 203 1-09

2-59 1-97 1-06

000 1-06 1-96

258 2‘86 2-78

2-49 1-89 1-02

2-38 1-80 097

225

170 092

2-09 1 59 086

1-92 146 079

173 131 071

2-86.”)5 27044 2-4124

o-oo

2-83 5-52

o-oo

2-87 5-60

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- Multiply the tangent by the latitude, and if it is south, change the signs.

EQUAL BEATING, in music, is applied to such tempered concords as beat equally quick, or make the same number of wa, wa, wa, wa's, in a given space of time, when sounding. The first who mentions, or makes any use of equal beat- ing concords, is Dr. Robert Smith, who observes, (Harmonics, p. 188), ' if several imperfect con- sonances of the same name, as fifths, for in- stance (by which the whole scale is usually tuned), beat equally quick, they are not equally harmo- nious, or tempered ; to make them so, the higher in the scale ought to beat as much quicker than

the lower, as their bases vibrate quicker ; that is, if a fifth be a minor tone higher than another, it should beat quicker, in the ratio of 10 to 9, or (if a major tone) 9 to 8 nearly ; if a third higher, in the ratio of 5 to 4 ; if a fifth higher, in the ratio of 3 to 2 ; if an eighth higher, of 2 to 1, &c.

EQUANI'MITY, n. s. I Lat. aquanimitas.

EQUA'NIMOUS, adj. J Evenness of mind, neither elated nor depressed.

I do not know how to express this habit «f mind , except you will let me call it equanimity. It is a vir- tue which is necessarv at every hour, in every

place^

»nd in all conversations ; and is the effect of a rcgu- ar and exact prudence. Tatler.

Not so the idle muses' mad-cap train, Not such the working of their moon-itruck brain ; In equanimity they uever dwell, Hy turns in soaring heaven, or vaulted hell.

Burns.

EQUATION, n.t. Lat. aquare. The in- vestigation of a mean proportion collected from the extremities of excess and defect, to be ap- plied to the whole.

We are to find out the extremities on both sides, and from and between them the middle daily motions of the sun alon& the ecliptick ; and to frame tables of equation of natural days, to he applied to the mean motion by addition or subtraction, as the case shall require. Holder on Time.

By an argument taken from the equation* of the times of the eclipses of Jupiter's satellites, it seems that light is propagated in time, spending in its pas- sage from the sun to us about seven minutes of time. Newton'* Optick*.

EQUATION ALGEBRAIC. See ALGEBRA.

EQUATION OF THE CENTRE. See ASTRONOMY.

EQUATION OF PAYMENTS. See ARITHMETIC.

EQUATION OF TIME. See ASTRONOMY.

EQUATOR, n. t.) Lat. atquator. A great

EQUATO'RIAL, adj. 5 circle of the earth, whose poles are those of the world. See below.

By reason of the convexity of the earth, the eye of man, under the equator, cannot discover both the poles ; neither would the eye, under the poles, discover the sun in the equator. Browne's Vulgar Erroart.

On the other side the equator, there is much land still remaining undiscovered. Ray on the Creation.

The planets have spheroidical figures, and obliqui- ties of their equatorial to their ecliptic planes.

Cheyne.

Rocks rich in gems, and mountains big with mines,
That on the high equator ridgy rise, Whence many a bursting stream auriferous plays.

Thomson.

The expansive force of steam was known in some degree to the ancients : Hero of Alexandria describes an application of it to produce a rotative motion by the re-action of steam issuing from a sphere mounted upon au axis, through two small tubes bent into tan- gents, and issuing from the opposite sides of the equa- torial diameter of the sphere. Darwin.

EQUATOR. See ASTRONOMY, and GEOGRA- PHY.

EQUATOR, CROSSING THE. When a vessel in her voyage crosses this line it has been a custom, time immemorial, to perform a certain ceremony on those of the crew who have not previously passed through it, in order to make them free of the line. Two persons are selected by the offi- cers to preside over this ceremony, who take the characters of Neptune and his wife Amphitrite, and with tridents, conch shells, 8>,c., head their gang. They first order the largest tubs in the ship to be brought upon deck and filled with salt water ; across each tub a sptr or hand-spike is placed as a seat, on which the candidates for freedom are set, whilst they are lathered with a composition of tar, grease, &c., and shaved with a piece of old iron hoop, the

edge of which is well notched. This being done, each person attempts to rise from his Hazardous seat, when it is generally so con-

trived that he falls heels over head into the tub of water ; and, after having gone through this ceremony, he becomes free of the equa- tor.

EQUATORIAL SECTOR. See ASTRONOMY.

EQUERRY, or EQUERY, an officer of the king's stables, under the master of the horse. Of these there are seven, who, when his majesty goes abroad, ride in the leading coach, are in waiting one at a time monthly, and have a table with the gentlemen ushers during the time, and a salary of £300 a year each. They used to ride on horseback by the coach side, when the king tra- velled ; but that, being more expensive to them than necessary to the sovereign, has beeen dis- continued.

EQUERRY OF THE CROWN STABLE has that ap- pellation as being employed in managing and breaking the saddle horses, and preparing them for the king's riding. There are two of these ; The first has an annual salary of £256, and the second of £'200. One is, or always should be, in close waiting at court; and, when his ma esty is going to ride, holds the stirrup, while the master of the horse, or one of the equer- ries in his absence, assists in mounting him ; and, when his majesty rides, they usually attend him.

EQUERY, or ECURY; French escuire, or Latin equile, a stable, from equus, a horse ; a grand stable for horses, furnished with stalls, manger, rack, &c. Some think the word stable properly relates only to bullocks, cows, sheep, hogs, &c. ; and equery to horses, mules, &c. A simple equery is that provided for one row of horses ; a double equery that provided for two, with a passage in the middle, or two passages ; the horses being placed head to head, as in the equery at Versailles. Under equery are sometimes, also, comprehended the lodgings and apartments of the equerries, grooms, pages, &c.

EQUES; from equus, a horse ; in antiquity, a knight or horseman. See EQUESTRIAN ORDER and EQUITES.

EQUES AURATUS, a knight bachelor; called auratus, that is gilt, because anciently none but knights might gild or beautify their ar- mour with gold. In law this term is not used ; but, instead of it, miles, and sometimes chevalier

EQUE'STRIAN, adj. Lat. equestris. Being on horseback : skilled in horsemanship.

An equestrian lady appeared upon the plains.

Spectator.

EQUESTRIAN GAMES, among the ancient Romans, horse- races, of which there were five kinds : the prodromus, or plain horse-race ; the chariot race ; the decursory race, round fune- ral piles ; the ludi severales ; and the ludi Nep- tunales.

EQUESTRIAN ORDER, among the Romans, signified their equites or knights : also their horse- men in the field ; the first of which orders stood in contradistinction to the senators ; as the last did to the foot, military, or infantry. Each of these distinctions was introduced into the state by Romulus.

EQUICRU'RAL, adj.

Lat. aquus and

EQUICRU'RE. 5 cms, the leg. Having

the legs of an equal length, and longer than the base; isosceles.

An equicrure triangle goes upon a certain propor- tion of length and breadth. Digby on the Soul.

We successively draw lines from angle to angle until seven equicntral triangles be described.

Browne.

EQUIDISTANCE,n.«. } Lat. aquus and EQUIDIS'TANT, adj. >

EQUIDIS'TANTLY, adv. j Equal distance or remoteness.

Into our reason flow, and there do end, All that this natural world doth comprehend ; Quotidian things, and equidistant hence, Shut in for man in one circumference. Donne.

from the earth's centre, perturb not the equilibration of either hemisphere. Browne's Vulgar Errours.

In so great a variety of motions, as running, leap- ing, and dancing, nature's laws of equilibration are ob- served. Derham.

If the point of the knife, drawn over the loadstone, have in this affriotion been drawn from the equator of the loadstone towards the pole, it will attract one of the extremes of an equilibrated magnetick needle.

Boyle's Experiment*.

Things are not left to an equilibrium, to hover un- der an indifference whether they shall come to pass, or not come to pass. South.

.EQUILIBRIST, (from the Lat. (Equilibrium} one who preserves his balance in unnatural positions and hazardous movements. The equilibrist en- tertains the spectator by his artful motions, atti- tudes, leaps, &c.

. -.r, — India is the native country of

The collateral eyMutance of cousin-german from equilibrists, and the accounts given by travellers the stock whence both descend, hath m it no such of

the jndian balancers * incredible. The

,

appearance of inequality.

Bp. Hall

^ ^ ^

The liver, seated on the right side, by the subcla- guch performers are met wkh j " u j , vian division equidistantlu communicates unto either -•«: r -p j A

arm Brown Clties °* Europe and America.

EQUILIBRIUM, in mechanics, is when the two ends of a lever or balance hang so exactly even

The fixt stars are not all placed in the same con- cave superficies, and equidistant from us, as they seem to be. Ray.

and level, that neither ascends or descends,

From the equidittance of the letters and vowel, they but both keep in a position parallel to the

gather the distinction of the persons. Lightfoot.

EQUIFORM'ITY, n.s. Lat. aquus and>r- ma, uniform equality.

No diversity or difference, but a simplicity of parts and equifunnity of motion.

Browne't Vulgar Errows.

EQUILATERAL, adj. Lat. equus and la- tus, a side. Having all sides equal.

Circles or squares, or triangles equilateral, which are all figures of equal lines, can differ but in greater or lesser. Bacon.

Trifling futility appears in their twelve signs of the zodiack and their aspects : why no more aspects than diametrically opposite, and such as make equilateral figures 1 Bentley.

EQUILATERAL HYPERBOLA is that in which the conjugate axes, and every pair of conjugate

horizon ; being both charged with an equal weight.

EQUIMULTIPLES, in arithmetic and geo- metry, are numbers or quantities multiplied by one and the same number or quantity. Hence equimultiples are always in the same ratio to each other as the simple quantities before multi- plication : thus, if 6 and 8 are multiplied by 4, the equimultiples 24 and 32 will be to each other as 6 to 8.

EQUINE'CESSARY, adj. Lat.

For both to give blows and to carry, In fights, are equinccessary. Hudibras.

EQUINOCTIAL, adj.&n.s.\ From equi- EQUINOC'TIALLY, adv. J nox. Pertain-

ing to the equinox ; or occurring at the equinox :

diameters, are equal to each other. The asym- as a substantive, synonymous with equinox, ptotes are also at right angles to each other, and each of them forms a right angle with the axis. Such an hyperbola is also equal to its opposite hyperbola, and likewise to its conjugate hyper- bola, so that all the four conjugate hyperbolas are mutually equal to each other. Hence, as the parameter is a third proportional to the con- jugate axes, they are all mutually equal ; conse- quently, if in the equation for the hyperbola

Natural tempests are greatest about the equinoctial.

Bacon.

Thrice the equinoctial line He circled ; four times

crossed the car of night From pole to pole, traversing each colure. Milton.

Some say the sun

Was bid turn reins from the equinoctial road, Like distant breadth. Id. Paradise Lost.

They may be refrigerated inclanately, or somewhat equinoctially ; that is, towards the eastern and western points. Browne.

The EQUINOCTIAL or EQUINOCTIAL, in astro- t is the transverse axis, c the conjugate, p the pa- nomy, is a great and immoveable circle of the

2- P

— ~- x tx+x2, or — — - X t x + j?} in which t t

rameter, x the absciss, and y the ordinate, t, c, and p being made equal, the equation for the equilateral hyperbola becomes y*—tx f a-2; dif- fering from that of the circle merely in the sign of the term x3, which in the circle is — . See HYPERBOLA.

EQUlLI'BRATE,v. a. -> Lat. equilibrium.

sphere, under which the equator moves in its diurnal motion. It is ordinarily confounded with the equator ; but there is a difference ; the equator being moveable, and the equinoctial immoveable; and the equator being drawn about the convex surface of the sphere, but the equinoctial on the concave surface of the

EQUILIBRA'TION, n. s. ^Equipoise; to ba- Great Globe. The shadows of those who live EQUILIBRIUM, EQUILIB'RIO, abl. case. equal weight on each side.

The accession of bodies upon, or secession thereof year, viz. at the equinoxes, the sun at noon

V… VTTT n 1VT

(lance equally ; to under this circle are cast to the southward of J keep even with them for one half of the yeai, and to the north- ward during the other half; and twice in a

casts no shadow, being in their zenith. See EQUINOX.

EQUINOCTIAL POINTS are the two points in which the equator and ecliptic intersect each other : the one, being in the first point of Aries, is called the vernal point or equinox ; and the otner, in the tirst point of Libra, the autumnal point or equinox. The equinoctial points, and all the other points of the ecliptic, are contin- ually moving backward, or in antecedentia, i. e. westward. This retrograde motion is called the precession of the equinoxes. See ASTRO- NOMY.

E'QUINOX, n. s. Lat. eequus and nox, night. Equinoxes are the precise times in which the sun enters into the first point of Aries and Li- bra ; for then, moving exactly under the equi- noctial, he makes our days and nights equal. This he does twice a year, about the 21st of March and 23d of September, which therefore are called the vernal and autumnal equinoxes.

Do but sec his vice ; Tis to his virtues a just equinox, The one as long as the other.

Shahspeare. Othello. It ariseth not beliacally about the autumnal equinox.

Browne.

The time when this kid was taken out of the womb was

about the vernal equinox. Ray.

Twas now the month in which the world began, If March beheld the first created man ; And since the vernal equinox, the sun, In Aries twelve degrees or more had run. Dryden.

The passage yet was good ; the wind, 'tis true, Was somewhat high, but that was nothing new, No more than usual equinoxet blew. Id.

EQUINOX, in astronomy, the time when the sun enters one of the equinoctial points. The equi- noxes happen when the sun is in the equinoctial circle, of consequence the days are equal to the nights throughout the world, which is the case twice a year, viz. about the 21st of March, and the 22nd of September ; the first of which is the vernal, and the second the autumnal equi- nox.

As the sun's motion is unequal, that is, some- times swifter and sometimes slower (from causes explained under the article ASTRONOMY), it conies to pass that there are about eight days more from the vernal to the autumnal equinox than from the autumnal to the vernal, the sun spending so much more time in travelling through the northern than the southern signs. According to the observations of Cassini, the sun is 186 d 14 h. 53m. in the northern signs, and only!78d. 14 h. 56m. in the southern. The difference of which is 7 d. 23 h. 57 m.

The sun, continually advancing forwards in the ecliptic, and gaining a degree every day, makes no stay in the equinoctial points, but the moment he arrives in them he also leaves them. Of course, therefore, though the day the sun en- ters the equinoctial point is called the equinox, as being reputed equal to the night, yet it is not precisely so, unless the sun enter the equator at mid-day; for if the sun, at rising, should enter the vernal equinox, at setting he will have departed from it, and have, got northwards about 12'; con- sequently that tiny will be somewhat longer than

twelve hours, and the night proportionably shorter.

The time of the equinoxes, that is, the mo- ment in which the sun enters the equator, is found by observation, the latitude of the place of observation being given. Thus, in the equi- noctial day, or near it, take the just me'ridian altitude of the sun ; if this be equal to the alti- tude of the equator, or the complement of the latitude, the sun is that very moment in the equator : if it be not equal, the difference is the sun's declination. The next day observe the meridian altitude as before, and find his declina- tion; if the declination be of different kind?, viz. the one north and the other south, the equi- nox has happened in the interval of time between them; otherwise, the sun has not entered the equinoctial, or had passed it at first. From these observations a trigonometrical calculus gives the time of the equinox.

EQUINU'MERANT, adj. Lat xquus and numerus. Having the same number ; consisting of the same number.

This talent of gold, though not equinumerant , nor yet equiponderant, as to any other ; yet was equivalent to some correspondent talent in brass.

Arbuthnut on Coins.

EQUIP/ v. a. ~\ Fr. equiper ; Old Fr- EQ'UIPAGE, n. s. f equippe, meaning a sailor, EQ'UIPAGED, adj. {says Mr. Todd, 'derived EQUIP'MENT, n. s. J perhaps from the barbar- ous Lat. eschipare, to furnish or adorn vessels.' Junius thus conjectures the French word to have been formed. Minsheu says, therefore, ' to dight, to set forth man, horse, or ship.' Equip- age is the furniture of a horseman, &c., or the attendance, retinue of a traveller ; accoutrement : equipment, the act of equipping, or the equipage.

Soon as thy dreadful trump begins to sound, The god ot war, with his fierce equipage, Thou do'st awake, sleep never he so sound.

Faerie Qucene.

She forth issued with a goodly train Of squires and ladies equipaged well, And entertained them right fairly, as befell.

Spenter,

I will not lend thee a penny.

I will retprt the sum in equipage.

Shakxpeiire.

Winged spirits, and chariots wingrd, From the armory of God ; where stand of old Myriads, between two brazen mountains lodgee. Against a solemn day, harnessed at hand, Celestial equipage. Milton's Paradise Lost.

The country are led astray in following the town ; and equipped in a ridiculous habit, when they fancy themselves in the height of the mode. Addison.

Extinguish vanity in the mind, and you naturally retrench the little superfluities of garniture and equip- page. The blossoms will fall of themselves when the root that nourishes them is destroyed. Steele.

Think what an equipage thou hast in air, And view with scorn two pages and a cbair.

Pope. Then over all, that he might be

Equipped from top to toe, His long rod cloak, well brushed and neat,

He manfully did throw. Cowper.

EQUIPAGE, in military art, denotes all sorts of utensils, artillery, &c., necessary for commencing and prosecuting with ease and success any mili-

citry operations. Camp and field equipage con- sists

of tents, kitchen furniture, saddle horses, baggage waggons, bat horses, &c.

EQUIPE'NDENCY, n. s. Lat. aquus and pendeo. The act of hanging in equipoise ; not determined either way.

The will of man, in the state of innocence, had an entire freedom, a perfect equipendency and indifference to either part of the contradiction, to stand or not to stand. South.

E'QUIPOISE, n. s. Lat. aquus and Fr.poids. Equality of weight; equilibration; equality of force.

In the temperate zone of our life there are few bodies at such an equipoise of humours, but that the prevalency of some one indisposed; the spirits.

Glanville's Scepsis.

EQUIPO'LLENCE, n. s. } Lat.

EQUIPO'LLENT, adj. J pollentia. Equa-

lity of force or power.

In his equipollence he judgeth him equivalent with God omnipotent. Skelton.

Votary resolution is made equipollent to custom, even in matter of blood. Bacon's Essays.

EQUIPO'NDERATE, v. n.\ Lat. aqum

EQUIPO'NDERANCE, n. s. { and pondero.

EQUIPO'NDERANCY, i To weigh equal

EQUIPO'NDERANT, adj. * to any thing :

being of the same weight.

Their lungs may serve to render their bodies cqui-ponderent to the water. Ray on the Creation.

A column of air, of any given diameter ; is equi-ponderant to a column of quicksilver of between

twenty-nine and thirty inches height. Locke.

The heaviness of any weight doth increase propor- tionably to its distance from the centre : thus one pound A at D, will equiponderate unto two pounds at B, if the distance A D is double unto A 15.

Wilkint's Mathematical Magick.

EQUIPO'NDIOUS, adj. Lat. cequus and p on- dus. Equilibrated ; equal on either part.

The scepticks affected an indifferent equtpondiout neutrality, as the only means to their ataraxia.

Glanrille's Scepsis.

EQUISETUM, horse-tail, a genus of the order of filices, and cryptogamia class of plants ; natural order fifty-first, coniferae. There is a spike of pel- tated or shielded fructifications opening at the base. There are eight species : of which the most remarkable are the following : —

1. E. arvense, the common or corn horse-tail, grows in wet meadows and corn fields. The most remarkable property of this is, that its seeds, when viewed by a microscope, are seen to leap about as if they were animated. It has a very astringent and diuretic quality, and has been esteemed serviceable in the haematuria and gonorrhoea, but is disregarded in the present practice. It is a troublesome plant in pastures ; and disagreeable to cows, being never touched by them unless they are compelled by hunger, and then it brings on an incurable diarrhoea. It does not seem to affect horses or sheep.

2. E. fluviatile, the great river horse-tail, is frequent in shady marshes, and on the brinks of stagnant waters. It is the largest of all the species, growing sometimes to the height of a yard, and nearly an inch in diameter. Haller tells us that this species was eaten by the Romans ;

and Linnaeus informs us that oxen and reindeer are fond of it, but that horses refuse it.

3. E. hyemale, rough horse-tail, shave-grass, or Dutch rushes. This is much used by the whitesmiths and cabinet-makers, under the name of Dutch rushes, for polishing their metals and wood. All the other species will answer this purpose in some degree, but this better than any of the rest. In Northumberland the dairy maids scour and clean their milk-pails with it. Some imagine that, if cows are fed with this species, their teeth will fall out.

4. E. sylvaticum, the wood horse-tail. It grows in woods and moist shady places, in many parts of England and Scotland. The stalk rises from twelve to eighteen inches high, angular, and rough to the touch ; the angles being edged with sharp spiculae, scarcely visible without a microscope. The leaves grow verticillate, twelve or more in a whorl, and these whorls are about an inch distant from one another. The leaves are very slender, nearly quadrangular, about five inches long, pendent, and beset with several other secondary whorls, so that it resembles a pine-tree in miniature. Horses are very fond of this plant, and in some parts of Sweden it is collected to serve them as winter food.

EQUITES, amongst the Romans, were per- sons of the second degree of nobility, next to the senators in point of rank. The equites or knights were required to be possessed of 400 sestertia before they could be admitted into that order; and when they were so reduced as to fall short of the prescribed revenue, they were expunged out of the equestrian list. This revenue amounted to about 10,000 crowns. Part of the ceremony whereby the honor of knighthood was conferred amongst the Romans was the giving of a horse ; every eques received also the stipend of a horse- man to serve in the wars, and wore a ring which was given him by the state. The equites com- posed a large body of men, and constituted the Roman cavalry ; for there was always a sufficient number of them in the city, and nothing but a review was requisite to fit them for service. The knights at last grew too powerful, became a balance for the senate and people, neglected the exercises of war, and betook themselves to civil employments. The

equites were liable to be punished by the censors, and to suffer degrada- tion. They were degraded by taking from them the horse which was kept for each of them at the public charge ; this was called equum adimere.

E'QUITY, n. s. ^ Fr. equitc ; Lat. (equitas.

E'QUITABLE, adj. > Justice; right; honesty;

E'QUITABLY, adv. J fairness.

For sothe a word makynge and ende and abreggynge in equyte, for the lord schal make a word brcggid on al the erthe. Wiclif. Romaynet 2.

Liking their own somewhat better than other mens, even because they are their own, they must in equity allow us to be like unto them in this affection.

Hooker.

Foul subordination is predominant, And equity exiled your highness' land.

Shakspeare.

Equity is a roguish thing ; for law we have a mea- sure, and know what to trust to : equity is according to the conscience of him that is chauopllor, and as that is larger or narrower, so is equity. Tis all one as if

they should make his foot the standard for the mea- sure we call a chancellor's foot, what an uncertain measure this would be ! One chancellor has a long foot, another a short foot, a third an indifferent foot : 'ti« the same thing in the chancellor's conscience.

Selden.

Christianity secures both the private interests of

men and the publick peace, enforcing all justice and rquity, Tillotson.

It seems but equitable to give the artists leave to name them as they please. Boyle's Scept. Chemitt.

To carry this a little farther. Here is one muffled up in the zeal and infallibility of his own sect, and will not touch a book, or enter into debate with a per- son that will question any of those things which to him are sacred. Another surveys our differences in religion with an equitable and fair indifference, and so finds probably that none of them are in every thing unexceptionable. Locke.

That, under equitable government, tne protection of law is an unspeakable advantage, will appear to those who consider, that a good citizen has the whole power of the state engaged on his side, to vindicate his rights, and guard htm from injury. Beaitie.

I never will believe, the colonel cries, The sanguinary sceues that some devise, Who make the good Creator on their plan A being of less equity than man. Cvwper.

EQUITY, in jurisprudence, is defined a correc- tion or qualification of the law, generally made in that part wherein it failelh or is too severe. It likewise signifieth the extension of the words of the law to cases unexpressed, yet having the same reason ; so that where one thing is enacted by statute all other things are enacted that are of the like degree : e. g. the statute of Gloucester gives action of waste against him that holds lands for life or years : and, by the equity thereof, a man shall have action of waste against a tenant that holds but for one year, or one half year, which is without the words of the act, but within the meaning of it ; and the words that enact the one, by equity enact the other. So that equity is of two kinds. The one abridges and takes from the letter of the law : the other enlarges and adds to it : and statutes may be construed according to equity, especially where

they give remedy for wrong, or are for expedition of justice. Equity seems to be the interposing law of reason, exer- cised by the lord chancellor in extraordinary matters to do equal justice ; and, by supplying the defects of the law, gives remedy in all cases.

'The essential difference,' says Blackstone, ' between law and equity principally consists in the different modes of administering justice in each, in the mode of proof, the mode of trial, and the mode of relief. Upon these, and upon two other accidental grounds of jurisdiction, viz. the true construction of securities for money lent, and the form or effect of a trust or second use, hath been principally erected that structure of jurisprudence which prevails in our courts of equity, and is inwardly bottomed upon the same substantial foundations as the system of the courts of common law.

As to the mode of proof. When facts, or their leading circumstances, rest only in the knowledge of the party, a court of equity applies itself to his conscience, and purpes him, upon oath, with re- gard to tie tn.tli of the transaction; and that

being once discovered, the judgment is the same in equity as it would have been at law. But, for want of this discovery at law, the courts of equity have acquired a concurrent jurisdiction with every other court in all matters of account. 1 Chan. C. 57. As incident to accounts, they take a concurrent cognizance of the administra- tion of personal assets, 2 P. Wms. 145., con- sequently of debts, legacies, the distribution of the residue, and the conduct of executors and ad- ministrators. 2 Chan. c. 152. As incident to accounts, they also take the concurrent jurisdic- tion of tithes, and all questions relating thereto,

1 Eq. C. Ab. 367 ; of all dealings in partnership,

2 Vern. 277, and many other mercantile transac- tions ; and so of bailiffs, receivers, factors, and agents. Ibid. 638. From the same fruitful source,

the compulsive discovery upon oath, the courts of equity have acquired a jurisdiction over almost all matters of fraud, 2 Chan. C. 46 : all matters in the private knowledge of the party, which, though concealed, are binding in conscience, ami all judgments at law obtained through such fraud or concealment. And this not by impeaching or reversing the judgment itself, but by prohibiting the plaintiff from taking an advantage of a judg- ment obtained by suppressing the truth. 3. P. Wms. 148. Year book, 22 Ed. IV. 37. p. 21.

The mode of trial, is by interrogatories ad- ministered to the witnesses, upon which their depositions are taken in writing, wherever they happen to reside. If, therefore, the cause arises in a foreign country, and the witnesses reside upon the spot ; if, in causes arising in England, the witnesses are abroad, or shortly to leave the kingdom ; or, if the witnesses residing at home are aged or infirm ; any of these cases lays a ground for a court of equity to grant a commis- sion to examine them, and, in consequence, to exercise the same jurisdiction which might have been exercised at law if the witnesses could probably attend.

With respect to the mode of relief. — The want of a more specific remedy than can be obtained in the courts of law, gives a concurrent juris lic- tion to a court of equity in a great variety of cases. To instance in executory agreements. A court of equity will compel them to be carried into strict execution, unless where it is improper or impossible ; instead of giving damages for their non- performance. Eq. Ca. Ab. 16. And hence a fiction is established, that what ought to be done shall be considered as being actually done, and shall relate back to the time when it ought to have been done originally ; and this fiction is so closely pursued through all its consequences, that it necessarily branches out into many rules of jurisprudence, which form a ceitain regular system. 3 P. Wms. 215. So, of waste, and other similar injuries, a court of equity takes a concur rent cognizance, in order to prevent them by in- junction. 1 Ch. Rep. 14. 2 Ch. C. 32.

Over questions that may be tried at law, in a great multiplicity of actions, a court of equity assumes a jurisdiction, to prevent the expense and vexa- tion of endless litigation and suits. 1 Vern. 308; Pre. Ch. 261. 1 Pr. Wms. 672. Stra. 404. In various kinds of fraud it assumes a concurrent jurisdiction, not only for the sake of a discovery.

but of a more extensive and specific relief, 2 P. exhibited, to which an answer is put in and a

Wms. 156; as by setting aside fraudulent deeds, decree being obtained, a master in chancery is'to

decreeing re-conveyances, or directing an abso- certify what is due for principal, interest, and

lute conveyance merely to stand as a security, costs, which are to be prefixed by the decree

1 Vern. 32. 1 P. Wms. 239. 1 Vern. 237. 2 Vern. whereupon the premises are to be re-conveyed to

84 ; and thus, lastly, for the sake of a more bene- the mortgagor ; or, in default of payment, the

ficial and complete relief, by decreeing a sale of mortgagor is ordered to be foreclosed from all

lands, a court of equity holds plea of all debts, equity of redemption, and to convey the premises

incumbrances, and charges that may affect it, or absolutely to the mortgagee. Law of Securities

issue thereout. 1 Eq. Ca. Ab. 337. p. 129, 133. By stat. 7 Geo. II. cap. 20, after

As to the construction of securities for money payment or tender by the mortgagor of principal,

lent; when courts of equity held the penalty of interest, and costs, the mortgagee can maintain

a bond to be the form, and that in substance it no ejectment, but maybe compelled to re-assi

was only as a pledge to secure the repayment of his securities.

the sum bona fide advanced, with a proper com-
EQUITY, in mythology, sometimes confounded

pensation for the use, they laid the foundation of with Justice, a goddess among the Greeks and

a regular series of determinations, which have Romans, represented with a sword in one hand

settled the doctrine of personal pledges or securi- and a balance in the other.

ties, and are equally applicable to mortgages of
EQUIVALENCE, n. s. & v.a.) Lat. aquus

real property. The mortgagor continues owner
EQUIV'ALENCY, n. s. > and valco,

of the land, the mortgagee of the money lent upon
EQUIVALENT, n. s. & adj.) to prevail!

it: but this ownership is mutually transferred,
Equality of power or value ; to equiponderate;

and the mortgagor is barred from redemption, if, to be equal to. An equivalent is any thing

when called upon by the mortgagee, he does not equal in any quality or excellence expressed or

redeem within a time limited by the court : or he implied.

may, when out of possession, be barred, by length

of time, by analogy to the statute of limitations. The form of a trust, or second use, gives the

courts of equity an exclusive jurisdiction, as to

the subject matter of all settlements and devises

in that form, and of all the long terms created in

the present complicated mode of conveyancing.

This is a very ample source of jurisdiction : but

the trust is governed by very nearly the same

The consideration of public utility is, by very good advice, judged at the least the equivalent to the easier kind of necessity. Hooker.

Must the servant of God be assured that which he nightly prays for shall be granted ? Yes, either for- mally or by way of equivalence, either that or some- thing better. Hammond.

Whether the transgression of Eve seducing did not exceed Adam seduced, or whether the resistilility

rules as would govern the estate in a court of of his reason did not equivalence the facility of her law, if no trustee was interposed ; 2 P. Wms. seduction, we shall refer to schoolmen. Browe.

045, 668, 669. And by a regular positive system, established in the courts of equity, the doctrine of trusts is now reduced to as great a certainty as that of legal estates in the courts of common law.' See 3 Comm. 436 — 440. See CHANCERY and LAW.

EQUITY OF REDEMPTION, on mortgages, is the right which a man has of redeeming his estate upon payment of the money borrowed. This en- ables a mortgagor to call on the mortgagee who has possession of his estate to deliver it back, and account for the rents and profits received, on payment of his whole debt and interest : .thereby turning the mortuum into a kind of vivum vadium. But, on the other hand, the mortgagee may either compel the sale of the estate in order to get the whole of his money immediately, or else call upon the mortgagor to redeem his

estate, or, in default thereof, to be for ever foreclosed from redeeming the same, that is, to lose his equity of redemption without possibility of recall. And also in some cases of fraudulent mortgages (stat. 4 & 5 W. & M. c. 16.), the fraudulent mortgagor forfeits all equity of redemption whatsoever This is done l)y pro- ceedings in the court of chancery. But the chancery cannot shorten the time of payment of the mortgage money, where it is limited by ex- press covenant, though it may lengthen it ; and then, upon non-payment, the practice is to fore- close the equity of redemption of the mortgagor. 2 Vent. 364.

To foreclose the equity, a bill in chancery is

The dread of Israel's foes, who, with a strength Equivalent to angels, walked their streets, None offering fight. Milton's Agonistes.

No fair to thine

Equivalent or second ! which compelled All thus, though importune perhaps, to come And gaze, and worship thee. Milton.

The slave without a ransom shall be sent : It rests for you to make the equivalent. Dryden.

The use of the word minister is brought down to the literal signification of it, a servant ; for now to serve and to minister, servile i>nd ministerial, are terms equivalent. South.

A man of wit, genius, learning, is apt to think it something hard, that men of no wit, no genius, no learning, should have a greater share of wealth and honours ; not considering that their own accomplish- ment ought to be reckoned to them as their equivalent. It is no reason that a person worth five thousand pounds, should, on that account, have a claim to twent". • Shenstone.

That there is any equivalence or parity of worth betwixt the good we do to our brother, and the good we hope (or from God, all good Protestants '.lo

deny.

Smalridge.

Civil causes are equivalent unto criminal causes, but this equivalency only respects the careful and dili- gent admission of proofs. Ayliffe's Parergon.

Things

Well nigh equivalent, and neighbouring value, By lot are parted ; but the value, high heaven, thy

share,

In equal balance laid with earth and hell, Flings up the adverse scale and shuns proportion.

Prior

Fancy a regular obedience to one law will be a full equivalent for their breach of another. Rogert,

The characteristic style of the Hebrew poets, who delight in subjoining to one proposition a correspond- ing clause which has an equivalent or opposite sense, affords frequent explanations of obscure passages by Jie parallelism. Archbp. Newcome.

There is probably no country so barbarous that ivould not disclose all it knew, if it received from the traveller equivalent information. Goldtmith,

EQUIVALENT TERMS are where several words that d.ffer in sound have yet one and the same signification ; as every body was there, and no- l;ody was absent; nihil non, and omne.

EQUIVALENT THINGS are either moral, physi- cal, or statical. 1. Moral; e. g. the command- ing or advising a murder is a guilt equivalent to that of the murderer. 2. Physical; a man who has the

strength of two men is said to be equiva- lent to two men. 3. Statical ; a less weight be- comes equivalent in force with a greater, by having its distance from the centre increased.

s, Chemical, a term employed in chemical philosophy, to express the system of definite ratios, in which the corpuscular subjects of. this science reciprocally combine, referred to a common standard reckoned unity. Omitting here the combination of liquids, and solution in water and alcohol, there are two laws relating to the combinations of substances: first, "The com- position of bodies is fixed and invariable ;" and secondly, "When one body combines with another in different proportions, the larger pro- portion of one of the ingredients has a simple arithmetical ratio, to the smaller proportion." See Chemistry.

EQUIVOCAL, adj. & n. *.} Lat. aquivo-

EQHIV'OCALLY, adv. Was ; of aquus,

EQUIV'OCALNESS, ?i. s. .)and voco, to

speak. Of doubtful meaning; standing for dif-

ferent notions, or things : uncertain ; irregular.

These sentences to sugar or to gall, Being strong on both sides, are equivocal.

Shakspeare.

Words abstracted from their proper sense and sig- nification, lose the nature of words, and are only equivocally so called. South.

Distinguish the equivocalness or lassitude of the word, and then point out that determinate part which it the ground of my demonstration. Norrit.

No insect or animal did ever proceed equivocally from putrefaction, unless in miraculous cases ; as in Egypt by the divine judgments. Bentley.

Shall two or three wretched eqvivocals have the force to corrupt us ? Dennit.

Equivocal generation is the production of plants without seed, or of insects or animals without parents, in the natural way of coition between male and female ; which is now believed never to happen, but that all bodies are unequivocally produced.

Harris.

EQUIV'OCATE, v. n.~i Lat. aquivocatio ;

EQUIVOCATION, n. t. \ttquvs and voco. See

EQUIVOCA'TOR, n. s. } EQUIVOCAL. To use

ambiguous expressions, or words of double mean-

ing ; to mean one thing and express another.

Here's an equivocator, that would swear in both the scales agaiust either scale j yet could not eqtuvo' cate to Heaven. Shakspeare.

Reproof is easily misapplied, and through equivoca- tion, wrested.

I pull in resolution, and begin To doubt the equivocation of the fiend That lies like truth. Sftafupeare. Macbeth.

Who sees not how no place can be left for truth, where there is full room given to equivocation ?

Bp. Hall. Not only Jesuits can equivocate ? Dryden.

My soul disdained a promise;

— But yet your false equivocating tongue, Your looks, your eyes, your every motion promised : But you are ripe in frauds, and learned in falsehoods.

Smith.

EQUULEUS, or ECCULEUS, in antiquity, a kind of rack used for extorting a confession, at first chiefly

practised on slaves, but afterwards made use of against the Christians. The equu- leus was made of wood, having holes at certain distances, with a screw, by which the criminal was stretched to the third, sometimes to the fourth, or fifth "holes, his arms and his legs being fastened on the equuleus with cords ; and thus was hoisted aloft, and extended in such a manner, that all his bones were dislocated. In this state red-hot plates were applied to his body, and he was goaded in the sides with an instrument called ungula.

EQUT;LEI;S, EQUICULUS, or EQUUS MINOR, in astronomy, the horse's head ; a constellation of the northern hemisphere. See ASTRONOMY.

EQUUS, in zoology, a genus of quadrupeds belonging to the order of belluae. They have six erect and parallel fore teeth in the upper jaw, and six somewhat prominent ones in the under jaw; one short tusk on each side of both jaws, at a considerable distance from the other teeth ; and the feet consist of an undivided hoof. This genus is the only race of quadrupeds, in which the mammae are wanting on the males. Mr. Kerr enumerates six species.

I. EQUUS ASINUS, the ass, has long slouching ears, solid hoofs, short mane, and tail covered with long hairs at the end. The body is usually of an ash color, with a dusky cross on the shoul- ders. Gmelin describes two varieties, besides hybrids or mules, viz.

1. EQUUS ASINUS DOMESTICUS, the tame or domestic ass, is an humble, patient, and quiet ani- mal, lie submits with firmness to strokes and chastisement ; he is temperate both as to the quantity and quality of his food ; he contents himself with the rigid and disagreeable herbago which the horse and other animals leave to him and disdain to eat ; he is more delicate with regard to his drink, never using water unless it be per- fectly pure. As his master does not take the trou- ble of combing him, he often rolls himself on the turf among thistles, ferns, &c. Without regarding what he is carrying, he lies down

to roll as often as he can, seeming to reproach his masters with neglect and want of attention. When very young, the ass is a gay, sprightly, nimble, and gentle animal. But he soon loses these qualities, proba- bly by the bad usage he meets with ; and becomes lazy, untractable, and stubborn. . When under the influence of love, he becomes perfectly furious. The affection of the female for her young »

strong. Pliny assures us, that when an experi- ment was made to discover the strength of ma- ternal affection in a she ass, she ran through the flames in order to come at her colt. Although the ass be generally ill used, he discovers a great attachment to his master ; he smells him at a dis- tance, searches the places and roads he used to frequent, and easily distinguishes him from other men. The ass has a very fine eye, an excellent scent, and a good ear. When overloaded; he hangs his head, and sinks his ears ; when too much teased or tormented, he opens his mouth and re- tracts his lips in a disagreeable manner. If you cover his eyes, he will not move another step ; if you lay him on his side, and place his head so that one eye rests on the ground, and cover the other with a cloth, he will remain in this situation without making any attempt to get up. He walks, trots, and gallops in the same manner as the horse, but all his motions are slower. Whatever pace he is going at, if pushed, he instantly stops. The cry of the horse is called neighing ; that of the ass braying, which is a long disagreeable noise, consisting of alternate discords from sharp to grave and from grave to sharp; he seldom cries but when pressed with hunger or love ; the voice of the female is clearer and more piercing than that of the male. The ass is less subject to vermin than other animals covered with hair ; he is never troubled with lice, probably owing to the hardness and dryness of his skin ; and it is perhaps for tne same reason that he is less sensi- ble to the whip and spur than the horse. The teeth of the

ass fall out and grow at the same age and in the same manner as those of the horse ; and he has nearly the same marks in his mouth. Asses are capable of propagating when two years old. The females are in season in May and June. The milk appears in the dugs ten months after im- pregnation ; she brings forth in the twelfth month, and always one at a time. Seven days after the birth, the season of the female returns, and she is again in a condition to receive the male. The colt should be taken from her at the end of five or six months, that the growth and nourishment of the foetus may not be obstructed. The stallion or jack-ass should be the largest and strongest that can be found : he should be at least three years old, and never ought to exceed ten. Mules are the offspring of the horse and ass, or the jack- ass and mare. See MULE. Mr. Pennant men- tions a mule produced between a jack-ass and a female zebra.

The ass, like the horse, continues growing three or four years, and lives till he is twenty-five or thirty ; he sleeps less than the horse, and never lies down but when excessively fatigued. He is more i-obust, and less subject to disease than the horse. Travellers inform us, that there are two sorts of asses in Persia ; one of which is used for bur- dens, they being slow and heavy ; the other kept like horses for the saddle : for they have smooth hair, carry their head well, and are much quicker in their motion ; but when they ride them, they sit nearer their buttocks than when on a horse ; the) are dressed like horses, and are taught to amble like them ; but they generally cleave their nostrils to give more room for breathing. Dr. Hussell tells us, that they have two sorts in Syria; one of which is like ours, and the other very

large ; with remarkably long ears ; but they are both used to carry burdens. In America there were originally no asses, but they were carried thither first by the Spaniards, and afterwards by other nations, where they multiplied greatly; in- somuch, that, in some places, there are whole droves of them that run wild, and are not easily caught. Asses in

general carry the heaviest bur- dens in proportion to their bulk; and, as their keeping costs little or nothing, it is surprising- that they are not put to more uses than they ge- nerally are among us. The flesh of the common as? is never eaten in Europe; though some say, that of their colts is tender, and not disagreeable. 2. EQUUS ASINUS FERUS, the wild ass, the onager, of Oppian, Pliny, Ray, &c., and the koulan of Mr. Pennant, varies from the tame in several respects, and requires a more particular description. The forehead is much arched ; the ears are long and erect, even when the animal is out of order; sharp-pointed, and lined with whi- tish curling hairs ; the irides are of a livid brown ; the lips thick ; and the end of the nose sloping steeply down to the upper lip ; and the nostrils are large and oval. It is much higher on its limbs than the tame ass, and its legs are much finer, but it again resembles it in the nar- rowness of its chest and body ; it carries its head much higher; and its skull is pf a surprising thin- ness. The mane is dusky, about three or four inches long, composed of soft woolly hair, and extends quite to the shoulders,; the hairs at the end of the tail are coarse, and about a span long. The color of the hair in general is silvery white ; the upper part of the face, the sides of the neck, and body, are of a flaxen color ; the hind parts of the thighs are the same; the fore part divided from the flank by a white line, which extends round the rump to the tail ; the belly and legs are also white ; along the very top of the back, from the mane quite to the tail, runs a stripe of bushy waved hairs of a coffee-color, broadest above the hind part, and growing narrower again towards the tail ; another of the same color crosses it at the shoulders (of the males only), forming a mark, such as distinguishes the tame asses ; the dorsal band and the mane are bounded on each sid e by a beautiful line of white, well described by Oppian, who gives an admirable account of the whole. Its winter coat is very fine, soft, and silky, much undulated, and likest to the hair o. the camel ; greasy to the touch ; and the flaxen color, during that season, more exquisitely

bright. Its summer coat is very smooth, silky, and even, with the exception of certain shaded rays that mark the sides of the neck, pointing downwards These animals inhabit the dry and mountainous parts of the deserts of Great Taitary, but not higher than latitude 48°. They are migratory, and arrive in vast troops to feed, during the sum- mer, in the tracts east and north of lake Aral. About autumn they collect in hundreds, and di- rect their course towards Che north of India, to enjoy a warm retreat during winter. But Persia is their most usual place of retirement; where they are found in the mountains of Casbin, some even at all times of the year. Barboga says, they penetrate even into the southern parts of In- dia, to the mountains of Malabar and Golconda. According to Leo Africanus, wild asses of an ash

color are found in the north deserts of Africa. The Arabs take them in snares for the sake of their flesh. If fresh killed, it is hot and unsavory ; if kept two days after it is boiled, it becomes excellent meat. These people, the Tartars, and Romans, agreed in their preference of this to any other food , the latter indeed chose them young, at a period of life in which it was called lalisio (See Martial xiii. 97). The epicures of Rome preferred those of Africa to all others. Full grown onagri were introduced among the spectacles of the theatre ; and their combats were preferred even to those of the ele- phants. The manners of the wild ass are very much the same with those of the wild horse. They assemble in troops under the conduct of a leader, and are very shy. They will, however, stop in the midst of their course, and even suffer the ap- proach of a man at that instant, but will then dart away with the rapidity of an arrow from the bow. This Herodotus mentions, in his account of those of Mesopotamia ; and Leo Africanus, in that of the African. Theirwildness is beautifully described in Scripture. See Job xxxix^ 5 — 8. Yet they can be

tamed ; the Persians catch and break them for the draught : they make pits, half filled with plants to lessen the fall, and take them alive, when they break, and hold them in great esteem. The famous breed of asses in the East is produced from the koulan reclaimed from the savage state, which highly improves the breed. The Romans reckoned the breed of asses pro- duced from the onager and tame ass to excel all others. The Tartars, who kill them for the sake of the flesh and skins, lie in ambush and shoot them. They have been at all times celebrated for their amazing swiftness. Their food is the saltest plants of the deserts, such as the kalis, atriplex, chenopodium, and the bitter milky tribe of herbs, &c. ; they also prefer salt-water to fresh. This is exactly conformable to the history given of this animal in the book of Job ; for the words ' barren land,' expressive of its dwelling, ought, according to the learned Bochart, to be rendered 4 salt places.' The hunters lie in wait for them near the ponds of brackish water, to which they resort to drink ; but they seldom have recourse to water. These animals were anciently found in the Holy Land, Syria, the land of Uz or Arabia Deserta, Mesopotamia, Phrygia, and Lycaonia. But at present they are entirely confined to the countries above mentioned. Shagrin is made of the skin of these animals. See SHAGRIN. The Persi-.ms use the bile of the wild ass as a remedy again.it dimness of sight.

11. EQUUS BISULCUS, the Chilese horse, in the size, number, and arrangement of teeth, as well as general appearance, resembles the horse ; and is therefore ranked by Gmelin in this genus, though it differs from all the ether species in having cloven hoofs. In its size, hair, color, nose, eyes, neck, back, tail, legs, genitals, and internal structure, it resembles the ass, but wants the dusky cross on its shoulders. It resembles the horse in the figure of its ears, and the sound of its voice; and, according to Molana, in the size and position of its teeth. Hence Mr. Kerr sup- poses, it may be only a wild horse, degenerated through the inclemency of the mountainous dis- trict it inhabits, in the Andes, in

South America;

and that ' the circumstance of its having cloven hoofs may be exaggerated, or only a mistake.' Some naturalists are inclined to consider it as belonging to the camel tribe, and the genus au- chenia.

III. EQUUS CABALLUS, the horse, has a long flowing mane, and the tail covered on all parts with long hairs. Even in a domestic state he is a bold and fiery animal : equally intrepid as his master, he faces danger and death with ardor and magnanimity. He delights in the noise and tumult of arms, and seems to feel the glory of victory; he exults in the chase; his eyes sparkle with emulation in the course. But, though bold and intrepid, he is docile and tractable; he knows how to check the natural vivacity and fire of his temper. He not only yields to the hand, but seems to consult the inclination of his rider; constantly obedient to the impressions he receives, his motions are entirely regulated by the will of his master. He in some measure re- signs his very existence to the pleasure of man. He delivers up his whole powers ; he reserves nothing; he will rather die than disobey. Who could endure to see a character so noble abused ? Who could be guilty of such gross barbarity ! This character, though natural to the animal, is in some measure the effect of education. His education commences with the loss of liberty, and is finished by constraint. The slavery of the horse is so ancient and so universal, that he is but rarely seen in a natural state. Se- veral ancient writers talk of wild horses, and even mention the places where they are to be found. Herodotus takes notice of white savage horses in Scythia ; Aristotle says they were to be found in Syria ; Pliny, in the northern regions ; and Strabo, in Spain and the Alps. In more re- cent times, Cardan says, that wild horses are to be found in the Highlands of Scotland and the Orkney Isles ; Glaus, in Muscovy ; Dapper, in the island of Cyprus ; Leo and Marmol, in Ara- bia and Africa, &c. But, as Europe is almost all inhabited, wild horses are not to be met with in any part of it; and those of America were origi- nally transported from Europe by

the Spaniards ; for this species of animals did not exist in the New World. The Spaniards carried over a great number of horses, left them in different islands, &c., with a view to propagate that useful animal in their colonies. These have sometimes multi- plied incredibly, in the vast deserts of those thinly peopled countries, and roamed at large without any restraint. M. de Salle relates, that he saw, in the year 1685, horses feeding in the meadows of North America, near the bay of St. Louis, which were so ferocious that nobody durst come near them. Oexmelin says, that he has seen large troops of them in St. Domingo running in the valleys ; that when any person approached, they all stopped"; and one of them would advance till within a certain distance, then snort, take to his heels, and the whole troop after him. Every au- thor, who notices these horses of America, de- scribes them as smaller and less handsome than those of Europe. These relations sufficiently prove, that the horse, when at full liberty, though not a fierce or dangerous animal, has no inclina- tion to associate with mankind; that all the soft-

ness and ductility of his temper proceeds entirely from the culture and polish he receives in his do- mestic education, which in some measure com- mences as soon as he is brought forth. The mo- tions of the horse are chiefly regulated by the bit and the spur ; the bit informs him how to direct his course, and the spur quickens his pace. The mouth of the horse is endowed with amazing sensibility; the slightest motion or pressure of .he bit gives him warning, and instantly deter- mines his course. The horse has not only a grandeur in his general appearance, but there is the greatest symmetry and proportion in th.p dif- ferent parts of his body. The regularity and proportion of the different parts of the head give him an air of lightness, which is well supported oy

the strength and beauty of his chest. He erects his head as if willing to exalt himself above the condition of other quadrupeds : his eyes are open and lively ; his ears are handsome, and of a proper height ; his mane adorns his neck, and gives him the appearance of strength and bold- ness. At the age of two years, or two years and a half, the horse is in a condition to propagate ; and the mare, like most other females, is ready to receive him still sooner. But the foals pro- duced by such early embraces are generally ill- made and weakly. The horse' should never be admitted to the mare till he is four or four and a half; this is only meant with regard to draught horses. Fine horses should not be admitted to the mare before they are six years old, and Spa- nish stallions not till seven. The mares are generally in season from the beginning of April to the end of June ; but their chief ardor for the horse lasts but about fifteen or twenty days, and this critical season should always be embraced. The stallion ought to be sound, well made, vigor- ous, and of a good breed. Mares go with young eleven months and some days. They bring forth standing : contrary to the course of most other quadrupeds, who lie during this operation. They continue to bring forth till the age of sixteen or eighteen years ; and both horses and mares live between twenty-five and thirty years. Horses cast their hair once a year, generally in the spring, but sometimes in the autumn. At this time they are weak, and require to be better fed and taken care of than at any other season. In Persia, Ara- bia, and most eastern countries, they never geld their horses, as is done in Europe and China. This operation greatly diminishes their strength, courage, and spirit ; but it makes them good- humored, gentle, and tractable. With regard to the time of performing this operation, the prac- tice of different countries is different : some geld their horses when a year old, and others at eighteen months. But the best and most general practice is to delay the operation till they are two years old, as they thus retain more of the strength and other qualities of the male. — For the breeding, rearing, &c., of horses, and the technical

descrip- tion of the parts, 8cc., see the articles HORSE, STALLION, &c. ; for the method of training and managing them, see HORSEMANSHIP; and foi their diseases and cure, VETERINARY ARTS.

IV . EQUUS HEM ION us of Pallas, the 'H/iiovoe, or half ass, of Aristotle and Pliny, the czigithai of Buffcn, and the dshikketei, fecund, or wild

mule of Pennant, is of the size and appearance of the common mule, with a large head, flat fore- head growing narrow toward the nose, eyes of a middle size, the irides of an obscure ash color : thirty- eight teeth in all, being two in number fewer than in a common horse ; ears much longer than those of a horse, quite erect, lined with a thick whitish curling coat ; neck slender, com- pressed ; mane upright, short, soft, of a grayish color; in place of the foretop, a short tuft of downy hair about an inch and three quarters long. The body is rather long, and the back very little elevated ; the breast protuberant and sharp. The limbs are long and elegant ; the thighs thin as a mule's. Within the fore legs there is an oval callus ; in the hind legs none. The hoofs are oblong,' smooth, and black ; the tail is like that of a cow, slender, and for half of its length naked, and the rest covered with long ash-colored hairs. Its winter coat is gray at the tips, of a brownish ash-color beneath, about two inches long, in softness like the hair of a camel, and un- dulated on the back. Its summer coat is much shorter, of a most elegant smoothness, and in all parts marked most beautifully with small vor- texes. The end of the nose is white ; from thence to the foretop inclining to tawny. The buttocks are white ; as are the inside of the limbs and belly. From the mane a blackish testaceous line extends along the top of the back to the tail, broadest on the loins, and growing narrower to- wards the tail. The color of the upper part of the body is a light yellowish gray, growing paler towards, the sides. The length, from the tip of the nose to the base of the tail, is six feet seven inches ; length of the trunk of the tail, one foot four; of the hairs beyond the end, eight inches. The height of the animal is three feet

nine. This species Inhabits the deserts between the rivers Onon and Argun in the most southern part of Siberia, and extends over the vast plains and deserts of Western .Tartary, and the celebrated sandy desert of Gobi, which reaches even to India. In Siberia they are seen only in small numbers, as if detached from the numerous herds to the south of the Russian dominions. In Tartary they are found about Taricnoor, a salt lake at times dried up. They shun wooded tracts, and lofty snowy mountains. They live in separate herds, each consisting of a chief, a number of mares and colts, in all to the number of about twenty ; but seldom so many, for com- monly each male has but five and sometimes fewer females. They copulate towards the mid- dle or end of August ; and bring, for the most part, but one at a time, which, by the third year, attains its full growth, form, and color. The young males are then driven away from their paternal herds, and keep at a distance till they can find mates of their own age which have quitted their dams. These animals also carry their heads horizontally ; but, when they take to flight, hold them upright, and erect their tail. Their neigh- ing is deeper and louder than that of a horse. They fight by biting and kicking, as usual with the horse : they are fierce and untameable ; and even those which have been taken young, are so intractable as not to be broken by any art which thfe wandering Tartars could use. Yet

were it possible to bring them into fit places, and to provide all the conveniences known in Europe, the task might be effected; but it is doubted whether the subdued animal would re- tain the swiftness for which it is so celebrated in its state of nature. It exceeds that of the antelope ; it is even proverbial ; and the in- habitants of Thibet, from the fame of its rapid speed, mount on it Chammo, their god of fire. The Mongalians despair of ever taking them by

the chase; but lurk behind some tomb, or in some ditch, and shoot them when they come to drink or eat the salt of the desert. They are ex- cessively fearful animals, and provident against danger. A male takes on him the care of the herd, and is always on the watch. If they see a hunter, who by creeping along the ground has got near them, the sentinel takes a great circuit, and goes round and round him, as discovering somewhat to be apprehended. As soon as the animal is satisfied, it rejoins the herd, which sets off with great precipitation. Sometimes its curiosity costs its life ; for it approaches so near as to give the hunter an opportunity of shooting it. But it is observed that, in rainy or in stormy weather, these animals seem very dull, and less sensible of the approach of mankind. The Mon- galians and Tungusi, according to Du Halden, kill them for the sake of their flesh, which they prefer to that of horses, and even to that of the •wild boar, esteeming it equally nourishing and wholesome. The skin is also used for making boots. Their senses of hearing and smelling are most exquisite: so that they are approached with the utmost difficulty. The Mongalians call them dshikketei, which signifies the eared ; the Chinese, yo-to-tse, or mule. In ancient times this species extended far south. It was found in Syria in the time of Aristotle, who celebrates it for its amazing swiftness and fecundity, a breed- ing mule being thought a prodigy (see MULE); and Pliny, from the report of Theophrastus, men- tions this species as found in Cappadocia.

V. EQUUS QUAGGA, the quacna, is striped like the zebra on the head and body, but with fewer lines. The flanks are spotted ; the rump is plain; the ground color of the head, neck, body, and rump, a bright, bay : the belly, thighs, and legs, are white, and free from all marks. This species, till of late, has been supposed to be the female of the zebra ; but recent observations prove that the male and female zebra are marked alike This differs likewise in being thicker and stronger made, and in being more tractable; for instance, one had been so

far broken as to draw in a cart. The Hottentots also distinguish them from the former, by the names of quagga and oppagha.

VI. EQUU, ZEBRA has the figure and grace- fulness of the horse, joined to the swiftness of the stag. He is about seven feet Ions, from the point of the muzzle to the origin of the tail, and about four feot high. The color of his skin is beautiful and uniform, consisting of alternate parallel rings of black and white, disposed in the most regular manner. He is generally less than the horse and larger than the ass. The zebra is found no where but in the east and south pro- vinces of Africa, from Ethiopia to the Cape of

Good Hope, and from the Cape of Good Hope to Congo. The Dutch have been at great pains to tame and use them for domestic purposes, but with little success. The zebra is hard-mouthed, and kicks when any person attempts to touch or come near him. He is restless and obstinate as a mule : but perhaps the wild horse is naturally as untractable as the zebra ; and it is probable, if he were early accustomed to obedience and a domestic life, he would become as docile as the horse.

ER, a syllable in the middle of names or places, comes by contraction from the Saxon pana, dwellers.

ERA, n. s. Fr. ere ; Lat. ERA. Some from Goth, ar ; Swed.

The Mohammedan era, reckoning from the Hegira or flight of the prophet, has of itself a strong tendency to preserve that superstition, and prevent the Mussul- mans from assimilating with the other nations.

Thomas.

Mr. Grey's Memoria Technica was designed as an artificial language to remember numbers, as of the eras, or dates of history. Darwin. '

ERAD'IATE, v. n. \ From Lat. e and rtr

ERADIA'TION, n. s. J dius, a ray. To shoot out in the mannei of a ray of light.

A kind of life eradiating from intellect, &c.

More.

God gives me a heart humbly to converse with him, from whom alone are all the eradiations of true ma- jesty. King Charles.

ERADICATE, v. a. ^ FT. eradication;

ERADICA'TION, n. s. S Lat. eradicare,

ERAD'ICATIVE, adj. & n. s. j from e and radix, radicis a root; Gr. pa£i£, a branch or bough. To pluck or tear up by the roots : hence to des- troy completely; an eradicative (also used as an adjective) is a medicine that thus destroys dis- ease.

He suffereth the poison of Nubia to be gathered, and Aconite to be eradicated, yet this not to be moved.

Browne

They affirm the roots of mandrakes give a shriek upon eradication, which is false below confutation.

Id.

If a gouty person can bring himself entirely to a milk diet, he may so change the whole juices of hi« body as to eradicate the distemper. Arbuthnot.

If vice cannot wholly be eradicated, it ought at lea* t to be confined to particular objects. Swift.

Philosophy 'converses in more appropriated and ab- stracted terms ; and thus by degrees eradicates the abundance of metaphor, which is used in the more early ages of society. Darwin.

ERAKLEA, or EREKLI, a town of European Turkey, in Romania, on the sea of Marmora, the ancient Heraclea. It has a double harbour, con- tains 7000

inhabitants, and is a Greek arch- bishop's see. Eighteen miles south of Rodosto, and forty-srx west of Constantinople.

ERAMNOO, an island at the entrance of the gulf of Cutch, on the western coast of India, having a principal town of the same name. Long. 68° 40' E., lat. 22° 32' N.

ERANARCHA, a public officer among the ancient Greeks, whose business was to preside over and direct the alms and provisions made foi

the poor. Cornelius Nepos, in nis life of Epa- minondas, seems to describe the office thus : When any person was reduced to poverty, taken captive, or had a daughter to marry, which he could not effect for want of money, &c., the era- narcha called an assembly of friends and neigh- bours, and taxed each according to his means and gstate, to contribute towards his relief.

ERANES, in Grecian history, societies among the ancient Athenians, in which each member deposited, monthly, a certain sum, in the com- mon treasury, which was destined for the relief of associates who labored under particular mis- fortunes. As soon as it was possible, they were obliged to refund the money, but without inte- rest. The Athenians looked upon these societies as very useful among a commercial people, where disappointments and shipwrecks often produced sudden and unmerited misfortune.

ERANTHEMUM, in botany, a genus of the monogynia order, and diandria class of plants : COR. quinquefid, with the tube filiform ; the an- therae without the tube ; the stigma simple. Species five ; mostly Cape shrubs.

ERASE', v. a. } Fr. raser ; Lat. erado, era-

ERASE'MENT. $ sus, from e and rado, to scrape. Gr. pa<7, to cut or break. To excind ; to expunge ; blot out.

The heads of birds, for the most part, are given erased; that is, plucked off.

Pcacham on Blazoning.

I think such a passage should make men very cau- tious, that they may not rashly incur any censure on this account, though undoubtedly the terror of the threatening is planted against any designed erasement or addition. Daddridye.

ERASED, in heraldry. The nead or limb of any creature torn from the body, so as to ap- pear jagged, is called erased. See the annexed figure. Ar- gent a lion's head, erased gules.

ERASISTRATUS, in biography, a physician, of great reputation among the ancients, born at Cos, and a pupil of Chrysippus. His fame ac- quired him the esteem of Seleucus Nicanor, king of Syria, at whose court he resided for a consi- derable time. While there, Antiochus, the king's son, was seized with a disorder for which the physicians could afford no remedy, and Erasis- tratus was called in. He observed that when- ever Stratonice, his father's wife, entered his apartment, Antiochus appeared confused, a blush and tremor spread over his frame, his pulse quickened, and his voice grew feeble. He in- stantly perceived the cause of the disease, and conceived at the same time a plan for its cure. He went to the king and informed him that An- tiochus must die, as his illness was occasioned by a passion that could never be gratified. 'Who then is the object of his love ?' exclaimed Seleu- cus. ' My wife,' answered Erasistratus. Seleucus urging him strongly not to occasion his son's death by refusing to give up his wife, Erasistratus demanded whether, if Stratonice were the object of his affections, he would yield her for the life of his son ? To this the father replied, that he would willingly give up his wife, or his kingdom,

for his son; and he was informed that he might then be at ease, for that if Antiochus were pos- sessed of Stratonice his illness would soon be at an end.

The great character of Erasistratus, however, is founded upon more solid ground than this anecdote displays. He may be considered as the father of anatomical science, at least con- jointly with Herophilus. Before these physi- cians, the human body had never been opened for anatomical research, which had been con- fined to the bodies of brutes. A(w>rding to Galen, they dissected living criminals : but this seems contradicted by their assertion that the arteries are filled with air only, which they must have seen to be false had they opened a living subject. They described minutely the cerebrum and cerebellum, its cavities and ventricles, and maintained that the brain was the common ' sen- sorium,' or source of vital action, through the medium of the nerves. He also examined mi- nutely the structure of the heart and of the great vessels, and was the first to point out the valvular apparatus, and its peculiar form in each of the cavities of that viscus. He affirmed that the veins divided in the liver, for the purpose of secreting the bile ; and knew that the urine was secreted by the kidneys.

ERASMUS (Desiderius), a celebrated writer, born at Rotterdam, in 1467. He was the ille- gitimate son of one Gerard a native of Tergou, by the daughter of a physician. Gerard had determined to marry the mother of Erasmus, but was deceived by a false report of her death while he was in Italy, upon which he entered into orders. The original name of Erasmus was Ge- rard, but he changed it himself to the Latin De- siderius, and the Greek Erasmus, all signifying amiable. When about nine years of age, he was sent to Deventer in Guelderland, where he made great progress in his education. During his residence at Deventer, his mother, who was also there, died of the plague, and his father did not long survive her ; by which he was left an or- phan, under the care of three guardians, who resolved on bringing him up to a religious life, with the base intention of

dividing his patrimony among themselves. With this view, they sent him from one convent to another, till at last, in 1486, he was induced to assume the religious habit among the canons regular in the monastery of Stein, near Tergou. After spending some time in this situation, he obtained a dispensation from his vows, and was invited by the archbishop of Cambray to reside with him. During his abode with this prelate he was ordained priest ; but in 1496 he went to Paris, where he sup- ported himself by giving private lectures. Next year he visited England, where he was kindly received by the most eminent scholars of the age ; and here he first applied himself to the study of the Greek language. His early literary works were philological, as his Adagia; De Copia Ver- borum ; and De ratione Conscribendi Epistolas. In 1503 we find him at Louvain, where he studied divinity under Adrian VI. The next year he published his Enchiridion Militis Chris- tiani, a treatise on practical religion. About this time he paid another visit to England ; and

in 1506 took the degree of D. D. at Turin, after which he went to Bologna; and thence to Venice, where he lived with the famous Aldus Manutius. Leaving Venice, he visited Padua and Rome, where many offers were made to in- duce him to remain ; but he preferred an invi- tation which he received from Henry VIII. of England, and arrived here in 1510. He first resided with Sir Thomas More, where he wrote his Encomium Moriae, or Eulogy on Folly. Being invited by bishop Fisher to Cambridge, he was the/e made lady Margaret's professor of divinity, and Greek professor. In 1514 we find him at Basil, preparing his New Testament, and the Epistles of Jerome, for the press : about this time he was nominated by Charles of Austria to a vacant bishopric in Sicily ; but when he was informed of this preferment he refused it, con- sidering himself unfit for such a station, though, as he says, the

Sicilians were merry fellows, and might like such a bishop. His edition of the New Testament came out in 1516, being the first time it was printed in Greek. This was a work of amazing labor, and much impaired his health ; but, though it drew upon him the cen- sures of ignorant and envious divines, it met with a rapid sale. The church of Rome was now thrown into a violent ferment by the preach- ing of Luther ; and Erasmus, whose bold ridi- cule of the monks doubtless contributed in part to their discredit, was loudly complained of. In 1519 he received a very courteous letter from Luther, to which he replied, styling Luther his dearest brother in Christ, and adding, ' the Lord Jesus grant you from day to day an increase of his spirit, for his own glory and the public good ;' but as Erasmus did not openly avow the prin- ciples of the reformer, though it is certain he approved of them in his heart, this intimacy was of short continuance. In 1 720, when the pope's nuncio solicited the emperor to punish Luther, and the elector of Saxony consulted Erasmus on the occasion, he observed, ' Luther has com- mitted two unpardonable crimes ; he has touched the pope upon the crown, and the monks upon the belly ;' to which he added, ' I know that a bishopric is at my service, if I would but write against Luther; but he is a man of too great abilities easily to encounter; and to say the truth, I learn more from one page of his, than from all the volumes of Thomas Aquinas.' When his friend and patron, Mountjoy, exhorted him to the service, he replied, ' Nothing is more easy than to call Luther a blockhead ; nothing less easy than to prove him so.' In 1522 he pub- lished his Colloquies, which gave great offence to the monks, who used to say, ' Erasmus laid the egg, and Luther hatched it.' He appears, indeed, to have been at a loss how to behave towards Luther, and escape the vengeance of the court of Rome ; and the timidity with which he acted seems rather inconsistent with the know- ledsre and freedom he displayed in speaking tnd writing : ' I follow,' says he, ' the decisions of the court and emperor when they are right, which is acting religiously; I submit to them when they are wrong, which is acting

prudently ; and I think it lawful for good men to act thus, when there is no hope of obtaining more.' Eras-

mus was next engaged in a controversy with Scaliger and other scholars, who, in their great zeal for the purity of Latin composition, were for rejecting all words not to be found in the works of Cicero, whence they were denominated Cice- ronians. In opposition to these pedants, Eras- mus wrote the much admired dialogue, entitled Ciceronianus, which was printed in 1528 His learned work, De rectft. Latini Graecique Ser- monis pronuntiatione, was also published this year. The last of his publications appeared in 1535, entitled Ecclesiastes, or, on the Manner of Preaching. He died at Basil, in 1536, and was buried honorably in the cathedral of that city. Erasmus, on the whole, was esteemed the most learned man of his age ; and contributed, by his example and his writings, to the restoration of learning in the several countries in which he occasionally resided. He had, however, many enemies ; and as he did not embrace the refor- mation, and yet censured the corruptions of po- pery, he has been treated injuriously both by catholics and protestants. His works, in 10 vols. folio, were ably edited at Leyden in 1706, by M. Le Clerc.

ERASTIANS, a religious sect which arose in England during the time of the civil wars in 1647, thus called from their leader, Thomas Erastus, whose distinguishing doctrine it was, that the church had no right of discipline, that is, no regular power to excommunicate, censure, absolve, or decree, &c.

ERATO, from tpaw, I love, in mythology, the muse who presided over amorous poetry. To this muse was ascribed the invention of the lyre and lute ; and she is represented with a garland of myrtles and roses, holding a lyre in one hand, and a bow in the other, and at her side a Cupid, with his torch. There was also a Nereid of this name.

ERATOSTHENES, a Cyrensean philosopher, historian, and poet, styled for his learning Plato Minor. He

had the care of the celebrated library at Alexandria : and was warmly patronised by Ptolemy Euergetes, by whose order he wrote a History of the Theban Kings of Egypt, whose succession had been entirely omitted by Manetho. He thus fixed the Egyptian chronology, and his authority is by many preferred to that of Mane- tho. He wrote other treatises, a catalogue of which is to be seen in Fabricius Vossius, &c. The only piece of his now remaining entire is a Description and Fabulous Account of the Stars. The fame of Erastosthenes however principally rests on his measurement of the earth, in which he ascertained that, at the time of the summer solstice, the sun at noon was vertical to the city of Syene, situate on the borders of Ethiopia, under the Tropic of Cancer. He imagined, and he was not far from the truth, that Alexandria and Syene were both under the same meridian. On these data he constructed a concave hemis- phere at Alexandria, from the bottom of which arose a vertical stile, terminating at the centre of curvature of the hemisphere. Then, supposing the city of Syene to be in the vertical direction of the stile, he observed, that the arc, included between the foot of the stile and the extremity of its shadow, projected oa the concavity of the

hemisphere by die meridian sun at the solstice, was equal to a fiftieth part of the whole circum- ference. Hence, he inferred, that the arc of the heavens comprised between Alexandria and Sy- ene must be the same ; and that the distance of the two cities must likewise be a similar arc, or a fiftieth part of the whole circumference of a great circle of the earth. He starved himself in old age through grief for the dimness of his sight, about the tenth or twelfth year of Ptolemy Epiphanes, A.A.C. 194.

ERBACH, a county of the Odenwald, in Franconia.

Though generally mountainous, it is productive in corn wine, and pasturage. The population is about 24,200.

ERBACH, a town of Germany, on the river Mummling, capital of the above district : twenty miles north-east of Manheim.

ERBIL, the ancient Arbela, a town in the pachalic of Bagdad, Persia, situated on an emi- nence commanding an extensive and fruitful plain. It is surrounded by walls, and contains a population of about 2000 or 3000, almost all Kurds or Chaldeans. Mules are much used in the agriculture of the neighbourhood, which is productive both in grain and fruit. Not far from Erbil, Alexander the Great defeated Darius. Sixty miles east of Mosul.

ERCILLA (Zuniga Don Antonio de), an emi- nent Spanish poet, was born at Madrid in 1533. His father was a lawyer ; but, dying while our author was only a child, his family would have been exposed to want, had not Isabella, the wife of Charles V., kindly received his surviving parent into her household. His mother, from this circumstance, was not only employed her- self, but procured an office for her son as soon as his years permitted him to accept of it. He was appointed page to Philip, the son of the emperor, and in that capacity had an opportunity of tra- versing Italy, Germany, and the Low Countries. When Philip visited England, to solemnise his marriage with Mary, he made one of his retinue. We find him soon afterwards in America, whither he had gone with the troops destined to quell a revolt in Chili. It is well known that the inhabi- tants of the mountainous and temperate regions of South America, displayed a degree of adven- turous courage and persevering exertion, in defence of their liberty and independence, which distinguished them remarkably from the other tribes of the New World, and surprised not a little their Spanish invaders. It was against this race that Ercilla, and the troops which he accom- panied, were appointed to act. The poet obeyed the mandates of his country, but admired the conduct of those whom he was

commanded to reduce. Their fearless intrepidity, and generous love of freedom, made a deep impression on his heart, and called forth the efforts of his muse. He recorded in heroic verse those interesting events of which he was a daily witness, and described those scenes that excited so much of his interest. The intervals of leisure, from the duties of the field or the camp, were the seasons he chose for celebrating the exploits and the vir- tues of his enemies. A poem which was thus formed he called Araucania, and it displays much of the ardor of the warrior, with much of that

irregularity which his situation produced, and many of those real transactions in which his own valor was exercised. Neither the structure of the verse, nor the style of the narrative, is uniformly good ; there being many prosaic lines in the one, and a ludicrous mixture of fable and reality in the other. After remaining for a considerable time on the western continent, he returned to Spain with his health very much impaired ; and after rambling for some time over different parts of Europe, he settled at Madrid, and passed his life in retirement, poverty, and poetry. The king, whom he served in the capacity of a page and a soldier, for whom he had performed the most menial offices, and the most adventurous exploits, whose praises he had sung, and under whose protection he had placed his poem, neg lected and forgot him. He died about the end of the sixteenth century.

ERE, adj. & prep.~\ Saxon aori; Teut. er ;

ERE-LONG, adv. f Belg. eer ; Goth, ar, soon.

ERE-NOW, adv. iOji and aeri, being in-

ERE-WHILE, adv. J discriminately used in the Saxon, we often find or for ere in old English books. See the quotation from Daniel vi. So the old Apocrypha of 1578. ' He knew all things or ever they were made,' Ecclesiasticus xxxiii. 20. Before ; sooner than : ere-long is before the lapse of any considerable time : ere-now before this time ; and

ere-while, some time since, before a little while.

The lions brake all their bones in pieces or ever they came to the bottom of the den. Daniel.

The wild horse having enmity with the stag, came to a man to desire aid, who mounted upon his back, and following the stag, erelong slew him.

Spenser on Ireland.

Ere he would have hanged a man for the getting a hundred bastards, he would have paid for the nursing a thousand. Shuhspe.are.

I am as fair now, as I was erewhile ; Since night you loved me, yet since night you left me.

Id.

Nothing is lasting that is feigned : it will have another face than it had erelong. Ben Jonson.

Just trial ere I merit

My exaltation without change or end. Milton. They swim in joy,

Erelong to swim at large, and laugh, for which

The world erelong a world of tears must weep.

Id.

The anger already began to paint revenge in many colors, erelong he had not only gotten pity but pardon. Sidney.

We may observe some of our noble countrymen, who come with high advantage, and a worthy character into the public. But ere they have long engaged in it, their worth, unhappily becomes venal.

Shaftesbury. Our fruitful Nile Flowed ere the wonted season. Dryden.

The mountain trees in distant prospect please, Ere

yet the pine descended to the seas ; Ere sails were spread new oceans to explore. Id. I saw two stock-doves billing, and erelong

Will take the nest. Id. Virgil.

Ah, gentle soldiers, some short time allow j

My father has repented him erenow. Id.

We sit down to our meals, suspect not the intrusion of armed uninvited guests, who erewhilcs, we know were wont to surprise us. Decay of Piety.

EBE

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Eura'xxss.

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ERE

With froot erect that hide their head by day,

And making night still darker by their deeds.

Young.

•Th« tame pride thet erectt a colossus, or a pyramid, instals a god or a hero. Goltlemith.

When nature has erected no barrier, and affords no retreat, the guilty or obnoxious are soon detected and punished. Robertton. Hittory of Scotland^

ERECT, in fortification, that state of the defen- ces .of a face, when the several works bear directly and regularly upon the approaches. Thus, when the two bastions which defend a' curtain are equal and similar, and the raveline, with all its dependencies, stands evenly upon the line or capital of that face, without obliquity or curve, the whole of such defences are said to be erect. The whole of the defences of a fortifi- cation will be of this description : as far, of course, as possible, in all irregular fortifications there will generally be a mixture of erect and of oblique defence. And the latter is not always to be considered a defect ; since innumerable cases occur in which the prolongation, or the curtail- ment of any particular part, such, for instance, as the face or flank of a bastion, is indispensably necessary, either to make way for some natural advantage, or to prevent that kind of weakness which might otherwise be entailed by the prox- imity of some height, whence enfilading might be successfully practised. When, therefore, the two bastions are dissimilar, or when they are unequal, so as to render the flanked angle of either less distant on the capital, if a line of de- fence were to be drawn upon, and formed from, the two extremities of such unequal bastions, the raveline must either stand a little obliquely, or the bastions must be unequally protected by it.

ERECTORES. See ANATOMY. EREEF, or RIF, a province of Morocco, in the Mediterranean, described by Mr. Jackson as containing 200,000 inhabitants, and abounding in fertile valleys. The mountains to the south are inhabited by Brebers, of a very fierce and cour- ageous character ; the eye of an Ereef Breber is proverbial for keenness and cunning.

EREKLEE, a town of Caramania, in Asiatic Turkey, situated on the left bank of the Kalys, in a very fertile and picturesque district. It stands in front of a hill, and is of considerable size, but the houses are mean, being principally con- structed of mud, or bricks dried in the sun. The gardens yield abundance of fruit, especially pears. Some have thought this the ancient Heraclea.

EREKLI, EREGRI, or PENDERACHI, a sea- port town of Asiatic Turkey, on the Black Sea, 100 miles east of Constantinople.

ER'EMITE, n. s. \ Lat. eremita, from Gr.

EREMIT'ICAL, adj. \ ipt)pof, a desert. One who

secludes himself from society ; living in solitude :

generally applied to religious devotees of this

'description.

Antoniu*, the eremite, findeth a fifth commodity not inferior to any of these four. Raleigh'* History.

Embryoes and idiots, eremitei and friars, White, black, and grey, with all their trumpery.

Miltmt.

Thou spirit who led'st this glorious eremite Into the desert his /ictorious field, Against the spiritual foe, and broughtest him thence Jly proof the undaunted Son of God, inspire. Id.

They have multitudes of religious orders, eremitical. and cenobitical. Stillingjlect.

EREPTATION, n. s. Lat. ereptio. A creep- ing forth.

ERE'PTION, n. t. Lat. ereptio. A snatching or taking away by force.

ERETHISMUS, from tptOXu, to irritate, or excite. A term which some medical writers ex- tend to every kind of irritation which has a ten- dency to weaken and destroy the vital powers. Mr. Pearson, on succeeding to the situation of surgeon to the Lock, drew the particular notice of medical men to a dangerous affection of the constitution, now well known by the name of the mercurial erethismus. He had occasion to re- mark; that almost every year one, and sometimes two instances of sudden death occurred among the patients, when no cause could be assigned for these events, but the subjects were commonly observed to be men who had either nearly, or completely finished a course of mercury. Messrs. Bromfield and Williams, on being consulted by Mr. Pearson concerning these cases, confessed themselves ignorant of the cause, mode of pre- vention, and treatment, and explained, that they had never oeen able to detect any diseased appearances in the bodies of such persons as had died in this manner. The latter able surgeon at length ascertained, that these unfortunate acci- dents were to be ascribed to mercury acting as a poison on the system, quite unconnected with its operation as a remedy ; and that its deleterious qualities were neither in proportion to the inflam- mation in the mouth, nor to the actual quantity of mercury absorbed into the constitution. The disordered state of the system, implied by the mercurial erethismus, comes on after a long em- ployment of mercury. According to Mr. Pearson, its tendency to fatal consequences is characterised by great depression of strength, a sense of anxi- ety about the przcordia, irregular action of the heart, frequent sighing, partial, or universal trembling, a small, quick, and sometimes an inter- mitting pulse, occasional vomiting, a pale con- tracted countenance, a sense of coldness ; but the tongue is seldom furred, and the vital and natu- ral functions are not much disordered. He further observed that when these, or the greater part of

these symptoms are present, a sudden and violent exertion of the animal power will some- times prove fatal. Walking hastily across the ward; rising up suddenly in the bed to take food; or slightly struggling with some of the other patients, are circumstances noticed by him as having commonly preceded the sudden death of such persons. And in order to avert the peril- ous effects of this affection, Mr. Pearson states, that the employment of mercury is, at all events, to be discontinued, whatever may be the stage, extent, or violence of the venereal symptoms. Every consideration must yield to the great object of extricating the patient from a state of impending destruction; nor would a perseve- rance in the use of mercury, under these circum- stances, be of any avail, in regard even to the syphilitic complaints.

ERETRIA, in ancient geography, a city of Euba-a, situated on the Euripus, in the south- west of the island, and the largest in it, except

Chalcis. After being demolished by the Per- sians, it was restored on an adjoining spot, according to Strabo, who mentions a school of Eretrian philosophers there. See ARMIRO.

ERFORT, or ERFURT, a city of Germany, in the late circle of the Lower Rhine, founded in the fifth century It was long the capital of Thu- ringia, and subject to the elector of Mentz ; but was ceded to Prussia in 1802. It had an eccle- siastical, a civil, and criminal tribunal, and a regen- cy, from which appeals might formerly be made to the elector. The municipality was composed of an equal number of Catholics and Lutherans. The town is large, but not populous ; the build- ings in general are in the Gothic style. It is situated on the Gera, fortified, and defended by a well-built citadel called

Petersberg. Branches of the river traverse the town in the form of canals. It contains a mitred abbey, and seven others, four parish churches, and three chapels for Ro- man Catholics ; eleven churches for Lutherans ; an academy for useful sciences ; a well furnished library, in which are several manuscript Bibles in the Hebrew character; and had until 1816 a university composed of five colleges, whose pro- fessors were Roman Catholics and Lutherans. But it was dissolved in the last named year, for want of funds. After the fatal battle of Jena, a corps of 14,000 Prussians retreated hither, but were obliged to surrender the next day to the French; a park of artillery of 120 pieces fell likewise into the hands of the latter. Two years after, Erfurt was the scene of an interview be- tween the emperors Napoleon and Alexander of Russia ; and, in October, 1813, this place became the retreat of the French army from Leipsic. Er- furt is now the capital of an extensive Prussian province, though it is said to have been in the sixteenth century a place of greater population and commerce. The inhabitants, who amount to about 18,000, are employed largely in the manu- facture of woollens and silk. The territory of Erfurt is fertile, but wants wood. It contains, besides the capital, two towns, and seventy-three villages. Erfurt is 110 miles west of Dresden, and 160 east of Cologne.

ERGASTULUM, in Roman antiquity, a pri- son, work- house, or house of correction, where slaves by the private authority of their masters were confined and kept for their offences to hard labor. The Greeks had a place of confinement of this sort, called 2u)0povi

E'RGOT, n. s. A sort of stub, like a piece of soft horn, about the bigness of a chestnut, which is placed behind and below the pastern joint, and is commonlj hid under the tuft of the fet- lock.— Farrier's Dictionary. See below.

Deep-rooted mould, and ergot'* horn uncouth, And break the canker's desolating tooth. Darwin.

ERGOT, (from ergot, French, the spur of a cock), in agriculture, a vegetable disease which affects various kinds of grain, by the seeds grow- ing out into large black horns. It is particularly seen in sea-cale, rye, and carex. It often attacks the rye in France, and is seen in this country in very moist seasons. The grain yields a black meal along with the white, and is asserted to have the appearance of being pierced or perfo-

rated by insects, which are believed by some to be the cause of the affection. The earliest ac- count of this disease of rye is contained in a letter from M. Dodart to the editor of the Jour- nal des Savans, published in March, 1676. Sec vol. iv. part ii. p. 79. The facts were commu- nicated a few years before by the physicians and surgeons of Sologne,in which district the disease, called by this name (see below), had been pre- valent. The grains of rye affected by the ergot, according to M. Dodart, are of a dark color exr ternally, but white within, and when dry they are harder and of a more compact substance than the natural grains, and have no bad taste. They are considerably longer than the other grains, some of them being fourteen or fifteen lines in length, and two in breadth ; and seven or eight of them are sometimes seen in one ear. They are obviously not foreign substances engendered between the grains of rye, M. Dodart adds, but the true grains, surrounded with their proper coats, in which the place of the germ is discerni- ble. These grains were called ergots, spurs, in Sologne; in Gastinois, where they also were known, they were termed bled cornu. The dis- ease has also other appellations, such as clavus, or the spur, and horn-seed ; and no certain me- thod of treating or preventing it has, we believe, been suggested,

ERGOT, in medicine, a term applied to denote a disease in the human body, occasioned by using diseased or ergoted rye as food.

Writers in general agree in stating that the dis- ease, which the ergoted rye induces, is prevalent only at the conclusion of harvest, and ceases be-

fore the commencement of winter ; that it is chiefly observed among the poor, who are unable to procure wheaten bread in those seasons.

The symptoms of the ergot in the human body are described somewhat differently by different writers ; but they coincide in representing a dry gangrene, and ultimately death, as the ordinary results. It commences with a lassitude and de- bility, but with little interruption tc the functions in general. A degree of torpor in the lower ex- tremities is then observed, accompanied, accord- ing to some of the writers, with a sense of prick- ling, and of the creeping of insects (formicatio) upon the skin ; a slight degree of swelling, but without inflammation, ensues, often accompanied by the most excruciating pains, and with a sense of burning heat ; soon succeeded by that of ex- treme cold; the skin of the feet and legs become shrivelled, and of a dark hue, as if dried in smoke, alterwards black and destitute of feeling ; in fact the limb dies, or is gangrenous, but in a dry state, which has been compared to that of a mummy. By degrees the dead parts separate from the living, as if they had been destroyed by caustic. In this mutilated condition, de- prived of one, sometimes of both legs, more rarely of the hands or arms, some individuals have survived for months, or even years.

Another species of disease has also been as- cribed to the use of ergoted rye by Hoffmann, Tissot, and some other writers ; but with what justice or propriety may admit of a question. It is a febrile disease, said to be of a contagious and malignant nature, and to be accompanied

and principally characterised by various spasmo- dic and convulsive symptoms, by which, or by a general epilepsy, the patients were frequently car- ried off. This disease is said to have been epidemic in Hessia, Westphalia, and o-ther parts of Germany

several different times in the sixteenth and seven- teenth centuries ; and a description of it by the professors of the university of Marpurg, in the year 1597, is generally considered the first authentic account of the symptoms. • Galen remarked, that the seeds of lolium temulentum mixed with wheat, or the degenerated grain, called black wheat, would produce fever, head-ache, delirium, and gangrenous ulcers. (De Aliment, facultat. lib. i. cap. 37.) Most of the writers on the sub- ject, from M. Dodart downwards, have stated, that the ergoted rye, when given to fowls, hogs, and other animals, as food, produces the same symptoms as in man, and destroys life. More lately the abbe Tessier made a series of experi- ments upon this subject, and has given a minute description of the ergot in rye. He found that by feeding or cramming turkeys and other ani- mals with this diseased rye, he could produce in all of them the dry gangrene and death. See Memoires de la Soc. Roy. de Medecine for 1 776, p. 303. Hist.de VAcad. des Sciences, for 1710. Acta Erudit. Lips. 170 et 1752. Saviard Obs. Chirurg. The Treatise of M. Tessier, &c.

ERIC X., king of Sweden, Norway, and Den- mark, was the son of Wratislaus VII. duke of Pomerania% and one of the few Danish princes who possess particular claims upon our notice. He was declared successor to the crowns of Den- mark and Norway in the year 1388 by his great aunt queen Margaret; and when, in 1396, she annexed the crown of Sweden to her dominions, Eric was, by the treaty of the ' Union.of Calmar,' declared successor to that kingdom also. This important treaty consisted of three articles: 1. ' That the three kingdoms of Denmark, Sweden, and Norway, should thenceforward have but one king, who should be chosen alternately by each of them, and approved in a general assem bly. 2. That the monarch should divide his re- sidence equally between the three kingdoms, and appropriate the revenues of each to its particular xigencies. 3. That each kingdom should re- tain its own laws, customs, senate, and privileges ; and that the subjects of one should not be ele- vated to offices of profit and power in the

other.' These conditions proved afterwards to be the fruitful and lasting source of wars between the three kingdoms. On the death of the queen in 1412, Eric succeeded without opposition to the three united crowns,and having married the datfgh- ter of Henry IV. of England, with whom he had a iarge portion, might be regarded as one of the most potent princes of his day. He was soon involved in a war with the princes of Holstein, which for some time was carried on with doubt- ful success, but in 1424 the whole of South Jut- land, including SleSwick and Gottorp, was reded to the Danish crown by an award of th«> emperor Sigismund. Eric now undertook a pilgrimage to the Holy Land, during which he was made cap- tive, and in his absence a rebellion broke out. Having raised the large sum demanded for his ransom, he, in 1435, met the Swedish diet at VOL. VIII.

Stockholm, and agreed to a full redress of griev- ances. Four years after, however, his people deposed him, and chose in his stead, his nephew Christopher ol Bavaria. Fcv ten years he made various unsuccessful attempts to rega.n his crown, and afterwards employed himself in com- piling a history of Denmark from the public re- gisters, containing the periol from the com- mencement of the monarchy to 1288t He died in 1459, in the isle of Rugen. Eric is said to have possessed quick natural parts, and to have been a lover of learning ; but was ambitious, despotic, irresolute, and insincere.

ERIC 'XIV., king of Sweden, and son of the celebrated Gustavus Vasa, ascended the throne in 1560, at the age of twenty-seven. He spoke all the modern languages, and was considered an accomplished prince. But he suffered himself to be hurried away by gusts of passion, which so far predominated over his judgment occasionally, that his father once formed the design ot exclud- ing him from the throne, and refused to permit him to negociate in person a treaty of marriage with the princess, afterwards queen, Elizabeth, of England. Eric,- however, after his accession, determined to obtain an interview with Elizabeth, and set sail with a

large fleet and splendid train, but the vessels being overtaken with a storm, were shipwrecked on rjjs own>coast, and the project was abandoned. He now sent proposals of marriage to Mary queen of Scotland, and before he could well obtain an answer, solicited from the emperor the hand of the princess of Lorraine, daughter of Christian II. with whom he was enamoured by the description of some of his courtiers. He received from this quarter a favorable reply, but in the mean time he had changed his mind in fa- vor of Elizabeth. His political conduct, being equally capricious, involved him in continual quarrels with his neighbours, and a confederacy was formed against him by Muscovy, Poland, and Denmark. His brother John, who had married Catharine, daughter of the king pf Poland, fell under his suspicion, and was driven to an open rupture. That prince was cited to Stock- holm, to vindicate his conduct,, and, refusing to appear, an army was sent into Finland with or- ders to seize him. and his wife, and to bring them to the capital. Here he was thrown into prison, accompanied by his wife, who voluntarily chose to share his sufferings. It is even said that the king frequently visited his brother, with the design of murdering him, but that on seeing him he felt his heart relent. With tears in his eyes he would sometimes confess the sanguinary design which had prompted his visit, and added, ' I know that the crown of Sweden is intended for you, and I request that, when you are in possession of it, you will pardon my errors.'

His capricious conduct at length destroyed all respect for him in the breast of his subjects; and, disappointed in his matrimonial projects, he en- tertained a number of concubines, one of whom, a peasant's daughter, gained su.ch an ascendancy over himithat he married her; and his ministers and domestics being generally of mean rank, ex- cited the jealousy of the great families. Eric himself entertained a particular hatred of the Stuies, an illustrious family, descended from the

ancient regents, lie had taken one of them into favor, though he had, on a former occasion, dis- graced him. He now sent him in the quality of ambassador to JStralsund, but he became once more the object of his changeable master's ab- horrence, who conceived that he was conspiring against his life, and he suborned witnesses to ac- . cuse him of treason before the states. An infa- mous favorite, named Peerson, persuaded Eric to extirpate the family : sentence of death was accordingly pronounced against the whole of its members, together with twenty-six other nobles, who were the alleged accomplices of a conspi- racy. But in a public trial, which was afterwards allowed them, the Stures were able to vindicate their cause so completely, that the king himself apologised to them for their detention and long imprisonment : he nevertheless, in a very short time, stabbed Nils Sture with his own hand. When this unfortunate nobleman drew the dag- ger from his breast, and presented it to the mo- narch, Eric, with the most savage barbarity, or- dered his guards to accomplish that which he had failed to perform. The rest of the prisoners were cruelly murdered at the same time. But no sooner was the bloody scene over than Eric felt intolerable pangs of remorse. He wai per- fectly frantic, we are told ; and, as if pursued by the avenging furies, fled irAo the woods, where he wandered for many days like a wild beast. On his return he endeavoured to compensate for his cruelty, by bestowing large sums upon the friends and relations of the victims ; and by giving up Peerson, who was condemned but not executed. Being now threatened by the king of Denmark, Eric set at liberty prince John, to whom and to his other brother he proposed as- signing lands in Livonia, in lieu of those left them by Gustavus. But he shortly after formed a design of putting them to death, and of conci- liating the friendship of the czar of Muscovy, by delivering him the wife of John, to whom that prince had once paid his addresses. On his in- tentions being discovered, the brothers raised

forces in their own defenee, when an accommo- dation was effected ; but on Peerson's being given up and put to the torture, he confessed a plot contrived by himself and the king, of pillaging Stockholm, burning part of the ships in the har- bour, and proceeding with the rest to Narva. The dukes now felt themselves justified in break- ing the treaty, and they finally obliged Eric to capitulate, when he was solemnly deposed by the states, and John elected king in his stead. His children were also declared incapable of succession, and he was condemned to perpetual imprisonment. His keepers were appointed, it is said, from among the relations of those whom he had so cruelly massacred ; and they did not fail to subject him to various insults and indigni- ties. After nine years imprisonment, he finished a wretched life in 1578, in consequence, it was supposed, of poison being administered to him by order of his brother.

ERICA, heath, in botany, a genus of the monogydia order, and octandria class of plants ; natural order eighteenth, bicornes. The CAL. tetraphyllous : COR. quadrifid : the filaments in- jerted into the receptacle : antherae bifid : CAP.

quadrilocular. Of this there are 137 species, four of which are natives of Britain. In the Highlands of Scotland this plant is made subser- vient to a great variety of purposes. The poorer inhabitants make walls for their cottages with al- ternate layers of heath, and a kind of mortar made of black earth and straw. The woody roots of the heath are placed in the centre ; the tops externally and internally. They make their beds of it, by placing the roots downwards ; and, the tops only being uppermost, they are sufficiently soft to sleep upon. Cabins are also thatched with it. In the island of Hay, ale is frequently made by brewing one part of malt and two of the tops of young heath ; sometimes adding hops. Boethius relates, that this liquor was much used by the Picts. Woollen cloth boiled in alum- water, and afterwards in a strong decoction of heath tops,

comes out of a fine orange color. The stalks and tops will tan leather. Sheep and goats will sometimes eat the tender shoots, but they are not fond of them. Cattle not accustomed to feed on heath, give bloody milk ; but they are soon relieved by drinking plentifully of wa- ter. Horses will eat the tops. Bees extract a great deal of honey of a reddish hue from the flowers.

One of the most beautiful species of this tribe is E. elegans, elegant erica, a low shrub with short branches growing in every direction. Leaves ternate, but, by those of one whorl being placed directly between those of the next, the whole is neatly arranged in six distinct rows, glaucous, fleshy, acerose, channelled underneath. Flowers terminal, in a compact umbel.

BRIGHT, LOCH, a large lake of Scotland, in Perthshire. It is the largest in the county, ex- cept Loch Tay, being twenty-four miles in length, though scarcely a mile in breadth. It lies at the head of the district of Rannoch, and extends some miles into the county of Inverness; si- tuated in the midst of the Grampians, and en- compassed on all sides by lofty mountains and rugged cliffs of the most tremendous aspect. Near this lake the unfortunate prince Charles Stuart, the chevalier, after his defeat at Culloden, in 1746, was obliged to lurk and wander among the caves and rocks, subjected to want, and ex- posed to the rigors of an inhospitable climate.

ERICHT, or EROCHT, a river of Perthshire, in the district of Stormont ; formed by the union of the Ardle and Black-water or Shee. After a south-east course of thirteen or fourteen miles, it falls into the Isla ; but from the rapidity of its course through the valley of Strathmore, in which it frequently overflows its banks, destroying the labor and hope of the farmer, it has been named the Ireful Ericht. Though its banks are in some places low, they are in general steep and rugged ; about two miles north from the village of Blair- gowrie, they rise at least 200 feet from the bed of the river,

and on the west side are formed, for about 700 feet in length, and 220 in height, of perpendicular rock, as smooth as if the tool of the workman had been employed. The bo- tanist and naturalist may here find much gratifi- cation. There is a fine natural cascade about a mile below Blairgowrie, called the Keith ; and the scenery in general is beautiful »nd picturesque

The river abounds with salmon and trout ; and is said to afford, for two miles below the Keith, better encouragement for the rod than any other river in the kingdom.

ERIDANUS, the ancient name of the Padus OT Po, an appellation ascribed by Pliny to the Greeks ; followed in this by Virgil. It rises in mount Vesulus, in theAlpes Cottiae, and dividing the Cisalpine Gaul into the Cispadana and Trans- padana, and swelled on each hand with no in- considerable rivers from the other Alps and Appenines, falls by seven mouths into the Adriatic.

ERIE, an extensive lake of North America, of an elliptical form, extending south-west and north-east 231 miles; its greatest breadth is six- ty-three and a half miles, and in circumference it is 658 miles. Though liable, like the other great lakes of Canada, to severe storms, it has many good harbours, particularly on its northern side. Its greatest depth is between forty and forty-five fathoms, and its bottom generally rocky. It abounds with great variety of fish. Lake Erie receives its waters on the west by the Detroit from Lakes Superior, Michigan, and Huron ; and on the north-east communicates with Lake Ontario by the Niagara. The line of di vision between the United States and Upper Canada, runs through it. In some places its navigation is rendered dangerous by numerous

projections of perpendicular craggy rocks into the water from its north shore for many miles ; and its banks and islands on the west are infested with the rattle-snake and other venomous reptiles. Lake Erie is situated between 78£° and 84° long. W., and between 41° and 43° lat. N.

ERIE, a town of the United States, in Pennsyl- vania, situated on the south shore of the lake of this name. It contains about 1000 inhabitants, with a church, court-house, and public prison. The streets are regularly laid out, and eastward of the town is a strong battery, and on the point of the peninsula a large blockhouse, which together defend the harbour. Here is also a dock-yard, with store- houses, wharfs, &c., forming the Ame- rican naval depot on the lake.

ERIE, FORT, a fort of Upper Canada, on the north coast of Lake Erie, and west bank of the Niagara, twenty-seven miles south by east of Fort Niagara.

ERIGERON, flea-bane, in botany, a genus of the polygamia superflua order, and syngene- sia class of plants; natural order forty-ninth, composita. The receptacle is naked ; the pap- pus hairy ; the florets of the radius are linear, and very narrow. There are five species; of which the most remarkable is,

E. viscosum, the male flea-bane of Theophras- tus, and greater flea-bane of Dioscorides. It is a native of the south of France and Italy; and has a perennial root, from which arise many upright stalks near three feet high. The leaves in warm weather sweat out a clammy juice ; the flowers are produced single upon pretty long foot-stalks, are of a yellow color, and have an agreeable odor. The plants are easily propa- gated by seeds ; and thrive best in a dry soil and sunny exposure.

ERIGONE, in fabulous history, the daughter

of Icarus, died of grief for her father's death was translated into heaven, and made the sign Virgo.

ERINACEUS, the hedge-hog, in zoology, a genus of quadrupeds belonging to the order of ferae, the characters of which are these : — They have two fore teeth in the upper jaw, at a consi- derable distance from one another, and two in the under jaw, close together ; on each side there are five tusks in the upper jaw, and three on each side in the lower ; on each side of both jaws are four grinders. The back and sides are covered with strong sharp spines ; and all the feet have five toes. The hedge-hog, being pos- sessed of little strength or agility, does not at- tempt to fly from or assail his enemies ; but erects his bristles, and rolls himself up like a ball, exposing no part of his body that is not furnished with sharp weapons of defence ; and in this state may be thrown about without any injury. He will not unfold himself, unless thrown into water: the more he is frightened or harassed, the closer he shuts himself up, and frequently discharges his urine, which has a very fetid and loathsome smell. While in this state, most dogs instead of biting him, stand off and bark, no? daring to seize him; or, if they attempt it once their mouths are so hurt by his bristles, that they will not attempt it a second time. Both the male and female are covered with bristles' from the head to the tail. The females are in season ir. spring, and bring forth their young in the begin- ning of summer. They commonly bring three or four, and sometimes five at a time. The young ones are of a whitish color, and only the points of the bristles appear above the skin. Some zoologists say, it is impossible to tame them ; and that the mother and her young have been confined together, and furnished with plenty of provisions ; but, instead of nourishing them, she devoured them one after another. Males and females have likewise been kept in one apartment, where they lived but never copulated Mr. Kerr, however, says, that ' by the Calmucks, this animal is domesticated, and , kept in their huts instead of cats.' Hedge-hogs feed upon fallen fruits, some roots, and insects; they are very fond of flesh either raw or roasted. They frequent woods, and live under the trunks of trees,

in the chinks of rocks, or under large stones. Some naturalists allege, that they go into gardens, mount the trees, and come down witli pears, apples, or plums, stuck upon their bristles. But this is a mistake ; although kept in a garden, they never attempt to climb trees, or stick even fallen fruit upon their bristles, but lay hold of their food with their mouth. They never come out of their holes in the day, but go in quest of food during the night. They eat little, and can live very long without nourish- ment. They do not lay up any store of provi- sions in harvest, as they sleep all the winter. They lie under the unmerited reproach of sucking cattle and hurting their udders ; but the small- ness of their mouth renders that impossible. There are six species, viz. 1. E. auritus, the long-eared urchin of Pallas and Gmelin, or Si berian hedge-hog of Pennant, has long oval ears nostrils crested at the edges, and all the manners

of the European. It inhabits Asiatic Russia, near the Volga and Ural, where it is smaller than the European, and beyond lake Baikal, where it is larger. 2. E. ecaudatus, the tanrec of Buf- fon, and Asiatic hedge-hog of Pennant, is ne irly as large as a rabbit, and has , a very long slender muzzle, but no tail. It inhabits In- dia and Madagascar, 3. E. Europaeus, the Eu- ropean, or common hedge-hog, with broad, short, round ears, and crested nostrils. It is about ten inches long; the upper part of the body is totally covered with sharp spines, and the under part with hair. The hedge-hog, even when standing on his legs, has a very ugly aspect. His body is an oblong mass, convex above, terminated on the fore part by a very sharp muzzle, and mounted on four short legs, of which nothing appears but the feet, and the tail is not discernible. His eyes are small and protuberant. 4. E. inauris, the white American urchin of Seba, or Guiana liedge-hog of Pennant, is

eight inches long, and has no external ears. It is a native of South America. 5. E. Malaccensis, the Malacca urchin of Brisson, or short-tailed porcupine of Linnaeus, has pendulous ears, and inhabits Asia. From this species is procured the piedra del porco, formerly much esteemed, supposed by Mr. Kew, to be a kind of bezoar. 6. E. setosus, the ten- drac, has spines only on the head, neck, tail, and withers ; is scarcely six inches long, and inhabits India and Madagascar.

ERI'XGO, n.s. Sea-holly. A plant.

ERINNYS, Gr. tpwwc, i. e. an avenger of crimes, in mythology, a name common to the three Furies. S«e FURIES.

ERINUS, in botany, a genus of the angios- permia order, and didynamia class of plants; natural order fortieth, personatae. CAL. penta- phyllous ; C«R. limb quinquefid and equal, with its lobes emarginated, and the upper lip very short and reflexed; CAP. bilocular. There are seven species, none of them natives of Britain. They grow mostly at the Cape, and are from two inches to four feet in height, and are adorned with flowers of a white or purple color. They are propagated by seeds, but, in this country, require to be kept in a stove.

ERIOCAULON, in botany, a genus of the trigynia order, and triandria class of plants ; na- tural order sixth, ensatae. CAL. an imbricated capitulum or knob ; there are three equal petals, and the stamina are on the germen. There are nine species, natives of India and South America.

ERIOCEPHALUS, in botany, a genus of the polygamia necessaria order, and syngenesia class of plants ; natural order forty-ninth, compositae. Receptacle somewhat villous ; no pappus : CAL. decaphyllous and equal ; the radius has five flo- rets. Three species, all Cape plants, of an her- baceous kind.

ERIOPHORUM, in botany, a genus of the monogynia order, triandria class of plants. The •jlumes are

paleaceous and imbricated all round : COR. none : SEED one only, furnished with a very long down. Species six, four of which may be found in English bogs.

ERIOSPERMUM, from «p«w, wool, and airip- u-tt, seed, ;i C,t"t- i-ru-i. >o f:iu.""? f"oT) the long woolly haiis \!iiih evver its seed. It belongs

to the class and order of hexandria monogynia, COR. bell-shaped, permanent, of six ovate, equal, keeled petals, three of which are exterior and most expanded. Filaments six, shorter than the corolla, awl-shaped, and dilated at the base, smooth; antherae incumbent, oval, two-lobed. Germen superior, ovate, with six ribs ; style erect, angular, as long as the stamens ; stigma simple, obtuse ; CAPS, of throe cells and three valves ; partitions from the centre of each valve : SEEDS several, affixed to the lower part of eacb partition, roundish, invested with long prominent woolly hairs. Three specie;!, all Cape plants.

ERIOSTEMUM, in botany, a genus of the decandria class, and monogynia order : CAL. five-parted ; petals five, sessile ; stamens flat, ciliate ; anthers pedicelled, terminal ; style from the base of the germ : CAPS, five in number, and united, seated on a nectary covered with protu- berances ; SEEDS coated. Species one, an Aus- tralasian shrub with alternate leaves and solitary flowers.

ERIPHYLE, in fabulous history, the sister of Adrastus, king of Argos, wife 6*f Amphiaraus, and daughter of Talaus and Lysimache. When her husband concealed himself that he might not accompany the Arg:ves in their expedition against Thebes, where he knew he was to perish, Eriphyle suffered herself to be bribed by Poly- nices with a golden necklace which had been formerly given to Hermione by the goddess Ve- nus, and she discovered where Amphiaraus was. This treachery of Eriphyle compelled him to go to the war, but, before he departed, he charged his son Alcmaeon, to murder his mother as soon as he was informed of his death. Amphiaraus perished in the

expedition ; and his death was no sooner known than his last injunctions were obeyed, and Eriphyle was murdered by the hands of her son.

ERIS, or ATE, the goddess of discord among the Greeks, the Discordia of the Latins. She was represented, by Aristides, with fiery eyes, a pale countenance, livid lips, and wearing a dag- ger in her bosom. At the marriage of Peleus and Thetis she threw in the golden apple, whereon was written, ' To the fairest ;' which occasioned a contention between the goddesses Juno, Minerva, and Venus, each claiming right to the apple. See PARIS.

ERISICHTHON, in fabulous history, aThes- salian, son of Triops, who derided Ceres and cut down her groves. This impiety irritated the goddess, who afflicted him with continual hun- ger. He squandered all his possessions to gratify the cravings of his appetite, and at last he de- voured his own limbs for want of food. His daughter had the power of transforming herself into whatever animal she pleased, and made use of that artifice to maintain her father, who sold h«r in the form of one animal, after which she assumed that of another, and returned to him.

ERI'STICAL, adj. Gr. tptf. Controversial ; relating to dispute ; containing controversies.

ERITHALIS, in botany, a genus of the mono- gynia order, belonging to the pentandria class of plants ; and in the natural method ranking with those of which the order was doubtful. The corolla is quinqnepartite : the calyx urceolated or bladder- like ; the ber~y decsmlocnlar inferior.

ERL

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ERITRIA, anciently Erythrae, a town of Asia Minor, in Natolia. Here was a good sea-port formerly, and a spacious harbour ; there was also a temple dedicated to Hercules, esteemed one of the finest in Asia. It

is thirty-six miles west of Smyrna.

ERIVAN, called also Persian Armenia, an extensive province of Persia, bounded on the north and west by the Mossian Hills, on the south by the river Araxes, and on the east by the dis- tricts of Tharabang and Sharadang. Jt has an ex- cellent climate ; but the winter is long, and the surface, which is generally mountainous, is inter- sected by fertile valleys. But fruit does not suc- ceed well here from the coldness of the climate. Fish and game are plentiful. The principal towns are Erivan and Nacsivan.

ERIVAN, IRVAN, or IRIVAN, the capital of the foregoing province, is situated on the banks of the river Tergui, which rises from a lake, about seventy miles farther north. The surrounding country is subject to earthquakes, and the water is considered unhealthy. The city, on one side, surmounts a precipice 600 feet high, and is en- compassed by a double wall. It is also com- manded by a spacious castle built on an almost perpendicular rock, and defended by a triple wall on three sides. Erivan has suffered severely from sieges. In 1635 it was taken from the Turks by the king of Persia, who changed its position to its present site, about a mile from where it formerly stood. The pacha of Diarbekir attacked it in 1724 with a numerous army, of which he lost 24,000 in four unsuccessful at- tempts to storm, but the inhabitants capitul- ated after a brave defence. It was taken by Nadir Shah in 1748, and since his time has been in the possession of Persia. In 1 808 the Russians blockaded it for six months, and then endeavoured to take it by assault, but they were repulsed with great slaughter.

ERKE, n. s. Sax. eaji3. Idle ; lazy ; sloth- ful. An old word ; whence we now say irksome. For men therein would hem clelite j

And of that dede be not erfte,

But oft sithes haunt that werke. Chaucer.

ERLAF, GREAT and LITTLE, two rivers of Austria, which rise in the mountains that border on Styria, and fall into the Danube near Pech- larn. They are rapid and unfit for navigation.

ERLAN, a town, valley, and river, of Hun- gary, in the county of Hewesch. The town is of very ancient date ; and, after being many centu- ries the see of a bishop, was raised to an arch- bishopric in 1803. The population, about 15,000, is of German, Hungarian, and Rascian descent. Here are churches for their different religions, and, though the houses are generally mean, the public edifices are respectable, particu- larly the cathedral and episcopal residence. On a strong and lofty rock stands a citadel which commands the town. Here is an academy, with professors of law, philosophy, and theology. Erlan has suffered formerly in the Turkish war with Germany, and in 1800 was much damaged by fire. It is thirty-eight miles from Baden, and 120 south-east of Vienna.

Ell LANG EN, a town of Germany, in Fran- conia, and former marquisate of Culembach. It

is situated on the Regnitz, twelve miles north- west of Nuremberg, and on the high road from Leipsic to Bayreuth. It was founded by Charle- magne, and a new town was added to it by the marquis Christian Ernest, as a refuge for the French protestants, in 1686. It has a university, a palace, and several churches. The population, about 8500, is employed in the manufacture of hats, stockings, and gloves.

ERMENONVILLE, a village in the depart- ment de 1'Oise, about 8 leagues from Paris ; the country seat of M. de Girardin, celebrated fo its large and handsome park, in which the re mains of Rousseau were entombed upon an island of poplars. Frencli and foreigners, parti- cularly the English, frequently go thither from Paris, during the summer, to visit the tomb of Rousseau. In former days, the fair Gabriele d'Estre"es resided at Ermenonville, in a hunting castle, of which a tower, still standing, bears the name of that favorite of Henry IV. After

her death, Ermenonville fell into the hands of that faithful friend of Henry, whom grief for the loss of his master carried off two days after the king's as- sassination by Ravaillac. Ermenonville has been made still more remarkable in later times J. J. Rousseau died there, after having lived there only six weeks. His bones were removed from the island of poplars to the Pantheon. The or- naments of art contribute to the embellishment of this beautiful spot, so highly favored by nature. The elder de Girardin, author of a work on hor- ticulture, expended 3,000,000 francs on it in 30 years.

ER'MINE, n. s.^ Fr. hermine, from Lat.

ER'MINED, adj. ^armenius, because the ani-

ER'MELIN, n. s. jmal comes from Armenia. — Dr. Johnson. See MUSTELA. From arrnus, the shoulder, because the capes or shoulders of princes' robes are lined with ermine. — Minsheu. The fur of a species of mustela.

ERMINE, or ERMIN, in heraldry, denotes a white field or fur, powdered or interspersed with black spots, called powdering. It represents the skin of an animal so named. There is however no animal whose skin naturally corresponds to the herald's ermin. The animal is milk white; and, so far from having spots, that tradition re- ports, it will rather die or be taken than sully its whiteness ; hence its symbolical use. But white skins having for ages been used for the linings of the robes of magistrates and great men, the fur- riers, to add to their beauty, sewed bits of the black tails of those creatures upon the white skins ; which alteration was introduced into heraldry. The sable spots in ermine are not of any deter- minate number, but maybe more or less at the pleasure of the pain- ter or furrier.

ERMINE, an order of knights, instituted in 1450 by Francis I., duke of Bretagne, and for- merly subsisting in France. The collar was oi gold, composed of ears of corn in saltier; ;it t'~ ; end of which hung the ermine, with this inscrip- tion, '

a ma vie.' But the order expired when the dukedom of Bretagne was annexed to the crown of France.

ERMINE'E, or a cross er- mine, is a cross composed of four ermine spots placed cross- wise, as in the annexed figure.

ERMINES are white spots on a black field.

ERMINITES is the field white, and the spots black, with one red hair on each side.

ERMINOIS is the field or. and the spots black.

ERNE, or EARN, a river of Perthshire, which issues from the lake, about four miles west of Comrie; runs in beautiful meanders for above twenty miles through Stratherne, and falls into the Tay about five miles south-east of Perth. It has a bridge of great antiquity, three miles above its junction with the Tay. The tide flows two miles above this bridge, and sloops of fifty tons come up to it with lime and coals. The bridge is kept in repair by the town of Perth. Salmon, perches, trouts, &c., are found in the Erne.

ERNE LOCH, or LOCH EARN, a lake in the south-west of Perthshire, eight miles long and one broad, which never freezes. Its banks for five miles on each side are covered with natural oaks. It has an artificial island, with the ruins of an ancient castle, at each end.

ERNESTI, John Augustus, founder of a new theological and philosophical school in Germany, was born at Tennstadt, in Thuringia, 1707. He studied theology at Pforta, Wittenberg, and Leipsic. Havirrg been made associate instructer (1731) and rector (1734) of the Thomas-school in Leipsic, he devoted himself principally to ancient literature, and the studies connected with it. In 1742, he was appointed extraordi- nary professor of ancient literature in

the university there, and, in 1756, ordinary professor of eloquence. In 1759, an ordinary professorship of theology was added to his other offices. lie performed the duties of both pro- fessorships till 1770, when he resigned the for- mer. He became, in succession, first professor of the theological faculty, canon at Misnia, as- sessor of the consistory at Leipsic, and president of the Jablonowski academy of sciences at Leipsic. He died 1781. By a careful study of profane philology, he had fitted himself for a thorough study of theology, and was thus led to a morejudicious exegesis of the biblical writers,and, in general, to more liberal theological views. Theological criticism, so far as it is founded on philology and grammatical illustrations, was greatly promoted by him. Of his accuracy as a critic and grammarian, his editions of Xenophon's Memorabilia of Socrates, the Clouds of Aristo- phanes, Homer's works, Callimachus, Polybius, Suetonius, Tacitus, and, above all, his admirable edition of Cicero's works (first, at Leipsic, 1738), are sufficient proofs. For the elegance of his Latin style, he well deserves to be called the Cicero of Germany. His Opuscular Orat. (Ley-den, 1762), Oration. (Leipsic, 1791), Initia Doctrin. Solidioris (Leipsic, 1736), have been often published. His theological writings are no less numerous. — ERNESTI, Augustus William, nephew of the preceding, was born 1733, and died 1801. He was pro-

fessor of philosophy and eloquence, and a distinguished philologist. We are indebted to him, among other works, for a good edition of Livy and Ammianus Marcellinus.

KRODE', v. a. ^ Lat. erodo, from e and ERO'SION, n. s. $ rodo, to gnaw. To eat or corrode away.

EROGATION, n. s. Lat. erogatio. The act of giving or bestowing; distribution.

EROSTRATUS, an Ephesian who burnt the famous temple of Diana the same night that Alexander the Great was born. This burning, as some authors observed, was not seen by the goddess of the place, who was then

present at the labor of Olympias, and birth of Alexander. See EPHESUS.

ERUTIA, a festival in honor of Eros, cele- brated by the Thespians every fifth year with sports and games. If any quarrels or seditions had arisen among the people, it was then usual to offer sacrifices and prayers to Eros, that he would totally remove them.

EROUAD, or ERODU, a town in the province of Combetoor, 104 miles south-east from Serin- gapatam, which has a large mud fort, occupied by a regiment of sepoys. In the time of Hyder Aly, the suburbs contained about 3000 houses, but Tippoo reduced them one-third ; and the whole were destroyed during an invasion of the British. It has been since fast recovering. The canal coming by Erouad from the Bhawani River is an excellent work, fifteen Malabar hours' journey in length. The best land about this place lets for £2 7s. per acre, says Mr. Hamilton, and the worst at 11*. 4rf. The dry field is from 5*. 10^. to Is. Gd. per acre.

ERPE (Thomas of), or ERPENIUS (Thomas), a celebrated writer, born at Gorcum in Holland, in 1584, and educated at Leyden. Havingstudied the oriental languages, he travelled into England, France, Italy, and Germany, and every where obtained the esteem of the learned. On his re- turn to Holland, he was made professor of Ara- bic in the university of Leyden, and died there in 1623. He published many excellent works, which spread his reputation through the learned world. It is said that the king of Morocco ad- mired BO greatly the letters Erpinus wrote to him in Arabic, in the name of the United Pro- vinces, that he often read them to those who spoke that language naturally.

ERR, v. n. ~] Fr. errer ; Span.

ERR'ABLE, adj. \ and Port. error; Ital.

ERR'ABLENESS, n. s. and Lat. errare ; Gr.

ERRA'TA, | tppfiv, to wander ;

ERRA'TUM, W^retrejtogosorrow-

ERRO'NEOUS, adj. I fully. — Minsheu. —

ERRO'NEOUSLY, adv. \ Ainsworth. To stray;

ERKO'NEOUSNESS, n. s. \ ramble; deviate; miss

ER'ROR.) the right way ; mis-

take ; conclude falsely : errable is liable to mis- take. Errata and erratum, somewhat of techni- cal use, have been transferred from the Latin to express the typographical errors of a book ; erra- tum being the singular, errata plural. Dr. Franklin, however, makes a more general, and very characteristic, use of these terms.

It is a strange thing to bihold what gross errors and extreme absurdities many (especially of the greater

srrt) do commit for want of a friend to tell them of them. Bacon.

Thou art far from destroying the. innocent with the guilty, and the erroneous with thi; malicious.

King Charlus.

Popularity carries weak minds, and teaches them the safety of erring with a multitude.

Bp. Hall's Contemplations

Possibly the man may err in his judgment of cir- cumstances, and therefore let him fear ; but berause it is not certain he is mistaken, let him not despair. Taylor's Rule of Holy Living.

Error supports custom, custom countenances error :

and these two between them would persecute and chace away all truth and solid wisdom out of human life, were it not that God, rather than man, once in many ages, calls together the prudent and religious consols of men, deputed to Depress the encroachments, and to work off the inveterate blots and obscurities wrought upon our minds by the subtle insinuations of error and custom. Milton.

I will not lag behind, nor err The way thou leading. Id.

The muses' friend, unto himself severe, With silent pity looks on all that err. Waller. If he meet with faults, beside those that the errata take notice of, he will consider the weakness of the author's eyes. Boyle.

The phenomenon may be explained by this hypo- thesis, whereof he demor» -ates the truth, together with the erroneousness of r» Id.

4 storm of strokes, we"'1 /leant, with fury flies, And errs about their temr>es, ears, and eyes.

Dryden's Virgil.

The rains arise, and fires their warmth dispense ; And fixed and erring stars dispose their influence.

Id.

What brought you living to the Stygian state ? Driven by the winds and errours of the sea, Or did you Heaven's superior doom obey ? Dryden.

He looked like nature's errour, as the mind And body were not of a piece designed, But made for two, and by mistake in one were joined.

Id.

Errour is a mistake of our judgment giving assent to that which is not true. Locke.

An error is not the better for being common, nor

truth the worse for having lain neglected : and if it were put to the vote any where in the world, I doubt, as things are managed, whether truth would have the majority ; at least, whilst the authority of men, and not the examination of things, must be its measure.

Id.

They roam

Erroneous and disconsolate, themselves Accusing, and their chiefs improvident Of military chance. Philips.

An errour in pleading, or in the process • and the writ, which is brought for remedy of this oversight, j» called a writ of errour, which lies to redress false • –•′ gment given in any court of record. Cowel.

We may infer from the errableness of our nature the «asonableness of compassion to the seduced.

Decay of Piety.

Nor has it only been the heat of erring persons that has been thus mischievous, but sometimes men of right judgments have too much contributed to the breach. /(/.

The confirmed prejudices of a thoughtful life, are as hard to change as the confirmed habits of an indo- lent life : and as some must trifle away age, because they trifled away youth, others must labour on in a maze of error, because they have wandered there too long to find their way out. Bolingbroke.

This circle, liy bein<* placed here, stopped much of the erroneous light, which otherwise would have ili-;- turbed the vision. Newton.

If the vessels, instead of breaking, yield, it subjects the person to all the inconveniences of errinieiHts cir- culation ; that is, when the blood strays into the ves- sels destined to carry serum or

lymph.

Arbuthnot on Aliments.

He who from the reflected image of the sun in wuter would conclude of light and heat, could not err more grossly. Cheyiic.

But errs not nature from this gracious end, From burning suns when livid deaths descend.

POJIC.

Unblamed abundance crowned the royal board What time this done revered her prudent lord ; Who now, so heaven decrees, is doomed to mourn Bitter constraint ! erroneous and forlorn, Pope.

I could not discover the lenity of this sentence ; but conceived it, perhaps erroueuusiy, rather to be ri- gorous than gentle. Gulliver .

In spite of dulness, and in spite of wit If to thyself thou canst thyself acquit j Rather stand up, assured with conscious pridf, Alone, than err with millions on thy side.

Churchill.

My soul ! henceforth in sweetest union join The two supports of human happiness, Which some, erroneous, think can never meet, True taste of life, and constant thought of d ^uh '.

Ywg.

It was not fair in me to take this advantage, and this I therefore notice as one of the first errata of uiy life; but the unfairness of it weighed little .itii me when under the impression of resentment.

Franklin.

Another erratum. Id.

Unenlightened reason often errs; undirected virtue frequently deviates from the right path.

Robertson's Sermont.

Truth needed only a fair hearing to be an overmatch for error. Robertson. History of Scotland.

B. And yet his judgment was not framed amiss ; Its error, if it erred, was merely this — He thought the dying hour already come, And a complete recovery struck him dumb.

Cowper.

O blessed proficiency ! surpassing all That men erroneously their glory call, The recompense that acts or arms can yield, The bar, the senate, or the tented field. Id.

Attendant nymphs her dulcet mandates hear, And nurse in fostering arms the tender year, Plant the young bulb, inhume the living seed, Prop the weak stem, the erring tendril lead.

Darwin.

There was in him a vital scorn of all : As if the worst had fallen which could befall, He stood a stranger in this breathing world, An erring spirit from another hurled. Byron.

ERROR. Mr. Locke reduces the causes of error in philosophy to these four ; first, want of proofs ; secondly, want of ability to use them ; thirdly, want of will to use them; and, fourthly, wrong measures of probability. He observes upon the first of these, that the greatest part of mankind want conveniences and opportunities of making experiments and observations themselves, or of collecting the testimonies of others, being prevented by the necessity of their cond:tion. Upon the second, he observes, that there are many, who, from the state of their condition, might bestow time in collecting proofs, but yet

E R S K I N E.

are not able to carry a train of consequences in

their heads, nor weigh exactly the preponderance of contrary proofs and testimonies, merely from the difference in men's understandings, apprehen- sions, and reasonings. He remarks, thirdly, that though some have opportunities and leisure enough, and want neither parts, learning, nor other helps, they never come to the knowledge of several truths within their reach, either upon ac- count of their attachment to pleasure or business ; or, otherwise, because of their laziness or aversion to study. The fourth cause of error he imputes, 1st, To the practice of taking for principles pro- positions that are not in themselves certain and evident, but, on the contrary, doubtful and false. 2dly, To received hypotheses. 3dly, To pre- dominant passions or inclinations. And, 4thly, To authority, or the giving up our assent to the common received opinions either of- our friends or party, neighbours or country.

ERROR Loci, :.e. error of place, a term in- troduced into medicine by Boerhaave, from the opinion that the vessels were of different sizes for the circulat on of blood, serum, and lymph ; and that when the larger sized globules were forced into the lesser vessels by an error of place, they were obstructed. This opinion is now ex- ploded.

ER'RAND, n. s. Sax serienb; Dan. arend ; Icel. erende, from Goth, aims, a messenger. Lye. From Goth, am, to send. Thomson. A man- date or message. Now principally of colloquial use.

When he came, behold the captains of the host were sitting, and he said, I have an errand to thee, O captain. Kinys.

Servants being commanded to go, shall stand still, 'till they have their errand warranted unto them.

Hooker.

But hast thou done thy errand to Baptista ? — I told him that your father was in Venice.

Shakspeare.

A quean ! have I not forbid her my house ? She comes of errands, does she ? Id.

I had not taught thee then the alphabet Of flowers, how they, devisefully being set And bound up, might, with speechless secrecy, Deliver errands mutely and mutually. Donne.

From them I go This uncouth errand sole.

Milton's Paradise Lost. His eyes,

That run thro' all the heavens, or down to the earth Bear his swift errands, over moist and dry, O'er sea and land. Id.

Well thou doost to hide from common sight Thy close intrigues, too bad to bear the light ; Nor doubt I, but the silver-footed dame, Tripping from sea, on such an errand came,

Dryden.

ER'RANT, adj. \ From Lat. erro; Gr. KR'RANTRY, n. s. 'tppw, to wander. See ERRAT'IC, adj. i ERR. Roving,wander

ERRAT'ICALLY, adv. * ing : applied in the mid- dle ages to an order of knights much celebrated in romances : in law, itinerant ; in a general sense, deviating from a particular course : and hence vile, extremely bad or abandoned ; erratic is ir- sejular, uncertain, without rule or order.

ERRUINCS, in [harmacy, medicines which, when snuffed up the nose, promote a discharge of mucus. These are more friendly to the con- stitution and nerves than sternutatories, by their subtile, acrid, and volatile salt gently stimulating the pituitary membrane, and drawing the mucid humor from it. They are also much safer. Those prepared of cephalic herbs are of singular service in oppressive pains of the head, hemi- crania, lethargic disorders, stuffings of the head, and coryza, mucous defluxions

of the eyes, drowsiness, vertigoes, and in cases where the malignant humors generated by the luesvenerea are lodged in the membranes of the nostrils.

Euan INKS, MILD, are marjoram, basilicon, thyme, hyssop, savory, marum Syriacum, the tops of origanum, flowers of lilies of the valley, and gum benzoin, the resin of guaiacum, fine raspings of aloes wood, dry volatile salt of sal ammoniac perfumed with oil of marjoram, and white vitriol.

EKRUIKES, VIOLENT, are euphorbium, the pow- der of white hellebore, Jseveral sorts of snuffs, precipitate mercury, turbitli mineral, and pepper.
ERSCH, John Samuel; the father of modern German bibliography. He was born at Gross- glogau, in Lower Silesia, June 23rd, 1766, and, while a mere tyro, showed uncommon love for bib- liography. Being encouraged in this pursuit by Tabri and other learned men, he published tike Repertory of the German Journals, and other Periodical Collections of Information on the Subjects of Geography, History, and Sciences connected with them, 1790—1792, 3 vols. Be- coming known to Schutz and Hufeland, they engaged him in the editing of their Universal Repertory of Literature, 1785—1790. This work was published in 1793, and was followed in 1799 by the Quinquennium, extending from 1791 to 1795; and in 1806, by another, extend ing from 1796 to 1800. These works contain notices of all the separate publications which appeared during that period, and even all the essays printed in the journals and other periodi- cals. They are executed with accuracy, on a good plan, and with a general account of re- views, whose character for partiality or impar- tiality is illustrated by examples. At the same time, Ersch began to prepare a Universal Dic- tionary of Modern Authors, which he afterwards limited to European writers. This was the origin of his Gelehrtes Frankreich (Literary France), Hamburg, 1797—1806, 3 vols., with two supplements. In the year 1803, he was made professor of geography and statistics in the university of Halle, where he published his Manual of German Literature, from the

Middle of the 18th Century till the latest Times (Am- sterdam and Leipsic, 1812, 2 vols 8vo., 2nd edition, Leipsic, 1822), and the Universal En- cyclopaedia of Arts and Sciences (Leipsic, 1818, 4to) : 16 parts had appeared in 1827. By the former work, he first gave a systematic character to modern German bibliography ; and its com- pleteness, accuracy, and arrangement, make it a model for such a work

ERSKINE is a Scottish family name whose honors have been well upheld in modern times (see our next article). It was settled at a very

remote period at Erskine Castle, in a parish of that name, in Renfrewshire, at the mouth of the Clyde.

We extract the following particulars of its his- tory, furnished by a distinguished member of this family, to a modern periodical work.

The families of Erskine lord Erskine, Ers- kine earls of Marre, of Buchan and of Kelly, and the lords Cardross of Dryburgh ; of Erskine of Dun, Pittodrie, Kinnoul, Kirkbuddo, Balgonie, Shieldfield, and their various branches, are all sprung from this family, situated beyond record at Erskine, to which topographers and antiquaries suppose it gave its name. In the old language of the country, the name being descriptive, not local, signifies 'the man with the dagger,' or * dagger- man.' The Erskines and the Stuarts were neighbours, and fostered each other's chil- dren, till the political extinction of both families in the beginning of the eighteenth century. Passing over the celebrated Dagger-man, who, by his military prowess, first acquired, it is said, the surname of Eris-Skyne from king Malcolm II., the brave Sir William Erskine merits our particular notice, who was knighted in the field, under the banner of king Robert Bruce, for his gallantry under Randolph earl

of Murray and the Douglas in England. His son, Sir Robert, lord chamberlain of Scotland, was one of the plenipo- tentiaries for the redemption of king David II. ; governor of the three great fortresses of Scotland, Edinburgh, Dumbarton, and Stirling; and was highly instrumental in the peaceable accession of the Stuarts to the throne of the Scots, in the person of king Robert II. Sir Robert died in the end of 1385. John, the twelfth lord Erskine, and fifth earl of Marre of the name, custodiar of king James V. and his daughter Mary, ambassa- dor in England in 1534, who went with James to France, where he married Magdalen of Valois daughter of Francis I., appears from the history of those times to have been a man of great pru- dence and virtue, and a friend to the dawning Reformation. His son John, regent of Scotland after the expulsion of Mary Stuart from the throne, though a man of mild character, and un- fit for the turbulent age in which he swayed a sceptre, is characterised by all the Scots historians, as a man of untainted virtue ; a friend to rational religion, liberty, and learning; the protector and friend of George Buchanan. John, son of the regent, was lord high treasurer of Scotland, knight of the garter, and ambassador in England, before the accession of James VI. to the throne; to which, by his prudence, and by engaging the Cecils, and other principal families, to support the Scots succession, he greatly contributed. He was supplanted in the king's confidence by the worthless favorite Carr, afterwards earl of Somerset, and retired to his seat at Alloa, where he lived to a great age in the enjoyment of an honorable retreat. Inspired with a passion for a daughter of Esme, duke of Lennox, a kins- woman of the king, and his suit meeting with obstruction, he became uneasy and wrote to the king. The king's answer was laconic : — ' Cod's fish, Marre, thou sha'nnae die for onie lass in a' the laund.' Sir Alexander Erskine of Gogar, biother to the regent, appears to have been a

faithful custodiar of the king, after the death of that distinguished member of the family.

Of the sons of the treasurer, William, the youngest,

cup-bearei to the king, was a man of considerable learning. He was in strict habits of literary intimacy with Sir Robert Moray, first

g resident of the Royal Society; with lord rouncker, and most of the groupe who met together at Oxford, and in Gresham College. during the civil wars. He lived to a great age, and was called Cousin William, by the successive princes of the house of Stuart. William's sis- ter, the countess of Mareschal, was a woman of learning and taste, to whom Arthur Johnston addressed some of his pieces of Latin poetry, and his version of the Psalms. David, lord Cardross, grandson of the treasurer Marre, was remarkable for his love of a free government; but still more for his integrity and sense of honor. He headed the protest against the de- livery of Charles I., to the army of the English parliament, saying that ' Evil ought not to be done in expectation of good coming of it.' Lord Innerpesser, one of the Scots judges afterwards, a brother of the famous Fletcher of Saltoun, fol- lowed the example of Cardross. Henry, lord Cardross, the son of David, was a friend of Sid- ney, Russel, and the other patriots, who opposed the arbitrary measures of Charles II. He was forced for a time to take refuge in America; where he founded a small colony in Carolina. When he returned from thence, he came over from Holland with king William III. He was a man of courage, learning, and remarkable at- tachment to the cause of liberty ; but his health being broken by a long imprisonment in Edin- burgh Castle, and by his American fatigues, he died in 1693, in the forty-third year of his age. The seal of his colony of Cardross, in Carolina, was accidentally found by the soldiers of general Abercromby, where it had been hastily buried ; and was presented by David Stuart, earl of Bu- chan, his heir, to the state of South Carolina, by the hands of Moultry, the governor of that state, in 1795.

Charles Erskine of Alva, second son of Sir John Erskine of Alva, great-grandson of the trea- surer Marre, was a lawyer of considerable emi- nence in Scotland ; and some time lord justice clerk. His second son, Charles Erskine, was a barrister of

reputation in England, of the standing of Yorke, after lord chancellor, and Pratt, and was thought, both by the bench and the bar, to be on the fair road to the head of his profession, when, by an access of fever, in the absence of his attendants, he flung himself from a chamber window in Lincoln's Inn. John Erskine, advo- cate at Edinburgh, and professor of the municipal laws of Scotland, in that college, was a grandson of David lord Cardross. His Institutes of the law of Scotland do him great honor. It has been long a standard book, like Coke's in England.

In the other branches of the family, Thomas earl of Kelly, K. G., was famous for the part he took in the mysterious business of Cowrie's murder at Perth. Of his descendants, Thomas, the seventh earl of Kelly, was a man of uncom- mon wit and humor, which he seemed to in- herit from his mother, who was a daus;hte; of th«

celebrated Dr. Pitcairn, and possessed consider- able musical taste. Of the Cambo branch of tiie Kelly family, Charles Erskine, the son of Colin Erskine (who was an eminent painter at Rome, and married a Roman lady), rose by his merit at the bar to a conspicuous situation in the papal states. He was domestic prelate to the pope, and one of the rota on a scale of the highest preferments, overturned by the Revolution at Rome in 1798.

Of the family of Erskine of Dun, John, the reformer in the reign of Mary, was eminent, and a man of great reputation. Of Kirkbuddo, a branch of this family, was Sir Alexander Erskine, ambassador from Sweden at the treaty of West- phalia Of Shieldfield, descended from a natural son of the elder brother of the regent, Ebenezer and Ralph Erskines, the early seceders of Scotland ; both men of considerable genius and energy. The former, born 1680, became minister of Portmoak in Fife, in 1702 ; in which

situation he continued six and twenty years, when he re- moved to Stirling. Five volumes of his sermons are extant, printed 1762 and 1765, 8vo. Dif- fering with the members of the kirk, he joined the sect known by the name of Burghers, and died in 1755. — His brother, Ralph, who was two years younger than himself, was minister of Dumfermline in Fifeshire from 1711 to 1734, when he was ejected by the synod for secession. His sermons are numerous, and, together with a controversial treatise, and some lyrical effusions on sacred subjects, called Gospel Sonnets, fill two folio volumes, printed in 1760. He died in 1751. Robert Erskine, a grandson of Ralph the preacher, was lately a civil engineer both in Bri- tain and the United States of America.

ERSKINE (Thomas, lord), a celebrated modern lawyer and politician, was the youngest son of David Henry-firskine, earl of Buchan ; and designed originally, the family being in con- tracted circumstances, for a profession. After receiving his education at the High School, Edin- burgh, and at the university of St. Andrew's, Aberdeen, he entered at Leith as a midshipman on board a vessel commanded by Sir John Lind- sey. He continued in the navy, though without obtaining a commission, four years. In 1768 he entered the Royals, or first regiment of foot ; and marrying two years afterwards Frances, daughter of Daniel Moore, Esq., went with his regiment to Minorca, where he spent three years. He was connected with the army about six years ; at the end of which, the persuasions of his family, and particularly of his mother, lady Buchan, a woman of very superior mind, induced him to relinquish it, with a view to practise at the bar.

In 1777 he entered as a fellow-commoner at Trinity College, Cambridge, to obtain a degree, and, thereby to shorten his period of probation as a barrister ; and entered himself at the same time a student of Lincoln's Inn. He likewise became a pupil in the office of Mr., afterwards judge Bul- ler, then a special pleader, and subsequently in that of Mr., afterwards baron Wood. Being called to the 'bar the following year, his success was marked and rapid.

The first cause in which be was engaged was in defence of captain Baillie, who, being dismissed from a situation in Green-

wich Hospital, by lord Sandwich, had become the object of a state prosecution for libel. The conduct of Mr. Erskine gave such satisfaction on this occasion, that he is said to have received thirty briefs immediately from the solicitors who were present, and was retained as counsel for Carnan the bookseller, to resist, at the bar of the house of commons, the claim of the Stationers Company, and two universities, to the sole right of printing almanacs. His next important engage- ment was that of conducting the defence of admiral Keppel at Portsmouth, for which he was rewarded with 1000 guineas. In 1781 he advo- cated the cause of lord George Gordon, who was indicted in the court of king's bench for being the promoter of the memorable riots of that pe- riod. The ability displayed by him on this trial procured him a silk gown, at the recommendation, it is said, of lord Mansfield. In this same year (1783) he was chosen member of the house of commons for Portsmouth. Soon after he de- fended the dean of St. Asaph at Shrewsbury, on a charge of libel ; and had on the trial a remark- able dispute with his old preceptor, Mr. justice Buller, to whom he ventured to reply upon a point of practice, in so lofty a tone of defiance, that the judge was evidently abashed. In 1789 Mr. Erskine had another opportunity of display- ing his peculiar eloquence, in the defence of Mr. Stockdale, the bookseller, for publishing a pam- phlet, charged as a libel, in favor of Mr. Hastings. But in 1792, being retained to defend Thomas Paine, on a prosecution for publishing the second part of the Rights of Man, he offended several of his political and personal friends in so doing, and lost his office of attorney-general to the prince of Wales. Perhaps the most arduous effort of his professional life arose out of his situation as counsel on the trials of Hardy, Tooke, and others, for high treason, in 1794. These trials lasted for several weeks, and attracted the attention of the whole

country. Mr. Home Tooke, it is well known, largely assisted in con- ducting his own defence ; a circumstance, which, while it displayed his unquestionable talents, added in no small degree to the onerous task of his leading counsel. All parties, however, joined in admiring the able and constitutional conduct of Mr. Erskine.

His first appearance as an author was not less flattering to this great man, than his first recep- tion at the bar. A pamphlet, in which he warmly expressed his disapprobation of the war with France, passed through upwards of forty editions in a few weeks. In 1802 he was restored by the prince of Wales to his office of attorney-general, and made also keeper of the seals for the duchy of Cornwall. Four years after, lord Grenville, on receiving his late majesty's commands to form an administration, included the name of Mr. Erskine amongst its most efficient members. He was in 1806 created a peer, by the title of lora Erskine, of Restormel Castle, in Cornwall, and raised to the dignity of lord high chancellor of Great Britain ; but held the seals too short* a period to afford any fair opportunity of estimating his talents for this important trust. It is to be remarked, that he had never practised in the court over which he was called so suddenly to

preside; and that no elevation to a high legal office was ever more decidedly political. The result was, that he distinguished himself rather for the despatch of business, than for the legal solidity of his decisions. The public career of lord Erskine closed with the retirement of his party from power: for though he afterwards occasionally spoke in the house of peers, his parliamentary eloquence was not calculated at this or any other period to increase his fame. On the accession of his present majesty to the regency, he conferred the Order of the Thistle

on this old servant and friend.

In his latter years lord Erskine embarrassed his fortune by a speculation in land, and embit- tered his retirement by a low marriage. In the autumn of 1823 he was seized, while on a voyage to Scotland, with inflammation in the chest ; a complaint to which he had been subject for some years, and landing in Yorkshire, reached his nephew's seat at Ammondell, to terminate his earthly probation. He died here on the 17th of November, and was interred in the ancient family vault of the house of Buchan at Uphall. By his first wife, who died in 1805, lord Erskine nad five daughters and three sons. By his second, from whom he endeavoured to get divorced, but failed in the object, two sons, we believe. Lord Erskine, it is well known, was a decided whig, and a close adherent of Mr. Fox, whose speeches he edited. Five volumes of his own speeches have been published by Mr. Ridgway. In 1797 he published the tract we have alluded to, enti- tled A View of the Causes and Consequences of the War with France ; and subsequently, poems, a political romance called Armata, and a pam- phlet in favor of the Greeks.

ERSKINE (Henry), elder brother of the pre- ceding, was born at Edinburgh, November 1st, 1746. Being called to the bar in 1768, he was soon admitted a member of the Faculty of Advo- cates, where he raised himself to high distinction. In 1783 he held for a short time the high official situation of lord advocate of Scotland, and be- came afterwards dean of the Faculty of Advo- cates. In 1806 he was re- appointed to the situation of lord advocate, but retired again at the period in which his brother was deprived of the great seal of England. Mr. Henry Erskine was a man of brilliant wit, and wrote several epigrams of merit. He died at his seat of Am- mondell in West Lothian, October 8th, 1817.

ERST, adv. Sax. aejtfta; Teut. erst ; the superlative of aeri, thus aeri, aeneri, aertj-ta. Fore- most, first ; at first ; at a former time ; before ; until then or now.

Erst wer you father, and now must ye supply, The mothers part also, for lo now here I ly.

Sir T. More.

In short space they did to health restore The man that would not live, but ertt lay at death's dore. Spenser. Faerie Queene.

Sir knight, if knight thou be, Abandon this forestalled place at ertt, For fear of further arm, I counsel thee. Id. The Rhodians, who ertt thought themselves at great quirt, were now overtaken with a sudden mischief.

Knolles.

As signal now in low dejected state As erst in highest, behold him.

Milton's Agonistvs. Fame that her high worth to raise, Seemed erst so lavish and profuse, We may justly now accuse Of detraction from her praise. Id.

Opener mine eyes,

Dim erst; dilated spirits, ampler heart. Id. The future few or more, howe'er they be,

Were destined erst, nor can by fate's decree

Be now cut off, Prior.

He taught us erst the heifer's tale to view.

Gay.

Surprised, alas ! to find

Man now their foe, whom erst they deemed their lord, But mild and gentle, and by whom as yet Secure they grazed. Samervile

And clustering stars, portrayed on mimic spheres, Assumed the forms of lions, bulls, and bears ; — So erst, as Egypt's rude designs explain, Rose young Dione from the shoreless main.

Darwin.

ERT HOLMER, the collective name of a group of four rocky islands of the Baltic, on the north-east of the coast of Bornholm, and subject to Denmark. Two only, Christians-oe and Frederickshol m, are inhabited, and between them is a safe harbour of about 900 feet in length and 200 wide, where vessels navigating the Baltic often put in. There is here a light-house, ele- vated ninety-two feet above the level of thfe sea, so that it may be distinguished from that of Born- holm, which is much higher. Here also are bat- teries and towers, which, when adequately garrisoned, are capable of a long defence. The population, however, is only 450. The whole of these islands are surrounded with rocks and sand-banks. Long. 14° 47′ E., lat. 55° 13′ N.

ERUCA, the general name of caterpillars of all kinds. The caterpillar state is that through which every butterfly must pass before it arrives at its perfection and beauty ; po other insects being produced in their winged form. The change from caterpillar to butterfly was long esteemed a meta- morphosis, a real change of one animal into another ; but this is not the case. The egg of a butterfly produces a butterfly, with all the linea- ments of its parent ; only these are not disclosed at first, but for the greater part of the animal's life are covered with a case or muscular coat, in which are legs for walking, which only suit it in this state ; but its mouth takes in nourishment, which is conveyed to the included animal ; and, after a proper time, this covering is thrown off, and the butterfly, which all the while might be discovered in it by an accurate observer with the help of a microscope, appears in its proper form. Before it passes into this state, however, there requires a state of rest for the wings to harden, and the other parts to acquire their proper firm- ness; this is transacted in a time of perfect rest, when the animal lies in what is called the nymph or chrysalis state, in appearance only a lump of inanimate matter. There is a determined time for each of these changes in every species ; but, in the several

different kinds, the periods are very different. There is no sign of sex in the animal while in the caterpillar state : the propa- gation of the species is the business of the crea-

tare in Its ultimate perfection ; and till that, these parts are never excluded : one female butterfly, when she has been impregnated by the male, will produce 300 or 400 eggs, or even more. See ENTOMOLOGY.

ERUCT, v. a. a Fr. eructation ; Latin

ERUCTATION,;!, s. $er>Kto, to belch, vomit forth ; the substantive is sometimes used for any sudden burst or eruption A matter or wind.

The signs of the functions of the stomach being depraved, are eructations, either with the taste of the aliment, acid, inodorous, or -fetid. Arbuthnot.

Thermae, are hot springs, or fiery eructations ; such ts burst forth of the earth during earthquakes.

Woodioard.

ER'UDITE, adj. 1 Fr. erudition; Span.

ERUDI'TION, n. s. $ erudition ; Ital. erudit'wne ; Lat. eruditio, erudio to teach, from rudis a rod, an important assistant in the mystery of teaching in all ages (Mason has observed that it often conveys a sneer). Learned : a word of modern appearance in our language.

Famed by thy tutor, and thy parts of nature ; Thrice famed beyond all erudition. Shakspeare.

The earl was of good erudition, having been placed at study in Cambridge very young. Wotton.

To your experience in state affairs you have also joined no vulgar erudition, which all your modesty is not able to conceal ; for to understand critically the delicacies of Horace, is a height to which few of our noblemen have arrived. Dryden.

Some gentlemen, abounding in their university erudition, nil their sermons with philosophical terms.

Swift.

All or most of these inconveniences, may be avoided at an English university, provided a youth have a discreet tutor, and be himself of a sober and studious disposition. There classical erudition receives all the attentions and honours it can claim. Beattie.

ERUGINOUS, adj. Fr. erugineux ; Lat.

Copperas is a rough and acrimonious kind of salt, drawn out of ferrous and eruginous earths, partaking chiefly of iron and copper; the blue of copper, the green of iron. Browne.

Agues depend upon a corrupt incinerated melan-
choly, or upon an adust stibial or eruginout sulphur.

Harvey.

ERUPTION, n.s. I Fr. eruption; Spanish ERUP'TIVE, adj. S eruption ; Ital. erottione ; Lat. eruptio ; erumpo, eruptus (from e and rumpo to break), to break or burst forth. The act of breaking or bursting from confinement; hostile incursion ; violent exclamation; cutaneous humor.

Diseased nature oftentimes breaks forth In strange eruptions. Shakspeare. Henry IV.

In part of Media there are eruptions of flames out of plains. Bacon's Natural History.

To his secretary whom he laid in a pallet near him

for natural ventilation of his thoughts, he would, in the absence of all other ears and eyes, break out into bi ter and passionate eruptions.

Wotton t Life of Buckingham.

It did not run out in voice or indecent eruptions, but filled the soul, as God the universe, silently and without noise. South.

Such command we had, To see that none thence issued forth a spy, Or enemy, while God was in his work ; Lest he, incensed at such eruption bold, Destruction with creation might have mixed.

Milton.

Finding themselves pent in by the exterior earth, they pressed with violence against that arch, to make it yield and give way to their dilatation and eruption.

Burnet's Theory.

An eruption of humours, in any part, is not cured merely by outward applications, but by alterative me- dicines. Government of tlie Tongue.

Upon a signal given the eruption began ; fire and smoak, mixed with several unusual prodigies and figures, made their appearance. Addison's Guardian.

Tis listening fear, and dumb amazement all, When to the startled eye the sudden glance Appears far south eruptive through the cloud.

Thornton.

At the destined hour,

By the loud trumpet summoned to the charge. See all the formidable sons of fire, Eruptions, earthquakes, comets, lightnings play Their various engines. Young.

ERVUM, the lentil ; a genus of the decandria order,

and diadelphia class of plants; natural order thirty-second, papilionaceae : CAL. quin- quepartite, length of the corolla : stigma capitate. There are three species; of which the most re- markable are the following :

1. E. Gallicum, the French lentil, is twice the size of the common lentil, both in plant and seed; and is much better worth cultivation. It should be sown in March, after a single plough- ing, in the ground that bore corn the year before. Manure is not absolutely necessary, though it will undoubtedly increase the crop. Its grass is said to be very copious; it may be mowed many times in the year, and affords a healthy as well as an agreeable food to horses, cows, and sheep : the milk of cows fed with it is said to be copious and good. Long and numerous pods ripen about the beginning of winter, which afford a new kind of legume, to be eaten as common lentils; when fresh, it makes admirable peas soup ; dry, it is greedily eaten by the poultry. The dried herb is also a good resource for cattle in winter. It is cultivated in Britain, and grows on any kind of ground.

2. E. lens, the common lentil, is cultivated in many parts of England, either as fodder for cattle, or for the seeds which are used in meagre soups. It is an annual plant, and r:ses with weak stalks about eighteen inches high, gar nished with winged leaves composed of sever*, pairs of narrow lobes, terminated by a clasper or tendril, which fastens to any neighbouring plant, and is thereby supported : the flowers come out three or four together, upon short footstalks from the sides of the branches. They are small, of a pale purple color, ind are succeeded by short flat pods, containing two or three seeds, which are flat, round, and a little convex in the middle. The seeds of this plant are most com- monly sown in March, where the land is drv ; but, in moist ground, the best time is April. Ths* usual quantity of seed allowed for an acre of land is from one bushel and a half to tw > bushels. If these are sown in -drills in the sanr> manner as peas, they will succeed better thai

when sown in broad-cast : the drills should be a foot and a half asunder, to allow room for the Dutch hoe to clean the ground between them ; for, if the weeds are permitted to grow among them, they will get above the lentils and starve them.

ERYCINA, a title of Venus. See ERYX.

ERYMANTHUS, in ancient geography, a mountain, and town of Arcadia, where Hercules is said to have killed a prodigious boar, which he carried on* his shoulders to Eurystheus ; who was so terrified at the sight, that he hid himself in a brazen vessel.

ERYNGIUM, ERYNGO, or sea-holly, a genus of the digynia order, pentandria class of plants : order forty-fifth, umbellatae. The flowers are collected into a round head, and the receptacle is paleaceous. There are eleven species, most of which are hardy herbaceous perennials, pro- ducing erect stalks from one to two or three feet high; with simple, entire, or divided prickly leaves ; and the stalks terminated by roundish aggregate heads of quinquepetalous flowers, of white, blue, or purple colors. They all flower mostly in July, and the seeds ripen in Septem- ber. They are propagated by seeds sown in a bed or border, either in spring or autumn. The plants are to be removed the autumn after they come up, into those places where they are de- signed to remain.

E. maritimum grows naturally on the sea- coasts of England and Scotland. The leaves are sweetish, with a light aromatic warmth and pun- gency. The roots are accounted aphrodisiac, and are kept candied in the shops. The young flow- ering shoots eaten like asparagus are very grateful and nourishing.

ERYSIMUM, hedge-mustard, a genus of the siliquosa order, and tetradynamia class of plants : natural order thirty-ninth, siliquosse. The SILIQUA is long,

linear, and exactly tetragonal : CAL. close. There are fourteen species ; of which the most remarkable is

E. oflficinale, hedge-mustard, or bank cresses. It grows naturally in Britain under walls, by the sides of highways, and among rubbish. It is warm and acrid to the taste; and, when culti- vated, is used as a vernal pot-herb. Birds are fond of the seeds ; sheep and goats eat the herb ; cows, horses, and swine refuse it. The seeds are said to promote expectoration, and excite urine and the other fluid secretions, and to attenuate and dissolve viscid juices, &c., by an acrimo- nious stimulating quality ; but the taste discovers in them only an herbaceous softness void of acri- mony : the seeds indeed are considerably pun- gent, and the roots in a small degree.

ERYSI'PELAS, n. s. Gr. tpvmirtXas.

An erysipelas is generated by a hot serum in the blood, and affects the superficies of the skin with a shining pale red, and citron colour, without pulsation or circumscribed tumour, spreading from one place to another. Wiseman's Surgery.

ERYSIPELAS. See MEDICINE.

ERYTHEA, or ERYTHIA, an island said to have been either adjoining to, or a part of Gades ; but nowhere now to be found by the description given of it by ancient authors. The poets feign this to have been the habitation of the fabulous

Geryon, disarmed by Hercules, who drove away his cattle.

ERYTHRjE, in ancient geography, three towns: 1. in .Sitolia, on the Corinthian bay : 2. in Boeotia, near Plataea, and mount Cithseron : 3. in Ionia, on the peninsula, at its extremity : with 4. a cognominal port. It was famous for an ancient temple of Hercules.

ERYTHR^EUM MARE, erroneously called Rubrum, or the

Red Sea, by the Romans. Thus, the ocean that washes Arabia and Persia, and ex- tends a great way further, is denominated. Hence Herodotus says, that the Euphrates and Tigris fall into the Mare Erythraeum. He also calls it the South Sea, on which the Persians dwell. It takes its name, not from its color, the error of the Romans, but from

ERYTHRAS, the son of Perseus and Andro- meda, whose kingdom lay on the confines of that sea.

ERYTHRINA, coral tree, a genus of the decandria order, and diadelphia class of plants : natural order thirty-second, papilionaceaj : CAL. bilabiate, the one lip above, the other below ; COR. vexillum very long and lanceolated. There are twelve species, all of them shrubby flowering exotics for the stove, adorned chiefly with trifo- liate leaves, and scarlet spikes of papilionaceous flowers. They are all natives of the warm parts of Africa and America; and must always be kept in pots, which remain constantly in stoves in this country. They are propagated by seeds 'annually imported from Africa and America. They are sown half an inch deep in pots of light rich earth, which are then plunged in the bark- bed of the stove ; and, when the plants are two inches high, they are separated into small pots, plunged in the bark-bed, with frequent waterings, and as they increase the growth shifted into larger pots. The inhabitants of Malabar make sheaths of the wood, for swords and knives. They use the same, together with the bark, in washing a sort of garments which they call sarassas ; and make of the flowers the confection caryl.

ERYTHRONIUM, dog's-tooth violet, a ge- nus of the monogynia order, and hexandria class of plants; natural order eleventh, sarmentacese. COR. hexapetalous and campanulated ; with a neetarium of two tubercles adhering to the inner ' base of every other petal. There is only one species, which, however, admits of several varie- ties in its flowers, as white, purple, pale red, dark red, crimson, and yellow. The plants are low and herbaceous, with a purple stalk and hexapetalous

flowers. All the varieties are hardy and durable; and may be planted in small patches in borders, where they will make a good appearance. They rarely perfect their seeds in this country, but may be propagated by offsets. In Siberia, according to Gmelin, they dry and mix the root of this plant with their soups.

ERYTHROXYLON, in botany, a genus of the trigynia order, and decandria class of plants ; CAL. turbinated ; petals of the corolla have each a nectariferous emarginated scale at the base; the stamina are connected at the base; the fruit a bilocular plum. Species twelve, African and South American shrubs.

ERYX, in fabulous history, a son of Butes and

Venus, who, relying on his strength, challenged all strangers to fight with him in the combat of the cestus. Hercules accepted his challenge after many had yielded to his superior dexterity; Eryx was killed in the combat, and buried on the mountain, so named from him, where he built a temple to Venus.

ERYX, in ancient geography, a mountain of Sicily near Drepanum, so steep, that the houses built upon it seemed every moment ready to fall. Daedalus enlarged the top, and enclosed it with a strong wall. He also consecrated there to Venus Erycinaa golden heifer, which resembled life so much, that it seemed to exceed the power of art.

ERZERUM, the capital of Armenia, and of a pachalic of the same name, is situated on a rising ground at the base of a chain of high mountains, generally covered with snow. The streets are paved, and the houses, which are built of stone, have terraces, on which grass grows which affords herbage for sheep; so that the town, when seen from an eminence, can

scarcely be distinguished from a plain. Erzerum is pro- tected on the south by a citadel, which is sur- rounded by a double wall of stone, and has four gates covered with iron plates. East of the city is an old brick tower, with a clock on its lofty summit. It is the most conspicuous building of the place. The mosques are numerous, amount- ing, according to some writers, to forty and up- wards: besides which there are two Greek churches and one Armenian. Several of the former have domes covered with lead, and are ornamented with gilt balls. There are sixteen baths. The markets are spacious and well sup- plied with provisions and fruit. Manufactures of considerable extent are also established here, and an extensive trade is carried on in copper, and in articles from Persia, and from north-west Hindostan and its vicinity. The population, amounting to 100,000 or 130,000, are Turks. Greeks, Persians, and Armenians. The inhabi- tants are in general stout and healthy; but the cold during winter, which commences in August, is intense, and snow remains on the ground from October until March. This town, however, was visited by tne plague in 1807, which carried off ' twenty-five of the inhabitants daily. It is go- verned by a pacha of three tails, who has a large hut mean palace. 250 miles N. N. E. of Aleppo.

ERZGEBIRG (i. e. the Metalliferous Moun- tains), a chain of mountains in the heart of Ger- many, between Saxony and Bohemia, and joining the Riesengebirg on the frontiers of Silesia. The highest summits are on the s de of Saxony, where they sometimes rise to 3800 or 3900 feet above the level of the sea: the south front of them, on the Bohemian side, exhibits a number of peaks of basalt of a most romantic appear- ance. The country around the Schneeberg, one of the highest of them, is very barren and deno- minated the Siberia of Saxony.

EnzoEBiRG, a circle of the kingdom of Saxony, separated from Bohemia by the foregoing chain, and containing 460,000 inhabitants, on a surface of 2300 square miles. Its principal towns are Freyberg (the capital), Altenburg, Chemnitz, and

Zwickau; and its chief branch of industry the working of the mines; which yield iron, copper, tin, lead, cobalt, bismuth, and arsenic. The yearly produce is averaged at from £300,000 to £400,000 sterling: the number of miners at 12,000. This circle is divided into seventeen bailiwics.

ESARHADDON, or ASSAR-ADDON, the son of Sennacherib, and his successor in the kingdom of Assyria, about A.A.C. 712. He united th«> kingdoms of Nineveh and Babylon ; conquered Ethiopia and Syria ; sent a colony to Samaria ; and his generals took king Manasseh, and carried him in chains to Babylon. He reigned twenty- nine years at Nineveh, from A. M. 3294 to 3322, and thirteen at Babylon ; in all forty-two years. He died A. M. 3336, and was succeeded by Saosduchinus. Esarhaddon, in the opinion of Sir Isaac Newton, is the Sardanapalus who died, as Clectarchus says, of old age, after the revolt of Syria; the name Sardanapalus being derived from Asserhadon Pul.

ESCALADE, n. s. Fr. escalade ; Ital. scalata, from Lat. scala, a ladder. The act of scaling walls.

In Geneva one meets with the ladders, petard, and other utensils, which were made use of iu their fa- mous escalade. Addison.

ESCALADE, or SCALADE, in the military art, is a furious attack of a wall or rampart ; carried on with ladders, to pass the ditch or mount the rampart ; without proceeding in form, breaking ground, or carrying on regular works for the security of the men. When every thing is ready for the troops to pass the ditch, either by means of boards, hurdles, and fascines, if it is muddy ; or by small boats of tin, or baskets covered with skins or oil cloth, if it is deep or filled with water ; a party should be placed on the counter- scarp, opposite to the landing place, ready to fire at the garrison, if they are alarmed, and oppose the mounting on the rampart. When the ditch is dry, the ladders are fixed in some place far- thest distant from the sentinel ; and, when the troops have got upon the

rampart, they put themselves in order for receiving the enemy : should the sentinel be surprised, and silently overcome, the detachment endeavours to break Open the gate and admit the rest of the party. When the ditch is wet, the rampart high, and provided with a revetment, it is very difficult to surprise a town in this way ; but whe^e there is no revetment, the troops may hide themselves along the outside of the rampart till all are over.

ESCALLONIA, in botany, a genus of the monogynia order, and pentandria class of plants. The fruit is bilocular and polyspermous ; th*> petals distant and tongue-shaped; the stigma headed. Species two, natives of South America.

ESCAL'OP. See SCALLOP. A particular kind of shell-fish ; indenture of margin (from the figure of the scallop's shell).

The shells of those cockles, escalnps, and periwinkles, which have greater gravity, were inclosed i't stone. Woodward.

An inequality of margin ; indenture.

The tigure of the leaves is divided into jags and ctculvps, curiously indented round the edges. Ray.

ESCAMBIA, one of the largest rivers which fall into the bay of Pensacola, in West Florida,

It flows through several channels, which have a number of low islands between them; and is navigable for upwards of 100 miles. On its banks are forests of valuable timber.

ESCAPA'DE, n. s. Fr. Irregular motion of a horse.

He with a graceful pride,

While his rider every hand surveyed,

Sprung loose, and flew into an escapade ;

Not moving forward, yet with every bound

Pressing and seeming still to quit his ground .

Dryden.

ESCAPE', v. a., v. n., & n. s.) Fr. echapper ;

ESCAP'ING, n. s. \ Span, and Port.

escapar ; Ital. scappare, from Lat. ex from, and capio to take. To take (one's self) away from ; to fly ; avoid ; obtain exemption from ; pass away unobserved : as a neuter verb to withdraw ; avoid punishment or injury: as a substantive, flight'; excursion : hence evasion or excuse, and mistake.

Escape for thy life ; look not behind thee, neither stay thou 4in all the plain : escape to the mountain, lest thou be consumed. Genesis.

Benhadad, the king of Syria, escaped on horse.

Chronicles.

Should we again break thy commandments, woulds t thou not be angry with us till thou hast consumed us, so that there should be no remnant nor escaping ?

Exra ix. 14.

Men are blinded with ignorance and errour : many things may escape them, in many they may be de- ceived. Hooker.

He might put on a hat, a muffler, and a kerchief, and so escape.

Shakspeare. Merry Wives of Windsor. Thousand 'scapes of wit, Make thee the father of their idle dreams, And rack thee in their fancies. Id.

He enjoyed neither his escape nor his honour long -, for he was hewn in pieces. Hayward.

St. Paul himself did not despise to remember what- soever he found agreeable to the word of God among the heathen, that he might take from them all escape by way of ignorance. Raleigh.

Pride an 1 malice did not care so much for safety, as for conquest ; it would not content them to escape Israel, if Israel may escape them.

Bp. Hall's Contemplations.

Loose 'scapes of love. Milton.

'Tis still the same, although their airy shape • All but a quick poetic sight escape. Denham.

We made an escape not so much to seek our own, as to be instruments of your safety. Id.

Since we cannot escape the pursuit of passions ; and perplexity of thoughts, there is no way left but to endeavour all we can either to subdue or divert them. Temple.

The reader finds out those beauties of propriety in

thought and writing, which escaped him in the tumult and hurry of representing. Dryden.

Had David died sooner, how much trouble had he escaped, which by living he endured in the rebellion of his son ! Wake.

Men of virtue have had an extraordinary escape out of such dangers as have enclosed them, and which have seemed inevitable. Addison.

In transcribing there would be less care taken, as the language was less understood, and so the es- capes less subject to observation.

Brerewood on Languages.

To convince us that there was no way to escape by climbing up to the mountains, he assures us that the highest were all covered. Woodward.

Laws are not executed, men of virtue are disgraced, and murderers etcape. Watts's Logick.

Fear loses its purpose when we are sure it cannot preserve us, and we should draw resolution to meet it» from the impossibility to escape it. Steele.

As boiling water does not grow hotter by longer boiling, if the particles that receive greater heat can escape. Franklin.

There dwell the most forlorn of humankind. Immured though unaccused, condemned untried, Cruelly spared, and hopeless of escape. There, like the visionary emblem seen By him of Babylon, life stands a stump, And, filleted about with hoops of brass, Still lives, though all his pleasant boughs are gone.

Cowper.

Sweet are our escapes

From civic revelry to rural mirth ;

Sweet to the miser are his glittering heaps ; Sweet

to the father is his first-born's birth.

Byron.

ESCAPE, in law, is of two sorts :

ESCAPE, NEGLIGENT, is where one is arrested, and afterwards escapes against the will of the person that arrested him, and is not pursued with fresh suit, and retaken before the person pur- suing has lost sight of him. By stat. 8 and 9 Will. III. c. 26, the keepers of prisons conniving at escapes shall forfeit £500, and in civil cases the sheriff is answerable for the debt.

ESCAPE, VOLUNTARY, when a man arrests another for felony, or other crime, and after- wards lets him go freely by consent ; in which case, the party that permits such escape is held guilty, committed, and must answer for it.

ESCAPE, ASSISTING IN. By stat. 16 Geo. II. c. 31, it is enacted, That persons who any ways assist a prisoner, committed for treason or felony, to attempt his escape from any gaol, shall be ad- judged guilty of felony and be transported ; and if the prisoner be committed for petit larceny, or other inferior offence, or upon process for £100 debt, &c., the offenders are liable to fine and imprisonment. And where any person conveys any arms, instrument, or disguise, to a prisoner in gaol for felony, &c., or for his use, without the privity of the gaoler, in order to an escape, though no escape be actually made, it is like- wise felony and transportation. Also if one assist any prisoner to escape from any constable, or other officer or person in whose custody he is, by virtue of a warrant of commitment for felony, it is declared to be the like offence. See also stat. 6 Geo. I. c. 23, § 5. 24 Geo. III. c. 56.

The indictment on the stat. 16 Geo. II. c. 31, must state that the instruments were conveyed to the prisoner with a design to effectuate his escape. But no indictment can be maintained on this statute for

contributing to the escape of a prisoner committed on suspicion only.

By stats. 13 Geo. III. c. 31 ; 44 Geo III. c. 92; and 45 Geo. III. c. 92, to render more easy the apprehending and bringing to trial offenders escaping from one part of the United Kingdom to the other, and also from one county to the other, it is enacted, That offenders escaping from England to Scotland, or from Great Britain to

Ireland, or vice vers&, may be apprehended and conveyed back to the place from whence they escaped. By the said act 44 Geo. III. c. 92, offenders escaping with stolen goods from one part to another of the United Kingdom, may be tried in the place where the goods shall be found in their custody, and receivers in the place where they receive. By 54 Geo. HI. c. 186, all war- rants issued in England, Scotland, or Ireland, may be executed in any part of the United Kingdom. By the said acts 13 Geo. III. c. 31 ; 44 Geo. III. c. 92 ; and 45 Geo. III. c. 92, per- sons committing offences in one county may be pursued and apprehended in any other county. Stat. 52 Geo. III. c. 156, is for the more effec- tual punishment of persons aiding prisoners of war to escape from his majesty's dominions, which is a transportable offence. See RESCUE.

ESCAPE-WARRANT. If any person committed or charged in custody in the King's Bench or Fleet prison, in execution, or on mesne process, &c., go at large; on oath thereof before a judge of the court where the action was brought, an escape-warrant shall be granted, directed to all sheriffs, &c., throughout England, to retake the prisoner, and commit him to gaol where taken, there to remain till the debt is satisfied : and a person may be taken on a Sunday upon an escape-warrant. And the judges of the

respec- tive courts may grant warrants, upon oath to be made before persons commissioned by them to take affidavits in the country (such oath being first filed), as they might do upon oath made be- fore themselves. 5 Ann. c. 9. A sheriff ought not to receive a person taken on escape-warrant, 8cc., from any but an officer; not from the rabble, &c., which is illegal. 3 Salk. 149. A person being arrested and carried to Newgate by virtue of an escape-warrant, moved to be discharged, because he said he was abroad by a day-rule when taken ; but, it appearing by affidavit that he was taken upon the escape-warrant before the court of B. R. sat that morning, they refused to set him at liberty.

ESCAPE POINT, a cape on the west coast of the island of Revilla Gisedo, in the North Pacific, so called by Vancouver, from landing here after being attacked by the savages in Traitor's Cove. It is in long. 228° 30' E., lat. 55° 37' N.

ESCAPE RIVER, a river of North America, which runs into the Mississippi, in lat. 43° 35' N.

ESCA'RGATOIRE, n. s. Fr. A nursery of snails.

At the Capuchins I saw escargatoires , which I took the more notice of, because I do not remember to have met with any thing of the same kind in other countries. It is a square place boarded in, and filled with a vast quantity of large snails that are esteemed excellent food, when they are well dressed.

A ddison.

ESCHAL'OT, n. s. Fr. eschalot: Ital. cepa- letto, perhaps from Lat. cepnla, an onion.

Et h ilnts are now from France become an English plant, managed after the same manner as garlick ; only they are to be set earlier, and taken up as soon as the haves begin to wither, lest the winter kill them. Mcnrtimer't Husbandry.

ESCHALOT. See ALLIUM.

ESCHAR', n.«.) Gr. taxape; Old

ESCHAROT'IC, adj. & n. s. $ Fr. escar, a scab. A crust or scar made by hot applications : es- charotic is caustic : a caustic application

An eichar was made by the cathaeretick, which we thrust off, and continued the use of esctuiroticks.

Wiseman's Surgery.

Escharotielu applied of ash-ashes, or blistering plaster. Fioyer.

When issues are made, or bones exposed, the eschar should be cut out immediately.

Sharp's Surgery.

ESCHARA, in natural history, a species of coralline, or coralloid, the characters of which are these : they are of a stony or coral-like hard- ness, and resemble a woven cloth in their tex- ture ; and the microscope shows, that they con- sist of arrangements of very small cells, whose surface* appear much in that form. Linnaeus makes it a species of millepora, in the class of lithophytes. The narrow-leaved hornwrack di- vides as it rises into narrow leaves made up of regular rows of oblong square-shaped cells placed alternately by each other, and opposite to an equal number on the other side of the leaf, like a honeycomb : from these leaves proceed other still smaller foliaceous ramifications, many of which seem to be connected at the lower part by tubuli, as in the corallines ; by which means they can ply to and fro more freely in the water. The broad-leaved hornwrack, when fresh taken out of the sea, is of a spongy soft texture, and smells very fishy ; but, when it has lain for some time on the shore, it becomes stiff and horny, like some sort of withered leaves. Both sur- faces, when examined by glasses, appear to be covered with cells ; and, when a piece of it is cut across, one may discover the thin membrane that serves as a base to the cells of each surface. The form of the cells

is very remarkable, each one being, arched at the top, and contracted a little at the lower part of the sides to make way for the arches of the two next adjoining cells ; so that by this particular construction no room is lost. The entrance of the cells is immediately under the arch of each cell, and the walls of the cells seem to be fortified with spines. Jussieu discovered small polypes extending themselves out of these cells, which he has described in the Memoires of the Academy of Sciences, 1742.

ESCHEAT, n. s., v. n., & v. a. French echet, from echoir to lapse ; Lat excado to fell from. Land forfeited to the lord or to the king ; see below : the verb being derived from the noun, signifies to fall to a lord or the king ; to forfeit.

In the last general wars there, I knew many pood freeholders executed by martial law, whose lands were thereby saved to their heirs, which should have otherwise escheated to her majesty.

Spenser on Ireland.

If the king's ordinary courts of justice do not pro- tect the people, if he have no certain revenue or et- cheatt, I cannot say that such a country is conquered. Daries on Ireland,

At a Bartholomew fair at London, an etcheator of the city arrested a clothier, and seized his poods.

Camden't Remains.

He would forbear to alienate any of the forfeited escheated lands in Ireland, which should accrue to the crown by reason of this rebellion. Clarendon.

ESCHEAT (from old Fr. eschoir, to fall or hap- pen),

in English law, a casual descent, in the nature of forfeiture, of lands and tenements within his manor to a lord, on account of the felony of such tenant. Blackstone defines it ' an obstruction of the course of descent, and a con- sequent determination of the tenure, by some unforeseen contingency, in which case the land naturally results back, by a kind of reversion, to the original grantor, or lord of the fee.' Escheats are also divided into those propter defectum san- guinis, and those propter delictum tenentis ; but both species may be included under the first de- nomination ; since he that is attainted suffers an extinction of his blood, as well as he that dies without relations.

Inheritable blood is wanting, 1. When the tenant dies without any relations on the part of any of his ancestors. 2. When he dies without any relations on the part of those ancestors from whom his estate descended. 3. When he dies without any relations of the whole blood. 4. When he is attainted for treason or felony. — In all these cases the lands escheat to the lord.

Care must be taken to distinguish between forfeiture of lands to the king, and this species of escheat to the lord : a general rule is that such escheat operates in subordination to the more ancient and superior law of forfeiture or escheat to the crown.

The doctrine of escheat upon attainder, taken singly, is that the blood of the tenant, by the commission of any felony (under which denomi- nation all treasons were formerly comprised), is corrupted and stained, and the original donation of the feud is thereby determined. Upon the thorough demonstration of which guilt, by legal attainder, the feudal covenant and mutual bond of fealty are held to be broken, the estate in- stantly falls back from the offender to the lord of the fee, and the inheritable quality of his blood is extinguished and blotted out for ever. In consequence of which corruption and extinction of hereditary blood, the land of all felons would immediately revest in the lord, but that the su- perior law of forfeiture

intervenes, and intercepts it in its passage : in case of treason, for ever ; in case of other felony, for only a year and a day. 2 Inst. 36.

Fn cases of escheat, the blood of the tenant heing utterly corrupted and extinguished, it fol- lows, not only that all that he has at the time of his offence committed shall escheat from him, but also that he shall be incapable of inheriting any thing for the future. This farther illustrates the distinction between forfeiture and escheat. If therefore a father be seised in fee, and the son commits treason and is attainted, and then the father dies : the land shall escheat to the lord, because the son, by the corruption of his blood, is incapable to be heir, and there can be no other heir during his life, but nothing shall be for- feited to the king, for the son never had any irir- terest in the lands to forfeit. Co. Lit. 13. In this case the escheat operates, and not the for- feiture; but in the following instance the for- feiture works, and not the escheat. As where a new felony is created by act of parliament, and it is provided (as is frequently the case) that it VOL. VIII.

shall not extend to corruption of blood ; here the lands of the felon shall not escheat to the lord, but yet the profits of them shall be for- feited to the king for a year and a day, and so long after as the offender lives. 3 Inst. 47.

ESCHEAT, in Scots law, is that forfeiture which is incurred upon a person's being denounced a rebel.

ESCHEW', v. a Fr. esquiver ; Span, and Port, esquivar; Belg. schouwen; Teut. sc/teufien, probably from Teut. scheu, fear. To shrink from ; avoid; shun.

Job was perfect and upright, and one that feared •God and eschewed evil. Job i. I.

Eschew evil and do good. Heb. iii. 11.

Correct a wise man that would eschew ill name, And

fayne woulde learne, and his lewde life amende, And to thy wordes he gladly shall intende.

Barclay. 1550.

So let us, which this change of weather view, Change eke our minds, and former lives amend ;

The old year's sins forepast let us eschew, And fly the faults with which we did offend.

Spenier. fle who obeys, destruction shall eschew ;

A wise man knows both when and what to do.

Sandys.

She was like a young fawn, who, coming in the wind of the hunters, doth not know whether it be a thing or no to be eschewed. Sidney.

Of virtue and vice, men are universally to practise the one, and eschew the other. Atterbury.

ESCHRAKITES, or ESRAKITES, a sect of philosophers among the Mahommedans, who ad- here to the doctrines of Plato. The word is de- rived from the Arabic p"HP schraca, which in the fourth conjugation p"NPN aschracha, signifies to shine, or glitter like the sun; so that eschra- kite seems to import illumined. These Mahom- medan Platonists place their highest good in the contemplation of the Divine Majesty ; despising the gross descriptions in the Alcoran of Paradise. They carefully avoid vice, preserve an equal temper, love music, and divert themselves with composing poems or spiritual songs. The sheicks or priests, and the chief among the preachers of the imperial mosques, are eschrakites.

ES'CORT, n.s. & v. a. French escorte; Ital. scoria or cohorta, from Lat. cohort, a cohort or division of soldiers. Convoy, military guard : to guard or convoy : and hence to protect in any way from place1 to place.

Escort of deserters consists in general of a

corporal and three rank and file, unless the number exceed four or five. James.

ESCOT, n.s. &u.a. Fr. A tax paid in boroughs and corporations towards the support of the community, which is called scot and lot. See SCOT. To pay a man's reckoning ; to support.

W hat, are they children ? Who maintains them ? How are they escoted ? Shaktpeare. Hamlet.

ESCOUADE, or SQUAD, is usually the third or fourth part of a company of foot ; so divided for mounting guards, and for the more convenient relieving of one another. It is equivalent to a brigade of a troop of horse. See BRIGADE.

ESCO'UT, n. s. Fr. cscouter. Listeners or spies ; persons sent for intelligence. Now SCOUT, which see.

They were well entrenched, having good escout abroad, and sure watch within. Hayward.

ESCU'AGE, n. s. From Fr. escu. a shield. Etcuage, that is, service of the shield, is either uncertain or certain. Etcuage uncertain is likewise twofold : first, where the tenant by his tenure is bound to follow his lord, going in person to the king's wars so many days. The days of such service seem to have been rated by the quantity of the land so hoi- den : as, if it extend to a whole knight's fee, then the tenant was bound thus to follow his lord forty days. A knight's fee was so much land as, in those days, was accounted sufficient living for a knight ; and that was six hundred and eighty acres as some think, or eight hundred as others, or £15 per annum. Sir Thomas Smith saith, that census equestris is £40 revenue in free lands. If the land extend but to

half a knight's fee, then the tenant is bound to follow his lord but twenty days. The other kind of this escuage uncertain is called Castleward, where the tenant is bound to defend a castle. Escuage certain is where the tenant is set at a certain sum of money to be paid in lieu of such uncertain services. Cowel.

ESCUAGE, or SCUT AGE, an ancient knight's service, called also ' service of the shield ;' the tenant holding by which was obliged to follow his lord at his own expense to the Scottish or Welsh wars. Tenants sometimes compounded for it by a pecuniary satisfaction, which was levied by assessments at a certain rate ; and thus it became a pecuniary in lieu of a military ser- vice. The first instance of this occurs in 5 Hen. II. 'on account of his expedition to Tou- louse; it afterwards became more general and oppressive ; so that king John was obliged to consent, by his magna charta, that no scutage should be imposed without consent of parlia- ment ; but the clause was omitted in the charter of Hen, III. which directs, that it should be taken as it used to be in the time of Henry II. or in a reasonable and moderate manner. How- ever, it was afterwards enacted by stat. 25 Edw. I. cap. 5 and 6, and many subsequent statutes, that the king should take no aids or tasks but by the common assent of the realm ; and it appears that scutages were the ground-work of all suc- ceeding subsidies, and of the land-tax of later times. Blackst. Com. vol. ii. p. 74. Es- cuage was also a reasonable aid, demanded by the lord of his tenants, who held of him by knight's service. See AID. ' Concesserunt do- mino regi ad maritandum filiam suam de omni- bus qui terient de domino rege in capite de sin- gulis scutis 20 solidos solveudos.' Matt. Paris, anno 1242.

ESCULENT, adj. & n. s- Lat. esculentus, from esca food. Edible : any thing fit for food.

This cutting off the leaves in plants, where the root is the etculent, as radish and parsnips, it will make the root the greater, and so it will do to

the heads of onions ; and where the fruit is the etculent, by strengthening the root, it will make the fruit also the greater. Bacon's Natural History.

[knew a man that would fast five days ; but the same man used to have continually a great wisp of herbs tliat he smellcd on, and some esculent herbs of strong scent, as garlick. Id.

In Siberia the roots of the butomus, or flowering rush, are eaten, which is well worth further inquiry, as th-y grow spontaneously in our ditches and rivers,

which at present produce no esculent vegetables ; and might thence become an article of useful cultivation.

Darwin.

ESCURIAL,a village and royal residence, fif- teen miles north-west of Madrid, Spain. It is the largest and most superb structure in the kingdom, and one of the finest in Europe. The word is Arabic, meaning ' a place of rocks,' and the site is sufficiently dry and barren, surrounded with rugged mountains ; so that every thing whicli grows has been the offspring of art and culture. The place was chosen, it is said, for the sake of the stone so readily yielded here, and which is an excellent pale granite ; and the design of erecting the palace was to commemorate a victory which Philip II. obtained over the French, by the assistance of the English forces, at St. Quintin, on St. Laurence's day, in the year 1557. The Spanish description of the structure forms a considerable 4 to. volume. Its founder expended upon it six millions of ducats. The apartments are decorated with an astonishing variety of paintings, sculpture, tapestry, orna- ments of gold and silver, marble, jasper, and other curious stones. Here is also a noble and richly ornamented church ; a mausoleum ; cloisters ; convent; a college, and a library, containing about 30,000 volumes ; besides large apartments for all kinds of artists and mechanics ; and noble walks, with extensive parks,

gardens, and foun- tains. The fathers that live in the convent are 200, and they have an annual revenue of £1 2,000. The whole/ begun by Philip in 1562, com- pleted in twenty-two years. The total ex- pense was estimated at nearly £3,000,000 ster- ling. The place is a monument of Spanish magnificence and superstition united. Its seve- ral courts and quadrangles are disposed in the shape of a gridiron, the instrument of the mar- tyrdom of St. Laurence ; the apartment where the king resides forming the handle. The prin- cipal building is a long square of 640 by 580, and the height to the roof sixty feet. At each angle is a square tower of 200 feet high. The - numberof windows in the west front is 200 ; in the east front 366. The orders are Doric and Ionic. In the principal front are three doors. Over the grand entrance are the arms of Spain, carved in stone ; and a little higher, in a niche, a statue of St. Laurence, in a deacon's habit, with a gilt grid- iron in his right hand, and a book in his left. Di- rectly over the door is a basso relievo of two enor- mous gridirons. This vast structure, however, with its narrow high towers, small windows, and steep sloping roof, exhibits altogether a very uncouth appearance ; at the same time that the domes, and the immense extent of its fronts, give it, on the whole, considerable pretensions to grandeur. The church is in the centre ; the cupola is bold and light. The high altar is composed of rich marbles, agates, and jaspers of great rarity, the produce of Spain. Two magnificent catafalquas fill up the side arcades of this sanctuary : on one the emperor Charles V., his wife, daughter, and two sisters, are represented in bronze, larger than life, kneeling ; opposite are the effigies of Philip II. and of his three wives, of the same materials, and in the same devout attitude. Underneath is the burial-place of the royal family, called the

pantheon : twenty-five steps lead down to this vault, over the door of which is a Latin inscrip- tion, denoting, that ' this place, sacred to the remains of the Catholic kings,' was intended by Charles the emperor, resolved upon by Philip II., begun by Philip III., and completed by Philip IV. The mausoleum is circular, thirty- six feet diameter, incrusted with fine marble in an elegant taste. The bodies of the kings and queens lie in tombs of marble, in niches, one above the other. The collection of pictures dis- persed about various parts of the church, sacristy, and convent, was thought at one time to equal that of any gallery in Europe. Some of them were carried off by the French during the late war, but they have been subsequently restored. The library of the monastery contains a valuable collection of manuscripts and old books, al- though part of the latter were destroyed by a fire in 1671.

A beautiful road, about a quarter of a league m length, and planted on both sides with lofty elms and linden trees, leads to the village, as also does a subterraneous corridor, arched with free-stone, and called the Mina. Another road leads to Fresneria, a country-house situated a quarter of a league to the east of the palace, and in the centre of it is a piazta, supported by Doric columns. The road to Madrid is excellent, but is through a naked country. In going from Mad- rid it first winds along the Manzanarez, and, leaving the Casa del Campo, it passes Pardo, and then three houses in succession, where relays of horses are provided. It then conducts to Valde Morillo, from whence the Escurial is first seen.

Spacious reservoirs have been constructed in the neighbouring mountains for collecting the water, which is conveyed by an aqueduct to sup- ply ninety-two fountains. The royal family, before ' the Spanish revolution, inhabited the Escurial from September to December, a season almost wholly errrployed in devotion. The position of the Es- curial, according to trigonometrical observations, is W. long. 4° T 50′, and N. lat. 40° 35* 50′.

ESCUTCH'EON. Fr. ecusson, from Latin scutum, a leather shield. The shield of a family, on which originally the family arms were de- picted : hence any emblazonment of arms.

There be now, for martial encouragement, some de- grees and orders of chivalry, and some remembrance perhaps upon the escutcheon. Bacon.

We will pass over the etcutcheoru of the tribes of Israel, as they are usually described in the maps of Canaan. Browne.

Titles and mottoes to books are like escutcheons and dignities in the hands of a king. The wise sometimes condescend to accept of them ; but none 'but a fool •would imagine them of any real importance.

Goldsmith.

I have not the most distant pretensions to assume that character which the pye-coated guardians of es- cutcheons call a gentleman. Burnt.

ESCUTCHEON, or SCUTCHEON. See HERAL- DRY.

ESK, NORTH, a considerable river of Angus- shire, formed by the junction of two small rivers called the East and West Waters. It separates the counties of Angus and Mearns, and falls into

the German Ocean, two miles north-east of Mori- trose. It has three remarkable bridges over it : the first consisting of one aroh, called the Ganna- chie Bridge, about ten miles north-west of Mon- irose; the second of three arches, about four miles north of Montrose, called the Old North Water Bridge, built above 200 years ago; and the third of seven arches, near the mouth of the river, called the New North Water Bridge. Vast quantities of salmon are taken in this river and sent to London.

ESK, SOUTH, a considerable river of Angus- shire, which, after traversing the whole breadth of the county in many beautiful meanders, passes by Brechin, glides through the capacious basin and

harbour of Montrose, and falls into the Ger- man Ocean, a mile west of that town. An ele- gant new bridge, or rather two bridges, were erected over the mouth of this river in 1792-3, from Forthill to the isle of Inch-Broyock, and from that to Craig. See MONTROSE.

ESKDALE, the most eastern division of Dum- friesshire, so named from the river Esk running through it. It was formerly a lordship or barony in the family of Maxwell; but attainted on ac- count of the attachment of that family to the house of Stuart.

ESKI-SAGRA, a large town of European Turkey, in Romania, seldom visited by Euro- peans. The population, said to amount to 20,000, are employed in hardware, carpet, and leather manufactures.

ESMERALDAS, a province of Quito, South America, situated between the jurisdictions of Guayaquil and Barbacoas, on the coast of the South Sea. It is estimated at fifty-six leagues in length, and abounds in wax, copal, balsams, manilla, indigo, tobacco, and excellent cocoa. Its mountains are clothed with rare and valuable woods.

ESMERALDAS, a port of the foregoing province, situate on the coast of the South Sea, on a strip of land which forms the mouth of the river Es- meraldas.

ESMERALDAS, a considerable river of the same province, which has its rise in the mountains of Pasto, and falls into the Pacific Ocean in lat. 0° 53' N. 2. A river of Brasil, in the province of Porto Seguro, which enters the Rio Dolce.

ESNE, or ASNA, a considerable sea-port town of Upper Egypt. To the description of this place, which will be found under ASNA, we may add the following, from the Travels of Denon. ' Esne is the ancient Latopolis. Some remains are still visible of its port or quay on the bank of the Nile, which has been often repaired; but, notwithstanding all that has

been done for it, still remains in a very miserable situation. This town also contains the portico of a temple, which appears to me to be the most perfect monument of ancient architecture. It is situated near the bazaar in the great square, and would make an incomparable ornament to this spot, if the inha- habitants had any idea of its merit ; but instead of this they have deformed it by the most mi< serable ruined hovels, and have devoted it to the vilest purposes. The portico is very well pre- served, and possesses a great richness of sculp- ture : it is composed of eighteen columns with

broad capitals; these columns are noble and elegant, though they now appear in the most disadvantageous light; the rubbish should be cleared to find if any part of the cellar remains. The hieroglyphics with which it is corered,within and without, are executed with great care ; they contain, among other subjects, a Zodiac, and large figures of men with crocodiles' heads : the capitals, though all different, have a very fine effect ; and, as an additional proof that the Egyp- tians borrowed nothing from other people, we may remark, that they have taken all the orna- ments, of which these capitals are composed, from the productions of their own country, such as the lotus, the palm-tree, the vine, the rush, Sec.' The inhabitants of Esne having revolted against the persecution of Dioclesian, that emperor de- stroyed this town and put them to the sword. Thus consecrated by religion, it has long been a celebrated place of pilgrimage among the Copts, who repair to it from the most distant provinces. Mr. Hamilton says, that there is a great variety in the sculptures upon the above-mentioned por- tico, and he was inclined, from the rude manner in which they are executed, to ascribe to them a very remote antiquity. Although equally mys- terious and unintelligible with those on similar buildings

throughout Egypt, they are so nume- rous as to afford the amplest field for studying the whole range of the learning, mythology, and superstitions of the ancient inhabitants of this country. The ceiling is replete with mysterious representations; among which are figures sur- rounded with stars, and boats conveying the most mystical of their sacred animals.

ESOX, in ichthyology, a genus of fishes be- longing to the order of abdominales. The body is elongated ; the head is plainish above ; the upper jaw is plain, and shorter than the under one, which is dotted ; and the branchiostege membrane has from seven to twelve rays. Spe- cies fifteen in number. 1. E. barracuda of Catesby is found in great numbers about the seas of the Bahamas and as far as Jamaica. Its body and head very much resemble the Eu- ropean pikes : the eyes are large ; the mouth is very wide ; the Tinder jaw longer than the upper : there are four very large and sharp teeth in the front of the upper jaw ; in that of the lower, a single great and sharp tooth : there are two dorsal fins : the tail is large and forked : color a deep brown, whitish on the belly. It grows to the length of ten feet. It swims exceeding swiftly ; is of dreadful voracity; and will attack men •when they are bathing. The flesh has a dis- agreeable smell and taste, and is even poisonous; causing great sickness, vomiting, intolerable pains in the head, and loss of hair and nails ; yet the hungry Bahamans formerly were under the necessity, at times, of feeding on it. 2. E. belone, the gar, or sea needle, sometimes grows to three feet or more. The jaws are very long, slender, and sharp-pointed ; the under jaw ex- tends much farther than the upper; and the edges of both are armed with numbers of short and slender teeth ; the tongue is small : the eyes are large ; the irides silvery ; and the nostrils wide and round. The body is slender, the belly quite flat, bounded on both sides by a rough

line. The tail is much forked. The colors are extremely beautiful when the fish is in the water : the back is a fine green, beneath which appears a

rich changeable blue and purple : the sides and belly are of a fine silvery hue. This fish is found in many places, and comes in shoals on our coasts in the beginning of summer. It precedes the mackerel, and resembles it in taste ; but the light green which stains the back-bone gives many people a disgust to it. 3. E. lucius, the pike, has a flat head : the upper jaw is broad, and shorter than the lower : the under jaw turns up a little at the end, and is marked with mi- nute punctures. The teeth are very sharp, dis- posed not only in the front of the upper jaw, but in both sides] of the lower ; in the roof of the mouth, and often in the tongue. The slit of the mouth is very wide ; the eyes small. The pike is common in most lakes of Europe ; but the largest are those taken in, Lapland, which, ac- cording to Scheffer, are sometimes eight feet long. They are taken there in great abundance, dried, and exported for sale. The largest fish of this kind caught in England, weighed thirty-five pounds. All writers who treat of this species bring instances of its voraciousness. It has been known to choke itself by attempting to swallow one of its own species which proved too large a morsel. Yet its jaws are very loosely connected, and have on each side an additional bone like the jaw of a viper, which renders them capable of greater distension when it swallows its prey. It will devour the water rat, and draw down the young ducks as they are swimming abo.ut. Ges- ner relates, that a famished pike in the Rhone, seized on the lips of a mule that was brought to water, and that the beast drew the fish out before it could disengage itself; that people have been bit by these voracious creatures while they were washing their legs; and that the pike will even contend with the otter for its prey, and endeavour to force it out of its mouth. Small fishes show the same .uneasiness at the presence of this tyrant, that little birds do at the sight of the hawk or owl. When the pike lies dormant near the sur- face, as is often the case, the smaller fishes are observed to swim round it in vast numbers and in great anxiety. Pikes are often haltered in a noose, and taken while they thus lie asleep, as they are

often found in May, in the ditches near the Thames. In the shallow water of the Lin- colnshire fens they are often taken in a manner, we believe, peculiar to that county and to the island of Ceylon. The fisherman uses a hemis- pherical basket, open at top and bottom, called a crown net. He stands at the end of one of the litile fen boats, and frequently puts his basket down to the bottom of the water; then poking a stick into it, discovers whether he has any booty by the striking of the fish; and vast numbers or pike are taken in this manner. The longevity of this fish is very remarkable, if we may credit the accounts given of it. Rzaczynski tells us of ont that was ninety years old ; but Gesner relates, that, in 1497, a pike was taken near Ha Ibrun in Suabia, with a brazen ring affixed to it, on which were these words in Greek characters : ' I am the fish which was first put into this lake by the go- vernor of the universe, Frederick II. the 5th of

October, 1230.' ! ! Pikes spawn in March or April, according to the coldness or warmness of the weather. When they are in high season, their colors are very fine, being green, spotted with bright yellow ; and the gills are of a most vivid and full red. When out of season, the green changes to a gray, and the yellow spots turn pale. 4. E. saurus, the saury, is eleven inches long; the nose slender ; the jaws produced like those of the gar, but equal ; the eyes large ; the body anguilliform, but towards the tail small and taper- ing. The tail is forked ; the back dusky ; the belly silvery. Great numbers of these fish were thrown ashore on the sands of Leith near Edinburgh, after a storm in November 1768. Rondeletius describes this species among the fish of the Me- diterranean.

ESPAGNE (John d'), a French protestant divine of some celebrity in the seventeenth cen- tury, was

born at Dauphine, and became a mi- nister of the French church in London. He oc- cupied this post during the reigns of James I. and Charles I., and published several tracts, which were afterwards collected and published at Geneva and the Hague, in three and in two volumes 1 2mo., 1670. He also published a work, which he dedicated to Charles I., entitled Erreurs Populaires en points Generaux qui concernent I'lntelligence de la Religion. Bayle speaks of his pieces in high terms.

ESPAGNE, in geography. See EPAIGNE.

ESPAGNET (John d'), a French philosopher of the seventeenth century, was president of the parliament of Bourdeaux. He published a work entitled Enchiridion Physicae Restitutae ; and in French La Philosophie des Anciens retablie en sa Purete. This may be regarded as the first book that appeared in France on an Anti- Aris- totelian system of physics. He published also a work concerning the philosopher s stone, entitled Arcanum Hermeticae Philosophise Opus. Also an old MS. entitled Le Rozier des Guerres, found in the king's closet at Nerac, and attributed, though erroneously, to the pen of Louis XI. To this work he added a treatise of his own, on the Education of a Prince.

ESPALIER, n.s. Fr. espalier; Ital. spal- liera ; Swed. spulier; Teut. spalicr, probably from Goth, spala ; Swed. spiale ; Erse, spate, a lath: hut Mr. Thomson derives it from Ital. spulla ; Lat. scapula, the back between the shoulders : hence spalliera, the back of a garden bench. A tree planted and cut so as to join others.

Plant your fairest tulips in places of shelter, and under espaliers. Evelyn's Kalendar.

Behold Vilario's ten years' toil complete,

His arbours darken, his espaliers meet. Pope.

ESPALIERS are planted about a garden, or in hedges, so as to enclose quarters or separate parts of a

garden ; and are trained up regularly to a lattice of wood-work in a close hedge. They are of great use in a kitchen garden, to shelter the tender plants, and to screen them from the sight of persons in the walks. The trees chiefly planted for espaliers, are apple, pear, and plum tree? Some plant nnples grafted upon paradise stocks; but it is I n-.f to plant those grafted upon crabstocks, or Dutch stocks ; which will both cause them to bear sooner, and prevent their

growing too luxuriant. The best kind of apples ibr this purpose are the golden pippin, non- pareil, rennet or nonsuch, &c.; and' the best sort of pears, are the jargonelle, blanquette, &c. These last, if designed for a strong moist soil. should be grafted upon quince stocks ; but if for a dry soil, upon free stocks. While the trees are young, it is sufficient to drive a few stakes into the ground on each side of them ; fastening the branches to these in an horizontal position, as they are produced. This method will do for the first three years; after which an espalier should be made of ash poles, whereof there must be two sorts, larger and smaller ; the for- mer to be driven upright into the ground, a foot asunder, and the latter, or slender poles, to be nailed across these, at about nine inches. When the espalier is thus framed; the branches are to be fastened to it with other twigs ; horizontally and at equal distances. Fruit trees thus managed are preferable to any others ; not only as bear- ing better tasted fruit, but as taking up very little room.

ESPECIAL, adj. 3 Fr. special; Lai. spcci-

ESPEC'IALLY, adv. $alis a species, the appear- ance, from specto, Gr. aKtirTw; Heb. t\p'ff' t > see. Principal ; chief; especially, is particularly ; chiefly ; in an uncommon degree.

I somewhat marvel that they especially should think it absurd to oppose church government, a plain matter of action, unto matter of faith, who know that themselves divide the gospel into doctiine and

disci- pline. Hooker.

Would you proceed especially against Caius Har- ems 1 Shakspeur?.

They had the especial engines been, to rear His fortunes up. Daniel's Civil War.

This delight, children take in doing of mischief, Imt more especially the pleasure they take to put any thing to pain that is capable of it, I cannot persuad" myself to be any other than a foreign and introduced disposi- tion Lucke.

Providence hath planted in all men a natural desire and curiosity of knowing things to come j .-.u-1 such things especially as concern our particular happi- ness, or the general fate of mankind. Bit- met.

Nothing that is not a real crime makes a mail appear so contemptible and little in the eyes of lJu; world as inconstancy, especially when it regards reli- gion or party. Addison.

But especially must you attend to the occasions which most usually betray you into your favorite vie; s ; and consider the spring from whence they arise.

Mason.

I can't but say it is an awkward sight

To see one's native land receding through

The growing waters ; it unmans one quite,

Especially when life is rather new. Byron.

ESPERA'NCE, n. s. Fr. Hope. Not used.

To be worst,

The lowest most dejected things of fortune, Stands still in esperance, lives not in fear.

Shakspeare. King Lear.

Yet there is a credence in my heart, An esperance so obstinately strong, That doth invert th' attest of eyes and ears.

Shaktpeare.

ESPIERS, a town of West Flanders, in the department of Jemappe, and kingdom of the Netherlands. A considerable French force ra-

tacked the English and Austrians in this city on the 22nd of May, 1794 ; but were repulsed after an obstinate engagement.

ESPER (John Frederic), a German zoologist and astronomer of the eighteenth century, was bom at Drossenfeld, Bayreuth, in 1732. He first studied at Erlangen, where he applied himself chiefly to theological pursuits, but at the same time made himself well acquainted with natural history and botany. He died of a fever in July 1781, leaving behind him a considerable reputation as a naturalist, particularly in that department which relates to the zeolites in the principality of Bayreuth. Here is a number of large subterranean caverns, partly insulated, and partly connected with each other, which contain immense numbers of bones of various animals. The opening into them is highly pic- turesque, but almost as soon as a person enters he is surrounded by darkness, and the passage becomes still more difficult and narrow, till the eye at last is struck by the immense extent of an awful arch, which on every side presents fis- sures and clefts, strewed with the fragments of once living bodies. With the aid of an inge- nious apothecary of Erlangen, Esper undertook an examination and description of these cu- riosities, and published the result of his labors under the

following title : An Accurate Descrip- tion of the Zoolites of Unknown Animals, &c. This was published at Nuremberg, in the year 1774, in folio, with fourteen illuminated plates. Esper was also author of some papers in the Transactions of the Friendly Society of the Searchers into Nature ; and he wrote an account of A Method of determining the Orbits of Comets, and other Celestial Bodies without In- struments or Mathematical Calculations.

ESPLANA'DE, n. s. Fr. In fortification, the same with the glacis of the counterscarp ori- ginally ; but now it is taken for the empty space between the glacis of a citadel and the first houses of the town.

ESPOUSE', v. a.) Fr. espouser; Ital. spa

ESPOUS'AL, n. s. ?sare; Port, esposar ; Lat sponsare, spondere, to promise, from sponte, freely ; because he who promises does it freely, or of his own accord. To contract or promise marriage; to marry : hence to adopt, maintain, or defend : espousal is more frequently used in the plural, as the marriage contract consists ol mutual promises.

Deliver me my wife Michal, which I espoused to me.

2 Samuel. Lavinia will I make my emperess,

And in the sacred Pantheon her espouse.

Sfiakspeare.

In gratitude unto the duke of Bretagne, for his former favours, he espoused that quarrel, and declared himself in aid of the duke. Bacon's Henry VII.

The ambassador put his leg, stript naked to the knee, between the espousal sheets ; that the cere- mony might amount to a consummation. Id.

He had received him as a suppliant, protected him as a person fled for refuge, and espoused him with his kinswoman. Bacon.

With flowers, garlands, and sweet smelling herbs, Espoused Eve decked first her nuptial bed. Milton.

They soon espoused; for they with ease were joined, Who were before contracted in the mind. Dryden.

Their gods did not only interest themselves in the event of wars, but also espoused the several parlies in a visible corporeal descent

Dryden's Juvenal. Dedication.

I know it is not unusual to find a multitude of texts heaped up, for the maintaining of an espoused proposition ; but in a sense often so remote from their true meaning, that one can hardly avoid thinking that those who so used them either sought not, or valued not, the sense. Locke.

The righteousness of the best cause may be over-balanced by the iniquities of those that espouse it.

Smalridge.

You have made —the hypothesis valuable by espousing it yourself; for, had it continued Mr. Hobbes's, nobody would have minded it. Spectator.

The cause of religion and goodness, which is the cause of God, is ours by descent, and we are doubly bound to espouse it. Atterbury.

If her sire approves,

Let him espouse her to the peer she loves. Pope.

But several noblemen, of the greatest distinction, having, about this time, openly espoused their principles, they were no longer under the necessity of acting with the same reserve ; and with more security and encouragement, they had likewise greater success. Robertson. History of Scotland.

Not so when winter scowls. Assistant Art

Then acts in Nature's office, brings to pass

The glad espousals, and ensures the crop. Cowper.

ESPOUSALS, among the Jews, were either by writing, or by a piece of silver given and re- ceived, or by cohabitation. Among the Greeks, after the parents and friends of the young couple had finished their negociation, the couple them- selves pledged their faith to each other, the man swearing that he would be constant and true, the woman that she would marry him, and make him master of all she "had. Then they ratified their agreement by a. kiss and joining right hands. Among the Romans the espousals consisted in an engagement of friends on both sides, whether absent or present, in public or without witnesses. But the common way was by writings drawn up by common consent, and sealed by both parties ; the man also sent a ring to the woman, consist- ing of iron and without a stone.

ESPREMENIL (James Duval d'), was born in Pondicherry, and became counsellor of the parlia- ment of Paris, and in 1789 deputy from the no- bility to the states-general. He first distinguished himself against M. de Lally Tolendal, on the attempt of the latter to obtain a reversal of the attainder of his father, count Lally, beheaded by Louis XV. D'Espremenil early entertained the project of restoring to France the states- general ; and at the sitting of the parliament, November 19th, 1787, he spoke with great ef- fect in favor of that scheme. Renewing his animadversions on the 3rd of May, 1788, r-e was seized and banished to the isle of St. Mar- garet. Being recalled to Paris, he was nomi- nated a deputy to the states-general, when he defended the monarchy against innovators wit as much warmth as he had before opposed the oppressive measures of the ministry. When, after his speech against the re- union of the dif- ferent orders, he saw the minority of the nobles about to leave the chamber, he exclained : ' We are on the field of battle : the cowards desert us !

but let us close our ranks and we are still strong enough.' In September, 1790, he made the singular proposition to the national assembly to re-establish the monarchy. He afterwards fell a victim to revolutionary fury. On the 27th of July, 1792, he was assailed by a band of armed men, by whom he was badly wounded, and from whom he narrowly escaped with his life. His friends then entreated him to leave France, but he refused, saying he ought to await the consequences of a revolution which he had planned. He was at length condemned by its bloody tribunal, and suffered on the scaf- fold in 1793; on which occasion he called out to Pethion, mayor of Paris, 'Beware of your own fate ! I, too, was once the idol of the peo- ple.' He was at this time forty-eight years of age.

ESPRIT (James), one of the French literati of the seventeenth century, was born at Besiers in the year 1611. Having passed through his initiatory studies, he was introduced to the duke de la Rochefoucault, who procured him the patronage of the chancellor Seguier, from whom he obtained a pension from his own private purse, and another of 2000 livres, on an abbey ; together with a brevet of counsellor of state. He afterwards incurred the displeasure of the chancellor, and withdrew to the seminary of St. Magloire, where he became acquainted with the prince of Conti, and had serious thoughts of entering the church. This prince was so charmed with his conversation, that he gave M. Esprit handsome apartments in his own hotel, and a pension of a thousand crowns. In a short time Esprit gave up all thoughts of the ecclesiastical life, and determined to marry. On this occa- sion he received some handsome presents from the prince, to whom he became so much at- tached that he followed him, in 1766, to his go- vernment of Languedoc, and became his most confidential friend and adviser. At the death of his patron, he devoted the whole of his time to the education of that prince's children, and died at the place where he was born, in 1678. He left behind him Paraphrases on some of the Psalms ; and a treatise,

entitled La Faussete des Vertus humaines, in two volumes, which was published the same year in which he died, and •was intended as a commentary on the maxims of his patron the duke de la Rochefoucault. By the abbe Olivet he is supposed to have been the translator of Pliny's panegyric on "Trajan. Esprit was a member of the French Academy.

ESPRIT (St.), a town of France, in the depart- ment of the Landes, on the Adour, opposite Bayonne, and twenty-five miles south-west of Dax. Population 5100.

ESPY', v. a. & v. n.) Fr. espier. See SPY.

ESPI'AL, n. s. J To see at a distance :

hence to look at attentively, or minutely ; to discover by examination ; to watch.

As one ef them opened his sack he espied his money.

Genetit.

Moses sent me to espy out the land, aud I brought Lim word again. Jos. xiv. 7.

Stand by the way and eipy ; ask him that fleeth, What is donct Jer. xlviii. 19.

Those four garrisons issuing forth at such con- venient times as they shall have intelligence, or espial upon the enemy, will drive him from one side to another. Spenser on Ireland

On the top of all I do espye

The watchman wayting tidings glad to heare

That, O my parents ! might I happily

Unto you bring, to ease you of your misery.

Spenser, Faerie Qtteene. Eftsoones that dreadful dragon they espyde,

Where stretched he lay upon the sunny side

Of a great hill. Id.

Few there are of so weak capacity but publick evils they easily espy ; fewer so patient as not to complain, •when the grievous inconveniences thereof work sen- sibly smart. Hooker. As he marched along,

By your espials were discovered

Two mightier troops. Shakspeare.

'Spials have informed me,

The English in the suburbs close entrenched,

Went through a secret grate. Id. Henry VI.

She had some secret espials to look abroad for graceful youths, to make Plantagenets,

Bacon's Henry VII.

If the Israelites had gone on to Canaan without inquiry, their confidence had possessed it •, now they send to etpy the land, six hundred thousand of them never lived to see it. Bp. Hall's Contemplations.

He who before he was 'espied was afraid, after being perceived was ashamed, now being hardly rubbed upon, left both fear and shame, and was moved to anger. Sidney.

He had the skill, when Cunning's gaze would seek To probe his heart and watch his changing cheek, At once the observer's purpose to espy, And on himself roll back his scrutiny. Byron.

ESQUILUE, the ESQUILINE, or ESQUILINUS MONS, in ancient geography, one of the seven hills of Rome, which Varro will have to consist of two, viz. Cispius and Oppius. The name was softened from Exquilinus, and this from Excubinus, the watch or guard Romulus kept here, from a jealousy he entertained of his col- league Titus Tatius. On the east it reached the city walls and Porta Esquilina

(the Esquiline gate) so named from it ; on the south the Via Lavicana ; on the west the wide valley between mount Coesius and the Palatine ; and on the north the Viminal mount. This hill by some of the ancients was called Suburranus, from the street Suburra to the north of it; and styled by the poets Esquilius.

ESQUIMAUX, the aboriginal inhabitants of the coasts of Labrador and Hudson's Bay, North America, agreeing remarkably with the Green- landers in their customs, manners, and language. Crantz assures us in his History of Greenland, vol. i. p. 262, that the Moravian brethren, who, with the consent and furtherance of Sir Hugh Palliser, then governor of Newfoundland, visited the Esquimaux, on the Labrador coast, found that their language, and that of the Greenlanders, did not differ so much as that of the high and low Dutch. Hearne, in 1772, traced this race farther back, towards that part of the globe, from whence they had originally coasted along in their skin-boats, having met with some of them at the mouth of the Copper-mine River, in the latitude of 72°, and near 500 leagues farther west than Pickersgill's most westerly .station in

Davis's Strait. The reader of the third voyage of captain Cook will find them also at Norton Sound, at Oonaleshka, and at Prince William's Sound ; that is, nearly 1500 leagues distant from their stations in Greenland, and on the Labrador coast. See AMERICA, NORTH, chap. V.

ESQUIRE. Fr. escuier. See SQUIRE and ESCUTCHEON. A title of heraldic dignity next to that of knight. ' Those to whom this title is now of right due, says Blount, ' are all the younger sons of noblemen, and their heirs male for ever : the four esquires of the king's body ; the eldest sons of all baronets ; so

also of all knights of the Bath, and knights bachelors, and their heirs male in the right line; those that serve the king in any worshipful calling, as the Serjeant chirurgeon, serjeant of the ewry, master cook, &c., such as are created esquires by the king with a collar of S. S. of silver, as the heralds and serjeants at arms. The chief of some ancient families are likewise esquires by prescription ; those that bear any superior office in the com- monwealth, as high-sheriff of any county, who retains the title of esquire during his life, in res- pect of the great trust he has had of the posse comitatus. He who is a justice of the peace has it during the time he is in commission, and no longer. Utter barristers, in the acts of parlia- ment for poll-money, were ranked among esquires.'

What, are our English dead ? — Sir Richard Ketley, Davy Gam, esquire.

Sluikspeare.

An ESQUIRE, or SQUIRE, was originally a per- son who, attending a knight in time of war, carried his shield; whence he was called escuier in French, and escutifer or armiger, i. e. armour- bearer, in Latin. Hotoman says, that those whom the French called esquires were a military kind of vassals, having jus scuti, viz. liberty to bear a shield, and in it the ensigns of their fa- mily, in token of their gentility or dignity. But this addition has not, of long time, had any re- lation to the office or employment of the person to whom it has been attributed, as to carrying of arms, &c., but has been merely a title of dig- nity, next in degree to a knight. Officers of the king's courts, and of the king's household, counsellors at law, justices of the peace, are only esquires in reputation : and even Irish peers and all foreign noblemen, as well as the eldest sons of British peers, though commonly entitled lords, are only esquires in law, and must be so named in all legal proceedings. In late acts of parliament for poll-money, many persons, commonly reputed to be wealthy, were ranked among the

esquires of this kingdom. There is a general opinion, that every gentleman of landed property who has £300 a year, is an esquire, which is a vulgar error ; for no money whatsoever, or landed property, will give a man properly this title, unless he comes within one of the above rules. By custom, however, this title, like the Spanish title Don, is given indis- criminately to every gentleman who lives on his private fortune, as well as to rich merchants, and even opulent tradesmen. See GENTLEMAN.

ESQUIRES OF THE KING are such as have tha». title by creation, wherein the form used

is, to put about their necks a collar of SS, and bestow on them a pair of silver spurs, &c.

ESQUIRES OF THE KNIGHTS OF THE BATH are constituted by these knights, each knight of the Bath constituting three esquires, at his in- stallation.

Ess, Charles van, born in 1770, at Warburg, in the bishopric of Paderborn, entered the Bene- dictine abbey of Huysburg, near Halberstadt, in 1788, where he subsequently became prior; but on the suppression of the abbey, in 1804, he became a parish preacher at this place. In 1811, the bishop of Paderborn appointed him episcopal commissioner, with the full powers of vicar-general in the departments of Elbe and Saal. In this situation, he evinced a great predilection for the Roman see. It is said that he took but little part in the translation of the New Testa- ment which was published under his and his brother's name, and he subsequently disclaimed any cooperation in it. In 1810, he wrote a History of the Abbey of Huysburg ; and, at the time of the protestant jubilee, in 1817, a Short History of Religion, which was publicly burnt by the scholars in Halberstadt at the celebra- tion of the festival of the reformation, and which was answered by some scholars in the vicinity. He died Oct. 22, 1824. — His brother, Leander van Ess, Benedictine of the abbey of Marienmun- ster, in the territory of Paderborn, and, at a later period, a parish priest at Schwalenberg, in the principality of Lippe, and,

since 1813, profes- sor extraordinary of theology and preacher at Marburg, also one of the directors of the semi- nary for teachers at that city, has distinguished himself by his translation of the New Testament, published at Sulzbach, by Seidel. The pope, it is true, has lately prohibited this translation ; but, in 1820, a new edition appeared, under the name of Leander only. This translation has had a great influence upon the German Catholics.

ESS'AY, v. a. &. n. s. ~\ Fr. essayer ; Arm.

ESSAY'ER, ^essai,from Goth.saka,

ESSAY'ISTS.)to examine; whence

also our word SEEK. To try ; attempt ; ascer- tain the value of (as in matallurgy): hence a first attempt; endeavour; experiment; and a composition of the lighter kind, not formed upon logical rules ; an essayer or essayist is a com- poser of essays.

No conquest she, but o'er herself desired ;

No arts essayed, but not to be admired. Pope,

To the Taller, in about two months, succeeded the Spectator ; a series of essiti/s of the same kind, but written with less levity, upon a more regular plan, and published daily. Johnton, Life of Addison.

The last paper of the Rambler was published March 2nd, this year ; after which there was a cessation for some time of his talents as an essayist.

Boswelt's Life of Johnson. And wet, and cold, and lifeless at her feet,

Pale as the foam that frothed on his dead brow, Which she essayed in vain to clear (how sweet

Were once her cares, how idle seemed they now !)

Byron.

ESSAYING. See ASSAYING.

ESSECK, a fortress and town of Austria, in Sclavonia, situated on the right bank of the Drave, two miles above its influx into the Danube. The inhabitants, about 9000, live chiefly in the;

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suburbs. The fort, which is at some distance from the town, contains an arsenal, barracks, and other military buildings. The country is marshy and unhealthy. A long wooden bridge and dam traverse the Drave and the adjoining mo- rasses. Forty-eight miles W. N.W. of Peter- wardein, and eighty north-west of Belgrade.

ES'SENCE, n. s. & v. a.~) Fr. essence ; Span.

ESSEN'TIAL, adj. & n. s. > and Port, essencia ;

ESSEN'TIALLY, adv. j Ital. and Lat. es- sentia, from esse, to be. Being ; virtual or for-

Judgment s more essential to a general, ' Than courage/ Denham's Sopfnf,

The plague of sin has even altered his nature, and* eaten into his very essentials. South.

1 could wish the nature of a spirit weie more un- known to me than it is, that I might believe its ex- istence, without meddling at all with its essence.

More't Divine Dialogues.

From that original of doing good that is essential to the infinite being of our Creator, we have an excellent copy transcribed. Sprat.

Knowledge is that which, next to virtue, truly and

Addison's Guardian. The husband rails, from morning till night, at essenced fops and tawdry courtiers.

Id. Spectator. The juice of the seed is an essential oil or balm,

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mal existence, see the quotation from Watts; menria% raises One man above another, species ; pnncipal powers or virtues ; perfume : used also (improperly) for the cause of being; and, rather fantastically, for to perfume or scent. Essential is, necessary to the being or constitution of a tiling: hence important in a high degree;

pure; simple: as a substantive it is used synony- designed by nature to preserve the seed from corrup- mously with essence, and also for a chief or im- portant point or consideration.

The visible church of Jesus is one in outward pro- fession of those things which supernaturally apper- tain to the very essence of Christianity, and are ne- cessarily required in every particular Christian man.

Hooker.

She is my essence ; and I leave to be, If I be not by her fair influence Fostered, illumined, cherished, kept alive.

Shakspeare. He that loves himself, Hath not essentially, but by circumstance, The name of valour. Shakspeare. Henry VI.

Here be four of you, as differing as the four ele- ments ; and yet you are friends : as for Eupolis, because he is temperate, and without passion, he may be the fifth cssvnce. Bacon.

The discipline of our church, although it be not an essential part of our religion, should not be rashly altered, as the very substance of our religion will be interested in it. Id.

One thinks the soul is air ; another, fire ;

Another, blood diffused about the heart ; Another saitli, the elements conspire,

And to her essence each doth give a part. Dailies.

But pause, my soul ! and study ere thou fall On accidental joys, th' essential. — — And what essential joy canst thou expect Here upon earth? Donne.

True repentance is a very severe magistrate, and will strip off all that shelter and covering which would make the stripes to be less sensibly felt and reckons shame an essential part of the punishment.

Clarendon.

tion. Arbuthnot.

This power cannot be innate and essential to matter ; and if it be not essential, it is consequently most mani- fest it could never supervene to it, unless impressed and infused into it by an immaterial anil divine power. Bentley.

Our humble province is to 'tend the fair ; To save the powder from too rude a gale, Nor let th' imprisoned essences exhale. Pope.

And if each system in gradation roll, Alike essential to the amazing whole, The least confusion but in one, not all That system only, but the whole must fall. Id. A great minister puts you a case, and asks your opinion ; but conceals an essential circumstance, upon which the whole weight of the matter turns.

Swift.

The sort of definition, which is made up of a mere collection of the most remarkable parts or properties, is called an imperfect definition, or a description ; whereas the definition is called perfect, when it is composed of the essential difference, added to general nature or genus. Watts.

The hand of him here torpid lies

That drew the essential form of grace ; Here closed in death the attentive eyes, That saw the manners in the face.

Johnson's Epitaph for Hogarth.

A knowledge of the laws of our country, is a highly useful, and I had almost said essential, part of liberal and polite education. Blackstone.

And what the stoicks taught of resignation to the will of heaven, or to the decrees of fate, was so repugnant to some of their other tenets, that little

All arts acknowledge, that then only we know cer- good could be expected from it. But of every Chris-

tainly, when we can define ; for definition is that which refines the pure essence of things from the cir- cumstance. Milton. For spirits when they please,

Can either sex assume, or both ; so soft

And uncompounded is their essence pure ;

Not tied or manacled with joint or limb. Id.

As far as gods and hea enly essences

Can perish. Milton's Paradise Lost.

His utmost ire to the height enraged,

Will either quite consume us, or reduce

To nothing this essential. Id.

In such cogitations have I stood, with such a dark- ness and heaviness of mind, that I might have been persuaded to have resigned my very essence. Sidney.

Body and spirit are essentially divided, though not locally distant, GlanviUe.

tiau virtue piety is an essential part. Beattie.

The love-sick Beauties lift their essenced brows, Sigh to the Cyprian queen their secret vows, Like watchful Hero feel their soft alarms, And clasp their floating lovers in their arms.

Darwin I ask not

For valor, since Deformity is daring. It is its essence to overtake mankind By heart and soul, and make itself the equal, Aye, the superior of the rest. Byron.

ESSENCE, in metaphysics, is that which con- stitutes the particular nature of each genus or kind, and distinguishes it from all others ; being nothing but that abstract idea to which this name is affixed, so that every thing contained in it is essential to that particular kin'd. This Mr.

Locke calls the nominal essence ; in contradic- tion to the real essence, or constitution of sub- stances, on which this nominal essence depends. Thus the nominal essence of gold is that complex idea the word gold stands for ; as implying a body, yellow, weighty, malleable, fusible, and fixed ; but its real essence is the constitution of its insensible parts, on which these qualities and all its other properties depend, which is wholly unknown to us.

ESSENES, or ESSENIANS, in Jewish an- tiquity, one of the three ancient sects among that people. Some suppose they took their rise from that dispersion of their nation which took place after the Babylonish captivity. They al- lowed a future state, but denied the resurrection of the dead ; and they maintained that rewards and punishments extended to the soul only, con- sidering the body as a mass of malignant matter, and the prison of the immortal spirit. The greatest part of them considered the law of Moses as an allegorical system of spiritual and mysterious

truth, and renounced all regard to the outward letter in its explanation. They paid the highest regard to the moral precepts of the law, but neglected the ceremonial, excepting what regarded personal cleanliness, the observation of the sabbath, and making an annual present to the temple at Jerusalem. Their way of life was very singular : they did not marry ; but adopted t^e children of others, whom they bred up in the institutions of their sect ; they despised riches, and had all thiiigs in common, and never changed their clothes till they weie entirely >vorn out. When initiated, they were strictly bound not to communicate the mysteries of their sect to others ; and, if any of their members were found guilty of flagrant crimes, they were ex- pelled. Pliny tells us, that they dwelt on the west side of Asphaltites ; and that they were a solitary kind of men, living without women or money, and feeding upon the fruit of the palm tree : he adds, that they were constantly re- cruited by new comers, whom the surges of ill fortune had made weary of the world ; in which manner the sect was kept up for several thou- sands of years, without any being born among them. Philo mentions two classes of Essenes, one of which followed a practical institution, the other a professed theoretical institution. The latter, who were called Therapeutae, placed their whole felicity in the contemplation of the divine nature. Detaching themselves entirely from secular affairs, they transferred their property to their relations and friends, and retired to so- litary places, where they devoted themselves to a holy life. The principal society of this kind was formed near Alexandi ia, where they lived not far from each other in separate cottages, each of which had its own sacred apartments, to which the inhabitants retired for the purpose of devotion.

ESSENTIAL OILS are such as are really con- tained in a plant, and are drawn from it by dis- tillation in an alembic with water; they are thus called in centra-distinction to empyreuma- tic oils, which are raised by a naked fire without water.

ESSENTIAL QUALITIES of bodies are those

which are inseparable from them in all their changes and alterations, as extension, figure, number, &c.

ESSEQUIBO. See DEMERARA, and ISSE- QUIBO.

ESSEQUIBO, a river of what formerly was Dutch Guiana, is twenty miles broad at its em- bouchere, but of difficult navigation. Banks of sand run in different directions across tiie mouth, where are three islands, namely, Leguan, Wal- kenaam, and Tiger island, which separate it into four channels. Above these there is a succession of islands, extending up the river about twenty- five or thirty miles. The tide is felt about 100 miles up the stream.

ESSEQUIBO, once a Dutch, but now a British settlement, extends along the banks of the above river, and grows cotton, coffee, cocoa, and sugar. We have noticed its political history, and general statistical features, under AMERICA, SOUTH, par. 206 — 220. See also DEMERAHA.

ESSEX (Robert Devereux, second earl of), a distinguished personal favorite of queen Eliza- beth, was born in the year 1567 at Netherwood, in Herefordshire, the seat of his father, the first earl, Walter; who died in 1577. He left his heir under the guardianship of Cecil, lord Burleigh, who sent him to Trinity College, Cambridge, at twelve years of age, under the care of Dr. Whit- gift, afterwards archbishop of Canterbury. At the age of seventeen he was introduced at court, and accompanied the earl of Leicester in 1585 to Holland. This nobleman had married his mother, and young Devereux so much distinguished himself under his auspices, at the battle of Zut- phen, as to be created a knight banneret in the camp. On his return home he was made mas- ter of the horse, in the place of the earl of Leices- ter, who was advanced to the post of high steward ; and in 1588 he accompanied the queen to Tilbury, to resist the Spanish invasion, and was there decorated with the order of

the garter. In 1589 he joined, without leave of the queen, an expedition under the conduct of Sir John Norris and Sir Francis Drake, for the purpose of restoring Don Antonio to the throne of Portugal: and, while skirmishing in the neighbourhood of Lisbon, challenged, by the sound of the trumpet, the governor, or any person of equal quality with himself, to single combat. . Elizabeth expressed herself at first very indignant at this erratic con- duct of the earl ; but She was soon reconciled, and bestowed upon him some considerable grants of land. Scarcely had this momentary cloud passed over him, when he again incurred the queen's displeasure, by marrying the widow of Sir Philip Syflney. This, however, with a dis- position capricious as his own, she also soon forgave; and lord Essex was sent in 1501 with an army of 4000 men to the assistance of Henry IV. of France, then fighting against the league. He assisted in the siege of Rouen, but effected nothing of consequence. He now however retained the queen's favor steadily for some years. She created him a privy counsellor, and in 1596 he was appointed, in conjunction with the lord high admiral Howard, commander of a very successful expedition to the coast of Spain : on his return he was made master-general of the

ordnance. On peace with Spain being proposed, Essex insisted that the queen should listen to no terms of accommodation, and pressed his views on the council with considerable haughtiness : when his guardian, lord Burleigh, is said to have drawn a prayer-book from his pocket, from which he read to Essex the too prophetic warning— * Men of blood shall not live out half their days.' On the death of Burleigh he succeeded him in the chancellorship of Cambridge : and soon after, at a private council which was called to de- termine upon a proper governor to be sent to Ireland, he had a serious difference with the queen. On the dispute becoming warm, Essex, unable to persuade his sovereign, is said, con-

temptuously to have turned his back upon her ; when, provoked at his insolence, she bade him ‘ retire and be hanged,’ accompanying her com- mand with a blow on the side of his face. The favorite, thrown off his guard, instantly clasped his sword, and swore he would not put up with the affront. He withdrew in anger, and for some time seemed to set the queen’s displeasure at defiance, but at length he submitted, and was so far restored to favor, that he was himself ap- pointed governor of Ireland, ‘ the cursedest of all islands,’ as he still ventured to call it in his let- ters to the queen. In his absence his enemies at court were not idle : he was currently reported to have reflected on the queen’s age and infirmi- ties, and to have become secretly connected with the king of Scotland. He soon, therefore, resolved to return to vindicate himself: and, arriving un- expectedly at the court, threw himself at Eliza- beth’s feet, entreating her protection. She received him with apparent cordiality, but he was soon after committed to private custody, and the exercise of his public employments suspended. It was alleged that he had indulged himself in some freedoms of speech respecting the queen, which she was neither likely to forget or pardon: one was, ‘ That she grew old and cankered, and that her mind was become as crooked as her carcass.’ It was also said that, in his correspon- dence with the king of Scotland, the object was to procure a public declaration of his right of succession to the English throne, and that he would have engaged his friend, lord Mount] oy, deputy of Ireland, to bring over troops to com- pel that measure. Still he sufficiently possessed the personal favor of Elizabeth to have been able, with a prudent temper, to overcome all his diffi- culties ; but he rashly encouraged, if he did not originate, a conspiracy to seize the queen’s per- son, and remove his enemies from her councils. Elizabeth however received tidings of the plot, and sent Egerton, the lord-keeper, and other persons of distinction, to expostulate with him. These he had the rashness to detain as prisoners, whilst the earl and his friends went into the city (where he

flattered himself he was popular) to raise the inhabitants. But here he was bitterly disappointed; instead of meeting with friends, he was proclaimed a traitor, and the streets were barricadoed against the return of his party. Making his way to the river, therefore, he returned to his house in the Strand in boats, but was soon invested by the queen's forces, and obliged, with all his principal adherents, among whom was the

earl of Southampton, to make an unconditional surrender. Ho was now committed to the Tower, found guilty by a jury of peers, and received sentence of death. The queen is said long to have hesitated as to signing the warrant for his execu- tion, but was persuaded by his enemies that he wished to die, and, considering his silence insult- ing or obstinate, she at length signed it, and the earl was executed within tho Tovvei on the 25th of February, 1601. A story rejected by Dr. Lingard, but which rests on what most others of our historians have thought tolerably good evi- dence, is told concerning a ring sent by the earl to the queen during his confinement; which ring, in the height of his favor, he had received as a pledge, on the return of which, she would pardon any future offence. He is said to have entrusted this ring to the countess of Nottingham, his relation, but the wife of his enemy, the admi- ral, who would not suffer her to deliver it, by which the queen's clemency was frustrated. It is added that, upon her death-bed, the countess having confessed the secret to the queen, the latter was greatly agitated, and told her 'That God might forgive her, but she never could.'

Essex suffered in the thirty-fourth year of his age : and having exhibited together with many wild, ambitious, and violent traits of character, much that was estimable, both in public and pri- vate life. He was of an open, brav% and gene- rous disposition : of a cultivated mind ; and the decided friend of literature. He gave an estate to the ungrateful Bacon, patronised Wotton, and erected a monument to Spenser.

ESSEX (Robert Devereux, third earl of), son of the preceding, and born in 1592, was at the period of his father's death, or soon after, entered at Merton College, Oxford, under the care of the warden, Henry Saville, who had been his father's particular friend; and James I., almost imme- diately upon his succession to the throne, restored this youth to almost all his hereditary honors. He already evinced his father's high spirit, in a quarrel which he had with prince Henry. Some dispute arose between them at tennis ; when the prince calling his companion ' the son of a trai- tor,' he retaliated by giving him a severe blow with his racket ; and the king was obliged to in- terfere to restore peace. At the age of fourteen young Essex was betrothed to lady Frances Howard, who was still younger : but he imme- diately set out on his travels, and during his absence the affections of his wife were estranged from him, and fixed upon the king's favorite, Carr, afterwards earl of Somerset. The conse- quence was a suit instituted against the husband for impotency, in which the king, to his disgrace, interfered, and which ended in a divorce. The earl of Essex now retired to his country seat, and spent some years in a rural life. Being wearied however of a state of inaction, he joined the earl of Oxford in the year 1620, in a military expe- dition to the Palatinate, where they served with companies of their own raising, under Sir Horatio Vere. In the following year they served in Hol- land, under prince Maurice. The next winter they returned to England, and lord Essex ap- peared in parliament in the ranks of the oppo- sition. He was of course not favorably received

at court, and shortly after we find him command- ing a regiment, raised in England for the United States. On the accession of Charles I., hu was employed as vice-admiral in an unsuccessful expedition against Spain. In 1626 he made a third campaign in the Low Countries, and shortly after married the daughter of

Sir William. Paulet. He now courted popularity among the Puritans, and the officers of the army. He was however still employed by the k.ng in various services; but, when the measures of that monarch forced the court to retire from the metropolis, lord Essex pleaded his obligation to stay and attend in his place as peer of the realm. This fixed him in opposition to the king, and in July, 1642, he accepted the post of general of the parliamentary army : and opposed the king in person at the battle of Edge-hill. After this he was occasion- ally successful in other instances, but, though treated with external respect, he had not the entire confidence of the ruling party, and the self-denying ordinance (see CROMWELL) threw him out of the command. Unwilling, however, to lose his services altogether, the parliament voted that he should be raised to a dukedom, and be allowed £1 0,000 per annum, to support that dignity. Neither of these resolutions was car- ried into effect, and the earl died suddenly, Sep- tember 14th, 1646, when the parliament directed a public funeral for him, at Westminster Abbey. With him the title of Essex became extinct.

ESSEX, one of the eastern maritime counties of England, is bounded on the east by the Ger- man Ocean; on the west by the rivers Lea and Stort, with a part of Hertfordshire ; on the north by the river Stour, and part of Cambridgeshire ; and on the south by the Thames. Its extent from east to west is about sixty miles, from north to south fifty ; its circumference about 226 miles, containing nearly 1,2*40,000 acres. Its divisions are two-fold: natural and artificial, the first consisting of continent and islands; the latter of hundreds, towns, parishes, and hamlets. The islands lie bordering partly on the German Ocean, and partly on the Thames. The first and most valuable to the east is the island of Mersey, eight or ten miles south of Colchester. The islands towards the south-east, in the hundred of Rochford, are Foulness, Wallasea, Potten, Havengore, and New England, contiguous to each other. The remaining island, going towards the

south, is Canvey, surrounded by branches of the river Thames, and situated nearly at its mouth. There are fourteen hundreds, five smaller districts called half-hundreds, and one royal liberty, containing in all 41 5 parishes, with twenty-one market towns. This county is in the diocese of London, and the province of Canter- bury, and is included in the home circuit. It received its name from its situation, in contra- distinction to the districts occupied by the West and South Saxons. They called it East Deaxa and East Dexscire, which were changed by the Normans into Exssesa. At the time of the Roman invasion it was inhabited by the people subse- quently called Trinobantes. On the subdivision of this island by the Romans this county formed

Eart of the province named Flavia Caesariensis. Q the Heptarchy it formed a distinct kingdom.

In the popular sense of the word, the climate of Essex is mild and genial. Its northerly ana easterly winds, however, are very pernicious both to animals and vegetables ; and agues are preva- lent, notwithstanding the practice of draining and the highly improved cultivation of the lands. The surface is generally very flat and open. Indeed, Essex composes part of that tract of country on the eastern side of England, which forms the largest connected space of level ground in the island ; not one lofty eminence or rocky ridge being found in several contiguous counties. The sur face of this county, however, is not totally flat, it having many gentle hills and dales. The most level tracts are those of the southern and eastern hundreds.

The most beautiful part of Essex, without the addition of a river, is in the liberty of Havering. From Romford to Brentwood is a fine country ; but the more striking scenes are not within view of the road. From Dagenham to the earl of St. Vincent's, who commands a portion of the fine park of Mr. Towers, the country is truly beau- tiful. From Thorndon, Lord Petre's, to Epping, is all nearly of this description, a perpetual va- riety of

undulation thickly wooded with much fine timber. The fields generally offer a verdure refreshing to the eye ; and gentlemen's houses are thickly strewed in every direction. Between Hockley and Raleigh there is a very beautiful view of a rich vale, bounded by distant higher grounds; the whole, a scene to the eye of rich cultivation well woodpd Landon Hill commands the greatest and finest view in the county • the Thames is seen distinctly for many miles, and the distant hills of Kent terminate the view with an interesting outline; it exceeds the view from Danbury, though that also is a striking one. The high lands at Purfleet, formed by a chalk cliff, without the intervention of marsh, offer a scene not common on the Essex side of the Thames : it is full of business, shipping, and animation, always an agreeable prospect when mixed with rural features.

South End, now a favorite watering place, de- pends for beauty, as the scenes on tide rivers necessarily must, on the moment of view being high or low water. The river here is five miles wide ; the highlands of Sheppey and the coast of Kent are distinctly seen; and opposite is the mouth of the Medway. The cliff, on which the terrace at South End is built, is high enough to command the whole, and the broken woodland shore that sinks to the water's edge gives to it an outline of foliage.

A finer country is no where to be seen than the banks of the river Stour from Shoebury to Har- wich : the vale through which the river glides has great variety of breadth and features ; and the bounding hills in all directions offer rich scenes of cultivation ; towns, villages, steeples, farms, and woods are intermixed, and form a succession of landscapes extremely pleasing. The animated as well as decorated scene at Mistley, is at high water, singularly beautiful. From the summit of Jarvis Hill, near Barking, a most delightful pros- pect is obtained over the river Thames, which is here seen to singular advantage, spreading its ex- pansive bosom for many miles in extent, con-

tmuaily enlivened by the numerous vessels constantly navigating this important portion of the river, while the scene is rendered truly en- chanting by the broken range on the coast of Kent, the whole undulating surface, clothed with the softest verdure, and bespangled with flourish- ing villages, forming a sylvan back-ground to the view.

By much the larger portion of the soil, ex- tending diagonally quite across the county, from Walthamstow and West Ham on the Middlesex border to the Suffolk border, near Clare in that county, consists of various loams. This district contains 681 square miles. The variety of soils in this district is so great as to prevent the possi- bility of any accurate yet brief view of them. Clayey soils are found in three patches of land, the largest of which is on the borders of Suffolk and Cambridgeshire, between Saffron Walden west ; and a little beyond Tilbury east, in this county ; and from near Lindsell south, to beyond Sturmer north, containing 222 square miles, The fertile loams run along the entire borders of Kent, the Thames mouth, and the German Ocean as far as Harwich, making several indentations into the interior of the county on the eastern side. They contain 255 square miles. The chalky district, forty-five square miles, is an un- shapen tract, west north and south of Saffron Walden, particularly west of that town. Mr. Young, in his Agricultural Report, has denomi- nated that tract of land which surrounds Col- chester in nearly a circular form, embracing 255 square miles, a turnip loam. It is a dry sandy and gravelly loam, perfectly well adapted to the culture of that plant, with but few exceptions. An extensive district, containing 156 square miles, consists of a crop and fallow clay. It is a triangular tract, the base of which extands from near the northern extremity of Eppirig Forest, south-west, to Saffron Walden north. This is a Urong, wet, heavy, reddish, or brown loam, upon a whitish clay marl bottom ; adhesive, which will yield nothing without draining, and very little with it. Speaking of the soil of this county

generally, Speed says, that it is rich and fruitful, though in some places sandy and barren ; yet so that it never frustrates the husbandman's hopes, or fills not the hands of her harvest laborers ; but in some parts so fertile, that after three years glebe of saffron, the land, for eighteen more, will yield plenty of barley, without either dung or other fattening earth. This coloring is cer- tainly too high for modern times. But all its grain is of good quality, and its wheat obtains the best prices at Mark Lane. This county is dis- tinguished for its skilful agriculture.

The principal rivers are the Colne, the Black- water or Pont, the Chelmer, Crouch, Ingerbourn, Roding, and Cam. The Thames, Lea, Stort, and Stour, also contribute to the irrigation and fer- tility of this county. The principal harbour on the coast is that of Harwich, situated on a tongue of land opposite to the united mouths of the Stour and the Orwell. The greater part of Essex is well watered by the many brooks and rivers which run through its vales. The canal from Maiden to Chelmsford is of considerable utility to the ar>?arpnt villages, and e^n to narishes at

a considerable distance. There are several smaller cuts in different parts. The agricultural produce consists of live stock, chiefly calves, for which Essex has long been proverbial ; all sorts of grain and hops, coriander, teazel, caraway and saffron. Potatoes are also grown to a great extent. This county returns eight members to parliament; viz. two for the county, two foe Maldon, two for Harwich, and two for Colches- ter.

We may enumerate the following eminent men born in this county. — Samuel Angier, a nonconformist divine, one of the 2000 ejected ministers. Born at Dedham, 1545. Died 1617. —Thomas Audley, lord chancellor of England. He sat in judgment on Sir Thomas More, and bishop Fisher, in the reign of Henry VIII. — Richard de Badew, the original founder of Clare Hall, Cambridge, born at Badow, towards the close of the thirteenth century. — Dr. Thomas

Bourchier, archbishop of Canterbury, He introduced the art of printing into England, in ,1464, by bringing over a compositor from Haerlem. He was born at Hawstead. Died 1486. — Sir Anthony Cooke, tutor to Edward VI. Died 1576. He had some very learned and ac- complished daughters; one of whom was married to lord Burleigh, another to Sir Nicholas Bacon, a third to Sir John Russel, and a fourth to Sir Henry Killigrew. Lady Russel was a most ex- cellent woman and elegant scholar. — Sir William Dawes, a learned prelate, born near Braintree, 1671. Died 1724. — George Edwards, an emi- nent naturalist, born at West Ham, in 1693. Died 1773. George Gascoigne, a soldier and a poet of some merit. Died 1577. Dr. John Gauden, bishop of Exeter. He was somewhat of the spirit of the vicar of Bray, vacillating between the king and the parliament, for whom has been claimed the merit of having written the Eiicwv Bao-iXuct) ; he was born at Mayfield in 1 605. Died about 1662. — William Gilbert, a learned physician, who wrote on magnetism. Born at Colchester, 1540. Died 1603.— Sir Harbottle Grimston, a distinguished lawyer. He assisted Burnet in his History of the Reformation. Born at Bradford Hall, near Manningtree, about 1594. Died 1683. — The learned and amiable Joseph Mede, born at Berden in 1586. — Sir Walter Mildmay, the good and virtuous founder of Emanuel College, Cambridge. Born at Chelms- ford. Died 1589. &c. &c.

Few minerals are found in Essex ; and there are hardly any quarries or masses of rocks. It was formerly noted for woollen manufactures of various descriptions ; but of late they have been on the decline. Baize, however, and sacking, are still manufactured in various parts ; artificial slates are also made. Near the metropolis large calico- printing manufactories are established ; and on the Lea there are mills for making sheet lead. The plaiting of straw has also been intro- duced with success. A considerable proportion of the inhabitants are employed in the oyster fishery. About 200 vessels, of from eight to fifty tons, are engaged in dredging near the mouths of the Crouch,

the Colne. the Blackwater, and in other parts; and, independent of the supplies sent to the metropolis, oysters are exported to

the continent : it is calculated that 20,000 bushels are taken annually. See COLCHESTER. In Foulness Island there are salt water stews for various kinds of fish; and formerly there seem to have been several fish ponds for fresh water fish. In the marshy parts there are decoys for wild ducks. 'Not having before viewed a decoy in the taking season,' says the author of the Agricultural Survey of Essex, ' I had not re- marked the practice of each person taking a piece of lighted turf stuck on a table fork in his hand, to approach the decoy ; as the wild ducks, it is said, would certainly smell the person with- out this precaution, and immediately quit the pond. I found the expenses of this decoy (at Mersey) considerable ; two men who attend it, •who are paid above £100 a year; repairs, nets, rent, &c., amount in all to about £300 a year. Ducks are sometimes so low as 14s. a dozen. The contrivance for taking dun- birds was new to me. At the decoy for them, near Ipswich, there are a series of high poles, to which the nets are attached for taking them in their flight; and these poles are permanent. At this Mersey decoy, to which this bird resorts in large quantities as well as ducks, the net poles are suspended when not at work.'

Antiquities, both of the Roman and the ancient Britons, abound in Essex ; such as encampments, tesselated pavements, roads, &c., and there are besides many interesting architectural remains, both military and ecclesiastical.

ESSEX, a county of Massachusetts, thirty-eight miles long, and twenty-five broad, bounded on the south and east by the Atlantic ; north and north-west by

New Hampshire, and west by Middlesex county. The north part of the county is intersected by Merrimack River : be- tween it and the New Hampshire line are the towns of Ethuen, Haverhill, Almsbury, and Salisbury. It contained twenty-two townships. Salem is the capital.

ESSEX, a county of New Jersey, twenty-five miles long and sixteen broad ; bounded on the east by the Pasaick and Newark Bay ; south by Middlesex county; north-west by Somerset and Morris counties ; and north by Bergen. It is divided into three townships, viz. Newark, Ac- quacknack, and Elizabeth-town. The soil is very fertile.

ESSEX, a county of Virginia, fifty-five miles long and twelve broad ; bounded on the east and north- east by the Rappahannock ; south- east by Middlesex ; south and south-west by King and Queen county; and north-west by Caroline.

ESSEX, a county of the United States, in Vermont, which contained, in 1816, 3087 inha- bitant;.

ESSEX, a county of the state of New York, on the western shore of Lake Champlain, erected from Clinton county. It is about forty-three miles long north and south, and forty-one in its average breadth, being nearly square; and is bounded north by Clinton and Franklin counties, east by Lake Champlain, or the state of Vermont, south by Washington county, and west by Mont- gomery and Franklin counties.

ESSO'INE, 7i. t. Of the Fr essonie, or eion-

nie. He that has his presence forborne or ex cused upon any just cause ; as sickness. Allege- ment of an excuse for him that is summoned, or sought for, to appear and answer to an action real, or to perform suit to a court-baron, upon a just cause of absence. Excuse ; exemption.

From every work he challenged es,ioin, For contemplation sake j yet otherwise His life he led

in lawless riotise. Frierie Queene.

ESTAB'LISII, v.a. ^ Fr. etablir; Span. ESTAB'LISHER, festabluer ; Ital. stabi-

ESTAB'USHMENT, n. s. J /ire, from Lat. stab ilis, firm, from sto, to stand. To fix or settle firmly ; to ratify, form, or found. Establisher and esta- blishment follow each of these senses : but the latter word is frequently used in theology for the endowed church of these realms.

I will eitablish my covenant with him for an ever- lasting covenant. Gen. xvii. 19.

Every vow, and every binding oath to afflict the soul, her husband may establish it, or her husband may make it void. Numbert.

So were the churches established in the faith.

Actt. xvi. 5.

All happy peace, and goodly government, Is settled there in sure establishment.

Faerie Queene.

Who life did limit by almightye doome, Quoth he, knows beet the termes established. Id. Now come into that general reformation, and bring in that ettablishment by which all men should be con- tained in duty. Spenser.

We will establish our estate upon Our eldest Malcolm, whom we name hereafter The prince of Cumberland. Shahspcare. Macbeth. He had not the a-t penned by way of recogni- tion of right ; as, on the other side, he avoided to have it by new law ; but chose rather a kind of middle way, by way of establishment.

Bacon's Henry VI I.

I reverence the holy fathers as divine eitablishert of faith. L. Digby.

He appointed in what manner his family should be ettablished. Clarendon.

The Normans never obtained this kingdom by such a right of conquest, as did or might alter the established laws of the kingdom. Hide's Common Law.

It is an ettablished opinion among some men that there are in the understanding certain innate princi- ples ; some primary notions. Locke.

Whilst we set up our hopes and establithment here, we do not seriously consider that God has provided another and better place for us. Wake.

The sacred order to which you belong, and even the establishment on which it subsists, have often been struck at ; but in vain. Atterbury.

Against all this there seems to be no defence, but that of supporting one established form of doctrine and discipline. Swift.

His excellency, who had the sole disposal of the emperor's revenue, might gradually lessen your etta- Uukment. Id.

His court is immediately ettablished in the plenary possession and exercise of its rights. Franklin.

Never did a serious plan of amending any old tyrannical establishment propose the authors and abet- tors of the abuses as the reformers of them. Burke.

ESTACHAR, ESTAKER, or ISTACHAR, a town of Persia, in the province of Kuzistan, near which are the ruins of the celebrated PERSEPOLIS, which

ESTAING (Charles Henry Count d'), a French admiral

of the last century, and lieutenant-general of the armies of France. He was born at Ravel in Auvergne, and descended from an ancient family in that province, one of whom had saved the life of Philip Augustus at the battle of Bo- vines, in the twelfth century. Count d'Estaing began his career by serving in the East Indies under Lally, when he was taken prisoner by the English, and sent home on his parole. Having dishonorably engaged in hostilities again before he had been exchanged, he was, on being again taken, kept a close prisoner at Portsmouth. In the American war he was a vice-admiral, and behaved gallantly at the taking of Grenada. In

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the Revolution he was (1789) appointed to the comprehending the whole in which a person has - command of the national guard at Versailles, and suffered by the guillotine as a counter-revolut.onist ia 1793, aged ^sixty-five.

ESTATE', n. s. & v. a. Fr. etat ; Span, and

Some thought that Christ translated them [tho souls of the faithful] into a far more glorious place, and eitated them in a condition far more happy.

Pearson on the Creed.

Themistocles, the great Athenian general, being asked whether he would rather choose to marry his daughter to an indigent man of merit, or to a worth-less man of estate, replied, that he should prefer a man without an estate to an estate without a man.

Hughes.

The estate his sires had owned in ancient years Was quickly distanced, matched against a peer's. Jack vanished, was regretted and forgot : 'Tis wild goodnature's never failing lot. Cowper.

ESTATE, in law, signifies the interest that a person

has in lands, tenements, or other effects :

any property. Estates are either real or personal, otherwise distinguished into freeholds, which descend to heirs ; or chattels, that go to executors or administrators. A fee simple is the amplest

'_ . _ •j. ur aumuusucuuis. xx iee suiiuie is uie am|jit,jbi

Port, e stado ; Ital.rtoto; Lat. status, from tto, estate our law admits of. SeeFKE. Estates are

Gr. *r«w, to stand. The general interest ; stand- obtained several as> b uescent from a

ing or universal condition of things ; particular fether tQ & b conveyance or Errant from one

condition of life; fortune; possession ; rank ; n tQ another; b ift or purchase . or by

and, in an obsolete sense a person of h,gh rank. £eed Qr wi,L §ee DESC SUCCESSION, TENURE,

Shakspeare, and others of our early dramatists, use the verb for to settle as a fortune, and Pear- son for to establish generally.

Herod, on his birth-day, made a supper to his lords, high-captains, and chief estates of Galilee.

Markvi. 21.

More especially we pray for the good estate of the Catholic church ; that it may be so guided and

ESTATES, in a political sense, is used either to denote the dominions of a prince, or the general classes into which the people are divided. In Britain, the estates are the king, lords, and com- mons.

ESTE, an ancient walled town of the Venetian

governed by thy good Spirit, that all who profess and territory, in the Paduan. It is situated at the

call themselves Christians, may be led into the way of truth, &c. Common Prayer.

She is a dutchess, a great estate. Latimer.

The highest point outward things can bring unto, is the contentment of the mind ; with which no estate can be poor, without which all estate will be miserable.

Sir P. Sidney. Why hath thy queen Summoned me hither? — A contract of true love to celebrate, And some donation freely to estate On the blest lovers. Shakspeare. Tempest. To venture a sure estate in present, in hope of a better in future is mere madness. Rjleiyh.

conflux of the Bacchiglione and Gua, in a de- lightful country : containing several good build- ings, and a population of 6000. Thirteen miles south-west of Padua, and thirty-six east of Mantua.

ESTEEM', v. a., v. n. &n.s.^\ Fr. estime ;
ESTEEM'ABLE, adj. Span, and Por.

ESTEEM'ER, n. s. estima ; Ital.

ES'TIMABLE, [ttima ; Lat. as-

ES'TIMATE, v. a. & n. s. (timatio from

ESTIMA'TION, re. s. «c and rijuaw,

ES'TIMATIVE, adj. to value. Both

ES'TIMATOR, n.s. J esteem and es-

Many times the things adduced to judgment may timate signify to affix a value upon ; to calcu- late ; compare ; think, or imagine ; but the for- mer is applied to thinking of, or valuing highly, or with preference : also, as a neuter verb, to consider, or to value : esteemable and estimable mean valuable; worthy of preference.

When a man shall sanctify his house to the Lord,

then the priest shall estimate it whether it be good or bad : as the priest shall estimate it, so shall it stand. ,

Lev. xxvii. 14.

One man esteemeth one day above another ; another esteemeth every day alike. Rom. xiv. 5.

I preferred her before sceptres and thrones, and esteemed riches nothing in comparison of her.

Wit. vii. 8.

I shall have estimation among the multitude, and honour with the elders. Id. viii. 10.

The worth of all men by their end esteem, And then due praise, or due reproach them yield.

Spenser.

A knowledge in the works cf nature they honour, and esteem highly profound wisdom ; hcwbeit this •wisdom saveth not. Honker.

be meum and tuum, when the reason and conse- quences thereof may reach to point of ettate: I call matters of estate not only the parts of sovereignty, but whatsoever introduced! any great alteration, or dan- gerous precedent, or concerneth manifestly any great portion of people. Bacon's Essays.

A covetous man makes a hard shift to be as poor and miserable with a great estate, as any man can he •without it. Tillut&on.

Who hath not heard of the greatness of your estate ? Who seeth not that your estate is much excelled with that sweet uniting of all beauties ? Sidney.

Go, miser ! go ; for lucre sell thy soul ; Truck wares for wares, and trudge from pole to pole. That men may say, when thou art dead and gone, See what a vast estate he left his son !

Dryden. Pert. Thanks to giddy chance,

She cast us headlong from our high estate.

Dryden.

Truth and certainty are not at all secured by innate principles ; but men are in the same uncertain, float- ing ettaie with as without them. Locke,

EST

Crimes there were laid to hit charge many, the least whereof being just, had bereaved him of ettima- rion and credit with men. Id.

Forasmuch as to understand and to be mighty, are great qualities ; the higher that they be, they nre so much the less to be e-steemed, if goodness, also, abound not in the possessor. Sir P. Sidney.

I'd love

My country's good, with a respect more tender, More holy and profound than mine own life, My dear wife's estimate, her womb's increase, The treasure of my loins. S/iaktpeare. Coriolanvs.

Of your brace of unprizable estimations, the one is but frail, and the other casual. Shahtpeare.

I know the gentleman To be of worth and worthy estimation, And not without desert so well reputed. Id,

A pound of man's flesh, taken from a man, Is not so estimable or profitable As flesh of muttons, beefs, or goats. Id.

No man is esteemed for gay garments but by fools.

Raleigh.

In our own estimation we account such particulars more worthy than those that are already tried and known. Bacon.

Besides, those single forms she doth esteem, And in her balance doth their values try. Daviei.

Not knowing how to set a true value upon this, (time) is the true cause of the wrong estimate they make of all other things. Clarendon.

The only way to come to a true estimate upon the odds betwixt a publick and a private life, is to try both. L' Estrange.

We 6nd in animals an estimative or judicial faculty, an appetition or aversation, and loco-motive faculty answering the will. Hale.

The error is not in the eye but in the estimative facul y, which mistakingly concludes that colour to belong to the wall, which indeed belongs to the ob-ject. Boyle.

The only way for a rich man to be healthy, is by exercise and abstinence, to live as if he was poor; which are esteemed the worst parts of poverty.

Sir W. Temple.

You lost one who gave hopes of being, in time, every thing that was estimable and good. Temple.

Both those poets lived in much esteem with good and holy men in orders. Dryden's Fables. Preface.

Who would not be loved more, though he were etteemed less ? Dryden.

It is by the weight of silver, and not the name of the piece, that men estimate commodities and ex-change them. Locke.

This might instruct the proudest esteemer of his own parts, how useful it is to talk and consult with others. /j.

Outward actions can never give a just estimate of us, since there are many perfections of a man which are not capable of appearing in actions. Addison.

Upon a moderate estimate and calculation of the quantity of water now actually contained in the abyss, 1 found that this aloue was full enough to cover the whole globe to the height assigned by Moses.

Woodwa'd.

Where great eitcem is without affection, 'tis often r.ttended with envy if not with hate. Dennis.

To whom can riches give repute and trust, Content or pleasure, but the good and just ? Juoges and senates have been bought for gold, Esteem and love were never to be sold. Pope.

What has age, if it has not esteem? — It has nothing. Young

All gentlemen of fortune are, in .consequence of their property, liable to be called upon to establish

the rights, to estimate the injuries, to weigh the accu- sations, and sometimes to dispose of the lives of their fellow subjects, by cerving upon juries. Blackstone.

The English in general seem fonder of gaining th« esteem than the love of those they converse with j this gives a formality to their amusements.

Goldsmith.

No man — can pay a more servile tribute to the great, than by suffering his liberty in their presence to aggrandize him in his own esteem.

Johnson. Life of Swift.

You may, indeed, happen to lose the game to your opponent, but you will win what is better, his

esteem, his respect, and his affection ; together with the silent approbation and good-will of impartial spectators.

Franklin.

There wants some certain rule then, by which every man's knowledge is to be tried, and the value of it es- timated. Mium.

When ancient opinions and rules of life are taken away, the loss cannot possibly be estimated. From that moment we have no compass to govern us j nor can we know distinctly to what port we steer.

Burke

By this he forms, as pleased ho sports along, His well puiied estimate of right and wrong j And finds the modish manners of the day, Though loose, as harmless as an infant's play.

Cowper. Catharine has fled like a dream —

(So vanishes pleasure, alas !) But has left a regret and esteem

That will not so suddenly pass. Id.

ESTHER; inp», Heb. i.e. secret, or hid; a canonical book of the Old Testament ; contain- ing the history of

ESTHER, a Jewish lady, whose great beauty raised her to the throne of Persia ; whereby she saved her countrymen from the total extermina- tion planned by the proud Haman, prime minis- ter and favorite of king Ahasuerus. The learned are not agreed who this Ahasuerus was. Arch- bishop Usher supposes him to be Darius Hys- taspis, and Artystona to be Esther. Scaliger makes him the same with Xerxes, and his queen Hamestris to be Esther. Josephus, on the con- trary, positively asserts that the Ahasuerus of the Scriptures is the Artaxerxes Longimanus of pro- fane story : and the Septuagint, throughout the whole book of Esther, transla*e Ahasuerus by Artaxerxes.

Most authors agree in this last opinion ; and, indeed, the extraordinary kindness showed by Artaxerxes to the Jews, can scarcely be accounted for otherwise than by supposing that they had some powerful advocate like Esther.

Esther was of the tribe of Benjamin, and a descendant from one of those familes which had been carried into captivity by Nebuchadnezzar, king of Babylon, and afterwards settled in the city of Shushan. She was the niece of Mordecai, and her Jewish name was ' Hadassah.' The critics are divided about the author of this book : St. Epiphanius, St. Augustine, and Isidore, attribute it to Ezra ; but Eusebius will have it to be of a later date. Some ascribe it to Joachim, high priest of the Jews, and grandson of Josedek ; others will have it composed by an assembly, or synagogue, of the Jews, to whom Mordecai wrote letters, informing them of what happened. Esther ix. 29. But the generality of interpreters, He-

brew, Greek, Latin, &c., ascribe the book to Mordecai himself; Elias Levita, in his Mass. Hamutn., pref. 3, mentions this opinion as un- questionable.

It is chiefly founded on that passage, chap. ix. ver. 20, where it is said that i Mordecai wrote these things, and sent letters unto all the Jews, that were in all the provinces, &c.' It is also supposed that queen Esther herself might have some share therein : it being expressed in the same chapter, ver. 29, that FJsther and Mordecai wrote a second letter, by the king's authority, to ordain the solemnising a yearly feast, called purim, that is, day of lots, in commemoration of the Jews being delivered from the lots, or sortes, whereby they had been condemned.

Some will have this book to be deuterocanoni- cal, or apocryphal; others contend for its being canonical, as far as chap, x., ver. 3 inclusive, and

all the rest deuterocanonical. Of this senti- ment are, St. Jerome, De Lyra, Dionysius the Carthusian, Cajetan, and others. The council of Trent turned the scale for its being canonical throughout ; so that the matter is determined for the Catholic countries. But the Protestants re- tain the old opinion, and only admit it as far as the third verse of the tenth chapter ; the rest, to the end of the sixteenth chapter, is thrown among the apocryphal books.

ESTHONIA, a country of European Russia, adjoining to Livonia, and extending along the south side of the gulf of Finland. It is upwards of 10,000 square miles in superficial extent; but its population does not exceed 250,000. Revel, the capital, is the only considerable town, and the manufactures are on a very small scale. The hovels of the peasantry are mean, and men and cattle are frequently found under the same roof. In 1804 an imperial ukase issued to ameliorate the condition of the serfs, and another, dated June 1816, pronounced their gradual liberation in the course of fourteen years. The common people speak a dialect of the Finnish; the higher classes German. Corn, hemp, flax, cattle, and seeds, are the principal products; and are all articles of export. Esthonia once belonged to the Teutonic knights, and became an object of contest between Sweden, Russia, and Poland. The treaty of Oliva, in 1660, gave it to Sweden: that of Nystad, in 1721, to Russia, in whose pos- session it has been ever since. It is sometimes called the government of Revel, and is divided into four circles.

E’STIVAL, adj. ^ Lat. astivus. Pertain-

E’STIVATOR, n. s. >ing to, or continuing for,

ESTIVA’TION.) the summer : the act of

passing the summer.

A grotto is a place of shade or estivation. Bacon.

ESTO’PEL, n. s. Law term. Such an act as bars any legal process.

ESTOVERS, n. s. Law term. Necessaries allowed by law.

ESTOVERS, in law, is used by Bracton, for that sustenance whicli a man, committed for felony, is to have o.ut of his lands or goods for himself and his family during imprisonment. In stat. 6 Edw. I., it is used for an allowance in meat or clothes. In some manors, the tp"™ts VOL. VIII.

have common of estovers; that is, necessary botes or allowances out of the lord's wood : in which last sense, estovers comprehend house- bote, hay-bote, and plow-bote : so that if a man have in his grant these general words, ' de rationabili estoverio in boscis, &c.' he may thereby claim all three.

ESTOVERS is also used for alimony, which if the husband refuses to pay, there is, besides the ordinary process of excommunication, a writ at common law, de estoveriis habendis, in order to recover it.

ESTRADES (Godfrey), Count of, a French diplomatist of the seventeenth century, was at an early age designed for the profession of arms, and served under prince Maurice in Holland, with whom he acted as agent of the French court. He was afterwards made a marshal of France, and highly esteemed as a diplomatic character. In the year 1661 he went to England as ambassa- dor extraordinary, where he maintained with spirit the precedence of the crown of France to that of Spain. In the following year he con- cluded the peace of Breda in Holland. He was intrusted with the negociation for a general peace at Nimeguen, and acquitted himself to the satis- faction of all concerned. He sustained with great credit its various other public trusts; and, in. 1685, was nominated governor of the duke de Chartres, but died a few months after his appoint- ment, aged seventy-nine. In 1709 were pub- lished Letters, Memoirs, and Negociations, of the Count d'Estrades; an improved edition of the same work

appeared at the Hague in 1743, in 9 veils. 12mo.

ESTRANGE', v. a.) Fr. estranger. A com-

ESTRANGE'MENT, n. s. S pound of STRANGE, which see. To keep at a distance ; withdraw ; alienate from use or affection.

They have estranged this place, and have burnt in- cense in it toother gods. Jer. xix. 4. Had we not only cut off their corruptions, but also estranged ourselves from them in things indifferent, who seeth not how greatly prejudicial this might have been to so good a cause ? Hooker. How comes it now, my husband, oh, how comes it, That thou art thus estranged from thyself ? Thyself I call it, being strange to me. Shakspeare.

Adam, estranged in look, aad altered style, Speech intermitted, thus to Eve renewed.

Milton.

We must estrange our belief from every thing which is not clearly and distinctly evidenced.

Glanville's Scepsis. See, she weeps ;

Thinks me unkind, or false, and knows not why I thus estrange my person from her bed.

Dryd n.

EST RAYS, and WAIFS. Estrays are any va- luable beasts, not wild, found within a lordship, and whose owner is not known, such as are com- monly impounded and not claimed. They are then to be proclaimed in the church and in the two nearest market towns, on two market days, and, not being claimed by the owner, belong to the king, and now commonly, by grant of the crown, to the lord of the manor in the liberty. Wails arc goods which are stolen, and buried, or left by the felon on his being pursued, for feat

EST 6:

of being apprehended, and forfeited to the king or lord of the manor.

ESTRE'ES (Francis-Annibal d'), was bora in 1573, and educated for the church, in which he, at an early age, had the bishopric of Noyon con- ferred upon him by Henry IV. When he was twenty-one, however, he resigned his ecclesiasti- cal preferment, on account of the death of his elder brother, and assumed the profession of arms, in which he became distinguished under the title of the marquis De Coeuvres. He was ambassador extraordinary to Switzerland and the princes of Italy in 1614, and created marshal of France in 1626. In 1630 he succoured the duke of Mantua, who was besieged in his capital. In 1636 he was appointed ambassador extraordinary to Rome, a character in which he ably sustained the honor and interests of his master. Being re- called by his sovereign, which he considered as an affront, he refused to appear at court, to give an account of his conduct. He died at Paris in 1670, highly respected, at the great age of ninety- eight years. At the desire of cardinal Richelieu, he drew up Memoirs of the Regency of Mary de Medicis, which was published at Paris in 12mo., in the year 1660. A relation of the Siege of Mantua, in 1620, and An Account of the Con- clave, in which pope Gregory XV. was chosen, in 1621, have also been given to the public from his papers.

ESTRE'ES (Caesar d'), cardinal, son of the pre- ceding, was born in 1628, and raised to the bishopric of Laon in 1653. He was created car- dinal by Clement X. in 1671 ; and at the death of that pontiff entered the conclave, and managed so as to put off the election five weeks, till the arrival of the body of French cardinals. He was sent into Bavaria to negociate the marriage of the dauphin in 1677; and afterwards went to Rome on other important business. He sup- ported the rights of the crown, and of the Galli- can church, in opposition to pope Innocent XI. On his return to France he was rewarded with the abbey of St. Germain des Pres, where he died in 1714, in his eighty-seventh year, greatly regretted. His sister, known as the 'fair

Gabrielle,' was for many years the favorite mistress of Henry IV., who first saw her at her father's castle of Coeuvres, 1591. He had three children by her, and, notwithstanding the remonstrances of Sully, the hope of making her his queen was one of his principal inducements in urging on his divorce from Margaret of Valois. Before, however, he could attain his object, Gabrielle died suddenly, on the 10th of April, 1599, not without a strong suspicion of poison.

ESTREMADURA, an extensive province of Spain, bounded by the frontier of Portugal on the west, Salamanca on the north, Toledo on the east, and Cordova and Seville south. Its length is estimated at 140 miles, its breadth at 120. Rye, wheat, and pasturage, are the chief ob- jects of agriculture here ; and the stock of horned cattle, pigs, and goats, is considerable. Sheep, to the amount of 4,000,000 in num- ber, are sent hither every summer from the mountainous provinces, to remain during winter; but most of the raw produce is sent to Seville and Cadiz. Badajos is the chief town ; others

worth notice are Merida, Lerena, Truxillo, Al- cantara, and Placentia. Its chief rivers are the Tagus and Guadiana. There is a solitary woollen manufacture at Bejar. Population 450,000.

ESTREMADURA, a considerable province of Portugal, containing the capital, and extending along the Atlantic to the north and south ot» Lisbon, being bounded on the north by Beira, and on the east by Alentejo. It is about 140 miles in length, and seventy in breadth. The Tagus enters it on the east, and for many miles forms the boundary between this province and Beira. The climate is mild, and calculated, as well as the soil, for grain culture ; which is how- ever but little pursued, nor is pasturage much attended to. The chief products are wine, oil, honey, and fruit ; the tract between Lisbon and Abrantes is a perfect garden. Salt is obtained on the coast, and exported from Setubal in

con- siderable quantities. Population 850,000.

ESTREMOS, a strong town of Portugal, in Alentejo, situated in an agreeable neighbourhood, on the Tarra. It consists of the upper and lower towns, the former standing with the citadel on an eminence, the latter in the valley. It is one of the chief fortresses in the kingdom. Popula- tion 6500. Twenty-four miles north-east of Evora, forty-eight west of Badajos, and eighty east of Lisbon.

E'STRICH, n. s. Commonly written ostrich ; struthiocamelus. The largest of birds.

To be furious,

Is to be frighted out of fear; and, in that mood, The dove will peck the estridge. Shakspeare.

The peacock, not at thy command, assumes

His glorious train ; nor estrich her rare plumes.

Sandys.

E'STUANCE, n.s. Heat; warmth. A word rarely found.

Averroes restrained his hilarity, and made no more thereof than Seneca commendeth, and was allowable in Cato ; that is, a sober incalescence, and regulated estuance from wine. Browne.

ESTUATION, n. s. From Lat. astuo. The state of boiling ; agitation ; commotion.

Rivers and lakes that want fermenting parts at the bottom, are not excited into estuations ; therefore some seas flow higher than others. Browne.

The motion of the will is accompanied with a sen- sible commotion of the spirits, and an estuation of the blood. Norrix.

ESTWAITE, ESTHWAITE WATER, a lake of Lancashire, between Hawkshead and \Vinander- mere, two miles and a half long, and half a mile broad. It is nearly

intersected by two elevated peninsula, one from each side jutting far into it, well cultivated and bordered with trees and cop- pice wood. ' It abounds with trouts, pikes, perches, and eels, and has an outlet in the Winauder-mere, over which is a narrow stone bridge.

E'STURE. n. s. Lat. astus. Violence ; com- motion.

The seas retain

Not only their outrageous esture there, But supernatural mischief they expire.

Chapman.

E SU'RIENT, adj. > Lat. esurio. Corroding; E'SVRINE. J eating; voracious.

Overmuch piercing is the air of Hampstead, in •which sort of air there is always something esurine and acid. Wisembn.

ETAMPES, a large town of France, in the department of the Seine and Oise, situated on the Loet or Etampes, which, on its junction here with the Juine, assumes the name of Epone, and becomes navigable. It has leathern- and woollen manufactures of some extent. On the 1st of March, 1792, Etampes was the scene of several revolutionary excesses, among others the murder of its mayor. Population 8000. Twenty miles •outh of Versailles, and twenty-eight south by west of Paris.

ETAPLES, a sea-port town of France, on the English channel, at the mouth of the Canche, and containing about 1450 inhabitants, whose chief employment is fishing. Eleven miles south- east of Boulogne.

ETAWEH, a district of Hindostan, in the pro- vince of Agra, situated between the Jumna and the Ganges. After a good rainy season, it is very productive,

yielding all kinds of grain except rice ; it also produces sugar, tobacco, and cotton. In the year 1801, it was ceded by the nabob of Oude to the British ; and is governed by a judge and collector, subject to the court at Bareilly.

ETAWEH, a fortress, and the capital of the above district, situated on the eastern bank of the river Jumna, which is here very broad. It was formerly the residence of a rajah, and a place of much resort : it is situated on various distinct hills, and has many sand islands.

ETC, a contraction of the two Latin words et c&tera, which signifies, and so on ; and the rest; and others of the like kind.

ETCH', v. a. •) Ger. etzen, from Ger. eeten,

ETCH'ING, n. s. $ to eat. To engrave bythe use of aquafortis, which eats into the copper ; to nibble, eat or remove the edges : hence to move edgewise. Etching is the art of engraving in this way, or a print thus prepared.

There are many empty terms to be found in some learned writers, to which they had recourse to etch out their systems. Locke.

When we lie long awake in the night, we are not able to rest one quarter of an hour without shifting of sides, or at least etching this way and that way, more or less. Ray.

He (Durer) was the first of the Germans, who not only arrived at an exact imitation of nature, but has likewise left no second •, being so absolute a master of it, in all its parts, in etching, engraving, statuary, architecture, optics, symmetry, and the rest, that he had no equal, except Michael Angelo Buonarrotti.

Pilkington.

It has formerly been much disputed among the curious, whether Germany or Italy had the honour of

giving birth to the invention of etching, and with the view of ascertaining this point, the dates of the impressions from the earliest etching by Albert Durer and Parmegiano have been assiduously sought for and compared. Dr. A. Rees.

ETCH, n. s. Sax ebij-c. Written also eddish and EARSH, which see. Ground from which a crop has been taken or eaten ; or not impro- bably of similar origin to the foregoing 'etch.' See EAT.

When they sow their etch crops, they sprinkle a f (Hind or two of clover on an acre. Mortimer,

Where you find dunging of land makes it rank, lay dung upon the elch, and sow it with barley.

Mortimer's Husbandry.

ETCH or ETCHING, etizen German, in en- graving, is performed on copper and other metals or substances by drawing with a needle inserted in a handle, called an etching needle, on and through a thin ground, which being corroded or bitten by aqua-fortis, forms the lines upon the plate. The tools and substances employed in this free and artist-like mode of engraving are varnishes or grounds of various sorts, both hard and soft, which can be purchased at the color shops ; etching needles of various sizes, etching- boards, rules, &c. The design is transferred to the ground in the same way as directed for en- graving, and then the lines and figures are traced, drawn, or etched through the ground with the needles. See ENGRAVING.

The most eminent artists of different nations who, after Albert Durer, have distinguished themselves by their abilities in etching, and whose works are the fittest examples for the student, in Germany are Jean Guillaume Bauer; born at Strasburg in 1600, and died at Vienna in 1640 ; he engraved many battle-pieces, capriccios, and historical pieces with great ability; Mathieu Merian, 1661, who excelled in natural history, entomology, &c. ; Wenceslas Hollar, 1676, of whom G. Vertue published in London, 1752

and 1759, a description of his works in one volume 4to.; Jonas Umbach, a painter and etcher born at Augsburg in 1624, and died there about 1690, engraved many ex- cellent plates from scripture history ; Jean Henri Roos, born at Ottendorf in the Palatinate, in 1631, died at Frankfort in 1680; he excelled chiefly in animals; J. J. de Sandrart, 1698, who engraved after Raffaelle, &c.; Franc. Ettinger, 1702; Phil. Roos, 1705; Fel. Meyer, 1713 ; Jean Christophe Dietsch,also a landscape painter, born at Nuremburg in 1710, and died in 1769 ; Pierre Von Bemmel, born at Nuremburg in 1689, and died in the same city in 1723, .and- scape ; Franp de Paule Ferg, born at Vienna in 1689, died in London 1740; G. Phil. Rugendas, born at Augsburgh 1 666, died 1742 ; J. F.^Beich, born at Munich 1665, died there in 1748; J. Frey, born at Lucerne 1689, died at Rome in 1760,; Thiele, 1752; Wolfgang Kilian, 1759; Phil. Jerome Brinkmannj born at Spire 1709, died at Manheim in 1761 ; J. E. Reidinger, born at Ulm in 1698, died at Augsburgh in 1767, celebrated for his animals and hunting pieces; Francois Edmond Weirotter, bom at Inspruck in 1730, died at Vienna in 1773; Chret. Guill. Ernest Dietrich, also a painter, born at Weimar in 1712, died at Dresden in 1 774 ; his works are both numerous and excellent ; a catalogue of them is printed in Les Melanges Artistiques de M. Meusel ; Georges Fred. Schmidt, born at Berlin in 1712, died in the same city in 1775; a catalogue raisonne" of whose works, in two parts, was published at Leipsic in 1789; Christ. Louis de Hagedorn, 1780; Jos. Wagner, born at Thalendorfin1706, died at Venice in 1780; Salomon Gessner, born at Zurich, 1734, died there in 1788; Daniel Chodoweichi, born at Dantzic in 1726; his

works have been described by M. Meusel ; Bal- thasar Antoine Dunker, born at Saal near Stral- sundin!746; M. A. Geyser; H. and C. Gut- temberg; Jacques

Philippe Hackert, also a landscape painter, bom at Prenzlau, in Branden- burgh, in 1737; John Hackert, bom at Amster- dam in 1634 ; George Hackert ; Maria Angelica Kaufman, born at Coire in the Grisons in 1 747, died at Rome in 1807, also an eminent painter. Her etchings are various aud beautiful. Fer- dinand Kobell, also a landscape painter, born in 1740; Philip James De Loutherbourg, born at Strasburg in 1740, died at Hammersmith, near London, in 1812, many excellent etchings after his own designs ; Jean Meill, born at Ant- werp 1599, died at Turin in 1664 ; Oeser, Rode, Schellenberg, Tischbien, Weisbrodt, Wille, Zingg, &c. &c.

Among the artists of the Netherlands who have rendered themselves celebrated by their etchings are Lucas Sim. Frisixis, 1640; Pierre Soutman, 1640 ; many pieces after Vandyck, Rubens, &c. ; Corn. Schut, also a painter, born at Antwerp in 1590, died there in 1660; Jonas Suyderhcef, born at Leyden 1600; J. G. Van Vliet, born in Holland 1608; many spirited etchings after Rembrandt ; Ant. Van Dyck, born at Antwerp in 1559, died in London 1641 ; Jean Fyt, born at Antwerp in 1625, died in 1644; Jean Both, the celebrated painter, born at Utrecht in 1609, died at Venice in 1650, many very spirited and artist-like etchings, of which there were some fine specimens in the cabinet of M. Paignon Dijonval ; P. Potter, born at Enkhuysen in 1625, died in 1654; Pierre Van Sompelen, Jerome Wittoweck, Jacques Neefs Franc. Sneyders, the celebrated painter of animals, born at Antwerp in 1579, died in 1657; Antoine Waterloo, landscape painter, born at Utrecht in 1618, died there in 1662 ; Lucas Van Uden, born at Antwerp in 1596, died there in 1662 ; Corn. Bega, born at Haarlem in 1620, died there in 1664; his etchings are both nume- rous and excellent; Theodore Van Thulden, 1662 ; Jean Vischer, born at Amsterdam in 1636, and Corneille Vischer, born at Haarlem in 1610, died in 1673, of whose works a catalogue has been published by Ger Hecquet in 1754 ; Adrian Van der Velde, born at Amsterdam in 1639, died there in 1672, animals and landscape ; Pierre Van I.aar, born at Laaren, in Holland, in 1613, died at Haarlem in 1

674 ; Paul Rembrand van Ryn, born near Leyden in 1606, died in 1674; of the numerous etchings of this great artist several catalogues have been published, one in 1751 by Gersaint, another by Helle and Glojny in 1756, to which P. Yver added a sup- plement; in 1759 Ant. de Burgy published another, but they have been all superseded by the excellent catalogue raisonne of Adam Bartsch, published at Vienna in 1797 ; Albert VanEver- dingen, alsoa landscape painter, born at Alkmaer in 1021, died there in 1675 ; Du Jardin Mor- ghen ; Jacques Jordaens, the celebrated painter, born at Antwerp in 1594, died therein 1678; R. Stoope born in Holland 1612, died in England 1686; he engraved a set of seven pieces relating to the marriage of Charles II. aid Catherine of Portugal ; Jean Van der Velde,

born at Leyden about 1598, died 1679; Ileinier Nooms, called Zeeman, born at Anisterdam in 1612, and died in 1680; he etched many excel- lent sea pieces; Melch. Kussel, born at Augs- burg in 1621, died in 1683; Nic. Berghem, the celebrated painter, born at Haarlem in 1624, died in 1683, of whose works a descriptive cata- logue was published by Winter in 1767; Adrian Van Ostade, born at Lubeck in 1610, died at Amsterdam in 1685 ; Abr. Genoels born at Ant- werp in 1638, died in 1685; Herman Saftleven, born at Rotterdam in 1609, died at Utrecht in 1685; Roland Rogmann, born at Amsterdam in 1607, died in 1686; Jean Bischop, known by the name of Episcopius, born at the Hague ir 1646, died at Amsterdam 1686; Thomas Wyck, born at Haarlem in 1618, died there in 1686; Jacques Ruysdaal, the landscape painter, born at Haarlem in 1635, died at Amsterdam 1681 ; David Teniers, born at Antwerp in 1611, died in 1690: Herman Van Swaneveldt, born at Voerden, in Holland, in 1620, died at Rome in 1690 ; Adrian Van der Cabel, born at Rhyswick in 1631, died in 1695 ; Ant. Franc. Boudewyns, known by the name of Boudouin, 1700; Cor- neille du Sart, a painter, engraver in aqua-fortis and mezzotinto, born at Haarlem, in 1665, died there in 1704 ; Romyn de Hooghe, born at the Hague in 1638, died in 1718 ; Gerard Lairesse, born at Liege in 1640, died at

Amsterdam in 1711; Jean Luycken, born at Amsterdam in 1649, died there in 1712; Jean Gottlieb Glauber, 1726; Jean Van Hughtenburg, painter and etcher of battles, and engraver in mezzotinto, born at Haarlem in 1664, died at Amsterdam in 1733; Jean Punt, also a painter, born at Amsterdam in 1711, died in 1770; Cornelius Ploos Van Amstel, who is also celebrated for his engravings in imitation of drawings, born at Amsterdam about 1730.

The French artists have excelled in the art of etching, which they have brought to great per- fection, particularly in finished works upon a small scale. The principal who have succeeded in this spirited and artist-like department of art are Et. Du Perac, born at Paris about 1550, died in 1601 ; Jacques Callott, born at Nancy in 1593, died there in 1635 ; his works in sacred and mythological subjects, history, portraits, titles, frontispieces, grotesques, landscapes, &c., are very numerous and much admired ; Jean • Morin, born about 1612, died in 1665; Fran- cois Perrier, born at Macon in 1590, died at Rome in 1650; Laurent De La Hire, born at Paris in 1606, died there in 1656; Jean Bou- langer, born at Troyes in 1613, died in Paris in 1660; Michael Dorigny, who engraved much after Vouet, 1665 ; Et.' Bourdon. Et. Bandet, 1671 : Franc. Chauveau, born at Paris in 1620, died there in 1676 ; Abr. Bosse, born at Tours in 1610, died at Paris in 1678 ; Gabr. Perelle, born at Paris 1622, died 1680; Franf. Tortebat, born at Paris 1626, died 1690; Israel Silvestre, born at Nancy in 1621, died at Paris in 1691 ; Claudia Bousonet Stella, 1697; Jean Baptiste Monnoyer, who painted the flowers at the British Museum, born at Lisle in 1635, died at London in 1699; Elisabeth Sophie Cheron, born -dt Paris in 1648, died there in 1711 ; Sebastian Le

Clerc, born at Metz in 1637, died at Paris in

<714; a catalogue of this artist's works was pub- lished by Jombert in 1774 : Antoine Watteau, born at Valenciennes in 1684, died at Paris in

1721 ; Ant. Coypel, born at Paris in 1661, died there in 1728 ; Bernard Picart. whose numerous and excellent works have procured him a de- servedly great name, was born at Paris in 1673, and died at Amsterdam in 1733 ; Ch. NIC. Cochin, born at Troyes in 1619, died at Paris in 1686 ; J. B. Oudry, born at Paris in 1686, died in 1755; Jacques Phil, le Bas, born at Paris in

1708, died in 1782; Pierre Quentin Chedell, born at Chalons, in Champagne, in 1705, died" about the year 1762 ; Jean Moyreau, 1762; A. C. Ph. Comte de Caylus, born at Paris in 1687, died in 1765, known by the number and excel- lence of his works and his writings on antiqui- ties ; Nic. Ch. Silvestre, 1767; Ch. Hutin, born at Paris in 1715, died at Dresden in 1776; J. B. Le Prince, born at Paris in 1733, died in 1781; Ch. Nic. Cochin the younger, born at Paris in 1715, died there 1788 ; a catalogue of the works of this able artist is published by Jombert, Paris, 8vo. 1770; Laurent J. Cars, born at Lyons in 1702, died at Paris in 1771 ; Choffart, Flippart, S. Aubin, Demanteau, J. de Longueuil, Marcenay de Ghuy, De S. Non, Denon, Tardieu, De Seve, Pillement, Hibon, Willemin, &c.

Among the Italian artists who have excelled in etching are Agostino Veneziano, who etched many of the designs of Michel Angiolo, Raifaelle, &c., and died in 1514 ; Franc. Mazzuoli, com- monly called Parmegiano, born at Parma in 1504, died at Casal Maggiore in 1540; his etchings, after his own pictures, are numerous and excellent; Marco da Ravenna, died in 1540 ; Giacomo Robusti, surnamed Tintoret, born at Venice in 1512, died in 1594 ; Agostino Caracci, born at Bologna in 1558, died in 1602; Annibale Caracci, brother of the last, born at Bologna in 1560, died at Rome in 1609; F. Baroccio, born at Urbino in 1528, died at Rome in 1612 ; B. Schidone, born at Modenain 1560, died at Parma in 1616 ; C. Procaccini, born at Bologna in 1546, died at Milan in 1626; F. Villamena, born at Assisi in 1566, died at Rome in 1626; Giacomo Palma, born at Venice in 1544, died in 1628; Raffaelle Sciaminose, born in 1570, died in 1615; Guido Reni, born at

Calvenzano, near Bologna, in 1575, died in 1642; Lanfranco, born at Parma in 1581, died at Rome in 1647 ; Pietro Testa, born at Lucca in 1611, died at Rome in 1648; Guiseppe Ribera, called II Spagnuoletto, born atGallipoli in 1593, died in 1656; Giov. Franc. Barb ieri, called Guercino, born at Cento in 1590, died at Bologna in 1660; Pietro Santi Bartoli, 1670; Giov. Benedetto Castiglione, born at Genoa in 1616, died at Mantua in 1670; Salv. Rosa, bora at Naples in 1615, died at Rome in 1673 ; Gasp. Dughet, called Le Poussin, born at Rome in 1613, died in 1675; Lucas Giordano, 1705; Carlo Maratti, born at Camerino in 1625; died

t Rome in 1713 ; Pietr. Aquila, 1720 ; Marco Ricci, born at Belluno in 1689, died at Venice in 1730; J. B. Tiepolo, born at Venice in 1697, died at Madrid in 1770; Andre Scacciati, 1771,

Franc Bartolozzi, Bern. Bellotto, called Canaletti, Fr. Cunego, Piranesi, Volpato, &c. &c.

Among our English artists who have distin- guished themselves by the use of the etching needle are Franc. Barlow, who died in 1702; Dan. Marot, 1712; Jon. Richardson, born at London in 1665, died there in 1745; Arthur Pond, born in 1700, died in 1758; William Hogarth, born at London in 1608, died in 1764 ; of whose numerous and admirable works an ac.- count may be "found iii the Biographical Anec- dotes of Will. Hogarth. London, 1766; Rich. Earlom ; William Woollet, born at Maidstom; in 1735, died at London in 1785; Robert Walker, born in Somersetshire in 1572 ; James Gammon, born about 1630 ; Thomas YVorlidge, in the style of Rembrandt, born at Peterborough in 1700, died at Hammersmith in 1766 ; .1. B. Chatelain, born in England about 1710; Can- tain William Bailly, born about 1726; Thomas Gainsborough, born at Sudbury in 1727, died in 1788; Peter Tillemans, James Barry, Paul Sandby, Robert Pollard, James Gilray, the ini- mitable caricaturist, Robert Dodd, Thomas Vivares, and most of our eminent engravers.

The best works for reference concerning the subject

of etching, and of the artists who have practised it, are, among others, mentioned under ENGRAVING. Le Catalogue du Cabinet de M. de Marolles ; le Cabinet des Singularites d' Archi- tecture, de Peinture, Sculpture, et Gravure, par Florent Le Conte ; Description du Cabinet de M. Lorangcre, par M. Gersarit ; Le Cata- logue du Chevalier de la Roque, by the same author; Le Catalogue raisonne du Cabinet de M. De Fonspertuis, by the same ; that of the Cabinet de M. Mariette, par Franc. Basan ; Le Catalogue raisonne des Estampes de M. Julienne, par P. Remy ; Les Notices generates des Gravures divises par Nations, suivies d'un Catalogue raisonne d'une Collection choisi'e d'Estampes, par M. Huber; Le Catalogue du Cabinet du Comte de Praun par Christophe de Murr, 8vo. 1797; Le Catalogue raisonne des principaux Graveurs et de leurs Ouvrages, par Fuesslin ; Le Manuel des curieux et des Amateurs des Arts, by the same ; Le Dictionnaire des Artistes dont nous avons des Estampes, par le Baron, de Heinecken; Cabinet de M. Paignon Dijonval ; various periodical works, such as Le Mercure de France, la Bibliotheque et la Nouvelle Bibliotheque des Belles Lettres et des Beaux Arts, en Allerhand, les Journaux artistiques publics, par M. de Murr et M. Meusel. See ENGRAVING.

ETEOCLES, in fabulous history, the eldest son of (Edipus and Jocasta. See CREON. Hav- ing reigned one year in Thebes, he refused to give up the crown to his brother, Polynices, ac- cording to their mutual agreement. Polynices, resolved to punish such a violation of a solemn engagement, implored the assistance of Adrastus king of Argos. He received that king's daughter in marriage, and was soon after assisted with a strong army headed by seven famous generals. Eteocles chose seven brave chiefs to oppose these, and stationed them at the seven gates of the city. He placed himself against his brother Polynices, and he opposed Menalippus to

Tydeus, Polyphonies to Capaneus, Megareus to Eteoclus, Hyperbius to Parthenopaeus, and Lasthenes

to Amphiaraus. After much blood had been shed, it was at last agreed between the two brothers that the war should be decided by single combat. Inflamed with the most invete- rate fury on each side, they both fell ; and it is said that their ashes separated on the funeral pile, as if still sensible of resentment, and hostile to reconciliation.

ETER'NAL, adj. & n. s.} French eternel ;

ETER'NALIST, n. s. Span, and Port.

ETER'NALIZE, v. a. \ eternal : ItaL eter-

ETER'NALLY, adv. -nale; Lat. ater-

ETERNE', adj. 1 nus, i. e. aviter-

ETER'NITY, n. s. nus, from ovum,

ETER'NIZE, v. a. J which by inser-

tion of the jEolic digamma comes from Gr. oiwv, i. e. cut wv, ever being. Without beginning or end : hence as a substantive applied only with strict propriety, to God : without end, immortal, perpetual, constant : an eternalist is one who holds in the past eternal existence of matter or of the world : to eternalise and eternise (de- rived from the adjective) to make eternal, to per- petuate, immortalise : eterne (probably from the Fr. eterne) is an obsolete synonyme of eternal. The eternal God is thy refuge.

Deuteronomy xxxiii. 27. And well beseems all knights of noble name,

That covet in the immortal book of fama

To be eternized, that same to haunt.

Faerie Queene.

The earth- shall sooner leave her kindly skill To bring forth fruit, and make eternal derth, Then I leave you my liefe, yborn of hevealy birth.

Id.

Full hard it is, ‘ quoth he,’ to read aright The course of heavenly cause, or understand The secret meaning of the eternall might, That rules men’s waies, and rules the thoughts of living wight. Id.

That law whereby the Eternal himself doth work.

Hooker.

They which want furtherance unto knowledge, are not left in so great destitution, that justly any man should think the ordinary means of eternal life taken from them. Id.

The particular drift of every act, proceeding eternally from God, we are not able to discern ; and therefore cannot always give the proper and certain reason of his works. Id.

Thou knowest that Banquo and his Fleance lives — But in them nature’s copy ‘s not eternal.

Shafupeare. The Cyclops hammers fall

On Mars his armour, forged for proof eterne. Id.

You’ll tell me his name shall live, and that now, being dead, his works have eternised him, and made him divine ; but could his divinity feed him while he lived ? could his nature feast him ? Ben Jonton.

In this ground his precious root Still lives, which when weak times shall be poured

out

Into eternity, and circular joys Dancing an endless round, again shall rise.

Craihaw. Who would inglorious live, inglorious die.

And might eternixe his name’s memorie ?

Bp. Hall’s Satires.

For, God would, from eternity and before all worlds, ore ate all men in the world, in thai certain order,

ETE

wherein he preconceived and predestinated to create them. id,

Thy immortal rhyme Makes this one short point of time , To fill up half the orb of round eternity.

Cowley.

I might relate of thousands, and their names Eternixe here on earth ; but those elect Angels, contented with their fame in heaven. Seek not the praise of men.

Milton’s Paradise Lott. I with two fair gifts

Created him endowed ; with happiness, And immortality : that fondly lost, This other served but to eternise woe. Milton.

Beyond is all abyss,

Eternity, whose end no eye can reach ! Id.

The Eternal, to prevent such horrid fray, Hung out of heaven his golden scales. Id.

Man, that is even upou the intrinsick constitution of his nature, dissol vible, must, by being in an eternal duration, continue immortal.

Hole’s Origin of Mankind.

Mankind by all means seeking to eternixe himself, so much the more as he is near his end, doth it by speeches and writings. Sidney.

Hobbes believed the eternal truths which he op-posed. Dry den.

Both of them are set on fire by the great actions of heroes, and both endeavour to eternue them.

Id. Dufresnoy.

The four great monarchies have been celebrated by the writings of many famous men, who have eternized their fame, and thereby their own. Temple.

It is a question quite different from our having an idea of eternity, to know whether there were any real being, whose duration has been eternal ? Locke.

By repeating the idea of any length of duration which we have in our minds, with all the endless addition of number, we come by the idea of eternity.

Id.

That which is morally good, or evil, at any time, or in any case, must be also eternally and unchangeably so, with relation to that time and to that case.

South.

Bear me, some god, to Baja's gentle seats. Or cover me in Umbria's green retreats, Where western gales eternally reside, And all the seasons lavish all their pride.

Additon.

Eternity, thou pleasing, dreadful thought ! Through what variety of untried being, Through what new scenes and changes must we pass '

Id.

Hence came its name, in that the grateful Jove Hath eternised the glory of his love.

Creech's Manil.

To sounds of heavenly harps she dies away, And melts in visions of eternal day. Pope.

• Blush at terror for a death

Which gives thee to repose in festive bowers, Where

nectars sparkle, angels minister. And more than angels share, and raise, and crown, And eterntMe, the birth, bloom, bursts of bliss.

Young.

Matter being supposed eternal, there never was a time when it could be diffused before its conglobation, or conglobated before its diffusion. Johnson.

My heart was completely tinder, and was eternally lighted up by some goddess or other j and as in every other warfare in this world my fortune was various, sometimes I was received with favour, and sometimes I was mortified with a repulse. Burns.

ETH <

Can glittering plume, or can the imperial wreath

Redeem from unrelenting fate the brave ? What note of triumph can her clarion breathe, T' alarm the eternal midnight of the grave ?

Beattie.

Lo where it comes like an eternity, As if to sweep down all things in its tract, Charming the eye with dread. Byron.

ETESI.ZE or ETESIAN WINDS, are such as blow at stated times of the year, from what part soever of the compass they come. They are so called from the Greek word tro$, year, being anniversary winds, such as our seamen, call monsoons and trade winds, which in some parts of the world continue constantly blowing for certain stated seasons of the year. Thus, the north winds, which, during the dog-days, con- stantly blow upon the coasts of Egypt, and hinder all ships from sailing out of Alexandria for that season, are called etesiae in Caesar's Commentaries. See EGYPT. In other authors, the west and east winds are called etesite, when they continue Wowing for certain seasons of the year. Cellarius endeavours to prove that those winds are

pro- perly etesian, which blow from that part of the horizon which is between the north and west aliout the times of the solstice. In ancient writers they are represented as very mild and gentle ; and were called by mariners somniculosi and delicati, from their sleeping, or ceasing to blow in the night.

ETFU, or EDFOU, in geography, a village of Upper Egypt, situated near the Nile, above Esneh, built on the ruins of the great city of Apollo, or Apollinopolis Magna. It possesses an ancient temple, covered with hieroglyphics. 'The extent, majesty, and preservation of this edifice, says Denon,' who has given a view of it, ' surpassed all that I had seen in Egypt, or else- where; ,it made an impression on me as vast as its own gigantic dimensions. This building is a long suite of pyramidal gates, of courts decorated with galleries, of porticoes, and of covered naves, constructed, not with common stones, but entire rocks.' ' The excellent preservation of this an- cient edifice forms a wonderful contrast with the gray ruins of modern habitations built within its vast enclosure ; a part of the population of this village is contained in huts built in the courts, and around the fragments of the temple; which, like swallows' nests in our houses, defile them without concealing or injuring their general ap- pearance.' Below Etfu, the country becomes narrow, so that there is only a quarter of a league in breadth between the desert and the river.

E'THER, n. s. ^ Fr. ether ; Lat. cither ; Gr. ETHE'REAI., ad;. >ai0»jp, from ai0w, to burn. ETHE'REOUS, adj.j An element of greater sup- posed subtilty than the air ; the element of the heavenly regions : the adjectives both mean formed of ether, celestial or heavenly. They rove abroad in ether blue, To dip the sithe in fragrant dew ; The sheaf to bind, the beech to fell, That, nodding, shades a craggy dell.

Warton.

Go, heavenly guest, ethereal messenger, Sent from

whose sovereign goodness I adore.

Milton.

m ETH

Behold the bright surface

Of this ethereous mould, whereon we stand. Id
Thrones and imperial powers, offspring of Heaven
Ethereal virtues ' Id, Paradise Lost.

Such as these, being in good part freed from the entanglements of sense and body, are employed, like the spirits above, in contemplating the Divine Wis- dom in the works of nature ; a kind of anticipation of the ethereal happiness and employment.

Qlanville.

Thpre fields of light and liquid ether flow, Purged from the ponderous dregs of earth below.

•Dry den.

The parts of other bodies are held together by the eternal pressure of the ether, and can have no other conceivable cause of their cohesion and union.

Locke.

If any one should suppose that ether, like our air, may contain particles which endeavoured to recede from one another ; for I do not know what this ether is • and that its particles are exceedingly smaller than those of air, or even than, those of light, the exceed- ing smallness of its particles may contribute to the greatness of the force by which those particles may recede from one another. Newton.

Vast chain of being, which from God began, Natures ethereal, human ; angel, man. Pope.

— ' Let there be light !' proclaimed the Almighty- Lord,

Astonished Chaos heard the potent word ; Through all

his realms the kindling ether runs, And the mass starts into a million suns. Darwin.

The Giant Form on Nature’s centre stands, And waves in ether his unnumbered hands ; Whirls the bright planets in their silver spheres, And the vast sun round other systems steers. Id. High over the fields of boundless ether roves, And seeks amid the clouds her soaring loves. Id.

Love wreaths the flowery ways with fatal sn are. And nurse the ethereal fire that warms thy heart, That fire ethereal lives but by thy care. lieattie.

Along the plain The joyous swain, Eyes the gay villages again, And gold-illumined spire ; While on the billowy ether borne Floats the loose lay’s jovial measure. Id.

The trumpet breathed a note : and all in air.

The glories vanished from the dazzled eye ; And three ethereal forms, divinely fair,

Down the steep glade were seen advancing nigh.

Id.

ETHER, or ./ETHER, in chemistry, a com- pound of an acid and alcohol, of which there are several different kinds, such as nitric, sul phuric, muriatic ethers; which the reader will find described at length under the article CHE- MISTRY. Its medical uses will be treated of in the article PHARMACY.

ETHERIA, an ancient name of Ethiopia. ETHERIDGE (Sir George), a celebrated wit and comic writer, in the reign of Charles II. arid James II. descended from an ancient family in Oxfordshire, and born in 1636. He travelled in his youth ; and, disliking the study of the law, devoted himself to the drama. His first dramatic performance, the Comical Revenge, or Love in a Tub, appeared in 1664 : and introduced him to the leading wits of the time: in 1668 he produced a comedy called She would if she could; and, in 1676, he published his last comedy, called the Man of Mode, or Sir Fopling

Flutter. This piece is dedicated to the beautiful duchess of York, in whose service he then was ; and who had so high a regard for him, that when, on the accession of James II., she came to be queen, she procured him the situation of ambassador, first to Hamburgh, and afterwards to Ratisbon, where he continued till the revolu- tion. Being addicted to extravagance, he had greatly impaired his fortune ; to repair which, he paid his addresses to a rich widow ; but she refused to marry any man who could not bestow a title upon her; on which account he was obliged to purchase a knighthood. No author has fixed the period of his death, but some place it soon after the Revolution. Some say, he fol- lowed king James into France, and died there ; but the authors of the Biographia Britannica mention a report, that after having entertained some company

at his house at Ratisbon, where he had taken his glass too freely, and being too forward in waiting on his guests at their depar- ture, flushed as he was, he tumbled down stairs and broke his neck. As to Sir George's literary character, he seems to have been endued with a genius whose vivacity needed no cultivation : for we have no proofs of his having been a scho- lar. His works, however, have been justly cen- sured on account of their licentiousness.

ETH'IC, adj. ~\ Gr. qfticoc, moral, from ETH'ICAL, adj. f »/0of, originally a house ETH'ICS, n. s. £ thence the manners of per- y. Jsons in houses. Relating

to morals, or moral philosophy : the plural ethics is more commonly used to express a moral sys- tem, or the doctrine of morals.

For of all moral virtues, she was all That ethicks speak of virtues cardinal. Donne.

I will never set politicks against ethicks ; for true ethicka are but as a handmaid to divinity and religion.

Bacon.

Persius professes the stoick philosophy ; the most generous amongst all the sects who have given rules of ethiclu. Dryden.

If the atheists would live up to the ethicks of Epicu- rus himself, they would make few or no proselyte* from the Christian religion. Bentley.

My subject leads me not to discourse ethically, but Christianly, of the faults of the tongue.

Government of the Tongue,

ETHIOP, n. s. ? From ETHIOPIA :

ETHIOPIAN, adj. & n. s, 5 see below. A native of Ethiopia ; pertaining to that country ; dark, black

in complexion : and hence dark in charac- ter, of ill repute.

Can the Ethiopian change his skin, or the leopard his spots. Jer. xiii. 13.

Since her tinoe are colliers counted bright. And Ethiopt of their sweet complexion crack.

Shakspeare.

Earn dirty bread by washing Ethiops fair.

Young.

ETHIOPIA.

ETHIOPIA, a celebrated empire of Africa, whose boundaries have never been exactly de- fined either by ancient or modern geographers. It is generally divided into Upper and Lower : the former taking in modern times the name of ABYSSINIA, which see.

Some writers of antiquity gave the title of Ethiopians to all nations whose complexion was black : hence we find the Arabians as well as many other Asiatics sometimes falling under this denomination ; besides a number of Africans whose country iay at a distance from Ethiopia Proper. Thus the Africans in general were by these writers divided into the western or Hespe- rian Ethiopians, and those above Egypt situated to the east of the former ; the latter being much more generally known than the former, by the commerce they carried on with the Egyptians. From this account we may easily understand, why such an apparent disagreement exists among ancient authors concerning the situation of Ethiopia, as likewise why it should pass under such a variety of names. Sometimes it was named India, and the inhabitants Indians; an appellation likewise applied to many other dis- tant nations. Sometimes it was denominated Atlantia and Etheria, and in the most remote periods of antiquity Cephenia ; but more usually Abasene, a word resembling its modern names, Ihibash, Abassia, or Abyssinia. On the other hand, we find Persia, Chalcltca, Assyria, &c.,

styled Ethiopia by some writers; and all the countries extending along the coast of the Red Sea were promiscuously denominated India and Ethiopia, By the Jews the empire of 'Ethiopia was styled Cnsh and Ludim. Notwithstanding this diversity of appellations, and vast diffusion of territory ascribed to the Ethiopians, there was one country to which the title was thought more properly to belong than to any of the rest; and which was therefore called Ethiopia Pro- pria. This was bounded on the north by Egypt, extending all the way to the lesser cataract of the Nile, and the island namfed Elephantine ; on the west it had Libya interior ; on the east the Red Sea, and on the south unknown parts- of Africa; though these boundaries cannot be fixed with any precision.

A great variety of different nations are of course found in the ancient descriptions of this empire ; to whom they gave names either from some personal property, or from their manner of living. The principal of these were, 1. The Blemmyes, seated near the borders of Egypt ; and who, probably from the shortness of their necks, were said to have no heads, but eyes, mouths, &c. in their breasts. Their form, some- how or other, must have been very extraordinary, as we learn from Vopiscus, who gives an accoun of some of the captives of this nation brouirh to Rome. 2. The Nobatae, inhabiting the bunk? of tbe Nile near the island Elephantine, said t«*

have been removed thither by Oasis to repress the incursions of the Blemmyes. 3. The Tro- glodytes, by some writers said to belong to Egypt, and described as little superior to brutes. 4. The Nubians. See NUBIA. 5. The Pig- mies, by some supposed to be a tribe of Tro- glodytes ; but by the most approved writers placed on the African coast of the Red Sea., b'. The Aualitae or Abalitae, of whom \ve know no- thing more than that they were situated near the

Abalitic Gulf. 7. The Struthiophagi, so called from their feeding upon ostriches, were situated to the south of the Memnones. 8. The Acri- dophagi. 9. Chelonophagi. 10. Ichthyophagi. 11. Cynamolgi. 12. Elephantophagi. 13. llhi- fcophagi. 14. Spermatophagi. 15. Hylophagi, and 16. Ophiophagi; all of whom had their names from their common food, viz. locusts, tortoises, fish, bitches' milk, elephants, roots, fruits or seeds, shrubs, and serpents. 1 7. The Hylogones, near to the Elephantophagi, and who were so savage that they had no houses, nor any other places to sleep in, but the tops of trees. 18. The Pamphagi, who used almost every thing indiscriminately for food. 19. The Agnophagi, who lived on the flesh of wild beasts. 20. The Anthropophagi, or man-eaters, now supposed to have been the Caffres, and not any inhabitants of Proper Ethiopia. 21. The Hippophagi, or horse-eaters, who lay to the north of Libya In- cognita. 22. The Macrobii, a powerful nation, remarkable for their longevity ; many of them attaining the age of 120 years. 23. The Sambri, situated near the city of Tenupsis in Nubia upon the Nile ; of whom it is reported that all the quadrupeds they had, not excepting even the elephants, were destitute of ears. 24. The Asachae, a people inhabiting the mountainous parts, and continually employed in hunting ele- phants. Besides these, there were a number of other nations or tribes, of whom we scarcely know any thing but the name, as the Gapachi, Pto- emphanes, Catadupi, Pechini, Catadrse, &c.

The most famous cities and towns of ancient Ethiopia, were Abalis, Axum, Caloe, Melis, Mondus, Mosylon, Napata, Opone, and Premis or Premnis.

Of a country inhabited by such a variety of nations as we have above enumerated, all in a state of extreme barbarism, it is rather to be wondered that we have any history at all, than that it is not more distinct. It is generally agreed that Cush was the great progenitor of the inhabitants, and hence the country has sometimes been named from him. Many authors are of opinion, that Ethiopia received its

first inhabi- tants from the country lying east of the Red Sea; and that the descendants of Cush, having settled in Arabia, gradually migrated to the south-east extremity of that country ; whence, by an easy passage across the straits of Babelmandel, they transported themselves to the African side, and entered the country properly called Ethiopia : a migration which, according to Eusebius, took place during the residence of the Israelites in Egypt : but, in the opinion of Syncellus, after they had taken possession of Canaan, and were governed by judges. Mr. Bruce mentions a tradition among the Abyssinians, which, they

say, has existed among them from time imme- morial, that very soon after the flood, Cush, the grandson of Noah, with his family, passed through Atbara, then without inhabitants, till they came to the ridge of mountains, which se- parates that country from the hi»h lands of Abyssinia. Here, still terrified with the thoughts of the deluge, and apprehensive of a return of the same calamity, they chose to dwell in caves- made in the sides of these mountains rather than trust themselves in the plains of Atbara; and our author is of opinion, that the tropical rains which they could not fail to meet with in their journey southward, and which would appear like the return of the deluge, might induce them to take up their habitations in these high places. Be this as it may, he considers it as a fact, ' that here the Cushites, with unparalleled industry, and with instruments utterly unknown to us, formed to themselves commodious, yet wonder- ful, habitations in the herirt of mountains of gra- nite and marble, which remain entire in great numbers to this day, and promise to do so till the consummation of all things.' The Cushites, having once established themselves among these mountains, continued to form similar habitations in all the neighbouring ones ; and, thus follow- ing the different chains, spread the arts and sciences, which they cultivated, quite across the African continent from the eastern to the western ocean. According to the tradition above men- tioned, they

built the city of Axum, early in the days of Abraham. This city was anciently noted for its superb structures, of which there are still some remains. Among these is a magnificent temple, originally 110 feet in length, with two wings on each side, a double porch, and an as- cent of twelve steps. Behind this stand several obelisks of different sizes. Mr. Bruce mentions some 'prodigious fragments of colossal statues of the dog-star,' still to be seen at this place ; 'and Seir,' adds he, 'which, in the language of the Troglodytes, and in that of the low country of Meroe, exactly corresponding to it, signifies a dog, instructs us in the reason why this pro- vince was called Sire, and the large river which bounds it Siris.' Soon after bounding the city of Axum, the Cushites founded that of Meroe, the capital of a large island in the Nile, where, according to Herodotus, they pursued the study of astronomy, in very early ages with great suc- cess. See MEROE. Mr. Bruce gives two reasons for their building this city in the low country, after having built Axum in the mountainous part of Abyssinia. 1. They had discovered some inconveniences in their caves both in Sire and the country below it, arising from the tropical rains in which they were npw involved, and which prevented them from making the celestial observations to which they were so much ad- dicted. 2. It is probable that they built this city farther from the mountains than they could have wished, in order to avoid the venomous fly, called tsaltsalya, and zimb, with which the southern parts were infested. Meroe, which lay in latitude 16° north, the exact limit of the tro- pical rains, was without the bounds assigned by nature to these destructive insects ; and con- sequently a place of refuge, for the cattle. Mr.

Bruce, on his return through the desert, saw at Gerri, in this latitude, ruins, supposed to be those of Meroe, and caves in the mountains im- mediately above them ; for he is of opinion, that they did not

abandon their caverns imme- diately after they began to build cities. As a proof of this, he mentions that Thebes, in Upper Egypt, was built by a colony of Ethiopians : and that near the ruins of that city, a vast num- ber of caves are to be seen even up to the top of a mountain in the neighbourhood; all of which are inhabited at this day. By degrees, however, they began to exchange these subter- raneous habitations for the cities they built above ground ; and thus became farmers, arti- ficers, &c., though originally their sole employ- ment had been commerce.

Besides the territories already mentioned, the Cushites had extended themselves along the mountains which run parallel to the Red Sea on the African side ; which • country, according to Mr. Bruce, has ' in all times been called Saba, or Azaba, both of which signify south ;' an epi- thet given it from its lying south of the Arabian Gulf, and which in ancient times was one of the richest and most important countries in the world. ' By that acquisition,' says Mr. Bruce, 1 they enjoyed all the perfumes and aromatics in the east ; myrrh, and frankincense, and cassia ; all which grow spontaneously in that strip of ground from the Bay of Bilur west of Azab to Cape Gardefan, and the southward up in the In- dian Ocean, to near the coast of Melinda, where there is cinnamon, but of an inferior kind.' As the Cushites advanced still farther south they met not only with mountains, in which they might excavate proper habitations, but likewise with great quantities of gold and silver furnished by the mines of Sofala, which, our author says, fur- nished ' large quantities of both metals in their pure and unmixed state, lying in globules without alloy or any necessity of preparation or separation.' In other parts of this work he endeavours to prove Sofala to have been the Ophirof Scripture. See OPHIR.

Thus the Ethiopians, for some time after their settlement, according to Mr. Bruce, must have been a nation of the first importance in the world. The northern colonies from Meroe to Thebes built cities,

and made improvements in architec- ture; cultivated commerce, agriculture, and the arts ; not forgetting the science of astronomy, for which they had an excellent opportunity by the clearness of the sky in the Thebaid. Their brethren farther south, or those who inhabited Ethiopia, properly so called, were confined for six months to their caves by the tropical rains, whence they were naturally led to pursuits of another kind. 4 Letters,' says Mr. Bruce, ' at least one kind of them, and arithmetical characters, were invented by this middle part of the Cushites; while trade and astronomy, the natural history of the winds and seasons, were what necessarily employed that part of the colony established at Sofala most to the southward.' Travels, vol. i. p. 383.

While the Cushites were thus employed at home in collecting gold, gathering and preparing spices, &c., these commodities were sent into other countries by another set of people named Shep-

herds, who acted as carriers to them, and who afterwards proved so formidable to the Egyptians. See EGYPT. These differed in their appearance from the Ethiopians, having long hair, and the features of Europeans ; and were of a very dark complexion, though not at all like the negroes. They lived in the plain country in huts or move- able habitations, attending their cattle, and wandering up and down as circumstances re- quired. By acting as carriers to the Cushites, they became a great and powerful people, pos- sessing vast numbers of cattle, as well as a very considerable extent of territory. They possessed a strip of land along the Indian Ocean ; and ano- ther north of that along the Red Sea ; but their principal habitation was the flat part of Africa, between the northern tropic and the mountains of Abyssinia, which country is now called Beja. This reaches from Masuah along the sea-coast to Suakem ; then turns west, and continues in that direction, having the Nile on the south, the tropic of Cancer on the north, and the deserts of Seiiinu and Libya on the west. The next district was Meroe, now called Atbara, lying between the rivers Nile and

Astraboras. A third district, now called Derkin, is a small plain lying between the river Mareb on the east, and Atbara on the west. But the most warlike of all the shepherds were those who possessed the mountains of Ila- bab, reaching from the neighbourhood of Masuah to Suakem, which district is still inhabited by them. * These shepherds,' says Mr. Bruce, ' were distinguished by several different appellations, which maybe supposed to denote different de- grees of rank among them.' Those called simply shepherds, he supposes to have been the persons who attended the flocks. Those called Ilycsos or Agsos, signifying armed shepherds, are sup- posed to have been the soldiers. A third class were named A

ference in opinions. Besides the Cushites and Shepherds, Mr. Bruce allows that there are va- rious nations inhabiting this country, who are fairer than either, and which, though they have each a particular name, are all known by the ge- neral title of Habesh ; which may be translated by the Latin word convenae, signifying a number of distinct people meeting accidentally in one place ; and which our author maintains against Scaliger, Ludolf, &c. to be a very just translation, quite consonant to the history of Ethiopia. Mr. Bruce proceeds to prove that the ancient Ethio- pians were not only the most learned people in the world, but that they spoke the original lan- guage, and were the inventors of writing. In what manner they came to degenerate into their present state of barbarity, cannot be known ; this being a phenomenon equally unaccountable with the degeneracy of the Egyptians.

The most authentic ancient history of this country, according to Mr. Bruce, is the Chroni- cle of Axum : the character of which, among the modern Abyssinians, stands next to the sacred writings; and consequently must be esteemed the highest Abyssinian authority we have. Ac- cording to this book, there

was an interval of 5500 years between the creation of the world and the birth of Christ; 1808 years before which last event the empire of Abyssinia or Ethiopia received its first inhabitants. Two hundred years after its settlement, it was so destroyed by a flood, that it received the name of Oure" Midra, or a country laid waste ; or, says our author, as it is called in Scripture itself, ' a land which the wa- ters or floods had spoiled.' Isaiah xviii. 2. The peopling of the country was finished about A. A. C. 1400, by the settlement of a great num- ber of people, speaking different languages, who sat down peaceably in the high lands of Tigre, in the neighbourhood of the shepherds, with whom they were in friendship. These people, according to tradition, came from Palestine ; and our author is inclined to believe the whole of the relation to be true, as the time coincides with the expulsion of the Canaanitish nations by Joshua, which happened about A. A.C. 1490; ten years before which there had been, according to Pausanias, a flood in Ethiopia, which occa- sioned prodigious devastation. Ethiopia, he thinks, would afford the most ready asylum for the fugitive Canaanites, as they must have long had a commercial intercourse with that country ; and he supports the opinion likewise from what Procopius mentions, of two pillars extant in his time, on the coast of Mauritania, with the follow- ing inscription in the Phoenician language, * We are Canaanites, flying from the face of Joshua, the son of Nun, the robber.' The authenticity of these inscriptions, however, is much disputed, and therefore cannot establish any historical point. The first and most considerable of the colonies above mentioned settled in the province of Amhara ; the second in Damot, one of the southern provinces ; the third in a province called Lasta, or Tcheratz-Agow, from Tchera, their principal habitation ; and a fourth in the territory of Gafat.

According to some ancient authors, the Ethio- pians were conquered by Moses ; who besieged

their capital Meroe, a city almost impregnable,, being surrounded with three rivers, the Nile, As-

tapus,andAstaboras. The daughter of the Ethio- pian monarch, however, having an opportunity of seeing Moses from the walls, offered to deliver up the city, it is said, provided he would swear to marry her. With this requisition the Egyp- tian general complied ; but treated the inhabi- tants with great severity ; plundering the city, and putting many of the people to death. Aftei this he ravaged the whole country, dismantling all the places of strength; and, having thus rendered the Ethiopians incapable of attempting any kind of offensive operations against other nations fora considerable time, he returned in triumph to Egypt, after an absence of ten years. We hardly account the foregoing as history ; but from this time to that of Solomon there is an entire chasm in the Ethiopic annals. After this, however, we are furnished with some kind of regular accounts. They commence with the reign of the queen of Sheba, called Makedaby the Abys- sinian historians, and who went to visit the Jewish monarch Solomon, and whom the Abyssinians suppose to have been sovereign of Ethiopia Pro- per ; but Mr. Bruce is of opinion that she was only sovereign of the territory on the east coast of Africa named Saba. In favor of this opinion he urges, that it was customary for the Sabeans, who inhabited Saba, to be governed by women ; whereas those who inhabited the opposite side of the Arabian Gulf, and who were named Sabean Arabs, or Homerites, were not only governed by kings, but would not allow their sovereigns to go abroad any where, under pain of being stoned to death. The Abyssinians, however, claim her for their sovereign ; and their historians speak of her being struck with admiration at the sight of Solomon's grandeur, and the wisdom he dis- played, as well as of her becoming a convert to the Jewish religion. Another part of her history, in the annals of this country, is, that she returned in a state of pregnancy, and within a year was delivered of a son, named David by Solomon, but by his mother Menilek, Menelech, or Mene- leheck ; that is, another self. When he grew up, he was sent to be educated, we are told, at the court of Solomon ; where having staid some time, he was accompanied

home by several doctors of the law, and particularly by Azariah the son of Zadoc the high priest. By these the Jewish religion was es- tablished in Abyssinia, where it continued till the introduction of Christianity. Azarias, who brought with him a Hebrew transcript of the law, it is added, was now constituted high priest ; and though this book is lost, having been burnt along with the church at Axum, the office is still continued in the line of Azarias, whose successors are styled Nebrits, high priests, or keepers of the church, in that city. Makeda continued to enjoy the sovereignty for forty years ; and the last act of her reign settled the succession to the throne. By this act the crown was declared hereditary in the family of Solomon for ever ; it was also de- termined, that after her no woman should be en- titled to wear it, or act as sovereign of the coun- try ; but that the sovereignty should descend to the most distant heirs male, rather than to the females, however near. Lastly, that the male

heirs of the royal family should always be sent prisoners to a high mountain, where they were to he confined till they should be called to the throne, or as long as they lived. This custom, according to Mr. Bruce, was peculiar to Abyssi- nia ; the neighbouring shepherds being accus- tomed to have women for their sovereigns, which prevailed in the last century. Makeda, having established these laws, died in A. A. C. 986.

The transactions of Menilek after his accession are not recorded, farther than that he removed his capital to Tigre. In his time the empire was invaded by Shishak, king of Egypt, who plun- dered a rich temple at Saba, the capital of Ethiopia, and which probably occasioned the removal of the imperial seat to Tigre. It is in- deed plain from Scripture, that Ethiopia, or great part of it, was subject to this monarch ; as the Ethiopians, mentioned in his army

which invaded Judaea, and plundered the temple of Jerusalem (2 Chron. xii. 3), are joined with the Lubims, or Libyans, and must therefore be re- garded as inhabitants of Ethiopia Proper. This confirms the opinion of Sir Isaac Newton, who agrees with Josephus in supposing Shishak to have been the celebrated Sesostris of profane historians. Thus far we are certain, that in the passage of Scripture alluded to, the sacred his- torian indirectly ascribes the sovereignty of Ethiopia to Shishak ; and we do not find it any where hinted, that another Egyptian monarch was possessed of this sovereignty. Herodotus also plainly tells us, that Sesostris was master of Ethiopia, and that no other Egyptian but him- self ever possessed that empire. After the death of Shishak, Sir Isaac Newton is of opinion, that the Ethiopians defended Egypt against the Libyans, who had invaded that country during the civil war, which took place on the death of that great conqueror. In about ten years after- wards, however, they became the aggressors ; drowned the successor of Shishak in the Nile, and seized on the whole kingdom; at which time Libya fell also into their hands. In the time of Asa, king of Judah, we find the combined host of the Ethiopians and Lubims attacking the ter- ritories of Judea, to the number of more than a million. 2 Chron. xiv. 9 ; xvi. 8. This confirms the above account ; as it is not easy to conceive how the two nations should have combined in such a manner, unless Zerah had been master of both. The total overthrow which the allied army received from Asa, gave the inhabitants of Lower Egypt an opportunity of revolting ; who, being sustained by an army of 20,000 auxiliaries from Phoenicia and Palestine, obliged Memnon to retire to Memphis. Soon after this, he was forced to leave Egypt altogether, and to retire into Ethiopia ; but in about thirteen years he returned with his son Ramesses at the head of a powerful army, and obliged the Canaanitish forces to retire out of the Lower Egypt — a trans- action denominated, by the Egyptian writers, the second expulsion of the shepherds. Sir Isaac Newton is of opinion, that the Egyptian princes Menes, Memnon, and Amenophis, were the same

person ; and that by him Memphis was either originally built or first fortified, to prevent the Egyptians from entering Ethiopia. He is

also supposed to have been the son of Zerah, an-'l to have died in an advanced age about ninety years after the death of Solomon. Thus, accord- ing to Sir Isaac Newton's chronology, the most remarkable transactions of antiquity will be brought lower by several ages, than by the usually received computations. According to this, the Argonautic expedition happened in the time of Amenophis ; and some Greek writers inform us, that he assisted Priam king of Troy with a body of forces. lie was succeeded by Ramesses, who built the northern portico of the temple of Vulcan at Memphis. The next was Moeris ; who adorned Memphis, and made it the capital of his empire, about two generations after the Trojan war. Cheops, Cephrenus, and My- cerinus successively followed Moeris ; the last being succeeded by his sister Nitocris. See EGYPT.

In the reign of Asychis, the successor of Ni- tocris, both Ethiopia and Assyria revolted from Egypt; which, being now divided into several small kingdoms, was quickly subdued by Saba- con or So, the emperor of Ethiopia. This monarch, soon after his accession to the throne of Egyyt, allied himself with Hoshea, king of Israel ; by which means the latter was induced to revolt from the Assyrians ; and in consequence of this an end was put to the kingdom of Israel by Shalmaneser, king of Assyria, in the 24th year of the era of Nabonassar, A.A.C. 720. Ac- cording to Herodotus, this monarch voluntarily resigned the crown of Egypt after he had enjoyed it fifty years; but Africanus relates, that after a reign of eight years, he died in Egypt, in the ninth year of Hezekiah, king of Judah. His successor, Sethon, supposed to be the Sevechus of Manetho, advanced to Pelusium will) a power- ful army against Sennacherib kin

After the death of this tyrant the Ethiopians shook off the yoke, and maintained the r inde- pendency till the time of Cyrus ; who, according to Xenophon,

seems to have also been sovereign of Ethiopia. After his death they revolted, and his son Cambyses unsuccesfully attempted to reduce them. Herodotus informs us, that before

he undertook this expedition, he sent some of the Ichthyophagi ambassadors to the king of the Macrobii, under pretence of soliciting his friend- ship, but in reality to discover the strength of the country. Of this the Ethiopian prince was aware, and told the ambassadors that he knew their design, reproached Cambyses with his in- justice and ambition, and gave them his bow; telling them, at the same time, that the Persians might think of invading Ethiopia when they could easily bend it ; and, in the mean time, that tieir master ought to thank the gods, who had fcever inspired the Ethiopians with a desire of •expending their territories by conquest. Cam- byses had sent by the ambassadors a rich purple robe, gold bracelets, a box of precious ointment, a 'Vessel full of palm wine, and other things, which he imagined would be acceptable to the Etluopian monarch. But all these, excepting the wine, were despised. This, he owned, was superior to any liquor produced in Ethiopia ; and he intimated, that the Persians, short-lived as they were, owed most of their days to the use of this excellent liquor. — Being informed by the ambassadors, that a considerable part of the food used by the Persians was bread, he said that it was no wonder to find people who lived on dung unable to attain the longevity of the Macrobian Ethiopians. In short, the whole of his answer was so contemptuous and disgusting that Cam byses was filled with the greatest indignation; arid instantly began his march without taking time to make the necessary preparations, or even to procure provisions for his army. Thus a ter- rible famine ensued among his troops, and the soldiers are said to have been reduced to eat one another : Cambyses himself, finding his life in danger, was at last obliged to

retreat. Another army which he sent against Ammonia, to destroy the celebrated oracle of Jupiter Ammon, perished entirely in the deserts, being overwhelmed with the vast clouds of sand fre- quently raised there by the wind. At this time it is doubtful whether Cambyses would have accomplished his purpose, even if he had found it practicable to march into the heart of Ethiopia. This empire had but a short time before received a very considerable accession of strength by the desertion of 240,000 Egyptians who had been posted by Psammenitus in different places on the frontiers. These, not having been relieved for three years, had gone over at once to the emperor of Ethiopia, who placed them in a country disaffected to him; ordering them to expel the inhabitants, and take possession of their lands. Notwithstanding this, however, Sir Isaac Newton thinks that Cambyses con- quered Ethiopia about the 223rd or 224th year of the era of Nabonassar ; but this opinion does not appear to be well founded. We are told, in- deed, that the Persian monarch, notwithstanding the misfortunes above mentioned, did really make himself master of some of the Ethiopic provinces which bordered on Egypt ; and that these, together with the Troglodytes, sent him an annual present of two cha;nixes of unrefined gold, 200 bundles of ebony, five Ethiopian boys, and twenty elephants teeth of the largest size ; but it appears very improbable, that Cambyses

could have conquered the vast regions of Ethio- pia Proper, Sennaar, and Abassia, which were all included in the Eth.opia of the ancients. When Xerxes invaded Greece, his army was partly composed of Ethiopians, of whom Herodotus mentions two distinct races of people. One of these inhabited the Asiatic coast, and differed from the Indians only in their hair and language. Their arms were the same with those of India ; they wore helmets made of the skins of horses, the ears and manes of which served them for tufts and plumes of feathers ; their shields being made of the skins of cranes. The hair of the Asiatic Ethiopians was long, but that of the western tribes was frizzled. The latter were also

differently armed, having darts lighted at one end and covered with leather. We are not informed particulacly whether these troops were subjects of the king of Persia or only auxiliaries ; and therefore we can conclude nothing certain con- cerning the dominion of the Persian monarchs at this time over Ethiopia. They might possess some of the provinces next to Egypt, while the main body of the empire being in a state of in- dependence, and unconnected with other parts of the world, has not been noticed by historians. Though Alexander had a desire to know the sources of the Nile, he did not suffer himself to be diverted by this curiosity from pursuing his grand expedition into Persia. Ptolemy Euergetes, however, appears to have carried this curiosity to such a length as to have invaded Ethiopia for no other purpose. It is surprising that the particulars of this expedition are not recorded by any historian, as it appears by an inscription that he actually penetrated to the farthest parts of the empire, and conquered the most powerful nations in it. Of this we have the following ac count, which the best historians consider au- thentic; copied on the spot (at the western entrance of Adule, a city of Ethiopia) by Cosmus Egyptius, or Indicopleustes, in the time of the emperor Justin I. ' Here, facing the road to Axuma, stood a chair of white marble, consisting of a square base, a small thin column at each angle of this base, with a larger wreathed one in the middle, a seat or throne upon these, a back and two sides. Behind this chair there was a large stone three cubits high, which had sus- tained considerable injury from time. This stone and chair contained an inscription to the fol- lowing purpose : ' Ptolemy Euergetes penetrated to the farthest parts of Ethiopia. lie subdued Gaza, Agame, Signe, Ava, Tiamo, or Triamo, Gambela, Zingabene, Angabe, Tiama, Athagaos, Calaa, Semene, Lasine, Zaa, Gabala, Atalino, Bega,theTangaitae, Anine, Metine, Sesea, Rauso, Solate, the territory of Rauso, and several other kingdoms. Among the nations he reduced were some inhabiting mountains always covered with a deep snow ; and others seated upon ridges of hills, whence issued boiling streams, and craggy

precipices, which therefore seemed inaccessible Having finally, after all these conquests, assembled his whole army at Adule, he sacrificed to Mars, Neptune, and Jupiter ; for his great success, lie dedicated this chair or throne to Mars.'

From the time of Ptolemy to that of Augustus, we meet with nothing of uny consequence re-

lating to Ethiopia Proper. The Roman forces having about this time been drawn out of Egypt, in order to invade Arabia, Candace queen of Ethiopia, or rather of the island of Meroe, took tne opportunity of their absence to make an ir- ruption into the province of Thebais. As there was at that time no force to oppose her, she met for some time with great success , but hearing at last that Petronius, governor of Egypt, was in full march to attack her, she retired into her own dominions. Petronius pursued her as far as Pselcha, where with 10,000 men he gained an easy victory over 30,000 undisciplined Ethiopian savages, armed with poles, hatchets, and the like weapons. This victory was soon followed by the reduction of several fortresses ; but, as the Roman soldiers were greatly incommoded by the heat, Petronius was obliged at last to retire. Soon after, Candace sent ambassadors to Augus- tus himself, with such magnificent presents, that the emperor was induced to grant her a peace on her own terms. From this time the Romans accounted themselves masters of Ethiopia : Au- gustus was complimented ori the great glory he had acquired, by reducing a country till that time unknown even to the Romans, and thus completing the conquest of Africa. No material alteration, however, took place in the affairs of Meroe in consequence of this conquest, whether real or pretended. Pliny informs us, that it had been governed by queens, who bore the title of Candace, for several generations before that time; and so it continued to be afterwards, as we learn from Scripture, where we are informed that, in the reign

of Tiberius, the sovereign of Ethiopia was named Candace. Some, indeed, are of opinion, that the Candace mentioned in Acts, viii. 27, was the same with her who had been conquered by Augustus.

From an anecdote of the debauched emperor Heliogabalus, who was accustomed to confine his favorites, by way of diversion, with old Ethio- pian women, we may learn that some intercourse took place between the two empires, and that the Ethiopians owned some kind of subjection to the Romans. The Blemmyes, a gang of mon- strous banditti, who inhabited" the frontiers of Thebais, were vanquished by the emperor Pro- bus : but, towards the close of the third century, they again became so powerful, that, in conjunc- tion with the Nobatae, they committed such de- predations in the Roman territories, that Dio- clesian was obliged to assign lands to the latter, and to pay both of them a considerable sum annually, to desist from their former practices. These expedients did not answer the purpose ; the savages continued their depredations till the time of Jastinian L, who treated them with seve- rity, and oliged them to remain at peace. Pro- copius says, that before the time of Dioclesian, the Roman territories extended so far into Ethiopia, that their boundaries were not twenty- three days' journey from the capital, so that probably the whole empire had been in a state of dependence on them. From this period, to that of their conversion to Christianity, we find nothing remarkable in the history of the Ethio- pians. This event happened about A. D. 327, soon after the establishment of Christianity at

Rome by Constantine, when the gospel was preached in Ethiopia by Frumentius. He was a kinsman and companion of the philosopher Me- ropius, of Tyre : who, having travelled over all India, died on an island of the Red Sea. After his death, Frumentius, with JEdesius, who had also been his companion, were brought before the king of Ethiopia, to whom that island was subject. He took them into his service ; making the one his treasurer and the other his butler. On the death of this prince, the queen

refused to allow them to depart out of the kingdom; but committed the management of her affairs entirely to Frumentius, who is said to have diffused the Christian religion throughout the country; and became the first bishop of Axum. The two princes, Abra and Asba, or Abreha and Atzbeha, who reigned jointly in Ethiopia in the time of Frumentius, lived in such harmony together, that their friendship became proverbial. After being converted to Christianity, they adhered strictly to the orthodox doctrine, refusing to admit an Arian bishop into their country. In the time of the emperor Constantius, however, Arianism was introduced, and greatly favored ; and an attempt was made to depose Frumentius on account of his refusal to embrace it.

The reign of Abra and Asba is remarkable for an expedition into Arabia Felix, called by the Mahommedan writers the war of the elephant, and which was undertaken on the following oc- casion : — The temple of Mecca, situated nearly in the middle of the Arabian peninsula, had been held in the greatest veneration for nearly 1400 years : probably from the notion entertained by the people in the neighbourhood, that Adam pitched his tent on that spot. Here also was a black stone supposed to possess extraordinary sanctity, as being that on which Jacob laid his head when he had the vision of angels. This temple, according to Mr. Bruce, was built by Sesostris, who was worshipped there under the name of Osiris. He supposes, that, on account of the veneration in which this tower and idol were held by the Arabians, the thought was first suggested of making it the emporium of the trade between India and Africa ; but Abra, in order to divert it into another channel, built a very large temple near the Indian Ocean in the country of the Homerites ; and, to encourage the resort of people to this new edifice, bestowed upon it all the privileges of the one at Mecca. The tribe of Arabians named Koreish, in whose country Mecca stood, being now, therefore, alarmed at the thoughts of having their temple deserted, en- tered the new one in the night, burned all that could be consumed,

and besmeared the ruins with human excrement. Abra, provoked at this sacrilege, assembled a great army, with which he invested Mecca, himself appearing on a white elephant, whence the war took its name. The termination of the war, according to the Ara- bian historians, was miraculous. A vast num- ber of birds, named abibil, came from the sea, having faces like lions ; each carrying in his claws a small stone about the size of a pea, which they let fall upon the Ethiopian army in such numbers, that every one of them was destroyed. At this tin. a it is said, that the small-pox first

made its appearance; and the more probable account of the destruction of the Ethiopian army is, that they perished by this distemper. The war of the elephant is supposed to have termi- nated about A. D. 360 : from which time to that of Elesbaan, named also Caleb, we meet with nothing remarkable in the Ethiopic history ; ex- cepting that the court and principal people, if not the nation in general, relapsed into idolatry, which, it is said, prevailed till A. D. 521, when they were again converted by their king, Adad or Adag, whom some suppose to be the same with Elesbaan. Be that as it may, Elesbaan engaged in a war with the Homerites, or Sa- bseans, in Arabia Felix ; whom he overthrew in battle, and put an end to their kingdom ; after which he embraced the Christian religion in token of gratitude for the success he had met with. In the time of this prince a violent per- secution of the Christians took place in Arabia. The Jewish religion had now spread itself far into that peninsula ; and in many places the pro- fessors of it were become absolute masters of the country, insomuch that several Jewish princi- palities had been erected, the sovereigns of which commenced a severe persecution against the Christians. Among the rest, one Phineas dis- tinguished himself by his cruelty, having pre- pared a great number of furnaces or .pits filled with fire, into which he threw those

who refused to renounce Christianity. The Christians ap- plied for relief to the emperor Justin ; but he, being at that time engaged in a war with the Persians, could not interfere : however, in 522, lie sent an embassy to Elesbaan, who was now also a member of the Greek church, intreating him to exert himself for the relief of the Chris- tians of Arabia. On this the emperor com- manded his general Abreha, governor of Yemen, to march to the assistance of Aretas, son to a prince of the same name, whom Phineas had burnt : while he himself prepared to follow with a more considerable force. But, before the ar- rival of the Ethiopian monarch, young Aretas had marched against Phineas, and entirely de- feated him. Soon after, the emperor himself arrived, and gave Phineas a second defeat : but, notwithstanding these misfortunes, it does not appear that either the principality of Phineas, or any of the other Jewish ones, was at this time overturned ; though it seems certain that, at this time, the Ethiopians possessed part of the Ara- bian peninsula. According to the Arabian his- torians, the war of the elephant, with the mira- culous destruction of the Ethiopian army, took place in the reign of Elesbaan. Some historians mention, that the Ethiopian monarchs embraced the doctrine of Mahomet soon after the impostor made his appearance ; but this seems not to be well founded : though it is certain that the Na- jaski, or Ethiopian governor of Yemen, em- .braced Mahommedanism, and that he was re- lated to the royal family. On this occasion, however, the Ethiopians lost all the footing they once had in Arabia; the governors being ex- pelled by Mahomet and his successors. They fled to the African side of the Red Sea with numbers of their subjects, where they erected several small kingdoms, as Adel, Wypo, Hadea,

Mara, and others. During the conquests of the caliphs, the Jews were for some time every where driven out of their dominions, or oppressed to such a degree that they voluntarily left them. Ethiopia offered them an asylum : and in this country they became so powerful, that a revolu- tion in favor of

Judaism seemed ready to take place. One family had always preserved an in- dependent sovereignty on a mountain called Sa- men, the royal residence being on the top of a high rock ; and several other high and rugged mountains were used as natural fortresses. Be- coming by degrees more powerful, Judith the daughter of one of their kings, formed a design of overturning the Ethiopian government, and setting aside the family of Solomon, who had hitherto continued to enjoy the sovereignty. This design was facilitated by several circum- stances. The empire had been weakened by an unsuccessful war, famine, and plague; the throne was possessed by an infant ; and the ab- surd custom of confining the whole royal family on a rock, named Damo, gave her an opportu- nity of cutting them all off at once by surprising that place. Fortunately, however, the king es- caped the general catastrophe, and was conveyed by some of the nobility of Amhara to the pro- vince of Xoa, or Shoa ; by which means the line of Solomon is stated to have been preserved, and afterwards restored, though not till after a very considerable interval.

Judith, having by this massacre established her own power, assumed the imperial dignity, though in direct opposition to the established law, that no woman should enjoy the sovereign power. The people, however, seemed to have submitted quietly to her government, as she sat on the throne for forty years, and afterwards transmitted the sovereignty to five of her posterity, who reigned successively. We are not furnished with any particulars concerning their reigns ; farther than that they were great oppressors. Another revolution took place, and a new set of usurpers, related to the family of Judith, but not their direct lineal descendants, succeeded to the throne. These were Christians, and governed with much greater lenity than the Jewish sovereigns had done ; but still, being usurpers, none of their transactions are recorded in the Abyssinian an- nals, excepting those of Lalibala, who was accounted a saint. He lived in the end of the twelfth, or beginning of the thirteenth century, and proved a

great prince. At that time the Christians in Egypt were grievously persecuted by the Saracens, who had a particular abhor- rence of masons, builders, and stone-cutters ; looking upon them as the chief promoters ot idolatry, by the ornaments connected with their works. The refugees of this description were joyfully received by Lalibala; and were employed by him in hewing churches out of the solid rock, after the example of the ancient Troglodytic habitations : many works of this kind still remain in the country. He undertook, however, a still more arduous task ; that of lessening the stream of the Nile, and thus starving the whole kingdom of Egypt, now in the hands of his enemies. From the account given by Mr. Bruce of this project, it appears that there was some possibility

of accomplishing it ; not indeed by turning the course of the Nile itself, but by diverting that of many of those branches which convey into it the water of the tropical rains. He says, that Lali- bala succeeded in his enterprise so far as to divert the course of two large tributaries of the Nile, and that they have ever since flowed into the Indian Ocean. He next proceeded to carry a level towards a lake named Zagvia, into which many rivers flow, whose streams contribute to increase that of the Nile; and, had this been accomplished, the loss of so much water would have been very sensibly felt by the Egyptians. This enterprising monarch was prevented by death from executing his design; though Mr. Bruce informs us of a written account at Xoa, in which it was asserted, that he was dissuaded from it by certain monks, who told him, that by sending down such a quantity of water to the eastern and dry parts of Africa, these countries would soon become so fertile and populous, that they would rival the empire of Ethiopia, or at least withdraw their allegiance from it. The remains of these works were seen by the Portu- guese ambassador in 1522.

All this time the princes of the ancient line had been obliged to content themselves with the sovereignty of the province of Xoa, and made no attempt to regain their former dignity ; but they were unexpectedly restored without bloodshed or disturbance, by Naacueto Laeb, the grandson of Lalibala. This prince, of a pacific disposition, was persuaded by a monk named Tecla Haiman- out, greatly celebrated for his sanctity, to resign the crown, to which, though he received it from his father, he could not pretend to have any right. It was now agreed therefore that Naacueto should give up the empire to Icon Amlac, the lineal de- scendant of Solomon, who then possessed the sovereignty of Xoa ; but that a portion of land should be irrevocably assigned to Naacueto and his heirs, over which he should be allowed to exercise an absolute sovereignty, as a testimony of this sacrifice. The monk, in this treaty, did not forget his own interest. He had founded a famous monastery in Xoa, and was primate of the whole empire under the title of Abuna. He now insisted that one-third of the kingdom of Ethiopia should be ceded to himself, for the maintenance of his own dignity, and the support of the clergy, convents, &c., throughout the country ; and that no native Abyssinian should ever enjoy the same dignity with himself, even though he should have been chosen and ordained at Cairo, as was the custom with the Abyssinian prelates. These extraordinary terms were complied with, and Icon Amlac ascended the throne of Ethiopia.

This prince did not remove the seat of govern- ment from Tegulat, the capital of the province of Xoa ; but continued there during the whole of his life, which lasted fifteen years after his acces- sion. We are ignorant of the transactions of his reisii, as well as that of several of his successors; five of whom ascended the throne in as many years : and we have no particular account of the transactions of the empire 1 11 the time of Amda Sion, who beiran to rei^n in 1312. He was the son of Wed en Araad, the youngest brother of Icon Amlac, and succeeded to the throne on the

ueath of his father. He professed the Christian religion; but his practice seems to have been very opposite to its precepts. He began his reign with living publicly with a concubine of his father's ; and quickly after committed incest with his two sisters. On this he was fir^t ex- horted to repentance, and then excommunicated, by Honorius, a monk greatly celebrated for his sanctity, and who has since been canonised. The prince, enraged at this indignity, caused the saint to be severely whipped through every street of his capital. The same n.ght the town was set on fire, and reduced to ashes ; the clergy per- suading the people, that the blood of Honorius had turned to fire as it dropped on the ground, and thus occasioned the catastrophe ; but Amdi Sion, suspecting that the monks themselves had been the incendiaries, banished or imprisoned them all, so that their hopes of exciting an insur- rection were disappointed ; and, being dispersed into those provinces where the inhabitants were mostly Jews or Pagans, they were now obliged to apply to their proper duty, yiz. the diffusion of the gospel. While the emperor was busy with the monks, one of his commercial factors was assassinated by the Moors in the province of Isat ; on which he assembled his troops, and fell upon the nearest of the Mahommedan settlements, massacring all he met without exception. He ultimately laid waste the whole country with fire and sword, carrying off an immense booty. For some time the'Moors were so surprised that they did not think of making opposition ; but at last they took up arms, and attempted to surprise the Abyssinian monarch in his camp. With this view they approached the camp in the night- time, expecting to have found the emperor and his soldiers immersed in sleep. Unexpectedly, however, he had been joined by a considerable part of his army, whom he drew up in battle array to receive his enemies. An engagement ensued, in which Amda Sion behaved with great valor ; killed the Moorish general with his own hand, and gained a complete victory. He then commanded such of his soldiers as could not find houses ready built, to build huts for themselves, and a large tract of

land to be ploughed and sown, as if he meant to stay in the country of ihe enemy during the rainy season. The Mahomme- dans now perceiving that they were in danger of being totally exterminated, willingly submitted to his terms ; while the monarch conciliated the affections of his people by dividing amona; them the vast plunder he had acquired. Ikit the Moors no sooner found themselves freed from immediate danger, than they prepared for a new- revolt. They renewed hostilities by plundering some villages belonging to the Christians, and destroying their churches. A most formidable combination had taken place ; but the super- stition of Amano, king of Hadea, one of the chiefs of the revolt, was instrumental ;n giving the first blow to the rebellion. This man, by the advice of a necromancer, in whom he put great confidence, instead of marchine his tioops to the assistance of his allies, remained at home, where he was defeated and taken prisoner by a detach- ment of the imperial army. The governor uf Amhara was next despatched against Suber-

eddin, the revolted governor of Fatigar, with orders to lay waste the country, and use every method to force him into an engagement, in which he was defeated ; the victors plundering his house, and taking his wife and children pris- oners. But in the mean time intelligence was received of a new revolt among the Falasha, who had assembled a formidable army. They were, however, entirely defeated by Tzaga Christos, another Abyssinian general, who soon after joined the emperor. Saber-eddin, no longer able to support himself against the united forces, was obliged to surrender at discretion, and all the rest were quickly reduced; so that Amda Sion was at leisure to march against the kings of Adel and Mara, who, having now united their forces, resolved to give him battle. At thii the Abys- sinian monarch was so exasperated, that he vowed to take ample vengeance ; swore on the holy eucharist, in the presence of his whole army, that ' though but twenty

of his army should join him, he would not turn his back upon Adel or Mara, till he had either forced them to tribute and submission, or entirely extirpated them and their religion.' The army not only applauded this with loud shouts, but protested that they looked upon themselves to be all bound by the oath he had taken : and, as he had mentioned in his speech that the plunder had been purchased by the lives of their Christian brethren, they de- termined to show their abhorrence at keeping any of it. Taking lighted torches therefore in their hands, they set fire to the plunder that had been amassed since the beginning of the war. Notwithstanding this enthusiasm, however, the expedition did not proceed successfully. This arose principally from the superstition of the Abyssinians, who were always averse to travelling, and especially to fighting, in the night. Their enemies, therefore, always chose this season for coming to an engagement ; and so harassed the Abyssinian monarch, that his troops began to complain ; and, on the commencement of the rainy season, insisted on being allowed to return. Amda Sion on this told them, that, if they were afraid of rains, he would conduct them to a country where there were none ; meaning Adel, which, though within the limits of the tropical rains, has them at a different season to Abyssinia. Thus he persuaded his army again to set forward ; but was so grievously harassed by the nocturnal at- tacks of the Moors, that he was once more in danger of being deserted ; and when by his elo- quence he had dissipated the apprehensions of the soldiers, he was seized with a violent fever. To add to his disasters, while the troops were indulging themselves in inaction, they heard that the Moors, having assembled an army of 40,000 men, were in full march to attack them. The king now fainted on attempting to make himself ready for battle. Still, however, his courage was unabated. Having refreshed himself, he said to his soldiers : ' As it never was my opinion, that it was my own strength and valor, or their want of it, which has so often been the cause of pre- serving me from their hands ; so I do not fear at present that my accidental weakness will

give the enemy any advantage over me, as long as I trust in God's power as much as I have ever done.'

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The drooping spirits of the Abyssinians weie, it is said, revived by this speech, and they only begged that their monarch would now trust to their valor, and not expose his own person. His advanced guard, however, was soon attacked and driven back on the main body by a detach- ment of the Moors, who had along with them a number of women provided with drugs to poison, and spells to enchant the waters. On this a dreadful panic seized the whole Abyssinian army; who, for the greater part, not only refused to ad- vance, but resolved to leave the camp, and return homewards immediately. The king, sensible that all- was lost if this pernicious scheme should be adopted, and perceiving that nothing was to be gained by reasoning with men so much terri- fied, only requested that such as would not fight, would stand quiet spectators of the battle. Even this had little effect : so that finding the enemy now ready to make an attack, he ordered his master of the horse, with only five others, to at- tack the left wing of the enemy; while he, with an almost equally small party, made an attack on the right. This desperate effort was attended with decided success. The king, notwithstand- ing his weakness, killed with his own hand two commanding officers of the enemy's* right wing; while his son despatched another of considerable rank belonging to the left. The Moorish army on this began to lose courage ; while the Abys- sinians, ashamed of their conduct, rushed fu- riously on to rescue their prince from danger. The battle then raged for Some time with great fury; but at last the centre and left wing of the Moors were defeated, and the right, composed principally of Arabians, retired in a body. Not knowing the country, they entered a deep valley entirely covered with wood and surrounded by perpendicular rocks. The Abyssiniuns imagin- ing they had nothing more to do, began to strip and mangle the bodies of the killed and wounded ; but Amda Sion, perceiving the situation of the Arabians,

ordered a detachment to ascend the rocks, whence they rolled down immense stones ; which threw them into such confusion, that, being neither able to fly nor resist, they were all killed to a man. The fate of the Moors was little better. The other division of the Abyssinian army found them lying round a pool of water, which they lapped like dogs, and fell upon them with fury. At last, wearied with slaughter, they took a few prisoners, among whom was Saleh king of Mara with his queen ; the former of whom was hanged by order of Amda Sion, and the latter cut in pieces, and her body given to dogs. This signal victory was gained in the end of July 1316; but, as the rains at that season set in with violence, most of the army now again insisted on return- ing home. The emperor and principal officers, however, were of opinion, that the advantages so dearly purchased ought by all means to be pur- sued, till they had either reduced the Mahom- medans to subjection, or at least deprived them of power to make future attacks on the empire. This opinion being adopted, Amda Sion sent home the baggage, women, and incumbrances of the army, retaining only the veteran soldiers. Advancing farther into the Mahommedan terri- tory, he took up his residence in a large town * 2 R

vailed Zeyla ; from whence he, on the night of his arrival, sent out a detachment to surprise a village* near it, named Taraca. Continuing to advance, he detached parties to lay waste the country round ; and in this expedition cut off two of the principal authors of the conspi- racy. He then proceeded to invade Talab and Abalge in the territories of the king of Adel, and, being well supported by his troops, defeated the latter in a pitched battle ; the king himself, with almost all his men, being killed on the spot. In this desperate state of their affairs, three Ade- lian princes, sons of the late king, with their uncle, waited upon Amda Sion to intreat his pardon ; but the only

promise they could obtain was, that if the queen, with the rest of the royal family, would surrender themselves to the con- queror next day, he would cease to lay waste their territory. The nobles, however, resolved to yenture another battle, and bound themselves by an oath, to support each other to the last. The conflict was long doubtful ; and in opposi- tion to Amda Sion appeared the young king of Wypo, who every where encouraged his troops, and made the most obstinate resistance. At last the Abyssinian monarch sheathed his sword, and taking a bow wounded the young prince mortally in the neck. On this the Adelians fled, but were so completely intercepted by two Abys- sinian detachments, that only three men escaped. On the side of the Abyssinians, however, the victory was dearly purchased ; many of the prin- cipal officers being killed, and scarcely a man of their cavalry escaping without a wound.

At last, weary of conquest and carnage, this victorious monarch, who never was defeated, returned in triumph to his capital, where he ended his days after a reign of thirty years. In his time we find that the rest of the royal family were not confined, according to the ancient prac- tice ; for Saif Araad, the son and successor of Amda Sion, distinguished himself in one of the battles in which his father was engaged. Though this prince was by no means destitute of military talents, the Abyssinian empire enjoyed a pro- found peace during his reign. The only remark- able transaction was the relief given by him to the Coptic patriarch, whom the sultan of Egypt had thrown into prison. At this time a great trade was carried on through the desert, by cara- vans between Cairo and Abyssinia, as well as from Cairo and Suakem on the Red Sea ; but the Ethiopic monarch having seized the mer- chants from Cairo, and sent parties of horse to interrupt the caravans in their passage, the sultan was soon content to release the patriarch, whom he had imprisoned only with a view to extort money. In the reign of Theodorus, who held the crown of Ethiopia from 1409 to 1412, an in- fringement was made on the

treaty above-men- tioned, between Icon Amlac and the Abuna, Tecla Haimanout. By that treaty the Abuna was to have a full third of the whole empire for the support of his dignity and that of the church ; but Theodorus, considering this as an unreason- able acquisition, reduced it very considerably, though he still allowed the priesthood an ample revenue out of every province of the empire. The annals of this prince's reign are very defec-

tive ; Mr. Bruce supposes that they have beer, mutilated by the ecclesiastics. By his subjects, however, he was considered as such a saint, that in Mr. Brace's time the people believed he was to rise again and to reign 1000 years in Abyssinia. Zara Jacob, who began his reign in 1434, is the next prince of whom the Abyssinian annals narrate any affair of consequence. The character of this prince is represented as not inferior to that of Theodorus, or indeed of any monarch that ever sat on the throne of Ethiopia. He is in short set forth as another Solomon ; though, from some parts of his conduct, this character seems to be rather exaggerated. The first re- markable transaction of his reign was his send- ing an embassy to the council of Florence. The ambassadors were priests from Jerusalem, who, in that assembly, adhered to the opinions of the Greek church; and the embassy itself was judged to be of such consequence, as to be the subject of a picture in the Vatican. This prince obtained also a convent at Rome from the pope for the use of the Abyssinians : which was preserved until the middle of the last century. He seems to have been very desirous of keeping up a corres- pondence with Europeans as well as the Asiatics ; and in his time we first read of a dispute in Abyssinia with the Frangi or Franks, on the sub- ject of religion. This was carried on in presence of the king between one Abba George and a Venetian painter, Francisco de Branco Lone, in which the former confuted and even convinced his antagonist ; but from this time we find a party formed for the church of Rome, which probably took its rise from the embassy to the council of Florence. Zara Jacob is disgraced, however, by being

the first who introduced persecution for religion into Abyssinia; while, for 'this reason probably, he is so highly commended by the ecclesiastics. The state of Christianity in Ethi- opia was now indeed very corrupt. The Greek profession had been originally established on the model of Alexandria ; but in the low provinces bordering on the coast of Adel, the Mahomme- dan superstition prevailed. Many of that per- suasion had also dispersed themselves through the towns and villages in the internal parts of the empire, while, in other places, the grossest idolatry was practised : such as the worship of the heavenly bodies, the winds, trees, cows, ser- pents, &c. All this had hitherto passed unnoticed : but, in the reign of Zara Jacob, some families being accused of worshipping the cow and ser- pent, were brought before the king, who pro- nounced sentence of death upon them. Their execution was followed by a royal proclamation that whoever did not carry on his right hand an amulet with these words upon it, ' I renounce the devil for Christ our Lord,' should not only forfeit his personal estate, but be liable to cor- poral punishment. The spirit of persecution thus begun, quickly diffused itself, and an inqui- sitor was appointed to search for criminals. This was Amda Sion, the king's chief confident, who pretended to all that absurd and austere devotion common to hypocrites ; and, at the same time, assumed no uncommon parade and attendance. He kept a number of spies, who brought him intelligence of those who were secretly guilty of

any idolatrous or treasonable practices ; when, proceeding with his attendants to the house of the delinquent, he would cause the family first to bring forth refreshments for himself and his party, and then order the whole to be put to death. Among those who suffered in this bar- barous manner were the king's two sons-in-law, who had been accused by their wives, the one of adultery, and the other of incest. After this the public dislike to these

measures became so great, that no farther persecution took place during this reign. The attention of the emperor was also now called to the state of his affairs in the different provinces. The Moorish provinces, be- coming rich by the extensive trade they carried on, frequently employed their wealth in exciting rebellions. Zara Jacob now, therefore, divided the empire more distinctly, increased the number of governments, and set about repairing the churches, which had fallen into decay. So zea- lous was he in this respect, that having heard of the destruction of the church of the Virgin in Alexandria by fire, he instantly built another in Ethiopia to repair the loss. The last public transaction of his reign was the quashing of a rebellion in the interior. In the decline of his life his domestic conduct becomes a dark stain upon his memory. The mother of the heir ap- parent, wishing to see her son on the throne, be- gan to form schemes to oblige his father to take him into the government. These being discovered, her husband cruelly caused her to be whipped to death ; and finding that his son afterwards per- formed certain solemnities at her grave, ordered him to be loaded with irons, and banished to the top of a mountain.

On the accession of Bseda Mariam, in 1468, the old law for imprisoning all the royal family was revived, and a mountain, named Geshan, or Amba- geshen, selected for the purpose. See AMBA-GfiSHEN. Having thus secured himself from any danger of a rival, to ingratiate himself with the people, he proclaimed a pardon to all those who had been banished ; after which he prepared for war. On this the king of Adel, being alarmed, sent ambassadors requesting the continuance of peace. The Abyssinian monarch told them, that his design was to destroy the Dobas ; a race of shepherds very wealthy, but extremely barbarous, professing the pagan re- ligion, and greatly resembling the Gallas ; and that he was determined not to make war on them as a common enemy, but to extirpate them as a nuisance. The king of Adel no sooner received this intelligence than he invited the Dobas to send their

women and children, with their most valuable effects, into his kingdom ; but Baeda, having obtained notice of their design, seized an avenue through which they must necessarily pass, and massacred every one of the party. After this, entering their country, he committed such devas- tations, that they were glad to submit, and even to renounce their religion, to free themselves from such an enemy. The emperor then turned his arms against Adel, where they were attended with equal success ; but while Batda himself was ad- vancing towards the capital, he was seized with the pains of death.

The modern acquaintance of Europeans with

Ethiopia or Abyssinia, took place about thjs time. Some intercourse by individuals had been carried on between this country and Ituly ; but the knowledge of it conveyed to Europe 'm this manner was very imperfect and obscure. Even its situation had been forgotten, and though some confused notions were entertained of a'distant Christian prince, who was likewise a priest, Marco Paulo, the famous Venetian traveller, af- firms that he had met with him in Tartary ; and it was universally agreed that his name was Joannes Presbyter, Prete Janni, or Prester John.. When the Portuguese began to extend their dis- coveries along the coast of Africa, more certain intelligence concerning this prince was obtained. Bemoy, one of the kings of the Jalosses, a nation on the western coast of Africa, had assured the Portuguese navigators of the existence of such a prince so strongly, that king John II. determined to send ambassadors to him ; and the discovery was of the greater consequence, that a passage to the East Indies was now attempted both by land and sea. The ambassadors were named Peter Covillan and Alphonzo de Paiva. These were sent to Alexandria, whence they set out on their journey, to explore the sources of the Indian trade, the principal markets for spice, &c., but, above all, to learn whether it was possible to arrive at the East Indies by sailing round the continent of Africa. In the prosecution of this scheme our two travellers arrived at Cairo;

thence tney went to Suez, and from that to Aden, a city beyond the straits of Babel-Mandel. Co- villan then set sail for India and De Paiva for Suakem. The latter lost his life without making any discovery ; but Covillan passed over to Cali- cut and Goa. Thence he returned to Africa, visiting the gold mines of Sofala, and passing from thence to Aden and to Cairo, where he was met by two Jews with letters from the emperor of Abyssinia. One of these was sent back with letters to that monarch ; but with the other Co- villan proceeded to the island of Ormus in the Persian Gulf. Here they separated ; the Jew returning home, and Covillan repassing the straits of Babel-Mandel, whence he proceeded to Aden, and afterwards entered the Abyssinian dominions about A. D. 1490.

When Covillan arrived in Abyssinia, Alex- ander, the son of Bsedal Mariam, was emperor, and was employed in levying contributions on his rebellious subjects. He met with a kind re- ception, and was conveyed to the capital, where he was promoted to the highest posts of honor ; but was never allowed to return to Europe. The intelligence, however, which he transmitted to the court of Portugal, proved of much impor- tance. He not only described all the ports in India he had seen, with the situation and wealth of Sofala, but advised the king to prosecute the discovery of the passage round Africa with the utmost diligence ; affirming that the Cape at the southern extremity of the continent was well known in India ; and accompanying the whole with a chart which he had obtained from a Moor and which showed exactly the situation of the Cape and the neighbouring countries. Alev- ander seems to have been endowed with many good qualities. His reign however was disturbed

•by plots and rebellions, which at last proved fatal

to him. From his early years he desired to make war with the king of Adel, who seems to have been the constant rival of the Ethiopic princes. But the Adelian monarch, sensible that he was not able to cope with such a power- ful adversary, took an effectual way of securing himself, by gaining over a party at the Abyssi- nian court. In th»s he succeeded so well, that when Alexander was about to invade Adel, Za Saluce the prime minister, with many of the principal nobility, were in the interest of his ad- versary. Not being apprised of their treachery, Alexander entrusted this minister with the com- mand of a great part of his forces; and with these the latter abandoned him in the heat of an en- gagement. Alexander and the few troops who remained with him, however, were so far from being disheartened by this treason, that they seemed to be inspired with fresh courage. The emperor having killed the standard-bearer of the Adelians, and thus become master of the green ensign of Mahomet, the enemy began to give way, and, on his killing the king of Adel's son, they quitted the field. But the victory was not com- plete, nor was Alexander in a situation to pursue his advantage. Having in vain challenged the Moors to a second engagement, he returned with a design to punish his perfidious minister Za Saluce, who had endeavoured to excite the governors of all the provinces to revolt as he went along. The traitor, however, had laid his plots so well, that Alexander was murdered in two days after his arrival in the capital. Za Saluce did not, however, enjoy the rewards he expected for his treachery ; for, having attempted to excite a revolt in the province of Amhara, he was attacked by the nobility there; and, his troops deserting him, he was taken prisoner, his eyes were put out, and he was exposed on an ass to the derision of the people.

Alexander was succeeded by an infant son, who reigned only seven months; after which his younger brother Naod was chosen king by the unanimous voice of the people. He proved a wise and virtuous prince; but the late misfor- tunes, together with the corruption introduced at court, by the Mahommedans,

had much un- hinged the government. On his entering upon the government, he found it necessary to prepare against a new enemy, viz. Maffudi, prince of a district named Arar, near Adel. This chieftain being a man of enterprising disposition, and a most violent enthusiast in the Mahommedan cause, made a vow to spend forty days annually in some part of the Abyssinian dominions during the time of Lent. For this purpose he kept a small body of veteran troops, with which he fell sometimes on one part, and sometimes on another, of the frontiers, putting to death with- out mercy such as made resistance, and carrying off the rest for slaves. He continued this prac- tice, it is said, for thirty years, beginning exactly on the first day of Lent, and proceeding gradu- ally up the country as the term advanced : and his progress was facilitated by the superstition of the people, who kept that fast with such rigor as almost entirely to exhaust their strength. Now, however, he experienced a prodigious reverse of

fortune. Naod having enjoined his soldiers to live in the same full and free manner during the fast as at any other time, and having set the ex- ample himself, marched out against the enemy; who, being ignorant of the precaution taken, advanced with his usual confidence of success. The Abyssinian monarch, still pretending fear, as if on account of the weakness of his men, pitched his camp in a strong position, but left some pas- sages to it open, that the enemy might be in- duced to attack him. The consequence of which was, that almost every one of them was cut off. On this the king of Adel sent ambassadors to solicit a continuance of peace with himself; which was granted, on condition that he restored all the slaves whom Maffudi had carried off in his last year's expedition. Naod, having thus freed his country from the danger of a foreign invasion, applied himself to the cultivation of the arts of peace, and reforming the manners of his subjects, in which he spent the remainder of his days. He died in 1508, after a reign of thir- teen years; and was succeeded by his son David III., a child of eleven years of age; upon whom the empress

Helena, widow of Baeda Mariam, had interest enough to get the crown settled.

The aspect of affairs in Ethiopia was now quite changed by the interference of the Turks. That people having conquered almost the whole of Arabia to the Indian Ocean, being likewise on the point of reducing Egypt, and possessing great advantages over their adversaries in the use of fire-arms, now projected the conquest of India also. In this indeed they had been hitherto checked by the valor of the Portuguese ; but, as this conquest remained a favorite object with them, they did not abandon the attempt. All along the countries which they had conquered, they exacted enormous contributions from the merchants, vast numbers of whom fled to the African side of the Red Sea, and settled on the coast of Adel. The Turks, surprised at the increase of trade in this country, which they themselves had thus occasioned, resolved to share in the ad- vantages of it. For this purpose they took pos- session of Zeyla, a small island in the Red Sea, directly opposite to the coast of Adel, and erected a custom-house; thus threatening both Adel and Abyssinia with a most formidable rival. Helena, sensible of the dangerous situation of the empire, now thought proper to enter into an alliance with the Portuguese. The ambassador from Portugal, Covillan, as we have stated, was denied the liberty of returning to his own coun- try, and had of late been treated with entire neglect. In the present emergency, however, he recovered his importance. S^e united with him, in an embassy to Portugal, one Matthew, an Ar- menian merchant, and a young Abyssinian of noble family; but the latter died by the way. The letters they carried are by Mr. Bruce sup- posed to have been partly the work of Covillan, and partly of the less experienced Abyssinian confidants of the empress. They begin with telling the king, that Matthew would give him information of her whole purpose, and that lie might depend on the truth of what he said ; and concludes with soliciting a force sufficient to de- stroy the Turkish power. It is said, that a third

part of Abyssinia was offered, in case her requi- sitions were complied with ; but this, as well as the embassy itself, was always denied by David when he came of age. Matthew, having arrived at Dabul in the East Indies, was seized as a spy, but relieved by Albuquerque the viceroy of Goa; not indeed out of any regard to his character as ambassador, but because he himself had a design upon Abyssinia, and he now used his utmost en- deavours to induce Matthew to deliver his letters to him; which, however, he constantly refused. He boldly asserted the sacreduess of his cha- racter as an ambassador, and told the viceroy and clergy, that, he had with him a piece of the wood of the true cross, sent as a present to the king of Portugal; requiring them under pain of sa- crilege, to respect the bearer of such a precious relic, and to celebrate its arrival as a festival. This last request was instantly complied with, and a solemn procession instituted ; yet, after all, little regard appears to have been paid to him; and he could not obtain leave to depart for Por- tugal till 1513, which was three years after he first arrived in India.

Maffudi in the mean time, having recovered from his late defeat by Naod, formed alliances with the Turks in Arabia, and renewed his de- predations on the Abyssinian territory. Such a number of slaves had been, by his assiduity, sent to Mecca, that he was honored with a green silk standard (an emblem of the true Mahommedan faith), and made sheik of Zeyla. The king of Adel now determined to seek his alliance. Having accomplished this, the two princes in- vaded Abyssinia with their joint forces, and in one year carried off 19,000 Christian slaves, so that a general terror was spread over the empire. David, impatient of the injuries of his people, determined to raise an army, and head it in per- son as his ancestors had done, contrary to the advice of the empress, who wished him to em- ploy some of his veteran officers. A very pow- erful army, however,

was raised, and he took the road to Aussa the capital of Adel, detaching a part of his forces under an officer called the Betwudet, to meet the Moorish army, who were then ravaging Abyssinia. He ordered the Bet- wudet to allow them to enter certain agreed de- files; and before they could get through, he himself, with the main body of the army, marched to attack them at the other end. Thus the Moors were completely surrounded, and were farther dispirited by the conduct of Maffudi, who, on the morning of the engagement, told the king of Adel, that his own time was now come ; that he had been certainly told by a prophet, long ago, that if this year (1516) he should fight the king of Abyssinia in person, he should lose his life ; and therefore advised the king of Adel to make the best of his way over the least steep part of the mountain before the engagement began. Maffudi, however, as soon as he sup- posed the king of Adel to be out of danger, sent a trumpet to the Abyssinian camp, with a chal- lenge to any man of quality in the army to fight him ; on condition that the party of the victorious champion should be accounted conquerors, and that the armies should immediately separate •without further bloodshed. The challenge was

accepted by a monk named Gabriel Andreas; who, in the reign of Breda Mariam, had been condemned to lose the tip of his tongue for speaking slightly of the king's proclamation of amnesty. Maffudi showed no reluctance to pre- sent himself; but received a stroke from his an- tagonist with a two-handed sword, which nearly cut him in two. Andreas with a second blow struck off his head ; and throwing it at the king's feet, exclaimed, there is the Goliath of the infi- dels. A general engagement now ensued, not- withstanding the terms stipulated. The Moors were quickly repulsed and driven through the defile. At the other end they were met by the Betwudet, who drove them back to the king's forces ; so tha* at last, being compelled to fly to the mountains, they were all slaughtered by the peasants, or perished with hunger. This victory was gained over the Moors by David in July 1516, and on the same day the

island of Zeyla in the lied Sea was taken, and the town burnt by the Portuguese fleet under Lopez Suarez de Al- berguiera.

For the Abyssinian ambassador, Matthew, had been received with the greatest marks of respect in Portugal. The king prepared an embassy in retuni, at the head of which he placed Don E. Galvan, and sent home Matthew on board the Indian fleet commanded by Lopez. The Portu- guese ambassador,' though otherwise a distin- guished man, was very unfit from his age, being now eighty-six, for such a long and perilous voyage. He died on the island of Camaran in the Red Sea ; but a successor to his office was provided on board the fleet, and when, after a variety of adventures on the coast, Matthew re- paired to the emperor's court, he was accompa- nied by Roderigo de Lima, and fifteen Portu- guese attendants. After a tedious and perilous journey, which occupied the ambassador from the 16th of April to the 18th of October 1520, he arrived with his retinue within about three miles of the Abyssinian camp. His reception was by no means favorable; for, instead of being admitted to the presence of the emperor, he was waited on by an officer of state, who caused him to retire three miles farther from the camp : and it was- not till five years afterwards that he was enabled to finish the business of his em- bassy, and obtained leave to depart for Europe.

At last the Abyssinian emperor, having re- solved to send a new embassy to Portucal, allowed don Roderigo to depart, but detained two of his people. He at the same time despatched Zaga Zaab, an Abyssinian monk, as his own envoy. This intercourse between two such distant na- tions, however, greatly alarmed the Mahommedan powers. Selim I., the Turkish sultan, having been constantly defeated by the Portuguese in the east, and alarmed at the thought of having a fleet of that nation in the Red Sea, where they might annoy his settlements on the coast of Arabia, determined to carry his arms to the African side ; while the king of Adel having strengthened him- self by alliances with the Turks in Arabia, was now

become a very formidable enemy. This .soon appeared in the new wars with the Adelians ; who totally defeated the Abyssinian monarch with the loss of almost all his great officers and prin-

cipal nobility. The hostile army was com- manded by Mahomet surnamed Gragne" i. e. left- handed, the Turkish governor of Zeyla. The fortune of the war now entirely turned in favor of the Adelians and Turks ; the emperor was de- feated in every battle, and hunted from place to place. At last the Moors, finding no necessity for keeping up an army, over- ran the whole em- pire in small parties, plundering and burning the towns and villages, and carrying off the people for slaves. This destructive war continued till 1537; when Gragne sent a message to the em- peror, exhorting him not to fight any longer against God, but to make peace while it was in his power, and give him his daughter in mar- riage: on which condition he would withdraw his army. David, however, refused to submit: replying, that he put his confidence in God, who at present only chastised him and his people for their sins ; but that Gragne himself being an in- fidel, an enemy to the true religion, could not fail of coming shortly to a miserable end. The invincible constancy, with which this monarch bore his misfortunes, surprised both his friends and enemies. At last by the death of Ammer, a re- bellious chieftain, and the successes which David himself had obtained, the affairs of Abyssinia seemed to revive ; but still there was no proba- bility of their being brought to a fortunate issue. An embassy to Portugal was ' therefore thought of in earnest; and John Bermudes, an attendant of Roderigo, who had been detained in Abys- sinia, was placed at its head. To his temporal character of ambassador was added that of abuna, primate or patriarch. John, who was not a clergyman originally, being a bigot to the popish religion, would not accept of his new dignity but with the proviso, that his ordination should be approved by

the pope : to effect which he passed through Arabia and Egypt to Italy. On his arrival at Lisbon, he was acknowledged by John III. king of Portugal, as patriarch of Alexandria, Abyssinia, and of the sea : for this last title had also been conferred upon him by his holiness. Entering then upon the pur- pose of his embassy, he threw Zaga Zaab, his predecessor at the court of Portugal, into irons ; and so forcibly represented the distresses of the Abyssinians to the king, that an order was issued for 400 musketeers to be sent by don Garcia de Noronha to their relief. To accelerate the arrival of these succours, John himself proposed to sail in the same fleet with don Garcia; but his voyage was delayed for a whole year by sickness, occasioned, as he supposed, by poison given him by Zaga Zaab. After his recovery, he set sail for India, but here the death of don Garcia occasioned another delay. It was resolved, how- ever, that don Stephen de Gama, who had suc- ceeded Garcia, should undertake an expedition to the Red Sea, in order to bum the Turkish galleys at Suez. But, the enemy having received intelligence of the intended voyage, their vessels were withdrawn, and the Portuguese fleet, having found considerable difficulty in obtaining pro- visions, at last attacked the town of Arkeeko, putting all the inhabitants to the sword ; and sent the head of the governor to the Abyssinian court. During this interval a considerable change

had taken place in the affairs of that court. David had been reduced to the greatest distress ; and a Mahommedan chief, called vizier Mugdid, had made a successful attack upon the unprotected fortress at Geshen, where the imperial family resided, and slaughtered the whole of its in- mates. This last disaster seems to have been too great for the fortitude even of this heroic prince : he died the same year, 1540.

Claudius, the son and successor of David III., though only eighteen years of age, soon re- vived the affairs of the empire. On his acces- sion, the Moors formed a league among them- selves to crush him at once ; but Claudius anticipated this ; and

falling upon a consider- able party, in the neighbourhood of his own camp, totally defeated them ; the pursuit lasting two days. His enemies now found it necessary to concentrate their forces, and spend the rainy season in such parts of Abyssinia as they had conquered, without venturing to return intoAdel. They at last placed themselves under the com- mand of an experienced chief, named Jonathan : and determined to attack the Abyssinians with- out delay. But in the camp of Claudius all their plans were known, and any attempt upon it would have been desperate. He finally de- termined to surprise the confederates, and, sal- lying out in the night, defeated them with great slaughter, and sent the head of Jonathan to, his allies by a prisoner, the only one he had spared. The Abyssinians now flocked in from all parts to join their prince ; and even many of the Mahommedans, having experienced the lenity of his government, chose rather to submit to Claudius than to the Turks and Adelians. His affairs were in this situation when the Portu- guese arrived, and the admiral, Don Stephen de Gama, lost no time in bringing forward the armament designed by his sovereign to assist the Abyssinians. The command was given to Don Christopher de Gama, the admiral's youngest brother ; and almost every man on board the fleet was ambitious to share in the enterprise; 100 musketeers having first arrived, they were ap- pointed by the Portuguese general as the em- peror's guard. After eight days march through a nigged country, Don Christopher arrived in presence of the Turks, and received a defiance in very insulting terms from Gragne, their ge- neral. An engagement took place on the 25th of March, 1542 ; in which both commanders were wounded, but no other result of conse- quence followed.

The Portuguese retired into winter quarters ; while Gragne remained in their neighbourhood, in ho.pes of forcing them to a battle before they could be joined by the main body of the Abys- sinian forces : he in the mean time doubled the number of his horse, and increased his train of artillery. Still in a second engagement, which now ensued, the superiority of the

Portu- guese appeared great, and the battle was de- cidedly in their favor, until Gragne' ordered some artillery to be pointed against the Abys- sinians, who, being unaccustomed to fire-arms, fled at the first discharge. Don Christopher, rashly exposing himself, was singled out and shot through the arm. This produced such con

fusion, that a total defeat of his forces, with the loss of their camp, ensued ; the barbarians, ac- cording to custom, putting to death all the •wounded and defenceless. The Portuguese general obstinately refused to fly, and was at last put into a litter by force, and sent off along with the Abyssinian ladies and patriarch. Ar- riving in a wood where he entered a cave, to have his wound dressed, he was betrayed by a female to a party of the enemy, and carried in triumph to Gragne. Here, after mutual insults, the barbarian in a fit of passion cut off his head; which was sent to Constantinople, and his body cut in pieces and dispersed throughout Abyssinia. But this piece of cruelty was quickly punished. The Turks were irritated to the last degree against their general at the loss of Don Christopher's expected ransom, and abandoned him in large numbers. Gragn£, thus left to de- cide the quarrel with his Africans, was in ano- ther engagement, on the 10th of February, 1543, defeated by Claudius, and killed by a Portu- guese valet de chambre of Don Christopher's. His wife and son were taken prisoners, with Nur, the son of Mugdid, who destroyed the royal family ; and happy it had been for Clau- dius, if he had retaliated, and put these prisoners to death.

We have already mentioned that John Ber- mudes was appointed, by the pope, patriarch of Alexandria and Abyssinia. He now began to insist that Claudius should establish the doc- trines of the church of Rome throughout the empire, which he said his father David had en- gaged to do. Claudius, however,

refused to alter the religion of the country ; upon which those contentions commenced, which ended in the total expulsion of the catholics, and the cutting off all communication with Europeans. Claudius took every opportunity of showing his attachment to the Greek church, denying that he had made any promise of submitting to the see of Rome ; and when Bermudes told him that he was accursed and excommunicated, and threatened to return to India with his country- men, Claudius Answered, that he wished in- deed that Bermudes would return ; but that he should not allow the Portuguese, nor any per- son to leave his territories without permission. The emperor, however, found it prudent to con- ciliate the other Portuguese, and succeeded so far with their commander Arius Dias, that he privately renounced the church of Rome, and was baptised into that of Abyssinia by the name of Marcus. The emperor now, therefore, re- garding him as a naturalised subject, sent him a. standard with the Abyssinian arms, to be used instead of those of Portugal. He had previously bestowed on him the captive queen of Adel, in marriage ; and now raised him to the royal dignity, by giving him the kingdoms of Doar and Belwa. The altercation on the subject of religion becoming every day more violent, Ber- mudes was prohibited by the emperor from any further communication with the Portuguese; and, the latter having attempted in defiance of his authority to fortify their camp, he ordered it to be instantly attacked. The attempt, how- ever, failing, he is said to have been advised toy

Marcus to consult his own safety, and break the power of the Portuguese by artifice. With this view he endeavoured to appease the patriarch by a valuable present; and then dispersed the European leaders into different parts of his em- pire. Such is the account given of this transac- tion by the Portuguese historians : but Mr. Bruce, after the Abyssinian annals, says that no quarrel ever took place betwixt Claudius and any of the Portuguese, except the brutish Ber mudes, whom he was on the point of banishing to one of the rocks used as

prisons in Abyssinia. At last Bermudes was persuaded to withdraw to India, where he remained neglected for two years, and then returned to Portugal. Claudius was scarcely freed from this troublesome priest, when he was threatened with the intrusion of others into his dominions. Ignatius Loyola, the founder of the order of the Jesuits, then at Rome, proposed to go in person to Abyssinia, to make a thorough conversion of both prince and people. The pope, however, who conceived that he might be of more importance to him in Europe, substituted in his place Nugnex Baretto, a Jesuit, whom he invested with the dignity of patriarch, and honored with a letter to Claudius. With these commissions, and a number of priests, Baretto sailed for Goa, then the only mode of passage to Abyssinia; on his arrival, being informed that the Abyssinian monarch had such an aversion to the church of Rome that there was no probability of his meeting with a favorable reception, he sent forward some clergymen of inferior dignity, with proper cre- dentials, headed by Oviedo, bishop of Hierapo- lis, and Carneyro, bishop of Nice. These arrived safely at Masuah in 1558.

The emperor, supposing that a new supply of Portuguese soldiers had come from Europe, was happy to hear of their arrival, and, even when he found that they were only priests, resolved to give them a civil reception. But a more impor- tant object now claimed his attention. This was the appointment of a successor to the throne, Claudius having no son. A project was there- fore set on foot for ransoming- prince Menas, the emperor's youngest brother, who had been taken prisoner by the Moors in the time of David, and hitherto detained in captivity on a high moun- tain in Adel. A proposal was made to the wife of the late Gragne", who had escaped into Atbara, that her son, who had been taken by the Abys- sinians, should have his liberty, provided the emperor's brother should be restored. This was accepted ; 4000 ounces of gold being added for the ransom of Mcnas. The widow of Gragne", as Mr. Bruce informs us, had been taken prisoner at the battle in

which her husband was killed, but by means of Nur, the son of Mugdid, the murderer of the royal family, she made her escape into Atbara. Subsequently, Nur offered her his hand, but she refused to marry any man, unless be brought her the head of Claudius. Nur, therefore, now governor of Zeyla, when Claudius marched towards Adel, sent him a challenge; and the emperor, though advised against the ex- pedition by all his friends, did not decline the combat. This advice is said to have been dic- tated by a number of prophecies, that he should

be unfortunate, and lose his life in this encoun- ter ; prophecies which, in the present state of this country, were sure to occasion their own fulfilment. On the day of conflict all the attend- ing Abyssinians fled on the first fire, leaving the emperor in the midst of his enemies, attended by only eighteen Portuguese, and twenty horse- men. These were all killed after a desperate resistance; the emperor himself receiving up- wards of twenty wounds before he fell. His head was now brought by Nur to his mistress, who hung it up on a tree before her door, and here it remained, it is said, for three years. This fatal encounter took place on the 22d of March, 1559.

Menas, ascending the throne without oppo- sition, found his affairs in great confusion, both from foreign and domestic enemies. The first of these was Radaet, a king of the Jews, who had a territory in the empire of Abyssinia ; the capital of which was on a rock named Samen : which the emperor found impregnable. The cause of this quarrel was not known, but the event was unfortunate ; the emperor being obliged to aban- don the enterprise, after having bestowed a con siderable time upon it. An attempt to assassinate him now followed, which was succeeded by a conspiracy among his principal nobles. They proclaimed Tascar, the nephew of Menas, empe- ror of Abyssinia: and assembled a powerful

army to support his claim. But they were entirely defeated by Menas ; Tascar himself taken, and thrown from the top of a precipice; and Isaac the Baharnagash, the leader of the con- spiracy, himself escaped with difficulty to the confines of his own government. Here he entered into an alliance with the Turkish bashaw of Ma- suah ; whom he put in possession of Dobarwa, with the country adjacent, which is considered as the key to the province of Tigre. Isaac strengthened himself also by an alliance with the Portuguese, and professed a great desire to em- brace the Romish religion. The emperor was very apprehensive of the arrival of more Portu- guese, for he had come to an open breach with Oviedo, the head of the European mission ; but the latter had not sufficient interest to procure the supply he promised the rebels. An engage- ment took place without them, in wh ch Menas •was again victorious ; though the battle was not so decisive as to terminate the rebellion. Menas died soon after this, and was succeeded in 1563 by his son Sertza Drnghel, then only twelve years of a^e.

The beginning of Sertza Denghel's reign was disturbed by various factions. Isaac, with his allies, the bashaw and the Portuguese, seem to l>ave remained for some time unmolested ; and, in 1569, a kind of accommodation took place. Mr. Bruce only tells us however that ' Oviedo and the Portuguese did not appear at court.' Others say, that after the last battle with Isaac, their name became so odious to all the Abyssini- ans, especially to their monarchs, that they would never more suffer any of them to enter into the army. They were certainly however more favorablv dealt with by the new emperor than they had been by his father. The Galla made frequent inroads into Abyssinia during this reign, and in 1576 a leacue was formed bv Ma-

homet, king of Adel, with Isaac and the Turkish bashaw. The emperor, however, marched with such expedition, that he did not allow them time to join their forces ; and, attacking them sepa- rately, eventually defeated them all. Almost the whole Moorish army was destroyed ; but, while the emperor

entered Adel on the east, he was informed that the Galla had invaded him on the west. Traversing therefore the whole breadth of the empire with the utmost expedition, he soon came up with these new enemies, who retired before him ; and he now in turn invaded their country, and that of the Falasha, which he rava- ged for four successive years. These Falasha profess the Jewish religion, and were then governed by a king named Geshen, who was killed, and his army utterly defeated by the Abyssinians, on the 19th of January, 1594. The victorious Sertza then hastened to encounter the oashaw of Masuah, who, confident of the supe- riority of his army, waited for him in a strong position. A desperate battle ensued ; the event of which was .doubtful, till Robel, commander of part of the emperor's household troops, who were armed with pikes, attacked the part of the Turkish horse where he saw the bashaw, and killed successively the officer who carried his standard, and that chieftain himself. This in- stantly decided the victory : the Turkish horse fled, and the rest of the army soon followed the example. The Moors were pursued to the island of Masuah; where, and in the neighbouring deserts, many perished with thirst. After this, marching towards the western part of his terri- tories, the emperor proceeded to Narea, destroy- ing the Galla as he went along. His last expedition was towards Damot, to chastise a rebellion there, and where he died from eating poisonous fish.

Jacob, his son, about seven years of age, was raised to the throne, and his nephew, Za Deng- hel, i rival, confined in an island of the lake Dembea.

An attempt was next made to seize Socinios, natural son to Facilidas, grandson of David 111 , who had likewise a claim to the throne. He, however, contrived to withdraw from the power of his enemies ; and Za Den^hel himself found means to escape to the mountains of Gojam. The empress-mother, with her two sons-in-law, governed Jacob till lie was seventeen years of age ; but, being now thwarted by him in their further views, declared him degraded from the imperial dignity, and proclaimed Za

Denghel. Jacob left his palace in the night, and attempted in his turn to fly to the mountains of Samen, but was discovered, seized, and brought back to his rival, who banished him for life to Narea. All those who came into Abyssinia with Oviedo be- in? TIOW dead, the Romish religion languished for want of preachers, the last of whom died in 1596. Next year, however, Melchior Sylvanus, a vicar of the church at Goa, was sent on a mission to Abyssinia. He was succeeded by Peter Pae?., the most learned and Ijest qualified missionary that had as yot appeared here, in 1600 ; who taking up his residence at the convent of Fre- mona, in the province of Ti^re", first applied to the study of the learned language of the Abys

sinians. In this he made such progress, as ever, any thing of importance could be done m quickly to surpass the natives : after which he religion, an impostor appeared, who assumed

the name of Jacob the late king, pretending to

have escaped from the battle ; but so much in- jured in the face, that he kept one side of it co- vered to conceal his wounds. He hovered for some time amongst the Galla in the mountains, where he was finally assassinated by two young men, who had been outlawed for murder.

Another dangerous rebellion in this reign was

established a school, where the children of the Portuguese and Abyssinians were promiscuously taught, and their progress was spoken of at the court. On this (in 1604) he was sent for by the emperor ; and, having vanquished the best theo- logians opposed to him, performed mass before the court, in the Romish manner : this was fol- lowed by a sermon,which, in elegance of diction,

is said to have excelled any thing that had ever

headed by one Melchizedec, a servant °of the been heard there; and Za Denghel resolved to late Sertza Denghel, but a man of great expe- embrace the Catholic religion. Communicating rience in war, and a bloody battle ensued, in this resolution to several friends, he soon after which Sanuda, the emperor's general, was so to- issued proclamations forbidding the observation tally defeated, that he alone had the good fortune of the Jewish sabbath, and wrote letters to pope to escape. On this Socinios sentEmana Christos Clement VIII., and Philip III. of Spain, desi- with a considerable force to reduce the rebels ring a new supply of teachers, to instruct his and a second engagement took place on the 9th people in religion and the useful arts. This of March, 1611, which was fought with great precipitate conduct had the effect which might obstinacy on both sides : for some time the ad- have been expected. The Abyssinians, headed vantage appeared on that of the rebels ; till by one Za Selasse, prevailed on the abuna to Emaria Christos pushed desperately forward to excommunicate the emperor, and absolve his the place where Melchizedec himself was, who subjects from their allegiance. He then set out instantly turned his horse and fled ; and his army for Gojam, where, the people being remarkable soon followed his example. Melchizedec, how- for their aversion to the church of Rome, he ever, was closely pursued, taken prisoner, and found no difficulty in raising an army; and Za executed as a traitor.

Denghel soon found, by the great desertion News were now received that tne whole coun- among his troops, how fearfully the excommuni- try round the head of the Nile to the province cation had 'availed. John Gabriel, an experi- ofTigre had revolted; so that there was a ne- enced Portuguese officer, advised him to retire cessity for the immediate presence of the em- to some fortress, until his subjects should return peror in this tract of territory. His brothers, to a sense of duty. This advice however was Emana and Sela Christos, were also employed rejected; and a sanguinary battle ensued, in against

different rebel chiefs. A mountainous which at first the Portuguese seemed to carry district named Gusman, on the Nile, was now every thing before them. In the other wing, completely laid waste. The men found in re- however, the cowardly and treacherous Abys- bellion were uniformly killed, though, at the in- sinians deserted their emperor, who was quickly tercession of Peter Paez, the women and children, surrounded by his enemies, and, after great per- instead of being sold for slaves, were given to sonal exertion, fell under the hands of the traitor the Jesuits. The Gongas and Agows were next Za Selasse attacked with equal success, and still greater

On Za Denghel's death, Sorinios appeared as cruelty ; one of their tribes, named Zalabassa, a ran dilate already in possession of the empire, being almost entirely exterminated. Gideon, Knd ready to support his right by force of arms, king of the Jews of Samen, having killed the Za Selasse at first hesitated to acknowledge him, guards who watched him, set at this time a new in expectation that Jacob would make his ap- impostor, who took the name of Jacob, at liberty, pearance, from whom he had received several and supported his cause. He soon collected a flattering' promises ; but after much vacillation, formidable army, with which he defeated the he made proposals to join Socinios; and, though royal forces. This brought Socinios himself Jacob had sufficient influence to raise a more against him, who instantly attacked the Jewish numerous army than his rival, the latter boldly monarch, and took a strong fortress of his named advanced to give him battle ; in which the over- Massiraba by storm. Hotchi, Amba Za Han- confident Jacob perished. In this battle also casse, and Senganat, three other strong fortresses, was killed the wicked priest Abuna Petros, who shared the same fate; Gideon himself narrowly had been the occasion of Za Denghel's death, escaping with his life. The war was now rc- By this victory Socinios was fully established on sumed against the Gongas and Cuba ; whom the the throne, though his situation might

still be emperor annually invaded for the purpose of
accounted precarious, from the rebellious dispo-
making slaves. In 1616 the emperor set out on sition
of many of the provinces. He began au expedition
against the Galla ; but this was with making a
general proclamation of pardon, laid aside on the
death of his eldest son, for excepting only the
murderers of Za Denghel, whom he entertained a great
affection. It was with whom he had been on terms of
intimate succeeded by avery cruel order against the
Jews, friendship, and distinguished the Portuguese
by whom Socinios now resolved to exterminate his
favors. He enlarged the territory possessed without
any apparent occasion. His commands, by the Jesuits
at Fremona; after which he de- however, were
executed so punctually, that very dared to Paez his
resolution of embracing the few escaped ; and, among
the rest, their prince Catholic religion, forwarding
at the same time Gideon, perished. He was supposed
to be im- letters to the king of Portugal and to the
pope, mensely rich, and to have concealed his
riches, requesting more European troops. Before,
how- which have since been sought for in vain by the

Abyssinians. The children of the murdered Jews were
sold for slaves.

At last the emperor, being left for a short time at
rest from rebellion, determined to make war on his
neighbour the king of Sennaar. In this expedition he
was assisted by one Wed Ageeb, a prince of the
Arabs, who lived on the frontiers of Abyssinia. The
allies proceeded with their usual cruelty, killing
all the men, and selling the women and children for
slaves. Vast numbers of cattle were also carried
off; and the victorious armies returned with an
immense booty. His next expedition was against
Fatima queen of the Shepherds, otherwise called
queen of the Greeks, who resided on the north-east
of Atbara. In this also he proved successful, though
less blood was shed than usual. All this time Peter

Paez had applied himself with the utmost assiduity to the conversion of the Abyssinians, and had been at- tended in this undertaking with surprising suc- cess. His universal gepius, and knowledge of the arts, came happily in aid of his zeal and learn- ing, while the barbarous ignorance and savage manners of his antagonists tended to prejudice every one against their tenets. At last a public dispute was appointed between the catholic and the Abyssinian patriarch ; in which the inferiority of the latter was very apparent. While the labors of Paez were proceeding in this prosperous way, letters arrived from pope Paul V., and Philip III. king of Spain, assuring him of their alliance and of the support of the Holy Spirit himself, provided he continued firm in his resolution of embracing the catholic faith. Socinios would have been better satisfied with an account of a reinforcement of soldiers ; but, as matters stood, he resolved to submit in form to the pope, renounce the Greek church ; and, to accomplish this, sent new ambassadors to Europe.

Socinios had now gone so far in favor of the catholic party, that he began to share the unpo- pularity of Za Denghel, and numberless conspi- racies were formed against him. The conspi- rators were at this time supported, not only by the abuna, but by Emana Christos himself, the emperor's brother. Their first step was the very same which had been so successfully taken by Za Selasse in the time of Za Denghel, viz. to procure a sentence of excommunication on the emperor from the patriarch. He was then ab- sent on an expedition against the Agows; but returned immediately; informing the abuna, that, if he did not recal the excommunication without delay, his head should pay the forfeit. This spirited declaration had such an effect, that the anathema was annulled, and the conspiracy dissolved. It was next resolved between Emana Christos, the emperor's brother, Julius his son- in-law, and Kesla Wahad, master of the house- hold, to assassinate Socinios in his palace; and, on this failing, that of Sela Christos was at- tempted ; because the

emperor had taken the government of Gojam from Emana Christos, who was a schismatic, to give it to Sela, a violent catholic. The enterprise was begun by Julius ; who issued a proclamation, that all those who nelieved there were two natures in Christ should leave the province of Tigre". where he was go- vernor ; and that such as were true friends to the

Alexandrian faith should repair to his standard to fight for it. He then ordered the goods of all the catholics in Tigre to be confiscated ; and marched into Gojam, to surprise Sela Christos. But here the whole scheme was baffled by the vigilance and activity of the emperor ; who, hear- ing of what had been attempted, returned into that province before the conspirators had heard of his having left it. Julius was now very much disconcerted; but advanced to attack the em- peror before he could be joined by Sela Christos, Simon himself (the abuna) offering to share his fortunes. He had been persuaded by the latter, that as soon as the imperial army should see him (Julius), they would abandon the emperor's standard and join him. On this, without farther consideration, he rushed into the camp of So- cinios with very few attendants, and reached the emperor's tent before he was known. Here, however, the guards instantly despatched him ; and his whole army, retreating in dismay, were pursued with great slaughter by the imperialists. By this victory the whole scheme of the conspi- rators was overthrown. But another soon fol- lowed, which arose out of a dispute concerning the sabbath ; the Abyssinian church insisting on the observance of the seventh day of the week, and the Romish church on that of the first. The author of this rebellion was one Jonael, who drew together his forces in the country of the Galla. On this the emperor entered and laid waste their territories ; on which one part of that people were disposed to afford protection to Jo- nael, and another to deliver him up : and the latter were soon bribed by Socinios to send him the head of the rebel. A more formidable enemy, however, still remained. The province of Damot was one of the most disaffected to So- cinios in the whole empire; and

hither the greatest part of the relig:ous fanatics in the other provinces had retired. They now mustered an army of more than 12,000 men, among whom were 400 monks. Against these Sela Christos was despatched with about 7000 excellent troops ; and as the general himself was a zealous Roman catholic, as well as most of his men, both parties imagined themselves sure of the protection of heaven. The two armies met on the 16th of October, 1620; when the monks made a most obstinate resistance, and did not yield till after 180 of them had been killed; but the rebels were finally and completely beaten. Socinios now determined openly to show his attachment to the church of Rome, and renounced the Alex- andrian faith in the most explicit manner. The example of the sovereign, however, had very little effect upon his subjects : it only, in fact, urged forward a new rebellion. This, however, was put down, and Socinios persevered. At last a new set of missionaries, with a patriarch, Al- phonso Mendez, at their head, arrived at Gor- gora, the seat of imperial residence. This was in the beginning of 1626; and, at the first au- dience, it was agreed, that the emperor should take an oath of submission to the pope ; a cere- mony which was performed with the utmost splendor. Sela Christos, not contented with taking the oath, drew his.gword, and denounce! vengeance on 'those \vlio fell from their dutv/

Excommunication was no«r pronounced against ail who did not keep the oath: a proclamation was issued, that all priests should embrace the catholic religion under pain of death ; and that every one, under the same penalty, should ob- serve Lent and Easter according to the rules of the Romish church; while the new patriarch proceeded to re-ordain the clergy, to consecrate the churches anew, and to rebaptise the people.

We cannot follow the coriseqences of this at- tempted change in detail : it will suffice to say,

that neither the example nor authority of the em- peror could wean the people from their attach- ment to the ancient faith : and, after repeated efforts to effect this, Socinios's own attachment to the Romish religion began to decline. In this disposition he set out for the country of Lasta, where Melca Christos had raised the standard of revolt ; and the entrance to which was guarded by very high and rugged mountains. Among these the rebels had fortified themselves; but were driven from their posts by the king's troops, so that the latter imagined they had gained a complete victory. The rebels, however, descend- ing suddenly upon them, cut off great numbers, and obliged the rest to make a precipitate retreat. They even rallied, and sustained an action, in which they lost 8000 men. On viewing the field of battle next day, prince Facilidas is said to have made a pathetic speech to his father. ' How many men have you slaughtered !' he exclaimed ; ' how many more have you yet to kill ! We are become a proverb even to the Pagans and Moors for carrying on this war ; and for apostatising, as they say, from the faith of our ancestors.' The king made no reply, but the effect of the prince's words was soon apparent. And, when the patri- arch upbraided him with his ingratitude to the catholics, he replied, that he had done every thing in his power to establish the catholic religion ; that he had shed the blood of thousands, and had still as much more to shed ; but that he should consider of the matter, and acquaint him with his final resolution. Next day, in a message to the patriarch, he recounted the many rebellions which had been excited on account of religion; and concluded with observing, that though the faith of Rome was not a bad one, yet the people of Abyssinia did not understand it. For this reason, he was determined to tolerate both : and im- mediately afterwards issued a proclamation, de- claring the Alexandrian faith restored, with the altars, liturgy, &c. ; and stated, at the same time, that being now old and infirm, he himself re- signed the empire to Facilidas. This remarkable proclamation was dated the 14th of June, 1632; after which

Socinios retired from public affairs. He died on the 7th of September, 1632; and with him fell all the hopes of the Jesuits.

Facilidas was an inveterate enemy to the Romish faith. As soon therefore as he had ob- tained the government, the catholics were every where displaced : a letter was sent to the patri- arch, informing him, that as the Alexandrian faith was now restored, it was necessary for him to leave the kingdom, and commanding him, with all his brethren, to leave their convents throughout the empire, and retire to Fremona, in Tigre. The emperor, understanding that they

were about to solicit succours from Spain, sent orders to the patriarch instantly to deliver up all the gunpowder they possessed, and to prepare without delay to set out for Masuah. On this the infatuated priest applied for assistance to the Baharnagash, named John Akay, then in re- bellion against the emperor; who conducted him and his associates to a strong fortress, named Adicotta ; but afterwards agreed to sell them to the Turks, with whom Facilidas was now on friendly terms. He next became jealous of his uncle Sela Christos, as the only remaining Romanist of any rank in the empire. He abso- lutely refused to renounce his faith ; and, not- withstanding his former services, was banished to an unwholesome district among the mountains of Samen : here, being detected in a corres- pondence with the Jesuits, he became a martyr to the new faith, and was sentenced to be hanged on a cedar tree.

Though the catholic faith was now totally sup- pressed, the spirit of rebellion continued ; and Melca Christos was as conspicuous as ever in it. He at one time made himself master of the capi- tal, entered the palace, and was formally crowned emperor. Facilidas, however, having recruited his army, sent three able generals to attack him ; who almost entirely cut off his forces, and killed their leader. This victory over Melca Christos was followed by several successful expeditions against

the Agows and Galla ; but, in the sixth year of the reign of this emperor, the rebels of Lasta chose the son of Melca Christos for their king, and made serious depredations on the neighbouring provinces. Before this rebellion could be suppressed, Claudius, the emperor's brother, placed himself at the head of another. He had not the same good fortune with the rebels of Lasta ; but was quickly defeated, taken prisoner, and banished to a mountain called Wechne ; which served from that time for the imprisonment of the blood royal. The latter, however, weary at last of the contention, sub- mitted unconditionally to the emperor; who, though he at first affected to treat them with severity, soon after released their leader from prison, and bestowed upon him large possessions in Begemder, with his daughter Theoclea in mar- riage. Facilidas died in October 1665, and was succeeded by his son Hannes I.

Hannes was zealous for the Christianity his forefathers had professed ; and, in the beginning of his reign, issued a proclamation forbidding the Mahommedans to eat any flesh but what wai killed by Christians; but so far was he from favoring the catholics, that he ordered all their books which could be found in the empire to be burnt. Much of his reign, which lasted but fif- teen years, was spent in regulations of the church matters, and in contentions and trifling disputes with the clergy. He died on the 19th of July.

1680.

Yasous, who succeeded with universal appro- bation, is described as a prince of very amiable qualities. Having visited those of the royal family who were confined on the mountain of Wechne, he found them in the most miserable condition ; their revenue having been ill paid by his father, and embezzled by their keepers, lie

Tissigned a large tract of territory, and an ample revenue, for the maintenance of the princes; who, though left at perfect liberty to depart, unanimously determined to return to their former stale of confinement ; and, during the whole of his reign, no competitor for the crown ever made his appearance from among them. Yasous, how- ever, had soon to encounter a violent irruption of the Galla, headed by Isaac, a grandson of So- cinios, while the Agows and other malecontents were ready to join him as soon as he should pass the Nile. The emperor, however, entirely dis- concerted the scheme by his activity; and Isaac himself was taken and put to death.

The most memorable events in the reign of Yasous I. regard religion, and a renewal of the correspondence betwixt Europe and Abyssinia ; of which Mr. Bruce gives a detailed account. It was pretended, that, on the expulsion of the Je- suits from Abyssinia, a great number of Catholic Christians had fled into the neighbouring coun- tries of Nubia and Sennaar, where they were so grievously oppressed by the Mahommedans, that without some spiritual assistance, they would be under the necessity of renouncing their religion. This story being confirmed by two Franciscans of Cairo, the cause of these supposed Christians was eagerly espoused by the religious in Italy, and a new mission was set on foot at the expense of the pope for their relief, under the title of the Ethiopic mission. The missiona- ries had it also in charge to penetrate if possible into Abyssinia, to keep up the catholic faith, until a better opportunity should offer of attempt- ing to convert the whole nation. For this pur- pose a convent was procured for them at Achmim in Upper Egypt ; and permission was granted to settle two of their body at Cairo indepen- dent of the fathers of Palestine. While these transactions passed in Italy and Esrypt, Louis XIV. of France was in the height of his glory. A scheme was devised by the Jesuits of inducing the emperor of Abyssinia to send an embassy to France ; after which they hoped that they might be replaced in the Ethiopic mission. They even

applied to the pope to decide which of the two orders should make the attempt to enter Abys- sinia ; but received no other answer, than that those who were most expert should do so. The mission therefore now fell into the hands of two persons of opposite professions ; viz. Paschal, an Italian Franciscan, and Brevedent, a French Je- suit. In the mean time an unexpected incident made way for the admittance of missionaries into Abyssinia. Yasous and his son had both been attacked by a scorbutic disorder, which threa- tened to end in leprosy ; on which one Hagi AH, a Mahommedan factor at Cairo, received orders, on his return to Abyssinia, to bring with him &n European physician. This man, who had been acquainted with friar Paschal, at first proposed that he should accompany him to Abyssinia in the character of a physician ; and take a companion of his order with him. But this scheme was frustrated by Maillet the French consul, who represented to Hagi Ali, that friar Paschal understood nothing of medicine ; but recommended Charles Poncet, a French chemist and apothecary, as a most able physician, with

father Brevedent, the Jesuit, to attend him as his servant. They arrived safely at Gondar in July 1699, but here Brevedent died on the 9th of August; Poncet however lived to execute his commission, by making a complete cure of his royal patients; and, on the 2d of May 1700, set out on his return for Europe. A main end of this undertaking, to procure an embassy from Abyssinia to the French monarch, was also gained. An ambassador was procured, but M. Maillet, hearing of his low origin, thought proper to call in question the authenticity of his mission, branded Poncet himself as a liar, and would not allow the Abyssinian ambassador to proceed to France.

An embassy sent from France to Abyssinia, at the instigation of the Jesuits, was equally unfor- tunate. The person appointed as ambassador was M. de Roule, vice-consul at Damietta. He is characterised by Mr. Bruce as ' a young man of some merit, who had a considerable degree of ambition, and a moderate skill of the lan- guages spoken in the east ; but

was absolutely ignorant of that of the country to which he was going, and, what was worse, of the customs and prejudices of the nations through which he was to pass.' The Franciscans took advantage of this, and are accused of having procured his murder, which took place at Sennaar, just after that of Yasous the Abyssinian emperor, who fell by a conspiracy of his wife and son.

Yasous was succeeded by his son Tecla Hai- manout. Before his death, he had despatched a message to the king of Sennaar, requiring him to afford M. de Roule protection at his court, and a safe conduct from it ; but, when the mes- senger was within three days' journey of the ca- pital of that kingdom, he heard of the assassina- tion of his master. On this he returned in great haste to Gondar, to have the letters of protection renewed by Tecla Haimanout. This was readily donf : bm. now, before the messenger could reach Sennaar, he was informed that De Roule was also assassinated. The Abyssinian monarch, provoked at this violation of the law of nations, resolved on hostilities against the king of Sen- naar; and assembled an army for this purpose. But a rival candidate for the throne, named Amda Sion, was set up against him by the friends of his father Yasous, and had been for some time privately collecting troops. In the issue (in 1 706) the emperor himself was assassinated, and succeeded by his uncle Tiffilis, or Theophilus; whose reign, was principally occupied in punish- ing the murderers of his two predecessors. He died in September 1709.

Oustas, the new monarch, was elected by the army, and hardly seated on the throne when a dangerous conspiracy was formed against him by the very parties who had placed him on it. He baffled their designs, however, by seizing the principal conspirators. After this he undertook an expedition against the Shangalla, on a principle, now becoming common, of hunting these poor people for the sake of making slaves. In this he met with great success, until recalled to his capital by the death of his prime minister, Tafa Christos. Soon after this he was taken suddenly ill, and, a few days before he

died, David IV.

son of Yasous was proclaimed his successor. He was crowned on the 30th of January, 1714.

It was the custom to call a convocation of the clergy on the accession of every new emperor ; this assembly was now very fully attended, and the monks insisted upon being summoned on the occasion; more especially as a new abu- na was come from Egypt, and the lenity shown to the catholics by Oustas had excited the jea- lousy of the Abyssinian clergy. Three Romish priests, whom he had protected and supported for some time, were by this holy fraternity con- demned to be stoned to death ; and the sentence was instantly executed by the furious and igno- rant multitude. The priests next insisted that Abba Gregorius, who had acted as an interpre- ter to the three priests, should also be put to death; but this was prevented by David, who found upon enquiry that he had only done so in obedience to the express command of Oustas. Other disputes now arising among themselves, and the sitting having become completely riotous and seditious, the emperor sent against them a body of Galla; who killed upwards of 100 of the ringleaders, and then, sallying out into the street, destroyed indiscriminately every one they met. The emperor thus became completely hated in his capital, and numberless conspiracies were talked of; but, before any pretender to the crown appeared, he fell sick, the cause of which was found to be poison ; and died the 9th of March 1719, in great agony.

David IV. was succeeded by his brother Ba- euffa; who, in the beginning of his reign, sought

- out with great severity all the nobility who could be supposed to have had any share in the con- spiracies of former reigns. In the latter part of it he became much more mild, and was beloved by his

subjects.

He was succeeded 1729 by his son Yasous II. who continued long under the regency of his mother ; and was, afterwards, like all his prede- cessors, disturbed continually with seditions and rebellions. In one of these the city of Gondar was made a field of battle, and was so frequently set on fire, as to be almost entirely reduced to ruins. Having at last reduced his subjects to obedience, he applied himself to the arts of peace, repairing and ornamenting his palaces, &c. At last, being incensed at the publication of a severe satire against him, under the title of The expeditions of Yasous the Little, he deter- mined on an expedition against Senriaar, from which, after one or two partial reverses, he re- turned triumphant to Gondar. In one action, however, he is said to have lost all those holy relics, which it was usual in Abyssinia to carry into the field battle. Among these was a picture of the crown of thorns which was put upon our Saviour's head ; some pieces of the cross upon which he suffered; and a crucifix which had spoken on many occasions! They were, after the battle, fortunately redeemed by the priests for 10,000 ounces of gold, and, on their arrival at Gondar, the greatest rejoicings were made. Soon after these transactions, the abuna died, and, to defray the expense of sending for a new one from Alexandria, Yasous was obliged to lay a tax upon all the churches. Three priests,

consigned to the care of as many Mahommedan factors, were sent to Egypt for the new patriarch ; but they were detained for some time. It was found that the naybe of Masuah had robbed these messen- gers of half the money, and Michael, the governor of Tigre refused to punish him. Yasous therefore sent a body of troops into Tigre" to bring him Michael's head ; but at the intercession of the principal officers, lie was pardoned, and became one of the most dutiful and zealous of his subjects. This emperor had been married when very young to a lady of Amhara, by whom he had two sons named Adigo and Aylo; but as she attempted to interfere in matters of state, he was

persuaded by his mother to banish both her and her chil- dren to Wechne. After this his mother selected lor him a wife from among the Galla ; a people of all others the most obnoxious to the Abyss mans, both on account of the barbarity of their man- ners, and the continual wars which from time immemorial had taken place between the two nations. The new empress was the daughter of one Amitzo, a prince who had hospitably enter- tained Bacuffa before he became emperor. A prejudice against her, however, against her off- spring, and the emperor himself, never to be ef- faced, now took place among the Abyssmians ; but this did not show itself during the rei3,u of Yasous. He died on the 21st of June, 1753, in the twenty-fourth year of his reign, and is said to have been poisoned by his mother's relations.

Joas, his son by the Galla princess, succeeded without opposition. The discontent which had taken place, about the power assumed by the relations of the empress dowager, now began to appear ; and it was complained that a relation- ship to her was the only way to preferment. On the accession of Joas, a party of Galla horse, said to be about 1200 in number, were sent to Gon- dara, as the portion of his mother : these were quickly followed by a number of private per- sons from motives of curiosity, or hopes of prefer- ment, who were embodied to the number of 600 into a troop of infantry. The great favor in which these people were at court, soon induced others to make their appearance. Two of the emperor's uncles were sent for by his express order, and brought with them a troop of 1000 horse. By the time they arrived the empress was dead ; but her two brothers, Brulhe and Lubo, determined to support the family party. This was easily ef- fected ; every thing was governed by Gallas : even the emperor himself affected to speak their lan- guage ; while the Abyssinians were to the last de- gree mortified, at seeing their inveterate enemies thus establishing a dominion over them in the heart of their own country. At last Joas ap- pointed his uncle Lubo to the government of Amhara, which produced excessive discontent ; and he retracted his nomination, lest a

civil war should ensue. In the mean time, the Abyssinian prime minister, Welled De L'Oul, died. He had hitherto moderated the fury of the opposite parties by his prudent conduct ; but no sooner was he dead, than a most dreadful civil war took place. The whole empire was divided into two great factions : at the head of the one was the empress dowager, mother of Yasous H. ; at the

head of the other, Joas the emperor, with his Galla relations. We cannot detail their ferocious contests. They were brought to a crisis by the emperor's bestowing the government of Begemder upon Brulhe, in the place of Mariam Barea, an accomplished nobleman, son of the late gover- nor.

After a desultory warfare between the rivals, Joas despatched an express for the old servant of his father Suhul Michael/investing him with the dignity of Ras, by which he became possessed of unlimited power, civil and military. Michael himself had long foreseen that matters would come to this crisis, and had provided for it. He set out with an army of 26,000 of the best sol- diers in the empire, of whom 10,000 were armed with muskets. Though the subsistence of these troops was abundantly provided for by the mi- serable inhabitants of the provinces through winch he passed, he insisted on a contribution in money from all the districts within a day's march of his line of progress, and on his arrival at the capital took possession of all the avenues, as if he meant to besiege it. This at first pro- duced a universal consternation. Instead of offering any hostility, however, he waited with the utmost respect on the emperor. No sooner had he done this than he established so rigid a police, that a very short time after he entered the city, a loaf of bread, a bottle of water, and an ounce of gold, were exposed in the market- place on the head of a drum night and day, with- out being stolen. This was the more remarkable as there was then a scarcity of provisions, and but a scanty supply of water in the city. Mi- chael next prepa/ed for his expedition against Mariam Barea, in which Joas accompanied him. An engagement at last took place at Nefas Musa, on the extreme borders of Begemder, when Ma- riam could not retreat without quitting the pro- vince. As the royal army was both ably com- manded, and more than double the number of the rebels, victory was not long doubtful. Ma- riam, with twelve of his officers, took refuge in the country of the Galla ; but were immediately delivered up by that people. He was put to death by Lubo the brother of Brulhe, who

is him- self said to have cut his throat, and afterwards to have disfigured the body in a shocking manner. The head being carried to Michael's tent, was afterwards sent to the family of Brulhe in the country of the Galla.

Michael, after this, married the widow of Ma- riam in the presence of all his army, with whom the measure was popular ; but which sowed the seeds of a lasting jealousy between the emperor and himself. This was soon made public by a trifling accident. One day, while the army was on its march, Michael being much incom- moded by the sun, threw a white handkerchief over his head to keep off the heat. This was in- stantly told the king, who took it as an affront offered to himself; for in Abyssinia it is for- bidden to cover the head on any occasion what- ever, in presence of the emperor, or even within sight of his palace. Joas, therefore, sent to the ras, to know upon what account he presumed to cover Ms head in his presence, and he even patro- nised an attempt to assassinate the ras. This issued

in retaliating measures on the part of Michael, who succeeded in his object; assassins weie des- patched to murder the empercr ; which they ac- complished, and buried him in a church atGon- dar, dedicated to St. Raphael.

Michael, now absolute master of Abyssinia, first proclaimed Hannes II. brbther to king Bacufi'a, emperor; an old man who had resided almost all his life on the mountain of Wechne, and had been deprived of one hand, to incapaci- tate him for the throne. He found him, how- ever, entirely averse to taking the field, and is therefore said to have despatched him by poi- son, after which his son, Tecla Haimanout II. ascended the throne.

The young emperor, according to Mr. Brace's account, was a prince of considerable accom- plishments; and much attached, of course, to ras Michael, who now marched against the re- bel Fasil without delay, and entirely defeated him on tne 3rd of December, 1769. On this occasion Woosheka, another instigator of re-

bellion, was taken prisoner, and flead alive, his skin being afterwards formed into a bottle. This piece of cruelty was attributed to Ozoro Esther, the wife of Michael, whom Mr. Bruce, however, represents as the most humane and merciful of women. The night on which this miserable victim was destroyed, she appeared in the king's tent dressed like a bride ; and in a little time returned in triumph to Gondar. During these transactions Mr. Bruce arrived in Abyssinia ; and relates the history of the civil war after his arrival at great length ; we need only add, that the emperor Tecla Haimanout kept his ground, and was finally acknowledged by almost the whole empire. Bruce had several interviews with ras Michael, who claimed on his part the honor of receiving frequent visits from the archangel of that name, and appears for years to have been stimulated to exertion by believing in this as a fact.

Mr. Bruce entered Ethiopia in September, 1769, and on the 19th arrived at Masuah, where there was a report of Hannes II. being ill. Mr. Bruce was supposed to be his physician; but, he was here ill treated by the naybe, with a design to extort money. He escaped from his power, however, by the protection of Achmet, nephew and heir apparent to the naybe ; and by his own prudent and resolute behaviour. On the 15th of November, 1769, he left Arkeeko, and proceeded southward for Gondar, accom- panied by two guides. In this journey he was told that he would be obliged to cross the moun- tain, Taranta, the highest in Abyssinia ; but that the fatigue of this would be more than recom- pensed by the assurance of safety, and the cu- riosity of the place. After taking leave of Ach- met in a very friendly manner, Mr. Bruce and his company set out on this part of their journey the evening of the 16th. For the short space they had travelled, the ground was covered with grass broader in the leaf than ours ; but a little farther on, the soil was hard , dry, gravelly, and full of Egyptian thorn. Next day they changed their course from south to west, and soon ar- rived at a range of mountains standing so close to one another, that there was no

passage be-

tween them, except what was worn by water In the evening they pitched their tent at some dis- tance from this channel, which had scarcely any, water in it when they left it ; but all the after- noon there had been an appearance of rain, with much thunder and lightning, at a distance. On a sudden they heard a noise among the moun- tains louder than thunder ; and instantly saw the torrent, swelled immensely by the distant rains, now running like a rapid river, and the foremost part advancing in a body of water about the height of a man. Having dashed along for some time in this violent manner, the current, no lon- ger supplied by the rains, began to diminish, and by the next morning was quite gone. Among these mountains the nights are cold even in summer. On the 18th, the journey was resumed in the bed of the torrent, which now scarcely had any water ; though the stones were rendered very slippery by the quan- tity of rain which had fallen. Leaving this line of road, they came to a fine rivulet ; which, being the first clear water they had seen from the time Mr. Bruce left Syria, was exceedingly welcome to our travellers. On the 20th of November they began to ascend the high moun- tain of TARANTA. See that article. Their road, excessively rugged and uneven, was every where intersected with monstrous gullies and holes made by the torrents, and by huge frag- ments of rocks. It was with the utmost diffi- culty that they could carry their astronomical instruments. Taranta is so destitute of earth, that there was no possibility of pitching a tent upon it ; so that our travellers were obliged to take up their lodging in one of the caves with which it abounds. The air here was extremely cold, though the barometer was not below 59° in the evening. The road down the mountain was for some time equally rugged ; but, as they approached Dixan, it became considerably better. The inhabitants of this place had been not long before exterminated by ras

Michael; and their successors were, as Mr. Bruce says, composed of the vilest of the population from the territories of the Baharnagash and Tigre.

He was at first surrounded in a threaten- ing manner by a body of armed men ; but they were dispersed by the authority of Hagi Abdel- cader, the friend of Achmet, who had received oiders to provide for the safety of the travellers. The next stage was from Dixan to Adowa, ca- pital of the province of Tigre. Leaving Dixan on the 25th of November, they pitched their tent the first night under a large spreading tree called daroo, which, Mr. Bruce says, was one of the finest he saw in Abyssinia, being about seven feet and a half in diameter. They had been joined by some Moors driving twenty loaded asses, and two bulls, which are likewise used as beasts of burden. They were now out of the dominions of the naybe, and entered into those of the emperor. Saloome, a guide of whom he had great suspicions, attended them for some way, and seemed disposed to proceed ; but one of the company, who belonged to the Abyssinian monarch, having made a mark in the ground with his knife, told him, that if he proceeded

one step further, he would bind him hand and foot, and leave him to be devoured by wild beasts. The mountains of Adowa, to which they came on the 5th of December, are all per- pendicular rocks, and the town of that name, though the capital of an extensive province or kingdom, did not contain at th;s time above 300 houses. Mr. Bruce was very hospitably en- tertained here. Leaving on the 17th of December, he visited the ruins of Axum, where he found forty obelisks, without hieroglyphics, and about 600 houses. It is watered by a small stream which flows all the year, and is received into a fine basin 150 feet square. Its latitude was found by Mr. Bruce to be 14° 6' 36" north. On the 20th of January, 1770, our travellers left Axum. The road was at first smooth and plea- sant, but afterwards very difficult ; being com- posed of stones raised one above another, the remains of a magnificent causeway. As they passed farther on, however, the air was every where perfumed by a vast number of

flowers, particularly jessamine. One species of this, named agam, was found in such plenty, that almost all the adjacent hills were covered by it, and the whole country had the most beautiful appearance. In this fine country, however, Mr. Bruce first beheld the horrible barbarity of cut- ting off pieces of flesh from the bodies of living animals, and devouring them raw. See ABYS- SINIA. During the remaining part of the jour- ney from Adowa to Sire, the country was equally beautiful, and the variety of flowers and trees greatly augmented ; but, a report being propa- gated that ras Michael had been defeated by Fasil, the party now met with some insults. On the 22nd in the evening they arrived safely at Sire. The country northward of this place is flat and open. On the 26th of January, 1770, in their way to Gondar, between Sire and the mountains of Samen, they passed the river Tacazze, at a ford where it was 200 yards broad, and three feet deep; in lat. 13° 42' 45" After this they entered the country of Samen ; the go- vernor of which had never acknowledged the authority of ras Michael, nor that of the em- perors set up by him since the death of Joas. It therefore was considered hostile to the reign- ing authorities in Abyssinia ; but the uncertainty of the event of the war, and the well- known severity of Michael, protected the travellers from insult. In the road along the mountains of Samen lions and hyaenas were numerous, and devoured one of the best mules Mr. Bruce had. The latter, he says, were not intimidated by the discharge of fire- arms, and their voracity was such, that they ate the bodies of their own species ! On the 7th of February they began to ascend Lamalmon by a winding path scarcely two feet broad, on the brink of a frightful preci- pice, and frequently intersected by the beds of torrents, which produced vast irregular chasms in it. After an ascent of two hours, attended with incredible toil, they came to a small plain, named Kedus, or St. Michael, from a church of that name situated there. On the top of the mountain, which they reached on the 9th of February, the mercury in the barometei

itood at 20f inches, See LAMALMON. During the time our travellers remained at Lamalmon, a servant of ras Michael arrived to conduct them to the capital. As they approached the capital, the country appeared well cultivated, and they saw several plantations of sugar canes growing from the seed. They also were wit- nesses of the great damage done here by swarms of ants, rats, and mice. Mr. Bruce approached the capital dressed as a Moor ; but the priests were alarmed at hearing of the approach of a Frank or European, thinking all Europeans Je- suits. He took up his residence in the Moorish part of Gondar, which was found to contain about 3000 houses, where he remained till the 15th of February, when an officer of the court, Ayto Aylo waited upon him, and addressed him in the character of a physician. By this noble- man he was carried to the palace, and intro- duced to the empress dowager, his advice being required for one of the imperial family, who was ill of the small-pox. Our limits do not allow us to give any particular account of the steps by which Mr. Bruce arrived at the high degree of icputation which he enjoyed in Abyssinia. They belong rather to his biography : but he clearly exercised great address, and rendered himself agreeable to all classes of the people of thi? divided country. By the court he was pro- moted to the government of Ras-el-Feel, and was the constant attendant of the emperor on several military expeditions. Thus honored and employed, he had an ample opportunity of ex- ploring the sources and cataracts of the Nile, as well as the geography and natural products of the whole country ; and the results, as de- tailed in his Travels, have been at last appre- ciated by his countrymen. He in particular am- ply describes the manners of the ABYSSINIANS : see that article.

We shall now present the reader with a brief sketch of the information respecting Ethiopia which has been furnished by subsequent travellers.

The indefatigable Burckhardt penetrated into Dan Mahass, a district of Nubia, as far as Tena- reb, in about 20° N. lat. Very little has been added to our geographical knowledge of the space that separates Sennaar from the second cataract of the Nile, except what his researches, and the journey of Messrs. Waddington and Stanbury, supply. Immediately above this cata- ract the district commences, called Batn el Had- jar, which extends to about 21° N. lat: Sukkot is the name given to the next fifty miles ; and after that comes Dar Mahass, which stretches about sixty miles from north to south. Dongola adjoins to Dar Mahass, which may be regarded as the termination of Nubia southward. It ex- tends in a southerly direction up to a point a little below 18° N. lat., then bends to the east, always following the course of the Nile, and ter- minates where the great bend of that river forces the traveller, who traces its course upwards, to journey towards the north. Dar Sheygy'a is the name given to the district through which the Nile flows from north to south : and Berber and Shendy fill up the space between Dar Sheygy'a and Sennaar.

Burckhardt's researches were therefore con-

fined to what is more properly termed NUBIA, and in that article we shall detail them.

Under cover of an expeuition sent in 1825by the pacha of Egypt, to conquer the Nile to its source, three travellers of different nations, Mr. Waddington, Mr. English, and M. Caillaud, penetrated far beyond Burckhardt's limits, and into districts as interesting as those which he visited. M. Caillaud, it seems, reached farthest of any, having followed the Egyptian expedition to the utmost point of its career, which terminated at Singue, in the tenth degree of latitude : but his voluminous travel? are yet, we believe, in course of publication. Those of the two English gentlemen, and of Mr. English, an American, will now occupy our attention.

The whole of the districts we have enume- rated

exhibit, it is said, amidst a few minoi di- versities, considerable sameness of aspect. The Nile, as it flows through them, is divided from time to time into branches which afterwards re- unite, so as to enclose in its waters many ver- dant isles and islets, which attract inhabitants both by the abundance of their productions, and by the security they afford against the depreda- tions of the wandering tribes of the desert. Along one or both of the banks, and more fre- quently along the eastern than along the western, there generally extends a fert le and cultivated slip of ground, sometimes spreading, especially in Doogola, to a considerable breadth ; at other times very much compressed, or even entirely interrupted, by rocks and encroaching sands. To the right and to the left of this, all is dreary desolation, a wide expanse of sand frequented only by the predatory Arab, where the eye seeks in vain for any thing more cheering to rest upon, than the dark or yellowish tints of naked moun- tains in the back ground. The population of the Batn el Hadjar, Sukkot, Mahass, and D6n- gola, is Nubian. The women are generally naked, except a covering round the waist ; and do not appear to have made a favorable impres- sion on Mr. Waddington, notwithstanding- his prepossession in favor of black, which he thinks, or at least thought, the finest color for a human being. In speaking they use much gesticulation ; when they mean to be emphatic, they sharpen theii voice to shrillness : and, to enforce what has been said, the shrill sounds are re-echoed by the other females present, even though they should have taken no share in the previous conversa- tion. They are not afraid of being seen in public. They ride and walk about uncovered, talk fear- lessly to the men, return the salutations of strangers, and even salute them first Though in general very ugly, and, when old, almost hideous, they are so far from affecting the entire concealment of the person, which is usual with Mahommedan women, that the upper part of the body down to the loins is always quite naked. It is on the head that the labors of the toilet are chiefly bestowed. The hair is greased and plaited with great

care : and, where superior pretensions to elegance exist, some of the plaits, passing under those which hang down by the side of the face, are brought backwards above the ears, exactly in the fashion which is often seen in the figures in the temples of Egypt

The Nubian population is intermixed with Arabs. The Nubians have generally some know- ledge of Arabic, but the Arabs are always com- pletely ignorant of the Nubian tongue. Like the Egyptians they divide their year into three sea- sons of four months each; the Nile or inunda- . tion — the winter< — and the summer. The summer is the sickly season ; and, at the end of it, in the middle of July, their yeai begins. Their build- ings are generally of mud or straw. Those which are intended to serve as fortresses, are sometimes of brick, more frequently of mud. The larger dwelling houses, especially in places dignified with the name of towns, are also of mud — occasionally of mud and stones inter- mixed : but most of the inhabitants now, as in the time of Strabo, dwell in cottages of straw. These cottages are eight or ten feet in height; their walls are constructed of straw and palm- branches, kept together by strings made of the palm, and are fastened at each of the foui cor- ners to the dry stem of the palm ; and the flat roof of palm leaves is secured and overtopped by acacia branches. In most of the villages is a hut by the road side, with a jar of water in it, for the accommodation of travellers.

Dar Sheygy'a, the most remote of the districts visited by Mr. Waddington and Mr. Hanbury (lying, as we have already stated, along that part of the Nile, where the river, before making a bend to the west, flows for nearly two degrees of latitude from north to south) is inhabited by the Sheygy'a Arabs. It appears to be subdivided into three states, often at war with one another, but ever ready to unite

against a common foe. Adjacent to the Dongolese frontier are the do- minions of king or malek Zobeyr. Further up are those of malek Chowes, extending from Toraif to Kasinger ; his capital is Merawe. Most remote of all is the kingdom of Amri, with its capital of the same name. It is a rocky, moun- tainous region, and has for its sovereign Hamet Wallad Asia. < The Sheygy'a,' says Mr. Wad- dington, 'are black — a clear, glossy jet black, which appeared, to my then unprejudiced eyes, to be the finest color that could be selected for a human being. They are distinguished in every respect from Negroes, by the brightness of their color, by their hair, and the regularity of their features ; by the mild and dewy lustre of their eyes, and by the softness of their touch, in which last respect they yield not to Europeans.

This is a brave and warlike race, and have long been the most powerful people between Egypt and Sennaar. They live on horseback, with arms constantly in their hands. Their horses, which are of the Dongola breed, are taught to swim across the Nile in the broadest parts, and trained to a gallop resembling the spring of the antelope, which, though it occa- sions no embarrassment or impediment to riders accustomed to it, renders it extremely difficult for a foe to take a sure aim at them.

When equipped for war, they have each two lances and a long solingeu sword. A few have pistols, but the possession of guns is confined to their chiefs. Their defensive armour consists of an oblong shield made of the skin of the croco- dile, or more frequently of that of the hippopo- VOL. VIII.

tamus. Some of the leaders wear a coat of mail, which covers the head, and falls down over the shoulders to the middle of the back, stron •* enough to resist a spear, but penetrable by half. They are singularly fearless in an attack. Riding up with gaiety of heart to the very face of the^r enemy, as to a scene of festive enjoyment, thiiy give the salam aleikoum — Peace be with you ; and the deadly thrust of the lance instantly follows the mock

salutation of friendship. Their warlike character does not hinder them from cul- tivating the ground. They raise considerable quantities of wheat and dhourra, and carry on traffic with Darfour and Sennaar. They have many Nubians settled in the country; and, when their own numbers have been exceedingly dimi- nished in war, they have supplied the loss by carrying off Dongolese. These Nubians, though regarded as inferiors, do not seem to be reduced to servitude; but a great part of the labors of agriculture devolve upon them.

The whole of Dongola was formerly under the dominion of the Sheygy'a : Dar Mahass was subject to their frequent, Sukkit and the Batn el Hadjar, to their occasional inroads. Till the arrival of the Mamelukes, Handec (situated between New and Old Dongola) was the ordi- nary residence of malek Chowes : and the rest of Dongola was parcelled out among their chief- tains, who appropriated to themselves one half of the taxes paid by the people, and left the other half to the native princes. But the arrival of the Mamelukes in 1812 altered this situation of things. When these exiled warriors under the command of the beys Ibrahim and llochman, made their appearance in Dar Mahass, the Casheef of that district was at war with the Sheygy'a, who were settled in the southern part of Dongola. At his solicitation the Mamelukes advanced to the isle of Argo: but the war, which they threatened, was suddenly changed into peace. They were entertained at Argo as friends and allies, and they rewarded the confidence re- posed in them, by a treacherous massacre of their hosts. The Sheygy'a immediately sought to avenge in war their murdered brethren ; but they were soon forced to cede to the strangers the western bank and the islands of the Nile, from the frontier of Dar Mahass as far as Han- nech. The Mamelukes now acted as rulers of the country, and as intending to make it their permanent abode. They dismissed their Egyp- tian wives, and married the daughters of their Nubian subjects. They increased the taxes to one-third of the whole produce ; they promoted the cultivation of wheat instead of

dhourra; they introduced some of the more ordinary arts ; and having fixed the seat of their government at Maragga, which now assumed the name of New Dongola, they enlarged and improved it. Zo- beyr, one of the Sheygy'a chiefs, begged their assistance against his neighbour malek Chowes. They complied with his request: and with some of their own forces, zealously seconded, it would appear, by their Nubian vassals, they were again successful against their Sheygy'a foes. But the vengeance and ambition of the pacha of Egypt still pursued them. Mohammed Ali, eager to annihilate the remnant of his once formidable

enemies, and anxious at the same time to carry his conquests to the borders of Abyssinia, began in 1820 to assemble the army which was to pene- trate into the countries beyond the second cata- ract. While the preparations were going on, he sent a messenger to New Dongola, in the hope that flattering promises might reduce the Mame- lukes to subjection. Their only answer was an expression of indignant contempt. — ' Tell Mo- hammed Ali that we will be on no terms with our servant.' Hearing of the approach of his army, they celebrated the Ramadan with unusual so- lemnity, and in the middle of June, mustering about 300 strong (they had lost about 100 men, and among them Ibrahim Bey, during their resi- dence in Dongola), with double that number of women and slaves, they took their departure for Shendy.

The army which the pacha had collected against them was nominally 10,000 strong, and was accompanied by twelve pieces of artillery: the number of fighting men in it, however, did not exceed 4000. The command was entrusted to his second son, Ismael — a bold and impetuous youth, twenty-two years of age, who gave con- siderable promise of being one day a superior character. Underhim were several leaders of more

advanced age and more mature experience, among whom Abdin Casheff was the first in character and influence. The troops were all mercenaries ; the best of them were Bedouins and Moggreb- byns. Their engagement bound them to serve only as far as Dongola, and they received six months' pay in advance. Leaving Cairo early in the summer, they passed the cataracts during the inundation, arrived at New Dongola without op- position, and, having agreed to extend their ser- vices as far as Sennaar, advanced against the Sheygy'a. Such was the situation of this little- known part of Ethiopia, when Mr. Waddington and Mr. Hanbury resolved to avail themselves of the facilities afforded by the progress of the victorious army to penetrate where none of their countrymen had been before.

Four days, and part of the fifth, were spent by these gentlemen in traversing the Batn el Hadjar. They kept the right bank of the Nile; and their course was through a plain, except where the rocks, that skirted it on the left, approached so near to the river as to make it necessary for them to wind through the mountainous passes. Some of these passes were not destitute of beauty. The Virgin's Pass, in particular, struck Mr. Wad- dington. 'The rocks,' says he, 'are high and well broken, and often joined by sand blown up to a great height between them. The sun-set was red and fiery, the moon clouded, and the sky unusually disturbed ; a strong, though mild, wind served to increase our enjoyment of the most English evening we had seen in the East.' They saw many fertile spots, that lay altogether uncul- tivated. The villages were of mud, and a few old Christian churches were still to be seen. The Nile, from time to time interrupted by rocks in its course, exhibited a great variety of cataract scenery. The people appeared stupid. One man, to whom they applied for information, an- swered their questions by saying, that his father had not taught him any thing about hours, and

that he was not acquainted wita any division or time.

On the 15th, Messrs. Waddington and Han- bury entered Sukkot, and slept at a village called Ferket, where, according to the promises of the Aga of the Cataracts, the camels were to be re- placed by others. In the morning, they found that no camels could be procured : and they were deliberating on the propriety of pressing into their service two of those which had brought them thither, when they were informed, that the drivers, apprehensive probably of some such mea- sure, had during the night set out with their beasts for Wady Haifa. The party were therefore obliged to have recourse to the assistance of asses. After two hours' travelling, during which they seem to have had much difficulty in keeping their asses together, and still more in getting them to move onwards, they came to Mograte. ' Here,' says Mr. Waddington, ' our prospects brighten a little; a camel is discovered among the palms, and soon afterwards another, and a man, with a woman and child near it ; he proves to be an Ababde Arab, named Achmet, going down, with his wife and infant, to buy dates ; we of course invite him very warmly to enter into our service, to which he as strongly objects; and, on being more urgently pressed, he asks with great feeling, 'And will you oblige me to leave my wife and child in the hands of strangers ?' Now his wife was a very pretty woman, and was watching this scene with great interest, though in silence. The case was- certainly a hard one, and perhaps we were de- cided by the sight of one of our asses, at that moment down on the ground, struggling with his burden : however, we were decided ; we jus- tified ourselves by the tyrant's plea, and imme- diately proceeded to transfer part of our property to the more dignified situation it was once more destined to occupy. The man entrusted his- family to a fellow countryman, an inhabitant of the village, and proceeded reluctantly with us.'

The Arabs, who were forced into the service of the travellers, demanded half a dollar per day for each camel; this charge, which was much less than that of the Aga of the cataracts, was willingly paid. Beasts of burden were not the only things which there was a

difficulty in pro- curing. Provisions were often scarce. The sour bread and milk of the country were supplied willingly ; but the inhabitants frequently refused to give or sell better fare — probably because they had not enough for their own wants, and those of the Turkish officers and agents who were con- stantly passing and repassing between Cairo and the seat of war. When this happened, 'the tyrant's plea' was enforced anew. Fowls were generally abundant; our countrymen shot as many as they thought they should need, and then paid for them : for the owners, who would not sell their live poultry, had no objection to part with them when once they were dead. At a later period of their expedition, when they were passengers in one of the boats that were proceed- ing with supplies to the army, a similar transac- tion came under the cognizance of the commo- dore. They had seized a fine fowl in a Nubian cottage, and then paid for it. ' But as a previous- refusal to sell,' says Mr. W., « and subsequent

payment on our part were proved, the commo- dore gave his approbation to this modification of a robbery.'

The inhabitants of Sukkot seemed glad that the pacha had taken the country into his own hands; for his sovereignty was a protection to them, both against the depredations of the Arabs, and against the rapacity of their own petty chief- tains, who had been in the habit of leaving their subjects just enough to tempt the rovers of the desert. They gave our travellers, for the most part, a kindly reception. Their admiration was excited by their arms more than by anything else. ' Now, at last,' exclaimed one of their sheiks at the sight of a sword-stick, ' now at last we begin to see the world.' The face of the country was superior to that of the Batn el Hadjar. The Nile •was less interrupted by rocks; the plain had assumed a wider

extent ; the acacias were finer than even in Egypt; but the many ruined houses, which were to be seen, attested too surely that the population was in an unpros- perous state.

The travellers entered Dar Mahass on the 18th, and spent three days in traversing it. The general aspect of this district was similar to that of Sukkot ; if there was any difference, it was on the side of improvement. The soil was better cultivated ; matted work was becoming plen- tiful ; and great numbers were seen employed in weaving. Shortly before quitting Dar Mahass, our travellers enjoyed the contemplation of the most striking spot that Nubian scenery has to boast Of. It is known by the name of ' the Pass of the Water's Mouth.' Near the entrance, on the right, two immense stones, regular as if art had hewn and placed them there, stand detached in solitary grandeur. Beyond them the pass opens with extraordinary sublimity : and the tra- veller finds himself amid a wilderness of rocks, that tower aloft like so many natural columns. In the presence of these enormous masses, irre- gularly scattered about in solitude, ' we felt our- selves,' says Mr. W., ' in a holy place, and seemed walking amid the columns of a mighty temple, erected by the divinity in his own honor, and for his own worship.' 'There is nothing at As- souan, Wady Haifa, or in the Batn el Hadjar, at all comparable to the ' Pass of the Water's Mouth,' either in grandeur or in variety of scenery : the immense masses of rock piled up together, the open plains scattered over with fragments, the entire want of all vegetation, and yet the traces of so many animals ; the occasional view of the distant palms straggling by the river side, and of the boundless desert beyond it, with the know- ledge that man has no power here to change the face of nature, which ever has been, and ever must be what it is ; these circumstances unite to give this place an interest possessed by no other that I ever saw, and to us, perhaps, heightened by the reflection, that we were the first English- men who had ever seen it, as we might possibly be the last.'

On the morning of the 22d of November, they entered Dongola. Five palms standing by the river side, and a large solitary hill, Mount Arambo by name, four miles distant from the Nile, mark the frontier. About a mile beyond it, they ob-

served two hieroglyphical inscriptions on a large granite rock, called by the natives the Golden Stone. One of them faces the north-west, and is two feet four inches broad, and three feet high A man, with his hair in the fashion of the Bna- reus of the Egyptian temple, is in the act of making an offering ; and, in the lower corner on the left, are two prisoners, back to back, with their arms chained together. The whole is en- compassed and diversified with hieroglyphics. The other faces the south-west, and consists of eighteen lines of hieroglyphics, with the ball and serpent at the top ; but it is so defaced that no copy of it could be made. On the same day they saw much cotton growing in the neighbour- hood of a place called Askan, and passed what we certainly did not expect to find in Dongola — a cotton-mill.

On the following day, their route lay at first through a barren plain, the uniformity of which was broken only by a few acacias, and many ruined houses and tombs : but crossing a high mound, which was between them and the river, they suddenly found themselves in a garden luxuriant beyond imagination, where the air breathed fragrance, and the groves were filled with melody. Dismissing here their guides, and beasts of bur- den, they were ferried over into the island of Argo. The scenery of the island is very beautiful ; consisting of meadows, where cows and goats feed without any keeper, intermixed with small open cultivated fields, all shut in by sycamore and aromatic groves. It is likewise interesting to the antiquary, by the ruins of ancient build- ings and fragments of ancient statues which it contains. Our countrymen traversed it nearly from north to south, and arrived at the ferry for cross- ing to the western bank of the Nile, elevated by the hope that a few hours would bring them to New Dongola, where abdin Casheff would

lend them every assistance for the further prosecution of their journey. From the ferryman, however, they learned that Abdin Casheff had advanced to join the army ; intelligence which could not be very acceptable to travellers, who, counting upon his protection, were without camels, and almost without money. With the assistance of asses, they arrived on the 25th at New Dongola, which we have already mentioned as having been the capital of the Mamelukes, and greatly improved by them. It is a large and very neat mud town, ornamented with courts and squares, and beauti- fully situated in the finest country of the Nile. It lies in 19° N. lat. The river is here about half a mile broad.

As no beasts of burden could be procured, to proceed by land was impossible. In this dilemma, the travellers applied to the Turkish Aga, to grant them a passage in one of sixteen boats, which were about to sail with supplies for the army. Their request was instantly granted : and, on the morning of the 26th, they commenced their, voyage up the river. This mode of travelling did not allow them any opportunity of examining the country, but it gave them some illustrations of Turkish discipline and Turkish navigation. The former is somewhat better, the latter much worse, than we had imagined. The boats could not move unless the wind was directly favorable :

and »'iey scarcely dreamt of the possibility of crossing the river with a side breeze. So much for their navigation. As to their discipline, all plundering was prohibited, and the troops were not permitted to oppress the natives. One morning Mr. Waddington found the commodore in great wrath, and beating all the soldiers who came within his reach .because during the night some of them had plucked the ears of the dhourra. This severity of

discipline, however, was neither maintained uniformly, nor was it universal in its operation. Some restraint was imposed upon the troops, only that the superior officers might have a more complete monopoly of rapine ; and, though the soldiers might not steal a few ears of corn, they were at liberty to seize the sheep of the inhabitants by force, and pay for them in base money, which had neither currency nor value in the country. Accordingly the neigh- bourhood of the fleet seems to have been dreaded by the natives. The want of a favorable wind forced the commodore to make a halt near the town of Amboocote, and, in the course of the ensuing night, the inhabitants removed with their property into the desert. During this delay our countrymen received a visit of an un- common description. It was from some Cubba- bish Arabs, who, in the character of strolling preachers, went about the villages, teaching and explaining the Koran, in churches set apart for that purpose. They said that nearly all their tribe could read and write; so that, if reading and writing are to be taken as the criteria of education, the county of Middlesex, we are afraid, must yield the palm to a horde of Nubian Arabs. They supposed that Mr. Waddington was invested with authority to assess the new im- positions upon the country (an error arising probably from the frequent use he made of his pencil in noting the names of places and the in- cidents of his journey), and they came to ascer- i ain the rate and manner in which they were to be taxed for the future, and to entreat him not to make their burdens too heavy.

On the 7th of December the fleet resumed its progress, and, leaving Dongola, entered Dar Sheygy'a. Our travellers were now in the theatre of the war, and they found that the arms of the Turks had been hitherto successful. Ismael pacha, having upon his approach to the frontier summoned the Sheygy'a to submit, was answered by an offer to pay tribute. He next required them to prove their sincerity by sending him their arms and their horses, but received the same reply. And when he

renewed his demand, ' Either go on your business, or come and attack us,' was the laconic answer made to it. In the first skirmish the Sheygy'a were the assailants, and were repulsed. In the second they were again unsuccessful, and the virgin daughter of one of their chiefs was made prisoner. The pacha sent her back uninjured and loaded with presents: and her father showed his gratitude to his generous enemy by refusing to take any fur- ther share in the war. To diffuse astonishment and terror among them, Ismael c used a brilliant display of fire-works to be made in view of their encampment. 'What!' said they, upon behold- ing this exhibition, ' is he come to make war

upon heaven too.' They were told by some of the Arabian followers of the pacha, that, unless they submitted, he would drive them to Sennaar; they replied, ' He may drive us to the gates of the world, but we will not submit.' An engage- ment, of more importance than any which had preceded it, took place shortly after Mr. Wad- diugton's arrival in the camp. ' Their first attack was irresistible ; the Bedouins were driven back, and Abdin Casheff advanced from the opposite angle of the square to support them ; while he was engaged, the Bedouins rallied in hiSjTear, he returned to his post, and they charged again. The Moggrebbyns had been similarly routed and rallied. The Sheygy'a, though suffering very severely, repeated their attacks, and three times was Abdin Casheff seen to charge in person, and throw himself into the middle of the enemy ; he shot several of them with his own hand, and, having disarmed one, he drove his own lance quite through his body. The pacha was giving, in other parts, similar proofs of courage, the only one he could now give of generalship, and the pistol of his Highness is said to have been particularly destructive; lie caught the gaiety of his enemies, and rode among them with a laugh. At last, the Sheygy'a, finding that their magic had not been able to stop the course of Turkish balls, and that tiie charms of the enemy were stronger than their own, said, ' that God had declared against them,' and

took to flight. They had placed' great de- pendence on those charms to which their necro- mancers had given, for this occasion, peculiar power and efficacy ; and their first act after the battle was to put to death the whole race that had thus imposed on their credulity.

' Their cavalry, being much better mounted than their adversaries, in general escaped, but a great part of the infantry was massacred. It is, however, universally acknowledged that the pacha exerted himself to save the flying enemy, and succeeded in preserving some, who were of the infantry, and chiefly Nubians: inhabitants of that part of Dongola which was tributary to the Sheygy'a, and attached to their army by force, or habit, or inclination ; for these Arabs were not disliked by their subjects. The pacha made presents to his prisoners, and clothed them, and sent them back to the Sheygy'a with an in- sulting message, not to send Beraberes against them, but to come themselves; to which they answered, as when yet unwounded, ' Either go on your business, or come and attack us.' He had not yet passed their mountain barrier, where they had been in the habit of routing their invaders.

'It is a singular, though very certain, fact, that the pacha had not one man killed in this action, and only one officer and sixteen men wounded, and these, with scarcely any exception in the back — the natural consequence of their manner of fighting ; they discharge all their fire- arms, and then retire into the rear to re-load, while the second and succeeding ranks are firing; when loaded, they advance again, and therefore, after the first discharge, the whole is a scene ol confusion. One Bedouin recei.ed seven lance wounds, not one of which was honorable, and

recovered of them all; he had been unhorsed among the enemy, and lanced while lying on the ground. 'The Sheygy'a left 600 men on the field of battle. I have heard of some acts of individual courage

performed by them during the battle, and which are related with admiration by the Turks themselves. One Arab, who appears to have placed perfect confidence in the strength of his charms, after receiving five balls, continued fighting, and crying out, ‘ that they might fire, but could never hurt him ;’ till lie received his mortal wound. The exploits of another are particularly celebrated by his enemies, who, after being similarly perforated, fought till he fell, and died crying • Where is the pacha ?’ Ano- ther, also wounded, had lost his horse; however, he found his way to the door of the tent of Selagh Dar, whose groom was standing there bitting his master’s charger ; the Arab disabled the groom, leaped on the horse, and galloped away.’ (P. 92—102). Those who escaped from the battle took refuge in soire stone castles situated on the western bank of the Nile, in the neighbourhood of Mount Dager ; and soon afterwards, in for- midable battle array on the side of the hill, they again defied the invader. A heavy fire of shot and shells soon dispersed them, rather dismayed by their superstitious alarms than terrified by the carnage. The shells appeared to them to work by sorcery. ‘The spirits of hell are come against us,’ was the exclamation called forth by the explosion of a shell, which had fallen among them.

The melancholy effects of the war were visible on both sides of the river. The villages were burnt down or deserted ; the dogs were their only inhabitants. In one of them some mats and bedsteads remained; and over the doors were inscriptions written on t’iper in a very legible hand, purporting ‘ that the “inhabitants had been driven away by unholy people, not under the protection of God.’ In another village, one old woman was still lingering, who had refused to quit her cottage: she rejected all sustenance, and talked lightly of death. A multitude of women, who had fallen into the power of the invaders, were confined in one of the islands of the Nile. Mr. Waddington’s servant asken some of them, whether they were not afraid of the soldiers. The reply breathed a spirit of magnanimity, scarcely

inferior to that which true religion would inspire : ‘ Why should we fear the soldiers ? Can they do more than kill us ?’ In another village, an old woman was the only living creature in it, and she had her ears cut off; for Ismael, that he might send down a large collection of ears to his father as proofs of his success, bought them at fifty piasters a piece : and this necessarily led to much wanton cruelty. The shore was putrid, and the air tainted by the carcases of oxen, goats, sheep, camels, and men. Corpses were found every fifty yards scattered along the road, and among the corn. The horror of such objects formed a strong contrast to the placid beauty of the scenery. ‘ I never,’ says Mr. Waddington, * saw the Nile so smooth and beautiful as in this country; it is like a succession of lakes orna- mented by green islands, and surrounded by verdure. This may be fancy, and that the mind,

disgusted by the fury of men, takes refuge in the tranquillity of nature, and is more disposed to the admiration of inanimate things, as it is shocked by the crimes and miseries of the things that live.’

On the 13th of December Mr. Waddington and his party quitted the boat which had brought them from New Dongola, and proceeded along the eastern bank on dromedaries which the pacha’s physician had sent to meet them. They passed through a town, named Kadjeba, entirely deserted by its inhabitants ; and, in the course of the day, they met many families, consisting of old men, women, and children, who, with the pacha’s permission, were returning to their villages. The travellers were now in the dominions of Maleck Chowes, whose capital, Merawe, they reached, when it was nearly dark. They did not halt there ; but passing through its long and gloomy streets, where the howling of dogs was the only sound that met their ears, they arrived in the camp of Ismael. A mud cottage had been pre- pared for them, in which they were received by the pacha’s physician with every civility.

On the following afternoon they were presented to the pacha, from whom they met with the mosi gracious reception. He made them sit by him on his sofa, and requested them to accommodate themselves in the fashion of their own country. He seemed to have a tolerable acquaintance with the geography of Europe, and put many ques- tions and snowed great curiosity concerning Euro- pean politics. He was much surprised that the English did not assist AH Pacha, for whose suc- cess he was anxious; and still more, that t'u; Congress should have allowed the force of Russia to be increased.

No military operations took place after their arrival in the camp. The Turks and the Sheygy'a, were in constant negociation ; and Ismael appears to have let slip no opportunity of conciliating his adversaries. These negociations terminated finally in peace. The Sheygy'a, who from the beginning had offered to pay tribute, became the allies of the pacha, retaining their arms and their horses; and it was agreed that a number of them should advance with his army against the southern nations, who were their enemies as well as his. Our travellers were prevented from wit- nessing this event, and from accompanying the army in its advance, by finding their departure most unexpectedly precipitated.

On the morning of the 20th of December, when they had not been quite a week in the camp, they were informed by a message from the pacha, that he meant to dismiss them with all honor on the following evening. On the same day they had an interview with him. ' We found him sitting in the European manner, on a very Christian-like sofa, on which we took our places by him. Nothing could be more gracious ; the doctor, as usual, stood before us to interpret, and James within hearing, a little behind. On a carpet on the pacha's right hand was a grand Turk from Cairo, and next to him two sheygy'a professors with long white beards, who had just been clothed, to their very great surprise and dismay, in splendid pelisses and rich shawls. ' The usual preliminary conversation abcut

the river, the mountains, and the trees, we cut rather short, and came somewhat hastily to the point. ' We are come according to the com- mands of your highness, supposing that your highness has something particular to communi- cate.' ' I feel honored by your visit to the army, and should be pleased to have your company as far as Sennaar, but the dangers and difficulties and privations will be so great, that I advise you to return.' ' We wish respectfully to be informed, whether your highness's advice amounts to a com- mand ?' ' It is for your own good, and the love I have for England.' ' We are to understand, then, that your highness obliges us to return?' ' it is solely with a view to your own good that I give this order.' ' We are sorry that your highness has thought proper to prevent the intentions of English gentlemen. We submit to your high- ness's order.' ' My only motive is a considera- tion of your own safety ; besides which, the firman given you by my father extends no farther than Wady Haifa.' ' We do not dispute your high- ness's right to act, but rather thank your highness that we have been allowed to come thus far, and perhaps we should not have thought of advancing farther, had not the Protomedico com- municated to us, from your highness, an invita- tion to accompany the army as far as Sennaar.' ' I should have great pleasure, were it not that I fear for your safety.' ' Well, we submit ; we have only to beg your highness to permit us to ad- vance as far as the cataract and the islands near it, and then to return by water.' ' The danger is not so much in advancing as for your return, as the people in our rear are even now unquiet, and, when the army moves on, will probably break into insurrection ; and from above I shall not be able to send a guard with you ; nor will i» be safe for you to go by water. As visitors to my army, I am responsible to my father, and to the English nation, for your safety.' ' In case of our writing to Cairo to mention the offers of pro- tection made by your highness, may we be al- lowed

these favors, by taking all responsibility on ourselves '(' After some hesitation, ' If you will write a letter to such effect, and give it to me, I will send it to my father and the English consul, and you are then free to advance or return, as you like.' And after a few more words, in which he promised us a boat to go down in, the matter was ended greatly to our satisfaction. ' He attempted, during the latter part of the conversation, which is here much abridged, to work alternately on our vanity and our fears; on the former, by a number of unmeaning com- pliments to ourselves and to the English nation ; and or. the latter, by accounts of robberies com- mitted every night in the very rear of his army, and the general disturbed state of the country ; and then he motioned away the Mamelukes and Janissaries, who were standing by, as if he were making us an important communication, that would spread a panic in his army if generally known. The courtier from Cairo gave us from time to time some looks of mixed anger and surprise, on observing perhaps a freedom in oui words or manner that was not usual towards a Turkish prince. The pacha ended by telling us, that he would defer the departure of the convoy

till to-morrow evening, to give us more time for reflection, and we parted apparently good friends.' (p. 149 — 151). They immediately wrote a iet- ter, taking upon themselves exclusively, in the strongest language they could use, all responsi- bility for their own safety.

But the pacha, though he expressed himself perfectly satisfied with it, begged them to re- consider the subject : and Abdin CasherT, having sent for them, entered into many details to prove, that their advance would be dangerous, and their return, after a certain time, impossible. They now, therefore, saw that the pacha was determined they should go no further. The pro- mise of a boat to convey them down was re- tracted, and it was fixed, that they should return with a convoy along the left bank of the Nile. The escort, however, was placed completely at their disposal, and every necessary for the journey

liberally supplied. A respite of two days was also allowed them, that they might finish their plans and descriptions of the anti- quities in the neighbourhood.

These two days our travellers assiduously de- voted to the important ruins a little to the north of Merawe, at the foot of the mountain Djebel el Berkel, near the site, as Mr. Waddington sup- poses, of the ancient Napata. They consist of temples and pyramids. Of the seven or eight stone buildings and excavations in the rock, which Mr. Waddington supposes to have been temples, there is one which far exceeds all the rest. Including the thickness of the walls, it is 450 feet long, and 159 wide : its entrance faces the Nile, and, going in, you pass successively through five chambers, the exterior being larger than the interior, and all of them having been once ornamented with columns. To the left of the innermost chamber but one, is a sixth apart- ment; and in each of these two is a black granite pedestal, beautifully sculptured, on which stood, most probably, the statue of the god to whom the temple was dedicated, or of the king by whom it was erected. Hieroglyphics were still visible on the ruined walls. From having observed a sculptured stone among the mortar, in the middle of the thick outer wall, Mr. Waddington inferred that the stones were taken from some more ancient edifice; and the irregularity of the foundations, together with the positions of several of the columns, inclined him to believe that this build- ing had, when erected, included within it some chambers of one still older. The most perfect of these temples is one which, according to Mr. Waddington, was dedicated to Bacchus ; it is about 100 feet in length, and is ornamented with figures of nearly all the gods of Egypt. The fol- lowing is the description of the edifice, which, in his opinion, surpasses all the rest in antiquity : — ' Five of its six chambers are cut in the rock, and the other, the first, which is thirty-six feet square, stands on an artificial stone foundation, by which it is elevated to the height of the rock in which the others are

excavated. The wall separating the second chamber from the first is solid, but of no great thickness ; the chamber measures twenty feet five inches by twenty-one feet six inches, and contains the remains of four round pillars, whose diameter is two feet five

inches. The third chamber is only ten feet uine inches in length, and of nearly the same width as the second. The fourth, or adytum, is twelve feet four inches long, and ten feet eight inches wide. Of the two smaller ones, on each side of it, the one is four feet three inches in width, and the other only three feet nine inches : at the end of each is a stone bench, two feet in height, where statues may formerly have been erected. The height of the solid roof, which is now in most places fallen in, was eleven feet seven inches. On the back wall of the room, on the right of the adytum, appear two defaced figures of Jupiter Ammon, and the young divinity whom I have called Horus. There are vestiges of hierogly- phics in all the chambers. Above the rock, which forms the back wall of the adytum, are six or eight layers of stones, of different sizes, and of the rudest architecture, erected possibly as a defence against fragments which might roll down upon the temple from the mountain be- hind. The walls of the cells have in two or three places been repaired, and faced with stone, on which are hieroglyphics. There are some specimens of the same kind of patchwork on the front of the rock, in which the temple of Gyrshe, in Nubia, is excavated. The elevated chamber in front may have been the addition of a later age ; as in the preceding temple the statue of Bacchus, ind the capital or ornament on its head, are better executed and finished than the figures sculptured on the walls within. From the sim- plicity of the masonry, from the rudeness and decay of the remaining sculptures, and from the raggedness and decomposition of the walls, though they had been sheltered probably for ages, by the

solid rock, from the sun and wind, I am inclined to believe that this is older than any of the temples of Egypt, or even Nubia. We observed nowhere any sculptures that had been intentionally erased or disfigured ; proving, I think, that the ruins were in their present state when Christianity was introduced into the coun- try. The idols were already broken, and the ravages of time, or of war, had been so effectual, that they needed not the hand of fanaticism to complete them.' (p. 169 — 171).

The pyramids of Djebel el Berkel are on the north and north-west of the mountain, near the edge of the desert. They are seventeen in num- ber, but some of them are now mere shapeless mounds. None of them are of considerable size : the base of the largest is eighty-one feet square. One group, consisting of seven, have all, with one exception, arched porticoes annexed to them, coeval, as it appeared, with the pyramids themselves.

At El Belial, a rocky spot surrounded by sand, on the edge of the desert, six or seven miles above Djebel el Berkel, and situate on the left bank of the river, the remains may be seen of nearly forty pyramids of different sizes, of higher apparent antiquity than those of Djebel el Berkel, and in a more ruinous state than the most rui- nous of those at Saccara. Mud seems to have been the cement employed in them. The greater part of them are now mere mounds of decom- posed stone, gravel, and sand. Even in those which have best withstood the ravages of time,

the exterior coating has crumbled otf, and the layers to some depth within have fallen away. The largest has a base of 152 feet square, and is 103 feet seven inches in height: it contains within it another pyramid of a different age and architecture, and composed of a hard, light, colored sand-stone, ' more durable,' says Mr. Waddington, ' than that, which, after sheltering it for ages, has at last decayed and fallen off, and left it once more exposed to the eyes of men.' The conclusion is too hasty. The outer case has been exposed to the winds

and rains of thou- sands of years, while the inner pyramid has been completely sheltered: the less ruinous state of the latter is therefore no proof of the superior durability of its materials. They were informed that, in the island of Doulga, situated a short way up the river, immediately above a cataract, there were large excavations and 'buildings that reached to heaven.' These they supposed to have been fortifications, not temples ; and that Doulga is the island in which the king of Dongola took refuge in 688 from the pursuit of the boats and troops of the sultan of Egypt.

Mr. English's account of the country on each side of the river up to the pyramids of Merawe, where the voyage of Messrs. Waddington and Hanbury terminated, is pretty nearly the same as that of those gentlemen, though, on the whole, rather more favorable, both as it regards the people and the state of the cultivation. lie praises the forbearance of the Turkish troops, though frequently reduced to the greatest dis- tress for want of provisions. The only complaint he makes of taking by force the property of the wretched inhabitants, is directed against the Greek and Frank domestics of the protomedico, ' who seized whatever they thought they had occasion for.' The pacha soon put a stop to irregularities of this kind — ' The most rigid discipline was observed in the camp, to prevent the people of the country from suffering by the presence of the army. Some soldiers and domestics were se- verely beaten for taking sheep and goats without paying for them, and five of the ababdies (auxi- liaries mounted on dromedaries) were impaled for having seized some camels from the peasants.'

Nothing, he says, could exceed the fertility of the country beyond the second cataract. The banks and islands presented one continued succession of villages amidst fields of grain, interspersed with stately palm trees, acacias, and sycamores, larger and taller than those of Egypt ; and the fine broad river, swollen out in many places to the width of two or three miles, and studded with numerous fertile islands, conveyed to the eye a far more

picturesque appearance than is observed in any part of the Said. This descrip- tion applies more particularly to the territory of Succoot ; the next beyond it, which is Mahass, though generally fertile, is inferior to the former. But of Dongola, he says, ' the whole country is absolutely overwhelmed with the products of the very rich soil of which it consists.'

Yet the pacha's flotilla that conveyed his army, ammunition, and provisions, navigated the Nile beyond the second cataract without a rival. A constant intercourse however is kept up between the islands and the shores of the main land.

This is done either by swimming their horses and cattle, or by floating on bundles of reeds, straw, or pieces of wood, buoyed up with gourds, in the most clumsy and awkward manner. ' I saw to-day,' says Mr. English, ' a singular mode of navigating the river ; a man, who apparently was travelling down the river with his whole fa- mily, had placed his youngest wife and her two young children on a raft made of bundles of corn-stalks (stems of the holcus) lashed together; he himself swam by its side to guide it, while he kept his old wife a-swimming and pushing it by the stern ; and in this way they proceeded down the river.'

Our American only joined the encampment of the pacha about the same time and at the same spot where Messrs. Waddington and Hanbury had their short interview, and their dismissal. He only therefore knew from hearsay what took place at the great battle in the vicinity, which decided the fate of the Sheygy'a and the Mame- lukes, and opened a free passage to Sennaar. He relates, though somewhat differently, the anecdote of several travellers, respecting the young pacha's treatment of the daughter of a ch'ef who fell into his possession, and whose conduct is scarcely surpassed by that of

Scipio. 4 When our troops approached the castle of Ma- Tek Zibarra, his daughter, a girl of about fifteen, fled in such haste that she dropped one of her sandals, which I have seen. It was a piece of workmanship as well wrought as any tiling of the kind could be even in Europe. The girl was taken prisoner and brought to the pacha, who clothed her magnificently in the Turkish fashion, and sent her to her father, desiring her to tell him to ' come and surrender himself, as he preferred to have brave men for his friends than for his enemies.' When the girl arrived at the camp of Zibarra, the first question her father asked her was, ' My child, in approaching your father, do you bring your honor with you ?' ' Yes,' re- plied the girl, ' otherwise I should not dare to look upon you. The pacha has treated me as his child, has clothed me as you see, and desires that you would leave war to make peace with him ' Zibarra was greatly affected, and did make several efforts to effect a peace with the pacha, which were traversed and frustrated by the other chiefs of the Sheygy'a.' p. 86.

Mr. English did not follow the great bend of the Nile above Dongola, which, he says, is 250 miles long, and full of rocks and rapids, but crossed the peninsula in a direct line towards Shendi. He was now in the country of the Ber- bers, whom he is not much in love with, and whom he describes to be as licentious as the la- mented Mr. Burckhardt found them, especially the women, who walk about the streets and roads unveiled, without the least embarrassment. In appearance the common people are not unlike the fellahs of Egypt ; but the families of the ma- leks or chiefs are generally as stout and tall as they were in the days of Cambyses. The malek with whom our traveller lodged was seven feet high ; his youngest son, six feet four inches, stout and well proportioned. The mother, he says, offered him the choice of two of the daughters, both young and handsome, and both married to

husbands living in the town ; but he declined the proffered favor, which did not raise him very high in the esteem of the ladies.

The country of the Berbers is fertile, and the cultivated lands extend to the distance of a couple of miles from the river ; thus far the in- undations reach. The produce is abundant, consisting of dhurra, wheat, barley, beans, cotton, tobacco, and various culinary vegetables. The horned cattle are large, the sheep, goats, camels, and asses, are also of a large stature, and the horses, as we have said, unequalled. The houses are generally of clay, with flat roofs, covered with straw, which would seem to prove that the rains are neither frequent nor heavy ; the roofs of the houses belonging to the meks, or maleks, are terraced with beaten clay. The place particu- larly to which these remarks refer is called by our author Nourreddin, after the name of the malek, and the villages clustered round the chief's residence are stated to contain a popula- tion of 5000 or 6000 souls. From Nourreddin, a march of eight days carried the army to Sheudi el Garb, or Shendi on the west bank, which is opposite to the capital of the same name on the eastern side of the river. The former is large and well built, in comparison with other villages on the Upper Nile, and is supposed to contain about 6000 inhabitants. The other is equally large and populous. To the north (he means south) of Shendi, at the foot of some mountains named Attar Bael, are found the remains of a city, tem- ples, and fifty-four pyramids. ' The territory,' he observes, ' in winch these ruins are found, is nearly surrounded by rivers, being bounded on the west by the Nile, on the south by the rivers Ratt (llahed) and Dander, and on the north by the Babr el Iswoode.' Of the last of these names we know nothing; but we are the more disposed to consider these ruins as the remains of the ce- lebrated Meroe, as their position agrees with that which M. Linant, an admirable draughtsman in the employ of Mr. W. Bankes, has assigned to it, and from whose pen and pencil we hope the public may shortly expect to be gratified, not only with the antiquities of Meroe", but with the whole of the intermediate country as far as Sennaar, where he has long resided. His beau- tiful drawings and description of the temple of Jupiter Ammon are

already in England.

The place of any importance next to Shendi, in proceeding upwards, along the banks of the Nile, is Halfaia, the malek of which, in conjunc- tion with the chief of Shendi, is said to be able 'to bring into the field 30,000 horsemen, mounted on steeds as beautiful as any found in any coun- try in the world." In the advance towards this place, Malek Chous, chief of the fugitive Shey- gy'a, came in and surrendered himself at dis- cretion. ' I have fought,' says he, addressing himself to the pacha, ' against you to the utmost of my means and power, and am now ready, if you will, to fight under the banners of my con- queror.'

The army halted on the western bank of the Nile, opposite Halfaia, where, on the 23d of the

moon Shaban (April), the Nile rose suddenly

about two feet. This was occasioned, as they soon discovered, by the rise of the Bahr el Abiud,

which flows into the Baht el Azrek about five hours' march above Halfaia, the latter of which showed no signs of rising till nearly a month afterwards. Mr. English says, ' The Nile is not half as broad as the Bahar el Abiud, which is, from bank to bank, one mile higher than where the Nile joins it, about a mile and a quarter in breadth. It comes, as far as we can see it, from the W.S.W. The Nile of Bruce must, therefore, after the expedition of Ismael pacha, be con- sidered as a branch of a great and unexplored river, which may possibly be found to be con- nected with the Niger.' p. 147.

It has been often doubted whether the Azrek rises, as Bruce makes it do, in Gondar ; and the following information, which Mr. English re- ceived in Sennaar, would seem to comfirm it. * The source of the Adit (so the people of Sennaar call the river

that runs by their city) [meaning the Azrek] is in the Gibel el Gumera (that great range of mountains called the mountains of the Moon), about sixty days' march of a camel from Sennaar, in a direction nearly south. It receives, at various distances above Sennaar, several smaller rivers, which come from Abyssinia and from the mountains south of Sennaar ;' and this seems to be the opinion of Mr. English. With regard to the course of the Abiad he has not collected much satisfactory information. He was told it was nearly parallel with that of the Adit (Azrek), but that its source was much farther off, among the Gibel el Gumera ; that it is augmented by the junction of three other rivers, one from the south- west, and two others from the east, running from the mountains south of Sennaar.

4 The water of the Bahar el Abiud,' continues Mr. English, * is troubled and whitish, and has a peculiar sweetish taste. The soldiers said that ' the water of the Bahar el Abiud would not quench thirst.' This notion probably arose from the circumstance that they were never tired of drinking it, it is so light and sweet. The water of the Nile is at present perfectly pure and transparent, but by no means so agreeable to the palate as that of the Bahar el Abiud, as I expe- rimented myself, drinking first of the Bahar el Abiud, and then walking about 200 yards across the point, and drinking of the Nile, the water of which appeared to me hard and tasteless in com- parison. Nothing of the kind couli be easier than to ascend the Bahar el Abiud from the place where we are. A cania, well manned and armed, and accompanied by another boat containing provisions for four or six months, and both fur- nished with grapnels to enable them at night to anchor in the river, might, in my opinion, ascend and return securely ; as the tribes on its borders have great dread of fire arms, and will hardly dare to meddle with those who carry them.' pp.

150, 151.

We may now quote the very accurate published account of Mr. Caillaud's researches in the neighbourhood of

this stream. He set out with the army, after a residence of five months in Sennaar, in November, 1821, traversed the pro- vince of Fazoele, or Fazucle and, following the Balir el Azrek, entered the kingdom of Bertot, on the western side of that river, which extends westerly to the kingdom of iiourun, and is

bounded on the south by that of Darfoke. The whole country is extremely mountainous, covered with dense forests, and almost impassable ; yet the pacha led his army through it, mounting his cannon on the backs of camels, for 300 or 400 miles, pursuing, plundering, and carrying off the miserable inhabitants. In Gamenil, between Bertot and Uarfoke, the natives collect a small quantity of gold dust from the sand brought down by the rivers: they are all pagans, and M. Caillaud says he discovered among them many customs which resemble those of the ancient Egyptians. At a place called Singue, in the latter kingdom, situated under the tenth parallel of latitude, and five days' journey to the westward of the confines of Abyssinia, the conquests of Ismael pacha terminated.

An able article in the Edinburgh Review, No. 81, discusses the intricate subject of the geogra- phy of this extensive region. 4 No name in the ancient world,' it is here justly observed, ' was more venerable than that of Ethiopia. As early as Homer, its people are described as the most ancient of nations, and their rites as sacred be- yond all others: and, independent of the fabled grandeur thus assigned by superstition and poe- try, history, in a distinct, though not detailed mannei, represents the Ethiopians as a powerful people, considerably improved in the arts of life. A distinction must however be made in the ap- plication of the wide- spread name of Ethiopia. In one sense it implied generally the country of the blacks, and thus included the whole of Cen- tral and Tropical Africa. But the region to which this name was applied in a peculiar sense, the civilised and learned Ethiopia, that to which Egypt, whether truly or not, looked up as the fountain of her arts and religion, was

confined to the banks of the Upper Nile, and most peculiarly to the island-kingdom of Meroe. The site as- signed to this kingdom, and to its celebrated capital of the same name, was such, that it must have been passed over by some of our recent travellers : — And their descriptions, if accurate, should have afforded to Europe the means of ascertaining where it stood, and what monuments it has left behind. A judgment, in fact, has been very decidedly formed ; but as it appears to us to be extremely questionable, if not absolutely erroreous, we must be indulged in a short dis- cussion of the question.'

This writer then proceeds to remind us, that all the ancient authorities treat of Meroe as an island, formed by the junction of the Nile with the Astapus, believed to be the Azergue, or river of Abyssinia, and with the Astaboras, which undoubtedly is the Tacazze, called still Atbar?.

- The city of Meroe, then, to be within the island thus formed, must, it is supposed, be above this last junction, where indeed it is said by Eratosthenes actually to be. Accordingly, near Shendi, about forty miles above that junction, there have been discovered a range of temples and pyramids, of very considerable extent and magnificence. Bruce, on his passage, partly observed these monuments, and threw out a conjecture that they marked the site of the city of Meroe, and that the kingdom was com- posed of the extensive region between the Azcr-

gue and the Tacazze. This view of the subject, as to the kingdom at least, has been generally adopted in the English maps. M. Caillaud and Mr. English have recently examined these mins, as well as those at Merawe; and> though Cail- laud shows some disposition to prefer the site of Merawe, this idea

is crushed in the bud by his editor, Jomard, who entirely adopts the opinion first suggested by Bruce. Mr. Waddington would gladly, for his own credit, have caught at the idea of Caillaud ; but, on looking into the ancient authorities, he considered it untenable, and acceded to Shendi. Every other hypothesis, indeed, seems now to be given up ; and it ap- pears, from a contemporary journal, that Mr. Bankes, the diligent explorer of the East, has been employing his draughtsman, Mr. Linant, to delineate the ruins of Shendi, as those of Meroe. Notwithstanding so great a concurrence of au- thorities, we cannot but think it pretty clear, that the city of Meroe was not at Shendi, but at Merawe, and that the kingdoms of the same name coincide ; though Meroe, in its glory, probably extended to Dongola on one side, and Shendi on the other.'

' The first coincidence is that of name, which is complete ; for both Burckhardt and Wadding- ton observe, that the modern appellation, though written Merawe, has the precise sound of Meroe. Resemblance of name, indeed, is often acci- dental, but strict identity not so often; and, amid the general change, it is still common, especially in those unfrequented tracts of Africa, that great capitals should retain their name (Axum, Augila, Assouan). At all events, re- semblance, and still more identity, becomes almost decisive, when there is a coincidence also of circumstance and situation. Now, here we have, bearing the name of Meroe, a modern ca- pital, having in its vicinity monuments that exactly correspond in character, magnitude, and antiquity, to those which ought to mark the site of that celebrated metropolis of Ethiopia. There are no other ruins in this country which can be compared to these ; for, according to the measurement of Caillaud, those of Shendi are decidedly inferior. The length of the greatest temple there is not quite 280 feet; of that at Merawe it is 450. The height of the highest pyramid at Shendi is twenty-five metres (eighty- one feet) ; of that at Merawe 1 03 feet. The base of the former is sixty-seven, of the latter

152 feet. Now, all the ancient accounts unite in representing Meroe as without a rival among the cities of Ethiopia; but if Shendi be Meroe, there must have been a much more splendid ca- pital nearer to Egypt, and yet unknown to Egypt. We have then a combination of cir- cumstances in favor of the position of Merawe, which only the most decided proof would be sufficient to negative. Such proof is, with some apparent reason, supposed to exist in those ancient statements which appear absolutely to re- quire, that Meroe must oe above the junction of the Nile and the Tacazze. But a closer exami- nation will probably alter our views as to the decisive nature of these statements. It has never been observed, that by far the highest an- cient authority is in direct contradiction to them.

To this pre-eminence Ptolemy seems fully en- titled, from the advanced era at which he lived, the great extension of commerce and communi- cation in his time, and, in fact, the more accurate and detailed manner in which he lays down his positions. His residence too at Alexandria, then the centre of the commerce of Africa and the East, gives peculiar weight to his authority respecting Egypt and the surrounding countries.' He says, 'Meroe is rendered an island by the river Nile coming from the west, and by the river Astapus coming from the east. * In it are the following towns :

Long.

Lat.

Meroe ....

61° 30'

16° 26'

Sacolche ....

61 40

15 15

Eser ....

61 40

13 30

Village of the Dari .

62

12 30

Then the junction of the Nile) and Astapus . . J

61 0

12 0

Then the junction of the Asta- ^ boras and Astapus . S

62 30

11 30

We need only glance at this table, to perceive that Ptolemy places Meroe far, quite as far as Merawe actually is, below the junction with the Nile, of the Astapus, Astaboras, or any great river whatever. He makes the difference of la- titude indeed much too great ; but into this error he appears to have been betrayed, by extending his itineraries nearly in a direct line up the river, without allowing for the very circuitous course which it here takes. Beyond Meroe, the know- ledge of Ptolemy is first bedimmed ; but from Egypt all the way to that point, he gives a close and continued chain of positions ; and there is every reason to think, that the intercourse between the countries would be pretty frequent. It seems, then, scarcely possible, that Ptolemy should have been mistaken as to this point ; or that so grand a feature should have escaped his notice, as that of the Nile, which, for more than 1000 miles, had not received even a rivulet, receiving, below Meroe, so mighty a tributary as the Tacazze. The statements of Herodotus, though less

de- tailed, appear to point pretty exactly to the same spot. According to him, travellers ascending the Nile, above Elephantine, journeyed the first forty days by land to avoid the cataracts ; then embarked, and were conveyed in twelve days to Meroe. The place of embarkation would evi- dently be about the frontier of Dongola, where the long chain of cataracts terminates. Twelve days thence to Merawe, would be keeping up very exactly the same rate of travelling ; whereas to Shendi it would be out of all sort of propor- tion. Again, Meroe is stated to be midway between Egypt and the Land of the Exiles, de- scribed by other writers as an island formed by the Nile, and which we think is evidently Sen- naar, to which the parallel streams of the Azergue and Abiad give much of an insular aspect. Now, Merawe is very exactly midway up the Nile, between Egypt and Sennaar; but Shendi would break up altogether the equality between the two divisions. -Strabo, from Eratosthenes,

gives a statement, which appears to point pretty directly to Shendi, and is indeed the only one that can cause a doubt. But elsewhere he de- scribes Meroe as ' bounded upwards on the south by the junction of the rivers Astapus, As- taboras, and Astasobas.' This agrees very closely with our idea on the subject, and is quite con- trary to that which would represent the Astaboras (Atbara) as the northern boundary of Meroe. His statement also, that Meroe is the last king- dom of the Ethiopians (Blacks), after which the Nuba commenced, and occupied the Nile down- wards to Egypt, is true only in regard to Me- rawe. But how then, it will be asked, was the idea so prevalent among ancient geographers, that Meroe was formed by the junction of the great rivers? and how does Ptolemy himself, in the title of his chapter, imply that statement, though its contents are in direct contradiction to it ? The following will, we think, afford a suffi- cient account of the manner in which the error

originated.

' All who are conversant with the early history of geography, must be aware of the many errors with which it abounded. Among these none are more frequent than such as respect the conti- nuous course of great rivers, and the distinction between islands and large peninsulas. The latter terms, indeed, are often used as synonymous, though, perhaps, only through the influence of this original error. Now, the reader need only look at the above sketch of the country here considered as Meroe, intersected by three pa- rallel branches of the Nile, to perceive at once how excessively natural it was, that the first im-

perfect accounts should represent it as an island enclosed by river branches. The original opinion, indeed, which is still to be found in Mela, 1. ix. 10, and Pliny, T. 9, was, that the Astapus and Astaboras were branches of the Nile itself, first separating and forming Meroe into a species of Delta, and then re-uniting; an idea which seems to have a peculiar reference to the parallel streams of the modern Meroe. Then, when it was found that the Nile here- abouts received some large tributaries, it was very natural to consider those tributaries as the river branches employed in the formation of Me- roe. The original idea thus formed of Meroe, as. an island enclosed by them, appears to have become rooted in the minds of geographers, even after they had obtained data by which it was directly negatived. How inconsistent the statement which, under this influence, Ptolemy placed at the head of his chapter, was with the details given by him in it, will be manifest, by observing the vain attempt which the person who afterwards constructed the maps attached to his work, has made to reconcile them, and the strange delineations with which he has thus per- plexed all succeeding enquirers. Such are the considerations which, in our apprehension, esta- blish the identity of the ancient with the modern Meroe.'

This writer concludes, by insisting that the arts

and improvements of civilised life did not proceed from Upper to Lower Egypt ; but, on the contrary, that the early improvements of this part of the world originated altogether in the Delta.

ETHIOPS (martial). Black oxide of iron.

ETHIOPS (mineral). Black sulphuret of mer- cury.

ETHMOIDES Os, a bone in the inner part of the nose. See ANATOMY. The name of this bone is derived from tOfiof, a sieve, and uSoe, form, because it is porous like a sieve. This is per- haps one of the most remarkable bones of the human frame. It appears almost a cube of light, spongy, plates of bone, which are convoluted so as to resemble a honey-comb. It is firmly en- closed in the os frontis, just between the eyes. One horizontal plate receives the olfactory nerves, which, passing through its sieve-like sub- stance, are received in the perpendicular plates, and thus extend the surface of that delicate or- gan. Another flat plate lies in the orbit of the eye ; and, being very smooth, it is named the os planum, or smooth bone. So that the ethmoid bone supports the fore part of the brain, receives the olfactory nerves, forms the organ of smelling, and makes the chief part of the orbit of the eye; and the spongy bones, and the os planum, are neither of them distinct bones, but parts of this ethinoid bone. The principal eminences and depressions of this bone are the crista galh, the perpendicular septum, the spongy laminae, and the cribrose foramina.

ETHNARCH, ETHNARCHA, of t9vog, a nation, and vpvoc, a ruler, a governor of a nation. There are some medals of Herod the Great, on one side

of which is 'HpwJou, and on the other EQrap\or, i. e. Herod the Ethnarch. This title has been used synonymously with tetrarch, though origi- nally different. Though Herod the Great left by willtoArchelaus all Judea, Samaria, and Idumea, yet Josephus says he was then only called ethnarch. See TETRARCH.

ETH'NIC, adj. f Gr. tQwxos, from eOvof, ETHNIC'ISM, n. s.l the people. Heathen ; pa- ETH'NICS, n. s. Cgan: ethnics, are hea- thens ; gentiles; pagans.

This first Jupiter of the ethnicki was then the same with Cain, the son of Adam. Ruleigh'g History.

A hallowed temple, free from taint of ethnicism, makes his muse a saint. Sen Jonson.

I shall begin with the agreement of profane, whe- ther Jewish or ethnick, with the Sacred Writings.

Grew.

Such contumely as the ethnick world durst not offer him, is the peculiar insolence of degenerated Chris- tians. Government of the Tongue.

ETHNOPHRONES ; from tQvoq, a heathen, and <4poww, to think ; in antiquity, a sect of he- retics in the seventh century, who made a profes- sion of Christianity, but joined thereto many ot the ceremonies and follies of paganism; as judi- cial astrology, sortileges, auguries, and other vinations.

ETHULIA, in botany, a genus of the polyga- mia requalis order, syngenesia class of plants;

natural order forty-ninth, composite. They have tubulose compound flowers, of which the florets are all hermaphrodite. Species seven ; natives of the East and West Indies.

ETIO'LOGY, n.s. Gr. amoXoyut. An account of the causes of any thing, generally of a distemper.

I have not particulars enough to enable me to enter iuto the etiology of this distemper. Arbuthnut.

ETIQUETTE', n. s. Fr. First meaning, ac- cording to Cotgrave, a lawyer's book bag, con- taining the titles of the books, and the names of those to whom they belong : then an account of court ceremonies. Prescribed order or ce- remony.

Kiss the slipper or whatever else the etiquette of that court requires. Chesterfield.

There's nothing in the world like etiquette,

In kingly chambers, or imperial halls,

As also at the race and county balls. Byron.

ETIQUETTE, Fr. i.e. a ticket or title affixed to a bundle of papers, expressing its contents, is still used, when applied to the Spanish and some other courts, to signify a particular account of what is to be done daily in the king's household, and in the chief ceremonies relating to it. The word is otherwise chiefly used to denote those forms that regulate the decorum of conduct towards persons of various ranks and stations.

ETMULLER (Michael), an eminent physi- cian born at Leipsic in 1646. After having tra- velled through the greatest part of Europe, he became professor of botany, chemistry, and ana- tomy, at Leipsic; where he died in 1683. He was a very voluminous writer : his works making 5 vols. folio, as printed at Naples in 1728. They consist principally of Institutiones Medicae, De Morborum Curationibus, Collegium Practicum Doctrinale, Collegium Chymicum, Synopsis Col- legii Institutionum Medicarum, De Corpulentia Nimia, Fundamenta Medicinae Verae, Collegium Pharmaceuticum, Chymia Rationalis et Experi- mentalis Curiosa, and a treatise De Praescribendi Formulis.

ETMULLER (Michael Ernest), the son of the preceding, was also an ingenious physician who published several works: he died in 1732.

ETNA. See^ETNA.

ETOILES, in fortification, small star re- doubts, which have from five to eight salient points. Each one of their sides, or faces, may contain from twelve to twenty-five toises. This species of fortification has fallen into disuse.

ETON, or EATON, a town of Bucks, on the banks of the Thames, opposite Windsor, with which place it is connected by means of a bridge. It has long been celebrated for its royal college, founded by Henry VI. for the support of a pro- vost and seven fellows, one of whom is vice- provost; and for the education of seventy king's scholars on the foundation, who, when properly qualified, are annually elected to King's College, Cambridge, to which they are removed wb,en any vacancies occur, and can claim a fellowship after three years' residence. But, besides those on the foundation, about 300 gentlemen's sons are ge- nerally boarded and educated here, within the bounds of the college. This building consists of two neat quadrangles. In the outermost are

the schools and houses for the masters and scho lars ; and on the south side is the college chapel. On the front is part of the provost's dwelling, and a handsome tower or gateway dividing the two courts. In the centre of the first court is a neat brass statue of its royal founder. The other court consists of the apartments of the provost and fellows of the college. The college library on the south side is, with respect to its architec- ture, as neat and elegant as any in the kingdom. Its choice collection of books was for the most part presented to the college by Dr. Wadding- ton, bishop of Chichester; Dr. Godolphin, pro vost; Nicholas Munn, Esq. a late master of the Charter-house ; and Richard Topham, Esq. of Windsor; together with many elegant drawings of Greek and Roman antiquities, collected in Rome, at a great expense, by the latter gentle- man. At Eton a singular festival is celebrated by the school once every three years, called MONTEM, under which title an account of this ancient custom will be given. The town is twenty-two miles north-west of London.

ETRAPADE, Fr. a sort of crane with a pulley ; formerly used among the French to punish mili- tary delinquents. The unfortunate wretch had his hands tied behind his back, with ropes fas- tened to them ; he was then hauled up, and suddenly let down within one foot of the ground ; so that, by means of the jerk, the limbs must in- stantly be dislocated. This punishment was formerly in use at Rome, for the purpose of correcting disorderly conduct at the opera, &c.

ETRURIA, or HETRURIA, in ancient geo- graphy, a celebrated country in Italy, on the Tiber, bounded by that river, the Macra, the Appennine, and the Tyrrhene Sea. It originally contained twelve different nations, which had each their respective monarch. Their names were Veientes, Clusini, Penisini, Cortonenses, Arretini, Vetuloni, Volaterrani, Rusellani, Vol- scinii, Tarquinii, Falisci, and Caeretani. The inhabitants were famous for their confidence in omens, dreams, auguries, &c. They all proved powerful and resolute enemies to the rising em- pire of the Romans, and were conquered only after much effusion of blood. The principal rivers of this country were the Arnus, the Um- bro, the Clanis, and the Tiber. The chief lakes were the Lacus Trasimanus, and Vulsiniensis. Among the most considerable cities were Luna, Pisae, Luca, Pittoria, Florentia, Fesulae, Portus Herculis, Labronis, Voluterrae, Sena Julia, Ar- retium, Cortona, Perusia, Clusium, Vetularii, &c.

ETRURIA, a village of England in Stafford- shire, the principal place for potteries in the county, where the most elegant vases of every form and for every use are made. It was founded by Josiah Wedgewood, who died here in 1795.

ETRUSCA TERRA, in the materia medica, a kind of bole of which there are two species, the white and the red ; the white Tuscan earth is a dense and compact substance of a dull deadish white, of a smooth surface, not staining the fingers when touched. It is not easily broken, but slightly adheres to the tongue, freely melting in the mouth ;

makes a slight effervescence with acid men- strua. The red Tuscan earth is a pure bole, very heavy, of a compact texture, and of a dull brownish-red color. It is naturally of a smooth surface, adheres strongly to the tongue, melts freely in the mouth, and has a strong astringent taste. It makes an effervescence with acid men- strua. This is made up in small flat cakes, and impressed with a shield bearing a ducal coronet, &c. It is a medicine prescribed with success in fevers of many kinds, and in diarrhoeas, dy- senteries, and the like cases.

ETRUSCANS, or ETRUSCI, in ancient geogra- phy^ people of Italy, who inhabited the modem Tuscany, formerly a much more extensive country under the name of Etruria. The Etruscans, in. very ancient times, are supposed to have been masters of almost all Italy ; for the whole region called Italia by the Latins was denominated by the ancient Greeks Tyrrhenia, according to Dionysius Halicarnassensis (Antiq. Rom. lib. i.) ; whence it is inferred, that it was formerly sub- ject to the Tyrrhenians, or Etruscans, and from them received that denomination. Livy and Plutarch state that the seas, which partly sur- round Italy, viz. the Tyrrhenian, Ionian, and Adriatic, were anciently denominated the Etruscan Sea ; and that the Etruscans possessed the whole tract extending from the Alps to the straits separating Italy from Sicily. Beyond the Tiber, they built twelve cities, which were afterwards the boundary of Etruria Proper on one side ; they were the founders of Nola and Capua, and possessed twelve capital cities in the tract terminated by the Po and the Alps. Virgil and Silius Italicus rank Caesena and Mantua among the cities of Etruscan extraction. According to Pliny, Bononia, or Bologna, was anciently regarded as the principal city of Etruria; and many Etruscan relics and fragments have been dug up in various provinces of Naples, Verona, and Padua, as well as in the duchy of Tuscany, or Etruria Proper. The kingdom of Latium was probably a colony of the Etruscans ; and to them therefore we may trace the first origin of the Roman people. In process ol time, the Gauls made several irruptions into Etruria, and seized upon that part of it which lay between the Alps and the Appennines. The first of these incursions happened aUout 600 years B. C., and the last a little before the taking of Rome by Brennus. Colonies of Greeks made also settle- ments in the superior part of Etruria ; whence it was sometimes denominated Magna Graecia. The Etruscans were likewise dispossessed of a large extent of territory by the Samnites and Ligurians, long before they submitted to the Romans ; so that at last they were confined to the limits of Etruria Propria. This

we also find called Tyrsenia and Tyrrhenia. It was divided into twelve states or dynasties, each of which had its peculiar city, and each state or tribe was governed by its own prince, called in the Etruscan language Lucumo. See ETRURIA.

The Tyrseni, or Etruscans, were a branch of the Pelasgi, that according to Dionysius emi- grated into Europe, not many ages after the dis- persion. The Etruscans denominated themselves Raseni, from their leader Rasan, or Rasen ; and

Tyrsenus, or Tyrsen, is said to be only the name Resen, with the servile letter T superadded. This serves to evince, not only that the Etruscan name of the people under consideration agreed with that of the Greeks, but likewise that they were both of oriental extraction. These people seem to have derived their appellation Etruscans from Athuria, Aturia or Asigria, their parental coun- try ; as may be proved from Dionysius Ilalicar- nassensis, Strabo, and Dio. Aturia and Assyria differ merely in dialect; the former being equi- valent to the Chaldsean word K'TnX, and the latter to the Hebrew TTtfK, as may be seen in Bochart (Phaleg. 1. ii. c. 3) and others. The term Tusci, or Thusci, is of a later date, and seems to have been given to the Etruscans by the Greeks. The sacrifices, or use of frankincense, that prevailed among the Tuscans in after ages, probably suggested this appellation.

While each of the twelve tribes, or cantons, called in the Tuscan Language Lucumonin, was governed by its own prince, a king presided over the whole; and convened the general diet of the twelve nations on all pressing emergencies. This was held at the temple of Voltumna, a celebrated city of Etruria, seated on the spot which is occupied, according to Cluverius, by the present city of Viterbo. Although the power of each lucumo was limited, the Etruscan kings seem to have been vested with a sort of absolute oriental authority.

Some of the principal Etruscan laws were : 1. By the original constitution of Etruria, no single state,

or lucumony, could enter upon a war, or conclude a peace, with any neighbouring power, without the participation of the whole Etruscan body. 2. The Etruscans, by a particular law (Athen. Deipnos. 1. i. p. 23) admitted their women to all nocturnal entertainments ; in which they were afterwards followed by the Romans. 3. They obliged themselves to treat all foreigners with the utmost humanity. 4. They gave all possible encouragement, as it should seem, by virtue of their constitution to all polite arts and artificers. 5. In order to deter people from contracting larger debts than they were able to pay, the Tuscan boys, by way of ridicule, fol- lowed all insolvent debtors with an empty purse. 6. They must have had many good moral insti- tutions, since from them the Romans received a supplement to their Twelve fables. 7. The Jura Fecialia were first observed by the Etruscans. 8. The Etruscan polity, in general, seems to have been founded upon maxims of the most consummate wisdom, as may be collected from Aristotle, and Heraclides Ponticus in Athenaeus's Deipnos. ; to which the curious reader may be referred for further information. The religion of the Etruscans was a gross and multifarious idolatry: in common with the ancient Greeks, and Phoenicians, they worshipped the Cabiri, or Dii magni majorum gentium. They were also in- itiated in the Samothracian or Cabirian mysteries.

They had also several deities peculiar to themselves, and some which were confined to particular districts. The sacred mysteries of the old Etruscans agreed, in several points, with those of the Greeks, but in others differed from

them, and these they communicated to the Romans long before that nation had any inter- course with the Greeks generally. The festivals, holy days, and stated times of public worship of the Romans and Etruscans must also have agreed in several particulars ; as the Romans, before they became

acquainted with the Greeks, received every thing relating to religion, and even their calendar itself, from this quarter. The rites and ceremonies used by the haruspices, augurs, and pontifices at Rome, were also derived from the Etruscans, who seem to have been the most celebrated nation in the Pagan world for skill in augury, and the accompanying sacrifices. This was their character among the Romans, as Cicero and Livy have testified. Hence this branch of science was emphatically styled at Rome ' Ars Etrusca,' and ' Disciplina Etrusca ;' and Etruria was denominated by Arno'oius the mother of superstition. It is here observable, that neither the Etruscans nor the Romans had any magnificent temples in the earlier ages. With regard to the theological notions of the Etruscans, they believed in one supreme Being, whom they called Jave, or Jove ; him they con- sidered as the great governor of the universe, and the principle of life and motion. They were also firmly persuaded of the immortality of the soul, and a future state of rewards and punishments ; though in later times they seem to have followed the system of Pythagoras, and to have adopted the metempsychosis. However, the generality of the Tuscans adhered to the Sabian superstition.

The Etruscan language was the same, or nearly so, with the Hebrew and Phoenician. The first Pelasgic settlements in Etruria could not have taken place many centuries after the deluge, and at that time the languages, or rather dialects of the Egyptians, Assyrians, Babylonians, Celtes, Syrians, and Arabs, must have approached extremely near to the Hebrew and Phoenician, which the learned allow to have been almost the same. This also appears from the letters and manner of writing anciently used in Etruria. The letters are almost the same with those of the earliest Greeks, brought by Cadmus out of Phoenicia. The manner of writing is purely oriental. The high, and indeed the almost in- credible antiquity of the Etruscan language and alphabet, has been clearly evinced in twodisser- tations, printed at Oxford in the year 1746. For other particulars relating to this subject, we refer to Dempster's Etruria regalis

; Gori in his Museum Etruscum, published at Florence in 1737; M. Bourguet's Dissertation published in 1733, and Buonarota's of Florence in 1726 ; and Swinton's Etruscan Alphabet, published at Ox- ford ; and for an abstract, Anc. Un. Hist. vol. XVIII.

The Etruscans were well versed in all the early arts, and from them the Romans derived that knowledge of them which paved the way to the empire of the world. In the best ages of Rome they imitated the Etruscans ; every thing that bore any relation to civil government at Rome, such as ensigns of royalty, the distinc- tion of nobles from plebeians, the secures and fasces, the lictors, &c., was derived from this source. Arms, instruments of military music, mili-

tary accoutrements and decorations, trophies, tri- umphs, chariots, crowns, &c., and in short, the whole art of war, or military exercises, were also brought from Etruria. To this may be added the first Roman money, locks and keys, lamps, candle- sticks, glasses, cups, drinking vessels, together with the laws and customs relating to banquets and entertainments. Agriculture, planting of vines, all instruments requisite in husbandry, mills, architecture, music, and a variety of musical instruments, many sorts of diversions, especially tragedies, various kinds of garments, and even the rudiments of physic, seem to have been like- wise introduced into Italy by the Etruscans. The art of constructing ships and of navigating them, the method of equipping fleets, and all kinds of naval armaments, were certainly known to the Etruscans before the time of Romulus ; and hence we may conclude, that this nation must have been a maritime power, and that it must have possessed an extensive commerce in the earlier ages. The Etruscans, who were follow- ers of Pythagoras, and who cultivated the princi- ples of the Italian philosophy, must also have cul- tivated the art of music and poetry, and have been well versed in natural philosophy and astronomy. Tragedy is said to have owed its birth to this nation; or at least they first communicated it to the Romans. The first actors who appeared upon

the stage of Rome were sent for from Etruria. Nor could the ancient Etruscans, valuing them- selves upon being the disciples of Pythagoras, be strangers to geometry, nor indeed to any of the mathematical sciences. For military lean ing they were famous, and especially for the art of drawing up an army, and making dispositions for an engagement. Athenaeus informs us, that the formation of the phalanx, and manner of fighting consequent upon it, was invented by the Etruscans. To all the other branches of litera- ture and science for which the Etruscans were distinguished, we may add that they excelled in the knowledge and composition of history. The first person who is said to have fixed monarchical government in Etruria was Janus, supposed by some to be the Javan of Scripture, or one of his posterity, and in subsequent ages deified by his subjects. The history of their succeeding kings is intermixed with much fable, and, of course, very obscure and uncertain. It appears, how- ever, that they were a maritime power in the time of the Argonauts ; and that they commanded respect, as such, at least a generation before the Trojan war. That the Etruscans were a power- ful and polished nation, when Romulus founded or rather restored Rome, appears from approv- ed authors. That prince could not carry the design he had fontttd into execution, without their assistance. See Ancient Universal History. vol. XVIII.

ETTENHEIM, a town of Baden, in the circle of the Kinzig, having about a league to the east the once rich but now secularised Benedictine abbey of Ettenheim-Munster ; it was made over, with the adjacent country, to the grand duke of Baden in 1803. The town stands on the rivulet of Etteribach, four miles from the Rhine. It is nineteen miles S. S. E. of Strasburg, and has a population of 3000.

ETYMOL'OGY, from the Greek IrvpoXoyia, from tYv/ioc, true, real, and Xoyog , word ; that branch of philology which teaches the origin of words, traces the laws by which the changes in languages take place, and discovers the true meanings of words by examining their roots and composition. It is at once the delicise philolo- gicae, and a safeguard against the corruption of words by a careless application of them. Ety- mology becomes particularly interesting when applied to those languages which are not so much the product of accident as of settled laws, which continue to operate as long as the lan- guage exists. Etymology has not unfrequently led to important historical conjectures, because the language of a tribe is often the only record of its descent, the individuals composing it naving lost all tradition of their origin. Who can doubt the importance of etymology, taking it in its widest sense, as treating of the origin and nature of words, and of the connexions of differ- ent languages ; in short, as occupied with the laws which regulate the formation of languages, which stand preeminent among the most inter- esting, important, and noble productions of the human mind ? To be a sound etymologist re- quires many rare qualifications, among which are, a thorough knowledge of many and very different languages; great caution, which will not be easily led astray by appearances; a phi- losophical mind, which easily conceives the as- sociations of ideas, and traces the different, yet' connected, notions which the same root expresses in different languages ; in one language repre- senting, perhaps, the most concrete, and in another the most abstract idea ; a perfect know- ledge of phonology, or the science of human sounds, and the organs which produce them, and a natural taste and adaptation for the study, which, like every gift of nature, may be much developed, but cannot be produced by labor. Etymology has been cultivated with much zeal and success in our day, as illustrative both of single languages (how much, for instance, has Buttmann done for Greek etymology), and of the relations between whole families of languages. Modern scholars have been assisted in

their re- searches in this department, not merely by the materials which former ages have accumulated, but by the great advancement which has been made in the knowledge of languages before un- known, owing to the more frequent and rapid communication between the most distant parts of the globe, to materials collected by missionaries, &c. In general, it may be said that the Germans have done more for etymology than any other nation; while, comparatively speaking, very little has been done by the English, whom almost every word in their language conducts into a foreign country, and with whom it might be sup- posed etymology would be much more generally cultivated than with a nation like the Germans, whose language forms a whole in itself, the words of which explain each other as far as common use requires.

Etymology might be divided into the higher and lower, as we have the higher and lower ma- thematics, and it might, perhaps, be correct to say, that higher etymology examines the origin

of the root of a certain word, its connexions with corresponding words in other languages, &c., and that it treats only of the higher laws of the formation of languages ; but, of course, the line of distinction between these two divisions cannot be very accurately drawn. As an instance of our meaning, let us trace the origin of disagreeable- ness; ness is an affix frequent in substantives, corresponding to the German niss, and indicating a state, effect, or abstraction; a syllable which is to be found in some shape or other in all Teutonic dialects ; dis (the Latin dis, asunder), a prefix often of the same meaning as the English un, conveying the idea of negation ; agreeable, from the French agreable, of which able is an adjective affix from the Latin ; a, a preposition often indi- cating at, as a plaisir, at pleasure; gre, at last, is the root of the word, analogous to grat, the root of the Latin gratus, and having the same mean- ing. Higher etymology now continues to trace the root of gratus in several languages, or en- deavours to do so. It is not improbable that it would be found that g is

an augment which, in several other languages, is left out. To find the root of a word is always the first object of ety- mology, but often difficult, because several different syllables may sometimes present them- selves as probable roots. Euphony must be always taken into the account, and letters which are added merely for the sake of improving the sound must be thrown aside. As another in- stance, we may take the word lawless ; this con- sists of a substantive, law, and a syllable, less, corresponding to the German syllable los, which is also used as an adverb, and has then the mean- ing of off; it is the root of losen, to loosen, to separate, connected, probably, with the Latin laxare, and lucre, the Greek Xvoat, \v&iv, \vtiv ; and the same with the Swedish losa, the Icelandic leisa, and the Anglo-Saxon lezan and lysan. Law is a root which we recognize in the corresponding word, or connected ones, of a great many lan- guages, Teutonic, Latin and Greek, and pro- bably Asiatic ones, and is, besides, connected with the German legen, to lay, to lay down, which corresponds to the lagjan of Ulphilas in the Gothic translation of the Bible, the Icelandic leggia, the Swedish lagga, the Greek Xe^o/uat. Law is also connected with the Latin locus and locare. The French loi probably comes from the Latin lex, as the inhabitants of Gaul received laws in a very complete state from the Romans before the Franks conquered Gaul, and from the truncated genitive legis, loy and loi can easily have originated. It is to be remarked that de- rived languages, as the Italian, French, &c., very often form their substantives from the genitives of the original language, as the Italian Giove of Jovis.
EU, a town of France, in the department of the Lower Seine, and late province of Normandy, with a strong castle and an elegant square. Its chief trade is in laces and serges. It is seated on the Bresle, fifteen miles north-east of Dieppe and thirty-six of Rouen.

EV'ACATE, v. a. ^ Fr.eracwer.-Span.

EVAC'UATE, v. a. & v. n. f and Port, evacuar;
EVACUA'TION, n. s. I ltd. and Lat. eva

EVAC'UATOR, n. s. J cuare, from e and

vaco; Heb. ppa, to make void. — Minsheu. To

empty; throw out; make empty, or clear; to void, quit : as a neuter verb it is used by Brown in the particular sense of to let blood : an evacu- ator is one who makes void or annuls.

Dry air opens the surface of the earth to disincar- cerate venene bodies, or to evacate them.

Harvey on the Plagut.

EVAGATION, n. s. Lat. evagor. The act of wandering ; excursion ; ramble ; deviation.

These long chains of lofty mountains, which run through whole continents east and west, serve to stop the evagutiun of the vapours to the north and south in hot countries. Ray.

EVAGRIUS (Scholasticus), a celebrated his- toiian, born at Epiphania, about A. D. 536. He practised as an advocate, from which he was called Scholasticus. He was also tribune, and keeper of the prefect's dispatches. He wrote an ecclesiastical history, commencing where those of Socrates and Theodoret end, with other works, for which he was rewarded by the emperors Ti- oerius II. and Mauricius. M. de Valois pub- lished at Paris an edition of Evagrius's ecclesiasti- cal history, in folio ; and it was republished at Cambridge in 1620, by William Reading, with notes of various authors.

EVANDER, in fabulous history, a famous Arcadian chief, said, on account of his elo- quence, to have been the son of Mercury, by the prophetess Carmenta. He brought a colony of his people into Italy, about sixty years before the taking of Troy ; when Faunus,

who then reigned over the Aborigines, gave him a large territory in which he settled with his friends. He is said to have taught the Latins the use of letters, and the art of husbandry. He kindly received Her- cules when he returned from the conquest of Geryon, and he was the first who raised to him altars He assisted ./Eneas against the Rutuli, and distinguished himself by his hospitality. It is said that he first brought the Greek alphabet into Italy, and introduced there the worship of the Greek deities. He was honored as a god after his death, and his subjects raised him an altar on mount Aventine.

EVANES'CENCE, n. s.*\ Lat. evanescens ; EVANES'CENT, adj. te and vanesco, to

EVAN'ID, adj. £ vanish, from vanus,

EVAN'ISH, v. n. J void, empty. Dis-

appearance by imperceptible degrees : the adjec- tives alike mean fading ; faint , weak : to evanish is to depart or escape imperceptibly.

Where there is heat and strength enough in the plant to make the leaves odorate, there the smell of the flower is rather evanid, and weaker than that of the leaves. Bacon.

The decoctions of simple*, which bear the visible colours of bodies decocted, are dead and evanid, with- out the commixtion, of alum, argol, and the like.

Browne.

I put as great difference between our new lights and ancient truths, as between the sun and an evanid meteor. Glanville.

The difference between right and wrong, on some petty cases, is almost evanescent. Wollaston.

The canal grows still smaller and slenderer, so as that the evanescent solid and fluid will scarce

differ.

Arbuiknol.

The downy orchard, and the meltins pulp

Of mellow fruit, the nameless nations feed

Of evanescent insects. Thomton’t Spring.

Of the great principles of truth which the first spe- culathu discovered, the simplicity is embarrassed by ambitious additions, or the evidence obscured by inac- curate argumentation ; and as they descend from one •accession of waiters to another, like light transmitted f r >m room to room, they lose their strength and splen- dour, and fade at last in total evancicmce.

Johnson. Rambler. Or like the borealis race,

That’flit ere you can point their place ;

Or like the rainbow’s lovely form

Evanishing amid the storm. Burnt.

Immortal Guide ! O, now with accents kind Give to my ear the progtess of the Mind. How loves, and tastes, and sympathies commence From evanescent notices of sense. Darwin.

EVAN’GEL, n. s. ~\ Fr. evangelise; EVANGEL’IC, adj. I Gr. evayytXucoc,

EVAKGEL’ICAL, adj. I tvoyytXof, i. e. tv,
EVANGEL’ICALLY, adv. \ good, and ayytXoc,
EVAN’GELISM, n.s. ^- a messenger, or

ayytXwz, a message. The GOSPEL (see that word) : relating to the gospel : evan-

EVAN’GELIST,

EVANGELIST’ARY,

EVAN’GELIZE, v a.

EVAN'GELY, n. s.

gelism is the promulgation of the gospel ; an evangelist one who promulgates it ; and is particularly applied to those who first recorded the facts of the life of Jesus Christ, on which it is founded. To evangelise is to teach the gospel : an evangelistary a selertion from the gospels : evangely is synonymous with evangel.

The lawe and prophetis til to Jon, fro that tyme the rewme of God is euangelited ; and ech man doth violence into it. Wiclif. Luk. 16.

We suffren alle thingis that we ghyuen no lettyng to the enangelie of crist. Id. 1 Cor. Q.

Good Lucius,

That first received Christianity,

The sacred pledge of Christ's evangaly.

Faerie Queene.

These evangelical hymns they allow not to stand in our liturgy. Hooker.

Thus was this land saved from infidelity, through the apostolical and miraculous evangelism. Bacon.

God doth not less approve our evangelical sacrifices, than theirs under the law.

Bp. Hall's Contemplationtr

Much rather might the heavenly ministry of the evangel bind herself about with far more piercing beams of majesty and awe, by wanting the beggarly help of halings and amercements in the use of her powerful keys. Milton.

Sworn to the laws of God and evangelick truth.

Id.

The Spirit

Poured first on his apostles, whom he sends T' evangelite the nations ; then on all Baptized, shall them with wondrous gifts endue.

Id.

The sin of calumny is set in a most diametrical op- position to the evangelical precept of loving our neigh- bours as ourselves. Government of the Tongue.

Each of these early writers ascribe to the four evan~ gelistt by name their respective histories, Additon.

This distinction between moral goodness and a-aii- gelical perfection, oucht to have been observed.

A rliuihiuit

EVAPORATION.

Gou will indeed judge the world in righteousness ; Lat 'tis by an evangelical, not a legal righteousness, and by the intervention of the man Christ Jesus, who is the Saviour as well as the Judge of the world.

Atterbury.

Those to whom he first entrusted the promulgating of the gospel, had instructions ; and it were fit our new evangelists should show their authority.

Decay of Piety.

Acts of saving grace are evangelically good, and well-pleasing to God. Bp. Barlow.

The criticks complain that the evangelistaries and lectionaries have often transferred their readings into the other manuscripts. Parson.

EVANGELIST is derived from the Greek tt/ay- •ytXiov, formed of tvj, good, and ayyeXoc, angel or messenger. This title was also given in the primitive church to such as preached the gospel in

different places, without being attached to any particular church. In this sense some interpre- ters think, that St. Philip, one of the seven dea- cons, is called the evangelist, in Acts xxi. 8. St. Paul, writing to Timothy, 2 Eph. iv. 5, bids him do the work of an evangelist : and, in his epistle to the Ephesians, iv. 11, he ranks the evangelists after the apostles and prophets.

EVANGELISTS, four small islands at the western end of the straits of Magellan, near the coast of South America; three of them are low, and the other, at some distance from, the rest, has the ap- pearance of a hay-stack. Long. 67° 16′ W., lat. 52° 45′ S.

EVANID COLORS are such as are of short dura- tion, as those in the rainbow, in clouds before and after sun-set, &c. They are also called fan- tastical and emphatical colors.

EVANS (Caleb), a distinguished Baptist minister, born at Bristol, in 1737, where his father was pastor to a respectable congregation. He received his education at a dissenting academy in London, after which he was chosen assistant to his father, and became his successor. Besides attending to the duties incumbent on him, he conducted a seminary for bringing up young men for the pastoral office, with great reputation. He also published Sermons on the Scripture charac- ter of the Son and Holy Spirit ; a Collection of Hymns, adapted to public worship ; an Address to the Serious Professors of Christianity ; Christ Crucified, or the Scripture Doctrine of the Atonement, &c. In 1789 he had the degree of D. D. conferred on him by King's College, and died in 1791.

EVANS'S ISLAND, a small American island, near the coast of Main. Long. 67° 3′ W., lat. 44° 31′ N.

EVANTES, in antiquity, the priestesses of Bacchus, so called, because in celebrating the orgia they ran crying, ' evan ! evan ! ohe evan !' See BACCHANALIA.

EVAPORATE, v. a., v. n., & adj. ^ Fr. eva-

EVAP'ORABLE, adj. > porcr ;

EVAPORATION, n. s. J Lat. eva-

poro; e and vaporo, from vapor, a vapor. To drive off, or away, in v*por : hence to give vent, or utterance, to thought ; to fly away in vapors ; waste imperceptibly; disperse in vapor. Eva- porable is, easily dispersed, in this way: evapo- ration is the act or doctrine of evaporating. VOL. VIII

Those waters, by rarefaction and evaporation, as- cended. Raleigh.

My lord of Essex evaporated his thoughts in a son- net to be sung before the queen. Wotton.

They are but the fruits of adusted choler, and the evaporations of a vindictive spirit. Howel.

Poesy is of so subtile a spirit, that in the pouring out of one language into another it will all evaporate.

Denham.

Being weary with attending the slow consumption of the liquor, we set it in a digesting furnace to evapo- rate more nimbly. Boyte.

This vapour falling upon joints which have not heat enough to dispel it, cannot be cured otherwise than by burning by which it evaporates. Temple.

Such cordialpowders as are aromatick, their virtue lies in parts that are of themselves volatile, and easily evaporable. Grew.

If we compute that prodigious mass of water daily thrown into the sea from all the rivers, we should then know how much is perpetually evaporated, and cast again upon the continents to supply those innumera- ble streams. Bentley.

Evaporations are at some times greater, according to the greater heat of the sun : so wherever they

alight again in rain, 'tis superior in quantity to the rain of colder seasons. Woodward.

Convents abroad are so many retreats for the spe- culative, the melancholy, the proud, the silent, the politick, and the morose, to spend themselves, and evaporate the noxious particles. Swift.

We perceive clearly that fire will warm or burn us, and will evaporate water. IVatts'i Logick.

Our works unhappily evaporated into words ; we should have talked less, and done more.

Decay of Piety.

The state, when now his rising fame was known, Th' unrivalled genius challenged for her own ; Nor would that one for scenes of action strong, Should let a life evaporate in song. Young.

The atmosphere will dissolve a certain quantity of moisture as a chemical menstruum, even when it is much below the freezing point, as appears from the diminution of ice suspended in frosty air ; but a much greater quantity of water is evaporated and suspended in the air by means of heat, which is perhaps the uni- versal cause of fluidity, for water is known to boil with less heat in vacuo, which is a proof that it will evaporate faster in vacuo, and that the air therefore rathei- hinders than promotes its evaporation in higher degrees of heat. Darwin.

EVAPORATION, in natural philosophy, signifies the conversion of fluids, principally water, into vapor, so that it becomes specifically lighter than the atmosphere. Dr. llutton observes, that it differs from exhalation, which is properly a dis- persion of dry particles from a body.

Evaporation is usually produced by heat, and by the change of air : thus, common salt is formed by evaporating all the humidity in the brine or salt water; which is either performed by the heat of the sun, as in the salt works on the sea coast, &c. ; or by fire, as at the salt springs. Sec.: and it is

well known how useful a brisk wind is in drying wet clothes, or the surface of the ground ; while, in a calm still atmosphere, they dry very slowly. But, though evaporation be generally an effect of the heat and motion of the air, yet, M. Gauteron, in the Memo-res de 1' Acad. des Scienc. anno. 1705, shows that a quite opposite cause may have the same effect, and that fluids lose more of their parts in the severest frost, than

when the air is moderately warm : thus, in the great frost of 1708, he found that the greater the cold, the more considerable the evaporation ; and that ice itself lost full as much as the warmer liquors that did not freeze.

Water evaporates in every degree of heat from 32° to 212°, which is its boiling point, when it is dissipated in great quantity, and very rapidly. It has also been supposed to evaporate even after its conversion into ice ; but some late authors have denied this to be the case. Other liquids, such as spirit of wine or ether, continue to evapo- rate long after they have been cooled down to the freezing point of water ; nor is there any experi- ment by which it has yet been discovered at what degree their evaporation ceases. Even quick- silver, to appearance a much more heavy and sluggish fluid, and which does not boil without applying almost three times the heat necessary to make water boil, readily evaporates when the pressure of the atmosphere is taken off; and hence the empty parts of barometrical tubes, where the instruments were made with great ac- curacy and the tubes perfectly exhausted, have been covered with mercurial globules, owing to an invisible vapor ascending from the surface of the metal. In like manner the evaporation of water is very perceptible in some experiments with the air pump. Dr. Priestley found

that, where moisture was carefully excluded from his apparatus, he was never able to produce such a quantity of inflammable air by heating charcoal, as when a little quantity of water was admitted, by moistening the leather on which the receiver stood. Nor is the elasticity of this kind of steam altogether imperceptible ; for, in the barometer above-mentioned, the accuracy of the instrument was considerably affected by the steam of the mercury ascending from it, and occupying the roid space in the upper part of the glass tube.

There are fewsub ects of philosophical investi- gation that have occasioned a greater variety of opinion than the theory of evaporation, or of the ascent of water, in such a fluid a.« air, between 800 and 900 times lighter than itself, to different heights, according to the different densities of the air ; in which case it must be specifically lighter than the air through which it ascends. The Cartesians account for it by supposing that, by the action of the sun upon the water, small particles of the water are formed into hollow spheres and filled with the materia subtilis, which renders them specifically lighter than the ambient air, so that they are buoyed up by it. Dr. Nieuwentyt, in his Religious Philosopher, Contemplation 19, and several others, have al- leged that the sun emits particles of fire which adhere to those of water, and form moleculre, or small bodies, lighter than an equal bulk of air, which consequently ascend, till they come to the height where the air is of the same specific gravity with themselves ; and that these particles, being separated from the fire with which they are in- corporated, coalesce and descend in dew or rain. Dr. Halley advanced another hypothesis, which 'has been more generally received : Ha imagined that, by the action of the sun on the surface of the water, the aqueous particles are formed into hollow spherules, that are filled with a finer air

highly rarefied, so as to become specifically lighter than the external air.

Dr. Desaguliers, dissatisfied with the hypo- theses of Drs. Nieuwentyt and Halley, proposes another in the Philosophical Transactions, No. 407. He supposes that heat acts more power- fully on water than on common air ; that the same degree of heat which rarefies air two-thirds, will rarefy water near 14,000 times ; and that a very small degree of heat will raise a steam or vapor from water, even in winter, whilst it condenses the air; and thus the particles of water are con- verted into vapor by being made to repel each other strongly; and, deriving electricity from the particles of air to which they are contiguous, are repelled by them and by each other, so as to form a fluid which, being lighter than the air, rises in it, acccording to their relative gravities. The particles of this vapor retain their repellent force for a considerable time, till, by some dimi- nution of the density of the air in which they float, they are precipitated downwards, and brought within the sphere of each other's attrac- tion of cohesion, and so join again into drops of water. Many objections have been urged against this theory, by Mr. Clare in his Treatise of the Motion of Fluids, and by Mr. Rowning in his system of Philosophy ; to which Dr Hamilton has added the two following, viz. that if heat were the only cause of evaporation, water would evaporate faster in a warm close room, than when exposed in a colder place, where there is a constant current of air ; which is contrary to experience ; and that the evaporation of water is so far from depending on its being rarefied by heat, that it is carried on even whilst water is condensed by the coldness of the air, till it freezes ; and since it evaporates even when frozen into hard ice, it must also eva- porate in all the less degrees of cold. And therefore heat does not seem to be the principal, much less the only cause of evaporation. Others have more successfully accounted for the pheno- mena of evaporation on another principle, viz. that of solution ; and shown, from a variety of experiments, that what we call evaporation is nothing more than a gradual solution of water in air, produced and supported by the same means, viz.

attraction, heat, and motion, by which other solutions are effected. The abbe Nollet first started this opinion, though v-'ithout much pur- suing it, in his Lecons de Physique Experimen- tale, first published in 1743: he offers it as a conjecture, that the air of the atmosphere serves as a solvent or sponge, with regard to the bodies that encompass it, and receives into its pores the vapors and exhalations that are detached from the masses to which they belong in a fluid state, and he accounts for their ascent on the same principles with the ascent of liquors in capillary tubes. On this hypothesis, the condensation o. the air contributes, like the squeezing of a sponge, to their descent.

Dr. Franklin, in a paper of Philosophical anc" Meteorological Observations, Conjectures, and Suppositions, delivered to the Royal Society about 1747, suggested a similar hypothesis. He observes, that the air and water mutually at- tract each other ; and hence he cr Deludes, that water will dissolve in air, as salt in wi»»r • *v>™

particle of air assuming one or more particles of water ; and, when too much is added, it precipi- tates in rain. But as there is not the same con- tiguity between the particles of air as of water, the solution of water in air is not carried on without a motion of the air, so as to cause a fresh accession of diy particles. A small degree of heat so weakens the cohesion of the particles of water, that those on the surface easily quit it, and adhere to the particles of air: a greater degree of heat is necessary to break the cohesion between water and air ; for its particles being by heat repelled to a greater distance from each other, thereby more easily keep the particles of water that are annexed to them from running into cohesions that would obstruct, refract, or reflect the heat ; and hence it happens that when we breathe in warm air, though the same quan- tity of moisture may be taken up from the lungs as when we breathe in cold air, yet that moisture is not so visible. On these principles he

ac- counts for the production and different appear- ances of fogs, mists, and clouds. He adds, that if the particles of water bring electrical fire when they attach themselves to air, the repulsion between the particles of water electrified, joins with the natural repulsion of the air to force its particles to a greater distance, so that the air, being more dilated, rises, and carries up with it the water: which mutual repulsion of the par- ticles of air is increased by a mixture of confmon fire in the particles of water. When air, loaded with surrounding particles of water, is com- pressed by adverse winds, or by being driven against mountains, &c., or condensed by taking away the fire that assisted it in expanding, the particles will approach one another, and the air with its water will descend as a dew ; or, if the water surrounding one particle of air come in contact with the water surrounding another, they coalesce and form a drop, producing rain ; and since it is a well known fact, that vapor is a good conductor of electricity, as well as of common fire, it is reasonable to conclude with Mr. Hen- ley, that evaporation is one great cause of the clouds becoming at times surcharged with this fluid. M. Le Roi, of the Academy of Sciences at Paris, has also advanced the same opinion, and supported it by a variety of facts and obser- vations in the Memoirs for the year 1751. He shows, that water undergoes in the air a real dis- solution, forming with it a transparent mixture, and possessing the’same properties with the solu- tions of most salts in water ; that the two princi- pal causes, which promote the solution of water in the air, are heat and wind ; that the hotter the air is, within a certain limit, the more water it will dissolve ; and that at a certain degree of heat the air will be saturated with water ; and, by determining at different times the degrees of the air’s saturation, he estimates the influence of those causes on which the quantity depends that is suspended in the air in a state of solution. Accordingly, the air, heated by evaporating sub- stances to which it is contiguous, becomes more me and light, rises and gives way to a denser air; and,

by being thus removed, contributes to accelerate the evaporation. The fixed air con- tained in the internal parts of evaporating bodies,

put into action by heat, seems also to increase their evaporation. The wind is another cause of the increase of evaporation, chiefly by chan^- ing and renewing the air which immediately en- compasses the evaporating substances ; and, from the consideration of these two causes combined, it appears why the quantity of vapor raised in the night is less than that in the day, since the air is then both less heated and less agitated. To the objection urged against this hypothesis, on ac- count of the evaporation of water in a vacuum, M. Le Roi answers, that the water itself contains a great quantity of air, which gradually dis- engages itself, and causes the evaporation ; and that it is impossible that a space containing water which evaporates should remain perfectly free from air. To this objection Dr. Dobson of Liverpool replies, that though air appears, by unquestionable experiments, to be a chemical solvent of water, and as such is to be considered as one cause of its evaporation, heat is another cause, acting without the intervention of air, and producing a copious evaporation in an exhausted receiver; agreeably to an experiment of Dr. Irving, who says, that in an exhausted receiver water rises in vapor more copiously at 180° of Fahrenheit's thermometer, than in the open air at 212°, its boiling point. Dr. Dobson farther adds, that water may exist in air in three dif- ferent states ; in a state of perfect solution, when the air will be clear, dry, and hea^y, and its powers of solution still active ; in a state of be- ginning precipitation, when it becomes mois and foggy, its powers of solution are diminished and it becomes lighter in proportion as its wate is deposited : and, thirdly, when it is completely precipitated, which may happen either by a slowa. process, when the dissolved water falls in drizzling rain, or by a more sudden process, when it descends in brisk showers.

Dr. Halley, whose theory is mentioned above, has furnished some experiments on the evapora- tion of water, the result of which is; 1. That water salted to about the si me degree as sea water, and exposed to a heat ?qual to that of a summer's day, did, from a circular surface of about eight inches diameter, evaporate at the rate of six ounces in twenty-four hours : whence by a calculus he finds that, in such circumstances, the water evaporates one-tenth of an inch deep in twelve hours : which quantity, he observes, will be found abundantly sufficient to furnish all the rains, springs, dews, &c. By this experi- ment, every ten square inches of surface of the water yield in vapor, per day, a cubic 'inch of water : and each square foot, half a wine pint ; every space of four feet square, a gallon ; a mile square, 6914 tuns ; and a square degree, of sixty-nine English miles, will evaporate 33,000,000 tuns a day; and the whole Mediterranean, com- puted to contain 160 square degrees, at least 5,280,000,000 tuns each day. Philosophical Transactions, No. 189, or Abridgment, vol. II, p. 108. 2. A surface of eight square inches, evaporated purely by the natural warmth of the weather, without either wind or sun, in the course of a whole year, 16,292 grains of water, or sixty-four cubic inches; consequently, the depth of water thus evaporated in one year

amounts to eight inches. But t'.iis being too little to answer the experiment of the French, who found that it rained nineteen inches of water in one year at Paris ; or those of Mr. Townley, who found the annual quantity of rain in Lan- cashire above forty inches; he concludes, that the sun and wind contribute more to evaporation than any internal heat or agitation of the water. In effect, Dr. Hal ley fixes the annual evaporation of London at forty-eight inches ; and Dr. Dobson states the same for Liverpool at thirty-six inches and three quarters.

Philosophical Transactions, vol. LXVII, p. 252. 3. The effect of the wind is very considerable, on a double account; for the same observations show a very odd quality in the vapors of water, viz. that of adhering and hanging to the surface that exhaled them, which they clothe as it were with a fleece of vaporous air; which once investing the vapor, it afterwards rises in much less quantity. Whence, the quan- tity of water lost in t%venty-four hours, when the air is very still, was very small, in proportion to what went off when there was a strong gale of wind abroad to dissipate the fleece, and make room for the emission of vapor ; and this, even though the experiment was made in a place as close from the wind as could be contrived. Add, that the fleece of water, hanging to the surface of waters in still weather, is the occasion of very strange appearances, by the refraction of the vapors differing from and exceeding that of common air : whence every thing appears raised, as houses like steeples, ships as on land above the water the land raised, and as it were lifted from the sea, &c. 4. The same experiments show that the evaporations in May, June, July, and August, which are nearly equal, are about three times as great as those in November, De- cember, January, and February. Philosophical Transactions, No. 212, or Abridgment, vol. II., p. 110.

Dr. Hamilton, professor of philosophy in the university of Dublin, transmitted to the Royal Society, in 1765, a long dissertation on the na- ture of evaporation, in which he proposes and establishes the theory of solution ; and though other writers had been prior in their conjectures, and even in their reasoning on this subject, Dr. Hamilton assures us, that be has not represented any thing as new, which he was conscious had ever been proposed by any 6ne before him, even as a conjecture. Dr. Hamilton, having evinced the agreement between solution and evaporation, concludes, that evaporation is nothing more than a gradual solution of water in air, produced and promoted by attraction, heat, and motion, just as

other solutions are effected. To account for the ascent of aqueous vapors into the atmosphere, this ingenious writer observes, that the lowest part of the air being pressed by the weight of the upper against the surface of the water, and con tinually rubbing upon it by its motion, attracts and dissolves those particles with which it is in contact, and separates them from the rest of the water. And since the cause of solution in this case is the stronger attraction of the particles of water towards the air, than towards each other, those that are already dissolved and taken up will be still farther raised by the attraction of the

dry air that lies over them, and thus will diffuse themselves, rising gradually higher and higher, and so leave, the lowest air not so mnch satu- rated, but that it will still be able to dissolve and take up fresh particles of water ; which pro- cess is greatly promoted by the motion of the wind. When the vapors are thus raised, and carried by the winds into the higher and colder parts of the atmosphere, some of them will coalesce into small particles, which slightly at- tracting each other, and being intermixed with air, will form clouds; and these clouds will float ot different heights, according to the quantity of vapor borne*\ap, and the degree of heat in the upper parts of the atmosphere : and thus clouds are generally higher in summer than in winter. When the clouds are much increased by a con- tinual addition of vapors, and their particles are driven close together by the force of the winds, they will run into drops heavy enough to fall down in rain. If the clouds be frozen before their particles are gathered into drops, small pieces of them, being condensed and made heavier by the cold, fall down in thin flakes of snow. When the particles are formed into drops before they are frozen, they become hail-stones. When the air is replete with vapors, and a cold breeze springs up, which checks the solution of them, clouds are formed in the lower parts of the atmosphere, and compose a mist or fog, which usually happens in a cold morning, and is dis- persed when the sun has warmed the air, and made it

capable of dissolving these watery par- ticles. Southerly winds commonly bring rain, because, being warm and replete with aqueous vapors, they are cooled by coming into a colder climate ; and therefore they part with some of them, and suffer them to precipitate in rain : whereas northerly winds, being cold, and ac- quiring additional heat by coming into a warmer climate, are ready to dissolve and receive more vapor than they before contained ; and therefore, by long continuance, they are dry and parching, and commonly attended with fair weather. Changes of the air, with respect to its density and rarity, as well as its heat and cold, produce contrary effects in the solution of water, and the consequent ascent or fall of vapors. Several ex- periments prove that air, when rarefied, cannot keep so much water dissolved as it does in a con- densed state; and therefore when the atmosphere is saturated with water, and changes from a denser to a rarer state, the high and cold parts of it will let go some of the water before dissolved, forming new clouds, and disposing them to fall down in rain : but a change from a rarer to a denser state will stop the precipitation of the water, and enable the air to dissolve, either in whole or in part, some of those clouds that were formed before, and render their particles less apt to run into drops and fall down in rain. On this account, we generally find that the rarefied and condensed states of the atmosphere are respec- tively attended with rain or fair weather.

In the Transactions of the American Philoso- phical Society, vol. III., p. 125, there is an inge- nious paper on evaporation, by Dr. Wistar. It is there shown, that evaporation arises when the moist body is warmer than the medium it is en-

closed in. And, on the contrary, it acquires moisture from the air, when the body is colder. This carrying off, and acquiring of moisture, it is

chown, is by the passage of heat out of the body, or into it.

Evaporation, according to the experiments of «he abbe Nollet, appears to be promoted by electricity. See ELECTRICITY, Index. The conclusions drawn from them are, 1. Electricity augments the natural evaporation of fluids; all that were tried, excepting mercury and oil, being- found to suffer a considerable diminution, greater than what could be ascribed to any other cause. 2. Electricity augments the evaporation of those fluids the most which are found most readily to evaporate spontaneously: the volatile spirit of sal ammoniac suffering a greater loss than spirit of wine or oil of turpentine, these two more than common water, and water more than vinegar or a solution of nitre. 3. The effects seemed always to be greatest when the vessels containing the fluids were non-electrics. 4. The increased eva- poration was more considerable when the vessel which contained the liquor was more open ; but the effects did not increase in proportipn to the apertures. 5. Electricity was also found to in- crease the evaporation from solid bodies, and of consequence to augment the insensible perspira- tion of animals.

Evaporation is one of the great natural pro- cesses, by means of which the whole vegetable kingdom is supplied with rain necessary for its support. This evaporation takes place at all times, not only from the surface of the ocean, but of the earth also. Dr. Halley, by an experi- ment with a pan of water kept in the heat of our summer sun, found that as much water might be reasonably supposed to evaporate from the sur- face of the Mediterranean Sea as would be suffi- cient to supply all the rivers which run into it. Dr. Watson, in his Chemical Essays, has shown that the evaporation is not less considerable from the surface of the land than from that of the sea. By inverting a glass vessel on the ground, in the time of a considerable drought, he found that even then about 1600 gallons of water were raised from an acre in twenty-four hours ; and, repeating the experiment after a thunder-shower, he found that in

such a state an acre parted with above 1900 gallons of water in twelve hours. This evaporation is carried on not only from the ground itself, but from the leaves of trees, grass,

during May, June, July, and August; and the evaporation of the whole year at more than 140 inches. But the evaporation of the four summer months at Liverpool, on a medium of four years, was found to be only 18-88 inches. With- out evaporation there would be no dews nor showers ; ' without which,' as Dr. Derham ob- serves, ' the trees and plants would languish and die with perpetual drought, but are hereby made verdant and flourishing, gay and ornamental : so that (as the psalmist says, Psalm Ixv. 12, 13), The little hills rejoice on every side ; the pastures are clothed with flocks; and the valleys shout for joy; they also sing.' — Physico-Theology, p. 22.

Another great use of the natural evaporation is to cool the earth, and prevent its being too much heated by the sun. This property of producing cold by evaporation has been but lately observed by chemists, though it has long been employed by those who knew not the reason of their doing so. It has been observed at Aleppo, in Syria that the water is always coolest when the weather is most warm and the power of the sun exces- sive. The heats in that part of the world are sometimes almost intolerable ; and at that time the evaporation from the outside of the jars, which are made of porous clay, is very copious; and in proportion to the quantity of water eva- porated from without is the degree of cold in the liquor within. The reason of this is, that vapor is composed of fire and water united. The con- sequence is that, wherever there is any quantity of latent heat above 32° of Fahrenheit contained in any body, the water in contact with the sur- face, or contained in the pores of the body, will gradually absorb it, and, converting it into latent heat, will thus be rendered specifically lighter than the common atmosphere and fly off into it. Thus part of the sensible heat of the body will be carried off; and, as subsequent quantities of wa- ter always fly

off with more and more of the sen- sible heat, it is plain that, by continued evapora- tion of water, almost all the sensible heat above 32° of Fahrenheit will be carried off. If, instead of water, spirit of wine be used, a much greater degree of cold may be produced than by the evaporation of mere water ; and if, instead of spirit of wine, we use ether, which is still more volatile than spirit of wine, an excessive degree of cold, scarcely inferior to that which congeals mercury, may be produced. This method of producing cold, by the expensive liquids of ether

&c., with which it is covered ; and great part of and spirit of wine, cannot be employed except-

the water thus raised falls down in the night-time ing merely for experiment : but that by the eva-

in dew, bein"- absorbed by the vegetables which poration of water may be applied to very ui

yielded it before. Thus the earth is not so soon purposes in warm countries ; and i has been

exhausted of water, even for a little way below customary with seamen to cool their casks of 1

the surface, as we might imagine from the quan- tity raised by evaporation : for if all that was raised by the sun's heat during the time of a long drought, left the earth not to return to it for per- haps five or six weeks, the whole vegetable king-

quors by 'sprinkling them with sea water. From the theory of evaporation laid down, we may easily see the reason why, in a very warm tem- perature, animal bodies have the power of producing cold. A vapor, called insensible per-

uaps nve or six weens, me wuuic vegetate mip- p>~ •"& .' f , i j- „/•

dom, at least such as do not strike their roots spiration, continually issues from tt

very deeply into the ground, would of necessity

animals, from human bodies especially, whi

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be destroyed; whichVet we see is only the case carrying off great quantities of their sensible with the most tender grass, and even that only heat, enables them, according to its quantity, U

preserve the same temperature in many cl decrees of atmospherical heat. For the same

on the most elevated situations, and when most exposed to the sun. Dr. Brownrig^, in his Art of making common Salt, p. 180, fixes the evapo-

re:ison, also, we see why the continual sprinkling

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ration of some parts of England at 73'8 inches with cold water is so very powerful in deprr

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the hurnr.i body of the heat necessary for the •support of life, even though the temperature of the water should not be below what can be easily borne. It has already been shown that, by the evaporation of water, a degree of cold not much inferior to that of freezing water may be produced ; and consequently, by continual sprinkling of the body with water, the whole might in time be reduced to nearly the degree of cold in which water freezes. But this is what no human body can bear : and hence we may understand why storms of rain and snow are often fatal; and likewise why, in cases of ship-wreck, people have died by being exposed for a few hours to the spray of the sea. The theory of the evaporation of water furnishes us also with a

solution of a very curious phenomenon, inex- plicable on any other principle, viz. why melting ice will freeze other pieces together more strongly ; •ind, if a considerable degree of heat is not con- tinued for some time, will again consolidate itself into a much harder mass than before. See ICE.

EVAPORATOR, an apparatus calculated for expediting the process of evaporation ; a model of which was presented by the inventor, Mr. Browne of Derby, to the Society for the En- couragement of Arts, &c., who conferred on him their gold medal. See Mr. Browne's com- munication, inserted in the Society's volume for

1794.

EVASION, in law, any subtle endeavour to set aside truth, or to escape the punishment of the law. Thus, if a person says to another that he will not strike him, but will give him a pot of ale to strike b'ai first, and accordingly he strikes, the returnir of it is punishable; and, if the person first st.lking be killed, it is mur- der: for no man shall evade the justice of the law by such a pretence to cover his ma- lice.

EVATES, or EUBATES, a branch of the Dru- ids. Strabo divides the British and Gaulish philosophers into three sects ; bards, evates, and druids. He adds that the bards were the poets and musicians ; the evates, the priests and natu- ralists; and the druids, moralists as well as natu- ralists. See DRUIDS.

EVAUX, a town of France, in the department of Creuse, and ci-devant province of Marche : near which there is a mineral spring and baths ; eighteen miles N. N. E. of Aubusson, and twenty- five and a half east of Guerat. Long. 2° 35' E., lat. 46° 13' N.

EVAUX, or EVAON, a town in the department of La Crease, France. It is situated on an emi- nence, and in the neighbourhood are warm salt and sulphur

baths. Here are also several ancient monuments of art. Population 2100 ; twenty- five miles east of Guerat.

EUBCEA, or Abantis, in ancient geography, an oblong island, stretching out between Attica and Thessaly. See ABANTIS. It is now called Negropont, from its principal town, anciently called Chalcis.

EUC ERA, in entomology, a genus of hyme- noptera, proposed by Scopoli, and adopted by various late writers. Under this denomination are comprehended those of the Linnaean genus

apis which have the mandibles horny, incurvated, acute, and not dentated ; jaw elongated, and membranaceous at the tip ; lip horny ; tongue inflected, and seven-cleft; antennae cylindrical, quinquefid in the male, often exceeding the length of the body ; the abdomen short and downy ; female armed with a sting.

E'UCHARIST, n. s. I Yr.eucharistie; Span.

EucHARiSTic'AL,od/. } Port. Ital. and Lat. eu- cJuiristia ; Gr. ivxapurrta from tv well and xaPlC> thanks. The sacrament of the Lord's Supper ; any formal act of thanksgiving : the adjective follows these senses.

Himself did better like of common bread to be used in the eucharist. Hooker.

Some receive the sacrament as a means to procure great graces and blessings, others as an eucharist and an office of thanksgiving for what they have received.

Tuyl'jr.

The latter part was eucharistical, which began at the breaking and blessing of the bread. Browne.

It would not be amiss to put it into the eucharistiuul part of our daily devotions: we praise thee, O God, for our limbs and senses. Ray.

EUCHARIST properly signifies giving thanks; the word tw^apiTia literally importing thanks- giving; being formed of tug, good, and xa!"C> thanks. This sacrament was instituted by Christ himself, and the participation of it is called com- munion. As to the manner of celebrating the eucharist among some ancient Christians, after the customary oblations were made, the deacon brought water to the bishops and presbyters, stand- ing round the table, to wash their hands; accord- ing to the passage of the Psalmist, ' I will wash my hands in innocency, so will I compass thy altar, O Lord.' Then the deacon cried out alou i ' Mutually embrace and kiss each other ;' which being done, the whole congregation piayed for the universal peace and welfare of the church, for the .tranquillity and repose of the world, Id- the prosperity of the age, for wholesome weather, and for all ranks and degrees of men. After this followed mutual salutations of the minister an 1 people; and then the bishop or presbyter, having sanctified the elements by a solemn benedict. on, he brake the bread and delivered it to the deacon, who distributed it to the communicants, and after that the cup. Their sacramental wine was usually diluted or mixed with water. During the admi- nistration they sang hymns and psalms; and, having concluded with prayer and thanksgiving, the people saluted each other with a kiss of peace, and departed.

EUCHITjE, or EUCHITES. Gr. tv^rai, from , prayer, a sect of ancient heretics who were

first formed into a religious body towards the end of the fourth century, though their chief doctrines and discipline subsisted in Syria, Egypt, and other eastern countries before the birth of Christ. They were thus called because they prayed without ceasing ; imagining that prayer alone was sufficient to save them. They founded their sect on the words of St. Paul, 1 Thess. v. 17, 'Pray without ceasing.' They were also called Enthusiasts and Messalians, ; a term of Hebrew origin, denoting the same as Euchites. They were a sort of mystics who imagined, ac- cording to the oriental notion, that two souls re-

sided iu man, the one good and the other evil ; and who were zealous in expelling the evil soul t or daemon, and hastening the return of the good spirit of God, by contemplation, prayer, and singing of hymns. They also embraced opi- nions, nearly resembling the Manichean doc- trine, which they derived from the tenets of the oriental philosophy.

EUCHITES, another sect of fanatics, who, in the twelth century, infested the Greek and east- ern churches, and who were charged with believing a double Trinity, rejecting wedlock, abstain" ing from flesh, treating with contempt the sacra- ments of baptism and the Lord's supper, and the various branches of external worship, placing the essence of religion solely in external prayer1, and maintaining the efficacy of perpetual suppli- cations to the Supreme Being for expelling an evil genius, who dwelt in the breast of every mortal. This sect is said to have been founded by one Lueopetrus, whose chief disciple was named Ty- chicus. By degrees the title Euchites became a general and invidious appellation for persons of eminent piety and zeal for genuine Christianity, who opposed the vicious practices and insolent tyranny of the priesthood ; as the Latins after- wards comprehended all the adversaries of the Roman pontiff under the general terms of Wal- denses and Albigenses.

EUCHOLOGIUM, Gr. «,XoXorcoi/, i. e. a discourse on prayer; from tt^jj, prayer, and Xoyoc, discourse; the Greek ritual, wherein are prescribed the order and manner of every thing relating to the administration of their ceremonies, sacraments, ordinations, &c. F. Goar has given an edition of it in Greek and Latin, with notes, at Paris.

EUCHO'LOGY, n. s. Gr. tvxo\o7iov. A formulary of prayers.

EUCLID OF ALEXANDRIA, the celebrated mathematician,

flourished in the reign of Ptolemy Lagus, about A.A.C. 280. He reduced all the fundamental principles of pure mathematics, which had been delivered down by Thales, Py- thagoras, Eudoxus, and other mathematicians before him, into regularity and order, and added many others of his own discovering ; on which account he is said to be the first who reduced arithmetic and geometry into the form of a sci- ence. He likewise applied himself to the study of mixed mathematics, and especially to astro- nomy and optics, in which he also excelled. His works, as we learn from Pappus and Pro- clus, are The Elements of Geometry; Data; Introduction to Harmony; Phenomena; Optics; Catoptrics ; a Treatise of the Division of Super- ficies; Loci ad Superficiem ; Porisms; Fallacies; and four books of Conies. Of these the most celebrated is his Elements, of which there have been numberless editions in all languages. A fine edition of all his works, now extant, was printed in 1703, by David Gregory, Savilian professor of astronomy at Oxford. Euclid was greatly esteemed by king Ptolemy; who once asking him if there was any shorter way of coming ft geometry than by his Elements, Euclid answered ' that ttiere was no royal road to geo- metry.'

EUCLID OF MEGARA, a celebrated vl'ilosopher

and logician, nourished about A.A.C. 400. Tin- Athenians having prohibited theMegarians from entering their city on pain of death, this philoso- pher disguised himself in female clothes to attend the lectures of Socrates. After tlie death of So- crates, Plato and other philosophers went to Euclid of Megara, to shelter themselves from the tyrants who governed Athens. Euclid admitted but one chief good ; which he sometimes called God, sometimes Spirit, and sometimes Provi- dence.

EU'CIIASY, ». *. Gr. ivKpaoia. An agree- able well- proportioned mixture of qualities, whereby a body is said to be in a good state of health.

EU DIOMETER, an instrument for ascertain- ing the purity of the atmospherical air, or the quantity of

oxygenous gas or vital air contained in it, chiefly from its diminution on a mixture with nitrous air. See AEROLOGY. Several kinds of these have been invented, of several of which we shall give a short account: —

The first eudiometer, as invented and used by Dr. Priestley, was a divided glass tube, into which, after having filled it with water, and in- verted it into the same, one measure or more of common air, and an equal quantity of nitrous air, are introduced by a small phial, which is called the measure ; and thus the diminution of the volume of the mixture, which is seen at once by the gradations of the tube, discovers the purity of the air required. Dr. Priestley's discovery was announced to the public in 1772 ; and several persons, both at home and abroad, pre- sently availed themselves of it, by framing other more accurate instruments.

A preferable method of discovering the purity of the air by an eudiometer, is recommended by M. Fontana. The first simple eudiometer con- sisted only of a glass tube, as uniformly cylin- drical as possible in its cavity, about eighteen inches long, and three-fourths of an inch in dia- meter in the inside, hermetically sealed at one end. The outside had circles drawn round it, marked with a diamond, three inches from one another, or at such distances as are exactly tilled by equal measures of elastic fluids. When the parts of these divisions were required, the edge of a ruler, divided into inches and smaller parts, was held against the tube ; so that the first divi- sion of the ruler might coincide with one of the marks on the tube. The nitrous and atmospherical air are introduced into this tube to be diminished, and the purity of the atmospheric air thus ascer- tained ; but, that an equal quantity of elastic fluid may always be certainly introduced, M. Fontana contrived a curious instrument as a measure. Notwithstanding the accuracy of this instrument, M. Fontana found that it was still liable to some errors, which he endeavoured in vain to remedy. M. Saussure of Geneva invented an eudiometer which he thought more exact

than any of those above described. His apparatus consists of the following parts: — 1. A cylindrical glass bottle with a ground stopple, containing about five ounces and a half, which serves as a receiver for mixing the two airs. 2. A small glass phial, about one-third of the size of the receiver, to serve as a measure. 3. A small pair of scales which

must weigh exactly. 4. Several glass bottles for containing the nitrous or other air to be used, and which may supply the place of the receiver when broken. The whole of this apparatus may be easily packed into a box, and thus transported from place to place, and even to the summits of very high mountains. The method of using it is as follows : — The receiver is to be filled with •water, closed exactly with its glass stopple, wiped dry on the outside, and weighed very exactly. Being then immerged in a vessel full of water, and held with the mouth downwards, the stopple is removed, and two measures of common and one of nitrous air are introduced into it by a fun- nel, one after another : these diminish as soon as they come into contact ; in consequence of which the water enters the recipient in propor- tionable quantity. After being stopped and well shaken, to promote the diminution, the receiver is to be opened under water ; then stopped and shaken, and so on for three times successively. At last the bottle is stopped under water, taken out, wiped very clean and dry, and weighed exactly as before. It is plain, that now when the bottle is filled partly with elastic fluid and partly with water, it must be lighter than when quite full of water ; the weight of it then being subtracted from the former, the difference shows that quantity of water which would fill the space occupied by the diminished elastic fluid. Now, in making experiments with airs of different de- grees of purity, the difference will be greater when the diminution is less, or when th£air is less pure, and vice versa ; and thus the comparative purity between

two different kinds of airs may be determined. This eudiometer, however, is liable to some errors, principally arising from the inaccuracy of the measure, and the difficulty of stopping the bottle without occasioning a pressure upon the contained elastic fluid.

To avoid the inconveniences to which all the above instruments are subject, Mr. Cavallo em- ploys a glass tube with its scale and measures, the length of the tube being about sixteen or seventeen inches, and between one-half and two- thirds of an inch in diameter, and of as equal a bore as possible throughout ; having one end sealed hermetically, and the other shaped like a funnel, though not very wide. The following directions are given by Mr. Cavallo for marking these divi- sions : — ' When the tube is filled with water, a measure of air should be thrown into it; the tube must then be suspended to a hook over the pneumatic trough, by a loop, as represented, so high that the surface of the water within the tube may be very near the surface of the water in the trough, two inches, for instance, above it ; then, looking horizontally through the tube, a mark should be made by sticking a bit of soft wax upon the tube, just coinciding with the lowtr part of the surface of the water within it; in which place afterwards a circular mark should be made with a piece of agate or "diamond . Thus the first measure is marked, and in like manner may the rest. The practitioner, however, should never venture to mark the tube with an indelible stroke after one trial, lest he should be mistaken. The proper method is to mark them first with wax, and then repeat the operation

once or twice, to correct such errors as might escape the first time ; after which the mark may be made with a diamond, flint, or perhaps more conveniently with a file. The polish of the inside of both tube and measure should be taken off with emery ; which is a very laborious operation, though it is particularly necessary that the mea- sure should be done in this manner.' To use this eudiometer, fill the tube with water, taking care

that no bubbles of air remain in it; and, invert- ing it with the mouth downwards, leave it in the water leaning against the side of the trough. Fill the measure then with the elastic fluid whose purity is to be tried. Put the eudiometer upon the shelf of the trough, keeping it perpendicular, and with the mouth exactly upon the hole of the shelf, and throw the measure of air into it : fill it again with the same air, and throw this like- wise into the tube. Then fill it with nitrous air, and throw this also into the tube, which must be shaken immediately after the operation by moving it alternately up and down in the water of the tub for about a quarter of a minute. It is then left a short time at rest, and suspended by the hook, so that the surface of the water in the inside may be about two inches above that in the tub ; when the brass scale is slided upon it till the upper edge of the lower ring coincide with the middle part of the surface of the water within the tube, and then we may observe which division of the scale coincides w ith any of those on the tube ; by which means the quantity of elastic fluid remaining in the tube may be clearly seen, even to the 1-1 00th part of a measure.' Mr. Cavallo, after giving directions for noting down the results, advises that, in this ope- ration, care should be taken to shake the tube immediately after the nitrous air has been thrown into it, and to leave it at rest afterwards for some time; otherwise the results of similar experiments are far from being alike. By holding the mea- sure or the eudiometer with the hand, which is warmer than the water of the trough, the elastic fluid undergoes some degree of rarefaction, so that the event of the experiments may often be rendered precarious. For this reason the instru- ments should be held only with the extremities of the fingers and thumb.

In vol. LXXIII. of the Philos. Trans, we have an account of an eudiometer by Mr. Cavendish. He preferred the abbe Fontana's to all the rest ; the great improvement in which is, that as the tube is long and narrow, and the orifice of the funnel not much less than the bore of the tube, and the measure

made to deliver its contents very quick, the air rises slowly up the tube in one continued column ; so that there is time to take the tube off the funnel, and to shake it before the airs come quite into contact ; by which means the diminution is much greater and more certain than it would otherwise be. Thus, if equal measures of nitrous and common air are mixed in this manner, the bulk of the mixture will, in general, be about one measure; but, if the airs are suffered to remain in contact about a quarter of a minute before they are shaken, the bulk will hardly be less than one measure and one-fifth • and it will be very different according * j the time they are suffered to remain before the} are shaken

EUDIOMETER.

In like manner, if, through any fault in the apparatus, the air rises in bubbles, as in that case it isimpossible to shake the tube soon enough, the diminution is always less than it ought to be. Another very considerable advantage arising from the method of mixing the airs just men- tioned is, that the diminution takes place in its full extent almost instantaneously ; but, if they are allowed to remain for some time in contact before they are shaken, the mixture will con- tinue diminishing for many hours afterwards. The reason of these differences is, that, in the abbe Fontana's method, the water is shaken briskly up and down in the tube while the airs are mixing ; by which means every small por- tion of nitrous air must be in contact with water, either at the instant it mixes with the common air, or at least immediately after ; and it seems that the water, by absorbing the nitrous acid the moment it is formed, greatly contributes to the quickness of the diminution, as well as to the quantity of it. Hence Mr. Cavendish was in- duced to try whether the diminution would not be more certain and regular, if one of the airs were added to the other slowly and in small bubbles, the vessel being kept shaking all the while that the mixture was made : and on trial he found that this method fully answered his expectations. In some of his experiments, Mr. Cavendish had occasion to use a larger apparatus,

which is represented in the annexed diagram. A repre-

sents a bottle containing nitrous air inverted into the trough of water D E. B is a bottle fitted with a bent glass tube C. This bottle is to be filled with common air without any water, and is first slightly warmed by the hand : the end of the glass tube is then put into the bottle of nitrous air as represented in the figure. As the bottle B cools, a little nitrous air runs into it, which instantly loses its elasticity in consequence of coming into contact with the atmospherical air. This condensation occasions an influx of fresh nitrous air, and so on till the whole is exhausted. Thus the nitrous air is added slowly to the other without coming into contact with water, till the whole of it has run out from the bottle A into B ; after which the water flows in to supply the vacancy occasioned by the diminution.

In mixing the airs together, Mr. Cavendish commonly added the respirable slowly to the nitrous. The quantities of air made use of, and the diminution of the mixture, are deter- mined by weighing the vessels under water. No sensible error can arise from any difference in

the specific gravity of the air; for the thin,? found by weighing the vessel is the difference of weight of the included air and an equal bulk of water; which, as air is no less than 800 times lighter than water, is very nearly equal to the weight of a quantity of water equal in bulk to the included air. A common balance is not convenient for weighing the bottles under water, without some addition to it : for the lower the vessel of air sinks under water, the more the air is compressed ; which makes the vessel heavier, and thereby causes that end of the beam to preponderate. Hence we must either have the index placed below the beam, as in assay balances ; or by some other means remove the centre of gravity of the beam so much below the

centre of suspension as to make the balance vibrate, notwithstanding the tendency which the compressibility of the air in the vessels has to prevent it.

Scheele's eudiometer is merely a graduated glass cylinder, containing a given quantity of air, exposed to a mixture of iron filings and sul- phur, formed into a paste with water. The substances may be made use of in the following manner : —

Make a quantity of sulphur in powder, and iron filings, into a paste with water, and place the mixture in a saucer, or plate, over water, on a stand raised above the fluid ; then invert over it a graduated bell-glass, and allow this to stand for a few days. The air contained in the bell- elass will gradually diminish, as will appear from the ascent of the water.

Sir H. Davy passes the nitrous gas into a satu- rated solution of green muriate of iron, which becomes black and opaque when fully impreg- nated witty the eras. The air to be tried is contained in a small graduated tube, largest at the open end, which is introduced into the solution, and then gently inclined, to accelerate the action, which will be complete in a few minutes, so as to have absorbed all the oxygen. He observes, that the measure must be taken as soon as this is done, otherwise the bulk of the air will be in- creased by a slow decomposition of the nitric acid formed.

Volta had recourse to the ascension of hydro- gen gas. For this purpose, two measures of hy- drogen, with three of the air to be examined, are introduced into a graduated tube, and fired by the electric spark. The diminution of bulk, observed after the vessel has returned to its ori- ginal temperature, divided by three, gives the quantity of oxygen consumed.

Phosphorus and sulphuret of potassa have likewise been employed in eudiometry. A piece of phosphorus may be introduced by means of a glass rod into a

tube containing the air to be ex- amined, standing over water, and suffered to remain till it has absorbed its oxygen; which, however, is a slow process. Or a glass tube may be filled with mercury and inverted, and a piece of phosphorus, dried with blotting paper, intro- duced, which will of course rise to the top. It is there to be melted, by bringing a red-hot iron near the glass, and the air to be admitted by a little at a time. At each addition the phosphorus in • flames; and, when the whole has been admitted,

the red-hot iron may be applied again, to ensure Jhe absorption of all the oxygen. In either of these modes one-fortieth of the residuum is to be deducted, for the expansion of the nitrogen, by means of a little phosphorus which it affords.

Seguin's eudiometer, consists of a glass tube, of about one inch in diameter, and eight or ten inches high, closed at the upper extremity. It is filled with mercury, and kept inverted in this fluid in the mercurial trough. A small bit of phosphorus is introduced into it, which, on ac- count of its specific gravity being less than that of mercury, will rise up in it to the top. The phosphorus is then melted by means of a red hot poker, or burning coal applied to the outside of the tube. When the phosphorus is liquefied, small portions of air destined to be examined, and which have been previously measured in a vessel graduated to the cubic inch, or into grains, are introduced into the tube. As soon as the air which is sent up reaches the phosphorus, a com- bustion will take place, and the mercury will rise again. The combustion continues till the end of the operation ; but, for the greater exactness, Se- guin directs the residuum to be heated strongly. Instead of the rapid combustion of phospho- rus, Berthollet has substituted its spontaneous combustion, which absorbs the oxygen of atmos- pheric air completely ;

and, when the quantity of air operated on is small, the process is accom- plished in a short time.

Berthollet's apparatus consists of a • narrow graduated glass tube, containing the air to be examined, into which is introduced a cylinder, or stick of phosphorus, supported upon a glass rod, while the tube stands inverted in water. The phosphorus thould be nearly as long as the tube. Immediately after the introduction of the phosphorus white vapors are formed, which fill the tube ; these vapors gradually descend, and become absorbed by the water. When no more white vapors appear, the process is at an end, for all the oxygen gas which was present in the con- fined quantity of air, has united with the phos- phorus ; the residuum is the quantity of nitrogen of the air submitted to examination.

This eudiometer, though excellent of the kind, is nevertheless not absolutely to be depended upon ; for, as soon as the absorption of oxygen is completed, the nitrogen gas exercises an action upon the phosphorus, and thus its bulk becomes increased. It has been ascertained, that the volume of nitrogen gas is increased by one-fortieth part; consequently the bulk of the residuum, diminished by one-fortieth, gives us the bulk of the nitrogen gas of the air examined ; which bulk subtracted from the original mass of air, gives us the proportion of oxygen gas con- tained in it. The same allowance must be made in the eudiometer of Seguin.

The following account of Dr. Ure's eudiome- ter for measuring the combustible gases by ex- plosion with the electric spark, we extract (by permission) from his well known Dictionary of Chemistry.

It consists of a glass syphon, having an inte- rior diameter of from two-tenths to four-tenths of an inch. Its legs are of nearly equal length, each being from six xo nine inches long. The

open extremity is slightly funnel-shaped; the other is hermetically sealed; and has inserted near it, by

the blow-pipe, two platina wires. The outer end of the one wire is incurvated across, so as nearly to touch the edge of the aperture ; that of the other is formed into a little hook, to allow a small spherical button to be attached to it, when the electrical spark is to be transmitted. The two legs of the syphon are from one-fourth to half an inch asunder.

The sealed leg is graduated by introducing successively equal weights of mercury from a measure glass tube. Seven ounces troy, and sixty-six grains, occupy the space of a cubic inch; and 34J grains represent ^j part of that column. The other leg may be graduated also, though this is not necessary. The instrument is then finished.

To use it, we first fill the whole syphon with mercury or water, which a little practice will render easy. We then introduce into the open leg, plunged into a pneumatic trough, any conve- nient quantity of the gases, from a measure glass tube, containing them previously mixed in de- terminate proportions. Applying a finger to the orifice, we next remove it from the trough in which it stands, like a simple tube ; and, by a little dexterity, we transfer the gas into the sealed leg of the syphon. When we conceive enough to have been passed up, we remove the finger, and next bring the mercury to a level in both legs, either by the addition of a few drops, or by the displacement of a portion, by thrusting down into it a small cylinder of wood. We now as- certain, by careful inspection, the volume of in- cluded gas. Applying the fore-finger again to the orifice, so as also to touch the end of the pla- tina wire, we then approach the pendent ball or button to the electrical machine, and transmit the spark. Even when the included gas is conside- rable in quantity, and of a strongly explosive power, we feel at the instant nothing but a slight push or pressure on the tip of the finger. After explosion, when condensation of volume ensues, the finger will feel pressed down to the orifice by the superincumbent atmosphere. On gradually sliding the finger to one side, and admitting the air, the

mercurial column in the sealed leg will rise more or less above that in the other. We then pour in this liquid metal, till the equili- brium be again restored, when we read off as before, without any reduction, the true resulting volume of gas.

As we ought always to leave two inches or more of air, between the finger and the mercury, this atmospheric column serves as a perfect recoil spring, enabling us to explode very large quanti- ties without any inconvenience or danger. The manipulation is also, after a little practice, as easy as that of the single tube. But a peculiar advantage of this detachable instrument is, to en- able us to keep our pneumatic troughs, and electrical machine, at any distance which conve- nience may require ; even in different chambers, which, in the case of wet weather, or a damp apartment, may be found necessary to ensure electrical excitation.

We may analyse the residual gaseous matter, by introducing either a liquid or a solid re-agent.

We first fill the open leg nearly to the brim with quicksilver, and then place over it the substance •whose action on the gas we wish to try. If liquid, it maybe passed round into the sealed leg among the gas, but if solid, fused potassa; for ex- ample, the gas must be brought round into the open leg, its orifice having been previously closed with a cork or stopper. After a proper interval, the gas being transferred back into the gradu- ated tube, the change of its volume may be accu- rately determined. With this eudiometer, and a small mercurial pneumatic cistern, we may perform pneumatic analyses on a very considera- ble scale.

In making experiments of this kind, several

phenomena occur, which should be attended to : 1. When respirable air is mixed with nitrous air their joint bulk is diminished, and the di- minution is greater when the air is purer, ceteris paribus, and vice versa. 2. On mixing the two airs together all at once, the ensuing diminution is greater than if the same quantity of nitrous air be added to an equal quantity of respirable air at different times : and hence it follows, that, the quicker the two sorts of elastic fluids are mixed together, the greater is the diminution, and contrarywise. 4. Nitrous airs of different qualities occasion a different degree of diminu- tion with respirable air ; and, therefore, care should be taken to use such materials as afford air always of the same quality. The most pro- per substance for this purpose is very pure quicksilver ; a quarter of an ounce or even less, with a proper quantity of diluted nitrous acid, will produce a great deal of nitrous air, which is always of the same quality, provided the metal be always of equal purity ; but with other metals, as brass, copper, &c., the nitrous air made at one time is often different from that made at another, and therefore occasions a greater or less diminution when mixed with common air though precisely of the same sort. 4. The quality of nitrous air is impaired by keeping, especially when in contact with water ; and for this reason it ought to be prepared fresh every two or three days. 5. In performing these experiments, it should be carefully remarked, that no mistake arise from heat or cold ; as the elastic fluids are easily contracted or expanded by any variation of temperature. 6. Though the greatest dimi- nution takes place immediately after mixing the respirable and nitrous airs together, especially when they are agitated, yet they continue to diminish a little for some time after ; for which reason the diminution should be observed al- ways at a certain time after the mixture is made. The whole process indeed ought always to be performed in a uniform manner, otherwise the results will be frequently very dissimilar. 7. It must be remarked, that the surface of the watei which lies contiguous to the elastic

fluid con- tained in a small vessel, is very far from being a plane, or even from being always of a similar figure in the same vessel, on account of the at- traction or repulsion between the substance of the glass and water. This is altered by many circumstances, particularly by the adhesion of extraneous bodies ; whence it is very improper to use common open phials for this purpose.

We must also take into consideration the drop? of water adhering to the sides of the vessel, and the quality of the water in which the operation is performed. 8. In case the experiment is to take up some hours, in order to observe the last diminution, it will be proper to notice, by a good barometer, if the gravity of the atmosphere has suffered any alteration during that time ; for a difference in its pressure may occasion some dif- ference in the result of the experiments. 9. A simple apparatus is always to be preferred to a more complicated one, even though the latter should appear to have some advantage over it in point of accuracy. Complex machines are not only expensive, and subject to be easily put out of order, but occasion frequent mistakes, on account of the operator having generally many things to do and keep in proper order ; whence it is easy to overlook some of them

EUDOCIA, or EUDOSIA, a celebrated lady, the daughter of Leontius, a philosopher of Athens ; who gave her a learned education, and at his death left her only a small legacy, saying she was capable of making her own fortune. Pleading at Athens against her two brothers, for a share in her father's estate, without success, she carried her cause personally by appeal to Constantinople ; recommended herself to Pul- cheria, the sister of the emperor Theodosius II., embraced Christianity, was baptised by the name of Eudosia, her original name being Athenais, and was soon after married to the emperor. A difference at length taking place, on account of the emperor's jealousy, excited by Chrysapius, the eunuch, she retired to Jerusalem, where she spent many years in building and adorning churches, and in relieving the poor. Dupin says that she did not return thence till

after the emperor's death ; but Cave informs us, that she was reconciled to him, returned to Constanti- nople, and continued with him till his death ; after which she went again to Palestine, where she spent the remainder of her life in pious works. She died A. D. 459 or 460. She wrote a Paraphrase on the First Eight Books of the Old Testament, in heroic verse ; another in prose on Daniel and Zechariah ; a History of St. Cyprian and Justina; and a Life of Christ, in heroics, with many other poems, which are lost.

EUDOXIANS, a sect of heretics in the fourth century, who adhered to the errors of the Arians and Eunomians, maintaining that the Son was created out of nothing ; that he had a will dif- ferent from that of the Father, &c.

EUDOXIUS, the founder of the sect of the Eudoxians, was patriarch of Antioch and Con- stantinople, and succeeded Macedonius in the latter see, A. D. 360. He was a zealous defender of the Arian doctrines, and died A. D. 370.

EUDOXUS, a celebrated astronomer of Cni- dus, in Caria, who flourished about A. A. C. 370. He studied geometry under Archytas, and tra- velled into Egypt to learn the sciences. There he studied, together with Plato, for thirteen years ; after which they came to Athens, where Eudoxus taught with great renown. Eudoxus composed Elements of Geometry, from which, Proclus tells us, Euclid himself borrowed libe- rally. Cicero calls Eudoxus the greatest astro-

•iomer that ever lived,; and Fetronius says, he spent the latter part of his life on the top of a nigh mountain, that he might contemplate the stars with more convenience. Strabo says, the remains of

his observatory were to be seen at Cnidus in his time. He died in his fifty-third year.

EVE, n.s. ^ Sax. sepen; Dut. avend ; E'VEN, | Goth, ibn ; all also denoting

EV'ENIXG, [equal, evening being the

EV'EN ING-STAR, [''equal division between light EVENSONG, | and darkness. Todd But EV'ENTIDE. J Minsheu derives it from Heb. 3^V, to obscure; through Teut. abend, night, or Gr. a privative, and 0atvw, to be light, to shine. Declining day ; the close of the day ; the obscure interval between light and darkness ; the vigil, or preparatory fast before a church holiday. Even- song is a hymn for the evening : and hence the time itself when it was sung, or synonymous with eventide.

And the day was the eeuen of the holiday : and the Sabboth began to schyne. Wiclif. Luk 24.

And whanne eventide was comun hise discipHs went down to the see. Id. Jon. 6.

Isaac went out to meditate at the eventide.

Gen. xxiv. 16.

And now the evenly de

His brode black wings had through the heavens wyde By this dispred. Spenser. Faerie Queene.

They, like so many Alexanders, Have in these parts from morn 'till even fought, And sheathed their swords for lack of argument.

Shaktpeare. I shall fall

Like a bright exhalation in the evening, And no man see me more. Id. Henry VIII. Behold the longest day hath its evening. Raleigh, The devil is now more laborious than ever, the long day of mankind drawing towards an evening, and the world's tragedy and time near at an end. Id.

Let the immediate preceding day be kept as the eve to this great feast. Duppa's Ride of Devotion.

If a man were but of a day's life, it is well if he last till evensong, and then says his compline an hour before the time. Taylor.

Thee, 'chantress of the woods among, I woo to hear thy eventong. Milton.

Such sights as youthful poets dream On Summer eves by haunted stream. Id.

Joyous the birds ; fresh gales and gentle airs Whispered it to the woods, and from their wings Flung rose, flung odours from the spicy shrub, Disporting, till the amorous bird of night Sung spousal, and bid haste the evening-star On his hill top to light the bridal lamp. Id.

The unerring sun by certain signs declares, What the late even, or early morn prepares.

Dryden.

Mean time the suu descended from the skies,

And the bright evenitig-star began to rise. Id.

He tuned his notes both evemong and morn. Id.

When the sun's orb both even and morn is bright,

Then let no fear of storms thy mind affright. May.

It was the sacred rule among the Pythagoreans, that they should every evening thrice run over the actions and affairs of the day. Watts on the Mind.

Winter, oft at eve, resumes the breeze, Chills the pale morn. Thomson's Spring.

But such self-inspection, however, should not fail to make part of our evening devotions. Mason.

So on his nightmare through the evening fog Flits the squab fiend o'er fen, and lake, and bov ; Seeks

some love-wiidered maid with sleep oppressed, Alights, and grinning sits upon her sreast.

Darwin. When in the crimson cloud 01 t -n

The lingering light decays, And Hesper on the front of Heaveu

His glittering gem displays. Beattie.

As clouds from yonder sun receive

A deep and mellow dye, Which scarce the shade of coming eve

Can banish from the sky. Byron.

And Ardennes waves above them her green leaves Dewy with nature's tear-drops, as they pass, Grieving, if aught inanimate e'er grieves, Over the unreturning brave, — alas ! Ere evening, to be trodden like the grass Which now beneath them, but above shall grov In its next verdure, when this fiery mass Of living valour, rolling on the foe And burning with high hope, shall moulder cold and low. . /a

EVELYN (John), a learned writer, and na- tural philosopher, born at Wotton in Surry, the seat of his father, in 1630. After making the tour of Europe, he returned about 1651, an. lived very retired at his rural retreat, Say':> Court, near Deptford in Kent. He was very assiduous in transmitting to the Royal Society whatever fell within the compass of his enqui- ries ; and used humbly to style himself pioneer in the service. ' His life,' says Mr. Walpole, ' was a course of enquiry, study, curiosity, in- struction, and benevolence. The works of the Creator, and the mimic labors of the creature, were all objects of his pursuit. He unfolded the perfections of the one, and assisted the im- perfections of the other. He adored from exa- mination; waara courtier that flattered only by informing his prince, and pointing out what was worthy of him to countenance. He was one of the first promoters of the Royal Society, a pa- tron of the ingenious and indigent, and, besides his

writings and discoveries, he obtained the Arundelian marbles for the University of Ox- ford, and the Arundelian library for the Royal Society.' There are five small prints of his journey from Rome to Naples, drawn and etched by him ; and among his published works are, 1. A Character of England; 2. The State of France; 3. An Essay on the First Book of Lu- cretius De rerum Natura ; 4. The French Gar- dener ; 5. A Panegyric on King Charlas II.'s Coronation ; 6. Fumifugium, or the Inconve- niences of the Air and Smoke of London Dis- sipated ; 7. The History and Art of Engraving on Copper ; 8. A Parallel between the Ancient Architecture and the Modern ; He died in 170fi, and his "Diary" has since been published by Mr. Upcott, of the London Institution.

E'VEN, adj.. v. a. Sc v. n. -\ Sax aepen ; (Jot'i

EVEN'HANDED, adj. I rfn or ibn; Icel.

E'VENLY, adv. - itifn ; Teut. eben ;

E'VENER, n.s. I Belg. even, equal.

E'VEN NESS, n.s. J See the foregoing

word. Perhaps from Heb. pK ; perpendicular, straight (Minsheu). Level, smooth, equal, uniform: very variously applied, as to equality of con- dition, temper, parts, or number of parts : the

state of accounts between debtor and creditor, even with Israel, for all their uuthankfulness, and &.C. To even, is to make equal to: an evener, mutinous insurrections. JBp. Hall's Contemplations.

one that makes things or persons even.

But thilke serv;tunt gede out, and fonde oon of his

even servauntis that oughte him an hundrid peens, and he heelde him and stranglide him, &c.

Wiclif. Matt. 18.

And his evene servauntis seynge the thingis that weren don sorowdeu greetly. Id.

Therefore the Jewis soughten more to sle him for notooneli he brak the Saboth.but he seyde, that God was his fadir, and made him euene to God.

Id. Jon. v.

That the net way be even to the midst of the altar.

Exodus. And shall lay thee even with the ground.

Luke xix. 44. Even so did those Gauls possess the coast.

Spenser. Hail evener of old law and new !

Old Hymn to the Virgin, Quoted by Warton.

A crooked stick is not straitened, unless it be bent as far on the clear contrary side, that so it may settle itself at the length in a middle state of evenness be- tween both. Hooker,

The upper face of the sea is known to be level by nature, and evenly distant from the centre, and waxes deeper and deeper the farther one saileth from the shore. Brerewood.

Thou wast a soldier

Even to Cato's wish ; not fierce, and terrible Only in strokes.

Shahspeare. Coriolanus, Act i, Scene 4. Nothing can, or shall content my soul, Till I am evened with him, wife for wife. Id.

He was

A noble servant to them ; but he could not Carry his

honours even. Id. Coriolanus.

Evenhanded justice

Returns the ingredients of our poisoned chalice To our own lips. Id. Macbeth.

This temple Xerxes evened with the soil, which Alexander is said to have repaired. Raleigh.

In taking revenge, a man is but even with his enemy ; but in passing it over, he is superior.

Bacon's Essays.

You serve a great and gracious master, and there is a most hopeful young prince : it behoves you to carry yourself wisely and evenly between them both.

Id. Advice to VHliers.

When Alexander demanded of one what was the fittest seat of his empire, he laid a dry hide before him, and desired him to set his foot on one side there- of; which being done, all the other parts of the hide did rise up ; but when he did set his foot in the mid- dle, all the other parts lay fiat and even.

Dame,*

A palish clearness, evenly and smoothly spread j not over thin and washy, but of a pretty solid consis- tence. Wutton. I do confess

The blind lad's power, while he inhabits there ;

But I'll be even with him nevertheless. Suckling.

A like strange observation taketh place here as at Stonehenge, that a redoubled numbering never eveneth with the first. Carew.

Beat, roll, and mow carpet-walks and camomile ; for now the ground is supple, and it will even all in- equalities. Evelyn.

\ow might Moses have found a time to have been

Let him tell me whether the number of the stars be even or odd. Taylor's Rule of Holy Living.

Upheld by me, yet once more he shall stand On even ground against his mortal foe. Milton.

It is not much that the good man ventures ; after this life, if there be no God, he is as well as the bad ; but if there be a God, is infinitely better, even as much as unspeakable and eternal happiness is better than extreme and endless misery. Tillotson.

The motions of all the lights of heaven might afford measures of time, if we could number them ; but most of those motions are not evident, and the great lights are sufficient, and serve also to measure even the motions of those others. Holder.

Nor death itself can wholly wash your stains, But long contracted filth even in the soul remains.

Dryden.

To see a beggar's brat in riches flow, Adds not a wrinkle to my even brow. Id.

All I can say for those passages is, that I knew they were bad enough to please even when I wrote them. Id.

The ether most readily yieldeth to the revolutions of the celestial bodies, and the making them with that evenness and celerity is requisif in them all.

Grew's Cosmologia Sacra.

Even reckoning makes lasting friends ; and the way to make reckonings even is to make them often.

South.

I have made several discoveries which apprar new, even to those- who are versed in critical learning.

Addison's Spectator.

The publick is always even with an author who has

not a just deference for them : the contempt is reci- procal. Id.

The present face of Rome is much more even and jevel than it was formerly. Id. On Italy.

Lay the rough paths of peevish nature even,

And upen in each heart a little heaven. Prior.

Since you refined the notion, and corrected tho malignity, I shall e'en let it pass. Collier.

The superficies of such plates are not even, but have many cavities and swellings, which, how shallow soever, do a little vary the thickness of the plate.

Newton’s Opticlu.

In change of torment would be ease : Could you divine what lovers bear,

Even you, Prometheus, would confess There is no vulture like despair. Granville.

Though he appeared to relish these blessings as much as any man, yet he bore the less of thorn, when it happened, with great composure and evenness of mind . A tterbury.

He might even as well have employed his time, as some princes have done, in catching moles. Id.

The true reason of this strange doctrine was to be even with the magistrate, who was against them —, and they resolved at any rate to be against him. Id.

In an infinite chaos nothing could be formed ; no particles could convene by mutual attraction ; foi every one there must have infinite matter around it, and therefore must rest for ever, being evenly balanced between infinite attractions. Bentley.

Here all their rage, and even their murmurs cease, And sacred silence reigns, and universal peace.

Pope.

Desires composed, affections ever oven, Tears that delight, and sighs that waft to h°avi-n.

Id.

Books give the same turn to our thoughts that com-pany does to our conversation, without loading our memories, or making us even sensible of the change.

Swift.

To appear wise nothing more is requisite here, than for a man to borrow hair from the heads of all his neighbours, and clap it like a bush on his own : the distributors of law and physic stick on such quantities, that it is almost impossible even in idea to distinguish between the head and hair. Goldsmith.

The commonwealth of kings, the men of Rome ! And men since, and now, fair Italy ! Thou art the garden of the world, the home Of all art yields, and nature can decree ; Even in thy desert, what is like to thee ? Thy very weeds are beautiful, thy waste More rich than other climes' fertility ; Thy wreck a glory, and thy ruin graced With an immaculate charm which cannot be defaced.

Byron.

EVENT, n. s. ~\ Fr. evenement ; Italian EVENT'FUL, adj. 9 evenimento ; Lat. eventus, ' EVENT'UAL, {from evenio to happen,

EvENT/UALLY,aofo.Ja e forth and venio, to come. An incident or occurrence of whatever nature ; any thing that proceeds regularly from its causes or beginning : thus eventual and even tually mean ultimate and ultimately, consequen- tial, and in the last result : eventful is full of incidents or changes of affairs.

There is one event to the righteous and to the wicked. Eccl.

Oh heavy times, begetting such events !

Sliakspeare Last scene of all,

That ends this strange eventful history, Is second childishness. Id. As You Like It. Hermione has but intentionally, not eventually, dis- obliged you ; and hath made your flame a better re- turn, by restoring you your own heart. Boyle.

Two spears from Meleager's hand were sent, With equal force but various in the event ; The first was 6xed in earth, the second stood On the boar's bristled back, and deeply drank his blood. Dry den.

It is madness to make fortune the mistress of f vents, because in herself she is nothing, but is ruled by prudence. Id.

It is for him only that sees the event, ere he ap- point the means, not to be deceived.

Bp. Hall's Contemplations.

0 my soul, think, and think again what it is to die. — Do not put that most awful event far from thee : nor pass it by with a superficial thought.

Maion.

It is during the time that we lived on this farm that my little story is most eventful. Burns.

1 left you fretful and passionate — an untoward ac- cident drew me into a quarrel — the event is, that I must fly this kingdom instantly. Sheridan.

EVE'NTERATE, v. a. Lat. eventero. To rip ; to open by ripping the belly.

In a bear, which the hunters eventerated, or opened, I beheld the young ones, with all their parts distinct.

Browne.

EVENTUATE, v. a. (Lat. eventilo, e and

EVENTILA'TION, n. s. S ventilo, to blow ; to winnow by aid of the wind; to ventilate.

It (the vital flame) requires constant eventilation through the trachea and pores of the body.

Bishup Berkeley.

EVER, adv. -| Sax. aepne ;

EV'ER A, adj. Goth, a ve, from

EV'ER-BUEBUNG, <« always, and

EV'ER-BURNING, uera,tobe;Teut.

EV'ER-FAIR, evig, a corrup-

EV'ERGREEN, adj. St n. s. tion, says Min- EV'ER-HONORED, adj. sheu, of Latin

EV'ERLASTING, adj. $t n. s. (EV'ERLASTING LY. adv. ''See ETERNITY.

EV'ERLASTINGNESS, n. s. At one time, at

EV'ERLIVING, adj. any time, at all

EV'ERMORE, adv. times ; hence,

EV'ER-OPEN, adj. in any degree :

EV'ER-PLEASING, always, end less-

EV'ER-WATCHFUL, ly. As an ex-

EV'ER-YOUNG. J pletive it em-

phatically expresses both the time immediately succeeding an event, and the time following, in- definitely ; as, as soon as ever ; ever since : or, at any time, as in the example from Shakspeare, That ever this fellow, &c. Dr. Johnson says, that ever a, as, ever a boy, is properly everich, Sax. or ever each boy. See EVERY. For ever is for all time, or for always, indefinitely : hence for the term of life or any understood state of being, see the instance from Exod xxi. : hence also 'for ever and ever/ is for, or unto, eternity. The com- pounds appear to require no explanation.

His master shall bore his ear through with an aul, and he shall serve him/or ever. Exod. xxi. 6.

But hou manye euer resceyden him he gaf to hem power to be maad the sones of God, to hem that be- leueden in his name. WiclifJon. 1.

And we witen, that if cure ertheli hous of this dwellynge be dissolued, the we han a bildyng of God, an hous not maad bi hondis euerlaitinge in heuenes.

Id. 2 Cor. 5.

They brake all their bones in pieces, or ever they came at the bottom of the den. Dan. iv. 24.

Trust shall I God, to entre in a while. Hys hauen or hnauen sure and veniforme Euer after thy calme, loke I for a storme.

Sir T. More.

So long as Guyon with her communed, Unto the ground she cast her modest eye ;

And ever and anon, with rosy red, The bashful blood her snowy cheeks did dye.

Faerie Queene.

His tail was stretched out in wonderous length, That to the house of heavenly gods it raught ;

And with extorted power and borrowed strength, The everburning lamps from thence it brought. Id.

But sith now safe ye siezed have the shore, And well arrived are, high God be blest, Let us devise of ease and everlasting rest. Id.

Is not from hence the way, that leadeth, right To that most glorious house, that glistereth bright With burning stars and everliving fires ? Id.

So well, they say,

It governed was, and guided evermore. Id.

God hath had ever, and ever shall have, some church visible upon the earth. Hooker.

Men know by this time, if ev^r they will know, whether it be good or evil which hath been so long re- tained. Id.

We are in God through the knowledge which is had of us, and the love which is born towards us, from everlasting. Id.

In that he is man, he received light from the Father, as from the fountain of that everliving Deity.

Id.

I sne things may seive 'ong, but not serve ever.

Shakspeare.

Riches endless is as poor as Winter, To him that ever fears he shall be poor. Id.

If thou hast that, which I have greater reason to heli°ve now than ever, I mean valour, this might shew "t- Id.

That ever this fellow should have fewer words than a parrot, and yet the son of a woman. Id.

I am old, I am old. —I love thee better than I love e'er a scurvy young

boy of them all. Id. Henry IV.

Whether we shall meet again I know not ; Therefore our everlasting farewell take : For ever, and for ever, farewell, Cassias.

Shakspeare.

I'll hate him everlastingly, That bids me be of comfort any more. Id.

Our souls, piercing through the impurity of flesh, behold the highest heavens, and thence bring know-ledge to contemplate the everduring glory and

termless Joy. Raleigh.

Goo’s justice in the one, and his goodness in the other, is exercised for evermore, as the everliving sub- jects of his reward and punishment. Id.

You serve a master who is as free from the envy of friends,, as ever any king was. Baoon.

Sparks by nature evermore -aspire, Which makes them now to such a highness flee.

Denies.

Nothing could make me sooner to confess, That this world had an everlattingness, Than to consider that a year is run Since bpth this lower world’s and the sun’s sun, Did set. Donne.

Panting murmurs, stilled out of her breast, That everbubbling spring. Crashaw.

t’he everlasting life, both of body and soul, in that tuture state, whether in bliss or woe, hath been added.

Hammond.

Let no man fear that harmful creature ever the less, because he sees the apostle safe from that poison.

Hall.

God is the great eye of the world, always watching over our actions, and has an everoyen ear to all our words. Taylor.

There under ebon shades, and low-browed rocks In dark Cimmerian desart ever dwell. Milton.

Torture without end Still urges, and a fiery deluge, fed With everburning sulphur unconsumed. Id.

Heaven opened wide Her everduring gates, harmonious sound ! On golden hinges moving. Id. Paradise Lost.

There will I build him

A monument, and plant it round with shade Of laurel, evergreen, and branching palm. Milton. Some of the hardiest evergreens may be transplanted, especially if the weather be moist and temperate.

Evelyn.

So few translations deserve praise, that I scarcely ever saw any which deserved pardon,, Denham.

And what a trifle is a moment's breath, Laid in the scale with everlasting death ! Id.

The everpleasing Pamela was content to urge a little farther for me. Sidney.

The most sensual man that ever was in the world never felt so delicious a pleasure as a clear conscience.

Tillotson.

Religion prefers those pleasures which flow from •Joe presence of God for evermore, infinitely before the transitory pleasures of this world. '"•

I know a lord, who vUoes no lease, though for a thousand years, nor any estate that is not for ever and ever.

Temple.

The inclinations of the people must ever have a. great influence. j^

He shall ever love, and always he The subject of my scorn and cruelty. Dryden.

He lay stretched along, And ever and anon a silent tear Stole down and trickled from his hoary beard.

Id.

That purse in your hand has a twin-brother, as like him as ever he can look. Id. Spanish Friar.

The fat ones would be ever and anon making sport

with the lean, and calling them starvelings.

L' Estrange .

By repeating any idea of any length of time, as of a minute, a year, or an age, as often as we will in our own thoughts, and adding them to one another, with- out ever coming to the end of such addition, we come by the idea of eternity. Locke.

It suffices to the unity of any idea, that it be con- sidered as one representation or picture, though made up of ever so many particulars. Id.

Men are like a company of poor insects, whereof some are bees, delighted with flowers and their sweet- ness ; others beotes, delighted with other kinds of viands ; which, having enjoyed for a season, they cease to be, and exist no more for ever. Id.

Ever since that time Lisander has been at the house.

Tatler.

The title of duke had been sunk in the family ever since the attainder of the great duke of Suffolk.

Addison on Italy.

I find you are against filling an English garden with evergreens. Id. Spectator.

As soou as ever the bird is dead, Opening again, he lays his claim To half the profit, half the fame. Prior.

For a mine undiscovered, neither the owner of the ground or any body else are ever the richer.

Cottier.

The instinct of brutes and insects can be the effect of nothing else than the wisdom and skill of a pow- erful everliving agent. Newton.

We'll to the temple : there you'll find your son ; And there be crowned, or give him up for ever.

A. Philips.

The juice, when in greater plenty than can be exhaled by the sun, renders the plant evergreen.

Arbuthnot on Aliments.

There must be somewhere such a rank as man : And all the question, wrangle e'er so long, Is only this, If God has placed him wrong ?

Pope.

Immortal Vida ! on whose honoured brow The poet bays and critick's ivy grow, Cremona now shall ever boast thy name, As next in place to Mantua, next in fame. Id.

The meeting points the fatal lock dissever From the fair head, for ever and for ever. Id.

Forsaking Sheria's everpleasing shore, The winds to Marathon the virgin bore. Id. Placed at the helm he sat, and marked the skies Nor closed in sleep his everwatchfal eyes. Id.

Monies, an everhonoured name, of old High in Ulysses' social list enrolled.

Id. Odyssey.

Joys everyovng, unmixed with pain or fear, Fill the wide circle of the eternal year. Id.

Many have made themselves everlastingly ridiculont.

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His boundless years can ne'er decrease,

But still maintain their prime, Eternity's his dwelling place,

And ever is his time. Watts.

Thy throne eternal ages stood,

Ere seas or stars were made ; Thou art the ever-living God,

Were all the nations dead. Id.

Refined policy ever has been the parent of con-fusion ; and ever will be so, as long as the world en-

In the compartment there are two trees, whose WX,[WL], v^i. ci/cuyc, ,,t, .. ^. ″ "—

factor, a surname given to Philip 111. ot Mace-

which shed their leaves ; and it is, perhaps, principally owing to th's close covering, that they retain their verdure, ind continue through the winter on the trees. The nutritive, juices of these plants always abound, more or less, with an oily quality, which secures them from being injured by severe frost; so that many ever- greens grow in the coldest parts of the habitable world.

EVERLASTING PEA. See LATHYRUS.

EUERGETES, Gr. fviotrits, i.e. a bene-

branches spread over the figures ; one of them has smoother leaves like some evergreens, and might thence be supposed to have some allusion to immor-

donia,. Antigonus Doson, and Ptolemy III. of Egypt. It was also assumed by the monster

tality, but they may perhaps have been designed only Ptolemy Physcon, as well as by some of the

Darwin.

as ornaments.

Tis true your asses and your apes, And other brutes in human shapes, And that thing made of sound and

show Which mortals have misnamed a beau, (But in the language of the sky Is called a two-legged butterBy), Will make your very heartstrings ache With loud and everlasting clack. Seattle.

To what recess

Shall we our weary steps address, Since Fate is evermore pursuing All ways and means to work our ruin ? Id.

The sight of Christ in glory, with his saints, will, in an inexpressible manner, torment the crucifiers of the

one and the persecutors of the others ; as it will shew subvert, destroy, them the hopes and wishes of their adversaries all granted to the full, and all their own ' desires' and designs for ever at an end.

Bishop Home. Commentary on Psalm cxii. One spot exists, which ever blooms,

Even in that deadly grove — A single rose is shedding there

Its lonely lustre, meek and pale. Byron.

EVERGREENS are a species of perennials, such as hollies, phillyreas, laurustinuses, bays, pines, firs, cedars of Lebanon, &c. They preserve their old leaves a long time after the formation

kings of Syria and Pontus, particularly Alex- ander Balas and Mithridates. Some of the Ro- man emperors also claimed this epithet, though most of them rather merited that of eaico£py£rijc, malefactor.

EVERO, the name of a mountain of South America, in Peru, and of a late village near it. During the great earthquake in February 1797 (see PERU) the mountain fell on the village, and totally overwhelmed it, without leaving a single soul alive.

Old Fr. evertir ; Lat. ever- to, eversus, e and verto, to turn over. To overthrow,

EVERSE′, v. a. EVER′SION, n. s. EVERT′, v. a.

Supposing overturnings of their old error to be the eversion of their well established governments.

Bp. Taylor.

The foundation of this principle is totally cversed by the ingenious commentator upon immaterial beings.

Glanville.

A process is valid, if the jurisdiction of the judge is not yet everted and overthrown. Ayliffe.

EVERY, adj.) Dr. Johnson says an- EV′ERY-DA v, adj. > ciently everich or evtr each ; EV′ERYWHERE, 5 but Mr. Thomson derives it from Goth, a one, and vera to be ; the first

of the new, and do not drop them at any deter- meaning of the word being each. ‘ Everich′ and minate time. In general, the leaves of ever- « everyche,′ however, abound in our early writers, greens are harder, and less succulent, than those §ee the examples. Each one of two or more ; which are renewed annually. The trees are ge- every day is common to all days ; every where nerally natives of warm climates ; as the alater- in au piaces, in each place, nuses of France and Italy, the evergreen oak of And &o whanne Portugal and Suabia, &c. Some herbaceous pe- rennials, as the house-leeks and navel-worts, en- pfiny joy the same privilege with the evergreen trees, and resist the severities of winter; some can

resist

even exist out oi the earth for some time ; being replete with juices, which the leaves imbibe from the humidity of the atmosphere, and, which, in sucli plants, are of themselves sufficient for ef- fecting the purposes of vegetation. For this reason, unless in excessive hot weather, garden- ers seldom water fat succulent plants, as the aloes, which rot when they are moistened, if the sun does not quickly dry

them. The leaves of all the evergreen shrubs and trees have a thin compact skin over their surface, as is easily dis- covered by macerating them in water, to separate

weren come, that camen aboute

the elleventhe hour also thei token enench of hem a

Wiclif. Matt. 20.

All the congregation are holy, every one of them.

Numb. xvi. If that you liketh, take it for the bestfi. That everich of you shal gon wher him leste Freely withouten ranus on or dangere.

Chaucer. Cant. Tales.

Xathelesse handes of some men hadden kerve that clothe, by violence or by strength, and evsriche manne of 'hem had borne awaie soche poces, as he might getten.

Ho proposoth

Colevile. nto God their necpssities, and they

their own requests for relief in every of them

Hooker.

substance of the body of Christ was not every-

the parenchyma, or pulp, from the vessels of the where seen, nor did it every-where suffer death ; evcry-

leaves ; which cannot be effected in any of these eversrreens till a thin parchment-like cover is iaicen off". They are found by experiment to

trhrre it could not be entombed : it is not every-where now, being exalted into heaven.

The king made this ordinance, that every twelve

perspire but little, when compared with those years thrra should be set forth two ships. Bacon.

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The virtue and force of every of these three is shrewdly allayed. Hammond's Fundamentals.

Now Pharaoh must need see how impotent a devil he served, that could not make that vermin which eoery-day rises voluntarily out of corruption.

Bp. Hall's Contemplationi.

Every man is not a proper champion for truth, not fit to take up the gauntlet in the cause of verity.

I Sir T. Browne.

Aristotle has long since observed, how unreasonable it is to expect the same kind of proof for every thing, •which we have for some things. Tillotsan.

I saw you every day and all the day, And every day was still the same. Dryden. Every one, that has an idea of a foot, finds that he can repeat that idea, and, joining it to the former, make the idea of two feet. Locke.

If I send my son abroad, how is it possible to keep him from vice, which is every-where so in fashion ?

Id.

Every compliance that -we are persuaded to by one, is a contradiction to the commands of the other ; and our adherence to one, will necessarily involve us in a desertion of the other. Rogers.

From pole to pole the thunder roars aloud. And broken lightnings flash from every cloud.

Pope.

This was no every-day writer. Id.

'Tis no where to be found, or every~where. Id. Years of maturity were not always accompanied with discretion, neither was youth in every instance devoid of it. Franklin.

Ah, not like her who, half afraid, half bold, Proud of new slaves, yet loath to lose the old. When cruel fortune gathers round her throne Whom singly she had seemed to love alon", Must anxious manage every look and speech, And deal the cautious tenderness to each.

Dr. T. Brown.

EVES-DROPPER, more properly written EAVES-DROPPER, which see.

What makes you listen there ? Get farther off ; I preach not to thee, thou wicked evesdropper.

Dryden's Spanish Fryar.

Do but think how becoming your function it is to be disguised like a slave, and an evesdropper, under the women's windows. Id. Don Sebast.

EVES HAM, or EVESHOLM, commonly called Esam, a borough of Worcestershire, seated on a gentle ascent from the river Avon, over which there is a stone bridge of seven arches. It sends two members to parliament, and had formerly an abbey, which was one of the largest in the king- dom, whose abbot sat in parliament as a spi- ritual lord. It was founded in 709 by prince Egwin, who retired thither after he had been unjustly dispossessed of the bishopric of Wor- cester by the pope. The principal fragment of this building, now remaining, is a large, ellip- tical arch, or gateway, seventeen feet high. King James I. gave this town a charter for a mayor, seven aldermen, twelve burgesses, a recorder and chamberlain, who are all of the common council, with twenty-four assistants. The mayor and four of the aldermen are justices of the peace, and of oyer and terminer, &c., for all offences in the corporation,

except high treason; and the corporation has power to try and execute felons within the borough. It has three churches, but the bells of two of them have been removed to a beautiful old tower, which was one of the pates VOL. VIII.

of the abbey. It has a weekly market and four fairs; and lies fourteen miles south-east of Wor- cester, and 100 north-west by west of London.

EVESHAM, VALE or, a spacious vallej in Wor- cestershire, on the banks of the Avon, celebrated for its fertility and beauty. Besides the usual objects of agriculture, great quantities of garden stuff are cultivated, and sent to the towns around to a considerable distance. In this vale, Simon de Montfort, earl of Leicester, was defeated and slain by prince Edward in 1265, the very year in which, by his usurped authority, the house of commons first received its existence. See ENG- LAND. This vale, communicating with the more extensive and spacious one on both sides of the Severn, gives to it, for no assignable reason, the same general name of the Vale of Evesham. See SEVERN.

EUGANO, or the EUGANEAN MOUNTAIN'S, a chain of hills in Upper Italy, between Este and Padua, and sometimes considered as a branch of the Noric Alps. They furnish many petrifac- tions of shell-fish. The highest point, Mount Venda, is about 1800 feet above the level of the sea.

EUGENE (Francis), prince of Savoy, de- scended from Carignan, one of the three branches of the house of Savoy, and son of Eugene Mau- rice, general of the Swiss and Grisons, governor of Champagne, and earl of Soissons, was born in 1663. Louis XIV. thought him so much ad- dicted to pleasure, that he refused him preferment both in church and state. Prince Eugene, in disgust, quitted France ; and, returning to Vien- na, devoted himself to the imperial service. In 1691 he was sent into Piedmont, where he re- lieved Coni, which the French had besieged, .and took Carmagnioia. But the war between the emperor Leopold I. and the Turks afforded more ample

opportunity of exerting his military talents ; and every campaign proved a new step to his advancement to the highest offices in the army. Having attained to the chief command in 1697, he that year gave the Turks a memor- able defeat at Zenta. Upon the death of Charles II. of Spain, the emperor laid claim to the throne, which occasioned a new war; and prince Eugene was sent into Italy, where he defeated the celebrated French general Catinat, and obliged him to retreat. Marshal Villeroy suc- ceeded Catinat, but he was still less successful against the prince, who foiled him in every en- gagement ; and while the marshal lay at Cre- mona, secure, as he supposed, the prince entered the place by stratagem, and took him prisoner. Not long after this, the prince returned to Vien- na, where he was made president of the council, and associated with the great duke of Marlho- rough in the command of the allied army. His- tory scarcely affords a parallel to this association ; they were two of the greatest generals of the age, equal in their merit and fame, as well for their courage and conduct in military exploits, as their prudence in council. From their first meeting, at Helibron, their esteem grew into friendship and confidence, and contributed to the glorious successes which attended the arms of the allies during the war. Prince Eu- gene had a principal share in the famous

l/attleat Blenheim in 1704; and though tie next year suffered a repulse from Vendome, in Cas- sano, he quickly retrieved this reverse by a bloody action near Turin, which was then be- sieged by the French, whose trenches he forced, and gained a complete victory. In 1707 he en- tered France, and laid siege to Toulon, but was not able to reduce it. The next year he com- manded the imperial army in Flanders,

and contributed to the victory at Oudenarde. In 1709 he had a considerable share in the hard won victory at Malplaquet, where he received a slight wound in the head. In 1712 he came over to England, in order, if possible, to prevent the English ministry from making a separate peace, but his arguments were ineffectual, and he was left to finish the war alone. This defec- tion soon obliged him to enter into a negociation with marshal Villars, which produced the peace of Rastadt in 1714. This peace was scarcely concluded, when a war broke out between the emperor and the Turks, on which the prince was again entrusted with the command in Hun- gary, where, in 1716, he defeated the grand vi- zier at Peterwaradin, which he followed up by capturing Belgrade. After the peace of 1718 he retired to a private life; but in 1733, when the election for the crown of Poland was dis- puted, he was again employed. His service, however, was short, and unproductive of any remarkable action. He died at Vienna in 1736, and was as remarkable for his modesty and liberality, as for his abilities in the cabinet and the field.

EUGENIA, the yamboo, a genus of the mo- nogynia order and icosandria class of plants; natural order nineteenth, hesperidese : CAL. quadripartite, superior; the petals four, the fruit a monospermous quadrangular plum. There are two species, natives of the hot parts of Asia. They rise from twenty to thirty feet high, and bear plum-shaped fruit, enclosing one nut. They are too tender to live in this coun- try, unless they are constantly kept in a stove.

EUGH, or ^ Saxon, \> ; Welsh, iw, or Ew, n. s. >yewn ; Tartar, iay ; Teut. eib ', EUGHEN, adj. j Belg. iven, Fr. if. The origi- nal mode of spelling the word now written YEW, which see. Eughen is, made of yew.

And eke the names how the trees highte, As oke, fir, birch, ashe, alder, holm, poplere, Maple, thorn, beche, hasel, ew, whipultre, How they were feld, shall not be told for me.

Chaucer.

His stiff arms to stretch with eughen bow, And many legs still passing to and fro.

Hubbard's Tale.

The shooter eugh, the broad-leaved sycamore, The barren plantane, and the walnut sound ;

The myrrhe, that her foul sin doth still deplore ; Alder, the owner of all waterish ground. Fairfax.

At the first stretch of both his hands he drew, And almost joined the horns of the tough eugh.

Drydcn's JEneid.

EVICT", v. a.) Fr. evincer ; Lat. evincere,

EVICTION, n. s. \ evictus ;from e andw'nco, to

conquer. To take from or dispossess by force of

law ; and, in an obsolete sense, to prove, evince.

If any of the parties be laid asleep under pretence of arbitreirent, and the other party doth cautiously get the start at common law, yet the pretorian court will set back all things, and no respect had to eviction or dispossession. Bacon.

His lands were evicted f rom him. A. James.

The law of England would speedily evict them out of their possession, and therefore they held it the best policy to cast off the yoke of English law.

Davies on Ireland.

A plurality of voices carries the question, in all our debates, but rather as an expedient for peace than an eviction of the right. L' Estrange.

This nervous fluid has never been discovered in live animals by the senses, however assisted ; nor its necessity evicted by any cogent experiment. Cheyne.

EVIDENCE, n, s. & v. a.-\ Fr. evidence ;

EV'IDEJJT, adj. (^ Italian, evidenza;

EVIDEN'TIAL, i Latin, evidentia ;

. EV'IDENTLY, adv. J evidzns, from vi-

deo, Ionic idtta, and the digamma being pre- fixed Fi$tw,io see. Certainty, or certain testimony, proof: hence witness, and one who gives witness proof. As a verb, to evidence means to prove ; make clear or apparent. Evidential, affording proof. Evident and evidently mean, clear ; ob- vious ; plainly ; obviously

I had delivered the evidence of the purchase unto Baruch. Jer.

Lytel Lowys my sonne, I perceive well by certaine evidences, thine abylyte to lerne scyences. Chaucer.

It is, and may be made evident enough, that the greatest infirmities and deformities of the mind may be reformed and rectified by industry and reasonable application. Clarendon.

Thou on earth had'st prospered, which thy looks Now also evidence. Milton's Par. Lost.

It is evident, in the general frame of nature, that things most manifest unto sense have proved obscure unto the understanding. Browne's Vulgar Errours.

Although the same truths be elicited and explicated by the contemplation of animals, yet they are more clearly evidenced in the contemplation of man.

Hale's Origin of Man.

These things the Christian religion requires, as might be evidenced from taxes. Tillotson.

The horses must be evidenced by good testimonies to have been bred in Ireland. Temple.

They are incapable of making conquests upon their

neighbours, which is evident to all that know their constitutions. Id.

To swear he saw three inches through a door, As Asiatick evidences swore. Dryden's Juvenal.

Children minded not what was said, when it was evident to them that no attention was sufficient.

Locke.

It being as impossible that the love of truth should carry my assent above the evidence there is to me that it is true, as that the love of truth should make me as- sent to any proposition, for the sake of that evidence, which it has not, that it is true ; which is, in effect, to love it as a truth, because it is possible or probable that it may not be true. Locke.

They bear evidence to a history in defence of Christianity, the truth of which history was their mo- tive to embrace Christianity. Addison. Laying their eggs, they evidently prove

The genial power and full effects of love. Prior.

There are books extant, which they must needs al- low of as proper evidence ; even the mighty volumes of visible nature, and the everlasting tables of right rea- son. Bent ley.

The printing private letters is the worst sort of be- traying conversation, as it evidently has the most ex. tensive ill consequences. Pope.

Remember you sit in judgment upon yourself, and have nothing to do at present but to sift the evidence, which conscience may bring in. Mason.

It appears evident 'that frugality is necessary even to complete the pleasure of expense. Johnson.

But in all cases where such accounts are entitled to credit, or supported by tolerable evidence, it will be found that they referred to something which it con- cerned men to know ; the overthrow of kingdoms, the death of great persons, the detection of atrocious crimes, or the preservation of important lives.

Beattie.

Elis evidence, if he were called by law To swear to some enormity he saw, For want of prominence and just relief, Would hang an honest man, and save a thief.

Cowper.

The ship was evidently settling now Fast by the head ; and, all distinction gone, Some went to prayers again, and made a vow Of candles to their saints — but there were none

To pay them with. E'VIL, n. s., adj. & adv.

E'VIL-AFFECTED, adj.

E'VIL-DOER, n. s. E'VIL-EYED, adj.

E'VIL-FAVORED, E'VIL-FAVOREDNESS, U. S.

E'VJLLY, adv.

E'VIL-MINDED, adj. E'VIL-MINDEDNESS, 71. S. E'VIL-SPEAKING, H. S.

E'VIL-WORKING, adj.

E'VIL-WORKER, H. S.

Byron.

Saxon, ypel ; Gothic, uwel. or ubils;Teu.t.ubels; Belg. euvel, from M negative, and vel, right or well ; 'or, as Minsheu not improbably conjectures, from

Heb. 73 n, vani- ty ; destitute of or truth. —

The frere with euyll g-aco, Sayd, I rest the, Come on with me,

And out he toke his mace.

Sir. T. More.

To forsake the true God of heaven, is to fall into all such evils upon the face of the earth, as men, either destitute of grace divine, may commit, or unprotected from above, may endure. Hooker.

The just, though they hate evil, yet give men a pa- tient hearing ; hoping that they will shew proofs that they are not evil. Sir P. Sidney.

No man, because he hath done well before, shall have his present evils spared ; — reward is proper to well-doing; punishment to evil-doing; which must not be compounded no more than good and evil are to be mingled. /^

Not in the legions

Of horrid hell can come a devil more damned In evils to top Macbeth ! Shakspeare. Macbeth.

What's the disease he means ? — 'Tis called the evil. Id

This act so evilly born, shall cool the hearts Of all his people, and freeze up their zeal.

Shakspeare.

Machiavel well noteth, though in an evilfavoured instance, there is no trusting to the force of nature, except it be corroborated by custom.

Bacon's Essays.

The infection of evil is much worse than the act. Bp. Hall's Contemplations. Pleasure's the hook of evil ; ease of care, And so the general object of the court ; Yet some delights are lawful. Matsinger.

The moral goodness and congruity, or evilness, un-
fitness, and unseasonbleness of moral or natural ac-
tions, fall not within the verge of a brutal
faculty.

Hole's Origin of Mankind. They heard of this sudden
going out, in a country

Crime; falsehood; wickedness; injury; mis- *u^ °^
^twuhify minds towards him. Sidney.

chief; calamity : as an adjective, havino- bad or
But most she feared» travelling so late,

injurious qualities, moral or physical ; mischiev-
ome wil™nded. beasts miS »*7*» ,

ous; unhappy; miserable : as an adverb, not And' Wth
°Ut WUness» wreak their hldden ha£' rf well in
whatever respect; not happy, or tending If we will
stand boggling at imaginary ^lefu,

to happiness. 1 he compounds follow these mean-
never blame a horse for starting at a shadow.

ings

Ech man that doith yuel hatith the lyght, and he
cometh not to the lyght, that hise werkis be not re-
preued. Wiclif. Jon. 3.

The imagination of man's heart is evil from his
youth. Gen.

It is my son's coat ; an evil beast hath devoured
him. Id.

He hath brought up an evil name upon a virgin.

Deut. The Egyptians evil entreated us, and afflicted
us.

Id.

Thou shalt not sacrifice unto the Lord any bullock
or sheep, wherein is blemish, or any
evilfavouredneu.

Id.

L'Estrange.

Evil is what is apt to produce or increase any pain, or diminish any pleasure in us ; or else to procure us any evil, or deprive us of any good . Locke.

It is one thing to submit to heaven, as a lesser evil than hell ; and another to desire it as a greater good than earth. Baxter.

He that calk a man ungrateful, sums up all the evil that a man can be guilty of. Swift.

However, look not unequally either at the good or evil that is in you ; but view them as they are.

Mat&n.

EVIL-MERODACH, king of Babylon, suc- ceeded his father Nebuchadnezzar the Great, A.M. 3443. He had governed the kingdom

The good figs very good, and the evil very evil, that during the lunacy of his father, who after seven

cannot be eaten they are so evil.

Jeremiah, years, having recovered his understanding, once

The unbelieving Jews stirred up the Gentiles, and more ascended the throne, and imprisoned his

made their minds evil-affected against the brethren. son Evil-Merodach. In this confinement, it is

Acts. supposed, that Evil-Merodach made an acquaint-

Whereas they speak evil against you as evildoers, they ance and friendship with Jeconiah, king of Ju-

may by your good works glorify God. Peter, fa^ Wh0 had been carried to Babylon by Nebu-

Wherefore laying aside all malice and all guile, and chadnezzar. However, it is certain, that soon

hypocrisies and envies, and all evilspeakings. Id. after hjs succession to the throne, he delivered

Beware of dogs, beware of evilworken. Phil. the king of Judah out of prison, after a confine-

Whan there wag none, ment of thirty-seven years, heaped many favors

But they alone, on him, and placed him above all the other kings

E U L E R.

who were at the court of Babylon (2 Kings xxv. 27; Jer. lii. 31). Evil-Merodacb. reigned but one year, according to the chronology of arch- bishop Usher ; but Dr. Prideaux says, he reigned two years, and was succeeded by Neriglissar, his sister Nitocris's husband, who, having been at the head of a conspiracy that put him to death, reigned in his stead. Others will have it, that this prince was immediately succeeded by his son Belshazzar.

EVINCE', v. a.&c. v. n. ~\ Fr. evincer ; Lat.

EVINC'IBLE, adj. >erinro, to prove:

EVINC'IBLY, adv. j from vinco, to pre-

vail, either in argument or battle. To conquer

(rarely used) ; to prove ; show ; make manifest.

Evincible, is capable of proof.

The witness ecineeth, the judre sentences.

BpiHaU. Doubt not bat that sin

Will reign among them as of tbee begot ;

And therefore was law given them, to erince

Their natural pravity. Milton* Paradise Lott.

Impi&nted instincts in brutes are in themselves highly reasonable and useful to their ends, and erin- cible by true reason to be such. Hole.

That religion, teaching a future state of souls, is a probability • and that its contrary cannot, with equal probability, be proved, we have evinced. South.

The greater absurdities are, the more strongly do they evince the falsity of that supposition from whence they flow. Aaerbny.

ErVTRATE,*. o. Lat. eviratus. To deprive of manhood ; to emasculate.

EVTSCERATE, u. a. Lat eviscero. To embowel ; to draw ; to deprive of the entrails; to search within the entrails.

EVTTATE, v. a. & adj.~\ Fr. eviter ; Latin, f

EDITABLE, adj.

mto;rrom »j/o, to

EVITA'TION, n. t. f avoid. Both verbs

EVITE', T. a. J signify to avoid ; to

shun ; escape. Evitable is avoidable ; that which may be shunned or escaped from.

Of divers things evil, all being not eritable, we take one ; which one, saving only in case of so great ur- gency, were not otherwise to be taken. H-.-. k< '.

Therein she doth eritate and shun A thousand irreligious cursed hours, Which forced marriage would have brought upon her.

Shakxpeare.

In all bodies there is an appetite of union, and

eri- tation of solution of continuity. Bacon.

EVITE'RNAL, adj. \ Lat. evitermu. Eter- EvnxRNAi/ iTY,n.*. i ual in a limited sense ; duration not infinitely but indefinitely long.

Have not I lands of faire inheritance, Derived by right of long continuance, To first-borne males, so lis» the law to grace, Nature'* first fruits in etiternal race ? Bp. Hall.

EULER (Leonard), F.R.S., was born at Ba- sil, April 15th, 1707. He was the son of Paul Euler and Margaret Brucker, of an illustrious family; and spent the years of his infancy in a rural retreat at the village of Richen, where his father was minister. He was afterwards sent to the university of Basil, where all his leisure time was consecrated to geometry, which soon became his favorite science. The early pro

sor John Bernoulli, who was then one of the first mathematicians in Europe. In 1723 M. Euler took his degree as M. A., when he delivered a Latin discourse, in which he drew a comparison between the philosophy of Newton and Des Cartes, which was received with the greatest ap- plause. While under the instructions of M. Bernouilli, he contracted an intimate friendship with his two sons Nicholas and Daniel ; and it was chiefly in consequence of this that he became afterwards the principal ornament of the academy of Petersburg. The project of erecting this aca- demy, formed by Peter the Great, was executed by Catharine I. : and the two young Bernouillis, being invited to Petersburg in 1725, promised Euler that they would use their utmost endea- vors to procure for him an advantageous settle- ment in that city. In the mean time, by their advice, he applied himself with ardor to the study of physiology, to which he made an appli- cation of his mathematical knowledge; in a Dis- sertation on the Nature and Propagation of Sound, and an answer to a prize question concerning the masting of ships ; to which the Academy of Sciences adjudged the accessit or second rank, in 1727. Soon

after this he was called to Pe- tersburg, and was made joint professor with his countrymen Hermann and Daniel Bernouilli in the university of that city. At this time he car- ried to new degrees of perfection the integral calculus, and he invented the calculation by sines, thus throwing new light on all the parts of mathematical science. In 1730 he was promoted to the professorship of natural philosophy ; and in 1733 he succeeded his friend D. Bernouilli in the mathematical chair. In 1735 a problem was proposed by the Academy, for the solution of which several eminent mathematicians had de- manded some months. The problem was solved by Euler in three days, to the great astonishment of the Academy; but the violent and laborious efforts it cost him threw him into a fever, which endangered his life, and deprived him of the use of his "right eye. The Academy of Sciences at Paris, which in 1738 had adjudged the prize to his memoir Concerning the Nature and Proper- ties of Fire, proposed for the year 1740 the im- portant subject of the tides; a problem whose solution required the most arduous calculations. Euler's treatise on this question was adjudged a master-piece of analysis and geometry ; and it was more honorable for him to share the acade- mical prize with such illustrious competitors as Colin Maclanrin and Daniel Bernouilli, than to have carried it away from rivals of less magni- tude. Seldom if ever did such a brilliant com- petition adorn the annals of the Academy ; and perhaps no subject, proposed by that learned body, was ever treated with such accuracy of investigation and force of genius, as that which here displayed the philosophical powers of this extraordina'ry triumvirate. In 1741 M. Euler was invited bv Frederic II. to Berlin, to direct and assist the Academy then rising into fame. He enriched the last volume of the Miscellanies (Melanges) of Berlin with five memoirs, which form an eminent figure in that collection. These were followed with amazing rapidity, by a num- ber of important researches, which ore dispennJ

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through the Memoirs of the Prussian Academy ; a volume of which has been regularly published every year since its establishment in 1744. Of these we shall only mention a few : his complete Treatise of Isoperimetrical Curves; his Theory of the Motions of the Planets and Comets ; his Theory of Magnetism, which gained the Paris prize, and his much amended translation of Ro- bins's Treatise on Gunnery, were all published in 1744. In 1746 his Theory of Light and Co- lors overturned Newton's System of Emanations; as it did another work, then triumphant, the Monads of Wolfe and Leibnitz. • And as na- vigation was the only branch of useful know- ledge, for which the labors of analysis and geo- metry had done nothing. Euler began now to turn his attention to thif science. A memoir on the motion of floating bodies, by M. le Croix, gave him the first idea. His researches on the equilibrium of ships famished him with the means of bringing stability to a determined measure, and produced the great work, which the Academy published in 1749, in which we find, in systematic order, the theory of the equi- librium and motion of floating bodies. This was followed by a second part: and, in 1773, produced the Theorie complette de la Construc- tion et de la Manoeuvre des Vaisseaux. This work was instantly translated into all languages, and the author received a present of 6000 livres from the French king. He had before had £300 from the English parliament, for the theorems by the assistance of which Meyer made his lunar tables. It was now time to collect, into one sys- tematical and continued work, all the important discoveries on the infinitesimal analysis which Kuler had been making for thirty years, and which lay dispersed in the memoirs of the dif- ferent Academies. This, accordingly, our pro- fessor set about ; but he prepared the way by an elementary work, containing all the previous re- quisites for this study. This is called an Intro- duction to the Analysis of Infinitesimals; and is u work in which the author has exhausted all the doctrine of fluxions, whether algebraical or tran- scendental, by showing their transformation, resolution, and development. The labors of Kuler appear the more

astonishing, that while he was enriching the academy of Berlin with a number of memoirs on the deepest parts of mathematical science, containing always some new points of view, and sometimes dis- coveries of great importance, he still con- tinued his philosophical contributions to the Academy of Petersburg, which granted him a pension in 1 742, and whose Memoirs display the marvellous fecundity of Euler's genius. It was with much difficulty that this great man ob- tained, in 1766, permission from the king of Prussia to return to Petersburg, where he desired to pass the rest of his days. Soon after his re- turn he was rewarded by Catharine II., but was seized with a violent disorder, which ended in he total loss of his sight. A cataract, formed in iis left eye, which had been essentially damaged ">y too ardent application to study, deprived fcim entirely of the use of that organ. It was in his d;stressing situation he dictated to his ser- vant, a taylor's apprentice, who was absolutely

devoid of mathematical knowledge, his Elements of Algebra; which, by their intrinsical merit, in point of perspicuity and method, and the un- happy circumstances in which they were com- posed, have equally excited applause and asto- nishment. This work, though purely elementary, discovers proofs of a most inventive genius; and it is here alone that we meet with a complete theory of the analysis of Diophantus. About this time M. Euler was honored by the Academy of Sciences at Paris with the place of one of its foreign members; and the academical prize was adjudged to three of his memoirs, Concerning the Inequalities in the Motions of the Planets! The two prize questions, proposed by the same academy for 1770 and 1772, were designed to obtain from the labors of astronomers a more perfect theory of the moon. M. Euler, assisted by his eldest son, was a competitor for these prizes, and obtained them both. He afterwards reviewed his whole theory, with the assistance of his son and Messrs. Krafft and Lexell, and pur- sued his researches until he had constructed the new tables, which appeared, together

with the great work, in 1772. Instead of confining him- self, as before, to the fruitless integration of three differential equations of the second degree, which are furnished by mathematical principles, he reduced them to the three ordinates, which determine the place of the moon ; he divided into classes all the inequalities of that planet, as far as they depend either on the elongation of the sun and moon, or upon the eccentricity, or the parallax, or the^nclination of the lunar orbit. All these means of investigation, employed with such art and dexterity as could only be expected from an analytical genius of the first rank, were attended with the greatest success ; and it is im- possible to observe, without admiration, such immense calculations on the one hand, and on the other the ingenious methods employed by this great man to abridge them, and to facilitate their application to the real motion of the moon. Some time after this the famous oculist, Wentzell, by couching the cataract, restored his sight; but the joy that this operation produced was of short duration. Some negligence on the part of his surgeons, and his own impatience to use an organ whose cure was not completed, deprived him of his sight a' second time, and this relapse was accompanied with tormenting pain He, however, with the assistance of his sons, and of Messrs. KrafTt and Lexell, continued his labors ; neither the loss of his sight, nor the infirmities of an advanced age, could depress the ardor of his genius. He had engaged to furnish the Academy of Petersburgh with as many me- moirs as would be sufficient to complete its acts for twenty years after his death. In seven years he transmitted to the academy, by Mr. Golof- kin above seventy memoirs, and above 250 more, left behind him, were revised and completed by a friend. Such of these rfiemoirs as were of ancient date were separated from the rest, and form a collection that was published in 1783, under the title of Analytical Works. Several attacks of the vertigo, in September, 1783 (which however did not prevent his calculating the mo- tions of the aerostatic globes), were the forerun-

ners of his death. While he was amusing him- self at tea with one of his grand-children, he was struck with an apoplexy, which terminated his illustrious career at the age of seventy-six. His •constitution was uncommonly strong and vigor- ous ; his health was good ; and the evening of his life was calm and serene, sweetened by the fame that follows genius, and the public respect that is paid to exemplary virtue. His works are so numerous that the printed catalogue alone extends to fifty pages ; fourteen of which contain those in MS. : those printed are to be found in the Petersburg, Paris, and Berlin acts, the Acta Eruditorum, the Miscellanea Tauripensia, &c. M. Euler was twice married, and had thirteen children and thirty-eight grand-children.

EU'LOGY, n. s. -\ Fr. eloge ; Lat. eulogia ;
EU'LOGIZE, v. a. f Gr. euXoyoc, rrorn tv well
EULOG'ICAL, adj. (and Xoyoc, a discourse, EULOG
iCA.LLf.adv. J Praise; encomium. To. eulogise is to commend ; panegyrise.

Many brave young minds have oftentimes, through hearing the praises and famous eulogies of worthy men, been stirred up to affect the like commendations.

Spenser on Ireland.

Give me leave eulogically to enumerate a few of those attributes. Sir T. Herbert.

If iome men's appetites find more melody in dis- cord, than in the harmony of the angelic quires ; yet even these seldom miss to be affected with euloyiei riven themselves. Decay of Piety.

Those

Who eulogize their country's foes. Huddertford.

EULOGY, EULOGIA, (from tv, bene, and Xtyw, dico, q. d. benedictum, blessed), a bit of consecrat- ed bread. When the Greeks cut a loaf of bread, to consecrate it, they break the rest into little bits, and distribute them among those who have not yet communicated, or who are absent ; and these pieces of bread they call eulogies. The Latin church has had something like eulogies for many ages ; and thence arose the use of their holy bread. The name was likewise given to loaves or cakes brought to church by the superstitious to have them blessed. It passed hence to mere presents, without any benediction. See Gretser. de Benedict, et Maledict. lib. ii. cap. 22, &c. From a passage in Bolandus, on the life of St. Melaine, cap. 4, it appears, that eulogies were not only of bread, but any kind of meat blessed for that purpose. Almost every body blessed and distributed eulogies ; hermits, though lay- men, made a practice of it ; women also some- times sent eulogies. The wine sent as a present was also held an eulogy. Bolandus says, that the eucharist was also called eulogy.

EUMARIDES, of tv/xapijc, easy, among the ancients, a kind of shoes common to men and women. The eumarides were used for pomp and delicacy, being neat, and painted with va- rious colors.

EUMENES, a Greek officer in the army of Alexander, son of a charioteer; and fhe most worthy of all the officers of Alexander. He con- quered Paphlagonia, and Cappadocia, of which he obtained the government, till the power and jealousy of Antigonus obliged him to retire. He joined his forces to those of Perdiccas, defeated Cratenis and Neoptolemus, and killed the latter.

When Craterus was afterwards killed, his re- mains received an honorable funeral from Eu- menes, who, after weeping over the ashes of a man who once was his dearest friend, sent his remains to his relations in Macedonia. Eumenes fought against Antipater and conquered him ; but after the death of Perdiccas, his ally, he was conquered by Antigonus, chiefly through the treachery of his officers. He

then disbanded the greatest part of his army to secure a retreat; and fled with only 700 attendants to Nora, a fortified place on the confines of Cappadocia, where he was soon beseiged by the conqueror. He sup- ported the siege for a year with courage and resolution, but some disadvantageous skirmishes so reduced him, that his soldiers, grown des- perate, and bribed by the enemy, betrayed him. Antigonus hesitated whether he should not restore to his liberty a man with whom he had lived in the greatest intimacy while both were under Alexander; and these emotions of humanity were increased by the petitions of his son Deme- trius. But the calls of ambition prevailed ; and when Autigonus recollected what an active enemy he had in his power, he ordered Eumenes to be put to death in the prison, A. A. C. 315. Eumenes raised himself to power by merit alone. His skill in public exercises first recommended him to the notice of Philip; and under Alexander his fidelity and military accomplishments pro- moted him to the rank of a general. Even his enemies revered him; and Antigonus, by whose orders he perished, honored his remains with a splendid funeral, and conveyed his ashes to his wife and family in Cappadocia.

EUMENES I. king of Pergamus, succeeded his uncle Philetaerus about A. A. C. 264. He made war against Antiochus the son of Seleucus, and enlarged his possessions by seizing upon many cities of the kings of Syria. He lived in alliance with the Romans, and made war against Prusias, king of Bithynia. He was a great patron of learning ; but died of an excess in drinking, after a reign of twenty-two years. He was succeeded by Attalus I.

EUMENES II. succeeded his father Attalus on the throne of Asia and Pergamus. His kingdom was small and poor, but he rendered it powerful and opulent ; and his alliance with the Romans contributed to the increase of his dominions after the victories obtained over Antiochus the Great. He carried his arms against Prusias and Antigo- nus; and died A. A. C. 160, after reigning forty years, leaving the kingdom to his son Attalus II. He has been admired

for his benevolence and magnanimity ; and his love of learning greatly enriched the famous library of Pergamus, which had been founded by his predecessors in imita- tion of the Alexandrian collection of the Ptole- mies. His brothers were so attached to him, that they enlisted among his body-guards to show their fraternal fidelity.

EUMENIDES, a name given to the Furies by the ancients. See FURIES. It seems to have been given them in irony, as tvfitvtia, instead of vengeance, signifies benevolence.

EUMENIDIA, festivals in honor of the Eu- menides, or Furies, celebrated annually with sacrifices of pregnant ewes, with offerings of

cakes made by the most eminent youths, and libations of honey and wine. At Athens none but free-born citizens were admitted, such as had led a life the most virtuous and unsullied.

EUMOLPIDES, the priests of Ceres at the celebration of her festivals at Eleusis; the de- scendants of Eumolpus, king of Thrace ; who being appointed priest of Ceres, by Erechtheus king of Athens, soon became so powerful, that he made war against Erechtheus himself. This war proved fatal to both. Erechtheus and Eu- molpus were both killed, and peace was re- established among their descendants, on condi- tion that the priesthood should ever remain in the family of Eumolpus, and the regal power in the house of Erechtheus. The priesthood accor- dingly continued in the family of the Eumolpides for 1 200 years ; which is the more remarkable, as he who was once appointed to the office was obliged to remain in perpetual celibacy.

EUMOLPUS, in fabulous history, a king of Thrace, son of Neptune and Chione. He was thrown into the sea by

his mother, who wished to conceal her shame from his father. Neptune saved his life and carried him into ^Ethiopia, where he was brought up by a woman, one of whose daughters he married. An act of violence to his sister-in-law obliged him to leave ^Ethiopia, and he fled to Thrace with his son Ismarus, where he married the daughter of Tegyrius, the king of the country. This connexion rendered him ambitious; he conspired against his father-in- law, and fled, when the conspiracy was disco- vered, to Attica, where he was initiated in the mysteries of Ceres of Eleusis, and made hiero- phantes or high priest. He was afterwards recon- ciled to Tegyrius, and inherited his kingdom. He perished in battle about A. A. C. 1380. See the last article.

EUNAPIUS, a native of Sardis in Lydia, a celebrated sophist, physician, and historian, who flourished in the fourth century, under Valenti- nian, Valens, and Gratian. He wrote The Lives of the Philosophers and Sophists, in which he shows himself a bitter enemy to the Christians ; also a history of the Caesars, which he deduced from the reign of Claudius II., where Herodian left off, down to that of Arcadius and Honorius. The history is lost : but we have the substance of it in Zosimus, who is supposed to have done little more than copy it.

EUNOMIANS, in church history, Christian heretics in the fourth century. They were a branch of Arians, and took their name and creed from Eunomius bishop of Cyzicus ; whose con- fession of faith here follows, extracted from^ Cave's Historia Literaria : — ' There is one God, uncreated and without beginning; who has no- thing existing before him, for nothing can exist before what is uncreate ; nor with him, for what is uncreate must be one ; nor in him, for God is a simple and uncompounded being. This one simple and eternal being is God, the creator and ordainer of all things : first indeed, and princi- pally, of his only begotten son ; and then, through him, of all other things. For God begot, created, and made the Son only, by his direct operation and power, before all things, and every other creature ; not producing, however, any being

like

himself, or imparting any of his own proper sub- stance to the Son : for God is immortal, uniform, indivisible ; and therefore cannot communicate any part of his own proper substance to another. He alone is unbegotten; and it is impossible that any other being should be formed of an un- begotten substance. He did not use his own substance in begetting the Son, but his will only; nor did he beget him in the likeness of his substance, but according to his own good pleasure. He then created the Holy Spirit, the first and greatest of all spirits, by his own power indeed and operation mediately, yet by the immediate power and operation of the Son. After the Holy Spirit, he created all other things in heaven and in earth, visible and in- visible, corporeal and incorporeal, mediately by himself, by the power and operation of the Son,' &c.

EUNOMIUS, a famous heresiarch of the fourth century, the disciple of Aetius (see AETIUS.), but more subtile than his master, as well as more bold in propagating the opinions of his sect. He was born at Dacora, in Cappadocia, and or- dained bishop of Cyzicus; but gave so much disturbance by his zeal that he was deposed more than once. At last he petitioned to retreat to his birth place, where he died very old, about A. D. 374, after experiencing a variety of sufferings. His works are lost, except a few small pieces and his confession of faith, which Cave inserted in his Historia Literaria, from a manuscript in archbishop Tennison's library. See EUNO- MIANS.

EU'NUCH, n. s. ") Fr. eunuque. ; Span.

EU'NUCHATE, v. a. >Port. and Ital. eun'ico ;

EU'NUCHISM, n. s. J Lat. eunuchus ; Gr. tv- vsx°G> according to Eustathius, from tvme, de- prived, o %«af of cohabitation. From tvog, alone, single; and t^w, to keep. — Parkhurst. From fvvri, a couch, and £%<,>, because they have the custody of the Eastern females. — Minsheu. One that is emasculated. To

eunuchate, is to perform emasculation. Eunuchism, the state or condition of an eunuch.

He hath gelded the commonwealth, and made it an eunuch. Shakspeare. Henry VI.

It hath been observed by the ancients, that much of Venus doth dim the sight ; and yet eunuchs, which are unable to generate, are nevertheless also dim-sighted. Bacon's Nat. Hist.

Neither do we think that the earth affords any thing more glorious, than eunuchum for the kingdom of heaven : which is therefore commended by our Sa-viour, not as a thing merely arbitrary, by way of ad- vice, but of charge to the able. Bp. Hall.

It were an impossible act to eunuchate or castrate themselves. Browne's Vulgar Errours.

So charmed you were, you ceased awhile to doat On nonsense gargled in an eunuch's throat. Fenton.

Next these, with prying eunuchi girt around The fair sultannas of his court. Someroile

And now they were diverted by their suite,

Dwarfs, dancing-girls, black eunuchi, and a poet,

Which made their new establishment complete ; The last was of great fame, and liked to show it.

Byron.

EUNUCH. In Britain, France, &c., eunuchs are never made but upon occasion of some dis- ease, which renders such an operation necessary ;

but in Italy they make children eunuchs, to sup- ply the operas and theatres with singers. In the eastern

parts of the world they are the guards of the women ; and the seraglios of the eastern em- perors are chiefly served by them.

EUNUCHS, in church history, a sect of heretics in the third century, who were said to be mad enough to emasculate, not only those of their own persuasion, but even all others they could lay hold of. They took their rise from the example of Origen, who, misunderstanding these words of our Saviour, ' and eunuchs who made themselves eunuchs for the kingdom of heaven,' absolutely performed this operation on himself. Those who, out of a similar imprudent zeal, made themselves eunuchs, were, by the council of Nice, condemned, and excluded from holy orders.

EVOKE', v. a. \ Fr. evocation ; Lat. evoco,

EVOCA'TION, n. s. J e and voco, to call ; from »jXw, nx°C» a sound- To call forth, or out.

Would truth dispense, we could be content with Plato, that knowledge were but remembrance, that in- tellectual acquisition were but reminiscential evocation.

Browne.

Instead of a descent into hell, it seems rather a conjuring up, or an evocation of the dead from hell.

Notes to Odytsey.

So that I had no sooner evoked the name of Shak- speare — than a crew of strange devils — came chat- tering, mewing, and grinning about me. Warburton.

They were a barrier against those prevailing kinds of superstition which consisted in the supposed evoca- tion rf departed spirits, and in consulting imaginary local deities, for the purpose of gratifying the natural thirst which all mankind have for the knowledge of futurity. Archbishop Newcome.

Lost is the patriot, and extinct his name ! Out comes the piece, another and the same ', For it, his

magic pen evokes an O, And turns the tide of Europe on the foe.

Young.

EVOCATION, evocatio, among the ancient Ro- mans, a religious ceremony always observed by them at the undertaking a siege, wherein they solemnly called upon the deities of the place, to forsake it and come over to them. Without per- forming this ceremony, they either thought the place could not be taken, or that it would be a sacrilege to take the gods prisoners. They took it for granted that their prayer was heard, and that the gods had deserted the place and come over to them, provided they were able to make themselves masters of it.

EUODIA, in botany, a genus of the mono- gynia order, and tetrandria class of plants : CAL. a tetraphyllous perianthium : COR. four spathu- lated sharp and open petals; the stamina are four subulated filaments, as long as the pe- tals; the pericarp four roundish, bivalve, and monospermous capsules; the seeds solitary. This genus is totally omitted by Lee in his different lists of plants.

EVOLVE', v. a.&LV.n.) Lat. evolvo, e forth,

EVOLU'TION, n. s. £ and ro/w, to roll. To

unfold ; disclose ; disentangle : as a neuter verb, to disclose or open. Evolution is the act of open- ing or unrolling ; or the cries of things unfold ed, or laid open.

The animal soul sooner expands and evolves itself to its full orb and extent than the human soul. Hale.

The spontaneous coagulation of the little saline bodies was preceded by almost innumerable evolutions, •which were so various, that the little bodies came to obvert to each other those parts by which they might be best fastened together. Boyle.

Ambrosial odours

Does round the air cvolvity scents diffuse ; The holy ground is wet with heavenly dews.

Prior.

The whole evolution of ages, from everlasting to everlasting, is so collectedly and preseutifically repre- sented to God at once, as if all things which evei were, are, or shall be, were at this very instant really pre- sent. More's Divine Dialogue*. Beyond long ages, yet rolled up in shades

Unpierced by bold conjecture's keenest ray,

What evolutions of surprising Fate ! Young.

I knew and could execute all the evolution! and po- sitions of Thevenot ; and I added to them some of my own invention. Franklin

— Incumbent spring her beamy plumes expands O'er restless oceans, and impatient lands, With genial lustres warms the mighty ball, And the great seed evolves, disclosing all. Darwin.

EVOLVENT, in the higher geometry, a term used by some for the involute, or curve resulting from the evolution of a curve, in contradistinc- tion to that evolute, or curve supposed to be opened and evolved.

EVOLUTE, in the higher geometry, a curve first proposed by M. Huygens, and since much studied by mathematicians. It is any curve sup- posed to be evolved, by having a thread wrapped close upon it, fastened at one end, and beginning to evolve or unwind the thread from the other end, keeping the part evolved or wound off tight stretched : then this end of the thread will de- scribe another curve called the involute.

EVOLUTION, in algebra. See ALGEBRA.

EVOLUTION, in arithmetic. See ARITHME- TIC.

EVOLUTION, in geometry, is tae unfolding or opening of a curve, and making it describe an evolvent. In

the Philosophical Transactions, No. 160, a new quadratrix to the circle is thus found, being the curve described by the equable evolution of its periphery.

EVOLUTION, in the art of war. See DOUB- LING.

EVOLVULUS, in botany, a genus of the te- tragynia order, and pentandria class of plants ; natural order twenty-ninth, campanacea? : CAL. pentaphyllous : COR. quinquefid and verticil- lated : CAPS, trilocular : SEED solitary. Species, seven herbaceous annuals of the West Indies.

EVOMI'TION, n. s. Lat. evomo. The act of vomiting out.

He was to receive immediate benefit either by eructation, or evomition. Strift.

EUONYMUS, the spindle-tree, a genus of the monogynia order, and pentandria class of plants ; natural order forty-third, dumosae : COR. pertape- talous : CAPS, pentagonal, quinquelocular, quin- quevalved, and colored : SEEDS hooded. Species seven, the chief are,

1. E. Americanus, or evergreen spindle-tree, has a shrubby stem, dividing into many opposite branches, rising six or eight feet high, garnished with spear-shaped evergreen leaves, growing opposite, and from the sides and ends of the

branches. The flowers are quinquetid and whitish, and come out in small bunches, suc- ceeded by roundish, rough, and protuberant capsules, which rarely perfect their seeds in this country.

2. E. Europseus has an upright woody stem ten or fifteen feet high, garnished with oblong opposite

leaves : from the sides of the branches' proceed small bunches of greenish quadrifid flowers, succeeded by pentagonous capsules, disclosing their seeds in a beautiful manner in autumn. The berries vomit and purge very violently, and are fatal to sheep. If pow- dered and sprinkled upon hair, they destroy lice. If the wood is cut when the plant is in blossom, it is tough and not easily broken ; and in that state is used by watchmakers for cleaning watches, and for making skewers and tooth-pickers. Cows, goats, and sheep, eat this plant; horses refuse it.

EVORA, a fortified town of Portugal in the province of Alentejo, of which it is the capital, and an archbishop's see. It stands on an ele- vated plain in the Sierra Alpedreira mountains, and is supposed to contain a population of 10,000 persons. Here is a very complete and ancient aqueduct erected by Sertorius : this place was once also the seat of a university, and com- pletely surrounded with walls. It is sixty-five miles east of Lisbon, and 125 north of Seville.

EUPAREA, a genus of the class and order pentandria monogynia : CAL. five-leaved : COR. five or twelve petalled : berry superior, one- celled : SEEDS many. Species one, an herba baceous plant of New Holland.

EUPATORIA, sometimes also called Kaslov, a sea-port town of the government of Taurida, on the west coast of the Crimea, Russia, rudely fortified. It has a good trade in corn, salt, and leather, and was in 1798 declared free for all nations. Sixty-eight miles south-west of Pe- -ekop.

EUPATORIUM, EUPATORY, or hemp agri- mony, a genus of the polygamia aequalis order, and syngenesia class of plants : natural order forty-ninth, composite : receptacle naked ; pap- pus feathery : CAL. imbricated and oblong ; the style semibifid and long. There are seventy species, many of them herbaceous flowery per- ennials, producing annual stalks from two to three or five feet high, terminated by clusters of compound flowers of a red,

purple, or white color. They are easily propagated by seeds, or parting the roots in autumn or spring. One of them, viz.

E. cannabinum, or water hemp agrimony, is a native of Britain. It is found wild by the sides of rivers and ditches, and has pale red blossoms. It has an acrid smell, and a very bitter taste, with a considerable share of pungency. The leaves are much recommended for strengthening the tone of the viscera, and as an aperient; and said to have excellent effects in the dropsy, jaun- dice, cachexies, and scorbutic disorders. Boer- haave informs us, that this is the common medi- cine of the turf diggers in Holland, against scur- vies, foul ulcers, and swellings in the feet, to which they are subject. The root of this plant is said to operate as a strong cathartic ; but it is hardly

used in Britain, and has no place in our pharma- copoeias.

EUPATRID/E, in antiquity, a name given by Theseus to the nobility of Athens, as distin- guished from Geomeri and Demiurgi. The Eu- patridse had the right of choosing magistrates, teaching and dispensing the laws, and interpreting religious mysteries. See ATTICA. The whole citizens in all other matters were upon an equality. The Geomeri were husbandmen, and inferior to the Eupatridse in point of fortune ; the Demiurp-j were artificers, and fell short of the Eupatridce in number.

EUPEN, a considerable town of Prussia, on the Weeza, in the grand duchy of the Lower Rhine. It was ceded to Prussia by the peace of 1815. The French refugees of the seven- teenth century introduced several important cloth manufactures here, and there are likewise some flourishing tanneries, soap works, and paper- mills. It is four miles E. N. E. of Limburg, and twenty east of Liege.

EUPHEMIA, or St. Euphemia, an ancient sea-port of Naples, seated on a bay, to which it gives name. Fifty miles north-east of Re°-gio Long. 16° 32' E.,

lat. 38° 44' N.

EUPHEMISM, from (ve good, and $tlfll, to say. A representation of good qualities ; a figure in oratory, in which a harsh expression is changed for one less offensive.

EU'PHONY, n. s. 3 Gr. tv^ma, from (Vf

EUPHON'ICAL, adj. 5 well, arid u>vri, the voice. An agreeable or harmonious sound.

EUPHONY, in grammar, an easiness, smooth- ness, and elegance in pronunciation. Quintilian calls euphonia, 'vocalitas;' Scaliger, 'facilis pronunciatio.' Euphonia is properly a kind of figure whereby we suppress a too harsh letter, or convert it into a smoother. There are many examples in all languages.

EUPHORBIA, spurge ; a genus of the trigy- nia order, and dodecandria class of plants : na- tural order thirty-eighth, tricoccae : cos. tetrapeta- lous or pentapetalous, placed on the calyx : CAL. monophyllous and ventricose : CAPS, tricoccous. There are 120 species, of which seven are natives of Great Britain. They are mostly shrubby and herbaceous succulents, frequently armed with thorns, having stalks from ten or twelve inches to as many feet in height, with quadripetalous flowers of a whitish or yellow color. They are easily propagated by cuttings ; but the foreign kinds must always be kept in pots in a stove. If kept dry they may be preserved for several months out of the ground, and then planted, when they will as readily take root as though they had been fresh. The juice of all the species is so acrid, that it corrodes and ulcerates the body wherever it is applied ; so that physicians have seldom ventured to prescribe it internally. Warts, or corns, anointed with the juice, presently disap- pear. A drop of it put into the hollow of an aching tooth, gives relief, like other corrosives, by destroying the nerve. Some people rub it behind the ears that it may blister. Among the foreign species we shall only mention.

1. E. Capensis, a native of the Cape of Good Hope, which supplies the Hottentots with an ingredient for poisoning their arrows. TlieiT'

method of making this pernicious mixture, is by first taking the juice extracted from the euphor- bia, and a kind o-f caterpillar peculiar to another plant, which has much the appearance of a spe- cies of rhus. They mix the animal and vege- table matter, and after drying it they point their arrows with this composition, which is supposed to be the most effectual poison of the whole country. The euphorbia itself is also used for this purpose, by throwing the branches into fountains of water frequented by wild beasts, which, after drinking the water thus poisoned, seldom get 1000 yards from the brink of the fountain before they fall down and expire. This plant grows from about fifteen to twenty feet in height, sending out many branches full of strong spines. The natives cut off as many of the branches as they think necessary for the des- truction of the animals they intend to poison. They generally conduct the water a few yards from the spring into a pit made for the purpose ; after which they put in the euphorbia, and cover the spring, so that the creatures have no choice. No animal escapes which drinks of such water, though the flesh is not injured by the poison.

EUPHORBIUM, a gum exuding from the Eu- phorbia officinarum, is brought from Barbary, in drops of an irregular form ; some of which, upon being broken, are found to contain little thorns, small twigs, flowers, and other vegetable matters : bthers are hollow, without any thing in their cavity : the tears in general are of a pale yellow color externally, somewhat white in the inside : they easily break between the fingers. Lightly applied to the tongue, they affect it with a very sharp biting

taste ; and, upon being held for some time time in the mouth, prove violently acrimonious, inflaming and exulcerating the fauces, &c. This gum is extremely trouble- some to pulverise ; the finer part of the powder, which flies off, affecting the head in a violent manner. The acrimony of this substance is so great as to render it absolutely unfit for any in- ternal use: several correctors have been con- trived to abate its virulence, but the best of them are not to be trusted to : and as there seems to be no real occasion for it, unless for some ex- ternal purposes, we think, with Hoffman and others, that it ought to be expunged from the ca- talogue of internal medicines. It has now no place in the London or Edinburgh Pharmaco- poeia. But it is still retained in most of the foreign ones, and is sometimes used as a sternu- tatory. The following constituents were found in euphorbium by Braconnot : —

Resin Wax

Malate of Lime

Malate of potassa

Water

Woody matter .

Loss

37-0

19-0

20-5

2-0

5-0

13-5

3-0

100-0

EUPHORBUS, a famous Trojan, son of Pan- thous. He was the first who wounded Patroclus, whom Hector killed. He perished by the hand of Menelaus, who hung his shield in the temple

of Juno at Argos. Pythagoras the founder of the doctrine of the metempsychosis or transmi- gration of souls, affirmed that he had been once Euphorbus, and that his soul recollected many exploits which had been done while it animated that Trojan's body. As a proof of his assertion, he showed at first sight the shield of Euphorbus in the temple of Juno.

EUPHORION, a poet and historian, born at Chalcis, in the 126th Olympiad. Suetonius says that Tiberius composed verses in imitation of Euphorion, Rianius, and Barthenius; with whom he was charmed to such a degree, that he ordered their writings and their pictures to be kept in all the public libraries, among the ancient and cele- brated authors.

EUPHRANOR, an eminent ancient sculptor and painter, who flourished about A. A. C. 362. He wrote several volumes on symmetry and the art of coloring, and was the first who signalised himself by representing heroes.

EUPHRASIA, EUPHRASY, or eye-bright, a genus of the angiospermia order, and didynamia class of plants ; natural order fortieth, personatae : CAL. quadrifid and cylindrical : CAPS, bilocular ovato-oblong ; two of the antherae having the base of the one lobe terminated by a small spine. There are eleven species, of which two are na- tives of Britain, viz. E. odontites, and E. oflfici- nalis. This has blue flowers, is a weak astrin- gent, and was formerly much celebrated in dis- orders of the eyes ; but the present practice disregards both its internal and external use. It will not grow but when surrounded by plants taller than itself. Cows, horses, goats, and sheep eat it : swine refuse it.

EU'PHRASY, n. s. Lat. euphnma. The herb eyebright; a plant supposed to clear the sight. Then purged with euphrasy, and rue,

The visual nerve : for he had much to see ;

And from the well of life three drops instilled.

Milton.

EUPHRATES, a river which all the ancient geographers represent as rising in Armenia Major ; but in what particular spot, or in what direction it afterwards shapes its course, they greatly differ. Strabo says it rises in Mount Abus, a part of Mount Taurus ; that it is first found on the north side of Mount Taurus ; and that then running west through Armenia, and striking off to the south, it forces its way through that mountain, and escapes to Syria, when it takes a new bend to Babylonia. On the other hand, Pliny describes it as running from north to south in a right line, till it meets Mount Tau- rus ; placing the springs together with Mount Abus, which inclines to the west on the north of Taurus. Ptolemy strikes a middle course between both, placing the springs of this river to the east as Strabo does ; whence, he says, it runs a long course west before it bends south, and that it rises not from Mount Taurus, but far north of it. He makes it run straight west from its rise, then to turn south spontaneously, without any interposing obstacle, in a manner quite different from Strabo, Mela, and others, who make the Taurus the cause of this turn. The Euphrates branched into two channels at this time, one running through Babylon, and the other through

Seleucia, besides the several artificial cuts made between it and the Tigris about Babylon ; and these cuts or trenches seem to be what the Psalmist calls the rivers of Babylon, on the willows of which the captives hung their harps. It is pro- bable that the Euphrates naturally emptied it- self into the sea at one mouth, before these cuts were made. Pliny, in

stating the distance be- tween the mouths of the Euphrates and the Tigris, says, some made it twenty-five and others seven miles; but that the Euphrates being for a long time back intercepted in its course by cuts made for watering the fields, only the branch called the Pasitigris fell into the sea, the rest of it into the Tigris, and both together into the Per- sian Gulf.

Modern travellers also describe this celebrated iver as rising in the mountains of Armenia, from two principal sources. The first issues from a mountain in the vicinity of the towns of Bayazid and Diadin ; the second is formed by the conflu ence of many streams from the mountains near Erzerum. These two streams, pursuing a wes- terly direction, unite near the town of Kebban in Mount Taurus, when the river flows chiefly to the south-west as far as Semisat. Here it would fall into the Mediterranean, if it were not turned into a south-east course by a high range of mountains in the neighbourhood. The Eu- phrates at Korna, about 130 miles from its mouth, is joined by the Tigris, and those two united streams, forming one of the noblest rivers in the east, fall into the gulf of Persia, about fifty miles south- east of Bassora.

The course of the Euphrates, before joining the Tigris, is about 1400 miles, and, adding 130 miles for the distance of the Tigris from the sea, its whole course will be upwards of 1500 miles. According to captain M. Kinneir, who wrote in 1808 from observation on the spot, the greatest increase of the Euphrates is in January, when it rises twelve perpendicular feet, and it continues to rise and fall till the end of May or the beginning of June. In the driest season it is navigable for boats of considerable burden as far as Shukashu, a village about a day's sail from the confluence of the Tigris. Above this point the tides of the Persian Gulf reach twenty or twenty-five miles, and the river is navigated during six months of the year, by flat-bottomed boats to Hibah. These boats are of the shape of a half moon, the ribs and planks roughly nailed together, and the out- side covered with

bitumen. The rudder is as large as the vessel, or nearly, and they have a mast and a sail. Thus provided they float down the stream, and they are dragged back again against the current. Herodotus mentions a cir- cular sort of boats which were in use in ancient times for navigating the Euphrates ; and boats of the same figure, and made of wicker-work, covered with bitumen, still ply upon this cele- brated stream. In consequence of the periodical rise of the Euphrates from the melting of the snows in spring and summer, artificial canals and lakes were dug by the ancient inhabitants of Asia Minor, for the double purpose of protecting the contiguous plains from inundation, and at the same time of preserving the' superfluous waters for the irrigation of the soil. Of these

is the canal of Pallacopus, which was dug by tha Babylonian kings. This canal had fallen into disrepair; but about the year 1793 it was par- tially cleaned by the nabob of Oude. It is cut from the Euphrates, and that part of it whicli holds water extends to within five miles of the city of Meshed Ali, or Nejiff. The remainder is nearly choked up with sand ; but its course may be still traced to its termination in the Per- sian Gulf. The Bahr Nejiff, or sea of Nejiff, was also a work of great labor, and is of equal anti- quity with the canal of Pallacopus. Captain Kinneir passed through the middle of it in his way from Samarat, or Semisat, and found it dry, with the exception of a few ravines and channels of water, near which the miserable inhabitants rear rice and vegetables. There are other canals, some of which are still in preservation, such as the Kerbela, at the extremity of which is the large and populous town of that name, and the canal of Hie, connecting the Euphrates and the Tigris, and navigable in spring for large boats : but the great works of art for protecting this country against the overflowing streams, and at the same time for preserving the water for fertilising the soil, have fallen into neglect and disrepair. The Euphrates is sometimes represented to flow into the Persian Gulf by a variety of channels

; navi- gators commonly imagining that the seven streams, which fall into the Persian Gulf, all de- rive their origin from the common channel of the Euphrates. This, however, is not so. Only one of these streams is connected with the Euphrates, and this by an artificial canal, by means of which part of its waters flow into the channel of this river. But the great stream of the Euphrates is not divided, and it has no connexion with the other six channels which issue in the Persian Gulf.

EUPOLIS, an Armenian comic poet, who flourished about the 85th Olympiad. He took the freedom of the ancient comedy in lashing the vices of the people. He lost his life in a sea-fight between the Athenians and the Lacedemonians ; and his fate was so much lamented that, after his death, it was enacted, that no poet should serve in the wars.

EURE, a river of France, which rises in the forest of Logny, near Pointgoin, in the depart- ment of Eure and Loire ; passes by Courville, Chartres, Maintenon, Louviers, &c., and falls into the Seine above Pont de 1'Arche.

EURE, a department of France, so named from the river which crosses it; bounded on the north by the department of the Lower Seine ; on the east by that of the Oise ; on the south by those of the Eure and Loire, and the Orne ; and on the west by that of Calvados. It includes part of the late province of Normandy, and 422,000 inhabitants. It is a flat district, divided into the five arron- dissements of Evreux (the capital), Louviers, Bernay, Andelys, and Port Audemen. The cli- mate is very similar to that of England, though not altogether so humid or so changeable. The chief produce is wheat, barley, oats, flax, and hemp ; vines are not cultivated here : the com- mon drink is cyder. The sheep pasturage is exten- sive ; and the number of horses in the departmen* is computed at 30,000. The forest land is com-

puted to cover a surface of 200 000 acres ; and here are several iron mines In the towns are manufactures of woollen, linen, and leather : the broad cloth of Louviers is very superior. Evreux is the capital.

EURE and LOIRE, a department of France, bounded on the north-west by that of the Eure ; on the east by those of the Seine and Oise, and the Loiret ; on the south by those of the Loiret, and the Loire and Cher ; and on the west by those of the Sarte and the One. The rivers Eure and Loire run through it. It contains the ci-devant province of Beauce, which has been called the granary of Paris. This district is also flat, and is divided into the four arrondissements of Char- tres, Nogent le Rotrou, Chateaudun, and Dreux ; its population is 266,000, among whom are 3000 Protestants. The manufactures not important, being confined to coarse woollens, leather, paper, and pins ; the last chiefly made at 1'Aigle. The trade of the department consists in corn, cattle, fruit, and, to a small extent, in wine ; the pastu- rage is very good. Chartres is the capital.

EVREMOND (Charles de St.), a miscella- neous French writer of noble family, was born at Denis le Guast in Normandy in 1613. He was educated for the law at Paris and Caen, but quitted it for the army, where he rose to the rank of captain, and distinguished himself in several battles. When the civil wars of France broke out the king made him a major-general ; but, after the reduction of Guienne, he was sent to the Bastile for satirising Mazarin. On the death of the cardinal, a letter of St. Evremond was dis- covered which gave so much offence to the court, that he would again have been imprisoned, had he not made his retreat to Holland ; from whence he came to England, where Charles II. gave him a pension of £300 a year. He died in London in 1703, and was interred in Westminster Abbey. His works consist of essays, letters, poems, and dramatic pieces, and

have been printed in 2 vols. 4to. and 7 vols. 12mo. There is an English trans- lation of some of them in 2 vols. 8vo.

EVREUX, an ancient town of France, the capital of the department of the Eure. The cathedral is handsome, and the trade consists in corn, cyder, and linen and woollen cloth. It has manufactories of cotton velvets and ticks. It is seated on the Iton, twenty-five miles south of Rouen, and sixty-five north-west of Paris. In the neighbourhood is the noble castle of Na- varre.

EURIPIDES, a celebrated Greek tragic poet, >>orn about A.A.C. 468, in the isle of Salamis, on the day that Xerxes was defeated. He studied rhetoric under Prodicus, ethics under Socrates, and natural philosophy under Anaxagoras ; but, at eighteen years of age, abandoned philosophy, for dramatio poetry. He used to shut himself up in a ca> i to compose his tragedies, which were so universally admired, that several of the soldiers of Nicias, after their defeat in Sicily, purchased their lives and liberties by reciting them ; and Socrates himself set so high a value upon them, that they were the only tragedies he went to see performed. Euripides frequently intersperses through them severe reflections on the fair sex ; whence he was called the woman-

hater. He was, nevertheless, married : but the scandalous lives of his two wives drew upon him the raillery of Aristophanes, and other comic poets; which occasioned him to retire to the court of Archelaus, king of Macedon. Here he was well received, and made, according to Soli- nus, minister of state to that prince. But a few years after, as he was walking in a wood in deep meditation, he accidently met with Archelaus s hounds, and was by them torn in pieces. Arche- laus buried him with great magnificence; and the Athenians were so much afflicted at his death, that the whole city went into mourning. Of ninety-two tragedies, which he composed, only nineteen remain : the most valuable editions of which are those of Aldus, in 1503, 8vo.

; of Plan- tin in 1570, 16mo. ; of Commelin in 1597, 8vo. ; of Paul Stephens in 1604, 4to. ; and of Joshua Barnes in 1694, folio. Wodhull and Potter have translated them into English ; and valuable criti - cal editions of portions of them have been edited by Valckenaer, PORSON, Brunck, and Markland.

EURIPO, or EURIPUS, the celebrated channel which separates the island of Negropont from Livadia. Its greatest width is thirty-five miles ; and at the town of Negropont, where it is crossed by a bridge, it is not much more than twenty paces. This strait presents a phenomenon, occasioned by the irregularity of its tides, which was remarked at a very early period. During the last two days of the moon the course of the water is periodical ; but, when new moon arrives, the water alternately ebbs and flows five, nine, and even twelve or fourteen times in the day. In this place Aristotle has been said to have drowned himself out of chagrin, for not being able to ac- count for its wonders. Euripus afterwards be- came a general name for all straits, where the water is in great motion and agitation. The ancient circuses had their euripi, which were pits or ditches on each side of the course. The term was particularly applied by the Romans to three canals which encompassed the circus on three sides, and which were filled occasionally to represent naumachiae or sea battles. They also called their smaller fountains or canals in their gardens euripi; and their largest, as cascades, &c., niles.

EVRON, a town in the department of the Mayenne, France, containing 4100 inhabitants. Seven miles E.N.E. of Laval, and thirteen S.S.E. of Mayenne.

EUROCLYDON,of twpoc, the east wind, and rXvflwv, a wave, is a species of wind, of which we have an account only in Acts xxvii. 14, and concerning the nature of which critics have been much divided. Bochart, Grotius, Bentley, and others substitute another reading, supported by the Alexandrian MS. and the Vulgate, viz. Eupo- KV\WV, or Euro-aquilo ; but Mr. Bryant defends the common reading, and considers the Eurocly- don, i. e. Ewpoc K\V^O>V, as an east wind that causes a deep sea of vast

inundation. Dr. Bent- ley supposes that the mariners in the ship, the voyage of which is recited in this passage, were Romans; but Mr. Bryant maintains that they were Greeks of Alexandria, and that the ship was an Alexandrian ship employed in the trafhV of carrying corn to Italy : and therefore, that the

mariners had a name in their own language for the particular typhonic or stormy wind here men- tioned. He also shows, from the passage itself, that the tempestuous wind called Euroclydon beat, gar avrijc, upon the island of Crete.

EURO PA, in fabulous history, a daughter of Agenor, king of Phoenicia and Telephassa. Ju- piter became enamoured of her, and to seduce her, assumed the shape of a bull, aud mingled with the herds of Agenor. Europa caressed

the beautiful animal ; and at last had the cou- rage to' sit upon his back. The god retired toward the shore, crossed the sea, and car- ried Europa in safety to Crete ; where, as- suming his original shape, he dec ared his love. The nymph consented, and became mother of Minos, Sarpedon, and Rhadamanthus. After this she married Asterius, king of Crete, who adopted her sons. Some suppose that Europa lived about A.A.C. 1552.

EUROPE.

EUROPE, one of the four general or greater divisions of the world, called by the people of Asia Frankjstan, is bounded on the north by the Frozen, and on the west by the Atlantic Ocean ; on the south by the Mediterranean, which sepa- rates it from Africa ; and on the east by the Ar- chipelago, which divides it in part from Asia; as also by the Black Sea; then by the river Don, till it comes near the river Volga ; then it is parted from Asia by this last, and afterwards by the river Oby. It is

situated between long. 9° 35 W., and 62° 25' E., and between lat. 35° and 72° N.

The origin of the name of this important di- vision of the earth is hid in obscurity. Bochart fancifully derives it from the Phoenician word Ur-appa, signifying ' the land of fair people,' as contrasted with the sable Africans, and tawny Asiatics : all that is with certainty known of this appellation is, that it was applied at an early period to a small district on the northern shores of the Hellespont, whence it spread over new regions, as they became added to those which were previously discovered.

Europe is about 3500 miles in length, from Cape St. Vincent in Portugal, to the Oby in Russia ; and 2700 miles in breadth, from Cape Me- taphan, in the Morea, to the North Cape in Lap- land. Its figure is so irregular, and its outline so indented with seas, bays, and gulfs, that it is difficult to estimate its superficial extent with accuracy, but it has been calculated to contain about 225,000 square geographical leagues, or 2 700,000 square English miles. The population being computed at 185,000,000, there will be 822 inhabitants to each square league, or nearly sixty-nine to a square mile.

In commencing our description of this con- tinent at its southern shores, the great indenting seas of Europe on the north side of the Medi- terranean are the Gulf of Venice or the Adriatic, and the Archipelago or the ancient jEgean Sea. The former separates the shores of Italy from those, of Dalmatia and Albania; the other di- vides Greece from Asia Minor. The Strait of Gallipoli, also called the Dardanelles and Hel- lespont, connects the Archipelago with the Sea of Marmora, which is about ninety miles in length, and forty-five in breadth. The Strait of Constantinople, the ancient Thracian Bosphorus, joins the Sea of Marmora, and the EUXINE, or Black Sea, which see. Its northern shore is united by the Strait of Caffa the Cimmerian Bosphorus of the ancients, with the Sea of AZOF,

which is nearly 200 miles long and 100 broad. See

that article.

The Bay of Biscay forms the large north-west opening between the shores of Spain and the south-western coast of France : and with the op- posite approach of the Mediterranean, peninsu- lates the south-western portion of this continent.

Further north, the British Channel separates England from France, forming a communication between the Atlantic and the German Ocean, or British Sea; and terminating to the, north-west in St. George's Channel, or the Irish Sea, flowing between England, Ireland, and the west of Scut- land.

' According to the observations of a gentleman conversant in marine affairs,' says a writer in the Edinburgh Philosophical Journal, Jan. 1825, ' there is a remarkable difference in the appear- ance, and also in the destructive effects, of the waves of the British Seas, compared with those of the Western Ocean. We doubt not that many will he surprised to be told, that the waves of the Bay of Biscay do not seem to be so destruc- tive, in proportion to their great extent and weight, as those of our own seas. This appears to be owing to the slow pace at which these oceanic billows roll along in majestic style; while the surges of the British seas are quick in their motion, and impinge upon an obstacle with violent impulse. In evidence of the fact, it may be remarked, that the great platform of the Tour de Corduan, situate in the Bay of Biscay, at the entrance of the Garonne, is only about eighteen feet above the level of the sunken rock on which this magnificent structure is erected ; and that the top of the parapet, or wall of circumvalla- tion, which includes the store-rooms and other offices of the light-house, does not exceed twelve feet above the platform. Now, although the Corduan Rock is of much greater extent than the Eddystone or the Bell Rock, yet, judging from the appearance of things, as represented in the vignette to Mr. Smeaton's Narrative of the Eddystone Light-house, and the frontispiece to Mr. Stevenson's Account of the Bell Rock Light- house, in both of which the seas are

represented as running up the building to the height of near 100 feet, we are led to apprehend, that, under like circumstances, the platform at Corduan would often be completely deluged with water, and that the offices erected upon it would be rendered wholly untenantable. And such would certainly be the case, but for the less velocity of the waves of the Bay of Biscay : occasionally

st-us and sprays do pass over the parapet-wall in very stormy weather, but not with such violence as to occasion material inconvenience to the in- habitants of the Tour de Corduan.'

In about the fifty-seventh degree of north lati- tude, the Cattegat conducts us into the Baltic, which, after increasing in width, and stretching towards the north-east through about five degrees of latitude, separates into two branches ; the Gulf of Finland, stretching eastwards and ter- minating near St. Petersburg, about the thirtieth degree of east longitude ; and the Gulf of Both- nia, running northward beyond the sixty-sixth parallel. The length of this sea, therefore, ex- ceeds 600 miles, while its breadth varies from about eighty to 150 miles, and the surface has been computed at 10,000 square leagues. See BALTIC. The Baltic is generally frozen annually for three months, so as not only to prevent navi- gation, but frequently to admit of a passage over the ice, from Sweden to Finland. When Mr. James crossed from one coast to the other in Februaiy, 1814, he describes his road as 'an undeviating line from place to place, no obstacle presenting itself; we passed over the fields, through the woods, across the ice ; hill and dale, land and water, were all alike : sometimes we traversed the ro^-ky channel of a deep-bedded river, at other times wandered among the inlets of a lake, at others again steered our way be- tween the islands, over the sea.' In the southern part the ice usually breaks up in April ; but the Gulfs of

Bothnia and Finland seldom clear before May is advanced.

A controversy took place among the natural philosophers of the north of Europe, about the middle of the last century, respecting the alleged gradual lowering of the level of the sea in general, and of the Baltic Sea in particular. Celsius was the first who introduced this idea to notice. He generalised it, by applying it to all the planets, and was supported by the authority of the celebrated Linne. It was soon perceived, that the point could never be settled by mere discus- sion, and that facts alone could lead to any cer- tain result. Observation was therefore had re- course to; and the results of investigations, undertaken for this purpose, are now beginning to be collected in that part of the world.

In the course of 1820, and 1821, Mr. Brun- crona, assisted by the officers of the pilotage establishment, and other qualified persons, undertook the examination of all the authentic measures that had been established upon the west coast of the Baltic during the last half century. The results of this examination are given in a short but very interesting memoir inserted in the Swedish Transactions for 1823. The following tabie indicates the degree to which the level of this sea has fallen during the last forty years, on the coast of Sweden, at various latitudes. It is proper to remark that, in some of the places ob- served, the measures were much older, and in some others much more recent, than the period of forty years. In both cases the change of level that must have been effected, during this period, has been estimated by calculating the mean annual depression furnished by the observations

Latitude. East Coast.

Fall of Surface in forty years, in feet.

Latitude. East Coast.

Fall of Surface in forty years, in feet.

Latitude. East Coast.

Fall of Surface in forty years, in feet.

63° 59'

1-50

59° 17'

2-17

56° 10'

o-oo

2-50

58 44

1-00

56 10

o-oo

0-50

58 42

1-08

55 53

o-oo

61 43 61 37

2-50 2-83

58 45 58 35

1-17 2-00

South-West Coast.

61 32

2-50

59 28

0-07

55 23

o-oo

61 45

2-50

58 11

0-83

55 22

o-oo

60 11

2-33

58 8

1-00

57 21

o-oo

59 46

0-17

57 50

1-00

57 53

1-00

59 46

2-00

56 41

0-41

Of the facts collected, in the course of this in- restigation, the following may be mentioned as tending to support the opinion of a fall of level.

1. It is generally believed, among the pilots of the Baltic, that the sea has become shallower along the course which vessels ordinarily follow; but it is added, that this alteration is more sen- sible in the places where the tide collects sand, detached pebbles, and sea-weed, than in those where the bottom is composed of rocks. The same observation has been made in the neigh- bourhood of some large towns and fisheries ; for example, a hydrographic chart, made in 1771, gives six fathoms for the mean depth of the sea opposite the harbour of Landskrona, whereas, in 1817, the sounding line scarcely gave five fathoms at the same point.

2. According to the oldest and most ex- perienced pilots, the straits, which separate the numerous islets scattered along the coast of Sweden, from Haarparanda to the frontiers of Norway, received vessels that drew ten feet of water; now they are not practicable for boats that draw more than two or three feet.

3. The pilots further affirm, that, along the whole coast of Bothnia, the depth of the water undergoes a diminution, which becomes sensible every ten years, in certain places where the bot- tom is composed of rocks. Several other parts of the Baltic may be cited, in which a similar change has been remarked.

Mr. C. P. Hallstrom, in an Appendix to Mr. Bruncrona's Memoir, gives the following table of the diminution observed in the depth of the waters of the Gulf of Bothnia.

EUROPE.

Places.

Mean marked in.

Heights of the water re-ob- served in

Fall beneath the original mark in feet.

Num- ber of years.

Fall of the water in 100 years in feet.

Raholem, parish of Lower Kalix,

1770

1750

2-05

50

4-10

Stor Rebben, parish of Pitea,

1751

1775 1785

2-49 1-70

75 34

4-32 5-00

Ratan, parish of Bygdea,

1749

1796 1785

1-90 2-70

45 36

4–22 4–72

1795

2–50

46

5–43

1819

2–60

70

3–47

1774

1785

0–55

11

5–00

1795

1–16

21

5–52

1819

1–60

45

3–57

Rbnnskat, on the coast of Wasa,

1795 1755

1819 1797

0–65 1–70

24 42

2–71

4–05

Wargon, on the coast of Wasa,

1755

1821 1785

2–87 1–45

65 30

4-35 4-83

1797

1-69

42

4-02

Logfrundet, near Sefle,

1731

1821 1785

2-87 2-90

65 54

4-35 5-37

1796

2-17

65

3-34

Ulfon, in Angerraanland.

1795

1822

1-58

27

5-85

It is not demonstrated that the numbers of the last column represent exactly the lowering of the water in a century ; for it has not yet been suf- ficiently determined, if this lowering be uniform, or if it vary at different periods, and if it depend

upon some local circumstance, upon the climate, or upon the state of the atmosphere. Nor is it properly established that this lowering, which becomes less perceptible from the north of the Baltic, until it disappears entirely at the southern extremity, follows precisely the same law of di- minution as the latitude. It appears to be uni- form in the whole extent of the Gulf of Bothnia, and it rises about four feet and a quarter in that region. At Calmar, (lat. 57° 50′) it is only two feet, but it is not yet known whether it decreases in a regular manner between these two places. Some authors consider the facts related by Messrs. Bruncrona and Hallstrom, as deciding the ques- tion in favor of those who believe in a lowering of the level of the Baltic.

The north of Europe, is encompassed by the North Sea, or Arctic Ocean, a storehouse of in- calculable masses of ice : yet, hence proceed with great general regularity the innumerable shoals of fish, particularly herrings, which arrive continually on the British shores in April and May. Their progress is marked by a rippling and peculiar brightness of the water, which fre- quently extends for miles together, and attended (to a certain latitude at least) by the whale, the shark, and other voracious enemies of these tribes, and accompanied by prodigious flights of sea-fowls : — Mr. Pennant supposes that mil- lions of these herrings regain the Arctic Ocean, and deposit their spawn about the month of October.

North of Russia, a vast gulf, called the White Sea, indents the upper part of this continent, and extends through several degrees of latitude to the south. It is also blocked up with ice during several months in the year ; and much less vi- sited sine* the commerce of Archangel, its prin-

cipal port, has been diverted to St. Petersburgh. It contains several islands.

Following the northern shores of the Medi- terranean and its adjacent seas, and thence proceeding through

the Strait of Gibraltar to .the Frozen Ocean, the following are the chief peninsulas of Europe, in the order in which they occur.

1. The Crimea, between the Black Sea and the Sea of Azof.

2. Greece, between the Archipelago and the Mediterranean. This portion of Europe is ter- minated by the Morea, the ancient Peloponne- sus, which forms a second peninsula, connected with the former by the isthmus of Corinth.

3. Italy, between the Mediterranean Sea and the Gulf of Venice.

4. Spain and Portugal, comprehended by the Mediterranean, the Atlantic, and the Bay of Biscay.

5. Jutland, between the German Ocean and the Cattegat.

6. The country comprising Norway, Sweden, and Lapland, between the Baltic, the Cattegat, the North Sea, the Frozen Ocean, and the White Sea. This portion embraces the most northern point of Europe.

The insular portions or appendages of Europe may be thus enumerated : — The Azores, situated about thirteen degrees west of Portugal, are the farthest from its shores. In the Mediterranean the Balearic and Pityuse Isles first present them- selves, the principal of which are those of Ma- jorca, Minorca and Ivica. Eastward are Corsica and Sardinia, with Elba, Sicily, Malta, and Goza. Opposite the western coast of Greece are Corfu, Cephalonia, and Zante ; with Candia still further to the south. Amid the multiplicity of islands in the Archipelago, the principal are Negropont, Mytilene, Scio, Samos, Cos, and Rhodes ; with Cyprus near the southern coast of Anatolia. Passing from the Mediterranean to the North Sea and the Baltic, we have the extensive islands

of Great Britain and Ireland, and their numerous dependencies, the Hebrides, Orkneys, and Shet- land Isles ; with those of Jersey and Guernsey, near the coast of France. North-west of Shet- land lie the Faroe Islands, and, still farther to- wards the Arctic circle, the large island of Ice- land, the ultima Thule as it has been supposed of the ancients. The coast of Norway is fur- nished with numerous islands ; the only cluster which here deserves notice, is the Loffoden Isles, situated between the polar circle and the seven- tieth degree of latitude. Beyond the northern extremity of Europe, and near the eastern enhance of the White Sea, is the Island of Colguef ; still fuither to the east that of Waygait. The large islands of Nova Zembla are situated opposite the north-east coast of European Russia, and appear like a continuation of the Uralian Mountain range. Still further north, and locked up in the ice of the Arctic Ocean, lie the dreary and de- solate islands of Spitzbergeir, within ten degrees of the pole. Within the Baltic are the Islands of Funen, Zealand, and several smaller ones. Rugeii, near the southern shore, Bornholm, north-east of this last, with Oland and Gothland, near the Swedish coast; Osel and Dago oppo- site the entrance of the Gulf of Finland ; and Aland, with its attendant group, forming a belt across that of Bothnia.

The next grand distinction of this, as of the other great portions of the globe, is into moun- tains and plains ; the former being here some- times detached, but more generally in groups or chains, resting on an elevated base. Mr. Jame- son gives the following perspicuous view of the high and low lands of Europe :—

In Europe we find but two high lands and one low land. The one is the great European or Southern, the other the Scandinavian or Nor- thern. The one has its middle point in Switzer- land, in the Tyrol, and in the Alps of Savoy. Hence it passes through three-fourths of France, traverses the whole of Portugal

and Spain, in- cludes nearly two-thirds of Germany, passes through the greater part of Italy, and also part of Hungary and Turkey, and terminates on the bor- ders of the Black Sea. The course of this high land determines that of the great low land. Saxony lies nearly on the border of this low land or plain. It passes through the north part of Saxony, to the east or Baltic Sea. It also passes by the foot of the Rocky Mountains, through the upper part of Westphalia, and fur- ther through the whole of Holland, the Nether- lands, and a small part of France; it even reaches the east coast of this island. It extends very considerably towards the north, including in its course Prussia, Poland, and nearly all Russia in Europe, and reaches to the Uralian Moun- tains, including the greater part of Moldavia. The other high land rises in Norway and Sweden, comprehends a portion of Russia, and extends with some interruption to the Uralian Moun- tains.

The two grand declivities, it will easily be conceived, are subdivided into others ; and these form the basins of all the large European rivers.

Again proceeding along the northern shores of the Mediterranean, we find —

1 . The Ebro, in the eastern part of the Spanish Peninsula.

2. The Rhone, which traverses the lake of Geneva, and falls into the Mediterranean.

3. The Po, discharging its waters into t'ae gulf of Venice.

The Italian Peninsula is intersected by the Appennines, by which ite breadth is too muc \ contracted to allow of large rivers.

4. The Marissa, which falls into the Archi- pelago.

Coasting the Black Sea along its northern shore, we meet with —

«' S6 SanUl,>e' * Considerable rivers, fall-

6. The Dniester, £ . h Black ^

7. The Dnieper, >

8. The Don, which terminates in the sea of Azof.

9. The Kuban, flowing into both the sea of Azof, and the Black Sea.

10. The Volga, terminating in the Caspian Sea.
Between the straits of Gibraltar and the north

of Europe, are —

11. The Guadal quiver, ~\ Having their sources

12. The Guadiana, { in the great western

13. TheTagus, for Spanish Penin-

14. The Douro, ./sula.

15. The Garonne,) Which empty themselves

16. The Loire, J into the bay of Biscay.

17. The Seine, falling into the English Chan- nel.

Jo' Se whin6' 7 A11 terminating in the

19. I he vVeser, > /-,

20. The Elbe, 3 German Ocean'

The mountains of the Northern Peninsula, be- tween the Cattegat and the North Cape, are too near the shore to allow a course for any large rivers. The Frozen Ocean receives no extensive river between that cape and the gulf of Lapland, or White Sea. We no%v arrive at —

21. The Dwina, which' falls into the White Sea.

22. The Petshora, terminating in the Arctic Ocean.

On entering the Baltic, we meet, along its southern coast, with —

23. The Oder, } The two principal rivers

24. The Vistula, J of the Prussian dominions.

25. The Memel, the upper part of which is called the Niemen.

26. The Duna, which falls into the gult of Riga.

27. The Narva, ? Both entering the gulf of

28. The Neva, \ Finland.

These last have only a short course ; the one connects the gulf of Finland with lake Peypus, the other, the same gulf with lake Ladoga ; and both lakes receive rivers of considerable magni- tude.

In the northern part of the Baltic, are —

29. The Kemi, } Having their rise in the

30. The Tornea, 5 mountains of Laplaid, and falling into the gulf of Bothnia.

The Danube is the largest river that has its entire course in Europe. If we consider its length (about 1800 miles) to consist of 100 parU,

E U R

the following will be the proportion of the other chief rivers of Europe.

Danube

100

Wolga (partly in Asia)

130

Dneiper

72

Don

69

Rhine

49

Elbe . .

42

Vistula .

41

Loire

37

Tagus

32

Oder

31

Rhone

30

Seine

23

Po ...

21

Tiber

10

Thames .

9

OPE.

The Alps, as a distinct mountain range, have already engaged our attention at considerable length; see ALPS and BLANC, MOUNT. In the latter article we have given a sketch of the modern ascent of the mountain, (the highest in Europe), and concluded with the unsuccessful at- tempt of Mr. Domford and his friends to reach the summit] in 1820. We have now the plea- sure to add, that in 1822 an English gentleman, Mr. Clissold, accomplished this arduous task. The following account of his expedition ap- peared hi the Bibliotheque Universelle of Sep- tember in that year.

SIR,

' Chamouny, August 27, 1822.

You have probably heard of the success of my ascent of Mont Blanc, of which I shall communicate to you some particulars. I left Chamouny, where I remained fifteen days in ex- pectation of settled weather, on Sunday, the 18th, at half past ten P. M., with six chosen guides, one of whom was provided with a lan- tern. Each of these guides? carried a weight of twenty pounds in provisions and objects of pre- caution for the ascent. (Mr. Clissold, either with the design of trying his strength, or with the *iew of inspiring the guides with confidence, carried one of these loads during a considerable part of the ascent of the mountain De la Cote.) We ascended, as is usually done, by the moun- tain called De la Cote, and reached the summit of it at half past three in the morning. After a short halt, we entered, at four o'clock, on the Glacier ; and, having crossed it without accident, reached, at half past seven, the rocks called the Grands Mulcts, where preceding travellers have generally made arrangements for passing the night. My plan was different : I was ambitious to reach the summit the same day, and to re- main there during the night, in order to see the day-break on the following morning. We, therefore, continued our march, the most difficult part of which was in the neighbourhood of

these same rocks, where we had to climb obliquely up a very steep slope of ice, inclined about 45°, in which we were obliged to cut with a hatchet a number of steps, the missing of one of which would have been certain death ; for this slope terminated at an enormous cleft. This passage was still worse wher we came down again. We

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quitted the Grands Mulcts at nine o'clock, and reached at two the Grand Plateau, near the Dome du Goute". We were in the regions of those masses of snow, which are formed into enormous parallelopipedons, called Seracs, Thence, ascending to the left, we from time to time proceeded along the edge of the clefts, one of which was perhaps the grave of the victims of 1820. All the guides, excepting P. M. Favret, and myself, were more or less incommoded by the rarefaction of the air. Three of them, in particular, who ascended Mont Blanc for the first time, lost their strength to such a degree that they considerably delayed our progress. If it had not been imprudent to separate, I should certainly have reached the summit before night. We arrived about seven in the evening at the Petit Mulet, a rock situated above the Rocher Rouge, the nearest to the top of all those that are seen from Chamouny. We had reached it at half past six. The Petit Mulet being higher, and to the left, is not visible from below. As we had not time to reach the summit before night, we descended again to the Roche Rouge, near which we made a pit in the snow, four feet deep, five broad, and six long. We placed at the bottom some pieces of wood, on which we spread a rather thin covering, on which we all seven lay down, covered with a slight sheet, which was by no means sufficiently large for the purpose. Some blasts of wind, which now and then blew into our faces some of the light snow drifted from the surface, wns a bad omen of the fate that awaited us if the wind had risen. We slept, however, about four hours. We could not observe the thermometer for want of light ; but the night was cold enough to produce ice in a bottle of Hermitage wine, and thoroughly to

freeze some lemons among our provisions. The right foot of one of my guides (David Coutet) was frozen, and also the extremities of my own fingers and toes. But these accidents were at- tended with no bad consequences. We left our cold couch at four o'clock in the morning. The day was .beginning to break, and the first rays of the dawn gave a silver tinge to the summits, from which we were not far distant. In pro- portion as the sun approached the horizon, the tint changed, and became entirely golden when he rose. It formed the most striking contrast with the nearly black color of the sky, from which it seemed to be detached. All the diffi- culties were now surmounted : we sunk but little in the snow, and now and then halted for a short time to take breath. We soon came to the Petit Mulet which we had visited the day before ; and at half past five we were on the summit. We began by making the signals agreed on with our friends in the plain, who easily distinguished them.

' This summit is not so limited as it seems to be at a distance. It forms a small plain, nearly horizontal, about 200 feet fall, which is in th« shape of a triangle, the base of which is towards Chamouny ; one side is towards the Alice Blanche, and the other towards the passage ot Bon-homme. It took roe four minutes to walk along the perpendicular drawn from the apex of the triangle to the base.

' The sky was without clouds ; the sun, which had risen below our horizon, deluged with light the region from which it seemed to issue, and in the direction of which we could distinguish nothing. Every where else we perceived a vast number of summits, some covered with shining ice, others more or less rent and threatening : others, again, of roundish forms, and covered with pasture. Jura

bounded the horizon in the north-west ; more to the north we saw the lake, but not Geneva. To the south-east the eye pe- netrated beyond the Plains of Lombardy, as far as the Appennines, which bounded the horizon in the form of a blue line, or of the dense fog of a winter's morning. The sun, both at setting the preceding evening, and at rising in the morning, seemed more or less enveloped in this vapor. I had brought no instrument with me but a ther mometer. At sun-set the day before, near the Rocher Rouge, it was at 26° Fahrenheit. We forgot to observe it when we set out in the morning ; but Coutet, who is used to make ob- servations at great heights, thinks that the cold exceeds 18° Fahrenheit. But on the summit at eight o'clock, at the Grands Mulcts, the day be- fore, at nine, and the Grand Plateau, the same day, at three ; lastly, at the Grands Mulcts the next day (Tuesday, about three in the afternoon) ; at all these stations the thermometer observed by Coutet, and one at four or five feet from the ground, stood at 70° Fahrenheit.

' During our stay on this singular belvedere, some of the guides picked up specimens of the highest rocks near the summit, which I brought along with me. After stopping three hours on the summit, where I felt myself very comfortable, except that I had lost my appetite since leaving the Grands Mulcts, though the guides had pre- served theirs, we set out for the purpose of de- scending. It was half-past eight o'clock. At eleven, we came to the Grand Plateau, and at half-past one to the Grands Mulcts. When we arrived there, we heard something like the rol- ling of thunder, which was nothing but the noise of an enormous avalanche, which was seen, from the Col de Balme, to cover a part of the space which we had crossed in our descent. A few hours sooner, and we should have all been enve- loped and destroyed.

' We quitted the Grands Mulcts at three o'clock, and at half-past three were beyond the region of the ice. We arrived at the priory of Chamouny at half-past seven, after an absence of forty-five hours. We there heard that two English ladies, Mrs. and Miss

Campbell, had passed the Col du Geant, two or three hours before we reached the Petit Mulct, and that while we were near that rock, they were de- scending at Cormayeur. They had left Chau- mony on Sunday, and spent the night at the foot of the rocks of Tacul. In consequence of the ignorance of their guides, they met with more difficulties than I experienced. They are re- solved to attempt, next year or the year follow- ing, the ascent of Mont Blanc.

' I owe so much of my success to Joseph Marie Coutet, that I wish to present him with a portable barometer, made by vour excellent ar- tist M. Gourdon, and I beg that you will endea-

vour to obtain it for him as soon as possible. I am much indebted to you for having procured me the acquaintance of M. De Saussure, an?1 the inspection of the shoes which his late father wore at the time of his ascent. I got mine made upon the very same plan, and they enabled me to cross rapidly the Glacier of Boissons, and to pass where the guides could not follow me. I walked, indeed, with these shoes upon the hard- est ice, as if I had been upon the solid ground. These shoes have the soles sufficiently thick to receive nails of steel, cut with a square point, and the other end of which has a screw, which is fixed in the leather, on which rests the bases of the pyramid, which forms the head of the nail. The steel is tempered, and brought back to a straw color, which leaves it almost all its hardness, and renders it less liable to break.

' The following are the names of my guides : Joseph Marie Coutet, the chief; this was his sixth ascent. David Coutet, his brother; this was his fourth ascent. Pierre Marie Favret, the strongest of them all; tl.is was his third ascent; his father formerly ascended with Saussure. Jacques Coutet, another brother of Joseph ; J . Baptiste Simon; Matthieu Bossnett; this was their first ascent.'

Note by Professor Pictet on the specimens from Mont Blanc. — Mr. Clissold has had the goodness to show

us his specimens, and give us duplicates of the most interesting.

No. 1 is the fragment of a rock in situ, nearest the summit that is the highest point in F,urope. It is an amorphous rock, in which feldspar pre- dominates, mixed with a little quartz. It is yellow here and there with oxide of iron.

No. 2 is a specimen of those rocks with vi- treous bubbles on the surface, which are com- monly found on the Aiguille of Goute, and of which Mr. CHssold has brought a great number from the summit of Mont Blanc. The one in question is composed of a mass of black amphi- bole (hornblende), almost pure, to which adheres a distinct crystal of feldspar. At the place where the two substances come in contact, are seen three or four globules of black glass, one of which is about a line and a half in diameter, and from this runs a slight groove, excavated out of the feldspar portion of the stone, and in which there are small globules of black glass, an effect which seems to confirm the opinion of those who attribute these fusions to lightning.

No. 3 is a small specimen of the same kind of rock, but in which the feldspar is more dissemi- nated. Two faces of the stone are wholly co- vered with microscopic vitreous globules, and one of its two faces, seen with a microscope, appears entirely covered with a varnish arising from fusion.

No. 4 is a fragment of rock of the Grands Mu- lcts, covered with small crystals of adularia, in- termixed with amianthus.

Mr. Clissold, we understand, means to de- posit the greater part of the specimens in the British Museum, and in that of the Geological Society.

The Carpathian and Sudetic chain, which with the Erzegebirge and Boehmerwald, may be con- sidered as forming one continued Alpine range

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in the north of Europe, will require some farther notice than we have bestowed upon it. Its length from the point where it starts from the Danube in Hungary, to the point where it strikes the same river in Bavaria, is about 1200 miles, exclusive of the transverse branches which sepa- rate Moravia from Bohemia and Hungary. The declivities of this range are steepest on the south side, and the elevations are lowest on the west: increasing generally as we advance eastward, till we come to the sources of the Thiess in the north of Hungary, after which they decline. The Fichtelberg, at the westmost point of the chain, is 4030 feet high ; Schnekoppe, the highest of the Sudetic mountains, is 5280 feet ; and Lomnitz in Hungary, the loftiest of this whole range, is 8460 feet. None of these mountains are covered with perpetual snow, the inferior limit of which, ac- cording to Wahlenberg, is about sixty feet above the summit of Lomnitz. The most elevated parts consist of primitive rock; but corn and fruit trees are said to grow at a greater height upon them than upon the Alps of the south.

The Scandinavia of the ancients is divided from north to south by an extensive mountain chain, called the Scandinavian Alps and Norwe-

fian Mountains: they separate Norway from weden. These commence about the fifty-ninth degree of latitude, and spread nearly ten degrees towards the north. The highest summits are in- ferior in elevation to those of the Pyrenees and perhaps to those of the Carpathian ridge; but they are clothed with the terrific appendages of perpetual winter. Forests of pine adorn their sides to a considerable height, and furnish inex- haustible stores of valuable timber for the south- ern countries of Europe. They also yield mar- ble, iron, copper, and other useful minerals.

For an account of the APPENNINES, see that ar- ticle.

The Ural mountains, are an almost unknown ridge, extending from the fiftieth to the sixty- seventh degree of latitude, and constituting the boundary between Europe and Asia: they are more than 1200 miles in length, and for the greater part in Asia. The loftiest summits do not reach 5000 feet. The people of the neigh- bourhood are said to denominate this ridge Semenoi Poias, the Girdle of the World. The greater part is covered with forests, and the cen- tral portions abound in valuable ores ; but the richest mines are on the Asiatic side.

While volcanoes occur in the New World throughout the heart of its mighty continents, they are found chiefly in the islands and penin- sular extremities of the Old World. Mr. Jame- son gives the following comparative estimate of the volcanoes of the globe :

Continent of Europe ... 1 European Islands . • .12
Continent of Asia 8

Asiatic Islands . . • .58 Continent of America . .97
American Islands . . .19 The chief volcanoes of Europe are Vesuvius, jEtna, Hecla, and others on the island of Ice- land, and Stromboli. Earthquakes are phenome- na which seem intimately connected with the volcano: their principal range is in volcanic

countries, though less remarkably in the imme- diate vicinity of the eruption. They occur, on an immensely destructive scale, we know, over a great part of the continent of South America. Violent tremor of the earth, the overthrow and sometimes the entire swallowing up of the objects on its surface, and the rushing in of the sea, are the well known symptoms of this alarming con- vulsion. The finest countries in the south of Europe are subject to its ravages. Calabria, in 1783, was entirely laid waste, and its aspect com- pletely changed ; and the cities of Messina and Lisbon have, at different periods, been nearly swallowed up. In Britain they have repeatedly been felt, but never to such an extent as to oc- casion serious damage.

The greater part of Europe, lying within tie

temperate zone, is exempt from the extremes o heat and cold, which are experienced on the other continents; In some of its northern states, indeed, every thing appears bound in icy chains, and the mountain ranges are covered with one wide expanse of snow, during several months o* the year : but its central and principal parts are temperate and pleasant ; while its southern tracts enjoy a serene sky, and a climate more pure and delightful than any other region of equal extent. Two peculiarities indeed distinguish the climate of Europe : it exhibits a higher mean tempera- ture than any of the other great divisions of the world, in corresponding latitudes ; and it is not subject to such violent extremes of heat and cold. It is habitable at a higher latitude by 12° or 14° than either Asia or America. These advantages, while attributable chiefly to its numerous inland seas and waters, arise partly also, according to Humboldt, from its situation at the western extremity of the greatest range of dryland on the surface of the globe ; the western sides of all continents being warmer than the eastern,- accord- ing to this accurate observer. Only a very small portion of this continent, therefore, is uninhabit- able from cold, and it nowhere has to complain of excessive heat; at least of no such heat as the neighbouring continents of Africa and Asia. The mean temperature at its southern extremity, in lat. 36°, is about 66° of Fahrenheit ; and at Cape North, in the latitude of 71°, where the mean temperature is 32°, the cold is not greater than in the latitudes of 55° or 56° on the east coasts of Asia and America. The following table, taken from Humboldt's Memoir on the Distribu- tion of Heat (abridged in Dr. Thomson's Annals of Philosophy, XI. 188), shows the difference in temperature between Europe and the eastern shores of Asia and America, at the parallel of 40° : at the parallel of 60° the difference is much greater : —

Lat.

Mean Temperature

Of the Year.

Of Three

Winter Months.

Of Three Summer

Month?.

Rome Pekin New York

41–35 39–54 40–40

60–4 55–2 538

45–8 26–8 29–8

75–2 826 79–2

676

EUROPE.

No portion of the world of equal extent is richer in minerals. All the metals except platina are found in Europe ; and the useful metals, iron, copper, lead, and tin, in great abundance. Gold occurs in the three forms called by Werner yel- low, grayish yellow, and electrum, or argenti- ferous gold, in different parts, widely diffused, and in small quantity. Spain and Greece were both famous for this metal in the ancient world. At present it is wrought only in the Alps, the Carpathian, and Ural mountains, and, we believe, the Dofrenis.

The most valuable silver mines in Europe are those situated in various parts of the Austrian dominions. Others of less value are found in Saxony, and other parts of Germany, in Russia, and in Sweden. Different parts of Siberia also produce silver : and a vein of considerable value was some time ago worked in the parish of Alva, in Stirlingshire ; several veins occur in different parts of Cornwall.

Humboldt gives the following table, here reduced into sterling money, of the produce of the gold and silver mines of different quarters of the world : —

Gold.

Silver.

Total.

Europe Northern Asia America

£

178,697 74,124 2,382,315

£

468,177 192,966 7,071,830

£

646,874 267,090 9,454,145

2,635,136

7,732,973

10,368,109

This, however, does not include the gold of Africa, and the Asiatic islands, which perhaps does not fall much short of £1,000,000.

The most extensive iron mines in the world are found in Europe : and are those of the clay and iron-stone strata of Great Britain and France. Sweden also contains large mines of magnetic 'ron-stone ; which are particularly suited for bar iron, and afford an invaluable export. Extensive iron-mines are likewise found in Russia, in Ger- many, particularly in Austria, and in Spain. The following table is given by professor Jameson, of the comparative produce of iron mines in differ- ent parts of the world : —

Quintals.

1. Great Britain . . . 5,000,000

2. France 4,500,000

3. Russia 1,675,679

4. Sweden 1,500,000

5. Austria 1,010,400

6. United States, without including

Louisiana and the Indian

territory 480,000

7. Prussia, after the treaty of Tilsit 322,053

8. Kingdom of Westphalia in 1808 187,411

9. Spain 180,000

10. Danish States . . . 135,000

11. Bavaria, and the Tyrol . . 110,000

12. Kingdom of Saxony . . 80,000

Copper, the next most important metal, occurs also in large quantity in Europe. The most copious mines are in England, particularly in Cornwall. It occurs also in Norway, Swe- den, Germany, particularly in the Austrian domin- ions, in Russia, and in the whole of Siberia. Mr. Jameson estimates the produce of Britain at 200,000 quintals ; that of the rest of Europe at about 180,000. Lead appears also in a con- siderable number of ores, as well as combined with arsenic, phosphoric, and sulphuric acids. It too is found most abundantly in Great Britain, particularly at Leadhills and Wanlockhead in Scotland. Mr. Jameson calculates its annual produce in Britain at 250,000 quintals ; in the rest of Europe, chiefly France, Germany, and Spain, at 230,000. No large quantity is found in any of the other continents. Tin is of still more limited occurrence. In Europe, it is found only in Cornwall (by much its largest repository), in the Saxon Erzgebirge, and in Spanish Galicia. Mercury occurs native, amalgamated with sil- ver, in various ores, but principally combined with sulphur in the form of cinnabar. There are no

mines of any great importance in the world, except those of Almaden in Spain, Idria in Car niola, and Guancavelica in Peru. Those o. Idria form a stratum at the depth of 7000 feet, having a computed length of 3000, and a breadth of 2400 feet. The subterraneous excavations consist of nine horizontal galleries, which are entered from descending shafts, besides a descent partly by a stair-case, and partly by a ladder, from the interior of a large building in the town. The annual produce of these mines is about 360,000 pounds.

Great Britain and France supply the richest mines of coal in the world. In the north-west of England, and both sides of the south of Scot- land, it is particularly abundant. (See COAL.) It is found also in Ireland, in the Netherlands, in about a fourth part of the French territory (where it has lately been made more pro- ductive), and occurs more sparingly in Saxony, Hanover, Denmark, Sweden, Russia, Hungary. Bohemia, Moravia, Silesia, Bavaria, Austria, Franconia, Westphalia, Suabia, Catalonia, and some other parts of Spain, in Portugal, and in Sardinia.

In Poland and on the north side of the Carpa- thian mountains are the most productive salt mines of Europe ; those in Salzburg on the north side of the Alps, are also considerable. Mineral salt is found in Transylvania and Hungary; in Valentia, Navarre, and Catalonia, in Spain; in Cheshire, in England ; and in Bavaria and Swit- zerland. Salt springs are numerous along the sides of primitive mountains in most countries of Europe. The inferior minerals, alum, anti- mony, cobalt, manganese, sulphur, and zinc, also occur throughout this continent.

The productions of the soil in Europe, though not often reaching the luxuriance of the tropics, are abundant in comfort and usefulness to man. Here are raised wheat and barley, the bases of the most nutritive bread, in their most perfect state : the vine ; the olive ; the mulberry ; and even the sugar-cane: — cotton ; the banana, orange, citron, fig, pomegranate, and date also

grow in the south of Europe. Peaches and apricots succeed with care as far north only as the latitude of 50° in Russia ; melons as far as 52°. The plum and the cherry grow wild as far north as 55°, but are carried farther by cultivation. (Storch, II, 302, 304, 308). Fruit trees and the oak terminate in Sweden, at Geffle, in the latitude of 61° ; but the pine and the birch advance within the arctic circle ; and the former grows to the height of sixty feet in the latitude of 70°. (Annals of Phil. VII. 382). The blackberry and the whortle-berry grow in Lapland, and the goose- berry even in Greenland. (Mentelle et Mahe- Brun, Geog. I. 502). Tobacco is extensively cultivated over the greater part of the Continent of Europe, from Sicily to Sweden. Wheat is with difficulty raised in higher latitudes of the conti- nent ; but oats, hemp, and flax find there a conge- nial soil. Proceeding further towards the north, every species of vegetation which is available to human subsistence fails ; and nothing appears but dwarf trees, the different species of lichen, and a few wild berries. M. Von Buch, however, calculates, that even at the Northern Cape of Europe, in 70° of north latitude, perpetual snow does not begin till the height of 1060 metres (about 3200 English feet). This naturalist gives the following table of the height at which the different plants, which have hitherto stood the cold of this rigorous clime, cease to grow.

Feet.

The pine (pinus sylvestris) . . . 600 The birch tree (betula alba). . . 1,400 The myrtle (vacciniiim myrtillus). . 1,850 The mountain willow (salixmyrsinites) 1,950 The dwarf birch (betula nana) . . 2,490 Humboldt thus distributes the 38,000 plants of the globe which have organs of reproduction.

In EUROPE 7000

In the temperate zone of Asia . . 1500 In equinoctial Asia and the adjacent

islands 4500

In Africa 3000

In the temperate zone of America . 4000 In equinoctial America . . • 1 3,000 In New Holland, and the isles of the Pacific Ocean 5000

Certain animals, peculiarly useful to man, s?em to thrive equally well in all the zones of the earth, as the ox, the sheep, the goat, the hog, the horse, the dog : and, while the torrid zone teems with the same luxuriance of life in its animal as in its vegetable tribes, the comparative dimi- nution of their profusion is felt in Europe, rather in the noxious and ferocious, than in • the really important species of animals. Here, for instance, the wolf and the wild bear are the chief beasts of prey continually retreating before civilisation ; while the reptile race gradually dwindle in their capacity to do mischief, until it disappears.

The insect tribes also wear little of harassing and destructive character. In approaching, however, to the sixtieth degree, the useful animals also become small and stunted ; and a little be- yond they give place to the elk, the martin, the sable, the ermine, animals protected from the cold with a covering of fur, at once rich and

beautiful, and which is eagerly sought after by man for similar purposes. The rein-deer, a more valuable species, peculiar to this rigorous climate, serves all the purposes of a domestic animal, both - for draught and food. And it is only when man can no longer exist that the quadruped race again assumes a fierce and for- midable character, and the bear stalks amid the horrid and frozen solitude.

The populat ion of Europe, in number, character, and origin, has unusual claims on our atten- tion. Minute particulars respecting it, belong of course

to our articles on the respective coun- tries over which it is distributed. Zimmer- mann in 1787 estimated the entire popula- tion of Europe at 144,000,000 ; at present, according to the best authorities, it has been thought to have advanced above 40,000,000 from this estimate ; or is about 185,000,000. This, if a regular increase, would imply an annual augmentation of 77 in the 1000, or 1,416,000 persons on the present population; and, at this rate, the number of inhabitants would double in about ninety years. But the parti- culars of this extensive calculation are by no means sufficiently accurate to warrant a close calculation upon them. In the following esti- mate of the distribution of the inhabitants of this continent, which appeared originally in a res- pectable Foreign Journal, they are only taken at 181,500,000. Arranging them according to their respective languages and religions we have.

I. ACCORDING TO LANGUAGE. 1. Nations speaking dialects derived

from the Latin . . . 61,000,000

Teutonic nations . . . 54,000,000

Sclavonians 45,000,000

Celts 3,720,000

Tartars 3,500,000

Magyans 3,250,000

Greeks 2,100,000

Fins 1,800,000

Cimmerians 1,610,000

Basques 630,000

Arnauts 330,000

Maltese . . . . . ^0,000

Circassians ‘, 8,000

Samoides 2,100

Jews 2,060,000

Gipsies 340,000

Armenians 150,000

2.

3.

4.

5.

6.

7.

8.

9. 10. 11. 12. 13. 14. 15. 16. 17.

II. ACCORDING TO RELIGION.

1. Roman Catholics . . .

2. Protestants of different commu

3. Greek church . .

4. Mennonists ...

5. Methodists ...

6. Unitarians ... 7 Quakers . ...

8. Mahommedans . .

9. Jews

10. Moravians (Hernhutters)

100,000,000

42,000,000

32,000,000

240,000

190,000

50,000

40,000

2,630,000

2,060,000

40,000

The superficial extent of Europe is here taken at 2,536,464 square geographical miles, or one-sixteenth of the continental superficies of the

EUR

whole globe ; giving on an average about seventy-one persons to each square mile.

If each of these states be classed according to its superficial extent, population, ordinary re- venue, and the contributive proportions which each individual, on an average, pays towards the public expenses, they will occupy the following order, viz.

I. ACCORDING TO SUPERFICIAL EXTENT. . Russia (including Poland).

2. Sweden (including Norway).

3. Austria.

4. France.

5. Turkey,

6. Spain.

7. Great Britain.

8. Prussia.

9. Germany.

10. Denmark.

11. The two Sicilies.

12. Portugal.

13. Sardinia.

14. Netherlands.

15. Switzerland.

16. Ecclesiastical States.

17. Tuscany.

II. ACCORDING TO POPULATION.

1. Russia (including Poland).

2. France.

3. Austria.

4. Great Britain.

5. Germany.

6. Spain.

7. Prussia.

8. Turkey.

9. The two Sicilies.

10. Netherlands.

11. Sardinia.

12. Portugal.

13. Sweden (including Norway).

14. Ecclesiastical States.

15. Switzerland.

16. Denmark.

17. Tuscany.

ACCORDING TO REVENUE.

1. Great Britain.

2. France.

3. Russia.

4. Austria.

5. Germany.

6. Netherlands

7. Prussia.

8. Spain.

9. Turkey.

10. Portugal.

11. The two Sicilies.

12. Sardinia.

13. Sweden.

14. Denmark.

15. Ecclesiastical States.

16. Tuscany.

17. Switzerland.

ACCORDING TO CONTRIBUTIVE PROPORTION. Proportional No.

1. Great Britain. . . 52-17

2. Netherlands. . . 28-05

678 EUR •

3. France. . . . 19-71

4. Germany. . . . 16-06

5. Russia. . . . 15*88

6. Denmark. . . . 14-60

7. Portugal. . . . 13-58

8. Prussia. . . . 13-14

9. Spain ' ; . . . 12-60

10. Sardinia . . . 12-05

11. Austria . . . 11-68

12. Ecclesiastical States . 9-49

13. Sweden . . .9-31

14. Tuscany. . . . 9-12

15. Turkey. . . . 9'04

16. The two Sicilies. . 7-97

17. Switzerland. . . 5'47

EU'RUS, n.s. Lat. The east wind.

Eurus, as all other winds, must be drawn with blown cheeks, wings upon his shoulders, and his body the color of the tawny moon. Peacham.

EURYANDRA, in botany, a genus of the trigynia order, and polyandria class of plants : CAL. pentaphyllous perianth,with small, roundish, and concave leaves : COR. of three roundish hollow petals, longer than the calyx ; the sta- mina are very many capillary filaments, much dilated at the apex ; pericarp, three egg-shaped follicles containing several seeds.

EURYDICE, the wife of Amyntas, king of Macedon, and the mother of Alexander, Per- diccas, and Philip, the father of Alexander the Great. From a criminal loves he had conceived for her daughter's husband, she conspired agains* Amyntas ; but he discovered the plot, and for- gave her. On the death of Amyntas, Alexander ascended the throne, but he perished through the ambition of his mother, as also did his suc- cessor Perdiccas. Philip, however, preserved his crown from all her attempts, on which she fled to Iphicrates, the Athenian general, but what afterwards became of her is not known.

EURYDICE, in fabulous history, the wife of Orpheus, who, flying from Aristaeus, who endea- voured to ravish her, was slain by a serpent. See ORPHEVS.

EURYMEDON, in ancient geography, a large river running through Pamphylia ; famous for a naval engagement, in which the Athenians, under Cimon, defeated the Persians.

EURYSTHEUS, in fabulous history, king of Argos and Mycense, son of Amphitryon, or, ac- cording to others, of Sthenelus and Nicippe, the daughter of Pelops. Juno hastened his birth by two months, that he might come into the world before Hercules, the son of Alcmena, as the younger of the two was doomed by Jupiter to be subservient to the will of the other. See ALCMENA. This natural right was cruelly ex- ercised by Eurystheus, who was jealous of the fame of Hercules; and who, to destroy so powerful a relation, imposed upon him the most dangerous enterprises. See HERCULES. The success of Hercules in achieving these perilous labors alarmed Eurystheus to a greater degree, and he furnished himself with a brazen vessel, to secure a safe retreat in time of danger. After the death of Hercules, Eurystheus renewed his cruelties against his children, and made war against Ceyx, king of Trachinia, because he

treated them with hospitality. See HERACLID.E. He was killed in this war by Hyllus, the son of Hercules. His head was sent to Alcmena, who tore out his eyes with the most inveterate fury. Eurystheus was succeeded by Atreus his nephew, about thirty years before the Trojan war.

EURYTUS, a king of Oechalia, who, proud of his skill in archery, offered his daughter, lole, in marriage to any man who should shoot nearer a mark than he. Hercules excelled him, but, being refused the fair prize, killed the father and carried off the daughter.

EUSDEN , an English poet, born in Yorkshire, and educated at Trinity College, Cambridge. His first patron was the celebrated lord Halifax ; whose poem, on the battle of the Boyne, he translated into Latin. In 1718 the duke of Newcastle rewarded an epithalamium he wrote on his marriage, with the place of poet laureat ; but this preferment raised him several enemies, and Pope placed him in the Dunciad. He became also rector of Coningsby in Lincoln shire, where he died in 1730. He was the au- thor of many poetical pieces.

EUSEBIANS, a name given to the Arians, on account of the favor which Eusebius pro- cured for them. See ARIANS and EUSEBIUS.

EUSEBIUS, surnamed Pamphilus, born in Palestine about the end of the reign of Gal- lienus. He was the intimate friend of Pam- philus the Martyr; and, after his death, took his name. He was ordained bishop of Csesarea in 313. He had a considerable share in the con- test relating to Arius; whose cause he defended. He assisted at the council of Nice in 325 ; when he made a speech to the emperor Constantine on his coming to the council, and was placed next him on his right hand. He was also present at the council of Antioch, in which Eustathius, bishop of that city, was deposed ; but though he was chosen by the bishop and people of

Antioch to succeed him, he refused that station. In 335 he assisted at the council of Tyre held against Athanasius ; and was in the assembly of bishops at Jemsalem, at the dedication of the church there. By these bishops he was sent to the em- peror Constantine, to defend what they had done against Athanasius; when he pronounced the panegyric on that emperor, during the public rejoicings in the thirtieth year of his reign. Eu- sebius died in 338 He wrote, 1. An Eccle- siastical History, of which Vatesius has given a good edition in Greek and Latin ; 2. The Life of Constantine ; 3. A Treatise against Hierocles; 4. Chronicon; 5. Preparationes Evangelicse; 6. De Demonstratione Evangelica; of which there are but ten books extant out of twenty ; and several other works, some of which are lost.

EUSTATHIANS, a name given to the Ca- tholics of Antioch in the fourth century, on their refusing to acknowledge any other bishop be- side St. Eustathius, who had been deposed by the Arians. This denomination was given them during the episcopate of Paulinus, whom the Arians substituted for St. Eustathius, about A.D. 330. About 350 Leontius, of Phrygia, who was an Arian, and was put in the see of Antioch desired the Eustathians to perform their service

in his church ; which they accepting, the church of Antioch was served alternately by the Arians and Catholics. This, however, gave offence to many Catholics, who began to hold separate meetings"; and thus formed the schism of Antioch. Upon this, the rest, who continued to meet in the church, ceased to be called Eustathians, and the appellation became restrained to the dissenting party. St. Flavianus, bishop of Antioch in 381, and one of his successors, Alexander, in 482, brought about a coalition between the Eustathians and the body of the church of Antioch, describe*' by Theodoret, Eccl. 1. iii. c. 2.

EUSTATHIUS, a monk of the fourth centur who excluded married people from salvation _ prohibited his followers from praying in their houses; and obliged

them to quit all their pos- sessions as incompatible with the hopes of hea- ven. He drew them out of the other assemblies of Christians to hold secret ones with him, and made them wear a particular habit : lie appointed them to fast on Sundays ; and taught them, that the ordinary fasts of the church were needless, after they had attained to a certain decree of purity, which he pretended to. He expressed great horror for chapels built in honor of martyrs, and the assemblies held in them. Several wo- men, seduced by his sophistry, forsook their hus- bands, and many slaves were easily prevailed on to desert their masters. He was condemned at the council of Gangra in Paphlagonia, held be- tween the years 326 and 341.

EUSTATHIUS, archbishop of Thessalonica, in the twelfth century, under the emperors Eina- nuel, Alexander, and Andronicus Comnenus. He was an eminent grammarian : and wrote commentaries upon Homer and Dionysius the geographer. The best edition of his commen taries on Homer is that of Rome, printed in Greek, in 1542, in 4 vols. folio. His com- mentaries on the Periegesis of Dionysius were printed by Hudson at Oxford, in 1697, 8vo. He was alive in 1194.

EUSTATIA, or EUSTATIUS (St.), one of the Caribbee islands, belonging to the Dutch. It is little less than a huge mountain, which for- merly has, in all probability, been a volcano. Its situation is so strong that it has but one landing place; and this is so well fortified as to be almost impregnable. Tobacco is its chief product. It is cultivated to the very top, which terminates in a large plain surrounded with wood, but having a hollow in the middle, which serves as a large den for wild beasts. The inhabitants rear hogs, goats, rabbits, and all kinds of poultry, in such abundance, that they can supply their neighbours, after serving them- selves. The first Dutch colony sent to this island consisted of about 1600 people. They were dispossessed by the English from Jamaica in 1665. Soon after, the Dutch and French be- coming confederates, the English were expelled in their turn. The French continued to hold

a garrison in the island till the treaty of Breda, when it was restored to the Dutch. Soon after the revolution, the French drove out the Dutch, and were in their turn driven out by the English under Sir Timothy Thornhill, with the loss o4 only eight men killed and wounded, though

fort they took mounted sixteen guns, and was in every respect very strong. Sir Timothy found it necessary, for the protection of the Dutch, ta leave a small English garrison in the fort; but he granted the French no terms of capitulation, except for their lives and baggage. By the peace of Ryswick, the island was again restored to the Dutch. It was reduced by the British in 1781. Though not twenty miles in circumference, here was a vast conflux of trade from every other island in these seas. Being a free port it was open to all the subjects of the belligerent powers; and thus a communication was established among them, through which they were enabled to carry on a commercial correspondence, which greatly mitigated the inconveniences of war. The greatest benefit, however, was reaped by the Dutch ; who, by transacting all business for other nations, were entrusted with numberless commissions, and enjoyed vast profits from the sale of their own merchandise. At the time the attack was made, the beach and streets were covered with hogsheads of tobacco and sugar. Admiral Rodney suddenly appeared before the island with an armament by no means required for the capture of a place in its defenceless con- dition. The governor could scarcely credit the iificer who summoned him to surrender ; but, being convinced how matters stood, surrendered the whole island, and every thing in it, at discre tion. Along with the island there fell into the hands of the captors a ship of sixty guns, with 250 sail of merchantmen, while the value of property on the shore was estimated at no less than £4,000,000

sterling. This capture became afterwards a subject of discussion in parliament, •where the conduct of the British commanders was severely scrutinised by Mr. Burke. The admiral and general made their defence in per- son : but the minority at that time were far from being satisfied ; and it was supposed that on the change of ministry a rigid enquiry would have been set on foot, had not the splendor of admi- ral Rodney's victory over de Grasse put an end to all thoughts of that nature.

The island of St. Eustatius is naturally of such difficult access, that it is almost impossible for an enemy to effect a landing, if proper care is taken by those who are in possession of it. This very circumstance proved the ruin of the new possessors. The British, secure in- their inacces- sible situation, conducted themselves in such a manner as induced the marquis de Bouille to make an attempt to regain it. Having sailed from Martinico, at the head of 2000 men, he arrived on the 26th of November, 1781, off one of the landing places of the island, which was deemed so inaccessible that it had been left without a guard. With much loss and difficulty, however, he landed here with 400 or 500 men, during the night. The appearance of day put an end to his landing any more ; and he now saw himself obliged either to relinquish the enterprise or to attack the garrison, which was almost double the number of those he had on the island. He chose the latter ; and was fa- vored in his enterprise, by the extreme negli- gence of his antagonists. A difficult pass, which ft few men might have occupied with success

against a gr?at number, was left unguarded, which the marquis secured, and then pushed forward with the utmost expedition. The British, mis- taking a body of Irish troops which attended the French commander, for their own comrades, suf- fered them to approach without thinking of op- posing them. They were then exercising on the parade; but were soon made sensible ol their fatal mistake by a close discharge from their supposed friends, by which many were killed and wounded. The surprise occasioned by

this sudden attack was so great, that no resistance could be made ; especially as their commanding officer, colonel Cockburn, who happened at that instant to come upon the parade, was made pri- soner. A number of them, however, hastened to the fort with a view of making head against the enemy ; but the French had already taken possession of the gate, and prevented the draw- bridge from being raised. They entered the fort : which, being surrendered by those who had taken shelter in it, the rest of the garrison dispersed in various places, and, imagining the number of the enemy to be much greater than it really was, submitted without opposition. The French commander took this opportunity of showing his disinterestedness in pecuniary mat- ters. Among the spoils that fell into his hands a large sum of money was claimed by the British commanding officer as being his private property, which was generously restored to him : the pro- perty of the Dutch inhabitants was also reserved to them, and nothing was allowed to be seized but the produce arising from the sale of prizes, that had been taken by the English when they captured the island. St. Eustatius was restored to the Dutch at the peace in 1783. It was again taken by the English in 1801, but was again re- stored to its old owners in 1814. It is nine miles north-west of St. Christopher's. Long. 63° 5' W., lat.17°31'N.

EUTERPE, one of the nine muses. She pre- sided over music, and was said to be the in- ventress of the flute. She is represented as crowned with flowers, and holding a flute in her hand.

EUTHANA'SIA, Gr. ivQavama, from fv, well, and Oavarog, death. An easy death.

A recovery, in my case, and at my age, is impossi- ble : the kindest wish of my friends is euthanasia.

Arbuthnot.

EUTROPIUS (Flavius), a Latin author in the fourth century, who was secretary to Con- stantine the Great, and afterwards bore arms under Julian, whom

he followed in his expedi- tion against the Persians. He wrote an Abridg- ment of the Roman History, from the foundation of Rome to the reign of Valens, to whom it is dedicated. The best edition is that of Madame Dacier, published at Paris for the use of the dauphin, in 4to. in 1683.

EUTYCHES, an archimandrite or abbot of a monastery at Constantinople, who began to pro- pagate his opinion against the duplicity of the natures in Christ, A. D. 448. He did not, how- ever, seem quite consistent in his sentiments : for he allowed of two natures before the union ; he believed that the soul of Jesus Christ had been

united to the divinity before the incarnation; but he allowed no distinction of natures in Jesus Christ since his incarnation; alleging that the divine nature had swallowed up the human.

EUTYCHIANS, ancient heretics who denied, the two natures in Christ; thus denominated from Eutyches. This heresy was first condemned in a synod held at Constantinople by Flavian in 448, approved by the council of Ephesus, called conventus latronum, in 449, but re-examined, and fulminated in the general council of Chal- cedon in 451. The legates of pope Leo I., who assisted at it, maintained, that it was not enough to define that there were two natures in Jesus Christ, but insisted strenuously that, to remove all equivocations, they must add these terms, ' without being changed, or confounded, or di- vided.' The heresy of the Eutychians, which made a very great progress throughout the east, at length became divided into several branches, and Nicephorus mentions no fewer than twelve.

EVU'LSION, n. s. Lat. evulsio. The act of plucking out.

From a strict enquiry we cannot maintain the evul-

tion, or biting off any parts.

Browne's Vulgar Errows.

EVULGATION, n.s. I&t.evulgo. The act of divulging ; publication.

The EUXINE, or BLACK SEA, derives its latter name, it is said, either from the dark color of its rocks, or its dangerous navigation. The former has the following origin. When first known to the Greeks, its distant shores were said to be covered with barbarians, and they gave it the name of a£ivog, inhospitable : when they afterwards became civilised, by their com- merce with that people, the epithet was reversed into ivZivoc, hospitable.

The Black Sea belongs in part only to Europe. It derives, however, four-fifths of its waters from this continent : it is 690 miles long, 360 miles broad, and, including the sea of Azof, presents a surface of 170,000 square miles, being about the size of the Baltic. It is bounded on the north by the government of Caucasus and Eka- tarinoslaf, on the east by Mingrelia and Georgia, on the south by Natolia, and on the west by European Turkey; and is divided into the Euxine Proper, or Pontus Euxinus, computed by the Russians to be 1000 versts in length, and 500 in breadth ; and the sea of Azof (see AZOF), the Palus Maotides of the ancients, which, with- out including the bay of Taganroh, is stated to be 200 versts long, and 160 versts broad. Both are now entirely within the confines of the Rus- sian empire. The sea of Azof, called Palus, or a marsh, by the ancients, because it was polluted by mud, is united to it by the straits of Caffa, or the ancient Cimmerian Bosphorus. The most important of the bays formed by these seas are the Liman, at the mouth of the Dnieper, the bay near Perekop, and that close to Yenikale. The most considerable island belonging to these seas, in the vicinity of the Russian coasts, is Taman : the principal harbours are Caffa, now Theodosia, Sebastopol, Koslof, and Balaklava, These seas are remarkably destitute of islands of any con- sequence.

Some writers, who derive the epithet Black

Sea from the fogs which abound here in winter remind us, that the haziness is often so great that mariners can scarcely distinguish objects at even a cable's length. Dr. Clarke states that, in ad- dition to this danger, out of sight of land shal- lows occur which are laid down in no chart; and that dreadful storms arise so suddenly, and blow with such fury, as to carry every mast by the board before any preparations can be made to ward off the coming danger. This account is corroborated by other navigators, although a di- rectly contrary account is given by some. The climate of the neighbourhood is so cold and moist, and the winters so long and severe, that Dr. Clarke was informed by an officer that he was once detained some months at the mouth of the Danube, the Euxine itself being frozen. In general the navigation is free from impediments from ice till November, and often much later.

The principal rivers which fall into the Black Sea are, the Danube, which collects the waters of a great part of Germany, Hungary, Bosnia, and Servia; the Bog, the Don, or ancient Tanais, and the Dnieper, or Borgysthenes of .the ancients, which discharge into it those of Russia and Po- land ; the Phasis, which flows into it from Min- grelia, and the Sangaris and Kisil Irmak from Anatolia.

Some of the ancients, as well as the moderns, have been of opinion that this sea arose gradually from a lake formed in a valley by the waters that pour into its; and which, bursting its original bar- riers, opened for itself a channel into the Medi- terranean. Polybius and BufFon unite in opinion that the Black Sea will in time be filled up by the mud carried into it by rivers, as well as by the diminution of the waters of these rivers, in consequence of the degradation of the moun- tains ; and it is said that a considerable decrease of depth is observed to have taken place in the sea of Azof. However this may be, the quan- tity of fresh water conveyed into this sea at pre- sent renders it so little salt that it freezes with a moderate degree

of cold, and the mud then causes its waters to be very turbid. It is calcu- lated that the fresh water received by the Black Sea is nine times more than what it discharges into the Mediterranean through the Bosphorus, and that the overplus is carried off by the eva- poration alone. The streams of the rivers pro- duce violent currents, particularly in summer, when they are increased by the melting of the snows ; and in strong winds, acting against these currents, a high chopping sea, as it is called, is produced.

A constant and strong current sets in from the Black Sea through the Bosphorus, but, this chan- nel having seven abrupt sinuosities, counter cur- rents and eddies are formed on either shore, as in a river. In entering the Bosphorus, the current first sets into the curve of Bojoukdere against the point called Kishe-bouroun on the European shore, which throws it off towards the coast of Asia, where it strikes against the point of Kau- ledgebouroun. Repelled by this point, it again re- turns towards the coast of Europe at the point Kis- lar-bouren, and from thence towards Vania-Keui on the coast of Asia ; again towards the Euro- pean shore at Effendi-bouroun, which throws it

off towards the point of Scutari on the opposite shore ; and finally from this last it strikes against the Seraglio Point, which divides it ; one part of the stream running through the entrance of the Bosphorus into the Sea of Marmora, and the other makes the circuit of the port, running in along the side of the city, and out on that of the suburbs, the latter with such velocity, that it forms a strong counter current near the shore to Effeudi- bouroun ; where, meeting the regular cur- rent, their opposition creates a violent agitation of the waters. In the strength of the stream of the general current, its velocity is from three to five miles an hour. Violent eddies are also ex- perienced below

the points which throw off the stream.

The coasts of the Black Sea, in general, are elevated and rocky; a few spaces only being composed of sandy downs. From the entrance of the Bosphorus to Kara-Kerman, advancing up the western side of the Euxine, the coast is lined by the mountainous ridge of Haemus, now Balkan, terminating at Cape Emeniah (Haemi extrema). The valleys between these mountains form little coves towards the sea, where vessels load the timber of Haemus for Constantinople. On this coast we meet, in succession, with Derkus, Midjeh (Salmy-dassus), Omidra, Iniada (Thi- nias), Akteboli and Vaidoura. The Gulf of Foros, or Burgos, limited on the south by Cape Emeniah, is four or five leagues wide, and runs in nearly the same distance. It has several roads fit for the largest ships ; the principal of which are, Sizeboli (Appolonia), Foros, Tchingana, Ahiolu, Burgos, and Mesembria. Tchingana is a modern village, with a well-sheltered road but bad bottom. Ahiolu is amongst marshes, which afford a quantity of inferior salt. Burgos, at the head of the gulf, is a considerable place, and has a large trade with Constantinople, whither it exports wool, iron, corn, butter, cheese and wine. Mesembria (Messouri of the Turks), on the north shore of the gulf, is on a rocky peninsula, joined to the main by a low isthmus, sometimes nearly overflowed. Small vessels are built here of the oak of the neighbouring country.

On the coast of Bulgaria, comprehending the ancient Maesia, the places of any note are, Varna (Odessus), at the mouth of a river which forms a large lake and extensive marshes. It has 16,000 inhabitants, is surrounded by a ditch, and de- fended by an old castle. It exports corn, fowls, butter, eggs and cheese, to Constantinople. Near this town a great battle was fought in 1544, be- tween the Hungarians and Turks, in which La- dislaus, king of Hungary, lost his life.

To Varna succeeds Kalekria, with a good road, Balchak (Crami), Mangolia (Calatis), Keustengi

(Constantiana), all of which export provisions and wood to Constantinople. Kara-Kerman (Istropolis) is a large village on the beach, de- fended by a square castle, flanked with round towers. Several shoals off it oblige vessels to anchor a league south of the village. The prin- cipal export is corn.

From Kara-Kerman to Aktiar, in the Crimea, the coast is low, and the shoals formed by the rivers run off a considerable distance. The coast of the Crimea, from Aktiar to Kaffa, is bordered

by high peaked mountains, with valleys termi- nating in little coves.

The principal mouths of the Danube, from south to north, are, Visi-Bogasi (Sacra Osteum), Ghiurchheva-Bogasi, Sunne or Sulina-Bogasi (Nareum Osteum), the most frequented, being 100 fathoms wide, with a depth of three fathoms, its stream running out three miles an hour ; Ruski-Bogasi (Calum Osteum), and Kilia-Bo- gasi (Boreum Osteum).

Opposite the mouths of the Danube is Ser- pent s Island, Ulan-Adassi of the Turks, and Fidonisi of the modern Greeks, the ancient Leuce, or White Island, celebrated for a statue and temple of Achilles. It is but two miles long, and half a mile broad ; its south shore presenting rocky cliffs, fifty feet high. It produces some grass and shrubs, and is frequented by vast flocks of sea birds. A cable's length round it the depth is twenty fathoms. The Russians absurdly believe that this island is so infested by serpents, that certain destruction would be the consequence of landing on it.

The principal trading port on the Black Sea is Odessa, situated between the Dniester and the Dnieper, and which, since the navigation of the Black Sea has been opened to European vessels, it carries on a considerable trade, 498 vessels having entered it in 1816, and 246 having departed from it laden with Russian produce

Ockzakof is a small town near the mouth of the

Dnieper on the right bank ; it is fortified, and on the opposite shore is the fortress of Kin- burn. Gloubuk is a village on a small eminence at the mouth of the river. Vessels of conside- rable size lie in its road, and those of ten or twelve feet close to the shore : but its trade has of late been transferred to Belessa. Kherson, or Cherson, on the right bank of the Dnieper, eight or nine leagues above Gloubuk, near the con- fluence of the Ingouletz, is a new town, founded by the Russians in 1778, and intended to be the entrepot of the Russian trade of the Black Sea, but the extension of the Russian dominions on the west has caused it also to be superseded.

Nicolaef, in a healthy situation on the Bog, is a new town, covering a large extent of ground. It is handsomely built and lias an extensive ma- rine arsenal ; being the seat of the Russian ma- rine administration of the Black Sea, and the station of the flotilla. The' west coast of the Crimea has the port of Kosloff, or Eupatoria, of which the commerce, once considerable, has now declined ; Sevastopel, the chief station of the Russian fleet, and remarkable for the great natural advantages of its harbour ; Balaclara, of which the harbour is completely landlocked by lofty mountains; and Caffa, lying in a bay ex- posed to the east and south-west, but capable of containing several hundred merchant vessels. The Anatolian coast is lined with high moun- tains, terminating in lofty promontories, and in- dented with numerous little coves into whicli the neighbouring rivulets fall . The only port of con- sequence is Sinope, situated on the narrow and low isthmus of a rocky peninsula. On the south- east coast isTrebizond, which has a considerable trade.

The ports of Mingreha arc Anarghia, Isgaour,

or Sebastopolis (Dioscurius), at the mouth of the Marmar. Near the entrance of the Black Sea is a lighthouse on each shore of the Bospho- rus; that on the European shore being on the ancient Paniura prom, and that on the Asiatic side on the ancient Ancyreum prom.

All the celebrated ancient nations contended in turn for the commerce of these shores : and its history is therefore connected with that of the Phoenicians, Egyptians, Greeks, and Romans, successively. On the establishment of the empire at Constantinople, this commerce fell into the hands of the Greeks, from whom it was trans- ferred to the Venetians and Genoese. The trade which the latter powers carried on with the east, by the Black Sea, centered principally in the port of Cafia. This was greatly interrupted by the capture of Constantinople in 1453 : and by the subsequent capture of Caffa, in 1476, it was destroyed. Russia made it a favorite point of policy to obtain the entire command of it from the Turks in the last century : but has since acted with considerable liberality towards all other nations. The Euxine lies between 41° and 46J0 of N. lat. and between 28° and 41 i° of E. long, from Greenwich.

EWALD (John), a modern Danish poet of eminence, was the son of a clergyman of Copen- hagen, where he was born in 1743. Having lost his father, he ran away from his home at the age of fifteen, and enlisted in the service of Prussia ; but soon deserted, and entered that of Austria, in which he continued some time, and became a Serjeant. Once more he deserted his masters, in 1 760, and returned to Denmark. He now seems to have been weary of his youthful courses, and applied with diligence to the study of theology and the belles lettres. His first publication was a prose piece, called The Temple of Good For- tune ; but he owed his first distinction as a poet to his Elegy on the Death of Frederic V. He afterwards wrote Rolf Krage, a tragedy; the Songs of the Scalds, and other pieces in the style of Ossian. He obtained from the Danish court a pension of 100 dollars, by means of which, to- gether with the profits of his theatrical and other works, he

supported himself. Ewald died at Copenhagen in March, 1781. He has been con- sidered by some of his eulogists to have sur- passed all preceding Danish poets. A collective edition of his works appeared at Copenhagen, 1781-1791, 4 vols. 8vo.

EWE, n.s. Sax. eope; Goth, a; Belg. ovi; Lat. ova. A female sheep.

Rams have more wreathed horns than ewes.

Bacon. Haste the sacrifice ;

Seven bullocks yet unyoked for Phoebus chu»e ;

And for Diana seven unspotted ewes.

Dryaen's JEn.

That sage they seemed, as lawyers o'er a doubt. Which puzzling long, at last they puzzle out ; Or academic tutors, teaching youths, Sure ne'er to want them, mathematic truths ; When thus a mutton, statelier than the rest, A ram, the ewes and wethers sad addressed.

Camper.

EWER, n. s. 5 Norman Fr. eyer ; Fr. aigu- EW'BY. Jerre; Span, aquamanil; Lat.

aquarium ; from old Fr. ewe ; Sax. epc water. A hand-basin ; a vessel in which water for washing the hands is contained. The ewry was an ancient office in the king's household, where the linen of the royal table, and the royal ewers were de- posited.

Let one attend him with a silver bason Full of rosewater, and bestrewed with flowers ; Another bear the ewer ; a third a diaper ; And say, Wil't please your lordship cool your hands.

Shakxpeare.

The golden ewer a maid obsequious brings Replenished from the cool translucent springs j With copious

water the bright vase supplies A silver laver, of capacious size : They wash. Pope's Odyssey.

Etruria ! next beneath thy magic hands Glides the quick wheel, the plastic clay expands, Nerved with fine touch, thy fingers (as it turns) Mark the nice bounds of vases, ewers, and urns j Round each fair form in lines immortal trace Uncopied beauty, and ideal grace. Darwin.

These were ranged round, each in a chrystal ewer, And fruits, and date-bread loaves closed the repast,

And Mocha's berry, from Arabia pure,

In small fine china cups, came in at last. Byron.

EX, a Latin preposition often prefixed to com- pounded words : sometimes meaning out, as exhaust, to draw out; sometimes only enforcing the meaning, and sometimes not affecting the sense.

Ex, in geography, a river of Somersetshire, which rises in a barren tract of land, called Ex- moor ; runs by Tiverton, where there is a stone bridge over it two miles long ; nine miles below which it is joined by the Columb ; and lower, by the confluent waters of the Harton and Credy; after which, it washes the walls of Exeter. Two miles below Topsham it is joined by the Ken, and, widening to an estuary, falls into the English Channel at Exmouth, after a course of about forty miles. Ships of great burden go up to Topsham, from whence vessels of 150 tons are conveyed to the quay at Exeter by an artificial canal. The passage at the mouth of this river is narrow, having rocks on the east side and broad sands on the west ; the water on the bar is only six or seven feet deep at low water, but the tide rises fourteen or fifteen feet at high water. When ships are within the bar, they may ride afloat at a place called Starcross, about a mile and a half from the river's mouth.

Ex OFFICIO, among lawyers, signifies the power a person has, by virtue of his office, to do certain

acts without being applied to.

Ex POST FACTO, in law, something done after another : thus an estate granted may be good by matter ex post facto, that was not so at first, as in case of election.

EXAC'ERBATE,v.a.) Lat. exacerbo, ex and

EXACERBA'TION, n. s. lacerbo, from acer, acrid; a Gr. cuer), a sharp point. To provoke; exas- perate ; embitter. The noun is also applied to the height or paroxysm of a disease.

The patient may strive, by little and little, to over- come the symptom in exacerbation ; and so, by time, turn suffering into nature. Bacon's Natural History.

Watchfulnesi and delirium, and exacerbation every other day A rbuthnot on Diet.

EXA

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EX ACT, v. a., v. n. & adj. ~\ Fr. exact ; Lat.
EXACT'ER, or exactus, perfectly

EXACT'OR, n.s. finished, from ex,

EXACT'ION, ^emphatic, and ac-

EXACT'ITUDE, n. *. tus, doneorfinish-

EXACT'LY, adv. ed. Minsheu says

EXACTNESS, n. s. j exquisite actus. To

require with rigidity or authority ; to demand as of right ; to enjoin ; enforce ; extort. As a verb neuter, to practise extortion. Exacter, or exac- tor, and exaction follow these senses. Exact, as an adjective, means strict ; according to rule or method ; nice ; hence careful ; punctual ; honest : and exactly, exactitude, and exactness are formed on these meanings.

Of a foreigner thou mayest exact it again ; but that •which is thine with thy brother, thine hand shall re- lease. Devt. The enemy shall not exact upon him.

Psalm Ixxx. 22. In my doings I was exact.

Eccles. li. 19.

I will also make thy officers peace, and thine ex- acton righteousness. Isaiah Ix. 1 7.

Remove violence and spoil, and execute judgment and justice ; take away your exactions from my people.

Ezek. xlv. 9.

Thou now exactest the penalty, Which is a pound of this poor merchant's flesh.

Shakspeare.

If he should break this day, what should I gain By the exaction of the forfeiture ? Id.

They vent reproaches Most bitterly on you, for putter-on Of these exactions. Id. Henry VII f.

Heading maketh a full man; conference a ready man ; and writing an exact man ; and, therefore, if a man write little, he had need have a great memory ; if he confer little, he had need have a present wit ; and if he read little, he had need have much cunning, to seem to know that he doth not. Lord, Bacon.

Light and lewd persons, especially that the exacter of the oath did neither use exhortation, nor examining of them for taking thereof, were easily suborned to make an affidavit for money. Id.

As the first earl did first raise the greatness of that house, by Irish exactions and oppressions ; so Girald the last earl did at last ruin it by the like extortions. Daviet's State of Ireland.

No men are prone to be greater tyrants, and more

rigorous exacters upon others, than such whose pride was formerly least disposed to the obedience of lawful constitutions. King Charles.

I preferred not the outward peace of my kingdoms •with men, before that inward exactness of conscience before God. Id.

Exact of servants to be faithful and diligent.

Taylor.

He (a high-spirited man) does homage to no man for his great stile's sake, but is strictly just iu the ex- action of respect again, and will not bate you a com- pliment. Bp. Earle.

Repentance is a magistrate that exacts the strictest duty and humility, because the reward it gives is ines- timable and everlasting. Clarendon.

Let us descend now therefore from this top Of speculation ; for the hour precise Exact* our parting hence. Milton's Par. Lost.

Duty

And justice to my father's soul, exact This cruel piety. Denham's Sophy.

There is no way to deal with this man of reason, this rigid exacter of strict demonstration for things which are not capable of it. Tillotson.

Years of service past,

From grateful souls exact reward at last. Dryden.

Both of 'em knew mankind exactly well j for both of 'em began that study in themselves. Id.

Who is there that has been bred up in the peripa- tetic philosophy, who does not think the ten names, under which are ranked the ten predicaments, to be exactly conformable to the nature of things ? Locke.

The grateful person being still the most severe ex-

acter of himself, not only confesses, but proclaims his debts. ' South.

Where they design a recompense for benefits received, they are the less solicitous to make it when it is exacted. Smalridge.

Many gentlemen turn out of the seats of their ancestors, to make way for such new master- as have been more exact in their accounts than themselves.

Spectator.

The hand of fate is over us, and Heaven Exacts severity from all our thoughts. Addison.

They have not made bridges over the river for the convenience of their subjects as well as strangers, who pay an unreasonable exaction at every ferry upon the least using of the waters. Id. on Italy.

The experiments are all made with the utmost exactness and circumspection. Woodward on Fossils.

They think that their exactness in one duty will atone for their neglect of another. Rogers.

The religion they profess is such, that the more exactly it is sifted by pure unbiassed reason, the more reasonable still it will be found. Atterbury.

What if you and I enquire how money matters stanp between us ? — With all my heart, I love exact dealing ; and let Hocus audit. Arbuthnot's John Bull.
All this, exact to rule, were brought about,

Were but a combat in the lists left out. Pope. In wit, as nature, what affects our hearts

Is not the exactness of peculiar parts ;

'Tis not a lip, or eye, we beauty call,

But the joint force and full result of all. Id.

The balance must be held by a third hand, who is to deal power with the utmost exactness into the seve-

ral scales. Swift.

With gradual steps and slow, exacter France Saw art’s fair empire o’er her shores advance ; By length of toil a bright perfection knew, Correctly bold, and just in all she drew. Collins.

When the old clipped money was called in for a new coinage, in king William’s time ; to prevent the like for the future, they stamped on the edges of the crown-pieces these words, et dccus ct tutamen. That is exactly the case with good-breeding. Chesterfield.

But it is better that the whole should be imperfectly and anomalously answered, than that, while SOUK; parts are provided for with great exactness, others might be totally neglected, or perhaps materially in- jured, by the over care of a favourite member.

Burke.

Grave without dulness, learned without pride, Exact, yet not precise, though meek, keen-eyed ; A man that would have foiled at their own play A dozen would-be’s of the modern day. Cowper.

There wanting nothing, save a fan, To seem some nymph in her sedan, Apparelled in exactest sort, And ready to be borne to court. Id.

Great, indeed, and many are the advantages of habitual attention. Clearness of understanding, ex- tensive knowledge, and exact memory, are its natural consequences. Beattie.

EXACTION, in law, a wrong done by an officer, Exaltation is the act of elevating or the state

or a person in pretended authority, in taking a elevated to. Exaltedness is height or dignity

reward or fee that is not allowed by law. A — ' — *— '-J ' " •• °

person guilty of exaction may be fined and im- prisoned.

EXACUM, in botany, a genus of the mono-

gynia order, and tetrandria class of plants ; na- up thine eyes on high ?

real or fancied : hence pride; self-conceit.

As yet exaltest thou thyself against my people, that thou wilt not let them go ? Exodui ix. 17.

Against whom hast thou exalted thy voice, and lift

tural order twentieth, rotaceae : CAL. tetraphyl- lous : COR. quadrifid, with the tube globular : CAPS, two-furrowed, bilocular, polyspermous, and

2 Kings xix. 22.

8 magnify the Lord with me, and let us exalt hi* name together. Psalm xxxiv. 3.

And thou, Capernaum, which art exalted unto hea-

opening at the top. Species eighteen, chiefly ven» 8nal' be brought down to hell. Matt. xi. 23.

natives of the East Indies and South America. EXAGGERATE, v. a. kv.n.y Fr. eia- EXAG'GERATION, n. s. >gerer; Span.

EXAG'GERATORY, adj. j and Port.

exagerar ; Ital. essagerarar ; Lat. exaggero ; ex

She put off the garments of widowhood, for the ex- altation of those that were oppressed. Judith xvi. 8.

The former was an humiliation of Deity, the latter an humiliation of manhood ; for which cause there followed an exaltation of that which was humbled ;

emphatic, and aggero (from ad to, ~and gero for with Power he created the world, but restored it to bear). To heap up ; to accumulate ; heighten by obedience– Hooker.

A prince exalting his own authority above his laws.

or enlarge by representation, now more com– monly used in the figurative than the literal sense.

He had exaggerated, as pathetically as he could, the sense the people generally had, even despair of ever seeing an end of the calamities. Clarendon.

In the great level near Thorny, several oaks and firs stand in firm earth below the moor, and have lain three hundred of years, still covered by the fresh and salt waters and moorish earth exaggerated upon them,

Hale.

Some towns that were anciently havens and ports, are now, by exaggeration of sands between these towns and the sea, converted into firm land.

Hate’s Origin of Mankind.

A friend exaggerates a man’s virtues, an enemy in– flames his crimes. Addison’s Spectator.

Exaggerations of the prodigious condescensions in the prince to pass good laws, would have an odd sound at Westminster. Swift.

And it is abominable, because it abounds in filthy and indecent images ; because the general tenor of the satire is exaggerated into absolute falsehood ; and because there must be something of an irreligious ten– dency in a work, which, like this, ascribes the per– fection of reason, and of happiness, to a race of beings who are ->aid to be

destitute of every religious idea.

Beattie.

Dear princess, said Rasselas, you fall into the com- mon error of exaggerating declamation. Johnson.

EXAGGERATION,″ in painting, a method by which the artist, in representing things, charges

is like letting in his enemy to surprise his guards. The laws are the only guards he can be sure will never run away from him. Saville.

Exalted she's, but both ' exalters ' good. Donne.

His hand exaltt the poor, and casts down the mighty from their throne. Bp. Hall't Contemplation.*

The covenanters, who understood their own want of strength, were very reasonably exalted with this suc- cess. Clarendon. I wondered at my flight and change

To this high exaltation. Milton't Par. Lott.

But hear, oh hear, in what exalted strains, Sicilian muses,. through these happy plains Proclaim Saturnian times, our own Apollo reigns.

Roscommon.

In God all perfections, in their highest degree and exaltation, meet together. Tillotson.

How much soever the king's friends were dejected upon the passing of these two acts^ it is certain, they who thought they got whatsoever he lost were mightily exalted, and thought themselves now superior to any opposition. Dryden's JEneid, Dedicat.

Astrologers tell us, that the sun receives his exal- tation in the sign Aries. Dryden.

Now Mars, she said, let fame exalt her voice ; Nor let thy conquests only be her choice. Prior.

Angels and saints should upon the account of the exultedness of their nature, see and hear from thence what is done or said from one side of the earth to the other. More.

The wild animals have more exercise, have their

*«n t ,„„ «TtSIr J«ices more elaborated and exalted ; but for the same them too much, or makes them too strong, either J . ' .

tuxiiu .v\j MMVU) vr« » Tpasnn thp fihrps arc harder. A r hut hunt on Alimfnt.i.

in respect of the design or coloring. It differs from caricature, in that the latter perverts or gives a turn to the features of a face, &c., which they had not; whereas exaggeration only heightens or improves what they had.

EXAG'ITATE, v. a. \ Lat. exagito, to move
EXAGITA'TON, n. s. S literally orjnentally ;

(ex emphatic, and agito, to shake.) To put into of its innocent qualities, decisive or violent motion; to reproach: pas- sion or exasperation by invective.

This their defect and imperfection I had rather la- ment in such case than exagitate. Hooker.

The warm air of the bed exagitates the blood.

Arbuthnot.

EXALT, v. a. \ Fr. etalter ; Span, ex EXAITA'TION,
n. s. f altar ; Port, exahar ; It. EXALT'EDNESS. 1
essaltare, from ex empha- EXAL'TER. 3 tic, and
altus, high. To

elevate in any manner; praise; extol ; heighten.

reason the fibres are harder. Arbuthnot on Aliments.

With chymick art exults the mineral powers, And draws the aromatick souls of flowers. Pope.

You are as much esteemed, and as much beloved,

perhaps more dreaded, than ever you ware in your highest exaltation. Swift.

They meditate whether the virtues of the one will exalt or diminish the force of the other, or correct any

Watti.

We are formed by our Creator capable of acquiring knowledge, and regulating our conduct by reasonable rulei ; it is therefore our duty to cultivate our under- standing, and exalt our virtues. Johnton. Hope not, though all that captivates the wise. All that endears the good exalt thy praise ; Hope not to taste repose : for Envy's eyes. At fairest worth still point their deadly rays.

Beat lie.

EXALTATION OF THE CROSS, a feast of the Romish church, held on the 14th of September, in. memory of the emperor Heraclius having

EXAMINE, v. a.

EXAM'EN, n. s.

EXAM'INABLE, adj.

EXAM'INANT, n. s.

EXAM'INATE,

EXAMINATION,

EXAM'INATOR,

EXAM'INER. doubt; ascertain, with examination.

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brought back the true cross of Jesus Christ on his shoulders, to the place on mount Calvary, from which it had been carried away fourteen years before by Cosroes king of Persia, when he took Jerusalem, in the reign of Phocas. The cross was delivered up by a

treaty of peace made with Siroe, Cosroes' son ; which is said to have been signalised by a miracle; viz. that Heraclius could not stir out of Jerusalem with the cross, while he had the imperial vestments on, but bore it with ease in a common dress ! But, long be- fore Heraclius, there had been a feast of this denomination, both in the Greek and Latin churches. The feast of the dedication of the temple built by Constantine was held, says Ni- cephorus, on the 14th of September, the day on which the temple had been consecrated, in 335 ; and was also called the exaltation of the cross, because it was a ceremony therein, for the bishop of Jerusalem to ascend a high place, built by Constantine for that purpose, in manner of a pulpit, and there hoist up the cross, for all the people to see it.

Fr. examiner; Span, and Port, examinar ; Ital. essaminare ; Lat. examinare, from ejand 'animus, the mind. — Minsheu. To enquire; try or prove by inter- rogatories ; question ; Examine is synonymous Examinable that which may be or is proper to be enquired into. Examinant, examiner, and examinator, he who enquires or examines. Examinate, he who is examined.

If we this day be examined of the good deed done to the impotent man. Acts, iv. 9.

Command his accusers to come unto thee, by era- mining of whom thyself mayest take knowledge of all these things. Act*.

Let them examine themselves whether they repent them truly. Church Cat.

In an examination where a freed servant, who hav- ing power with Claudius, very saucily had almost all the words, asked in scorn one of the examinala, who was likewise a freed servant of Scribonianus ; I pray, sir, if Scribonianus had been emperor, what would you have done? He answered, I would have stood behind his chair and held my peace. Bacon.

This considered together with a strict account, and

critical examen of reason, will also distract the witty determinations of astrology.

Browne'i Vulgar Erroiirt.

An inference, not of power to persuade a serious examinator. Id.

A crafty clerk, commissioner, or examiner, will make a witness speak what he truly never meant.

Hale'i Law of England.

The ancients have diligently examined in what consists the beauty of good postures. Dryden. Dufres.

Different men leaving out or putting in several simple ideas, according to their various examination, skill, or observation of the subject, have different essences.

Locke.

Let any one examine his own thoughts, and thoroughly search into his understanding, and then let him tell me whether all the original ideas he has there are any other than of the objects of his senses, or of the operations of his miad, considered as objects of hit reflection. Id.

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To put a stop to the insults and detractions of vaia men, I resolved to enter into the examination.

Woodward.

We ought, before it be too late, to examine our souls, and provide for futurity.

Wake's Preparation.

So much diligence is not altogether necessary, but it will promote the success of the experiments, and by a very scrupulous examiner of things deserves to be applied. Newton's Optic/a.

To write what may securely stand the test ,

Of being well read over thrice at least, Compare each phrase, examine every line, Weigh every word, and every thought refine.

Pope.

Shall I with Bavius, then, my voice exalt. And challenge all mankind to find one fault ? With huge exament overwhelm my page, And darken reason with dogmatic rage. Young. When at the usual time he claimed the bachelor- ship of arts, he was found by the examiners too con- spicuously deficient for regular admission.

Johnson. Life of Swift.

Perhaps if we could examine the manners of differ- ent nations with impartiality, we should find no people so rude as to be without any rules of politeness ; nor any so polite as not to have some remains of rudeness.

Franklin.

We must first suspect ourselves, then examine our- selves, then watch ourselves, if we expect ever to know ourselves. How is it possible there should be any self-acquaintance without self-converse ? Mason.

The most profitable part of my time is that which I employ in examinations, or in Socratical dialogue with my pupils, or in commenting upon ancient authors j all which may be done by a tutor in a private apart- ment, as well as by a professor in a public school.

Beattie.

EXAMINERS, in chancery, two officers of that court, who examine, upon oath, witnesses in causes depending there, where the witnesses live in London or near it. In the country, above twenty miles from London, on the parties join- ing in commission, witnesses are examined by commissioners, who are

usually counsellors or attorneys not concerned in the cause.

EXAM'PLE, n. s. &t>. a.^\ Fr. exemple; Sp.
EXAM'PLARY, adj. & Port, exemplar;

EXEM'PLAR, n. s. It. essempio ; Dm.

EXEM'PLARILY, adv. exemple ; Lat. ex-

EXEM'PLARINESS, n. s. \emplum ; a pattern.
EXEMPLAR'ITY, n. s. jCopy; pattern; EXEM'PLARY, adj. precedent; in-

EXEM'PLIFY, v. a. stance ; used for

EXEM'PLIFIER, n. s. that which does or

EXEMPLIFICATION. J should deter, as

well as for that which deserves or is designed to be imitated ; 'but we only find exemplar used in the latter sense. To example, from the noun, is to furnish an instance of, and is synonymous with to exemplify : examplary or exemplary, is, serv- ing for imitation or warning ; illustrating as proof: exemplarily is, in the manner of a pattern : ex- em plariness, state of being exhibited as a pattern : exemplarity, excellence; a pattern worthy of being imitated.

Be thou an example of the believers. 1 Tim.

Sodom and Gomorrah, giving themselves over to fornication, are set forth for an example, suffering the vengeance of eternal fire. Jude 7.

When virtue is present, men take example at it j and when it is gone, they desire it. Wisd. iv. 2.

The proof whereof I saw sufficiently exampled in

these late wars of Minister.

Spenser's State of Ireland.

We are not of opinion that nature, in working, hath before her certain examplary draughts or pat- terns, which subsisting in the bosom of the Highest, and being thence discovered, she fixeth her eye upon them. Hooker.

This might be exemplified even by heaps of rites and customs, now superstitious in the greatest part of the Christian world. Id.

Do villany, do, since you profess to do

Like workmen : I'll example you with thievery.

Shakspeare. So hot a speed, with such advice disposed,

Such temperate order in so fierce a course,

Doth want example. Id. King John.

The example and pattern of those his creatures he beheld in all eternity. Raleigh's History.

When a prince's example ceaseth to have the force of a law, it is a sure sign that his power is .wasting.

Saville.

The archbishops and bishops have the government of the church : be not you the mean to prefer any to those places, but only for their learning, gravity, and worth : their lives and doctrine ought to be exemplary.

Bacon.

An ambassador of Scotland demanded an exempli- fication of the articles of peace. Hayward.

Princes that would their people should do well, Must at themselves begin, as at the head ; For men, by their ex&nuple* pattern out Their imitations, and

regard of laws ; A virtuous court a world to virtue draws.

Ben Jonson.

Had the tumults been repressed by exemplary justice, I had obtained all that I designed.

King Charles.

Some he punishes exemplarily in this world, that we might from thence have a taste or glimpse of his future justice. Hakewill.

A father that whipt his son for swearing, and swore while he whipt him, did more harm by his example than good by his correction. Fuller.

She is exemplarUy loyal in a high exact obedience.

Howel.

No man is so insignificant as to be sure his example can do no hurt. Lord Clarendon.

If he had shut the commons' house, whilst their champions were exemplarily punished, their jurisdiction would probably in a short time have been brought within due limits. Id.

Taught this by his example, whom I now Acknowledge my Redeemer ever blest !

Milton.

In Scripture we find several titles given to Christ, which import his exemplariness as of a prince and a captain, a master and a guide. TiUotson.

Ariseth, being multiplied to scruples, drachms, ounces, and pounds, and then those weights, as they happen to take them, are fixed by authority, and exemplars of them publickly kept. Holder.

My reason is sufficiently convinced both of the truth and usefulness of his precepts : it is to pretend that I have, at least in some places, made

eramplet to his rules., Dryden.

He must have lived but a little while m the world who has not seen examples of this in his time : and he must have read very little who cannot produce examples of it in all sorts of governments in the world.

Locke.

A love of vice as such, a delighting in sin for its own sake, is an imitation, or rather an exemplification, of the malice of the devil. South.

If he intends to muider his prince, as Cromwell did, he must persuade him that he resolves nothing but his safety ; as the same grand exemplar of hypocrisy did before. fj.

Of some performances of our Saviour no other, or no so passable an account can be given, as that they were done for exemplarity. Barrow.

Best poet ! fit exemplar for the tribe Of Phoebus. Philips.

Our author has exemplified his precepts in the very precepts themselves. Spectator.

Awaking therefore, as who long had dreamed, Much of my women and their gods ashamed, From this abyss of exemplary vice Resolved, as time might aid my thought, to rise.

Prior.

Example is a motive of a very prevailing force on the actions of men. Rogers.

When any duty is fallen under a general disuse and neglect, in such a case the most visible and ex-emplary performance is required. Id.

A satire may be exemplified by pictures, characters, and examples. Pope.

If all these were exemplary in the conduct of their lives, religion would receive a mighty encouragement.

Swift. A sovereign's great example forms a people,

The public breast is noble, or is vile,

As he inspires it. Mallet.

To this he calls us, and no man is anv further a Christian than as he is a follower of Christ ; aiming at a more perfect conformity to that most perfect example which he hath set us of universal goodness. Mason.

EXAMPLE, in a moral sense, is either taken for a precedent, for our admonition, that we may be cautioned against the faults or crimes which others have committed; or for a pattern for our imitation. In the latter sense, the example of our Saviour is most proper to form us to holiness. There is no example of a mere man that is to be followed without limitation : but the example of Christ is absolutely perfect ; his conversation was a living law.

EXAMPLE, in rhetoric, denotes an imperfect kind of argumentation; whereby it is pleaded, that a thing which happened on some former oc- casion, will happen again on the present one, from the similitude of the cases.

EXANG'UIOUS, adj. More properly written exsanguious; from ex, and sanguis, blood. Bloodless ; formed without sanguineous juices.

Hereby they confound the generation of perfect animals with imperfect, sanguineous with exanguious.

Browne.

The insects, if we take in the exanguioui, both ter- restrial and aquatick, may for number vie even with plants. Ray-

EXANIMATE, v. a. & adj. } Lat. exanima-

EXANIMA'TION, n. *. > tus ; from ex pri-

EXAN'IMOUS, adj.) vative, and ani-

mus, the soul. To trouble ; amaze ;. dishearten; deprive of animation or life. We find no in- stance but of the first adjective, yet all the words are in our old vocabularies.

The grey morn

Lifts her pale lustre on the paler wretch, Exanimate by love. Thomson's Spring.

EXANTLATE, v. a.) Lat. exantlo; Gr.

Ex ANTLA'TION, n. s. $ ttavrXtv ; from avrXtw, to draw up. To exhaust ; shrivel ; waste : an act or mode of exhaustion.

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EXC

By tim-J those seeds are wearied or exa-itlated, or unable to act their parts any longer. Boyle.

EXARATION, n. s. Lat. exaro. The ma- nual act of writing ; the manner of manual writing.

EX' ARCH, n. *. i Fr. exarque ; Lat. exar-

EXAR'CHATE, n. s. \ chus ; Gr. t£apx°C 5 from e? and apxn, government or command. A. vice- roy, or representative governor; it has been ap- plied particularly to an officer of the German empire resident at Ravenna. See below.

The popes, without admittance either of the em- perors themselves, or of their lieutenants the exarcht, ascend not the thrones. Garnet's Trial, 1606.

The exarchate of Ravenna being yielded to the pope, the government of Rome of course devolved upon him ;

for the Roman dukedom was always sub- ject to the exarch. Dr. A. Rees.

EXARCH, Gr. tKapxoQ, an appellation given by the eastern emperors to certain officers sent into Italy, in quality of vicars or prefects, to defend that part of Italy which was yet under their obedience; particularly the city of Ravenna against the Lombards, who had made themselves masters of the greatest part of the rest. The re- sidence of the exarch was at Ravenna; which city, and that of Rome, were all that were left the emperors. The first exarch was the patrician Boetius, famous for his treatise De Consolatione Philosophise ; appointed in 568, by Justin II . The exarchs subsisted about 185 years, and ended in Eutychius ; under whose exarchate the city of Ravenna was taken by the Lombard king Aistulphus. The emperor Frederic created He- raclius, archbishop of Lyons, a descendant of the house of Montboissier, exarch of Burgundy, a dignity till that time unknown any where but in Italy, particularly in the city of Ravenna.

EXARCH, in the eastern church antiquity, a superior over several monasteries ; the same that we otherwise call Archimandrite; being ex- empted, by the patriarch of Constantinople, from the jurisdiction of the bishops.

EXARCH also denotes an officer still subsist- ing in the Greek church; being a kind of deputy or legate a latere of the patriarch, whose office it is to visit the provinces allotted him, to inform himself of the lives of the clergy ; take cogni- zance of ecclesiastical causes; the manner of celebrating divine service; the sacraments, par- ticularly confession ; the observance of the ca- nons; monastic discipline; affairs of marriages, divorces, &c. ; but, above all, of the patriarch's revenues, and the collecting of them. The exarch often rises to the patriarchate.

EXARTICULATION, n. s. Lat. ex and ar- tictilus. The dislocation of a joint See ARTI- CULATION.

EXAS'PERATE, v. a. & adj.) Fr. exaspe-

EXASPERA'TION, n. s.] rer ; Span, ex-

asperar ; Lat. exasperare ; ex, emphatic, and as-pero, to sharpen, from asper, roush. To irritate; provoke; enrage; aggravate a difference.

To take the widow, ExacperateSf makes mad her sister Gonerii.

Shaktpeare

The plaster alone would pen the humour already coctained in the part, and to exasperate it. Baton.

Matters grew mere exasperate between the kings of England and France, for the auxiliary forces of French and English were much blooded one against another. Id.

My going to demand justice upon the five members, my enemies loaded with all the obloquies and exaspe-rationt they could. King Cfiarlet.

The people of Italy, who run into politicks, having something to exasperate them against the king of France. Adduon.

When ambition is unable to attain its end, it is not only wearied, but exasperated at the vanity of its labours. Parnel.

Their ill usage and exasperations of him, and his zeal for maintaining his argument, disposed him to take liberty. Alter bury.

After the death of Stella, his benevolence was con-tracted, and his severity exasperated ; he drove his ac- quaintance from his table, and wondered why he wa» deserted. Johnson. Life of Swift.

EXAUCTORATE, or-\ Lat. exauctoro,

EXAUC'THORATE, v. a. /from ex, privative

EXAUCTORA'TION, n. s. {and auctoritas, au-

EXAUCTHORA'TION. J thority.

The exaucthoration of episcopal office and dignity.

Bp. HaU.

Arch-hereticks, in the primitive days of Christianity, were by the church treated with no other punishment than excommunication, and by exaucturating and de- priving them of their degrees therein.

Ayliffe's Parergon.

Deposition, degradation, orexauctoration, is nothing else but the removing of a person from some dignity or order in the church, and depriving him of his ec- clesiastical preferments. Id.

EXAUCTORATIO? in the ancient Roman military discipline, differed from the missio, which was a full discharge, and took place after they had served in the army twenty years ; whereas the exauctoratio was only a partial discharge, which was granted after seventeen years' service. They lost their pay indeed, but still kept under their vexilla, or colors, though not under the aquila, or eagle, which was the standard of the legion : whence, instead of legionarii, they were called subsignani, and were retained till they had either served their full time, or had lands assigned them.

EXCALCEATION, among the Hebrews, a law, whereby a widow, whom her husband's brother refused to marry, had a right to summon him to a court of justice, and, upon his refusal, might excalceate him, i. e.. pull off one of his shoes, and spit in his face, by way of ignominy.

EXCANTATION, n. s. Lat. excanto. Dis- enchantment by a counter-charm.

There was no possibility of getting out [of his, the don's, cage] but by the power of a higher

excantation. Gayton's Don Quixote.

EXCA'RNATE, v. a. > Lat. ex and carries.
EXCARNIFICA'TIOX, n.s. 5 To clear from flesh The spleen is most curiously excamated, and the

vessels filled with wax, whereby its fibres and vessels

are very well seen. Grew.

EX'CAVATE, v. a. > Lat. excavo, from cavus,
EXCAVA'TION, re. «. 5 hollow. See CAVE. To

hollow, or form into caves.

While our eye measures the eminent and the hoi

lowed parts of pillars, the total object appeareth the

EXC

fciggor ; and so, as much as those excavations do sub- tract, is supplied by a fallacy of the sight.

Wotton's Architecture.

The cups, gilt with a golden border about the brim, were of that wonderful smallness, that Faber put a thousand of them into an excavated pepper-corn.

Ray on the Creation.

Though nitrous tempests, and clandestine death,
Filled the deep caves, and numerous vaults beneath,
Which formed with art, and wrought with endless toil, Ran through the faithless excavated soil, See the unwearied Briton delves his way And to the caverns lets in war and day. Rlackmore.

Flat thecae, some like hats, some like buttons, exca- vated in the middle. Derham's Physico- T/ ieology.

EXCEED', v. a. & v. n. ^ Fr. Span.

EXCEEDING, M.S. part. adj. kadv. j and Port. ex-

EXCEED'INGLY, adv. I ceder; It. ec-

EXCESS', n. s. \cedere ; Lat.

EXCES'SIVE, adj. \ excedere ex-

EXCF.S'SIVEI.Y, adv. J cessus, i. e.

extra incedere, to go beyond, to pass. — Minsheu. To pass beyond ; outgo ; excel : as a neuter verb, to go too far, or beyond limits ; overbalance : exceeding is used both as a substantive, an adjective, and an adverb, by our best writers, although the last use of it is clearly a barbarism. Excess is the state of exceeding; superfluity; exuberance ; transgression of limits : hence intemperance ; indulgence beyond the bounds of reason.

Isaac trembled exceedingly. Gen. xxvii. 33.

Forty stripes he may give him, and not exceed.

Devt.

Talk no more so exceeding proudly ; let not arrogance come out of your mouth. 1 Sam. ii. 3.

Solomon exceeded all the kings of the earth.

1 Kingf.

Be not excessive toward any. Eccles.

They cried out more exceedingly, Crucify him.

Mark xv.

And at the point two stingcs infixed arre, Both deadly sharp, that sharpest steele exceeden farre. Spenser. Faerie Queene.

Amongst the heaps of these excesses and superfluities, there is espied the want of a principal part

of duty. Hooker.

It was excess of wine that set him on, And on his more advice we pardon him.

Shakspeare.

Let the superfluous and lust-dieted man, That braves your ordinance, feel your power quickly ; So distribution shall undo excess, And each man have enough. Id. King Lear.

The Genoese were exceeding powerful by sea, and contended often with the Venetians for superiority.

Raleigh.

If the panicum be laid below and about the bottom of a root, it will cause the root to grow to an excessive bigness. Bacon.

Goodness answers to the theological virtue charity, and admits no excess but error : the desire of power in excess caused the angels to fall ; the desire of know- ledge in excess caused man to fall ; but in charity there is no exeats, neither can angel or man come in danger by it. Id. Essays.

The Earl of Surrey, lieutenant of Ireland, was much feared of the king's enemies, and exceedingly be. loved af the king's subjects. Davies on Ireland.

The people's property it is, by excessive favour, to bring great men to misery, and then to be excessive in pity. Hayward.

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The country is supposed to bo exceeding rich.

Abbot.

Pride may be allowed to this or that degree, else a man cannot keep up his dignity. In gluttony there must be eating, in drunkenness there must be drink- ing; 'tis not the eating, nor, 'tis not the

drinking, that must bo blamed, but 'tis the excess. So in pride.

Selden:

There will be need of temperance in diet ; for the body, once heavy with excess and surfeits, han»» plummets on the nobler parts. Duppa°.

In your prayers, and places of religion, use reverent postures and great attention, remembering that wo speak to God, in our reverence to whom we cannot possibly exceed. Taylor.

A popular sway, by forcing things to give

More than was fit for objects to receive,

Ran to the same extremes ; and one excess

Made both, by striving to be greater, less.

Denham. Justice must punish the rebellious deed ;

Yet punish so, as pity shall exceed. Dryden.

Precious stones look exceedingly well, when they are set in those places which we would make to come out of the picture. Id.

Jesting, R-ken not used upon improper matter, in an unfit manner, witii excessive measure, at undue seasons, or to evil purpose, may be allovfcd. Barrow.

Members are crooked or distorted, or disproportion-ate to the rest, either in excess or deteci. Ray.

There has been a great exceeding of late y-ars in the second division, several brevets having b .—?'.» granted for the converting of subalterns into scarf-officers. Spectator.

The action of the Iliad, and tnat of the JEncid, were in themselves exceeding short ; but are beautifully extended and diversified by the invention of episodes, and the machinery of the

gods. Addison.

A man must be excessively stupid, as well as un-
charitable, who believes there is no virtue but on
his own side. Id.

Is not this medium exceedingly more rare and sub-
tile than the air, and exceedingly more elastick and
active 1 Newton's Optic/a.

The several rays in that white light retain their
colorifick qualities, by which those of any sort,
when- ever they become more copious than the rest,
do by their excess and predominance cause their
proper color to appear. Id.

Hospitality sometimes degenerates into profuseness :
even parsimony itself, which sits but ill upon a
publick figure, is yet the more pardonable excess of
the two.

A tier bury.

Nor did any of the crusts much exceed half an inch
in thickness. Woodward on Fossils.

The serum of the blood affords, by distillation, an
exceeding limpid water, neither acid nor alkaline.

Arbuthnol.

And by which they have been so exceedingly affected
as to make no doubt but that it was the instant of
their conversion. Mason.

Some are more inclined to the sins of the flesh ;
sensuality, intemperance, uncleanness, sloth, self-
indulgence, and excess in animal gratifications. Id.

He stripped the' impostors in the noon-day sun.
Showed that they followed all they seemed to shun ;
Their prayers made public, their excesses kept As
private as the chambers where they Mept.

Cowper.

It is not free from inaccuracy ; but, as a model of easy and graceful simplicity, it has not been exceeded by any thing in our language, and well deserves to be studied by every person who wishes to write pure English. *«”«•

Their conduct was exceedingly well-bred,

And gave no outward signs of inward strife, Until at length the smothered fire broke out, And put the business past all kind of doubt.

Byron.

Fr. erceller ; Lat. ex- cellere, from t£w, be- yond, and KfXAttv, to run. — Minsheu. To

surpass ; exceed in good

EXCEL’, v. a. & v. n.

EXCELLENCE, Tl.S. Ex’CELLENCY, Ex’CELLENT, adj. Ex’cELLENTLY, adv.

qualities ; overpower : as a neuter verb, to be eminent or superior : excellence, and excellency, mean the state of superiority or greatness : and the latter is a common title of honor bestowed on ambassadors and principal commanders, civil and military.

Reuben, unstable as water, thou shall not excel.

, . Gen. xlix.

He is excellent in power and in judgment.

Job xxxvii. 23.

So fairely dight when she in presence came, She to her sire made humble reverence, And bowed low, that

her right well became, And added grace unto her excellence.

Spenser. Faerie Queene. The sparke of noble corage now awake. And strive your excellent selfe to excel.

Id.

Is it not wonderful, that base desires should so extinguish in men the sense of their own excellency, as to make them willing that their souls should be like the souls of beasts, mortal and corruptible with their bodies 1 Hooker.

Then to Silvia let us sing, That Silvia is excelling. Shakspeare.

She loves him with that excellence, That angels love good men with. Id.

They humbly shew unto your excellence, To have a goodly peace concluded of. Id.

It is not only in order of nature for him to govern that is the more intelligent ; but there is no less re- quired, courage to protect, and, above all, honesty and probity to abstain from injury : so fitness to govern is a perplexed business. Some men, some nations, excel in the one ability, some in the other.

Bacon's Holy War.

Rules and precepts doe then help after they have bin laboured and polisht by practice ; but if those rules may be m;.de cleere and chrystalline afore- hand, it would be the more excellent, because they would lesse stand in need of diligence, labour, and exercise after.

Id. On Learning.

The conscience of a man's excellency will abide no limits ; but spurs him forth to win admiration abroad.

Bp. Hall.

Ceremony keeps up things : 'tis like a penny glass to a rich spirit, or some excellent water ; without it the water were spilt, and the spirit lost. Selden.

Arts and sciences are excellent, in order to certain ends. Taylor.

He lamented the loss of an excellent servant, and the horrid manner in which he had been deprived of him. Clarendon.

He determines that man was erect, because he was made with hands, as he excellently declareth.

Browne's Vulgar Errourt. Venus her myrtle, Phoebus has his bay ; Tea both excels, which you vouchsafe to praise.*

WaUer.

Company are to be avoided that are good for no-thing ; those to be sought and frequented that excel in some quality or other. Temple.

He matched their beauties where they most excel \ Of love sung better, and of arms as well. Dry den.

I know not why a fiend may not deceive a creatura of more excellency than himself, but yet a creature.

Id. Juv. Dedic.

Comedy is both excellent ly instructive and extremely pleasant ; satire lashes vice into reformation ; and humour represents folly, so as to render it ridiculous.

Dry den.

It seems plain to me, that the principle of all virtue and excellency lies in a power of denying ourselves the satisfaction of our own desires, where reason does not authorize them. Locke.

But these incoherent apophthegms of philosophers and wise men, however excellent in themselves, anj well intended by them, could never make a morality whereof the world could be convinced ; could never rise to the force of a law that mankind could with certainty depend on. Id.

The criticisms have been made rather to discover beauties and excellencies than their faults and imper- fections. Addison.

How heroes rise, how patriots set, Thy father's bloom and death may tell ,

Excelling others, these were great ; Thou greater still, must these excel. Prior.

Let those teach others, who themselves excel ; And censure freely, who have written well. Pope.

That was excellently observed, says I, when I read a passage in an author where his opinion agreed with mine. Swift.

Though ambiguities are the first excellence of an im- postor, they are the last of a wit. Young.

Every one is apt to set the greatest value upon that kind of knowledge in which he imagines he himself most excels ; and to undervalue all other in compari- son of it. Mason.

He is happy whose circumstances suit his temper ; but he is more excellent, who can suit his temper to any circumstances. Hume.

Excellence is never granted to man but as the re- ward of labour. Sir J. Reynolds.

It is the great excellence of Shakspeare, that he drew his scenes from nature, and from life.

Johnson.

Osborne will never acknowledge the smallest de- gree of excellence in any production of mine.

Franklin.

EXCENTRIC. See ECCENTRIC.

EXCENTRIC CIRCLE, or EXCENTRIC, in the ancient Ptolemaic astronomy, was the orbit of the planet itself, which it was supposed to describe about the earth, and to be excentric with it ; called also the deferent. See ASTRONOMY.

EXCENTRIC EQUATION, in the ancient astro- nomy, is an angle made by a line drawn from the centre of the earth, with another line drawn from the centre of the excentric, to the body or place of any planet. This is the same with the prosthaphaeresis ; and is equal to the difference, accounted in an arch of the ecliptic, between the real and apparent place of the sun or planet. See ASTRONOMY.

EXCEPT, v. a., «.«.,&, "|

EXCEPT'INT,, prep, \prep.

EXCEPTION, ?j. s.

EXCEPTIONABLE, adj.

EXCEPT'IONER, n. s.

EXCEPT'IOUS, adj.

EXCEPT'IOUSNESS, n. t

EXCEPT'IVE, adj.

EXCEPT'LESS.

EXCEPT'ER, n. s.

Fren. excepter;

Spanish, eceptuar ;

Italian, eccettare ;

Lat. excipere, i. e.

ex, from, and ca- fpere, to take. To

exclude, omit, or

take from a list;

to specify as an j omission. As a

EXC

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EXC

neuter verb, to object ; make objections. As a character of friendship, but become the very sores of preposition (originally the passive participle of society. South

the verb), except means, exclusively of; unless; When God renewed this charter of man's s« provided that. Exception is either the act of reignty over the creatures to Noah and his family we excluding; the thing or person excluded; the find no exception at all ; but that Cham stood as fully form or manner (as an objection, cavil, Sec.), or invested with this right as any of his brethren. Id. the motive of exclusion. Exceptionable is, liable The except* makes a reflection upon the impro to objection ; doubtful in a degree. Exceptioner, priety of those expressions. Burnet

he who makes objections. Exception, cavilling ; Let the money be raised on land, with an creep. peevish. Exceptive is, including an exception, tion to some of the more barren parts, that mi^ht be Exceptless, general ; universal ; making no excep- tax-free. Addison

The only piece of pleasantry in Milton is where the evil spirits rally the angels upon the success of their artillery ; this passage I look upon to be the most ex- ceptionable in the whole poem. Id. People come into the world in Turkey the same way

tion.

But when he saith, All things are put under him, it is manifest, that he is excepted which did put all things under him. Cor.

He may have exceptions peremptory against the jurors, of which he then shall sh-;w cause. Spenser.

they do here ; and yet, excepting the royal family, Your assertion hath drawn us to make search whe- they get but little by it. Collier on Duelling.

ther these be just exceptions against the customs of our church, when ye plead that they are the same which the church of Rome hath, or that they are not the same which some other reformed churches have de- vised. Hooker. Preface.

Richard except, those whom ye fight against, Had rather have us win than him they follow.

Shakspeare.

He first took exception at this badge, Pronouncing, that the paleness of this flower Bewrayed the faintness of my master's heart. Id.

Roderigo, thou hast taken against me an exception ; but I protest I have dealt most directly in thy affair.

Id.

I feared to shew my father Julia's letter, Lest he should take exceptions to my love. Id.

Forgive my general and exceptlen rashness, Perpetual sober gods! I do proclaim One honest man. Id. Timon,

He gave Sir James Tirrel great thanks ; but took exception to the place of their burial, being too base for them that were king's children. Bacon.

Revelations will soon be discerned to be extremely conducible to reforming men's lives, such as will an- swer all objections and exceptions of flesh and blood against it. Hammond.

God and his son except, Nought valued he nor feared. Milton.

Adam, behold

The effects, which thy original crime hath wrought, In some to spring from thee, who never touched The excepted tree. Id. Paradise Lost.

I will answer what exceptions they can have against our account, and confute all the reasons and explica- tions they can give of their own. Bentley

Pleads, in exception to all general rules,

Your taste of follies, with our scorn of fools.

Pope.

Every act of parliament was not previous to what it enacted : unless those two, by which the earl of Staf- ford and Sir John Fenwick lost their heads, may pass for exceptions. Swift.

Exceptive propositions will make complex syllogisms : as, None but physicians came to the consultation, the nurse if no physician j therefore the nurse came not to the consultation. Watts't Loyick.

A gentleman of Sweden differs but little, except io trifles, from one of any other country. Goldsmith

Their visible aim is not to inform your judgment, but display their own ; you have many things to query and except against j but their loquacity gives you uo room ; and their good sense, set off to so much ad- vantage, strikes a modest man dumb. Mason.

Such rare exceptions, shining in the dark, Prove rather than impeach the just remark ; As here and there a twinkling star descried Serves but to show how black is all beside.

Cowper.

Dost thou deem

None rebels except subjects ? The prince who Neglects or violates his trust is more A brigand than the robber-chief. Byron.

EXCEPTION, in law, denotes a stop or stay to

Thus much, readers, in favour of the softer spirited aa action; and is either dilatory or peremptory Christian } for other exceptions there was no thought in proceedings at commOn law : but in chancery

ton' it is what the plaintiff alleges against the suffici-

taken.

sary

cept

It is necessary to know our duty, because 'tis neces- ' ™ ' "" ttllc&" '

ryforustod7it;anditisimpossibletodoit,e,- ency of an answer &c An exception is he rt weknow it Tilhtson. denial of what is taken to be good by the other

May I not live without controul and awe, Excepting still the letter of the law?

Dryden's Pert.

party, either in point of law or pleading. The counsel in a cause are to take all their exceptions to the record at one time, and before the court

A succession which our author could not except has delivered any opinion on it

against. Locke.

Folly is freakish and humourous, impertinent and obstreperous, inconstant and inconsistent, peevish and exceptions ; and consequently fastidious to society, and productive of aversation and disrespect. Barrow.

Friendly admonition — being delivered in an impe-
riously insulting way — becomes unsavory and odious.
and both in shew and effect resembles a froward, ma-
licious exceptioumess. !&•

They are so supercilious, sharp, troublesome,
fierce, and exceptiotu, that they are not only short
of the true

EXCE'RN, v. a. Lat. excerno. To strain out; to
separate or emit by strainers ; to send out by
excretion.

That which is dead or corrupted, or exeerned, hath
antipathy with the same thing when it is alive and
sound, and with those parts which do excertt.

Bacon's Natural History.

Exercise first sendeth nourishment into the parts ;
and secondly, helpeth to excern by sweat, and^
maketh the parts assimilate.

2 Y2

id.

An unguent or pap, prepared with an open vessal to
exern it into. Ray on the Creation.

EXCERP, or ^ Lat. excerpt'w, ercerpo ; ev and carpo,
to crop. 'To pick out or select.

Times have consumed his works, saving some few
excerptions. Raleigh.

In your reading excerp, and note in your books such
things as you like. Hale*.

I have not been surreptitious of whole pages toge-
ther out of the doctor's printed volumes. I am no
such excerptor. Barnard.

EXCESS'. See EXCEED.

EXCESS, in arithmetic and geometry, is the difference between any two unequal numbers or quantities, or that which is left after the less is taken from or out of the greater.

EXCHANGE', K.a.&n.s. > A compound of

EXCHAX'GER, n. s. J ex and CHANGE,

which see. To ijive or take reciprocally one thing for another : it takes with, before the party with whom the bargain or agreement to exchange is made ; and for before the thing taken in ex- change.

They shall not sell of it, neither exchange nor alie- nate the first fruits. Ezek. xlviii. 1 1 . I have bills for money by exchange,

From Florence, and must here deliver them.

Shakspeare; If none appear to prove upon thy person

Thy heinous, manifest, and many treasons,

There is my pledge : I'll prove it on thy heart.

• — There's my exchange ; what in the world he is

That names me traitor, villain-like he lies. Id,

Exchange forgiveness with me, noble Hamlet ; Mine and my father's blood, be not upon thee. Nor thine on me. Id. Hamlet.

He was skilled in the exchange beyond seas, and in all the circumstances and practices thereof.

ffayward on Edward VI.

The king called in the old money, and erected ex- changes where the weight of old money was exchanged for new. Camden.

No thing, no place is strange, While his fair bosom is the world's exchange.

Denham.

And thus they parted, with exchange of harms ; M ich blood the monsters lost, and they their arms.

Waller.

The respect and love which was paid you by all who had the happiness to know you, was a wise ex- change for the honour* of the court. Dryden. If blood you seek, I will my own resign :

O spare her life, and in exchange take mine.

Id. Indian Empire.

Words having naturally no signification, the idea must be learned by those who would exchange thoughts, and hold intelligible discourse with others. Locke.

Being acquainted with the laws and fashions of his own country, he has something to exchange with those abroad. Id.

He that uses the same words sometimes in one, and sometimes in another signification, ought to pass, in the schools, for as fair a man, as he does in the market and exchange who sells several things under the same name. Id,

Whilst bullion may be had for a small price more than the weight of our current cash, these exchangers generally choose rather to buy bullion than run the risk of melting down our coin, which is ciiminal by the law. Id.

Here then exchange we mutually forgiveness. So may the guilt of all my broken vows, My perjuries to thee be all forgotten. Rowe.

The world is maintained by intercourse ; and the whole course of nature is a great exchange, in which one good turn is, and ought to be, the stated price of another. South.

They lend their corn, they make exchanges; they are always ready to serve one another. Add'uon.

Take delight in the good things of this world, so as to remember that we are to part with them, ana to exchange them for more excellent and durable enjoy- ments. Atterbury.

The most reserved of men, that will not exchange

two syllables together in an English coffee-house,

should they meet in Ispahan, would drink sherbet,

and eat a mess of rice together. Shenstone.

Yet ne'er with wits profane to range

Be complaisance extended ; An Atheist's laugh 's a poor exchange

For Deity offended! Burnt.

I do not know how others feel, but if I haa stood in that situation I never would have exchanged it for all that kings in their profusion could bestow.

Burke.

SIR ASTH. Let her foreclose, Jack ; let her fore- close : they are not worth redeeming ; besides, you have an angel's vow in exchange, I suppose, so there can be no loss there. Sheridan.

EXCHANGE, m architecture, a place in most trading cities, wherein the merchant, negociants, agents, bankers/brokers, interpreters, and other persons concerned in commerce, meet on certain days, and at certain hours, to confer together of matters relating to exchanges, remittances, pay- ments, adventures, assurances, freightments, and other mercantile negociations, both by sea and land. In Holland, the ci-devant Flanders, and several cities of France, these places are called burses ; at Paris and Lyons, places de change ; and in the Hanse towns, colleges of merchants. These assemblies are

held with so much exact- ness, and merchants and negociants are so indis- pensably required to attend them, that absence alone makes a man suspected of bankruptcy. The most considerable exchanges in Europe, are that of Amsterdam, and that of London, called the Royal Exchange. Even in the time of the ancient Romans, there were places for the mer- chants to meet, in most of the considerable cities of the empire. That said by some to have been built at Rome, A. U. C. 259, arid A. A. C. 493, under the consulate of Appius Claudius and Pub- lius Servilius, was called collegium mercatorum ; of which it is said there are still some remains, called by the modern Romans loggia, the lodge ; and now, usually, the Place of St. George. This notion of a Roman exchange is supposed to be founded on Livy's words, lib. ii. ; viz. Certamen consulibus inciderat, uter dedicaret Mercurii cedem. Senatus a se rem ad populum rejecit: utri eorumdedicatio ;ussu populidata esset, eum praeesse annonx, mercatorum collegium instituere jussit. But it is certain that collegium never signified a building for a society in the purer ages of the Latin tongue ; so that collegium mer- catorum instituere must not be rendered to build an exchange for the merchants, but to incorpo- rate the merchants into a company. As Mercury was the god of traffic, this aedes Mercurii seems

to have been chiefly designed for the devotions advantages, prevents all risk of loss by ship-

.vreck, robbery, &c., which might happen from remitting payment in coin. But, when the reci- procal debts are not equal, there arises a balance on one side. Suppose London to owe Paris a balance, value £100. An exchanger, finding a

of this company.

EXCHANGE, in arithmetic. See ARITHMETIC, Index. The

operations are only different appli- cations of the rule of three, or of practice* to perform which it is necessary to know the value

of the coins and monies of account of different demand for a bill upon Pans for £1 00, when Paris countries, and their proportions to each other; owes no more to London, sends £100 to his cor- for which see the various tables under the article respondent in Paris in coin, at the expense (sup- MONEY. pose) of £1 ; and then, having become creditor on

EXCHANGE, in ancient commerce, an agree- Paris, he can give a bill for the value of £10(/ mem, whereby one thing was given for another, upon his being repaid his expense, and paid for The fust commerce carried on among men was by his risk and trouble. When merchants have oc- exchange; people furnished each other mutually casion to draw and remit bills for the liquida- with what things they wanted ; but such exchanges tion of their own debts active and passive, in were clogged with two considerable difficulties, distant parts, they meet upon 'Change ; where 1. On account of the unequal value of com- (to continue the example) the creditors upon modities; and 2. because every body has not Paris, when they want money for bills, look out just what might accommodate the person with for those who are debtors to it. The debtors to whom he would exchange. To remove these in- Paris again, when they want bills for money, conveniences, money was invented for a common seek for those who are creditors upon it. This medium ; and, instead of exchanging, buying market is constantly attended by brokers, who and selling were introduced. There are many relieve the merchant of the trouble of searching nations among whom the primitive mode of ex- for those he wants. To the broker every one change still obtains; and even the most civilised communicates his wants, so far as he finu it people must sometimes have recourse to this prudent ; and, by going about among all t • method. Such, e. g. is the trade of several merchants, the broker discovers the side upoi cities of the north and Baltic Sea, where the which the greater demand lies, for money

or for French exchange their wines and brandies for bills. This renders secrecy very essential to iu- wood, metals, hemp, and furs. dividuals among the merchants. If the London

EXCHANGE, in modern commerce, is the re- merchants want to pay their debts to Paris, when ceiving or paying of money in one country for there is a balance against London, it is their the like sum in another, by bills of exchange, interest to conceal their debts, and especially the The Dunctuality of acquitting these obligations is necessity they may be under to pay them: lest essential to commerce; and no sooner is a mer- those who are creditors npon Paris should de- chant's accepted bill protested, than he is consi- mand too high a price for the exchange above dered as a bankrupt. For this reason, the laws par. On the other hand, those who are creditors of most nations have given very extraordinary upon Paris, when Paris owes a balance to Lon- privileges to bills of exchange. Were the claims don, are as careful in concealing what is owing of merchants to linger under the formalities of to them by Paris, lest those who are debtors to courts of law when liquidated by bills of ex- Paris should avail themselves of the competition

change, faith, confidence, and punctuality, would quickly disappear, and the great engine of com-

among the Paris creditors, to obtain Dills for their money, below their value at par. A cre-

merce would be totally destroyed. A regular ditor upon Paris, who is pressed for money at

bill of exchange is a mercantile contract, in London, will abate something of his debt, in

which four persons are concerned (see BILL), order to get money for it. Thus the merchants

viz. 1. The drawer, who receives the value: 2. upon 'Change, from their separate and jarring

His debtor, in a distant place, upon whom the

interests, are constantly interested in the state of

bill is drawn, and who must accept and pay it: 3. The person who gives value for the bill, to

the balance. Those who are creditors upon Paris, fear the balance due to London ; those

whose order it is to be paid : and 4. The person who are debtors to Paris dread a balance due to

to whom it is ordered to be paid, creditor to the Paris. The brokers determine the course of the

third. By this operation, reciprocal and equal day; and the most intelligent merchants despatch

debts, due in two distant parts are paid by a their business before the fact is generally known,

sort of transfer of debtors and creditors. Thus A In this complicated operation, the interest of

in London is creditor to B in Paris, value £100 : trade and of the nation is concerned in the pro-

C again in London is debtor to D in Paris for a per method of paying and receiving the balances,

like sum. By the operation of the bill of ex- and in preserving a just equality of profit and

change, the London creditor is paid by the Lon- loss among all the merchants, relative to the real

don debtor; and the Paris creditor is paid by the state ot the balance. Such is the nature of these

Paris debtor; consequently the two debts are operations of exchange, that it is hardly possible

paid, and no money is sent from London to for a mercham to carry on his business without

Paris nor from Paris to London. In this ex- the assistance of the brokers. When balana

ample, A is the drawer, B is the accepter, C is come to be paid, exchange becomes mini

the purchaser of the bill, and D receives the and merchants are so much employed in p

money. Two persons here receive the money, cular branches of business, that they are ol

A and ID- and two pay the money, B and C; to leave the liquidation of their debts to men

which is just what must be done when two debtors who, naturally, also consider their own adv

and two creditors cleai accounts. This is the plain tage. Whenever a balance is to be paid, th

principle of a bill of exchange; which, among other payment costs an additional expense

of the place who owe it, over and above the value of the debt. If, therefore, this expense be a loss to the trading man, he must either be repaid by those whom he serves, that is, by the nation ; or the trade he carries on will become less profitable. It is therefore plain, that the expense of high exchange upon paying a balance is a loss to a people, not to be compensated by enriching the few individuals among them who gain by contriving methods to pay it off. What- ever renders the profit upon trade precarious or uncertain is a loss to trade in general.

EXCHANGE is sometimes also used for the agio, or profit allowed for the monies, ad- vanced in any one's behalf. Thus it is a fixing of the actual and momentary value of money. Silver as a metal has a value like all other mer- chandise; and an additional value, as it is capa- ble of becoming the sign of other merchandise. If it was no more than a mere merchandise, it would perhaps lose much of its

nominal value. As a money, silver has a value which the prince in some respects can fix, but in others he cannot. The prince establishes a proportion between a quantity of silver, as a metal, and the same quan- tity, as money. He fixes the proportion between the several metals made use of as money; he establishes the weight and standard of every piece of money ; in fine, he gives to every piece that ideal value already mentioned. The value of money in all these respects may be styled its positive value, because it may be fixed by law. The coin of every state has also a relative value as compared with the money of other countries. This relative value is established by the exchange, and greatly depends on its positive value. It is fixed by the current course of commerce, and by the general opinion and consent of merchants, but never by the decrees of the prince, because it is liable to incessant variations, depending on the accidental circumstances of trade, the money transactions between nations, the state of public credit, &c. Nations, in fixing this relative value, are chiefly guided by that country which pos- sesses the greatest quantity of specie. , If she has as much specie as all the others together, the others regulate theirs by her standard; and this regulation between all the others will nearly agree with the regulation made with this prin-

cipal nation. The relative abundance or scarcity of specie, in different countries, forms what is called the course of exchange, and this plenty or scarcity, on which the mutability of the course of exchange depends, is not real but relative ; e. g. when the French have greater occasion for funds in Holland than the Dutch have for funds in France, specie is said to be common in France, and scarce in Holland ; and vice vers&.

EXCHANGE, ARBITRATION OF. See ARITH- METIC, Index.

EXCHANGE, BILL OF. See BILL.

EXCHANGE, PAR OF. When money of the same standard and weight in one country, yields money of the same

standard and weight in an- other, the exchange is then said to be at par. Thus in the year 1744 the par between France and Holland was nearly at fifty-four gros to the French crown of three livres ; when the exchange is above fifty-four gros, the French say it is high ; when below fifty-four gros, it is low. When the exchange is below par between one country and another, the former loses as debtor and buyer, and gains as creditor and seller. Thus if France owes Holland a certain number of gros, the more of these there are in a crown the more crowns she has to pay; and as there must be the same number of gros to buy the same quantity of mer- chandise, while the exchange is low, every French crown is worth fewer gros. On the con- trary, if France is creditor for a certain number of gros, the less of them there are in a crown the more crowns she will receive ; and if France sells her merchandise in Holland for a certain number of gros, the more crowns will she receive, in pro- portion as each crown contains fewer of these gros. The same reasoning will apply, mutatis mutandis, to the commercial intercourse of other countries, and to any par of exchange. A mer- chant may send his stock into a foreign country, when the exchange is below par, without injur- ing his fortune ; because, when it returns, he re- covers what he had lost ; but a prince, who sends only specie into a foreign country, which can never return, is always a loser. The par of ex- change between Great Britain and the principal places in Europe, with which, in time of peace, we have commercia.1 intercourse, may be thus exemplified from Lloyd's List, October 4th 1825.

Course of Exchange.

Par about.

Explanation.

Usance.

Days of Grace.

Amsterdam . .

12. 4

12. 9

Flor. & St. per £ Sterling

1 m

d

6

Rotterdam .

12. 5

12. 9

Flor. & St. per £ Sterling

1 m

d

6

Antwerp .

12. 4

12. 9

Flor. & St. per £ Sterling

1 m

d

6

Hamburgh . .

37 2

34. 3

Sh. & D. Flem. per £ Ster.

1 m

d

12

Frankfort . . .

151.

140

Batzen per £ Sterling

14 d

s

4

Paris ....

25.35

25. 20

Francs & Cums. per £ Ster.

30 d

d

Madrid . . .

37.

39

Pence Ster. per Dol. of Ex.

2 m

d

14

Gibraltar . .

31.

34*

Pence Ster. per Current Dol.

2 m

s

3

Leghorn . . .

49|

49

Pence Ster. per Piastre

3 m

d

Genoa . . .

44J

45*

Pence Ster. per Piastre

3 m

d

Venice . . .

27

26. 30

Ital. Livres per £ Sterling

3 m

d

6

Malta . . .

53*

Pence Ster. for thirty Tari.

30 d

s

3

Naples . . .

40J

4U

Pence Ster. per Ducat

3 m

d

3

Palermo . . .

122

124

Pence Ster. per Oz.

3 m

d

Lisbon • . . .

51

67*

Pence Ster. per Milree

30 d

d

6

1 Rio Janeiro . .

50

67*

Pence Ster. per ditto

30 d

d

6 I

EXCHANGE.

695

In the above columns it appears that the ex- change between London aad the three first places is nearly at par. But Hamburgh, Frankfort, and Paris, give more than the par to the pound sterling, and hence the exchange is in favor of London; while Madrid, Gibraltar, and Genoa, receive less than par from London for their monies respectively.

It should also be observed that when the ex- change is favorable to a place, it is only so to the buyer and remitter of foreign bills ; but un- favorable to the drawer and seller. Thus the interest of each party is identified with that of the place where his funds are : and hence an un-

favorable rate of exchange in any place operates as a premium for the exportation of goods, and is, so far, an advantage to that place.

The rule for reducing foreign money into English, and vice versa, may be thus instanced : Dutch money is reduced to English by saying : As the given rate of exchange to £1 sterling, so the given Dutch to

the sterling sought: and sterling is reduced to Dutch by reversing this rile. This rule will apply in all cases by merely substituting the money of other count :es with the rate of exchange. See our ailicle COINS for copious tables of these monies.

EXAMPLE.

Reduce 8,132 guilders or florins, sixteen stivers, into sterling; exchange at ten current florins eight stivers per pound sterling.

(=. 34s. 8d. Flem.)

G. S. If 10 8

20

208

L. St.

: 1 :

Guil. Stiv.

8132 16

20

£

208)162656(782 1456

1705. &c.

Reverse Rule.

L. G. S.

As 1 : 10 8

L. Guild. Stiv.

782 : 8132 16.

When the price is give^ in Flemish, say,

L. St. Fl. St. As 34 4 : 1 : 8132 16

6 20

208

208)162656(7822

12 12 12 37 37

The following is the COURSE OF EXCHANGE for the above day, October 4th, 1825.

Amsterdam C. F. 12

Ditto at sight .....

Rotterdam ;• —. . . . . 2 U.

Antwerp

Hamburgh 2£ U.

Altona ..... 2£ U.

Paris, three days sight 25 35

Ditto 2 U. 25 65

Bourdeaux 25 65

Berlin 7

Frankfort on Maine . . Ex. M. 151

Petersburg!), Rble. . . . 3 U. 9|

Vienna . . . effective p. 2 M. 10 i

Trieste .... do ... 10 2

Madrid 37

Cadiz 37

Bilboa 36?

Barcelona 36

Seville 36£

Gibraltar 31

Leghorn 49f

. . . • 44|

9

23 J 3 4 d 4J 4d 71 exd

lOf

Genoa Venice Malta Naples

4°1

Palermo the oz. 122

Lisbon ^1

Oporto ....—.••• 51 '

Rio Janeiro 50

Bahia 52

•Buenos Ayres "J

Dublin . . . i °i

Cork 9i

FOREIGN STOCKS, same day. Austrian Bonds, 5 per cent. . • Brasilian Bonds

Ditto Scrip .....

Buenos Ayres, 6 per cent. . . .

Chilian, 6 per cent. .....

Colombian, 6 per cent 75 J

Ditto, 1824 74

Danish, 5 per cent •

Ditto, Marks Banco, 5 per cent. .

Ditto Scrip, 1825

Greek Bonds ....

Ditto Scrip, 1825, 5 per cent. Guatimala Scrip . . . Mexican, 5 per cent. . . Ditto, 1825, 6 per cent. . . Ditto Scrip, 1825, 6 per cent.

Neapolitan, 5 per cent

Ditto, 5 per cent. 1824 ....

Peruvian, 6 per cent 67^-8

Ditto Scrip, 1825, 6 per cent. . . Portuguese, 5 per cent. . . , , .

Prussian, 5 percent

Ditto, 1822, 5 per cent. .... Russian, 1822, 5 per cent. . . . Spanish, 5 per cent. Consols . . 16J.J £ Ditto, 1823

BULLION, the oz., Oct. 4th, 1825.

£ s. d.

Portugal gold, in coin ... 0 0 0 Foreign gold, in bars 3 17 6

New doubloons 000

New dollars .....0411$

Silver, in bars, standard ... 0 5 1

BRITJSH STOCKS, Oct. 4th, 1825.

Bank stock ~^5

3 per cent, reduced .... 87 3 per cent, consols . . . •

3J per cent $•”>

Assented . , • < •

EXCHANGE.

4 per cents. 1822 102f J £

India stock 264

Ditto bonds 14 p

Exchequer bills, Id par 1 p

Ditto small

Ditto \d

Consols for Oct. Ace. . . .' 88J 8 \ f These subjects have of late years received that large share of public attention which their im- portance to a country so essentially commercial as our own would seem to demand.

I. In respect to nominal exchange. In the civil- ised part of the commercial world bullion is now every where recognised as the standard currency, and the comparative value of the currency of each country must depend (1st.) On the relative value of bullion there. (2dly.) On the quantity of bullion contained in the coins of that country, or on the quantity of bullion for which the paper- money, or other circulating media, will exchange. It has, therefore, been well argued, That the real price of commodities being always pro- portionable, not merely to their actual cost of production, but also to the expense incurred in conveying them to where they are consumed, it follows that, if the trade in the precious metals were perfectly free, and if the commodities pro- duced in different countries were nearly all equally well fitted for exportation, the value of bullion in different countries would be chiefly regulated by their respective distances from mines. Thus, on the supposition that neither England nor Poland had any other commodities except ?orn to exchange with the South Americans for bullion, it is evident that the precious metals would possess a greater value in Poland than in England, because of the greater expense of send- ing so bulky a commodity as corn, the more distant voyage, and

because of the greater expense of conveying the gold to Poland. If Poland, however, had succeeded in carrying her manufactures to a higher pitch of improvement than England, her merchants might have been able, notwithstanding the disadvantage of dis- tance, by exporting commodities possessed of great value in small bulk, and on which the expense of freight would have been compara- tively triflincr, to have sold bullion on cheaper terms than those of England. But if, as is actu- ally the case, the advantages of skill and machi- nery were possessed by England, another reason would be added to that derived from her less distance from the mines, why gold and silver should be less valuable in England than in Po- land, and why the money price of commodities should be higher in the former country. (Ricar- do, Principles of Political Economy, &c., 1st. Ed. p. 175). After nations therefore have attained to different degrees of excellence in manufactu- ring industry, the value of bullion in different countries will no longer depend on their distance from the mines But, whatever variations a dif- ferent progress in the arts may occasion in the value of bullion, as compared with particular commodities in different countries, it is certain that it must always be less valuable in those countries into which it is imported than in those in which it is produced. Bullion, like every other commodity, is exported to find, not to

destroy its level. And, unless its value in Eu- rope exceeded its value in America, by a sum sufficient to cover the expenses attending its im- portation, and to yield the ordinary rate of profit to the importer, we should not, although the mines of Mexico and Peru were a thousand times more productive than at this moment, be able to import a single ounce of bullion.

It is incorrect, therefore, to lay down as a general proposition, ' that the par of exchange between two countries is that sum of the currency of either of the two, which, in point of intrinsic worth, is precisely equal to a given sum of the other, that is, contains precisely an equal weight of gold and

silver of the same fineness.' (Bul- lion Report, p. 22, 8vo. edit). For a given quan- tity of gold and silver is not always, as is here assumed, of the same intrinsic value in different countries. It may not, indeed, differ very ma- terially among nations in the immediate vicinity of each other, and which are all destitute of mines. But, although the value of sugar, for instance, approaches nearly to a level in the great trading cities of Europe, it cannot be maintained that its value in the West Indies is the same with its value in Bourdeaux or Liverpool ; or that the exchange would be at true par, if a bill, which cost 100 hogsheads of sugar in London, only brought 100 in Jamaica. Now, this is pre- cisely the case with bullion. Though the value of gold and silver, as compared with corn, labor, &c., may, and indeed must, vary very consider- ably among the different European nations, these variations are only the necessary result of their different progress in industry, and of the differ- ent quality of their cultivated lands, &c. Such a difference of prices is the natural order of things; and bullion has only found its proper level when a sufficient quantity has been introduced into those countries which excel in manufactures, so as to raise the price of their corn and labor. These variations have, therefore, no effect on the exchange. An ounce of bullion in one country, notwithstanding this difference of price, will, because of the facility of intercourse, be very nearly equivalent to an ounce of bullion in another; and, supposing the trade in the precious metals to be perfectly free, the exchange will be at true par when bills are negociated on this footing. But when we compare the value of the precious metals in very distant countries, and especially in those in which they are produced, with those into which they are imported, it is obvious that, considered merely with reference to the exchange, it must differ considerably. Gold and silver, like coal, tin, 8cc., must always be really cheaper in countries possessed of extraordinarily productive mines, than in those possessed of mines of a secondary degree of fertility, or in which they are entirely imported

from abroad. And the exchange between such places can only be at true par when adequate allowance has been made for this difference of value. Thus, if, because of the expense of carriage, the value of bullion in Great Britain is 5 per cent, greater than in Rio Janeiro, 100 ounces of pure gold in Rio Janeiro would not be worth 100 ounces of pure gold in London, but 5 per cent, less ; and the exchange would be at true par when bills for

105 ounces of standard bullion, payable in Rio Janeiro, sold in London for 100 ounces. The differences in the value of the precious metals, in different countries, have not been confined to those which depend on their respective distances from the mines, or on their different progress in the arts. The opinion formerly so very preva- lent, that gold and silver alone constituted real wealth, induced almost every commercial nation to fetter and restrict their exportation, and to adopt a variety of measures intended to facilitate their importation. But these regulations, even when most rigorously enforced, have been singu- larly ineffectual ; the great value and small bulk of the precious metals rendering it not only extremely advantageous, but also comparatively easy, to smuggle them abroad, whenever their relative value declined.

' When,' says Dr. Smith, ' the quantity of gold and silver imported into any country exceeds the effectual demand, no vigilance of government can prevent their exportation. All the sangui- nary laws of Spain and Portugal are not able to keep their gold and silver at home. The con- tinual importations from Peru and Brasil exceed the effectual demand of those countries, and sink the price of these metals below their pr ce in the neighbouring countries. If, on the contrary, in any particular country their quantity fell short of the effectual demand, so as to raise their price above

that of the neighbouring countries, the government would have no occasion to take any pains to import them. If it were even to take pains to prevent their importation, it would not be able to effect it. Those metals, when the Spartans had got wherewithal to purchase them, broke through all the barriers which the laws of Lycurgus opposed to their entrance into Lace- demon. All the sanguinary laws of the customs are not able to prevent the importation of teas of tiie Dutch and Gottenburgh East India Compa- nies, because somewhat cheaper than those of the British Company. A pound of tea, however, is about 100 times the bulk of one of the highest prices, 16s., that is commonly paid for it in sil- ver, and more than 2000 times the bulk of the same price in gold, and is consequently just so many times more difficult to smuggle.' — Wealth of Nations, vol. II., p. 149.

It is a consequence of these principles, that •whatever occasions a risfi or fall in the relative value of the precious metals, in a particular country, must proportionably affect its nominal exchange with other countries. If more coin, or paper convertible into coin or bullion, circulated in Great Britain, compared with the business it had to perform, than what circulated in other countries, its relative value would in consequence be diminished. Foreign bills would sell for a premium, the amount of which would be pre- cisely equal to the excess of the value of the precious metals in the foreign market, caused by their redundancy in the home market ; and, on the other hand, in the event of the currency becom- ing relatively deficient, its value would be propor- tionably increased ; — bills drawn on foreign coun- tries would sell at a discount, the amount of which would measure the excess of the relative value of the currency of this over that of other countries.

II. In ascertaining the comparative quantity of bullion contained in the currencies of different countries, a particular coin of one country, such as the British pound sterling, must be taken as an integer, or standard of comparison, and the

proportion between it and the coins of other countries of their mint standard weight and fine- ness, is ascertained by experiment. A par of exchange is thus established; or rather it is ascertained, that a certain amount of the stan- dard currency of any particular country contains precisely as much gold or silver of the same fineness, as is contained in the coin, or integer, with which it had been compared. This relation or par, as it is technically termed, is considered invariable ; and allowance is made for the sub- sequent variations in the comparative quantity and purity of the bullion contained in the cur- rencies of countries trading together, by rating the exchange at so much above or below par. In mercantile language, that country, by a com- parison with one or other of whose coins the par of exchange has been established, is said to give the certain for the uncertain, and conversely. Thus, in the exchange between London and Paris, London and Hamburgh, &c., London gives the certain, or the pound sterling, for an uncertain, or variable number of francs, schil- lings, &c. Hence, *he higher the exchange be- tween any two countries, the more it is in favor of that which gives the certain, and the lower, the more is it in favor of that which gives the uncertain. On the supposition, which is very near the truth, that twenty-five francs contain the same quantity of standard bullion as a pound sterling (twenty-five francs twenty centimes is she exact par); and supposing also, that the relative value of bullion is the same in both countries, the exchange between London and Paris will be at par, when a bill drawn by a merchant in the one, on his correspondent in the other, sells at that rate ; that is, when a bill of exchange for 2500 or 25,000 francs, payable in Paris, sells in Lon- don for £100 or £1000, and vice versa. It is but seldom, however, that the coins of any country correspond exactly with the mint stan- dard; unless, when newly issued, they are all either more or less worn ; and, whenever this is the case, an allowance corresponding to the dif- ference between the actual value of the coins and their mint value, must be

made in estimating ' the sum of the existing currency of either of two countries, which contains precisely the same quantity of bullion as is contained in a given sum of the other.' Thus, if the one pound ster- ling was so worn, clipped, rubbed, &c., as not to contain so much bullion as twenty- five francs, but 10 per cent, less, the exchange between London and Paris would be at real par, when it was nominally 10 per cent, against London; and if, on the other hand, the pound sterling was equal to its mint standard, while the franc was 10 per cent, less, the exchange between London and Paris would be at real par, when it was nominally 10 per cent, against Paris, and in favor of London. If the currency of both coun- tries was equally reduced below the standard of their respective mints, then it is obvious there would be no variation in the real par. But,

•whenever the currency o countries trading together is depreciated in an unequal degree, the exchange will be nominally in favor of that country whose currency is least depreciated, and nominally against that whose currency is most depreciated.

It is to be further observed, that when one country uses gold as the standard of its currency, and another silver, the par of exchange between these countries is affected by every variation in the relative value of these metals. When gold rises in value comparatively to silver, the ex- change becomes nominally favorable to that country which has the gold standard, and vice versa. And hence, in making a correct estimate of the state of the exchange, between those countries which use different standards, it is always necessary to advert to the comparative value of the metals which are assumed as such.

'For example,' to use the words of Mr. Mushet, 'If 34 schillings 11| grotes of Ham- burgh currency be

equal in value to a pound sterling, or $ of a guinea, when silver is at 5s. 2rf. per oz., they can no longer be so when sil- ver falls to 5s. Id., or 5s. an oz., or when it rises to 5s. 3d. or 5s. 4

' To find the real par, therefore, we must as- certain what was the relative value of gold and silver when the par was fixed at 34s. 11} gr. Hamburgh currency, and what is their relative value at the time we wish to calculate it.

' For example, if the price of standard gold was £3 17s. lO^rf. per oz. and silver 5s. Id., an ounce of gold would then be worth 15'07 ounces of silver, and twenty of our standard shillings would then contain as much pure silver as 34s. 11 J gr. Hamburgh currency. But if the ounce of gold were £3 17s. 10£d. and silver 5s. (which it was on the 2d of January 1798), the ounce of gold would then be worth 15-57 ounces of silver. If £1 sterling at par, therefore, be worth 15-07 ounces of silver, then at 15'57 it would be at 3 per cent, premium ; and 3 per cent, premium on 34s. 11J. is 1 schilling 1 grote and $, so that the par, when gold is to silver as 15-57 to 1, will be 36 schillings 1 gr. and 1|J. The above calculation will be mote easily made by stating as 15-07 : 34-1H :: 15-57 ; 36-1-fc.'

Nominal exchange has however been supposed to affect the profits of the merchant more cer- tainly, that in truly does. When, from a fall in the value of its currency, the nominal exchange becomes unfavorable to a particular country, the premium which its merchants receive on the sale of foreign bills, has been supposed capable of enabling them to export with profit in cases where the difference between the price of the exported commodities at home and abroad might not be such as would have permitted their ex- portation had the exchange been at par. Thus, if the nominal exchange was 20 per cent, against this country, a merchant who had consigned goods to his agent abroad, would receive a pre- mium of 90 per cent, on the sale of the bill ; and if we suppose freight, insurance, mercantile profit, &c., to amount to 12 or 15 per cent., it would at first

sight appear as if our merchants

might, in such circumstances, export commodi. ties although their price at home should be 5 or 8 per cent, higher than in other countries. If, on the other hand, the nominal exchange was in our favor, or if bills on this country sold at a premium, it would appear as if foreigners would then be enabled to consign goods to our mer- chants, or our merchants to order goods from abroad, when the difference of real prices was not such as would of itself have led to an importation. But a little consideration will convince us that these fluctuations in the nominal exchange can have no such effect. The same fall in the value of the currency which renders the exchange un- favorable, and causes foreign bills to sell at a premium, must equally increase the price of all commodities. And hence, whatever might be the amount of the premium which the exporter gained by the sale of the bill drawn on his cor- respondent abroad, it would do no more than indemnify him for the enhanced price of the goods exported. Mercantile operations are, in such cases, conducted precisely as they would be if the exchange was really at par ; that is, by a comparison of the real prices of commodities at home and abroad, meaning, by real prices, the prices at which they would be sold, provided there was no depreciation of the currency. If those prices are such as to admit of exportation or importation with a profit, the circumstance of the nominal exchange being favorable or unfavorable will make no difference whatever in the transaction. ' Suppose,' says Mr. Blake, ' the currencies of Hamburgh and London being in their due proportions, and therefore the no- minal exchange at par, that sugar, which from its abundance in London sold at £50 per hogshead, from the scarcity at Hamburgh would sell at £100. The merchant in this case would imme- diately export. Upon the sale of this sugar, he would draw a bill upon his correspondent abroad for £100 which he could at once convert into cash, by selling it in the bill market at home, deriving from this transaction a profit of £50 under deduction of

the expenses of freight, in- surance, commission, &c. Now, suppose no alteration in the scarcity or abundance of sugar in London and Hamburgh, and that the same transaction were to take place, after the currency in England had been so much increased, that the prices were doubled, and, consequently, the nominal exchange 100 per cent, in favor of Hamburgh, the hogshead of sugar would then cost £100 leaving apparently no profit whatever to the exporter. He would, however, as before, draw his bill on his correspondent for £100; and, as foreign bills would bear a premium of 100 per cent., he would sell this bill in the Eng- lish market for £200, and thus derive a profit from the transaction of £100 depreciated pounds, or £50 estimated in undepreciated currency, de- ducting, as in the former instance, the expense of freight, insurance, commission, Sec.

'The case would be precisely similar, mutatis mutandis, with the importing merchant. The unfavorable nominal exchange would appear to occasion a loss, amounting to the premium on the foreign bill, which he must give in order to pay his correspondent abroad. But, if the

difference of real prices in the home and foreign markets were such as to admit of a profit upon tlie importation of produce, the merchant would continue to import, notwithstanding the pre- mium ; for that would be repaid to him in the advanced nominal price at which the imported produce would be sold in the home market. ' Suppose, for instance, the currencies of Ham- burgh and London being in their due propor- ions, and, therefore, the nominal exchange at jar, that linen, which can be bought at Ham- mrgh for £50 will sell here at £100, the im- porter immediately orders his correspondent abroad to send the linen, for the payment of which he purchases at £50 a foreign bill in the English market, and on the sale of the consign- ment for £100 he will derive a

profit, amounting to the difference between £50 and the expense attending the import.

‘ Now, suppose the same transaction to take place, without any alteration in the scarcity or abundance of linen at Hamburgh and London, but that the currency of England has been so augrrented as to be depreciated to half its value, the nominal exchange will then be 100 per cent, against England, and the importer will not be able to purchase a £50 foreign bill for less than £100. But, as the prices of commodities here will have risen in the same proportion as the money has been depreciated, he will sell his linen to the English consumer for £200, and will, as before, derive a profit amounting to the differ- ence between £100 depreciated, or £50 estimated in undepreciated money, and the expenses at- tending the import. The same instances might be put in the case of a favorable exchange ; and it would be seen in the same manner, that no- minal prices and the nominal exchange being alike dependent on the depreciation of currency, whatever apparent advantage might be derived from the former, would be counterbalanced by a loss on the latter, and vice versa.’ Observations, &c. p. 48.

2. Of real exchange. — The expense of the transfer of bullion from country to country, con- stitutes the limit within which the rise and fall of the real exchange between them must be con- fined. In this respect, as in most others, transactions between foreign countries are regu- lated by the very same principles which regulate those between different parts of the same coun- try. The principle holds universally. What- ever may be the expense of transmitting bullion, or the money of the commercial world, between London and Paris, Hamburgh, New York, &c., it is impossible that the real exchange of the one or the other should, for any considerable period, be depressed to a greater extent. For no mer- chant will ever pay a greater premium for a bill to discharge a debt abroad, than what would suffice to cover the expense of transmitting bullion to his creditor. Hence it appears, that whatever has a tendency to obstruct or fetter the intercourse

between different countries, must also have a tendency to widen the limits within which fluctuations in the real exchange may ex- tend. It is this principle which enables us to •account for its varying so much more in time of war than in time of peace. The amount of the

bills drawn on a country engaged in hostilities is, from various causes which we shall afterwards notice, liable to be suddenly increased ; though it is certain, that whatever may be the amount of the bills thus thrown into the market, the depression of the exchange cannot, for any length of time, exceed the expense of conveying bul- lion from the debtor to the creditor country. But during war this expense is increased ; the charges on account of freight, insurance, &c., being then necessarily augmented. It appears from the evidence annexed to the Report of the Bullion Committee, that the expense of convey- ing gold from London to Hamburgh, which, previously to the war, only amounted to 2 or 2£ per cent., had, in the latter part of 1 809, increased to about 7 per cent. ; showing, that the limits within which fluctuations of the real exchange were confined in 1809, were about three times as great as those within which they were confined in 1793. This also enables us to account for the greater steadiness of the real exchange be- tween countries in the immediate vicinity of each other. The expense of transmitting a given quantity of bullion from London to Dublin or Paris, is much less than the expense of trans- mitting the same quantity from London to New York or Petersburgh. And, as fluctuations in the real exchange can only be limited by the cost of transmitting bullion, they may conse- quently extend much farther between distant places, than between those that are conti- guous.

We may here briefly investigate the circum- stances which give rise to a favorable or an unfavorable balance of payments, and endeavour to appreciate their effects on the real exchange, and on the trade of a country in general.

A great object of the whole system of com- mercial

policy, a system which still continues to preserve the ascendancy in this and in every other country in Europe, is to create a favorable balance of payments, and consequently, a fa- vorable real exchange, by facilitating exportation and restricting importation. It is foreign to the object of this article, to enter into any examina- tion of the principles of this system, except in so far as they are connected with the subject of exchange ; but we hope to show, in opposition to some popular opinions on the subject, that in every country carrying on an advantageous com- merce, the value of the imports must always exceed the value of the exports ; and that this excess of importation has not, in ordinary cases, the least tendency to render unfavorable the real exchange.

The proper business of the merchant, it has been well observed, consists in carrying the va- rious products of the different countries of the world, from those places where their exchange- able value is least, to those where it is greatest ; or, which is the same thing, in distributing them according to the effective demand. It is clear, however, that there could be no motive to export any commodity unless the commodity which it was designed to import in its stead was of greater value. No merchant ever did or ever will export but with the view of importing a greater value in return. And so far from an

excess of exports over imports being any crite- rion of an advantageous commerce, it is quite the reverse ; and the truth is, contends an able writer in the Supplement to the Encyclopaedia Br tannica, notwithstanding all that has been said and written to the contrary, that unless the ralue of the imports exceeded the value of the exports, foreign trade could not be carried on. Were this not the case, were the value of the exports always greater than the value of the im- ports, merchants would

lose on every transaction »vith foreigners, and the trade with them would either have no existence at all, or if begun, would have to be speedily relinquished.

- *In England, the rates at which exports and imports are valued, were fixed so far back as 1696. But the very great alteration that has since taken place, not only in the value of money, but also in the real price of most part of the commodities produced in this and other countries, has rendered this official valuation of no use whatever as a criterion of the true value of the exports and imports. In order to remedy this defect, an account of the real, or declared value of the exports is annually prepared and laid before parliament ; but even this is very far from accurate. It must always be the interest of the merchant to endeavour to conceal the real amount of the goods imported on which duties are charged ; while, on the other hand, it is very frequently his interest to magnify the amount of those commodities on the export of which either a bounty or a drawback is allowed. If per- fectly accurate accounts could be obtained of the value of the exports and imports of a commer- cial country, there can be no manner of doubt, that in ordinary years there would be always an excess of imports over exports. The value of an exported commodity is estimated at the mo- ment of its being sent abroad, and before its value is increased by the expense incurred in transporting it to the place of its destination ; but the value of the commodity imported in its stead, is estimated after it has arrived at its des- tination ; and, consequently, after its value has been enhanced by the cost of freight, insurance, importer's profit, &c.*

' It is of very little importance, in as far at least as the interests of commerce are concerned, whether a nation acts as the carrier of its own imp' rts and exports, or employs others. A car- rying nation will appear to derive a compara- ' tiyely

larjre profit from its commercial transac- tions; but this excess of profit is nothing more than a fair remuneration for the capital employed and the risk incurred in transportine commodi- ties from one country to another. If the whole trade between this country and France was car- ried on in British bottoms, our merchants, in addition to the value of the goods exported, would also receive the expense of the carriage to France. This, however, would not occasion any loss to that country. The French merchants must pay the freight of the commodities they import; and if the English can afford it on cheaper terms than their own countrymen, there can be no good reason why they should rot em- ploy them in preference. In the United States the value of the imports, as ascertained by the

Custom-house returns, always exceeds the value of the exports. And, although our practical po- liticians consider the excess of exports over imports as the only sure criterion of an advan- tageous commerce, ' it u neverthelas true, that the real gain of the United States has been nearly in proportion ax their imports have exceeded their exports.' — Pitkin on the Commerce of the United States. This has in part been occasioned by the Americans generally exporting their own surplus produce; and, consequently, receiving from fo- reigners, not only an equivalent for their exports, but also for the cost of conveying them to the foreign market. In 1811, says the author just quoted, flour sold in America for nine dollars and fifty cents per barrel, and in Spain for fifteen dollars. The value of the cargo of a vessel car- rying 5000 barrels of flour would, therefore, be estimated, at the period of its exportation, at 47,500 dollars ; but as this flour would, because of freight, insurance, exporter's profits, &c., sell in Spain for 75,000 dollars, the American mer- chant would be entitled to draw on his agent in Spain for 27,500 dollars more than the flour cost in America, or than the sum for which he could have drawn, had the flour been exported on ac- count of a Spanish merchant. If, as is most probable, the 75,000

dollars were invested in some species of Spanish or other European goods, the freight, insurance, &c., on account of the return cargo, would, perhaps, increase its value to 100,000 dollars; so that, in all, the American merchant might have imported commodities worth 52,500 dollars more than the flour origi- nally sent to Spain. It is as impossible to deny that such a transaction as this is advantageous, as it is to deny that its advantage consists entirely in the excess of the value of the goods imported over those exported. And it is equally clear, that, although such transactions as the above had been multiplied to an inconceivable extent, America might, notwithstanding, have had the real balance of payments in her favor. Instead, therefore, of endeavouring to fetter and restrict the trade with those countries from which we should otherwise import a greater value than we exported, we ought, on the contrary, to give it every possible facility. There is not a private merchant in the kingdom who does not consider that market as the best in which he is enabled to obtain the highest price, or the greatest value in exchange for his goods ; why then should he be excluded from it ''(Why compel him to dispose of a cargo of muslin for £10,000 rather than £1 2,000 ? The wealth of a state is made up of the wealth of individuals ; and it is impossible that any more effectual method of increasing individual wealth can be devised than to permit every person to make his purchases in the cheap- est and his sales in the dearest market.

3. On the subject of computed exchange, we have only room to observe — When the nominal and real exchange are both favorable, or both un- favorable, the computed exchange will express their sum ; when the one is favorable, and the other unfavorable, it will express their difference. Thus, for example, the currency of Great Britain is of the mint standard and purity, and the cur- rency of France 5 per cent, degraded, the no-

minal exchange will be 5 per cent, in favor of this country. But the real exchange may, at the same time, be either favorable or unfavorable. If it be also favorable to the extent of 1, 2, 3, fee. per cent, the computed exchange will be 6, 7, 8, &,c. per cent, in favor of this country. And, on the other hand, if it is unfavorable to the extent • of 1, 2, 3, &c., per cent, the computed exchange •will be only 4, 3, 2, &c., per cent, in our favor. When the real exchange is in favor of a parti-

TABLE I. — An Estimate of the Value of tne MONIES OF ACCOUNT of all the chief commercial Places (expressed in Pence, and Decimals of Pence), according to the Mint Price both of (5 old and Silver in England ; that is, £3 17s. lOJd. per oz. for Gold, and 5s. 6d. (as fixed in the New Coinage), per oz. for Silver.

cular country, provided the nominal exchange be equally against it, the computed exchange will be at par, and vice versa. A comparison of the market with the mint price of bullion, affords the best criterion whereby to ascertain the state of the exchange at any particular period.

Having given in our article COINS tables of the real monies of most known countries, we here subjoin

Aix la Chapelle Amsterdam

Antwerp

Barcelona . . Basil . • •

Berlin . . .

Bern . . . .

Bremen . . .

Cassel . . •

Cologne . .

Constantinople

Dantzic . . .

Denmark . .

England Florence

France . Francfort Germany

Geneva . Genoa .

Hamburgh Hanover

Rixdollar current .

Rixdollar banco (agio at 4 per cent.),

Florin banco

Pound Flemish banco

Rixdollar current . .

Florin current

Pound Flemish current .

Pound Flemish (money of exchange)

Florin (money of exchange), .

Pound Flemish current .

Florin current . ".'".'

Libra Catalan

Rixdollar, or ecu of exchange .

Rixdollar current .

Pound banco .

Rixdollar current . ...

Ecu of 3 livres . . '

Crown of 25 batzen

Rixdollar current

Rixdollar in Carls d'or .

Rixdollar current .

Rixdollar specie of 80 albuses .

Rixdollar current of 78 albuses

Piastre, or dollar . . .

Gulden, or Florin .

Rixdollar specie

Rixdollar crown money .

Rixdollar Danish currency Pound Sterling Lira ....
Ducat, or crown current . Scudo d'oro, or gold crown

Livre Tournois

Franc (new system),

Rixdollar convention money

Rixdollar Muntze, or in small coins

Rixdollar current .

Rixdollar specie . «

*Florin of the Empire **

Rixdollar Muntze .

Florin Muntze .

Livre current

Florin .

Lira fuori Banco .

Pezza, or dollar of exchange

Scudo di cambio or crown of exchange

Mark Banco (at a medium),

Pound Flemish Banco .

Mark current . •

Pound Flemish current . . Rixdollar, in cash . .

Rixdollar, gold value

Value in Silver.

Value in Gold.

33, 43

31, 43

58, 16

variable

23, 26

ditto

139> 56

. ditto

55, 93

ditto

22, 35

ditto

134, 13

ditto

131, 20

123, 87

21, 87

20, 64

112, 47

106, 18

18, 73

17, 70

30, 28

26, 70

50, 32

47,

45, 19

42, 20

50, 29

variable

38, 32

ditto

45, 39

42, 90

37, 82

35, 75

40, 24

variable

39, 68

40, 24

variable

33, 40

ditto

32, 25

ditto

13, 96

uncertain

9, 58

9,

58, 25

51, 49

47, 13

44, 88

240,

240,

8, 62

8, 53

60, 36

59, 71

63, 97

10, 16

9, 38

10, 33

9, 52

40, 24

37, 65

33, 53

40, 24

variable

53, 65

ditto

26, 83

ditto

33, 53

ditto

22, 36

ditto

17, 17

16, 93

4, 89

4, 84

8, 50

7, 83

48, 90

45, 01

e 39, 12

36, 02

19, 39

variable

145, 46

ditto

15, 78

ditto

118, 32

‘ ditto

44, 71

42, 26

41, 51

39, 24

700

EXCHANGE.

Ireland Pound Irish ....

Konigsberg . . . Gulden or florin Leghorn .... Pezza of 8 reals *

Lira moneta buona . Lira moneta lunga • Leipsic Rixdollar convention money .

Rixdollar in Louis d’ors or Frederick:

Malta Scudo or crown

Milan Lira Imperiale

Lira corrente

Scudo Imperiale

Scudo corrente

Modena .... Lira

Munich Gulden or florin

Naples Ducat of 1818

Parma Lira ....

Persia Toman of 100 mamoodis

Poland Gulden or florin . .

Portugal .... Milree ....

Old Crusade Riga Rixdollar Alberts .

Rixdollar currency (agio at 40 per cent.), ... Rome Scudo or crown

Scudo di Stampa d'oro .

Russia Ruble ....

Sardinia .... Lira ....

Sicily Ounce ....

Scudo or crown Spain Real of old plate

Real of new plate •

Real of Mexican plate .

Real Vellon ....

Dollar of old plate, or of exchange Sweden ... . Rixdollar .... Switzerland . . . Franc (new system), Trieste Floren, Austrian currency

Lira, Trieste currency

Lira di piazza

Turin Lira

Valencia .... Libra ..... Venice Lira piccola (in the old coins),

Lira piccola (in the coins introduced by the Austrians)

Vienna Florin

Zant Real

Zurich Florin, money of exchange

Florin current

Value in Silver.

Value in Gold.

221, 56

221, 56

12, 77

variable

49, 76

49, 16

8, 65

8, 55

8, 29

8, 19

40, 24

variable

39, 68

22, 69

23, 34

11, 08

10, 53

7, 83

7, 44

64, 83

61, 60

45, 05

42, 78

3, 53

22, 36

21, 28

43, 90

41, 22

2, 60

2, 40

306, 15

6, 42

6, 27

73, 18

67, 34

29, 27

26, 94

55, 96

variable

39, 95

ditto

55, 40

51, 63

84, 49

78, 73

40, 98

39, 35

19, 38

18, 82

130, 44

124, 80

52, 18

49, 92

5, 25

4, 57

5, 58

4, 86

6, 97

6, 07

2, 79

2, 43

41, 99

36, 59

58, 98

56, 43

23, 57

26, 83

25, 05

5, 07

4, 73

4, 95

4, 63

12, 01

11, 23

41, 99

36, 59

5, 39

variable

4, 52

ditto

26, 83

25, 05

4, 32

variable

27, 52

ditto

25, 02

ditto

EXCHEQUER.

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TABLE ![.— The general PAR of EXCHANGE between England and the following places viz Am- sterdam,

Hamburgh, Paris, Madrid, Lisbon, Leghorn, Genoa, Naples, and Venice 'computed from the intrinsic Value of their principal Coins, by comparing Gold with Gold, and'silver with Silver, according to their Mint Regulations, and to Assays made at the London and Paris Mints (Given in by Dr. Kelly to the Committee of the House of Lords, on the expediency of the Bank's resuming Cash Payments).

GOLD.

SILVER,

EXPLANATIONS.

Old Coinage.

New Coinage.

1 Regula-

Assays.

Mint

Mint

Monies of Exchange.

tions.

Regula-

Assays.

Regula-

Assays.

tions.

tions.

Amsterdam, i Banco]

Ditto, Current

36 8 11 4,5

36 6,8

11 3,8

37 3 11 8,5

37 10,5 11 11,8

35 0 10 14,6

35 6,5 1017,6

S Schillings and Pence Flemish per I Pound Sterling. Agio 2 per cent. < Florins and Stivers per Pound I Sterling.

Hamburgh .

34 3,5

34 1,5

35 1

35 1,3

32 11

32 11,5

C Schillings and Pence Flemish c Banco per Pound Sterling.

Paris . . .

25 20

25 26

24 73

24 91

23 23

23 40

C Francs and Cents per Pound Ster- t ling.

Madrid . .

37–3

37–2

39–2

39–0

41–7

41–5

C Pence Sterling for the Piastre or c Dollar of Exchange.

Lisbon . .

67–4

67–5

60–41

58–33

64–30

62–09

Pence Sterling per Milree.

Leghorn . .

49*1

49–0

46–46

46–5

49–60

49–5

(Pence Sterling per Pezza of Ex- 1 change.

3enoa . .

45–5

45–5

46–46

48–9

49–4

52–0

(Pence sterling per Pezza Fuori (Banco.

Naples . .

41–22

41–22

43–9

(Pence Sterling per Ducat (New i Coinage of 1818).

Venice . .

46>3

46–0

47–5

49–0

44–6

46–1

Lire Piccole per Pound Sterling.

EXCHANGE, REAL, is also used for the profit which a merchant, negociant, or broker makes of a sum of money received, and for which a bill of exchange is drawn, payable in some other place, and by some other person, for the interest of his money, and the reward of his negociation. This profit is

exceedingly various ; being some- times two, sometimes three, four, or even ten and fifteen per cent., according as the alloy of the species differs, or as money is more or less plen- tiful, or bills of exchange more or less scarce, in the places. This kind is sometimes called mer- cantile or mixed exchange.

EXCHANGE, SMALL, is used to denote the profit allowed for exchanging one species of money for another. This is also called natural or pure ex- change, &c.

EXCHE'AT, n.«. > c D

EXCHE'ATOR. \ See ESCHEAT.

He by my ruins thinks to make them great : To make one great by others loss, is bad excheat,

Spenser.

These carls and dukes appointed their special of- ficers ;, as sheriff, admiral, receiver, havener, custo- mer, butler, searcher, comptroller, gager, etcheutor, feodary, auditor, and clerk of the market. Carew.

EXCHEQ'UER, n, s. & v. a. Fr. excliequitr ; Ital. scacciere ; from Gcth. and Swed. skat ; Teut. schatz ; treasure, cognate with our word scot ; a tribute in scot and lot. A court into which the revenues of the crown are brought, and where they are exacted or defended : the verb has lat-

terly come into familiar use, to express the insti- tuting a process against a person at this court. See below.

I will be cheater to them both, and they shall be exchequers to me. Shahipeare.

Your treasures Are quite exhausted, the exchequer't empty.

Denham.

Clipped money will pass whilst the king's bankers and at last the exchequer takes it. Locke.

High worth is elevated place : 'tis more, It makes the post stand candidate for thee ; Makes more than monarchs, makes an honest man ; Though no exchequer it commands, 'tis wealth.

Young.

EXCHEQUER, in the British jurisprudence, an ancient court of record, in which all causes con- cerning the revenues and rights of the crown are heard and determined. Some writers state that it took this name from the cloth that covered the table of the court, which was party-colored, or chequered. It is said to have been erected by William the Conqueror, its model being taken from a similar court established in Normandy. Anciently its authority was so great that it was held in the king's palace, and its acts were not to be examined or controlled in any other of the king's courts ; but at present it is the last of the four courts at Westminster. In the exchequer, some reckon seven courts, viz. those of pleas, ac- counts, receipts, exchequer chamber (which is an assembly of all the judges on difficult matters

in law), errors in the excnequer, errors in the king's bench, and, lastly, the court of equity in the exchequer. But the exchequer, for the de- spatch of business, is generally divided into two parts. Officers of the receipt may take one penny in the pound, as their fee for suras issued out : and they are obliged, without delay, to re- ceive the money brought thither ; and the money received is to be put into chests under three different locks and keys, kept by three several officers. All sheriffs, bailiffs, &c., are to account in the exchequer ; and in the lower part, termed the receipt, the debtors of the king and persons in debt to them, the king's

tenants, and the offi- cers and ministers of the court, are privileged to sue one another, or any stranger, and to be sued in the like actions as are brought in the court of king's bench and common pleas. The judicial part of the exchequer is a court both of law and equity. The court of law is held in the office of pleas, according to the course of common law, before the barons : in this court the plaintiff ought to be a debtor or accountant to the king ; and the leading process is either a writ of subprena, or quo minus, which last goes into Wales, where no process out of courts of law ougtit to run, ex- cept a capias utlagatum. The court of equity is held in the exchequer chamber, before the trea- surer, chancellor, and barons ; bat, generally, be- fore the barons only : the lord chief baron being the chief judge to hear and determine all causes. The proceedings in this part of the exchequer are by the English bill and answer, according to the practice of the court of chancery; with this difference, that the plaintiff here must set forth that he is a debtor to the king, whether he is so or not. It is in this court of equity that the cle rgy exhibit bills for the recovery of their tythes, &c. Here too the attorney general exhibits bills for any matters concerning the crown ; and a bill may be exhibited against the king's attorney by any person aggrieved in any cause prosecuted against him on behalf of the king, to be relieved therein : in which case the plaintiff is to attend on the attorney general, with a copy of the bill, and procure him to give an answer thereto ; in the making of which he may call in any person interested in the cause, or any officer, or others to instruct him, that the king be not prejudiced thereby, and his answer is to be put in without oath. Besides the business relating to debtors, farmers, receivers, accountants, &c., all penal punishments, intrusions, and forfeitures upon popular actions, are matters likewise cognizable by this court ; where there also sits a puisne ba- ron, who administers the oaths to high sheriffs, bailiffs, auditors, receivers, collectors, surveyors, and searchers of all the customs, &c. The court of exchequer in Scotland has

the same privileges and jurisdiction as that of England ; and all mat- ters competent to the one are competent to the other.

EXCHEQUER BILLS, bills of credit issued by the authority of parliament, payable with interest out of the produce of a particular tax, or more frequently out of the supplies to be granted in a future session. By statute 5 Ann. c. 13, the lords treasurers may cause exchequer bills to be made of any sums not exceeding £1,500,000, for *he use of the war; and the duties upon houses

were made chargeable with £4 10*. per cent, pet annum to the bank for circulating them. The bank not paying the bills, actions to be brought against the company, and the money and damages recovered : and if any exchequer bills be lost, upon affidavit of it before a baron of the exche- quer, and certificate from such baron, and security to pay the same if found, duplicates are to be made out : also when bills are defaced, new ones shall be delivered. The king, or his officers in the exchequer, by former statutes, might borrow money upon the credit of bills, payable on de- mand, with interest after the rate of 3d. per diem for every £100 bill. And by 8 and 9 Wil. III. c. 20, an interest of 5d. a day was allowed for every £100. But 12 Wil. III. c. 1, lowered the interest on these bills to 4d. a-day per cent. And by 12 Ann. c 11. it sunk to 2d. 'a-day. The exchequer bills presently in circulation bear in- terest at the rate of 3Jc?. a-day per cent. ; which is computed up to the day of sale, from the respec- tive dates of the bills. They are generally for £100 each, but many of those issued on the vote of credit are for £1000, and they have some- times been made out for much larger sums : they are all numbered arithmetically, and registered accordingly, for the purpose of paying them off in a regular course. The time of payment is notified by advertisement, and they are paid at the exchequer- bill office, Westminster. The daily transactions between the bank and the ex- chequer are chiefly carried on by bills of £1 000 each, which are deposited by the bank in the exchequer to the amount

of the sums received by them on government account ; the bank notes and cash thus received by the bank being re- tained by them, as the detail part of the money concerns of government is all transacted at the bank. The instalments on loans are paid into the receipt of the exchequer by these exchequer bills of £1000 each, which are received again by the bank as cash, either for the amount of dividends due, or in repayments of advances; and as, while deposited in the exchequer, they are considered merely as a pledge of security, they of course continue to bear interest till the advance on which the bank first received them is paid off. In October 1796, the 5 per cent, exchequer bills, issued on the vote of credit, being at a considerable discount, it was thought proper to fund them, when it was agreed that the holders should be entitled for every £100 to either of the following capitals: £176 19s. 9Jd. in the 3 per cents. £137 18s. 1\d. in the 4 per cents.; or £118 6s. 1O^d. in the 5 per cents. Bills were thus funded to the amount of £1,433,870, and a capital stock of £2,374,333 14s. 8

£25 New 5 per cents, 24 15 0

\t. 9d. Long annuity ... 1 14 4

£102 15 7

EXCISE.

And the proprietors to have the liberty of sub- scribing £50 additional in money for ever £100 they held in bills, the money thus raised to be applied in paying off the sum of about £2,400,000 in exchequer bills in possession of the bank. The amount of the bills funded and redeemed was £8,910,450.— As there is always a considerable sum outstanding in exchequer bills, the interest paid thereon forms a constant addition to the annual charge of the funded debt. The premium or discount at which ex- chequer bills sell, depends on the proportion which the interest payable on them bears to the interest produced by the public funds, according to their current prices.— Forging

exchequer bills, or the indorsements thereof, was always made a capital felony ; by the several acts under which they were issued, as it is now by the act 48 Geo. III. c. 1, for the general regulation of the issuing and paying off exchequer bills : which act is re- ferred to by every subsequent act for raising money by exchequer bills. See FUNDS, and NATIONAL DEBT.

EXCHEQUER, BLACK BOOK OF THE, an ancient statistical work under the keeping of the two chamberlains of the exchequer; said to have been composed, in 1175, by Gervais of Tilbury, nephew of king Henry II. and divided into se- veral chapters. Herein is contained a descrip- tion of the court of England, as it then stood, its officers, their ranks, privileges, wages, perquisites, power, and jurisdiction ; and the revenues of the crown, in money, grain, and cattle. Here we find, that for one shilling, as much bread might be bought as would serve 100 men a whole day; that the price of a fat bullock was only 12s. and of a sheep 4s. &c.

EXCISE', n. s. & v. a. ~) Fr. accise : Dutch

EXCIS'ABLE, adj. ^accijs; Lat. excisum;

EXCISF/MAN. ' cut off. An inland

impost on various commodities specified by act of parliament. See below. Excisable is, liable to the excise duties : exciseman, the lowest of- ficer of the excise.

The people should pay a ratable tax for their sheep, and an excise for every thing which they should eat.

Hayward. Excise,

With hundred rows of teeth, the shark exceeds,

And on all trades like Cassawar she feeds.

Marvel. Hire large houses, and oppress the poor,

By farmed excise. Dryden's Juvenal,

Ambitious now to take excise Of a more fragrant paradise. Cleaveland.

In South-sea days, not happier when surmised The lord of thousands, than if now excited. Pope. Thae curst horse-leeches o' the' Excite,

Wha mak the whisky stells their prize !

Haud up thy han', Deil ! ance, twice, thrice ! There, seize the blinkers !

An' bake them up in brunstane pies. Burns.

The rigour and arbitrary proceedings of excise laws seem hardly compatible with the temper of a free nation. For the frauds that might be committed in this branch of the revenue, unless a strict watch is kept, make it necessary, wherever it is established, to give the officers a power of entering and searching the houses of such as deal in erciseable commodities, at any hour of the day, and, in many cases, of the night likewise. Dr- A- Rees-

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EXCISE is otherwise derived from the Belgic acciisse, tribute ; and defined to be an inland, duty or imposition, paid sometimes upon the consumption of the commodity, or frequently upon the wholesale, which is the last stage before the consumption. This is doubtless the most economical way of taxing the subject; the charges of levying, collecting, and managing the excise duties, being considerably less in propor- tion than in other branches of the revenue. It also renders the commodity cheaper to the con- sumer, than charging it with customs to the same amount would do, because generally paid in a much later stage of it. The proceedings, in case of a transgression of the excise laws, are however very prompt and arbitrary ; so that a man may be convicted in two days time in the penalty of many thousand pounds, by commissioners or justices of the peace; to the total exclusion of the trial by jury, and disregard of the

common law. For which reason lord Clarendon tells us, that though to his knowledge the earl of Bedford (who was made lord treasurer by king Charles 1.j intended to have set up the excise in England, it never made a part of that unfortunate prince's revenue ; being first introduced, on the model of the Dutch prototype, by the parliament itself after its rupture with the crown. Such was at that time the opinion of its general unpopularity, that when in 1642 ' aspersions were cast by malignant persons upon the house of commons, that they intended to introduce excises, the house for its vindication did declare, that these rumors were false and scandalous, and that their authors should be apprehended and brought to condign punishment.' Its original establishment was in 1643, and its progress was gradual; being at first laid upon those persons and com- modities where it was supposed the hardship would be least perceivable, viz. the makers and venders of beer, ale, cyder, and perry ; the royal- ists at Oxford then followed the example of their brethren at Westminster, by imposing a similar duty : both sides protesting, that it should be continued no longer than to the end of the war, and then be utterly abolished. But the parlia- ment soon after imposed it on flesh, wine, to- bacco, sugar, and such a multitude of other commodities, that it might be fairly denominated general : in pursuance of the plan laid down hy Mr. Pym (who seems to have been the father of the excise), in his letter to Sir John Hotham, ' that they had preceded in the excise to many particulars, and intended to go on farther ; but that it would be necessary to use the people to it by little and little.' Afterwards, when the na- tion had been accustomed to it for a series of years, these champions of liberty boldly declared ' the impost of excise to be the most easy and indifferent levy that could be laid upon the peo- ple;' and accordingly continued it during the whole usurpation. Upon king Charles II.'s return, it having then been long established and its produce well known, some part of it was given to the crown (in 12 Car. II.), by way of pur- chase for the feudal tenures and other oppressive parts of the

hereditary revenue. But, from its first origin to the present time, its name has been odious to the people. It has, nevertheless, been

•2 Z

imposed on a great number of other commodities. Thus brandies and other spirits are now excised at the distillery ; printed silks and linens, at the printer's ; starch and hair powder, at the maker's ; gold and silver wire, at the wire drawer's; and all plate whatsoever. To these we may add coffee and tea, chocolate and cocoa paste, for which the duty is paid by the retailer; all artificial wines, com- monly called sweets ; paper and pasteboard, first when made, and again if stained or printed; malt, as already mentioned ; vinegars, and glass ; for all which the duty is paid by the manufac- turer; hops, for which the person that gathers them is answerable ; candles and soap, which are paid for at the maker's ; malt liquors brewed for sale, which are excised at the brewery ; cyder and perry at the vender's ; leather and skins, at the tanner's ; and, lastly, tobacco, at the manufacturer's. The excise, like the customs, is necessarily regulated by a multiplicity of statutes; the abridgement of which would form no small volume. The produce of the excise duties for the year ending Jan. 5th 1825, was £26,768,039, and as this is the most important item of the public revenue, we shall be found to give it its due consideration in the article FUNDS.

EXCISE, COMMISSIONERS OF, The excise was formerly farmed out; but is now managed for the king by commissioners who receive the whole product of the excise, and pay it into the exchequer. They are obliged by oath to take no fee or reward but from the king himself; and from them there lies an appeal to five other com- missioners called commissioners

of appeal.

One principal head office of excise is to be kept in London, or within ten miles thereof, to which all other offices in the kingdom shall be subordinate and accountable ; which said office shall be managed by such commissioners as the king shalV appoint. And all the places within the bills of mortality shall be under the imme- diate care and management of the said head office. Stat. 12 Car. II. The kingdom at large is divi- ded into fifty collections of excise, which are again subdivided into districts, out-rides, and foot-walks.

EXCl'SION, n. s. Lat. excisio. Extirpation ; destruction ; ruin ; the act of cutting off; the state of being cut off.

Pride is one of the fatalest instruments of excision. Decay of Piety.

Such conquerors are the instruments of vengeance on those nations that have filled up the measure of iniquities, and are grown ripe for excision.

Atterbury.

EXCITE', v. a. -\ Fr. exciter ;La.i.excitare,

EXCIT'ABLE, adj. I from ex and cito, to call.

EXCITA'TION, n. s. V Tostirup ; rouse ; animate ;

EXCITE'MENT,«.S. i awaken : excitable is easy

EXCIT'ER. J to be excited.

For ther passing study han freshed our wittes, and cure understandynge han excited in consideracion of trouth by sharpenes of ther resons. Chavcer.

The Lacedemonians were more excited to desire of honour with the excellent verses of the poet Tirtaeus, than with all the exhortations of their captains.

Spenser’s Ireland. How stand I then,

That have a father killed, a mother stained,

Excitements of my reason and my blood,

And let all sleep ? Shakspeare. Tempest.

All putrefactions come from the ambient body, either by ingress of the ambient body into the body putrefied, or by excitation and solicitation of the body putrefied, by the body ambient. Bacon.

They never punished the delinquency of the tu- mults and their exciters. King Charles. His affections were most quick and excitable.

Barrow.

That kind of poesy which excites to virtue the greatest men, is of greatest use to human kind.

Dry den.

This they are capable of understanding ; and there is no virtue they should be excited to, nor fault they should be kept from, which I do not think they may be convinced of. Locke.

Hope is the grand exciter of industry.

Decay of Piety.

The original of sensible and spiritual ideas may be owing to sensation and reflection, the recollection and fresh excitation of them to other occasions.

Watts’s Logick.

Last, as observant Imitation stands, Turns her quick glance, and brandishes her hands, With mimic acts associate thoughts excites, And storms the soul with sorrows or delights.

Darwin.

EXCLAIM’, r. n. &n.s.~\ YT. exclamer ; Sp.

EXCLAIM'ER, n. s. (and Port, eiclamar ;

EXCLAMA'TION, i Lat. exclamare, from

EXCLAM'ATORY, adj. J ex, emphatic, and da- mo, to call out. To call or cry out vehemently ; to vociferate : as a substantive, Shakspeare uses it for clamor ; outcry : exclamatory is of the na- ture of an exclamation.

The ears of the people are continually beaten with txclamations against abuses in the church.

Hooker, Dedication. This ring,

Which, when you part from, lose, or give away, Let it presage the ruin of your love, And be my 'vantage to exclaim on you. Shakspeare.

Is Cade the son of Henry the Fifth, That thus you do exclaim you'll go with him t

Id.

Alas, the part I had in Glo'ster's blood Doth more solicit me than your exclaims, To stir against the butchers of his life. Id.

Either be patient, or intreat me fair, Or with the clamorous report of war, Thus will I drown your exclamations. Id.

0 Musidorus ! Musidorus '. but what serve exclama* tiom, where there are no ears to receive the sound ?

Sidney.

The most insupportable of tyrants exclaim against the exercise of arbitrary power. L' Estrange.

1 conclude with those exclamatory words of St. Paul — ' How unsearchable are his judgments, and his* ways past finding out !' South.

I must tell this exclaimer, that his manner of pro- ceeding is very strange and unaccountable.

Atterbury.

Those who exclaim against foreign tyranny, do, to this intestine usurper, make an entire dedition of themselves. Decay of Piety.

P. In the poetry of our language I don't think we

are to look for any thing analogous to the notes of the

tramut : for, except perhaps in a few exclamations or

interrogations, we are at liberty to raise or sink our

voice an octave or two at pleasure, without altering

the sense of the words. Darwin.

EXCLUDE', v. a. -\ Yr.exclurre; Span. and

EXCLU'SION, 7i. s. (Port, excluyr ; Ital. ex-

EXCLU'SIVE, adj. tcludere; Lat. exdudere,

EXCLUSIVELY, ady.) from ex, out, and clau~

dere, to shut. To shut out ; hinder from admis- sion ; debar ; eject ; except : the compounds following these meanings.

They separate from all apparent hope of life and salvation, thousands whom the goodness of Almighty God doth not exclude. Hooker.

In bodies that need detention of spirits, the exclu- sion of the air doth good ; but in bodies that need emission of spirits, it doth hurt. Bamn,

They obstacle find none

Of membrane, joint, or limb, exclusive bars :

Easier than air with air, if spirits embrace,

Total they mix. Milton’s Paradise Lost.

It is not easy to discern among the many differing substances obtained from the same portion of matter, which ought to be esteemed, exclusively to all the rest, its inexistent elements ty ingredients ; much less what primogenial and simple bodies, conveyed together, compose it. Boyle.

Justice, that sits and frowns where publick laws Exclude soft mercy from a private cause, In your tribunal most herself does please ; There only smiles, because she lives at ease.

Dryden.

Sure I am, unless I win in arms, To stand excluded from Emilia’s charms. Id.

How were it possible the womb should contain the child, nay, sometimes twins, ‘till they come to their due perfection and maturity for exclusion ?

Ray on the Creation.

Others ground this disruption upon their continued or protracted time of delivery, wherewith excluding but one a-day, the latter brood impatient, by a forcible proruption, antedates their period of exclusion.

Browne’s Vulgar Errours.

The salt and lixiviated serosity, with some portion of choler, is divided between the guts and bladder, yet it remains undivided in birds, and hath but a sin- gle descent by the guts with the exclusion! of the belly.

Id.

Though these three sorts of substances do not exclude one another out of the same place, yet we cannot conceive but that they must necessarily each of tbem exclude any of the same kind out of the same place.

Locke.

In scripture there is no such thing as an heir that was, by right of nature, to inherit all, exclusive of his brethren. Id.

Fenced with hedges and deep ditches round, Exclude the' incroaching cattle from thy ground.

Dry den's Virgil.

If he is for an entire exclusion of fear, which is sup- posed to have some influence in every law, he opposes himself to every government. Addison.

The first part lasts from the date of the citation to the joining of issue, exclusively : the second continues to a conclusion in the cause, inclusively.

Ayliffe's Parergon.

This is Dutch partnership, to share in all our beneficial bargains, and exclude us wholly from theirs.

Swift.

I know not whether he reckons the dross, exclusive or inclusive, with his three hundred and sixty tons of copper. Id.

Ulysses addresses himself to the queen chiefly or primarily, but not exclusively of the king. Broome.

Who gave beginning can exclude an end. Young.

There are few people who have not, at particular seasons, experienced the effect of certain accidental associations, which obtrude one impertinent idea, or set of ideas, on the mini), to the exclusion of every other. Percival.

As style and expression were, ail we had in view, we excluded every idea of invention. Franklin.

Parliaments were often hastily assembled, and it was probably in the king's power, by the manner in which he issued his writs for that purpose, to exclude such as were averse from his measures.

Robertson's History of Scotland.

By these we are to rectify, and to these are we to conform, all our opinions and sentiments in religion, as our only standard, exclusive of all other rules, light, or authority, whatsoever. Mason.

Is sparkling wit the world's exclusive right? The fixed fee-simple of the vain and light ?

Cowper.

The Saxon mines have till very lately almost ex- clusively supplied the rest of Europe with cobalt, or rather with its preparations, zaffre and smalt, for the exportation of the ore itself is there a capital crime.

Darwin . The morn broke, and found Juan slumbering still

Fast in his cave, and nothing clashed upon His rest ; the rushing of the neighbouring rill,

And the young beams of the excluded sun, Troubled him not, and he might sleep his fill.

Byron.

EXCO'CT, v. a. Lat. excoctus. To boil up ; produce by boiling.

Salt and sugar, excocted by heat, are dissolved by cold and moisture. Bacon's Natural History.

EXCCECARIA, in botany, a genus of the tri- andria order, and dioecia class of plants ; natu.- ral order thirty-eighth, tricoccse. Male amentum naked :

CAL. none : COR. none ; styles three : CAPS, tricoccous. See ALOEXYLUM, and XYLO ALOE?.

EXCOGITATE, v. a. &v.n.j . Lat. excogito,
EXCOGITA'TION. Ji. e. ex, em-

phatic, and cogito, to think. To discover; in- vent ; strike out in thinking : to think.

I take it to be my duty — to excogitate of myself wherein I may ; but derive your virtues, &c. Bacon.

The tradition of the origination of mankind seems to be universal ; but the particular methods of that origination excogitated by the heathen, were particular.

Hole's Origin of Mankind.

If the wit of man had been to contrive this organ, what could he have possibly excogitated more accurate ?

More.

To indulge the power of fiction, and send imagina- tion out upon the wing, is often the sport of those who delight too much in silent speculation. When we are alone we are not always busy ; the labour of excogitation is too violent to last long.

Johnson. Rasselas.

EXCOMMU'NICATE, v. a. &} Fren. ex- EXCOMMU'NICABLE,
\udj- n.s. \communier f EXCOMMUNICA'TION, n. s. j
Hal. escom-

tnunicare, from Lat. ex, from, and communio, com- munion. To separate or eject from the ChristiaiT church or fellowship : to separate from any visi- ble church by ecclesiastical censure.

Perhaps excommunicable ; yea, and cast for notori- ous improbity. Hooker.

As for excommunication, it neither shutteth out from

the mystical, nor clean from the visible church ; but only from fellowship with the visible in holy duties.

Id.

Thou shalt stand curst and excommunicate ; And blessed shall he be, that doth revolt From his allegiance to an heretick. Shakspeare.

Thou excommunicate From all the joys of love. Donne.

EXCOMMUNICATION.

What if they shall ercommunicate me, hath the doctrine of meekness any salve for me then?

Hammitnd't Pract. Catech.

The office is performed by the parish-priest at in- erment, but not unto persons excommunicated.

Ayliffe's Parergon.

EXCOMMUNICATION was originally instituted for preserving the purity of the church; but am- bitious ecclesiastics converted it by degrees into an engine for promoting their own power, and inflicted it on the most frivolous occasions. The power of excommunication, as well as other acts of ecclesiastical discipline, was lodged in the hands of the clergy, who distinguished it into greater and less. The greater, called iravrtXnt: a0op«(T/ioc, i. e. total separation and anathema, consisted in an absolute and entire exclusion from the church and the participation of all its rites. When any person was thus excommuni- cated, notice was given of it by circular letters to all the most eminent churches, that they might confirm this act of discipline, by refusing to ad- mit the delinquent to their communion. The consequences of this excommunication were very terrible. The excommunicated person was avoided in civil commerce and outward conversa- tion. No one durst receive him into his house, or

eat at the same table with him ; and, when dead, he was denied the solemn rites of burial. The less excommunication, simply called aopio- /toc, i. e. separation or suspension, consisted in excluding men from the participation of the eu- charist, and the prayers of the faithful. But they were not expelled the church ; for they had the privilege of being present at the reading of the Scriptures, the sermons, and the prayers of the catechumens and penitents. This excom- munication was inflicted for smaller crimes ; such as neglecting to attend the service of the church, misbehaviour in it, and the like.

The causes of excommunication in England are, contempt of the bishop's court, heresy, neg- lect of public worship and the sacraments, incon- tinency, adultery, simony, &c. It is described to be twofold. But. if the judge of any spiritual court excommunicates a man for a cause of which he has not the legal cognizance, the party may have an action against him at common law, and he is also liable to be indicted at the suit of the king. Heavy as the penalty of excommuni- cation is, there are many who would despise the brutum fulmen of mere ecclesiastical censures. The law, therefore, steps in to their aid, and lends a supporting hand to an otherwise tottering authority. By the common law, ?n excommuni- cated person is disabled to do any act that is required to be done by one that is probus et legalis homo. He cannot serve upon juries; cannot be a witness in any court; and cannot bring an action to recover lands or money due to him. And if, within forty days after the sentence has been published in the church, the offender does not submit to the sentence of the spiritual court, the bishop may certify such contempt to the king in chancery. Upon which there issues put a writ to the sheriff of the county, called from the bishop's certificate a significant; or from its effect, a writ de excommunicato capien- tlo; and the sheriff shall thereupon take the

offender and imprison him in the county jail, lili he is reconciled to the church, and such recon-

ciliation certified by the bishop ; upon which another writ de excommunicato deliberando, issues out of the chancery to release him.

The Romish pontifical mentions three kinds of excommunication, viz. 1. The minor, incurred by those who have any correspondence with an excommunicated person. 2. The major, which falls upon those who disobey the commands of the holy see, or refuse to submit to certain points of discipline, in consequence of which they are excluded from the church militant and triumphant, and delivered over to the devil and his angels. 3. Anathema, which is properly that pronounced by the pope against heretical princes and countries.

Excommunication, in the Church of Scotland, consists only in an exclusion of openly profane and immoral persons from the ordinances of bap- tism and the lord's supper, but is seldom publicly denounced, and is attended with no civil in- capacity whatever.

Excommunication, in the Greek Church,cuis off the offender from all communion with the 318 fathers of the first council of Nice, and with the saints ; consigns him over to the devil and the traitor Judas ; and condemns his body to remain, after death as hard as a flint, or piece of steel, unless he humbles himself, and makes atonement for his sins by a sincere repentance. The form abounds with dreadful imprecations ; and the Greeks assert that if a person dies excommuni- cated, the devil enters into the lifeless corpse ; and therefore, in order to prevent it, the relations of the deceased cut his body in pieces, and boil them in wine. It is a custom for the patriarch of Jerusalem annually to excommunicate the pope and church of Rome ; on which occasion, he drives a nail into the ground with a hammer, as a mark of malediction.

Excommunications, in the Jewish Church. — Elias, a German rabbi, and others, speak of three kinds of excommunication among the Jews : the first was niddui, or separation of the person from things holy, for the space of thirty days ; the second,

chirem, or anathema, which ratified the former, and excluded the offender from the syna- gogue, and from civil commerce ; the third, shammatha, which was published by 300 or 400 trumpets, and implied a final exclusion from the synagogue. But Selden has pretty fully evinced that niddui and shammatha are promiscuously used, and oft signify the same censure; and therefore that there were but two kinds of excom- munication among the Jews; :i lesser and a greater. Among the modern Jews, excommuni- cation is attended with the most terrible conse- quences. The excommunicated person is refused all human assistance ; if there is a corpse in his house, or a child to be circumcised, none must help him. He is cursed by the book of the law, by the curse of Joshua against Jericho, by that of Elisha against the children, by heaven and earth, and God is besought that a whirlwind may dash him to pieces. He is pelted with stones if he appears in the streets; and, if he obtains absolution, it is upon the most mortifying conditions; for he is publicly tied to a post and

whipped ; after which he lays himself down at the door of the synagogue, and all those who go out pass over him. Such was the case with the famous Acosta, bom in Portugal about the begin- ning of the seventeenth century, who, after em- bracing Judaism, became dissatisfied with the Jewish rites, was excommunicated%and lay under the sentence fifteen years ; was re-admitted into the synagogue upon making his submission; was excommunicated a second time, and was for seven years abandoned by his friends, and reduced to a wretched condition ; when he again made his submission, and was publicly scourged, &c., as above mentioned. The death of any under the sentence of excommunication is cele- brated by the Jews with feasting and diversion. The introduction of various excommunications into the Jewish church seems to be entirely a tradition of the elders, for the law of Moses men- tions but one, viz. 'That soul shall be cut off from among his people.'

EXCO'RI ATE, v. a. > Old Fr. excorier, from
EXCORIA'TION, n. s. 5 Lat. ex privative, and corium
skin. To flay ; strip off the skin.

It hath marvellously enhanced the revenues of the crown, though with a pitiful excoriation of the poorer sort. Howel.

An hypersarcosis arises upon the excoriated eye-lid, and turneth it outward. Wiseman's Surgery.

A looseness proves often a fatal symptom in fevers ; for it weakens, excoriates, and inflames the bowels.

Arbitthnot.

The pituite secerned in the nose, mouth, and intes- tines, is not an excrementitious, but a laudable hu- mour, necessary for defending those parts from exco- riations. Id.

Survivor sole, and hardly such, of all That once lived here, thy brethren, at my birth (Since which I number t';reescore winters past^, A shattered veteran, hollow-trunked perhaps, As now, and with excoriate forks deform, Relics of ages ! Cowper.

EXCORIATION, in medicine and surgery, the galling, or rubbing off of the cuticle, especially of the parts between the thighs and about the anus. In adults, it is occasioned by riding, much walking, or other vehement exercise, and may be cured by vulnerary applications. In children there is often an excoriation, not only of the parts near the pudenda, chiefly of the groin and scrotum, but likewise in the wrinkles of the neck and under the arms ; proceeding from the acrimony of urine and perspiration, and occa- sioning itching pains, crying, restlessness, &c. The parts affected should be often washed with warm water, and sprinkled with drying powders, as flour, chalk, tutty, or lapis calaminaris, tied loosely in a rag, and the powder shaken out on the parts ; but ceruse, which some nurses use in this way, is very dangerous.
EX'CREMENT, n. s. \ Fr. excrement, EXCREMENT'AL,

adj. I recrement ; Italian, EXCREMENTITI'OUS, \escremento, recre-

EXCRE'TION, n. s. C mento ; Spanish

EXCRET'IVE, adj. 1 and Portuguese,

EXCRE'TORY. adj. &n.s. ' excremento ; Lat. cjrcremenfum, recrementum, a excerno, from ex and eerno ; Gr. rpivw, to separate. The refuse part of human food ; that which is rejected or voided by the natural passages ; sometimes np-

EXC

plieu to any excrescence, as hair, &c. Excre- mentitious is containing excrement. Excretion is the act of separating excrements, or the thing separated. Excretive and excretory (as an ad- jective), having the power or quality of ejecting them. Cheyne defines the latter as a substan- tive.

It fares with politick bodies as with the physical ; each would convert all into their own proper sub- stance, and cast forth as excrement what will not so be changed. Raleigh's Essays.

God hath given virtue to springs, fountains, earth, plants, and the excremental parts of the basest living creatures. Raleigh.

We see that those excrements, that are of the first digestion, smell the worst ; as the excrements from the belly. Bacnn.

The excrementitious moisture passeth in birds through a fairer and more delicate strainer than in beasts. Id.

The moss from apple-trees is little better than an excretion. Id.

The poyson's gone thro' all ; poysons affect

Chiefly the chiefest parts; but some effect

In nails, and hairs, yea excrements, will show :

So lies the poyson sin in the most low. Donne.

Moses burns and stamps the calf to powder, and gives it Israel to drink — that instead of going before Israel, it might pass through them ; so as the next day they might find their god in their excrements ; to the just shame of Israel. Bp. Hall's Contemplation's.

Their sordid avarice rakes In excrements, and hires the very jakes.

Dry den. Farce, in itself, is of a nasty scent ;

But the gain smells not of the excrement. LI.

A diminution of the body happens by the excretive faculty, excerning and evacuating more than neces- sary. Harvey on Consumptions.

Toil of the mind destroys health, by attracting the spirits from their task of concoction to the brain ; whi- ther they carry along with them clouds of vapours and excrementitious humours. Harvey.

You may find, by dissection, not only their sto- machs full of meat, but their intestines full of excre- ment. Bentley.

The lungs are the grand emunctory of the body; and the main end of respiration is continually to dis- charge and expel an excrementitious fluid out of tha mass of blood. Woodward.

An animal fluid no ways excrementitious, mild, ela borated, and nutritious. Arbuthnot on A limenta.

The excrements of horses are nothing but hay, and, as such, combustible. Id.

The symptoms of the excretion of the bile vitiated, are a yellowish skin, white hard faeces, loss of appe« tite, and a lixivial urine. td.

Excretories of the body are nothing but slendtt slips of the arteries, deriving an appropriate juid from the blood. Cheyne

Others have believed them excretory organs of ex- crementitious juices ; but, as the vapour exhaled from vegetables has no taste, this idea is no more probable than the other ; add to this, that in moist weathet they do not appear to perspire or exhale at all.

Darwin.

EXCREMENTS, in physiology, are properly those parts of the food which, after having un- dergone the process of digestion, are rejectee and thrown out from the passages of the body adapted for their exclusion. This class em- braces the urine and faeces : some writers also include the perspiration or sweat. Both th«

perspiration and urine appear to be loaded with salts oi various kinds, and to tinge linen with different shades of yellow ; both redden blue paper, and both appear to contain phosphoric acid. Human urine, however, is peculiarly cha- racterised in the possession of lithic acid, an acid secreted in no other animal than man; and which crystallises round the sides of the vessel in which it is deposited, in the form of red po- lygonal salts, vulgarly denominated red sand. It contains also a large quantity of extractive matter of a peculiar kind, denominated by the French chemists uree. The urine of animals that feed on vegetables alone is proved by Fourcroy to contain benzoic acid instead of phosphoric, and to hold a larger portion of extractive matter. From urine, nitre, ammonia, and its muriat are ex- tracted, and it is greatly used in the scouring of woollen cloths. The dung of

different animals is employed for a variety of important purposes. That of the herbivorous quadrupeds appears a mixture of bile, &c., with a considerable portion of the fibrous vegetable food. Hence, the great use of camels' dung in Arabia and Egypt as fuel. A considerable quantity of ammonia is produced by the burning of dung, from which, mixed with sea-salt, the earliest sal-ammoniac was obtained. Cow-dung is of no small use in the preparation of cloth, as it mixes with water, and possesses cleansing powers similar to those of soap. The faeces of dogs and carnivorous animals have a most powerful corroding effect upon animal sub-stances when the putrid fermentation is esta-blished.

EXC RES'C ENC E, or "1 Fr. excrescence, ex-

ExcREs'cENCY,n. s. fcroissance ; Ital. es-

EXCRZS'CENT, adj.) crescenza ; Span, and Port, excrescencia ; Lat. excrescentia, ab excrescere, i. e. ertru crexcere. — Minsheu. An useless or monstrous growth or superfluity.

AH beyond this is monstrous, 'tis out of neture, 'tis an excrescence, and not a living part o.f poetry.

Dryden.

We have little more than the excrescences of the Spanish monarchy. Addison on the War.

They are the excrescences of our souls •, which, like our hair and beards, look horrid or becoming, as we cut or let them grow. Tatler.

Tumours and excrescences of plants, out of which generally issues a fly or a worm, are at first made by such insects which wound the tender buds. Bentley.

Expunge the whole or lop the excrescent parts Of all, our vices have created arts ; Then see how little the remaining sum, Which served the past, and

must the times to come.

Pope.

EXCRESCENCE, in surgery, a preternatural tu- mor upon the skin, either in the form of a wart or tubercle. If they are born with a person, as they frequently are, they are called naevi materni, or marks from the mother ; but if the tumor is large, so as to depend from the skin, like a fleshy mass, it is then called a sarcoma. See SURGERY.

EXCRU'CIATE, v.a. \ Lat. excrucio, ex

EXCRU'CIATION. \ and crucio,crux,cru-

cis, a cross. To put to pain, torture, torment.

He (Socrates) wittingly did marry her to exercise his patience, that, by the practice of enduring her shr- wish heats, he might be able to brook all compa-

nies ; the brawls, the scorns, me sophisms, and the petulancies of rude and unskilful men ; the frettings, the thwartings, and the excruciations of life

Feltham.

And here my heart long time excruciate, Amongst the leaves I rested all that night.

Chapman.

Leave them, as long as they keep their hardness and impenitent hearts, to those gnawing and e.ccru- ciating fears, those whips of the Divine Nemesis, that frequently scourge even atheists themselves. Bentley. I soon after was confined by a most excruciating disorder, and lost the use of my limbs. Sheridan. A talking oracle of awful phrase,

The approving ' Good ! ' (by no means good iii

law) Humming like flies around the newest blaze,

The bluest of blue bottles you e'er saw, Teasing with blame, excruciating with praise,

Gorging the little fame he gets all raw, Translating tongues he knows not even by letter, And sweating plays so middling, bad were better.

Byron.

EXCUBUE, in antiquity, the watches and guards kept in the day by the Roman soldiers, contradistinguished from the vigilae, which were kept in the night. The excubia- were placed either at the gates and entrenchments, or in the camp; for the latter there was allowed a whole manipulus to attend before the prsetorium, and four soldiers to the tent of every tribune. The excubiae at the gates of the camp, and at the en- trenchments, were properly called stationes. One company of foot and one troop of horse were assigned to each of the four gates every day.

EXCUL'PATE, v. a. } Fr. disculper ; Lat.

EXCULPA'TION, n. s. ^exculpo, ex and culpo.

EXCUL'PATOKY, adj. J cutpa, a fault. To clear from blame, or charge. Exculpatory, is that which has the tendency to excuse or free from blame.

A good child will not seek to exculpate herself at the expence of the most revered characters. Clarissa,

By this fond and eager acceptance of an exculpa- tory comment, Pope testified that, whatever might be the seeming or real import of the principles which he had received from Bolingbroke, he had not intention- ally attacked religion •, and Bolingbroke, if he meant to attack him, without his own consent, an instru- ment of mischief, found him now engaged, with his eyes open, on the side of truth. Johnson.

EXCULPATION, LETTERS OF, in Scotch law, a writ or summons issued by authority of the court of

justiciary, at the instance of a pannel, for citing witnesses to prove his defences, or his objections to any of the jury or witnesses cited against him.

EXCUR', v. n. -v Lat. excurso, ex from,

EXCURSION, n. s. fand cut-so, to run; Fr.

EXCUR'SIVE, adj. {and Span, excursion. ;

EXCUR'SIVELY, adv. J Italian, excursione. To pass beyond limits : the act of doing so ; an ex- pedition or digression beyond usual bounds ; a ramble, or irregular journey.

Expect not that I should beg pardon for this excur sion, till I think it a digression to insist on the bles- sedness of Christ in heaven. Boyle's Seraph. Love.

His disease was an asthma, oft ercurrmg to an or- thopnreia ; the cause, a translation of tartarous hu- mours from his joints to his lungs. Harvey.

The mind extends its thoughts often beyond the

utmost expansion of matter, and makes excurtions into

that incomprehensible. Locke,

The causes of those great excursions of the seasons

into the extremes of cold and heat, are very obscure.

Arbuthnot on Air.

I Am too weary to allow myself any excursion from the main design. Atterbury.

The muse whose early voice you taught to sing, Prescribed her heights, and pruned her tender wing ; Her guide now lost, no more attempts to rise, But in low numbers short excursions tries. Pope.

But why so far excursive, when at hand Fair-handed Spring unbosoms every grace ?

Thomson.

Of animals which feed excursively [the flesh] is allowed to have a higher flavour than that of those who are couped up. Boswell.

Laud attended throughout that whole journey, which he was not obliged to do, and no doubt would have been excused from it. Clarendon.

Goodness to be admired, that it refuted not hi* argument in the punishment of his excusation.

Browne.

I was set upon by some of your servants, whom because I have in my just defence evil entreated, I came to make my excuse to you. Sidney.

Though he were already slept into the winter of his age, he found himself warm in those desires, which were in his son far more excusable. Id.

Let no vain hope your easy mind seduce ;

For rich ill poets are without excuse. Roscommon.

I speak not of your innocent or excusable mistakes in cases of great difficulty, nor yet of excusing a cause bad in the main from unjust aggravations. Baxter.

It may satisfy others of the excusableness of my dis-

EXCUSATI, in church history, slaves who, satisfaction' to peruse the ensuing relation. Boyle. flying to any church for sanctuary, were excused

Before the Gospel, impenitency was much more ex- and pardoned by their ihasters ; but these were cusahle> became men were ignorant. Tilhtson.

obliged to take an oath to that purpose before they could again obtain possession of them; and, if they broke the oath, they were punished and fined as persons guilty of perjury.

EXCUSE', v. a., n. s. \ Fr. excuser ; Ital.

EXCU'SABLE, adj. I escusare, iscusare, and

Nothing but love this patience could produce ;

And I allow your rage that kind excuse. Dryden.

Children, afraid to have their fault!) seen in their naked colours, will, like the rest of the sons of Adam, be apt to make excuses. Locke.

Nor could the real danger of leaving their dwell-

EXCTJ'SABLENESS, n. s. scuare ; Spanish and ings to go UP to the temPle' excvse their Jou™ey.

« X/w

Exru'sATioN, ^Port. escusar ; Latin,

EX^U'SATORY, adj. i ejccusare, i. e. extra

E> CUSE'LESS, adj. \ causam (ponere), to

EXCUS'ER, n. s.) place beyond or out of

the cause. To extenuate; deliver from charge or obligation ; to remit ; pardon ; vindicate. As a substantive, it means the act or plea of apology, or the cause for which one is excused. Excu- sation is synonymous with excuse as a substan- tive. Excusatory is apologetical. Excuser, he who pleads for, or pardons another.

And all bigunnen togider to excuse hem, the firste seyde : I haue bought a toun, and I haue nede to go out and se it, Y preie thee haue me excusid.

Wiclif. Luk. 14.

If I hadde not come and hadde not spokun to hem thei schulden not haue synne, but now thei han noon excusacioun of her synne. Id. Jon 15.

Accusing or else excusing one another. Romans.

Be gone, I will not hear thy vain excuse ; But, as thou lov'st thy life, make speed from hence.

Shakspeare.

Heaven put it in thy mind to take it hence, That thou might'st win the more thy father's love, Pleading so wisely in excuse of it. Id. Henry IV. Not only that ;

That were excusable, that and thousands more

Of semblable import. Id. Antony and Cleopatra.

As good success admits no examination, so the contrary allows of no excuse, how reasonable or just soever. Raleigh.

Learned men are excusable in particulars, where-upon our salvation depe-ndeth not. Id. History.

Prefaces, excutatwns, and other speeches »f reference to the person, though they seem to proceed of modesty, they are bravery. Bacon's Essays.

Bad men excuse their faults, good men will leave

them ; He acts the third crime that defends the first.

Ben Jonson.

For his intermeddling with arms he i» the more ex-

South.

O, thou, whoe'er thou art, excuse the force These men have used ; and O befriend our course !

Addison,

We find out some excuse or other for deferring good resolutions, 'till our intended retreat is cut off by death. Id.

The voluntary enslaving myself is excuselets.

Decay of Piety. Excuse some courtly strains,

No whiter page than Addison's remains. Pope.

An excuse is more terrible than a lie ; for an excuse is a lie guarded. Id.

In vain would his excusers endeavour to palliate his enormities, by imputing them to madness.

Swift.

When we would impose upon God and our con- sciences, we excuse and disguise with all imaginable artifice and sophistry. Mason.

He had himself nothing to shew. It was now my turn. I made some difficulty ; seemed as if I wished to be excused; pretended that I had no time to make corrections, &c. Franklin.

But if this plea 's denied, in our excuse > Another still remains you can't refuse ; It is a lady writes. Sheridan.

EXCU'SS, v. a. I Lat. excussus. To seize

EXCURSION, n. s. S and detain by law : legal seizure.

If upon an excussion there are not goods to satisfy the judgment, his body may be attached. Ayliffe.

The person of a man ought not, by the civil law, to be taken for a debt, unless his goods and estate have been first excussed. Id. Parergon.

EX'ECRATE, v. a.~\ Fr. execrcr ; Ital. ese-

EX'ECRABLE, adj. Icrare, essecrare ; Span.

EX'ECRABLY, adv. {and Port, execrar ; Lat.

EXECRA'TION, n. s. J execrari, of ex, privative, and sacrare, to make holy. To curse ; to pro- nounce evil upon ; detest.

Of the visible church of Jesus Christ those may be, in respect of their outward profession, who, in re-

cusable, because many others of his coat are com- gard of their inward disposition, are most worthily

Howel. both hateful in the sight of God himself, and in the

manders.

eyes of the sounder parts of the visible church most execrable. Hooker.

Give sentence on this execrable wretch, That hath been breeder of these dire events.

Shahspeare.

Mischance and sorrow go along with you, And threefold vengeance 'tend upon your steps ! — Cease, gentle queen, these execrations. Id.

For this we may thank Adam! but his thanks Shall be the execration. Milton's Paradise Lost.

The Indians, at naming the devil, did spit on the ground in token of execration. Stilling fleet.

' Extinction of some tyranny, by the indignation of a people, makes way for some form contrary to that which thoy lately execrated and detested. Temple.

As for Pilate's personal qualities ; such a person deserved to bear the guilt of a fact so execrably base ; was worthy to be employed therein, and ready enough to undergo it. Barrow.

When execrable Troy in ashes lay, Through fires, and swords, and seas, they forced their way. Dryden.

Furies ! rise,

And drown, in your less execrable yell, Britannia's shame. Young.

Well ! divines may say of it what they please, but execration is to the mind what phlebotomy is to the body : the vital sluices of both are wonderfully re- lieved by their respective evacuations. Burnt.

She execrates indeed

The tyranny that doomed them to the fire, But gives the glorious sufferers little praise. Cowper.

EXECRATION, in antiquity, a kind of punish- ment, consisting of direful curses and marks of infamy ; such was that used against Philip of Macedon by the Athenians. A general assembly of the people being called, they made a decree, that all the statues and images of that king, and of all his ancestors, should be demolished, and their very name razed; that all the festivals, sa- cred rites, priests, and whatever else had been instituted in honor of him, should be profaned ; that the very places where there had been any monument or inscription to his honor, should be detestable ; that nothing should be set up, or de- dicated in them, which could be done in clean places ; and, lastly, that the priests, as often as they prayed for the Athenian people, allies, ar- mies, and fleets, should as many times detest and execrate Philip, his children, kingdom, land and sea forces, and the whole race and name of the Macedonians. ,At the taking and demolish- ing of cities, it was usual amongst the Greeks and Romans to pronounce curses upon, and load with direful execrations, the rebuilders of them.

EXE'CT, v. a. 1 Lat. execo. To cut out; EXE'CTION, n. s.] to cut away. The act of cutting out.

Were it not for the effusion of blood which would follow an erection, the liver might not only be exected, but its office supplied by the spleen and other parts. Harvey on Consumptions.

EX'ECUTE,v.a.&v.n.^ Fr. executer ; ltd. EXECU'TER, or I essequire, essecutare ;

EXEC'UTOR, n. s. Span, and Port, exe-

EXEC'UTORSHIP, [^cutar, esecutar ; Lat.

EXECU'TION, { exequor, from ex, ex-

EXECU'TIOM.U, pletive, and sequor,

EXECUTIVE, to follow. To per-

EXEC'UTRIX, J form; bring into ac-

tion or completion ; put to death : as a neuter verb, to perform an expected office or service : executer or executor is he who performs or ac- complishes a thing; the legal trustee under a will ; it has been sometimes used as synonymous with executioner, or he that inflicts capital punish- ment, and vice versa ; executioner is also used for the instrument whereby any thing is punished or performed : executorship is the office of trus- tee under a will : executrix a female appointed to such trust : executive, active* not deliberative or legislative ; having power to carry laws or government into practice.

Against all the god?, of Egypt I will execute judg- ment. Exodus.

Men may not devise laws, but are bound for ever to use and execute those which God hath delivered.

Hooker.

Fitzosborn was executed under him, or discarded into

foreign service for a pretty shadow of exilement.

Spenser.

My sweet mistress

Weeps when she sees me work, and says such base-
ness Had ne'er like executer. Shakspeare.

I like thy counsel ; and how well I like it, The
execution of it shall make known. Id.

Brave Macbeth with his brandished steel, Which
smoked with bloody execution, Carved out his
passage. Id.

la not the causer of the timeless deaths, As
blameful as the executioner? Id.

I would not be thy executioner : I fly thee, for I
would not injure thee ; Thou tell'st me there is
murder in mine eyes. Id.

The sad-eyed justice, with his surly hum Delivers
o'er to executers pale The lazy yawning drone. Id.
Henry V.

The treacherous Fastolfe wounds my peace, Whom with
my bare fists I would execute, If I now had him. Id.
Henry VI.

I wish no better

Than have him hold that purpose, and to put it In
execution. Id. Coriolanus.

For fishing for testaments and erecuterships it is
worse, by how much men submit themselves to moan
persons, than in service. Bacon.

It is a comfort to the executioners of this office,
when they consider that they cannot be guilty of
oppression.

Id.

He did, after the death of the earl, buy of his ex-

ecutrix the remnant of the term. Id.

When things are come to the execution, there is no secrecy comparable to celerity. Id. Essays.

Sir William Bremingham was executed for treason.

Davies.

The cannon against St. Stephen's gate executed so well, that the portcullis and gate were broken, and entry opened into the city. Sir J. Hayward.

The execution had been too cruel, and far exceeding the bounds of ordinary hostility. Id.

What are we the better for God's own laws, with- out execution ? Bp. Hall.

To have seen them struck dead upon the earth had been fearful ; but to see the earth at once their executioner and grave was more horrible.

Bp. Hall's Contemplations.

Sir Richard was committed to the Fleet in execu- tion for the whole six thousand pounds. Clarendon.

HP, born of the greatest blood, submitted himself to be servant to the executioner that should put to deatli Musidorus. Sidney .

EXECUTION.

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They arc the nimblest, agil, strongest instruments, fittest to be executive of the commands of the souls.

Hale.

O Tyburn, could'st thou reason and dispute, Could'st thou but judge as well as execute, How often would'st thou change the felon's doom, And truss some stern chief justice in his room !

Dryden.

The excellency of the subject contributed much to the happiness of the execution. Id.

Absalom pronounced sentence of death against his brother, and had it executed too. Locke.

Legislators not being able to foresee, and provide by laws, for all that may be useful to the community, the executor of the laws, having the power in his hands, has by the common law of nature a right to make use of it for the good of the society, in many cases where, the municipal law has given no direction, till the legislative can conveniently be assembled to provide for it. Id.

Where the legislative and executive power are in

distinct hands (as they are in all moderated monarchies and well framed governments), there the good of the society requires that several things should be left to the discretion of him that has the executive power. Id.

In this case every man hath a right to punish the offender, and be the executioner of the law of nature.

Id.

He casts into the balance the promise of a reward to such as should execute, and of punishment to such as should neglect their commission. South.

When the tongue is the weapon, a man may strike where he cannot reach, and a word shall do execution both further and deeper than the mightiest blow. Id.

The Roman emperors were possessed of the whole legislative as well as executive power. Addiion.

All along

The walls, abominable ornaments ! Are tools of wrath, anvils of torments hung, Fell executioners of foul intents. Crashaw.

The heart of every man was in the hand of God, and he could have made them executioner of his wrath upon one another.*

Woodward's Natural History. Laws support those crimes they checkt before, And executions now affright no more. Creech.

O fate of fools ! officious in contriving ; In executing puzzled, lame, and lost. Congreve. Ships of such height and strength, that his vessels could do no execution upon them. Arbuthnot.

Sophocles and Euripides, in their most beautiful pieces, are impartial executers of poetick justice.

Dennis.

Hobbes confounds the executive with the legislative power, though all well instituted states have ever placed them in different hands. Swift.

The government here is so regularly disposed, that it almost executes itself. Id.

Know I am but executor ; he left This moral legacy ; I make it o'er By his command. Young.

Every sort of legislative, judicial, or executory power are its creatures. They can have no being in any other state of things ; and how can any man claim, under the conventions of civil society, rights which do not «o much as suppose its existence? Burke.

When this great revolution was attempted in a more regular mode by government, it was opposed by plots and seditions of the people ; when by popular efforts, it wan repressed as rebellion by the hand of power ; and bloody executions (often bloodily returned) marked the whole of its progress through all its stages. Id.

It works the coupoirs or screw-presses for cutting out the circular pieces of copper ; and coins both the faces and edges of the money at the same time, with such superior excellence and cheapness of workman- ship, as well as with marks of such powerful machi- nery as must totally prevent clandestine imitation, and in consequence save many lives from the hand of the executioner ; a circumstance worthy the attention of a great minister. Darwin.

An actor is in the capacity of a steward to every living muse, and of an executor to every departed one : the poet digs up the ore ; he sifts it from the dross, refines and purifies it for the mint : the actor s,gts the stamp upon it, and makes it current in the world. Cumberland.

EXECUTION, in criminal cases, follows judg- ment; and must in all cases, capital as well as otherwise,

be performed by the legal officer, the sheriff or his deputy ; whose warrant for so doing was anciently by precept, under the hand and seal of the judge, as it is still practised in the court of the lord high steward upon the execu- tion of a peer ; though, in the court of the peers in parliament, it is done by writ from the king. Afterwards it was established, that in case of life, the judge may command execution to be done without any writ. The usage now is, for the judge to sign the list of all the prisoners' names, with their separate judgments in the margin, which is left with the sheriff. As, for a capital felony, it is written opposite to' the pri- soner's name, ' let him be hanged by the neck ;' formerly, in the days of Latin and abbreviation, ' sus. per coll./ for ' suspendatur per collum.' And this is the only warrant that the sheriff has for so material an act as taking away the life, of another. Upon this, Blackstone observes, it may certainly afford matter of speculation, that in civil causes there should be such a variety of writs of- execution to recover a trifling debt, is- sued in the king's name, and the seal of the court, without which the sheriff cannot legally stir one step : and yet that the execution of a man, the most important and terrible task of any, should depend upon a marginal note. The sheriff, upon receipt of his warrant, is to do execution within a convenient timer which in the country is also left at large. In London, indeed, a more solemn and becoming exactness is used, both as to the warrant of execution and the time of executing thereof; for the recorder, after reporting to the king, in person, the case of the several prisoners, and receiving his royal pleasure, that the law must take its course, issues his warrant to the sheriffs, directing them to do execution on the day and at the place assigned. And in the court of king's bench, if the prisoner be tried at the bar, or brought there by habeas corpus, a rule is made for his execution, either specifying the time and place, or leaving it to the discretion of the sheriff. And throughoul the kingdom, by stat. 25 Geo. II., cap. 37, it is enacted that, in case of murder, the judge shall, in his sentence, direct

execution to be performed on the next day but one after sentence is passed. But other- wise, the time and place of execution are-by law no part of the judgment. It has been well ob- served, that it is of great importance that the punishment should follow the crime as early as possible; that the prospect of gratification or

advantage which tempts a man to commit the crime, should instantly awake the attendant idea of punishment. Delay of execution serves only to separate these ideas ; and then the execution itself affects the minds of the spectators rather as a terrible sight, than as the necessary conse- quence of transgression. Sir Edward Coke and Sir Matthew Hale say, that even the king cannot change the punishment of the law, by altering the hanging or burning into beheading; though, when beheading is part of the sentence, the king- may remit the rest. But others have thought, and more justly, that this prerogative, being founded on mercy, and immemorially exercised by the crown, is part of the common law. For hitherto, in every instance, all these exchanges have been for more merciful kinds of death; and, how far this may also fall within the king's power of granting conditional pardons, viz. by remitting a severe kind of death, on condition that the criminal submits to a milder, is a matter that may bear consideration. When lord Staf- ford was executed for the popish plot in the reign of king Charles II., the then sheriffs of London having received the king's writ for be- heading him, petitioned the house of lords for an order how the said judgment should be exe- cuted ; for he, being prosecuted by impeach- ment, they enterta ued a notion, which is said to have been countenanced by lord Russel, that the king could not pardon any part of the sentence. The lords resolved, that the scruples of the she- riffs were unnecessary, and declared that the king's writ ought to be obeyed. Disappointed of raising a flame in that assembly,

they imme- diately signified to the house of commons, by one of the members, that they were not satisfied as to the power of the said writ. The house took two days to consider of it, and then sul- lenly* resolved, that the house was content that the sheriff do execute lord Stafford by severing his head from his body. It is farther related, that when afterwards the same lord Russel was condemned for high treason, upon indictment, the king, while he remitted the ignominious part of the sentence, observed, ' that his lordship would now find that he was possessed of the prerogative, which in the case of lord Stafford he had denied him.'

The policy of public executions for any offence short of the crime as murder has now become so questionable as to materially diminish their num- ber, and we have liitle doubt but that that portion of our criminal law which condemns a human being to a cruel and ignominious death for ob- taining money by a forged bill of exchange, will speedily be erased from the statute book. Nay, we are convinced that sound policy as well as humanity sanction the change. — If our laws were less like those of Draco, a greater number of criminals would be prosecuted to conviction.

EXECUTION, military, includes every kind of punishment inflicted on the army by the sentence of a court-martial ; such as tying up to three halberts, and receiving a number of lashes with a whip, composed of nine whip-cord lashes, and each lash of nine knots, from the drummer ; or running the gantelope through the parade at

guard-mounting, drawn up in two lines for that purpose ; when the provost marches through with twigs or switches, and every soldier takes as many as there are prisoners to be punished ; the prisoner then marches through the two lines, and each soldier gives him a hard stroke, the major riding up and down to see that the men lay on properly. When a soldier is to be pu- nished with death, a detachment of about 200 men from the regiment to which he belongs, form the parade, when a file of grenadiers

shoot the prisoner to death. Every nation has different modes of punishment. The cat with nine tails is to punish foot soldiers ; dragoons and cavalry men are generally picketed.

EXECUTIONS, in civil actions or where money only is recovered, as a debt or damages, are of five sorts. 1 . Against the body of the defendant. 2. Against his goods and chattels. 3. Against his goods and the profits of his lands. 4. Against his goods and the possession of his lands. 5 Against all three, his body, lands, and goods.

1. The first of these species of execution if. by writ of capias ad satisfaciendum (shortly called a ca. sa.) to take and imprison the body of the debtor till satisfaction be made for the debt, costs, and damages. Sir E. Coke gives a singular instance where a defendant in 14 Edw. III. was discharged from a capias because he was of so advanced an age that he could not undergo the pain of imprisonment. 1 Inst. 289. Tin's writ is an execution of the highest nature, inas- much as it deprives a man of his liberty till lie makes the satisfaction awarded ; and, therefore, when a man is once taken in execution upon this writ, no other process can be sued out against his lands or goods. Only by stat. 21 Jac. I. c. 24, if the defendant dies while charged in ex- ecution upon this writ, the plaintiff may, after his death, sue out a new execution against his lands, goods, or chattels. If a ca. sa. is sued out, and a non est inventus is returned thereon, the plaintiff may sue out a process 'against the bail, if any were given ; who stipulated in this triple alternative, that the defendant shall, if con- demned in the suit, satisfy the plaintiff his debt and costs, or surrender himself a prisoner ; or that they will pay it for him : as therefore the two former branches of the alternative are nei- ther of them complied with, the latter must im- mediately take place. Lutw. 1269, 1273. In order to which a writ of scire facias may be sued out against the bail, commanding them to show cause why the plaintiff should not have execution against them for his debt and damages ;

and on such writ, if they show no sufficient cause, or the defendant does not surrender him- self on the day of the return, or of showing cause, the plaintiff may have judgment against the bail, and take out a writ of ca. sa. or other process of execution against them.

2. The next species of execution is against the goods and chattels of the defendant, and is called a writ of fieri facias, from the words in it where the sheriff is commanded that he cause to be made of the goods and chattels of the de fendant, the sum or debt recovered. This lies as well against privileged persons, peers, &c., as

other common persons; and against executors or administrators, with regard to the goods of the deceased. The sheriff may not break open any outer doors to execute either this writ or the writ of ca. sa. but must enter peaceably ; and may then break open any inner door belonging to the defendant, in order to take the goods. 5 Rep. 92. Palm. 54. See post, III. 3. And the sheriff may sell the goods and chattels of the defendant, even an estate for years, which is a chattel real (8 Rep. 171), till he has raised enough to satisfy the judgment and costs ; first paying the landlord of the premises upon which the goods are found, the arrears of rent then due, not exceeding one year's rent in the whole. Stat. 8 Ann. c. 14. If part only of the debt be levied on a fieri facias, the plaintiff may have a ca. sa. for the residue. 1 Ro. Ab. 904. Cro. Eliz. 344.

3. A third species of execution is by writ of levari facias ; which affects a man's goods, and the profits of his lands, by commanding the sheriff to levy the plaintiff's debt on the lands and goods of the defendant ; whereby the sheriff may seize all his goods, and receive the rents and profits of his lands, till satisfaction be made to the plaintiff. Finch, L. 471. Little use is now made of this writ;

the remedy by elegit, which takes possession of the lands themselves, being much more effectual. But, as a species of this levari facias may be considered a writ of execution proper only to ecclesiastics, which is given when the sheriff, upon a common writ of execution sued, returns that the defendant is a beneficed clerk, having no lay fee. In this case a writ goes to the bishop of the diocese, in the nature of a levari or fieri facias, to levy the debt and damages de bonis ecclesiasticis, which are not to be touched by lay hands : and thereupon the bishop sends out a sequestration of the pro- fits of the clerk's benefice, directed to the church-wardens to collect the same, and pay them to the plaintiff till the full sum be raised. Reg. Orig. 300. Burn E. L. 329. 2 Inst. 472. Jenk.

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4. The fourth species of execution is by the writ of elegit, which is [a judicial writ given by stat. Will. II. 13, Edw. I. c. 18, either upon judgment for a debt or damages, or upon the forfeiture of a recognisance taken in the king's court. By the common law, a man could only have satisfaction of goods, chattels, and the pre- sent profits of lands, by the two writs of execu- tion last-mentioned (2 and 3) ; but not the pos- session of the lands themselves, which was a natural consequence of the feudal principles prohibiting alienation of lands. See TENURE. By this writ of elegit the defendant's goods and chattels are not sold, but only appraised ; and all of them, except oxen and beasts of the plough, are delivered to the plaintiff at such reasonable appraisement and price, in part of satisfaction of his debt. If the goods are not sufficient, then the moiety, or one half of his freehold lands, which he had at the time of the judgment given, whether held in his own name or any other in trust for him, are also to be delivered to the plaintiff: to hold till out of the rents and pro- fits therrof the debt be levied, or till the de-

fendant's interes- be expired; as till the death of

the defendant, if he be tenant for life, or in tail. This execution, or seizing of lands by elegit, is of so high a nature, that after it the body of the defendant cannot be taken : but if execution can only be had of the goods because there are no lands, and such goods are not suffi- cient to pay the debt, a ca. sa. may then be had after the elegit; for such elegit is in this case no more in effect than a fieri facias. Hob. 58.

5. Thus it appears that body and goods may be taken in execution ; or land and goods ; but not body and lands too upon any judgment be- tween subject and subject, in the course of the common law ; but, upon some prosecutions giveu by statute ; as in the case of recognisances or debts acknowledged on statute merchant, or sta- tute staple (see stat. 13 Edw. I. de mercatoribus ; 27 Edw. III. c. 9.) upon forfeiture of these the body, lands, and goods may all be taken at once in execution to compel the payment of the debt. The process hereon is usually called an extent or extendi facias ; because the sheriff is to cause the lands, &c., to be appraised to their full ex- tended value, before he delivers them to the plaintiff, that it may be certainly known how soon the debt will be satisfied. F. N. B. 131.

By stat. 33 Hen. VIII. c. 39, all obligations made to the king shall have the same force, and of consequence the same remedy to recover them, as a statute-staple ; though, indeed, before this statute, the king was entitled to sue out execu- tion against the body, lands, and goods of his accountant or debtor. 3 Rep. 12. And his debt shall, in suing out execution, be preferred to that of every other creditor who hath not ob- tained judgment before the king commenced his suit. Stat. 33 Hen. VIII. c. 39, sec. 74. The king's judgment also affects lands which the king's debtor hath at or after the time of con- tracting his debt, or which any of his officers mentioned in stat. 13 Eliz. c. 4, hath at or after the time of his entering on the office : so that if such officer of the crown aliens for a valuable consideration, the

land shall be liable to the king's debt, even in the hands of a bona fide purchaser : though the debt due to the king was contracted by the vendor many years after the alienation. 10 Rep. 55, 6, 8 Rep. 171. And see stat. 25 Geo. III. c. 35, which enables the Court of Exchequer, on application by the at- torney general by* motion, to order the estate of any debtor to the king, and of the heirs and assigns of such debtor, in any lands extended, to be sold as the court shall direct; the convey- ance to be made by the remembrancer of the court, by bargain and sale, to be inrolled in that court.

Judgments between subject and subject re- lated, even at common law, no farther back than the first day of the term in which they were re- covered, in respect of the lands of the debtor ; and did not bind his goods and chattels but from the date of the writ of execution : and now by the statute of frauds, 29 Car. II., c. 3, the judgment shall not bind the land in the hands of a bon& fide purchaser, but only from the day of actually signing the same, which is directed by the statute to be punctually entered on the re-

cord : nor shall the writ of execution bind the goods in the hands of a stranger or a purchaser, (Skin. 257) but only from the actual delivery of the writ to the sheriff or other officer, who is, therefore, ordered to indorse on the back of it the day of his receiving the same.

EXECUTIVE POWER. The supreme executive power of these kingdoms is vested by our laws in the king or queen for the time being, who has a right to a negative in parliament, i. e. to refuse assent to any bill offered. See ENGLAND.

EXECUTOR, in English law, is one appointed by a man's last will and testament to perform or execute the contents thereof after his decease; and to have

the disposing of all the testator's substance, according to the tenor of the will. Under the term WILL we shall have to consider the legal form and character of that important instrument. In this place we propose only to point out who may be executors, the nature of the appointment, the interest vested in them, and the general duties of their office.

1. No person can act as executor under the age of seventeen years; till which time adminis- tration must be granted to some other durante minore aetate. And if the right of administration devolves on an infant, administration durante minore aetate is to be granted till he arrives at twenty-one. But such administrator is but a curator for the infant, and has no interest or benefit in the testator's or intestate's estate, but in right of the infant. If an infant and one of full age, are made executors, he who is of full age may take out administration durante minori setate of the infant, and may declare as executor or administrator durante minori aetate : and there is no absurdity in this case, that there should be an executor and administrator to the same party. In like manner as it may be granted durante ab- sentisi pendente lite ; when the executor is out of the realm ; or 1 Lutw. 342 ; or when a suit is commenced in the Ecclesiastical court, touching the validity of the will. 2. P. Wms. 589, 590.

2. The appointment of an executor is essential to the making of a will: Went. c. 1. Plowd. 281 ; and it may be performed either by express words, or such as strongly imply the same : but if the testator makes an incomplete will, without naming any executors ; or, if he names incapable persons; or if the executors named refuse to act, see 9 Rep. 37. Went. Off. Ex. 38; in any of these cases administration must be granted cum testa- mento annexe to some other persons ; 1 Rol. Ab. 907; Comb. 20; and then the duty of the admi- nistrator, as also when he is constituted only durante minore aetate, &c., is very little different from that of an executor. A man may also ap- point two or more persons to be joint executors, and they are

accounted in law but as one person. See post. v. 3.
5. — Such joint executors shall not be charged by the acts of their companions ; any further than for effects actually come to their hands. Moor. 620. Cro. Eliz. 318. 2 Leon. 209. But if two or more executors join in a re- ceipt (in writing) and one of them only actually receives the money, each is liable for the whole as to creditors at law, but not as to legatees, or next of kin. 1 Sulk. 318. If joint executors, by agreement among themselves, agree that each

shall intermeddle with a certain part of the tes- tator's estate, yet each shall be chargeable for the whole (to creditors) by agreeing to the other's receipts. Hard. 314.

3. The interest vested in the executor, by the will of the deceased, may be continued and kept alive by the will of the same executor; so that the executor of A's executor is to all intents and purposes the executor and representative of A himself; see 25 Ed. III. st. 5. c. 5. 1 Leon. 275. But the executor of A's administrator, or the administrator of A>s executor, is not the repre sentative of A. For the power of an executor is founded upon the special confidence and ac- tual appointment of the deceased ; and such ex- ecutor is therefore allowed to transmit that power to another, in whom he hath equal confidence : but the administrator of A is merely the officer of the ordinary, prescribed to him by act of parliament, in whom the deceased has reposed no trust at all; and therefore, on the death of that officer, it results back to the ordinary to appoint another. And, with regard to the administrator of A's executor, he has clearly no privity or re- lation to A; being only commissioned to admi- nister the effects of the intestate executor, and not of the original testator. Wherefore in both these cases, and whenever the course of the re- presentation from executor to executor is inter- rupted by any one administration, it is necessary for the ordinary to commit administration afresh, of the goods of the deceased, not administered by the former executor or

administrator. And this administrator, de bonis non, is the only legal representative of the deceased in matters of personal property. But he may, as well as an original administrator, have only a limited or special administration committed to his care, viz. of certain specific effects, such as a term of years and the like ; the rest being committed to others. 1 Roll. Abr. 908. Godolph. p. 2. c. 30. Salk. 36. 1 New. Abr. 385.

If an executor dies before probate, such an executor's executor cannot prove the will, because he is not named therein, and no one can prove a will but he who is named executor in it: but if the first executor had proved the will, then his executor might have been executor to the first testator, there requiring no new probate. 1 Salk, 299. Though an executor of an executor may thus be executor to the first testator, yet he may take upon him the executorship of his own tes- tator, and refuse to intermeddle with the estate of the other; and if the first executor refuses (as if he dies before probate) his executor shall not administer to the first testator.

4. The duty and office of executors and admi- nistrators in general are very much the same ; excepting, first, that the executor is bound to perform a will, which an administrator is not, unless where a testament is annexed to his admi- nistration, and then he differs still less from an executor: and secondly, that an executor may do many acts before he proves the will Wentw. ch. 3. but an administrator may do nothing till letters of administration are issued; for the for- mer derives his power from the will, and not from the probate ; the latter owes his entirely to the appointment of the ordinary. Com. 51.

If a stranger takes upon him to act as ex- ecutor, without any just authority (as by inter- meddling

with the goods of the deceased, 5 Rep. 33, 34. and many other transactions, Wentw. ch. 14. Stat. 43. Eliz. c. 8), he is called in law an executor of his own wrong (de son tort,) and is liable to all the trouble of an executorship, without any of the profits or advantages; but merely doing acts of necessity or humanity, as locking up the goods, or burying the corpse, of the deceased will not amount to such an inter- meddling, as will charge a man as executor of his own wrong. Dyer, 166. When there is a rightful executor, and a stranger possesses him- self of the testator's goods, without doing any further act as executor, he is not an executor de son tort, but a tresspasser, Dyer, 105. Rol. Abr. 918. See 5 Rep. 82. An executor of his own wrong may be sued as executor; and he shall be sued for legacies as well as a rightful executor. Noy, 13. Though an executor de son tort cannot maintain any suit or action, because he cannot produce any will to justify it, yet he will be se- verely punished for a false plea; for in such case the execution shall be awarded for the whole debt, though he meddled with a thing of very small value. Noy, 69. What acts make a per- son liable as executor de son tort, is a question of law ; the jury are to say whether the acts be sufficiently proved.

i. The executor or administrator must bury the deceased in a manner suitable to the estate which he leaves behind him. Necessary funeral ex- penses are allowed, previous to all other debts and charges ; but if the executor or administra- tor be extravagant, it is a species of devastation or waste of the substance of the deceased; and shall only be prejudicial to himself, and not to the creditors or legatees of the deceased.

ii. The executor or administrator durante mi- nore aetate, or durante absentia, or cum testa- mento annexo, must prove the will of the de- ceased ; which is done either in a common form, which is only upon his own oath before the or- dinary, or his surrogate ; or per testes, in more solemn form of law, in case the validity of the will be disputed. Godolph. p. I.e. 20. § 4. When the will is so

proved, the original must be deposited in the register of the ordinary : and a copy thereof, in parchment, is made out under the seal of the ordinary, and delivered to the ex- ecutor or administrator, together with a certifi- cate of its having been proved before him : all which together is usually styled the probate. By stat. 37 Geo. III. c. 90, the executor must take probate within six months on penalty of £80.

iii. An executor may refuse an executorship ; but the refusal ought to be before the ordinary. If an executor be summoned to accept or refuse the executorship, and he doth not appear on the summons, and prove the will, the court may grant administration, &c., which shall be good in law till such executor hath proved the will ; but no man can be compelled to take on him the executorship, unless he hath intermeddled with the state. 1 Leon 154. Cro. Eliz. 858. Where ihere are several executors, and they all refuse, none of them shall administer afterwards; but if there is a refusal by one, and the other proves

the will, the refusing executor may administer when he will during the life of his co-executor, I Rep. 28. If there is but one executor, and he administer, he cannot refuse afterwards ; and if once he refuse, he cannot administer afterwards : thus, when a testator being possessed of lands, &c., for a term of years, and devised the same to the chief justice Catline, and made him executor., and died ; afterwards the executor wrote a letter to the judge of the prerogative court, intimating that he could not attend the executorship, and desiring him to grant administration to the next of kin to the deceased, which was done accord- ingly; and after this the executor entered on the lands, and granted the term to another ; it was adjudged void, because the letter which he wrote was a sufficient refusal ; and he may not, after refusal, take upon him the executorship. Moor,

As the testator has thought the executor ap- pointed a proper person to be entrusted with his affairs, the ordinary cannot adjudge him disable or incapax ; but a mandamus shall issue from B.R. for the ordinary to grant probate of the will, and admit the executor, if he refuse him : neither can the ordinary insist upon security from the executor, as the testator has thought him able and qualified. 1 Salk. 299. And although an executor becomes bankrupt, yet it is said the ordinary cannot grant administration to another ; but if an executor become non compos, the spiritual court may commit administration for this natural disability.

iv. The executor or administrator is to make an inventory of all the goods and chattels, whether in possession or action of the deceased, which he is to deliver in to ,the ordinary upon oath, if thereunto lawfully required. Stat. 21 H. 8. c. 5. By stat. 1 Jac. II. c. 17 § 6, no administrator shall be cited into court to render an account of the personal estate of his intestate, otherwise than by an inventory thereof, unless at the in- stance of some person in behalf of a minor, or having a demand out of such estate as a creditor, or next of kin ; nor shall be compellable to ac- count before any ordinary or judge empowered by the act of 22 & 23 Car. Il.'cap. 10, otherwise than as aforesaid. See 9 Rep. 30. 2 Inst. 600. Raym. 407.

v. He is to collect all the goods and chattels so inventoried ; and to that end he has very large powers and interests conferred on him by law, being the representative of the deceased ; Co. Lit. 209 ; and having the same property in his goods as the principal had when living, and the same remedies to recover them. And if there be two or more executors, a sale or release by one of them shall be good against all the rest, Dyer 23. Cro. Eliz. 347. Sid. 33. Brownl, 183, unless such release be obtained by fraud.

If goods of the testator are kept from the exe- cutor, he may sue for them in the spiritual court, or at common law ; and if one seized of a mes- suage

in fee, &c., has goods in the house, and makes a will and executors, and dies, the execu tors may enter into the house, and carry away the goods. Lit. 60. An executor may, in con- venient time after the testator's death, enter into a house descended to the heir, for removing an I

carrying away the goods, so as the door be open, or the key be in the door. Offic. Exec. 8. He may take the goods and chattels to himself, or give power to another to seize them for him, 9 Rep. 38. If an executor with his own goods redeem the goods of the testator ; or pays the testator's debts, &c., the goods of the testator shall, for so much, be changed into the proper goods of the executor. Jenk. Cent. 188. Where a man by will devises that his lands shall be sold for payment of debts, his executors shall sell the land, to whom it belongs to pay the debts. 2 Leon. c. 276. And if lands are devised to exe- cutors to be sold for payment of the testator's debts, those executors that act in the executor- ship, or that will sell, may do it without the others. Co. Lit. 113. By stat. 21 H. VIII. c. 4, bargains and sales of lands, &c., devised to be sold by executors, shall be as good, if made by such of the executors only as take upon them the execution of the will, as if all the executors had joined in the sale. If lands are thus devised to pay debts, a surviving executor may sell them ; but if the devise be, that the executor shall sell the land, and not of the land to them to be sold, here being only an authority, not an interest ; if one dies, the other cannot sell.

vi. The executor or administrator must pay the debts of the deceased. In payment of debts he must observe the rules of priority ; otherwise, on deficiency of assets, if he pay those of a lower degree first, he must answer those of a higher out of his own estate. And, first, he must pay all funeral charges, and the expenses of proving the will, and the like.

Secondly, debts due to the king on record or speciality. 1 And. 129. Thirdly, such debts as are by particular statutes to be preferred to all others ; money due upon poor rates (stat. 17 Geo. II. c. 38), for letters to the post-office (stat. 9 Ann. c. 10), and some others. See WILL. Fourthly, debts of record ; as judgments (docquetted according to the stat. 4 & 5 W. & M. c. 20), statutes, and recognizances. (4 Rep. 60 Cro. Car. 363). Fifthly, debts due on special contracts ; as for rent (for which the lessor has often a better remedy in his own hands by distraining) ; or upon bonds, covenants, and the like under seal. Wentw. ch. 12.) Lastly, debts on simple contracts, viz. upon notes unsealed and verbal promises. Among these simple contracts, servants' wages are by some (1 Rol. Abr. 927), with reason preferred to any other : and so stood the ancient law according to Bracton (lib. 2, c. 26), and Fleta (b. 2, c. 56 §10). Among debts of equal degree, the executor or administrator is allowed to pay himself first ; by retaining in his hands so much as his debt amounts to. 10 Mod. 496. If a creditor constitutes his debtor his executor, this is a release or discharge of the debt, whether the executor acts or not, provided there be assets sufficient to pay the testator's debts : for, though this discharge of the debt shall take place of all legacies, yet it were unfair to defraud the testator's creditors of their just debts by a release which is absolutely voluntary. Salk. 303. 1 Rol. Abr. 921. 5 Rep. 30. 8 Rep. 136.

vii. When the debts are discharged, the lega-

cies claim the next regard ; which are to be paid by the executor so far as his assets will extend ; but he may not give himself the preference herein, as in the case of debts. 2 Vern. 434. 2 P. Wms. 25. — The assent of an executor to lega- cies is held necessary to entitle a legatee ; but as this assent may be compelled, see March, 97, it does not seem necessary to state the effect of a dissent where there are assets sufficient to answer both debts and legacies. Where there are not assets, the assent of the executor of the legacy would subject him to a

devastavit.

viii. When all the debts and particular lega- cies are discharged, the surplus or residuum must be paid to the residuary legatee, if any be ap- pointed by the will ; and if there be none, it was long a settled notion that it devolved to the exe- cutor's own use, by virtue of his executorship. Perkins, 525. But, whatever ground there might have been formerly for it, this opinion seems now to be understood, with the following restriction : that although, where the executor has no legacy at all, the residuum shall in general be his own ; yet wherever there is sufficient on the face of a will (by means of a competent legacy or other- wise), to imply that the testator intended his exe- cutor should not have the residue, the undivided surplus of the estate shall go to the next of kin, the executor then standing upon exactly the same footing as an administrator.

EXECUTRY, in Scotch law, is the move- able estate falling to the executor. Under exe- cutry, or moveables, is comprehended every thing that moves itself, or can be moved ; such as corn, cattle, furniture, ready money, &c.

EXEDR/E, in antiquity, halls with many seats, where the philosophers, rhetoricians, and men of learning, met for discourse and disputa- tion. The word occurs in ecclesiastical writers as a general name for such buildings as were distinct from the main body of the churches, and yet within the limits of the church, taken in its largest sense. Among the exedrae the chief was the baptistery.

I have here and there interspersed some critical and some exegetical notes, fit for learners to know, and not unfit for some teachers to read. Walker.

EXEGESIS, in the Scotch universities, is an ex- ercise among the students in divinity, in which a question is stated by the respondent, who is then opposed by other students in their turns, during which the professor solves the difficulties which

the respondent cannot overcome.

EXEGETES; from tfyyiofiai, to explain; among the Athenians, persons learned in the laws, whom the judges used to consult in capital causes.

EXEGETICA, in algebra, the art'of finding, either in numbers or lines, the roots of the equa- tion of a problem, according as the problem is either numerical or geometrical.

EXEMPLAR. See EXAMPLE.

EXEMPLAR also denotes the image conceived in the mind of the artist, whereby he conducts his work.

EXERCISE.

EXEMPLIFY. See EXAMPLE.

EXEMPLIFICATION OF LETTERS PATENT, denotes a copy made from the enrolment, and seal- ed with the great seal ; which is as effectual as the original.

EXEMPT', v. a. & adj.^ Fr. exempter ;

EXEMP'TION, n. «. > Span, exemtar ; Lat.

EXEMPTI'TIOTJS, adj. J exemptus, ab exlmor, eximo, to take out, or away. To deliver, or grant immunity, from ; to free, or clear : as an adjective, not liable to ; not included ; cut off from : exemptitious is separable ; that which may be divided, or taken from another matter or thing.

Things done well,

And with a care, exempt themselves from fear :

Things done without example, in their issue

Are to be feared. Shalupearc.

Was not thy father for treason headed ? And by his treason stand'st not thou attainted, Corrupted, and

exempt, from ancient gentry? Id.

The religious were not exempted, but fought among the other soldiers. Knolles's History of the Turks.

The like exemption hath the writ to enquire of a man's death, which also must be granted freely.

Bacon. Do not once hope, that thou canst tempt

A spirit so resolved to tread

Upon thy throat, and live exempt

From all the nets that thou canst spread.

Ben Jonsan.

If the motion were loose or exemptitious from mat- ter, I could be convinced that it had extension of its own. More.

His dreadful imprecation hear; 'Tis laid on all, not any one exempt. Lee's Oedipus.

No man, not even the most powerful among the sona of men, is exempt from the chances of human life.

Atterbury.

The emperors exempted them from all taxes, to which they subjected merchants without exception. A r but ft i tot on Coins.

The Roman laws gave particular exemptions to such as built ships or traded in corn. Arbuthnot.

An abbot cannot, without the consent of his con- vent, subject a monastery to any, from whose jurisdic- tion such monastery was exempted. Ayliffe. The god constrains the Greek to roam,

A hopeless exile from his native home,

From death alone exempt. Pope's Odyssey.

There seem to be two situations which may be con-

ceived to be exempted from rain falling upon them, one where the constant trade-winds meet beneath the line, for here two regions of warm air are mixed together, and thence do not seem to have any cause to precipitate their vapor ; and the other is, where the winds are brought from colder climates, and become warmer by their contact with the earth of a warmer one. Darwin.

You, in your grotto work enclosed,

Complain of being thus exposed ;

Yet nothing feel in that rough coat,

Save when the knife is at your throat.

Wherever driven by wind or tide,

Exempt from every ill beside. Cowper.

EXEMPTIONS, in law. Peers are exempted from being sworn upon inquests ; and {nights, clergymen, and others, from appearing at the sheriff's turn. Persons of seventy years of age, surgeons, apothecaries, &c., are exempted from serving on juries ; and justices of the peace, at- :orneys, &c. from parish offices.

EXENTERATE, v. a. \ Lat. exentero. To

EXENTERA'TION n. s. S embowel; to de- prive of the entrails. The act of taking out the bowels.

A toad contains not tnose urinary parts which aro found in other animals to avoid that serous excretion, which may appear unto any that exenterates or dis- sects them. Browne.

Belonius not only affirms that chamelions feed on flies, caterpillars, beetles, and othf r insects, but upon exenteration he found these animals in their bellirs.

Id.

EXE'QUIES. n. s-,plur. 1 Lat. exequia:.

EXE'QUIAL, adj. $ Funeral rites ;

the ceremony, or procession, of burial : relating to a funeral.

Let's not forget

The noble duke of Bedford, late deceased,

But see his exequies fulfilled in Roan. Shakspeare.

Whatever eye sbalt finde this hatfull scrole After the date of my deare exequies, Ah ! pitty thou my playning orphane's dole, That faine would see the sunne before it dyes.

Bp. Hall. Charge to his Satires.

The tragical end of the two brothers, whose exe- quies the next successor had leisure to perform.

Dryden.

EXE'RCISE, v. a., v. n. & n. s.} Fr. exer-

EXER'CENT, adj. (^ dee; Ital.

EX'ERCISER, n. s. i essercitio,

EXERCITA'TION. 3 essercita-

tione ; Span, and Port, exercicio ; Lat. exerci- tium, exerceo, to use energetically. To employ ; engage ; train to practice : hence to make skilful ; to busy : as a neuter verb to use labor : as a substantive, exercise is labor ; employment , labor with a view to health, or as contrasted with labor undertaken from necessity ; practise ; task ; an act of divine worship : exercitation is a syno- nyme of exercise.

Sore travel hath God given to the sons of man to be exercised therewith. JSvcl. i. 13.

The princes of the Gentiles exercise dominion over

them, and they that are great exercise authority upon them. Matt. xx.

Strong meat belongeth to them who, by reason of use, have their senses exercised to discern both good and evil. Hebr.

Youth will never live to age, without they keep themselves in breath with exercise, and in heart with joyfulness. Sir P. Sidney.

Until men find pleasure in the exercise of the mind, great promises of much knowledge will little persuade them that know not the fruits of knowledge. Id.

The sceptre of spiritual regimen over us in this pre- sent world, is at the length to be yielded up into the hands of the Father which gave it ; that is, the use and exercise thereof shall cease, there being no longer on earth any militant church to govern. Hooker.

Good sir John,

I'm in your debt for your last exercitt ; Come the next Sabbath, and I will content you.

Skakspenre.

A man's body is confined to a place ; where friend- ship is, all offices are granted to him and his deputy : for he may exercise them by his friend.

Bacon's Essays.

Men ought to beware that they use not exercise and a spare diet both : but if much exercise, a plentiful diet , if sparing diet, little exercise. Bawn.

As a watchful king, he would not neglect his safety, .hinking nevertheless to perform all things rather

as an exercise than as a labour. Id.

Where pain of unextinguishable fire

Must exercise us without hope of end. Milton.
Patience is more oft the exerciie

Of saints, the trial of their fortitude

Making them each his own deliverer,

And victor over all

That tyranny or fortune can inflict. Id.

It were some extenuation of the curse, if in sudore vultus tui were confinable unto corporeal exercitations.

Browne.

He was strong of body, and so much the stronger as he, by a well-disciplined exercise, taught it both to do and to suffer. Sidney.

Age's chief arts, and arms, are to grow wise ;
Virtue to know, and, known, to exercise. Sen/tarn.

The wise for cure on exercise depend : God never made his work for man to mend.

Dry den.

And now the goddess, exercised in ill, Who watched an hour to work her impious will. Ascends the roof. Dryden't MntiA.

To you such scabbed harsh fruit is given, as raw
Young soldiers at their exercising* gnaw. Dryden.

Their consciences oblige them to submit to that dominion which their governours had a right to exercise over them. Locke.

The learning of the situation and boundaries of king- doms, being only an exercite of the eves and memory, a child with pleasure will learn tneui. Id.

This faculty of the mind, when it is exercised immediately about things, is called judgment. Id. By frequent exerzitations we form them within us.

Felton.

Mean while‘1‘11 draw up my iSumidian troop Within the square, to exercise their arms. Addison.

The French apply themselves more imiversally to their exercises than any nation : one seldom sees a voung gentleman that does not fence, dance, an-1 ride.

H.

Lewis refused even those of the church of England, who followed their master to St. Germain’s, the public exercise of their religion. Id.

The Lacedemonians were remarkable for the sport, and Alexander the Great frequently exercised at it.

Broome.

He will exercise himself with pleasure, and without weariness, in that godlike employment of doing good.

A tlerbury.

He is exact in prescribing the exercises of his patients, ordering some of them to walk eighty stadia in a day, which is about nine English miles.

Arbuthnot on Coins. The purest exercise of health, The kind refresher of the Summer heats. Thomson.

Know then, that providence calls thee to the exercise of industry, contentment, submission, patience, hope, and humble dependence on him, and a rospetful deference to thy superiors. Mason.

Prepare yourselves for the great world, as the athlete used to do for their exercises. Chesterfield.

If al’tei exerciie we feed sparingly, the digestion

will be easy and good, the body lightsome, the temper cheerful, and all the animal functions per- formed agreeably. Franklin. Good lack ! quoth he, yet bring it me.

My leathern b(It likewise, In which I bear my trusty sword,

When I do exercise. Cowper.

When we go from home in quest of amusement, or to the fields for the sake of exercise, we shall do well

to leave all our speculations behind : if we carry them with us, the exercise will fatigue the body without re- freshing it; and the amusement, instead of enlivening, will distract the soul. Bcattie.

But pray, Mr. Puff, what first put you on exercising your talents in this way ' Sheridan.

A division which is very ancient, but, though sanctioned by the approbation of many ages, very il- logical ; since the will, which, in this division, is nominally opposed to the intellect, is so far from being opposed to it in reality, that, even by the as- sertors of its diversity, it is considered as exercising^ in the intellectual department, an empire almost as wide as in the department allotted to itself.

Dr. T. Brown.

EXERCISE, or bodily motion, constitutes, in the langua e of the older physicians, one of the six non-naturals, and has been justly considered, from the earliest times, as an important measure in the preservation of health, as well as in the cure of several diseases. It increases the circu- lation of the blood, attenuates the fluids ; pro- motes a regular perspirat.on, and a due secretion of all the humors ; accelerates the animal spirits ; facilitates their distribution into all the fibres of the body ; strengthens the parts ; creates an appetite, and helps digestion. Boerhaave recommends

bodily exercise in diseases of a weak and lax fibre. By riding on horseback, says his commentator, the pendulous viscera of the abdomen are shaken every moment, and gently rubbed one against another, while in the mean time the pure air acts on the lungs with greater force. But, though nothing is more conducive to health than moderate exercise, yet violent exercise dissipates the spirits, weakens the body, destroys the elasticity of the fibres, and exhausts the fluid parts of the blood.

EXERCISE, or MANUAL EXERCISE, in military affairs, is the ranging a body of soldiers in form of battle, and making them perform the several motions and military evolutions with different management of their arms, in order to make them expert therein. See GYMNASTICS and MEDICINE.

Formerly, in the British service, every com- mander in chief, or officer commanding a corps adopted or invented such manoeuvres as he judged proper, excepting in the instance of a few regulations for review : neither the manual exercise, nor quick and slow marching were pre- cisely defined by authority. — Consequently, when regiments from different parts of the king- dom were br gaded, they were unable to act in line till the general officer commanding had es- tablished some temporary system to be observed by all under -his command.

These inconveniences were, in some degree, obviated by the Rules and Regulations compiled by general Dundas, on the system of the Prussian discipline, as established by Frederick the Great.

When a regiment is drawn up or paraded for exercise, the men are placed three deep, either by companies, or divided into platoons, with the grenadiers on the right. When soldiers are drawn up for exercise, the ranks and files should be exactly even. The distances between the files must be equal, and the ranks eight feet distant from each other. Every motion should

be performed with life, and the greatest exact- ness observed in all firings, wheelings, and marchings; and therefore a regiment should never be under arms longer than two hours. The following is an abstract of the manual exer- cise, as altered and abridged by his Majesty's command, 1792. — Position of the Soldier under Arms. The equal squareness of the shoulders and body to the front, is the first and great prin- ciple of the position of the soldier : — The heels must be in a line, and closed : — The knees straight without stiffness ; — The toes turned out, so that the feet may form an angle of about sixty degrees ; the arms hang near the body, but not stiff; the flat of the hand, and little finger, touch- ing the thigh, and the thumbs as far back as the seams of the breeches? — The elbows and should- ers are to be kept back : — The belly rather drawn in; and the breast advanced, but without con- straint ; — The body to be upright, but inclining rather forwards, so that the weight of it may bear chiefly on the fore part of the feet; — The head to be erect ; and neither turned to the right nor to the left ; the eyes alone will be glanced to the right. The body of the soldier being in this position, the firelock is to be placed in his left hand, against the shoulder; his wrist to be a little turned out, the thumb alone to appear in front ; the four fingers to be under the butt ; and the left elbow to be rather bent inwards, so as not to be separated from the body, or to be more backward or forward than the right one : — The firelock must rest on the hand, not on the end of the fingers ; and be carried in such a manner as not to raise, advance, or keep back one shoulder more than the other ; the butt must therefore be forward, and as low as can be permitted without constraint ; the fore part a very little before the front of the thigh ; and the hind part of it pressed by the wrist against the thigh : — It must be kept steady and firm before the hollow of the shoulder ; should it be drawn back or carried too high, the one shoulder would be advanced, the other kept back, and the

upper part of the body would be distorted, and not square with respect to the limbs. — WORDS OF COMMAND. I. Order Arms. Bring the firelock to the trail in two motions, as usual, seizing it at the first, at the lower loop, just above the swell ; at the second, bring it down to the right side, the butt within two inches of the ground ; at the third, drop the butt on the ground, placing the muzzle against the hollow of the right shoulder, and the hand flat upon the sling. II. Fix Bayonets. At the word Fix, place the thumb of the right hand, as quick as possible, behind the barrel, taking a gripe of the firelock ; as soon as the word of command is fully out, push the firelock a little forward, at the same time drawing out the bayonet with the left hand, and fixing it with the utmost celerity : the instant this is done, return, as quick as possible, to the order, as above described, and stand per- fectly steady. III. Shoulder Arms. As soon as the word shoulder is given, take a gripe of the fire- lock with the right hand, as in fixing bayonets, and, at the last word arms, the firelock must be thrown with the right hand in one motion, and with as little appearance of effort as possible, into its proper position on the left shoulder; — VOL. VIII.

the hand is brought to the centre of the body in so doing, but must instantly be withdrawn. IV. Present Anns. First, Seize the firelock with ths right hand, under the guard, turning the lock 10 the front, but without moving it from the shoulder ; second, bring it to the poise, seizing it with (lie left hand, the fingers extended along the sling, the wrist upon the guard, and the point of the left thumb of equal height with the eyes ; third, Bring down the firelock with a quick motion, as low as the right hand will admit without con- straint, drawing back the right foot at the same instant, so that the hollow of it may touch the left heel. — The firelock in this position is to b>' totally supported in the left hand ;— the body to rest entirely on the left foot ; both knees to be straight. V. Shoulder Arms. First, By a turn of the right wrist, bring the firelock to its proper position on the shoulder, as

described above, the left hand grasping the butt :— second, Quit the right hand, bring it briskly down to its place by the side. VI. Charge Bayonets. At one motion throw the firelock from fhe shoulder across the body to a low diagonal recover. VII. Port Arm:;. First, Turn the lock to the front, and at UK: height of the breast; the muzzle slanting upwards so that the barrel may cross opposite the poiiit of the left shoulder, with the butt proportionally depressed : the right hand grasps the small of the butt, and the left holds the piece at the swell, close to the lower pipe, the thumbs of both hands pointing towards the muzzle; second, make a half-face to the right, and bring down the firelock to nearly a horizontal position, with the muzzle inclining an inch upwards, and the right wrist resting against the hollow of the thigh, just be- low the hip. — N. B. The first motion of the charge is the position which the soldier will, either from the shoulder, or after firing, take, in order to advance on an enemy, whom it is in- tended to attack with fixed bayonets ; and the word of command for that purpose is, prepare to charge. Second, The position of the charge is that which the front rank takes, when arrived at a few yards distance only from the body to be attacked. The first motion of the charge is also that which sentries are to take, when challenging any persons who approach their posts. VIII. Shoulder Arms. First, Face to the front, and throw up the piece into its position on the shoulder, by a turn of the right wrist, instantly grasping the butt, as above described, with the left hand ; but particular care must be taken, that the shoulder does not fall to the rear. Second, Quit the firelock briskly with the right hand, bringing it to, its proper place by the side. The men must be taught likewise to support aims at three motions, throwing the first and se- cond nearly into one : at the first motion, thev seize the small of the butt under the lock with the right hand, bringing the butt in front of the groin, and keeping the lock somewhat turned out ; at the second they bring the left arm under the cock : at the third they quit the right hand. In carrying arms

from the support, the motions are exactly reversed.

CAVALRY EXERCISE is of two sorts, on horse- back, and on foot. The squadrons for exercise are sometimes drawn up three deep, though fre-

quently two deep ; the tallest men and horses in the front, and so on. When a regiment is formed in squadrons, the distance of twenty-four feet, as a common interval, is always to be left between the ranks ; and the files must keep boot-top to boot-top. The officers commanding squadrons must, above all things, be careful to form with great celerity, and, during the whole time of ex- ercise, to preserve their several distances. In all wheelings, the flank which wheels must come about in full gallop. The men must keep a steady seat upon their horses, and have their stirrups at a fit length.

ARTILLERY EXERCISE is the method of teach- ing the regiments of artillery the use and practice of all the various machines of war, viz. Exercise of the light field pieces teaches the men to load, ram, and sponge the guns well ; to elevate them according to the distance, by the quadrant and screw ; to judge of distances and elevations without the quadrant ; how to use the port-fire, match, and tubes for quick firing ; how to fix the drag-ropes, and use them in advancing, re- treating, and wheeling with the field-pieces ; how to fix and unfix the trail of the carriage on the lim- bers ; and how to fix and unfix the boxes con- taining the ammunition upon the limbers of the carriages. Exercise of the garrison and batter- ing artillery is to teach the men how to load, ram, and sponge ; how to handle the hand-spikes in elevating and depressing the metal to given dis- tances ; and for ricochet, how to adjust the coins, and work the gun to its proper place ; and how to point and fire with exactness, &c.

EXERCISE, in the royal navy, is the preparatory practice of managing the artillery and small arms, in order to make the ship's crew perfectly skilled therein, so as to direct its execution successfully in the time of battle.

The words of command introduced, during the late war, for the exercise of the great guns, are the following : Silence ; cast • loose your guns ; level your guns ; take out your tompions; runout your guns; prime; point your guns; fire ; sponge your guns ; load with cartridge ; shot your guns ; put in your tompions ; house your guns ; and secure your guns.

EXERT', v. a.) Lat. exero, ex, expletive, and

EXER'TION, n. s.] sero, to plant, or sow. To apply with effort or energy ; to use with ardor ; to put or push forth ; enforce.

Strong virtue, like strong nature, struggles stil , Exerts itself, and then throws off the ill. Dryden.

The stars, no longer overlaid with weight, Exert their heads from underneath the mass, And upward shoot and kindle as they pass, And with diffusive light adorn the heavenly place.

EXE'SION, n. s. Lat. exenu. The acf'of eating through.

EXESTUA'TION, n. s. Lat. exesluo. The state of boiling ; tumultuous heat; effervescence.

EXETER (Indian name Swanscot), a post town of New Hampshire, in Rockingham county, fourteen miles S. W. by W. of Portsmouth, fif- teen N.N.W. of Newburyport, eighteen N. N. E. of Haverhill, forty S.E. by E of Concord, forty- seven N. by E. of Boston; population in 1820, 2114 It is pleasantly situated at the head of

tide-water and of navigation, and is one of the most considerable towns in the state, and was formerly the seat of government. It contains a court-house, a

jail, t\vo banks, an academy, three printing- offices, and three houses of public worship, two for Congregationalists and one for Baptists. It is favorably situated for a manu- facturing town, and contains several manufacto- ries, and many valuable mills. Phillips Exeter academy, in this town, was founded by the ho- norable John Phillips, LL.D., in 1781. It is one of the oldest, best endowed, and most re- spectable institutions of the kind in the United States. It has a principal, a professor of mathe- matics and natural philosophy, and a professor of languages, about eighty students, a library of about 700 volumes, and a handsome philoso- phical apparatus.

EXETER, q. d. Excester, i. e. a city upon the Ex. The capital of Devonshire, anciently called Isex, and Isia Dumnoniorum. It had six gates, besides many turrets, several of which are now destroyed. It had formerly so many convents, that it was called Monktown, till king Athelstan changed its name to Exeter, about A. D. 930 ; when he fortified it with circular walls, embattle- ments, towers, and turrets of stone, encircling the whole, except the west side, with a deep moat. St. Peter's cathedral is a magnificent pile ; though little now remains of the ancient fabric, except that part called Our Lady's Chapel. It has a ring of twelve bells, reckoned the largest in England : as is also its organ, whose largest pipes are fifteen inches in diameter. In 1763 the cathedral was repaired and new paved ; when, in removing the old pavement, was found the leaden coffin and skeleton of bishop Bitten, who died in 1307; near the bones of the finger was found a sapphire ring. Near this stood a small neat chalice and patten of silver gilt. The top of the crozier was also found, but totally decayed. A most beautiful modern painted glass window has been lately erected at the west end of the ca- thedial, the east end having before a remarkably fine antique one. In the other windows there is much fine ancient painted glass. The altar is remarkable for its beautiful design and execution. On the left hand side of it is the seat where Edward the Confessor

and his queen sat and in- stalled Leofric his chancellor, the first bishop of Exeter ; and in the south cross aisle is the monu- ment of the same Leofric who died in 1073. The western end of the church is adorned with the statues of the patriarchs, &c. The Chapter- house was built in 1439. The throne for the bishop was constructed about 1466, and is said to be the grandest of the kind in Britain. The great north tower was completed in 1485, and contains a bell th^t weighs 17,472 pounds. This city has had various royal charters ; but it was made a corporate town in the reign of king John, and a county by Henry VIII. It is go- verned by a mayor, twenty-four aldermen, four bailiffs, a recorder, chamberlain, sheriff, town clerk, &c., who try all civil causes. Criminal causes are tried by eight aldermen, who are jus- tices of the peace. It had anciently a mint ; and in the reigns of William III. and queen Anne, many pieces of silver money were coined

in it, which have an E under the bust. It has King Charles I's queen, to whom this city twelve or thirteen incorporated commnW an(1 shelter in the civil war^, wls hTre deHve^ed of

Henrietta, afterwards duchess of Orleans ; whose picture is in its guildhall, as are also those of general Monk and George I., &tc. An elegant circus is built on the spot, with a theatre adjoin- ing it : and for the conveniency of the inhabit- ants, a passage has been made through the town- wall to Southern Hay, on which green stands the county hospital, besides a considerable number of new buildings. There are remains of an old palace of king Athelstan. The guildhall is a spacious and convenient building, first erected in 1330, to which its present front was rebuilt in 1593, and repaired in 1720. An arm of the sea formerly flowed nearly up to the city's wall, till 1316, when Hugh Courtenay earl of Devon, in revenge for an affront, ruined the

navigation, by constructing wears and dams in the river; but to remedy it, in 1539, an act of parliament passed for making a navigable canal, for the better con- veyance of goods in barges to Topsham. This was carried into execution in 1581, but not com- pleted till 1675; nor was it after all found suf- ficient, till the present haven was constructed in 1697, when it was rendered capable of

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twelve or thirteen incorporated companies, and sends two members to parliament. Exeter has four principal streets, centering in the middle, which is therefore called Carf'ox, from the old Norman, Quatre voyes, i. e. the four ways. There is an old castle in the north-east part of the city, called Rougemont, from the red soil it stands on' supposed to have been built by the West-Saxon kings. This castle was remarkably strong both by nature and art. ' The original gate was walled up by William I. ; and close by it an inferior one was made in the wall, in which state they both remain. The outward stone facing is kept in tolerable repair. The ancient chapel, built in 1260, is also kept in good repair. The city is healthy, and pleasantly situated on a hill, having other hills on the north-east and south, which shelter it from storms. The bank, which sus- tained the ditch that nearly surrounded the castle, is planted, gravelled, and accommodated with seats, being the place of resort for walking; and the ditch, being filled up and planted with elms, forms a delightful grove. The old palace is demolished, and an elegant session-house is

erected, where the assizes, quarter sessions, and 1697, when it was rendered capable of brinEXETER, a bishopric of England, comprehend- long ells, and other woollen goods ; yet no mar- ing the counties of Cornwall and Devonshire. kets were erected here for wool yarn, and ker- The bishop's seat was transferred to Exeter, from seys,till the 30th of Henry VIET. Before that Crediton, by Edward the Confessor. The see

• was once one of the most wealthy m the king- dom ; but its revenues were shamefully wasted by bishop Voysey, who alienated its lands. What

j — o- . —.„.,,„, »..v, ov.^.i.« ..i ungiu.in.1 . he left was so much incumbered, that the see has

in some weeks as many serges have been sold never recovered its former grandeur ; and so here as amounted to £80,000 or £100,000. Great small are its present revenues, that it has been quantities of woollen goods are also exported to found necessary for the bishop to hold some othei Portugal, Spain, Italy, Germany, &c. The city preferment to support his dignity. The diocese was anciently possessed by the Romans, whose contains 604 parishes, of which 239 are impro- coins have been frequently dug up in it. The priate. It has four archdeacons, viz. of Corn- Saxons drove the Britons out of it into Cornwall, wall, Exeter, Barnstaple, and Totness. It was and encompassed it with a ditch and bulwarks, formerly valued in the king's books at £1556 The Danes plundered it in 875, and afterwards, 14s. 6d. ; but, since bishop Voysey's time, more in revenge of the general massacre of the Danes than two-thirds of its value are computed to have by the English, Sueno, one of their kings, been alienated. The clergy's tenth was not long came hither with great force, put the men to the since about £1200. To the cathedral belong, sword, ravished the women, massacred the chil- besides the bishop, a dean, four archdeacons, a dren, burnt the city, and defaced the walls; Just 'chancellor, a treasurer, a chantor, and twenty- as it was reviving, W7illiam the Conqueror be- four prebendaries.

sieged and took it ; and it was again besieged in EXFO'LIATE, v. n.) Fr. exfolier ; Lat. ex the reigns of Stephen and Edward IV. In that EXFO'LIATION, n. s. >and folium, a leaf. To of Henry VII. it was besieged by Perkin War- EXFO'LIATIVE, adj. J shell, or cast off; a term beck ; but the citizens forced him to raise the applied in surgery to the separation of the cor- siege ; which so pleased the king, that he came rupt from the sound

part of a bone, hither and presented a cap of maintenance to the Qur work wem on successfull the bone exfoliatiny city, and gave the sword from his side to be borne from the ed Witeman’s Surgery.

always before the mayor. In the reign of Edward

VI., in July 1544, it was smartly cannonaded by , Dre” the bone w’th the milder “/**«», till the the rebels of Cornwall and Devon, who almost burnt bone 1S cast off”

starved it by breaking down its bridges, cutting EXFOLIATION, in surgery, denotes the process off its water, and stopping up all passages ; but oy which the dead portion of a bone separates it held out till lord Russel raised the siege on the from the living part. This operation of nature 6th of August, which was appointed as an anni- very much resembles the sloughing away of the versary day of thanksgiving, and is still observed, softer parts. A dead bone, says Mr. Hunter, acts

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time, the merchants carried on a considerable trade to Spain and France ; and were incorpo- rated in the reign of Mary I. Here is also a weekly serge market, the second in England:

EXH

on the system in the same manner as any other extraneous body. It stimulates the adjacent living parts, in consequence of which the living adjacent bone becomes more vascular, a circum- stance which always takes place when a part has more to do than is just sufficient for the support of life ; and the earth of the living part, when it is in contact with the dead bone, is absorbed. Hence the bone becomes softer, and is now only adherent by the animal matter in its texture. In

The fire may resolve some of the more spirituous and exhalable parts, whereof distillation has shewn me that alabaster is not destitute, into vapours.

Boyle.

I flattered myself with the hopes that the vapour

had been exhaled.

Temple.

Fear freezes minds ; but love, like heat, Exhale* the soul sublime to seek her native seat.

Dry den.

It is no wonder if the earth be often shaken, then* being quantities of exhalations within those mines,

proportion to the waste made by the last part of or cavernous passages, that are capable of rarefaction

the process, a fungus arises from the living sur- face, and fills up the intermediate space, so as to prevent a vacuum ; and, when a portion of the bone is once loose, it will be pushed towards the surface of the body, as most other inanimate substances are. This part of the process is partly mechanical, and partly a continuation of ulceration. In the bones of persons who die while exfoliation is going on, a small groove, or worm-eaten canal may be discovered, which follows the irregularities of the dead and living surfaces. Thus we find that exfoliation, and the

and inflammation. Burns.

The growing towers like exhalations rise And the huge columns heave into the skks.

Pope

Praise, the sweet exhalation of our joy, That joy exalts, and makes it sweeter still.

Young

'Tis true, that if to trifle life away Down to the sunset of their latest day. Then perish on futurity's wide shore Like fleeting exhalation*, found no more.

Cowper. EXHALATION and EVAPORATION are often used

process by which a slouarh of the soft parts is detached, are nearly alike. In both instances, Anonymously, but accurate writers distinguish the matter which forms the bond of connexion them, appropnatmg the latter to the raising of between the dead and living substances, is ab- m°tf fumes.from liquid bodies, and the former sorbed, the dead part is looosened, and is next tO *e emission of dry effluvia from solid bodies, pushed off by the rising of the granulations. See ^.^th, fire minerals &c. In this sense, exha- SURGERY lations are dry and subtle corpuscles, loosened

EXHALE', v.a.) Fr.erAafer; Lat. erAa/o ; ffom hard terrestrial bodies, either by the heat of

EXHALE'MENT, n. s. 'to send out breath. To

EXHALA'TION.

or draw out vapors, fumes, or fluids : exhalement is the matter exhaled.

the SUn' l,he ac J°" of t!l€ ' a'r' or f™ other

3 breathe outwards; to send caufs,e; and emitted uPwards to a certa'n Jei?ht In *« atmosphere, ™re, mixing with the va- pors, they help to form clouds, and return back in rain, mist, &c.

EXHAUST', v. a. ~\ Lat. exhaurire, cx- EXHAUST'IBLE, adj. f haustus (ex and haurio,

Yon light is not daylight, I know it well : It is some meteor that the sun exhales, To be to thee this night a torch-bearer.

Shakspeare.

See, dead Henry's wounds

Open their congealed mouths, and bleed afresh ! Blush, blush, thou lump of foul deformity ; For 'tis thy presence that exhales this blood From cold and empty veins, where no blood dwells !

Id.

No nat'ral exhalation in the sky, No 'scape of nature, no distempered day, But they would pluck away its nat'ral cause, And call them meteors, prodigies, and signs. Id. Moving in so high a sphere, and with so vigorous a lustre, he must needs, as the sun, raise many envious exhalations ; which, condensed by a popular odium, are capable to cast a cloud upon the brightest merit and integrity. King Charles.

As frozen dung-hills in a winter's morne, That voyd of vapours seemed all beforne, Soone as the sun sends out his piercing beanies, Exhale out filthie smoke and stinking steames.

Bp. Hall. A fabrick huge

Rose like an exhalation, with the sound Of dulcet symphonies and voices sweet. Milton. Aqua-fortis, or any mineral solution, either of vitriol, alum, salt-petre, ammoniac, or tartar, which, although to some degree exhaled and placed in cold conservatories, will chrystallize and shoot into white and glacious bodies.

Sir Thomas Browne, book ii. ch. i. Nor will polished amber, although it send forth a gross and corporeal exhalement, be found a long time defective upon the exactest scales. Browne.

EXHAUST'ION, n. s. { Gr. apww, to draw out).

EXHAUST'LESS, adj.) To drain; draw out en- tirely ; diminish or deprive by draining; to weaken : exhaustless is, not to be exhausted.

Single men be many times more charitable, be- cause

their means are less exhausted. Bacon.

Though the knowledge they have left us be worth our study, yet they exhausted not all its treasures : they left a great deal for the industry and sagacity of after-ages. Locke.

Of heat and light, what everduring stores Brought from the sun's exhaustless golden shores, Through gulphs immense of intervening air, Enrich the earth and every loss repair. Blackmore.

Spermatick matter of a vitious sort abounds in the blood, exhausts it of its best spirits, and derives the flower of it to the seminal vessels. Wiseman.

Story-telling is subject to two unavoidable defects ; frequent repetition, and being too soon exhausted.

Swift.

The careful insect midst his works I view, Now from the flowers exhaust the fragrant dew.

Gay.

The arts and sciences, like some plants, require a fresh soil ; and however rich the land may be, and however you may recruit it by art and care, it will never, when once exhausted, produce any thing that is perfect or finished in the kind. Hume.

Perceiving, at length, that his strength began to be exhausted, we took him into the boat, and conveyed him home in the evening completely drenched.

Franklin.

Curiosity, from its nature, is a very active princi- ple ; it quickly runs over the greatest part of its ob- jects, and soon exhausts the variety which is

common to be met with in nature. Burke.

But sin marred all ; and the revolt of man, That source of evils not exhausted yet, Was punished with revolt of his from him.

Cowper.

Whence the use of much wine, or opium, or spice, or of much salt, by their unnatural stimulus induces consequent debility, and shortens life, on the one hand, by .the exhaustion of sensorial p'ower ; so on the other hand, the want of heat, food, and fresh air, in- duces debility from defect of stimulus, and a conse- quent accumulation cf sensorial power, and a general debility of the system. Darwin.

What then avails, that with exhaustless store, Obsequious Luxury loads thy glittering shrine ?

What then avails, that prostrate slaves adore, And Fame proclaims thee matchless and divine ?

Beat tie. Thus uncontrolled, in mutual bliss,

And rich in love's exhaustless mine, Do thou snatch treasures from my lips, And I'll take kingdoms back from thine !

Sheridan.

EXHAUSTIONS, in mathematics. The method of exhaustions, is a way of proving the equality of two magnitudes, by a reductio ad absurd um ; showing, that if one be supposed either greater or less than the other, there will arise a contra- diction. It is founded upon the exhausting a quantity by continually take away certain parts of it. This method was of frequent use among the ancient mathematicians; as Euclid, Archi- medes, &c. It is founded on the tenth book of Euclid, where he argues that those quantities whose difference is less than any assignable quantity, are equal ; for if they were unequal, be the difference ever so small, yet it may be so multiplied,as to become greater than either of them, if not so, then it is really

nothing. This he as- sumes in the proof of proposition I. book x. which imports, that if, from the greater of two quanti- ties, be taken more than its half, and from the remainder more than its half, and so continually, there will, at length, remain a quantity less than either of those proposed. On this foundation it is demonstrated, that if a regular polygon of in- finite sides be inscribed in, or circumscribed about, a circle ; the space, which is the difference between the circle and the polygon, will, by de- grees, be quite exhausted, and the circle become equal to the polygon.

EXHEREDATION, in the civil law, with us ordinarily called disinheriting, is the father's ex- cluding his son from inheriting his estate. There are fourteen causes of exheredation expressed in Justinian's Novelise ; without some of which, he decrees the exheredation null, and the testament inofficious, as the civilians call it. Indeed, by the ancient Roman law, the father might pro- nounce exheredation without any cause : but the rigor of this -aw was restrained and moderated bv Justinian.

' EXHIB'IT, v. a. -\ Fr. and Span, exhibcr ;

EXHIB'ITER, n. s. (ital. essibere ; Lat. exhi-

EXHIBI'TION, n. s. f here, from ex, forth, and

EXHIB'ITIVE, adj. J habeo, to have; to have

openly. To offer to open view ; to propose or

expose publicly; to display: exhibitive is re- presentation ; displaying.

If any claim redress of injustice, they should ex- hibit their petitions in the street. Sltakspeare.

He seems indifferent, Or rather swaying more upon our part, Than cherishing the exhibiters against us. Id.

I crave fit disposition for my wife, Due preference of place and exhibition, As levels with her

breeding. Id.

I would not do such a thing for gowns, petticoats, nor caps, nor any petty exhibition. Id.

All was assigned to the army and garrisons there, and she received only a pension or exhibition out of his coffers. Bacon.

He suffered his attorney-general to exhibit a charge of high treason against the earl. Clarendon..

Merely by blowing fine crystal-glass, at the flame of a lamp, to a very extraordinary thinness, we have made it to exhibit, and that vividly, all the colours (as they speak) of the rainbow.

Boyle. Experiments. Notes, fyc.

What are all mechanick works, but the sensible exhibition of mathematick demonstrations. Grew.

Truths must have an eternal existence in some un- derstanding ; or rather, they are the same with that understanding itself, considered as variously exhibith-e or representative, according to various modes of inimitability or participation. Norris.

One of an unfortunate constitution is perpetually erhibitiny a miserable example of the weakness of mind and body. Pope.

He is now neglected, and driven to live in exile upon a small exhibition. Swift.

Mr. Denhain took a warehouse in Water-street, where we exhibited our commodities. I applied my- self closely, studied accounts, and became in a short time very expert in trade. Franklin.

Ocean exhibit, fathomless and broad,*

Much of the power and majesty of God.

He swathes about the swelling of the deep,

That shines and rests, as infants smile and sleep.

Cowper.

EXHIBIT, in law, is where a deed, or other writing, being produced in a chancery suit to be proved by witnesses, the commissioner, appointed for the examination, certifies on the back of the writing, that it was shown to the witness at his examination, and by him sworn to.

EXHIBITION, in law, a production of titles, and other proofs of a matter in contest.

EXHIL'ARATE, v. a. I Fr. exhilarer; Ital.

EXHILARA'TION, n. s. J essilarare; Lat. exhi-

larare, i. e. ex, expletive, and hilaro ab hilaris ,

Gr. iXapog, from e\r], splendor. To cheer; make

cheerful ; enliven.

Exhilaration hath some affinity with joy, though it be a much lighter motion. Bacon.

The coming into a fair garden, the coming into a fair room richly furnished, a beautiful person, and the like, do delight and exhilarate the spirit? much. Id. Natural History. The force of that fallacious fruit, That with exhilarating vapours bland About their spirits had played, and inmost powers Made err, was now exhaled. Milton.

Let them thank

Boon nature, that thus annually supplies Their vaults, and with her former liquid gifts Exhilarate! their languid minds, within The golden mean confined. Philips.

Burke.

The game sun which gilds all nature, and exhila- rates the whole creation, does uot shine upon disap- pointed ambition.

EXHO'RT, v. a. EXUORTA'TION, n. s- EXHORT'ATIVE, adj. EXHORT'ATORY, EXHORT'ER, n. *.

Fr. exhorter ; Span. esortar ; Ital. essortare; Lat. exhortari, i. e. ex, expletive, and hortor, to enjoin, from Gr. opw,

perf. pass, wprot, to excite. To urge by words to the performance of duty : exhortative is con- tain.ng exhortation; exhortatbry,' tending to ex- hort.

We beseech you, and exhort you by the Lord Jesus, that as you have received of us, how you ought to •walk, so ye would abound. Thetsaloniata.

My duty is to exhort you to consider the dignity of that holy mystery. Common Prayer.

11 end my exhortation after dinner. Shaktpeare.

Designing or exhorting glorious war. Milton.

These words, — have a fit coherence with those that precede, — especially considering St. Paul's style and manner of expression in the preceptive and exhorta- tive part ot his epistles. Barrow.

Our Saviour, by the example of his holy life, con- tinual instruction, and vehement exhortations, assayed to procure a belief of and submission to his most ex- cellent doctrine. Id.

If we will not encourage public beneficence, 'till we are secure that no storm shall overturn what we kelp to build, there is no room for exhortations to charity. Atterbury.

EXI'CCATE, v. a } Lat. exsicco. To dry;

EXICCA'TION, n. s. Mo dry up. Arefaction ;

EXICCATIVE. adj. Jact of drying up; state

of being dried up. More properly EXSIOTE,

which see.

What is more easily refuted than that old vulgar assertion of an universal drought and exiccation of the earth ? As if the sun could evaporate the least drop of its moisture, so that it should never descend again, but be attracted and elevated quite out of the atmos- phere. Bentlcy. EXI'GENCE, or } Fr. exigence; Lat- EXI'GENCY, n. s. >exigens, exigo, ex and EXI'GEXT, adj. & n. s. Jago; Greek, a-yw, to drive or bring. Need ; peremptory occasion; de- mand. Exigent, as an adjective, mean pres- sing, urgent.

As men, we are at our own choice, both for time and place and form, according to the exigence of our own occasions in private. Hooker.

In such an exigent I see not how they could have staid to deliberate about auy other regiment than that which already was devised to their hands.

Id. Preface.

These eyes, like lamps whose wasting oil is spent, Wax dim, as drawing to their exigent. Shakfpeare.

It is apparent, that the civil law in this kingdom, had not in the least degree the ability to help or to hurt the church, in any exigency, as the common law had. Clarendon.

The council met, your guards to find you sent, And know your pleasure in this exigent. Waller.

If I find that my enemies shall take advantage of my silence to begin hostilities upon me, or if any uther exigency of affairs may so require, since I see elections in so great forwardness, we may possibly meet before the il;.y appointed ; or, if matters go on to my satisfaction, 1 may perhaps put off the meeting tit a further day ; but of this

public notice shall be given. Sped itor

This dissimulation in war may be called stratagem and conduct; in other exigencies address and dexte- rity. Broome.

You have heard what the present condition and ex- igencies of these several charities are. Atterbury.

While our fortunes exceed not the measure of real convenience, and are adapted to the exigencies of our station, we perceive the hand of Providence in our gradual and successive supplies. Roger*.

Now in such exigencies not to heed, Upon my word you must be rich indeed ! A noble superfluity it craves, Not for yourself, but for your fools and knaves.

Pope.

Henry II. being then at peace with England, the queen represented that they could not expect him to take part in their quarrel, but upon views of personal advantage ; and that, without extraordinary conces- sions in his favour, no assistance, in proportion to their present exiyenciei, could be obtained.

Robertson's History of Scotland. At this exigent moment the loss of a finished man is not easily supplied. Burke.

EXIGENT, in law, a writ sued out when the defendant is not to be found, being part of the process leading to an outlawry. The writ of exigent is directed to the sheriff, to proclaim and call the absent defendant five county-court days, one day after another, charging him to appear under the pain of outlawry. When a person indicted for felony, &c. absents himself so long, that the writ of exigent is awarded against h»;u, such a withdrawing will be deemed a flight in law, whereby he is liable to forfeit his goods ; and though he afterwards renders himself on the exigent, and is found not guilty, it is said the forfeiture shall stand ; but if the party was in prison, or beyond the seas, he, or his

executors, may reverse the reward of the exigent, by writ of error. Upon all exigents a proclamation shall be issued out to make proclamations in the county where the defendant dwells, for him to . yield himself, &c.

EXIGENTERS, four officers in the court of common pleas, who make all exigents and pro- clamations in actions where process of outlawry lies. Writs of supersedes, as well as the pro- thonotaries, upon exigents, were likewise drawn up in their office.

EXIGUITY, n. s.) Lat. exiguitas. Small- Exici'uous, adj. j ness ; diminutiveness. The exiguity and shape of the extant particles is now supposed. Boyle on Colours.

Their subtile parts and exiguous dose are consumed and evaporated in less than two hours' time.

Harvey.

EX'ILE, n. s. & v. a. ^ Old Fr. exil and EXILI'TION, n. s. ^exile; Lat. exilium, ex- EXILE'MENT, n. s. j ilio, ex and sulio, to spring or start out. Banishment ; the person banished or living in habitual absence from his native country : to banish or drive from a coun- try. Exilition is used with strict etymological propriety by Browne for rushing forth or spring- ing out.

They, fettered with the bonds of a long night, lay there exiled from the eternal Providence.

Wisdom xvii. 2.

Our state of bodies would bewray what life We've led since thy exile. Shaksjteare.

W?lcrinc is exile, welcome were my death. /

EXI

Let them pronounce the steep Tarpcian death, Vagabond exile, flaying, pent to linger, But with a grain of day, I would not buy Their mercy at the

price of one fair word. Shakspeare.

For that offence, Immediately we do exile him hence. Id.

Call home our exiled friends abroad, That fled the snares of watchful tyranny. Id.

EXIN'ANITE, v. a. > Fr. (old) csinantr.

EXINANI'TION, n. s. 5 Lat. exinanio ; to empt j or discharge. To make empty ; spoil ; weaken ; according to our older vocabularies. The llhe- mish version of Philippians ii. 7, seems to retain this old verb very properly. « He brought him- self from all things as it were to nothing,' is the

Fitzosborn was discarded into foreign service for a Geneva English explanation, 1560.

pretty shadow of exilement,

Wotton. He exinanited himself and took the form of a scr-

From saltpetre proceedeth the force and report of gunpowder ; for sulphur and small-coal mixt, will not take fire with noise or exilition ; and powder, which is made of impure and greasy petre, hath but a weak emission, and gives but a faint report. Browne.

Nothing is more certainly bad, or mope displeasing to God, than that which rendereth us in our com- plexion of mind, or in our behaviour, unlike to God : we thereby become exiles and aliens from his name and family. Barrow.

Arms and the man I sing, who forced by fate,

And haughty Juno's unrelenting hate,

Expelled and exiled. Dryden.

O must the wretched exiles ever mourn,

Nor after length of rolling years return ? Id.

Ulysses, sole of all the victor train,

And exile from his dear paternaV coast,

Deplored his absent queen, and empire lost.

Pope.

A small body of the nobles, however, continuing faithful to their exiled prince, drove Baliol out of Scotland. Robertson's History of Scotland.

Phil. ii. 7. Rhemiih N. T.

He is not more impotent in his glory, than he was in his exinanition. Decay of Piety.

EXIST', v. n. -\ Fr. exister ; Lat. existo ;

EXIST'ENCE, or ^ (ex and sisto, a Gr. tsru)

EXIST'ENCY, n. s. i to be. To have being : state

EXIST'E.VT, adj. J of being; a being: existent, is in possession of existence.

Whatsoever sign the sun possessed, whose recess or vicinity defineth the quarters of the year, those season* were actually existent. Browne.

Nor is only the exist ency of this animal considerable, buc many things delivered thereof. Id.

It is impossible any being can be eternal with successive eternal physical changes, or variety of states or manner of existency, naturally and necessarily con- comitant unto it. Hale.

The eyes and mind are fastened on objects which have no real being as if they were truly existent.

Dryden.

It seems reasonable to enquire, how such a multi- tude comes to make but one idea, since that combina-

j- ,, T „. •!• j •. .1 tion does not always exist together in nature. Locke.

adj.) Lat. exilis ; ex and lie. the rrk ... J . .... 6 … .. ...

y 1 hft nrinrmtnm innivinnat-innis is lUfutaflUM itjaplf

T-, / t a i xu »• r A.

EXI LITY, n. s. i flank ; the thin part of the

The principium individuationis is existence itself, •hich determines a being of any sort to a particular

Dody. Weak; thin; slenderness; smallness ; time and place, incommunicable to two beings of the

diminution.

In a virginal, when the lid i* down, it maketh a more exile sound than when the lid is open. Bacon.

Certain flies, called ephemera, live but a day ; the cause is the exility of the spirit, or perhaps the absence of the sun. Id.

For exility of the voice, or other sounds, it is cer- tain that the voice doth pass through solid and hard bodies, if they be not too thick. Id.

A body, by being subtilized, can lose nothing of its corporeity ; neither can it hereby gain any thing but exility ; for all degrees of subtility are essentially the same thing. Grew.

same kind. Id.

It is as easy to conceive that an Almighty power might produce a thing out of nothing, and make that to exist de novo which did not exist before ; as to conceive the world to have had no beginning, but to have existed from eternity. South.

The soul, secured in her existence, smiles At the drawn dagger, and defies its point.

Addison.

One year is past, a different scene ! No farther mention of the dean : Who now, alas, no more is mist Than if he never did exist. Swift.

EXILE. Among the Romans exilium properly When a beinS is cohered « P°ssible> * » said

.c j , • c r . •'to have an essence or nature : such were all things

signified an interdiction or exclusion from water before Ae · When .(ig considered as ^

or fire; the necessary consequence of which then it is said to have e*«tence also. Watt,.

was, that the interdicted person must betake Theintenseviewofthesemauifoldcontradictioasand himself into some other country, since there was imperfectiong ia human reason has so wroughtupon no living without fire and water. Inus Cicero, me> and heated my brainj that r am ready to reject aU ad Herenn, observes that the form of the sen- be]ief and reagonjng> and can i00k upon no opinion tence did not express exilium, but only aquae even as more probable or likely than another, et ignis interdictio : and that ' exile was not Where am I, or what ? From what causes do I derive properly a punishment, but a voluntary flying my existence, and to what condition shall I return ? and avoiding the punishment decreed.' He Whose favour must I court, and whose anger must I adds, that there was no crime among the Ro- dread? What beings surround me ? mans, as among other nations, punished with exile ; but it was a resource to which people flew voluntarily, to avoid chains, ignominy, star- ving, &c. The Athenians often sent their great men into exile, 'from envy of their merits, or jealousy of their popularity. See OSTRACISM.

EXIM'IOUS, adj. Lat. eximius. Famous; eminent;

conspicuous; excellent.

Hume on Human Natwe. They are as well instructed, judicious, and prudent a people as exist any where in the world, all profes- sing, like myself, to be lovers of economy.

Franklin. The objects which at that time warmed and inter-

ested both nations, exist no longer.

Robertson's History nf Scotland. No government ought to own that it exists for the

About him (the Holy Spirit), this excellent part of purpose of cheesing the prosperity of 'ta oeople, or nr duty, this eximiout worship is conversant. that there is such a principle involved in its H^""';

Barrow. u

Poetry is the art of substantiating shadows, and of ending existence to nothing. Id.

The next the fleeting images select, Of action, suffering, causes and effect ; Or mark existence, with the march sublime O'er earth and ocean of recording Time.

Darwin.

E'XIT, n. s.) Lat. exit ; he departs. Re- Ex I'TIAL, adj. > cess ; departure ; a term set in EXI'TIOUS.) the margin of plays to mark the time at which the player goes off the stage; passage or way out ; death. The adjectives signi- fying destructive, mortal, &c., are obsolete.

All the world's a stage,

And all the men and women merely players; They have their exits and their entrances, And one man in his time plays many parts.

Shakspeare.

In such a pervious substance as the brain, they might find an easy either entrance or exit, almost every where. Glanville.

Most exitial fevers, although not concomitated with the tokens, exanthemata, anthraces, or carbuncles, are to be censured pestilential. Harvey.

The fire makes its way, forcing ths water forth through its ordinary exits, wells, and the outlets of rivers. Woodward.

A regard for fame becomes a man more to-.vards the txit than at his entrance into life. S.rj/ir .

EXITERIA, in antiquity, oblations or prayers to the gods for a prosperous journey : also feasts celebrated by the Greeks with sacrifices, when their generals undertook expeditions against an enemy.

EX MOUTH, a village and township in the parish of Littleham, hundred of East Budleigh, and county of Devon, England, 168 miles S. W. of London. It is situated at the embouchure of the river Exe, is a good fishing station, and a frequented watering place. It gives title of viscount to the family of Pellew.

EXOC(ETl> S, or the flying fish, in ichthyology, a genus belonging to the order of abdominales. The head is scaly, and it has no teeth ; it has »en radii in the branchiostege membrane; the hotly is whitish, and the belly is angular : the pectoral fins, the instruments of flight, are very large. When pursued by any other fish, it raises itself from the water by these long fins, and flies in the air to a considerable distance, till the fins dry, and then it falls down into the water. This fish is caught in the Mediterranean and some other seas. It is most common between the tro- pics, and there its

enemies are most numerous. In these climates the flying fishes spring out of the water by hundreds, to escape the rapacity of the dolphins, sharks, dorados, &c. When fly- ing, they have as formidable enemies to encounter in the air, viz. the pelican, eagle, diomedea, &c. and frequently throw themselves on board the ships to escape their pursuit. Their flesh is said to be palatable and nourishing food.

EXODIUM, in the ancient Greek drama, one of the four divisions of tragedy ; the part that included the catastrophe and unravelling of the plot; answering nearly to our fourth and fifth acts.

ExomuM, among the Romans, consisted of certain humorous verses rehearsed by the exo- drary at the end of the fabube atellanae.

EXODIUM, in the Septuagint, signifies the end or conclusion of a feast. It is particularly used for the eighth day of the feast of tabernacles, which, it is said, had a special view to the com- memoration of the exodus or departure out of Egypt.

EX'ODUS, n. s.) Gr. iKo$oC, departure.

EX'ODY.) The second book of the

Bible. See below. A departure or journey, and particularly that of the Israelites from Egypt.

In all probability their years continued to be three hundred and sixty-five days, ever since the time of the Jewish exody at least. Hale.

EXODUS, (E£o&>c, going out), the second of the five books of Moses, and of the books of the Bible; so called originally by the Septuagint translators, from the principal circumstance re- corded in it; i. e. the departure of the Is- raelites from Egypt. It contains also the history of what was transacted in Egypt from the death of Joseph to the departure of the Jews ; as well as what passed in the wilderness, and particu- larly at mount Sinai, to the building of the ta- bernacle. The Jews and the Hebrew copies of the Old Testament call it niOIP H^Nl, ve-alehu

she- moth, q. d. hffic nomina, ' these are the names' from their being the initial words of the book. It comprises a period of about \ 45 years ; or from A.M. 2369 to A. M. 2514 inclusive: and contains the earliest instance of alphabetical writing recorded in history ; i. e. the inscription of the law or ten commandments, said to be written ' by the finger of God' on the tables of stone. Exod. xxxi. 8.

EXO'LVE, v. a. \ Lat. exolvo. To loose :

EXOLU'TION, n. s. S hence to pay a debt. Lax- ation of the nerves.

Considering the exolution and languor ensuing that action in some, we cannot but think it much abridgeth our days. Browne's Vulgar Erroun.

EXOM'PHALOS, n. s. Greek, % out, and o/i0aXoc, the navel.

Exomphalos is an umbilical hernia, or a disease which consists of a protrusion of some of the abdo- minal viscera at the navel. Dr. A. Rees.

EXOMPHALOS. See HERNIA.

EXON'ERATE, v. a. > Lat. exonero, from

EXONERATION, n. s. y ex privative, and onm, onerls, a burden ; a Gr. OVOQ, an ass. To dis- burden ; unload : hence to free from charge or obligation.

The glands being a cougeries of vessels curled, cir- cumgyrated, and complicated, give the blood time to separate through the capillary vessels into the secretory ones, which afterwards all exonerate themselves into one common ductus. Rcy-

The body is adapted unto eating, drinking, nutri- tion, and other ways of repletion and exoneration.

Greiv.

EXO PHTHALMIA, from i$, out, and pof, the eye, in

surgery, a disease consisting of a protrusion, or a preternatural projection of the globe of the eye from the orbit, so that the part cannot be duly covered by the eye-lids. The disorder may proceed either from a morbid en- largement of the eye-ball, or what, perhaps, is a still more common cause, some tumor which occupies or dimin:shes the cavity of the orbit,

See ME-

and consequently c1 iplaces the eye. DICINE and SURGERY.

EX'ORABLE, adj. Fr. and Span, exorable ; Ital. essorabile ; Lat. exorabllis (exoro, to get by entreaty). Easy to be entreated.

Wisdom discovers our relations, duties, and con- cernments, in respect of men — prompts us to bear the infirmities of our brethren, to be gentle in our censures, — to be patient, exorable, and reconcileable to those that give us greatest cause of offence. Barrow.

EXORBITANCE, or -\ Fr. exorbitant ;

EXOR'BITANCY, n. s. I Italian, essorbitante ;

EXOR'BITANT, adj. > Span, and Port, ex-

EXOR'BITANTLY, adv. I orbitante ; Lat. ex-

EXOR'BITATE, v. n. J orbitans, from ex and orbis, a circle. That which is out of bounds or due limits ; the act of deviation from rule. Exorbitant is eccentric ; excessive. To exorbi- tate is used with strict propriety , by our old writers, for to deviate from an orbit.

The Jews, who had laws so particularly determin- ing in all affairs what to do, v/ere notwithstanding con- tinually inured with causes exorbitant, and such as their laws had not provided for. Hooker.

The reverence of my presence may be a curb to your exorbitancies. Drydcn's Spanish Friar.

What signifies the fiction of the tortoise riding upon the wings of the wind, but to prescribe bounds and measures to our exorbitant passions?

L' Estrange.

The ways of iniquity and vanity (if we may call them ways, which indeed are but exorbitances and seductions from the way), are very unintelligible, very obscure, abstruse, and intricate. Barrow.

For then mankind will be in a far worse condition than in the state of nature, if they shall have armed one, or a few men with the joint power of a multitude, to force them to obey at pleasure the exorbitant and un- limited decrees of their sudden thoughts, or unres- trained, and till that moment unknown wills, without having any measures set down which may guide and justify their. actions. Locke.

Their subjects would live in great plenty, were not the impositions so very exorbitant j for the courts are too splendid for the territories. Add'uon.

I see some of this fault cleave to those, who have eminently corrected all other exorbitances of the tongue. Government of the Tongue.

These phenomena are not peculiar to earthquakes in

tive of oppression, and not subject to law ; or there

must prevail in the state a spirit of licentiousness

which the law cannot control. Beattie.

EX'ORCISE, v. a.~\ fr.exorcisir, exorcisms :

EX'OUCISER, n, s. f Ital. exorcismo ; Spanish

EX'ORCISM, £ and Port, exorcismo ; Lat.

EX'ORCIST. J exorcismus ; Gr. ££op«

ftof (from eg, out, and opei£w, to adjure). To

adjure evil spirits to depart, by some supposed

holy name or influence. See below.

Summe of the iewis exorcistis gheden about and assaieden to clepe the name of the lord ihcsu crist on hem that hadden yuele spiritis.

Wicl'if. Dedis. 19. Soul of Rome !

Thou, like an exorcist, had conjured up My mortified spirit. Shaktpeure. Julius Caesar. Will his lordship behold and hear our exorcisms ?

Id.

Symptoms supernatural must be only curable by su- pernatural means ; namely, by devout prayers or ex- orcisms. Harvey. And fryers, that through the wealthy regions run, Resort to farmers rich, and bless their halls, And exorcite the beds, and cross the walls.

Dryden.

Ye glowing embers,

— Who blaze or die, as great Jehovah's breath Or blows you or forbears, assist my song ; Pour your whole influence j exorcise his heart, So long possessed, and bring him back to man.

Young.

The practice of EXORCISM was carried to a great extent among the Jews, and Josephus re- lates several wonderful tales of the success of exorcists. One Eleazer, a Jew, cured many daemoniacs, he informs us, by means of a root set in a ring. This

root, with the ring, was held under the patient's nose, and the devil was forth- with expelled. M. Fleury mentions certain people among the Jews who travelled round the country, making profession of driving out devils by invocations, which, they pretended, had been taught them by Solomon; these were also called exorcists. See Joseph. Antiq. Jud. lib. viii. Origen. Tract, xxxv. in Matt. xxxv. 63.

Exorcisms are greatly used in the church of Rome, the rituals of which forbid exorcising without leave of the bishop. The ceremony is

our times, but have been observed in all ages, and par- performed at the lower end of the church, to-

ticularly those exorbitant commotions of the waters of wards the door. The exorcist first signs the

the globe. Woodward's Natural History. possessed person with the sign of the cross,

They riot still, makes him kneel, and sprinkles him with holy

Unbounded in exorbitance of ill. Garth. water. Then follow the litanies, psalms and

The planets sometimes would have approached the Fayer; after which the exorcist asks the devil

M.n as near as the orb of mercury, and sometimes his name, and adjures him by the mysteries of

have exorbitated bevond the distance of Saturn. the Christian religion not to afflict the person

Bentley. any more : then, laying his right hand on the

The people were grossly imposed on, to commit such daemoniac's head, he repeats the form of exor-

pj-orbitandes as could not end but in the dissolution of cism. The Romanists have a similar form for

the government. Swift. the exorcising of houses, which may be found in

So endless and exorbitant are the desires of men, Brown's Papal Antiquities. Selden has said,

that they will grasp at all, and can form no scheme < casting out devils is mere juggling; they never

cast out any but what they first cast in.'

Exorcisms had anciently another acceptation ;

of perfect happiness with less. Id.

This was not owing to the inattention of our princes, or their want of ambition. They were Jundantly sensible of the exorbitant power of the nobility, and extremely solicitous to humble that order.

being applied by way of trial or purgation to extort the truth from the accused. The exor-

Robertson's Histor,, of Scotland. cism, in this sense, was a sort of bread conjured »v nere ,„„ „ mo rase, there must be in the hands and exorcised for the purpose ; and the opinion of certaiu individuals som-, exorbitant power produc- was, that if the person was criminal lie couM

Where (I. is is the

not swallow the bread. This, it seems, was a frequent practice in the time of our Edward III. and the bread thus exorcised was said to be corsned. Linderbroeck gives instances of exor- cisms with barley-bread, and others with cheese. EXORCIST, in the Romish church, is a priest, or tonsured clerk, who has received the four lesser orders, one of

which is tha* of exor- cist. The term is likewise applied to a prelate, or to a priest delegated by a prelate, who ac- tually exorcises a person possessed.

The ordination of exorcists is performed in the time of mass, their principal office being to expel devils. The fourth council of Carthage, can 7, appoints, that at the ordination of exorcists, the bishop, putting the book of exorcisms in their hands, shall say these words ; ' Receive it, and keep it in remembrance, and have power to lay hands on energumeni, whether baptised or catechumens ;' which form still obtains.

It is a dispute among divines whether ever the Greeks had any such order as that of exorcist. Fa. Goar, in his Notes on the Greek Eucho- logion, has made it probable they had, from several concurring passages in St. Dionysius and St. Ignatius Martyr.

EXOR'DIAL, adj. \ Fr. exorde ; Lat. ex-

EXOR'DIUM, n.s. S ordium, a preface. Intro- ductory : an introduction.

I cannot forbear to allege that so grave and perti- nent speech of Cicero, which is the exordium of his iratio ad Pontifices. Barrow.

Nor will I thee detain

With poets' fictions, nor oppress thine ear

With circumstance, and long exordiums here.

May's Virgil.

I have been distasted at this way of writing, by reason of long prefaces and exordiums. Additon.

EXORNATION, n.s. Lat. exornatio. Or- nament ; decoration ; embellishment.

It seemeth that all those curious exornations should rather cease. Hooker.

Hyperbolical exornationt and eleganciei many much affect. Hale.

EXOS'SEOUS, adj. \ Lat. ex and ossa.

EXOS'SEATED. J Wanting bones ; bone-

less ; formed without bones.

Thus we daily observe in the heads of fishes, as also in snails and soft exosteous animals, nature near the head hath placed a flat white stone, or testaceous concretion. Browne.

EXOTERIC and ESOTERIC, terms denoting external and internal, applied to the double doc- trine of the ancient philosophers; the former public, the latter secret. The exoteric was that which they openly professed and taught to the world ; the esoteric was confined to a small number of chosen disciples. This method was derived originally from the Egyptians ; who, ac- cording to Herodotus, Uiodorus Siculus, Strabo, Plutarch, &c., had a twofold philosophy, one secret and sacred ; the other public and com- mon. The same practice also obtained among the Persian Magi, the Druids of the Gauls, and the Brachmans of India. The Egyptian priests, with whom it originated, sustained the character of judges and magistrates, and probably intro- duced this distinction to serve the purposes of legislation and government. Clement of Alex-

andria informs us, that they communicated their mysteries principally to those concerned in the administration of the state; and Plutarch con- firms this. Others have supposed, that *,hey in- vented the *ables of their erods and heroes, and the other external ceremonies of their religion, to disguise natural and moral truths; but, what- ever was the motive of their practice, it was cer- tainly applied to political purposes.

EXOSTO'SIS, n.s. Fr. exostose ; Cr. t£, out of, and oTTtov, a bone. Any protuberance of a bone that is not natural.

The particular kind of tumour which occasionally forms on the surface of the bones, is that to which this writer ^ Bayer) assigns the appellation of cxostoiis. He notices, however, that this name comprehends different species, which should be considered in a dis- tinct manner. Dr. A. Reel.

EXOTIC, or ^ Fr. exotique; Ital.

EXOT'ICK, adj. & n. s. > esotico, Span, and Port.

EXOT'ICAL, adj. j exotica ; Lat. exot icus ;

Gr. t£wTiKoc, ab, ifa, extra (Minsheu). Foreign, not of home produce, not domestic : applied par- ticularly, as a substantive, to plants.

Some learned men treat of the nature of letters as of some remote exotick thing, whereof we had no knowledge but by fabulous relations. Holder.

Continue fresh hot-beds to entertain such exotick plants as arrive not to their perfection without them. Evelyn's Kalendar.

Crowded theatres, too fondly proud of their exotic minstrels and shrill pipes. The price of manhood, hail thee with a song, and airs soft warbling

Somervile.

Claudian was seated on the other summit, which was barren, and produced, on some spots, plants that are unknown to Italy, and such as the gardeners call exotick*. Addison't Guardian.

Sometimes retiring, from the public weal One tranquil hour the royal partners steal ; Through glades exotic pass with step sublime, Or mark the growths of Britain's happier clime.

Darwin.

Some Russian Roscius next delight the age. And a Dutch Cleinel skate along the stage. Exotic fopperies, hail ! -whose flattering smile Supplants

the sterner virtues of our isle. Sheridan. Many and beautiful lay those around,

Like flowers of different hue and clime and root In some exotic garden sometimes found,

With cost, and care, and warmth, induced to shoot.

Byron.

EXPAND', v. a. ~] Lat. expando, ex out,

EXPAN'SE, n. s. 1 and panda (Gr. Qatvu,

EXPANSIBILITY, | avu>), to open. To

EXPANSIBLE, adj. ^spread ; lay open ; dilate;

EXPAN'SILE, adj. I diffuse : an expanse is a

EXPAN'SION, n. s. I body, or space, equally

EXPAN'SIVE, adj. J diffused : expansibility,

capacity of extension : expansible and expansive,

capable of being extended : expansion, the act

of spreading out, or the state of being expanded ;

extent

She useth most the target to fence away the blow, and leaves all other weapons to the Alcoran to propagate and expand itself. Howel.

A murmuring sound Of waters issue from a cave, and spread Into a liquid plain ; then stood unmoved, Pure as the expanse of heaven. Milton.

EXPANSION.

Bellerophon's horse, framed of iron, and placed between two loadstones, with wings expanded, hung pendulous in the air. Bi-owne.°

The capacious mind of man cannot be confined by the limits of the world : it extends its thoughts even beyond the utmost expansion of matter, and makes incursions into that incomprehensible inane. Locke.

The elastick or expansive faculty of the air, whereby it dilates itself when compressed, hath been made use of in the common weather glasses. Ray.

Bodies are not expansible in proportion to their weight, or to the quantity of matter to be expanded.

Grew.

With the rotundity common to the atoms of all fluids, there is some difference in bulk, by which the atoms in one fluid are distinguished from those of another ; else all fluids would be alike in weight, ex- pansibility, and all other qualities. Id.

It would for ever take an useless flight, Lost in expansion, void and infinite. Blackmore.

An animal growing, expands its fibres in the air as a fluid. Arbuthnot on Air.

Tis demonstrated that the condensation and expan- sion of any portion of the air is always proportional to the weight and pressure incumbent upon it. Bentley.

Bright as the ethereal glows the green expanse.

Savage. Along the stream of time thy name

Expanded flies, and gathers all its fame. Pope.

On the smooth expanse of crystal lakes, The sinking stone at first a circle makes ; The trembling surface, by the motion stirred. Spreads in a second circle, then a third ; Wide, and more wide, the floating rings advance, Fill all the watery plain, and to the margin dance.

Id.

The expansive atmosphere is cramped with cold.

Thornton. O thou bright queen, who o’er the expanse

Now highest reign’st, with boundless sway ! Oft has thy silent-marking glance

Observed us, fondly-wandering, stray. Burns.

Here various motives his ambition raise — Power, pomp, and splendour, and the thirst of praise ; There beauty woos him with expanded arms ; E’en bacchanalian madness has its charms. Cowper.

O’er ten square leagues her pennons broad expandt And twilight swims upon the shuddering sand.

Darwin.

The matter of heat is an ethereal fluid, in which all things are immersed, and which constitutes the gene- ral power of repulsion, as appears in explosions which are produced by the sudden evolution of combined heat, and by the expansion of all bodies by the slower diffusion of it in its uncombined state. Id,

There is another power in nature, besides that of ex- pansile vapour, which may have raised some materials which have previously been in igneous or aqueous so- lution ; and that is the act of congelation. I’d.

Seen on yon sky-mixed mountain’s brow. The mingling multitudes, the madding car Pouring impetuous on the plain below, War’s dreadful lord proclaim. Bursts out by frequent fits the expansive flame. Whirled in tempestuous eddies flies The surging smoke o’er all the darkened skies.

Seattle.

Their azure arches through the long expanse More deeply purpled meet his mellowing glance ; And tenderest tints, along their summits driven, Mark his gay course — and own the hues of heaven.

Byriin.

She looked (this simile’s quite new) just cut

From marble, like Pigmalion’a statue waking, The mortal and the marble still at strife, And timidly expanding into life. Id. Don Juan. EXPANSION, in physiology, is the dilating, stretching, or spreading out of a body ; whether from any external cause, as rarefaction, or from an internal cause, as elasticity. All bodies, whether solid or fluid, naturally expand by heat beyond their dimensions when cold ; and hence their dimensions are different in different tem- peratures and seasons of the year. Air com- pressed or condensed, as soon as the compress- ing or condensing force is removed, expands by its elastic power, to its former dimensions. In some few cases, however, bodies seem to expand as they gnw cold, as water in the act of freez- ing : but this is owing to the extrication of a number of air bubbles from the fluid, and is not at all a regular and gradual expansion like that of metals, &c., by heat. In certain metals, also, an expansion takes place when they pass from a fluid to a solid state: but this is not any proper effect of cold, but of the arrangement of the parts of the metals, and is, therefore, to be ac- counted rather a kind of crystallisation. The expansion of different bodies by heat is very various ; and many experiments upon it are in- serted in the Philosophical Transactions. In the forty-eighth volume, Mr. Smeaton gave a table of the expansion of many different sub- stances, as determined by experiment, from which the following particulars are extracted. The quantities of expansion which answer to 180° of Fahrenheit’s thermometer are expressed in 10,000th parts of an English inch,e ach substance being twelve inches in length.

White glass barometer tube . . 100

Martial regulus of antimony . • 130

Blistered steel 138

Hard steel 147

Iron 151

Bismuth 'V . '. . . 167

Copper hammered 204

Copper 8 parts, mixed with 1 of tin . 218

Cast brass . 225

Brass 16 parts, with tin 1 . . 229

Brass wire . . • . 232

Speculum metal . . . 232

Spelter solder, viz. brass 2 parts, zinc 1 247

Fine pewter 274

Grain tin 298

Soft solder, viz. lead 2, tin 1 . . 301

Zinc 8 parts, tin 1, a little hammered 323

Lead 344

Zinc or spelter 353

Zinc hammered half an inch per foot. 373

By other experiments too it has been found that, for each degree of heat of the thermometer, mer- cury, water, and air, expand by the following parts of their own bulk, viz. mercury the 9600th ; water the 6666th ; air thej435th. From the above table it appears, that there is no ge- neral rule for the degree of expansion to which oodies are subject by the same degree of heat, either from their specific gravity or otherwise. Zinc, which is much lighter than lead, expands more with heat ; while glass, which is lighter

EXP

than either, expands much less; and copper, which is heavier than a mixture of brass and tin, expands less. It seems too that metals ob- serve a proportion of expansion in a fluid state, quite different from what they do in a solid one: for regulus of antimony seemed to shrink in

fixing, after being melted, considerably more than zinc. The following table will give the reader an idea of the proportionate rate of ex- pansion of liquids as far as they have been ex- amined.

Temp.

Mercury.

Linseed oil.

Sulphuric acid.

Nitric acid.

Water.

Oil of tur- pentine.

Alcohol.

30°

100000

100000

—

—

—

100000

40

100081

—

99752

99514

—

—

100539

50

100183

— •

100000

100000

100023 –

100000

101105

60

100304

—

100279

100486

100091

100460

101688

70

100406

—

100558

100990

100197

100993

102281

80

100508

—

1 00806

101530

100332

101471

102890

90

100610

—

101054

102088

100694

101931

103517

100

100712

102760

101317

102620

100908

102446

104162

110

100813

—

101540

103196

—

102943

—

120

100915

— .

101034

103776

101404

103421

—

130

101017

–

102097

104352

–

103954

–

140

101119

–

102320

105132

–

104573

–

150

101220

–

102614

–

102017

–

–

160

101322

–

102893

–

–

–

–

170

101424

–

103116

–

–

–

–

180

101526

–

103339

– ,

–

–

–

190

101628

—

103587

—

103617

—

—

200

101730

—

103911

—

—

—

—

212

101835

107250

—

—

104577

—

—

After bodies are reduced to a vaporous state, their expansion seems to go on without any limitation, in

proportion to the degree of heat applied ; so that it is impossible to say what would be the ultimate effects of that principle upon them in this way. The force with which these vapors expand, on the application of high degrees is very great ; nor does it appear that any obstacle, whatever, is insuperable by them. On this principle depends the steam engine, the instruments called manometers, which show the variation of gravity in the external atmosphere, by the expansion or condensation of a small quantity of air confined in a proper vessel, &c. &c. ; a variety of other curious machines may be constructed on the principle of aerial expansion; an account of which will be found under HY- DROSTATICS and PNEUMATICS. On the principle of the expansion of fluids are constructed ther- mometers : and for the effects of the different expansions of metals in correcting the errors of machines for measuring time, see PENDULUM. The expansion of solid bodies is measured by the pyrometer ; and the force with which they expand is still greater than that of aerial vapors ; the flame of a farthing candle produces an ex- pansion in a bar of iron capable of counteract- ing a weight of 500 pounds. The quantity of expansion, however, is so small, that it has never been applied to the movement of any mechanical engine.

EXPATIATE, v. n. & v. a. Lat. expatior, to walk abroad. To range; to wander beyond limits : hence to dilate, or enlarge upon, in words. Johnson notices the active use of it by Dryden as ' very improper.' But Mr. Todd supplies another instance of it from Bp. Sprat. See below.

Make choice of a subject, which, being of itself capable of all that colors and the elegance of design can possibly give, shall afterwards afford an ample field of matter wherein to expatiate itself. Dryden.

They were not allowed to expatiate or amplify or connect, specious arguments together. Bp. Sprat.

Religion contracts the circle of our pleasures, but

leaves it wide enough for her votaries to expatiate in. Addiion's Spectator.

They had a custom of offering the tongues to Mercury, because they believed him the giver of eloquence : Dacier expatiates upon this custom.

Broome.

He looks in heaven with more than mortal eyes, Bids his free soul expatiate in the skies ; Amidst her kindred stars familiar roam, Survey the region, and confess her home. Pope.

EXPATRIATE, v. a. \ Fr. expatrier, from

EXPATRIATION, n. s. J ex, and Lat. pairia, country. To banish any one from his native land.

Abeillard indulged the romantic wish of expatriating himself for ever. Berington.

EXPECT', v. a. & v. n. EXPECT'ABLE, adj. EXPECT'ANCE, or, EXPECI'ANCY, n. s. EXPECT'ANT, n. s. & adj.

Sp. and Port, es- perar ; Lat. expecto, ex, intensive, and •spccto, to mind. To apprehend, or wait

EXPECTATION, n. s. for, good or ill; to

EXPECT'ER. J attend the coming

of: expectable is, to be hoped or feared : expectance or expectancy, the act or state of expecting, or the thing expected : expectant, as an adjective, is wishing for ; and, as a substantive, the person who expects, and synonymous with expecter.

My soul, wait thou only upon God j for my expectation is from him. P». xlii. 5.

Tkere is expectance here from both the sides. What further you will do. Shahspeare.

Signify this loving interview To the expecters of our Trojan part. Id.

The trees

Should have borne men, and expectation fainted. Longing for what it ha 1 not. /,/.

Every moment is expectancy Of more arrivance. Id. Othello.

Satyrs leave your petulance, Or else rail upon the nuon, Your expectance is too soon ; For before the second cock Crow, the gates will not unlock.

Ben Jonion.

Needs must the serpent now his capital bruise Expect with mortal pain. Milton.

Good with bad

Expect to hear, supernal grace contending With sinfulness of man. Id.

We expected

Immediate dissolution. Id.

But fy, my wandering muse, how thou dost stay !

Expectance calls thee now another way. Id.

Now clear I understand, What oft my steadiest thoughts have searched in

vain,

Why our great expectation should be called The Seed of woman. Id. Paradise Lost.

Occult ana spiritual operations are not expectable from ice ; for being but water congealed, it can never make good such qualities. Browne.

How fit it will be for you, born so great a prince, and of so rare not only expectation but proof, to divert your thoughts from the way of goodness.

Sidney.

Vbu first came home

From travel with such hopes as made you looked on, By all men's eyes, a youth of expectation ; Pleased with your growing virtue I received you.

Otway. This blessed expectance must be :.cw my theme.

Boyle.

While, expecting there the queen, he raised His wondering eyes, and round the temple gazed.

Drydcn.

We are not to intrench upon truth in any conver- sation, but least of oil with children ; since, if we play false with them, we not only deceive their expectation, and hinder their knowledge, but corrupt their inno- cence, and teach them the worst of vices. Locke.

Live in a constant and serious expectation of that day, when we must appear before the Judge of heaven and earth. Rogert'i Sermons.

'Tis expectation makes a blessing dear.

Congrere,

They, vain expectants of the bridal hour, My stores in riotous expence devour. Pope.

This treatise was agreeable to the whole nation, ex- cept those who had employments, or were expectants.

Swift to Pope.

Her majesty has offered concessions, in order to remove scruples raised in the mind of the expectant heir. Swift.

These are not great expecten under your adminis- tration, according to the period of governors here.

EXPECTATION, in the aoctrine of chances, is the value of any prospect of prize or property depending upon the happening of some uncertain event, the value of which, in all cases, is equal to the whole sum multiplied by the probability that the event on which it depends may happen.

EXPECTATION, in the doctrine of life annuities, denotes the time which a person of a given age may expect to live. Simpson's table of the ex- pectation of life, in London, is as follows : —

Age.

Expec.

Age.

Expec.

Age.

.Expec.

Age.

Expec.

1

27.0

21

28.3

41

19.2

61

11.0

2

32.0

22

27.7

42

18.8

62

11.6

3

34.0

23

27.2

43

18.5

63

11.2

4

35.6

24

26.6

44

18.1

64

10.8

5

36.0

25

26.1

45

17.8

65

10.5

6

360

26

23.6

46

17.4

66

10.1

7

358

27

25.1

47

17.0

67

9.8

8

35.6

28

24.6

48

16.7

68

9.4

9

35.2

29

24.1

49

16.3

69

9.1

10

34.8

30

23.6

50

16.0

70

8.8

11

34.3

31

23.1

51

15.6

71

8.4

12

33.7

32

22.7

52

15.2

72

8.1

13

33.1

33

22.3

53

14.9

73

7.8

14

32.5

34

21.9

54

14.5

74

7.5

15

31.9

35

21.5

55

14.2

75

7.2

16

31.3

36

21.1

56

13.8

76

6.8

17

30.7

37

20.7

57

134

77

6.1

18

30.1

38

20.3

58

13.1

78

6.0

19

29.5

39

19.9

50

12.7

79

5.5

20

28.9

40

19.6

60

12.4

80

5.0

From this table, the expectation of life, at any age, is found, on inspection, thus : a person of twenty years of age has an expectation of living 28.9 years ; and others in the same manner. EXPECTORATE, v. a. bv.n.) Fr. expec- EXPECTORA'TION, n. s. > torer ; Lat.

EXPEC'TORATE, adj. j expectore,

(ex and pectore) to throw from the breast. To dis- charge from the breast or lungs, as in coughing. EXPE'DIENCE, or \ Fr. expedient; Ital. EXPE'DTENCY, n.s. f and Span, expedients; EXPE'DI ENT, adj. San.s. | Lat. expediens, cx EXPE'DIENTLY, adv. J pedit, it is fit, or needful. Fitness ; propriety ; suitableness ; con- venience : an expedient is that which assists, and so appears needful to an end ; it is used also for a shift or contrivance in an exigency.

All things are not expedient : in things indifferent there is a choice ; they are not always equally ex- pedient. Hooker.

The adverse winds,

Whose leisure I have staid, have given him time To land his legions all as soon as I : His marches are expedient to this town. Shakspeare.

Let my officers of such a. nature Make an extent upon his house and lands : Do this expediently, and turn him going. Id

Let me hear

What yesternight our council did decree, In forwarding this dear expedience. Id.

Eight tall ships, three thousand men of war, Are making hither with all due expedience.

Id. Richard II.

And where such extraordinary commendations are wanting, is it not reasonable that the need of them should be supplied by ordinary and probable ex-pedients ? Barrow.

The expediency of things to be permitted or per-formed, doth not consist in single acts or events, but in many conspiring to one common end. !&•

When men live as if there were no God, it become* expedient for them that there should be none ; and then they endeavour to persuade themselves so.

Tillotton.

The' expedient pleased, where neither lost his right ; Mars had the day, and Venus had the night.

Dryden.

Solemn dedications of things set apart for Divine Worship, could never have been universally practised, had not right reason dictated the high

expediency and great use of such practices. South.

He flies to a new expedient to solve the matter, and supposes an earth of a make and frame like that of Des Cartes. Woodward.

God does not project for our sorrow, but our inno- cence ; and would never have invited us to the one, but as an expedient to the other. Decay of Piety.

Were I as wealthy as a South-sea dream, Wishing is an expedient to be poor. Young.

The true danger is, when liberty is nibbled away, for expedients, and by parts. Burke.

Canst thou, and honoured with a Christian name, Buy what is woman born, and feel no shame ? Trade in the blood of innocence, and plead Expedience as a warrant for the deed ? Cotoper.

Pursue the search, and you will find Good sense and knowledge of mankind

To be at least expedient, And, after summing all the rest, Religion ruling in the breast

A principal ingredient. Id.

EXPEDITATION, in the forest laws, sig- nifies the cutting out the balls of a dog's fore feet for the preservation of the king's game. Every one that keeps any great dog not expedi- tated, forfeits 3s. 4rf. to the king. In mastiffs, not the ball of the feet, but the three claws are to be cut to the skin. Instit. part iv. p. 308. This was to be performed once in every three years, on every man's dog who lived near the forests, and even on the dogs of the foresters themselves.

EX'PEDITE,u.a.&af//.^ Fr. expedier; Lat.

EX'PEDITELY, adv. I expedio, from ex and

EXPEDITION, n. s. >pedio, pes, pede (&

EXPEDI'TIOUS, adj. (Gr. TTOVC., the foot),

EXPEDI'TIOUSLY, adv. j to free ; quit ; place

at liberty. To disencumber ; facilitate; hasten ;

despatch: the adjective, and expeditious, mean

quick; soon performed ; nimble; swift.

Wholesome advice, and expedite execution in free-
ing the state of those monsters. Sandys.

Nature can teach the church but in part ; neither so fully as is requisite for man's salvation, nor so easily as to make the way plain and expedite enough, that many come to the knowledge of it, and so be saved, and therefore the Scripture has been given.

Hooker.

Prayers, whereunto devout minds have added a piercing kind of brevity, thereby the better to express that quick and speedy expedition wherewith ardent affections, the very wings of prayer, are delighted to present our suits in heaven. Id.

Even with the speediest expedition I will dispatch him to the emperor's court.

Shakspeare.

Young Octavius, and Mark Antony, Come down upon us with a mighty power, Bending their expedition tow'rd Philippi. Id. Though such charters be expedited of course, and aa of right, yet they are varied by discretion.

Bacon.

He sent the lord chamberlain with expedite forces to speed to Exeter, to the rescue of the town.

Id. Henry VII.

By sin and death a broad way now is paved, To expedite your glorious march. Milton,

Can he be free and expedite in the discharge of his duty who is perplexed with difficulties ?

Barrow.

The more any man’s soul is cleansed from sensual lusts, the more nimble and expedite it will be in its operations. Tillotson.

Nature left his ears naked, that he may turn them more expeditely for the reception of sounds from every quarter. Grew.

An inquisition would still be a further improvement, and would expedite the conversion of the Papists.

Swift.

EXPEL’, v. a. i Lat. expello, expellere, i.e.

EXPEL’LER, n. s. $ extra pellere (Minsheu).

To drive out or away ; to eject, refuse, exclude.

The Lord your God shall expel them from before

you, and drive them from out of your sight.

Jos. xxiii. 5.

And would you not poor fellowship expel, Myself would offer you t’ accompany In this adventurous chanceful jeopardy.

Hubbard.

I may know the let why gentle peace Should not expel these inconveniences.

Shtkspeare.

Oh that that earth which kept the world in awe Would patch a wall, expel the winter’s flaw ! Id.

Since she did neglect her looking-glass, And threw her sna-expelling mask away, The air hath starved the roses in her cheeks, And pitched the lily

tincture of her face. Id.

Whatsoever cannot be digested by the stomach, is either put up by vomit, or put down to the guts, and other parts of the body are moved to expel by consent.

Bacon's Natural History Unspotted faith expeller of all vice.

Fanshawe.

The virgin huntress was not slow T' expel the shaft from her contracted bow.

Dry den.

Arms and the man I sing, who forced by fate, And haughty Juno's unrelenting hate, Expelled and exiled left the Trojan shore. Id.

Suppose a mighty rock to fall there, it would eipcl the waters out of their places with such violence as to fling them among the clouds. Burnet.

EXPEND', v. a. ~\ Ital. espensa ; Span. EX'PENCE, or dispensa ; Fr. depense ;

EXPENSE, n.s. I from Lat. expertdo, ex

EXPENSE'FUL, adj. [and pendo, to weigh.
EXPENSE'LESS, I To lay out money, to

EXPENSIVE, I spend; hence to bes-

EXPEN'SIVELY, adv. tow or give: expense
EXPEN'SIVENESS, n.s.j is the better mode of

writing the substantive. The meaning of the

compounds seems sufficiently clear.

If my death might make this island happy, I would expend it with all willingness. Shakspeare,

The king of England wasted the French king's country, and thereby caused him to- expend such sums

of money as exceeded the debt. Hayward.

Hence comes that wild and vast expense, That hath enforced Rome's virtue thence, Which simple poverty first made. Ben J onsen.

I'd have you sober and contain yourself. Not that your sail be bigger than your boat ; But moderate your expense now, at first, As you may keep the same proportion still. Id.

A physician may save any army by this frugal and erpenselcss means only. Milton on Eihiciriion.

No part of a structure is either more expenseful than windows or more ruinous. Wotton's Architect.

A feast prepared with riotous expense, Much cost, more care, and most magnificence.

Dryden.

Frugal and industrious men are friendly to the es- tablished government, as the idle and expensive are dangerous. Temple.

This requires an active, expensive, indefatigable goodness, such as our apostle calls a work and labour of love. Sprat.

We are apt to rely upon future prospects, and be- come really expensive while we are only rich in possi- bility. Addison.

What health promotes, and gives unenvyed peace, Is all espenseless, and procured with ease.

Blackmore.

Such provision made, that a country should not want so many springs as were convenient, and afford a

supply every where suitable to the necessities and e.rpentes of each climate. Woodward.

The publick burthens, though they may be a good reason for our not expending so much in charity, yet will not justify us in giving nothing. Atterbury.

Their highways, for their extent, solidity or expen- sivenesi, are some of the greatest monuments of the grandeur of the Roman empire. Arbuthnot.

I never knew him live so great and expensively as he hath done since his return from exile. Swift.

I can see no reason by which we are obliged to make those prodigious expenses. Id.

Fancy, and pride, seek things at vast expense, Which relish not to reason, nor to sense. Young.

I applied very assiduously to my work : but I ex- pended with Ralph almost all that I earned.

Franhlin.

Superstition never prevailed among any people but *t the expense of morals. Robertson's Sermons.

A fine piece of ruins, built by the late lord Holland » at a great expense, which the day after I saw it tum- bled down for nothing.

Cowper. Private Correspondence.

They cease to have their faculties excited into their usual activity, and become unhappy, I suppose from the too great accumulation of the seusorial power of volition ; which wants the accustomed stimulus or motive to cause its expenditure. Darwin.

EXPE'RIENCE, n. s. & v. a. ~\ Fr. expe-
EXPE'RIENCED, part. adj. rience ; Ital.

EXPE'RIENCER, experiensa,

EXPE'RIMENT, n. s,, v. a. & v. n. esperimento ;
EXPERIMENTAL, adj. (Spanish and

EXPERIMENTALLY, adv. TPort. esperi-

EXPER'IMENTER, n. s. encia, esperi-

EXPERT', adj. mento ; Lat.

EXPERT'LY, adv. experientia,

EXPERT'NESS, n. s. J experimen-

tum, ex, expletive, and pario, to produce, or invent. Practise ; trial ; skill or wisdom resulting from practise : an experiencer and experimenter, alike mean one who makes trial or experi- ments. Experiment is essay ; trial ; an operation upon matter or things partially known to ascer- tain something unknown : the verb signifies to try or test ; to endeavour to ascertain qualities or things unknown : as a neuter verb to make trial. Expert is wise or skilful by experience.

And men may well preven be experience and fotyle compassement of wytt, that zif a man fond passages 5ie schippes, that wolde go to serchen the world, men myghte go be schippee alle aboute the world, and abovcn and benethen. Sir John Mandeville.

Old Timon, who in youthly yeares hath beene In warlike feates the expertest man alive, And is the wisest now on earth I weene.'

Spenser. Faerie Queene.

That which sheweth them to be wise, is the gather- ing of principles out of their own particular experi- ments ; and the framing of our particular experimentt, according to the rule of their principles, shall make u* such as they are. Hooker.

Now we will take some order in the town, Placing therein some expert officers. Shakspeare. Boys immature in knowledge

Pawn their experience to their present pleasure.

Id.

Trust not my reading, nor my observations Which with experimental seal do warrant The tenor of my book. Id.

Hereof experience hath informed reason, and time hath made those things apparent which were hidden.

Raleigh.

A prison is a grave to bury men alive, and a place wherein a man for halfe a yeare's experience may learne more law than he can at Westminster for an hundred pound. Mynshul, 1618.

It is good, also, not to try experiments in states, ex- cept the necessity be urgent, or the utility evident.

Bacon.

Expert men can execute, and judge of particulars, one by one; but the general counsels, and the plots and marshalling of affairs, come best from those that are learned. Id.

Is there less hope from your enemies that shall be, when ye go under strong and expert leaders, than from the enemies that were, when ye shall return master- less. Bp. Hall's Contemplation!.

Galileus and Mersennus, two exact experimenters, do think they find this verity by their experiences, but surely this is impossible to be done. Digby.

A curious experiencer did aJfirm, that the likeness of any object, if strongly enlightened, will appear to another, in the eye of him tliat looks strongly and steadily upon it, till he be dazzled by it, even after he shall have turned his eyes from it. Id.

But apt the mind or fancy is to rove

Unchecked, and of her roving is no end,

'Till warned, or by experience taught, she learn,

That not to know at large of things remote

From use, obscure and subtle, but to know

That which before us lies in daily life,

Is the prime wisdom. Milton.

He through the armed files

Darts his experienced eye. Id.

Adam ! by sad experiment I know, How little weight with thee my words can find. Id.

The experimental testimony of GilHus is most considerable of any, who beheld the course thereof.

Browne's Vulgar Errours.

The miscarriage being somewhat universal, haa made us impart what we have experimentally leained by our own observations. Evelyn's Kalendar

The meanest sculptor in the ./Emilian square. Can imitate in brass the nails, and hair ; Expert in trifles, and a cunning fool, Able t' express the parts, but not dispose the whole.

Dryden.

Such a project it is, which, in my text, by a very trusty voucher and skilful judge of such things, and one who had himself fully experimented it, is proposed. Barrow.

History teaches this best, next to experience ; which is the only effectual way to get a knowledge of the world. Locke.

We must perfect, as much as we can, our ideas of the

distinct species ; or learn them from such as are used to that sort of things, and are experienced in them. Locke.

When the succession of ideas ceases, our perception of duration ceases with it, which every one experiments —whilst he sleeps soundly. Id.

They have not the good luck to be perfectly knowing in the forms of syllogism, or expert in mode and figure. Id.

Francisco Red! experimented that no putrified flesh will of itself, if all insects be carefully kept from it, produce any. Ray on the Creation.

Till his fall man's mint! was ignorant of nothing but of sin ; or, at least, it rested in the notion without the smart of the erperiment. Smtth's Sermons.

Again fair Alma sits confest,

On Florimel's experter breast ;

When she the rising sigh constrains,

And by concealing speaks her pains. Prior.

We have no other evidence of universal impenetrability, besides a large experience, without an experi- mental exception. Newton.

While the man is under the scourge of affliction, he is willing to abjure those sins which he now experimentally finds attended with such bitter consequences. Rogcrs's Sermons.

These are so far from being subservient to atheist in their audacious attempts, that they rather afford an experimental confirmation of the universal deluge.*

Bentley's Sermons.

But if you'll prosper, mark what I advise, Whom age

and long experience render wise. Pope.

To him experienced Nestor thus rejoined, O friend '. what sorrows dost thou bring to mind !

Id. Thy offspring bloom,

Expert o/'arms, and prudent in debate,

The gifts of Heaven to guard thy hoary state.

Id. Odyssey.

When we are searching out the nature or proper- ties of any being by various methods of trial, this sort of observation is called experiment. Wafts.

Soon as man, expert from time, has found The key of life, it opes the gates of death. Young.

A man who enters the theatre is immediately struck with the view of so great a multitude, participating of one common amusement ; and experiences, from their very aspect, a superior sensibility of disposition of being affected with every sentiment which he shares with his fellow-creatures. Hume.

If we see them obedient to the laws, prosperous in their industry, united at home, and respected abroad, we may reasonably presume that their affairs are con- ducted by men of experience, abilities, and virtue.

Juniuf.

Young men are as apt to think themselves wise enough, as drunken men are to think themselves sober enough. They look upon spirit to be a much better thing than experience, winch they call coldness ; for though spirit without ei-periencc is dangerous, ex- perience without spirit is languid and defective.

Chesterfield.

Sleep, when it follows, will be natural and undis-

turbed. While indolence, with full feeding, occa- sions night-mar"s and horrors inexpressible : we fall from precipices, are assaulted by wild beasts, mur- derers, and demons, and experience every variety of distress. Franklin.

O most delightful hour by man

Experienced here below, The hour that terminates his span,

His folly, ?nd his woe ! Cuwpcr.

Such rhapsodies our shrewd discerning youth Learn from expert inquirers after truth ; Whose only care, might truth presume to speak, Is not to find what they profess to seek. Id.

An historian may describe from hearsay ; a poet must describe from seeing and experience ; and this he is enabled to do by making use of the eye of ima- gination. Beattie.

Look on her well — does she s»cn> formed to teach ? Should you expect to hear this lady preach ? Is grey experience suited to her youth ? Do solemn sentiments become that mouth ? Bid her be grave, those lips should rebel prove To every theme that slanders mirth or love.

Sheridan.

EX'PIATE, v. a.^ Fr. expier ; Lat. expio,

EX'PIABLK, adj. (ev and pio, to worship

EXPIA'TION, n. .<. ^ (hence to appease a divine

EXPIA'TORY, adj. J power). To make atone- ment for; to annul guilt; to satisfy, as for in- jury : to make reparation for : the compounds all follow these senses.

His voluntary death for others prevailed with God, and had the force of an expiatory sacrifice. Hooker.

Strong and able petty felons, in true penitence, implore permission to expiate their crimes by their assiduous labours in so innocent and so hopeful a work. Bacon's Physical Remains.

Upon the birth of such monsters, the Grecians and Romans did use divers sorts of expiations, and to go about their principal cities with many solemn cere- monies and sacrifices. Huywzrd.

The odium which some men's rigour or remissness had contracted upon my government, I resolved to expiate by regulations. Kin// Charles.

The treasurer obliged himself to expiate the injury, to procure some declaration to that purpose, under his majesty's sign manual. Clarendon.

Law can discover sin, but not remove, Save by those shadowy expiations weak, The blood of bulls and goats. Milton.

The former part of this poem is but a due expiation for my not serving my king and country in it.

Dryden.

Lustrations and processions were much easier than a clean conscience, and a steady course of virtue ; and an expiatory sacrifice, that atoned for the want of it, was much more convenient than a strict and holy life. Locke.

For the cure of this disease an humble, serious, hearty repentance is the only physick ; not to expiate the guilt of it, but to qualify us to partake of the br- nefit of Christ's atonement. Ray-

Let a man's innocence be what it will, let his vir- tues rise to the highest pitch of perfection, there will be still in him so many secret sins, so many human frailties, so many offences of ignorance, passion, and prejudice, so many unguarded words and thoughts, that without the advantage of such an expiation and atonement as Christianity has revealed to us, it is impossible be should be saved. Addison.

The more they have hitherto embezzled their parts, the more they endeavour to expiate that unthriftiness by a more careful managery for the future.

Government of the Tongue.

Confessing that in the sight of God, the just Judge of things, the blood of the offerers should be shed, and their bodies burnt for their sins — but that through the mercy of God, expiation was made for them by the victims being put in their,' place, by whose blood and life the blood and life of the offerers were redeemed. Abarbanel. Theol. Rer.

Since vre have no longer a empie or altar, there remains no expiation for sins, but repentance only—— and this will expiate all transgressions.

Maimonides. Id.

When they (the Jews) themselves die, they pray that their own deaths may be considered as an ex- piation or satisfaction for their sins. Dr. Priestley.

In that humiliating attitude, in spite of my protests, he may supplicate pardon for his menacing proclama- tions ; and, as an expiation to those whom he failed to terrify with his threats, he may abandon those whom he had seduced by his promises. Burke.

EXPILLI (Claude), a native of Voiron in the province of Dauphiny, born 1561, was eminent in French jurisprudence. He was educated at Turin, Padua, and the university of Bourges, where he graduated. Besides his Pleadings, printed at Paris rn 1612, 4to., and other profes- sional works, he was the author of a treatise on Orthography, Lyons, folio, 1618, and of a vo- lume of poems in the French

language, Grenoble, 1624. He died president of the parliament of Grenoble in 1636.

EXPILLI (John Joseph), a French ecclesiastic, was born in 1719, at St. Remy. He was a learned and ingenious geographer, correcting from personal observation various errors in the relative situations of different places in Europe and Africa. He published several scientific works, the principal of which are, Polychoro- graphie, 8vo ; De la Population de la France, folio; Dictionnaire geographique des Gaules et de la France, in six folio vols.; Manuel Geo- graphic, 12mo. ; Topographic de 1'Amiens, 2 vols. 8vo. ; Cosmographie, folio ; Delia casa Milano, 4to. ; and a Tour though England, Scotland, and Ireland. His death took place at the be- ginning of the French Revolution.

EXPIRE', v. a. & v. n.) Fr. expirer ; Ital. EXPIRA'TION, n. s. \espirare; Span, and Port, expirar ; Lat. expirure, i. e. extra spirare (a Gr. ffTratpw) to breathe forth. To breathe out; exhale; hence to close, conclude; and in our old writers, bring to an end : as a neuter verb, to make emission of breath ; breathe the last breath ; conclude ; terminate ; die. Dryden poetically uses it for the action of the ball pro- ceeding out of a gun.

To save his body from the scorching fire, Which he from hellish entrails did expire.

Faerie Queene. All thy praise is vain,

Save what this verse, which never shall expire, Shall to thee purchase. Spenser.

When as time flying with wings swift, Expired had the term that these two javels Should render up a reck'ning of their travels.

Hubb. Tale. A month before

This bond expires, I do expect return Of thrice three times the value of this bond.

Shakfpeare.

The dead man’s knell \& there scarce asked, for whom ; and good mens

lives

Expire before the flowers in their caps, Dying or ere they sicken. «”•

If till the expiration of your month, You will return and sojourn with my sister, Dismissing half your train, come then to me.

Id. King Ltar.

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In all expiration the motion is outwards, and there fore rather driveth away the voice than draweth it.

Bacon’s Nat. fliit.

Ye presbyters, do you feed the flock till God shall design you a bishop. Till then, therefore, it was hut a delegate power, it could not else have expired in the presence of a superiour. Bp. Taylor.

Anatomy exhibits the lungs in a continual motion of inspiring and expiring air. Harvey.

This he did in a fortnight after the expiration of the treaty of Uxbridge. Clarendon.

If the inspiring and expiring organ of any animal be stopt, il suddenly dies. Walton’s Angler.

To satisfy ourselves of its expiration we darkened the room, and in vain endeavoured to discover any spark of fire. Boyle.

This chafed the boar ; his nostrils flames expire, And his red eyeballs roll with living fire. Dryden.

The distance judged for shot of every size, The linstocks touch, the ponderous ball expires ;

The vigorous saamen every port-hole plies, And adds his heart to every gun he fires. Id.

The fluid which is thus secreted, and expired forth along with the air, goes off in insensible parcels.

Woodward.

Of an inflammation of the diaphragm, the symp- toms are a violent fever, and a most exquisite pair: increases upon inspiration ; by which it is distinguished from a pleurisy, in which the greatest pain is in expi- ration. Arbuthnot on Diet.

Words of this sort resemble the wind in fury and impetuousness, in transienmess and sudden expira- tion. Decay of Piety.

For when the fair in all their pride expire, To their first elements the souls retire. Pope.

All to reflourish, fades :

As in a wheel all sinks to reascena : Emblems of man, who passes, not expires. Young. We have heard him breathe the groan of expira- tion. Rambler.

When day, expiring in the west, The curtain draws o' nature's rest, I flee to his arms I lo'e best,

And that's my ain dear Davie. Burns. Burst from each pyramid expiring groans, And darker shadows stretched their lengthened cones, Day after day their deathful rout they steer, Lust in the van, and rapine in the rear. Darwin.

Yet not on thee the fatal meed — Tis I, who caused thy crime should bleed. — On me then, Dian, vent thine ire, And let her crime with me expire. Sheridan.

Fatal passion !

Why dost thou not expire at once in hearts Which thou hast lighted up at once ? Zarina ! I must pay dearly for the desolation Now brought upon thee.

Byron.

And Kaled, though he spoke not, nor withdrew From Lara's face his fixed despairing view, With brow repulsive, and with gesture swift, Flung back the hand which held the sacred gift, As if such but disturbed the expiring man, Nor seemed to know his life but then began. Jd. EXPLAIN', v. a. \ Fr. exptaner ; Ital. EXPLAINABLE, adj. i esplanare ; Span, ex EXPLAIN'ER, n. s. > planar ; Lat. explano, EXPLANATION, I to mak' plain or

EXPLANATORY, adj. J smooth. To expound ; illustrate ; make clear. Explainable is, capable of being made clear. Explainer, an interpreter ; expounder. Explanation, the sense or meaning he gives ; or the act of explaining.

It is symbolically explainable, and implieth purification and cleanness. Browne's Vulgar Erraurs.

Such is the original design, however we may explain it away. Ayliffe's Parergon.

You will have variety of commentators to expla.it the difficult passages to you. Gay.

Some explained the meaning quite away. Pope.

No translation ought to be the ground of criticism, because no man ought to be condemned upon another man's explanation of his meaning . Id.

Before this explanation be condemned, and the bill found upon it, some lawyers should fully inform the jury. Swift.

Had the printer given me notice, I would have printed ths names, and writ explanatory notes. Id.

A vocabulary of the most usual difficult words might be formed for their use, with explanations, and they

might daily get a few of those words and explanations by heart. Franklin.

EX'PLETIVE, n. s. Fr. ejcpletif; Lat. ex- pletivum, ex and pleo, to fill. Something, the chief or only use of which is to fill up a vacancy : particularly applied to redundant words.

Oft the ear the open vowels tire, While expletives their feeble aid do join. Pope.

Expletives, whether words or syllables, are made use of purely to supply a vacancy ; rfo, before verbs plural, is absolutely such ; and future refiners may explode did and does. Id.

These ar : not only useful expletives to matter, but great ornaments of style. Swift.

Was man made only to flutter, sing, and expire ? A mere expletive in the mighty work, the marvellous operations of the Almighty 1 Yowtg.

EXP

Fr. expliquer ; Ital. explicare ; Span, expli- car ; Lat. explico, ex, privative, and plico, to ^knit together. To un- fold ; explain, expand, make clear : explicative is having the tendency

EX'PLICATE, v. a. ^ EXPLICABLE, adj. EXPLICATION, n. s. Ex PLICATIVE, adj. EX'PLICATOR, n. s. EXPLICA'TORY, adj. EXPLI'CIT, adj. EXPLICITLY, adv.

to explain; explication, the act or mode of mak- ing clear : explicit, unfolded ; plain : hence, not obscure or implied.

Many things are needful for explication, and many ior application unto particular occasions. Hooker.

They do not understand that part of Christian phi- losophy which explicates the secret nature of this di- vine sacrament. Taylor.

Although the truths may be elicited and explicated

by the contemplation of animals, yet they are more clearly evidenced in the contemplation of man.

Hale's Origin of Mankind.

Many difficulties, scarce explicable with any certainty, occur in the fabric of human nature. Hale.

No such appearances being otherwise so clearly and cleverly explicable, as by assigning the divine hand for their principal cause. Barrow.

Hereon therefore are grounded those evangelical commands, explicatory of this law as it now standeth in force ; that as we have opportunity we should do good unto all men, especially unto them who are of the household of faith, &c. Id.

Others conceived it much more fit T'unmount the tube, and open it, And, for their private satisfaction, To re-examine the transaction, And after explicate the rest, As they should find cause for the best.

Butler.

Great variety there is in compound bodies, and little many of them seem to be explicable. Boyle.

The last verse of his last satyr is not yet sufficiently explicated. Dryden.

By making an explicit consent of every commoner necessary to any one's appropriating to himself any part of what is given in common, children or servants could not cut the meat, which their father or master had provided for them in common, without assigning to every one his peculiar part. Locke.

These speculations, when most refined, serve only to shew how impossible it is for us to have a clear and explicit notion of that which is infinite.

South's Sermons.

We must lay aside that lazy and fallacious method of

censuring by the lump, and bring things close to explicit proof and evidence. Burnet.

'Tis the substance of this theory I mainly depend upon : many single explications and particularities may be rectified upon further thoughts. Burnet.

This querulous humour carries an implicit repug- nance to God's disposals ; but where it is indulged, it usually is its own expositor, and explicitly avows it. Government of the Tongue. They explicate the leaves and ripen food For the silk labourers of the mulberry wood.

Blackmore.

Allowances are made in the explication of. our Sa- viour's parables, which hold only as to the main scope. Atterbvry.

If the term which is added to the subject of a com- plex proposition be either essential or any way neces- sary to it, then it is called explicative ; for it only ex- plains the subject ; as, every mortal man is a son of Adam. Watts's Logick.

They are plainly and explicitly published ; easily understood ; and in fair and legible characters writ in every man's heart. Mason.

If, therefore, we make Christianity a mystery, we exclude the greater part of mankind from the know- ledge of it ; which is directly contrary to the inten- tion of its Author, as is plain from his explicit and reiterated declarations. Beattie.

EXPLODE' -\ Latin, explode, ex and EXPLO'DER, n. s. {plaudo, to applaud by EXPLO'SION, n. s. {clapping or noise. To EXPLO'SIVE, adj. 3 eject or reject with loud expressions of contempt ; to drive off or away. Explosion is therefore the driving or blowing any thing away with violence.

„ Him old and young

Exploded, and had seized with violent hands, Had not

a cloud descending snatched him thence Unseen amid the throng. Milton's Paradise Lost.

Thus was the applause they meant Turned to exploding hiss, triumph to shame, Cast on themselves from their own mouths.

Milton.

Old age explodes all but morality. Roscommon. Shall that man pass for a proficient in Christ's school, who would have been exploded in the school of Zeno 1 South.

Provided that no word, which a society shall give a sanction to, be antiquated and exploded, they may re- ceive whatever new ones they shall find occasion for.

Swift.

But late the kindled power did explode The massy ball, and the brass tube unload.

Blackmore.

There is pretended, that a magnetical globe or ter- rella, being placed upon its poles, would have a con- stant rotation ; but this is commonly exploded, as be ing against all experience. WUhins.

EXPLOSION.

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These minerals constitute in the earth a kind of natural gunpowder, which takes fire ; and by the assist- ance of its explosive power, renders the shock greater.

Woodward.

Those parts which abound with strata of stone, or marble, making the strongest opposition, are the most furiously shattered ; an event observable not only in this, but all other explosions whatever. Id.

In gunpowder, the charcoal and sulphur easily take fire, and set fire to the nitre ; and the spirit of the nitre being thereby rarified into vapour, rushes out with explosion, after the manner that the vapour of water rushes out of an aeolipile : the sulphur also, being volatile, is converted into vapour, and augments the explosion. Newton's Optichs.

With explosion vast, The thunder raises his tremendous voice.

Thomson.

Has not the Muse asserted pleasures pure, Like those above, exploding other joys ?

Young.

They act like the comedians of a fair before a rio- tous audience ; they act amidst the tumultuous cries of a mixed mob of ferocious men and women lost to shame, who, according to their insolent fancies, direct, control, applaud, explode them ; and sometimes mix and take their seats amongst them ; domineering over them with a strange mixture of servile petulance and proud presumptuous authority. Burke.

EXPLORATOR, a contrivance, invented by Beccaria, consisting of a wire, whose insulated ends, provided with knobs of tin, are fastened to a pole over the chimney, or to the top of a tree. From this wire another leads into a chamber, through a glass tube, covered with sealing-wax, communicating in the chamber with an electro- meter, by which the electricity of the air may be daily observed.

EXPLOSION, in natural philosophy, a sudden and violent expansion of an aerial or other elastic fluid, by which it instantly throws off any ob- stacle, and sometimes with considerable -force.

Explosion differs from expansion, in that the latter is a gradual and continued power, acting uniformly for some time ; whereas the former is always sudden, and only of momentary duration. The expansions of solid substances do not ter- minate in violent explosions, on account of their slowness, and the small space through which the metal, or other expanding substance, moves ; though their strength may be equally great with that of the most active aerial fluids. Thus we find, that though wedges of wood, when wetted, will cleave solid blocks of stone, they never throw them to any distance, as is the case with gunpowder. On the other hand, it is seldom that the expansion of any elastic fluid bursts a solid substance, without throwing the

fragments of it to a considerable distance.

The reasons of the above phenomena are, 1. The immense velocity with which the aerial fltrid* '"xpand, when affected by a considerable degree of heat ; and, 2. Their celerity in &f- quiring heat and being affected by it, whicn is much superior to that of solid substances. Thus air, heated as much as iron when brought to a white heat, is expanded to four times its bulk ; but the metal will not be expanded the 500th part of the space. Tn the case of gunpowder, the velocity with which the flame moves, is cal- culated by Mr. Robins, in his Treatise upon

Gunnery, to be no less than 7000 feet in a se- cond, or nearly seventy-nine miles per minute. Hence, the impulse of the fluid is inconceivably great, and the obstacles on which it strikes are hurried off with vast velocity, though much less than that just mentioned ; for a cannon bullet, with the greatest charge of powder that can be conveniently, given, does not move at a greater rate than 2400 feet per second, or little more than twenty-seven miles per minute. The velo- city of the bullet again is promoted by the sudden propagation of the heat through the whole body of air, as soon as it is extricated from the mate- rials of which the gunpowder is made ; so that it is enabled to strike all at once, and thus greatly to augment the momentum of the ball. It is evident, that this contributes very much to the force of the explosion, by the different result when powder is wetted or mixed with any sub- stance which prevents it from taking fire all at once. In this case, the force of the explosion is vastly inferior to that of dry powder. Upon these principles, we may conclude, that the force of an explosion depends, 1. On the quantity of elastic fluid to be expanded ; 2. On the velocity it 'acquires by a certain degree of heat; and, 3. On the celerity with which the degree of heat affects the whale of the expansible fluid. These three take place in the greatest perfection where the electric fluid is concerned, as in cases of lightning, earthquakes, and volcanoes.

The expansion of the electric fluid is nothing else than its motion from a centre towards a cir- cumference, for it does not seem capable of any proper expansion by a separation of its parts. Hence, when it begins to expand in this manner, the motion is propagated through it with a velo- city far exceeding that of any other fluid what- ever. Thus, even when the quantity is exces- sively small, as when an electric spark is sent through a glass full of water or of oil, the ex- pansion is so violent as to dissipate the glass into innumerable fragments, with great danger to the by-standers. See ELECTRICITY. In vio- lent lightning, where the electric fluid collects itself into balls, the strength of the explosion is proportionable to the quantity. Every one has heard of the prodigious effects of lightning when it strikes buildings, trees, or even the most solid rocks ; and in some cases, where the quantity of electricity is greater than in any flash of light- ning, we hear of still more tremendous conse- quences ensuing. Dr. Priestley gives an instance of a large fire-ball rolling on the surface of the sea, which, after rising up to the top-mast of a ship of war, burst with such violence that the explosion resembled the discharge of hundreds of cannons fired at once. Great damage was done by it ; but there is not the least doubt that most of its force was spent on the air, or carried down to the sea by the mast and iran-work of the ship. Indeed, considering that in all cases a great part of the force of electric explosions is dissipated in this manner, it may justly be doubted, whether they can be measured by any method applicable to the mensuration of other forces. Even in artificial electricity the force is prodigiously great. Dr. Van Marum calcu- lated that of the great battery in Teyler's mu-

seum to be upwards of 900 pounds. In the firing of

gunpowder, the condensed air, he says, is at first of the dephlogisticated kind, but is quickly phlogisticated by the combustible matters mixed with the nitre, while the heat produced by the inflammation augments the elasticity of the generated air to four times what ,it usually is ; so that the whole force of the explosion is calculated at 1000 times the pressure of the atmosphere. See GUNNERY. Even in ordinary ex- periments, the confinement of aerial vapors has often occasioned violent explosions in chemical vessels. In one case too the ex- trication of fixed air adds excessively to the force of an explosion, viz. in that of pulvis ful- minans. This is compounded of sulphur, salt- petre, and salt of tartar. The latter contains much fixed air : and it is probable that the vio- lence of the explosion is occasioned by this air; for the greater quantity of it that the alkaline salt contains, the greater force does it explode with. Fulminating gold emits a quantity of phlogisticated air, to which its explosive power is supposed to be owing ; but that of fulminating silver is so extraordinary, that scarcely any force of aerial vapor that can be extricated seems able to produce it.

Next in strength to the aerial vapor are those of aqueous and other liquids. The most remark- able effects of these are observed in steam en- gines ; but there is one particular case from which it has been inferred, that aqueous steam is vastly stronger than the flame of gunpowder. This is when water is thrown upon melted copper : for here the explosion is so strong as almost to ex- ceed imagination ; and the most terrible acci- dents have been known to happen from such a slight cause, as one of the workmen spitting in the surface where copper was melting. To un- derstand the manner in which this is accom- plished, we must remember that though the air, in cases of ordinary velocity, makes no great re- sistance, it is far otherwise where the velocity of the moving body becomes very great. In all cases of explosion also there is in the first in- stance a vacuum made by the exploding fluid ; and

consequently the weight of the atmosphere is to be overcome, which amounts to about fif- teen pounds on every square inch of surface. Supposing the surface of the exploding fluid, then, on that of melted copper to contain an area of four square inches, it meets with a re- sistance of sixty pounds from the atmosphere, and consequently communicates an equal pres- sure to the fluid metal. Even this must of con- sequence throw it about, unless the same pressure were exactly diffused over every part of the sur- face : but much more must this effect be increased by the immense velocity with which the fluid moves, and by which the resistance of the at- mosphere is augmented in a prodigious de- gree.

The elastic fluid generated is then confined not only by the fluid metal and sides of the furnace, but by the air itself, which cannot get out of the way; so that the whole resembles a cannon closed at the mouth, and filled with inflamed eunpowder. Hence not only the melted mntal, but the furnace itself and the adjacent walls of the building, are hurried off as they would be by

the firing of a great quantity of gunpowder hi a small space. In explaining this phenomenon, Dr. Black supposes that the mere heat of the metal applied to the aqueous steam produces the explosion ; and in proof of this alleges, that copper imbibes a greater quantity of heat during fusion than any other metal. Aqueous steam, however, seems to be too slow for producing such sudden and violent effects. Explosions, it is true, will be occasioned by it, but then it must be continued for a very considerable time : whereas the effects of water thrown upon melted copper are instantaneous. It may now be asked, Why such explosions do not take place with any other metal, iron for instance, when water is thrown upon its surface in fusion? In answer, we must observe, That though water is decomposed by being applied to red hot iron in the form of steam, yet there is a possibility, that when the same element is applied in substance to the fluid metal, no decomposition may ensue. Something like this indeed happens with copper itself; for,

notwithstanding the violent effects which take place on the contact of water in substance with the melted metal, no explosion happens though aqueous steam be blown upon its surface. On the contrary, the upper part of the metal is thus cooled, and forms itself into cakes, which are af- terwards taken off, and new ones formed in the same manner; neither does aqueous steam affect red-hot copper in the manner that it does iron in the same state. A decisive proof that the explo- sion is not occasioned by the mere heat of the aqueous steam, may be deduced from the ex- ample of melted glass, which produces no ex- plosion though we pour water upon it in that state; and yet the heat of melted glass is un- doubtedly equal at least to that of melted copper. It must be observed, however, that, in all cases where a very hot body is thrown upon a small quantity of water in substance, an explosion will follow ; but here the water is confined and sud- denly rarefied into steam, which cannot get away without throwing off the body which confines it. Examples of this kind frequently occur, where masons, or other mechanics, are employed in fastening cramps of iron into stones ; where, if there happens to be a little water in the hole into which the lead is poured, the latter will fly out in such a manner as sometimes to burn them severely. Terrible accidents of this kind have sometimes happened in foundries, when large quantities of melted metal have been poured into wet moulds. In these cases the sudden expan- sion of the aqueous steam has thrown out the metal with violence; and if any decomposition has taken place at the same time, so as to convert the aqueous into an aerial vapor, the explosion must be still greater. To this last kind of ex- plosion we must refer that which takes place on pouring cold water into boiling or burning oil or tallow. Here the case is much the same whe- ther we pour the oil on the water, or the water on the oil. In the former case the water, which lies at the bottom, is rarefied into steam and ex- plodes ; in the latter it sinks down through the oil by its superior specific gravity, and explodes as it passes along. In either case, however, the quantity of aqueous fluid must be

but small in proportion to that of the oil : a very ercat quan-

tity would put out the flame, or destroy the heat, in whatever way we applied it.

Another kind of explosion is that which takes place in solid substances, where we can scarcely suppose either aqueous or aerial vapors to be concerned. The most remarkable of these are the volcanic bombs mentioned by Sir William Hamilton in the great eruption of Vesuvius in

discharge. The reason he gives for this is, that the mixture was not fired at the same instant, but first at the place where the discharge was made. This first explosion would have ac-ied equally upon all parts of the vessel, had it not been for the intervention of the air. By the first momentary explosion, however, the air in the farthest part of the vessel was condensed, so that

1779. They were large pieces of lava which the next explosion was made stronger, while the

burst in pieces like bombs as they fell to the ground; but he does not inform us whether their

copper in the fore part of the vessel had the whole of this strong explosion to resist, the

bursting was attended with any great violence or hinder part being but" little concerned, as the

not. Indeed, amidst such scenes of horror, and tremendous explosions of the volcano, smaller phenomena of this kind would probably be over-

m it was condensed, and reduced almost to a vacuum.

The effects of explosions, when violent, are

looked. ^ Other examples are the glass drops (see felt at a considerable distance, by reason of the RUPERT'S DROPS) ; the bursting of electrical concussions they give to the atmosphere ; for all globes when put in motion ; of other glass ves- sels spontaneously, and seemingly without cause ; and lastly the bursting of large cast metal vessels in the act of cooling. These are all so similar that it is probable they depend on one general cause.

They all agree in this respect, that their extreme unbolted, and one door was burst open, thougl parts are considerably cooled, while the internal remain very hot. Thus, in the volcanic bombs,

of them act upon the atmospherical fluid with the very same force they exert upon terrestrial sub- stances. Sir W. Hamilton relates, that at the explosions of Vesuvius, in 1 766, the doors and windows of the houses of Naples flew open, if

it had been locked. A great quantity of gun- powder being put into the ditch of a fortified

the current of air, formed by their swift passage city, and set on fire, destroyed part of the wall, through it in falling, necessarily carries off a and broke down one of the gates. The blowing great quantity of heat from the parts which are up of powder-magazines, or powder-mills, will

in contact with it, while the rest are scarcely at all cooled. The glass drops are artificially cooled on the outside by dropping them' upon water; and, in consequence of this, their explosion is probably more violent in proportion to their bulk than that of the volcanic bombs. Glass vessels

destroy buildings, and kill people, though beyond the reach of the flame, and untouched by any part of the shattered magazine or mill. But the most curious effect is, that they electrify the air, and even glass windows, at a considerable distance. This is always observed in firing the

only burst spontaneously when they have not guns of the Tower at London ; and some years

been well annealed ; and this bad annealing con- sists only in applying cold too suddenly to the outside. Something like this probably takes place when cast-iron vessels explode ; and we are certain it does so with electrical globes, for these last are not apt to burst if they have been well annealed. In all cases, therefore, there is a remarkable contraction of the outward surface by the cold, while the internal parts remain as much expanded as ever.

A very singular kind of explosion is produced by hydrogenous and oxigenous gas, or inflamma- ble and dephlogisticated air, mixed together, and set on fire. This differs from any of those hitherto considered, because there is an absolute

ago, after an explosion of some powder-mills, a great number of people were alarmed by a rattling and breaking of their china-ware ; which undoubtedly was owing to some commotion in the electrical fluid from the violent concussion of the atmosphere. In this respect, however, the effects of electrical explosions themselves are most remarkable, though not in the uncommon way just ment oned ; but it is certain that the influence of a flash of lightning is diffused a great way round the place where the explosion hap- pens, producing many very perceptible changes both on the animal and vegetable creation ; and, though explosions are sometimes very destruc- tive, they are likewise of considerable use in

condensation rather than an expansion through- life, by removing obstacles which could scarcely out the whole of the operation; and could the be overcome by any mechanical power what- airs be made to take fire throughout their whole ever. The principal of these are the blowing up

substance absolutely at the same instant, there would be no explosion, but only a sudden pro- duction of heat. From this cause is also derived a

very singular phenomenon, taken notice of by Dr. Priestley, in his experiments, recorded in the Philosophical Transactions. Having enclosed several quantities of inflammable and dephlogis- ticated air in a copper vessel, firing them after- wards by the electric sparks, he found that the force of the explosion was directed more towards one part of the vessel than another ; least on

of rocks, the separating of stones in quarries, and other purposes of that kind. For the production of artificial explosions, gunpowder is the only substance that has yet been found to answer; though several attempts have been made to find out a cheap substitute for it. One of the most remarkable of these was by mixing small quan- tities of water enclosed in little bladders, or some easily destructible vehicles, along with a charge of powder. By this contrivance it was hoped, that the water being converted into vapor

that part where the electrical discharge was when the powder was inflamed, would augment made, and most upon that which was farthest the force of the explosion ; but instead of this it from it. This inequality was very considerable ; was found greatly to dimmish it. The reai

insomuch that he could not repeat his experi- ments any number of times without injuring the in that nart which was farthest from the

was, that the conversion of the water into steam reuuired so much of the latent heat of the inflamed gunpowder, that enough was not left to

give the necessary expansion to the aerial fluid produced. A mixture of inflammable and de- phlogisticated air has also been tried, but the explosion here has always been found too weak. In

mines, indeed, very terrible effects are pro- duced by such a mixture, but in these the quan- tity is immense ; so that the comparative weakness of the mixture cannot be discovered.

EXPLOIT, n. s. & v. a. Fr. exploit ; Lat. ex- vletum, a thing accomplished. An achievement; something perfectly done, and with real or sup- posed skill. Camden supplies the only instance of the verb which we have seen.

K no west thou not any whom corrupting gold Would tempt into a close exploit of death ?

Shaktpeare.

He exploited great matters in his own person ia Gallia, and by his son in Spain. Camden.

How shall I relate

To human sense the' invisible exploit* Of warring spirits 1 Milton's Paradise Lost. He breaks fierce Hannibal's insulting heats ; Of which exploit thus our friend Ennius treats.

Denham.

Will you thus dishonour Your past exploit!, and sully all your wars ?

Addison.

The more warlike any people were, the more inde- pendent they became ; and the same persons being both soldiers and subjects, civil privileges and immuni- ties were the consequence of their victories, and the reward of their military exploits.

Robertson's History of Scotland. The' exploit of strength, dexterity, or speed, To him nor vanity iior joy could bring. Beatlie.

EXPLORE', or ^ Fr. explorer ; Lat. ex- EXPLO'RATE, v. a. 1 ploro, ex and ploro (old EXPLORA'TION, n. s.

I Latin),to enquire acutely EXPLORA'TOR, f or diligently. To search;

EXPLOR'ATORY, adj. \ examine ; investigate ; pe-
EXPLORE'MENT,TI.S.J netrate.

Abdiel that sight endured not, where he stood Among the mightiest, bent on highest deeds, And thus his own undaunted heart Arploret. Milton.

Snails extrude their horns, and therewith explorate their way. Browne's Vulgar Errours.

For exact exploration, scales should be suspended where the air is quiet, that, clear of impediments, they may the more freely convert upon their natural verticity. Id.

Divers opinions I have been inclined to question, not only as a naturalist, but as a chymist, whether they be agreeable to true grounds of philosophy, or the exploring experiments of the fire. Boyle.

Use may be made of the like way of exploration in that enquiry which puzzles so many modem naturalist!).

Id. But Capys, and the rest of sounder mind,

The fatal present to the flames designed,

Or to the watery deep •, at least to bore

The hollow sides, and hidden frauds explore.

Dryden's JEneid.

The frustrated search of Porta, upon the explore-
ment of many, could scarce find one. Browne.

The mighty Stagyrite first left the shore, Spread all his sails, and durst the deeps explore ; He steered securely, and discovered far, Led by the light of the Maeonian star. Pope.

Like what we find in microscopical observations on natural objects : the better the glasses, and the

nearer the scrutiny, the more wonders we explore. Mason.

She tells me too, that duly every morn Thou climb'st the mountain top, with eager eye Exploring far and wide the watery waste. For sight of ship from England. Cowper.

On trembling wings let youthful fancy soar, Nor always hunt the sunny realms of joy, But now and then the shades of life explore.

Beattie.

The good explore,

For peace, those realms where guilt can never soar j The proud — the wayward — who have fixed below Their joy — and find this earth enough for woe, Lose in that one their all — perchance a mite — But who in patience parts with all delight ? Byron.

EXPONENT OF A POWER, in arithmetic and algebra, the number which shows how often a given power is to be divided by its root before it be brought down to unity. The exponent of a square number or quantity is 2 ; of a cube 3 ; and so on. Exponents are also now used to* de- note roots, and, like those of the powers, are set above, and somewhat to the right hand of the numbers to which they belong : thus the square, cube, and fourth root of x, are denoted by x? ^,3 r?_

EXPONENTIAL CALCULUS. See CALCULUS.

EXPONENTIAL CURVE is that whose nature is defined or expressed by an exponential equation; as the curve denoted by a*~y, or by jr*— y.

EXPONENTIAL EQUATION is one in which is contained an exponential quantity : as the equa- tion «x ~ b, or .r* — ab, &c.

EXPONENTIAL QUANTITY is that whose power is a variable quantity: as the expression a*, or ar. See FLUXIONS.

EXTORT, v. a. &n.s.^ Fr. exporter; Lat.

EXPORTATION, n. *. > exporto, from ex and

EXPORT'ER. j porto (a Gr. 0oprt£w),

to bear. To carry ; and hence to send from a country: as a substantive, the commodity sent out : the exporter is he who sends goods out of a country : exportation, the act or practice of carrying or sending them out.

Glorious followers taint business for want of secrecy* and export honour from a man, and make him a re- turn in envy. liuc.un.

Money will be melted down or carried away in coin by the exporter, whether the pieces of each species be by the law bigger or less. Locke.

Edward III., by his encouragement of trade, turned the scale so much in favour of English merchandise, that, by a balance of trade taken in his time, the ex- ported commodities amounted to two hundred ninety- four thousand pounds, and the imported but to thirty- eight thousand. Addison's Freeholder.

Great ships brought from the Indies precious wood, and exported pearls and robes. Arbuthnot.

The cause of a kingdom's thriving is fruitfulness of soil to produce necessaries, not only sufficient for the inhabitants, but for exportation into other countries.

Swift.

Hast thou, though suckled at fair Freedom's breast, Exported slavery to the conquered East. Cowper.

EXPOSE',u. a. ~\ Fr. exposer ; Ital. espone,

EXPOSITION, n. s. / esponcre ; Span, exporter ;

EXPOS'ITOR, V Lat. expono, expositum, ex,

EXPOSITORY, ad;, i forth, and puno, to place or

EXPO'SURE. J lay. To lay out or open; to make bare ; to cast out ; hence to make liable, or put in danger : exposition is openness of situa-

tion; explanation; interpretation: expositor, he who expounds or explains : expositive, explana- tory : exposure, the state of being laid open, or being liable to danger or censure; sometimes synonymous with exposition.

A mirth-moving jest,

Which his fair tongue, conceit's expositor, Delivers iu such apt and gracious words, That aged ears play truant at his tales.

Shakspeare. Ajax sets Thersites

To match us in comparisons with dirt j To weaken and discredit our exposure, How hard soever rounded in with danger. Id.

Take physick, Pomp ; Expose thyself to feel what wretches feel, That thou mayest shake the superflux to them, And shew Heaven just. Id. King Lear.

You are a worthy judge ; You know the law : your exposition Hath been most sound.

Id. Merchant of Venice. When we have our naked frailties hid That suffer in exposure, let us meet. Id. Macbeth.

To pass the riper period of his age, Acting his part upon a crowded stage, To lasting toils exposed, and endless cares, To open dangers, and to secret snares. Prior. Water he chuses, clear, light, without taste or smell ; drawn from springs with an easterly exposition.

Arbuthnot.

A fool might once himself alone expose ; Now one in verse makes many more in prose.

Pope.

Your fame and your property suffer alike, you are at once exposed and plundered. Id.

This book may serve as a glossary, or expository index, to the poetical writers. Johnson.

EXPOSING OF CHILDREN, a barbarous custom practised by most ancient nations, excepting the Thebans, who had an express law, whereby it was made capital to expose children, and ordained that such as were not in a condition to educate them, should bring them to the magistrates, to be brought up at the public expense. Among the other Greeks, when a child was born, it was laid on the ground ; and, if the father designed to

Christian modesty teaches a wise man not to expose educate 'his child he immediatel toolc himself to the forest show, and to live at the utmost ^ {f he forbore t() - pitch of his strength. Bp. Hall a Contemplations.

The exposing himself notoriously did change the fortune of the day, when his troops began to give ground. Clarendon.

Who here

Will envy whom the highest place exposes Foremost to stand against the Thundrer's aim ?

Milton. Moral and political aphorisms are seldom couched

away and exposed. The Lacedemonians indeed had a different custom : for with them all new- born children were brought before some of the gravest men in their own tribe, by whom the in- fants were carefully viewed ; and, if they were found lusty and

well-favored, they gave orders for their education, and allotted a certain pro- portion of land for their maintenance; but, if

in such terms, that they should be taken as they weakly or deformed, they ordered them to be

cast into a deep cavern near Mount Taygetus, thinking it neither for the good of the children themselves, nor for the public interest, that such should be brought up. Many exposed their children, only because they were not in a con- dition to educate them, having no intention that they should perish. It was the unhappy fate of daughters especially to be thus treated, as requi- ring more to educate and settle them in the world than sons. The parents frequently tied jewels and rings to the children they exposed, whereby they might afterwards discover them, if Providence should preserve them ; as well as to encourage such as found them, to nourish and educate them, if alive ; or to give them burial, if dead. The places where it was usual to expose children, were those most frequented, that they might be found, and taken up by compassionate persons, who were able to be at the expense of their education. Thus the Egyptians and Ro- mans chose the banks of rivers ; and Greeks the highways.

EXPOSTULATE, v. n.~\ Lat. expostulo ;
EXPOSTULA'TION, n. s. {ex, expletive and
EXPOSTULA'TOR, i postulo, to desire or

EXPOSTULA'TORY, adj. J entreat. To argue or debate with another, as distinguished from coming to an open rupture.

More bitterly could I expostulate, Save that for reverence of some alive I give a sparing limit to my tongue.

Skahspeare.

The emperor's ambassador did expostulate with the king, that he had broken his league with the emperor

Hayward.

sound precisely, or according to the widest extent of signification ; but do commonly need expotition and exception. Barrow.

In the picture of Abraham's sacrificing his son, Isaac is described as a little boy, which is not con- sentaneous unto the authority of expositors. Browne. But still he held his purpose to depart ;

For as he loved her equal to his life,

He would not to the seas expose his wife. Dryden,

I have sometimes very boldly made such exposi- tions of my authors, as no commentator will forgive me. Id.

Like Horace, you only expose the follies of men, without arraigning their vices.

Id. Juvenal. Dedication.

Those who seek truth only, freely expose their principles to the test, and are pleased to have them examined. Locke.

A father, unnaturally careless of his child, gives him to another man ; and he again exposes him : a third man finding him, breeds up and provides for him as his own. Id.

Scholiasts, those copious expositors of places, pour out a vain overflow of learning on passages plain and easy. Id.

The sinner's conscience is the best expositor of the mind of God, under any judgment or affliction.

South's Sermons.

He that wants good sense is unhappy in having learning, for he has thereby only more ways of ex- posing himself. Taller.

Tully has justly exposed a precept, that a man should live with his friend in such a manner that if

he became his enemy, it should not be in his power to hurt him. Addison's Spectator.

A little wit is equally capable of exposing a beauty, and of aggravating a fault. Id.

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He that expostulated with God to have Israel live an'1 prosper, why should he deface the rule of their lifi, in the keeping whereof they should prosper?

lip. Hall's Contemplations.

St. Paul rationally expottvlatet in the priest's be- half. Barrow.

It is madness for friendless and unarmed inno- cence to expostulate with invincible power.

I/Estrange.

This fable is a kind of an expostulatory debate be- tween Bounty and Ingratitude. Id. Durst I expostulate with Providence, I then might It. Cotton.

This makes her bleeding patients to accuse High Heaven, and these expostulations use ; Could Nature then no private woman grace, Whom we might dare to love with such a face ?

Waller.

Expostulation is a private accusation of one friend touching another, supposed not to have dealt singly or considerately in the course of good friendship.

Ayliffe.

It is likewise with much satisfaction, that I find some of the most outlying parts of the kingdom alarmed upon this occasion, having received letters

to expostulate with me about it from several of my readers. Spectator.

Expostulations end well between lovers, but ill between friends. Id.

The bishop will expostulate, and the tenant will have regard to the reasonableness of the demand.

Swift.

It was an unpardonable omission to proceed so far as I have already done, before I had performed the due discourses, expostulatory , supplicatory or deprccacatory with my good lords the criticks. Id.

EXPOUND', v. a. ? Lat. exponere ; ex, forth,
EXPOUND'ER, n.s. $ and pono, to place. See EXPOSE.
To open ; make clear ; explain.

He expounded unto them in all the Scriptures the things concerning himself. Luke xxiv. 27.

We cannot better interpret the meaning of those •words than pope Leo himself expounded them, whose speech, concerning our Lord's ascension, may serve instead of a marginal gloss. Hooker.

This they did partly as faithful witnesses ; making a mere relation of what God himself had revealed unto them ; and partly as careful expounders, teachers, and persuaders thereof. Id.

This by Calphurnia's dream is signified. — And this way you have well expounded it.

Shakspeare.

Those right holy fathers; as in matters of faith they did not make truth, Lut religiously expounded it; so, in matters of ecclesiastical government, they did not create provinces, but ordered the countries which they tben had. Raleigh.

The best he was, And faithfullest expounder of the laws.

Dryden's Juvenal. He expounded both his pockets. And found a watch with rings and lockets.

Hudibras.

Or heard we that tremendous bray alone, I could expound the melancholy tone ; Should deem it by our old companion made. The ass; for he, we know, has lately strayed, And being lost perhaps, and wandering wide. Might be supposed to clamour for a guide.

t'l'M'/'flf .

EXPRESS', v. a., adj. 8c n. s.^\ Fr. exprimer ;
EXPRESS'IBLE, adj. Ital. esprimere ;

EXPRESS'ION, n. s. Span, and Port.

EXPRESS'IVE, adj. espremir ; Latin

EXPRESS'IVELY, adv. fexprimere, ex-

EXPRESS'IVENESS, n. *. pressus ; ex and

EXPRESS'LY, adv. premo, to press.

EXPRESS'NESS, n. s. To press out :

EXPRESS'URE. J hence to bring

out in representation ; to copy ; show ; make known; utter: as an adjective, express signi- fies closely resembling ; plain ; apparent ; exactly alike ; on purpose : as a substantive, a represen- tation by sculpture ; a messenger purposely sent ; a message sent ; a plain declaration : expressible, is capable of being drawn out by pressure, or capable of being uttered or declared : expression, the act of squeezing out by pressure, or the act or mode of explaining any thing: expressive, having the power of uttering or explaining ; em- phatic : expressly, in direct terms, as distin- guished from implication ; particularly : ex- pressness, the power of expression, with which last form of this root expressure is an old sy- nonyme.

Moses and Aaron took these men expressed by their names. Numb. i. 17.

There is not any positive law of men, whether general or particular, received by formal express con- sent, as in councils ; or by secret approbation ; but the same may be taken away, if occasion serves.

Hooker.

Articles of belief, and things which all men must do, to the end they may be saved, are either expressly set down in Scripture, or else plainly thereby to be gathered. Id.

What a piece of work is man ! How noble in rea- son 1 how infinite in faculties '. in form, and moving, how express and admirable. Shakspeare.

Who dare cross 'em,

Bearing the king's will from his mouth expressly ?

Id. There is a mystery in the soul of state,

Which hath an operation more divine.

Than breath or pen can give expressure to. Id.

Among the watery juices of fruit are all the fruits out of which drink is expressed ; as the grape and the apple. Bacon.

Those juices that are so fleshy, as they cannot make drink by expression, yet may make drink by mixture of water. Id.

Art did express

A quintessence even from nothingness, From dull privatives and lean emptiness.

Donne.

Halters and racks cannot express from thee More than thy deeds : 'tis only judgment waits thee.

Ben Jonson.

All the gazers on the skies, Read not in fair heaven's story Expresser truth, or truer glory, Than they might in her bright eyes. Id.

I am content my heart should be discovered to the world, without any of those popular captations which some men use in their speeches and expresses.

King Chariet.

The king sent an express immediately to the mar- quis, with all the particular information. Clarendon.

Of his presence many a sign Still following thee, still compassing thee round

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With goodness and paternal love, his face Express, and of his steps the track divine.

Milton.

Less than half we find exprett, Envy bid conceal the rest. Id.

As to the testimonies of the fathers, let them be never so express against all sorts of prayers and in- vocations, they hold only of such a sort of prayer.

Stillingfleei.

The beginning of the worship of images in these •western parts was, by the folly and superstition of the people, expressly against the will of their own bishop.

Id.

There is nothing comparable to the variety of in- structive expressions by speech, wherewith a man

alone is endowed, as with an instrument suitable to the ex- cellency of his soul, for the communication of his thoughts. Holder on Speech.

So kids and whelps their sires and dams express, And so the great I measured by the less. Dryden.

Adorn a dream expressing human form, The shape of him who suffered in the storm. Id. As if expresses from all parts had come, With fresh alarms threatening the fate of Rome.

Id. Juvenal.

In moral ideas we have no sensible marks that re- semble them, whereby we can set them down ; we Save nothing but words to express them by. Locke.

Where reason or scripture is express for any opinion, or action, we may receive it as of divine authority.

Id.

But ill expression sometimes give allay To noble thoughts, whose flame shall ne'er decay.

Buckingham.

Each verse so swells expressive of her woes, And every tear in lines so mournful flows, We, spite of fame, her fate reversed believe, O'erlook her crimes, and think she ought to live !

Tickell.

The murrain has all the expressiveness that words can give ; it was here that Virgil strained hard to outdo Lucretius. Addisrm.

No longer shall thy bodice aptly lace, That air and shape of harmony express, Fine by degrees, and delicately less. Prior. To shed tears, among the ancients, when they should express their gratitude to the gods with joy was esteemed a profanation. Broome.

The poet, to reconcile Helen to his reader, brings her in as a penitent, condemning her own infidelity in very strong expresnons. Id.

They had not only a memory and tradition of it in general, but even of several particular accidents of it likewise, which they handed downwards to the succeeding ages, with notes of the greatest terror expres- sible. Woodward's Natural History.

Each skilful artist shall express thy form In animated gold.

Smith's Phaedra and Hippolitus. They who are not induced to believe and live as they ought by those discoveries which God hath made in Scripture, would stand out against any evidence what- soever ; even that of a messenger sent express from the other world. Atterbury.

This account I expressly give of them, when I enter on the argument. Id.

The juices of the leaves are obtained by expression: from this juice proceeds the taste.

Arbuthnot.

All the duties that the best political laws enjoin, as conducive to the quiet and order of social life, are expressly commanded by our religion. Rogers.

A visible and exemplary obedience to God's laws .5 the most expressive acknowledgment of the majesty

and sovereignty of God, and disposes others to glorify him by the same observances. Id.

Mr. Philips did express himself with much indignation against me one evening. Pope.

True wit is nature to advantage drest. What oft was thought, but ne'er so well expreit.

Id.

And four fair queens, whose hands sustain a flower, The expressive emblem of their softer power. Id.

Upon the first moment I was discovered, the em- peror had early notice of it by an express.

Gulliver's Travels.

I love to feel myself of an express and settled judg- ment and affection in things of the greatest moment. More's Div. Dial.

It is usually said by grammarians, that the use of language is to express our wants and desires ; but men who know the world hold, and I think with some show of reason, that he who best knows how to keep his necessities private, is the most likely person to have them redressed ; and that the true use of speech is not so much to express our wants as to conceal them.

Goldsmith.

How she caught the contagion, I cannot tell : you medical people talk much of infection from breathing the same air, the touch, &c. ; but I never expressly said I loved her. Burns.

Genteel in figure, easy in address, Moves without noise, and swift as an express, Reports a message with a pleasing grace, Expert in all the duties of his place. Cowper. The wildest irregularity appears in its composition : the expression is warlike and melancholy, and ap- proaches even to the terrible. Beattie.

But in his delicate form, a dream of love, Shaped by some solitary nymph, whose breast Longed for a deathless lover from above, 4nd maddened in that vision, are exprett.

Byron.

EXPRESSION, in painting, a natural and lively representation of the subject, or objects intended to be shown. It consists chiefly in representing the

human body and all its parts, in the action suitable to it; in exhibiting, in the face, the seve- ral passions proper to the figures, and observing the motions they impress on the external parts. Expression, according to Le Brun, is a lively and natural resemblance of the objects which are re- presented. In every part of painting it is a ne- cessary component, and no picture can be perfect without it, as by it the true characters of things are described. Expression distinguishes the different natures of bodies, makes the figures ap- pear to have motion, and gives to every thing imitated a degree of reality. It is to be observed in the coloring as well as in the design, and in the representation of landscapes as well as in the general composition of figures. Every substance, whether animate or inanimate, is capable of ex- pression : and the skilful painter exhibits the hardness of one substance, and the softness of another, smoothness or roughness, dryness or moisture, clearness or opaqueness, &c., in cha- racters which it is impossible to mistake. Ex- pression being, therefore, a representation of things according to their character, may be con- sidered either with regard to the subject in ge- neral, or to the passions relative to it. With respect to the subject, it is particularly requisite that all and every part of the composition should be so adapted to the general character of the

subjects that they should conspire to impress at the same moment one distinct sentiment or idea. Thus for example, in a picture designed to give the representation of a joyful or peaceful event, every object that is introduced should be of a pleasing or tranquil kind ; and if the subject be taken from history, its particular nature and cha- racter must be diffused through every part of the work ; but, wherever any circumstance occurs which counteracts or diminishes the general sen- timen* raised by the event represented, the inser- tion of such

circumstance will, proportionably to its magnitude, destroy the general expression of the picture. For the purpose of diversifying and giving variety to the expression, extraneous inci- dents are sometimes introduced ; but they ought to be neither contrary to the truth of the history, nor to the principal design of the subject. Whatever is the general character of the subject, whether serene, joyous, melancholy, grave, solemn, or terrible, the picture should discover that character to the first glance of the spectator. The nativity of our Saviour, his crucifixion, inter- ment, resurrection,and ascension, should eachihave their distinguishing characteristics, and that as much in the general hue of the picture, the ac- cessory ornaments, back ground, &c., as by the action of the figures. In viewing some of the finest religious subjects of the Italian school, senti- ments of awe and devotion have been often ex- perienced to be amongst the first impressions made on the spectator, previous to his examina- tion of the particular actions or countenances of the figures, and therefore evidently produced by the general distribution of the composition, or the general tone of the coloring. In the academic discourses of Sir Joshua Reynolds, the works of Ludovico Caracci are justly celebrated for their powerful effect in the latter respect. But, in the power of distinct, peculiar, and appropriate ex- pression, no one has ever excelled Raphael, and scarcely one has equalled him. In the admira- ble cartoon by him, of St. Paul preaching at Athens, the expression of the whole work is just and strong. The dignified air of the apostle impresses the spectator with reverence. His ac- tion is awful and authoritative without excess or extravagance : it is an action which assures us that he who uses it speaks with a power of conviction. The different sentiments of his au- dience are exhibited with equal skill and judg- ment. Some appear angry, some malicious, some attentive, some reasoning within themselves on his doctrine, some disputing their truth, and some convinced. Even the back ground has its meaning; and contributes to the demonstration or expression of that superstition, against which the

inspired orator directed his eloquence. Cer- tain minor circumstances frequently contribute to the expression of the general subject; and of these Raphael avails himself as much, if not more, than any other painter. In the cartoon of the apostles healing at the beautiful gate of the temple, the burning lamps have the effect of ex- pressing not only the holy uses, but the magnifi- cence of the building in which they are sus- pended. The expression of character is much aided by the robes or other habits of the figures, their attendants, their ensigns of authority,

crowns, maces, swords; or, in humble life, their various implements of labor, crooks, scythes, &c. Raphael, in the cartoon of the people of Lycao- nia about to offer sacrifices to St. Paul and Bar- nabas, has shown the cause of their offerings by adventitious figures. In the fore-ground, the man who had been healed of lameness by those apostles, is the most eager to express his sense of the miraculous power exercised by them, and the individuality of this character is marked not only by a crutch on the ground under his feet, but by the more singular circumstance of an old man taking up the skirt of his garment, looking on the limb which he may be supposed to have remembered in its former crippled state, and ex- pressing his admiration and devotion. Such also was the much admired artifice of the Greek painter Timanthas, to express the prodigious bulk of a cyclops. Around the sleeping mon- ster he placed several satyrs, supposed to be of the ordinary size of the human form, one of whom was measuring the thumb of the giant with his thyrsus, apparently with great caution, lest he should awake ; others were running away, as if frightened ; others gazing on him from a dis- tance, not daring to approach him. Another ar- tificial mode of expression, practised by painters, is the use of allegorical figures, representative of certain points of the subject. This art has also been derived from the ancients, who have left abundant examples of it; such as in the has re- liefs of the Antonine column at Rome, where the

figure of Jupiter Pulvius is introduced to ex- press the rain which fell when the Roman army was preserved by the prayers of the Theban le- gion ; Raphael, in this manner, has personified the river Jordan in his design of the children of Israel crossing that river, and has represented him as pushing back and restraining the course of the waters with his arm.

EX'PROBRATE, v. a. I Lat. exprobro ; from

EXPROBRA'TION, n. s. Sprobrum, deformity. To charge reproachfully ; to upbraid.

To exprobrate their stupidity, he induces the providence of storks ; now, if the bird had been unknown, the illustration had been obscure, and the exprobration not so proper. Brown.

The goodness we glory in, is to find out somewhat whereby we 'may judge others to be ungodly : each other's faults we observe as matter of exprobration, not of grief. Hooker.

When retaliations of vengeance are ministered, extorting confessions like to that of Adoni-bezek; deserving such exprobrations as that of Samuel to Agag.

Barrow. No need such boasts, or exprobratioru false

Of cowardice : the military mound

The British files transcend in evil hour

For their proud foes. Philips.

It will be a denial with scorn, with a taunting exprobration ; and to be miserable without commiseration, is the height of misery. South's Sermon*.

The Parthians, with exprobration of Crassus's thirst after money, poured gold into his mouth after he was dead. Abbot.

EXPRO'PRIATE, v. a. Lat. ex and proprius. To make no

longer our own ; to hold no longer as a property. Not in use.

When you have resigned, or rather consigned, your expropriated will to God, and thereby entrusted him

to will for you, all his dispensations towards you are, in effect, the acts of your own will.

Boyle's Seraphick Love.

EXPU'GN, v. a. i Lat. expugno. To EXPUGNA'TION, n. s. 5 conquer ; to take by as- sault; figuratively, to prevail with: conquest.

The exvugnation of Vienna he could never accom- plish. Sandyi.

All (the ten lepers) cried together : these ten voices were united in one sound ; that their conjoined forces might expugn that gracious ear. Bp. Hall,

EXPULSE', v. a. ^ Fr. expulser ; Lat. expul-
EXPUL'SION, n. s. >sus; to drive out ; the old
EXPUL'SIVE, adj. j antithesis of REPULSE, which see : expulsion is the act of expelling, or the state of being expelled : expulsive, having the power to expel.

For ever should they be crpulted from France, And not have title of an earldom there.

Shakspeare. A wooer,

More hateful than the foul expulsion is, Of thy dear husband. Id. Cymbeline.

To what end had the angel been sent to keep the entrance into Paradise, after Adam's expulsion, if the universe had been Paradise ? Raleigh's History.

Suppose a nation where the custom were, that after full age the sons should expulse their fathers and

mo- thers out of possessions, and put them to their pen- sions. Bacon's Holy War.

Sole victor from the expulsion of his foes, Messiah his triumphal chariot turned. Milton. -nwardly received, it may be very diuretick, and expulse the stone in the kidneys. Browne.

Others think it possible so to contrive several pieces of steel and a load-stone, that, by their conti- nual attraction and expulsion of one another, they may cause a perpetual revolution of a wheel.

Wilkint's. Daedalus.

This magnificent temple was not finished till after the expulsion of Tarquin. Stilling fleet.

Dictys relates, that Peleus was expulsed from his kingdom by Acastus. Broome.

Coffee-coloured urine proceeds from a mixture of a small quantity of blood with the urine ; but often prognosticates a resolution of the obstructing matter, and the expulsion of gravel or a stone. Arbuthnot.

If the member be dependent, by raising of it up, and placing it equal with, or higher than the rest of the body, the influx may be restrained, and the part strengthened by expulsive bandages. Wiseman.

EXPUNGE', v. a. \ Lat. expungo, perhaps EXPUNC'TION, n. s.) from ex negative, and pin- go, to paint ? pungo signifying to prick. To blot out or erase ; efface ; annihilate : expunction is ihe act of effacing or blotting out.

Wilt thou not to a broken heart dispense The balm of mercy, and expunge the offence ?

Sandys.

•This work will ask many more officials, to make expurgations and expunctions, that the commonwealth of learning be not damnified. Milton.

A succession of new and fresh benefits should not (as among some savages the manner is for the young to mak<- away the old) supplant and expunge ancient ones, but make them rather more dear and venerable to us. Barrow.

The difference of the denarius and drachm having been done in the manuscript, it was needless to ex- punge it. Arbuthnot.

Deduct what is but vanity, or dress, Or learning's luxury, or idleness,

Or tricks to shew the stretch of human brain

Mere curious pleasure, or ingenious pain ;

Expunge the whole, or lop the' excrescent parts

Of all, our vices have created arts :

Then see how little the remaining sum,

Which serve the past, and must the times to come.

Pope.

Neither do they remember the many alterations, additions, and expungings made by great authors in those treatises which they prepare for the publick.

Swift.

EXPUR'GE, v. a. \ Lat. expurgatio, expur EXPUR'GATE, v. a. I go; i. e. ex expletive, EXPURGA'TION, n. s. > and purgo to cleanse ; EXPURGA'TOR, i fiompurum ago, to make ExpuR'GATORY,o$../pure. To purify; cla- rify; expunge : an expurgator is one who cor- rects by expunging : expurgatory, purifying or cleansing from noxious matter.

The council of Trent, and the Spanish inquisition, ingendering together, brought forth or perfected

those catalogues and expurging indexes that rake through the entrails of many an old good author. Milton.

They may well be allowed an expurgator.

Lord Dig by.

There want expurgatory animadversions, whereby we might strike out great numbers of hidden qualities ; and having once a conceded list, we might with more safety attempt their reasons. Browne.

Wise men know, that arts and learning want ex- purgation ; and, if the course of truth be permitted to itself, it cannot escape many errours. Id.

All the intestines, but especially the great onei, kidneys and ureters, serve for expurgation.

Wiseman.

Juan was taught from out the best edition, Expurgated by learned men, who place, Judiciously from out the school-boy's vision,

The grosser parts ; but fearful to deface Too much their modest bard by this omission,

And pitying sore his mutilated case, They only add them all in an appendix, Which saves, in fact, Jhe trouble of an index.

Byron.

EX'QUISITE, adj. ^ Fr. exquis; Span.

EX'QUISITELY, adv. >and Port, exquisito ;

EX'QUISITENESS, n. s. J Ital. esquisito ; Latin, cxquisitus, sought after, from the verb exquiro, i. e. ex emphatic, and quozro to seek, from Heb. «"lp, he calls. Far-sought ; excellent ; consum- mate (whether in a good or bad sense) ; deeply felt.

His absolute exactness they imitate by tending unto that which is most exquisite in every particular.

Hooker.

We see more exquisitely with one eye shut than with both open ; for that the spirits visual unite them- selves, and become stronger. Bacon's Nat. Hist.

Why should the state be troubled with this needless charge of keeping and maintaining so great a navy in such exquisite perfection and readiness ? Raleigh.

A collection of rare manuscripts, exquisitely written in Arabick, and sought in the most remote parts by Erpenius, the most excellent linguist. Wotton.

With exquisite malice they have mixed the gall and vinegar of falsity and contempt. King Charles.

We suppose the superficies of the two glasses should be so exactly flat and smooth, that no air at all can come between them ; and experience has informed os, that it is extremely difficult to procure from our or- dinary tradesmen either glasses or marbles so much as approaching such an exquiyitenesi. Boyle.

EXS

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EXT

The soldier then, in Grecian arts unskilled. Returning rich with plunder from the field, If cups of silver or of gold be brought. With jewels set, and exquisitely wrought, To glorious trappings straight the plate he turned, And with the glittering spoil his horse adorned.

Drydnn.

The poetry of operas is generally as exquisitely 11 as the music is good. Addison on Italy.

Adam and Eve, before the fall, were a different species ; and none but a poet of the most unbounded invention, and the most exquisite judgment, could

have fitted their conversation and behaviour to their state of innocence. Adduon.

The pleasures of sense are probably relished by beasts in a more exquisite degree than they are by men ; for they taste them sincere and pure, without being distracted in the pursuit, or disquieted in the use of them. Atterbvry's Sermons.

The scales of the scarf-skin hinder objects from making too painful and exquisite an impression on the nerves. Cheyne.

From it (marriage) are derived those exquisite joys or sorrows, which can embitter all the pleasures, or alleviate all the pains in human life.

Robertton't Sermons.

If we all adopted their sentiments to a man, their allies, the savage Indians, could not be more ferocious than they are ; they could not murder one more help- less woman or child, or, with more exquisite refinements of cruelty, torment one more of their English flesh and and blood than they do already. Burke.

And 'twas but justice that the swain For whom so many sighed in vain, Should feel how exquinte the smart, That rankles in a lover's heart. Sheridan.

The ruling passion, such as marble shows

When exquisitely chisseled, still lay there, But fixed as marble's unchanged aspect throws O'er the fair Venus, but for ever fair. Byron.

EXSIC'CATE, v. a. ~\ Lat. exsicco, from ex

ElSIc'CANT

EXSICCA'TION

EXSIC'CATIVE. are, having the quality or power to dry up

That which is concreted by exsiccation, or expression of humidity, will be resolved by humectation ; as earth, dirt, and clay. Browne.

If in a dissolution of steel a separation of parts be made by precipitation, or exhalation, the exsiccated power ascends not unto the loadstone. Id.

Great heats and droughts exsiccate and waste the moisture and vegetative nature of the earth.

Mortimer's Husbandry.

Some are moderately moist, and require to be treated with medicines of the like nature, such as fleshy parts ; others dry in themselves, yet require ex- siccants, as bones. Wiseman.

EXSU'CTION, n. $. Lat. exugo. The act of sucking out, or draining out, without immediate contact of the power of sucking with the thing sucked.

If you open the valve, and force up the sucker, af- ter this first exiuction, you will drive out almost a whole cylinder full of air. Boyle.

EXSUDE', v. a. J Lat. exudo. To ex-

EXSUDA'TION, n. s. Mil; proceed out of, like perspiration: a sweating out; an extillation; an emission.

They seemed to be made by an exsudation, or extil- lation of some petrifying juices out of the rocky earth.

Derham^

KSIC'CATE, v. a. \ Lat. exsicco, from ex CSIC'CANT, adv. (and sicctu ; Heb. Pin*, ISICCA'TION, n. s. I dry. To dry. Exsic CSIC'CATIVE, adj. J cant and exsiccative

In the cavern at Colebrook Dale, where the mine- ral tar exmd.es, the eyes of the horse, which was drawing a cart from within towards the mouth of it,

appeared like two balls of phosphorus, when he was above 100 yards off, and for a long time before any other part of the animal was visible. Darwin.

There are many other vegetable exsudations used in the various arts of dyeing, varnishing, tanning, lac- quering, and which supply the shop of the druggist with medicines and with poisons. Id.

EXSUFFLATION, n. s. Lat. ex and sufflo. A blast working underneath.

Of volatility, the most degree is when it will fly away without returning : the next Is when it will fly up, but with ease return : the next is when it will fly upwards over the helm, by a kind of exsufllation, without vapouring. Bacon.

EXSU'FFOLATE, v. «. [a word peculiar to Shakspeare]. To whisper; to buzz in the ear: from the Italian verb suffblar.

Exchange me for a goat, When I shall turn the business of my soul To such extuffolate and blown surmises.

Shakspeare.

EXTANT7, adj.) Lat. extans, i. e. ear, forth.
EXTAN'CY, n. s. J and stans, standing. Stand ing out, or forth ; public : hence modern, out • standing in point of time.

They (the ways of truth) are extant in God's word, there written as with a sunbeam, so perspicuously expressed, so frequently inculcated, that, without gross negligence or strange dullness, we cannot but descry them. Barrow.

The order of the little extancies and consequently that of the little depressions, will be altered likewise.

Boyle on Colours.

The first of the continued weekly bills of

mortality, extant at the parish clerks' hall, begins the twenty- ninth of December 1603. Graunt.

That part of the teeth which is extant above the gums is naked, and not invested with that sensible membrane called periosteum, wherewith the other bones are covered. Ray.

If a body have part of it extant, and part of it immersed in fluid, then so much of the fluid as is equal in bulk to the immersed part shall be equal in gravity to the whole. Bentley.

The Library of the Faculty of Advocates at Edinburgh, contains not only a large collection of original papers relating to the affairs of Scotland, but copies of others no less curious, which have been preserved by Sir Robert Cotton, or are extant in the public offices in England. Rabertson. Preface to History of England. Linnaeus, who thinks that all the plants now extant arose from the conjunction and reproduction of about sixty different vegetables, from which he constitutes his natural orders. Darwin.

EXTASY, w. s.) Now written ECSTASY ; EXTATIC', adj. > which see. Rapturous pas- EXTAT'ICAL. J sion : rapt ; absorbed.

She thus resolved that whilst the gods Were troubled, and amongst themselves at odds Before they could new counsels reallie, To set upon them in that extasie, And take what fortune, time, and place, would lend. Spenser. Faerie Quecne.

I find in me a great deal of extatical love, which continually carries me to do good without myself.

Boyle.

In trance extatic may thy pangs be drowned, Bright clouds descend, and angels watch thee round.

Pope.

EXT

Lat. extemporalis, from ex, out, and temporis,

i time. Without | premeditation ; prompt ; ready : extemporanean, extemporaneous,

EXTEM'PORAL,

EXTEM'PORALLY,

EXTEMPORA'NEAN, ad;. I tempus EXTEMPORA'NEOUS, EXTEM'PORARY, EXTEM'PORE, adv. EXTEM'PORINESS, n.s. EXTEM'PORIZE, v. n.

and extemporary have also this sense. Extem- pore, and extemporally, mean suddenly; readily ; without previous time for meditation : extempo- riness is the faculty of speaking, or acting, with- out premeditation ; or the state of being unpre- meditated : to extemporise is to speak extempore. Alcidimus the sophister hath arguments to prove, that voluntary and extemporal far excelleth preme- ditated speech. Hooker.

The quick comedians Extemporally will stage us, and present Our Alexandrian revels.

Shakspeare. Anthony and Cleopatra. You may do it extempore : for it is but roaring.

Shakspeare.

A man of pleasant and popular conversation, of good extemporal judgment and discourse, for the satis- fying of publick ministers. Wotton.

Many foolish things fall from wise men, if they speak in haste or be extemporal. Ben Jonson.

That men should confer at very distant removes by an extemporary intercourse, is another reputed impossi- bility. Glanville.

Hast thou no mark at which to bend thy bow Or, like

a boy, pursuest the carrion crow With pellets and with stones from tree to tree, A fruitless toil, and livest extempore? Dryden.

The extemporixing faculty is never more out of its element than in the pulpit ; though even here, it is much more excusable in a sermon than in a prayer.

South's Sermons.

Nothing great ought to be ventured upon without preparation ; but, above all, how sottish is it to en- gage extempore, where the concern is eternity. South.

I have known a woman branch out into a long ex- tempore dissertation upon a petticoat. Addison.

This custom was begun by our ancestors out of an ambition of shewing their extemporary ability of speaking upon any subject. Mote't Divine Dialogues.

They write in so diminutive a manner, with such frequent interlineations, that they are hardly able to go on without perpetual hesitations, or extemporary expletives. Swift.

Infected persons fly each public place And none, or enemies alone, embrace. To the foul fiend their every passions sold, They love and hate, extempore, for gold. Young.

He patronised the Improvisator!, Nay, could himself extemporise some stanzas.

Byron.

EXTENLY, v. a. &v.n. ^ Fr. extendre ; EXTES DER, n. s. Ital. extendere ;

EXTENSIBLE, adj. \ Span, and Port.

EXTEND'LESSNESS, n. t. i extender ; Lat.
EXTENSIBILITY, extendere, exten-

EXTEN'SIBLE, adj. sus, from 'ex and

EXTEN’SIBLENESS, n. s. \tendo ; Or. nivw, EXTENSION, MO stretch. To

EXTENSIONAL, adj. spread, or stretch

EXTEN’SIVE, out; elongate;

EXTENSIVELY, adv. amplify; expand;

EXTEN’SIVENESS, n. s. diffuse; enlarge;

EXTENSOR, and, figuratively

EXTENT’, n. s. St. part. adj. _

to impart, or

communicate. In a legal sense, to seize by course of law, i. e. with a view to obtain the full and extended value : an extender is a person or thing by which any thing is extended or moved ; and extensor is the name of that muscle of any limb which performs this office. Extendible and extensible mean capable of expansion or elonga- tion ; liable to legal seizure : extendlessness, unlimited extension : extensibility and extensi- bleness, the quality or capacity of being extended. Extension is the state of being extended, or state of extending : extensional and extensive, drawn out; of great extent; wide; large: extent is used by Spenser as a participial adjective ; and as a substantive, it signifies the place or time between certain points of extension or expansion ; com- pass; bulk; size; measure; length; communi- cation; legal seizure.

Let there be none to extend mercy unto him.

Psalms. My goodness ertendeth not to thee. Id.

Both his hands most filthy feculent, Above the water were on high extent, And fained to wash themselves incessantly.

Spenser.

Seeing it is not set down how far the bounds of his

speech concerning dissimilitude reach, who can assure us that it extendeth farther than to those things only wherein the nations were idolatrous ? Hooker.

An emperour of Rome,

Troubled, confronted thus, and for the extent, Of equal justice used with such contempt.

Shakspeare.

If much you note him,

You shall offend him, and extend his passion : Feed and regard him not. Id. Macbeth.

Let my officers

Make an extent upon his house and land, And turn him going. Id. As You Like It.

The hiccough cometh of fulness of meat, especially in children, which causeth an extension of the stomach.

Bacon.

It is sufferable in any to use what liberty they list in their own manner of writing ; but the contracting and extending the lines and sense of others would ap- pear a thankless office. Wotton.

If I mean to reign

David's true heir, and his full sceptre sway To just extent over all Israel's sons. Milton.

The serpent, subtlest beast of all the field, Of huge extent sometimes. Id.

Certain moleculse seminales must keep the world from an infinitude and extendlessness of excursions every moment into new figures and animals. Hale.

The law, that settles all you do, And marries where you did but woo ; And if it judge upon your side,

Will soon extend her for your bride ; And put her person, goods, or lands, Or which you like best, int' your hands.

Hudibras.

All rest satisfied at the postures of moderation, and none endure the extremity of flexure or extension.

Browne.

The eyes of Tobit, carrying in themselves some action of their own, were additionally promoted by that power which can extend their natures into production of effects, beyond created efficiencies.

Id. Vulgar Errours.

That love is blind, is extensible beyond the object of poetry. Glanville.

Silver beaters chuse the finest coin, as that which is most extensive under the hammer. Boyle.

EXT

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EXT

The mallcous being fixed to an extensible membrane, follows the traction of the muscle, and is drawn inward. Holder,

See the figure of his lifeless friend, And his old sire, his helpless hand extend.

Dryden.

The bigness of such a church ought to be no greater than that unto which the voice of a preacher of a middling lungs can easily extend. Graunt.

He much magnifies the capacity of his understanding, who persuades himself that he can extend his thoughts farther than God exists, or imagine any ex-

pansion where he is not. Locke,

By this idea of solidity is the extension of body distinguished from the extension of space : the exten- sion of body being nothing but the cohesion or con- tinuity of solid, separable, moveable parts ; and the extension of space, the continuity of unsolid, insepa- rable, and immoveable parts. //(/.

We take notice of the wonderful dilatibility or ex- tensiveness of the throats and gullets of serpents : I myself have taken two entire adult mice out of the stomach of an adder, whose neck was not bigger than my little finger. Ray on the Creation.

In what manner they are mixed, so as to give a fibre extensibility, who can say ? Grew's Cos. Sacra.

This foundation of the earth upon the waters, or extension of it above the waters, doth agree to the an- tediluvian earth. Burnet.

Discretion has large and extended views, and, like a well-formed eye, commands a whole horizon — is the perfection of reason, and a guide to us in all the duties of life. Addison.

As we have reason to admire the excellency of this contrivance, so have we to applaud the extensiveness of the benefit. Government of the Tongue.

The mind, say they, while you sustain To hold her station in the brain ; You grant, at least she is extended, Ergo the whole dispute is ended. Prior.

Civil people had the flexors of their head very strong ; but in the insolent there was a great overba- lance of strength in the extensors of the neck.

Arbuthnot and Pope's Mart. Scrib.

Tubes, recently made of fluids, are easily length- ened ; such as have often suffered force, grow rigid, and hardly extendible. Arbuthnot.

The extension made, the extenders are to be loosened gently. Wiseman.

Extensors are muscles so called, which serve to extend any part. Quincy.

You run into these extensional phantasms, which I look upon as contemptuously, as upon the quick wrigglings up and down of pismires. More.

To Helen's bed the gods alone assign

Hermione t' extend the legal line.

Pope's Odyssey. Should'ring God's altar a vile image stands,

Belies his features, and extends his hands. Pope.

All are but parts of one stupendous whole, Whose body Nature is, and God the soul : That changed through all, and yet in all the same, Great in the earth, as in the ethereal frame, — Lives through all life, extends through all extent, Spreads undivided, operates unspent. Id.

I would not be understood to recommend to all a pursuit of those sciences, to those extensive lengths to which the moderns have advanced them. Watts.

An extensiveness of understanding and a large memory are of service. Id. Logick.

Tis impossible for any to pass a right judgment concerning them, without entering into most of these circumstances, and surveying them extensively, and comparing and balancing them all aright. Watts.

His descriptions of extended scenes and general effects bring before us the whole magnificence of nature, whether pleasing or dreadful. Johnson.

— And where yon oak extends his dusky shoots Wide o'er the rill that bubbles from his roots.

Darwin.

Extensive empires have a tendency to become des-
potical : for the sovereign must keep a great
military force, which makes him, if not strictly
limited by law, master of the lives and fortunes of
his people.

Beattie.

'Tis said the lion will turn and flee, From a maid
in the pride of her purity, And the power on high,
that can shield the good Thus from the tyrant of the
wood, Hath extended its mercy to guard me as well
From the hands of the leaguering infidel.

Byron. Siege of Corinth. Tis the perception of the
beautiful,

A fine extension of the faculties, Platonic,
universal, wonderful,

Drawn from the stars, and filtered through the

skies, Without which life would be extremely dull.

Byron.

Her graceful arms in meekness bending Across her
gently budding breast, At one kind word those arms
extending To clasp the neck of him who blest His
child caressing and carest, Zuleika came — and
Giaffir felt His purpose half within him melt. Id.

EXTEN'UATE, v. a. & adj. 3 Fr. extenuer ;

EXTENUA'TION, n. s. Jltal. estenuare ;

Lat. extenuare, i. e. ex and tenuo, from tennis,
slender. To make thin, or rare, as opposed to dense
; to diminish ; lessen ; palliate ; degrade. The
substantive follows all these senses.

When you shall these unlucky deeds relate. Speak of
me, as I am : nothing extenuate, Nor set down ought
in malice.

Shakspeare. Othello. To persist

In doing wrong, extenuates not wrong, But makes it much more heavy. Shakspeare. Upon his examination he denied little of that wherewith he was charged, nor endeavoured much to excuse or extenuate his fault ; so that, not very wisely, thinking to make his offence less by confession, he made it enough for condemnation. Bacon.

The race of all things here is to extenuate and turn things to be more pneumatical and rare, and not to retrograde from pneumatical to that which is dense.

Id.

Righteous are thy decrees on all thy works ; Who can extenuate thee ? Milton's Par. Lost.

Yet hear me, Sampson, not that I endeavour To lessen or extenuate my offence. Milton.

So far is evil from being extenuated by the multitude of the guilty, that nothing can more aggravate it. Bp. Hall's Contemplations.

A third sort of marasmus is an extenuation of the body, caused through an immoderate heat and dryness of the parts. Harvey.

But fortune there extenuates the crime ; What's vice in me, is only mirth in him.

Dryden.

His body behind his head becomes broad, from whence it is again extenuated all the way to the tail.

Grew's Museum.

If it be said that Swift should have checked a passion which he never meant to gratify, recourse must

oe had to that extenuation which he so much despised, ' men are but men/ Johnson's Life of Swift

EXTE'RIOR, adj. & n. s. i Fr. exterieur ;
EXTE'RIORLY, adv. \ Lat. exterior, com-

parative degree of extents, foreign. Outward ; external.

You have slandered nature in my form ; Which, howsoever rude exteriorly, Is yet the cover of a fairer mind, Than to be butcher of an innocent child .

Shakspeare.

And what is faith, love, virtue unessayed Alone, without exterior help sustained ? Milton. Seraphick and common lovers behold exterior beau- ties, as children and astronomers consider Galileo's optick glasses. Boyle.

As to honour and reverence, it is plain, that no ex- terior signification, in ceremonious unveiling or cring- ing to them, can so demonstrate it, as doth the wishing them well in our hearts, and from thence framing particular addresses to the divine Majesty for their welfare. Barrow.

Farther, blacker and merrier, are words which, to- gether with the thing they denominate, imply also something else separate and exterior to the existence of that thing. Locke.

EXTER'MINE, v. a.-\ Fr. exierminer ; Lat.
EXTERMINATE,^ a. / extermino : i.e. extra
EXTERMINATION, n.s. tterminum, beyond a
EXTER'MINATOR. J boundary. Todestroy; drive away; root out; abolish.

If you do sorrow at my grief in love, By giving love, your sorrow and my grief Were both extermined.

Shakspeare. As You Like It.

The question is, how far an holy war is to be pur- sued, whether to displanting and extermination of peo- ple ? Bacon.

Alexander left Grecian colonies in the Indies ; but they were exterminated by Sandrocothus.

Arbuthnot on Coins.

This discovery alone is sufficient, if the vices of men did not captivate their reason, to explode and extermi- nate rank atheism out of the world. Bentley.

Unlucky vices, on which the exterminating lot hap- pened to fall. Decay of Piety.

They did not exterminate the ancient inhabitants of the countries they subdued ; but, seizing the greater part of their lands, they took their persons under pro- tection. Robertson's History of Scotland,

Methinks the gentleman, quoth she, Opposite in the apple-tree, By his good will would keep us single Till yonder heaven and earth shall mingle, Or (which is likelier to befall) Till death exterminate us all. Cowper.

If we escaped not, if Heaven spared not us, Peeled, scattered, and exterminated thus ; If Vice received her retribution due, When we were visited, what hope for you? Id. Prone on their routed rear the cranes descend , Their bills bite furious, and their taloms rend : With unrelenting ire they urge the chase. Sworn to exterminate the hated race. Beattie.

EXTERN', adj. ^ Fr. externe; Lat. exter- EXTER'NAI, >nus (ab extents). Out-

EXTER'KALLY, adv. j ward; visible; pertaining to the exterior; extrinsic; not inherent.

When my outward action doth demonstrate The native act and figure of my heart In compliment extern, 'tis not long after But I will wear my heart upon my sleeve For daws to peck at. Bhakipeare. Othello.

The exterior ministry, externally and alone, hath m it nothing excellent, as being destitute of the sanctity that God requires,. and it is common to wicked men and good. Taylor.

Our inward disposition is the life of our actions • ac- cording to that doth the God of spirits judge us, while men censure according to our external motions.

Bp. Hall's Contemplation!.

When two bodies are pressed one against another, the rare body not being so able to resist division as the dense, and being not permitted to retire back, by rea- son of the extern violence impelling it, the parts of the rare body must be severed. Digby.

We come to be assured that there is such a being, either by an internal impression of the notion of a God upon our minds, or else by such external and visible effects as our reason tells us must be attributed to some cause, and which we cannot attribute to any other, but such as we conceive God to be. Tillotson.

He that commits only the external act of idolatry is as guilty as he that commits the external act of theft.

Stillingjleet.

Sleep; without dreaming, is rest from all these ; and dreaming itself is the having of ideas (whilst the outward senses are stopped, so that they receive not outward objects with their usual quickness) in the mind, not suggested by any external objects, or known occasion, nor under any choice or conduct of the un- derstanding at all. Locke.

Adam was then no less glorious in his externals : he had a beautiful body as well as an- immortal soul.

South.

Shells, being exposed loose upon the surface of the

earth, to the injuries of weather, to be trod upon by horses and other cattle, and to many other external accidents, are, in tract of time, broken to pieces.

Woodward.

For they can command nothing but what is external : but God, who knows and looks at the hearts of all his creatures, will accept of nothing but what comes from thence. Mason.

EXTI'L, v. n. 1 Lat. ex and stillo, to
EXTILLA'TION,W.S. J drop. To drop or distil

from ; the act of falling in drops.

They seemod made by an exsudation or extillation

of putrify ing juices out of the rocky earth.

Derham's Physico-Theology.

EXTI'MULATE, v. a.) Lat. extimulo. To

EXTIMULA'TION, n. s. J prick; to incite by stimulation : pungency.

Choler is one excretion whereby nature excludeth another, which, descending into the bowels, extimulates and excites them unto expulsion. Browne.

The native spirits admit great diversity ; as, hot, cold, active, dull, &c., whence proceed most of the virtues of bodies ; but the air intermixed is without virtues, and maketh things insipid, and without any ex/imulation. Bacon's Natural History.

EXTINGUISH, v. a. ^ Lat. extinguo, from EXTINCT', adj. ex and stinguo (a Gr.

EXTINCTION, n. s. (EXTIN'GUISHER, n.s. out light; suppress; EXTINGUISHMENT. J destroy: extinct is, quenched ; put out ; defunct.

My days are extinct. J°b'

They are extinct, quenched as tow. Isaiah.

Divine laws of Christian church polity may not be altered by extinguishment. Hooker.

Bethink thee on her virtues that surmount, Her uat'ral graces that extinguish art. Shakspeare

The immediate cause of death is the resolution or extinguishment of the spirits.

Bacon's Natural Hittory.

They extinguish the love of the people to the young king, by remembering some imperfections of his father.

Hayward.

When death's form appears, she feareth not An utter quenching or extinguishment ;

She would be glad to meet with such a lot, That so she might all future ill prevent. Daviei. Red-hot needles or wires, extinguished in quick- silver, do yet acquire a verticity according to the laws «f position and extinction. Browne's Vulgar Errourt.

The parts are consumed through extinction of their native heat, and dissipation of their radical moisture.

Harvey.

My fame of chastity, by which the skies I reacht before, by thee extinguished dies.

Denham.

Heaping on wood, or too many sticks, or too close together, suppresses, and sometimes quite

extinguishes a little spark, that would otherwise have grown up to a noble flame. Sir W. Temple.

The royal family is all extinct, And she who reigns bestows her crown on me.

Dryden.

The soft god of pleasure that warmed our desires, Has broken his bow, and extinguished his fires. Id.

Of it a broad extinguisher he makes, And hoods the flames. Id.

Tis better to cover the vital flame with an extin- ffuulter of honour, than let it consume till it burns Blue, and lies agonizing within the socket. Collier.

A. censure inflicted a jure continues, though such law be extinct, or the lawgiver removed from his office. Ayliffe.

The extinction of nations, and the desolation of kingdoms, were but the effects of this destructive evil.

Roger's Sermons.

If it should ever offer to flame out again, I would use the conicum as an extinguisher to smother it.

More's Divine Dialogues.

Their purple vengeance bathed in gore retires, - Her weapons blunted, and extinct her fires. Pope.

Then rose the seed of chaos and of night, To blot out order and extinguish light. Id.

The nobility are never likely to be extinct, because the greatest part of their titles descend to heirs gene- ral. Swift.

They lie in dead oblivion, losing half The fleeting moments of too short a life, Total extinction of the' enlighted soul.

Thomson.

Religion should extinguish strife, And make a calm of human life ;

Bat friends that chance to differ On points which God has left at large, How freely will they meet and charge !

No combatants are stiffer. Cowper.

Tis strange — of yore its welcome seldom failed, Nor now, perchance, extinguished, only veiled.

Byron.

EXTINGUISHMENT, Lat. extinguo. The ex- tinction or annihilation of a right, estate, &c., by means of its being merged in, or consoli- dated with, another, generally a greater or more extensive, right or estate. Wherever a right, title, or interest is destroyed, or taken away by the act of God, operation of law, or act of the party, this in many books is called an extinguish- ment. Co. Litt. 147, b. 1 Ro. Abr. 993. It is of various natures, as applied to various rights; viz. estates, commons, debts, ways, &c.

1 . If a man hath a yearly rent out of lands, and afterwards purchases the lands whereout it ariseth, so that he hath as good an estate in the land as in the rent : now both the property and rent are consolidated or united in one possessor; and therefore the rent is said to be extinguished. Also where a person has a lease for years, and afterwards buys the property ; this is a consoli- dation of the property and fruits, and an extin- guishment of the lease : but if a man have an estate in the land but for life or years, and hath a higher estate as a fee-simple, in the rent ; the rent is not extinguished, but in suspense for a time ; for after the term, the rent shall revive. Termes de Ley Extinguishment of a rent is a destroying of the rent by purchase of the land ; for no one can have a rent going out of his own land : though a person must

have as high an es- tate in the land, as in the rent, or the rent will not be extinct. Co. Litt. 147. When a lessor enters tortiously upon the lessee against his con- sent, the rent is extinguished ; 2 Lev. 143. But it has been adjudged, that rent is not extinct by the entry of the lessor, but only suspended ; and revives by the lessee's re-entry; Dyer 361. An infant has a rent, and purchases the land out of which it is issuing; by this the rent will be sus- pended, but not extinct ; Bro. Extinguish. A man lessee for years takes a wife, or woman lessee a husband, that hath the reversion after the lease; here the term is not extinguished.

2. By purchasing lands wherein a person hath common appendant, the common is extinguished; Cro. Eliz. 594. A commoner releases his com- mon in one acre, it is an extinguishment of the whole common : Show. Rep. 350. And where a person hath common of vicinage, if he en- closes any part of the land, all the common is extinct; 1 Brownl. 174. But if one hath com- mon appendant in a great waste, belonging to his tenant, and the lord improve part of the waste leaving sufficient ; if he after make a feoff- ment to the commoner of the land improved, this will be no extinguishment.

3. If a feme sole debtee take the debtor to husband ; or there be two joint obligors in a bond, and the obligee marries one of them ; or in case a person is" bound to a feme sole and another, and she takes the obligor to husband ; in these cases the debt will be extinguished ; 8 Rep. 136. And if a debtor makes the debtee his executor, or him and another executors, and they take the executorship upon them ; or if the deb- tee makes his debtor executor, &c., it is an ex- tinguishment of the debt, and it shall never re- vive; Plowd. 184. 1 Salk. 304. But where a debtee or debtor executor legally refuseth ; or he and others being made executors they all refuse, then the debt is revived again. Plowd. 185. It is agreed as a general rule, that a creditor's ac- cepting a higher security than he had before, is an extinguishment of the first debt; as if a cre- ditor by simple contract accepts an obligation, this

extinguishes the simple contract debt. So if a man accepts a bond for a legacy, he cannot after sue for his legacy in the spiritual court; for by the deed the legacy is extinct and it is become a mere debt at common law. And if a bond creditor obtain judgment on his bond, or has

judgment acknowledged to him, he cannot after- Thus hath he deluded many nations unto h,» *„. wards bring an action on the bond, for the debt gurial and extupicious inventions, from casual ana un- is extinguished in the judgment; but these cases contrived contingencies, divining events succeeding.

must be understood where the debtor himself enters into these securities ; and therefore if a stranger give bond for a simple contract due by another, this does not extinguish the simple con- up tract debt; but if, upon making the contract, a stranger gives bond for it, or being present pro- mises to give bond for it, and afterwards does so,

Browne's Vulgar Erruurs.

EXTOL', r. a.) Fr. (old) extolkr ; Ital. EXTOL'LER, n. s. Sestollere; Lat. extollo, to lift To exalt by praise ; magnify ; applaud. Extol him that rideth upon the heavens.

Psalmi. When a rich man speaketh, every man holdeth his

the debt by simple contract is extinguished, the tonBue > and look. what he aaith they extol it to the - 1 1 • . • i • • ' - clouds.

obligation being made upon, or pursuant to the contract. 2 Leon. 110.

But the accepting a security of an inferior na- ture

is by no means an extinguishment of the first debt ; as if a bond be given in satisfaction of a judgment. Also the accepting a security of equal degree is no extinguishment of the first debt; as where an obligee has a second bond given to him ; for one deed cannot determine the duty upon another. Cro. Eliz. 304, 716, 727. 1 Brownl. 74.

4. If a man hath a highway as appendant, and after purchases the land wherein this way is, the way is extinct. Termes de Ley. Though a way of necessity to market or church, or to arable

Eccles. xii..

Extolleri of the pope's supremacy. Bacon. Heaven and earth shall high extol Thy praises with the' innumerable sound Of hymns and sacred songs, wherewith thy throne Encompassed shall resound thee ever blessed.

Milton,

Many are the sayings of the wise, fn ancient and in modern books enrolled, Extolling patience as the truest fortitude. Id.

Let Araby extol her happy coast, Her cinnamon and sweet amomum boast.

Dryden.

Cowards extol true courage to the skies, And fools are still more forward to advise.

Congreve. Praise never gives us much pleasure unless it con-

1 j o • . • i 1 i i f, * »«**av u^Tti givca ua muni pleasure uuicaU II con-

land &C., is not extinguished by purchase of cur with our own opinion, and e^oZ us for those qua-

ground or unity of possession.

EXTIRP′, v. a. \ Fr. extirper ; Lat. ex EXTIR′PATE, v. a. >tirpo, from ex out of, and EXTJRPA′TION, n. s. j stirps, stirpis, a root. To

root out ; to exscind ; to destroy : extirpation is

the act of rooting out, &c.

Which to extirp he laid him privily Down in a darksome lowly place far in.

Faerie Queene.

It is said that popery, for want of utter extirpation, hath in some places taken root and flourished again.

Hooker.

Nor shall that nation boast it so with us, But be extirped from our provinces. Shakspeare. It doth notably set forth the consent of all nations and ages, in the approbation of the extirpating and debellating of giants, monsters, and foreign tyrants, not only as lawful, but as meritorious even of divine honour ; and this, although the deliverer came from the one end of the world unto the other. Bacon.

Religion requires the extirpation of all those passions and vices which render men unsociable and trouble- some to one another. Tillotson.

Now that from the practice of religion, and from it alone, such inward content and pleasure do spring ; that it extirpateth the ground and roots of discontent.

Barrow.

The rebels were grown so strong, that they made account spetdily to extirpate the British nation in thai kingdom. Dryden.

We in vain endeavour to drive the wolf from our own to another′s door ; the breed ought to be extir-

pated out of the island. Locke.

It is not the business of virtue to extirpate the af- fections, but to regulate them. Addiaon'i Spectator.

Obstinate against all the endeavours employed by their Divine Lawgiver to repress or extirpate it, this superstitious spirit broke out on every occasion.

Robertson's Sermont.

EXTISPI'CIOUS, adj. Lat. extispicium, i. e. exta inspicere, to inspect the entrails. Augurial ; relating to the inspection of entrails in order to prognostication.

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lilies in which we chiefly excel. Hume.

Pure is the nymph, though liberal of her smiles, And chaste, though unconfined, whom I extol. Not as the prince in Shushan, when he called, Vainglorious of her charms, his Vashti forth To grace the full pavilion. Cotcper.

EXTORT' v. a., v. n. & part. adj.~^ Fr. ex-
EXTORT'ER, n. s. I torquer ;

EXTOR'TION, vital, estor-

EXTOR'TIONER, i quere ; Sp.

EXTOR'TJOUS, adj. j extorier,

estorcer; Lat. extorquere, extortus, from e.r and torqueo, to twist ; distort. To wring, wrest, or draw, by force : hence to obtain by violence or oppression : as a neuter verb to practice oppres- sion. Spenser uses extort as a participial adjec- tive : extorter and extortioner are synonymous : extortious is oppressive; unjust; violent.

Nor thieves, nor covetous, nor drunkards, nor

revilers, nor extortioners, shall inherit the kingdom of God. 1 Cor. vi. 10

He is, said he, a man of great defence, Expert in battell and in deedes of armes, And more emboldened by the wicked charmes With which his daughter doth him still support, Having great lordships got, and goodly farmes, Through strong oppression of his power extort.

Spenser. Faerie Quiene.

To whom they never gave any penny of entertain- ment, but let them feed upon the countries, and extort upon all men where they come. Spenter.

His tail was stretched out in wonderous length, That to the house of heavenly gods it raught,

And with extorted power and borrowed strength, The ever-burning lamps from thence it brought. Id.

Till the injurious Roman did extort This tribute from us, we were free. Shakspeare. Are my chest* filled up with extorted gold ? Id.

That goodness

Of gleaning all the lands wealth into one, Into your own hands, cardinal, by extortion. Id. Edric, the extorter, was deprived by king Canute of the government of Mercia. Camden's Remains.

There will be always murderers, and adulterers, extortioners, church-robbers, traitors, and other rabble- nient. Lamden.

Before they did extort and oppress the people only by colour of a lewd custom, they did afterwards use

the same extortions by warrant. Davies on Ireland.

Oppression and extortion did maintain the greatness, and oppression and extortion did extinguish the great- ness of that house. Id.

A succeeding king's just recovery of rights from un- just usurpations and extortions, shall never be preju- diced by any act of mine. King Cliarles.

That glory never shall his wrath or might Extort from me, to bow and sue for grace With suppliant knee, and deify his power. Milton. Some things God allows in judgment ; their impor- tunity and distrust extorted from God this occasion of their overthrow. Bp. Hall's Contemplations .

We do well to curb the extortions cruelties of some, the corrupt wresting of justice in others. Bp. Hall.

The excellency of God's nature doth justly re- quire honour and reverence to him; his sovereign power may also reasonably extort obedience from us.

Barrow.

Piety removeth extortion and cozenage out of trade.

Id.

An epicure hath some reason, and an extortioner is a man of wisdom if compared to him (a swearer), for they enjoy some pleasure, or acquire some gain here, in lieu of their salvation hereafter. . Id.

I remember well the impious oath,

Hardly extorted from my trembling youth. Rotee.

My earnest desires, not any doubts of your goodness, but my real concern for your welfare, extort this from me. Wake.

The covetous extortioner is involved in the same sentence. Decay of Piety.

The temple and its holy rites profaned

By mummeries he that dwelt in it disdained ;

Uplifted hands, that at convenient times,

Could act extortion and the worst of crimes.

Cowper.

— So erst when Jove his oath extorted mourned. And clad in glory to the fair returned. Darwin.

The drawing of one metal or mineral out of another, we call extracting. Id. Physical Remains.

Although the charge of extraction should exceed the worth, at least it will discover nature and possibi- lity. Bacon. I will present a few extracts out of authors.

Camden.

The distillations of waters, extractions of oils, and such lite experiments were unknown to the ancients.

Hakewill.

A family of an ancient extraction, transported with the Conqueror out of Normandy. Clarendon.

I now see

Bone of my bone, flesh of my flesh, myself Before me : woman is her name, of man Extracted. Milton's Paradise Lost.

One whose extraction's from an ancient line. Gives hope again that well-born men may shine ; The meanest in your nature mild and good, The noble rest secured in your blood. Waller. In tinctures, if the superfluous spirit of wine be dis- tilled off, it leaves at the bottom that thicker sub- stance, which chemists call the extract of the vege- tables Boyle.

Tb . apostle gives it a value suitable to its extract, brar jing it with the most ignominious imputation of foo' .shness. South.

ihese waters were extracted, and laid upon the s irface of the ground. Burnet's Theory of the Earth.

To dip our tongues in gall, to have nothing in our mouth but the extract and exhalation of our inward bitterness, is no great sensuality.

Government of the Tongue.

The pert, the talkative, all such as have no sense of the observation of others, are certainly of

foreign extraction. Steele.

It would not defray the charge and labour of the extraction, and must needs be all irretrievably lost.

Woodward's Natural History. They

Whom sunny Borneo bears, are stored with streams Egregious, rum and rice's spirit extract. Philips.

To see how this case is represented, I have ex- tracted out of that pamphlet a few notorious false- hoods. Swift.

i- Spend some hours every day in readme, and

EXTORTION, in law, includes the exaction ^ '___£

making extracts, if your memory be weak. Id.

O remember thy heavenly extract; remember thou art a spirit. Mason.

In these discourses several things seemed strained

of unlawful usury, winning by unlawful games, and taking more than is due under pretence of right. It is punishable by fine and imprison- ment; and by 3 Eliz. I. c. 30. it is enacted, that and fanciful; but herein he folfowed entirely the officers of justice guilty of it shall render to the manner of the earlier Fathers, from whom the great- party treble value. There are also other statutes est part of his divinity is not so much imitated as for punishing extortions of sheriffs, gaolers, extracted. Burke. clerks, attorneys, solicitors, &c. EXTRADICTIONARY, adj. Lat. extra and

EXTRACT, v. a. & n. s. } Fr. extraire ; dictio. Not consisting in words but realities.

EXTRACTION, n.s. >It. estrarre; Span. of extradictionary and real fallacies, Aristotle and

EXTRACT'OR. j extraer • Lat ex- logicians make six ;

but we observe men are com-

traho, extractum ; ex and traho, to draw. To draw monlv de<*ived by four thereof. Browne.

out or select from ; the substance or thing drawn EXTRAJUDI'CIAL, adj. > Lat. extra and out or selected : extraction is the act of drawing EXTRAJUDI'CIALLY, adv. Sjudicium. Out of

out, or separating the parts of a compound, che- the regular course of legal procedure, mically or otherwise ; derivation ; lineage : ex- The confirmation of an election, though done by a

tractor the person, or thing, by whkh an extrac- previous citation of all persons concerned, may be

tion is performed. sa*d to be done extrajudiciully, when opposition ensues

Out of the ashes of all plants they extract a salt thereuP°n-

which they use in medicines.

Bacon's Natural History.

Some books may be read by extracts made of them by others, but only in the less important arguments, and the meaner books ; else distilled books are like common distilled waters, flashy things.

Bacon's Essays.

A declaratory or extrajudicial absolution is conferred in foro penitentiali. Id. Parergon.

EXTRAMI'SSION, n. s. Lat. extra and mitto. The act of emitting outwards ; opposite to intromission.

Aristotle, Alhazen, and others, hold that sight is by reception, and not by estramission ; by receiving

EXT

the

ing an;

EXTRAMUNDA'NE, adj. Lat. extra and mundus. Beyond the verge of the material world.

'Tis a philosophy that gives the exactest topography of the extramundane spaces. Glanville's Scepsit.

Say at what point of space Jehovah dropped His slackened line, and laid his balance by j Weighed worlds, and measured infinite no more? Where rears his terminating pillar high Its extramundane head I Young.

EXTRA'NEOUS, adj. Lat. extraneus. Not belonging to a thing; foreign; of different sub- stance; extrinsic.

Relation is not contained in the real existence of things, but something extraneous and superinduced.

Locke.

When the mind refers any of its ideas to any thin°- extraneout to them, they are then called true or false"

Id.

Gold, when equally pure, and freed from extra- neous matter, is absolutely alike in colour, consistence, specific gravity, and all other respects. Woodward. Until you nearly trod on them, and then

You started back in horror to survey The wondrous hideousness of those small men,

Whose colour was not black, nor white, nor grey, But an extraneous mixture, which no pen Can trace, although perhaps the pencil may.

Byron.

EXTRAORDINARY, adj. & adv.) Lat. ex-

EXTRAOR'DINARILY, adv. J traordina-

rius, from extra and ordo, ordinis, a rank. Out of the common order or method ; hence emi- nent, remarkable ; used both in a good and bad sense. The use of extraordinary, as an adverb, is only bad, however.

Evils must be judged inevitable, if there be no ap- parent ordinary way to avoid them ; because where council and advice bear rule of God's extraordinary power, without extraordinary warrant, we cannot pre- sume. Hooker.

In the affairs which were not determinable one way or other by the Scripture, himself gave an extraordi- nary direction and counsel, as oft as they sought it at his hands. Id.

Spain had no wars save those which were grown into an ordinary : now they have coupled therewith the extraordinary of the Valteline ana the Palatinate.

Bacon.

In government it is good to use men of one rank equally ; for to countenance some extraordinarily, is to make them insolent, and the rest discontent. Id.

See what extraordinary armies have been trans- mitted thither, and what ordinary forces maintained there. Davies.

It will be better for a man who is doubtful of his pay to take au ordinary silver piece with its due stamp upon it, than an extraordinary gilded piece which may perchance contain a baser metal under it. Herbert.

\ithout the sovereign influence of God's extraordi- nary and immediate grace, men do very rarely put off nil the trappings of their pride, till they who are about them put on their winding sheet. Clarendon.

True wisdom is a thing veiy extraordinary. Happy are

they that have it : and next to them, not those many that think they have it, but those few that are sensible of their own defects and imperfections, and know that they have it not. Tillotson.

, not

,,,, T ,. Sidney.

I he Indians worshipped rivers, fountains, rocks or great stones, and all things which seemed to have something extraordinary in them. Stillingfleet

I had rather see some women praised extraordinarily, than any of them suffer detraction. Dryden

He quotes me right ; and I hope all his quotations, wherein he is so extraordinarily copious and elaborate are so.

Huwel.

The temple of Solomon was a type, and therefore was so extraordinarily magnificent ; otherwise perhaps a cheaper structure might have been as serviceable. Wilkint't Mathematical Maqick.

I chuse some few either for the extraordinarinets of their guilt, or the frequency of their practice.

Government of the Tongue.

The excellent Mr. Boyle was the person who seems to have been designed by nature to succeed to the labours and inquiries of that extraordinary genius I have just mentioned. Spectator.

I ran over their cabinet of medals, but don't remember to have met with any things in it that are extraordinary rare. Addison.

But we should not judge of ourselves by that which is unusual or extraordinary with us. Mason.

We know nothing, or next to nothing, of the substance or structure of our souls, so cannot account

for those seeming caprices in them, that one should be particularly pleased with this thing, or struck with that, which, on minds of a different cast, makes no extraordinary impression. Burns.

CHARLES S. And there are two brothers of his, William and Walter Blunt, Esqrs. both members of parliament, and noted speechers, and what's very ex- believe, this is the first time they were

EXTRAPARO'CHIAL, adj. Lat. extra and

EXTRAPROVIN'CIAL, adj. Lat^raand provincia. Not within the same province ; not within the jurisdiction of the same archbishop.

An extraprovincial citation is not valid, ultra duas difetas, above two days' journey : nor is a citation valid that contains many conditions manifestly incon- venient. Ayliffe's Parergon.

EXTRAREG'ULAR, adj. Lat. extra and regula. Not comprehended within a rule.

His providence is extraregular , and produces strange things beyond common rules : and he led Israel through a sea, and made a rock pour forth water.

Taylor's Rule of Living Holy.

EXTRAVAGANCE, or ^ Old Fr. extra- EXTRAV'AGANCY, n. s. I vagance,extrava- EXTRAV'AG ANT, adj. & n. s. 1 gant ; Ital.es/ra- EXTRAV'AGANTLY, adv. | vagante ; Span. EXTRAV'AGATE, v. n. and Port, extra-

EXTRAV'AGATION, n. s. j vagante ; Lat ex- travagans, extravagantis, extra and vagor, vagari, to wander. Transgression of due bounds; ec- centricity; irregularity: hence excessive expense; waste. Extravagant, as a substantive, means a stroller, one who confines himself to no regular occupation or rule of life. To extravagate is to wander out of limits.

At this warning

The extravagant and erring spirit hies To his confine. Shahnpeare. Hamlet.

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I have troubled you loo far with this extravagance : I shall make no delay to recall myself into the road

again.

Hammond.

For a dance the.y seemed

Somewhat extravagant and wild.

Milton's Paradise Lost. Folly, as it grows in years. The more extravagant appears. Butler.

With what hope of success, in his forlorn habit, shall he adventure to check the vicious extravagances of a ruffling gallant. Barrow.

How many, by the wild fury and extravagancy of their own passions, have put their bodies into a com- bustion, and, by stirring up their rage against others, have armed that fierce humour against themselves.

Tillotson.

In tragedy, the poet who flourished in the scene, is damned in the ruelle ; nay more, is not esteemed a good poet, by those who see and hear his extrava- gances with delight. They are a sort of stately fus- tian and lofty childishness. Nothing but nature can give a sincere pleasure : where that is not imitated, 'tis grotesque painting ; the fine woman ends in a fish's tail. Dryden.

I dare not ask for what you would not grant : But

wishes, madam, are extravagant ; They are not bounded with things possible ; I may wish more than I presume to tell. Id.

Her passion was extravagantly new ;

But mine is much the madder of the two. Id.

The imagination is always restless, and suggests variety of thoughts, and the will, reason being laid aside, is ready for every extravagant project.

Locke.

We pity or laugh at those fatuous extravagants.

Glanville.

There are certain extravagants among people of all sizes and professions. L' Estrange.

Twenty constitutions of pope John XXII. are called the extravag ints ; for that they being written in no order or method, vagantur extra corpus collectionuin canonum. Ayliffe's Parergon.

There appears something nobly wild and extrava- gant in great natural geniuses, infinitely more beauti- ful than turn and polishing. Addison.

Ridicule, perhaps, is a better expedient against love than sober advice ; and I am of opinion, that Hudi- bras and Don Quixote may be as effectual to cure the extravagancies of this passion, as any one of the phi- losophers. Id.

She was so expensive, that the income of three dukes was not enough to supply her extravagance.

Arbuthnot.

I cannot think it extravagant to imagine, that man- kind are no less in proportion accountable for the ill use of their dominion over creatures of the lower rank of beings, than for the exercise of tyranny over their own species. Pope.

Some are found to praise our author, and others as rashly and extravagantly contradict his admirers.

Id.

He that is extravagant will quickly beeome poor, and poverty will enforce dependence, and invite cor- ruption. Johnson.

Laws cannot prevent extravagance. ; and perhaps it is not always an evil to the public. A shilling spent idly by a fool may be picked up by a wiser person, who knows better what to do with it ; it is, therefore, not lost. Franklin.

I do not justify all the extravagations of the mob.

SmoUft.

EXTRAVAGANTES, decretal epistles, pub- lished after the Clementines; so called, because at first they were riot ranged with the other papal

constitutions, but seemed to be detached from the canon law. They continued to be called by the same name when they were afterwards in- serted in the body of the canon law. The first extravagantes are those of John XXII. successor of Clement V. The last collection was brought down to 1483, and was called the common ex- travagantes, notwithstanding that they were like- wise incorporated with the rest of the canon law.

EXTRA'VASATED, adj. > Lat. extra and

EXTRAVASA'TION, n. s.) vasa, vessels. Forced out of proper vessels The act of forcing, or state of being forced out of vessels.

The viscous matter, which lies like leather upon the extravasated blood of pleuritick people, may be dis- solved by a due degree of heat.

Arbuthnot on Aliments.

Aliment, too viscous, obstructing the glands, and by

its acrimony corroding the small vessels of the lungs, after a rupture and extravasation of blood, easily produces an ulcer. Id.

EXTRAVASATION, in contusions, fissures, de- pressions, fractures, and other accidents of the cranium, is when one or more of the blood-ves- sels, that are distributed in the dura mater, are broke or divided, whereby there is such a dis- charge of blood as greatly oppresses the brain, and disturbs its office ; frequently bringing on vio- lent pains, &c. ; and at length death itself, unless the patient is timely relieved. See MEDICINE and SURGERY.

EXTRAVE'NATE, adj. Lat. extra and vena, a vein. Let out of the veins.

That there is a magnetick way of curing wounds, by anointing the weapon ; and that the wound is af fected in like manner as is the extravenate blood by the sympathetick medicine as to matter of fact, is with circumstances of good evidence asserted.

Glanville's Scepsis.

EXTRAVER'SION, n. s. Lat. extra and versio, a turning. The act of throwing out; the state of being thrown out.

Nor does there intervene heat to afford them any colour to pretend that there is made an extroversion of the sulphur, or of any of the two other supposed prin- ciples. Boyle.

EXTRA'UGHT, part. This is an obsolete participle from extract ; as distraught from dis- tract. Extracted.

Sham'st thou not, knowing whence thou art es-

traught, To let thy tongue detect thy base born heart.

Shakspeare.

EXTREME', adj. & n.s.^ Old Fr. extreme ;

EXTREMIST, ad).

EXTREME' LY, adv.

EXTREM'ITY, n.s.

Johnson says, by a superlative termination, ' as it has in itself the superlative signification.' Last ; greatest ; of the highest degree ; urgent ; rigorous : as a substantive, the last point or re- sort ; the greatest or highest degree ; extrava- gance of conduct : extremity is partly synony- mous with extreme as a substantive ; but it is applied to the constituent parts of things more commonly ; to violence of passion, excess or aggravation of disease ; the termination of life.

The Lord shall smite thoe with a fever, an inflam- mation, aud an extreme burning. Deut. xxviii. 22.

.\ Old Fr. extreme ; I Lat. e.ttremus, the {last, final. Cor * rupted, as Dr.

If them be extreme to mark what is amiss, O Lord, who shall abide it? Psalms.

O fayrest virgin ! full of heavenly light, Whose wondrous faith, exceeding earthly race, Was firmest fixt in myne extremest case.

Spenser. Faerie Queene.

Why should not the same laws take good effect on that people, being prepared by the sword, and brought under by extremity? Spenser.

With equal measure she did moderate The strong extremities of their outrage. Id.

Cases of necessity being sometime but urgent, sometime extreme, the consideration of publick

utility is urged equivalent to the easier kind of necessity.

Hooker.

He that will take away extreme heat, by setting the body in extremity of cold, shall undoubtedly remove the disease ; but together with it the diseased too.

Id.

If I shew no colour for my extremity, let me be your table-sport. Shahspeare.

The hairy fool

Stood on the extremest verge of the swift brook, Augmenting it with tears. Id. As You Like It. The true Protestant religion is situated in the golden mean : the enemies unto her are the extremes on either hand. Bacon.

*They thought it the extremest of evils to put them-selves at the mercy of those hungry and disorderly people. Id**

It is a harder matter to endure in extreme want, than to obey a hard commandment.

Bp. Hall's Contemplations.

He promised, if they should be besieged, to relieve Ihem before they should be reduced to extremity.

Clarendon.

Thither by harpy-footed furies haled, At certain revolutions, all the damned Are brought ; and feel by turns the bitter change Of fierce extremes, extremes by change more fierce ; From beds of raging fire to starve in ice Their soft ethereal warmth, and there to pine Immoveable, infixed, and frozen round Periods of time ; thence hurried back to fire.

Milton.

In its proper colour it is inclining to white,

except- ing the extremities or tops of the wing- feathers, which are black. Browne.

Suppose any person for our sake willingly should deprive himself of all his estate, his honour, his ease and pleasure, should expose himself to extreme*! ha- zards, should we not then be monstrously ungrateful, if we did not most deeply resent such kindness.

Barroa.

Farewell, ungrateful and unkind ! I go, Condemned by thee, to those sad shades below : I go the' extremest remedy to prove, To drink oblivion, and to drench my love.

Dryden.

The world is running mad after farce, the extremity of bad poetry ; or rather the judgment that is fallen upon dramatic writing. '"•

I wish peace, and any terms prefer, Before the last extremities of war. Id.

The extremities of the joints must be seldom hidden, and the extremities or end of the feet never.

Id. Dufresnoy.

i The syllogistical form only shews that, if the inter- mediate idea agrees with those it is on both sides im- mediately applied to, then those two remote ones, or, as thev are called, extremes, do certainly agree.

Locke.

Should any one be cruel and uncharitable to that extremity, yet this would not prove that propriety gave

any authority.

Id.

Sho might hear, not far from her, an extremely doleful voice ; but so suppressed with a kind ol whis- pering note, that she could not conceive the words distinctly. Sidney.

Miseno's cape and Bauli last he viewed, That on the sea's extremest borders stood.

Additon.

A man of wit may extremely affect one for the pre- sent, but if he has not discretion, his merit soon va- nishes away. Steele.

The extremity of pain often creates a coldness in the extremities ; but such a sensation is very consistent with an inflammatory distemper.

Arbuthnot on Diet.

They sent fleets out of the Red Sea to the extre- mities of Ethiopia, and imported quantities of precious goods. Arbuthnot.

Avoid extremes, and shun the faults of such Who still are pleased too little, or too much.

Pope.

Whoever sees a scoundrel in a gown, reeling home at midnight, is apt to be extremely comforted in his own vices. Swift.

Alas ! this day

First gave me birth, and (which is strange to tell) The fates e'er since, as watching its return, Have caught it as it flew, and marked it deep With something great, extremes of good or ill.

Young's Busiris.

The idea of uniting all parties, of trying all cha- racters, and distributing the offices of state by rotation, was gracious and benevolent to an extreme. Junius.

At last he had drawn so much of this money, that I was extremely alarmed at what might become of me, should he fail to make good the deficiency.

Franklin.

An extreme rigour is sure to arm every thing against it, and at length to relax into a supine neglect.

Rurke.

Ideas consist of synchronous motions or configurations of the extremities of the organs of sense ; these when repeated by sensation, volition, or association, are either simple or complex, as they were first excited by irritation ; or have afterwards some parts abstracted from them, or some parts added to them. Darwin.

This tendency to insubordination forms no part of the temper or character of the people ; the contrary disposition is even carried to an extreme. Sheridan.

Chained to excess, the slave of each extreme. How woke he from the wildness of that dream ? Alas ! he told not — but he did awake To curse the withered heart that would not break.

Byron.

And at this moment, when thousands of misguided but most unfortunate fellow-countrymen are struggling with the extremes of hardship and hunger, as your charity began abroad, it should end at home. Id.

White as a white sail on a dusky sea,

When half the horizon's clouded and half free,

Fluttering between the dun wave and the sky,

Is hope's last gleam in man's extremity.

EXTRICATE, v. a.) Lat. extrico, ex and

EXTRICA'TION, n. t. i trica, hindrances. To

disembarrass; free from hindrances or perplexity.

Crude salt has a taste not properly acid, but such M

predominates in brine ; and it does not appear that

this acid spirit did as such pre-exist in the salt whence

it was obtained, so that we may suppose it to have

been rather by transmutation than extrication.

Boyle.

We run into great difficulties about free created aeents, which reason cannot well extricate itst If out of,

Locke.

Id.

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These are reliefs to Nature, as they give her an opportunity of extricating herself from her oppressions, and recovering the several tones and springs of her vessels. A dditon.

In this dilemma, she had recourse to me ; and, to extricate her from her difficulties, I lent her all the money I could spare. Franklin.

EXTRIN'SIC, adj. -) Fr. extrinseque ; Lat.

EXTRIN'SICAL, > ext rinsicus, outward.

ExTRiN'sicALLY,odf.> External; relating to the exterior of a thing. Sometimes written extrinsecal.

A body cannot move, unless it be moved by some extrinsical agent : absurd it is to think that a body, by a quality in it, can work upon itself.

Digby on Bodies.

But so much shall suffice for preface, concerning the title and other extrinsical adjuncts of the Creed.

Barrow.

If to suppose the soul a distinct substance from the body, and extrinsically advenienl, be an error, almost all the world hath been mistaken. Glanville.

Outward objects, that are extrinsical to the mind j and its own operation, proceeding from powers in-trinsical, and proper to itself, which, when reflected on by itself, become also objects of its contemplation, are the original of all knowledge. Locke.

Neither is the atom, by any extrinsical impulse, di--orted from its natural course. Ray.

When they cannot shake the main fort, they try if they can possess themselves of the out-works, raise some prejudice against his most extrinsic adherents. Government of the Tongue.

Extrinsic modes are such as arise from something that is not in the subject or substance itself ; but it is a manner of being which some substances attain, by reason of something external or foreign to the subject j as, this globe lies within two yards of the wall ; this man is beloved or hated. Watti't Logick.

EXTRUCT>.a. } Lat. extruo, extructum.

EXTRUCT'OR, n.s. J To build; to form into a structure : a builder or contriver.

Papistry is both affirmative and extractive of all •wickedness. Fulke.

EXTRU'DE,«.o. I Lat. estrudo. To thrust

EXTRU'SION, n. i. J off; to drive off; to push out

with violence.

They suppose the channel of the sea formed, and mountains and caverns, by a violent depression of some parts of the earth, and an extrusion and elevation of others. Burnet.

If in any part of the continent they found the shells, they concluded that the sea had been extruded and driven off by the mud. Woodward.

EXTU'BERANCE, n. s. Lat. ex and tuber, a swelling. Knobs, or parts protuberant ; parts that rise from the rest of the body.

The gouge takes off the irregularities or extuberancei that lie farthest from the axis of the work.

Moxon's Mechanical Exercises.

EXU'BERATE, v.n.-\ Latin exubero, ex

EXI/BERANCE, n. s. (and uber, fruitful. To

EXU'BERANT, adj. t bear abundantly : over-

'Ext/BERANTLT, adv. Jgrowth; luxuriance.

All the loveliness imparted to the creature is lent it, to give us enlarged conceptions of that vast con- fluence and immensity that exuberates in God.

Boyle's Seraphick Love.

Such immense power, such unsearchable wisdom, an d such exuberant goodness, as may justly ravish us lo ;>r amazement, rather than a bare admiration. Id.

A part of that exuberant devotion, with wlich tla whole assembly raised and animated one another catches a reader at the greatest distance of time.

Addison's Freeholder.

A considerable quantity of the vegetable matter lay at the surface of the antediluvian earth, and

rendered it exuberantly fruitful. Woodward.

Men esteem the overflowing of gall the exuberance of zeal, and all the promises of the faithful combatant they confidently appropriate. Decay of Piety.

Though he expatiates on the same thoughts in different words, yet in his similies that exuberance is avoided. Garth.

HU similies have been thought too exuberant, and full' of circumstances. Pope.

Another Flora there, of bolder hues, Plays o'er the fields, and showers with sudden

hand Exuberant spring. Thomson's Spring.

True charity, a plant divinely nursed, Fed by the love from which it rose at first, Thrives against hope, and in the rudest scene ; Storms but enliven its unfading green ; Exuberant is the shadow it supplies, Its fruits on earth, its growth above the skies.

Cowper.

If prouder branches with exuberance rude Point their green germs, their barren shoots protrude.

Darwin.

Tasso possesses an exuberant and sublime imagination, though in emberaitce it seems, in my opinion, inferior to our Spenser, and in sublimity inferior to Milton.

Beattie.

EXU'CCOUS, adj. Lat. exsuccus. Without juice ; dry.

This is to be effected not only in the plant yet growing, but in that which is brought exuccous and dry unto us. Browne.

EXUDE', or, "j Lat. exudo, ex, exple-

EXU'DATE, v. n. Stive, and sudo, to sweat.

EXUDA'TION, n. s. j To sweat ; issue out in

the manner of sweat. Dr. Johnson says this

also means, as an active verb, to force, or

throw out, as by sweat ; but we find no instance

of it in this sense.

The gum of trees, shining and clear, is but a straining of the juice of the tree through the wood and bark •, and Cornish diamonds, and rock rubies, which are yet more resplendent than gums, are the fine exudations of stone. Bacon.

Some perforation in the part itself, through which the humour included doth exudate, may be observed in such as are fresh. Browne.

Cuckowspittle, or woodsere, that spumous frothy dew, or exudation, or both, is found especially about the joints of lavender and rosemary.

Browne's Vulgar Errours.

The juices of the flowers are, first, the expressed juice ; secondly, a volatile oil, wherein the smell of the plant presides ; thirdly, honey, exuding from all flowers, the bitter not excepted. Arbuthnot.

The tumour sometimes arises by a general exuda- tion out of the cutis. Wiseman's Surgery.

EXUL'CERATE, v. a., v. n., & adj. (Fr.

EXULCERA'TION, n. s. J exulce-

rer ; Span, exulcerar ; Lat. exulcero, ex and ulcero, ulcus (Gr. ab tXicoc) a sore. To make sore with ulcers ; to afflict with sores, or gene- rally : to become ulcerous.

This exulceration of mind made him apt to lake all occasions of contradiction. Hooker.

Sharp and eager humours will not evaporate ; and then they must exulcerate, and so may endanger the sovereignty. Bacon.

Cantharides, applied to any part of the body, touch the bladder and exulcerate it, if they stay on long.

Bacon.

Thoughts, my tormentors, armed with deadly stings, Mangle my apprehensive tenderest parts, Exasperate, exulcerate, and raise Dire inflammation, which no cooling herb Or medicinal liquor can assuage. Milton.

The speech being ill taken, the writing might exas-perate that which already was exulcerate. Harrington.

That the saliva hath a virtue of macerating bo-dies, appears by the effects in taking away warts, sometimes exulcerating the jaws, and rotting the teeth. Ray on the Creation.

The stagnating serum, turning acrimonious, exulce-rates and putrefies the bowels. Arbuthnot.

EXULT, v. a. ~\ ^.exulter ;~LaA..exulto, EXULT'ANCE, n. s. I ex and salto, to dance. To EXULT' ANCY, S triumph; glory; rejoice EXULT'ANT, adj. i in a high degree. The EXULTA'TION, n. s.J compounds follow this meaning.

The whole world did seem to erwitthatit had occa-sion of pouring out gifts to so blessed a purpose.

Hooker.

Good effects may grow in each of the people towards other, in them all towards their pastor, and in

their pastor towards every of them ; between whom there daily and interchangeably pass, in the hearing of God himself, and in the presence of his holy an- gels, so many heavenly acclamations, exultations, pro- vocations, petitions. Id.

Who might be your mother, That you insult, erult, and rail, at once Over the wretched ?

Shakspeare. As You Like It. That boasting exultancy of Campian. Hammond. Devotion inspires men with sentiments of religious gratitude, and swells their hearts with inward trans- ports of joy and exultation. Addison's Freeholder.

We have great cause of exultance and joy, God's service being the most perfect freedom.

Government of the Tongue. Gaily the splendid ornaments along Exultant ploughed. TJiomson.

Poets who have to deal with an audience not yet graduated in the school of the rights of men, and who must apply themselves to the moral constitution of the heart, would not dare to produce such a triumph as a matter of exultation. Burke.

His hoary head,

Conspicuous many a league, the mariner Bound homeward, and in hope already there. Greets with three cheers exulting. At his waist 4 girdle of half-withered shrubs he shows, And at his feet the baffled billows die. Cowper. Roll on, thou fair orb, and with gladness pursue

The path that conducts thee to splendour again : But man's faded glory what change shall renew ? Ah, fool ! to exult in a glory so vain ! Beattie. And must I think it ! is she gone, My secret heart's exulting boast ? And does she heedless hear my groan ?

And is she ever, ever lost? Burns.

A thing of dark imaginings, that shaped

By choice the perils he by chance escaped ;

But 'scaped in vain, for m their memory yet

His mind would half exvlt, and half regret.

Byron.

EXUMA, GREAT and LITTLE, are islands of the West Indies, on the Great Bahama bank. In 1803 they had 140 whites, and 1000 blacks; they have a port of entry, and make much salt. Long Island, or Yuma, at the south-east extre- mity of the Great Bank, is fifty miles long, but very narrow; in 1803 it had 2500 inhabitants. On the east side is Great Harbour, from whence its salt is exported. There is also a chain of islands called the Exuma Keys, which reach for a considerable extent along one edge of the Great Bahama Bank, generally in a south-west direc- tion. They commence at Ship Channel Key, ten leagues E. S. E. from the east end of the island of New Providence, and extend to Great Exuma, the harbour of which lies fifty leagues from New Providence. The principal island lies between long. 74° 28' and 74° 48' W., and be- tween lat. 23° 21' and 23° 31' N.

EXUMA SOUND, a channel among the Bahama islands, extending from north-west to south-east, between Cat Island, or Guanahani to the east, and a range of small islands and rocks to the west and south-west. The entrance is south of the island of Eleuthera.

EXUN'DATE,v. a. "> .Lat. exundo. To

EXUNDA'TION, n. s. 5 overflow; abundance.

It is more worthy the Deity to attribute the creation of the world to the exundation and overflowing of his transcendant and infinite goodness. Ray.

EXU'PERABLE, adj.') Latin, exuperail is,
EXU'PERANCE, n. s. 3 efuperuntia. Con- querable ;
vincible : overbalance ; greater pro- portion.

Rome hath less variation than London ; for on the

west side of Rome are seated France, Spain, and Germany, which take off the exuperance, and balance the vigour of the eastern parts. Browne.

EXUS'CITATE, v. a. Latin, exsuscito. To stir up ; to rouse.

EXUS'TION, n. s. Lat. exustio. The act of burning up ; consumption by fire.

EXU'VI^E, n. s. Latin. Cast skins ; cast shells ; whatever is thrown off, or shed by ani- mals.

They appear to be only the skins or exuviae rather than entire bodies of fishes. Woodward.

EY'AS, n. s. Fr. niais. A young hawk just taken from the nest, not able to prey for itself. Like eyas hauke up mounts unto the skies,

His newly budded pinions to assay,

And inarveiles at himselfe stil as he flies ;

So new this new-born knight to battell new did rise. Spenser's Faerie Queene.

An aiery of children, like eyases, that cry out.

Shakspeare.

EY'ASMUSKET, n. s. A young unfledged male hawk of the musket kind.

Here comes little Robin.— How now, myeyasmus- het ; what news with you 1 Shakspeare.

EYBEN (Hulderic), a Saxon lawyer of emi- nence, was born at Norden in East Friesland in 1629. He studied at Marpurg, and took his doctor's degree in 1655 ; soon after which he was appointed professor of law ; but in 1669 removed to Helmstadt, where he became counsellor, as- sessor, and a judge of the imperial chamber of

Lower Saxony. The emperor also raised him to the rank of nobility, with the station of aulic- counseller. He died in 1699. His works were printed at Strasburgh in 1708. His son Chris- tian William was also a lawyer and antiquary. He wrote Dissertatio de ordine equestri veterum Romanorum, folio. He died in 1727.

EYBENSTOCK, a town of Saxony, in the circle of the Erzgebirg. Population 3150. It is seven miles south- west of Schwartzenberg.

EYCK (Hubert Van), a celebrated painter, founder of the Flemish school, was born at Maaseyk in 1366. He first painted in distem- per, which practice he relinquished for oil paint- ing. There is a picture by him in the cathedral of Ghent, of which Sir Joshua Reynolds speaks highly, iu regard to the heads and the landscape. Van Eyck died in 1426.

EYCK (John Van), brother of the preceding, and also an eminent painter, was born in 1 370, and is said to have discovered the method of paint- ing in oil, by accidentally finding that his colors mixed better with that than with water. He ex-

peare uses it as a neuter verb for to appear Eye- ball is the globe, apple, or pupil of the eye ; eye- beam a glance of or from the eye ; eye- bright, a common flower, see EUPHRASY; eye- brow, the beautiful defensive arch of hair over the eye; eyed (used only in composition) having eyes ; eye-drop, a tear ; eyer, a close observer ; eye-glance, a quick notice or direction of the eye ; eyelash, the line of hair that edges the eye- lid ; eyelet, a small hole or perforation ; eyelid, the well known membrane that protects the eye ; eye-service, a service only in operation when watched ; eyeshot, glance, range or length of view ; eye-sore, something that offends the eye or sight ; eye- spotted, marked with spots re- sembling eyes ; eye- string, the tendon that moves the eye ; eye-tipped, tipped or terminated with eyes ; eye-tooth, the

tooth of the upper jaw next on each side of the grinders ; eye-wink, a hint or wink from the eye ; eye-witness, an ocu- lar evidence : one who speaks from personal observation. An eyliad is an eye-glance. We have thus, at the hazard of prolixity, explained,

celled as an artist in producing a richness of we believe, every thing that can need elucidation effect in his coloring, and labored his pictures in these compounds. highly. There is a Nativity by him at Wilton, in which the colors are remarkably fresh. It should be observed, however, that Raspe has almost demonstrated the futility of his claim to the invention of oil painting. In the collection of the duke of Orleans was a picture by him, representing the Wise Men's Offering; and it is said that a capital painting by John Van Eyck, of the Lord Clifford and his Family, was at Chis- •wick, in the collection of the late earl of Bur- lington. He died in 1441. — In the Exchequer Rolls are bills of charges on account of oil for the painters, a century at least previous to the period in question.

EYE, n s., v. a. & v. n.^\

EYE-BALL,

EYE-BEAM,

EYE-BRIGHT,

EYE-BRIGHTENING, adj.

EYE-BROW, n. s.

EYED, adj. EYE-DROP, n. s. EYER,

EYE-GLANCE, EYE-GLASS, EYE-GLUTTING, adj. EYE-LASH, n. s. EYELESS, adj. EYELET, n. s. EYELID,

EYE-OFFENDING, adj. EYE-SALVE, n. s. EYE-SERVICE, EYESHOT, EYESIGHT, EYESORE, EYE-SPOTTED, adj. EYE-STRING, n. s. EYE-TIPPED, adj. EYE-TOOTH, n. t. EYEWINK, EYE-WITNESS, EYLIAD, foration, &c. To eye

Sax, eaj ; Teut. aug ; Goth, auga ; Swed. oga ; Belg. oog; Isl eiga; Span. ojo ; Scotch ee, pi. eene (our obsolete plural is eyen, eyne, and yglien, see the examples). The organ of vision ; sight; hence, ocu- lar knowledge, look, aspect, line of sight, notice, vi- > gilance ; opinion formed by observ- ing ; view ; mental perception : the im- portance of this organ has induced frequent compari- sons with its form, color, socket, &c. ; hence eye also means any central or chief ornament ; a bud ; a small but striking shade of color ; a small per- is to watch ; observe

Attentively ; spy; regard with malice : and Shaks-

The liuiterne of thi bodi is thin yghe.

Wiclif. Lukll.

And whanne hise yghen weren cast up into his dis- ciples : he seyde, blessyd be ye pore men : for the kingdom of God is youre. Id. Luk 6.

He kept him as the apple of his eye.

Deut. xxxii. 10.

On the seventh day he shall shave all his hair off his head, his beard and his eyebrows. Lev. xiv. 9.

The Lord hath recompensed me according to my cleanness in his eyesight. 2 Sam.

On my eyelids is the shadow of death. Job xvi. 16. He that hath a bountiful eye shall be blessed.

Proverbs.

Who hath bewitched you, that you should not obey the truth, before whose eyes Jesus Christ hath been evidently set forth? Gal. iii. 1.

The eyes of your understanding being enlightened.

Eph. i.

Servants, obey in all things your masters ; not with

eyeservice, as men-pleasers, but in singleness of heart.

Col. iii.

We made known unto you the power and coming of our Lord Jesus Christ, and were eyewitnesses of his majesty. 2 Peter.

His eyen twinkeled in his bed aright As don the sterres in a frosty night.

Chaucer. Prologue to Cant. Tales.

But adding new

Feare to his first amazement, staring wyde With stony eyes and hartless hollow hew, Astonished stood. Spenser. Faerie Qucene.

But being up, he lookt againe aloft, As if he never had received fall, And with sterne eye-brows stared at him oft, As if he would have daunted him withall. Id. His countenance was bold, and bashed not For Guyon's looks ; but scornful eyeglance at him

shot. Id.

• Mammon,' said he, ' thy godhead's vaunt is vain, And idle offers of thy golden fee ; To them that covet such eye-glittering gaine, Proffer thy gifts, and fitter servaunts eutertaine'. Id.

The drouping night thus creepeth on them fast, And the sad humor loading their eye-liddes, As messenger of Morpheus oil them cast Sweet sloubring deaw, the which to sleepe them biddes. Id.

E Y

When they are laid in garrison, they may better

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That tyranny which never quaft but blood,

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UUl LHIIOU.

mde tLe;r defaults than when they are in camp, where Would, by beholding him, have washed his knifr

they are continually eyed and noted of all men. With gentle eyedrops. Id. Henry VI

Spenser on Ireland. A proclaimed prize ! most happy !

Some reliques of the true antiquity. Though disfigured, a well-«,»d man May happily discover. Spenter.

Nor Juno’s bird , in her eyespotted train, So many goodly colours doth contain. Id.

prize : most nappy \

That eyeless head of thine was first framed flesh To raise my fortunes. Id. King Lear.

I would have broke mine eyestrings ; crack them, but To look upon him. Id. Cymbeline.

Seekanauk, a kinde of crusty shel-fish, which is good It hath, in their eye, no great affinity with the form meat» about a foot in bredth, hauing a crusty taile, of the church of Rome. Hooker. lnany ‘egges like a crab, and her eyes in her back.

Lawmakers must have an eye to the place where, ^nev are f°und in shallowea of waters, and sometime and to the men amongst whom. Id. on tte shore-

Hath the church of Christ, from the first beginning, Hakluy*- Voyage, &c. M. Thomas Uariot, vol. iii. by a secret universal instinct of God’s good spirit, al- 274.

•ways tied itself to end neither sermon, nor almost any That Planet would, unto our eyes, descrying only speech of moment, which hath concerned matters of tnat part whereon the light falls, appear to be horned, God, without some special words of honour

and glory as the moon seeras- Raldgh.

to the Trinity, which we all adore ; and is the like As lo.n& looking against the sun or fire hurteth the conclusion of psalms become now, at length, an eye- eye bv dilation '•> so curious printing in small volumes,

and reading of small letters, do hurt the eye by con- traction. Bacon.

None should be put into either of those commis- sions, with an eye of favour to their persons, to give them countenance or reputation in the places where they live. Id. to Villiers.

The Turks have a black powder, made of a mineral

sore, or a galling to the ears that hear it? Id.

Nor doth the eye itself, That most pure spirit of sense, behold itself, Not going from itself; but eyes opposed, Salute each other with each other's form.

Shahspeare. Good sir John, as you have one eye upon my follies,

turn another into the register of your own, that I may Called alcohol> which, with a fine long pencil, they lay- pass with a reproof off the easier. Id. under thelr eVehds> which doth colour black, whereby Vouchsafe, bright moon, and these thy stars to the whlte of the eye is set off more white.

shine, Those clouds removed, upon our watry eyne. Id.

I'll say yon grey is not the morning's eye, 'Tis but the pale reflex of Cynthia's brow. Id.

There shall he practise tilts and tournaments, Hear sweet discourse, converse with noblemen; And be, in eye of every exercise, Worthy his youth and nobleness of birth. Id.

To justify this worthy nobleman, Her shall you hear disproved to your eyes. Id. I'll not be made a soft and dull-eyed fool, To shake the head, relent, and sigh, and yield To Christian intercessors. Id.

Fetch me that flower ; the herb I shewed thee

once ;

The juice of it, on sleeping eyelids laid, Will make or man or woman madly doat Upon the next live creature that it sees. Id.

Methinks T see thee, now thou art below, As one dead in the bottom of a tomb ; Either my eyesight fails, or thou look'st pale. Id.

Fy, doff this habit ; shame to your estate, And eyesore to our solemn festival. Id.

They would have won any woman's heart ; and, I warrant you, they could never get an eyewink of her.

Id.

Full many a lady I've eyed with best regard. Id. Tempest,

The ground indeed is tawny. — With an eye of green in't. Id.

Be subject to no sight but mine : invisible To every eyeball else. Id.

The kitchen Malkin pins Her richest lockram 'bout her reeky neck, Clambering the walii to eye him.

Id. Coriolanus. Forgive me,

Since my becomings kill me when they do not Eye well to you. Id. Antony and Cleopatra.

The lover,

Sighing like a furnace, with a woful ballad Made to his mistress' eyebrow.

Id. At You Like It.

Id. Natural History. If the English had driven the Irish into the open countries, where they might have an eye and observation upon them, the Irish had been easily kept in order. Davies on Ireland.

— In some open place, that to the sun doth lye, His fumitorie gets, and eye-bright for the eye.

Drayton.

I was as far from meditating a war, as I was, in the eye of the world, from having any preparations for one. King Charles.

Satan, like the raven, first seizes upon the eye of understanding, and then preys freely upon the other carcase. Bp. Hall.

These eyes and ears of state are nrri-ssary to the well-being of the head. Id.

This dignity was an eye-sore to these Levites and these Reubenites, ye take too much upon you, ye sons of Levi. Id Contemplations.

As soon as the two lords came thither they covered, to the trouble of the other; but, having presently to speak, they were quickly freed from that eyesore.

Clarendon.

Mine eyes he closed, but open left the cell Of fancy, my internal sight. Milton's Paradise Lost.

To the ocean now I fly, And those happy climes that lie Where day never shuts his eye, Up in the broad fields of the sky. Milton. Bold deed thou hast presumed, adventurous Eve, And peril great provoked, who thus hast dared, Had it been only coveting to eye That sacred fruit. Id.

Some eye-brightening electuary of knowledge and foresight. /<•*

Promise was, that I

Should Israel from Philistian yoke deliver : Ask for this great deliverer now, and find him Eyeless in Gaza, at the mill with slaves. /i

Though sight be lost, Life yet hath many solaces, enjoyed Where other senses want not their delights. At home in leisure and domestick ease, Exempt from many a care and chance, to which Eyesight exposes daily men abroad. Id. Agonistzi.

To meet him all his saints, who silent stood Kyewitnesses of his almighty acts, With jubilee advanced. Milton.

Such a story as the basilisk is that of the wolf, con- cerning priority of vision, that a man becomes hoarse and dumb, if the wolf have the advantage first to eye him. Browne.

Then gave it to hi§ faithful squire, With lessons how to observe and eye her.

Hudibrat.

Prune and cut off all your vine shoots to the very root, save one or two of the stoutest, to be left with three or four eyes of young wood. Evelyn's Kalendar. The suitor was a diligent eyer of her.

Gayton.

She told her husband she designed to be beautiful in nobody's eye but his. Sidney.

Not satisfied with our oath, he appointed a band of horsemen to have an eye that we should not go be- yond appointed limits. Id.

Though he in all the people's eyes seemed great, Yet greater he appeared in his retreat. Denham. Red with

an eye of blue makes a purple.

Boyle.

Those parts if they cohere to one another but by rest only, may be much more easily dissociated, and put into motion by any external body, than they could be, if they were by little hooks and eyes or other kinds of fastenings entangled in one another.

Id.

His awful presence did the crowd surprize, Nor durst the rash spectator meet his eyes ; Eye* that confessed him born for kingly sway, So fierce, they flashed intolerable day. Dryden.

Now passed, on either side they nimbly tack, Both strive to intercept and guide the wind ;

And in its eye more closely they come back, To finish all the deaths they left behind. Id.

Misdoubt my constancy ; and do not try ; But stay and ever keep me in your eye. Id.

I feel my hair grow stiff, my eyeballs roll ; This is the only form could shake my soul. Id.

The balls of bis broad eyes rolled in his head, And glared betwixt a yellow and a red ; He looked a lion with a gloomy star, And o’er his eyebrows hung his matted hair. Id. At length the crackling noise and dreadful blaze Called up some waking lover to the sight ;

And long it was ere he the rest could raise, Whose heavy eyelids yet were full of night. Id.

He blinds the wise, gives eyesight to the blind, And moulds and stamps anew the lover’s mind. Id.

I must not think of sharing the booty before I am free from danger, and out of eyeshot from the othei windows. Id.

He’s the best piece of man’s flesh in the market ; not an eyesore in his whole body. Id. Don Sebastian.

Josephus sets this down from his own eyesight, being himself a chief captain at the siege of Jopata, where these events happened. Wilkins.

After this jealousy he kept a strict eye upon him.

L’Estrange.

Mordecai was an eyesore to Haman. Id.

This method of teaching children by a repeated practice, under the eye and direction of the tutor, till they have got the habit of doing well, has many ad- vantages. Locke.

Above stand tb« eyebrows, to keep any thing from running down upon the eyes ; as drops of sweat from the forehead, or dust. Ray.

The next teeth on each tide stronger and deeper rooted, and more pointed, called canini, in English eyeteeth, to tear the more tough sort of aliments.

Id. on the Creation.

Does not our Saviour himself speak of the intoler- able difficulty which they cause in men’s passage to heaven ? Do not they make the narrow way much narrower, and contract the gate which leads to life to the straitness of a needle’s eye ? South.

In this disposal of my sister, I have had an eye to her being a wit, and provided that the bridegroom be a man of sound judgment. Tatler.

A beautiful eye makes silence eloquent, a kind eye makes contradiction an assent, an enraged eye makes beauty deformed. This little member gives life to every other part about us, and I believe the story of Argus implies no more, than that the eye is in every part ; that is to say, every other part would DC mu tilated, were not its force represented more by the eye than even by itself. Spectator.

We were the most obedient creature* in the world, constant to our duty, and kept a steady eye on the end for which we were sent hither. Id.

I have preserved many a young man from her eye- shot by this means. Id.

There is nothing so bad for the face as a party zeal. It gives an ill-natured cast to the eye, and a disagree- able sourness to the look. Addison.

Booksellers mention with respect the authors they have printed, and consequently have an eye to their own advantage. • Id.

Pentheus durst deride The cheated people, and the eyeless guide. Id.

The curious, by laying together circumstances, at- testations, and characters of those who are concerned in ihem, either receive or reject what at first but eye- witnesses could absolutely believe or disbelieve.

Addison on the Christian Religion.

Winds and hurricanes at land, tempests and storms at sea, have always been looked upon with as evil an eye as earthquakes. Woodward's Nat. Hist.

We see colours like the eye of a peacock's feather, by pressing our eyes on either corner, whilst we look the other way. Newton.

Maeonides,

Poor eyeless pilgrim. Phillips.

Slitting the back and fingers of a glove, I made eye- let holes to draw it close. Wiseman's Surgery.

To know whether the sheep are sound or not, see that their gums be red and the eyestrings ruddy.

Mortimer.

But sure the eye of time beholds no name So blest as

thine in all the rolls of fame. Pope.

Eye nature's walks, shoot folly as it flies, And catch the manner's living as they rise. Id.

Not when a gilt buffet's reflected pride Turns you from sound philosophy aside, Not when from plate to plate your eyeballs roll, And the brain dances to the mantling bowl. Id.

Cyclop, if any pitying thy disgrace, Ask who disfigured thus that eyeless face. Id.

It was needful for the hare perpetually to eye her pursuing enemy.

More's Antidote against Atheism. Long, pity ! let the nations view Thy sky-worn robes of tenderest blue, And eyes of dewy light. Collins.

O might reflection folly's place supply, Would we one moment use her piercing eye, Then should we know what woe from grandeur

springs, And learn to pity, not to envy kings. Chwchill.

True happiness ne'er entered at an eye, True happiness resides in things unseen. Young. The eye that will not weep at other's sorrow, Should boast no gentler brightness than the glare That reddens in the eyeball of the wolf. Mason.

EYE.

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The beauty of the eye consists, first in its clearness ; what coloured eye shall please most depends a good deal on particular fancies ; but none are pleased with an eye whose water (to use that term) is dull and muddy. We are pleased with the eye in this view, on the principle upon which we like diamonds.

Burke. His to enjoy

With a propriety that none can feel, But who, with filial confidence inspired, Can lift to Heaven an unpresumptuous eye, And smiling say — My Father made them all !

Cowper.

Forth comes the pocket mirror. — First we stroke An eyebrow ; next compose a straggling lock ; Then with an air most gracefully performed Fall back into our seat, extend an arm, And lay it at its ease with gentle care, With handkerchief in hand depending low. Id.

From each nice pore of ocean, earth, and air, With eye of flame the sparkling hosts repair, Mix their gay hues, in changeful circles play, Like motes, that tenant the meridian ray.

Darwin.

Now with young Wonder touch the sliding snail, Admire his eye-tipped horns, and painted mail. Id.

Grief dimmed her radiant eyes, Her swelling bosom heaved with boding sighs : She eyed the main ; where, gaining on the view, Emerging from the ethereal blue, Midst the dread pomp of war Gleamed the Iberian streamer from afar. Seattle.

WTiich to explore

Even Fancy trembles, 'in her sprightliest mood ; For there, each eye-ball gleams with lust of gore, Nestles each murderous and each monstrous brood, Plague lurks in every shade, and steams from every

flood. Id.

She views her mirror ; but how starts her eye, Strange wrinkles on her faded brow to spy ! And, ah, her bloomless cheeks ; what daemon's rage Has chilled their blush with sallow tints of age ?

Dr. T. Brown.

PART I.

—I write in haste, and if a stain

Be on this sheet, 'tis not what it appears,

My eyeballs burn and throb, but have no tears.

Byron. Her glossy hair was clustered o'er a brow

Bright with intelligence, and fair and smooth ; Her eyebrow's shape was like the aerial bow,

Her cheek all purple with the beam of youth, Mounting, at times, to a transparent glow,

As if her veins ran lightning ! Id.

A slight blush, a soft tremor, a calm kind Of gentle feminine delight, and shown More in the eyelids than the eyes, resigned

Rather to hide what pleases most unknown, Are the best tokens (to a modest mind)

Of love, when seated on his loveliest throne, A sincere woman's breast, — for ever warm, Or ever cold annihilates the charm. Id.

At the line formed by the eye-lashes, the skin becomes changed in appearance and structure, and we observe continued from it a mucous membrane, called, from its office, the conjunctiva, which, after investing the posterior surface of the tarsi, is reflected over the front of the eye-ball. D. A. Rees.

EYE, in anatomy, the organ of sight. This has already been described by us in the article ANATOMY, par. 188—208. But some general remarks on its physiology and diseases have been reserved for this place.

OF THE PHYSIOLOGY OF THE EYE.

It is well ascertained by experiment that the rays proceeding from any object to the eye un- dergo

certain changes in their passage through the transparent parts of the organ ; that these changes ultimately collect the rays, proceeding from the several points of the object, into op- posite corresponding focal, or nearly focal points on the retina; and that the impression thus pro- duced causes the perception of the object. An interesting proof of this may be obtained thus : — Let an eye, from which the back of the sclerotica and choroid has been carefully removed, and their place supplied by oiled paper, or by the membrane which lines the shell of an egg, be placed in a room with a candle, with the cornea towards the luminous object. A diminished image of the candle will now be represented in- verted on the paper.

We shall endeavour to trace the rays from the surface of the cornea to their collection into foci on the retina, giving the change of direction in general terms. 1 . The pencils of rays radiating from any object, when they arrive at the surface of the cornea, are found to form cones, the points of which are at the object, and the bases on the cornea. Those which strike on the opaque sclerotica are reflected, and have no concern in vision : and those which, falling very obliquely, make a considerable angle with the cornea, are also reflected without penetrating into the aqueous humor. The rays, which fall within an angle of about 48°, pass through this membrane, undergoing a certain refraction, by which they are brought nearer to the line of the axis of the cornea; and, if produced, would converge into a focal point beyond the interior of the eye. The rays pass from the cornea into the aqueous humor, and are divided by the dispersive powers of this fluid, so that, if con- tinued in the same medium, they would not only converge beyond the back of the eye, but, on account of the aberration caused by their dif- ferent refrangibility, would produce a confused and colored image.

2. The rays collected by tne cornea pass through the pupil. Those which come in an unfavorable direction are either reflected by the iris, or absorbed by the

pigrnentum on its posterior surface. The pupil admits only those rays which are the nearest the axis of vision. They then meet with the crystalline humor, which collects them, and brings them into foci, after passing through the less refractive medium of the vitreous humor on the concave surface of the retina. They do not impart a correct perception of the body which reflects them, unless they fall on the retina precisely in the order in which they are detached from that body.

3. The cone of rays proceeding from any luminous point to the cornea forms another cone, the apex of which falls on the retina. These two cones nave their axes almost in a stnuuht line. That which is perpendicular to the middle of the crystalline proceeds directly to the bot- tom of the eye ; that which comes from above

falls inferiorly ; that on the left proceeds to the right, and so on with respect to the others : thus an inverted image is formed on the retina.

4. The iris, by altering the diameter of the pupil, will influence immediately the quantity of light admitted into the eye. If one eye is closed, and we continue to look at the same object, the pupil of the open eye dilates evidently, and con- tracts again, as the other is opened, to its former diameter. The iris also intercepts such rays as would fall on parts incapable of refracting them regularly, or such as are directed so obliquely on the cornea as to be too much refracted, ad- mitting only the smaller pencil which enters the eye more in the direction of its axis. This, however, but partially, and only in cases where the opening of the pupil is circular, and where the confusion which would arise from the aber- ration of the extreme lateral rays may possibly be prevented : it is not the case where the open- ing is very much extended, oblong, vertical, and, in some circumstances, almost

linear, as in the cat. The eccentricity of the pupil can only so far influence the pencils of rays as to make them fall on the anterior vertex of the crystalline, with which it corresponds : the axes of the pupil, and the lens, do not correspond with that of the cornea. It appears from careful observations that this contraction and dilatation are irregular and limited ; that by bringing the object nearer to the eye, within a certain distance, the pupil not only ceases to contract, but becomes again dilated ; and that, beyond a few yards distance, it also ceases to dilate. In viewing the sun, instead of dilating according to the distance, it contracts most closely, obeying the quantity and intensity of the light, rather than the distance of the object. In viewing a less luminous object, the pupil dilates, when it is more distant, a greater quantity of light being necessary to pro duce a clear impression ; as the object is brought nearer, we require a less degree of light, and the iris contracts to exclude what is super- fluous. Thus far the iris may be useful in ac- commodating the eye to different distances ; it may regulate the quantity of light, but it can- not alter the direction. In quiescent vision, the pupil preserves its diameter most steadily.

5. The crystalline lens being found to di- minish in density gradually in every direction, approaching the vitreous humor on one side, and the aqueous on the other, Mr. Ramsden supposes that its refractive power is the same with that of the two contiguous substances. Its principal use appears to him to be that of cor- recting the aberration arising from the spherical figure of the cornea, where the principal part of the refraction takes place. From the constitu- tion of the crystalline he inferred, that it will refract the rays of light without reflecting any of them ; so that, although we have two surfaces of the aqueous, two of the crystalline, and two of the vitreous humor, we have only one reflected image, and, that being from the front of the cornea, there can be no surface to reflect it back, and dilate the image on the retina. If the sur- faces of

the crystalline had been abrupt, there must have been a reflection at each, and an ap- parent haziness would have interfered with the

distinct view of every luminous object. The smaller density of the lateral parts will not only correct the aberration of the spherical surface of the cornea, but will cause also the focus of each oblique pencil of rays to fall either accu- rately, or very nearly so, on the concave surface of the retina, throughout its extent. Had the refractive power been uniform, throughout the whole substance of the lens, it might have col- lected the lateral rays of a direct pencil nearly as well, but it would have been less adapted to the oblique pencils of rays. Also, the gradual in- crease of density in approaching the centre makes the crystalline equivalent to a much more refractive substance of equal magnitude. The principal use of the vitreous humor ap- pears to be that of giving a ready passage to the rays of light, as they are converging into foci on the retina, and of keeping at the same time the surface of the latter uniformly spherical. It would allow a change of figure in the eye, or in the lens, or even a change of place in the latter, supposing there were powers in the living organ adequate to the purpose.

6. Some writers have contended that the retina is not equally sensible in all parts, and that a portion only, near the axis of the eye, is capa- ble of conveying distinct impressions. Com- paretti says that distinct vision is effected only in the optic axis, which is moved most rapidly over every point of the object ; and that what is seen apparently out of the axis is caused by the direction of the first impression in the axis. We believe, however, that the limits of distinct vision are far more extensive. Dr. Young says, of his own eye, that the visual axis being fixed in any direction, he can see at the same time a luminous object placed at considerable distances from it; the angle, however, differs. The ex- tent of the retina is every way greater than the limits of the field of view. The whole extent of perfect vision is little more than

ten degrees; or, more strictly speaking, the imperfection be- gins within a degree or two of the visual axis, and at the distance of 5° or 6° becomes nearly stationary, until, at a still greater distance, vision is wholly extinguished. The imperfection may be owing partly to the unavoidable aberration of oblique rays, but principally to the insensi- bility of the retina; for, if the image of the sun itself be received on a part of the retina remote from the axis, the impression will not be suffi- ciently strong to form a permanent spectrum, although an object of very moderate brightness will produce this effect when distinctly viewed. The motion of the eye has a range of about 55° in every direction, so that the field of perfect vision, in succession, is by this motion extended to 110°.

7. It results from some experiments of Hal- dat's, made by producing an artificial strabismus, that the opinion, which limits the position in which an image can be be seen distinctly to a point at the bottom of the eye, is by no means reconcileable with actual observation. For, in an artificial strabismus, one of the impressions falling on a part without the visual axis, ought not to produce any perception of the object ; this we know not to be the case. From this

fact alone we may conclude that the place of in eyes which have a white pigraentum, than in e image is not necessarily confined to the axis, such as possess a dark one. Hence all animals but that many points of the surface of the retina see more or less distinctly in the dark according are capable of conveying an impression of it. as their lucid tapetum approaches nearer to a As the angle is increased, the perfection of the white or black color. Man, in whom it is dark image may be lessened ; but we do not lose the sees very imperfectly in a light where a cat or dog' perception of it until its position is such, that would perceive objects with

tolerable clearness none of the rays proceeding from it directly can We may observe that, when either of the latter be brought to converge on the posterior hemi- look at us in the dark, the whole pupil is en- sphere of the globe. This would appear to con- larged and illuminated ; but in a full light there form also with our ideas of the use of the extent ' of the retina, for which, if the field of vision was

so extremely limited, we could assign no reason.

is no such appearance. Here there must be a reflection of light from the bottom of the eye to produce the effect ; and the reflected light is al-

The points of it, at a distance from the axis, may ways of the same color with the tapetum. Those

be less favorably disposed, but are not perhaps individuals of our species who have a light pio—

less susceptible of being affected. 'The whole mentum, see much better with less light than

of the retina is of such a form as to receive the those who have it dark. In the Albino, where

most perfect image on every part of its surface, the coloring matter is exceedingly thin, or wholly

that the state of each refracted pencil will ad- deficient, the common day-light is far too power-

mit; and the varying density of the crystalline renders that state more capable of delineating such a picture than any other imaginable contri- vance could have done.' Dr. Young has given

ful to admit of distinct Vision. When "he at- tempts to examine the qualities of an object with precision, the eye-brows are knit, and the eye-lids kept almost shut. In the twilight he can

a diagram, representing the successive images see more plainly, as the luminous rays are then

of a distant object filling the whole extent of view, as they would be formed by the successive refractions of the different surfaces. But in opposition to the observations given above, respecting the decreasing sensibility of the retina remarked by Dr. Young, it has been observed that, on comparing the impressions produced by

not too intense for the very sensible retina. The ferret is destined, from its mode of life, to see in dark places; and its pigmentum is naturally white. The rays which pass through the trans- parent retina are disposed of according to the reflecting powers of the pigmentum. In man, who requires distinct vision in a moderate light,

rays parallel to the optic axis with those by rays rather than the power of seeing where light is

much inclined to this axis, they have appeared to differ in intensity only in a degree corres- ponding to the diminution in the extent of the opening of the pupil, produced by the obliquity of its plane to the luminous rays, and by the obliquity of the rays themselves to the refract- ing substances through which they pass. At the most, the difference of the clearness of the im- pression is not such as it would be if it de- pended on a diminution of the sensibility of the retina, proportionate to its distance from the optic axis. Notwithstanding the influence of the causes just mentioned, the light of a candle passing into both eyes, when their axes are artifi- cially inclined, so that the images make angles of 15° to 25° with the optic axis, suffers no ap- parent diminution of brightness. This fact certainly gives to the field of distinct vision a more considerable extent than that usually as- signed it. The point of the retina, which cor- responds to the optic axis, may possibly be the place of most perfect vision ; not because it is endowed with a greater sensibility than other parts of the retina, but from its being in the ex- act focus of the refractive powers of the eye, and the only point where the image can be impressed with every perfection.

8. In considering the sensibility of the retina, the office of the pigmentum must not be over- looked. In the human subject this is always more or less dark. In animals, where the pig- mentum is more than of one color in the same eye, the lighter portion is always placed at the bottom of the eye, including the entrance of the optic nerve in its sweep ; the color varies in different animals, but has always a brilliant surface. Pro-

almost wholly wanting, the pigmentum is dark, and the rays are absorbed, and entirely lost; therefore, in such eyes, it can add nothing to acuteriess of vision, and a considerable quantity of light is required to produce an adequate im- pression on the retina. The rays are then lost in the pigmentum, and the accuracy of the image is no way impeded. In animals, who require a great acuteness of sight, the rays, reflected from a light and brilliant surface, again impress the retina, and increase the power of vision. The interval of time is too short, and the distance between the points they may strike in their double passage too minute, to occasion any in- distinctness of the image. Distinct vision re- quires that the object should be fixed, and not allowed to move over the surface of the retina. To accomplish this object, the muscles of the globe are employed in the manner above de- scribed. We believe the impression made on the retina by the luminous rays to be in some degree permanent, and the more so as the light is stronger. The duration may vary probably from one hundredth of a second to nearly a second. Hence, the well-known phenomenon of the circle of light in revolving a lighted stick. If the object is painfully bright, the sensation is more permanent, and vanishes at last gradually. 9. Images of what we see are pictured inverted on the retina, and much controversy has arisen as to the cause of our perceiving the objects erect. If it be allowed that we judge of the si- tuation of each luminous point by the direction of the rays it transmits, it follows that we must see bodies as we really do see them, in their pro- per position. The opinion that we really see

bably the light has a greater effect on the retina objects reversed, and correct the sensation by

experience and judgment, derived from the other senses, is liable to very numerous objections. The chick just hatched knows where to direct its bill ; and persons born blind, who have sud- denly gained their sight, see objects in their pro- per position. We do not see the picture on the retina, but the object itself in the direction of each of the rays which conveys to us the sensa- tion, or, to speak more correctly, in the direction of the axis of that pyramid which a pencil of divergent rays forms in proceeding from any point of an object to the eye. Bishop Berkeley explains the supposed difficulty in another way; he does not allow that we can estimate the situa- tion of parts or objects by the decussation and direction of the rays of light, as the mind neither perceives the intersections of the radious pencils, nor pursues the impulses they give in right lines : without perceiving them it cannot form a judg- ment, and it cannot perceive them without a consciousness of such perception. The situa- tion of visible objects must be entirely relative, and depend on the place which they occupy with regard to each other. And, as all visible objects are inverted at the same instant, eacn will be in the same relative situation on the retina as it is in actually. Thus the terms of above and below are arbitrary expressions, by which it is agreed to call upper what corresponds to the heavens, and lower what corresponds to the earth. Now it is evident that, at the bottom of the eye, the si- tuation of these is inverted ; the earth is above, and the heavens below. We call that the lower end of an object which is nearest the ground ; and, the image of a man's feet being in contact with the image of the earth on the retina, we naturally infer

that they are in contact with the actual earth ; the head being more remote from the earth, we suppose that it is higher. The con- fusion has arisen from mixing the ideas derived from the different sensations of sight and touch. ' You say,' to use the words of Dr. Berkeley, ' the picture of the man is inverted, and yet the ap- pearance is erect. I ask you what mean you by the picture of the man, or, which is the same thing, the visible man's being inverted ? You tell me it is inverted because the heels are upper- most, and the head undermost. Explain me this : you say that, by the head being undermost, you meaiY that it is nearest to the earth ; and, by the heels being uppermost, that they are farthest from the earth. I ask, again, what earth you mean ? You cannot mean the earth that is painted on the eye, or the visible earth ; for the picture of the head is farthest from the picture of the earth, and the picture of the feet nearest the picture of the earth ; and, accordingly, the visible head is farthest from the visible earth, and the visible feet nearest to it. H remains therefore that you mean the tangible earth, and so determine the situation of visible things with respect to tangible things, which is absurd, and perfectly unintelli- gible.'

10. Two distinct images are certainly painted, one upon each eye, and yet we only perceive a single object. Many explanations have been given of this phenomenon ; the most satisfactory is, that in the two eyes there are corresponding parts of the retinae, which are probably suscep-

tible of the same impression in equal degree, and convey it to the sensorium in that equal degree : hence, as long as similar points of the images fall upon the corresponding points of the retinae, the perception of the same object is single. It is double, for the same reason, whenever the dis- position of the visual axes is deranged ; and, by an artificial pressure on one of the eyes, we may so displace its visual axis, or point of most per- fect vision, that the two images shall not fall on those parts of the retina? of the two eyes usually

impressed simultaneously ; a double image is the consequence. In order to preserve the simplicity of perception, when we look at an object brought nearer to us, we ratjke them converge towards it by means of the Kt'ernal muscles of the eye, which is further adjusted to the decreasing dis- tance by some other of its powers, so as to con- vey a single and distinct image of the object.

11. In the year 1793 Dr. Young made some observations on the structure of the eye, and its provisions for adjustment, among which are ac- counts of the theories of adjustment, proposed by various earlier writers. Of these we shall say nothing, as a reference to the anatomical descrip- tion of the eye, and other remarks already de- tailed, would at once refute the- greater part of them. It was the opinion of Dr. Young that rays of light, passing from objects at a small distance, could only be brought to foci on the retina by a nearer approach of the crystalline to a spherical form ; this change, he believed, was effected by the muscularity of the lens. In the following year, some observations of John Hunter on this subject were published by Mr. Home, from which it appears, that he had for many years entertained a notion, that the crys- talline humor was enabled, by its own internal actions, to adjust itself, so as to adapt the eye to different distances. Mr. Hunter had instituted some experiments, but died before he had made sufficient progress to draw any conclusion. In the same year Dr. Hosack, in a paper on vision, controverts Dr. Young's deductions with regard to the muscularity of the lens, and attributes the effects produced in adjustment to the actions of the muscles. He assumes, as the necessary consequence of contraction in these muscles, that the axis of the eye will be elongated, and the elastic cornea rendered more convex ; both which circumstances would tend to preserve dis- tinctness of vision with regard to near objects. In order to prove that the eye is capable of ha- ving its focal adjustment considerably varied by external pressure, he applied the common spe- culum to his own eye, and, by

increasing the pressure of it considerably, was enabled to see objects distinctly, though placed much nearer than the natural focal distance. The means here made use of to ascertain the fact do not appear to us very accurate. In the Croonian lecture for 1725 Mr. Home relates a series of experi- ments and observations made by himself and Mr. Ramsden, from which he concludes, that the eye has a power of adjusting itself to different distances, when deprived of the crystalline lens ; and that, therefore, the supposed fibrous, and laminated structure of that lens, is not intended to alter its form, but to prevent reflections in the

passage of the rays through the surfaces of media of different densities, and to correct spherical aberrations; that the cornea is elastic, capable of being elongated one-eleventh of its diameter ; that the tendons of the four straight muscles ter- minate in forming a lamina of the cornea; and that, in changing the focus of the eye from seeing with parallel rays to a near distance, there is a visible alteration produced in the figure of the cornea, rendering it more convex ; and, when the eye is again adapted to parallel rays, the altera- tion by which the cornea is brought back to its former state is equally visible. The exertion re- quired to adjust the eye to near distances, and the ease with which it is adapted to remote ob- jects, proves that the first was a positive action, and the second a relief. The defect of elasticity in the cornea, inferred to arise from age, is applied to explain the changes of vision which take place in advanced life. By some further experiments Mr. Ramsden and Mr. Home were induced to abandon the opinion that the adjustment is pro- duced solely by the alteration of the convexity of the cornea, which might probably be sufficient when the lens was removed, but not when the eye is entire. Mr. Home assumes that the action of the straight muscles will elongate also the axis of the eye, and produce an

effect upon the crystalline lens, and ciliary processes, pushing them forward in proportion as the cornea is stretched. Granting these two last changes, Mr. Ramsden computed that the increase of the cur- vature of the cornea may be capable of producing one-third of the effect, and that the change of place of the lens, and elongation of the axis of vision, sufficiently account for the other two- thirds of the quantity of adjustment necessary to make up the whole.

In the year 1800 was published an excellent paper by Dr. Young, on the mechanism of the eye, in which he examines, with great acuteness and accuracy, the different opinions on this sub- ject. It is impossible for us here to give an abstract of his observations ; we must refer the reader to the paper itself, for the detail of all the proofs by which he endeavours to establish his opinion of an alteration in the figure of the crystalline, and give here only the general con- clusions drawn from his investigations. ' The arguments in favor of an increase of the con- vexity of the crystalline lens are of two kinds ; some of them are negative, derived from the im- possibility of imagining any other mode of per- forming the accommodation without exceeding the limits of the actual dimensions of the eye, and from the examination of the eye, in its dif- ferent states by several tests, capable of detecting any other changes if they had existed : for ex- ample, by the application of water to the cornea, which completely removes the effects of its con- vexity, without impairing the power of altering the focus, and by holding the eye, when turned inwards, in such a manner as to render any ma- terial alteration of its length utterly impossible. Other arguments are deduced from positive evi- dence of the change of form of the crystalline, furnished by the particular effects of refraction and aberration, which are observable in the dif- ferent states of the eye ; effects which furrjish a

direct proof that the figure of the lens must vary '• its surfaces, which are nearly spherical, in the quiescent form of the lens, assuming a different

determinable curvature, when it is called into exertion. The objections which have been made to this conclusion are founded only on the ap- pearance of a slight alteration of focal length in an eye from which the crystalline had been ex- tracted ; but the fact is neither sufficiently ascer- tained, nor was the apparent change at all con- siderable : and even if it were proved that an eve without the lens is capable of a certain small alteration, it would by no means follow that it could undergo a change, five times, or ten times as great.'

12. Motions of the eye are either external or internal. The external motion is that performed by its four straight and two oblique muscles, whereby the whole globe of the eye changes its situation or direction. The spherical figure of our eyes, and the loose connexion to the edge of the orbit by the tunica conjunctiva, which is soft, flexible, and yielding, does excellently dis- pose them to be moved this or the other wav, according to the situation of the object we would view. By the membranes the eye is connected to the edge of the orbit, which, being soft and flexible, they do in such a manner as not in the least to impede its necessary motions; and that great quantity of fat placed all round the globe, betwixt it and the orbit, lubricates and softens the eye, and renders its motions more easy : hence arise the three following remarkable ob- servations : —

i. When nature has denied the head any mo- tion, it is observable that she has, with great care and industry, provided for this defect. To this purpose belongs the surprisingly beautiful and curious mechanism observable in the immove- able eyes of flies, wasps, &c. They nearly re- semble two protuberant hemispheres, each con- sisting of a prodigious number of other little segments of a sphere, all which segments are perforated by a hole, which may be called their pupil, in which this is remarkable ; that every foramen, or pupil, is of a lenticular nature, so that we see objects through them topsy-turvy, as through so many convex glasses : they even be- come a small telescope, when there

is a due focal distance between them and the lens of the mi- croscope by which they are viewed. Leuwen- hoek's observations make it probable that every lens of the cornea supplies the place of the crys- •talline humor, which seems to be wanting in those creatures; and that each has a distinct branch of the optic nerve answering to it, upon which the images are painted : so that as most animals are binocular, and spiders for the most part octonocular, so flies, &c., are multocular, having in effect as many eyes as there are perfo- rations in the cornea, by which means (as other creatures with but two eyes are obliged, by the contraction of the muscles above-enumerated, to turn their eyes to objects) these have some or other of their pupils always ready placed to- wards objects nearly all around them : whence they are so far from being denied any benefit of this noble and most necessary sense of sight, that they have probably more of it than other crea-

tures, answering to their necessities and ways of living.

iii. As in man and most other creatures the eyes are situated in the head, because, among other reasons, it is the most convenient place for their defence and security, being composed of hard bones, wherein are formed two large strong sinuses, or sockets, commonly called orbits, for the convenient lodging of these tender organs, and securing them against external injuries; so in those creatures whose head, like their eyes and the rest of their body, is soft and without bones, nature has provided for this necessary and tender organ a wonderful kind of guard, by enduing the creature with a faculty of withdraw- ing his eyes into his head, and lodging them in the same safety within his body. We have a very beautiful example of this in snails, whose eyes are lodged in four horns, like atramentous spots, one at the end of each horn, which they can retract

at pleasure when in any danger. Here it may be also observed, that the cornea in all animals that want eyelids, as fishes, exactly re- sembles in hardness the horn of a lantern ; and therefore is not hurt by such particles as their eyes are commonly exposed to. And in the mole, because this animal lives under ground, it was necessary its eyes should be well guarded and defended against the many dangers and incon- veniences to which its manner of living exposes it : this is the reason why its eyes are so small, and that they are situated so far in the head, and covered so strongly with hair ; and besides, they can protrude and retract them at pleasure. The eyes of insects are more varied than in any other class of animals : for their form and distribution see ENTOMOLOGY.

iii. The third and last reflection we shall make upon the external motion of our eyes, is what regards a problem which has very much per- plexed both physicians and philosophers, viz. What is the cause of the uniform motion of both eyes ? In some creatures, such as fishes, birds, and among quadrupeds the hare, camelion, 8cc., the eyes are moved differently; the one towards one object, and the other towards another. But in man, sheep, oxen, and dogs, the motrons are so uniform that they never fail to turn both to- wards the same place ; hence in operations upon the eye that require it to be kept immoveable, sometitnes it is necessary to tie up the sound eye with a compress, by which means the other is easier kept fixed and immoveable. The final cause of this uniform motion is, (1). That the sight may be thence rendered more strong and perfect : for since each eye apart impresses the mind with an idea of the same object, the im- pression must be more strong and lively when both eyes concur ; and that both may concur it is necessary that they move uniformly ; for though the retina, or immediate organ of vision, is expand- ed upon the whole bottom of the eye, as far as the ligamentum ciliare,yet nothing is clearly and dis- tinctly seen but what the eye is directed to. (2.) Another advantage we reap from the uniform mo- tion of the eyes, which is

more considerable than the former, consists in our being thereby enabled to judge with more certainty of the distance of objects. (3.) There is yet another advantage,

full as considerable as any of the former, that is thought to arise from the uniform motion of our eyes, and that is, the single appearance of objects seen with both our eyes ; which, though at first view it does not appear probable, is true : for if in looking at an object you turn one of your eyes aside with your finger, and alter its direc- tion, every thing will be seen double.

By the internal motions of the eye we under- stand those motions which only happen to some of its internal parts, such as the crystalline and iris;; or to the whole eye when it changes its spherical figure and becomes oblong or flat. The internal motions of our eyes are either such as respect the change of conformation that is neces- saty for seeing distinctly at different distances, or such as only respect the dilatation and contrac- tion of the pupil. That our eyes change their conformation, and accommodate themselves to the various distances of objects, will be evident to any person who but reflects on the manner aTid most obvious phenomena of vision. See VISION.

PART II. OF THE DISEASES OF THE EYE.

The principal diseases of the eye are ophthal- mia ; opacities and ulcers in the cornea ; ptery- gium and encanthis ; staphyloma ; cataract ; hypopium, dropsy, and cancer. For GUTTA SERENA, see that article. We shall exhibit the chief symptoms of these diseases in the foregoing order: referring to the articles MEDICINE and SURGERY, for a more particular description of the modes of treating them.

. Of Ophthalmia. — Inflammation is the most frequent of all the disorders of the eyes, and there are few other diseases of these organs, on which it is not attendant. Of many, it is a necessary symptom or

consequence. Pain and redness are its chief diagnostic symptoms; the latter one is particularly so, the healthy eye being free from all redness. But this appear- ance is not essential to ophthalmy; for many eyes, undergoing vehement inflammation, are lit- tle, or not at all, red. The internal ophthalmy is of this description. The red appearance, when present, is most evident in the white of the eye : but, when the inflammation is severe, red vessels are frequently seen ramifying over the cornea. Little vesicles, containing extravasated blood, also sometimes form on this transparent mem- brane. The dark red swelling of the conjunctiva, termed chemosis, arises from an effusion of blood into the loose cellular texture, which con- nects this membrane with the sclerotica. The eyelids also commonly partake of the redness attendant on ophthalmy. In mild 'cases, the pain may be compared with, a sense of heat in the part affected, or with a sensation, seeming to arise from the lodgment of sand or dust, under- neath the eyelids. In more severe instances, there is a violent, burning, spasmodic, darting pain.

This disease is sometimes attended with a diminution, or total loss of vision ; and this unpleasant event may depend on opacity of the cornea, a closure of the pupil, or a paralytic state

of the retina. Tumefaction, which accompanies inflammation in general, seems principally to affect, in these cases, the conjunctiva forming the white of the eye. In very violent ophthalmies, this membrane swells, in such a manner, that it covers the whole cornea, protruding like a thick fold between the eyelids, which cannot be shut. The whole eye-ball seems, on this occasion, like a portion of red flesh. The cornea is also liable to become considerably thickened, so as to come into contact with the iris, and adhere to it, or to form an opaque prominence forward, termed staphyloma. In

ophthalmy, the eyelids also are not unfrequently very much swollen. Acute inflammations of the eyes are usually accompa- nied with the common symptoms of inflamma- tory fever, the constitutional disturbance being proportioned to the vehemence of the local affection.

In severe ophthalmy, two distinct stages are commonly observable ; the first is attended with a great deal of heat and pain in the eye, and considerable febrile disorder ; the second is, com- paratively, a chronic affection, without pain and fever. The eye is merely weakened, moister than in the healthy state, and more or less red. The second stage is frequently very obstinate, and much more difficult to cure than the first.

Mr. James Wardrop has recommended punc- turing the cornea, and letting out the aqueous humor, in certain cases of ophthalmy. This gentleman states, that in the living body the transparency of the cornea varies according to the degree of its distention, and that, in cases of opacity of the cornea, attended with fulness of the eyeball, the transparency of the above mem- brane may be restored by the evacuation of the aqueous humors. Mr. Wardrop first tried the experiment in a case, in which there was a con- siderable degree of milkiness and opacity of the cornea, and in which the eyeball appeared dis- tended and prominent, attended with acute inflammatory symptoms. He discharged the aqueous humor by a small incision, and found that the operation produced, not only an alter- ation in the degree of the transparency of the cornea; but an abatement of the pain, and a sudden check of all the inflammatory symptoms. Hence, Mr. Wardrop was afterwards led to per- form the operation, for the purpose of relieving the ophthalmy, as well as preventing opacity of the cornea, when the inflammation is attended with a fulness, prominence, and sense of disten- tion in the eye, and cloudiness of the cornea. He says also, that in all cases in which there is the smallest quantity of pus in the anterior chamber, accompanied with inflammation, he would let out the contents of this part of the eye.

Mr. Wardrop recommends the operation to be done with such a knife as is employed for the extrac- tion of the cataract. The instrument is to be introduced into the cornea, so as to make an in- cision as broad as the blade, at the place where the knife is usually introduced in operating to extract the cataract. Then the aqueous humor flows out along the edges of the blade, as soon as this is turned a little on its own axis— See EJin. Med. and Surgical Journal, Jan. 1807. P undent Ophthabny in Adult Subjects.— The VOL. VIII.

purulent eyes of infants are remarkably subject to ophthalmy. But there is another kind of pu- rulent ophthalmy, to which adults are subject, and which is so generally represented by the best modern authors as arising from two very pecu- liar causes, viz. the suppression of a gonorrhoea, and the inadvertent application of gonorrhoea! matter to the eyes, that the mention of the case cannot be prudently omitted.

The disease produces rather a swelling of the conjunctiva than of the eyelids. This tumefac- tion is followed by a discharge of a yellow, greenish matter, similar to what issues from die urethra in cases of clap. Heat and pain in the eyes; great aversion to lights and, in some in- stances, an appearance of hypopium in the anterior chamber, attend the malady. When the complaint proceeds from the second cause, it is said to be less severe.

As to scrofulous ophthalmy, no specific for scrofula being known, the treatment consists rather in preventing an aggravation, than attempt- ing to / effect the radical cure of the complaint.

2. Of Opacities and Ulcers of the Cornea — Opacity of the cornea is one of the worst conse- quences of obstinate chronic ophthalmy. Scarpa distinguishes the superficial and recent state of the disease, from the albugo and leucoma, which are usually accompanied with inflammation, assume a clear pearl color, and affect the very substance of the cornea. The nebula, or slight opacity, now to be considered, is preceded by, and attended with, chronic

ophthalmy. The ins and pupil can be seen through a kind of dim- ness; and, of course, the patient is not entirely bereft of vision. The veins of the conjunctiva, greatly relaxed by the protracted duration of chronic ophthalmy, become preternaturally tur- gid, irregular, and knotty ; first in their trunks, then in their ramifications, near the union of the cornea with the sclerotica; and, ultimately, in their most minute branches, returning from the delicate lamina of the conjunctiva, spread over the anterior surface of the cornea. When this happens, a milky albuminous secretion begins to be superficially effused in the interspaces between the red streaks. The opaque specks thus produced may cover only a part, or the whole of the cornea.

The opacity of the cornea, sometimes occurring in violent ophthalmies, is essentially different from the nebula, and arises from a deep extrava- sation of coagulating lymph into the cellular texture of the cornea, or from an abscess between the layers of this membrane.

Albugo and Leucoma are also effects of severe acute ophthalmy, and consist of an extravasation of dense lymph into the very substance of the cornea. The disease is sometimes the conse- quence of an ulcer, or wound of this membrane. The first species, arising from the extravasation of lymph, is named albugo ; while the term leu- coma is particularly applied to the other form of the complaint. The recent albugo may some- times be dispersed by the same treatment as is applicable to violent ophthalmy.

An ulcer of the cornea is commonly *e consequence of the rupture of a small alv scess, which not unfrequently forms beneath

the delicate layer of the conjunctiva, conti- nued over the cornea, or in the very substance of the cornea itself, in consequence of violent ophthaimy. At other times, the ulcer is pro- duced by the irritation of extraneous substances in contact with the eye, such as quick-lime, pieces of glass, &c. Little abscesses of the cor- nea ought never to be punctured, although they are slow in bursting. The matter which they contain is so viscid, that not a particle of it ever issues from an opening, and the wound exaspe- rates the disease, increases the danger of opacity of the cornea, and often occasions another small abscess in the vicinity of that which has been punctured. The safest plan is to temporise, until the pustule spontaneously bursts ; promoting this event by means of frequent fomentations, by bathing the eye with warm milk and water, and by applying to it emollient poultices. The ulcer of the cornea is of a pale ash-color; its edges are high and irregular; it creates acute pain; dis- charges a serous matter, and has a tendency to spread widely and deeply.

Scarpa has observed, that this character is not peculiar to ulcers of the cornea, it is common to all those sores which are situated where the skin is delicate, tense, and exquisitely sensible ; as on the nipples of the mammae, the glans penis, lips, apex of the tongue, &c. When ulcers of the cornea spread superficially, the transparency of the membrane becomes destroyed ; when they proceed deeply, and penetrate the anterior chamber of the aqueous humor, this fluid escapes, and a nstulous opening may remain, 01 a pro- lapsus of a portion of the iris take place. If the ulcer be large, even the crystalline lens and vitreous humor may fall out: and, in short, a *otal destruction of the whole organ of sight be the result. The cicatrix of a large ulcer impairs the texture of the cornea so much, that the injury is irremediable.

3. Of Pterygium and Encanthis. — Pterygium is a term applied to the little, preternatural, reddish, ash- colored, triangular membrane, usual- ly growing from the internal angle of the eye, about the caruncula

lachrymalis, and extending over the cornea to the great impairment of vision. Although this kind of membrane gene- rally proceeds from the inner canthus, it occasionally arises from the outer one, and, in some instances, from the superior and inferior hemisphere of the eye itself. Wheresoever it originates, it is a remarkable fact, that it is invariably of a triangular shape, the base of the triangle being towards the white of the eye, the apex towards th» cornea, sometimes at a greater, sometimes at a less distance, from the axis of sight. In a few uncommon cases, two or three pterygia, of various sizes, are met with in the same eye, arranged with different interspaces around the circumference of the organ. Some- times their points meet, and coalesce on the centre of the cornea, so as to completely abolish the functions of the eye.

Scarpa observes, with his usual accuracy, that between chronic varicose ophthaimy, with relax- ation of the conjunctiva, the superficial opacity termed nebula, and the pterygium, the only dif- ference is io the drgree of the disease. All three

consist of a varicose state of the vessels of the conjunctiva over a certain extent of this mem- brane, together with a degree of relaxation of the tunic itself. In the chronic varicose ophthaimy the preternatural magnitude and knottiness of the veins, and the relaxation of the conjunctiva, are confined to the white of the eye ; in the nebula the vessels of the conjunctiva are dilated and knotty, even over some part of the delicate layer of this membrane, covering the transparent por- tion of the eye : in the pterygium, to the varicose state of the vessels on the surface of the cornea is added a thickening of the lamina of the con- junctiva, spread over this membrane.

A very peculiar feature of the pterygium is the facility with which it may be taken hold of with a pair of forceps, and raised in a fold over the cornea. It is worthy of notice, however, that sometimes the pterygium assumes a malignant cancerous nature, and then it has a bright red color

like sealing-wax, easily bleeds when touched, is firmly adherent to the cornea, and occasions lancinating pains, which extend over the whole eye and temple. Scarpa recommend" this case to be treated on the palliative plan ; but it seems questionable whether it might not be proper to attempt the total excision of the malady ; if the trial should fail, we might then extirpate the eye, an operation truly horrible; but one which would certainly become inevi- table, if the malignant pterygium were allowed to increase, and one which can be avoided by no other means than an effort to extirpate the recent disease.

The encanthis, in the incipient state, is a small, soft, red, and sometimes livid excrescence, grow- ing from the caruncula lachrymalis, and neigh- bouring semilunar fold of the conjunctiva. In the inveterate state its magnitude is considerable ; and its roots extend beyond the caruncula lachrymalis, along the lining of one or both eye- lids. The complaint excites chronic ophthaimy, prevents the complete closure of the eye, and by compressing and displacing the puncta lachry- malia, obstructs the free passage of tears into the nose. The surface of the excrescence is at first granulated like a rrulberry; but, after the tumor has become large, only a part of its outside has the above appearance, while the rest seems like a smooth, whitish, ash- colored substance. In this advanced state, the body of the encanthis divides (to use Scarpa's figurative expression), like a swallow's, tail, so as to form two elong- ations, one of which extends along the inner sur- face of the upper eyelid, the other along the inside of the lower one. As of pterygium, so th«>re is a malignant species of encanthis, denoted by its dnll red color, bleeding tendency, lanci- nating pain, excessive hardness, and very fetid discharge. The same practical observations ap- ply to this case, as to the cancerous pterygium.

4. Of Staphyloma and Prolapsus of the Irix. — Staphyloma is the name given to that disease of the eye, in which the cornea loses its natural transparency, rises above its proper level, and even

projects between the eyelids, in the form of a whitish, pearl-colored tumor, which is attended with-total loss of sight. The malady commonly results from some violent species of ophthaimy

particularly that which is termed purulent, and .-;ifects children, and that which is consequent to ihe small-pox. As Scarpa observes, the staphy- loma is one of the most serious diseases to which the eyeball is subject ; for, to the total and irre- mediable loss of sight, are added all the evils which necessarily result from the protuberance of the cornea in advanced cases. The inability of closing the eyelids ; the exposure of the eye- ball to the contact of the air, and extraneous matter suspended in it ; the friction of the eye- lashes against the tumor; the incessant flux of tears down the subjacent cheek ; render the eye painful and inflamed ; sympathetically induce ophthalmy in the sound one; and cause ulcer- ation both on the diseased part of the eye, and on the lower eyelid and cheek.

Prolapsus of the iris is also denominated by some writers staphyloma. Sometimes, when the aqueous humor has escaped through an ulcer, or wound of the cornea, the iris is pressed forward by the humors situated behind it, until a portion of it protrudes from the eye, at the same opening through which the aqueous humor made its escape. The little tumor is of the same color as the iris, viz. brown, or grayish, and is surround- ed at its base by an opaque circle of the cornea. If we reflect a little on the delicate structure of the iris, on the great quantity of blood-vessels which enter it, and the numerous nervous fila- ments which are distributed to it, we shall easily conceive the nature and severity of those symp- toms which are wont to attend this disease, how small soever the portion of the iris projecting from the cornea may be, even when not larger than a pin’s head. Pain, similar to

what would arise from something pricking the eye ; an op- pressive sense of tightness in the whole eyeball; inflammation of the conjunctiva and eyelids ; a copious effusion of tears ; and an absolute ina- bility to endure the light, are the symptoms which successively follow this complaint. The pupil deviates from the centre of the iris, towards the seat of the prolapsus, and assumes an oval shape. In very old cases the protruded portion of the iris seems frequently to become less sen- sible and irritable, so that patients do not expe- rience inconvenience equal to the above account.

5. Of Cataract.— When opacity gradually affects the crystalline lens, or its capsule, the species of blindness thence resulting is denomi- nated a cataract. The first effect of an incipient opacity is a mist before the eyes, surrounding every object, and afterwards gradually increasing so much in density as to render things quite invisible. The opacity behind the pupil in- creases in proportion as the cloudiness in vision augments. As the lens is thick at its centre, and thin at its edge, the incipient opacity, when viewed externally, always seems the greatest in the middle of the pupil ; while the circumfer- ence of the lens appears like a black ring, sur- rounding the white nucleus of the crystalline. Some rays of light are capable of penetrating the thin margin of the lens in its most opaque state ; and hence patients with cataracts are almost al- ways able to distinguish light from darkness, and, iu the early stage of the complaint, discern ob- jects best when these are a little on one side of

the axis of vision, and not immediately opposite the eye. Hence, also, such patients see bettor in a moderate, than a brilliant light, which make* the pupil contract over the thin circumference of the lens. When the opaque lens is either more indurated than in the natural state, or retains a moderate degree of consistence, the case is termed a firm or nard cataract.

Mr. Pott has explained, that an opaque lens is very

rarely firmer than, or even so firm as, a healthy one ; and both this eminent surgeon and Richter make it appear probable, that the harder a cataract is, the thinner and smaller it becomes. The latter states, that a firm cataract usually presents either an ash-colored, a yellow, or a brownish appearance. The interspace between the cataract and pupil is very considerable. The patient very distinctly discerns the light, and can even plainly perceive large bright objects. In the dilated state of the pupil, a black circle, sur- rounding the lens, is very perceptible. The mo- tions of the pupil are free and prompt ; and tin- anterior surface of the cataract appears flat, without the least degree of convexity. When the substance of the lens seems to be converted into a whitish, or other kind of fluid, lodged iu the capsule, the case is denominated a milky, or fluid cataract. According to Richter, this spe- cies of the malady has usually a white appear- ance, while irregular spots and streaks, different in color from the rest of the cataract, are often observable on it. These are apt to change their figure and situation, when frequent and sudden motions of the eyes occur, or when these or^aiii are rubbed or pressed. The lower half of the pupil seems more opaque than the upper one. The crystalline lens, as it loses its firmness, com- monly acquires an augmented size. Hence the fluid cataract is thick, and the opacity close be- hind the pupil. Sometimes one can perceive no space between the cataract and margin of the lens. In advanced cases the pupil is usually very much dilated, and the iris moves very slowly and inertly, in consequence of the catar- act touching this membrane, and impeding its action. Patients, who have milky cataracts, usually distinguish light from darkness very in- distinctly, and sometimes not at all ; partly be- cause the cataract, when bulky, lies so close to the iris that few or no rays of light can enter be- tween them into the eye ; and partly because the fluid cataract always assumes a globular form, and consequently has no thin edge, through which the rays of light can penetrate.

When the opaque lens is of a middling con- sistence, neither hard, nor fluid, but about as consistent as a thick jelly, or curds, the case is termed a soft, or caseous cataract. As the lens softens in this manner, it commonly grow* thicker and larger, eren acquiring a much greater size than that of the fluid cataract. Hence, this species of the malady impedes the motion of the pupil, even more considerably than the latter sort of case.

The only other species of the disease, necessary to be noticed, is the secondary membranous cataract, which is an opacity of the anterior or posterior layer of the crystalline capsule, taking place after the k-n> itself has been removed from

this little membranous sac by a preceding; ope- ration. All cataracts may be complicated with other diseases of the eyes, chronic ophthalmy, lippitudo, gutta serena, adhesion of the opaque lens to the iris, &c.

6 Of Hypopium, Dropsy and Cancer in the eye. — Hypopium is an accumulation of a glutinous, yellowish fluid, like pus, in the anterior chamber of the aqueous humor, and frequently also in the posterior one, in consequence of violent oph- thalmy. The symptoms, exciting apprehensions of an hypopium, are the very same which occur in the highest stage of violent acute ophthalmy, viz. prodigious tumefaction of the eyelids ; red- ness and swelling of the conjunctiva, as in che- mosis ; burning heat and pain in the eye ; pains in the eyebrow and nape of the neck; fever; restlessness; aversion to the faintest light, and a contracted state of the pupil. As soon as the hypopium begins to form, a yellowish, semilunar streak makes its appearance at the bottom of the anterior chamber, and, regularly as the glutinous fluid is secreted,

it increases in all dimensions, and gradually obscures the iris, first, its anterior part, next where it forms the pupil, and lastly, its whole circumference. While the inflamma- tory stage of the ophthalmy lasts, the hypopium never fails to enlarge ; as soon as this stage ceases, and the ophthalmy becomes connected with local weakness, the hypopium leaves off increasing, and from that moment is disposed to diminish.

When the secerning extremities of the arteries, and the minute mouths of the absorbent vessels of the eye, do not act in their naturally recipro- cal manner, the organ may become distended with a morbid redundance of an aqueous secretion. This malady constitutes what is termed dropsy of the eye, and is at first attended with great weakness, and afterwards with total loss of sight.

Scarpa, who has had many opportunities of dissecting dropsical eyes, is inclined to believe, that, in the generality of instances, the disease chiefly depends on a diseased secretion of the vitreous humor, and also, occasionally, on a mor- bid alteration of the alveolary membrane, by which this humor is produced. The eye affected assumes an oval shape, terminating in a point on the cornea; then, as the organ enlarges in all di- mensions, it projects from the orbit in such a manner, that it causes immense deformity, and prevents the closure of the eye-lids.

The disease is sometimes preceded by blows on the eye, or adjoining temple ; sometimes, by an obstinate internal ophthalmy. In other instances it is preceded by no inconveniences, except an uneasy sensation of tumefaction and tension of the orbit, a difficulty of moving the eye ball, and a considerable impairment of sight. When the eye has assumed an oval figure, and the anterior chamber has become preternaturally capacious, the iris seems situated backward, in an unnatural degree, and tremulates in a very singular way, on the slightest motion of the eyeball. The pu- pil remains dilated in every degree of light, •while the crystalline is sometimes discolored from the very beginning of the

disease, and sometimes does not become opaque, till the af- fection has arrived at its highest pitch. While

the eye is not considerably enlarged, and the crystalline is not deeply opaque, the patient can usually distinguish the outlines of objects and brilliant colors. But, when the eye has acquired a larger volume, and the whole crystalline has become opaque, the retina becomes completely paralytic, probably, from the excessive disten- tion which it suffers. In the last stage of the disease, when the dropsical eye projects from the orbit, so as not to admit of being covered by the eyelids, to the inconveniences already enume- rated, others associate themselves, arising from the dryness of the eye ; the contact of extraneous bodies ; the friction of the eyelashes ; the very viscid secretion from the eyelids ; the ulceration of the lower eyelid, and even of the eye itself. Hence, the advanced stage of dropsy of the eye induces violent ophthalmies, followed by ulce- ration and a total destruction of the organ.

Carcinoma is said to make its appearance in this situation in three forms. Sometimes tl>e eyeball becomes irregular and knobby, and swells to the size of an apple; the sight is gradually lost ; the blood-vessels in the white of the eye enlarge; and the whole external and internal structure of the organ becomes so alterod that the part resembles a piece of flesh, and no ves- tiges of its original organisation remain. Some- times a portion of the cornea is still externally visible. Internally may sometimes be discerned a small aperture, through which may be distin- guished the remains of the vitreous humor, and of the choroid coat. In some instances, the eye- ball is ulcerated and emits a fetid discharge. In others, there is not the smallest appearance of ulceration, and the eyeball resembles a piece of firm flesh. The patient commonly experiences in the eye, from the first, considerable burning, and, at last, violent darting pains, extending over one side of the head. This is the most frequent description of cancer of the eye.

Sometimes excrescences form on the anterior surface of the eye, especially on the transparent cornea, and frequently admit of being radically cured by the knife, caustics, or ligature. But, occasionally, they regularly grow again after the employment of these means, becoming broader, more ma- lignant, and even cancerous, and, at length, changing into a spongy fungus, which is very painful, covers the whole anterior surface of the eye, and renders extirpation indispensable. This is the second sort of cancer of the eye. On several occasions, ulcers form on the front of the eyeball,which, though generally curable by proper means, sometimes are exceedingly inveterate, entirely destroying the eyesight, and becoming so malignant as to obtain the appellation of cancer. This is the third species of cancer of this organ. On the subject of extirpation of the eye, some- times the only resource of surgeons in this case, see SURGERY.

EYE, a market town of Suffolk, built on a kind of island, surrounded by a brook, near the borders of Norfolk, in the road between Ipswich and Norwich. It was incorporated by king John ; has two bailiff's, ten principal burgesses, twenty- four common counsellors, a recorder, and a town i lerk. The chief manufacture is bone-lace and spinning. It has a large handsome church ; and

near it are the ruinous walls of an ancient castle and monastery. The market is on Saturday, the fair on Whit-monday. It formerly sent two mem- bers to parliament : since the passing of the reform bill it sends only one. It is twenty miles and a half north of Ipswich, and ninety N. N. E. of London. The greatest part of the town belongs to earl Cornwallis, who is lord of the manor, from whence he receives the title of baron.

EYE OF A BLOCK, in naval affairs, that part of the rope-strap which is fastened to some neces- sary place in the ship : the strap is a sort of wreath, or rope formed into a ring, and fixed round the block for the double convenience of strengthening the block and fastening it in any place where it is wanted.

EYEMOUTH, a town of Berwickshire at the mouth of the Eye. The town is a borough of barony, of which Mr. Wedderburn is proprietor and superior. About the beginning of the eighteenth century, Eyemouth was a small fish- ing village, which afforded a retreat for smugglers ; but shortly after the Union, that pernicious trade being much checked, the gentlemen of the county took advantage of the excellent natural harbour formed by the river Eye; and in 1750 a new pier was erected on the west side of the harbour, and in 1770 another on the east side; in conse- quence of which the trade has considerably in- creased. The coast abounds with fish, and many fishing boats are constantly employed. It has fairs in June and October, and lies nine miles north by west of Berwick.

EYLAU, PRUSSIAN, a town of Prussia, chiefly remarkable as the scene of the first successful resistance of the Russians to the power of Buo- naparte on his invasion of that country. It is twenty miles south of Konigsberg.

Beningsen, the Russian commander, after re- treating before the French for six days, had pro- mised to give battle to them on this spot: but the ground was ultimately chosen with a view to the preservation of the city of Koningsberg. The length of the Russian position was two miles ; partly flanked by woods, but, on the whole, ele- vated and exposed. The French took post nearly parallel, but on higher ground, so that their ar- tillery could command the Russian position. The French had likewise the superiority in num- bers, the Russians not exceeding 60,000 men. On the eve of the battle, there was a sanguinary struggle for the town of Eylau, which remained in possession of the French. The cannonade

began next day at dawn, and was at first con- ducted with greater effect on the part of the French. The marshy ground between the ar- mies now appearing easily passable over the ice, Buonaparte ordered two large columns to move forward, the one against the centre, the other on the right flank of the Russians ; but, after ad- vancing 300 yards, the havoc of the Russian ar- tillery was so great as to break their order, and they returned in "confusion. A subsequent effort against the Russian left, was equally unavailing, the Russians driving back their opponents with the bayonet.

Buonaparte's general attack was now oidered. Calculating that Davoust, whom he had de-

tached to take the Russians in the rear, would arrive at his station towards noon, Buonaparte di- rected a movement of his army in six separate columns, against the Russian line : and a heavy fall of snow concealed the arrangement. When they had come upon the Russian line, Beningsen, aware of the importance of the moment, made his own reserve advance, join themselves to the main body, and rush forward, with united strength, to charge the enemy. The French were shaken, gave way, and all efforts (to rally them became ineffectual. Their cavalry attempting to turn the fortune of the day by desperate charges, were cut up in great numbers. Scarcely, how- ever, had the Russians effected this repulse, when they were ordered to face about, a nume- rous corps appearing on their left, and threaten- ing their rear. This was the corps of Davoust, who had been retarded by the wretched state of the roads. The Russian main body was drawn back from the field of battle to meet him ; and a Prussian corps under general Lestocq having, after a most difficult march, reached the scene of action, advanced also to attack the French. Their number did not exceed 6000 ; but they were admirably commanded by Lestocq, and the Russian left wing affording them support, Davoust was repulsed with very heavy loss. Night now came on, and Buonaparte recalled him. Had the Russians been in a condition to make an attack the next day, their success, it is thought, would

have been certain ; but their am- munition was expended, and their men were ex- hausted. Beningsen, apprehensive for the eventual safety of Koningsberg, now, therefore, took the determination of retreating, contrary to the wish of his generals. The Russians acknow- ledged a loss of nearly 20,000 men in killed and wounded, and estimated that of the French to exceed 30,000. Buonaparte remained for some time at this place, but finding that the Rus- sian cavalry well protected the surrounding country, and that he could make no effectual progress against so obstinate an enemy, he retired in the direction of Dantzic.

EYOT, n. s. Sax. &xzat>> an island. A little island.

It seems just, that the eyolt, or little islands, arising in any part of the river, shall be the property of him who owneth the piscary and the soil. Blachttone.

EYNAPOOR, or AINAPOOR, a town in the province of Bejapoor, Hindostan, belonging to the Mahrattas. It is twelve miles south-east from Merritch. This is a town of some size, in which are several Mahommedan families, who subsist on the produce of charitable lands.

EYRE, n. s. Fr. eyre ; Lat. iter. The court of justices itinerants ; and justices in eyre are those only, which Bracton in many places calls justiciaries itinerantes. The eyre also of the forest is nothing but the justice-seat, otherwise called ; which is, or should, by ancient custom, be held every three years by the justices of the forest, journeying up and down for that purpose. (Cowel).

EY'RY, n. s. From Teut. ev, an egg. The place where birds of prey build t'ncir nests and hatch.

But I was born to high, Oar eyrie buildeth in the

cedar’s top, And dallies with the wind, and scorns the sun.

Shahspeare.

The eagle and the stork, On cliffs and cedar-tops their eyriet build. Milton.

Some haggard hawk, who had her eyry nigh, Well pounced to fasten, and well winged to fly.

Dry den.

Forth from his eyry roused in dread. The ravening eagle northward fled. Collins.

So, borne on sounding pinions to the west, When tyrant-power had built his eagle nest ; While from his eyry shrieked the famished brood, Clenched their sharp claws, and champed their beaks for blood. Darwin.

EZEKIEL, the third of the greater Prophets, •was the son of Buzi, and of the sacerdotal race. He is said to have been a native of Sarera, and to have been carried away captive to Babylon with Jehoiachim, king of Judah, A.M. 3406. He settled, or was placed, with many others of his captive countrymen, on the banks of the Chebar, a river of Mesopotamia; where he was favored with the divine revelations which are described in this book. He is supposed to have prophesied during a period of twenty-one years. He began to deliver his prophecies about eight or ten years after Daniel, in the fifth year of Jehoiachim’s captivity ; and, as some have supposed, in the thirtieth year of his age. The author of Ecclesiasticus says of him, that ‘ he directed them who went right;’ which may be considered as a merited encomium on the in- dustry with which he endeavoured to instruct and guide his countrymen to righteousness. He is reported by some writers to have presided in the government of the tribes of Gad and Dan in Assyria ; and, among other miracles, to have punished them for idolatry by a fearful destruc- tion produced by serpents. In addition to

these popular traditions it is reported, that his coun- trymen were so incensed by his reproaches as to put him to a cruel death. In the time of Epi- phanius it was generally believed thathis remains were deposited in the same sepulchre with those of Shem and Arphaxad, which was situated be- tween the river Euphrates and that of Chaboras, in the land of Maur ; and it was much resorted to, not only by the Jews, but also by the Medes and Persians : who reverenced the tomb of the pro- phet with a superstitious devotion. The authen- ticity of Ezekiel's book will admit of no question. I le represents himself as the author in the begin- ning and other parts of it, and justly assumes the character and pretensions of a prophet, as such he has been universally considered.

St. Jerome remarks, with great truth, that the visions of Ezekiel are sometimes very mysterious and of difficult interpretation, and that they may be reckoned among the things in Scripture which are 'hard to be understood.' Ezekiel himself, well aware of the mysterious character of those representations which he beheld in vision, and of the necessary obscurity which must attend the description of them to others, humbly represented to God that the people accused him of speaking daikly 'in parables.' It appears to have been God's design to cheer the drooping spirits of his

people, but only by communicating snch encou- ragement as was consistent with a state of pun- ishment, and calculated, by indistinct intimations, to keep alive a watchful and submissive confi- dence. For this reason, perhaps, were Ezekiel's prophecies, which were revealed amidst the gloom of captivity, designedly obscure in their nature; but, though mysterious in themselves, they are related by the prophet in a plain and historical manner He seems to have been de- sirous of conveying the strong impressions which he received, as accurately as they were capable of being described.

'The book of Ezekiel,' says Bishop Gray, ' is sometimes distributed, by the following analysis,

under different heads. After the first three chap- ters, in which the appointment of the prophet is described, the wickedness and impending pun- ishment of the Jews, especially of those remaining in Judaea, are represented under different parables and visions to the twenty-fourth chapter, inclu- sive. From thence to the thirty-second chapter, the prophet turns his attention to those nations who had unfeelingly triumphed over the Jews in their affliction ; predicting that destruction of the Ammonites, Moabites, and Philistines, which Nebuchadnezzar effected ; and particularly, he foretells the ruin and desolation of Tyre and of Sidon, the fall of Egypt, and the base degene- racy of its future people, in a manner so forcible, in terms so accurately and minutely descriptive of their several fates and present condition, that nothing can be more interesting than to trace the accomplishment of these prophecies in the ac- counts which are furnished by historians and travellers. From the thirty-second to the fortieth chapter, Ezekiel inveighs against the hypocrisy and murmuring spirit of his captive countrymen : encouraging them to resignation by promises of deliverance, and by intimations of spiritual re- demption. In the last two chapters of this divi- sion, under the promised victories to be obtained over Gog and Magog, he undoubtedly predicts the final return of the Jews from their dispersion in the latter days; with an obscurity, however, that can be dispersed only by the event. The nine last chapters of this book furnish the de- scription of a very remarkable vision of a new temple and city ; of a new religion and polity, under the particulars of which is shadowed out the establishment of a future universal church. Josephus says, that Ezekiel left two books con- cerning the captivity; and the author of the Synopsis attributed to Athanasius, supposes that one book has been lost ; but, as the last nine chapters of Kzekiel constitute in some measure a distinct work, probably Josephus might consider them as forming a second book.'

It deserves to be remarked, that \ve are in- formed

by Josephus, that the prophecy in which Ezekiel foretold that ' Zedekiah should not see Babylon, though he should die there,' was judged by that monarch to be inconsistent with that of Jeremiah, who predicted that ' Zedekiah should behold the king of Babylon and go to Babylon But both were exactly fulfilled ; for Zedekiah did see the kin? of Babylon at Riblah, and then, being deprived of his eyes, he was carried to Babylon, and died there. From this account it

appears, that Ezekiel's prophecies were trans- mitted to Jerusalem, as we know that Jeremiah's were sent to his countrymen in captivity ; an intercourse being kept up, especially for the conveyance of prophetic instruction, for aught that might console misery, or awaken repent- ance; and it was probably on the ground of this communication, that the Talmudists supposed that the prophecies of Ezekiel were arranged into their present form, and placed in the canon by the elders of the great synagogue.'

The style of Ezekiel is characterised by Bishop Lowth as bold, vehement, and tragical ; as often worked up to a kind of tremendous dignity. His book is highly parabolical, and abounds with figures and metaphorical expressions. ' Ezekiel/ says the author before quoted, ' may be compared to the Grecian ./ Eschylus ; he dis- plays a rough but majestic dignity ; an un- polished though noble simplicity ; inferior, per- haps, in originality and elegance, to others of the prophets ; but unequalled in that force and grandeur for which he is particularly celebrated. He sometimes emphatically and indignantly re- peats his sentiments ; fully dilates his pictures ; and describes the adulterous manner of his countrymen under the strongest and most exag- gerated representations that the licence of the eastern style would admit. The middle part of the book is in some measure poetical ; and con- tains even some perfect elegies; though his thoughts are

in general too irregular and uncon- trolled to be chained down to rule, or fettered by language.'

EZRA, or ESDRAS, a Jewish priest, in the direct line from Aaron, and author of the book that bears this name in the Bible, succeeded Zerubbabel in the government of Judea, A. M. 3546, and was in commission as such about twelve years ; at the expiration of which he seems either to have returned to Babylon, or retired to a private station in Judea.

' Some critics indeed,' says Bishop Gray, ' have pretended that the first six chapters must have been written by a person more ancient than Ezra, because Ezra is said, in the seventh chapter, to have gone up from Babylon after the events df- scribed in the first six chapters, in the time of Artaxerxes Longimanus ; whereas, in the fifth chapter, the author has been thought to speak of himself as present at Jerusalem, in the time of Darius Hystaspes : if this be not a mistake, Ezra may perhaps be supposed to have accom- panied Zerubbabel in the first return from the captivity; and might have been again sent up to Babylon to counteract the representations of those who opposed at the Persian court the re- building of the city and temple ; and the account of his departure, which is given in the seventh chapter, perhaps refers only to his going up with that commission and power which he received from Artaxerxes. But, whether Ezra were or were not at Jerusalem at the time when this an- swer is supposed to have been made to Tatnai, he may well be conceived, either as copying a public record of the transaction, or as relating a speech of the Jews, to have used the expression of We said unto them, meaning by we, his,

countrymen ; which is surely no uncommon mode of speaking. Such objections are very futile; and there is no reason to question the authenti- city of any part of the book, which from the highest antiquity has been attributed to Ezra ; who certainly at least digested it ; and probably towards the end of his days.'

This book begins with an account of God's having disposed Cyrns, either by positive injunc- tion, or by discovering to him his long-predicted designs, to promote the rebuilding of the city and temple of Jerusalem. It relates the accom- plishment of some illustrious prophecies in the release which that monarch granted in the first year of his reign over Babylon ; and in the re- turn of the Jews to their own country after a captivity of seventy years, A. M. 3468. We then are presented with a list of the leaders and numbers of the captives who returned under Zerubbabel, and perceive how fatally the nation had been diminished and brought low by suc- cessive defeats and dispersions. We contemplate the picture of a harassed people restored from captivity, and returning to their country, which had long lain desolate. We behold them erect- ing a temporary altar and service, and laying the foundation of their temple. Afterwards are de- scribed the lamentations of those who remem- bered the magnificence of Solomon's building ; the opposition excited by the Samaritans and others, whose assistance had been rejected ; the interruption occasioned by their intrigues; and, at last, the finishing and dedication of the temple about A. M. 3489, and the celebration of the passover. Ezra then relates his return with his companions to Jerusalem ; confesses the dis- obedience of the people to God's laws, in inter- marrying with the Gentile nations of the land ; describes his own pious and conciliatory prayer; the repentance of the people, and their separation from their wives and children, who, not being of the holy seed, might, if suffered to intermingle with the Jews, have rendered uncertain the ac- complishment of the promises ; and he concludes with an enumeration of those who had trans- gressed : stigmatising, with impartial indignation, the names of even the priests and rulers who had offended in this important violation of the law. The history contains a period of about seventy-nine years : from A. M. 3468, when Cy- rus became master of Persia, to A. M. 3547, when Ezra effected the reform described in the last chapter of his book; for between the

dedication of the temple, and the departure of Ezra from Babylon in the seventh year of the reign of Artaxerxes Longimanus, is a period of fifty-seven or fifty-eight years ; which this book passes over in silence, only mentioning that the Jews had during that time intermixed with the Gentiles.

Ezra is written in Chaldeefrom the eighth verse of the fourth chapter to the nineteenth verse of the sixth chapter, and from the beginning of the seventh chapter to the twenty-seventh verse ; for as this part of the work contains chiefly letters, conversation, and decrees uttered in that lan- guage; it was consistent with the fidelity of the sacred historian, to describe the very .words which were used ; especially as the people re-

cently returned from the captivity were familiar, and perhaps more conversant with the Chaldee than even with the Hebrew tongue ; and it was probably about this time that the Chaldee para- phrases began to be used; for it appears by Neiiemiah's account, that all could not understand the law, which may mean that some of them had forgotten the Hebrew during their dispersion in the captivity.

Ezra appears to have 'oeen particularly well skilled in the law, to have given much attention to the study of the Scriptures, and to have been well versed in the interpretation of them. He styles himself a ready scribe, and professes to have prepared himself to instruct the people in the statutes of God : the tradition, therefore, of his having made a collection of the sacred wri- tings is extremely probable. We know, indeed, from Josephus, that the Jewish priests, after every important war, were accustomed on the establishment of peace, both at home and abroad, publicly to ascertain, recognise, and copy out the registers of the priesthood ; by which we must either understand the Scriptures, or believe that the same practice

prevailed as to them. Ezra, therefore, may well be supposed to have pub- lished a correct edition,after the re-establishmentof the Jews ; and probably with the assistance of the great synagogue, which particularly flourish- ed in the time of Artaxerxes Longimanus ; not that there is any reason to imagine that the sacred books were lost during the captivity ; as some have absurdly conceived from the fabulous relation of a pretended burning of the law, and of the restoration of the Scriptures by divine re- velation, which account is given only in the apocryphal book of Esdras : a work of little or no authority. The copies of the law were too much reverenced to be lost; and Daniel we know was in possession of one during the capti- vity. He likewise quotes the prophecies of Je- remiah ; and probably other persons had copies of the Scriptures, many of them being favored by the conquerors*; and if the sacred vessels of

the temple were so carefully preserved, we may well conceive that the authentic manuscripts of the Hebrew Scriptures were safely deposited at Babylon ; and, perhaps restored to Zerubbabel, or Ezra, on their return to Jerusalem. But, wherever preserved, Ezra certainly produced the Law, and read it to the people ; and the other books of scripture were collected by him and Nehemiah, or by the. great synagogue.

Besides the books which a*e ascribed to Ezra, in the apocryphal part of our Bible, there have been spurious constitutions, benedictions, and prayers attributed to him ; as likewise a revela- tion, a dream, and a prophecy relative to the Roman empire ; together with a calendar of pretended auspicious and unlucky days, none of which deserve attention.

Justin Martyr cites, we may add, a very re- markable passage as having once been found in the book of Ezra. Whitaker (Origin of Ari- anism, p. 305) thinks it stood in chap. vi. 19 — 22, or between the 20th and 21st verses ; and he contends for its genuineness. It is thus trans- lated : — 'And Ezra said unto the people, this passover is our saviour

and our refuge; and if ye shall understand and ponder it in your heart, that we are about to humble him in this sign, and afterwards shall believe on him, then this place shall not be made desolate for ever, saith the Lord of hosts. But if ye will not believe on him, nor hear his preaching, ye shall be a laughing- stock to the gentiles.' Dr. Adam Clarke also is disposed to believe this passage authentic (Disc, on the Eucharist, p. 83) ; and L'Enfant thinks that St. Paul alludes to it expressly 1 Cor. v. 7. But Dr. Orabe, Thirlby, and archbishop Magee (Discourses on the Atonement, i. 306, note) doubt its genuineness ; and Dr. Clarke does not refer to it in his Commentary on 1 Cor. v. 7, or Exod.xii. 8. No Hebrew copy of the clause is found, nor is it in any copy of the Septuagint version. The Greek passage may be found in Justin Martyr, Thirlby, pp. 292-3, and is dis- cussed at length by Dr. Magee.

END OF VOL VIII.

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Volume IX (F - Garumna)

The London Encyclopaedia

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Sic oportct ad librum, presertim miscellanei veneris, legendum accedere lectorem, ut solet ad convivium conviva civilis. Convivator anDititur omnibus satist’acere ; et tamen si cjuid apponitur, quod hujtis aut illius palate non respondeat, tt iiic et ille urbane dissiniulant, et alia fercula probant, ne quid contristent eonvivatorem. Erasmus.

A reader should sit down to a book, especially of the miscellaneous kind, aa a well-behaved visitor does to a banquet. The master of the feast exerts himself to satisfy his euests ; but if, after all his care and pains, something should appear on the table that does not suit this or that person’s taste, they politely pass it over without notice, and commend other dishes, that they may not distress a kind host. Translntiun.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITANA,

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

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THE

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F. The letter (Saxon p) is evidently derived from the Greek digamma, through the medium of the Latin language. Some contend that this is derived from the ˆ, phi. by first making the per- pendicular stroke, and, in adding the circle at two strokes, carelessly omitting to make them join. This, however, the learned bishop of Salis- bury disputes. He says it was anciently called vau, or wau, and is in fact a double vau of the Hebrew and Syriac, and corresponding in shape with the vau of the Arabic and Ethiopic. Ains- worth, however, derives it from the Hebrew 3 phe, or r, pe final, which, if turned, nearly gives the figure; and he observes, that in changing Hebrew words into Latin, n is converted into F. Its sound, in English, is very uniform, being formed by compression of the lips, or a junction of the upper teeth with the under lip, and a forcible breath. In the preposition of, indeed, and Dn some few other occasions, it is pronounced softer, or like v.

As an abbreviation, F, in physical prescrip- tions, stands for fiat, i. e. Let it be done, or made up.’ Thus f. s. a. signifies fiat secundum artem. F, in the civil law, doubled thus,ˆ signifies the pandects. See Pandects. F, in the criminal law, was a stigma put upon felons with a hot iron, on their being admitted to the benefit of clergy; by stat. 4 Hen. VII. c. 13. F, as a numeral, anciently signified 40, and when a dash was added at top (thus F), it stood for

40,000.

FAABORG, a sea-port town of Denmark, on the south coast of the island of Funen. It has but an insecure harbour ; and its trade, which is in provisions, is not considerable. Population about 1100. It is seventeen miles south of Oldensee.

FABBRONI (Giovanni), a modern Italian philosopher of considerable eminence. We find him filling the various posts of secretary to the Academia de i Georgofili, director of the Museum and Cabinet of Natural History at Florence, one of the forty members of the Societa Italiana delle Scienze, Tuscan deputy for the new system of weights and measures, member of the depu- tation of finance under the government of the queen regent of Etruria, a deputy to the corps legislative in France, director, umder the Impe- rial government, of bridges and highways for the department beyond the Alps, director of the mint at Florence, royal commissary of the iron works and mines, and one of the commissioners of taxes for the states of Tuscany. His writings best known are — Provedimenti Annonarj ; his Discourses on National Prosperity; on the Equilibrium of Commerce, and the Establish- VoL. IX.— .Part 1

ment of Custom-houses; on the Eft'ects of the Free Traffic of Raw Material ; on Rewards for the Encouragement of Trade ; on the Chemical Action of Metals ; on the Value aud Reciprocal Proportion of Coins ; on the Scales and Steel- yards of the Chinese ; on the Palaces of Spain ; and on the ancient Hebrew People. He left behind him many unpublished memoirs. He died at Florence in 1823, aged upwards of seventy.

FABELL (Peter), a reputed magician, and native of Edmonton, lived and died there in the reign of Henry VII. In Norden's account of Edmonton, we read, 'There is a fable of one Peter Fabell, that lieth in this church, who is said to have beguiled the devell by poUcie for money ; but the devell is deceit itself,' Weever supposes Fabell to have been an ingenious man, who amused himself and astonished his neigh- bours by sleight-of-hand tricks, or chemical ex- periments. There is a very scarce pamphlet, entitled — 'The Life and Death of the Merry Devil of Edmonton ; with the pleasant Pranks of Smug the Smith, &c.' In this book Fabell is styled ' an excellent scholar, and well scene in the arte of magicke.'

FABER (Basil), a protestant German critic of the sixteentli century, was born at Sorau in Lu- satia, and, after studying at Wittemberg and other universities, was about 1550 appointed rector of the seminary of Nordhausen. He died rector of the Augustinian College at Erfurth in 1576. He was one of the protestant ecclesias- tical historians, termed

the Centuriators of Mag- deburgh. Faber's literary reputation is founded on his Thesaurus Eruditionis Scholasticae, 1571, folio, of which improved editions were published in 1735 and 1749.

Faber (John), a German divine, born at Heilbron in 1500. He was created doctor at Cologne, and in 1526 was appointed confessor to Ferdinand king of the Romans, who, when he became emperor, gave him the see of Vienna. He was called the mallet of heretics, and owed his preferment to the zeal which he displayed in opposition to Luther. He died in 1562. His works were printed at Cologne, in 3 vols, folio. Faber, in ichthyology. See Zeus. FABIAN, or Fabyan (Robert), an alderman and sheriff" of London at the close of the fifteenth century, was a man of learning, and author of a Chronicle of England and France, entitled the Concordance of Histories, in 2 vols, folio, be- ginning with Brute, and ending with the 20th of Henry VII. 1504. He was a member of the company of drapers, and resigned his gown in 1502 to avoid serving the office of lord mayor. Dying in 1511, or 1512, he was interred in the

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FABLE.

church of St. Michael, Cornhill. His Chronicle IS a mere compilation, but it contains several curious particulars relative to the city of Lon- don, not elsewhere to be found. Stowe calls it ' a painful labor, to the great honor of the city and of the whole realm.' Cardinal Wolsey caused as many copies of it as he could procure to be burned, because the author had made too clear a discovery of the large revenues of the clergy. It is Fabian's general practice at the division of the books to insert metrical prologues and other pieces, in verse. The best of his metres is the complaint of King Edward the Second, who is introduced reciting his misfor- tunes ; but this, in fatt, is only a translation of an indifferent Latin poem a.scribed to that mo- narch, and probably written by William of Wor- cester. In the first edition of Fabian's Chro- nicle (printed in 1516) he has given, as epilogues to his seven books, The Seven Joys of the Blessed Virgin, in English Rime : and under the year 1325 there is a poem to the Virgin; and another on one Badby, a Lollard, under the year 1409. These are suppressed in the later editions. In his panegyric upon London, he despairs of doing justice to his theme, ' even if he had the eloquence of Tully, the morality of Seneca, and the harmony of that faire ladie. Calliope.' Fabian's History was reprinted in 1811, 4to.

FABIUS, the surname of a powerful patrician family at Rome, said to

have derived their name from J'aba, a bean, because some of their ances- tors cultivated this pulse. They were once so numerous that they took upon themselves to wage a war against the Veientes. They came to a general engagement near the Cremera, in which all the family, consisting of 306 men, were slain, A. U. C. 277. There only remained one boy, whose tender age had detained him at Rome, and from him descended the noble Fabii of the following ages. Ovid celebrates the above trans- action in those lines beginning,

Una domus vires et onus susceperat urbis, Sumunt gentiles arnia professa maniis.

Fasti, lib. ii, 197.

Fabius Maximus (Quintus), a celebrated Roman, who from a dull and inactive childhood was raised to the highest offices of the state. In his first consulship he obtained a victory over Liguria, and the fatal battle of Thrasymenes oc- ciusioned his election to the dictatorship. In this important office he began to oppose Hannibal, not by fighting him in the open field, like his predecessors, but by continually harassing his army by countermarches and ambuscades, from which he received the surname of Cunctator, or the Delayer. Hannibal sent him word, that ' If he was as great a captain as he would be thought, he ought to come into the plain and give him battle.' But Fabius coldly replied, * That if he (Hannibal) was as great a captain as he would be thought, he would do well to force him to battle.' Such operations in the commander of the Roman armies gave offence to several ; and Fabius was even accused of cowardice. He, however, continued firm in his resolution ; and patiently bore to see his master of horse raised,

by his enemies at home, to share the dictatorial dignity. When he had laid down his office of dictator, his successors, for a while, followed his plan ; but the rashness of ^^arro, and his con- tempt for the operations of Fabius, occasioned the fatal battle of Canni£. Tarentum was obliged to surrender to him after the battle of Cannoe ; and on that occasion the Carthaginians observed, that Fabius was the Hannibal of Rome. When he had made an agreement with Hannibal for the ransom of the captives, which was totally disap- proved by the Roman senate, he sold all his estates to pay the money, rather than forfeit his word to the enemy. The bold proposals of young Scipio, to carry the war from Italy to Africa, were rejected by Fabius as chimerical and dangerous. He did not, however, live to see the success of the Roman arms under Scipio, and the conquest of Carthage by measures which he treated with contempt, and heard with indig- nation. He died in the 100th year of his age, after he had been five

times consul, and twice honored with a triumph. The Romans were so sensible of his great merit and services, that the expenses of his funeral were defrayed from the public treasury.

Fabius Maximus (Quintus), son of the pre- ceding, showed himself worthy of his fathers virtues. During his consulship he received a visit from his father on horseback in the camp. The son ordered the father to dismount; and the old man cheerfully obeyed, embracing his son, and saying, * I wished to convince myself whether you knew what it is to be consul.' He died before his father, who, with the moderation of a philo- sopher, delivered a funeral oration over his son's body.

Fabius Maximus Rullianus was the first of the Fabii who obtained the surname of Maximus, for lessening the power of the populace at elec- tions. He was master of horse, and his victory over the Samnites in that capacity nearly cost him his life, as he engaged the enemy without the command of the dictator. He was five times consul, twice dictator, and once censor. He triumphed over seven different nations.

FA'BLE, n. s., v. a.&cv.n

Fa'bled, part, ctdj,

Fa'bler, n. s.

Fab'ulist,

Fabulo'sity,

Fab'ulous, adj.

Fab'ulously, adv.

Fab'ulousness, n. s. Minsheu, as the root of the Latin story : fiction, generally, see below

Fr./aWe;Ital. /aw/a; Span, and Lat. f'abula, from for,fari, to speak ; r Gr. (pau). The Hebrew '?3n sig- nifies vanity, and J is considered, by A fictitious a lie. The

verb neuter (derived from the noun) signifies to feign ; write, or tell falsehoods : as an active verb, to tell a thing falsely : fabled is feigned ; and a fabulist is one celebrated in fables : a fabler, he who composes the specific fictions called fables, or who deals in fiction or falsehood generally. Fabulosity means abundance of fiction ; fabulous invention, or faculty; in which latter sense it is synonymous with fabulousness :

fabulous is full of fables ; feigned ; invented.

But refuse profaae and old viives' fables.

1 Tim. iv. 7 .

FABLE.

Uc fable} not : I hear the enemy.

S/iakspeare. Henry VI. In their fabulosity they report, that they had obser- vations for twenty thousand years.

Abbot's DMcription of the World. We mean to win. Or turn this heaven itself into the hell Thou f ablest. Milton'.^ Paradise Lost.

Ladies of the' Hesperides, they seemed Fairer than feigned of old, or fabled since Of fairy damsels met in forest wide. By knights. Id.

There are many things /ate/ous/?/ delivered, and are not to be accepted as truths.

Browne's Vulgar Errours. Triptolemus, so sung the nine. Strewed plenty from his cart divine ; But, spite of all those /aftZe-makers, He never sowed on Almaign acres. Dryden. The moral is the first business of the poet : this being formed, he contrives such a design or fable as may be most suitable to the moral. Id. Dufresnoy.

It would look like a fable to report that this gen- tleman gives away a great fortune by secret methods.

Addison. A person terrified with the imagination of spectres, is more reasonable than one who thinks the appear- ance of spirits fabulous and groundless. Id.

Jotham's fable of the trees is the oldest extant, and as beautiful as any made since. Id. Spectator,

The first thing to be considered in an epick poem is the fable, which is perfect or imperfect, according as the action, which it relates, is more or less so. . Id.

That Saturn's sons received the three-fold reign Of heaven, of ocean, and deep hell beneath. Old poets mention, fabling. Prior.

Quitting jEsop and the fabulists, he copies Boccace.

Croxal. Palladius coming to die somewhere in the north part of Britain, may seein to give some kind of coun- tenance to those fables that make him to have lived many years among the Scots. Lloyd.

Hail, fabled grotto 1 hail, Elysian soil ! Thou fairest spot of fair Britannia's isle !

Tickell. Our bard 's a, fabulist, and deals in fiction.

Garrick. The style of Boethius, though, perhaps, not always rigorously pure, is formed with great diligence upon ancient models, and wholly uninfected with monastic barbarity. His history is written with elegance and vigour, but his fabulousness and credulity are justly blamed. Johnson.

The first ages of the Scottish History are dark and fabulous. Robertson's History of Scotland.

Fabulous narrative has accordingly been common in all ages of the world, and practised by teachers of the most respectable character. It is owing, no doubt, to the weakness of human nature, that fable should ever have been found a necessary, or a con- venient, vehicle for truth. Beattie. Believing every hillock green

Contains no fabled hero's ashes. And that around the undoubted scene

Thine own ' broad Hellespont' still dashes. Be long my lot ! and cold were he Who there could gaze denying thee '. Byron.

Fable is generally esteemed tlie most ancient species of wit ; and has continued to be highly valued, not only in times of the greatest simplicity, but in the most polite ages of the world. Nathan's fable of the poor man (2 Sam. xii. 6) is next in antiquity to Jotham's, and which, as Addison (see tlie foregoing extracts) observes, is

the oldest extant : perhaps that of Nathan is superior to it in close painting and affecting re- presentation. We find ISLsop delivering fables in the most distant ages of Greece ; and, in the early days of the Roman commonwealth, we read of a mutiny appeased by the timely delivery of the fable of the belly and the members.

The earliest collection of fables extant is of eastern origin, and preserved in the Sanscrit language. It is called Ilitopadesa, and the author Veshnoo Sarma; but they are known in Europe by The Tales and Fables of Bidpay, or Pilpay, an ancient Indian philosopher. Of this collection Sir William Jones takes the following notice : — ' The

Fables of Veshnoo Sarma, whom we ridiculously call Pilpay, are the most beauti- ful, if not the most ancient, collection of apo- logues in the world. They were first translated from the Sanscreet, in the sixtli century, by Buzerchumihr, or bright as the sun, the chief physician, and afterwards the vizier of the great Anushirwan ; and are extant under various names, in more than twenty languages. But their origi- nal title is Ilitopadesa, or amicable instruction : and as the very existence of .ffisop, whom the Arabs believe to have been an Abyssinian, ap- pears rather doubtful, I am not disinclined to suppose that the first moral fables which appeared in Europe were of Indian or Ethiopian origin,'

Mr. Frazer, at the end of his History of Nadir Shah, gives us the following account of this curious work : — ' The ancient Brahmins of India, after a good deal of time and labor, compiled a treatise (which they called Kurtuk Dumnik), in which were inserted the choicest treasures of wisdom, and the most perfect rules for governing a people. This book they presented to their rajahs, who kept it with the greatest secrecy and care. About the time of Mahomet's birth, or the latter end of the sixth century, Noishervan the Just, who then reigned in Persia, discovered a great inclination to see that book ; for which purpose Burzuvia, a physician, who had a surprising talent in learning several languages, particularly Sanskerritt, was in- troduced to him as the most proper person to be employed to get a copy of it. He went to India, where, after some years' stay, and great trouble, he procured it. It was translated into the Peh- luvi (the ancient Persian language) by him and Buzrjumehr, the vizier. Noishervan, ever after, and all his successors, tlie Persian kings, had this book in high esteem, and took the greatest care to keep it secret. At last Abu Jaffer Munsour zu Nikky, who was the second caliph of the Abassi reign, by great search, got a copy of it in the Pehluvi language, and ordered Imam Hassan Al)dal Mokaffa, who was the most learned of the age, to translate it into Arabic. This prince ever after made it his guide, not only in affairs relating to the government, but also in private life. In the year 380 of the Hegira, sultan Mahmud Ghazi put it into verse : and afterwards, in the year 515, by order of Bheram Shah ben Massaud, that which Abdal Mokaffa had translated, was re-translated into Persic by Abdul Mala Nasser Allah Mustofi ; and this is that Kulila Dumna, wliicli is now extant. As this latter had too many Arabic verses and obsolete phrases in it, Molana Ali ben Hassein Vaes, at the request of

EmirSohfeli, keeper of the seals to sultan Hossein Mirza, put it into a more modern style, and gave it the title of Anuar Sohfeli. In the year 1002 the great moghul, Jalal o Din Mohommed Akbar, ordered his own secretary and vizier, the learned Abul Fazl, to illustrate the obscure passages, abridge the long digressions, and put it mto such a style as would be most familiar to all capacities ; which he accordingly did, and gave it the name of Ayar Danish, or the Criterion of Wisdom.' Thus far Mr. Frazer, under the word Ayar Danish.

'In the year 1709,' says Dr. Wilkins, 'the Kulila Dumna, the Persian version of Abul Mala Nasser Allah Mustofi, made in the 515th year of the Hegira, was translated into French, with the title of Les Conseils et les Maximes de Pilpay, Philosophe Indien, sur les divers Etats de la Vˆie. This edition resembles the Hitopadesa more than any other then seen ; and is evidently the im- mediate original of the English ' Instructive and entertaining Fables of Pilpay, an ancient Indian Philosopher,' which, in 1775, had gone through five editions. The Anuar Sohfeli, above men- tioned, about the year 1540, was rendered into the Turkish language ; and the translator is said to have bestowed twenty years' labor upon it. In the year 1724 this edition M. Galland began to translate into French, and the first four chap- ters were then published ; but, in the year 1778, M. Cardonne completed the work, in three volumes, giving it the name of Contes et Fables Tndiennes de I3idpai et de Lokman; traduites d'Ali Tcheleby ben Saleh, auteur Turc : Indian Tales and Fables of Bidpay and Lockman, trans- lated from Aly Tcheleby ben Saleh, a Turkish author.'

The Fables of Lockman were published in Arabic and Latin, with notes, by Erpenius, 4to., Amstel. 1636 ; and by the celebrated Golius, at the end of his edition of Erpen's Arabic Gram- mar, Lugd. Bat. 1656, with additional Notes; and also in the edition of the same Grammar, by Albert Schultens, Lugd. Bat. 1748, 4to. They are only thirty-seven in number.

Of the Hitopadesa, or Fables of Vishnoo Sar- ma, we have two very elegant English translations from the original Sanscrit : one by Sir William Jones, printed in his works, 4to. vol. VI, Lond. 1799; the other by the father of Sanscrit litera- ture in Europe, Dr. Charles Wilkins, of the India House, 8vo., Bath, 1787, with a collection of very important notes.

Fable, as a mode of conveying moral instruction, is allied both to all other kinds of similitude and to parable : but, in the strict use of it, at

least, it differs widely from both. Every subject of the inanimate creation may be employed in similitude and parable ; but the grand objects in fable are borrowed from the animate and rational creation only : and the best fables consist of human actions, spirit, and intelligence, attributed to brute and irrational creatures.

FABRETTI (Raphael), LL. D. a learned Italian author and antiquary, born at Urbmo, in 1619. He studied at Cagli, and took his degree at Urbino in his eighteenth year. Cardinal Im- periali sent him into Spain, where he continued thirteen years, and was for some time auditor general of the Nunciature. On his return to

Rome he was appointed judge of appeals, and afterwards inspector of reliques. Pope Alex- ander VIII. appointed him Secretary of memo- rials, and Innocent XII made him keeper of the archives of St. Angelo. In the midst of this business, however, he found time to cultivate his favorite study of antiquities, upon which he wrote several tracts in Latin, particularly, 1. De Aquis et Aqueeductibus Veteris Romae; 2. De Columna Trajana; 3. Inscriptionum Antiquarura Explicatio, &c. He was admitted a member of the academy of Assorditi at Urbino, and of the Arcadi at Rome; and died 7th January, 1700.

FABRIANO (Gentile Da), a celebrated his- torical painter, was born at Verona, in 1332, and became a disciple of Giovanni Da Fiesole. He was employed to adorn a great number of churches and palaces at Florence, Urbino, iSiena, Perusia, and Rome, but particularly the Vatican ; and one picture of his, representing the Virgin and Child, attended by Joseph, which is preserved in the church of St. Maria Maggiore, was highly commended by Michael Angelo. By order of the doge and senate of Venice he painted a picture in the great council- chamber, which was considered as so extraordinary a per- formance that his employers granted him a pen- sion for life, and conferred upon him the privi- lege of wearing the habit of a noble of Venice, the highest honor the state could bestow. He died in 1412.

Fabrian'o, a town of the Papal states, at the foot of the Appennines in the Marca d'Ancona. The inhabitants trade chiefly in wool and its manufactures ; also in paper. Population 4000. Thirty-three miles south-west of Ancona.

FAB'RIC, 71. s. & u. a. ˆ French, fahrique ;

Fab'ricate, D. a. >Belg. /air!//ce; Ital.

Fa'brication, ra. s. 3 Span, and Lat. fa- brica, from faher (i. e. faciber a

Jacio, to do), a workman. A building or edifice : hence any system or combination of things : the verb, formed after the noun, signifies to build, construct, or frame, as does the more common verb to fabricate : the latter is also used, figuratively, for to invent, construct, or frame a fictitious, as dis- tinguished from a true account of any thing. Like the baseless /a&Wc of this vision.

The cloiid-capped towers, the gorgeous palaces.

The solemn temples, the great globe itself.

Yea, all which it inherits shall dissolve ;

And, like this insubstantial pageant faded.

Leave not a wreck behind. Shakspeare.

There must be an exquisite care to place the co- lumns, set in several stories, most precisely one over another, that so the solid may answer to the solid, and the vacuities to the vacuities, as well for beauty as strength of the fabrick. Wotton.

This fabrication of the human body is the imme- diate work of a vital principle, that formeth the first rudiments of the human nature. Hale.

Still will ye think it strange.

That all the parts of this gxttai fabrick change ;

Quit their old station and primeval frame. Prior, Shew what laws of life

The cheese inhabitants observe, and how

Fabrick their mansions. Philips,

How may the poet now unfold. What never tongue or numbers told.

FAB

FAB

How learn delighted and amazed.

What hands unknov/n that/aftricA raised.

Collins. From beginnings the most inconsiderable, and by instruments

the most unlikely, the Almighty, with incredible facility, raised that glorious fabric of his church, which hitherto hath xrithstood all the rage of his enemies. Robertson's Sermons,

FABRICIA, -in botany, a genus of plants of the class icosandria, and order inonogynia: cal. five-cleft, half superior; petals five, without claws ; stigma capitate ; caps, many-celled : SEEDS winded. Species two; natives of New Holland.

FABRICIUS (Caius), a celebrated Roman, who in his first consulship, A. U. C. 470, obtained several victories over the Samnites and Lucanians, and was honored with a triumph. The riches acquired in those battles were immense, the soldiers were liberally rewarded, and the treasury was enriched with 400 talents. Two years after Fabricius went as ambassador to Pyrrhus, and refused with contempt presents and ofTers, which might have corrupted the fidelity of a less vir- tuous citizen. Pyrrhus admired the magnanimity of Fabricius, but his astonishment was excited to the highest pitch, when the latter discovered to him the villany of his own physician, who had offered to the Roman general to poison his royal master. To this greatness of soul was added the most consummate knowledge of military affairs, and the greatest simplicity of manners. Fabri- cius never used plate at his table. A small salt cellar, the feet of which were of horn, was the only silver vessel which appeared in his house. This contempt of luxury he wished also to en- courage among the people ; and during his censorship he banished from the senate Cornelius Russinus, who had been twice consul and dic- tator, because he kept in his house more than ten pounds weight of silver plate. Such were the manners of the conqueror of Pyrrhus, who ob- served that he wished rather to command those that had money than possess it himself. He lived and died in virtuous poverty: his body was buried at the public charge ; and the Roman people gave a dowry to his two daughters when they had arrived to years of maturity.

Fabricius (George), a learned German, born at Chemnitz in Misnia, in 1516. After a liberal education, he visited Italy in the character of tutor to a young nobleman ; and, examining all the remains of antiquity with great accuracy, compared them with their descriptions in Latin writers. The result of these observations was his work entitled Roma, containing a description of that city. He afterwards settled at Misenum, where he conducted a great school till his death in 1.571. He also wrote seven books of the Annals of Misnia, three of the Annals of Meissen, Travels, and many sacred poems in Latin.

Fabricius (Jerome), a celebrated physician in the end of the sixteenth

century (surnamed Aqua- pendente, from the place of his birth), was the disciple and successor of Fallopius. He chiefly applied himself to surgery and anatomy, which he professed with great reputation at Padua for forty years. The republic of Venice settled a considerable pension upon him, and honored him

with a gold chain and a statue. He died in 1603; leaving behind him several works which are much esteemed.

Fabricius (John Albert), one of the most learned and laborious theologians of his age, was born at Leipsic in 1668. He lost his parents when very young, but was carefully brought up by his guardian, who sent him to Quedlinburgh school. In 1692 he was admitted a preacher, and was chosen professor of eloquence at Ham- burgh in 1697. He died at Hamburgh in 1736, after a life spent in collecting and publishing valuable remains of the ancients. His principal works are: Bibliotheca Latina, 2 vols. 4to. ; Vita Procli Philosophi, 4to. ; Codex Apocryphus Novi Testamenti coUectus, 8vo. ; Bibliotheca Graeca, 14 vols. 4to. A new edition of this stu- pendous magazine of learning has been published by Harles. Centuria Fabriciorum Scriptis cla- rorum, Bvo. ; Memoriae Hambergenses, 7 vols. 8vo. ; Codex Pseudepigraphus Vet. Test, Bvo. ; Bibliographia Antiquaria, 4to. ; Bibliotheca Ec- clesiastica, fol . ; Delectus argumentorum et syl- labus Scriptorum, 4to. ; Conspectus Thesauri Literariae Italiae, 8vo.; Salutaris Lux Evangelii, 4to. ; Bibliotheca mediae et infimae Latinitatis, 5 vols. 8vo.

Fabricius (William), surnamed Hildanus, a famous surgeon, was born near Cologne in 1560. He became public physician at Berne, where he died in 1634. His Six Centuries of Observations and Cures were published in 1606, 4to.; besides which he wrote on Gangrene and Sphacelus ; on Burns ; Gun Shot Wounds ; on Lithotomy, &c. The whole of his works were printed in folio, at Frankfort, in 1682.

Fabricius (John Christian), a modern ento- mologist of the greatest celebrity, was bom in the duchy of Sleswick in 1742. After completing his studies, he went, at the age of twenty, to Upsal to attend the lectures of Linnˆ. Having here conceived the idea of forming an arrangement of insects according to the structure of the mouth, Linne highly approved his plan, but declined in- troducing it into his Systema Naturae. See our article Entomology. Fabricius now adopted the profession of medicine, and took his doctor’s degree. Being afterwards appointed professor of natural his.tory at Kiel, he devoted himself en- tirely to his favorite science ; and published, in 1775, his new System of Entomology. Two years after he pointed out the classic and generic characters of insects, in a second treatise ; and in 1778

published his Philosophia Entomologica, on the model of the Philosophia Botanica of Linnaeus. From that period to his death Fabricius industriously employed himself in extending his system. His knowledge of all the branches of natural history was extensive, and he wrote many useful works in the German and Danish languages. He died in 1807.

Fabric Lands, in ecclesiastical affairs, those formerly given towards rebuilding or repairing cathedrals and other churches ; for anciently al- most every body gave more or less, by his will, to the fabric of the parish church where he dwelt.

FABROT (Charles Hannibal), one of the most celebrated civilians of his time, was born at Aix

in 1681 ; and acquired an extraordinary skill in the civil and canon law, and in the belles lettres. He published the Basilicae, or Constitutions of the Emperors of the East, in Greek and Latin, with learned notes, in 7 vols, folio ; and editions of Cedrenus, Nicetas, Anastasius, Bibliothecarius, Constantine IManasses, and Cujas, with learned and curious notes.

FACE', n. s., V. n. Scv.a.ˆ Fr. face ; Span.

Face'-cloth, # huz ; Port, faz ;

Face'-painting, \liˆ. faccia ; Lat.

Facet', Vfucies, from facio,

Fa'cing, J to make, ' the face

being the part that makes the distinction or iden- titye.' Minsheu. The visage or countenance; hence general appearance, presence, sight; also the surface or outward part of a thing, dis- tortion or peculiarity ; and confidence or bold- ness of face or cliaracter. As a verb neuter, to face, is to come with the face toward an object; to carry a false countenance or appearance : as an active verb, to meet in front, oppose or stand opposite to; cover with the outward layer or superficies ; invest with any covering ; oppose with boldness and impudence, or with success (as to face down, and faae out) : a face-cloth is linen cloth placed on the face of the dead : face- painting, portrait-painting. Facet (Fr. facette) is a diminutive of face, a small surface ; applied particularly to the small superficies of precious stones. Face to face is an adverbial

expression for mutual presence.

And thou child schalt be clepid the profete of the higheste, for thou schalt go before the face of the Lord to make redy hise weyes. Wiclif, Luk. i.

A mist watered the whole /ace of the ground.

Genesis.

The children of Israel saw the face of Moses, that the skin of Moses's face shone. Exod. xxxiv. 35.

The breadth of the face of the house, towards the cast, was an hundred cubits. Esek. xli. 14.

It is not the manner of the Romans to deliver any man to die, before that he which is accused have his accusers /ace to face. Acts xxv. 16.

Now we see through a glass darkly ; but then face to face. 1 Cor. xiii, 12.

I know how to content myself in others lust. Of little stufte unto my self to weave a webbe of trust : And how to hydc my harmes with sole dyssembling

chere. Whan in my face the painted thoughtes would out- wardly appeare. I know how that the bloud forsakes the face for dred. And how by shame it staynes agayne the chekes with flaming red. Surry.

Thou needs must learn to laugh, or lye.

To face, to forge, to scoff, to company.

Hubbard's Tale. They're thinking, by his /nee. To fasten in our thoughts that they have courage : But 'tis not so. Shakipeare. Julius Caesar.

Shame itself! Why do you make such faces 1 Id. Macbeth.

How many things are there which a man cannot, with any faceot comeliness, say or do himself? A man can scarce allege his own merits with modesty, much less extol them : a man cannot sometimes brook to supplicate or beg. Bacon,

A mein shall sec faces, which, if you examine them part by part, you shall never find good ; but take them together, are not uncomely. Id,

Honour that is gained and broken upon another, hath the quickest reflection, like diamonds cut with facets. Id.

These offices and dignities were but the facings and fringes of his greatness. Wotton.

Keep still your former /«ce, and mix again With these lost spirits ; run all their mazes with

‘em ; For such are treasons. Ben Jomon.

Give me a look, give me ‘a. face. That makes simplicity a grace. Id.

He looked and saw the face of things quite changed. The brazen throat of war had ceased to roar ; All now was turned to jollity and game. To luxury and riot, feast and dance. Milton.

We trepanned the state, and faced it down With plots and projects of our own. Hudihras. You’ll find the thing will not be done With ignorance and /ace alone. Id.

The mere face-painter has little in common with the poet ; but, like the mere historian, copies what he sees, and minutely traces every feature, and odd mark.

Sliaftesbury. At the first shock, with blood and powder stained. Nor heaven, nor sea, their former /ace retained ; Fury and art produce effects so strange, Thay trouble nature, and her visage change.

Wallace. When men have the heart to do a very bad thing, they seldom want the face to bear it out. Tillotson. Jove cannot fear ; then tell me to my face. That I of all the gods am least in grace.

Dryden’s Iliad. I’ll face This tempest, and deserve the name of king.

Dryden. Kicked out, we set the best /ace on’t we could.

Id. Virgil. Face about, man ; a soldier, and afraid of the enemy ? Id.

Hail and farewell they shouted thrice amain. Thrice facing to the left, and thence they turned again.

Id. Georgione, the cotemporary of Titian, excelled in portraits of facepainting. Id. Dufresrwy.

You, says the judge to the wolf, have the face to challenge that which you never lost ; and you, says he to the fox, have the confidence to deny that which you have stolen. L'Estrange.

Let any one, even below the skill of an astrologer, behold the turn oi faces he meets as soon as he passes Cheapside Conduit, and you see a deep attention and a certain unthinking sharpness in every countenance.

Tatler. From beauty still to beauty ranging In every face I found a dart.

Addison's Spectator, When it came to the count to speak, old Fact so stared him in the face, after his plain downright way, that the count was struck dumb.

Id, Cmmt Tariff, We get intelligence of the force of the enemy, and cast about for a sufficient number of troops to face the enemy in the field of battle. Id. On the War. This would produce a new face of things in Europe.

Id. The fortification of Soleurre is faced with marble.

Id. Because he walked against his will. He faced men down that he stood still. Prior. Where your old bank is hollow, face it with the first spit of earth that you dig out of the ditch.

Mortiiner't Husbandry,

FAC

FAC

Seized and tied down to judge, how wretched I ! Who can't be silent, and who will not lye : To laugh, were want of goodness and of grace ; And to be grave, exceeds all power of fac&.

Pope.

The temple is described square, and the four fronts with open gates, facing the different quarters of the world. Id.

They are as loth to see the fires kindled in Smith- field as his lordship ; and, at least, as ready to /ace them under a popish persecution. Swift.

The face cloth too is of great antiquity. — Mr. Strutt tells us, that after the closing the eyes, &c., a linen cloth was put over the face of the

deceased. — Thus we are told, that Henry the Fourth, in his last illness seeming to be dead, his chamberlain covered his face with a linen cloth. English ˆra, p. 105.

‘ Brand’s Popular Antiquities.

Face comprehends all that part of the head “which is not covered with the hair. The human face is called the image of the soul, as being the seat of the principal organs of sense, and the place where the ideas, passions, emotions, &c., are chiefly set to view. It shows also the sex, age, temperament, health, disease, &c. As the index of the passions, habits, &c., of the person, it becomes the subject of physiognomy. See Physiognomy.

Face of the Measures, in mining, is that part of a mine bounded by the length- way or principal vertical joints, or natural cracks of the measures. In coal mines, these principal joints are called sline back, or face joints, and are generally parallel to each other ; the lesser joints, which cross the slines almost at right angles, are called end-joints or cutters.

To Face, in the military art, a word of com- mand intimating to turn about : thus, face to the right, is turn upon the left heel, a quarter round to the right; and, face to the left, is to turn upon the right heel a quarter round to the left.

FACETIOUS, arfj. ~v Ft. facet ieux ; Lat. Face’tiously, adv. ifacetus, from facetiep, Face’tiousness, 9J.S. sjokes. Jocular; lively; Facete’ly, adv. i witty ; cheerful : facete Facete’ness, n. s. J and facetious seem both to have been used in this sense formerly.

Parables — work upon the affections, and breed de- light of hearing, by reason of iha.t facetness and witti- ness. Hales.

If there be any kind of facetiousness innocent and reasonable, conformable to good manners, St. Paul did not intend to discountenance or prohibit that kind.

Barrow. The eyes are the chief seats of love, as Lernutius hulh. facetely expressed. Burton.

Socrates, informed of some derogating speeches used of nim behind his back, made this facetious reply, Let him beat me too when I am absent.

Government of the Tongue.

My facetious friend, D r, I would wish also to

be a partaker ; not to digest his spleen, for that he laughs off, but to digest his last night's wine at the last field-day of the Crochallan corps. Burns.

'Tis pitiful To court a grin, when you should woo a soul ; To break a jest, when pity would inspire Pathetic exhortation ; and to' address The skittish fancy with facetious tales. When sent with God's commission to the heart ! So did not Paul. Coivper.

Our word jealousies contains all tlie vowels, though three of them only were necessary : nevertheless in the two words abstemiously a.nd facetiously the vowels exist all of them in their usual order, and are pro- nounced in their usual manner. Darwin. And without turning his facetious head.

Over his shoulder with a Bacchant air. Presented the o'erflowing cup, and said,

' Talking's dry work, I have no time to spare.'

Bt/run. FACIES Hippocratica, the aspect of a dyino- man, as described by Hippocrates, and so named by later physicians, who have made similar ob- servations : it is when the nostrils are sharp, the eyes hollow, the temples low, the tips of the ears contracted and cold, the forehead dry and wrinkled, and the complexion pale or livid. See Medi- cine. The Hippocratic face is chiefly observed towards the period of phthises and other con- sumptions, and is held a sure prognostic of death. FA'CILE, adj. ~\ Fr. facile, faciliti ;

Fa'cilely, atfv. i Sˆan. facilida'd : Ital- Facil'itate, v. a. \facUita ; Lat. fucilis, Facilita'tion, 11. s.\J'acilUas, from _/acio, to Facil'ity. J do. Easy, pliant, flex-

ible : to facilitate is to make easy; make free from difficulty or obstruction.

Piety could not be diverted from this to a more commodious business by any motives of profit or fa- cility. Raleigh.

Choice of the likeliest and best prepared metal for the version will facilitate the work. Bacon.

A war upon the Turks is more worthy than upon any other Gentiles, both in point of religion and in point of honour ; though facility and

hope of success might invite some other choice. Id.

Facility is worse than bribery ; for bribes come now and then : but if opportunity or idle respect lead a man, he shall never be without them. Id.

I meant she should be courteous, facile, sweet. Hating that solemn vice of greatness, pride,

I meant each softest virtue there should meet. Fit in that softer bosom to reside. Ben Jonson.

The one might be as facilely impetrate as the other.

Ld. Herbert. Facility of yielding to a sin, or wooing it with a voluntary suit, is a higher stair of evil.

Bp. Hall's ContemplatioTn. They renewed their assault two or three days toge- ther, and planted cannon to facilitate their passage, ■which did little hurt ; but they still lost many men in the attempt. Clarendon.

The facile gates of hell too slightly barred.

Milton. Raphael now, to Adam's doubt proposed. Benevolent and facile, thus rcplyed. Id.

too facile then, thou didst not much gainsay ; Nay, didst permit, approve, and fair dismiss. Id.

By dividing it into parts so distinct, the order in which they shall find each disposed, will render the work/ac«7fc' and delightful. Evelyn's Kalendar.

To confine the imagination is as facile a perform- ance as the Gothham's design of hedging in the cuckoo. Gianville.

Yet reason saith, reason should have ability To hold these worldly things in such proportion, As let them come or go with even facility. Sidney.

Though perspective cannot be called a certain rule of picture, yet it is a great succour and relief to art, and facilitates the means of execution.

Dryden's Dufresnoy.

They who have studied have not only learned many excellent things, but also have acquired a great /aci- lilu of profiting themselves by reading good authors.

Id.

‘Tis a great error to take facility for good nature ; tenderness without discretion, is no better than a more pardonable folly. L’Estrange.

The facility which we get of doing things, by a cus- tom of doing, makes them often pass in us without our notice. Locke.

He opens and yields himself to the man of business with difficulty and reluctancy ; but offers himself to the visits of a friend with facility, and all the meet- ing readiness of appetite and desire. South.

This may at first seem perplexed with many difii- culties, yet many things may be suggested to make it vaoTQ facile and commodious. IVilkins.

Some men are of that facile temper, that they are wrought upon by every object they converse with, whom any affectionate discourse, or serious sermon, or any notable accident, shall put into a fit of religion, which yet usually lasts no longer than till somewhat else comes in their way. Calamy.

What produceth a due quantity of animal spirits, necessarily yact/ito

A war on the side of Italy would cause a great diversion of the French forces, and facilitate the pro- gress of our arms in Spain. Swft.

Science, though perhaps the nurseling of interest, was the daughter of curiosity : for who can believe that they who first watched the course of the stars, foresaw the use of their discoveries to the fadUtation of commerce, or the mensuration of time ?

Johnson. Rambler.

FACING, FAfADE, or Revfetement, in forti- fication, is a strong wall of masonry, or other binding, built on the outside of the rampart and parapet, to prevent the soil of which they are composed giving way. When the revetement of a rampart goes quite up to the top, four feet of the upper part is a vertical wall of three feet thick, with a square stone at the top of it, pro- jecting about five or six inches, and a

circular one below, or where the slope begins, of eight or ten inches diameter. When the facing is carried up as high as the soles of the embrasures, it is called a whole revetement ; but, when confined to the ditch only, it is termed a half-revetement. These must depend on the nature of the soil, the facility of obtaining materials, the time that can be bestowed, the importance of the post, &c. Where difficulties occur, as also in temporary works, the facings are made with turf; in which case they are said to be gazoned.

F'ACIN'OROUS, adj. LtiL /acinus, f acinous, ixomfacio, to do, used both in a good and bad sense for great actions, but more commonly the latter. Extreme : extremely bad, or wicked.

•Tis strange, 'tis very strange, that is the brief and tedious of it ; and he's of a most /acmorotis spirit that will not acknowledge it. Shakspeare.

FACT, n. s. Yx.fait; lat. factum, iromfacio, /actus, to do. A thing or effect accomplished : reality, as opposed to fiction or speculation ; action; deed.

In matter of fact they say there is some credit to be given to the testimony of man ; but not in matter of opinion and judgment : we see the contrary both acknowledged and universally practised all throughout the world. Hooker.

As men are not to mistake the causes of these ope- rations, so much less are they to mistake the fact or effect, and rashly to take that for done which is not done. Bacon.

Those effects which are wrought by the percussiou of the sense, and by things in fact, are produced like- wise in some degree by the imagination : therefore if a man see another eat sour or acid things, which set the teeth on edge, that object tainteth the imagination. Bac07t's Natural History. I see the Levites, not long since, drawing their swords for God and Moses, against the rest of Israel j and thatyact wins them both praise and blessing.

Bp. Hall's Contemplations. Unhappy man ! to break the pious laws Of nature, pleading in his children's cause : Howe'er the doubtful yiic* is understood, 'Tis love of honour and his country's good ; The consul, not the father, sheds the blood.

Bryden. Matter oifact breaks out and blazes with too great an evidence

to be denied. South's Sermons.

Manifold sins, though in speculation they may be separable from war, in reality and fact never fail to attend it. Smalridge.

If this were true in fact, I do not see any colour for such a conclusion. Addison on the War.

It is a point oi fact on which every English gentle* man will determine for himself. Junius,

The facts which inspired writers relate are no less instructive than the doctrines which they teach.

Robertson's Sermons. It may seem strange, that horror of any kind should give pleasure. But the fact is certain. Why do people run to see battles, executions, and shipwrecks ?

Beattie. FACTION, «. s. "ˆ Tt. /action ;It2i. fat- Fac'tionary, { tiune ; Lat. /actio, /ac-

Fac'tionist, \tio7iis, from /acio, /ac~

Fac'tious, adj. Ctus, to make, or do. A

Fac'tiously, acˆt;. [public, or busy party : Fac'tiousness, 71. s. J hence tumult; discord; dissension : factionary and factionist are old words for the promoters of faction or discord.

By one of Simon's /aciiora murders were committedˆ Shakspeare. Mac. The queen is valued thirty thousand strong ; If she hath time to breathe, be well assured Her faction will be full as strong as ours.

Shakspeare, He has been known to commit outrages. And cherish _/(zc

Pr'ythee, fellow, remember my name is Menenius ; always /ac/i'onajˆ/ of the party of your general.

Id. Coriolanus. He is a traitor; lead him to the Tower, And crop away thdA factious pate of his.

Shakspeare. Be factious for redress of all these griefs. Id. There be that can pack the cards, and yet cannot olay well : so there are some that are good in can- vasses and factions, that are otherwise weak men.

Lord Bacon. By the weight of reason I should counterpoise the overbalancing of a.ny factions. King Charles.

Factious tumults overbore the freedom and honour of the two houses. ˆd-

I intended not only to oblige my friends, but mine enemies also : exceeding even the desires of those that were factiously discontented. Id.

God and Moses knew how to distinguish betwixt

FACTORS.

the heads of the faction and the train ; though neither be faultless, yet one is plagued, the other forgiven. Bp. Hall's Contemplations. By some needful act, to put a present restraint upon the wild and lawless courses of all their factious com- binations abroad, and enterprises of this kind.

Bp. Hall. Some busy factionists of the meaner sort. Id.

They remained at Newbury in great /action among themselves. Clarendon.

Gray-headed men and grave, with warriors mixed. Assemble ; and harangues are heard ; but soon In factious opposition. Miltons Paradise Lost.

How from dissensions in opinion do \o\ent factions and feuds rage ! Barrow.

Avoid the politic, the /ac<»o!M fool. The busy, buzzing, talkiug, hardened knave.

Otway. Why these factious quarrels, controversies, and battles amongst themselves, when they were all united in the same design ? Dryden.

It is thus with all those, who, attending only to the shell and husk of history, think they are waging war with intolerence, pride, and cruelty, whilst, under color of abhorring the ill principles of antiquated parties, they are authorising and feeding the same odious vices in different factions, and perhaps in worse. Burke.

If all the world joined with them in a full cry against rebellion, and were as hotly influenced against the whole theory and enjoyment of freedom, as those who are the most factious for servitude, it could not in my opinion answer any one end whatsoever in this contest. Id,

Come thou, whose love unlimited, sincere,

‘if or faction cools, nor injury destroys;

Who lend’st to Misery’s moans a pitying ear.

And feel’st with ecstasy another’s joys.

Beattie.

Faction, in antiquity, a name given to the different companies of combatants in the circus. They were four; viz. the white, the red, the green, and the blue ; to which Domitian added another of purple color. They were so denominated from the color of the liveries they wore ; and were dedicated, according to M. Aur. Cassiodorus, to the four seasons of the year; the green being con- secrated to spring, the red to summer, the white to autumn, and the blue to winter. It appears from ancient inscriptions, that each faction had its procurators and physician; and, from history, that party rage ran so high among them, that, in a dissension between two factions, in the time of Justinian, almost 40,000 men lost their lives in the quarrel.

FACTITIOUS, adj. La.t. f act it ius, from facio, to make. See Faction. Made by art.

In the making and distilling of soap, by one degree of fire the salt, the water, and the oil or grease, whereof that factitious concrete is made up, being boiled up together, are easily brought to co-operate.

Boyle.

Hardness wherein some stones exceed all other bodies, and among them the adamant, all other stones being exalted to that degree that art in vain en- deavours to counterfeit it ; the factitious stones of chymists, in imitation, being easily detected by an ordinary lapi’.list, Ray on the Creation.

Hence the diamond reflects half as much more light as a factitious gem in similar circumstances ; to which must be added its great transparency, and the excellent polish it is capable of. Darwin.

, n. s.ˆ Fr. facteur ; Lat. factory

E, > (k facio). One who does

J business for another ; an

FACTOR, >i. s. Factorage, Factory. agent : factorage is his commission, or charge, for the business done. A factory is a house of business; a place where any thing is made; and figuratively, but more commonly, the collective body of merchants in a given place. Take on you the charge And kingly government of this your land ; Not as protector, steward, substitute. Or lowly factor for another's gain.

Shakspeare. Richard III. The senators alone of this great world, Chiei factors for the gods.

Id. Antony and Cleopatra. We agreed that I should send up an English yac/or, that whatsoever the island could yield should be de- livered at a reasonable rate. Raleigh's Apology.

The Scots had good intelligence, having some ya

Forced into exile from his rightful throne. He made all countries where he came his own ; And viewing monarch's secret arts of sway, A royal factor for their kingdoms lay. Dryden. Vile arts and restless endeavours are used by some sly and venomous factors for the old republican cause. South.

Asleep and naked as an Indian lay. An honest factor stole a gem away : He pledged to the knight ; the knight had wit. So kept the diamond, and the rogue was bit.Pope.

And, disclaiming all regard For mercy, and the common rights of man, 3\xi\d factories with blood, conducting trade At the sword's point, and dyemg the white robe Of innocent commercial Justice red. Cowper.

' In the road of commerce,' said he, ' you will be sure, by diligence and assiduity, though you have no capital, of so far succeeding as to be employed as a factor. Franklin,

The factorage or wages, called also commission, is different at different places, and for different voyages : at a medium it may be fixed at about three per cent, of the value of the goods bought, beside the charge of package, which is paid over and above. When factors make themselves answerable for the debts of those persons with whom they deal, the charges of commission or factorage are, of course, enhanced.

Dr. A. Rees.

Factors are employed by merchants residing at other places, to buy or

sell goods, negociate bills, &c., on their account ; and are entitled to a certain allowance for their trouble. A supercargo differs from a factor in this : the business of the former is limited to the care of a particular cargo; he goes along with it, and generally returns when his business is completed : the lat- ter has a fixed residence, and executes commis- sions for different merchants. A factor's power is either absolute or limited. Though entrusted with ample discretionary powers, he is not war- ranted to take unreasonable or imusual measures, or do any thing contrary to his employer's interest ; but it is incumbent on the employer, if he challenge his proceedings, to prove that he could have done better, and was guilty of wilful mismanagement. When a factor's power is limited, he must adhere strictly to his orders. If he exceed his power, though with a view to

his employer's interest, he is hable for the con- sequence. For example, if he gives credit when not empowered, or long credit if not empowered, for the sake of a better price, and the buyer proves insolvent, he is liable for the debt. A factor has no power to give credit unless autlior- ised : but if the goods consigned be generally sold on credit at the place of consignation, the factor will be vindicated for selling at thi; usual credit, unless expressly restricted. Although opinion will never justify the factor for departing from orders, necessity sometimes will. If he be limited not to sell goods under a certain price, and the goods be perishable, and not in a situa- tion for being kept, he may sell them, to prevent tlieir destruction, even under tlie price limited. A factor is never warranted to deal on trust, ex- cept with persons in good credit at the time. If the employer challenge the debtors, it is incum- bent on him to prove that their bad circumstances were known at the time of sale ; and the factor will be vindicated, if he trusted them at the same time for goods of his own. If the factor sell his employer's goods on trust, and, after the day of payment is elapsed, receive payment from the purchaser for a debt of his own, he becomes liable in equity for the debt. In case of bank- ruptcy, the factor ought immediately to lay attachments, and advise his employers ; and he cannot withdraw his attachments, nor compound debts without orders. If a factor sells goods belonging to different merchants to the same person, and the buyer proves insolvent, they shall bear the loss in equal proportions ; and, if the buyer has paid part before his insolvency, with- out specifying for which, the payment ought to be distributed in equal proportions ; but, if the days of payment be fixed, and part of the debts only due, the payment ought to be applied, in

the first place, to such debts as were due. If he makes a wrong entry at the custom-house, and the goods be seized in consequence thereof, he must bear the loss, unless the error be occasioned by a mistake in the invoice, or letter of advice. The owner bears the loss of goods seized, when attempted to be smuggled by his orders : but the factor complying with an unlawful order, is liable in such penalties as the laws exact. If a factor saves the duty of goods due to a foreign prince, he shall have the benefit; for, if detected, he bears the loss. If a factor sells goods bought by his employer's orders for his own advantage, the employer may recover the benefit, and the factor shall be amerced for the same. If a factor receives bad money in payment, he bears the loss ; but if the value of the money be lessened by the government, the employer bears the loss. A factor is not liable for goods spoiled, robbed, or destroyed by fire. If a factor receives Coun- terfeit jewels from his employer, and sells them, the employer is liable to indemnify him for any penalties he may incur. If a factor be ordered to make insurance, and neglect it, and the sub- ject be lost, he is liable to make it good, provid- ing he had effects in his hands. If a factor buys goods for his employer, his bargain shall be' binding on the employer. Factors having obtained a profit for their employers, ought to be very cautious how they dispose of it ; for if they

act without commission, they are responsible : and even in the case of a merchant remitting goods to his factor, and some time after drawing a bill on him, which the factor, having effects in his hands, is supposed to accept, if the merchant foils, the goods are seized in the factor's hands, for behoof of the creditors, and the factor, it has been tliought, must answer the bill notwithstand- ing, and only rank a3 a creditor for the sum, which, by his acceptance of the bill, he was obliged to pay. In case of a factor's insolvency, the owner may reclaim his goods ; and, if they be sold on trust, the owner (and not the factor's creditors) shall recover payment of the debts. The above is principally applicable to factors residing abroad, and acting for merchants, or to supercargoes going a voyage to dispose of a cargo, and afterwards returning with another to their employers ; but it is likewise the practice of merchants of the greatest credit in the com- mercial world, to act mutually as factors for each other. The business thus executed is called commission-business, and is generally desirable by all merchants, provided they have always effects in their custody, as a security for such matters as they transact, for the account of others. Those who trade extensively in this manner, have current as well as commission accounts, constantly between them ; and draw on, remit to, and send commissions to each other, only by the intercourse of letters, which, among men of honor, are as obligatory and

authoritative as all the bonds and ties of law.

Factorage, the allowance given to factors by the merchant who employs them : called also commission. A factor's commission in Britain on most kinds of goods is 2| per cent. : on lead and some other articles, 2 per cent. In some places it is customary for the factors to insure debts for an additional allowance, and in that case they are accountable for the debt when the usual term of credit is expired. Factorage on goods is sometimes charged at a certain rate per cask, or other package, measure, or weight, especially when the factor is only employed to receive or deliver them.

FACTOTUM, n. s. Lat. fac totum. It is used likewise in burlesque French. A servant employed alike in all kinds of business : as Scrub in the Stratagem.

Factotum here. Sir. Ben Jonson.

FA'CTURE, 71. s. French. The act or man- ner of making any thing.

There is no doubt but that the faciure or framing, is as full of difference as the outward [parts.]

Bacon.

FACULˆ, Latin, from fax, a torch, in astro- nomy, a name given by Scheiner and others, to certain bright spots on the sun's disc, that ap- pear more lucid than the rest of his body. Ilevelius affirms, that on July 20th, 1634, he observed a facula, whose breadth was equal to one-third of the sun's diameter. Kircher, Scheiner, and others, represent the sun's body as full of these faculae, which they suppose to be volcanoes ; and others contend that the maculae change into facula; before they disappear. But Huygens and others of the latest and best observers, finding

tliat the best telescopes discover nothing of the matter, agree entirely to explode the phenomena of faculffi ; and attribute the cause of these appearances to the tremulous agitation of the vapors near our earth. Dr. Hutton concludes tliat ' the facula; are not eructations of fire and flame, but refractions of the sun's rays in the rarer exhalations, which, being condensed, seem to exhibit a light greater than that of the sun.'

FACULTY, n. s. Yr.faculfc ; lta.1. facolta ; Spˆn. faculdud ; l,3.t.facullas, homj'ucio, to do. The power of doing any thing

mechanical or mental : hence skill ; dexterity ; excellence ; quality ; power ; authority or privilege : a com- pany of skilful or eminent men in any of the professions.

There is no kind of faculty or power in man, or any creature, which can rightly perform the functions al- lotted to it without perpetual aid and concurrence of that supreme cause of all things. Hooker.

Law hath set down to what persons, in what causes, with what circumstances, almost every faculty or fa- vour shall be granted. Id, I'm traduced by tongues which neither know My faculties nor person, yet will be The chronicles of my doing.

SItakspeare. Henry VIII. This Duncan Hath born his faculties so meek, hath been So clear in his great office, that his virtues Will plead like angels. Id. Macbeth,

He had none of those faculties, which the other had, of reconciling men to him. Clarendon,

I understand in the prime end Of nature, her the inferior ; in the mind And inward faculties, which most excel.

• 3Iilton. Orators may grieve ; for in their sides. Rather than heads, iheiv faculty abides.

Denham. He, which hath given no man his faculties and graces for himself, nor put light into the sun, moon, stars, for their own use, hath stored no. parcel of earth with a purpose of private reservation. Bp. Hall,

Our author found out monarchial absolute power in that tex; the had an exceeding good faculty to find it himself where he could not show it to others.

Locke. We shall then use our understanding right, when we entertain all objects in that way and proportion, that they are suited to o\it faculties. Id,

Many are ignorant of mathematical truths, not out of any imperfection of their facidties, or uncertainty in the things themselves, but for want of application in acquiring, examining, and by due ways comparing those ideas. Id.

Reason in man supplies the defect of other f acid- ties wherein we are inferior to beasts, and what we cannot compass by force we bring

about by stratagem.

L' Estrange. A power of command there is without all question, though there be some doubt in v/hvLt faculty this com- mand doth principally reside, whether in the will or the understanding. Bramhall against Hubbes,

Sure it is a pitiful pretence to ingenuity that can be thus kept up, there being little need of any other yit- culty but memory, to be able to cap texts.

Government of the Tongue, The fifth mechanical faculty is the wedge used in cleaving wood. Wilkins,

Nature its mother, habit is its nurse ; Wit, spirit, /acM/rie«, but make it worse j

FAD

Reason itself but gives it edge and power.

As heaven's blessed beam turns vinegar more sour. Pope's Essay on Man,

He had an excellent faculty in preaching if he were not too refined. Swift,

Neither did our Saviour think it necessary to ex- plain to us the nature of God, because it would be im- possible, without bestowing on us othtv faculties than we possess at present. Id,

The wretched condition, weakness, and disorder of the faculties which I must employ in my inquiries, increase my apprehensions ; and the impossibility of amending or correcting those faculties, reduces me al- most to despair, and makes me resolved to perish on the barren rock on which I am at present, rather than venture myself upon that boundless ocean which runs out into immensity. Hume. On Human Nature.

Called thee into being when thou wast not ; gave thee these reasoning and reflecting faculties, which thou art now employing in searching out the end and happiness of thy nature. Mason.

FADE, V, n, & v. a. Goth, fixda; Isl. and S wed. /ate ; Erse, /aicZ; Arabic,y«Mˆ; from Fr. fade, weak, insipid, says Dr. Johnson ; but Mr. Todd derives it with more probability, from Lat. vado, Gr. /3aJw to

move, the primary meaning of fade being to disappear quickly. To vanish ; disappear rapidly ; languish ; change to a weaker color; wither; lose vigor or beauty; die away. Our older writers use it as an active verb for to wear away ; reduce.

Ye shall be as an oak whose le&i fadeth, and as a garden that hath no water. Isaiah i. 30.

The glorious beauty on the head of the fat valley shall be a. fading flower. Id. xxviii. 4.

Whose flowring pride, so fading and so fickle. Short Time shall soon cut down with his consuming sickle. Spenser's Faerie Queene.

This is a man, old, wrinkled, /arferf, withered j And not a maiden, as thou sayest he is.

Shakspeare. The stars &hz\ fade away, the sun himself Grow dim with age, and nature sink in years.

Addison, The greenness of a leaf ought to pass for apparent, because, soon fading into a yellow, it scarce lasts at all, in comparison with the greenness of an emerald.

Boyle on Colours. His palms, tho' under weights they did not stand. Still thrived ; no Winter could his laurels ybde,

Dryden, The pictures drawn in our minds are laid in fading colours, and, if not sometimes refreshed, vanish and disappear. Locke,

Where either through the temper of the body, or some other default, the memory is very weak, ideas in the mind quickly fade. Id,

The spots in this stone are of the same colour throughout, even to the very edges ; there being an immediate transition from white to black, and the colours not fading or declining gradually.

Woodward, Restless anxiety, forlorn despair. And all the faded family of care.

Garth's Dispensary. Narcissus' change to the vain virgin shows. Who trusts to beauty, trusts thn fading rose.

Gay. The garlands/arfe, the vows are worn away ; So dies her love, and so my hopes decay. Pope,

— Hence plastie nature, as oblivion whelms Her fading forms,

rcpeoples all her realms;

FAE

12

FAG

Soft joys disport on purple plumes unfurled. And love and beauty rule the willing world.

Darwin. ” Yet such the destiny of all on earth : So flourishes and fades majestic man. Fair is the bud his vernal morn brings forth. And fostering gales awhile the nursling fan.”

Beattie. Then let the winds howl on ‘. tlieii harmony Shall henceforth be my music, and the night The sound shall temper with the owlet’s cry. As I now hear them, in the fading light Dim o’er the bird of darkness’ native site. Byron. FADGE, V . n. Sax. ˆeFejan ; Germ, fugen ; from Goih. fagks, fit, accominodated. To suit; fit; succeed. Obsolete.

How will t\iii fadgel my master loves her dearly. And I, poor monster, fond as much on him; And she, mistaken, seems to doat on me.

Shakspeare. When they thrived they never fudged. But only by the ears engaged ; Like dogs that snarl about a bone, And play together when they’ve none.

Hudibras. The fox hath a fetch ; and when he saw it would not fudge, away goes he presently. L’ Estrunge.

FAECES, in medicine. See Excrements. Al- chemists, who searched every where for the secret of making gold, operated greatly on the faeces of men and other animals ; but philosophical chemistry has acquired no knowledge from all these alchemical labors. Romberg particularly analysed and examined human faeces, to satisfy an alchemical project of one of his friends, who pretended that from this matter a white oil could be obtained, without smell, and capable of fixing mercury into silver. The oil was found, but mercury was not fixed by it. Romberg’s labors were not, however, useless, as he has related his experiments in the Memoirs of the Academy of Sciences.

The following is the result of a careful analy- sis of human faeces by Berzelius in 1806 : —

Water 733

Vegetable and animal undigested residue 7-0

Bile 0-9

Albumen 0*9

Extractive matter ..... 2*7 Carbonat of soda ..... 0‘9 Muriat of soda . . . . . O’l

Sulphat of soda ..... 0‘05 Ammon. phosphat of magnesia . . 0-05 Phosphat of lime . . . • .0-1 Slimy matter, consisting of resin of bile, peculiar animal matter, and insoluble residue 140

1000

F.ˆCULENT, abounding with faeces. The blood and other humors are said to be faeculent, when without tliat purity which is necessary to health.

FAENZA, a city and bishop’s see of the ec- clesiastical state, in Romagna, anciently known by the name of Falentia, and noted in modern times for its pottery wares. Hence the French give to all fine stone ware the name of Fayence.

It has several fine churches with good paintings and a cathedral standing in a noble square Faenza was ravaged by the Goths in the sixth century, and by the Germans in the thirteenth. It fell afterwards into the hands of the Venetians, the Bolognese, and finally of the pope. Its in- habitants carry on the manufacture of linen ex- tensively. It is twenty miles south-west of Ra- venna.

FAERNUS (Gabriel), a native of Cremona in Italy, was an excellent Latin poet and critic of the sixteenth century. He was skilled in all parts of polite literature ; and pope Pius IV. par- ticularly patronised him. He was the author of several Latin elegies ; of 100 Latin fables, se- lected from the ancients, written in iambic verse; and of several pieces of criticism, as Censura Emendationum Livianarum, De MetrisComicis, &c. He was remarkably happy in decyphering MSS., and restoring ancient authors to their pu- rity : he took such pains with Terence in parti- lar, that Bentley has adopted all his notes in the edition he gave of that writer. He died at Rome in 1561. Thuanus charges him with suppressing the then unknown fables of Phaedrus, for fear of lessening the value of his own Latin fables, written in imitation of iEsop. M. Perrault, however, who translated Faernus’s fables into French, has defended him from this imputation, by affirming that the first MS. of Phaedrus’s fables, found in the dust of

an old library, was not discovered till about thirty years after Faernus's death.

FAG, V. n., V. a. & n. s. Lat. fatigo ; Goth. fecka, to be weary, or to diminish. To grow weary or tired ; to outrival ; beat : a fag is a drudge ; a school-slave.

Creighton with-held his force 'till the Italian begaa to fag, and then brought him to the ground.

Mackenzie's Lives. The duke of Dorset was my fug at Harrow, and t was not a very hard taskmaster.

Lord Byron, quoted by Captain Medwin,

PAGAN'S (St.), a small town and parish of Glamorganshire, South Wales, and having a cas- tellated mansion built in a comparatively modern style of architecture. Here a sanguinary en- gagement took place in May 1648, between the royalists and republicans, in which, after a mo- mentary advantage, the former were entirely routed, and left 3000 slain. According to the Welsh chronicle, St. Fagan came from Rome to Britain about the year 180, being sent by pope Eleutherius to convert the inhabitants to Chris- tianity. It is three miles from Cardiff, and 163 from London.

FAGARA, iron-wood, a genus of the mo- nogynia order and tetrandria class of plants ; natural order forty-third, dumosae : cal. quadri- fid : COR. tetrapetalous : caps, bivalved and mo- nospermous. Species twelve, all natives of the East Indies and the warm parts of America, rising with woody stems more than twenty feet high. They are propagated by seeds ; but in this country must be kept continually in a stove. The chief is F. octandra with pinnate leaves, downy each side. It is a tall tree, abounding in a balsamic glutinous juice, racemed flowers,

with white calyxes and yellow corols. Its bal- sam resembles the gum tacamahac.

FAGE (Raimond de la), an ingenious designer and engraver, highly esteemed by Carlo Maratti, was born at Toulouse in 1648. He had no master nor any assistance ; but his superior ta- lents supplied the want of them. His perform- ances on licentious subjects are the most

esteemed . It is reported that he never made use of money, but contracted debts, and when the accounts were brought him, he drew on the back of the bills, and bid the owners sell the drawings to connoisseurs for the amount, by which they were generally great gainers. Several of those draw- ings are in the cabinets of the curious. He led a loose depraved life, which his repeated de- baucheries put an end to, at the age of forty-two. FAGEND. From fag and end, says Dr. Johnson, but more probably from Swsd.fogan ; Sax. peˆan, to join. The end of a web of cloth, rope, &c. ; hence the refuse of any thing.

I have unpartially ransacked this fag-end of my life, and curiously examined every step of my ways ; and I cannot, by the most exact scrutiny of my sad- dest thoughts, find what it is that I have done to forfeit that good estimation, wherewith you say, I was once blessed. Bp. Hall's account of himself.

In the world's ybˆend A nation lies. Fanshaw.

When they are the worst of their way, and fixt in the fagend of business, they are apt to look not kindly upon those who go before them. Collier.

FAGGOT, or Fagot, v. a. Fr. fagot ; Arm. and Welsh fftgorf; ItaX. fagotta ; British fiago- den ; according to Casseneuve from Lat. fugus, a beech tree, the old faggots being mostly made of that wood. Others derive it from Lat. funds ; ˆaKtSog, a bundle of wood. A bundle of sticks or small wood ; any one of the pieces in the bundle : hence an individual in a muster or list of soldiers. See below. We only find the verb used by Dryden.

Spare for no fagots, let there be enow ;

Place pitchy barrels on the fatal stake.

Shakspeare. About the pile of fagots, sticks, and hay.

The bellows raised the newly-kindled flame.

Fairfax. He was too warm on picking work to dwell.

But fagoted his notions as they fell,

And if they rhymed and rattled, all was well.

Dryden.

The Black Prince filled a ditch with fagots as suc- cessfully as the generals of our armies do it with fascines. Addison.

Mitres or fagots have been the rewards of different persons, according as they pronounced these conse- crated syllables or not. Watts on the Mind.

Faggot, in times of popery, was a badge worn on the sleeve of the upper garment of such persons as had abjured heresy; being put on after the person had carried a faggot, by way of penance, to some a])pointed place of solemnity. The leaving off the wear of this badge was some- times interpreted a sign of apostasy.

Faggots, among military men, persons formerly hired by officers, whose companies were not full, to muster and hide the deficiencies of the com- pany ; by which means they cheated the king of so much money.

FAGIUS (Paul), alias Buchlin, a learned protestant minister, born at Rheinzabern in Ger- many in 1504. He was a schoolmaster at Isna; but afterwards became a zealous preacher, and wrote many theological works. During the per- secution in Germany, he and Bucer came over to England in 1549, at the invitation of arch- bishop Cranmer, to perfect a new translation of the Scriptures. Fagius took the Old Testament, and Bucer the New for their respective parts ; but the design was frustrated by the sudden deaths of both. Fagius died in 1550, and Bucer did not live above a year after. Their bodies were dug up and burned in the reign of queen Mary.

FAGONIA, in botany, a genus of the mono- gynia order and decandria class of plants ; na- tural order fourteenth, gruinales : cal. penta- phyllous ; the petals are five and heart-shaped : CAPS, quinquelocular, ten-valved, with the cells monospermous. There are four species ; natives of Spain, Crete, Arabia, and Persia.

FAGRiEA, in botany, a genus of plants of the class pentandria and order monogynia : cor. funnelform, with a very long tube ; stigma pel- tate: BERRY two-celled, fleshy : seeds globular: species one only ; a shrub of Ceylon ; with thick square branches, and large terminal flowers.

FAG US, the beech tree, a genus of the hex- andria order and moncecia class of plants ; natu- ral order fiftieth, amentaceae : male cal. quin- quefid and campanulated : cor. none : stamina from five to twelve : female Cj\l. qiiinqneden- tated; styles three : cap* muricated

and quad ri- valved ; the seeds two in number. There are five species, of which the most noted are,

1. F. castanea, the chestnut-tree, has a large upright trunk growing forty or fifty feet high, branching regularly round into a fine spreading head, garnished with large spear-shaped acutely serrated leaves, naked on the under side, having flowers in long amentums, succeeded by round prickly fruit, containing two or more nuts. It is chiefly propagated by seeds. Evelyn, says, * Let the nuts be first spread to sweat, then cover them in sand ; a month being past, plunge them in water, and reject the swimmers; being dried for thirty days more, sand them again, and to the water ordeal as before. Being thus treated until the beginning of spring or in November, set them as you would do beans. They need only to be put into the holes with the point upmost. In winter or autumn, inter them in their husks, which, being every way armed, are a good pro- tection against the mouse. Being come up, they thrive best unremoved, making a great stand for at least two years upon every transplanting ; if you must alter their station, let it be done against November.' Millar cautions about purchasing foreign nuts that have been kiln-dried, which, he says, is generally done to prevent their sprout- ing in their passage. He adds, ' If they cannot be procured fresh from the tree, it will be better to use those of the growth of England, which are full as good to sow for timber or beauty as any of the foreign nuts, though their fmit is much smaller.' He also recommends preserving them in sand, and proving them in water. In setting these nuts, he says, ' the best way is to make a

drill with a hoe, about four inches deep, in wliich place the nuts about four inches distant, with their eye uppermost ; then draw the earth over them with a rake, and make a second drill a foot distance from the former, proceeding as before, allowing three or four rows in each bed. In April these nuts will appear above ground ; keep them dear from weeds, especially while young : in these beds they may remain for two years, when you should remove them into a nursery at a wider distance. The best time for transplanting these trees is in October, though some prefer the end of February; the distance these should have in the nursery is three feet between, and one foot in the rows. If these trees have a downright tap root, it should be cut off, especially if they are intended to be removed again ; this will occasion their putting out lateral shoots, and render them less subject to miscarry when finally removed. The time generally allowed them in the nursery

is three or four years, according to their growth ; but the younger they are transplanted, the better they will succeed. Young trees of this sort are very apt to have crooked stems ; but when they are transplanted out and have room to grow, as they increase in bulk they will grow more up- right, and their stems will become straight ‘ llaxihury recommends that the young plants, a year after they have been planted in the nursery, be cut down to within an inch of the ground ; which, he says, ‘ will cause them to shoot vigo- rously with one strong and straight stem.’ There is one material objection against sowing chestnuts in drills, that they serve as guides to the field- mouse, who will run from one end to the other of a drill without leaving a single nut : we rather recommend setting them with a dibble, either promiscuously, or a quincunx, at about six inches distance. Evelyn says, that coppices of chestnuts may be thickened by layering the tender young shoots : but adds that ‘ such as spring from the nuts and marrons are best of all.’ There is a striped-leaved variegation which is continued by budding ; and the French are said to graft chest- nuts for their fruit ; but Miller says, such grafted trees are unfit for timber. The chestnut-tree will thrive almost upon any soil which lies out of the water’s way; but disaffects wet moorish land. It sometimes grows to an immense size. The largest in the known world are those which grow upon Mount .ˆEtna in Sicily. At Tortworth, in Gloucestershire, is a chestnut tree fifty-two feet round. It is proved to have stood there ever since 1150, and was then so remarkable that it was called the * great chestnut of Tortworth.’ It fixes the boundary of the manor, and is proba- bly near 1000 years old. As an ornamental, the chestnut is well worthy the gardener’s attention. Its uses have been highly extolled. As a sub- stitute for the oak, it is preferable to the elm : for door-jambs, window-frames, and some other purposes, it is nearly equal to oak itself; but there is a deceitful brittleness in it which renders it unsafe to be used in beams, or in any other si- tuation where an uncertain load is required to be borne. It is excellent for liquor casks ; not being liable to shrink, nor to change the color of the liquor : it is also recommended as an under- wood for hop-poles, stakes, &c. Its fruit too is

valuable; not only for swine and deer, but as a human food : bread is said to have been made of it.

2. F. pumila, the dwarf chestnut tree, or chin- kapin, rises eight or ten feet high, with a branch- ing shrubby stem, and oval spear-shaped and acutely serrated leaves, hoary on the under side. It is propagated from seeds, brought from Ame- rica. These should be planted in drills, as soon as they arrive, in a moist bed of rich garden mould. If good, they will come up pretty soon in the spring. After they appear, they require

no trouble, except keeping them clean from weeds, and watering them in dry weather. They may stand in the seed-bed two years, and be afterwards planted in the nursery ground, a foot asunder, and two feet between the rows. When strong, they are fit for any purpose.

3. F. sylvatica, the beech tree, rises sixty or seventy feet high, and has a proportionable thick- ness, branching upward into a fine regular head, garnished with oval serrated leaves, with flowers in globular catkins, succeeded by angular fruit called mast. It is very easily raised from the mast or seed. ‘ For woods,’ says Evelyn, ‘ the beech must be governed as the oak : in nurseries, as the ash ; sowing the mast in autumn, or later, even after January, or rather nearer the spring, to preserve them from vermin. They are like- wise to be planted of young seedlings to be drawn out of the places where the fruitful trees abound. Millar says, ‘ the season for sowing the mast is any time from October to February, only observing to secure the seeds from vermin when early sowed. The sooner they are sown the better, after they are fully ripe.’ Hanbury orders a sufficient quantity of mast to be gathered about the middle of September, when they begin to fall; these are to be ‘spread upon a mat in an airy place lix days to dry ; and after that you may either sow them immediately, or put them up in bags to sow them nearer the spring ; which method,’ says he, ‘ I would rather advise, as they will keep very well, and there will be less danger of having them destroyed by mice or other vermin.’ They must be sown in beds properly prepared, about an inch deep. In the first spring many of the young plants will appear, whilst others will not come up till the spring following. Having stood two years in the se- minary, they should be removed to the nursery, where they may remain till wanted. In stateli- ness and grandeur the beech vies with the oak. Its foliage is peculiarly soft and pleasing ; its branches are numerous and spreading ; and its stem waxes to a great size. The bark is remai’k- ably smooth, and of a silvery cast ; which, added to the splendor and smoothness of its foliage, gives a striking delicacy to its general appear- ance. The beech, therefore, standing singly, and suffered to form its own natural head, is highly ornamental ; and its leaves, varying their hue as the autumn approaches, render it still more desirable. In point of use the beech fol- lows next to the oak and the ash ; it is almost as necessary to the cabinei-makers and turners, as the oak is to the ship-builder, or the ash to the plough and cart-wright. Evelyn, however, ob- serves, that ‘ where it lies dry, or wet and dry,

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it is exceedingly obnoxious to the worm, but being put ten days in water, it will resist die worm.' The natural soil of the beech is upon dry, chalky, or limestone heights. It grows to a great size upoii the hills of Surry and Kent ; upon the declivities of the Cotswold and Stroud- water hills of Gloucestershire, and upon the bleak banks of the Wye, in Hereford and Monmouth shires; where it is much used in making char- coal. The mast, or seeds, yield a good oil for lamps ; and are a very agreeable food to squir- rels, mice, and swine. The fat of swine fed with them, however, is soft, and boils away, unless hardened by some other food. The leaves ga- thered in autumn, before they are injured by the frosts, make much better matrasses than straw or chaff; and last for seven or eight years. The nuts occasion giddiness and head-ache ; but when well dried and powdered, they make wholesome bread. They are sometimes roasted and substi- tuted for coffee. The poor in Silesia use the ex- pressed oil instead of butter. ' The purple beech,' says Mr. Nicholls, ' is a fine ornamental variety, and even promises to become fit for the decora- tion of the park, although it has hitherto been chiefly confined to the pleasure-ground. A tree of the purple variety in the gardens of Messrs. Tel- fords, within the walls of the city of York, and another in the pleasure-ground at Enville, have assumed such tree-like forms, each being fully thirty feet high, that such an expectation may reasonably be entertained ; and the more espe- cially, as we know of several even in Scotland from twenty to thirty feet high. It must, how- ever, be observed, that the purple beech plants most proper for the park or the lawn, or indeed for any situation where it is required that they grow to a great size, are such as are grafted or budded on the common sort. Those raised by layers grow more dwarf; and therefore should be planted in situations where dwarf trees, or bushes, are required.

FAHLUN, a mining town of Sweden, the capital of the province of Dalecarlia. Some- times the whole province is called by the name of Fahlun. It stands in a small plain, is sur- rounded by hills, and consists of several parallel streets, crossing others at right angles. It is chiefly built of wood, and the population has di- minished from above 7000 to a little above 4000, the copper mines of the vicinity having become less productive. They still yield an annual supply of ochre and vitriol, together with small portions of silver and gold. It is 110 miles N. N. W. of Stockholm.

FAHRENHEIT, a celebrated experimental philosopher, born at Hamburgh in 1686. He improved the thermometer, by making use of mercury instead of spirit of wine, and formed a new scale for the

instrument, grounded upon the most accurate experiments. This scale has been generally adopted by the English, but the French prefer that of Reaumur. Fahrenheit wrote a dissertation on thermometers. He died in 1736. See Thermometer.

FAIFO, or Haifo, an old town of Cochin China, situated on a navigable river falling into the bay of Turon, about ten miles from the sea. It was formerly of considerable size, the streets

were regular, and die houses built of brick ; but it was destroyed during the late wars, and is now but slowly regaining its importance.

FAIL, V. n., V. a. &, n. s. “1 Fr./ttj//J7-;Teut.

Fail’ing, n. s. yfehleii ; Wel./oe/?* ;

Fail’ure. J Belg. Ja«/e«, from

Goth./e/«; La.t. /alio ; Gr ˆjjXew, to deceive. To be lacking or deficient ; to cease ; sink ; be borne down ; decay ; miss ; not succeed ; die. As an active verb, to desert ; forsake ; omit duty ; dis- appoint ; deceive. As a substantive it signifies, miscarriage; non-success; omission; want: and failing and failure are used in these last senses.

And he saide to hem, whanne I sente you without sacbel and scrippe and schoon, wher ony thing failide to you ? Wiclif. Luk. xxii.

He will without fall drive out from before you the Canaanites. Jos. iii. 10,

The viaieTsfail from the sea, and the flood decayeth and drieth up. Job xiv. 11.

Help, Lord, for the godly man ceaseth ; for the faithful /aj/ from among the children of men.

Psalin xii. 1. Let him complayne who hathe been deceyved ; let, him despayre to whom his promised hopes have fuyled , let him confesse it whom I shall ever call ; let him vaunt whom I shall admit. But let him not call me cruell or an homicide, whom I never promised, de- ceyved, called, or admitted. Spelman. But little may such guile thee now avail. If wonted force and fortune do not much me fail.

Spenser. I am enjoined, by oath, if I fait. Of the right casket, never in my life To woo a maid in way of marriage.

Shakspeare. Had the king in his last sickness failed. Their heads should have gone off. Id. Henry VIII. How grounded he his title to the crown. Upon our fail. Id.

Mark and perform it, seest thou? for the fail Of any point in't shall not only be Death to thyself, but to thy lewd-tongued wife.

Shakspeare. Consider of deformity not as a sign, which is de-.ceivable, but as a cause which seldom fuileih of the effect. Bacon.

Since nature /aiZi us in no needful thing. Why want I means my inward self to see ?

Davies. Besides what failings may be in a matter, even in the expressions there must often be great obscurities.

liigby. By fate the strength of Gods And this empyreal substance cannot fail. Milton.

I perceive Thy mortal sight to fail ; objects divine Must needs impair and weary human sense. Id. I laugh, when those who at the spear arc bold And vent'rous, if that fail them, shrink and fear.

Id.

Wherefore should not strength and might There /ai7 where virtue /ui/ s, or weakest prove Where boldest, though to tight unconquerable ?

Id. Whether such virtue spent of old now fail More angels to create. Id.

The ship was now left alone, as proud lords be when fortune /m'/i them. Sidnei/

All other arts may fail, but truth and integrity will carry a man through, and bear him out to the last.

Tillotsun.

FAl

The inventive god who never fails his part. Inspires the wit when once he warms the heart.

Dtyden. This jest was first of the other house's making. And, five times tried, has never failed of taking.

Id. Her heart failed her, and she would fain have com- pounded for iier life. L' Estrange.

In difficulties of state, the true reason of failing proceeds from failings in the administration. Id.

Where the credit and money fail, barter alone must do. Locke.

He presumes upon his parts that they will notyai7 him at time of need, and so thinks it superfluous la- bour to make any provision before-hand. Id.

He, that being subject to an apoplexy, used still to carry his remedy about him ; but upon a time shifting his clothes, and not taking that with him, chanced upon that very day to be surprised with a fit ; he owed Lis death to a mere accident, to a little inadvertency and failure of memory. South.

For Titan, by the mighty loss dismayed. Among the heavens the' immortal fact displayed. Lest the remembrance of his grief should fail.

Addison. Men who have been busied in the pursuit of the philosopher's stone, have failed in their design. Id.

There must have been an universal failure and want of springs and rivers all the summer season.

Woodward. Endeavour to fulfil God's commands, to repent as often as yon fail of it, and to hope for pardon of him.

Wake. Even good men have many temptations to subdue, many conflicts with those enemies which war against the soul, and many failings and lapses to lament and recover. Rogers.

He does not remember whether every grain came up or not ; but bethinks that very ie'w failed.

Mortimer's Husbandry. To failings mild, but zealous for desert ; The clearest head and the sincerest heart. Pope. He (the clerk) used a sort of ivory knife with a blunt edge to divide a sheet of paper, which never failed to cut it even, only requiring a steady hand.

Swift. Books, like friends, should be few and well chosen. Like friends, too, we should return to them again and again — for, like true friends, they will never fail us — never cease to instruct — never cloy.

Joineriana, 1772. It is more disgraceful never to try to speak (in public) than to try it, and fail j as it is more disgraceful not to fight, than to fight and be beaten. Johnson.

Canst thou be too well fortified against the terrors of that day ? And art thou sure that the props which support thee now will not fail thee then ? Mason.

Timidity and irresolution were his predominant failings ; the one occasioned by his natural constitu- tion, and the other arising from a consciousness that his abilities were not equal to his station.

Robertson's History of Scotlajid, They newer fail who die In a great cause : the block may soak their gore ; Their heads may sodden in the sun ; their limbs Be strung to city gates, and castle walls — But still their spirit walks abroad. Byron.

P'AIN, V. n., adv. & adj. I Sax. paejn ; Goth.

Fa'inly, orfv. ˆJcigiyion, or J'ogn ;

Swed. fagiia; Jce. feigin, to l)e glad. To de- sire ; wish. As an adjective, the old sense is fond ; glad ; desirous ; afterwards it was used for desirous of one evil in preference to a greater :

and the adverbial use has followed these signifi- cations.

My lips will be fain when I sing unto thee, and so will my soul whom thou hast delivered.

Psalm Ixxi. Alas alas howe dull and defie be the cares of cruel death vnto men in misery that would fayne dye : and yet refusythe to come and shutte vp thcyr carefull wepyng eyes. Colvile.

With hym truly. Fay lie speake would I,

Sir quod she by my fay. He is so sike. Ye be not lyke.

To speake with hym to day.

Sir T. More. And in her hand she held a mirrour bright. Wherein her face she often viewed fain.

Faerie Queene. Every weight to shroud it did constrain. And this fair couple eke to shroud themselves were f”’^’ Spenser.

Fairer than fairest, in his faining eye. Whose sole aspect he counts felicity.

Id. on Love. Whosoever will Lear, he shall find God ; whosoever will study to know, shall be also/ui« to believe.

Hooker. I was fain to forswear it ; they would else have married me to the rotten medlar. Shakspeare.

When Hildebrand had accursed Henry IV. there were none so hardy as to defend their lord ; where- fore he WHS fain to humble himself before Hildebrand.

Raleigh’s Essays. There cannot be conceived an honour less worth emulation, than this principality of Israel ; a people that could give nothing; — a people whom their leader was fain to feed with bread and water.

Bp. Hall’s Contemplations. The learned Castalio was /am to make trenchers at Baste, to keep himself from starving. Locke.

Why wouldest thou urge me to confess a flame I long have stifled, and would fain conceal.

Addison. The plebeians would fain have a law enacted to lay all men’s rights and privileges upon the same level.

Swift. Teach me — too early taught by thee !

To bear, forgiving and forgiven : On earth thy love was such to me ;

It fain would form my hope in Heaven.

Byron.

¥AmT,v.n.,v.a.!cadj.”^ Faint’hearted, Fainiheart’edly, adv. Faiktheart’edness, «..

From Fr. faner, to fade, says Dr. Johnson; but Mr. Home Tooke says it is the past parti-);ciple of the Saxon pynijean, to grow inusty ; to spoil. To decay; waste or wear away ; lose J vigor, or muscular

strength; grow feeble or dejected. Shakspeare only (as we find) uses it in an active sense for to enfeeble : faint, as an adjective, means weak

in any sense, and is applied to light, color, sound, objects of taste, &c. : faintly follows this variety of acceptation : faintish is slightly, or beginning to grow, faint : fainty is an obsolete and poetical synonyme of faint : faintling, timorous ; feeble- minded. The other compounds seem not to re- quire explanation.

They will stand in their order, and never faint in ihoir watches. Eccles. xliii. 10.

Fear not, neither be fainthearted. Isaiah vii. 4. Consider him that endured such contradiction against himself, lest ye be wearied and faint in your minds. Heb. xii. 3.

— Sooth it is said, and tried in each degree. Faint hiends when they fall out, most cruel foe-men

be. Spenser.

This evil proceeds rather of the unsoundness of the counsels, or of faintness in following and effecting the same, than of any such fatal course appointed of God.

Spenser, If the prince of the lights of heaven, which now a« a giant doth run his unwearied courses, should through a languishing / uinˆneM begin to stand. Hooker.

Loth was the ape, though praised, to adventure ; Yet faintly ‘gan into his work to enter.

Hubbard’s Tale. Should they resolve the next day, as victorious conquerors, to take the city, or else there, as faint- hearted cowards, to end their days. Knolles, The paleness of this flower Bewrayed the faintness of my master’s heart.

Shakspeare. It faints me To think what follows.

Id. Henry VIII. I have told you what I have seen and heard but faintly ; nothing like the image and horrour of it.

Id. Kitig Lear. The imagination cannot be always alike constant and strong, and if the success follow not speedily it will/oi«« and lose

strength.

Bacons Natural History. Faint heart never won fair lady.

Proverb in Camden's Reinains. The defects which hindered the conquest, were the faint prosecution of the war, and the looseness of the civil government. Vavies on Ireland.

Why are we faint in spiritual things, when we are not denied, but delayed ?

Bp. Hall's Contemplations. Lest they /ai»< At the sad sentence rigorously urged. All terror hide. Slilton.

Now the late fainthearted rout O'erthrown and scattered round about, Chaced by the horrour of tlieir fear. From bloody fray of knight and bear. Took heart again and faced about. As if they meant to stand it out. Hudibrat. He faintly now declines the fatal strife ; So much his love was dearer than his life.

Denhum. In intemperate climates, the spirits, exhaled by heat or comprest by cold, are rendered /ain« and sluggish.

Temple. This proceeded not from any violence of pain, but from a general languishing and faintness of spirits, wliich made him think nothing worth the trouble of one careful thought. Id.

The pump after this being employed from time ta time, the sound grew /airaia- &rt(\ fainter . Boyle,

Out faint Egyptians pray for Antony ; But in their servile hearts they own Octavius.

Dryden. When Jove in dusky clouds involves the skies. And ihe faint crescent shoots by fits before their eyes.

Id, Willi his lolled tongue he faintly licks his prey. His warm l

TJie ladies gasped, and scarcely could respire ; The breath they drew, no longer air, but fire : Vol. IX.

The fainty knights were scorched, and knew not whore To run for shelter ; for no shade was near. Id.

Villain, stand off! base, groveling, worthless

wretches. Mongrels in faction ; poor faintliearted traitors.

Addison, How while the fainting Dutch remotely iire. And the famed Eugene's iron troops retire.

Smith. The blue compared with these is a faint and dark colour, and the indigo and violet are much darker and fainter. Newton.

The length of the image I pleasured from the faintest and utmost red at one end, to th.e faintest and utmost blue at the other end, excepting only a little penumbra. Id. Opticks.

A certain degree of heat lengthens and relaxes the fibres ; whence proceeds the sensation of faintishncss and debility in a hot day. Arbuthnol on Air.

There's no having patience, thou art such s. faintUng silly creature. Arbuihnot. History of John Bull.

These faintings her physicians suspect to proceed from contusions. Wiseman's Surgery.

Word."! pronounced at length, sounded faint and languid. Swift.

From her naked limbs of glowsng white. In folds loose floating fell the fainter lawn.

Thomson. An obscure and confused idea rejH:escnts the object so faintly, that it doth not appear plain to the mind.

Waits The showery arch Delights and puzzles the beholder's eyes. That views the wat'ry brede with thousand shews Of painture varied ; yet unskilled to tell Or where one colour rises, or where one /aini*.

Philips. Gilded clouds, while we gaze upon them, faint be- fore the eye, and decay into confusion. Pope.

Nature affords at least a glirtimering light ; The lines, tho' touched hut faintly, are drawn, right.

Id. Upon hearing the honour intended her, she fainted away, and fell down as dead. Guardian.

Two neighbouring shepherds, /urn* with thirst, stood at the common boundary of their grounds.

Rambler. Faint o'er her couch in scintillating streams Pass the thin forms of fancy and of dreams.

Darwin. Lifts proud Anteus from his mother-plains And with strong grasp the struggling giant strains ; Back iaWs his fiihiting head, and clammy hair. Writhe his weak limbs, and flits his life in air. Id,

His brow was pale, his blue eyes sunken in. And blood-drops sprinkled o'er his yellow hair Showed tliat his yhinineji came not from despair. But nature's ebb. Byror. ■

FAIR, adj., adv. Si, ˆ Sax. p3C3eji; Gothic, Fairia', adv. [n.s. ifaigr ovfager; Svf./a- Fair'nf.ss, n. s. igcr, Dan. /a«r, formed Fair-spoken, adj. j from the old verb/t-y, to cleanse, or Swedo-Goth. and Icel. j'tcgia) Teut, fegen, to purify. Minsheu says, from Gr. ˆatpoˆs shining; Heb. *1N3,7 > /(Cfr, beauty. This adjec- tive has, throughout its various applications, the sense of clear or bright, literal or figurative. In its adverbial use, it preset ves the same idea. As a substantive, it is principally used for women, collectively or individually ; for honesty in transactions ; and the duality of fairness in thing? or persons.

C

FAT

18

FAI

Thou art aybir woman to look upon. Gen. xii. li Fair weather cometh out of the north. Job,

Take lire, and here it into the derkest hous Betwix this and the Mount of Caucasus, And let men shette the dores, and go thennc. Yet wol the fire as /aire lie and brcnne As twenty thousand men might it behold.

C/iaucer. Cant. Tales. Ey flattering fortune, loke thou neuer so fay re.

Or ntucr so pleasantly begin to smile. As though thou wouldst my mine all repayre. During my life thou shalt not me beguile.

Sir T. More. He only y«ir, and what he fair hath made. All olher fair like flowers untimely fade. Spenser. All the lords came in, and, being hy fair means wrought thereunto, acknowledged king Henry.

Id. On Ireland. All this they fairly overcame, by reason of the con- tinual presence of their king. Id.

Arius, a prii-st in the church of Alexandria, a sub- tlc-wittcd ;ind a

marveUom fairspoken man, but dis- contented that we should be placed before him in ho- nour, whose superior he thought himself in desert ; because through envy and stomach prone unto contra- diction. Hooker. Fair is foul, and foul is fair ; Hover through the fog and filthy air.

Shakspeare. I never yet saw a man. But she would spell him backward ; H fair faced. She'd swear the gentleman should be her sister : If black, wliy, nature, drawing of an antick. Made a foul blot. Id. Much Ado about Nothing.

-ˆYourself, renowned prince, stood as fair As any comer I have looked on yet. For my affection. Id. Merchant of Venice.

Well, you must now speak sir John Falstatf yuir.

Shakspeare. O, princely Buckingham, I'll kiss thy hand. In sign of league and amity with thee : Now _/air befall thee and thy noble house I Thy garments are not spotted with our blood. Id.

Hereby, upon the edge of yonder coppice, A stand where you may make the fairest shoot.

Id. Our love is not so great, Hortensio, but we may blow our nails together, and fast it fairly out.

/(/. Taming of the Shrew. Carry him gently to my fairest chamber. And hang it round with all my wanton pictures.

Shakspeare. But if greatness be so blind,

4s to trust in towers of air. Let it be with goodness joyned.

That at least the fall be fair. Bacon.

A standard of a damask-roso, with the root on, was set in a chamber where no fire was, upright in an earthen pan, full of fair water, half a foot under the water. Id.

There is due from the judge to the advocate some commendation and gracing where causes are fairly pleaded. /

He through liis virtue was a.

Carew. Careth the world, thou love, thou live, or die? Careth the world how/aire thy /«ire one bee?

Bp. Hall's Satires. About three of the clock in the afternoon the weather was very fair and very warm. Clarendon.

The king (lid so much desire a peace, that no man need advise him to it, or could divert him from it, if fair and honourable conditions nf peace were offered \o him. /J.

For to reduce her by main force Is now in vain ; by fair means, worse.

Hudihrat. Greedily they pluck The fruitage /air to sight, like that which grew Near that bituminous lake where Sodomˆ flamed. This more delusive, not the touch, but taste Deceived. Milton,

His doom is fair, That dust I am, and shall to dust return.

Id. Not only do'st degrade them, or remit To life obscured, which were a. fair dismission ; But throw's! them lower than thou didst exalt them high. Id. Agonistes.

Let us look upon men in several climates : the Ethiopians or black, flat-nosed, and crisp-haired : the IMoors tawny ; the northern people large, and fair complexioned. Hale,

That which made he\ fairness much the fairer was that it was but an ambassador of a most fair mind.

Sidney. After all these conquests he passed the rest of his age in his own native country, and died a fair and natural death. Temple.

For still, methought, she sung not far away : At last I found her on a laurel-spray : Close by my side she sat, and fair in sight. Full in a line, against her opposite. Dryden.

In this plain fable you the' effect may see Of negligence, and fond credulity ; And learn besides of flatterers to beware. Then most pernicious when they speak too fair.

Id. As I interpret /airfi/ your design. So look not with severer eyes on mine. Id. 'Waiting 'til) willing winds their sails supplied. Within a trading town they long abide, ¥a\l fairly situate on a haven's side. Id.

Of sleep forsaken, to relieve his care. He sought the conversation of the /air.

Id. Fables. When fair words and good counsel will not pre- vail upon us, we must be frighted into our duty.

L’ Estrange. He that attacks received opinions, with any thing but /air arguments, may, I own, be justly suspected not to mean well, nor to be led by the love of truth j but the same may be said of him too who so defends them. Locke.

He who/«/r and softly goes steadily forward, in a course that points right, will sooner be at his journey’s end, than he that runs after every one, though he gallop. Id.

Gentlemen who do not design to marry, yet pay their devoirs to one particular /air. Spectator.

This promised /a/r at first.

Addison on Italy In vain you tell your parting lover. You wish fair winds may waft him over.

Prior, To the first advantages we may fairly lay clai-n; I wish we had as good a title to the latter.

Atterbury, I am not much for that present ; we’ll settle it be- tween ourselves ; fair and square, Nic, keeps friends together. Arbuthnot.

This nutritious juice, being a subtile liquor, scarce obtainable by a human body, the serum of the blood is fairly substituted in its place. Id. on Aliments.

I looked for the jugular veins, opened the/a»>e«, and took away a dozen ounces of blood. Wiseman. Virtuous and vicious every man must be.

Few in the’ extreme, but all in the degree j

FAIRS.

19

The rogue and fool by fits is fair and wise. And even the best, by fits what they despise.

Pope. The stage how loosely does Astrea tread, Who fairly puts all characters to bed ! Id.

It is a church of England man’s opinion, that the freedom of a nation consists in an absolute unlimited legislative power, wherein the whole body of the people are fairly represented in an executive duly limited. Swift.

There are other nice, though inferior cases, in which a man must guard, if he intends to keep fair with the world, and turn the penny.

Collier on Popularity.

Nature's circle, like a chariot wheel

Rolling beneath their elevated aims. Makes their /air prospect /aiVer every hour. Advancing virtue in a line to bliss. Young.

For as by depredations wasps proclaim The fairest fruit, so these the. fairest fame. Id.

Behold, my fair, where'er we rove. What dreary prospects round us rise.

Johnson. Winter's Walk. Not slothful he, though seeming unemployed. And censured oft as useless. Stillest streams Oft water/ajrest meadows, and the bird. That flutters least, is longest on the wing.

Cowper, So, robed by beauty's queen, with softer charms Saturnia wooed the thunderer to her arms ; O'er her fair limbs a veil of light she spread. And bound a starry diadem on her head. Darwin. When blest with the smiles of my fair ˆ

I know not how much I adore ; Those smiles let another but share.

And I wonder I prized them no more ! Byron.

Fair, 71. s. J Fi. foire ; Ita.. Jier a ; Port.

Fair'ing. Sfaira; Span.ym« ; levX.feyer: Welsh ffair ; Sv/ed. fira; either from Lat._/m>, feast days, or forum, the market place ; Gr. ipopiov, merchandise. — Minsheu. A stated market : a meeting-day, or meeting-place, for buyers and sellers : a fairing is a present brought from, or given at, a fair.

With silver, iron, tin and lead, they traded in thy fairs. Esek.

Sweetheart, we shall be rich ere we depart, II fairings come thus plentifully in. Shakspeare.

Like children that esteem every trifle, and prefer a fairing before their fathers. Ben Jonson.

His com, his cattle, were his only care.

And his supreme delight a country fair. Dryden.

The ancient Nundinae, or fairs of Rome, were kept every ninth day : afterwards the same privileges were granted to the country markets, which were at first under the nower of the consuls.

Arhuthnot on Coins.

Now he goes on, and sings of fairs and shows ; For still new fairs before his eyes arose : How pedlars stalls with glittering toys are laid, The various ˆ/airinˆs of the country maid.

Gay's Pastorals.

Fairs are generally kept once or twice in tlie year, and in most places on the same day with ♦he festival of some patron saint to whom the church was dedicated. This may in some mea- sure serve to show us their origin. When bishops and abbots observed that crowds of people assembled to celebrate the festivals of their patron saints, they applied to the crown for char- ters to hold fairs at those times, for the accom- modation of strangers, and with a view to in-

crease their own revenues by the tolls which their charters authorised them to levy at these fairs. Hence the multitude of attendants in- creased, some of whom were actuated by re- ligious, and others by commercial views. When a fair was held within the precincts of a cathe- dral or monastery, it was not uncommon to oblige every man to take an oath at the gate, before he was admitted, that he would neither lie, nor steal, nor cheat, while he continued at the fair. The duration of fairs is determined by proclamation, by slat. 2 Ed. III. c. 15; and if a person shall sell any goods after the time of the fair expires, he shall incur a forfeiture of double the value of the goods sold, one-fourth to the prosecutor, and the rest to the king. Any citizen of London may carry his goods to any fair or market in England at his pleasure. If any person is entitled to hold a fair or market, and anotlier is set up within the distance of a third part of twenty miles, either on the same day, or a different day, it is a nuisance, and an action on the case lies ; and also against persons disturbing such as are coming to buy or sell in the fair or market, so that the person holding the fair, &c., loses his toll, or receives prejudice in the profits arising from it. There is a toll usually paid in fairs on the sale of things, and for stallage, piccage, &c. Fairs abroa*ˆ are either free, or charged with toll and impost. The privileges of free fairs consist chiefly, first, in that all traders, &c., whether natives or foreigners, are allowed to enter the kingdom, and are under the royal protection, exempt from duties,

impo- sitions, tolls, &c. Secondly, that merchants, in going or returning, cannot be molested or ar- rested, or their goods stopped. They are es- tablished by letters patent from the prince. Fairs, particularly free fairs, are of great import- ance in the commerce of Europe, especially in that of the Mediterranean, and inland parts of Germany, &c.

The principal fairs in Europe are — 1. Two in Frankfort; the first commencing the Sunday before Palm Sunday, and the second on the Sunday before the 8th of September. Each lasts three weeks ; the first called the week of accep- tance, the second the week of payment. They are famous for the sale of all kinds of commodi- ties ; but particularly for the immense quantity of books, nowhere else to be found, whence the booksellers throughout all Europe used to furnish themselves. Before each fair there is a catalogue of all the books to be sold, printed and dispersed, to call together purchasers ; though the learned have long complained of unfair practices herein ; as fictitious titles, names of books purely imagi- nary, &c., besides great blunders in the names of the authors, and the titles of the real i)ooks. 2. The fairs of Leipsic, which are held thrice a-year; one beginning on the 1st of January, the second three weeks after Easter ; and the third after Michaelmas. 3. The four fairs of Novi, in the Milanese, commencing on the 2d of February, the 2d of May, the 1st of August, and 2d of September. Though the commodities bought and sold are very considerable, yet what chiefly contributes to render them famous is, the vast concourse of the most considerable mer-

2J-

chants and nojociants of the neighbouring king- parently endless coniinuation of convulsive ruin.

doms, for transacting affairs and settling accounts 4. The fairs of Higa, two in ihe year; in May and Septeml)er, much frequented by the English, Dutch, and French ships, as also from all parts of the Uidtic. The best time for tlie sale of goods at Ri'j,a is during the fairs. Since the building of Petersburg, these fairs have suH'ered some di- minution. 5. Fair of Archangel, daring which all the trade foreigners have with that city is managed. It holds a month, or six weeks, cor\i-

mencmg in the middle of August. The Musco- vite merchants attend here from all parts of that vast empire ; and the English, Dutch, French, Swe- dish, Danish, and other ships in the port of that city, on this occasion, ordinarily amount to 300. But this is not a free fair as the rest are: The duties of exportation and importation are very strictly paid, and on a high footing. 6. The fair of St. (Jermain, Tiear Paris, commencing the 3d

covered by the waters beneath the promontory. Upon this region of desolation, on the shoie, enormous debris, either assuming the character of rude columnisation, or in a perfectly shape- less masSjwhose weight is calculated at from 4000 to .5000 tons, are thrown together in all tiie savage sublimity of which we can conceive the wildest scenes in nature capable.

The scene just now described is discovered below the feet of the traveller, as' he cautiously paces along the brink of the precipice. The surface upon which he treads, upon examination, will be found to consist of a regular pavement, formed of the extremities of enormous prismatic masses, composing the precipice, perfectly de- nuded and completely level. These prisms vary in form ; some are quadrilateral, and appear to be composed of a congeries of smaller prisms, aggregated in such a way as to suggest very ob-

of February, and holding till Easter, though it is viously the clustered assemblage of shafts, which

only free for the first fifteen days. 7. The fairs of Lyons, whicli M. de Chesiie, in his An- tiquity of Cities, alleges, from a passage of Stra- bo, were established by the Romans ; though the fairs, as they now stand, are of a much later date. There are three in the year, each lasting twenty days, and free for ever. They begin on Easter Monday, the 26th of July, and the 1st of De- cember. 8. Fair of Guibray, a suburb of Fa- laise, said to have been established by William the Conijueror, who was born at Falaise. It commences on the I6th of August; and holds fifteen days free by charter, and longer by cus- tom. 9. Fair of Beaucaire, held partly in the city of that name, and partly in the open country.

occur in the formation of a Gothic column. In tracing the summit of this bold head, several natural curiosities are pointed out ; the first, to the west, is a fissure in the face of the precipice, called Fhir Leith, or the Gray Man's Path : the entrance to the pass, at the top, is extremely narrow ; and formerly, a joint of green-stone, which had fallen across it, formed a sort of na- tural gate, through which the bold enquirer de-

scended ; entering, next, a gradually expanding passage, which leads to the chaotic heaps, at the base of the great colonnade. The natural archi- trave has lately fallen down, and quite choked up the passage. There are one or two similar chasms along the summit, which have frequently proved

tinder tents, &c. It commences on the 22d of fatal to the cattle left pasturing upon the head- July, and only holds for three days ; yet it is the land. There are several places, along the brink greatest and most celebrated of all the fairs in of the precipice, where the guide directs his fol- that part of Europe, both for the concourse of lowers to lie flat upon the ground, and cast the strangers frOm all parts of the world, and for the eye down perpendicularly to the foot of the co- traffic of all kinds of goods : the money returned lumn, a depth of 250 feet ; this can be done in

in these three days amounting sometimes to about 6,000,000 of livres.

Fair Head, or Benmore, i.e. the Great Head, as it is generally and more properly called, is said, by Dr. Hamilton, to be the Rhobogdium of Ptole-

rnany places without the least danger. Some of the columns are magnetical.

Near the highest point of Fair Head is an ex- traordinary cave, said to be artificial, and called a Pict's house. Not far hence are two small

my. It is not, however, the most northern point of lakes, at an elevation exceeding 400 feet above

Ireland, which was what Ptolemy meant to de signate by this name. Mr. Wright therefore considers that geographer to apply this denomi- nation to Malin Head, or Inishowen Head. This splendid promontory, whose highest point

the sea, called Lough Caolin and Lough-na- Cressa; one of these discharges its overflowing waters into the sea, through the whyndyke, called Carrick Mawr, or the Great Crag.

Fair Isle, or Faro, as Buchanan calls it, a

is 535 feet above the ocean's level, is, according small island lying between Orkney and Shetland,

to the latter writer, composed of a body of co- thirty miles E.N. E.

from the former, and twenty-

lumnar green-stone, of such dimensions, that its four south-west from the latter. It is above three

articulations are not at first very obvious ; but, miles long, and nearly two broad, very craggy,

upon surveying attentively one of the gigantic with three very high promontories (one of them

columns, the joints and separatrices are distinctly called Sheep Craig, 480 feet high), which are

marked. The whole structure of the promon- visible both from Orkney and Shetland. Bu-

tory consists of two y)arts ; the one, at the sea chanan says, it is ‘ encompassed with lofty rocks ;

side, is an inclined plane, strewn with enormous and is every where inaccessible, unless upon the

masses of the same stone, in the wildest and south-east, where, lowering a little, it afTords a

most terrific chaos ; above this rises the mural safe station for small vessels.’ There is great

precipice of columnar green-stone, 250 feet in plenty of sea and water fowl, and all kinds of

height. The scene of ruin at the base of these fish upon the coast. There is a small harbour at

Titanian pillars is probably not exceeded in the south end, which is full of rocks, where only

Europe. Here the sea heaves in a solemn ma- small boats can lie, and another at the north-east

jˆs.ic swell, and in everj’ retreat discloses the ap- end, larger and safer in summer, so that it serves

tommodiously enough for their fishery. The duke of Medina Sidonia, commander of tlie famous Spanish armada, in 1588, was wrecked on the east coast of this island. Tlie ship broke to pieces, but the duke and 200 men made their escape. They lived here so long, that both they and the inhabitants were almost famished. At

even seems to give him the preference for har- mony, when he observes that Waller owned him- self indebted for tlie harmony of his numbers to Fairfax's Godfrey of Boulo'ˆne. He died about 1632, at his house, called Kewhall, between Den- ton and Knaresborough.

Fairfax, a county of Virginia, on the west

length the duke, and the poor remains of his bank of the Potomac, twenty-five miles long and

people, were carried over to the main land of Shetland, and thence to Dunkirk, by one Andrew Humphrey, for which Andrew was rewarded with 3000 merks.

FAHIFAX (Sir Thomas), general of the parlia- mentary forces in the civil wars, was the eldest son of Ferdinando lord Fairfax, and born at Denton, the family seat, in Yorkshire, in 1611. He commenced his military career in the army under lord Vere in Holland ; and, when the dif- ferences broke out into hostility between the kuig and parliament, took a decided part in the favor of the latter, being, as wˆU as his father, a zealous presbyterian. He had a principal command in the north, where he and his father were defeated in several engagements, particularly at Adderton Moor, in June 1643. Sir Tliomas was, however, more successful in some subsequent actions, and he distinguished himself so greatly, at the battle of Marston]Moor, that, when the army was new modelled, he was appointed general in the room of the earl of Essex. In June, 164 j, lie defeated the king's forces at Naseby, after which he marched to the west, where he obliged a number of places to submit. Upon the death of his father, in 1648, he succeeded to his title, and the same year took Colchester, after a brave resist- ance by Sir George Lisle and Sir Charles Lucas, whom his lordship, after the surrender, basely caused to be shot. He pretended to be against putting the king to death, but took no steps to prevent it; and, at the time of the execution, was engaged in prayer with major Harrison. He de- clined commanding the army against the presby

eighteen broad. The chief town is Alexandria. FAiEFAX,a township of Vˆermont, in Franklin county, east of Georgia, on the bank of the Moille ; nine miles from Lake Champlain.

FAIRFIELD, a populous maritime county of Connecticut, forty-six miles long and thirty-five broad, bordering on the state of New York. It is divided into thirteen townships. L”)aubury and Fairfield are the chief towns.

, Fairfield, the capital of the above county, called Unquowa by the Indians, is seated on the Mill-run, a little above its influx into- Long Island Sound. It was burnt in 1777, by a party of British and loyalists ; by which it incurred a loss of above £40,109. It has been since rebuilt, and is now flourishing. It carries on a cons.der- able trade to the West Indies. It is twenty-two miles south-west by west of IS’ew Haven, sixty- four north-east of New York, and 161 of Phila- delphia.

Fairfield, a county of South Carolina, in Camden district, forty miles square ; seated be- tween the Wateree and Broad lliver. Winusbo- rough is the capital.

P”AIRFORD, a town in Gloucestershire, re- markable for its church, which has curious painted glass windows. They are said to have been taken in a ship by John Tame, esq., towards the end o. the fifteenth century, who built a church for their sake. They are preserved entire, and the figures are extremely well drawn and colored. Tiiey represent the most remarkable histories in the Old and New Testament. The painter was Al- bert Durer. In the church are also a number of

terians, who aftenvards appeared in favor of monuments, particularly a curious one to the

Charles II., and lived in retirement till measures were adopted for bringing back the king. He was at the head of the committee appointed by the house of commons to attend king Charles 11- at the Hague, and, having assisted in his restora- tion, returned again to his seat in the country ; where he lived in a private manner till his death, which took place in 1671 in the sixtieth year of his age. He wrote, says Mr. Walpole, INlemori- als of Thomas Lord Fairfax, printed in 1699 ; and was not only an historian but a poet. In Mr. Thoresby's museum were preserved, in MS., the following pieces : — The Psalms of David, the Canticles, the Song of Moses, and other parts of

memory of the founder, who died in the year 1500 ; with his efiigy in white marble. Near it is a handsome free school, endowed for sixty boys ; besides which this town has many other charitable institutions : it has also two neat bridges over the river Colne. It is twenty-two miles E.S.E. of Gloucester, and seventy-nine and a half west by north of London.

Fair Weather Mount, a mountain on the north-east coast of North America, about 14,900 feet above the level of the sea, and about twelve miles north-east of Fair Weather Cape. It is one of the principal summits of tlie Cordillera of New Norfolk ; its base being formed by the summits

Scripture, versified ; a poem on Solitude ; Notes of various surrounding mountains. It is covered of Sermons; and a Treatise on the Shortness of with perpetual snow. Long. 222° 47′ E., lat. 58″ Life. But the most remarkable of lord Fairfax's 57′ N.

works, says Walpole, were the verses he wrote on the horse on which Charles II. rode to his coro- nation. He gave a collection of MSS. to the Bodleian library.

Fairfax (Edward), natural son of SirThomas Fairfax, was an English poet who lived in the reigns of Elizabeth and .lames I. He was an accomplished scholar. Dryden classes him with Spenser, as a leading writer of the times ; and

FAIRY, 71. s. & adj. } Old Tr. faerie, a spec- Fairylike. S tre, _/('■£', a nymph; Sax.

pejihb. ' Ab tpa terra, fit et fipa Macedonum dialecto ; unde tvtpoi

irptpoi, et Romanis in- feri, (jui Scoto-Saxoiiibus dicuntur ft lUs nostra- tibiisque; vulgo corruptius jdiiiea, KaraxOoviot PainovtQ, sive dii manes.' — Baxter's Glossary. Tlie French have also an old verb facr, to en- chant. Fairy and fay are indiscriminately used

by our older writers. See Fay. Both, perhaps, came into our language from the French. An imaginary being, or spirit, supposed to appear in a diminutive human form, and generally of the female sex : as an adjective, fairy means given by, or belonging to fairies.

To thi.

Shakspeare . Antony and Cleopatra, Nan Page, my daughter, and my little sou. And three or four more of their growth, we'll dress Like urchins, ouphes, and fairies, green and white.

Shahspeare. Then let them all encircle him about. And fairy like to pinch the unclean knight : And ask him, why, that hour of /airj/ revel. In their so sacred paths he dares to tread In shape prophane. fd. Merry Wives of Windsor. This is the fairy land : oh, spight of spights. We talk with goblins, owls, and elvish sprights.

Shakspeare. Be secret and discrete ; these fairy favours Are lost when not concealed.

DryderCs Spanish Fryar,

Such borrowed wealth, VAe fairy money, though it were gold in the hand from which he received it, will be but leaves and dust when it comes to use. Locke,

By the idea any one has of fairies, or centaurs, he cannot know that things, answering those ideas exist.

Id. F&ys, faries, genii, elves, and demons, hear.

Pope, What farther clishmaclaver might been said, What bloody wars, if sprites had blood to shed, Nae man can tell ; but a' before their sight, A fairy train appeared in order bright ; Adown the glittering stream they featly danced ; Bright to the moon their various dresses glanced.

Burns. While frowning loves the threatening falchion wield. And tittering graces peep behind the shield. With jointed mail their fairy limbs o'erwhelm. Or nod with pausing step the plumed helm.

Darwin. This hour we part ! — my heart foreboded this : Thus ever fade my fairy dreams of bliss. Byron,

Fairy. Fairies were most usually imagined to be women of an order superior to human nature, yet subject to wants, passions, accidents, and even death; sprightly and benevolent while young and handsome ; morose, peevish, and malignant, if ugly, or in the decline of ttieir beauty ; fond of appearing in white, whence they are often called the white ladies. Jervaise of Tilleberry, marshal of the kingdom of Aries, who lived in the beginning of the thirteenth cen- tury, writes thus concerning them, in a work in- scribed (0 the emperor Otho IV. ' It has been asserted, by persons of unexceptionable credit, that fairies used to choose themselves gallants from among juen, and rewarded their attachment with an affluence of worldly goods ; but if they married, or boasted of a fairy's favors, they as severely smarted for such indiscretion.' Similar tales are still current in Languedoc ; where there is not a village without some ancient seat or cavern, which had the honor of being a fairy's residence, or some spring where a fairy used to bathe. This idea of fairies has a near affinity with that of the Greeks and Romans, concerning

the nymphs of the woods, mountains, rivers, and springs ; and an ancient scholiast on Theo- critus says, 'The nymphs are demons which ap- pear on the mountains in the figure of women.' The Arabs and other orientals have also their ginn and peri, of whom they entertain the like notions. Fairies have been likewise described as of both sexes, and generally as of minute stature, though capable of assuming various forms and dimensions. The most elegant re- presentation of these children of romantic fancy is to be found in the Midsummer Night's Dream of Shakspeare. Spenser's Fairy Queen is an epic poem, under the characters of fairies. The belief of fairies subsists in many parts of our own country. The ' Swart fairy of the mine,' is scarcely yet believed to have quitted our subter- raneous works. And, in the Highlands of Scot- land, new-born children are watched till the christening is over, lest they should be stolen or changed by some of these imaginary beings.

Fairy Circle, or Ring, a phenomenon pretty frequent in the fields, &c. long supposed to be traced by the fairies in their dances. 'There are two kinds of it ; one of about seven yards in diameter, containing a round bare path, a foot broad, with green grass in the middle of it.

The other is of a different size, encompassed with a circumference of grass. Some suppose these circles to be made by ants, which are often found in great numbers in them. Messrs. Jessop and Walker, in the Philosophical Transactions, ascribe them to lightning ; which is thought to be confirmed by their being most frequently pro- duced after a storm of that kind, as well as by the color and brittleness of the grass roots when first observed. Lightning, like all other fires, moves round, and burns more in the extremity than in the middle ; the second circle arises from the first, the grass burnt up growing very plentifully afterwards. Mr. Cavallo, however, in his valuable Treatise on Electricity, does not think that lightning is concerned in the forma- tion of them : ‘ They are not,’ says he, ‘ always of a circular figure ; and, as I am informed, they seem to be rather beds of mushrooms than the effects of lightning.’ Other philosophers, who have examined these circles, believe they are produced by a kind of fungus breaking and pulverising the soil.

Dr. WoUaston has examined this subject with his usual ingenuity. He observed that the fungi or mushrooms, first noticed by Withering, were found solely at the exterior margin of the dark ring of grass. The breadth of the ring, in that in- stance, measured from them towards the centre, was about twelve or fourteen inches, while the exterior rinp, occupied by the mushrooms, was only about four or five inches broad. Dr. Wol- laston conjectured, from the position of the mushrooms, that the rings were formed after the manner described by Dr. Hutton, by a progres- sive increase from a centre, and this opinion was strengthened by finding that a second species of fungus presented a similar arrangement, with re- spect to the relative position of the ring and fungi, the fungi being always upon the external margin of a dark ring of grass. ‘ I thought it not improbable,’ says he, ‘that the soil which

had once contributed to the support of fungi might be so exhausted of some peculiar pabulum necessary for their production, as to be rendered incapable of producing a second crop of that singular class of vegetables. The second year’s crop would consequently appear in a small ring surrounding the origmal centre of vegetation, and, at every succeeding year, the defect of nu- triment on one side, would necessarily cause the new roots to extend themselves solely in the opposite direction, and would occasion the circles of fungi continually to proceed by annual en- largement from the centre outwards. An

appear- ance of luxuriance of the grass would follow as a natural consequence, as the soil of an interior circle would always be enriched by the decayed roots of fungi of the preceding year's growth.'

Dr. WoUaston often observed undecayed spawn, even below the most luxuriant grass. ' During the growth of the fungi, they so entirely absorb all imtriment from the soil beneath, that the herbage is for a while destroyed, and a ring appears, bare of grass, surrounding the dark ring. If a transverse section be made of the soil beneath the ring, at this time, the part beneath the fungi appears paler than the soil on either side of it, but that which is beneath the interior circle of dark grass, is found, on the contrary, to be con- siderably darker than the general surrounding soil. But, in the course of a few weeks after the fungi have ceased to appear, the soil where they stood grows darker, and the grass soon vegetates again with peculiar vigor, so that I have seen the surface covered with dark grass, although the darkened soil has not exceeded half an inch in thickness, while that beneath has con- tinued white with spawn, for about two inches in depth. The section of the space occupied by the white spawn, has in general, nearly the same form, and may be compared to that of a wave, proceeding from the centre outwards, as its boundary on the inner side ascends obliquely to- wards the surface, while its exterior termination is nearly in avertical position. The extent occu- pied by the spawn varies considerably, according to the season of the year, being greatest after the fungi have come to perfection, and is reduced to its smallest dimensions, and may, in some cases, not be discernible before the next year's crop begins to make its appearance.

' For the purpose of observing the progress of various circles, I marked them three or four years in succession, by incisions of different forms, by which I could distinguish clearly the succes- sive annual increase, and I found it to vary in different circles, from eight inches to as much as two feet. The broadest rings that I have seen, were those of the common mushroom, (ag. cam- pestris) ; the narrowest are the most frequent, and are those of the champignon (ag. orcades ot Dr. Withering). The mushroom accordingly makes circles of the largest diameter, but those of the champignon are most regular. There are, however, as many as three other fungi that ex- hibit the same mode of extension, and produce the same effect upon the herbage. These are the ag. terreus, ag. procerus, and the lycoperdon bovista, the last of which is far more common than the two last-mentioned agarics. There is

one circums ance that may frequently be ob- served respecting these C'"cles, which can satis- factorily be accounted for, according to the

preceding hypothesis ofthe cause of their increase, and may be considered as a confirmation of its truth. Whenever two adjacent circles are found to interfere, they not only do not cross each other, but both circles are invariably obliterated be- tween the points of contact; at least, in more than twenty cases, I have seen no one instance to the contrary. The exhaustion occasioned by each, obstructs the progress of the other, and both are starved.

‘ I think it also not.unworthy of observation, that different species of fungi appear to recjuire the same nutriment ; for in a case of interference, between the one circle of puff-balls and another of mushrooms, they did not intersect ; but I cannot say positively that I have seen more than one instance. I once found that a tree had in- terrupted the regular progress of a circle; but this appeared to be only a temporary impediment, as the extension had proceeded at the usual rate ; and, by passing obliquely from each side into the soil beyond the tree, had given the ring the form of a kidney, so that another year or two would probably reunite the two extremities into one curve surrounding the tree. Being desirous of ascertaining in what length of time a soil might again recover the power of producing a fresh crop of fungi, I cut a groove, in one or two in- stances, along the diameter of a mushroom ring, and inserted a quantity of spawn taken from its circumference, with the hope of seeing it vegetate for some distance near the centre ; but the expe- riment failed altogether, as I shortly after quitted my residence in the country.’

Another modern writer, Mr. Wilson, ascribes fairy rings to the action of grubs, concealed un- der the ring among the roots of the herbage ; and supposes, that the fungi give a preference to these rings, on account of the abundance of dead vegetable matter to be found in them.

Fairy of the Mine, an imaginary inhabi- tant of mines. The Germans believe in two species ; one fierce and malevolent ; the other a gentle race, appearing like little old men, dressed like the miners, and not much above two feet high. These wander about the drifts and cham- bers of the works ; seem perpetually employed, yet do nothing; some seem to cut the ore, or sling what is cut into vessels, or turn the wind- lass ; but never do any harm to the miners, unless provoked, as Agricola relates in his book De Animantibus Subterraneis.

FAITH, n. s. Faith’breach, Faith’ed, adj. Faith’ful Faith’fuii.y, adv.

FaITh’fULNESS, 71. s.

Faith’less, adj. Faith’lessness, n. a.

Fr. foi/, foi ; Span, and Port, fe ; Ital. fede ;La.t. fides. Mr. Tooke considers our “modern word faith, once written faieth, as the third person sin- J gular of the Saxon

verb paejan ; Pnrkhurst, and others derive it from the Greek 7ra0w ; and this from the Hebrew nns, to persuade. Belief; credence: belief of revealed truth : and hence the truth believed tenets held by man ; a promise given by man or God : also, confidence, or trust, in a thing or

party believed ; and (the qualities which inspire this feeling) fidelity to engagements ; sincerity; veracity : faithbreach is a breach of honor or faith : f;iithed, honest ; sincere : as is faithful, which also means true to allegiance, duty, or regard, professed: faithless is without faith ; per- fidious ; and, particularly, without belief in revealed religion.

And he seide to hir, doughtir, thi feith hath maad the saaf. ‘WicUf. Luk. 8.

]My servant Moses is faithful in all mine house.

Numbers. They are a very froward generation, children in ■whom is - RO faith. Dcut. xxxii. 20.

For there is no faithfulness in your mouth; your inward part is very wickedness. Psalm lix.

Felix heard Paul concerning thp faith.

A cts xxiv. Adew myne owne dere spouse my worthy lordeˆ The faithf all loue, that dyd vs both combyne. In mariage and pcasaVjle Concorde, Into your handes here I clcane resyne. To be bestowed vppon your children and myne.

Sir T. More. The man that is faithful, thinks it more liberty to be his friend’s prisoner, than to be any other’s gene- ral. Sir P. Sidney.

The name oi faith being properly and strictly taken, it must needs have reference unto some uttered word, as the object of belief. Hooker.

Whatsoever our hearts be to God and to his truth, believe we, or be we as yet faithless, for our conver- sion or confirmation, the force of natural reason is great. Id.

I have been forsworn. In breaking /(iJˆA with Julia whom I loved.

Shakspeare. I have this day received a traitor's judgment. And by that name must die ; yet, heaven bear wit- ness. And, if I have a conscience, let it sink me.

Even as the axe falls, if I be not faithful. Id.

Never dare misfortune cross her foot. Unless she doth it under this excuse. That she is issue to a. faithless Jew. Id.

Both Foil by our servants, by those men we loved most ; A most unnatural and faithless service. Id.

His nobb grace would have some pity Upon my wretched women, that so long Have followed both ray iorinnes faithfulli/. Id.

Vision in the Uext life is the perfi;cting of tha.t faith in this life, or that faith here is turned into vision there, as hope into enjoying. Hammond.

For his own part he did faithfully promise to be still in the king's power. Bacon's Henry VII.

If they had gone to God without Moses, I should have praised their faith ; but now they go to Moses without God, I bate their stubborn faithlessness.

lip. Hall's Contemplations. Her failing, while her faith to me remains, I should conceal. Milton's Paradise Lost.

So spake the seraph Ahdie\ , faithful foimd ; Among the faithless, faithful only he. Milton.

Seeming devotion doth but gild the knave. That's neither faithful, honest, just, nor brave.

Waller. For you alone I broke my faith witli injured Palamon. Dryden. Well I know him ; Of easy temper, naturally good, AndjfartA/ui to his word. Id. Don Sebastian,

If on my wounded breast thou drop a tear. Think for whose sake my breast that wound did bear ; Anii faithfully vay\a.st desires fullil. As I

perform my cruel father's will. Id. Ovid.

And, therefore, I have often wondered to hear men of several churches so heartily exclaim against the implicit _/aj7/t of the church of Rome ; when the same implicit /a«A is as much practised and required in their own, though not so openly professed, and inge- nuously owned there. Locke.

The band that knits together and supports all com- pacts, \itt[i.ha.nA faithfulness. South.

They suppose the nature of things to be truly and faithfully signified by their names, and thereupon believe as they hear, and practise as they believe.

Id. SermoTts.

Then faith shall fail, and holy hope shall die ; One lost in certainty, and one in joy. Prior.

Faith is an entire dependeivce upon the truth, the power, the justice, and the mercy of God ; which de- pendence will certainly incline us to obey him in all things. Swift.

We may meet with frauds and faithless dealings from men ; but after all, our own hearts are the greatest cheats ; aud there are none we are in greater danger from. Mason.

From every joy and pleasure torn.

Life's weary vale I'll wander through ; And hopeless, comfortless, I'll mourn

A faithless woman's broken vow. Burns. To praise him is to serve him, and fulfil

Doing and sutTering his unquestioned will j

'Tis to believe what men inspired of old.

Faithful and faithfully informed, unfold ;

Candid and just, with no false aim in view.

To take for truth what cannot but be true.

Cowper.

A nation famed for song, and beauty's charms. Zealous, yet modest ; innocent, though free ■ Patient of toil ; serene amidst alarms ; Inflexible in faith ; invincible in arms ! Beattie.

Faith, in philosophy and theology, is that assent which we give to a proposition advanced by another, the truth of which we do not im- mediately perceive from our own reason or ex- perience ; or it is that judgment or assent of the mind, the motive whereof is not any intrinsic evidence, but the authority and testimony of some other who reveals or relates it. Hence, as there are two kinds of authorities and tes- timonies, the one of God, and the other of man, faith becomes distinguished into divine and hu- man:— •

1. Faith, Divine, is that founded on the authority of God ; or that assent we give to what is revealed by God. The objects of this faith, therefore, are matters of Revelation. See Re- VELAxroN and Theology,

2 Faith, Human, is that whereby we believe what is told us by men ; and the object of it is matter of human testimony and evidence. See Metaphysics.

FAITIIORN (William), an ingenious artist, a native of London, was the disciple of Peak the painter, and worked with him three or four years. At the breaking out of the civil war Peak espoused the royal cause, and Faithorn, who ac- companied him, was taken prisoner, sent to Lon- don, and confined in Aldersgate. In this un- comfortable situation he exercised his graver; and executed a small head of the first Villa/s

duke of Buckingham, in the style of Melan. Being permitted to retire to the continent, he found protection from the abbe de MaroUes, in France; where he formed an acquaintance with Nanteuil. About 1650 he returned to England, and soon after married the sister of a captain Ground. By her he had two sons : Henry, who was a bookseller, and William an engraver in mezzotinto. He painted portraits from the life in crayons. He also painted in miniature ; and his performances were much esteemed. His spirits were broken by the dissipation of his son William ; and a lingering consumption put an end to his life in 1691. He wrote a work on Drawing, Graving, and Etching.

FA'ITOUR, n.s. Yr.fuitard; or, as Minsheu thinks, a corruption oi

faisiiir, i. e. a factor, or doer ; but the Norman Fr. hdiSfaitour regularly. A scoundrel; a rascal; a poltroon. Obsolete.

To Philemon, false /aiˆour, Philemon, I cast to pay, that I so clearly bought.

Faerie Queenc,

Into new woes unweeting I was cast. By this false faitour. Id.

FAKE, n. s. Among seamen. A coil of rope.

P'AKIRS, or Faquirs, oriental monks or friars. The word is Arabic and signifies a poor or needy person. D'Herbelot regards it as synonymous with dervise : and certainly in some Mahommedan countries the religious are called fakirs, in others dervises.

These oriental monks are said to outvie the severity and mortification of the ancient Ancho- rets. Some of them make a vow of continuing all their lifetime in one posture, and keep it ef- fectually. Others never lie down ; but continue in a standing posture for long periods of their lives, supported only by a stick, or rope under their arm-pits. Some mangle their bodies with scourges and knives. They pretend to have conquered every passion, and triumphed over the world ; and accordingly scruple not, as if in a state of innocence, to appear sometimes en- tirely naked. The people of the east are per- suaded of the virtue of the fakirs; notwithstand- ing which, they are accused of committing the most enormous crimes in private.

One set or sect of fakirs, who do not practise such severities, travel together, from village to village, prophesying, and telling fortunes. They make use of drums, trumpets, and other musical instruments, to rouse themselves and their au- ditors to an artificial ecstasy : and their votaries are said to consult them in the most indecent attitudes. They are so indulgent towards every living creature, that they suffer themselves to be over-run with vermin, or stung by insects, with- out the least roUictancy or complaint: but it is more than probal)le, tiiat they lull their senses by opiates in order to render tliemselves insensi- ble to the excessive torments they undergo. The garment of the chief fakirs distinguishes them from the rest. Some persons of considerable rank in India have become fakirs : and D'Herbelot estimates the number at about 2,000,000.

FALAISE, a town of France, in Lower Nor- mandy, having still, in the ruins of its castle, one of the finest towers in France ; famous for

being the birth place of William the Conqueror. It has a good trade in serges, linens, and lace ; with a famous fair held in Guibray, one of its suburbs, which begins 28th Thermidor (Aug. 16lh) and lasts a week. It is fifteen miles south by east of Caen. Population 14,000.

FALASHA, a people of Abyssinia, of Jewish origin, described by Mr. Bruce, who was at great pains to acquaint himself with their history. According to the accounts he received, thev are the descendants of those Jews who came from Palestine into Ethiopia, as attendants of Menilek, or David I., the son of the queen of Sheba by Solomon. They agree in the relations given by the Abyssinians of that princess (See Etihopia) ; but deny that the posterity of those who came with JNIenilek ever embraced Christianity, as the Abyssinians say they did. They state that at the decline of the Jewish commerce, when the ports of the Red Sea fell into the hands of other nations, and no intercourse took place betwixt them and Jerusalem, the Jewish inhabitants quitted the sea coasts and retired into the province of Dembea. Here they carried the art of pottery to a great degree of perfection, multiplied ex- ceedingly, and became very numerous and pow- erful, about the time the Abyssinians were con- verted to Christianity. As this event was accounted by thera an apostasy from the true religion, they now separated themselves from the Abyssinians, . and declared one Pliineas, of the line of Solomon, their king. Thus they say, they have still a prince of the house of Judah for their sovereign. AboutA. D.960 Judith, queen of this people, after extirpating the Abyssinian princes on Damo, assumed the sovereignty of the whole empire, which the Falasha retained for some time ; but, their power being by degrees reduced, they were obliged to take up their re- sidence among the rugged mountains of Sameu ; one of which they chose for their capital, and which has ever since been called the Jews' Rock. About A.D. 1600 they were almost entirely ruined by an overthrow from the Abyssinians, in which both their king and queen were slain ; since which time they have been in subjection to the emperors of that country, but are still go- verned by their own princes.

When Mr. Bruce was in Abyssinia the Falasha were supposed to amount to about 100,000 ef- fective men. Gideon and Jvidith were the names of the king and queen at that time. The lan- guage of this people is very different from the Hebrew, Samaritan, or any other which the Jews ever spoke in their own country. On being in- terrogated concerning it, by Mr. Bruce, tliey said, tliat it was probably one of tliose spoken l)y the nations on the Red Sea, among wlioin tliey had settled at tlieir first coming. They arrived in Abyssinia it is said speaking Hebrew, and with tlie advantage of having books in that lan- guage ; but had now forgdt it, and were entirely ignorant of tlie art of

writing. At the time of tlieir leaving Judea they were in possession both of the Hebrew and Samaritan copies of the law ; but when their fleet was destroyed in the time of Rehoboam, and no farther communication wit!) Jerusalem took place, they were obliged to use translations of the Scriptures, or those copies

■which were in the possession of the shepherds, who, they say, were all Jews, before the time of Solo- mon. On being asked, however, where the shepherds got their copy, and being told, that, notwithstanding the invasion of Egypt by Nebu- chadnezzar, there was still a communication with Jerusalem, by means of the Ishmaelite Arabs through Arabia, they frankly acknowledged that they could not tell ; "ˆneither had they any memo- rials of tlie history either of their own or any other country ; all that they believed in this case being derived from mere tradition, their histories, if any existed, having been destroyed by the famous Moorish captain, Gragne. (See Ethi- opia). They say, that tlie first book of Scr pture they ever received was that of Enoch ; and they place that of Job immediately after it, supposing that patriarch to have lived soon after the flood. They have no coi)y of the Old Testament in tlie Falasha language, what they make use of being in that of Geez. This is sold to them by the Abyssinian Christians, who are the only scribes in that country. No difference takes place about corruptions of the text; nor do the Falasha know any thing of the Jewish Talmud, Targum, or Cabala.

FALCA'DE, n. s. ˆ Lat. fair, falcis. A FALCA'TEn, adj. ˆ sickle : a crooked motion Falca'tion, H.s. 3 or bend: hooked; bent like a reaping-hook or scythe : crookedness.

The locusts have antenn*, or long horns before, with a longyˆiZcaˆi'on or forcipated tail behind. Browne.

The enlightened part of the moon appears in the form of a sickle, or reaping-hook, which is while she is moving from the conjunction to the opposition, or from the new moon to the full ; but, from full to a new again, the enlightened part appears gibbous, and the AtivW falcated. Harris.

A horse is said to make falcades when he throws himself upon his haunches two or three times, as in very quick curvets ; therefore a. falcade is that action of the haunches and of the legs, which bend very

low, when you make a stop and half a stop.

Farrier's Dictionary.

FA'LCHION, n. s. Fr. fauchon ; Lat. fulxi A -short crooked sword ; a scimitar.

I've seen the day, with my good \)\.mg falchion, I would have made them skip : I am old now.

Shakspeare,

0\A falchions are new tempered in the fires ; The sounding trumpet every soul inspires.

Drydcn's jEneid. What sighs and tears Hath Eugene caused ! how many widows curse His cleaving falchion. Philips.

Have moments, hours, and days, so unprepared. That you might ' brain them with their lady's fan ;'

And sometimes ladies hit exceeding hard. And fans turn inio falchions in fair hands. And why and wherefore no one understands. Byron.

FALCO, in ornithology, a genus of birds, be- longing to the order of accipitres. The characters are these : The bill is hooked at the end, and covered at its base with a cere, or naked mem- branous skin ; the head is covered with feathers, which lie close on each other; the tongue is often cleft. This is a rapacious carnivorous race of animals, feeding almost entirely on animal food ; they are very quick-sighted ; generally fly high, and build their nests in lofty places. They

are not gregarious ; and the females are larger than the males. The legs and feet are scaly ; the claws large, strong, very sharp, and much hooked. Gmelin divides this genus into four sub-genera, or less divisions; which Kerr has reduced to three, by including the G. serpentarius in the second subgenus, because it has some re- lation to the vultures. Tliese three sub-genera are, 1. Gypaeti, bastard eagles; 2. Aquilae, Eagles; and 3. Falcones, falcons and hawks. 1. Tiie Gypaeti comprehend nine species and two varieties which have the bill-hooked only towards the point, and its base garnished with a beard of longish extended bristles. This sub-genus holds a middle rank between the vultures and eagles ; the head is not so naked as in the former, and the bill not so much hooked as in the latter ; like eagles they prey on living animals, but like vu Itures they also devour dead carrion. Hence they have been hitherto ranked by some authors with the one genus,

and by others with the other. 2. The Aquilae comprehend forty-one species and seven varieties, which are larger in size than those of the third sub-genus, and have their legs for the most part rough. They differ fron* the gypa;ti in preying on living animals, while the latter prefer dead carcases. They can abstain long from food, though very voracious. Their gastric juice is very acrid, yet they are killed by eating bread. 3. The Falcones are less in size than the aquilae, and their legs are universally naked. But in other respects, the limits between the falcons and hawks, and the eagles, are by no means well ascertained. This sub-genus comprehends eighty-six species, and thirty-two varieties : making in all no fewer than 136 spe- cies, and forty-one varieties, in the whole genus. Of these (as our room permits us not to enume- rate the whole) we shall describe a few of the most remarkable :

1. F. aeruginosus, the moor buzzard, greenish cere, a grayish body, the top of the head, nape of the neck, and legs, yellowish ; is a native of Europe, and frequents moors, marshy places, and heaths ; it never soars like other hawks ; but commonly sits on the ground or on small bushes. It makes its nest in the midst of a tuft of grass or rushes. It is a very fierce and voracious bird ; and is a great destroyer of rabbits, young wild ducks, and other water fowl. It also preys on fish.

2. F. apivorus, the honey buzzard of Ray, has black cere, yellow legs half naked, the head of an ash color, and having an ash-colored stripe on the tail, which is white at the end. It had its name from the combs of bees being found in its nest. It is a native of Europe, and feeds on mice, lizards, frogs, bees, &c. It runs very swiftly.

3. F. aquila chrysaetos, the golden eagle, weighs about twelve pounds, and is about three feet long, the wings when extended measuring seven feet four inches. The sight and sense of smelling are very acute: the head and neck are clothed with narrow, sharp-pointed feathers, of a deep brown color bordered with tawny; the hind part of the head is of bright rust color. These birds are destructive to fawns, lambs, kids, and all kinds of game ; particularly in the breed-

ing season, when they bring a vast quantity of prey to their young. Smith, in his history of Kerry, relates, that a poor man in that country obtained a comfortable subsistence for his family, during a summer of famine, out of an eagle’s nest, by robbing the eaglets of the food the

old ones brought; whose attendance he protracted beyond the natural time, by clipping the wings and retarding the flight of the former. In order to extirpate these pernicious birds, there was formerly a law in the Orkney isles, which entitled every person that killed an eagle to a hen out of every house in the parish where it was killed. Eagles seem to give the preference to the carcases of dogs and cats. Those who formerly made it their business to kill these birds, fired the instant they alighted ; for the eagle at that moment looks about before she begins to prey. Yet, quick as her sight may be, her sense of hearing seems still more exquisite. If hooded crows or ravens happen to be nearer the carrion, and resort to it first, and give a single croak, the eagle instantly repairs to the spot. These eagles are remarkable for their longevity, and for sustaining a long ab- stinence from food. Mr. Keysler relates, that an eagle died at Vienna after a confinement of 104 years. This length of days seems alluded to by the Psalmist, ‘ Thy youth is renewed like the eagle’s.’ One of this species, which was nine years in the possession of Owen Holland Esq. of Conway, lived thirty-two years with the gentle- man who made him a present of it ; but what its age was, when the latter received it, from Ireland, is unknown. The same bird also furnishes us with a proof of the truth of the other remark ; having once, through the neglect of servants, endured liunger for twenty-one days without any sustenance whatever. — It is perhaps proper here to notice a very singular variety of the golden eagle, described by Mr. Bruce, in his travels in Abyssinia; for, whether it properly belongs to this species or not, we do not find that it has been as yet either arranged under any other, or ranked as a different genus. Mr. Bruce says, it is not only the largest of the eagle kind, but the largest bird that flies. By the natives it is vulgarly called abon duchen, or father long-beard. It is not an object of any chase, nor stands in need of any stratagem to bring it within reach. Upon the highest top of mount Lamalmon, while Mr. Bruce’s servants were refreshing themselves’ after their toilsome ascent, and enjoying the pleasure of a most delightful climate, eating their dinner in the open air with several large dishes of boiled goat’s flesh before them, this noble bird suddenly made its appearance; he did not stoop rapidly from a height, but came flying slowly along the ground, and sat down close to the meat within the ring the men had made round it. A great shout, or rather cry of distress, which they raised, made the bird stand for a minute as if to recollect himself, while the servants ran for their lances and shields. His attention was fully fixed upon the flesh. He put his foot into the pan where was a large piece in water nearly boiling ; but, feeling the smart, he withdrew it, and forsook the piece which he held. There were two large pieces, a leg and a shoulder, lying upon a wooden platter; into these he

trussed his claws and carried them off; skimming slowly along the ground as he had come, till he disappeared behind a cliff. But being observed at his departure to look wistfully at the large piece, which remained in the warm water, it was concluded that he would soon return ; in expec- tation of which Mr. Bruce loaded a rifle gun with ball, and sat down close to the platter by the meat. It was not many minutes before l.e came, and a prodigious shout was raised by the attendants, ‘ He is coming, he is coming !’ enough to have discouraged a less courageous animal. Whether it was not quite so hungry as at the first visit, or suspected something from Mr, Bruce’s appearance, it made a small turn, and sat down about ten yards from him, the pan with the meat being between them. In this situation Mr. Bruce fired, and shot him with the ball through the middle of his body about two inches below the wing, so that he lay down upon the grass without a single flutter. Upon laying hold of his monstrous carcase, our author was not a little surprised at seeing his hands covered and tinged with yellow dust. Upon turning him upon his belly, and examining the feathers of his back, they produced a brown dust, the color of the feathers there. This dust was not in small quantities ; for, upon striking his breast, the yellow powder flew in greater quantity than from a hair dresser’s powder puff. The feathers of the belly and breast, which were of gold color, did not appear to have any thing extraordinary in their formation, but the large feathers in the shoulders and wings seemed apparently to be fine tubes, which upon pressure scattered this dust upon the finer part of the feather ; but this was brown, the color of the feathers of the back. Upon the side of the wing, the ribs, or hard part of the feather, seemed to be bare as if worn, or, in our author’s opinion, were rather renewing themselves, having before failed in their function. What is the reason of this extraordinary provi- sion of nature, Mr. Bruce does not attempt to determine. But, as it is an unusual one, it is probably meant, he thinks, for a defence against the climate in favor of those birds, which live in those almost inaccessible heights of a country, doomed even in its lower parts to several months of excessive rain. This bird, from wing to wing, was eight feet four inches; from the tip of his tail to the point of his beak, when dead, four feet seven inches. He was remarkably short in the le-j;s, being only four inches from the joining of the foot to where tiie leg joins the thigh, and from the joint of the thigh to the joining of his body six inches. The thickness of his thigh was little less than four inches ; it was extremely muscular and covered with flesh. His middle claw was about two inches and a half long, not very sharp at the point, but extremely strong. From the root of the bill to the point was three inches and a quarter, and one inch and three-quarters in breadth at the root. A forked brush of strong hair, divided at the

point into two, proceeded from the cavity of his lower jaw at the beginning of his throat. His eye was remarkably small in proportion to his bulk, the aperture being scarcely half an inch. The crown of his head, and the front where the bill and skull joined,were bald.

4. F. aquila fulvus, the tawny eagle or wliite tailed eagle of Edwards, lias the whole plumage of a dusky brown : the breast marked with trian- gular spots of white, but which are wanting in the British kind : the tail is white, tipt with black ; but in young birds dusky, blotched with white : the legs are covered to the toes with soft rust-colored feathers. Tliese birds inliabit Hud- son's Bay, and nortiiern Europe as far as Dron- theim. They are found on the highest rocks of the Uralian chain, where it is not covered with wood ; but are most frequent on the Siberian, where they make their nests on tiie loftiest rocks. They are inferior in size to the sea eagle; but are spirited, and docile. Tiie Tartars train them for the chase of hares, foxes, antelopes, and even wolves. The use is of considerable antiquity ; for Marco Polo, the great traveller of 1269, ob- served and admired the diversion of the great cham of Tartary ; who had several eagles, which were applied to the same purposes. The Tartars also esteem the feathers of the tail as the best for pluming their arrows. This species is frequent in Scotland ; where it is called the black eagle, from the dark color of its plumage. It is very destructive to deer, which it will seize between the horns ; and, by incessantly beating it about the eyes with its wings, soon makes a prey of the harassed animal. The eagles in the isle of Rum have nearly extirpated tlie stags that used to abound there. They generally build in clefts of rocks near the deer forests ; and make great havoc among them, the white hares, and the ptarmigans. ˆVilloughby gives the following curious account of the nest of this species. 'In 1668, in the woodlands near the river Darwent, in the peak of Derbyshire, was found an eagle's nest made of great sticks, resting one end on the edge of a rock, the other on two birch-trees ; upon which was a layer of rushes, and over them a layer of heath, and upon the heath rushes again ; upon which lay one young one and an addle egg; and by them a lamb, a hare, and three heath poults. The nest was about two yards square, and had no hollow in it.

The following account of the capture of four young of this species, when about three weeks old, is given by Mr. Bullock : — ' On the 10th of June, 181-2, they were seen in their aery on the tremendous cliff called the West Craigs, in the Isle of Hoy (one of the Orkneys), the

towering rocks of which rise to the perpendicular height of 1200 feet from the sea. About one-third of the wai» down this awful abyss a slender-pointed rock prelected from the cliff, like the pinnacle of a Gothic building; on the extremity of this is a hollow, scarcely of sufficient size for the purpose for which these birds had fixed on it, i. e. as a place of security for rearing their young; the situation was such as almost to defy the power of man to molest their habitation ; yet with the assistance of a short slender rope made of twisted hogs' bristles, did the well-known adventurous climber, or Itocksman, ' WooUeyTomson,' traverse the face of this frightful precipice, and for a trifling remuneration brought up the young birds.

- After a fiitigiiing scramble up the sides of the mountains, we arrived at the place from whence we could see the aery beneath ; the distance wa.s

so great tnat tne young eagles appeared no larger than pigeons. After placing us in a secure situa- tion on a projecting ledge of the rock, that com- manded a view of the scene of action, Tomson left us, carrying his rope in his hand, and disap- peared for upwards of half an hour; when, to our great joy, we discovered him creeping on his hands and knees up the spiry fragment, onwiiich lay the unfledged eaglets; when, knowing he was then in our sight, he knelt on tiie top, and looking towards us, waved his hat. At tins time it was impossible to see the situation he was in without trembling for his safety; the slender point of the rock on which he knelt was at least BOO feet above the surges of the Atlantic, which with unbroken violence were foaming beneath him. Yet he deliberately took from his pocket a cord, and tying the wings of the young birds, who made some resistance with their bills and talons, he put them into a basket, and began to descend, and in a few minutes the overhanging masses of stone hid him from our view. The old birds were in sight durinjˆ the transaction, and made no attempt to defend their young; but, soaring about a quarter of a mile above, occa- sionally uttered a short siirill scream, very dif- ferent from their usual barking noise. Had they attempted a rescue, the situation of the climber would have been extremely dangerous, as the slightest deviation or false step would have pre- cipitated him into eternity, a misfortune that a few years since befel his brother on the same spot, when in his company.

' After waiting in a most painful state of sus- pense for near an hour, our climber suddenly made his appearance, and, laughing, presented his prize.'

5. F. aquila Groenlandicus, the falco fuscus of Latham, the dusky

falcon of Pennant, or Greenland eagle, has dusky irides ; lead-colored cere and feet; brown crown, marked with irre- gular oblong white spots ; whitish forehead, blackish cheeks ; the hind part of the head and throat white ; breast and belly of a yellowish white, striped downwards with dusky streaks ; the back dusky, tinged with blue ; the ends of the feathers lightest, and sprinkled over with a few white spots, especially towards the rump; the wings of the same colors, variegated with white and black ; the u])per part of the tail dusky crossed very faintly with paler bars, the under side whitish. They inhabit all parts of Green- land, from the remotest hills to those which im- pend over the sea ; and are even seen on the islands of ice remote from shore. They retire in the breeding season to the farthest part of the country, and return in autumn with their young. They breed in the same manner as the cinereous eagle, but in more distant places ; and lay from three to five eggs. The tail of the young is black, with great brown spots on the exterior webs. They prey on ptarmigans, auks, and all the small birds of the country. They have frequent dis- putes with the raven, but seldom come off victors ; for the raven, on being attacked, flings itself on its back ; and either by defending itself with its claws, or by calling, with its croaking, numbers of others to its help, obliges the eagle to retire. The Greenlanders use the skin for their inner

gariuents ; the wings for brushes ; the feet for amulets; but seldom eat the flesh, unless com- pelled by hunger.

6. F. uquila haliaetos, the balbuzard of Buf- fon, the osprey of Pennant and Latham, or the fishing-hawk of Catesby, weighs three pounds and a quarter ; it measures from one tip of the wing to the other five feet and a half, but is hardly two feet long. The bill is black, with a blue cere ; the iris of the eye is yellow, and the crown of the head brown, with a mixture of white feathers ; from each eye backwards runs a brown stripe ; the back, wings, and tail, are of a dark brown ; the throat, neck, and belly, wliite ; the legs and feet are rough and scaly, and of a pale blue color ; the talons are black, and nearly of an equal size ; the feathers of the thighs, con- trary to others of the hawk kind, are short, and adhere close to them, for the more easily pene- trating the water. Notwithstanding this bird is so persecuted by the bald eagle, yet it always keeps near its haunts. It is very quick-sighted, and will see a fish near the surface from a great distance, descend with prodigious rapidity, and carry the prey with an exulting scream high

into the air. Sometimes the bird perishes in taking its prey ; for, if it chances to fix its talons in an overgrown fish, it is drawn under water before it can disengage itself, and is drowned.

7. F. aquila leucocephalus, the bald eagle of Catesby and Latham, and the white-headed eagle of Pennant, is ash-colored, with the head and tail white ; the iris of the eye is white, over which is a prominence covered with a yellow skin ; the bill and cere are yellow, as well as the legs and feet ; and the talons are black. Though it is only three feet long, it weighs nine pounds, is strong and full of spirit, preying on lambs, pigs, and fawns. They always make their nests near the sea or great rivers, and usually upon old pine or cypress trees, continuing to build annually on the same tree till it falls Though he is so formidable to all birds, yet he suffers them to build near his nest without molestation ; particularly the fishing-hawk, herons, &c., which all build on high trees. The nests are very large and very fetid by reason of the relics of their prey. Lawson says, they breed very often, laying^ again under their callow young ; whose v/armth hatches the eggs- In Bhering's Isle they make their nests on the cliffs nearly six feet wide and one thick ; and lay two eggs in the beginning of July. This species inhabits Europe, but is more common in America. It feeds also on fish. This, however, it does not procure for itself; but, sitting in a convenient spot, watches the diving of the osprey in the water after a fish, which, the moment it has seized, the bald eagle follows close after, when the osprey is glad to escape by dropping the fish from his bill ; and such is the dexterity of the eagle, that it often seizes the prey before it can fall to the ground. Catesby says, the male and female are much alike.

8. F. aquila maculatus, the spotted ea

varied with oval white spots ; the primaries dusky, the ends of the greater white ; the breast and belly are of a deeper color than the rest of the plumage, streaked downwards with dull yellow ; the tail is dark brown, tipped with.dirty white ; the legs are feathered to the feet, which are yellow. The length of the bird is two feet. This species is found in many parts of Europe, but not in Scandinavia; is frequent in Russia and Siberia ; and extends even to Kamptschatka. It is less spirited than other eagles, and is perpetually making a plaintive noise ; from which it was styled by the ancients planga; and anataria, from its preying on ducks, which Pliny describes with great elegance. Lib. X. c. 3. The Arabs used to train it for the chase ; but its quarry was cranes and other birds ; the more generous eagle being flown at antelopes and various quadrupeds. This species was itself an object of diversion, and made il.a prey of even so small a bird as the sparrow-

hawk ; which would pursue it with great eagerness, soar above, then fall on it, and, fastening with its talons, keep beating it about the head with its wings, till they both fell together to the ground. Sir John Chardin saw this practised about Tauris.

9. F. aquila milvus, the kite, is a native of Europe, Asia, and Africa. This species gene- rally breeds in large forests or woody mountain- ous countries. Its nest is composed of sticks, lined with several odd mate.ials, such as rags, bits of flannel, ropes, and paper. It lays two, or at most three eggs; which, like those of other birds of prey, are much rounded and blunt at the smaller end. They are white, spotted with dirty yellow. Its motion in the air distinguishes it from all other birds, being so smooth and even that it is scarce perceptible. Sometimes it Will remain quite motionless for a considerable space ; at others glide through the sky without the least apparent action of its wings ; from thence de- riving the old name of glede, from the Saxon glida. They inhabit the north of Europe, as high as Jarisberg, in the south of Norway ; but do not extend farther. They quit Sweden in flocks at the approach of winter, and return in spring. Some of them winter about Astrakan, but the greater part are supposed to retire into Egypt, being seen in September passing by Con- stantinople in their way from the north ; and again in April returning to Europe, to shun the great heats of the east. They are observed in vast numbers about Cairo, where they are ex- tremely tame, and feed even on dates, probably for want of other food. They also breed there ; so that, contrary to the nature of other rapacious birds, they increase and multiply twice in the year ; once in the mild winters of Egypt, and a second time in the summers of the north. They appear in Greece in the spring. In Britain they are found the whole year. Lord Bacon observes, that when kites fly high, it portends fair and dry weather. Kerr enumerates three varieties of this species, viz. the Siberian, Russian, and .laic kites. 10. F. aquila ossifragus, the osprey, or sea eagle, with yellow cere, and half-feathered legs ; is about the size of a peacock ; the fea- thers are white at the base, iron-colored in the.

middle, and biack at the points ; and the legs are yellow. It is found iu several parts of Great Britain and Ireland. Willoughby tells us, that there was an aery of them iu Whintield Park, Westmoreland ; and the bird soaring in the air with a cat in its talons, which Barlow drew from the very fact which he saw in Scotland, is of this kind. The cat's resistance brought both animals to the ground, when Barlow took

them up; and afterwards caused them to be engraved, as strug- gling, in the thirty-sixth plate of his Collection of Prints. Turner says, that in his days this bird was too well known in England ; for it made terrible destruction among the fish. All authors indeed agree, that it feeds principally on fish, which it takes as they are swimming near the surface, by darting down upon them, not by diving or swimming, as some authors have pre- tended, who furnish it for that purpose with one webbed foot to swim with, and another divided foot to take its prey with. Martin, speaking of tlie great eagles of the Western Isles, says, that tliey fasten their talons in the back of the fish, com- monly salmon, which are often above the water, or very near the surface. Those of Greenland will even take a young seal out of the water. It also preys on water-fowl. This species is fre- quent in North America, and was met with in Botany Island by captain Cook.

11. F. aquila Peruvianus, or furcatus ; the Peruvian kite, or swallow-tailed hawk, has a black bill, less hooked than usual with rapacious birds ; the eyes are large and black, with a red iris ; the head, neck, breast, and belly, are white ; the upper part of the back and wings a dark purple ; but more dusky towards the lower parts, with a tincture of green. The wings are long in proportion to the body, and, when extended, measure four feet. The tail is dark purple mixed with green, and remarkably forked. This most elegant species inhabits only the south parts of North America; and that only during summer. They feed chiefly flying ; for they are much on wing, and prey on various sorts of insects. They also feed on lizards and serpents; and will kill the largest of them with the utmost ease. They quit North America before winter, and are sup- posed to retreat to Peru.

12. F. aquila Sinesis, the Chinese eagle, is one of the largest of the sub-genus. The cere and legs are yellow; the body is reddish brown above and yellowish beneath. The bill and claws are large and black ; the irides brown ; the crown dusky; the coverts and quill-feathers marked with a dusky band. It inhabits India and China.

13. F. aquila tharus, the Chilese eagle, has a crest of black feathers on the head ; legs and cere yellow ; the body blackish white ; feet scaly, with very strong claws. It is common in Chili ; is about the size of a large capon, and feeds on dead carcases, like the bastard eagles. The fe- male is smaller than the male, and grayish ; and lays five eggs at a brood.

14. F. aquilinus, the aquiline falcon, or small American eagle, of Buffon, has yellow legs and cere ; the upper parts blue ; the under reddish- white ; the neck purplish-red ; the sides of the head downy,

and hardly covered with feathers ;

eye-lids bristly; the orbits yellow; and irides orange colored ; the bill blue, and claws black. The male is from sixteen to eighteen inches long; the female twenty-three. It inhabits South America.

15. F. buteo, the buzzard, is the most common of the hawk kind in England. It breeds in large woods, and usually builds on an old crow's nest, which It enlarges, and lines with wool and other soft materials. It lays two or three eggs, per- fectly white, or spotted with yellow. The cock buzzard will hatch and bring up the young, if the hen is killed. The young keep company with the old ones for some time after they quit the nest ; which is not usual with other birds of prey, who always drive away their brood as soon as they can fly. This bird is very sluggish and inactive, and is much less in motion than other hawks ; remaining perched on the same bough for the greatest part of the day, and is found at most times near the same place. It feeds on birds, rabbits, moles, and mice ; it will also eat frogs, earthworms, and insects. This species is subject to some variety in color. Some have their breast and belly of a brown color, and are only marked across the craw with a large white crescent ; but usually the breast is of a yellowish white, spotted with oblong rust-colored spots, pointing downwards : the back of the head and neck, and coverts of the wings, are of a deep brown, edged with a pale rust-color ; the middle of the back covered only with a thick white down. The tail is barred with black, and ash- color, and sometimes with ferruginous.

16. F. cachinnans, the laughing falcon, has yellowish legs and cere, and white eye-brows ; the body is variegated with brown and white; and it has a black ring round the top of the head. It makes a laughing kind of noise when it observes any person, and is a native of South America.

17. F. candicans, the white gyrfalcon of Pen- nant, has legs and cere of a bluish ash, the bill bluish, and greatly hooked ; the eye dark blue ; the throat of a pure white ; the whole body, wings, and tail of the same color, most elegantly marked with dusky bars, lines, or spots, leaving the white the far prevailing color. There are instances, but rare, of its being found entirely white. In some the whole tail is crossed by remote bars of black or brown ; in others, they appear only very faintly on the middle feathers : the feathers of the thighs are very long and un- spotted : the legs strong, and of a light blue. Its weight is forty-five ounces Troy ; length near two feet ; extent four feet two inches. This spe- cies has the same manners and haunts with the Iceland falcon. It is very common in Iceland ; is found in Lapland and

Norway ; but rarely in the Orkneys and North Britain. In Asia it dwells in the highest points of the Uralian and other Siberian mountains, and dares th" coldest climates throughout the year. It is kept in the latitude of Petersburgh, uninjured in the open air during the severest winters. This bird is pre-eminent in courage as well as beauty, and is the terror of other hawks. It was flown at all kinds of fowl, how great soever, but its chief game was herons and cranes. This species, with

the Iceland and Greenland falcons, are reserved for the kings of Denmark; who send their falconer with two attendants annually into Ice- land to purchase them. They are caught by the natives, a certain number of whom in every dis- trict are licensed for that purpose. The falconer exammes the birds, rejects those which are not for his purpose, and gives the seller a written certificate of the qualities of each, which entitles him to receive payment from the king's receiver-general. They are taken in the following man- ner : — Two posts are fastened in the ground, near their haunts. To one is tied a ptarmigan, a pigeon, and a cock or hen, fastened to a cord, that it may flutter, and so attract the attention of the falcon. On the other post is placed a net, dis- tended on a hoop, about six feet in diameter. Through this post is introduced a string, above 100 yards long, which is fastened to the net, in order to pull it down; and another is fastened to the upper part of the hoop, and goes through the post to which the bait is tied. As soon as the falcon sees the fowl flutter on the ground, he takes a few circles in the air, to see if there is any danger, then darts on his prey with such violence as to strike off the head, as nicely as if it was done with a razor. He then usually rises again, and takes another circle, to explore the place a second time; after which he makes another stoop, when, at the instant of his de- scending, the man pulls the dead bird under the net ; and, by means of the other cord, covers the falcon with the net at the moment it has seized the prey ; the person lying concealed behind some stones, or flat on his belly, to elude the sight of the falcon. As soon as one is caught, it is taken gently out of the net, for fear of break- ing any of the feathers of the wings or tail : and a cap is placed over its eyes. If any of the tail feathers are injured, the falconers have the art of grafting others.

18. F. columbarius, the pigeon-hawk of Cates- by, weighs about six ounces. The bill is black at the point, and whitish at the base : the iris of the eye is yellow ; the base of the upper mandi- ble is covered with a yellow wax ; the upper parts of the body and wings are brown : the

tail)3 brown, but has four white bars. The interior vanes of the quill feathers have large red spots. The tail is marked with large regular transverse white lines; the throat, breast, and belly, are white, mixed with brown ; the small feathers that cover the thighs reach within half an inch of the feet, and are white, with a tincture of red beset with long spots of brown ; the legs and feet are yellow. It inhabits America, from Hudson's Bay as low as South Carolina. In the last it attains to a larger size. In Hudson's Bay it appears in May on the banks of the Severn, breeds, and retires south in autumn. It feeds on small birds ; and on the approach of any person flies in circles, and makes a great shrieking. It forms its nest in a rock, or some hollow tree, with sticks and grass, and lines it with fealliers : and lays from two to four eggs, white, spotted with red. In Carolina it preys on pigeons, and the young of wild turkeys.

19. F. gentilis, the gentle falcon, inhabits the north of Scotland, and was in high esteem in the

days of falconry. It makes its nest in rocks : i is larger than the goshawk ; the cere and legs are yellow, the head of a light rust color, with black streaks ; the whole upper side from chin to tail white, with dusky heart-shaped spots : the back of a brown color ; the tail barred with four or five bars of black, and as many of ash- color ; the tips of all the tail feathers white.

20, F. gypstus albicilla, the cinereous bastard eagle, is inferior in size to the golden eagle; the head and neck are of a pale ash color; the body and wings cinereous, clouded with brown ; the quill feathers very dark : the tail white ; the legs feathered but little below the knees, and of a very bright yellow. The male is of a darker color than the female. The bill of this species is rather straighter than usual, which seems to have induced Linnaeus to rank it among the vultures. But Pennant observes, that it can have no title to be ranked with that genus, the characteristical mark of which is, that the head and neck are either quite bare, or only covered with down ; whereas this bird is wholly feathered. This spe- cies is in size equal to the black eagle, and inhabits Europe as high as Iceland and Lapland, and particularly the north of Scotland. It is common in Greenland, but does not extend to America ; or according to Pennant, if it does, it varies into the white-headed eagle, to which it has great affinity, particularly in its feeding much on fish ; the Danes therefore call it fiske- orn. It is common in the south of Russia, and about the Volga, as far as trees will grow ; but is very scarce in Siberia. It inhabits Greenland the whole year, silting on the rocks with flagging wing, and flies slowly. It makes its nest on the lofty cliff's, with twigs, lining the middle with mosses and feathers

: lays two eggs, and sits in the end of May, or beginning of June. These birds prey on young seals, which they seize while floating on the water ; but oftentimes, by fixing their talons in an old one, they are overmatched, and drawn down to the bottom, screaming horribly. They feed also on fish, especially the lump-fish, and a sort of trout : on ptarmigans, auks, and eider ducks. They sit on the top of rocks, attentive to the motion of the diving-birds; and with quick eyes observe their course by the bubbles which rise to the surface of the water, and catch the fowls as they rise for breath. The Greenlanders use their skins for clothing next to their bodies ; eat the flesh, and keep the bill and feet for amulets. They kill them with the bow, or take them in nets jjlaced in the snow properly baited ; or tempt them by the fat of seals, which the eagles cat to an excess, and which occasions such a torpidity as to make them an easy prey. In Scotland and the Ork- neys they feed on land animals as well as fish.

21. F. gypa'tus barbatus, the bearded bastard eagle, or boarded vulture of Linnaus, is of a whi- tish fiery-red color, brown on the back, with a black stripe above and below each eye. It inhabits the Alps, is four feet long, and ten feet in extent ; the bill is of an ash color, mixed with reddish; fringed at the sides and below with stiff" black bristles. The wings have twenty-eight bright ash-colored quill feathers, and the tail twelve. This species build their nests in the caverns of

inaccessible rocks, and lay four or five eggs eacli brood. They keep in small flocks, and fieed on dead carcases, like the vulture tribe, which they resemble in general appearance ; but they have their head aud necks covered with featliers, and prey on living animals, as chamois, goats, and laiubs.

22. F. gypaetus harpyja, the harpy, the vul- tUTe harpyja of Linnteus, the yzquachtii, or crested eagle of Willoughby, has a crest of long feathers on the hind head : the back, neck, and crest are black ; the under parts variegated with black, white, and tawny; under the maw the feathers are long and white, and, when irritated, hang down almost to the ground ; the eyes have a nictitating membrane. Tiiis species inhabit the warm parts of America; are almost as large as a sheep, and are said to be able to cleave a man's skull with one stroke.

23. F. g)']])aEtus serpentarius, the secretary, or vultur serpentarius of Latham, is of a dark leaden color ; has a crest on the hind head, which

he can erect or depress at pleasure ; the legs are remark- ably long ; the claws short, black, and hooked ; the wing quills, vent feathers, and thighs are black ; and the two mid tail quills much longer than the rest. It is about three feet high when erect ; the space round the eyes is orange color- ed ; the irides pale ash ; the bill is black with a white cere, but wants the bristly beard, which is a characteristic of the subgenus of gypaeti; — a circumstance, which, with the great length of its legs, induced Gmelin to rank this species as a distinct subgenus. These birds inhabit Africa, Asia, and tlie Philippines. They prey on qua- drupeds of the order of glires, aiid on amphi- bious animals, but are easily tamed.

24. F. gyrfalco, the Iceland falcon, or brown ■gyrfalcon, has a strong bill, much hooked, the •upper mandible sharply angulated on the lower edges, with a bluish cere : the head is of a very pale rust color, streaked downwards with dusky lines ; the neck, breast, and belly, are white, marked with cordated spots ; the thighs white, crossed with short bars of deep brown : the back and coverts of the wings are dusky, spotted, and edged with white : the exterior webs of tlie pri- maries dusky mottled with reddish white, the inner barred with white; the feathers of the tail are crossed with fourteen or more narrow bars of dusky and white ; the dusky bars regularly op-])0sing those

25. F. lanarius, the common lanner, has the •cere yellow, sometimes bluish ; the legs and bill blue ; tlie breast white, tinned yellow, with brown spots; the wing quills and tail dusky, with oval rusty spots: and has a white line over each eye. This species is about tiie size of the buzzard ; inhabits Europe, the Uralian, Baraba, and Tar- tarian deserts ; but is rarely found in Britain. It builds on low trees, and is migratory.

26. F. nisus, the sparrow-hswk, with green cere, yellow legs, a white belly undulated with gray, and the tail marked with blackish belts. This is the most pernicious hawk we have ; and makes great havoc among pigeons and partridges. It builds in hollow trees, in old nests of crows, large ruins, and high rocks : it lays four white eggs, encircled near the blunt end with red specks.

27. F. palumbarius, the goshawk of Ray, witli. black cere edged with yellow; yellow legs, a brown body, the prime feathers of the tail marked with pale streaks, and the eyebrows white. It was once in high esteem among falconers, being flown at cranes, geese, pheasants, and partridges. It breeds in Scotland, and builds its nest in trees. It is very destructive to game, and dashes through the woods with vast impetuosity ; but if it cannot catch the object of its pursuit almost immediately, desists, and perches on a bough till some new game

appears. This species is coifnmon in Muscovy and Siberia. They extend to the river Amur; and are used by the emperor of China in his sporting progresses, attended by his grand falconer, and 1000 of the subordinates. Every bird has a silver plate fastened to its foot, with the name of the falconer who has the charge of it ; that in case it should be lost it might be brought to the proper person.

28. F. subbuteo, the hobby, was used like the kestrel in the humbler kind of falconry ; particu- larly in what was called daring of larks : the hawk was cast ofl'; the larks, aware of their most inveterate enemy, were fixed to the ground for fear ; by which means they became a ready prey to the fowler, by drawing a net over them. The back of this bird is brown; the nape of the neck white ; aad the belly pale, with oblong brown spots. It is a bird of passage ; but breeds in Britain, and migrates in (October.

29. F. sufflator, the Surinam falcon, has yel- lowish cere and legs ; the body is of a brownish white color : and the coverts of the eyes are bony. He has a fleshy lobe between the nos- trils ; which Rolander says, when angry or ter- rified, he inflates till his head becomes as big as his whole body.

30. F. tinnunculus, the kestrel, breeds in the hollows of trees, in the holes of high rocks, towers, and ruined buildings. It feeds on field mice, small birds, and insects ; which it discovers at a great distance. This is the hawk that we so often see in the air fixed in one place ; and, as it were, fanning it with its wings ; at which time it is watching for its prey. When falconry was in use in Great Britain, this species was trained for catching small birds and young partridges. It is easily distinguished from all other hawks, by its colors. The crown of the head and the greater part of the tail are of a fine light gray ; Che back and coverts of the wing of a purplish

ed, elegantly sjiottsd with black : the whole under side of the bird of a pale rust-color spotted with black. The male weighs six ounces; the female eleven.

31. F. versicolor, the variegated falcon, or spotted f.dcon of Pennant, inhabits England ; is about the size of the common buzzard ; and has the bill black ; the cere and legs yellow ; the

head and upper parts white, with light reddish brown spots ; the

wingˆs dusky and barred with ash ; the rump and under parts white ; the breast being marked with a few rusty spots ; and the tail quills barred with light and dark brown. FAL’CONˆ 71. s.) Fr. faucon; Lat. falco;

Falconer, H.s. > Ital. fakonne ; ‘a rostro

Falconet. j falcato sive adunco,’ from

the falcated or crooked bill, says Ur. Jobnson. A hawk trained for sport; a kind of cannon: a falconer is one who breeds and trains hawks ; one who follows the sport of fowling with hawks.

Mahomet sent janizr.ries and nimble footmen, with certain falconets and other small Dieces, to take the streights. Knollcs,

Hist I Romeo, hist ! O ioT a. falconer’s vo\ce. To lure this tarsel gentle back again. Shakspeare.

As Venus’ bird, the white, swift, lovely dove, O ‘ happy dove that art compared to her.

Doth on her wings her utmost swiftness prove. Finding the gripe oi falcon fierce not far. Sidney.

Air stops not the high soaring of my nohle falcon.

Walton. ne universal remedy was swallowing of pebble- stones, in imitation oi falconers curing hawks. Templeˆ

I have learned of a falconer never to feed up a hawk when I would have him fly.

Dryden. Don Sebastian.

Apulian farms, for the rich soil admired. And thy large fields vrhere falcons may be tired.

Dryden.

Say, will the falcon, stooping from above, Smit with her varying plumage, spare the dove ?

Pope.

A falconer Henry is, when Emma hawks : With her of tarsels, and of lures he talks. Prior.

[A falcon is] a sort of cannon, whose diameter at the bore is five inches and a quarter, weight seven hundred and fifty pounds ; length seven feet ; load two pounds and a quarter ; shot two inches and a half dia- meter, and two pounds and a half weight. Harris.

Falconet is a sort of ordnance, whose diameter at the bore is four inches and a quarter, weight four liundred pounds, length six feet, load one pound and a quarter, shot something more than two inches dia- meter, and one pound and a quarter weight. Id.

Falcon, in heraldry, is usually represented with bells tied on his legs : when decorated with hood, bells, virols (or rings), and leishes, then in blazon he is said to be hooded, belled, jessed and leished, and the colors thereof must be named.

Falconer. See Falconry. Tlie French kings had a grand falconer, an office dismem- bered from that of grand veneur, as early as the year 1250. A falconer should be well acquainted with the quality and mettle of his hawks, that he may know which of them to fly early, and which late. Every night after flying he should give them casting; one while plumage, sometimes pellets of cotton, and at another time physic, as he finds necessary. He ought also every even- ing to make the place clean under the perch, that by her casting he may know whether she wants scouring upwards or downwards. lie must water his hawk every evening, except on such days as she has bathed ; after which, at night, she shovdd be put into a warm room, having a candle burning by her, where she is to sit un- hooded, if she be not ramage, that she may prick Vol. IX.

and prune herself. He should always caii-y proper medicines into the field, as hawks fre- quently meet with accidents there. He must take with him all his hawking implemeLts ; and should be skilful in making lures, hoods of all sorts, jesses, bewets, and other furniture. He ought to have his coping irons, to cope his hawk's beak when overgrown, and to cut her pounces and talons as there shall be occasion : nor should his cauterising irons be wanting

Falconer (William), an ingenious Scotch sailor and poet, born in the county of Fife, of humble parentage. ■ He was bred to the sea; and, though he possessed few of the advantages which result from education, he had good natural talents, which he cultivated with assiduity. In 1751 he published a poem on the death of the prince of Wales, which possesses considerable merit; but his reputation rests on The Ship- wreck, a poem in three cantos, in which he beau- tifully describes the scenes he himself witnessed, bemg shipwrecked in a

voyage from Alexandria to Venice, when only three of the crew were saved. The motto is taken from the second book of the iEneid : —

Quaˆque ipse miserrima vidi, Et quorum pars magna fui.

The publication of the Shipwreck recommended him to the then duke of York ; to whom he after- wards wrote an Ode, which obtained him the post of purser to the Royal George. He also published a very useful and laborious work, en- titled The Marine Dictionary, in one vol. 4to., besides a poem against Wilkes and Churchill, under the title of The Demagogue. In 1770 he went out a volunteer in the Aurora frigate, sent to carry Messrs. Vansittart, Scraston, and Ford, the supervisors appointed to regulate our East India settlements ; which vessel, after it had touched at the Cape of Good Hope, was nevcx more heard of. Falconer is said to have been the author of the popular song — The Storm.

Falconer (William), M. D., was born at Chester in 1743; and his father was for some time recorder of that city. He studied medicine at Edinburgh, and took his doctor's degree there in 1766; after which he established himself at Bath. He became physician of the general hos- pital of that city, and was elected a member of the Royal Society, to whose Transactions, as well as to those of the Manchester Philosophical Society, he was a frequent and valuable con- tributor. Dr. Falconer, after a long and useful life, died at Bath, August 30th 1824. His prin- cipal works are, 1. Dissertatio de Ncphritida vera. 2. Essay on Bath Waters, 2. vols, 8vo. 3. Observations on Dr. Cadogan's Dissertation on the Gout, Bvo.- 4. Observations and Experi- ments on the Poison of Copper, 8vo. 5. Essay on the Water commonly used at Bath, 8vo. 6. Experiments and Observations, 3 parts, Bvo. 7. Observations on Diet and Regimen for Valetudi- narians, Bvo. 8. Remarks on the Influence of Climate, 4to. 9. Account of the Epidemic Catarrhal Fever, called the Influenza, 8vo. 10. On the Influence of the Passions upon tlie Dis- orders of the Body, 8vo. 11. Essay on the Pre- servation of the Health of Persons employed in

Agriculture, 8vo. 12. Practical Dissertation on tlie Effects of Bath Waters, 8vo. 13. Tracts and Collections relating to Natural History, 4to. 14. Observations respecting the Pulse, 8vo. 15. Examination of

Dr. Ileberden's Observations on tiie Plague, 8vo. 16. Account of an Epidemical Catarriial Fever at Bath in 1803, 8vo. 17. Dis- sertation on Ischias, or the Disease of the llip- joint. 18. Arrian's Voyage round the Euxine Sea translated, with a Geographical Dissertation, and Three Discourses, 4to.

FALCON ETTO (John Maria), a celebrated architect of Verona, was bom in 1458, and died in 1534. lie erected the church della Madonna delle Grazie, at Padua; and a music-hall, praised by Serlio, who called it La Rotonda di Padova. This building is said to have suggested to Pal- ladio the idea of the villa Capra, which served as the model of the duke of Devonshire's house, at Chiswick. Falconetto built several other palaces and churches in Itab', where his works are higlily esteemed.

FALCONIA (Proba), an Etrurian Christian poetess who flouiished in the reign of the emperor Honorius, towards the end of the fourth century. She composed a celebrated cento from the works of Virgil, comprising the history of the Old Testament, and that of Jesus Christ, from the Gospels. The best edition is that of Wolfius, 1734, 4to,

FALCONNET (Stephen Maurice), a French sculptor of the eighteenth century, of low extrac- tion but who happily obtained the assistance of Lemoine in his studies. Catharine IL of Russia ultimately patronised liim, and he was employed by her to execute the colossal statue of Peter the Great at Petersburgh. He wrote notes on the thirty-fourth and thirty-fifth books of Pliny's Natural History ; Observations on the Statue of Marcus Aurelius; and other works re'ating to the arts, printed together in 6 vols. 8vo., Paris, 1781 : and died at Paris in 1791.

I'ALCONRY, the art of training different kinds of hawks, but more especially the larger ones, called falcons, to the art of taking wild fowl, &:c. Falconry was anciently a favorite amusement in Britain, and to carry a hawk was esteemed a distinction of a man of rank. The Welsh had a saying, that you may know a gentleman by his hawk, horse, and greyhound. In those days a person of rank seldom went without one on his hand. Even the ladies were not withovtt them ; and in an ancient sculpture in the church of Milton Abbas, in l")orsetshire, appears the consort of king Athelstan, with a falcon on her hand, tearing a bird.

Though generally disused, this amusement is partially reviving in some places, and has never been wholly discontinued in certain favorable districts.

‘ In our own country, however,’ says Mr. Pennant, ‘ I cannot trace the certainty of fal- conry till the reign of king F.thelbert, the Saxon monarch, in the year 760, when he wrote to (iermany for a brace of falcons, which would fly at cranes and bring them to the ground, as there were very few such in Kent.’

Of the Anglo-Saxons, Mr. Turner says,‘Hawks aud falcons were also favorite subjects of amuse-

ment, and valuable presents in those days, when the country being much over-run with wood, all species of the feathered race must have abounded. A king of Kent begged of a friend abroad, two falcons of such skill and courage as to attack cranes willingly, and, seizing them, to throw them to the ground. We may infer the com- mon use of the diversion from his forbidding his monks to hunt in the woods with dogs, and from having hawks and falcons. An Anglo- Saxon, by his will, gives two hawks (hafocas), and all his stag-hounds (header hundas), to his natural lord. The sportsmen in the train of the great were so onerous on lands, as to make the exemption of their visit a privilege. Hence a king liberates some lands from those who carry with them hawks or falcons, horses or dogs. The Saxon calendar, in its drawings, represents hawking in the month of October.’

The Saxon Dialogues in the Cotton library speak thus of the fowler : — ‘ How do you de- ceive fowls?’ ‘Many ways; sometimes with nets, sometimes with gins, sometimes with lime, sometimes whistling, sometimes with hawks, sometimes with traps.’ ‘ Have you a hawk ? ‘ I have !’ ‘ Can you tame them V ‘ I can ; what use would they be to me if I covdd not tame them V ‘ Give me a hawk.’ ‘ I will give it wil- lingly if you will give me a swift hound ; which hawk will you hare, the greater or the less?’ ‘ The greater ; how do you feed them V ‘ They feed themselves and me in winter, and in spring I let them fly to the woods. I take for myself young ones in harvest, and tame them.’ ‘And why do you let them fly from you when tamed V ‘ Because I will not keep them in summer as they eat too much.’ ‘ But many feed and keep them tame through the summer that they may again have them ready.’ * So they do, but I will not have that trouble about them as I can take many others.’

‘ It seems highly probable,’ continues Mr. Pennant, ‘ that falconry had its rise in Scythia, and passed thence to the northern])arts of Europe. Tartary is even at present celebrated for its fine breed of falcons ; and the sport is in such general esteem, that, according to Olearius, there was no hut but what had its eagle or fal- con. The boundless plains of that country are as finely adapted to the diversion, as the wooded or

mountainous nature of most parts of Europe is ill calculated for that rapid amusement.'

To the Romans this diversion was scarcely known in the days of Vespasian ; yet it was in- troduced soon after. Probably they adopted it from the Britons ; but they greatly improved it by the introduction of spaniels into the island. In this state it appears among the Britons in the sixth century. Gildas, in his first epistle, speaking of Maglocunus, on his relinquishing ambition, and taking refuge in a monastery, compares him to a dove, that with various turns and windings takes her flight from the talons of the hawk. In after times hawking was the principal amusement of the English : a person of rank scarce stirred out without his hawk on his hand : which in old paintings is tlie criterion of nobility. Harold, afterwirds king of England, when he went on an embassy into Normandy, is ria-nted

embarking with a bird on bis liand, and a dog under his arm : and in an ancient picture of tlie nuptials of Henry VI. a nobleman is represented in the same manner; for in tiiose days 'it was thought sufficient for noblemen to winde their liorn, and to carry their hawk fair, and leave study and learning to the children of mean peo- ple !' In short, this diversion was, among the ancient English, tlie pride of the rich, and the privilege of the poor ; no rank of men seems to have been excluded from it : we learn from the book of St. Alban's, that every degree had its peculiar hawk, from the emperor down to the holy-water clerk. 'ast was the expense that sometimes attended this sport. In the reign of James I. Sir Thomas Monson is said to have given £1000 for a cast of hawks : we are not then to wonder at the rigour of the laws made to preserve a sport that was carried to such an extravagant pitch. In the 34th of Edward III. it was made felony to steal a hawk ; to take its eggs even in a person's own ground, was punish- able with imprisonment for a year and a day, besides a fine at the king's pleasure : in queen Elizabeth's reign, the imprisonment was reduced to three months ; but the offender was to find security for seven years, or lie in prison till he did.

The Norwegian breed was, in old times, in high esteem in England : they were thought bribes worthy a king. Geoffrey Fitzpierre gave two good Norway hawks to king John, to ob- tain for his friend Walter Le Madena, the liberty of exporting 100 weight of cheese ; and Nicholas, the Dane, was to give the king a hawk every time he came to England,

that he might have free liberty to trafhc throughout the king's dominions. They were also made the tenures by which some nobles held their estates fiom the crown. Thus Sir John Stanley had a grant of the Isle of Man from Henry IV. to be held of the king, his heirs, and successors, by homage and the service of two falcons, on the day of his or their coronation. And Philip de Hasting lield his manor of Combertoun, in Cambridge- shire, by the service of keeping the king's falcons.

In order to instruct them, the following me- thod is generally pursued : — When a hawk or falcon is taken, she must be seeled in such a manner, that, as the seeling slackens, she may see what provision lies before her ; but care ought to be taken, not to seel her too hard. A falcon or hawk newly taken should have all new furniture, as new jesses of good leather, mailled leashes with buttons at the end, and new bewits. There should also be provided a small round stick, to stroke the hawk; because, the oftener this is done, the sooner and better will she be manned. She must also have two large bells, ' that she may be foimd when she scattereth.' Her hood should be well fashioned, raised, and embossed auainst her eyes, deep, and yet strait enough beneath, that it may fasten about her head without hurting her; and her beak and talons must be a little coped, but not so near as to make them bleed. A soar falcon, which has passed the seas, will be harder to reclaim, but will prove the best of falcons. Her food must

be good and warm, and given twice or thnce a day, till she be full gorged : the best for this purpose is pigeons, larks, or other live birds ; because she must be broken off by degrees from her accustomed feeding. When she is fed, you must whoop and lure, that she may know when you intend to give her meat. On this occasion she must be unhooded gently ; and, after giving her two or three bits, her hood must be put on again, when she is to get two or three bits more. Care must be taken that she be close seeled ; and after three or four days her diet may be les- sened ; the falconer setting her every night to perch by him, that he may awaken her often in the night. In this manner he must proceed, till he find her grow tame and gende ; and, when she begins to feed eagerly, he may give her a sheep's heart. He may now begin to unhood her in tlie day time, but it must be far from company, first giving her a bit or two, then hood- ing her gently, and giving her as much more. When she is sharp set, he may now unhood her, and give her some meat just against his face and eyes, which will make her less afraid of the countenances of others. She must be borne continually on the hand, till she is properly manned, causing her to feed in company, giving her in the morning, about sun-rise, the wing of a pullet ; and in the evening, the foot of a hare or coney, cut off the

joint, flead and laid in water, which being squeezed is to be given her with the pinion of a hen's wing. For two or three days give her washed meat, and then plu- mage in more or less quantity as she is thought to be more or less foul within. After this, being hooded again, she is to get nothing till she has gleamed and cast, when a little hot meat may be given her in company ; and, towards evening, she may be allowed to plume a hen's wing iu company also. Cleanse the feathers of her cast- ing, if foul and slimy ; if she be clean within, give her gentle castings ; and when she is re- claimed, manned, and made eager and sharp set, feed her on the lure.

The lure is a piece of red stuff or wool, on which are fixed a bill, talons, and wings. To this is likewise fastened a piece of that fiesh on which the bird feeds, and the lure is thrown out to him. When they intend to reclaim or recall him, the sight of food brings him back ; and in time the voice will be sufficient. The various plumage with which the lure is set off" is called a ' drawer.' Wlien they accustom the hawk to fly at a kite, a heron, or a partridge, they change the drawer according to the kind of game to which he is to be devoted. When this is a kite, they fix the bill and feathers of that bird to the lure; and so of tlie rest : and in order to entice the bird to his object, they fasten beneath the drawer or plumage, the flesh of a chicken, or oUier fowl, occasionally seasoned with sugar and spices, to- gether with marrow and other delicacies. Tliree things are to be considered before the lure be showed her: 1. That she be bold and familiar in company, and not afraid of dogs and horses. 2. Sharp set and hungry, haviig regard to the ho\ir of morning and evening, when you would lure her. 3. Clean within, and lure well gar- nished with meat on both sides ; and when you

intend to give her tlie length of a leash, you must abscond. She must also be unhooded, and have a bit or two given lier on the lure as she sits on your list; afterwards take the lure from her, and iiide it tliat slie may not see it ; and, when slie is unseeled, cast tlie lure so near her, that she may catch it within the length of her leash, and as soon as she has seized it, use your voice, feeding her upon tiie lure, on the ground, witli tlic heart and warm thigh of a pullet. Hav- ing so lured your falcon, give her but little meat in the evening ; and let this luring be so timely, that you may give her plumage next morning on your fist.

When she has cast and gleamed, give her a little warm meat. About noon, tie a creance to hor leash ; and going into the field, there give her a bit or two upon her lure ; tlien unwind the creance, and draw it after you a good way ; and let him who has the bird hold his right hand on the tassel of her hood, ready to unhood her as soon as you begin to lure ; to which if she come well, stoop roundly upon it, and hastily seize it, let her cast two or three bits thereon. Then, unseizing and taking her off the lure, hood her and give her to the man again ; and going farther off, till she is accustomed to come freely and eagerly to the lure ; after which she may be lured in company taking care that nothing affright her. When she is used to the lure on foot, she is to be lured on horseback ; which may be effected the sooner, by causing horsemen to be about her when lured on foot. When she has grown familiar to this way, let somebody on foot hold the hawk, and the person on horseback must call and cast the lure about his head, the holder taking off the hood by the tassel ; and if she seize eagerly on the lure without fear of rrian or horse, then take off the creance, and lure her at a greater dis- tance. If you would have her love dogs as well as the lure, call dogs when you give her her living or plumage. After this, she may be al- lowed to fly, in a large field, unencumbered with' trees. To excite her to fly, whistle softly; unhood her, and let her fly with her head to the wind ; as she will thus the more readily get upon the wing, and fly upwards. The hawk some- times flies from the falconer's fist, and takes stand on the ground : this is a fault very common with soar falcons. To remedy this, fright her up with your wand; and, when you have forced her to take a turn' or two, take her down to the lure, and feed her. But if this does not do, then you must have in readiness a duck seeled, so that they may see no way but backwards, and that will make her mount the higher. Hold this duck in your hand, by one of the wings near the body ; then lure with the voice, to make the falcon turn her head ; and when she is at a rea- sonable pitch, cast your duck up just under her ; when, if she strike, stoop, or truss the duck, per- mit her to kill it,' and reward her by giving her a rea.sonable trorge. After you have practised this two or three times, your hawk will leave the stand, and, delighted to be on the wing, will be very obed ent. It is not convenient, for the first or second time, to show your hawk a large fowl ; for such often escape from the hawk, and she rakes after them : this gives the falconer trouble,

and frequently occasions the loss of the hawk But if she happens to pursue a fowl, and being unable to recover it gives it over, and comes in again directly, then cast out a seeled duck ; and if she stoop and truss it across the wings, per- mit her to take her pleasure, rewarding

her also with the heart, brains, tongue, and liver. If you have not a quick duck, take her down with a dry lure, and let her plume a pullet and feed upon it. A hawk will thus learn to give over a fowl that rakes out, and on hearing the falconer's lure, will make back again, and know the better how to hold in the head. Some hawks have a disdainful coyness, proceeding from their being high fed : such a hawk must not be rewarded though she should kill, but may be allowed to plume a little : then taking a sheep's heart cold, or the leg of a pullet, when the hawk is busy in pluming, let either of them be conveyed into the body of the fowl, that it may savour of it ; and when the hawk has eaten the heart, brains, and tongue of the fowl, take out what is enclosed, call her to your fist, and feed her with it ; after- wards give her some of the featKers of the fowl's neck, to scour her, and make her cast.

When falcons are taught to fly at rabbits, hares, &c., it is called ' flying at the fur ;' and some are instructed to fly at the fur and the plume, or to the pursuit of hares and rabbits, as well as of pheasants and partridges, &c. For this purpose, wlien the falcon is very tame, they take a hare's skin stuffed with straw ; and having fixed to it a piece of chicken's flesh, or such food as the fal- con is most fond of, they tie this skin, with a long cord, to the girth of a horse, and, as the skin is thus dragged along, the bird imagines it to be a hare in flight, and is allowed to dart upon it; and is thus taught to distinguish the animal. Falcons of the larger kind have been taught to fly at the roebuck, and even at the wild boar, and the wolf. W'ith this view they should be accustomed to feed, when young, from out of the sockets of the eyes of a wolf's or boar's head ; the whole skin of the animal being stuffed, so as to make it appear ali-ve. While the bird is feeding, the falconer begins to move the figure gradually ; in consequence of which the bird learns to fasten itself so as to stand firm, not- witlistanding the precipitate motions with are gradually given to the stuffed animal. He would lose his meal if he quitted his hold, and there- fore he takes care to secure himself. When these first exercises are finished, the skin is placed on a cart, drawn by a horse at full speed ; the bird follows it, and is particularly feeding ; and then, when they come to fly him in the field, he never fails to dart on the head of the first beast of the kind he discovers, and begins to scoop out the eyes. Tliis puts the animal into such distress, that the hunters have time to approach, and despatch it with their spears.

FA'LDAGE, 7i. s. } Barbarous Lat. falda- Faldfke. S giitm- A privilege which

anciently several lords reserved to themselves of setting up folds of

sheep, in any fields within their manors, the better to manure them; and this not oidy with their own, hut their tenants' sheep : faldfee is a composition paid anciently by tenants for the privilege of faldage. ,

FAL

3:

Fuldage in some places they cilV a foldcourse or frsehold. tlarris.

Faldfee, or fey, is a teraa -which was formerly used to denote a rent or fee paid by certain customary tenants for the liberty of folding their sheep upon their owii lands.

FALDING, n

Faldstool,

Faldustor. 3 fold). A kind of coarse

cloth; fold or wrapper; faldstool is a folding- stool, or chair; a kind of stool placed at the south side of tlie altar, at -which the kings of England kneel at their coronation : faldustor the extract explains.

Faldustor was anciently used to signify the highest seat of a bishop, inclosed round with a lattice.

Dr. A. R'cs.

FALERII, in ancient geography, a town and

Dr. A. Ries. s.) Sax. pealti, paltj ; Goth. ˆfalder (whence oiu word 3 fold).

} FAL

FALKIRK, a considerable town of Stirling- shire, situated near the river Can-on, on the high road from Edinburgh to Glasgow. The road to Stirling and the North Islands also passes through it : and in the neighbourhood are. the celebrated CaiTon iron works. The town stands upon an eminence, commanding an extensive and de- lightful prospect of the surrounding country. Falkirk was formerly a borough of barony, under the baronial jurisdiction of the earls of L.nlith- gow and Callander ; but no records are extant of any magistrates having been invested with the power of the borough, except the bailiff of the earl ; who, before the abolition of hereditaiy jurisdictions, had an extensive authority, both in civil and criminal mattters. It is now

governed by a baron bailie, appointed by the lord of the manor ; an ofticer, who, within the bounds of his

territory of Etruria, on the west or right side of jurisdiction, can enforce the payment of rents to

the Tiber. The territory was famous for its rich pastures ; hence the gramen Faliscum in authors. Eutropius and Frontinus call the town Falisci ; which, according to the last, was surnamed Co- lonia Junonia.

FALISCI, the people of Falerii, called 7E,qui by Virgil, because they afforded supplemental laws to tlie twelve tables. When the Falisci were besieged by Camillus, a schoolmaster went out of the gates of the city with his pupils, and proposed to betray them into the hands of the Roman enemy, that by such a possession he might easily oblige the place to surrender. Ca- millus heard the proposal with indignation, and ordered the man to be stripped naked, and whip- ped back to the town by the boys whom he wished to betray. This instance of generosity operated upon the people so powerfully, that they surrendered to the Romans.

FALK or Falck (John Peter), a disciple of Linne, studied at Lpsal, and was appointed di- rector of the cabinet of natural history, at St. Petersburgh ; and also professor of botany in the garden of the apothecaries in that metropolis. In 1768 the Imperial Academy of Sciences en- gaged Falk to assist in exploring the Russian dominions ; and he travelled for that object as far as Kasan, when he was recalled. Being af- flicted with hypochondria he went to use the baths of Kisliar, and returned to Kasan much relieved: but his complaint recurring with vio- lence, he put an end to his life by shooting him- self through the head with a pistol, March 3 1st, 1774. The Travels of Falk were published from his papers, by professor Laxman, in 3 vols. 4to. Petersburgh, 1785.

FALKENSTEIN (John Henry), a voluminous writer of Franconia, was born in 1682. He was appointed director of the nobles' academy at lirlangen ; but afterwards, ha-(ˆing embraced the Roman catholic faith, he entered into the service of the bishop of Eichstadt, on whose death the margrave of Anspach became his patron. He wrote the Antiquities of Nordgan, in the bishop- ric of Eichstadt, 3 vols, folio, and several other works of a similar nature. He died in 1760.

FALKIA, in botany, a genus- of the trigynia order, and hexandria class of plants: cat,, mo- nophyllous : cor. monopetalous : selds four. Species one only, a Cape creeper.

any amount, and decide all money matters under £2 sterling : he can also punish petty offenders by fine and imprisonment. The chief support of this town is its great fairs and trysts for black cattle from the Highlands, at which, on an average, there are sold 60,000 head annually. Falkirk is memorable in history for a battle fought in its neighbourhood between Edward I. of England, and the Scots commanded by the Grand Steward of Scotland, Cumin of Badenoch, and Sir Wil- liam Wallace. The latter had been invested with the supreme command ; but, perceiving that this gave umbrage to the nobility, he resigned his power into the hands of the noblemen above mentioned, reserving to himself only the com- mand of a small body who refused to follow another leader. The Scots generals placed their pikemen along the front, and lined the intervals,' between the three bodies of which their army was composed, with archers ; and, dreading the great superiority of the English cavalry, endea- voured to secure their front by palisadoes tied together with ropes. The battle was fought on the 22d of July 1298. Edward divided his army also into three bodies ; and by the superiority of his archers, defeated the Scots with great slaugh- ter. Wallace alone preserved entire the troops he commanded; and, retiring behind the Carron, marched leisurely along the banks of that river, which protected him from the enemy. In this battle fell John de Graham, a hero much ce- lelirated for his valoi, and styled the right hand of Wallace. His epitajih is still to be seen on a plain stone in the church-yard of Falkirk. On the 18ih of January, 1746, a battle was fought here between the king's forces commanded by general Hawley, and the Highlanders headed by prince Charles Stuart. The former were seized with a panic and fled ; but colonel Husk with two regiments, who kept their ground,])revented the Highlanders from pursuing their victory. Extensive ruins are to be seen in the neighbour- hood of this town, supposed by some antiqua- rians to have been the capital of the Piclish government ; but others believe them to be the remains of some Roman stations. On taking down the wall of the church, a few years ago, two inscriptions were found, which have excited con- siderable controversy. The one referred to events supposed to have occurred not many centuries

subsequent to the Christian era; the other alluded to the foundation of a church or monastery here in the eleventh century. Both, however, appeared inacliaracter and under peculiarities fatal to their supposed

antiquity : therefore, if not entirely spurious, they can only be considered an attempt at renewing inscriptions of more ancient date. The armual competition of bagpipers was formerly held at Falkirk, but of late years it has been transferred to Edinburgli. It is twelve miles south-east of Sterling, and twenty-four west of Edinburgh.

FALKLAND, a town of Fifeshire, anciently one of the seats of the Macduffs, earls of Fife, ■which, on tbe attainder of Munro Stewart, the seventeenth earl, in 1424, became forfeited to the crown, and afterwards was a residence of the Scottish kings. It was erected into a royal burgh by James II. in 1458 ; enlarged and im- proved by James V. who died here in 1542; and received a renewal of its charter from James VI. in 1595, ‘ to obviate (as the preamble states), the damage and inconvenience sustained for want of innkeepers and victuallers, by the many prelates, peers, barons, nobles, and others of their subjects, who came to their country seats.’ By this charter Falkland has a right to hold a weekly market and four annual fairs. The town is neatly built, and plentifully supplied with excellent water. It carries on a manufacture of coarse linens and osnaburghs, and is governed by three bailies, fourteen counsellors, a treasurer, and town clerk. The annual revenue of the borough is about £100. The remains of the palace evince its former magnificence and elegance, and the- noble taste of the architect. The gateway is placed between two fine round towers ; and on the right hand joins the chapel, roofed with wood, handsomely gilt and painted, but in a most ruinous condition. Beneath are several apart- ments. The front next to the court was beautifully adorned with statues, heads in bas-relief, and elegant columns not reducible to any order, but of fine proportion, with capitals approaching the Ionic scroll. Beneath some of these • pillars was inscribed I. R. M. G. 1537: Jacobus Rex, Maria de Guise. This place was also a favorite resi- dence of James VI. ou account of the fine park and deer. The east side was accidently burnt in the time of Charles II., and the park ruined during Cromwell’s usurpation ; when the fine oaks were cut down to build the fort at Perth. Falkland is fifteen mdes north of Edinburgh, and fifteen south-east of Perth.

Falkland Islands, a cluster of Islands at tlie extremity of South America, not far from the Straits of Magellan. They were discovered by Sir Richard Hawkins in 1594. The soil is bad, and the shores are beaten by perpetual storms. A British settlement was formed in 1764, but the settlers were dispossessed by the Spaniards in 1770; which occasioned an armament on the part of Britain ; but, the dispute being settled by a convention, the British regained possession of tlvem. In 1774, however, they were voluntarily abandoned to the Spaniards. The soil is repre- sented as a mere bog, and the mountains to be

barren. They have been called, by different natvieators, South Belgia Islands, New Islands

of St. Lewis, and the Mallouines : but they are now generally known by tlie name of Falkland Islands. Long, between 50° and 56° W., lat, from 51° to 53° S.

F'alkland Soixn, a strait or bay separating the two largest of the foregoing islands.

FALL, V. n. & v. a. Sax. peallen ; Geim. fallen ; Belg. fallen; Goth, and Swtd. follu ; ab Heb. h22, says Minsheu. To drop ; tumble down ; move down; sink; descend in any way : hence to decrease; lessen; ebb; grow shallow; decline; become dejected ; sink below something else in comparison ; sink into weakness and apparent torpor (hence the phrase ' to fall asleep') ; come to an end (as that which falls to the ground does with regard to its motion) ; die. To fall also frequently includes the idea of casualty, accident, or chance, perhaps from the ancient modes of decision by lot, or from the accidental manner in which fruit and other things drop around us : it is also applied to wrath and punishment, as being supposed to fall with weight ; to the birth of ani- mals who are dropped from the mother, &c. As an active verb, to fall signifies to let fall ; sink ; depress; diminish ; yean; bring forth. Dr. Johnson having arranged the prepositions with which fall is used in composition alphabetically, we retain that order, and his definitions of the modification of meaning the verb thus undergoes. Fall, as a substantive, signifies the act of dropping or tumbling from a height, or erect posture ; de- cline ; degradation ; declension or diminution of any kind ; declivity : it is used particularly for the rushing of water down a precijjice or declivity, or into a larger body of water; for autumn, the season of the fall of the leaf ; and for any conspicuous or remarkable act or habit of falling, as 'a fall of rain;' ' the fall of timber;' ' fall of prices,' &c. Fall, says Dr. Johnson, is one of those general words of which it is very difficult to ascertain or detail the full signification. It retains in most of its senses some part of its primitive meaning, and implies, either literally or figuratively, descent, violence, or suddenness; In many of its senses it is opposed to rise ; but in others has no counterpart or correlative.

Not newe conuertid to the feith ; lest he be borun up into pride and falle into doom of the deuel.

WicUf. 1 Tymo. iii

And the next multitude fell a lusting.

Numb. ii. 4.

Ye shall chase your enemies, and they shall fall before you by the sword. Lev. xxvi. 7.

Tbou shall make a battlement for thy roof, that thou bring not blood upon thine house, if any man fall from thence. Deut.

There fell w#ath for it against Israel. 2 Chron.

Fear fell on them all. Acts xix. 17.

Labour to enter into that rest, lest any man fall after the same example of unbelief. Heb. iv. 11.

A whistling wind, or a melodious noise of l)ird.s, among the spreading branches, or a pleasing fall o' water running violently, these things made them to swoon for fear. WUdom.

Our fathers were given to the sword, and for a spoil, and had a great /a// before our enemies.

Judith, viii. 9.

Wickeoness may well be compared to a bottomless pit, into which it is easier to keep one's self from /IiK-

FAL

ing, than, being fallen, to give one's self any stay fri)m falling infinitely. Sir P. Sidney.

All the lands, which will /a?? to her majesty there- abouts, are large enough to contain them. Spenser.

0 Man I have mind of that last bitter throw ; For as the tree does fall, so lyes it ever low.

Id. Faerie Queene.

Till the empire came to be settled in Charles the Great, the fall of the Romans' huge dominion, con- curring with other universal evils, caused those times to be days of much affliction and trouble throughout the world. Hooker.

For such things as do fall scarce ones in many ages, it did suffice to take such order as was requisite when they/e«. d.

The stout bishop could not well brook that his pro- vince should fall into their hands. Knolles.

SoJvman, chafed with the loss of his gallies and best soldiers, and with the double injury done unto him by the Venetians, fell into such a rage that he cursed Barbarossa. Id.

Some falls are means the happier to rise.

Shakspeare.

1 saw him run after a gilded butterfly ; and when he caught it he let it go again, and after it again ; and over and over he comes, and up again, and caught it again ; or whether his fall enraged him, or how it was, he did so set his teeth, and did tear it.

Id. What can be their business With a poor weak -womnn fulleji from favour! Id. ■ Then burst his mighty heart?

And, in his mantle muffling up his face. Even at the base of Pompey's statue. Which all the while ran blood, great Caesar fell. Oh ! what a. fall was there my countrymen ! Then I and you, and all of us fell down. Whilst bloody treason flourished over us. Id.

What other oath. Than honesty to honesty engaged ? That this shall be, or we will fall for it. Id. There will we sit upon the rocks. And see the shepherds feed their flocks By shallow rivers, to whose fall* Melodious birds sing madrigals. Id.

They then conceiving, did in yeaning time Fall party-coloured lambs, and those were Jacob's.

Id. If the vforst fall that ever fell, I hope, I shall make shift to go without him. Id.

Each of us fell in praise of our country mistresses.

Id. He was stirred, And something spoke in choler, ill and hasty ; But he fell to himself again, and sweetly In all the rest shewed a most noble patience. Id. In sweet musick is such art. Killing care and grief of heart.

Fall asleep or hearing die. Id.

To-morrow in the battle think on me. And fall thy edgeless sword, despair and die.

Id. Did Caesar swoon ? — He fell down in the market- place, and foamed at mouth, and was speechless. — He hath the filling-sicJtness. Id.

That is a step. On which I must fall down, or else o'erleap ; For in my way it lies. Id. Macbeth.

That strain again ; it had a dying fall: O it came o'er my car, like the sweet South That breathes upon a bank of violets, Stealing and giving odours. Id. Twelfth Night.

I have two boys Seek Percy and thyself about the field ;]

If you have any other request to make, hide it not ; for ye shall find we will not make your countenance to fall hy the answer ye shall receive. Bacon.

The greatness of an estate, in bulk and territory, doth fall under measure ; and the greatness of finances and revenue doth /a// under coniputation. Id.

If a man would endeavour to raise or fall his voice still by half notes, like the stops of a lute, or by whole notes alone without halfs, as far as an eight, he will not be able to frame his voice unto it.

Id. Natural History. He fell at difference with Ludovico Sfortia, who carried the keys which brought him in, and shut him out. Bacon's Henry VII.

When the price of corn falleth, men generally break no more ground than will supply their own turn.

Carew, O, how feeble is man's power. That if good fortune fall. Cannot add another hour. Nor a lost hour recall ! Domie.

The greatness of these Irish lords suddenly /eiZ and vanished, when their oppressions and extortions were taken awˆy. Davies.

These, by obtruding the beginning of a change for the entire work of new life, will/a// under the former S'l'"* Hammond.

That the Israelites might see the hand of Moses had a greater stroke in the fight than all theirs, tha success must rise and fall with it : Amalek

rose, and Israel fell, with his hand falling ; Amalek fell, and Israel rises, with his hand raised.

Bp. Hall's Contemplations. Perhaps thou talkest of me, and do'st enquire Of my restraint : why here I live alone j And nitiest this my miserable fall. j

Daniel's Civil War. They not obeying. Incurred, what could they less ? the penalty ; And manifold in sin, deserved to fall. Milton.

How sweetly did they float upon the wings Of silence, through the empty-vaulted night. At every fall smoothing the raven down Of darkness 'till it smiled ! Id.

They brought scandal To Israel, diffidence of God, and doubt In feeble hearts, propcnse enough before To waver or fall off, and join with idols. Id. None on their feet might stand. Though standing else as rocks, but down they fell By thousands, angel on archangel rolled. Id.

Fame of thy beauty and thy youth. Among the rest me hither brought. Finding this fame fall short of truth. Made me stay longer than I thought. Waller. The dogfisher is good against falling-tickness.

Walton. Paul's, the late theme of such a muse, whose flight Has bravely reached and soared above tliy height ; Now shalt thou stand, though sword, or time, or fire. Or zeal more fierce than they, thy fall conspire.

Denhayn. After the flood, arts to Chaldea/eZZ; The father of the faithful there did dwell. Who both their parent and instructor was. Id.

The king, understanding of their adventure, sud- deii\y falls to take pride in making much of them.

Sidriey. Her memory served as an accuser of her change, and hiT own handwriting was there to bear testimony against her fall. [^^

FAI.

Oft It fallt out, that while one thinks too much of his doing, he leaves to do the effect of this thinking.

Id. A long advertent and deliberate connexing of con- sequents, which yii/Zi not in the common road of ordi- nary men. Hale.

When a horse is hungry, and comes to a good pas- ture, hf, falls to his

food immediately. Id. I am fallen upon the mention of mercuries.

Boi/le. Whon about twenty, upon the falseness of a lover, she fell distracted. Temple.

The odd hours at the end of the solar year, .ire not indeed fully six, but are deficient 10,‘44″ ; which de- ficiency, in 134 years, collected, amounts to a whola day : and hence may be seen the reason why the ver- nal equinox, which at the time of the Nicene council fell upon the ’21st of March, /u//« now about ten days sooner. Holder on Time.

High o’er their heads a mouldering rock is placed. That promises a fall, and shakes at every blast.

.Drydcn. I am willing to fall this argument : ‘tis free for every man to write or not to write in verse, as he thinks it is or is not his talent, or as he imagines the audience will receive it. Id.

Since both cannot possess what both pursue, I’m grieved, my friend, the chance should fall on you.

Id. Some painters taking precepts in too literal a sense, have fallen thereby into great inconveniences. Id.

What crouds of patif nts the town doctor kills. Or how \viii fill he raised the weekly bills. Id.

Down through the crannies of the living walls The crystal streams descend in murmuring /a//ji. Id. He first the fate of Caesar did foretell. And pity’d Rome when Rome in Cxsa.T fell ; In iron clouds concealed the publick light. And impious mortals feared eternal night. Id.

A spark like thee, of the man-killing trade. Fell sick, and thus to his physician said ; Mcthinks I am not right in every part, I feel a kind of trembling at my heart ; My pulse unequal, and my breath is strong ; Besides a filthy fur upon my tongue. Id. Pers. Upon a great /a// of rain the current carried away a huge heap of apples. L’ Estrange.

They fell to blows, insomuch that the Argonauts slew the most part of the Delioncs. Id.

This book must staad or fall with thee ; not by any opinion I have of it, but by thy own. Locke.

Upon lessening interest to four per cent, you fall the price of your

native commodities, or lessen your trade, or else prevent not the high use. Id.

Rents ˆiWfall, and incomes every day lessen, ‘till industry and frugality, joined to a well ordered trade, shall restore to the kingdom the riches it had formerly.

Id. All liquid bodies arc diffusive; for their parts, being in motion, have no connexion one with another, but glide and fall off any way, as gravity and the air presseth them. Burnet.

What men could do. Is done already : heaven and earth will witness. If Rome must fall, that we are innocent.

Addison. We must immediately fall into our subject, and treat every part of it in a lively manner. Id.

It shows the nose and eyebrows, with the several prominences and fallings in of the features, much more distinctly than any other kind of figure. Id.

You shall see a great estate /a// to you, which you vould have lost the relish of, had you known yourself born to it. Id.

iO

FAL

Portms hitnself oft/u/i»in tears before me As if he mourned his rival’s ill success. Id.

I have observed of late thy looks are fallen, O’ercast with gloomy cares and discontent. Id.

For as his own bright image he surveyed. He fell in love with the fantastick shade. Id.

Before the fall of the Po into the gulph, it receives into its. channel considerable rivers. Id. on Itiili/.

A kind refreshing sleep is/a//enupon him : I sa\T him stretched at ease, his fancy lost In pleasing dreams. Id. Cato.

Exalted Socrates’, divinely brave I Injured he fell, and dying he forgave ; Too noble for revenge. Creech’s Juvenal.

The best mea fall under the severest pressures.

Wake. And you have known none in health who have pitied you ? and behold, they are gone before vou, even since you. fell into this distemper. Id.

He died calmly, and with all the easiness of a man falling asleep. Atterbury.

From the pound weight, as Pliny tells us, the A%fell to two ounces in the first Punick war; when Hanni- bal invaded Italy, to one ounce ; then, by the Pa- pirian law, to half an ounce. Id.

Cassar therefore gave orders to build his gallics on the Loir, and the rivers that /aW into it. Id.

Birds and fowls, that rest one foot to ease the other, naturally lay their heads under their wings, that the centre of gravity may fall upon the foot they stand on. Cheyne.

I fell in love with the character of Pomponius At- ticus ; I longed to imitate him. Blount to Pope.

He, careless now, of interest, fame, or fate. Perhaps forgets that Oxford e'er was great ; Or, deeming meanest what we greatest call. Beholds thee glorious only in thy fall.

Pope to'Parnel. The swain, in barren deserts, with surprize Sees lilies spring, and sudden verdure rise ; And starts, amidst the thirsty wilds, to hear New/uZ.'s of water murmuring in his ear. Pope.

If to her share some female errors fall. Look on her face, and you'll forget them all. Id. Ulysses let no partial favours yb//. The people's parent, he protected all.

Id. Odyssey. In their spiritual and temporal courts the labour falls to their vicars-general, proctors, apparitors, and seneschals. Swift.

I had more leisure, and disposition, than have since yh/fere to my share. Id.

Some expressions fell from him, not very favour- able to the people of Ireland. Id.

Some were hurt by the falls they got by leaping upon the ground. Gulliver's TraveL.

See the leaves around \xs falling.

Dry and withered to the ground. Thus to thoughtless mortals calling.

With a sad and solemn sound. Sons of Adam once in Eden,

Blighted when like us yo\x fell. Hear the lecture we are reading,

‘Tis alas ! the truth we tell. Bp. Home. There as sad Philomel, alike forlorn. Sings to the night from her accustomed thorn ; While at sweet intervals each falling note Sighs in the gale, and whispers round the grot ; The sister-wo shall calm her aching breast, 4nd softer slumbers steal her cares to rest.

Darwiyi. Fallen, fallen, a silent heap ‘. her heroes all Sunk in their urns ; behold the pride of pomp.

FAL 41

The throne of na.Uons, fallen ! obscurotl in dust ; Even yet majestical. Byron.

Up Juan sprung to Haidee’s bitter shriek.

And caught her falling, and from off the wall

Snatched down his sabre, in hot haste to wreak

Vengeance on him who was the cause of all.

Id. To fall away. To decline gradually ; to fade 5 to languish ; to apostatise ; to sink into wicked- ness ; to perish ; to be lost ; to revolt.

The fugitives ye/i away to the king of Babylon.

2 Kings. Say not thou, it is through the Lord that I fell away ; for thou ougttest not to do the things that he Lateth, Ecchts. xv.

These for a while believe, and in time of tempta- tion _/a/Z atcaˆ. Luke v’ni.XZ. Still propagate ; for still they fall away : ‘Tis prudence to prevent entire decay.

Dryden’s Virgil. In a curious brede of needlework one colour falls away by such just degrees, and another rises so in- sensibly, that we see the variety, without being able to distinguish the total vanishing of the one from the first appearance of the other. Addison.

Watery vegetables are proper, and fish rather than flesh : iu a Lent diet people commonly full away.

Arbuthnot on Diet. To fall back To fail of a promise or pur- pose; recede.

We have ohen fallen back from our resolutions.

Taylor,

To fall down. (Dotcn is sametimes added to fall, though it adds little to the signification.) To prostrate himself in adoration ; to sink ; not to ˆtand; to bend as a suppliant.

He that herith and doith not is lyk to a man bild- inge his hous on erthe withoutcn i'oundempnt, into which the flood was hurlid ; and anoon it fel doun, and the. fallytig doun of that hous was niaad gret.

Wiclif. Luk 6. Shall I fall down to the stock of a tree ?

Isaiah xliv. 11. All kings shall fall down before him ; all nations shall serve him. Psalm Ixxii. 11.

, .4s she was speaking, she fell down for faintness.

Esther xv. Down fell the beauteous youth ; the yawˆning wound
Gushed out a purple stream, and stained the ground.

Dryden. To fall from. To revolt ; to depart from ad- herence.

Clarence Is very likely to fall from him.

Shakspeare. Henry VI. The emperor being much solicited by the Scots not to be a help to ruin their kingdom, fell by degrees frotn the king of England. Hayward.

Through many insensible declinations, do we fall from virtue ; and, at the first, are so gently led by vice that we cannot bfelieve our accusers. Bp, Hall.

To fall in. To concur; to coincide ; to com- ply ; to yield to.

Our fine young ladies readily fall in with the di- rection of the graver sort. Spectator.

It is a double misfortune to a nation, which is thus given to change, when '.hey have a sovereign that is prone to fall t« with all the turns and veerings of the people. Addison.

Any single paper that falls in with the popular taste, and pleases more

than ordinary, brings one in a great return of letters. Id.

FAL

Objections fall in here, and are the clearest and most convincing arguments of the truth. IVoodwird.

His reasonings in this chapter seem to fall in with each other ; yet, upon a doscr investigation, we shall find them proposed with great variety and distinction.

Atterbury. When the war was begun, there sooa fell in othtr incidents at home, which made the continuance of it necessary. Swift.

That prince applied himself first to the church of England ; and, upon their refusal to full in with his measures, made the like advances to the dissenters.'

Id. To fall off. To apostatise ; to revolt ; to for- sake ; to perish ; to die away ; to separate ; to be broken.

Love cools, friendship falls off, brothers divide ; in cities, mutinies ; in countries, discord.

Shakspeare. Oh, Hamlet, what a. falling off was there ! Id. They, accustomed to atford at other times either silence or short assent to what he did purpose, did thca fall off, and forsake him. Hayward.

What cause Moved out grand parents, in that happy state. Favoured of heaven so highly, to full off From their Creator, and transgress his will '

Milt07i. Those captive tribes fell off From God to worship calves.

Id. Paradise Los!. Languages need recruits to supply the place of those words that are continually /aWi«ˆ off through disuse. Felton.

To fall on. To make an assault ; to begin the attack : to begin eagerly to do any thing.

Ech that Schal/aZ/e on that stoon schal be so brisid, but on whom it schal /aWe it schal alto breke him.

Wiclif. Luk. 20. 'they fell on, I made good my place ; at length they came to the broomstaff with me ; I defied 'em still. Shakspeare. Henry VIII. Fall on, fall on, and hear him not ; But spare his person for his father's s.a.ke. Dryden. Draw all; and when I give the word,/a// on.

Dryden. Oedipus. Some coarse cold sallad is before theo set ; Bread with the bran, perhaps, and broken meat ; Fall on, and try thy appetite to eat. Dryden. Pers.

He pretends, among the rest, to quarrel with me, to have fallen foul on priesthood. Dryden.

To fall over. To revolt ; to desert from one side to the other.

And dost thou now fall over to my foes ? Thou wear a lion's hide ! doff it, for shame. And hang a calve's skin on those recreant limbs.

Sliakspeare. King John. To fall out. To quarrel ; to jar ; to grow contentious : to happen ; to befall.

It many times falls out, that we deem ourselves much deceived in others, because we first deceived ourselves. Sir P. Sidney.

Now, for the most part, it so falleth out, touching things which generally arc received, that although ia themselves they be most certain, yet, because men pre- sume them granted of all, we are hardliest able to bring proof of their certainty. Hooker

It so fell out, that certain players We o'er-rode on the way ; of those we told him.

Shakspeare Meeting her of late behind the wood. Seeking sweet favors for this hateful fool, I did upbraid her, aad fall out with her. Id,

How fell you out, say that ? — No coniruries hold more antipathy. Than I and such a knave. Id. King Lear.

The cedar, by the instigation of the loyalists, /eW out with the honicbians, who had elected him to be their king. Howel.

A prince who falleth out with laws, breaketh with his best friends. Savillc.

Yet so it may/oW out, because their end Is hate, not help to me. Milton's Agonistes.

If it so fall out that you are miserable for ever, thou hast no reason to be surprised, as if some unex- pected thing had happened. Tillotson.

There fell out a bloody quarrel betwixi the frogs and the mice. L' Estrange. .

Who think you is my Dorus fallen out to be ?

Sidney. Little needed those proofs to one who would have fallen out with herself, rather than make any conjec- tures to Zelmane's speeches. Id. A soul exasperated in ills.yaiZ* out With every thing, its friend, itself.

Addison' t Cato. It has been my misfortune to live among quarrel- some neighbours : there is but one thing can make us fall out, and that is the inheritance of lord Strut's estate. Arbuthnofs John Bull.

To fall to. To begin eagerly to eat ; to apply liimself to.

Having been brought up an idle horseboy, he will never after fall to labour : but is only made fit for the halter. Spenser.

I know thee not, old man ; fall to thy prayers : How ill white hairs become a fool and jester.

Shahspeare. Seven times already hath Israel mutinied against Moses, and seven times hath cither been threatened or punished ; yet now ihey fall to it afresh.

JBp. Hall's Contemplations. They fell to raising money under pretence of the relief of Ireland. Clarendon.

They would needs fall to the pract'ce of those vir- tues which they before learned. Sidney. The men were fashioned in a larger mould. The women fit for labour, big and bold ; Gigantick hinds, as soon as work was done. To their huge pots of boiling pulse would run ; Fall

My lacy falls to play : so bad her chance. He must repair it. Pope.

To fall under. To be subject to ; to become the sv'ibject of. To be langed with; to be reck- oued with.

We know the effects of heat will be such as will scarce yiiW under the conceit of men, if the force of it be altogether kept in. Bacon's Nat. Hist.

Those things which are wholly in the choice of another, /a// unJei'

our deliberation. Taylor.

The idea of the painter and the sculptor is un- doubtedly that perfect and excellent example of the mind, by imitation of which imagined form all things are represented which yiiW under human sight.

Dryden's Dufresjwy. No rules that relate to pastoral can affect the Geor- gicks, which fall under that class of poetry which con- sists in giving plain instructions to the reader.

Addison on the Georgicks.

To fall upon. To attack ; to invade ; to as- sault ; to rush against ; to attempt.

I do not intend to fall upon nice philosophical dis- quisitions about the nature of time. Holder.

Auria falling upon the gallies, had with them a cruel and deadly fight. Knolles.

An infection in town htst falls upon children, weak constitutions, or those that are subject to other dis- eases ; but, spreading further, seizes upon the most healthy. Temple.

Man falls upon every thing that comes in his way ; not a berry or mushroom can escape him.

Addison's Spectator.

At the same time that the storm bears upon the whole species, we are falling foul upon one another.

AdditoH,

To get rid of fools and scoundrels was one part of my design ia. falling upon these authors. Pope.

Fall of Man. See Theology.

FAL'LACY, n. s. -\ French, fallace ;

Falla'cious, a(/;. \1.2.. fullucia ; Span.

Falla'ciously, rt(/y. 4ˆ and Port, falacea ;

Falla'ciousness, n. s. J Lat. fallacia, fallax, deceitful. A deceit ; sophism

; logomachy ; de- ceitful or unfounded argument. Fallacious is misleading or deceitful.

Until I know this sure uncertainty, I'll entertain the favoured yaWocˆ. Shaktpeare.

It were a mere fallacy and mistaking, to ascribe that to the force of imagination upon another body, which is the force of imagination upon the proper body. Bacon.

The force of that /oWocfoMS fruit.

That with exhilarating vapour bland

About their spirits had played, and inmost powers

Made err, was now exhaled.

Milton's Paradue Lost. False philosophy inspires FallacioHs hope. Id.

We shall so far encourage contradiction, as to pro- mise not to oppose any pen that shall fallaciously re- fute us. Browne.

The inconstant opinions, uncertam resolutions, mutable affactions, and fallacious pretences of men, upon which the accomplishment of most projects rely, may easily deceive and disappoint us. Barrow.

Most princes make themselves another thing from the people by a fallacy of argument, thinking them- selves most kings when the subject is most basely subjected. Sidney.

All men, who can see an inch before them, may easily detect gross fallacies. Dryden.

The Jews believed and assented to things neither evident nor certain, nor yet so much as probable, but actually false and fallacious ; such as the absurd doc- trines and stones of their rabbles. South's Serrnons.

We have seen how fallaciously the author has stated the cause, by supposing that nothing but unli- mited mercy, or unlimited punishment, are tlie me- thods that can be made use of. Addison. But as a scale by which the soul ascends

From mighty means to more important ends ;

Securely, though by steps but rarely trod.

Mounts from inferior beings up to God,

And sees, by no fallacious light or dim.

Earth made for man, and man himself for him.

Cowper.

Fallacy, in philosophy, false appearance. The Epicureans deny that there is any such thing as a fallacy of the senses. According to them, all our sensations and perceptions, both of sense and phantasy, are true ; whence they make sense the primary criterion of truth. The Cartesians, on the other hand, maintain, that we shoidd sus- pect as false, or at most as dubious, every thing that presents itself to us by means only of the external senses, because they frequently deceive us ; and that our senses, as being fallacious.

were nerer given us by nature for the discovery of truth, or the contemphation of the principles of things ; but only for pointing out to us what things are convenient or hurtful to our bodies. The Peripatetics keep a middle course. They say, that, if a sensible object be taken in its com- mon or general view, the sense cannot be deceived about it ; but that, if the object be taken under itb specific view, the sense may be mistaken about it, from the want of the dispositions neces- sary to a just sensation, as a disorder in the organ, or any thing uncommon in the medium : thus, in some disorders of the eye, all objects appear yellow : a stick in water appears broken or crooked, &c.

FAL'LIBLE, ttf/;. } Trench, faillibk, from Fallibil'ity, n. s. j Lat._/o//o; Gr. (jˆaXXw. Ainsworth. To slip or slide. Liable to error, or to be deceived.

Do not falsify your resolution with hopes that are fallible : to-morrow you must die. Shakspeare.

He that creates to himself thousands of little hopes, uncertain in the promise, fallible in the event, and depending upon a thousand circumstances, often fails in his expectations. Taylor.

Our intellectual ©r rational powers need some as- sistance, because they are so frail and fallible in the present state. Watts.

There is a great deal of fallibility in the testimony of men ; yet some things we may be almost as certain of, as that the sun shines, or that five twenties make a hundred. Id. ■

To take our religious sentiments only from his gos- pel, in opposition to all the authoritative dictates of men, who are weak and fallible as ourselves. Mason.

FALLOPIAN Tubes. See Anatomy.

FALLOPI US (Gabriel), a celebrated physician and anatomist, born at Modena in 1523, and descended of a noble family. He made several discoveries in anatomy, one of which was that of the vessels, called after him the Fallopian tubes. He travelled through the greatest part of Europe : was made professor of anatomy at Pisa in 1548, and at Padua in 1551, where he died in 1562, aged thirty-nine. His writings, which are nume- rous, were first printed separately, and afterwards collected under the title of ‘ Opera genuina omnia, tam practica quam theoretica, in tres tomos distributa.’ They were printed at Venice in 1585, and in 1606; at Francfort in 1600, and in 1606, in folio.

FAL’LOW, adj. n. s.&c f Sax. jraleye ; Isl.

Fal’lowxess, 71. s. [y.a. \ fauliir ; Bel. foal ; Swed. fol; LaX.fidvu.’!, a pale yellow. A ‘ fal- low field ‘ is so called, according to Minsheu,

- because it looketh of fallow color.’ This, how- ever, seems doubtful, as there is a Saxon noun fealga, a kind of plough ; and Teut. folgen is to plough ; Arab. /■«/(//(«, is also plougliing; tillage ;

- and the Falalis or Foulahs of Africa,’ as Mr. Thomson observes, ‘ are boors.’ Pale, yellow, or red ; unsowed ; ploughed but not sowed : hence unoccupied ; neglected. As a substantive, fallow is ground in any of these last-mentioned ■ttates. To fallow is to plough in order to a second oration ; to grow yellow ; fade. Fallowness is barrenness; fruitlessncss.

How dees youT fallow greyhound, sir? I heard say, he was out run at Cotsale.

Shakspeare.

The h:iTC fulloic brings to teeming foysen.

Id. Measure for Measure. Mqt fallow lees The darnel, hemlock, and rank fumitory. Doth root upon. Id. Henry V.

The ridges of the fallow field lay traversed, so as the English must cross them in presenting the charge.

Hayward. Like one, who, in her third widowhood, doth profess Herself a nun, tyed to retiredness, S' atfect* my muse now a chaste fallowness. Dcnne.

Her predecessors, in their course of government, did but sometimes cast up the ground ; and so leaving it fallow, it became quickly overgrown with weeds. Howel's Vocal Forest. The king, who was excessively affected to hunting, had a great desire to make a great park for red as well ˆs fallow deer between Richmond and Hampton-court. Clarendon. Shall saints in civil bloodshed wallow Of saints, and let the cause lie fallow?

Hudibras, Within an ancient forest's ample verge. There stands a lonely but a healthful dwelling. Built for convenience, and the use of life ; Around it fallows, meads, and pastures fair, A little garden, and a limpid brook. By nature's own contrivance seem disposed.

Rowe. The plowing oi fallows is a benefit to land.

Mortimer. The best ploughs to plow up Summer /aWow with.

Id. Begin to plow uˆp fallows : this dist fallowing ought to be very shallow. Id. Husbandry.

Then o'er the fallowed ground How leisurely they work, and many a pause The' harmonious concert breaks, till more assured. With joy redoubled the low vallies ring. Somerville.

FALMOUTH, a town of Cornwall, on a fine bay of the English Channel. The town consists principally of one street, extending nearly a mile along the beach, and is tolerably well budt. It is the richest sea-port and market town of the county, and larger than any three of its other boroughs. It has so commodious a harbour, that ships of the greatest burden come up to its quay. It is guarded by the castles of St. Mawes and Pendennis, on high rocks at the eiˆtrance ; both of which are now strongly fortified, and gar- risoned by invalids, with an establishment for a governor at £300 per annum, and a deputy go- vernor at £91. The roadstead is deep, and the shelter afforded by the number of

creeks in it is so good, that tiie whole British navy may ride safely here in any wind, it being, next to Ply- mouth and Milford Haven, the best road for shipping on our coasts. It is well built; and its trade is considerably increased since the establishment of packet boats for Spain, Portu- gal, and the West Indies. The custom-hoase for most of the Cornish towns, as well as the head collector, is settled here, wiiere the duties, including those of the other ports, are very con- siderable. A considerable pilchard fishery is carried on here. It is a corporation, governed by a mayor and alderman ; and has a market on Thursday, and fairs .luly 27th and October 30t!i. Falmouth is ten miles south of Truro, and 269 west by south of London.

FAL

Falmouth, a sea-port town of Antigua, on tlie south shore, between Englisli Harbour and Ren- dezvous Bay, seven miles south-east of St. John's.

Falmouth, a town of Jamaica, called also the Point, on the south side of Martha Brae Harbour. Lonj. 61° 28′ W., lat. 17° 9′ N.

Falmouth, a town of the United States, in the district of Maine, Cumberland county, seated on Casco Bay, 120 miles N. N. E. of Boston.

Falmouth, a township of Massachusetts, in Barnstaple county, fifty miles south-east by south of Boston, on the north-east of Vineyard Sound. It was buint by the British in 1775.

Falmouth, a township of Nova Scotia, in Hants county, opposite Windsor, twenty-eight miles north-west of Halifax.

Falmouth, a town of Pennsylvania, in Lan- caster county, twenty miles west of Lancaster.

Falmouth, a town of Virginia, in Stafford county, on the north bank of the Rappahannock; twenty-three miles south-west of Dumfries. FALSE, adj., adv. & v. a. "^ Sax. palj-e ; Fr. Falsefa'ced, ar//. faux, fausse ; Ital.

False'heart, Span, and Port.

False'hearted, (also; Goth, fah

Falseheart'edxess, n. s. (from/f/a, to cover False'hood, n. s. or conceal, says

False’ly, adv. [Mr. Thomson) ;

False’ness, n. s. ‘Lat. falsus ; de-

False’r, ceived. Untrue;

Falsifi’able, adj. supposititious; de-

Falsipica’tion, n. 5.’ ceitful ; dishonest;

Fal’sifier, treacherous ; not

Fal’sify, v. a. Sc v. n. according to rule :

Fal’sity, n s. J as an adverb, not

truly, honestly, or exactly (a barbarism). To false is an obsolete verb, expressing, to make false (a pledge or promise implied); to deceive; evade : falsefaced, falseheart, and falsehearted, all mean deceitful, the first being applied to ap— pearancej, the last two to motives : as our jjreat bard says, ‘ False face must hide what the false heart doth know.’ Falsehood, falseness, and falsity, are want of, or contrariety to truth ; duplicity : sometimes falsehood and falsity express simply want of verbal truth ; some- times intentional deception ; a lie ; counterfeit ; imposture. See the extract from Dr. Paley. (We only hope it will be felt that his list of non-criminal falsehoods is sufficiently copious). I’alsifiable is liable to be counterfeited : falsifi- cation, tlie act of counterfeiting or making any thing appear vvhat it is not, as well as that of making the falsehood of any deceitful thing ap- pear ; confutation : to falsify is used also in these different senses, viz. it signifies to confute ; to counterfeit, forge, or corrupt ; as well as to vio- late a pledge given : as a neuter verb it means to tell falsehoods. Dryden’s labored defence (see below) of his use of the verb active, seems almost needless : a shield is falsified when it is pierced, in the same sense as an argument when it is confuted, i. e. the falshood of its assumed character is made to appear. Dr. Johnson says, * Dryden, with all this effort, was not able to na- turalise the new signification, which I have never seen copied, except once by some obscure

nameless’ writer, and which, indeed deserves not to be received.’ We have copied a far more barbarous use of falsity as a substantive, first quoted by Mr. Todd, from Beaumont and Fletcher.

In your answers there reiaAms faUhood. Job. Falsift/ing the balance

by deceit. Amot.

Can you on him such falsitie.ˆ obtrude? And as a mortal the most wise delude? Sandys. Such end had the kid ; for he would weaned be Of craft coloured with simplicity ; AnJ such end, pardie, does all them remain. That of such faher's friendship been fain. Spenser.

The Irish bards use to forge scaA. falsify every thing as they list, to please or displease any man. Id. Fair seemly pleasance each to other makes. With goodly purposes there as they sit ;

And in l.ii falsed fancy he her takes To be the fairest light that lived yet.

Id. Faerie Queenc.

Is't not enough that to this lady mild. Thou false hast thy faith with perjury ? Id.

And falsed oft his blows t' illude him with such

bait. Id.

He fell, as a huge rocky cliff. Whose false foundation waves have washed away. With dreadful poise is from the main land reft. Id.

Concerning the word of God, whether it be by mis- construction of the sense, or by falsification of the words, wittingly to endeavour that any thing may seem divine which is not, is very plainly to abuse, and even to falsify Divine evidence, which injury, offered but unto men, is most worthily counted heinous.

Id, Neither are they able tq break through those er- rours wherein they are so determinately settled, that they pay unto falsity the whole sum of whatsoever love is owing unto God's truth. Id.

He suddenly falsified his faith, and villainously slew Selyuics the king, as he was bathing himself, mislrasling nothing less than the falsehood of the pirate.

Knolles's History.

Now, fy upon my false French ; by mine honour,

in true English, I love thee, Kate. Sliakspeare.

King Richard might create a perfect guess.

That great Northumberland, t\zvi false to him.

Would of that seed grow to a grcater/u/se/jfjx.

Id.

Time’s glory is to calm contending kings.

To unmask /a/se/ioo(f, and bring truth to light.

To stamp the seal of time on aged things. To wake the morn, and centinel the night. To wrono- the wronger, till he render right.

Id.

I grant him bloody, Luxurious, avaricious, ˆa/ie, deceitful. Sudden, malicious, smacking of every sin That has a name. Id. Macbeth.

What thou wouldest highly. That thou wouldest holily ; wouldest not play false. And yet wouldest wrongly win. Id.

May these same instruments, which you profane. Never sound more I When drums and trumpets shall I’ the field prove flatterers, let courts and cities be Made all of false-faced soothing.

Id Curiolantts. I am thy king, and thou i. falsehearted traitor.

Id. King Hi-nry VI. p. 1 1 .

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A falsity may spoil his cringe.

Or making of a leg, in wLich consists Much of his court perfection.

Beaumont and Fletcher, Coronation. Take a vessel, and make a. false bottom of coarse canvass : fill it with earth above the canvass.

Bacon. A man to whom he had committed the trust of his person, in makinˆ him his chamberlain , this man, no ways disgraced, no ways discontent, no ways put in fsar, turns yoZse unto him. Id. Henry VI.

The traitorous or treacherous, who have misled others, are severely

punished ; and tlie neutrals and falsehearted friends and followers, who have started aside like a broken bow, he noted. Id,

To counterfeit the dead image of a king in his coin is an high offence ; but to counterfeit the living image of a king in his person, exceedeth all falsifications ; except it should be that of a Mahomet, that counterfeits Divine honour. Id,

Club and coffee-house gentlemen, petty merchants of small conceits, who have an empty habit of prating without meaning, always aim at wit, and generally make false fire. 'Saville,

For how can that be /a/s3 which every tongue Of every mortal man affirms for true?

Which truth hath in all ages been so strong. As, loadstone like, all hearts it ever drew. Davies. Men are spunges, which, to pour out, receive ; Who kaovf false play, rather than lose, deceive.

Donne. Piety is opposed to hypocrisy and insincerity, and all falseness or foulness of intention, especially to personated devotion. Hammond's Fundamentals.

To seek to the second means, with neglect of the first, is the fruit ot a/ aZi-e faith.

Bp. Hall's Contemplations, Artificer of fraud ; he was the first That practised falsehood under saintly show.

Milton. That Danubiu?, ariseth from the Pyrenean hills, and that the earth is higher towards the North, are opinions truly charged on Aristotle by the restorer of Epicurus, and all easily coaiatahls falsities,

Glanville's Scepsis. It shall be thy work, thy shameful work, which is in 'hy power to shun, to make him live to see thy faith falsifed, and his bed defiled. Sidney.

Thou dost kill me with thy /a/«eAoocJ ; and it grieves me not to die, but it grieves me that thou art the mur- therer. Id.

Suppose the reverse of virtue were solemnly en- acted, and the practice of fraud and rapine, and per- jury and falseness to a man's word, and all vice were established by a law, would that which we now call vice gain the reputation of virtue, and that which we now call virtue grow odious to human nature ?

Tillotson. There was no hypocrisy or falseheartedness'ia all this. Stilling fieet.

So hast thou cheated Theseus with a wile. Against thy vow, returning to beguile Under a borrowed name ; &% falsa to mo. So false thou art to him who set thee free.

Dryden, A farce is that in poetry which grotesque is in a picture : the persons and actions of a farce are all unnatural, and the manners false ; that is, inconsist- ent with the characters of mankind. . Id, Tell him, I did in vain his brother move. And yet he falsely said he was in love ; Falsely ; for had he truly loved, at least He would have given one day to my i-equest. Id.

His crest is rashed away, his ample shield

\^ falsified, and round with jav'lins filled. Id.

I used the word falsify, ii, this place, to mean tluit the shield of Turnus was not proof against the spears and javelins of the Trojans, which had pierced it through and through in many places. The words which accompany this new one, makes my meaning plain :

Ma si r Usbergo d' Ambi era perfetto, Che mai poter /aZfaWo in nessuin canto.

Ariosto, cant, xxvi. Fahar cannot otherwise be turned than by falsified : for, his shield was /a/serf, is not English. 1 might indeed have contented myself with saying, his shield was pierced, and bored, and stuck with javelins. Id,

The heart of man looks fair, but when we come to lay any weight upon it, the ground is false under us.

L' Estrange,

Boasters are n7it\ixs.\y faldfiers, and the people of all others, that put their shams the worst together.

Id,

This point have we gained, that it is absolutely and universally unlawful to lie und falsify. South,

Probability does not make any alteration, either in the truth or falsity of things ; but only imports a dif- ferent degree of their clearness or

appearance to the understanding. /./.

All deception in the course of life is, indeed, no- thing else but a lie reduced to practice, and falsehood passing from words to things. Id.

Simeon and Levi spake not on\y falsely but insidi- ously, nay hypocritically, abusing proselytes and reli- gion. Government of the Tongue.

The poet invents this fiction to prevent posterity from searching after this isle, and to preserve his story from detection of falsification. Broome.

There are falsehoods which are not lies ; that iˆi, which are not criminal : as, where no one is deceived ; which is the case in parables, fables, novels, jests, tales to create mirth, ludicrous embellishments of a story, where the declared design of the speaker is not to in- form but to divert, fitc. In such instances no confi- dence is destroyed, because none was reposed.

Paley, Moral Philosophy.

Our Saviour's prophecy stands good in the destruc- tion of the temple, and the dissolution of the Jewish economy, when Jews and Pagans united all their en- deavours, under Julian the apostate, to bafHe and _/a?j(/>/ the prediction. Addiso)i.

Such as are treated ill, and upbraided falsely, find out an intimate friend that will hear their complaints, and endeavour to sooth their secret resentments.

Id. Spectator,

He knows that to be inconvenient, which we falsely think convenient for us. Sinulridge's Sermons.

The prince is in no danger of being betrayed by the falseness, or cheated by the avarice of such a servant.

Rogers.

False happiness is like false money, it passes for a time as well as the true, and serves some ordinary occasions ; but, when it is brought to the touch, we find the lightness and alloy, and feel the loss. Pope.

This superadds treachery to all the other pestilent ingredients of the

crime ; ‘tis the falsifying the most important trust. Decay of Piety.

When Satire flies abroad on falsehood’s wing. Short is her life, and impotent her sting ; But, when to truth allied, the wound she gives Sinks deep, and to remotest ages lives. Churchill.

It is more from carelessness about trut’n, than from intentional lying, that there is so much falsehood in the world. Johnson,

Many seek to hide their sins from themselves by false glosses, and from others by excuses or false colours. Mason.

Falsest of womankind, canst thou declare, All thy fond plighted vows — fleeting as air ? To ihy new lover hie. Laugh o’er the perjury. Then in thy bosom try.

What peace ii there ! Bums.

And much and oft, he warned him, to eschew Falsehood and guile, and aye maintain the right. By pleasure unscduced, unawed by lawless might.

Beattie. Let not the goddess find that thou Hast dared io falsify a vow! With vengeance every crime she treats. But never perjury forgets. Sheridan.

For when sparkling wine went round.

Never saw I falsehood’s mask j But still honest truth I found

At the bottom of each flask. Id.

False Bay, a bay lying east of the Cape of Good Hope ; frequented by vessels during the prevalence of the north-west winds,which begin to blow in May, and render it dangerous to re- main in Table Bay. It is terminated on the east by False Cape, and on the west by the Cape of Good Hope. It is eighteen miles wide at its entrance ; and the two capes bear due east and west from each other.

False Imprisonment is a trespass committed against a person by arresting and imprisoning him without just cause, contrary to law ;

or’where :a man is unlawfully detained without legal pro- cess : it is also used for a writ which is brought for this trespass. If a person be any way un- lawfully detamed it is false imprisonment: and considerable damages are recoverable in those actions. See Imprisonment.

ALSE News, Spreading or, in order to make discord between the king and nobility, or con- cerning any great man of the realm, is punish- able by common law with fine and imprisonment; ■which is confirmed by statutes Westm. 1, 3 Edw. I. cap. 34 ; 2 Iltth. II. stat. 1, cap. 5 : and 12 Rich.II.cap.il.

FALSI Crimen, in the civil law, is fraudu- lent subornation or concealment, with design to darken or hide the truth and make things appear otherwise than they are. The crimen falsi is committed, 1. By words, as when a witness swears falsely. 2 By writing, as when a man antedates a contract, or the like. 3. By deed, as when he sells by false weights and mea- sures.

FALSIFYING a Record signifies showing it to be erroneous. Tlius lawyers teach, that a per- son purchasing land of another, who is afterwards outlawed of felony. Sec, may falsify the record, not only as to the time wlierein the felony is sup- ,josed to have been committed, but also as to the point of the offence. But, where a man is found guilty by verdict, a purchaser cannot falsify as to the offence, though he may for the time where the party is found guilty generally in the indict- ment, because the time is not material upon evi- dence.

FALSTER, an island of the Baltic belonging to Denmark, is separated from the east end of Tjaa’.and by Guldborg Sound, and from jMcen by

Grensund. It is eight leagues long, and from one to four broad, containing 150 square miles and 15,000 inhabitants. The south point, called Gieddesby Head, is high and remarkable. It is well watered and fertile, exporting 40,000 tons of corn, and, from the great quantity of fruit it produces, is called the Orchard of Denmark. It has a mineral spring, celebrated for its cures. The towns are Stubbekoebing on the north, and Ny- koebing on the west : the latter is considered the chief place, and has a royal castle ; it has be- sides thirteen vdlages. The Trindel Reef, with but eight feet water, runs out to the south-east of the island.

FALTER, V. a. & v. n. 3 Isl. vaulttur, a Falteringly. 5 stammerer; Span.

fal tar, forte a hat. Julleiido, Minsheu. To fail frequently in utterance;

to stammer; hesitate; hence to fail generally : the use of falter, as an active verb, we should imagine to be a corruption from filter, in the instance Dr. Johnson supplies.

Trembling every joynt did inly quake. And faltering tongue at last these words seemed forth to shake. Spenserˆs Faerie Qiieer.e.

This earth shall have a feeling ; and these stones Prove armed soldiers, ere her native king Shall ya/Jer under foul ri bcUious arms. Shakspeare

The pale assistants on each other stared. With gaping mouths for issuing words prepared ; The still-born sounds upon the palate hung, And died imperfect on the faltering tongue. Dryden.

How far idiots are concerned in the want or weakness of any or all faculties, an exact observation of their several ways oi faltering would discover.

Locke.

He changes, gods ! and falters at the question : His fears, his words, his look declare him guilty.

Smith.

Barley for malt must be bold, dry, sweet, and clean faltered from foulness, seeds, and oats.

Mortimer’s Husbandry.

He found his legs falter. Wiseman’s Surgery.

How melts my beating heart! as I behold Each lovely nymph, our island’s boast and pride. Push on the generous steed, that strokes along. O’er rough, o’er smooth, nor heeds the steepy hill, Ts or falters in the extended vale below. Somervile.

These arts in vain our rugged natives try. Strain out -with faltering diftidence a lye. And gain a kick for aukward flattery. Johnson.

The bright tear starting in the impassioned eyes

Of silent gratitude ; the smiling gaze Of gratulationyaˆˆtTin;/ while he tries

With voice of transport to proclaim thy praise.

Beattie. For well did she know tliat my heart meant no wrong ;

It sunk at the thought but of giving her pain : But trusted its task to & fault ering tongue.

Which erred from the feelings it could not explain.

Sheridan, Then, soft as Elim's well. The precious tears of new-born freedom fell. And he, whose hardened heart alike had borne The house of bondage and the oppressor's frown. The stubborn slave, by hope's new beams subdued. In faltering accents sobbed his gratitude.

Bp. Heber.

FALUGA, a town in the pachalic of Bagdad, on the west bank of the Euphrates, whence an arm of that river issues to join the Tigris. It is twenty-five miles south of Bagdad.

FAMA Clamosa, in tlie judicial procedure of the church of Scotland, a ground of action before a presbytery against one of its members, independent of any regular complaint by a particular accuser. Any person of a good character may give to the presbytery a complaint against one of its members ; but the presbytery is not to pro- ceed to the citation of the person accused, until the accuser gives in the complaint, under his hand, with some account of its probability, and under- takes to make out the libel, under the pain of being considered as a slanderer. But, besides this, the presbytery considers itself obliged to proceed against any of its members, if a fama clamosa of the scandal is great This they can do without any particular accuser, after they have enquired into the rise, occasion, and authors of the report ; it being a maxim in the kirk of Scotland that religion must suffer if the scanda- lous or immoral actions of a minister are not corrected. After they have considered the accu- sation, the rule is to order the party accused to be citea, and to draw out a full copy of what is reported, with a list of tJie witnesses' names. He is now to be formally summoned to appear ; and has at least ten days' notice to give in his an- swers to the libel. If the minister appear, at the time appointed, the libel is to be read to him, and his answers are also to be read ; and, if the libel be found relevant, then the presbytery is to endeavour to bring him to a confession. Should the matter confessed be of a

scandalous nature, the presbytery generally depose him from his office, and aopoint him in due time to appear before tlie congregation where the scandal was given, and make public confession of his crime and repentance. If a minister absent himself by leaving the place, and be contumacious, without making any relevant excuse, a new citation is given, and intimation is made at his own church when the congregation is met, that he is to be holden as confessed, since he refused to appear before them; and he is accordingly deposed from liis office.

FAMAGUSTAj a sea-port town on the east coast of Cyprus. It is about two miles in cir- cumference; stands on a rock ; and is surrounded by strong walls and a deep ditch, twenty paces in breadth. Tiie walls, which are very tliick, are flanked by twelve noble towers. This fortress serves as a prison for the chief malefactors of the island and other parts of the Turkish dominions. The town has two gates, with drawbridges, one to the land the other to the sea side. Famagusta was fortified in 1193 by Guy de Lusignan, and still farther strengthened during the period of ninety years when it was in the possession of the Vene- tians and Genoese. Many of the churches are now destroyed ; and the whole place is in decay. The Latin cathedral of St. Nicholas is converted ‘nto a mosque ; and the harbour is little fre- quented. Here reside an aga, a cadi, and a governor of the castle. Famagusta is said to be . the ancient Arsinoe. Here the Lusignans caused themselves to be crowned kings of Jerusalem. After belonging for a considerable time to differ- ent states of Italy, it was besieged by the Turks in 1570, and surrendered, after having sustained six assaults, in August 1571. The victors flayed

the commander of the garrison alive. During the siege 75,000 of the Turkish army, it is said, perished: and 140,000 bomb shells were ex- pended.

FAMARO, or Famars, a town of France, in the department of the North, three miles south of Valenciennes. The French had a strong camp at this town on the 23rd of May, 1793, when they were defeated and driven from it by the combined forces, under the late duke of York and the prince of Saxe-Cobourg.

FAM’BLE, V.71. Da.n.famler ; Belg. fowe/c?-, from Goth, fa, deficiency ; paucity, and mal speech, says Mr. Thomson. To hesitate in the speech. ‘ This word I find only in Skinner. — Dr. Johnson.

FAME, ?«. s. “^ French, fame; Ital.

Fa’med, pa7’t. adj. Span., Port., and Lat.

Famf/less, fama; Dor. Gr. (paˆia ;

Famos’ity, n. s. ˆ(prifii, to speak, probably

Famous, adj. [from Chald. £33, the

Fa’moused, mouth. — Park hurst.

Fa.‘uovsly, adv. Common report; cele-

Fa’mousness, n. s. j brity ; universal and ac- knowledged distinction : famosity is synony- mous with fame : fameless is without fame : famed, famous, and famoused, celebrated ; re- nowned ; much talked of

And Jhesus turnede agcn in the vertue of the spirite into Galilee, and the fame went forth of him thorough al the cuntree. Wiclif. Luk. iv.

There rose up before Moses two hundred and fifty princes of the assembly, famous in the congregation, men of renown. Numb. xvi. 2.

The house to be buildcd for the Lord must be ex- ceeding magnifical, of fame and of glory throughout all countries. Chronicles.

He is famed for mildness, peace, and prayer.

Shalispeare

Henry the Fifth, too famous to live long ; England ne’er lost a king of so much worth. Id.

Then this land vizs famotisly enriched With politick grave counsel ; then the king Had virtuous uncles to protect his grace. Id,

I shall shew what are true fames. Bacon.

Pyreius was only famous for counterfeiting all base things ; as earthen pitchers, a scullery, rogues together by the ears, and swine tumbling in the mire ; where- upon he was surnamed Rupographus.

Peacham on Drawing,

Detraction’s a bold monster, and fears not To wound the yame of princes, if it find But any blemish in their lives to work on.

Massinger.

I shall be named among the famottsesi Of women, sung at solemn festivals.

Milton’s Agonistes.

They looked on the particulars as ih.m%s famou.ily spoken of and believed, and worthy to be recorded and read. Grew's Cosmologia.

New ways I must attempt, my grovelling name To raise aloft, and wing my flight to fame. Dryden.

Many, besides myself, have heard onr famous Wal- ler own, that he derived the harmony of his numbers from the Godfrey of Bulloign, turned into English by Fairfax. id.

Aristides was an Athenian philosopher, famed for his learning and wisdom ; but converted to Christianity.

Addison.

The desire of fame will not suffer endowments to lie useless. Id. Spectator.

FAM

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FAM

Then let nie,fameless, lovt; the fieUU and wood.;. The fruitful watered vales and running floods.

3Ia)/. What is this fame, for which we thoughts employ. The owner's wife, which other men enjoy ? Pope. That fame is wealth, fantastic poets cry ; That wealth k fame, another clan reply ; Who know no guilt, no scandal, but in rags. And swell in just proportion to their bags.

You)i(j. > I courted fame but as a spur to brave And honest deeds ; and who despises yame. Will soon renounce the virtues that deserve it.

Mallet. Happy are those prioces who are educated by men who are at once virtuous and wise, and have been for some time in the school of affliction ; who weigh happiness against glory, and teach their royal pupils the real value oi fame. Goldsmith.

If parliament were to consider the sporting with re- putation of as much importance as sporting on manors, and pass an act for the preservation of fame, there are many would thank them for the bill. Sheridan.

His British /a;ne j the popular celebrity of his des- picable work, had preceded him, and rendered a par- ticular report to his co-plot'ers unnecessary.

Cheetham's Lifj of Paine.

FAMILIAR, afl';. Sc 7i. s.ˆ Yr.famiUer, fa- Famil'iarly, adv.

Famil'iarize, v. a. Famil'le, (l"r.) Fam'ily, n. s. & adj. laZX. familiaris, famllia.

mille ; \i7i. famig-

liare, famigUa ; Span, and Port. ffaniiliar, familia ; Domestic ; relating to a

family : lience aflable ; unceremonious ; intimate with ; frequent ; easy : as a substantive, an inti- mate friend, acquaintance, or supposed attendant spirit : to familiarise is to make easy by habit or custom: a family, hˆi. famiJia, horn f amid, or famulus, a servant, ' anciently and properly the servants belon2;ing to one common master,' says Ainsworth. Those who dwell together; hence those who descend from a common stock or pro- genitor (for they commonly dwell togetlier), and a course of descent or genealogy ; and, in a very correct sense, a tribe, class, oi species. Enfa- Jiiille is a French phrase for in the manner of a family.

Of Gershon was the family of the Libnites.

Numbers. I see not how the Scripture could be possibly made familiar unto all, unless far more should be read in the people's hearing than by a sermon can be opened.

Hooker. Let us chuse such noble counsel. That war, or peace, or both at once, may be As things acquainted and familiar to us.

Shakspeare. Be thou yajni/inr, but by no means vulgar. Id,

The king is a noble gentleman, and my familiar.

Id. Love is a familiar ; there is no evil angel but love.

Id. Because that 1 familiarly sometimes Do use you for my fool, and chat with you. Your sauciness will jest upon my love. Id.

A man must first govern himself, ere he be fit to govern a family . and hXs family, ere he be fit to bear the government in the

commonwealth. Raleigh.

Lesser mists acd fogs than those wliich covered Greece with so long darkness, do familiarly present our senses with as great alterations in the sun and moon. Id. History.

The governor came to us, and, after salutations, said familiurhj, that lie wa > come to visit us, and called for a chair, and sat iiim down. Bacon.

There be two great families of things, sulphureous and mercurial, inflammable and not inflammable, ma- ture and crude, oily and watry. Id.

A poor man found a priest familiar with his wife, and because he spake it abroad, and could not prove •.t, the priest sued him for defamation. Camden.

It is mischief enough, if they can be drawn to a less dislike of ill ; which now, by long acquaintance, is grown so familiar to their eyes, that they cannot think it so loathsome, as at the first view.

Bp. Hall.

God loves at once familiarity and fear ; familiarity in our conversation, and fear in his commands.

Id. Contemplation.%.

Or changed at length, and to the place conformed In temper and in nature, will receive Familiar the fierce heat, and void of pain.

Miltmi.

The senses at first let in particular ideas ; and the mind, by degrees, growing _/amj7iur with some of them, they are lodged in the memory, and names got to them. Locke.

Kalandar streight thought he saw his niece Par- thenia, and was about in such familiar sort to have spoken unto her •, but she, in grave and honourable manner, gave him to understand that he was mistaken.

Sidney. He unreins

His muse, and sports in loose /amiii'ar strains.

Addison.

The genius smiled upon me with a look of com- passion and affabilitj' that familiarized him to my imagination, and at once dispelled all fe;ir and appre- hensions. Id. Spectator,

When he finds himself avoided and neglected by his familiars, this affects him. Rogers.

We contract at last such an intimacy and familiarity with them, as makes it difficult and irksome for us to call off our minds. Atterbury.

They rsxigp. familiar to the dome. Pope.

They say any mortals may enjoy the most intimate familiarities with these gentle spirits. Id.

Horace still charms with graceful negligence. And without method talks us into sense ; Will, like a hicnd , familiarly conve The truest notions in the easiest wa Id.

If thy ancient but ignoble blood Has crept through scoundrels ever since the flood. Go and complain thy family is young. Nor own thy fathers have been fools so long. Id.

He was amazed how so impotent and groveling an insect as I could entertain such inhuman ideas, and in so familiar a manner, as to appear wholly unmoved at all the scenes of blood and desolation.

Gulliver's Travels. Deluded mortals, whom the great Chuse for companions tete a-tete ; Who at their dinners, en famille. Get leave to sit whene'er you will. Swift.

The night made little impression on myself ; but I cannot answer for my whole family ; for my wife pre- vailed on me to take somewhat. Id.

One idea which is familiar to the mind, connected with others which arc new and strange, will bring those new ideas into easy remembrance. Watts.

Prudent men lock up their motives ; letting fa- miliars have a key to their heart, as to their garden.

Shenstmie.

That he became at last ridiculously cautious, and would scarcely answer the most plain and familial question without previously asking me. Franklin.

Therefore in contemplation is his bliss. Whose power is such, that whom she lifts from earth She makes familiar with a Heaven unseen. And shows him glories yet to be revealed. Coxsper.

Yet to the accomplished orator all this is so familiar, ‘Q consequence of being habitual, that, without think- ing of his rules, or violating any one of them, he ap- plies them all. Beattie.

Sir p. I am convinced of it — Ah! it is a happi- ness to have a friend whom we can trust even with one’s family secrets. Sheridan,

Familiars, in the inquisition, persons who assisted in apprehending the accused, and carry- ing them to prison. They were assistants to the inquisitor, and called familiars, because belong- ing to his family. See Inquisition.

FAMINE, M.S. -ˆ Fr. famine; old Fr. F am’ish,v. a. Ikv. n. yfamis ; Ital. fame ; Lat. Fam’ishment, ?z. s. y/ames, hunger. Dearth; hunger ; distress from want of food : to famish (apparently derived from the substantive) is to kill with hunger ; to starve ; hence to deprive of any thing essential to life.

Our castle’s strength Will laugh a siege to scorn : here let them lie, ‘Till/<»OTme and the ague eat them up.

Shakspeare, You are all resolved rather to die than to famish.

Id. Apicius, thou did’st on thy gut bestow Full ninety millions ; yet, when this was spent.

Ten millions still remained to thee •, which thou. Fearing to suffer thirst a.ud famishment. In poisoned potion drankest.

Hakewill on Providence. Thin air Above the clouds will pine his entrails gross. And famish him of breath if not of bread. Milton. Famines have been of late observed to be rare, partly because of the industry of mankind, partly by those supplies that come by sea, but principally by the goodness of God. Hale.

The pains oi famished Tantalus he’ll feel. And Sisyphus, that labours

up the hill The rowling rock in vain ; and curst Ixion's wheel,

Dryden. This city never felt a siege before. But from the lake received its daily store ; Which now shut up, and millions crowded here. Famine will soon in multitudes appear. Id.

Tyranny and superstition, like those other destroyers ■of mankind, yanuW and pestilence, are nearly allied. Robertson's Sermon, What though their Phoebus kinder warms. While fragrance blooms and beauty charms ! When wretches range, in famithed swarms. The scented groves.

Burm. So, when the cold damp shades of night prevail. Worms may be caught by either head or tail ; Forcibly drawn from many a close recess. They meet with little pity, no redress ; Plunged in the stream, they lodge upon the mud. Food for the famished rovers of the flood. Cowper. Famine, and Pestilence, her first-born son,. Attend to finish what the sword begun ; And echoing praises, such as fiends might earn. And Folly pays, resound at your return. Id.

Loud o'er the camp the fiend of famine shrieks. Calls all her brood, and champs her hundred beak.s.

Darwin.

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So when the /amuAed wolves at midnight howl, Fell serpents hiss, or fierce hyenas growl ; Indignant lions rear their bristling mail. And lash their sides with undulating tail. Id.

Onward sweep the varied nations ! Famine long hath dealt their rations. Byron,

FAN, n. s. & V. a. Sax. pann ; Fr, van (for

grain) ; Lat, vannus (that which causes light things to fly). An instrument used by ladies to cool themselves; an agricultural instrument for winnowing corn ; any thing by which tlie air is agitated ; any thing of the shape, appearance, or used for the purposes, of these instruments. To fan is to cool, ventilate, or winnow ; also to increase, or make more vehement, a flame (as the agitation of the surrounding air does).

Asses shall eat clean provender, winnowed with the shovel and with the fan. Isaiah xxx. 24.

Nature worketh in us all a love to our own counsels : the contradiction of others is a fan to inflame that love. ‘ Hooher.

In the wind and tempest of fortune’s frown. Distinction, with a broad and powerful fart. Puffing at all, winnows the light away. Shakspeare.

With scarfs, and fans, and double change of bravery. With amber bracelets, beads, with all this knavery.

Id. The Norweyan banners flout the sky. And fan our people cold. Id. Macbeth.

Let every feeble humour shake your hearts ; Your enemies, with nodding of their plumes. Fan you into despair. Id. Coriolanus.

I have collected some few, therein /annjVw/ the old, not omitting any. Bacon’s Apothegms.

Flaile, strawfork, and rake, with a fan that is strong. Tusser.

Not so the wicked ; but as chaff, which, fanned. The wind drives, so the wicked shall not stand In judgment. Milton,

Calm as the breath which /ans our eastern groves. And bright, as when thy eyes first lighted up our loves.

Dryden,

The fanning wind upon her bosom blows \ To meet the fanning wind the bosom rose : The fanning wind and purling streams continue her repose. Id. Cimon and Iphigenia.

As a peacock and crane were in company, the pea- cock spread his tail, and challenged the other to shew him such a fan of feathers, L’ Estrange.

She -was fanned iuto slumbers by her slaves.

Spectator.

For the cleansing of corn is commonly used either a wicker /un, or a fan with sails.

Mortimer’s Hjusbandry.

Flavia, the least and slightest toy

Can with resistless art employ :

In other hands the fan would prove

An engine of small force in love ;

But she, with such an air and mien,

Not to be told or safely seen.

Directs its wanton motions so.

That it wounds more than Cupid's bow ;

Gives coolness to the matchless dame.

To every other breast a flame, Atterbmry.

The modest /an was lifted up no more. And virgins smiled at what they blushed before.

Fy > e.

And now his shorter breath, with sultry air,' Pants on her neck, and / o;« her parting hair, ,ˆ

Id:

There sits quiescent on the floods, that show Her beauteous form reflected clear below.

mˆ.

FAN

50

FAN

While airs impregnated with incense play

Around her, fannintj light her streamers gay ;

So thou, with sails how swift ! hast reached the shore

- Where tempests never beat nor billows roar.'

Cowper. While on light step enamoured Zephyr springs. And fans their

glowing features with his wings. Imbibes the fragrance of the vernal flowers. And speeds with kisses sweet the dancing Hours.

Darwin.

Fan, in husbandry. The machine used for this purpose by the ancients seems to have been of a form similar to ours. The fan, which Virgil calls mystica vannus lacchi, was used at initia- tions into tlie mysteries of the ancients : for, as the persons who were initiated into any of the mysteries, were to be particularly good, this in- strument, which separates the wheat from the chaff, was the fittest emblem that could be of setting apart the good and virtuous from the vicious and useless part of mankind. It is figu- ratively applied in a similar manner Luke iii. 17.

Fans, Ancient. That the use of the fan was known to the ancients is very evident from what Terence says, Cape hoc flabellum, et ventulum huic sic facito : and from Ovid, De Arte Amandi, i. 161.

Profuit et tenues ventos movisse flabello. The fans of the ancients were made of different materials ; but the most elegant were composed of peacocks' feathers, or perhaps painted so as to represent a peacock's tail.

Fans, Modern. The custom which prevails among European ladies, of wearing fans, was borrowed from the east, where the hot climate renders the use of them almost indispensable. In the east they chiefly use those of large size, and made of feathers, to keep off the sun and flies. In Italy and Spain they have a sort of square fan, suspended in the middle of their apartments, and particularly over the tables : these, by a motion given them, which they retain a long time on account of their perpendicular suspension, help to cool the air and drive off insects. In the Greek church, a fan is put into the hands of the deacons in the ceremony of their ordination, in allusion to a part of the deacon's office in that church, which is to keep the flies off the priests during the celebration of the sacra- ment.

FANATIC, adj. & n. s.-\ Fr. fanatique ; Lat.

Fanat'ical, (tdj. yfanuticus, possessed.

Fanat'ically, adv. i Wildly enthusiastic ;

Fanaticism, K.s, >» superstitiously wild, or mad.

Osiris, Isis, Orus, and their train. With monstrous shapes and sorceries

abused Fanatic Egypt, and her priests, to seek Their wandering gods disguised in brutish forms.

Milton.

When a man iˆ once possessed with a certain fa- natic spirit, he imagines, if a shoulder do but itch, •hat the world has galled it with leaning upon it too long. Marvell.

I remember an ingenious physician, who told me, in the /anu

A church ‘whose doctrines are derived from the clear fountains of the Scriptures, whose polity and discipline are formed upon the most uncorrupted mo- dels of antiquity, which has stood unshaken by the most furious assaults of Popery on the one hand, and fanaticism on the other ; has triumphed over all the arguments of its enemies, and has nothing now to contend with but their slanders and calamities.

Rogeri,

The double armature of St. Peter is a more de- structive engine, than the tumultuary weapon snatched up by a fanatiek. Decay of Piety.

It is the new ybnaˆica/ religion, now in the heat of its first ferment, of the rights of man, which rejects all establishments, all discipline, all ecclesiastical, and in truth all civil order, which will triumph, and which will lay prostrate your church-, which will destroy your distinctions j and which will put all your pro- perties to auction, and disperse you over the earth.

Burke.

The living they pursued was neither hj’pocritically nor ybnaiioai/y followed. Jd.

Thy country, Wilberforce, with just disdain.

Hears thee by cruel men and impious called

Fanatic, for thy zeal to loose the enthralled From exile, public sale, and slavery’s chain.

Cowper.

Fanatics. The ancients called those fanatici, who passed their time in fana, temples, and being, or pretending to be, often seiied with a kind of enthusiasm, as if inspired by the divinity, showed wild and antic

gestures. Prudentius represents them as cutting and slashing their arms with knives. Shaking the head was also common among the fanatici ; for Lampridius informs us that the emperor Heliogabalus was arrived to that pitch of madness, as to sliake his head with the gashed fanatics.

FANCOURT (Samuel), a dissenting minister, born in the west of England in 1678. He became pastor of a congregation at Salisbury, whence he was obliged to remove for rejecting the Calvi- nistic opinions of election and reprobation. He then went to London, where he established the first circulating library, about the year 1740, but in this he was not greatly encouraged. He wrote some controversial tracts, and died in low circum- stances in 1768.

FAN'CY, w.s.,i?.n.&i;. a."l Fan'ciful, adj. Fan'cifully, adv. Fan'cifulness, n.s. Fan'cyfree, adj. Fan'cymonger, n. s. Fan'cysick, adj

Fr. fanfasie ; Italian fantasia; Latin pfutntasia ; J > Greek ipavraaia : See Fantasy. This is evidently a contraction of

that word. Imagination ; the mental power of framing to ourselves images or representations of things or persons : hence an imaginary as dis- tinct from a well-founded opinion; and the image made ; conception; supposition : also liking ; inclination ; attachment ; humor or caprice ; love : to fancy, as a verb neuter, signifies to knagine or believe on slight grounds : as an active verb to pourtray in the mind ; to imagine ; be pleased or gratified with. Fancy-free is used by Shakspeare for free from love ; fancy-monger is one who deals in imaginary conceits or tricks ; fancy-sick, one of unsound imagination.

Men's private /a7!/;i«s must give place to the higher judgment of that church which is in authority over them. Hooker.

FAN

il

FAN

For you, fair Herma, look you arm yourself. To fit youT fancies to your father's will ; Or else the law of Athens yiolds you up To death, or to a vow of single life. Shakspeare. There is a man haunts the forest, that abuses our young plants with carving Rosalind on their barks j hangs odes upon hawthorns, and elegies on brambles ; all forsooth, deifying the name of Rosalind. If I could meet that faticy monger, I would give him some good counsel ; for he seems to have

the quotidian of love upon him. Id.

How now, my lord, why do you keep alone j Of sorriest fancies your companions making. Using those thoughts which should indeed have died With them they think on ? Id. Macbeth.

Tell me where is fancy bred. Or in the heart, or in the head ? How begot, how nourished ? It is engendered in the eyes. With gazing fed, Hodfaricy dies In the cradle where it lies.

Id. Merchant of Venice. Ninus both admiring her judgment and valour, to- gether with her person and external beauty, fancied her so strongly, as, neglecting all princely respects, he took her from her husband. Raleigh.

The altering of the scent, colour, or taste of fruit, by infusing, mixing, or cutting into the bark or the root of the tree, herb, or flower, any coloured, aro- matical, or medicinal substance, are but fancies : the cause is, for that those things have passed their period, and uourish not. Bacon's Natural History.

What treasures did he bury in his sumptuous build- ings ? and how foolish and fanciful were they ?

Hfiyward. Albertus Magnus, with somewhat too much curiosity, was somewhat transported with too much fancifulness towards the influences of the heavenly motions, and astrological calculations. Hale.

It would show as much singularity to deny this, as it does a. fanciful facility to aflˆirm it. Garth.

Shakespeare, /a»c»/'s sweetest child I Warbled his native wood-notes wild. Milton. In the soul Are many lesser faculties, that serve Reason as chief : among these fancy next Her office holds : of all external things. Which the five watchful senses represent. She forms imaginations, airy shapes. Which reason joining, or disjoining, frames All what we affirm, or what deny, and call Our knowledge, or opinion. Id. Paradise Lost. A person of a full and ample fortune, who was not •disturbed by any fancies in religion. Clarendon.

True worth shall gain me, that it may be Kaid Desert, not fancy, once a woman led. Dryden,

But he whose noble genius is allowed. Who with stretched pinions soars above the crowd ; Who mighty thought can clothe with manly

dress. He whom I fancy, but can ne'er express. /(/.

One that was just entering upon a long journey, took up ?i fancy of putting a trick upon Mercury.

L' Estrange,

'Tis not necessity, but opinion, tliat makes men miserable ; and when we come Koha fancysick, there's no cure. Id.

If o\ir search has reached no farther than similo and metaphor, we rather fancy than know, and are not yet penetrated into the inside and reality of the thing ; but content ourselves with what our imagina- '.ions furnish us with. Locke.

I have always had a fancy, that learning might be made a play and recreation to children. Id.

It was an imperfect view of leason, or, perhajK, the decayed remains of an ancient tradition, which seemed rather to float on men's fancies than sink deep into their hearts. Jjˆ

Love is by fancy led about. From hope to fear, from joy to doubt :

Whom we now a goddess call. Divinely graced in every feature. Strait's a deformed, a jjcrjurnd creature;

Love and hate are fancy all. Granville.

The little chapel called the Salutation is very neat, and built with a pretty fancy, Addison.

The politician would be contented to lose three years in his life, could he place things in the posture which he fancies they will stand in after such a revo- lution of time. ■ Id,

Some fanciful men have expected nothing but con- fusion and ruin from those very means, whereby both that and this is most effectually prevented.

Woodward's Natural Histoi-y. A resemblance in humour or opinion, a fancy for the same business or diversion, is a ground of aff"ection.

Collier. London-pride is a pretty fancy for borders.

Mortimer, Though no evidence affects the fancy so strongly as that of sense, yet there is other evidence which gives as full satisfaction, and

as clear a conviction to our reason. Atterhury.

The sultan of Egypt kept a good correspondence with the Jacobites towards the head of the Nile, for fear they -should take a fancy to turn the course of that river. Arhuthnot.

Imaginary evils soon become real ones by indulg- ing our reflections on them ; as he who in a melan- choly yanc!/ sees something like a face on the wall or the wainscot, can, by two or three'touches with a lead pencil, make it look visible, and agreeing with what he fancied. Swift,

Who lives to Nature rarely can be poor ; Who lives to fancy never can be rich. Young,

He seemed, through the day, to be swallowed up in profound meditation, and, through the night, he was disturbed with those visionary terrors which make an ia.pression upon a weak understanding only or a disordered fancy. Roberison't History of Scotland. To thee my fancy took its wing,

I sat, but neither heard or saw : Though this was fair, and that was braw. And yon the toast of a' the town. Burns. That a people beset with such real and imaginary bugbears, should fancy themselves dreaming, even when awake, of corpses, and graves, and coftiiis, and other terriijle things, seems natural enough ; but that their visions ever tended to any real or useful disco- very, I am much inclined to doubt. Beatlic. O'er fancied injury Suspicion pines.

And in grim silence gnaws the festering wound ; Deceit the rage-imbittered smile refines.

And Censure spreads the viperous hiss around.

Id. Pulci was sire of the half-serious rhyme.

Who sang when chivalry was more Quixotic, And revelled in the fancies of the time.

True knights, chaste dames, huge giants, kings despotic. Byron,

Not that against her fancied weal His heart though stern could ever feel ; Affection chained her to that heart; Ambition tore the links apart. Id,

At intervals, some bird from out the brakes Starts into voire a

moment, then is still. There seems a floating whisper on the hill. Hut that is fancy, for the starlight dews

All silently their tears of love instill. Weeping themselves away, till they infuse Deep into Nature's breast the spirit of her hues. Id. Childe Harold.

FAND for found. It is retained in Scotland.

This when as true by tryal he out fand. He bade to open wide his brazen gate. Spemer. FANE, ra. s. 'FT.fa7ie;L?it.J'a7ium. A tem- ple ; a place consecrated to religion. A poetical word.

"Sot fane nor capitol. The prayers of priests, nor times of sacrifice, Embarments all of fury, shall lift up Their rotten privilege. Shakspeare. Coriolanus.

Old Calibe, who kept the sacted fane Of Juno, now she seemed. Dryden's Mneid. Yet some to fanes repaired, and humble rites Performed to Thor and Woden, fabled gods. Who with their votaries in one ruin shared.

Phili'ps. A sacred /ane in Egypt's fruitful lands. Hewn from the Theban mountain's rocky womb.

TickeU. The fields are ravished from the industrious swains. From men their cilies, and from gods their /unes.

Pope. In every storm that either frowns or falls. What an asylum has the soul in prayer ! And what z. fane is this in which to pray ! And what a God must dwell in such a fane I

Young. Fanes, bulwarks, mountains, worlds, their tempest whelms : Yet glory braves unmoved the' impetuous sweep. Fly then, ere, hurled from life's delightful realms. Thou sink t' Oblivion's dark and boundless deep.

Beattie. FA'NFARON, n. s. \ French, from the Spa- Fa'nfaronade. i nish. Originally in Ara-

bic it signifies one who promises what he cannot perform. A bully; a hector; a blusterer.

Virgil makes jEneas a bold avower of his own vir- tues, which, in the civility of our poets, is the charac- ter of a.fanfaron or hector. Dryden.

The bishop copied this proceeding from the fanfa- ronade of Monsieur BoufBeurs. Swift.

There are fanfarons in the trials of wit too, as well as in feats of arms ; and none so forward to engage in argument or discourse as those that are least able to go through with it. L'Estiange.

FANG, V. a. &w. s.n Sax. panjen, penmen, Fang'led, arf/'. # to seize; Goth. ˆa«gfl; Fang'le, n. s. \ Belg. vangen : vang is

Fangled'ness, n. «.i still used in the West Fang'less, adj. y of England. To seize; grasp ; gripe : as a substantive, it means that by which an animal seizes or lays hold of its prey ; hence the tusks of the boar, the teeth of the lion, &c., have this name; and any remarkable tooth- like protuberance r fanged is furnished with fangs or long teeth : a fangle is an attempt ; a scheme: fangledness, idle scheming; fangled, fashioned; made; hence * new fangled,' is new fashioned ; trifling : fangless, toothless.

Quick wits be in desire nesv fangled, and in purpose UDconstant. Ascham.

— In his hand a burning hart he bare.

Full of vainc follies and ncvt fanglednesse ; For he was false and fraught with ficklenesse. Spenser's Faerie Queene. Destruction fang mankind !

Shakspeare. Timon.

My two schoolfellows. Whom I will trust as I will adders /anjfei, They bear the mandate. Id. Handel.

The king hath wasted all his rods On late offenders, that he now doth lack The very instruments of chastisement ; So that his power, like to a fangless lion, May offer, but not hold. Id. Henry IV,

A book ! oh, rare one ! Be not, as in this fangled world, a garment Nobler than that it covers. Id. Cymbeline.

Some creatures have overlong or outgrowing teeth, which we call fangs or tusks ; as boars, pikes, sal- mons, and dogs, though less.

Bacon's Natural History.

The fangs of a bear, and the tusks of a wild boar, do not bite worse, and make deeper gashes, than a goosequill sometimes : no not even the badger him- self, who is said to be so tenacious of his bite, that he ■will not give over his hold till he feels his teeth meet, and the bones crack. Howell.

Prepar'd to fly. The fatal /anˆ drove deep within his thigh, Aud cut the nerves : the nerves ne more sustain The bulk ; the bulk unpropped, falls headlong on the plain. Dryden.

Then charge, provoke the lion to the rage Of fangs and claws, and, stooping from your horse. Rivet the panting savage to the ground. Addison,

A hatred to fangles and French fooleries.

A. Wood.

Not Scythians, nor fierce Dacians, onward rush With half the speed, nor half so swift retreat : In chariots, _/anˆfd with scythes, they scour the field. Drive through our wedged battalions with a whirl. And strew a dreadful harvest on the plain. Philips.

The protuberant /an(/s of the yuca are to be treated like the tuberoses. Evelyn's Kalendar.

FA'NNEL, 71. s. Yr.fanon. A sort of orna- ment like a scarf, worn about the left arm of a mass-priest when he officiates.

Item, a suite of vestmentes of blewe velvette ; with albes, stoles, and funnels, agreeable.

Will of S. T. Pope.

FANO, a well built manufacturing town and bishop's see of the papal state, in the legation of Ancona. It is walled, and contains a noble square, and several churches, with elegant paint- ings ; also an academy, a library, and opera-house. Silk is the staple commodity. The town contains, among other remnants of antiquity, the ruins of a triumphal arch ; and was anciently called Fanura Fortunae, from a temple built here to Fortune, after the defeat of Asdrubal by the

Romans. Near this place also Narses obtained a victory over Theia, king of the Goths. It was destroyed by Totila, and rebuilt by Belisarms. Population 7500. Sixteen miles E. N. E. of Urbino, and thirty-two north-west of Ancona.

Fang (the ancient Othanus, Uphanus, and Calypso), a small rocky island, north-west of Cape Sidero, in the island of Corfu. It commands a complete view of the adjacent navigation of the Adriatic. Population 500, chiefly Greeks. Long, of the northern extremity, 19° 32′ E., lat. 39° 45′ N.

Fang, Cape, a promontory of Norway, in lat. 70° 30′ N.

Fanoe, a small island of Denmark, near North Jutland, opposite the town of, Rypen. It is about fifteen miles in circumference, and has a

considerable shipping trade. Population 2300. Long. 9° 43′ E., lat. 55° 25′ N.

FANSHAW (Sir Richard), a celebrated ambas- sador, was the son of Sir Henry Fanshaw of Ware Park in Hertfordshire, and was born about 1607. In 1635 he was employed by king Charles I., and sent resident to the court of Spain ; whence, being recalled in 1641, he adhered to the royal interest, and was employed in several important matters of state. At the restoration he was made master of the requests ; a station in those times of considerable profit. In 1661 he was sent envoy to Portugal ; and, in 1662, with the title of am- bassador; when he negociated the marriage of Charles II. with the infanta Catherina. Upon his return he was made a privy counsellor. In 1664 he was sent ambassador to both Spain and Portugal ; at which time the foundation of peace betwixt those crowns and England was laid by him. His conduct during his former employ- ments in those courts gained him such esteem, that his reception was magnificent, beyond any thing before known ; and which those kings de- clared was not to be a precedent to succeeding ambassadors. He died at Madrid in 1666, on the day he had fixed for his return to England. Besides some original poems, he published a translation of Bathista Guarini’s Pastor Fido, and another of the Lusiad of Camoens. Among his posthumous publications are. Letters during his embassies in Spain and Portugal; with his life prefixed.

Fanshaw, Cape, a cape on the north side of Frederick's sound, and on the west coast of North America. Long. 226° 44′ E., lat. 57° 11′ N.

FANTASIA, in the Italian music, signifies fancy ; and is used for a composition, wherein the composer ties himself to no particular time, but ranges according as his fancy leads, 'amidst various movements, diff'erent airs, &c. This is otherwise called the capricious style : before sonatas were used, there were many of this kind, some of which still remain.

FAN'TASY, n. s. Fan'tasied, adj. Fan'tasm, n. s. Fantas'tic, adj. Fantas'tical, Fantas'tically, adv. Fantas'ticness, n. s. Fantas'tioalness.

Fr. fantasie : Ital. Span., Port., and Lat. fantasia ; Gr. ˆav- raaia, show, parade. Fancy ; imagination ; idea ; whim : fan- tasm, fantasticness, j and fantasticalness,

have the same meaning : fantasied is filled with wild imaginations, or conceits : fantastic, and fan- tastical, imaginary ; irrational ; not real ; capri- cious; uncertain.

Let us shewe our fantasies in such wordes as we lerneden of our dame's tonge. Chaucer.

0 who does know the bent of women's fantasy.

Spenser's Faerie Queene. And with the sug'ry sweet thereof allure. Chaste ladies ears to fantasies impure. Hubbard.

1 would wish that both you and others would cease from drawing the Scriptures to your fantasies and af- fections. Whityift.

I talk of dreams. Which are the children of an idle brain. Begot of nothing but vain fantasy ; Which is as thin of substance as the air. And more inconstant than the wind. Skakspearc.

Go you, and where you find a maid.

That ere she sleep hath thrice her prayers said.

Rein up the organs of hei fantasy.

Sleep she as sound as careless infancy. Id.

I'll knit it up in silken strings. With twenty odd conceited true love knots : To be fantastich may become a youth Of greater time than I.

Id. Two Gentlemen of Verona. Present feats Are less than horrible imaginings : My thought, whose murther yet is hut fantastical. Shakes so my single state of man, that function Is smothered in surmise; and nothing is. But what is not. Id, Macbeth.

Are ye fantastical, or that indeed Which outwardly ye shew ? Id.

England is so idly kinged. Her sceptre so fantastically borne. By a vain, giddy, shallow, humourous youth. That fear attends her not. Id. Henry V.

Vain delight, thou feeder of my follies. With light fantasticness, be thou my favor !

Beaumont and Fletcher. These spirits of sense, in fantasy's high court. Judge of the forms of objects, ill or well ;

And so they send a good or ill report Down to the heart, where all affections dwell.

Davies. They put such words in the mouths of one of these fantastical mind-infected people that children and musicians call lovers. Sidney.

I dare not assume to myself to have put him out of conceit with it, by having convinced him of the fan- tasticalness of it. Tillotson. Preface.

One cannot so much a.3 fantastically chuse, even or odd, he thinks not why. Grew's Cosmologia.

We are taught to clothe our minds as we do our bodies, after the faihion in vogue : and it is accounted fantasticalness, or something worse, not to do so.

Locke. The delight that a man takes from another's sin, can be nothing else but a fantastical, preternatural complacency, arising from that which he really has no feeling of. South.

Duumvir is provided with an imperious, expensive, and _/an

Tatler. Mankind may be divided into the merry and the serious, who, both of them, make a very good figure in the species, so long as they keep their respective humours from degenerating into the neighbouring ex- treme ; there being a natural tendency in the one to a melancholy moroseness, and in the other to a fan- tastic levity. Addison.

We are apt to think your medallists a little/antes/i- cal in the different prices they set upon their coins, without any regard to the metal of which they are composed. Id.

Nor happiness can I, nor misery feel. From any turn of her fantastic wheel. Prior.

By the power oi fantasy we see colours in a dream, or a mad man sees things before him which are not there. Newton.

Men are so possessed with their own fancies, that they take them for oracles ; and are arrived to some extraordinary revelations of truth, when indeed they do but dream dreams, and amuse themselves with the fantastich ideas of a busy imagination.

Decay of Piety. A heavenly mind May be indifferent to her house of clay. And slight the hovel as beneath her care ;

But hovr a body so fantastic, trim, And quaiat in its deportment and attire, Can lodge a heavenly mind— demands a doubt.

Covaper.

Your plaj-ful trains, on sultrj' islands born. Turn on fantasticioe at eve and morn ; With soft susurrant voice alternate sweep Harth's green pavilions aud encircling deep.

Darwin. There with a little tinge of Phantasy, Fantastic faces moped aud mowed on high. And then a mitre or a shrine would fix The eye upon its seeming crucifix. Byron,

FANTEES, once a numerous and powerful race of Africans, on the Gold Coast, extended their influence from Cape Coast to Acra, and in the interior to the frontier of Ashantee. Many years ago they were subject to tl>e latter power ; but threw off tlieir allegiance: latterly the Asimn- tees have poured down upon them in such num- bers, that they have almost extirpated this race. They are in the immediate neighbourhood of our forts, aud governed by several magistrates called pynins, generally chosen by the public ; but some claim an hereditary right to their office. The laws are strictly executecl ; and great crimes are said to be rare, especially since the cessation of the slave trade. Yet these people are described as very litigious, and often

plead their own cause with great ability. Polygamy prevails amongst them universally ; girls become women at the early age often, and boys men at twelve. Their decline is equally quick, and begins at the pe- riod when both sexes, in temperate climates, ar- rive at full maturity. The first wife, however, generally has the sole management of the domes- tic concerns. Any female whose virtue is sus- pected is made to swallow a quantity of a certain species of bark, to which large draughts of water are added ; when if the whole be retained on the stomach she is considered guilty, if otherwise, innocent. The dress of each sex consists of a piece of cloth wrapped loosely about the body. This garment is fastened round the waist by a girdle or zone, called a tombah, to which women of rank have a number of silver keys suspended. A Fantee may be known from other Africans, by small scarifications on the upper part of the cheek bones, and on the back of the neck. Both men and women are cleanly. Pepper is a uni- versal ingredient in all their dishes,-of which the principal is fish, or poultry made into soup. It is eaten with a pudding of yams or plantains, or with the bread of the country, which is made of maize.

The Assins, a smaller nation, were fix ed in 1 806 between theFantees and Ashantees, and agitated at that time with internal divisions; one of the par- ties appealed to tlie monarch of the Ashantees, who, being thus furnished with a ground for in- terfering in the disputes, from an arbitrator soon became a party, and, attacking the adversaries of his clients, compelled them to retire into the country of the Fantees, where the Ashantees re- solved to follow and punish the Fantees for af- fording their enemies an asylum. This brotight them into the vicinity of one of our forts, the governor of which wished to send a flag of truce to treat with the invaders, who had advanced to

within fifteen miles of our garrison. The Fan- tees disapproved of the mission, and in conse- quence of it tiie mediation of the British officer was not proposed : when it was afterwards of- fered it was rejected, TheFantees in Anamaboe, a town surrounding our fort, were confident in their powers to resist tlie attack of the Ashantees ; but when it was made they behaved with great cowardice, and were defeated with a slaughter, by which two-thirds of a population of 15,000 were destroyed. Part of the fugitives took shel- ter under the guns of our fort, whilst the aged, the infirm, and infants, were secure within it. In the heat of the battle accidental rather than de- signed hostilities passed between the conquerors and the English garrison. They soon ceased, however, and a good understanding was estab- lished. Soon afterwards a meeting took place between the king of the Ashantees and colonel Torrane, the governor-in-chief of the English forts, which led to some amicable arrangements, and especially saved from death

the numerous poor creatures secured within the fort. These circumstances led to the mission of JVIr. Bowdich to Ashantee, noticed under that article. The first part of his journey was through the country before-possessed by the Fantees. It had Telt the scotirge of war ; and though the soil was good, and the vegetation flourishing, there was a great scarcity of food for the few remaining inhabitants. At a village called Payntree, the mission first began to see something of the domestic life of these half civilised negroes. They remained there a day to procure provisions for their journey ; and Mr. Bowdich says, ‘ I walked with Mr. Tadlie along a very neat path, well fenced and divided by stiles, to a corn plantation of at least twenty acres, and well cultivated. Payntree’s farm house was situated here, and afforded superior conveniences ; a fowl-house, a pigeon-house, and a large granary raised on a strong stage. As we returned we paid him a visits and were refreshed with some excellent palm wine ; his dwelling \yas a square of four apartments, which were en- tered from an outer one, where a number of drums were kept ; the angles were occupied by the slaves; and his own room, which had a small inner chamber, was decked with muskets, blun- derbusses, cartouch belts fantastically ornament- ed, and various insignia. The order, cleanliness, and comfort surprised us : the sun had just set, and a cheerful fire on a clean hearth supported the evening meal. The old man was seated in his state chair, diverting himself with his child- ren and younger wives ; the elder one was look- ing on from the opposite apartment, with happy indiflference : it was the first scene of domestic comfort I had witnessed among the natives.’ p. 18. As the journey proceeds Mr. Bowdich de- scribes the face of this country, and the prospects around them, in glowing colors.

FANUM, among the Romans, a temple or place consecrated to some deity. The demigods among the heathens had likewise their fana ; and even Cicero erected one to his daughter TuUia.

Fanum Vacunˆ, in ancient geography, a vil- lage of the Sabincs, situated between Cures and Mandela ; where stood the temple of Vacuna, goddess of the idle or unemployed, in an old de-

cayed state; and hence the epithet putre, used by Horace. It is now called Vocone.

FAOUA, or Foua, a town of Lower Egypt, on the east bank of the western or Rosetta branch of the Nile. It is supposed to be the ancient Naucratis, and was built by the]\Iilesians in the reign of

Psammitichus ; it formerly communi- cated with Alexandria by the canal, but this is no longer navigable. Long. 31° E., lat. 31° IC N.

FAOUET, a town of Brittany, France, on the Elle; in the department of the Morbihan. Popu- lation 2600. Twenty-eight miles west by south of Pontivy.

FAP, adj. Fuddled ; drunk. It seems to have been a cant word in the time of Shaks- peare.

The gentleman had drunk himself out of his fivo senses ; and being fap, sir, was, as they say, ca- shiered. Shakspearc.

Faquier County, in Virginia, United States, is bounded north by London, and east by Prince William county. It is about fifty-five miles long, and twenty broad ; and contained, in 1816, 22,689 inhabitants. Warren Town is the chief place.

FAR

FAR. adv. & adj. Far'fetch, n. s. Far'fetched, adj. Far'fet, Far'most, Far'ness, n. s. Far'piercing, adj. Far'shooting, Far/ther, Far'thest.

Sax. peoji; Isl. far; varre, ver ; Goth.

far ; all, perhaps, from the Gr. Tropow, longe. (To a great extent, in '^any direction ; to a dis- tance ; in great part or proportion ; in a certain point or degree. As an adjective, far means

distant; remote ; further: it is used also ellipti- cally, for from a distant place ; ' far off' ex- presses a great distance, or to a great distance; and off is joined with far, when the latter is not followed by a preposition, as, ' I set the nets far off,' meaning i&xfrom a supposed object. Re- specting the comparative and superlative degrees of far, Dr. Johnson says (under ' farther '), that no analogy can make far into farther or farthest ; but the fact is, the Saxon language is the direct origin of all these forms of the word, and has J'eor, feorre, and feorrest, in the three degrees. A far-fetch is a deep stratagem or trick. Far- fetched, brought from far, or over-labored ; far- fet, a compound of far and fet, an obsolete syno- nyrae of fetch. See Fet : far-most, is a redund- ant superlative of far: the examples will explain the other compounds.

And Zacarye seyde to the aungel : whereof schal Y wyte this ? for Y am old : and my wyf hath gon J'er in bir dayes. Wiclif, Luk vii.

The yongere sone wente forth in pilgrimage into a fer cuntree and ther

he wastidc hise goodis : in lyuynge locherously. Id, Luk xv.

The Lord shall bring a nation against thee from far, from the cud of the earth. Deut. xxvii. 49.

When they ■were by Jehus the day vrSiS far spent.

Judges.

A man taking afar journey. Blark.

Beare the not proude, nor take not out of measure, Bylde not thyne house on heyth vp in the skye, Nonne falleth farre, but he that climbeth hyc.

Sir T. More. But yet more mindful! of his honour dearc,

TLeu of the grievous smart which him did wring.

From loathed soile he gan him lightly reaxe.

And strove to loose the /ar-infixed sting.

Spenser. Faerie Qucene. And after that long strayed here and there.

Through every field and forest /ar and near.

Hubbard.

In a kingdom rightly ordered, after a law is once published, it presently takes eircct/«r and wide ; all states framing themselves thereunto. Hooker.

Yet it must be withal considered, that the greatest part of the world are they which be furthest from perfection. y^_

He sent light-horsemen into Mesopotamia with a guide, because the country was unto him best known • following not far after himself with all his army.

K/wllet. Answer them How/a»- forth yoa do like their articles.

Shakspeare. These things seem small and undistiuguishable. Like far off mountains turned into clouds. Id.

York, with all hhfarfel policy. Id.

Is it far you ride ? — As far, my lord, as will fill up the time ‘Twixt this and supper. Id. Macbeth.

Be factious for redress of all th&se griefs. And I will set this foot of mine as far As who goes f art/test. Id. Julius Caesar.

I do not think So fair an outward, and stuff within. Endows a man but him.

You speak him far.

1 don’t extend him, sir. Id. Cymbeline.

li we may behold in any creature any one spark of that eternal fire, or any far off dawning of God’s glorious brightness, the same in the beauty, motion, and virtue of this light may be perceived. Raleigh.

Not to resolve, is to resolve ; and many times it breeds as many necessities, and eugageth as far in some other sort, as to resolve. Bacon.

Those countries have far greater rivers, and ˆur higher mountains to pour down waters, than any part of the old world. Id.

Far be it from me to justify the cruelties used towards them, which had their reward soon after.

Id. Holy War. Such a communication passeth far better through the water than air. Id. Natural History.

And yet the lights which ia my tower do shine. Mine eyes, which view all objects nigh and /ar. Look not into this little world of mine. Daviet,

Of this I need not many words to declare how ybr it is from being so much as any part of repentance.

Hammond, And he, like some imperious Maronist, Conjures the Muses that they him assist ; Then strives he to bumbast his feeble lines With farre-fetcht phrase. Bp. Hall’s Satires. Cherubic watch, and of a sword the flame Wide-waving, all approach _/ur oˆto fright. And guard all passage to the tree of life. Milton.

God hath bid dweliyar off all anxious cares. And not molest us ; unless we ourselves Seek them with wandering thoughts, and notions vain. Id. j

Of these things others quickly will dispose. Whose pains have earned

the farfetched spoil.

Id. Then, to perform the care so well begun. To him I showed this glorious setting sun. How, by her people's looks pursued frotn far, She mounted on a bright celestial car. Outshining Virgo, or the Julian star. Matvcll.

But Jesuits have deeper reaches, In all their politicli farfetches ; And from their Coptick priest, Kirchorus, Found out this mystick way to jeer us.

Hudibras, He meant to travel into far countries, until his friend's affection either ceased or prevailed. Sidttey. The face of war, In ancient times, doth differ /ar From what our fiery battles are. Waller. Of negatives we have far the least certainty, and they are usually hardest, and many times impossible to be proved. Tillotson.

The nations far and near contend in choice. And send the flower of war by publick voice.

Dryden. But from the reading of my book and me. Be far, ye foes of virtuous poetry ! Who fortune's fault upon the poor can throw. Point at the tattered coat and ragged shoe. Id. The field is spacious I design to sow. With oxen far unfit to draw the plough. Id. Far off you view them with a longing eye Upon the topmost branch . Id.

By his command we boldly crossed the line. And bravely fought where southern stars arise : We traced the farfetched gold into the mine. And that which bribed our fathers made our prize.

Id. Then loud he called ˆEneas thrice by name ; The loud-repeated voice to glad jEneas came ; Great Jove, he said, and the farshooting god. Inspire thy mind to make thy challenge good. Id.

The painted lizard and the birds of prey. Foes of the frugal kind, he far away. Id. Virgil.

A spacious cave, within its farmost part. Was hewed and fashioned by laborious art. Through the hill's hollow sides. Id. ˆneid.

No true Egyptian ever knew in horses The far side from the near. Id, Cleomenes. Their nearness on all quarters to the enemy, and their farness from timely succour by their friends, have forced the commanders to call forth the utter- most number of able hands to fight. Careva.

They contented themselves with the opinions, fa- shions, and things of their country, without looking any farther. Locke.

The custom of these tongues sometimes so yjir in- fluences the expressions, that in these epistles one may observe the force of the Hebrew conjugations. Id. On St. Paul's Epistlet. I had always a curiosity to look back into the sources of things, and view in my mind, so far as I was able, the beginning and progress of a rising world. Burnefs Theory. Till on the Po his blasted corps was hurled. Far from his country in the western world.

Addison. Inured to blood ; thcyar destroying dart. And the best weapon, an undaunted heart. Id, Vast and great Is what I love; the /ar- extended ocean To a little rivulet I prefer. Prior.

Pay sacred rev'rence to Apollo's song. Lest wrathful the far-ahooting god emit His fatal arrows. Id.

VoT far-fetched rhymes make puzzled angels strain. And in low prose dull Lucifer complain. Smith,

With costly cates Rome stained her frugal board ; Then with ill-gotten gold she bought a lord : Corruption, discord, luxury combined, Down sunk theyur-famed mistress of mankind.

Arbrithnot.

Besides he's lovely yar above the rest. With you immortal, and with beauty blest.

Pope, Ah ! hope not yet to breathe thy native air ; Far other journey first demands thy care. Id.

From the same lineage stern jEetes came. The /(jr-famed brother of the enchantress dame.

Id. Atlas, her sire, to whose farpiercing eye The wonders of the deep expanded lie ; The' eternal columns which on earth he rears. End in the starry vault and prop the spheres. Id. Under this head we may rank those words which signify different ideas, by a sort of an

unaccountable far-fetched analogy, or distant resemblance, that fancy has introduced between one thing and another ; aa when we say, the meat is green when it is half roasted. Watts.

His style was well suited to his thoughts, which are never subtilized by nice disquisitions, decorated by a sparkling conceit, elevated by ambitious sen- tences, or variegated hy far-sought learning.

Johnson, Life of Swift. In shining rays the scaly monster spreads O'er ten square leagues hisyV/r-diverging heads ; Or in one trunk entwists his tangled foi-m. Looks o'er the clouds, and hisses in the storm.

Darwin, Far, n. s. Contracted from farrow. The offspring of a sow ; young pigs.

Sows, ready to farrow at this time of the year. Are for to be made of and counted full dear ; For now is the loss of the fur of the sow More great than the loss of two calves of the cow.

Tusser.

FARADEESE, a town of Tunis, Northern Africa, not far from the sea-coast. It was an old Roman town, probably Veneria or Aphrodisium. The inhabitants m the sixteenth century were celebrated pirates and seamen. It is twelve miles west of Hamamet, and thirty south of Tunis.

FARCE, V. a. &n. t."^ Yt. farcer ; Italian,

Far'cical' adj. >farcire ; ha.t. Jar cio, to

Far'cically, arfr. j stuff. The verb has been rarely used in our language, except for what we now express by ' force' in respect to meat and pastry ; to fill with mingled ingredients ; but Shakspeare uses it for to extend or swell out. The substantive is applied to an irregular and mixed dramatic representation, * stuffed with wild and ludicrous conceits,' as Dr. Johnson says ; but the old French verb farcer signifies to mock or laugh at.

' Tis not the balm, the sceptre, and the ball, The sword, the mace, the crown imperial. The entertissued robe of gold and pearl, The farced title running 'fore the king. Shakspeare.

Wrestling is a pastime which either the Comish- men derived from Corineus, their first pretended founder, or at least it ministred some stuff to the /arc- ing of that fable. Carew.

The first principles of Christian religion should not be/arcedwith school points and private tenets.

B}. Sanderson.

There is yet a lower sort of poetry and painting, which is out of nature ; for a farce is that in poetry which grotesque is in picture : the persons and actions of a/arcearo all unnatural, and the manners false; that is, inconsistent with the characters of mankinil ; grotesque painting is the just resemblance of this.

Dryden's Dufresnoy.

FAR

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FAR

What should be great, you turn io farce. Print. They object against it as a farce, because the irre- gularity of the plot should answer to the extravagance of the characters, which they say this piece wants, and therefore is no farce. Clˆy-

They deny the characters to be farcical, because they are actually in nature. Id.

It is not necessary that he should have recourse to ini3iges farcically low. Lanyhurnc.

To suit our author, and his farce. Short let me be, for wit is scarce ; Nor would I show it, had I any ; The reasons why are strong and many.

Garrick. Farce, comedy, and tragedy, Wilkes, Foote, and Junius, united at the same time against one poor par- son, are fearful odds. H. Tooke.

Farce was originally a droll, petty show, ex- hibited by charletans, and their buffoons, in the open street to gather a crowd together. The word is French, and signifies literally, stuffing ; from the Latin farcio, to stuff. It was applied to this species of entertainment on account of the variety of jests, gibes, tricks, Sec, with which it was interlarded. At present it is acted by comedians in the theatre, and becomes the enter- tainment of a polite audience. In other words, poets have reformed the wildness of the primitive farces, and brought them to the taste and

manner of comedy. The difference between the two is, that comedy keeps to nature and probability, and therefore is confined to certain laws pre- scribed by ancient critics ; whereas farce disal- lows all laws. Its end is purely to entertain; and it gathers some of its most effective materials from the wild and extravagant. Hence the dia- logue is usually low, the persons of inferior rank, the fable or action trivial, and nature and truth every where heightened and exaggerated to afford the more palpable ridicule. See Drama.

FAR'DEL, n. s. Ital. fardello ; Fr. furdeau. A bundle ; a little pack.

Let us to the king; there is that in th.K fardel will make him scratch his beard. Shahspeare.

Who would fardels bear. To groan and sweat under a weary life ? Id.

FARE, V. n. &, n. s. \ Sax. papan; Goth. Farewell, adv. S and Swed. faran,

fara; Isl. fan, a journey. To go; to proceed; to succeed ; to be in any state, good or bad ; to be sustained ; to take food : the substantive signifies, maintenance ; food for the table ; journey ; passage ; hence price of a passage, journey, or stage : as also the person carried or conveyed. Farewell is the imperative of fare, and well : we preserve the words separate in the plural ' fare you well,' and the Dutch and Swed- ish unite them as we do, in their vaarwel and farwal. It is a parting salute, with various de- grees of compliment and kindness implied.

He found a ship going to Tarshish ; so he paid the fare thereof, and went down into it, to go with them unto Tarshish. Junah.

The rich man ybrerf sumptuously every day. Luke, One knocked at the dore, and in would _/are; He knocked fast, and often curst and sware. That ready entrance was not at his call.

Spenser's Faerie Queene. So bids thee well to fare thy nether friend. Id. At last, resolving forward still to fare, Until the blustering storm is overblown. Id.

Thus it far eth when too imuli desire of contradic- tion causeth our speeches rather to pass by number than to stay for weight. Hoular.

See how the morning opes her golden gates. And takes her farewell of the glorious sun.

Shakspeare. Whether we shall meet again, I know not. Therefore our e \er\iistiag farewell take ; For ever, and for ever, farewell, Cassius. Id.

Feast your ears with the musick awhile, if they will fare so harshly as on the trumpet's sound.

Id, Timon. So on \iG fares, and to the border comes Of Eden. Milton's Paradise Lost.

So fares it when with truth falsehood contends.

Milton. But come, so well refreslied, now let us play. As meet is, after such iieVicioan fare. Id.

If chance the radiant sun with farewell sweet Extend his evening beam, the fields revive. The birds their notes renew, and bleating herds Attest their joy, that hill and valley ring. Id.

Men think they have fared hardly, if, in times of extremity, they have descended so low as to eat dogs ; but Galen delivereth, that, young, fat, and gelded, they were the food of many nations.

Browne's Vulgar Errours. But as a barque, that in foul weather. Tossed by two adverse winds together. Is bruised and beaten to and fro, And knows not which to turn him to ; So fared the knight between two foes. And knew not which of them t' oppose.

Hudibras. So fares the stag among the enraged hounds; Repels their force, and wounds returns for wounds.

Deiiham. So in this throng bright Sacharissayurer/, Oppressed by those who strove to be her guard : As ships, though never so obsequious, fall Foul in a tempest on their admiral. Waller.

Well /((re the hand, which to our humble sight Presents that beauty. Id.

Treading the path to nobler ends, A long farewell to love I gave ;

Resolved my country and my friends All that remained of me should have. Id.

His spirits pure were subject to our sight. Like to a man in shew and shape he fared.

Fairfax. He passage begs with unregarded prayer. And wants two farthings to discharge his fare.

Ihyden. This is what nature's want may well suffice; He that would more is covetous not wise : But since among mankind so few there are, . AVho will conform to philosophick_/

/(/.

Farewell, says he ; the parting sound scarce fell From his faint lips, but she replied /artwc.'/. /(/.

Thus /arcs the queen, and thus her fury blows Amidst the crowd. /(/. Aincid.

If you do as I do, you may fare as I fare.

L' Estrange. When the hand finds itself well warmed and covered, let it refuse the trouble of feeding the mouth, or.guurd- ing the head, till the body be starved or killed, and then we shall see how it will /aru with the hand.

South. Several ingenious writers, who have taken their leave of the publick in farewell papers, will not give

FAR

over so, but intend to appear again; though perhaps under another form, and with a different title.

Spectator. English ministers never Jare so well as in a time of war with a foreign power, which diverts the private feuds and animosities of the nation. Addison.

Upon his rising up he oniercd the peasant to set before him whatever food he had in his house : the pea!>ant brought out a great deal of coarse fare, of which the emperor eat very heartily. Id.

Before I take my furewdl of this subject, I shall advise the author for the future to speak his meaning more plainly. Id.

Sadly .\ey fared along the sea-beat shore; Still heaved tlieir hearts. Pope,

O ()ueen, farewell ! he still possest Of dear remembrance, blessing still and blest.

Id. Some are comforted that it will be a common ca- lamity, and they shall fare no worse than their neigh- bours. Swift. Fareu-ell, thou fair diy, thou green earth, and ye skies

Now gay with the briglit setting sun ; Farewell, ioves and friendships, ye dear, tender ties. Our race of existence is run ! Burns,

Fareivell ! if ever fondest prayer

For other's weal availed on high. Mine will not all be lost in air.

But waft thy name beyond the sky. 'Twere vain to speak — to weep — to sigh ; Oh I more than tears of blood can tell. When wrung from guilt's expiring eye. Are in that word — Farewell! — Farewell!

Byron.

FAREIIAM. See Foreham.

FAREL (William), a protestant divine, born at Gap in Dauphiny, in 1498. He studied at PariS, but, having embraced the reformed religion, he thought it adviseable to leave France ; and, after visiting several parts of Germany and Switzerland, he went to Geneva, where he labored with great zeal against popery, and was princi- pally instrumental in establishing the reforma- tion there. He was, however, banished thence, together with Calvin, in 1538, for refusing to submit to the synod of Berne. Farel afterwards settled at Neufchatel, where he died in 1565.

FAR ELLON ES, rocks in the North Pacific Ocean, in two distinct clusters of three or four rock-s in each, lying in a south-east and north-west direction from each other. The highest of the nortiiern group lies fourteen miles S.S.W.; the soutliern cluster lies seventeen miles S.S.W. from Puntadelos Reyes; a third cluster, scarcely above water, lies twelve miles S.S.W. from Punta de los Reyes.

Fareli.ones, five islands of the archipelago or gulf of Chiloe. They are barren and desert.

FARGANI, Alfragan, or Ali-ergani, a celebrated Arabian astronomer, who flourished about A. D. 800 ; so named from his birth-place, Fergan, in Samarcan;(l. He is also named Ahmed Ben Cothair, or Katir. He wrote Elements of Astronomy, in thirty chapters, wherein he chiefly adopts Ptolemy's hypothesis, using his terms and often quoting him. Of this work there are three Latin translations; the last and best by professor Golius of Leyden, published in 1G69, after his death. It is accompanied with tlie Arabic original, and with many learned notes on the first nine chapters, which Golius's death

prevented him from continuing to the end of the work.

FARIA Sous A (Manuel de), a celebrated Portuguese historian and poet, was born in 1590 in tlic province of EntreMinhoy Douro. He devoted the early part of his life to tlie study of painting, but afterwards devoted himself to Greek and Roman literature, and was made secretary to the bisliop of Oporto. Not inclined to the cluirch, he left tlie service of that prelate, and obtaining tlie patronage of Pereira, secretary of state to the king of Spain, procured admission into the Por- tuguese order of the knights of Christ. He was employed in 1631 as secretary to the Spanish ambassador at Rome, whom he so offended, that on his return to Spain, in 1634, he was arrested, and at first closely confined. He was for several years a kind of prisoner at large at Madrid, where he died in 1649. Faria was the author of an Epitome of the History of Portugal ; a poli- tical and geographical survey of the territories belonging to the crown of Portugal in the various quarters of the globe, entitled Asia Portuguesa, 3 vols, folio ; Europa Portuguesa, 2 vols, folio ; Africa Portuguesa, folio ; and America Portu- guesa; Commentaries on the Luciad of Ca- moens, Poems, &,c.

FARINA FoECUNDAKS, among botanists, the impregnating dust on the apices or antherae of flowers. See Pollen. The manner of gather- ing the farina of plants for microscopical obser- vations is this : Gather the flowers in a dry sun- shiny day at mid day, when the dew is perfectly off; then gently shake off the farina, or lightly brush it off with a soft hair pencil, upon a piece of white paper ; then take a single talc or isin- glass between the nippers, and, breathing on it, apply it instantly to the farina, and the moisture of the breath will make that light powder stick to it. If too great a quantity adhere to the talc, blow a little of it off; and, if too little, breathe upon it again, and take up more. Then, put the talc into the hole of a slider, and, applying it to the microscope, see whether the little grains are properly laid ; lastly, cover them up with ano- ther talc, and fix the ring; but be ˆcareful that the talcs do not press upon the farina, so as to alter its form.

FARINA'CEOUS, adj. From Lat. farina. Mealy ; tasting like meal, or flower of corn.

The properest food of the vegetable kingdom for mankind is taken from the farinaceous or mealy seeds of some culmiferous plants ; as oats, barley, wheat, rice, rye, maize, panick, and millet.

Arbuthnot on Aliments.

In the roots of growing vegetables, as in the pro- cess of making malt, the farinaceous part of the seed is converted into sugar by the vegetable power of di- gestion, in the same manner as ihc farinaceoxu matter of seeds is converted into sweet chyle by the animal digestion. Darwin.

FARINATO (Paul), a celebrated painter of Verona, whose works exhibited the same free- dom of design, and boldness of coloring and ex- ecution, to nearly the close of his life, which was protracted to the length of eighty-four years. He died in 1606. His mother is said to have died in childbed previous to his birth, which was effected by the Caesarian operation. A romantic

story is told of liis last moments. Wlieh on his death-bed he said to his wife, who was lying near him dangerously ill, * Oh, my wife, I am going!' ' I will go with thee !' replied she ; and tliey died, it is added, almost at the same moment.

FARM, n.s.&». a. ˆ Sax. peopm, provision Farm'er, 71. s. Sot feeding; Fr. ferine; Goth, and Swed. fara (to cultivate). Ground cultivated, or let out for cultivation ; the state of lands let out for culture : to farm is either to cul- tivate or let out land at certain rates for cultiva- tion ; hence to let out or bargain for the culture or current expenses of things or persons gene- rally ; thus we hear of ' farming out the poor,' hut find, happily, no instance of it : it is also a common phrase among the agriculturalists of some districts that a man 'farms his own land.' A farmer is the actual cultivator of ground, •whether his own or another's ; one who rents any thing.

It is great wilfulnes in landlords to make any longer farms unto their tenants. Spenser,

The lords of land in Ireland do not use to set out their land in farm, for term of years, to their tenants ; but only from year to year, and some during pleasure.

Id. on Ireland. ' Thnu hast seen Sl farmer's dog bark at a beggar, and the creature run from the cur : there thou might'st behold the great image of authority j a dog's obeyed in office. Shakspeare.

We are enforced to farm our royal realm.

The revenue whereof shall furnish us

For our affairs in hand. Id. Richard II.

Touching their particular complaint for reducing lands and farms to their ancient rents, it could not be done without a parliament. Hayward,

They received of the bankers scant twenty shillings for thirty, which the Earl of Cornwall farmed of the king. Camden's Remains.

Nothing is of greater prejudice to the farmer than the stocking of his land with cattle larger than it will bear. Mortimer's Husbandry.

I entered on this farm with a full resolution, " Come, go fo, I will be wise !" I read farming books ; I calculated crops ; I attended markets ; and, in short, in spite of " the devil, and the world, and the flesh," I believe I should have been a wise man. Burns.

For gold the merchant ploughs the main,

The farmer ploughs the manor ; But glory is the sodger's prize j

The sodger's wealth is honour. Id.

Farm, Farin, or Ferm, (Firma,) in law, sig- nifies a country messuage or district ; cantaining house and land, with other conveniences ; hired, or taken by lease, either in writing, or parole, under a certain yearly rent. See Lease. This in some parts is differently termed : in Scotland, it is a tack; in Lancashire, fermeholt; in some parts of Essex a wike, &c. In corrupted Latin firma signified a place enclosed or shut in ; whence in some provinces. Menage observes, they call closerie or closure, what in others they call a farm. We find locare ad firmam signifies to let to farm ; probably on account of the sure hold tlie tenant here has in comparison of tenants at will. Spelman and Skinner liowevcr, derive the word farm from the Saxon fearme, or feorme, provi- sion ; because the country people and tenants anciently paid their rents in victuals and other necessaries, which were afterwards converted into

the payment of a sum of money. Whence a farm was originally a place that furnished its landlord with provisions. And among the Nor- mans they still distinguish between farms that pay in kind, i. e. provisions, and those which pay in money; calling the former simply fermes, and the latter blanche ferrae, white ferm. Spelman shows, that the word firma anciently signified not only what we now call a farm, but also a

feast or entertainment, which the farmer gave the proprietor, for a certain number of days, and at a certain rate, for the lands he held of him. Thus fearme in the laws of king Canute is rendered, by Mr. Lambard, victus; and thus we read of red- dere firmam unius noctis; and, reddebal unum diem de firma; which denote provision for a night and day, the rents about the time of the conquest being all paid in provisions; which custom is said to have been first altered under Henry I.

It might have been expected, that the first essays of improvement on a farm, should have been, to make it both advantageous and delight- ful ; but the fact was otherwise : a small spot was appropriated to pleasure ; the rest was reserved for profit only. And this seems to have been a principal cause of the vicious taste which long prevailed in gardens. See Gak- DENixG. It was imagined that a spot apart from the rest should not be like them ; this introduced deviations from nature, which were afterwards carried to such an excess, that hardly any objects tnily rural were left within the enclosure, and the view of those without was generally excluded. The first step, therefore, towards a reformation, was by opening the garden to the country, and that immediately led to assimilating them ; but still the idea of a spot appropriated to pleasure only prevailed, and one of the latest improve- ments has been to blend the useful with the agreeable : even the ornamental farm was prior in time to the more rural; and we have at last returned to simplicity by force of refinement.

The country in the time of our ancestors was neither entirely cleared nor distinctly divided ; the fields were surrounded by woods, not by hedges; and, if a considerable tract of improved land lay together, it still was not separated into a numloer of enclosures. The farms, therefore, most approaching to this character, are those in which cultivation seems to have encroached on the wild, not to have subdued it; those, for in- stance, at the bottom of a valley where the sides are still overgrown with wood : and the outline of that wood is indented by the tillage creeping more or less up the hill. If the pastures are here broken by straggling bushes, thickets, or coppices, and the scattered trees beset with brambles and briars, these are circumstances which improve the beauty of the place; yet appear to be only remains of the wild, not in- tended for embellishment. Such interruptions must, however, be less frequent in the arable jiarts of a farm ; there the opening may be divided into several lands, distinguished, as in common fields, only by different sorts of grain. These will sufficiently break the sameness of tlic space ; and tillage does not furnish a more pleasing scene, than such a space so- broken, if

the extent be moderate, and the boundary beau- tiful. As much wood is essential to the imitation of tiie farms of our ancestors, a spot may easily be found, where turrets rising above the covert, or some arches seen within it, may have the resemblance of a i-istle or abbey. The partial concealment is almost necessary to both ; for to accord with the age, the buildings must seem to be entire ; the ruins of them belong to later days : the disguise is, however, advantageous to them as objects; none can be imagined more pic- turesque tlian a tower bosomed in trees, or a cluster appearing between the stems and the branches. Pieces of water are also a great addi- tional beauty in such a scene ; and all the varieties of rills are consistent with every species of farm.

Farming is, however, a serious and very im- portant pursuit with a large portion of our coun- trymen ; who can but very slightly regard the mere external beauties of the scene of their la- bors. In our article Agriculture we have largely discussed the scientific basis and connec- tions of that pursuit ; and referred, as we must here do, to tkit of Husbandry for the practical rules and details of farming. We shall only in this place suggest a few principal considerations on the laying out of farm-lands, the construction of farm-buildings, or farmeries, as they have been called of late, and the keeping of farm accounts; topics, which may with propriety be thus de- tached from our larger articles.

1. On the haying out of Farm Lands. — On the supposition of our being able to follow na- ture in the distribution of farm lands, or indeed in almost any ordinary departure from her dic- tates, the first object of attention to the proprie- tor of an estate should be its natural characteris- tics, lie should consider it as in a state of nature, and without inhabitants; observing the elevation and general turn of its surface, whether it consists of mountain, upland, vale, or water-formed land ; ascertaining at the same time its soils, the absorbencyor retentiveness of the sub- strata, determining to what uses its several parts are adapted. Having, for instance, determined on the sheep-walk and grazing ground, he should trace the natural and fortuitous lines of the cultu- roble lands ; as the feet of steep hills, the ridges of uplands, large rivers, public roads, he. Where an extent of newly appropriated lands is concerned, he must endeavour to lay them out into what may be termed natural farms, of such sizes as will bring the most permanent rent at the least expense of buildings, yards, separate roads, and fences.

A first object of consideration will now be, the most natural or eligible sites for farm-steads; laying to those which are the most eligible such lands as by natural situation and quality belong to them. The principal recpiisites of a home- stall, for a farm in mixed cultivation, are shelter and water for domestic and farm-yard purposes, with some permanent grass ground below the yards, to receive the overflowings of the dung-basins, that nothing of manure may escape or be lost. If lands lie in a shelving situation, it is de- sirable to have the home-stead near the midway of the slope ; thus having lands above as well as below the yards ; so that neither tV.ˆ whole of the

crops, nor of the dung, may require to be drawn agauist the hill at one time. A dip, or shallow valley, with a natural stream falling down it, and with lands in the lower part of it, which are capable of being converted into watered mowing- ground, will, speaking generally, prove a desira- ble site for a home-stead.

An inhabited estate however, with the farm- steads and fences fixed, and the buildings substantial, requires much thought and care to reform as to its general distribution. The lands of different farms often lie scattered and inter- mixed through circumstances perhaps that were originally unavoidable ; through indulgencies to favorite tenants; or through the ignorance or negligence of managers ; but something may generally be done towards lessening or remedy- ing this evil ; opportunities may be watched, and amicable changes between tenants made. Lands which lie compact and conrenient to the home-stall are worth far more to an occupier than those of the same intrinsic value, scattered at a distance; so that by this sort of exchange an advantage may sometimes be secured to two or more tenants at the same time.

Where the farms are too large, or the farm- steads very improperly placed, but the existing buildings are in a substantial state, it requires t© be calculated whether the increase of rent, by any proposed alteration of them, will pay for the money required to be laid out in making it, taking into the account the superiority of new buildings. The erecting of an entire range of farm-buildings, with the requisite appendages, is an undertaking which of course demands mature consideration. There are cases, however, in which it may be effected with profit, and many in which it may be done with credit aad respec- tability to those employed.

Where the farms of an estate have been made too small, suitable consolidations should be made, and each of these be colored on the maps as one farm, the alterations being afterwards made as circumstances may direct; pi

It is to be further remarked, on the subject of laying out farm-lands into suitable tenements, that although compactness of form, and central- ity of home-stall are always desirable, they are not the only objects to be attended to. The specific qualities of the lands of the estate are another subject of consideration. If the lands of an estate are naturally adapted to different pur- poses, as cool strong lands, fit for perennial mowing-grounds, especially if they can be profitably watered, and dry uplands that are suit- able for mixed cultivation only ; a portion of each ought, according to long-established ideas, to be included in every farm: a principle this, however, which is very often destructive of the compactness of form. A more modern opinion is, that perennial grass-lands are not at all neces- sary to profitable farming, cultivated herbage and roots beine enual to all the wants of mofl< > >”

husbandry. Nevertheless, where a suit of meadow and pasture-grounds can be properly united with arable lands, it will generally be for their mutual benefit. But this is to be done by a general arrangement, not by making up disjointed farms with lands lying in distinct and perhaps distant parts of a parish, as we not unfrequently see. For the extra carriage of crops and manure, or the unnecessary and injurious drift of stock, and the waste of manure incurred, together with the mischiefs arising from stock being left at a dis- tance from the eye, and the time lost in passing, on every occasion, between distinct parts of a scattered farm, eventually fall on the proprietor. In fact, where an estate consists of arable lands of different sub-strata, so that some parts are re- tentive of moisture, and others not, it ought to be the aim of the planner to include portions of each in every farm, in order that each occupier may have a regular succession of employment for his teams in a moist season, and in order that, whether the summer prove wet or dry, he may not be destitute either of grass or herbage. In districts of a mixed nature or strata, where a variety of lands are found, this, by due attention, may not unfrequently be done, without much deranging the compactness of the farms.

In the distribution of particular fields, the benefit of having a water meadow below the home-stead has already been pointed out. When this cannot be accomplished, the yard- liquor may be profitably expended on a farm garden ground, to be watered by means of paral- lel trenches, formed across the slope or descent of the ground to receive it; thus conveying the nutritious particles which have escaped

from the dung-yards immediately to the fibrils of the plants while growing, or to the base of the soil into which they are required to strike. And, on every farm in which there is not a sufficiency of watered garden ground, a garden field of some acres for the culture of green herbage and roots with the plough, for horses, cattle, and swine, as well as for culinary purposes, ought to be laid out near the farm-yard. A pasturing paddock or two near the house is likewise a requisite ap- pendage to a home-stead.

Where the dairy is a principal object, dairy- grounds ought in like manner to be laid out near the house, and open into the lobby, green, or milking-yard. But the meadows, or perennial mowing-grounds, may be laid out at a distance with better effect, as it is always convenient to stack hay in the field ; and, if not wanted near the spot, it may generally be brought home, with little inconvenience and expense, as it is wanted. But arable lands cannot lie at a distance from home with propriety ; as, in this case, not only the crops and manure require a length of draught, but the time taken up by the plough-teams in passing to and fro, is an inconvenience. Nor should the pasture-grounds for working stock, whether oxen or horses (where these are pas- tured) be far from the home-stall. But those for store cattle and sheep, woodlands, coppice- grounds, &c., may lie at a distance.

Arable lands must be laid out accordintr, as we have before noticed, to their sizes, the absor- bent or retentive nature of their soils, &c. Vt'here

two sets of arable fields can be laid out, the works of tillage and semination will not be liable to be interrupted by a siiower, and tlie stock of the farm, be the season wet or dry, will not be distressed for pasturage. On a large farm, the lands of which are uniformly absorbent, and consequently adapted to the turnip husbandry, it is proper to have more than one set of arable fields, in order that a sufficient choice of con- tiguous or near fields may be had, over which to distribute the crop, and thus prevent an un- necessary length of carriage. But on rich reten- tive lands, in situations where a good supply of extraneous manure can be procured, or where such lands are united with marsh and meadow grounds, to furnish a sufficiency of hay and pas- turage, without the assistance of arable land, one set of arable fields may be sufficient : four or five fields or divisions are generally found on a small farm. On those numerous English farms, on which a number of manure-making stock are necessary to be supported by the arable lands, a greater diversity of fields is required. It is in this case necessary that the land should be in a state of cultivated heroage two, three, four, or five years. If the arable rotation

occupy four years, therefore, taking three crops of corn witli a fallow crop or fallow intervening, the number of arable fields required for one set of la-ids would be six, seven, eiglit, or nine. The conclusive argument in favor of large arable fields, is, that where fields are small, much time and labor are wasted by short turnings ; and it is now ascer- tained, * that if fields are of a regidar shape, and the ridges of a proper length, five ploughs may do as much work as six plouglis in fields of a small size, and of an irregular shape ; while every other branch of labor (such as dunging, sowing, harrowing, reaping, and carrying in the harvest), can be executed, though not altogether, yet nearly in the same proportion.' Husb. of Scot. vol. i. p. 4 1 . Sometimes, in a bleak situation, it will be found requisite to subdivide the arable fields not only for shelter, but for the greater convenience of shifting and separating stock. The shape, even, of an arable field ought not, in all cases, to be thought a matter of indifference. It should be regulated mainly by the water-courses and roads of the farm, as well as by the nature of its lands, the turn of its surface, and its aspect or exposure. A perfect ssiuare, or parallelogram, is a desirable shape, if circumstances admit of it. Two sides at least ought to run parallel to each other; and it is equally, or more desirable, that each field should have a uniformity of soil and sub-soil, as on these depend the uses to which it is applicable. Yet, where the natural line of division is irregular, it is improper always to follow its windings. The planner ought rather to draw a judicious line between the two, and the cultivator to alter the qualities of the lands, which happen to be unnaturally severed, by draining, manur- ing, &c.

The general direction of the fields should be the same as that in which the land ought to be ploughed for a crop. On a level surface, or on one which is gently inclining, the direction of the beds of retentive lands that require to be laid up in round ridges ought to be nearly north and

south ; in order tluU tlie crops on either side of them may receive equal sun. In this case, con- sequently, the fences, which form the two longer sides of the quadrangle, should take that direc- tion. But, where the surface is steep, this prin- ciple of direction must give way to another of great importance. If the land be retentive, and the soil require to be laid up into round beds, across the slope, tlie direction of the ridges must be guided by the face of the slope ; and the fences, on the general principle, ought to take the same direction ; observing, in this case, where circumstances will admit, to let them wind to the

right of a person standing on the brink of the slope, and facing towards it ; as the beds ought to take that direction for the greater ease in ploughing them. Where the face of a hill is steep, and the land absorbent, the soil requires to be turned downwards of the slope with a turn- wrest or Kentish plough ; and the fences to be directed by the natural lines of the hill.

The supply of water is the main consideration in laymg out grazing grounds, cow grounds, and pasture grounds in general. Wherever good water is found naturally, or can be conveniently brought by art, to that point a pasture ground ought to tend, in order to enjoy the supply as much as possible. In laying out water-meadows, where they are situated on sloping grounds, or the higher sides of which adjoin to upper lands, the .main conductor (where a proper fall from the source of the water will admit of it) ought to define the outline of the meadow on that side; and the fence which separates the meadow lands from the dry grounds ougiit to run immediately along the upper side of the water-course ; the two thus becoming natural guards to each other. Within an extended flat, or an extent of gently shelving meadow grounds, belonging to different propri- etors, and where deep ditches are required to be sunk on the upper sides of the fences, to drain the lands that lie above them, the plan here re- commended would be improper. But in the situations described above it is perfectly eligible, and ought not, in ordinary cases, to be departed from.

The size of fields, it has been observed by a modern writer, must bear some proportion to The strength of the farmer with regard to ploughs and horses. ‘ For instance, where six two-horse ploughs are kept, and where it is difticult, from the nature of the soil, to have the fields of a large extent sufficiently dry, from eighteen to twenty- five English acres are considered to be a conve- nient size. With twelve horses a field of this extent can always be finished in four, or at the utmost in five days. There is less risk, therefore, of being overtaken by bad weather, and prevented from completing the preparation of the land for the internal crop. When the fields are of too great an extent, in proportion to the stock ke])t, a considerable interval must occur between the sowing of the first and of the la.st part ; and it will in general be desirable to have each field cleared at the same time in harvest. The harrowing also is done more economically, when the field is sown at once, than in several portions ; and where rolling is required, that operation being most effectually done across, it cannot well be

accomplished till the field has been completed. Hence the advantages

of having the size of the fields in some degree commensurate to tlie stock of working animals upon the farm.'

' Though on large farms,' continues this writer, ' fields should, in general, be formed on an exten- sive scale, there is a convenience in having a few smaller fields near the farm-house for keeping the family cows ; for turning out young horses, mares, and foals ; for raising a great variety of vegetables ; and for trying experiments on a small scale, which may afterwards be extended, if they shall be found to answer. Where enclo- sures are too large for particular purposes, and where no small fields, as above recommended, have been prepared, large fields may be subdi- vided by sheep-hurdles, a sort of portable fence well known to every turnip-grower. In this way great advantage may be derived from the constant use of land that would otherwise have been occupied by stationary fences ; and the ex- pense of subdivisions, which, on a large farm, would necessarily have been numerous, is thereby avoided. This fence is perfectly effectual against sheep, though it is not so well calculated for stronger animals. On dry soils, where sheep are generally pastured, it is not unlikely that, by using moveable hurdles, the expense of permanent fences might, in a great measure, be saved.'

In the Code of Agriculture it is observed, that ' when a whole farm is divided into fields of various sizes, it is difficult to form a plan, so as to suit a regular rotation of crops, or to keep very accurate accounts. Whereas, by having the fields in general of a large size, the whole strength of a farm, and the whole attention of the farmer, is directed to one point; while an emulation is excited among the ploughmen, when they are thus placed in circumstances which admit their work to be compared. Some small fields are certainly convenient on any farm, for grazing and other purposes, to be afterwards explained. On elevated situations, also, the shelter derived from small enclosures is of use.

Sometimes a farm is situated on both sides of a highway ; in which case all the fields may be made to open into it, either directly or through an intervening field. Here no private road is wantiuK, excepting a few yards to reach the far- mery. But when, as is most generally the case, the lands are situated at a distance from a great road, and approached by a lane or bye-road, then from that bye-road a private road is required to the fiirmcry, and a lane or lanes from it so con- trived as to touch at most of the fields of the farm. In wet and clayey soils, these lanes must be formed of durable materials; but in dry soils, provided attention be paid to fill in the cart ruts as they are formed (by the leading out of dung, or home of corn,) by small stones,

gravel, or even earth, the lane may remain green ; and being fed with sheep or cattle will jiot be altogether lost. It is essentially necessary to make a piece of road at the gate of every en- closure, being the spot which is most frequently in use. Without this precaution, it often becomes a mire where corn is thrown down and spoiled in harvest, or if it is attempted to avoid the mire, the gate-posts and neighbouring fence are

often damaged. (Communications to tiie board of Agriculture, vol. ii.) With good private roads a farmer will perform his operations at much less expense; the labor of the horses will be much easier; a greater quantity or weight of grain and other articles may be more expedi- tiously carried over them ; manure can be more easily conveyed to the fields ; the harvest can be carried on more rapidly; and wear and tear of every description will be greatly reduced. (Code of Agriculture, p. 138.) The gates of fields, it has been observed, should in most cases be placed in the middle of that side of the field which is nearest the road ; and not in an angle, or at one corner, unless particular circumstances point out this as the preferable mode.

On the subject of fences in general see Hus- bandry. Ilespecting one conspicuous boundary of some farms, hedge-row trees, a great dif- ference of opinion prevails. While they im- prove the landscape, it seems to be agreed by tl)e most intelligent agriculturists that they are extremely hurtful to the fence, and for some dis- tance to the crops on each side; and it is evi- dent, that in many instances the highways, on the sides of which they often stand, sufi'er greatly from their shade. It has therefore been doubted, whether such trees be profitable to the proprie- tor, or beneficial to the public ; to the farmer they are almost in every case injurious, to a de- gree beyond what is commonly imagined. (Sup- plement to the Encyclopffidia Britannica article Agriculture.) Loch, however, a well informed improver of landed property, is of a different opinion. He says, there is no change in the rural economy of England more to be regretted, than the neglect which is now shown to the cultivation and growth of hedge-row timber. The injury which it does to the cultivation of the land is much exaggerated, especially if a proper selec- tion of trees is made ; but even the growth of the ash, so formidable to agricvilturists, might be defended on the ground that, without it, the best ihiplements employed in the cultivation of the soil could not be made. It is well known that good hedge- row timber is by far the most valua- ble both

for naval and domestic purposes. Its superior toughness rendering it equally valuable to the ship and to the plough-wright. The value which it is of, in affording shelter, is also of ma- terial use ; besides, the raising of grain is not the only purpose of life, or the only matter to be attended to, nor the only object worthy of atten- tion. The purposes of war and the national glory, the protection and extension of t)ur com- merce, the construction and repair of buildings, and even the enjoyment arising from the rich and beautiful effect produced by such decoration and ornament, are all objects of material importance to the well-being and constitution of a highly cultivated state of society. Even upon the more narrow basis of individual utility, this]iractice might be defended and recommende.d ; for it is not useless to consider how many families and C'states have been preserved, when pressed by temporary difficulties (from which none are ex- empted), from a fall of hedge-row timber. One of the best legacies, that a great proprietor can

leave his country and his family, is an estate well stocked with such trees.

2. Of the arrangement of farm buildings, and the enclosures of a fai'mery. — According to Beatson, the first thing to be taken into conside- ration upon this subject is the nature and pro- duce of the farm : hence may be judged the different kinds of accommodation that will be necessary. Every farm, for example, must have, 1. A dwelling-house; 2. A barn suitable to the extent of arable land in the farm, either with or without a threshing mill, but always with one if possible ; and it should be endeavoured to place it so that it may go by water, if a supply can be had ; 3. Stables', the dimensions of which must be determined according to the number of horses necessary for the farm ; 4. Cow-houses, or feeding-houses, or both, according to the number of cows and cattle, and so on, till the whole ac- commodations and their dimensions are fixedupon. Having ascertained these, and the situation foi building on being also settled, the ground must be carefully and attentively viewed ; and, if not very even, the different levels must be observed, and the best way of conducting all the necessary drains, and carrying off all superfluous moisture. Also the best situation for dung and urine-pits, or reservoirs, which will, in a great degree, ascer- tain at once where the cattle-houses and stables should be. These being fixed on, the barn should be as ni

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site of the dwelling-house, it may be remarked, that, although a house being situate in the middle of a regular front is, in some pomts of view, the most pleasing way, and in many situations per- haps the best, yet, unless the ground and other circumstances in every respect favor such a dis- position, it should not invariably be adhered to; for it may often happen, that a much better situ- ation for the dwelling-house may be obtamed at a little distance from the offices, a pleasing uni- formity be observed in them at the same time, and the house be more healthy and agreeable. In some cases, and for some kinds of farms, it may be particularly necessary to have the house so placed, in respect to the offices and farm-yard, as to admit of their being constantly inspected, and the labor that is to be performed in them at- tended to and overlooked.

‘ The requisites of a farmstead,’ says Mr. Mar- shall, ‘ are as various as the intentions of farms. A sheep-farm, a grazing-farm, a hay-farm, a dairy-farm, and one under mixed cultivation, may require diflerent situations, and different ar- rangements of yards and buildings. On a farm of the last species, which may be considered as the ordinary farm of this kingdom, the princi- pal requisites are shelter, water, an area or site sufficiently flat for yards and buildings; with mea- dow land below it, to receive the washings of the yards; as well as sound pasture grounds above it for a grass-yard and paddocks; with private roads nearly on a level to the principal arable lands; and with suitable outlets to the nearest or best markets.’

For a mixed husbandry farm, the particulars, to be arranged, according to Marshall, are thus enumerated ; 1. A suit of buildings, adapted to the intended plan of management ; — as a dwell- ing-house, barns, stables, cattle-sheds, cart-shed. 2. A spacious yard, common to the buildings, and containing a receptacle of stall-manure, whether arising from stables, cattle-sheds, hog- styes, or other buildings ; together with separate folds, or straw-yards, furnished with appropriate sheds, for particular stock, in places where such are required. 3. A reservoir, or catchpool, situ- ated on the lower side of the buildings and yards, to receive their washings, and collect them in a body for the purpose of irrigating the lands below them. 4. A corn yard, convenient to the barns; and a hay-yard contiguous to the cow or fatting-sheds. 5. A garden and fruit ground near the house. 6. A spacious grass-yard or green, embracing the whole or principal part of the conveniences ; as an occasional receptacle for stock of every kind ; as a common pasture for swine, and a range for poultry ; as a security to the fields from stock straying out of the inner yards; and as an ante-

field or lobby, out of which the home grounds and driftways may be conve- niently entered. ‘ An accurate delineation of the site which is fixed on, requires,’ he observes, ‘ to be drawn out on a scale; the plannist studying the subject, alternately, upon the paper, and on the ground to be laid out; continuing to sketch and correct his plan, until he has not a doubt left on his mind ; and then to mark out the whole upon the ground, in a conspicuous and perma- nent manner, before the foundation of any par-

ticular building be attempted to be laid. It may. he adds, ‘ be conceived by a person who has not turned iiis attention to this subject, that there must be some simple, obvious, and fixed plan to proceed upon. But seeing the endless variety in the mere dwelling-places of men, it is not to be wondered at if a still greater variety of plans should take place where so many appurtenances are required, and these on sites so infinitely va- rious ; nor that men’s opinions and practices should differ so much on the subject, that on a given site, no two practical men, it is more than probable, would make the same arrangement.’ ‘There are, however,’ he says, ‘certain principles which no artist ought, to lose sight of in laying out such buildings and conveniences. The barns, the stables, and the granary, should be under the eye, — should be readily seen from the dwelling- house. The prevailing idea, at present, is, that the several buildings ought to form a regular figure, and enclose an area or farm-yard, either as a fold for loose cattle, or, where the stalling of cattle is practised, as a receptacle for dung, and the most prevailing figure is the square. But this form is, he thinks, more defective than the oval or circle, the angles being too sharp, and the corners too deep. Besides, the roadway, ne- cessary to be carried round a farm-yard in order to have a free and easy passage between the dif- ferent buildings, is inconveniently lengthened or made at greater expense. The view of the whole yard and buildings from the house, on one side of it, is likewise more confined.’ He on the whole prefers the complete octagon, the dwelling- house a being on one side, and the entrance gate- way and granary opposite ; the remaining six sides being occupied by stables and cattle-sheds, and other out-buildings, c , d, e, a barn and threshing machine,/, with a broad-way, dipping gently from the buildings, g, and surrounding a wide shallow dung-basin, h, which occupy the rest of the area of the yard- Externally is a basin for the drainings of the yard, t; and grass enclosures for calves, poultry, fruit trees, and rick-yard.

The following plan of the arrangement of a small farm-house and offices, which he considers very convenient, is given by Beatson. At the north-west corner is the barn (1), with a water threshing-mill; a straw-house (2), being a con- tinuation of the barn above, for holding

a quan- tity of straw after it is threshed, or hay, that it may be at hand to give to the cattle in the feeding-house below. The upper part of this

straw-house may consist of pillars to support the roof, with about eight feet space between them, whereby a good deal of buildiiTj; will be saved. In the floor should be liatches, at convenient dis- tances, to put down the straw to the cattle below.

A court for the dung-hill (3) has a door to it from the feeding-house, and a large entry at the other end to admit carts to take away the dung : on the outside of this should be a urine-pit, in the most convenient place, according to the form of the ground ; a cow-house (4) has a door also to the dung-court; and a calf-pen (5) with a rail across to keep in the calves, even though the doors are all open, adjoins ; there is a stable, with a harness-room, and a place for keeping corn (6) ; a root-house (7), over which, or over the barn, may be a granary ; a shed for carls (8) ; a place for keeping large implements, as ploughs and harrows (9); for keeping smaller imple- ments, as spades, shovels, rakes, forks, &c., and for laying by old iron and many other useful things that might otherwise be lost or thrown away (10); a pond for washing the horses' feet (11); which slopes down from each extremity towards the middle, where it is deepest, tliat the horses may easily go in at one end, and come out at the other, with a rail at each end, to prevent their going in during frost, or when not wanted to go ; a pump, with a trou'jh for the horses or cattle to drink in, especially while otlier water is frozen, or when the water in the pond is dirty (12); but, if it can be contrived so that the water which drives the mill may run through this pond, it will be preferable as being at all times clean and wholesome. One advantage of this arrange- ment, as Beatson remarks, is, that the fodder con- sumed upon the farm goes progressively forward from tlie barn-yard through the cattle-houses to the dung-hill, without the unnecessary labor cenerally occasioned by carrying it backwards and forwards. For it comes from the barn-yard into the barn, where it is threshed; it is then put iu the straw- house, and given to the cattle immediately below ; and after passing through them, it is Vol. IX.

thrown into the dung-court. A rick of straw, or hay, built behind the stable or cow-house, or in a shed contiguous to either, with proper conveni- ences, will have tlie same progressive course to the dung-hill; for, it will be observed, the com- munication from these is equally

easy from without or within ; the rail across the calf-pen being intended chiefly to keep in the calves, while the doors on each side are open when con- veying the dung that way from the stable to the dung-hill.

The ground floor of the dwelling-house to this farmery (13), has a dairy, pantry, and various conveniences behind for keeping swine, poultry, coals, &c. The stair to the upper chambers rises from either side to the same landing-place; from whence are a few steps up to the chamber- floor.

The following diagrams represent the elevation, and two ground plans, of a farm-house on a large scale, and which might be extended to any size. The ground plan, fig. 2, is divided into «, the principal entry; &, the parlour; c, the family bed-room; d, the kitchen; f, the dairy; /', the pantry and cellar; the three latter being at- tached to the back part of the house by a con- tinuation of the same roof downwards. By permitting the ceilings to be seven and a half or eight feet in height, some small bed rooms may be provided above tliein, having a few steps down from the floor of the front rooms, or a few steps I p from the first landing place.

Fig. 1.

Fig. 2.

The earl of Winchelsea, at Burleigh, has a farm-house erected nearly in this way ; but in it

the back door of the kitclien enters into a brew- house and wash-house ; the fire place and copper being behind tlio kitchen vent. Beyond this brew-house is a place for holding fire-wood, &c.; ir. the back walls of which are openings to feed the swine at. In the kitchen is an oven; and below the grate an excellent contrivance for baking occasionally, but chiefly employed for the purpose of keeping the servants' meat warm . It consists of a plate of cast iron, with a door similar to that of an oven. The,up-stairs part is divided in the front into two good rooms, and into two small ones on the back part, but may be easily subdivided where necessary.

Fig. 3 exhibits another mode of dividing the ground floor, in wliicli a is the parlour; b, the kitchen ; c, the closet ; d, the dairy ; e, the pan-

try ; J] the coal-house ; g, the poultry-house ; h, the pig-sty, which has an opening into the kitchen; /, the back entry. The chamber-floor may be divided likewise, where it is requisite, into two good bed-rooms, and a light closet ca-

pable of holding a bed, or m any other way that may be thought more convenient.

Fig. 3.

3. On keeping Farming Accounts. — Sir John Sinclair strongly recommends accuracy to the gentleman farmer, as well as to the tenant, and furnishes the following models, chiefly adapted to the former, in his Code of Agriculture, 1820.

Weekly Journal of Transactions, from

TO

Monday.

State of Weather.

Baro.

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Wind.

Rain.

Tuesday.

Wednesday.

Thursday.

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Friday.

Saturday.

Sunday.

Weekly

State of

Labor, from

TO

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Names of Men and Horses.

Mon.

Tues.

Wed.

Thar.

Frid.

Sat.

No. of Days.

Rate per Day.

Total.

Daily Laborers . . .

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s.

d.

Farm Servants

—

Horses

Task Work . • . .

\N’ork by Tradesmen

FARM.

Cash Account.

Dr. Cash received.

Cash paid Cr,

When received.

Of whom received.

On wliat account received.

Amount. When paid.

To wliom paid.

On what account paid.

Amount.

Total received.

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d.

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Articles from tlie Farm consumed (Amount of)”

When.

By whom.

W;hat Articles.

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Total paid – – – |

Management of Arable Land.

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When begun.

Plougliing, Harrowing, Rolling.

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Sowing Seed.

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Management of Pasture Land.

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Produce of Hay, &c.

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Amount.

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FARM.

Management of Woodland.

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Quantity of Bark.

Underwood.

Timber Sold. |

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Amount.

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Account of Crops.

Sort

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Bought.

Sold.

Sown.

Consumed.

Where, and by whom consumed.

Where sown.

Ground.

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Wheat .

Barley .

Oats . .

Hay . .

Potatoes.

Dairy Account of Milk, Butter, Cheese.

Sunday.

Mon. 1

Tues

Wed.

Thurs.

Friday.

Sat. |Total price.

Amount. 1

A

s

Milked . .

Made into \ Butter and ˆ• Cheese . y

Consumed

Qts.

Pts.

Qts.

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FARM.

Stock Account

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Increase and Decrease of Live Stock.

What part of the Farm occupied by the Cattle.

Description,

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Date when sent in.

When Number and

taken Description

out. of Cattle.

No.

of

field.

Nature of

the Crop

in the

Field.

Rams

No.

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71

Ewes Wethers

Spaniard

R. Lambs

Spaniards

E. LambsDitto |

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Bulls

Cows

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Oxen

Heifers

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B. Calves .

C. Calves .

Boars

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Sows ....

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Barrows

Pigs ....

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Horses Mares

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Colts

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Poults Fowls

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Chickens

Geese

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Goslings

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Ducks

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Ducklings .

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Pigeons

Eggs ....

‘ The account books of a common farmer,’ says Mr. Loudon, ‘ may be a cash book for all receipts and payments, specifying each ; a ledger for accounts with dealers and tradesmen; and a stock book for taking an inventory and vahiation of stock, crop, manures, tillages (and every thing that a tenant could dispose of or be paid for on quitting his farm), once a year. Farming may be carried on with the greatest accuracy and safety, as to money matters, by means of the above books, and a few pocket memorandum books for laborers’ time, jobs, &c. With the exception of a time book (such as is hereafter described), we should never require more, even from a proprietor’s bailiff; to many of whom the nine forms just given would only puz/le; — to some we have known them lead to the greatest errors and confusion. No form of books, or mode of procedure, will enable a farmer to know whether he is losing or gaining, but that of taking stock.’

The Time Book, Mr. Loudon recommends, may be made useful, as he suggests, in every department of agriculture and on every scale of management, though most necessary for bailiffs, where a number of day laborers are employed on improvements. It is a folio vojumf, ruled so

as to read across both pages, with columns titled, as in the specimen annexed. In this the bailiff or master inserts the name of every hand ; and the time in days, or proportions of a day, which each person under his care has been at work, and the particular work he or she has been en- gaged in. At the end of each week the bailiff or master sums up the time from the preceding Saturday or Monday, to the Friday or Saturday inclusive ; the sum due or to be advanced to each man is put in one column, and when the man receives it he writes the word received in the column before it, and signs his name as a receipt in the succeeding column. The Time Book, therefore, will show what every man has been engaged in during every hour in the year for which he has been paid, and it will also con- tain receipts for every sum, however trifling, which has been paid by the bailifl' for rural labor.' ' In short, it would be difficult to contrive a book more satisfactory for botii master and sen-ant than the Time Book, as it prevents, as far as can well be done, the latter from deceiving either himself or his employer, and remains an authentic indisputable record of work done, and of vouchprs for money paid during the whole]iprind of the bailifT's services.'

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Farmer (Hugh), a learned dissenting minister, born at Shrewsbury in 1714. He was descended from a respectable family in North Wales ; and, after receivmg the first part of his education at a sciiool m Llangerin, was for some time under the tutorage of Dr. Charles Owen. When about sixteen years of age, he was sent to prosecute his studies under the celebrated Ur. Doddridge, at Northampton. Mr. Farmer first became chaplain m the family of William Coward, Esq. of Wal- thamstow in Essex, and minister to a dissenting congregation in that

village. He next resided with William Snell, Esq., a respectable dissenter of the neighbourhood ; and in his family Mr, Farmer lived for thirty years, still continuing his connexion with the congregation at Walthamstow. Upon the day of thanksgiving appointed for the suppression of the rebellion, in 1745, he delivered a very apposite sermon, which he was induced to publish the following year. His next publi- cation was entitled An Enquiry into the Nature and Design of our Lord's Temptation in the Wilderness, 8vo. In this work Mr. Farmer labors to demonstrate that the whole of the temptations were transacted in vision, and that they were particularly intended to point out to Jesus the difficulties and duties of his subsequent ministry. Whatever singularity of opinion ap- peared in this work, the originality of thought and profound erudition witli which it was sup- ported, gained it a rapid and extensive circula- tion, and called forth the abilities of those who were of a different opinion. It is generally thought, however, that of all Mr. Farmer's lite- rary productions, his Dissertation on Miracles, designed to show that they are arguments of a divine interposition, and absolute proofs of the mission and doctrine of a prophet, published in 1771, is the most masterly. Notwithstanding the many able treatises upon that subject, which have appeared, some have considered this work in many respects as without a rival. His next pub- lication was An Essay on the Demoniacs of the New Testament, which he maintains to have been only natural diseases. This work seems to be a completion of what the author had designed in his Dissertation on IMiracles. Mr. Farmer was, for several years the sole pastor of the congrega- tion at Walthamstow, but in 1761 an able col- league was appointed him, in consequence of which he became the afternoon preacher to the congregation of Salter's Hall, London, and, in a short time after, the Tuesday lecturer at the same place. As he advanced in years, he resigned his ministerial employments, much to the regret of the people under his charge. His last perforni- ance was entitled The General Prevalence of the Worship of Human Spirits in the Ancient Heathen Nations Asserted and Proved ; which was attacked by Mr. Fell, in an acute and learned treatise in 1785. In the same year Mr. Farmer was afflicted with a disease in his eyes, which almost deyirived him of sight. From this time, however, his infirmities increased, and he died at Walthamstow in 1787, in die seventy- third year of his age. In his last will his exe- cutors were directed toburji all his manuscripts ; but some of his letters and fragments of a Dis- sertation on the Story of Balaam, were published in 1804 with iiis life prefixed.

FAR

Farmer (Richard), an English divine and an- tiquary, born at Leicester in 1735. His father was a hosier in that town, and, after receiving the rudiments of his education there, he became a student at Cambridge, and pensioner of Ema- nuel College. Here his diligence and success in obtaining a knowledge of books, as well as the quickness of his memory, were early observed ; and he was made B.A. in 1757, and M.A. in 1760, in which year also he was appointed classical tutor. After officiating some time as a curate, he, inl767, took the degree of B.D. and became one of the preachers at ^\hitehall. While Mr. Farmer paid considerable attention to Grecian and Roman authors, he also applied himself particularly to old English literature; and An Essay on the Learning of Shakspeare, pub- lished in 1766, contributed principally to his literary fame. Of this performance, which was much admired for the sprightliness of its com.po- sition, three editions were sold in a very short time. Mr. Farmer was now noticed and pa- tronised in his profession : by the influence of bishop Ilurd, he was promoted to the chancellor- ship and a prebend in the cathedral of Litchfield ; and in 1775 was chosen master of Emanuel College, and took his degree of D.D. Not long after, he was appointed principal librarian to the university, and served in turn the office of vice-chancellor. Lord North, at that time prime- minister, made him prebendary of Canterbury, and Mr. Pitt repeatedly offered him a bishopric; but the constraints and solemnity of the episco- pal character did not suit his natural disposition, and he not only declined accepting a bishopric, but resigned his office as prebendary for a resi- dentaryship of St. Paul's. By this it was neces- sary he should reside three months annually in London, and these he spent in the company of literary characters with pleasure and advantage. He was particularly instrumental in amending the police of Cambridge, with regard to the paving and lighting the streets. He had collected ample materials for a history of the town and anti- quities of Leicester, which he intended to pub- lish by subscription, but relinquished the design ; and Mr. Nichols being engaged in writing a his- tory of that county, the doctor gave what he had collected, with the plates, to him. Dr. Farmer died at Emanuel College, in 1797, in the sixty- second year of his age. His collection of scarce and curious books, which was very extensive, was disposed of a short time after his death.

FARMINGTON, a large, pleasant, and wealthy town in Hartford county, Connecticut. Tiic river meanders delightfully through charm- ing intervales, which beautify and enrich this town. Tlie houses, in the compact part of the town, stand chiefly on the street that runs north and south along the gentle declivity of a hill which ascends east ot the

vallies. About the centre of the street there is a large and handsome congregational church. This town was settled as early as 1645, and its boundaries were then very extensive. Several towns have been since taken from it. It lies ten miles south-west of Hart- ford.

FARN Islands, two groups of little islands and rocks, seventeen in number, opposite to I'am-

borough castle in Northumberland At low water the points of several others are visible be- sides the seventeen just mentioned. The nearest island to the shore is called the House Island, and lies exactly one mile and sixty-eight chains from the coast. The most distant is about seven or eight miles. Their produce is kelp, feathers, and a few seals, which the tenants watch and shoot for the sake of the oil and skins. Some of them yield a little grass that serves to feed a cow or two ; which the people transport over in their little boats.

FARNABIE, or Farmaby (Thomas), an emi- nent grammarian, son of a London carpenter, was born in 1575. While at Oxford, being en- ticed to abandon his religion, he went to Spain, and was there educated in a college belonging to the Jesuits. Being weary of their severe disci- pline, he went with Sir John Hawkins and Sir Francis Drake in their last voyage in 1595. He was afterwards a soldier in the Low Countries : but being reduced to great want, returned to England, where after wandering about for some time, under the name of Thomas Bainrafe (the anagram of his name), he settled at Mattock in Somersetshire, and taught grammar with reputa- tion. He removed to London, and opened a school. While here he was made M. A. at Cam- bridge, and incorporated into the university of Oxford. Thence he removed, iu 1636, to Seven- Oaks in Kent; and raised a respectable school. Lˆpon the breaking out of the civil war, in 1641, he was cast into prison. It was debated, in the house of commons, whether he should be sent to America; but, this motion being rejected, he was removed to Ely-house in Holborn, where he died, June 12th, 1647. Many writers have spoken with great approbation of his labors. M. Bayle says, ' his notes upon most of the ancient Latin poets have been of very great use to young beginners ; being short, learned, and designed chiefly to clear up the text.'

FARNESE, the name of a distinguished fa- mily in Italy, of which the most remarkable were, 1. Peter Louis Farnese, the son of Alexander, afterwards pope Paul III. He was created duke of Parma and Placentia in 1545, but, becoming universally hated for his tyranny and debauchery, fell by the hands of an assassin in 1347. 2. His eldest son, Alexander, born 1520, was raised by Clement VII. to the see of Parma,

and created a cardinal by his grandfatiier, Paul III. He was also dean of the Sacred College, and distinguished both by his learning and virtues. He was re- peatedly employed as nuncio to the courts of X'ienna and Paris, and died at Rome in 1589. 3. Alexander, third duke of Parma, was a nephew of his, and distinguished as a military comman- der under Philip II. of Spain. He succeeded Don John of Austria in the government of the Low Countries in 1578; and was designed to have commanded the Spanish army which em- barked witii the Armada for the conquest of England. He died in 1592 at Arras, aged forty- six.

FARNHAM, or Ferniiam, a market town of Surry, thirty-eight miles from London, and twelve west from Guildford. It is a populous])lare, situated on the Woy, and supposed to

have its name from the fern which abounded here. It was given by Ethelbald, king of tiie West Saxons, to tlie see of Winchester; the bishops of whicli liave generally resided in the castle here, in summer, since the reign of king Stephen, whose brother, the then bishop, first built it. It was a magnificent structure, with deep moats, strong walls, towers, and a fine park ; but it IS much decayed. Adjoining the park is Jay's tower, the ascent to whicli is by sixty-three stone steps. Tiiis was partly beaten down by Cromwell's cannon. It now contains about forty-eight rods of land on its top, which is con- verted into a kitchen parden. This spot was annually visited by their late majesties durin the life of the Late bishop Thomas. The town, which has many handsome houses, and well paved streets, is governed by twelve masters, of whom two are bailiffs, chosen annually. They have the profits of the fiiirs and markets, and the assize of bread and beer ; and hold a court every three weeks, which has power of trying and de- termining all actions under 40s. From Michael- mas to C'iiristmas there is a good market for oats; and a considerable wheat market between All Saint's day and Midsummer; but it is diminished since the people about Chichester and Southamp- ton have so largely communicated with London by sea. This loss, however, is amply made up by the vast growth of hops, of wliicli there are 700 or 800 acres of plantations about this town, said to excel the Kentish grounds both in quan- tity and quality. This town sent members to parliament in the reign of Edward II. but never since. The market is on Thursday ; fairs on Holy

Thursday, .June 24th, and Nov. 2nd. There is also a market for Welsh hose.

FARNOVIUS (Stanislaus), a dissenter from tlie other Unitarians in 1.568, who was followed by several persons eminent for their learning. lie was induced by Gonesius to prefer the Arian system to tiiatof the Socinians, and consequently asserted, that Christ had been produced out of nothing by the Supreme Being before the crea- tion. He warned his disciples against paying religious worship to the Divine Spirit. He died in 1615.

FARO, an island of Sweden, to the north-east of Gothland, in the Baltic. It is about tliirty miles in circumference; and has a chief town of the same name on the east coast. Long. 19° .32′ 55″ E., lat. 57° 56′ N.

Faro, a sea-port and bishop's see of Portugal, in Algarve, near Cape Santa Maria. It stands in a fertile plain ; is fortified, and tolerably well built. Population 7000. The harbour is almost blocked up, but the roadstead has good anchor- age ; and a considerable export trade is carried on with Enifland and other countries in sumach, wine, and cork. There are packet boats between this place and Gibraltar. It suffered severely from the earthquake of 1755 ; and is eighteen miles south-west of Tavira, and 130 south-east of Lisbon.

Faro of Messina, a strait of the Mediterra- nean, between Sicily and Calabria, about seven miles across; so named from Cape Faro; re- markable for its tide ebbiny: and flowing with great rapidity every six hours. In this strait

the French obtained a naval victory over the Spaniards in 1675.

FAROE Islands. See Ferroe Isles.

FARON, a mountain of France, in the de- partment of V'ar, near Toulon, with a fort and redoubt on its top, which is 1718 feet above the sea level, and almost inaccessible, being nearly perpendicular. The British troops, under lord iMulgrave, were in possession of the fort, on the 30th September, 1793, when the Frencii, by a very daring manoeuvre, seized the redoubt, but were dnven from it on the 1st October, by the combined forces, with the loss of 2000 men.

FAIKiUIlAR (George), an ingenious poet and dramatic writer, the son of an Irish clergy- man, was born at Londonderry in 1678. He was sent to Trinity College, Dublin ; but his volatile disposition soon led him to the stage ; where, having dangerously wounded a brother actor in a

tragic scene, by forgetting to change his sword for a foil, it affected him so much that he left the Dublin theatre and went to Lon- don. Here, by the interest of the earl of Orrery, he procured a lieutenant's commission ; which he held several years, and gave many proofs both of courage and conduct. In 1698 he wrote his first comedy, called Love and a Bottle; which, for its sprightly dialogue and busy scenes, was well received. In 1700, the jubilee year at Rome, he brought out his Constant Couple, or a Trip to the .lubilee: and suited Mr. Wilkes's talents so well, in the character of Sir Henry Wildair, that the player gained almost as much reputation as the poet. This induced him to continue it in another comedy called Sir Harry Wildair, or The Sequel of the Trip to the Jubi- lee ; in which Mrs. Oldfield acquired great ap- plause. In 1703 appeared The Inconstant, or The Way to Win him; in 1704 a farce called The Stage-coach; in 1705 The Twin Rivals; and in 1706 The Recruiting Officer, founded on his own observations while on a recruiting party at Shrewsbury. His last comedy was The Beaux Stratagem, of which h-e did not live to enjoy the full success. I\Ir. Farquhar married in 1703. Before this time his manner of life liad been dissipated ; and the lady, who became his wife, having fallen violently in love witli him, contrived to circulate a report that she was pos- sessed of a large fortune. Interest and vanity, therefore, got the better of Farquhar's passion for liberty, and the lady and he were united in the hymeneal band. To his honor, however, it is recorded, that though he soon found himself deceived, he was not known to upbraid his wife with it ; but became a most indulgent husband. Mrs. Farquhar, however, did not long enjoy the happiness she had thus purchased by this strata- gem. The involvement of her husband, and the treachery of a court patron who persuaded him to sell his commission, brought on a decline, which at length carried him oft' in 1707, in the twenty-ninth year of his age. His plays still con- tinue to be represented to full houses.

FARR (Samuel), M. D., was a native of Taunton, Somersetshire, and born in 1741. He was educated at Warrington grammar-school, and the universities of Edinburgh and Leyden. He afterwards established himself in his native

town, and was the author of several medical tracts of merit, as An Inquiry into the propriety of Phlebotomy in cases of Consumption, 8vo. ; An Essay on Acids; The History of Epidemics, translated from the Greek, of Hippocrates, 4to. ; The Elements of Medical

Jurisprudence, 8vo. ; and Aphorismi de Mitrasmo, exsummisMedicis collecti, 12mo. He died in 1795.

FARRA'GO, ?j. s. J Lat. A mass formed

Farra'ginous, 0(7;. S confusedly of several in- gredients; a medley formed of different materials.

Bbing a confusion of knaves and f<;ol.«, and a. farra- ginous concurrence of all conditions, tempers, sexes, ;ind ages, it rs but natural if t}itir determinations be monstrous, and many ways inconsistent with truth. Browne's Vulgar Errours.

When we sleep, the faculty of volition ceases to act, and in consequence the unccnipared trains of ideas become incongruous, and form the farrago of our dreams ; in which we never experience any <;u.rprise, or sense of novelty. Darwin.

FARRANT (Richard), an English musical composer of eminence, held situations in the Chapel Royal and St. George's chapel at Wind- sor, from 1564 to 1580, and was remarkable for the devout and solemn style of his church music, much of which is found in the collections of Boyce and Barnard. His full anthem, ' Lord, for thy tender mercy's sake,' is still in use.

FAR'RIER, n. s. & v. n. > Fr. ferrier ; Ital.

Far'rif.RY. Sferraro; IjM, ferra-

rius, oiferrnin, iron. A shoer of horses ; a horse- doctor: to farrier is to practice either or both of thest callings : farriery is the art or calling thus practised. Which see below.

But the utmost exactness in these particulars be- loni.;s to farriers, saddlers, smiths, and other trades- men. Digby.

There are many pretenders to the art of farriering and cowleeching, yet many of them are very ignorant.

Mortimer.

If you are a piece of a farrier, as every gi-oom ought to be, get sack, or strong-beer, to rub your horses.

Swift. Most satirists arc indeed a public scourge

Their mildest physic is h. farrier's purge ;

Their acrid temper turns, as soon as stirred.

The milk of their good purpose all to curd.

« Cowper.

Farrier, Military, is a man appointed to do the duty of farriery in a troop of horse. These troop farriers are under the immediate superintendence of a veterinary surgeon, to whom they must apply whenever a horse is ill or lame, that he may report the same to the officer commanding the trooj). When the far- rier goes rotmd, after riding out, or exercise on horseback, he must carry his hammer, pincers, and some nails, to fasten any shoo that may be loose. When horses at out-fjuarters fall par- ticularly ill, or contract an obstinate lameness, the case must be reported to the head-tpiarlers of the regiment; and th6 veterinary surgeon must, if time and distance will permit, be sent to examine the horse. No farrier must presume to make up any medicine, or any external appli- cation, without, or contrary to, the receipt uiven him by .the veterinary surgeon. If any farrier, through carelessness or inattention, lames a horse belonging to another troop, he ought to be

at all the expense in curing the horse so lamed. Farriers are in every respect liable to be tried according to the Articles of War.

Farriery. The treatment of the diseases of horses we refer to the article Veterinary Art, fully feeling the propriety of seeking that superior professional treatment for horses of value which the English gentleman no longer expects to find either with his groom or his black- smith. But farriery (Iˆai. Jhrarius, from J'errum, iron) may with strict propriety describe a very useful and important employment of the latter, i.e. the shoeing of hojses : we therefore propose to offer our observations on that art in tiiis place.

Shoeing is a method of preserving the iˆeet of horses. Some other auxiliary methods may first be noticed. For instance, when young horses are first taken from the field, their hoofs are ob- served to be cool, sound, and tough : but they are no sooner introduced into the stable, than their hoofs are greased or oiled two or three times a week : and if they are kept much in the house standing upon hot dry litter, without being frequently led abroad, and without having an opportunity of getting their hoofs cooled and moistened in wet ground, their hoofs grow so brittle, dry, and hard, that pieces frequently break off, like chips from a hard stone ; and, when driving the nails in shoeing, pieces will split off, even although the nails are

made very fine and thin. If these same horses with brittle shattered hoofs are turned out to graze in the fields, their hoofs in time will become as sound, tough, and good, as they were at first.

Mr. Clarke of Edinburgh .ascribes this change to the wet and moisture which the hoofs are ex posed to in the fields, of which water is the principal ingredient; and it is a certain fact, of which we have daily proofs, that, when all other means fail, horses, turned out to grass, will re- cover their decayed brittle hoofs. It is known, he observes, that tiie hoofs of horses are porous ; and that insensible perspiration is carried on through these pores, in the same manner, and according to the same laws as take place in other parts of the body. Now every body knows, that greasy or oily medicines applied to the skin of the human body prevent perspiration, which is frequently attendeil with the worst consequences. The same reasoning will hold with respect to the hoofs of horses; for greasy applications close the pores of the hoof, by being absorbed into its inner substance. Hence the natural moisture, which should nourish the hoof, is prevented from arriving at its surface ; which, on that account, becomes as it were dead, and consequently dry, brittle, and hard. The original practice of creasing horses' hoofs has probably taken its rise from observing, that grease or oil softens dead substances, .such as leather, ivc. But this will by no means apply to the hoofs of horses, as there is a very great difference between the living and dead parts of animals ; the former havina; juices, Ike, necessary for tlieir own nourishment and support, whilst the latter require such ap- plications as will preserve them only from de- c yin ■ and rotting.

Another practice, equally pernicious, is the stuffi\igup (as it is called) horses' hoofs with hot

resinous and greasy mixtures, under the notion oi" cooling and softening them. 'arious are the prescriptions recommended for this purpose, many of wliich are of a quite opposite nature to the purpose intended. There is likewise a great impro})riety in stuffing up the hoofs with rotten dung and stale urine : this, it is true, is moisture ; but of the very worst kind, on account of the salts contained in the urine, which of itself greatly contributes towards hardening and drymg their Iwofs, in place of softening them; besides tlie other bad effects which may arise to the frog, Sec, from the rottenness of tiie dung.

Without commenting upon the various com- positions or pompous

prescriptions recommended in books, or tlwse handed about as receipts for the softening and stufiing horses' hoofs, we would recommend one whicli is more natural, and ought not to be despised for its simplicity. This is only to cool and moisten the hoofs with water morning and evening : and, to those who are fond of stuthng, we would prescribe bran and water, or clay, &c. made into the consistency of a poul- tice; and in particular cases, where horses stand much in the stable, and the hoofs are disposed to be very hard, dry, and brittle, a poultice of this kind, or any other emollient composition in which water is a principal ingredient, may be" applied all round the hoof; or, in imitation of some dealers, to keep a puddle of water at the watering place, which will answer equally well, if not better. From this manner of treatment, the hoofs will be preserved in their natural state, and a free and equal perspiration kept up, by which the nourishment natural to the lioof wiii have free access to its surface ; as it is this only which causes that cohesion of the parts which constitutes a firm, sound, and tough hoof.

Horses are shod with iron to defend and pre- serve their hoofs. As feet difl'er, so should shoes accordingly. 'The only system of farriers,' lord Pembroke observes, ' is to shoe in general with excessive heavy and clumsy ill-shaped shoes, and very many nails, to the total destruction of the foot. Tiie cramps they annex, tend to destroy tlie bullet; and the shoes made in the shape of a walnut shell prevent the horse's walking upon the firm basis which God has given him for that end, and thereby oblige him to stumble and fall. They totally pare away also and lay bare the inside of the animal's foot with their detestable butteries, and afterwards put on very long shoes, whereby the foot is hindered from having any pressure at all upon the heels ; which pressure might otherwise still perchance, notwithstanding their dreadful cutting, keep the heels properly open, and the feet in good order. The frog should never be cut out ; but as it will sometimes become ragged, it must be cleaned every now and then, and the ragged pieces pared off with a knife. In one kind of foot indeed a considerable cutting away must be allowed of, but not of the frog ; we mean, that very high feet must be cut down to a proper height ; because, if they were not, the frog, though not cut, would still be so far above the ground as not to have any bearing upon it, whereby the great tendon must inevi- tably be damaged, and con^^equently the horse would go lame.

' The weight of shoes must greatly depend on the quality and hardness of the iron. If the iron be very good, it wdl not bend ; a«d in this case the shoes camiot possibly be made too light: care, however, must be taken, that they be of a thickness so as not to bend ; for bending

would force out tlie nails, and ruin the hoof. That part of the shoe which is next the horse's heel, must be narrower than any other ; that stones may be thereby prevented from getting under it, and sticking there; wliich otherwise would be the case; because the iron, when it advances in- wardly beyond the bearing of the foot, forms a cavity, wherein stones being lodged would re- main, and, by pressing against the foot, lame the horse. The])art of the shoe which the horse walks upon should be quite tlat, and the inside of it likewise; only just space enough being left next the foot to put in a picker (which ought to be used every time the horse comes into the stable), and also to prevent the shoe's pressing upon the sole. Four nails on each side hold better than a greater number, and keep the hoof in a far better state. The toe of the horse must be cut short, and nearly square (the angles only just rounded off); nor must any nails be driven there : this method prevents mucii stumbling, especially in descents ; and serves, by tiirowing nourishment on the heels, to strengthen them : on them the horse should in some measure walk, and the shoe be made of a proper length accord- ingly ; by these means, narrow heels are pre- vented, and many other good effects produced. Many people drive a nail at the toe, but it is an absurd practice. Leaving room to drive one there causes the foot to be of an improper length ; and moreover, that part of the hoof is naturally so brittle, that even when it is kept well greased, the nail there seldom stays in, but tears out and damages the hoof.

' In wet, spongy, and soft ground, where tht foot sinks in, the pressure upon the heels is of course greater than on hard ground ; and so in- deed it should be upon all accounts. The hinder feet must be treated in the same manner as the fore ones, and the shoes the same ; except in hilly and slippery countries, they may not im- properly be turned up a little behind ; but turn- ing up the fore shoes is of no service, and is certain ruin to the fore legs, especially to the .bullets. In descending hills, cramps are apt to throw horses down, by stopping the fore legs, out of their proper basis and natural bearing, when the hinder ones are rapidly pressed ; which unavoidably must be the case, and consequently cannot but push the horse upon his nose. With tiieni, on a plain surface, a horse's foot is always thrown forwards on his toe, out of its proper bearing, which is very liable to make the horse stumble. The notion of their utility in going up hills is a false one. In ascending, the toe is the first part of the foot which bears on, and takes hold of the ground ; and whether the horse draws or carries, consequently the business is done before the part where the cramps are comes to the ground. Ice nails are preferable to any thing to prevent slipping, as also to help horses uphill, the most forward ones

taking hold of the ground early, considerably before the heels touch the

ground. They must be so made, as to be, when driven in, scarcely half an inch above the shoe, and also have four sides ending at the top in a point. Tliey are of great service to prevent slipping on all kinds of places ; and by means of them a horse is not thrown out of his proper basis. They must be made of very good iron ; if they are not, the heads of them will be per- petually breaking off. From the race horse to the cart horse, the same system of shoeing should be observed. The size, thickness, and weight of them only should differ. The shoe of a race horse must of course be lighter than that of a saddle horse ; that of a saddle horse lighter than that of a coach or bat horse ; and these last more so than a cart, waggon, or artillery horse. At pre- sent all shoes in general are too heavy ; if the iron is good, shoes need not be so thick as they are now generally made. The utmost severi y ought to be inflicted upon all those who clap shoes on hot. This unpardonable laziness of farriers, in making feet thus fit shoes instead of shoes fitting feet, dries up the hoof, and utterly destroys them. Frequent removals of shoes are detrimental, and tear the foot; but sometimes they are very necessary : this is an inconvenience to which half shoes are liable; for the end of the shoe, being very short, is apt to work soon into the foot, and consequently must then be moved.'

In a judicious treatise on this subject, by Mr. Clarke, the common forni of shoes, and method of shoeing, are, with great reason, totally ex- ploded, and a new form and method recom- mended, which seem founded on rational prin- ciples, and to have been confirmed by expe- rience.

' In preparing the foot for the shoe,' our author observes, ' the frog, the sole, and the bars or binders, are pared so much that the blood fre- quently appears. The shoe by its form (being thick on the inside of the rim, and tliin upon the outside), must of consequence be made con- cave or hollow on that side which is placed im- mediately next the foot, in order to prevent its resting upon the sole. The shoes are generally of an immoderate weight and length, and every means is used to prevent the frog from resting upon the ground, by making the shoe-heels thick, broad, and strong, or raising cramps or caukers on them. From this form of the shoe, and from this method of treating the hoof, the frog is raised to a considerable height above the ground, the

heels are deprived of that substance which was provided by nature to keep the crust extended at a proper widencss, and the foot is fixed as it were in a mould.

- By the pressure from the weight of tiie body, and resistance from the outer edges of the shoe, the heels are forced together, and retain that shape impressed upon them, wiiich it is impossible ever afterwards to remove ; hence a con- traction of the heels, and of course lameness. But farther, the heels, as has been observed, being forced together, the crust presses upon the processes of the coffin and extremities of the nut bone : the frog is confined, and raised so far from the ground, that it cannot have that support upon it which it ought to have : the circulation of the blood is impeded, and a wasting of tlic frog.

and frequently of the whole foot, ensues. Hence proceed all those diseases of the feet, known by the names of foundered, hoof-bound, narrow heels, running thrushes, corns, high soles, &c.

‘ I haTe likewise frequently observed, from this compression of the internal parts of the foot, a swelling of the legs immediately above the hoof, attended with great pain and inflammation, with a discharge of thin, ichorous, fetid matter: from which symptoms, it is often concluded, tliat the horse is in a bad habit of body (or wiiat is termed a grease falling down), and must there- fore undergo a course of medicine, &.c. The bad effects of this practice are still more obvious upon the external part of the hoof. The crust towards the toe, being the only part of the hoof free from compression, enjoys a free circulation of that fluid necessary for its nourishment, and grows broader and longer ; from which extraor- dinary length of toe, the horse stumbles in his going, and cuts his legs. The smaller particles of sand insinuate themselves between the shoe and the heels, which grind them away, and thereby produce lameness. All this is entirely owing to the great spring the heels of the horse must unavoidably have upon the heels of a shoe made in this form.

‘Tlˆis concave shoe in tjme wears thin at the toe, and, yielding to the pressure made upon it, is forced wider, and of consequence breaks ofi” all that part of the crust on the outside of the nails. Instances of this kind daily occur, inso- much that there hardly remains crust sufiicient to fix a shoe upon them. It is generally thought that the broader a shoe is, and the more it covers the sole and frog, a horse will travel the better. But, as has been formerly remarked, the broader a shoe is of this form, it must be made the more concave ; and, of consequence, die contracting power upon the heels must be the greater. It is

likewise to be observed that, by using strong broad-rimmed concave shoes in the summer sea- son, when the weather is hot and the roads very dry and hard, if a horse is obliged to ride fast, the shoes, by repeated strokes or frictions against the ground, acquire a great degree of heat, which is communicated to the internal parts of the foot, and together witii the contraction upon the heels, occasioned by the form of the shoe, must certainly cause exquisite pain. This is frequently succeeded by a violent inflammation in tlie internal parts of tlie hoof, and is the cause of that disease in the feet, so fatal to the very best of our horses, commonly tem'ied a founder. Tins is also tlie reason why horses, after a journey of a hard ride, are observed to shift their feet so iVeciuontly and to lie down much. If we attend further to the convex surface of this shoe, and the convexity of the pavement upon which horses walk, it will tlien be evident, that it is impossible for them to keep their feet from slipping in tiiis form of shoe, es- pecially upon declivities of streets.

' It is also a common practice to turn up tlie heels of the shoes into what is called cramps or caukers, by which means the weight of the horse is confined to a very narrow surface, viz. the inner round edge of the shoe-rim and the]H)ints or caukers of each heel, which soon wear round and blunt ; besides, tiicy for the most part are made by far too thick and long. The consequence

is, that it throws the horse forward upon the toes, aud is apt to make liina slip and stumble. To this cause we must likewise ascribe the frequent and sudden lameness horses are subject to in the legs, by twisting the ligaments of the joints, ten- dons, &c. I do not affirm that caukers are always hurtful, and ought to be laid aside : on the contrary, I grant that they, or some such like contrivance, are extremely necessary, and may be used with advantage upon flat shoes where tlie ground is slippery; but they should be made thinner and sharper liian those com- monly used, so as to sink into the ground, otherwise they %m11 rather be hurtful than of any advantage.

' The Chinese are said to account a small foot an ornament in their women, and for that purpose, when young, their feet are confined in small shoes. This, no doubt, produces the desired effect ; but must necessarily be very prejudicial to them in walking, and apt to render them entirely lame. This practice, however, very much resembles our method of shoeing horses ; for if we looked upon it as an advantage to

them to have long feet, with narrow low heels, and supposing we observed no inconve- nience to attend, or bad consequence to follow it, we could not possibly use a more effectual means to bring it about than by following the method already described.

‘ In shoeing a horse, therefore, we should in this, as in every other case, study to follow na- ture : and certainly that shoe which is made of such a form as to resemble as near as possible the natural tread and shape of the foot, must be preferable to any other. But it is extremely difficult to lay down fixed rules with respect to the proper method to be observed in treating the hoofs of different horses : it is equally difficult to lay down any certain rule for deter- mining the precise form to be given their shoes. This will be obvious to every judicious practitioner, from the various constvuctions of their feet, from disease, and from other causes that may occur ; so that a great deal must depend upon the discretion and judgment of the operator, in proportioning the shoe to the foot, by imitating the natural tread, to prevent the hoof from con- tracting a bad shape. In order, therefore, to give some general idea of what may be thought most necessary in this matter, I shall endeavour to describe that form of shoe and method of treat- ing the hoofs of horses, which from experience I have found most beneficial.

‘ It is to be remembered that a horse’s shoe ˆj. ought by no means to rest upon the sole, since this it will occasion lameness ; therefore it must restentirely on the crust; and, in order that we may imitate the natural tread of the foot, the shoe must be made flat (if the height of the sole does not forbid it); it must be of an equal thickness all round the outside of the rim. For a draught horse about half an inch thick, and larger in pro- portion for a saddle horse. And on that part of it which is to be placed immediately next the foot, a narrow rim or margin is to be formed, not exceeding the breadth of tlie crust upon which it is to rest, with the nail-holes placed exactly in the middle ; and from this narrow rim the shoe

is to be made gradually thinner towards its inner edge. See plate Farriery, fig. 1.

‘ The breadth of the shoe is to be regulated by the size of the foot, and the work to which the horse is accustomed; but, in general, should be made rather broad at the toe, and narrow towards the extremity of each heel, in order to let the frog rest with freedom upon the ground. The necessity of this has been already shown. The shoe being thus formed, and shaped like the foot, the surface of the crust is to be made smooth, and the shoe fixed on with eiglit or at most ten nails, the

heads of which should be sunk into the holes, so as to be equal with the surface of the shoe. The sole, frog, aud bars, as I have already observed, should never be pared, farther than taking off" what is ragged from the frog, and any excrescences or inequalities from the sole. And it is very properly remarked by Air. Osmer, ‘ That the shoe should be made so as to stand a little wider at the extremity of each heel than the foot itself; otherwise as the foot grows in length, the heel of the shoe in a short time gets within the heel of the horse ; which pressure often breaks the crust, and produces a temporary lame- ness, perhaps a corn.’ This method of shoeing horses I have followed long before Mr. Osmer’s treatise on that subject was published; and for these several years past I have endeavoured to introduce it into practice. But so much are the farriers, grooms, &c., prejudiced in favor of the common meUiod of shoeing and paring out the feet, that it is with difficulty they can even be prevailed upon to make a proper trial of it.

‘ They cannot be satisfied unless the frog be finely shaped, the sole pared, and the bars cut out, in order to make the heels appear wide. Wide open heels are looked upon as a mark of a sound good hoof. This practice gives them a show of wideness for the time; yet that, together With the concave form of the shoe, forwards the contraction of the heels, which, when confirmed, renders the animal lame for life. In this flat form of shoe, its thickest part is upon the outside of the rim, where it is most exposed to be worn ; and being made gradually thinner towards its inner edge, it is therefore much lighter than the common concave shoe : yet it will last equally as long, and with more advantage to the hoof; and as the frog or heel is allowed to rest upon the ground, the foot enjoys the same points of support as in its natural state. It must therefore be much easier for the horse in his way of going, and be a means of making him surer footed. It is likewise evident that, from this shoe, the hoof cannot acquire any bad form ; when, at the same time, it receives every advantage that possibly could be expected from shoeing. In this respect it may very properly be said, that we make the shoe to the foot, and not the foot to the shoe, as is but too much the case in the concave shoes, where the foot very much resembles tliat of a cat’s fixed into a walnut-shell.

‘ It is to be observed, that the hoofs of young horses, before they are shoed, for the most part are wide and open at the heels, and that the crust is sufficiently thick and strong to admit of the nails being fixed very near the extremities of each. But, as I have formerly remarked, from

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the constant use of concave shoes, the crust of this part of the foot grows thinner and weaker ; and when the nails are fixed too far back, especi- ally upon the inside, the horse becomes lame : to avoid this, they are placed more towards the fore part of the hoof. This causes the heels of the horse to have the greater spring upon the heels of the shoe, which is so very detrimental as to occasion lameness; whereas, by using this flat form of shoe, all these inconveniences are avoided ; and if the hoofs of young horses, from the first time that they were shoed, were conti- nued to be constantly treated according to the method here recommended, the heels would always retain their natural strength and shape. By following this flat method of shoeing, and manner of treating the hoofs, several horses now under my care, that were formerly tender footed, and frequently lame, while shoed with broad concave shoes, are now quite sound, and their hoofs in as good condition as when the first shoes were put upon them. In particular the horse that wore the broad concave shoes, from which tlie drawings of figs. 2 and 3 were taken, now goes perfectly sound in the open narrow kind of shoes, as represented figs. 1 and 4.

‘ If farriers considered attentively the design of shoeing horses, and would take pains to make themselves acquainted with the anatomical

struc- ture of the foot, they would then he convinced that this method of treating the hoofs, and this form of shoe, is preferable to that which is so ge- nerally practised.

‘ It has been alleged that, in this form of shoe, horses do not ‘go so well as in that commonly used. This objection will easily be laid aside, by attending to the following particulars. There are but few practitioners that can or will endea- vour to make this sort of shoe as it ought to be. The iron, in forming it, does not so easily turn into the circular shape necessary as in the com- mon shoe ; and perhaps this is the principal rea- son why farriers object to it, especially where they work much by the piece. And, as many horses that are commonly shoed with concave shoes have their soles considerably higher than the crust, if the shoe is not properly formed, or if it be made too flat, it must unavoidably rest upon the sole and occasion lameness. The practice of paring the sole and frog is also preva- lent, and thought so absolutely necessary that it is indiscriminately practised, even to excess, on all kinds of feet : and while this method continues to be followed, it carmot be expected that horses can go upon hard ground (on this open shoe) with that freedom they would do if their soles and frogs were allowed to remain in their full natural strength. Experience teaches us that, in very thin-soled shoes, we feel an acute pain from every sharp-pointed stone we happen to tread upon. Horses are sensible of the same thing in their foot, when their soles, &c., are pared too ihin. Hence they who are prejudiced against this method, without ever reflecting on the thin state of the sole, &c. are apt to condemn it, and draw their conclusions more from outward ap- peaiances than from any reasoning or knowledge of the structure of the parts. From a due atten- tion likewise to the structure of a horse’s foot in

a natural state, it will be obvious, that paring away the sole, frog, &c., must be hurtful, and in reality is destroying that substance provided by nature for the defence of tlie internal parts of the foot : from such practice it must be more liable to accidents from hard bodies, such as sharp stones, nails, glasj, &:c. From this consi- deration we shall likewise find, that a narrow piece of iron, adapted to the shape and size of the foot, is the only thing necessary to protect the crust from breaking or wearing away : the sole Sec, require no defence if never pared.

‘There is one observation 1 would farther make, which is, that the shoe should be made of good iron, well worked, or what smiths call ham- mer-hardened, that is, beaten all over lightly with a hammer when almost cold. The Spaniards and Portuguese farriers use this

practice greatly, insomuch that many people, who have seen them at work, have reported that they form their horses shoes without heating them in the fire as we do. It is well known, that heating of iron till it is red softens it greatly ; and when shoes thus softened are put upon horses' feet, they wear away like lead. But when the shoes are well hammered, the iron becomes more compact, firm, and hard; so that a well-hammered shoe, though made con- siderably lighter, yet will last as long a? one that is made heavier ; the advantage of which is ob- vious, as the horse will move his feet with more activity, and be in less danger of cutting his legs. The common concave shoes are very faulty in that respect ; for, in fitting or shaping them to the foot, they require to be frequently heated, in order to make them bend to the unequal surface which the hoof acquires from the constant use of these shoes : they thereby become soft ; and to attempt to harden them by beating or hammering, when they are sha])ed to the foot, would undo the whole. But flat slioes, by making them, when heated, a little narrower than the foot, will, by means of hammering become wider, and acquire a degree of elasticity and firmness which it is necessary they should have, but impossible to be given them by any other means whatever ; so that any farrier, from practice, will soon be able to judge, from the quality of the iron, how much a shoe, in fitting it to the circumference of the hoof, will stretch by hammering when it is almost cold ; this operation, in fitting flat shoes, will be the less difticult, when it is consi- dered, that as there are no inequalities on the surface of the hoof (or at least ought not to be) which require to be bended thereto, shoes of this kind only require to be made smooth and flat ; hence they will press equally upon the cir- cumference or crust of the hoof, which i-s the na- tural tread of a horse.'

Mr. St. Bel, the first professor appointed at the Veterinary College, London, constructed a shoe different from the common style, in being somewhat convex on that side which is placed in contact with the horse's foot, but considerably so on that surface which is presented to the ground. On this plan, the horses sent for shoe ing to tlie college were for some time shod ; and it cannot be denied, that if every horse so sent had had the advantage of a perfecJtly natural hoof, Mr. St. Bel's shoe might have been found

worthy the name of an improvement, since its lurmation was certainly adapted to what the shape of the horse's foot naturally is, and ouglit to be, if the farriers would permit. See fig. 5. As the case was

other^vise, however, in a great majority of instances, many who had sanguine expectations from the invention, were disappoint- ed. iS'evertheless this shoe has its advantages, which are set forth at large, by the author in a 4to. volume on the subject, to which we refer the reader.

Taplin recommends a form of a shoe, which differs little from that of]\Ir. St. Bel, except that it is broader in tlie rim, and concave where flie other is convex on the side next the foot. See fig. 6. He advises that ' the shoe should be uni- formly supported by the hoof only, entirely round the foot, and brought so regularly into contact, that it should not press more upon one part than another. It should also be formed with a concave inner surface to keep it perfectly clear of the sole, that the point of the picker may occasionally pass under the inner \ja.Tt of the web, to free it from every extraneous substance. The shoe should not be made too wide in the web, or too weighty in the metal ; and the heel of the shoe should always ratlier exceed the termination of the hoof behind, and be formed something wider than the heel itself.'

Some modern authors, particularly Osmer, in- stead of attempting to improve the horse-shoe, propose to lay aside the use of it altogether, for which they are severely censured by Mr. Taplin. They ' seem,' says he, ' extravagantly fond of an idea, borrowed from antiquity, of the practica- bility of horses travelling the road, and doing their constant work, without any shoeing at all.' Osmer insists, ' that horses are adequate to their different services in a state of nature, without the officious obtrusions of art;' venturing to affirm * that they will travel even upon the turnpike roads about London without injury to their feet.' As Mr. Taplin, however, observes, ' such an eco- nomical plan may be admirably calculated for the theoretical journey of some literary specula- tist, but no such excursion can take place of any duration, without material injury to the hoof.'

Mr. Coleman, a late ingenious professor at the Veterinary College, has made a material improve- ment on the horse-shoe. In his lectures he ob- serves that, for a good natural foot (see fig. 7), all that is required of a shoe is, to guard the crust by a small and narrow piece of iron, which should be attached principally towards the toe, and should not be extended so far back as the heel. The sole itself should not be covered by the shoe ; for dirt and stones will get between, and will form a permanent and partial pressure on the sole, which will produce disease-. Ac- cording to the present mode of shoeing, tliose diseases which affect the horse's foot constantly take place on that portion of it which is covered by the extended breadth of the shoe, while the

exposed parts remain uninjured. The reason is, that the covered parts, besides being exposed to permanent pressure from the cause already related, become tender by being covered. If these parts, therefore, are exposed, they get har-

dened and thick ; and, if the horse happens to tread on a hard and rough body, the inconve- nience is but momentary, and the pain will make him remove his foot, so as to prevent mis- chief.

Common shoeing is very liable to produce corns by the hoofs spreading out, and leaving the shoe in close contact with the sole, where it acts as a fixed point, and will not allow the elasticity of the insensible sole to act. The nails of the shoe should not be placed near the heels; for it disposes the heel to contract, especially when the bars are cut away. The narrow shoe has an- other advantage. The horse is less likely to slip than with the broad one, on any ground on which the foot makes an impression. But it would not perhaps be quite so proper for horses always treading on a pavement, such as the streets of London ; nor for horses that are cal- culated for heavy draught, such as dray or cart horses, which require not only a stouter shoe, but also to be turned up behind, in order to resist the descent of heavy loads in passing down a hill, &c.

Fig. 8 represents]Mr. Coleman's s'loe, the principle of which rests not only on the advan- tages attending the exposure of the horny sole, but likewise on an objection to which all slioes are liable that require to be nailed all round, as in common instances. The na.ls at the quarters form so many fixed points, and prevent that ex- pansion which is natural to the hoof in conse- quence of its growth ; and the effect of this con- finement is that of contracting the whole foot, and particularly the heel ; to which many of the diseases of that part may be attributed. In Mr. Coleman's shoe this material objection seems to be removed ; for it requires to be fixed to the wall of the foot only by a few nails at the toe, which leaves the growth of the quarters entirely to take their natural direction.

Almosteveryveterinar}' professor has his favorite shoe : one of the most ingenious of tiie present day is endeavouring to force on our notice, and introduce into our stables, the French method ; which, with the exception of the mode of nailing on. White observes, is the verv worst he ever saw. The French shoe, fig. 9 («), has a wide web towards the toe ; is concave above and con- vex below (6), on the ground surface, by which neither the toe nor heel touch the ground ; but the horse stands pretty much in the same way as an unhappy cat, shod by unlucky boys with wal- nut shells.

Tlie improved shoe for general use, fig. 10, which Mr. Loudon recommends, is rather wider than what is usually made. ‘ Its nail holes («) extend no further towards the heels than is actually necessary for security ; by which the expansion of thˆse parts is encouraged, and contraction is avoided. To strengthen the attachment, and t© make up for this liberty given to the heels, the nails shouldi be carried round the front of the shoe (c). The nail holes, on the under or ground surface of the shoe (a) are usually formed in a gutter, technically called the fullering ; but in the case of heavy treading powerful horses, this gutter may be omitted ; or, if adopted, the shoe in that part may be steeled. The web should be

quite even on the foot or hoof surface (/>), and not only be rather wider, but it should also liave rather more substance than is common : from half an inch to five eighths in thickness, accord- ing to circumstance, forms a. fair proportion ; when it is less it is apt, in wearmg, to bend to pressure and force out the clinches.’

The bar shoe, fig. 11, is a defence to thin weak feet, which Mr. L. regrets there should be so much prejudice against using. It removes a part of the pressure from the heels and quarters, which can ill bear it, to the frog which can well bear it : a well formed bar shoe should not have its barred part raised into an edge behind, but such part should be of one uniform thickness throughout the web of the bar, which, instead of being the narrowest, should be the widest part of the shoe. The thickness of the bar should be greater or less («), so as to be adapted to take pnly a moderate pressure from the frog. When the frog is altogether ulcerated away, by thrush, the bar may be altogether plain ; but this form of shoe is still the best for these cases, as it pre- Tents the tender surface from being wounded. In corns this shoe is invaluable, and may then fee so made as to lie off the aff”ected part, which is the great desideratum in corns.

The hunting shoe is a light horse-shoe, and it should be made to sit flat to the foot. ‘Hunting fore shoes,’ says the above ingenious writer, ‘ should also be as short at the heels as is con- sistent with safety to the foot, to avoid the danger of being pulled off by the hinder shoes : nor should the web project at all. It is the custom to turn up the outer heel to prevent slipping ; which is done sometimes to both fore and hind feet, and sometimes only to the latter. As this precaution can hardly be avoided in hilly slip- pery grounds, it should be rendered as little

hurtful as possible by making the tread equal ; for which purpose thicken the inner heel and turn up the outer. This is better than lowering the outer heel to receive the shoe, which still leaves both the tread and foot uneven. The racing shoe, or plate, is one made as light and slender as will bear the weight of the horse, and the operations of forging, grooving, and punching : to enable it to do which, it ought to be made of the very best Swedish iron. Three, or at most four nails, are sufficient on each side ; and, to avoid the in- terfering of the hind with the fore feet, the heels of the fore shoes are made as short as they can safely be. As racers are shod in the stable, the owners should be doubly careful that the plate is an exact fit. Many pairs ought to be brought and tried before any are suffered to be put on, and which is more important than is at first considered.' Loudon s Agriculture, 8vo.

Grass shoes, or tips, are short pieces some- times placed on the toe in horses turned to grass in summer ; at which time it is necessary to guard the fore feet, which otherwise become broken away. They should be looked at occasionally, to see that they do not become indented into the soles of d)e feet.

When the roads are covered with ice it is ne- cessary to have the heels of a horse's shoes turned up, and frequently sliarpened, to prevent him from slipping and falling: but this cannot

be done without the frequent moving of the shoes, which breaks and destroys the crust of the hoof whore the nails enter. To prevent this, it is recommended to those who are willing to be at the expense, to have steel points screwed into the heels or quarters of each shoe, which might be taken out and put in occa- sionally. To do this properly, Clark advises, first, to have the shoes fitted to the siiape of the hoof; then to make a small round hole in the extremity of each heel, or in the quarters, about three-eighths of an inch in diameter, or more, in proportion to the breadth and size of the shoe ; in each of these holes a screw is to be made ; the steel points are likewise to have a screw on them, exactly fitted to that in the shoes. Care must be taken that the screw in the points is no longer, when they are screwed into the shoe, than the thickness of the latter. The steel points are to be made sharp ; they may either be made square, triangular, or chisel-pointed, as may be most agreeable ; the height of the point above the shoe should not exceed half an inch for aˆ saddle horse; they may be made higher for a draught horse. 'The key or handle for screwmg them in and out, occasionally, is repre- sented in fig. 13, and is made of a sufficient size and strength,; at the bottom of the handle a socket or cavity must be made, properly adapted to the shape of the steel point, and so deep as to re- ceive the whole head of the point that is above the shoe.

To prevent the screw from breaking at the neck, it is necessary to make it of a gradual taper ; the same is likewise to be observed of the female screw that receives it, that is, the hole must be wider on the upper part of the shoe than the under part ; the sharp points may be tem- pered or hardened, in order to prevent them from growing too soon blunt ; but where they become blunt they may be sharpened as at first. These points should be unscrewed when the horse is put into the stable, as the stones will do them more injury in a few minutes than a day's riding on ice. A draught horse should have one on the point of each shoe, as that gives him a firmer footing in drawing on ice ; but for a saddle horse, when points are put there they are apt to make him trip and stumble.

When the shoes are provided with |these points,,a horse will travel on ice with the greatest security and steadiness, much more so than on causeway or turnpike roads, as the weight of the horse presses them into the ice at every step he takes.

Dr. Moore has suggested a frost clip, fig. 12, to be made distinct and iroveable by means of a female screw b, worked into it, to which is fitted a knob or wedge c, and male screw d ; a key, c , being used to fix and remove it.

FAIIRINGDON, a market town and parish of Berkshire, fourteen miles west from Abing- don, and sixty-eight W. N. W. from London. The town stands on the side of a hill, and has a very large and handsome church, the east end of which is of great antiquity : the windows are similar to those of the Temple in London ; it contains several very handsome mon\iments, and on the south side is that of the founder. The

town is governed by a bailiff. The ruins of an ancient castle are still observable here ; and here King John founded ar> abbey for Cis- tercian monks. The principal business of this town is in hogs and bacon, not less than 4000 hogs being slaughtered here in some years. Here is a good market on Tuesday.

FAR'ROW, n. j. & v. a. Sax. papjw: (a small pig); Swed. Jarre. A litter of pigs: to bring forth pigs.

Pour in sow's blood that hath littereJ Her nine /arrow. Shakspeare. Macbeth.

Sows ready lo farrow this time of the year.

Tusser.

The swine, although multiparous, yet being bisul- cous, and only clovi-n-hoofcd, is farrowed with open eyes, as other bisulcous animals. Browne.

Even her, who did her numerous offspring boast. As fair and fruitful as the sow that carried The thirty pigs at one large litter/arrouied. Dryden.

FARS, a considerable province of Persia, is bounded on the north by Irak, on the east by Kerraan and Lar, by Kuzistan on the west, and on the south by the Persian Gulf The rivers by which it is watered are the Tabris, formed by the junction of two streams both rising in the mountains ; but which becomes brackish on approach- ing within sixteen miles of the sea; and the Jerak, from which numerous artificial channels are made, after which it flows into the salt lake Bertegan, ten miles soutii-east of Schiras.

Fars is divided into the Germaseen and Schud, or the hot and cold climates, the latter compre- hending the mountainous portion, which is co- vered with wood, and almost uninhabited. Those parts of the province to the east are well cul- tivated, and populous. Grain and the finest fruits are produced in abundance in the neigh- bourhood of the towns, and the sides and sum- mits of the hills are covered with vineyards. The tobacco is considered the finest in the world. In general the inhabitants are a civilised people. The principal towˆns are Schiras the capital, containing, perhaps, 40,000 inhabitants ; Bushirc, the chief port on the Persian gulf; Darabjerb, and Bebahan. Within its confines are the ruins of the cities of Persepolis and Shapour. The former is about thirty miles from Schiras, on the road to Ispahan. This province participated deeply in the wars which seated the reigning family on the throne.

FARTll EL, or Fauthklling, among seamen, was used for the same with what they commonly call furl, or furling, which is taking up the sails, and binding them close to the yards.

FARTHER, V. a. & adj. "ˆ Sax. pope, forth, I"ˆar'therakce, n. s. > further, furthest Far'thermore, adv. J (See Furthest), are clearly the origin of these words, which should therefore be written further,

furtherance, &c. We have, in fact, confounded in our lan- guage the degrees of far with those of forth, from the Saxon verb fore, to advance. To farther or further means to promote ; facilitate : farther or further, as an adjective, more remote or advanced ; longer : fartherance or furtherance, encourage-

ment; facility; advancement: farthermore or furthermore, something over and above, or be- yond.

That was the foundation of the learning I have, and of all the fartherance that I have obtained.

Ascham's Schoolmaster, Farthermore the leaves, body, and boughs of this tree, by so much exceed all other plants, as the great- est men of power and worldly ability surpass the meanest. Rtilciyh's History.

To make a perfect judgment of good pictures, when compared with one another, besides rules, there is farther required a long conversation with the best pieces. Dryden's Dufresnoy.

Let me add a farther truth, that without ties of gra- titude, I have a particular inclination to honour you.

Dryden. He had farthered or hindered the taking of the town. Id.

FARTHING, n. s. i Sax. peopSuns, fourth- Far'thingsworth. S thing, i. e. the fourth part of a peimy; our smallest current coin: hence, any trifling sum of money. It seems to have been used formerly also for a measure of land ; see the example from Carew.

I seye to thee thou schalt not go fro thennes ; til thou yelde the laste ferthing. Wiclif, Luh xii.

Too popular is tragicke poesie, Strayning his tip-toes for z. farthing fee.

Bp. Hall. Thirty acres make a farthing-\aMA ; nine farthings a Cornish acre ; and four Cornish acres a knight's fee.

Catew. His son builds on, and never is content. Till the last farthing is in structure spent.

Dryden.

Else all those things we toil so hard in.

Would not avail one single yar

The parish find, ‘tis true ; but our churchwardens

Feed on the silver, and give us ihe farthings. Gay.

They arc thy customers ; I hardly ever sell them afarthingnvorth of any thing. Arbuthnot.

You are not obliged to take money not of gold or silver ; not the halfpence or farthings of England.

Swift. A farthing is the least denomination or fraction of money used in England. Cocker’s Arithmetick.

FARTHINGALE, n. s. Belg. vcrdegarde, fartegardc; Fr. vertugalle, vertugaden ; Span. vertngado, the guard of virtue, say some of the dictionaries : but Air. Thomson traces these words to the Gothicˆora; Belg. vaarew ; Sax. finan, and Teut. virt : vaaren, signifying to carry ; to go with child ; and the Teut. va-t, the burden borne. A hoop of whalebone, originally used as a protec- tion by women with child. Tell me. What compass will you wear your farthingale?

Shakspeare. Arthur wore in hall Round table like a. farthingal. Hudibr::ˆ. Some will have it that it portends the downfal of the French king ; and observe, that the farthingale appeared in England a little before the ruin of the Spanish monarchy. Addison.

She seems a medley of all ages. With a huge farthingale to swell her fustian stuff, A now commode, a topknot, and a ruff. Swift.

FA’SCES, n. s. Lat. Rods anciently car- ried before the Roman consuls as a mark of their authority.

To kisse the precious case of his proude toe : And for the lordly /aice* borne of olde. To see two quiet crossed keyes of golde ; Or Cybele’s shrine, the famous Pantheon’s frame ‘I’uru’d to the honour of our Ladie’s name.

Bp. [lull’s Stilires. The duke beheld, like Scipio, with disdain. That Carthage, which he ruined, rise once more j And shook aloft the fasces of the main. To fright those slaves with what they felt before.

Drydcn.

Fasces, in Roman antiquity, were axes tied up with rods. According to Florus, tlie fasces were introduced by Tarquin I., the fifth king of Rome ; and were then the mark of the sovereign dignity. In after-times they were borne before the consuls, but by turns only, each his day ; they had each of them twelve, borne by as many lictors. These fasces consisted of branches of elm ; having in the middle a securis or axe, the liead of which stood out beyond the rest. Pub- licola took the axe out of the fasces, as Plutarch says, to remove from the people all occasion of terror. After the consuls, the pretors assumed the fasces. In the government of the decemvirs, it was the practice at first for only one of them to have the fasces. Afterwards each of them had twelve, after the mann-ˆr of the kings. When the magistrates, who by right had the axes carried before them, wished to show some deference to the people, or any person of singular merit, they either sent away the lictors, or commanded them, submittere fasces, to lower the fasces before them. Many instances of this occur in the Ro- man history.

FASCIA Lata, in anatomy, a thick strong tendon, sent off from the back, the glutsei, &,c., to surrolind the muscles of the thigh. It is the thickest on the outside of the thigh and leg, and a little below the trochanter major, it is firmly fixed to the linea aspera ; it is again fas- tened further down, to that part of the head of the tibia that is next the fibula, where it sends off the tendinous expansion along the outside of the leg. It serves to strengthen the action of the muscles, by keeping them firm in their pro- per places when in action.

FASCIA'TED, adj. > Lat. fascia, a band

Fascia'tion, W..S. i or fillet. Bound with fillets : bandage ; the act or manner of binding wounds.

Three especial sorts oi fasciation, or rowling, have the worthies of our profession commended to poste- rify. Wiseman.

FAS'CINATE, v. a.ˆ YT.fasciner ; Lai.fas-

Fascina'tion, 7z. s. ˆcino, a Gr. (iaatcaivio ;

Fas'cinous, adj. j to bewitch with the eye. To enchant; bewitch ; influence secretly and un- accountably : fascinous is an obsolete word for caused or acting by enchantment.

There be none of the affections which have bicn noted to fascinate or bewitch, but love and envy.

Bacon.

He had such a crafty and bewitching fashion, both to move pity and induce belief, as was like a kind of fascination and enchantment to those that saw liini or heard him. Id

Vol. IX.

The Turks hang old rags, or such like ugly things, upon their fairest horses, and other goodly creatures, to secure them ii\^a.mst fascination. Waller.

I shall not discuss the possibility of fascittout dis- eases, farther than refer to experiment. Haroey.

There is a certain bewitchery of fascination in words, which makes them operate with a force be- yond what we can naturallj' give an account of.

Soitth.

Such 3. fascinating sin this is, as allows men no liberty of consideration. Decay of Piety.

First her sweet voice in plaintive accents chains The Muse's ear -wiili fascinating strains. Darwin. It was as if their little looks could ,poison

Oi fascinate whome'er they fixed their eyes on.

Byron.

Fascination, from the Greek ftauKaiveiv, to fascinate or bewitch, a sort of witciicraft sup- posed to operate either by the eye or the tongue. Ancient writers distinguish two sorts of fascma- tion, one performed by looking, or the efficacy of the eye. Such is that spoken of by Virgil in his third eclogue :

Nescio quis teneros oculus mihi fascinat agnos.

The second by words : such is that mentioned in his seventh eclogue :

Aut si ultra placitum laudarit, baccare fronteni C'ingite, ne vati nocpat mala lingua futuro.

Horace touches on both kinds in his first book of

epistles :

Non istic obliquo oculo mca commoda quisquam Limat, non odio obsculo, raorsuque venenat.

Fascination, in natural hisiory, an extra- ordinary power said to be possessed by serpents, and more especially by the rattle snake, over animals and birds it destines for its prey. The evidences of the fact are numerous and well supported, but in accounting for the causes of it there is great difference of opinion ; Kulser and some others, have endeavoured to say that the animals, &c., must have received some pre- vious bite ; La Cepede and others, again, think the rattle snake possessed of peculiar miasmata the odoi of which may at pleasure stupify , and some have ascribed it entirely to its rattle; See Coluber and Serpent.

FA'SCINE, n. s. Ft. A military fixggot.

The Black Prince passed many a river without the help of pontoons, and filled a ditch with faggots as successfully as the generals of our times do with fascines. Addison's Spectator.

Fascines, in fortification, are faggots, made of small branches of trees tied in three or foui places, and of various dimensions, according to the purposes intended. Those that are for making epaulements or chandeliers, for raising works, or filling up ditches, are ten feet long, and one or one and a quarter foot in diameter. They are made in the following manner : six small pickets are stuck into the ground, two and two, forming little crosses, well fastened in the middle. On these trestles the branches are laid, and are bound round with withe.s at the distance of every two feet. Six men are em- ployed in making a fascine : two cut the boughs, two gather tl)(>m, and the remaining two bind them.

FASCIOLA, in zoology, the fluke or gourd worm : a genus of insects of the order of vermes intestina : the body is flattish, and has a vent hole at the extremity and on the belly. There are forty-six-species :

F. barbata, is white, with transverse papillte in the mouth. It is of an oblong shape, anri about the size of a cucumber seed. It is found in the intestines of the sepia lotigo.

F. hepatica, the liver fluke, grows to two- thirds of an inch in length, though it is more usually met with not half that size; and its breadth is nearly equal to two-thirds of its length: it' is flattish, but somewhat rounded on the back, and has about eight deep longitudinal furrows in

two series ; its skin is soft and whitish, with a tinge of brown. The hinder part is founded, the fore part is furnished with a large mouth; it bears some resemblance to the seed of the common gourd, whence it has acquired the name of the gourd-worm. It is found in fresh waters, in ditches, at the roots of stones, sometimes in the intestines, and often in the sub- stance of the other viscera in quadrupeds. It often infests the livers of sheep, and on tluit ac- count is called hepatica. Bags with salt in them should be placed in the fold that tlie sheep may lick them, which is the only remedy,

F. intestinalis, or intestinal fluke, is of a long slender form, when extended ; when contracted, of a suhoval form. It inhabits the intestines of fresh water fish, particularly breams.

”” ‘ French, /“aˆott ;

Norman Fr. J’a- cion; Ital. fuzo, yfattionc ; Latin, facia, to make. Form ; make ; ap- pearance ; man-

FAS

FASiriON, n.s.&cv.a. Fash’jo.varlf., adj. Fash’ionably, adu. Fash’ionableness, n.s. Fasu’ioner, Fash’ionist,

FASH’lON-MONGERING,af/;. _

ner ; mode; custom of dress or ornament : hence any thing worn ; a distemper of horses. To fashion is to make or form ; fit; adapt; accom- modate to the reigning custom or mode ; coun- terfeit. A fashioner is a former or maker of any thing. Fashionist ami fashion-monger, a fop ; a ‘dandy;’ a foolish observer of all fashions. Fashion-mongering, behaving as a fashion-mon- ger.

Did not ho that made me in the womb, make him ? And did not ono fashion us in the womb ? Job.

The fashion of his countenance was altered.

Lulie. Laws ought to be fashioned unto the manners and conditions of the people for whom they are meant, and not to be imposed upon them according to the simple rule of rijˆht. Spenser.

Ne do, I doubt, but that ye well can fashion Yourselves thereto, according to occasion.

Huhberd’s Tale. They pretend themselves grieved at our solemni- liiS

in erectini; churches, at their form and fashion, at the statelincss of them and costliness, and at the ojiinion which we liave of them. Hooker.

It bptter fits my blood to be disdained of all, than U> fashion a carriage to rob love from any.

Shdlitpeare. Nature, as it grows again towards earth. Is fathioned for the journey, dull and heavy. Id. Stand these poor people's friend. —I will. Or let me lose the fashion of a man. Id.

Here's the note How mucn your chain weighs to the utmost carat. The fineness of the gold., the chargeful /a*/ido». Id. For that 1 love your daughter In such a righteons fashion as I do, Perforce against all checks, rebukes, and manners^ I must advance. Id. Merry Wives of Windsor.

This cardinal. Though from an humble stock undoubtedly. Whs fashioned to much honour from his cradle.

Id. Henry VIIl. I'll be at charges for a looking-glass. And entertain a score or two of taylors. To study fashiortJ to adorn my body. Id.

Now, by this maiden blossom in my hand, I scorn thee, and thy fashion, peevish boy. Id.

His horse is possest with the glanders, infected witJi the fashion:!, and fidl of windgalls. Id,

Time is like a. fashionable host. That slightly shakes his parting guest by th' hand ; But with his arms outstretched, as he would fly. Grasps in the comer : welcome ever smiles. And farewell goes out sighing. Iil.

Scambling, out-facing, /^w/jiore-mrmf/'n/i^ boys. That lie, and cog, and flout, deprave and slander. Go antickly, and show outward hideousness. Id.

Exceed not the humour of rags and bravery, for these will soon wear out of fashion ; but money in thy purse will ever be in fashion. Raleigh.

It is strange that men oi fashion, and gentlemen, should so grossly belie their own knowledge. Id.

The graves of the rebellious generations were a.- Tez.dy fashioned in the clouds, which soon after should swallow up all living creatures. Id.

The commissioners either pulled down or defaced all images in churches ; and that in such unseason- able and unseasoned fashion, as if it had been done in hostility against them. Hayward.

Where is my fashioner ? my feather-man?

My linener, perfumer, barber ? Ben Jonson.

The way of outward fashionableness in religion, and inward liberty of heart, cannot but seem fair to nature.

Bp. Hall.

Balaam's suit and Israel's quails had both one fashion of grant, in anger. Id. Contemplations.

The rib he formed and fashioned with his hands ; Under his forming hands a creature grew. Manlike, but different sex. Milton's Paradise Lost.

Zelmaue again, with great admiration, began to speak of him ; asking whether it were the fashion or no, in Arcadia, that shepherds should perform such valorous cnterprizos ? Sidney.

Though the truth of this hath been universally ac- knowledged, yet because the fashion of the age is lo call every thing into question, it will be requisite to satisfy men's reason about it. Tillotson.

The eminence of your condition will invite gentle- men to the study of nature, and make philosophy /u- shionable. Glancilte.

A certain air of pleasantry and humour, which prevails now-a-days in the fashionable world, gives a son the assurance to tell his father, he has lived too long. Shaftesbury.

This fashion-monger each morn 'fore he rise. Contemplates suit-shapes. Marston.

Rich, fashionable robes her person deck ;

Pendants her ears, and pearls adorn her neck.

Dryden,

Inability will cveiˆ one find in himself, who shall go about to fashion in his understanding any simple idea, not received by his senses from external objects, or by reflection from the operation of his mind about

them. Locke.

FAS

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FAS

A youne; gentleman accommodates himself to the innocent diversions in fdshion. Id.

The value of the labour employed about one parcel of silver more than another, m;ikes a difference iu their price ; and thus fashioned plate sells for more than its weight. Id.

But if ever frequency of oaths shall make them be looked on as formalities of law, or the custom of straining of truth (which men's swearing in their own cases is apt to lead them to), has once dipped men in perjury, and the guilt, with the temptation, has spread itself vfery wide, and made it almost fashionable in some cases, it will be impossible for the society (these bonds being dissolved) to subsist. Id.

Why should they not continue to value themselves for this outside fashiunableness of the taylor or tire- woman's making, when their parents have so early instructed them to do so ? Id.

He must at length die dully of old age at home, ■when here he might so fashionably and genteelly have been duelled or fluxed into another world. South. How could this noble fabrickbe designed. And fashioned, by a maker brute and blind ? Could it of art such miracles invent. And raise a beauteous world of such extent ?

Blackmore. No wonder that pastorals are fallen into disesteem, togethsr with tha.t fashion of life upon which they were grounded. Walsh.

Examine how the. fashionable practice of the world can be reconciled to this important doctrine of our re- ligion. Rogers. A different toil another forge employs. Here the loud h?i.iamcT fashions female toys Each trinket that adorns the modern dame. First to these little artists owed its frame.

Gay's Fan. It was not easily reconciled to the common method ; but then it was the fashion to do such things.

Arlntthnot. 'Tis prevailing example hath now made it fashion- able,

Bentley.

His pancgyricks were bestowed only on such per- sons as he had familiarly known, and only at such times as others cease to praise, when out of power, or out of fashion. Pope.

Look on this globe of earth, and you will find it to be a very complete and fashionable dress. Swift.

Spirit is now a very fashionable word ; to act with spi- rit, to speak with spirit, means only to act rashly, and to talk indiscreetly. An able man shows his spirit by gentle words and resolute actions ; he is neither hot nor timid. Chesterfield.

Whatever has, by any accident, hccoms fashiotiahle, easily continues its reputation, because every one is ashamed of not partaking it. Johnson.

Whilst you arc discussing fashion, the fashion is gone by. The very same vice assumes a new body. The spirit transmigrates ; and, far from losing its principle of life by the change of its appearance, it is renovated in its new organs with the fresh vigour of a juvenile activity. Burke.

Nor for its own sake merely, but for his Much more, who fa-ihioned it, he gives it praise j Praise that from earth resulting, as it ought. To earth's acknowledged Sovereign, finds at once Its only just proprietor in Him. Cowper.

Yet what can satire, whether grave or gay ? It may correct a foible, may chastise The freaks oi fashion, regulate the dress, Retrench a sword-blade, or displace a patch. Id, For he, with all his follies, has a mind Not yet so blank, or fashioruthly hVmd , Hut now and then perliaps a feeble ray Of distant wisdom shoots across his way. Id.

In Kensington Gardens to stroll up and down. You know was the fashion before you left town ; The thing's well enough, when allowance is made For the size of the trees and the depth of the shade

Sheridan.

FAST', «(/;., arfy., u. 7j.&7j.s.ˆ Gothic and

Fast'en, v. a. & V. n.

Fast'eu, n. s. Fast'exer, n. s. Fast'ening, n. s. Fast'iianued, adj.

FaSt'iNG, 71. s.

Fast'ing-day, Fast'ly, adv. Fast'ness, n. A-.

Hwed. fast; Isl.

fast)- ; Saxon

pxj-t; Belgic (^ vast ; Teutonic (fcst, fast, vast.

Finn ; strong ;

steady ; close ;

fixed ; abid- J ing;persistini;

swift; speedy; i. e. with an abiding or unrelaxed pace : fast is also found frequently in our lan- guage as an adverb, following these senses, or synonymous with fastly. To fast, the verb, also means to adhere to a rule or resolution of abstinence, from whatever motive : fast and fast- ing, as substantives, signify imposed abstinence : ' fast and loose,' sometimes the one and some- times the other ; variable ; inconstant. To fasten, according to a common use of the termination en, signifies to makes fast or firm; to unite inse- parably ; to affix, and hence to impress : as a neu- ter verb, to fix itself: a faster, one who practises abstinence : a fastener is a person, and a fasten- ing a thing, which makes fast or firm : fast-lianded, avaricious ; ' close-fisted' : fastness, closeness ; state of being firm ; fixed ; secure ; hence a strong military place or position"; a fortress; concise- ness.

Thanne the disciplis of John camcn to him and sciden, whi fasten, and the Farisees ofte? but thi disciplis /as

And it was doon whanne the dayes of liis taking up weren fulfiUid he settidc faste his face to go to Jerusalem. Id. Luk ix.

Moses reared up the Tabernacle, and fastened his sockets. Exodus.

This work goeth/as* on, and prospercth.

Ezra v. 8. He by his strength seiteth fast mountains.

Psalm Ixv. 6. When thon fastest, anoint thy head and wash thy face, that thou appear not unto men to fast.

Malt. vi. Surely the stone from the wall crieth out ; And the beam (marg. fastninij) from the limber an- swereth it. Hab. ii. 11. Abp.

Neuicome's Trans. Quick wits be in desire new-fangled ; in purpose, unconstant ; light to promise any thing, ready to forget every thing, both benefit and injury ; and there- by neither_/ajt to friend nor fearful to foe.

Aschain's Schoolmaster.]{ring his stile from all loose grossncss to such firm fastness in Latin, as in Demosthenes. Ascham.

Kut who can turn the stream of destiny, Or break the chain of strong necessity, Which fast is tied to Jove's eternal scat?

Spenser's Faerie Qucene. And dieted -wiih fasting every day. The swelling of his wouniles to mitigate. Id. England, by report of the chronicles, was infested with robbers and outlaws ; which, lurking in woods and fast places, used often to break forth to rob and spoil.

/(/. Oil Ireland. Lodronius, with the breaking in of the horsemen, was driven into a marsh ; where, after that he, being

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a\niosi fast in the deep mud, had doae the uttermost, he yielded himself. Knolles,

Barbarossa left, fourteen galleys in the lake ; but the tacklings, sails, oars, and ordnance, he had laid up in the castle /csi by. Id,

This love of theirs myself have often seen, 'iapiy when they have judged me fajt asleep.

Shakfpeare. Last night the very god shewed me a vision : I fast, and prayed for their intelligence. Id.

A thousand men have broke their fasts to-day. That ne'er shall dine, unless thou yield the crown.

Id. Bind the boy, which you shall find with me. Fast to the chair. Id. King John.

I would give a thousand pound I could run as fast as thou can'st. Id. Henry IV.

Thinking, by this face. To fasten in our thoughts that they have courage ; But ‘tis not so. Id. Julius Ccesar.

lln fastened on my neck ; and bellowed out, \s he’d burst heaven. Id. King Lear.

The king being fasthanded, and loth to part with a second dowry, prevailed with the prince to be con- tracted with the princess Catharine. Bacon.

The prince groweth up fast to be a man, and is of a sweet and excellent disposition : it would be a stain upon you if you should mislead, or suffer him to be misled. Id. to Villieis.

We have some meats, and breads, and drinks, which taken by men enable them to fast long after. Id. New Atlantis, Such as had given the king distaste, did contend by their forwardness to shew it was but their fastness to the former government, and that those affections ended with the time. Id,

Skill comes so slow, and life so fast doth fly. We learn so little, and forget so much. Davies.

All the places are cleared, and places of fastness laid open, which are the proper walls and castles of the Irish, as they were of the British in the times of Agricola. Id. mi Ireland.

She had all magnetick force alone. To draw and fasten sundred parts in one. Donne. Happy and innocent were the ages of our fore- fathers, who broke their fasts with herbs and roots ; and, when they vˆere permitted flesh, eat it only dressed with hunger and fire. Taylor.

Do not call it a. fastingday , unless also it be a day of extraordinary devotion and of alms. Id.

He that was the meekest man upon earth, in a sud- den indignation abandons that, which in cold blood he would have h.c\i faster than his life.

B}>. Hall’s Contemplations. I see Moses the receiver of the Law, Elias the restorer of the Law, Christ the fulfiUer of the old Law and author of the new, all fasting forty days ; and these three great fosters 1 find together glorious in Mount Tabor. Id.

Last, the sire and his three sons. With their four wives; and God made fast the door.

Milton. Silo's brook that flowed Fast by the oracle of God.

Id. Paradise Lost. Where will this end ? Four times ten days I've passed. Wandering this woody maze, and human food Nor tasted, nor had appetite ; Kha.1 fast To virtue I impute not, or count part Of what 1 suffer here. Id. Paradise Regained.

It (religion) alone fastetieth our thoughts, affections, and endeavours, upon occupations worthy the dignity of our nature. Barrow.

It (piety) tieth all relations more fastly aud strongly, assureth and augmenteth all endearments, enforceth and esiablisheth all obligations by thii '•rm band! > of conscience. Id.

A rope of fair pearl, which now hiding, now hidden by the hair, did, as it were, play at fast and loose each with other, giving and receiving richness. Sidney.

A mantle coming under her right arm, and covering most of that side, had no fastening on the left side.

Id.

There streams a spring of blooa so fast. From those deep wounds, as all embrucd the face.

Daniel.

If she perceived by his outward cheer. That any would his love by talk bewray.

Sometimes she heard him, sometimes stopt her ear. And played fast and loose the live-long day.

Fairfax.

This paucity of blood may be observed in other sorts of lizards, in frogs, and other fishes ; and there- fore an horse-leech will hardly yhsˆen upon a fish.

Browne's Vulgar Errovrs.

A man in a boat, who tugs at a rope that's yart to a ship, looks as if he resolved to draw the ship to him.

Temph,

Let purling streams be in her fancy seen. And flowery meads, and vales of cheerful green ;

And in the midst of deathless groves Soft sighing wishes lie. And smiling hopes fast by,

Ai > J just beyond ‘em ever-laughing loves.

Dryden.

She’s gone unkindly, and refused to cast One glance to feed me for so long a fast. Id.

By chance a ship was fastened to the shore. Which from old Clusium king Osinius bore. Id.

The foes had left the fastness of their place.

Prevailed in fight, and had his men in chace. Id.

Could he fasten a blow, or make a thrust, when not sufi’ered to approach ? Id. ˆneid, Dedication.

The folly and wickedness of men, that think to play fast and loose with God Almighty ! L’Estrange.

The wrong judgment that misleads us, and makes the will often fasten on the worse side, lies in misre- porting upon comparisons. Locke.

We may trade, and be busy, and grow poor by it, unless we regulate our expenses ; if to this we are idle, negligent, dishonest, malicious, and disturb the sober and industrious in their business, let it be upon what pretence it will, we shall ruin the faster. Id,

We humble ourselves before God this day, not merely by the outward solemnities of a faat, but by afflicting our souls as well as bodies for our sins.

Atterbtay.

If they cohered, yet by the next conflict with other atoms they might be separated again ; and so on in an eternal vicissitude oi fast and loose, without ever con- sociating into the huge condense bodies of planets,

Bentley.

Being tried only with a promise, he gave full credit to that promise, and still gave evidence of his fidelity as fast as occasions were offered.

Hammond’s Practical Cateclasm. Well-known to me the palace you inquire ;

For fast beside it dwells my honoured sire. Pope. Fast by the throne obsequious fame resides.

And wealth incessant rolls her golden tides. Id.

Nor prayers nor fasts its stubborn pulse restrain ; Nor tears, for ages, taught to flow in vain. Id,

The heaviest muse the swiftest course has gone. As clocks ran fastest when most lead is on. Id.

You are to look upon me as one going feut out of the world. Swift.

FASTS.

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The words Whig and Tory have been pressed to the service of many successions of parties, with very dif- ferent ideas /oaienerf to them. Id. Examiner.

Their oppressors have changed the scene, and com- bated the opinions in their true shape, upon which they could not so well fasten their disguise.

Decay of Piety.

If his adversary be not well aware of him, he en- trenches himself in a new fastness, and holds out the siege with a new artillery. Watts on the Mind.

Industry needs not wish, and he that lives upon hope will die fasting. Franklin.

Not a little sore At this most strange and unexplained ‘ hiatus’

In Don Alfonso’s facts, which just now wore An awkward look ; as he revolved the case The door vfZi& fastened in his legal face. Byron.

Fasts, Religious. Religious fasting has been practised by most nations from the remotest an- tiquity. Some divines derive its origin from the

terrestrial paradise, where our first parents were forbidden to eat of the tree of knowledge. The Jewish church has observed fasts ever since its first institution ; nor were the neighbouring hea- thens, viz. the Egyptians, Phoenicians, and As- syrians, without their fasts. The Egyptians, ac- cording to Herodotus, sacrificed a cow to Isis, after having prepared themselves by fasting and prayer : a custom which he likewise ascribes to the women of Cyrene. Porphyry affirms, that the Egyptians, before their stated sacrifices, al- ways fasted many days, sometimes six weeks ; during all which time the priests and devotees not only abstained from flesh, fish, wine, and oil, but even from bread, and some kinds of pulse. These austerities were communicated by them to the Greeks, who observed their fasts much in the same manner. The Athenians had the Eleusinian and Thesmophorian fasts, the observation of which was very rigorous, especially among the women, who spent one whole day sitting on the ground in a mournful dress, without taking any nourishment. In the island of Crete, the priests of Jupiter were obliged to abstain all their lives from fish, flesh, and baked meats. Apuleius in- forms us, that whoever wished to be initiated in the mysteries of Cybele, were obliged to prepare themselves by fasting ten days ; and, in short, all the pagan deities, whether male or female, required this duty of those that desired to be initiated into their mysteries, of their priests and priestesses that gave the oracles, and of those that came to consult them. Among the heathens fasting was also practised before some of their military enterprises. Aristotle informs us that the Lacedemonians, having resolved to succour a city of the allies, ordained a fast throughout the whole extent of their dominions, without except- ing even the domestic animals : and this tliey did for two ends ; one to spare provisions in favor of the besieged ; the other to draw down the blessing of heaven upon their enterprise. The iuliabitants of Tarentum, when besieged by the Romans, demanded succours from their neighbours of Rhegium, who immediately commanded a fast throughout tlieir wliole territories. Their enter- prise having proved successful, by their throwing a supply of provisions into the town, the Romans were obliged to raise tlie siege; and llic Taren-

tines, in memory of this deliverance, instituted a perpetual fast. At Rome fasting was practised by kings and emperors. Numa Pompilius, Julius Casar, Augustus, 'espasian, &,c., had tlieir stated fast days ; and Julian the Apostate was so exact in this observance as to outdo the priests themselves, and even the most rigid philosophers. The Pythagoreans kept a continual lent; but with this difference, tliat they believed the use of fish to be equally unlawful with that of flesh. Besides their constant temperance, they also fre- quently fasted rigidly

for a ˆery long time. In this respect, however, they were all outdone by their m.aster Pythagoras, who continued his fasts for no less than forty days together. The brahmins are very remarkable for their severe fastings ; and the Chinese have also their stated fasts, with forms of prayer for preserving them from barrenness, inundations, earthquakes, &c. The Mahommedans are very remarkable for the strict observance of their fasts ; and the exact- ness of their dervises in this respect is extra- ordinary. Fasting was often used by the heathens for superstitious purposes; sometimes to pro- cure the interpretations of dreams ; at others to be an antidote against their pernicious conse- quences. The modem Jews, though expressly forbidden to fast on Sabbath days, think them- selves at liberty to dispense with this duty when they have frightful dreams the night preceding, that threaten them with great misfortunes. On these occasions, they observe a formal fast the whole day. They have also added several fasts to the law of Moses, particularly three, in me- mory of sore distresses their nation has suff'ered at different times. The abstinence of the ancient Jews commonly lasted twenty-seven or twenty- eight hours at a time ; beginning before sun-set, and not ending till some hours after sun-set next day. On these days they wore white robes in token of grief and repentance ; covered tliein- selves with sackcloth, or their worst clothes ; lay on ashes ; sprinkled them on their heads, Sec. Some spent the whole night and day following in the temple or synagogue, in prayers and other devotions, barefooted, scourging themselves. To complete their abstinence, at night they were to eat nothing but a little bread dipped in water, with some salt for seasoning ; except they chose to add to their repast some bitter herbs and] > ulse. The ancients, bodi Jews and Pagans, had also their fasts for purifying the body, particularly the priests, and such as were any way employed at the altars ; for when nocturnal disorders hap- pened to these, it was unlawful for them to ap- proach all the next day, whicli they were bound to employ in purifying themselves. On this ac- count, at great festivals, where tlieir ministry could not be dispensed with, it was usual for tiiem, on the eve thereof, not only to fast, but also to abstain from sleep. For this purpose the high-priest had under-ofiicers to wake him, if overtaken with sleep.

FASTI, in Roman antiquity, a chronicle or register of time, wherein the several years were denoted by tlie respective consuls, with the principal events that happened during tlieir consulates; these were called also fasti oou- sulares.

FAS

Fasti, or Dies Fasti, also denoted court days. The word fasti is formed

of the verb fari, ‘ to speak,’ because during those days the courts were opened, causes might be heard, and the praetor was allowed to pronounce the three words, do, dico, addico ; the other days wherein this was prohibited, were called Nefasti : thus Ovid,

Illc nefastus crit, por quem tria verba silentur : Fastus crit, per quem lege licebit agi.

These dies fasti were noted in the kalendar by the letter F : but there were some days ex parte fasti, partly fasti, partly nefasti, i. e. justice might be distributed at certain times of the day, and not at others. These days were called in- tercisi, and were marked in the calendar thus, F. P. fasto primo, where justice might be de- manded during the first part of that day.

Fasti signitied also tlie kalendar wherein were expressed the several days of the year, with their feasts, games, and other ceremonies. There were two sorts of fasti, the magistrales and kalendares, or the greater and less.

I. Fasti Kalendares, which were what was properly and primarily called fasti, are defined by Festus Fompeius to be books containing a description of the whole year : i. e. Epheraerides, or diaries, distinguishing the several kinds of days, festi, profesti : fasti, nefasti. Sec. The in- stitutor was Numa, who committed the care and direction of the fasti to the Pontifex Maximus, whom the people used to go and consult on every occasion. This custom held till A. U.C. 450, when C. Flavins, secretary to the pontifices, exposed in the forum a list of all the days whereon it was lawful to work : which was so acceptable to the people, that they made him curule ffidile. These less fasti were of two kinds, urbani and rustici. 1. Fasti rustici, the country fasti, expressed the several days, feasts, &c. to be observed by tha country people ; for as these were occupied in tilling the ground, fewer feasts, sacrifices, ceremonies, and holidays, were enjoined them than the inhabitants of cities; and they had also some peculiar ones not ob- served at Rome. These rustic fasti contain little more than the ceremonies of the kalends, nones, and ides ; the fairs, signs of the zodiac, increase and decrease of the days, the tutelary gods of each month, and certain directions for rural works to be performed each month. 2. Fasti urbani, the fasti of the city, were those which obtained or were observed in the city. Some will have them thus called because they were exposed publicly in divers parts of the city ; though, by the various inscriptions or gra- vings thereof on antique stones, one would ima- gine that private persons had them likewise in tiieir houses. Ovid undertook to illustrate these fiisti urbani, and comment on them, in

his Libri Fastorum, whereof we have the first six books still remaining ; the last six, if they were ever written, being lost.

II. Fasti Magistrales, the greater fasti, ex-]Kessed the several feasts, with every thing re- lating to the gods, religion, and the magistrates ; the emperors, their birth-days, offices, days con- secrated to tlicin, and feasts and ceremonies

established in their honor, or for their prosperityˆ &c. With a number of such circumstances did flattery at length swell the fasti ; when they be- came denominated Magni, to distinguish them from the bare kalendar, or fasti kalendares. FASTFDIOUS. adj. ˆ Trench, fasHdieui; Fasti'diously, adv. tfasHdicnsc;La.t.fas- Fasti'diousness, 7J.S. ttidiosus. Disdain- Fasti'diosity. J ful ; squeamish ; de-

licate to a fault; over-nice.

Reasons plainly delivered, and always after one manner, especially with fine and faitidiom minds, enter but heavily and dully. Bacon.

Let x\inr fastidious vain Commission of the brain.

Run on and rage, sweat, censure, and condemn. They were not made for thee, less thou for them.

Ben Joiuon.

And if nearness and presence be the cause of our dislike, why do we not hate ourselves, which arc ever in our own bosom ? why do we not hate this fastidi- ous curiosity, which is too close to us. Bp, Hall.

Less licentious and more discerning times will re- pair the omissions s.xiA fastidiousness of the present.

Boyle.

A squeamish fastidious niceness, in meats and drinks, must be cured by starving. L' Estrange.

All hopes, raised upon the promises or supposed kindnesses of the fastidious and fallacious great ones of the world, shall fail. South.

Their sole talent is pride and scorn : they look fas- tidiously, and speak disdainfully, concluding, if a man shall fall short of their garniture at their knees and elbows, he is much inferior to them in the furniture of

his head. Government of the Tongue.

His diseases heiag fastidiosity , amerphy, and oscita- tion. Swift,

Proud youth ! fastidious of the lower world I

Man’s lawful pride includes humility. Young.

And to abate ihc fastidiousness of some critics, with respect to the Hebrew style of poetry, I shall produce a few similar instances, among many whicli occur in the Eneid itself. Archbp, Newcome.

Fasting. See Abstinence.

FASTOLFFE (Sir John), an English general who obtained some reputation in France, in the fifteenth century. He served in Ireland under Sir Stephen Scrope, and on his death, in 1408, married his widow, an heiress of the Tibtot family, of whose rich estates in Gloucestershire and Wiltshire he consequently became possessed. He soon after obtamed the honbr of knighthood and the order of the garter ; and having been wounded at the batUe of Agincourt, was rewarded with a grant of territorial property in Normandy. In 1429 he defeated 6000 Frenchmen with only 1500 English, and brought relief to the army before Orleans. But the same year he shame- fully fled before Joan of Arc at the battle of Paiay, for which he was deprived of his garter by the regent. He died in 14G9. This officer has been supposed, by the resemblance perhaps of the names, to have been the prototype of Shaks- peare’s Falstafl”. But he is introduced by name as fleeing at Patay, and his garter is torn off” at the coronation scene in Henry 'I., part 1, at which time the Sir John Falstafl’ of Henry IV. and V. was dead. Vide King Henry V., act 2, scene 111. Nor does the character of Fastolffe appear to have been that of a debauchee.

FAS’TUOUS, adj. Fr. fastueux, fastueusc ; LM.fustuusus. Proud; hauglity.

It Cpietv) fenceth him from insolence, a.ndfastuoui contempt of others. Barrow,

a. & ‘^ Tevit.vcfor fi’tt ; [v. n.

FAT, n. s., adj., v

FAT’p.RAIˆˆ:D, adj.

Fat’kidneyed,

Fat LING, n. s.

Iˆat’ner,

Fat’ness,

1’at’ten, v. a. & V. n.

Fat’ty, adj.

Fat’witted.

Swed. fett ; Belg. vet ; Saxon, pat, the past partici- >ple of paesan, to feed, says Mr. II. Tooke. Tlie con crete oily matter of the flesh of

aiiiiuals ; metaphorically the best or choicest part of things. Fat, as an adjective, signifies well-fed ; plump ; fleshy ; also rich ; wealtliy ; coarse; dull. To fatten, signifies to make fat or])lunip ; to feed abundantly or to excess. As a verb neuter, to grow fat or full-fleshed. Fat-brained; fat-kidneyed, fat-witted, are terms of reproach, importing dulness, stupidity, or vulgarity. A fatling is a young animal fed for slaughter. A fatner, that which causes fatness. Fatness, the quality or state of being fat in any way ; fer- tility. Fatty, unctuous ; oleaginous ; greasy.

God give thee of the dew of heaven, and the fat- ness of the earth, and plenty of corn and wine.

Gen, xxvii. J8. The calf and the young lion, and the fatling shall lie down together, and a little child shall lead them.

Is. xi. 6. Such iraitery is in false curates, that given mede or hire to come into such wordly offices, and couchcn in lord’s courts for to get mo fatte benefices, and pur- posen not spcdly to do their ghostly office,

Wickliffe on Si/morii/, And by his side rode loathsome gluttony. Deformed creature, on a filthy swine ; His belly was upblown with luxury. And eke with yaˆness swollen were his eyen.

Faerie Queens. Oh how this villany Voth fat me with the very thoughts of it I

Shakspeare. Let our wives Appoint a meeting with this old fat fellow. Id. When gods have hot backs, what shall poor men do? For mc, I am here a Windsor stag, and the fattest, I think, i' th' forest. Id.

Clarence, he is well repaid ; He is franked up lo fatting for his pains. Id. Ere this I should ha.yo fatted all the region kites With this slave's offal. Id. Hamlet.

What a wretched and proud fellow is this king of England to mope with hh fat-brained fellows, &c.

Id. Henry V. Peace, ye fatkidney'd rascal ; what a brawling dost thou keep ! /,/. Henry I V.

'J'hou art so fatwiited with drinking old sack, and unbuttoning thee after supper, and sleeping upon benches in the afternoon, tliat thou hast forgotten.

Id. In this ointment the strangest and hardest ingredi- ents to come by, are the moss upon the scull of a dead man unburied, and the fats of a boar and a bear, killed in the act of generation. liacon.

Earth and water, mingled by the help of the sun, gather a nitrous/ atec.v*. Id. Nat. Hist.

The like cloud, if oily or fatty, will not discharge ; not because it stickctli faster, but because air preyelh upon water, and flame and .fire upon oil. Id.

T\ey fat such enemies as they take in the wurs, that they may devour them. Ahlnt.

It is good so to diet the body, that the soul mav be fattened. Bp. Hall's Contamplatious.

Some arc allured to law, not on the contempli'inii of equity, but on the promising and pleasing tho: of litigious terms, /a< contentions, and flowing fi-

All agree to spoil the public good, And viWcdus fatten with the brave man's labour

Otw,. We're hurry'd down This lubrique and adult'rate age ; Nay, added /at pollutions of our own, T' increase the steaming ordures of the sia ■

Dry.lcn. O souls ! in whom no heav'nly fire is found. Fat minds, and ever-grov'ling on the ground. Id, Dare not, on thy life. Touch ought of mine ; This falchion else, not hithei'to withstood. These hostile fields shall fatten with thy blood.

Id. Yet then this little spot of earth well till'd, A num'rous family with plenty filled. The good old man and thrifty housewife spent Their days in peace, and fat ten' d withe :. Enjoy'd tho dregs of lifiˆ, and liv'd to sei- A long-descending healthful progeny. j.<.

Apollo chcck'd my piide, and bade me feed

My fatt'ning flocks, nor dare beyond the reed. Id.

'Tis a tine thing to ha fit and smooth.

L'Es'raiii/i . Tho one labours in his duty with a good conscicnt c ; the other, like a beast, hn. fatting u\> for the slauglilcr.

Id. The Caribbees were wont to geld their children, ou purpose to fat and eat them. Locjte.

An old o-x. fats as well, and is as good, as a young.

Mortimer. When around The clouds Axoˆ fatness, in the middle sky The dew suspended staid, anil left unmoist The execrable glebe. Philips.

The gourd And thirsty cucumber, when they perceive Th' approaching olive, with resentment fly KcT fatty fibres, and with tendrils creep Diverse, detesting contact. Id.

These were terrible alarms to persons grown fai and wealthy by a long and successful imposture.

South. Spare diet and labour will keep constitutions, where this disposition is the strongest, from being ya< : Noa may see in an army forty thousand foot soldiers w uli- out

The wind was v/est on which that philoooplicr bestowed the encomium oi fatner of the earth. Id.

CM,.\a fatted by good pasture, after violent motion, sometimes die suddenly. Id. on Diet.

The common symptoms of the muriatick scurvy are, a saline taste in the spittle, and a lixivial urine, sumo- times with A fatty substance like

a thin skin a-top.

Id. on Alim, Tygers and wolves shall in the ocean breed. The whale and dolphin fatten on the mead. And every element exchange its kind. When thriving honesty in courts we find.

Crrt/ii’<7/e. A fat benefice is that which so abounds witli an estate and i-evenucs, that a man may expend a great deal in delicacies of eating and drinking. Aylijfe.

Vapours and clouds feed the plants of the earth with the balm of dews and the/aˆn«« of showers.

Bentlei/. Some, lucky, find a fiowery spot. For which they never toiled nor swat ; They drink the sweet, and eat the fat.

Burns. I am of small stature, like Alexander the Great ; 1 am soiucwhal inclinalilc to fatness, like Dr. Arbuth- not ami Arislotle; and I drink brandy and water, like Mr. Boyd. Sheridan.

Fat, 71, s. Sax. rˆ’ˆˆj Swed. /«ˆ; Belg. vatte; generally written Vat, which see. A fermenting or other large vessel to liold liquids.

The fats shall overflow with wine and oil.

Joel ii. 24. A white stone used for flagging floors, for cisterns, and tanners ‘/a

Fat, in medicine. A great number of fats have been kept in the shops, for making oint- ments, plasters, and other medicinal compo- sitions ; as hog’s lard, the fat of the boar, the fox, hare, dog, wild cat, Alpine mouse, beaver ; that of hens, ducks, geese, storks ; of the whale, pike, serpents, viper, &c., as also human fat ! — These are now, of course, abandoned. To obtain fat pure, it must be cut into pieces, and melted with a gentle heat in a proper vessel •witii an equal ({uantity of water. It is afterwards to be put into an earthen pot, where the fat rises to the top, and becomes solid when cold. In this state it is exceedingly white, and suffi- ciently pure for the purposes of pharmacy or cliemical examination. See Pharmacy. Fat thus purified has very little taste, and a weak but peculiar smell. The uses of fat in the animal economy have not been clearly ascertained. (Jne of the chief probably is, to blunt and correct a great part of the acids of the aliments, and which are

more tlian are requisite to the composition of the nutritive juice. This is certain, that animals which are castrated, which are not much exercised, or v>‘lnch are come to an age when the production and loss of the seminal fluid is less, and which at tlie same time consume much succulent aliment, generally become fatter, and sometimes exceed, uijly so. Although fat is veiy different from truly animalised substances, and appears not easily convertible into nutritive juices, it being generally difficult of digestion, and apt to become rancid, yet in certain cases it serves to the nourishment and reparation of the body. Animals certainly become lean, and live upon their fat, when they have too little food, and when they have diseases which prevent digestion and nutrition. In these cases the fatter animals hold out longer than the leaner. The fat appears to be then absorbed, and transformed into nutritive juice. In infancy it is white, insipid, and not very solid ; in the adult it is firm and yellowish, and in animals of an advanced aae its color is deeper, its consistence various, and its taste in general stronger.

Fat, in sea language, signifies the same with broad. Thus a ship is said to have a fat quar- ter, if the trussing in or tuck of her quarter be deep.

Fat likewise denotes an uncertain measure of capacity Thus a fat of isinglass contains from

3J; cwt. to 4 cwt. ; a fat of unbound books half a maund or four bales ; of wire from 20 to 25 cwt. ; and of yarn from 220 to 221 bun- dles.

F’ATA Morgana, a very remarkable aerial phenomenon, which is sometimes observed from the harbour of Messina, and adjacent places, at a certain height of the atmosphere. The name, which signifies Fairy Morgana, is derived from an opinion of the superstitious Sicilians, that the whole spectacle is produced by fairies, or such like visionary invisible beings. The populace are delighted whenever it appears, and run about the streets shouting for joy, calling every body out to partake of the glorious sight. This singular meteor has been described by various authors ; but the first who mentioned it with any degree of precision was Father Angelucci, who gives the following account of it as quoted by Swinburne : ‘ On the 15th of August, 1643, as I stood at my window, I was surprised with a most wonderful delectable vision. The sea, that washes the Sicilian shore, swelled up, and became, for ten miles in length, like a chain of dark mountains ; while the waters near our Calabrian coast grew qu.te smooth, and in an instant appeared as one clear polished mirror, reclining against the afore- said ridge. On this glass was depicted, in chiaro scuro, a string of several thousands of pilasters, all equal in altitude, distance, and degree of

light and shade. In a moment they lost half their height, and bent into arcades, like Roman aque- ducts. A long cornice was next formed on the top, and above it arose castles innumerable, all perfectly alike. These soon split into towers, which were shortly after lost in colonnades, then windows, and at last ended in pines, cypresses, and other trees, even and similar. This is the Fata Morgana, which, for twenty-six years, 1 had thought a mere fable.'

As soon as the sun sunnouuts the eastern hills behind Ileggio, and rises high enough to form an angle of forty-five degrees on the water before the city, every object existing or moving at Reg- gio is repeated 1000 fold upon this marine look- ing glass ; which, by its tremulous motion, is as it were cut into facets. Each image passes rapidly off in succession as the day advances, and the stream carries down the wave on which it appeared. Thus the parts of this moving pic- ture will vanish in the twinkling of an eye. Sometimes the air is, at that moment, so impreg- nated with vapors, and undisturbed by winds, as to reflect objects in a kind of aerial screen, rising about thirty feet above the level of the sea. In cloudy heavy weather, they are drawn on the surface of the water, bordered with fine prismati- cal colors. The following is the account given by M. Ilouel : ' In fine summer days, when the weather is calm, there rises above the great cur- rent a vapor which acquires a certain density, so as to form in the atmosphere horizontal prisms, whose sides are disposed in such a manner that, when they come to their proper degree of perfec- tion, they reflect and represent successively, for some time (like a moveable mirror), the objects on the coast or in the adjacent country. They exhibit by turns the city and suburbs of Messina, trees, animals, men, and mountains. They are

certainly beautiful aerial moving pictures. There are sometimes two or three prisms, equally per- fect ; and they continue in this state eight or ten minutes. After this, some shining inequalities are observed upon tlie surface of the prism, which render confused to the eye the objects which had been before so accurately delineated, and the picture vanishes. The vapor forms other combinations, and is dispersed in air. Different accounts have been given of this singular appear- ance; which, for my part, I attribute to a bitu- men that issues from certain rocks at the bottom of the sea, and which is often seen to cover a part of its surface in the canal of Messina. The subtle parts of this bitumen being attenuated, combined, and exhaled with the aqueous globules that are raised by the air, and formed into bodies of vapor, give to this condensed vapor more con- sistence ; and contribute, by their smooth

and polished particles, to the formation of a kind of aerial crystal, which ˆceives the light, reflects it to the eye, and transmits to it all the luminous points which color the objects exhibited in this phenomenon, and render them visible.' Francis Antonio Minasi, who observed this curious spec- tacle three times in 1793, gives the following account of it : —

' When,' says Minasi, ' the rising sun shines from that point whence its incident ray forms an angle of about forty-five degrees on the sea of Reggio, and the bright surface of the water in the bay is not disturbed either by the wind or the current, the spectator being placed on an eminence of the city, with his back to the sun, and his face to the sea ; on a sudden there ap- pear in the water, as in a catoptric theatre, various multiplied objects, viz. numberless series of pilasters, arches, castles well delineated, regu- lar columns, lofty towers, superb palaces, with balconies and windows, extended alleys of trees, delightful plains with herds and flocks, armies of men on foot and horseback, and many other strange figures in their natural colors and proper actions, passing rapidly in succession along the surface of the .sea, during the whole of the short period of time while the above- men- tioned causes remain.

' But if, in addition to the circumstances before descril)ecl,tlie atmosphere be highly impregnated with vapor, and dense exhalations not pnviousiy dispersed by the action of the wind or waves, or rarefied by the sun, it then happens that in tliis vapor,as in a curtain extended along the chat)nel to the height of about four or five and twenty feet, and nearly down to the sea, the observer will behold the scene of the same objects not only reflected from the surface of the sea, but likewise in the air, thou ;h not so distinct or well defined as the former objects from the sea.

- Lastly, if the air be slightly hazy and opaque, and at the same time dewy, and adapted to form the iris, then the above- mentioned objects will appear only at the surface of the sea, as in the first case, but all vividly colored, or fringed with red, green, blue, and other prismatic colors.'

FATATENDA, a considerable town on the Gambia, Western Africa, about 500 miles from its mouth. The African Company had once a factory here, situated on a rock, and overlooking

FATE, n. s. Fa'ted, adj. Fˆa'tal, adj. Fa'talism, n.s. Fa'talist, Fatal'ity, Fa'tally, adv.

a fine country ; but the violent conduct of the king of Tomaiii determined them to break it up in tlie year 1734.

Fr. fatalitc, fatal ; Ital. fata ; Pers. /aˆ (death) ; Lat. fatuiii, from for, fari (a Gr.)), to pronounce (the supposed decree of God). Destiny ; sometimes mean- ing a kind of deified chance ; FVtalness, n. s.J sometimes a fixed series of causes; predetermined event; cause of death; death: fated, means decreed by fate or destiny; invested with the powers of fate, or fatal deter- mination; endued with any power or quality by fate. Fatal is decisive ; inevitable ; deadly ; mortal; appointed by destiny; causing sure destruction or death: fatalism, the doctrine of necessitarian philosophers, or of the fatalists, who maintain that all things happen by necessity : fatality is predetermination ; predestination ; ten- dency to danger or evil : fatalness, inevitable necessity.

Tell me vfhai fates attend the duke of Suffolk : By water shall he die, and take bis end ?

Shalupeare. The fated skj Gives us free scope. Id.

If I'm traduced by tongues which neither know My faculties nor person, yet will be The chronicles of my doing, let me say 'Tis but the fate of place, and the rough brake That virtue must go through. Id. Henry VIII.

It v/a.s fatal to the king to fight for his money ; and

though he avoided to fight with enemies abroad, yet

he was still enforced to fight for it with rebels at home.

Bacon's Henri/ VII.

By a strange /a

be drawn into the stream of the present vogue.

King Charlet. In using the terms fate, decree, or destiny, we speak after the manner of men ; for it being custo- mary with us, whenever we resolve upon some dis- tant work, to declare our intentions to persons under our influence, we conceive of God as making the like

declared or mental determination.

Search, 1 76 3. Viewing a neighbouring hill, whose top of late A chupcl crowned, ‘till in the common fate The’ adjoining abbey fell. Denham.

The stream is so transparent, pure, and clear. That had the self-enamoured youth gazed here. So fatally deceived he had not been. While he the bottom, not his face, had seen. Id,

Necessity or chance Approach not me ; and what I will is fate.

Milton. Some concurrence of their own will is requisite to produce their virtue, God rarely v.orking with irresis- tible power, or fatal eiHcacy. Harrow. It was Still fatal to stout Hudibras, In all his feats of arms, when least He dreamt of it, to prosper best. Hudibras. Seven times seven, or forty-nine, nine times nine, or eighty-one, and seven times nine, or the year sixty- three, is conceived to carry with it the most consiiier- a,hlc fatality. Browne.

Others delude their trouble by a graver way of roa» soning, that these things are fatttl and necessary, it being in vain to be troubled at that which we cannot help. Tillutsoii,

There is a necessity in fate Why still the brave bold raaa is fortunate.

Vryden. When empire in its childhood first appears, A watchful fate o’ersees its rising years. Id.

Looking, he feeds alone his famished eyes ; Feeds lingering death, but looking not he dies ; Vet still he chose the longest way x.o fate. Wasting at once his life and his estate. Id.

O race divine ! For beauty still is fatal to the line. Id.

Behold the destined place of your abodes; For thus Anchiscs prophesied of old. And thus our /araJ place of rest foretold. Id.

O fatal maid ! thy marriage is endowed With Phrygian, Latian, and Rutilian blood. Id.

‘Tis the procession of a funeral vow. Which cruel laws to Indian wives allow, Whca. fatally their virtue they approve ; Cheerful in flames, and martyrs of their love.

li. She fled her father’s rage, and with a train. Driven by the Southern blasts, was fated here to

reign. Id.

With full force his deadly bow he bent. And featheredyaˆM among the mules and sumpters sent. Id.

All the father’s precautions could not secure the son from the fatality of dying by a lion. L’ Estrange.

The stoicks held a fatality, and fixed unalterable course of events ; but then they held also, that they fell out by a necessity emergent from and inherent in the things themselves, which God himself could not alter. South.

Random chance, or wilful /a

A, Philips. O think what anxious moments pass between The birth of plots, and their last/atoZ periods. Oh, ‘tis a dreadful interval of time. Filled up with horror all, and big with death.

Addison. Her aukward love indeed was oAAXy fated ; She and her Polly were too near related. Prior. A palsy in the brain is most dangerous ; when it seizeth the heart, or organs of breathing, /atoZ.

Arbuthnot on Diet. To say that the world was made casually by the concurrence of atoms, is to affirm that the atoms com- posed the world mechanically and fatally; only they were not sensible of it. Bentley.

The whizzing arrow sings. And bears \hy fate, Antinous, on its wings. Pope.

Will the obstinate fatalist find sufKcient apology ?

Watts. All should be prophets to themselves ; foresee Their future fate ; their future fate foretaste • This art would waste the bitterness of death. The thought of death, alone, the fear destroys.

Young. O majestic Night ! Nature's great ancestor ! Day's elder-bora 1 And fated to survive the transient sun. Id.

Wickedness and weakness; is one of the fatalest mistakes desperation can hurry a man into. Sterne.

Our pott, it must be confessed, left several passages so expressed, as to be favorable io fatalism and neces- sity. Warton. Yes, to deep sadness sullenly resigned. He feels his body's bondage in his mind ; Puts otT his generous nature ; and, to suit Uis manners with \\s,fate, puts on the brute.

Cowper.

Frec'in his will to choose or to refuse, Man may improve the crisis or abuse ; Else, on the fatalistˆ unrighteous plan. Say to what bar amenable were man ? Id.

Then grieve not thou to whom the' indulgent Muse

Vouchsafes a portion of celestial fire. Nor blame the partial fates, if they refuse The' imperial banquet and tne rich attire.

Beattie.

Of fate, and chance, and change in human life. High actions and high passions best describing.

Byron.

I feel the impulse — yet I do not plunge ; I see the peril — yet do not recede ; And my brain reels — and yet my foot is firm : There is a power upon me which withholds. And makes it my fatality to live. Id.

Fate denotes an inevitable necessity dependinp: upon a superior cause. The word is formed from fari, fatuin,to speak; aiad primarily implies the same with eff'atum, viz. a word or decree pronounced by God; or a fixed sentence whereby the Deity has prescribed the order of things, and allotted to every person what shall befal him. The Greeks called it ti/xapjutvij, as it were a chain or necessary series of things indissolubly Unked together. All things, says Plato, are in fate; i.e. within its sphere or scheme, but all things are not fated ; and he thus explains the distinction : it is not in fate, says he, that one man shall do so and so, and another suffer so and so, for that would be destructive of our free agency and liberty ; but if any one should choose such a life, and do such or such things, then it is in fate that such things and such consequences shall ensue upon it. The soul, therefore, is aSeairoTov, free and uncontrolled, and it lies within itself to act or not; and there is no compulsion or neces- sity here ; but what follows upon the action shall be accomplished, KaB' mia^nivriv, according to fate, or the constitution of tilings. Thus, that /Eneas should marry Lavinia was a thing in which he was free and independent, but the con- sequent war with Turnus was a fated circum- stance. To this fate even the gods themselves were subject.

FATEMITES, Fathemites, or Fathimites, the descendants of Mahomet by Fathema, or Fatima, his daughter. They never enjoyed the khalifat of Mecca or Begdad, but reigned in Bar- bary and Egypt. See Khalifs.

FATES, in mythology. See Parc^

FATHER. M.S. k.v.

F"A'riIERUOOD,

^

Fatiier-in-law, Fa'tuerless, adj. Fa'tiierliness, n.s.

Saxon, px'toefi ; Goth, and Swed. fader; Belg. and Isl. vader ; Teut, vatter, or voter ;

Fa'tiierly, adj. & adv. J Sans. p«

or production : a fatherhood is the character, or authority, of a father; a father-in-law is the father of one's husband or wife : fatherless, destitute if a fatlier ; unprotected : fatherly ; ten- derly ; with paternal care : fatherliness, paternal kindness.

In the hous of my fadir, ben manye dwellingis, if ony thing lasse I hadde seid to you : for I go to make redi to you a place. Wiclif. Jon xiv.

Jubal was lh.e fattier of all such as handle the harp and organ. Gen. iv. 21.

He hath made me s. father to Pharaoh, and lord of all his house. Gen. xlv. 8.

Ye shall not afRict any widow, or fatherless child.

Ex. xxii. We have one Father, even God. John. viii. 41. Abraham is the father of us all. Rom. iv. 16.

The fatherless hath no friend. Sandys.

And lest we seem to father any thing upon them more than is their own, let them read. Hooker.

It was said It should not stand in thy posterity ; But that myself shall be the root and father Of many kings. Shaksp. Macbeth.

Formal in apparel. In gait and countenance surely like a. father. Id. Ay, good youth. And rather /aˆAer thee than master thee. Id. I am no stronger than my sex. Being so father'd and so husbanded. Id. J. Cces.

You shall find one well accompanied With reverend yatAeri and well learned bishops. Id. Richard III. Out fatherless distress was left unmoan'd j Your widow dolours likewise be unwept. Id.

Let me but move one question to your daughter. And, by that fatherly and kindly power That you have in her, bid her answer truly. Id, A poor blind man was accounted cunning in prog- nosticating weather : Epsom, a lawyer, said in scorn. Tell me, father, when doth the sun change ? The old man answered. When such a wicked lawyer as you

gocth to heaven. Camden.

Son of Bensalem, thy yaˆ/ier saith it; the man by whom thou hast breath and life speaketh the word.

Bacon. Who can abide, that against their own doctors, both of the middle and latest age, six whole books should hy thair fatherhoods of Trent be, under the pain of a curse, imperiously obtruded upon God and his church ? Hall.

The eternal Son of God esteemed it his meat and drink to do the will of his Father, and for his obedi- ence alone obtained the greatest glory. Taylor.

After the delivery of your royal father's person into

the hands of the army, I undertaking to the queen

mother that I would find some means to get access to

him, she was pleased to send me. Denham.

He shall forget

Fatlter and mother, and to his wife adhere.

3Iilton. Thus Adaˆm, fatherly displeas'd ; O execrable son ! so to aspire Above his brethren 1 Id.

To father on God the mischif;fs issuing from our sin and folly, may savour of profaueness. Barrow.

Magical relations comprehend effects derived and fathered upon hidden qualities, whereof, from received grounds of art, no reasons are derived. Brown.

Men may talk of the fathers, and magnify the fathers, and seem to make the authority of tho fathers next to infallible ; and yet expose them to contempt.

Stilliwjfleet.

From hence the race of Alban fathers come. And the long glories of majestick Rome. Dryden.ˆ The part which describes the fire, I owe to the piety and fatherly affection of our monarch to his suffering subjects. Id.

Father is a notion superinduced to the substance, or man, and refers only to an act of that thing called man, whereby he contributed to the generation of one of his own kind. Locke.

God, who knows our fraiky, pities our weakness, and requires of us no more than we are able to do, and sees what was, and what was not, in our power, will judge as a kind and merciful father. Locke.

We might have had an entire notion of thisyaˆ/ier- hood, or fatherly authority. Id.

There was a father of a convent, very much re- nowned for his piety and exemplary life ; and, as per- sons under any great affliction applied themselves to the most eminent confessors, our beautiful votary took the opportunity of confessing herself to this celebrated father. Addison.

I must make my father-in-law a visit with a great train and equipage. Id. Spectator,

He caught his death the last county sessions, where be would go to see justice done to a poor widow woman and her fatherless children. Id.

Father of verse. Pope.

My name was made use of by several persons, one of which was pleased to father on me a new set of productions. Swift.

Men of wit. Often fathered what he writ. Id,

Consider a kingdom as a great family, whereof tho prince is father, and it will appear plainly, that mer- cenary troops are only servants armed either to awe the children at home, or else to defend from invaders.

Id.

Stretched on the ground awhile entranced he lay. And pressed warm kisses on the lifeless clay •, And then upsprung with wild convulsive start. And all the father kindled in his heart. Darwin,

Father. See Children, and Parent. By the laws of Romulus, a father had an unlimited power over his children. Among the Lacede- monians, as we learn from Aristotle's politics, the father of three children was excused from the duty of mounting gvxard for the security of the city ; and a father of four children was exempted from, every public burden.

The Poppaean law, amongst the Romans, granted many valuable privileges to the fathers of three children; amongst which one was, that he should be ex- cused from civil offices, and that the mother should have liberty, in her father's life-time, to make a will, and manage her estate without the authority of tutors.

FATil'OM, n. s. & v. a. \ Sax. j:abm, paoem ;

Fath'omless, «f/j. S Goth. J'atm, fadm ;

Belg. vadein, perh.aps from Sax. fcttan; Belg. vatlan, to contain. The space whicii the ex- tended arms can contain ; six feet : the usual measure of the depth of the sea : reach ; pene- tration; depth or compass generally. Fathom- less, that which can never be measured or bounded.

Anothi'r of his fathom they have none To load their business. Sliakspcare. Otiiello,

Will you with counters sum The vast proportion of his intinitc ;

And buckle in a waste most fathomless, With spans and inches so diminutive As fears and reasons?

Id. Troilus and Cressida. Dive into the bottom of the deep, Whereyo

Id. Henry IV. The extent of this fathom, or distance between the extremity of the fingers of eitlier liand upon expan- sion, is equal unto the space between the sole of the foot and crown. Browne.

The arms spread cross in a straight line, and mea- sured from the end of the long finger on one hand, to that of the other, a measure equal to the stature, is named a fathom. Holder.

Leave, leave to fathom such high points as these j Nor be ambitious, ere the time, to please. Dryden.

'Tis too strong for wealc heads to try the heights and fathom the depths of his flights. Felton,

How into the ground A pit they sink, full many & fathom deep.

Somenile. Our depths yrhu fathoms. Pope.

What but thafatho^nless of thought divine Could labour such expedient from despair. Ana rescue both ? Young.

All his hopes Tend downward ; his ambition is to sink. To reach a depth profounder still, and still Profounder, in the fathomless abyss Of folly, plunging in pursuit of death. Cowper. The image of Eternity — the throne Of the Invisible ; even from out thy slime The monsters of the deep are made ; each zone Obeys thee ; thou gosst forth, dreH'l, fathornless, alone.

Byron.

Fathom, in commerce, &c., is a long mea- sure, comprising six feet, being taken from the utmost extent of botli arms, when fully stretched out into a right line. It is made use of in the measurements of mines, quarries, wells, and pits. This measure is chiefly used at sea, or by sea-faring people, for expressing depths of the sea, lengths of cables, &c. It is hardly ever used on land, except by miners.

FAT'IGATJE, v. a. & adj.\ Fr. J'atiguer, fali

Fat'igable, af//. fg"c; hvA. futigo, oi

Fatiga'tion, n. s. ij'atim and ago, to do

Fatigue', n. s. k,v.a. J or perform (a thing) abundantly. To weary; tire; exhaust with labor: this is also the signification of the more usual verb, fatigue : fatigable is susceptible of fatigue ; easily wearied: fatigation and fatigue, weariness; lassitude ; or the causes of either.

By and by the din of war 'gan to pierce His ready sense, when straight his doubled spirit Requickcned what in flesh was fatigate. And to the battle cume he. Shakspearc. Coriolanus.

The earth alloweth man nothing but at the expense of his labor and fatigalion. Montague, 1648.

The great Scipio sought honours in his youth, and endured the fatigues with which he purchased them.

Dryden. The man who struggles in the fight, Fatigues left arm as well as right. Prior.

Cursed be the gold and silver which persuade Weak men to follow far

fatigueing trade! The lily peace outshines the silver store. And life is dearer than the golden ore. Collins.

Lord F. Very possibly, Mr. Mendlegs ; but that ■was in the beginning of the winter, and you should always remember, Mr. Hosier, that if you make a

nobleman's spring legs as robust as his autumnal calves, you commit a monstrous impropriety, and make no allowances for the fatigues of the winter.

Sfieridan.

FATTECONDA, the capital of the kingdom of Bondou, Western Africa. It lies near the eastern bank of the river Faleme. Long. 10° 20′ W., lat. 14° 20′ N.

FATTICK, a sea-port of Western Africa, capital of the kingdom of Joal, or Joul. It is about sixty miles nortii of the Gambia.

FATUA, in mythology, the wife of the god Faunus, who was supposed to inspire women with the knowledge of futurity, as Faunus him- self did tlie men. Fatua had her name from fari, q. d. vaticinari, to prophesy. See Fauna.

FATU'ITY, n. s. J F'r. fatuitc ; Lat. fatuus,

I'at'uous, rtcˆ. Jiisipid. Stupidity ; foolish- ness ; feebleness or prostration of mind : fatuous is the corresponding adjective.

It had argued a very short sight of things, and extreme fatuity of mind in me, to bind my own hands at their request. King Charles.

And when that flame finds combustible earth. Thence fatuous fires and meteors take their birth.

Deyiham , We pity or laugh at those fatuous extravagants, while yet ourselves have a considerable dose of v.hat makes them so. Glanville.

These symptoms were so high in some as to pro- duce a sort of fatuity of madness.

Arhuthnot on Air.

His madness was compounded of rage atixd fatuity .

Johnaon. Life of Swift.

FAUCHET (Claude), a French antiquarian, born in 1529. He was tlie author of treatises on Gaulish and French antiquities; on the Liberties of the Gallican church ; on the Origin of Knights, Armorial Bearings, and Heralds ; Origin of Dignities and Magistrates in France. Hb died in 1601, and his works were collected and printed at Paris in 4to in 1610.

Fauchet (Claude), a French priest, born at Dome, in the Nivernois, in 1744. Having taken upon him the ecclesiastical habit, he became vicar-general to the archbishop of Bruges, and preacher to Lewis XVI.; but his excessive vanity disgusted the king, and from this no doubt Fauchet the more eagerly em- braced the revolutionary cause. He was a principal instigator to the storming of the bastile, and he preached a thanksgiving sermon on die occasion ; and in another sermon he had the audacity to call .Testis Christ the first sans culotte of .ludea. He entered among the Illuminati, and in 1791 became what was called constitutional bishop of Bayeux. He was like- wise chosen deputy to the national assembly for the department of Calvados, and was afterwards a member of the convention ; but was one of the many who met the first fruits of the doc- trines tliey propagated at the guillotine, in 1793. Fauchet wrote a Panegyric on St. Lewis, pro- nounced before the French Academy ; a Funeral Oration for the Duke of Orleans ; Eloge on Benjamin Franklin ; Discourse on Universal Manners, &c.

FA'UCHION, w.s. SeeFALCHDN. Acrooked sword .

FAULKNER.

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A stately tomb, whose top a trumpet bore ; A soldier's /awc/tion, and a seaman's oar.

Dryden.

FA'UCET, n. s. Fr. fausset ; Lat. fauces. The pipe inserted into a vessel to give vent to the liquor, and stopped up by a peg or spigot : improperly written fosset.

Vou were out a good wholesorne forenoon in hearing a cause between an orange-wife and a fosset-%&\i-T, and adjourned a controversy of three-pence to a second audience. Shakspeare.

If you are sent down to draw drink, and find it will not run, blow strongly into the /aucef, and it will im- mediately pour into your

mouth. Swift,

FAUCIGNY, or Faussigny, a ci-devant pro- vince of Savoy which has been annexed to France, and included in the department of Mont Blanc. The name is derived from an ancient castle, situated near the Arve, about three miles and a half north from Bonne Ville. It was bounded on the north by Chablais, east by Valais, and Aosta ; south and west by Gene- vois. It was divided into upper and lower Faucigny, and belonged anciently to the dau- phin Humbert II. from whom it went to the nouse of Savoy by marriage in 1233. It abounds in wood and pastures. Its chief towns were Salanche and Cluse.

FAVERSHAM. See Feversham.

FAVIDA, an island in the gulf of Georgia, discovered by the Spaniards in the year 1791. It is near the west coast of North America, from which it is separated by a channel, called Canal del Nuestra .Signora del Rosario. Thirty miles in length from north-west to south-east, and from two to five in breadth.

FAVIER ( ), an eminent French states- man of the eighteenth century, was a native of Toulouse. At the age of twenty he succeeded his father as secretary general to the states of Languedoc, but afterwards sold the office, and applied himself to the study of history and politics. He was now nominated secretary to Chatardie, the ambassador to Turin, after whose death he was patronised by M. d'Argenson, and wrote Reflexions contre le Traite de 1756. This work being highly esteemed, Favier was employed on several missions in Spain and Russia, under the ministry of the duke de Choiseul. He was also engaged in several of the intrigues of the count de Broglio, which in- volved him in difficulties, and obliged him to leave France. He was arrested, however, at Hamburgh, and taken to Paris. M. de Broglio procured his liberation in 1773; and on the accession of Louis XVI. he obtained a pension. He died in 1784. De Segur has inserted part of his works in his Politique de tons les Ca- binets de I'Europe pendant les Regnes de Louis XV. et de Louis XVI. 1793, 2 vols. 8vo. Favier was engaged with Freron, J. J. Rousseau, the abbe Arnaud, Suard, and others, in conduct- ing the Journal Etranger.

FAVIGNANA, the ancient TEgusa, one of the Tl'gates islands, nine miles west of Trapani, and about five from the western coast of Sicily. It is seventeen miles in circumference, and has a fort called St. Catharine. On each side of the island there is good anchorage.

FAVI'LLOUS, oJj. Lsit. favilla. Consisting of ashes.

As to foretelling of strangers, from the fungom par- ticles about the wicks of the candle, it only signitirth a moist air about them, hindering the avolation of light and the favitlowi particles. Bruwne.

FAVISS.E, in antiquity, were, according to Festus and Gellius, cisterns to keep water in : but the favissae in the capital at Rome were dry cisterns or subterraneous cellars, where they laid up the old statues, broken vessels, and other things used in the temple. These were much the same with what, m some modern churches, are called the Archives and Treasury

FAULCON. See Falcon.

Faulconry. See Falconry.

FAULKNER (George), a celebrated Irish printer at Dublin, the friend of dean Swift. He carried on business many years with great repu- tation. Having the misfortune to lose a leg, Foote caricatured him in his Orators in 1762, under the title of Peter Paragraph. Faulkner commenced an action against the poet, but the affair was terminated by lord Townshend. He was chosen one of the aldermen of Dublin, and died there in 1775.

Faulkner (Jonathan), an English naval officer, of whom the first notice we have is his promotion to the rank of lieutenant on the 24th of August, 1753; in which character he served on board the Alderney sloop in 1755. In 1758 he acted as commander of the Furnace bomb-ketch, one of the squadron under commodore Keppel on the expedition against Goree. In July, 1759, he was advanced to be captain of the Mercury, in which he continued till after the conclusion of the war. In 1767 he was appointed to the Superbe of seventy-four guns, the flag ship of rear-admiral Sir John Moore; whence he was removed to the Royal Oak in 1777. Prior to the actual commencement of hostilities with France, in 1778, Mr. Faulkner was appointed second captain of the ^^icto^y, the flag ship of admiral Keppel, under whom he so remarkably distinguished himself, that he received from the commander-in-chief, and ad- miral Campbell, the most exalted encomiums on his cool intrepidity and conduct, in the en- gagement with the French fleet off" Ushant, on the 29th of the ensuing July. In 1782 he was appointed to the Princess Royal of ninety-eight guns, and in that ship joined the fleet sent to Gibraltar, under lord Howe, for the relief of that fortress, and was placed in the line as one of the seconds to the commander-in-chief. The cessation of hostilities soon after taking place, and the Princess Royal being refitted and re-commis- sioned as one of the guard-ships at Portsmouth, he was re-appointed

to the same ship ; but on quitting it, before the expiration of the usual period of such command, he was appointed to the Triumph of seventy-four guns, also a guard- ship at that port. This w;ls the last commission he ever held ; but he received the following honorable appointments : on the 24th Septem- ber, 1787, he was made rear-admiral of the white; in September, 1790, rear-admiral of the red; in February, 1793, vice-admiral of the blue; in April, 1794, vice-admiral of the red;

and lastly, he was made admiral of the blue on the 1st of June, 1795. He did not, however, long survive this last promotion. After he be- came a HaiT-officer he had spent the greater part of his time at his seat in Havˆt Park in Hants; but repairing to London on the 2‘2nd to be pre- sented to his majesty, on his last promotion, he was suddenly struck with an apoplexy at colo- nel Stanhope’s, and expired the next morning. The nautical abilities of admiral Faulkner were universally acknowledged and admired; and by his death the country lost a gallant and merito- rious officer.

Faulkner (Robert), was ‘the son of captain Samuel Faulkner, who was unfortunately drowned in the Victory with Sir John Balchen. Robert was bred to the sea service by his father, and was promoted to be a lieutenant on the 5th of October, 1741. On the 19th of January, 1757, he was made captain of the Marlborougli of ninety guns, apparently for the purpose of giving him rank, for he almost immediately quitted that ship, and remained for a short time out of commission. In 1760 he commanded the Mercury ; and early in the ensuing year was removed to the Bellona of seventy-four guns ; soon after which he was ordered on a cruise oft the coast of France, in company with the Bril- liant frigate, commanded by captain Logie. On the 14th of August, 1761, he fell in with the Courageux, a French ship of war, carrying seventy-four guns, and 700 men ; together with the Malicieuse and Herraione, of thirty-two guns each. A desperate action ensued ; the particu- lars of which are officially given in a letter from captain Faulkner, dated Lisbon River, August 21st, 1761, in the following words : — ‘ Be pleased to acquaint my lords commissioners of the admi- ralty, that, on the 14th instant, at three P. M. we saw three sail in the south-west quarter, Cape Finisterre, bearing north-east half east distant ten leagiies; we immediately gave chase, and, by their crowding sail from us, soon sus- pected they were enemies ; we came up but slowly with them and continued the chase all night. At five A.

M. we got almost up with the frigates ; at six the Brilliant began to engage one of them, and soon after the other also ; at twenty-five minutes past six we came along side the large ship, and began to engage as near as possible; at thirty-four minutes after six our mizen mast went away by the enemy's shot, and at forty-five minutes after six the large ship struck, which proved Iˆ Courageux of seventy- four guns commanded by Dugue L'Ambert, having on board 700 men from St. Domingo. The Brilliant continued to engage the two frigates, till half past seven, when they bore away, and neither of our ships were in a condi- tion to pursue them; at the same time the prize's main-mast went away. We found our lower rigging much cut, the fore-mast, main- mast, and main-top-mast much shattered ; we lost in the action six men and twenty-eight wounded : the enemy had 240 men slain, and 110 men wounded. We sentour first lieutenant Mr. Male, with other officers, and 150 men to take possession of the prize, and received 224 prisoners on board ; the Brilliant sent fifty men

and received 100 prisoners on board ; she had five men killed, and sixteen woinided ; among the slain is the master.' The disparity of loss sustained by the two ships was almost incredible, being altogether in killed and wounded 3.30 to tliirty-four. On the passage to Lisbon the Courageux was accidentally set on fire, from the sentinel having incautiously carried a candle too near the bung of a cask of spirituous liquor. The alarm of fire being suddenly spread over the ship, struck such terror among the prisoners, that twenty of them jumped into the sea, and perished. The Bellona and her prize being refitted, captain Faulkner returned to England ; and afterwards proceeded to the West Indies, in the Mercury of twenty-four guns. Nothing of importance occurred respecting this gentleman ; nor does he appear after his return to England, on the cessation of hostilities, to have accepted of any subsequent command. After this period he resided principally at Bath, but died in France on the 19th of May, 1769.

FAULQUEMONT, a town of France, in the department of the Moselle, seated near the Nied ; nine miles south-east of Boulay, and sixteen and a half east of Metz.

FAULT, n. s., u. a. k.v.n.ˆ Fault'er, n.s. Fault'findek, Fault'ful, adj. Fault'ily, adv.

FaULT'INESS, U.S.

Faultless, adj. Fauli'lessness, n. s Fault'y, adj

Yr.faut, faute ;

Old Yx.fuidte;

Ital. falt'a; Lat.

falleu. This

ˆword seems to

have come to us

from the French

verb falLnr, it

J fails. Offence ;

venial crime ; defect ; loss : to fault is to fail, or to charge with a fault, or failure ; to accuse ■ a faulter is an offender : fault finder, an accuser : faultful, abounding in faults : faultless, without them: faulty is defective; wrong; blameable: the other formations do not appear to require explanation. '

The former impression was yery faultily printed. Abp. Cranmer. Which moved him rather in eclogues than other- wise to write, minding to furnish our tongue in this kind wherein ilfaulleth. Spenser.

The prophet chuseth rather to charge them with the faull of making a law unto themselves, than the crime of transgressing a law which God had made.

Hooker. The inhabitants will not take it in evil part, that the faiddness of their people heretofore is laid open.

Id.

The form of polity by them set down for perpetuity, is three ways faulty; faulty in omitting some things which in Scripture are of that nature, as namely, the difference that ought to be of pastors, when they grow to any great multitude ; faulty in requiring doctors, deacons, and widows, as things of perpetual necessity by the law of God, which in truth are nothing less ; faulty also in urging some things by Scripture muta- ble, as their lay elders. ˆ"■

'Tis a very great fault to ho more forward in setting one's self off, and talking to show one's parts, than to learn the worth, and to be truly acquainted with the abilities of other men. Chc.rron.

So fares it with th\ifavlty lord of Rome.

Shakspeare.

FAU

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FAU

I could tell to thee, as to one it pleases mo, for fault of a better, to call niy friend, I could be sad, aad sad indeed too. •”^■

If little faults, proceeding on distemper. Shall not be winked at, how shall we stretch our eye At capital crimes ? /”• i/««’-2/ ^’•

Thou mayest be sure that he that will in private tell thee of thy /a«/ <.s, is thy friend, for he adventures thy dislike, and doth hazard thy hatred. Raleiah.

By accident of a. faulty helmet that Parker had oh, he WES stricken into the mouth at the lirst course, so that he died presently. Bacons Henry VII.

For that I will \io. fault thee. But for humbleness exalt thee. Old Song.

He cannot mislike the love of his countrymen : he cannot/aiiii their carriage. Bp. Hall.

If the fault-finding with the vices of the times may honestly accord with the good will of the parties, I had as lievo ease myself with a slender apology, as wilfully bear the brunt of causeless anger in my silence.

Id. Satires,

Then she. Behold the /awZier here in sight; This hand committed that supposed off-jnce.

Fairfax. Can thus The image of God in man, created once So goodly and erect, t\io\xgh. faulty since. To such unsightly sufferings be debased ? Milton. When her judgment was to be practised in knowing ˆau/ii/iew by his first tokens, she was like a young fawn, who coming in the wind of the hunters, doth not know whether it be a thing or no to be eschewed.

Sidney.

Pleasant /auZ(/in(ie?5, who will correct the verb be fore they understand the noun. Id.

He finds no fault with their opinion about the true God, but only that it was not clear and distinct enough.

StilUngJieet.

It is a very poor, though common, pretence to me- rit, to make it appear by ih.e faults of other men.

Sir W. Temple.

They wholly mistake the nature of criticism, who think its business is principally to hnA fault. Dryden.

They are hardlj' to be prevailed with to amend the acknowledged faults in the frame they have been accustomed to. Locke.

Which of our thrum-capped ancestors found fault. For want of sugar-tongs, or spoons for salt ? King.

To be desirous of a good name, and careful to do every thing that he innocently may to obtain it, is so far from being a. fault, even in private persons, that it is their great and indispensable duty. Atttrbury.

The best way to prove the clearness of our mind, is by showing its faults; as when a stream discovers the dirt at the Ijottom, it convinces us of the transpa- rency and purity of the water. Pope. Whoever thinks a. faultless piece to see.

Thinks what ne'er was, nor is, nor e'er shall be.

Id. Being void of all friendship and enmity, they ne- ver complain, nor find fault with the times. Swift.

FAUNA, a deity among the Romans. She •was (laughter of Picus, and was originally called Marica. Her marriage with Faiinus procured her the name of Fauna, and her knowledge of futurity those of Fatua and Fatidica. It is said, that her clrastity occasioned her being ranked among the gods after her death. She is the same, according to some, with Bona Mater.

FAUNALIA, in antiquity, Roman feasts cele-

brated in honor of tlie god Faunus, who was tlie same among the

Romans with Pan of the Greeks. Tiie Faunalia were held on the nones or 5th of December. The principal sacrifice was a roe-buck ; or rather, according to Horace, a kid, attended with libations of wine and burning of incense. It was properly a country festival, being performed in the fields and villages with peculiar joy and devotion. Horace gives a description of it, in his eighteenth ode of the third book, beginning,

Faune, nympharum fugionliim amator. Per mpos fines et aprica rura Lenis incodas, abeasque parvis jEquus aluninis.

Struvius in his Roman kalendar marks the feast of Faunus on the ides of February, or 30th day of tliat month ; and the Faunalia he places on the 5th of the ides of December, or the 9th of that month : thus there were really two Fauna- lia ; the one in February, mentioned by Ovid, Fast. lib. vi. ver. 246.; the other on the 9th De- cember, described by Horace.

FAUNI, Fauk5, among the ancients, were a species of demi-gods, inhabiting the forests ; called also Sylvani, and little difi'ering from the Satyrs. They were said to delight in vineyards ; and generally appear as attendants of Bacchus, in the representations of Bacchanal feasts and processions. They were represented as half men, half goats ; having the horns, ears, feet, and tail of a goat, a Very flat nose, and the rest hu- man. Though the Fauns were held for demi- gods, yet they were supposed to die after a loiig life. Arnobius shows that their father, Faunus himself, lived only 120 years.

FAUNUS, in fabulous history, the son of Picus, who reigned in Italy, about 1300 years before the Augustan age. His bravery, as well as wisdom, gave rise to the tradition, that he was the son of Mars. His great popularity, and his fondness for agriculture, made his subjects revere him as one of their country deities after his death. He was represented with all the equipage of the satyrs, and was consulted to give oracles. See Fauna.

FAVORINUS, an ancient orator and philo- sopher of Gaul, wiio flourislied imder Adrian, and taught with high reputation both at Athens and Rome. Many works are attributed to him : among the rest, a Greek miscellaneous history, often quoted by Diogenes I.aertius. Being re- proached by his friends with having submitted to the emperor, in a dispute on some literary topic, he exclaimed, with more wit than principle, ‘ Would you have me pretend to be wiser than the commander of thirty legions?’

FAVORITA, or Favokito, a palace of Italy, near Mantua, in the ci-

devant Cisalpine republic, and department of Mincio. It was taken by the French in May, 1796; and on the 16th of .lanuary, 1797, a battle was fought near it between the I'rencli, under Buonaparte, and tlie Austrians, under Wurmser ; wherein the latter were defeated witli great slaughter, and general Provere taken, with 6000 men, and twenty pieces of cannon. Tliis battle decided the fate of Mantua.

port; assist; coun- tenance ; appear like. As a sub- stantive, it siaˆnifies J kindness or kind

FA VOR, or "ˆ Fr. faveur ; Ital.

Fa'vour, v. a. & n. s. favore ; Span, and

Favourable, «(/;. Port. /awr; Lat.

Fa'vour ADLENESS, n. s. favor ; from Greek Fa'vourably, adv. ipato, to shine. To

Fa'voured, /Jflrˆ adj. Jˆrejjard kindly; sup- F'a'vouredness, n. s. Fa'vourer,

Fa'vour iTE, n. s. & adj Fa'vour ISM, ?j. j. Fa'vourless, adj. regard ; assistance ; deference ; benevolence ; le- nity; leave given; object of kindness; token or pledge of favor : and in an obsolete sense, countenance literally ; feature. A favorer is he ■who shows, and a favorite he who receives, marks of favor: favoritism, a modern word for sys- tematic favor or partiality : the other compounds follow the senses of favor.

The ill-favoured and lean-flcshed kine did eat up the seven well-favoured and fat kine. Genesis.

Thou shalt not sacrilice any bullock or sheep where in is blemish or e\ \ fuvouredness. Deut. xvii. 1.

The cliild Samuel was in favour, both with the Lord, and also with men. 1 Sam. ii. 26.

They got not the land by their own sword ; but thy right hand and thine arm, and the light of thy coun- tenance, because thou hast ».

favour unto them.

Ps. xliv 3. The race is not to the swift, nor yet favour to men of skill. Eccl. ix. 3.

Whiles that false fortune faucryedme with her tran- sitorye goodes, then the howre of death had almost ouercome me, Colvile.

Of all the race of silver-winged flies Which do possess the empire of the air. Was none more favourable nor more fair. Than Clarion the eldest son and heir Of Muscarol. Id.

Of that goddess I have sought the sight. Yet no where can her find ; such happiness Heaven doth me envy, and fortune favourless.

Faerie Queene. Of her there bred A thousand young ones, which she daily fed ; Sucking upon her poisonous dugs, each one Of sundry shape, yet all ill-favoured. Id.

Touching actions of common life, there is not any defence more yoj'ourafe/^ heard than theirs who allege sincerely for themselves, that they did as necessity constrained them. Hooker.

If we should upbraid them with irreligious, as they do us with superstitious_/ai'ourers, the answer which herein they would make us, let them apply unto them- selves. Id.

Fortune so favoured him, that the town at his first coming, surrendered vinto him. Knolles,

The same gods that armed the queen of Troy, May _/atJour Tamora the queen of Goths. Shakspeare. It pleased your majesty to turn your looks Oi favour from myself, and all our house. Id.

Disseat thy favour with an usurped beard. Id.

Worthy Macbeth, we stay upon your leisure. • — Give me your favour ; tny dull brain was wrought With things forgot. Id,

And every one his lovcsuit will advance Unto his several mistress, which they'll know Ey favours several which they did bestow. Id.

Bid her steal into the plashed bower. Where honey-suckles, ripened by the sun. Forbid the sun to enter ; like io favourites, Made proud by princes that advance their pride Against that power that bred it. Id.

Here, Fluellen, wear thou this favour for me, and stick it in thy cap.

Id. Henry V.

Famous Plantagenet ! most gracious prince, head favourable ear to our requests.

Id. Richard III. Do I not know you for a. favourer Of this new sect ? ye are not sound.

Id. Henry VIII. Then since fortune's yai'ours fade. You that in her arms do sleep. Learn lo swim and not to wade.

For the hearts of kings are deep. Bacon.

A youth of &ae favour and shape. Id.

It is received that it helpeth to continue love, if one wear the hair of the party beloved ; and perhaps a glove, or other like favour, may as well do it.

Id. Natural History. Men favour wonders. Id,

Yet ere we enter into open act. With favour, 'twere no loss, if't might be inquired What the condition of these arms would be.

Ben Jonson. Nothing is more vigilant, nothing is more jealous than a favourite, especially towards the waning time, and suspect of satiety. Wotton.

I have been since with all your friends and tenants. And, on the forfeit of yo\ix favour charged them. Though a crust of mouldy bread would keep him from

starving. Yet thfy should not relieve him. Massingcr. A New Way to pay Old Debts, act \, sc. 1.

Conjure their friends they had, labour for more. Solicit all reputed favourers. Daniel's Civil War.

It is just with God to deny us those favours which we were careless in keeping, and which we under- valued in enjoying. Bp. Hall's Contemplations.

To the favourableness of your ladyship's answer be pleased to add tlie yarotir of your pardon.

Bp. Taylor. Many good officers were willing to stay there, as a place very favourable for the making levies of men.

Clarendon. This man was very capable of being a gvcdt favourilˆ to a great king. Id.

All these his wondrous works, but chiefly man. His chief delight diuA favour ; him, for whom All these his works so wondrous he ordained.

Milton.

That is only suitable in laying a foul complexion upon a fiLhy /auour, setting forth both in sluttishness.

Sidney.

All favours and punishments passed by him, all officers and places of importance were distributed to his favourites. Id.

I was a Thessalian gentleman, who, by mischance, having killed a favourite of the prince of that country, was pursued so cruelly, that in no place but hy favour or corruption they would obtain ray destruction. Id, His dreadful navy, and his lovely mind.

Gave him the fear and favour of mankind.

Waller.

Would you both please, and be instructed too, Watch well the rage of shining to subdue ; Hear every man upon his yat!0«r//e theme. And ever be more knowing than you seem.

Stillingjieet.

They were invited from all parts for the use of kings, princes, and ministers. And in short the favour of learning was the humour and mode of the age.

Temple.

People are multiplied in a countr; .y the temper of the climate, favourable to generation, health, and long life. 1^^’

Come down, said Reynard, let us treat of peace : A peace, with all my

soul, said Chanticleer ; But, with youT favour, I will treat it here. Dryden. The good ˆneas am I called ; a name. While foi-tune favoured, not unknown to fame.

Id. None can have the favourable thought. That to obey a tyrant's will they fought. Id.

The violent will condemn the character of Ab- salomˆ as either too favourably oi too hardly drawn.

Id. When truths are once known to us, though by tra- dition, we are apt to be favourable to our own parts ; and describe to our own understandings the discovery of what, in reality, we borrowed from others,

Locke. O, my royal master ! The gods, in favour to you, made her cruel.

Pliilips, By their virtuous behaviour they compensate the hardness of their favour, and by the pulchritude of their souls, make up what is wanting in the beauty of their bodies. S>'uth.

A blue ribband tied round the sword-arm, I con- ceive to be the remains of that custom of wearing a mistress's yai-our on such occasions of old.

Spectator. The porter owned that the gentleman favoured his master. Id.

No one place about it is weaker than another, to favour an enemy in his approaches. Addison.

All the favourers of maeick were the most profest and bitter enemies to the Christian religion. Id,

Every particular master in criticism has his fa- ijowrite passages in an author. Id. Spectator.

Our happiness is bound up in God's favour. If wc have that, we have enough, whatever else we want.

Henry. The pleasures which these Scriptures ascribe to re- ligion, are of a kind very different from those in fa- vour of which they are here alleged. Rogers.

We are naturally inclined to think favourably of those we love. Id,

Huntsman ! her gait observe ; if in wide rings She wheel her mazy way, in the same round Persisting still, she'll foil the beaten track; But if she fly, and with the fav'ring wind Urge her bold intercourse, less intricate thy task.

Somervile, Oft with some favoured traveller they stray. And shine before him all the desert way. Pope, V/ ha.t fav'rites gain, and what the nation owes. Fly the forgetful world. Id.

I could not discover the lenity and favour of this sentence ; but conceived it rather to be rigorous than gentle. Swift.

When a philosopher has once laid bold of a fa- vourite principle, whicl:, perhaps, accounts for many natural effects, he extends the same principle over the whole creation, and reduces it to every phenomenon, though by the most violent and absurd reasoning.

Hume, The favourers of the reformation being the most numerous and spreading body of the regent's enemies, she applied to them with a particular attention.

Robertson's History of Scotland. The young women in the neighbourhood with bride favours at their breasts, and nosegays in their hands, attended the bride on her wedding day in the morn- ing. Brand's Antiquities.

I have some favourite flowers in spring, among which are the mountain-daisy, the hare-hell, the fox- glove, the wild-bricr-rose, the budding birch, and the hoary hawthorn, that I view and hang over with par- ticular delight. Burns. Vol. IX.

A plan oi favonrititm is essentiiilly at variance wiˆ.h the plan of our legislature. Burke.

But he, the favorite and the flower. Most cherished since his natal hour. His mother's image in fair face. The infant love of all his race. Byron.

FA' US EN, n. s. A sort of large eel.

He left the waves to wash ; The wave sprung entrails, about which fausens and

other fish Did shoal. Chapman's Iliads.

FA'USSEBRAYE, n.s. In fortification: a small mount of earth, four

fathoms wide, erected on the level round the foot of the rampart, to fire upon the enemy, when he is so far advanced that you cannot force him l)ack; and also to receive the ruins which the cannons make in the body of the place. — Harris.

Fausse-bray, is a low rampart going quite round the body of the place, about three feet at most above the level ground ; its parapet is about four or five toises distant from that of the body of the place. Muller.

Fausse-bray works have been rejected by all but Vauban, in modern fortifications. They are made at a very great expense : their faces are very easily enfiladed : the enemy is under cover the minute he becomes master of them ; and a great quantity of shells which may be thrown into them, and must lodge, will most probably make a breach, or at least drive every one out.

FAUST, or Fust, a goldsmith of Mentz, and one of the three earliest printers to whom the invention of this most useful art has been ascribed. Some say, he only assisted Guttcm- berg at Strasburg, in his attempts to make move- able types, in 1444. Be this as it may, he had the policy to conceal his art ; and to this we are supposed to be indebted for the tradition of the Devil and Doctor Faustus, handed down to the

E resent times. Faust, in partnership with Peter choefTer, having, in 1462, printed off a consider- able number of copies of the Bible, to imitate those which were sold in MS., undertook the sale of them at Paris, where the art of printing was then unknown. At first he sold his copies for so high a sum as 500 or 600 crowns, the prices usually demanded by the transcribers. He afterwards lowered his price to sixty ciowns, which created universal astonishment; but when he produced copies as fast as they were wanted, and lowered the price to half that amoimt, all Paris was agitated. The uniformity of the copies increased the wonder; informations were given into the police against him as a magician ; his lodgings were searched ; and a great mnubGr of copies being found, they were seized : the red ink with which they were embellished, was said to be his blood ; it was seriously adjudged that he was in league with the devil ; and, if he had not fled, most probably he would have shared the fate olF tliose wliom the ignorance and superstition of the age condemned for witchcraft. See Print- ing. Dr. Watkins, in liis Biographical and Historical Dictionary, says ‘ tliis story is a fable,’ but assigns no authority for discrediting it. Faust is said to have died of the plague at Paris, about 1466.

FAU’TOR, H.s. J Uit.fautor,faiitrix; Fr. Fau’tress. \fauteur. Favorer;

counte-

nancer; supporter.

II

FAW

98

FAY

I am neither author or fautor of any sect : I will have no man addict himself to me ; but if I have any thing right, defend it as truth's, not mine.

Ben Jonson. The new mountain in the Jjucrine lake, which is alleged, by t)ic fautors of this opinion, as an instance in behalf of it, was not raised thus. Woodward.

It made him pray and prove Minerva's aid Kisfautress still. Chapman's Ilimds.

He comes from banishment to the fautress of liberty, from the barbarous to the polite. Garth.

FAWKES (Francis), an English poet and divine, educated at Leeds, whence he was trans- planted to Jesus College, Cambridge, where he took his degree of M. A. Entering into orders, he settled first at Bramham, in Yorkshire, near Mr. Lane's elegant seat. His first poetical pub- lications were Gawin Douglas's Description of !\Iay and Winter modernised. Removing after- wards to Croydon, in Surry, he recommended himself to the notice of archbishop Herring, to whom he addressed an Ode on his recovery in 17.54, printed in Dodsley's collection ; and who collated him, in IT.'ia, to the vicarage of Orping- ton.]\Ir. Fawkes lamented his patron's death in 1757, in a pathetic Elegy, entitled Aurelius, first printed in 1763. He married at this time Miss Furrier, of Leeds. In April, 1774, he exchanged his vicarage for the rectory of Hayes. He was also one of the chaplains to the princess dowager of Wales. He publislied a volume of Poems by subscription, in 8vo. 1761 ; the Poe- tical Kalendar in 1763 ; and Poetical INIagazine, 1764, in conjunction with Mr. Woty; Partridge- Shootini. an Eclogue, 1767, 4to. ; and a Family Bible, with notes, in 4to. a compilation. He also fjublished translations of fragments of Menander, the Works of Anacreon, Sappho, Bion, Moschus, and Musseus, 12mo. 1760; the Idylliums of Theocritus, Bvo. 1767; and the Argonautics of

Apollonius Rhodius. He died August ■26th, 1 777. FAWN. Yv.faon; Old Yr. fan, a child; pro- bably from Lat. infans, says Dr. Johnson: Mr. Tliomson, more probably, traces it to Fr. fauve, fallow, from its color. A young deer.

Looking my love I go from place to place. Like a young /awre that late hath lost the hind ; And seek each where, where last I saw her face. Whose image yet I carry fresh in mind.

Spenier. The buck is called the first year a, fawn, the second year a pricket. Shakspeare. Love's Labour Lost.

The colt hath about four years of growlli ; and so the fawn, and so the calf. Bacon'i Natural Hiitory.

Who for thy table feeds the wanton /a«m. For him as kindly spreads the flowery lawn. Pope.

Fawn, among hunters, is the name generally given to the buck or doe of the first year, or the voung one of the buck's breed in its first year.

Dr. A . Rees.

Fawn, v. n. & n. s. "^ Sax. psjenian; I\L

Fawner, ' Goth, faigenn. To

Fawning, L wheedle ; caress ; fon-

Fawningly, aJu. ' die: hence to court

servilely : as a substantive fawn signifies a servile

cringe, or bow ; flattery : a fawner is a flatterer :

fawning, and fawningly, nave also been chiefly

used in this sense.

Instead thereof he kissed her weary feet. And licked her lily Lands withyairnin^ tongue. As he her wronged innocence did weet. Faerie Queene.

Hatred hatched at home is a tame tyger. May fawn and sport, but never leaves his nature.

Beaumont and Fletcher. You will rather shew our gentle lowts How

you can frown, than spend a. fawn upon them for the inheritance of theii loves.

Shakspeare. Coriolamtg, Be not fond To think that Cssar bears such rebel blood That will bq thawed from the true quality. With that which melteth fools ; I mean sweet words. Low crooked curtesies, and base spaniel fawning.

Id. Julius Ceesar. And thou, sly hypocrite, who now wouldest be Patron of liberty, who more than thou Once fawned, and cringed, and servilely adored Heaven's awful monarch? Milton's Paradise Lost.

The dog straight fawned upon his master for old knowledge. Sidney.

Whom Ancus follows, with a. fawning air ; But vain within, and proudly popular. Dryden.

Is it not strange that a rational man should wor- ship an ox 1 that he should fawn upon his dog ? bow himself before a cat ? and adore leeks and garlick ?

South. Courage, in an ill-bred man, has the air, and escapes not the opinion of brutality ; learning becomes pedantry ; wit, buffoonery ; plainness, rusticity ; good- nature, /aicnin^. Locke.

By softness of behaviour we have arrived at the appellation oi fawners. Spectator.

See there with countenance blithe. And with a courtly grin, the fawning hound Salutes thee cow'ring. Somervile.

Dexterous the cxa-viwr fawning croud to quit, A^d pleased t' escape from flattery to wit. Pope.

It is success that colours all in life : Success makes fools admired, makes villains honest . All the proud virtue of this vaunting world Fawns on success, and power, howe'er acquired.

Thompsoti. The whole of the speech is hypocritical, fawning, time-serving, and pusillanimous. He felt that in the terrible republic, whose course and conduct he had recommended to England, there was neither freedom nor safety, p. 173. C/teetham's Life of Paine.

FA'XED, adj. Sax. psex, hair. Hairy. Ob- solete.

They could call a comet a faxed star, which is all one with Stella

crinita, or cometa.

Camden’s Remains. FAY, n. s. Fr./ee. See Fairy. And the yellow-skirted fays Fly after the night steeds.

Leaving their moon-loved maze Milton.

Ye sylphs and sylphids, to your chief give ear; Fays, fairies, genii, elves, and demons hear ! Pope. Attendant /aˆ6- around her throng, And trace the dance, or raise the song,

Darwin. Or, when the setting Moon, in crimson dyed. Hung o’er the dark and melancholy deep. To haunted stream, remote from man, he hied. Where /at/s of yore their revels wont to keep ; And there let Fancy rove at large, till sleep A vision brought to his entranced sight. Beattie. FAY, n. s. W.fay, Span. /e. Faith. Obso- lete.

Their ill ‘haviour garres men missay, Both of their doctrine and their / ay. Spenser.

FAYAL, the most western of the Azores. It is about twenty-seven miles long and nine broad; and abounds in cattle, fowls, fish, and beech trees. The chief town is Villa Horta. It has a

fort and a Portuguese garrison. It was taken by the English, under the earls of Cumberland and Essex, with a rich squadron of ships. Its trade has been extended since the wine of the Pico has been so much improved as to be in great demand in the West Indies. In good years from 8000 to 10,000 pipes are exported, besides corn and provisions to freight seventy vessels of from eighty to 100 tons each. There are several British and Irish settlers. Long. 10° 45′ E. of Ferro, lat. 38ˆ 32′ N.

FAYETTE (Marie Madeleine Pioche de la Verge), countess of, wife of the count de la Fayette, in the reign of Louis XIV., was a lady of considerable literary attainments, and inti- mately acquainted with the men of literature of that period. Segrais, on leaving his residence with Mademoiselle Montpensier, entered upon a residence with Madame de la Fayette, and was her chief director. In his name her celebrated ro- mances of Zaide and the Princess of Cleves “were published. Voltaire

speaks of them as the first romances in which the manners of persons of condition were truly painted. On the ap- pearance of Zaide, Huet wrote his Origin of Romances, and exposed himself to some censure by the importance which he attached to them. Madame de la Fayette died in 1693. Besides the works already mentioned, she wrote. The Princess of Montpensier ; Memoirs of the Court of France in the years 1688 and 1689; The History of Henriette of England ; and Divers Portraits of Persons about the Court. Madame de Genlis has given a very sprightly account of Madame de la Fayette as the friend of the due de la Rochefoucault, from whom she stated herself to have derived her wit, and to have paid him by reforming his heart. Our au- thoress says that she reformed also many of his Maxims. We are of opinion that it would have been a better service to the cause of virtue and humanity if she had persuaded that nobleman to abstain altogether from a work which is cal- culated only to make men distrustful of all ap- pearances of good, to relax the springs of virtuous action, to extinguish mutual benevolence, and to reconcile the heart to its own turpitude, by teaching it to suppose an equal degree of it at the bottom of every character. The remarks of Madame de Genlis on the princess de Cleves are very lively and sensible. See her De 1′ In- fluence des Femmes sur la Literature Francaise, comme Protectrices des Lettres et comine Auteurs ; ou Precis de 1′ Histoire des Femmes Fran^aises les plus c^lebres. Paris, 1811.

Fayette, a county of Kentucky, surrounded by Clarke, Bourbon, Scott, Franklin, Woodford, Maddison, and Mercer counties. Lexington is the capital.

Fayette, a county of Pennsylvania, bounded on the north by Westmoreland, east by Somerset, south by the states of Maryland and 'irginia, and west by the ^lonongahela. It is thirty-nine miles long, twenty-nine broad, and contains 473,280 acres ; divided into eleven townships, of which Union is the chief. The western parts arc fertile; the eastern mo’nitalnous, i junding in iron ore. Two iron manufactories are esta- blished in it

Fayette, a district of North Carolina, con- prehending six counties, bounded on the north by Hillsborough, south-east by Wilmington and Newbern, south by South Carolina, and west by Salisbury. It is 120 miles long, and fifty broad.

Fayette, a settlement of New York, in Tioga county, between the Unadilla and the chief branch of the Chenengo, containing 100 square miles.

FAYETTEVILLE, a flourishing town of North Carolina, the capital of Cumberland county, and of Fayette district; seated in a settlement of Scots Highlanders, on the north- west branch of Cape Fear River. It is regularly laid out in four streets of 100 feet wide ; and two squares of 300 feet each.

FAYOUM, or Feium, a province of Egypt, on the west side of the Nile, extending from that river to Moeris, now Birket el Kerun. It was anciently called Arsinoe, and intersected by canals, cut by the ancient Egyptians between the river and the lake of Mceris ; but, though formerly very wealthy and fertile, it greatly de- clined, through the oppressions of the Mame- lukes, and, instead of flourishing cities, exhibits only mud-walled villages. The canals are almost dry, and the Birket el Kerun, whose ancient name was Moeris, reduced to two-thirds of its former extent. Notwithstanding all this, wherever the waters can penetrate, the same productions are found in similar abundance. ‘ The Copts still cultivate the vines and olives which their forefathers planted ; and gather ex- cellent grapes, of which they make a most agree- able white wine. The whole country is covered with wheat, barley, and dourra, which rise in succession, uninterruptedly, for seven or eight months. The tall flax, the sugar cane, and vegetables of all kmds, sprout up almost without culture ; cucumbers, and nearly twenty species of melons, melting, sweet, and wholesome, adorn the banks of the rivulets ; clustering fruit trees are scattered over the plain. Amid a diversity of trees and plants, the villages are regaled with forests of rose-bush. In other provinces this fine shrub only ornaments gardens, but here it are cultivated, and the rose water, distilled from its odoriferous flower, forms a considerable branch of commerce. The canals and lakes swarm with fish, which are caught in prodigious quantities, and eaten in die province, or carried to the neighbouring cities, and are as cheap as at Damietta. When tlie frost and snow of winter are felt in the northern countries, innumerable flocks of birds resort to the lake Moeris, and the canals of Fayoum. The people catch abund- ance of geese with golden plumage, and a most agreeable flavor, fat and delicate ; ducks, teal, swans (the skins of which are used like furs), and pelicans.

Fayoum, the capital of the above province, formerly contained public baths, markets, and colleges ; was divided by .Joseph’s canal, and surrounded by gardens. At present it is only half a league in circumference, and stands on the eastern shore of the canal. The remainder is destroyed, and the colleges are no more. Houses- built of sun-dried bricks, present a gloomy assemblage of huts; their inhabitants

are poor and deprived of energy ; their arts are reduced to some manufactures of mats, coarse carpets, and the distillation of rose water. It is forty-nine miles S. S. W. of Cairo.

FAZIO (Bartholomew), an Italian historian of the fifteenth century, was a native of Spezia on the coast of Genoa. He was patronised by Alphonso, king of Naples, at whose instance he translated Arrian's History of Alexander into Latin, and wrote the history of that prince in ten books, printed 15(50. He composed like- wise a History of the War between the Genoese and Venetians in 1377, and De Viris Illustribus, containing brief accounts of the most famous of his contemporaries. This last production long remained in MS. and was published by the abbe Mehus, who added some MS. letters of Fazio's tliat are valuable.

FE SANTA, or Santa Fe de Bogota, a pro- vince of Colombia, South America, is bounded on the north by Santa Marta and Merida ; on the east by the lofty summits of the eastern part of the Cordillera of the Andes, and the province of San Juan de los Llanos; on the south by Popayan ; and on the west by Santa Fe de Antioquia. It is exceedingly moun- tainous, and situate in tlie very centre of Cun- dinamarca, on the west of the eastern branch or parallel of the main chain of the Andes, and on both sides of the great river Magdalena. None of the mountains here, however, attain the height of perpetual snow. Two of the curiosi- ties of this province. Lake Guatavita and the cataract of the Tequendama, we have described in the article Colombia, which see.

The rivers of Santa Fe are very numerous, but most of them are innavigable on account of the great declivity of the land towards the Magdalena. The Suarez, the Gallinazo or Sogamozo, the Rio Negro, and the Bogota or Funza, are the chief streams, which, rising in the eastern Cordillera, descend into and swell the Magdalena.

Between the top and the bottom of this fall of Tequendama may be observed a curious variety of climate. Tlie plain of Bogota is covered with crops of wheat, with oaks, elms, and other productions of a temperate region. At the foot of the fall are seen the palms of the equinoctial low-lands. The face of the rock, which finishes and borders the vast plain of Bogota, near the cataract, is so steep that it takes

three hours to descend from the river Funza to the Rio Meta ; and the basin or gulf cannot be approached very close, as the rapidity of the v/ater, the deafening noise of the fall, and dense mass of vapor, render it impossible to get nearer the edges of the abyss than 400 or 500 feet. The lone- liness of the spot, the dreadful noise, and the beauty of the vegetation, render this situation one of the wildest and most picturesque scenes in the whole range of the Andes.

The outlets from Popayan or Quito to Santa Fe, are by means of roads traversing broken ground ; and the pass of the Paramo de Guana- cas, which lies across the Cordillera of Antio- quia, is the most freciueiitcd, from which the traveller crosses the Magdalena, and arrives at the metropolis by Tocayma and' Meza, or the

natural bridges of Icononza. These bridges are, however, not much frequented, excepting by the Indians, and travellers whose curiosity inspires them to venture on such desolate regions. They are the formation of nature's ever-varying hand ; and are situate west of the Suma Paz, in the direction of a small river which rises in the mountain of that name. This torrent rolls through a deep and narrow valley, which would have been inaccessible, but for the arches thrown across it in so wonderful a manner. The little village of Pandi is the nearest inhabited place to this pass, being a quarter of a league distant, and the whole road from the capital is one of the most difficult in the Andes.

The province is noted for the production of gold (in small quantities), silver, gems, salt, and coal, and for the fertility of the plain near the capital. The woods abound with game, wild beasts, and birds ; the plains with horses and mules ; and the rivers with alligators and fish.

Fe Santa, de Bogota, the metropolis of Cundinamarca, is in N. lat. 4° 6', and W. long. 78° 30', near the river Funza, or Pati. It is situate in a spacious and luxuriant plain, to the east of the great chain of the Andes, and be- tween it and its first parallel branch. It is also to the west of the Paramo of Chingasa, on an elevation ; on the western declivity of which is the celebrated fall of the Tequendama. Though this city is only four degrees from the equator, the elevation of 8694 feet above the level of the sea renders the temperature of the air so equable, that the Bogotians enjoy a perpetual spring. It is large and handsomely built, con- taining four great squares ; with wide, regular, and well laid out streets. Two small rivers, the San Francisco, and San Augustin, run through the town, and join the main stream of the Funza at a short distance. Over these rivulets, five handsome bridges are erected. The cathedrˆ is a magnificent structure, and forms the

chief ornament of the place, which also contains three other churches, eight convents, four nunneries, and an hospital. The university was founded in the year 1610, since which time two colleges have been endowed for public education; and a library was established in 1772. There is also a mint, several courts of justice, and state offices.

The inhabitants, who are said to amount to 30,000, are represented as possessing agreeable manners, and much good sense, combined with a considerable degree of industry. The latter quality is manifested by the appearance of the plain suriounding the city, which they take so much pains with, as to cause it to produce two harvests in the year. In the environs are some mines of gold, as well as of Peruvian emeralds. Salt and coal are found also in considerable quantities; but the difficulty of carriage renders the latter very expensive.

Fe Santa, de Antioquia, called also An- tioquia, is a province of Colombia, bounded on the north by Carthagena and Darien ; on the east by Choco ; on the west by Santa Fe ; and on the south by Popayan.

It consists almost entiiely of mountainous land, having part of the central ridge of the Andes, which divides the valley of the Magda-

lena from that of the Cauca,‘within its limits. The mountains of this country attain the great- est elevation of any of the three parallel chains in this part of the Andes. They reach the period of perpetual congelation, and in some of their summits greatly exceed it. Indeed the whole country is so thickly surrounded with these mountains, that those who are not strong enough to travel on foot, or dislike being carried on the backs of men, must pass their whole lives within its bounds.

It is famous for its mines of gold, &c. Gold is found in veins in micaceous slate at Buritoca, San Pedro, and Arenas, but is not vyorked on account of the difficulty in procuring laborers, as the province is accessible only on foot. Gold is also collected in grains in great abundance on the alluvial grounds of the valley of Santa Rosa, the valley de la Trinidad, and the valley de los Onos. It is chiefly found by negroes, employed for that purpose, and sent to Mom- pox, which is the great mart where the gold found in this province is disposed of.

The gold of Antioquia is only of nineteen or twenty carats fineness, and it has been computed that 3400 marcs of this precious metal are annually exported. The silver of Cundinamarca is chief- ly produced in this province at Vega de Supia, a mine which has been lately discovered twenty leagues from Carthago. Quicksilver, that pre- cious article in a mining country, is occasion- ally discovered in Antioquia; as sulphureted mercury is found in the valley of Santa Rosa on the east of the Rio Cauca. The number of negroes who inhabit the gold district of the valley of Cauca, is said to be 8000 ; dispersed in small villages near the mining stations.

Fe Santa, de Antioquia, the capital of the above province, is situated about two leagues distance from the river Cauca, and 270 miles north by east from Popayan, in 6′ 48′ N. lat., and 74° 36′ W. long.

Fe Santa, a city of Mexico, capital of the intendancy of New Mexico, is situated on a creek which comes down from the mountains, and runs west into the Rio del Norte. It is about a mile in length, and consists of three streets. It has two churches, with magnificent spires. The public square, on the north side of which is the government house, is in the centre of the town. Pike estimates the population at 5000 ; Humboldt with more probability at 3600. Long. 104° 54′ W., lat. 36° 13′ N.— There are other settlements of this name in Spanish Ame- rica, consisting chiefly of a few Indian familie?.

FE’ABERRY, n, s. Grossularia. A goose- berry.

FEAGUE, v. a. Gower uses to feige, for to censure ; Gcxm. fegen, to sweep; Dnt. fyken, to strike. To whip ; to chastise ; to beat.

When a knotty point comes, — I fcague it away i’ faith. Backingfuim. Rehearsal,

FEAL, adj. } Yr.feal, fealty ; Ual.fedelte ; Feal’ty, 72. s. S fipani. firldcldad ; L,At. fidelis, fidelitatis. Faithful : faitlifulness ; duty to a supe- rior feudal lord, or master ; loyalty. Let my sovereign Command my eldest son, nay, all my sons. As pledges of my fealty and love.

Fhaktpearc, Henry IV.

The tenants by knight service did swear to their lords to he feal and leal, i. e. to be faithful and loyal. SpchTAin, De Parliament, Man disobeying. Disloyal, breaks K\% fealty, and sins Against the high supremacy of Heav’n. Milton, ‘;

Each bird and beast behold After their kinds : I bring them to receive

From thee their names, aud pay thee fealty With low subjection. Id. Paradise Loit.

He prevailed on all who were present, not excepting Bruce and Baliol, the competitors, to acknowledge Scotland to be a fief of the English crown, and to sy/e&T fealty to him as their sovereign or liege lord. Robertson's History of Scotland.

Feal, a river of Ireland, which rises near Coolnakenny, in Limerick, and joins the Gale in Kerry county; after which it is called Cashin, and falls into the Shannon.

Feal Dikes, a cheap sort of fence common in Scotland ; built with feal, or sod dug up by the spade, from the surface of grass ground, consisting of the upper mould rendered tough and coherent by the matted roots of the grass thickly interwoven with it. If only a very thin bit of the upper surface is pared off" with the paring spade, the pieces are called divots. These, being of a firmer consistence, are more durable when built into dikes than feal, but much more ex- pensive also.

Fealty, in law, an oath taken on the admit- tance of any tenant, to be true to the lord of whom he holds his land ; by this oath the tenant holds in the freest manner, on account that all who have fee hold per fidem et fiduciam, that is, by fealty at least. This fealty, at the first creation of it, bound the tenant to fidelity, the breach of which was the loss of his fee. It has been divi- ded into general and special : general, that which is to be performed by every subject to his prince; and special, required only of such as, in respect of their fee, are tied by oath to their lords. To all tenures, except tenancy at will and frank almoing, fealty is incident, though it chiefly be- longs to copyhold estates held in fee and for life. The form of this oath is ordained by sta- tute 17th Edward II.

FEAR, n. s., v. a. & v. n.'^ Fear'ful, adj. Fear'fully, adv. Fear'fulness, n. s. Feak'less, adj. Fear'lessly, adv.

FeAR'lESSNESS, 71. $.

Sax. poeji; Goth- faiirhtan, to fear ;

Teut. raer; Swed. -fara ; Isl. far^

Norm. Fr. Jeer.

Dread ; dismay ;

terror; awe; ap-

prehension of danger ; sorrow ; the object or cause of fear : in a theological sense, ‘ a reve- rential awe of the holy and infinite majesty of God.’ (Bp. Hall). See the fine description of this feeling in the extract from that author. To fear is applied in all the various senses of the noun : as a neuter verb it signifies to live in dread or anxiety ; to be afraid. The other deri- vations are varied by their terminations in the regular manner.

And the fear of yon, and the dread of you, shall bo upon every beast. Gen. ix. 2.

Except the God of Abraham, and the /ear of Isaac had been with me. Id. xxxi. 42.

Who is like thee, glorious in holiness, fearful ia

praises i

Exudut,

FEA

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FEA

Id. Id.

He who fleetb from the noise of the fear shall fall into the pit, and he that cometh up out of the midst of tlie pit, shall be taken in the snare. Is. xxiv. 18. Them that are of a /ear/u? heart. ‘d.

Neither fast to friend, dot fearful to foe,

Ascham. Trembling /«?ar still to and fro did fly. And found no place where safe she shrowd him might.

Faerie Queene. From the ground ihe fearless doth arise. And walketh forth without suspect of crime. Id. Against such monsters God maintained bis own, by fearful execution of extraordinary judgment upon them. Hooker.

Is it credible that the acknowledgment of our own unworthiness, our professed fearfvlnesi to ask any thing, othrrwise than only for his sake to whom God can deny nothing, that this should be noted for a popish

errour 1 ”^•

Well you may _/ear too far,

Safer than trust loo far :

Let me still take away the arms I fear, ‘Sot fear still to be harmed. Shakspeare.

Antony, stay not by his side : Thy demon, that’s the spirit that keeps thee, is Noble, courageous, high, unmatchable. Where Caesar is not ; but near him, thy angel Becomes a /ear, as being overpowered. Id.

All torment, trouble, wonder, and amazement nhabits here : some heavenly power guide us Out of ih’is fearful country.

He’s gentle, and not /ear/u/. In such a night Did Thisbe/ear/«/ˆi/ o’ertrip the dew. And saw the lion’s shadow. Id,

There is a cliff, whose high and bending head Looˆis fearfully on the confined deep. Td.

Cowards fear to die ; but courage stout. Rather than live in snuff, will be put out.

Raleigh. Lay down by those pleasures the fearful and dan- gerous thunders and lightnings, the horrible and fre- quent earthquakes, and then there will be found no comparison. •’”•

The Irish are more fearful to offend the law than the English. Dav’tes on Ireland.

Some sitting on the hatches, would seem there. With hideous gazing, to fear away year. Dunne,

The inhabitants, being feared with the Spaniards landing and burning, fled from their dwellings.

Carcto. When a man shall have stedfastly fixed his eyes upon the dread majesty of an ever-present God, and upon the deplorable wretchedness of his own condi- tion, he shall be in a meet capacity to receive the holy fear, whereof we treat. Neither indeed is it possible for him to see that all-glorious presence, and not presently thereupon tind himself affected with a trembling kind of awfulness : neither can he look upon his own vileness without an humble and bashful dejection of soul : but when he shall see both these at once — how

can he choose but be wholly possessed with a devout shivering, and religious astonishment?

Bp. Hall. Fear doth not more multiply evils, than faith di- minisheth them. Id. Contemplations.

He gave instances of an invincible courage, and fearlessness in danger. Clarendon.

The flaming seraph, /caWew, though alone Encompassed round with foes, thus answered bold.

3Iillon. This is the natural fruit of sin, and the present re- venge which it takes upon sinners, besides that fear- ful punishment which shall be inflicted on them in MioUier life. TiUotson.

A nation, whose aistinguishing character it is to be- more fearless of death and danger than any other.

Tetnple. Fear is an uneasiness of the mind, upon the thought 3i future evil likely to befal us. Locke.

When I view the beauties of thy face, T fear not death, nor dangers, nor disgrace.

Drtfden. I have made my heroine fearful of death, which neither Cassandra nor Cleopatra would have been.

Id. If it was so fearful when Christ looked his denier into repentance, what will it be when he shall look him into destruction ? South.

A third thing that makes a government justly des- pised, is fearfulness of, and mean compliances with, bold popular offenders. Id,

See, pious king, with different strife. Thy struggling Albion's Dosom torn :

So much sh". fears for William's life. That Mary's fate she dare not mourn. Prior,

Fear, in general, is that passion of our nature whereby we are excited to provide for our security upon the approach of evil. Rogers.

A propensity to hope and joy is real riches •, one to fear and sorrow, real poverty. Hume.

'Tis matter of the greatest astonishment to observe the stupid, yet

common boldness of men, who so fear- lessly expose themselves to this most formidable of perils. Decay of Piety.

For fame the wretch beneath the gallows lies. Disowning every crime for which he dies. Of life profuse, tenacious of a name, Fearless of death, and yet afraid of shame.

Soame Jenyju. So fare we in this prison-house the world ; And 'tis & fearful spectacle to see So many maniacs dancing in their chains.

Cowper. The pigmy warriors eye with fearless glare The host thick swarming o'er the burdened air \ Thick swarming now, but to their native land Doomed to return a scanty straggling band.

Beattie. ' And is he gone ?' — on sudden solitude How oft \)mX fearful question will intrude ? 'Twas but an instant past — and here he stood !

Byron.

FEARNE (Charles), an ingenious lawyerof the last century, was a native of London, and educa- ted at Westminster schodl. He afterwards be- came a student of the Inner Temple, and com- menced practice as a chamber counsel and con- veyancer, in which branches he attained the re- putation of great skill and legal learning. He was the author of an Essay on Contingent Re- mainders and Executory Devises ; A Legigraphi- cal Chart of Landed Property : Observations on the Statute of enrollment of Bargains and Sales ; and an Essay on Consciousness, or a Series of Evidences of a distinct Mind. He died January 21st, 1794, aged forty-five.

FEAS'IBLE, flrf;. -j Fr. faisable, of Lat.

Feasibil'ity, ,i!s. f/«cio,todo. Practicable;

Feas'iblenkss, n.s. ˆevident; that which may

Feas'iblv, udv. J be easily done : feasibility IS sometimes used for a thing practicable. Bishop Hall writes the other substantive, strictly accord- ing to its etymology, ' faisableness.'

Let us enquire into the faisableness of this great improvement of our Christian diligence. Bp. Hall.

FEAST,

To require tasks not feasible, is tyrannical, and doth only pick a quarrel to punish. Id. Contemplations.

”{ a project should be proposed to us very feasible, and probable to succeed, in pursuance whereof as- suredly we might obtain great profit ; methinks, in con- sistence with ourselves, and conformable to our usual manner of acting, we should be very ready to embrace and execute it. Barrow.

We conclude many things impossibilities, which yet are easy feasible!. Glanville’s Scepsis.

Men often swallow falsities for truths, dubiosities for certainties, possibilities {or feasibilities, and things impossible for possibilities themselves.

Browne’s Vulgar Err ours.

Things are feasible in themselves; else the eternal

wisdom of God would never have advised, and much

less have commanded them. South.

But fair although and feasible it seem.

Depend not much upon your golden dream.

Cowper.

FEAST, n. s., v. n. & v. a.ˆ Sax. past ; Yx.fetey

Feast’er, n. s. (feste; old Yx.feu&t ;

FEASx’ruL, adj. ˆ Ital. and Yˆori.festa ;

Feast’rite, n. s. J Span. Jiesta ; Eelg.

feest ; Goih. fist {iooA) ; IjM. festum. A formal or sumptuous entertainment ; an anniversary day of rejoicing; delicious food: to feast is to eat sumptuously, or on a joyful occasion : as a verb active, to give a sumptuous entertainment; to delight ; pamper : feastful is luxurious ; festive ; joyous : feastrite, a custom or rite observed at feasts.

On Pharaoh's birthday he made a. feasi unto all his servants. Genesis xl. 20.

Who frowns at others' feasts, had better bide away.

Sir P. Sidney.

Richard and Northumberland, great friends. Did feaxt together. Shakspeare.

Here's our chief guest. If he had been forgotten. It had been as a gap in our great /cas<. Id.

This day is called the feast of Crispian. Id.

He was entertained and feasted by the king with great shew of favour. Hayward.

Those fensters could speak of great and many ex- cellencies in manna. Taylor.

It is not the quantity of the meat, but the cheerful- ness of the guests, which makes the feast ; it was only at the feast of Centaurs, where they ate with one hand, and had drawn swords in the other ; where there is no peace, there can be no feast. Clarendon.

The virgins also shall on feastful days Visit his tomb with flowers, only bewailing His lot unfortunate in nuptial choice. From whence captivity and loss of eyes.

Milton.

All these are our's, all nature's excellence, Whose taste or smell can bless the feasted sense.

Dryden,

The lady of the leaf ordained a feast, And made the lady of the flower her guest ; When, lo! a bower ascended on the plain. With sudden seats ordained, and large for either train.

Id.

Many people would, with reason, prefer the griping of an hungry belly to those dishes which are a feast to others. Locke.

His hospitable gate, Unbarri ; lo all, invites a numerous train Of daily

guests ; whose board, with plenty crowned, Revives l\e feastrites old. Philips.

The parish finds, indeed ; but our church-wardens Feast on the silver, and give us the farthings. Gay.

The suitor train Who crowd his palace, and with lawless power His herds and flocks in feastful rites devour.

Pope. Returning to England in the same vessel with my- self, as I have related above, he invited all his old creditors to 2. feast. Franklin.

Feast, or Festival, is derived by some from fe- riari, to keep holiday ; by others from fq-taw, to feast or entertain ; by others, particularly M. Huet, from festinare, which is used by Origen in the same sense, in his Comment on Matthew. Social or civil feasts are also expressed by the words convivium, and compotatio, or conccenatio.

VV'e learn from Herodotus, that the ancients had neither cups nor bowls at their feasts, but they drank out of little horns tipt with silver or gold. The Greeks and Romans kept a domestic for the purpose of reading during their meals and feasts. Sometimes the chief of the family him- self performed the office of reader; and history informs us, that the emperor Severus often read while his family ate. The Greeks at feasts pro- posed moral topics for conversation, of which Plutarch has preserved a collection. Heroes rarely assembled convivially without bringing affairs of consequence into discourse, or delibe- rating upon those that regarded either present events or future contingencies. The Scythians, while at meat, used to make the strings of their bows resound, lest their warlike virtues might be enfeebled or lost in the season of pleasure. People of rank among the Rhodians, by a fixn- damental law of the state, were obliged to dine daily with those who had the management of affairs, in order to deliberate with them concern- ing such things as were necessary or useful for the country ; and on this account the principal ministers of the kingdom were obliged to keep open table for all who could be of use to the state. The Persians also generally deliberated on business at table, but never determined, or put their determinations in execution, except in the morning before having eaten. Among the Romans, the place where th-ey supped was gene- rally the vestibule, that a more retired part of the house might not encourage licentiousness and disorder. There were several laws that re- stricted their meals to these vestibules. When luxury reigned in Rome, they had superb halls for their entertainments. Lucullus had many, each of which bare the name of some deity ; and tliis name was a mark which indicated to the ser-

vants the expense of the entertainment. The expense of a supper in Lucullus's hall of Apollo amounted to 50,000 drachmas. Singers, dancers, musicians, stage-players, jesters, and buffoons, were brought into these halls to amuse the guests. Plutarch informs us- that Cxsar, after his tri- umphs, treated the Roman people at 22,000 tables ; and by calculation it would seem, that there were at these tables upwards of 200,000 persons. The hall in which Nero feasted, by the circular motion of its walls and ceiling, imitated the revolutions of the heavens, and represented the different seasons of the year, changing at every course, and showering down flowers and perfumes on the guests. The Romans did not, as we do, use but one table at their feasts ; they

had generally two; llie first was for the services of animal food, which was afterwards removed, and another introduced with fruits ; at this last they sung and poured out their libations. The Greeks and eastern nations had the same custom, and even the Jews in their solemn feasts and at sacrifices. The Romans, in the time of Nero, had tables made of citron wood brouglit from Mauritania; they were varnished with purple and gold, and were raised on feet of carved ivory. It is said that they were more precious than gold. Dion Cassius affirms, that Seneca had 500 of these, which he made use of one after ano- ther ; and TertuUian tells us that Cicero had but one. The Romans chose the king of the feast by a throw of the dice. At tlie conclu- sion of the feast they drank out of a large cup as often as there were letters in the names of their mistresses.

Some very interesting particulars of the pre- parations for, and materials of, the Athenian feasts are collected in a late number of the Quarterly Review. We are principally indebted to it for the following facts and observations : —

The Athenians surpassed our French neigh- bours, we are told, still more than they do us, in the variety and excellence of their farinaceous compositions. Archestratus, a decisive authority upon these matters, and one of the earliest to be found, made the gods trade with Lesbos for their barley meal : for wheaten bread, at least of one kind (the aprot ayopaiot,) he allowed, that mere mortals could not go to a better market than the Athenian. Besides the usual divisions of wheaten and barley bread, the Athenians ap- pear to have made use of millet {fiikivi)), of zea, (the triticum spelta of Linnaeus, and the far of

the Romans), and of a corn called tiphe, in these compositions. The species of grain de- nominated olyra, with which Homer feeds his heroes' horses, formed, in later ages, a sort of brown bread. Rice (opiˆa) and an Ethiopic grain resembling the seed of the plant -sesame, whose fruit still furnishes a valuable oil in the east, supplied a species, called Orindes. But the chief attention was confined to the wheaten and the barley bread (aprof, juaˆa). Into the de tails of each of these the copious language of the Greeks entered very minutely. The meal of the latter (aXˆtrov) was accurately distinguished from the meal of the former {aXivˆov), and the act "}f kneading them into dough had also their separate terms, {irtTTiiv, fiauativ). Meal iin- boulted bore the name of syncomistos ; boulted to an extreme degree, it was termed semidalis : a third name was imparted from the boulting cloth (cpjjfffpa), which, according to Photius, was often made of wool, and bore the same name as the fine net with which the Athenian anchovy was caught. If leaven was used, the bread re- ceived the appellation of zymites ; if not, that of azymos. The operation of baking, as per- formed by the oven, the hearth, by live coals without flame, by ashes heaped up round the dough, or by placing the dough on a roaster, introduced a fresh change of names. iTri-irjjCj fT\apiTi]r, airavOpciKig, ffK(>v

banus, or clibanus, an earthen or iron pot broader below than above. .The dough shut up in this vessel, and surrounded with coal, or placed over a fire, was thought to warm more equally ; and the bread thereby acquired a more delicious flavor. The bread made of the first corn after the harvest was called thargelus. The homorosw-as a bread on which goddesses supped ; as the hemiartium, or half-circle, appeased the coarser appetite of Hecate. The bread given to children was, according to the scholiast on Aristophanes, called collyra. The poor, who wished to fill the stomach expeditiously, we conclude, bought the bread called panias. The bread made of new spring-wheat, and which in figure resembled the pegs or pins by which harpstrings were tightened, was called coUabus. A large bread prepared for the ladies of Delos, when celebrating the feast of Ceres and Pro- serpine, took the name of Achainas : its size gave a name to the festival ; and, from an excla- mation put into the mouths of those who carried it, it appears to have been of a very greasy com- position. The Cyprian bread was chiefly dan- gerous to hungry horsemen travelling in a hurry; for, having the eflTect of a magnet, it necessarily impeded expedition. The encryphias, placed in Alexandria in the temple of Chronus for any person to eat that pleased, ranked, as we have seen, among the Athenians, with the bread baked on live coals. The obelias, deriving its name from its price, or the manner in which it was baked,

was a bread carried on men's shoulders in sacred processions, and was invented by Bac- chus on his military expeditions. From a caution of Pherecrates against its purchase, the god was probably hard put to it for food, when the idea first entered his head. The steetites had a mixture of fat in it ; the meconis a strong tincture of a favorite edible among the ancients, the poppy; the encris was composed of farina, oil, and honey; the dipyrus (synonymous with the modern biscuit) of water and farina, boiled in broth, with an addition of pepper, cinnamon, and saffron : cheese, that universal ingredient in Greek cookery — much to the discomfiture of Archestratus — also entered into its composition. But the two favorite breads were the escharitea of the Rhodians, and the cribanites. The latter was said to surpass all the rest, as being juicy, agreeable to the stomach, and easy of digestion ; but Gourmands must have been inexcusable in not preferring the former : for, surpassing even the apToi ayopaioi of the Athenians, it is said to have been so delicious as to cause appetite by eating. » A Lydian, a Phoenician, and in latter ages, when the excellencies of the art had been thoroughly discriminated, a Cappadocian baker was recommended. Thearion, one of the pro- fession, could command honorable mention even from such a man as Plato. The pastn,—cooks claimed the title of demiurgists, or artists par excellence : the task was generally entrusted to female hands. Guests wiped their hands on pieces of soft bread, called apomygdalia' : Aris- tophanes feeds his sausage-seller upon morsels of this kind, and the rogue, in spite of his dra- matic pleasantry, deserved no better food. The apomygdaliae were generally thrown to dogs

The Athenian cook had both a secular and a sacred capacity ; and the parish-clerk of England has not more right to mix himself up with the religion of his country, than had this person to take his place among the priesthood of Athens. All the mechanical parts of the sacrificial rites were entrusted to him ; and that this was no un- important function may be evinced from the earnest language in which Olympias writes to her son Alexander, then engaged in his grand Asiatic exterprise, upon the subject of a person of this description whom she had sent to him at his own request. As the epistle possesses a convenient brevity, we insert a version of it, without troubling ourselves much about the difficulties of commentators. ' You will please to accept at my hands of a cook ; his name Pelignas. He is well versed in all the modes of sacrifice usual in your own country ; he is also acquainted with those practised in the mysteries, and the festivals

of Bacchus, and with such as take place before the commencement of the Olympic games. You will, therefore, pay him every attention, and be cautious of any neg- lect. Let me hear from you at your earliest leisure.' That fit and able persons might never be wanting in this branch of the profession, there appears to have been a particular tribe at Athens, enrolled into a sort of collegiate body, for the sake of preserving the knowledge of their im- portant functions.

The tfiste for fish of every kind, salt, fresh, shelled or otherwise, was, among the Athenians, universal and vehement. Among other salt- fish, in various degrees of favor among the com- mon Athenians, may be mentioned the scombri, which the most correct taste decided, ought to be eaten just three days after putting into brine ; the coracini, of which the best came from the Lacus Mffiotis, and which then assumed the name of saperdac ; the mugiles supplied from Abdera and Sinope; the enormous tiltus, and that species of fish, of which the larger sort were called platistaci, the middle-sized mylli, and the small agnotidia. Of all salted fish, the cheapest, perhaps, was the omotarichos. In a very amusing fragment of Alexis, where a per- son, with his table and reckoning stones before him, settles the various prices of fish, the omo- tarichos is rated at five-eighths of an obol : sea- muscles fetch seven-eighths of the same coin, and the echinus, or sea-porcupine, an entire obol. These fish, potted down, formed the common food of the Greek soldiers and sailors. Epicures pronounced them to be best when boiled in scva- water ; and the hotter they were brought to table, the more agreeable they were declared to be.

The ancient dinners were no sinecures, either in a bodily or an intellectual view. To touch a lute, to bear a part in a catch or scolium, to en- liven the board, or repay hospitality by a fablo or a tale similar to those found in the old Fab- liaux, wore aihong tiie lighter contributions to a Grecian feast ; the guests were often caUed upon for a more important task ; and had the convivial discourses of Aristotle, Speusippns, Dion, and others come down to us, we should perhaps have found that the Greeks, like the Romans, brought their common- place books when they distrusted

their memories, and mercilessly showered down their contents on the unfortunate auditors. — • Another list of fish brings us among the Al- phesta:', which were always caught in pairs, one seeming to follow at the tail of the other ; the amia, so delicious in itself, that in autumn, if dressed after the setting of the Pleiades, it de- fied all the arts of bad cookery to spoil it ; the scarus, the only fish, according to Seleucus, that never slept at night, the anthias, particularly agreeable in winter, as the chromius was in spring ; the ellops, by some writers supposed

to be the same as the anthias ; the batis (maid or skate) which, in concert with hares, and women whose gait or feet have puzzled translators, formed the great attraction, according to Eupolis, of Callias's table ; the gnapheus or fuller ; — in the water, which boiled one, says Dorion, I washed out every one of my stains ; — tlie salpa, who never could resist a hook baited with gourds; the sacred fish pompilus, to which so many ro- mantic Greek stories are attached, and which v/as said to have sprung with Venus from the blood of the sky ; and the aphyie (anchovies), for the dressing of which Archestratus has given a very full receipt. The fish called at Rhodes the fox, and at Syracuse the dog, is opposed by Lynceus to any of the Athenian fish, ' even though surpassing Cecrops himself in reputation.' Ar- chestratus recommends epicures to steal it at the hazard of life, if they cannot purchase it ; and all accidents of fate were to be considered as immaterial, according to this great gastrologist, when a man had once eaten of this inestimable dainty. The aper he declares to be too divine for the eyes of any but rich bankers and money- reckoners to look upon ; and he recommends travellers to purchase it even at its weight in gold, under pain of incurring the divine dis- pleasure, for it is the ' flower of nectar.' Eels, the only instance perhaps in Athens of modest merit brought from the shade of retirement, supplied an admirable repast for the table, and no small one for the theatre ; some of the hap- piest strokes of the comic poets being derived from its natural habits. It has already appeared incidentally, that the Copaic eel ranked first. The Boeotians, with whom this eel formed a va- luable article of trade, crowned the larger sort with a garland like victims, and then offered them to the gods. The eel ranked among fisli, according to good eaters, as Helen among wo- men in the opinion of amatory poets ; Arche- stratus sang its praises accordingly : ' I com- mend,' says he, ' eels of every kind, but happiest among men is he who lives near]\Iessina, for there the best are found.' The Egyptians, the bold Antiphanes tells us, rank the eel in C(jual honor with the gods; but in fact, it is in much higher estimation than the gods. Offer a few prayers to tlic heavenly powers, continues tho poet, and you gain all your desires ; but such is the value set upon eels, that you may pay ten good drachma;, and hardly get a small one after all! 'He wlio goes to cater,' says Ainphis, 'ami buys herbs, when he has the power to buy good fish, is a madman.'

Two other articles connected with Grecian dinners, will, from their intrinsic excellence,

(observes the lively writer we have adverted to,) repay a little attention — perfumerij and Jloutrs. The room where an entertainment was held was commonly perfumed by burning myrrh and frankincense. The thicker perfumes were called Xp

To drink like a Greek,' has become a pro- verb. The gods, it was understood, did not sit long at table; but the Greek sat long, and drank deep. ' Long may you live,' was the congratu- latory expression used to a person who drank off" a large cup without taking breath ; and, that there night be no evasion, three public officers, we are assured, were elected in the free town of Athens, whose business it was to attend enter- tainments, and observe whether every man drank his portion. ' In tlie pains and headaches arising from the powerful effects of unmixed wine, a compression of the head by the hands was found to convey considerable relief. This gave rise to more permanent ligatures. Ivy, as the most ready a hand, was the first herbaceous plant used for the purpose ; the myrtle, the rose, and the laurel soon followed, each having some phy- sical qualities to recommend it, besides its ex- ternal beauty. By the time of Theophrastus, a much larger assortment had been pressed into the service of the chaplet. The violet, bodr the black and the white, — the lily, the anemone, the hyacinth, — the helichr^'sus, deriving its name from the nymph who first gathered it, — the he- merocallis, which dies away at niglit and revives with the rising sun, — the cosmosandalus, from the wearing of which in their chaplets, Clearchus dates the ruin of the Lacedaemonians, — the lych- nis, born of the water in which Venus bathed.'

' During the day,' says Dr. Hill, ' the Athe- nians either took no food, or only a slight repast ir» private. At sun-set they sat down to supper; and, considering the business of the day as over, devoted the evening to society and amusement, and often continued to a late hour of the night.'

For the pic-nic parties, where each guest might send his own portion of the feast, or where one might provide, at a fixed price, an enter- tainment for all the rest, the Athenians appear to have felt a passionate fondness. When Aris- totle advocates the propriety of a"mitting that ' complex entity, the public,' as he calls th'^m, into a share of the government, he more than once draws an argument from the pic-nic suppers, which he asserts were always better than tho-e

furnished by a single person. And Theophrastus, his great disciple, was so much persuaded of this truth, that among his legacies may be found one for the support of a pic-nic club.

Before the time of Menander, the law to prevent too large a concourse of people at an entertainment, had limited the number of guests to thirty : there were persons called gynoeconomi, whose office it was to number the guests, and to see that this statute was not infringed. It was an ancient practice to give a bill of fare to the master of die feasts, who communicated its con- tents, at proper intervals, to the guests. The great man, whether host or guest, was general iv attended by a flatterer, whose office, from the epithets attached to him by Julius Pollux, (the most amusing of word-collectors), was evidently no easy one — and recreations for the sight and hearing (ˆtafiaTa, aKpoaˆara) made part of the entertainment. The supper-hunters (rp£xfˆ«t'ri/ot), that class of persons upon whom is laid all the trouble of convivial conversation, and who are expected to perform the double task of never speaking with the mouth full, and yet never losing a mouthful, generally paid their quota in coin of the latter kind. They who were present without contributing towards the entertainment, says archbishop Potter, were termed aavˆfioXot, in which condition (continues the learned, but plain-spoken archaeologist) * were poets and singers, and others who made diversion for the company.'

The common Athenians contented themselves with salt-fish, herbs, pottage, a barley c?ke not very nicely kneaded : these with a bottle of wine, and figs perhaps for a dessert, formed their usual diet, when a sacrifice, or one of those feasts, which, on various pretences, were wrested from the rich, did not furnish a more substantial banquet.

The following picture of the domestic enter- tainments of the Romans, which introduces us to their social and convivial hour, contains, in a condensed and accurate shape, nearly all that can be collected upon the subject.

' The tables were originally made of ordinary wood, square, and on four feet; but the form was afterwards changed to circular, or oval, sup- ported on a single carved pedestal, and they were richly inlaid with ivory, gold, or silver, sometimes with the addition of precious stones. Those most valued were made of a kind of wood with which we are at present unacquainted. It appears to have been brought from some part of Barbary, and was called citron-wood : but the timber from the tree of that name is far from beautiful, and certainly was not then so scarce as to command an extraordinary price ; yet we are told of a single table, formed of it, having cost a million of sesterces ! They were at first used without any covering, and it was not until the reign of the emperors that cloths were intro- duced : these were of colored woollen, or silk and wool intermixed, and variously ornamented with embroi'' •; but those most in fashion were striped ith gold and purple.

A canopy was suspended over the table, to guard it, as it is said, from the dirt of the ceiling. This, how ever it mHy have added to the decoration of the

apartments, does not convey a very tiigh idea of their cleanliness ; and, in fact, Horace describes tiie accidental fall of the dˆ-apery, at an enter- tainment, as having enveloped the company in a clond of dust.' Sketches of the Domestic Man- ners, S)C., of' the Jio?«a«s, London, 1824, pp. 164,

165.

' The indulgence of lying down at supper on couches was not extended to young people, of either sex, and, when they were admitted at table, they were seated at the feet of their nearest relation. Each couch could accommodate three or four, but seldom five, persons, who lay in a reclining posture, on the left arm, having the shoulders elevated with cusliions, and the limbs extended behind whoever was next; so that, the head of the one was opposite to the breast of the other: and, in serving themselves, they only made use of the right hand.' — p. 166.

' When the form of the table was changed from square to circular, it became customary to place but one large couch around it, in the man- ner of a crescent. The improvement in the de- coration of the table, was followed, as may be supposed, by that of the couch ; and from having been formed of the coarsest materials — stuffed with straw, and covered with skins — it became not uncommon to see them plated with silver, and furnished with mattresses of the softest down covered with the richest stuffs. The ancient poets, and even graver writers, are full of de- scriptions of them, and have long dissertations on their substance and fashion, the choice of the purple, and the perfection of the brocade. The dress worn at table differed from that in use on other occasions, and consisted merely of a loose robe, of a light texture, and generally white. Cicero accuses Valerius, as if it were a crime, of having appeared at an entertainment, dressed in black, although it was on the occasion of a fu- neral ; and compares him to a fury whose pre- sence spread dismay among the assembly. The guests were sometimes supplied with these robes by the master of the house. The sandals were taken off, lest they should soil the costly cushions ; and the feet were covered with slippers, or, not unfrequently, left naked. Water was presented to the company to wash

the hands, and even the feet before they lay down ; and they were then perfumed with essences. It was also customary to sprinkle the apartments with scented waters : but these were, probably, far inferior both in odor and variety, to those of the present day, U3 the ancients neither possessed so many species of flowers as the moderns, nor were so well ac- quainted with the art of distilling them; and their chief perfume was always extracted from saffron. Precedence was strictly attended to, and, in families of distinction, there was always a master of the ceremonies who arranged the company; but intbost' of inferior condition, that duly devolved or tbe giver of the entertainment. Tlie master of the house occupied the second place on the centre couch, that immediately be- low him being for his wife, ajid that above for the most distinguished guest. This w;us called the consular seat, and we are told, that it was so termed in consequence of being considered the most proper for the chief magistrate, because

the space between it and the next couch would admit of his more easily conversing with those who might come to him on the public business. Those next in rank took the upper couch. Guests were allowed to bring their friends, though un- invited, along with them, and they were fre- quently accompanied by some humble de- pendents, who, however, do. not seem to have been treated with much respect, and were even distinguished by the sneering appellation of ' shadows.' These, with the parasites of the fa- mily— also contemptuously nick-named ' flies/ from those insects intruding themselves every where, — and the clients, were placed on the lower couch. The custom of entertaining parasites — men who professedly repaid the hospitality of the host with the grossest adulation — M'as general, and betrays a want of delicacy and refinement but little in unison with the elevation of senti- ments and dignity of manners which we are taught to consider as characteristic of the Ro- mans, as well as a humiliating contrast witli the high-minded independence of their ancestors. They were not alone looked upon with the con- tempt which their servility perhaps merited, but they were often treated with a degree of coarse- ness that reflected as little credit on the manners, as on the hospitality of their entertainers ; and we should* find it difficult to determine whether most to despise the meanness of the patron who could impose, or that of the sycophants who would submit to, such a tax upon their recep- tion. The guests being placed, a bill of fare was laid before each, with a cover and goblet.' pp. 167—171.

Feasting was no small enjoyment of the Britons, Germans, Gauls, and all the other Celtic nations ; in which they indulged themselves to the utmost, as often as they had opportunity. 'Among these nations (says M. Pelloutier, inhis Hist. Celt. 1. 2, c. 12, p. 463,) there is no public

assembly, either for civil or religious purposes, duly held ; no birth-day, marriage, or funeral properly celebrated ; no treaty of peace or alli- ance rightly cemented, without a great feast.' When the Germans, says Tacitus, wanted to reconcile enemies, to make alliances, to name chiefs, or to treat of war and peace, it was dur- ing the repast, that they took counsel ; a time in which the mind is most open to the impres- sions of simple truths, or most easily animated to great attempts. These artless people during the conviviality of the feast spoke without disguise. Next day they weighed the counsels of the former evening : they deliberated at a time when they were not disposed to feign, and took tlieir reso- lution when they were least liable to be deceived. It was by frequent entertainments of this kind that the great men or chieftains gained tlie affec- tions and rewarded the services of their follow- ers, and those who made the greatest feasts were sure to be most popular, and to have tlie greatest retinue. These feasts (in which plenty was more regarded than elegance) lasted commonly several days, and the guests seldom retired until they had consumed all tl:e provisions and exhausted all the liquors. Athena-us describes an entertainment that was given by Arcamnes, a very wealthy prince in Gaul, which continued a whole year

without interruption, and at which all the people of Gaul, and even all strangers who passed through that country, were made welcome. At these feasts they sometimes consulted about the most important affairs of state, and formed reso- lutions relating to peace and war; imagining that men spoke their real sentiments with the greatest freedom, and were apt to form the boldest designs, when their spirits were exhila- rated with the pleasures of the table. The con- versation at these entertainments, very frequently turned on the great exploits which the guests themselves or their ancestors had performed in war ; which sometimes occasioned quarrels and even bloodslied. It was at a feast that the two illustrious British princes, Carbar and Oscar, quarrelled about their own bravery and that of their ancestors, and fell by mutual wounds, (Ossian, vol. ii. p. 8, &c). As to the drink used at those feasts, particularly in Britain, i* seems probable, that before the introduction of agricul- ture into the island, mead, or honey diluted with water, was the only strong liquor known to its inhabitants, as it was to many other ancient na- tions in the same circumstances. This continued to be a favorite beverage among the ancient Britons and their posterity long after they had become acquainted with other liquors. See Mead. After the introduction of agriculture, ale or beer became the most

general drink of all the British nations who practised that art, as it had long been of all the Celtic people on the continent. See Ale. If the Phoenicians or Greeks imported any wine into Britain, it was only in very small quantities ; that liquor being very little known in this island before it was conquered by the Romans. The drinking vessels of the Gauls, Britons, and other Celtic nations were, for the most part, made of the horns of oxen and other animals ; but those of the Cale- donians consisted of large shells, which are still used by some of their posterity in the Highlands of Scotland. The dishes in which tlie meat was served up were either of wood or earthenware, or a kind of baskets made of osiers. These last were most used by the Britons, as they very much excelled in the art of making them both for their own use and for exportation. The gˆiests sat in a circle upon the ground, with a little hay, grass, or the skin of some animal under them. A low table or stool was set before each person, with the portion of meat allotted to him upon it. In this distribution, they never neg- lected to set the largest and best pieces before those who were most distinguished for their rank, their exploits, or their riches. Every guest took the meat set before him in his hands, and, tearing it with his teeth, fed upon it in the best manner he could. If any one found diffi- culty in separating any part of his meat with his hands and teetli, he made use of a large knife, that lay in a particular place for the benefit of the whole company. Sei-vants, or young boys and girls, the children of the family, stood behind the guests ready to help them to drink or any thing they wanted. As the ancient Britons greatly excelled and very much delighted in music, all their feasts were accompanied with the joys of song, and the music of harps. In the words of

Ossian (vol. ii. p. 9, &c.) ‘ whenever the feast of shells is prepared, the songs of bards arise. The voice of sprightly mirth is heard. The trembling harps of joy are strung. They sing the battles of heroes, or the heaving breasts of love.’ Some of the poems of that illustrious British bard appear to have been composed in order to be sung by the hundred bards of Fingal, at the feast of Selma. See vol. i. p 87, 209. Many of the songs of the bards, which were sung and played at tlie feast of the ancient Britons, were of a grave and solemn strain, celebratmg the brave actions of the guests, or of the heroes of other times ; but these were sometimes inter- mixed with sprightly and cheerful airs, to which the youth of both sexes danced.

On the subject of Anglo-Saxon feasting, Mr. Turner supplies us with a full quota of infor- mation.

‘ They boiled, bated, and broiled their vic- tuals,’ he says. ‘ We read of their meat dressed in a boiling vessel, of their fish having been

broiled, and of an oven heated for baking loaves. The term abacan is also applied to meat. In the rule of St. Benedict, two sanda, or dishes of sod- den syilian, or soupe bouillie, are mentioned. Bede mentions a goose that hung on the wall taken down to be boiled. The word seathan, to boil, deserves notice, because the noun seath, from which it is derivable, implies a pit. As we read in the South Sea islands of the natives dressing their victuals in little pits lined with stones, the expression may have been originally derived from a similar practice. A cook appears as an appendix to every monastery, and it was a character important enough to be inserted in the laws. In the cloisters it was a male office ; else- where it was chiefly assumed by the female sex. In the dialogue already cited, the cook says, ‘ If you expel me from your society, you would eat your herbs green, and your flesh raw.’ He is answered, ‘ We can ourselves seethe what is to be seethed, and broil what things are to be broiled.’ They seem to have attended to cookery not merely as a matter of taste, but of indispen- sable decorum. It was one of their regulations, that if a person eat any thing half dressed, igno- rantly, he should fast three days ; if knowingly, four days. Perhaps as the uncivilised Northmen were, in their pagan state, addicted to eat raw flesh, the clergy of the Anglo-Saxons were anxi- ous to keep their improved countrymen from re- lapsing into such barbarous customs.

‘In the drawings which accompany some Anglo-Saxon manuscripts, we have some deline- ation of their customs at table. In one drawing a party is at table, seated with the females by the side of the men in this order : a man, a lady, a man, a lady, two men, and another lady. The first two are looking towards each other, as if talking together ; the three in the middle are en- gaged with each other, and so are the two last ; each have a cup or horn in their hand. The ta- ble is oblong, and covered with a table-cloth that hangs low down from the table ; a knife, a horn, a bowl, a dish, and some loaves appear. The men are uncovered ; the women have their usual head-dress. In another drawing, the table is a sharp oval, also covered with an ample

cloth; upon it, besides a knife and a spoon, there are a bowl, with a fish, some loaves of bread, and two other dishes. Some part of the costume is more like the manners of Homer’s heroes than of modern limes. At the angles of the tables two attendants are upon their knees, with a dish in one hand, and each holding up a spit with the other, from which the persons feasting are about to cut something. One of

these persons, to whom the servants minister with so much respect, is holding a whole fish with one hand, and a knife in the other.

‘ In the drawing which accompanies Lot feast- ing the angels, the table is oblong, rounded at the ends, and covered with a cloth. Upon it is a bowl, with an animal’s head like a pig’s ; ano- ther bowl is full of some round things like apples. These, with loaves, or cakes of bread, seem to constitute the repast. There are two horns upon the tal:)le, and one of the angels has a knife. As no forks appear in any of the plates, and are not mentioned elsewhere, we may presume that our ancestors used their hands instead. There is one drawing of men killing and dressing meat. One man is holding a sheep by his horns, while a lad strikes at its neck with an axe ; behind him is a young man severing an animal’s head from his body with an axe. Another has put a long stick, with a hook attached to it, into a caldron, as if to pull up meat. The caldron is upon a trivet of four legs as high as the servant’s knee, within which the fire is made, and blazing up to the caldron.’

It has been observed by some authors that no nation comes near the English in the magnificence of their public entertainments. Our coronation and instalment feasts, our civic charitable d inners, transcend the belief of foreigners ; and yet it may be doubted whether those now given are comparable to the feasts of former ages. William the Conqueror, after he was peaceably settled on the throne of England, sent agents into different countries, to collect the most admired and rare dishes for his table ; by which means, says John of Salisbury, this island, which is naturally pro- ductive of plenty and variety of provisions, was overflowed with every thing that could inflame a luxurious appetite. The same writer tells us, that he was present at an entertainment which lasted from 3 P. M. to milnight ; at which deli- cacies were served up, which had been brought from Constantinople, Babylon, Alexandria, Pa- lestine, Tripoli, Syria, and Phoenicia. These delicacies were doubtless very expensive. Tho- mas a Becket (says his historian Fitz-Stephen), gave £5, equivalent perhaps to £50 at present, for one dish of eels. The sumptuous entertain- ments which the kings of England gave to their nobles and prelates, at the festivals of Cliristmas, Easter, and Whitsuntide, in which they spent a great part of their revenues, contributed very much to diffuse a taste for profuse and expensive banqueting. It was natural for a proud and wealthy baron to imitate in his own castle the entertainments he had seen in the palace of liis prince. Many of the clergy too, both secular and regular, being very rich, kept excellent tables. The monks of St. Swithins, at Winchester, made a formal complaint to Henry II, against their

abbot, for taking away three of the thirteen dishes they used to have every day at dinner. The monks of Canterbury were still more luxurious : for tliey had at least seventeen dishes every day dressed with spiceries and sauces, besides a dessert. Great men had many kinds of provisions at their tables, not now to he found in Britain. When Henry II. entertamed his court, the great officers of his army, and the kings and great men of Ireland, in Dublin, at the Christmas feast of A. D. 1171, the Irish princes and chieftains were quite astonished at the profusion and variety of food which they beheld, and were with difficulty pre /ailed upon by Henry to eat the flesh of cranes. In the remaining monum.ents of this period, we meet with the names of several dishes, as dellegrout, maupigyrnun, karumpie, Sec, the composition of which is now unknown. The coronation feast of Edward III. cost at that pe- riod £2835. 18s. 2d. At the installation of Ralph abbot of St. Augustine, Canterbury, A. D. 1309, 6000 guests were entertained with a dinner consisting of 3000 dishes, which cost £'287. 5s. ' It would require a long treatise (says Matthew Paris) to describe the astonishing splendor, mag- nificence and festivity, with which the nuptials of Richard earl of Cornwall, and Cincia daughter of Riemund earl of Provence, were celebrated at London, A. D. 1243. We are told that above 30,000 dishes were served up at the marriage dinner.' The nuptials of Alexander III. of Scotland, and the princess Margaret of England, were solemnised at York, A. D. 1251, with still greater pomp and profusion. ' If I attempted (says M. I'aris) to display all the grandeur of this solemnity, — the numbers of the noble and illustrious guests, — the richness and variety of the dresses, — the sumptuousness of the feasts, — the multitudes of the minstrels, mimics, and others whose business it was to amuse and divert the company, those of my readers who were not present would imagine that I was imposing upon their credulity. The following particular will enable them to form a judgment of the whole. The archbishop of York made the king of Eng- land a present of sixty fat oxen, which made only one article of provision for tlie marriage feast, and were all consumed at that entertainment.' The marriage feast of Henry IV. and his queen Jane of Navarre, consisted of six courses ; three of flesh and fowls, and three of fish. All these courses were accompanied and adorned with subtleties, as they were called. These were figures in pastry, of men, women, beasts, birds, &c., placed on the table, to be admired, but not touched. Each figure had a label affixed to it ; containing some wise or witty saying, suited to the occasion. The installation feast of George Neville, archbishop of York and chancellor of England, exceeded most others in our history in splendor and expense, and in the number and quality of the guests. The reader may form some idea of this enormous feast from the follow- ing list of

provisions prepared for it. ‘ In wheat, quarters, 300 ; in ale, tuns, 300 ; in wine, tuns, 100; in ipocrasse, pipes, 1; in oxen, 104; in wild bulls, 6; in swanns, 400; in geese, 2000 ; in cappons, 1000; in pigs, 2000.; in plovers, 400; in quailes, 1200; in fowls called rees,

2400 ; in peacocks, 104 ; in mallards andteales, 4000 ; in cranes, 204 ; in kids, 204 ; in chickens, 2000 ; in pigeons, 2000 ; in connies, 4000 ; in bittors, 20,4 ; in heronshaws, 400 ; in pheasants, 200 ; in partridges, 500 ; in woodcocks, 400 ; in cnrliews, 100; in egritis, 1000; in stags, bucks, and roes, 500 and more ; in pastries of venison, cold, 4000 ; in parted dishes of jellies, 1000; in plain dishe;* of jellies, 3000 ; in cold tarts, baked, 4000; in cold custards, baked, 3000; in hot pasties of venison, 1500; in hot custards, 2000 ; in pikes and breams, 308 ; in porpoises and seals, 12; spices, sugared delicates, and ■wafers, plenty.’

One of the most expensive singularities at- tending the royal feasts in those days consisted in what tliey called intermeats. These were re- presentations of battles, sieges, &c., introduced between the courses, for the amusement of the guests. The French excelled in exhibitions of this kind. At a dinner given by Charles V. of Franco to the emperor Charles IV., A D. 1378, the following intermeat was exhibited : — A ship, with masts, sails, and rigging, was seen first : she had for colors the arms of ‘the city of Jeru- salem : Godfrey of Bouillon appeared upon deck, accompanied by several knights armed cap-a- pie ; the ship advanced into the middle of the hall without the machine which moved it lieing perceptible. Then the city of Jerusalem ap- peared, with all its towers lined with Saracens. The ship approached the city; the Christians landed, and began the assault ; the besieged made a good defence : several scaling ladders were thrown down ; but at length the city was taken. Intermeats, at ordinary banquets, consisted of certain delicate dishes introduced between the courses, and designed rather for gratifying the taste than for satisfying hunger.

We conclude with an account of the corona- tion feast still given by our kings, and which is the most splendid relic of ancient English enter- tainments known to modern times.

The great hall of Westminster is considered on this occasion as the hall of his majesty’s palace, where he entertains the nobility and the public officers who have attended the coronation cere- mony. The

table at which their majesties are to dine is covered by the serjeant and gentlemen of the ewry : and the officers of the pantry set

kings salt of state and cadinet on the table, with another cadinet for the queen.

Besides the royal table, which is at the upper end of the hall on the raised floor, there are usu- ally tables along each side of the hall. The first on the west side is for the dukes of ˆ>ormandy and Aquitain, the great officers, the dukes, duch- esses, marquisses, and marchionesses ; the second of the same side for earls and viscounts, and their ladies ; the third for the barons and baronesses.The first table on the east side of the hall is for the archbishops, bishops, barons of the cinque-ports, judges, the king's ancient sergeant, attorney and solicitor general ; the second for the Serjeants at law, masters in chancery, six clerks, lord mayor, aldermen, and twelve citizens of London ; and the third for the kings of arms, heralds, and pur- suivants.

When the procession arrives at the hall, the noble and illustrious persons who compose it are conducted by officers of arms to their respective tables, and the king and queen pass up the hall and retire to the court of Wards, leaving the ca- nopies which have been borne over them with the barons of the cinque-ports, who retain them as their fee. The heralds then retire to places appointed for them, and the king's trumpeters and musicians are stationed in a gallery at the lower end of the hall.

Dinner being ready, his majesty — with his crown on his head and his sceptre and orb in his hands, preceded by the lord great chamberlain, and the swords being borne before him — comes out of the court of Wards, and seats himself in his chair of state at the table. Immediately after, the queen, when present, with her crown on her head and the sceptre and ivory rod in her hands, — preceded Ijy her chamberlain and fol- lowed by the ladies of the bedchamber, — comes through the court of Wards, and seats herself in her chair of state at the table, on *.he left hand of the king.

The First Course of hot meat is then served up. Tlie lords the sewers go to the dresser of the kitchen, and the serjeant of the silver scullery calls for a dish of meat, wipes die bottom of the dish, and also the cover, takes assay of it, and covers it ; and then it is conveyed to their ma- jesties' table with a flourish of trumpets. Tliis course is attended by.

Three great officers, in their robes of estate and their coronets on their

heads, mounted on goodly

horses ; viz.

Earl Marshal, with Lord High Steward, with High Constable, with

his staff'. his white staff". his staff".

Six Serjeants at Arms, with their maces, &c. &c.

Dinner being placed on the table oy the king's and queen's carvers and sewers, with their assist- ants, the lord great chamberlain and his majesty's cup-bearer and his assistants go to the king's cupboard ; and, having washed, the lord great chamberlain — preceded by the usher of the black rod, attended by the cupbearer, and followed by his assistants before mentioned — brings up the great basin and ewer for his majesty to wash : upon which the king rises, and, having delivered the sceptre to the lord of the manor of Worksop, and the orb to one of the bishoos, the cupbearer

pours out the water upon the king's hands ; and the lord of the manor of Heydon in Essex (hav- ing accompanied the cupbearer from the cup- board) holds the towel to the king. The like ceremony is used with regard to her majesty's washing; after which the dean of the chapel royal says grace, and their majesties sit down to dinner, as do likewise t'.e peers, peeresses, and others al the tables below.

On the king's right hand stand the noblemen who carry the four swords, holding them naked and erected all dinuer-time; nearer the king stand

FEASTS.

Ill

the lords who hold the orb and sceptre : and on his left han'^ the lord great chamberlain. On the queen's left hand stand her chamberlain and vice-chamberlain, who bear her sceptre and ivory rod.

The Challenge. — Before the Sv ond course is brought in, the king's champion, who holds that

office with the manor of Scriˆelsby in Lincoln- shire, enters the hall completely armed

in guise Of warriors old, with orderea spear and shield,

mounted upon a goodly horse richly caparisoned and attended as follows : —

Two Trumpets, the Champion's arms on their banners. The Serjeant Trumpeter, wiih his mace. Two Serjeants at Arms, with their maces. The Champion's two Esquires, richly habited, — one on the right hand, with his lance carried up- right, the other on the left, with his target, the Champion's arms depicted thereon.

A Herald with a paper in his hand, containing the words of the Challenge.

The Earl JNIarshal in his The Champion on The Lord High Constable

robes and coronet, on horseback, with a in his robes and coronet,

horseback, with the staff gauntlet in his on horseback, with his

in his hand. right hand. staff.

Four pages richly apparelled, attendants on the Champion.

The passage to their majesties' table being cleared by the knight marshal, the herald with a loud voice proclaims the champion's challenge at the lower end of the hall, in the words fol- lowing : —

If any person, of what degree soever, high or low, shall deny or gainsay our sovereign lord , king of Great Britain and Ireland, de- fender of the faitli, &c., son and next heir to our

sovereign lord , the last king deceased, to

be right heir to the imperial crown of this realm of Great Britain, or that he ought not to enjoy the same ; here is his champion, who saith that he lieth and is a false traitor, being ready in person to combat with him ; and in this quarrel will adventure his life against him, on what day soever he shall be appointed.

The champion then throws down his gauntlet : which, having lain some small time, the herald takes up, and delivers it again to him. They then advance in the same order to the middle of the hall, where the herald makes proclamation as before ; and lastly, to the foot of the steps, when tlie said herald, and those who precede him, going to the top of the steps, proclamation is made a third time ; at the end of which the champion casts down his gauntlet, which being taken up, and redelivered to him by the herald, he makes a low obeisance to his

majesty, where- upon the king's cupbearer brings to the king a gilt bowl of wine, with a cover; and his majesty drinks to the champion and sends him the bowl by the cupbearer; which the champion (having put on his gauntlet) receives, and, retiring a little, drinks thereof ; he then makes his humble re- verence to his majesty, and, accompanied as be- fore, departs out of the hall, taking the bowl and cover as his fee.

The Largess. Immediately after this the offi- cers of arms, descending from their gallery, Gar- ter ; and the two provincial kings of arms — with their coronets on their heads, followed by the heralds and pursuivants — come to the lower end of the hall, and, making their obeisance to his majesty, proceed to the middle of the hall, where they make a second obeisance, and a third at the foot of the steps ; and, having ascended, Garter cries out three times Largess : his majes- ty's largess is then given, which Garter proclaims

aloi\d in Latin, French, and English, in three different parts of the hall.

The Second Course is now carried up to their majesties' table by the gentlemen pensioners, with the same solemnities as the former ; and va- rious feudal services, by which property and manors are held, take place.

Feasts, or Festivals, in a religious sense, are ceremonies of feasting by way. of thanksgiv- ing. Such feasts have made part of the religion of almost all nations and sects ; witness those of the Greeks, Romans, Hebrews, Christians, and Mahommedans. Among the Greeks the first re- ligious feasts were celebrated in solemn assem- blies of the whole nation, on occasion of their games, as the Olympic, the Pythian, the Isth- mian, and Nemsean : in process of time they had many others, the principal of which are enumerated in this work, under their respective names. The Romans had also abundance of stated feasts in honor of their deities and heroes; such were the Saturnalia, Cerealia, Luper- CALiA, Liberalia, Neptunalia, Consualia, Portumnalia, Vi lcaxalia, Palilia, Diva- lia, &c. See these articles. They had also feasts instituted occasionally; as Carmextalia, Quirinalia, Termixalia, Floralia, Compi- talia, Lemuria, Verxalia, besides other moveable and occasional ones : as to give thanks to the gods for benefits received ; to implore their assistance or to appease their wrath, ^c, as the Paganalia, Feralia, Bacchanalia, Am-

BARVALIA, AmBL'RBALIA, SuOVETAfRILI A, and

divers others, particularly denominated Feri.e ; as Sementin.e, Latin.e, &c. See these articles. The feasts were divided into days of sacrifice, and days of banqueting and feasting ; days of games, and days of rest or ferite. There being but little his- tory written, or at least published in those days, one end of feasts was to keep up the remembrance of past occurrences.

Feasts, Jewish. The principal feasts of the Jews were the feast of Trumpets, that of the Expiation or Atonement, of Tabernacles, of theDEiMCATiONjof the Passover, of Pentecost, and of PuRiFK'ATiox. See those articles, and our article Jewish Dispensation. The modern Jews have other feasts marked in their kalendar of modem institution.

Feasts in the Church of England. The four feasts of which the English laws take parti- cular notice are, the Annunciation of the blessed Virgin Mary, or Lady-day, the 25th of March ; the nativity of St. John the Baptist, held on the 24th of June ; the feast of St. ˆlichael the arch-angel, on the 29th of September ; and that of St. Thomas the Apostle, on the 21st of December: on which quarterly days rent on leases is usually paid. 5 &. 6 Edw. VI. cap. 3; 3 Jac. I. cap. 1 ; 12 Car. II. cap. 30. Besides these feasts vvhieh are general, and enjoined by the church, there are others local and occasional, enjoined by the magistrate or voluntarily set on foot by the peo- ple ; sucli are the days of thanksgiving for victo- ries, delivery from wars, plagues, &:c. Such also are the vigils or wakes in commemoration of the dedications of particular churches. See Vi- gil, &c. The feasts of the church of England are either immoveable or moveable.

1. Feasts, Immoveable, are those constantly celebrated on the same day of the year ; the prin- cipal of these are Christmas or the Nativity, the Circumcision, Epiphany, Candlemas or the Purification, the Annunciation called also the Incarnation and Conception, All Saints, and All Souls ; besides the days of the several apostles, St. Thomas, St. Paul, &c, which in the church of England are feasts, though not feriffi. See these articles.

2. Feastsj Moveable, are those which are rot confined to the same day of the year. Ot these the principal is Easter, which gives law to all the rest, all of them following and keeping their proper distances from it ;

such are Palm Sunday, Good Friday, Ash-Wednesday, Sexagesima, Ascension day, Pentecost, and Trinity Sunday. See Easter, Pentecost, Sexagesima, Trinity, &c.

Feasts in the Church of Rome. The pro- digious increase of feast days in the Romish church commenced towards the close of the fourth century, and was occasioned by the discovery that was then made of the remains of martyrs and other holy men, for the commemoration of whom they were established. These, instead of being set apart for pious exercises, were but too often abused in indolence and voluptuousness: and this has been defended by the theologians of this church on the ground of becoming all things to all men,' that some may be won. See Dr. Doyle's late Essay on the State of the Irish Catholics. i\lany of them were instituted on a pagan model.

Feasts, Mauommedan. The Mahommedans, 1>esides their feast or sabbath, which is kept on Friday, have two solemn feasts, the first of which is called the Feast of Victims, and celebrated on the 10th day of the last month of their year; and the second called Bairam. See Bairam.

Feasts of the Dead are solemn religious ce- remonies in use among the American Indians. By some nations they are celebrated every eight years ; by others, as the Ilurons and Iroquois, every ten years.

FEAT, n. s. ?c adj. *\ Fr. fait ; Norm. Yt. feat ;

Feat'ly, orlv. t]ta.. faflo; \Ai. fttctiiw, a

Fea'teous, rtc//. iˆdeed. Anact, deed, orex-

FEA'TEOUSLy,o

means leady ; skilful; ingenious: 'fine; neat; brave;' says Minsheu: the adjective is nearly obsolete, and both words have been generally applied with some degree of contempt: fea- teous, and feateously (botli obsolete), have been used as synonymous with feat and featly.

Wherefore her father promised by crye that noble young men should meate at Peverell's place in the Peke, and he that provid hymself yn feates of armes should have Mellet his doughter, ■with the C'astel of Whitington.

Leland. Thinges excerpted owl of an old English Boke, Sˆc. vol. i. p. 23.

Pyrocles is his name, renowned far For his bold feats, and hardy confidence ; Full oft approved ia many a cruel war.

Faerie Queenc. And with fine fingers cropt full featously The tender stalks on high Spenser.

Tarquin's self he met. And struck him on his knee : in that A&y's fedits, When he might act the woman in the scene. He proved the' best man i' the' field. Shakspeare.

[Posthumus] Lived in court (Which it is rare to do) most praised, most loved ; A sample to the youngest j to the more mature, A glass iha.t feated them. Id, Cymbeline.

Never master had A page so kind, so duteous, diligent ; So tender over his occasions, true. So feat, so nurse-like. Id,

Foot It featly here and there. And sweet sprites and burthen bear.

Id. Tempest. Look how well my garments sit upon me. Much yeafer than before. Id.

The joints are more supple to all feats of activity and motion in youth than afterwards. Bacon.

Thatyeai man at controversy. Stillingjieet.

The moon was up, and shot a gleamy light ; He saw a quire of ladies in a round, Tha,t featly footing seemed to skim the ground.

Dryden, Our soldiers are men of strong rieads for action, and perform such, feats as they are not able to express. Addison's Spectator. Down the deep vale, and narrow winding way. They foot it featly, ranged in ringlets gay : 'Tis joy and frolic all, where'er they rove. And fairy people is the name they love. Beattie.

FEATII'ER, 71. s. & V. a.^ Saxon, pebep ; Feath'erbed,

Feath'erdriver, Feath'ered, adj.

FeaTH'eREDGE, 71. s.

Feath'eredged, adj. Feath'ergrass, Feath'erless, adj. I'eath'erly, Feath'ery.

Goth, feaden ;

Swed. and Teut.

fedcr ; perhaps . from the Goth. \ fliader, plumage.

Thompson. The

plume of birds;

any ornament ;

and (as birds are

distinguished bytheir plumage) kind, or species; as in the expression, ‘birds of a feather’: to feather is to adorn with feathers or ornaments ; to treat as a cock: feathered, clothed, or fitted with a feather, or feathers : featherless is without feathers : fea- tlierly, resembling, and feathery, covered with, feathers: the extracts explain the other deri- vatives, except feathergrass, which is another name for the herb also called shadowgrass, gramen plumotum.

The soote season tliat bud, and Woom fourth bringes. With grene hath cladde the hyll, and eke the vale. The nightingall -with fethcrs new she singes ; The turtle to her mate hath told the tale. Suirr/.

I am not of ih

Look, as I blow this yt’oˆ/jer from my face.

Id. Henry IV.

I saw young Harry with his beaver on. His cuisses on his thighs, gallantly armed. Rise from the ground like feathered Mercury. Id.

They stuck not to say, that the king cared not to plume his nobility and people, to feather himself.

Bacon’s Henry VII.

The husband cock looks jut, and straight is sped. And meets his wife, which brings her featherbed.

Donne.

This so high grown ivy was like that featherless bird, which went about to beg plumes of other birds to cover his nakedness. Howel's Vocal Forest.

Or whistle from the lodge, or village cock Coant the night watches to his feathery dames.

Milton.

The accretion or pluvious aggelation of hail about the-mother and fundamental atoms thereof, seems to be some featherly particle of snow, although snow itself be sexangular. Browne.

The brave eagle does with sorrow see

The forest wasted, and that lofty tree

Which holds her nest, about to be o'erthrown.

Before the feathers of her young are grown ;

She will not leave them, nor she cannot stay,

But bears them boldly on her wings away.

Waller.

So when the new-born phcenix first is seen. Her feathered subjects all adore their queen.

Dryden,

Dame Partlet was the sovereign of his heart ; Ardent in love, outrageous in his play. He feathered her a hundred times a-day. Id.-

The cover must be made of featheredyed boards, in the nature of several doors with hinges fixed thereon.

Mortimer.

Boards or planks that have one edge thinner than another, are called feathercdge stuff. Moxon.

Vultures, harpies, ravens, cormorants, and among many other / ea^Aered creatures, several little winged boys perch upon the middle

arches. Addison.

Darkening the sky, they hover o'er alud shroud The wanton sailors with a feathered cloud. Prior.

When a man in the dark presses either corner of his eye with his finger, and turns his eye away from his finger, he will see a circle of colors like those in the feathers of a peacock's tail. Newtvn.

A featherdriver had the residue of his lungs filled with the fine dust or down of feathers. Derliam.

An eagle had the ill hap to be struck with an arrow, feathered from her own wing. L'Estrange.

Not the bow they bend, nor boast the skill To give the feathered arrow wings to kill. Pope.

Then ships of uncouth form shall stem the tide. And featliered people croud my wealthy side. Id.

Among our Scythian ancestors, the number of pens was so infinite, that Herodotus had no other way of expressing it than hy saying, that in the regions far to the north, it was hardly possible for a man to travel, the very air was so replete with feathers. Swift.

Time is the feathered thing.

And whilst I praise

The sparklings of thy locks, and call ihcm rays.

Takes wing. Maync.

See then the quiver broken and decayed. In which are kept our arrows ! Rusting there In wild disorder, and unfit for use. Vol. IX.

What wonder, if, discharged into the world. They shame their shooters with a random flight. Their points obtuse, and /eaˆ/ters drunk with wine ! Well may the church wage unsuccessful war With such artillery armed. Cotaper.

While each light moment, as it dances by With feathery foot and pleasure-twinkling eye. Feeds from its baby-hand, with many a kiss. The callow nestlings of domestic bliss. Darwiti.

Free let the feathery race indulge the song.

Inhale the liberal beam, and melt in love : Free let the fleet hind bound her hills along.

And in pure streams the watery nations rove.

Beattie.

Feathers. See Ornithology. Feathers make a considerable article of commerce, parti- cularly those of ostriches, herons, swans, peacocks, geese, liens, Sec, for plumes, ornaments of the head, filling of beds, writing pens, &c. Geese are plucked sometimes in Great Britain five times in the year, and in cold seasons many of them die by this barbarous custom. See Anas. The feathers that are brought from Somersetshire are esteemed the best, and those from Ireland the worst. Eider down is imported from Denmark ; the ducks that supply it being inhabitants of Hudson's Bay, Greenland, Iceland, and Norway. See Down. Our own Western Islands breed numbers of these birds, which turn out a profit- able branch of trade to the poor inhabitants. Hudson's Bay also furnishes very fine feathers of the goose kind. The down of the swan is brought from Dantzic, as well as great quantities of the feathers of the cock and hen. The London poulterers deal largely in the feathers of those lairds, and of ducks and turkies : those of ducks, being weaker, are inferior to those of the goose ; and turkies' feathers are the worst of any. The best method of curing feathers is to lay them in a room, in an exposure to the sun, and when dried to put them in bags, and beat them well with poles'. See Quills.

FEATLY (Daniel), an English divine, born at Charlton, in Oxfordshire, in 1582. He was edu- cated at Magdalen Cqllege, Oxford, and after- wards became fellow of Corpus Christi. He was for some years chaplain to the English embassy in France, and soon after his return became chaplain to archbishop Abbot, who gave him the rectory of Lambe'di. Dr. Featly was the last provost of Chelsea College, which station he quitted on his marriage in 1625. He wrote several polemical treatises, particularly against the church of Rome. When the civil wars com- menced, he was chosen one of the assembly at Westminster, but his correspondence with arch- bishop Usher at Oxford being intercepted, he was sent to prison. On the trial of archbishop Eaud, Featly appeared as a witness against him. He was the author of Clavis Mystica, a Key opening divers difficult Texts of Scripture, 1636, folio ; and among his controversial tracts is one with a title too witty to be forgotten, The Dipper Dipt, or the Anabaptist plunged over Ilejid and Ears and shrunk in the washing, 4to. Upon his liberation he retired to Chelsea College, where he died in 1044.

FEA’TUllE, n. s. &«.«.) Old Fr. fnk-

Featured, part. fidj. i tmre and fuc’turc ;

Ital. fatturu; I-at. fact urn, the making of a

tiling. The general cast, or make of tlie face : any lineament, or single part of the face ; make, generally, and of the body in particular: to feature is to resemble, or to pourtray features. Dr. Johnson seems to have read the extract from Shakspeare’s Cymbeline, ‘ featured,’ erroneously ; but we insert the passage, as he quotes it, being better sense, in our humble judgment, than the more approved reading, ‘ feated’ ; and finding the verbal form of the word adopted by other poets.

Though ye be the fairest of God’s creatures. Yet think that death shall spoil your goodly features.

Spenser.

Report th.e feature of Octavia, her years.

Shakspcare. He lived in court most praised, most loved,

A sample to the young’st ; to the more mature,

A glass thai featured them. Id. Cymberline.

Though various features did the sisters grace,

A sister’s likeness was in every face.

Addison’s Oo.

No woman can be handsome by the force oi features alone, any more than she can be witty only by the help of speech. Hughes.

We discover in James all the features of a great but uncultivated spirit. Robertson’s Hist, of Scotland.

The great Creator to revere.

Must sure become the creature ; But still the preaching cant forbear.

And ev’n the ligid feature. Burns.

Pair after pair, and tittering as they pass.

View their fair features in the walls of glass •,

Leave with impatient step the circling bourn.

And hear behind the closing rocks return.

Darivin.

FEBRIC'ITATE, u. n. ˆ Fr. /etnViˆˆ/Hi (/e

Febric'ulose, adj. f veris/i), feb?'ifuˆe ;

Febrif'ic, \ Old Fr. J'ebrifique ;

Feb'rifuge n. s. &«c?;. ˆ\jA.febricito. To

Feb'rile, adj. 3 be in a fever. Fe-

briculose is, troubled with fever. We copy these words from Dr. Johnson, but find no ex- amples of them Febrific is, tending to produce, febrile, constituting or consequent upon, fever. Febrifuge, a medicine for the cure of fever; and, as an adjective, having the power or tendency to cure that disease.

The spirits, embroiled with the malignity in the blood, and turgid and tumified by the febrile fermen- tation, are by phlebotomy relieved. Harvey.

Bitters, like choler, are the best sanguifiers, and also the best febrifiHjes. Floycr on the Humours.

Febrifuge draughts had a most surprising good effect. Arbuthnot.

The febrific hnmoar fell into my legs, Chesterjield.

FEBRIS, Lat. Fever, was worshipped as a goddess by the ancient Rpmans. Slie had a tem- ple on movmt Palatine, and in two other places in Rome. The following inscription to this god- dess is still extant: Febri. Divae. Febri. Sanctce. Febri. Magna;. Camilla, amata. pro. filio. male, affecto.

FEBRUA, a feast of atonement held by the ancient Romans for twelve days together in Fe- bniary.

FEBRUA'RY, n. s. ˆ Latin, Februarius, of

Februa'tion. S Greek, ˆojfSaoj, to purify.

The second month of the year. IcbruatiMii was the keeeping of certain feasts of purification among the ancients.

Fantastic rites and februations to chase awaj mormoes and spectres. Spenser.

You have such a February face.

So full of frost, of storm, of cloudiness!

Shakspeare.

February, in chronology, was the second month of Numa's year, and under the protection of the god Neptune. It was not in tlie kalendar of Romulus, being added to the year by Numa. It had its name from Februa, a name of Juno, who presided over the purifications of women ; and in this month the Lupercalia were held in honor of Juno, and women were purified by the priests of Pan Lyceus at that festival. See Lu- percalia. February, in a common year, con- sists only of twenty-eight days ; but every bis- sextile year it has twenty-nine, by the addition of the intercalary day.

FECAMP, an ancient sea-port of France, in the department of the Lower Seine, and late province of Normandy, containing about 1000 houses, and a ci-devant Benedictine abbey long famed for its riches. The church is one of the largest in France. The chief trade of the inhabitants is in linens, serges, laces, hats, and leather. Many vessels are employed in the herring fishery. Fecamp lies nine miles south-west of Dieppe, and fifteen N. N. E. of Montvilliers.

FE'CES, M. s. Yr. feces; Lat. /ˆeces. Dregs; sediments; subsidence; excrement.

Hence the surface of the ground with mud And slime besmeared, the feces of the flood Received the rays of heaven ; and sucking in The seeds of heat, new creatures did begin.

Dryden. The symptoms of such a constitution are a sour smell in their /ece«. Arbuthnot on Aliments.

Feces. See Faeces.

FECIALES, or Foeciaees, an order of priests or officers consisting of twenty persons among the ancient Romans, appointed to proclaim war, negociate peace, &c. Festus derives the word from ferio, I strike; as, ferire foudus signifies, to con- clude a treaty ; and accordingly, instead of feci- ales, he would have it written feriales. Others derive it from foMlus, which was anciently written fedus ; or from fidus, faith. Others from facio, feci, I make, he, because they made war and peace. Vossius derives it from fatu, of the verb fari, to speak ; in which sense the feciales should be the same with oratores ; which sentiment is also confirmed by 'arro, who says they were called indifferently feciales and oratores. The feciales were a fort of heralds, who, when the Romans had any dispute with their neighbours, were sent first to demand the thing pretended to be usurped, or require the satisfaction for the injury alleged to be done. If an answer was not returned by them, that was satisfactory to the people and the senate, they were despatched again to declare war, and the like in treating of peace ; the feciales being the only persons ap- pointed to negociate between the senate, &c., and the enemy. Plutarch, in the life of Numa, and Ilalicarnasseus (lil). ii.), observes, that they were first instituted by that prince. The latter adds, that they were chosen out of the best families in Rome; that their office, whicli was reputed a

sort of sacerdotium, or priesthood, only ended with their life; tliat their persons were sacred and inviolable, as those of other priests ; that they were even charged to see that the republic did not declare war unjustly ; that they were to re- ceive the remonstrances of nations who com- plained of having been any way injured by the Romans; that if those complaints were found just, they were to seize the criminals, and deliver them up to those they had offended ; that they were invested with the rights and privileges of ambassadors ; that they concluded treaties of peace and alliance, and took care to see them executed ; and, lastly, abolished them, if they were not equitable. Livy (lib. i. cap. 24) ascribes their institution to Ancus Martius, A. U. C. 114. Varro assures us, that in his time most of these functions of the feciales were set aside; though Plutarch says, that they had still some authority in his time. The feciales were crowned with vervain when they went to declare war. Their heads were covered with veils, over which the crown was placed. In this equipage they pro- ceeded to the frontiers of the new enemy’s coun- try, and threw a bloody dart or

javelin into the ground within the same. In Livy and other ancient authors we have the formula used in such declarations.

FECKENHAM (John de), the last abbot of Westminster, was born at Feckenham, a village of Worcestershire, about the beginning of the sixteenth century. When the Reformation com- menced he opposed it with great zeal, and was sent to the Tower, where he continued till queen Mary's accession, soon after which he was made abbot of Westminster. Queen Elizabeth, whose life he had saved by his remonstrances with Mary, when she designed the death of her sister, would have given him the archbishopric of Can- terbury, if he would have conformed to the Re- formation, but this he refused; and, while he sat in her first parliament, he protested strongly against the Reformation, which occasioned his being committed to the Tower in 1560. He con- tinued in confinement till 1563, and was then put under the charge of the bishop of Winchester. Two days before the execution of lady Jane Grey, Feckenham held a conference with that unfortunate lady, who remained as much un- moved by his arguments as Cranmer, Ridley, and Latimer, against whom he disputed at Oxford. He died in the castle of Wisbeach in 1585. Feckenham was a learned and a liberal man, and very charitable to the poor. He was the author of several controversial pieces : and is spoken of with great respect by Camden, Fuller, and Burnet. FE-CHING-SE, a city of China, in the pro- vince of Pe-tche-li, near Pekin. It is not exten- sive, and the houses are low, but the excellent walls and pavilions give it a respectable appear- ance. In the vicinity there is a fine bridge, built of hewn stone, 216 paces long. At each end is a pavilion, with an inscription in honor of the architect; and at a little distance a temple erected by the late emperor to a tutelary divinity.

FECULENCE, or ˆ Yr. fcculeme; Latin, Fec'ulency, n. s. ˆftecukntia, fxcula, from Fec'ulent, adj. j fax facts, dregs. Sedi

ment : lees ; quality of abounding with dregs or lees; muddiness.

As much as the reasonable soul doth in dignity of nature, and purity of substance, excel ihU feculent lump of orgauised clay, our body ; as the blissful ra- vishments of spirit surpass the dull satisfactions of sense, Barrow,

They are to tlic body as the light of a candle to the gross and feculent snuif, which as it is not pent up in it, so neither doth it partake of its impurity.

Glanv. Apology, Pour upon it some very strong lee, to facilitate the

separation of its feculencies. Boyle.

Whether the wilding's fibres are contrived To draw the' earth's purest spirit, and resist Its feculence, which in more porous stocks Of cyder plants finds passage free. Philips,

So joys the soul, when from inglorious aims And sordid sweets, from yecuZence and froth Of ties terrestrial set at large, she mounts To Reason's region. Young.

Thither flow. As to a common and most noisome sewer. The dregs und feculence of every land. In cities, foul example on most minds Begets its likeness. Cowper.

FECUND' o^/. ^ Yi;fecond; Lat. /e Fecunda'tion, w. s. \cundus. Fruitful; pro- Fecun'dity. 3 lific. Fecundation, the

act or art of making fruitful. Fecundity, fruits fulness ; power of production.

The more sickly the years are, the less fecund or fruitful of children also they be. Graunt.

She requested these plants as a medicine of fecun- dation, or to make her fruitful. Browne.

Some of the ancients mention some seeds that re- tain their fecundity forty years, and I have found that melon-seeds, after thirty years, are best for raising of melons. Ray.

I appeal to the animal and vegetable productions of the earth, the vast numbers whereof notoriously testi- fy the extreme luxuriance ami fecundity of it.

Woodward, The least Of these disseminated orbs, how great !

Fecundity divine !

Exub'rant Source I perhaps I wrong thee still.

Young. It has been supposed that the embryon vegetable after fecundation, by its living activity or stimulus exerted on the vessels of the parent plant, may pro- duce the fruit or seed-lobes, as the animal foetus pro- duces its placenta, and as vegetable buds may be supposed to produce their umbilical vessels or roots down the bark of the tree. Darwin.

FED. See Feed.

FEDALA, a sea-port town of Morocco, on thu western coast. It is situated on a promontory, which has been mistaken for an island, and sur- rounded by a fine fertile country. It has an ex- cellent road for ships, so that no place can be more advantageously situated for the corn trade, which it carried on to a great extent till the pre- sent emperor prohibited the exportation of corn. Fedala is forty miles S. S. W. of Sallee.

FED'ARY, n. s. -\ Lat. fa-dus (cruel), as Fed'eral, adj. i Ainsworth thinks, because P'ed'eraiiy, ?«. s, ˆno confederacies were an-
FED'ERATE,af//. i cieotly made withoutblood, Fed'erative. J i. e. sacrifice. An ally, confederate, or accomplice: this is the sense both of fedary and federary. Federal is relating to

a league or covenant. Federate, leagued ; con- tracted. Federative is, having power to make leagues.

Damn'd paper ! Black as the ink that's on thcc, senseless bauble ! Art thou a fedary for this act, and lookest So virgin-like without ? Shahspeare. Cymbeline. She's a traitor, and Caiuillo is A federary with her. Shahspeare.

It is a federal right betwixt God and us, as eating and drinking, both among Jews and Heathens, was wont to be. Hammond.

The Romans compelled them, contrary to all federal right and justice, both to part with Sardinia, their lawful territory and also to pay them, for the future a double tribute. Grew.

The power to which our constitution has exclusively delegated the federative capacity, may find it expe- dient to make war upon them. Burke. FEE, n. s. & V. a. \ Sax. peah ; Goth, fe ; Feefarm. ˆ Swed. fae; T)7ii. fee ; Teut. jieh ; Su. Goth.ˆae ; all perhaps from the Go\.fa, to acquire. Property in money, goods, or land ; payment to official persons, or to the pro- fessors of law or medicine ; portion ; pittances : to fee is to pay, reward; hence bribe; keep in one's pay : for Fee, see the article.

I here quod he all mync with me al>out : Wisedom he ment, not fortunes brolleyee*. For nought he counted his that he might leese.

Sir T. More. In pruning and trimming all manner of trees. Reserve to each cattle their property yee«. Tusser.

Though sweet love to conquer, glorious be. Yet is the pain thereof much greater than the fee.

Spenser. These be the ways by which, without reward, Livings in courts be gotten, though full hard ; For nothing there is done without a. fee. Hubbert.

Now like a lawyer, when ho land would let. Or seliyee-simples in his master's name.

Id. Tale. What concern they ? The general cause ? or is it a fee-giit. Due to some single breast ? Shakspeare.

Now that God and friends Have turned my captive state to liberty. At our enlargement what are thy dnefees?

Id. Henry VI. Here's the lord of the soil come to seize me for a stray, for entering his /ee-simple without leave. Id, There is not a thane of them but in his house I have a servant /eed. Id. Macbeth.

John surrendered his kingdoms to the pope, and look them back again, to hold in feefarm ; which brought him into such hatred, as all his lifetime after he was possessed with fear. Davies.

He thought he should be blest To have his heir of such a suffering spirit ; So wise, so grave, of so perplext a tongue. And loud withal, that could not wag, nor scarce Lie still without a.fee. Ben Jonson.

While freezing Matho, that for one leaneyec Wont terme auld Terme the Terme of Hilarie, May now, in sted of those his simple yees Get theyee-simple of fayre manncryes.

Bp. Hall. Satires. Watch the disease in time ; for when within The dropsy rages, and extends the skin. In vain for hellebore the patient cries. And fees the doctor : but too late is wise.

Dryden.

A wealthy doctor who can help a poor man, and will not without a fee, has less sense of humanity than a poor ruiBan, who kills a rich

man to supply his necessities. Tatler.

He does not refuse doing a good office for a man, because he cannot pay ihe fee of it. Addison.

No man fees the sun, no man purchases the light, nor errs if he walks by it. South.

Praise was originally a pension paid by the world ; but the modems, finding the trouble and charge too great in collecting it, have lately bought out the _/ee- simplc ; since which time the right of presentation is wholly in ourselves. Swift.

When neebors anger at a plea. An' just as wud as wud can be. How easy can the barley-bree

Cement the quarrel ! It's aye the cheapest lawyer's /ee.

To taste the barrel. Burns. If he comes here to take a deposition.

By all means let the gentleman proceed ; You've made the apartment in a fit condition : —

There's pen and ink for you, sir, when you please — Let every thing be noted with precision,

I would not you for nothing should be fee'd.

Byron.

Fee, in law, signifies a complete feudal pro- perty. Hence, where the bare life-rent of any feudal subject is meant to be conveyed to A, and the absolute property to B, that meaning is ex- pressed thus, ' to A in life-rent, and to B in fee.' See Law.

Fee Absolute, or Fee Simple. A tenant, says Blackstone, in fee simple, or, as he is fre- quently styled, tenant in fee, is he that hath lands, tenements, or hereditaments, to nold to him and his heirs for ever ; generally, absolutely, and simply ; without mentioning what heirs, but referring that to his own pleasure, or to the dis- position of the law. The true meaning of the word fee (feodum), is the same with that of feud or fief (See Feudal System), and, in its original sense, it is taken in contradistinction to allodium ; which is property in its highest degree ; and the owner thereof hath absolutum et directum domi- nium, and therefore is said to be seised thereof absolutely in dominio suo, in his own demesne. But this allodial property no subject in

Britain has ; it being a received and now undeniable principle in the law, that all lands are holden mediately or immediately of the king. A subject therefore hath only the usufruct, and not the abso- lute property of the soil. And hence, in the most solemn acts of law, the strongest and highest estate that any subject can have, is expressed by these words, ‘ he is seised thereof in his demesne, as of fee.’ It is a man’s demesne, dominium, or property, since it belongs to him and his heirs for ever : yet this property or demesne, is strictly not absolute or allodial, but qualified or feodal , it is in his demesne, as of fee ; that is, it is not purely and simply his own, since it is held of a superior lord, in whom the ultimate property re- sides. This is the primary sense and acceptation of the word fee. But, as Sir Martin Wright very justly observes, the doctrine, ‘ that all lands are holden,’ having been, for so many ages, a fixed and undeniable axiom, the English lawyers very rarely, of late years especially, use tlie word fee in this its primary original sense, in contradis- tinction to allodium or absolute property, with

which they have no concern ; but generally use it to express the continuance or quantity of estate. A fee therefore, in general, signifies an estate of inheritance ; being the highest and most exten- sive interest that a man can have in a feud : and when the term is used simply, without any other adjunct, or has the adjunct of simple annexed to it, it is used in contradistinction to a fee-con- ditional at the common law, or a fee-tail by the statute ; importing an absolute inheritance, clear of any condition, limitation, or restrictions to particular heirs, but descendible to the heirs general, whether male or female, lineal or colla- teral. And in no other sense than this is the king said to be seised in fee, he being the feuda- tory of no man. Taking therefore fee in this its secondary sense, as a state of inheritance, it is applicable to, and may be had in, any kind of hereditaments either corporeal or incorporeal. But there is this distinction between the two species of hereditaments : that of a corporeal in- heritance a man shall be said to be seised in his demesne, as of fee ; of an incorporeal one he shall only be said to be seised as of fee, and not in his demesne. For as incorporeal heredita- ments are, in their nature, collateral to and issue out of lands and houses, their owner hath no property, dominium, or demesne, in the thing itself, but hath only something derived out of it, resembling the servitudes or services of the civil law. The dominium, or property, is frequently in one man, while the appendage or service is in another.

Thus Gaius may be seised as of fee, of a way going over the land of which Titius is seised in his demesne as of fee. The fee simple or inheritance of lands and tenements is gene- rally vested and resides in some person or other ; though divers inferior estates may be carved out of it. As if one grants a lease for twenty-one years, or for one or two lives, the fee simple re- mains vested in him and his heirs ; and after the determination of those years or lives, the land reverts to the granter or his heirs, who shall hold it again in fee simple. Yet sometimes the fee may be in abeyance, that is (as the word signi- fies), in expectation, remembrance, and contem- plation in law ; there being no person in esse, in whom it can vest and abide, though the law considers it as always potentially existing, and ready to vest whenever a proper owner appears. Thus, in a grant to John for life, and afterwards to the heirs of Richard, the inheritance is plainly neither granted to .John nor Richard, nor can it vest in the heirs of Richard, till his death, nam nemo est ha;res viventis: it remains therefore in wait- ing, or abeyance, during the life of Richard. This is likewise the case of a parson of a church, who hath only an estate therein for the term of his life ; and the inheritance remains in abeyance. And not only the fee, but the freehold also, may be in a])eyance; as, when a parson dies, the free- hold of his glebe is in abeyance until a suc- cessor be named, and then it vests in the suc- cessor. The word heirs is necessary in the grant or donation in order to make a fee of inheritance. See IIeir.

Fees, Limited, or such estates of inheritance as are clogged and confined with conditions or qualifications, maybe divided into two sorts, viz.

1. Qualified, or base fees; and 2. Fees con- ditional, or fees tail.

P’ees, Qualified, or base fees, are such as have a qualification subjoined, and which must be determined whenever the qualification annexed to it is at an end. As, in the case of a grant to A. and his heirs, tenants in the manor of Dale ; in this instance, whenever the heirs of A. cease to be tenants of that manor, the grant is entirely defeated. So when Henry VI. granted to John Talbot, lord of the manor of Kingston Lisle in Berks, that he and his heirs, lords of the said manor, should be peers of the realm, by the title of barons of Lisle ; here John Talbot had a base or qualified fee in that dignity ; and the instant he or his heirs quitted the seigniory of this manor, the dignity was at an end. This estate is a fee, because it may possibly endure for ever in a man and his heirs ; yet as that du- ration depends upon the concurrence of collateral circumstances, which qualify and debase the purity of the donation, it is therefore a qualified or base fee.

Fees Tail are so called in consequence of the statute de donis, or fees conditional, as they are called in common law. See Tail.

Fees of Lawyers and Pir\siciANS. An attorney may bring an action for his fees against the client that retained him in his cause. But by a decision, which was given some years since in the court of king's bench, a physician cannot bring an action against a patient, who is so un- grateful as not to pay him his fees. If a person refuse to pay an officer of court his due fees, the court will grant an attachment against him, to be committed till the fees are paid.

All fees allowed by acts of parliament become established fees ; and the several officers entitled to them may maintain action of debt for them.

2 Inst. 210. All such fees as have been allowed by the courts of justice to their officers, as a recompense for their labor and attendance, are established fees : and the parties cannot be de- prived of them without an act of parliament. Co. Lit. 368. Where a fee is due by custom, such custom, like all others, must be reasonable; and therefore where a person libelled in the spiritual court for a burying fee due to liim for every one who died in the parish, though buried in another ; the court held this unre;isonable, and a prohibition was granted. Hob. 175. The plaintiff brought an action on the case for fees due to him as usher of the black rod, and ob- tained a verdict. Stran. 747. Justices in ses- sions have no authority to fix the bailiff's fees for arrests in civil cases ; nor would the court of king's bench allow more than the usual fee of one guinea, though a larger sum had in fact been paid for years under an order of such justices.

3 Term. Rep. K. B. 417.

As to poundage to sheriffs on executions, see stat. 43 Geo. III. c. 46 § 5. Where the sherifl'levied, un- der fi. fa. and received the money, and afterwards the judgment and execution being set aside for irre- gularity, and the money ordered to bo returned, paid it back, with the assent of the])laiiitifF; it was held that the stat. 43 Geo. III. c. 40 did not take away the sheriff's remedy by action of debt against the plaintiff for his poundage. If an

en’oneous writ be delivered to the sheriff, and he execute it, he shall have his fees, though the writ be erroneous. 1 Stalk. 332. It seems to be laid down in the old books as a distinction, that upon an extent of land upon a statute, the sheriff is to have his fees, so much per pound according to the statute immediately ; but that upon an elegit he is not to have them till the liberate. Poph. 156. Winch. 51. S. P.

Fees are now recoverable by an action for money had and received, which has been intro- duced in lieu of an assise. Money given to A. and claimed by B. as perquisites of office, con- not be recovered by B. in such action, unless such perquisites be known and accustomed fees, such as the legal officer could have recovered from A. 6 Term. Rep. K. B. 681, 3.

Action on the case lies for an attorney for his fees, against him that retained him in his cause : and attorneys are not to be dismissed by their clients till their fees are paid. 1 Lil. 142. But attorneys are not to demand more than their just fees ; nor to be allowed fees to counsel without tickets, or the signature of counsel, &c. Stat. 3 Jac. I c. 7. An attorney may have action of debt for his fees, and also of counsel, and costs of suit : as a counsellor is not bound to give counsel till he has his fee, it is said he can have no action for it : though it has been held other- wise, F. N. B. 121. Brownl. 73. 31 H. VI. c. 9.

Fee Farm is a tenure without homage, fealty, or other service, except that mentioned in the feoffment ; which is usually the full rent, or at least a fourth part of it. The nature of this tenure is, that if the rent be behind, and unpaid for two years, then the feoffer and his heirs may have an action for the recovery of the lands.

FEE’BLE, «

Fee’bleminded, adj. /ˆeuoZe, from Lat.ˆei—

Fee’bleness, n. s. N ibilis, pliant. Weak ;

Fee’blesse, i infirm ; debilitated :

Fee’bly, adv. ˆ as a verb, to render

weak ; now more commonly used with the pre- fix en (enfeeble) : Spenser uses feeblesse, pro- bably after the Old Yr.febles, for feebleness; state of weakness, or infirmity.

Whanne thou makist a feest clepe pore men, feble, crokid, and blinde : and thou schalt be blessid.

WicUf. Luk xiv. Warn them that are unruly, comfort the feeble-minded, support the veak, be patient toward all men.

1 Thess. Thenceforth the waters waxed dull and slow. And all that drunk thereof did faint SluA feeble grow,

Spenser. Or as a castle reared high and round. By subtile engines and malicious slight

Is undermined from the lowest ground. And her foundation forced and feebled quite.

Id. Faerie Queene. They passing forth kept on her readie way, With easie steps so soft as foot could strjde. Both for grezt feeblesse , which did oft assay Faire Amoret that scarcely she could ryde. And eke through heavie armes. Id.

A better head Rome's glorious body fits. Than his that shakes for age and feebleness.

Shakfpeare.

Shall that victorious hand he feebled here. That in your chambers gave you chastisement ?

Id. King John. Feeble minds, when they meet with crosses they looked not for, repent of their good beginnings, and wish any difficulty rather than that they find.

Bp. Hall's Cfmtemplations.

How T have loved, excuse my faltering tongue j

My spirits ˆeeWe, and my pains are strong. Dryden.

Like mine, thy gentle numbers yeefc/?/ creep.

Thy tragic muse gives smiles, thy comick sleep.

Id. Rhyme is a crutch that helps the weak along. Supports the feeble, but retards the strong.

Smith. Some in their latter years, through the feebleness of their limbs, have been forced to study upon their knees. South.

We carry the image of God in us, a rational and immortal soul ; and though we be now miserable and feeble, yet we aspire after eternal

happiness, and tinally expect a great exaltation of all our natural powers. Bendey.

The hand of God sheltered this feeble plant from the storm, and by his care it was reared, and culti- vated, and brought to maturity. Robertson's Sermon, Daughter of woe ! ere morn, in vain caressed. Clung the cold babe, upon thy milkless breast, With/eeWe cries thy last sad aid required. Stretched its stiff limbs, and on thy lap expired I

Darwin. Another, hideous sight ! unseamed appears. His gory chest unveils life's panting source ; Though death-struck, still \iis feeble frame he rears ; Staggering, but stemming all, his lord unharmed he bears. Byron.

FEED, V. a., v. 7i. & w. s. > Sax. pedan, poedan ;

Feeder, n. s. S Goth, fodan ; Dan.

fide; Ic. fodr. To supply with nutriment ; to nourish ; entertain : hence to supply generally ; to graze ; consume by cattle ; fatten : as a neuter verb, to take food ; live by eating ; to prey ; to pasture : as a substantive, feed is used synony- mously with food, also for a meal, and a given quantity of food : a feeder is either one who gives food, or one who eats; hence one who excites or encourages : also one who is devoted to tlie training or feeding of cattle for market or otherwise.

If a man shall cause a field to be eaten, and shall put in his beast, and shall feed in another man's field, he shall make restitution. Eaod, xxii. 5.

Barbarossa learned the strength of the emperor, craftily _/eedfnˆ him with the hope of liberty.

Knollea. To feed were best at home ; From thence the sawce to meet is ceremon)' ; Meeting were bare without it,

Shakspeare. Macbeth. You cry against the noble senate, who. Under the gods, keep you in awe, which else Would feed on one another. Id. Coriolanus.

When thou do'st hear I am as I have been. Approach me, and thou shalt be as thou was't The tutor and the feeder of my riots. Shakspedre. But that our feasts In every mess have folly, and the feeders Jest with it as a custom, I should blush To see you so attired. Id.

Besides his cote, his flocks and bounds of feed Are now on sale. Id. As You Like It,

The alteration of scenes, so it be without noise, feeds and relieves the eye, before it be full of the same object. Bacon.

Galen speaketh of the curing of the scirrhus of the liver by milk of a cow, that feedelh upon certain.herbs.

Id. At his bed's ieet feeden his stalled teme. His swine beneath, his pullen ore the beame.

Bp. Hall's Satires. The beast obeys his keeper, and looks up. Not to his master's, but his feeder's hand,

Denham. What followers, what retinue canst thou gain ? Or at thy heels the dizzy multitude. Longer than thou canst feed them on thy cost ?

Milton. Plenty hung Tempting so nigh, to pluck and eat my fill I spared not : for such pleasure till that hour At feed or fountain never had I found. Id.

Upon the roses it would feed Until its lips e'en seemed to bleed ; And then to me 't would boldly trip. And print those roses on my lip. Marvell.

Some birds feed upon the berries of this vegetable.

Brow7ie. We meet in Aristotle with one kind of thrush, called the missel thrush, or feeder upon misselto.

Id. Vulgar Errours. A fearful deer then looks most about when he comes to the best feed, with a shrugging kind of tremour through all her principal parts. Sidney.

The brachmans were all of the same race, lived in fields and woods, and/ed only upon rice, milk, or herbs. Temple.

Tie feeds on fruits, which of their own accord. The willing grounds and laden trees afford.

Dry den. Her heart and bowels through her back he drew, AnA fed the hounds that helped him to pursue. Id. But such fine feeders are no guests for me ; Riot agrees not with frugalitv :

Then, that unfashionable man am I, With me they'd starve for want of ivory. Id.

The frost will spoil the grass ; for which reason take care lo feed it close before Winter.

Mortimer's Husbandry. The breadth of the bottom of the iiopper must be half the length of a haileycorn, and near as long as the rollers, that it may not feed tiiem too fast. Id.

An old worked ox fats as well as a young one, their yeed is much cheaper, because they eat no oats.

Id. God advanced David to the throne that he might feed his people, not that he might feed himself ; that he might do good, not that ho might make his family great. Henry. Psa. Ixxviii. 71.

A constant smoke rises from the warm springs, that feed the many baths with which the island is stocked.

A ddison. How oft from pomp and state did X remove. To feed despair, and cherish hopeless love ?

Prior, Boerhaave fed a sparrow with bread four days, in which time it eat more than its own weight.

Arbutlinot on Diet, All feed on one vain patron, and enjoy The extensive blessing of his luxury. Pope.

For on the grassy verdure as he lay. And breathed the freshness of the early day. Devouring dogs the helpless infant tore. Fed on his trembling limbs, and lapped the gore.

Id. When I've my master's leave to stand Cooing upon his friendly hand ;

When I can be profusely fed

With crumbs of his ambrosial bread.

Cunningham. The Dove. Ode 9. Though laden, not encumbered with her spoil ; Laborious, yet unconscious of her toil ; When copiously supplied, then most enlarged ; Still to he fed, and not to be

surcharged. Cowper.

Till canker taints the vegetable blood. Mines round the bark, &a& feeds upon the wood.

Darwirt,

Feejee, Fidgee, or Prince William's Islands, are a group of islands on the South Pacific Ocean, the exact number and extent of which are not yet ascertained. They are said to be situated from about 15° 33′ to 19° 15′ of S. lat.; and to about 175ˆ of E. long. The missionary ship Duff counted from fifteen to twenty. They are equally fertile as the generality of the islands in the South Pacific, and produce the same kinds of roots and fruits. Sandal wood is plentiful, and attempts have been made to introduce this valuable tree from hence into Tongataboo, but without success. The inhabitants are a ferocious race, and greatly dreaded by their neighbours ; being said to be cannibals in the strictest sense of the word. Englishmen have seen numerous baskets of human flesh, and many bodies of fallen enemies and slaughtered captives devoured. The stature and appearance of the Feejeeans is supe- rior to those of the Friendly Islands, their com- plexion is darker, and their hair approaches more to a woolly texture. Their arms are neatly fashioned, their canoes of better workmanship, and they are more industrious in their habits also than most of their neighbours. They supply the Friendly Islands v,'ith the feathers of a red par- roquet, with vessels of earthenware, stone for their hatchets, and all their cutting implements. It is uncertain what kind of government prevails. Some of them have been supposed subject to Tongataboo, but this is very doubtful. These islands were originally discovered byTasman in the year 1643, who named the more northern Prince William's Island, and Heemskirk's shoals. They were seen by captain Bligh in 1789 and 1792 ; and in the year 1794 captain Barber anchored, in a merchant-ship, at a bay on the western side of the largest island, where he was attacked by the natives.

FEEL', V. n., v, a, k n. s. -\ Saxon pelan ; Feel'ek, 7z. s. i Belg.voelcn;

Feel'ing, part. adj. & n. s. \ Goth, folwu. To Feel'ingly, fldr. ihave perception

Ye'lidet:;, part. adj. ' by the touch; to

explore by feeling: hence to have acute mental sensibility ; to appear to the touch : as an active verb, to perceive by the touch ; to try ; sound ; perceive mentally ; know : as a substantive, the sense of

feeling : a feeler is one who feels or per- ceives; an instrument of feeling conspicuous in insects : feeling means expressive of acute sensibility; felt sensibly : as a substantive the sense of touch, power of acting upon sensibility; sen- sibility; perception. Wickliffe uses the word feliden for perceived ; apprehended.

And thei knewen not this word and it was hid bi- fore hem that the: feliden it not, and thei dreddcn to axe him of this word. Wiclif. Luk i.

They should seek the Lord, if happily they might feel after him, and tiud him. Acts.

He hath writ this to feel my affection to your honour. S/takspeare.

His overthrow heaped happiness upon him ; For then, and not till then, he felt himself. And found the hlessedncss of being little.

Id. Henry VIII. A most poor man made tame to fortune's blows. Who, by the art of known and feeling sorrows. Am pregnant to good pity. Shakspeare.

Write 'till your ink be dry, and with your tears Moist it again ; and frame some feeling line. That may discover such integrity. /"•

The apprehension of the good. Gives but the greater /ee/inˆ to the worse.

Id. Richard II. This hand, whose touch. Whose every touch would force the feeler's soul To the oath of loyalty. Id. Cymbeline.

Hevc feel we but the penalty of Adam, The season's difference ; as the icy phang. And churlish chiding of the Winter's wind. Which when it bites, and blows upon my body. E'en till I shrink with cold, I smile and say. This is no flattery : these are counsellors. That feelingly persuade me what I am.

Shakspeare. The air is so thin, that a bird has therein no feeling of his wings, or any resistance of air to mount herself by. Raleigh.

'Re feelingly knew, and had trial of the late good, and of the new purchased evil. Id.

A king that would no. feel his crown too heavy for him must wear it every day : but if he think it too light, he knoweth not of what metal it is made.

Bacon. Great persons had need to borrow other men's opinions to think themselves happy : for if they judge by their owin feeling, they cannot find it. Id.

But why should those be thought to escape, who feel Those rods of scorpions and those whips of steel ?

Creech. Nor did they not perceive the evil plight In which they were, or the fierce pains not feel.

Milton. Why was the sight To such a tender ball as the eye confined ; So obvious and so easy to be quenched. And not, a& feeling, through all parts diffused. That she might look at will through every pore ?

Id. Thy wailing words do much my spirits move. They uttered are in such a /ec/in// fashion. Sidney, The princes might judge that he meant himself, who spake so feelingly. Id.

Blind men say black feels rough, and white feels smooth. Dryden.

The sense of feeling can give us a notion of exten- sion, shape, and all other ideas that enter at the eye, except colours. Addison's Spectator.

Soon in smart pain he feels the dire mistake. Lashes the wave, and beats the foamy lake. Gay,

The difference of these tumours will be distinguished by the feel. Sharp's Surgery.

Of these tumours one feels flaccid and rumpled ; the other more even, flatulent and springy. Sharp.

Insects clean their eyes with their forelegs as well as antenn;e ; and, as they are ˆeTpetuaMy feeling and searching before them with their feslers or antennee, I am apt to think that besides wiping and cleaning the eyes, the uses here named may be admitted.

Derham's Physico- Theology.

The well-sung woes shall sooth my pensive ghost » He best can paint them who can /ft;/ them most.

Pope. Not youthful kings in battle seized alive,

“E’er felt such grief, such terrour and despair. Id.

He would not have talked so feelingly of Codrus’s bed, if there had been room for a bedfellow in it. Id. I had a feeling sense Of all your royal favours j but this last Strikes through my heart. Southeme.

As we learn what belongs to the body by the evi- dence of sense, so we learn what belongs to the soul by an inward consciousness, which may he called a sort of internal feeling. Watts.

He that will not fear, shall feel the WTath of heaven.

Young.

What is so hateful to a poor man as the purse-proud arrogance of a rich one ? Let fortune shift the scene, and make the poor man rich, he runs at once into the vice that he declaimed against so feeli?igly : these are strange contradictions in the human character.

Cumberland.

Feeling is one of the five external senses, by which we obtain the ideas of solidity, hardness, softness, roughness, heat, cold, wetness, dryness, and other tangible qualities. Althouglt this sense is perhaps the least refined, it is of all others the most sure, as well as the most universal. Man sees and hears with small portions of his body, but he feels with all. The author of na- ture has bestowed that general sensation wherever there are nerves, and they are every where found where there is life. If it were otherwise, the parts wanting this sense might be destroyed without our knowledge. On this account it seems wisely provided, that this sensation should not require a particular organisation. The structure of the nervous papillae is not absolutely necessary to it : the lips of a fresh wound, the periosteum, and the tendons, when uncovered, are extremely sensible without them, though they serve to the perfection of feeling, and to diversify sensation. Feeling is, perhaps, the basis of all other sensations. The object of feeling is every body that has consistency or so- lidity enough to move the surface of our skin. To make feeling perfect, it was necessary that the nerves should form small eminences, because they are more easily moved by the impression of bodies than a uniform surface; and it is owing to this structure that we are enabled to distinguish not only the size and figure of bodies, their hardness and softness, but also their heat and cold. To the blind, feeling is so useful a sensation, that it supplies the office of eyes, and in a great measure indemnifies them for the want of sight. See Blind.

FEET Bearer, an officer in the courts of the ancient Anglo-Saxon and Welsh kings. He was a young gentleman whose duty it was to sit on the floor, with his back towards the fire, and hold the king's feet in his bosom all the time lie sat at table, to keep them warm and comfortable. — Lepcs Wallia; p. 58.

FEHRABAU, or Fahra-bad, a town in the province of Mazanderan, Persia, situated at the mouth of a river, near the south coast of the Caspian. It carries on some trade in rice, salt, fish, and pottery: Some time ago the population was computed at 16,000 persons, the descendants-

principally of Armenians and Georgians. The environs produce sugar, cotton, and silk. It is 126 miles west of Ast-erabad, and 270 north of Ispahan.

FEIGN, V. a. & v. n. -\ Fr. feindre ; Old

Feign'edly, adv. I Fr. feigner ; Latin,

Feign'er, n. s. yfoˆgo, to contrive.

Feign'ing, V'^^ invent; ima-

FEiNT,parˆ. adj. &n. s. y gine; make a show

of; dissemble. As a verb neuter, to relate falsely

or fabulously. Feint,, as a substantive, is a false

appearance ; a false assault in fencing.

And thei aspieden and senten aspieris that fay- ncden him just, that thei schulden take him in word and bitaken him to the power of the prince.

Wiclif. Luk XX. No such things are done as thou sayest, but thou feignedst them out of thine own heart. Neh. vi. 3.

Each trembling leaf and whistling wind they hear. As ghastly bug their hair on end does rear ; Yet both do strive their fearfulness to feign.

Faerie Queene. Both his hands most filthy feculent. Above the water were on high extent. And feigned to wash themselves incessantly. Id. Therefore the poet Did feignihat Orpheus drew trees, stones, and floods ; Since nought so stockish, hard, and full of rage. But music for the time doth change his nature.

Shakspeare. Such is found to have been falsely and feignedly in some of the heathens. Bacon.

May hev feignings Not take your word in ! Ben Jonson.

And these three voices differ ; all things done, the doing, and the doer ; the thing feigned, the feigning, and the feigner ; so the poem, the poesy, and the poet. Id.

Such is the greediuesse of men's natures (in these Athenian dayes) of news, that they will TSiihcTf eigne than -want it. T. Ford, 1647.

No pretences, no privileges, can bear off a sin with God : men think either to patronise or mitigate evils, by theit feigned reasons. Bp. Hall's Contemplations. Abominable, inutterable, and worse Than fables yet have feigned, or fear conceived, Gorgons, and hydras, and chimeras dire ! S-Iilton. The mind by degrees loses its natural relish of real, solid truth, and is reconciled insensibly to any thing that can be but dressed up into z-ny feint appearance of it. Locke.

Courtly's letter is but a. feint to get off. Spectator. But, in the breast encamped, prepares For well-bred feints and future wars. Prior.

Me gentle Delia beckons from the plain, Ihen hid in shades, eludes her eager swain ;

Jiut feigns a laugh to see me search around. And by that laugh the willing fair is found. Pope. But charity not feigned intends alone Another's good — theirs centres in their own.

Cowpcr. FELIBIEN (Andrew), born at Chartres in 1619, went secretary under the marquis de Fon- tenay Mareuil, ambassador to the court of Rome, in 1647. On his return, M. Colbert procured him the places of historiograph'er to Louis XIV., superintendant of his buildings, and of arts and manufactures in France. He became afterwards deputy comptroller general of the bridges and dykes, and died in 1695. He wrote several pieces relating to the fine arts; the prin-

cipal of which ii his Dialogues on the Lives and Works of the most eminent Painters.

FELICITAS, Felicity, or happiness, was deified by the ancient Pagans. LucuUus built a temple to her, and she had another erected by Lepidus. The Greeks worshipped her under the name of Macaria. This deity is often re- presented upon medals, and generally with a cornucopia in one hand and a caduceus in the other. The inscriptions are, Felicitas Temporum, Felicitas Augusti, Felicitas Pub- lica, &c.

FELICITATE, v. a., part, -v Fr. feliciter, Felicita'tioNjW. s. [k,adj.i La.t. fehcitatuni; Felic'itous, adjˆ \felicito, to make

Felic'itously, adv. i happy: as an

Felic'ity, n. s. J adjective, feli-

citate signifies made happy. Felicitation is, con- gratulation. Felicity, happiness ; prosperity ; bliss. Felicitous and felicitously follow this sense.

Set fortunes servauntes by them and ye wuU, That one is free, that other eucr thrall. That one content, that other neuer full. That one in suretye, that other like to fall. Wholyst to aduise them bothe, perceyue he shall. As great difference between them as we see. Betwixt wretchednes and felicite. Sir T. More.

The joyous day, dear Lord, with joy begin. And grant that we, for whom thou didest die. Being with thy dear blood clean washed from sin. May live for ever in felicity. Spenser's Sonnets.

That I profess Myself an enemy to all other joys; Which the most precious square of sense possesses. And find I am alone felicitate. In your dear highness' love. Shakspeare. Lear. Felicity, pure and unalloyed felicity, is not a plant of earthly growth ; her gardens are the skies. Burton.

Others in virtue placed felicity ; But virtue joined with riches and long life. In corporal pleasilre he, and careless ease.

Milton. All pious dispositions are fountains of pleasant streams, which by their confluence do make up a full sea oi felicity. Barrow,

They might proceed unto forms of speeches, /t'/tcj- tating the good, or depreciating the evil to follow.

Broume. Some of the fathers went so far, as to esteem the love of music a sign of predestination ; as a thing di- vine, and reserved for the felicities of heaven itself.

Sir W. Temple. How great, how glorious a felicity, how adequate to the desires of a reasonable nature, is revealed to our hopes in the gospel. Rogers.

The felicities of our wonderful reign may be com- plete. Attcrbury.

What a glorious entertainment and pleasure would fill and felicitate his spirit, if he could grasp all in a single survey. Watts.

Other ambition than of crowns in air. And superluminary felicities. Thy bosom warm. Youiuj.

Pound St. Paul's church into atoms, and consider any single atom ; it is, to be sure, good for nothing : but put all these atoms together, and you have St. Paul's church. So it is with liuman felicity, which is made up of many ingredients, each of which may be shown to be very insignificant. Johnson.

FELICUDI, one of the Lipari Islands, the ancient P'nitnicusa. It consists chiefly of a vol-

canic rock, but has some good corn land, and produces oil, wine, and fruit. Population 650, Long. 14° 21′ E., lal. 38° 34′ N.

FE'LINE, 71. s. Lat. felinus. Like a cat; pertaiumg to a cat.

livc-n as in ih • beaver ; from which he diflers prin- cipally in his tei- th, which aru canine, and in his tail, wliich is feline, or a long taper. Grew.

lELlPE (St.), or St. Philip de Xativa, a town of Spam, in the province of Valencia, situated on the declivity of a mountain. It has an old castle built on a rock, containuig several Roman and Moorish remains. The Roman name of this place was Setahis, changed by the Moors to Xaiiva. In 1706 it was taken by assault and burned ; king Philip, on ordering it to be rebuilt, gave it the name of San Felipe. The adjacent country is productive in rice. Twenty-nme miles S.S.W. of Valencia. Popu- lation 10,000.

Felu'e, San, a city of Venezuela, South America, was, a century ago, only a village, known by the name of Cocorota. A great number, however, of Canarians, and natives of the neighbouring districts,

attracted by the fer- tility of its soil, having settled there, the company of Guipuzcoa, some time before its dissolution, established stores for the purpose of trading with the interior. From that time this place gained a new aspect ; handsome houses, and streets regularly built, took the place of huts huddled together without order. It stands in lat. 10° 15′ N., fifty leagues west of Caraccas, fifteen north-west of Valencia, and seven north- west of Nirgua. The neighbouring district is watered by the rivers Yarani and Aioa, and by numerous rivulets. Copper mines exist also there. The city is regularly built ; the streets are in a line and broad ; and the parish church is handsome and well maintained. The inhabi- tants, who amount to nearly 7000, are reputed laborious and industrious. They have only priests, and no monks or miraculous images among them. The atmosphere is hot and moist, and the town consequently not very healthy

FELIS, Lat. felis, the cat, in zoology, a genus of quadrupeds, belonging to the order of fera. The characters, according to Gmelin and Kerr, are these : six cutting teetli, all equal ; grinders three : the tongue beset with rough papillae, which point backwards : the feet are provided with sharp hooked claws, which are lodged in a sheath, and may be extended or drawn in at pleasure : the head is mostly lound, and the visage short. All the animals of this genus, though fe- rocious, are tenijierate ; very agile in climbing trees ; alight on their feet, when falling from a height; and seize their prey by surjjrise. The females bring a considerable number at a birth, and have all eight paps. This genus compre- hends twenty-eight species. Mr. Pennant has arranged it in two subdivisions, viz. 1. those having long tails and plain ears; and, 2. those with short tails and ears pencilled at the tips. The latter comprehends nine different species of lynxes, and the former nineteen species, consist- ing of th(; lions, tygers, panthers, leopards, cats, and all the rest of the genus. This arrangement is adopted by Kerr.

F. capensis, the Cape tiger, is the nsussi of Labat, who was the first that noticed this species, which he describes as of the size of a dog, with a coat as much striped and varied as that of a tiger. Its appearance bespeaks cruelty, and its eyes fierceness ; but it is cowardly, and gets its prey only by cunning and insidious arts. It is found in all parts of Africa, from Congo to the Cape of Good Hope. When Dr. Forster touched the second time at the Cape of Good Hope, in 1775, an animal of this species was offered him to purchase ; but he refused to buy it because it had a broken leg. It was very gentle and tame. It was brought in a basket to his apartment, where he kept it above twenty- four hours, which gave him the opportunity of describing it more accurately than had hitherto been done, and of observing its manners and economy. These he found to be perfectly

analo- gous to those of our domestic cats. It ate fresh raw meat, and, after it had been several times fed by our author, followed him like a tame fa- vorite cat. It liked to be stroked and caressed ; it purred and rubbed its head and back against the person's clothes who fed it. It had been taken when quite young in the woods, and was not above eight or nine months old ; but had already very nearly, if not quite, attained its full growth. The doctor was told that the tiger-cats live in mountainous and woody tracts ; and that in their wild state they are very great destroyers of iiares, rabbits, jerboas, young antelopes, lambkins, and of all the feathered tribe.

F. catus, the common cat. Of this species there are many varieties. Mr. Kerr describes nine.

F". catus Angorensis, the Angora cat, with hair of a silvery whiteness and silky texture, and very long, especially about the neck, where it forms a fine ruff. It is a large variety ; found about Angora, the same country which produces the fine-haired goat. It degenerates after the first generation in our climate. A variety of this kind, with pendant ears, is found in China, of which the Chinese are very fond, ornament- ing their necks with silver collars.

F. catus domesticus, the domestic, or tame cat, is of a smaller size, and has the hair shorter and thicker than the wild cats. Although when young they are playful and gay, they possess a perverse disposition, which increases as they grow up, and which education teaches them to conceal, but never to subdue. Constantly bent upon theft and rapine, though in a domestic state, they are full of cunning and dissimulation; they conceal all their designs, and seize every opportunity of stealing. They love ease, and search for the softest and warmest places to repose in. The cat is extremely amorous ; and the female is more ardent than the male. The female goes with young fifty-five or fifty-eight days, and generally produces from three to six kittens at a litter, which are blind for nine days. She takes care to conceal them, and, when she is apprehensive of a discovery, she takes them up in her mouth one by one, and hides them in holes or inaccessible places. When she has nursed a few weeks, she brings them mice, small birds, &c., to teach them to eat flesh. The cat is inca-

pable of restraint, and consequently of being educated to any extent. However, we are told that the Greeks in the island of Cyprus trained

this animal to catch and devour serpents, with which that island was greatly infested. He has no delicacy of scent, like the dog ; he hunts only by the eye : neither does he properly pursue, but rather lies in wait, and attacks animals by sur- prise ; and, after he has caught them, sports with and torments them a long time. The eye of tlie cat differs greatly from that of most other ani- mals : the pupil being capable of a great degree of contraction and dilatation. It is narrow and contracted like a line during the day, round and wide in the dark. It is from this conformation of the eye that the cat sees best iu the night, which gives him a great advantage in discovering and seizing his prey. Cats have a natural an- tipathy to cold and wetness. They likewise hate bad smells ; but they are fond of certain aro- matics, and particularly of catmint, and vale- rian. Cats take about eighteen months be- fore they come to full growth ; but they are ca- pable of propagation in twelve months, and retain this faculty all their life, which generally extends to nine or ten years. They eat slowly, and are peculiarly fond of fish. They drink frequently ; their sleep is light. They walk softly, and without making any noise. As their hair is always dry, it easily gives out an electrical fire, whicli becomes visible when rubbed in the dark. Tlieir eyes likew.se sparkle in the dark like diamonds. The cat, when pleased, purrs, and moves its tail : when angry, it spits, hisses, and strikes with its foot. It washes its face with its fore paws before rain, and stretches itself, &c., at the approach of a storm. These peculiarities are probably owing to its abounding with the electric fluid. It always lights on its feet, and is proverbially tenacious of life. Our ancestors seem to have had a high sense of the utility of this animal, lloel Dda, or Howel the Good, among his laws relating to the prices, &c., of animals, includes that of the cat; and describes the qualities it ought to have. The price of a kitten before it could see was to be a penny ; till it caught a mouse, two-pence; when it com- menced mouser, four-pence. It was required besides, that it should be perfect in its senses of hearing and seeing, be a good mouser, have the claws whole, and be a good nurse; but if it failed in any of these qualities, the seller was to forfeit to the buyer the third part of its value. If any one stole or killed the cat that guarded the prince's granary, he was to forfeit a milch ewe, its fleece, and lamb; or as much wheat as, when poured on the cat suspended by its tail, the head touching the floor, would form a heap high enough tc cover the tip of the former. — Leges WaUiree, p. 247, 248.

F. catus ferus, the wild cat, is three or four times as large as the house cat ; the head larger, and the face flatter. The teeth and claws are tremendous : its muscles very strong, as being formed for rapine : the tail is long and very thick, marked with alternate bars of black or brown, and white, the end always black ; the hips and hind part of the

lower joints of the leg are black ; the fur is very soft and fine. The

general color is a yellowish-white, or yellowish- brown and whitish, mixed with deep gray or blackish stripes. These colors though they appear at first sight confusedly blended together, yet on a close inspection are found to be dis- posed like the streaks on the skin of the tiger, pointing from the back downwards, rismg from a black list that runs from tlie head along the middle of tlie back to the tail, while those on the sides are perpendicular or spiral. This animal, with us, may be called the British tiger. It is the fiercest and most destructive beast we have ; making div'adful havoc among our poul- try, lambs, and kids. It inhabits the most moun- tainous and woody parts of tiiese islands, living mostly in trees, and feeding only by night. They are taken either in traps or by shooting : in the latter case, it is very dangerous only to wound them, for they will attack the person who injured them ; and have strength enough to be no des- picable enemy. Wild cats were formerly reck- oned among the beasts of chase, as appears by the charter of Richard II. to the abbot of Peter- borough, giving him leave to hunt the hare, fox, and wild cat. The fur was used for the lining of robes ; but it was esteemed not of the most luxurious kind ; for it was ordained, ' that no abbess or nun should use more costly apparel than such as is made of lambs' or cats' skins.' This animal is now become very scarce in Bri- tain ; one was killed some years ago in Cumber- land, and another in Warwickshire. They are more frequently found in the North of Scotland, and are still common in the Hebrides. This species is the stock or origin of the domestic cat in all its varieties. — It inhabits the woods of most parts of Europe, but is not found in the vast woods of Russia or Siberia. It dwells with the common lynx in all the wooded parts of the mountains of Caucasus and their neigh- bourhood ; and is most destructive to lambs, kids, fawns, and all sorts of feathered game.

F. concolor, the puma, the couguar of Buffon, has a very small head, ears a little pointed, and eyes large. According to some zoologists, the back, neck, rump, and sides, are of a pale brown- ish red, mixed with dusky hairs ; the breast, belly, and inside of the legs, cinereous : but Gmelin and Kerr say, ' the fur is of a unitoira lively red color, tinged with black, having no spots.' The tail is dusky and ferruginous, the tip black ; and the teeth are of a vast size. It is as big as a large wolf, being long bodied, and high on its legs ; the length from nose to tail five feet three inches ; that of the tail two feet eight. Tiiis animal inhabits the continent of America, from Canada to Brasil : in South America it is called Puma, and by Europeans is mistaken for the lion. It is the scourge of the colonies of the hotter parts of America, being fierce and ravenous in the highest degree. It swims over the broad

rivers ; attacks the cattle in the very enclosures ; and, when pressed with hunger, spares not even mankind. In North America their fury seems to be subdued by the rigor of the climate ; and the smallest cur, in company with its master, makes them seek for security, by running up trees. When they lie in wait for the moose, or other deer, they lie

close on the branch of some tree till the animal passes beneath, when they drop down upon and soon destroy them. They also make wolves their prey. In the Museum of the Royal So- ciety there is the skin of one which wa>5 killed just as it had pulled down a wolf. When it has satisfied itself with eating, it carefully conceals the rest of the carcase, covering it with leaves ; if any other touches the relics, it never comes near them again. It sometimes purrs like a cat, and at other times makes a great howling. The fur is soft, and of some value among the Indians, who cover themselves with it during winter; and who also eat tlie flesh, which is said to be good and as white as veal.

F. jubata, the hunting leopard, or Guepard of BufTon, is of the size of a large greyhound, of a long make, vrith a narrow chest and long legs. The color of the body is a light tawny-brown, marked with numbers of small round black spots ; the neck is shaggy, having a mane four or five inches long ; the hair on the belly is of the same length, and the tail is longer than the body. It inhabits India; where it is tamed, and trained for the chase of antelopes. For this purpose it is carried in a small kind of ■waggon, chained and hoodwinked, till it ap- proaches the herd ; when first unchained, it does not immediately make its attempt, but winds along the ground, stopping and concealing itself till it gets a proper advantage, and then darts on the animals with surprising swiftness. It over- takes them by the rapidity of its bounds, but if it does not succeed in its first efforts, consisting of five or six amazing leaps, it misses its prey : losing its breath, and finding itself unequal in speed, it stands still, gives up the point for that time, and returns to its master. This species is called in India, Chittah. It is used for the taking of jackals, as well as other animals.

F. leo, the lion. The largest lions are from eight to nine feet in length, and from four to six feet high ; those of a smaller size are generally about five feet and a half long, and about three and a half high. The head is very thick, and the face is beset on all sides with long bushy yellowish hair ; this shaggy hair extends from the top of the head to below the shoulders; the belly and breast are likewise covered with

long hair. The rest of the body is covered with very short hair, excepting a bush at the point of the tail. The ears are roundish, and almost entirely concealed under the hair of his front. The tail is long and very strong ; the legs are thick and fleshy ; and the feet are short : the claws are about an inch and a quarter long, of a whitish color, very crooked, and can be extended or retracted into the membranous sheath at plea- sure: their points are seldom blunted, as they are never extended but when he seizes his prey. The female, or lioness, has no mane about her head or shoulders ; in her we see distinctly the whole face, head, ears, neck, shoulders, breast, &c. ; all these parts being in some measure con- cealed under the long hair of the male, give a female a very different appearance ; besides, she is considerably less than the male. The hair of both male and female is of a yellowish color, and whitish on the sides and belly. Naturalists

are not agreed as to the ordinary period of life in this animal which is variously stated. Bufibn concludes that it ought to be about twenty-five years, or seven times the space of three or four years, as it has been asserted of the lion that he acquires maturity in three or four years after his birth. It is, however, ascertained, that in some instances, the lion lives much beyond that time. The great lion called Pompey, which died in the Tower, is recorded to have lived in captivity above seventy years ; and one brought from the river Gambia died there a few years since at the age of sixty-three. In warm countries, quadru- peds in general are larger and stronger than in the cold or temperate climates. They are like- wise more fierce and hardy ; all their natural qualities seem to correspond with the ardor of the climate. The lions nourished under the scorching sun of Africa or the Indies, are the most strong, fierce, and terrible. Those of mount Atlas, whose top is sometimes covered' with snow, are neither so strong nor so ferocious as those of Biledulgerid or Zaara, whose plains are covered with burning sand. It is in these hot and barren deserts, that the lion is the dread of travellers, and the scourge of the neighbour- ing provinces. But tlie species is not very nu- merous, and they even appear to diminish daily. The Romans brought many more lions out of Libya for their public shows in one year, than are now to be found in the whole country. In short, in those countries which lions chiefly in- habit, their numbers were infinitely greater in former times than they are at present. It is scarcely to be conceived how, otherwise, the Romans were able to procure the prodigious number of these animals, which, from time to time, they exhibited in their public shows. Pliny has supplied us with details on this sub- ject, which almost surpass belief. * Quintus Scaevola,' he says, ' was the first who exhibited many of them at once, in the circus, during the time he was aedile. Sylla, in

his praetorship, had 100 lions, all males, to fight at the same time. — Pompey afterwards 600 (of which 350 were males), and Caesar 400.' Seneca, it is tnie, informs us, that those of Sylla had been sent to him by Bocchus, king of Mauritania; but, at this day, the princes of that country consider one or two of these animals as a grand present. The same abundance continued, during some time, under the emperors ; but, in the second age, it appears to have begun to diminish, since Eutropius then considered the appearance of 100 lions, in the triumph of Marcus Aurelius, as an exhibition of great magnificence. The lions in Persia and the Indies are also said to be less numerous than formerly. As this for- midable and courageous animal makes a prey of most other animals, and is himself a prey to none, this diminution in the number of the species can be owing to nothing but an increase in the number of mankind; for the strength of this king of beasts is not a match for the dexte- rity and address of a negro or Hottentot, who will often dare to attack him face to face, and with very slight weapons. Tlie ingenuity of mankind augments with their number ; that of other animals continues alw;iys the same. This

superiority in the numbers and industry of mankind, at the same time that it has broken the vigor of the lion, seems likewise to have enervated his courage. In the vast deserts of Zaara ; in those which separate the negroes and Moors, between Senegal and the boundaries of Mauritania ; in those uninhabited regions above the country of the Hottentots ; and, in general, in all the meridional parts of Africa and Asia, where mankind have disdained to dwell, lions are still as numerous and as ferocious as ever. Accustomed to measure their strength by that of in all other animals which they encounter the habit of conquering renders them haughty and intrepid. Having never experienced the strength of man, or the power of his arms, instead of discovering any signs of fear, they disdain and set him at defiance. Wounds irritate, but do not terrify them : they are not even disconcerted at the sight of numbers. A single lion of the desert has been known to attack a wliole cara- van ; and if, after a violent and obstinate engage- ment, he finds himself weakened, he retreats fighting, always keeping his face to the enemy. On the other hand, the lions which live near the villages or huts of the Indians or Africans, being acquainted with man and the force of his arms, are so dastardly as to fly and leave their prey at the sight of women or children. A lion taken young, and brought up among domestic animals, will easily be accustomed to his master or keeper, and refrain from injuring them.

When led into captivity, he will discover symp- toms of uneasiness, without anger or peevish- ness ; on the contrary, his natural temper softens, he obeys his master, caresses the hand that gives him food, and sometimes gives life to such ani- mals as are thrown to him alive for prey ; by this act of generosity he seems to consider him- self as for ever bound to protect them : he lives peaceably with them ; allows them a part, and sometimes the whole, of his food ; and will rather submit to the pangs of hunger, than de- stroy the fruit of his beneficence. iElian, quoting Eudemus, speaks of the affection en- tertained by a lion for a dog. He informs us, that a lion, a dog, and a bear, lived together in the most intimate friendship. The attachment between the two first was most tender. The dog, in one of his frolics, having by "accident bitten the bear, the natural ferocity of that animal returned, and he tore the offender to pieces, but the irritated lion revenged the death of his com- panion, by immediately destroying the bear. But as his passions are impetuous and vehement, it is not to be expected, that the impressions of education will at all times be sufficient to balance them ; for this reas6n it is dangerous to let him suflfer hunger long, or to vex him by ill-timed teazings ; bad treatment not only irritates him, but he remembers it long, and meditates revenge. Labat informs us of a gentleman, who kept a lion in his chamber, and employed a servant to attend it, and who as usual mixed his caresses ■with blows. One morning the gentleman was awakened by an unusual noise in his room, and drawing his curtains aside, he perceived the lion growling over the body of the unhappy man, whom it had just kille-l, and had separated

his head from his body. The terror and con- sternation of the gentleman may be easily con- ceived ; he flew out of the room, obtained assistance, and secured the animal. For his ordinary subsistence, the lion requires about fifteen pounds of raw flesh each day.

The body of the lion appears to be the best model of strength joined with agility. The force of his muscles is expressed by his prodi- gious leaps and bounds, often twenty feet at once ; by the brisk motion of his tail, a single sweep of which is sufficient to throw a man to the gTound ; by the ease with which he moves the skin of his face, and particularly of his fore- head ; and by the faculty of erecting and agita- ting the hair of his mane when irritated. Lions are very ardent in their amours ; when the fe- male is in season, she is often followed by eight or ten males, who roar incessantly, and enter into furious engagements, till one of them com- pletely overcomes the rest, takes peaceable pos- session of the female, and carries her off' to some secret recess. The length of time the lioness goes with young is

variously stated by different writers; TElian says two months, Philostratus six ; among the moderns the period of gestation is said to be five months ; but it has been clearly ascertained by La Cepede, that the lioness goes with young 108 days, or rather more than three months and a half. A lion and lioness of about the same age having arrived from Northern Africa, at the menagerie of Paris, they were permitted to couple, which they did, five times in the same day. The first time the lioness was with young, she miscarried at the end of about two months, bringing forth two fetuses. The Second time she produced, at the end of about 108 days, three young ones. One of these, about five hours after it came into the world, had the following measurements : —

Eighteen inches and a half from the fore part of the forehead to the origin of the tail ; four inches and a quarter from the muzzle to the occiput; three inches and a quarter from one ear to the other ; four inches and three quarters from the elbow to the end of the 'toes of the fore feet ; three inches and three quarters from the knee to the heel ; three inches and a half from the heel to the extremity of the toes of the hind feet ; six inches and a quarter from the origin of the tail to its extremity.

These little animals were, at first, entirely destitute of hair; and we are informed that the long hair or mane on the neck and round the face of one of the males, which survived the rest, did not begin to appear till he had attained the age of nearly three years and a half; and that, from that time, this has been continually in- creasing in quantity. He had no tuft at the end of his tail till about the same]ieriod. The hair of all the young animals of this litter was at first woolly, and not of the same color as that of their parents, but a mixed gray and red, marked by a great number of narrow brown stripes. These were very distinct at the middle of the back, and towards the origin of the tail; and they were disposed transversely on each side of a longitudinal stripe, of the same color, that ex- tended from the back of the head to the end of

the tail When the mother was again with young, the three animals of the former litter be- came very mischievous. One of these, wlien about three months old, was driven, against his inclination, into the garden of the museum, when he made a spring at the keeper, Felix Cassel, and seized his arm with so much violence as to tear the sleeve of his

coat. We are not able any further to describe the development of character in the above-mentioned three animals, since two of them have fallen victims to the first effects of dentition, an operation vˆry dangerous to most animals that are produced in captivity. The lion that bit the keeper was one of those that died.

All the passions of the lion, the soft passion of love not excepted, are excessive ; the love of offspring is extreme : the lioness is naturally weaker, less bold, and more gentle than the lion ; but she becomes perfectly ferocious and terrible when she has young. She then regards no dan- ger; she attacks indifferently men and animals, kills them and carries them to her young ones, whom she thus early instructs to suck their blood and tear their flesh. She generally brings forth in the most secret and inaccessible places; and, when afraid of a discovery, she endeavours to conceal the traces of her feet, by returning fre- quently on her steps, or rather by effacing them with her tail ; and, when the danger is great, she carries off her young, and conceals them elsewhere. But, when an actual attempt is made to deprive her of her young, she becomes perfectly furious, and defends them till she be torn in pieces. The lion seldom goes abroad in the day; but sallies forth in the evening and night in quest of prey. He is afraid of fire, and seldom or never approaches the artificial fires made by the shepherds for the protection of their flocks ; he does not trace animals by the scent, but is obliged to trust to his eye. Many historians have even represented him as incapa- ble of finding out his prey ; alleging that he is obliged to the jackal, an animal of exquisite scent, to provide for him, and that this animal either accompanies or goes before him for this purpose. The jackal, perhaps, sometimes fol- lows the lion, but it is to pick up what he leaves behind, not to provide for him. The lion, when hunsrry, will attack any animal that presents itself; but he is so formidable, that all endeavour to avoid his rencounter ; this circumstance often obliges him to conceal himself, and lie in wait till some animal chances to pass. He lies squat on his belly in a thicket ; from which he springs with such force and velocity, that he mostly seizes them at the first bound. He endures hunger longer than thirst ; he seldom passes water without drinking, wtiich he does by lap- ping like a dog. In burning deserts, where rivers and fountains are denied, they live in a perpetual fever, a sort of madness fatal to every animal they meet with. ‘ The roaring of the lion,’ says Dr. Sparrman, * consists in a hoarse inarticulate sound, which at the same time seems to have hollowness in it, something like that proceeding from a speaking trumpet. The sound is between that of a German u and an o, beinsj drawn to a great length, and appearing as if it

came from out of the earth ; at the same time, after listening with the

greatest attention, I could not exactly hear from what quarter it came. The sound of the lion's voice does not bear the least resemblance to thunder, as M. de Buffon, torn, ix. p. 22, from the voyage of Bouillage le Gouz, affirms it does. In fact, it appeared to me to be neither peculiarly jiiercing nor tremendous; yet, from its slow prolonged note, joined with nocturnal darkness, and tlie terrible idea one is apt to form to one's self of this animal, it made me shudder, even in such places as I had an opportunity of hearing it in with more satisfac- tion, and without having the least occasion for fear.' But when he is irritated his cry is shorter, repeated more suddenly, and is still more terrible than the roaring ; he beats his sides with his tail, stamps with his feet, erects and agitates the hair of his head and mane, moves the skin of his face, shows his angry teeth, and lolls out his tongue. The gait of the lion is stately, grave, and slow, though always in an oblique direction. His movements are not equal or measured, but consist of leaps and bounds ; which prevent him from stopping suddenly, and make him often over-leap his mark. When he leaps upon his prey, he makes a bound of twelve or fifteen feet, falls above it, seizes it with his fore feet, tears the flesh with his claws, and then devours it with his teeth. If he chances to miss his leap, he will not follow his prey any farther ; but, as if he were ashamed, turning round towards the place where he lay in ambush, slowly, and step by step, as it were, measures the exact length between the two points, in order to find how much too short of, or beyond, the mark, he had taken his leap. One would suppose that the roaring of the lion would prove serviceable to the other animals, by warning them to betake themselves to flight; but as, when he roars, he puts his mouth to the ground, so that the sound is diffused equally all over the place, without its being possible to hear from what quarter it comes, the animals are intimidated to such a de- gree, as to fly about backwards and forwards in the dark to every side; inconsequence of which, they often run on to the very spot from whence the sound proceeds, and which they meant most to avoid. Dr. Sparrman, in his account of the lion, detracts considerably from the character of courage and generosity generally ascribed to that animal ; and relates several anecdotes in proof of his opinion. ' A yeoman,' says Dr. Sparrman, ' a man of veracity, related to me an adventure he had in these words : ' one day walking over his lands with his loaded gun, he unexpectedly met with a lion. Being an excellent shot, he thought himself pretty certain, in the position he was in, of killing it; he therefore fired his piece. Unfortunately he did not recollect that the charge had been in it for some time, and consequently was damp, so that his piece hung fire, and the ball, falling short, entered the ground close to tlie lion. In consequence of this he was seized with a panic, and took directly to

his feet ; but being soon out of breath, and closely pursued by the lion, he jumped upop a little heap of stones, and there made a stand, presenting the butt-end of his gun to his adver-

sary, fully resolved to defend his life as well as he could to the utmost. JVIy friend did not take upon him to determine whether this position and manner of his intimidated the lion or not ; it had, however, such an effect upon the creature, that it likewise made a stand, and, what was stall more singular, laid itself down at the dis- tance of a few paces from the heap of stones, seemingly quite unconcerned. The sportsman in the mean while did not dare to stir a step from the spot ; besides, in his flight, he had the misfortune to lose his powder-horn. At length, after waiting a good half hour, the lion rose up, and at first went very slowly, and step by step, as if he had a mind to steal off", but as soon as it got to a greater distance it began to bound away at a great rate.'

' An elderly Hottentot,' says the same writer, * in the service of a Christian, near the upper part of Sunday River, on the Cambdebo side, perceived a lion following him at a great dis- tance for two hours together. Thence he natu- rally concluded, that the lion only waited for the approach of darkness in order to make him his prey, and in the mean time could not expect any other than to serve for this fierce animal's supper, inasmuch as he had no other weapon of defence than a stick, and knew that he could not get home before it was dark. But as he was well acquainted with the nature of the lion, and the manner of its seizing upon its prey, and at the same time had leisure between whiles to ru- minate on the ways and means in which it was most likely that his existence would be put an end to, he at length hit upon a method of saving his life. iFor this purpose, instead of making the best of his way home, he looked out for a kilpkrans (so they generally call a rocky place, level and plain at the top, and having a perpen- dicular precipice on one side of it), and sitting down on the edge of one of these precipices, he found, to his great joy, that the lion like- wise made a halt, and kept tlie same distance as before. As soon as it grew dark, the Hottentot, sliding a little forwards, let himself down below the upper edge of tlie precipice upon some pro- jecting part or cleft of the rock, where he could just keep himself from falling. But, in order to cheat the lion still more, he set his hat and cloak on the stick, making with it, at the same time, a gentle motion, just over his head, and a little way from the edge of the mountain. This crafty expedient

had the desired success. He did not stay long in this situation before the lion came creeping softly towards him like a cat, and, mis- taking the skin cloak for the Hottentot himself, took his leap with such exactness and precision, as to fall headlong down the precipice directly close to the snare which had been set up for him.'

The strength of the lion is very great. We are informed by Dr. Sparrman, that ' tiiis animal was once seen at the Cape to take a heifer in his mouth, and though the legs of the latter dragged on the ground, yet seemed to carry her off" with the same ease as a cat does a rat. It likewise leaped over a broad dike with her with- out the least difficulty. A buff'alo perhaps would be too cumbersome for this beast of prey, not-

withstanding his strength, to seize and carry off with him in this manner. Two yeomen, upon whose veracity I can place some confidence, gave me the following account. Being a hunting near Boshies-man River with several Hottentots, they perceived a lion dragging a buffalo from the plain to a neighbouring woody hiil. They, however, soon forced it to quit its prey, in order to make a- prize of it themselves ; and found that this wild beast had had the sagacity to take out the buffalo's large and unw.eldly entrails, to be able the easier to make off" with the fleshy and more eatable part of the carcase. The lion's strength, however, is said not to be suffi- cient alone to get the better of so large and strong an animal as the buffalo ; but, to make it his prey, this fierce creature is ooliged to have recourse both to agility and stratagem ; insomuch that, stealing on the buffalo, it fastens with both its paws upon the nostrils and mouth of the beast, and keeps squeezing them close together, till at length the creature is strangled, wearied out, and dies. Buffaloes which had escaped from the clutches of lions, bore the marks of the claws of these animals about their mouths and noses. The lion itself, however, risked its life in such attempts, especially if any other buff'alo were at hand to rescue that which was attacked. A traveller once had an opportunity of seeing a female buff'alo with her calf, defended by a river at her back, keep for a long time at bay five lions, which had partly surrounded her, but did not dare to attack her. 1 have been informed, from very good authority, that on a plain to the east of Kromme River, a lion had been gored and trampled to death by a herd of cattle, having, urged probably by hunger, ventured to attack them in broad day light.' This the reader will, perhaps, not so much wonder at, when he is in- formed, that in the day time, and upon an open plain, twelve or sixteen dogs will easily get tlie better of a large lion. Some other important particulars, such as the hunting, &,c., of the lion, together with some account of the late com- bats of the lions and bull dogs, we

shall give under the English name of this animal. See Lion.

F. leopardus, the leopard, diff'ers from the panther and the ounce, in the beauty of his ˆ color, which is a lively yellow, with smaller spots than those of the two latter, and disposed in groups. He is larger than the ounce, and less than tlie panther, being about four feet long, and the tail from two to two feet and a half. He inhabits Senegal and (iuinea, and, when beasts of chase fail, descends from the internal parts of Africa among the numerous herds tiiat cover the rich meadows of the lower (luinea. It tears its prey to pieces with both claws and teeth ; but is always thin, though perpetually devouring. The pantlier is its enemy, and de- stroys numbers of them. The negresses make collars of their teeth, and attribute to them cer- tain virtues. The negroes take tiiese animals in pit-falls, covered at tlie top with slight hurdles, on which is placed some flesh as a bait. They make a banquet of their flesh, which is said to be as white as veal, and very well tasted, lˆeo- pards' skins are often brought to Europe, and

reckoned very valuable. In Asia these animals are found on the mountains of Caucasus, fronˆ Persia to India; and also in China, where tiiey are called Poupi. By the Bukharian traders, who often brinˆ their skins to Russia, they are styled Bars. The leopard inhabits also Arabia, where it is called Nemr. Mr. Forskal says, that in that country, as well as in Egypt, it will do uo harm to man unless provoked ; but will enter iiouses by night and destroy the cats.

F. lynx Canadensis, the Canadian lynx, has pale yellow eyes, and erect ears tufted with long black hair. The body is covered with soft and long fur, cinereous tinged with tawny, or gray mixed with white, and marked with black or dusky spots more or less visible in different sub- jects, dependent on the age or season in which the animal is killed ; the legs are strong and thick ; the claws large. It is about three times the size of a cat; though only about a foot high, and the tail is four inches long, tipt with black. This species inhabits the vast forest of North America. It is called in Canada le chat cervier, or le loup cervier, on account of its being so destructive to deer : which it drops on from the trees, like the puma, and, fixing on the jugular vein, never quits its hold till the exhausted ani mal falls through loss of blood. The English call it a wild cat. It is very destructive to the young pigs, poultry, and all kinds of game. The skins are in high esteem for the softness and warmness of the fur ; and great numbers are an- nually

imported into Europe.

F. caracal, the siyah-ghush, or Persian lynx, has a lengthened face and small head ; very long slender ears, terminated with a long tuft of black hairs ; eyes small : the upper part of the body is of a very pale reddish brown ; and the belly and breast are whitish : the limbs are strong and pretty long ; and the tail is about half the length of the body. These animals inhabit Arabia, Persia, India, and Barbary ; where they are often brought up tame, and used in the chase of smaller quadrupeds, and the larger sort of birds, such as cranes, pelicans, peacocks, &c., which they sur- prise with great address. When they seize their prey, they hold it fast with their mouth, and lie for a time motionless on it. They are fierce when provoked ; Dr. Charleton says, he saw one fall on a hound, which it killed and tore to pieces in a moment, notwithstanding the dog defended itself to the utmost. — The Arabian writers call it anak el ard ; and say, that it hunts like the panther, jumps up at cranes as they fly, and covers its steps when hunting.

F. lynx chaus, tlie Caspian lynx, has a round head, a little more oblong than that of the common cat ; shining restless eyes, with a most brilliant golden pupil ; ears erect, oval, and lined with white hairs ; their outside reddish, their summits tufted with black. The hairs are coarser than those of the cat or common lynx, but less so than those of the wolf. They are shortest on the head, but on the top of the back above two inches long. The color of the head and body is a yellowish-brown; the breast and belly of a bright brown, nearly orange. The tail reaches or>ly to the flexure of the leg; is thick and cylindric ; of the same color with the back, tipped

with black, and thrice obscurely annulated with black near the end. In general appearance it has the form of the domestic cat. Its length is two feet and a half from the nose to the base of the tail : its tail little more than eleven inches : its height before is nineteen inches ; behind twenty. It is sometimes found larger, there being instances of its reaching the length of three feet from the nose to the tail. This animal in- habits the reeds and woods in the marshy parts that border on the western sides of the Caspian Sea, particularly about the castle of Kislar on the river Terek, and in the Persian provinces of Ghisan and Masenderan, and frequent about the mouth of the Kur, the ancient Cyrus. — In man- ners, voice, and food, it agrees with the wild cat. It conceals itself in the day, and wanders over the flooded tracts in search of prey ; feeding on rats, mice, and birds, but seldom climbing trees. It is excessively fierce, and never frequents the haunts of mankind. It is so impatient of capti- vity, that one wiiich was taken in

a trap, and had a leg broken, refused for many days the food placed by it; but in its fury devoured the fractured limb, with pieces of the stake it was fastened to, and broke all its teeth in the phrensy of its rage.

F. lynx vulgaris, the common lynx, is about two feet and a half long and fifteen inches high. He has a great resemblance to the common cat; but his ears are longer and tufted, and his tail is much shorter: his head and body are of a grayish color tinged with red ; liis hair is streaked with yellow, white, and black colors. The lynx in- habits the vast forests of the north of Europe, Asia, America, and Japan. His eyes are brilliant, his aspect is soft, and his air is gay and sprightly. Like the cat, he covers his urine with earth ; he howls something like the wolf, and is heard at a considerable distance; he does not mn like the dog or wolf, but walks and leaps like a cat ; he pursues his prey even to the tops of trees ; nei- ther wild cats nor squirrels can escape him ; he lies in wait for stags, goats, hares, weasels, birds, &c., and darts suddenly upon them ; he seizes them by the throat and sucks their blood ; then opens the head and eats the brain ; after this, he frequently leaves them and goes in search of fresh prey. The color of his skin changes ac- cording to the season or the climate ; the winter furs are more beautiful than those of summer. These furs are valuable for their softness and vvarmth : numbers are annually imported from North America, and the north of Europe and Asia; the farther north and east they are taken, the whiter they are, and the more distinct the spots. Of these the most elegant kind is called irbys, whose skin sells on the spot for £l. ster- ling. The ancients, particularly Pliny, (viii. 8.) celebrated the great quickness of the lynx's sight; and feigned that its urine was converted into a precious stone.

F. onca, the American tiger, thejaguarof Buffbn, is of a bright tawny color ; the top of the back marked with long stripes of black ; the sides with rows of eyes like annular spots, open in the middle, which is of the ground color of the hair: the thighs and legs are marked with full spots of black, the breast and belly whitish : the tail

is half the length of the body. This specioi, which grows to the size of a wolf, and even lai-ger, inhabits the hottest parts of South America, from the isthmus of Darien to Buenos Ayres. It is fierce, and destructive to man and beast. Like the tiger, it plunges its head into the body of its prey, and sucks out the blood before it devours it. It

makes a great noise in the night, like the howling of a hungry dog; and is very cowardly. It is easily put to flight, either by the shepherds' dogs, or by a lighted torch, being very fearful of fire. It lies in ambush near the sides of rivers.

F. pardalis, the Mexican panther, or ocelot of Buffou, has its head, back, upper part of tlie rump, and tail, of a bright tawny ; a black stripe extending along the top of the back, from head to tail; and, from the nostrils to the corners of the eyes, there also runs a stripe of black: the sides are whitish, marked lengthways with long stripes of black, hollow and tawny in the middle, in which are sprinkled some small black spots ; the legs are whitish, varied with small black spots ; and the tail is also varied with small spots near its base, and larger near the end, which is black. It is above four times the size of a large cat, and strongly made. It inhabits Mexico, California, the neighbourhood of Carthagena, and Brasil. It lives in the mountains ; and is very voracious, but fearful of mankind ; preying on young calves, and different sorts of game. It lurks amidst the leaves of trees ; and sometimes will extend itself along the boughs as if dead, till the monkeys, tempted by their natura? curiosity, approaching to examine it, become its prey.

F. pardus, the panther, is about the size of a large dog, and has a great resemblance to a do- mestic cat. The tongue is rough, and remarka- bly red ; the teeth are strong and sharp ; the skin is exceedingly beautiful, being of a yellow or bright tawny color, variegated with roundish black spots, and the hair is short. Each spot is composed of four or five small spots, with a single spot in the centre. He has a cruel and ferocious aspect ; his motions are brisk and lively; his cry resembles the growi of an enraged dog, but is more strong and rough. The panther in- habits Africa, from Barbary to the remotest parts of Guinea. This species is next in size to the tiger ; next to it in cruelty, and its general en- mity to the animal creation: it is to Africa what the former is to Asia, with this alleviation, that it prefers the flesh of brutes to that of mankind ; but, when pressed with hunger, attacks every liv- ing creature without distinction. Its manner o*" taking its prey is the same with that of the tiger, always by surprise, either lurking in thickets or creeping on its belly till it comes within reach ; it will also climb up trees in pursuit of monkeys and smaller animals, so that none lu-e secure from its attacks. He is not so perfectly ungovernable as the tiger: but, notwithstanding all attempts to render him obedient and tractable, he may rather be said to be suliducd than tamed ; for he never entirely loses his natural ferocity. Accord- ingly, when kept with a view to the hunting of bucks, goats, or other animals, great care is ne- cessaiy in training him, and still greater in

ducting him. Wlieu leading out to tiie field, they put him in a cage and carry him on a airt. When the game is sprung, they open the door of the cage ; he instantly springs towards tiie animal, often seizes him in a few Ijounds, throws him to the ground, and strangles him. But if he happens to miss his aim, he becomes mad with rage, and sometimes falls upon his master, who, to prevent sucli accidents, generally carries along with him pieces of flesh, or perhaps a lamb or a kid, which he throws to him in order to appease his fury. The ancients were well acquainted with these animals. Scaurus exhibited at one time 150 panthers; Pompey the Great 410; Augustus, 420. Probably they thinned the coasts of Mau- ritania of these animals, but they still swarm in the southern parts of Guinea. Oppian describes two species of panthers, a large and a small one ; the first of which has a shorter tail than the smaller, and may possibly be this kind. An ani- mal of this species is found in Bukharia, called there Babr; it is seven feet long, very destruc- tive to horses, and even camels ; the skin is fine, and valued in Russia at £l sterling. In Cliina there is a most remarkable kind, called there louchu, whose skins sell at £6 sterling a- piece. These skins equal those of the old continent in beauty and size. Though Buflbn denies the panther to be an inhabitant of Ainerica, yet Pennant is of opinion tliat the same, or a variety at least, inhabits that country.

F. serval, the serval, has the upper part of the body of a dusky color, interspersed with round black spots; the belly and the orbits of the eyes are white. This animal, which is very fierce and untameable, inhabits the woods in the mountainous parts of India and Thibet ; where it lives in trees and breeds in them. It scarcely ever descends on the ground ; but leaps witli great agility from tree to tree. It is culled by the natives of Malabar tlie marapute, by the Portuguese the serval.

F. tigrina, the margay of Buff'on, is about the size of a common cat. The upper part of the head, the neck, back, sides, shoulders, and thighs, are of a bright tawny color; the face is striped downwards with black: the shoulders and body are marked with stripes and oblong large black spots : tjie legs with snr.iW spots : the thighs are whitish spotted with black: the tail is very long, marked with black, tawny and gray. It inhabits South America, where it lives on the feathered game and on poultry. It is untame- able. It makes a noise like the common cat; lives much in trees; it is very active and goes by bounds or leaps. It brings forth in all sea sons of the year, in hollow trees, and has two a> a time.

F. tigris, the tiger, according to some authors is larger, and according to others somewhat less, than the lion. M. de la I.andemagon as- s-ures us, that he has .seen a tiger in the Fast Indies fifteen feet long, including undoubtedly the length of the tail, which, supposing it to be four feet, makes the body of the tiger about eleven feet in length. The skeleton preserved in the ci-devant royyl cabinet at Paris, indicitcˆ that the animal was about seven feet long from the point of the muzzle to the origin of the tail;

but then it must be consideEed, that he was caught young, and lived all his days in confine- ment. The head of the tiger is large and roundish; and the ears are short, and at a great distance from each other. The form of the body has a great resemblance to that of the panther. The skin is of a darkish yellow color striped with long black streaks; the hair is short, exceptmg on the sides of the head, where it is about four inclies long. The point of the tail is black, and the rest of it is interspersed with black rings. His legs and claws resemble those of the lion, only the legs are much shorter in proportion to the size of the animal. The tiger is more ferocious and savage than the lion. Although gorged with carnage, his thirst for blood is not appeased ; he seizes and tears in pieces a new prey with equal fury and rapacity, the very moment after devouring a former one; he lays waste the country he inhabits; he nei- ther dreads the aspect nor the weapons of men ; slaughters whole troops of domestic animals; and attacks young elephants, rhinoceroses, &c., and sometimes even braves the lion himself. The tiger seems to have no other instinct, but a constant thirst after blood, a blind fury which knows no bounds or distinction, and which often stimulates him to devour his own young, and to tear the mother in pieces for endeavouring to de- fend them. He lies in wait on the banks of rivers, &c., where the heat of the climate obliges other animals to repair for drink. Here he seizes his prey, or rather multiplies his mas- sacres; for he no sooner kills one animal, than he flies with equal fury upon the next, plunges his head into their bodies and drinks their blood. However, when he kills a large animal, as a horse or buffalo, he sometimes does not tear out the entrails on the spot, but, to prevent any inter- ruption, drags oft'tlie whole carcase to the wood, with incredible swiftness. This is a sufficient specimen of the strength of this rapacious ani- mal. Neither indulgence nor restraint can tame the tiger. He is equally irritated with good as with

bad treatment : he tears the hand which r.ourishes him with equal fury as that which ad- ministers blows: he roars and is enraged at the siuht of every living creature. There is a sort of cruelty in his devastations, unknown to the lion; as well as a cowardliness in his sudden retreat on any disappointment. ‘ I was in- formed,’ says Pennant, ‘ by very good authority, that, m the be

like the hog, loves to wallow ‘n tlie mire; anD one of the young in order to re- tard her mo: on; she stops, takes it up, and carries it into some secret part of the forest; but she instantly returns and pursues the hunters into their villages or boats. , The tiger moves the skin of his f;ice, grinds his teeth, and roars, like the lion; but the sound of his voice is dif- ferent.

F. uncia, tlie ounce, is less than the panther; the tail is longer; the hair is likewise longer, and of a whitish-gray color, marked with irregular black spots. The ounce is easily tamed ; and is employed in hunting in several parts of Asia, where dogs are very scarce. He has not the de- licate scent of a dog; does not trace other ani- mals by the smell; neither can he run them down in a fair chase; but lies in wait for their approach, and then darts upon them unawares. He leaps so nimbly, that he easily clears a ditch or a wall several feet high ; he often climbs trees, waits till some animal passes, and instantly leaps upon them. This method of catching their prey, is practised by the panther and leopard, as well as by the ounce. . The ounce inhabits Barbary, Persia, Hyrcania, and China; from which last place the skins are brought into Russia, and sold for 20s. a-piece. It is an animal of a more gentle and mild nature than most of the pre- ceding. It is like the F. leopardus, used for the chace of antelopes, and even hares ; but, instead of being conveyed in a waggon, is carried on the crupper on horseback. It is under as much command as a setting-dog; returns at the least call, and jumps up behind its master. This animal is supposed to be the TrapcaXig oXiyortpa,

or less panther of Oppian, and the panthera of Pliny.

FELL, adj. “) Sax. pelle ; Old Fr.

Fellness, n. s. > Teut. and Belg /eZ. Cruel; Felly, adj. J barbarous ; savage ; atro- cious.

Soone meete they both ; both fell and furious. Thai daunted with their forces hideous Their steeds doe stagger, and amazed stand.

Spenser's Faerie Queenc. When his brother saw the red blood trail AdowD so fast, and all his armour steep. For very fellness loud he 'gan to weep. Id.

Fair ye be sure, but cruel and unkind ; As is a tyger, that with greediness Hunts after blood, when he by chance doth find A feeble beast doth felly him oppress. Spenser.

So fellest foes. Whose passions and whose plots have broke theiv

sleep. To take the one the other, by some chance. Some trick not worth an egg, shall grow dear friends,

Shakspeare. It seemed fury, discord, madness yeZi, Flew from his lap when he unfolds the same.

Fairfax. I know thee, love ! wild as the raging main. More fell than tygers on the Lybian plain. Pope.

Scorning all the taming arts of man. The keen hyena, fellest of the fil. Thomson.

T' indulge ./eW Rapine's desolating lust.

To drench the balmy lawn in streaming gore. To spurn the hero's cold and silent dust- Are these thy joys ? Nor throbs thy heart for more ?

Beattie.

Fell, n. s. "i Sax. pele ; Teut. fell ;

Fellmonger, 5 Belg. vel, of Goth, vela, to

cyjver; or, as some writers think, from L'i.i pelUs ;

Gr. 0t\Xoc- The skin ; the hide of a beast : a

fellmonger is one that dresses or prepares hides.

Wipe thine eye ; The goujers shall devour them, flesh and fell. Ere they shall make us weep. Shakspeare.

The time has been my senses would have cooled To hear a night-shriek ; and ray fell of hair Would at a dismal treatise rouse and stir.

Id,

Fell, v. a. 3 Sax. pyllan ; Teut. fellen ; Feller, n. s. 5 Goth, fella. To knock down ; bring to the ground ; down, or along, added seem redundant.

Since thou art laid down, no feller is come up against us. Isa. xiv. 8.

Whom so dismayd when that his foe beheld. He cast to suffer him no more respire, 15ut gan his sturdy sterne about to weld. And him so strongly stroke, that to the ground him feld Spenser's Faerie Queene.

Then would he seem a farmer that would sell Bargains of woods, which he did lately /t;W. Hubberd. Villain, stand, or l'l\ fell thee down. Shakspeare. Up and down he traverses his ground ; Now wards a. felling blow, now strikes again,

Dan. Taking the small end of his musket in his hand, he struck him on the head with the stock, a.iid felled him.

Raleigh. Whereas great Arthur lies in ruder oke ; That never felt none but the/eHer'« stroke.

Bp. Hall's Satires. On their whole host I flew Unarmed, and with a trivial weapon felled Their choicest youth : they only lived who fled.

Millon.

Proud Arcite and fierce Palatnou, In mortal battle, doubling blow on blew ; Like lightning flamed their falchions to and fro. And shot a dreadful gleam ; so strong they struck. There seemed less force required to fell an oak.

Dryden.

I felled along a man of bearded face. His limbs all covered with a shining case. Id,

The poplars arc felled, farewell to the shade. And the whispering sound of the cool colonnade ; The winds play no longer and sing in the leaves. Nor Ouse in his bosom their image receives. Cowper,

Fell. See Fall.

Fell (Dr. John), a learned English divine, born at Longworth in Berkshire, in 1G25, and educated at Christ Church, Oxford, of which his father was dean. In 1648 he was ejected by the parliamentary

visitors, being then in orders; and from that time to the Restoration, lived at Oxford a retired and studious life. He was installed canon of Christ Church, in July 1660; and dean in 1661 ; in which places he did great services to the college, and reformed several abuses. He was consecrated bishop of Oxford in 1675; and had leave to hold his deanery in coramendam, that he might continue his services to the college and university. He published several works, and died in 1636.

Fell (John), an English dissenting minister, and controversial writer, born at Cockermouth in Cumberland in 1732. He was bred a taylor, and followed this occupation for some time in London, but soon after, he was enabled by a friend to pursue his studies at an academy, after which he became pastor of a congregation at Beccles, near Yarmouth, whence he removed to Thaxted in Essex, where he also kepta boarding school. After several years residence at Thaxted, he accepted an invitation to be resident tutor in the dissenting academy at Homerton. But he had not been long there, before a misunderstand- ing took place between him and the managers of that institution, which ended in his dismissal. Some respectable friends then subscribed a yearly stipend of £lOO, for which he was to deliver a course of lectures on the evidences of Chris- tianity. Four of these were preached by him in 1797, but he died on the 6th of September in that year. The late Dr. H. Hunter completed and published the lectures. Mr. Fell was a man of considerable erudition ; he was the author of an answer to Mr. Farmer's Essay on the De- moniacs, and also to that on the Idolatry of Greece and Rome by the same gentleman : this last, which was published in 1785, is an acute and learned treatise. Besides these, he wrote an Essay on the Love of Onc'.s Country ; Genuine Protestantism; A letter to IMr. Burke on the Penal Laws; An Essay towards an Eiiglisli Grammar, &c.

FELLER (Francis Xavier), known for some time as Flexier de Reval, a name which he as- sumed on the suppression of the society of Jesuits, to which he oelonged ; was a native of Brussels, born in 1735, and enjoyed a reputation for learning. But his principal work, an Histo- rical Dictionary, printed at Liege in eight octavo volumes, has been attacked on the score of piracy by the proprietors of the Nouveau Die- tionnairc Historique. His other writingB aif;

A Reply to Buftbn's Epochs of Nature; Re- marks on the Newtonian Philosophy; a Geogra- phical Dictionary; and a literary and historical journal entitled Clef des Cabinets, published at Luxemburtjh from 1774 to 1794. lie died at Ratisbon in 1802.

Feller (Joachim), a German poet, was a na- tive of Zwickhau, and born in 1638: he was chosen professor of poetry at Leipsic in 1661. At an early age he wrote a poem on the passions. His principal compositions, which he wrote in Latin, are f lores Flnlosophici; Notx- in Lotichicii eclogam, &c. ; Cygni quasiniodo geniti sanctaa virorum celebrium Cygneae (Zwickhau) veterum ; and some annotations on the works of Horace. In 1676 he became librarian to the university of Leipsic. Having contracted a habit of walking in his sleep, he fell at length from a window during one of his fits of somnambulism, and died in 1691, from the effects of the fall.

Feller (Joachim Frederick), son of the above, was born in 1673 at Leipsic, where he graduated in philosophy. The duke of Weimar appointed him his secretary in 1706, a situation he filled during twenty years; travelling a con- siderable part of the time, under his patron's auspices. He published Monumenta varia in- edita, in twelve 4to numbers, printed in 1714 at Jena; a Genealogy of the House of Bruns- wick Lunenburgh, Bvo. ; Otium Hanoverianum ; and Miscellanea Leibnitiana; and died in 1726.

FELLIF'LUOUS, adj. Lat. fel and Jhio. Flowing with gall.

FE'LLOE, n.s. Dan. and Tent, felge. Tlie circumference of a wheel ; the outward part. It is often written fally or felly.

Axle-trees, naves, ˆeZ/oe«, and spokes, were all mol- ten. Kings.

Out, out, thou strumpet Fortune I all you gods. In general synod, take away her power ; Break all the spokes and fellies from her wheel. And bowl the round nave down the hill of heaven.

Shakspeare.

FELLOW, n. s. k V. a. ~] Fellow-citizen, n. s. Fellovv-commoner,

Fellow-counsellor,

Fellow-creatltre,

Fellow-feeling,

Fellow-heir,

Fellow-helper,

Fellow-laborer,

Fellow-like, adj.

Fellowly,

Fellow-maiden, n. s.

Fellow-memiier,

I’ellow-min ister.

Fellow-peer,

Fellow-prisoner,

Fellow-scholar,

Fellow-servant,

Fellowship,

F”ELLOw-soi.nirR,

Fel low-st f d e n t,

Fellow-s’jbject,

Fellow-sufferer,

Fellow-traveller,

Fellow-worker,

Fellow-writer.

Sax. pela{7;Goth. felag, a compa- nion; community; iiwed .fcelage ; Scot. fallow , ‘ quasi, to follow’, Minsheu, from Sax. pe, faith, and laj, bound. — Junius. A compa- nion ; associate ; equal ; one of a lite- rary community, ot (ˆprivileged frater- f nity of scholars ; one of the same kind ; one of a pair: a fa- miliar compclla- tion, and appella- tion, sometimes ex- pressing mere fa- miliarity, at other times contempt, pity, and even ab- horrence : to fellow is to suit, or pair J with : fellowship is

companionship; consent; association; the pri- vileged state of a fellow at college ; a rule of arith- metic ; a disposedness to good living or jollity, having ‘ good’ generally prefixed. The com- pounds explain themselves.

What if ony of the branchis ben broken whanne thou were a wielde olyue tree art grafiid among hem, art maad felowe of the roote and of the fatnesse of the olyue tree ? Wiclif. Romat/nes xi.

Now, therefore, ye are no more strangers and foreigners, hnt felbw-citisem, with the saints.

Ephes. xi. 19. The Gentiles should be fellow-heirs. Id. iii. 6. Epaphroditus, my brother and companion in la- bour, a.ad fellow-soldier. Phil. ii. 25.

Those only are my fellow-workers to the kingdom of God. Col.iv. 11.

There salute thee Epaphras, my fellow-prisoner in Christ, &c. Philem. 23.

We ought to receive such, that we might be fellow- helpers to the truth. 3 John, 8.

In youth I had twelve fellows like unto myself, but not one of them came to a good end. Ascham.

One seed for another to make an exchange, “With fellowly neighbourhood seemeth not strange;.

Tusser. Those laws do bind men absolutely, even as they are men, although they have never any settled fellowship, never any solemn agreement among them- selves. Hooker.

Most of the other Christian princes were drawn into the fellowship of that war. Knolles.

To be yoxiT fellow. You may deny me : but I’ll be your servant. Whether you will or no. S’i ./■

I have great comfort from this fellow : methinks he hath no drowning mark about him •, his complexion is perfect gallows. Id.

Imagination, With what’s unreal, thou co-active art. And fellowest aoihins,. Shakspeare,

This is Othello’s ancient, as I take it. — The same indeed ; a very

vaWant fellow. Id. Cassio hath here been set on in the dark By Roderigo, and fellows that are ‘scaped. Id,

To quench mine honour ; they add shame to make me Wait else at door; a. fellow -cottnscllor Among boys, grooms, and lackeys.

M. H try VIII. She, questionless, with her sweet harmony. Is with her J’ellow-maideiis now within.

Id. Pericles. You shall not need, my fellow-peer of Tyre, Further to question of your king’s departure. His sealed commission’s left with me. Id.

]\Iy fellow-ministers Are alike invulnerable. Id. Tempest.

You

Have sworn for tliree years’ time to live with me My fellow -scholar. Id. Love’s Labour Lost.

We would not die in that man’s company. That fears h\s fellowship to die with us.

Shakspeare, Come, fellow-soldier, make thou proclamation. Id. I pr’y thee, do not mock me, fellow-student.

Id. Hamlet. An officer was in danger to have lost his place, but his wife made his peace ; whereupon a pleasant yeWou’ said, that he had been crushed, but that he saved him- self upon his horns. Bacon.

There should be a mission of three of the fellows or brc thren of Solomon’s house, to give us knowledge of the affairs and state of those countries to which they were designed. Id.

FEL

13C

In a great town friends are scattered, so that there :s not that /ei/oui^/ iip which is in less neighbourhoods.

Id. Essays. Chieftain of the rest I chose him here : the earth shall him allow ;

His fellows late, shall be his subjects now.

Fairfax,

All which good parts he graceth with a gooi fellow- like, kinˆ, and respectful carriage. Carew.

Eighty pounds per annum for a. fellow-comtnoner [at Cambridge] was looked on as a sufficient maintenance.

Prideaux.

Homer in his Odyssey, speaking of Ulysses, and Elpenor his fellow-traveller, &c. Sir T, Herbert.

Whence are our depopulations and inclosures, but for that men cannot abide eiihei fellows or neighbours ? Bp. Hall's Contemplation!!.

He had by his excessive good fellowship, which was grateful to all ihe company, made himself popular with all the officers of the army. Clarendon.

Nearer acquainted, now I feel by proof

That fellowship in pain divides not smart.

Nor lightens aught each man's peculiar load.

Paradise Regained,

Let partial spirits still aloud complain. Think themselves injured that they cannot reign. And own no liberty, but where they may Without controul upon their fellows prey. Waller.

Those great fellows scornfully receiving them, as foolish birds fallen into their net, it pleased the eter- nal Justice to make them suffer death by their hands.

Sidney.

So you are to be hereafter fellows, and no longer servants. Id.

Have we not plighted each our holy oath, That one should be the common good of both j One soul should both inspire, and neither prove His fellow's hindrance in pursuit of love ? Dryden. As next of kin, Achilles' arms I claim j

This fellow would ingraft a foreign name

Upon our stock. Id.

My fellow-labourers have commissioned me to per- form in their behalf this office of dedication.

Id. Juvenal, Dedication.

O love ! thou sternly dost thy power maintain. And will not bear a rival in thy reign ; Tyrants and thou all fellowship disdain. Dryden.

How happy was it for those poor creatures, that your grace was made thm fellow -sufferer ? And how glorious for you, that you chose to want rather than not relieve ? Id.

The fellow had taken more fish than he could spend while they were sweet. L' Estrange,

A shepherd had one favourite dog -. he fed him with his own bands, and took more care of him than of hi? fellows. Id.

It is a high degree of inhumanity not to have a fellow-feeling of the misfortune of my brother. Id,

He cannot appropriate, he cannot inclose, without the consent of all his fellow-commoners, all mankind.

Loc/te.

God having designed man for a sociable creature, made him with an inclination, and under the necessity to have fellowship with those of his own kind. Id.

We have one peculiar elegance in our language above all others, which is conspicuous in the term 'fellow.' This word, added to any of our adjectives, extremely varies, or quite alters tlie sense of that with which it is joined. Thus, though ' a modest man' is the most unfortunate of all men, yet a modest fellow is as superlatively happy. A ' modest fellow' is a ready creature, who, with great humility, and as great forwardness, visits his patrons at all hours, and meets them in all places, and has so moderate an opinion of himself, that he makes his court at iajge. Tatter.

FEL

Since they cannot raise themselves to the reputation of their fellow-writers, they must sink it to their own pitch, if they would keep themselves upon a level with them. Addison.

When virtue is lodged in a body, that seems to have been prepared for the reception of vice ; the soul and the body do not seem to he fellows. Id, Spectator.

We in some measure share tlie necessities of the poor at the same time that we relieve them, and make ourselves not only their patrons but fellow-auffarers.

Id.

Their fathers and yours were fellow-servants to the same heavenly master while they lived ; nor is that relation dissolved by their death, but ought still to operate among their surviving children. Atterbury.

Even your milliwoman and your nurserymaid have a fellow-feeling. Arbuthnot,

You'll find, if once the monarch acts the monk. Or, cobler-like, the parson will be drunk. Worth makes the man, and want of it the fellow; The rest is all but leather and prunella. Pope.

The bleeding condition of their fellow -subjects was a feather in the balance with their private ends.

Swift.

If you have no fellow-student at hand , tell it over with your acquaintance. Watts's Logick.

We signify our being united to each other as fellow- members. Wliole Duty of Man.

Self-knowledge, moreover, implies a due attention to the several relations in which we stand to o\xt f el- low-creatures ; and the obligations that result from thence. Mason,

When blockheads rattle the dice-box, when fellows of vulgar and base minds sit up whole nights contem- plating the turn of a card, their stupid occupation is in character. Cumberland,

A yonag fellow who seems to have no will of his own, and does every thing that is asked of him, is called a very good-natured, but at the same time is thought a very silly, young fellow, Chesterfield,

Their poet, a sad trimmer, but no less

In company a very ˆieasant fellow , Had been the favourite of full

many a mess

Of men, and made them speeches when half mellow.

Byron.

Felo-de-se. See Suicide.

FEL'ON, n. s. &, adj. N Sax. pel ; Goth, and

Felo'nious, adj. i Swed._/e/, a fault; Fr.

Felo'niouslv, adv. \ felon ; Low. Lat. /i/o ;

Felon'ous, adj. T Minsheu says, from

Felon'y, n. s. \fill, crime, and one.

Felo-de-se, n. s. ˆ One who has com mitted a serious crime; a capital offender; a whitlow : as an adjective, fierce ; cruel ; inhu- man ; wicked ; whicli is also the meaning of felonious and the obsolete felonous : felony is legally defined in our article.

Ah me ! what thing on earth, that all things breeds. Might be the cause of so impatient plight ! What fury, or what fiend with /Won deeds. Hath stirred up so mischievous dcspiglit ! Spenser. I am like for desperate dole to die. Through felonous force of mine enemy. Id.

I apprehend thee for a felon here.

Shaktpeare. I will make it felony to drink small beer.

Id. Henry VI.

This man conceived the duke's death ; but what was the motive of that felonious conception is in thu clouds. Wolton.

O thievish night I

Why bhould'st thou, but for some felonioM end.

'34

FELONY.

la *y dark lanthom thus clcse up the etare That uaturc hun§ in heaven, and filled the lamps With everlasting oil, to give due light To

the misled and lonely traveller t Milton.

The wily fox, Chased even amid' the folds ; and made to bleed, Like/ e/o;w, where they did the murderous deed.

Dryden. In thy felonious heart though venom lies. It does hut touch thy Irish pen, and dies. Id.

The malign paronychia is that which is commouly called a. felon. Wiseman's Surgery.

Then with deep-opening mouth. That makes the welkin tremble, he proclaims The' audacious _/c/o». Sumervile,

Then bids prepare the' hospitable treat. Vain shews of love to veil his felon hate

Pope. But, though the f don on his back could dare The dreadful leap, more rational, his steed Declined the death, and v.hoeliug swiftly round, Or e'er Iiis hoof had pressed the crumbling verge, HafHed his rider, saved against his will. Cowper.

Next view iu state, proud prancing on his roan. The golden-crested haughty Marmion, 7*fow forging scrolls, now foremost in the fight. Not quite n felon, yet but half a knight. The gibbet or the field prepared to grace, A mighty mixture of the great and base. Byron.

Felony, says Blackstone, in the general acceptation of the law, comprises every species of crime which occasions, at common law, the forfeiture of lands or goods. This most fre- quently happens in those crimes for which a capital punishment either is or was to be inflict- ed : for those felonies that are called clergyable, or to which the benefit of clergy extends, were anciently punished with death in all lay, or un- learned, offenders ; though now, by the statute law, that punishment is for the first offence uni- versally remitted. Treason itself, says Sir Ed- ward Coke, was anciently comprised under the name of felony : and, in confirmation of this, we may observe that the statute of treasons, 25 Ed. III. c. 2, speaking of some dubious crimes, di- rects a reference to parliament • that it may be there adjudged ' whether they be treason or other felony.' All treasons, therefore, strictly speak- ing, are felonies ; though all felonies are not treason. And all offences now capital are in some degree or other felony : but this is likewise the case with some other offences which are not punished with death ; as suicide, where the party is already dead; homicide by chance-medley, or in self-defence ; and petit larceny, or pilfering ; all of which are, strictly speaking, felonies, as they subject the committers of them to

forfeitures. So thai, upon the whole, the only adequate de- finition of felony seems to be, an offence which occasions a total forfeiture of lands or goods, or both, at the common law ; and to which capital or other punisiiment may be superadded, ac- cording to the degree of guilt. To explain this farther: The word felony, or felonia, is of un- doubted feodal original, being frequently to K— met with in the books of feuds, &c. ; but the derivation of it has much puzzled the juridical lexicographers, Prataus, Calvinus, and the rest : some deriviug it from the Greek

called felonia. Sir Edward Coke has given us a still stranger etymology; that it is crimen animo felleo perpˆtraium, 'with a bitter or gall- ish inclination.' But all of them agree in the de- scription, that it is such a crime as works a for- feiture of all the offender's lands or goods. And this gives a great probability to Sir Henry Spel- man's Teutonic or German derivation of it : in which language indeed, as the word is clearly of feodal original, we ought rather to look for its signification, than among the Greeks and Romans. Fe-lon then, according to him, is derived from two northern words ; fee, which signifies the fief, feud, or beneficiary estate; and Ion, which signifies price or value. Felony is therefore the same as pretium feudi, the consi- deration for which a man gives up his fief; as we say in common speech, such an act is as much as your life, or estate, is worth. In tliis sense it will clearly signify the feodal forfeiture, or act by which an estate is forfeited, or escheats, to the lord.

To confirm this, we may observe, that i\ is in this sense, of forfeiture to the lord, that the feo- dal writers constantly use it. For all those acts, whetlier of a criminal nature or not, which at this day are generally forfeitures of copy-hold estates, are styled felonia in the feodal law : ' scilicet, per quas feudum amittitur.* As ' si domino deservire noluerit ; si per annum et diem cessaverit in petenda investitura : si dominum ejuravit, i. e. negavit se a domino feudum ha- bere; si a domino in jus eum vocante, ter cita- tus non companierit;' all these, with many others, are still causes of forfeiture in our copy-hold estates, and were denominated felonies by the feodal constitutions. So likewise injuries of a more substantial or criminal nature were deno- minated felonies, that is forfeitures : as assaulting or beating the lord ; vitiating his wife O'- daugh- ter; ' si dominium cucurbitaverit, i. e. cum uxore ejus concubuerit :' all these are esteemed felonies, and the latter is expressly so denominated, si fe- cerit feloniam, dominium forte cucurbitando. And as these contempts, or smaller offences, were felonies, or acts of fbrfeiture, of course greater crimes, as murder and robbery, fell under the same denomination. On the other hand, the lord might be guilty of felony, or forfeit his seignory to the vassal, by

the same act as the vassal would have forfeited his feud to the lord. ‘ Si dominus commisit felonian, perquam vasal- lus amitteret feudum si eam commiserit in domi- num, feudi proprietatem etiam dominus perdere debet. One instance given of this sort of felony in the lord is beating the servant of his vassal, so as that he loses his services, which seems merely in the nature of a civil injury, so fer as it respects the vassal. And all these felonies were to be determined, ‘ per juramentum sive judi- cium parium suoium,’ in the lord’s court ; as with us forfeitures of copy-hold lands are pre- sentable by the homage in the court-baron. Fe- lony, and the act of forfeiture to the lord, being thus synonymous terms in the feodal law, we may easily trace the reason why, upon the intro- duction of that law into England, those crimes which induced such forfeiture or escheat of lands (and, by a small deflexion from the original

sense, such as induced the forfeiture of goods also) were denominated felonies. Thus it was that suicide, robbery, and rape, were felonies ; that is, the consequence of such crimes was for- feiture ; till by long use we began to signify, by the term felony, tlie actual crime coramiited, and not the penal consequence. And upon this sys- tem only can we account for the cause why treason, in ancient times, was held to be a spe- cies of felony; because it induced a forfeiture. Hence it follows, that capital punishment does by no means enter into the true idea and defini- tion of felony. Felony may be without inflicting capital punishment, as in the cases instanced of self-murder, excusable homicide, and petit lar- ceny : as in case of heresy by the common law, which, though capital, never worked any for- feiture of lands or goods, an inseparable incident to felony. And of the same nature was the pu- nishment of standing mute, without pleading to an indictment ; which at the common law was capital, but without any forfeiture, therefore such standing mute was no felony. In short the true criterion of felony is forfeiture ; foi, as Sir Edward Coke justly observes, in all felonies which are punishable with death, the offender loses all his lands in fee simple, and also his goods and chattels ; in such as are not punish- able, his goods and chattels only. The idea of felony is indeed so generally connected with that of capital punishment, that we find it hard to separate them ; and to this usage the inter- pretations of the law now conform. And there- fore, if a statute make any new offence felony, the law implies that it shall be punished with death, viz. by hanging as well as with forfeiture : unless the offender prays for benefit of clergy ; which all felons are entitled once to have, unless the

same is expressly taken away by statute. If a statute make the doing of an act fe- lonious, and a subsequent act make it penal only, the latter is considered as a virtual repeal of the former.

Felonies are several, and cannot be joint ; so that the pardon of one felon cannot discharge another; though the felony of one man may be dependent upon that of another. Henry I. was the first who ordered felons to be hanged, about the year 1108. The judgment agamst a man for felony has been the same since the reign of that king, i. e. that he be hanged by the neck till dead ; which is entered suspendatur per col- lum, &c., 4 Inst. 124. As well as loss of life, felony is punished with forfeiture of lands not entailed, goods and chattels. Heretofore felony worked corruption of blood ; unless a statute making an offence felony ordained it otherwise, as many statutes did ; and at last, by stat. 54 Geo. III. c. 14.5, no corruption of blood takes place for any felony (not treason) except mur- der or petty treason.

The punishment of a person for felony, by our ancient books, is 1. To lose his life: 2. To lose his blood, as to his ancestry, and so as to have neither heir noi posterity ; 3. To lose liis goods ; 4. To lose his lands, and the king shall have annum diem et vastum, to the intent that his wife and children be cast out of the house, his house pulled down, and all that he

had for his comfort or delight destroyed. 4 Rep 124. By Stat. 53 Geo. III., c 162, any court may pass on persons convicted of felony with benefit of clergy (or of grand or petit larceny) sentence of miprisonment to hard labor, either singly and alone, or in addition to any other sentence. A former provision, as to passmg tUis sentence on felons, by 52 Geo. III. c. 44, is repealed by this act. 53 Geo. III.

Private persons may arrest felons by their own authority, or by warrant from a justice of peace ; and every private person is bound to assist an officer to take felons, &c. But no one ought to be arrested upon suspicion of felony, except there be probabilis causa showed for the ground of the suspicion. If a felony is not done by a man, but some person else, if another hath pro- bable cause to suspect he is the felon, and ac- cordingly doth arrest him, this is lawful and may be justified. But, to make good such jus- tification, there must be in fact a felony com- mitted by some person, without which there can be no ground of suspicion. 2 Hale’s liist. P. C.

78.

A private man arresting one for felony, can- not justify breaking doors,

to take the party suspected; but he doth it at his peril, viz. if iu truth he be a felon it is justifiable ; but if inno- cent, then it is not. To prevent a murder, or manslaughter, private persons may break doors open. 2 Hale 82. Officers may break open a house to take a felon, or any person justly sus- pected of felony ; and if an officer hath a warrant to take a felon, who is killed in resisting, it is not felony in the officer; but if the officer is killed it is otherwise.

Watchmen and beadles have authority at com- mon law to arrest and detain in prison for ex- amination by a magistrate, persons walking in the streets at night, whom there is reasonable ground to suspect of felony, although there is no proof of a felony having bt.en committed. 3 W. P. Taunton, 14. Persons indicted of felony, &c., where there are strong prcsvimptions and circumstances of guilt, are not rcplevisable; but for larceny, &c., when persons are commit- ted who are of good reputation, they may be bailed. 2 Hawk. P. C. The former part of the position must be, with an exception to the power of the court of king's bench.

If one be committed to prison for one felony, the justices of gaol delivery may try him for an- other felony, for which he was not committed, by virtue of their commission, 1 Lil. 602. In the higiiest crime, and in the lowest species of felony, viz. in petit larceny, and in all the mis- demeanors, standing mute hath always been an equivalent to conviction. But upon appeals or inaictments foi other felonies, or petit treason, the prisoner was not by the ancient law looked upon as convicted, so as to receive judgment for the felony, but should, for his obstinacy, have received a terr'ble s(nitence of penance, or peine forte et dure. See Muir, STAˆˆIˆ'G.

When; a married woman coinn. its felony, in company with her husband, it shall iie presumed to be done by his command, and she shall be excused. 3 Inst. 310. Where one steals an- other's goods, and a third person feloniously

takes tlicm from him, he is a felon as lo both the others. There is also a pretence of title to thinjˆs unlawfully taken, which maybe only a trick to color felony : the ordinary discovery of a felonious in- tent is, if the party doth it secretly, or being charged with the goods denies it. If a person to whom goods are delivered, on a pretended buy- ing them, runs away with them, it is felony : and a guest stealing plate set

before him at an inn, &c. is felony ; also persons who have the charge of things, as a servant of a cliamber. Sec., may be guilty of felony : and the least removing of a thing in attempts of felony, is felony, though it be not carried off. 3 Inst. 308. Ilaym. 275.

But base kinds of goods, such as dogs, &c., being stolen, cannot constitute a felony : nor ferae naturre, as deer, hares, &c., except they be made tame, when it will be felony to steal them. If any turkeys, geese, poultry, fish in a trunk, &c., are taken away, it is felony. 3 Inst. 309, 310. Stealing of tame peacocks is felony; so of herons and young hawks in their nests ; it is otherwise of pheasants, partridges, conies, &c., although they be so kept that they cannot escape ; if they be not reclaimed and known. The owner of goods stolen prosecuting the ˆelon to conviction, cannot recover the value of them in trov?r from the person who purchased them in market overt, and sold them again before conviction, notwithstanding the owner gave him notice of the robbery, while they were in his possession ; but he has a right to restitution ot the goods in specie. 2 Term Rep. K. B. 750.

Under the term felony, in commissions, &c., are included petit treason, murder, homicide, burning of houses, burglary, robbery, rape, Sec, chance-medley, se defendendo, and petit larceny. All felonies punishable according to the course of the common law, are either by the common law or by statute. Piracy, robbery, and murder on the sea, are punishable by the civil statute law. 1 Inst. 391.

Felony, by the common law, is against the life of a man ; as murder, manslaughter, felo de se, se defendendo, &:c. Against a man's goods, 'Uch as larceny and robbery : against his habita- tion, as burglary, arson or house-burning : and against public justice, as breach of prison. 3 Inst. 31. It is not easy to recapitulate the vast variety of offences which are made felony, by the almost innumerable statutes which have been from time to time made on this subject : which we are happy to believe is, at the period we are writing, undergoing important revision in the highest c[uarter. But we copy from Sir T. E. Tomlyn's Law Dictionary the following gen- oral account of felonies, by statute; within clergy, and without.

Felonies Within Clergy. Armour, the king's, embezzling. — Assaults, with intent to spoil persons' dress ; or with intent tc rob. — Bail, personating: before commissioners. — Bank pa- prr, forging or preparing. — Bigamy. — Bills of Ex- change, foreign, forging. — Blcacfiirjg grounds, robbing. — Bridges, destroying, several specified in different statutes. — Bunting ricks of corn, hay, &.C. — Cattle, sheep, &:c. killing in the night malici'jusly, or slaughtering horses

without no- tice— Child-stealing. — Cloth, stealing from ten-

ters, third offence. — Collieries, destroying engines to dram. — Commons, destroying enclosures of. — C'o/j/jfr, removing from a house to steal it, assist- ing therein, or buying it when stolen. — Co7n, destroying granaries ; second ofi'ence. — Customs; harbouring smugglers, and assisting to run goods. — Deer stealing. — Dikes, cutting in marsh land. — Fishing in enclosed pond, &c., with in- tent to steal; or buying stolen fish. — Foreign State, going out of the realm to serve without taking the oath of allegiance. — Forests, destroy- ing enclosures in; third offence. — Forgery of bank bills, foreign bills, customs' debentures, stamps for marking plate, &c. — Framc-ioork-knitting machines, destroying. — Gaoler, forcing a prisoner to become an approver (impeacher). — Hawk, stealing. — Hunting, in the niglit or in disguise. — Jeicels and plate stolen, receiving of. — iron bars fixed to buildings, stealing. — F.ing or his council, conspiring to destroy. — Labo7ers; confederacy of masons against the statute of la- borers.— Lead ; entering black-lead mines with intent to steal; stealing lead affixed to buildings; or buying or receiving it when stolen. — Locks, floodgates, sluices or banks, destroying. — Maim- ing another. — Marriage, clandestine, solemnis- ing.— Miscarriage, attempting to procure though the woman be not quick with child. — Monei/ ; exporting silver, importing false money, blanch- ing copper, putting off counterfeit money, or counterfeiting copper money, or tokens issued by the bank. — Mutiny and desertion in seamen or soldiers. — Oysters and their brood, taking from beds. — Palaces of the king, entering with intent to steal. — Pewter, stolen, buying or re- ceiving. — Plague, persons infected with, going out of doors. — Po((/grtw/j/, or bigamy. — Post-office, frauds in, as to postage of letters. — Privily steal- ing from the person. — Process, opposing execu- tion of, in pretended privileged places. — Public icorks, injuring or damaging. — Reeords, with- drawing or secreting. — Resucing prisoners for treason or felony ; or offenders against statutes concerning spirituous liquors; or offenders con- demned to hard labor; or bodies of murde*ers. — Robbery, of furniture from lodgings ; assault- ing with intent to rob. — Rogues, incorrigible, escaping from the house of correction or offend- ing a second time. — Servants taking their master's goods at his death ; assaulting master wool- comber or weaver ; embezzling goods to the va- lue of 40s. — Sheep, exporting alive ; second of- fence.— Ships, destroying ; forcibly preventing the lading, sailing, &c., of ships by seamen, keelmen, and others. Smugglers, assisting, &c., — Stamp (/«AJes, frauds respecting. — Stolen goods, buyers or receivers of, or person taking reward to discover. — Stores, government, embezzling. — Tr-ces, shrubs, &c., destroying in nurseries or gardens to the value

of 5s. — Turnpikes, gates, toll-houses, &c., destroying. — Warrens, entering in the nightand killing conies. — lVaternien,ciirTy- ing too many passengers, if any drowned. — Woods, setting fire to.

Felonies Without Clergy. Abortion, jyTO- curing. — Accessaries, in cfi'tain cases. — Aliens returning from transportation. — Arson. — Bail, personating. — BankqfEngland,c]titksemhez7Ain3, notes ; altering dividend warrant: &c. ; paper

makers unauthorised using moulds for notes (See post, Forgery). — Banks, of the sea, destroying. — Bankrupt, not surrendering; concealing his estate, &c. — Bustard, murdering, &c. — Black act, offenders under. — Bridges, wilfully damaging tiiose of London, Westminster, and Fulham. — Burglary. — Burning houses, or barns witli corn. — Cuttle, stealing or maiming. — Challenging ju- rors, above twenty, in felonies ousted of clergy. — Cloth, stealing from the tenters. — Coal mines, setting fire to. — Coining. — Cottons, selling, with forged stamps. — Customs ; smugglers shooting at or wounding officers of the navy or custom- house; harbouring transported ortenders; not surrendering on proclamation. — Cutting, mali- ciously. — Deeds, enrolled, acknowledging in the name of another robbing. — Fences of commons, destroying. — Fishponds, Fens, destroying works for draining of. — Fines, acknowledging in an- other's name. — Forgeries of deeds, transfers of stock, stamps, bills, notes, wills, registers, &c. iScc. — Kighway robbery. — Hops, cutting the binds. — Horse stealing. — Judgments, acknow- ledging in another's name. — Leˆˆers, threatening, sending; or rescuing offenders so doing. — Li- nen, stealing from bleaching grounds ; or cutting or destroying. — Mail, robbing, or stealing let- ters from post- office. — Maiming; maliciously lying in wait for that purpose. — Malicious in- juries, viz. shooting at, stabbing, &.c., giving medicine to procure miscarriages : setting fire to houses, out-houses, &c. — Marshes ; setting fire to engines for draining. — Mariners wandering with- out testimonials, and see stat. 39 Eliz. c. 17, sec. 4 (post, Seaman). — Murriase, forcible. — Mines, damaging. — Miscarriage, procuring, when the woman is quick with child. — Money, uttering false money; third offence. — Murder. — Mute, standing on trial for treason or felony. — Northern borders, thieves and spoilers in Cumberland, Northumberland, Westmoreland, and Durham. — Outlawry, for felonies without clergy. — Perjury, convicts for escaping, breaking pri.son, or return- ing from transportation. — Personating bail, sea-

men, pensioners, nominees of annuities, &c. — Piracy ; under which is included, sailors hinder- ing the captain of a ship from fighting, by forci- ble restraint. — Poisoning of malice prepensed, and administering with intent to murder, &c. — . Popish recusants, priests and Jesuits in certain cases. — Post-o/Jice; robbing mail, secreting letters, &c. — Prisoners forswearing themselves under insolvent acts, refusing to deliver up, or concealing their effects ; escaping from confine- ment to hard labor; second offence. — Privi/ Counsellors, attempting to kill. — Quarantine, neglecting the regulations for performing. — Rape. — Rescuing convicts from transportation, or murderers. — Rebels returning from transporta- tion, tlieir aiders and correspondents. — Recog- nizance or recovery, acknowledging in another's name. — Riots, and destroying buildings. Rob- bery, of churches, oxi ihe \n§hvf:iy, in booths in fairs, dwelling-liouses, shops, ware-houses, coach- houses, or stables : on board vessels ; in wharfs ; in lodgings, if above \2d. value; stealing exche- quer orders, bank notes, navy bills, promissory notes, &c. — Sea ; treasons, robberies, murders, &c. upon. — Seamen, personating to receive ♦heir

pay. — Ships of war, and others, wilfully destroy- ing.— Shooting at another. — Silk ; destroying any silk or velvet in the loom, or the tools for manu- facturing thereof. — Smuggling, and assemblincˆ armed for that purpose. — Sodomy. — Soldiers; de- serting, wandering without testimonials, per- sonating them. — Stabbing maliciously. — South Sea Company ; servants embezzling tiieir effects. — Stamps, counterfeiting. — Stolen goods, helping to a reward in certain cases. — Stores, government; embezzling, or burning, or destroying, in dock yards. — Transportation, returning from, or being at large in the kingdom after sentence. — Turn- vikes, gates, weighing engines, locks, sluices, <*tc., destroying. — Wool; destroying woolien goods, racks, or tools, or forcibly enterino- a house for that purpose. — Women, stealing, and marrying. — Wreck of ships, causing by stealing pumps, &c., stealing shipwrecked goods, or kill ing shipwrecked persons.

FELOOPS, a people of Western Africa, in- habiting the south side of the Gambia. 'Theii country is extensive, and abounds with rice and bees' wax, with which, as well as with goats and poultry, they supply the European traders. They also make their honey itito an intoxicating liquor, similar to mead. They are described as wild and unsociable, and have a language of their own. Their trade is generally conducted by a Mandingo factor, who speaks a little En- glish.

FELSPAR, in mineralogy, Germ, feldspath. Of this mineral there are five sub-species, viz. adularia, common felspar, continuous fel- spar, Labradore felspar, and compact felspar.

1. Adularia, or moonstone of Kirwan. • Co- lor greenish-white ; and when thin, pale ilesh- red by transmitted liglit. Massive and crystallised. Primitive form an oblique four-sided prism, with two broad and two narrow lateral planes; the lateral edges are 120*^ and 60°. Lustre splendent, intermediate between vitreous and pearly. Cleavage threefold. Fracture im- perfect conchoidal. Semitransparent. Refracts double ; softer than quartz, and easily frangible. Specific gravity 2”5. It melts before the blow- pipe, without flux, into a white transparent glass. Its constituents are sixty-four silica, twenty alumine, two lime, and fourteen potash. It occurs in drusy cavities, in granite and gneiss, in the island of Arran, in Norway, Switzerland, France, and Germany. Tiie finest crystals are found in the mountain of Stella, a part of St. (Jothard. Rolled pieces, exhibiting a most beautiful pearly light, are collected in the island of Ceylon. Moonstone adularia is found in Greenland ; and all the varieties in the United States. Under the name of moonstone it is worked by lapidaries.

2. F. vulgare, common felspar, spath. fusible of Desmaretz, spath. etinnlant. spathum pyro- machum. — Its color is most commonly fiesh-red, sometimes bluish-gray, oftener yellowish-white, or milk white, or brownish-yellow, rarely blue, or olive green ; and lately, in one instance, black. Amorphous and interspersed, sometimes crystallised in rhomboids, or six or eight sided prisms; seldom right angled; very seldom in pellucid needles, tables, or polygons. Its lustre

when broke across, 0 ; in other directions, 2‘3-l. Its transparency, 2-1. Its fracture dis- covers a straight foliated texture. The lamellae polished, and sinning often on four sides, cross fracture uneven. Its fragments rhomboidal, or tendmg to that form. It generally presents granular distinct concretions, either large or small. Its hardness, from nine to ten. Its specific gravity, from 2,437 to 2,600; the greenish seem to extend to 2,70. The yellow felspar of Port Francois, in North America, is so brittle as not to bear the slightest friction ; when heated it becomes red. When heated, the crystallised frequently decrepitate: a quadrangular prism of crystallised felspar of Baveno, of a reddish-white color, and whose specific gravity was 2,437, melted at 130°, into a gray semi- transparent porous glass, and at 154° into a compact semi-transparent glass. Another from Silesia, which was not crystallised, and whose specific gravity was 2,554, and of a gray yellowish white color, melted at 119°, into a gray, smooth, almost compact, semi-transparent glass; and, being mixed with an equal

weight of Car- rara marble, it melted at 105°, into a white opaque, almost compact mass of a silky lustre. The green becomes pale reddish when heated. Alkalies flux this stone with great difficulty; microcosmic salt, and particularly borax, is more effectual.

According to Gerhard, the purest felspar found in granites contains 0-46 srlex, 0-30 ar- gill, and 0-06 calx. Here 0-18 parts are miss- ing, a loss too great to be imputed to the escape of air and water. Vauquelin analysed the green Liberian felspar, and found it to consist of

Silex .

62-83

Alumine

17-02

Lime

3-

Oxide of iron

1-

Potassa

13-

96-85

Magnesia was indicated in felspar by !Mr. Bergman, and though not found by many of the subsequent analysts, Monnet found it jointly with silex, argill, and calx, in the felspar he ex- amined ; and Chaptal observed it to exist in greater plenty in the red than in white felspar.

Scopoli, in felspar of Baveno, found 0-63 silex, 0-17 argill, 0-06 magnesia, 0-02 calx, and 0-07 of iron, loss 005. With respect to iron, it is highly improbable that this felspar, which is of the purest kind, should contain any. That which appeared may most probably be ascribed to the Prussian alkali he employed in the analysis.

From these different analyses it appears that any compound of silex and argill, in which silex predominates, and to which a sufficient, but smaller proportion of calx and magnesia, or of calx, magnesia, and barytes, is added to ren- der the whole fusible in a heat not exceeding

140°, may form a felspar, and will undoubtedly be so called, if at the same time it presents a foliated texture ; but iron appears to be a foreign ingredient.

3. Continuous felspar. Its color is reddish- gray, or flesh-colored; or pale reddish-yellow, or olive-green. It occurs in mass, and generally contains common crystallised felspar dispersed through it in various proportions. It is some- times dull, but generally possesses a feeble glim- mering lustre; it is translucent on the edges; its fracture is fine splintery, passing into uneven earthy; its fragments are indeterminately an- gular ; its hardness is fully equal to that of com mon felspar, and it is less brittle. It frequently consists of granular concretions, easily separa- ble. A specimen of this sort, melted at 150° 5, into a porous porcelain mass, glazed on the sur- fiice. It differs from the amorphous stones of the first family in this, that the last has a foliated texture, and more lustre, and the fragments tend more to the rhomboidal shape ; and also in fusi- bility.

4. Labradore felspar. Its color is of a light or dark gray, or bluish, or blackish gray ; but, in certain positions and spots, reflecting blue, purple, red, green, &c. It chiefly occurs in blunted fragments. Its lustre 2-3. Its trans- parency 1-2-3. Its fracture straight foliated. Its fragments 2. Rhomboidal, with four polished faces, or tending to that shape. Soraetmies without distinct concretions ; sometimes with large or coarse grained, rarely with thick lamel- lar. Its hardness 10. Its specific gravity from 2-C7 to 2-6925. • At 130°, a specimen of the bluish gray, whose transparency was barely 1, and its specific gravity 2672, was barely glazed on the outside ; and at 155° the white part sepa- rated itself from the brown, and was melted. The brown was also imperfectly melted into an opaque porous brown porcelain.

5. Compact felspar. Colors, white, gray, green and red. Massive, disseminated, and crystallised in rectangular four- sided prisms. Lustre glistening, or glimmering. Fracture splintery and even. Translucent only on the edges. Easily frangible. Specific gravity 2-69. It melts with difficulty into a whitish enamel. Its constituents are, 51 silica, 30-5 alumina, 11-25 lime, 1*75 iron, 4 soda, 1-26 water. — KUipr. It occurs in mountain masses, beds, and veins : in the Pentland hills, at Sala, Dan- nemora, and Ilallefors in Sweden ; in the Saxon Erze- gebir;,‘e, and the Hartz. The blue com- pact variety was discovered by Widenmann, at Krieglach, in Stiria, forming a granitic mass with white quartz and silvery mica : the green va- rieties occur in green porphyry and greenstone.

FELT, n.s.kv. a. 3 Sax. pelt; Ital./<'//ro;

Felt’re, r. a. 5 Dan. and Swed”. fiU ;

Belg. vUt. Woollen stuff or cloth made without weaving ; the basis of hats : to felt or feltre, is to unite without weaving; to clot together.

It were a delicate stratagem to shoe A troop of horse wiihfelt.

Shakspeare. King Lear. Hisfeltered locks, that ou his bosom fell. On rugged mountains briers and thorns resemble.

Fairfax. The same wool one man felts into a hat, another weaves it into cloth, another into kersey. Hale.

To know whether sheep are sound or not, sec that the fdt be loose. Mortimer’* Husbandry.

FELTHAM (Owen), an English autlior de- scended of a respectable Suffolk family, was born about the middle of tlie seventeenth century. He resmed, many years in the family of the earl of Thomond. during; which he published liis only known worij, which is of great merit, entitled Resolves, Divine, Political, and Moral. It went through twelve editions before the year 1709 ; and a thirteenth has lately appeared under the superintendence of Mr. Gumming of the Board of Control. The author died about

1678.

FELTING, in the mechanical arts, is the pro- cess by which hair, wool, or silk is worked into a compact texture, without spinning or weaving; chiefly employed in the manufacture of hats. See Hat Making.

FELTRE, or Feltri, the antient Feltria, a town and bishop’s see of the Austro-Venetian territory, in the delegation of Beluno. It has a population of 5200, and stands in a moun- tainous district, at the conflux of two small rivers, not far from the Piave. It is well built, having a handsome square, a cathedral, and a provincial academy ; it is likewise a place of some strength. In 1809 Buonaparte conferred the title of duke of Feltre on general Clarke, his minister of war. It is fifty-three miles north-west of Verona, and eighty-three north of Padua.

FELU’CCA, n. s. TT.felouque ; Arab, felkon. A small open boat with six oars.

I took a felucca at Naples to carry me to Rome.

Additon.

FELUDJE, Felucia, or Anbar, a small modern town of Asiatic Turkey, situated on the east bank of the river Euphrates, north of Hallah. In the neighbourhood dates, grapes, grain, and cotton, are produced. Here Soliman the Great, pacha of Bagdad, erected a palace ; and the place was anciently of great celebrity ; it was taken by the Romans under the emperor Julian, who reduced it to ashes.

FE’MALE, n.s. k adj.

Fe’male-riiymes,

Fe’minality,

Fem’inine, ?i. s. Si. adj.

Fem’inity. young ; a woman : female and feminine, mean of or pertaining to the female sex ; soft; tender; delicate: female-rhymes, are double rhymes; see below : feminality and fem.inity, female nature ; the quality or oehavior of women.

God created mar. in his own image ; male and fe- tnale creattˆd he them. Gen. i. 27.

If he offer it of the herd, whether it be male or female, he shall ofter it without blemish. Levit.

Hether great Venus brought this infant fayre. The yonger daughter of Chrysogoner, And unto Psyche, with great trust and care. Committed her, yfostered to bee, And trained up iu true /t’mim’/pc.

Spcmer’i Futric Qucene, Men, more divine. Indued with intellectual sense and soul, Are masters to their /ema/es, and their lords.

Shakspeare. Ninias was no man of war at all, but altogether feminine, and subjected to ease and delicacy.

Raleigh’s History,

Fr. femme, femcllc ;

Lat. J'emdla, a

./(ttu (Ainsworth).

' A she' ; one of the

sex tliat produces

Thus we chastise the god of wine With water that is feminine. Until the cooler nymph abate His wrath, and so concorporate. CleavelanJ. Female of sex it seems. Milton.

Swarming next appeared The female bee, that feeds her husband drone.

Id. Other suns, perhaps. With their attendant moons thou wilt descry. Communicating male ?a\A female light; Which two great sexes animate the world. Id.

He scrupled not to eat Against his better knowledge, not deceived. But fondly overcome with ye/no/e charm. Id.

O I why did God create at last This novelty on earth, this fair defect Of nature ? And not fill the world at once With men, as angels, yi\h.o\i. feminine. Id.

If in the minority of natural vigour the parts ol fe- minality take place, upon the increase or growth thereof the masculine appears. Brovme.

The female rhymes are in use with the Italian in every line, with the Spaniard promiscuously, and with the French alternately, as appears from the Ala rique, the Pucellc, or any of their later poems.

Dry den's Preface to Ann, Mirab, If by a, female hand he had foreseen He was to die, his wish had rather been The lance and double ax of the fair warrior queen.

Dry den. So should young sympathy \n female form. Climb the tall rock, spectatress of the storm ; Life's sinking wrecks with secret sighs deplore. And bleed for others' woes, herself on shore.

Darwin. My heart is feminine, nor can forget —

To all, except one image, madly blind ; So shakes the needle, and so stands the pole. As vibrates my fond heart to my fixed soul.

Byron, Of higher birth he seemed, and better days. No mark of vulgar

toil that hand betrays. So femininely white it might bespeak Another sex, when matched with that smooth

cheek. But for his garb, and something in his gaze, More wild and high than woman's eye betrays.

Id.

FEMERN, an island o' Denmark, in the Bal- tic, opposite to the coast of Holstein ; its circuit is about thirty miles ; its population 7600. Part of it is under tillage, the rest affords good pas- turage. Fisliing is one of the ciiief means of subsistence here ; but the women are employed in the knitting of stockings.

Feminine, in grammar, one of the genders of nouns. See Gender. The feminine gender in Latin, is formed of the masculine, by altering its termination; particularly changing iis and tr into a or ra. Thus, of the masculine bonus equus, a good horse, is formed the feminine bona equa, a good mare ; but tliis rule is far from being universal, most adjectives of the third de- clension having tlie terminations of both gen- ders alike, and some those of all the three the same. In French, the feminine gender is generally ex- pressed, not by a difterent termination, but by a different article : thus, le is joined to a male, and la to a feirale. In English, the difference of sex is generally expressed by different words ; as boy and girl, brother and sister, boar and

sow, &c. though sometimes the fenjinine is formed by vary.ng the termination of the male into ess ; as in abbot, abbess, &c.

FEM'ORAL, adj. Lat. femoralis. Belong- ing to tlie thigh.

The largest crooked needle should be used in taking up the femoral arteries in amputation. Sharp.

FEM(JRIS OS, the tliigh bone, a long cylin- drical bone, situated between the pelvis and tibia. Its upper extremity affords three con- siderable processes ; the head, the trochanter major, and trochanter minor. The head, which forms about two-thirds of a sphere, is turned inwards, and is received into the acetabulum of the OS innominatum. It is covered by a carti- lage, which is thickest in the middle, but which is wanting in its lower internal part, where its place is supplied by a round spongy fossa, to which the strong ligament, usually called

the round ligament, is attached. This is about an inch in length, flattish, and of a triangular shape, having its narrow extremity attached to the fossa, while the broader end is fixed obliquely to the rough surface near the inner and anterior edge of the acetabulum of the os innominatum. The head of the os femoris is supported obliquely, with respect to the rest of the bone, by a smaller part, called the cervix, vvhich, in the generality of subjects, is about an inch in length. The lower extremity of the os femoris is larger than the upper one, and flattened, so as to form two surfaces, of which the anterior one is broad and convex, and the posterior narrower and slightly concave. This end of the bone terminates in two large protuberances, called condyles, which are united before so as to form a pulley, but are separated behind by a considerable cavity, in vvhich the crural vessels and nerves are secured from the compression to which they would other- wise be exposed in tlie action of bending the leg.

FEN, 71. s. \ Saxon, p&nn ; Goth, and Fen'berr V, # Welsh, /crt ; Teut.fenn ; Bel Fen'eorn, «f/j. > gic, vten; Yv.funge; Italian, Fen'ny, «f/;'. \fungo. A marsh ; bog ; low, FtN'sucKEn. J flat ground. Fenberry is a kind of blackberry : fenny, belonging to, or in- habiting fens. Fenn-sucked, ' drawn out of the fens.'

I go alone, Jiike to a lonely dragon, that his /era Makes feared and talked of more than seen.

Shakspeare. Fillet of a. fenny snake. In the cauldron boil and bake. Id.

Infect her beauty, 'YoM feruuckediogs, drawn by the powerful sun.

Id. King Lear. Mexico is a city that stands in the midst of a great marsh or fen. Abbot's Description of the World.

The fen-born serpent. Milton,

Driving in of piles is used for stone or brick houses, and that only where the ground proves fenny or moorish. Moxon.

He to Portina's v?atery marshes went; A long canal the muddy fen divides. And with a clear unsullied current glides.

Addison. TLe surface is of black fen earth. Woodward.

The hungry crocodile, and hissing snake. Lurk in the troubled stream and fenny brake.

Prior. Mountains, and /ens, and rivers, set bounds to de- spotic power, and amidst these is the natural seat of freedom and independence.

Robertson's History of Scotland. The star of Autumn rays his misty hair ; Fierce from his fens the giant Ague springs.

Darwin. Ten thousand forms by pining fancy viewed Dissolve. — Above the sparkling flood When Phnebus rears his awful brow. From lengthening lawn ;ind valley low The troops of fen-born mists retire. Beattie.

Fen. See Draining. Fens are either made up of a congeries of bogs, or consist of a mul- titude of pools or lakes, with dry spots of land intermixed like so many little islands. The fens in Lincolnshire and elsewhere in England, bring many advantages to the inhabitants. Fowls ancl fish are very plentiful in them. The pikes and eels are large and easdy caught, but they are usually coarse. Ducks, mallards, and teals, are in such plenty as is scarcely to be conceived. They are taken by decoys in prodigious flocks; but im- provements in drainage are annually banishing these ancient distinctions of the fen districts. The people have another very great advantage from these birds, in their feathers and quills.

(ˆats grow very well in many of the fen coun- tries, and in good seasons bring great advantage to the owners. There is also another vegetable of great profit to them, i. e. the brassica napus ; the seed of which they call cole seed ; and make an oil from it of great use in trade.

In Cambridgesinre the fen lands occupy per- haps a third of the whole surface of the county : the soil here is rich, black, and deep. In the neighbourhood of Wisbeach it consists of a mix- ture of sand and clay, or silt, and the uplands of chalk, gravel, loam, and clay. Agues were once very common here; but are much diminished of late years.

The former state of the fen lands, and their degradation to their present state, are given at length in the Agricultural Report, chiefly from an able pamphlet by lord Ilardwicke, a great proprietor here. It was the opinion of Atkins, a commissioner of sewers in the reign of .Tames I. 1604, that these fens, a space of upwards of 280,000 acres, were once ' of the nature of land- meadows, fruitful, healthy, and very gainful to the inhabitants, and yielded much relief to the highland counties in time of great droughts.' Sir W. Dugdale, who was born 1G05, and died 1686, was of the same opinion, adding as a proof, ' that great numbers of timber trees (oaks, firs, &.C.) formerly grew

there, as is plain from many being found in digijinc; canals and drains, some of them severed from their roots, the roots standing as they grew, in firm earth, below the moor.' In 1635 the workmen, on deepening the channel of Wisbeach river, at eight feet below the then bottom, discovered a second bottom, which was stony, with seven boats lying in it, covered with silt. And at Whittlesea, on diu'ging through the moor at eight feet deep, a perfect soil was found with swards of grass lying on it, as they were at first mown. Henry of Hunting-

don, who lived in die reign of Stephen, 1135, described this fenny country 'as pleasant and agreeable to the eye ; watered by many rivers which run through it, diversified by many large and small lakes, and adorned by many woods and islands.' And William of Malmsbury, who lived in the first year of Henry II. 1154, has painted the state of the land round Thorney in the most glowing colors : he says, 'it is a very paradise, in pleasure and delight it resembles heaven itself; the very marshes abounding in trees, whose length without knots do emulate the stars.' ' Tlie plain there is as level as the sea, which, with the flourishing of the grass, allureth the eye ; in some parts there are apple-trees, in others vines.' It appears then, on the authority of the authors quoted, that the fens were for- merly wood and pasture. The engineers were of opinion that the country in question formerly meadow and wood, now fen, became so from partial embankments preventing the waters from the uplands going to the sea by their natural outfalls ; want of proper and sufficient drains to convey these waters into the Ouse ; neglect of such drains as were made for that purpose ; and that these evils increased from the not embanking the river Ouse, and the erection of sluices across it preventing the flux and reflux of the sea ; the not widening and deepening, where wanted, the river Ouse ; and from not removing tlie gravels, weeds, &c., which have from time to time accu- mulated in it.

The first attempt at draining any part of the fens appears lo have been made in the time of Edward I. (1272, See); many others with various success followed. The famous John of Gaunt, or Ghent, who died in 1393, and Margaret, countess of Richmond, were amongst the drairjug adventurers; but Gough, in his addition to Camden, says ' the reign of Elizabeth may be properly fixed on as the period when the level began to become immediately a public case. Many plans were proposed and abandoned between that time and 1634, when king Charles I. granted

a charter of incorporation to Francis, earl of Bedford, and thirteen gentlemen adven- turers with him, wlio jointly undertook to drain the level on a condition that they ahould have granted to them, as a recompense, 95,000 acres (about one-third of the level). In 1G49 this charter was confirmed to William, earl of Bed- ford, and his associates, by the convention par- liament; and in 1653, the level being declared completely drained, the 95,000 acres were con- veyed to the adventurers, who had expended £400,000, which is almost £4 4s. per acre on the 95,000 acres, and about £l 8s. on the whole breadth, if the whole level contain 285,000 acres, and it is generally supposed to contain 300,000 acres. In 1664 the corporation called Conservators of the great level of the fens was established. This body was empowered to levy taxes on the 95,000 acres, to defray whatever expenses miglit arise in their preservation ; but only 83,000 acres were vested in the corporation, in trust for the earl of I?pdford and his asso- ciates; the remaining 12,000 were allotted, 10,000 to the king, and 2000 to the earl of Portland. At first the levy was an equal acre tax, but upon

its being deemed unjust, a gradual one was adopted, which is now acted upon. In the year 1697 the Bedford level was divided into three districts, north, middle, and south ; having one surveyor for each of the former, and two for the latter. In 1753 the north level was separated by act of parliament from the rest. In addition to the public acts obtained for draining the fens, several private ones have been granted, for draining separate districts with their limits, not- withstanding which, and the vast sums expended, much remains to be done ; a great part of the fens is now (1806) in danger of inundation ; this calamity has visited them many times, producing effects distressing and extensive beyond concep- tion, indeed many hundred acres of valuable land now drowned, the misfortune aggravated by the proprietors being obliged to continue to pay a heavy tax, notwithstanding the loss of their land.

The interior drainage is performed in most places by windmills, which are very uncertain in their effects. Steam has been tried, and there can be no doubt would be incomparably prefer- able, as working in all weathers.

Embanking may be considered a necessary accompaniment of draining on the fen-lands. The fens are divided into three large levels, and each of these are subdivided into numerous districts by banks ; but as these banks are made of fen-moor, and other light materials, whenever the rivers are swelled with waters or any one district is deluged, either by rain, a breach of banks, or any other cause, the waters speedily pass through these bright, moory, porous banks, and drown all the

circumjacent districts. The fens have sometimes sustained £20,000 or £30,000 damage by a breach of banks; but these accidents seldom happen in the same dis- trict twice in twenty years ; the water however, soaks through all fen banks every year in every district; and when the water-mills have lifted the waters up out of the fens into the rivers in a windy day, a great part of tlie water soaks back through the porous banks in the night upon the same land again. This water that soaks through the bank, drowns the wheat in the winter, washes the manure into the dykes, destroys the best na- tural and artificial grasses, and prevents the fens from being sown till too late in the season. Tiiis stagnant water, lying on the surface, causes also fen agues, &c. ; thus the waters that have soaked through the porous fen banks have done the fer- tile fens more real injury than all the other floods that have ever come upon them. The remedy for the soaking through of the water is obviously that of forming a puddle wall in the middle, which appears to liave been first thouglit of among the fen bank-makers by Smitli of Chat- teris, a professed embanker. See our article Embankments. With respect to embanking from the sea, Vancouver is of opinion that tiie ground ought to be covered by nature with sam- phire or other plants, or with grass, before an attempt is made to embank it : there is particular danger in being too grasping. ‘ If the sea has not raised the salt marsh to its fruitful level, all ex- pectation of benefit is vein, the soil being imma- ture, and not ripened for tr.closure; and if again

with a view of grasping a great extent of salt marsh, the bunks or sea wall be pushed farther outwards than where there is a firm and secure foundation for it to stand upon, the bank will blow up, and in both cases great losses and dis- appointments will ensue.’

Paring and burning land is every where ap- proved of, and considered the sine qua non of the fen districts, in breaking up turf. Without it corn crops are destroyed by the grub and wire-worm. Colonel Adeane, of Barbraham, has 300 acres of meadows, which have been irrigated from the time of queen Elizabeth. ‘ Pallavicino, who was collector of Peter’s pence in England, at the deatii of queen IMary, having £30,000 or £40,000 in his hands, had the art to turn Pro- testant on the accession of queen Elizabeth, and appropriated the money to his own use ; he bought with it an estate at Barbraham. and other lands near Bournbridge ; and procuring a grant from the crown, of the river which passes through them, was enabled legally to build a sluice

across it, and throw as much of the water as was necessary into a new canal of irrigation, which lie dug to receive it in the method so well known, and commonly practised in Italy long before that period. The canals and the sluices are all well designed, and are the work of a man evidently well acquainted with the practice ; but, in taking the waters froaa them for spreading it by small channels over the meadows, there does not seem to be the least intelligence or knowledge of the husbandry of watering. No other art is exerted but that merely of opening in the bank of the river small cuts for letting the water flow on to the meadows always laterally, and never longitudinally, so necessary in works of this kind. Tlie water then finds its own distribution, and so irregularly, that many parts receive too much, and others none at all. From the traces left of small channels in different parts of the meadows, it would appear that the ancient dis- tribution formed under Pallavicino is lost, and that we see nothing at present but the miserable jiatch-work of workmen ignorant of the business. Irrigation has not spread from this example, but might be extensively practised on the banks of all the rivers.

FENCE, H.s.,v.«.&u.w.ˆ Fence'less, adj. Fence'ful, Fen'cer, n.s. Fenc'ible, adj. Fenc'ing, n. s.

FeNC'iNG-M ASTER,

Fenc'ing-schooi.. or guard : as a neuter verb

Latin, fendo,

to drive away.

Guard ; defence ;

[ˆ security ; enclo-

['sure ; the art or

i skill of defending

I one's self. To

J fence is to enclose

o practise the art

of fencing; to guard against: fenceful, affording])rotection : fenceless, exposed ; without defence : fencer and feccing-masters, are professors

of the art of fencing: fcncible, capaljle of defence: fencinrj, tlie ?rt of using weapons for defence and occasional assault : fencing-school, a place where the use of such weapons is taught.

Thou hast clothed rae with skin and flesh, and hast fenced me with bones and sinews. Job x. 11.

He went about to make a bridge to a strong city, which \i3iS fenced about with walls. 2 Mac. xii. 13.

If a throstle sing, he falls strait a capering : He vWifeTice with his own shadow. Shabspeare.

I'll prove it on his body, if he dare. Despite his nice fence and his active practice. Id

The' inhabitants each pasture and each plain Destroyed have, each field to waste is laid j In fenced towers bestowed is their grain. Before thou cam'st this kingdom to invade.

Fairfax. Calmness is great advantage ; he that lets Another chafe, may warm him at his fire,

Mark all his wand'rings, and enjoy his frets ; As cunning yenceri suffer heat to tire. Herbert. A nimble fericer -wiW put in a thrust so quick, that the foil will be in your bosom when you thoifgbt it a yard off. Dkjby.

So much of adders' wisdom I have learnt. To fence my ear against thy sorceries. Milton. Are not the /ences of discipline cast down ? Is there any conscience made of violating laws ? Bairow. A beauteous heifer in the wood is bred ; The stooping warriors aiming bead to head. Engage their clashing horns ; with dreadful sound The forest rattles, and the rocks rebound ; They fence and push, and, pushing, loudly roar. Their dewlaps and their sides are bath'd in gore.

Drt/den. Shall I mention make Of the vast mound that binds the Lucrine lake ? Or the disdainful sea, that, shut from thence. Roars round the structure, and invades the fence.

Id. With love to friend, the impatient lover went, Fenc'd with the thorns, and trod the deep descent.

Id. There's no fence against inundations, earthquakes, or hurricanes, L' Estramje.

A man that cannot fence will keep out of bulUcs and gamesters' company. Locke.

The only fence against the world is a thorough knowledge of it ; into which a young gentleman should be entered by degrees, as he can bear it ; and the earlier the better, so he can be in safe and skilful hands to guide him. Id.

If a man be to prepare his son for duels, I had rather n.ine should be a good wrestler than an ordi- nary fencer, which is the most a gentleman can attain to, unless he will be constantly in the fencingschool , and every day exercising. Id.

Each motion of the heart rises to fury. And love in their weak bosoms is a rage As terrible as hate, and as destructive : So the wind roars o'er the \i\ile feiicelett ocean, And heaves the billows of the boiling deep. Alike from North, from South.

Rome's Jane Shurc. Let us bear this awful corpse to Cassar, And lay it in his sight, that it may stand A fence betwixt us and the victor's wrath.

Addison. While a man is learning to fence, he practises both on friend and foe ; but when he is a master in the art he never exerts it but on what he thinks the right si'lc.

Id. Spectator. See that Uie churchyard be /oiccf/ in with a decent rail or other inclosuro. Ayliffe's Parerymi.

]\linerva Taught artists first the carving tool to wield. Chariots with brass to arm, and form the fenceful shield. Conijreve.

These, ocing polemical arts, could no more be learned alone l\a.ii fencing or cudgelplaying.

Arbuthnot and Pope.

FENCE.

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Employ their wiles and unavailing care. To pass the fences and surprise the fair. Pope. That proved not fence enough to the reputation of Jicir oppressors. Decay of Pietj.

I wat she was a sheep o' sense. An' could behave herself wi' mense : I'll say't she never brak a. fence.

Through thievish greed.

B urns. We give some Latin, and a smatch of Greek ; Teach him to fence and iigure twice a week ; And having done, we think, the best we can. Praise his proficiency, and dub him man.

Cowper. Thither he hied, enamour'd of the scene. For rocks on rocks piled, as by magic spell. Here scorch'd with lightning, there with ivy green, Fenc'd from the north and east this savage dell,

Beattie, Then for accomplishments of chivalry.

In case our lord the king should go to war again. He Icarn'd the arts of riding, yˆicmˆ, gunnery. And how to scale a fortress — or a nunnery.

Byron.

Fence, in gardening and husbandry, wall, ditch, bank, or other enclosure, made round gar- dens, fields, woods, &c. In hot climates, where they have no occasion for walls to ripen their fruit, their gardens lie open, where they can have a water fence, and prospects ; or else they are bounded with groves, which are much more pleasing to the sight than dead walls ; but, in cold countries, we are obliged to have walls to shelter and ripen our fruit, although they take away much from the pleasant prospect of the garden. Brick walls are accounted the best and warmest for fruit; and these being built pannel-wise, with pillars at equal distances, save a great deal of expense, as they can be built thinner than if they were made plain without the pannels ; and besides, these pannels make the walls look the handsomer. Stone walls, however, on account of their durability, are to be preferred to brick, especially those of square hewn stones. Those that are made of rough stones, tliough they are very dry and

warm, yet, by their unevenness, are in- convenient to nail up trees to, unless pieces of timber be laid in them here and there for that purpose. But, in large gardens, it is better to have the prospect open to the pleasure garden; which should be surrounded with a fosse, that from the garden tlie adjacent country may be viewed. Where the fosses are made round a gar- den which is situated in a park, they are ex- tremely proper ; because hereby the prospect of the park will be" obtained in the garden, which renders those gardens much more agreeable than those that are confined. In making these fosses there have been many inventions : but, Miller, in his Gardener's Dictionary, reckons none pre- ferable to those which have an upright wall next the garden, which (where the soil will admit of a deep trench) should be five or six feet high ; and, from the foot of this wall, the ground on the outside should rise with a gradual easv slope, to the distance of eighteen or twenty feet; and, where it can be allowed, if it slopes much farther it will be easier, and less perceptible as a ditch, to the eye, when viewed at a distance ; but if tiie ground is naturally wet, so as not to admit a

deep fosse, then, in order to make a fence against cattle, if the wall be four feet high, and slight posts of three feet high are placed just behind the wall, with a small cham carried on from post to post, no cattle or deer will ever attempt to jump against it; therefore it will be a secure fence against them; and if these are painted green they will not be discerned at a distance, and at the same time the chain will secure per- sons walking in the garden from falling over. In places where there are no good prospects to be obtained from a garden, it is common to make the enclosure of park-pailing ; which, if well per- formed, will last many years, and has a much better appearance than a wall : and this pale may be hid from the sight within, by plantations of shrubs and evergreens ; or there may be a quick hedge planted within the pale, which may be trained up, so as to be an excellent fence by the time the pales begin to decay. Fences round parks are generally of paling; which if well made of winter fallen oak, will last many years. But a principal thing to be observed is, not to make them too heavy, else their own weight will make them decay; therefore the pales should be cleft thin; and the rails should be cut triangular, to prevent the wet lodging upon them ; and the posts should be good, and not placed too far asunder. One of these pales will thus last up- wards of forty years. The common way of making these fences is, to have every other pale nine or ten inches above the intermediate ones ; so that the fence may be six feet and a half high, which is enough for fallow deer ; but, where there are red deer, the fence should be one foot higher, otherwise they will leap over. Some en- close their parks

with brick walls ; and, in coun- tries where stone is cheap, the walls are built with this material ; some with, and others with- out, mortar. A kitchen garden if rightly con- trived, will contain walling enough to afford a supply of such fruits as require the assistance of walls, for any family: and being situated on one side, and quite out of sight of the house, may be surrounded with walls which will screen the kitchen garden from the sight of persons in the pleasure garden ; and, being locked up, the fruit will be much better preserved than it can be in the public garden. Too great a quantity of wall- ing is often the occasion that so many ill-managed trees are to be seen in large gardens. The height of garden walls should be twelve feet, which is a moderate proportion; and, if the soil be good, it may in time be well furnished with bearing wood in every yjart, especially that part])lanted with pears, notwithstanding the branches being trained horizontally from the bottom of the walls. See Horticulture.

Dr. Anderson, in his Essays on Agriculture, &c., observes, that, ‘ The fences that are most universally employed, are either stone dikes or hedges. Dikes, if well built, as efi’ectually pre- serve a field from the intrusion of domestic ani- mals, as any other kind of fence whatever; but they afford little warmth or shelter to the fields: whereas hedges, if good, answer both these inir- poses equally well. But the most material dis- tinction between dikes and hedges is, that dikes are in the highest degree of perfection as soon us

they are reared, and from that moment begin to tend towards decay ; so that the person wlio builds this kind of fence immediately receives the full benefit tliereof: whereas hedges, being at first weak and tender, stand in need of attention and care, and do not become a fence for several years after they aie planted; and, as they conti- nue to increase in strength, and gradually acquire a higher and higher degree of perfection, it is long before they begin to fall towards decay ; so that they are, in general, infinitely more durable than dikes, although they are longer in becoming of use to tlie person who plants them. Which of these two kinds offences may, upon the whole, be most eligible, must, in general, be determined by the circumstances and views of the possessor of the ground to be enclosed. If he is a tenant who has a short lease, without a prospect of get- ting it renewed ; or, if he has immediate occa- sion for a complete fence ; it will be, in general, most prudent in him to make choice of dikes, if the materials for rearing these are at hand ; but, if there is any probability that his

posterity may reap any advantage fromtliese enclosures, it will be almost always more for his advantage to make choice of hedges. A dike built of freestone and lime will be almost as durable as a hedge; al- though, in general, it will neither be so cheap nor agreeable. But dry stone dikes, unless built of the finest quarried stone, are of such a perishable nature, as to be hardly ever worth the expense of rearing; and never, excepting where tlie field that you would wish to enclose has plenty of stones upon its surface, which you are under a necessity of carrying away before the field can be improved. In this situation a man may, in some measure, be excused, if he should be tempted to put them into dikes ; because the carriage of these stones may be said to cost him nothing: and he may, perhaps, be at some loss how to dispose of them in any other manner. But, in all other circumstances, it is very bad eco- nomy to rear fences of this kind, as feal (sod) dikes can always be built at one fourth of the expense that these would cost, and will answer all pur- poses equally well, and, if carefully built, will be kept in repair for any number of years at as small an expense as they could be. The want of durability generally complained of in these dikes is owing to their bad construction. The greatest part of them are made of a considerable thick- ness, witli a ditch on each side ; the heart of the dike being made up with the earth that is taken from these ditclies ; and only a thin wall, on each side, is built of solid feal from top to bot- tom; the consequence of which is, that as the loose earth that is thrown into the middle of the dike subsides much more than the seal on each side, the top of the dike sinks down ; and, of course, the two side walls are pressed too much upon the inside, so as to bilge (or swell) out about the middle, and quickly crumble down to dust. To avoid this inconvenience, I have always chosen to build my dikes of tliis sort thinner than usual : they being only three feet and ˆ ‘ialf thick at tlie bottom ; one foot, or a very little more, at top ; and five feet high : taking care to have them built in such a manner, as that every sod (or feal), from top to bottom binds the join-

ings of the others below it, with as much accu- racy as the bricks in a well built wall. The up- permost course of feal is cut a little longer than those that are immediately below it, and placed with the grassy side uppermost, so as to project a little on each side ; which not only helps to throw the water a little off” the dike, but also to prevent sheep or cattle from attempting to jump over it so readily as they otherwise might do. At the foot of the dike, on each side, is dug a small ditch, about one foot and a half or two feet deep ; leaving a ledget of a few inches broad on each side, that the dike may not be undermined by the crumbling down of the loose earth into the ditch. These ditches not only help to give the dike an additional height, and

keep its founda- tion dry ; but are also of use to prevent cattle from coming close to it and rubbing upon it, or tearing it down with their horns, which they are very apt to do if this precaution be omitted. The earth that is taken out of the ditches may be thrown outwards, into the place that was oc- cupied by the feal that has been taken to build the dike ; and, if the field is in grass, a few seeds may be sowed upon it, and it will soon be co- vered as well as the rest of the field. By having the joints bound in every direcuofi, tbc Aibric is rendered much firmer than it could be by any irregular manner of working, while it is at the same time more easily reared. If the ground is soft, and the feal rise well, I get a fence of this kind done for one halfpenny per yard ; but, if it is not good to work, a little more must be allow- ed. As to the time that a fence of this kind may stand without needing any repair, the oldest has now stood ten years, and seems to be nearly as firm as when first built. I have seen some walls of poor cottages which have beenbuiltsomewhat after this manner, tliat have been good after standing forty or fifty years : but their durability depends greatly upon the nature of the feal of which they are formed. The best is that which is taken from poor ground of a spongy quality, which is generally covered with a strong sward of coarse benty grass. And, in situations where this can be had, I would recommend this as the cheapest and best temporary fence that could be reared. The greatest inconvenience that attends this species of fence is, the danger it runs of being torn down by the horns, or wasted away by the rubbing of cattle upon it; which they will sometimes do notwithstanding the ditches. This may be effectually prevented by planting a row of sweet briar (or eglantine) plants between the first and second course of feal when the dike is built, which will not fail to grow with luxuri- ance, and in a short time defend the dike from every attack of this kind. But if sheep are to be kept in the enclosures, this plant ought not, on any account, to be employed ; for, as that animal naturally flies to the fences for shelter in stormy weather, the prickles of the straggling branches of the briar will catch hold of the wool, and tear it off" in great quantities, to the great detriment of the flock and loss of the])roprietor. In these cases, if the possessor of the ground is not afraid of the bad consequences that may be dreaded from the spreading of whins (furze), it would be much better to scatter a few of the seeds of this

plant along the ledget at the foot of the dike, which would quickly become a preservative for it, and be otherwise of use as a green food

for his sheep during the winter season. But, before he ventures to sow this plant, let him remember, that where it is once established it will hardly fail to spread through the adjoining fields, and can hardly be ever afterwards thoroughly rooted out. I have often imagined, that this kind of fence might be greatly improved both in beauty and strength, by planting a row of ivy plants be- neath the first course of feal in building the dike; which would, in a short time, climb up the sides of the dike and cover the whole with a close and beautiful net- work of woody fibres, covered with leaves of the most beautiful ver- dure ; which would tend to preserve the dike from being eaten away by frost, and other vicissi- tudes of weather. And when it is arrived at the top, it would there send out a number of strong woody branches, forming a sort of hedge, that would afford some shelter to the fields, and break the force of the wind considerably. I have seen a garden wall that had been built of stone and clay, ornamented and strengthened in this way. 1 have had the experience of ivy growing well upon a dry stone dike ; and have likewise seen it growing up the walls, and covering whole cot- tages built of feal ; which have by this means been preserved entire, long after the walls that had been naked have fallen to decay. But, not having had plants of this kind at hand, I have not had an opportunity of trying it in the manner proposed ; although, I think, there is the greatest reason to hope for success. Whins have been often employed as a fence when sowed upon the top of a bank. They are attended with the con- venience of coming very quickly to perfection, and of growing upon a soil on which few other plants could be made to thrive : but, in the way that they are commonly employed, they are nei- ther a strong nor a lasting fence. See Hedge. The fences hitherto mentioned are only intended to preserve fields from the intrusion of cattle; but, on some occasions, it is necessary to have a fence that would even resist the efforts of men to break through it : as around bleaching fields, orchards, &c. the want of which often subjects the proprietor of such fields to very disagreeable accidents. To effectuate this, it is necessary to begin by trenchincr up or ploughing a large belt all around the field you mean to enclose, of forty or fifty feet or more in breadth, if you find it con- venient ; the outer edge of which should be en- closed by a good dike, or a ditch and hedge. This belt should be kept in culture one year, and well manured, if your situation will admit of it ; and laid up before winter in such a manner that no water may be allowed to lodge upon it; and planted in winter all over with plants of eg- lantine so thick as not to be above two feet from one another ; and between these put a good number of young birch plants not above two years old. interspersed with hazels, oak, ash, ravvn (wild service), and other trees that will thrive upon your soil : together witl\ thorns, hollies,

brambles, and wood-bine (honey suckle); and having then fenced it from cattle, and kept down the weeds that may rise upon its surface by ^‘or.. IX.

the hoe, as long as you can conveniently get ac- cess into it, leave it afterwards to nature. If this is done, and your soil be not extremely bad, the belt in a very few years will be entirely filled with a close bush of trees, so intermixed with the bending branches of the eglantine, and bound together by the trailing shoots of the bramble and wood-bine, that no animal above the size of a cat could penetrate ; especially when it is of such a depth as I have recommended. — But as all kinds of trees and shrubs, if planted very close upon one another, become naked at the root when they arrive at any considerable size, care should be taken to prevent it from ever coming to that state, by cutting it down whenever it becomes in danger of being open at the root. And as it would be improper ever to leave the field en- tirely defenceless, it is a great advantage to have the belt as broad as it conveniently may be, so that the one-half of it may be a sufficient fence ; by which means, we shall have it in our power to cut down the inside and the outside of the best alternately, so as still to keep the thicket young, and never to want at any time a sufficient fence ; and the brush wood that this afforded at each cutting would, in almost every situation, yield such a r-evenue as would do much more than in- demnify the proprietor for the rent of the ground that was occupied by this fence. And, if the field was in such a situation as required shelter, some trees might be allowed to grow to their full size about the middle without any inconvenience, if the belt were of a sufficient breadth.’

‘ There is one other species of fencing (conti- nues Dr. Anderson), as useful as any of those al- ready mentioned, which is in general much less understood, and more difficult to execute properly, viz. the method of securing the banks of rivers from being washed away by the violence of the stream, and of preventing the damages that may otherwise be occasioned by the swelling of the waters. It frequently happens that, when a river runs in a bed of rich vegetable mould, the least accident that may chance to divert the stream towards any particular part of the bank, causes it to sweep away large tracts of fine ground, to the very great detriment of the proprietor, as well as the public ; as this fine mould is usually carried to tlie sea, and the place that die water leaves, to occupy the new bed that it thus forms for itself, is generally of a much worse quality, con- sisting chiefly of stones, sand, and gravel. In some cases, where the whole force of the current is quite close to the bank, and the materials necessary for fencing it are not to be found, it may perhaps be impossible or very

difficult totally to prevent this evil ; but for the most part it admits of a cure that can be obtained at a pretty moderate expense. These ravages are always greatest where the bank rises perpendicularly to a pretty considerable height above the ordinary surface of the water, and never at those places where the banks shelve down gradually towards the water's edge; for when the river is swelled to a great height by rains, and runs with a force and ra- pidity greater than usual, it strikes violently against these perpendicular banks tl>at directly oppose its course, which, being composed of earth quite bare and uncovered, are easily soft-

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eiied by the water, and quickly washed away; so that the upper part of the bank, being thus under- mined, falls by its own weight into the river, and is carried off in prodigious quantities : whereas at those parts of the bank that shelve gradually downwards to the water's edge, when the river rises to any considerable height, it gently glides along its surface ; which, being defended by the matted roots of the grass with which it is covered, scarcely sustains any damage at all ; and is nearly the same after the water has retired within its banks as before the inundation. These facts, which no one who has bestowed the least atten- tion to this subject can fail to have observed, clearly point out, that the first and most neces- sary step towards a cure, is to level down the edge of the bank that is next to the water, so as to make it slope gradually down towards the river. If the bank is very high, and you have no other particular use for the earth that must be taken from it, the' easiest method of disposing of it, will be to throw it into the river ; but, in whatever manner you may dispose of the earth, the slope of the bank must be continued until the inner edge of it is as low as the surface of the water at the driest time of the year, and be made to ascend gradually upwards from t!ie water with an easy slope, till it comes to the level of the ground, or at least rises to such a height as the water never exceeds. This operation ought to be performed as early in summer as possible, and should be either immediately covered with turf, pared from the surface of some field that has a very strong sward upon it, taking care to lay these in such a manner as to be in as little dan- ger as possible of being washed away by any ac- cidental flood that might happen before they had grown together ; or, if turf of this kind cannot be easily had, it should be sowed very thick with the seeds of some small matt-rooted grass (such as the poa

repens, or creeping meadow grass), * that should be kept in readiness for this purpose. If the stream has not been extremely rapid at the foot of the bank, some of the earth that was thrown into the water will be allowed to subside to the bottom, and will there form a bank of loose soft earth, which will be of great use afterwards in preventing tlie fiice of the bank under water from being washed away ; but, in order to secure this bulwark effectually for the future, the surface of this soft earth ought to be instantly stuck full of the roots of bot; reeds, flags, water spider-wort, rushes, and otiier matt-rooted aquatic plants ; which, if allowed to remain till they have once struck root, will afterwards form a barrier that nothing will ever be able to destroy. But if the stream be too rapid to admit of this, and the bank of soft earth is much deeper than the sur- face of the water, it will be of use to fill up the breast of the bank with loose stones carelessly thrown in, till they rise near the surface of the water ; which would most effectually secure it against any future encroachments, if the bank is sloped away aliove. If stones cannot be easily got for this purpose, the only resource is to dig the bank so low, that, at the undermost edge, it may be always below the surface of the water ; and to carry it out in this way for a considerable distance, and thus stick the whole surface that is

below the water full of matt-rooted aquatic plants; which will in a great measure, if not entirely, defend it from any future encroachments. This bank ought to continue to shelve downwards even where it is below water, and those aquatics that will grow in the greatest depth of water should be planted on the innermost brink, and the others behind them. The water spiderwort will grow in four feet deep of water, and the roots of the common yellow-flowered water iris form such a strong and compact covering upon the surface of the soil on which it grows, as would defend it from being afiected by the water almost as well as a rock. It is likewise an advantage attending this plant, that it grows upon a firm bottom, and chiefly delights in running water. If the stratum of soft earth is not so deep as to reach to the sur- face of the water, and lies upon a stratum of rock or hard gravel, there will be no occasion for throwing in stones of any kind. But, as it is difficult to unite the vegetable mould to any of these strata, there will always be some danger of its separating from these in violent inundations ; and, if the water once get an entry, it will not fail to grow larger and larger by every future inunda- tion. To prevent this inconvenience, it will be necessary, after you have sloped the earth away till you reach the gravel or rock, to cover the place where the edge of the earth joins the infe- rior stratum with a good many small stones, if they can be found ; sowing between them the seeds of any

kind of plants that you think are most likely to thrive, which have strong matted roots with as small and flexible tops as possible. From the impossibility of ever making earth ad- here firmly to stone of any kind, it must always be an improper practice to face the banks of ri- vers to a certain height with stones which is coped at top with earth.'

]Mr. Arthur Young, in his Annals of Agricul- ture, vol. XIII. has supplied us with the fol- lowing method of fencing, from the pen of W. Erskine, Esq. 'The importance of good fences is universally acknowledged by every lover of husbandry, although there are various opinions about the kinds of them, every one being natu- rally prejudiced in favor of those he has been most accustomed to see, or by the opinion of others whose judgment he relies on. An intelligent correspondent, in the second volume of the Bath Papers on Agriculture, is so warm an advocate for quickset hedges, as to make him totally con- demn the dead walls which are to be seen on the road between Bath and Cirencester, and in many other parts of England. I hope he will not take it amiss, if I cannot absolutely assent to his assertion, ' that quickset hedges are more useful and profitable.' That they are more ornamental cannot be denied, and they are generally al- lowed to afford more shelter ; but the length of time, the constant attention, and continual ex- pense of defending them until they bear even a resemblance of a fence, induces many people, in those places where the materials are easily pro- cured, to prefer the dry stone walls ; for though the first cost is considerable, yet as the farmer reaps the immediate benefit of the fence (which is undoubtedly the most secure one), they are thought on the whole to be the least expensive ;

besides, the cattle in exposed situations, and es- pecially in these northern parts, are so impatient of conlinemerft at the commencement of the long, cold, wet nights, that no hedges I have ever yet seen in any part of this island are sufficient to keep them in. These inconveniences probably suggested to the late Sir George Suttie (eminent in East Lothian for his love of, and skill in, agri- culture), an idea of a fence, that at once joined the warmth and ornament of the hedge with the almost perpetual fence of the wall. If I mistake not, you have, in some of your useful works, reconmiended hedges to be planted against the common dry stone walls : Sir George Suttie rather improved on this thought ; he planted his hedges after the common method here, in the face of the ditch ; but instead < f putting a paling, or post and rail on the top of the bank, he placed a wall of two

feet and a half high. His local situation induced him to build with lime, and, in places where that commodity is tolerably reasonable, it is the best method, as the satis- faction it affords by requiring no repairs, and the duration more than repays the expense; but, where the price of lime is high, they may be built without any cement, and an- swer the purpose very well, if the work is pro- perly executed.' Mr. Erskine, after informing Mr. Young that 'he has now experienced the benefit of these fences for some years,' and that he ' can with great confidence recommend them as superior to all others,' concludes with the fol- lowing account of the method of erecting them : ' When a new fence is proposed to be made, the surface of the ground of the breadth of the ditch, and likewise for two feet more, should be pared off, to prevent, as much as possible, the weeds and grass from hurting the growth of the young thorns. The ditch should be five feet broa.d, two feet and a half deep, and one foot broad at tlie bottoni; leave one foot for an edging or scarcement, then dig the earth one spit of a spade for about one foot, and put about three inches of good earth below the thorn, which should be laid nearly horizontal, but the p'oint rather inclining upwards, in order to let the rain drip to the roots ; then add a foot of good earth above it ; leave three or four inches of a scarce- ment before another thorn is pfanted : it must not be directly over the lower one, but about nine inches or a foot to one side of it ; then throw a foot of good earth on the thorn, and trample it well down, and level the top of the bank for about three feet and a half for the base of the wall to rest on. The b;i.se of the wall should be about nine or ten inches (but not exceed one foot from the thorn). The wall to be about two feet thick at the bottom, and one foot at the top ; the cope to be a single stone laid flat, then covered with two sods of turf; the grass of the undermost to be next the wall, and the other sod must have the grass side uppermost; the sods should be of some thickness to retain moisture, so tliat tliey may adhere together, and not be easily disjjlaced by the wind ; the height of the wall to be two feet and a half, exclusive of the sods, which to- gether should be from four to six inches, by which means the wall would be nearly three feet altogether.' See Hepges and Paling.

‘ Next to implements and machineiy, and suitable buildings,’ says an able writer on this subject in the supplement to the Encyclopedia Britannica, ‘ fences are in most situations in- dispensable to the profitable management of arable land. They are not only necessary to protect the crops from the live stock of the farm, but often contribute, in no small degree by the shelter they aflbrd, to augment and improve the produce itself. On all arable farms, on which cattle and sheep are pastured, the ease, security, and comfort, which good fences give,

both to the owner and the animals themselves, are too evi- dent to require particular notice. And as there are few tracts so rich as to admit of crops being carried off the land for a succession of years, without the intervention of green crops consumed where they grow, fences, of some description or other, can very rarely be dispensed with, even in the most fertile and highly improved districts.' But 'there is no branch of husbandry so ge- nerally mismanaged as this. No district, of any considerable extent, perhaps, can be named, in which one does not see the greater part of what are called fences, not only comparatively useless, but wasteful to the possessor of the lands which they occupy, and injurious both to himself and his neighbours, by the weeds which they shelter. This is particularly the case with thorn hedges, which are too often planted in soils where they can never, by any management, be expected to become a sufficient fence ; and which, even when planted on suitable soils, are in many cases so much neglected when young, as ever afterwards to be a nuisance, instead of an ornamental, per- manent, and impenetrable barrier, as, with proper training, they might have formed in a few years.*

By way of general hints, he adds, ' the ex- posure of the lancL should be considered, in order that the fences may give the shelter that is most required : — the form of the field should be such as to render it most accessible from the farm buildings, and that it may be cultivated at the least expense, the lands or ridges not being too short, nor running out into angles at the points where the fence takes a different directioLi : — and the soil of the enclosure should be as nearly alike throughout as possible, that the whole field may be always under the same kind of crop. It must, in general, be a matter of consequence to have water in every enclosure ; but this is too obvious to escape, attention.'

'The most common fences, of- a permanent character, are stone walls and whitethorn hedges. Stone walls have the recommendation of being an immediate fence; but the disadvantage of going gradually to decay, and of requiring to be entirely rebuilt, in some cases every twenty years, unless they are constructed with lime mortar, which is in many districts much too expensive to be em- ployed in erecting, common fences. Whitethorn hedges, on the contrary, though they require several years to become a fence of themselves, may be preserved at very little expense afterwards in full vigor for several generations. It is scarcely necessary to add, tliat \ipon wet soils, where hedges are employed as fences, it is of importance that the ditches be drawn in such a direction as to serve the purposes of drains, and also that

they may receive tlie water from the covered drains that may be required in the fields con- tiguous. According as the line of the fence is more or less convenient in this respect, the ex- pense of draining may be considerably diminished or increased.'

' The expense of enclosing, and, of course, the direction and construction of the fences,' con- cludes this writer, ' ought to be undertaken in almost every case by tlie proprietor, not merely for tlie sake of relieving the tenant from a burden which may be incompatible witli his circum- stances and professional duties, but also from a principle of economy on the part of the landlord. Whatever may be tlie tenant's knowjedge and capital, it is not to be expected that his views should extend much beyond his own accommo- dation during ids temporary occupation ; whereas the permanent interest of the landlord requires, not so much a minute attention to economy in the first instance, as that the amelioration sliall be as complete and as durable as possible. The tenant's outlay on fences must inevitably be re- turned by a diminution of the yearly rent, and probably with a large profit for the first advance of the money ; while, at the same time, that money may be expended in an improvement which is neither so complete nor so lasting as it might have been rendered, had it been done at the expense, and under the direction of the pro- prietor. But another error of tlie same kind is probably still more common, and by far more pernicious to landholders. The fences are to be kept in repair by the tenant ; which, in so far as regards stone walls, is' a stipulation no way ob- jectionable. But it often happens that a land- lord, even though he runs a hedge-fence at his own expense, leaves it to be trained up by the tenant without his interference ; and the conse- quence is, that, in perhaps nine cases out of ten, it never becomes a sufficient fence at all ; that the original cost is lost for ever ; and that the land wliich it occupies is not only unproductive, but actually a nuisance. Besides, it is evidently improper to require of a tenant to rear up a good fence, commonly by a greater outlay than was required for forming it, v/hen the half of his lease

perhaps must elapse before he can derive much benefit from it. This mistake on the part of proprietors is probably the principal cause of the badness of hedge-fences; for if they are neglected when the plants

are young, if cattle are allowed to make gaps, water permitted to stagnate in the ditch, or weeds to grow unmolested on the face of the bank, no labor or attention afterwards will ever make an equal and strong fence. As it is well known how difficult, or rather impossible, it is to enforce tliis care by any compulsory co- venants, the best plan for botii parties is that which is adopted in some districts, where hedges are reared at the mutual expense of landlord and tenant, tlie thorns, while they require it, being protected by rails, or otherwise, so as to give the tenant all the advantages of a complete fence in the mean time. In this case he cannot justly complain that he pays a share of the expense, and this payment furnishes the strongest motive for preserving the young thorns from damage, and for training them with such care, as to be- come a complete fence in the shortest possible period.'

Rammed earth, or en pise walls, are very com- mon in France, both as fences and walls for buildings. They have been described at great length in the communications to the Board of Agriculture, and in other works, and tried in various parts of this country with tolerable suc- cess, though they are? by no means suited either to our moist climate or degree of civilisation. In constructing them the earth is previously pounded, in order to crumble any stones therein ; clay is added thereto in a small quantity, about one-eighth part. It is all beaten and mixed up together by repeated blows with a mallet about ten inches broad, and ten or fifteen inches long, and two inches thick. The earth being thus pre- pared, and slightly wetted, the foundation of the wall is dug ; this is laid with stone, and when it is about one foot high above the surface of the ground, planks are arranged on each side, and the space between filled with the earth intended for the wall. It is strongly beaten ; and this method is continued successively, till the wall is completed.

FENCING.

Fencing, in military exercises, is the art, or science, of making a proper use of the sword, either for attacking an enemy or defending one's self. On this elegant and mˆnly exercise Sir John Sinclair observes, ' There is no exercise, with a view to health, better entitled to the atten- tion of those who are placed among the higher orders of society, than that of fencing. The positions of the body, in fencing, have for object, erectness, firmness, and balance ; and, in prac- tising that art, tlie chest, neck, and shoulders, are placed in positions the most beneficial to health. The vario\is motions of the arms and limbs, whilst the liody maintains its erect position, on- able the muscles in general to acquire vigorous

strength, and in young people the bones of the chest and thorax necessarily become more en- larged, by means of which a consumptive ten- dency may be often prevented. It has been remarked, also, thai those who practise the art are remarkable for long life and the good h-ealth they enjoy. These considerations, combined with the graceful movements which it establishes, and the elegant means of self-defence which it fur- nishes, certainly render the art an object of con- siderable importance.'

' Fencing,' says Locke on Education, ' is so necessary a quidilication in the breeding of a gentleman, and' has so many advantages in re- gard to health and personal appearance, tha*

every gentlemaa of respectability ouglit to have so striking a mark of distinction.'

But fencing is not the exercise of a few days, or even months ; the practice of two or three years is requisite to enable a person to become a skilful fencer. In France, where the best fencers in Europe are found, a very indif- ferent opinion is entertained of any one if he cannot boast of at least four years regular prac- tice in the fencing schools.

This art is, however, too much dependent on personal instruction and practice to demand any lengthened treatise in a work like the present. We shall, therefore, only attempt to give a suc- cinct account of the first lessons, the thrusts, parades. Sec, following Monsieur Danet's well- known arrangement.

It will be necessary, first, to observe that the sword is divided into two parts : the strong part, or fort, as it is usually termed, reaching from the hilt to tlie middle of the blade, and the weak part, ov foible from the middle to the point.

Thrusts are made either inside, or outside, over, or under the arm, and ought to be parried with the fort of the blade. Supposing the sword held flat before you, the inside is that edge which is nearest the left side, the outside that nearest the right ; a thrust put above the sword is over the arm, one put in beneath it under the arm.

The Guard. — The only regular guard in fen- cing, is assumed after the following manner. Hold the sword with the thvmib flat upon the

handle, at about the distance of an inch from the guard, pressing the hilt principally with the little and ring fingers; incline the edge of the blade a little inwards, the hilt being at the height of the right breast, and the point a little higher. The body is to be turned, so as to present the ‘profile of it, the heel of the right foot in a line with the ancle of the left, at tlie distance of at least twice the length of the foot, and at right angles with each other. The right arm must be a little bent, the elbow inclining inwards ; the left arm raised to the height of the head, and forming an easy semi-circle, the fingers a little bent, and the index just touching the thumb.

The Thrusts. — In fencing there are nine dif- ferent positions of tlie arm and wrist in thrusting, which are thus distinguished. 1. Prime of the modern nomenclature, commonly called high carte, inside the arm ; 2. Ancient prime ; 3. High tierce or modern seconde ; 4. Old seconde, a mere low tierce ; 5. Low carte of the moderns, the common carte of the ancient school ; 6. Quinte, the same in both modern and ancient style ; 7. Carte, overarm; 8. Carte, cut outside; and 9. Flanconnade.

It is necessary to observe that all thrusts and parades are included in but three])ositions of the wrist, viz. supination, the palm of the hand being turned upwards ; pronation when reversed or turned downwards ; and the mean position the medium between these two, the thumb being above the lingers as they are bent.

1. Prime or high carte, inside the arm. — This thrust is the prime of the moderns, not only be- cause it is the highest elevation of the wrist, but because it is also the easiest, most used, and most simple thrust in fencing. It is given inside

tlie arm, the wrist in supination raised about three inches above the crown of the head during the movement of the right foot. The instructions for performing this thrust, as given in Rolando’s modern art of fencing, are the following: — Carry the right foot forward to its greatest point of extension, which is generally about four times its length ; and in the very time of this action, when you ought to direct your point, adjust your thrust without vacillation towards your adversary’s right breast; but, as soon as the point of your sword reaches within three or four inches of his body, form the opposition of your wrist, the nails uppermost, your chest a little inclined for- ward, the head turned a little outside, the left haunch steadied, the shoulders well turned out, the right knee outwards, and bent perpendicu- larly with the instep ; the left heel on the same line with the right heel, the leg well bent, and the foot firm upon the ground. The right hand, in directing the thrust, must always set out first, and the other parts of

the body should follow rapidly. The thrust being made, get up quick on guard, joining your adversaries blade without forcing, and holding your point still opposite to his breast. In every thrust all these evolutions are to be executed with the same precision. This thrust is parried either by high carte, prime seconde, or octave. See plate I. Fencing, fig. 1.

2. Ancient prime. — This was the first thrust of the ancient school, and was so named as being the natural attempt made by any one, who had never learned to fence, to thrust with a sword, it is executed by raising the wrist in pronation about three inches above the crown of the head ; and, in plunging the point at the adversary, the body is inclined somewhat more forward than in high carte : the remainder is executed in the same manner as described in the account of that thrust. In order to obtain an opening for this thrust, which is generally put in after tlie prime parade, it is sometimes necessary to step out of the line, to the right, as you make your thrust. This is parried hy prime, lialf ciixle, and octave.

3. High tierce, or the seconde of the moderns. — In making the thrust of high tierce the wrist should be in pronation at about the height of the crown of the head ; the sight may be directed under the arm, the body should be a little more in- clined forward than in high carte, and tlie thrust should be given between the arm-pit and the right breast : the rest as in high carte. This thrust is parried by tierce, carte over arm, and pointc volante. Although this thrust is given in the same situation as tlie old prime, it ditlbrs from it not only in the heigiit of the wrisi, hut in the more marked opposition of the fort of the blade. See plate I. fig. 2.

4. Seconde of the ancients, or low liercc of the moderns, is thus performed : lower the point of your sword under your adversary's guard, and thrust under his arm ; the wrist in pronation raised as high as the eyes, directing the point under his arm-pit, and inclining the body and head farther forward than in the precciling; covering, particularly the head, as much witli ttie wrist as by the fort of tiie blade. This thrust is parried by the tidtf-circte, prime, seconde, octave, and ijiiinlt.

5. Low carte, of the modern system, or com- mon carte inside the ai'm, of the ancients, is thus executed. Being on guard, in carte, direct the

point of your sword along, and underneath your opponent's wrist; and, when about four inches from his body, raise your wrist in supination as high as the mouth, and throw the point into the pit of his stomach without extending your body so much as in the preceding thrust. This thrust is parried by low carte, the octave, half-circle, prime, and seconde. Rolando's Modern Art of Fencing, p. 28.

6. Quinte, both ancient and modern, was the fifth thnist, whence it derives its name. It is thus given: the wrist, being in the mean position, should be lield as high as the chin, the fort of your blade opposed to the foible of your adver- sary's, and supporting thus your opposition pass as it were by stealth your point under his wrist, and thrust at his abdomen, still in the attitude of carte with the flat of the blade uppermost. This thrust is parried by quinte, seconde, octave, and the half circle.

7. Carte over arm, or modem prime over arm, is a carte thrust, passed over the arm along your opponent's blade, with the wrist in supination three inches above the head ; the right arm should be entirely extended, and the other parts of the body placed as directed in high carte. This llirust is best parried by pointe volante ; it may also be parried by tierce, and the cart cover arm parade.

8. Carte cut outside the arm, is thus executed: wˆhen on guard in tierce over your opponiˆnt's arm, lower by stealth your point by means of a half circle outside the arm ; adjust your point under his arm-pit, the flat of the blade upper- most, supporting the sword precisely under his elbow ; the wrist will then be in the mean po- sition with the same position as in law carte. This thrust is to be parried by the half circle, seconde, quinte, or octave. See Fexci\o, plate II. fig. 1.

9. Flancormadc, so called, because mostly touching only the tirmk, is thus performed : being engaged in carte, lower the point below your op- ponent's wrist, take the foible of his blade with- out quitting it, and plunge your point into his flank under his elbow outside the arm ; the wrist raised and supported in the mean position as high as the mouth ; oppose suddenly the left wrist close to the elbow, the hand open, and stoop at the same time to avoid being touched by seconde. This is parried by seconde and low carte. See plate II. fig. 2.

\"e shall now endeavour to give a short des- cription of the different simple parades. A pa- rade, or parry, is formed by giving a dry beat on your opponent's sword, to avoid being touched by his j)omt. A dry parade, is the action of striking his blade with a firm vivid motion, so

as to turn it aside without following it. There were for- merly only six parades taught; there are now fifteen in use.

The first is that of high carte, or modern prime, which is thus executed : supposing you are on guard, and your opponent thrusts high carte, then turn your right side so as to oppose as narrow a front as possible, and parry with a dry heat from

the inside fort of your blade against his foible, lowering yours about six inches inside the arm, the wrist in the mean position at the breast height, and return high caHe.

2. Ancient prime parade. — If when on guard your opponent thrusts ancient prime, parry with the fort outside of your sword, the wrist in pro- nation being as high as the forehead and op- posed inside the arm ; then extend your arm, and throwing your point below his stomach return ancient prime.

3. High tierce, or modern seconde, parade. — If when on guard your opponent thrusts high tierce, parry with a dry beat, fort against foible, outward from within; wrist nearly in pronation at the height of the flank, the arm extended in order better to be able to return with high tierce.

4. Ancient seconde parade. — If when on guard your opponent thrusts ancient seconde, parry with the inner fort of the blade turned out ; the wrist in pronation breast high, the arm extended to return ancient seconde.

5. Low carte parade. — If from the guard your opponent thrust low carte, parry with a dry beat from the fort inside of your blade; the wrist in the mean position at the height of the abdomen, the point a little more elevated, and return low carte.

6. Quinte parade. — When from his guard your opponent makes the thrust of quinte, parry with the fort edge of your blade against his foi- ble ; lowering your wrist to the mean position, perpendicular with your knee, and the edge of your sword to the height of the thigh, somewhat inclined inwards, return low carte.

7. Carte over arm parade. — Upon your oppo- nent’s thrusting from his guard carte over arm, parry with your arm bent, with the fort outside of your blade against his foible, the wrist being in the mean position at the height of the chest, in the same situation as in carte outside the arm, and return with carte over arm.

8. Low tierce parade is adapted in the same manner either to a tierce or carte over arm thrust, and is thus executed : — Upon your antagonist attempting either of these, parry with the inner fort edge upon his foible by a dry beat, lowering and bending your elbow a little ; the wrist in pronation at the height of the haunch, the point elevated, and return seconde.

9. The octave parade, so called as having been formerly the eighth and last of the parades, is thus performed : — Upon your antagonist's thrust- ing carte cut outside the arm, parry with the fort outside edge of your blade against his foible, the wrist in the mean position at the height of the breast ; the arm bent outwards, the point low ; and then return carte over arm.

10. Half circle parade upon low carte. — When from his guard your opponent thrusts low carte, parry with a dry beat from the inner fort edge of your blade against the foible of his, forming a half circle outside the arm ; stretch out your arm, the wrist in supination the height of your mouth, and return carte.

11. i'lanconnade parade. — If from the carte engagement ynur opj)onent thrust the flanconnade, turn your wrist suddenly in pronation at the heiglit of the haunch, forming an angle from it

to the point of the sword, the arm bent at the same time that he endeavours to assure himself of your blade, from the foible to the fortˆ and re- turn secondˆ

Wiien this parry is used in the attack it is in the following manner : — If your opponent from the i;uard in carte thrust flanconnade, parry carte ; without quitting his blade, lower your point a little, and pass it immediately under his wrist ; thus binding his blade, and returning his sword to nearly the position in which it before was. This is however a dangerous parade to use in an attack, as a quick fencer would often, by disengaging carte over arm with the strong part of his sword against the foible of yours, thrust you at the same time you were thrusting at him.

12. Pomte volante parade is the twelfth and last of the simple parades, and is so named from the swiftness with which the point of the sword is thrown over the shoulder When your anta- gonist thrusts carte over arm, parry rapidly by bending your elbow, and throwing the point of

your sword over your shoulder without displacing your wrist from the situation in which it was in the guard in carte ; the outside edge of your sword thus gliding from one end to the other of your antagonist's will throw it sufficiently aside to fenable you to return to your guard.

We have now enumerated the twelve simple parades commonly in use : there are now three others, of the circular kind, remaining to be no- ticed, the first of which is,

The counter carte parade, the chief of the cir- cular parades, as it envelopes almost every thrust in fencing, either inside, outside, over or under the arm. It is in fact describing a small circle round your adversary's blade to throw it aside when you join it.

The counter of tierce is neither so easy nor so certain a parade as the last, and ought only to be used when out of measure.

The circle parade is performed by wheeling your sword closely and rapidly round from right to left so as to throw off your adversary's point from the centre of attack. This is the most diffi- cult to perform of all the parades now in use, and is eminently useful as it embraces all the thrusts that can be aimed at you in retreating. Indeed, if it could be continued as long as it might be necessary to join an adversary's blade, who possesses both vivacity and address, it would be general against every attempt ; but, as the arm and wrist after the fourth or fifth round become considerably deranged, a quick fencer, in order to follow you, will describe a smaller circle and easily come witlun its central point. To effect this parade with certainty, extend your arm, the wrist in supination being as high as the mouth, the point of the foil very low, and by the motion of the wrist alone describe from right to left, in an oblique manner, the figure of a cone in as small a compass as possible. See plate IT. fig. 3.

Having now enumerated the principal thrusts and])arades, we shall give some account of the common artifices in fencing, and a definition of some of the common terms.

The appeal. — Marking an appeal is an en-

deavour to throw your adversary off his guard by inducing him to make some thrust for which be- ing prepared you may return to advantage. This artifice consists in a lively close stroke from the fort to the foible of his blade to throw it aside, and by giving a stamp with the right foot induce him to parry at a thrust you never intended to give, or to thrust you at a time when you expect and are prepared for

it. The greatest attention should however be paid, lest your adversary, an- ticipating your intention, throw in liis thrust at the very time you are executing your appeal, and thus seizing the time touch you before you are prepared.

Beating. — To beat the foil is to strike the foi- ble of your adversary's blade with the fort edge of yours, as often with a view to turn his point aside as to open his guard so as to be enabled to touch him. See Beat, in fencing, in the body of the work.

Binding. — To bind and cross an adversary's sword is to join it by sliding and forcing strongly upon it with your edge from the fort to the foible under his wrist, to drive it away, as it were, so that you may be sure to touch if not disarm him. For this reason it is a method of disarming the most advantageous, as, if well executed, it be- comes, if not absolutely certain, yet very useful, as being attended with no comparative danger.

Coup defouet, or lashing, is the act of giving a firm dry beat or jerk upon your opponent's blade, when he holds it flat and stiffly before him, in order to cause him to let it fall.

To disengage is to carry or pass the point of your sword from one side to the other over your antagonist's, by joining it witliout forcing.

Glizade is the act of sliding your blade upon the foible of his : the body must be well effaced and firm upon the left haunch; the sword di- rectly before you ; and when you close slide upon your adversary's blade by the fort of your own.

Volting. — To volte is to turn your back almost entirely upon your adversary, by a half wheel to the left to about the distance of the guard, throwing back your point at the same time to his body. The volte is only useful when you are engaged with one, who, without any knowledge of fencing, rushes upon you with a curved arm, not suspecting the danger; or who, being ac- quainted with the danger, cautiously uses this method of fighting, with tlie view either of sur- prising or disconcerting you.

' It is not a little surprising,' says Mr. Forsyth in the treatise we have already quoted, ' that such dangerous manceuvres have been invented and adopted, so diametrically opposed to the true principles of fencing, which only require firmness of the body and legs, a requisite that can never be supplied in the action of volting, which too evidently and too frequently exposes us to be hit, before we can

completely com- mand this hazardous and uncertain evolution, and whicli, should we fai. in our design, leaves us without a resource with a strong quick fencer, who will seldom fail to ‘.ake advantage of the disorder into whicli these dangerous e>:perimonts are sure to involve us.’ For SpADRti’.‘N Exer- cise, and SwoBi) Exercise, see those articles.

FEN

FEND, V. a. k v. n. ^^ Latin Jendo. See Fend’er, ?<. s. > Fence. To keep off;

Fend’er-bolt. 3 shut out; to dispute;

shift off (a cliarge) : the sea phrase is exempli- fied by Dr. Rees : the household fender is a well known protection of the floor from coals falling out of the fire, says Dr. Johnson : we should add from the scene around us, and of children from falling into it.

Spread with straw the bedding of thy fold.

With fern beneath to fend the bitter cold.

Dryden.

The dexterous management of terms, and being able tn fend and prove with them, passes for a great part of learning : but it is learning distinct from knowledge. Locke.

Fend, in the sea language, imports the same as de- fend. Hence the phrase /ending the boat, &c. ; that is, saving it from being dashed against the rocks, shore, or ship’s side. Hence sX&o fenders, any pieces of old cable-ropes, or billets of wood, &c., hung over the ship’s side, to fend or keep other ships from rub- bing against her ; or to prevent her from striking or rubbing against a wharf or quay. Dr. A. Rees.

Fend, or fender-holts, made with long and thick heads, struck into the outermost bends or wales of a ship, to save her sides from bruises and hurts. Id.

FENELON (Francis de Salignac de la Motte), was of an ancient and illustrious family, and born at the castle of Fenelon in Perigord, in 1651 . In 1689 he was appointed tutor to the dukes of Burgundy and

Anjou ; and in 1695 was conse- crated archbishop of Cambray. But a publica- tion of his, entitled An Explication of the Max- ims of the Saints concerning the Interior Life, in which he seemed to favor the extravagant notions of Madam Guyon, and the principles of Quietism, compelled him to quit the court ; to which he never returned. A controversy was for some time carried on between him and M. Bos- suet, bishop of Meaux; which terminated in an appeal to the pope, who condemned the arch- bishop's book, March 12th, 1699, and our prelate had what was wittily called the coquetry of hu- mility to read his own condemnation from his own pulpit. Some allege that there was more of court policy than religious zeal in this affair ; be this as it may, the archbishop submitted pa- tiently, and, retiring to his diocese, performed the duties of his station, and led a most exem- plary life. The work that gained him the greatest reputation, and which will render his memory immortal, is his Telemachus ; the style of which is natural, the fictions well contrived, the moral sublime, and the political maxims ex- cellent. Louis XI Vˆ is said never to have ap- proved of the appointment of Fenelon to the preceptorship of the princes, and to have re- gard(:d Telemachus as a satire upon his own government. He stopped therefore the printing of the work, and the archbishop could never re- cover his favor, notwithstanding his writings against the Jesuits, and munificent distribution of corn in a season of scarcity to the army. Fe- nelon is also said to have given unpardonable offence by his honest advice to Louis not to marry madame Maintenon. In person, manners, and general character Fenelon is universally represented as having been one of the most cn- gagirhg of men ; unitiiˆ, with a noble])oliteness.

a natural and flowing elocution, and the power of making himself understood" upon all subjects. No man inspired stronger attachments ; and such was the respect borne to his character, that the duke of Marlborough, and the other generals of the allies, expressly excepted the archiepiscopal lands of Cambray from pillage when in posses- sion of that part of Flanders. His principal works not already mentioned, are — Dialogues of the Dead, 2 vols. 12mo. ; Dialogues on Elo- quence, 12mo. ; Philosophical Letters, a Demon- stration of the Existence of a God, 12mo. ; Let- ters on different Religious and Metaphysical Subjects, 12mo. ; Spiritual Works, 4 vols. 12mo. ; Sermons, and controversial pieces. Fenelon died from a fall received in the overturning of his carriage in 1715 ; a collection of all his religious works was afterwards printed at Rotterdam, under the care of the marquis Fenelon his grand- nephew, when ambassador to the states general. FENERATION, 7j. s. l.'M. faneratio. Usury; the gain of interest; the practice of increasing money by lending.

The hare figured not only pusillanimity and timi- dity from its temper, but feneration and usury fro-n its fecundity and superfetation. Browne.

FENESTRA, in anatomy, a name given to two small holes in the cavity of the tympanum, which are distinguished from each other by the epithets rotunda and ovalis.

FENESTRELLE, a fortress of France, in Piedmont, on the Clusone, near the borders of Dauphiny, consisting of three distinct erections, built on eminences, and communicating with each other by covered ways cut in the rock. In the valley below lies the village of Fenestrelles, with 860 inhabitants. Seven miles S. S. E. of Susa, and twenty N. N. W. of Pignerol.

FE'NNEL, n. s. L,at. fa niculum. A plant of strong scent.

A sav'ry odour blown, more pleased my sense

Than smell of S'weetcst fennel, or the teats

Of ewe, or goat, dropping with milk at even.

Milton,

Fennel, in botany. See Anethum.

Fennel Flower. See Nigella.

Fennel Flower or Crete. See Gari-

DELLA.

Fennel, Giant. See Ferula.

Fennel, Hog's. See Peucedanum.

Fennel, Scorching. See Thapsia.

FENTON (Elijah), descended from an ancient family, was born at Shelton near Newcastle. He was the youngest of twelve children, and was in- tended for the ministry; but embracing political principles contrary to the measures of govern- ment, while at Cambridge, he declined entering into holy orders. He was secretary to the earl of Orrery ; but seems to have spent most of hi» time among his friends and relations. His elder brother had an estate of £1000 a year. When his engagement with lord Orrery ceased, he obtained, through the

recommendation ol Pope, a situation with Mr. secretary Craggs, who, aware of the deficiences of his own education, wished to have a man of taste and learning for a companion. He next undertook, for Pope, the translation of the first, fourth, nineteenth, and twentieth books of the Odyssey, for which he re-

ceived the sum of £300. His tragedy of Mari- amne rendered him more known; it was per- formed in 1723, with very great applause, and])roduced him £1000. ‘ An instructive compa- rison,’ says Dr. Johnson, ‘ between the patronage of the public, and that of a king or minister.’ He died in 1730 of indulgence and want of ex- ercise. His pupil, lord Orrery, says of him. Poor Fenton died of a great chair and two bottles of port a day. He adds, he was one of the worthiest and modestest men that ever belonged to the court of Apollo. Pope wrote upon him the following beautiful but not very veracious epitaph: —

‘ This modest stone, which few vain marbles can.

May truly say, here lies an honest man ;

A poet blessed beyond the poet’s fate.

Whom heaven kept sacred from the proud and great j

Foe to loud praise, and friend to learned ease.

Content with science in the vale of peace.

Calmly he looked on either life, and here

Saw nothing to regret, or there to fear ;

From nature’s temperate feast rose satisfied.

Thanked heaven that he had lived, and that he died.’

FenTon (Sir GeofTry), privy counsellor and secretary in Ireland, during the reigns of queen Elizabeth and king James I., is well known for his translation of Guicciardin’s History of the Wars of Italy, dedicated to queen Elizabeth in 1579. He died at Dublin in 1608, after having married his daughter to Mr. Boyle, afterward earl of Cork.

FE’NUGREEK, n. s. Lat. faiium GrcEcum. A plant.

FEOD, n. s. \ Fr. fief, of Old Latin Fe’odal, Of/;. I feodum. Fee ; tenure ; pos Feodal’ity, k.s.V session held under a su- Fe’odary, i perior : the adjective feo-

Feoda’tory, adj. J dal is strictly Gothic, signifying possessed by fee : a feodary, is one who holds under a feudal lord or superior : feo- dality, ‘ the possession of divers feoffs.’ — Cot- grave.

Any beneficiary or feudatory king. Bacon. The feudal discipline extended itself every where.

Burke. The leaders teach the people to respect all feoda- lity. Id.

Feod, or Feud, is defined to be a right which a vassal hath in lands or some immoveable thing of his lord’s, to use the same, and take the pro- fits thereof, hereditarily, rendering unto the lord such feodal duties and services as belong to military tenure, Sec, and the property of the soil always remaining to the lord. Pontoppiddan says, that odh in the northern languages is the same with proprietas, and all with totum in the Latin. Hence, odhall signifies right : and hence we may conjecture, that the udal right in Finland is derived. By transposing these two syllables, we form the word allodh ; whence we have the etymology of the allodium or absolute property claimed by the holders of fiefs or feuds ; and by combining odh, signifying property, with the word fee, signifying a conditional stipend or re- ward, we have the word feodh, signifying a pro- perty given by way of stipend or reward upon a certain condition. See Ff.udat, System. Feodal System. Sec Feupai. System.

FE’OFF, v. a. & n. s.~v Old Yr. feoffee ; Low

Feoffee’, H. s. ˆLat. fojfare. To put

Feoff’er, / in feodal possession ; a

Feoff’ment. J fief: a feoffee, is one

put in possession : feoffer, one who gives pos- session: and feoffment, the act or form of giving it.

The late earl of Desmond, before his breaking forth into rebellion, conveyed secretly all his lands to feoffees in trust, in hope to have cut off her ma- jesty from the escheat of his lands. Spenser.

Any gift or grant of any honours, castles, lands, or other immoveable things, to another in fee simple, that is, to him and his heirs for ever, by the delivery of seisin of the thing given : when it is in writing, it is called a deed of feoffment ; and in every feoff- ment the giver is called tha feoff er , feoff ator , and he that receiveth by virtue thereof the feoffee, feoffatus. The proper difference between & feoffer and a donor is, that thf; feoffer gives in fee-simple, the donor in fee-tail. Cowell.

Feoffment, in law, from feoflfare, to give one a feud, is still directed and governed by the feodal rules: insomuch that the principal rule relating to the extent and the effect of the feodal grant, tenor est qui legem dat feudo, is the maxim of the law with relation to feoffments, modus legem dat donationi. And therefore, as in pure feodal donations, the lord, from whom the feud moved, must expressly limit and declare the continuance or quantity of estate which he meant to confer, ne quis plus donasse praesumatur, quam in donatione expresserit : so, if on« grants by feoffment lands or tenements to another, and limits or expresses no estate, the grantee (due ccemonies of law being performed) hath barely an estate for life. For, as the personal abilities of the feoffee were originally presumed to be the immediate or principal inducements to the feoffment, the feoffee's estate ought to be confined to his person and subsist only for his life; unless the feoffer, by express provision in the creation and constitution of the estate, has given it a longer continuance. These express provisions are indeed generally made ; for this was for ages the only conveyance whereV)y an estate was created in fee simple, by giving the land to the feoffee, to hold to him and his heirs for ever; though it serves equally well to convey any other estate of freehold. But by the mere words of the deed the feoffment is by no means per fected : a very material ceremony remains to be performed, called livery of seizing; withoutwhich the feoffee has but a mere estate at will. See Seisin.

FER DE Fourchette, in heraldry, a cross having at each end a forked iron, like that formerly used by soldiers to rest tlieir muskets on. It differs from the cross fourclie, the ends of which turned forked : whereas this has that sort of fork fixed upon the square end. See Heraldry.

Fer de Moulin, MiEiuxn, or Inke de Mou- lin, in heraldry, is a bearing supposed to rejire- sent the iron-ink, or ink of a mill, which sustains the moving wheel.

FEIIABAD, or Ferabat, a town of Persia, in the province of Mezanderan, twelve miles from the Caspian Sea, seated among the

moun-

tains whicli bound its south coast. The environs produce sugar, cotton, and silk. Shall Abbas often spent the winter in it. It lies 122 miles west of Asterabad ; 140 north-east of Gilan, and 270 north of Ispahan.

FEllABAT, a town of Persia, one mile and a half from Ispahan, extending nearly three miles along the banks of Zenderoad. It was built by Shah Abbas, who brought Armenians to it, from Ferabad, after they had revolted from the Turks. FER/E, in zoology, an order of the class mammalia; thus characterised: foreteeth conic, usually six in each jaw; tusks longer than the other teeth; grinders with conic projections ; feet with subulate claws; food carcases, and other animals attacked while alive.

FE'IIAL, tfrf/. Ldt.feralis. Funereal ; deadly.

By the wan moon how oft the bird of night Lengthens hci feral note. Headley,

FERALIA, in antiquity, a festival observed among the Romans on the 21st of February, or, according to Ovid, on the 17th of February, in lionor of the manes of their deceased friends and relations. "arro derives the word from inferi, the shades, or from fero, to carry ; on account of a repast carried to the sepulchres of such. Festus derives it from ferio, on account of the victims sacrificed. Vossius observes, that the Romans called death fera, cruel, and that the word feralia might arise thence. Macrobius refers the origin of the ceremony to Numa Pompilius. Ovid, in his Fasti, goes back as far as /Eneas for its insti- tution. He adds, that on the same day a sacri- fice was performed to Muta, the goddess of dumbness; and that the persons who officiated were an old woman attended with a number of young girls. During the continuance of this festival, which lasted eleven days, presents were made at the graves of the deceased, marriages were forbidden, and the temples of the gods shut up. While the ceremonies continued, they imagined that the ghosts suflered no punish- ments in hell, but that their tormentors allowed them to wander round their tombs, and feast upon the meats which their surviving friends had prepared for them. For a more particular ac- count of the offerings, sacrifices, and feasts for the dead, see iNFERiˆand Silicernium. Some- times at the feralia

public feasts were given to people at the tombs of the rich and great, by their heirs or particular friends.

FERBER (John James), a Swedish minera- logist and physician, born at Carlscrona in 1743. He was brouglit up under his father, also a physician, and early became distinguished as a na- tural philosopher. He set out in 1765, on a mi- neralogical tour to inspect the mines of Genriany, France, Holland, England and Italy; and on his return accepted an invitation to become professor of natural history at Mittau. He removed to St. Pctersburgh in 1783, as professor of Natural Science in that capital, whence he removed in 1786 into the service of Prussia. He died in 1790 at Berue in Switzerland. His works are — Letters from Italy, respecting the most remark- able Natural Productions in that Country, 1773, 8vo. ; Collections towards a History of the Mines of Bohemia, Berlin, 1774, 8vo.; A Description of the Quicksilver Mines at Idria, Berlin, 1774,

8vo. ; An Account of Mines in the Cantons of Deux Fonts, the Palatinate, and Nassau, Berlin, 1776, 8vo.; An Attempt towards an Orycto- graphy of Derbyshire, Mittau, 1776, &c., &c.; all of which are written in the German lan- guage.

FERDINAND V. king of Spain, who married Isabella of Castile, whereby that kingdom was united to the Spanish crown. This illustrious pair laid the foundation of the glory and power of Spain. The conquest of Granada, and the discovery of America by Christopher Columbus, make his reign a celebrated era in history. He died in 1.516, aged sixty-three. See Spain.

FERE, 72. s. Sax. pejia. A mate or companion. Also written pheer ; and applied to both sexes. Clarissa to a \civc\y fere Was linked, and by him had many pledges dear.

Speriser. This king unto him took a pheere. Who died and left a female heir. Shakspeare. FERENTINUM, in ancient geography, a town of the Hernici in Latium, which the Romans, after subduing that nation, allowed to be go- verned by its own laws : now called Ferentino.

FERETRUM, among the Romans, the bier used in carrying out tlie bodies of the dead, which duty was performed by the nearest male relations of the deceased : thus, sons carried out their parents, brothers their sisters, &c.

FERG, or Ferc.ue, Francis Paul, an emi- nent landscape painter, born

in 1689, at Vienna, where he learned the first principles of his art. He practised \inder Hans Graf, Orient, and Thiele. He first went into Saxony, and painted for the duke of Brunswick, and for the gallery of Salzdalil. From Germany he came to Lon- don, where he was involved in difficulties. His necessities compelled him to diminish the prices of his paintings, in order to procure immediate support; and by a series of misfortunes he was always overwhelmed with debt. He died sud- denly in the street one night in 1738, at the door of his lodgings. He had formed a style of his own from various Flemish painters, though re- sembling Poelemburgh most in the enamelled softness and mellowness of his coloring; but his figures are greatly superior; every part of them is sufficiently finished, every action expressive. He painted small landscapes, fairs, and rural meetings ; his horses and cattle are not iuferior to Wouvermans; and his buildings and distances seem to owe their respective softness to the in- tervening air not to the pencil. The greatest part of his works are in London and Germany ; and tliey now bear a high price.

FERGANA, or Ferganah, a mountainous province of Samarcand, abounding in mines of goldy silver, copper, iron, and coals.

FERGUSON (James), an eminent experi- mental philosoplier and mechanic, born in 1710, at Keith, a village in the shire of Banff in Scot- land. At the earliest age his extraordinary genius began to exert itself. He first learned to read, by overhearing his father, who was in low circumstances, teach his elder brother : and his taste for mechanises was first shown by his making a wooden clock after having once only been shown the inside of one. As soon as his age

would permit, he went to farming service; and, whilst in this liumble situation, he begau the study of astronomy, by laying down from his own observations only, a celestial globe. His master, observing these marks of his ingenuity, procured him the countenance and assistance of iiis superiors; and, by their help, he was sent to Edinburgh. Here he began to take portraits; an employment by which he supported himself and family for several years, both in Scotland and Enijiand, whilst he was pursuing more serious studies. In London he first published some curious astronomical tables and calculations; and afterwards gave public lectures in experimental philosophy, which he

repeated (by subscription) in most of the principal towns in England, with the iiighest marks of general approbation. He was elected F. R. S. without paying for admis- sion; and had a pension of £50 a year given him, unsolicited, by the late king, who had at- tended his lectures, and frequently sent for him. His death took place in 1776, and he left behind liim nearly £6000. His principal works are Astronomical Tables and Precepts, 8vo. ; Astro- nomy Explained ; Introduction to Astronomy ; Tables and Tracts; Lectures in Mechanics, Hy- drostatics, Pneumatics, and Optics ; Select Me- chanical Exercises; The Art of Drawing in Per- spective ; An Lntroduction to Electricity; and several papers in the Piiilosophical Transac- tions.

FERGUSSON (Adams), a celebrated writer on history and moral science, was born in 1724, at Logierait, in Scotland, of which parish his father was minister. Educated at Perth and St. Andrews, he removed to Edinburgh, after gra- duating M.A. to study for the ministry. He served in the first instance as chaplain in tlie forty-second regiment of foot, but on the peace of Aix-la-Chapelle returned to Edinburgh, where, in 1 7.59, he was made professor of natural phi- losophy, which chair he afterwards resigned for that of moral philosophy. His Essay on Civil Society appeared in 1767, and was very favor- ably received. He shortly after received the degree of LL.D., and accompanied the earl of Chesterfield on his ti-avels. In 1776 he replied to Dr. Price on Civil Liberty, and was re- warded by the appointment of secretary to the mission sent to America in 1778, to effect a re- conciliation between the two countries. On his return he resumed the duties of his professor- ship, and composed his History of the Roman Republic, which was published in 1783, in three volumes, 4to. In 1793 he published his lec- tures as a Treatise on Moral and Political Science, two volumes, 4to. He subsequently went abroad, and returning, settled at St. An- drews, where he died, February 16th, 1816.

Feuousson (Robert), an eminent Scottish poet, born in Edinburgh, in 1750. Though early laboring under the disadvantages of a deli- cate constitution, which often interrupted his studies and attendance, yet he excelled most of his companions at the high school of Edinburgh. After four years spent at this seminary, he studied two years at the grammar-school of Dundee; after which, having obtained a bur- sary in the college of St. Andrews, he entered as

a student there in his thirteenth year, and soon became distinguished as a youth of very superior genius. During his residence at St. Andrew's, he first gave specimens of his poetical talents. He had been originally intended for the church, but upon the expiration of his

bursary, after residing four years at St. Andrew's, he abandoned the study of divinity. After residing six months with his maternal uncle, Mr. John Forbes, he was dismissed from the house, and composed his poems on the Decay of Friendship, and Against Repining at Fortune. Not long after this he obtained employment, first in the commissary's, and afterwards in the sheriff clerk's office, in which last he remained to the end of his short career. Meantime he continvied to indulge his poetical vein, and before he was twenty years of age had published many of his pieces in Ruddi- man's Weekly Magazine, a periodical work then universally read. Those most admired were written in the Scottish dialect, upon humorous and often temporary subjects. As he subscribed all his poems with his name, from their first ap- pearance in the Weekly Magazine, his company soon came to be generally courted, and in the circles of gaiety and dissipation his conversa- tion never failed to please. But while he re- ceived these slight marks of general admiration, he had not the good fortune to fall in with any one who was equally qualified by station, incli- nation, and influence, to patronise his merits, and ameliorate his circumstances. Among his numerous acquaintance there was, however, one gentleman, who having contracted a sincere friendship for Fergusson previous to his aepar- ture for the East Indies, remitted a draught for £lOO, accompanied with a cordial invitation to come over to India and make his fortune. But the kind invitation arrived too late : poor Fergus- son having previously breathed his last. Among the numerous acquaintance, whom his fame as a poet and man of humor had attracted around him, there were some persons, unfortunately, by no means celebrated for their regularity of life ; a-id against the temptations to dissipation, held out to him by such companions, his eisy temper proved a weak defence. At last the debility of his frame produced a total derangement of mind : and, his mother's circumstances not admitting of a proper attendance being paid to him in her own house, he was removed to the public asy- lum, where he died, October 16lh, 1774. He was interred in the Canongate church-yard, where Burns erected a monument to him, with the following epitaph and inscription : —

No sculptured marble here, nor pompous lay !

No sioried urn, nor animated bust '. This sˆiinple stone directs pale Scotia's way,

To pour her sorrows o'er her poet's dust.

By special grant of the Managers

To RoRKKT lUlRNS, who erected this stone,

This burial place is ever to remain sacred

to the memory of

Robert Fergusson.

FERI.T-, in Roman antiquity, holidays, or days upon which tbey abstained from work. I'roclamation was generally made by the herald,

by command of the rex sacrorum, or flamines, tliat all should abstain from business ; and who- ever transgressed the order was severely fined. The feriae were of two kinds, public and private. Feui.i; Private:, the private ferise, were ho- lidays observed by particular persons or families on account of birth-days, funerals, &c. These belonged to, and were one division of, the dies festi.

Feri.e Publico, the public ferise, were of four kinds, viz. ferise conceptivse, moveable feasts, the days for the celebration of which were fixed by the magistrates or priests ; of this sort were the ferise, Latinse, paganalia, &c., which happened every year, but the days for keeping them were left to the discretion of the magistrates or priests. Of these the ferise Latinae were feasts at which a white bull was sacrificed, and the Latin and Roman towns provided each a set quantity of meat, wine, and fruits; and, during the celebra- tion, the Romans and Latins swore eternal friendship to each other, taking home a piece of the victim to every town. The festival was in- stituted by Tarquinius II., when he overcame the Tuscans and made a league with the Latins, proposing to build a common temple to Jupiter Latialis, at which both nations might meet and offer sacrifices for their common safety. At first the solemnity lasted but one day, but it was at diflTerent times extended to ten. It was held on the Alban Mount, and celebrated with chariot races at the capitol, where the victor was treated with a large draught of wormwood. Ferise im- perative were fixed and instituted by the mere command of consuls, praetors, or dictators, upon the gaining of some victory or other fortunate event. . Feriae nundinales were regular market days, one of which fell every ninth day. The country people, after working eight days suc- cessively, came to town the ninth to sell their commodities, and to inform themselves of what related to religion and government. Ferise sta- tivsE; were kept as public feasts by the whole city upon certain

immoveable days appointed in their calendar ; such were the compitalia, carmentalia, lupercalia, &c.

Ferine, in the Romish breviary, is applied to the days of the week ; thus Monday is the feria secunda, Tuesday the feria tertia. The occasion of this was, that the first Christians used to keep the Easter week holy, calling Sunday prima feria, he, whence the term feria was given to the days of every week. They have also extra- ordinary feriae, viz. the last three days of passion week, the two following Easter day, and the se- cond feriae of rogation.

FE'RIAL, adj.) Lat. feruilis. Respect-

Feria'tion, n. s. S ing the ordinary days of the week ; sometimes respecting holidays : feria- tion is the act of keeping holiday.

As though there were any yeriaiion in nature, this season is commonly termed the physician's vacation.

Srowne.

Concerning the ferial character. The ecclesiastical year of old began at Easter, the first week whereof was all holiday, the days being distinguished by pri- ma, secunda, tertia, &c., added nnlo feria. Gregory.

In the statute 27 Hon. VI. c. 5. ferial days are taken for working days ; all the days of the week ex- cept Sunday. ToinUns.

FERIANA, the ancient city of Thala, in Africa, taken and destroyed by Metellus in the war with Jugurtha. It was visited by Mr. Bruce in his late travels through Africa, who expected to have found many magnificent ruins in the place, but was disappointed. The only remark- able objects he met with were the baths, which are excessively warm : these are without the town, and flow from a mountain named El Tarmid. Notwithstanding the excessive heat of its water the fountain is not destitute of fish : they are of the shape of a gudgeon, above four inches long ; and he supposed that there might have been about five or six dozen of them in the pool. On trying the water with a thermometer, he found the heat so great that he was surprised the fish were not boiled in it.

FE'RINE, adj. -% Lat. ferinus. Wild ; Feri'neness, «. s. > savage : the substantives Fe'rity. 3 mean barbarity ; cruelty.

The only difficulty is touching those yerine, noxious, and untameable

beasts ; as lionsˆ tygers, wolves, bears. Hale.

A ferine and necessitous kind of life, a conversa- tion with those that were fallen into a barbarous habit of life, would assimilate the next generation to bar- barism nud ferineness. Id.

He reduced him from the most abject and stupid ferity to his senses, and to sober reason.

Woodward's Natural History.

FERMANAGH, a county in the province of Ulster, Ireland, is bounded on the west by Lei- trim, on the north by Tyrone and Donegal, on the east by Tyrone and Monaghan, and on the south by Cavan and Leitrim. It abounds in lulls, many of them of great height, and boggy ; but these high grounds afford good coarse pas- ture for young cattle. Agriculture is not here in a flourishing condition; and the fact is said to be well authenticated that, so late as the year 1808, it was the practice in some places to plough by the tail ! The farms in the northern part are of a large size, and tolerably productive. Oats are the most common grain, and next to these barley. In some quarters, when calcu- lating a profitable crop, they estimate four stone of barley, and six of oats, to a gallon of whisky. Potatoes are common.

In 1809 about 5000 Irish acres were sup- posed to be sown with flax. The gracing tenures are from 100 to 300 acres.]\Ir. Wakefield says, that ' Enniskillen market is attended weekly by about thirty or forty farmers from the vicinity, whose circumstances enable them to eat meat daily, and to drink port wine' ! This is the prin- cipal or rather the only town of note in the county. See Enniskillen.

A considerable part of the county is occupied with dairies. There is also a small breed of cows here similar to those of Down : but no flocks of sheep. The linen manufacture and the rearing of black cattle are the great sources of wealth here. The linen produced is what is called seven-eighths. Illegal distillation is carried on to a considerable extent. There are mills for grinding oats, but none for grinding wheat.

This county also contains rich iron ore and coal. On lord Enniskillcn's estate, west of

Lougli Erne, tliere are quarries of marble. It is brown and white,

beautifully veined, and of a fine grain.

The laborer is generally paid in money. In 1811 the prices of labor, provisions, &c., were: for ;i man, the year round. Is. and a woman 6d. per day ; a carpenter, per day, 3s. 6d. and if constantly employed, 2s. 6d. ; a mason, per day, 2s. 6d.; a tlirasher, per day. Is. Id., or, by piece- work, from 6d. to 8d. per barrel of oats, 8d. to lOd. per ditto of barley, and Is. Id. to Is. 8d. per ditto of wheat ; a car and horse, per day, 2s. 2d. ; a saddle-horse per ditto 5s. 5d. ; a plough per ditto lis. 4ˆrf., and, for ploughing and sowing an acre, from 26s. to 36s. ; a blacksmith, per stone of work, Is. 6d., or per day 2s. 6ˆˆ.; turf, per kish, 2s. ; sea coal, per barrel, 4s. to 5s. ; culm, per ditto, 3s.; lime, per ditto, Is. &d. to 2s.; a car, mounted, £4 10s.; potatoes, per stone, 2d. to Ad.; salt butter, per cwt. £4 13s. Ad. ; fresh ditto, per lb. Is. ; hay, per ton, £3 to £4 ; whisky, per gallon, 7s. 9d. to 10s; strong ale, per quart. Ad.; porter, per gallon. Is. 3rf. ; beef, per lb., &d. ; mutton id.; pork 3c/.; lambs, per score, £l8 to £22”; eggs, per score, &d. ; cheese, per lb.. Is. 6d. ; bacon, per ditto, Qd. ; shoeing a horse, 4s. ; shoes, per pair, lis. A\d.; salt, per stone. Is. 5d.; undressed flax, per cwt. £4 10s. to £5; wool, per stone, 22s. to 20s. ; fowls, per couple. Is. to is. 6d. ; wheat, per barrel, £2 3s. ; barley, ditto, 19.S. ; oats, ditto, 13s. 6rf. ; quartern loaf of wheaten bread. Is. ; ilower, firsts, per cwt., £l 9s.; seconds, ditto, £l 8s.; thirds, ditto, £l 4s.; oatmeal, per cwt. 16s. ; labor in harvest of hay and corn, per day, 2s. to 3s. ; mowing grass, per acre, .5s. ; rabbits, per couple, Is. 8d. ; milk, per quart, 2d. ; corn acre of oats (tithe free to tiie tenant), per acre, £6 to £8; ditto, meadows (ac- cording to weight.of grass, ditto), £6 to £9 ; ditto potatoe land, ditto, £6 16s. Qd. to £8 8s. ; ditto, flax, per rood (tithe free), ditto £2 5s., to £2 10s. The wood of this county is an important product. Ash- trees are common, running along the edgerows; they are, however, of modern in- troduction. At Lough Erne, the yew grows to a large size : beech, grows in this county to a good height and bulk : here are also oaks, firs, sallows, and hazels.

Mr. Wakefield reckons the average rental of this county at £l 5s. per green acre. At Flo- rence-court, land lets at £l 10s. per acre: near Enniskillen, at £8 8s. per corn acre. In general the leases run for three lives, or thirty-one years : of late the period adopted is twenty-one years and one life. There are here a few estates whose rental is from £l500 to £2000; but by far the greatest number of the estates are large, and there is no intermediate step ‘between the pro- prietors and the leaseholders. Lord Enniskillen has an estate of £13,000 per annum. The mar- quis of Ely, lord Belmour, and Sir James Cald- well, have property of from £6000 to £7000 per annum each. There is also a large church pro- perty here, ‘belonging to the see of Clogher.

The most remarkable geographical feature of this county is Lotigh Erne; consisting of two lakes, the upper being nine miles long, and from one and a half to five wide, and tlic lower one about ten miles in length, and from two to eight in breadth. They are connected by a broad

winding channel of about six miles The entire site occupied by Lough Erne is supposed to be eighty-five square miles. The scenery around is remarkably striking. On its bosom are between 300 and 400 islands, some of them large, fertile, well-wooded, and inhabited ; and the whole of them disposed in a very picturesque manner. The Erne runs into it at the north-west end by a current of about seven miles, and at length pre- cipitates itself over a grand cataract into the sea at Ballyshannon. The falls of Belleek are es- teemed very beautiful, and deserving of the tra- veller's attention. Lough Erne contains almost every kind of fresh water fish. The salmon grow very rapidly : some young ones have been found to increase at the rate of a pound a week. Near Enniskillen large quantities of eels are caught. At Belleek is an eel weir, which lets at £l20 per annum, and three others in the vicinity, which let at £lOO each. On the east of Lough Erne, Fermanagh has five baronies, and on the west three. It sends three members to parliament, two of these being from the county, and one from the burgh of Enniskillen. The county free- holders amount to 5000.

Of the eighteen parishes of the county, fifteen are in the diocese of Clogher, and the other three in that of Kilmore. The Catholics are in the proportion of three to one. Dr. Beaufort sup- poses that Fermanagh contains 719 square miles, or 455,298 acres English measure, the length being forty-three miles, and the breadth thirty- three. Of these, Lough Erne occupies 76,311. Mr. Wakefield makes the superficial contents 694 English square miles. Excluding Lough Erne, there are about thirty-one English acres to a house, or five acres and one-sixth to each indivi- dual.

FERMAT (Peter), a French mathematician, was horn at Toulouse in 1590. He was bred to the law, and became counsellor to the parlia- ment of Toulouse, where he died in 1664. Ilis mathematical works were printed in 2 vols., folio, 1679, under the title of Opera Varia Mathema- tica. He was the intimate acquaintance of Des- cartes, Torricelli, Pascal, Iluygens, he. His son, Samuel Fermat, was the author of several works.

FER'MENT, v. a., v. n. & n. s.-

Ferment'aele, adj.

Ferment'al, \mcnto.'Yoxa.-

Fermenta'tion, n. s.

Ferment'ative, adj. J chemically,

by internal commotion. See the more scientific explanation of this word in our article : ferment- able, is capable of fermentative : fermental, having the power to cause it: fermentative, ac- tually causing fermentation.

Cucumbers, being waterish, fill the veins witli crude and windy serosities, that contain little salt or spirit, and debilitate the vital acidity and fermental faculty of the stomach. Bruwnc.

The juice of grapes, a.hcT fcrmcntaliun, will yield a spiritus ardcns. lioylc.

As these politicians of both sides have already worked the nation into a mo.>t unnatural ferment, I shall be so far from endeavouring to raise it to a (jreater height, that, on the contrary, it shall be tho

. v Fr. fermen I ter; Lat. /er- > mento. To ra- irify; change J cl

chief tendency of my papers to inspire my country- men with a mutual good-will and benevolence.

Spectalor. A man, by tumbling his thoughts, and I'orming them into expressions, gives them a new kind of fer- mcnlation ; which works them into a finer body, and makes them much clearer thun they were before.

Collier on Friendship. Subdue and cool the ferment of desire. Rogers.

The dewlapl bull now chafes along the plain. While burninî love ferments in every vein ; His well-armed front against his rival aims. And by the dint of war his mistress claims. Gay. The semen puts females into a fever upon impreg- nation ; and all animal humours which poison, are putrefying ferments. Flayer.

Digestion is s. fermentation begun, because there are all the requisites

of such a fermentation ; heat, air, and motion : but it is not a complete fermentation, be- cause that requires a greater time than the continu- ance of the aliment in the stomach : vegetable putre- faction resembles very much animal digestion.

Arbulhnot on Aliments. Aromatical spirits destroy by their fermentative heat. Arbuthnot.

The sap, in fluent dance. And lively /ermenta/ion, mounting, spreads All this innumerous coloured scene of things.

Thomson. Secrtts are so seldom kept, that it may be with some reason doubted, whether the quality of retention be so generally bestowed, and whether a secret has not some subtile volatility by which it escapes, im- perceptibly, at the smallest vent, or some power of fermentation, by which it expands itself, so as to burst the heart that will not give it way. Johnson.

The same yields a stercoraccous heap. Impregnated with quick fermenting salts. And potent to resist the freezing blast. Cowper. It is remarkable, that all the diseases from drink- ing spirituous or fermented liquors are liable to become hereditary, even to tlie third generation, gradually increasing, if the cause be continued, till the family becomes extinct. Darwin.

Thus heat evolved from some fermenting mass Expands the kindling atoms into gas ; Which sink ere long in cold concentric rings, Condensed, on Gravity's descending wings. Id.

Fermentation. The phenomena and pro- ducts attendant on this process are of considerable importance. Its general application to the manu- facture of malt liquors, will be found under Ale and Beer brewing.

The term fermentation is employed to signify the spontaneous changes which certain vegetable solutions undergo, placed under certain circum- stances, and which terminate either in the pro- duction of an intoxicating liquor, or of vinegar ; the former termination constituting vinous, and the latter the acetous fermentation.

The principal substance concerned in vinous fermentation is sugar; and no vegetable juice can be made to undergo the process, which does not contain it in a very sensible quantity. In the production of beer, the sugar is derived from the malt; in that of wine, from the juice of the grape.

When sugar is dissolved in four times its weight of water, and mixed with yeast, it speedily fer- ments, and yields peculiar products. It has been employed, therefore, by chemists as a less com- plicated means of ascertaining the plienomena of fermentation, than grain which is usually

employed. Thenard mixed sixty parts of yeast with 300 of sugar, and fermented them at a temperature of 59°. In four or five days, he informs us, that all the saccharine matter had disappeared. The quantity of carbonic acid evolved amounted, by weight, to 94”6 parts. It was perfectly pure, laeing completely absorbed by water. Tiie fermented liquid, being distilled yielded 171-5 parts of alcohol, of the specific gravity •822. When the residue of the distillation was evaporated, twelve parts of a nauseous acid substance were obtained ; and forty parts of the yeast still remained ; but, upon examination, it had lost the whole of its azote. This experiment gives us the following quantities : —

Substances fermented. Sugar . . 300 Yeast . . 60

360

Products of fermentation. Alcohol of -822 . . 171-5 Carbonic acid . . 94-6

Nauseous residue . . 12.0 Residual yeast . . 40-0

Loss

The loss here amounts to about a ninth part of the whole, and must either be ascribed to waste, or to the formation of water. The first is the more probable supposition. From this experiment we learn that 100 parts of sugar, supposing the yeast not to furnish any thing, would yield.

Alcohol . . 57-16 Carbonic acid . 31-53 Nauseous residue . 4-00

Loss

Here the produce of alcohol is greater than that obtained from wort of barley ; but the pro- duce of carbonic acid is somewat less. The well known experiment of Lavoisier corresponds pretty well witli the result obtained by Thenard. 100 pounds of sugar and ten pounds of yeast yielded.

Alcohol . . 57-70

Carbonic acid . 35-34 Residue . . 659

99-63

These experiments are sufficient to show us, that by far the greatest part of the produce is obtained from the sugar ; and the yeast acts chiefly by inducing the decomposition of that substance.

Messrs. Vauquelin and Fourcroy, after a series of very minute experiments, came to the follow- ing conclusions relative to the fermentation of grain : —

Two pounds of grou-nd germinated barley, placed with six pounds of water heated to 131° Fahr. in a matrass furnished with a crooked tube, fermented in four hours in a heat of 72°. The fermentation continued thirty-six hours. The

gas disengaged and collected was partly formed of carbonic acid, and partly of hydrogen gas. Six days afterwards this barley was distilled, from which a product was obtained equal at least to one-third of the water employed. This pro- duce, heavier tlian water, was acid and empyreu- niatic. This acidity demonstrates the conversion of alcohol into acetous acid. The liquor, which was saccharine at the period of distillation, was no longer so at the end of the process.

The same ground and germinated barley, but deprived of its bran by bolting, was treated in the same manner as in the first experiment; it fermented with similar appearances, and yielded an equal part of carbonic acid gas and hydrogen gas. Thus the bran was not the source of the latter gas, as at first supposed.

Brewers' mash, exposed in the same apparatus to the same temperature of 72°, fermented more quickly with a more rapid effervescence, and its gas was merely carbonic acid, without hydrogen gas. Thus the latter depends upon the farina mixed with flower.

The farina of germinated barley, with water, exposed in the matrass to the temperature of 59°, did not ferment until the end of five hours; and its gas was condensed by potash. Upon raising the temperature to 22°, there came off a mixture of gas not soluble and inflammable, the proportion of which was soon equal to that of the carbonic acid. Thus it is necessary that there should be a heat of upwards of 68° before

there can be any liberation of hydrogen gas in the farina of barley which is fermenting.

Six pounds of ground barley, not germinated, treated at three several times with twelve pounds of warm alcohol, furnished one ounce two drachms of pure sugar; while six pounds of germinated barley, treated in the same manner, yielded four ounces and two drachms, or about five per cent. ; which is four times what the bar- ley contained previous to germination. Thus germination forms sugar, as we have announced. They put twenty-four pounds of farina of bar- ley, not germinated, into a tub with seven times its weight of hot water at 158°, and four pounds of mild beer yeast. Fermentation immediately commenced with great violence, and continued seven days. The liquor submitted to distillation, with the husks, yielded nine litres of a weak and empyreumatic liquid, which, being passed again through the still, furnished sixteen decilitres of an alcohol at 16°, which amounts to nine deci- litres at 40°. These nine decilitres, weighing twenty-three ounces, and twenty-four pounds of barley not germinated, containing only five ounces of sugar, it follows, that four times more alcohol v/as formed than there was sugar in this farina. Lavoisier, however, asserts that 100 pounds of sugar furnish only fifty-eight pounds of alcohol. Twenty-four pounds of germinated and ground barley, made to ferment under the same circum- stances as barley not germinated, presented the same phenomena, and only varied in their pro- ducts. There were two litres 0”3 of alcoliol at 40°, whicli makes five pounds of alcohol for a quintal of barley, or three times more alcohol than diere v.‘as sugar ; and this answers to the produce of barley not germinated.

‘ It must be concluded from these results,’

observe these ingenious chemists, * that it is some other substance than sugar which is con- verted into alcohol, although sugar is indispen- sable to its production and to the establishment of fermentation.

‘ Two pounds of farina of bolted wheat, mixed with six pounds of water at 140** Fahr., remained six hours without motion. The next day, after having remarked the swelling of the mass, they placed the matrass upon a sand-bath a little heated, and added watei to favor the disengage- ment of the gas. We obtained hydrogen gas twice larger in volume than carbonic acid. The vessel, having been taken off’ the sand-bath, the temperature having decreased to 57°, tlie fermen- tation all at once stopped. The liquid, when submitted to distillation, did not yield alcohol, but an acid liquor.’

The farina of wheat, therefore, does not form alcohol by fermentation : yeast is indispensable for this fermentation, although it does not enter into the composition of alcohol ; by accelerating the alcoholic fermentation, it opposes the forma- tion of vinegar. When, on the contrary, the fermen- tation is very slow, the alcohol becomes acetous in proportion as it is formed ; perhaps even then sugar and the other fermenting substances pass into the acid state with alcoholizing.

Air is not absorbed in the vinous fermentation, although its oxygen is in the acetous. When wine is manufactured in close vessels it is stronger, if the process is slower, because a por- tion of the alcohol escapes from the vats : and this is now understood m our malt distilleries. Tliat alcohol is held in solution in the carbonic acid which is generated ; and thus, it appears, to intoxicate more rapidly, as is well known in the wines of Champagne. Under pressure, this compound is united to the fluid ; and, being disengaged, produces the well-known efferves- cence. The practice of fermentation is partly regulated by this consideration. The violent stage of that process in wine-making is allowed to take place in an open vat ; the next is par- tially checked by an occasional bung, and, in the last of all, the vessel is completely closed. In strong still wines the whole process may be con- ducted in open vessels ; but, in light and brisk ones, it is absolutely necessary that the last part should take place in closed ones. Champagne wines are managed so as to ferment even in their bottles.

The volume of the fermenting fluid has a con- siderable effect on the process ; a few days are sufficient to complete it when the quantity is large. When small, it is difficult to establish, and tedious in the progress, and the results are also different: wines of different qualities being thus produced from the very same materials. It is tlie same in the ultimate fernVenlation or ripening of wines. Champaj-ne would be de- stroyed in a large cask :_ porter, an extreme case, is ripened in enormous masses, as are many of tiie stronger wines. Bulk is peculiarly requireil for the strong and sweet wines ; Ciiampagne may be made in a gallon measure.

The first appearance is the production of air- bubbles, terminatinc at length in a general ebullition. The liquor then becomes turbid, a variety of solid matters are disengaged, some

il'lling to the bottom, and others rising to the tˆop of the fluid. The yeast before mentioned is thus separated among other matters, wiiile the bulk of the fluid is materially increased. It is in this stage that we have the power of regulating the extent of the fermentation, by separating the floating leaven, or allowing it to return into the liquor. Hence, the process of fermentation in a full cask, ejecting that substance by the bung hole.

The disengaged gas is carbonic acid chiefly ; but holding some alcohol in solution. It ap- pears, by analysis, that this is the produce of part of the carbon of the sugar and of its oxygen ; and this is the great change which leads to the production of the alcohol. But it also contains some obscure vegetable matter in suspension ; because, if passed through water, it not only converts it into vinegar, but deposits that muci- lage, which, in vinegar, is called the mother. It is possible, however, that this may itself be a new compound : and it is one which, in certain cases, contains azote.

All those juices of fruits which undergo the vinous fermentation, either with or without the addition of sugar, contain an acid. Vegetable acids are obtained chiefly from fruits. The apple, for instance, contains malic acid ; the le- mon, citric acid ; the grape, tartaric and malic acids. The marquis de Bouillon has ascertained that must will not ferment if all tlie tartar which it contains be separated from it ; but it ferments perfectly well on restoring that salt. The same chemist asceitained that the strength of wine is considerably increased by adding tartar and sugar to the must. We may coricliule from tliese facts that the presence of a vegetable acid is of importance in these spontaneous fermentations. It deserves attention, that Bouillon obtained more tartar from verjuice than from wine ; and he ob- served, that the more the proportion of sugar in grapes increased, the more that of tartar dimi- nished.

It seems more than probable, from the expe- riments of Bouillon and Chaptal, that the tartaric acid is partly decomposed during the fermenta- tion, and that a portion of malic acid is formed. The process, therefore, is more complicated than was suspected by Lavoisier. It is obviously analogous to combustion, as is evident from the evolution of caloric and the formation of car- bonic acid, which is a product of combustion. Proust has ascertained that, during the fermenta- tion, not only carbonic acid, but azotic gas also, is disengaged. This is a demonstration, that all the constituents of must are concerned ; for sugar does not contain that principle. Thenard could detect no azote in the carbonic acid from wort.

We have already seen that a vinous fer- mentation, to be perfect, requires very exact proportions of mucilage and saccharine matter, so as to have the one just suthcient to destroy or attenuate the otl>er ; in which case the result will be, if the operation has beeu properly con- ducted, a mixture of alcohol and water, differ- ently flavored, according to the materials from which it is produced, as grapes, pears, apples, or malt and hops ; but such accuracy in the

proportions cannot be expected, either from nature working at large, and varying in every climate, soil, and situation, or from our most in- geniously conducted experiments.

A perfect fermentation, therefore, has been considered an object almost impossible to be obtained ; and all we wish to show is, that the errors of the mixture may be corrected, and the wiiole process improved, by good management.

The common practice, un-til a few years back, has been to ferment in open vessels ; and though it was a circumstance well known among che- mists, that a certain portion of spirit and flavor escaped in the form of vapor during the process, yet no one had an idea that the condensatory system could be applied, as it appeared im- possible to eff”ect the fermentation in air-tight vessels, being unable to surmount the great ditticulty which existed of keeping down and managing that enormous bulk of non-con- densable gases, which are emitted during the decomposition of the saccharine matter, and which acquire greater expansive force by the gradual increase of heat.

The idea, however, occurred to Madame Ger- vais, that distillation might be carried on during the fermenting process. Having come to this conclusion, she proceeded to construct an appa- ratus that would operate in such manner as to return into the vessel the spirit and the flavor that was evolved from the fermenting gyle, and let out the non-condensable gases, which might, by the increasing heat, acquire too great an expansive force, and burst the workuig-tun. A short description of this apparatus will be a fresh proof tliat the greatest advantages are often derrvwi from the most simple means.

It consists of a vessel resembling the head of the ancient still, and constructed of such form as to be capable of being placed securely on the back, or vat, in which the process of fermentation is to be carried on ; the back or vat must be closed air-tight, with a hole in the top, commu- nicating with that part of the apparatus called the cone, or condenser Tliis cone is surrounded by a cylinder or reservoir, which is to oc filled with cold water, so that the alcoholic vapor, or steam,

evolved during the process, may be con- densed as it comes in contact with the cold in- terior surface of the cone; and, being thereby converted into a liquid, trickles down the inside of the condenser, and through a long pipe is re- turned into the fermenting liquor. . By the application of this apparatus, a con- siderable portion of alcohol, which has been hitherto suffered to escape in the form of vapor, along with the non-condensable gases, is con- densed and returned into the liquor ; and the non-condensable gases are carried ofl" by a pipe, which, proceeding from the interior lower part of the cone, and running up the inside of the cylinder in the cold water, passes out through the side, and the end is immersed some depth below the surface of water contained in a separate vessel, permitting the gases to escape, but still under a certain degree of pressure, the object of which is to confine the alcoholic steam and gas within the cone, and allow them a sufKcient time to cool and condense.

FERMENTATION.

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To obtain a good fermentation, as complete a decomposition of the must or wort, and as per- fect a recomposition of alcohol as possible, are the great objects to be obtained. To acquire the former, three requisites are necessary — fluidity, heat, and motion ; the latter — density, coolness, and tranquillity.

Let us examine each of these separately ; first, of fluidity.

The specific gravity of the liquid most eligi- ble to produce a good fermentation, is between 1-020 and 1-140, or eighteen, and 132 pounds by Dicas's improved saccharometer, made by Joseph Long. Below eighteen pounds of real extract per barrel, the liquid is too thin to pro- duce a proper fermentation, and above 132 pounds it is too thick ; but, supposing the speci- fic gravity of the must or wort to be correct, it may be carried beyond a proper dilatation by too much heat, or congealed to too great a con- sistency by excessive cold ; consequently either a thunder-storm or hard frost will derange the operation, and are equally injurious to fermen- tation. Any method, therefore, that will ensure an even temperature must be of great import- ance ; and such a method is obtained by apply- ing the apparatus already described, since, by preventing the access of atmospheric air, the sudden changes of the external temperature can have no effect upon the fermenting gyle ; and if it has been commenced at a proper heat (which is between sixty-five and eighty), will proceed through its different stages, as well during the hottest

days of summer, as in the selected months of autumn and spring.

With respect to motion, we are indebted to M. Gay Lussac, as we have already stated, for a beautiful and important experiment, proving that must, possessed of all the reciuisites to pro- duce a good fermentation, will not begin to fer- ment unless excited by a foreign agent. He placed the must in a close vessel, from which the atmospheric air had been exhausted, where it remained several days without giving any signs of fermentation, from which he concluded some power was wanting to break the union of its constituent principles; he therefore introduced a small quantity of oxygen, which immediately caused the must to ferment, evidently proving the necessity of a small portion of atmospheric air (which contains oxygen), to allow the fermen- tation to commence. But it at the same time proves, that, after performing that oftice, this great enemy to all fermented liquors may be dis- pensed with, without impeding the process ; as the small qu-antity of oxygen, introduced by M. Gay Lussac, was soon absorbed by the carbon to form carbonic acid gas, and he found no oc- casion for any further supply.

This discovery is of the greatest importance, since it enables us, without the least detriment or inconvenience to the process, to exclude the oxygen of atmospheric air, which, by constantly supplying the gyle with the principle that causes and promotes acidity, casts on it from the first that roughness and disagreeable flavor which spoil most of our common beverages.

Here again the new apparatus proves of great benefit, for, as soon as carbonic acid gas is evolved Vol. IX.

from die fermenting gyle, the atmospheric air, being lighter, is driven out from the upper part of the working tun ; and, as no air is permitted to enter afterwards, all the subsequent carbonic acid gas emitted, diminishes the quantity of oxygen contained in the gyle, by the oxygen uniting with the carbon as fast as it disunites from tlie saccharine matter during its decompo- sition, and thereby secures a soundness and peculiar mildness, not to be procured by any other mode.

The necessary conditions for a complete de- composition oi the saccharine matter having been stated, it remains to notice those required for a good production of alcohol.

The first already mentioned is a certain den- sity, in order to allow the several principles which are disunited to recombine. It is doubt- ful

whether such a combination will in any case take place, until the temperature of the gyle, having attained its greatest heat, is afterwards cooled a few degrees ; a fact confirming which is, that a portion of the liquid taken out when at its greatest heat, and tried by distillation, produced little or no spirit; but such refrigeration must not be effected too suddenly, as it might coagu- late the yet undecomposed mucilage, and check its further action on the remaining saccharine matter ; and by arresting that natural operation which ought to be pursued a longer or shorter period, according to the specific gravity of the fermentable matter, might produce that result termed ‘ ropiness,’ by holding insolation the coa- gulated mucilage.

Here again the apparatus will be found of great service, for, by frequently renewing the cold water in its reservoir, the internal tempera- ture will gradually diminish by the heat of the gyle coming in contact with the cold interior of the cone : lout, in order to effect this, the tran- quillity above mentioned is necessary, since the continual motion is caused by the oxygen soli- citing new combinations with the carbon, and thereby constantly giving rise to a fresh supply of heat.

Besides tiie advantages already mentioned, which are common to all fermented liquors, there are others peculiar to each, that require to be explained.

The apparatus being applied to ferment the must of grapes, has been found to procure an increase of quantity, amounting in some instan- ces to ten or twelve per cent., and which neces- sarily varies according to situation, season, or former management; but in no instance has it been found less than from five to six per cent.

When applied to the fermentation of beer, this saving has constantly been between four and a half and five i)er cent., a quantity certainly in- ferior to that obtained from wine, but which will not appear unimportant when it is considered that this saving is a spirit congenial to the nature of the beer, and an essential oil necessary to its preservation ; in addition to the peculiar mild- ness and superior flavor.

Mr. Henry found, by a series of very if’terest-

ing experiments, that malt infusion might be

made to enter into complete fermentation by

impregnating it with carbonic acid, prepared

from chalk and sulpliuric acid, and the liquor thus fermented gave a yeast which made per- fect bread, gave alcohol by distillation, and vinegar by further keeping. The wort itself Uiidoubtedly contained all the ingredients of yeast, since this substance was produced during the fermentation ; but the experiment is decisive to prove that no addition of azotic extract is re- quired to begin fermentation in materials naturally fermentable, though, when once begun, the yeast, as fast as it was produced, must have assisted in ˆ.he fermentation then going on. The evidence for the necessity of an acid to begin fermentation is, therefore, more decisive, but it is still doubt- ful whether any particular one is required, or whether there are not several which will answer the purpose. In Mr. Henry's experiments the acid employed was the carbonic, and, from the arrangement of the apparatus, probably a small portion of sulphuric was also carried in along with it. But in grape juice there is no proof of the existence of carbonic acid ready formed, though the tartaric, malic, and other vegetable acids contain within themselves the ingredients of carbonic acid, and are chiefly and ultimately resolvable into this acid. Yeast wdl ever, induce fermentation after it is pressed and dried into solid cakes (a practice not uncommon, as it will keep for a great lengdi of time in this form), but after this operation it can hardly contain any carbonic acid ready formed, though with abun- dant tendency to reproduce it by the first mutual action of its constituent parts.

The attenuation of liquors, or the diminution of their specific gravity by fermentation, is very striking. This is shown by the hydrometer, which swims much deeper in fermented liquor, than in the same materials before fermentation.]\luch of this attenuation is, doubtless, owing to the destruction of the sugar, (vv'hich, dissolved in water, adds to its density), and to the consequent production of alcohol, which, on the contrary, by mixture with water, diminishes the density of the compound. The extract, or mucdage,also appears to be in some degree destroyed by fermen- tation, for the gelatinous consistence of thick litjuors is much lessened by this process: the destruction of tliis principle, however, is by no means so complete as of the sugar, many of the full-bodied ales, for example, retaining much of their original clamminess and gelatinous density even after having undeigone a very perfect fer- mentation.

The acetous fermentation must now be noticed. When any of the vinous liquors are exposed to the free access of atmospheric air, at a temper- ature of 80″ or 85°, they undergo a second fer- mentation, terminating in the production of a sour liquid called vinegar. During this pro- cess, a portion of the oxygen of the air is con- verted into carbonic acid ; hence, unlike vinous fermentation, the contact of the atmosphere is necessary, and the most obvious phenomenon is the removal of carbon from the beer or wine ; the vinegar of this country is usually obtained from malt liquor, while wine is employed as its source in those countries where the grape is abundantly cultivated.

Not only do vinous liquors suffer this change,

but every substance susceptible of the vinous can likewise pass into the acetous fermentation ; hence, sugar dissolved in water, sweet vegetable juices, or infusions of grains tliat have been malted, can be converted into vinegar. Fecula, even without the previous process of malting, is e(]ually susceptible of it ; for, in the process of starch-making, a quantity of vinegar is formed, not merely from the small portion of saccharine matter in the giain, but likewise, as Vauquelin, in his Analysis of the Sour Liquors of the Starch-Makers, has remarked, from the fecula itself. Even substances which are not at all susceptible of the vinous fermentation, it appears to be established, may suffer the acetous. This is indeed contrary to an opinion formerly main- tained, which regarded the acetous merely as a continuance of the vinous fermentation, and as necessarily preceded by it. But it often happens where the former cannot be traced, and where there is no reason to suppose that it ever did exist, as in vegetable juices or infusions containing much mucilaginous with scarcely any saccharine matter, which soon become sour; and the sour- ness which even pure mucilage, or a solution of gum in water suffers, is probably owing chiefly to the production of acetous acid.

Nor is pure alcohol, in any state of dilution with water, capable of undergoing the acetous fermentation : there must always be present other vegetable principles, as sugar, mucilage, or farinaceous matter. Even a certain proportion of these is requisite. Hence strong wines do not become so readily sour as weak or sweet wines ; for the same reason, wine that has been clarified is less liable to ferment; and strong wines can be made to pass into the acteous fer- mentation more easily, by adding to them sugar or mucilage ; and, when these highly spirituous wines are thus made to ferment, they furnish a much stronger vinegar than those which are weak. Even the vegetable acids appear to con- tribute to it, and, in the conversion of sweet vegetable juices or of wine into vinegar, there is reason to believe that the malic

and tartaric acids they contain are partly changed and pass into the acetic acid.

The addition of some substances which act as ferments, appears also to be requisite. It is true that wine and other fermented liquors will of themselves become sour in a certain time ; but this is probably from their containing a por- tion of matter analogous to ferment, and which excites the change. In preparing vinegar, it is known that a certain quantity of such matter must be added, either a portion of the substance which has been deposited from a liquor that has previously passed into vinegar, or a quantity of yeast ; and there is every reason to believe, that it is vegetable gluten which is the essential principal of these ferments. Fourcroy and \ auquelin accordingly found, that, when sugar was added to water which had stood over the gluten of wheat, it quickly formed vinegar; and BerthoUet obtained the same result from a mix- ture of gluten and starch. This principle, '^aii- quelin remarks, contributes to the formation of vinegar in the liquor formed in the manufacture of starch; and the matter which is contained ia

•common vinegar from malted grain, and which renders it so liable to putrefaction, is, according to the chemist, vegetable gluten.

The admission of atmospheric air is essential to the acetous fermentation. Hence, wines that are well bottled maybe kept for a long time un- injured, and tlie more free the exposure to the air is, the sooner they become sour. The oxygen of the air is at the same time always absorbed. According to Saussure, this oxygen is not ab- sorbed so as to enter into the composition of the acid, but is expended entirely in abstracting carbon, and of course forming carbonic acid. In keeping wine in contact with oxygen gas for a year in receivers closed with mercury, he found it converted into vinegar; but the diminution of the volume of the gas never exceeded, but was always inferior to the volume of the wine ; and hence, acording to the view he gives of the ex- periment, the oxygen had combined with carbon so as to form carbonic acid, which had been ab- sorbed by the liquor. And accordingly he found, that when he made the experiment with wine previously impregnated with carbonic acid gas, this wine, under the same circumstances, was equally converted into vinegar, but without the volume of the elastic fluid above it being changed ; the oxygen consumed being replaced by an equal volume of carbonic acid gas.

A certain degree of temperature is requisite to the acetous fermentation. It takes place slowly, even below 60″ ; but it proceeds with more rapidity between 60° and 80° ; and in forming vinegar artificially, the temperature is kept high. If it fall below 50° it is nearly checked ; and hence wines can be longer pre- served by being kept below this temperature.

The phenomena which occur in the acetous fermentation are somewliat analogous to those in the vinous. When it is proceeding rapidly, there is an intestine motion, not accompanied, how- ever, with such a disengagement of elastic fluid as in the vinous fermentation ; the liquor is turbid; its temperature rises; and its smell be- comes perceptibly acetous. These appearances at length subside, and the liquor gradually ‘.ie- comes clean, having deposited a kind of glutin- ous sediment somewhat similar to yeast.

The theory of tlie acetous fermentation is not yet completely elucidated. Since the strength of the acid which is formed from it is proportioned to the quantity of alcohol, or of matter of a compo- sition analogous to alcohol, and in general capable of passing into it: and, since this alcohol disap- pears during the fermentation ; Lavoisier sup- posed that the theory of the process might be inferred from the changes which this principle can be supposed to suffer : and, as he found tliat during the change oxygen is absorbed, while scarcely any sensible quantity of jarbonicacid is extracted, he concluded, that the acetous fermen- tation consists in the oxygenizement of the al- cohol. If the experiments of Saussure be ad- mitted as correct, in proving that as much car- bonic acid is formed as corresponds with the quantity of oxygen consumed, this acid being re- tained by the liquor, the theory of Lavoisier would require to be so far modified as to ascribe the change of alcohol into vinegar rather to the abstrac-

tion of carbon than the fixation of oxygen ; leaving ofcourse,however, a larger proportion of tlie latter principle in the composition of the acetic acid. This simple view cannot however be received as altogether just, since alcohol ahme cannot undergo this change, nor can it by oxygenizement be converted into acetic acid ; and since the pre- sence of mucilage, saccharine matter, or other principles, is always necessary to the acetous fermentation, the operation of which is not ex- plained in conformity to his theory : neither does it explain the action of the ferment which ap- pears to be nearly equally indispensable. It will afterwards appear, that nitrogen probably enteis into the composition of acetic acid ; and the operation of the ferment may be partly that of affVjrding this element.

Vinegar, the product of the acetous fermenta- tion, is prepared in diff'erent countries from dif- ferent materials. Where the grape is cultivated, it is obtained from weak or spoiled wine. This is kept in a proper temperature with the access of the air, and the fermentation is excited by the addition of a quantity of the sediment of vinegar, of wine already sour, or of the lees of such wine. The product is stronger in proportion to the previous strength of the wine. In this country it is prepared either from unrefined sugars, or from the wort obtained by infusion from malted grain ; the fermentation being excited by yeast, and being carried on in a warm apartment. This vinegar is in general inferior in strength and purity to that from wine, and is more liable to become mouldy or sufl'er the putrefactive fer- mentation. This appears to be owing chiefly to the presence of glutinous matter ; and hence the rationale of the method which Scheele pointed out as the best for preserving vinegar, that of heating it, and bringing it even to boil for a few minutes, the glutinous matter being separated by a kind of coagulation.

Panary fermentation has already been noticed under the article Bread, and little more than the theory remains to be examined. ■ Although the fermentation of dough has been termed pa- nary, there is little doubt but it is merely a mo- dification of the acetous. The subjects of both species of fermentation are certainly different, in regard to consistency ; but it is probable, that the modification alluded to is tlie consequence of this difference : for the fermentable matter, from want of room for action, does not arrive at the same point of chemical change which it would do in a more diluted state. We shall not attempt to theorize on the changes which take place during the panary fermentation, fur ther than to suppose that the flour, yeast, and water, give out thoir elementary components for the formation of saccharine matter, starch, car- bonic acid, and acetic acid ; and that, during the incipient generation of the latter, the process is stopped by the action of artificial heat.

The fermentation that produces putrefaction is the last stage of this process The most re- markable changes produced upon a body by putrefaction are upon its color, smell, and taste. Flesh beginning to putrefy, is well known to exhale very soon after a penetrating fetid smell, its color becomes pale, then inclining to blue,

and afterwards livid and black, and its taste nauseous. Transparent

liquor, as urine and broth, during putrefaction, becomes also turbid; as the putrefaction advances the smell becomes more and more fetid, and it also acquires great pungency, which is caused by a large quantity of volatile alkali, disengaged from those sub- stances that are completely putrefied. Solid bodies, whilst they are putrefying, swell, become soft, lose the cohesion of their parts, and are lastly reduced to a very disagreeable putrid pulpy mass : the fluids become turbid, and the effluvia are loathsome and sickening, and after a time a putrid gas is disengaged in a slow but sensible effervescence. A foul and brown serum tlien passes out from the pulpy mass, and about this time the effluvium is very sensibly ammo- niacal, which is indicated by its effects on the eyes and throat," and by forming a white vapor with muriatic acid gas. For some time a large part of the putrid substance is evaporated, and carried otf in the putrid gas and dispersed in the atmosphere, after which the extreme fetor sub- sides; and finally the process of putrefaction ceases, and leaves a kind of fat fetid earthy matter. All the gases certainly known to be produced by putrefaction, are carbonic acid, carburetted hydrogen, sulphuretted and phosphu- retted hydrogen, and ammonia ; but either these, or some of these, must be considerably changed by the solution of the animal matter ; or some compound, not yet examined, must be produced in that state of putrefaction, when the gas evolved occasions such dreadful effects upon those tliat have the misfortune to fall in the way of it, even when diluted considerably with common air. This is said to be the case when the abdomen of a large animal is first burst, the gas from which causes instant fainting, and sometimes death ; and even when death does not ensue, it leaves excessive debility and other alarming symptoms for a considerable time. The most deleterious gas that is known is, perhaps, carburetted hydrogen, but the effects of this, as obtained by chemical means, are far short of those above-mentioned, when equally diluted. The generation of ammonia has been satisfactorily accounted for, since tlie discovery of the consti- tuent parts of the volatile alkali, by the new com- bination formed between the azote of the animal matter, and the hydrogen, of which latter tliere are many sources, and particularly that of the decomposition of water. As ammonia is always produced during putrefaction, it seems rational to suppose, that one im])ortant purpose of the moisture necessary to the process, is to afford, by its decomposition, the hydrogen of the volatile alkali. The nitrous acid is also an undoubted product of putrefaction ; but farther experiments and facts are necessary for explaining the reason why in some cases the azote tends to unite with oxygen to form this acid, and in others with hy- drogen to form ammonia.

Every kind of vegetable matter is liable to this species of decomposition: there is none but what ultimately decays, though some resist it, or preserve tiieir composition much longer tVian others. Those suffer it most quickly whicli are soluble in water ; and any vegetable principle

dissolved in this fluid passes very speedily into it: the surface of the liquor appears covered with a mould : various elastic fluids are disengaged, and at length it is entirely decomposed. Those which are not perfectly soluble, if merely kept humid, present nearly the same results. Oils and resins, which refuse to unite with water or imbibe it, resist any change of this kind for a long period, and can indeed scarcely be said to be subject to it.

The same circumstances favor this species of spontaneous decomposition which favor the others, particularly humidity, and a moderate heat. Any species of vegetable matter, kept perfectly dry, is long in exhibiting any sign of alteration or decay. A certain temperature, which must be less, however, than what will dissipate the humidity, hastens the decomposi- tion, by favoring the approximation and conse- quent exertion of the affinities of the constituent elements. And the presence of the air often promotes it ; at the same time, however, modi- fying the results.

The gases which are disengaged during this decomposition are of course combinations of the principles of the vegetable substance. Accord- ing to Saussure junior, they are compounds of hydrogen with carbon, forming inflammable gases and carbonic acid. The former appear principally when the action of the atmosphere is excluded by the substance being immersed underwater: the latter is produced when the air is admitted ; and its production depends in a great measure on the action of the oxygen of the atmosphere. A portion of water appears also to be formed by the union of part of the oxygen and hydrogen of the vegetable matter.

The principal difference between this species of decomposition and the putrefaction of animal matter is, that there is no evolution of ammonia, or of those fetid combinations which characterise the latter. This is owing to the absence of nitrogen, which is essential to the formation of these. And, accordingly, those varieties of vege- table matter which contain this element, present, in their ultimate decomposition, results extremely similar to those of animal substances : such is particularly the case with all those which con- tain gluten, and with gluten itself in its pure form.

The residual matter of vegetable substances, after this species of decomposition, frequently contains a large proportion of carbon, especially when formed from those principles in which this element is abundant, as from' the ligneous matter; and this may remain long unaltered, the other principles which could re-act upon it having been abstracted in the progress of the decomposition. A residuum of this kind forms that black soft matter which has been named vegetable mould, and which constitutes so im- portant a part of the soil.

When this is obtained free from the unde- composed vegetable matter, more or less mixed with it, it appears from the researches of Saus- sure, who has particularly examined it, to be nearly uniform in its composition and proper- ties. Subjected to distillation, it gave carburetted hydrogen and carbonic acid gases ; water, hold-

iDg in solution acetate and sometimes carbonate of ammonia, and a small quantity of empyreu- matic oil, leaving charcoal, with various saline and earthy ingredients. From these products it follows, that the mould contained less oxygen, more carbon, and more nitrogen than the vege- table matter from which it had been formed ; thougli part of this nitrogen must probably have been derived from the animal matter unavoid- ably mixed with it.

The acids do not exert any very striking action on this mould ; they dissolve its earthy and metallic ingredients. The fixed alkalies dis- solve it almost entirely, and evolve ammonia during the solution. Alcohol merely takes up a little resinous extractive matter. Water likewise dissolves a small quantity of extract.

Saussure has remarked, as has been above stated, that vegetable mould, though the result of the putrefactive process, is not itself suscep- tible of putrefaction, but even rather retards it; hence it remains unaltered, evidently from the cause already assigned, that no other principles are present in sufficient proportion to act on the carbon accumulated in it. This, however, is to be understood of it, only when the air is ex- cluded ; for, when exposed to the atmosphere, it suffers a gradual change, until it is entirely de- composed. The oxygen of the air becomes comt)ined with its carbon, forming carbonic acid, as Saussure found by enclosing it over quicksilver, in atmospheric air or oxygen gas. While this proceeds, the abstraction of carbon appears to allow part of the oxygen and hydrogen of the mould, to combine and form water ; for it loses more of its weight than can be accounted for, merely from the quantity of carbon abstracted. These changes continue to proceed in a certain relation to each other, and terminate at length in the entire decomposition, leaving the eartliy and metallic substances originally contained in the vegetable matters. We perceive from this view, how necessary the frequent turning up of the soil is to enable the vegetable mould to form a proper manure, by decomposing, and affording carbonic acid to the growing plant.

FERN, 71. s. ˆ Sax, peajin. A plant de-

FEAR’ˆY, adj. J scribed in the extracts.

The leaves are formed of a number of small pin- nules, dentated on the edges, and set close one by another on slender ribs. On the back of these pin- nules are [.roduced the seeds, small and extremely numerous. The country people esteem it as a sove- reign remedy decocted for the rickets in children.

Hill. The herd sufficed, did late repair To ferny heaths, and to their forest-lair.

Dry den. There are great varieties of fern in different parts of the world ; but they are seldom cultivated in gar- dens Miller. Hence dusky iron sleeps in dark abodes. And ferny foliage nestles in I he nodes. Darwin.

Fern, in botany, filix. SeeFitiCES. Fern is very common in dry and barren places. It is one of the worst weeds for land, and very hard to destroy where it has a deep soil to root in. In some grounds the roots are found to the depth of eight feet. One of the most effectual ways to

destroy it is often mowing the grass ; and, if the field is ploughed up, plentiful dunging is good. However, fern, cut while the sap is in ii, and left to rot upon the ground, is a very good ma- nure. In some places of the north the inha bitants mow it green, burn it, and make the ashes up into balls with water : which, when dried in the sun, they use to wash linen with, and find to be nearly as good as soap for that purpose.

Fern, Female. See Fteris.

Fern, Flowering. See Osmunda.

Fern, Male. See Polypodium.

Fernˆ Mule's. See IIemionitis.

Fern, Sweet. See Scandix.

FERNANDEZ, or Juan Fernandez, an island in the South Pacific Ocean, about 100 miles from the coast of Chili ; formerly a place of resort for the buccaneers, who were led to re- sort hither from the multitude of goats which it nourished. To deprive their enemies of this advantage, the Spaniards transported hither a considerable number of dogs, which, increasing greatly, almost extirpated the goats. There are instances of two men living at different times alone on this island for many years ; the one a Musquito Indian : the other Alexander Selkirk, a Scotchman, who was, after five years, taken on board an English Ship, which touched here in about 1710, and brought him back to Europe. From the history of this recluse Daniel de Foe is said to have written his Adventures of Robin- son Crusoe. See De Foe. This island was a propitious retreat to commodore Anson's squa- dron in 1741, after having been buff"eted with tempests, and debilitated by an inveterate scurvy. They continued here three months; during which time the dying crews, who op their arrival could scarcely with one united effort hea\e the anchor, were restored to perfect health. Captain Carteret, also, in the Swallow, in 1767, having met with many difficulties and impediments in his passage into the South Sea, attempted to make this island in order to recruit the health of his men ; but he found it fortified by the Span- iards. They in fact had settled an establishment at the port called Juan Fernandez, on the south- west coast, since June 1750. But M. de Bou- gainville that same year is said to have touched here for refreshments, although, in the narrative of the voyage, the fact is cautiously suppressed. The island is not quite fifteen miles long, and six broad ; its only safe harbour is on the north side. It is said to have plenty of excellent water, and to abound with a

great variety of ex- cellent vegetables, and valuable wood : among which are the sandal, the yellow wood, and a species of palm. Vast shoals of fish of various kinds frequent the coast, particularly cod of a prodigious size. There are but few birds here. The president of Chili usually appoints the governor of this island, who is one of the commanders upon the Araucanian frontier. Be- sides the port of Juan Fernandez, there is another, lying towards the south, called the English har- bour, from the circumstance of lord Anson's squadron having anchored there; but it is inse- cure, and too much exposed. Long. 78"^ 30′ W., hit. 33° 40′ S.

FERNE (Sir John), a celebrated antiquary, was bom in Lincolnshire, and educated at Oxford, whence he removed to the inner tem- ple, and in the beginning of the reign of James I. wa-> knighted and made keeper of tiie king's signet for the nortli. lie died about 1610: having published The Blazon of Gentry, 4to., 158G.

Ferne (Henry), a bishop, the son of the pre- cedmg, was born at York in 1602, and became first a commoner of St. Mary-hall Oxford, and afterwards fellow of Trinity College Cambridge. He enjoyed tiie livings of iNIasham in Yorkshire, and Medborn in Leicestershire; and, being made archdeacon of Leicester, took, in 1642, his doctor's degree. The same year he published a piece in defence of the king, whose personal favor he obtained, and who, after the Reforma- tion, made him master of Trinity College, dean of Ely, and bisliop of Chester. lie died in 1661. His works are — 1. The Case of Conscience touching Rebellion; 2. Episcopacy and Presby- tery considered ; 3. Sermons and Tracts.

FERNEL, or Fernelius (John), physician to Henry II. of France, was born in Picardy, about the end of tlie fifteenth century. Being sent to Paris, to study rhetoric and philosophy, he ap- plied himself in a most intense manner. He read Cicero, Plato, and Aristotle ; and, by imi- tating the style of the ancients, made the lectures he afterwards read on philosophical subjects as eloquent as those of the other masters were bar- barous. He also applied himself earnestly to the mathematics ; but this continual study occa- sioned a long fit of sickness, which obliged him to leave Paris. On his recovery he returned and studied physic, and at the same time taught phi- losophy in the college of St. Barbara. In the course of these studies he invented several ma- thematical instruments; and soon after began reading lectures upon Hippocrates and Galen, which gained him great

reputation. He now composed his treatise on Physiology, and another De Vense Sectione, upon both of which he read lectures for several years. While thus employed he was sent for to court to see a lady whose re- covery was despaired of. He, however, accom- plisiied tlie cure ; and on this occasion Henry II., then dauphin, offered h.m the place of first y>hy- sician to him; but Fernel, preferring his studies, declined the employment. When Henry came to the throne he renewed his offers, which Fernel was at last prevailed on to accept. He died in 1558, leaving behind him many other works, as De Abditis Rerum Causis, seven books of Pathology, a book on Remedies, &c., which have been repeatedly printed, with his life prefixed, written by William Plantius, his dis- ciple.

FERNESS, a cape and bay on the west coast of Eday, one of the Orkney islands. Long. 2° 43′ W., lat 59° 2′ N.

FERNEY, a small town of France, on the frontier of Switzerland, five miles N.N.W. of Geneva. It is chiefly remarkable as the favo- rite residence of Voltaire. In the reigns of Louis XIII. and XIV. the inhabitants, who were Protestants, were obliged to emigrate. In 1762 Voltaire purchased the adjacen* lands, and in-

vited a immber of workmen and artists, parti- cularly watchmakers, to settle here; he even erected a church for their use: but in 1786, eight years after his death, the number of inha- bitants did not exceed 600. The chateau of this superficial philosopher is preserved, and shown to strangers.

FERNS, a small town, or rather village, of Ireland, in the county “of Wexford, which, united with Leighlin, was once a bishop’s see. In the year 1166 the king of Leinster burnt this town, but afterwards founded an abbey in it, now in ruins, as also a castle to which he retired. This occasioned the calling in of the Norman chiefs, and, eventually, the conquest of Ireland. Ferns is fifteen miles north of Wexford.

FERO’CIOUS, adj. ˆ Fr.firoce; Lat. /erox. Fero’ciously, tit/y. > Savage; fierce; rave- Feroc’itv, n. s. j nous.

The hare, that becomcth a prey uuto men, unto beasts and fowls of the air, is fruitful even unto su- perfetation ; but the lion and ferocious animal hath young ones but seldom, and hut one at a time.

Jirovne’s Vulgar Errours. Untaught, uncultivated, as they were Inhospitable, full of ferocity, Philip’s Briton. An uncommon ferocity in my countenance, with the remarkable flatness of my nose, and extent

of my mouth, have procured me the name of lion.

Addison's Guardian, Smedley rose in majesty of mud ; Shaking the honors of his ample brows. And ea.ch ferocious feature grim with ooze.

Pope. It is to the merciful maxims of Christianity, much more than to any other cause, that we must ascribe the little ferocity and bloodshed which accompr.ny our modern victories. Robertson's Sermon,

And now to see them thus divided, stand In fixed ferocity , when joyous tears And sweet sensations should have welcomed, both Show what the passions are in their full growth.

Byron, The FEROE, Ferr.e, or Faroe Islands, are a cluster of islands in the Northern Ocean, amounting to twenty-two in number, and lying between 61° 15′ N. lat., and 62° 25'. Their name is conjectured to have been derived either from fcer, a sheep, and a?, an island, from the number of these animals found on them by the first settlers, and which were introduced by the Norwegian pirates, who first discovered the islands and made them their rendezvous; or from fier, feathers, the feathers of sea-birds form- ing a staple article of tiieir riches ; or finally, from fia;r, far distant, as relative to their position with respect to Norway. The seventeen of them which are inhabited, may be thus described: —

1. Fiigld', Bird Island, north-eastern, is eight miles in circuit, has some spots of ground pro- ducing corn, and two villages. 2. Sivina; Ilog Island, larger than FuglcK, is composed of two hills, and nearly divided by a great bay on the east, and another on the west ; one village. 3. Videriv, three leagues long and one broad ; on the east side is a cavern penetrating quite through the island, 300 feet long, and by which a boat may pass as under the arch of a bridge; two villages. 4. Bordie is four leagues long and three broad, is intersected by two inlets dividing

it into four peninsulas ; it has a good winter port named Klaksund, on the north-west, and seven villages. 5. Kunar, eight miles long, and two broad, is one steep conical hill ; three villages. 6. Kelsa, nine miles long, and one broad ; four villages. Ostcrx, twenty miles long, and ten broad, has the highest hills among the group, is indented by five sounds, and has the good winter harbour of Kongshaven on the south-

west ; it has two small fresh-water lakes and many basaltic columns. It contains seven churches, and twenty villages or farms. Two singular rocking stones are seen in the sea near the island. Their length is twenty-four feet, and breadth eighteen, even when the sea is perfectly calm, they have a sen- sible vibratory motion, and in storms move backwards and forwards several inches with a creaking noise : this effect is probably produced by their remaining suspended on the summits of other rocks after the clay on which they formerly rested had been waslied away. 8. Stroma, the largest of the islands, is twenty-seven miles long, and seven 1)road. It has one town and twenty villages and farms. The former, named Thorshavn, is the only one on the islands, and is on the south-east side of the island. It is the seat of government and the centre of trade. It consists of 100 wˆooden houses, with the same number of families, of whom one half are fish- ermen, servants, or paupers. There is a Latin school, and a wooden church, covered with slate. Tiie defences are a small fort, and garrison of thirty-six men. At Kirkeboe, a village on the south end of the island, is the only stone church ; and here was the ancient seat of the popish bishops. Westmanhamen, on the west side of the island, is the best harbour of the group. 9. Nohce, Needle Island, has its name from a perforated hill resembling the eye of a needle. It is five miles and a half long, and one mile broad, and contains copper ore, mixed with gold; one village. 10, 11. Hesta, and Kolter, are little islands with a single farm each. 12. Vanga, has two lakes of fresh-water, one of which is three miles long, and half a mile broad; they abound in large trout; three villages. 13.]\li/gcna's, the western island, is small and of difficult access, so that it is only visited twice a year by the clergyman ; one village. West of this island is a great rock of basaltic columns, the only resort amongst the islands of the Soland goose. It pastures sheep and oxen, whose flesh is the most esteemed of the islands. 14. Sander is thirteen miles long, and one mile and a half broad ; it has three lakes, and five villages. It is one of the most fertile, producing excellent potatoes. 1.5. SJaiiT, a small island, is celebrated in the annals of the islands for containing the tomb of their hero Sigismund Bristesen. 16. The Great Dimon is almost entirely inacces- sible ; and its inhabitants, of one family, having no place to haul up a boat, have no communica- tion with the other islands, unless when the people of the latter visit them ; and the clergy- man who visits the island ordy every summer, is obliged to be hoisted up by a rope. This island, as well as its neighbonr the Little Dimon, is the grand resort of sea-fowls. 17. Sudcra; the southernmost of the group, is seventeen miles

long, and five miles broad ; has six churches, and ten villages. It has many spaces, covered with basaltic columns. This island has two good

winter harbours. The Monk is a great lump of rock south of Suderoe, surrounded by sunken rocks among which the currents are strong and dangerous.

These islands are all vast mountains of rock, generally rising in conical or angular summits oi 1000 to 2000 feet elevation, and the coasts presenting perpendicular rocky cliffs of 200 to .300 feet height. The grand formation is trap, with feltspar, glimmer, and grains of zeolite ; the only volcanic appearances are in basaltic columns, which cover considerable spaces. Many confused heaps of loose stones, and vast masses of rock, scattered on the sides of the hills, seem to denote some great convulsion, by wliich also it would appear that many of the islands have been torn to pieces. The shores offer numerous deep caverns, the resort of seals. The moun- tains are only separated by very nairow glens, through which run rivulets and brooks, many ol which form cascades, and are useful in turning corn mills. There are also some fresh-watei lakes, in which are trout and eels ; and somt warm springs.

The quantity of arable land is very small, the soil over the bed of rock being in general not more than a foot or two deep. Barley and rye are the only cultivated grains; and turnips, carrots, and potatoes the only vegetables. The turnips are a yellow sort, but small and hard ; and the potatoes diminutive and watery. Such, however, is the industry of the people in some places, that soil is often seen laid on the flat sur- faces of large stones, in which potatoes of a good quality are produced. The islands have no trees, though from the veins of soil they possess, and from the trunks of juniper trees found in the soil, it would appear that they were not formerly without wood. Copper ore has been found, with particles of gold, but too poor to pay the expense of working. The climate, though very foggy, is not unhealthy. The summers are generally wet ; the winters stormy but not cold, the lakes or brooks seldom freezing to any thick- ness, but snow falls in vast quantity. The aurora borealis is common in winter, and is even seen sometimes in August. The shores are tre- mendously beaten by the Atlantic waves, and the currents rush through the sounds and straits with great violence, forming whirlpools almost equal to those of the Maelstrom, on the coast of Norway. The islands are deeply indented by inlets forming eight good harbours in winter, and they have besides many roads named summer harbours.

The wild animals are only rats and mice ; the domestic ones horned cattle, sheep, horses, and a few hogs, dogs, and cats. The amphibious animals are the walrus, and several species of the seal. Among the aquatic birds are many kinds of ducks, particularly the eider, the auk,

the puflSn, penguin, diver, fulmer, sheer-water, ganuet, gulls, petrel, &c. The only land birds of any consideration are the quail and wild pigeon. Domestic fowls are common, but there are no turkeys.

The population in 1782 was 4409 souls : in 1812, 5209. Their principal pursuits are cutting turf for fuel, agriculture, rearing cattle and sheep, manufacturing the wool of the latter into coarse cloths or knit jackets and stockings, to dye whicii they make use of lichens, with which the islands abound. The cattle are small; and, no pains being taken to select tlie best for breeding, lew are to be met with that are well shaped. They yield but a small quantity of milk, but it is sweet and rich. The sheep vary a little in ap- pearance and in the quality of ti'ieir wool, which is torn from them when the fleece begins to loosen; but frequently that event is not waited for, and the skin of the animals is cruelly lace- rated. The horses are small, and in general not well shaped. The best are to be seen in the island of Suderoe. They are very seldom used, except for carrying home fuel from the mosses ; there being no roads and no wheel carriages. The inhabitants are also employed in catching sea birds both for their flesh and feathers, the former forming a good portion of their food, fresh or dried ; and in hunting the seal for its skin and oil. The fishery, which was formerly considerable, is now reduced to barely sufficient for the consumption of the inhabitants, the fish having forsaken these coasts ; the principal kinds are hoUibut, cod, haddock, and sey (gadus vi- rens.) Shoals of small whales, of 100 to 1000, arrive periodically, and a great number are killed for their oil as well as for food. Seals were formerly taken in great numbers in the caverns but they are not so numerous now.

Many of the inhabitants speak English, a considerable intercourse having been kept up between these islands and Scotland during both the American and French wars. Some differ- ences having taken place in the year 1809 be- tween some British merchants and the Icelanders, an order in council was issued, commanding Bri- tish svibjects to consider the Icelanders, Faroese, and the people of the Danish settlements in Greenland, as stranger friends, and permitting a trade between these places and the ports of Lon- don, Leith, and Liverpool, on certain conditions. The money and the value of all the goods of which Feroe and Iceland had been robbed by some privateers were also restored. In 1811, the maritime war interrupting the supplies of the Faroese, a small but adequate export from Bri- tain was permitted. Many romantic scenes are presented in the formation and appearance

of these islands ; and there is scarcely a promon- tory or detached rock that does not present something combining singularity with magnificence. Of these, the rock called the Witch's Finger and the litde island called Tindholm, the one on the east and the other on the west side of Vaagoe, are perhaps the most remarkable. The former is detached from the adjoining precipice almost to the bottom. From some points of view it has the appearance of a grand square tower, surmounted by a lofty spire ; and, when the light falls in a particular direction, the resemblances of a door and windows are quite distinct at a distance of five miles. When viewed in that position in which it appears detached from the rock, it is not unlike a huge finger

pointing upwards. Landt states the height of this peak to be 1200 feet, and we believe that this does not much exceed the truth. The elevation of Tindholm is probably about 500 feet, and its singular appearance is much more strik- ing. On one side, though very steep, it is co- vered with verdure almost to the summit, which consists of a number of long and slender peaks, ranged along the ridge, which terminates on the opposite side a perpendicular face of rock. In crossing the island of Vaagoe towards this rock, its summit is seen in a form bearing a close si- militude to the towers and pinnacles of Westminster Abbey. In some places there are ranges of columnar rocks ; but, in general, they are not in such situations as to render them of much im- portance in the scenery. The promontory of Niepen, in Stromoe, presents a beautiful range of columns. There are some in Osteroe which are lofty, but, from their situation, not very striking. Several very curious columnar rocks are to be seen in Suderoe and Mygenses. The highest mountain is the Skellingfell, or Skielinge Field, which rises very abruptly, terminating in a small platform. It exceeds 3000 feet in height ; but il has not yet been very accurately measured. The frequency of fog, which often sud- denly envelopes the adventurous traveller, even in fine weather, renders the ascent of the Feroe mountains a very hazardous undertaking. The height of Slatturtind, in Osteroe, is 2825 feet; and there are several mountains in the same island, which appear equally high. There is nothing in Feroe which can be called a valley. Of the few lakes, the largest is in the island of Vaagoe, being about three miles long, and one in breadth. Beyond the upper end of the lakes there is generally a small extent of flat ground. Barley is the principal article imported from Denmark : pease, rye, meal, and oats being less commonly used. In the year 1812, 5650 barrels of grain and meal were imported. It appears that a single mercantile house in Copenhagen has of late years had a monopoly of the supply of these islands.

The bird-catchers here are very adventurous. Sir G. Mackenzie

supplies the following account of their modes of procedure : — ‘ The fowlers are provided with long poles, to the ends of which are fastened small poke nets. They display great dexterity in casting this instrument over the birds, which invariably make towards the water when they are disturbed. It is this anxiety of the birds to seek the element in which their security is to be found, which gives cer- tainty to the exertions of the fowler. The birds push their heads through the meshes of the net, which, being dexterously inverted, keeps them suspended by the neck. When a fowling expedition is undertaken, two men fasten them- selves to a rope, so that there may be eight or ten fathoms of it between them. One assists the other to ascend the rock by means of a pole, at the end of which is a hook, which is fastened to the band of the climber’s breeches, or to a rope tied round his waist, and thus he is pushed up : but the most common method is for the climber to seat himself on a board fastened to the end of the pole. They often ascend frightful

cliffs without any assistance. When the first has got to a place where he has some footing, he helps the other up by means of the rope to which they are both fastened. When tliey have gained the elevation where the birds are pretty nume- rous, they assist each other from cliff to cliff. It sometimes happens that one of them falls and pulls the other after him, when both are precipi- tated into the sea, or dashed to pieces on the projecting rocks. When the rocks are so high and smooth as to render it impossible for the fowlers to ascend, they are let down by means of a strong rope from above. To prevent the rope being cut, a piece of wood is placed at the verge of the precipice. By means of a small line, the fowler makes signals to those above, and they let him down or pull him up accordingly. When he reaches a shelf of the rock where the birds have their nests, he unties himself, and proceeds to take them. Sometimes he places himself on a projecting rock, and, using his net with great adroitness, he catches the birds as they fly past him ; and this they call heining. This mode of catching birds is even practised while the fowlers are suspend’jd. When a projection of the rock is between the fowler and the place where the birds are, he swings himself from the rock so far that he turns round the projection. In this, great address and courage are requisite, as well as in swinging under a projection into a cavern. When he cannot, with the help of his pole, swing far enough, he lets down a line to people stationed in a

boat below, who swing him, by means of it, as far as is necessary to enable him to gain a safe place to stand upon. Besides being exposed to the risk of the rope breaking, the fowler is frequently in danger of being cruslied by pieces of the rock falling down upon him. — Such are the hazardous means to which these poor people resort for procuring food.'

The houses in Thorshavn are crowded together without any regularity. The roofs are covered first with birch bark, brought from Norway, over which turf is laid. The green color of the tops of the houses, assimilating with that of the soil a-ound the town, renders the place almost in- visible from the sea. The house of the com- mandant is the best furnished, but tliat of the land-foged (who is here high sheriff as well as treasurer) is the most spacious. Though the exterior of the buildings does not promise much, yet the rooms are generally neat and clean. The prison is a wretched stone building, in which those convicted of crimes, such as sheep-stealing, are confined for several years. They are brought out occasionally, however, to work when any thing jjarticular is required to be done. At the mouth of the harbour are the remains of a small but strong fort, the guns of which were de- stroyed by the British in the year 1H08.

The hospitality of tlie Faroese is remarkable, and in their polite and respectful deportment, and strict honesty, they are no where exceeded.

To religious duties they pay the most regular attention. Almost every village has a cliurch. On the Sunday evenings, and on holydays, the people give themselves up to merriment. In fine weather, groups of them are seen in the

fields, formed into circles, moving round in slow, cadence (which they call dancing) to a song iu which sometimes fifteen or twenty voices join.

The religious establishment of the whole of these islands is under the superintendence of a provost. There are seven parishes, and thirty-nine places of worship, so tiiat the duty of the clergy is exceedingly laborious. The stipends are inconsiderable, and are chiefly paid in kind. To the glebes a permanent stock of sheep, and sometimes a few cows, are attached. Glebes are also provided for the widows of the clergy.

Barley bread with milk or fat generally con- stitute the breakfast of the common people. In the autumn, when the lambs are slaughtered for

drying, the blood is boiled with the milk. Din- ner consists of fish and water gruel, improved by being boiled with bones or fat. Soup is sometimes made with fresh or dried meat, and turnip leaves. Dried lamb is eaten raw with tallow, and dried whale flesh is esteemed a delicacy. On holydays a large pot is placed on the fire, and a quantity of sea-birds Vjoiled for sup- per. The quantity of fat which these people devour, and the state in which the rest of their animal food is taken into the stomach, miglit be deemed unwholesome ; yet diseases are not fre- quent, and the appearance of the inhabitants every where is robust and healthy. Elephan- tiasis was formerly a prevalent disorder, and an hospital was established near Thorshavn for the reception of lepers. The remedies used by the natives are simple, and, as might be expected, harmless and ineffectual, such as soaking the parts affected in water, into which a piece of old gold or silver coin, or some ornament, is put, and decoctions of various plants applied exter- nally. The only surgical operation performed is the extirpation of the uvula, when, from re- laxation, it lengthens and obstructs the passage to the stomach and lungs. There is a surgeon established at Thorshavn, with a salary from the Danish government.

The male dress consists entirely of woollen stuffs, manufactured in the country. Their jackets, which are worn in their ordinary occu- pations, are knitted, and ornamented with figures in colored worsted. In full dress, they wear a long frock of a dark brown or black color, and breeches of the same. Their shoes are made of sheep-skin, slightly tanned with the root of tor- mentilla They are formed by cutting a piece of a skin proper length and breadth, and puckering, very neatly, the parts for the toes and heel : the fastening is a white woollen thong, knitted for the purpose, and tied round the legs. Tiie dress cap is formed like a bishop’s mitre ; on ordinary occasions they wear woollen caps, and sometimes caps of skin, with the hairy part outermost. The men never cut their hair; and to appearance sel- dom comb or wash it. Tiie women wear their hair combed backwards from the forehead, and liave wihte linen caps with a broad stiff border of coarse lace, rising perpendicularly. The cap is fastened by a colored silk or cotton kerchief tied under the chin, with a piece of riband float- ing behind. The rest of the dress much resem- bles that of the peasantry of Scotland, tiie mate- rials being coarser. They wear apronsj and

cflvion kerchiefs over the shoulders and bosom; and the more gaudy the colors, the more superb is a dress esteemed. The language is a dialect of the Scandinavian.

The revenue collected out of the produce of the islands is : for every sheep of the perma- nent or estimated stock of each farm, a lamb's skin; and for every sixty sheep killed, 361bs. of tallow, and thirty skins. The proportion of wool paid as tax, is sold at a fixed price to the people of Thorshavn. It amounted formerly to between 3000 and 4000 rix dollars. The civil establishment is under the direction of a military officer, commanding thirty men, who maintain the form of mounting guard, and keeping a look out. Under the commandant are, the landfoged or treasurer, and the sysselmen, or governors of districts.

FERONIA, the goddess of woods and or- chards, so named from the town where were a wood and temple consecrated to her. Strabo relates, that those who sacrificed to this goddess walked barefoot upon burning coals, without being hurt. She was the guardian deity of freed men, who received their cap of liberty in her temple.

FERRACINO (Bart.), an Italian engineer, of considerable repute in the seventeenth cen- tury, was born at Bassano, and originally a sawyer. He first invented a saw to be worked by wind, and then constructed various clocks and hydraulic engines, which have been much admired. One of the latter, made for the pro- curator Belegno, was famous in Italy within these few years : it was framed on the principle of the screw of Archimedes, and raised water to the height of thirty-five feet. He also built the bridge over the Brenta, at his native town. He died in 1750.

FERllAH, a large walled town of Afghaunis- taun, situated in a fertile valley : it gives its name to a considerable river, falling into the lake of Zarra, the Ariapaulus of the ancients, and is supposed to be tiie Parrah, mentioned in ancient geography as the capital of the Parthian pro- vince of Anabon. It stands in long. 61° 40′ E., and lat. 33° 7′ N.

FERRAR, (Robert), an English prelate and martyr of the sixteentli century, was born at Hali- fax, Yorkshire, and studied both at Oxford and Cambridge. He became a canon regular of the order of St. Augustine, and was chosen prior of the monastery of St. Oswald, which dignity he sur- rendered on the dissolution of 1540, receiving a pension of XlOO per annum. Embracing the principles of the reformation, he became chap- lain to archbishop Cranmer, and, after his ex- ample, took a wife. By Edward VI. he was made bishop of St. David's; but in consequence of issuing out his commission to his

chancellor to visit his chapter, and inspect into some dila- pidations in an exploded form, his enemies found occasion to accuse him of a praemunire, and so great were the expenses of the prosecution, that he became unable to pay bis first fruits and tenths, and was imprisoned for them as a del)tor to the crown. On the accession of queen Mary he was brought, in company with Hooper, Brad- ford, and others, before Gardiner, bishop of

Winchester, who after treating him with great indignity delivered him up for trial to his suc- cessor, Morgan, by whom he was declared guilty of heresy, and being turned over to the secular arm was burnt at Caermarthen, on the 30th of March, 1555. This prelate appears to have been of a headstrong and imprudent dispo- sition, but was treated with remarkable and per- sonal ill will by both Protestants and Papists.

FERRARA, or the Ferrarese, a duchy and province of Italy, in the ecclesiastical states, bounded on the north by the Po, and on the east by the Adriatic. The part formerly belonging to this province, beyond the Po, was in 1815 united to Lombardy. It is now properly a lega- tion of the papal states, and is supposed to con- tain about 171,000 mhabitants. It is well wa- tered by branches of the Po, which often over- flow it : but is indifierently cultivated, though fit for corn, pulse, and hemp, which it produces, as well as some silk and wine. This duchy was formerly possessed by the house of Este ; but pope Clement \ III. took possession of it in 1598, after the death of Alphonso II., duke of Ferrara, as a fief of the church. In October, 1796, the inhabitants of this province, uniting with those of Bologna, Modena, and Reggio, erected the ci-devant Cispadane republic. In October, 1797, they joined the other Italian states in forming the Cisalpine republic, of which this duchy constituted a department, entitled the Lower Po, and was then found to contain 154,000 citizens, who elected twelve deputies to the councils. But in July, 1799, the whole provmce was reduced, and the democratic go- vernment overthrown by the Austrians, who were again obliged to surrender to the French in May, 1800. They occupied it until 1814.

Ferrara, an ancient and large city of Italy, capital of the above duchy. It is seated in an agreeable and fertile plain, watered by the river Po on one side, and on the other encompassed by a strong wall and deep broad ditches. It has a citadel, erected by pope (.ˆlenient VIII, In the middle of the city is a magnificent castle, surrounded with water, formerly the palace of the dukes, and now of the papal legate. It con- tains some fine paintings. The duke’s garden and park are called the Belvidere. The theatre here is one of the best in Italy. Here are also a

good drawing academy, and a valuable collec- tion of minerals and antiquities.i Manuscripts of Ariosto, Tasso, and Guarini are shown ; also the houses which they respectively occupied. The hospital of St. Ann was the prison of Tasso. The two Strozzi, the poets, and Bentivoglio, the historian, as well as Savonarola, the Dominican, were natives of Ferrara.

Ferrara had formerly a considerable trade; but it was greatly reduced by the exactions of the popes. The ancient university, founded in 1391, by pope Boniface IX., had dwindled into a wretched college of the Jesuits before the re- volution. In 1735 it was advanced to an arch- bishopric by pope Clement XII. The country around is so marshy, that a heavy shower of rain renders the roads almost impassable. It has an ancient cathedral and about 100 churches, and contained 30,000 inhabitants in 1797, including

1600 Jews, who carry on silk manufactures, &c. On the llth of June, 1796, the French, under Buonaparte, arrived in this city, and began to establish the late democratic constitution. On the 19th February, 1797, it was formally ceded to the Cispadane republic by the pope. In July, 1799, it surrendered after a long siege, to the Austrians, under general Klenau. Rlurat's army was defeated here in the beginning of April, 1815, by an Austrian force under general Mohr and

FERRARS (George), a lawyer, poet, and historian, descended from an ancient family in Hertfordshire, and born about A. 1). 1510, near St. Alban's. He was educated at Oxford, and thence removed to Lincoln's Inn, where he was soon called to the bar. Cromwell, earl of Essex, introduced him to king Henry VIII. who em- ployed him, and in 1535 gave him a grant of the manor of F'.amstead, in his native county. He was, however, for some years afterwards in

Po

count Neipperg. It is sixty-seven miles north of embarrassed circumstances: and being, in 1542, ~ ■ " " "in attendance on his duty as a member of the

house of commons, he was taken in execution by a sheriff's officer and committed to the compter. The house, having heard of his

confinement, des- patched their serjeant to require his release. This was refused, and an affray took place be-

Bologna, and forty south-east of Mantua, pulation, 24,000.

FERRARI (Octavian), an Italian philosophi- cal writer, was born at Milan, in 1518. He be- came professor of ethics and politics at his native place, but removed afterwards to Padua, where

he explained the principles of Aristotle four tween the clerks of the compter and that officer, years, and then returned to Milan. He died in who had his mace broken. On his returning, 1586. His works are, 1. De Sermonibus exote- and making a report to the house of what had

ricis. 2. De Disciplinae, Encyclica : seu Clavis Philosophic Peripateticae Aristotelica?. 3. De Ongine Romanorum. 4. A Translation of Athe- naeus into Latin.

Ferrari (Francis Bernardin), of the same family with the foregoing, was born at Milan in 1577, and laid the foundation of the Ambro- siun library. He died in 1669. His works

happened, the members in a body repaired to the bar of the house of lords to complain of the breach of privilege ; when the latter judged the contempt to be very great, and referred the pu- nishment of the offenders to the discretion of the lower house. The members now resolved that the Serjeant should repair once more to the sheriffs of London (who in the late affray had

are, 1. De Antiquo Ecclesiasticarum Epistola- supported the clerks of the compter), and de-

rum genere. 2. De Ritu Sacrarum Ecclesiae Catholicie concionum. 3. De veterum acclama- tionibus et plausu.

Ferrari (Octavio), another professor of the same family, was born in 1607, and educated at tlie Ambrosian College, where he presided in the chair of rhetoric. He afterwards removed to

mand their prisoner without writ or warrant, his mace being a sufficient badge of his authority : when the city magistrates delivered up the insol- vent senator to tiie officers of the house. But this tardy obedience did not exempt the parties from punishment, for the sheriffs and the plaintiff, at whose suit P'errars was arrested, were committed

Piulua, and greatly benefited that university by to the tower, and the

clerks to Newgate; and an

his labors and fame. He died in 1682. His principal work is entitled Origines Linguse Italics;, folio; besides which he wrote several dissertations on subjects of antiquity.

Ferrari (John Baptist), was a Jesuit of Si- enna, who published a Syriac Dictionary in 1622, 4to. He wrote also De Malorum Aureorum Cultura, 1646; and De Florum Cultura, 1633. He died in 1655.

Ferrari (Gaudenzio), a painter born at V'aldugia, in 1484, was employed by Raffaelle in the Vatican, and thereby acquired a beautiful style of design and coloring. He died in 1550. Another painter of this name, John Andrew

act of parliament was passed discharging Ferrars from liability for the debt. This extraordinary transaction, it is said, obtained the entire appro- bation of the king, and became the basis of that rule of parliament which exempts members to this day from arrest. In the reign of Edward VI. Mr. Ferrars attended lord Somerset as a commissioner of the army, in his expedition to Scotland in 1548. He died in 1579, at Flam- stead. He wrote, 1. A Translation of Magna Charta, and several early statutes. 2. History of the Reign of Queen Mary, published in Grafton's Chronicle, 1569, folio. 3. Six Trage- dies, or dramatic Poems, published in the Mir-

Ferrari, of Genoa, excelled in landscapes as well ror for Magistrates, in 1559, 1587, and 1610 as historical subjects. He died in 1669.

Ferrari (Lewis), a mathematician, was born at Bologna, about 1520. He studied under Cardan, and discovered the method of resolving biquadratic equations. He was professor of ma- thematics at Bologna, where he died in 1565.

FERRARIA, in botany, a genus of the trian- dria order, and gynandria class of plants : natu- ral order sixth ensatat. Spatha; two-leaved : cal. none; petals six, wavingly curled ; stigmata cu- cuUated : cap. trilocular, inferior. There are four species, natives of the Cape of Good Hope, Mexico, and Australasia. There is a great sin- gularity in the root of one of these species ; it vegetates only every other year, and sometimes every third year; in the intermediate time it re- mains inactive, though quite sound.

Ferrars (Henry), a Warwickshire gentleman, of a good family, eminent for his genealogical and neraldic researches. Mr. Wood says, that out of the collections of this gentleman Sir Wil- liam Dugdale laid part of

the foundation of his celebrated Antiquities of Warwickshire. Camden also mentions liis assistance in relation to Coventry. Some poems of his were published in the reign of queen Elizabeth ; and he died in

1633.

FERREARAT. See Feriara.

FE'RREOUS, adj. } Lat./meus. Irony;

Ferrij'ginous. ˆ of iron.

In tlic body of the glass there is no ferre.ous or magnciical nature. Browne's Vulgar Errours.

Tboy are cold, l:ot, purgative, AmxciizV, ferruginous, saline, petrifying, and bituminous. Ruy-

On long exposure to air, the granites or porphories of this country exliibit a ferrwjiiMUi crust ; the iron being calcined by the air first becomes visible, and is then washed away from the external surface, which becomes white or gray, and thus in time seems to de- compose. Darwin.

FEIIREIIAS (Don John de), a learned Spa- nish ecclesiastic, a native of Labaneza, was born in 1652. After studying at Salamanca he obtained the cure of St. James of Talavera, whence he removed to Madrid, and became a member of the academy, lie assisted in the compilation of the great Spanish Dictionary, and was the au- thor of various works in pliilosophy, tlieology, and history, the most considerable of which is a general History of Spain, in ten volumes, 4to.

FER'IIET, n. s. &i, v. a. I Yv.furet ; Teut.

Feu'kf.ter, n. s. ˆfret; 'ˆe\s\,fured ;

Vovi. frao ; Dutch, yerreˆ; Lat. viverra, i.e. a creature that lives or sees under the earth. A species of mustela used in the destruction of rats, hunting of rabbits, &c. See Mustela. : hence to ferret is to hunt out of concealment, or lurking places.

Cicero Looks with such ferret and such fiery eyei As we have seen him.

SJiakspeare. JuUut Ca:sar, With what an eager earnestness slie looked, having threatening not only in her ferret eyes, but while she spoke, her nose seemed to threaten her chin.

Sidney. The archbishops had ferretted him out of all his holes. Heylin,

Coneys are taken either by feirets or purse-nets.

iVortimer.

FERRETTO, in glass-making, a substance which serves to color glass. It is made by a simple calcination of copper, but serves for se- veral colors. There are two ways of making it: the first is this : — Take thin plates of copper and lay them on a layer of powdered brimstone, in the bottom of a crucible ; over these lay more brimstone, and over that another layer of the plates, and so on, alternately, till tliˆ pot is full. Cover the pot, lute it well, place it in a wind- furnace, and make a strong fire about it for two hours. When it is taken out and cooled, the copper will be found so calcined diat it may be crumbled to pieces between the fingers like a friable earth. It will be of a reddish, and, in some parts, of a blackish color. This must be powdered and sifted fine for use. Another way of making ferretto is as follows : make several stratifications of plates of copper and white vi- triol, alternately, in a cmcible, which place on the fioor of the glass furnace, near the eye, and let it stand there three days ; then take it out, and make a new stratification with more fresh vitriol : calcine again as before. Repeat this operation six times, and a most valuable ferretto will be obtained.

FERRI (Ciro), a painter, born at Rome in 1634, was bred under Pietroda Cortona; and the ■works of the scholar are often mistaken for those of the master. The grand duke of Tuscany no- minated him chief of the Florentine school. He died in 1689.

FERRIAR (John), a respectable modem

physician and polite writer, was born at Chester, in 1764. He graduated at Edinburgh, after winch he settled in practice at Manchester, and became senior physician to tlie infirmary and the lunatic asylum. He contributed largely to the formation of the literary and scientific insti- tutions of that place ; and supplied many papers in their Transactions. He died in 1815. Dr. F'erriar was the author of, 1. Medical Histories, 3 vols. 8vo. 2. Illustrations of Sterne, in which the plagiarisms of that writer were de- tected, Bvo. 3. Bibliomania, an

Fˆpistle, 8vo. 4. An Essay towards a Theory of Apparitions, 8vo. 5. On the medical Properties of the Digi- talis Purpurea, Bvo.

FERRI ER (Arnold de), an eminent French lawyer, born at Toulouse in 1506. He was ad- mitted LL.D. at Padua : was a professor in the university of Toulouse, and a counsellor in the parliament of that city. He went afterwards ambassador to Venice, where he continued se- veral years. He wrote several works, and as sisted F. Paul in his history of the council of Trent. After long entertaining sentiments in favor of the Protestant religion, he at last openly renounced popery in his seventy-sixth year, and died three years afterwards.

FERRINGTOSH, Gael. 'i. e. the Thane's lands, a barony of Scotland, in Ross-shire, whose ancient owner having greatly assisted to quash a rebellion which threatened the north of Scotland upon the revolution in 1688, and having, in con- sequence of his patriotic exertions, incurred great damage by the depredations of the opposite fac- tion upon his property, he received, by way of compensation, an exemption from all duties upon spirits distilled from grain, the growth of his lands in this district. The family continuing steadfast in their adherence to government this singular privilege of exemption from excise was continued to them till 1784, when it was taken away by act of parliament, and a suitable compensation authorised to be made. This, upon being submitted to a jury before the court of exchequer, November 29th, 1785, was fixed at £21,580.

FERRO, Fer, or Hiero, the smallest and most westerly of the Canary islands. It contains about seven square leagues, and a population of 5000. The chief exertions of the inhabitants are turned towards the rearing of cattle. Fogs are very common over this island, whence it has re- ceived in the neighbourhood the name of the Black Canary. It presents on all sides to the sea a face of hold and craggy rock. In the inte- rior the ap]3earance of the country improves and a great part of the island is tolerably fruitful. Good wine and brandy are exported to Tonerifi'e Bees thrive exceedint;ly on account of the multi- tude of aromatic flowers, and the honey .s excel- lent. The island abounds also in figs, and the quantity is sometimes so great, that to prevent their being lost, it is necessary to convert them into brandy, llie woods have deer, red-legged partridges, bustards, and pheasants. A great dis;idvantage is the want of wat.r, of whicii Ferro is said to contain not more than three fountains. Hence the cattle are said sometimes to quench their thirst with sea water. Ferro

FERROPRUSSIC ACID.

being once supposed to be the most westerly point of the old world, was originally employed by all geographers as their first meridian, and the longitude reckoned from it. El Golfo, or the Gulf, on the east side, is the principal village. Long. 17° 46′ W., lat. 27° 45′ N.

FEilllOL, an important sea-port of Spain, on the north coast of Galicia, naving one of the best harbours of Europe ; being ten miles deep, and from a quarter to half a mile broad, with depth for the largest ships to Ferrol, five miles from the entrance, and for frigates two miles further. Both shores are lofty and lined with forts, and the haven, or arsenal, which is formed by piers, Hiay be closed with a boom. Tlie strength of these works will account for the retreat of Sir James Pulteney, who landed with a very efli- cient force in the vicinity, in the end of August 1799, but judged it necessary to re-embark.

The bays of Ares and Betanzos are separated from Ferrol harbour by a peninsula: the islands of Marola and Miranda are in the entrance. These bays are open to the north-west, and con- sequently dangerous.

The basin in which the ships are laid up is or great extent, and solid workmanship ; each ves- sel has its own store-house, where the boatswains', carpenters', and gunners' stores, are distinctly marked. 'The marine barracks are a vast and beautiful building, affording accommodation for 6000 men. The establishments are all naval ; there is an academy for the Guardas Marinas : a n.athematical school for marine artillerists ; a nautical, and even a pilot school. The town has 10,000 inhabitants, but little more trade than what the presence of the fleet produces, foreign merchandise not being allowed to enter it: and the manufactures are confined to sail-cloths, ropes, hardware, and leather. The climate is moist. The town is of very recent erection, having been but a village until 1732, when En- sennada, minister of Ferdinand VI., apprised of the advantages of its situation, determined to establish dock-yards, arsenals, and manufacto- ries here. It is twenty-one miles north-east of Corunna, and thirty-six north-west of Lugo. Long. 8° 11′ 29″ W., lat. 43° 29′ 30″ N.

Ferrol, Cape, a cape on the north-west coast of Newfoundland. Long. 57° 11′ W., lat. 51° 4'N.

FERROPHUSSIC, or Ferrocyanic, Acin. Into a solution of prussiate of potash pour hydro- sulphuret of barytes, as long as any precipitate will fall. Filter the whole, and wash the preci- piUite with cold water; dry it, and, having dis- solved 100 parts in cold water, add gently concentrated sulphuric acid thirty parts ; shake them well together, and set the mixture aside to settle. Tlie supernatant liqnid is

ferroprussic acid, first discovered by Mr. Porrett. It has a pale lemon-yellow color, but no smell. Heat and light decompose it. Hydrocyanic acid is then formed, and white ferroprussiate of iron, which soon becomes blue. Its affinity for the bases enables it to displace acetic acid, without heat, from tl;e acetates, and to form ferropnis- siates.

Mr. PorrcU considers this acid ‘ as a compound of

4 atoms carbon rz 30 00

1 atom azote zz. 17-50

1 atom iron =z 17-30

1 atom hydrogen ˆ 125

66-25′

This sum represents the weight of its prime equivalent. Ferroprussiate of potash, an , of barytes, will each therefore, according to liim, consist of an an atom of acid \ an atom of base | two atoms of water.

It has been supposed that Mr. Porrett’s new acid is notliing but a hydrocyanate or prussiate of iron, which, from the mutability of its con- stituents, is easily decomposed by heat and light; and that tlie only permanent compound which that acid fi)rms is in triple salts. This is the old opinion, and also the present opinion of several eminent chemists. These compounds we shall call ferroprussiates. M. Vauquelin and M. Thenard style them ferruginous prussiates.

Ferroprussiate of potash is made by heating pearl-asli with the hoofs and horns of animals in a heated iron vessel. This salt is now manufactured in several parts of Great Britain; and therefore the experimental chemist need not incur the trouble and nuisance of its preparation. An extemporaneous ferroprussiate of potash may however be made by acting on Prussian blue with pure carbonate of potash, prepared from the ignited bicarbonate or bitartrate. Of the puri- fied Prussian blue, add successive portions to the alkaline solution, as long as its color is de- stroyed. Filter the liquid, saturate the slight alkaline excess with acetic acid, concentrate by evaporation, and allow it slowly to cool. Qua- drangular bevelled crystals of the ferroprussiate of potash will form. This salt is transparent, and of a beautiful lemon or topaz-yellow. Its specific gravity is 1-830. It has a saline, cool- ing, but not unpleasant taste. In large crystals it possesses a certain kind of toughness, and, in thin scales, of elasticity. The inclination of the bevelled side to the plane of the crystal is about 135°. It loses about

thirteen per cent, of water when moderately heated; and then appears of a white color, as happens to the green copperas ; but it does not melt like this salt. Water at 60° dissolves nearly one-third of its weight of the crystals ; and, at the boiling point, almost its own weight. It is not soluble in alcohol ; and is not altered by exposure to the air. Exposed in a retort to a strong red heat, it yields prussic acid, ammonia, carbonic acid, and a coaly resi- due consisting of cliarcoal, mct-allic iron, and potash. When dilute sul])iiuric or muriatic acid is boiled on it, prussic acid is evolved, and a very abundant white precipitate of protoprussiatc of iron and potash fidls, whicli afterwards, treated with liquid clilorine, yields a Prussian biUe, equivalent to fully one-third of the salt cm- ployed. Neither sulphuretted hydrogen, the hydrosulphurets, nor infusion of galls, produce any change on tliis salt. Red oxide of mercury acts powerfully on its solution at a moderate heat. Prussiate of mercury is formed, wliicli re- mains in solution; while peroxide of iron and metallic mercury precipitate. Tiiis salt is said

by Mr. Porrett to be composed of the following constituents.

Potash

Ferrochyazic acid Water

40-34

44o3

1513

10000

Ferroprussiate of soda may be prepared from Prussian blue and pure soda, by a similar pro- cess to that prescribed for the preceding salt. It crystallises in four-sided prisms, terminated by ddiedral summits. They are yellow, transparent, have a bitter taste, and effloresce, losing in a warm atmosphere thirty-seven and a half per cent. At 5.5″ they are soluble in four parts and a half of water, and in a much less quantity of boiling water. As the solution cools crjMids se- parate. Their specific gravity is 1-458. They are said to be soluble in alcohol.

Ferroprussiate of lime may be easily formed from Prussian blue and

lime water. Its solution yields crystalline grains by evajˆoration.

Ferroprussiate of burytes may be formed in the same way as tlie preceding species. Its crystals are rhomboidal prisms, of a yellow color, and soluble in 2000 parts of cold water and 100 of boiling water. By Mr. Porrett's second account of this salt it is composed of

Acid .... 415 Barytes . . . .47-5 Water 11-0

100-0

In the Annals of Philosophy for October, 1819, Mr. Porrett gives as its true proportions,

1 atom ferrochyazic acid 6625 35-66

1 atom barytes . . 97- 52-22

2 atoms water . . 22-5 12-12

185-75 100-00

But professor Berzelius represents it as a com- pound of,

Potassiumˆ . . .37-11 Iron .... 12-85 Water . . . 12-82

Cyanogen . . . 37-22

100-00

Ferroprussiate of strontian and magnesia have also been made.

Ferroprussiate of iron. — With the protoxide of iron and this acid we have a white powder, which, on exposure to air, becomes blue, passing into deutojerroprussiate of ii'on, or Prussian blue. We have already described the method of mak- ing the ferroprussiate of potash, which is the first step in the manufacture of this beautiful pigment. This is usually made by mixing to- gether one part of the ferroprussiate of potash, one part of copperas, and four parts more of alum, each previously dissolved in water. Prus- sian blue, consisting of the deutoferroprussiate of iron, mixed with more or less alumina, precipi- tates. It is afterwards dried on chalk stones, in a stove.

Pure Prussian blue is a mass of an extremely deep blue color, insipid, inodorous, and consi- derably denser than water. Neither water nor alcohol has any action on it. Boiling solutions of potash, soda, lime, barytes, and strontites, de- compose it ; forming on one hand soluble

ferro- prussiates with these bases, and on the odier a residue of brown deutoxide of iron, and a yellow- ish-brown sub-ferroprussiate of iron. Aqueous chlorine changes the blue to a green in a few minutes, if the blue be recently precipitated. Aqueous sulphuretted hydrogen reduces the blue ferroprussiate to the white protoferroprus- siate.

Its igneous decomposition in a retort has lately been executed by M. Vauquelin with minute at- tention. He regards it as a hydrocyanate or mere prussiate of iron ; but the changes he de- scrdies are very complex, nor do they invalidate Mr. Porrett's opinion, that it is a combination of red oxide of iron, with a ferruretted acid. The general results of M. Vauquelin's analysis were hydrocyanic acid, hydrocyanate of ammo- nia, an oil soluble in potash, crystalline needles, which contained no hydrocyanic acid, but were merely carbonate of ammonia ; and, finally, a ferreous residue slightly attracted by the magnet, and containing a little undecomposed Prussian blue.

Proust, in the Annales de Chimie, vol. LX., states, that 100 parts of Prussian blue, without alum, yield 0-55 of red oxide of iron by com- bustion ; and, by nitric acid, 0-54. 100 of prus- siate of potash and iron, he further says, afford, after digestion with sulphuric or nitric acid, thirty-five parts of Prussian blue.

Ferry is also used for a liberty by prescrip- tion, or by the king's grant, to have a boat for passage, on a frith or river, for carrying pas- sengers, horses, &c., over it, for a reasonable toll.

FER'RULE, n. s. Lat. ferrum, iron ; but this word, the Fr.verole, and Teut. vere, are traced by Mr. Thomson to the barb. Lat. virola, and Cr. yvpou), to bend. An iron ring put round any thing to keep it from cracking.

The fingers ends are strengthened with nails, as we fortify the ends of our staves or forks with iroa hoo^s ox ferrules. Ray-

FER'RY, u. a., v.n. & n.s.'\ Saxon, papan

Fer'ry-boat, n. s. (^ (to go), pep ;

Fer'rv-man, i Goth, fc/r ;Teut.

Fer'riage, n. s. ■'./f"^' > Bel. rewr ;

Swed.farga. Skinner traces all these words to the Lat. veho : Dr. .Johnson suggests ferri, to be carried, as their more probable origin ;

Min- sheu refers at once to the Greek (ptpto, to bear. To carry or be carried over water in a boat. Ferry and ferrj'boats are names for the vessel of carriage, and the former is a name often given to the accustomed place of passage. A ferry man is he who manages or conducts one over a ferry. Ferriage, the fare or price paid for his services.

A ferryboat to carry over the king's household.

2 Sam. xix. 18.

Cymocles heard and saw, He loudly called to such an were aboard

The little bark unto the shore to draw. And him io ferry over that deep ford.

Faerie Queene. By this time was the worthy Guyon brought Unto the other side of that wide strand. Where she was rowing, and for passage sought •. Him needed not long call, she soon to hand "Ret ferry brought. td.

Bring them with imagined speed Unto the Traject, to the common / frry Which trades to Venice. Shakspeare.

I past, methought, the melancholy flood. With that grim ferryman which poets write of. Unto the kingdom of perpetual night. Id.

But never since dareth the Ferryman. Once entertaine the ghost of Gullian.

B]). Hall's Satires. Thence hurried back to fire. They ferry over this Lethaean sound Both to and fro, their sorrow to augment. Milton. The common ferryman of Egypt, that wafted over the dead bodies from Memphis, was made by the Greeks the /eiTJ/man of hell, and solemn stories raised after him. Browne.

The grisly ferryman of hell denied iEneas entrance, 'till he knew his guide.

Roscommon. I went down to the river Brent in the ordinary ferry. Additon,

We have no slaves at home — Then why abroad ? And they themselves, once ferried o'er the wave That parts us, are emancipate and loosed. Cowpcr.

Ferte Gaucher, La, a small town of France, in Champagne, which was tlie scene of a severe action, on the 26th of March 1814, between the French and allies. Population 1950 Fourteen miles south of Chateau-Thierry.

Ferte Imbault, La, a smalltown of France, in the department of the Loir and Cher, on the Seudre, with IfiOO inhabitants. Twenty-eight miles E.S. E. of Blois.

Ferte, Langeron, La, a town of France, in the department of the Nievre. Population 1200. Fifteen miles north of Nevers.

Ferte LorvTiERE, La, a town of France, in the department of the Yonne. Population 1160. Fifteen miles north-west of Auxerre.

Ferte Maces, La, a town of Normandy. Population 3400. Twenty-three miles west of Alenˆon.

Ferte Mieon, La, a town of France, in the department of the Aisne, on the Ourcq. Racine, the celebrated French trapped ian, was born here, in 1639. Population 2100. It is sixty miles north-east of Paris.

Ferte, St. Auben, La, or Lovendhal, a small town of the interior of I'rance, on the Cousson, containing 1 600 inhabitants. Eleven miles soutii of Orleans.

Ferte Si:r Aube, La, a town of France, in the department of the Upper Marne, on the Aube. Population 1100. This was the scene of an action between the French and allies on the 27th and 28th of February 1814. Fifteen miles west of Chaumont en Bassif;ne.

Ferte Sous Jouarre, a neat town of France, in the department of the Seine and Marne, at the conflux of the Marne and the Morin. Population 3700. Ten miles east of Meaux. There are various other small towns of France of this name.

ˆ Fr. and \.ˆ. fertile , I Span, and Port, ftrtil ;

FERTILE, adj.

Fer'tileness,/!. s.

Fektil’itate, v. a. [l.at. fertilis, from J’cro,

Fertte’ity, w. s. (J’ers,’ to bear. Produc-

Fer’tilize, v. a. \ tive; fruitful; abundant;

Fer’tilely, adv. j taking of before that which is produced. Fertilitate is an obsolete sy- nonyme of fertilise, which signifies to make fruitful or productive. Fertileness and fertility are the state of being fruitful or productive ; fe- cundity ; plenteousness.

I had hope of France, As firmly as I hope iot fertile England.

Sliakupearc. I will go root away The noisome weeds, that without profit suck The %oiVsfertility from wholesome flowers.

Id. Rich. II.

Paradise itself exceeded in beauty and fertility, and these places had but a resemblance thereof.

Raleigh’s History.

A cock will in one day fertilitate the whole ra’ema tion or cluster of eggs not excluded in many weeks after. Browne.

I have had a large, a fair, and a pleasant field, so fertile, that it has giv^n uics iv,o hancsts in a sum- mer. Lrijd&n.

The quickness of the imagination is seen in the invention, the fertility in the fancy, and the accuracy in the expression. Id.

I ask whether in the uncultivated waste of America, a thousand acres yield as many conveniences of life as ten acres of equally yer

Locke.

The earth \s fertile ofzW kind of grain. Camden.

This happy country is extremely yijr^iVe, as o/” those above, so likewise of its productions under ground.

Woodward.

Rain-water carries along with it a sort of terrestrial matter th^r. fertilizes the land, as being proper for the formation of vegetables. Id.

To inundations Egypt, through which the Nile flows, and the Indies owe their extraordinary ytrti7i7ˆ, and those mighty crops they produce after these waters arc withdrawn. , Id.

View the wide earth adorned with hills and woods. Rich in her herds, and fertile by her floods.

Blackmore.

Sneer. In nhort, that even the finest passages you steal are of no service to you ; for the poverty of your own .prevents their assimilating ; so that they lie on the surface like lumps of marl on a barren moor, encum- bering what it is not in their power io fertilize!

f'leridan.

Add to this, that on the coasts of Africa, where frost is unknown, ihe fertility of the soil is almost be- yond our conceptions of it. D.irwin.

FER'VENCY.n.s.ˆ Yr. fervait ; Ital. and

Fer'vent, arf;'. 1 Fort. J'ervcnte ; Lat /tr-

Fer'vently, adv. \ vf.n.

Fer'vid, arf;.)ˆ to make hot. IIeat:mo.st

Fervid'iiy, H.s. I commonlyapplied in our

Fer'vidness, I language metaphorically,

Feu'vor. J to heat or ardor of mind ;

warmth of devotion ; zeal : fervidity, fervidness, and fervor, are synonymes of fervency.

Not slough in bisinesse.yVn/cnˆ in spyryt, seriionge to the lord. Wiclif. Romuynes \u.

And not by his coming only, but by the consolation wherewith he was comforted in you, wlien he told \it your earnest desire, your mourning, yoar fervent mind toward me ; so that I rejoiced the more.

1 Cor. vii. 7.

FER

Epaphras saluteth you. Xahoriaˆ fervently for you in prayers. Col. iv. 12.

The day of God, wherein the heavens being

on fire shall be dissolved, and the elements shall melt viih fervent heat. 2 Peter iii. 12.

The fountains Bubbling wave did ever freshly wade Ke ever would through _/en)en< Summer fade.

Spe/iter, Yon s.ecping sparKes awake. Which troubled once into huge flames will grow ; Ne ever will iheh fetxent fury slake. Till living moisture into smoke do flow. And wasted life doe lye in ashes low.

Spenser's Faerie Queene. They all that charge did fervently apply ; With greedy malice and importune toil. Id.

They that are more fervent to dispute, be not always the most able to determine. Hooker.

We have on all sides lost most of our first fervency towards God. Id. Dedication.

Odious it must needs have been to abolish that v/hich ail had held for the space of many ages, with- out reason so great as might in the eyes of impartial men appear sufficient to clear them from all blame of rash proceedings, if in fervour of zeal they had re- moved such things. Hooker. Haply despair hath seized her ; Or, winged with fervour of her love, she's flown To her desired Posthumus.

Shakspeare. Cymheline. Your diver Did hang a fish on his hook, which he With fervency drew up. Shakspeare.

From the phlegmatick humour, the proper allay of fervent blood, will flow a future quietude and sereni- tude. Wotton.

How justly is the fervency of the prayer added to the righteousness of the person.

Bp. HalVi Contemplations.

lie cares not how or what he suffers, so he suffer well, and be the

friend of Christ; nor where nor when he suffers, so he may do it frequently, /tri'e/i;/ˆ, J»nd acceptably. Taylor.

So spake tlie fervent angel ; but his zeal

None secfˆnded, as out of season judged.

Or singular and rash. Milton's Paradise Lost.

Were it an undeniable truth that an effectual fer- vour proceeded from this star, yet would not the same determine the opinion. Browne,

Like bright Aurora, whose refulgent ray Foretells ihc fervor of ensuing day. And warns the shepherd with his flocks retreat To leafy shadows, from the threatened heat. Waller.

Let all enquiries into the mysterious points of the- ology be carried on v;ith. ferˆsent petitions to God, that he would dispose their minds to direct all their skill to the promotion of a good life. South.

There will be at Loretto, in a few ages more, jewels of the greatest value in liurope, if the devotion of its princes continues in its present fervour.

Addison on Italy.

When you pray, let it be with attention, with fer- vency, and with perseverance. IVakeˆ

As to the healing of Malchus's ear, in the account of the meek Lamb of God, it was a kind of injury done to him by the fervidness of St. Peter, who knew not yet what spirit he was of. Bentley.

These silver drops, like morning dew.

Foretell the fervour of the day ;

So from one cloud soft showers we view.

And blasting lightnings burst away. Pope.

What profound repose ! What fervid action, yet no noise ! as awed To silence by the presence of their Lord.

Young. Yet, when the sense of sacred presence fires. And strong devotion to the skies aspires. Pour forth thy fervours for a healthful mind. Obedient passions, and a will resigned.

Johnson. Vanity of Human Wishet, Thus while she spoke, her eye, sedately meek. Looked the pure fervour of maternal love. Beattic. Ah I fondly youthful hearts can press. To seize and share the dear caress : But Love itself could never pant For all that Beauty sighs to grant With half the fervour Hate bestows Upon the last embrace of foes. When grappling in the fight they fold Those arms that ne'er shall loose their hold.

Byron. Yet did I love thee to the last

As fervently as thou. Who did'st not change through all the past. And can'st not alter now. Id

FE'RULA, n.s. > Yr. fei-ule, from Lat. Fe'rt:le,7j.s. &?;.«. Sfrrula, giant fennel. An instrument of correction witli which young scho- lars are beaten on the hand ; so named because anciently the stalks of fennel were used for this purpose : to ferule is to apply the ferile. These differ as much as the rod An& ferula.

Shaw's Grammar. The birch upon the breeches of the small ones. And humble with the ferule the tall ones.

Beaumont and Fletcher. The eye of the parent, and the ferule of the master, is all too little to bring our sons to good. Bp. Hall.

Feri.'la has also been used to denote the pre- late's crosier and staff.

Ferula, in the eastern empire, was the em- peror's sceptre, as is seen on various medals ; it consists of a long stem, or shank, and a flat square head. The use of the ferula is very an- cient among the Greeks, who used to call their princes vapOtjKoipopoi, q. d. ' ferula-bearers.'

Ferula, in the ancient eastern church, signi- fied a place separated from the church ; wherein the penitents, or the catechumens of the second order, called auscultantes, aKpoafiariKoi, were kept as not being allowed to enter the chiuxh ; whence the name of the place, the persons therein being under penance or discipline : sub ferula erant ecclesiae.

Ferula, fennel-giant, in botany, a genus of the digynia order and pentandria class of plants: natural order forty-fifth, urabellatje. The fruit is oval, compressed plane, with three stria on each side. There are nine species ; all herbaceous peren- nials, rising from three to ten or twelve feet high, with yellow flowers. They are propagated by seeds, which should be sown in autumn ; and, when planted out, ought to be fotir or five feet distant from each other, or from any

other plants ; for no other will thrive under their shade. Asa- fetida is obtained from a species of ferula. The process of obtaining it is as follows : the earth is cleared away from the top of the roots of the oldest plants; the leaves and stalks are then twisted away, and made into a covering, to screen the root from the sun ; in this state the root is left for forty days, when the covering is removed..

and the top of the root cut off transversely ; it is then screened again from the ‘Jun for forty-eight _ hours, when the juice it exudes is scraped off, and exposed to the sun to harden. A second transverse section of the root is made, and the exudation suffered to continue for forty-eight hours, and then scraped off. In this manner it IS eight times repeatedly collected in a period of six weeks. Tlie juice thus obtained has a bitter, acrid, pungent taste, and is well known by its j- eculiarnauseous smell, the strength of which is the surest test of its goodness. This odor is extremely volatile, and of course the drug loses much of its efficacy by keeping. It is brought to us in large irregular masses, composed of various little shining lumps, or grains, which are partly of a whitish color, partly reddish, and partly of a violet hue. Those masses are ac- counted the best which are clear, of a pale reddish color, and – variegated with a great number of elegant white tears.

FESCENNIA, or Fescennium, in ancient geography, a town of Etruria, above Falerii, near the Tiber, where the Fescennine verses were first invented : now called Galese.

FESCENNINE Verses, in Roman antiquity, were a kind of satirical verses, full of wanton and obscene expressions, sung or rehearsed by

Fig. 1.

Fesse Point, is the exact centre of the es- cutcheon. See Point.

FES’TER, V. n. Sax. ette/i, an ulcer ; Bav. fesse, a swelling corrupted, says Junius ; Teut. eissr ; Goth, eiter ; from Goth, festeen, to putrefy. — Minsheu. To rankle ; become virulent or cor- rupt.

But yet the cause and root of all his ill. Inward corruption and infected sin, Not purged nor healed, behind remained still. And festring sore

did ranckle yett within. Close creeping twixt the marrow and the skin.

Spenser's Faerie Quecne. How should onv festered sores be cured ? Hooker. I have some wounds upon me, and they smart. To hear themselves remembered. — Well might they fester 'gainst ingratitude. And tent themselves with death.

Shakspcare. Coriolaniu.

There w.is imagination, that between a knight the company, with many inde'cent gestures and ^^hom the duke had Ukenˆintoˆsome good degree of dances, at the solemnisation of a marriage (Hor. "”” ” ”” ‘ ” ”” ” “* ” ”

ep. i. lib. V. 145). The word is borrowed, ac- cording to Macrobius, from fascinum, a charm ; the people supposing songs proper to drive away witches, or prevent their effect ; buj; its more probable origin is from Fescennia.

FE'SCUE, n. s. ¥T.festii; Dut. vccse. A small wire by which those who teach to read it fester.

favour, and Felton, there had been, ancient quarrels not yet well heiled, which might perhaps he festering in his breast, and by a certain inflammation produce this effect. Wotton.

I might, even in my lady's presence, discover the Bore which had deeply feste7ed within mc. Sidney.

Passion and unkiudness may give a wound that shall bleed and smart ; but it is treachery that makes

South.

point out the letters.

Why mought not he, as well as others done. Rise from his yescwe to his Littleton.

Bp. Hall's Satires.

Teach him an alphabet upon his fingers, making the points of his fingers of his loft hand, both on the inside, to signify some letter, when any of them is pointed at by the fore-finger of the right hand, or by any kind of fescue. Holder.

Teach them how manly passions ought to move ; For such as cannot

think, can never love ; And since they needs will judge the poet's art. Point 'em ■ˆith. fescues to each shining part. Dryden.

FE'SELS, ?i.s. ˆx.fascolc;\id.faˆiulo; Lat. phaseolus. A kind of base grain.

Disdain not fesds or poor vech to sow. Or care to make Egyptian lentils thrive. Maij.

When thus a squadron or an army yields, And festering carnage loads the waves or fields.

Darwin. Not Virtue's self, when Heaven its aid denies.

Can brace the loosened nerves, or warm the heart ; Not Virtue's self can still the burst of sighs. When festers in the soul Misfortune's dart.

Beat tie.

FESTI Dies, in Roman antiquity, certain days in the year, devoted to the honor of the gods. Numa, when he distributed the year into twelve months, divided the days into dies festi, dies profesti, and dies intercisi. The festi again were subdivided into sacrifices, banquets, games, and ferize. See Feriˆ. The profesti were those days allowed for tlie administration of affairs, whether of a public or private nature : these were divided into fasti, comitialcs, &c. See

Comitiales, Fasti, &c. The intercisi were FESSh:, in heraldry, an honorable ordinary, days common both to gods and men, some parts assessing the third and middle part of the of which were allotted to the service of the one, It is supposed to be a belt and some to that of the other.

l^'™^'^^^'^"f} LˆLfcstinaftts. Uˆsiy;

possessing

field horizontally

of honor given as a reward by kings, &c., for

services in the army. See fig. 1. argent, a /esse

gules, name Wil.'iins. A fesse is often borne

couped or cut off as it were from the two sides

as fig. 2. Sable, a fesse couped or between two

swords pointing upwards and downwards.

Parti/ per Jess, is when a shield is parted across the middle or lesse part as fig. 3 ; partly per fesse dancette, or and azure, two mullets counter- changed, name Doubleday. Vol. IX.

FES'TINATELY,ar/r..,^^^^.^-j

Iestinatiojj, n.s. ?

Not in use.

Advise the duke, where you are going, to a most fcstinate preparation : we are boand to the like.

Shalispeare. King Lear.

Take this key ; give onlargcmcnt to the swain, and bring him fcslinatcly hither. Sliakspcare.

Lay bands on him with all /erti/w/ion.

Preston (1561).

N

Fr. (old) festival ;

.•\ iT. {Ola) Jestwal ;

t Lat. festivm. Per- /tainin;ˆ to a feast; -/joyous: lience, as a

FESTIVAL, ar/;.& 71. 5.

Fes’tal, adj.

Fes’tive,

Festiv’ity, n. s. ˆ joyˆ

substantive, the time of a feast ; which festivity also signifies, as well as gaiety, generally ; joyftil- ness : festive is joyous ; gay ; befitting a feast.

So tedious is this day, As is the night before some festival. To an impatient child that hath new robes. And may not wear them.

Shakipeare. Romeo and Juliet. To some persons there is no better iastrament to cause the remembrance, and to endear the affection to the article, than the recommending it by festivity and joy of a holy-day. Taylor.

The morning trumpets /ejfiua/* proclaimed Through each high street. Milton‘3 Agonistes.

True festivity is called salt; and such it should be, giving a smart, but savoury relish to discourse ; ex- citing an appetite, not irritating disgust. Barrow.

The daughter of Jephtha came to be worshipped as a deity, and had an annual festivity observed unto her honour. Browne.

There happening a great and solemn festivity, such as the sheep-shearings used to be, David condescends to beg of a rich man some small repast. South.

lie appeared at great tables, d.ad festival enter- tainmonts, that he might manifest his divine charity to men. Atterbury.

The Jestival of our Lord’s resurrection we have ce- lebrated, and may now consider the chief conse- quences of his resurrection, a judgment

to come.

Id. Sermons. Follow, ye nymphs and shepherds all. Come celebrate this /esˆJuaJ, And merrily sing and sport, and play; ‘Tis Oriana’s nuptial day. Granville.

By sacrifice of the tongues they purged away what- ever they had spoken amiss during the festival.

Broome on the Odyssey. The glad circle round them yield their souls To festive mirth and wit that knows no gall.

Thomson. His theology forms the most considerable part of his writings. He wrote comments upon almost the whole Scripture, and several Homilies oa the princi- pal Festivals of the Church. Burke. Echoed the vale with many a cheerful note ;

The lowing of the herds resounding long.

The shrilling pipe, and mellow horn remote.

And social clamoura of the festive throng.

Beattie. Drunkenness is a social festive vice. The drinker collects his circle ; the circle naturally spreads : of those who are drawn within it, many become the corrupters and centres of sets and circles of their own ; every one countenancing, and perhaps emulating the rest, till a whole neighbourhood be infected from the contagion of a single example. Paley.

Blue as the garters which serenely lie Round the patrician left-legs, which adorn The /ef to/ midnight, and the levee morn.

Byron.

FESTOON’, n. s. Tt. feston; UaX. fcstone ; a wreath ; from Lat. fcstum, festiviim ; from its being an ornament worn at festivals.’ — (Skinner). ‘ An ornament of carved work in the form of a wreath or garland of flowers, or leaves twisted together, thickest at the middle, and suspended by the two extremes, whence it hangs down perpendicularly.’ — (Harris).

With all it3 sinful doings, I must say

That Italy’s a pleasant place to me. Who love to see the sun shiue every day.

And vines (not nailed to walls) from tree to tree Festooned, much like the back scene of a play.

Byron,

Festoons are now chiefly used in friezes, and other vacant places which want to be filled up and adorned; in imitation of the long clusters of flowers, which the ancients placed on the doors of their temples and houses on festival oc- casions.

FESTUCA, fescue, in botany, a genus of the digynia order, and triandria class of plants : na- tural order thirty-fourth, gramina : cal. bivalved ; the spicula or partial spike oblong and a little roundish, with the glumes acuminated. Tiiere are twenty-seven species; of which the follow- ing are the most remarkably useful : — •

1. F. fluitans, floating fescue, so called from its growing in wet ditches and ponds, is remark- able for the uses made of its seeds, which are small, but very sweet and nourishing. They are collected in several parts of Germany and Poland, under the name of manna seeds; and are used at the tables of the great, in soups and gruels, on account of their nutritious quality and grateful flavor. When ground to meal, they make bread very little inferior to that in common use. The bran, separated in preparing the meal, is given to horses as a vermifuge. Geese are also very fond of these seeds. Mr. Lightfoot recommends this as a proper grass to be sown in wet mea- dows.

2. F. ovina, * sheep's fescue grass,' says Dr. Anderson, ' is much praised by the Swedish na- turalists for its singular value as a pasture-grass for sheep ; this animal being represented as fonder of it than of any other grass, and fattening upon it more quickly than on any other kind of food whatever. And indeed, the general ap- pearance of the plant, and its peculiar manner of growth, seems very much to favor the ac- counts that have been given us of it. This plant is of the same family with the rubra, and agrees with it in several respects ; although they may be easily distinguished from one another. Its leaves, in its natural state, are always rounded, but much smaller ; being little bigger than large horse-hairs, or swine's bristles, and seldom ex- ceeding six or seven inches in length. But these spring out of the root in tufts, so close upon one another, that they resemble, in this respect, a close hair-brush more than any thing else I know ; so that it would seem naturally ˆadapted to form that thick short pile of grass in which sheep are known chiefly to delight. Its flower- stalks are numerous, and sometimes attain the height of two feet; but are more usually about twelve or fifteen inches high. Upon gathering the seeds of this

plant, and sowing them, it was found that they sprung up as quickly as any other kind of grass ; but the leaves are at first no bigger than a human hair. From each side spring up one or two of these hair-like filaments, that in a short time send out new off'-sets, so as quickly to form a sort of tuft, which grows larger and larger, till it at length attains a very large size, or till all the intervals are closed up, and

then it forms the closest pile of grass that it is possible to imagine. In April and May it pushed forth an innumerable quantity of tlower-stalks, that afforded an immense quantity of hay ; it bein J so close throughout, that the scythe could scarcely penetrate it. This was allowed to stand till the seeds ripened ; but the bottom of the ■italks were quite blanched, and almost rotten for want of air before that time. It is found in poor barren soils, where hardly any other plant can be made to grow at all ; and on the surface of dry worn out peat moss, where no moisture remains sufficient to support any plant whatever ; but in neither of these situations docs it thrive ; as it is there only a weak and unsightly plant, very unlike what it is when it has the good for- tune to be established upon a good sod ; although it is seldoraer met with in this last state than in the former.

3. F. rubra, red or purple fescue grass. Dr. Anderson gives the following character of this species : — ' It retains its verdure much better than rye-grass during the winter season. It likewise rises in the spring, as early as rye-grass.' * Although this grass is very often found in old pastures, yet as it has but few flower stalks, and a>- it is greedily eaten by all domestic animals, these are seldom suffered to appear ; so that it usually remains there unperceived. The leaves are long and small, and appear to be roundish, something like a wire ; but, upon examination, they are found not to be tubulated like a reed or rush ; the sides of the leaf being only folded to- gether from the middle rib, exactly like the strong bent grass on the sea-shore. The flower stalk is small, and branches out in the head, a little re- sembling the wild oat ; only the grains are niuch smaller, and the ears do not spread fully open but lie bending a little to one side. The stalks are often spotted with reddish freckles, and the tops of the roots are usually tinged with the same color ; from whence it has probably obtained its distinctive name of festuca rubra, or red fescue. It is often to be met with in old garden walks ; and, as its leaves advance very

quickly after cut- ting, it may usually be discovered above the other grasses, about a week or fortnight after the walks are cut. Nor do they seem to advance only at one season, and then stop and decay, like the rye-grass; but continue to advance during the whole of the summer, even where they are not cut ; so that they sometimes attain to a very great height. The leaves naturally trail upon the ground, unless where they meet with some ac- cidental support ; and if any quantity of it is suf- fered to grow for a whole season, without beinjj eaten down or cut, the roots of the leaves are al- most rotted by the overshadowing of the tops of the other leaves, before the end of the season. From the growth of this plant, it would seem to promise to be of great use to the farmer ; as he could reap from a field of it, for the first two or three years, as great a weight of hay as he could ob- tain from any of the culmiferous grasses ; and, if he meant afterwards to pasture it, he would suffer no inconveniences from the flower-stalks; and the succulent leaves, that continue to vege- tate during the whole summer, would at all times furnish his cattle with abundance of wholesome

food. It has also been remarked, that this grais rises as early in the spring as rye-grass; and continues green for tlie greatest part of winter, which the other does not.

FES'TUCINE, or/;. > IjM. festuca. Straw- Fes'tucous. \ color, between green and

yellow : formed of straw.

Therein may be discovered a little insect of a fcs- tucine or pale green, resembling a locust or grass, liopper. Browne.

We speak of straws, or festucous divisions, ligh'.Iy drawn over with oil. Id. Vulgar Errours.

FET, u. a. Sen. s. i Sax. peccan, p r-

F£TCH, V. a., V. n. & n. s. J tan ; Swed. falca ; Goi\. fa ; lydn.fatte ; Belg. vatten. Fet is our old word for fetch. To go and bring ; hence to derive ; to reach to, or at ; obtain as a price ; to bring out; to bring within a particular line or compass ; to perform : as a verb neuter, to move round quickly : a fet or fetch is a something fetched ; atrick or stratagem, i. e. something per- formed in an indirect or circuitous way.

Go to the flock, and fetch ma from thence two good kids of the goats. Genesis.

We will take men io fetch victuals for the people.

Judges, And they fet forth Urijah out of Egypt to Jehoia. kim, who slew him with the sword. Jcr. xxvi. 23. My litel child, than wol Ifetchen thee. Whan that the grain is fro thy tonge ytake ; Be not agaste, I wol thee not forsake.

Chaucer. Canterbury Tales. Get home with thy fewel, make ready to fet. The sooner the easier carriage to get. Tusser.

An envious neighbour is easy to find.

His cnmheisovae fetches are seldom behind ;

His fetch is to flatter; to get what he can;

His purpose once gotten, a pin for thee then. Id.

But for he was unable them to fet,

A little boy did on him still attend.

Spenser's Faerie Queene. To come to that place they must fetch a compass three miles on the right hand through a forest.

Knolles's History/, On, you noblest English, Whose blood is fetched from fathers of war-proof.

Shakspeare. They have devised a mean How he her chamber window will ascend. And with a corded ladder fetch her down. /(/. I'll fetch a turn about the garden, pitying The pangs of barred affections ; though the king Hath charged you should not speak together. Id.

Like a shifted wind unto a sail. It makes the course of thoughts to fetch about. Id. It is a. fetch of wit ; You laying these slight sullies on my son, As 'twere a thing a little soiled i' th' working. Id. Hamlet. In smells we see their great and sudden effect in fetching men again, when they swoon. Bacon.

The conditions of weapons, and their improve- ments, are the fetching afar off; for that outruns the danger, m it is seen in ordnance and musketi.

Id. The bottom clear Now laid with many a. fet Of seed-poarl, ere she bathed her there Was known as black as jet. Drayton.

Mean time flew our ships, and straight we fetcht The syrens' isle ; a

spleenless wind so stretcht Uer wings to waft us, and so urged our keel.

Chapman. N 2

FET

180

FET

If Moses had received a command, that rod which fetched water from the rock, could as well hˆLve fetched the blood of the Amalckites out of their bodies.

Bp. Hall's Cimtemplation.1. So have we seen a hawk, cast olV at a hernshaw, to look and fly a quite other way; and, after many careless and overly fetches, to tour up unto the prey intended. Bp. Hall.

General terms may sufficiently convey to the people what our intentions are, and yet not fetch us within the compass of the ordinance, Sariderson.

These ways, if there were any secret excellence among them, would fetch it out, and give it fair op- portunities to advance itself by. Milton. If earth, industrious of herself, /rfcA day Travelling East ; and with her part averse From the sun's beam, meet night ; her other part Still luminous by his ray. Id. Paradise Lost. When evening grey doth rise, I fetch my round Over the mount, Milton. Hut Sidrophel, as full of tricks As rota mpn of politicks. Straight cast about to over-reach The' unwary conqueror with a fetch.

Hudibrai. The seat of empire where the Irish come. And the unwilling Scotch, lo fetch their doom.

Waller. Witli this fetch he laughs at the trick he hath played me. Stillingfleet.

The hare laid himself down, and took a nap ; for, says he, I can fetch up the tortoise when I please.

L' Estrange.

The fox had a fetch in't. Id.

The iox fetched a hundred and a hundred leaps at

a delicious cluster of grapes. Id.

During such a state, silver in the coin will never

fetch as much as the silver in bullion. Locltc.

They have no sooner fetched themselves up to the fashion of the polite world, but the town has dropped them. Addison.

An human soul without education is like marble in the quarry, which shews none of its beauties ‘till the skill of the polisher fetches out the colours.

Id. Spectator. Talk to her of an unfortunate young lady that lost her beauty by the small-pox, she fetches a deep sigh.

Addison, From these instances and fetches Thou niakest of horses, clocks, and watches. Quoth Mat, thou seemcst to mean That Alma is a mere machine. Prior.

Draw forth the monsters of the’ abyss profound, Oi fetch the’ aerial eagle to the ground. Pope.

FET’lD, flf/j. > ¥t. fctide ; Lvit. fcetidm. Fet’idness, w. s. 5 Ruiicid ; of strong and of- fensive smell.

Most putrefactions are of an odious smell j for they smell either /e

In the most severe orders of the church of Rome, those who practise abstinence, feel after it fetid hot eructations. Arbuthnot.

Plague, fiercest child of Nemesis divine. Descends from Ethiopia’s poisoned woods. From stifled Cairo’s tilth and/e<«

Thomson.

FETLAR, an island of Scotland, in the Nor- thern Ocean, one of the most northerly of the Shetland Isles, six miles east of North Yell. It is four miles and a half long and three and a half broad, and forms a parish, which is united w,*h that of North Yell. See Yell. The cli-

mate is s>alubrious,and the soil a rich black loam with some sand, producing barley, oats, and kitchen roots. There is a considerable quantity of bog iron ore of a good quality in this island; there are also some veins of copper.

FETLOCK, ?i. s. Feet and lock. A tuft of hair that grows behind the

pastern joint of many horses.

Their wounded steeds Yrct fetlock deep in gore, and with wild rage Yerk out their armed heels at their dead masters. Shakspeare. Henry V. White were the fetlocks of his feet before. And on his front a snowy star he bore. Dryden. Stamping like Bucephall, whose slackened raynes. And bloody fet-lochs fry with seven men's braines. Bp. Hall's Satires. FETOR, n. s. Lat. ftetor. A stench ; a strong and offensive smell.

The fetor may discover itself by sweat and humour.

Browne. When the sj'mptoms are attended with a fetor of any kind, such a discuse will be cured by acescent substances, and none better than whey. Arbuthnot.

I'ETTER, n. s., and commonly used in tiic plural, fetters, from feet; Sax. petrepe. Chains for the feet ; chains by which walking is hindered ; to bind with such chains ; to shackle.

Doctrine unto fools is as fetters on the feet ; and like manacles on the right hand. Eccles. xxi. 19. Fetter strong madness in a silken thread ; Charm ach with air, and agony with words.

Shakspeare. Drawing after me the chains and fetters whereunto I have been tied, I have by other men's crrours failed.

Raleigh. Doth a master chide his servant because he doth not come, yet knows that the servant is chained and fettered, so as he cannot move ? Bramltall.

Neither her great worthiness, nor his own suffering for her, could yfeˆer his fickleness. Sidney.

It is no wonder, then, that learning has been so little advanced since it grew to be mercenary, and the progress of it has heen fettered by the cares of the world, and disturbed by the desires of being rich, and the fears of being poor. Sir W. Temple.

Passion's too fierce to be in fetters bound. And nature fiies him like enchanted ground.

Dryden. Pleasure arose in those very parts of his leg that just before had been so much pained by the fetter.

Addison. Profuseness is a cruel and crafty demon, that gi-a- dually

involves her followers in dependence and debts ; that is, fetters them with ‘ irons that enter into their souls.’ Adventurer.

A chain which man to fetter man has made ; By artifice imposed, by fear obeyed. Prior.

The wretch in double ye«eri bound. Your potent mercy may release. Id.

I thought her pride Had broke yOMv fetters, and assured your freedom.

A. Philips. If then, just then, all thoughts of mercy lost. When hope, long lingering, at last yields the ghost. The sound of pardon pierce his startled ear. He drops at once his fetters and his fear ; A transport glows in all he looks and speaks. And the first thankful tears bedew his cheeks.

Cotgper, There the curst spells of superstition blind. And fix her feticrt on the tortured mind \

She bids in dreams tormenting shapes appear. With shrieks that shock Imagination’s ear. Darwin.

FETTI (Dominico), an eminent painter in the style of Julio Romano, born at Rome, in 1589, and educated under Ludovico Civoli of Florence. He excelled in historical pieces ; his pic- tures are much sought after, and are scarce. lie shortened his days by excess, and died in his thirty-fifth year.

FETTLE, V. n. A diminutive of fet, proba- bly. Dr. Johnson says, ‘ a cant word from feel.’ Grose, that to fettle is ‘ to set or go about any thing; to dress, prepare, or put in order.’ It is a word still used in this last sense in the North of England. To do or prepare trifling business ; to bustle ; to arrange household furniture.

Now doth he inly scorne his Kendall-Greene, Aud his patcht cockers now despised beene. Nor list he now go whistling to the carre But sells bis teme and fetleth to the warre.

Bp. Hall’s Satires.

When your master is most busy in company, come in and pretend to fettle about the room ; and if he chides, say you thought he rung the bell. Swift.

FETU, or Affetu, asmall kingdom of Africa, on the Gold Coast, east of Commendo, extend- ing 160 miles in length, or into the interior, ac- cording to some geographers ; but not above fif- teen or sixteen miles in breadth along the coast: here is situated Cape Coast Castle, the capital of the English settlements. It was formerly governed by a chief, assuming the title of dey, and belong- ing to the class of fetishmen, or priests ; but he was subdued by the Fantees, who are now, or were lately, in this town, subjugated by the Ashantees, See Fantees. It was formerly very])opulou3 and powerful, but is now almost ruined, the inhabitants not being sufficient to till the ground ; effects which Walker ascribes to war and the slave trade. It is naturally fertile, abounding in corn,, fruits, trees, palm wine, oil, and cattle. The Dutch have a fort in it.

FETUS, n. s. Lat. fcctus. Properly there- fore written fcetus. Any animal in embryo ; any thing yet in the womb ; unborn ; young.

That paradox of Hippocrates some learned physi- cians have of late revived, that the fetus respires in the womb. Boyle.

FEUD, n. s. Sax. peah*©, enmity. Quarrel; contention ; opposition ; war.

Almighty Jove in wrathful mood. To wreak the guilt of mortal sins is bent ;

Hurls forth his thundering dart with deadly /eurf, InroUed in flames and smouldring drcarimcnt.

Faerie Queene. Tliough men would find such mortal feuds

In sliaring of their publick goods. Hudibras.

In former ages it was a policy of France to raise and cherish intestine feuds and discords in Great Britain. Addison.

Swift contrivfd an intercourse, from which they both drpartod discontented ; he procured a second, which only convinced him that the feud was irrecon- cileable. Juhnsim. Life of Swift.

Quarrtls were transmitted from father to son, and, under the name of deadly feuds, subsisted for many generations with unmitigated

rancour.

Robertson’s History of Scotland.

Feud, in ancient customs, is used for a capi- tal quarrel or enmity, not to be satisfied but

with the death of tiie enemy; and thence usually called deadly feud. Feud, called also feida, and faida, in the original German signifies guerram, i. e. war. Lambert writes it feeth, and says, ‘ it signifies capitale;* inimicitias, implacable hatred. In Scotland and the north of England, feud is particularly used for a combination of kindred, to revenge the death of any of their blood, against the killer and all his race, or any other great enemy.

Feud, Feoda, in law, the same with fief or fee. See Feudal System.

FEU’DAL, adj. Sc 7i. s. (Fr. (old) feudal ;

Feu’datory, 71. s.&cadj.] Lait.feudalii. See Feodatory. Pertaining to fees, feus, or tenures by which lands are held of a superior lord. A dependence; something held by tenure; a fee. A feudatory is one who holds lands by some conditional tenure from a superior. As an ad- jective it means, held by such tenure.

The duke of Parma was tempted to be true to that enterprize, by no less promise than to be made feu- datory, or beneficiary king of England, under the seignory in chief of the pope, and the protection of Spain. Bacon.

Wales, that was not always the feudal territory of England, having been governed by a prince of their own, had laws utterly strange to the laws of England.

Hale.

Nothing is more suitable to feudal ideas, than that the same person should be both a lord and a vassal, independent in one capacity, and dependent in ano- ther. Robertson’s History of Scotland.

If the one crown had been considered not as impe- rial and independent, but as feudatory to the other, a treaty of union could not have been concluded ou equal terms. ˆd.

Feudal System. About twelve centuries ago, this system was so universally received in Europe, that Sir Henry Spelman calls it ‘ the

law of nations in our western world.' Hence it deserves our attention in a particular manner ; a knowledge of the different feuds being indispen- sably requisite for a proper understanding either of the civil government of our own country, or the laws by which its landed property is regulated.

The military policy of the Celtic, or northern nations, known by the names of Goths, Vandals, Franks, Huns, and Lombards, furnished the original constitution or system of feuds. These people, pouring out in vast multitudes from the same officina gentium, or store-house of nations, over-ran all the European countries on the de- clension of the Roman empire. They brought the feudal system along with them from the countries out of which they emigrated ; and, sup- posing it to be the most proper method of secur- ing their new conquests, they introduced it into their more southerly colonies. According to this system, the victorious general allotted considera- ble tracts of land to his princii)al officers ; while they, in like manner, divided their possessions among the inferior officers, and the common soldiers who were thought to be the most de- serving. Allotments of this kind were named feoda, fiefs, fees, or feuds, from a combination of words, in the language of those barbarians, signifying a reward or stipend bestowed on cer- tain conditions. Sec Feod. The condition upon which these rewards were given, was, lliat the

possessors should faithfully serve the person from whom they were received, both at home and abroad, in the military way. To this they en- gaged themselves by-a juramentum fidelitatis, or oath of fealty, in the event of a breach of which, either by not performing the service a;Treed upon, or by deserting their lord in time of battle, &c., the lands were to return to their original pos- sessor.

The possessors of feudal allotments thus be- came interested in the defence of them ; and not only the receivers, but those who gave them, were equally and mutually bound to defend their possessions, none of them being able to pretend any right but that of conquest. For this purpose, government and subordination were absolutely necessary ; it being impossible to conduct any sys- tem of defence where every thing was tumultuous and irregular. Every person, therefore, who was a feudatory, i. e. who had received lands, was bound to do every thing in his power to defend the lord of his fee; while, on the other hand, the latter was no less subordinate to his

immediate superior; and so up to the prince himself. In like manner a reciprocal bond of defence existed down from the prince to the lowest feudists. Such were the foundations on which the feudal system was pro- perly established ; and the natural consequence was, a military subjection throughout the whole community. The prince could always collect an army of feudatories ready to defend not only the kingdom in general, but the particular possessions of each person ; and the propriety of this constitu- tion was soon apparent in the strength which these newly erected kingdoms acquired, and the valor with which their conquests were defended. Europe owed to it, in after ages, as Mr. Hallam has observed, the free constitution of England, the firm monarchy of France, and the federal union of Germany. Besides these feudal grants, however, which were held only on the terms of military service above mentioned, there were others called allodial, which were given upon more enlarged principles. To these every free man had a title ; and could not only claim his territory as well as the rest, but dispose of it at his pleasure ; and this freedom was denominated allodiality. These allodials, however, were not exempted from mi- litary service. A part of their freedom consisted in liberty to go to the wars ; for this, in the barbarous times we speak of, was the only way to acquire any degree of renown. Only the serfs or villeins were destined to follow the arts of peace ; while every free person was not only at liberty to defend his country, but under an obligation to do it in case of any urgent neces- sity. Thus there was a feudal and a national militia. The free people only were allowed to possess property; the feudal vassals constituted the army, properly so called ; while the national militia was composed of the allodial proprie- tors. This allodiality, however, was not con- fined to landed property, but included likewise moveable estates or money ; so that proprietors of the latter kind were obliged also in times of danger to bear arms and appear in the field. Be- tween the feudal and allodial proprietors, how- ever, there was this farther difference, that the latter had no concern with any private quarrels

which might take place among the lords them- selves ; so that they were never obliged to ap- pear in the field unless when called forth by the sovereign against the enemies of the nation at large. This circumstance we might suppose to be an advantage, but it ultimately operated otherwise ; becoming the means of changing the allodial right into a feudal tenure.

The holders of fiefs had for some time an emi- nent advantage over the allodial proprietors. This was owing to the imperfection of the existing public governments ; so that the nobles had it in their power to revenge their own quarrels, while the weak were equally exposed

to the insults of both parties. The lord and his vassals there- fore were always formidable; but the allodial proprietors had scarcely any means of defend- ing themselves. The reasons of this were, first, that the law did not allow them to commit any hostilities ; and secondly, they were too distant and unconnected to form any proper league for mutual defence ; and hence proceeded the necessity of converting allodial property into feudal tenure. This was indeed owing in a great measure to the absurdity and violence of the times, by which gifts of property, burdened with service, and which might return to the person who granted them, were rendered superior in value to the ab- solute and unconditional possession of a subject. Other considerations likewise contributed to produce the same effect. As in those dark ages no right existed but what had its origin in con- quest, it thence followed, that the greatest con- queror was the most honorable person. The king, in whom the whole exploits of the community centered, as being their head, was the most honor- able person ; all others derived from him that portion of honor which they enjoyed, and which was most nicely adjusted in proportion as they approached him. Allodial proprietors, there- fore, having no pretensions of this kind, were treated with contempt as a kind of poltroons. From this disagreeable situation they wished to free themselves, by converting their allodial pro- perty into feudal tenures ; while the princes, supposing it their interest to extend those tenures as much as possible, discouraged the allodial pos- sessions. As the feudists supported the im- portance of the nation, and dignity of the monarch, it was not thought proper to allow the allodial proprietors any greater compen- sations than what were given to vassals in similar cases. Thus they were exposed to continual mortifications in courts of justice; they were neglected by the king; denied sufficient pro- tection from the laws; exposed not only to con- tinual insults, but to have their property on all occasions destroyed by the great ; so that they were without resource except from the feudal tenures, and were obliged even to solicit the pri- vileges which were bestowed in other cases on vassals. In these unhappy circumstances, they were glad to yield up their lands to any superior whom they thought most agreeable, and to receive them back from him as a feudal gift. Thus the landed property was every where changed into feudal tenures, and fiefs became almost universal. See Tenure.

For some time the feudal system was not only

useful in itself, but honorable in its principles ; but this continued no longer than while the im- porters of it into Europe adhered to their ori- ginal simple and noble maxims. During that period, the lord exercised his bounty to the vassal, which the latter repaid by acts of grati- tude ; so that the intercourse between them was of the most affectionate kind ; and this gave rise to what are called the feudal incidents. The expectants of fiefs were educated in the hall of the superior, while the tenures were precarious or only for life : and, even when they became here- ditary, the lord took care of the son and estate of his deceased vassal ; not only protecting his per- son, but taking charge of his education, and di- recting the management of his affairs. He took pleasure in observing his approach to maturity; and when he came of age never failed to deliver to him the lands, with the care of which he liad been entrusted, and which he had been careful to improve. This was called the incident of icard- ship. The incident of relief was founded upon the gratitude of the vassal ; who, upon entering on his fief, brought a present to his lord, as an acknowledgment of his care of him during the early part of his life, and in order to conciliate his future regard. The incident of marriage pro- ceeded also upon the principle of gratitude on the part of the vassal. The latter, conscious of the favors he had received, did not choose to ally himself with a family inimical to his chief: while the superior himself, ambitious to aggran- dise and augment the importance of his family, sought the most advantageous match for his vas- sal. Sometimes the superior himself was re- duced in his circumstances by war or otlier accidents : but from whatever cause his distress proceeded, even though it had arisen from his own extravagance or prodigality, or when only destitute of means to support his ambition cr grandeur, his vassals were bound to support and relieve him according to their circumstances; and this was called the incident of aid. The in- cident of escheat took place on the part of the vassal, when, through cowardice, treachery, or any remarkable misbehaviour, he rendered him- self unworthy of his fief. In that case, the taking it from him, and giving it to one more worthy, was called an escheat. While the lords and vassals thus vied with one another in mutual acts of friendship and benevolence, universal liappiness, liberty, and activity, were diffused through the society. The vassals behaved cour- teously towards the retainers, who were immedi- ately below them ; while they again were courted by the lords as constituting their importance and strength ; the lords, lastly, giving a like impor- tance and dignity to the sovereign himself. Thus a regular, powerful, and compact system of go- vernment took place; a unanimity and attention pervaded the various departments of the state ; so that while the subjects were free, the nation at large was

formidable. During this state of affairs, the members of the national assembly in every country in Europe appeared there in arms, whether they came personally or by their repre- sentatives. Such particularly was the case under the Anglo-Saxon government; and tlie happiness they at thai time enjoyed made the oppression

and tyranny of the Normans appear the more in- tolerable.

In process of time, the state of society began to suffer a remarkable alteration. The high and disinterested notions, from wliich the happiness above mentioned took its origin, declined; the romantic ideas of chivalry ceased (see Cui- VALRT,) and much more interested notions of property came in tlieir stead. The separation of the interests of the lords from their vassals was the first step towards the destruction of the feu- dal system. Then the incidents, which had hi- therto promoted their happiness, now had a reverse tendency. Property being looked upon as a distinction superior to personal merit, intro- duced the most mercenary views. In conse- quence of these, the infant ward, the care of whom was'wont to be considered as a sacred and honorary trust, was now only looked upon as a mean of procuring emolument to the superior. The latter regarded the profits of his vassals as so many diminutions of his own wealth. Instead of taking care to improve the state of his ward as formerly, he impoverished it ; not only neg- lecting the education of the heir, but offering in- sults to himself: insomuch that the relations of the unfortunate vassal were often obliged to ran- som from the avaricious superior both his person and effects. By merchandise of this kind tlie coffers of princes were filled, and wardships let out to strangers, who might exercise their rapa- city with greater freedom. When the vassal at last attained the years of maturity, he came to the possession of his lands Avithout any of that joy and festivity which usually took place on the occasion. He received an inlieritance wasted and impoverished, while new grievances daily occurred, to augment the horrors of his situa- tion. All the incidents, which formerly were so many expressions of gratitude on the part of the vassal, were now changed into taxes exacted at tlie pleasure of the lord. Before the vassal was invested in his land, the superior exacted from him a certain sum or gift, to be measured only by his own rapacity; and in case of delay or in- ability to pay this demand, the superior continued in possession of the estate. Such scandalous op- pression could not but produce the greatest dis- content and clamor. Applications were made to the law without success; nor were even the laws regarded which were fabricated on purpose for their relief. The incident of marriage now proved a source of the most dreadful oppression. The lord assumed a right of marrying his Aassal to whom he pleased ; and he not only

exerted this right himself, but would sell it to a stranger, or allow the vassal to buy it himself; while the penalty annexed to a marriage without the consent of the superior involved no less punishment than the loss of the estate itself, or some such grievous infliction as for a crime of the first mag- nitude. The case was still worse with a female ward; whose beauty and accomplishments be- came a source of gain to the superior, or were sacrificed to please liis whim or caprice: so that her relations were frequently obliged to buy from him the privilege of marrying her to the person she or they thought most proper. In like man- ner the aid, which was formerly a voluntary gift

from the vassal in cases of distress happening to his lord, now became an unavoidable tax. An aid formerly was demanded when the superior's eldest daughter was married, when his eldest son was knighted, or when he himself was taken pri- soner in battle. These were the only legal causes of making a demand of this kind : but in the subsequent times of degeneracy, the most fri- volous pretences were made use of by the prince to oppress the lords, and by the lords to oppress their vassals; demanding subsidies at pleasure, which their inferiors were always obliged to com- ply with. Lastly, the escheat, which in former times, took place only in cases of cowardice, treachery, or some other heinous crime, was now inflicted on tlie most trifling occasions. If the vassal happened to be too long in attending the court of his superior to take the oath of fealty ; if he committed any action which could in the least be construed an infringement of the oath ; if he neglected to give his lord warning of any misfortune which he might suppose was about to befal him ; revealed any thing concerning him ; made love to his sister or daughter, &c. ; or even if he should grant a tenure of land to ano- ther person in form diff"erent from that in which he held his own ; all these, nay others still more ridiculous, vvere judged sufficient reasons for the superior to seize on the estate of the vassal, and involve him and his family in ruin. Notwith- standing these oppressions, however, the vassal was still obliged to submit to his lord ; to own him as his superior; and even, in appearance, to pay him the same respect as formerly, when the greatest unanimity and cordial aff'ection subsisted between them. Still he was obliged to perform the same military service; because failure in that respect would have subjected him to a forfeiture of lands according to the original agreement. A vast difference, however, now took place in the valor and activity which inspired the army. The vassals, forced into the field with desponding hearts, were inditferent

as to the success of the cause in which they were engaged, and frequentlyobstmcted instead of forwarding the ope- rations of t!ie field. Hence the sovereign found himself embarrassed; and, though nominally at the head of a martial and powerful people, was frequently unable to effect any thing by reason of the mutual hatred and dissension wdiich every where prevailed.

Tims the feudal states of Europe became un- naturally weak : a remedy was necessary ; and it is remarkable, that the same remedy was ap- plied all over the continent. This was, the making fiefs hereditaiy, which till now had only been granted for a long term of years ; and, in return, burdening the lands with a certain num- ber of soldiers, wliich were not to be refused upon any pretence whatever. Hence was de- rived the tenure of knight-service. A certain portion of land, burdened with the service of one soldier or knight, was called a knight's fee; and thus an estate, furnishing any number of soldiers, was said to contain as many knight's fees; so tliat now the manors, baronies, &c., be- came powerful according to the number of sol- diers they were bound to furnish. In the grants from the crown, lltp nobility were oblii^cd to

furnish a certain number for the service of the sovereign ; and in those from the nobility to their vassals, the like service was required. Even the commons who had grants from the crown fur- nished a certain proportion of knights. The force of the nation was called into action by grants in capite, or from the sovereign and no- bility. A numerous and powerful army was in- stantly assembled, and at once ready for action. Of this army the king was the general, the no- bility the officers, and the vassals soldiers; the whole being exactly arranged, and capable of entering upon any expedition withou' the least delay. Thus a remedy was found in some mea- sure for the weakness of the feudal sovereigns ; but though the knight's tenure could accomplish this, it could not bring back the former affection and cordiality, which had subsisted between the various ranks of people. On the contrary, by uniting them more firmly to one another by legali- ties, it rendered matters rather worse. But the op- pression originating from the operation of the feudal incidents, still continued with unremitting violence. The grants of knight's tenure were attended with the same oaths of homage and fealty ; the same incidents of relief, wardship, marriage, aid, and escheat, with the feudal tenures. The princes promised to abate somewhat of their rigoi in demanding the feudal perquisites, but did not keep their word. Laws were occa- sionally promulgated, and for some time had an effect; but palliatives soon became ineffectual, and a new state of weakness began to commence. The two remarkable eras in the feudal history are, the time before the

invention of knight-ser- vice (See Knight), and tha:t during which it continued. Fiefs were in a state of fluctuation from the destruction of the Roman empire till the ninth century ; but they were rendered per- petual in France about A. D. 877, and were generally become so in every country of Europe about the beginning of the tenth. Du Cange, voce Militia, gives us an example of a knight-fee in A. D. 880. By the year 987, when Hugh Capet was raised to the throne of France, knight service was become general all over Europe, and was introduced into England after having made its, appearance in other countries. Dr. Stuart informs us, that it appears from the records of Malcolm IV'. in 1153, that knight-service was known in Scotland, and that it was a novelty at that time. lie thinks it even probable that it was known in the time of David I. In England, however, there have been several doubts and enquiries among the learned concerning the in- troduction of the feudal laws. Many are of opinion that they were first introduced by William the Conqueror ; and, consequently, that they were entirely unknown to the Anglo-Saxons : but others think, that they existed among the latter in the same form under which they were con- tinued by the Normans. Dr. Stuart is of opinion that the Saxons who settled in England could not be strangers to fiefs. IIo supposes the con- formity of manners, which undoid)todly prevailed between tlie Saxons and other barbarians, a suffi- cient proof that the hereditary grant of land, as well as the fluctuating state of feudal tenures which preceded it, was known to the loriuor.

Collateral proofs are derived from the spirit and tenure of the Anglo-Saxon laws, but especially from the grants of hereditary estates on condition of military service. The condition of fiefs under the Aniˆlo-Saxons was very different from what it was afteˆˆvards. In their times we find no men- tion made of those oppressions of which so much notice has already been taken ; and this may easily be accounted for from the alteration of the feudal spirit in different ages. During the time that a warm and generous affection sub- sisted between the feudal superiors and vassals, the incidents were marks of generosity on the one part and gratitude on the other ; but as soon as variance had taken place, by reason of the interested disposition which the introduction of luxury produced, the same incidents became sources of the most flagrant oppression. This was remarkably the case in the time of William the Conqueror; and, during the reign of king John, matters were come to such a crisis, that the people every where complained loudly, and demanded the restoration of the laws of Edward the

Confessor. ‘ What the laws of Edward the Confessor were,’ says Mr. Hume, ‘ which the English every reign, during a century and a half, desired so passionately to have restored, is much disputed by antiquarians ; and our ignorance of them seems one of the greatest defects of the English history.’ Dr. Stuart has offered an ex- planation, in a conjecture, that ‘ by the laws or customs of the Confessor, that condition of felicity was expressed which had been enjoyed during the fortunate state of the feudal associ- ation. The cordiality, equality, and indepen- dence which then prevailed among all ranks in society continued to be remembered in less pros- perous times, and occasioned an ardent desire for the revival of those laws and usages which were the sources of so much happiness. Besides the great distinction between the state of fiefs under tiie Anglo-Saxons and under the Normans, they were no less distinguished by the introduction of knight-service. Hitherto the refinement of the English had been obstructed by the invasion of the Danes, and the insular situation of the king- dom ; but after the Norman conquest the fiefs were made perpetual. Still, however, the knight’s fee and knight-service were altogether unknown. William, the sixth duke of Normandy, was well acquainted with every thing relating to fiefs; for that duchy had experienced all the variety incidental to them from the time of its being granted to Hollo by Charles the Simple, A.D. 912 to 1066, when William conquered England. On this event a number of forfeitures; took place among those who had followed the fortune of Harold II. Their estates were to be disposed of at the pleasure of the conqueror ; and it was natural to suppose that he would follow liie method practised in his own country. Hence the origin of knight-service in England. A grant of land, to any person whatever, was estimated at a certain number of knights’ fees ; and each of these required the service of a kniuht. The •grants of lands were even renewed to the old te- nants under this tenure ; so tliat by degrees the whole military people in the kingdom acquiesced .n it. To accomplish tliis, Domesday Hook is iupposed to liave been compiled, which contained

an exact account o all the landed property of the kingdom. Hence it is to be concluded, not that William introdvxced fiefs into England, as some have imagined, but that he brought tliem to their ultimate state of perfection by the intro- duction of knight-service. This is evident from the laws enacted during his reign. In these it is not only mentioned that knight-service was en- acted, but that it was done expressly with the con- sent of the common council of the nation; which at that time was equivalent to an act of parlia- ment. The invention of knight-service proved generally agreeable ; for, as only a

few of the Anglo Saxon fiefs were hereditary, the advance- ment of the rest to perpetuity, under the tenure of knight-service, must have been accounted an ac- quisition of some importance; as not only aug- menting the grandeur and dignity of the sovereign, but securing the independence of the subject, and improving his property. In the happy state of the feudal association, there was indeed no ne- cessity for the knight's fee ; but when the dis- cordance and oppression so often mentioned began to take place, it became then necessary to point out particularly every duty of the vassal, as well as of the lord ; and this was fully done by the invention of knight-service. The nobles possessed duchies, baronies, and earldoms; which extensive possessions were divided into as many fees, each of them to furnish a knight for the service of the king, or of the superior : so that every feudal state could command a numerous army and militia to support and defend it in case of any emergency. The knights were also bound to assemble in complete armour whenever the superior thought proper to call, and to hold themselves in readiness whenever the king or superior found it convenient to take the tield ; so that thus the militia might be marched at the shortest notice to defend or support the honor of the nation. The knights were usually armed with a helmet, sword, lance, and shield ; and each was obliged to keep a horse. This last requisite was owing to the contempt into which the infan- try had fallen, through the prevalence of tourna- ments and luxuries of various kinds, though it was by means of the infantry tliat the barbarians had originally distinguished themselves in their wars with the Romans, and become able to cope with these celebrated warriors. All proprietors of fees or tenants by knight-service fought on foot : the cavalry were distinguished by the name of battle ; and the success of every encounter was su])posed to depend on them alone. They only were completely armed ; the infantry, being fur- nished by the villages under the jurisdiction of the barons, had at first only bows and slings ; though afterwards they were found wortliy of mucii greater attention. While the feudal asso- ciation remained in perfection, the superior could at any time command tlie military service of his vassals ; but in the subsecjuent degeneracy this service could neither be deiiended upon when wanted, nor was it of tlie same advantage when obtained as formerly. The invention of knight- service tended in a great degree to remedy this inconvenience. Those who were possesseil of knight's fees were now obliged to remain forty days in tlie field at their own expense; and tiii.-; witliuut exception, from the great crown vassal*.

to the smallest feudatories; but, if longer service was required, the prince was obliged to pay his troops. In those times, however, when the fate of nations was frequently decided by a single battle, a continuance in the lield for ibrty days was sufficient for ordinary occasions. Thus mat- ters seemed once more to be restored nearly to their former state. It was now, as much as ever, the interest of the nation to act with unanimity in its defence, not only against foreign enemies, but against the tyranny of the prince over Iiis sub- jects, or of one part of the subjects over tlie oilier. New inconveniencies, however, soon be- gan to take place, owing to tJie gradual improve- ments in life and the refinement of manners. From the first institution of military service, a fine had been accepted instead of actual appear- ance in the field. In the times of barbarity, however, when men accounted rapine and blood- shed their only glory, there were but few who made an offer of this compensation; biitas wealth and luxury increased, and the manners of tlie people became softer, a general unwillingness of following the army into the field became also prevalent. A new tenure, called escuage, was therefore introduced ; by which the vassal was only obliged to pay his superior a sum of money annually instead of attending him into the field. See Escuage, and Kmght-sehvice. Hence originated taxes and their misapplication ; for, as the king was lord paramount of the whole king- dom, it thence happened that the whole escuage money collected throughout the nation centered in him. The princes, then, instead of recruiting their armies, frequently filled their coffers with the money, or dissipated it otherwise, hiring mercenaries to defend their territories when threatened with danger. These being composed of the dregs of the people, and disbanded at the end of every campaign, filled all Europe with a disorderly banditti, who frequently proved very dangerous to society. To avoid such inconve- niencies, standing armies were introduced, and taxations began to be raised in every European kingdom. New inconveniencies, however, arose. The sovereigns in most of these kingdoms having acquired the right of taxation, as well as the com- mand of tlie military power, became completely despotic : but in England the sovereign was de- prived of this right by Magna Charta, which was extorted from him (See Enolano), so that though allowed to command his armies, he could only pay tliem by the voluntary contributions of the people, or their submitting to such taxations as were virtually im])osed by themselves.

The author of A \ iew of Society in Europe, (book I. chap. ii. sect. 1). has traced the remote sources of the feudal laws in an elegant and con- cise manner. Tacitus informs us, he observes, that the individuals of each of the German na- tions cultivated by turns a tract of land pro-

portionable to their number, for the use of the whole ; after which each individual received such an allotment of the cultivated tract as his dignity required. These nations had not altered their political principles at the time they overran the Roman empire; and hence the provinces of it were then divided after the same manner. The most considerable allotment was bestowed on the

king, as the most dignified person in the com- munity, and this allotment was styled his do- main ; while the shares of citizens and warriors, wiiicli were likewise in proportion to the merit or dignity of each, constituted what was called allodiality. But, as it often iiappened that all the land was not exhausted by these partitions, what remained was considered as the property of the community ; and in the barbaric codes was called the lands of the fisc. In such German nations as had thus obtained a settlement, it was ne- cessary that there should be a more close connex- ion betwixt the sovereign and tlie chiefs, as well as between tlie chiefs and people, than in others. This was effected by means of the lands of the fisc ; for of these the sovereign took possession, dealing them out to the chiefs under the burden of appearing in arms whenever he should please to call; while the chiefs in like manner dealt out lands to those called their retainers, who were also obliged to supply them with military assist- ance in cases of necessity. Hence a political system was founded, which had a prodigious effect on society in all those countries where it prevailed. The intention and tendency of this system was to render the nation independent both at home and abroad ; for, while the people were all armed in their common defence, individuals were also properly guarded against the attacks of despotism. The power of the chiefs, who formed a regular nobility, was a counterpoise to that of the sovereign; while the number of the retainers and vassals, constituting the greatness and power of the nobility, was a proper barrier against aris tocratical oppression ; for a chief who oppressed his vassals evidently acted against his own in- terest.

The feudal system, it has been well observed by another writer, was originally grounded on the universal principles of self-defence, and the necessity of relinquishing a portion of our indi- vidual rights for the public security. Every freeman, therefore, under this system, upon re- ceiving a portion of the lands which were divided, bound himself to appear in arms against the enemies of the community. This military service was the condition upon which he received and held his lands ; and, as they were exempted from every other burden, that tenure, among a war- like people, was deemed both easy and honorable. The king, or general, who led them to conquest, had the largest portion allotted to him ; and he parcelled it out among those who entered into

an obligation to bear arms in his defence. His chief officers imitated his example, in distri- buting portions of lands among their depen- dents, upon the same condition. Thus a feudal kingdom resembled a military establishment rather than a civil institution. The names of a soldier and a freeman were synony- mous. Every proprietor of land, girt with a sword, was ready to marcii at the summons of his superior, and to take the field against the common enemy. The feudal government, how- ever, tliough admirably calculated for

innumerable. The powerful vassals of the crown soon extorted a confirmation for life of those grants of land which, being at first purely gra- tuitous, had been bestowed only during pleasure. They then succeeded in having them converted into hereditary possessions ; and at length in rendering them unalienable. The crown vassals, after having secured the possession of their lands and dignities, were led by the feudal institutions to new, and still more dangerous encroachments on the prerogatives of the sovereign. They ob- tained the power of supreme jurisdiction, both civil and criminal, within their own territories ; the right of coining money ; together with the privilege of carrying on war against their private enemies in their own name, and by their own authority. Subordination was almost lost, and persons of superior rank aspired at indepen- dence. Hence a kingdom, considerable in name and extent, was broken into as many separate principalities as it contained powerful barons. A thousand causesof jealousy and discord sprang up among them, and gave rise to as many wars. Every country in Europe, wasted or kept in con- tinual alarm during these endless contests, was filled with castles and places of strength, erected for the security of the inhabitants, not against foreign force, but against internal hostilities. Indeed an almost universal anarchy prevailed. The guilty escaped punishment, and the innocent could not find protection. Such was the state of Europe with respect to the interior administra- tion of government from the seventh to the eleventh century. This system likewise prevented nations from acting with vigor in their external operations. Besides, the feudal anarchy had a fatal influence on the character and improvement of the human mind. Without the protection of a regular government, and the certainty of per- sonal security, it cannot be expected that men will make any progress in the arts and sciences, or aim at attaming refinement in taste or manners. In less than a century

after the barbarous na- tions settled in their new conquests, almost all the effects of the knowledge and civility which the Romans had spread through Europe dis- appeared. The human mind, neglected, un- cultivated, and depressed, sunk into the most profound ignorance. The inhabitants of Europe during this period were not only strangers to the arts which embellish a polished age, but desti- tute of the virtues whicli abound among people who continue in a simple state.

The ablest modcrti picture of the advantages and disadvantages of the feudal system is found perhaps in Mr. Hallam's work on the Middle Ages. He thus exhibits both sides of the subject. 'The utility of any form of polity may be es- timated, by its eff"ect upon national greatness and security, upon civil liberty and private rights, upon the tranquillity and order of society, upon the increase and diff'usion of wealth, or upon the general tone of moral sentiment and energy. The feudal constitution was certainly, as has been observed already, little adapted for the defence of a mighty kingdom, far less for schemes of conquest. But, ;is it prevailed alike in several adjacent coimtrics, none had anything to fear from the military superiority of its neigh-

bours. It was this inefficiency of the feudal militia, perhaps, ihat saved Europe during the middle ages from the danger of universal monar- chy. In times, wh'jn princes had little notiori of confederacies for mutual protection, it is hard to say, what might not have been the successes of an Otho the Great, a Frederic Barbarossa, or a Philip Augustus, if they could have wielded the whole force of their subjects whenever their ambition required. If an empire equally exten- sive with that of Charlemagne, and supported by military despotism, had been formed about the twelfth or thirteenth centuries, the seeds of com- merce and liberty, just then beginning to shoot, would have perished ; and Europe, reduced to a barbarous servitude, might have fallen before the free barbarians of Tartary.

' If we look at the feudal polity as a scheme of civil freedom, it bears a noble countenance. To the feudal law it is owing, that the very names of right and privilege were not swept away, as in Asia, by the desolating hand cr power. The tyranny which, on every favorable moment, was breaking through all barriers, would have rioted without control, if, when the people were poor and disunited, the nobility had not been brave and free. So far as the sphere of feudality extended, it diffused the spirit of liberty, and the notions of private right. Every one, I think, will acknowledge this, who consi- ders the limitations of the services of vassalage, so cautiously marked in those law-books which are the records of customs, the reciprocity of ob- ligation between the lord and his tenant, tiie consent required in every

measure of a legisla- tive or general nature, the security, above all, wiiich every vassal found in the administration of justice by his peers, and even (we may in this sense say) in the trial by combat. The bulk of the people, it is true, were degraded by servi- tude ; but this had no connexion with the feudal tenures.

‘The peace and good order of society were not promoted by this system. Though private wars did not originate in the feudal customs, it is impossible to doubt that they were per- petuated by so convenient an institution, which indeed owed its universal establishment to no other cause. And as predominant habits of warfare are totally i ieconcileable with those of industry, not merely by the immediate works of destruction which render its efforts unavailing, but through that contempt of peaceful occupa tions which they produce, tht feudal system must have been intrinsically adverse to the ac- cumulation of wealth, and the improvement of those arts, which mitigate the evils, or abridge the labors of mankind.

- But as a school of moral discipline, the feu- dal institutions were perhaps most to be valued. Society had sunk, for several centuries after the dissolution of the Roman empire, into a condi- tion of utter depravity ; where, if any vices could be selected as more eminently characteristic than others, they were falsehood, treachery, and in- gratitude. In slowly purging off” the lees of this extreme corruption, the feudal spirit exerted its ameliorating influence. Violation cf faith stood first in the catalogue of crimes, most repugnant

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to the very essence of a feudal tenure, most severely and promptly avenged, most branded by general infamy. The feudal law-books breathe tliroughout a spirit of honorable obli- gation. The feudal course of jurisdiction pro- moted, what trial by peers is peculiarly calculated to promote, a keener feeling and readier percep- tiou of moral as well as of legal distinctions. And as the judgment and sympadiy of mankind are seldom mistaken in these great points of veracity and justice, except through the tempo- rary success of crimes, or the want of a definite standard of right, they gradually recovered them- selves, when law precluded the one, and supplied the other. In tlie reciprocal services of lord and vassal, tliere was ample scope for every magnanimous and disinterested energy. The heart of man, when placed in circumstances which have a tendency to excite them, %yill sel- dom be deficient in such sentiments. No occa- sions could be more favorable, than the pro- tection of a faithful supporter, or the defence

of a beneficent suzerain, against such powerful ag- gression, as left little prospect except of sharing in his ruin.

- From these feelings, engendered by the feu- dal relation, has sprung up the peculiar senti- ment of personal reverence and attachment towards a sovereign, which we denominate loyalty ; alike distinguishable from the stupid devotion of eastern slaves, and from the abstract respect with which free citizens regard their chief magistrate. Men who had been used to swear fealty, to profess subjection, to follow, at home and in the field, a feudal superior and his family, easily transferred the same allegiance to the monarch. It was a very powerful feeling, which could make the bravest men put up with slights and ill treatment at the hands of their sovereign ; or call forth all the energies of dis- interested exertion for one whom they never saw, and in whose character there was nothing to esteem. In ages when the rights of the com- munity were unfelt, this sentiment was one great preservative of society; and, though collateral or even subservient to more enlarged principles, it is still indispensable to the tranquillity and permanence of every monarchy. In a moral view, loyalty has scarcely perhaps less tendency to refine and elevate the heart than patriotism itself; and holds a middle place in the scale of human motives, as they ascend from the grosser inducements of self-interest, to the furtherance of general happiness, and conformity to the pur- poses of Infinite Wisdom.'

FE'VER, n. s. &v. w.ˆ Sax. pepeji; French,

FEV

Fe'ver-cooling, adj. Fe'ver-weakened

Fe'veKET, 71. s.

Fe'veriew, Fe'veuisii, atlj. Fe'vekisiiness, n. Fe'verous, adj. Fe'very.

fievre, Jiebure ; Latin, febrit. ' Adiseasecha- racterised by an in-

)> crease of heat, an ac- celerated pulse, a foul tongue, and an im- paired state of several

J functions of the body.'

— Hooper. See Medicine. Feveret is adimi nutive of fever; a slight fever. Feverfew, a plant, a species of matricaria.

And Jhcsus roos up fro the synagogc : and cntridf

into the hous of Symount, and naodir of Symoundis wiif • was holdun with gretc ytreWs. Wiclif. Luk. 4. Duncan is in his grave ; After life's fitfid fever he sleeps well.

Shakspeare.

The white hand of a lady fever thee I

Shake to look on't. Id. Antony and Cleopatra.

Thou luadest thine enemies shake, as if the world

Wcre/dteroiw, and did tremble. Id. Coriolanus.

It hath been noted by the ancients, that southern winds, blowing much, without rain, do cause a fever- ous disposition of the year ; but with rain not.

Bacon's Natural History. O Rome, thy head Is drowned in sleep, and all thy hoiy fev'ry.

Ben Jonson's Catiline. Tliose paiit nts that have inured themselves to a set course of me icinal evacuations, if they intermit their springs and fall;, fall iaXo feverous distempers.

Bp. Hall. All fjverous kinds. Convulsions, epilepsies, fierce catarrhs. Milton. Should not a lingeringykier be removed. Because it long has raged within my blood ?

Dryden. Her blood all fevered, with a furious leap. She sprung from bed distracted in her mind . Id. • We toss and turn about oat feverish will, When all our ease must come by lying still ; For all the happiness mankind can gain. Is not in pleasure, but in rest from pain. Id. More fevers and surfeits are got by people's drink- ing when they are hot than by any one thing I know.

Locke. To other climates beasts and birds retire. And feverish nature bums in her own fire.

Creech. When an animal that gives suck turns feverish, that is, its juices more alkaline, the milk turns from its na- tive genuine whiteness to yellow.

Arbuthnot on Aliments. A feverish disorder disabled me. Swift to Pope. Common feverfew is the sort used in medicine, and is found

wild in many parts of England. Uliller,

A light feveret, or an old quartan ague, is not a sufficient excuse for non-appearance. Ayliffe.

Sincere the' unaltered bliss her charms impart.

Sedate the enlivening ardours they inspire ; She bids no transient rapture thrill the heart. She wakes ao feverish gust of fierce desire.

Beattie.

Fˆever. See Medicine," Index. The ancients deified the diseases as well as the passions and affections of men. Virgil places- them in the entrance into hell, iEn..vi. 273. SccFeiiris.

FEVEUSHAINI, or Faversuam,. a market- town of Kent,, seated on a branch of the river Thames, which is navigable for hoys. It was a royal demesne A. D. 811, and called, in Kenulf 's charter the King's Little Town. It was inhabited by the Britons long before the invasion by Csesar. In 903 king Athelstan held a great council here. King Stephen erected a stately abbey, in 1147, whose, abbots sat. in parlia- ment; and. he was buried in it, with Maud, his queen, and Eustace his.son. Two mean gate- houses are all that now remain of it. The town was first incorporated by the title of the Barons of Feversham, afterwards by Ifenry VIIL, with that of the mayor, jurats, and commonalty. The mayor holds a court of session twice a year, at wiiich all offenders committed within the limits

of the town, except those for liigh-treason, are tried. It is a populous tlourisliing place, con- sisting chiefly of two long broad streets, witli a market-house in the centre, built in 1574. Its ancient church was repaired in 1754, at the ex- pense of £2300 ; it was originally built in the reign of Edward II. It is in the form of a cross ; the walls are of flint, quoined with stone from Caen. The inside of the church is handsome, and well worthy of observation ; it had origi- nally a square castellated tower in the middle, but that was taken down in 1755. Before the Reformation there were several altars in various parts of the church. Many ancient mural mo- numents, and several of brass let into the floor, still remain. It has a free grammar school, built

and endowed by queen Elizabeth in 1582 ; and two charity schools. It is a member of the cinque-port of Dover, and has a manufactory of gunpowder. The towni was considerably im- proved in 1773, when a spacious avenue was opened from the London road into Preston Street, and a bridge was erected over the stream at the bottom of West Street: in 1789 an act was passed for paving, watching, and liglitmg, the place. The markets, on Saturday and Wed- nesday, are well supplied with provision, and are well attended by the London dealers, who buy large quantities of the oysters caught on the coast. The Dutch also in time of peace, it is said, carry home as many oysters as amount to above £2000 a year. Tlie fishermen admit none to tlieir freedom but married men. It is nine miles west of Canterbury, and forty-seven east of London.

FE'UILLAGE, n.s. French. A bunch or row of leaves.

Of Homer's head I inclose the outline, that you may determine whether you would have it so large, or reduced to make room ioi feuillage or laurel round the oval. Jervas to Pope.

FEVILLEA, in botany, a genus of the pen- tandria order and dicecia class of plants ; natu- ral order thirty-fourth, cucurbitaceae. The male CAL. and COR. quinquefid; stamina five; necta- rium consisting of five filaments closing togedier : female cal. quinquefid; styles three ; fruit, a hard trilocular apple with a hard bark. Species two, of the East and West Indies, both climb- ing plants.

FEUILLE'E(Levvis),acelebrated French natu- ralist and mathematician, of the religious order of Minims. lie was a native of Provence, and sent by Louis XIV., in early life, to South America to make researches in natural history and philosophy, the result of whicii appeared in his .Tournal des ()bser\ations Pliysiquesˆ Mathematiques, et Bo- taniques, fliites surles Cotes Orientalosdc I'Ame- rique Meridionale, el dans les Indes Occiden- tales, 1714, 2 vols. 4to. In 1724 he was em- ployed, on the recommendation of the Academy of Sciences, in an expedition to the Canary Islands, to ascertain the position of the me- ridian of Ferro ; a task he performed in a very able maimer. lie was rewarded with the post of botanist to the king, and a pension. He died in 1732, at Marseilles, where an astrono- mical observatoiy had been built for him. In the Royal library at Paris are preserved, in MS., a

Journal of his Voyage to the Canaries, and a collection of corresponding drawings in natural history.

FE'UILLEMOllT, h. s. French. The color of a faded leaf, corrupted

commonly to phile- inot.

So to make a countryman understand what ‘ feuille- morte ‘ colour signifies, it may sufBcu to tell him, it is the colour of withered leaves falling in autumn,

Loclte.

FEVRE (Claud le), an eminent French painter, born at Fontainbleau in 1633. He studied first in the palace, and afterwards at Paris under Le Sueur and Le Brun ; the latter of whom advised him to adhere to portraits, for which he had a particular talent, and in his style equalled the best masters of that country. He died in England in 1675, aged forty-two.

Fevre (Nicolas le), or Nicolaus Faber, was born at Paris, June 2nd, 1544. During the course of his studies a singular misfortune happened to him. In cutting a pen, a piece of the quill flew into his eye, and gave him such exquisite pain, that hastily lifting up his hand, he thrust the knife into his eye and cut it out. After acquir- ing the languages, he studied the civil law at Toulouse, Padua, and Bologna. He travelled through Italy, and spent eighteen months at Rome. In 1587 he published Seneca, with a learned preface and notes ; and detected the defect in Scaliger’s demonstration of the Quad- rature of the Circle. He also wrote on eccle- siastical antiquities, and drew up a preface to the fragments of St. Hilary. He was appointed preceptor to the prince of Conde, by Henry the Great ; after whose death, the queen dowager made him preceptor to Louis XII. He died in 1611; and his works were collected by his friend, John le Begue, and printed at Paris in

1614.

Fevre (Tannegui le), an excellent scholar in Greek and Roman learning, born at Caen in Normandy, in 1615. Cardinal Richelieu gave him a pension of 2000 livres to inspect all the works published at the Louvre, and designed to have made him principal of a college he was about to erect at Richelieu. But the cardinal’s death cut off” his hopes; and his pension was i41 paid. Some time after, tlie marquis de Fran- ciere, governor of Langres, took him witli him to his government, where he embraced the Pro- testant religion ; after which he was invited to Saumur, where he was chosen Greek professor. He there taught with extraordinary reputation. Young men were sent to him from all the pro- vinces in the kingdom, and even from foreign countries, while divines and professors them- selves gloried in attending his lectures. He was preparing to go to Heidelberg, wiiitiier

he was invited by the prince Palatine, when he died, aged fifty-seven. He wrote Notes on Anacreon, Lucretius, Longinus, Pha-dnis, Justin, Terence, Virgil, Horace, iElian, Eutropius, Aurelius Victor, Dionysius, &c. A short account of the lives of the Greek poets. Two volumes of letters ; and many other works. lie left a son, and two daughters, one of whom was the cele- brated Madame Dacier. In his Latin works he assumed the name of Tanaquil Faber.

FEU'TERER, 71. s. Fr. vautrier. A dog- keeper.

• • If you will be

An honest yeoman feulerer, feed us first. And walk us after. Mastinyer.

FEW, adj. > Sax. peu ; Goi\. fauai, fa; Few'ness, n. s. Jlcl./a; Svved.yie; Dan._/«a, faa ; Fr. peu. Small in number ; not many ; used elliptically for ' not many words.'

And he seyde to hem, ther is myche rype corn : and /ewe werkemen, therfore preie ye the Lord of the riipe corn : that he sende werkemen into his rype corn.

Wiclif. Luh. X. We arc left but/ew of many. Jer.

To answer both allegations at once, the very sub- stance of that they contain is in /etc but this.

Hooker, Give every man thine ear, butyetu thy voice j Take each man's censure, but reserve thy judgment.

Shakspeare. Fewness and truth, 'tis thus. Id.

Many hands draw the cable with more violence than few. Bp. Hall.

No more shall be added in this place, his memory deserving a particular celebration, than that his learn- ing, piety, and virtue, have been attained by few.

Clarendon, So having said, he thus to Eve in few : Say, woman, what is this which thou hast done ?

Milton, So much the thirst of honour fires the blood j So many would be great, so few be good j For who would virtue for herself regard. Or wed without the portion of reward ? Dryden.

On Winter seas vie fewer storms behold. Than foul diseases that infect the fold. Id.

These, by reason of their fewness, I could not dis- tinguish from the numbers with whom they are em- bodied. Id.

The impartial lovers and searchers of truth are a great 6ca.\ fewer than one could wish or imagine.

Locke, Thus Jupiter in few unfolds the charge. Dryden, The firm resolve I here irx few disclose. Pope,

The fewer still you name, you wound the more ; Bond is but one, but Harpax is a score. Id,

Party is the madness of many, for the gain of a f&w. Swift,

An experiment very frequent among modern au- thors, is to write upon nothing : when the subject is utterly exhausted, to let the pen still move on ; by some called the ghost of wit, delighting to talk after the death of its body. And to say the truth, there seems to be no part of knowledge in yewcr hands, than that of discerning when to have done. Id,

The imagination of a poet is a thing so nice and delicate, that it is no easy matter to find out images capable of giving pleasure to one of the few, who, in any age, have come up to that character.

Berkley to Pope,

Man's rich with little, were his judgment true ; Nature is frugal, and her wants are few : Those few wants answered, bring sincere delights ; But fools create themselves new appetites. Young, • Ralph did it justice, remarking a/eif imperfections, and applauding euch parts as were excellent.

Franklin.

FE'WEL, n. s. & v. a. Yr.feu. Now written Fuel, which see. Combustible matter ; mate- rials for keeping fire. To supply with fuel. Get home with thy fewel, make ready to fet.

The sooner the easier carriage to get. Tiisser.

If a spark of error have thus far prevailed, falling even where the wood was green, and farthest off from any inclination unto furious attempts, must not the peril thereof be greater in men, whose minds are as dry fewel, apt beforehand unto tumults, seditions and broils ? Hooker. Dedication.

Never, alas ! the ‘dreadful name. That fewels the infernal flame. Cowley.

Others may give the fewel or the fire ;

But they the breath, that makes the flame, inspire.

Denliam,

A known quantity of fewel, all kindled at once, will cause water to boil, which being lighted gradually will never be able to do it. Bentley’s Sermons.

FEY, u. a. But. veghen ; Goti. J’cegen. To cleanse a ditch, or well, of mud.

Such muddy deep ditches and pits in the field. That all a dry Summer no water will yield. By feying and casting that mud upon heaps. Commodities many the husbandman reaps. Tusser.

FEYJOO Y Montenegro (Bened. Jerome), a Spanish Benedictine and writer of the last century. He has been sometimes styled the Spanish Addison. His principal works are Teatro Critico Universal, 14 vols. 4to., Madrid 1733, and his Cartas eruditas y curiosas ; both works of great merit, and liberality of sentiment. Divinity, law, medicine, and philosophy, occupy his attention ; and the superstitions of his church are animadverted on with considerable freedom. He died in 1765. An edition of his works was published in 1778, 15 vols. 4to. ; and a selection from his Essays and Discourses appeared, in an English translation, 1780, 4 vols., 8vo.

FEZ, an extensive kingdom of West Barbary, Africa, now united with the empire of Morocco, which see ; of which it forms the most valuable part. It is bordered by the chain of the Greater, and crossed by the Lesser Atlas, extending from the former to the sea, which it touches at Tetuan. The climate on the north of Mount Atlas is greatly modified by that range on the one hand, and the Mediterranean on the other. It differs, therefore, but little from that of southern Europe,

either in its temperature or salubrity. The heat in some places, however, is occasionally very great. Ali Bey says that, in the beginning of June, it exceeded 90° of Fahrenheit, in his tent, a little north-east of Fez. The valleys of this region are luxuriantly fruitful : it is divided into nine provinces, Shavnya, Ternsena, Fez Proper, Beni-hassen, Garb, Shaus, Rif, Tedla, and Garet, The principal rivers are the Mulluvia, the Lucos (Lixus of the ancients), the Suboe, and the river of Sallee. The principal towns are Fez, Mequi- nez, Melilla, Ceuta, Tangier, Earache, Mamora, and Sallee. The statistics, government, and conuuerce of tliis region, are the same in almost every respect as in Morocco, and will be found under that article.

Fez Proper, a fertile province of the above country, situated between the range of Atlas and the province of Beni-hassen. It consists of one entire plain, surrounded by ranges of hills, also capable of the highest cultivation. To the east it has extensive dependencies.

Fez, a city of Morocco, the capital of the king- dom of that name, situated near the bottom of a funnel-shaped valley, the surrounding hills of which are covered with woods and orchards.

They surround it, indeed, on all sides except the north and north-east. It consists of the Old and New town, the latter of which is almost entirely built on the heights which encompass the other. It is chiefly mhabited by Jews. Chenier, though lie thinks the description of Leo exaggerated, admits that Fez is one of the most agreeable cities in the empire. The finest edifice is the mosque of Carubin, built during the most flourishing period of Fez, and described by Leo as a mile and a half in circumference. Euro- peans, however, are not permitted to see it. The city contains 200 caravanseras, or inns, called fondaques, which are tolerably convenient. They are two or three stories high, with galleries towards the court, which is always in the centre and admits light into the apartments. Tlie tra- veller, however, is not supplied with provisions, or even bedding. His whole accommodation is a room and a mat. The streets generally are dark and dirty, and so narrow in some parts that two persons can scarcely ride abreast. Several of the buildings that face the streets are dilapi- dated, and some of them propped up. The shops are little better than mere stalls, where the sedentary occupant sits surrounded by bas- kets, to which he points his customers as they enter. The markets, however, are immensely crowded, as there is no other place in that part of the

country that deserves the name of a town; and the Arabs of the surrounding regions resort thither to purchase all the foreign and manufac- tured articles their doniestic habits require, or their means aff'ord. Fez and Morocco are also great marts for the Soudan trade ; the former has about 200 caravanseras.

Old Fez was founded towards the close of the eighth century, by Edris, a Barbary farmer ; and it soon became the capital of all the western Morocco states. In the twelfth century Leo Africanus describes it as containing 700 temples and mosques, of which fifty were magnificent, and adorned with marble pillars. Such was the veneration in which it was held, that, when the road to Mecca was occasionally shut up, pilgrimages were made to Fez. It was no less fa- mous as a school of learning. Its numerous schools for philosophy, physic, and astronomy, were resorted to from all the Mahommedan kingdoms of Spain and Africa, and even at- tended by Christians. The population v/as also occasionally replenished from the opposite shores of Europe, during the whole period of the Moorish war with Spain. The remains of its institutions still exist, but most that was valuable has long since vanished.

The studies are confined to the Koran and fs commentators, to a slight tincture of grammar and logic, and to clumsy astronomical observations, made solely with aviewto regulate the time of their religious exercises. They have Euclid in folio volumes, neither copied nor read. The. teacher sits crosslegged on the ground, and repeats in a drawling tone, between singing and crj'ing, words which are echoed by the scholars seated TOund him. Their religious prejudices exclude them from the study of anatomy and medicine. Ali Bey describes Fez as a singular mixture of splendor and ruin. The magnificence usual in

Mahommedan countries is displayed solely in the interior, where spacious courts are found, and the apartments are decorated with paint- ings, arabesques, and often with gold and silver, while the walls of the houses, next the street, are built of mud, and in many places cracked and falling. He states the population at 100,000, and it was double this amount till reduced by a late plague. Mr. Jackson, from the public documents to which he had access, makes it 380,000. It is 230 miles north-east of Morocco.

FEZZAN, a considerable country in the north- east part of Central Africa, to the south of Bar- bary, forms a sort of island in the midst of that immense desert of sand which reaches as far as the Niger. It is tributary to the dey of Tripoli, from which its nearest part is about 250 miles south-east. Its northern extremity, at the well of Bonjem, is

in lat. 30° 35', and its southern limit-at Tegerry in lat. 24° 4′ N. Its length is therefore about 450 miles. On the north-east it is bounded by the White Mountains of Hanitz. This country was known to the ancients under the title of the Phazania Regio, and the country of the Garamantes ; Garama, its ancient capital, has been recognised by major Rennell in the modern Germa. The name of Fasan, or Fezzan, seems to have been imposed by the Saracens, when they overran this with all the rest of north- ern Africa, and established the Mahommedan faith here.

Though, compared with the surrounding dis- tricts, Fezzan is tolerably fertile, the want of water precludes almost every kind of steady cul- tivation : there are only three springs in the whole of this vast tract. Water is sometimes found in beds of clay, in some places at ten or twelve feet below the surface. Trees of the mi- mosa species, called talh, are occasionally seen, and near the towns a scanty stock of palms ap- pears, with a few esculent vegetables. Small patches of grain are sometimes raised with great labor and care ; but the trouble of keeping the soil moist causes the largest of these patches not to exceed an acre. The water is drawn by asses from the wells, by very complicated machinery, and small channels are cut from the reservoirs to the gardens. Nearly all the water of Fezzan is brackish. Wheat and barley are sown in Octo- ber and November, and reaped in March and April, and until the last month the crops require watering twice a week. The principal vegetable products are — Indian corn, wheat, barley, beans, and peas, with some small seeds. A species of clover is sown in January and February, and will bear cutting repeatedly, as food for the horses and camels, till November. In such a country few domestic animals of course can be kept. The camel, best adapted to its wants, is therefore the most numerous. Horses, asses, cows, sheep, and goats are scarce, and only a very few dogs of the greyhound species are seen. The wild animals include the tiger-cat, the hyaena, fox, jackal, buflaio, antelope, gerboa, rabbits, and hares. Among the birds are the ostrich, eagle, vulture, hawk, wild turkey, and raven, with several smaller birds, besides domestic fowls, partridges, pigeons, ducks, and geese. The chief mineral productions are similar to those of many other

regions in this part of Africa, and may be taken as a specimen of the rest that are less known. Soda, rock-salt, alum, gypsum, saltpetre, and sulphur, are all said to exist. The tirst three are in sufficient quantities

to form articles of commerce. There is said to be one plain of solid salt thirty miles in length. Mourzouk, the capital, is situated in the soxithern part, and there are three or four more considerable towns, as Sockna, Zuela, and Gatrone, all of which, except Zuela, lie in the common route. Mourzouk is a walled town, with about 2500 in- habitants. The walls consist of mud, and are strengthened by round towers with loop holes for the musketry. See Mourzouk.

Most of the people here are capable of per- forming the busmess of carpenter and mason as far as domestic purposes require, and many work very well in leather. Others make substantial but clumsy articles in iron, and some display tolerable skill in working gold and silver. Some coarse hayks are also woven in the country. A considerable commerce in slaves, and other arti- cles common to these countries, is carried on between Fezzan and the interior of the continent, as well as with Egypt, Bornou, Sec.

The government of Fezzan is an absolute monarchy. All the boys are said to be taught to read the Koran, but of every other book they are perfectly ignorant. Dates constitute almost the only article of general subsistence. The .Fez- zanners are represented as possessing little cou- rage, enterprise, or honesty, and are as com- pletely submissive as their oppressors could wish. Their complexion is quite black, and the females the very reverse of handsome. Neither sex is noted for figure, strength, or activity. A peculiar cast of countenance distinguishes them from all other blacks, their cheek-bones being higher and more prominent; their faces fatter, and their noses le-ss depressed. They have small eyes, wide mouths, but good teeth. Their hair is mostly woolly. The females arrive early at puberty, and have often the appearance of old women at sixteen. They are cheerful people, fond of singing and dancing, and kind and obliging to each other. But their affections are cold and interested; they manifest a general indiffereiuce to the common incidents of life ; and are particularly devoid of that sudden anger, or determined revenge, which marks the Arab.

A tenth part at least of the population of Mourzouk are slaves. Many of them, however, were brought from their native countries so young, and are so mildly treated, that they are scarcely sensible of slavery. Very little dif- ference can be perceived between the household slaves and the freemen. They are often entrusted with their master's affairs, and, when any of the family die, one of 'tli€ slaves is generally liberated. The population scattered over this wild waste is estimated by Mr. Ilorneman to amount only to 70,000 or 75,000 souls, of which Mourzouk, as we have seen, contains, accord- ing to Lyon, about

2,500. The government ■was hereditary in a black family of shreefs for more than five centuries, but tributary to the bashaw of Tripoli. This tribute was collected by Mukni, the present sultan of Fezzan, who

contrived to get the government of the country into his own hands, by promising the bashaw to triple the amount of the annual tribute. I"or this purpose, in the year 1811, he came upon Llour- zouk by surprise, caused the sultan, his brother, and the principal Mameluke, to be strangled, and by his oppressions of the people, but chiefly by the wars which he waged, and still continues to wage with his defenceless neighbours, for the sake of procuring slaves, hv has hitherto managed to fulfil his promise, and retain his government. While, however, Messrs. Lyon and Ritchie were at Mourzouk, reports wˆre circulated that another sultan was on his way from Tripoli to supersede him.

- These reports, corroborated by one or two private letters,' says captain L}on, ' very much alarmed the sultan, and caused him to fall sick and take to his bed. He began, for the first time in his life, to pray at the regular hour ordered by the law ; he ceased to swear, talked much of Paradise, and the superiority of the other world to this. Mr. Ritchie was at this time very weak, and began again to be indis- posed, but he constantly visited Mukni, and at last succeeded in restoring him to health; thus returning by kindness the ill treatment we had received from him. We both went frequently to the castle, and learnt by degrees that some ex- pressions of Mukni's had come to the ears of the bashaw, whose emissaries he expected would be sent to strangle him, and take all his wealth. Never was a haughty tyrant so completely humbled by his fears as this man ; ha sat con- stantly in a dark room, would receive only one or two visitors, aud was nursed by negresses day and night ; always speaking in a low voice, and, in his terror, betraying all his secrets.' — p. 164. He determined, however, to try what bribes and promises would do; and with this view despatched his principal man of business to Tripoli with presents of civet, and other articles, ten fine slave girls for the bashaw, and hand- some negresses for the bey, his son, for his bro- thers, and for the principal people about the court; making at the same time secret prepara- tions for flight, such as getting all his horses shod by night, and all his women employed in grinding corn. For some time, however, his agent succeeded in diverting the storm.'

- The females are here allywed more liberty than those of Tripoli, and are more kindly treated. The eff'ect of the plurality of wives is but too plainly seen, and their women, in con- sequence, are

not famed for chastity. Thouah so mxxch better used than those of Barbary, their life is still a state of slavery. A man never ventures to speak of his women ; is reproached if he spends much time in their company; never eats •with them, but is waited upon at his meals, and fanned by them while he sleeps; yet these poor beings, never having enjoyed the sweets of liberty or affection, are, in spite of their humilia- tion, comparatively happy. The authority of parents over children is very great, some fathers of the better class not allowing their sons to eat, or sit down in their presence, till they become men ; the poorer orders, however, are less strict.'

Specimens of rock collected by captain Lyon,

in various parts of his journey, have enabled professor Buckland of Oxford, to determine the geological structure of Tripoli and Fezzan ; all of which may be referred to the three formations, 1. Basalt; 2. Tertiary limestone, of about the same age with the calcaire grossier of Paris ; 3. New red sandstone. The Soudah, or Black Mountains, are of basaltic formation ; their di- rection is east and west, and they extend proba- bly across the continent, Ilorneman having crossed them nearly 200 miles to the south-east- ward of Lyon, where they take the name of the Black Harutsch. Some basalt also appears in the Gharian Mountains ; but this ridge, which runs probably to the borders of Egypt, is composed apparently of trap and calcareous rocks, the ter- tiary limestone above-mentioned. The rocks contain marine shells, particularly two species of cardium, in a state of delicate preservation. In- deed most of the limestone formation, in every part of Northern Africa, appears to be loaded with fragments of organic remains, the most dis- tinct of which, brought away by captain Lyon, may be referred to the genera ostrea and pecton. We are informed by Horneman, that the ruins of the temple of Siwah are limestone, containing petrifactions of shells and small marine animals ; and from this place, westerly, the face of the rocky chain, rising abruptly from the sandy desert, was so crowded and filled with marine animals, and shells, and white detached mounds, as it were, wholly composed of shells, that when taken in connexion with the sea-sand, •whicii covers the desert, this vast tract of country, ho concludes, must have been flooded at a period later than the great deluge. Farther south, and

close to the Black Harutsch, the calcareous hills, rising steep from the level desert, are so friable, that petrified conchs, snail-shells, fish, and other marine substances, may be taken out by the hand. ‘ I found heads of fish’, says Horneman, ‘ that would be a full burthen for one man to carry.’ The third and last formation appears under its usual form of loose red sand, accom- panied by rock salt and gypsum, associated with beds of a calcareous breccia, cemented by mag- nesian limestone, and of compact dolomite. The drift-sand is composed of extremely minute grains of red semi-transparent quartz. Mr. Buck- land observes, that the frequent occurrence of salt-springs and of rock salt and gypsum goes far to identify this sand of the deserts with the new red sandstone in the somn of England. In this also are ferruginous concretions, forming sctites or geodes ; the broken fragments of which are compact, sonorous, and of a dark liver color, having a shining polished surface ; they are abundantly found among the sand. A narrow bed entirely composed of tubular concretions of iron, of similar origin near the pass of Kenair, threw out irregular ramifications through the sand like the roots of trees, and presented at first sight the resemblance of lava. Most of the plains are strewed with magnesian limestone or dolomite split into small laminated fragments, which break and rattle under Lhcfeet like pottery. Many other varieties of magnesian limestone and carbonates of lime are associated with the sand and sandstone of the hills an.d plains of this Vol. IX.

barren and miserable country. In our general article on Africa, par. 254 — 256, will be found several interesting particulars of the people and manners, supplied by captain Lyon.

FIANONA, a borough and castle of Italy, in the province of Istria, and district of Albona, four miles from Albona, and one from the coast. It has a good harbour, and a rivulet which turns twenty-two mills. It is seated on the Gulf of Carneroˆ seventeen miles north of Pola, and nineteen east of Rovigno.

FLAT, U.S. [Lat. i.e. be it so.] Order; de- cree.

I resolve all into the sole pleasure and Jiat of our Omnipotent Creator. Bentley.

What wealth in souls that soar, dive, range around. Disdaining limit or from place or time. And hear, at once, in thought extensive, hear The’ Almighty fiat, and the trumpet’s sound.

Young.

FIB, 71. s. &. V. 11. Probably contracted from fable, or the Latin fabula. A lie or falsehood : to tell lies : one of the cant terms in common use, to make lying appear less odious.

If you have any mark, whereby one may know when

yon Jib, and when you speak truth, you had best tell

it me. Arbuthnol,

Destroy his_ˆ6 or sophistry ; in vain.

The creature's at his dirty work again. Pope.

I so often lie.

Scarce Harvey's self has told more Jibs than I.

Id.

FIBRARI/E, a class of fossils, naturally and essentially simple, not inflammable nor soluble in water: and composed of parallel fibres, some shorter, others longer ; their external appear- ance being bright, and in some degree transpa- rent. They never give fire with steel, nor fer- ment with or are soluble in acid menstrua. FI'BRE, ??. .5. ■ˆ Fr.Jibre; Lai-Jibra. A small Fi'iiRiL, ˆthread or string : the first con-

Fi'brous. j stituent part of bodies: fibril is a diminutive of fibre.

The difference between bodies jib/jus and bodies viscous is plain ; for all wool and tow, and coLton and silk, have a greediness of moisture. Bacon.

My heart sinks in me while I hear him speak. And every slackened _/? 6re drops its liold. Like nature letting down the springs of life : The name of father awes me still. Dryden.

I saw Petreus' arms employed around A well-grown oak, to root it from the ground ; This way and that he wrenched the Jibrous bands. The trunk was like a sapling in his hands. Id.

The Jibrous and solid parts of plants pass unaltered through the intestines. Arbuthnot on Aliments.

AJibre, in physick, is an animal thread, of which some are soft, flexible, and a little elastick j and those are either hollow, like small pipes, or spougious and full of little cells, as the nervous and fleshy

Jihres : others arc more solid, flexible, aud with a strong elas- ticity or spring, as the membraneous aud cartilaginous Jibrea : and a third sort are liard and flexible, as the Jihres of the bones. Some so very small as not to be easily perceived ; and others so big as to be plainly seen ; and most of tl em appear to be composed of still &ma.\er Jibrcs: these yi7 > res livst constitute the sub- stance of the bones, cartilages, ligaments, membranes, nerves, veins, arteries, and muscles. Quiitvy.

The muscles consist of a number of fibres, and each

O

Jibrc of an incredible number of little _/ifcri7s bound to- gether, and divided into little cells.

CUeyne's Philosophical Principles.

Now sliding streams the thirsty plants renew. And feed their Jibres with reviving dew. Pope.

Inveterate habits choke the' unfruitful heart. Their Jibres penetrate its tendercpt part. And, draining its nutricious powers to feed Their noxious growth, starve every better seed.

Cowper. The age-worn _^6rei goaded to contract.

By repetition palsied, cease to act. Darwin.

New emhryon Jibrits round the trunk combine With quick embrace, and form the living line. Id. When strong desires or soft sensations move

The astonished Intellect to rage or love ;

Associate tribes of Jibrous motions rise.

Flush the red cheek, or light the laughing eyes.

Id.

If in a church one feels the floor and the pew trem- ble to certain tones of the organ ; if one string vibrates of its own accord when another is sounded near it of equal length, tension, and thickness ; if a

person who sneezes, or speaks loud, in the neighbourhood of a harpsichord, often hears the strings of the instrument murmur in the same tone, we need not wonder, that some of the finer Jibres of the liuman frame should be put in a tremulous motion, when they happen to be in unison with any notes proceeding from external ob- jects. Bealtie.

Fibre, in anatomy, is defined to be a per- fectly simple body, being fine and slender like a thread, and serving to form other parts. Some are hard, as tlie bony fibres ; others soft, as those which form all the other parts. The fibres are divided, according to their situation, into straight, oblique, transverse, annular, and spiral ; being found arranged in all these directions in different parts of the body. See Anatomy.

FI'BULA, u. s. Lat. The outer and less bone of the leg, much smaller than the tibia: it lies on the outside of the leg ; and its upper end, which is not so high as the knee, receives the lateral knob of the upper end of tl.e tibia into a small sinus, which it has in its inner side. Its lower end is received into the small sinus of the tibia, and tlien it extends into a large process, which forms tlie outer ankle. — Qidncy.

FinuLA, in antiquity, was a sort of button, buckle, or clasp, used by the (Greeks and Ro- mans for keeping close or tying up some part of their cloaths. They were of various forms, and often adorned with precious stones. Men and women wore them in tlieir hair and at their shoes. Fibular are often found in the tombs of the ancient Romans, Gauls, Franks, and the ancient Britons. M-any antique fibuhe of bronze are to be found in various cabinets and collections of antiquities, and a few in the British Museum, among other articles of the toilet or of personal decoration.

Fibula, in surgery, an instrument used among the ancients for closnig wounds. Celsus s))eaks of the fibula as to be used when the wound was so patent as not easily to admit of being sewed.

FICHARU (John), was born at Frankfort-on- the-Maine in \b\1, and devoting liimself to the stxidy of jurisprudence became syndic of Frank- fort, lie wrote, Tlie Lives of illustrious Men, d)stinguished for their Talents and Frudition during the fifteenth aud sixteenth Centuries, in

Latin, printed in 4to. 1536. The Lives of ce- lebrated Lawyers, 1565, 4to. A work entitled, Onomasticon Philosophico-Medico Synonymura, 1574. De Cautelis, 1577. And Concilium Ma- trimoniale, 1580. He

died in 1581.

FICHET (Alexander), a Jesuit and able writer on rhetoric, was horn about 1589. He became professor of the classics and rhetoric in the college at Lyons, where he published an edition of the Latin poets, under the title of Chorus Poetarum, 1616. He also published a collection called Musa;um, Rhetoricum et Poeti- cum ; and a work with the title of Arcana Stu- diorum omnium methodus, et Bibliotlieca Scien- tiarum, 8vo. He also printed Favus Patrum, or Thoughts of the Fathers, 12mo.

FICHTE (John Theophilus), a modern (Ger- man metaphysician, the son of a riband manu- facturer, was born at Rammenau, a village of . Lusatia, on the 19th of May, 1762. Young Fichte displayed at school considerable genius, and was patronised by some respectable persons; but becoming impatient of restraint he ab- sconded, and was found sitting on the banks of the Saale, with a map, on wliich he was endea- vouring to trace the way to America. He after this prosecuted his studies in a very desultory manner; occasionally attending the lectures of various professors of ˆVirtemberg and Lei])sic. Theology, however, was his favorite study. Pos- sessing no fortune to enable him to indulge in the luxury of mere speculation, he was compel- led by liis circumstances to accept the situation of tutor in the family of a Prussian gentleman. Here he was enabled to cultivate the acquaint- ance of tlie celebrated Kant, to whose judgment he sulimitted his first work, the Critical Review of all Revelations, which was published, anony- mously, in 1792, and which was for a time as- cribed to tlie pen of that philosopher. Fichte now set out on a course of travels througli Cer- many and Switzerland, and married at Zurich a niece of Klopstock's. In 1793 he published the first part of his very popular work, Contii- butions towards rectifying the Opinions of the Public respecting the French Revolution. His reputation was now so well established, that he was soon after appointed to the philosophical chair at Jena, and commenced his lectures by a programme, in vvhicl. he endeavoured to give an idea of the doctrine of science (wissenschafts- lehre), the name by which he distinguished the principles of his philosophical system. Besides the ordinary duties of his professorship, he gave a regular course of lectures, in the form of ser- mons, every Sunday, in the year 1794, on the literary calling, which were numerously attended. He now endeavoured to extend the application of his principles to the several departments of])hi- losophy; and with this view published, in 1796, his Fundamental Principles of the Law of Nature ; and two years afterwards, his System of Morals. In conjunction with Niethammar, he also published a Philosophical Journal, in which several articles were inserted, contaii

\ing some views of religion which were considered athe- istical. Among other objectionable propositions, it was maintained that God was nothing else than the moral order of the universe ; and that

to worsliip God as a being who cowl J on.ly be re- presented as existing in time and space, would he a species of idolatry. One of Fichte's col- leagues called the attention of the Saxon minister Burgsdorf to these heretical propositions ; and the consequence was, the rigorous confiscation of the periodical work in question. Fichte and his friend Forberg wrote an Appeal to the Public, and several Apologies, in oi-der to exculpate the'.uselves from the imputation of atheism. The cuniroversy was carried on with great violence, and excited considerable ferment throughout tlie whole of Germany. In the mean time Fichte re- signed his professorship at Jena and repaired to Berlin, where his time was occupied in giving private lectures and in private composition. In 1800 he published a treatise, entitled The exclu- sive Commercial State. About this period he met with a formidable rival in Schelling, who had formerly been a partizan of the doctrine of science, but who now separated from his master, and propounded a new metaphysical theory, which soon acquired a large share of popularity at the German universities. Fichte, indeed, en- deavoured to modify his theory of that doctrine, and to present it to the world in a more attrac- tive form; but he never again recovered his po- pularity. Meanwiiile, his wish to be re-placed in an academical chair was at length gratiiied by M. de Haraenberg, who, in 1805, procured for him the appointment of ordinary professor of philosophy in the university of Erlangen. This was accompanied with the especial favor of being permitted to pass the winter at Berlin, in order to finish his lectures. During the sum- mer of 1805, he lectured at Erlangen on the Essence of the Literary Character (uber das Wesen des Gelehrten.) The following winter he delivered to a numerous audience the course which he afterwards published under the title of Guide to a Happy Life, one of the best ex- positions of his metaphysical doctrines. Er- langen having ceased lo be a Prussian univer- sity in 1806, Fichte returned to Koningsberg, and from thence to Riga. In the summer of 1807 he delivered a popular course of philoso- phical lectures at the former place. The peace soon after enabled him to return to Berlin, where he pronounced his famous Orations to the German Nation, which were enthusiastically read and applauded throughout all Germany. On the university of Berlin being founded, he obtained, through the interest of Humboldt, the situation of rector, which

secured to him an ho- norable revenue, and great academical influence. His health, however, had suffered from the va- rieties of fortune he had experienced, and he was just recovering his strength at the waters of Bohemia, when his wife was attacked with a nervous fever : she recovered ; but Fichte, whose affection would not allow him to leave her for a moment, caught the disorder and died on the 29th of January, 1814.

Fichte was a voluminous writer ; and we are indebted for the following list of his works to the Supplement of the Encyclopaedia Britannica : — 1. Versuch einer Kritik aller Offenbarung. (Cri- tical Review of all Revelation). Koningsberg,

1792, 1793, 8vo. 2. Ueber den Begriff der Wissenschaftslehre. (On the Notion of a Doc- trine of Science). Jena, 1794. 8vo. 3. Grund- lage der gesammten Wissenschaftslehre. (Foun- dation of the whole Doctrine of Science). Ibid. 1794. 8vo. 4. Grundriss des eigenthumlichen der Wissenscaftlelire, (Sketch of the Peculiarity of the Doctrine of Science). Ibid. 1795. 5. ^^orlesungen ueber die Bestimmung des Gele- hrten. (Lectures on the Literary Calling). Jena,

1794. 6. System der Sittenlehre. (System of the Doctrine of Morals). Jena and Leipsic,

1795. 7. Beytriiige zur Berichtigung der Ur- theile des Publicums ueber die Franzosische Revolution. (Materials for Rectifying the Opi- nions of the Public respecting the French Re- volution). 8. Grundlage des Naturrechts. (Foun- dation of the Law of Nature). Jena, 1796, 1797. 2 vols. 8vo. 9. Appellation an das Publicum ueber die ihra beygemessenen atheistisclien Aeussemrngen. (Appeal to the Public respect- ing the Atheistical Expressions imputed to him). Jena and Leipsic, 1799. 10. Ueber die Bes- timmung des Menschen. (On the Destiny of Man). 11. Der geschlossene Handelsstaat. (The exclusive Commercial State). 12. Sonnen- klarer Bericht an das grbssere Publicum ueber das eigentliche Wesen der neusten Philosophic. (Luminous Report to the greater Public, on the peculiar Character of the Modern Philosophy). Berlin, 1801. 13. Wissenschaftslehre. (Doc- trine of Science.) Tubingen, 1802. 8vo. 14. Vorlesungen ueber das Wesen der Gelehrten. (Lectures on the Literary Character). Berlin, 1806. 15. Die Grundzuge des gegenwiirtigen Zeitalters. (The Characteristics of the present Age). Ibid. 1806. 16. Anweisung zum seligen Leben. (Guide to a Happy Life). Ibid. 1806. 17. Reden an die Deutsche Nation. (Discourses to the German Nation). Ibid. 1806. 18. Die Wissenschaftslehre in ihrem allgemeinsten Um- ri.sse dargestellt. (The Doctrine of Science ex- hibited in its most general Outline). Ibid.

1810. 19. Freidrich Nicolai's Leben und Sonderbare Meinungen, herausgegeben von Schlegel. (Life and singular Opinions of Frederic Nicolai, edited by Schlegel). Tiibingen, 1801. 20. Antwort- schrieben an K. L. Reinhold, auf dessen Bey- trdge zur leichtern Uebersicht des Zastandes det Philosophic, &:c. (Answer to K. L. Reinhold, on his Materials for acquiring a more easy View of the State of Philosophy, &c.) Ibid. 1801. 21. Ueber die einzig mbgliche Stijrung der acade- mischen Freyheit. (On the only possible Dis- turbance of Academical Freedom). Berlin, 1812. 22. Uber den Begriff des wahrhaften Kriegs, in Bezug auf den Kreig in Jahre 1813. (On the Notion of real War, with Reference to the War in 1813). Tiibingen, 1815. Fichle is also the author of numerous essays in periodical pub- lications, and particularly in the philosophical journal, edited by himself and Niethammer.

FICHTELBERG, a mountain, or rather a ridge of mountains, in Franconia, extending nearly from Bareuth to Eger in Bohemia, sixteen miles in length from east to west, and as many in breadth from north to soutii. Cruttwell styles it ' one of the highest mountains in Germany.'

Itcontiir.s many deserts, bogs, and morasses; and abounds with trees, particularly pines, oaks, elms, and beeches.

FICINUS (Marsilius), a modern philosopher and reviver of letters, was born in 1433 at Florence, where his father was physician to the Medici family. He was educated at Bologna ; and persuaded his patron, Cosmo de]Medici, to form an academy for the cultivation of the Platonic philosophy. He continued in favor under other princes of that house, and died, after taking orders, in 1499. He published a com- plete translation of Plato's writings into Latin. His own works were collected in 2 vols, folio,

1641.

FICKLE, adj. ˆ Sax. picol ; Goth, huckul ; Fic'klf.ness, n. s. > Belg. Jicken ; Lat. vacillo, Fick'ly, adv. j to waver. Changeable ; wavering ; inconstant.

Beware of fraud, beware of fickleness. In choice and change of thy

dear-loved dame.

Faerie Queene. Remember where we are. In France amongst a fickle wavering nation.

Shakipeare. I am a soldier, and unapt to weep, Or to exclaim on {oHnac's fickleness. Id.

lie would be loth Us to abolish; lest the adversary Triumph, and say, fickle their state, whom God Most favours ! Milton's Paradise Lost.

'Neither her great worthiness, nor lii? own suffering for her, could fetter his fickleness; but, before his marriage-day, he had taken to wife that Baccha of whom she complained. Sidney.

They know how fickle common lovers are ; Their oaths and vows are cautiously believed ; For few there are but have been once deceived.

Dryden. Instability of temper ought to be checked, when it disposes men to wander from one scheme of govern- ment to another, since such a fickleness cannot Imt be attended with fatal consequences. Addiso7i.

We in vain the fickle sex pursue. Who change the constant lover for the new.

Prior. Do not now. Like a young wasteful heir, mortgage the hopes Of godlike majesty on bankrupt terms. To raise a present power that's fickly held By the frail tenure of the people's will. Soutliern. A few good works gain fame ; more sink their price j Mankind are fickle, and hate paying twice. Young. Fancy now no more Wantons oa fickle pinion through the skies; But, fixed in aim, and conscious of her power. Aloft from cause to cause exults to rise. Creation's blended stores arranging as she flies.

Beattie. But droop not : Fortune at your time of life. Although a female moderately _/icWe, . Will hardly leave you (as she's not your wife) For any length of days in such a pickle. Byron. FI'CO, •>. s. Ital. An act of contempt done with the fingers, expressing ' a fig for you.'

Having once recovered his fortress, he then gives the fico to his adversaries. Carevo.

ilCTILE, oˆ;. 'L'A. fictibs. Moulded into form; manufactured by the potter.

The cause of fragility is an impotency to be ex- tended ; and therefore stone is more fragil than metal, and so fictile earth is more fragil than crude earth. Ba-con't Natural History.

"I Fr. fiction ; Ital. fit-

FIC'TION, n. s.

Fic'tious, «

Ficti'tious, [ficlio. A feigned thing

F'icTi'TiousLY,ar/;. for story; the act of

FicTi'xiouSN'tss, 7i. s. | feigning or inventing:

Fic'tive, af/,i. J fictions, and fictitious,

are fabulous ; false ; counterfeit ; not real or germirie : fictive, feigned ; imaginarj'.

So also was the fiction of those golden apples kept by a dragon, taken from the serpent, which tempted Evah. Raleigh.

Time to those things — gave_^

Drayton.

These pieces &x& fictitiously set dowi», and have no copy in nature. Browne's Vulgar Errours.

If through mine ears pierce any consolations, By wise discourse, sweet tunes, or poets' _^

If ought I cease these hideous exclamations. While that my soul, she lives in afflictions. Sidney.

If the presence of God in the image, by a mere fiction of the mind, be a sufficient ground to worship that imate, is not God's real presence in every crea- ture a tar better ground to worship it ? Stillingfieet.

Fiction is of the essence of poetry, as well as of painting : there is a resemblance in one of human bodies, things, and actions, which are not real ; and in the other of a true story by n fiction. Dryden.

Draw him strictlj' so. That all who view the piece may know. He needs no trappings o{ fictitious fame. Id.

Another way to make a book unanswerable is to lay a stress on matters of fact foreign to the question £is well as to truth, and to stuff it with scurrility and fic- tion. Locke.

It is the part of a poet to humour the imagmation in our own notions, by mending and perfecting nature where he describes a reality, and by adding greater beauties than arc put together in nature, when he describes z. fiction. Addison.

Milton, sensible of this defect in the subject of Lis

poem, brought into it two characters of a shadowy

and fictitious nature in the persons of Sin and Death,

by which means he has interwoven in his fable a

very beautiful allegory. Addison's Spectator.

With fancied rules and arbitrary laws

Matter and motion man restrains.

And studied lines and_/?c/iyiis circles draws.

Prior.

The human persons are as fictitious as the airy cnes ; and Belinda resembles you in nothing but in beauty. Pope.

FICUS, the fig-tree, a genus of the tricecia order, and polygamia class of plants : natural order fifty-third, scabridae. The receptacle is common, turbinated, carnous, and connivent ; enclosing the florets either in the same or in a distinct one: male cal: tripartite: cor. none: STAM. three: female cal: quinquepartite : cor. none : pistil one ; and one seed. — There are fifty-six species, of which the following are the most remarkable :

F. carica, the common fig tree, with an upright stem branching fifteen or twenty feet high, and garnished with large palmated or hand-shaped leaves. Of this there are many varieties ; as, The common fig tree, with large, oblong, dark purplish blue fruit, which ripens in August either on standards or walls, and of which it carries a great quantity. The brown or chestnut fig ; a large, globular, chestnut-colored fruit, having a purplish delicious pulp, ripening in July and

August. The black Ischia fig ; a middle sized, shortish, flat-crowned, blackisli fruit, having a bright pulp; ripening in the middle of August. The green Ischia fig; a large, oblong, globular- headed, greenish fruit, sliglitly stained by the pulp to a reddish-brown color ; ripens in the end of August. The brown Ischia fig ; a small, py- ramidal, brownish-yellow fruit, having a purp- lish very rich pulp ; ripening in August and September. The INIalta fig ; a small flat-topped brown fruit, ripening in the middle of August or beginning of September. Tiie round brown Na- ples fig ; a globular, middle-sized, light brown fruit, and brownish pulp ; ripe in the end of August. The long, brown, Naples fig ; a long dark brown fruit, having a reddish pulp ; ripe in September. The great blue fig; a large blue fruit, having a fine red pulp. The black Genoa fig ; a large, pear-shaped, black-colored fruit, with a bright red pulp ; ripe in August. The carica is frequently cultivated in this country, and is the only species which does not require to be kept in a stove. It may be propagated either by suckers arising from roots, by layers, or by cuttings. The suckers are to be taken oft' as low down as possible ; trim off any ragged part at bottom, leaving the tops entire, especially if for standards ; and plant them in nursery lines at two or three feet distance, or they may at once be planted where they are to remain ; observing, that if they are designed for walls or espaliers, they may be headed to six or eight inches in March, the more effectually to force out lateral shoots near the bottom ; but, if intended for standards, they must not be topped, but trained with a stem, not less than fifteen or eighteen inches for dwarf standards, a yard for half-standards, and four, five, or six feet for full standards. Then they must be suffered to branch out to form a head ; observing, that, whether against walls, espaliers, or standards, the branches or shoots must never be shortened unless to procure a ne- cessary supply of wood : for the fruit is always produced on the upper parts of the young shoots ; and, if these are cut off, no fruit can be expected. — The best season for propagating these trees by layers is in autumn ; but it may be also done any time from October to March or April. Choose the young pliable lower shoots from the fruitful branches; lay them in the usual way, covering the body of the layers three or four inches deep in the ground, keeping the top entire, and as upright as possible ; and they will be rooted and fit to separate from the parent in autumn ; when they may be planted either in the nursery, or where they are to remain. The time for propa- gating by cuttings is either at the fall of the leaf, or in March : choose well ripened shoots of the preceding summer ; short, and of robust growth, from about twelve to fifteen inches long ; having an inch or two of the

two years wood at their base, the tops left entire ; and plant them six or eigfit inches deep, in a bed or border of good earth, in rows two feet asunder. When planted in autumn, it will be eligible to protect their tops in time of hard frost, the first winter, with any kind of long loose litter. For an account of the Caprification of the fig tree, sec tliat article. , F. religiosa, the Banian tree, or Indian fig, is

a native of several parts of the East Indies. It has a woody stem, Ijranching to a great height and vast extent, with heart-shaped entire leaves ending in acute points. Of this tree Milton has given a description equally beautiful and just, in his Paradise Lost, b. ix. The Banian tree is perhaps the most beautiful of nature's produc- tions in that genial climate, where she sports with tJie greatest profusion and variety. Some of tliese trees are of amazing size and great extent ; as they are continually increasing, and seem to be exempted from decay. Every branch from the main body throws out its own roots ; at first, in small tender fibres, several yards from the ground : these continually grow thicker until they reach the surface ; and there striking in, they increase to large trunks, and become parent trees, shooting out new branches from the top : these in time suspend their roots, which, swelling into trunks, produce other branches ; thus continuing in a state of progression as long as the earth, the first parent of them all, contributes her sus- tenance. The Hindoos are peculiarly fond of the Banian tree ; they look upon it as an emblem of the deity, from its long duration, its out- stretching arms, and overshadowing beneficence. Near these trees the most esteemed pagodas are generally erected ; under their shade the Brah- mins spend their lives in religious solitude ; and the natives of all casts and tribes are fond of recreating in the cool recesses, beautiful walks, and lovely vistas of this umbrageous canopy, impervious to the hottest beams of a tropical sun. The largest known Banian tree grows on an island in the Nerbedda, ten miles from the city of Baroche in the province of Guzerat. It is distinguished by the name of Cubbeer Burr, which was given it in honor of a famous saint. It was once much larger, but high floods have carried away the banks of the island where it grows, and with them such parts of the tree as had thus far extended their roots : yet what re- mains is about 2000 feet in circumference, mea- sured round the principal stems ; the over-hanging branches, not yet struck down, over a much larger space. The chief trunks of this single tree (which in size greatly exceed our Englisli elms and oaks), amount to 3,50; the smaller stems, forming into stronger supporters, are more than 3000 ; and every one of these is casting out new branches, and hanging roots, in time to form trunks, and become the parents of a future progeny. Cubbeer Burr is famed throughout Ilindostan for its

great extent and surprising beauty : armies have encamped around it ; and, at stated seasons, solemn jatarras, or Hindoo festivals, are held here, to which thousands of votaries repair from various parts. It is said that 7000 persons find ample room to repose under its shade. The English gentlemen, on their hunting and shooting parties, used to form extensive encam)mients, and spend weeks toge- ther under this delightful pavilion, which is ge- nerally filled with green wood pigeons, doves, peacocks, and a variety of feathered songsters ; crowded with families of monkeys performing their antic tricks ; and shaded by bats of a large size. This tree not only afiords shelter, but sus- tenance to all its inhabitants, being covered

amidst its bright foliage with small figs of a rich scarlet color.

F. sycamorus, the sycamore tree, is very com- mon in Lower Eiiypt. It buds in the end of March, and the fruit ripens in the beginnmg of June. It is cut by the inhabitants at the time it buds ; for without this precaution they say it would not bear fruit. The wood of the sycamore tree is not subject to rot ; and has therefore been used for making coffins, in which embalmed bodies were put. Hasselquist affirms, that he saw in Egypt coffins made of this kind of wood, which had been preserved sound for 2000 years.

FID, 71. s. Ital. //7ˆa. A pointed iron with which seamen untwist their cords. — Skinner.

Fids or Fidds, are likewise used at sea to splice or fasten ropes together. There are also fids of wood, made tapering at one end, but much larger than the iron ones. — ˆThe pin in the heel of the topmast, which bears it upon the chess tree, is likewise called a fid.

FID’DLE, n. s. & v. a.’ˆ Sax. pi’sel ; Goth

Fid’dler, n. s.

Fid’dlestick,

Fid’dlestrixg. sical instrument ; a violin : to fiddle is to play upon this instrument; also to ‘shift the hands often and do notliing like a fellow that plays upon a fiddle,’ as Dr. Johnson says : the fiddle- stick is

otherwise called the bow, and the fiddle- string a portion of the stringed part of this in- strument.

Christorre him served longe. The kinge loved the melody oifithele and of sonj. Life of St. Christofre in the Bodleian Library, A. D. 1200. Themistocles being desired at a feast to touch a lute, he said he could not Jiddle, but he could make a small town a great city. Bacon's Essays.

There h a subordinate wit, as much inferiour to a wit of business, as Sl fiddler at a wake is to the lofty sound of an organ. Saville.

Let no s&ncy fiddler presume to intrude. Unless he is sent for to vary our bliss.

Ben Jonson. Nero put the fiddlers to death, for being more skil- ful in the trade than he was. Taylur.

For what can be more ridiculous than we do make oursclvcp, when we do thus fiddle and fool with our own souls ; when, to make vain people merry, we in- cense God's earnest displeasure. Barrow. The adventure of the bear ani fiddle Is sung ; but breaks off in the middle.

Hxidihras. His grisly heard was long and thick. With which he strung his fiddlestick. Id.

In trials of musical skill the judges did not crown the. fiddle, but the performer. Stillingfieet.

These will appear such chits in story, 'Twill turn all politicks to jests.

To be repeated like John Dory, When fiddlers sing at feasts. Dryderu

She tried the fiddle all over, by drawing the bow over every part of the strings ; but could not, for her heart, find whereabout the tune lay. Addison.

A cunning fellow observed, that old Lewis had *tole away part of the map, and saw him fiddling and turning the map, trying to join the two pieces toge- ther. A rbuthnot.

A fiddlcstring , moistened with water, will sink a note in a little time, and consequently must be re- laxed or lengthened one-sixteenth. Id. Others import yet nobler arts from France, Teach kings to fiddle, and make senates dance.

Pope. All human actions seem to be divided like Themis- tocles and his company ; one man can fiddle, and another man can make a small lown a great city j and he that cannot do either one or the other, de- serves to be kicked out of the creation. Swift,

I do not call him a poet that writes for his own di- version, any more than that gentleman a fiddler who amuses himself with a violin. LI,

There is nothing in which the power of art is shown so much as in piaying on ihe fiddle ; in all other things we can do something at first. Any man will forge a bar of iron, if you give him a hammer; not so well as a smith, hut tolerably. A man will saw a piece of wood, ana make a box, though a clumsy one ; but give him a. fiddle and a. fiddle-stick, and he can do no- thing. Johnson, If he the tinkling harpsichord regards As inoffensive, what offensive in cards ? Strike up ihe fiddles, let us all be gay ; Laymen have leave to dance, if parsons play.

Ciiwper. Hence all this rice, meat, dancing, wine, a.nd fiddling.

Which turned the isle into a place of pleasure ; The servants all were getting drunk or idling, A life which made them happy beyond measure.

Byron. FIDDLE-FADDLE, n. s. & adj. 5 From Fid-fad, n. s. y fiddle. A

toying with the fingers; trifling; making ‘much ado about nothing.’

She said that her grandfather had a horse shot at Edgehill, and their uncle was at the siege of Buda j with abundance oi fiddlefaddle of the same nature.

Spectator. She was a troublesome _ˆrfrfie/a(?rf/e old woman, and so ceremonious that there was no bearing of her.

Arhuthnot. FIDEL’ITY, n. s. Fr. fidelite. ; Lat. fidelitas ; Ita.J’edelita; Siˆa.n. fidelidud, faithfulness. Ho- nesty ; veracity.

The church, by her publick reading of the book of God, preached only as a witness ; now the principal thing required in a witness is fidelity. Hooker.

He, that after the misuse of the one talent, would not trust the evil servant with a second, because he saw a wilful neglect ; will trust Moses with his second law, because he s&w fidelity in the worst error of his zeal. Bp. Hall’s Contemplations.

They mistake credulity for fidelity. Clarke. Having taken leave of my friends, and interchanged promises o{ fidelity with Miss Read, I quitted Phila- delphia. Franklin.

As good subjects of God's kingdom, we are bound to pay a due regard and reverence to his ministers ; especially if they discover an uncorrupted fidelity to his cause. Mason.

But nothing unpleasant, or sad, or severe. Or that indicates life in its winter — is here. Yet all is expressed vihh fidelity due. Nor a pimple or freckle concealed from the view.

Cowper. FIDES, Faith or Fidelity, one of the vir- tues deified by the Romans, had a temple near the capitol, founded by Numa Pompilius ; but no animals were offered, or blood spilt, in hei sacrifices. During the performance of her rites, her priests appeared in white vestments, with

their heads and hands covered with linen, to show that fidelity ought to be sacred. The greatest oaths were taken in her name. Horace clothes her in white, places her in the retinue of Fortune, and makes her the sister of Justice, Od. '.!4, 35, 1. i. Public faith is represented on a great number of ancient medals ; sometimes with a basket of fruit in one hand, and some ears of corn in the other ; and sometimes holding a turtle dove. But the most usual symbol is two hands joined together. The inscriptions are ge- nerally. Fides Augusti, Fides exercitus, or Fides militum, &c.

FIDGE, or Fidg'et, v. re. &w.s. Goth, Jika, fhjka ; Dan. ˆA-A;e (to move briskly). To move in a hurried restless manner : restless agitation. Why what can the viscountess mean ?

Crip J the square hoods in woial Jidijet. Grai).

Tim, thou'rt the Punch to stir up trouble ;

You wriggle, /?(/(/«, and make a rout.

Put all your brother puppets out. Swift.

But sedentary weavers of long tales.

Give me .\a Jidrjets, and my patience fails.

Cowper.

FIDU'CIAL, «c//. > Ldit. fiducia. Con-

FiDu'ciARY, re. s. & adj. } fident ; undoubting.

Faith is cordial, and such as God will accept of, when it affords Jlducicd reliance on the promises, and oh;diential subuiission to the commands.

Hammond's Practical Catechism.

The second obstructive is that of the fiduciary, that faith is ihe only instrument of his justification ; and excludes- good works from contributing any thing to- ward it. Hummund.

Elaiana can rely no where upon mere love and fiduciary obedience, unless at her own home, where she is exemplarily loyal to herself in a high exact obedience. Howel.

That faith, which is required of us, is then perfect, when it produces in us a. fiduciary assent to whatever the Gospel has revealed. Wake.

FIPjF, re..?. Fr. fief. A fee: a manor; a pos- session held by some tenure of a superior. See Feoff.

To the next realm she stretched her sway.

For painturc near adjoining lay,

A plenteous province and alluring prey ;

A cliamber of dependencies was framed.

And the whole, firf, in right of poetry, she claimed.

Drydeti.

As they were honoured by great privileges, so their lands were in the nature oi fiefs, for which the pos- sessors were obliged to do personal service at sea.

Arbvthnot on Coins.

Towards the end of the thirteetilh century, this monarch (Edward 1. of England) called in question tlie independence of Scotland ; pretending that the kingdom was licld as i\ fief oi tlie crown of England, and subjected to all the conditions of a feudˆil tenure. Ruherlsnn's History of Scotland.

Fif.f. See Fee, Feod, and FKun.vi, System. li has been an object of encpury among the learned, in wliat nation of barbarians fiefs had their origin ? It is probable, that tliey took place in the different nations of Europe, nearly about the same time, on the same principles, and were continued by similarity of manners, conquests, ■jcc. ; so that we cannot ascribe the])revalence of them to imitation. In France, wo find fiefs men tioned as early as the age of Childebert 1. They ■were introduced into Italy by the Lombards ;

ainong whom the customs and laws relating to fiefs seem very early to have made rapid ad- vances. See Giannone, History of Naples. They were int oduced into Spain before the in- vasion of the Moors, A. D. 710. Lands were granted for service and attachment among the Goths; among whom also the person who re- ceived the gift was the retainer of him who granted it. If he refused his service, the grant was forfeited, and he was said to receive it in patrocinio : he also swore fealty to his lord ; and on this footing the national militia was regulated. Leg. Wisigoth, lib. v. tit. 7. Tliere can be little doubt that the feudal law was known in England in the Saxon times. See VVhitaker's History of Manchester. In Scotland the history of fiefs is more uncertain ; which has been ascribed partly to the mutilated state of the Scottish records, and partly to the want of able antiquaries in the na- tion. But Dr. Stuart, in Observatio:is on the Law and Constitution of Scotland, insists, that allo- diality and feudality have existed ever since the foundation of the Scottish monarchy. It has in- deed been supposed, that these customs were introduced from some foreign model by Malcolm II. Some say they were introduced directly from England ; and the policy of Malcolm in establishmg them has been highly extolled : but, according to our autlior, there is no foundation f(v this notion. Both these opinions either as- sort or imply, that the feudal maxims were intro- duced into this country upon the principle of imitation : but it is very improbable tliat they could be imported from one people to another, on account of their excessive contrariety to the common usages and precepts of government among mankind. It must undoubtedly have been very absurd, if not altogether impracticable, to transplant the feudal tenures when the grants of land were precarious, or depending entirely on the will of the prince, to a country which had never known superiority or vassalage. This would have required an alteration of all the or- ders of

society from the king to the peasant; while the whole chain of customs, as well as the jurisdiction of the kingdom, both high and low, must have sustained a corresponding alteration, to conform them to the new system. It is like- wise obvious, that no conquest could be made on purpose to obtain a settlement by any nation who had already received the knowledge of fiefs. The establishment of them implied, tiiat the people had already a fixed and settled residence; and accordingly history does not furnish us with any account of a nation among whom fiefs were known, who ever migrated from the country they already possessed, to seek for one in whicli they migiit settle. Feudal institutions must have ori- ginated wherever tiiey have been observed to flourish. Scotland was formerly a feudal king- dom, and we know pretty nearly the time when the fiefs were hereditary in it; hut in that form they could not be introduced by the sovereign ; and tliere was no nation among whom fiefs were already known, who conquered, or made an es- tablishment by conquest, in Scotland. Fiefs therefore must iiave gradually advanced to such a state of perfection. The progress they made may be likewise pointed out. At first they were

precarious, or at the pleasure of the lord ; after- wards they were granted for life ; then for a course of years lonp;or than the natural life of a man ; and, lastly, they became hereditary, which was their most perfect stage. This progress has been observed in every country where feudal tenures exist ; and the same nuist have been known in Scotland, though in considering it we are necessarily carried back to periods of remote anti(juity ; for as fiefs were hereditary as early as the time of Malcolm I[. they must have been in their precarious state several centuries before. See Feudal System.

Sax. };e\d; Goth.Jield; Tent. J’eld ; Belg. velt ; all from Goth, fa, level, flat, as Mr. Thomson suggests. Champaign ; open ground ; meadow ; >any wide space or ex- panse ; the ground of a

FIELD, w.s. Fielded, adj.

FlELD-B\SIL, n. s.

Field-bed,

Fieldfare,

Field-marshal,

Field-mouse,

Field-officer,

Field-piece,

Field-preaching,

Field-room,

Field-sport,

FlELDY, udj.

pictxire oi drawing; the ground of a battle; the action or exploits of an army in the field : fielded J is used byShakspeare for, being in a field of battle : field-basil is a plant : a field-bed, one contrived for ready use in the field : fieldfare, the bird turdus pilaris : field- marsVial is, stˆictiy, the commander of a whole army in the field : as a field-officer is one asso- ciated in the command of a whole regiment": a field-piece is a piece of ordnance used in fields of battle as distinct from sieges : a field-mouse, the Nitedui.a, which see: field-preaching, field- room, and field-sports, are sufficiently plain : fieldy, is an excellent old adjective, meaning roomy ; open as a field.

Heholdc ye the lilies of the feeld '.

Wiclif. Luk. xi. Jhcsus cam down fro the liil Nvilh hem, and stood in a. fecldy place, and the cumpany of hise disciples.

Id. Luk. VI. I was borne free ; and because I might live freely I made election of the solitude of the fields. The trees of these mountaines are my companions : the clearc water of these streams my mirrours. With the trees and waters I communicate my thoughtes and beautie. Skelton.

The bassa planting his fieldpieces upon the hilla, did from thence grievously annoy the defendants.

Kiwltes. You maintain several factions ; And whilst a. field should be dispatched and fought, Yoi' are disputing of your generals. Shakspcare.

Romeo, good night ; I'll to mj' truckle bed, "Vhii fieldhed is too cold for me to sleep. Id.

Since his majesty went into the field, I have seen her rise from her bed.

Jd. Macbeth. Now, l\I;irs, I pry'thce, muke us quick in work; That wc with smoking swords may march from hence. To help ony fielded friends. Id. Coriolanus.

Live with me, and be my love. And we will all the pleasure prove. That liills and vallies, dale a.ad field. And all the craggy mountains yield.

Raleigh. Winter liiids, as woodcocks and fieldfares, if they come early out of the uortbcrn countries, with us shew cold winters. liacon.

Falling back where they Might ^'W-roo;« find. Drayton.

It is a base cowardliness, so soon as ever we are called from the garrison to the field, to think of run- ning away. Bp. Hall's Contemplations. What though ihe field be lost, All is not lost. Milton's Paradise Lost. Around the fields did nimble lightning play. Which offered us by fits, and snatched the day ; 'Midst this was heard the shrill and tender cry Of well pleased ghosts, which in the storm did fly.

Dryden. The fieldmotise builds her garner under ground.

Id. Let the field or ground of the picture be clean, light, and well united with colour. Id.

The god a clearer space for heaven designed ; Where fields of light and liquid ether flow. Purged from the ponderous dregs of earth below.

Id. When a rnan is in tlie field, a moderate skill in fencing rather exposes him to the sword of his enemy, than secures him from it. Locke.

Field lands are not exempted from mildews, nor yet from smut, where it is more than in inclosed lands. Mortimer.

Fieldmice are apt to gnaw their roots, and kill them in hard Winters. Id. Husbandry.

The ill-natured man gives himself a large field to expatiate in ; he exposes failings in human nature. Addison's Spectator. I should enter upon afield too wide, and too much beaten, if I should display all the advantages of peace. Smalridge.

Who can this field of miracles survey. And not with Galen all in rapture say. Behold a God, adore him and obey.

Blackmore. Ask of yonder argent _ˆcZ(is above. Why Jove's satellites are less than Jove.'

Pope. Or great Osiris, who first taught the swain In Pharian_ˆ'eWs to sow the golden grain. Id.

.\[field-sports I look upon as frivolous.

Lord Chesterfield, The tumults oi field-preaching and the freaks of the new birth. Warburton.

Let us venture into this large field, and take a view of the political, of the moral, of the religious, and of the domestic state of the world. Robertson's Sermon. Not yet the hawthorn bore her berries red. With which the fieldfare, wintry guest, is fed : Nor Autumn yet had brushed from every spra}'. With her chill hand the mellow leaves away.

Cowper. First with fond gaze hhxe fields of air they sweep. Or pierce the briny chambers of the deep ; Earth's burning line, and icy poles explore. Her fertile surface, and her caves of ore. Darwin.

Field-marshal is a modern military rank in England, but superior to all others (except the captain-general), having the chief command of the whole army in the field. James.

When there is a field-officer of the day, it is his duty to visit all guards frequently during the day and night. In the morning, on the dismounting of the guards, he will collect the reports, and carry them to the governor or commandant. Id.

Field, in heraldry, is so called, because it contains those achievements anciently acquired in tlie field of battle. It is the ground on which tlie colors, bearing, metals, furs, charges, &:c., are represented. Among the modern heralds, field

is less frequently used in blazoning than shield or escutcheon. See Shield.

Field Colors, in war, are small flags of about a foot and a half square, which are carried along with the quarter-master general, for mark- ing out the ground for the squadrons and Imtta- lions.

Fieldfare, in ornithology. See Turdus.

FIEI-DING (Henry), the son of lieutenant- general Fielding who served under the duke of Marlborough, was born in 1707, On the death of his mother, his father married again ; and Sir John Fielding, who succeeded him in the com- mission of the peace for Middlesex, was his brother by this marriage. Henry was sent to study at Leyden ; but a failure in his remittances obliged him to return in two years, when his own propensity to gaiety and profusion drove him to write for the stage at twenty years of age. His first dramatic piece. Love in several Masques, which was well received, appeared in 1727: all his plays and farces, to the amount of eigh- teen, were written before 1737 ; and many of them are still acted with applause. While thus employed, he married a young lady with a for- tune of £1500 and inherited an estate of £200 a year from his mother ; all which, though he retired into the country, he contrived to dissipate in three years ; and then applied to the study of the law for a maintenance. In losing his fortune, he acquired the gout; which rendering it im- possible for him to attend the bar, he therefore had recourse to his pen for immediate supplies ; until he obtained the office of acting justice for Middlesex, an employment more profitable than honorable to him. Reduced at last by the fa- tigues of this office, and by a complication of disorders, he by the advice of his physicians went to Lisbon, where he died in 1754. He wrote a number of fugitive pamphlets and pe- riodical essays; but is chiefly distinguished by his Adventures of Joseph Andrews, his Amelia, and his History of Tom Jones. His works have been collected and published, with his life pre- fixed, by Mr. Murphy. Besides these mentioned, he published The Champion, 2 vols.; A Journey from this World to the next ; The History of Jo- nathan Wild ; and after his death appeared his Voyage to Lisbon.

Fielding (Sarah), sister of Henry Fielding, was born in 1714, and lived unmarried, and died at Bath in April 1768. She was the author of the novel of David Simple; a less popular pro- duction of a kindred class, called The Cry, a dramatic Fable ; Xenophon's Memoirs of So- crates, translated from the Greek (for which she was favored with some

valuable notes by Mr. Harris of Salisbury) ; The Countess of Delvvyn ; The History of Ophelia ; The Lives of Cleopa- tra and Octavia, &c. 8cc.

Field-Staff, a weapon carried by the gunners, about the length of a halbert, with a spear at the end ; having on each side ears screwed on like the cock of a match-lock, where the gunners screw in lighted matches when they are upon command ; and then the field-stafTs are said to be armed.

FiFLD-WoRKS, in fortification, are thoSe llirowa up by an army in besieging a fortress, or

by the besieged to defend the place. Such are the fortifications of camps, highways, &c.

FIEND, n. s. Sax. ˆ Sax. Fienˆt), piontj, a Fiend-like, af//, ifoe; Goth, and Tent. fiend ; Y>d.n. fiende. An enemy ; the great ene- my of mankind ; the devil.

I nyle that ghe be maad felowis of fendis. For ghe moun not drynke the cuppe of the lord, and the cuppe of fendis ; ghe moun cot be partenens of the boord of the lord, and of the boord oi fendis.

Wiclif. 1 Corynth. x. Here hauntis thzX feend, and does his daily spoyle ; Therefore henceforth be at your keeping well. And ever ready for your foeman fell.

Spenser's Faerie Queene. Tom is followed by the foul_ˆenrf. Shakspcare.

— This dead butcher and his Jiend-Uke queen.

Id. Macbeth, What now, had I a body again, I could. Coming from hell ; •whs.tjiends would wish should be. And Hannibal could not have wished to see.

Ben Jonson's Catiline. The hell-hounds, as ungorged with flesh and blood. Pursue their prey, and seek their wonted food ; Th.& fiend remounts his courser. Dryden.

O woman ! woman ! when to ill thy mind Is bent, all hell contains no fouler fiend. Pope. Vain wish ! for lo, in gay attire concealed.

Yonder she comes ! the heart inflaming ˆcnd .'

(Will no kind power the helpless stripling shield ?)

Swift to her destined prey see Passion bend.

Beattie.

FIENUS (Thomas), an ingenious and learned physician, born at Antwerp in 1566. He went into Italy to study physic under Mercurialis, and Aldrovandus; and on his return distinguished himself so much in the university of Louvain, that he was chosen professor of physic, and was afterwards made physician to the duke of Ba- varia. He wrote several works, among which v/ero, De Viribus Imaginationis ; and De For- matione Foetus. He died at Louvain in 1631.

FIERCE, arf/. -^ Fr. _^tT, yeroce ; Ital.

Fierce'ly, adi;. ^feroce ; Lat. ferus ; Heb.

Fierce'ness, n. s. J pa, violence. — Min^heu. Cruel ; savage ; ravenous ; furious ; violeuu

Therfore se the goodnesse and the fersnesse of god , ghe the fersnesse into hem that feldcn doun, but the goodnesse of god into thee, if thou dwellist in good- nesse. Wiclif. Rom. xi.

Cursed be their anger, for it was fierce ; and their wrath, for it was cruel. Gen. ilix. 7.

The ships, though so great, are driven of ferce winds •, yet are they turned about with a very small helm. James iii. 4.

Soone as thy dreadful trompe begins to sound. The god of warre with his Jiers equipage Thou docst awake, sleepe never he so sownd. And scared nations doest with horror stcrne astowud. Spenser's Faerie (Queene.

With greedy force each other both assail. And strike so fiercely that tl- ey do imi)ress Decp-dintcd furrows in the battered niail : The iron walls to ward their blows were weak and frail.

Id.

The defendants, fiercely assailed by their enemies before, and beaten with the great ordnance behind, were grievously distressed. Knolles.

Battle joined, and both sides /crce/y fought.

Shakspeura

This y?‘rrfl abridgement Hath to it circumstantial branches, which Distinction should be rich in. Id. Cymbelinc. The Greeks an; strong, and skilful to their strength, Fierce to their skill, and to .\c’\r fiercenets valiant.

Shakspeare. The air, if very cold, irritat.;th the flame, and maketh it burn more fiercely, as fire scorchcth in frosty weather. Bacon,

Suddenly there came out of a wood a monstrous lion, with a she-bear not far from him, of little less Hercenesa. Sidney.

His pride and brutal yiercejicss I abhor ; But scorn your mean suspicions of me more.

Dryden. Thus we see, when their young stand in need of it, the timorous become valiant, the fierce and savage kind, and the ravenous, tender, and liberal. Locke, Kindness has resistless charms.

All things else but weakly move ; Fiercest anger it disarms.

And clips the wing of flying love.

Rochester. ‘Tis the curse of mighty minds oppressed. To think what their state is, and what it should be : Impatient of tin ir lot, they Tea.son fiercely , And call the laws of providence unequal. Rowe. Tyrants yjerce, that unrelenting die. Pope.

The defect of heat whicli gives fierceness to our na- tures, may contribute to that roughness of our lan- guage. Swift. By the brook the shepherd dines ;

From ihe fierce meridian heat

Sheltered by the branching pines,

Pendant o’er his grassy seat.

Cunningham. As united fires burn the more fiercely, so a sinful society improve and grow in impiety, and every mem- ber joins his brother’s pollution to his own. It is not easy to say, how much profane companions are instru- mental in reciprocally undoing one another.

Witherspoon. His son, I am told, even at that early period of life, maintained his opinions, on every subject, with the same sturdy, dogmatical, and arrogant _/!erceneM with which he now overbears all opposition to them in company. Seward.

FIERI FA'CIAS, 7J. s. Inlaw. A judicial writ, that lies at all times within the year and day, for him that i>as recovered in an action of debt or dama'^es, to the sheriff, to command him to levy the debt or the damages of his goods against whom the recovery was had.

FIE'RY, (ulj. i Once written firy, from FiERiNESS, 72. s. 5 FiUE, which see. Con- taining fire ; fire-like ; heated : hence passionate, unrestrained.

Scarcely had Phfcbus in the gloomy East Yet harnessed hii fiery {octlc.d team,

Ne reared above the earth his flaming crest. When the last deadly smoak aloft did stream.

Faerie Queene. The sword which is made fiery doth not only cut by reason of the sharpness which simply it hath, but also burn by means of that heat which it hath from lire. Hooker.

I know, thoud'st rather Follow thine enemy in a liery gulph Than flatter him in a bower. Sliakapeare.

Then, as I said, the duke, great Bolingbroke, Mounted upon a hot und fiery steed. Which his aspiring rider seemed to know. With slow but stately pace kept on his course. Id.

1 drew this gallant head of war. And culled these fiery spirits from the world. To outlook conquest, and to win renown Even in the jaws of danger and of death. Id,

Then fiery expedition be my wing, Jove's Mercury, and herald for a king. Id.

Will any man put his finger into a _/Jeri/ crucible, to pull out gold? Bp, Hall,

The ashes, by their heat, their ^e)7«e«*, and their dryness, belong to the element of earth. Boyle.

Through Elis and the Grecian towns he flew ; The' audacious wretch iov fiery coursers drew.

Dryden, The Italians, uotwithstaading their natural y/erinesj of temper, affect always to appear sober and sedate.

A ddison. See ! from the brake the whirring pheasant springs. And mounts exulting on triumphant wings :

Short is his joy ; he feels ihe fiery wound. Flutters in blood, and panting beats the ground.

Pope. Though now with hopeless toil we trace Time's backward rolls to find its place; Whether the er-tressed Dane Or Roman's self o'erturned the fane. Collins. The Boy was sprang to manhood : in tlic wilds Oi fiery climes he made himself a home. And his soul drank their sunbeams, Byron.

FIESCO (John Lewis), count of Lavagna, head of one of the noblest houses in Genoa, became master of a large patrimony at the age of eighteen, and headed a remarkable conspiracy against the Doria family. France and the pope (Paul III.) seem to have favored his plans. On the evenuig of the 1st of January, 1547, he had prepared a galley under pretence of a cruise against the corsairs, and waited upon Andrew Doria, to request permission to depart from the harbour early in tlie morning. The same night he assembled a large body of partisans at his house, on the pretence of an entertainment, to whom he made an eloquent appeal on the sub- ject of this undertaking ; and then hastened to the apartment of his wife, and acquainted her with his intention. She earnestly, but in vain, entreated him to abandon his desperate enter- prise. He took leave of her, saying, ' Madam, you shall never see me again, or you shall see every thing in Genoa beneath you.' He now sallied forth, preceded by 500 armed men, and despatching parties to different quar- ters, himself proceeded to secure the darsena, or dock, in which the galleys lay. Going on board one of these, from which he was proceed- ing across the plank to the captain galley, the board gave way ; and falling into the water, in- cumbered with his armour, he sank to rise no more ! Thus terminated the life of this able ambitious young noble at the early age of twenty- two. His confederates failed in their attempt on Andrew Doria, but Giannetino his nephew fell beneath their swords. Tht loss of the leader however proved fatal to their conspiracy; his brotlier Jerome was deserted, and the whole family was mined and banished.

FIESOLE (the ancient Fcesuloe), an ancient town of Tuscany, one of the twelve cities of Etruria, and the spot to which Catiline retired on the discovery of his conspiracy. It is a bishop's see, but at present little more than a

heap of ruins : the situation is, however, elevated and salubrious, and tlie -Florentines have villas here, where there are traces of an amphitheatre of great extent. Three miles north-east of Flo- rence.

FIFE. Fr. ffre ; T'eut. pfeiffl. A military mu- sic-pipe ; an accompaniment to the drum.

Farewell tbe plumed troops, and the big war That make ambition virtue I oh farewell ! P'arewell the neighing steed and the fhrill trump. The spirit-stirring drum, the ear-piercing_/?/e.

Shakspeare.

Thus tbe gay victim, with fresh garlands crowned. Pleased with the sacred Jife's enlivening sound. Through gazing crowds in solemn state proceeds.

Philips.

Fife, or Fifeshire, a county of Scotland, bounded on the west by those of Clackmannan Kinross, and Perth; on the north and north-east by .the Tay ; on the east by the German Ocean, and on the south by the Frith of Forth. Though it extends to a much greater length along the coast, its mean dimensions are not above thirty- six miles in length, by fourteen in breadth ; and its superficial area has been computed at 504 square miles, or 322,560 English acres. The face of the country is various. Towards the west it is mountainous having the Lomond hills rising to a great height ; and a ridge of hills extends ••astward almost to the coast, occupying the cen- tral district ; towards the north and south the surface descends gradually to the Friths of Tay utid Forth, exhibiting the most beautiful prospect of fertile and well-cultivated fields. Woods and plantations abound through the whole, and the hills are covered with sheep, whose wool is in high estimation.

Agriculture has been greatly improved of late years ; and the farms, particularly on the northern

case; weigh) nq:, when fat, from three to four years old, from forty to sixty stone. The cows, when well fed, yield from ten to fourteen Scots pints of milk daily (nearly half as many Eng- glish wine gallons) during the best of the grass season, and continue long in milk ; yet the dairy is here but a secondary object. The oxen were formerly much

employed m labor, and were in request for this purpose for the counties along the north-east coast, but they are now very seldom to be seen at work. The horses are much the same as are found in all the lowlands of Scot- land.

The staple manufacture is linen. Dunferm- line has long been famous for its damasks and diapers. In several towns checks, ticks, osna- burgs, and other fabrics are made. In 1012 4,500,000 yards of hnen cloth were stamped, of the value of £280,000 ; and in 1 800, 600,000 yards of plain linen were supposed to be made by private families for their own use, which were not stamped. The number of hands em- ployed in all the branches of this manufacture in 1800 was computed to be 23,192. Flax is spun into yarn almost in every family. The other manufactures are spirits, at four distille- ries, one of which works for the English mar- ket; ship-building at Dysart, Kirkaldy, Wemyss, and Anstruther ; salt at the two former places and other towns; leather at Kirkaldy, Cupar, Auchtermuchty, and Falkland ; and there are breweries in every town, and most of the vil- lages. At Cupar, Kirkaldy, and Leven, bricks and tiles are made to a large amount; and vitriol or sulphuric acid at Burntisland.

The principal rivers are the Eden and the Leven, both abounding with trout and salmon ; and on no part of the coast of Scotland is the white fishery more productive than on that of Fife. Many lakes, formerly seen here, have been drained, and converted into arable land ; but some of small extent remain, such as the Loch of Lin- dores, Kilconquhar Loch, together with Loch- gellie, Comilla, and Lochpitty. Lead and cop- per and iron ore have been found here, and the sulphuretted ore of zinc ; but coal is the most important and abundant of its mineral produc- tions, and is well known to have been wrought here for above five centuries. There is a charter, dated 1291, allowing

This county is little distinguished by com- merce. In 1800, 142 vessels, carrying 13,51.'. tons, and navigated by 883 seamen, were under the two custom-houses at Kirkaldy and An.s- trutlter, within the county, and about half the number of each was supposed to be under those

out of it. lliese vessels are partly employed in foreign trade with Russia and the ports on the Baltic, but chiefly in the coasting trade.

The exports are the manufactures already mentioned, witli coal, lime, and grain of all sorts ; and the imports from foreign parts, timber, bark, hides, and tallow, flax and ilax-seed, hemp, tar, iron, &c. ; and coastwise, groceries, and otjier articles for home consumption. Fifesliire contains thir- teen royal boroughs, winch still possess par- liamentary representations : viz. Cupar, St. An- drews, Invcrkeithing, Dunfermline, Burntisland, Kinghorn, Kirkaldy, Dysart, Pittenweem, An- str\ither Wester and Easter, Kilrenny, and Crail ; besides several which have lost that pri- vilege, from their being unable to bear the ex- pense of sending a commissioner to the Scottish parliament ; but which yet retain all their other privileges; such are Auchtermuchty, Strath- miglo, Newburgh, Falkland, Kilconquhar, Elie, Earls-ferry, Sec. These are joined with burghs belonging to other counties ; Cupar and St. Andrews, with Dundee, Perth, and Forfar; and Dunfermline and Inverkeithing, with Stirling, Culross, and Queensferry. Fifeshire thus sends three members to parliament, one for tlie county and two for its burghs ; besides that the latter have a share in the election of. two members more. None of these towns are now consider- able, Dunfermline excepted, which is a thriving place. See Dunfermline. Packets and ferry- boats, ply regularly across the Forth from several places in tliis county ; but the great thorough- fares are between Leith and Kinghorn, or Petty- cur, and between Queensferry and Inverkeithing, or the North Ferry. Vestiges of royal splendor are still visible at St. Andrews, Dunfermline, Falkland, and Kinghorn, and various monastic remains are scattered throughout the county. Among the most remarkable are the ruins of St. Regulus's chapel and tower, at St. Andrews, said to have been built in the fourth century ; the cathedral at the same place, founded in 1161 ; the abbey of Dunfermline, remarkable for its being a royal cemetery, where the remains of Robert Bruce were lately discovered and re- interred with becoming solemnity. To the county also belong the small islands of May and Inchgarvie. There is a great mimber of elegant seats in the county, of which ten belong to eight peers, and seven to baronets, besides more than seventy to other proprietors. It is divided into sixty-one parochial districts, having one full synod, and four presbytery seats within itself. Fife affords an Irish title of earl to the Duffs of Braco, the descendants of the ancient Thanes of Fife. Cupar is the county town.

FiFE-UAiLS, in a ship, are those placed on banisters, on each side of the top of the poop, and so along with hauncets or falls. They reach down to the quarter-deck, and to the stair of the gang-way.

FIFTEEN, adj. } Sax. pyptyner, pipteoiSa.

Fif’teenth. i Five and ten: fifteenth is

the ordinal of fifteen; the fifth after the tenth; containins? one part in fifteen.

And Hcthanye was besides Jerusalem, as it wore Ji/tene furlongis. Wiclif. Jan xi.

I have dreamed and slept above some fifteen years and more, Stiahspeare. Taming of the Shrew.

A fifteenth part of silver incorporate with gold, wil’ not be recovered by any water of separation, excep’ you put a greater quantity of silver to draw up the less. Bacon’s Nat. History.

London sends but four burgesses to parliament, al- though it bear the fifleofh part of the charge of the whole nation iu all public taxes and levies.

Gruunt’s Bills of Mortality.

Towards tlie end of the fifteenth century, and be ‘, ginning of the sixteenth, all the princes of Europe attacked, as if by concert, the power of their nobles. Robertson’s History of Scotland.

FIFTH, adj. I Sax. pipta. The ordinal

Fifth’ly, adv. ˆ of five ; the next to the fourth. Note : all our ordinals are taken ellip- tically for the part of which they express : as a fifth, a fifth part; a third, a third part. Sec.

Fifthly, living creatures have a more exact figure than plants. Bacon’s Nat, History.

With smiling aspect you serenely move. In your fifth orb, and rule the realm of love.

Dryden. Just a

The publick shall have lost fonr fifths of its annual income for ever. Swift,

Fifth Monarchy Men, a set of fanatical Le- vellers, who arose in the time of Cromwell, and who supposed the period of the Millenium to be just at hand, when Jesus Christ should descend from heaven, and erect the fifth universal mo- narchy! Acting under this illusion, these enthu- siasts actually proceeded to the length of pro- claiming Jesus Christ king at London : but Oliver soon dispersed them, and put an end to their visionary

monarchy. See Great Britain. FI'FTY, adj. -f Sax. Fiprij, pipreojoSa. Five Fi'fiieth. 5 tens: the ordinal of fifty.

Thanne the Jewis seiden to him thou hast not yet fifti yeer, and hast thou seyen Abraham.

Wiclif. Jon viii. Judas ordained captains over thousands, hundreds, fifties, and tens. 1 Mac. iii. 55.

A withered hermit, five-score Winters worn. Might shake oS fifty looking in her eye.

Shakspeare. Be then desired (^^ fifty to disquantity your train ; And the remainders, that shall still depend. To such men as may besort your age. Id.

If tills medium be rarer within the sun's body than at its surface, and rarer there than at the hundredth part of an inch from its body, and rarer there than at the fiftieth part of an inch from its body, and rarer there than at the orb of Saturn, I see no reason why the increase of density should stop any where.

Newton's Opticks. In the Hebrew there is a particle consisting but of one letter, of which there are reckoned up above fifty several significations. Locke.

FIG, V. a. See Fico. To insult with ficos, or contemptuous motions of the fingers ; to de- lude.

When Pistol lies, do this, and fiy me like

The bragging Spaniard. Shakspeare. Henry IV.

Away to the sow she goes, and figs her in th3 crown with another story. L'Estrange.

ˆ Sax. pic ; Yr.figiic ; Ital. I and Span./go ; Teut.feig ;

[hˆA.jicus; Ileb. J3. See Ficus. The tree which

Fir., «. s.

Fio'apple,

Fig'gnat,

Fig'leaf,

Fig'marigold, I bears figs ; the fruit of the

Fig'wort. J ficus. The fig-apple Mor-

timer defines in the extract. The fig-gnat is a species of culex. Fig-leaf, the leaf of the ficus, and metaphorically any flimsy, imperfect cover- ing. Fig-marigold, a plant — see the extract. Fig- wort, a plant also called Scrophularia, which see.

Every tree is knowcn of his fruyt, and men gadcrin not Jigis of thornes : nether men gaderin a grape of a buysch of brieris. Wiclif. Luk. vi.

It maketh Jigs better, if a fig-tree, when it beginaeth to put forth leaves, have his top cut off.

Bacon's Natural Hiatory.

AJjgappie hath no core or kernel, in these resem- bling ayfjr, and differing from other apples.

Mortimer's Husbandry.

What pitiful flyleaves! What senseless and ridicu- lous shifts are these ! Lowth.

Figs are great subduers of acrimony. Arbuthnot. Full on its crown a. Jig's green branches rise, nd shoot a leafy forest to the skies.

Pope's Odyssey. Or lead me through the maze. Embowering endless of the Indian _^^.

Thomson.

Figmarigold is succulent, and has the appearance of houselcek ; the leaves grow opposite by pairs.

Miller.

Will not wounding the branch of a pear-tree, which is too vigorous, prevent the blossoms from falling off; as from some Jig-trees the fruit is said to fall off unless they are wounded by caprificaiion ? Darwin.

Fig, or Fig-tree. See Ficus. Figs are a considerable article in the materia medica, chiefly employed in emollient cataplasms and pectoral decoctions. The best are those which come fi om Turkey. Many are also brought from the south of France, where they prepare them in the following manner : — The fruit is first dipped in scalding hot lie made of the ashes of the fig- tree, and then dried in the sun. Hence these figs stick to the hands, and scour them like lixi- vial salts : and for the the same reason they ex- cite to stool, without griping. They are mode- rately nutrimental, grateful to the stomach, and easier to digest than any other of the sweet-fruits They have been said to produce lice, when eaten as a common food ; but this is entirely without foundation.

FIGHIG, a town and district of Africa, in the counti7 of Sigilmessa, to the south of the greater Atlas and included within the dominions of the emperor of Morocco. A fine woollen cloth is manufactured here ; and the place is a consider- able rendezvous for the Mecca and Tombuctoo caravans. 240 miles E. S. E. of Mequinez.

FIGHT, V. 71., V. a. &, 71. s. ˆ Sax. peoh-

Fight'er, >tan; Gothic,

Fight'isg, part. a(lj.,Scn. s. j viguTi, Jlgta ; Swed. fecta, figd (war) ; Teut. fechten ; all, as Mr. Thomson tiiinks, from the Goth, eiga, to contend. To combat in battle ; to war; make war; contend in arms; contend generally; tak- ing both with and against before the party op- posed : as an active veib, to war against : as

substantives, fight and fighting are battle or com- bat of any kind ; contention : fight is particu- larly used for a screen of the combatants in ships. The stars in their courses fought against Sisera.

Judges. An host oi fighting men went out to wai by bands.

2 Chron. "Ye fight with the Chaldeans. Jer

At mortal battails had he ben fiftene. And foughtin for our feith at Tramesene, In listis thrys, and alwey slein his fo. Chaucer. For nothing is more blameful to a knight. That court'sie doth as well as armes professe.

However strong and fortunate ia fight. Then the reproach of pride or cruelnesse.

Spenser's Faerie Queene. The poor wren. The most diminutive of birds, viiM fight. The young ones in her nest, against the owl.

Shakspeare. Macbeth, Fierce fiery warriors ^^Af upon the clouds In ranks and squadrons, and right form of war.

Shakspeare. I will return again into the house, and desire some conduct of the lady : I am no fighter. Id.

Richard, that robbed the lion of his heart. And fought the holy wars in P.ilestine, By this brave duke came early to his grave. Id. Here might be seen a great difference between men practised to fight, and men accustomed only to spoil.

Ilayward. The hot and cold, the dry and Immid fight.

Sandyi. Gabriel, lead forth to battle these my sons. Invincible, lead forth my armed saints. By thousands and by millions ranged for fight.

Miltim. On the faughten field Michael and his angels prevalent Encamping, placed in guard their watches round Cherubick waving fires. Id. Paradise Lost.

Himself alone an equal match he boasts. To fight the Phrygian and the Ausonian hosts.

Dryden's Mneid. Herilus in sinˆe fight I slew. Whom with three lives Feronia did endue ; And thrice I sent him to tho Stygian shore, 'Till the last ebbing soul returned no more.

Dryden. Who ever saw a noble sight. That never viewed a brave sea, fight ! Hang up your bloody colours in the air. Up with your fights and your nettings prepare.

Id. O, 'tis the coldest youth upon a charge. The most deliberate yiˆAˆcr. Id. All for Love. For her confederate nations /o«ˆ//<, and kings were slain, Troy was o'erthrown, and a whole empire fell.

Philipi. Greatly unfortunate, he fights the cause Of honour, virtue, liberty, and Rome. Addison,

In Jighting fields as far the spear I throw. As flies the arrow from the well-drawn bow.

Pope. The common question is, if we must now surrender Spain, what have wc been fighting for all this while ? The answer is ready : we have been fighting for the ruiu of the publick interest, and the advancement of a private. Swift.

While chaics and slavery were the certain lot of the conquerci', battles were fought, and towns dc-

FIG

Jended with a rage and obstinacy, which aothing but horror at such a fate could have inspired.

Robertson't Serman, And when they smiled because he deemed it near. His heart more truly knew that peal too well Which stretched his father on a bloody bier, Aad roused the vengeance blood alone could quell : He rushed into the field, and, iorem'ist fighting , fell.

Byro?i.

FIG'MENT, Lat. figmentum. A fiction; in- vention ; feigned notion.

Upon the like grounds was raised the figment of Briareus, who, dwelling in a city called Hecaton- chifia, the fancies of those times assigned him an hundred hands. Browne.

Those assertions are in truth the figment.i of those idle brains that brought romances into church history.

Bishop Lloyd.

It carried rather an appearance of figment and in- vention, in those that handed down the memory of it, than of truth and reality. Woodward.

FIGUERAS, a town of Catalonia, situated in the nrtiddle of a plain near the French frontier. It has a spacious square, with a piazza and wide ill-built streets. In the vicinity is a strong castle erected on an eminence, at an immense cost, in the middle of the eighteenth century. The ap- proaches are oil undermined, and every building is bomb proof. Tnis important fortress was de- livered over to the French in 1808, but surprised by the insurgent Spaniards in the night of 10th April 1811. The French garrison were made prisoners without firing a shot ; but the place being besieged anew was compelled to surren- der on 19th August, for want of provisions. Po- pulation 4C00. Twenty miles north of Gerona, and twenty-five south of Perpignan.

FIG URE, n. s., v. a. & u. «.^ Fr. figure;

Fig'urable, adj. \ It. Span. Port.

FiGURABIL'iTY, U.S.

Fig'ural, adj. Fig'urate, Figuka'tiox, n. s. Fig urative, adj.

Flo'URATlVELY, udv.

Fig'ure-caster, n. s. Fig'ure-flinger.

and Lat. figu- ra a jingo, to make. Form ; shape; outline; appearance : applied inten- sively to re- J nlarkable ap-

peafeince ; eminence ; numerical characters ; repre- sentations of the human form ; statues ; also to the combination of figures in an astrological horoscope ; to theological types and representa- tions ; and in rhetoric to various modes of speaking which depart from the literal and pri- mitive sense of words. See Figure, in rhetoric, below. To figure is to mould; form into shape; represent in any way ; to cove', adorn, or diver sify with figures ; to form figuratively ; to express in numerical or other characters : as a verb neu- ter to make a figure. Figurable is capable of receiving and retaining forms: figurability, the corresponding substantive : figural, represented by figure or delineation : figurate, of a determi- nate form, or resembling a determinate form : figuration, determination to, or the act of giving, a particular form : figurative, not literal ; mean- ing something else under the literal terms or re- presentations used ; changed by rhetorical figures from the primitive meaning : figuratively is the corresponding adverb. Figure-caster and figure-

flinger are both names of the contemptible mce of astrologers.

Who was the figwe of binj that is to come.

Tiomans. Arachne figured how Jove did abuse Europa like a bull, and on his back Her through the rica did bear ; so lively seen. That it true sea, and true bull ye would ween,

Spenser. When sacraments are said to be visible signs of in- visible grace, we thereby conceive how grace is in- deed the very end for which these heavenly mysteries were instituted : and the matter whereof they consist is such as 8ignifieth,_^^ure

Wc do not know what's brought to pass under the profession of fortunetelling ; she works by charms, by spells, by the figure, and daubry beyond our ele- ment. Shakspeare.

He hath borne himself beyond the promise of hij age, doing in the fignre of a lamb the feats of a lion.

Id. Hearts, tongues, _^^ttre«, scribes, bards, poets cannot Think, speak, cast,

write, sing, number His love to Antony. Id. Antony and Cleopatra.

Three glorious suns, each one a perfect sun ; In this the heaven _^ure4 some event.

Shahspearc. Silken terms precise Three piled hyperboles, spruce affectation. Figures pedantical, these Summer flies Have blown me full of maggot ostentation. Id.

There is a history in all men's lives. Figuring the nature of the times deceased. Id.

I'll give my jewels for a set of beads. My gorgeous palace for a hermitage. My gay apparel for an almsman's gown. My figured goblets for a dish of wood. Id,

He that seeketh to be eminent amongst able men, hath a great task ; but that is ever good for the pub- lick : but he that plots to be the only figure among cyphers, is the decay of a whole age. Bacon.

Flowers have all exquisite figures, and the flower numbers are chiefly fire and four : as in primroses, briar-roses, single muskroses, single pinks and gilli- flowers, which have five leaves ; lilies, flowerdeluccs, borage, bugloss, which have four leaves. Id.

Trees and herbs, in the growing forth of their boughs and branches, are not figured, and keep no order. Id.

The differences of impressible and not impressible, figurable and not figurable, scissable and not scissable, are plebeian notions. Id.

Plants are eM figurate and determinate, which in animate bodies are not ; for look how far the spirit is able to spread and continue itself, so far goeth the shape or figure, and then is determined. Id.

Neither doth the wind, as far as it carrieth a voice, with motion thereof confound any of the delicate and articulate _^c/uro

Id. Natural Hutory.

Marriage rings are not of this stuff: Oh! why should ought less precious or less tough Figure our loves ? Donne.

He set a figure to discover If you were fled to Rye or Dover. Hudibras.

As sins proceed, they ever multiply, and, like figures in arithmetic, the last stands for more than all that went before it. Sir T. Browne.

Incongruities have been committed by geogra- phers in t\iˆ figural resemblances of several regions.

FIG

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?iTen find green clay tha'. is soft as long as it is in (he water, so that one may print on it all kinds of figures, and give it what shape one pleases. Boyle.

Here is a siva.nˆ i Jigure invented against the plain and natural sense of the words; for by praying to bestow, must be understood only praying to pray.

Stillingfieet.

How often have we been railed at for understand- inf words in a. Jijurative sense, which cannot be lite- rally understooi without overthrowing the plainest evidence of sense and reason. 'd.

The blue German shall the Tigris drink.

Ere I, forsaking gratitude and truth, orget the Jigure ot'that godlike youth. Dri/den.

While fortune favoured while his arms support The cause, and ruled the counsels of the court, I made some Jigure there ; nor was my name Obscure, nor I without my share of fame. Id.

In the principal figures of a picture the painter is to employ the sinews of his art ; for in them consists the principal beauty of his work. Id.

Each thought was visible that rolled within,

As thro' a crystal glass the Jigured hours arc seen.

Id.

Sublime subjects ought to be adorned with the sublimest and with the vaost, figurative expressions. Id. Juvenal, Preface.

Satyr is a kind of poetry in which human vices are reprehended, partly dramatically, partly simply ; but, for the most ˆz.H, figuratively and occultly.

Id. Dedicatian.

Figure-flingers and star-gazers pretend to foretell the fortunes of kingdoms, and have no foresight in what concerns themselves. L'Estrunge.

Figuret are properly modifications of bodies ; for pure space is not any where terminated, nor can be : whether there be or be not body in it, it is uniformly continued. Locke.

They have been taught rhetorick, but nevor taught language ; as if the names of the figures that embel- lished the discourse of those, who understood the art of speaking, were the very art and skill of speaking well. Id.

Figured and metaphorical expressions do well to illustrate more abstruse and unfamiliar ideas, which the mind is not yet thoroughly accustomed to. Id.

As in accounts cyphers and figuret pass for real sums, so in bumeˆn affairs words pass for things them- selves. South's Sermous.

A goad figure, or person, in man or woman, gives credit at first sight to the choice of either. Clarissa.

The emperor appears as a rising sun, and holds a globe in his hand to fi.gure out the earth that is en- lightened and actuated by his beams. Addison.

Not a woman shall be unexplained that makes a figure either as a maid, a wife, or a widow.

Id. Guardian.

I wai charmed with tlic gracefulness of his figure and delivery, as well as with his discourses.

Addison.

Several gtatues, which seemed at a distance of the whitest marble, were nothing else but so jna.ny figures in snow. /j.

None that feels sensibly the decays of age, and his life wearing off, can figure to himself tho.se imaginary charms n riches and praise, that men are apt to do in the warmth of their blood. Temple.

If love, alas . be pain, the pain I bear No thought configure, and no tongue declare.

Prior. My favourite books and pictures sell ; Kindly throw in a little _/yu»-e. And set the price upon the bigger. Id.

Quacks, y?(/ure-flingers, pettifoggers, and republican plotters cannot well live without it. Collier.

This is a figurative expression, where the words are used in a different sunsa fiom what they signify in their fir»t ordinary intention. Rogers.

The custom of the apostle is figuratively to transfer to himself, in the first person, what belon?^ to others.

Hammond. Now marks the course of rolling orbs on high. O'er figured world now travels with his eye. Pope.

The figure of a syllogism is the proper disposition of the middle term with the parts of the question.

Watts's Logiek. If it be his chief end in it to grow rich, that he may live in figure and indulgence, and be abU to retire from business to idleness and hurry, his trade, as to him, loses all its innocency Law.

I grant you the periods are very well turned : so, a fresh egg is a very good thing ; but when thrown at a man in a pillory it does not at all improve his figure, not to mention the irreparable loss of the egg.

Burns. Sir Anth. .4ind it is my wish, while yet I live, to have my boy make some figure in the world. I have resolved, therefore, to fix you at once in a noble in- dependence. Sheridan, There's one, though tall and stiffer than a pike.

Yet has a sentimental kind of air Which might go far, but she don't dance with

vigour ; The more's the pity, with her face anxd figure.

Byron. Like the figures on arras, that gloomily glare. Stirred by the breath of the wintry air. So seen by the dying lamp's fitful light. Lifeless, but life-like, and awful to sight.

Id. Siege of Corinth.

Figure, in logic, denotes a certain order and disposition of the middle term in any syllogism. Figures are fourfold. 1. When the middle term is the subject of the major proposition, and the predicate of the minor, we have what is called the first figure. 2. When the middle term is the predicate of

both the preniises, the syllogism is said to be in the second figure. If the middle term is the subject of tlie two premises, ti-.e syllogism is in the third figure. And lastly, by making it the predicate of tlie major, and subject of the minor, we obtain syllogisms in the fourth figure. Each of these figures has a determinate number of moods, including all the possible ways in which propositions differing in quantity or quality can be combined, according to any disposition of the middle term, in order to arrive at a just conclusion. See Logic.

FILACER, FuAZER or Filizeu. Filizarius. Ft. file, filace ; from Lat. fi/um, a thread. An officer of the court of common pleas, so called because he files those writs whereon he makes out process. There are fourteen of those fihizers in tlieir several divisions and counties, and they make forth all writs and processes upon original writs, issuing out of chancery, as well real, as personal and mixed, returnable in tliat court; and m actions merely personal, wiiere the de- fendants are returned summoned, they make out pones or attacliinents ; wliicli being returned and executed, if tlie defendant appears not, tliey make forth a distringas, and so ad infinitum, or until he dcth appear; if lie be returned nihil, then process of capias infinite, &c. They enteral!

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appearances and special bails, upon any pro- cess made l)y t.hein : and makti the first scire facias on special bails, writs of habeas corpus, distringas nuper vice comitem vel ballivum, and all supersedeas's upon special bail : in real ac- tions, writs of view, of grand and petit cape, of withernam, &c. ; also writs of adjournment of a term, in case of public disturbance, &c. An order of court, 14 Jac. I., first limited their pro- ceedings to all matters before appearance, and the prothonotaries to all after. The filazers of the common pleas have been officers of that court before the stat. 10 Hen. VI. c. 4., wherein they are mentioned : and in the king's bench, of later times, there have been filazers who make out process upon original writs returnable in that court, on actions in general.

FIL'AMENT, 7i. s. > Fr. filament ; Lat. fila-

Fila'ceous, adj. \ menta. A slight or slen- der thread : filaceous is thread-like, or composed of threads.

They male cables of the bark of lime trees •, it is the stalk that maketh the filaceous matter commoaly, and sometimes the down that groweih above.

Bacon's Natural History.

The lungs of consumptives have been consumed, nothing remaining but the ambient membrane, and a number of withered veins dLiidJilaments. Harvey.

Men that look no further than their outsides, think health an appurtenance unto life, and quarrel with their constitutions for being sick; but I that have examined the parts of man, and know upon what ten- der//ome/i/ that fabric hangs, do wonder that we are nut always so ; and, considering the thousand doors that lead to death, to thank my God that we can die but once. Sir T. Browne.*

The ever-rolling orb's impulsive ray

On the next threads and. filaments does bear.

Which form the springy texture of the air ;

And those still strike the next, 'till to the sight

The quick vibration propagates the light.

Blackmore,

The dung of horses is nothing but the filaments of the hay, and as such combustible. Arbuthnot.

FILANDERS, in entomology and falconry, are worms as small as thread, and about an inch long, that lie wrapt up in a thin skin or net, near the reins of a hawk, apart from either gut or gorge. The malady is known by the hawk's poverty ; by her ruffling her tail ; by straining the fist, or perch, with her pounces; and, lastly, by croaking in the night, when the filanders prick her. The disease proceeds from bad food ; and must be remedied early, to prevent its spread- ing over the whole body, and destroying the bird. These worms must not be killed as others are, for fear of imposthumes from their corruption, being incapable of passing away with the hawk's feces. They must only be stupified, to prevent their being offensive, by giving the hawk a clove of garlic; after which she will feel nothing of them for forty days. The falconer, when he observes the hawk poor and low, should give her a clove of garlic once a month by way of prevention.

Filanders, in falconry, are also the name of another disease in hawks, &c., consisting of fila- ments or strings of blood coagulated ; and occasioned by a violent rupture of some vein, by which the blood extravasating, hardens into

these figures, and incommodes the reins, hips, &c.

FILANGIERI (Gxtan), one of the few mo- dern Neapolitan writers of eminence, was born in 17.52, and destined, as the younger son of a noble family, to the army. He however applied himself in 1774 to the study of the law, and pro- duced a tract, in which he defended a new enact- ment against the arbitrary decision of a judge. He soon after withdrew from public life, but in 1 777 at the advice of his uncle, the archbishop of Naples, entered into the service of the court, and was appointed gentleman of the bed-chamber and an officer in the royal corps of marine volun- teers. In 1780 he published the first part of his great work on The Science of Legislation, the whole of which was to be completed in seven books. In the first he proposed to expound the general rules of legislation ; in the second, civil and eco- nomical laws ; in the third, criminal laws ; in the fourth, legislation as applied to education and morals ; in the fifth, ecclesiastical laws ; in the sixth, laws respecting property ; and in the seventh, laws relative to paternal authority and domestic economy. Of this work the first four books only appeared during the life of the author. In 1783, having married a lady from Hungary who was governess to one of the princesses, he resigned his employments and resided for some time in the country ; but in March, 1787, was appointed to a place in the royal college of finance. He died suddenly while engaged in some extensive plans of improvement in the re- sources of the state, in July 1788. A part of the fifth book of his Science of Legislation was published in 1791, and attracted great public at- tention, from the bold and original views, and the liberality of sentiment by which it is charac- terised. Several editions appeared in Italy, and it was translated into the French, German, Eng- lish, and Spanish languages.

FILBERT', n. s. A hazel nut. A corruption, as Junius and Skinner think, of ' full beard', from the long beard or husk of tliis fruit. Dr. John- son conjectures it may have been originally called after some proper name, like Filbert or Filibert. Mr. Home Tooke reminds us of the following curious passage in Gower's Amantis on the sub- ject of its etymology: —

' Upon a grene bough

A scynt of sylke, which she (Phillis) there had.

She knit ; and so herself she lad.

That she about her white severe

It did, and henge hirselfc there.

Whereof the goddcs were amoved.

And Dcmophon was reproved.

That of the goddes' providence

Was shape such an evidence

Ever afterwarde ayen the slowe.

That Phillis in the same throwe

Was shape into a nutte tree.

That all men it might see :

And after Phillis Philberd

This tree was cleped in the yerd :

And yet, for Demophon to shame.

Unto this day it beareth ihe name.

Goicer. Confess. Amantis.

In August comes fruit of all sorts ; as plums, peats, apricots, barberries. ^/ Jer^J, muskmelons, monkshoods of all colors. Bacon's Essays.

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Thou hast a brain, such as it is indeed ! On what else should thy worm of fancy feed ? Yet in z.Jilbert I have often known Maggots survive, when ail the kernel's gone.

Dorset. There is also another kind, called the filbert of Constantinople ; the leaves and fruit of which are bigger than either of the former j the best are those of a thin shell. Mortimer.

FILCH, u. a. ■) Fr. filouter ; Goth, fda, Filch'er, 71.5. > filgia; iiv/ed. filska: probably, Filch'ing. j as Minsheu suggests, from the lAiinfaUax,fallacis. To steal; thieve; particu- larly in a secret and paltry manner.

The champion robbeth by night. And nrowleth ^ndfilcheth by daie.

Tusser's Husbandman. He shall find his wealth wonderfully enlarged by keeping his cattle in inclosures, where they shall al- ways have safe being, that none are continually _/i7cAed and stolen. Spenser.

Who steals my purse, steals trash ; 'tis something, nothing ; 'Twas mine, 'tis his, and has been slave to thousands ; But he that filches from me my good name, Robs me of that which not enriches him. And makes me poor indeed. Shakspeare. Othello,

He could discern cities like hives of bees, wherein every bee did nought else but sting ; some like hornets, some like_^/cAi«^ wasps, others as drones.

Burton on Melancholy. What made the venture to betray. And filch the lady's heart away. Hudibras. Fain would they filch that little food away. While unrestrained those happy gluttons prey.

Dryden. The pismire was formerly a husbandman, that secretly _^/cAed away his neighbour's goods.

L' Estrange. So speeds the wily fox, alarmed by fear. Who lately filched the turkey's callow care. Gay. Your business is not to steal from them, but to im- prove upon them, and make their sentiments your own ; which is an effect of great judgment ; and, though difficult, yet very possible without the scurvy imputa- tion ol filching. Swift. The tree of knowledge has been plucked — all's known — And life yields nothing further to recall

Worthy of this ambrosial sin, so shown. No doubt in fable, as the unforgiven Fire which Prometheus filched for us from heaven.

ByroH.

FILE, n, s.,v.a.&cv.n. Fr. Jile ; Lat. jilum (a pilus, Gr. iriXoc, hair). A thread; a line on which papers are strung ; a muster-roll ; line of soldiers : to place papers or documents on a file; to march in file.

Our present musters grow upon the file To five and twenty thousand men of choice.

Shakxpeare. Those goodly eyes. That o'er the files and musters of the war Have glowed like plated Mars, now bend, now turn Upon a tawny front.

Shakspeare. Antony artd Cleopatra. All records, wherein there was any memory of the king's attainder, should be cancelled and taken off the file. Bacon.

But let me resume the file of my narration, which this object of books, best

agreeable to my course of life, hath a little interrupted. yVotton.

'oL. IX.

If remarkable considerations be put into it by others, they are as some loose pearls, which, for want of filing upon a string, shake out of our pockets.

Bp. Hall. So saying, on he led his radiant ˆie. Dazzling the moon. Milton's Paradise Lost.*

The' apothecary train is wholly blind ; From files a random recipe they take. And many deaths of one prescription make.

Dryden. All ran down without order or ceremony, 'till we drew up in good order. Bind filed off. Tatler.

Did all the grosser atoms at the call Of chance yite off to form the pondrous ball. And undetermined into order fall ? Blackmore. From the day his first bill was filed he began to collect reports.

Arbuthnot and Pope's Martin Scriblerius. Now at the camp arrivedˆ with stern review Thro' groves of spears horn file to file he darts His sharp experienced eye. Somervile.

Then broader leaves in sha.dowy files advance. Spread o'er the crystal flood their green expanse ; And, as in air the adherent dew exhales. Court the warm sun, and breathe ethereal gales.

Darwin. File, n. s. k, v. a. '\ Sax. peol; Goth. Swed.ˆ/; Belgic, vi/le : Fi'lings. j Teut. and Dan.ˆje/ (q. ?)

of the same origin as the preceding word, the re- gular teeth lying like threads or hairs on the in- strument. A rubbing or cutting instrument to smooth prominences, sharpen other instruments, &c. To file is to apply this instrument ; hence to smooth or polish in any way. A file-cutter is a maker of files : filings, the fragments worn or cut off by a file.

A file for the mattocks and for the coulters.

1 Sam. xiii. 21. They which would file away most from the large- ness of that offer, do in more spariug terms acknow- ledge little less. Hooker.

His humour is lofty, his discourse peremptory, his toagne filed, and his eye ambitious. Shakspeare.

The _/ih'n(/s of iron infused in vinegar, will, with a

decoction of galls, make good ink, without any cop-

perose. Browne.

The smiths and armourers on palfreys ride.

Files in their hands and hammers at their side.

Dryden. Let men be careful how they attempt to cure a ble- mish hy filing or cutting off the head of such an over- grown tooth. Ray.

The rough or coarse-toothed file, if it be large, is called a rubber, and is to take off the unevenncss of your work which the hammer made in the forging : the bastard toothed _ˆe is to take out of your work the deep cuts, oryz'/c-strokes, the rouˆh file made : the fine- toothed file is to take out the cuts or/ic-slrokes, the bastard file made ; and the smooth file is to take out those cuts, or J(7e-strokes, that the Aae file made.

Moxon. Gad-steel is a tough sort of steel : filecutters use it to make their chissels, with which they cut theirˆ.*

Id. The chippings and filings of these jewel are of more value than the whole mass of ordinary authors. Felton on the Classics. File v. a. Sax. apylan, to foul ; defile ; sully: said to be still m u.se in this sense in Scotland. For Banquo's issue have I filed my mind. For them the gracious Duncan have I murdered.*

Sluiksjpeart, P

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His weeds divinely fashioned. All Jiled !Uid mangled. Chapman's Iliad,

File, in law, is a record of the court; ard the filing of a process of a court makes it a re- cord of that court. An original writ may be filed after judgment given in the cause, issued forth before ; declarations, &c., are to be filed, and affidavits must be filed, some before they are read in court, and some immediately after. Be- fore filing a record removed by certiorari, the justices of B. R. may refuse to receive it, if it a})pear to be for delay, &c.; and remand it back for the expedition of justice ; but if the certiorari be once filed, the proceedings below cannot be revived. An indictment, &c., cannot be amended after it is filed,

File, in the art of war, is the depth of the battalion or squadron. The files of

a battalion of foot are generally three deep ; as are some- times those of a squadron of horse. The files must be straight and parallel one to another.

A File on horseback occupies in the ranks about two feet eight inches ; thus three file eight feet. A file on foot occupies in the ranks twenty- two inches.

Files, Close, of infantry, are soldiers standing in rank, contiguous to one another, upon any given depth of line or column. The soldiers in the ranks should then touch lightly each other, without crowding or pressing.

Files, Open, are soldiers standing in rank at given distances without touching each other.

Files, Indian, a line of men advancing or re- treating from either of the flanks, from the centre, or from any proportion of a line in succession to one anotlier.

File-leader is the soldier placed in the front of any file, or the man who is to cover all those that stand directly in the rear of him, and by whom they are to be guided in all their movements. Filp-leaders must be particularly careful to preserve their proper distances from which ever hand they are to dress to, and the followers of each file must only be attentive to cover, and be regulated by their proper file- leaders.

Files, Close, in cavalry, are at the distance when each man's boot-top touches, but does not press, that of his neighbour.

Files, Loose, in cavalry movements, are six inches distant from boot-top to boot-top, being calculated for the gallop as well as the walk of a squadron.

Files, Open, in cavalry, are the full breadth of a horse from boot-top to boot-top. They contain the distance which is left, when from close files, the left files rein back to dismount.

File]\Iaking. Many useful tools have been invented for performing mechanical operations, which consist of a nilmber of wedges or teeth, which may be conceived to stand upon, or rise out of a flat or curved metallic surface. When these teeth are formed on the edge of a plate, the instrument is called a saw (see Saw) ; but when they are formed ipop a broad surface, it constitutes what is denominated a file. The comb-makers use a tool of this descrip'tion, called a quonet, having coarse single teeth, to the number of about seven or eight to an inch.

Fine tools of this description are called floats. When teeth are crossed they are called files ; and when, instead of the notches standing in a right line, a number of single teeth are raised all over the surface, it is called a rasp.

Files are cut upon the surface with a sharp-edged chisel. In rasps, the tooth is raised with a tri- angular punch. The file is adapted for working metals, but the rasp is more fitted for wood, bone, and horn. Files are distinguished by being single or double cut. The single cut file is simply cut once 'over, and is employed for filing brass, and the softer metals. A second course of teeth is cut to form the double cut file, crossing the first diagonally. This kind is best suited to iron and steel.

The steel employed for files requires to be very hard, and in consequence undergoes a longer process in the conversion (see Steel). It is said to be doubly converted. The very heavy files, such as smiths' rubbers, are made of the inferior marks of blistered steel : the more delicate kind, such as watch-makers' files, of cast steel. The steel is previously drawn at the tilt, into rods of suitable size. The flat and square files are made wholly with the hammer, and the plain anvil. Two workmen, one called the maker and the other striker, are required in the forging of heavy files. The anvil is pro- vided with a groove, for the reception of bosses or dies, which are used for the purpose of forging the half-round and three-angled files. The half-round boss contains a hollow which is the segment of a sphere, less than half a circle. That used for the triangular files has a hollow consisting of two sides, terminating in an angle at the bottom. In forging the half-round file, the steel is drawn out, as if intended to make a flat file. It is then laid in the die, and ham- mered, till the under side becomes round. The steel for the triangular file is tilted into square rods. The part to form the file is first drawn out with the hammer, as if intended to form a square file. It is then placed in the die with one of the angles downwards, and by striking upon the opposite angle, two sides of the square are formed into one, and consequently a three- sided figure produced. By successively pre- senting the different sides to the action of the hammer, the figure is rendered still more com- plete. In forming the tangs of most files, it is necessary to make the shoulders perfectly square and sharp. This is performed by cutting into the file a little on each side with a sharp instru- ment, and aftenvards drawing out the part so marked off", to form the tang.

After forging, and previously to their being ground and cut, the files require to be annealed. "This process is generally performed by piling up a great quantity together in a furnace for the purpose, and heating them red hot; suffering them afterwards to cool slowly; on the whole a very objectionable method, since the surface of, steel, when heated red hot in the open air, is so liable to oxidation. A superior method of annealing is practised by some file-makers, and, since hardness in a file is so essential a pro- perty, it ought to be generally adopted. This method consists in placing the files in an oven

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or trough, having a close cover, and filling up the interstices with sand. The fire is made to play on every side of the vessel, as gradually and uniformly as possible, till the whole mass becomes red hot. The fire is then discontinued, and the whole suffered to cool before the cover is removed from the trough, Another evil may however arise from keeping steel red hot, even in a close vessel, for too great a length a time. It assumes a kind of crystallisation, under which its tenacity is much impaired. Steel annealed in this way, is perfectly free from that scaly surface acquired in the open air ; and if each corticle be perfectly surrounded with the sand, and the cover not removed before the steel is cold, the surface will appear of a silvery white color. If the steel be suspected to be too kind, from containing too little carbon, pow- dered charcoal may be employed instead of sand, or sand mixed with charcoal. In this case the files should be stratified alternately with the charcoal, in order that the extra-con- version may be uniform.

The next thing is to prepare the files for cutting, by making the surface to 'contain the teeth as level as possible. This was formerly effected by means of files, and the process is called striping. The same is still practised by the Lancashire file-makers, and by others not having convenience for grinding. The greatest quantities of files, however, are ground to prepare them for cutting. The stones employed for the purpose are of the sand-stone kind, the texture of which is compact and sharp, but rather rough. They are of as great diameter as can be used with convenience; and about eight inches broad over the face. When used, the surface is kept immersed in water. The grinder sits in such a position as to lean over the stone, while its motion is directly from him. Its surface moves at about the same speed with those used in grinding cutlery. Since the object in grinding files is to make the surface as even and flat as possible, and as this cannot be done so completely upon asmall stone, the stones of the file-grinder are laid aside when they are reduced to a certain size, and are employed for grinding other articles. Though grinding is by far the most expeditious method, it does not give that truth to the surface which can be effected by filing. If the price of the articles would admit, however, it would be well to render the surface more even by the file after grinding. If the surface be not flat, it is obvious, that when the file is used for filing a large surface, those teeth in the hollow parts of the file will not be brought into action. It is from attention to this circum- stance, and to the care in annealing and harden- ing, that the Lancashire file-makers have gene- rally excelled. They are, however, confined chiefly to the small articles, since the larger files would not pay for the process of striping. The took of the file-cutter consist of an anvil placed upon a block of such a height that the man sits to his work. He has also a piece of lead al- loyed with tin, on which he lays the files when

one side is cut. The chisel and hammer are of such size as the size and cut of the file re- quire. He is also provided with a leathern

strap, which goes over each end of the file and passes round his feet, which are introduced into the strap on each side in the same manner as stirrups are used. The file-cutter, therefore, sits as if he were on horseback, holding his chisel with one hand, his hammer in the other, at the same time he secures the file in its place by the pressure of his feet in the stirrups.

Great pains ought to be taken in preparing the edge of the chisel. It is, in the first place, hardened and tempered by heating it gradually till it appears of a yellowish brown. It is next ground very true to form the edge, which is afterwards finished upon a Turkey stone with oil, It is not required to be very sharp, the bottom of the tooth requiring to be rather open, to prevent the file from clogging with the sub- stance to be filed. The edge is also required to be very smooth, in order that it may slip easily upon the surface of the files : this is also faci- litated by slightly greasing the surface. From this advantage the worker, after making one tooth, is enabled by feeling only, to form at its proper distance the succeeding tooth, by sliding the chisel close up against the back of the preˆ ceding one.

In the double-cut files, the first set of teeth, which the workmen call up-cutting, are, pre- vious to cutting the second course, filed slightly upon the face, in order to allow the chisel to slide freely. The single-cut file is more durable than the double-cut, and ought to be preferred for all purposes excepting for iron and steel, The same method is employed in cutting the rasp. The workman is, however, guided com- pletely by his eye in regulating the distance of the teeth from each other. The rasp ought to be cut in such a manner that no one of the teeth may stand opposite to another; this not only allows the rasp to cut faster, but makes the surface either of wood or other substance much smoother.

The operation of simple file-cutting seems to be of such easy performance that it has for almost two centuries been a sort of desideratum to construct a machine to perform that, which is not only done with great facility by the hand, but with wonderful expedition. We are told that a lad not very much experienced in the business will prociuce, with his hammer and chisel, nearly 300 teeth in a minute. With respect to machinery, it is said, that a French- man named Mathurin Jousse, in a work entitled La fidelle Ouverture de I'Art de Ser- rurier, published at La Fleche, in Anjou, so long ago as the year 1627, gives a drawing and description of one, in which the file is drawn along by shafts by means of wheel-work, and the blow is given by a hammer. There are several machines of this kind, or at least to effect the same purpose, in the Machines Approuvees par I'Academie Royale de Paris : there is also one published in the second volume of the Transactions

of the American Philo- sophical Society, of which we shall give some account, as we shall of another for which Mr. William Nicholson obtained a patent in the year 1802 ; premising that the principal requisites, in a machine for file-cutting, are that the metal

from which it is manufactured should be stea- dily supported, and the chisel adapted to the face without any unecjual bearing.

The American machine consists of a bench of well seasoned oak, and the faca' of it planed very smootli ; and a carriage on which the files are laid, which moves along the face of the bench parallel to its sides, and carries the files gradually under the edge of the cutter or chisel while the teeth are cut. The carriage is made to move by a contrivance somewhat similar to that which carries the log against tlie saw of a saw-mill. The lever or arm, which carries the cutter, works on the centres of two screws which are fixed into two pillars in a direction right across the bench. By tightening or loosening these screws, the arm which carries the chisel may be made to work more or less steadily. There is likewise a regulating-screw, by means of which the files may be made coarser or finer : also a bed of lead, which is let into a cavity formed in the body of the carriage, somewhat broader and longer than the largest-sized files : the upper face of this bed of lead is formed variously, so as to fit the different kinds of files which maybe required.

When the file or files are laid in their place, the machine must be regulated by the screw to cut them of a due degree of fineness. This machine is described as being so simple, that when properly adjusted a blind person may cut a file with more exactness than can be done in the usual method with the keenest sight ; for by striking with a hammer on the head of the cut- ter or chisel all the movements are set at work ; and by repeating the stroke with the hammer, the files on one side will at length be cut ; then they must be turned, and the operation repeated for cutting the other side. This machine may be made to work by water as readily as by hand, to cut coarse or fine, large or small files, or any number at a time : but it may be more particu- larly useful for cutting the very fine small files for watchmakers.

We shall now give an account of the machine for which Mr. Nicholson obtained his majesty's letters patent. 'My machinery,' says the pa- tentee, '

consists in four essential parts, suitably constructed and combined together; namely, First, a carriage or apparatus, in or by which the file is fixed or held and moved along, for the purpose of receiving tlie successive strokes of a cutter or chisel. Secondly, the anvil,, by which the file is supported beneatii the part which re- ceives the stroke. Thirdly, the regulating gear, by which the distance between stroke and stroke is determined and governed. And, fourthly, the apparatus for giving the stroke or cut. The four several parts are supported by, or attached to a frame or platform of solid and secure workman- ship, either of wood or metal, or both, according to the nature of the work intended to be per- formed, and the judgment and choice of the engineer. The carriage is a long block of wood, or metal, of the figure of a parallelipidon, or nearly so, having a portion cut out between its upper and lower surfaces to admit the anvil to stand therein, without coming into contact with the carriage itself. The said carriage is made of

such a length that the excavation here described shall be considerably longer than the longest files intended to be cut ; and it is supported upon straight bearers from the platform, upon which by projecting pieces, or slides, or wheels, or friction-rollers, it can be moved endwise in a straight-lined direction, without shake or devia- tion. At one end of the said excavation is fixed a clip, resembling a hand-vice, for holding the file by its tail or tang ; and in the opposite end of the said excavation there is a sliding block or piece, which being brought up to the other end of the file does, by means of a notch or other obvious contrivance, prevent it from being moved siJeways. The said clip is so fixed at its head or shank, by means of an horizontal axis on gudgeons and sockets, that the file is at liberty to move up and down, but not sideways or a-twist. In this manner it is that the file being fixed in the carriage is pressed down upon the anvil by a lever and weight proceeding from the platform, and bearing upon the face of the file by a small roller of wood, ivory, bone, or soft metal. The anvil is solidly fixed on the plat- form, and may be of any suitable figure which shall be sufficiently massy to receive and resist the blow; but its upper part must be so con- tracted as to stand up in the excavation of the carriage and support the file ; and the upper part of all must be constructed in such a man- ner that it shall fairly apply itself to the under surface of the file, and support it without leaving any hollow space, notwithstanding any casual irregularities of the said surface. I produce this effect by making a cavity in the anvil of the figure of a portion of a sphere, not much less than a hemisphere, and in this cavity I place (with grease between) a piece of iron or steel made exactly to fit, but of which the lower sur- face is a greater portion of the sphere, and the upper surface flat and plain. The file rests upon this last flat or plain surface, which is either faced with lead, or (in preference) a slip of lead is put under the file and turned round the tang

thereof, so as to move along with it. It is evi- dent that the upper or moveable piece of the said anvil will, by sliding in its socket, ac- commodate and apply itself constantly to the surface of the file, which is pressed and struck against it. Or, otherwise, I make the con- cavity in the upper moveable piece, and make the fixed part convex : or, otherwise, I support the upper part, or in some cases the whole of my anvil upon opposite gudgeons, in the manner of the gimbals of sea compasses : or, otherwise, I form the upper part of my anvil cylindrical, of a large diameter, supported on thick gudgeons, the axis of the said cylinder being short, and at right angles to the motion of the carriage : or, otherwise, I form only a small portion, namely, the upper extremity of my anvil, of a cylindrical form as aforesaid, and cause the same to continue motionless by fashioning the same out of the same mass as the rest of the anvil, or fixing the same thereto. And in both the last-mentioned cases of the cylindrical structure 1 fix the head or shank of the clip (by which the tang is held), not by a single axis or pair of gudgeons, but by an universal joint or ball and socket, so that the

file becomes at liberty to adapt itself not only upwards and downwards, but also in the way of rotation or a-twist, and supplies the want of motion in the anvil by the facility with which itself can be moved in the last- mentioned man- ner.

'The regulating-gear is that part of the machinery by which the carriage, and conse quently the file, is drawn along. It consists of a screw revolving between centres fixed to the platform, and acting upon a nut attached to the carriage with usual and well known precautions for working of measuring screws ; and the nut being made to open by a joint when the carriage is required to be disengaged and slided back. And the said screw is moved either constantly by a slow motion from the first mover, or (which is better) by interrupted equal motions, so as to draw the carriage during the interval between stroke and stroke. And the quantities of those respective equal motions may be produced and governed at pleasure by wheel-work applied to the head of the screw, or by the well known ap- paratus used in the mathematical dividing eng.ne for circles ; or by other contrivances well known to workmen of competent skill, and therefore unnecessary to be described at large : or, other- wise, the motion of the carriage may be pro- duced by a toothed rack from the carriage drawn by a pinion ; and this pinion moved by a ratchet- wheel on the same arbor moved by a click- lever, which shall gather up and drive a greater or less number of teeth, according to the coarseness or fineness of the file ; and the click-lever itself

may be moved by a tripping piece from the first mover, or by various other evident means of connexion : or, otherwise, the said carriage may be moved by a small cylinder, and rope or chain constantly acting : or, otherwise, the said motion maybe effected by a train of two or more wheels, suffered to move by any of the escapements used in time-pieces, and the fineness of stroke may be regulated either by changing the wheels as in the common fuzee engine, or by the greater or less frequency of escape during each turn of the first mover. And in every case I prefer a counter-weight to the carriage, acting either con- stantly against, or constantly in the direction of its motion ; though this is 'not absolutely neces- sary when the work is well executed. I may also observe, that it is possible to construct my said machinery by fixing and rendering motion-less that part which I have called the carriage, provided the other three principal parts be made to move instead of the carriage itself; but I con-sider this disposition as less eligible than that which requires the carriage to be moved. The apparatus for giving the stroke or cut, consists of a chisel, which is held between the jaws of a moutii-piece or claws resembling a strong hand- vice without teeth. One of the jaws is made very stout, and the chisel is formed narrow from edce to back, and wide from side to side, and has a semi-circular protuberance on its back, which rests in a circular notch in the strong jaw aforesaid ; and there are two or three bended flat rings or washers of iron or metal under the thumb-screw of the said mouth-piece or claws, wtiich prevent the chisel from becoming loose

by the stroke : or, otherwise, the said chisel may have a notch, or a hole, instead of a protuber- ance, to meet a correspondent part in the mouth-piece or claws; but I prefer the first-mentioned construction. By the construction of the chisel, as here mentioned and fixed, the edge of the said instrument is at liberty to apply itself fairly from side to side of the file notwithstanding any wind- ing or irregularity, whatever may be the fineness of the cut upon a broad surface. The mouth- piece, with its chisel, is firmly fixed in another piece, which by its motion gives the stroke. This last-mentioned piece may either be a lever, or a moveable carriage between up'-ight sliders ; but I greatly prefer the lever. The chisel must be so fixed that the moving piece shall carry it fairly edge onwards to the file without scraping or slapping in the least; and the obliquity of the stroke may be adjusted by fixing the centres of the level either higher or lower at pleasure, or by inclining the last-mentioned sliders. The lever may be raised and let fall (or the oliier chisel apparatus moved) by a tripp'ng-piece or snail-work, or other usual connexion with the first mover ; and its power of stroke may be increased by the addition of a weight, or by the action of a spring ; which last method is of ex- cellent use, and may,(if required- from the vary- ing breadth of the file) be made to increase or diminish its power during the '•un by several easy and commonly used methods or contri-

vances for pressing more or less against the spring. Or, otherwise, the lever, or holding- piece, may be kept immediately above the file by the re-action of a slight spring, or weight, and be struck by a hammer moved and acted upon by the first mover, as aforesaid : and to this method I give the preference, because the lever will then have less strain upon its pivots; or the said lever may even be supported by spring-joints without any pivots or centres at all. Or, instead of a hammer, the blow may be given by a ram, or a fly and screw, but I give the preference to the hammer. The lever may move in a vertical circle immediately over the file, or in an oblique circle at right angles to it, or at any intermediate angle consistent with the foregoing instructions : and the chisel may be set with its edge at any angle whatever, v.ith the line of the length of the lever ; but, in general, I have set the lever in the first-mentioned posi- tion, and have varied the angle between the chisel-edge and the lever, according to the in- tended slope of the cut upon the face of the file. The edge of the chisel must be sharpened to such an angle as the intended cut and strength of burr may require. Lastly, I describe the general action of the said machinery as follows : 1. The file being jirepared as usual for cutting, must be fixed in the clip of the carriage, and the sliding-block brought up and fixed, to steady its other extremity. 2. The nut of the screw being then opened (or the otlier rciˆailating gear disengaged) the carriage is slided to its place, so that the chisel may be situated over tliat part of the file which is to receive the first stroke. 3. The nut is then closed (or the other resn- lating gear connected) and the small roller of the pressing lever is made to bear upon the faiw

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of the file. 4. The first mover being then put into action, raises and lets fall the apparatus for giving the stroke by which the file receives a cut. And, 5, immediately afterwards, or during the same action, as the case may be (according to the construction as before described), the regu- lating gear moves the carriage, and consequently the file, through a determinate space. 6. The cut is then again given ; and in this manner (the strength of cut being duly proportioned to the space between cut and cut) the rile becomes cut throughout. 7. The file is then taken out and cut on the other side. 8. The burr is then taken off, or not, as the artist may think best ; and the cross-strokes are given over the surfaces as before. And the said machinery, by certain slight, necessary, and obvious changes in the structure and disposition of the chisels, and some other of the parts thereof, is adapted to manufacture all other forms and descriptions of files, whether floats, rasps, half-round, three- square, or any other figure or denomination.

Three things are strictly to be observed in hardening files; first, to prepare the file on the surface, so as to prevent it from being oxydated by the atmosphere, when the file is red hot, which effect would not only take off the sharp- ness of the tooth, but render the whole surface so rough, that the file would, in a little time, become clogged with the substance it had to work. Secondly, the heat ought to be very uni- formly red throughout, and the water in which it is quenched fresh and cold, for the purpose of giving it the proper degree of hardness. Lastly, the manner of immersion is of great importance, to prevent the files from warping, which in long thin files is very difficult. The first object is ac- complished by laying a substance upon the sur- face, which, when it fuses, forms as it were a varnish upon it, defending the metal from the action of the oxygen of the air. Formerly the process consisted in first coating the surface of the file with ale-grounds, and then covering it over with pulverised common salt. After this coating becomes dry the files are heated red-hot, and hardened ; then the surface is lightly brushed over with the dust of cokes; when it appears white and metallic, as if it had not been heated. This process has lately been improved, at least so far as relates to the economy of the salt, which, from the quantity used, and the increase of duty, had become a serious object. Those who use the improved method do not consume above one-fourth the quantity of salt used in the old way. The process consists in dissolving the salt in water to saturation, which is about three pounds to the gallon, and stiffening it with ale- grounds, or with the cheapest kind of flour, such as that of beans, to ?.bout tlie consistence of thick cream. The files only require to be dipped into this substance, and immediately heated and hardened. The grounds or the flour are of no other use than to give the mass eonsistence, and by that means, allowing a larger quantity of salt to be laid upon the surface. In this method, the salt forms immediately a firm coating. As soon as the water is evaporated, the whole of rt becomes fused upon the file. In the old method, the dry salt was so loosely

attached to the file, that the greatest part of it was rubbed off into the fire, and was sublimed up the chimney, without producing any effect. Some file-makers are in the habit of using the coal of burnt leather, which doubtless produces some effect; but the carbon is generally so ill- prepared for the purpose, and the time of its operation so short, as to render the effect very little. Animal carbon, when properly prepared and mixed with the above hardening composition, is capable of giving hardness to the surface even of an iron file. The carbonaceous matter may be readily obtained from any of the soft parts of animals, or from blood. For this purpose, how- ever, the refuse of shoe-makers and curriers is the most convenient. After the volatile parts have been distilled over, from an iron still, a bright shining coal is left behind, which, when reduced to powder, is fit to mix with the salt. Let about equal parts, by bulk, of this powder, and muriate of soda, be mixed

together, and brought to the consistence of cream, by the addi- tion of water. Or mix the powdered carbon with a saturated solution of the salt, till it becomes of the above consistence. Files which are intended to be very hard, should be covered with this composition, previously to hardening. By this method, files made of iron, which in itself is in- susceptible of hardening, acquire a superficial hardness sufficient to answer the purposes of any file whatever. Files of this kind may be bent into any form, and in consequence are rendered useful for sculptors and die-sinkers.

The mode of heating the file for hardening, is by means of a fire similar to that employed by common smiths. The file is to be held in a pair of tongs by the tang, or tail, and introduced into the fire, consisting of very small cokes, push- ing it more or less into the fire, for the sake of heating it regularly. When it is uniformly heated of a cherry color, it is fit to quench in the water. An oven is commonly used for the larger kind of files, into which the blast of the bellows is di- rected, being open at one end for the purpose of introducing the files and the fuel. After the file is properly heated, for the purpose of hardening, it should be cooled as quickly as possible ; this is usually done by quenching it in the coldest water. Clear spring water, free from animal and vegetable matter, is best calculated for the hardening of files.

When files are properly hardened, they are brushed over with water and powdered coke, when the surface becomes clean and metallic. They may likewise be dipped into lime-water, and dried before the fire as rapidly as possible, after which they should be rubbed over with olive oil, in which is mixed a little oil of turpen- tine, while warm, and then they are finished.

In the operations of filing, the coarser cut files are always to be succeeded by the finer; and the general nile is, to lean heavily on the file in thrusting it forward, because the teeth of the file are made to cut forwards. But in drawing the file back again, for a second stroke, it is to be lifted just above the work, to prevent its cutting as it comes back. The rough, or coarse-toothed file, called a rubber, serves to take off the uneven- ness of the work, left by the hammer in forging.

The bastard-toothed file, as it is technically cnlled, is to take out too deep cuts and file-strokes made by the rough file. The fine-toothed files take out the cuts or file-strokes which the bas- tard file made, and the smooth file

those left by the fine file.

Fl'LEJMOT, U.S., coRTupted from Yx.feueille morte, a dead leaf. A brown or yellow-brown color.

The colours you ought to wish for are blue

FILIAL, adj. > Fr. filial, filiale ; Lat.

*Filia'tion, n.s. Sfilius, or filia (a Greek diXia, love). Pertaining to a son or daughter; isefitting a child. Filiation is the relation of a child to its parents ; a legal order of filiation is a declaration of the justices that a particular party therein named is the father of a child. Why Dr. Johnson should have restricted the ap- plication of filial to ' pertaining to a son,' we cannot understand : filiation he himself defines as * correlative to paternity,' generally, while his own extract from Prior proves that it may also be the correlative of maternity,*

' Where the old myrtle her good influence sheds.'

In the modem legal use of filiation also we believe but too many instances occur of its appli- cation to both sons and daughters.

And thus xhe filiai godhead answering spoke.

Milton. From imposition of strict laws, to free Acceptance of large grace ; from servile fear To filial ; works of law, to works of faith. Id,

The relation of paternity and filiation, between the first and second person, and the relation between the sacred persons of the Trinity, and the denomination thereof, must needs be eternal, because the terms of relation between whom that relation ariseth were eternal. Hale's Origin of 3Iankind.

My mischievous proceeding may be the glory of his filial piety, the only reward now left for so great a merit. Sidney.

He grieved, he wept, the sight an image brought Of his own filial love, a sadly pleasing thought.

Dryden.

Where the old myrtle her good influence sheds, Sprigs of like leaf erect their filial heads ; And when the parent rose decays and dies. With a resembling face the daughter buds arise.

Prior, So when Arabia's Bird, by age oppressed.

Consumes delighted on his spicy nest ;

A filial Pha:nix from his ashes springs.

Crowned with a star on renovated wings.

Darwin.

By Stat. 49 George HI. c. 68. the reputed father of a bastard is chargeable with the expenses incident to the birth, and of his own apprehension, and of the order of filiation, Tmnlins, even while I kiss

Thy garment's hem with transport, can it be

That doubt shall mingle with my filial joy ?

Deal with me as thou wilt, but spare this boy.

Byron,

FILTCACIA (Vincent), a celebrated Italian poet, born at Florence, 1642. He was a member of the academies Delia Crusca and Arcadi, and secretary to the duke of Tuscany. He died in 1707. His poems are much esteemed for the delicacy and nobleness of their sentiments. Sci- pio de Filicacia, his son, had them all printed

together under the title of Poesie Fosiano di Vmcenzo da Filicacia, in 1707, 4to.

FILICES, from filum, a thread, quasi filatim incisa, ferns ; one of the seven tribes or families of the vegetable kingdom. See Botany. They constitute the first order in the class cryptogamia, and consist of eighteen genera, which are divided into fructificationes spicatae, frondosa;, et radi- cales. Lee however says they admit of no cer- tain distinction from their fructification. This order comprehends the entire twenty-sixth class of Tournefort, in whose system the filices make only a single genus, in the first section of this class.

Filices also constitute a class or order of plants in the natural method. See Botany.

FILTGRANE, ?. s. } L^t. filum, a thread, Fil'igree. 5 and granum, grain.*

A kind of wire work generally in gold and silver, wrought in the manner of threads or grains. Several filigrane curiosities. Toiler,

FILIGRANE, Filigree, or Fillagree Work, from Lat. filum, a thread, and

granum, a grain, a kind of enrichment on gold or silver, wrought delicately, in manner of small threads or grains, or both intermixed. It was formerly much more employed than at present, in the manufacture of small articles, which served more for show than for use ; such as vases, needle- cases, caskets to hold jewels, small boxes, par- ticularly shrines, decorations for the images of saints, and other church furniture. This art, however, is of great antiquity, and seems to have been brougiit into Europe from the East. Among church furniture we meet with filigree work of the middle ages. The Turks, Armenians, and Indians make at present some master-pieces of this sort, and with tools that are exceedingly coarse and imperfect. There is no manufacture in any part of the world that has been more admired and celebrated, than the fine gold and silver filigree of Sumatra. The surprising delicacy of this woriv is the more extraordinary as the tools are rudely and inartificially formed by the pandi., or goldsmith, from any old iron he can pick up. When you engage one of them to execute a piece of work, his first request is usu ally for a piece of iron hoop, to make his wire- drawing instrument; an old hammer-head, stuck in a block, serves for an anvil, and a pair of compasses is often composed of two old nails tied together at one end. The gold is melted in a piece of preeoo, or earthen rice pot, or some- times in a crucible of their own make, of ordi- nary clay. In general they use no bellows, but blow the fire with their mouths, through a joint of bamboo ; and, if the quantity of metal to be melted is considerable, three or four persons sit round their furnace, which is an old broken quallee or iron pot, and blow together. At Padang alone, where the manufacture is more considerable, they have adopted the Chinese bellows. Their method of drawing the wire differs little from that used by Europeans. When drawn to a sufficient fineness, they flatten it by beating it on their anvil ; and, when flattened, they give it a twist like that in the whalebone handle of a punch- ladle, by rubbing it on a

block of wood with a flat stick. After twisting they again beat it on the anvil, and, by these means, it becomes flat wire with indented edges. Witli a pair of nippers they fold down the end of the wire, and thus form a leaf, or element of a flower in their work, which is cut oft'. The end is again folded and cut off", till they have got a.sutticient number of leaves, which are laid on singly. Patterns of the flowers or foliage, in which there is not very much variety, are pre- pared on paper, of the size of the gold plate on which the filigree is to be laid. According to this, they begin to dispose on the plate the larger compartments of the foliage, for which they use plain

flat wire of a larger size, and fill them up with the leaves before mentioned. To fix the work, they employ a glutinous substance, made of the red hot berry, called boca sago, ground to a pulp on a rough stone. This pulp they place on a young cocoa nut about the size of a walnut, the top and bottom being cut off". After the leaves have been all placed in order, and stuck on bit by bit, a solder is prepared of gold filings and borax moistened with water, which they strew over the plate ; and then, putting it in the fire for a short time, the whole becomes united. This kind of work on gold plate they call carrang papan : when the work is open they call it car- rang trouse. In executing the latter the foliage is laid out on a card, or soft kind of wood, and stuck on, as before described, with the sago berry; and the work, when finished, being strewed over with their solder, is put into the fire, when, the card or soft wood burning away, the gold remains connected. If the piece be large, they solder it at several times. In the manufacture of badjoo buttons, they first make the lower part flat, and having a mould formed of a piece of buffalo's horn indented to several sizes, each like one half of a bullet mould, they lay their work over one of these holes, and, with a horn punch, they press it into the form of a button. After this they complete the upper part. When the filigree is finished, they cleanse it by boiling it in com- mon salt and alum, or sometimes lime juice ; and, in order to give it that fine purple color which they call sapo, they boil it in water with brim- stone. The manner of making the little balls, with which their works are sometimes orna- mented, is as follows : — They take a piece of charcoal, and having cut it flat and smooth, they make in it a small hole, which they fill with gold dust, and this melted in the fire becomes a little ball. They are very inexpert at finishing and polishing the plain parts, hinges, screws, and the like, being in this as much excelled by the Euro- pean artists, as these fall short of them in the fineness and minuteness of the foliage.

FILIPPO D'Argirone, a town in the Val di Demone, Sicily, situated on a high hill on the Jaretta. It contains about 6000 inhabitants, and is a place of great antiquity, having given birth to Diodorus Siculus. It is defended by a castle. Nine miles south of Nicosia.

FILL, V. a., V. n. & n. s. } Saxon, pyllan ;

Fil'i.er, n. s., j Teutonic, feelkn ;

'Be\g. vulkn ; Goth, and S wed. ^^//a. Minsheu traces these toGr. ttoXv, many ; which Parkhurst derives from Hcb. J<"?0, ' n being stibstituted for

its sister labial JD. To store to the utmost ; satisfy ; glut ; surfeit : applied both to time and space, as well as metaphorically to the mind, af- fections, &c. To fill out, is to extend or rather stretch out to the utmost, by filling; and the preposition up, ' to fill up,' occasionally adds intensity to this verb.*

*As a neuter verb, to fill is to satiate; glut; give to drink; * to fill up;' to grow full. As a substantive, a fill is a satis- fying quantity. A filler is any thing that occu- pies room ; any thing useless for any other pur- pose ; or one whose employment is to fill.*

Fill the waterpots with water ; and (hey Jilted them up to the brim. John ii. 7.

In the cup which she hzih Jilted, Jill to her double.

Rev. xviii. Her neck and breasts were ever open bare,

That aye thereof her babes may suck their _^7/.

Faerie Queene. Thou art going to lord Timon's feast,

—Ay, to see meat Jill knaves, and wine heat fools.

Shakspeare.

We Jill to the general joy of the whole table. And to our dear friend Banquo, whom we miss.

Id. Macbeth.

Things that are sweet and fat are vaoie Jilting , and do swim and hang more about the mouth of the stomach, and go not down so speedily. Bac(m.

But thus inflamed bespoke the captain. Who scorueth peace shall have his Jill of war,

Fairfax, ' Which made me gently first remove your fears. That so you might have room to entertain Your _^W of joy. Denham's Sophy.

I am y/ho Jill

Infinitude, nor vacuous space. Milton.

Amid the tree now got, where plenty hung Tempting so nigh, to pluck and eat tny Jill, I spared not. Id. Paradise Loit.

He with bis consorted Eve

The story heard attentive, and wasjilled

With admiration and deep muse to hear. Milton, I only speak of him

Whom pomp and greatness sits so loose about. That he wants majesty to Jill them out. Drt/den.

'Tis a vaere Jilter, to stop a vacancy in the hexa- meter, and connect the preface to the work of Virgil. Dry den's JEneid. Dedication.

This mule being put in the Jill of a cart, ran away with the cart and timber. Mortimer's Husbandry.

They have six diggers to four Jillers, so as to keep the Jillers always at work. Id,

There would not be altogether so much water re- quired for the land as for the sea, to raise them to an equal height; because mountains and hills would _/j7J up part of that space upon the land, and so make less water requisite. Burnet.

When the several trades and professions are sup- plied, you will find most of those that are proper for war absolutely necessary for Jilting up the laborious part of life, and carrying on the underwork of the na- tion. AddisQH on the War.

Neither the Palus Meotis, nor the Euxine, nor any other seas, Jill up, or by degrees grow shallower.

Woodward.

The first stage of healing, or the discharge of mat- ter, is by surgeons called digestion ; the second, or the Jilting up with flesh, incarnation ; and the last, or skinning over, cicatrization. Sharp.

Nothing but the supreme and absolute Infinite can adequately Jill and superabundantly satisfy the infi- nite desires of intelligent beings. Cheyne.

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Your barbarity may have its fill of destruction.

Pope. Hope leads from goal to goal. And opens still, and opens on his soul ; Till lengthened on to faith, and unconfined. It pours the bliss that fills up all the mind. Id,

A mixture of tender gentle thoughts and suitable expressions, of forced and inextricable conceits, and of needless fillers up to the rest. Id.

And after we have seen the light of the gospel penetrate into so many dark places of the earth, why should it seem a thing incredible, that its splendor should, at last, fill the world, and scatter the remain- der of darkness which covereth the nations.

Robertson. Sermon, FILLET, n. s. & v. a. Fr. filet ; Lat. filumy a thread. See File. A bandage : hence applied to the part of veal formerly bandaged, now skewered, and any meat thus rolled up ; an orna- ment in architecture. To fillet is to bind, or adorn, with a bandage.

Pillars and their fillets of silver, Exodiis.

He made hooks for the pillars, and overlaid their chapiters, anA filleted them. Id, xxxviii. 28.

Fillet of a fenny snake. In the cauldron boil and bake. Shakspeare,

His baleful breath inspiring as he glides. Now like a chain around her neck he rides j Now like n fillet to her head repairs. And with his circling volumes folds her hairs.

Dryden's ˆiieid. The youth approached the fire, and as it burned. On five sharp broachers ranked, the roast they

turned ; These morsels stayed their stomachs ; then the rest They cut in legs and fillets for the feast. Dryden.

She scorned the praise of beauty, and the care ; A belt her waist, a fillet binds her hair. Pope,

The mixture thus, by chymick art United close in every part, \n. fillets rolled, or cut in pieces. Appeared like one continued species. Swift.

Above twelve hundred of these fillets have been counted by which this animal fixes itself ; and when afloat, it contracts these fillets between the bases of its points, the number of which often amounts to two thousand. Darwin.

Her tresses, when Zio fillets bind.

Wanton luxurious in the wind :

Like Dian's auburn locks they shone —

But Venus wreathed them like her own.

Sheridan, And still they seem resentfully to fesl

The silken yjWe/'j curb, and sought to shun Their bonds, whene'er some Zephyr, caught, began To offer her young pinion as her fan. Byron.

FiLi.ET, in lieraklry, a kind of orle or bordure, containing only a tliird or fourth part of the br(;adth of the common bordure. It is supposed to be withdrawn inwards, and is of a different color from the field. It runs quite round, near the edge, as a lace over a cloak. Fillet is also used for an ordinary drawn like the bar from the sinister point of the chief across the sliield, in manner of a scarf; tliough it is sometimes like- wise seen in the situation of a bend, fesse, cross, &c. According to Guillim, the fillet is a fourth part of the chief, and is placed in the chief point of tlie escutcheon.

FIL'LIBKG. Gael, fillendh-beg, i. e. little plaid. The lower part of the Highland dress, reaching to the knees.

In the islands the plaid is rarely worn. The filU- beg, a lower garment, is still very common.

Johnson's Journey to the Hebrideu.

FIL'LIP, V. a. & n. s. Bdg.Jlip, a flap ; Teut. and Swed. ///. A word conjectured by Skinner and Minsheu to be formed ' from the sound' : Dr. Johnson thinks from fill up, by some combina- tion of ideas which cannot be recovered: Mr. Todd suggests the Lat. alapa, a blow, or stroke, as the origin ; but the northern languages evi- dently supplied us with it; and Flabby, Flap, Flippancy, are of the same family. See those words. To strike with the finsˆer nail by catch- ing it against the thumb: a fillip is a jerk, or stroke, of this kind.

Man's life is a glass, and a. fillip may crack it.

Old Play (1599), – Then let the pebbles on the hungry beach Fillip the stars ; then let the mutinous winds Strike the proud cedars 'gainst the fiery sunˆ

Shakspeare.

If I do, fillip me with a three-man beetle. Id.

We see, that if you fillip a lutestrmg, it sheweth

double or treble. Bacon's Natural History.

The cards obedient to his words.

Are by a, fillip turned to birds. Gay.

FIL'LY, n. s. Swed./o/a; Wehh ffilog ; Icel. filia, of Lat. ˆ/ia, ' as it were the daughter of the mare.' — Minsheu. A young female horse ; and, metaphorically, a light or wanton woman. Geld fillies, but tits, yet a nine days of age, They die else of gelding, and gelders do rage : Yoarig fillies so likely of bulk and of bone. Keep such to be breeders, let gelding alone.

Tusser. I jest to Obcron, and make him smile. When I a fat and bean-fed horse beguile. Neighing in likeness of a. filly foal. Shakspeare,

A well-wayed horse will convey thee to thy jour- ney's end, when an unbacked filly may give thee a fall. Sucklinij.

I am joined in wedlock, for my sins, to one of those fillies who are described in the old poet.

Addison's Spectator.

FILM, n. s. Siv.a.l Sax. film ; Belg. vilm.

Film'y, adj. S A thin skin or pellicle;

to cover with a thin skin.

It will but skin and film the ulcerous place.

Whilst rank corruption, mining all within.

Infects unseen. Sfiakspeare. Hamlet.

While the silver needle did work upon the sight of his eye, to remove the film of the cataract, he never saw any thing more clear or perfect than that white needle. Bacon.

Michael from Adam's eyes the _ˆ/m removed. Which that false fruit that promised clearer sight Had bred. Milton's Paradise Lost.

A stone is held up by the fihu of the bladder, and so kept from grating or otTending it. Graunt.

So the false spider, when hor nets are spread. Deep ambushed in her silent drn docs lie ;

And feels, far off, the trembling of her thread. Whose filmy cord should

bind the struggling fly.

Dryden. The wasps with fruitless toil T\ap filmy pinions oft, to extricate Their feet in liquid shackles bound, 'till death IJi-reave them of their worthless souls ; such doom Waits luxury, and lawless love of gain. Philips.

There is not one infidel so ridiculous as to pretend

to solve the phenomena of sight, fancy, or cogilation, by those fleeting superficial yiinw of bodies.

Bentley's Sermons. He from thick _^?m« shall purge the visual ray. And on the sightless eyeballs pour the day. Pope. Loose to the winds their airy garments flew. Thin glittering textures of the Jilmy dew j Dipt in the richest tincture of the skies. When light disports in ever-mingling dyes. Jd. Nor less amused have I quiescent watched The sooty Jilms, that play upon the bars Pendulous, and foreboding in the view Of superstition, prophesying still. Though still deceived, some stranger's near approach.

Cowper, Emerged from ocean springs the vapourous air. Bathes her light limbs, uncurls her amber hair, Incrusts her beamy form vihhjilins saline. And beauty blazes through the crystal shrine.

Darwin.

■ *FILMER (Sir Robert), son of Sir Edward Filmer, of East Sutton, Kent, was born towards the close of the sixteenth century, and educated at Trinity College, Cambridge. His works are, — The Anarchy of limited and mixed Monarchy, 1646 ; Patriarcha, in which lie endeavours to prove that all governments were originally monarchical, and that all legal titles are derived from the heads of families. This work was com- pletely answered by Locke in his two Treatises on Government. Filmer died in 1647.*

FiLMF.R (Edward), son of Sir Robert, who took his degree of LL. D. at Oxford, and was author of a tragedy called the Unnatural Brother. He defended the stage against Jeremy Collier.

FILOTI, a town of European Turkey, in the pachalic of Joannina, and the chief place of a small independent tribe of that name, consisting of 6000 or 8000 men. It is eight miles west of Joannina.

FILTER, V. a. & n. s.-\ Fr. filtre ; It. feltro;

Fil'terino-stone, flˆüt. Jiltro (■peTjilum

Filtrate, v. a. ˆt>'a/iere). To draw off

Filtra'tion, n. s. J by threads ; hence to purify by drawing off, in any way : the substan- tive was once applied to the twist of thread de- pending from a vessel by which liquors were cleansed ; it is now used for any strainer or cleansing vessel : hence the modern ' filtering- stone.' See below.

Having, for trial sake, filtered it through cap-paper, there remained in the filtre a powder. Boyle.

We toot then common nitre, and having, by the usual way of solatioa, filtration, and coagulation, re- duced it into crystals, we put four ounces of this pu- rified nitre into a strong new crucible. Id.

That the water passing through the veins of the earth, should be rendered fresh and potable, which il cannot be by any percolations we can make, but the saline particles will pass through a tenfold _ˆ/

Dilute this liquor with fair water, filtre it through a paper, and so evaporate it. Grew't Mtu.

The extract obtained by the former operation, burnt to ashes, and those ashes boiled in water and filtrated, yield a fiery salt. Arlmthnot on Alimenti.

Filter, or Filtre, in chemistry, &c., is used only for separating fluids from solids, or particles that may happen to be suspended in them, and not chemically combined with the

fluids ; and for this purpose, filters of various kinds and various substances have been em- ployed. That which is twisted up like a skain or wick, acts like a siphon, while it draws off only the purest part of the liquor. Others are of paper, flannel, fine linen, sand, pounded glass, or porous stones. When paper is used, it is shaped into the form of a cone, and placed in a funnel, to support it with the liquid, otherwise it would burst; but flannel or linen may be used in the form of a bag or otherwise. Filtering stones, basins, &c., are either natural or artificial, for the purpose of purifying water. Natural filters are found in rocks, mountains, beds of sand, &c. Artificial filtering basins are made of pipe-clay and coarse sand. In 1790 a fe- male potter obtained a patent for discovering a composition to make filtering basins, as a suc- cedaneum for that porous stone which in many places is not to be found. A patent was also obtained by Mr. Peacock, in 1791, for a new kind of filtration, by means of gravel of differ- ent sizes, suitable to the several strata. The various sizes of the particles of gravel, as

placed in layers, should be nearly in the quadruple ratio of their surfaces ; that is, upon the first layer a second is to be placed, the diameters of whose particles are not to be less than one-half of the first, and so on in this proportion. This arrangement of filtering particles will gradually fine the water by the grosser particles being quite intercepted in their ascending with the water. These filters may be readily cleansed by withdrawing the body of the fluid, when that which covered tlie strata will descend, and carry away all the foul and extraneous substances.

A patent was also granted to Mr. Collier, of Southwark, for a most ingenious method of fil- tering water, oil, and other liquids.

The principle of the improved filtering ma- chines consists in combining hydrostatic pressure with the mode of filtering per ascensum, which procures the peculiar advantage of causing the fluid and its sediment to take opposite directions The filtering surface remains the same, while the dimensions of the chamber in which the se- diment is received may be varied.

Professor Parrot jun. of Paris also invented a very ingenious and portable filtering machine, represented in the diagram annexed : —

The reservoir G may be of any form or di- mension which is convenient ; the principal part of the machinery consisting of a square vessel, A D, bent in the form of an inverted syphon. Tlie curve may be circular, elliptic, or in any other direction, and made of block-tin. This vessel is filled witli fine sand, till nearly the lit'ight of the dotted line x y, which denotes the ascent of the water to D, whence it flows into the receiver. To the part marked A B, which must always be above this line (according to the size of the filtering machine), a woollen bag is attached, open at the top, the lower part of wliicli touches the sand : this collects the coarsest im- purities, and preserves the sand for a longer time from becoming foul. It is evident that the water flows at A, through the bag into the filter, and rises at the place marked D, which is consider- ably lower than the former.

In large machines a water-tight trap-door may be made at F, for the purpose of removing the sand when it is overcharged with impurities. Tlie small diameter of the machine from which the drawing was taken was eight

Paris inches from B to E ; the perpendicular height of the lower side, from Cj its basis, to the rim D, whence the water issues, four inches and one-twelfth ; the opposite height of the mouth, A B, eight inches and three-fourths ; and the height of the sand on the side marked D, three inches and one- sixth. A machine of these dimensions will fur- nish about three quarts of water in an hour, or eighteen gallons in twenty-four hours. This quantity, however, being too large in proportion to the size of the machine, it is advisable to pro- long the stratum of sand, in order to reduce the filtration of the water to half the quantity above stated, and to obtain it in greater purity.

Thus a filtering apparatus eighteen inches long from A to D, two inches thick, and four broad, would afford every hour six pints of very pure water.

The society of Arts, &c., voted their silver medal, in the session of 1810, to Mr. W. Moult, Bedford Square, for his new method of apply- ing the filtering stone, for purifying water. The method of using this stone is that of placing it in the water to be purified ; by which means the water presses against the outside of the filter, ;ind, oozing through its pores, fills the stone, from niiich it is to be conveyed into a proper recep- lacle. The stone is suspended in the cistern by I ring round the inside of it, upon which a pro- ;> (ting part round the top of the stone rests. I he impurities are thus left at the bottom of the cistern, instead of at the bottom of the stone.

Filter, or Fii.tre, from ˆiXrpov or ˆtXtw I love, is also a charm, supposed to have a virtue of inspiring love. This is more properly written I'mi.TF.R, which see.

Sax. pfliS, from pylan, to defile ; Goth. f%ila ; Tcut.foiilheit. Dirt; pol- lution ; uncleanness; cor-

FILTII, 71. s.

Fii.Tn'fLY, adv.

FiLTIl'iNESS, n. s. i '

di.)

Filthy, adj. niption.

How perfect then is man ? from head to foot Defiled vihhjilth, and roltcn at the root. Sundys.

They held this land, and with their Jilthincss Polluted this same gentle soil

long time.

That their own mother loathed their beastlincsE,

And 'gan abhor her brood's unkindlv crime All were they born of her own native slime.

fype7Ker. Wisdom and goodness to the vile seem vile ; Filths ia.vo-aT hut themselves. Shakspeare. King Lear. Fair is foul, and foul is fair ; Hover through the fog and filthy air.

Id. Macbeth. Neither may you trust waters that taste sweet ; for they are commonly found in rising grounds of great cities, which must needs take in a great deal oi filth. Bacon's Natural History. Little would neatness of vestures avail us with a filthy soul. Bp. Hall's Contemplations.

Men of virtue suppressed it, lest their shining should discover the other's filthiness. Sidney.

Such do likewise exceedingly dispose us to piety and religion, by purifying our souls from the dross and filth of sensual delights. Tillotson.

As all stories are not proper subjects for an epick poem or a tragedy, so neither are they for a noble picture : the subjects both of the one and of the other ought to have nothing of immoral, low, or filthy in them. Dryden'a Dufresnoy.

It struck filthily in the camel's stomach that bulls, bears, and the like, should be armed, and that a crea- ture of his size should be left defenceless.

L'Estnmge. They never duly improved the utmost of such a power, but gave themselves up to all the filthineaa and licentiousness of life imaginable.

South's Sermons. Though perhaps among the rout He wildly flings his filth about; He still has gratitude and sap'ence. To spare the folks that give him ha'pence.

Swift. Thee will a land of liberty we name. Where all are free to scandal and to shame ; Thy sons, by print, may set their hearts at ease. And be mankind's contempt, whene'er they please ; Like trodden filth, their vile and abject sense Is unperceived, but when it gives offence. Youmj.

Like caterpillars, dangling under trees By slender threads, and swinging in the breeze. Which filthily bewray and sore disgrace The boughs in which are bred the' unseemly race.

Cowpier. Hence ! ye, who snare and stupify the mind.

Sophists of beauty, virtue, joy, the bane !

Greedy and fell, though impotent and blind.

Who spread your filthy nets in Truth's fair fane.

And ever ply your venomed fangs amain !

Beattie.

FI'MBLE Hemp, n. s. Corrupted from fe- male.

Good flax and good hemp, for to have of her own. In May a good housewife will see it be sown ; And afterwards trim it, and serve at a need ; Vhe fimble to spin, and the carle for her seed.

Tusscr.

The light Summer hemp, that bears no seed, whicli is called fimblc hemp. Mortimer.

FIN, M.S. "^ Saxon pin; Belg. vine;

Fin'-eooted,«/;. Goth./a«;?i; Swed./mna; Fin'less, Lat.;)/7(Hfl. 'The wing,' says

Fin'-like, V-Dr. .fohnson, 'of a fish;' the

Fin'ned, cartilaginous membrane on

Fin'ny, the sides of fish, whicli as-

Fin'-toep. J sists them in swimming'

fin-footed, and fin-toed, mean web-footed, or

web-toed ; palmipedous.

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He that depends Upon your favours, swims vrilhjins of lead. And hews down oaks with rushes.

Sluihspeare. Othello. He angers me With telling of the moldwarp and the ant. And of a dragon and njinless fish.

Id. Henry IV. It is described like sissipedes, or birds which have their feet or claws divided ; whereas it is palmipedous or Jin-footed, like swans and geese, according to the method of nature in latirostrous or flat-billed birds ; ■which being generally swimmers, the organ is wisely contrived unto the action, and they are framed with Jins or oars upon their feet. Browne.

Thus at half-ehb a rolling sea Returns, and wins upon the shore ; The watry herd, affrighted at the roar. Rest on their _/jVw awhile, and stay. Then backward take their wond'ring way.

Dryden. New herds of beasts he sends the plains to share ; New colonies of birds to people air ; And to their oozy beds the Jinny fish repair. Id,

In shipping such as this, the Irish kern And untaught Indian on the stream did glide ;

Ere sharp-keeled boats to stem the flood did learn. Or Jinlike oars did spread from either side. Id.

They plough up the turf with a broad _^'n»cd plough.

Mortimer. While black with storms the ruffled ocean rolls. And from the fisher's art defends her Jinny shoals.

Blackmore. With hairy springes we the birds betray ; Slight lines of hair surprize the Jinny prey. Pope. Their Jins consist of a number of gristly bones, long and slender, like pins and needles. More.

— Her playful sea-horse woos her soft commands, Turns his quick ears, his webbed claws expands. His watery way with waving volutes wins. Or listening librates on unmovingyin. Darwin. But ye were safe, ye Jinny brood. And safely stemmed your native flood j Secure around his float to glide. And dash the' unbailed hook aside.*

Sheridan. Oft from out it leaps The Jinny darter with the glittering scales. Who dwells and revels in thy glassy deeps ; While chance some scattered water-lily sails Down where the shallower wave still tells its bubbling tales. Byron.

FI'NABLE. See Fine. FI'NAL, Off;. \ Fr. fin, final; Ital. fino ; Yi'tiALhY, adv. >Lat. Jinis, Jlnalis. Ultimate; Fine, w. s. 3 last; decisive; conclusive; mortal : finally follows these senses : fine, in this sense, is sometimes used as a substantive for end, conclusion; but more commonly with in, as ' in

fine ;' meaning, adverbially, to con clude; sum up all.

Forsothc the most soveraine ajidJinaU perfeccion of man is in knowynge of a sothe, withouten any entent decevablc, and in love of one very God, that is in- chaungeable, that is to knowc, and love his creatour.

Chaucer. At last resolved to work hjsjinal smart. He lifted up his hand, but back again did start.

Sj)e>tser's Faerie Queene.

Some things in such sort are allowed, that they be

also required as necessary unto salvation, by way of

direct, imuiodiale, and proper necessity _/ina/ ; so that,

without performance of them, they rannot by ordinary

course be saved, nor by any means excluded from lite, observing them. Hooker.

His resolution, injine, is, that in the church a num- ber of things are strictly observed, whereof no law of scripture maketh mention one way or other. Id,

Still ihejine's the crown ; Whate'er the course, the end is the renown.

Shakspeare, Your daughter, ere she seems as won. Desires this ring ; appoints him an encounter ; Injine, delivers me to fill the time. Herself most chastely absent. Id.

There be many examples where sea-fights have teen Jinal to the war. Bacon.

Henry spent his reign in establishing himself, and had neither leisure nor opportunity to undertake the Jinat conquest of Ireland. Davies on Ireland.

Not any house of noble English in Ireland was ut- terly destroyed, or Jinally rooted out by the hand of justice, but the house of Desmond only. Id,

The Jinal absence of God is hell itself.

Bp. Hall's Contemplations. And over them triumphant death his dart Shook ; but delayed to strike, though oft invoked With voM's, as their chief good, &nd Jinal hope.

Milton. Sight bereaved May chance to number thee with those Whom patience_ˆ7w//y must crown.

Id. Agonixtes. In Jine, whatsoever he was, he was nothing but what it pleased Zelmane, the powers of his spirit de- pending of her. Sidney.

Injine, he wears no limbs about him sound. With sores and sicknesses beleaguered round.

Dryden. By its gravity air raises the water in pumps, siphons, and other engines ; and performs all those feats which former philosophers, through ignorance of the efficient cause, attributed to a Jinat, namely, nature's abhor- rence of a vacuity. Ray.

Doubtlessly many men are Jinally lost, who yrt have no men's sins to answer for but their own. Svuth.

Your answering in the Jinal cause, makes me be- lieve you are at a loss for the efficient. Collier. FINALE, a town of the territory of the king of Sardinia, once belonging to the Genoese. It is situated on the Di Ponente, at the end of a beautiful valley, and consists of two parts, half a league distant from each other ; the one called Finale Borgo, standing on a hill, tlie other Finale Marino, situated along the shore. The latter has an insecure harbour. Both towns are well built, and are defended by three forts. The ad- jacent country, formerly the marquisate of Fi- nale, is very productive in olives, oranges, and fruits. It has repeatedly been the scene of military operations, especially in the outset of Buonaparte's career in April, 1796, and at the time of the successes of the Austrians in 1800. The population of the whole is 7000. Twenty- three miles north-east of Oneglia, and thirty-five south-west of Genoa.

FINANCE'. n.i. ˆ Fr. fumnce. Revenue; Finan'cial, adj. ˆincome; the science of na- Financier', n. s. j tional income and expendi- ture : financial is relating to or respecting finance : financier, one skilled in, or a collector of the public revenue.

This sort oi Jinance hath been increased. Bacort. The residue of these OTdma.ry Jinances be casual or uncertain ; as be the escheats and forfeitures. Id.

His pretence for making war upon his neighbours was their piracies, though he practised the same trade when he was straitened in his finances at the siege of Byzantium. Arbuthnol.

It was thought long justly no small proof of na- tional strength and financial skill Burke.

FI'NARY, Ji. s. From To fine. In the iron works, the second forge at the iron mills.

FINCASTLE, the capital of Bottecourt county, Virginia, and situated on the east side of Catabaw Creek, a branch of James River. It is 116 miles west of Richmond.

FINCH (Heneage), first earl of Nottingham, was the son of Heneage Finch, recorder of the city of London. He was born in 1621, and educated at Westminster school, and Christ- church, Oxford, whence he removed to the Inner Temple. At the Restoration his reputation as a lawyer raised him to the post of solicitor- general, in which capacity he exerted great zeal in the prosecution of the regicides. In 1661 he was elected member for the university of Oxford, and obtained a baronetcy. Six years afterwards he took a prominent part in the impeachment of the earl of Clarendon. In 1670 he became attorney-general, and succeeded the earl of Shaftesbury in 1673, as lord-keeper. In two years afterwards he attained the chancellorship. In 1681 he was created earl of Nottingham, but survived his elevation little more than a year. Dryden lias handed down to posterity his portrait in Absalom and Achitophel, under the character of Amri. Several of his speeches on the trials of the judges of Charles I. have been published, as have also some of his parliamentary orations, his powers as an orator having been higlily re- garded.

Finch (Daniel), son of the preceding, born in 1647, was a member of the privy-council which caused .Tames II. to be proclaimed ; he never, however, sat at the board, or visited the court during the reign of that monarch. On his al)dication he exerted himself strongly in favor of a regency. But this did not prevent his acting as secretary of state under William and INIary, though he is said to have declined the chancellorship. In 1704 he went out of office, but acted as one of the lords justices on the death of queen Anne, in whom the administra- tion of affairs was vested till George I.'s arrival. In 1716 he retired from public life, and died in 1730, having been the author of an eloquent reply to W'histon on the subject of the Trinity.

FINCK (Thomas), a celebrated Danish mathematician, was a native of Flensburg in South Jutland, and received liis education at Strasburgh. After

visiting other universities he went to Basil, and there published a geometrical treatise which established his fame. He after- wards studied at Padua and Pisa, and returning to Basil took the degree of M.D. in 1587. Having travelled in Germany and the north of Europe, he settled at (iottorp as a physician. In 1591 he was ap])ointed j)rofessor of mathe- matics in the imiversity of Copenhagen : in 1602 he was made professor of rhetoric; and in 1605 professor of medicine. He was likewise presi- dent and administrator of the Royal Economical School and Corporation, and died in 1656, at the

age of ninety-five. He wrote on astronomy, medicine, and the mathematics.

obtain by search ; meet with ; feel ; know ; attain : hence to settle ; determine by judicial verdict; supply: to find in 'one's heart,' is to discover there: 'to find one's self,' is to perceive, or be conscious of, any particular or general state of one's health or affairs : the adverb gives intensity to this verb, in the first sense specified. A finder is a discoverer; inventor; one who meets with or falls upon any thing. A find-fault, a censurer.

Seke ye and °ye schulcn fynde, knocke ye and it schal be openyd to you. For ech that axith takith, and he that &e.\thfyndith : and to a man that knockith : it schal be openyd. Wiclif. Luk. xi.

Whereas thou hast searched all my stuff, what hast thou found of all the household stuff ?

Gen. xxxi. 37. Canst thou by searching_/ind out God ? Canst thou find out the Almighty unto perfection ? Job ii.

They are glad when they ca.n find the grave.

Id. iii. Whrn he hath found his sheep, he layeth it on his shoulders rejoicing. Luke xv. 5.

The fox that first this cause of grief did find, 'Gan first thus plain his case with words unkind.

Hubbcrd. In my school days, when I had lost one shaft, I shot his fellow of the self-same flight The self-same way, with more advised watch. To find the other forth ; by vent'ring both, I oh found both. Shakspenre. Merchant of Venice. His peers, upon this evidence. Have found him guilty of high treasor .

Shakr.peare. We will bring the device to the bar, and crown thee for a finder of madmen. Id. Twelfth Night.

We are the makers of manners, Kate ; and the Ij- barty that follows our places, stops the mouth of all findfaults. Shakspeare.

If he have several dwellings, let him sort them so, that what he wanteth in the one he may find in the other. Bacon.

They would enforce them to find as they would di- rect ; and if they did not, convent, imprison, and fine them. /,/.

A war with Spain is like to be lucrative, if we go roundly on at first ; the war in continuance will find itself. /,/.

Some lewd squeaking cryer. May gall the finder's conscience, if they meet.

Dunne. O yes ! if any happy eye This roving wanton shall descry. Let the firider surely know Mine is the wag ; 'lis I that owe The winged wand'rer. Crashato

How oft will he Of thy changed faith corapiaiu 1 And his fortunes y/nd to be So airy and so vain ! Cuivlci/.

They build on sands, which if unmoved they Jind, 'Tis but because there was no wind. /(/.

Some men The marks of old and catholick would yind. Id. A bird that flies about. And brats itself against the cage, Findintj at last no passage out. It sits and sings. Id.

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While she proudly marched about. Greater conquests to find out. She beat out Susan by the by. Id.

A curse on him -who found the oar. Id.

She disappeared, and left me dark j I waked To find her, or for ever to deplore Her loss. Milton.

Our voluntary f ervice he requires. Not our necessitated ; such with him Finds no acceptance, nor cˆn find. Id.

The sun that barren shines. Whose virtue on itself works no effect, But in the fruitful earth ; there first received His beams, unactive else, their

vigour_/i?jd. Id. Thus I emboldtned spake, and freedom used Permissive, and acceptance found. Id,

In mentioning the joys of heaven, I use the expres- sions I find less detractory from a theme above our praises. Boyle.

In these last three weeks, I have almost forgot what my teeth were made for : last night, good Mrs. Bibber here took pity on me, and crummed me a mess of gruel, with the children, and I popt and popt my spoon three or four times to my mouth, before I could fijid the way to it.

Dryden, The wild Gallant, act i. sc. 1. Physicians With sharpened sight some remedies vazy find.

Dryden. The principal part of painting is to find out, and thoroughly to understand, what nature has made most beautiful. Id.

Pray, sir, how d'ye find yourself? says the doctor.

L'Estrarige. lie finds no reason to have his rent abated, because a greater part of it is diverted from his landlord.

Locke. When first found in a lie, talk to him of it as a strange monstrous matter, and so shame him out of it.

Id. He was afraid of being insulted with Greek ; for which reason he 'desired a friend to find him out a clergyman rather of plain sense than much learning. Addison's Spectator. It is agreeable to compare the face of a great man with the character, and to try if we can find out in his looks and features either the haughty, cruel, or mer- ciful temper. Addison,

She drilled him on to five-and-fifty, and will drop him in his old age, if she ca.n find her account in another. Id.

There are agents in nature able to make the particles of bodies stick together by very strong attractions, and it is the business of experimental philosophy to find them out. Newton.

If we suppose a man perfectly accommodated, and trace him through all the gradations betwixt necessity and superfluity, we shall find that the slavery which occasioned his first activity, is not abated, but only diversified. Steele,

The bad must miss, the good unsought shall find.

Pope, We oft review, each finding like a friend Something to blame, and

something to commend.

Id. There watchful at the gate they find Suspicion with her eyes behind.

Dodsley's Miscellanies. WTicn we arc old our friends find it difficult to please us, and are less concerned whether we be pleased or not. Swift.

Pride is a vice, which pride itself inclines every man to find in others, and to overlook in himself.

Johnson.

Do not therefore shut your eyes against your ar, ling sin, or be averse to find it out. Mason.

She made the cleverest people quite ashamed.

And even the good with inward envy groan. Finding themselves so very much exceeded In their own way by all the things that she did.

Byron. F'INDY, adj. Saxon 3epinbi5. Plump ; weighty; firm; solid. Not used. Thus the proverb,

A cold May and a windy. Makes the barn fat and findy ;

means that it stores the barn with plump and firm

grain. Junius.

FINE, adj. Scv.a. "} Sax. pijn ; Goth, fm, Fine'draw, t). a. thi/n; Belg.yj^n; Teut.

Fine'fingered, adj. fein ; Swed. and Fr. Fike'ly, a£?y. jhi ; Ital.y?«o; Fre

Fine'ness, 71. s.) > fi€n; \c^. fynner {^o

Fi'j.'ER, lished, beautiful). Dr.

Fine'ry,

Fine'spoken, adj. Fine'spun.

Johnson says perhaps from L.a.t.Jinitus, com- pleted : Minsheu, a Gr.

There is a vein for the silver, and a place for gold, where they_^n <; it. Job xxviii. 1,

The fining pot is for silver, and the furnace for gold.

Prov. Take away the dross from the silver, apd there shall come forth a vessel for the finer. Id. xxv. 4.

The taost finefingered workman on the ground,

Arachne by his means was vanquished. Spenser.

Hugh Capet, also, who usurped the crown.

To fine his title with some shows of truth.

Conveyed himself as heir to the lady Lingare.

Shakspeare, That same knave. Ford, her husband, hath the finest mad devil of jealousy in him, master Brook, that ever governed frenzy. Id.

Our works are, indeed, nought else But the protractive tryals of great Jove, To find persistive constancy in men ; The fineness of which metal is not found In fortune's love. Id. Troilus and Cretsida,

Those, with the fineness of their souls. By reason guide his execution. Shakspeare,

The wisdom of all these latter times, in prince's affairs, is rather _ˆne deliveries, and shiftings of dan- gers and mischiefs, than solid and grounded courses to keep them aloof. Bacon.

Great affairs are commonly too rough and stubborn to be wrought upon by the finer edges or points of wit. Id.

He was alone, save that he had two persons of honour, on either hand one, finely attired in white. Id. New Atlantis. I am doubtful whether men have sufficiently refined metals ; as whether iron, brass, and tin be refined to

the height : but when they come to such dˆ fineness as serveth the ordinary use, they try no farther.

Id. Natural History.

Are they not senseless then, that think the soul Nought but difine perfection of the sense? Davies.

Get you black lead, shaTpened finely. Peacham.

Every thing was full of a choice fineness, that, if it wanted any thing in majesty, it supplied with increase in pleasure ; and if at the first it struck not admira- tion, it ravished with delight. Sidney.

Saltpetre was but grossly beaten ; for it should not be yine/i/ powdered. Boyle.

Whether the scheme has not been pursued so far as to draw it into practice, or whether it be too fine to be capable of it, I will not determine. Temple.

As the French language has more fineness and smoothness at this time, so it had more compass, spirit, and force in Montaigne's days. Id.

To call the trumpet by the name of the metal was fine. Dryden.

For him she loves !

She named not me ; that may be Torrismond,

Whom she has thrice in private seen this day :

Then I am finely caught in my own snare. Id.

It fines the grass, but makes it short, though thick.

Mortimer.

It is good also for fuel, not to admit the shavings of it for the yZnin^ of wine. Id. Husbandry.

Let laws be made to obey, and not to be obeyed, and you will find that kingdom finely governed in a short time. South.

The irons of planes are set fine or rank : they are sctfine when they stand so shallow below the sole of the plane, that in working they take off a thin shaving. Moxon's Mechanical Exercises.

Plutarch says very finely, that a man should not allow himself to hate even his enemies ; because if you indulge this passion on some occasions, it will rise of itself in others. Addison.

The softness of her sex, and the fineness of her genius, conspire to give her

a very distinguishing character. Prior.

The ancients were careful to coin their money in due weight and fineness, only in times of exigence they have diminished both the weight and firvenesi. Arhutknot on Coins.

He was not only the finest gentleman of his time, but one of the finest scholars. Felton on the Class.

It ia with a fine genius as with a. fine fashion ; all those are displeased at it who are not able to follow it.

Pope.

The satirical part of mankind will needs believe, that it is not impossible to be very fine and very filthy. Swift.

The capacities of a lady are sometimes apt to fall short in cultivating cleanliness and finery together.

Id.

Though Diogenes lived in a tub, there might be, for aught I know, as much pride under his rags, as in the fitne-spun garments of the divine Plato. Id. Dreus up your houses and your images. And put on all the city's finery. To consecrate this day a festival. Southern.

They taught us, indeed, to cloath, to dwell in houses. To feast, to sleep on down, to be profuse : A fine exchange for liberty. Philip's Briton.

They want to grow rich in their trades, and to maintain their families in some such figure and degree oi finery, as a reasonable Christian life has no oc- casion for. Law.

The fineness oi cloaths destroys the case : it often helps men to pain, but can never rid them of any : the body may languish under the most splendid cover.

Decay of Piety.

Next to clothes being fine, they should be well made, and worn easily : for a man is only the less genteel for afine coat, if in wearing it he shows a re- gard for it, and is not as easy in it as if it were a plain one. Chesterfield.

Be upon your guard against ˆne-dressed and fine- spoken chevaliers ' d'industrie.' Id.

I think the sermons published in his life-time are fine, moral discourses. They bear indeed the character of their author, simple, elegant, candid, clear, and rational. Warburton to Hurd.

There is no wonder, now one sees the fountain Milton drew from, that, in admiration of this poetical philosophy (which nourished the fine spirits of that time, though it corrupted some), he should make the other speaker in the scene cry out, as in a fit of ex- tacy.

How charming is divine philosophy. Hurd.

Let the wine without mixture or stum be allˆne. Or call up the master. Johnson.

You speak very fine, and you look very grave. But apples we want, and apples we'll have I If you will go with us, you shall have a share. If not, you shall have neither apple nor pear.

Cowper.

FINE, n. s., v.a. & v.n.\ Barbarous La t,

Fini'able, a(//.]finu7n; Old Fr.

fin. A payment ; forfeit ; mulct ; pecuniary penalty : to fine is used both for impose, or punish with, fines, as well as to pay a fine. Finable is, admitting or discovering a fine.

Even this ill night your breathing shall expire. Paying the fine of rated treachery.

Two vessels of fine copper precious as gold. Ezra. Shakspeare. King John.

The spirit of wantonness is sure scared out of him : if the devil have him not in fee-simple, with fine and recovery, he will never, in the way of waste, attempt us again. Shakspeare.

This is the order for writs of covenant that be finable. Bacon.

The killing of an Irishman was not punished by our law as manslaughter, which is felony and capital ; but by a fine of pecuniary punishment called an ericke. Davies on Ireland,

He sent letters to the council, wherein he ac- knowledged himself favored in bringing his cause finable. Hayward.

There have been ways found out to banish minis- ters, to fine not only the

people, but even the grounds and fields where they assembled in conventicles.

Marvell.

What poet ever fined for sheriff? or who By rhymes and verse did ever lord mayor grow'

Oldham.

To fine men one-third of their fortune, without any crime committed seems very hard. Locke.

Besides fines set upon plays, games, balls, and feasting, they have many customs which contribute to their simplicity. Addison.

How vain that second life in other breath. The' estate which wits inherit after death ! Ease, health, and life, for this they must resign. Unsure the tenure, but how vast the fine! Pope.

Fine, in law, has divers applications : as 1. A formal conveyance of lands or tenements, or of any thing inheritable, being in esse temporis finis, in order to cut off all controversies. 2. A final agreement between persons, concerning any lands or rents, fvc, of which any suit or writ is depending between them in any court. 3. A sum of money paid for entering lands or tene-

ments let by lease ; and 4. a pecuniary mulct for an offence committed against the king and his laws, or against the lord of the manor.

Fines for Alienation, in feudal law. One of the attendants or consequences of tenure by vassalslup, or knight-service, was that of fines due to the lord for every alienation, whenever the tenant had occasion to make over his land to another. This depended on the nature of the feudal connexion ; it not being reasonable, nor allowed, that a feudatory should transfer his lord's gift to another, and substitute a new tenant to do the service in his own stead, without the consent of the lord : and, as the feudal obliga- tion was considered reciprocal, the lord also could not alienate his seignory without the con- sent of his tenant, which consent of his was called an attornment. This restraint upon the lord soon wore away ; that upon the tenant con- tinued longer. For, when every thing came in process of time to be bought and sold, the lords would not grant a license to their tenants to

aliene, without a fine being paid ; apprehending that, if it was reasonable for the heir to pay a fine or relief on the renovation of his paternal estate, it was much more reasonable that a stranger should make the same acknowledgment on his admission to a newly purchased feud. In England these fines seem only to have been ex- acted from the king's tenants in capite, who were never able to aliene without a license : but as to common persons they were at liberty, by Magna Charta, and the statute of quia emptores (if not earlier), to aliene the whole of their estate, to be. holden of the same lord as they themselves held it of before. But the king's tenants in capite, not being included under the general words of these statutes, could not aliene without a licence; for, if they did, it was in ancient strictness an absolute forfeiture of the land ; though some have imagined otherwise. But this severity was mitigated by statute 1 Edward III. c. 12, which ordained that, in such case, the lands should not be forfeited, but a reasonable fine be paid to the king. Upon which statnte it was settled, that one-third of the yearly value should be paid for a license of alienation ; but, if the tenant presumed to aliene without a license, a full year's value should be paid. These fines were at last totally taken away by statute 12 Car. II. c. 24. See Knigiit-service.

Fine OF Lands. 'The law on this subject,' says Tomlins, ' of itself very extensive, is also closely implicated with that of recoveries. A fine, finis, or finalis concordia, from the words with which it begins (and, also from its effect in putting a final end to all suits and con- tentions,) is a solemn amicable agreement or composition of a suit (whether that suit be real or fictitious) made between the demandant and tenant, with the consent of the judges ; and en- rolled among the records of the court, where the suit was commenced ; by which agreement free- hold property may be transferred, settled and limited.' See Cruise on Fines, 1st. edit. 4. 89.

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Shepherd says, Sometimes it is taken for a final agreement or conveyance upon record for the settling and securing of lands and tenements;

and so it is designated by some to be an acknow- ledgment, in the king's court, of the land or other things to be his right that doth complain : and by others a covenant made between parties and recorded by the justices; and by others a friendly, real, and final agreement amongst par- ties, concerning any land, or rent, or other thing whereof any suit or writ is hanging between them in any court : and by others more fully an in- strument of record of an agreement concerning lands, tenements, or hereditaments ; duly made by the king's license, and acknowledged by the parties to the same, upon a writ of covenant, writ of right, or such like, before the Justices of the common pleas or others thereunto autho- rised,

and engrossed of record in the same court ; to end all controversies thereof, both between themselves which be parties and privies to tlie same, and all strangers not suing or claiming in due time. Shep. Touchst. c. 3. and the authori- ties there cited.

The distinguishable properties of a fine are,

1. The extinguishing dormant titles by barruig strangers; unless they claim within five years.

2. Barring the issue in tail immediately. (But not barring the remainders or reversions, which depend on the estate-tail barred ; except where the tenant in tail has the immediate reversion in fee in himself. (See Cruise on Fines, 2d edit. 17(3. 1 Show. 370. 1 Salk. 338. 4 Mod. 1.) 3. Binding Femmes Covert, see post, IV. — These constitute the peculiar qualities on account of which a fine is most usually, if not always, re- sorted to, as one of the most valuable of the common assurances of the realm ; being now in fact a fictitious proceeding to transfer or se- cure real property by a mode more efficacious than ordinary conveyances. 1 Inst. 121. a note 1, 2, for which see at full length, Mr. Hargrave's excellent abridgment of the History of Fines and their purposes.

Fines being agreements solemnly made in the king's courts were deemed to be of equal noto- riety with judgments in writs of right; and there- fore the common law allowed them to have the same quality of barring all who should not claim within a year and a day. See Plowd. 357. Hence we may probably date the origin and frequent use of Fines as feigned proceedings. But this puissance of a fine was taken away by stat. 34 E. III. c. 16; and this statute continued in force till Stat. 1 Ric. III. c. 7, and 4 H. VII. c. 24, which revived the ancient law, though with some change ; proclamations being required to make fines more notorious, and the time for claiming being enlarged, from a year and a day to five years. See post, 1. The force of fines on the rights of strangers being thus regulated, it has ever since been a common practice to levy them merely for lictter guarding a title against claims, which, under the common statutes of limitation, might subsist with a right of entry for twenty years and with a right of action for a much longer time. 1 Inst, ubi supra, and see post.

Fines, for offences, or pecuniary punishment, or as a recompense for an offence committed against the king and his laws, or against the lord of a manor. In these cases a man is said finem facere de transgressione cum rege, &c. Origi-

nally, perhaps, all punishments were corporal : but after the use of money, when the prohts of the courts arose from the money paid out of the civil causes, and the fines and confiscations in criminal ones, the commutation of punishments was allowed of, and the corporal punishment, which was only in terrorem, changed into pecu- niary, whereby they found their own advantage.

Thus arose the distinction between greater and less offences; for in the crimina raajora there was at least a fine to the king, which was levied by a capiatur ; but upon the lesser of- fences there was only an amercement, which was affeered, and for which a distringas, or action of debt lay. 2 New. Ab. 502. The discretionary fines (and discretionary length of imprisonment), which the courtsof justice are enabled to impose, may seem an exception to the general rule, that the punishment of every offence is ascertained by the law. But the general nature of the punish- ment is in these, as in other cases, fixed and de- terminate; though the duration and quantity of each must frequently vary, from the aggravations, or otherwise, of the ofl'ence, the quality and con- dition of the parties, and from innumerable other circumstances.

The quantum in particular of pecuniary fines, neither can nor ought to be ascertained by an in- variable law. Our statute law, therefore, has not often ascertained the quantity of fines, nor the common law, ever; it directing certain offences to be punished by fine in general, without speci- fying the certain sum; which is fully sufficient when we consider that, however unlimited the power of the court may seem, it is far from being wholly arbitrary; but its discretion is regulated by law. For the Bill of Rights, stat. 1 W. & M. Stat. 2, c. 2. has particularly declared, that exces- sive fines ought not to be imposed, nor cruel and unusual punishments inflicted; and the same statute further declares, that all grants and pro- mises of fines and forfeitures of particular persons before conviction, are illegal and void. Now the Bill of Rights was only declaratory, of the old constitutional law ; and accordingly we find it expressly holden, long before, that all such pre- vious grants are void; since thereby, many times, undue means, and more violent prosecu- tion, would be used for private lucre, than the quiet and just proceeding of law would permit. 2 Inst. 48.

The reasonableness of fines in criminal cases has been usually regulated by the determination of Magna Charta, c. 14, concerning amercements for misbehaviour by the suitors in matters of civil right. ' Liber homo non amercietur pro paryo delicto nisi secundum modum ipsius de- licti, et pro magno delicto, secundum magnitu- dinem delicti; salvo contenemento suo : et mercator eodem modo, salva mercandisa sua ; et villanus eodem modo

amercietur, salvo wainagio suo.' A rule that obtained even in Henry II's time (Glan. 1. 9. cc. 8, 11.) and means only, that no man shall have a larger amercement imposed upon him than his circumstances or personal es- tate will bear: saving to the land-holder his con- tenement or land ; to the trader liis merchandise ; and to the countryman his wainage or team and Vol. IX.

instruments of husbandry. In order to ascertain which, the great charter also directs, that the amercement, which is always inflicted in general terms (sit in misericordia) shall be set, ponatur, or reduced to a certainty by the oath of good and lawful men of the neighbourhood. Which me- thod of liquidating the amercement to a precise sum, was usually performed in the superior courts by the assessment or affeerment of the co- roner, a sworn officer chosen by the neigh- bourhood, under the equity of the stat. West. 1 . c. 18 ; and then the judges estreated them into the exchequer. F. N. B. 76. But in the court- leet and court-baron it is still performed by affeerors or suitors sworn to afferee, that is tax and moderate the general amercement according to the particular circumstances of the offence and the offender : the affeeror's oath is conceived in the very terms of Magna Charta, Fitzh. Surv. c. 11. Amercements imposed by the superior courts on their own officers and ministers were affeered by the judges themselves; but when a pecuniary mulct was inflicted by them on a stranger (not being party to any suit) it was then denominated a fine. 8 Rep. 40. And the ancient practice was, when any such fine was imposed to enquire by a jury quantum inde regi dare valeat per annum, salva sustentatione sua etuxoris, et liberorum suorum. Giib. Exch. c. 5. And since the disuse of such inquest it is never usual to assess a larger fine than a man is able to pay, without touching the implements of his livelihood : but to inflict corporal punish- ment, or a limited imprisonment, instead of such fine as might amount to imprisonment for life. And this is the reason why fines in the king's court are frequently denominated ransoms, be- cause the penalty must otherwise fall upon a man's person unless it be redeemed or ran- somed by a pecuniary fine. Mirr. c. 5. § 3. Lamb. Eir. 575. According to an ancient maxim, qui non habet in crumena luat in corpore. Yet where any statute speaks both of fine and ransom, it is holden that the ransom shall be treble to the fine at least.

FiNERs, or Refiners, of Gold and Silver, persons who purify and part those metals from coarser ones by fire and acids. They are also called parters in our old law-books, and some- times departers.

FiNE-STiLLiNG, that branch of the art of dis- tilling which is employed in distilling the spirit from treacle, or other preparations or recrements of sugar. It is so called by way of distinction from malt-stilling. This operation is the same with that used in making the malt spirit ; a wash of the

saccharine matter being made with water, from treacle, &c., and fermented with yeast. It is usual to add in this case, however, a consider- able portion of malt, and sometimes powdered jalap, to the fermenting backs. The malt accel- erates the fermentation, and makes the spirit come out the cheaper ; and the jalap prevents the rise of any musty head on the surface of the ferment- ing liquor, so as to leave a greater opportunitv for the free access of the air, and thus to shorten the work, by turning the foamy into a hissing fer- mentation.

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FINE'SSE, w.s. Fr. Artifice; stratagem : an unnecessary word which is creeping into the language. — Jolmson.

A circumstance n'jt much to be stood upon, in case it were not upon some finesse. Hat/ward.

In what the world calls a suit of clothes, embroidery is sheer wit ; gold fringe is agreeable conversation ; gold lace, repartee ; a huge long peruke, humour ; and a coat full of powder very good raillery : all which require abundance of finesse and delicatesse to manage with advantage, as well as a strict observance of tlic times and fashions. Swift.

But he (his musical finesse was such.

So nice his ear, so delicate his touch)

Made poetry a mere mechanic art •,

And every warbler has his tune by heart. Cowper.

FINET (Sir John), an English writer, des-" cended from an ancient family of Italy, was born near Dover in 1571. He was brought up at court, where he made himself by his wit a fa- vorite with James I. In 1614 he was sent into }■ ranee upon public business, and soon after was knighted. In 1G26 he was made assistant-mas- ter of the ceremonies. He was the author of Fineti Philoxenus, some choice observations touching the reception and precedency, &c., of foreigTi ambassadors in England. He also trans- lated from the French, The Beginning, Continu- ance, and Decay, of Estates, 1606.

FINGAL, king of Morven, in ancient Cale- donia. He flourished in the third century ; and, according to the Irish histories, died A. D. 283, although there is some reason from Ossian's poems for placing his death a few years later. Fingal was descended in all probability from those Celtic tribes who were the first inhabitants of Britain. Tradition, and the poems of Ossian, give him a long line of royal ancestors, such as Combal, Trenmor, Trathal, &c., who had all reigned over the same territory. Whether this territory was bounded by the Caledonian forest, or extended somewhat farther south towards the Roman province, is uncertain ; but it doubtless extended over all the North and West Highlands, comprehending the Hebrides, whose petty chiefs were all subject to the king of Morven. His principal place of residence was Selma, which was probably in the neighbourhood of Glenco, supposed to be the Cona of (Ossian ; though some imagine it to have been in Strath-Conan in Moray. The truth seems to be, that, as Fingal and his people lived by hunting, tliey often shifted their habitation. Hence, in all parts of the Highlands, we find in the names of places, build- ings, &c., such monuments as justify their seve- ral claims for the honor of I'ingal's residence. I'ingal acquired great fame by his prowess in arms. He made many successful incursions into the Roman province, whence he carried away spoils ; and by sea we find him frequently mak- ing voyages to Scandinavia, the Orkneys, and Ireland ; called by Ossian Lochlin, Innistore, and IJllin. The time of his death is uncertain.

'The character of Fingal,' Dr. Blair observes, speaking of him as he appears in Ossian, ' is perhaps the most perfect that was ever drawn by a poet, for we may boldly defy all the writers of antiquity to show us any hero equal to Fingal. Throughout the whole of Ossian's works he is presented to us in all that variety of lights which

give the full display of a character. In him con- cur almost all the qualities that can ennoble human nature; that can either make us admire the hero, or love the man. He is not only un- conquerable in war, but he makes his people hap})y by his wisdom in the days of peace. He is truly the father of his people. He is known by the epithet of ' Fingal of the mildest look,' and distinguished on every occasion by humanity and generosity. He is merciful to his foes, full of affection to his children, full of concern about his friends, and never mentions Agandecca, his first love, without the utmost tenderness. He is the universal protector of the distressed ; none ever went sad from Fingal.' The controversy respectingthe genuineness of the originals of these celebrated poems, at one time so long and so ably defended by the partizans on each side the ques- tion, we need not here enter upon. A real hero of the above name seems to be known to history. On the subject of the poems in question, see Ossian.

FINGER, n.s. & u.a."\ Sax. pinseji, from

FiNGERFERN, ˆ panjefi, to hold ; Sw.

Fingering, i finder ; Goth. Jinge ;

Finger-stone. J Relg. vinger. See

Fang. The flexible member of the hand, by which we seize, or hold ; the hand ; any instru- ment of work ; a small measure of extension : fingerfern is a plant (asplenum) ; finger-stone, a fossil (selenites) : fingering, the act of touching lightly ; manner of playing music ; fine or deli- cate work.

Woo to you wise men of lawe, for ye chargen men with birthuns whiche thei moun not berts : and ye you silf with your ofyitgir toucheu not the heuynessis.

Widif. Luk. xi.

Not any skilled in loops oi fingering fine. With this so curious net-work might compare.

Spenser.

You seem to understand me. By each at once her choppy finger laying Upon her skinny lips. Shakspeare. Macbeth.

Go, get you gone, and let the papers lie ; You would he fingering them to anger me.

Shakspeare, She hath broke the lute ; 1 did but tell her she mistook her frets. And bowed her hand to teach her fingering. Id.

With what eye should we have beheld this stone, which was hewen and written with the very finger of God. Bj>. Hall's Contemplations.

One of these bows with a little arrow did pierce through a piece of steel ihree fingers thick. Wilkins. Diogenes, who is never said.

For aught that ever I could read.

To whine, put finger i' the' eye, and sob.

Because h' had ne'er another tub. Hudihras.

Fool, that forgets her stubborn look. This softness from ihy finger took. Waller.

Go now, go trust the wind's uncertain breath. Removed iour fingers from

approaching death ; Or seven at most, when thickest is the board.

Dry den.

The hand is divided into ionv fingers bending for- ward, and one opposite to them bending backwards, and of greater strength than any of them singly, which we call the thumb, to join with them severally or united ; whereby it is fitted to lay hold of objects of any size or quantity. Ray.

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One thai is covetous is not so highly pleased with the ineer siijht and finyering of money, as with the thoughts of his being considered as a wealthy man.

Grew. His ambition would needs he Jiiigering the sceptre, and hoisting him into his father's throne. South.

A hand of a vast extension, and a prodigious num- ber oi fingers playing upon all the organ pipes of the world, and making every ono sound a particular note. Keil against Burnet. The fingers and thumb in each hand consist of fif- teen bones, there being three to each finger. Quiiicy.

Poor Peg sewed, spun, and knit, for a livelihood, 'till hei fingers' ends weie sore.

Arbuthnot. John Bull. I tread his deck. Ascend his top-mast, through his peering eyes Discover countries, with a kindred heart Suffer his woes, and share in his escapes j While fancy, like the finger of a clock. Runs the great circuit, and is still at home.

Cowper. Thy Druids struck the well-hung harps they bore With fingers deeply dyed in human gore ; And, while the victim slowly bled to death. Upon the rolling chords rung out his dying breath.

Id. Young Philanthropy, with voice divine. Convolves the adoring youth to Virtue's shrine ; Who with raised eye and pointing finger leads To truths celestial, and immortal deeds. Darwin, Anon her thin y/zn fijigers beat the wall

In time to his old tune ; he changed the theme.

And sung of love ; the fierce name struck through all

Her recollection. Byron.

FIN'GLE-FANGLE, n. s. From Fangle, which see. A trifle ; a burlesque word.

We agree in nothing but to wrangle About the ˆ{ighleˆt fingle-f angle, Hudihras,

VIKICAL, adj. "ˆ Apparently from Fine,

¥ iti' iCALiˆY, adv, > which see. Nice;over-

Fin'icalness, 71. s. y particular ; foppish. A low and burlesque word.

A whoreson, glassglazing, superserviceable, _ˆm'cai rogue. Shakspeare, King Lear,

I cannot hear di finical fop romancing, how the king took him aside at such a time; what the queen said to him at another. L'Estrange.

Taylor and Barrow arc incomparably the greatest preachers and divines of their age. It is true they are both incompti or rather exuberant. But it is for such little writers as the preachers of Lincoln's Jnu to hide their barrenness by the finicaltwss of cul- ture. Warburton to Hurd,

Fining of Wines. The usual method of fining down wines, so as to render them expe- ditiously bright, clear, and fit for use, is this : — Take an ounce of isinglass, beat it into thin shreds with a hammer, and dissolve it by boiling in a pint of water ; this when cold becomes a stiff jelly. Whisk up some of this jelly into a froth with a little of the wine intended to be fined, then stir it well among the rest in tlie cask, and bung it down tight ; by this means the wine will become bright in eight or ten days. This method, however, is found to be best suited to the white wines ; for the red ones the wine- coopers commonly use the whites of eggs beat up to a froth and mixed in the same manner with their wines. The method by vvhicli these vis- cous bodies act in the operation is this : they en- tangle themselves among the flying leo or light

fˆeculencies that float in the wine, and thus forming a mass specifically heavier than tiie wine, they sink through the body thereof like a net, carrying down all the foulness they meet in the way to the bottom; but when the wine is ex- tremely rich, so that its specific gravity is greater than that of the mass formed by the ingredients used in fining and the dregs or lee ; this mass then rises upwards, and floats at the surface of the wine, which will in this case also draw off" fine. See Clarification.

FINTSH, V, a. -% Fr. finir; Span, and

Finisher, w. s. y-Vori. fenecer ; hsLt. finio,

Finishing. j fto ; a Gr. , to produce.

— Ainsworth. To bring to an end ; complete ;

make perfect ; polish.

For which of you, intending to baild a tower, sittelii not down first and counteth the cost, whether he have sufficient to finish it. Luke xiv. 28.

When Jesus, therefore, had received the vinegar, he said, ‘ It is finished !’ and he bowed his head and gave up the ghost. John xix. 30.

The author and finisher of our faith. Hebrews,

They hindered the finishing of the building.

Esdras v. 73. This was the condition of those times ; the world against Athanasius, and Athanasius against it : half an hundred of years spent in doubtful trials which of the two, in the end, would prevail ; the side which had all, or else that part which had no friend but God and death ; the one a defender of his innocency, the other Vi finisher of all his troubles. Hooker.

He that of greatest works is finisher, Oft does them by the weakest minister.

Shalispeare,

0 prophet of glad tidings ! finisher

Of utmost hope. Milton’s Paradise Lost,

Though here you all perfection should not find. Yet is it all the Eternal Will designed ; It is a, finished work, and perfect in his kind.

Blackmore.

1 would make what bears your name a.s finished as my last work ought to be ; that is more finished than the rest. Pope.

A poet uses episodes ; but episodes, taken sepa- i&tely, finish nothing. Broome on the Odyssey,

When these are once stirred, there wants nothing but the assent of the will, and then the work is finished. Mason,

I am out of Humanity’s reach,

I vaMst finish my journey alone. Never hear the sweet music of speech ;

I start at the sound of my own. Cowper.

FINISTERRE, Lat. finis terra;, i.e. land's end. A department of France, bounded on the north-west and south by the sea, and on the east by the departments of the North and Morbihan. It is about fifty miles long from north to south, and between forty and forty-five broad from east to west, comprehending the west part of the ci- devant province of Bretagne. It is the most western part of Fiance, and contains the five arrondissements of (Juimper, Brest, Chateauliii, Morlaix, and Quimperle. Quimjier is the capital, but Brest its largest town ; the Aulne and the Oder are the chief rivers. The climate here is very wet, and the soil not very fertile in the interior : along the coast good buck-wheat, oats, and flax are grown ; the lisheries are abundant, and the pasturage is good. The manufactures are woollen, coarse linens, and leather.

FI'NITE, adj. ~\ Lat. finitus, participle Fi'nitei.f.ss, i offinio. See Finish. Li-

Fi'nitely, arfy. smited; bounded; having Fi'niteness, n. 5. i anend ifinitelessisbound- FiN'iTUOE. J less, a word hardly worth perpetuating while we have the far better one infinite to express the same sense : finiteness and tinitude, mean limitation; state of being finite ; confinement within boundaries.

Servius conceives no more thereby than .a finite number for indefinite. Browne's Vulgar Errours.

It is ridiculous unto reason, and Jintteless as their desires. Id.

They are creatures still, and that sets them at an infinite distance from God ; whereas all their excel- lencies can make them huijiniteli/ distant from us.

Stillirujjieet.

Finite of any magnitude holds not any proportion to infinite. Locke.

I ought now to unbay the current of my passion, and love without other boundary than what is set by the Jiniteness of my natural powers. Norris,

That supposed infinite duration will, by the very supposition, be limited at two extremes, though never so remote asunder, and consequently must

needs be finite. Bentley.

Finitude, applied to natural or created things, im- ports the proportions of the several degrees of affec- tions, or properties of these things to one another; infinitude, the unboundedness of these degrees of affections, or properties. Clieyne.

Sometimes he doth act in methods of wisdom, and by rules of justice, surpassing our capacity to know, either from the finiteness of our nature, or the feeble- ness of our reason, or the meanness of our state and circumstances here. Barrow.

FINLAND, or Fixnland, a country of Euro- pean Russia, bounded on the north by Lapland, on the east by Russia, on the south by a gulf to which it gives name, and on the west by the gulf of Bothnia. It was divided by tlie Swedes, who formerly possessed the sovereignty, into Finland Proper and East Bothnia, an extensive country to the northward ; but the whole is now comprised under the general name of Finland, containing seven provinces, of which East Both- nia is the least fertile, [n superficial extent Finland is equal to England ; but the population, including Russian Finland and the islands of Aland, does not exceed 1,100,000. Though the pastures are good, the cattle are small, and the forests of firs furnish the principal articles of commerce, in wood, charcoal, timber, and plank. Game is abundant of various kinds. The lakes and riveis aboiuui in fish, and pearls are found on the coasts. At the bottom of the morasses earth is dug, from which iron is extracted. There are also some mines of lead. In the more favored districts rice, oats, and barley, are suc- cessfully cultivated, and wheat in particular situations. The exports of the country consist in tar, pitch, wood, iron, and copper.

The towns lie generally along the coast; the principal are Abo, the capital, Ilelsingfors, Nis- tadt, Wasa, and Uleaborg ; in the interior is Tavasthus, and adjacent to the southern frontier is the town of Wyborg. The houses, and even the public edifices, are generally built of wood ; yet the poorest of the peasantry have a small

building for the purpose of taking the warm bath. Thinly peopled as Fmlaiid still is, it was much more so in the middle of the eighteenth century ; the inhabitants continue visibly on the increase, although their habitations, particularly in the north, are very wretched. They speak a language quite different both from Russian or .Swedish ; this language is spoken also in Lapland, Esthonia, and ia part of Livonia. In point of religion the Finlanders are in general Luthe- rans.

The Fins are a race of people very distinct from their neighbours and

masters, the Russians. They are of a middle stature, fair complexion, generally red hair, their beards shaven. Their han-, parted at top, is suffered to hang over their shoulders. A thoughtful disposition, often darkening into melancholy, and a singular language, without prepositions, complete the picture of their national characteristic.

'The villages we saw,' says Mr. James, speak- ing of his journey from Wyburg to St. Peters- burgh, ' were of the meanest appearance and character, for whatsoever in this country is not made for display and show, is poor indeed; and, by our recollection of the different state of things we had left behind, Sweden was now as much raised as she had before been sunk on comparison. Instead of the neat-built red-ochred cottages, the road-side was disfigured by large dismal huts, with walls made of the round trunks of trees barely stripped of their bark, and resembling externally a casual pile of timber, rather than a human dwelling. The interstices of this frame- work were caulked '.vith moss and clay, and though a few glazed windows were seen, their place was generally supplied by square open crannies. These structures called to mind the first rude efforts of primitive man after he left the shelter of the forest-oak, and looked as if age after age had passed over the heads of the people without their attempting any improvement in the arts of civil life. The ancient Russian Chro- niclers, who speak of the founder of any place as having cut the town (roubitgorod) might easily be supposed to be describing in that phrase the builders of the present day ; — so little diff'erent i.s the modern process ; the felling of the timber in fact, is the only part of the labor which a peasant thinks it behoves him to calculate upon when about to erect his habitation.

*' The cottages of the islanders,' says our tra- veller, * are rough-hewn log-houses, and they were themselves people apparently of such sim- ple manners and habits, as their secluded situa- tion and scanty number might lead one to expect; each rustic householder was provided with the tools and implements of a dozen necessary arts or professions ; performing for himself, with equal address, the duties oif carpenter, shoemaker, tailor, fisherman, baker, miller, &c. So little was the division of labor studied, or the appro- priation of means, that we observed the corn mills almost equalled in number the houses of the villagers ; they were cheap and of simple form, acting by sails constructed of wooden planks, and their mill-stones shaped like the querne or old Celtic machine, for grinding with*

the hand. Luxuries, sucli as ochre paint for their cabins, or coats of woollen

*cloth, where sheeps-skins would suffice, were not common. Caps of the most ordinary fur served as covering for their heads ; and for their feet, the want of shoes was supplied by a mis-shapen bag of dried seal-skin : the harness of their horses consisted of nothing more than a plain collar attached to the shafts of the cart or sledge ; the horse's neck was thrust through, and he had nothing to do but proceed ; the contrivance answers all the purposes of draught, because neither here nor in Sweden is the animal trained to resist the weight of a carriage on a descent, however steep it may be.**

Speaking of his arrival at the chief town of the southern frontier, he says, 'I gazed with wonder at the spectacle that presented itself in the streets of Wyborg; the glare of white houses, their green roofs and oriental cupolas, the noble mansions of the wealthy, and the religious fane, all so spacious and splendid in comparison of what we had lately been accustomed to see ; and yet above all, the new costume of the by-standers dressed in long caftans, their bare necks, their flowing beards, their sash, cap, and boots of red, were altogether objects so singular, that the spectacle impressed itself on my mind rather as a dream of the morning than as a scene of real life. The men seemed quite another race of beings ; no longer the modest homely Fin, but persons of strong masculine habit, carrying a stubborn and listless mien, that, combined with their majestic stature, seemed not altogether de- void of dignity : while the colored ornaments with which they were set off lent them an air of grotesque magnificence, not ill according with the showy buildings that surrounded us ; every object, in short, which met our eyes, partook of the same character, and bore a hint of Asiatic origin.' (p. 224.)

*Dr. Clarke, who visited that part of Finland which borders on the top of the Bothnian Gulf, thus describes the dress of the inhabitants of those regions. ' The pure costume of the Finland peasants is very elegant ; we saw it here gene- rally worn. It consists, among the men, of a jacket, with pantaloons, buskins, and a ye'low sash, worn as a girdle round the loins. The sash, although generally yellow, is sometimes red, and sometimes it is variegated with flowers. The buskins are bound about the ancles with scarlet garters, ending in a black tassel. The jacket and pantaloons are of the same color, and generally white ; but blue, black, and gray, are also used. Some of the' men, but very few, ap- pear in long white coats, bound with the same sort of sash with the Don Cossacks. The dress of the women resembles the costume of the fe- males of the Venetian territory, and is very beau- tiful. They appear in a short scarlet or striped vest, made as gaudy as possible, with large and loose shift sleeves of very white linen, and white hoods or handkerchiefs upon their heads. The vests are often of silk or rich damask, embroi- dered with large brocade flowers.**

One I’ˆinnish custom mentioned by Mr. James would provide so appropriate an occupation for a numerous body of respectable femak’S in lliis

country, and keep them out of mischief so much to the peace and comfort of their neighbours, that we cannot but refer to it. ‘ The solemnisa- tion of marriages takes place only once a year, and that on a fixed day in the teeming autumn. Before this time arrives, the expectant lover is not permitted, by the custom of the land, to pay his addresses in person to the object of his wishes : his offer is made by sending a piece of money, that is accepted or not as the fair one is inclined to approve or reject his suit : but both the conveyance of this token of love, and the whole of the after- ceremonials of courtship, are carried on through the intervention of some old woman of the village, whose occupation and calling may seem enviable to some bustling gen- tlewomen in other countries, being that of a re- gularly established match-maker.’ (p. 214, 215). Finland was formerly an independent king- dom, then an archduchy annexed to Sweden. In 1742 great part of it was conquered by the Rus- sians; but ceded again to Sweden except Carelia, Kexholm, &c. In the twelfth century great pains were taken for the conversion of the Finns to Christianity ; and Henry, who was bishop of Upsal in 1157, fell a martyr to his zeal in carry- ing on that pious undertaking. That prelate founded the first cathedral in Finland at Kanda- moke ; but the see was afterwards removed to Abo, which lies in the neighbourhood of the for- mer. Martin Skytte and Peter Serkilar were the first preachers of the Lutheran doctrine here. It was in 1808 that Finland was overrun by a Russian army, and annexed to that empire ; its vicinity to Petersburgh, and its advantages for naval purposes, had long made its conquest a favorite object with that court : East Bothnia and Kemi-Lappmark shared the same fate.

On the east of the Baltic is the Gulf of Fin- land, eighty leagues long, and from eleven to twenty-two broad. Its entrance is between Spinthamer Point in Estonia, and Hangoe-head in Finland. The latter point is the extremity of a peninsula, with a fire tower, and off it several islands, forming a port, defended by some batte- ries. The greatest depth of the gulf is sixty fathoms ; but it is encumbered with a vast num- ber of rocky islands and reefs, level with the water, distinguished by fire beacons, or flags of different colors, hoisted on high wooden crosses, to superintend which two Russian galliots are constantly employed, while the gulf remains open ; nevertheless, shipwrecks are extremely frequent.

I’TNMARK, an extensive province of Sweden, lying to the north of Norway, and usually consi- dered a part of Lapland. It is divided into four districts. West and East Finmaik, Senjen, and Tromsoe. The inhabitants derive their principal subsistence from fishing; and it is only on the coast

that human beings are to be met with in any number. To this province belong several islands, on one of which, Magheroe, is the North Cape, the most northern promontory of Europe. Finmark was ceded to Sweden with the rest of Norway in 1814. It contains 27,000 inhabi- tants, of whom 6000 are Laplanders.

*FINNI, or Fr.NNi, the ancient people of Firi- ningia; * whose ferocity,' says Tacitus, ' was*

extraordinary, poverty extreme, herbs their food, skins their covering, and the ground their coucli : regardless of man and of gods, they attained to a very difficult thing, not to have a single wish to form.'

FINNINGIA, or Fenningia, in ancient geography, the proper reading for Eningia in Pliny, which he makes an island, but is more truly a peninsula : now called Finland.

Fl'NOCHIO, n. s. A species of fennel ; a plant.

FIONDA, or Phionda, anciently Phaselis, a decayed city of Asia Minor, on the west coast of the Gulf of Satalia. It is called Tekrova by the Turks, and is still the see of a Greek bishop. It is situated on a small peninsula, at the foot of the mountain Yakhtalu. Here are still three ports and a lake, as described by Strabo (though the last is now a mere swamp), together with the ruins of a theatre, 160 feet in diameter, which has had twenty-one rows of seats. Some large sar- cophagi, of the finest marble, stand on the beach. Two bear a human figure, in low relief, on the lid, and are sculptured with various subjects ; but the sea is making rapid and destructive en- croachments here. Twenty-six miles south of Adalia.

FIORENZO (St.), a sea-port on the northern coast of the island of Corsica, with 1500 inha- bitants ; it is fortified, but the air is unwhole- some from the vicinity of marshes. In 1783 the town was set on fire by lightning, and in great part consumed. It is six miles west of Bastia. Long. 9° 17′ 43″ E., lat. 42° 41′ 2″ N.

FI'PPLE, n. s. 'LaX. fibula. A stopper.

You must know, that in recorders, which go with a gentle breath, the concave of the pipe, were it not for the fipple that staiteneth the air, much more than the simple concave, would yield no sound. Bacon.

FIR, \ Sax. pijih; Swed. yi

Fir-tree. \fyr ; Welsh _/)/i/r ; all perhaps from fire, from its inflammable nature ; or from Goth, thar ; Sax. taer, a drop, as Rlr. Thomson conjectures, ‘ which also signifies gum or tar.’ A species of pinus.

lie covered the floor of the house with planks of fir. 1 Kings.

‘Xhp fir-trees rejoice at thee, and the cedars of Le- banon, ha. xiv. The spiring ˆr and stately box. Pope.

Fir, in botany. See Abies and Pinus.

Fir Plantations. It has been stated by the author of the Essays on Rural Affairs that, in tlie vicinity of plantations of the fir kind, houses can be raised at so little expense, and the roofs are so much straighter and better than the ordi- nary ones, that settlers in such situations are in- duced to make their houses much neater and more commodious than in other places ; and, besides, rails and other kinds of materials for dead fences, can be so easily procured, that the poor people are first enabled to have good well fenced gardens, and then commodious enclosures of larger extent ; the branches likewise afford fuel to them, which adds greatly to tlie comforts of their situation. The cutting and manufac- turing of the wood into various kinds of utensils furnish employment for a great many persons ;

population is thereby increased ; and, with an augmentation of population, its necessary conse- quences, the desire for land to }}rocure the ne- cessaries of life, and of course an increase of rent to the proprietor. These new settlers in the desert wastes of Scotland, like those in Americaˆ cultivate and improve the soil in proportion’ as the trees are removed from it. At this moment, it is added, Mr. G. Dempster, who will be long respected by his countrymen, sees fields on his estate rapidly converting, in this way, into culti- vated ground, and yielding him ten or twelve shillings per acre in rent, not only without any expense to himself, but after having derived a considerable profit from tlie sale of woods of his own planting, which grew upon land that twenty- five years ago was not worth to him above two- pence the acre, and which might have remained in that state perhaps for ages to come, had it not been planted at all. It is contended by the same writer, that it is by a judicious manage- ment of this sort, that men of large landed estates, by a little fore-sight, find themselves en- abled to provide both employment and subsist- ence, with much profit, to a numerous people, who must otherwise have either remained in a destitute condition, or have abandoned a country, which did not properly provide for their accom- modation.

It may be remarked likewise that a plantation, of Scotch firs may be made at much less expense than of any other sort of trees in those northern parts of the kingdom, as the young plants can be afforded at a lower price than any others. In Aberdeenshire, where planting is so general as to have become a sort of occupation, fir plants of two years growth, above which age no experienced planter will ever buy them, sometiires will be sold at the very low rate of fourpence the 1000, which consists of 1200 plants; and they formerly seldom exceeded eightpence ; on the average about sixpence, or one halfpenny the 100 ; but they have lately been considerably higher. There are men who make a business of forming plantations, who will undertake to com- plete the whole, enclosing and planting, at the distance of one yard each way, and uphold them for five years, that is, supply any deficiencies that may take place, at the rate of from ten to fifteen or thirty shillings the Scotch acre, which is nearly equal to one and a quarter English, according to the size of tlie enclosure, and the nature of the fence. In all cases of this kind, it is supposed that the plantations are of the extent of thirty or forty acres or upwards ; for, where the enclosures are smaller, the expense of enclosing is proportionably augmented. The charge is thus not only rendered moderate, but the whole of the expense that is to be incurred ascertained before the plantation is begun, l)y which the being involved in unforeseen diffi- culties is fully obviated.

Experience has fully shown that there is scarcely any soil so bad, or any exposure so bleak, that the fir-tree will not live in, if the plantation be of sufficient extent, and not upon the very summits of high peaked hills. They do not indeed bear the sea air very well, where they are much exposed to the severity of its

blasts ; nor is the wood ever of so good a (juality, or the tree long-lived, upon soils of the ilayey kind. It has been found that in the southern parts of the kingdom, the pineaster oears the sea blast much better than any otlier of the fir tribe. This is a discovery of great importance, and which deserves the attention of improvers in the way of planting. The spruce fir will however bear a still more exposed situa- tion than the Scotch fir; and after a few years from the time of planting it shoots up with still greater luxuriance". This is the case probably only in particular situations. But the cones are not to be had in equal abundance ; and the plants being more difficult in the rearing, they are sold at a much higher price, usually at about six shillings the 1000, fit for being planted out. It is a native of Sweden and Norway. In a good soil the silver fir also prospers well, and is a beautiful tree on account of the depth of its shade. A silver fir at Panmuc

measured in Sep- tember 1810, at the surface of the earth, eight feet four inches ; at four feet high, seven feet one inch ; length of the stem to the fork, forty- one feet ; total height, eighty feet. Several others in the same place are nearly as large. In the Ray Wood at Castle-Howard, there was at the same time a silver fir, in girth, at four feet high, eleven feet six inches, with a stem eighty feet high; total height, by estimate, 100 feet, and some others in the same wood nearly as large. The grand silver fir, as it is called, at Woburn, is in girth, at the same height, nine feet ten inches, with a stem of seventy-five feet ; total height, by estimate, 110 feet. Both these trees were measured in the summer of 1810.

But the price of the plants is too great to admit of large plantations of silver fir being made with advantage. Wherever the situation is bleak, and much exposed to strong blasts of wind, the plantation, however, must not only be of considerable extent, if the trees be expected to thrive, but they must be planted very close together, so that each plant may stand at the distance of from two to three feet at most from each other. The more exposed the situation is, the closer they should be planted ; as it may be observed that until the branches begin to inter- mix, and give a mutual support to each other, the trees never begin to advance with vigor. Where the plantations are thus thick, there is a necessity for beginning to thin them out at a pretty early period, so that after the tenth to the fifteenth year from the time of planting, persons must be constantly employed in thinning them : and there are very few situations, ind^eed, in which the thinnings cannot be disposed of to advantage, or in which such sorts of plantations cannot be made.

It has been remarked, by a writer in the transactions of the Bath Agricultural Society, that though he docs not think that the Scotch fir can, in this country, ever equal the yellow deal from the Baltic, yet it maybe worth propagating, as being useful in ordinary buildings. The drier the soil is on which this sort of timber grows, the slower is its progress ; but the closer its pores, the more superior its quality. Wjien planted in rich land these trees will shoot three or

four feet in a season, and equal, if not surpass the abele in growth. In his plantations, though chiefly confined to chalky banks, in a north-west exposure, the trees evince, that, when once rooted, few obstacles will prevent their profitable progress. From observing the mistakes of others in endeavouring to ornament their naked downs too suddenly, he has learnt the necessity of planting firs when only a foot in height, and by opening the ground some time before, inverting the turf at the bottoms of the holes, and throwing the mould upon it in hillocks to meliorate, his plantations succeeded well : for though the soil is scarcely six inches in depth, the firs set in 1766 are now thirty feet in height, and from two feet six inches to two feet in cir- cumference, at four feet from the ground ; some few planted

at the same time in a deeper soil, and warmer situation, are now about three feet round. And spruce firs, planted in 1776, like- wise in a tolerably good soil, are now forty feet in height, and from two feet ten inches and a half to three feet round. But he has seen plantations that far surpassed either of these in growth ; they, however, occupied ground which was infinitely more valuable. See Piat'S.

FIRE, 71. s., V. a. k. v. n. ")

Fire'-arms, n. s.

Fire'-ball,

Ffre'-brand,

Fire'-breathing, adj.

Fire'-brush, n. s.

Fire'-cross,

Fire'- DRAKE,

Fike'-engine,

Fire'-flake,

Fire'-lock,

Fire'-man,

Fire'-mouthed, adj.

Fire'-new,

Fire'-office, n. s.

Fire'-pan,

Fire'-plug,

Fire'r,

Fire'-ship,

Fire'-shovel,

Fire'-side,

Fire'-stick,

Fire'-stove,

Fire'- WOOD,

Fire'-work,

Fi'ring.

Sax. pyfi; Icel. and Swed. ,/j//'; Belg. foir; Teut. feuer ; Fr. feu ; Ital. Juoco,fuogo ; Span, huego, fue- go ; Portug. Jogo. ' Vox antiquissi- ma Scytho-Phry- gica.' Serenius. Minsheu says, a. Gr. TTup ; from neb.i1K,fire. Mr. Thomson conjec tures that to this word, or the Coptic or, or Pers. ur, may have been prefixed the Coptic article piorp.'i. Ignition; a supposed igne- ous element; any thing that burns, or the state of burn- ing ; hence flame ; light; lustre ; and.

figuratively, that which provokes or inflames the temper ; enlivens the fancy or imagination ; the passion of love : to fire is to kindle ; set on fire, or a-fire (see letter A) ; inflame (figuratively), animate ; it is also used by Shakspeare for to drive away by fire : as a neuter verb it signifies to take fire ; be kindled or inflamed ; to dis- charge fire-arms : a fire-cross was once a Scot- tish or rather Highland signal to take arms, con- sisting of a wooden cross, having the ends burnt black, and in some parts smeared with blood, carried from one place to another. Upon refu- sal to send it forward, or to rise, the person who brought it would frequently shoot the other dead : firedrake is a fiery serpent: I suppose the pres- ter, says Dr. Johnson : fireman, an incendiary ; a person of fiery temper: fircnew, new from the

forge, or the melting-house : hrer, an incendiary : firestick, a lighted stick or brand : fireworks, shows of fire ; pyrotechnical performances : firing, fuel : the other compounds do not seem to re- quire explanation.

And now an axe is sett to the roote of the tre, and tliprefore every tre that makith not good fruyt schal be ki. doun. and schal be cast into the^ei-.

Wiclif. Lnk. ill. His firepans, and all the vessels thereof, thou shall make of brass. Exodus xxvii. 3.

Who among us shall dwell with the devouring ^re? Who among us shall dwell with everlasting burnings?

Isaiah xxxiii. His eyes red sparcling as theˆre glow His nose frounced full kirked stood He came criand as he were wood.

Chaucer. Romaunt of the Rose, fol. 130. Is this the battaile which thou vauntst to fight With that fire-ytiouthed dragon, horrible and bright? Spenser's Faerie Queene. Hcrmosilla courageously set upon the horsemen, and set fire also upon the stables where the Turks horses stood. Knolles.

A wise riche man is like the backe or stocke of the chimney, and his wealth theˆre; he receives it not for his own need, but to reflect the heat to others good. Sir T. Overburi/.

A little ˆre is quickly trodden out. Which, being suffered, rivers cannot quench.

Shakspeare. What_/?re is in my ears ? Can this be true ? Siand I condemned for pride and scorn so much ?

Id. Stars, hide your Jires ! Let not night see my black and deep desires. Id. He that parts us shall bring a brand from heaven And fire us hence. Id. King Lear.

Troy must not be, nor goodly Ilion stand ; Oar JirebraTid brother, Paris, burns us all.

Shakspeare. Armado is a most illustrious wight, A man oijirenew words, fashion's own knight.

Id. Some excellent jests, _/irene!C from the mint. Id. The king would have mc present the princess with some delightful ostentation, or pageant, or antick, or Jireii'ork. Id.

The surest way to prevent seditions is to take away the matter of them ; for, if there be fuel prepared, it is hard to tell whence the spark shall come that shall set it on fire. Bacon.

He sent Surrey with a competent power against the rebels, who fought with the principal band of them, and defeated them, and took alive John Chamber, ihe'iv firebrand. Id.

Pour of it upon z. firepan well heated, as they do rose-water and vinegar. Id. Natural History.

My. judgment is, that they ought all to be despised, and ought to serve but for winter talk by the fireside.

Bacon. We represent also ordnance, and new mixtures of gunpowder, wildfires burning in water, and unquench- able ; and s.\?,o fireivorks of all variety. Id.

They spoiled many parts of the city, and fired the liouscs of those whom they esteemed not to be their friends ; but the rage of the fire was at first hindred, and then appeased by the fall of a sudden shower of rain. Haytcard.

By the hissing of the snake. The rustling of the firedrake, I charge thee thou this place forsake, Nor of queen Mab be pratling. Drayton.

So inflamed by my desire. It may set her heart afire. Carew.

Others burned Moussel, and the rest marched zts a guard for the defence of these firers. Id.

Love no more is made By the fireside, but in the cooler shade. Id,

Happy are those that are from under the terrors of that law, which was given in fire, and infire shall be required. Bp. Hall's Contemplations.

Now see I fire-flakes sparkle from his eyes. Like to a comets tayle in the angrie skies.

Bp. Hall's Satires. Children, when they play v;\.h firesticks, move and whirl them round so fast, that the motion will cozen their eyes, and represent an entire circle of fire to them. I^igby on Bodies.

Nor can the snow that age does shed Upon thy reverend head. Quench or allay the noble _^re within. But all that youth can be thou art. Cowley.

He that set a fire on a plane-tree to spite his neigh- bour, and the plane-tree set fire on his neighbour's house, is bound to pay all the loss, because it did all arise from his own ill intention. Taylor.

Ammunition to supply their nevr fii-earms.

Clarendon. Culinary utensils and irons often feel the force of fire; as tongs, _//resAoueJs, prongs, and irons. Browne.

The ancients were imperfect in the doctrine of meteors, by their ignorance of gun-powder and fire- works. Id. The fire of love in youthful blood. Like what is kindled in brush-wood. But for a moment bums. Shadvoell. Love various hearts does variously inspire. It stirs in gentle bosoms gentle _/ire. Like that of incense on the altar laid ; But raging flames tempestuous souls

invade ; A fire which every windy passion blows. With pride it mounts, and with revenge it glows.

Dry den. Yet, if desire of fame, and thirst of power, A beauteous princess with a crown in dower, So_ˆreyour mind, in arms assert your right. Id. The neighbours are coming out with forks and fire- shovels, and spits, and other domestick weapons.

Id. Spanish Fryar. Infifeworks give him leave to vent his spite : Those are the only serpents he can write. Dryden.

I have eased my father-in-law of a firebrand, to set my own house in a flame. L'Estrange.

They bum the cakes, firing being there scarce.

Mortimer.

Firestone, if broke small, and laid on cold lands, must be of advantage. Id. Husbandry.

The fainting Dutch remotely _/;> <;, And the famed Eugene's iron troops retire.

S/nith.

I had last night the fate to drink a bottle with two of these firemen. Tatter.

Their fireworlis are made up in paper. Id.

Judge of those insolvent boasts of conscience, which, like so many fireballs, or mouth grenadoes, are thrown at our church. South.

Upon the wedding day, I put myself, according to custom, in another suit _/ ireneic, with silver buttons to it. Addison.

Our companion proposed a subject for a firework, which he thought would be very amusing. Id.

He sent his heralds through all parts of the realm, and commanded the fii-ecross to be carried ; namely, two firebra7ids set in fashion of a cross, and pitched upon the point of a spear. Haywood.

FIRE.

Did Shadrach's zeal my glowing breast iaspire. To -weary tortures, and rejoice in Jire? Prior.

By hisjireside he starts the hare. And turns her in his wicker chair. Id.

He brings, to make us from our ground retire. The reasoner's weapons and the poet's _/iVc.

Btackmore. The firestone, or pyrites, is a compound metallic fossil, composed of vitriol, sulphur, and an unmetal- lic earth, but in very ditYerent proportions to the seve- ral masses. It has its name of pyrites or Jirestone, from its giving fire on being struck against a steel much more freely than a flint will do ; and all the s;iarks bum a longer time, and grow larger as they f.ill, the inflammable matter struck from oft' the stone iiirning itself out before the spark becomes extin- guished. Hill's Mat. Med. Prime all yonx firelocks, fasten well the stake.

Gay. The fireman sweats beneath his crooked arms ; A leathern casque his vent'rous head defends. Boldly he climbs where thickest smoke ascends.

Id. He had fire in his temper, and a German blunt- ness j and, upon provocations, might strain a phrase.

Atterbury. There is another liberality to the citizens, who had suflFered damage by a great fire. Arbuthnut on Coins.

What art thou asking of them, after all ? Only to sit quietly at thy oy/n fireside. Id.

Our men bravely quitted themselves of the fire- tfiip, by cutting the spritsail tackle. Wiseman.

Though safe thou thiukest thy treasure lies. Concealed in chests from human eyes, A Jire may come, and it may be Bury'd my friend, as far frois thee. Granville.

They have no notion of life and^^re in fancy and ill words, and any thing that is just in grammar and in measure is good oratory and poetry to them. Felton. Exact Racine, and Corneille's nqhle fire. Taught us that France had something to admire.

Pope. The god of love retires ; Dim are his torches, and extinct his fires. Id.

Before the use oi fire-arms there was infinitely more scope for personal valour than in the modern battles.

Id. The same great man hath sworn to make us swallow his coin in fire-balls. Swift.

When you are ordered to stir up the fire, clean away the ashes from betwixt the bars witli the fire- bruth. Id.

New charms shall still increase desire. And time's swift wing shall fan ihe fire.

Moore's Fablts. Bookseller. The monsters of your Botanic Gar- den are as surprising as the bulls with brazen feet, and the fire-breathinij dragons, which guarded the Hesperian fruit. Darwin.

If bleak and barren Scotia's hills arise ; There plague and poison, lust and rapine grow ; Here peaceful are the vales, and pure the skies. And freedom ^"re the soul, and sparkles in the eyes.*

Beattie. Each at their departure took away a greater or less fire-brand, and the remains were scattered to the wind, which was to drive away every evil as it dis- persed the ashes. Brand's Antiquities.

FiiiE. Under this popuUir name for what is now more usually treated in works of science under the titles of caloric, heat, or combustion, ne may still classify a few exploded speculations, :n»portant ouly for the names attached to them.

The opinions of the ancients respecting fire were various and fanciful. Ignorant of the leading facts which a theory is required to account for, and unassisted by experiments or tools, they ge- nerally made use of words which conveyed no definite ideas. They called it an active fermen- tation, an intestine motion, a repulsive agent, and so forth; but no real attempt towards a rational investigation is to be found in their works. And, though some of their assertions seem to coincide with the more rational modem theories, yet that apparent coincidence must be considered as being accidental ; for it is not grounded upon any regular reasoning. It must be acknowledged, however, that almost all the opinions, either ancient or modern, respecting fire, may be divided into two classes ; for some of them asserted that fire was nothing more than a violent agitation, in some unknown manner, of the parts of burnmg bodies ; whilst others attri- buted it to something peculiar, and sui generis, which either existed in all combustible bodies, or was communicated to them. The former, which is called the mechanical hypothesis, was be- lieved and maintained by the most able philoso- phers of much earlier and much more enlightened times. The celebrated philosophers of the six- teenth century, Bacon, Boyle, and Newton, were of opinion that fire was no distinct substance from other

bodies, but that it consisted entirely in the violent motion of the parts of any body. As no motion, however, can be produced with- out a cause, they were obliged to have recourse to a mechanical force or impulse as the ultimate cause of fire in all cases. Thus Boyle tells us, that when a piece of iron becomes hot by ham- mering, ‘ there is nothing to make it so, except the forcible motion of the hammer impressing a vehement and variously determined agitation on the small parts of the iron.’ Bacon defines heat, which he makes synonymous with fire, to be an expansive undulatory motion in the minute par- ticles of a body, whereby they tend with some rapidity from a centre towards a circumference, and at the same time a little upwards. Sir Isaac Newton said nothing positive upon the subject ; but conjectured that gross bodies and light might be convertible into one another ; and that great bodies, of the size of our earth, when violently heated, might continue and increase their heat by the mutual action and re-action of their parts. But while the mechanical philo- sophers thus endeavoured to account for the phe- nomena of fire, upon the same principles which they judged sufficient to explain tiiose of the universe in general, the chemists as strenuously asserted, that fire was a fluid of a certain kind, distinct from all others, and universally present throughout the whole globe. Boerhaave j)arti- cularly maintained this doctrine ; and in support of it argued, that steel and flint would strike fire, and produce tiie very same degree of heat in Nova Zembla, which “they would do under the equator. Other arguments were drawn tVotn the increased weight of metalline calces, v/hich they supposed to proceed from tlie fixing of the element of fire in the substance whose weight was thus increased. By these experiments Mr. Roylc himself seems to have been staggered : as

lie published a treatise on the possibility of luaking fire and flame ponderable ; though this “was directly contrary to his own principles already (quoted. For a long time, however, the matter was most violently disputed ; and the mechanical philosophers, though their arguments were equally inconclusive with those of their ad- versaries, at last prevailed, through the prejudice in favor of Sir Isaac Newton, who, indeed, had scarcely taken any active part in the contest. The first of the chemists who attempted to form chemistry into a rcg’ular system, was John Joa- chim Becher; but the famous George Ernest Stahl (who was born in the year 1660, and died in the year 1734), by following Becher’s plan, continued to raise the edifice, endeavouring to collect the principal facts then known into a coherent system, by connecting them by means of general principles. This intelligent man, amongst other improvements, formed the fa- mous phlogistic theory of fire (see the article Combtjstion), which was almost

universally adopted, notwithstanding its insufficiency to ac- count for some of the most essential phenomena of combustion. This theory continued in vogue until towards the close of the last century. The experiments on which the modern theory of com- bustion was first developed were those of Dr. Black, concerning what he called latent heat ; on which some other names, such as absolute heat, specific fire, &c., have been bestowed. See Chemistry. From these discoveries it appeared that fire may exist in bodies in such a manner as not to discover itself in any other way than by its action upon the minute parts of the body; but that suddenly this action may be changed in such a manner as no longer to be directed upon the particles of the body itself, but upon external objects : in which case we then per- ceive its action by our sense of feeling, or disco- ver it by the thermometer, and call it sensible heat. It is certain, from the experiments just mentioned, that fire may exist in substances actually cold to tl\e touch. From this discovery made by Dr. Black, along with many others in electricity, and recorded at length in various articles of this work, it is now almost universally allowed that fire is a distinct fluid, capable of being transferred from one body to another. But when this was discovered, another question no less perplexing occurred, viz. what kind of a fluid it was ? or whether it bears any analogy to those with which we are better acquainted ? Here we find two fluids, viz. the solar light, and the electric matter, both of which occasionally act as fire, and which therefore seem likely to be the same. See Electricity. By the vulgar, in- deed, the matter has long ago been determined, and the rays of the sun as well as the electrical fluid have been promiscuously denominated ele- mentary fire. Philosophers, however, have with- held their assent. The most strange suppositions liave been made concerning the nature of both these fluids ; and on the most slender grounds, or rather on no grounds at all, they have been supposed to be phologiston itself, or to contain a large proportion of it. Mr. Scheele went so far in this way as to form an hypothesis, which he endeavoured to support by some experiments,

that fire is composed of dephlogisticated air and phlogiston. Bu-t it is now ascertained beyond dispute, that the result of such a combination is not fire, but fixed air : so that this hypothesis would have been altogether untenable, even though this discovery had not been made; be- cause the dephlogisticated air itself is not a simple but a compound substance ; and in all cases of combustion the one part of the air is se- parated from the other. It was long ago ob- served by Sir Isaac Newton, that heat was cer- tainly conveyed by a medium more subtile than common air ; because two thermometers, one in- cluded in the vacuum of an air-pump, the other placed in the open air, at an equal distance from the fire, would grow equally hot in nearly the same time. The consequence of this, had he pursued the thought, was, that fire itself was equally present in all places,

and as active where there was no terrestrial matter as where there was. New improvements in the air-pump have enabled succeeding philosophers to make more perfect vacuums, such as it has been sup- posed even the electric matter cannot pass through. It is not to be doubted, however, that even there the thermometer would be heated by a fire as well as in the open air. See Heat and Combustion.

The word fire has also been used both figu- ratively and incorrectly. The allegorical ex- pressions, of the fire of the imagination, the fire of youth, the fire of contention, and so forth, do not fall under the cognizance of natural philoso- phy,— but the scientific use of that word for ex- pressing heat without light, or light without heat, or lastly, things which have neither heat nor light, is in want of correction. Thus, phospho- rescent substances, like certain pieces of de- cayed wood, fish, &c., are frequently said to be on fire, whereas they are not attended with any degree of heat. Also the heat of fermenting sub- stances, and of other kinds of chemical combina- tions, has often been called their fire.

Fire, St. Anthony's. Erj'sipelas was first so called, it seems, in the south of F'rance, in the twelfth century, where, and when, this disorder was exceedingly prevalent, from the success of the monks of St. Anthony (whose profession it was to attend the sick, and who therefore carried the figure of a crutch upon the left shoulder) in curing it. They made great use of lard in these cures, hence their pigs were allowed to range free through the neighbouring grounds ; and that tiiey might be disting-uished from other pigs, bells were hung round their necks. These circum- stances account for the figure of St. Anthony, the Egyptian hermit of the fourth century, being represented with the pig, the bell, and the letter tau upon his shoulder. Fuquot in Molanum, de Inuiglnihus.

Fire, in theology. God has made several reve- lations of Himself under the appearance of fire : He appeared to Moses under the form of a fire burning in a bush ; the Holy Ghost descended on the apostles in tongues of fire ; and the camp of the Israelites was guided and conducted in the night-time by a pillar of fire. The .Tew:, kept up the holy fire in the temple. This holy fire descended from heaven, first upon the altai

in the tabernacle, at the consecration of Aaron and his sons to the priesthood, Lev. ix. 24. It afterwards descended anew on the altar in the temple of Solomon, at the consecration of tliat temple, 2 Chron. vii. 1. There it was constantly maintained by tlie priest, day and night, with- out

suffering it ever to go out; and with tliis all the sacrifices were offered that required fire. This fire, according to some of the Jewish writers, was extinguished in the days of Ma- nasseh ; but the more general opinion among them is, that it continued till the destruction of tlie temple by tlie Chaldeans ; after that it was never more restored ; but instead of it they had only common fire in the second temple.

The Chaldeans had a high veneration for fire, which they accounted a divinity ; and in the province of Babylon there was a city con- secrated to this usage, which was called the city of Ur, or of Fire. The Persians also adored God under the image or representation of fire, because it is fire that gives motion to every thing in nature. They had temples, which they called ‘ Pyraea,’ fire temples, set apart solely for the pre- servation of the sacred fire. They are said to have in that empire fires still subsisting, which have burnt many thousand years. The worship of the goddess V’esta (see Vesta) and of fire was brought into Italy by iE.neas and the other Trojans, who landed there ; but the Plirygians themselves had received it from the eastern na- tions. Fire was held in religious veneration among the Gauls ; and similar sentiments and practices have prevailed in several countries of America.

Vulcan was worshipped among the ancients, and particularly the Egyptians, as the inventor of Fire ; and Boerhaave has made it highly pro- bable, that the Vulcan of the heathens was the Tubal-Cain of the Hebrews, tlie first who ap- pears to have known the use of fire, and to have applied it in the fusion of metals and other pre- parations of chemistry. See Prometheus.

Fire, in theology, is frequently understood of the punishment of the wicked after death. See Hell.

Fire, Divination by. See Pyromancy.

FiRE-ARROw, in naval artillery, is a small iron dart furnished with springs and bars, toge- ther with a match impregnated with sulphur and powder, which is wound about its shaft. It is intended to fire the sails of the enemy, and is for this purpose discharged from a musquetoon or swivel gun. The match being kindled by the explosion, commimicates the flame to the sail against whicli it is directed, where the arrow is fastened by means of its bars and sprin2;s. This weapon ‘is peculiar to hot climates, parti- cularly the West Indies, where the sails being extremely dry by reason of the great heats, they instantly take fire, and of course set fire to the rigging, masts, and vessel.

Fire-Ball, in artillery. See Ball.

Fire-Ball, in Meteorology. See that article.

Fire-Barrels, a sort of small barrels used for fire-ships, of a cylindrical form, as best adapted to contain the reeds with which they arc filled, and more convenient for stowing be-

tween the troughs in the fire-room. The inside chambers should not be less than twenty-one inches, and thirty inches is suflJicient for their length. The bottom parts are first well stored with short double-dipped reeds placed upright ; and the remaining vacancy is filled with fire- barrel composition well mixed and melted, and then poured over them. The composition used for this purpose is a mass of sulphur, pitch, tar, and tallow. There are five holes, of three- fourths of an inch in diameter and three inches deep, formed in the top of the composition while warm ; one being in the centre, and the other four at equal distances round the sides of the barrel. When the composition is cold and hard, the barrel is primed by filling those holes with fuse-composition, which is firmly driven into them, so as to leave a little vacancy at the top to admit a strand of quick-match twice doubled. The centre hole contains two strands at their whole length, and every strand must be driven home with mealed powder. The loose ends of the quick-match being then laid within the barrel, the whole is covered with a dipped curtain, fastened on with a hoop that slips over the head of the barrel, to which it is nailed. The barrels should be made very strong, not only to support the weight of the composition before firing, when they are moved or carried from place to place, but to keep together whilst burning : for if the staves are too light and thin, so as to burn very soon, the remaining compo- sition will tumble out and be dissipated, and the intention of the barrels, to carry the flame aloft, will be frustrated. The curtain is a piece of coarse canvas, nearly a yard in breadth and length, thickened with melted composition, and covered with saw-dust on both sides.

Fire-bavins, or Fascines, are made of birch- heath, or other brush wood, whicli is tough and readily kindled. They are usually two or three feet long, and have all their bush-ends lying one way, the other ends being tied together with small cords. They are dipped in the compo- sition at the bush-ends, whose branches are afterwards confined by the hand, to prevent them from breaking off by moving about ; and also to make them burn more fiercely. They are then sprinkled with sulphur.

Fire-cocks. Church-wardens in London and within the bills of mortality, are to fix fire-cocks at proper distances in tlie streets, and keep a large engine and hand-engine for extinguishing fire, under the penalty of £lO by statute 6 Ann. c. 31. On the breaking out of any fire in London or Westminster, tlie constables and beadles of parishes shall repair to the place with their

staves, and assist in extinguishing it, and cause the people to work for that end, kc. Rewards for assistance are payable to the first turncock 105. — To the first engine not exceeding 30s. — The second not exceeding 20.s-. — The third lO.f. — To be paid by the churchwardens or ovei-seers, but not without the approbation of an alderman or justice of the peace. — The churchwardens, &c., to be repaid by the inhabitant if the fire begins in a chimney.

T/ie Fire Enoine is an apparatus of compara- tively modern invention, although the forcing-

pump, of which it is an application, is more than 2000 years old . There are laws still un- repealed which make it penal for persons to be unprovided with 'hand squirts' for the purpose of extinguishing fires, and the rude contrivances tiiat were employed for that purpose in the last century must still be in the recollection of many of our readers.

The apparatus for extinguishing fires, contrived by Mr. Newsham is exceedingly simple in the arrangement of its pai-ts, and, as such, appears best calculated to explain the construction of this important engine. It is siiown at fig. I, plate I. Hydraulics, and consists of a cistern A B, about three times as long as it is broad, made of thick oaken planks, tlie joints of which are lined with sheet copper, and easily moveable by means of a pole and cross bar C in the fore part of the engine, which is so contrived as to slide back under the cover of the cistern, and on four solid wheels, two of which are seen at D and E. The hind axle-tree, to which the wheel E and its opposite are fixed, are fastened across under the iDottora of the cistern ; but the fore axle-tree, bearing the wheel D, &c., is put on a strong pin or bolt, strongly fastened in a hori- zontal situation in the middle of the front of the bottom of the cistern, by which contrivance the two fore wheels and the axle-tree have a circular motion round the bolt, so that the engine may stand as firm on rough or sloping ground as if it was level.

Upon the ground next to the hind part of the engine may be seen a leathern pipe F, one end of which may be screwed on and off upon occa- sion to a brass cock at the lower end of the cis- tern : the other end is immersed in the water, supplied by a pond, fire-plug, &;c., and tlie pipe becomes a sucking pipe for furnishing the pumps of the engine by its working, without pouring water into tlie cistern. To the hind part of the cistern is fastened a wooden trough G, with a copper grate for keeping out stones, sand, and dirt, through which the cistern is supplied with water when the sucking pipe

cannot be used. The fore part of the cistern is also separated from the rest of its cavity by another copper grate, through which water may be poured into the cistern. Those that work the pumps of this engine move the handles visible at the long sides up and down, and are assisted by others who stand on two suspended treadles ; throwing their weight alternately on each of them, and keeping themselves steady by taking hold of two round horizontal rails, II, I, framed into four vertical stands, which reacli to the bottom of the cistern, and are well secured to its sides.

Over the hind trough there is an iron handle or key K, serving to open or shut a cock placed under it on the bottom of the cistern. L is an inverted pyramidal box or case which preserves the pumps and air-vessels from damage, and also supports a wooden frame M, on which stands a man, who, by raising or depressing, and turning about the spout N, directs the stream of water as occasion requires. This spout is made of two pieces of brass pipe, each of which has an elbow ; the lower is screwed over the upper end T of the pipe that goes tlirough the air-vessel, and the

upper part screws on to the lower by a screw o f several threads, so truly turned as to be water tight in every situation. The conic form of the spouting-pipe serves for wire-drawing the water on its passage through it, which occasions a fric- tion that produces such a velocity of the jet as to render it capable of breaking windows, &c., whilst the valves and leathern pipes of the engines have sufficient water-way to supply the jet in its greatest velocity. Leathern pipes of considerable length may be screwed at one end of the nozle of the engine, and furnished at the other end with a wooden or brass pipe for guiding the water into the inner apartments of houses, &:c. Be- tween the pyramidal box L, and the fore-end of the engine, there is a strong iron bar O, lying in a horizontal position over the middle of the cistern and playing in brasses supported by two wooden stands; one of which, P, is placed be- tween the two fore-stands of the upper rails, and the other is hid in the enclosure over the hind part. Upon proper squares of this bar are fitted, one near each end, two strong cross bars, which take hold of the long woodtm cylindrical handles, by means of which the engine is worked ; and the treadles by which they are assisted are suspended at each end by chains in the form of a watch- chain, and receive their motion jointly with the handles that are on the same side, by means of two circular sectors of iron fastened together, and fixed upon proper squares of the middle hori- zontal bar ; the two fore ones may be seen at Q; the two hind ones, represented on a large scale in fig. 2, differ from the former only in thickness ; for the fore sectors are made to carry only one chain each fastened by one end to their upper part, and by the lower end to the treadles ; whereas the sole of the two hind sectors is wide enough to carry two chains each ; one set fas- tened like those of the fore ones for the motion of the treadles : and the other two chains are fastened by their

lower ends to the lower part of these sectors, and by their upper ends to the top of the piston bars, in order to give them motion. See fig. 2, in which the hind sectors and their apparatus are represented as they would appear to a person standing betweeen the two fore-wheels, and looking at the hind part of the engine. The square over the letter A is the section of the middle bar, on which, right over the two barrels, are placed the two sectors BCA and DEA, forged together. E G H K and fg h k are the two piston-rods; and the openings between the letters G,II, and g,fi, are the spaces through which the hind parts of the two treadles pass. L and M represent two strong studs rivetted on the other side of the bars on which they are placed; and to each of these is fastened a chain like a watch-chain, fixed by their upper ends to the upper extremities D and B of the iron sectors by which tliey are drawn up and down alter- nately. These sectors give also an alternate motion. up and down to the piston-rods, by means of two other chains left white in the figure, in order to distinguish them from the others: these are fastened by their lower ends to the lower ex- tremities of the sectors E and C, and their upper ends, terminating in a male screw, are made tight to the piston-rods at I and F, by two nuts. The

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FIRE-ENGINE.

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shape of the piston-rods, and the size and situa- tion of the chains that give them motion, are so contrived, that the vertical axis of the pistons is exactly in the middle of the breadth of the per- pendicular part of the , chains, and the upper part of the piston-rod taken together. P Q re- presents one of the two cross bars through the ends of which pass the long handles to which tlie men apply their hands when they work the engine ; these cross

bars are fitted on the middle bar at some distance from the sectors. The otlier parts of this useful engine may be understood by the help of fig. 3, which represents a vertical section taken through the middle line of the hind part of the engine, as also the section of the air-vessel, and that of one of the barrels, and likewise the profiles of the hind sectors, and of several other parts. AB is the section of the bottom of the cistern, and C that of the hindmost axle-tree. D E is the vertical section of a strong piece of cast brass or hard metal so worked as to have a hollow in it, represented by the white part, and fixed to the bottom of the cistern : tliis reaches from the opening D through the cock W, and afterwards divides itself into two branches, so as to open under the two barrels ; one of these branches is exhibited in the figure and the other is exactly behind this. Through this channel, which may be called the sucking-piece, water is conveyed to the pumps by the pressure of the atmosphere, either from the cistern itself, or from any place at a distance, by means of a leathern pipe, F. fig. 4, which screws on to the sucking- piece at D, fig. 3, under the hind trough Z, tlie grate of which is represented by the horizontal strokes. FG represents the vertical section of another piece of cast brass or hard metal that may be called the communication-piece, having two hollows for conveying the water from under the two pistons to the two openings of the flanch of the air-vessel ; one of these hollows appears in the figure ; the other lies exactly behind this, though not in a parallel direction. Between the section of the sucking-piece D E, and that of the communication-piece F G, may be observed the section of one of the plates of leatlier, which makes all tight, and forms one of the two suck- ing-valves, of which there is another just behind this under the other barrel. RST is the section of the copper air-vessel, and TV that of the con- duit-pipe ; this vessel is screwed on to the hind part of the communication-piece, and at top is fastened by a collar of iron to a cross piece of timber.

Between the flanch of the air-vessel and the communication-piece may be observed the sec- tion of one of the plates of leather, making all tight, and screwing one of the two forcing valves, of which there is another just behind tliis, ex- actly over the other opening of the communica- tion from the air-vessel. These valves are loaded with a lump of cast iron or leaa, having a tail or teat let through the flap of the valve and cross- pinned under it ; and it is to be observed that, though both the valves are represented open in the figure, they are never both open at the same time ; for when the engine is not at work they are closed down by the weights on their upper surfaces ; and, when the engine works, two are

shut, and the other two are open alternately by the motion of the pistons and the action of the atmosphere, together with the re-action of the air contamed in the air-vessel. H I is the section of one of the barrels of the two pumps, which are both sucking and forcing, as is evident from the position

of the valves and the structure of tlie pistons, each of which is composed of two iron plates, of two wooden trenchers, and of two flat pieces of leather turning one up and the other down. LK represents one of the piston-rods edge-wise, behind which is one of the chains, the top screw of which, K, can only be seen. M is the end of the middle bar, and N a section of the hindmost of the two middle stands which support the middle bar.

The principle on which the common engine acts, so as to produce a continued stream, is obvious; the water being driven into the air- vessel, as in the operation of common suckino- and forcing pumps, will compress the air con- tained in it, and proportionably increase its spring, since the force of the air's spring will always be inversely as the space which it pos- sesses ; therefore, when the air-vessel is half filled with water, the spring of tlie included air, which in its original state counterbalanced the pressure of the atmosphere, being nov/ com- pressed into half the space, will be equal to twice the pressure of the atmosphere ; and, by its ac- tion on the subjacent water, will cause it to rise through the conduit-pipe, and to play a jet of thirtj'-two or thirty-three feei high, abating the efl'ect of friction. When the air-vessel is two- thirds full of water, the space which the air occu- pies is only one-third of its first space ; there- fore its spring, being three times as great as that of the common air, will project the water with twice the force of the atmosphere, or to the height of sixty-four or sixty-six feet. In the same man- ner, when the air-vessel is three-fourths full of water, the air will be compressed into one-fourth of its original space, and cause the water to ascend in air with the force of three atmospheres, or to the height of ninety-six or ninety-nine feet, &c., as in the following table.

Height of the water.

Height of the Com- pressed Air.

Proportion

of the Air's

Spring.

Height to which the ' Water will Rise.

1

2

1

■*2*

2

33

§

i

3

66

4

1 4

4

99

i

1

.*>

132

1

i

6

163

f

7

7

198

I

I

S

8

231

a

h

9

264

■ *1%*

^\

10

297

Since it is impossible, when a pump is well

made and is in good order, that its piston can move without displacing the water that is above or below it, according to the circumstances of its construction, so in all pumps that consist of cylindrical working barrels and pistons, nothing

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more is necessary to ascertain the quantity of water they will deliver, than to calculate the solid or cubical contents of that pai-t of the barrel iu wliich the vacuum is produced, and to reduce this to some standard measure, and then to multiply this by the number of strokes made in a given time; thus, if a pump is nine inches diameter, and makes an effective stroke of about eighteen inches, such a cylinder will be found to contain about 1134 cubic inches ; and, as 282 cubic inches make a gallon, so four gallons will be equal to 1128 cubic inches, consequently such a barrel will contain and throw out rather more than four gallons at every stroke ; and supposing this pump to make ten strokes in a minute, it would yield forty gallons in a minute, or sixty times that quantity in an hour, and so on. This rule ap- plies in every case, whether the water is sent to a small or great elevation, because the piston cannot move without displacing the water in the barrel ; but a small allowance must be made for leakage or waste, because some water will con- stantly pass the piston and escape, or be other- wise lost and wasted.

This mode of calculation, as before observed, only applies to such pumps as have cylindrical working barrels and pistons ; but sometimes pumps are otherwise constructed, of which the hre-engine of the late Mr. Bramah, and the exe- cutric pump are instances. In the former of these contrivances, the working barrel, instead of being an entire cylinder, is a semi-cylinder, and lies horizontally, while the place of a piston is supplied by a parallelogram of the same radius and length as the semi-cylinder, moving by an iron bar passing through its axis and properly packed at its exterior edges. This parallelogram is made to vibrate through about 170° by its handles, while its outer edges keep in contact with the interior surface and end? of the semi- cylinder, and two feeding and two delivering valves are placed upon the flat top or covering of the whole. This pump, therefore, in efTect is the same as that of INI. De la Hire, though quite different in form, and its mode of opera- tion is nearly allied to the excentric pump, a section of which is shown at fig. 5, Hypraulk s. It consists of a hollow drum or cylinder of metal a d, in the interior of which a solid cylinder b, of the same length, but of only half the diameter or thereabouts, is made to revolve by its axles pass- ing through water-tight stuffing-boxes in the sides of the larger and exterior cylinders. The internal cylinder does not revolve in the centre of the larger, but is so placed that one of its convex exterior edges may come into close contact with some one part of the concave or internal surface of the larger cylinder, as shown in the figure, and the circular exterior surface of the small cylinder is equipped with four metal flaps or valves, f, c, c, c, turning on hinges, and partaking of its own curvature, so that when they are shut down or closed they form no projections, but appear as parts of the same cylinder. These flaps are made to open either by springs placed underneath them, or, what is still better, by two cross wires, sliding through the internal cylinder in such manner that they may cross each other exactly in its centre, by which their operation

will be rendered equable in every part of their revolution. From the formation of this machine, when one of these flaps is brought by the revolu- tion of the internal cylinder between itself and the external one, it will be pressed down close and will shut, but, as the inner cylinder moves, it will be carried into a continually widening space until it arrives at d, opposite to the last- mentioned situation, when the cavity formed between it and the smaller and larger cylinder will have so far increased as to form a vacuum which is filled with water by the feeding pipe e. This cavity is no sooner so increased to its largest dimensions than it is diminished by a continuation of the revolution, in consequence of which the water, being pent up and squeezed into less compass, makes its escape by the delivering pipey"; and, as each of the flaps performs the same operation in its turn, this pump affords a very equable and constant supply of water. The greatest difficulty in its construction is that of keeping the sides of the flaps so packed as to

maintain a perfect contact with the sides of the larger cylinder without unnecessary friction, a fault which equally holds good in Mr. Bramah's fire-engine, in all excentric pumps, and in all the rotatory steam-engines that have yet been in- vented. The excentric pump is of the lift and force variety, since it will deliver water to an indefinite height above its working cylinders. In order to determine the force or power neces- sary to work a pump of any description, the height to which the water is to be raised must always be taken into account; for this height multiplied into the area of the piston, and re- duced to any of the usual denominations of weight, will give the amount of resistance to be overcome (friction of the pump only excepted). The size of the pipe containing the water is quite imma- terial, provided it be large enough to prevent friction and an unnatural velocity in the water ; and the entire perpendicular height from the surface of the water raised to the point where it is delivered, whether occupied by suction or feeding pipe, or delivering pipe from a forcing pump, must be added together and considered as the height of the lift ; so that if a lift and force pump of four inches diameter in the working barrel has ten feet of three-inch suction pipe below its piston, and twenty feet of two-inch delivering pipe (in- cluding the length of the working barrel) about it, the column to be lifted will be equal to thirty feet of four-incli pipe filled with water. The contents in gallons of thirty feet of four-inch pipe must therefore be found, and, as each gallon of water weighs about 10′ 2 pounds, the weight or load upon the pump will be immediately found, to which must be added from one-tenth to one- sixth, according to the construction of the pump, for friction. The load upon an excentric or any other pump may be found by the same rule if the eflfective horizontal area of the piston, or its sub-stitute be found, and this be, in like manner, multiplied into the height of the lift.

The Society of Arts voted a silver medal and twenty guineas to Mr. Furst, in consideration of the utility of a contrivance produced by him, and of which trial was made, for increasing the eflect of engines for extinguishing fires : a com-

plete model remains in the Repository of the Society, of wliich the following is a siiort descrip- tion : — From a platform rises an upright pole or mast of such height as may be judged necessary ; up this pole or mast slides a gaft, and along the upright pole and gaft the leather hose from the engine is conveyed ; at the extremity of the gaft the branch of the engine projects ; towards this extremity is fixed an iron frame whence hang two chains, and from them ropes serving to give an horizontal direction to the branch,

whilst other ropes running through proper puUies, and being thus conveyed down the mast, serve also to communicate a vertical motion to it; by these means the branch or nose pipe of the engine is conveyed into the window of any room where the fire more immediately rages, and the effect of the water discharged therefrom applied in the most efficacious manner to the extinguishing of it.

Mr. Perkins's method of fastening the seams of hose for fire-engines, and connecting two or more lengths together, consists in rivetting, in- stead of sewing it ; and in connecting the hose with a new modification of the swivel joints, in such a manner as not to contract the water way at the joints. The first idea of rivetting hose belongs to Messrs. Pinnock and Sellers, of Phi- ladelphia, and has been in successful practice for some years, but without the leathers being overlapped sufficiently. The method of con- necting the hose belongs to Mr. Perkins. The advantage of rivetting over sewing is, that the seam lasts much longer, and is much tighter. The rivets, which should be made of copper, will last four or five times longer than the best thread. If care is taken to have sufficient over- lap, the pressure of water against the overlap acts as a valve to tighten the seam. It has been found by experience, that the portion of hose next the engine is much the most likely to burst, especially when the water is carried perpen- dicularly ; to obviate this difficulty, the first, third, or fourth portions are double-rivetted.

V/hen a rivet breaks, it is replaced by making an opening in the seam of sufficient size to allow the hand to replace not only the broken rivet, but the rivets taken out to enlarge the opening. After the rivets are fixed in the holes, they are rivetted by placing them on a flat bar of iron, introduced into the entrance of the hose, and capable of being removed at pleasure. Copper has been found to answer best. It is of such importance that the rivet and burr should be of the same material, that it would not answer well to have the rivets of cast copper (they being an alloy of tin and copper), and ihe burr of wrought copper. Tin rivets, with copper burrs, will com- pletely destroy the leather in a few months, occasioned, undoubtedly, by the operation of galvanism.

Many have been the attempts to produce some machine by means of which fires might be more rapidly extinguished than by the common application of water. These machines have been principally constructed with a view to ex- ploding, and thus driving the liquids more for- cibly to tlie fire. The first person who attempted this with any tolerable degree of success was

Zachary Greyl. Me contrived certain engines, easily manageable, wiiich he proved to be of sufficient efficacy, and offered to discover the secret by which they were contrived, for a large premium given either from the crown, or raised by a subscription of private persons. The se- cret was this:

a wooden vessel was provided holding a very considerable quantity of water; in the centre of this there was fixed a case made of iron plates, and filled with gunpowder; from this vessel, to the head of the larger vessel containing the water, there proceeded a tube or pipe, which might convey the fire to the gun- powder in the inner vsssel. This tube was filled with a preparation easily taking fire, and quickly burning away ; and the manner of using the engine was to convey it into the room or build- ing where the fire was, with the powder in the tube lighted. The consequence of this was, that the powder in the inner case soon took fire, and, with a great explosion, burst the vessel to pieces, and dispersed the water every way : thus was the fire put out in an instant, though the room was flaming before in all parts at once. In our own country a chemist of the name of Godfrey, has brought forward similar machines which I.'e called water-bombs. They were howevei so very similar to Greyl's as to need no further de- scription, except that instead of water Godfrey used a medicated liquor, probably sal-ammoniac and water. But though these machines will prevent great fires by a timely application, they will not extinguish them after they have reached a frightful height, and several houses are in flames. The floors must be standing, and ac- cess 10 the building safe, otherwise no person can be supposed to approach near enough to apply them in a proper manner. Every fire has its beginning for the most part in some apart- ment ; and, as soon as discovered, the family should immediately apply one or more of these machines, which will then fully answer the in- tention. In 1761 Mr. Godfrey's experiment for extinguishing fire, was tried in a house erected for that purpose near Mary-le-bone. The then duke of York, prince William Henry, prince Henry Frederic, and a great number of persons of rank, gave their attendance on this singular occasion. The house, which was of brick, con- sisted of three rooms one above another, a stair- case, chimney, lath and plaster ceilings, and a kind of wainscotting round the rooms, of rough deal. Exactly at twelve o'clock the ground room, and that of one pair of stairs, were set on fire, by lighting the faggots and shavings laid in there for that purpose. In about fifteen mi- nutes the wainscot of the under room was thought to be sufficiently in flames, and three of the machines were thrown in ; which, by almost immediate and sudden explosions instantaneously extinguished the flames, and tlie very smoke in that apartment in a few minutes totally disap- peared. By this time, the firemen, &c., who had the care of throwing in the maciiines, gave an alarm that the stair-c'ise had taken fire, and that it was necessary directly to go to work upon the next room, which was accordingly done, and with the same effect. Tlie experiment however hitherto did not universally satisfy, in the last

instance especially it was thought to be too has- rally be sufficient; and he recommends to lay a tily put in execution. For the sake of the expe- deeper

covering on the stairs, because the fire riment, therefore, and to remove all manner of commonly ascends by them with the greatest doubt, Mr. Godfrey consented to a third expe- velocity. M. Hartley made several trials, in riment in the upper room, which was entirely of 1775 and 1776, to evince the efficacy of a me- wood. The flames were now suffered to get to thod which he had invented for restraining the a considerable height, and even the window spreading of fire in buildings. For this purpose frames destroyed, before the machines were thin iron plates are well nailed to the tops of thrown in : wiiich, however, answered exactly the joists, &c., the edges of the sides and ends as the former had done ; and met with universal being lapped over, folded together, and hammered approbation. close. Partitions, stairs, and floors may be de- Professor Palmer, of Brunswick, invented a fended in the same manner : and plates applied powder for extinguishing fire ; composed of equal to one side have been found sufficient. The parts of sulphur and ochre, mixed with six plates are so thin as not to prevent the floor times their weight of vitriol. These ingredients from being nailed on the joists, in the same man- are mixed, and the mass afterwards pulverized, ner as if this preventive were not used; they The powder is to be scattered over the places are kept from rust by being painted or varnished on fire ; two ounces are sufficient for a surface with oil and turpentine. The expense of this of a foot square. When it is not possible to addition, when extending through a whole build- approach the flames, cartridges may be made ing, is estimated at about five per cent. Mr. of it, and shot with a cross-bow against such Hartley obtained a patent for this invention, and parts of the building where the fire rages with parliament voted a sum of money towards de- ihe greatest violence. fraying the expense of his numerous experi- In order to preserve timber from fire, the ments. The same preservative may also be professor directs, to rub it over with common applied to ships, furniture, &c. The late earl carpenter's glue, and then sprinkle the powder of Stanhope also published a very simple and over it, repeating the operation three or four effectual method of securing every kind of times, as the preceding layer becomes dry. If building against all danger of fire. This me- vou wish to preserve cloth, paper, ropes, cables, thod he divided into three parts, viz. under- Sec, against fire, use water instead of glue, in flooring, extra-lathing, and inter-securing. 1. applying the powder. The method of underflooring is either single or Mr. Knox of Gotenburg recommends to mix double. In a single underflooring, a common seventy-five gallons of water with ten quarts of strong lath of oak or fir, about one-fourth of an clay, ten quarts of vitriol, and ten quarts of inch thick, should be nailed against each side common salt ; or a similar quantity of water, of every joist, and of every main timber sup- with eighteen quarts of till strongest solution porting the floor which is to be secured. Other- of wood-ashes and eighteen quarts of fine clay similar laths are then to be nailed along the reduced to powder ; or the same proportion

of whole length of the joists, with their ends but- water, with fifteen quarts of red ochre, or the ting against each other. The top of each of residuum of aquafortis, and fifteen quarts of these laths or fillets ought to be at one inch common salt : or, lastly, to mix fifteen quarts of and a half below the top of the joists or timbers the strongest herring-pickle, and fifteen quarts against which they are nailed ; and they will thus of red ochre, with seventy-five gallons of water, form a sort of small ledge on each side of all the All these difl'erent solutions, Mr. Knox remarks, joists. These fillets are to be well bedded in a are equally efficacious in extinguishing fire. rough plaster hereafter mentioned, when they Another of the various inventions for extin- are nailed on, so that there may be no interval guishing fire by chemical means, deserving of between them and the joists; and the same notice, is the composition prepared by M. Von plaster ought to be spread with a trowel upon the Aken, and which consists of the following ingre- tops of the fillets, and along the sides of that

lbs. the fillets and the upper edge of the joists. To Burnt alum 3 fill up the intervals between the joists that sup- Green vitriol in powder 4 port the floor, short pieces of common laths,

Red ochre, pulverized 2 whose length is equal to the width of these in- Potter's clay, finely pounded and sifted 20 tervals, ghould be laid in the contrary direction

Water . 63 to the joists, and close together in a row, so as

to touch one another : their ends must rest upon

Dr. Hales proposes to check the progr-ess of the fillets, and they ought to be well bedded in

Jires by covering the floors with earth. The pro- the rough plaster, but not fastened with nails,

posal is founded on an experiment which he They must then be covered with one thick coat

made with a fire board half an inch thick, part of the rough plaster, which is to be spread over

of which he covered with an inch depth of them to the level of the tops of the joists : and

damp garden mould, and then lighted a fire on in a day or two this plaster should be troweled

the surface of the mould ; though the fire was over close to the sides of the joists, without

kept up by blowing, it was two hours before the covering the tops of the joists with it. 2. In

board was burnt through and the earth prevented the method of double-flooring, the fillets and

it from flaming. The thicker the earth is laid short pieces of laths are applied in the manner

on the floors, the better ; however, Dr. Hales already described ; but the coat of rough plaster

apprehends that the depth of an inch will gene- ought to be little more than half as thick as that

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in tlie former method. Wliilst this rough plas- ter is laid on, some more of the short pieces of laths above-mentioned must be laid in the inter- vals between the joists upon the first coat, and be dipped deep in it. They should be laid as close as possible to each other, and the same di- rection with the first layer of short laths. Over this second layer of short laths there must be spread another coat of rough plaster, which should be troweled level with the top of the joists without rising above them. The rough plaster may be made of coarse lime and hair ; or, instead of hair, hay chopped to about three inches in length may be substituted with advan- tage. One measure of common rough sand, two measures of slaked lime, and three mea- sures of chopped hay, will form in general a very good proportion, when sufficiently beat up together in the manner of common mortar. The hay should be put in after the two other ingredients are well beat up together with water. This plaster should be made stiff; and, when tlie flooring boards are required to be laid down very soon, a fourth or fifth part of quicklime in powder, formed by dropping a small quantity of water on the limestone a little while before it is used, and well mixed with this rough plas- ter, will cause it to dry very fast. If any cracks appear in the rough plaster work near the joists when it is thoroughly dry, they ought to be closed by washing them over with a brush wet by putting two measures of quicklime and one of common sand in a pail, and stirring the mixture with water till the water becomes of the con- sistence of a thin jelly. Before the llooring boards are laid, a small

quantity of very dry common sand should be strewed over the plaster work, and struck smooth with a hollow rule, moved in the direction of the joists, so that it may lie rounding between each pair of joists. The plaster work and sand should be perfectly dry before the boards are laid, for fear of the dry rot. The method of under-flooring may be successfully applied to a wooden stair-case ; but no sand is to be laid upon the rough plaster work. The method of extra-lathing may be applied to ceiling joists, to sloping roofs, and to wooden partitions. 3. The third method, which is that of inter-securing, is very similar to that of under-flooring ; but no sand is after- wards to be laid upon it. Inter-securing is applicable to the same parts of a building as the method of extra-lathing, but it is seldom neces- sary.

FiRE-EscAPE. The best mode of constructing an apparatus, capable of furnishing prompt and efficient aid to persons placed in any, exposed and insulated situation, during the progress of this destructive element, may be considered as a matter of considerable importance, though it is one that has hitherto been little attended to. We propose, in the present article, to furnish a brief outline of the various contrivances that have been suggested for the purpose.

Mr. Witty's fire-escape resembles, when folded up, a small chair, being furnished with arms, cushions, and a cover, all of wliich are easily moveable, and have nothing to do with the ma- chine when used as a fire-escape. Implements Vol. IX.

of tliis kind are generally unsightly, and not ap- plicable to any use except that, for which they were primarily intended; the natural conse- quence of which is, that they are put out of the way and neglected, so that when wanted on a sudden emergency, they would probably not be forthcoming. It is this consideration which has induced Mr. Witty to convert liis fire-escape into an elegant and convenient article of furniture, the natural position of which would be the recess of a window in a bed-chamber, which is the precise place, where, in case of fire, it would be most conveniently used.

It consists of a chair capable of having its seat- part lifted through the window, at any time ; the top which contains the roller catches withinside the sill of the window-frame, the chair instantly adjusts itself on the same principle as' the pain- ter's machine, and requires no kind of fixing or fastening whatever, but is perfectly ready for a person to descend, which may be done from a four-story window to the street in half a minute from the time of getting out of bed. The bag is kept open by being made fast to a strong frame, and well secured by girth-web, which passes under it, and by which it hangs ; these webs go over rollers, and pass on to the end of the upper roller, where a sufficient quantity is coiled round to reach from the

top of the house to the bottom. When a person gets into the bag, it begins to de- scend, and as the web uncoils itself from tha rollers, it causes the flexible rope to wind round the middle part of the roller; a person within the rooD' lays hold of this rope to prevent the too rapid descent, and, if that is not enough, the handle of the break or regulator is raised by him. In case of alarm of fire, take off" the seat and cover by the two arms and tlirow ii entirely away from you, pull the chair over towards you as it stahds, and lift the seat part through the window.

To rescue a family, one person will manage it for the whole. On putting the machine out, a rope immediately falls, which winds on the roller as the bag descends ; when one person is down, the rope must be redrawn and the bag ascends for another, or two or three children may descend at once ; each descent occupying about one minute, a family of twelve persons may be saved in as many minutes: at the right-hand end of the roller is the break or regulator, i)y merely lifting which any person may prevent the too rapid descent of a great weight; but tliis is not of importance, as the same may be done by the rope, but not so easily as not afibrding so much purchase on the roller. When all are down but the person who conducts the machine, he will enter the bag taking the rope widi him and letting himself down; after which, sliould any one appear at the window ; he may, while in the street, draw the bag up to them and let them down ; shoidd the bag ever be destroyed after the first ascent, tlie rope (which is a patent one) may be thrown down, and, being held by a per- son at a distance, a descent may be attempted bv sliding down it; and, should both fail, in the greatest extremity four [KU'.sons might sit on the machine outside the window, thus afibrding tim« to bring fire-ladders, Sec, for their relief.

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F I R E-E SCAPE.

Mr. Forster of Walthamstow, has contrived a very ingenious fire-escape. It was originally suggested by Mr. Maseres, and an account of the invention was published in the Philosophical Magazine. It consists of a suspension-iron, which is formed like the ramhead commonly used for slinging goods from warehouses, with this difference, however, that the bottom hooks are turned up close to the upright part, to form two close rings or eyes : the length of this iron lb about four inches and a half ; the thickness of the iron out of which it is hammered is about half an inch. The rope is made of flax, and platted in a peculiar manner. It should be about three-eighths of an inch in diameter, and must be somewhat more than twice the height of the window from the ground. The regulator is an oblong piece of beech

wood, six inches and a half in length, three inches and a quarter broad, and about seven-eighths of an inch thick : in this there are four holes pierced for the rope to pass through; one of these is open at the side: there is also a notch at the top of this piece of wood, and an oblong hole about seven-eighths of an inch from the bottom. The upper bolt is a stout leathern strap, about four feet three inches long and one and a half broad, with a buckle to it. The lower belt is a strap of the same sort as the other; but the end, after being put through the buckle, is sewed down : this is for the purpose of security, in case the tongue of the buckle should by accident break. The union strap, so called from its connecting the regulator to the other parts of the machine, is leathern, and is about a foot and a half long and an inch and a quarter broad : it has, like the others, a buckle to it. It is stained black, which distinguishes it from the other leathern straps. The method of putting together all these parts of the machine is, first to pass one end of the rope through the holes in the regulator, then through the two lower rings of the suspension-iron : the upper belt is then to be passed through a doubling of the union strap; after which the rope is to be tied to that belt, and the knot secured by a string from slipping (which string is to pass through two small holes in the leather) ; and at a foot below the rope is to be tied to the lower belt in like manner. Next the union strap is to be put through the oblong hole in the regulator, and buckled; by which the upper belt and the regulator will be connected. The other end of the rope may be kept wound on a wooden roller, to prevent it from getting entangled. Persons who purchase these ma- chines should have a very strong iron 'hook, with a spring catch, fixed to some secure part of the window-frame, or elsewhere; on this hook the suspension iron is to be hung by the upper ring, when any one wishes to descend from the win- dow. The next operation is to step into the lower belt with both feet, and draw it up sufficiently high, so as to form a kind of swing to sit in; the part of the strap which is through the buckle is to be laid hold of with the left hand ; and the buckle, with the right hand, is to be slipped to its proper place, according to the size of the person : the tongue is then to be put into one of the holes, as in buckling common straps. After this is done, the upper belt is to be somewhat

loosely buckled round tlie chest, and then the rope which is on the roller is to be thrown out of the window on the ground. Now, all being ready for descending, the person is to get out of the window, grasping tight, with one or with both hands, the rope at some convenient part, taking especial care not to meddle with the sus- pension iron until quite out of the window; after which the rope below the regulator is to be laid hold of with the right hand, and to be let to run through the holes as fast as there may be occa- sion; for which purpose, if necessary, it may be easily slipped out of the open hole ; it will then have the clieck of only three holes : if the mo- tion is

wanted to be retarded, the rope is to be put into the notch at the upper part of the regu- lator. When one person has descended, and there is a necessity for a second immediately to follow, the union strap is to be unbuckled, when the re- gulator will be separated from the upper belt: the belts may then be veiy easily drawn up, having the friction of the suspension-iron only, and tjfie person above is to put on the belts as the other did, and is to be let down gradually, partly by the one below, and partly by managing the rope as the first did ; in this case great care must be taken, as the check occasioned by the regulator is gone. It is not easy to lay down exact rules for what number of holes the rope must pass through, as this must vary according to the weight of the person, and other circum- stances. It would be well, before the person gets out of the window, to examine, first, whether the suspension-iron is in the hook, this is absolutely necessary : then, that the three buckles are fast, the two knots tied, and that the rope is in the hole of the regulator which has the opening. Great care must be taken that there is not any impediment to the free running of the rope ; for which the wall of the house must be examined, and any nails or hooks which may chance to be there removed ; also iron scrapers, and every thing wherein the rope may be likely to catch.

Mr. Davis's fire-escape is calculated for the use of a parish; its principle consists in three ladders applied to each other by four clasp irons on the top of each of the two lowermost, which are so contrived that each ladder may slide into the one beneath it ; on the top of the lowermost ladder, two pulleys are fixed on the inside, over which two ropes pass. Tlie ropes are made fast to the bottom of the middle one on each side in a proper direction with the pulleys on the top. The upper ladder is attached to the middle one in the same manner, and on tlie top it carries two horn-pieces, made of iron, and turned off at each end similar to two horns which are four feet wide; their ends are sharp, to pitch on each side of a window, and with their points hold the ladders steady. The three ladders when shut down are about fifteen feet in height. They are placed perpendicularly in the middle of a framed carriage of nine feet six inches long, and five feet six inches wide, mounted upon four wheels. On each side of the carriage a windlass is placed, and, by turning it, the ladders may be wound out from their standing height of fifteen feet to forty. Over this windlass is a screw turned by a winch, by turning which the ladders may be inclined

against the house with all imaginable ease. On the top of the upper ladder on the outside, are two pulleys, over which chains are conducted to the windlass for the purpose of carrying up a box : two of these travel with the

fire-escape, so that in the event of one being filled with small valuables, it may be unhooked, and the other put on, which will save time. The whole apparatus may be drawn by one horse or six men, and when ar- rived at the scene of danger may be adjusted in two minutes. If every parish would provide one of these escapes, and keep it where it may be brought out on the first alarm, there is no doubt but that it would tend materially to lessen the number of accidents which occur by fire in the metropolis.

The Society for the Encouragement of Arts have rewarded M. Bordier for the construction of a bag fire-escape. It consists of a tube or slide of coarse cloth, of any convenient length, which may be carried to any required distance. This tube, which is attached to a ladder of ropes, is firmly fastened at one end to alight but strong square frame, of the same dimensions as a middling sized window, to which the frame is fixed. The other end of the tube is closed. In the middle of the upper cloth a longitudinal slit is made, sufficiently large to admit a man: this end is fastened to a solid place, a little elevated above the ground, and distant from the face of the wall about half the height of the window, to which the other extremity of the tube is attached. Persons, therefore, that enter, or are put into the upper orifice of this bag, will slide down by their own weight, and with an accelerated or retarded motion, according to the manner in which the apparatus is placed, or at the pleasure of the per- sons descending, who, by spreading their hands and feet, can regulate their own movements. The lower end of the tube being fixed to a point, a little raised from the ground, no part of the tube can touch the ground, consequently the persons descending run no risk of being hurt by coming suddenly upon the ground or pavement. Feather beds have, within the last few years, been recommended, as a means of escape from fire, when others fail or cannot be obtained. The plan suggested is, that a few strong men should hold one in their hands extended, and that the persons in danger should throw themselves on to it, endeavouring to leap outward as far as pos- sible, from the front or wall of the house on fire. The neighbours would furnish the beds, and, that they may instantly be ready, an ingenious asso- ciation of the v/ord featfur-beds is proposed with the cry of fire, usual at those times, fire-feuthcr- beds. The humanity of the suggestion, its easy application, and the importance of its successful results, entitle it to universal diffusion.

It may also be suggested here, that one means of escaping when the lower part of a house is on fire, is through the roof. This in many cases could be very easily effected. Retiring to the upper chamber and shutting the door, to jircvcnt a current of air, an a])erlure may he made in a few minutes through the lath and plaster of the ceiling, and the tiled or slated roof, by a poker, the back of a chair, or a tester rod ; and a way of exit procured. There are few cases where a

table or box would not elevate the person high enough ; and still fewer, where the roof would resist the force, even of a delicate female.

Fire-Grate. a grate or stove to produce the most perfect combustion of fuel in heating buildings, must be furnished with apertures for the constant supply of oxygen, which is the es- sential food of fire. Hence the word ‘ grate,’ or ‘ grating,’ which is usually placed at the bottom of the fire-place.

The theory of the common fire-grate is so simple, that but little attention need be paid to the matter ; and we had better, in the present ar- ticle, direct our attention to those useful varia- tions from the ordinary arrangement best calcu- lated to answer the purpose of the domestic eco- nomist.

In 1785 Dr. Franklin published the descrip- tion of a grate which has the flame reversed ; that is, it passes downwards through the fuel. The appearance of this stove is that of a vase of cast-iron, with its pedestal, and this is mounted upon the top or lid of an air-box, standing upon the hearth of the fire-place, and built close in a niche in the stone-work : but the vase, being wholly detached from the back of the niche, has a very neat appearance. The top of the vase turns back upon a hinge, so as to open like a lid, to put in the fuel ; and the opening is covered by a brass frame, which allows the air to enter. The bottom of the vase has in it an opening, of about two inches diameter, which leads through the stem or foot of the vase into a hollow iron box, forming the pedestal : at the bottom of this pedestal there is a grating in the lid or top of the air-box, upon which the vase stands. The air- box is divided by four partitions, between which the smoke passes and re-passes horizontally in a waving direction, until it escapes into the chim- ney. Thus the smoke and flame, immediately after it has descended through the grate in the top of the air-box, passes backwards towards the chimney between the two middle partitions ; but as it cannot enter into the chimney at that part, it turns round the ends of those partitions, and returns in two currents towards the front of the box ; then returns again round tiie end of the other partitions, and goes back into the chimney which is behind, or rather at the sides of the niche in which the vase stands. The front plate of the air-box is made to slide in a groove, in two pieces, which meet together in the front like folding-doors; and these pieces being slided back, expose the spaces between the partitions, which, as before mentioned, act as winding flues for the smoke to circulate in, and give out its heat through the metal of the air-box. In the space between the two middle partitions, and into which the smoke first descends, a drawer is fitted to receive the ashes or cinders, which may fall through the grate in the top of the air-box ; and it can be readily witlidravvn, to clear it out. There is likewise a small grate at the lower part of the vase, upon which tlie fuel contained in the vase will rest. When tliis fuel is lighted, the flame and

smoke will draw downward, and, de- scending through the grate, will pass through the hole in the bottom of the vase into the hollow pedestal, and through the grate in the top of Uio

air-box ; it tlien passes horizontally in the space between the two ̂middle partitions of the air-box, and proceeds in the same direction towards the back of the chimney ; there dividing, one part of it turns to the right, and passes round the far- ther end of the middle partition ; tlien coming forwards, it turns round the near end of the out- side partition ; then, moving backwards, it arrives at the opening into the bottom of one of the up- right corner funnels behind the niche, through which it ascends into the chimney, thus heating that hulf of the box and that side of the niche. The other part of the divided flame passes to the left, round the flir end of the middle partition, round the near end of the outside partition, and so into and up the other corner funnel ; thus heating the other half of the box, and the other side of the niche. The vase itself, and the box, will also be very hot; and the air surrounding them being heated, and rising as it cannot get into the chimney, it spreads in the room ; colder air succeeding, is warmed in its turn, and rises and spreads, till by the continual circulation the whole is warmed.

If there is occasion to make the fire when the chimney does not draw, it must not be begim in the vase, but in one or more of the passages of the lower air-box ; first withdrawing die sliding front of the air-box, and covering the mouth of the vase. After the chimney has drawn some time widi the fire thus low, and begins to be a little warm, those passages may be closed, and another fire kindled in the hollow pedestal, leav- ing its sliding shutter a little open ; and when it is found that the chimney, being warmed, draws forcibly, tliat passage may be shut, and the vase opened, to make the fire there, as above directed. The chimney, well warmed by the first day's fire, ■ivill continue to draw constantly all the winter, if the fire is made daily.

In the management of this stove, there are certain precautions to be observed, at first with attention, till they become habitual. To avoid the inconvenience of smoke the grate must be cleared before beginning to light a fire. If it is found clogged with cinders and ashes, the grate must be lifted up with the tongs, to let them fall upon the grate in the top of the air-box : the ashes will go through it into the drawer, and the cinders may be raked

off through a sliding door in the pedestal, and returned into the vase, when they are to be burnt. Care must be taken that all the sliding-plates are in their places, and closely shut, that no air may enter the stove but through the round opening at the top of the vase; and, to avoid the inconvenience of dust from the ashes, let the ash-drawer be taken out of the room to be emptied. The passages should be cleaned or raked out, when the draught of the air is strona: inwards ; and the ashes must be put carefully into the ash-box, whilst it remains in its place.

If it is required to prevent the fire burning in the absence of the proprietor, it may be done by removing the brass frame from the top of the vase, and covering the passage or opening into the top of die vase with a round tin-plate, which ■will prevent the entry of more air than barely sufficient to keep a few of the coals alive. When

the fire is wanted, though some hours afterwards, by taking oft" the tin-plate, and admitting the air, the fire will soon be recovered.

The effect of this machine, well managed, is to burn not only the coals, but all the smoke from them ; so that while the fire is burning, if the top of the chimney is observed, no smoke will be seen issuing, nor any thing but clear warm air, which, as usual, makes the bodies seen through it appear waving. But it must not be imagined from this, that it can be a cure for bad or smoky chimneys, much less that, as it bums the smoke, it may be used in a room that has no chimney. It is only by the help of a good chimney, and the higher the better, that it pro- duces its effect at all ; and, though a Hue of plate iron sufficiently high might be raised in a very lofty room, the management to prevent all disa- greeable vapor would be too nice for common practice, and small errors would have unpleasing consequences. It is certain that clear iron yields no offensive smell, when heated : whatever smell of that kind is perceived when there are iron stoves, proceeds, therefore, from some foulness burning or fuming on their surface ; they should therefore, never be spit upon, or greased, nor should any dust be suffered to lie upon them. But, as the greatest care will not always prevent these things, it is well once a week to wash the stove with soap-lees and a brush, rinsing it with clean water.

The advantages of this reversed flame in stc ves, are very considerable. The chimney does not grow foul, nor ever need sweeping ; for as no smoke enters it, so no soot can form in it.

The air heated over common fires instantly quits the room, and goes up the chimney with the smoke ; but, in the stove, it is obliged to de- scend in flame, and pass through the long wind- ing horizontal passages, communicating its heat to a body of iron-plate, which, having thus time to

receive the heat, communicates the same to the air of the room, and thereby warms it to a greater degree.

The whole of the fuel is consumed by being turned into flame, and the benefit of its heat is obtained ; whereas, in common chimneys, a great part goes away in smoke, which may be seen as it rises, but it affords no rays of warmth. Some idea may be formed of the quantity of fuel thus wasted in smoke, by reflecting on the mass of soot that a few weeks firing will lodge against the sides of the chimney ; and yet this is formed only of those particles of the column of smoke which happen to touch the sides in its ascent. How much more must have passed off" in the air? And we know that this soot is still fuel, for it will burn and flame as such; and, when hard cakfd together, is indeed very like and almost as solid as the coal from which it proceeds. The de- struction of fuel goes on nearly in the same quantity in smoke as in flame, but there is no comparison in the difference of heat given. When fresh coals are first put on a fire, a consi- derable body of smoke arises. This smoke is, for a long time, too cold to take flame ; but if a burning candle is plunged into it, the candle, in- stead of inflaming the smoke, will instantly be itself extinguished. Smoke must have a certain

decree of heat to be inflammable. As soon as it lias acquired that degree, the approach of a can- dle will inflame the whole body, and the differ- ence of the heat which it gives will be very sen- sible. A still easier experiment may be made with a candle itself. Hold your hand near the side of its flame, and observe the heat it gives : then blow it out, the hand remaining in the same])lace, and observe what heat may be given by the smoke that rises from the still burning snufl'; you will find it very little : and yet the smoke } > as in it the substance of so much flame, and will instantly produce it, if you hold anotlier candle above it so as to kindle it. Now the smoke from the fresh coals, laid on this stove, instead of ascending and leaving the fire, while too cold to burn, being obliged to descend through the burning coals, receives among them that degree of heat which converts it into flame : and the heat of that flame is communicated to the air of the room, as above explained.

The flame from the fresh coals laid on in this stove, descending through the coals already ig- nited, preserves them long from consuming, and continues them in the state of red coals, as long as the flame continues that surrounds them, by which means the fires made in this stove are of much longer duration than in any other, and fewer coals are tlierefore necessary for the

day. This is a very material advantage indeed. That flame should be a kind of pickle to preserve burning coals from consuming, may seem a paradox to many, and very unlikely to be true, as the doctor tells us it appeared to himself the first time he observed the fact ; he therefore relates the circumstances, and mentions an easy experiment, by which his reader may be in possession of every thing necessary to the understanding of it. In the first trial he made of this kind of stove, which was constructed of thin iron plate, he had, instead of the vase, a kind of inverted pyramid, like a mill-hopper; and fearing at first that the small grate contained in it might be clogged liy cinders, and the passage of the flame sometimes obstructed, he ordered a little door near the grate, by means of which he could occasionally clear it ; though after the stove was made, and before he had tried it, he began to think this precaution superfluous, from an imagination that the flame, being contracted in the narrow part where the grate was placed, would be more powerful in consuming what it should there meet with, and that any cinders between or near the bars would be presently destroyed and the pas- sage opened. After the stove was fixed, and in action, he had a pleasure now and then in open- ing that door a little, to see through the crevice how the flame descended among the red coals, and, observing once a single coal lodged on the bars in the middle of the focus, he observed by a watch in what time it would be consumed : he looked at it long without perceiving it to be at all diminished, which surprised him greatly. At length it occurred to him that he had seen the same thing a thousand times, in the conversion of the red coal formed in the snuff of a burning candle, ■which, while enveloped in flame, and thereby rrevented from the contact of the passing air, is long continued, and augments instead of

diminishing, so that we are often obliged to re- move it by the snuffers, or bend it out of the flame into the air, where it presently consumes to ashes. He then supposed, that to consume a body of fire, passing air was necessary to receive and carry off the separated particles of the body : and that the air passing in the flame of the stove, and in the flame of a candle, being already satu- rated with such particles, could not receive more, and therefore left the coal undiminished as long as the outward air was prevented from coming to it by the surrounding flame, which kept in a situation somewhat like that of charcoal in a well luted crucible, which, though long kept in a strong fire, comes out unconsumed.

Mr. Craigie has a patent fire-grate of a very peculiar construction. It consists of a founda- tion or basis of about four feet in length by about two feet eight inches in breadth, and about twenty inches in height ; at one end in the front is to be placed the chimney grate, eighteen inches wide and six deep. On the foundation in the centre, at nineteen inches distant from each other, are to be raised two sides in stone or brick, tlie whole length thereof,

about eight inches in height; on these sides is to be placed a pan of cast iron, of size to cover the whole, with rims to rest on the sides, but leaving a small space vacant, say about half an inch from each side below ; the depth of the pan may be about five or six inches, and will be raised above the basis, so as to leave an aperture throughout of about an inch and a half; at the end of the furnace, opposite to the fire- grate, the aperture will terminate in a flue of brick or iron to convey the smoke into the chim- ney of the house, which flue should be furnished with a register or damper.

A plate projecting from the lower end of the pan will form the top of the fire-place, of eigli- teen inches by six or eight; the sides will "be formed of fire-bricks ; the back of the fire-brick will ascend towards the top in a sloping direction under the pan. A frame of iron will be placed to receive the door or front, which will be in the clear about eighteen inches in width by about sixteen inches in depth, that is to say, to cover the ash-pit four inches, and about twelve inches above the grate for the fire-place, in front of which there should be an inner grate of about five or six inches high ; this door must have in the lower part of it, about an inch and a half from the bottom, a small door of about three inches wide by two in depth, to furnish air through the ash-pit. When wood is used for fuel, the depth of the fire-place may be twelve inches instead of six. The iron pan being filled with dry sand, will form a sand batli, Avith heat sufficient according to the depth to wliich the vessel is placed in it for all ordinary purjˆoses, and being once heated will retain the heat for a considerable time, especially if the doors are kept close shut ; the plate or front will serve for broiling or frying. IJoasting may be performed to perfection before the door in front even with the doors shut; an oven for baking may be fixed at the flue. Convenience will be found in havin"- the meat, &c., to be roasted suspended from a moveable fire-screen.

The great numbers of manufactories destroyed

by nre in consequence of tha large quantities of loose shavings in carpenters' and joiners' shops, induced Mr. Davis to contrive a fire-grate for a safe and economical mode of burning shavings; the object of which is to employ these useful combustible materials as fuel, instead of coal, by such a construction of the grate, that they will not burn too fast, as they do in an open fire, making an intense heat, but only of a momentary duration. This is effected by putting the shavings into a sheet iron cylinder, closed at top, which is fitted into the top of a grate, very similar to those used for burning coals; and the flame pro- duced by the shavings passes through

flues con- ducted in the usual manner; the air which sup- ports the combustion being supplied through the bars of the grate.

The fire-grate is twelve inches wide, and one foot three inches high; it is of cast iron, and lined with fire tiles, having a door with an ash- pit beneath, in the usual planner; the sheet iron pipe conveys the smoke and flame from the fire- place into a brick flue, and this leads into the chimney ; there is an iron door opening into the chimney for the sweeping machine, or boy, to pass through to sweep the chimney ; the sheet iron cylinder, in which the shavings are put to be consumed, is about nine inches in diameter, and sixteen inches high : it is placed over a cir- cular aperture in the top of the fire-grate, and has a neck to prevent the sparks of the shavings from flying out into the workshop. The cylinder is covered at top with a lid, having also a neck, which is removed at pleasure by a handle, to put in a supply of shavings ; this fits very close, and, as no air can pass by it, a sufficient draught to burn the shavings, but slowly, is afforded by the air passing through the bars of the grate, which is impeded by the ashes that may be therein ; but this flame may be increased to a rapid combustion, when necessary, by opening the door of the stove; the flame passes along the flues, and gives out an equable heat to the room. Iron bearers are fixed across the flue, wliich may be used to support any work which requires drying, or for any other purpose of this kind. The supply of this stove with fuel from shavings is attended with so little trouble, and i-s such an advantage to the workmen, that they will always prefer burning the shavings to coals; so much so, that where ten men are at work, there is a difficulty to collect shavings sufficient even to light the fire the next morning. By this means the danger of fire, which has been fatal to so many manufactories, is greatly removed ; the loose shavings being consumed as soon as they are made, and that in lieu of more expensive fuel ; and so slowly are the sliavings consumed, that the iron cylinder will hold enough, when completely filled, to supply the fire for upwards of half an hoiu-. To guard the workshops still more effectually from danger, the stove and its iron flue is supported upon a mass of brick-work, which prevents any sparks from falling on the Hoor ; and the sides of the b'-ick-work afford •ery convenient sheKes on which to lay any wood-work that requires heating or drying ; and when a greater heat is required to extend to a considerable length horizontally, as, for instance.

four or five feet, by merely putting a few shav- ings into the cylmder frequently, in place of filling it, they become converted into flame, which is carried the whole length of the iron flue, heating it uniformly throughout. No soot lodges in the flue, but merely light ashes, which can be easily cleared out from time to time, as naay be necessary.

The Swedish or Russian mode of warming buildings is thus described byM. Guyton in the Annales de Chimie. The construction of the apparatus which is there recommended may be improved, to adapt it to our use in England, where pit coal is used ; but the following prin- ciples, which the author lays down, are very use- ful as guides in making all kinds of stoves for warming apartments. 1. Heat is produced only in proportion to the volume of air consumed by the fuel. 2. The quantity of heat produced is greatest (the quantity and quality of the fuel being the same) when the combustion is most complete. 3. The combustion is the more com- plete, in proportion as the fuliginous part is longer retained in channels where it may undergo a second combustion. 4. The only useful heat is that sent out into, and retained in, the space intended to be heated. The temperature of that space will be higher in proportion as the cur- rent, which must be renewed from without to support the combustion, is less enabled to take up in its passage the heat produced.

Hence the following inferences evidently arise : — 1. The fire-place ought to be insulated from all bodies that are rapid conductors of heat. All the heat that goes out of the apartment is abso- lutely lost, unless intentionally directed into another apartment. 2. Ileat being produced only by combustion, and combustion being sus- tained only by a current of air, the current should be brought in by channels, where the needful rapidity may be preserved without being too dis- tant from the space to be warmed, so that the heat it there deposits may be gradually accumu- lated in the whole of the insulated surface, in order afterwards to flow out of it slowly, accord- ing to the laws of the equilibrium of that fluid. 3. The wood being so far consumed as to give no more smoke, it is advantageous to close the mouth of these channels, in order to retain there the heat that would otherwise be carried off through the upper flue, by the continuanceof a current of fresh air, necessarily of a low temperature. 4. Lastly, it follows from these maxims, that, all things being equal, a higher temperature will be obtained, and supported during a much longer time, by forming in the internal parts of the stove, or under the hearth of a chimney, and in their vicinity, tubes in which the air that comes from without may be warmed before it enters the apartment, to serve the purpose of combustion, or replace that which has been consumed. These have been called houchcs de chalcur (mouths or apertures of heat), because, instead of contemplating

their principal use and intention, it is commonly imagined that they are only made in order to give, by their issues, a more rapid current to the iieat produced. Nor is this idea absolutely devoid of foundation, since the air that issues from thom has only changed its temperature, by carrying

off a portion of the heat that would have re- mained in the interior. Those, however, who would proscribe them, as opposing the most im- portant object, which is the retaining of the heai as long as possible, do not consider that they may be closed, and all communication with the external air cut off by a simple slide, and, there- fore, it is easy to derive from them every possible advantage without any inconvenience. And we may add that in small apartments, or such as are accurately closed, they are often indispensably requisite, if we would avoid being exposed to currents of cold air. Dr. Franklin very justly quotes a Chinese proverb to this effect : ‘ Shun a. current of air from a narrow passage as you •would the point of an arrow.’

The Swedish or Russian stoves, which have chambers for the reception of the flame and smoke, are little known in this country : but those which are in common use in the halls and vestibules of our great houses are French stoves. They differ from the others in having a very great length of small flues or winding passages, through which the smoke passes, and communicates its heat to the air, which circulates in similar pas- sages, until it becomes warmed, and makes its exit through the mouths into the apartment. Tliis method is not so simple as the small cham- bers or apartments of the Russian stoves, nor is it so good in the long run; because the pas- sages are very liable to become clogged with soot ; and, even before they are so clogged as to intercept the passage of the smoke, the trans- mission of the heat is much impaired, because the interior surfaces of the flues, becoming coated with soot, do not conduct the heat so rapidly, and, in consequence, a great part will still pass out into the chimney. Also, these flues with small passages require a stronger draught in the chimney to make the air pass through the pas- sages, than when chambers are used.

The Holland iron stove, which has a flue pro- ceeding from the top, the fire-place and ash-pit being closed by small iron doors opening into the room, comes next to be considered. It is frequently made of iron plate, and is most com- monly called a German stove. Its conveniences are, that it makes a room warm all over, for the chimney being wholly closed, except

the flue of the stove, very little air is required to supply that, and therefore not much rushes in at crevices, or at the door when it is opened. Little fuel serves, the heat being nearly all saved ; for it radiates almost equally from the four sides, and the bottom and top, into the room, and presently warms the air around it, which, being rarefied, rises to the ceiling, and its place is supplied by the lower air of the room, which flows gradually towards the stove, and is there warmed and rises in its turn, so that there is a continual circula- tion, till all the air in the room is warmed. The air, too, is gradually changed by the stove-doors being in the room, through which part of it is continually passir^^, and that makes thesa stoves more wholesome, or at least more pleasant, than the German stoves. But they have the inconve- nience that there is no sight of the fire, which is, in itself, a pleasant thing, nor can any other use be conveniently made of the fire but tliat of warmincr the room.

Fire, Greek, a kind of factitious fire, called by the Greeks, who were the inventors and prin- cipal users of it, the maritime fire ; and which burns with greater violence in water than out of it. It is said to have been composed of naphtha, bitumen, pitch, sulphur, and gum, and was only to be extinguished by vinegar mixed with sand and urine. Leonard da Vinci de- scribes the composition as formed by mixing over the fire, the charcoal of willow, nitre, brandy, resin, sulphur, pitch, and camphor. A woollen cord is then plunged in the mixture, and made into balls, which, when set on fire, are thrown into the enemy's vessels. Tliis fire was employed principally in the wars of the Greeks with their Saracen neighbours ; and the Eastern Romans retained the secret for above 400 years ; and even at the end of the eleventh century, the Pisans, to whom every science and art were fami- liar, suffered the effects, without understanding the composition of the Greek fire. It was at length either discovered or stolen by the Mahom- medans, and in the holy wars of Syria and Egypt they retorted the invention on the heads of the Christians.

It might be used with equal effect by sea or land, in battles or in sieges. It was either poured from the ramparts in large boilers, or launched in red hot balls of stone and iron, or darted in arrows and javelins, twisted round with flax which had deeply imbibed the inflam- mable oil : sometimes it was deposited in fire- ships, or most commonly blown through long tubes of copper, planted on the prow of a galley. The modern discoveries respecting combustion have disclosed the whole secret of compositions which burn without access to the atmosphere, by means of oxygen afforded from nitre.

FiRE-LocK, in military affairs, the arms of a foot soldier, so called because it produces fire of itself by flint and steel, in contradistinction from a match-lock, which requires a lighted match. Firelocks were formerly three feet eight inches in the barrel, and weighed fourteen pounds, at present the

length of the barrel is from three feet three inches to three feet six inches, and the weight of the piece only twelve pounds. They carry a leaden bullet, of which twenty-nine make two pounds, its diameter is •550 of an inch, and that of the barrel one-fif- tieth part of the shot. See Musket.

Fire-Pots, in tiie military art, small earthen pots, into which is put a charged grenade, and over that powder enough to cover the grenade ; the pot is then covered with a piece of parch- ment, and two pieces of lighted match placed across ; this being thrown by a handle of matches where it is designed, it breaks and fires the pow- der, and burns all that is near it, and likewise fires the powder in the grenade, which ought to have no fuse, that its operations may be the quicker.

Fire-Rkeds, reeds used in fire-ships. They are made up in small bundles of about a foot in circumference, cut even at both ends, and tied together in two places. Tliey are distinguished into two kinds, viz. the long and short ; the for- mer of which are four feet, and the latter two feet five inches in length. One part of them are singly dipped, i. c. at one end : the rest are

dipped at both ends in a kettle of melted com-])o.sition. After being immersed about seven or eight inches in this preparation, and then drained, they are sprinkled over with pulverised sulphur upon a tanned hide.

FiKE-SiiiPs are generally old vessels filled witir combustibles, titted vfith grappling irons to hook, and set fire to, the enemies ships in battle, &c. As there is nothing particular in the construction of this ship, except the appa- ratus by which the fire is instantly conveyed from one part to anotlier, and thence to the enemy, it is sufficient to describe the fire-room, where these combustibles ure enclosed, together with the instruments necessary to grapple the ship intended to be destroyed. The fire-room is built between decks, and limited on the after- part by a bulkhead, L, behind the main mast, from which it extends cˆuite forward, as repre- sented in the diagram at the foot of this article. The train enclosed in this apartment is contained in a variety of wooden troughs, D, G, which intersect each other in different parts of the ship's length ; being supported at proper dis- tances by cross pieces and stanchions. On each side of the ship are six or seven ports, H, about eighteen inches broad and fifteen inches high ; and having their lids to open downward, con- trary to the usual method. Against every port is placed an iron chamber, which, at the time of firing the ship, blows out

the port-lid, and opens a passage for the flame. The iron cham- bers are ten inches long and 3‘5 in diameter. Tliey are breeched against a piece of wood fixed across the ports, and let into another a little higher. When loaded they are almost filled with corn-powder, and have a wooden tompion w ell driven into their muzzles. They are primed with a small piece of quick-match thrust through their vents into the powder, with a part of it hanging out. When the ports are blown open by means of the iron chambers, the port-lids either fall downward, or are carried away by the explosion. Immediately under the main and fore shrouds is fixed a wooden funnel INI ; whose lower end communicates with a fire-barrel, by wliich the flame passing through the funnel is conducted to the shrouds. Between the fun- nels, whicn are likewise called fire-trunks, are two scuttles, or small holes in the upper deck, serving also to let out the flames. Both funnels must be stopped with plugs, and have sail-cloth or canvas nailed close over them, to prevent any accident from above to the combustibles laid below. The ports, funnels, and scuttles, not only communicate the flames to the outside and upper works of the ship and her rigging; but likewise open a passage for the inward air, con- fined in the fire-room, which is thereby expanded so as to force impetuously through those out- lets, and prevent the blowing up of the decks, which must of necessity happen from such a sudden and violent rarefaction of the air as will then be produced. On each side of the bulk head behind is cut a hole L, of sufficient size to admit a trough of the same dimensions as the others. A trough, L, I, whose foremost end communicates with another trough within the fire-room, is laid close to this opening,

whence it extends obliquely to a sally port I, cut through the ship’s side. The decks and troughs are well covered with melted resin. At the time of the firing either of the leading troughs, the flame is immediately conveyed to the opposite side of the ship, whereby both sides burn together. The spaces N, O, behind the fire-room, represent the cabins of the lieute- nant and master, one of which is on the star- board, and the other on the larboard side. The captain’s cabin, which is separated from these by a bulk-head, is exhibited also by P. Four of the eight fire-barrels are placed under the four fire-trunks ; and tlie other four between them, two on each side of the fire scuttles, where they are securely cleated to the deck. The longest fire-reeds are put into the fore and aft troughs, and tied down : the shortest reeds are laid in the troughs athwart, and tied down also. The fire- bavins, dipped at one end, are tied fast to the troughs over the reeds, and the curtains are nailed up to the beams, in equal quantities, on each side of the fire-room. The remainder of the reeds are placed in a position nearly upright, at all the angles of every square in the fire-room, and there tied down. If any reeds are left, they are to be put round the fire-barrels, and other vacant places, and there tied fast.

The following instructions arc given in the regulations for a fire-ship of 150

tons burden :

The fire-barrels are to be two feet four inches high, and one foot six inches in diameter. Each barrel must have four holes of about six inches square, cut in its sides, with a square piece of canvas nailed over each of them. They are then filled with the carcass-composition, and four plugs, of about one inch diameter and three inches long, and well greased, are thrust into the top, and then left to dry. When dry, these plugs are taken out, and the holes filled with fuse-composition, and quick-match at the top, which goes from one hole to the other ; after this, the top is smeared over with mealed powder, mixed up with spirits of wine. When dry again, a sheet or two of brown paper is laid over the top, and then one of the canvas covers, which is made secure by the upper hoop of the barrel.

The composition for dipping reeds, bavins, and curtains, is

lbs. Resin 120

Coarse sulphur ... 90

Swedish pitch ... 60

Tallow 6

Mealed powder . . . 12

In order to produce an additional external fire, forty-four boxes are filled with the carcass- composition, and distributed on the three masts in the following manner : — One suspended from each of the cat-heads and davits, on each side of the bow ; eight slung across the bowsprit ; four across each of the out-riggers abaft ; two from the grapplings of each of the lower yard- arms ; one from the dead-eyes on each side of the three round-tops; and one from the middle of the inside of the main, fore, and mizen shrouds.

Besides the boxes, there are fire-barrels ar- ranged as follows: — Two half barrels on the forecastle; two abaft the main-deck, and four on the main-deck; two in each round-top, placed against the masts; and four large fire-barrels, under fire-trunks, to convey fire to the curtains on the shrouds. All these fire-barrels and boxes are to be fired by separate leaders of quick-match, or i)ort-fire, in order that any part of the ship may be fired, to cover its approach by tlie smoke ; and the remaining part instanta- neously

upon quitting the ship. It has been found, by experiment, that two men, with lighted port-fires, can set fire to the whole of the leaders on the deck, bowsprit, cat-heads, out-riggers, &.c., in less than a minute ; therefore, the risk of trusting to one main leader to the whole may be avoided. The leaders are laid in painted canvas hose, made for the purpose.

The proportion of combustible stores for a fire-ship of 150 tons, is as follows: —

8 Fire-barrels, filled with composition.

12 Iron chambers, to blow open the ports.

•250 Bavins, single-dipped.

24 Port-fires.

3ˆ- Priming composition barrels.

1 Quick-match ditto.

48 Dipped curtains.

150 Long reeds, single-dipped.

75 Short reeds, single-dipped.

75 Short reeds, double-dipped.

GO Hand grenades.

When ordered to prime, the captain is to take up all his reeds, one after another, and strow a little composition at the bottom of all the troughs under the reeds, and then tie them gently down again ; next to strow composition upon the upper part of the reeds throughout tlie fire- room ; and upon the composition to lay double quick-match upon all the reeds, in all tlie troughs : the remainder of the composition to be spread over all the fire-room. He is tlien to cast off all the covers of the fire-barrels, and hang the quick-match loose over their sides, and place leaders of quick-match from the reeds into the barrels, and thence into the vent of the chambers, in such a manner as to be certain of their blowing open the ports, and setting fire to the barrels. The troughs of communication from each door of the fire-room to the sally- ports must l)e laid with a strong leader of quick-match, four or five times double : also a cross- piece to go from the sally-port, when the ship is

fired, to the communication through the trough, laid with leaders of quick-

match, that the fire may be communicated on both sides at once. What quick-match is left must be placed so that the fire may be communicated to all parts of the room at once, especially about the ports and fire-barrels. The port-fire used for firing the ship burns about twelve minutes; great care must be taken to have no powder on board when the ship is fired. Sheer-hooks are fitted so as to fasten on the yard-arms of tlie fire-ship, where they hook the enemy's rigging. The fire- grappliugs are either fixed on the yard-arms, or thrown by hand, having a chain to confine the ships together, or fasten those instruments where- ever necessary. Whenever the commanding officer of a fleet displays tlie signal to prepare for action, the fire-ships fix their sheer-hooks, and dispose their grapplings in readiness. The battle being begun, they proceed immediately to prime, and prepare their fire-works. When they are ready for grappling, they inform the admiral thereof by a particular signal. To avoid being disabled by the enemy's cannon during a general engagement, the fire-ships con- tinue sufficiently distant from their line-of- battle, either to windward or leeward. They cautiously shun the openings or intervals of the line, where they would be directly exposed to the enemy's fire, from which they are covered by lying on the opposite side of their own ships. They are attentively to observe the signals of the admiral or his seconds, in order to put their designs immediately into execution. Although no ship of the line should be previously ap- pointed to protect any fire-ship, except a few of tire smallest particularly destined to this service, yet the ship before whom she passes in order to approach the enemy, should escort her thither, and assist her with an armed boat, or whatever succour may be necessary in her situation.

Among the most formidable contrivances ever used, either as a fire-ship or explosion-vessel, is that which was used to destroy the bridge of boats at the siege of Antwerp, in the year 1585 ; which an author of that period states to have been a ship strongly timbered, containing a vaulted arch of stone or mortar, filled with 200 barrels of gunpowder, over which were placed large stones of all forms, cannon-shot, iron chains, &c., sufficient to destroy a whole city, that were exploded by a secret fusee, contrived so as not to set fire to the charge till the vessel came in contact with the bridges, which it blew to atoms.

Fire-Works. See Pyrotechxy. No person whatsoever shall make or sell squibs, rockets, serpents, &c., or cases or moulds for making such squibs ; and every such offence shall be adjudged a common nuisance, and persons making or selling squibs shall forfeit £5.

Persons throwing or firing squibs, &c., or suffering them to be thrown or fired from their houses, incur a penalty of 20s. Likewise per- sons throwing, casting, or firing, or aiding or assisting in the throwing, casting, or firing of any squibs, rockets, serpents, or other fire-works, in or into any public street, house, or shop, river, highway, road, or passage, incur the like pe- nalty of 20s. ; and on non-payment may be committed to the house of correction.

This statute does not take from any person injured, by throwing of squibs, &c., the remedy at common law ; for the party may maintain a special action on the case or trespass, &c., for recovery of full damages.

Firing, in military affairs, is used to denote the discharge of all sorts of fire- arms against the enemy. The fire of the infantry is by a regular discharge of their firelocks, by platoons, divisions. Sec. ; that of the cavalry, viith their carbines and pistols ; and that of a place be- sieged, from their artillery.

Defensive fire belongs principally to infantrj-, •when posted on heights w^hich are to be defended by musketry. As soldiers generally present too high, and as fire is of the greatest consequence to troops that are on the defensive, the habitual mode of firing should, therefore, be rather at a low level than a high one.

On these occasions the men are generally drawn up three deep; in which case, the front rank kneeling, being the most efficacious, as being the most razing, should not be dispensed witli when it can be safely and usefully em- ployed. The present method of firing by pla- toons is said to have been invented by Gustavus Adolphus, and first used about 1618: the reason for this method is, that a constant fire may be always kept up. There are three different ways of platoon firing, viz. standing, advancing, and retreating. But, previous to every kind of firing, each regiment or battalion must be told off in grand divisions, subdivisions, and platoons, ex- clusively of the grenadiers, which form two subdivisions or four platoons of themselves. In firing standing, either by divisions or platoons, the first fire is from the division or platoon on the right; the second fire from the left; the third from the right again, and so on alternately, till the firing comes to the centre platoon, which is generally called the color platoon, and does not fire, remaining as a reserve for the colors. Firing advancing is performed in the same manner, with this addition, that before either division or platoon fires, it advances three paces forward. Firing retreating varies from either of the former methods ; for, before either division or platoon fires, if they are marching from the enemy, it must go to the right about ; and after firing, to the left about again, and continue tlie retreat as slowly and orderly as possible. In hedge-firing the men are drawn up two deep, and in

that order both ranks are to fire standing.

Oblique firing is either to the right and left, or from the right and left to the centre, according to the situation of the object. The Prussians have a particular contrivance for this purpose ; if they are to level to the right, the rear ranks of every platoon make two quick but small paces to the left, and the body of each soldier turns one-eighth of a circle, and vice versa. Parapet- firing depends on the nature of the parapet over which the men are to fire, and also upon that of the attack made to possess it. This method of firing is sometimes performed by single ranks stepping on the banquette and firing ; each man instantly handing his arras to the centre rank of the same file, and taking his back in the room of it ; and the centre rank giving it to the rear to load, and forwarding the arms of the rear to the front rank ; by which means the front rank men can fire six or seven rounds in a minute with exactness. Parapet-firing may also be executed two deep, when the banquette is three feet broad, or in field works, where no banquettes are made. Square-firing is performed by a regiment or body of men drawn up in a hollow square, in which case each front is generally divided into four divisions or firings, and the flanks of the square, being the weakest part, ate covered by four platoons of grenadiers. The first fire is from the right division of each face ; the second from the left division of each face, &c., and the grenadiers make the last fire. Street-firing is practised in two ways ; either by making the di- vision or platoon that has fired to wheel by half- rank to the right and left outwards from the centre, and to march in that order by half divi- sions down the flanks on each side of the column, and to draw up in the rear, and go on with their priming and loading; or, to make the division or platoon, after firing, to face to the right and left outwards from the centre, and one half rank to follow the other; and, in that order, to march in one centre file down on each side of the columns into the rear, and there draw up as before.

FIRK, i;. a. Lat. /erio. To whip ; to beat ; to correct ; to chastise.

Besides, it is not only foppish.

But vile, idolatrous, and popish.

For one man out of his own skin

Tofirk and whip another's sin. Hudibras.

FI'IIKIN, Ti.s. Sax. peoSefi, the fourth part of a vessel, i. e. of a barrel : Minsheu says, with superabundant erudition, from ha:, rjroido, bear- ing, because it is a little vessel, which easily may be carried ! A vessel containing nine gallons.

You heard of that wonder of the lightning and tliunder. Which made the lye so much the louder ; Now list to another, that miracle's brother. Which was done with ^l firkin of powder. Denham.

Strutt's servants get such a haunt about that shop, that it will cost us many a firkin of strong beer to bring them back again. Arbuthnot.

FIRLOT, a dry measure used in Scotland- The oat firlol contains 21-ilh pints of that coun- try; the wheat firlot contains about 2211 cubical inches ; and the barley firlot, thirty-one standard pints. Hence, it appears, that the Scotch wheat

firlot exceeds the English bushel by thirty-thrsp cubical inches.

FIRM, adj., v.a., hn.s. -^^ Yv.ferme; Ital. l'iRM'iTy,«. s. {firma;Lait.Jirmus,*

Firm'lv, adv. i from Gr. iipfioc,

Firm'ness, n. s. ' linked, or bound,

together. Compact ; strong ; hard ; solid : hence, fijruratively, constant ; fixed ; steady; re- solute ; as a verb, to settle; conform ; establish ; fix : and, as a substantive, an establishment ; or the fixed name of a mercantile house : firmity is strength ; solidity; the opposite of infirmity.

The flakes of his flesh are joined together : they are Jirm in themselves, and they cannot be moved.

Job xli. 23. He on his card and compass Jirms his eye. The masters of his long experiment.

Faerie Queene. Of the death of the emperor they advertised SoJy- ma.n. Jirmiitfj those letters with all their hands and seals. Knollcs.

God caused the wind to blow to dry up the abun- dant slime and mud of the earth, and make the land more_^r;n. Ralciyh.

We hold^^rm to the works of God, and to the sense which is God's lamp. Bacon's Natural History.

Both the easiness and firmness of union might be conjectured, for that both people are of the same lan- guage. Hayward.

'J'he strength and _ˆmi(y of my assent must rise and fail together with the apparent credibility of the object. Chillingworth.

Love's artillery then checks The breastworks of the firmest sex.

Cleaveland. It on firm land Thaws not, but rather heap and ruin seems Of ancient pile : all else deep snow and ice.

Milton. He straight obeys ; And firm believes. Id. Paradise Lost.

Thou shalt come of force, rfaough thou 3.Tt firmlier fastened than a rock.

Milton. That thou should'st my fiirm7iess doubt To God, or thee, because we have a foe May tempt us, I expected not to hear. Id.

The muddy and limous matter brought down by the Nilus, settled by degrees into a, firm land.

Browne's VnUjar Errotirs. Sinking waters, theˆrm land to drain. Filled the capacious deep, and formed the main.

Roscotmnon.

Nor can the' Egyptian patriarch blame my muse.

Which for his firvmess does his heat excuse. Id.

The great encouragement is the assurance of a fu- ture reward, thi; fir7n persuasion whereof is enough to raise us above any thing in this world. Tillotson. There is nothing to be left void in a. firm building; even the cavities ought to be filled with rubbish.

Dryden. The powers, said he. To you, and yours, and mine, propitious be. And firm our purpose with their augury. Id.

'Tis ratified above by every God, And Jove haifiirnwd it with an awful nod. Id. Himself to be the man the fates riMjuire ; lyiVmAy judge, and what 1 judge desire. Jd.

To this abuse, those men are most subject, who mo.it confine their thoughts to any one system, and give thcnriolves up into a. firm belief of the perfection of any received hypothesis ,• wlicroby they come to be persuaded, that the terms of that suet are so suited

to the nature of things, that they perfectly correspond with their real existsnce. Locke.

The man that's resolute and just. Firm to his principles and trust. Nor hopes nor fears can blind. Walsh.

The common people of Lucca arc y?rm/y persuaded, that one Lucquese can beat five Florentines.

Addiron on Italy. It would become by degrees of greater consistency and firmness , so as to resemble an habitable earth.

Burnet. In persona already possessed with notions of reli- gion, the understanding cannot be brought to change them, but by great examination of the truth andyicni- ness of the one, and the flaws and weakness of the other. SoutK's Sermons.

'Tis meet that noble minds keep ever with their like. For who so firm that cannot be seduced ? Settle,

How very hard particles, which touch only in a few points, can stick together %o firmly, without some- thing which causes them to be attracted towards one another, is difficult to conceive. Newton.

That bod}', whose parts are most firm in them- selves, and are by their pectiliar shapes capable of the greatest contacts, is the most firm ; and that which has parts very small, and capable of the least con- tact, will be most soft. Woodward. This armed Job v/ith firmness and fortitude.

Atlerbury. O thou, who freest me from my doubtful state. Long lost and wildered in the maze of fate ! Be present still : oh goddess, in our aid Proceed, &nd firm those omens thou hast made !

Pojie. So from dark clouds the playful lightning springs. Rives the firm oak, or prints the Fairy -rings.

Darwin. Too firm to yield, and far too proud to stoop. Doomed by his very virtues for a dupe. He curst those virtues as the cause of ill. And not the traitors who betrayed him still ; Nor deemed that gifts bestowed on better men Had left him joy, and means to give again.

Bynm.

riRM'AMENT, n. s. > Fr. firmament ; Ital. FirmameI'.'tai., adj. 3 Span, and Vori.firmu- wento ; Lat. jirmamentuni, from Jlrmns. See Firm. The sky; the visible heavens; the ex- panse over our heads.

Also, be the erthe devysed in als manye parties, as the firmament ; and let every partye answere to a degree of thu firmament. Sir J. Mcindivillc

Even to the hrˆavens their shouting shrill Doth reach, and all the firmament doth fill.

Spenser. I am constant as the northern star. Of whose true, fixt, and resting quality. There is no fellow in the firmatnent.

Shut{.'

The fiirmament expanse of liquid, pure. Transparent, elemental air, diDused In circuit, to the uttermost convex Of this great round. Milton's Paradise Lost.

An hollow crystal pyraujid he takes, ˆn Jirmamental waters dipt above. Dryden.

The steeds climb up the lirst ascent with pain ; And when the mxAAh' Jirmament they gain. If downward from the heavens my head I bow. And see the earth and ocean hang below, Even I am seized with horror. Addison's (h

What an i'nmeasiirahle space is the firmament, vhereia a great number of stars are seen with our raked eye, and many more discovered with our glasses ! Derham's Astro- Theoluijy.

Ye once were justly famed for bringing forth Undoubted scholarship and genuine worth ; And in iho. firrnainent of fame still shines A glory, bright as that of all the signs. Of poets raised by you, and statesmen, and divines.

Cowper.

Firmament, in the ancient astronomy, the eighth heaven or sjjliere ; being that wherein the fixed stars were supposed to be placed. It is culled tiie eighth, with respect to the seven hea- vens or spheres of the planets which it surrounds. It was supposed to have two motions ; a diurnal motion, given it by the primum mobile, from east to west, about the poles of the ecliptic ; and another opposite motion from west to east ; which last it finishes, according to Tycho, in 25,412 years ; according to Ptolemy, in 36,000 ;

and according to Copernicus, in 238,000 ; in which lime the fixed stars return to the same precise points wherein they were at tlie beginning. This period is commonly called Plato's year, or the great year. In various places of Scripture fir- mament is used for the middle region of the air. Many of the ancients allowed, with the moderns, that the firmament is a fluid matter; though they, who gave it the denomination of firmament, must have taken it for a solid sub- stance.

FIR'MAN, H. s. Fers. pJiurioana ; Arah.fir- maun. A mandate, license, or order of Turk- ish and Asiatic princes. Also written phirman. See our Life of Ali Pacha, vol. i. p. 621.

The king's phirman was thus interrupted.

Sir T. Herbert.

FIRMICUS Materxus (Julius), a famous writer, who composed in Latin, about A. D. 34.5, an excellent work in defence of Christianity, en- titled De Errore Profanarum Religionum, which is printed with the notes of John VVouver. There are also attributed to him eight books of ;tstronomy, printed by Aldus ˆlanutius in 1.501 ; but this work is by some supposed to have been written by another Julius Firmicus, who lived at the same time.

FUIOZLABAD, or Firusadad, a town oi Persia, in the Province of Fars, the ruins of wliich extend seventeen miles : among them are tlie remains of a fine temple, and of a ditch seven miles in circuit, and in some places sixty- tjight paces broad. The modern Firozeabad is an inconsiderable place. Seventy miles from Bushire.

FIROZEII, a town of Ilindostan, province of Delhi. Long. 75° 13′ E., lat. 29° 17′ N. As three of the Afghan emperors of Ilindostan bore the title of Firoz (the victorious), a number of towns were called after them, of which many are now in niins.

FIROZKOH, an ancient city of the province of (Ihore, in Afghaunistaun, frecjuently mentioned in oriental history. It was situated to the north of Ghore, and was the summer residence of the sovereigns ; in its vicinity was a celebrated tur- quoise mine.

FIRST, aclj. & adv. ~] Saxon pinrˆj popr'ˆ First'begot, adj. I (superlative nf pope) First'begottex, I kv,-ed.forst;

great : as an adverb, before any thing else ; often taking «< before it; earliest: firstling, as an ad- jective, means first brought forth or born : as a substantive, the first produce.

In the six hundredth and first year, in the first month, the first day of the month, the waters were dried up from off the earth. Genesis.

All the firstling males that come of thv herd, and of thy flock, thou shalt sanctify^ unto the Lord thy God. Deuteronomy.

Three presidents, of whom Daniel was first.

Daniel. My first son. Where will you go ? Take good Cominius With thee. Shakspeare. Coriolanus.

Thy air. Thou other gold-bound brow, is like the first. — A third is like the former. Id. Macbeth.

The (lighty purpose works o'erlook. Unless the deed go with it : from this moment. The very firstlings of my heart shall be The firstlings of my hand. Id.

First, metals are more durable than plants ; se- condly, they are more solid and hard ; thirdly, they are wholly subterraneous; whereas plants are part above earth, and part under the earth. Bacon.

Although the king loved to employ and advance bishops because, having rich bishopricks, ihey carried their reward upon themselves ; yet he did use to raise them by steps, that he might not losn the profit of the first-fruits, which by that course of gradation was mul- tiplied. Id. Henry VII. Man's _^rsi obedience. Milton. Who first, who last Roused from the slumber. Id. His first-begot. Vie know ; and sore have felt. When his fierce thunder drove us to the deep. Id. Hail, holy light, offspring oi heav'a first-born ! Id. Last, with one midnight stroke, all the first-born Of Egypt must lie dead. Id. Paradise Lost.

See, Father, vihat first-fruits on earth have sprung. From thy implanted grace in man 1 Milton.

A shepherd next. More meek, came with the firstlings of his flock. Choicest and best. Id. Paradise Loit,

First was the world as one great cymbal made. There jarring winds to infant nature played.

Marvell. The sea grew white ; the rolling waves from far Like heralds, _^n< denounced the wat'ry war.

Dryden. And all are fools and \oveT3 first or last. Id.

At first the silent venom slid with ease. And seized her cooler senses by degrees.

Id. Mneid. The tender firstlings of my woolly breed. Shall on his holy altar often bleed. Id. Virgil.

Truth scarce ever yet carried it by vote any where at'ttsjlrst appearance ; new opinions arc always sus- pected. Locke.

The first-born has not a sole or peculiar right, by any law of God and Nature ; the younger childrea having an equal title with him. Id. On Education.

First with the dogs, and king among the squires.

Spectator.

FIS

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FIS

'Tis little Will, the scourge of France, No godhead, but the Jirst of men. Prior.

I find, quoth Mat, reproof is vain ! Whojirst offend, wiW first complain. Id.

The blooming hopes of my then very young patron have been confirmed by most noble Jirst-frui If, and his life IS going on towards a plentiful harvest of all ac- cumulated virtues. Id.

Excepting fish and insects, there are very few or no creatures that can provide for themselves at first, without the assistance of parents. Bentley.

The firstlings of the flock are doomed to die.

Pope. Jove sent and found, far in a country scene. Truth, innocence, good-nature, look serene ; From which ingredients, yiVi, the dext'rous boy Picked the demure, the aukward, and the coy.*

Swift. The nameless He, whose nod is Nature's birth. And Nature's shield the shadow of his hand ; Her dissolution hi.« suspended smile '. The great First- Last ! Young.

And took his leave of me, promising to discharge the debt he owed me with the_ˆr«< money he should receive ; but 1 have heard nothing of him since.

Franklin.

*FiRST-BoRN. See Primogeniture. This word is often used in Scripture in a figurative sense for that which is first, most excellent, most distinguished in any thing. ‘ Tlie first-born of the poor’ (Isa. xiv. 30.) signifies, the most miserable of all the poor ; and in Job (xviii.13) * The first-born of death ;’ that is, the most ter- rible of all deaths.*

First-Frtits, primitiae, among the Hebrews, ■were oblations of part of the fruits of the har- vest, offered to God as an acknowledgment of his sovereign dominion. The first of these fruits were offered in the name of the whole nation,” being either two loaves of bread, or a sheaf of barley, which was threshed in the court of the temple. Every private person was obliged to bring his first-fruits to the temple ; and these consisted of wheat, barley, grapes, figs, apricots, olives, and dates. There was another sort of first-fmits which were paid to God. When bread was kneaded in a family, a portion of it was set apart, and given to the priest or Levite who dwelt in the place : if there was no priest or Levite there, it was cast into the oven, and consumed by the fire. These offerings made a considerable part of the revenues of the Hebrew priesthood.

First-Fruits are frequently mentioned by ancient Christian writers as one part of the church revenue. One of the councils of Car- thage enjoined, that they should consist only of grapes and corn.

First-Frtjits, in the church of England, are the profits of every spiritual benefice for the first year, according to the valuation thereof in the king’s books.

First Skiht Island, one of the Solomon islands, in the South Pacific, first discovered in 1769, by M. Surville. There is a small creek on the north coast, and islets and coral banks round the island. It is tininhabited and covered with fruit trees. Parrots and many other birds were seen. Long. 149” 10′ K., lat. 7° 15′ S.

FISC, fiscus, from ˆktkoc, Gr. a great basket, m the civil law, the treasury of a prince or

state ; or tliat to which all tilings due to tUe public fall. By the civil law, none but a sove- reign prince has a right to have a fisc or public treasury. At Rome the goods of condemned persons, if appropriated to the use of the public, were said publicari ; if to the support of the emperor, confiscari. See /Erarium.

FI’SCAL, n. s. & adj. ¥i. fiscal, from Latin fiscus, a treasury. Exchequer ; revenue ; a revenue officer; relating to the public revenue.

It behoveth the prince to have a vigilant eye on such fiscal ministers. Raleigh.

War, as it is entertained by diet, so can it not be long maintained by the ordinary _^co/ and receipt.

Bacon.

Don Pedro Rodriquez Compomares, ^^ca/ of the council of Castille. Swinburne.

FISCHER (John Andrew), M.D. of Erfurt, was born in 1667. He graduated at his native university, where he became professor extra- ordinary in physic, and also of logic, which he relinquished for the professorship of patliology, and the practice of his profession. He died m 1729, and wrote — 1. Consilia Medica, 3 vols. 2. Ilias in nuce, seu Medicina Synoptica. 3. Re- sponsa Practica.

Fischer (John Bernard), a German architect of the last century, was born at Vienna, about 1650, and went to Rome to improve his taste. He erected the famous palace of Schoenbrunn, and the emperor, Joseph I. appointed Fischer his chief architect ; creating him baron d'Erlach. His works arc thought to display too great a pre- dilection for ornament. The church of St. Charles Borromeo, in the suburbs of 'ienna, is his mas- terpiece. He died in 1724, leaving a work on Historical Architecture, oi a collection of ancient buildings, with explanations in French and Ger- man, Vienna, 1721, folio.

Fischer (Emanuel baron de), son of the above, applied himself to the study of mechanics, and assisted in several of the works conducted by his father. He constructed steam-engines for the mines of the Hartz, and other hydraulic machines; and corresponded with Desaguliers and S'Gravesande. He died in 1758.

Fischer (John Christian), an eminent musi- cian and pierformer on the hautbois, was born at Fribourg. After visiting several courts, he settled in England, were he was much admired for his skill in playing and composition. He died in 1000.

Fischer (John Frederic), a celebrated Ger- man scholar and editor, was born at Coburg in 1726, anil studied in the gymnasium there; pro- ceeding afterwards to the university of Leipsic His first publication was a Dissertation on the Altar of Peace. In 1751 he was chosen co-rec- tor of the school of St. Thomas, Leipsic, of which he subsequently became rector. He died Oc- tober 11th, 1799. His labors as an author and an editor were very considerable, including Re- marks on the Greek Grammai of Weller;

edi- tions of the Dictionary of the New Tt!stament by Pasor, the Lexicons of IMocris and Tima^us, the works of Anacreon, Theophrastus, the Dia- logues of Plato, and several other Greek and Latin authors.

FISCI AnvocATi, and Fisci PROciRATORrs, officers appointed for the management of the

fisc. Among the cases enumerated in the con- stitutions of the empire, where it was their busi- ness to plead, one is against those who have been condemned to pay a fine to the fisc on account of their litigiousness or frivolous appeals.

FISH, 71. $., V. 11. 8c V. a.'

Fisu'er,

Fish'er-boat, Fish'er-max, Fish'er-town, Fish'ery, Fish'ful, adj. Fish'-hook, n. s. Fish'ify, v. a. Fish'liko, n. s. Fish'-kettle, Fish'likf, adj. Fisii'-MFAL, n. a. Fish'-monger,

FiSIl'-POND, FiSa'-SPEAR,

Fish'-wife, Fish'-woman, Fish'y, adj.

Sax. pifc; Teut.

fiscli ; Beig. viscli ; Goth, and Danish,

jisk ; French peche ; Ital. pesche ; Latin, piscis, from Greek, TTiw, TTtv&j, to drink. Ainsworth. An ani- mal that inhabits

^water; the flesh of fish. As a verb neu- ter, to be employed in catching fish ; to lure. As an active

i verb, to search wa- ter for fish ; to search in any way. A fish- er-town, is a town j inhabited chieHyby

fishermen and their families. To fisbify is to convert into fish, or the likeness or taste of fish. A fish-meal is a diet of fish, or abstemious diet. A fish-wife and fish-woman, a woman that sells fish. Fishy, consisting or having the qualities of, or inhabited by, fish. The other compounds the extracts explain.

TherforR who of you axith his fadir breed, wher he schal geue him a stoon ? or if he axith fi/ssche, whe- ther he schal gyue him a serpent for tho ft/ssche ?

Wiclif. Luk. xi. Canst thou fill his skin wi'.h barbed irons ? or his head with fish-spearti Lay thine hand upon him, remcnsber the battle, do no more. Johy-W. 7, 8.

Lo in ibis ponde he fyshc and frogges both. Cast in your nette : but be you liefe or lothe, Hold you content as fortune lyst assyne : For it is your owncfyshyng and not myne.

Sir T. More. Somer is come, for every spray now springes. The hart hath hunge his olde head on the pale.

The bucke in brake his winter coate he flynges ; The Jishes fiete with newe repayred scale. Surry.

We know that town is but -withjishers fraught. Where Theseus governed and where Plato taught.

Sandys.

There also would be planted a good town, having

both a good haven and a plentiful _ˆ,s/i!raˆ. Spenser.

I heard it of 2, fishwife. Beaumont and Fletcher,

He smells like a.fiih, a very ancient and fishlike

smell. S/uikspeare. Tempest.

While others fish with craft for great opinion,

I with great truth catch mere simplicity. Id,

I fight when I cannot chuse, and I eat no fish.

Id. King Lear. The beasts, ihcfishet, and the winged fowls. Are their male subjects. Id. Comedy of Errors. In our sight the three were taken up. By fishermen of Corinth, as we thought : At lengtli another seized on us. And would have reft ihefhhers of their prey, Had not they been very slow of sail.

Sliakspeare. How fearful And dizzy 'tis to cast one's eyes so low ! The fiihermen that walk upon the beach Appear like mice. Id. King Lear,

Here comes Romeo, — Without his roi-, like a dried herring : O flesh, flesh, how art ihoa fishified !

Sliakspeare. May pure contents For ever pitch their tents Upon these down- v, these meads, these rocks, these

mountains, And peace still slumber by these purling fountains ‘ Which we may every year Find when we come a.Jishing here. Raleigh.

*It is walled and guarded with the ocean, most com- modious for traffick to all parts of the world, and watered with pleasant _/i*A/u?, and navigable rivers. Camden’s Remains.*

Others of them, in that time, turned thcitfisher- town IVIousehole. Carew’s Survey of Cornwall,

Thus mean in state, and calm in sprite.

My jishfd pond is my delight. Carew.

I fear lo play the fishmonger : and yet so large a commodity may not pass in silence. Id.

No fisher lets down an empty hook, but cloaihed wiili a proper and pleasing bait. Bp, Hall.

Lest he should suspect it, draw it from him. As fishers do the bait, to make him follow it.

DenhaiK. Aud now the fish ignoble fates escape. Since Venus owed her safety to th(ir shape.

Creech. Lime in Dorsetshire, a little fishertowa.

Clarendon. We mortify ourselves with the diet of fish, and think we fare coarsely if we abstain from the flesh of other animals. Browne.

Few eyes have escaped the picture of mermaids, that is, according to Horace, a monster with a woman’s head ubove, and fishy extremity below. Id.

At length two monsters of unequal size. Hard by the shore, a fisherman espies. WcAler. Do scales and fins bear price to this excess ; You might have bought the fishermen for less,

Dryden, The surgeon left the fishnumger to determine the controversy between him and the pike. L’ Estrange.

‘I’here are fishes, that have wings, that are not strangers to the airy region ; and there are some birds that are inhabitants of the water, whose blood is as cold as fishes ; aud their flesh is so like in taste, that the scrupulous are allowed them on fish-days.

Locke.

Fish-ponds are no small improvement of watery boggy lands. Mortimer’s Husbandry.

A sharp point, bended upward and backward, like a. fish-hook. Grew’s Museum.

It is probp.ble that the way of embalming amongst the Figyptians was by boiling the body in a long cauldron like a fish-kettle, in some kind of liquid bal- sam. Iti’

The king went down to a miserable _ˆ‘sAef-6oa< that Hahjs had provided. Burnet.

We shall have plenty of mackerel this season ; our fishery will not be disturbed by privateers.

Addison.

Fish-ponds were made where former foresu grew. And hills were levelled to extend the view. Prior.

After the great value the Romans put upon fishes, it will not appear incredible that C. Hirrius should sell his fish-ponds for quadragies H. S, £32.291 13«. 4(;_ Arbuthrwt.

Thin drink doih overcool their blood, and making m-day fish-meals, they fall into a kind of male green- sickness. ˆ«rP-*

FISHER.

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Oft, as hefiahed her nether realms for wit. The goddess favoured him, and favours yet.

Pope. A soldier now he with his coat appears ■, AJishernoy/, his trembling angle bears. Id.

My absent mates Bait the barbed steel, and from ihejishi/ flood Appease the’ afHictive fierce desire of food. Id. Some have Jished the very jakes for

papers left there by men of wit. Swift,

I would not take one of these as my arbitrator in a dispute for so much as ? i fish-pond ; — for if he reserved the mud to me, he would be sure to give the water that fed the pool to my adversary. Burke.

Meanwhile, I had formerly been extremely fond of fish ; and, when one of these cod was taken out of the frying-pan, I thought its flavour delicious.

Franklin, Pope's imitation of Spenser is the description of an alley of Jishwomen. Warton.

Fish, in a ship, a plank or piece of timber, fastened to a ship's mast or yard, to strengthen it; which is done by nailing it on with iron spikes, and winding ropes hard about them.

Fishes, in heraldry, are the emblems of silence and watchfulness ; and are borne either upright, imbowed, extended, endorsed respect- ing each other, surmounting one another, fretted, &c. In blazoning fishes, those borne feeding, should be termed devouring; all fishes borne up- right and having fins, should be blazoned hauri- ant ; and those borne transverse the escutcheon, must be termed naiant.

FisuES, in natural history, form the fourth class of animals in the Linnsean system. Their most general or popular division is into fresh and salt water ones. A few species only swim up into the rivers to deposit their spawn ; but by far the greatest number keep in the sea, and would soon expire in fresh water. There are about 400 species of fishes (according to Linnaeus), of which we know something; but the unknown ones are supposed to be many more ; and, as they are thought to lie in great depths of the sea remote from land, it is probable that many species will remain for ever unknown. For the subdivisions, characters, and natural history of this class of animals, see Ichthyology. Lin- nseus's method of preserving fish for cabinets is to expose them to the air; and, when they acquire such a degree of putrefaction that the skin loses its cohesion to the body of the fisii, it may be slid off almost like a glove ; the two sides of this skin may then be dried upon paper like a plant, or one of the sides may be filled with plaster of Paris to give the subject a due plumpness. A fish may be prepared, after it has acquired this degree of putrefaction, by makinij; a longitudinal incision on the belly, and carefully dissecting the fleshy part from the skin, which is but slightly attached to it in conse- quence of the putrescency. The skin is then to be filled with cotton and the antiseptic powder as directed for birds ; and to be sewed up where the incision was made. In the posthumous papers of Mr. Ilooke, a method is described of gilding live craw-fish, carps, &c., without in- juring the fish. The cement for tliis purpose is prepared, by

putting some Burgundy pitch into a new earthen pot, and warming the vessel till

it receives so much of the pitch as will stii.k round it ; then strowing some finely powdered amber over the pitch when growing cold, adding a mixture of three pounds of linseed oil and one of oil of turpentine, covering the vessel, and boiling them for an hour over a gentle fire, and grinding the mixture, as it is wanted, with so much pumice stone in fine powder as will re- duce it to the consistence of paint. The fish being wiped dry, the mixture is spread upon it; and the gold leaf being then laid on and gently pressed down, the fish may be immediately put into water again, without any danger of the gold coming off, for the matter quickly grows hard in water.

Fish, Gold. See Cyprinus. Fish (Simon), a lawyer, born in Kent, and who studied at Oxford, removed in 1525 to Gray's Inn, London. Having here acted a part in a play intended to ridicule cardinal Wolsey, he incurred that minister's resentment, and fled to Germany, where he wrote The Supplication of the Beggars, a Satire upon the Romish Clergy, which was answered by Sir Thomas More's Sup- plication of Souls. Henry VIII., however, was so pleased with the wit of Fish, that he granted him his protection. He died in 1531.

Fish River (Great), a river of Southern Africa, which rises in the Sneuwberg Mountains, and falls into the Indian Sea. Long. 27° 20′ E., lat. 33ˆ 30′ S.

Fish River, a river of West Florida, which runs into Mobile Bay. Long. 87° 50′ W., lat. 30° 30′ N.

FISHACRE, or Fizacre (Richard), a learned Dominican of the thirteenth century, was a native of Devonshire, and educated at Oxford. He was the intimate friend of Robert Bacon, and celebrated for his knowledge in philosophy and divinity. He died in 1248. His works were very numerous.

FISH BORN Creek, a river on the north side of the isle of Wight, which runs into the sea. Long. 1° 4′ W., lat. 50° 44′ N.

FISHER (John), D.D. was born at Beverly in Yorkshire, in 1459, and educated in that place. In 1484 he removed to Michael-house, Cambridge, of which college he was elected master in 1495. Having studied divinity, he took orders ; and, becoming eminent as a divine, attracted the notice of Margaret, countess of Richmond, mother of Henry VII., who made him her chaplain and confessor. In 1501 he took the degree of D.D. and was elected chan- cellor of the university. In 1504 he was con- secrated bishop of Rochester ; which small bishopric he would never resign, though he was ofTered both Ely and Lincoln. The founding of the two colleges of Christ

Church, and St. .lohn's, in Cambridge, was entirely owing to his influ- ence with the countess of Richmond. On the promulgation of Luther's doctrine, he exerted a'l his influence against it, and is supposed to have written the famous work for which Henry VIII. obtained the title of Defender of the Faith. But in 1527, opposing his divorce, and denying his supremacy, the implacable tyrant determined, and finally effected, his destruction. In 1534 the parliament found him guilty of

*raisprisiou of treason, for concealing certain prophetic speeclies of a fanatical impostor, called the holy maid of Kent, relative to the king's death, and condemned him, and five others, in loss of goods and imprisonment, but he was re- leased on paying £300 for the king's use. But on the king's marriage with Anne Roleyn, having refused to take the oath of allegiance, alleging that he was not convinced that the king's first marriage was against the law of God, he was attainted by the parliament of 1534, and com- mitted to the Tower, where he would probably 'yave been suffered to close his life, had not Pope Paul III. created this zealous adherent to his cause a member of the college of cardinals. Henry on hearing that Fisher intended to accept of the dignity, exclaimed in a rage, ' Yea, is he 50 lusty ? well, let the pope send him a hat when he will, he shall wear it on his shoulders, for I will leave him never a head to set it on.' In pursuance of this bloody intention the king sent llich the solicitor-general, under pretence of consulting the bishop on a case of conscience, but really with a design to draw him into a con- versation concerning the supremacy. The honest old bishop spoke his mind without reserve, and an indictment and conviction of high treason was the consequence. lie was beheaded on Tower hill on the '22nd June 1535, in the seventy-seventh year of his age. He wrote several treatises against Luther, and other works, which were printed at Wurtzburgh, in 1597, in 1 vol. folio. An interesting picture of the character of this prelate and his times is presented in the following ancient narrative of his execution : — ' About nine of the clock, the Lieutenant came againe to the bishop, and, find- ing him almost ready, said that he was come now for him ; ' I will wait upon you straight,' said he, ' as fast as this thin body of mine will give me leave.' Then said he tg his man, ' Reach me my furred tippet to put about my neck.' * 0 my lord,' said the lieutenant, 'what need you be so careful for your health for this little time, being, as yourself knoweth, not much above an hour ?' 'I think no otherwise,' said this blessed father ; ' but yet in the mean time I will keep myselfe as well as I can, tdl the very time of my execution ; for t tell you truth, though [have, I thank our Lord, a very good desire and a willing minde to die at this time, and so trust of his infinite mercy and*

goodnt'sse he will continue it, yet will I not willingly hinder my healt'i in the mean time, one minut; of an houre, but still prolong tlie same as long as I can, by such reasonable vvaies and meanes as Almighty God hath provided for me.' \Vith that, taking a little book in his hand, which was a New Testament lying by him, he made a crosse on his forehead, and went out of his prison doore with the lieutenant, being so weak that he was scarce able to go do\'ne staires ; wherefore, at the staires foot he was taken up in a chaire between two of the lieutenant's men, and carried to the Tower gate, with a great num- ber of weapons about him, to be delivered to the sheriffs of London for execution. And as they were come to the uttermost precinct of the liberty of the Tower, they rested there with him

*a space, tdl such time as one was sent before to know in what readinesse the sheritl's were to receive him ; during which space he rose out of his chaire, and standing on his feet leaned his shoulders to the wall, and lifting up his eyes towards heaven, opened his little book in his hand, and said, ' O Lord, this is the last time that ever I shall open tiiis book ; let some com- fortable place now chance unto me, whereby I thy poore servant may glorifie thee in this my last houre ;' and with that looking into the book, tV.i first thing that came to his sight were these words, ' Hi£c est autem vita aeterna, ut cognos cant te, solum verum Deum, et quem misisti Jesum Christum. Ego te glorificavi super terram, opus consummavi quod dedisti mi'ai ut faciam : et nunc clarifica tu me. Pater, apud temetipsum claritate quam habui priusquam, &c. ;' and with that he shut the book together, and said, ' Here is even learning enough for me to my life's end.' And .«o the sheriffs being reiidy for hira, he was taken up again among certain of the sheriffs' men, with a new and much greater company of weapons than was before, and carried to the scaffold on thf Tower hill, otherwise called East Smithfield, himselfe praying all the way, and recording upon the words which he before had read; and when he was come to the foot of the scaffold, they that carried him offered to help him up the staires ; but then said he, ' Nay, masters, seeing I am come so fcrre, let me alone, and ye shall see me shift for myself well enough ;' and so went up the staires v/ ithout any helpe, so lively, that it was merveile to them that knew before of his debility and weaknes; – . But as he was mount- ing up tiie staires, the south-east sun was shining very bright in his face, whereupon he said to himselfe these words, lifting up his hands, * Accedite ad eum, et illuminamini, et facies vestra non confundetur.' By that time he was upon the scaffold it was about ten of the clock, where the executioner being ready to do his office, kneeled down to him, as the fashion is, and asked him forgivenesse : ' I forgive thee,' said he, ' with all my heart, and I trust thou shalt see me overcome this storm lustily.' Then was his gown and tippet taken from him, and he stood in his doublet and hose in sight of all the people, whereof was no small number as- sembled to see his execution.*

There was to be seen a long, lean, and slender body, having on it little other substance besides skin and bones, insomuch, as most of the beholders merveiled to see a living man so farre consumed, for he seemed a very image of death, and as it were death in a man's shape, using a man's voice ; and therefore it was thought the king was some- thing cruell to put such a man to death being so neere his end, and to kill that which was dying already, except it were for pity's sake to rid him of his pain. When the innocent and holy man was some time upon the scaffold, he spake to the people in effect as followeth : — ' Cliristian people, I am come hidier to die for the faith of Christ's holy Catholiqup Church ; and I thank God hitherto my stomack hath served me very well tiiereunto, so that yet I hare not feared death ; wherefore I desire you all to help and

assist me with your prayers, that at the very point and instant of death's stroke, I may in that very moment stand steadfast, without faint- ing in any one point of the Catholique faith, free from any fear. And I beseech Almighty God of his infinite goodnesse, to save the king and his realme, and that it may please him to hold his hand over it and send him good coun- sel.' These, or like words, he spake with such a cheerful countenance, such a stout and constant courage, and such a reverend gravity, that he appeared to all men not only void of feare, but also glad of death. Besides this, he uttered his words so distmctly, and with so loud and cleare a voice, that the people were astonished thereat, and noted it for a miraculous thing, to heare so plain and audible a voice come from so weak and sickly an old body ; for the youngest man in that presence, being in good and perfect health, could not have spoken to be better heard and perceived than he was. Then after these few words by him uttered, he kneeled down on both his knees and said certain prayers, among which one was the hymn of Te Deum laudamus, to the end, and the psalra of In te, Domine, speravi. Tlien came the executioner and bound a handkerchief about his eyes; and so this holy father, lifting up his hands and heart towards heaven, said a few prayers, which were not long, but fervent and devout ; which being ended, he laid his head down on the middle of a little block, where the executioner being ready with a sh'Jri; sud heavy axe, cut asunder his slender neck at one blow, which bled so abundantly that many wondered to see so much blood issue out of so slender and lean a body. Lord Her-

bert says that ' the Pope Paul III. sent him a Cardinal's hat, but unseasonably, his head being off.'

Fisher (John), D.D., a modern English pre- late, was born at Hampton in Middlesex in 1748, his father being at that period curate of the village. Becoming afterwards chaplain to bishop Thomas, Mr. Fisher was by him presented to the vicarage of Peterborough, in the grammar- school of which city his eldest of ten sons, the subject of this memoir, received the rudiments of his education. He was afterwards removed to St. Paul's school, and thence proceeded to Peterhouse, Cambridge, in 1766. In 1770 he took hii detgree of A. B. with considerable credit; and two years afterwards succeeded to a fellow- ship at St. John's, of which college he also became a tutor. While in this situation prince Czartorinski Poniatowski, and several other dis- tinguished personages, were placed under his care ; but it was to his integrity in the election of Dr. Chevalier to the vacant headship of his college, that his future success in life is to be mainly attributed. It induced bishop Hurd to recommend him to George III. in the capacity of tutor to prince Edward, afterwards duke of Kent. In 1787 he married the daughter of Mr. Scrivener of Sibton Abbey, Suffolk, and two years afterwards proceded to his doctor's degree. In 1803 he was raised to the bishopric of Exeter, and was appointed to superintend the education of the late lamented princess Charlotte. In 1809 he was translated to the see of Salisbury. Dr. Fisher died in this see, in 1825, with the character of a most amiable and unostentatious, while active churchman.

FISHERIES.

Fisheries. While the sea surrounds her on every side, and her navy shall continue the bul- wark of Great Britain, the subject of fisheries, and the encouragement of a hardy race of fish- ermen, must ever be of importance to this country. Both have, therefore, from an early period attracted the attention, not only of indivi- duals, but of the government. It is said that nearly half of the known Linnsean species of fish frequent our shores.

We cannot, in this article, attempt more than to furnish the reader with a sketch of the history of our principal established fisheries, i.e. the cod, the herring, the pilchard, the mackerel, the salmon, and the lobster and oyster fisheries, &c. all of them articles of food, and of a large home consumption. For an account of the northern and southern whale-fishery, see Whale-Fishery.

We, perhaps, should first notice the long- standing complaint that has been made of our neglect of fish as an article of food. There can be no question that the complaint is just, as applied to a large portion of the inhabitants of this country. In the inland counties, the laboring classes seldom or never touch it; cod is a luxury at the tables of respectable families of the middle class; and salmon, once the common food of all ranks while in season, Vol.

in the northern counties, is universally scarce and dear; and through large portions of the country almost unknown. The only way in which this can be accounted for is, the entire monopoly of fish fnat has long been concentrated in the hands of the London salesmen. Boats to convey fish fresh to this market, gra- dually draw off all the regular supplies from the local markets ; and the contrivance of pack- ing fish in ice has further aided their absorp- tion in this one direction. In the metropolis the price is always kept up sufficiently high to en- sure a supply ; when there is any danger of tiie supply becoming excessive, the old method of the Dutch East India Company, to enhance -the price of their spices, i. e. by destroying them, is resorted to; and the tricks and manoeuvres of the fishermen, salesmen, and fishmongers, are only exceeded by those of Mark-Lane. In the cities of London and Westminster, to crown this modern absurdity in the supply of a prin- cipal article of food, there is also, unfortunately, but one fish-market — the favored Billingsgate ! ‘ The consequence of which is,’ as Mr. Barrow has observed, ‘that a sort of blockade checks the supply of fish for the metropolis ; that large quantities are withheld or destroyed as they ap- proach the market, in order to keep up the

price ; and 2,000,000 of people ;ire nearly pro- hibited from the use of an article of food, whicli iiiiglit be applied to the diminishing of the con- sumption of butchers’ meat and wheat-corn, to the great relief of the whole kingdom.’

Tile ‘ committee of the fish association’ have enumerated four principal impediments to an increased supply and distril)utio;i, of which they strongly recommend the removal by all practi- cable moans. The first, which, in fact, produces the rest, is the restriction of tl»e market to Bil- lingsgate ; the second is the doubt and hesitation of fishermen in bringing up to this only market so large a quantity of fish as they might pro- cure, under an uncertain demand for it; the tlurd, the difficulty and the increased expense of distribution from tlieir above-mentioned remote market; and the fourth, the uncertainty of the price, and the total ignorance in which the public are kept as to the daily state of the supply.

‘ The evils of the Billingsgate monopoly,’ says the foregoing writer, ‘ are strongly exem- plified in the case of mackerel, which is known to be scarcest in the market when most abundant in the British channel : then, indeed, the mackerel fishery is abandoned by the fisher- men for two

reasons ; the one is, that they would be too cheap ; the other, the difficulty of distri- bution, which is effected by fisherwomen, who attend daily at Billingsgate to. purchase the mackerel, and carry them for sale to the diffe- rent parts of the town : the attendance of these women secures to the fishermen a regular custom for their fish ; but this laborious, and not always profitable employment, is abandoned as soon as the common fruit comes into season, the carriers and distributors finding the sale cf strawberries, gooseberries, currants, &c., a more pleasant and profitable occupation, with less risk and trouble. All the mackerel which may arrive at this period, beyond the estimated demand of the fishmongers, however fresh and good, is thrown into the Tham.es. Perhaps, therefore, in the case of this particular fish, a free and unrestricted use of salt might be the means of procuring and preserving a considerable stock of palatable and nutritious food. It is the more surprising that these impe- diments to a more extended use of fish in the metropolis, so obviously arising out of the char- tered privileije of Billingsgate, should so long have been suffered to exist, especially as nothing more is required for the dissolution of this inju- rious monopoly than the establishment of new markets. The evils of this monopoly are not of recent date. In early times, there appears to have been a regularly established fish-market at Qucenhithe. In the first year of Henry III., 1226, the constable of the Tower was ordered to compel the boats, arriving with fish, to proceed to that market; and Edward IV. directed that two out of three vessels, arriving with fish, should proceed to Queenhithe, and the other remain at Billingsgate. At that period, the po- pulation of London, and its environs, appears to have been about a twenty-fourth part of its present amount, yet it had then two fish-markets. The market of Queenhithe, however, was suf- fered to drop; and we hear of no attempt to

establish a second, until the middle of the last century, when an act was passed, in the year 1749, ‘ for making a free market for the sale of fish in the city of Westminster; and for pre- venting the forestalling and monopolising of fish.’ Yet, strange and unaccountable as it may appear, tliis act was then, and has since remained a dead letter. Westminster, since that time, has increased its population at least three-fold, and is still without a fish-market. The act lias never been repealed, and requires only the no- mination of new and more efficient commission- ers to carry it into effect. If, in the vicinity of all the bridges across the Thames, fish-markets were once established, the fishermen of Deal, Dover, Hastings, Brighton, and other parts of the coasts of Kent and Sussex, would amply supply those markets by land-carriage, with the ordinary kinds of fish, in addition to the more valuable kinds brought up the Thames; and it could not fail to increase the general use of fish in and about London, if, when the Regent’s canal shall be opened, two or three fish-markets were established near it for the supply of Isling- ton, Pancras, Paddington, and the whole line of

London along the New Road, containing an im- mense population almost entirely cut off from the use of fish. The only arguments in favor of keeping back the fish, and throwing them overboard, is the frequent westerly wind which prevents the fishing-vessels from proceeding to the market up the Thames ; but that excuse is now done away by the numerous steam-vessels, which could easily tow up the fishing-boats.'

With regard, therefore, to the country at large, the demand for fish has, for a great length of time, become too unsteady and unimportant to ensure that regular mercantile supply which the natural abundance of fish all around us, the in- exhaustible natural supply, would teacli us to expect. We are much surprised that spirited individuals in the interior parts of Great Britain are not found to undertake the regular trans- mission of it from the coasts ; to stimulate the demand, and regulate the supply as a matter of trade : but into the vortex of London monopoly this great article of human subsistence has been drawn ; and a great length of time, and many mercantile revolutions, may be necessary to re- cover it from it.

We should, perhaps, add, that the salt duties (lately repealed) largely contributed to the dis- use of salt-fish in this country.

Certain it is that the fisheries have not always languished for want of public encouragement. In 1580 a plan was fonned for raising £80,000 for establishing 'The British Fishery.' In 1615 the same sum was raised by a joint-stock com- pany. In 1632 a Royal Fishing company was established imder the sanction of Charles I. ; who, in order to increase the demand, prohibited the importation of foreign fish, directed a supply to be furnished for his fleet, and ordered Lent to be more strictly observed. In 1660 parliament granted a remission of the salt duties, and freed all the materials employed in the fisheries from customs and exci.se.

The national fishery met with great encourage- ment under the auspices of Charles II. In

1677 this monarch incorporated the duke of York and others into 'The Company of the Royal Fishery of England;' but their capital was exhausted in the purchase and fitting out of a few busses, built in Holland, and manned with Dutchmen, which were seized by the French. In 1713 it was proposed to raise £180,000 on annuities, for the purpose of establishing a fish- ing company. In 1749 by the recommendation of George II. in his opening speech to Parlia- ment, and, in consequence of a report of a com-

mittee of the house of commons, the sum of £500,000 was subscribed for carrying on the fisheries, under a corporation, by the name of 'The Society of the Free British Fishery,' of which the Prince of Wales was chosen the go- vernor. This society, patronised by men of the first rank, promised fair for a little time, but soon began to languish ; nor was the large bounty of 56s. a ton, able to prevent its total failure. The attention of parliament was again called to this great national object in 1786, when a new corporation was formed, under the name of 'The British Society for Extending the Fislieries and Improving the Sea Coasts of the Kingdom,' which has continued, with various modifications, to the present time.

Parliament also has been liberal in encou- raging the fisheries by bounties. A committee of the house of commons, in 1785, reported that the herring-fishery cost the country little short of £20,000 annually, which, on an average of ten years, was equal to £75 per cent, on the value of all the fish that had been taken by the vessels on which it was paid. But, as Dr. Smith has observed, a tonnage-bounty, propor- tioned to the bunleu of the ship, and not to her diligence aud success in the fishery, is not the best stimulus to exertion ; it was an encourage- ment for fitting out ships to catch, not the fish, but the bounty ; or to induce rash adventurers to engage in concerns which they do not under- stand. The carelessness of such persons, and the ignorance of those employed by them in curing and packing the fish, not only robbed the public purse, but destroyed the character of the article in the foreign market ; where, if saleable at all, it fetched only an inferior price, while the skill and attention of the Dutch secured for their fish tliat preference to which they were justly entitled. The recent change of the bounty, however, from the tonnage to the quantity and the quality of the fish caught and cured, with the regulations adopted by the acts of 48th and 55th Geo. III. have had the good effect of rai.sing the character, and consequently increasing the demand for British fish in the foreign markets, where the herrings in parti'cular are now held in equal esteem with those of the Dutch. This bounty, granted by the act 48th Geo. III. c. 110, is 2x. per barrel on all herrings branded by the proper officers, and 4.s. a barrel granted by the act 55th Geo. III. c. 94, and is so considerable, that, at present, it amounts to not less than £30,000 a-year.

The following is an official return, for the year ending 5th April, 1818, of the total number of vessels, including their repeated voyages, which liave been cleared outwards for the British Her-

ring Fishery, not on the Tonnage Bounty, in the year ended 5th April, 1818; distinguishing the number of men on board, the tonnage, netting, salt, and barrels carried out.

Ves.

Men.

Tonnage.

Netting.

Salt.

Barrels.

Num.

Num.

Tons.

Sq. Yards.

Bushels.

Numb.

884

4049

26,951|f

2,490,660

224,133

■

125185

The returns for the same year of the total number of vessels which were fitted out in Scotland, for the ‘ Open Sea Fishery,’ under the regulations of the 48th and 55th Geo. III., is as under :-

Vcs.

Tonnag.

Men.

Netting.

Herrings.

Premiums Paid.

Num.

Tons.

Num.

Sq. Yards.

Barrels.

£. s. d.

19

464|f

139

191,6381

9461

1308 0 0

North Britain takes the lead in all our do- mestic fisheries. The whole coast of Scotland may indeed be considered as one contirraed fishery, distinguished by the names of the Shet- land, or northern fishery, that on the east side of the kingdom from the Pentland frith to Berwick, and the western or Hebrides fishery. The prin- cipal town on the Shetland Islands is called Lerwic, situated on a narrow channel of the Main-land, called Brassa or Brassey Sound. Hither the Dutch and other foreigners have been accustomed to resort to the fisheries at the ap- pointed seasons, when Lerwic has had all the appearance of a continued market or fair. The eastern fisheries along the shores of Scotland, though less considerable than those on the coasts of Shetland, are also of great national impor- tance. The late war, however, drove our Dutch neighbours from their haunts. In 1819 Mr. Stevenson, tiie celebrated engineer, thus des- cribes their re-appearance there; and adds so many uset\il reflections on the subject of the fisheries of Scotland, that we transcribe the principal part of his paper on the subject origin- ally communicated to the Edinburgh Philoso- phical Journal.

'In the early part of August last (1819), while sailing along the sliores of

Kincardine- shire, about ten miles off" Dunottar Castle, the watch upon deck, at midnight, called out ' Lights a-head.' Upon a nearer approach, these lights were found to belong to a small fleet of Dutch fishermen employed in the deep-sea fish- ing, eash vessel having a lantern at her mast- head. What success tliese plodding people had met with, our crew had no opportunity of en- quiring : but upon arriving the next morning at Fraserburgh, the great fishing station on the coast of Aberdeen, we found that about 120 boats, containing five men each, had commenced the fishing-season here six weeks before, and had that night caught no less than about 1500 barrels of herrings, which, in a general way, when there is a demand fbr fisli, may be valued at £l sterling

per barrel to the fishermen, and may be regarded as adding to the wealth of the country perhaps not less than £'3000. In coasting along between Fraserburgh and the Orkney Islands, another fleet of Dutch fishermen was seen at a distance. The harbour and bay of Wick were crowded with fishing-boats and busses of all descriptions, collected from the Frith of Forth, and southward even as far as Yarmouth and Lowestoffe. The Caithness fishing was said to have been pretty successful, though not equal to what it has been in former years.

' In the Orkney and Shetland Islands, one would naturally look for extensive fishing esta- blishments, both in herrings and what are termed white fish, (cod, ling, and tusk) ; but it is a cu- rious fact, that while the Dutch have long come from their own coast to these islands to fish her- rings, it is only within a very few years that the people of Orkney, chiefly by the spirited and praise-worthy exertions of Samuel Laing, esq., have given any attention to this important source of wealth. It has long been a practice with the great fishmongers of London to send their welled smacks to fish for cod, and to pur- chase lobsters, around the (Jrkney islands; and both are carried alive to the London market. This trade has done much good to these islands, and has brought a great deal of money to them ; but still it is of a more circumscribed nature, and is less calculated to swell the national wealth, than the herring and white fishery in general.

' Hitherto the industry of the Orcadians has been chiefly directed to farming pursuits ; while the Shetlanders have been almost exclusively oc- cupied in the cod, ling, and tusk fishing. It is doubtful, indeed, if, up to this period, there be a single boat belonging to the Slietland Isles, which is

completely equipped for the herring fishery. But here, again, another fleet of Dutch doggers was seen collecting in numbers off" these islands, which is considered a rich harvest in Holland. So systematically do the Dutch pursue the fishing business upon our coasts, that their fleet of busses is accompanied by an hospital- ship. This vessel we now found at anchor in Lerwick Roads, and were informed that she paid weekly yisits to the fleet, to supply medicines, and to receive any of the people falling sick, or meeting with any accident.

- *Though Shetland is certainly not so much an agricultural counti-y as Orkney, yet it may be hoped that the encouragement judiciously held out by the Highland Society, for the production of green crops in Shetland, may eventually have the effect of teaching these insular farmers the practicability of providing fodder for their cattle in the spring of the year. For ages past this has been a great desideratum. The command of a month or six weeks fodder, would enable the proprietors of that country to stock many of their fine verdant isles with cattle, and to employ their hardy tenantry more exclusively in the different branches of the fishery.*

- *It is well known, that, next to the Newfound- land Eanks, those of Shetland are the most pro- ductive in ling, cod, tusk, and other white fish ; and by the recent discovery of a bank, trending*

many leagues to the south-westward, the British merchants have made a vast accession to their fishing-grounds. In the small picturesque Bay of Scalloway, and in some of the other bays and voes on the wes'ern side of the Mainland of Shetland, the fishing upon this new bank (which I humbly presume to term the Regent Fishing Bank, a name at once calculated to mark the period of its discovery, and pay a pro- per compliment to the prince), has been pursued with great success. Here small sloops, of from fifteen to twenty-five tons burden, and manned with eight persons, have been employed. In the beginning of Aug-ust they had this summer fished for twelve weeks, generally returning home with their fish once a week. On an average, these vessels had caught 1000 fine cod-fish a-week, of which about 600, in a dried state, go to the ton, and these they would have gladly sold at about £l5 per ton. So numerous are the fish upon the Regent Fishing Bank, that a French vessel, be- longing, it is believed, to St. Maloes, had sailed with her second cargo of fish this season ; and though the fishermen did not mention this under any apprehension, as though there were danger of the fish becoming scarce, yet they seemed to regret the circumstance, on account of tlieir market being thus pre-occupied.

' Here, and at Orkney, we had the pleasure to see many ships arriving from the whale-fishing, and parting with a certain proportion of their crews. To

such an extent, indeed, are the crews of the whalers made up from these islands, that it is calculated that not less than £15,000 in cash are annually brought into the islands by this means. With propriety, therefore, may the whale-fishery be regarded as one of the most productive sources of national wealth connected with the British fisheries.

‘ From the Orkney and Shetland Islands our course was directed to the westward. A consi- derable salmon-fishing seems to be carried on in the mouths of the rivers of Lord Reay’s Country in Sutherlandshire : the fish are carried from this to Aberdeen, and from thence in regular trading smacks to London. We heard little more of any kind of fishing till we reached the Harris Isles. There, and throughout the numerous lochs and fishing stations on the INIainland, in the dis- tricts of Gairloch, Applecross, Lochalsh, Gle- nelg, Moidart, Knoidart, Ardnamurchan, Mull, Lorn, and Kintyre, w-e understood that there was a general lamentation for the disappearance of herrings, which in former times used to crowd into lochs which they seem now to have in some measure deserted. This the fishermen suppose to be owing to the schools being broken and di- vided about the Shetland and Orkney Islands; and they remark, that, by some unaccountable change in the habits of the fish, the greater num- ber now take the east coast of Great Britain. This is the more to be regretted, that in Sky, the Lewis, Harris, and Uist Islands, the inhabitants have of late years turned their attention much to the fishing. Indeed this has followed as a matter of necessity, from the general practice of con- verting the numerous small arable farms, which were perhaps neither very useful to the tenants, nor profitable to the laird, into great sheep-

walks; so that the inhabitants are now more generally assembled upon the coast. The large sums expended in the construction of the Cale- donian Canal, have either directly or indirectly become a source of wealth to these people : they have been enabled to furnish themselves with boats and fisliing tackle, and for one fishing- boat, which was formerly seen in the Hebrides only twenty years ago, it may be safely affirmed that ten are to be met with now. If the same spirit shall continue to be manifested, in spite of all the objections which have been urged against the salt laws, and the depopulating effects of emigration, the British fisheries in these islands, and along this coast, with a little encourage- ment will be wonderfully extended, and we shall ere long see the Highlands and islands of Scot- land in that state to which they are peculiarly adapted, and in which alone their continued prosperity is to be looked for, viz. — when their valleys, muirs, and mountains are covered with flocks, and the people are found in small

villages on the shores.'

Sect. I. — Of the Cod Fishery.

The cod, gadus morhua of Linne, peculiar to the Northern Seas, is the most extensive fishery of which Great Britain can boast; and which is well known to have its principal rendezvous on the banks of Newfoundland, and the neigh- bourhood. It extends itself in a greater or less degree over all the shores of our islands in Eu- rope. See Gadus. It is a gregarious and very voracious fish ; and is sometimes found to devour its own species : we need only add here that it is prolific almost beyond belief. Leuwenhoeck counted 9,384,000 eggs in a cod fish of a mid- dling size; Mr. Hanmer 3,686,750 in one which weighed 12,540 grains. The flesh is flaky, white, and firm, exceedingly palatable and wholesome: and held in high estimation in every part of the world. In our seas they begin to spawn in January, and deposit their eggs in rough ground among the rocks. Some continue in roe till the beginning of April. They in ge- neral recover quicker after spawning than any other fish ; therefore it is common to take some good ones all the summer. When out of sea- son, they are thin-taded, and much infested with the Icrnca asellina, on the inside of their mouths. The fish of a middling size are most esteemed, and are chosen by their plumpness and round- ness, especially near the tail ; by the depth of the fulcus or pit behind the head ; and by the regular undulated appearance of the sides, as if they were ribbed. The glutinous parts ujout the head lose their delicate flavor, after having been twenty-four hours out of the water, even in winter, when these and other fish of this genus are in highest season. One mentioned by Mr. Pennant, as the largest that he ever heard of taken on our coasts, weighed seventy-eight pounds, the length was five feet eight inches, and the girth round the shoulders five feet. It was taken at Scarborough in 1755, and was sold for a shilling. But the general weight of these fish in the York-

shire seas, he says, is from fourteen to forty pounds. The grand bank of Newfoundland is about seventy miles from it, and is 400 miles in length, and 200 in breadth, not including the Jaquet and Green Banks, &:c. ; the greatest and best part of it lies to the south and east of the island. The depth of water, according to go- vernor Pownall's chart, varies from twenty-four to sixty fathoms. The greatest number, as well as the fattest and bulkiest fish, are to be found where the water is rough, with a sandy ground; on the contrary, they are lean and scarce where the water is still, upon an oozy bottom ; and the depth to which they seem mostly attached, is from thirty to forty fathoms. All the immense fishery of these shores is carried on by hook and line only. In spring and summer they use short, and in winter long lines, on account of the cod keeping nearer the bottom in that season, and which (according to the fisherman's phrase- ology) they always keep bobbing, that is playing backwards and forwards by little and tremulous jerks of the hand and arm, by which means, as in angling, the line and hook are in continual motion; and, feeling the fish the moment he bites, they instantly haul him up. They are, therefore, all caught by the lip or mouth, which saves a great deal of time, as the fisherman is immediately enabled to renew the bait, not having to extricate the hook either from the gorge or stomach; besides, they are all taken alive, without being torn or mangled, a conside ration of no small importance. In this manner, on the cold and uncomfortable banks of New- foundland, each expert fisherman, although he can take but one at a time, will catch from 200 to 300 of their heavy fish in a day.

Almost all the civilised nations of the old world have endeavoured to avail themselves of this inexhaustible source of cod-fish. The Por- tuguese, the Dutch, and the Spaniards, the first especially, were ever very successful here : but the French, the Jersey and Guernsey islanders, and the Americans, are now the only competitors with Great Britain.

The entire fishery is conducted by vessels of from 100 to 200 tons burden each. They are mostly fitted out from Guernsey, Jersey, Ireland, and ports in the English Channel, as Poole, Dartmouth, &c. ; they carry about 35,000 fish each, upon an average ; their chief markets are Spain, Portugal, Italy, and the Levant ; for the other parts of Europe are commonly provided with those taken in the British Seas, the Dogger, Wale, or Wese Banks, and the North Sea. Tliere are besides these large vessels, at least 2000 small-decked craft, or shallops, from twelve to twenty tons burden, rigged like the luggers in England employed in the fisheries along the shores of Newfoundland, Nova Scotia, and the islands of Cape Breton, a great part of whose hands is taken up on land, in erecting stages, and in curing and drying their fish.

At a period (1801-2) when our exports from this valuable colony did not much exceed one- half of their value two years afterwards, the following was the

232

FISHERIES.

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FISHERIES.

111 the year 1805, the number of vessels em- ployed in the American fishery here amounted to about 1500, carrying about 10,000 men, and the quantity of fish caught by them to 800,000 or 900,000 quintals, while the whole produce of the British Newfoundland fishery of that year did not exceed 500,000 quintals; and the number of vessels and men we employed did not amount to one-half of that employed by the Americans! The demand for fish in our West India settle- ments, upon an average of three years, ending 1807, was 456,221 cwt. 97,486 of which was furnished by the mother country, leaving 358,735 cwt. to be supplied from the American fisheries. Of this quantity, above half was supplied by the United States, using our salt and our fishing banks, and in the three years, only 170,610 cwt. from our Newfoundland fishery, found a market in the West Indies.

The causes assigned for this, in an able pam- phlet on the subject of encouraging the New- foundland fishery, are these : — 'The New England fishery, in all its branches, is carried on by shares, each man having a proportion of his own catch, and few or none being hired as servants on wages. By this mode, the fisherman's interest being proportioned to his industry, he is actuated 1o labor by the most powerful incentive. The American fishermen are remarkable for their ac- tivity and enterprise, and not less so for their sobriety and frugality ; and, in order to be as in- dependent as possible on the owner of the vessel, each fisherman victuals himself, and the crew take it in turns to manage and cater for the rest. It is hardly necessary to add thatmen, provisions, and every other article of outfit, are procured upon much better terms in the United States than in Great Britain. But the English fishermen must not only lay in a large stock of provisions out and home at a dear rate, but must also carry out with them a number of persons to assist in tlie fishery, who, consequently, eat the bread of idle- ness on the passage out and home; for the laws by which the colony was held were such as almost to forbid residence, and those who did reside had no power of internal legislation ; they were restrained from erecting the necessary dwel- lings for themselves and their servants ; they were prohibited from enclosing and cultivating the land, beyond the planting of a few potatoes; and from the importation of provisions from the United States, except only on such conditions as were not calculated to afford the residents much relief. ' From a system,' says the autlior of the above pamphlet, ' the first object of wliich is to withhold that principle of internal legislation, which is acknowledged to be indispensable to the good government of every community, which restrains tiie building of comfortable dwellings in a climate exposed to tiie most inclement win- ter, which prohibits the cultivation of the soil for food, and restricts the importation of it from the only market to which the inhabitants have tlie power to go, — from such a system it is not sur-

prising that the inhabitants of Newfoundland are notable to maintain a competition against the American fishermen.'

In 1812, France having been driven out of her fisheries in this neighbourhood, our ships and men employed here are said to have equalled those of America, aniounting to about 1500 vessels caiTying ten men each. At this time the Americans were permitted to cure and dry fish on any part of the shore of Newfoundland ; but the abuses this gave rise to induced our govern- ment, at the conclusion of the late war, to cir- cumscribe their fishery within certain limits, and only to allow them the privilege of curing and drying their fish at certain spots on tlie shore. That is, the fishermen of the United States are at liberty to take fish, in common with the sub- jects of his Britannic majesty, on that part of the southern coast of Newfoundland, which ex- tends from Cape Ray to the Rameau Islands, from Cape Ray to the Quirpon Islands, on the shores of the Magdalen Islands, and also on the coasts, bays, harbours, and creeks, from Mount Joly, on the southern coast of Labrador, to and through the strait of Belleisle, and thence northerly in- definitely along the coast ; and they are at liberty also, to dry and cure fish in any of the unsettled bays, harbours, and creeks of the southern part of the coast of Newfoundland, and of the coast of Labrador ; but so soon as the same, or any portion thereof, shall be settled, they are no longer at liberty to dry and cure fish at such portion, without a previous agreement with the inhabitants or proprietors ; and, in consideration of these privileges, the United States renounce, on their part, any liberty heretofore enjoyed or claimed by their subjects, to take, dry, or cure fish, on or within three marine miles of any of the coasts, bays, creeks, or harbours of his Bri- tannic majesty's dominions in America, not in- cluded within the above mentioned limits ; but may be admitted to such bays and harbours, for the purpose of wooding, watering, or repairing damages only. From its distance from the shores of Newfoundland, the Great Bank is of course free to all the world ; but the fishery can only be successfully carried on by a. constant and uninterrupted communication with the shore.

During the war with America in 1813, our Newfoundland fishery increased largely : the export of dried cod alone for that year amounted to 946,102 quintals, with a proportionate in- crease in oil, seal-skins, salmon, &;c. ; amounting in value to £1,500,000. Since peace has be- come universal, and the French and Americans have been readmitted, the former are said, by their bounties on all fish cauu'Iit here, &c., to have taken in this fishery 300,000 quintals of cod in one year (1814). The nature and value of our own exjiorts for this fishery, in that and the following year, will appear from the an- nexed Table.

FISHERIES.

In 1814.

In 1815.

1. Number of fishing ships, European and

island bankers, ships from Nova Scotia,

Number of the same

&(;., the West India and stationary vessels

892

description

1,036

2. Burden of the above mentioned ships .

107,998 tons

Of the same . . .

127,582

3. Number of men belonginij to them

6,966

Number of the same

7,981

4. Number of boats kept by the fishing ships,

bye-boat men and inhabitants

3,241

Number of the same

3,518

5. Number of men employed in the fishery

and trade in ships and boats, and as

shoremen

19,295

Number of the same

22,167

C. Quintals of fisli caught and cured by the

fishing ships, bankers, and boats .

865,132

The same ....

866,580

7. Exported to Spain, Portugal, and Italy,

British Europe, the West Indies, British

America, and the Brasils

947,811

The same ....

1,180,661

8. Tierces of salmon cured and sent to British

and foreign markets ....

3,425

The same ....

3,752

9. Tons of train oil made by the fishing ships

4,126

The same ....

4,298

10. Tlie number of seal-skins taken

110,275

The same ....

121,182

1 1 . Tons of seal oil made ....

1,263

The same ....

1,397

The price of cod-fish is here reckoned at per quintal, from 15s. to 25s.; of salmon, from 65s. to 80s. the tierce ; of train oil, from £26 to £34 the ton, and seal oil generally about £36 the ton. In 1814 the number of passengers that went over from England, Ireland, and Jersey, amounted to 2800; in 1815 they were 6735. In 1815 the population of residents amounted to 55,284 in summer ; in winter they are dimi- nished about 10,000.

After the banks of Newfoundland, those near Ireland, the coast of Norway, Orkney, and the Shetland Islands, abound most with cod-fish. Dr. Hibbert gives the following interesting ac- count of the recent discovery of the new bank, mentioned by Mr. Stevenson, in the Edinburgh Philosophical Journal, Januarj', 1820:

' It is, I believe, about ten or twelve years since a few vessels, from six to thirty-five tons burden, and carrying from six to eight hands, first prosecuted a desultory and uncertain fishing for cod off the coasts of Shetland. They seldom went farther to look for fish than the immediate neighbourhood of Foula and Fair Isle ; and their success in general was very limited. To some of the vessels thus employed the discovery of the bank is due. The first knowledge of its exist- ence is contended for by three or more parties ; but the great probability is, that it was simulta- neo\»s, since the same cause, which was the un- commonly fine spring of 1818, caused almost every vessel to seek for fish, at a more than usual distance from the coasts of Shetland, and finding a very abundant supply off the north of Orkney, in the vicinity of the place which at- tracted Mr. Neill's attention, they fell in with the track of the cod-bank.'

< The cod-bank of Shetland is described by the fisRermen as lying from

twenty-five to thirty miles west of Foiila. That its extent is very great, all who have fished upon it agree. The information politely given me by Mr. Sheriff

Duncan of Lerwick, fully corroborates the pre- vious statement I had made on the subject last year. ‘ The fishing vessels,’ says this gentleman, ‘ spread themselves so widely over the bank, that it seldom happens that more than two or three are in sight of each other at the same time, yet they have never reached its utmost boundary.’ I shall, however, communicate what is known of its extent, from the experience o-f a former sea- son. The bank appears to commence near the cluster of islands bearing the name of Orkney : it is said to lie into the land about sixteen miles. The fishermen refer to the west of Westray as its origin ; and thence it is continued in a direction nearly north by west, having been variously en- tered upon in steering from the east, even as far distant as about twenty miles north-west of Shet- land. If this information be correct, it would give to what is known of the extent of the bank, a distance of about 140 miles.

‘ Respecting the depth of water on the bank, I reported last year, that it was from twenty-eight to forty-seven fathoms : the information recently given me, assigns to it a depth of from forty to fifty fathoms. This discrepance of opinion, which is not of material consequence, probably arises from the difl’erence of -observations taken near the origin of the bank at Orkney, or to the west of Foula, where its form becomes more definite. Its breadth has been reported to me as varying from eigViteen to forty-five miles; here also I have met with some little difference of opinion, which naturally arises from an indecision re- specting the exact depth to which its boundaries or shelving sides may be referred, and which can only be rectified by extensive soundings. The surface of the bank is described as in some places rocky, and in others sandy, and as covered by buckies, mussels, and razor-fish.

‘ It has been thought that this bank is continu- ous with a cod-bank near the Faroe Islands, not only from the general direction of the Shetland

*Bank, which bears towards that very northerly and remote group of islands, but also from a similarity of character in the fish caught at each place. ‘ The cod of both Shetland and Faroe liave been described to me,’ says Dr. H., * by a gentleman familiar with the fish, as gray-backed, spotted with black, and tinged with a ring, which is of a brownish color, inclining to gray. This continuation, then, the existence of which is very problematical, may perhaps take place, rather by a series of distinct banks*

in a given direction, than by one that is uninterrupted.

‘ In connexion with the history of the bank, it may not be uninteresting to enquire if it was really known to those nations who cannot be ac- cused of a supineness in the prosecution of their fisheries, and my enquiries will be principally di- rected to the Dutch, who for nearly three centu- rfes have been the principal fishers frequsnting the coast of Shetland,

‘ In order to understand the history of the Shetland fishery, we must distinguish between those nations who prosecuted it through the me- dium of the inhabitants of Shetland, and those who, avoiding such an intercourse, obtained the lucrative object of their visits by an equipment which rendered them independent of the people whose coasts they visited. The merchants who prosecuted the Shetland fishery, through the medium of the natives of the place, were from Hamburgh, Lubeck, Bremen, and Denmark. They occupied booths or shops in the counti-y, and trafficked with the Shetlanders chiefly for ling. This fish is caught in deep water, at a distance of thirty miles from land. For this purpose light six-oared boats are at present em- ployed, eighteen feet in keel, and six in beam, the adventurous crews of which carry each a stretch of lines amounting to 6000 fathoms, with 1200 attached hooks. The German and Danish merchants, who had almost exclusively conducted the Shetland ling-fisheries for nearly two centu- ries, left these shores in consequence of the bounties granted for the exportation of fish from Great Britain, agreeably to the acts of the years 1705 and 1714. To these visitors succeeded occasional companies of Scotch and English merchants, who were actuated by the new bounty ; but eventually the fishery devolved to the Shetland landholders, whose policy it was to parcel out occupations to a number of indivi- duals, involving at the same time, in the condi- tions of their holdings, the obligation to supply them at a stipulated rate with all the ling they caught during the customary summer season. The fish, when dried, were chiefly exported to the shores of the Mediterranean, and to Ireland. ‘ The second description of visitors to Shet- land, for the purpose of prosecuting the fishery of the place, comprehended, as I stated, that people who, avoiding an intercourse with the na- tives of the shores which they rifled, obtained the lucrative object of their visits by an independent equipment : I here allude to the Dutch nation. An enquiry into the nature of their visits to Shetland will involve in it the question, whether the cod-bank, first generally made known to this country in the year 1818, was or was not previously resorted to by this reserved nation,

who concealed from the rest of the world the fact of its existence, or whether the knowledge of it, if really acquired by us, scarcely became an object of remembrance, owing to our proverbial supineness in every thing relating to the advance- ment of the British fisheries ? The independent

*system of the Hollanders, and their little com- munication with the natives of the country, the policy of which is obvious, is alluded to by Brand, in his Tour to Shetland, in the year 1712 : 'The Dutch,' he remarks, * cannot be said so properly to trade with the country, as to fish upon their coasts.' In fact they only purchased fresh victuals from the natives, and a few stock- ings.*

*' The Dutch fishery is first particularly no- ticed by captain Smith, who in 1633, by order of the earl of Pembroke, and the British Fishery Company of London, visited the islands of Shet- land. He saw 1500 sail of busses, of eighty tons each, taking herrings on the coast of Shetland, with twenty rafters or ships of war, carrying twenty guns each, as convoys. But the confir- mation which he adds to this narrative, relating to a distinct establishment which the Dutch pos- sessed, for the purpose of prosecuting the cod- fishery, is so remarkable, and is so involved in the question of the important;e of this new accession to our national resources, that I shall give cap- tain Smith's account in his own words. Besides 1500 sail of herring busses and twenty wafters, * there was also,' he adds, ' a small fleet of dogger-boats, which were of the burden of sixty ton, which did fish only with hooks and lines for ling and cod. Many of these boats and busses came into several havens or sounds, to fit and trim themselves. One thing was observable, that, within eight or ten days after the dogger- boats went to sea, they came into the sound again so full laden .as they could swim. The certain number of dogger-"boats I could not learn, but the general report was about 400.' Upon the narrative of captain Smith, I have certain re- marks to make. The dogger-boals are stated in very general terms to fish for ling and cod ; but which of those fish was the leading object of their pursuit, our early narrator does not on this occa- sion inform us. It is well known, that the mode of prosecuting the white .fishery, inasmuch as it has for its leading object the taking of cod or ling, differs in certain essential points. The ling is sought for in deep water ; the cod, on the con- trary, is taken in the greatest quantity upon banks or on shoals. For the taking of ling, long lines, baited with many hundred hooks, are al- lowed to remain indeepwater all night. Hence the intent of employing open boats, that may not be .driven to a distance from their /ines. Cod, on the contrary, is caught by hand-lines, baited with single hooks, which are dropped into the water from the sides and stern of decked vessels, * It is possible to conceive, that the Dutch, in prosecuting the ling-fishery, by means of their doggers, had recourse to the expedient of a drove sail, which, by restraining the motion of their ves- sels, prevented them from being driven far from the lines .which tlioy had laid. But it may be remarked that, whenever the. Dutch fleet of dog- gers is described, with regard to its particular*

object, it is distinctly stated to be intended for the cod-iishery. Thus in Sir Robert Sibbald's description of Shethmd, bearing the date of 1711, the following passage occurs: 'But the greatest advantage Shetland hath is from the tishing of herring and cod, which abound so, that great fleets of the Hollanders come here, and begin to take herring upon St. John's day, with their busses. But,' the author adds, ' they at the same time employ hundreds of doggers for taking of cod.' From what has been advanced, I am disposed to believe, that the ancient importance of the Dutch cod-fishery of Shetland has been much underrated, and overlooked, by confound- ing it with a fishery of a different kind ; that of ling being for the most part conducted through the medmm of the natives of Siietland.

'The second remark which I have to make upon captain Smith's early narration, refers to the success of the Dutch doggers. It may be observed, that, previous to tiie cod-bank being found out in the year 1818, the fishery, which was conducted round every part of the Shetland coast, was highly desultory and uncertain ; and it rarely happened that vessels of only ten to thirty tons, after being employed a week in fish- ing, returned to their several harbouis, like the Dutch doggers described by Smith, ' so full laden as they could swim.' But captain Smith tells us, that vessels capable of holding a much greater quantity of fish, and amounting to even sixty tons, came into the harbours, after an eight days' cruise, full laden. For the reasons thus given, I am strongly inclined to suspect that the bank was, two centuries ago, well known to tlie Dutch, and that the knowledge of it was either carefully withheld from this nation in particular, or, which is more probable, regarded by us with such an indifference, that when the Dutch left our shores, owing to the interruption they experienced in our wars with them, it was soon forgotten that such a bank existed. In support of the latter opinion, a gentleman in Shetland last year in- formed me, that he had a distinct recollection of formerly seeing in an old Dutch chart the notice of a bank to the west of Foula, corresponding to the observations made in the year 1818.

'For nearly a century and a half after captain Smith's visit, we find that the Dutch still conti- nued to prosecute the cod-fishing on the coast of Shetland. In a MS. tour of the late Reverend George Low, in my possession, made through Shetland in the year 1778, it appears that this gentleman was present when Bressay Sound was filled with Dutch busses preparing to set out for the herring-fishery. After describing, in a very particular manner, the arrangements and eco- nomy of this fleet, he adds, ' Besides the herring- busses, the Dutch send out many doggers on the cod-fishing. These are going and coming from early spring through the whole summer. Each dogger has ten men and two boys, the half of whom sleep while the other

are employed in fishing.'

- *One boat alone,' says this writer afterwards, 'which fished nearly the whole season on the bank, or contiguously to it, took 1 1,000 fish, equal to ihirty-nii (■ ton of wet fish, or fifteen ton of dried fish. 1 was indeed informed, that upon*

one occasion, a vessel with six hands took, in a single tide or day, 1200 fish. Tlie general result of the fishery, however, of last year, could not fairly represent the productiveness of the bank; since the vessels which constantly resorted thither were comparatively few. Notwithstanding, thirteen vessels, from ten to thirty-five tons burden, and fiaving from six to eight hands each, fished, upon an average of each, twelve tons of dried fish ; when, in previous years, the average was three or four tons less. During this year, how- ever, a fair trial of the bank was made. The fishing season commenced in May and terminated in August. The number of vessels on the bank was increased from thirteen to twenty-five, and were of various sizes, from ten to sixty tons bur- den, and manned with from six to twelve hands each, boys included. The average quantity of Cod taken was much greater than that of previ- ous years, being not less than fifteen tons of dried fish for each vessel, when, priorto the year 1818, a sloop often took only six or seven tons, and never at the utmost exceeded in this respect twelve tons. – Some vessels, however, this year are understood to have obtained from twenty to twenty-five tons each.

'It is evident, with regard to dried cod,' he contends, 'that the fish prepared in Shetland will ever maintain its pre-eminence over the cod of other places. The Newfoundland fishermen are described as exposing their fisli, after it has been salted, on standing flakes, made by a slight wattle, and supported by poles often twenty feet from the ground. But the humidity is not near so well extracted from the fish as when, ac- cording to the Shetland method, they are care- fully laid out, upon dry beaches, the stones of which have been, during winter, exposed to the abrading action of the ocean, and are thus cleared from vegetable and animal matter. I am informed that the fishing season for cod might be success- fully prolonged. It reg'ularly commences in May, and ends in August; but Mr. Duncan remarks, that stout vessels might be ein])loyed all the year round, as the cod is to be taken at all seasons.'

Sir Thomas Bernard says, ' I bear no personal enmity to the Newfoundland fisheries; but I am persuaded that one domestic fishery upon our own coasts, employing our own people, though only of half their magnitude, would do this country infinitely more real service than they can ever do. They can never provide employment for our own poor ; and they are not, exclusively, nurseries for British seamen. So far indeed from their being

exclusively so, it is more than doubtful whether their effects are not inimical and injurious to the interests of this countr\ , whilst they are very favorable to those of the American Stales ; especially if it should appear, that a considerable portion of the persons em- ployed in those fisheries, are emigrants from our sister island ; — young men in the prime and most valuable i)art of life ; who, instead of sup- plying our army and navy with sa.iors an«i sol- diers, fly to a distant quarter of the globe ; leav- ing the helpless and the aged to be provided for at the cost, and by the labor of those who con- tinue at home : — young men. who-, at the expira-

tion of their three years service, generally settle for life in America.'

Sect. II. — Of the Herring Fishery. Our chief stations for this fishery are off the Shetland and Western Islands, and off the coast of Norfolk, in which the Dutcla also share. See Clupea. There are two seasons for it ; the first from June to the end of August, and the second in autumn, when the fogs become very favorable for this kind of fishing. The Dutch begin their herring fishing on the 24th of Jane, and employ a vast number of vessels in it, called busses, being between forty-five and sixty tons burden each, carrying three or four small guns. Before they go out, they are said to make a verbal agree- ment respecting their conduct on the voyage, which is very honorably observed. The regula- tions of the admiralty of Holland are partly fol- lowed by most nations : as, that no fisher shall cast his net within 100 fathoms of another boat; that while the nets are cast, a light shall be kept on the hind part of the vessel : that when a boat IS by any accident obliged to leave off fishing, the light shall be cast into the sea: that when the greater part of a fleet leaves off" fishing, and casts anchor, the rest shall do the same, &c. Mr. An- derson, in his History of Commerce, attributes to the Scots a knowledge of great antiquity in the herring fishery. He says that the Netherlanders resorted to these coasts as early as A. D. 836, to purchase salted fish of the natives ; but, imposing on strangers, they learned the art, and took up the trade, which has since proved of such im- mense emolument to the Dutch. Sir Walter Raleigh's observations on that head, extracted from the same author, are extremely worthy the attention of the curious, and excite reflections on the vast strength resulting fiom the wisdom of well-applied industry. In 1603, he remarks, the Dutch sold to different nations as many herrings as amounted to £1,759,000 sterling. In 1615 tliey at once sent out 2000 busses, and employed in them 37,000 fishermen. In 1618 they sent out 3000 ships, with 50,000 men, to take the herrings, and 9000 more ships to transport and sell the fish; which by sea and land employed 150,000 men, besides those first mentioned. All this

wealth was gotten on our coasts ; while our attention was taken up in a distant whale- fishery. The Scottish monarchs for a long time seemed to direct all their attention to the preser- vation of the salmon-fishery ; probably because their subjects were novices in sea affairs. At length James III. endeavoured to stimulate his great men to these patriotic undertakings; for, by an act of his third parliament, he compelled ‘ certain lords spiritual and temporal, and burghs, to make ships, busses, and boats, with nets and other pertinents for fishing. That the same should be made in each burgh ; in number ac- cording to the substance of each burgh, and the least of them to be of twenty tons : and that all idle men be compelled by the sheriff’s in the country to go on board the same.’ Numerous indeed have been the attempts made at different periods to secure this treasure to ourselves, but •with little success. In the reign of Geo. II. a very strong effort was made, and bounties al-

lowed for the encouragement of British adven- turers : the first was of 30.?. per ton to every buss of seventy tons and upwards. This bounty was afterwards raised to 50s. per ton, to be paid to such adventurers as were entitled to it by claim- ing it at the places of rendezvous, llie busses are from twenty to ninety tons burden, but the best size is eighty. A vessel of eighty tons ought to take ten lasts, or 120 barrels of herrings, to clear expenses, the price of the fish to be ad- mitted to be a guinea a barrel. A ship of this size ought to have eighteen men, and three boats; one of twenty tons should have six men ; and every five tons above require an additional hand. To every ton are 280 yards of nets ; so a vessel of eighty tons carries 20,000 square yards : each net is twelve yards long, and ten deep; and every boat takes out from twenty to thirty nets, and puts them together so as to form a long train ; they are sunk at each end of the train by a stone, which weighs it down to the full extent : the top is supported by buoys, made of sheep’s skin, with a hollow stick at the mouth, fastened tight; through this the skin is blown up, and tlien stopped with a peg, to prevent the escape of the air. Sometimes these buoys are placed at the top of the nets ; at other times the nets are suffered to sink deeper, by lengthening the cords fastened to them, every cord being for that pur- pose ten or twelve fathoms long. But the best fisheries are generally in more shallow water.

Of the herring fishery in the W’estern Isles the following account is given by Mr. Pennant, in his Voyage to the Hebrides. ‘ The fishing is always performed in the night, unless by acci- dent. The busses remain at anchor, and send out their boats a little before sun-set ; which continue out, in winter and summer, till day- light ; often taking up and emptying their nets, which they do ten or twelve times in a night, in case of good success. During winter it is a most dangerous and fatiguing employ, by reason of the greatness and frequency of the gales in these seas, and in such gales are the most successful captures : but, by the Providence of heaven, the fishers are

seldom lost; and, what is wonderful, fev/ are visited with illness. They go out well prepared, with a warm great coat, boots, and skin aprons, and a good provision of beef and spirits. The same good fortune attends the busses, which in the tempestuous season, and in the darkest nights, are continually shifting, in these narrow seas, from harbour to harbour. Sometimes eighty barrels of herrings are taken in a night by the boats of a single vessel. It once happened, in Loch Slappan, in Skye, that a buss of eigiity tons might have taken 200 barrels in one night, widi 10,000 square yards of net ; but llie master was obliged to desist, for want of a sufficient number of hands to preserve the cap- ture. The herrings are preserved by salting, after the entrails are taken out. This last is an operation performed by the country people, who get three half-pence per baiTcl for their trouble ; and sometimes, even in the winter, can gain fifteen pence a-day. This employs both women and children ; but the salting is only entrusted to the crew of tlic busses. The fish are laid on their backs in the barrels, and layers of salt be-

tvveen them. The entrails are boiled into an oil ; 8000 fish will yield ten gallons, valued at one siiilling the gallon. A vessel of eighty tons takes out 144 barrels of salt; a drawback of 2s. Sd. is allowed for each barrel used by the forei<;n exportation of the fish; but there is a duty of Ij. per barrel for the home consumption, and the same for those sent to Ireland. The liarrels are made of oak-staves, chiefly from ^"ir- ginia; the hoops from several parts of our own island, and are either of oak, birch, hazel, or wil- low : the last from Holland, liable to a duty. The barrels cost about 3s. each ; they hold from 500 to {300 fish, according to their sizes, and are made to contain thirty-two gallons. The barrels are inspected by proper officers : a cooper examines if they are good ; if faulty, he destroys them, and obliges the maker to stand to the loss. Loch Broom has been celebrated for three or four cen- turies as the resort of herrings. They generally appear here in July : those that turn into this bay are part of the brigade that detaches itself from the western column of that great army which an- nually deserts the vast depths of the arctic circle, and come, heaven- directed, to the seats of popu- lation, oflered as a cheap food to millions, whom wasteful luxury or iron-hearted avarice hath de- prived, by enhancing the price of the wonted supports of the poor. The migration of these fish from their northern retreat is regular ; their visits to the Western Isles and coasts, certain ; but their attachment to one particular loch, ex- tremely precarious. All have their turns : that which swarmed with fish one year, is totally de- serted the following ; yet the next loch to it may be crowded with the shoals. These changes of place give often full employ to

the busses, who are continually shifting their harbour in quest of news respecting these important wanderers. They commonly appear here in July ; the latter end of August they go into deep water, and con- tinue there for some time, without any apparent cause : in November they return to the shallows, when a new fishery commences, which continue? till January ; at that time the herrings become full of roe, and are useless as articles of com- merce. Some doubt, whether those herrings that appear in November are not part of a new mi- gration , for they are as fet, and make the same appearance, as those that composed the first. The signs of the arrival of the herrings are flocks of gulls, which catch up the fish while they skim on the surface ; and of gannets, which plunge and bring them up from considerable depths. Both these birds are closely attended to by the fishers. Cod-fish, haddocks, and dog-fish, follow the herrin

The nets being hauled on board, the fishes are taken out, and put into the warbacks, which stand on one side of the vessels. When all the nets are thus unloaded, one fills the gippers

baskets. The gippers cut their throats, take out their guts, and fluig out the full heirings into one basket, and the shotten into another. One man takes the full basket when they are gipped, and carries them to the rower back, wherein there is salt. One boy rows and stirs them about in tlie salt, and another takes them, thus rowed, and carries them in baskets to the pack- ers. Four men pack the herrings into one barrel, and lay them, one by one, straight and even ; and another man, when the barrel is full, takes it from the packers. It is left to stand a day or more open to settle, that the salt may melt and dissolve to pickle ; after which it is filled up, and the cooper completes the work, by heading the casks very tight, and stowing them in the hold. The pickle is to be strong enough to sustain a herring ; otherwise the fish decay in it.

Bishop Watson observes, that ‘ the Dutch have long been famous for preparing a salt for the pickling of herrings, by which they have ac- quired a superiority in that article of commerce over all other European nations. Their princi- pal secret in this business consists in evaporating the brine made from the solution of bay salt with the gentlest fire, and in mixing with the brine a proper quantity of very sour whey ; the acid whey unites itself with the uncombined fixed alkali, and thus prevents it from adhering to the common salt as it crystallises. Any other mild acid might probably answer the same pur- pose.’— Cheiiiical Essui/s, vol. 2. p. 63.

In the report of the Downs Fishery, the com- mittee, p. 21, observe, ‘ that theperi.odical shoals of herrings, in their progress from the North Sea to the Channel, appear in wonderful abund- ance in their straits, iu the early part of Octo- ber, and remain till the end of November; about which time they

proceed gradually to the westward, and are caught off the Isle of Wight till the end of February. Snch is the profusion of these fish, while they continue between the Forelands, where they are necessarily condensed by the conformation of the straits, that the quan- tities taken on this part of the coast, amount to more than double the average catch of our great fishery at Newfoundland, in proportion to the time and number of hands employed in it. Tlie mackerel are also found during their season, in remarkable abundance in these straits, whic'h appear to form the limits of their migration ap the channel. In this neighbourhood (Deal) they generally remain from Slay to July, afford- ing, like the herrings, a rich harvest that seems to invite the industry of the fisherman.' — In p. 26 and 28, they add, that ' Holland has no her- rings near her own coast, but takes them on the coast of Britain, from Shetland to the coast of Sussex; commencing at the distance of 250 leagues, and ending at fifty leagues from her own ports.'

The Downs Society was associated in No- vember, 1815, under the patronage of the earl of Liverpool, and is a gratifying example of the effect of spirited associations for tlie promotion of improvements in our fisheries. The fish which was cured by that society in the preceding year (with a v^'j little, though very valuable in-

stiuction from Mr. Sic vers, a fishing merchant of Loudon) received the first bounty paid under the late act, on that part of the coast. They sunt sixty-two barrels of white herrings to Bar- badoes, Antigua, Jamaica, and other West India Islands; from whence they received the most favorable and gratifying accounts of the excel- lence of their fish ; which sold at very high [uices, a third more than those from either the United States, or British America. See the Re- port of the committee of the Doiuns Society of Fisherman's Friends, 17th August, 1816.

Since the act of 48th Geo. III., appointing commissioners, separate and distinct from the cus- toms and excise, to superintend the distribution of bounties, and the stationing of officers versed in the trade of the herring fishery, persons who had experimentally and practically followed that fishery as a trade, but who are excluded from all interest or participation in the trade, the herring fishery has become with us, as it was with the Dutch, an object of national concern ; the good effects of which are sensibly felt in every part of the coast, where it has regularly been established. By this act, an annual report by the commission- ers, of their proceedings, ending the 5th April, is required to be presented to parliament

each session : containing the details of the fishery of the preceding year, together with such observa- tions and suggestions as may have occurred, or been communicated to the commissioners, in the interval between the reports. In their report of 1816, they state that they have had their atten- tion turned to different matters calculated to im- prove the cure of herrings, and to raise the character of the British fishery in foreign parts; that a communication,' made to them by a mer- cantile house of respectability, on the subject of increasing the exportation of herrings to the continent of Europe, had been printed, and distributed among the curers throughout the kingdom ; that regulations had been adopted for improving the construction of barrels intend- ed for bounty ; that the boats of the fishermen had been properly fitted up for the reception of herrings ; that bounty had been refused on all barrels not full of pickle ; and that the strictest orders had been given to the officers of the fish- ery, to apply the official brand in no case, unless both herrings and casKs were in every respect such as would do credit to the establishment. In the year 1817 the commissioners point out the great increase that had taken place in the exportation of British herrings to the continent of Europe, in consequence of the communica- tions made to and the regulations adopted by them, as contained in the preceding report; and, in the year 1818, they observe that they had received a memorial on the subject from Ham- burgh, signed by a number of herring merchants of that port, bearing testimony to the improve- ment that had taken place in the quality of British herrings, and pointing out the means of raising their character still higher. This mjemo- rial the commissioners likewise caused to be printed, and distributed among the curers, which they accompanied with such additional observations as they conceived to be necessary, and which they state to have produced the most

salutary effects. They conclude their statement with the intelligence, that the character of the British fishery is rising both at home and abroad ; for that, while the quantity of herrings cured gutted is annually increasing, the quantity cured ungutted is every year diminishing ; that great as the amount of fisheiy had been in the course of that year, the demand had fully kept pace with it ; and that, at the end of the season, few herrings remained unsold in the hands of the curers. They further report, that while the ex- portation to the continent of Europe had nearly equalled that of the preceding year, and tlie ex- portation to the West Indies and Ireland had increased, a new market had opened in the East Indies, to which different shipments of herrings had been made, by way of experiment both from Greenock and London : that, from the former of these places, upwards of 1300 firkins were ex- ported to Calcutta, all of which tliey understood were purchased by Europeans there at 20s. to 25s. per firkin ; and that it was the intention of the exporter, in consequence of this encourage- ment, to ship a larger quantity next season ; so that the commissioners trust, that

India will soon become a permanent and valuable market for the consumption of British herrings. The report concludes, ‘ it is impossible to state, witliin the compass of this report, the advantages resulting to the community from the prosperity of the herring fishery; but the commissioners think it their duty briefly to mention that the effects thereof are felt in almost every part of the king- dom. The fishermen have, in many cases, been enabled, by the produce of their industry, to re- place the small boats formerly used, by new boats of much larger dimensions, and to provide themselves with fishing materials of superior value. The number of boats and of fishermen has been greatly increased ; while, by the general introduction of the practice of gutting, a valuable source of employment has been opened to thousands of poor people, who now annually resort to the coast during the continu- ance of the fishing season, and there earn a decent livelihood in the operations of gutting and packing. New dwelling-houses and build- ings, on a superior construction, for the curing and storing of the herrings, are erecting at almost every station along the coast ; while the demand for home wood for the manufacture of barrels, affords a source of profit and employ- ment to numbers of people in the most inland parts of the country.’

The progress of the herring-fishery will best be seen by a summary view of the quantities caught, cured for bounty, and exported, from 1815 to 1819.

By the report of 1815, it appears that the quantity cured gutted was 105,372ˆ barrels. By that of 1816, it amounted to 135,981 barrels, being an increase in one year’s fishery of 30,608J barrels. The quantity cured ungutted, in the former period, was 54,767 barrels; in the latter 26,670J barrels, being a decrease of 28,096ˆ barrels. The total quantity brought under the view of the officers in 1815 was 160,139ˆ barrels. In 1 8 1 6 it was 1 62,651 J barrels, being an increase, on the whole, of 2512JJ barrels. The quantity

branded for bounty in 1815, was 83,376 barrels. In 1816 it was 116,436, being an increase of 33,060 barrels. The exports, on the whole, in 1815, exceeded those of 1816; but the gutted herrings exported in the latter year exceeded those of the former by 12,606ˆ barrels.

In the year 1817 the total quantity caught was 192,343ˆ- barrels, being an increase of 20,691j barrels. In the same year the quantity branded for bounty was, 140,018ˆ barrels, being an in- crease of 23,o82i barrels. The quantity exported in 1817 was 138,6281 barrels, being an increase of

30,940J barrels.

In the year 1818 the total quantity caught was 227,691 barrels, whereof 204,270ˆ were cured gutted, and 23,420? ungutted; being an increase in the total quantity of 35,347J- barrels,

and of 4rf,494i in the qiantity gutted; while there was a decrease in the quantity cured un- gutted of 13,146| barrels. In this year the quantity found entitled to bounty was 183,089ˆ being an increase of 43,071 barrels. In the same year, the total quantity exported was 162,339ˆ bar- rels, whereof 148, 147ˆ were gutted, and 14,192 ungutted ; being an increase in t!ie total quan- tity of 23,711 barrels, and of 32,667 in the quan- tity gutted ; while there was a decrease in the quantity ungutted of 8956 barrels.

But the report of the year ending the 5th of April, 1819, is still more encouraging than any of the former ones, as will be seen from the follow- ing accounts, which exhibit at one view the en- tire state of the herring fishery at the different stations in Great Britain.

Table I. — An Account of the Total Number of Barrels of White Herrings which ha%'e been branded for the Bounty of 4s. and of 3s. 6d. per Barrel, in the year ended 5th April, 1819.

STATIONS.

For the bounty of 4s. per Barrel.

Biingpacka.

Ayr, Irvine, and S

Campbeltown .

Fort-William .

Glasgow . . Greenock

Inverary . .

Loch Broom .

Carron .

Gilphead

Shildag .

Rothsay . .

Stornoway . .

Stranraer . . Tobermory Bristol .

St. Ives . . . Whitehaven

Anstruther . .

Banff . . . Burntisland Cromarty .

Eyemouth . . Fraserburgh

Helmsdale . .

Leith . . ,

Lybster . . , Orkney . .

Port Gordon .

Wick . . . Dover . .

London . . Portsmouth

Yarmouth . .

Itcoats

Total . . Year ended 5th April, 1 8 1 8

Difference, year ended } 5th April 1819. S

Barrels.

2,074 2,525 95 9,161

7.186i 3,61 6.A l,205i

1,516 1,093 1,102 7,910 1,135 1,503′ 2,294

244

l,314i

7,029

15,949A

10,851 8,987 6,073

10,368 7,969

28,983

7,694i

5,9791 6,927

24,761i

40

395J

185,983

*131,123^*

54,859i Increase.

Repacked.

Barrels.

2,234

*15,870^*

632

193

147

2,152

3321

8,226

8,713

1,690

7,422

3,197

3,801

6,153

4,866

2,1821

4,309

9,772

34

359

517

*82,802^*

50,875

31,9271

Increase.

For the bounty of 33. 6rf. per Barrel.

Bungpackd.

Barrels.

109

50

130

10

141

22

15

489 658

169

Decrease.

Repacked.

Total I Herrings]Amount of Bounty, branded.

Barrels.

295

211

242

Barrels.

2,074 2,525 204 11,395 23,352 3,6661

1,335ˆ

1,526 1,101 1,102 8,683 1,157 1,5031 2,294 193 391

3,692ˆ 7,36H 24,175J

19,564 10,677 13,495 13,811 11,770 35,136

12,560ˆ

8,162

11,236

34,533ˆ

34

359

557

3951

748 433

270,0221

183,089|

315 86,933

Increase. 'Total inc.

414

505

38

2,279

4,663

732

263

304

220

220

1,733

230

300

458

38

78

732

1,472

4,835

3,912

2,135

2,699

2,756

2,354

7,027

2,512

1,632

2,247

6,906

6

71

111

79

16 0

0 0

1 6 0 0

0 6

1 0

17 0 19 0

0 0 8 0

1 6 17 0

53,973 11 36,590 12

12 0

4 0

17 0

6 0

2 0

16 0

8 0

0 0

1 0 0 0

16 0 16 0

£17,332 19 0 Increase.

F I S H E R I E S.

271

Table II —An Account of the Total Number of Barrels of White Herrin?,-?, which have been landed from the Fishery, or cured on Shore, in the Year ended 5th April 1819 ;— in so for as the same has come under the cognizance of the officers of the Fishery.

Quantity and Description

of Herrings.

Cured for Bounty.

Cured not for Bounty.

Gutted

jutted not

with a

with a

Gutted and

knife, and

cnife, and

packed not

Total Bar-

Grand

STATIONS.

packed

packed

Total for within 24

Barrels of

rels not for

Total.

within 24 iours after

within 24 liours after

Bounty- hours after being

Ungutted.

Bulk.

Bounty.

being

being

taken.

taken.

taken .

Barrels.

Barrels.

Barrels.

Barrels.

Barrels.

Barrels.

Barrels.

Ayr, Irvine, 7 & Saltcoats 3

2,806

2,806

20

462

90

572

3,378

Campbeltown

3,543

4

3,547

.

1,112

768

1,8801

5,4271

Fort-\Yilliam

153ˆ

1391

293

1171

1174

4101

Glasgow . .

16,525

137

16,662

631

610

3811

1,055

2

17,717

Greenock . .

24,667

3031

24,9701

311

124

631

219

*25,189^*

Inverary . .

4,084

55

4,139

10

10

4,149

Loch-Broom .

1,383

134

1,517

1

51

185

237

1,754

("'irrnii

1,7641

38

:i,802-i

351

325

3601

2,163

Cr\] nVl01*^

1,456

11

1,467

64

34

98

1,565

1,6671

1,6671

72

82

154

1,821J

Rothsay . .

10,020

158

10,178

9

250

149

408

10,586'

Stornoway

i 1,230ˆ

22

1,2521

187

86

273

1,525ˆ

Stranraer . .

1,7121

1,7121

.

52

52

1,7641

4,17U

Tobermory .

2,8321

22

2,8541

534

783

1,317

Bristol . .

187

187

1571

1571

3441

Liverpool . .

134

1,412

2

1,546

1,546

St. Ives . .

404

801

4841

151

1,07U

1,2221

1,707

Whitehaven .

3,481

2261

3,707i

^161

64

9801

4,688 9,038

Anstruther

6,966

6,966

318ˆ

1,4241

329

2,072

Banff . . .

29,170

29,170

150

50

1,0271

1,2271

30,397J

3,8561

Burntisland .

3, 34 8 J

3,3481

308

200

508

Cromarty

13,953ˆ

13,953ˆ

150

3,6601

3,8101

17,764

Eyemouth

18,181 i

18,18U

1,099

420

1,519

19,7001

24,4€5J

Fraserburgh .

19,4821

700

20,1 82 i

65

2,850.1

1,3075-

4,223i

Helmsdale .

21,752ˆ

21,752i

465

153

506

1,124

22,8761

Leith . . .

3,301

3,301

54

909

,

963

4,264

Lybster Orkney . .

19,6281 8,714

19,628.ˆ

8,714

88 62

1 ,01 5 1,666.1

66

1,103 1,7941

2(»,7311

10,5081

Port Gordon .

14,299

14,299

167

117

284

14,583′ 65,9941

Wick . . .

61,111ˆ

61,1111-

45

3,129

1,709

4,883

Dover . . .

34

34

46

54

100

134

London . .

4121

4121

13

13

4’>5 ‘

Portsmouth .

1,139J

1,139.1

44

3,7‘20i

129

3,8931

5,033

Yarmouth

Total .

Year ended “^

5th April, >

1818 . . y

Difference, “\

year endcl f “5th April, {

1819 . .)

611J

6111

428

428

1,0391

300,023

2,031

302,054

1,684

25,372

11,550

38,606

340,660

203,2851

985

15,799

7,621 ;|

24,405J

t

227,691

!

98,768J

699

1 9,573

3,9281

1 4,200 i

112,969

Increase.

Increase.

Increase.

Increase.

Increase.

Increase.

Table III.— An Account of the Total Number of Barrels of White Herrings which have beer. Exported from Great Britain, in the year ended 5th of April, 1819 ;— in so far as the same have come under the cognizance of the Officers of tlie Fishery.

To other places in Exported to Ireland. Eiirope.

To places out of Europe.

Total

1

Exported.

STATIONS.

Gutted.

Ungutted. Gutted.

Ungutted.

Gutted.

Ungutted.

Barrels.

Barrels. Barrels.

Barrels.

Barrels.

Barrels.

Barrels.

Ayr, Irvine, and Saltcoats . .

165

487 . .

652

Campbeltown

1112

1407! . .

2519

Fort-William .....

385

60 . .

445

Glasgow

5829

614

100

6543

Greenock

3821 1

163

27,642

91

31,717i

Locli-Broom

165

60

225

Loch Shildag

1105

1105

Rothesay

Tobermory

1186 3216

294 1383

1480 4599

Bristol

969

148

4872

186

6175

Liverpool

134

2198

1317

3649

St. Ives

172

172

Whitehaven

655

325

2397

177

3554

Anstruther

2069

470

500

3039

Banff

4031

10,822

14,853

Burntisland

2855

252

5463

8570

Cromarty

. 2258

665

500

3423

Eyemoutli

Fraserburgh

1770 4439

332

3705

611

54

1770 9141

Helmsdale

2062

3580

5642

Leith

9674

1060

22,222

1638

50

34,644

Lybster

465

926

1391

Orkney

3452

1330

800

200

5782

Port Gordon

2600

1035

. .

3635

Wick

17,869

520

3170

21,559

London °

4707

310

42,595

277

47,889

Portsmouth

Total ....

30

2938i

20

2988ˆ

77,195ˆ

12,508ˆ

52,333

82,773

2352

227,162

Year ended 5th April 1818. .

44,304ˆ

9082

43,368

528

60,475

4582

162,339ˆ

Difference, year ended the 5th of April 1819 ....

32,891

.3426ˆ

8965

528

22,298

2230

64,822ˆ

Increa.se.

Increase.

Increase.

Decrease.

Increase.

Decrease

Total Incraese.

Sect III. — Of the Pilchard and Anchovy Fisheries.

The pilchard and the anchovy are, in fact, only a distinct species of the genus clupea. Some naturalists consider the former as a variety of the herring. It is, however, much less and thicker than the herring, the nose turns up, the under jaw is sliorter tlian the upper, the dorsal fin is placed exactly in the centre of gravity — for if you take a pilchard by the back it will hang even, which a herring will not — and the scales are firm, and adliere very closely, while those of the herring come off with the least rubbing.

The pilchard swims in large shoals which arrive on the coasts of Bretagne, Cornwall, and Devonshire, from June to September, although they are sometimes caught about Christmas. Men are set on the cliffs of the coasts of De- vonshire and Cornwall, whom they call huers, to watch their coming ; the purple color of the water in the day, and its shining appearance in the night, giving certain indications of their ap- proach. Then tlie huers, according to settled

and regulated signs, direct the boats and vessels how to manage their seins, and, when their com- mands are properly given and obeyed, they have been known to take 100,000 pilchards at a draught. It is a common saying of tlie Cornish fishermen, when talking of the pilchard, that it is the least fish

in size, most in number, and greatest in gain. In Scotland they sometimes appear among the herring shoals, but in the Frith of Forth there are no established fisheries for them.

Anchovies are caught inMay, June, and July, on the coasts of Catalonia, Provence, &c., when they constantly repair through the straits of Gibraltar into the Mediterranean. See Clupea. Col- lins says, they are also found in plenty on the west coasts of England and Wales. The fish- ing is chiefly in the night, when, a light being put upon the stern of the fishing-vessels, the an- chovies flock round, and are caught in the nets. But it is said to have been found by experience, that anchovies taken thus by fire, are neither so good, so firm, nor so proper for keeping as

those which are taken without tire. When the fishery is over, they cut oft' the heads, take out the gall and guts, and then lay them in barrels, and salt them. The common way of eating an- chovies is with oil, vinegar, &;c., in order to which they are first boned, and the tails, fins, &c., slipped off. Being put on the fire, they dissolve in almost any liquor. They are made into sauce by minching them with pepper, &:c. Some also pickle anchovies in small earthen pots, made on purpose, of two or three pounds weight, more or less, which they cover with plaster to keep them the better. Anchovies should be chosen small, fresh pickled, white on the outside and red within. They must have a round back ; for those which are flat or large are often nothing but sardines.

Sect. IV. — Of the Mackerel Fishery.

The mackerel, see Scomber, is a summer fish of passage, found in large shoals, in various parts of the ocean not far north ; but especially on the French and English coasts. It is about seventeen inches in length, and weighs nearly two pounds. The body long, round, thick, and fleshy, is beautifully shaped for swimming, and becomes very small and slender towards the tail, which is so much forked, that it seems to be almost parted into fins. Ilanmer found one in the month of June containing 546,681 eggs; when first taken it exhibits a phosphoric light. Its eyes, when they first appear on our coasts, and during winter, are covered with a kind of wˆiite film; they are then nearly blind, this, however, they cast in the beginning of sum.mer. The fish- ing is usually in April, May, and June, or July, according to the place. They enter the Englisli channel in April, and proceed up the straits of Dover as the summer advances ; so that by June they are on the coasts of Cornwall, Sussex, Nor- mandy, Picardy, 8cc.

where the fishery is most considerable. They are an excellent food fresh ; and not to be despised, when well prepared, pickled, and put up in barrels; a method of preserving them chiefly used in Cornwall. They are taken either with a line or nets : the latter is the chief method, and is usually performed in the night. The rules observed in the fishing for mackerel are much the same as those in the fishery of herrings. There are two ways of pickling them : the first is, by opening and gut- ting them, and filling the belly with salt, cram- med in as hard as possible with a stick ; which done, they range them in rows, at the bottom of the vessel, strewing salt between the layers. In the second way, they put them immediately into tubs full of brine, made of fresh water ancl salt ; and leave them to steep, till they have imbibed salt enough to make them keep; after which, they are taken out, and barrelled up, taking care to press them close down. Mackerel are not cured or exported as merchandise, except by the Yarmouth and Lowestoft merchants, but are ge- nerally consumed at home ; especially in Lon- don, the sea-ports between the Thames and Yarmouth, east, and the Land's end of Cornwall, west. It is said that this fish was in high esteem •with the Romans. Vol. IX.

Sect. V. — Ui the Lobster Fishery.

Lobsters are taken along the British Channel, and on the coast of Norway, whence they are brought to London for sale ; as also in the frith of Edinburgl), and on the coast of Northumberland By 10th & nth Will. III. c. 24, no lobster is to be taken under eight inches in length, from the peak of the nose to the end of the middle fin of the tail ; and by the 9th Geo. il. c. 33, no lobsters are to be taken on the coast of Scot- land from the 1st .of June to the 1st of Septem- ber. See Cancer. They are in season from September to June. The shell is black before it is boiled, but afterˆvards becomes red. During winter, the cock is supposed to be more delicate eating than the hen. They are taken in what fishermen call pots, in shape like a mouse-trap, made either of netting or twiggen work ; these, after being baited with garbage, and having a buoy affixed, are made fast to a rope, and thrown to the bottom of the sea, where it may be found to be from six to ten feet deep. On the York- shire and Orkney coasts, the fishermen use small nets, with iron hoops, baited with fish guts, or dried dog-fish. Lomlon coRsuines more lobsters than all the rest of the country together. They are sent hither as far as from the Orkneys in chests, which contain 400 or 500 each ; and, when 900 or 1000 are thus collected, they are stowed aboard the first smack that is to sail for Queen- borough and Billingsgate.

Sect. VI. — Of the Oyster Fishery.

The British oyster (ostrea edulis) a bivalvular testaceous fish, found in all parts of the king- dom, though not the largest, has been said to be the best

and most wholesome in the world. They were famous in the days of the Romans, so that, according to Juvenal and Pliny, they were con- veyed from the coast of Kent to Rome. Those of Colchester, however, are now thought fully equal to those of Kent. In Scotland they breed in the creeks and bays of the Orkney and Western Islands ; but the most considerable fisheries are in the Friths of Forth, near Inchkeith, and Pres- tonpans, in Musselburgh Bay. Here they ob- tain the appellation of Pandoors, from being taken close by the doors of the salt pans. Oys- ters cast their spat, or spawn, in the month of May ; when first shed, it has the appearance of candle-grease, and adheres to stones, or any other substance, which the dredgers term cultch ; — the spat is covered with a shell in two or three days, and, in the course of three years, it becomes marketable in size. The dredgers make use of a very thick, strong, net, fastened to three spills of iron : this they drag along the bottom of the sea, forcing the oysters into it. In England, many, after being taken in this manner, are car- ried to other])laces, and laid in bods, or pits of salt water, to fatten ; where thoy derive a green color, sometimes, and are then found unwhole- some. A green color is often artificially given to them in the salt marshes ; but we do not con- sider it as any improvement, as we think white oysters both look, and taste, better than those that are green. The sea star (asterias glacialis' is a most destructive animal in a bed of oysters.

The fishing for oysters is permitted from the 1st of September to the last day of April inclu- sive : or, according to common observation, oys- ters are in season in all those months which have die letter r in their name.

Sect. VII. — Salmon Fishery.

The Report from the Select Committee of the Salmon Fislieries of tlie United Kingdom, order- ed by the house of commons to be printed, the i7th of June 1824, presents so complete an ac- count of the hab.ts of this fish, and the general modes pursued in obtaining it, that we cannot do better in this place than present an abstract of it to the reader.

In the course of the examinations which are here recorded, the committee seem to have been anxious to determine the different species of fish usually found in the salmon rivers, or captured in the nets. This is an object of considerable im- portance, in every view of the subject before us.

1. Salmon. — All the witnesses are of the same opinion with regard to this species; but they differ greatly as to the question, Whether the salmon of

*one river can be distinguished from those of another by any definite characters. Mr. Halliday has compared them in Ireland, Eng- land, and Scotland, many times, and says, ‘ I cannot make out the distinction of one river’s fish from that of another.’ Mr. James Bell states, * I have a little guess; not altogether.’ J. Proud- foot considers the Tweed fish as smaller than those of the Tay, and those of the River Isla as smaller than those of the River Tay ; but, when asked if upon meeting with an Isla fish and a Tay fisli in the frith, he should know the one from tlie other, he replies ‘ No ; I would not.’ On the other side of the question, Mr. James Wilson, in reference to the North and South Esks at Montrose, declares, that ‘ the species of salmon are quite different in these two rivers;’ and adds, ‘ One is a large coarse scaly fish, and the other is a smaller and a finer fish.’ Mr. James Bell states, that the ‘ Aberdeen fish is quite dif- ferent from the Tay, different in the scale.’ Geo. Little, esq. states, that the ‘ salmon in the Shan- non grow to a large size ;’ and adds, ‘ We have three fishings that fall all into one bay in Ireland, the Bush, the Bann, and the Foyle, and we can easily distinguish the fish of all the different rivers when we take them. The salmon in the bush is a long-bodied round salmon, nearly as thick at the head as he is at the middle. The salmon that we kill at the Bann, is what I call a very neat-made fish, very broad at the shoulders, and tlie back fin tapering away towards the tail, and quite a different shaped fish from the Bush fish. The Foyle is a river that we seldom get any large salmon in.*

A considerable degree of importance seems to be attached to this branch of the enquiry, with the view of determining the question, Whether the fish bred in a particular river always return to their birth-place, and to no other river. Sir Humphry Davy assumes that ‘ salmon, and salmon-trout, belong, in fact, to the river in which they were spawned,’ and that ‘ each va- riety of salmon, or salmon-trout affects a parti- cular river, and always returns to it;’ p. 145.

The other witnesses seem generally to entertain the same opinion. Mr. Little has been told of evidence on this subject, p. 112; but no facts are communicated. Indeed, Mr. Halliday as- serts, that ‘ they do not all come to the same river in which they were bred ;’ and as a proof cf this he states, ‘ I found the different rivers vary from one year to another; but when one is protected and another unprotected, the unpro- tected river keeps up its quantity as well as the protected one;’ p. 87.

2. Grilse. — Sir H. Davy and Mr. Jo.hn Wil- son consider this fish as a young salmon ; other witnesses, as Messrs. Little, Johnstone, and Halliday, entertain a different opinion, viewing it as a distinct species. They found this opinion of its claim to rank as a species, on the circum- stances of its being found full of milt or of roe, and of its spawning and return to the sea as a kelt or spawned fish. But fish spawn long be- fore they attain maturity,

*consequently this test is of little value. But other proofs are offered. Mr. Johnstone says, ‘ The grilse is a much less fish in general ; it is much smaller at the tail in proportion, and it has a much more swallow tail, much more forked; it is smaller at the head, sharper at the point of the nose, and generally the grilse is more bright in the scales than the salmon;’ p. 38. Mr! Halliday states, * that a grilse’s tail is very much forked, like that of a swallow ; a salmon’s tail is not forked like that of a grilse, and the chowk fins (pectorals) of a grilse are much more blue in their color than a salmon’s ; a grilse is much smaller at the head and immediately above the tail than a salnion is : it seems to be a” different fish in shape every way ; besides, it goes up full of spawn in the end of the year, and does not come down till the spring, when it is a kelt grilse, while tˆie young salmon are coming up the rivers in numbers of at least fifty young salmon for every kelt grilse that returns to the sea:’ p. 63. Mr. Little, who entertains a similar opinion to the two preceding witnesses, states, that grilses enter rivers in June, seldom in May, p. 12 (confirmed by Mr. Halliday, p. 53.); and adds,’ We do not find in some rivers the same proportion of grilses to salmon as we do in others; for instance, in our fishing at the Foyle, it consists almost entirely of grilse,’ p. 110. When they first appear in the rivers, they are from a pound and a half to three pounds in weight, ‘ and they increase gradually every week during the time we kill them.’ At the end of the season they weigh eight, nine, or ten pounds. He likewise states, ‘ Our water keepers tell me that they very seldom see a sal- mon and grilse breeding together, but they have seen it occasionally, but not generally; very seldom;’ p. 113. There can be little doubt, that the term grilse is used in general to denote a young salmon, though the same epithet is pro- bably bestowed on a distinct species of die genus salmo, with which it seems to be confounded.*

3. Trout. — Sir H. Davy considers salmon- peal, sewen, and bull-trout, as constituting one species, the salmo-eriox of Linnaeus, the most correct appellation of which is sea-irout. The salmo trutta of Linnaeus, however, has been universally regarded by British systematical writers as tho

common sea-trout; and the salmo erioxis a very ditlerent species. Linnaeus employed the term eriox as a trivial name to the S maculis cirereis, Cauda extremo eequali of Artedi, and tlie gray of \Villougliby and Ray. Mr. Johnstone says, ‘ Al- though in some friths and rivers, where there are a great many salmon, tliere are also great num- bers of trout; yet in others, where are a great many salmon, there are very few trout ;’ p. 38. Mr. ilalliday states, ‘ In the Annan I have known us get more sea-trouts in one

day, than we shall get in the Tay in a whole year ;' p. 64. Mr. Little declares, ' that the sea-trout are not found in all salmon rivers. We do not see any thing like the Spey trout, or like the trout that is caught in the Solvvay Frith, or like the trout that is caught in the Tweed, in any of our fishings in Ireland. They do not breed, nor are they to be seen there;' p. 111. Sir H. Davy states, that

- *the different habits of the salmon and sea-trout are well demonstrated in the Moy, near Ballena in Ireland,' on which there is a large pile near the town, and which, below the fall, is joined by a considerable stream. ' The salmon leap this fall; the sea-trout almost all spawn in the smaller stream, a few miles from the sea;' p. 144. There is some strange blunder here. Mr. Little, the tenant of the fishings on the Moy, says, there are trout, ' but not the trout called the sea-trout ;' and with regard to the pile or fall which obstructs the progress of the trout, and over which the salmon leap, he adds, ' They can go over it at tide-time, without leaping; after the tide rises they can go over it;' p. 134. He likewise observes, ' A trout goes very far up the river to spawn. The smaller the fish is, they go the higher up into the little streams to deposit the spawn; but the trout in the Moy are quite a different kind of trout from what we call in Scotland the salmon or sea-trout;' p. 134.*

4. Wliitling. — Sir H. Davy considers this fish as a young salmon, and states, that they are

- *without visible ova or spermatic secretion; are found in salmon rivers, a mile or two from the sea, and which return to the sea, without at- tempting a farther migration;' p. 145. Mr. Little, who knows this fish by different names in different rivers, as hirlings, whitings, or fin- nocks, declares, ' We never see such a fish in Ireland, in the rivers we are concerned with.' Mr. Halliday states, that ' in Carlisle they call them whitings : in Annan hirlings, and in the North finnocks. I never saw any in the Tay ; but I have taken 100 dozen in the Annan at one draught. It is about twelve inches long. The tail of the hirling is straighter than that of the salmon or grilse, and it is quite a short-headed fish; neither does the head of the hirling shoot like that of the salmon when he is going to spawn. The largest I ever saw was about three- quarters of a pound. My reasons for believing that they are not the young salmon, are, that when they go up tne rivers, they are as full of spawn for their size as the salmon is; and when they come down in the spring of the year kelts, we are getting the young salmon ;' p. B3. Mr. Johnstone agrees with the preceding witnesses, in asserting the ordinary presence of ova and spermatic secretion, and in considering this fish*

IS a distinct species. ‘ They are called hirlings on the Scotch side of the Solway, whitings on the English side; hirlings, whitings or whitlings at Berwick; whitelings in the Tay; and finnocks in the norlii of Scotland ;’ p. 37.

5. Fur. — Mr. Little is the only witness who is questioned in reference to this fish. ‘ I have seen them ; but I consider them merely a fresh- water fisli, or a species of fish by themselves, un- connected with our salmon-fisheries altogether. p. 1 13.

It is probable that some species of migratory trouts have not been noticed at all. The river fishers are better acquainted with the trouts than the frith fishers. — But we return to the habits of the salmon, as furnishing materials for regulating the legislative enactments of this kingdom.

Before entering upon this branch of the sub- ject it may be proper to state, that the present legal time for beginning the salmon-fishing varies in different rivers, from the 10th December (in tlie Tay) to the 12th March (in the Solway) ; and that the fishing-season legally ends, according to the rivers, from the 12th August (Ireland gene- rally) to the 4th December (inthe’Teign). How far tliese terms are suitable or improper will presently appear.

In the more important actions of the salmon, viz. migration and spawning, there is a season during which these are executed by the greatest number of individuals, occupying, however, a range of some months. But there are individuals, executing these operations irregularly, at other periods. Mr. Little says, ‘ There are some rivers in which you will get some good salmon all the year round.’ In the spring months few fish enter rivers ; they rapidly increase in numbers as the summer advances, and in autumn again they be- gin to decrease, leaving the winter months, as to the ascending migration, to constitute a dead season.

The condition of rivers in the spring influences the movements of the salmon. J. Proudfoot states, that ‘ in the spring of the year the fish al- ways occupy the north side of the Tay (i. e. the sunny side of the river). The north side fishing kills far more fish than the south side;’ p. 28. Mr. Little states, that in ‘ the river Shannon the salmon fishery is nearly over by the middle of May,’ p. 114; and that he does ‘not get many fish in the Foyle of any kind till the end of May ;’ p. 112. When the great difierences existing be- tween different rivers, in the quantity, tempera- ture, and contents of their waters, are duly con- sidered, we need not wonder at the influence these circumstances may exert on the motions of salmon ; but, if we make a difference in the close season between one river and another, we must, with equal propriety, establish a similar distinc- tion between the south side

and the north side of every river. In rivers, during the early spring months, the fisheries are seldom productive : even lord Gray's fishings on the sunny side of the Tay, according to J. (Jillies, 'taking the average from the 10th December till the end of January, will not, one season with another, pay the expenses or little more. There are some very good fishings in the month of February ; perhaps in the month of February there will be ten days of those fish-

*ings, and scarcely take one fisli.' The same wit- ness adds, in reference to the kind of fish taken at those periods in the Tay, ' You will get ten foul tis! i till the middle of February for one clean one;' p. 1 39. As the season advances, the salmon appear on the shores, in the estuaries, and enter the rivers in greater numbers. The stakenets, in such places, according to Mr. Ilalliday, * are seldom productive but in iMay, June, and July ;' p. 68. 'The fishings fall materially off about the middle of Augaist, and to the end of it;' p. 69, and 84. ' In September they catch almost nothing ;' p. 84. These conditions vary much with the season. The salmon are most abundant in dry seasons on the shore, and in estuaries. In rivers, they abound most in wet seasons. J. Proudfoot de- clares that ' in rainy seasons, in heavy speats, the upper fisheries (in the river) give more fish m proportion when the river is high than when it is little ;' p. 26. The fish which enter rivers in tlie spring and summer months, have roe ; but in May, for example, it is very small. As the sea- son advances, the roe and milt are found in a riper state, until the time of spawning ; but, in these respects, there are individual differences. Now, since salmon enter rivers months before they be ready for spawning, Do they remain in the river until that period, or do they occasionally return to the sea? On this subject the com- mittee seem to ha've bestowed considerable at- tention. The opinions of the witnesses, however, .are at variance. In reference to tlie fish on the shore and in estuaries, Mr. Wilson declares, ' I believe they all go up those rivers; they are upon the shore, and get up the river if they can ;' p. 14. Several of the other witnesses give it as their opinion, that salmon, before the spawning season, enter the rivers, and return again to the sea, in- fluenced by very different instincts from those of spawning. The following proofs are offered : — 1 . It is asserted that salmon, remaining a short time in fresh- water, become weak, and return to the sea to be recruited. — It is stated by some of the wit- nesses, that salmon are fattest at a particular sea- son. Mr. Little says, ' In the month of May I consider they are as good and as perfect as at any one season of the year. From the month of May, they are*

gradually growing worse till they begin to deposit their spawn in the month of November;' p. 114. Mr. Wilson reckons 'sal- mon is at its best at Midsummer, and falls greatly off after about the middle' of July ;' p. 12. Mr. Johnstone considers ' May and June as the period of their greatest perfection,' but he adds, ' there may be equal to three months difference between the quality of fish;' p. 56. Mr. Bell, on the other hand, declares 'that the fish is full as good on the lOdi December in the Tay as at any other time of the year ;' and ' the Tweed fish are good in August ; that is their best season ;' p. 2 1 . Mr. P. J. Proudfoot says, in reference to the Tay, ' there is a great deal of good fish killed by the time we commence the season' (on 10th Decem- ber) ; p. 27. These opinions are of less value than those now to be stated respecting the rela- tive qualities of sea and river fish. Mr. Wilson decidedly declares that there is no difference in the quality of salmon taken at different parts of the same river, or in tlie tideway, or in the yea

adjoining, during the proper season; p. 13. On the other hand, Mr. Johnstone says, 'the salmon caught in the sea, and nearest to the sea, are gene- rally the richest.' When they have been some days in the water, ' they lose their bright color,' — ' their firm state ; the fish gets longer in propor- tion to its thickness, and loses its weight.' — ' If he is not many days in the water, if he is caught immediately out of the sea, I do not see he can be any worse;' p. 50. 'A few weeks would make him a great deal worse ;' p. 53. Mr, Hal- liday states, that those tliat had been long in fresh water ' were very much exhausted, quite changed in the color, as if they had hung in a smoky chimney for some time ; others were very red in the skin, by having been in the fresh water for some time.' ' When they are in the fresh waters they turn as slippery as an eel ;' p. 61 . ' The salmon becomes unsound after it has been detained in fresh-water at any season;' p. 79. Mr. Little not only states, ' if he remains any length of time in a fresh river, he becomes worse,' but even limits the period to a week or ten days ; p. 126. This supposed deterioration in fresh water, we consider to be visionary, and for this reason, — if it took place, how could the fish suffer under its influence for months, while exert- ing themselves in ascending to the spawning- ground, — while in the protracted act of spawn- ing,— during their residence in the neighbourhood after parturition, — and in their subsequent des- cent to the sea ?

2. Salmon remaining in fresh water have their gills covered and eaten by worms, xchich fall off upon their returii to the sea. — iMr. Johnstone de- clares, ' They get infested with worms or mag- gots in the gills if they remain long in tlie fresh water, which I think would kill tiiem in the end, if they did not go back to the sea to get clear of these worms or maggots ;' p. 35. jVIr. Halliday says of fish in a bad condition, ' Some of those we took had their gills almost eaten through witli maggot worms, by being so long

up the river ;' p. 61. Mr. Little declares, 'I have seen their gills entirely eaten off them by the worms in fresh water ; at least the thin and red parts en- tirely eat away' (i. e. all their organs of respira- tion). ' I do not believe they are ever found in that state except in fresh water, and it is neces- sary for them to leave the fresh water to get clear of the vermin wliich fasten upon them while there ;' p. 108. The worm referred to is the lernasa salmonea of Linnaeus, the entomoda sal- monea of Lamarck. We still ask the question. If the fresh water be so very exhausting, and the attacks of the maggot so very troublesome and destructive, how can the spawning fish survive during their residence for months in a river? It is to be regretted that the season of the year, and the condition of the fish as to spawning, have not been determined, as, trusting to the declarations of experienced river fishers, we consider that these worms only appear on the kelt fish, or such as have spawned, and which are consequently on their return to the sea.

3. Salmon are caught in the rivers and estuaries on their way out to sea. — In proof of this, Mr. Halliday states, ' I fished the Annan for many years ; and there is one pool in particular, namely

the Sand Pool ; although we had fished this pool quite clean of fish before the rain came, yet, whenever the rain did come on, we then con- tinued fishing constantly, until the water rose so high that we could not manage it, and we got the salmon and grilses coming down the river all the time into the pool. Some of those we took coming down the water of Annan were what we call moffatmen, a term used for exhausted fish which had been at the head of the water;' p. 61. But the fisli may have come up the water to this pool ; or, if they came down with the flood, they may have been kelts, — their gills were infested witli maggots. This is the only proof in the re- port of the descent of salmon in rivers before spawning, and it refers to a length of course from the sea not e.xceeding a salmon day's journey. The point in question can only be determined at salmon leaps. Do fish ever recross these before they have become kelts ? The proof in the es- tuary and sea is still more defective. Mr. John- stone declares ' the fish seldom go against the tide;' p. 44. 'They run backwards and forwards with the tide in all directions;' p. 45. Mr. Hal- liday admits that it is common ' for salmon to ebb and flow with the reflux of the tide;' p. 91. With these admissions, the last two witnesses consider the salmon taken in stake-nets, with an ebb court for taking fish with the ebb tide, were such as had been in the river or estuary, and were leaving it for the sea. But if the salmon were inactive, the motions of the ebb-tide would carry them into the nets, in the same manner

as the flood-tide carried them past. The fish do not enter rivers until the water is in a state to re- ceive them, and they are in a condition to enter. Hence, on the shore and in estuaries, when not inclined to migrate, the motions of the tide will control them, and the ebb-nets will, from their very nature, be most likely to secure them. Even in the driest seasons, when the fish were not entering the river, Mr. Halliday states that the ebb-nets were most successful ; p. 72. Could they be other fish than such as passed by with the flood?

If fresh waters be so exhausting to salmon, and promote the growth of parasitical maggots so rapidly, how comes it to pass that they ever leave the sea, unless for the necessary purposes of spawning? The three witnesses, who consider that salmon run out of rivers to get rid of the worms which infest their gills, have a similar hypothesis for explaining their leaving the sea. Mr. Little says, ' It is instinct which induces them to return to the rivers, and, as I consider, for the purpose of getting rid of a vermin which gets upon them, called sea-lice.' The animal here referred to is the monoculus piscinus of Linnaeus, and the caligus curtus (mixed probably with C. productus) of Müller, but usually con- founded with the lernaa salmonea of Linnseus, by a blunder of Mr. Pennant. This animal is common to the salmon, whiting, cod, and floun- der. The last three do not enter rivers to escape from its attacks. The salmon, when most infected by it, is in the fattest and healthiest condition ; but still, in order to have it removed, this fish, in the opinion of these witnesseˆ, enters rivers, where it is certain of being exhausted in a week

or ten days, and where it is in danger of having its organs of respiration entirely devoured by the entomoda, or maggot. Another reason as- signed by the same witnesses for salmon entering rivers, is searching for food. Of this, however, no proof is offered. But in reference to es- tuaries, Mr. Halliday has taken a great many salmon, ' with worms passing through them; such worms as are to be seen on the banks ;' p. 61. ' I have had thousands of them dissected, when I have seen small sea-fish in their sto- machs ;' p. 90.

At what season do salmon enter rivers for the purpose of spawning t — We have already seen that the milt and roe make their appearance in a very obvious manner, so early as the month of May ; p. 35. Mr. Johnstone states, ' that some are getting full of spawn in July ;' p. 56. In Au- gust, ' the great proportion of them are getting full of roe and milt; they always get full as they get near spawning ;' p. 40. Mr. Wilson states, that ' in August they get considerably advanced With spawn; and in the end of August and be- ginning of September they get very full of spawn ;' p. 12. William Bell, in reference to the Tay, states, that eight or ten days before the fishing- season closes, they are ' very full of roe ;' p. 32. J. Proudfoot

says, ‘ I have seen the fish, parti- cularly the female, beginning to get very large by the 25th August;’ p. 27. In September and October they are so full of roe and milt as to be unmarketable. Mr. Halliday says, ‘ Last year S(jme of the fish sent from Montrose before the 10th October were seeded, and condemned in the London market as being unfit for use ; and I have seen them frequently take them by the 1st October that I considered were very un- wholesome and improper fish to be taken;’ p. 83. Even in February and March la.st year (1824), in the North Esk, ‘ I caught them upon the spawning-beds in the night-time ;’ p. 84. Mr. Little declares, in August, September, and Oc- tober, in general, they get large in the belly, and full of roe and milt ; and he adds, that, for the purpose of spawning, ‘ they begin to ascend in the months of August and September, and con- tinue to the end of the year;’ p. 107. In Ja- nuary, February, and even March, some of the fish are unspawned. Mr. Little states, that ‘ last season my tenant commenced fishing at my fishery in the Nith on the 1 1th March. He then killed, as I am informed, upwards of 200 salmon, some of them positively not spawned;’ p. 116. Fish ready to spawn seem to enter the rivers directly, and in the friths to keep the depth of the stream : hence, neither shore ‘stake-nets nor estuary stake-nets are successful in capturing red fish. Even Mr. Bell, a witness obviously hostile to stake-nets, declares,_ in reference to the capture of red fish in the estuary, that ‘ none’ are caught, and qualifies his assertion by saying, ‘ there may be one, accidentally, in a year or two ;’ p. 23. In ascending the river, Mr. Halli- day declares, ‘ the fish run most in the morning and evening ;’ p. 86. The general time of spawn- ing, according to all the witnesses, is during the months of November, December, and January; pp. 61. 108 : though stragglers may be found in March.

*The interruptions which salmon at present ex- perience in ascending rivers for the purpose of spawning, chiefly arise from mill-dams. The walls of these, in many cases, are built in so close a manner, that for months there will not be enough of water to permit any fish to as- cend. It is only in very great floods that they can successfully overcome the barrier. Noxious matter from tan-pits, the steeping of flax, and gas-washing, expel salmon from a river ; p. 133. 67. In reference to noxious matter, however, Mr. Drummond makes an exception in favor of peat-moss, floated into the Forth from Blair- Drummond : * I believe it to be troublesome to the nets in fishing ; but certainly there is nothing noxious in the nature of moss to the fish ;’ p. 141.*

Fish ready to spawn are sought after by poachers for the sake of the roe.

*Mr. Little says, * It is potted. The gentlemen going to fish in the lakes of Cumberland buy it for the purpose of using it as bait in fishing upon these lakes;' p. 119.*

*\'itli regard to the mode of spawning, it is gratifying to peruse the testimony of eye wit- nesses. Mr. Halliday thus describes the pro- cess : — ' When they proceed to the shallow wa- ters, which is generally in the morning, or at twilight in the evening, they play round the ground, two of them together. When they begin to make the furrow, they work up the gravel rather against the stream, as a salmon cannot work with his head down the stream, for the water going into his gills the wrong way drowns him ; and, when they have made a fur- row, they go a little distance, the one to one side and the other to the other side of the fur- row, and throw themselves on their sides when they come togetlier, and, rubbing against each other, they shed their spawn both into the furrow at once.' — ' I have seen three pair upon a spawning-bed at a time in the Annan ; I have stood and looked at them, both while making the furrow and laying the spawn.' — ' They do not lay it all at once. It requires from about eight to twelve days for them to lay their spawn.' — * I liave often taken a number of these kelts with the skin rubbed off" below the jaws, just between the chowk fins (pectorals), almost the size of a half crown, with rubbing up the gravel, and making the holes for the spawn.' — ' The spawning-bed is easily known by the thrown-up gravel ; when I took my foot off the hard gravel, and put it on the spawning-bed, it was quite soft ;' p. 65. Mr. Little speaks in an equally decided manner. ' I have frequently looked at the salmon spawning.' — ' When they begin their bed first, it is like one furrow; they make a furrow in the shallow part or current of the wa- ter, where they begin their spawn, and they con- tinue working against the Stream, until they have formed a bed of perhaps twelve feet by eight or ten.' — ' for one pair of salnaon.' — ' In the instance I was alluding to, when I saw these salmon first, tie bed was very little, but it increased every day. I observed the salmon go very leisurely down the side of the bed, and go just round where they have thrown up the gravel, and come back to the same point next the stream ; as soon is they came up to this place, they threw them-*

selves on tlieir sides, and worked one against the other, at the same time rubbing their noses against the gravel, till they came to the other corner of the bed, ami then they fell leisurely round until they came to the same place again, at the top of the bed next the stream, where they went through the same process ; they con- tinued in this way for many days, working, and, if it so happened that they were frightened, they would run away, and in a little time return to it again.' — ' It takes them some considerable time before they get all their spawn deposited ; several days ; and I have known them, when they have been frightened away, go and leave their spawning-beds, and begin at other places.' — ' The bed is covered as they go along.'

— ‘ Both assist in it, and while in the act of depo- siting their spawn.’ He adds, that ‘ the male gets a very long hard bill on his under jaw, which decreases as the spawning season passes;’ p. 108. Sir H. Davy asserts (but whether from having seen the operation is not stated), that * the female fish, in spawning, deposits her eggs slowly on gravel ; the male sheds a white seminal liquid upon them ; and both fish cover the eggs with gravel. The male is most active in this opera- tion, which hardens the extremity of the mouth, and bends it into the form of a hook ;’ p. 145.

The quantity of eggs deposited by a single female, has been variously stated by difterent authors. Mr. Johnstone says, ‘ I have counted them (eggs in the roe) repeatedly ; they are from 18,000 to 20,000 on an average;’ p. 36. Mr. Halliday says, ‘ They are not all exactly of the same number; I have found them of dif- ferent numbers, from 17,000 to 20,000;’ p. 62.

Let us now attend to the character and mo- tions of the spawned fish, or kelts, as they are termed. In this state, says Mr. Wilson, ‘ when the spawn is just leaving the fish, it is merely just two pieces of skin, just like a cow in calf:’ p. 13. Mr. Johnstone, ‘By a kelt is meant a fish which has recently spawned ; it is very thin ; it gets very much discolored ; it is very long in comparison with its thickness ; the head is very large ; the fish is quite out of season ; the fish then cuts white in general ;’ p. 37. When the process of spawning is finished, according to Mr. Halliday, ‘ they go into a pool to recruit themselves ; and, in about a fortnight or three weeks thereafter, the male fish begins to seek his way down the river. The female fish re- mains longer about the spawning ground ; and I have very often found some of the mother fish going down a kelt as late as when the first of the fry began to come down the river.’ — ‘ In the end of April and beginning of i\Iay, I have taken five at one haul in the river Annan,’ p. 02. lie says, in February and INIarch, * immense num- bers are causht ;’ and, * in the upper parts of the Tay, there must be thousands taken annu- ally,’ p. 83. James Gillies has formerly stated the number of foul fish (kelts) in February. He adds, * You could not commence before the month of March, without taking the foul fish, because the most part of the she fish come down in the month of March from the high lands. You will see them go down in shoals. The he fish always seeks his way down immediately

after he spawns ; but you will scarcely get a slie kelt early in the season. You will get the she fish coming down in the months of March and April,

great numbers of them ; and you will scarcely get one he fish so late as that montli ; all the he's are coming down chiefly in the month of February,' p. 1 39.

In the course of their descent to the sea, they experience interruptions from cruives and dam- dikes ; but, when arrived at the place where the tide meets the river, they seem to pursue the deepest part of the channel or stream, and es- cape all the coble-nets and stake-nets of the estuaries and sea-shore. In reference to the stake-nets capturing kelts, Mr. Bell declares they do not, p. 29, Mr. Johnstone says, that ' very few were ever caught in them.'

The station in the sea to which the kelts re- sort, yet remains to be discovered. Sir H. Davy says, ' Salmon do not go far out to sea;' p. 145. How he has gained this information does not appear. Not surely from the proprietors of stake-nets on the sea-shore, for salmon seldom enter there, but from May to September ; — not surely from cod and haddock fishers, for the bait which allures these fish tempts not the salmon. William Bell thinks that the fish that enter rivers from the sea ' come from the north,' p. 33. ; the very place, we may add, whence the older naturalists brought the herrings.

To return to the spawning-bed, we are com- pelled to record the injuries which it must sus- tain by the present practice of fishing. Mr. Halliday, in reference to the coble-net (for the spawning-beds are remote from the stake-net grounds), as used in the winter and spring, says, ' We have very strong ropes made of old nets, and with round circles of heavy rope lashed to the ground-rope of the net to keep it down; sometimes we tie stones to it to keep it to the bottom, and sometimes we put two cast-metal sinkers. It is generally in the spring that we require the heaviest weights at the bottom of the coble-nets, on account of the river being heavier or more full of water at that season. If thon- sands of fish should breed in the river, it would be impossible for spawn to come to perfection, where we are constantly fishing over them all the twenty-four hours with coble-nets.' — ' They usually fish the whole fords in the river from top to bottom at pleasure, with ground-ropes trailed along them ;' p. 65. He has seen this process performed on the very places where ' they use winches and capstans in the Tay ; by wbich means they can add more weight to the bottom if they like.' Though he never examined the river to determine whether the eggs were actually removed, yet he declares, 'I have seen the under rope of the net level down the spawn- ing-bed ;' and he adds, with force, ' You might just as soon have a bed of onions to come to perfection (as a spawning-bed), if a coble-net and rope was dragged over it, tearing up the mould twenty times a-day; I would take my cliance of the one as soon as the other ;' p. 66.

The y)eriod when the spawn evolves the fry, is stated by Mr. Little to be when the natural warmth comes into the water in the month of March ; ‘ and they continue going down from

*that time until the first of May : sometimes I have observed them going down till the month of June; I have seen some of them in the month of June, but they principally are out of the river early in May. The spawn does not come into life I consider till March ;’ p. 115. Even with regard to the time of the fish rising from the gravel, he says, ‘ I have observed, when we have early warm weather the fry come early, and when we have a late spring, it is later before the fry rise from the gravel ; of course a great deal depends upon the season, but generally they begin to rise about the beginning of March, and they end about the middle of April in rising from the bed ;’ p. 109. Mr. Halliday says, * I think they generally come into life the end of March, or from about the middle of March to the end of it ; but I do not think they come all into life exactly at one time, but nearly so. Some of the fry appear to be much larger than others, and I do not see the young fish so plentiful at the sides of the water at the first as after some time ;’ p. 62. Sir H. Davy says, ‘ It is stated that the eggs produce young ones in about six weeks,’ p. 145.; — an opinion rendered nugatory by viewing in con- nexion the general period of the spawning and the general period of the appearance of the fry. There is very little satisfactory information re- specting the appearance of the fry at the time of their evolution. Mr. Little says, ‘ I never saw them in that state, but I have often conversed with other water-keepers on the subject, who are placed upon the upper branch of the rivers, and they describe them very much in the same way that Mr. William Scott did when he was ex- amined in the Tay case, that they rise from these gravel-beds like a crop of oats or thick beard of gram, rising up all round the stones in very great numbers. The tail comes up first, and they will come from these beds with a part of the pea about their heads ;’ p. 109. At such a period, the destruction occasioned by the heavy ground rope of the coble-nets must be truly great. The progress of the fry from their birth-place to the sea is given in detail by several witnesses, all of whom agree in the particulars. The fry, freed from the spawn, and now termed smouts or smolts, betake themselves to pools, and after- wards proceed, according to circumstances, in myriads along the easy water at the margin of the river, with their heads against the stream, until they reach the frith where the tide ebbs and flows, where like the kelts, which frequently go down at the same time, they retire to the deepest part of the channel, and disappear in the sea. These facts were established upon oath by two competent witnesses in the Tay case, and their evidence is recorded in the Report, p. 92. The flooded state of the river is most favorable for their descent, by supplying depths of water on the shallows or fords. Mr. Little says, * The Coleraine or Bann is a late fishery ; and in the year*

1820, in the spring of that year, I con- sideied we lost nearly all tlie fry ; the dry spring did not allow them to come down the small rivers ; they were collected into little pools, and the people in tlie country destroyed them ; and, in the end of that season of 1820, the fishing fell off to forty-two tons;' p. 127.

The smouts descend during tlie months of March, April, IVIay, and June. Mr. Halliday states, ' From the first time that I have observed them, about the end of March or beginning of April, they come down until about the 10th or 12th of May. I have seen them in the middle of May, and as late as June, in a particularly dry season, when the river had not been flooded ;' p. G3. Mr. Wilson says, ' 1 think they com- mence going down about the end of April, and finish going down about May;' p. 10. James Sime, in his deposition in the Tay case, 'believes that the fry goes down the river in the month of April ;' p. 93. Mr. Little declares, that ' they are principally out of the river early in May;' p. 1 15. Mr. Johnstone says, ' They have generally reached the sea in the month of May. Some reach it in June; a few;' p. 36. While the fry are in the act of descending to the sea, they are exposed to many enemies, of which the following are the most destructive : —

*A. Coble-nets. — As these engines, according to the present practice, are in active operation during the period of the descent of the fry to the sea, we may expect such statements as the fol- lowing. Mr. Johnstone says, tliat smouts cannot pass through the coble-net, ' if there be much dirt in it; and sometimes, particularly when there is a number of them, they get broadside on ; in particular when there are salmon in the net, diey prevent the fry from going through so easily ; and the net is loose and not extended, more especially when near the edge of the water;' p. 40. Mr. Halliday says, * I have dragged a number of them on shore with the coble-nets.' ' I have dragged them ashore at the Howe's Pool, on the river Annon ; in the Bridge Pool at the bridge of Annon, when the boys used to gather them up ; and at the Old Mill Pool I have hauled out a good many;' p. 66.*

B. Angling. — At first sight one might suppose that the angler was an enemy of but feeble destructive powers. But it appears to be other- wise in fact. Mr. Wilson says, ' I have seen from my own window upwards of seventy or eighty people angling within the distance of half a mile on the Tweed;' p. 15. Mr. Halliday declares, ' I have killed above twenty dozen with the rod in one day ;' p. 62. Mr. Little says, ' I liave killed twenty or thirty dozen of fry, when coming from tlie school at Annan to Newby, in half an hour, with a rod in an afternoon,' p. 121 ; and he adds, ' I have

known even boys and children go and kill, in the course of an after- noon, twenty, thirty, or forty dozen ;' p. 132.

*C. Mill-races. — Mr. Johnstone says, ' I have seen hundreds of them lying dead at (he botom of a mill-race, killed by the wheel.' — * 1 have seen them in thousands, and tens of thousands, in the water in the mill-leads, seeking to go down, but prevented by the dike across the river, whicli tliey could not get over;' p. 40-41. Mr. Halliday states, ' I have seen the miller taking out his creel in the morn- ing at the Newby mill, and taking baskets full out of it; and I have seen great quantities lying dead in the dam behind the mill-wheel in the morning ; I have also known the miller to put in a heck in the sm;dl side sluice, by which means great quantities are destroyed in tlie night*

time, when they set the water of the wlieel, through the side-sluice ; there have been so many taken on some of the mills on the Annan, that sometimes they have fed their pigs witli them ;' p. 67. ' The dam-dikes conduct the fry, when coming down tlie water, into the mill-dam, and when night comes on tliey do not see, and they seek their way down the dam, and so tliey go into the miller's heck or basket and are all taken ;' p. 67. Mr. Little adds, ' They are very destructive to the fry when they come down the river; they take amazing quantities as tiie fry go down ; in dry seasons, when the waters are little, there is no other way for the fry to get down the little rivers than by going down the mill-lead ; in fact, they can take all the fry that there are in the river at those mills. I have seen the water black in these mill-leads with fry, seek- ing down to the sea. I know they take the fry in L'eland, and cure them like herrings;' p. 118.

D. Eel-iceirs. — Mr. Little says, ' In Ireland the eel-fishery is very hurtful to the salmon fish- eries. The eels are caught by weirs, set in the river for taking the eels going down to the sea; the eel-weirs are made of stake and wicker work, drawn together towards the centre, and the net, which is like a bag, is hung at the centre ; the proper season of the eel-fishery is in the months of September, October, and November, when the eels are going down to the sea to spawn; but those who have eel-weirs place their nets in the river at the time the salmon-fry are going down; they do this under the pretence of catching eels, but really to catch the salmon fry, which they catch and salt in some places in great quantities;' p. 118. It has been alleged that stake-nets in estuaries and on the sea-shore are destructive to the salmon fry, and various questions are pro- posed by the committee, witli the view of eliciting the truth. The answers and documents pro- duced, however, demonstrate that there is little foundation for the charge.

In reference to the Tay, Mr. Johnstone declares that he 'never' saw a smout in a stake-net; p. 43. Of the presence of such in stake-nets, Mr. Halliday

also says, 'never; and they could not be there without being seen by me ; it was im- possible;' p. 70. Mr. Little declares, 'A stake- net neither injures the breeding fish, nor does it destroy the spawn of the salmon or the fry ; I speak from having attended those nets, and never having seen any salmon-fry in them ;' p. 122. Mr. Sime, and Mr. Shepherd, who surveyed the stake-nets on purpose, during the Tay case, never found in any of them any salmon-fry ; p. 92 — 93. They are not even taken by the spirlin-nets, which have a small mesh. In fact, not only are the stake-nets innocent of the charge of catching the fry, but even the coble-net in the estuary can do them no harm, as they are beyond its reach in the deep water. Hence Mr. Sime and Mr. Shep- herd, though fishing with a small-meshed net on purpose, both in the eddy water and in the stream, found none after the fiy had reached the tide, ib.

The period of the return of the fry from the sea, seems not well determined ; and, on this interesting sid)ject, the evidence is very imper- fect. Mr. Wilson seems to think that, as grilse, 'they return again at the end of June and the com-

mencement of July.'—' Perliaps from the end of June they will average three pounds, and at the end of July about four or five pounds;' p. 10. Mr. Halliday says, ' I think we do not see them again from the time they leave the river as fry, until the next year, early in the spring, when they begin to return to the rivers young salmon;' p. 87. Mr. Little says, 'I consider that what we call the fry that go down in the early part of the season, if they are allowed to iXO down to the sea, return the same year ; and that we kill them from three to nine or ten pounds weight;' p. 111.

The witnesses seem generally to agree with the prevailing opinion, ' That the salmon fish- eries in the kingdom are rapidly decreasing in value, owing to the increasing scarcity of fish.' But the importance which should be attached to this evidence, will be estimated differently according to the judgment of the reader. Mr. Wilson communicates a statement of the number of boxes of fish shipped from the Tweed, or rather for the first thirteen miles from its mouth, from the year 1796 to 1823. In this table we perceive the very great fluctuations of the fisheries, de- pending on the seasons : the years 1796 and 1815 were as 9-338 to 9-382 boxes; yeˆ 1776 was to 1797 as 9-338 to 12-665 boxes; and 1815 was to 1816 as 9-382 to 11-471. The year 1803 IS less than 1819, and 1809 than 1319

or 1821, and but a little higher than 1822 or 1823. The box of salmon previovis to 1816 contained six and a half stones of fisli ; since that period it con- tains eight and twelve stones. In this table the 'onsumption of the neighbourhood, or what is sent to a distance by carriers and coaches is not noticed. Hence the table is useless as an index of the actual productiveness of the Tweed, though it may serve to illustrate the character of the ex- ports of Berwick. Mr. Bell says that, in all parts of the Tay, the fisheries have decreased, but no statement is produced, p. 20. J. Proud- foot says, ' Inl815, 1816, 1817,andl818, it was a tolerable fishery, and the year 1819 was rather I inferior with me ; perhaps it might not be less with some ; and since 1820 we h-ave had regular bad years successively.' But in reference to the influence of the seasons in producing these changes, he says, ' for the last two years they have not been so good,' p. 26. In reference to the fishery in 1824, of May, compared with the corresponding period in 1823, he says, 'T be- lieve that this season there are more fish caught in the Tay, as yet, than last season,' p. 33. There is a statement given by Mr. Little, of the relative produce of his Irish fisheries, from the year 1808 to 1823 : we shall give a few examples of inter- vals of ten years. The produce in tons of fish was at the Bann in 1808 and 1818, as 76 to 70; in 1809 to 1819, as 80 to 82; in 1812 to 1822, as 65 to 31 ; in 1813 to 1823, as 47 to 52. In the Bush fishery 1808 is to 1818, as 16 to 12 ; 1809 to 1819, as 9 to 12 ; in 1812 to 1822, as 8 to 8; and in 1813 to 1823, as 7 to 14; in the l-'oyle, 1808 is to 1818 as 37 to 44; 1809tol819 as 36 to 58; 1812 to 1822, as 48 to 57; 1813 to 1823, as 35 to 50.— Evidence, p. 106.

The evidence in this Report shows that poac/iing operations are carried on both night and day,

occasionally under the very windows of the houses of our nobility, the Castles of Duplin and Kinfauns, and tlie Palace of Scoon. Where this has been prevented, as it seems to have been done in the Moy at Ballina, Mr. Little declares, ' I consider that they had no protection for some years previous to 1816 ; by that protection it has risen from six tons to an average of sixty tons in a season;' p. 106. The same witness adds, ' The Dublin market is just as regularly supplied with salmon during the close-season, as it is at any season of the year;' p. 116. How far these facts bear out Sir H. Davy in his assertion, that ' the great northern fisheries, and the Irish fisheries, are much less productive than formerly' (p. 145), the reader must determine. But if we believe the opinion of Mr. Little, in reference to the Solway, to be true, and extend it, as sup- ported by the preceding evidence, to all the other great fisheries, ' I believe I can prove, from tlie dealers in salmon in the neighbourhood of the Solway Frith, that there were more killed in these nets by poachers, during the winter season of last year, than were killed during the proper sea- son for killing salmon ;' then must we conclude that salmon are as abundant as ever, but poachers now enjoy

a greater share than formerly, to the injury of the legal fisher.

The natural foes of salmon are limited in the evidence to seals and grampuses. In regard to the seals, Mr. Johnstone says, ‘ I have often counted between fifty and sixty seals that lie a little from my house summer and winter.’ That they feed on salmon is ascertained. ‘ I have seen them chasing, catching, and eating them ;’ p. 47. Mr. Halliday says, ‘ I have observed from sixty to eighty seals in one flock, and I have seen three or four flocks within my view at Balmerino ;’ p. 74. Since the removal of the stake-nets these depredators have increased ; p. 47, 75. Mr. Little states, that there are few seals in the Sol- way (where there are stake-nets), but that they are numerous in Ireland. The grampuses are in all the sea-coasts around Scotland and Ire- land. It is indeed probable that, in the United Kingdom Seas, grampuses devour many more salmon than the inhabitants.

Mr. Halliday says, ‘ Since the lands have been so much drained, the rivers fall in so fast, that fish cannot get up to the higher iiarts of t.he ri->er so freely as formerly,’ p. 82 ; and Mr. Little says, ‘ I consider that the draining of the land in Scotland has been as injurious to the fisliings as the liming of it. Formerly the small waters, in consequence of the rains remaining long in the land and in the marshes, were a length of time in rising and falling ; now ttiey get up very rapidly, and fall very rapidly. The salmon, when they go up those little rivers to breed, deposit their spawn ; and, at a season of the year when the spawn ought to rise from the gravel, it is left dry;’ p. 117.’

Sect. VIII. — Of the Tl’rbot Fishery.

The Dutch seem to excel both the English and Scotch in the turbol fishery ; which is chiefly conducted on the Broadfonrlecns bank, and in the neighbourhood of Heligoland, from the be- ginning of April to the middle of August. The

mode of taking the fish is this : — At the be- ginning of the season, the drag-net is used, which, being drawn along the banks, brings up various kinds of flat fish, as soles, plaice, thorn- backs, and turbots ; but, when the warm weather has driven the fish into deeper water, and upon banks of a rougher surface, where the drag-net is no longer practicable, the fishermen have tlien recourse to the hook and line. Each line ex- tends from one to nearly three miles in length, and is armed with 600, 700, or 800, hooks,

fixed to it at the distance of several yards from each other. To keep these long lines properly stretched, and prevent their being carried away by the tide, lead is used or small anchors. The Dutch are said to supply turbot to the value of £80,000 per annum to the London market.

It having been said that the English salt does not answer for curing fish, so well as that of St.

Ube's, St. Martin's, and Oleron ; and that foreign salt is generally preferred for that purpose in the West of England ; Dr. Henry, of Manchester, examined in 1809 the comparative strength and purity of British and foreign salt, and the result of his investigation has proved, that the quantity of pure muriate of soda contained in the large grained fishery salt of Cheshire, is considerably more than what exists in the celebrated salt of Oleron, which is the strongest of the foreign salts ; and that the proportion of sulphate and muriate of magnesia is ten times, and of other impurities in foreign salt, three times as nmch, as in the Cheshire salt. An account of this analysis was read before the Royal Society, in January 1810, and published at Liverpool, in 1811. Dr. Henry's Table of the result of his experiments is so curious that we here insert it.

Kind of Salt.

Foreign Bay Salt.

St. Ube's . . . St. Martin's . . Oleron . . . .

British Salt from Sea Water.

Scotch (common)

(Sunday) .

Lymington (common (cat) . .

Cheshire Salt.

Crushed Rock . .

Fishery

Common . . . . Stoved

One Thousand Parts by Weight consist of

Insol. Matter,

a

12 10

10 1 1 1

Muriate Total

of earthy

Magnesia. Muriates.

Suiph.

of Lime.

28

111

11

5

0ˆ

28

U

11

5

23|

19 19

15

12

15

1

61

14.1

15ˆ

Sulph. of Mag- nesia.

17ˆ

35 5

Total Sul- phates.

Total jim puri- ties.

28 25

23?

32ri

16i

50

6

61

U

141

15i

40

40ˆ

354

64ˆ

29 63 12

16? 13i 16ˆ 17A

Pure Mu- riate of Soda.

960

9591

964i

935ˆ

971 937 988

983i 986i| 983ˆ 982 J

Fishing, Right of. It has been held, that where the lord of the manor hath the soil on bott\ sides of the river, it is a good evidence that he hath right of fishing ; and it puts the proof upon him who claims liberam piscariam; but, where a river ebbs and flows, and is an arm of the sea, there it is common to all, and he who claims a privilege to himself, must prove it ; for if the trespass is brought for fishing there, the defendant may justify, tliat the place is brachium maris, in quo unusquisque subditus domini regis habet et habere debet liberam pis- cariam. In the Severn the soil belongs to the owners of the land on each side ; and the soil of the river Thames is in the king, but the fishing is common to all. He who is owner of the soil of a private river, hath separata piscaria; and he that hath libera piscaria, hath a property in the fish, and may bring a possessory action for them ; but communis piscaria is like the case of all other commons. One that has a close pond, in which there are fish, may call them pisces suos, in an indictment, &c., but he cannot call

them bona et catalla, if they be not in trunks. There needs no privilege to make a fish-pond, as there doth in the case of a warren. See Franchise.

Fishing-Fly, a bait used in angling for divers kinds of fish. Of the artificial fly there are reckoned no fewer than twelve sorts, of v/hich the following are the principal : — 1. For March, the dun fly, made of dun wool, and the feathers of the partridge's wing; or the body made of black wool, and the feathers of a black drake. 2. For April, the stone-fly : the body made of black wood, dyed yellow under the wings and tail. 3. For the beginning of May, the ruddy fly; made of red wool, and bound about with black silk, with the feathers of a black capon hanging dangling on his sides next his tail. 4. For June, the greenish fly ; the body made of black wool, with a yellow list on either side, the wings taken off" the wings of a buzzard, bound with black broken hemp. 5. The moorish fly, the body made of duskish wool, and the wings of the blackish mail of a drake. 6. The tawny

fly, good till the middle of June: the body made of tawny wool, and the wings made to stand contrary, one agamst the other, of the whitish mail of a white drake. 7. For July, the wasp lly ; the body made of black wool, cast about with yellow silk, and the wings of drakes' fea- thers. 8. The steel fly ; proper in the middle of July; the body made with greenish wool, cast about with the feathers of a peacock's tail, and the wings made of those of the buzzard. 9. For August, the drake fly; the body made with black wool cast about with black silk ; the wings of the mail of a black drake, with a black liead. The best rules for fishing with the artifi- cial fly are : To fish in a river somewhat dis- turbed with rain : or in a cloudy day, when the waters are moved by a gentle breeze; the south wind is best; and if the wind blow high, yet not so but that you may conveniently guard your tackle; the fish will rise in plain deeps; but, if the wind be small, the best angling is in swift streams. Keep as far from the water-side as may be; fish down the stream with the sun at your back, and touch not the water with your line. Always angle in clear rivers, with a small lly and slender wings; but in muddy places, use a larger. When, after rain, the water becomes brownish, use an orange fly; in a clear day, a light colored fly; a dark fly for dark waters, Src. Let the line be twice as long as the rod, unless the river be encumbered with wood. For every sort of fly, have several of the same, differing in color, to suit with the different complexions of several waters and weathers. Let the fly fall first into the water, and not the line, which will scare the fish. In slow rivers, or still places, cast the fly across the river, and let it sink a little in the water, and draw it gently back with the current. Flies for salmon should be made with their wings standing one behind the other, whether two or four. This fish delights in the gaudiest colors that can be ; chiefly in the wings, which must be long, as well as the tail.

Fishing-Floats are little appendages to the line, serving to keep the hook and bait suspended at the proper depth, to discover when the fish has hold of them, &c. Of these there are divers kinds; some made of Muscovy duck quills, which are the best for slow waters; but, for strong streams, sound cork, without flaws or holes, bored through with a hot iron, into which is put a quill of exact proportion, is preferable : pare the cork to a pyramidal form, and make it smooth.

Fishing-Frog. See Lophius.

Fishing-Hook, a small instrument made of steel wire, of a bent form, to catch and retain fish. The fishing-hook, in general, ought to be long in the

shank, somewhat thick in the cir- cumference, the point even and straight. The bend should be in the shank. For sˆetting the hook on, use strong, but small silk, laying the hair on the inside of your hook; for if it be on the outside, the silk will fret and cut it asunder. There are several sizes of fishing-hooks, some big, some little, and of these some have jieculiar names; as, 1. Single hooks. 2. Double hooks, which have two bendings, one contrary to the other. .3. Snappers, or gorgers, which are the

hooks to whip the artificial fly upon, or bait with the naVJral fly. 4. Springers, or spring hooks ; a kind of double hooks, with a spring which flies open upon being struck into any fish, and so keeps its mouth open.

F"isHiNo-LiNE, a line made either of hair twisted, or silk; or the Indian grass. The best colors are the sorrel, white, and gray; the two last for clear waters, the first for muddy ones. The pale watery green color is given artificially, by steeping the hair in a liquor made of alum, soot, and the juice of walnut-leaves, boiled to- gether.

Fishing-Rod, a long slender rod or wand, to which the line is fastened, for angling. Of these there are several sorts ; as, 1. A troUer, or trol- ling rod, which has a ring at the end of the rod, for the line to go through when it runs off" a reel. 2. A whipper, or whipping rod; a top rod, that is weak in the middle, and top heavy, but all slender and fine. 3. A dropper, which is a strong rod, and very light. 4. A snapper, or snap rod, which is a strong pole, peculiarly used for the pike. 5 A bottom rod ; being the same as the dropper, but somewhat more pliable.

FIS'SILE, adj. "ˆ Lat. Jissilis, jissura,

Fissil'ity, n.s. Vfrom Jindo, to cleave.

Fis'suRE, 72..S. & u,«. ˆ Easy to cleave; fissility is tlie quality of admitting to be cloven : fissure a cleft made ; a narrow chasm or breach.

This crystal is a pellucid Jissile stone, clear as water or crystal of the rock, and without color ; enduring a red heat without losing its transparency, and in a very strong heat c-alcining without fusion.

1 Newton's Opticks.

The stone was distinguished into strata or layers; those strata were divided by parallel fissures, that were inclosed in the stone.

Woodward's Natural History.

By a fall or blow the skull may be fissured or frac- tured. Wiseman's

Surgery.

If the bone be much depressed, and the fissure considerably large, it is then at your choice, whether you will enlarge that fissure, or continue it for the evacuation of the matter, and forbear the use of the trepan : not doubting but a small depression of the bone will either rise, or cast off, by the benefit of nature. Wiseman.

The gSLYting fissures to receive the rain,

Thomson.

There is a. fissure eight or ten feet wide, in a gravel- bed on the eastern side of the hollow and ascending the hill about a mile from Frentham in Staffordshire, leading toward Drayton in Shropshire, which fissure is filled up with nodules of iron ore. Darwin.

Fissure of a Bone, in surgery, is when it is divided either transversely or longitudinally, not quite through, but cracked after the manner of glass, by any external force. See Surgery.

FIST, n. s. k,v.a.) Sax. pyrt; Goth, fust ;

Fist'icuffs. ˆ Teut._/((//,s-ˆ; i.e. the hand

in a fast or closed state. The hand clenched either to strike or hold : as a verb, to strike or grasp with the fist : fisticuff's arecuflfs with the fist.

I commaunde you not

Fortune to trust, and eke full well ye wot,

I haue of her no brydlc in my fist,

She rcnncth loose, and tuincth where she lyst.

Sir T. Mere.

FIS 284

And being down, the villain sore did beat

And bruise with clovrniih Jists his manly face.

Faerie Queene. We have been down together in my sleep.

Unbuckling helms, ywˆiw? each other's throat.

And waked half dead with nothing.

Sh'ikspeare. Coriolanus.

Anger causeth paleness in some ; in others trem- bling, swelling, and bending t\e Jist. Bacon. And the same hand into dijist may close.

Which instantly a palm expanded shows.

Denham.

She quick and proud, and who did Pas despise. Up with her fiit, and took him on the face ;

Another time, quoth she, become more wise ; Thus Pas did kiss her hand with little grace.

Sidney.

I saw him spurning and fisting her most unmerci- fully. Dry den. Tyrrheus, the foster-father of the beast.

Then clenched a hatchet in his horay fist. Id.

She would seize upon John's commons ; for which they were sure to go to fisticuffs

Arbuthnot John Bull.

My invention and judgment are perpetually at fis- ticuffs, 'till they have quite disabled each other.

Swift.

Naked men belabouring one another with snagged sticks, or dully falling together by the ears at fisti- cuffs. More.

FIST'ULA, jz.s. ˆ Fr. fistuk ; Lat. fistula.

Fist'ulous, adj. S A sinuous ulcer. See below.

That fistula which is recent is the easiest of cure : those of a long continuance are accompanied with ul- cerations of the glaud and caries in the bono.

Wiseman's Surgery.

How these sinuous ulcers become fiitulous, I have shewn you. Id.

Fistula, in tlie ancient music, an instrument of the wind kind, resembling our flute or flage- olet. The principal wind instruments of the ancients were the tibia and the hstula. Some had holes, some none; some again were single pipes ; others a combination of several ; witness the syringa of Pan.

Fistula, in the veterinary art. See Veteri- KARY Art.

Fistula, in surgery, a deep narrow ulcer, generally arising from abscesses. It differs from a sinus, in being callous, the latter not. See Surgery.

Fistula Lachrymalis. A disorder at the canal leading from the eye to the nose, which obstructs the natural progress of the tears, and makes them trickle down the cheek ; but this is only the first and mildest stage of tlie disease : in the next there is matter discharged with the tears from the puncta lachrymalia, and some- times from an orifice broke through the skin between the nose and the angle of the eye. The last and worst degree of it is, when the matter of one eye, by its long continuance, has not only corroded the neighbouring soft parts, but also affected the subjacent bone.

FISTULARIA, or Tobacco-pipe fish, a genus of fishes belonging to the order of abdo- rainales. Of this genus Linnaeus reckons two species. Three are now discovered. The F. tabacaria is generally about a foot in length ; the fore part from the nose to half way the body of nearly equal bigness; from whence it grows

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tapering to the tail, which is forked, and from which issues a slender taper whip, four inches long, of the consistence of whalebone ; the mouth narrow, and the whole fisli of a brown color. They are sometimes taken on the coasts of Jamaica. They feed on sea-insects, &c., which they drag easily from rocks on account of the peculiar formation of the snout.

FIT, n. s. } Sax, p2oz, paec ; Swed. Jet ;

Fit'ful, adj. i Belg. t;aˆ, Ital. /?«/« ; as Skin- ner conjectures from fight ; ' any fit of a disease being a struggle of nature :' Junius derives it more probably from the Flem. viit, frequent; and Gr. fiTra, haste. The paroxysm or crisis of an intermittent disorder; any short return of an intermitting complaint: hence, disorder; dis- temperature, generally ; any recommencement of an action after intermission; an interval: fitful is varied by paroxysms ; changeful.

The life did flit away out of her nest. And all his senses were with deadly

fit opprest.

Faerie Queene. For your husband.

He's noble, wise, judicious, and best knows

The fits of the season. Shakspeare. Macbeth.

The sting of a wasp, a fit of the stone, the biting of a mad dog, destroy for the time ; the two first^ happiness, and the other wisdom itself.

Sir W. Temple. Sometimes 'tis grateful to the rich to try

A short vicissitude, and _^< of poverty. Dryden.

Men that are habitually wicked may now and then, hy fits and starts, feel certain motions of repentance.

L'Estrange.

An ambitious man puts it in the power of every malicious tongue to throw him into a fit of melan- choly. Addiwn.

Thus o'er the dying lamp the' unsteady flame Hangs quivering on a point, leaps off hy fits. And falls again as loth to quit its hold. Id.

Religion is not the business of some fits only and intervals of our life, to be taken up at certain days and hours, but a system of precepts to be regarded in all our conduct. Rogers.

Mrs. Bull was so much enraged, that she fell down- right into a- fit. Arbuthnot's John Bull.

Small stones and gravel collect and become very large in the kidneys, in which case a fit of the stone in that part is the cure. Sharp's Surgery.

All fits of pleasure we balance by an equal degree of pain or languor : 'tis like spending this year, part of the next year's revenue. Swift.

As his years increased, his fits of giddiness and deafness grew more frequent, and his deafness made conversation difficult. Johnson's Life of Swift.

Fit. See Paroxysm.

Fit, adj. v. a. &cv. n. ^\ Sax. pegt ; Isl.fit ;

Fit'ly, adv. I Kern, vitten ; Belgic,

Fit'ment, ra.s. \voegt; Teut. Juig/it ;

Fit'ness, f (Sax. fegan, means to

Fit'ter, I adapt. — • Thomson).

Tit'tisoly, adv. J Proper ; meet ; adapt-

ed ; right ; convenient : as an active verb, to make so ; to accommodate or adapt one thing to another ; taking out and up to give intensity to the meaning : as a neuter verb, to be proper or becoming. Fitment is an obsolete word for something adapted to a particular purpose.

Men of VElour,_^< to go out for war and battle

1 Chron.

The carpenter marketh it out with a line : he Jitteth it with planes. fsa. xliv. 13.

In things the fitness whereof is not of itself appa- rent, nor easy to be made sufficiently manifest unto ail, yet the judgment of antiquity, concurring with tJiat which is received, may induce them to think it not unfit. Houker.

She shall be our messenger to this paultry knight. — Trust me, I thought on her ; she'll _/?< it.

Shakspeare. Even so moit fitly As you malign our senators. Id. Coriolanus.

Duncan is in his grave ; After hie'sfitfid fever he sleeps well. Id. Macbeth. Nor time nor place Did then cohere, and yet you would make both : They've made themselves, and that thekfitTtess now Does unmake you. Id.

Poor beseeming : 'twas a, fitment for The purpose I then followed. Id. Cymbeline. Since we have said it were good not to use men of ambitious natures, except it be upon necessity, it is fit we speak in what cases they are so. Bacon.

Where a man ca.nnot fitly play his own part, if he have not a friend, he

may quit the stage. Id.

A close behaviour is the fittest to receive virtue for its constant guest, because there, and there only, it can be secure. Saville.

To take a latitude. Sun or stars z.ve fitliest viewed At their brightest ; but to conclude Of longitudes, what other way have we But to mark when and where the dark eclipses be ?

Donne. He lends him vain Goliah's sacred sword. The fittest help just fortune could afford. Cowley. Would fate permit To my desires I might my fortune fit ; Troy I would raise. Denham.

See how thou could'st judge oi fit and meet.

Milton. We were purposely designed, and fitly framed, to understand and contemplate, to affect and delight in, to undertake and pursue most noble and worthy things. Barrow.

How evil fits it me to have such a son ; and how much doth thy kindness upbraid my wickedness.

Sidney. It is fit for a. m&n to know his own abilities and weaknesses, and not think himself obliged to imitate all that he thinks _/j< to praise. Boyle.

I CAnnotfitlier compare marriage than to a lottery ; for, in both, he that ventures may succeed, and may miss ; and if he draw a prize, he hath a rich return of his venture : but in both lotteries there lie pretty store of blanks for every prize. Id.

As much of the stone as was contiguous to the marcasite,yj«ed the marcasite so close cis if it had been formerly liquid. Id.

The whole of our duty may be expressed most fitly by departing from evil. Tillotson.

This fury fit for her intent she chose.

One who delights in wars and human woes. Dryden.

A play, which if you dare but twice _^< out.

You'll all be slandered and be thought devout. Id.

"fis the great business of life tr, fit ourselves for

our end, and no man can live well that hath not

death in his eye. U Estrange.

*It is a wrong use of my understanding to make it the rule and measure of another man's ; a use which it is neither _^*

Sowing the sandy gravelly land in Devonshire and Cornwall with French furze seed, thry reckon a great improver of their land, and a fitter of it for corn.

Mortimer's Husbandry.

If our forefathers thought_/i< to be grave and serious, I hope their posterity may laugh without offence.

Addison. The English fleet could not be paid and manned, a.Qd fitted out, unless we ejicouraged trade and navi- gation. Addison's Freeholder.

*An animal, in order to be moveable must be flexi- ble ; and therefore is fitly made of separate and small lolid parts, replete with proper flui is. Arbuthnot. A trussmaker_^*

'Sot fits it to prolong the feast. Timeless, indecent, but retire to rest.

Pope's Odyssey. Which abstract terms very fittingly agree with the notion. More.

A man cannot be said to know himself, till he is well acquainted with his proper talents and capacities ; knows for what ends he received them ; and how they may be most filly applied and improved for those ends. Mason.

And thu-. I, Still on thy shores, fair Teman ! may find room And food for meditation, nor pass by Much that may give us pause, if \>oi\deved fittingly.

Byron. FITCH, n. s. A corruption of vetch, says Dr. Johnson. A small kind of wild pea.

When he hath made plain the face thereof, doth he not cast abroad the fitches ? Isaiah.

Now is the season For sowing ol fitches, of beans, and of peason.

Tusser.

FiicH, in husbandry, is more generally known by the name of chick-pea. See Cicer. Fitches are cultivated either for feedmg cattle, or im- proving the land. They make a wholesome and nourishing food, whether given in the

straw, or threshed out. When sown only to improve the soil, they are ploughed in just as they begin to blossom, by which means a tough stiff clay soil is much enriched.

There are two words in the Hebrew Old Tes- tament, which our translators have rendered by fitches, n)tp and njDDD. Tlie first occurs but once, and that in Isa. xxviii. 23. 27, where the connexion proves it to be some kind of seed, but what kind is a subject of dispute. Jerom, Maimonides, R. David, Kimchi, and the rabbin understand it to be the gith, called by the Greeks fitkavQiov, and by the Latins nigella. It is thus described by Ballester : ' It is a plant commonly met with in gardens, with leaves like those of fennel ; the flower blue, which disappearing, the ovary shows itself at the top like that of tlie poppy, and containing in its membranous cells seeds of a very black color, not unlike those of the leek, but of a very fragrant smell.' The Jewish rabbin mention the seeds as mixed with bread, The other word rendered fitches, is n'203, which the greatest number of commenta- tors render spelt ; but Dr. Geddes, R. David Kimchi, as well as our English translators, con- sider it to be rye, which is supported by the Arabic translations. Dr. Shaw thinks it may be rice.

FI'TCHAT, n. s. 3 Yx.fismu; Dutch, ˆssc.

Fi'tchew. >A stinking little animal,

that robs the lien-roost and warren. Skinner calls him the stinking ferret ; but he is much

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larger, at least as some provinces distinguish them, in which the polecat is termed a fitchat, and the stinking ferret a stoat. See Mustela..

Tissuch uDOther Jitchew '. marry, a perfumed one ; What do you mean by this haunting of me ?

S/takspeare. The Jitchat, the sulimart, and the like creatures, live upon the face and within the bowels of the earth.

Walton's Angler.

FITCHBURGH, a post-town of Massachu- setts, in Worcester county, containing 1151 citi- zens in 1795; forty-two miles north-west of Boston,

and 393 from Philadelphia.

FITCHE'E, in heraldry, from old Fr. nshe, i.e. fixed; a term applied to a cross when the lower branch ends in a sharp point. The reason of it Mackenzie sup- poses to be, that the Christians were wont to cari-y crosses with them wherever they went; and, when they stopped on their journey at any place, they fixed these portable crosses in the ground for devotion's sake.

FITISH, or Fetish, is the appellation given by the natives of INIiddle Africa to their idols, or charms, which are of almost endless variety in form and composition. The most common are milk, eggs, and birds ; and the partridge is held so sacred, that if the foot of a dead one is knovra to have touched a dish of meat, no one will taste of it, although ready to die of hunger They do not, however, regard milk or eggs with equal veneration, for they may be sometimes seen devouring each other's titishes with the greatest harmony. Their portable fitishes consist of rude imitations of the human form, or of ani- mals, with a piece of looking-glass fixed in the breast; the tusks of the young elephant, filled with a black paste, into which shells are stuck ; tigers' claws and teeth ; the minute horns of the chevrotten and other animals; sea-shells full of black paste, or even small parcels of party- colored rags, and diminutive flasks, containing consecrated gunpowder. No man takes a drink, without making an oblation to the master fitish, which is frequently an elephant's tooth. He holds it in the left hand, and, after licking its pasted head, squirts a mouthful of liquid over it in a shower; then muttering a few words, he drinks the remainder himself.

FITZIIERBERT (Sir Anthony), a learn- ed lawyer in the reign of king Henry VIIL, descended of an ancient family, and born at Norbury in Derbyshire. He was made a judge of the court of common pleas in 1523; and dis- tmguished himself by many valuable works. His principal writings are. The Grand Abridg- ment ; The Office and Authority of Justices of Peace ; The Office of Sheriffs, Bailiff's of Liber- ties, Escheators, Constables, Coroners, &c. ; Of the Diversity of Courts ; Of the Surveying of Lands ; and the Book of Husbandry. He died in 1538.

FITZJAMES (James, duke of Berwick), was the natural son of James II., by Mrs. Arabella Churchill, sister to the celebrated duke of Marl- borough. He was born at Moulins in 1671,

and entered early into the French service. When only fifteen years of age, he was wounded at the siege of Buda. He was sent to Ireland in 1688, and distinguished himself at the siege of Lon- donderry, and at the battle of the Boyne. His superior merit recommended him to the French court, and he was created marshal of France, knight of the Holy Ghost, duke and peer of

France, grandee of Spain, and comm.ander-in- chief of the French armies ; in all which stations his behaviour was such, that few equalled, per- haps none surpassed him. He was killed by a cannon-ball at the siege of Philipsburgh in

1738.

FITZSTEPHEN (William), a learned monk of Canterbury, of Norman extraction, born of re- spectable parents in London, in the twelfth cen- tury. Being attached to archbishop Becket, he was present at the time of his mtirder. And in 1174 he wrote in Latin, The Life of St. Thomas, archbishop and martyr ; in which, as Becket was a native of the metropolis, he introduces a description of London, with a detail of the man- ners and ttsages of the citizens, which is deser- vedly considered as a great curiosity, being the earliest professed account of London extant. He died in 1191.

FITZWILLIAM, a township of New Hamp- shire in Cheshire county ; sixteen miles east of the Connecticut.

FIV'E, arf;. -\ Saxon, pip ; Goth, ˆn if ;

Five'bar, b Be\g.JieJ'; Teut.Junf, seem

Five'barred, Vingly corrupted, says Min

Five'-fold, i sheu, from the Lat. quinque.

Five'leaved. J a. number; foar and one; five-bar and five-barred are, having five bars, usually applied to gates. Five-leaved is an epithet of cinquefoil. Drayton calls it ' five-leaf.'

And aftir these dayes Elizabeth his wif conseyvedo dnd hidde h'lr fyve monethis and seyde. Wiclif.

And Jive of them were wise, a.nd Jive were foolish.

Mattlicw.

No person, no incident, but must be of use to carry on the main design : all things else are like six fingers to the hand, when nature, wnich is superfluous in nothing, can do her work viMiJive, Dryden,

Five heids, Jive bleating flocks, his pastures filled.

Id. '

Our British youth lose their figure by that time they are Jive and twenty.

Addiion.

The flood, flame, swine, the lion, and the snake. Those Jive-fold monsters modern authors make.

Young.

FIVES, n. s. Teut. Jeifel ; Fr. avives. A disease of horses.

His horse sped with spavins, rayed with the yel- lows, past eure if the Jives, and stark spoiled with the staggers. Shakspeare.

FIUME, a sea-port of Austria on the Adriatic, at the extremity of the gulf of Juarnero. It con- sists of the inner and outer town, the latter of which is new and well built. The harbour, though difficult of entrance, is commodious; and large vessels may ride at distance safely at anchor, The exports are corn, tobacco, and wood ; the imports rye, sugar, spices, salt, &c. Fiumewas in 1813 re-captured from the French, who seized

it in 1809, by an Austrian and British force. Many of the inliabitants of the neighbourhood are of Hungarian origin. It is five miles W. N. W. of Buccari, and thirty-six south east of Trieste. Population 12,000.

FIUMETTO, a mountain of Italy, in the duchy of Modena, and late department of Cros- tolo; near which wells are dug, from 100 to 120 feet deep, on the surface of whose waters a red- dish medicinal oil swims, that is skimmed off once a fortnight.

FIX', v.a, & V. n.""

FiXa'tION, 11. s.

Ftx'EDLY, adv. Fix'edness, n. s.

*Fix'iDITY, Fix'lTY, *

Fix'ture,

Fix'uRE.

. Yt. fixer; \i?i. ficcare ; S pan . fixar; Port, fincar ; L,a.t.fixus ; from Gr.

7r»;yw, TTtj^oj, to pitch as a tent. I To make fast or firm;

place permanently; esta- blish ; settle ; deprive of motion or volatility ; pierce : as a neuter verb to settle, opinion or resolution ; rest ; lose volatility : fixation is sta- bility ; firmness ; settledness : fixidity, coherence of parts ; a word used by Boyle for what Sir Isaac Newton calls fixity: fixure is the word used by Shakspeare (not fixture) for position ; stable pressure ; firmness ; although fixture, some- thing affixed, or fastened to a house, appears a very ' legitimate' and useful modern word. While from the raging sword he vainly flies, A bow of steel shall _/!.r his trembling thighs.

Sandys, Why are thine eyesjixt to the sullen earth. Gazing at that which seems to dim thy sight ?

S/iakspeare. The Arm Jixure of thy foot would give an excellent motion to thy gift. Id.

The Jixure of her eye hath motion in't. As we were mocked with art.

Id. Winter's Tale. Frights, changes, horrours. Divert and crack, rend and deracinate The unity and married calm of states Quite from iheii Jixure.

Id. Troilus and Cressida. In the midst of mohen lead, when it beginneth to congeal, make a little dent, and put quicksilver, wrapped in a piece of linen, in that hole, and the quicksilver y/iW Jix and run no more, and endure the hammer. Bacon's Natural History.

Upon the compound body three things are chiefly to be observed ; the colour, the fragility or pliantness, and the volatility ov fixation, compared with the simple bodies. Bacon,

To light, created in the first day, God gave no proper place or yia'a

A fixedness in religion will not give my conscience leave to consent to innovations. Kiny Cliarles.

Yoxxx fixation in matters of religion will not be more necessary for your soul's than your kingdom's peace.

Id. Hell heard the' unsufferable noise, hell saw Heaven running from heaven, and would have fled Afl'rightod, but that fate hi\A fixed too deep Her dark foundations, and too fast had bound.

Milton, Salt dissolved upon a fixation returns to its alfected cubes. Glanville.

Your kindness banishes your fear, . Resolved to /jx for ever here. Waller.

Bodies mingled by the fire are differing as to the fixidity and volatility, and yet are so combined by

the first operation of the fire, that itself does scarce afterwards separate them. Boyle.

One loves fi.ved laws, and the other arbitrary power.

Temple. Thus while the Trojan prince employs his eyes. Fixed on the walls with wonder and surprise.

Dryden. Ho made himself their prey. To' impose on their belief, and Troy betray • Fixed on his aim, and obstinately bent. To die undaunted, or to circumvent.

Id, jEneid. If we would be happy, we must fix upon some foundation that can never deceive us. L'Estranqe.

In most bodies not propagated by seed, it is the co- lour we must_/i.i- on, and are most led by. Locke. We pronounce concerning gold, that it i& fixed.

Id. If we pretend that the distinction of species, or sorts, is fixedly established by the real and secret constitutions of things. /^_

Fixedness, or a power to remain in the fire uncon- sumed, is an idea that always accompanies our com- plex idea signified by the word gold. Id.

Omnipotency, omnisciency, and infinite goodness, enlarge the spirit while it fixtly looks on them.

Burnet. And are not the sun and fixed stars great earths vehemently hot, whose heat is conserved by the greatness of the bodies, and the mutual action and reaction between them, and the light which they emit, and whose parts are kept from fuming away, not only by their fixity, bnt also by the vast weight and density of the atmospheres incumbent upon them ?

Newton's Opticks. An universal dissolution of manners began to pre- vail, and a professed disregard to affixed principles.

Atterhury, Fluid or solid comprehend all the middle degrees between extreme fixedness and coherency, and the most rapid intestine motion of the particles of bodies.

Bentley. They are subject to errors from a narrowness of soul, a. fixation

and confinement of tliought to a few objects. Watts.

If we take a general view of the world, wc shaU find that a great deal of virtue, at least outward ap- pearance of it, is not so much from any fixed prin- ciple as the terror of what the world will say, and the liberty it will take upon the occasions we shall give.

Sterne. For the wisest purposes God hath fixed the relation between the means and the end ; and we are not to expect, either in natural or spiritual things, to obtain the end while we despise the means. Witherspoon.

Individuals pass like shadows ; but the common- wealth is. fixed and stable. The ditlerence therefore of to-day and to-morrow, which to private people is immense, to the state is nothing. Burke.

Though her eyes shone out, yet the lids were fixed. And the glance that it gave was wild and unmixed With aught of change, as the eyes may seem Of the resdess who walk in a troubled dream.

Byron. Sieye of Corinth. Fixation, in chemistry, the rendering any volatile substance fixed, so as not to fly off upon being exposed to a great heat. See Fixed

B«DIES.

Fixed Air, in the old chemical nomenclature, an invisible and permanently elastic fluid, supe- rior in gravity to the common atmospheric air and most other aerial fluids, exceedingly destruc- tive to animal life; produced in great quantities,

‘ naturally from combustible bodies, and artifici- ally by many chemical processes. Upon its first discovery it was styled gas sylvestre, from its hein^ produced by burning charcoal : from its acrid properties it has obtained the name of aerial acid, and cretaceous acid; from its noxious qua- lities it lias been called mephitic air, or mephitic gas ; and, in the new chemical nomenclature, it is now called carbonic acid gas. See Air, Car- bonic Acid, and Chemistry.

FIZ’GIG, n. s. A kind of dart or harpoon with which seamen strike fish.

Can’st thou -milh Jizgigs pierce him to the quick. Or in his skull thy barbed trident stick ?

Sandi/s, Job. FLAB’BY, adj. i Teut. fahbe (a fly-flap) ; Flab’ile. 5 lta. Jlappo, Jiappo ; Lat._ˆoc-

ctis. Yielding ; easily shaken or wafted to and fro.

Paleness, a weak pulse, palpitations of the heart, fiahby and black flesh, are symptoms of weak fibres.

Arbuthnot. Pulls out the rags contrived to prop Her Jlabby dugs, and down they drop. Swift.

FLACCID, culj. J 1ˆ2l.. flaccidm (kjlaccus).

Flacciij’ity, 71. s. 5 Limber; weak; lax.

The bowing and inclining the head is found in the great flower of the sun : the cause I take to be is, that the part against which the sun beateth waxeth more faint nadjlaccid in the stalk, and thereby less able to support the flower. Bacon,

They whose muscles are weak q>t fiaccid, are unapt to pronounce the letter r. Holder.

The surgeon ought to vary the diet as he finds the fibres are too Jiaccid a.nd produce funguses, or as they harden and produce callosities. ArbtUhnot.

There is neither fluxion nor pain, but flaccidity joined with insensibility. Wiseman^s Surgery.

FLACCUS (Caius Valerius), an ancient Latin poet, of whom we have very imperfed; accounts remaining. He wrote a poem on the Argonautic expedition ; of which, however, he did not live to finish the eighth book, dying at about thirty years of age. John Baptista Pius, an Italian poet, completed the eighth book of the Argonau- tics; and added two more, from the fourth of ApoUonius; which supplement was first added to Aldus’s edition in 1523.

FLACOURTIA, in botany, a genus of plants of the raonoecia class, and icosandria order. Male c.\L. five-parted : con. none : stamens nu- merous. Female C.4L. many-leaved : cor. none; germ superior ; styles five to nine ; berry many- celled. Species one; a thorny shrub of Mada- gascar.

FLAG, V. «., i;. u. & n. s.ˆ, Saxon pleos,

Flag'giness, w. s. I pleojan (to fly);

Flag'gy, adj. \ Teut. (Old) Jiag-

Flag'officer, fgeren, to be loos

Flag'-siiip, 1 ened. To hang

Flag'staff. J loose or free; me

taphorically to grow dejected ; spiritless ; feeble; to droop: as a verb active to suffer, to droop or become feeble : as a substantive, the ensign of a ship or regiment ; a water plant with a large- bladed leaf: a flag-officer is the commander of a squadron : flag-ship, that in which the com- mander of a squadron sails: flag-staff, the staff on which the flag is fixed: flaggy is lax; lim- ber ; weak, in tt-Tision or taste.

She took an ark of bulrushes, and laid it in the Jiiigs by the river's brink. E.iodus ii. 3.

Can bulrushes but by the river grow ? Can Jlags there flourish where no waters flow ?

Sandys. He hangs out as many Jiogs as he descry eth ves- sels ; square, if sliips ; if gallies, pendants. Id, His flaggy wings, when forth he did display. Were like two sails, in which the hollow wind Is gathered full, and worketh speedy way.

Faerie Queene. The&e JIags of France that are advanced here. Before the eye and prospect of your town. Have hither marched to your endamagement.

Shakspeare. The jades That drag the tragick melancholy night. Who with their drowsy, slow, a.nd Jiagging wings Clip dead men's graves. Id. Henry VI.

Democi-acies are less subject to sedition than where there are stirps of nobles : for, if men's eyes are upon the persons, it is for the business sake as fittest, and not iox flags or pedigree. Bacon.

Graft an apple-cion upon the stock of a colewort, and it will bear a great flaggy apple. Id.

Juice in language is somewhat less than blood : for if the words be but becoming and signifying, and the sense gentle, there is juice : but where

that want- eth, the language is thin, flagging, poor, starved, scarce covering the bone, and shews like stones in a sack. Ben Jonson's Discoveries.

Beds of cotton wool hung up between two trees, not far from the ground ; in which, flagging down in the middle, men, wives, and children lie together.

Abbot. Let him be girt With all the grisly legion that troop Under the snoty flag of Acheron. Milton.

The French and Spaniards, when your flags ap- pear. Forget their hatred, and consent to fear. Waller.

It keeps those slender and aerial bodies separated and stretched out, which otherwise, by reason of their flexibleness and weight, \o\i\d flag or curl.

Boyle's Spring of the Air. The interpretation of that article about the flag, is a ground at pleasure for opening a war. Temple.

In ei'her's flag the golden serpents bear. Erecting crests alike, like volumes rear. And mingle friendly hissings in the air.

Dryden. That basking in the sun thy bees may lie. And resting there, their flaggy pinions dry. Id.

My flagging soul flies under her own pitch. Like fowl in air too damp, and lags along As if she were a body in a body : My senses too are dull and stupified, Their edge rebated : sure some ill approaches.

Id. Don Sebastian. The duke, less numerous, but in courage more. On wings of all the winds to combat flies :

His murdering guns a loud defiance roar. And bloody crosses on h'is flagstaffs rise. Dryden.

His stomach will want victuals at the usual hour, either fretting itself into a troublesome excess, or flagging into a downright want of appetite. Locke. Cut flag roots, and the roots of other weeds.

Mortimer's Husbandry. Fame, when it is once at a stand, naturally flags and languishes. Addison's Spectator.

Her grandfather was a. flag-officer. Addison. Take heed, my dear, youth flies apace ; As well as Cupid, Time is blind :

Soon must those glories of thy face The fate of vulgar beauty find :

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The ilioiisa&d loves, that arm thy potent eye, Musi drop their quivers, /«ˆ their wings, and die.

Prior. If, on sublimer wings of love and praise.

My love above the starry vault I raise.

Lured by some vain conceit of pride or lust,

Ijiag, I drop, and flutter in the dust. Arbuthnot.

The pleasures of the town begin to Jlag and grow languid, giving way daily to cruel inroads from the spleen. Swift.

Where Revel calls, and Laughter, vainly loud, False to the heart, distorts the hollow cheek. To leave the flagging spirits doubly weak; Siill o’er the features, which perforce they cheer. To feign the pleasure or conceal the pique. Byron.

FLAG,7i.s.k,v.a. -\ Swed._ˆa/ce; Teut. and

FLAG'-BROOM,n.s. f Fr. (old) Jlache ; Belg.

Flag'-stone, ijiuck (flat). See Flake.

FL.iio'-woRM. J Flag and flag-stone are

a species of broad flat stone used for pavements : to flag is to pave with flag-stones : flag-broom is a broom used for sweeping the flags or pavement : flag-worm, a grub commonly found under it.

The sides and floors were all flagged with excellent marble. Sandys.

There be divers fishes that cast their spawn on flags or stones. Walton's Angler.

He will in the three hot months bite at a. flag-worm, or a green gentle. Id.

A white stone used {ox flagging floors. Woodward.

Flagstone will not split, as slate does, being found formed into flags, or thin plates, which are no other ihan so many strata. Id. on Fossils.

Part of two flags striated, but deeper on one side than the other. Id,

Flag, in the army, a small banner of distinc- tion, stuck in the baggage-waggon, to distinguish the baggage of one brigade from another, and of one bpttalioT' from another; that they may be marshalled he waggon-master general accord- ing to tho ru ic of their brigades, to avoid the 'con- fusion that might otherwise arise.

Flag, in the marine, a certain banner or standard, by which an admiral is distinguish- ed at sea from the inferior ships of his squadron ; also the colors by which one nation is distin- guished from another. See our plates Flags I. and II. In the British navy, flags are either red, white, or blue ; and are displayed from the top of the main-ma.st, fore-mast, or mizen-mast, according to the rank of the admiral. When a flag is displayed from the flag-staff on the main- mast, the officer distinguished thereby is known to be an admiral; when from the fore-mast, a vice admiral ; and when from the mizen-mast, a rear admiral. The first flag in Great Britain is the royal standard, which is only to be hoisted when the king or queen is on board the vessel ; the second is that of the anchor of hope, which characterises the lord high admiral, or lords commissioners of the admiralty ; and the third is the union flag, in which the crosses of St. George and St. Andrew are blended. This last is appro- priated to the admiral of the fleet who is the first naval officer under the lord high admiral. The next flag after the union is that of the white squadron, at the main-mast head : and the last, which

characterises an admiral, is the blue, at the same mast head. For a vice-admiral, the first flag is the red, the second the white, the third Vol. IX.

the blue, at the flag-staff" on the fore-mast. The same order proceeds with regard to the rear admirals, whose flags are hoisted on the top of the mizen-mast ; the lowest flag m our navy is accordingly the blue on the mizen-mast.

All the white flags have a red St. George's cross in them, in order readily to be distinguished from the French white flag with a white cross. Besides the national flag, merchant ships fre- quendy bear on the raizen-masts smaller flags, with the arms of the city where the master ordi- narily resides ; and sometimes on the fore-mast, with the arms of the place where the person who freights them lives.

When a council of war is held at sea, if it be on board the admiral, they hang a flag on the main-shrouds; if in the vice-admiral, in the fore-shrouds ; and if in the rear-admiral, in the mizen-shrouds.

To hang out the white flag, is to ask quarter ; or it shows, when a vessel is arrived on a coast, that it has no hostile intention, but come to trade or the like. The red flag is a sign of defiance, in battle.

To strike the flag is to pull it down upon the cap, or to take it in, out of respect, or submission, due from all ships or fleets inferior to those any way justly their superior. To lower or strike the flag in an engagement is a sign of yielding. The way of leading a ship in triumph is to tie the flags to the shrouds, or the gallery, in the hind part of the ship, and let them hang down towards the water, and to tow the vessels by the stern. Livy relates, that this was the way the Romans used those of Carthage.

Flag-oeficers, in the British navy, are — the admiral, vice admiral, and rear admiral of the white, red and blue. See Admiral, Flag, and Fleet.

Flag-stone, a genus of argillaceous earth, of a gray, yellowish, or reddish-white color; not giving fire with steel, nor effervescing with acids. Its specific gravity is from 2600 to 2780. Some- times it is found compact, and sometimes like the argillaceous grit; in which case its gravity is less. Its general use is for flooring houses, though some- times it is used for covering them. There are cal- careous flag-stones found near Woodstock in England, of a yellowish-white color, and mode- rately hard, containing a little iron. The specific gravity is 2385.

Flag. See Iris.

Flag, Corn. See Gladiolus.

Flag, Sweet-scented. See AcoRus.

FLAGELE'T, or) Fr. flageolet ; Lat. flati-

Flageole't, n.s.] lis. A small flute, easily blown.

Play us a lesson on youv flagelet. More.

Where Rhenus strays his vines among. The egg was laid from which he sprung.

And though by Nature mute. Or only with a whistle blessed. Well taught he all the sounds expressed

Oi flagelet or flute. Cowpcr.

Flagelets, Flageolets, or Flajeolets, a kind of small flute, blown by means of a whistle, and generally made of l)ox or otlier hard wood, sometimes of ivory. They have six holes and four keys, or sometimes five, besides that at the U

bottom, the mouth-piece, and that behind the neck. The ambit of the flageolet, accordmg to the scale exhibited by Mersennus, is two octaves from g sol re ut upwards.

FL.\GELLANTES, a sect of fanatics of the thirteenth century, who chastised and disciplined themselves with whips in public. This sect rose m Italy in 1260; its author was one Ruiner a hermit ; and it was propagated throaigli almost all the countries of Europe. A great number of persons of all ages and sexes made processions, walking two by two with their shoulders bare, wliich they whipped till the blood ran down, to obtain mercy from God, and appease his indig- nation against the wickedness of the age. They were then called the devout ; and, having esta- blished a superior, he was called the general of the devotion. Tliough the primitive Flagellantes were exemplary in point of morals, yet they were soon joined by a turbulent rabble, who were in- fected with the most ridiculous and impious opi- nions, so that the emperors and pontiffs thought proper to put an end to this religious phrensy, by declaring all devout whipping contrary to the divine law, and prejudicial to the soul's eternal interest ! However, this sect revived in Germany towards the middle of the fourteenth century, and rambling through many provinces occa- sioned gi-eat disturbances. They held, among other extravagancies, that flagellation was of equal virtue with

the sacraments ; that the for- giveness of all sins was to be obtained by it from God without the merits of Jesus Christ ; that the old law of Christ was soon to be abolished, and that a new law enjoining the baptism of blood to be administered by whipping was to be sub- stituted in its place. They were burnt by the inquisitors in several places ; but they appeared again in Timringia and Lower Saxony in the fifteenth century ; and rejected not only the sa- craments, but every branch of external worship. Their leader Conrad Schmidt, and many others, were burnt in Germany about A. D. 1414.

A modern flagellation, which frequently takes place at Rome, is thus described by Mr. Hob- house in his notes to Childe Harold, Canto IV. It is administered in the oratory of the Padre Caravi»a and in another church at Rome.

‘ The ceremony takes place at the time of vespers. It is preceded by a short exhortation, during which a bell rings, and whips, that is, strings of knotted whip-cord, are distributed quietly amongst such of the audience as are on their knees in the mid- dle of the nave. Those resting on the benches come to edify by example only. On a second bell, the candles are extinguished, and the former .sermon having ceased, a loud voice issues from the altar, which pours forth an exhortation to think of unconfessed, or imrepented, or unfor- given crimes. This continues a sufficient time to alio w the kneelers to strip off” their upper garments; the tone of the preacher is raised more loudly at every word, and he vehemently exhorts his hearers to recollect that Christ and the martyrs suffered nnich more than whipping — ‘ Show, then, your penitence — show your sense of Christ’s sacrifice— show it with the whip.’ The flagella- tion begins. The darkness, the tumultuous sounds of blows in every direction — ‘ Blessed V’irgin Mary, pray for us !’ bursting out at inter-

vals— the persuasion that you are surrounded by atrocious culprits and maniacs, who know of an absolution for every crime — the whole situation has the eflect of witchery, and so far from ex- citing a smile fixes you to the spot in a trance of restless horror, prolonged beyond expectation o ,■ bearing.

‘ The scourging continues ten or fifteen mi ■ nutes, and when it sounds as if dying away, a beli rings, which seems to invigorate the penitents, for the lashes beat about more thickly than before. Another bell rings, and the blows subside. At a third signal the candles are re-lighted, and the minister who has distributed the disciplines, collects them again with the same discretion; for the performers, to do them justice, appear to be too much ashamed of their transgressions to make a show of their penance, so that it is very difficult to say whether even your next neighbour has given himself

the lash or not.

‘ The incredulous or the humourist must not suppose that the darkness favors evasion. There can be no pleasantry in doing that which no one sees, and no merit can be assumed where it is not known who accept the disciplines. The flagellation does certainly take place on the naked skin ; and this ferocious superstition, of wliich antiquity can furnish no example, has, after being once dropt, been revived as a salutary corrective of an age of atheism. The former processions of flagellants have not been yet re- newed, but the crowds which frequent the above ceremony leave no doubt that they would be equally well attended.

‘ Such an innovation may be tolerated, and perhaps applauded, in the days of barbarism, when the beating of themselves was found the only expedient to prevent the Italians from the beating of each other; but the renewal of it at this period must induce us to fear tWat the gradual progress of reason is the dream of philanthropy, and that a considerable portion of all societies, in times the most civilised as well as the most ignorant, are always ready to adopt the most unnatural belief, and the most revolting practices. It is singular, however, that the hu- mane Pius, and the intelligent Cardinal-secretary, do not perceive the objectionable part of an in- stitution which was prohibited at its first rise by some of tlie wisest Italian princes, and is now allowed no where but at Rome.’ (p. 320 — 323).

FLAGELLARIA, in botany, a genus of plants of the hexandria class and trigynia order : cal. six-parted : cor. none ; berry superior, one- seeded. Species two : Indian plants, one a creeper, the other a fine flowering shrub.

FLAGELLATION, «..?. Fr {o\A) flmella- tion; from Liit. Jlagello. The use of the scourge. By Bridewell all descend. As mo’^iving prayer a.ailJlagellation end. Garth.

FLAGITTOUS, adj. i Lat. Jhgilius, ‘ be- Flaoit’iousness, n..f. 5 cause worthy of the lash.’ — Ainsworth. Wicked ; atrocious ; guilty of great crimes.

First, those flagitious times, Pregnant with unknown crimes, Conspire to violate tlie nuptial bed.

Roscoynmon There’s no working upon a fiagitimts and perverse nature by kindness and discipline L’Estranqe.

No villainy or flagitious action was ever yet com- mitted, but, upon a due enquiry into the causes of it, it will be found that a lye was first or last the princi- pM engine to effect it. South.

Perjury is a crime of so flagitious a nature, wc can- not be too careful in avoiding every approach towards li Addison.

But if in noble minds some dregs remain. Not yet purged off, of spleen and sour disdain. Discharge that rage on more provoking crimes. Nor fear a dearth in these flagitious times. Pope.

FLAG'ON, n. s. Y v. flagon ; Lat. lagcna, from Gr. Xayrjvog, a cup (with the digamma prefixed). — Ainsworth. A drinking cup ; a two-quart mea- sure.

A mad rogue ! he poured a flagon of Rhenish on my head once. Shakspeare. Hamlet.

More had sent him by a suitor in Chancery two sWver flagotis. Bacon's Apophthegms.

Did they coin pisspots, bowls, and flagom into officers of horse and dragoons ? Hudibras.

His nnsty flagon, full of potent juice. Was hanging by, worn thin with age and use.

Roscommon. One ˆaˆoM walks the round, that none should think They either change, or stint him in his drink.

Dri/den. I thirsty stand. And see the double Oit/ /ora charge their hand ; See them puff oflP tlie froth, and gulp a main. While with dry tongue 1 lick my lips in vain.

Gay.

FLA'GRATE, v. a. ˆ Lat. Jlagro (to burn),

Fla'grance, w. s. Ijiagrans; Fr. (old) Jla-

Fla'grancy, lˆgrance, Jlagrant. Ains-

Fla'grant, adj. (worth derives the Latin

Fla'grantly, adv. \ verb from Gr.ˆXtyw (2nd

Flagra'tion, Ji. s. J fut. (pXayuj), to burn.

To burn or injure by fire : flagrance, or flagrancy,

means burning; flaring: hence, metaphorically,

notoriousness ; and notorious or glaring crime :

flagrant is ardent ; eager ; burning with desire ;

‘ flaming into notice ;’ and hence the flaming

color, red ; the adjective is only used figuratively :

flagration is also burning; state of being on fire.

Lust causeth a flagrancy in the eyes, as the sight and the touch are the things desired, and therefore the spirits resort to tliose parts. Bacon’s Natural History.

A thing which filleth the mind with comfort and heavenly delight, stirreth up flagrant desires and af- fections, correspondent unto that which the words contain. Hooker.

-4s lovers of chastity and sanctimony, and haters of untleanness, they bring to him a woman taken in the flagrance oi her adultery. Bp. Hall.

We feared no flagration. Lovelace (1659).

Typhons destructive and flagrating power lying hid in the sun was made more temperate.

Greenhill (1705). With equal poise let steady justice sway, AxiA flagrant crimes with certain vengeance pay ; But, ‘till the proofs are clear, the stroke delay.

Smith. Their common loves, a lewd abandoned pack. The beadle’s lash still flagrant on their back.

Prior. See Sappho, at her toilet’s greasy task. Then issuing y?a_(/raw< to an evening mask. So morning insects, that in muck begun, Shine, buz, and tly-blow in the setting sun.

Pope.

When fraud is great, it furnishes weapons to defend itself, and at worst, if the crimes be so flagrant that a man is laid aside out of perfect shame, he retires loaded with the spoils of the nation. Swift.

A species of wit flagrantly unsuitable. Warton.

FLAIL, n. s. Sax. jXe-ˆeA ; Fr. fleau ; Lat. flagelluvi. 'It is directly the old Fr. JIael, or Jiuiel,' Todd. Tlie instrument with which grain is beaten out of the ear.

Our soldiers, like the night-owl's lazy flight. Or like a lazy thrasher with a. flail. Fell gently dov/u as if they struck their friends.

Shakspeare. Henry VI. When in one night, ere glimpse of morn. His shadowy ˆat7 hath threshed the corn. That ten day-labourers could not end. Milton.

in this pile shall reign a mighty prince. Born for a scourge of wit, nud flail of sense.

Dry den. The dexterous handling of the flail, or the plougli, afld being good workmen with these tools, did not hinder Gideon's and Cincinnatus's skill in arms and government. Locke.

When in the barn the sounding _ˆaj7 I ply. Where from the sieve the chaff was wont to fly. The poultry there will seem around to stand. Waiting upon her charitable hand. Gay.

The thresher. Duck, could o'er the queen prevail. The proverb says, no fence against a. flail. Swift.

Flails consist of the following parts : 1. The hand-staff, or piece held in the thresher's hand. 2. The swiple, or that part which strikes out the corn. 3. The caplins, or strong double leather, made fast to the tops of the hand-staff and swiple. 4. The middle band, being the leather thongs, or fish-skin, that ties the caplins to- gether.

FLAKE, n. s., v. a., & v. n. } Saxon, place ;

Flaky, adj. 5 Gothic, floka ;

Teut. /?ac, from Goth. ˆa ; "LsX. floccus, io divide. A loose piece, or portion ; a laminated body, or thing ; to flake is to form, or break, into lamina;, or loose portions.

The flakes of his tough flesh so firmly bound. As not to be divorced by a wound. Sandys.

And from his wide-devouring oven sent

A flake of fire, that, flushing in his beard.

Him all amazed, and almost made affeared.

Faerie Queene. The silent hour steals on. And flaky darkness breaks within the East.

Shakspeare.

Crimson circleR, like red flakes in the element, when the weather is hottest. Sidney.

The teeth cut away great flakes of the metal, till i' received the perfect form the teeth would make.

Mo.ron.

Small drops of a misling rain, descending through a freezing air, do each of them shoot into one of those figured icicles ; which, being ruffled by the wind, in their fall are broken, and clustered together into small parcels, which wc call flakes of snow.

Grew's Cosmologia.

The earth is sometimes covered with snow two or three feet deep, made up only of Vm]c flakes or pieces of ice. Burnet.

Upon throwing in a stone, the water boils for a con- siderable time, and at the same time are seen little flakes of scurf rising up. Addison.

Hence, when the snows in winter cease to weep. And undissolved their flaky texture keep,

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The banks with ease their humble streams contain. Which swell in Sumaier, and those banks disdain.

Blackmoi-e,

From the ˆleak po.e no winds inclement blow. Mold the round hail, or Jiake the fleecy snow.

Pope's Odyssey.

The trumpet roars, long flaky flames exi)ire. With sparks that seem to set the world on fire.

Pope, Where twenty ages gather o'er a name,

'Tis as a snow-ball which derives assistance From every flake, and yet rolls on the same.

Even till an iceberg it may chance to grow.

But after all 'lis nothing but cold suow. Byron,

Flake, in the cod fisliery, a sort of scaflbld or platform, made of hurdles, and supported by stanchions, used for drying cod-fish in Newfound- land. These flakes are usually placed near the shores of fishing harbours.

I" LAKE, in gardening, a sort of carnation, which is of two colors only, and has very large stripes, all of them going quite through the leaves.

Flake, White, in painting, lead corroded by the pressing of grapes, or a ceruss prepared by the acid of grapes. It is brought here from Italy ; and far surpasses, both with regard to the purity of its whiteness and the certainty of its standing, all the ceruss of white lead made witli us. It is used in oil and varnish painting, for all purposes where a very clean white is required. It should be procured in lumps as brought over, and levigated by those who use it ; as that which the colormen sell in a prepared state is levigated and mixed up with starch, and often with white- lead.

FLAM, V. a. & n. s. Goth. Jlimma, to deceive. See Flim. To delude, in jest, or lightly : a freak ; whim ; falsehood ; pretext.

Hard trifles, anagrams, or eteosticks, or finer flams.

Ben Jonson. A flajn more senseless than the rog'ry

Of old aruspicy and aug'ry. Hudibras.

For so our ignorance vias flammed. Id.

God is not to he flammed off with lyes, who knows exactly what thou canst do, and what not. South.

'Till these men can prove the things, ordered by our church, to bo either intrinsically unlawfu\ or inde- cent, all pretences or pleas of conscience to the con- trary are nothing but cant and cheat, flam and delu- sion. Id.

FLAMBEAU, n. s. Fr. A lighted torch.

The king seized a. flambeau with Ecal to destroy.

JJryden.

As tlie attendants carried each of them a. flambeau in their hands, the sultan, after having ordered all the lights to be put out, gave the word to enter the house, and find out the criminal, and put him to death. Addison's Guardian.

Flambeajix are made of several thick wicks, covered with wax, serving to burn at night in the streets, at processions, illuminations, &c. They differ from links, torches, and tapers. — They are made square ; sometimes of white wax and some- times of yellow. They usually consist of four wicks or branches, nearly an inch thick and about three foot long, made of a sort of coarse hempen yarn half twisted. They are made with the ladle much as torches or tapers are ; viz. by first pour- ing the melted wax on the top of the several sus- Dended wicks, and letting it run down to the

bottom. This they repeat twice. After each wick lias thus got its proper cover of v^'ax, they lay them to dry ; then roll them on a table, and so join four of them together by a red-hot iron. When joined they pour on more wax till the flambeau is brought to the size required, which is usually from a pound and a half to three pounds. They then finish their form or outside, with a polishing instrument of wood, by running it along all the angles formed by the union of the branches. Flambeaux were anciently made of wood dried in furnaces or otherwise. Divers kinds of wood were used for this purpose ; the most usual was pine. Pliny says that, in his time, they also used oak, elm, and liazel. In the seventh book of the vEneid a flambeau of pine is mentioned ; and Servius on that passage remarks, that they also made them of the cornel tree.

FLAMBOROUGH Head, a cape on the east coast of Yorkshire, five miles east of Burlington, and 20G from London. It was the Fleamburg of the Saxons ; so called from the flames or lights made on it to direct the landing of Ida, who in A. D. 547 joined his countrj'raen in Bri- tain, with a large reinforcement from Germany, and founded the kingdom of Northumberland. In the time of Edward the Confessor, Flambo- rough was one of the manors of Harold, earl of the West Saxons, afterwards king of England. On his death William gave it to Hugh Lupus ; who bestowed it in perpetual alms on the mon- astery of Whitby. The cliffs of this cape are of a tremendous height and amazing grandeur. Be- neath are several vast caverns; some closed at the end, others pervious, formed with natural arches. In some places the rocks are insulated and of a pyramidal figure,

soaring up to a vast height. The bases of most are solid, but in some pierced through and arched. The color of all these rocks is white, from the dung of tiie innu- merable flocks of migratory birds which quite cover the face of them, filling every little pro- jection, every hole that will give them leave to rest. A light-house has been erected at Flam- borough Head, the height of which, from the ba- sis to the summit, is eighty-five feet, and from the level of the sea 230 feet. The lantern con- tains three frames, witli seven large lamps and reflectors in each, making in the whole twenty- one. Tlie lights revolve, and the motion is hori- zontal. One of the lights is red, to distinguisli Flamborough lights from all others; and in a clear night they may be seen at the distance of thirty miles. The building is executed in a very superior style ; and is of great advantage to navi- gation, in securing the property of individuals, and in preserving human life from the calamities of shipwreck.

FLAME, n. s., v. a., & v. n.ˆ Fr. ftamme ;

Flame'-colored, Belg. and Teut.

Flame'-eyed, vlumme ; Swed.

Flamma'tion, w. 5. Iˆand luaX. Jiam-

Flammabil'ity, Tvin; Arm. and

Flam'meoi'S, arf;. Welsii, flam;

Flammif'erous, Gothic, Horn;

Flam'y. J Saxon, leom ;

{Loge, or Lake, among the Goths was the god of fire, or rather of flame). Blaze; the light emitted

from fire: hence, metaphorically, ardor; passion; particularly the passion of love : to flame is to shine as fire, or flame ; to burst out into pas- sionate violence; to inflame; excite: flamma- tion is the act of inflaming, or causing to flame : flammability, the being possible, or likely, to blaze out : flammeous, consisting of, or re- sembling: flammiferous, bringing, or bringing forth flame.

Much was he moved at that rueful sight. And flamed with zeal of vengeance inwardly. He asked who had that dame so fouly dight. Or whether his own hand, or whether other wight? Spenser's Faerie Queene'

Wit is brush-wood, judgment timber ; the one gives the greatest _/?oTOe, the other yields the durablest heat; and both meeting make the best fire.

Sir T. Overhury.

Can you think to blow out the intended fire your city is ready to flame in, with such weak breath as this ? Shakspeare.

Children play With Eery flames, and covet what is bright ; But, feeling the effects, abhor the light.

Birth of Merlin. Rowley and Shahspeare.

'Tis strong, and it does indifferent well in flame- colored stockings. Shakspeare. Twelfth Night.

The vital spirits of living creatures are a substance compounded of an airy and flamy matter ; and though air and flame, being free, will not well mingle, yet bound in by a body they will. Bacon,

August shall bear the form of a young man of a fierce and choleric aspect, in a. flame-coloured garment.

Peacham. The sullen cave Where flame-eyed Fury means to smite, Quarles.

VfhdX flame, what lightning e'er So quick an active force did bear ! Cowley.

My heart's oa flame, and does like fire To her aspire. Id.

Hell all around As one great {uraace flamed. Milton.

He ieW flaming through the ethereal sky To bottomless perdition. Id.

White or crystalline arsenick, being artificial, and stiblimed with salt, will not endure flammation.

Browne's Vulgar Errours. This flammeous light is not over all the body.

Browne. In the sulphur of bodies terrified, that is, the oily, fat and unctuous parts, consist the principles of flam- mability. Id. My thoughts imprisoned in my secret woes. With flamy breaths do issue oft in sound . Sidney.

Of all our elder plays. This and Philastcr have the loudest fame ; Great are their faults, and glorious is their _ˆame ; In both our English genius is exprest. Lofty and bold, but negligently tlrest. Waller.

Behold it like an ample curtain spread. Now streaked and glowing with the morning red ; Anon at noon inflaming yellow bright. And chusing sable for the peaceful night. Prior. Is not flame a vapour, fume, or exhalation lieatcd red hot, that is, so hot as to shine ? For bodies do not flame without emitting a copious fume, and tliis fume burns in the flame. Newton's Opticks.

Now gaudy pride corrupts the lavish ago. And the streets flame with glaring equipage. Gay. No warning of the approachingyZame ; Swiftly like sudden death it came I loved the moment 1 beheld, GranviUc.

Smit with the love of kindred arts we came. And met congenial, vningWnˆ flame \i\ih flame.

Pope. A friend exaggerates a man's virtues ; an enemy inflames his crimes. Mason.

You from deep cauldrons and unmeasured caves "Bloyf flam.ing airs or pour vitrescent waves. Darwin.

Flame. Sir Isaac Newton considers flapie as only the red-hot vapor of any substance raised from it by fire, and heated to such a degree as to emit light copiously. This definition seems to be accurate, though some allege that it contains an inaccurate comparison. Simple ignition (they argue) never exceeds in intensity of light the body by contact of which it was produced. But flame always consists of volatile inflammable matter in the act of combustion and combination with vital air. Many metallic substances are volatilised by heat, and burn with a flame by the contact of the air in this rare state. Sulphur, phosphorus, and some other bases of acids, ex- hibit the same phenomenon. But the flames of organised substances are in general produced by the extrication and ascension of inflammable air with more or less charcoal. When circumstances are not favorable to the perfect combustion of these products, a portion of the coal passes through the luminous current unburnt, and forms smoke. It appears .to .be ascertained, however, that bodies emit flame in proportion to the quan- tity of vapor that rises from them. Thus wood, coals, &c., which emit a great quantity of vapor, flame violently; while lead, tin, &,c., which emit but a small fume, can scarcely be perceived to flame at all. This rule, however, is not to be de- pended upon in all cases. Some vapors seem to be in their own nature uninflammable, and capa- ble of extinguishing flame ; as those of water, the mineral acids, sal ammoniac, arsenic, &c. ; while

others take fire on the slightest approach of a flaming substance ; such as ether, spirit of wine, &c. These last also exhibit a remarkable phenomenon ; namely, that they cannot be made to flame without the approach of some substance actually in flames. Thus spirit of wine, poured on a red-hot iron, though instantly dissipated in vapor, will not flame ; but, if a burning candle touches its surface, the whole is set in a flame at once. The case is otherwise with oils, especially those of the grosser kind ; for their vapors are readily changed into flame by the mere increase of heat, without the approach of any flaming sub- stance. There is, however, no kind of vapor, perhaps, that is incapable of being converted into flame, provided it is exposed to a sufficient de- gree of heat. Thus the vapor of water, made to pass through burning coal, produces an exceed- ingly strong and bright flame. It is remarkable that thi.s vapor seems to be more powerful than almost any other in absorbing heat, and detain- ing it in a latent state. It seems ju-obable that, when smoke is converted into flame, the caloric, or latent heat with which the vapor had combined, or rather that which made an essential part of it, breaks forth, and adds to the quantity of sonsiljle heat already present. This seems probable, from the sudden explosion with which all flames break out. If a vessel full of oil be set over the lire a smnlie or vapor begins to arise from it;

which grows gradually thicker, and at last be- gins to shine in some places very near the sur- face of the oil, like an electrical light, or sulphur just kindled. At this time the oil is very hot, as well us the steam which issues from it. But this last is continually giving off its sensible heat into the atmosphere ; so that, at an inch or two from the surface of the oil, the heat of the steam will not exceed 400° of Faln-enheit ; i)ut, if a burning candle be lield in tlie steam for a moment, tlie ■whole is immediately converted into tiame, with something like an explosion ; after which tiie oil burns quietly until it is all consumed. The flame, as soon as it appears, is not only much hotter than the steam whence it was pro- duced, but even than the oil which lies below it. Whence, then, has this sudden and great increase of heat arisen '! It could not be the sensible heat of the vapor, for that was greatly inferior ; nor could it be communicated from the oil, for that could communicate no more than it had itself. The candle indeed would communicate a quantity of heat to the vapor which touched its flame ; but it is impossible that this quantity sliould extend permanently over a surfece perhaps 100 times larger than the flame of tlie candle, in such a manner as to make every part of that surface equally hot with the flame of the candle

itself; for this would be to suppose it to communicate 100 timeii more heat than really was in it. The heat therefore must have originally resided in the vapor itself: and as, in the freezing of water, its latent heat is extricated and becomes sensible, and the water thereupon loses its fluidity ; so, in the accession of vapor, the latent heat breaks forth with a bright flash, and the vapor is then totally decomposed, and converted into soot, ashes, or water, according to the different nature of the substances which produce it, or according to the intensity of the heat. — Several other hypotheses have been offered, to solve the phe- nomena of burning and flaming bodies. See Chemistry, Combustion, Fire, Heat, Igni- tion, &c. The colors of flames differ according to the substances from which they are produced. Thus, the flame of sulphur and spirit of wine is blue ; the flame of nitre and zinc, of a bright ■white; that of copper, of a greenish-blue, &c. These varieties afford an opportunity of making a number of agreeable representations in fire-works, which could not be done if the flame produced from every different substance was of the same color. See Pyrotfxiiny.

FLAMEEL, or Flemeal (Bertholet), a cele- brated Flemish painter, was born at Liege, in 1614. He improved himself at Rome by copy- ing the best masters; and in 1647 returned to his native place, but afterwards went to Paris and became a professor in the Academy of Paint- ing. He died in 1675. His architectural re- presentations are in fine style.

FLAMEL (Nicholas), a notary and alleged alchemist of Paris, in the fourteenth century, suddenly became possessed of so much wealth as induced a suspicion that he was indebted for it to the philosopher's stone : while others af- firmed that he obtained it by extortion from the Jews, when they were exiled. The truth seems to be, that he acquired it by commercial specu-

lations. He at any rate applied it to benevolent purposes, in building extensive hospitals — that of the Quinze Vingt, for instance — and places of worship. He died in 1418. Several books on alchemy have been published with his name. Paul Lucas, a French physician employed by the court, about the commencement of tlie last century, to collect rare coins and antiquities in the Levant, furnishes an amusing sequel to this man's history, lie tells us, in his second voy- age, that on tlie 9th of July, 1705, at Burnus Baschi, near Brussa, in Natolia, he fell in with an Usbec dervise who spoke a variety of languages, and who was not only perfectly well acquainted with the story of Flamel as related above, but who affirmed that both he and his wife were yet alive, having gained over their physician and the curate of S. S. Innocens to report their death, and to bury two logs of wood in their stead. They were now, he added, about 400 years old each, and belonged to a society, consisting in all of seven adepts, who travelled about the world, meeting at some appointed spot every twenty

years !

FLA'MEN. Lat. A Roman priest ; one that officiated in solemn or sacrificial rites. A drear and dying sound Affrights .\G Jiamen. Milton,

Then first ihn Jiamcn tasted living food ;

Next his grim idol smeared with human blood.

Pope.

Flamen, in Roman antiquity, an order of priests, instituted by Romulus or Numa. Tliey were originally only three ; viz. the Flamen Di- alis, Martialis, and Quirinalis. The last two, though of high authority, were much inferior to the Flamen Dialis. They were all chosen by the people, and consecrated by the pontifex maxi- mus. In latter times several priests of the same order were added to them, but inferior in power. The whole number at last amounted to fifteen : the first three of whom were senators, and called Flamines majores; the other twelve, taken from among the people, being denominated Flamines minores. Some authors tell us the Romans had a flamen for every deity they worshipped. The greater flamines wore the robe edged with purple, like the magistrates ; had an ivory chair, and a seat in the senate. They wore a little band of thread about their heads, whence their name is said to be derived, quasi filamines. They also wore a hat or cap, called apex or flam- meum.

Flamen dialis was sacred to Jupiter, and a person of the highest consequence and authority in the state. He discharged several religious duties which properly belonged to the kings, and was honored with many eminent privileges beyond all other officers, but was obliged to ob- serve several superstitious restraints. Flamen Martialis was sacred to Mars, and was ordained to inspect the rites of that god. Flamen Quiri- nalis was sacred to, and superintended the rites of, Quirinus Romulus.

FLAMINGO. See Phoenicopterxjs.

FLAMINIA Via, the highway from Rome to Arminum, made by Flaminus.

FLAMINACA, the wife of the Flamen Dialis, wore a flame-colored habit, on which was painlerl

a thunderbolt, and above her head-dress she had green oak boughs, to indicate that she served Jupiter the thunderer, to whom the oak was

FLAMININUS (Titus), or T. Quinctius Flaminius, a celebrated Roman general, who was consul A.U.C. 554, or A.A.C. 198. lie acquired much military experience in the war against Hannibal; and was afterwards sent against Philip V. of Macedon, whom he totally defeated on the confines of Epirus, and made all Locris, Phocis, and Thessaly, tributary to Home. Yet he not only granted peace to Philip, but proclaimed all Greece free and independent at the Isthmian games. This political step ren- dered him very popular among the Greeks, and paved the way to the universal dominion of the Romans. He was afterwards sent to Prusias, king of Bithynia; who had given refuge to Han- nibal, and by his address prevailed on the mon- arch to desert that unfortunate general. See Prusias II. Flaminius died suddenly.

Flaminius, or Flaminio (Mark Anthony), a Latin poet in the sixteenth century, of Imola, in Italy. The pope had chosen him secretary to the council in 1545; but he refused that em- ployment, as he favored the new opinions, as they were called, and would not employ his pen in an assembly where he knew these opinions were to be condemned. He wrote notes on the Psalms; paraphrased thirty of them in Latin verse ; and wrote letters and poems which are esteemed. He died at Rome in 1550.

FLAMSTED, a town of England, in Hert- fordshire, five miles from St. Alban's and Dun- stable, on the Verlam, anciently called Verlam- stede. The land hereabouts is a clay so thickly mixed with flints, that, after a shower, nothing appears but a heap of stones ; yet it bears good corn even in dry summers. Edward VI. when an infant, was brought hither for his health. The bedstead he lay on, which is curiously wrought, is still preserved in the manor house.

FLAMSTEED (John), an eminent English astronomer, born in Derby in 1646. He had early studied civil and ecclesiastical history; but accidentally meeting with John De Sacrobosco's book, De Sphˆrˆ,, acquired a turn for astronomy, which he afterwards prosecuted with great vigor. In 1674 he wrote an ephemeris, in which he showed the falsity of astrology ; and gave a table of the moon's rising and setting, with the eclipses and appulses of the moon and planets to fixed stars. This fell into the hands of Sir Jonas More ; for whom he made a table of tlie moon's true southings. In 1674 Sir Jonas having informed him that a true account of the tides would be highly acceptable to the king, he composed a small ephemeris for his use ; and, when Sir Jonas showed the king and duke of York Flamsteed's telescopes and micrometer, he procured for him a warrant to he king's astro- nomer, with a salary of £100 a-ycar. His Doc- trine of the Sphere was publisheH in 1681, in a posthumous work of Sir Jonas More, entitled, A New System

of the Mathematics. In 1684 he was presented to the living of P)urstow, in Surry, which he enjoyed till he died in 1710. His Ilistoria Coelcstis Britannica was published

at London in 1725, in 3 vols. He likewise composed the British Catalogue of the fixed stars, which contains twice the number that are in the catalogue of Hevelius (see Astronomy) ; to each of which h-e annexed its longitude, lati- tude, right ascension, and distance from the pole, together with the -variations of right ascension and declination, while the longitude increases a degree. This catalogue, together with most of his observations, were printed on fine paper at the expense of prince George of Denmark.

FLANCIIES, in heraldry. The flanch is composed of an arched line, drawn from the upper angle of the escutcheon to the base point of one side, and so on to the other. Flanches are never borne single, but in couples, and always in the flanks of the shields. See diagram.

FLANDERS, a country of the Netherlands, and now chiefly incorporated in the kingdom of that name, was formerly governed by its own hereditary sovereigns. It was bounded on the north by the United Provinces ; on the east by the ci-devant Austrian provinces of Brabant and Hainault ; on the south by Ilainauli and Artois ; and on the west and north-west by the German Ocean; extending sixty miles in length, and fifty in breadth. It contained thirty cities, a great number of market towns, 1154 villages, and forty-eight abbeys ; besides many colleges, monasteries, Sec. The towns are situated so near each other, that the Spaniards who followed Philip II. supposed the whole country to con- stitute but one great city. Since that"^period it has suffered greatly from the ravages of various wars. The climate is temperate and healthy; the soil very fertile, being watered by many-rivers and canals, and producing all kinds of corn, flax, and other vegetables ; and the surface per- fectly level, there being not a single hill of any importance in it. The pastures are excellent, and rear great numbers of fine horses, sheep, and black cattle. The Flemings were formerly the principal manufacturers in Europe, and either in- vented or improved several important arts ; par- ticularly weaving figured linens, dyeing cloths, painting in oil colors, curing herrings, &lc. Silk, cotton, and woollen stuffs, camblets, brocades, linens, laces, and tapestry are still manufactured in great quantities. The laces are also superior. The chief rivers are the Scheldt and the Lys.

Flanders has been divided into three parts ; viz. Flemish, French, and Austrian or Imperial Flanders. It has been otherwise divided into French, Austrian, and Dutch Flanders ; but, the country being so much exposed to the depreda- tions of ambitious princes and tyrannical states, the limits of tliese provinces have often varied : nor is it necessary to ascertain them

with much precision, now that these distinctions are abo- lished. French inlanders, now forming the French department of the North, we shall treat of under that title, and confine the present account to those provinces of the Netherlands, which still retain the name of East and West Flanders. East Flanders is divided from West Flanders

by a line running almost due so m froKi Sluys, a smal. town opposite Flushinsj. Its capital is Ghent; its computed extent 1080 square miles; its population fully 600,000. The surface in the northern part is level, while to the south it con- sists of undulating plains. The soil is in general a heavy fertile loam. The climate, though moist, is not unhealthy : the chief productions are corn, pulse, flax, madder, tobacco, fruit; most of these are in great abundance ; and the pasturages ex- cellent. The matmtactures are also here con- siderable. This province sends ten deputies to the provincial assembly, and is divided into the four circles of Ghent, Dendermonde, Oudenarde, and Eecioo. No part of it adjoins the sea, JJutch Flanders occupying the bank of the Scheldt ; but it enjoys the benefit of water com- munication by canals, the principal of which lead to Bruges in the west, and to Sas Van Ghent in the north.

West Flanders extends along a considerable tract of coast, in the central part of which is Ostend. This side faces the north ; but the western boundary of the province adjoins the French territory. Its extent is nearly 1500 square miles, and its surface in general level, ex- cept the sand-hills on the coast. Here also the soil is fertile, and the agriculture excellent. The climate, like that of England, is humid and changeable ; the products nearly the same as in East Flanders, and the language Flemish, except along the French frontier, where there is an inter- mixture of I"rench. The manufactures are very considerable in lace and fine linen ; cotton, stuffs, and leatlior ; and there are extensive breweries and distilleries. The exports consist of manu- lactured articles, corn, pulse, rapeseed, tobacco, butter, oil, cheese, and cattle. This province sends eight deputies to the lepresentative as- sembly; it is divided into four circles, that of Bruges (the capital), Fumes, Ypres, and Cour- tray. Ostend is its only harbour of consequence, but the province has several canals, which form a line of communication with France. Popula- tion 520,000. Wood is scarce : the common fuel is turf and coal. Both provinces are of the Catholic religion ; and each has, in addition t J its share in the general representative body, a local public assembly.

FLANK, n. s. & v. a. } Fr. fmic ; Teut.

Flank'er, n. s. & V. a. Sflnnk, or rather lank, according to W^ichter, who derives our word from this, with the addition of f ; Goth, lang ; B^lg, and Swcd. flunk. The side ; that part of the si4e of animals near the hinder thigh : in for- tincation, that part of the bastion which reaches from the curtain to the face. See Foutific^tion. To flank, in a military sense is to command or attack an enemy's side, or to secure an army on the side. A flanker s, in fortification, a la teral defence of any kind : to flanker is to defend laterally, to protect or to attack sideways .

Like storms of hail the stones fell down from high. Cast from the hnXvAtVa, flanker $, ports, and towers.

Fairfax.

The Turks, discouraged with the loss of their fel- lows, and sore beaten by the Spaniards out of their ftanlw.rs, were rnforccd to retire. hnoUes.

Great ordnance and small shot thimdered ami showered upon oui- men from the rampier in front, and from the gallies that lay at sea in Jfank.

Bacon's War with Spain.

Gray was appointed to stand on the left side, in such sort as he might take the flank of the enemy.

Hatfteard.

The belly shall be eminent by shadowing theflank.

Peacham. To right and left the front Divided, and to eithery//anA retired. Milton. With fates averse against their king's command,

Armed on the right, and oa the left they stand,

Aaiijiank the passage. Dryden's jEneid.

By the rich scent we found our perfumed prey. Which flanked with rocks did close in covert lay.

Dry den . He said, and poised in air, the jav'lin sent :

Through Paris' shield the forceful weapon went.

His corselet pierces, and his garment rends.

And glancing downward near his flank descends.

Pope,

Flakk, or Flanc, in farriery and horseman- ship. The flanks of a horse should be full, and at the top of each a feather. The distance be- tween the last rib and haunch-bone, which is properly the flank, should be short, which they term well coupled, such horses being most hardy, and fit to endure labor A horse is said to have no flank, if the last of the short ribs be at a considerable distance from the haunch- bone ; or when his ribs are too much straitened in their compass.

Flank, in military affairs, the side of a body of men. When a battalion is drawn up three deep, its flank files consist of three men. When four deep, the flank files are termed double files; so that a column formed from any of these alig- nements will have all its relative flank files, be the depth of formation what it will.

I'lank-Company, a certain number of men drawn up on the right, or left, of a battalion. Thus the grenadiers compose the right, and the light infantry the left flank company ; or, when these are detached, the two extreme battalion companies become such. Tht; grenadiers and light infantry are generally called flank com- panies, whether attached, or not, to tlteir several battalions.

Flanking-Party, a select body of men on foot or on horseback, whose object is to harass the enemy, to get upon his wings, or by any mancEuvre to hang upon the flank of an op- posing force. In flanking, a great deal depends upon the officer or serjeant; he must be ex- tremely active, and not only attend to the move- ments of the division from which he is detached, but likewise to his flankers.

Fi.ANK OF A Bas-ion (flauc d'une bastion, Fr.) in fortification, that part which joins the face to the curtain, comprehended between the angle of the curtain and that of the shoulder. It is the principal defence of the place. Its use is to defend the curtain, the flank, and face of the opposite bastion, as well as the passage of the ditch; and to batter the salient angles of the counterscarp and glacis, whence the besieged generally ruin the flanks with their artillery ; for the flanks of, a fortification are those parts which the besiegers endeavour most to destroy, in

order to take away the defence of the face of the opposite bastion.

FLAN'N EL, n s. Fr. fanelle ; Swed . flandl ; Belg. ftanel ; Welsh, gw/««en (i. e. woollen). A soft woollen .stuff or cloth, for which Wales has been long famous.

I cannot answer the "W eXch. flannel.

Shakspeare.

Before her kitchen hearth the nodding dame. In flannel mantle wrapt, enjoys the flame ; Hov'ring upon her feeble knees she bends. And all around the grateful warmth ascends. Gay,

Flannel, or Flanel, a kind of slight, loose, woollen stuff', composed of a woof and warp, and woven on a loom with two treadles, after the manner of baize. Dr. Black assigns as a reason why flannel and other substances of the kind keep our bodies warm, that they compose a rare and spongy mass, the fibres of which touch each other so slightly, that the heat moves slowly through the interstices, which being filled only with air, and that in a stagnant stage, give little assistance in conducting the heat. Count Ilumford has enquired farther into the matter, and finds that there is a relation betwixt the power which the substances usually worn as cloth- ing have of absorbing moisture, and that of keeping our bodies warm. Having provided a quantity of each of the substances mentioned below, he exposed them, spread out upon clean China plates, for the space of twenty-four hours, to the warm and dry air of a room which had been heated by a German stove for several months, and during the last six hours had raised the thermometer to 84° of Fahrenheit; after which he weighed equal quantities of the dif- ferent substances with a very accurate balance. They were then spread out upon a China plate, and removed into a very large uninhabited room upon the second floor, .where they were exposed forty-eight hours upon a table in the middle of the room, the air of which was 45°. At the end of this space they were weighed, and then re- moved into a damp cellar, and placed on a table in the middle of the vault, where the air was at the temperature of 45°, and which by the hy- grometer seemed to be fully saturated with mois- ture. In this situation they were allowed to re- main three days and three nights ; the vault being all the time hung round with wet linen cloths, tr> render the air as completely damp as possible. At the end of three days they were weighed, and the weights at the different times were found as in the following table.

1000 part dried in the | Weighed on coming out of*

hot room of | the cold room.

the vault.

Sheep's wool

1084

1163

Beaver's fur

1072

1125

Fur of a Russian hare.

1065

1115

Eider down

1067

1112

Raw single silk thread.

1057

1107

Ravellings of white taffety

1054

1103

Fine lint

1046

1102

Ravellings of fine linen

1044

1082

On these experiments he observes, that though linen, from the apparent ease with which it re- ceives dampness from the atmospiicrc, seems to

have a much greater attraction for water than any other ; yet it would appear from what is re- lated above, that those bodies which receive water in its unelastic form with the greatest ease, or are most easily wet, are not those which in all cases attract the moisture of the atmosphere with the greatest avidity. ‘ Perhaps the apparent dampness of linen to the touch, arises more from the ease with which that substance parts with the water it contains, than from the quantity of water it actually holds : in the same manner as a body appears hot to the touch, in consequence of its parting freely with its heat ; while another body which is really at the same temperature, but which withholds its heat with greater obstinacy, affects the sense of feeling much less violently. It is well known that woollen clothes, such as flannels, &c., worn near the skin, greatly pro- mote insensible perspiration. May not this arise principally from the strong attraction which sub- sists between wool and the watery vapor which is continually issuing from the human body ? That it does not depend entirely on the warmth of that covering, is clear ; for the same degree of warmth produced by wearing more clothing of a different kind, does not produce the same effect. The perspiration of tht human body being absorbed by a covering of flannel, it is im- mediately distributed through the whole thick- ness of that substance, and by that means ex- posed, by a very large surface to be carried off by the atmosphere ; and the loss of this watery vapor, which the flannel sustains on the one side by evaporation, being immediately restored from the other, in consequence of the strong at- traction between the flannel and this vapor, the pores of the skin are disencumbered, and they are continually surrounded by a dry and salu- brious atmosphere.’ Our author expresses his surprise, that the custom of wearing flannel next the skin should not have prevailed more univer- sally. He is confident it would prevent a num- ber of diseases ; and he thinks there is no greater luxury than the comfortable sensation whicli arises from wearing it, especially after one is a little accustomed to it. ‘ It is a mistaken notion’ says he, ‘.that it is too warm a clothing for sum- mer. I have worn it in the hottest climates, and at all seasons of the year ; and never found the least inconvenience from it. It is the warm bath of a perspiration confined by a linen shirt, wet with sweat, which renders the summer heats of southern climates so insupportable ; but flannel prornotes perspiration, and favors its evapora- tion ; and evaporation, as is well known, pro- duces

positive cold.' It has been observed that new flannel, after some time wearing, acquires the property of shining in the dark, but loses it on being washed.

FLAP, n. s., V. a. & v. n. ˆ Tent, flahhc ;

Flai"draoon, n. s. Scv.a. I Belg. .//«/;; Dan.

Flap'-eˆued, adj. Vand Swed. lap,

Flap'j ack, n. a. (1"1W '^ "^ ^-

Flap'mouthed, (idj. 1 Bv. Any thing

Flap'per, n. s. -ˆ pendulous, or

hanging loose : hence the motion of that which

hangs loose ; a disease in horses. To flap is to

strike with something light or loose; to move with

aflap-like-noisoof motion. As a verb neuter, to ply

the wings with a noise ; to fall with flaps or broad pendulous parts. Flap-dragon is a curi- ous synonyme of snap-dragon ; a play at catching raisins out of burning spirits : hence to flap- dragon is to devour eagerly. A flap-jack is a provincial name for a pan-cake. A flapper, a remonstrancer, as if with a flap or slight stroke of the hand.

But to make an end of the ship, to see how the sea Jiapdratjoned it. Shakˆpcare. Winter's Tale.

He plays at quoits well, and eats conger and fennel, and drinks candles' ends for Jitipdragutis, and rides the wild mare with the boys. Shakspeare.

A whoreson, beetle-headed, y/apearef/ knave. Id. We'll have moreover puddings and flap-jacks, and thou shalt be welcome. Id. Pericles,

Am > thei flapˆaouthed mr.yrner.

Id. Venus and Adonis, There is a peculiar provision for the windpipe, that is, a cartilaginous /lap upon the opening of the larinx, which hath an open cavity for the admission of the air. Browne,

The dire flapping on the shield of Turnus, and fluttering about his head, disheartened him in the duel. Dryden's JEneid,

A hare, hard put to it by an eagle, took sanctuary in a ditch with a beetle : the eagley/ap< off the former, and devoured the other. L'Estrange.

Tis commoa for a duck to ran flapping and flutter- ing away, as if maimed, to carry people from her young. Id,

With fruitless toil Flap filmy pinions oft, to extricate Their feet in liquid shackles bound. Philips, Forbidding airs might thin the place ; The slightest yfa/) a fly can chase. (Jf"'J/-

When suffocating mists obscure the morn. Let thy worst wig, long used to storms, be worn ; This knowB the powdered footman, and with care Beneath his flapping hat secures his hair. Id.

Some surgeons make a crucial incision, upon the supposition that the wound will more easily heal hy turning down the flaps. Sharp.

Three times, all in the dead of night, A bell was heard to ring ;

And shrieking at her window thrice The lavcn flapped his wing. Tickel.

Yet let me flap this bug with gilded wings, Tliis painted child of dirt, that stinks and stings.

Pope. I write to you by way of flapper, to put you in mind, &c. Chesterfleld.

When a horse has the flaps, you may perceive his lips swelled on both sides of his mouth ; and that which is in the blisters is like the white of an egg : cut some slashes with a knife, and rub it once wilii salt, and it will cure. Farrier's Dictionary.

FLARE, V. n. From T)\xic\ Jlederen, to flutter, (Skinner): Lat. /Zagro : to glitter with transient or unsteady light or splendor.

She shall be loose enrobed. With ribbands pendantyZarwy 'bout her head,

SItakspeare. Doctrine and life, colours and light, in one Wlien they combine and mingle, bring

A strong regard and awe ; but speech alone Doth vanish like 3. flaring thing. And in the ear, not conscience, ring. Herbert.

When the sun begins to fling His flaring beams, me, goddess, bring To arched walks of twilight groves. Milton.

I cannot stay Flaring in sunshine all the day. Prior.

FLASH, n.s., v. n. & v. a.'\ Belg. vlengie Flash'! LY, arfu. >(a flash); Goth.

Flash'y. y /og«(seeFLAM£):

Skinner says from blaze ; but Minsheu suggests the Gr. 0\o^, flame, as the origin of this word, and Dr. Johnson adopts that etymology. Mr. Todd's conjecture that it must be connected with Jlas (Icel.) ' tumbling down from a high place,' as where it means a body of water driven with violence, appears quite superfluous : water flashes, or is made to flash when its surface is driven into a thousand luminous planes that reflect the light. A sudden, transitory blaze or gleam of light : any short transient state of things. Dr. Johnson says, ' a body of water driven by violence ;' but supplies no instance of this ap- plication of the word, and we find none : as a verb neuter, to flash means to glitter with a tran- sient blaze or gleam of light ; to burst out into violence or into sallies of wit, or bright thought : as a verb active, to dash water into motion, and thus cause the light to flash from it ; to adorn or dress up in a showy manner : hence flashy is glittering ; empty ; showy ; without substance ; insipid.

Willi his raging arms he rudely ^as/jeo The waves about, and all his armour swept, That all the blood and filth away was washed.

Faerie Queene. When the cross blue lightning seemed to open The breast of heaven, I did present myself Even in the aim and very flash of it. Shakspeare.

Where be your gibes now ? your gambols ? your songs? your flashes oi merriment, that were wont to set the table in a roar ? Id.

By day and night he wrongs me •, every hour

He flashes into one gross crime or other.

That sets us all at odds. Id, King Lear.

We see a. flash of a piece is seen sooner than the noise is heard. Bacon's Natural History,

The tastes that most offend in fruits, herbs and roots, are bitter, harsh, sour, waterish, or flashy. Id.

The Persians and Macedonians had it for a flask.

Bacon.

If the sea-water be flashed with a stick or oar, the same casteth a shining colour, and the drops resemhle sparkles of fire. Carew,

Flashy wits cannot fathom the whole extent of a large discourse. D'gˆy on the Soul, Dedication.

When they list, their lean and flashy songs Grate on their scrannel pipes of wretched straw.

Milton.

The proper objects of common mirth and sportful divertisement are mean and petty matters ; any thing at best is by playing therewith made such : great things are thereby diminished and debased •, especially sacred things — when they become the subjects oi flashy wit, or the entertainments of frothy merriment.

Barrow,

One with ». flash begins, and ends in smoak ; The other cut of smoak brings glorious light.

Roscommon,

This salt powdered, and put into a crucible, was, by the injection of well kindled charcoal, made ui flash divers times, almost like melted nitre. Bnyle,

And as JEˆeon, when with heaven ho strove, Defyed the forky lightning from afar. At fifty mouths his flaming breath expires, \mi flash ioT flash returns, and fires for fires.

Dryden.

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This mean conceit, this darling mystery. Which thou think'st nothing, friend ! thou shah not

buy ; Nor will I change for all the flashy wit. Id.

Wicked mm prefer the light flashes of a wanton mirth, which for a while suspend reflection, and hide the sinner from himself, to such discourses as awaken conscience. Bufjers.

They flash out sometimes into an irregular great- ness of thought. Felton on the Classicks.

Are we carried down by the torrent of vanity and vice ? Will a flash of wit or a brilliant fancy make us excuse a profane expression ? If so, we shall soon come to relish it when thus seasoned, and use it our- selves. Mason.

To read froth and trifles all our life, is the way always to retain a.Jiashy and juvenile turn ; and only to contemplate our first (which is generally our worst).

Id. Red rockets rise, loud cracks are heard on high. And showers of stars rush headlong from the sky. Burst, as in silver lines they hiss along. And the (\mc.Jiash unfolds the gazing throng.

Darwin. Were I to compare Milton's genius with Tasso's, I would say, that the sublime of the latter \& flashy and fluctuating, while that of the former diffuses an uni- form, steady, and vigorous blaze ; Milton is more majestic, Tasso more dazzling. Beattie.

FLASK, n. s. ˆ Sax. plaxa; Goth. Swetl. Flas'ket. S and Arab .ˆasfca; Teut.ˆflst7;e, •

'Dzn.JIaske ; Welsh JIasg; Span, ˆasco; French flmque, flasquct ; Ital. fiasco, perhaps from the Gr. (barb.) (pXaaKt). A flat bottle, basket, or drinking vessel ; a powder-horn ; a vessel in which viands are served up.

Powder in a skilless soldier's _ˆaife Is set on lire. Shakspeure.

Then for the Bourdeaux you may freely ask ; But the Champaigne is to each man his flask.

King. Another placed The silver stands with golden ˆa«Ae/ graced.*

Pope. fLAT, adj., n. s., v. a. & V. w."ˆ Goth. & Swed. Flat' LONG, adj. flat ; Danisli

Flatly, atfv. flode ; Teuton.

Flatness, ˆBelg. and Fr.

Flat'ten, v. a.k,v. n. plat ; all of Gr.

Flat'tish, 7rXari;e(broad)

Flat'wise. J perhaps. Le-

vel ; horizontal ; smooth ; low ; even with the ground ; prostrate : metaphorically, and in works of art, wanting character or relief; depressed; wanting spirits ; insipid ; tasteless ; dull ; unqua- lified ; absolute : as a substantive, a level or ex- tended plane; a shore or low ground; the side of a sword or sabre; depression of thought or language : to flat, is to make or grow flat ; level ; vapid, or depressed ; better expressed, both in the active and neuter sense, by to flatten • flat- long is with the flat side downwards, as is flat- wise: flattish, somewhat or inclining to be, flat. It is z.flai wrong to punish the thought or purpose of any before it be enacted ; for true justice punisheth nothing but the evil act or wicked word. Spenser.

The wood-born people fall before her flat. And worship her as goddess of the wood.

Id. Faerie Quecne. He, like a puling cuckold, would drink up The lees and dregs of aflat tamed piece.

Hhahspeare.

Thou, all-shaking tiiunder. Strike _ˆa< the thick rotundity o' the world.

Id.

Now pile your dust upon the quick and dead, 'Till of ihis, flat a mountain you have made, T' o'ertop old Pelion, or the skyish head Of blue Olympus. Id. Hamlet.

You start away. And lend no car unto my purposes ; Those prisoners you shall keep :

1 will, that's /a<. Id. Henry IV.

I should not see the sandy hour-glass run. But I should think of shallows and ai flats.

Shaksj>€are. What a blow was there given ! — An it had faWen flatlony . Id. Tempest.

The emperor of Russia was my father ; Oh, that he were alive, and here

beholding His daughter's trial I that he did but see The _//a

The difficulty is very great to bring them in or out through so ma.ny flats and sands, if wind and weather be not very favourable. Raleiyh's Essays.

*In the dawning of the next day we might plainly discern it was a *

Because the air receiveth great tincture from the earth, expose flesh or fish, both upon a stake of wood some height above the earth, and upon the flat of the earth. Id.

Short speeches fly abroad like darts, and arc thought to be shot out of secret intentions ; but as for large discourses, they sue flat things, and not so much noted. Id.

If you stop the holes of a hawk's bell, it will make no ring, but aflat noise or rattle. Id.

The ancients say, if you take two twigs of several fruit-trees, and flat them on the sides, and bind them close, and set them in the ground, they will come up in one stock. Id.

Take two saucers, and strike the edge of the one against the bottom of the other within a pail of water, and you shall find the sound growcth more flat, even while part of the saucer is above the water ; but that flatness of sound is joined with a harshness. Id.

An orange, lemon, and apple, wrapt in a linen cloth, being buried for a fortnight four feet deep within the earth, though in a moist place and rainy time, were become a little harder than they were ; otherwise fresh in their colour, but their juice somey/hat flatted.

Id. Natural History. It comes near an artificial miracle to make divers distinct eminences appear a flat by force of shadows, and yet the shadows themselves not to appear.

Wotton's Architecture. Nor are constant forms of prayer more likely to flat and hinder the spirit of prayer and devotion, than un- premeditated and confused variety to distract and lose it. King Charles.

Frailty gets pardon by submissiveness. But he that boasts, shuts that out of his story. He makes flat war with God, and doth defy. With his mere clod of earth, the spacious sky.

Herbert. Thereupon they flatly disavouch To yield him more obedience, or support.

Daniel. With horrid shapes she does her sons expose. Distends their swelling lips, aud flats their nose.

Creech. In them is plainest taught, and easiest learnt. What makes a nation happy, and keeps it so. What ruins kingdoms, and lays cilicsy/a;. Miliim.

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Taste so divine ! that what of sweet before H.ith touched my sense, flat seems to t}>is and harsh.

Milton. The way is ready and not long Beyond a row of myrtles, on aflat. Fast by a rtiountain, Milton's Paradise Lost.

Thus repulsed, our final hope Is flat despair. Id.

Having newly left these grammatick_/7a<« and shal- lows, where they stuck unreasonably, they are now turmoiled with their unballasted wits in fathomless and unquiet deeps of controversy. Milton.

He that flatly, against the rules of duty and reason, will swear vainly, what can engage him to speak truly •> Barrow.

You had broke and robbed his house. And stole his talismanique louse ; And all his new-found old inventions. With flat felonious intentions. Hudihras.

His horse with flat tiring taught Him that discreet stays make speedy journeys. Sidney.

i burnt it the second time, and observed the skin shrink, and the swelling- to flat yet more than at first.

Temple. Some short excursions of a brokea vow He made indeed, hwt flat insipid stuff. Dryden.

A darted mandate came From that great will which moves this mighty frame, Bid me to thee, my royal charge, repair, 'I'o guard thee from the daemons of the air; My flaming sword above 'em to display. All keen and ground upon the edge of day, Ihaflat to sweep the visions from thy mind. The edge to cut 'em through that stay behind. Id.

Milton's Paradise Lost is admirable; but am I therefore bound to maintain,

that there are no flats amongst his elevations, when 'tis evident he creeps along sometimes for above an hundred lines together ?

Id: Here joys that endure for ever, fresh and in vigour, are opposed to satisfactions that are attended with satiety and surfeits, anA flatten in the very tasting.

L'Estrange. The upper end of the windpipe is endued with several cartilages and muscles to contract or dilate it, as we would have our voice flat or sharp. Ray.

Deaduess or flatness in cyder is often occasioned by the too free admission of air into the vessel.

Mortimer's Husbandry. The miry fields. Rejoicing in rich mould, most ample fruit Of beauteous form produce ; pleasing to sight. But to the tongue inelegant and_ˆa<. Philips.

The houses are y?a(-roofed to walk upon, so that every bomb that fell on them would take effect.

Addison on Italy. How fast does ohscvLTity , flatness , and impertinency, flow in upon our meditations? Tis a difScuIt task to talk to the purpose, and to put life and perspicuity into our discourses. Collier.

Its posture in the earth was flatwise, and parallel to the site of the stratum in which it was reposited. Woodward on Fossils. These are from three inches over to six or seven, and of a. flatfish shape. Id.

Are there then such ravishing charms in a dull unvaried flat, to make a sufiicient compensation for the chief things of the ancient mountains, and for the precious things of the lasting hills? lientley.

Not any interpreters allow it to be spoken of such as flatly deny the being of God ; but of thera that, believing his existence, seclude him from directing the world. I-d-

Some of Homer's translators have swelled into fus- tian, and others sunk into flatness. Pope,

Flat is a character in music, expressed by a small b, of which the effect is lowering the note to which it is affixed, a semitone minor. Flats on keyed instruments are the notes on the left hand of the natural notes, as sharps are on the right hand. There are two ways of using flats, the one accidental, which has no effect beyond, the single bar in which it occurs ; the other is the flat or flats placed at the clef, which affect all the notes on

the same line or space through- out a movement, unless accidentally discharged by a natural, Iq . Tlie placing the flats at the clef is not arbitrary, as the first necessarily is on B, tlie second on E, the fourth above or fifth below, &c.

For these five flats upon keyed instruments, there are five short keys ;. flats, however, some- times occur in C and F, but for these the two long keys are obliged to be used of IJ and E natural, the two half notes below C and F na- tural.

Flat, of Dr. Boyce, in some parts of his MS., in the library of the Royal Institution, is :r: S, or 57 S f f 4 5 m.

Flat, of Liston, to the notes D, G, B, or C, is rr S, or 47 s -f f (4 m; and to the notes E, F, or A, is =: 5, or 36 2 -f f + 3ra, the second flat of any note being always the reverse of its first one.

Flat, of Marsh, rr 6, or 36 S -ff j 3 m.

Flat, of Maxwell, = S, or 47 s = f -f 3 m.

Flat, of Overend, and Dr. Callcott Mus.

Gram. Isted. p. 112, rr P, or 58 2 j f (5 m;

this corresponds with perfect fifths. See the

theorems below.

Flat, of some writers, zz L, or 46 S } f f 4m.

FLAT,of regularly tempered scales, is the minor limna of Dr. R. Smith, which, according to Mr. Farcy's theorems, Phil. Mag. vol. xxxix, p. 44, is rr 58 S | f } 5 m — seven times the tempe- rament of the fifth ; or, = 38-7519656 S j f -f 3 m | seven-fourths of the temperament of the third ; or, — 32-3228500 S j f + 2 m j seven- thirds of the temperament of the sixth.

Flat, double, (b I?), of Chambers and Over- end; sometimes 2 P, or 116 S | 2f + 10m; at others, P + §, or 105 2 | 2f -f 9m.

Flat, double of Liston, is invariably B-- /, or 83 S f 2f 1 7m.

Flat-Bottomed Boats are such as are made to sail in shallow water, and to carry a great number of troops, artillery, ammunition, &c. They are constructed with a twelve-pounder bow-chase, and an eighteen-pounder stern-chase ; their keel is from ninety to 100 feet, and from twelve to

twenty-four feet beam : they have one mast, a large square main-sail, and a jib-sail; are rowed by eighteen or twenty oars, and can carry 400 men each. The gun takes up one bow, and a bridge the other, along which tlie troops are to march. Those that cany horses have the fore part of the boat made to open when the men are to mount, and ride along a bridge.

FIATA Islands, a cluster of small islands of Scotland, near the south-east of North Uist, and one mile north-east of Rona.

FLAT BUSH, a town of New York, capital of

King's county, Long Island. It contains a which is a man's self. But if he be an impudent court-house, a flourishing academy, a Dutch flatterer, look wherein a man is conscious to himselt

church, and many elegant houses. On the 27th of August, 1776, a bloody battle was fought near it, between the Americans, under general Putnam, and the British and Hessians, under lord Piercy, and generals Clinton and Grant, wherein the latter were victorious. Flatbush is pleasantly situated on a small bay, five miles south by east of New York.

FLATMAN (Thomas), an English poet of some repute, born at London about 1633. He studied at the Inner Temple, and became a bar- rister ; but having a turn for the fine arts, he fol- lowed his inclination, and acquired reputation

*that he is most defective, and is most out of counte- nance in himself, that will the flatterer entitle him to perforce. ^^^^*

He, always vacant, always amiable, Hopes thee, oi flattering gales Unmindful. /;;,_

A consort of voices supporting themselves by their different parts makes a harmony, pleasingly fills the ears a.nd flatters them. Dry den's Dufremmj.

If we from wealth to poverty descend. Want gives to know the _/ia«erer from the friend.

Dryden. Minds, by nature great, are conscious of their great- ness.

both as a poet and a painter. He published, in And hold it mean to borrow

aught itom flattery.

1682, a third edition of his poems and songs, dedicated to the duke of Ormond ; and a satirical romance in prose, on Richard Cromwell, soon after the Restoration. In his youth he wrote a curious satire against matrimony, beginning,

Like a dog with a bottle tied close to his tail. Like a Tory in a bog, or a thief in a jail. He died about 1688.

FLATTER, u. a. ~\ French, flatter; Teut.

Flat'terer, n. s. >Jiechan ; Minsheu says, ' a

Flat'tery. j Lat. y?a/are, frequentative,

njiare, to blow': but the word has probably been

formed from ' flat,' smooth : in Swed.Jiat is both

smooth and indulgent ; as in Scot, to stroke is

Rowe,

After treating her like a goddess, the husband uses her like a woman ; what is still worse, the most abject flatterers degenerate into the greatest tyrants.

Addison's Guardian.

I scorn to flatter you or any man. Newton.

Faction embroils the world, and every tongue. Is moved by flattery, or with scandal huug. ° Gay.

Averse alike to flatter or offend. Pope.

The publick should know this : yet whoever goes about to inform them, shall be censured for a flatterer.

Such is the encouragement given to flattery in the present times, that it is made to sit in the parlour, while honesty is turned out of doors. Flattery is never so agreeable as to our blind side : commend a

Fielding.

toutig.

also to flatter ; and we know that flatterers of all fool for his wit, or a knave for his honesty, and they ‘ ‘ 11ˆ- ■ ._ 1 __-.i _ 1 .1- will receive you into their bosom.

Flattered crimes of a licentious age Provoke our censure.

See how they beg an alms oi flattery ! They languish, O ! support them with a lye. Id.

Of all wild beasts preserve me from a tyrant, and of all tame, a flatterer. Johnson.

Flattery corrupts both the receiver and the givor, and adulation is not of more service to the people than to Icings. Burke.

I never framed a wish, or formed a plan,

Thzt flattered me with hopes of earthly bliss.

But there I laid the scene. Cowper.

FLATULENT, af/;•.ˆ Old Y v. flatulent ; Flat’ulency, ?z. s. / Ital. and Span. y?a

countries are well acquainted with smooth things. To soothe, or please, with praise, false, or true ; to gratify with obsequious, or servile compliment. He //aˆereˆA himself in his own eyes, until his ini- quity be found hateful. Psalm xxxvi. 2.

While either partye laboureth to be chicle, flattery shall haue more place than plaiue and faithful 1 aduyse.

Sir T. More. His cumbersome fetches are seldom behind : His fetch is to flatter, to get what he can ; His purpose once gotten, a pin for thee then.

Tusser. Alas ! what are we kings ? Why do our gods place us above the rest. To be served, flattered, and adored, till we Believe we hold within our hands your thunder. And when we come to try the power we have. There’s not a leaf shakes at our threatenings.

Beaumont and Fletcher. I cannot flatter and look fair. Smile in men’s faces, smooth, deceive, and cog. Duck with French nods, and apish courtesy.

Shakspeare. When I tell him he hiites flatterers. He says he does ; being then most flattered. Id.

Here foci we but the penalty of Adam, The season’s difference ; as the icy

fang. And churlish chiding of the winter's wind ; Wliich when it bites and blows upon my body, Ev'n 'till I shrink with cold, I smile and say This is no_ˆa«eri/. Id. As You Like It.

A flatterer is compared to an ape, who, because she cannot defend the house like a dog, labour as an ox, or bear burdens as a horse, doth therefore yet play tricks, and provoke laughter. Raleigh.

Some praises proceed mei-cly of flattery ; and if he be an ordinary y/a/

Flatuos'ity, Flat'uous, adj. Fla'tus, n. s.

lento; Lat. jlatulentus, flatus, a pufT, or blast, of wind. Windy; turgid

with air; hence, metaphorically, empty; vaTn; unmeaning : flatuosity, from the Fr. flatuositc is synonymous with flatulency : flatus is used both in tlie latter sense, for a puff, or breeze of wind ; and, medically, for wind gathered in any of the cavities of the body.

Rhubarb in the stomach, in a small quantity, doth digest and overcome, being not flatuous nor loathsome ; and so sendoth it to the mesentery veins, and, being opening, it hclpeth down urine. Bacon.

The cause is. flatuosity ; for wind stirred, moveth to expel ; and all purges have in them a raw spirit ,of wind, which is the principal cause of tension in the stomach and belly. Id.

You make the soul a mere flatus.

Clarke to Dodwell.

How many of those flatulent writers have sunk in their reputation, after seven or right editions of their works. Dryden.

Flatulent tumours are such as easily yield to tlie pressure of the linger, but readily return, by their elasticity, to a tumid state again. Quinci/.

Pease are mild and demulcent ; but, being full of aerial particles, are JJatule7it when dissolved by diges tion. Arbulhnot.

Vegetable substances contain a great deal of air, which expands itself,

producing all the disorders of Jiatulency, Id.

To talk of knowledge from those few indistinct re- presentations which are made to our grosser facul- ties, is ajiatulent vanity. Gtanville'i Scepsis.

FLAVEL (John), a celebrated nonconformist divine, was educated at University College, Ox- ford; and became minister of Deptford, and afterwards of Dartmouth in Devonshire, where he resided the greater part of his life. Though he was generally respected at Dartmouth, yet, in 1685, several of the aldermen of that town, at- tended by the rabble, carried about a ridiculous effigy of him, to which were affixed the bill of exclusion and the covenant. He, therefore, thought it prudent to withdraw from the town. He died in 1691 aged sixty-one; after his death, his works, consisting of many pieces of practical divinity, were printed in 2 vols, folio. Among tnese, the most famous are, 1. Navigation Spiri- tualised ; 2. Divine Conduct, or the INIysteries of Providence; and, 3. Husbandry Spiritualised; of all which there have been many editions.

FLAUNT, n. s. & v. n. Goth. Jlugant, flowing

or fluttering (proudly). To flutter, to make a

fluttering or pert show or appearance. A flaunt

is any thing loosely worn ; ostentatious display.

Let dainty wits cry on the sisters nine.

That, bravely masked, their fancies may be told.

Or Pindar's a.pcs, flaunt they in phrases fine. Enamelling with py'd flowers their thoughts of gold.

Sir P. Sidney. How would he look to see his work so noble, "Wildly bound up, what would he say ! or how Should I in these my borrowed _/ZaMn/,« behold The sternness of his presence ! Shakspeare.

With ivy canopy'd, and interwove Vˆilh faunting honeysuckle. Milton.

These courtiers of applause deny themselves things convenient to Jiaunt it out, being frequently enough fain to immolate their own desires to their vanity.

Boyle. Here, attired beyond our purse, we go. For useless ornament and Jiaunting show : We take on trust, in purple robes to shine. And poor, are yet ambitious to be fine. Dryden. You sot, you loiter about ale-houses, or

_ˆauni about the streets in your new-gilt chariot, never minding me nor your numerous family. Arbuthnot.

Fortune in men has some small difference made ; One flaunts in rags, one flutters in brocade. Pope.

FLA’VOR, or ■\ French J?«« > (scent);

Fla’voue, 71. s. i Welsh fare (an unplea-

Fla’vorous, adj. ˆsant smell); Lat. Jlo, Fla’vored Jjlare ; Greek, ˆXaw, to

blow. Taste; pleasant or unpleasant savor; power of pleasing the taste ; odor ; fragrance.

Myrde, orange, and the blushing rose, With bending heaps, so nigh their bloom disclose. Each seems to smell the. flavour which the other blows.

Dryden. Sweet grapes degenerate there, and fruits declined From their first Havourous taste renounce their kind.

Id.

They have a certain flavour, at their first appear- ance, from several accidental circumstances, which they may lose if not taken early.

Addison’s Spectator.

And flavoured Chian wines. Dyer.

FLAW, 71. s. & v.a.’ˆ Sax. ploh ; Gothic Flaw’less, adj. -fluh, from /?rt,to divide ;

Flaw’y. 3 and thus the \cq. fla-

gan, to divide, gives ˆ«g the divided])ortion, see Flag (a stone). Mr. H. Tooke considers ploh as the past participle of plean, to flay. A breach ; crack ; defect ; hence, its causes, a sudden blast or blow ; a tumult, or commotion (literally and figuratively) ; and its consequences, a fragment ; piece separated or broken off: in conformity with the Gothic usage we write to flaw; for to break ; crack ; damage with fissures or by violence.

Oh, that that earth, which kept the world in awe. Should patch a wall, to expel the Wintev’s flaw.

Shakspeare. Hamlet. And this fell tempest shall not cease to rage. Until the golden circuit on my head Do calm the fury of this madbrained flaw.

Shakspeare. This heart shall break into a thousand flaws Or ere I weep. Shakspeare. King Lear.

But his flawed heart. Alack, too weak the conflict to support, 'Twixt two extremes of passion, joy and grief. Burst smilingly. Id.

Oh these _ˆatBS and starts. Impostors to true fear, would become A woman's story at a Winter's fire.

Id. Macbeth.

France hzih flawed the league, and hath attached

Our merchants' goods. Id. Henry VIII.

Wool, new-ishorn, being laid casually upon a ves- sel of verjuice after some time had drunk up a great part of the verjuice, though the vessel were whole, without a.ny flaw, and had not the bung-hole open. Bacon's Natural History. As a huge fish, laid Near to the cold weed-gathering shore, is with a north

flaw fraid. Shoots back ; so, sent against the ground. Was foiled Eurialus. Chapman's Iliad.

Bursting their brazen dungeon, armed with ice. And snow, and hail, and stormy gust, and flaw, Boreas, and Caecias, and Argestcs loud. And Thrascias, rend the woods, and seas upturn.

Milton. And laid her dowery out in law. To null her jointure with a flaw. Hudibras. We found it exceeding difficult to keep out the air from getting in at any imperceptible hole ox flaw.

Boyle. A star of the first magnitude, which the more high, more vast, and more flawless, shines only bright enough to make itself conspicuous. Id.

The cup was flawed with such a multitude of little cracks, that it looks like a white, not like a crystalline

cup.

Id.

The brazen cauldrons with the frosts arc flawed. The garment stiff with ice, at hearths is thawed.

Dryden. The fort's revolted to the emperor. The gates are opened, the portcullis drawn, And deluges of armies from the town Came pouring in : I

heard the mighty flaw ; When first it broke, the crowding ensigns saw Which choaked the passage. Id. Aurengxebe.

FLAX.

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Traditions were a proof alone.

Could we be certain such they were, so known :

But since some flaws in long descents may be.

They make not truth, but probability. Dryden.

So ma.ny flaws had this vow in its first conception.

Atterbury.

Their judgment has found a flaw in what the ge- nerality of mankind admires. Addison's Spectator.

He that would keep his house in repair, must attend every little breach ox flaw, and supply it immediately, else time alone will bring all to ruin. Swift.

Whether the nymph shall break Diana's law. Or some frail China-jar receive a. flaw. Pope,

An adversary, on the contrary, makes a stricter search into us, discovers every flaw and imperfection in our tempers. Mason.

FLAWN. Sax. plena; Fv. flan, i. e. flowing;. A custard or cheesecake ; a soft or flowing kind of pudding.

Fill oven full oi flawns ; Ginny pass not for sleep. To- morrow thy father his wake-day will keep.

Tusser.

FLAX, «. s. -N Sax. pleax, plex; Goth.

Flax'-comb, I jieaks ; Teut. Jlachs ; Belg.

Flax'-dresserA r/asCiˆ. Qucere from the

Flax'en, arf/. i Goth. ˆoa; Sax. flowan, to

Flax'y. J flow, from its fibrous tex-

ture. The plant from which linen is made ; the fibres of that plant prepared for the spinner : flax-comb is the instrument whereby it is cleans- ed : and flax-dresser he who cleanses or prepares it : flaxen, and flaxy, made of, flowing like, or being of the color of, flax.

The four colours signify four virtues. The flaxy Jiaving whiteness appertains to temperance. Sandys. I'll fetch somcflar, and whites of eggs, T' apply to's bleeding face.

Shakspeare. King Lear, Then on the rock a scanty measure place

Of vital ˆ(ix, and turn the wheel apace.

And turning sung. Dryden's Ovid.

I bought a fine flaxen long wig. Addison.

The best mater'als for making ligatures are the flaxen threads that shoemakers use. Sharp's Suryery. The matron, at her nightly task.

With pensive labour draws theˆa.rera thread.

Thomson's Winter.

Five sister-nymphs with dewy fingers twine The heajny flax, and stretch the fibre-line ; Quick eddying threads from rapid spindles reel. Or whirl with beating foot the dizzy wheel. Darwin.

Flax, the linum usitatissimum of Linne, has been cultivated in this country, and in most civilised countries, trom time immemorial, both for its fibre in making thread, and for its seed, occasionally, as yielding a serviceable oil. The common flax has scarcely any varieties worth remarking. The blue or lead-colored is men- tioned by Marshall as being cultivated in York- shire; and professor Thaer mentions a finer and coarser variety ; he also, as well as some other writers, has tried the linum perenne, but the fibre is coarser, though ˆstrong, and with diflSculty de- tached.

Flax, for fine lawn and cambric, is recom- mended to be sown on a rich light soil, previ- ously well prepared by ploughing and made level like a garden. As the soil cannot be too rich, it ought to have at least double the quantity of seed commonly sown by farmers; and, when sown in dry weather, the ground should be im- mediately rolled. The lint should be carefully

weeded when about three inches high ; after which forked sticks are to be stuck in the ground, so as to receive poles from ten to fifteen feet long, six

or seven inches above the lint. Each row of poles should be three or four feet asunder, so as to support a layer of brush-wood, laid as thick and level as possible. The brush- wood may be of any sort except oak, which tinges the lint ; but none of the branches must be left sticking higher than eighteen or twenty inches above the lint. The brush-wood, when the flax springs up, catches it by the middle, and prevents it from lying down and rotting ; infal- lible consequences of sowing thick upon rich ground. It also keeps it straight, moist, and soft at the roots; and, by keeping it warm and shaded from the sun, greatly promotes its length. It must be pulled as soon as the seed is fully formed, before the lint turns yellow; and thus, instead of that coarse hardness, which flax has when let stand till fully ripe, it acquires a fine silky property. It must be pulled above the brush-wood, and every handful laid upon it as soon as possible : in fine weather it may be left four or five hours in that manner; after which it should be conveyed to a shade near a barn, where it may be spread for four or five days, always putting it in the barn at night, or on the appearance of rain. When in the barn, every precaution must be used to prevent it from heat- ing ; and if it happen to get rain or wet, in tlie course of these operations, which must be conti- nued till it is perfectly dry, it should be allowed to dry in the open air ; for, if put under cover when wet, it is apt to turn black, which must be carefully guarded against, as this is a principal cause of those bars so much complained of by bleachers. In all these operations, the roots should be kept as even as possible ; and if any coarse lint be discovered it should be separated from the rest. As it is a principal object to preserve the lint entire, or unbroken, the bolls are beat oflf with a round mall or beetle. When it is intended to water it immediately, it is next tied up in bundles about as large as a man may grasp in his two hands. The pit ought to be dug three or four months before it is used, about five feet deep and seven or eight broad, the length according to the quantity of flax to be watered. The water should be soft, and free of any metallic ore ; and no flood or foul water should be allowed to enter the pit ; but a small stripe of clear water should always run in and off' from it while the lint is in it. Along the sides of the pit, hooks of this form ~^ must be driven in at about five feet distance, so as to hold a long pole under the surface of the water ; after which the lint must be made up into bundles, laying the sheaves head to head, and making each to overlap the other about one-third. When they are thus built, till the bundle is about four feet or four feet and a half high, it is then tied in the middle and at each root end, wrapped in straw and put into the water, with the thin or broad side undermost. The lint being thus ynit into the water in distinct bundles, so as they may be easily taken out, cross poles are put in with their ends under the long ones in each side of the pit, so as to keep the lint three or four inches under water, but without any of it touching the ground.

FLAX.

The soils generally most proper for flax, be- sides the alluvial kinds, are deep and friable loams, and such as contain a large proportion of vegetable matter in their composition. Strong clays do not answer well, nor soils of a gravelly or dry sandy nature. But, whatever be the kind of soil, it ought neither to be in too poor nor too rich a condition ; because, in the latter case, the flax is apt to grow too luxuriant, and to produce a coarse sort ; and, in the former case, the plant, from growing weakly, att"ords only a small pro- duce. If there be water at a small deptii below tJie surface of the ground, it is thought by some still better, as is the case in Zealand, which is ren~arkable for the fineness of its flax, and where the soil is deep and rather stiff, with water almost every where, at the depth of a foot and a half or two feet underneath it. It is said to be owing to the want of this advantage, that the other provinces of Holland do not succeed equally well in the culture of this useful plant; not but that fine flax is also raised on high lands, if they have been well tilled and manured, and if the seasons are not very dry. It is remarked, in the letters of the Dublin Agricultural Society, tliat moist stiff" soils yield much larger quan- tities of flax, and far better seed, than can be ob- tained from light lands; and that the seed se- cured from the former may, with proper care, be rendered full as good as any that is imported from Riga or Zealand. M. du Hamel, however, thinks that strong land can hardly yield such fine flax as that which grows on lighter ground.

Mr. Donaldson observes, that flax is sown after all sorts of crops, but is found to succeed best on lands lately broken up from grass. And that in Scotland, the mo>t skilful cultivators of flax generally prefer lands from which only one crop of grain has been taken, after having been several years in pasture. When such lands have been limed or marled, immediately before being laid down to grass, the crop of flax seldom or never misgives, unless the season prove remark- ably adverse to it. It succeeds in general much better after green crops, than those of the grain kind.

The land, in order to render it fit for the growth of this sort of crop, requires to be ren- dered perfectly fine and mellow, by being re- peatedly ploughed over, and broken down by severe harrowings. When grass land is to be broken up for this crop, it should be done in the autumn, and left exposed to the influence of the atmosphere until the early part of the following year, when it should be well pulverised and broken down by heavy harrowing ; then, in the course of a week or two, ploughed again, in which state it may remain till the period of put- ting in the seed, when another light harrowing should be given, and the ploughing performed

afterwards by a very light furrow. But in cases where the crop is sown after grain, or other crops that have the property of keeping the land clean from weeds, the first ploughing need not be given till January, when it may remain in that situation until it becomes pretty dry in the early spring, being then well reduced by good har- rowing and rolling ; and, after continuing in that state about a fortnight, the seed may either be

immediately put in, or another light ploughin" and harrowing be first given.

*With regard to the choice of seed, the same writer states, that that which is of a bright brown- ish color, oily to the feel, and at the same time weight)', is considered the best. Linseed, im- ported from various countries, is employed. That brought from Holland is, however, in the highest estimation, as it not only ripens sooner than any other that is imported, but also produces greater crops, and flax of that quality which best suits the chief manufactures of this country. American seed produces in common fine flax ; but neither the quantity of flax, nor of the pods, provincially the * bolls,' which contain the seeds, is so large as the produce from Dutch linseed. The Riga seed yields a very coarse sort of flax, but a greater quantity of seeds than any other. It is common in some parts of Scotland to sow seeds saved from the crop the preceding year, especi- ally when the crop was raised from seed im- ported from Holland. The success of this prac- tice is found to depend greatly on changing the seed from one sort of soil to another of an oppo- site nature ; but the saving in the expense of purchasing that sort of seed, in place of what is newly imported from Holland, is so inconsider- able, and the risk of the crop misgiving so much greater in the one case than in the other, that it is supposed those only who are ignorant of the consequences, or who are compelled from neces- sity, are chargeable with this act of ill-judged parsimony in the business.*

In Ireland the cultivators of flax prefer the American seed for the lighter and more ele- vated and exposed lands; but the Baltic or Dutch for those which are of a heavier quality. The seed of home produce is often sown for white flax in Yorkshire ; but the Baltic sort is mostly preferred where seed is the object; which, for the ensuing year, and one or two afterwards, is found to answer as well as white flax. But it is highly probable that, if that which has been collected from the perfectly ripened seed of our own growth be made use of, it will be equally productive in both the flaxy substance and the quantity of seed, and the former be equally va- luable for all the purposes of the manufacturer.

Proportion of Seed. — In respect to the quan- tity of seed used, it varies in different places ac- cording to the circumstances of the soil, the me- thod of sowing, and the uses to which the crop is to be applied ; but from two bushels, to two bushels and a half, the English statute acre, is the ordinary

allowance. In determining the proper quantity necessary for the acre, it is re- quisite to pay great attention to the condition of the land. When the land is rich and fertile, and the season so favorable that it can be got thoroughly pulverised, if too much seed is sown the crop is in great danger of lodging ; and when that happens, particularly before the pods are formed, the flax proves inconsiderable in quantity, and very inferior in quality. When cultivated in the drill mode, at narrow distances, a much less quantity will be sufficient than in other cases ; and where the intervals are large, scarcely one-half the quantity is required. When the crops are intended for seed, in whatever

manner the sowing is performed, much less will be necessary, than where flax is the main object of the grower.

The time of sowmg it must depend much upon the soil and" situation ; but the ordinary season of sowing flax-seed is from the middle of March to the middle or end of April ; but the last week of March, and the first ten days of April, are ♦esteemed the best times ; and accordingly within these periods the greatest quantity of flax-seed is sown in this country. In the county of York, where this sort of crop is grown on land broken up from grass, the seed is commonly sown before the second week in April, where it can possibly be done; while, on such lands as have been in a previous state of tillage, the sowing is frequently deferred a week or ten days longer. Wherever it can be safely practised, early sowing has the advantage of getting the flax plants to cover the surface of the land well, before they can run much risk of injury from the rising of weeds, or the parching effects of heat. In some of the southern counties of Europe, however, the hus- bandmen who raise flax, sow part of their seed in September and October; so that the plants which spring from thence remain of course in the ground all the winter ; and this may be a judicious practipe in those places, because plants which have not covered the earth well before the summer heats come on are apt to be parched by the heat and drought which usually prevail in that season. They sow linseed again also in the spring; but the latter does not yield so large a crop ; the flax, however, which it produces is more esteemed, because it is finer than that sown in autumn. M. du Ilamel seems indeed to think, that the autumnal sowing yields the best seed; but however that may be, in places where the winter is apt to be severe, and where the flax, which is but a tender plant, would in course be in danger of being destroyed during that season, almost all the flax is sown about the end of March, or in the beginning of April, as already stated.

The land which is intended for flax crops should be brought to an exceeding fine tilth, in the way directed above, before the seed is put in. When pasture lands are broken up, in order to their being sown with flax, they must be well wrought during several months, before they will be fit for producing such crops, in the manner just described. To defray the expense of this culture, some other crops may be got off the land in the mean time, especially of such plants as do not occupy it long, and particularly of those which are remarkably benefited by fre- quent stirring of the earth whilst they grow; such as beans, peas, turnips, &c., because these repeated stirrings render the mould fine and loose, and help to kill the weeds, which would otherwise do great damage to the flax. It is as- serted, that the Livonians, when they clear wood- lands, burn the wood upon them, then plough them, and in this state prefer them to any other kind of soil for flax crops. If the land which is intended for flax be stiff, great care should be taken not to wor.k it when it is wet, for fear of kneading it ; but it is often an excellent plan to work it deeply before winter, when dry, laying Vol. IX.

it up in very high ridges, in order that the winter frosts may the more efl'ectually moulder and loosen its parts. In the month of February, where the land is not too wet, some very rotten dung should be laid on, and immediately co- vered over with the mould. The seed should afterwards, at the proper season, be sown, and harrowed in with a light or bu,sh harrow, so as not to bury it too deep. As this, wnen young, is a very tender plant, and is more easily injured and checked in its progress by weeds than any other that is usually cultivated in the field, it is indispensably necessary that the danger of in- jury in this way should be well guarded against, in order to save future trouble and expense.

Where the principal object of the grower is flax, the most general method of putting in the crops is that of sowing them broadcast over the surface of the land. In performing the business, much care is necessary that the seed be dispersed as evenly as possible over the ground, to prevent the plants rising in an unequal or tufty manner. It should be afterwards covered in by regular harrowing, once or twice in a place, with a light common or bush-harrow, as just noticed, not covering it in too deep. But, where the seed constitutes the chief intention of the cultivator, it is contended by some that the drill mode is preferable, as requiring much less seed in sow- ing, and affordmg a much better and more abundant produce. Besides, the smoothness and weight of the seed render it extremely proper for being drilled ; and the crops can be kept clean with greater facility.

In this method, the distances of the rows or drills should vary according to the circumstances of the soil, and the manner in which the crops are to be kept clean. Where the hand-hoe is to be chiefly depended upon, narrow distances may be proper, as ten or twelve inches ; but, wiiere the work is to

be principally executed" by the horse-hoe or cultivator, larger intervals may be more suitable, as those of eighteen or twenty inches. Slight harrowing and rolling are some- times afterwards necessary, especially the latter, in dry seasons. It has been observed that thick sown flax runs up in height, and produces fine soft flax ; but that when sown thin it does not rise to such a height, but spreads out more, sending off a greater number of side branches, which produce a great abundance of seed which is much better filled, more plump and heavy than that which is produced from thick-sown flax crops. Flax crops cultivated in this way are not so liable to be beaten down in bad weather, the stems being stronger and better fortified by the more free admission of sun and air among them ; and they are not so much exposed to danger in weeding or cleaning the rows.

Where flax crops are sown in the broadcast method, they are seldom much attemied to after- wards : it is, however, highly useful and neces- sary that they should have one good'hand-hoeing, or weeding, as soon as ever the crop is suflii- ciently up ; care being taken not to injure the plants by too much treading amongst them. In the drill manner of sowing, the after-culture of the crops must be regulated by the distance of the rows; but they may in general be cleaned

from weeds, and kept in vigorous growth, by pniper implements and horse labor. The ground between the rows is mostly wrought by a proper horse-h'oe, cultivator, or small hoe-plough, taking care that none of the mould is thrown against the rows ; to prevent svhich, the intervals may be hoed with a triangular harrow, having a proper number of iron tines hi it, and guided by two handles fixed behind. By these handles the tines are made to go deeper or shallower at pleasure ; and if the intervals are cultivated with this in- strument, beginning before the earth is become stale, and while the weeds are small, the land may be kept ver}' clean, and in fine tilth, at much less expense than hand-hoeing : for one horse is sufficient for this work. A great deal may be done in a day ; and by a frequent repetition of the hoeing, especially when the earth is dry, the weeds may be so efiectually kept down as never to rise to any height. But the rows must be weeded by hand. With some it has been a custom to sow, with their linseed, either annual or perennial grass-seeds, when they intend to lay tlie land down for pasture after the crop is taken oflf. But as grass plants grow but weakly under the flax, it is a practice by no means to be re- commended. No other sort of crop should, how- ever, be ever grown with this, as much injury may he done by it. Flax is sometimes damaged by insects, when it it about three or four inches high. These, it is said, may be destroyed by a

slight strewing of soot, ashes, &c., over the crop. At all events, this dressing will give vigor to the flax though it may not kill the in- sects. If any weeds appear afterwards among the flax, as is almost always the case, they must be thoroughly rooted out : and, that the flax may be as little damaged as possible in the doing of this, the weeders should work as carefully as pos- sible. The finest flax is most liable to be laid, particularly in countries subject to storms. To giiard against this accident, some people run across their flax-fields slender poles fixed to stakes : but a better method is to run small ropes across the field, both lengthwise and breadth- wise, where necessary ; for these being fastened •where they intersect one another, and supported by stakes at due distances, form a kind of net- work, which is proof against almost every acci- dent that can happen from tempestuous weather. These practices are, however, both troublesome and expensive, and are seldom or ever necessary where the crops have not been sown too thick on the ground.

When the crop grows so short and branchy, as to appear more valuable for seed than flax, it ought not to he pulled before it be thoroughly ripe ; but if it grows long and not branchy, the seed should be disregarded, and all the attention given to the flax. In the last case it ought to be pulled after the bloom has fallen, when the stalk begins to turn yellow, and- before the leaves fall, and the bolls turn hard and sharp-pointed. When the stalk is small, and carries few bolls, the flax is fine ; but the stalk of coarse flax is gross, rank, branchy, and carries many bolls. When the flax has fallen, and lies, such as lies ought to be immediately pulled, whether it has grown cough or not, as otherwise it will grow

unequally, so that some parts are ready for pul- ling before other parts; only what is ready should be pulled, and the rest should be suffered to stand till ready. The flax-raiser ought to be at pains to pull, and keep by itself, each differ- ent kind of lint which he finds in his field ; what is both long and fine, by itself; what is both long and coarse, by itself; what is both short and fine, by itself; what is both short and coarse, by itself; and in like manner every other kind by itself that is of the same size and quality. If the different kinds be not thus kept separate, the flax must be much damaged in the watering and the other succeeding operations. What is com- monly called under-growth may be neglected as useless. Few persons that have seen pulled flax, are ignorant of the method of laying it in haad- fuls across each other; which gives the flax suf- ficient air, and keeps the handfuls separate and ready for the rippler.

Donaldson observes, that a crop of flax fre- quently grows short, and runs out a great number of seed-bearing branches. When this is the case, the seeds, not the flax, ought to be the farmer's chief object, and the crop should be al- lowed to stand till the seeds are in a great mea- sure

perfected. But that when the' crop thrives, and is likely to become more valuablt^ for the flax than the seeds, it should be pulled soon after the bloom drops off, and before the pods turn hard and sharp in the points. When flax is grown for its fibre. Brown considers it the safest course to take it a little early, any thing wanting in quan- tity, being, in this way, made up by the superi- ority of quality.

After pulling, if the flax is to be regarded more than the seed, it should lie some hours upon the ground to dry a little, and so gain some firmness, to prevent the skin or harle, whicli is the flax, from rubbing off" in the rippling; an operation which ought by no means to be neg- lected, as the bolls, if put into the water along with the flax, breed vermin there, and otherwise spoil the water. The bolls also prove very in- convenient in the grassing and breaking. In Lincolnshire and Ireland, they think that rip- pling hurts the flax; and, therefore, in place of rippling, they strike the bolls against a stone. The handfuls for rippling should not be great, as that endangers the lint in the rippling comb. After rippling, the flax-raiser will perceive that he is able to assort each size and quality of the flax by itself more exactly than he could before.

If the flax be more valuable than the seed, it ought by no means to be stacked during winter; for its own natural juice assists it greatly in the watering ; whereas, if kept long unwatered, it loses that juice and the harle adheres so much to the boon, that it requires longer time to water, and even the quality of the flax becomes there- by harsher and coarser. Besides, the flax stacked up over year, is in great danger from vermin and other accidents ; the water in spring is not so soft and warm as in harvest; and nearly a year is thereby lost of the use of the lint : but if the flax be so short and branchy as to appear most valuable for seed, it or.ght, after pulling, to be stocked and dried upon the field, as is done with corn ; then stacked up for winter, rippled iii

spring; and, after 'slieeling, the seed should be well cleaned from all bad seeds, &;c.

With regard to wa^eri^g flax, a running stream wastes the liut, makes it white, and frequently carries it away. Both rivers and lochs water the flax quicker than canals. But all flax ought to be watered in canals, say our northern neighbours, which should be digged in clay ground if pos- sible, as that soil retains the water best ; but if a firm retentive soil cannot be got, the bottom or sides of the canal, or both the bottom and sides, may be lined

with clay; or instead of lining the sides with clay, which might fall down, a ditch may be dug without the canal, and filled with clay, which will prevent both extraneous water from entering, and the vˆater within from running off. A canal of forty feet long, six broad, and four deep, will generally water the growth of an acre of flax. It ought to be filled with fresh sofl water from a river or brook, if pos- sible, two or three weeks before the flax is put in, and exposed all that time to the heat of the sun. The greater way the river or brook has nm, the softer, and therefore the better, will the water be. Springs, or short runs from hills, are too cold, unless the water is allowed to stand long in the canal. Water from coal or iron is very bad for flax. A little of the powder of galls, thrown into a glass of water, will immediately discover if it comes from minerals of that kind, by turning it into a dark color, more or less ■ inged in oroportion to the quantity of vitriol it contains. The canal ouijht not to be under shade; which, besides keeping the sun from softening the water, might make part of the canal cooler than other parts, and so water the flax un- equally. The flax-raiser will observe, when the water is brought to a proper heat, that small plants will be rising quickly in it, numbers of small insects and reptiles will be generatmg there, and bubbles of air rising on the surface. If no such signs appear, the water must not be warm enough, or is otherwise unfit for flax. Moss holes, when neither too deep, nor too shallow, frequently answer well for watering flax, when the water is proper, as before described.. The proper season for watering flax is from the end of July to the end of August. The advan- tage of watering flax as soon as possible after pulling has been already mentioned. The flax being sorted after rippling, as before mentioned, should next be put in beets, never larger than a man can grasp with both his hands, and tied very slack with a band of a few stalks. Dried rushes answer exceedingly well for binding flax, as they do not rot in the water, and may be dried and kept for use again. ■ The beets should be put into the canal slope-ways, or half standing upon end, the root end uppermost. Upon the crop ends, when uppermost, there frequently breed a deal of vermin, destructive of the flax, which is effectually prevented by putting the crop end downwards. The whole flax in the canal ought carefully to be covered from the sun with divots ; the grassy side of which should be next the flax, to keep it clean. Tf it is not thus covered, the sun will discolor the flax, though quite covered with water. If the divots are not weighty enough to keep the flax entirely under

water, a few stones may be laid above themˆ But the flax should not be pressed to the bottom- When the flax is sufficiently watered, it feels soft to the gripe, and the harle parts easily with the boon or show, which last is then become brittle, and looks whitish. When these signs are found, the flax should be taken out of the water, beet after beet ; each gently rinsed in the water, to cleanse it of the nastiness which has gathered about it in the

canal; and, as the lint is then very tender, and the beet slackly tied, it must be carefully and gently handled. Great care ought to be taken that no part be overdone ; and as the coarsest waters soonest, if different kinds be mixed together, a part will be rotted, when the rest is not sufficiently watered. When lint taken out of the canal is not found sufficiently watered, it may be laid in a heap for twelve, eighteen, or twenty-four hours, which will have an effect like more watering; but. this operation is nice, and may prove dangerous in unskilful hands. After the flax is taken out of the canal, fresh lint should not be put a second time into it, until the former water be run off, and the canal cleaned and supplied with fresh water. Short heath is the best field for grassing flax; as, when wet, it fastens to the heath, and is thereby prevented from being blown away by the wind. The heath also keeps it a little above the earth, and so ex- poses it the more equally to the %veather. When such heath is not to be got, links or clean old lea ground is the next best. Long grass gTounds should be avoided, as the grass growing through the lint frequently spots, tenders, or rots it; and grounds exposed to violent winds should also be avoided. The flax, when taken out of the water, must be spread veiy thin upon the ground ; and, being then very tender, it must be gently handled. The thinner it is spread the better, as it is then the more equally exposed to the weather. But it ought never to be spread during a heavy shower, as that would wash and waste the harle too much, which is then excessively tender, but soon after becomes firm enough to bear the rain, which, with the open air and sunshine, cleans, softens, and purifies the harle to the degree wanted, and makes it blister from the boon. In short, after the flax has got a little firmness by being a few h)urs spread in dry weather, the more rain and sunshine it gets the better. If there be little danger of high winds carrying off the flax, it will be much the better for being turned about once a-week. If it is not to be turned, it ought to be very thinly spread. The spreading of flax and hemp requires a deal of ground, and enriches it greatly. The skilful flax- raiser spreads his first row of flax at the end of the field opposite to the point whence the most violent wind commonly comes, placing the root ends foremost ; he makes the root ends of every other row over-lap the crop ends of the former row three or four inches, and binds down the last row with a rope ; by which means the wind docs not. easily get below the lint to blow it away : and, as the CFop. ends are seldom so fully watered as the root ends, the aforesaid over-lap- ping has an effect like giving the crop ends more watering. Experience only can fully teach a per son the signs of flax being sufficiently grassed :

then it is of a clearer color than formerly ; the harle is blistered up, and easily parts with the boon, which is then become very brittle. Tlie whole should be sufficiently grassed before any of it is lifted; for, if apart be lifted sooner than the rest, that which remains is in great danger from the winds. A dry day ought to be chosen for taking up the flax ; and, if there is no appearance of high wind, it should be loosed from the heath or grass, and left loose for some hours, to make it thoroughly dry. As a great quantity of flax can scarcely be all equally watered and grassed, and as the difl'erent qualities will best appear at lifting the flax off the grass, therefore at that time each different kind should be gathered together, and kept by itself; that is, all of the same color, 'ength, and quality. The smaller the beets lint iS made up in, the better for drying, and the more convenient for stacking, housing, &c., and in making up these beets, as in every other ope- ration upon flax, it is of great consequence that the lint be laid together as it grew, the root ends together, and the crop ends together.

In the Gentleman's Magazine for June, 1787, a method of watering flax 'S proposed whereby the labor would be shortened ; the strength of the flax probably increased ; the color rendered much finer; the operation of bleaching ren- dered safer and less tedious ; a very disagreeable nuisance suppressed; the linen manufacture much improved ; and the national income increased many thousand pounds a-year. The ingenious author, after pointing out the many inconveniences of the present method of soaking the flax in rivu- lets, ponds, and stagnant pools, such as the offen- sive smell and inky tinge-arising from it in ponds, the pernicious effects of the noxious infusion, by destroying the fish in rivulets, the hurt done to cattle by preventing them from drinking the water, however thirsty, the danger of bad conse- quences even to the health of men, from the dis- agreeable effluvia, &c., proposes to improve as well as shorten tlie process, by plunging the new flax, after it is rippled, into scalding water, which, in extracting the vegetative sap, would do, in five minutes, more than cold water woilld do in a fortnight, or perhaps at all. This he' illustrates analogically, by the familiar examples of infusing tea, and blanching rough almonds* in scalding water and not in cold water. Boiling water, he thinks, would also clear the new flax from many impurities, which, when not removed till it be spun into yarn, are then removed with difficulty, and loss of substance. Upon the new system, the act of bleaching would begin immediately after rippling; and a little done then might save much of what is generally done after spinning and weaving. To spin dirty flax, with a view of cleaning it afterwards, appears to be the same impropriety as if we were to reserve part of the dressing given to leather till after it is made into a glove. Should the plunging of the flax into the boiling water not suffice to make the boon brittle enough, then the common watering might be added ; but in that case probably half the time usually given to this watering would*

suffice, and the flax might then be laid in clear ˆiˆallets, with- out any apprehension of its infecting the water and poisoning the fish, or of being discolored

itself; for the boiling water, into 'which it had been previously put, would have extn.ctedall the poisonous vegetative sap, which I presume is what chiefly discolors the flax, or kills the fish On the supposition that the use of boiling water in the preparation of flax m.ay be advantageous, I can recollect at present but one objection against its being generally adopted. Eveiy flax- grower, it may be said, could not be expected to have conveniences for boiling water sufficient for the purpose; the consumption of water would be great ; and some additional expense would be incurred. In answer to this, I presume any ad- ditional expense would be more than reimbursed by the better marketable price of the flax. In a large cauldron a great deal of flax might be dipt in the same water, and the consumption perhaps would not be more than a quart to eacli sheaf. Even a large household pot would be capable of containing one sheaf after another; and the whole objection would be obviated were the practice to prevail with us, as in Flanders and Holland, that the flax-grower and the flax-dresser should be two distinct professions. He con- cludes with recommending to those who are in- clined to make experiments, not to be dis- couraged by the failure of one or two trials. Perhaps the flax, instead of being just pUmged into the scalding water, ought to be kept in it five minutes, perhaps a tjuarter of an hour, per- haps a whole hour. Such boiling, when in this state, might in return save several hours boiling in the article of bleaching. It is not probable that the boiling of the flax with the boon in it would prejudice the harle; for, in the course of its future existence, it is made to be exposed twenty or forty times to this boiling trial; and, if not detrimental in the one case, it is to be pre- sumed it would not be detrimental in the other. Perhaps, after the boiling, it would be proper to pile up the flax in one heap for a whole day, or half a day, to occasion some fermentation; or immediately after the boiling it might be proper to wash it with cold water. The great object, when the flax is pulled, is to get the harle from the boon with as little loss and damage as possible; and if this is accomplished in a more complete manner than \isual, considerable la- bor and expense will be saved in the future manufacturing of the flax. On this accoxmt much more would be gained than lost, were the two or three last inches of the roots of the stems to be dipt off, previously to the flax being either watered or boiled. When the flax is watered, care should be taken not to spread it out dry, when there is a hazard of its being exposed in its wet state to frost. This method appears e.x- tremely plausible, and certainly merits a fair trial.

Hill and Bundy's machine for breaking flax and hem.p, is the latest improvement of this kind. It seems to have been suggested by Mr. Lee as far

back as 1810. It is portable, and may be worked in barns or out-houses of any kind ; a srreat part of the work is so light chat it may be done by children and infirm persons ; and such is the construction and simplicity of the machine, that no previous instruction o practice is required. The woody part is re

moved by a very simple macliine ; and, by passin gthrough a second machine equally siuiple, the flax may be brought to any degree of fine-‘ ness, equal to the best used for lace or cambric in France and the Netherlands. The original length of the fibre, as well as its strength, remains un- impaired ; and the difference of the produce is

immense, being nearly two-thirds ; one ton of flax being produced from four tons of stem. The expense of working each ton obtained by this method is only five pounds. The glutinous matter may be removed by soap and water only, which will bring the flax to such perfect white- ness, that no further bleaching is necessary, even after the linen is woven ; and the whole process of preparing flax may be completed in six days.

The produce of flax in seed is generally, says Mr. Loudon, from six to eight sometimes, as high as ten or twelve, bushels per acre ; and the price depends, in a great measure, on that of foreign seed imported; as, when sold to oil- makers, it is generally about one-half of that of Dutch seed sold for the purpose of sowing. The price of home-cultivated linseed is considerably advanced of late in some of the southern and western counties of the kingdom, in proportion to what it is in those of the northern, owing to the circumstance of its being much used as food for fattening cattle. The average price of the linseed cultivated in the kingdom at large, can- not, it is supposed, be rated higher than from three to four shillings the bushel.

Flax, Carolina. See Polypremum.

Flax, Earth. See Amianthus.

Flax Plant, New Zealand. See Phor-

MIUM.

Flax, Toad. See Antirrhinum.

Flax-Dressing. For many ages it was the practice to separate the boon or core from the flax, which is the bark of the plant, by hand methods. First,

for breaking the boon, the stalks in smal. parcels were beaten with a mallet ; or, more dexterously, the break was used thus ; The flax being held in the left hand across three under teeth, or swords of the break, the upper teeth were with the right hand quickly and often forced down upon the flax, which was artfully

shifted and turned with the left hand. Next, for clearing the flax of the broken boon, the workman witl'i his left hand held the flax over the stock, while with his right hand he struck or threshed the flax with the scutcher. These me- thods of breaking and scutching the flax being slow, and very laborious, a water-mill was in- vented in Scotland about the year 1 750 ; which, with some late improvements, makes great des- patch, and in skilful and careful hands gives satisfaction. It has been generally constructed to break the boon by three dented rollers, placed one above the other. The middle one, being forced quickly round, takes the other two along with it ; and one end of the handfuls of the flax being by the workmen directed in between the upper ar>d middle rollers, the flax is immediately drawn in by the rollers ; a curved plate of tin behind the rollers directs the flax to return again between the middle and undermost rollers ; — and thus the operation is repeated until the boon be sufficiently broken. Great weights of timber or stone, at the end of levers, press the upper and under rollers towards the middle one. The scutching is next carried on by the mill in the following manner : — Four arms, some- thing like the hand-scutchers, project from a per- pendicular axle ; a box around the axle encloses these projecting scutchers ; and this box is di- vided among the workmen, each having sufficient room to stand and handle his flax, which, through slits in the upper part and sides of the box, they hold in to the stroke of the scutchers ; which, moving round horizontally, strike the flax across or at right angles, and so thresh out or clear it of the boon. The breaking of the flax by rollers is scarcely subject to any objection, but that it is dangerous to workmen not suffi- ciently on their guard, who sometimes allow the rollers to take hold of their fingers, and thereby their whole arm is instantly drawn in : thus many have lost their arms. To avoid this danger, a break, upon the principle of the hand break, has been lately adapted to water machinery, and used in place of rollers. The horizontal stroke of the scutchers was long thought too severe, and wasteful of the flax ; but veiy careful expe- riments have discovered that the waste com- plained of must be charged to the unskilfulness or negligence of the workmen, as in good hands the mill carries away nothing but what, if not scutched off, must be taken off in the heckling with more loss both of time and flax. But to obviate this objection of f!ie violence of the ho- rizontal scutchers, an imitation of hand scutch- ing has lately been applied to water. The scutchers tlren project from an horizontal axle, and move like the arms of a check-reel, striking the flax neither across nor perpendicularly down, but

sloping in upon the parcel exactly as the flax is struck by the hand-scutcher. This sloping stroke is got by raising the scutching-stock some inches higher than the centre of the axle ; and by raising or lowering the stock, over which the flax is held, or screwing it nearer to or farther from the scutchers, the workman can temper or humor the stroke almost as he pleases. A lint mill, with horizontal scutchers upon a perpen- dicular axle, requires a house of two stories, the

rollers or break being placed in the ground story, and the scutchers in the loft above ; but a null with vertical scutchers on an horizontal axle, requires but one ground story for all the machi- nery. Another method of breaking or scutch- ing flax, more expeditious than the old hand methods, and more gentle than water mills, has also been lately invented in Scotland. It is much like tlie break and scutcher giving the sloping stroke last described, moving by the foot. The treadle is remarkably long, and the scutchers are fixed upon the rim of a fly-wheel. The foot break is also assisted in its motion by a fly. These foot machines are very useful where there are no water-mills, but they are far inferior to the mills in point of expedition.

The next operation that flax undergoes is heckling. The heckle is firmly fixed to a bench before the workman, who strikes the flax upon the teeth of the heckle, and draws it through the teeth. To persons unacquainted with that kind of work this may seem a very simple operation ; but, in fact, it requires as much practice to ac- quire the sleight of heckling well, and without wasting the flax, as any other operation in the whole manufacture of linen. They use coarser and wider-teethed heckles, or finer, according to the quality of the flax ; generally putting the fla.K through two heckles, a coarser one first, and next a finer one. See Heckling.

Flax for cambric and fine lawn, thread, and lace, is dressed in a manner somewhat different. It is not scutched so thoroughly as common flax ; which from the scutch])roceeds to the heckle, and from that to the spinner : whereas, this fine flax, after a rough scutching, is scraped and cleansed with a blunt knife upon the workman's knee covered with his leather apron ; from the knife it proceeds to the spinner, who, with a brush made for the purpose, straightens and dresses each parcel just before she begins to spin it.

FLAXMAN (—), Esq. R. A. and professor of sculpture in the Royal Academy, was born in 1754, and died at his house in Buckingham Street, Fitzroy Square, London, December 7th, 1826. The particvlars of his interesting life ■we hope to be able to furnish from more authentic documents than have yet (May, 1827), been published, probably in our article Sculptitre, before this work closes : at present nothing in detail has appeared.

Mr. Flaxman's fame, which on the Continent of Europe stands higher than that of any of our countrymen who have devoted themselves to the fine arts (with the exception, perhaps, of Sir Joshua Reynolds), rests principally on his de- signs after the Iliad and Odyssey of Homer, iEschylus, Hesiod, and

Dante. He is particu- larly mentioned by the illustrious Augustus Schlegel as ‘ a bright example among the few men of true genius of whom England at the present day can boast.’ The dowager “countess Spencer is said to be the patroness to whom the world is indebted for fostering his early genius.

The president of the Royal Academy, at a general assembly of the academicians, held in the month m which tliis distinguished member

of their body died, thus eulogises his memory ‘ Mr. Flaxman’s genius, in the strictest sense of the words, was original and inventive. His taste led him, in early life, to the study of the noblest relics of antiquity, and a mind, though not then of classical education, of classic bias, urged him to the perusal of the best translations of the Greek philosophers and poets ; till it be- came deeply imbued with those simple and grand sentiments which distinguish the productions of that favored people. When engaged in these mingling studies, the patronage of a lady of high rank, whose taste will now be remembered with her known goodness, gave birth to those unequalled compositions, from Homer and the Greek tragedians, which have so long been the admiration of Europe. These, perhaps, from their accuracy in costume, and the singular fidelity of the union between their characters and subjects, to minds unaccustomed to nice discrimination, may have conveyed the idea of too close an imitation of the Grecian art. Un- doubtedly the elements of his style were founded on it ; but only on its noblest principles — on its deeper intellectual power — and not on the mere surface of its skill. He was still more the sculptor of sentiment than of form ; and whilst the philosopher, tlie statesman, and the hero, were treated by him with appropriate dignity, not eve.n in RafTaelle himself have the gentler feelings and sorrows of human nature been traced with more touching pathos, than in the various designs and models of this estimable man. The rest of Europe know only the produc- tions of the earlier period of his fame ; but those which form the highest eff’orts of his genius had their origin in nature only, and the sensi- bility and virtues of his mind. Like the greatest of modern painters, he delighted to trace, from the actions of familiar life, the lines of senti- timent and passion ; and from the populous haunts, and momentary peacefulness of poverty and want, to form his inimitable groups of chil- dren and maternal tenderness ; with those’ noble compositions from Holy Writ, as beneficent in motive as they are novel in design, which open new sources of invention from its simplest texts, and inculcate the duties of our faith. In piety, the minds of Michael Angelo and Flaxman were congenial. I dare not assert their equality in art. The group of ‘ Michael and the Fallen Angel,’ is a near approach to the grandeur of the former; and, sanctified as his memory is by time and glory, it gained no trivial homage in the mind of the English sculptor ; whose ‘ shield of Achilles’ his genius only could surpass.’

In sepulchral monuments, we may add. Flax- man particularly excelled ; and never, we be- lieve, executed busts, except as portions of them. Westminster Abbey contains his Lord Mans- field ; College, Oxford, his Sir William

.Tones, and St. Paul's several other of his most distinguished works.

Mr. Flaxman lived a very retired life, and professed himself a member of the Established Church, but is known to have adopted, with some zeal, the theological sentiments of baron Swe- denborg. He married early in life, a lady whom he survived many years ; and completed his

studies in Italy, after his marriage. He was a man of warm benevolence and strict integrity.

FLAY, V. a. \ Sax. plean ; Goth, and Swed.

Flay'er, n. s. Sfla ; UA.fiaa ; Belg. vlaen. See Flaw. This word is evidently of the same ori- gin. To strip off the skin or external covering of any thing.

They flay their skin from off them, break their bones, and chop them in pieces. Micah iii. 3.

I must have been eaten with wild beasts, or have fallen into the hands of the Spaniards, and been fiayed alive. Raleigh.

Whilst the old Levitical hierarchy continued, it was part of the ministerial office to flay the sacrifices.

South. Then give command the sacrifice to haste j

Let the flayed victims in the plains be cast ;

And sacred vows, and mystick song applyed

To grisly Pluto and his gloomy bride.

Pupe's Odyssey.

Neither should that odious custom be allowed, of cutting scraws, which is flaying off the green surface of the ground, to cover their cabins. Swift.

FLEA,M. s. Set'. a.\ Sax. plea ; Belg. d/oOj Flea'bite, w. s. f Goth, fio ; Teut. foh;

Flea'biting, re. s. iˆScot. jleach. A small

Flea'bitten, adj.) red insect which sucks the blood of larger animals.

Awake, thou Coke! quod he ; God yeve the sorwe. What aileth thee to slepen by the morwe ? Hast thou hadfleen al night, or art thou dronke ?

Chaucer's Cant. Tales,

While wormwood hath seed, get a handful or twain. To save against March to make //ea to refrain : Where chamber is sweeped, and wormwood is strown. No flea for his life dare abide to be known. Tusser.

•A valiant flea, that dares eat his breakfast on the lip of a lion, Shakspeare. Henry V.

Fleas breed principally of straw or mats, where there hath been a little moisture.

Bacon's Natural History.

A gout, a cholick, a cutting off an arm or leg, or searing the flesh, are but fleabites to the pains of the Roul. Harvey,

Fleahitten synod, an assemblv brewed

Of clerks and elders ana, like the rude

Chaos of Presbytery, where laymen guide,

VViih the tame woolpack clergy by their side.

Cleaveland.

The same expence that breaks one man's back, is not a. fleahiting to another. L' Estrange,

The attendance of a cancer is crmmonly a breaking out al! jver the body, like a. fleahiting.

Wiseman's Surgery,

Flea, in entomology. See Pulex.

FLFA'BANE,«. s. Flea and bane. A plant. It hath undivided leaves, which, for the most part, are glutinous, and have a strong scent : the cup of the flower is for the most part scaly, and of a cylindrical form : the flower is composed of many florets, which are succeeded by seeds with a downy substance adhering to them. — Miller.

Flea-Bank, in botany. See Conyza.

Flea-Bitten, that color of a horse which is white or gray, spotted all over with dark reddish spots.

FLEAK, n. s. Lat. Jloccus. See Flake. A small lock, thread, or twist.

The businesses of men depend upon these little long flt>aks or threads of hemp and flax.

More's Antidote against Atheism.

FLEAM, n. s. Corrupted from ˆXt/Soro/iov, the instrument used in phlebotomy. An instru- ment used to bleed cattle. See Veterinary Art.

Fleams, a Case of, in farriery, comprehends six sorts of instruments ; two hooked ones, called drawers, and used for cleaning wounds ; a pen- knife ; a sharp pointed lancet for making inci- sions ; and two fleams, one sharp and the other broad pointed. The last are somewhat like the point of a lancet, fixed in a flat handle, and no longer than is just necessary to open the vein.

FLECHE, La, a town of Anjou, France, situ- ated in a pleasant valley on the Loir, and sur- rounded by hills covered with vineyards. The town is clean and well built, and here is an old ruined castle remarkable for its romantic situ- ation, and another of an elegant structure, with a fine mall, used as a public walk : the bank of the river, planted with elms, forms also a pro- menade. Here was a celebrated public semi- nary founded and endowed by Henrˆ IV. in 1603, and placed under the direction of Jesuits. It was one of the most extensive of the kind in France; containing fornierly no less than 600 youths ; but its funds were seized and wasted in the revolution. The central part of the building has been converted into a town- house, and one of the wings into a private boarding establish- ment. Here is now a Prytaneum or military school founded by Buonaparte, for the education of soldiers' children. Descartes was educated at the college of La Fleche. There are some manufactures of linen, muslin, and serge; and a traffic in wine and corn through the medium of Le Loir, which is navigable all the way to the greater river La Loire. Population about 5000. La Fleche is twenty-two miles north-east of Angers, and twenty-five S. S. W. of Le i \Ians.

FLECHIER (Esprit), bishop of Nismes, one of the most celebrated preachers of his age, was born at Perne in Avignon, 1632. He was no- minated bishop of Lavaur in 1685, and translated to Nismes in 1687; where he founded an aca- demy. His palace was also a kind of academy, where he trained up young orators and authors : He published 1. Cursius Regius, a Latin poem; 2. An History of Theodosius the Great, and Car- dinals Ximenes and Commendon. 3. Several Sermons. 4. Miscellaneous Works. 5. Letters, funeral orations, &c. It was this prelate who, on a person of noble descent having sarcastically alluded to his parentage, replied — ‘ Had you been born of such parents as mine, you would never have been any thing but a maker of can- dles.’ He was very superstitions ; and some time before his death, having had a dream which he conceived to be a presage of his end, he directed a sculptor to make him a monument. ‘ Begin upon it immediately, said he, there is no time to be lost,’ and soon after died ; his life having been perhaps shortened by the influence of this prepossession. He died in 1710.

FLECK, v.fl.) Goth, fleik; Belg. vleck;

FLECK’ER,u.a. S Germ. Jleck, a spot.— Skinner. Perhaps it is derived from fleak, or fleke, an old word for a grate, hurdle, or any thing made of parts laid transverse, from the Islandic ˆaAe. — .Johnson. To spot; to streak ; to stripe ; to dap-

pie ; to variegate ; to mark with strokes or touches of different colors ; to mark with red whelkes. About’ the pcytrel stood the feme full hie. He wos of fome aisjlecked as a pie.

Chaucer’s Cant. Tales. Let it not see the dawning ˆecA the ski-es, Nor the grey morning from the ocean rise. Sandys. The grey-eyed morn smiles on the frowning night. Checkering the eastern clouds with streaks of light ; And darkness _/7ecˆered, like a drunkard, reels From forth day’s path, and Titan’s burning wheels.

Shakspeare, Flecked in her face, and with disordered hair. Her garments ruffled, and her bosom bare. Dryden. Both flecked with white, the true Arcadian strain.

FLECKEROE, a small island of Norway, near Christiansand. A narrow strait, about four miles in length, runs between this island and the con-

tinent and forms an excellent harbour. Long. 8ˆ 18′ E., lat. 58°4'N.

FLECKNOE (Richard), an English poet in the reign of Charles II. more remarkable as the object of Dryden's satire than for any works of nis own. He is said to have been originally a Jesuit. When Dryden lost the place of poet laureat, on the Revolution, it was conferred on Flecknoe, on which Dryden wrote a satiric poem entitled Mac-Flecknoe ; one of the best written satires in our language, and from which Pope seems to have taken the hint for his Dunciad. Flecknoe wrote some plays ; but could never get more than one of them acted.

His works, however, are not altogether con- temptible. They contain — Heroick Portraits, with other Miscellaneous Pieces, 1660, 8vo. and Sixty-nine enigmatic Characters, all very exactly drawn to the Life, from several persons, humors, and dispositions. Pleasant and Full of Delight, 1665, 12mo.

FLEDGE, V. a. & adj. Dut. flederen, to fly. Full-feathered ; able to lly ; qualified to leave the tiest: to furnish with wings; to supply with feathers.

We did find The shells ol fledge souls left behind.

*Herbert. His locks behind. Illustrious on his shc*ulders,_/fedˆc with wings. Lay waving round. Milton's Paradise Lost.*

The birds vcre not as y it fledged enough to shift for themselves. L'Estrange's Fables.

The speedy growtn of birds that are hatched in nests, and fed by the old ones, till they he fledged and come almost to full bigness in about a fortnight, seems to me an argument of Providence. Ray.

The sandals of celestial mould. Fledged with ambrosial plumes, and rich with gold. Surround her feet. Pope's Odyssey.

FLEE, V. 72., pret, fled. This word is now al- most universally written fly, though properly to fly, pleojan, flew, is to move with wings, and flee, plean, to run away. They are now con- founded.— Johnson. Dr. Lowth has noticed that our English Bible, generally so correct, has fallen into this confusion. To run from danger; to have recourse to shelter.

Behold this city is near toyfes unto.

GenesU xix. 20. Truth is fled far away, and Iea.sing is hard at hand.

Eidras.

I ne wist not what was adversitee. Til I could^ee ful high under the sky.

Chaucer. The Squieres Talc. O noble, O worthy, Petro ! glorie of Spaine I Whom Fortune held so high in majestee, Wei oughten men thy pitous deih complaine. Out of thy iond thy brother made thee flee ; And, after, at a sege, by sotiltee Thou were betraied, and lad «nlo his tent, — Wher as he with his owen bond slow thee. Succeeding in thy regne and in thy rent.

Chaucer. The Monkes Tale. But he wos not so hardy to abide That bitter stownd, but turning quick aside His light foot-beast, ^^ed fast away for feare.

Spenser.

Macduff is fled to England. Shakspeare.

Were men so dull they could not see That Lyce painted ; should they fleB L'ke simple birds into a net. So grossly woven and ill set ? Waller.

None of us fall into those circumstances of danger, want, or pain, that can have hopes of relief but fron^i God alone ; none in all the world to flee to but him.

Tillotson. In vain for life he to the altar _/?ed ; Ambition and revenge have certain speed. Prior. FLEECE, n.s.k,v.a.-\ Sax. plyp, plep ; Teut. Flee'ced, ad;. >vlees;h3.t.vellus. The

Flee'cy, adj. J wool of one sheep : to

clip the fleece off a sheep. To strip, pull, or plun- der, as a sheep is robbed of his wool : having fleeces of wool ; woolly.

In an isle that called was Colchos, There was a Ram which that men mighten se — That had a Flees of Golde that shone so bright That no where was there soche an other sight.

Chaucer. Legende Hypsipyle and Medea.

-therein all the famous history. Of Jason and Medea was ywrit ; Her mighty charmes, her furious loving fitt •, His goodly conquest of the Golden Fleece ; His falscd fayth, and love too lightly flits ; The wond'rous Argo, which in venturous piece First through the Euxine Seas bore all the flowr of Greece. Spenser.

And over all of purest gold was spread A traylc of yvie in his native hew ; For the rich metal was so coloured. That wight who did not well avised it

vew. Would surely deem it to bee yvie trew : Low his lascivious arms adown did creepe. That themselves dipping in the silver dew Their fleecy flowres they fearfully did steepe. Which drops of chrystalls seemed for wantones (o weep. ^'^•

As when two rams, stirred with ambitious pride. Fight for the rule of the rich fleeced flock.

Their horned fronts so fierce on either side Do meet, that with the terror of the shock Astonied both stand senseless as a block.

Faerie Queene

Giving account of the annual increase Both of their lambs and of their woolly /eece.

Huhberd's Tale. So many days my ewes have been with young. So many months ere I shall shear the fleece.

Shakspeare.

I am shepherd to another man. And do not shear the fleeces that I graze. Id. Sailors have used every night to hang fleeces of wool on the sides of their ships, towards the water ^

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and they have crushed fresh water out of them in tlic momino'. Bacon's Natural History.

Kot all the Jieect/ wealth That doth enrich these downs is worth a thought To that my errand. Ji/ittori.

From eastern point Of Libra, to ihejieecy star that bears Andromeda far oif Atlantic seas.

Id. Paradise Lost. Courts of justice have a small pension, so that they are tempted to take bribes, and to fleece the people.

Addison.

Let her glad valleys smile with wavy corn ;

hetfleecy flocks her rising hills adorn. Prior.

The good shepherd tends hi& fleecy care.

Seeks freshest pasture, and the purest air ;

Explores the lost, the wand'ring sheep directs.

Fleece, Golden, in the ancient mythology, was the skin and fleece of the ram upon which Phryxus and Helle are said to have swum over the sea to Colchis ; and which, being sacrificed to Jupiter, was hung upon a tree in the grove of Mars, guarded by two brazen-hoofed bulls, and a monstrous dragon that never slept ; but was taken and carried oft" by Jason and the Argo- nauts. Some authors have endeavoured to show that this fable is an allegorical representation ol some real history, particularly of the philo- sopher's stone. Others have explained it by the profit of the wool trade to Colchis, or the gold which they commonly gathered there with fleeces in the rivers. See Argonauts.

Fleece, Golden, Order of the, a military order instituted by Plulip the Good, duke of Burgundy, 1427; thus named from a represen- tation of the golden fleece, borne by the knights on their collars. See diagram. The king of Spain,

as duke of Burgundy, is grand master of the order ; the number of knights is fixed to thirty- one. It is said to have been instituted on occa- sion of an immense profit which that prince made by wool ; though others will have a che- mical mystery couched under it, as that famous one of the ancients, which the adepts pretend to be the secret of the elixir vitae, written on the skin of a sheep.

FLEER, V. n. & n.s. } Saxon, plefibian, to Fleer'er, n. s. S trifle ; Scot, fleardan.

Skinner thinks it formed from leer ; but the Icel. Jlyre, is to joke. To mock ; to gibe ; to jest with insolence and contempt ; to leer. Encavc yourself. And mark the fleers, the gibes, and notable scorns. That dwell ia every region of bis face.

Shakejieare.

You speak to Casca, and to such a man That is no fleering tell-tale. Id. Julius Ceesar.

Dares the slave Come hither, covered with an antick face. To fleer and scorn at our solemnity?

Shakspeare. How popular and courteous ; how they grin and fleer upon every man they meet I Burton.

He shall generally spy such false lines, and such a sly treacherous yfeer upon the fare of deceivers, that he shall be sure to have a cast of their eye to warn him, before they give him a cast of their nature to betray him. South.

Do I, like the female tribe. Think it well to fleer and gibe ? Swift.

FLEET, Fleot, Flot, n. s. Are all derived from the Sax. pleot (Goth. ˆorf), which signifies bay or gulph. A creek ; an estuary ; an arm of the sea; an inlet of water. A provincial word, after which several streams in this country have been named : derived from Saxon plota; it signifies a company of ships ; a navy. The French use Jiotte, and &wed. Jiota, in the same sense.

This said, the whole _ˆee< gave it their applause. And all assume your courage in your cause.

Marvell. Already were the Belgians on our coast, Whose fleet more mighty every day became

By late success, which they did falsely boast. And now by first appearing seemed to claim.

Dryden. They have a very good way in Essex of draining lands that have land-floods or fleets running through them, which make a kind of a small creek.

Mortimer's Husbandry.

Our prayers are heard, our master's ˆee< shall go

As far as winds can bear, or waters flow. Prior.

The noblest captain in the British _ˆeet

Might envy William's lip those kisses sweet.

Gay.

Fleet, adj., v. n. in v. a.") Island, fliotur ; Fleet'ly, «iw. >Saxplotan. Swift

Fleet'ness, n. s. 3 of pace; quick;

nimble; active; light. To fly swiftly; to va- nish ; to be in a transient state ;

to skim the wa- ter; to live merrily, or pass time away lightly. Upon that shore he spied Atin stand ; There by his master left, when late he fared In Ph3Bdria's_ˆeer bark. Faerie Queene.

Who swelling sails in Caspian sea doth cross. And in frail wood an Adrian gulph doth fleet. Doth not, I ween, so many evils meet. Id.

I take him for the better dog.

Thou art a fool : if Echo were ˆs fleet,

I would esteem him worth a dozen such.

Shakspcare Many young gentlemen flsck to him every day, and fleet the time carelessly as they did in the golden age. Id.

How all the other passions ˆef to air. As doubtful thoughts, and rash embraced despair!

Id. A wolf, who, hanged for human slaughter, jiven from the gallows did his fell so\x\ fleet. Id. O fleeting joys Of Paradise, dear bought with lasting woe !

Milton. He had in his stables one of the fleetest horses in England. Clarendon.

His fear was greater than his haste ; For fear, thowˆ\ fleeter than the wind. Believes 'tis always left behind. Hudibrai,

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While I listen to thy voice, Chlnris ! I feel my life decay :

That powerful noise Calls n.y fleeting soul away. Waller.

So fierce they drove, their coursers were so Jieet, That the turf trembled underneath their feet.

Dryden. As empty clouds by rising winds are tost.

Their Jieeting forms scarce sooner found than lost.

Prior. He told us that the welkin would be clear

When swallows y/eet soar high and sport in air.

Gay. Contemplate mortal ! on thy Jlecting years. See, witli black train the funeral pomp appears. Id.

Fleet implies, not only a company of ships of war belonging to a prince or state, but also a number of trading ships employed in a parti- cular branch of commerce. His Britannic ma- jesty's fleet is divided into three squadrons, viz. the red, t!ie white, and the blue. Wiien any of the admirals are invested with the command of a squadron or detachment of men of war, the particular ships are distinguished by the colors of their respective squadron : i. e. the ships of the red squadron wear an ensign whose union is displayed on a red field; the ensigns of the white squadron have a white field ; and tliose of the blue squadron a blue field ; the union being common to all three. The ships of war, there- fore, are occasionally annexed to any of the three squadrons, or shifted from one to another. Of whatsoever number a fleet of ships of war is composed, it is usually divided into three squa- drons ; and these, if numerous, are again sepa- rated into divisions. The admiral, or principal officer, commands the centre; the vice-admiral, or second in command, superintends the van guard ; and the operations of the rear are di- rected by the rear admiral, or the officer next in rank. The disposition of a fleet, while proceed- ing on a voyage, will in some measure depeiid on particular circumstances; as the difficulty of the navigation, the necessity of despatch, accord- ing to the urgency or importance of the expe- dition, or the expectation of an enemy in the passage. The most convenient order is probably to range it into three columns, each of which is parallel to a line close hauled, according to the tack on which the line of battle is designed to be formed. This arrangement is more useful than any, because it contains the advantages of every other form, without their inconveniences. The fleet being thus more enclosed will more readily observe the signals, and with greater facility form into the line of battle ; a circtmistance which should be kept in view in every order of sailing. See Naval Tactics.

Fleet, a noted prison in London, where per- sons are committed for contempt of the king and his laws, particularly of his courts of justice; or for debt. There are large rules and a warden belonging to the Fleet prison ; which had its name from the river or ditch, on the side whereof it stands.

FLE'ETINGDISH, 71. s. From fleet and dish. A skimmins; bowl.

FJ.EKTWOOD (Charles), a general of the parliamentary army in the civil wars, was the son of Sir William Fleetwood, knight, ranger of

Woodstock park. He early entered the army? commanded a regiment of

cavalry in 1644, and afterwards held Bristol for the parliament. Fleetwood at the battle of Worcester bore the rank of lieutenant-general, and becoming allied to the family of the protector, by marrying his daughter, after the decease of her first husband, Ireton, was by him sent as lord deputy to Ire- land. On the death of Cromwell he joined in inducing his son, Richard, to abdicate. He died at Stoke Newington shortly after the Restoration.

Fleetwood (W'illiam), a learned bishop of an ancient family m Lancashire, born in the Tower of London, 1656 ; he distinguished himself during king William IH's reign, by his Liscriptionum Antiquarum Sylloge, by several sermons preached on public occasions, and by his Essay on Mira- cles. He was designed by king William to a canonry of W^indsor. The grant did not pass the seals before the king's death; but the queen gave it him, and he was installed in 1702. In 1707 he published, without his name, his Chro- nicon Pretiosum. In 1708 he was nominated by the queen to the see of St. Asaph. The change of the queen's ministry gave him much regret. In 1715 he published a pamphlet en- titled, The thirteenth chapter of the Romans vindicated from the abusive senses put upon it. In 1714 he was translated to the bishopric of Ely; and died in 1723, aged sixty-seven. He published several other sermons and tracts, and was a man of exemplary piety.

FLEMINGIANS, or Flandrians, in eccle- siastical history, a sect of Anabaptists, who ac- quired this name in the sixteenth century, because most of them were natives of Flanders, by way of distinction from the Waterlandians. In con- sequence of some dissensions among the Flemin- gians relating to the treatment of excommu- nicated persons, they were divided into two sects, distinguished by the appellations of Flan- drians and Frieslanders, who diff"ered from each other in their manners and discipline. Many of these in process of time came over to the mode- rate community of the Waterlandians, and those who remained separate are still known by the name of old Flemingians or Flandrians ; but they are comparatively few in number. These maintained the opinion of Menno with respect to the incarnation of Christ ; alleging that his body was produced by the creating power of the Holy Ghost, and not derived from his mother Mary. See Mennonites.

FLEMING (A), a poet of queen Elizabeth's reign, whose history is little known. He was a voluminous original writer as well as translator. Among his most celebrated original works are A Grove of Graces, supplied with Plentie of Plants, applicable to Pleasure and Profit; the Schoole of Skill ; the Footepath to Felicitie ; a Swarme of Bees, with their Honie and Ilonicombs, printed together in 1602, 12mo. The Diamond of Devotion, 12mo. The Cundyt of Comfort, 12mo., and A Memorial of the Almes Deeds of William Lamb, .Citizen of London. Fleming translated the Bucolics and

Georgics of Virgil, and some of Cicero's .Orations, and TElian's various Histories, into prose; and lie was the editor of Holinshed's Chronicle.

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FLEMMING, or Flemmynge (Richard), an English prelate, born at Croston in Yorkshire. He.received his education at University College, Oxford, and in 1408 obtained a prebend in York. He was for a time a zealous defender of the doctrines of WicklifTe, but he afterwards became a dttermined opponent of them. In 1442 he was promoted to the bishopric of Lincoln, and soon after was sent deputy to the council of Constance, where he greatly distinguished him- self by his eloquence. Upon his return to England he executed the decree of that assembly, in digging up the bones of WicklifTe, and causing them to be burned. After this he was nominated by the pope to the see of York ; but, the king re- fusing his consent, he was obliged to remain at Lincoln. He founded Lincoln College, and died in 1431.

FLEMYNG, or Fleming (Robert), a Scottish presbyterian minister, born at Bathens, in 1630 and educated at St. Andrews. When about the age of twenty-three he obtained a pastoral charge, but at the Restoration went over to the continent, and settled at Rotterdam, where he officiated to the Scottish congregation, and died in 1694. He wrote several tracts, but that by which he is best known is a work entitled The Fulhlling of the Scriptures.

Flemyng, or Fleming (Robert), son of the above, was born in Scotland. He studied at Leyden and Utrecht, and became minister of an English congregation at the former place, whence he removed to the Scottish church at Amster- dam. Here he resided several years, and after- wards went to London, where he officiated to the Scottish cliurch in Lothbury, and was lecturer at Salter's Hall. He died in 1716. He was the author of several sermons and tracts ; but his principal work is entitled Christology, 3 vols. 8vo.

FLENSBOURG, a sea-port town of Denmark, on the eastern coast of the duchy of Sleswick, is perhaps the most opulent and important place in the duchy. The streets are narrow, and the houses are constructed in a substantial and du- rable manner. It consists principally of one very long street, the back of which looks towards the harbour, and on that side each liouse has a garden. On the right is the harbour, filled with vessels, and every way safe and convenient. It is narrow close to the town, but the whole bay, called Flensbourg Wisk, is eighteen miles long, and has a sufficient deptii for large vessels, well sheltered from wind by the

neighbouring hills.

The trade of this town is carried on principally with Norway, Denmark, and Sweden, and con- sists of brandy, grain, skins, provisions, wines, and stuffs. The wines and stuffs are from France, England, Spain, and America, The inliabitants trade also with Iceland, Greenland, and Finland. The number of commercial houses is from 120 to 130.

In 1797 the number of sailors was 1597. There are no fewer than 200 establishments for manufacturing and distilling brandy, and these serve at the same time to fatten 4000 head of cattle, and as many of swine. The town also con- tains several sugar refineries, forty manufactories

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of tobacco, and some tanneries. The position of the town, according to trigonometrical observa- tions, is, E. long. 9° 27′ 40”, and N. lat. 54″ 47′

18”.

FLESH, n. s. 8c v. «.”] Saxon plepc, plaepc ; Flesh’-broth, Icel. and Tent. //et5c7<;

Flesh’-color, Belg. vkesch ; ‘ Svved.

Flesu’-diet, Jiccsch ; from Goth. Ujk,

Flesh’ed, adj. MS. leiki; Teut. leich ;

Flesh’-fly, n. s. Sax. Ik, a carcass. —

Fi,esh’hook, Thomson. The mus

Flesh’less, adj. y cular part of an ani-

Flesh’iness, 71. s. f mal ; animal food; ani- Flesh’ly, adv. mal nature ; near rela-

I’lesh’-meat, 71. s. tion : in theology, gross Flesh’ment, or worldly disposition,

Flesh’monger, gross or literal sense:

Flesh’-pot, to flesh is to initiate;

Flesh’-quake, harden ; glut ; from the

F”lesh’y, adv. J sportsman’s practice of

feeding his hawks and dogs with the first game that they take, or training them to pursuit by giving them the flesh of animals : fleshed is fat; well-fed; also initiated ; accustomed to: fleshi- ness, plumpness; fullness of flesh: fleshly, cor- poreal ; animal ; human ; not celestial or spiri- tual : fleshment, eagerness arising from partial success : fleshmonger, one who deals in flesh ; a pimp: flesh-quake, a tremor of the whole frame: the other compounds seem obvious in their meaning.

For I myself desiride to be departed fro Crist for my britheren that ben my cosyns aftir the Jieisch that ben men of Israel. Wiclif. Romarjns ix.

The end of 3\ flesh is come before me.

Genesis vi. 13. Let not our hand be upon him ; for he is o\ic flesh.

fd. All that ihe flesh-hook brought up the priest took.

1 Sam. ii. 12. A spirit hath not flesh and bones.

Luke xxiv. 39. They that are in ihc flesh cannot please God.

Romans viii. 8. Understond ye that both he that sclleth and he that byeth thinges spirituel, ben called Siraoniactes — be it by entel — be it by procuring or by fleshly praier of his frendcs — fleshly frendes or spiritual frendcs — fleshly in two manners as by kindfcde or other frendes. Chaucer. Tin Persunes Tale.

Corrupt manners in living, breed false judgment in doctrine : sin and fleshliness bring forth sects and he- resies. Ascha7n.

The eternal Lord in fleshly shrine Enwombed was, from wretched Adam’s line. To purge away the guilt of sinful crime.

Faerie Qtteene.

Wheti strong passions or weak fleshlinesi Would from the right way seek to draw liim wide.

He would, through temperance and steadfastness. Teach him the weak to strengtlicn, and the strouj suppress. Spenser.

Name not religion, for tliou lovcst the flesh.

Shakspeare.

There is auotlier indictment upon thee, for suffer- ing flesh to be eaten in tliy house, contrary to iho law. Id. Henry 1 V.

As if this flesh, which walls about our life. Were brass imprtguablr. Id. Richard II.

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FLETCHER.

Harry from curbed licence plucks The muzzle of restraint : and the wild dog ShaWjlesh his tooth on every innocent.

SfiakspeaTe. The kindred of him that hath hecn JJeshed upon us; And he is bred out of that bloody strain, That hunted us in our familiar paths. Id. Henry V.

I would no more endure This wooden slavery, than I would suffer 'T\G fli'sh-fiy blow my mouth. Id. Tempest.

Was the duke z.Jieshnumgcr, a fool, and a coward, as you then reported him ? Id. Measure for Measure.

Those fruits that are %o Jleshy, as they cannot make drink by expression, yet may make drink by mixture of water. Bacon,

And thou, my soul, which tum'st with curious eye To view the beams of thine own form divine. Know, that thou can'st know nothing perfectly. While thou art clouded with this flesh of mine.

Davies, Very wcW fleshed and excellently fat. Old Song. We say it is a. fleshy stile when there is much peri phrasis and circuit of words, and when with more than enough it grows fat and corpulent.

Ben Jonson. They may, blood-shaken then. Feel such zfleshquake to possess their powers. As they shall cry like ours ; In sound of peace or wars.

No harp e'er hit the stars. Id. New Inn.

If he takes away the flesh-pott, he can also alter the appetite. Taylor's Rule for Holy Living.

Nothing resembles death so much as sleep ; Yet then our minds themselves from slumber keep. When from their fleshly bondage they are free.

Denham. A fair and juicy fleshiness. Milton,

Much ostentation, \a.in fleshly arm. And of frail arms, much instrument of war Before mine eyes thou'st set.

Id, Paradise Regained, Belial, the dissolutest spirit that fell. The sensualest ; and, after Asmodai, The fleshliest incahns. Id,

We mortify ourselves with fish ; and think we fare coarsely, if we abstain from the flesh of other animals.

Browne. These princes finding them so fleshed in cruelty, as not to be reclaimed, secretly undertook the matter alone. Sidney.

Of these he murders one ; he boils the flesh. And lays the mangled morsels in a dish. Dryden.

'Tis then for nought that mother earth provides The stores of all she shows, and all she bides. If men viithfleshly morsels must be fed. And chaw with bloody teeth the breathing bread.

Id,

Flesh should be forborn as long as lie is in coats, or at least till he is two or three years old. Locke,

A complication of ideas together makes up the sin- gle complex idea which he calls man, whereof white \)T flesh-colour in England is one. Id,

The sole of his foot is flat and broad, being very fleshy, and covered only with a thick skin ; but very fit to travel in sandy places. Ray.

It is a wonderful thing in fleshflies, that a fly-mag- got in five days space after it is hatched, arrives at its full growth and perfect magnitude. Id.

Every puny swordsman will think him a good tame quarry to enter nad flesh himself upon.

Government of the Tongue,

Fasting serves to mortify the flesh, and subdue the lusU thereof. Smalridgc's Sermons,

The most convenient diet is that of fleshmeats.

Floyer. Her leg being emaciated, I advised bathing it with flesh-broth, wherein had been decocted emollient herbs. Wiseman's Surgery, Acidity in the infant may be cured by a flesh diet in the nurse. Arbuthnot on ALments.

In this prodigious plenty ‘of cattle and dearth of human creatures,_//«Am £‘a< is monstrously dear.

Swift. And out they spoke for lots of flesh and blood. And who should die to be his fellow’s food. Byron,

Flesh, in anatomy,a compound substance, con- sisting of the various softer solids of the animal body, and so denominated in contradistinction to bones.

FLET, participle passive of to fleet. Skim- med; deprived of the cream.

They drink _ˆe< milk, which they just warm.

Mortimer,

FLETA, the name given to an unknown writer who lived about the end of the reign of Edward II. and beginning of Edward III., and who, being a prisoner in tlie Fleet, wrote there an excellent treatise on the common law of England.

FLE’TCHER, n. s. From Fr. flcche, an ar- row. A manufacturer of bows and arrows.

It is commended by our fletchers for bows, next unto yew. Mortimer’s Husbandry.

Fletcher (Andrew), of Salton, a celebrat- ed Scotch political writer, was the son of Sir Robert Fletcher of Salton, and was born in 1653. His father, on his death-bed, left the care of his education to Dr. (afterwards Bp.) Burnet, from whom he early contracted an ardent love of li- berty, and an aversion to arbitrary government. Hence he readily took alarm at the despotic measures of Charles II., and being knight of the shire for Lothian, at the time the duke of York was commissioner, he openly opposed the designs of that prince. He also assisted lord viscount Stair in framing the test act. On these accounts he became peculiarly obnoxious to the duke ; and was at last obliged to flee to Holland, to avoid prosecution. Being cited before the privy council and justiciary court, and not appearing, he was declared an outlaw, and his estate confis- cated. In Holland he vvas consulted by the earl of Argyle concerning the designs then in agita tion ; and in 1G81 came over to England, with a Mr. Baillie, to concert matters with lord Russel. Mr. Fletcher managed his part of the negociation with so much address, that administration could find no pretext for seizing him : Baillie was, however, condemned to death; and, although of- fered a pardon on condition of accusing his friend, he persisted in rejecting the proposal with indignation. In 1685 Mr. Fletcher went to the Hague, to promote the

opposition to the arbi- trary measures of James II.; but.it does not ap- pear that he possessed much of the confidence of the party. He, however, joined the duke of Monmouth upon his landing, and received a principal command under him. But the duke was deprived of his services by the following occurrence: — Being sent upon an expedition, and not esteeming times of danger to be times of ceremony, he had seized the horse of the mayor of

Lyme, which stood ready equipped for its mas- ter. The mayor, hearing this, ran in a passion to Fletcher, gave him oppnobrious language, shook his cane, and attempted to strike him. Fletcher, though rigid in the duties of morality, yet having been accustomed to foreign service both by sea and land, in which he had acquired high ideas of the honor of a soldier and a gentleman, and of the affront of a cane, pulled out his pistol, and shot him dead on the spot. A clamor was on this raised against him among the people of the country : in a body they waited upon the duke with their complaints ; and he was forced to dis- miss him. The earl of Buchan and some others of his biographers, however, give the following account of the cause of his departure. The earl says ‘ that when Monmouth was proclaimed king at Taunton, Mr. Fletcher saw liis deception, and resolved to proceed no fardier in his engage- ments, which he considered from that moment as treason against the just rights of the nation, and treachery on the part of Monmouth.’ It was his misfortune to land in Spain ; where he was im- mediately arrested, and cast in-to prison, tilV a vessel should be prepared to carry him a victmi in chains to the court of London. But on the morning before the ship could sail he was liber- ated by some unknown friend, and in disguise. he j)roceeded in safety through Spain. During his exile he maintained an extensive correspondence with the friends of liberty at home, and partly employed himself in making a curious collection of books. He repaired to Hungary, and served several campaigns as a volunteer under the duke of Lorraine with great reputation. At length, un- derstanding that the great design then projectinsj in Holland (and upon the issue of which he considered the liberties of Britain to depend), had attained a considerable degree of maturity, he hastened thither; where his counsels and ad- dress were of eminent service. He came over witli the stadtholder ; and in zeal, activity, and political skill, proved inferior to none of the leaders m the Revolution. It appears, however, that, while others labored to turn this event to their own emolument and aggrandisement, Fletcher asked nothing. His estate had been forfeited, and his house abandoned to the military ; his fortune was greatly shattered, and his family re- duced to distress. Nothing was given him in recompense of all*

his sufferings. On the con- traiy, he and the duke of Hamilton were distinguished by marks of royal and ministerial dislike. In 1703 he opposed a vote of supply until 'the house should consider what was necessary to secure the religion and liberties of the nation on the death of the queen' (Anne), and carried va- rious limitations of the prerogative, forming part of the ' Act of Security,' rendered nugatory by the Scottish Union, which he vehemently opposed. He died at London in 1716, aged sixty-six. His remains were conveyed to Scotland, and depo- sited in the family vault at Salton. ' His poli- tical principles,' says lord Buchan, ' were too high and refined, and his sentiments were too Roman, or rather, as I may now say, too Gallic, and too mucli in the odor of philosophical {)oli- tics, to accept of the privilege granted by James •'I's act of indemnity, to return to his country

and estate, when under the dominion of disguised despotism sanctioned by a venal parliament.' He also possessed a dignity and warmth of tem- per which would not suffer him to brook an in- dignity from any rank of men, or in any place. Of this he exhibited a singular proof in the Scotch parliament. The earl of Stair, secretary of state and minister for Scotland, havnig in the heat of debate used an improper expression in reference to Mr. Fletcher, he seized him by his robe, and insisted upon public and immediate satisfaction, when his lordship was obliged in- stantly to beg his pardon, in presence of the parliament

Fletcher (Dr. Giles), a political writer of the sixteenth century, was born in Kent, and educated at Eton. In 1569 he took the degree of B. A. at Cambridge. In 1573 that of M. A. and in 1581, that of LL. D. He was sent by queen Elizabeth as a commissioner into Scotland, Germany, and the Netherlands; and in 1588 as ambassador to Russia, to settle a treaty of com- merce with the czar Theodore, and revive the trade of the English Russia Company, which the Dutch had encroached on. This he not ordy accomplished, "but, from the observations he made during his embassy, drew up and published on his return. An account of the Russe common- wealth, or Manner of Government by the Russe Emperor, commonly called the Emperor of Moskovia; with the manners and fashions of the people of that country, 1590, 8vo., re-printed in 1643 in 12mo. He was afterwards made secre- tary to the city of London ; master of requests, and treasurer of St. Paul's ; and died in 1610.

Fletcher (Dr. Richard), brother to Dr. Giles, was born in Kent, educated and graduated at Cambridge, promoted to be dean of, Peterbo- rough, in 1583; bishop of Bristol in 1589; of Worcester in 1592, and of London in 1594. He attended Mary queen of Scots at her execu- tion, in 1587, and importuned her to change her religion. He was twice married, which gave such offence to the virgin queen, that she ordered him to be suspended from

his bishopric. He was afterwards restored, but the disgrace is said to have hastened his death. He died sud- denly in his chair at London in 1596.

Fletcher (John), son of the preceding, was born in 1576, and rendered himself famous by his dramatic writings, in concert with his friend Francis Beaumont. See Beaumont. He was educated at Cambridge, where he made a great proficiency in his studies. Ilis natural vivacity, for which he was remarkable, soon ren- dered him a devotee to the Muses ; and his for- tunate connexion with a genius equal to his own raised him to one of the highest places in the temple of poetical fame. He was born nearly ton years before Mr. Beaumont, and survived him about the same length of time ; the plague, which happened in 16‘2r), involving him in its general destruction, in his forty-ninth year.

Fletcher (Phineas), son of Dr. Giles Fletcher, was educated at I’ton, whence he was removed to King’s College, Cambridge, in 1600. He took orders in 1021, and obtained the livingof Helgay in Norfolk, which he retained nearly twenty-nine years. His principal works are the

Purple Island, and Piscatory Eclogues; tlie former being a description of man, founded upon an allegory in the ninth canto of the second book of “the Faerie Queen, and in the Spenserian style. Fletcher also wrote a dramatic piece entitled Sicelides, intended to be performed at Cambridge before king James I., and printed in IGll ; and a work in prose entitled De Lite- ratis Antiquae Britanniie.

Fletcher (Abraham), an ingenious mathe- matician, born at Little Broughton, in Cumber- land, in 1714, and bred to his father’s business, which was that of a tobacco-pipe maker. He learned to read and write entirely by his own application, after which he taught himself arith- metic, and mathematics, to which he added the study of botany. When about thirty years of age he became schoolmaster, to which profession he added those of astrologer and doctor, by which means he acquired a fortune of £3000. He died in 1793. He drew up a compendium of practi- cal mathematics, under the title of the Universal Measurer, published in 1 vol. 8vo.

Fletcuer, or Flechiere (John William de la), a Swiss divine, was born at Nyon, in the Pays de A’aud. He was educated at Geneva, but went into the military service in Portugal, which profession he quitted and “became a

tutor in the Hill family. In March, 1757, he took orders; and three years afterwards was made vicar of Madeley in Shropshire. In 1 770 he took charge of lady Huntingdon's school for educating young men for the ministry, at Trevecca in Wales, but, in consequence of his anti-calvinistic principles, did not long remain. He then la- bored among the Wesleyan methodists, his at- tachment to whom exposed him to much annoy- ance. He died in 1786, leaving behind him a very amiable character, and ten volumes of con- troversial works against Calvinism.

FLETEWOOD (William), an eminent Eng- lish lawyer and recorder of London, in the reign of queen Elizabeth. He was very zealous in suppressing mass-houses, and committing popish priests; but once rushing in upon mass at the Portuguese ambassador's house, he was commit- ted to the fleet for breach sf privilege, but soon released. He was a good popular speaker, wrote upon government, and, was a good antiquarian. His principal wurks are, 1. Annalium tarn regum Edwardi V. Ricardi III. et Henrici VII. quam Henrici VIII. 2. A Table of the reports of Edmund Plowden. 3. The Office of a Justice of Peace He died about 1593.

FLEVILLEA, in botany, a genus of the hex- andria order, and dicecia class of plants. Male CAL. quinquefid : cor. quinquefid : stamina five ; the nectarium five converging filaments. Female CAL. quinquefid ; there are three styles ; fniit an hard trilocular barky apple.

FLEURI (Andrew, Hercules de), bishop of Frejus, preceptor to Louis XV., cardinal and minister of state, was born in 1653, and died in 1743. He was an able negociator ; and distin- cuished himself during his ministry by his pro- bity, and his pacific disposition.

Fleuri, or Flecry (Claude), one of the best French critics and historians of his age, was born at Paris in 1640. Reapplied hiraselfto

the law, was made advocate for the parliament of Paris, and attended the bar nine years : he then entered into orders, and was made preceptor to the princes of Conti. In 1689 Lewis XIV. made him sub-preceptor to the dukes of Bur- gundy, Anjou, and Berry: and in 1706 he gave him the priory of Argenteuille. In 1716 he was chosen counsellor to Louis XV. and died in 1723. He was the author of a great number of esteemed French works ; the principal of which are, 1. An Ecclesiastical History, in twenty vo- lumes, the last of which ends with the year 1414.

2. The Manners of the Israelites and Christians.

3. Institutions of Ecclesiastical Law. 4. On the Choice and Method of study. 5. The Duties of Masters and Servants, &c.

FLEURUS, a small town of the Netherlands in Hainault, not far from the Sambre. In 1622 a celebrated battle took place here between the Spaniards and Germans ; in 1690 between thf Germans and French, the latter commanded by Luxemburg : in 1 794 (26th June), between th allies and French, the latter commanded by Jourdan; and finally on the 14th June, 1815, a partial but sharp action between the French and Prussians, just previous to the battle of Wa- terloo. Population 2020. Seven miles north-east of Charleroi.*

FLEUR-DE-LIS, in heraldry. By some this flower is called the lily, or flower of the flag, and has only three leaves, by which itdiff'ers from the lily of the garden, that having always five ; others suppose it to be the top of a sceptre ; some the head of the French battle-axe ; others the iron of a javelin used by the ancient French. Many of the deceased antic[uaries, accord- ing to D. Orwade, as well as some of the present day, have thought, and do think, that it was originally meant to represent that flower from which it derives its name. See diagram, gules, a fleur-de-lis argent ; name Digby.

FLEURY, a cross-fleury is differenced from the cross-flory, by its having a line between the ends of the cross and the flowers, which that has not. See diagram. Azure a cross fleury, gules; name Jamieson.

FLEW. The preterite of fly, not of flee.

J/J

The people yreio upon the spoil.

1 Samuel xiv.

32.

O'er the world of waters Hermes flew, 'Till new the distant island rose in view.

Pope's Odytsey. As years increased her ruddy beauty grew. And Patty's fame o'er all the village ˆeiu, Gay.

FLFAV, n. s. 5 The large chaps of a deep- Flewed, adj. 5 mouthed hound. Chapped mouthed.

My hounds are bred out of the Spartan kind. So Jiewed, so sanded, and their heads are hung With ears that sweep away the morning dew.

Sha/apeare.

FLEXA'NIMOUS, adj. Latin flexanimm. Having power to change the disposition of the mind.

That Jlxanimous and golden-tongued orator.

Howel.

FLEX'EBLE, adj. Flexibil'ity, n. s. Flex'ibleness, n. s. Flex'ile, adj. Flex'ion, n.s. Flex uous, adj. Flex'ure, n.s. sion ; manageable ;

^ l^aLjiexlbilis, ajiec- to, to bend ; Fr, flexi- ble, flexibiliti,. Bend- >ing, not brittle ; pliant, I not stiff. Metapho- I rically, ductility of J mind ; easy of persua- facility ; obsequiousness : flexile is pliant, easily bent or turned : flexuous, full of turns or bendings : flexion, the act of flexure ; the state or habit of bending ; hence also, the part bent; the joint.

His mighty strength lies in his able loins. And where the fle.xure of his naval joins.

Sandys. When splitting winds tJldke fiexihle the knees of knotted oaks.

Shakspeare. Thinkest thou the fiery fever will go out Witli titles blown from adulation 1 Will give place to flexure and low bends?

Id. Henry V.

Take a stock gilly-flower, tie it upon a stick, put them both into a glass full of quicksilver, so that the flower be covered : after four or five days you will find the flower fresh, and the stalk harder and lesajiexible than it was. Baeon.

Phocyon was a man of great severity, and no way flexible to the will of the people. Id.

Of a sinuous pipe that may have some ioxrc flexions, trial would be made. Id. Natural History.

Resolve rather to err by too much flexibility than too much perverseness, by meekness than by self-love.

Hammond,

In regard of the soul, the numerous and crooked narrow cranies, and the restrained flexuous rivulets of corporeal things, are all contemptible. Dighy.

Keep those slender aerial bodies separated and stretched out, which otherwise, by reason of their flexibleness and weight, would flag or curl. Boyle.

Under whose care soever a child is put to be taught, during the tender and flexible years of his life, it should be one who thinks Latin and language the least part of education. Locke.

T\c flexibleness of the former part of a man's age, not jet grown up to be headstrong, makes it more governable. 14.

TSivery flexile wave Obeys the blast, the aerial tumult swells.

Thomson. The goddess ceased, — and calling from afar The wandering zephyrs, joins them to her car ; Mounts with light bound, and graceful as she bends. Whirls the long lash, the flexile rein extends.

Darwin. Contrary is the flexure of the joints of our arms and legs to that of quadrupeds : our knees bend forward, whereas the same joint of their hind legs bends back- ward. Ray.

FLEX'OR, n. s. Lat. The general name of the muscles which act in contracting the join ts.

Flatterers, who have the flexor muscles so strong that they are always bowing and cringing, might in some measure be corrected by being tied down upon a tree by the back. Arbtithnot.

FUCK'ER, V. a. Goth. fi;i/gra,ftokra ; Belg. fliggeren ; Sax. pliccejiian. To flutter ; to play the wings ; have a fluttering motion.

And hire to glad he did all his entent ; For whiche her gost, that flickered aie alofte. Into her wofuU hert aien it went.

Chaucer. Troilus and Creseide. The wreath of radiant fire On flickering Phoebus' front.

Shakspeare. King Lear. 'Twas ebbing darkness, pa<;t the mid' of night. And Phosphor, on the confines of the light. Promised the sun, ere day began to sprint ■ The tuneful lark already stretched her wing. And flickering on her nest made short essays to sing.

Dry den. At all her stretch her little wings she spread. And with her

feathered arms embraced the dead • Then flickering to his pallid lips, she strove To print a kiss, the last essay of love. Id.

FLIMSY, adj. ‘ Of this word,’ says Dr. John- son, ‘ I know not any original, and suspect it to have crept into our language from the cant of manufacturers.’ It has also been conjectured to come from flame, that is, flamy ; showy; easily seen through. But the Sax. iempe ; Teut. limp, limber ; pliant ; appears to be the true origin of it. A work or performance is flimsy which has nothing solid in it. Without strength of texture ; what is weak, feeble : hence, metaphorically, mean ; spiritless.

Proud of a vast extent of flimsy lines. Pope,

It must be very surprising to one who reads and studies the sacred scriptures with a free, unbiassed mind, to see what elaborate, finespun, flimsy glosses men will invent and put upon some texts as the true and genuine sense of them. Mason.

O’er his broad neck a wiry net he flung. Quick as he strode, the tinkling meshes rung ; Fine as the spider’s y/ms«/ thread he wove The immortal toil to lime illicit love. Darwin.

FLINCH, u.n.i Perhaps corrupted from Flincher, 71. s. S fling, or from the Teut. UeiKken, to start back; there is also a Saxon verb pi ion, to avoid. In Shakspeare it signifies to fail : but its usual application is to shrink from any suffering or undertaking ; to withdraw from any pain or danger. He is a flincher who shrinks or fails in any matter.

If I break time, or flinch in property Of what I spoke, unpitied let me die.

Shaks’peare. A child, by a constant course of kindness, may be accustomed to bear very rough usage without flinching or complaining. Locke.

Every martyr could keep one eye steadily fixed upon immortality, and look death and danger out of coun- tenance with the other ; nor did they flinch from duty, for fear of martyrdom. South’s Sermons.

Oh ingratitude, that John Bull, whom I have honoured with my friendship, should flinch at last, and pretend that he can disburse no more money.

Arhuthnot’s History of John Bull. ‘Twas blow for blow, disputing inch by inch. For one would not retreat, nor t’other y/mcA.

Byron.

FLING, preter. Flung ;^ Lat. Jligo, ssiys

part. Flung, or Flong ; j Skinner ; accord-

V. a. & V. n. I iiˆg lo others, it

Flinger, «. s. I is derived from

Flung, participle and pre- \ flying ; so to

terite. J fiˆˆg is to set

flying. So says Dr. Johnson. Serenius more

probably, that Sax. flenga, to cast or throw away,

is the origin of this word. To cast from the

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hand; to tlirow with violence or otherwise, either from the liand, from a machine, or with any violent force or concussion ; to move for- cibly ; to flounce ; to wince ; to fly into violent and irregular motions. And also in the sense of casting imputation and dishonor upon a person or character. The substantives are me- taphorically employed to signify a gibe ; a sneer ; a contemptuous remark : and a ilinger is not merely one who throws, but one who gibes and jeers. The verb is also used in phrases ; thus, to fling away ; to eject, to dismiss ; to fling down, to demolish, to ruin ; to fling off", to baffle in the chase, to defeat of a prey ; to fling out, to grow unruly, or outrageous.

Cromwell, I charge thee,/% away ambition ; By that sin fell the angels. Shakspeare.

The matrons y/u7i,9 their gloves, •_' Ladies and maids their scarfs and handkerchiefs Upon him. Id. Coriolanus.

Duncan's horses. Turned wild in nature, broke their stalls, _ˆunˆ ovi. Contending 'gainst obedience. Shakspeare.

How much unlike that Hector who returned Clad in Achilles' spoils ; when he, among A thousand ships, like Jove, his lightning flung.

Denliam, Millions of spirits for his fault amerced Of heaven, and from eternal splendours y/wny. For his revolt yet faithful how they stood Their

glory withered ! Milton's Paradise Lost.

There eternal summer dwells. And weit-winds with musky wings About the cedared alleys Jiing ,, """

Nard and cassia's balmy smells. Milton,

The angry beast Began to kick, and Jling, and wince. As if he had been beside his sense. Hudihras. 'Tis fate thidjiings the dice ; and as she Jiings, Of kings makes peasants, and of peasants kings.

Dryden. A heap of rocks, falling, would expel the waters out of their places 'with such a violence as to Jiing them among the highest clouds. Burnet's Theory.

These men are too well acquainted with the chace to \iˆ flung off by any false steps or doubles.

Addison's Spectator. The knight seeing bis habitation reduced to so small a compass, ordered all the apartments to be flung open. id-

I know thy generous temper : Fling but the appearance of dishonour on it. It straight takes fire. Addison's Cato.

No little scribbler is of wit so bare. But has his fling at the poor wedded pair.

A ddison. These are so far from raising mountains, that they overturn and fling down some of those which were before standing. Woodward.

And when up Ludgate-hill huge carts move slow Far from the straining steeds securely go. Whose dashing hoofs behind them flirig the mire. And mark with muddy blots the gazing squire.

Gay. Every beam new transient colours flings. Colours that ˆ change whene'er they wave their wings. ' Pope.

I, who love to have a fling Both at senate-house and king. Thought no method more commodious Than to show their vices odious. Swift.

It is not noon — the sun-bow's rays still arch The torrent with the many hues of heaven.

And roll the sheetea silver's waving column

O'er the crag's headlong perpendicular.

And fling its lines of foaming light along.

And to and fro, like the pale courser's tail.

The Giant steed, to be bestrode by Death,

As told in the Apocalypse. Byron. Manfred,

FLINDERS (Matthew), a modern and Eng- lish navigator, of respectable talents, was a native of Lincolnshire, and went to sea in the merchant service. In 1795 he sailed as midshipman with captain Hunter to New Holland, and was pro- moted in the early part of the yeai 1801 to the command ofan expeditionof discovery, consisting of a schooner of 420 ions burden, an astronomer, botanist, draftsman, &c. We should state that lieutenant Flinders had previously distinguished himself by the discovery of Bass's Straits (be- tween New Holland and Van Diemen's land), in conjunction with the person whose name they bear. After surveying the western coast of New Holland, in the summer of 1802, Flinders was obliged to return in August 1803 to Port Jack- son, his vessel having been wrecked on a coral reef. The crew and officers however being saved, Mr. Flinders embarked in the Cumberland, a boat of nineteen tons burden, in December, for the purpose of bringing home his papers. On his arrival at the island of Mauritius, not- withstanding he had passports from the French government, he was cruelly detained, together with his books, his most valuable collection of charts of the coasts he had explored, and all his papers. After a captivity of more than three years he was liberated, through the intercession of the Royal Society of London. On his return to England he drew up an account of his researches, pub- lished after his death, in 1814, under the title of A Voyage to the Terra Australis, undertaken for the purpose of completing the discovery of that vast country, in 1801, 1802, and 1803; 2 vols. 4to., with a folio atlas.*

FLINT, 7J.S. ˆ Sax. phnr ; Swed. Tent, and Flin'ty, ad). S Belg._//i«ˆ, from Sax. ligenl, Si fire-stone. — Thomson. A semi-pellucid stone, composed of crystal debased, of a blackish-gray, of one similar and equal substance, free from veins, and naturally invested withˆaˆwhitish crust. It is sometimes smooth and equal, more frequently rough : its size is various. It is well known to strike fire with steel. It is useful in glass-mak- ing. Any thing eminently or proverbially hard. The adjective signifies made of flint ; strong; full of stones : metaphorically, hard of heart ; cruel ; inexorable.

For, certes, fire ne may not come out of nothing, but if it were first in the same thing naturelly ; as fire is drawne out o{ flintes with stele.

Chaucer. The Persona Tale.

Your tears, a heart oi flint Might tender make. Spenter.

Throw my heart Against the flint and hardness of my fault.

ˆ Shakspeare.

Tyrant custom Hath made the flinty and .steel couch of war My thrice-driven bed of down. Id. Othello. Searching the window for a flint, I found This paper. ”’• •ˆ”’•”■v Ccesar.

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Gratitude, ‘Thtonztiflinti/ Tartar’s bosom, would prep forth. And answer thanks. Shahspeare.

The gathering up oi flints m flinty ground, and lay- ing tliem on heaps, is no good husbandry.

Bacon’s Nat. History. There is the same force and the same refreshing virtue in fire kindled by a spark from dˆ flint, as if it were kindled by a beam from the sun.

South’s Sermons. To pave thy realm and smooth the broken ways. Earth from her womb -i. flinty tribute pays. Oay. Juan, who saw the Moor’s late minion bleed As if his veins would pour out his existence. Stood calling out for bandages and line And wished he had been less hasty with hisˆm.*

Byron.

Flint, in natural history, a kind of semi-trans- parent, or not quite opaque stone; generally of a roundish form, and covered with white crust of a smooth, uniform, shining texture ; so hard that they will strike fire with steel ; calcinable by fire, after which they become white, friable, and, according to Henckel, heavier than before, and soluble by acids; vitrifiable only by the very violent heat of the largest speculums, such as that of ViUette, and not even by the focus of one of Tschirnhausen’s lenses, according to an experiment of Neumann. They are found gene- rally in beds of chalk and of sand; but never forming entire strata of rock as jasper does. By long exposure to air and the sun they seem to decay, to lose their lustre, their firmness, and texture, and to be changed to a white calcareous earth or chalk. Hence they are almost always found covered with a white chalky crust. They are also convertible into a calcareous earth by fusion, or vitrification with so much fixed alkali, that they shall resolve into a liquid mass called the liquamen, or oil of flints. And by precipita- tion from the

fixed alkali by means of acids. This genus of stones, or silicious earths, C ronstedt considers as of an intermediate nature between the quartz and jasper ; both of which it so nearly resembles that it is difficult to distinguish them. He characterises it thus : 1. It is more uni- formly solid and not so much cracked in the mass as quartz, but more pellucid than jasper. 2. It bears the air better than jasper, but worse than quartz. 3. For the purpose of glass- making it is better than jasper, l3ut not quite so good as quartz. 4. Whenever it has had an opportunity of shooting into crystals those of quartz are always found in it ; as if tlie quartz made one of its constituent parts, and had been squeezed out of it. This may be seen in every hollow flint and its clefts, which are always filled up with quartz. 5. It often shows most evi- dent marks of having been originally in a soft and slimy tough state like jelly. — To these pro- perties the following are added by other authors. 6. When broken it is scaly, generally unequal, and cracks into thin lamellae, 7. In a calcin- ing heat it becomes opaque, white, and milky.

The following is Mr. Kirwan's description of the flint. It is, says that eminent mineralogist, very commonly of a yellowish or bluish-gray cast, often grayisli-black. Several of these often meet in the same specimen, either in veins, stripes, clouds, or dots. Vol. IX.

*Amorphous, interspersed in other stones, or in nodules, or rounded lumps, often perforated, very rarely crystallised, in double triangular pyramids ; often also forming the substance of petrifactions, particularly of echinites. Its sur- face generally uneven and wrinkled, either smooth or rough, often covered with a rind, either calcareous or argillaceous. Its external lustre, 0 or 1. Internal 1. Transparency 2-1, sometimes nearly 3. Fracture conchoidal, sel- dom imperfectly. Fragments, 3. Hardness from 10 to 11. Specific gravity from 2-58 to 2*63. Heated, it decrepitates, whitens, becomes brittle, and opaque, is infusible at 168ˆ, and is barely softened by pure air ; the usual fluxes atfect it as they do quartz. The impressions of marine shells, and even of leaves, are frequently found in flints, which leaves no doubt of their having been produced in the moist way, and even that some are of modern formation. Ac- cording to Mr. Weigleb's analysis, they contain about b-80 silex, 0-18 avgill, and 0-02 calx. Its transitions are into quartz, calcedony, cornelian, and hornstone. It is frequently intimately mixed, not only with quartz or calcedony, but even with calcareous spars and earth. It occurs in primitive, transition, secondary, and alluvial mountains. In the first two, in metalliferous and agate veins. In secondary countries it is found in puddingstone, limestone, chalk, and amygdaloid. In chalk it occurs in great abund- ance in beds. These seem to have been both formed at the same time. Werner, however, is of opinion, that the tuberose and many other forms have been produced by infiltration.*

The method of preparing flints for the nicest operations in the glass trade is

this : — choose the hardest flints, such as are black and will resist the file, and will grow white when calcined in the fire. Cleanse these of the white crust that adheres to them ; then calcine them in a strong fire, and throw them while red-hot into cold water; wash off the ashes that adhere to them, and powder them in an iron mortar, and sift them through a very fine sieve ; pour upon this powder some weak aquafortis, or the phlegm of aquafortis, to dissolve and take up any particles of iron it may have got from the inortar ; stir this mixture several times ; then let it rest, and in the morning pour off" the liquor, and wasli the powder several times with hot water, and afterwards dry it for use. You will thus have a powder for making the purest glass as perfectly fine and faultless as if you had used rock crystal itself. The washing off the ferruginous parti(;les with aquafortis is not necessary when the glass intended to be made is to be tinged with iron afterwards ; but when meant to be a pure white, this is the method that will secure success.

FLINT, or Flintshire, a county of North Wales, bounded on the south-east by part of Denbighshire, which, intersecting it in that direction, insolates the hundred of Maylor ; on the south-west by a larger portion of the same county ; on the nortii it abuts on the Irish Sea ; and on the north-east it is separated from Cheshire by the estuaiy of the Dee, the ancient Seteia estuarium of Ptolemy. This county is in sliape a kind of stripe or slip of land, partially sej);^*

rated from a much larger region, to which it previously belonged, and extends nearly thirty- three miles in length, and, on the average, about ten in breadth. It is 115 miles in circuit, and contains a superficial area of 309 square miles, or 197,760 square acres.

When the liomans invaded Britain, the por- tion of country forming the present county of Flint was comprised in the territory of the Ordo- vices. This county, or a certain portion of it, was long designated under the appellation of Tegangle, or Teigengle, a term that has been sup- posed to mean Fair England. After the subju- gation of the Ordovices, this district was included among the portion of the island which constituted the region denominated Britania secunda. In the Saxon dynasty, the whole of what constitutes the present county of Flint was brought under the domination of those strangers, immediately after the surrender of Cl'iester to the arras of Egbert. It is now in the province of Canter- bury, and included in the two dioceses of St. Asaph and Chester. For the purposes of the administration of justice, it is placed in the cir- cuit visited by tiie chief justice of Chester

and his associate; and, for the sake of shrival and subsidiary order, is divided into five hundreds, one citv (St. Asaph), one borough (the county-town of Flint), and three other market-towns (_Mold, Caerwis, and Holywell), and comprises twenty-eight parishes. This county gives the title of earl, conjoined with the county palatine of Chester, to the Prince of Wales ; that of vis- count to the family of Ashburton : Greddington is a newly created barony for the family of Kenyon. Flintshire sends one member to par- liament for tlie county, aˆd one for Flint as the county-town.

In a comparative view, though this cannot be called a mountainous country, yet both as to soil and surface it is considerably diversified. Some of its ridges have rather sharp escarpments; but generally the hills fall in gentle slopes, de- scending into fertile vales, through which mean- der several pleasing and useful streams. From the shoTe of the Dee, the only navigable stream, the land suddenly rises for three or four miles in fine equalities, consisting of an argillaceous soil highly productive in corn and grass. Beyond this, in the vicinity of Halken, a mountainous tract runs for a considerable extent nearly parallel with the river, the upper parts of which present a sterile appearance ; but the interior is incalcu- lably rich, abounding in minerals, lead, and calamine, ihterspersed with immense strata of limestone ; and tlie lower parts are diversified with well wooded dingles, that, coming from the cwms of the hills, open theh embouchures to the tide river. The northern part of the county is in general flat, particularly towards the sea ; but yields excellent corn and grass. The eastern part has a line of elevation whose escarpment faces the vale of Clwyd, and forms a bold fron- tier, well known under the denomination of the <]lwydian Hill, the insolated summits of which, Moel Artlmr, Moel Fetilli, Moel y Famma, are conspicuous at an immense distance. These form a chain of varied elevation, commencing at Prestatyn, on the estuary of the Dee, extending

in a direction from north to south us far as tliˆ point of Moel yr Accre in the parish of Llanan- mon, where, reacliing a furtiier county, they ter- minate in the mountain Cefndu in the parish of Gwyddelwern. No passage is obtainable over their heath clad summits, but by the few bwlchs that are to be climbed for the purpose nearly two-thirds of their height, e'ˆcept one opening near Bodfari, where a road has been formed from Holywell to Denbigh. The soil of these hills is of a commixture of clay and gravel, and the ar- gillaceous is the predominant portion. The substrata of this elevated range principally con- sist of calcareous substances.

The other rivers of this district, as we have inti- mated, are not nav'igable. The Clwyd having risen in Denbighsnire, and watered that county, enters this in the vicinity of Bodfari, and, taking a northerly direction, empties itself into the Irish Sea. The Alun, which laiid-divesln the vicinity of Mold,

has its fountain head in the same county ; and, after a singularly curious route through Flintshire, re-enters Denbighshire iii its course to form a confluence with the Dee. The Terrig, Whaler, Elwy, &c., form contributary streams which furnish water for the demand of numerous mills, and afl"ord, for the table, a supply of vari- ous and delicate fish.

The natural productions of this county are more numerous and valuable than might be ex- pected in a district of so limited an extent. Its mineralogy has long been an interesting subject, and, at a very early period, Flint virtually became a mining county. The mineral line has been briefly pointed out by the accurate Pennant, who divides it into two parts, the highland and the lowland tracts. The former, he observe.ˆ, commences near Diserth, where the rocky ridge called Dalor-goch impends over the fertile ara- ble champaign lands of the Rhuddlan vale. The course southward runs through the parishes of Cwm, Tremeirchion, and Caerwys. The small valley of Bodfari occasions an interjacent break of continuity; part of the line is again found, passing through Skeifiog and Nannerch ; whence, near the town of Mold, it makes a considerable detour through the parish of Northop, and then exhibits its front to those of Halkin, Holywell, Whiteford, Llanasa, Gwaenyscor, and Meliden. The second division is separated from the first by a deep depression of the previously elevated line of country in the vicinity of Rhos Esmor; artd numerous coal and other mines are often found in the flat surface, on the western side of the lower portion. With.ˆIold Mountain the land rises again, and the mineral tract takes a south- erly course, as pre'iously stated, through the adjacent county of Denbigh. The central and western parts of the former, extending from Dalar-goch to Rhos Esmor, consist of calcareous strata that produce limestone of excellent quality ; and, in many instances, approximating to several kinds of foreign marble. On the eastern side of this tract the composite matter begins to alter, trapping, or rather changing into a mixed sort of silicious substance varying as to degrees of purity, denominated chert. Below this, a dark-looking shivery shale, becoming friable when exposed to the atmosphere, commences near Rhos Esmor ;

and so far as these decomposable strata occur ii. larger or smaller quantities, lead ore is found. Immediately as the shale disappears, freestone exhibits capabilities for quarrying useful stone ; and rich veins of coal lie subjacent, though at a great depth. The coal strata extend to the mar- gin of the Dee estuary, under whose bed they dip, the grass on the opposite side appearing again in the peninsulated tract, constituting the hundred of Wiral in Cheshire ; and further in the same north-easterly direction beyond tlie

IMersey in the county of Lancaster. The sud- den changes in the strata are as strikingly obser- vable, particularly near Nennerct, where the transition is demonstrable at first sight ; lime- stone rocks forming one side of the vale, and ledges composed of shivery shale the other oppo- sing declivity. Both the limestone and chert are of unknown depth ; because neither the natu- ral fissures, nor the mineral veins that cross them in lines of general but various bearings,have hither- to been fathomed. The minerals of those tracts are lead ores of various kinds, and degrees of estimated value ; lapis calaminaris, and another species of zinc that forms in some processes a substitute of calamine, known by the miners under the denomination of black-jack. At onetime a green lead ore was discovered in the Ilalken INIoun- tain, of such an obstinate tenacity as to resist the reductive force of a powerful blast-furnace before it would give out its metal ; which amounted to about thirteen hundred weight per ton. The gravel-ore found in what the miners denominate flats, that is, a loose stratum com- posed of sand and stones, consists of a kind of holders and tumblers, formed of a mineral rounded and polished on the surface by force of agitating waters. The lumps are of various sizes, from that of a hazel nut to pieces weighing several tons. The quality is nearly similar to the pot- ters' ore. Lapis calaminaris is found in great quantities, particularly on the eastern side of the county. This generally lies in a matrix of lime- stone or chert. It assumes various colors, viz. yellow, green, red, brown, or black, and is of different degrees of hardness, and mucli various surface: some is reticulated like corroded bones, and other kinds appear similar to indurated wax. Another species of zinc, pseudo-galena, or black-jack, is obtained in large

limestone strata in immense masses or rocks iliat form the matrices of different ores, useful for various purposes, but especially for the manu- facturing of porcelain and delft-ware : large quantities are sent to the Staffordshire and Shrop- shire potteries, where it is also used for commi- nuting calcined flints. Among other kinds of spars, the curious double reflecting species, the crystallum, vel Spatum islandicum, is not un- frequently found. Petroleum, or rock oil, is often met with in the limestone strata.

At Holywell is a fountain dedicated to St. Winifred, which was formerly believed to be endowed with miraculous medicinal properties, but the celebrity of the well has suffered great abatement of late years. It is chiefly distinguished by its extreme coldness and purity. Part of Flint- shire affords good pasturage, together with large harvests of excellent wheat, and other grain, which is principally exported to Liverpool. It is also a considerable breeding county of small black cattle. Formerly the inhabitants reared a vast number of bees, and made a liquor from the honey, called metheglin. It is now not much used. The principal manufactures are of copper and brass, carried on to a large extent near Holywell. Here are made bolts,

nails, sheathing for vessels, and plates of all descriptions ; as also copper pans of large dimensions, for the evapo- ration of salt. These works were established in the year 1765, and belong to the mining com- panies of the island of Anglesea. The other manufactures are of cotton and pottery.

Flint, in geography, the capital of Flint- shire, in North Wales. It is commodiously seated on the river Dee ; and though it is but a small place it has a corporation, consisting of a mayor, two bailiffs, and inferior officers. In conjunction with Rhyddlan, Overton, (‘aˆrwys, and Caergncrly, this borough sends one member to parliament. The voters, inhabitants paying scot and lot, are about 1200; the returning officer is the mayor of Flint. It was formerly noted for its castle, where Richard II. took shelter on his arrival from Ireland ; and where he was taken prisoner by the duke of Lancaster. This castle stands close to the sea on a rock, which in various parts forms several feet of its foundation. It covers about three quarters of an acre, but is now in ruins. It is 204 miles north-west of Lon- don, and twelve miles and a half W.N.W. of Chester.

FLIPP, n. s. A cant word. A liquor mncli used in ships, made by mixing beer with spirits and sugar.

The tarpawlin and swabber is lolling at Madagas- car, witli some drunken sunburnt wliorc, over a can oi flip. Dennis.

FLIP’PANT, adj. ˆ A word of no great au- Flip’pantlv, <«/i'. 5 'hority, probably derived from flip-flap. — Johnson. From Gntli. pleip-in, nimble. Thomson. It is applied only to speech, and signifies a nimble, flowing, prating, use of tlie t iiigue ; pert; saucy; petulant.

Hyde’s flippant stile tlicre pleasantly curvets. Still his sharp wit on states and princes whets ; So Spain could not escape his laughter’s spleen. None but himself must choose the king and queen.

Marivll.

An excellent anatomist promised to dissect a wo- man’s tongue, and examine whether there may not be in it certain juices, which render it so wonderfully voluble OT Jlippant. Addison.

Away v/ilh Jiippant epilogues. Tlioinsu7i. FLIRT, V. a., v. n. Jk n. s. i From S^x. piic- Fliuta'tion, n. s. < cepiaii ; Gothic

flcira, jii/gru, to flutter. Skinner thinks it {'oimed from the sound. To move any instrument l)ack- wards and forwards rapidly ; j)utting a iady'.s face in quick motion; lience it has been a])|)lied to tlie state of the mind and feelings indicated by such movement. Hence a flirt is one who loves to attract notice ; wiio holds out and em- ploys this or any other signal for admiration. It also means a young woman forward and pert. The verb is likewise used in tlie sense of jeering and gibing.

Scurvy knave, I am none of his flirt gills ; I am acne of his ska ins mates. Shakspeare.

Permit some happier man To kiss your hand, or flirt your fan. Dorset. Several yonng flirts about town had a design to cast us out of the fashionable world. Addison.

In unfurling the fan are several little flirtt and vi- brations, as also gradual and deliberate openings.

Id. Spectator. When waggish boys the stunted besom ply. To rid the slabby pavement pass not by Ere thou hast held their hands ; some heedless_^iV< Will overspread thy calves with spattering dirt.

Gat/. Before you pass the' imaginary sights. While the spread fan o'ershades your closing eyes. Then give one fiirt, and all the vision flies. Pope,

A muslin flounce, made very full, would give a very agreeMe flirtation air. Id,

Dick the scavenger Flirts from his cart the mud in Walpole's face.

Swift. Love had made Catherine make each lover's fortune.

Unlike our own half-chaste Elizabeth, Whose avarice all disbursements did importune.

If History the grand liar ever saith The truth ; and though Grief her old age might shorten, ■Because she put a favourite to death ; Her vile ambiguous method o{ flirtation,

And stinginess, disgrace her sex and station,

Bi/r07i.

FLIT, V. n. & adj. \ Dan. flitter ; and from Flit'ting. jˆ to fleet. To remove ; to

fly away ; to flutter; to rove on the wing; to be .ieet or unstable ; swift; nimble. In Scotland, a cant term for a clandestine al)andonment of one place for another to avoid the payment of rent. For whan that richessc shinelh bright. Love recovnreth ayen his light ; And whan it faileth he \vo \flit. And as she greveth so grevcth it.

Chaucer. Romaunt of the Rose. How oft do thev [angels] their silver bowers leave. To come to succour us that succour want I How oft do they with golden pinions cleave The flitting skycs, like flying pursuivant. Against fowle feendes to ayd us militant.

Spenser. Faerie Quecne His grudging ghost did strive. With the frail flesli ; at last n flitted is, VVhithtr the souls do die of men that live amiss.

Id.

So hardly he the flittedUte does win. Unto her native prison to return. Id.

He stopt at once the passage of his wind. And the free soul to flitting air resigned. Dryden. Which fastened, by the foot, the flitting bird.

Id. /Jineid. Fear the just gods, and think of Scylla's fate I Changed to a bird, and sent lo flit in air. Pope.

He flitted to and fro a dancing light. Which all who saw it followed wrong or right.

Bt/ron. FLITCH, U.S. Sax. plicce; Dun. fycke; Fr. Jicche, Jloc/ic. — Skinner. Icel. Jlyche, pro- bably from Jiuka (Goth./a), to divide. The side of a hog salted and cured.

But heretofore 'twas thought a sumptuou? feast. On birthdays, festivals, or days of state, A salt dry flitch of bacon to prepare; If they had fresh meat, twas delicious fare .

Drydenˆs Juven".l. He sometimes accompanies the present with a.fli/ch of bacon. Addison.

While he from out the chimney took A flitch of bacon off the hook. Cut out large slices to be frycd. Swift.

FLIT'TERMOUSE, n. s. Vcspcrtilio ; from flit and mouse. The bat ; the winged mouse.

FLIT'TING, n. s. Sax. j:\z, scandal. An offence ; a fault ; a failure ; a desert.

Thou tellest my flittings, put my tears into thy bottle. Ptalms.

FLIX, ?z. s. Corrupted from flax. Down; fur ; soft hair.

With his lolled tongue he faintly licks his prey ; His warm breath blows her flix up as she lies :

She trembling creeps upon the ground away. And looks back to him with beseeching eyes.

Dryden. FLOAT, V. n., v. a., n. s. & adj. Sax.pleoat; Yv.Jiotter. See Fleet. To swim on tlie sur- face of the water ; to be buoyant in any fluid, whether water or air : to cover with water ; as to float a meadow : to let water into dock : to render buoyant on its surface, the sliips that may be laid up. The noun is applied to any body so contrived or formed as to swim on the water. The statue of Venus, glorious for to see. Was naked, fleeting in the large see.

Chaucer. Knightes Tale. At last far off they many islandcs spy. On every side floiiny the floodes among : Then said the knight, ' Lo I I the land descry : Therefore, old Syre '. thy course doe thereunto apply.' Spenser. Faerie Queene. When the sea was calm all boats alike Shewed mastership in floating. Shakspeare.

The hindrance to stay wt il is the extreme length of a ship, especially if she be floaty, and want sharp- ness of way forwards. Raleigh. Thus Sa'an talking to his nearest mate. With head uplift above the wave, and eyes That sparkling blazed , his other parts besides Prone on the flood, extended long and large IjZiy floating many a rood. Milton. You will find this to be a very choice bait, some- times casting a little of it into the place where your float swims. Walton.

What divine monsters. O ye gods, were these Thˆi float in air, and fly upon the seas I Dryden. A passage for the weary people make ; With iisier floats the standing water strow, Of massy stones make bridges, if it flow. Id.

His rosy wreath was dropt not long before. Bom by the tide of wine, a.iid

Jioatinff on llio floor.

Dryden. Floating visions make not deep impressions enough to leave in the mind clear, distinct, lasting ideas.

Locke. Venice looks, at a distance, like a great town half Hoated by a deluge. Addison on Italy.

Swift they descend, with wing to wing conjoined. Stretch their broad plumes, and float upon the wind.

Pope. Now smoaks with showers the misty mountain- ground, AnA floated fields lie undistinguished round. Id.

Descending flames the dusky shrine illume, Fire the wet wood, the sacred bull consume ; Winged from the sea the gathering mists arise. And floating waters darken all the skies. Durwin. When &\ovi\y float i7ig down the azure skies A crimson cloud flashed on his startled sight.

Whose skirts gay sparkling with unnumbered dyes. Launched the long billowy trails of flickery light.

Beat tie. It is a pleasai

Bgron. The floating robe around him folding Slow sweeps he through the columned aisle — With dread beheld — with gloom beholding The rites that sanctify the pile.

Byron. The Bride of Abydot.

Float is also used for a quantity of timber bound together with rafters athwart, and put into a river to be conveyed down tlie stream ; and even sometimes to carry burdens down a river.

Float-Boards, boards fixed to water-wheels of under-shot mills, serving to receive the im- pulse of the stream, whereby the wheel is car- ried round. See Mill and Wheel. It is no advantage to have too great a number of float-boards; because, when they are all struck by the water in the best manner that it can be brought to come against them, the sum of all the impulses will be but equal to the impulse made against one float-board at right angles, by all the water coming out of the peustock through the opening, so as to take place on the float-board. The best rule in this case is, to have just so many, that each of them may come out of the water as soon as possible, after it has received and acted with its full impulse. As to the length of the float- board, it may be regulated according to the breadth of tlie mill. See Mill,

Float-Stone, a sub-species of the indi- visible quartz of Mohs., or spongiform quartz of Jameson. Color dirty white. In porous, mas- sive, and tuberose forms, and dull internally. Fracture coarse earthy : feebly translucent on the edges. Soft, but its minute particles are as hard as quartz. Rather brittle. Feels meagre and rough, and emits a grating noise when the finger is drawn across it. Specific gravity 0-49 Its constituents are, silica 98, carbonate of lime 2. It occurs in crusting flint, or in imbedded masses in a secondary limestone at St. Ouen near Paris.

FLOCK, n. s. &c v.n. Sax. plocc ; Goth, and Teut. flock; Dun. flok, a multitude, a Or. Xoxog, a troop. A company; usually, a company of birds or beasts ; sometimes of men ; but especially

of sheep, as distinguished from herds, whicn are of oxen. To gather in crowds, or large numbers

The heathen that had fled out of Judea came t Nicanor hy flocks. 2 Mac, xiv. 14,

A-morwe whan the day began to spring. Uprose our hoste and wos our aller cok. And gaderd us togcdev in a. flock, And forth we riden, a litel more than pas Unto the watering of Seint Thomas.

Chaucer. Prologue to the Canterbury Tales, Even all the nation of unfortunate And fatall birds about them flocked were Such as by nature men abhorre and hate.

Spetiser's Faerie Queene, She that hath a heart of that fine frame. To pay this debt of love but to a brother. How will she love when the rich golden shaft Hath killed the flock of all affections else That live in her. Sliakspeure. Twelfth Night,

!\Iany young gentlemen _//ocA to him every day, and il. ft the time carelessly. Shakspeare.

Sdlpo, when the people flocked about him, and that one said. The people come wondering about you as if it were to see some strange beast. No, saith lie, it is to see a man which Diogenes sought with lijs lanthorn at noon-day. Bacon.

The world's Great Light his lowly state hath blessed. And left his Heaven to be a shepherd base : Thousand sweet songs he to his pipe addressed : Swift rivers stood, beasts, trees, stones ran apace. And serpents flew to hear his softest strains ; He fed his flock where rolling Jordan reigns ; There took our rags, gave us his robes, and bore our pains. Fletcher's Purple Island.

Kusset lawns and fallows gray Where the nibbljng //ocAs do stray. 3Iilton.

All these, and more, cdLOip Jiockitig ; but with looks Downcast and damp. Id. Paradise Lost.

People do not flock to courts so much for their majesties' service, as for making their fortunes.

L'Estrange. France has a a sheep by her, to shew th,t the riches of the country consisted chiefly ia flocks and pasturage.*

*Addinon. For there is none to covet, all are full. The lion, and the libbard, and the bear Graze with the fearless y/ocfo; all bask a*t noon Together, or all gambol in the shade Of the same grove, and drink one common stream.*

Cowper.

Flock, 7i. s. From Jhccus ; Gr. ttXokoc- A lock of wool.

A house well-furnished shall be thine to keep. And, for a. flock bed, lean shear my sheep. Dryden.

FLODDEN, Floddon, or Flowden, a village of England, in Northumberland, on the Till, be- tween the Glen and the Tweed, five miles nort'i of Wooler. Near it the well-known battle of that name was fought, on the 9th September, 1513, be- tween the Scots, under king James IV., and the Englisli under the earl of Surrey. The conuuand of the van was allotted to the earl of Ilimtlcy; the earls of Lennox and Argyle commaiuled the Highlanders under James ; and the earls of Craw- ford and Montrose led the body of reserve. The earl of Surrey gave the command of his van to his son, the lord admiral ; his riglit wing was commanded by his other son, Sir Edward How- ard ; and his left by Sir Marmaduke Constable. The rear was commanded by the earl himself, lord Dacres, and Sir I'.dward Stanley. Under tiiose leaders served the flower of all th(,' nobilitv

and gentry tlien in England. Lord Hume served nnder the earls of Cniwford and Mon- trose, and Hepburn earl of Bothwel was in the rear. The first motion of the English army was liy the lord admiral, who suddenly wheeled to t!ie right, and seized a pass at lilford, where he planted his artillery so as to command the most sloping part of the ascent where the Scots were drawn up ; and it did great execution. The Scots had not foreseen this mamuuvre ; and it put them into such disorder, that the earl of Huntley

found it necessary to attack the lord admiral; which lie did with so much fury that he drove him from his post ; and the conse quence must have been fatal to the English, had not his precipitate retreat been covered by some squadrons of horse under the lord Dacres, which gave die lord admiral an opportunity of rallying ;md new forming his men. The earl of Surrey now advanced to the front, so that the English army formed om- continued Ime, which galled the Scots with perpetual discharges of dieir ar- tillery and boˆs. The Highlanders, as usual, impatient to come to a close fight, and to share in the honor of the day, which they now thought their own, rushed down the declivity with tlieir broad swords, but without order or discipline, and before the rest of the army, particularly the division under loid Hume, advanced to support them. Their impetuosity, however, made a con- siderable impression upon the main battle of the English ; and, the king bringing up the earl of Bothwel's reserve, the battle became general and doubtful : but by this time tlie lord adiairal, having again formed his men, came to the assist- ance of his father, and charged the division nnder the earls of Crawford and Montrose, who were marching up to support the Highlanders, among whom die king and his attendants were now fifihting on foot ; while Stanley, making a circuit round the hill, attacked the Highlanders in the rear. Crawford and Montrose, not being seconded by the Humes, were routed; and thus all that part ©f the Scottish army which was engaged under their kins, was completely sur- rounded by the division of the English under Surrey, Stanley, and the lord admiral. In this terrible situation, James acted with a coolness not common to his temper. He drew up his ■men in a circular form, and their valor more than once opened the ranks of the English, or obliged them to stand aloof, and again have recourse to their bows and artillery. The chief of the Scottish nobility made fresh attempts to prevail with James to make his escape while it was practicable ; but he obstinately continued the fight. He saw the earls of Montrose, Craw- lord, Ara;yle, and Lennox, fvill by his side, with the iDravest of his men lying dead on th« spot ; and, darkness now coming on, he himself was killed by an unknown hand. The English were i-ˆrnorant of the viciniy they had gained ; and had actually retreated from the field of battle, with a design of renewing it next morning. This disaster was evidently owinsj to the ro- mantic disposition of die king, and to the want of discipline among his soldiers ; though some writers have ascribed it to the treachery of lord Hume. Many of James's domestics knew and

mourned over his body ; and it appeared that he had received two mortal wounds, one through the trunk with an arrow, and the other on the head with a ball. His coat of armour was pre- sented to queen Catharine, who informed her husband, then in France, of the victory over the Scots. The loss on both sides in. this engage- ment is far from being ascertained ; though Polydore Virgil, who lived at the time, mentions the loss of the English at .5U00, and that of the Scots at 10,000.

FLOG, v.u. Lut. Jiug/um. To lash; to whip; to chastise.

The schoolmaster's joy is iofiog. Gay.

FLOOD, n. s. &: i'. a. } Saxon, plo'o ; from

Vhooo'cATE. J Sax. plopap, to flow ;

Goth, and Swed. flod ; Belg. vloccl; Yv.flot. A body of water; the sea; a river; a deluge; an inundation; flow; flux ; as opposed to ebb and retlux : the swelling of a river by rain, or any other cause. In medical science, catamenia. Thererb signifies to deluge; to cover \'ii\ water. Floodfjate is an artificial means of admitting, or excluding, water at pleasure : it is placed across a river, or a water-course, for this, purpose ; used generally, for whatever impedes, or introduces, water, or any other fluid : it is sometimes used in a metaphorical sense.

And whanne he was putt out in the Jlood, the lioughtir of Pharao took him up and nnrischide him into hir a sone. Wiclif. Dedis.

His dominion shall be ulso from the one sea to the otlier, and from the flood unto the world's end.

Psalm Ixxii. 8.

Wherefore, Lord Phoebus, this is my request, (Do this miracle ; or do min herte brest). That now next at this opposition Which in the signe shal be of the Leon, As preyeth hire so gret a flood to bring. That five fadome at the lest, it overspring The liighest rock in Armorike Bretaigne, And let ihis flood eniiurcn yercs twaine.

Chaucer. The Frankeleine Tale.*

Like a great ■v;a.teT-flood tliat tombling low, From the high mountaines, threates to overthrow. With suddein fury, all the fertile playne. And the sad husbandman's long hope doth throw Adownc the streame, and all his vowes make vayne ; Nor bounds, nor banks, his headlong usin« may sustayne. Spenser's Faerie Queene.

Yet there the steel staid not ; but inly bato Deep in his flesh, and opened wide a red floodgate.

Spencer. You see this confluence; this great _//(/0

Shakspcare. When went there by an age, since the gveal fluod. But it was famed with more than with one man?

Id. What need thtr bridge much broader than the_ˆ<)orf '

Id. By sudden floods, and fall of waters, Bui'kingbam's army is dispersed and scattered.

Id. Richard III. We seek to know the moving of each sphere. Ami the strange cause o' the' ebbs and floods of Nile.

Davics. His youth, and want of experience in maritime ser- vice, had somewhat been shrewdly touched, even l)t:\irc the s:luiccs and floodgates of popular liberty

ˆt set open.

Wotton.

FLO

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FLO

Those that have the good fortune of miscarrying, or being delivered, escape by means of their Jhods, rcvrlling the humours from their lungs. Harvey.

There the companions of his fall, o'erwhelmed ˆV iih y/oo(/s and whirlwinds of tempestuous fire. He soon discerns. Milton.

Or thence from 'Niger^^ood unto Atlas mount, The kingdoms of Almanzor, Fez, and Suz. Id.

All dwellings else Flood overwelmed, and them with all their pomp Deep under water rolled ; sea covered sea. Sea without shore. I

It is commonly opinioned that the earth was thinly inhabited before the flood. Browne.

As if the opening of her mouth had opened some gTCsX floodgate of sorrow, whereof her heart could not abide the violent issue, she sunk to the ground.

Sidney. Thus having said, as by the brook he stood. He scooped the water from the crystal _//o(«/.

Diyden. Where meadows are flooded late in spring, roll them with a large barley-roller. Mortimer.

The rain descended for forty days, the cataracts or floodyatea of heaven being opened. Burnet.

I ‘ scotched, not killed,’ the Scotchman in my blood. And love the land of ‘ mountain and of flood.’

Byron. “None saw his trickling tears — perchance, if seen. That useless flood of grief had never been : Nor long they flowed — he dried them to depart In helpless — hopeless — brokenness of heart.

Id. Corsair.

Flood (Henry), an eminent orator and poli- tician of the eighteenth century, the son of the ri’jht honorable Warden Flood, lord chief jus- tice of the King’s bench in Ireland, was born in 1732, and educated in Dublin. In 1749, after attondiiiij the university of Dublin for three years, he spent two years with much advantage under the tuition of Dr. Markhani, afterwards archbishop of York. Besides the acquisition of mathematics and other sciences, he became so complete a master of the Greek, that he read it with as much facility as English. In 1759 and 1761 he was chosen a member of the Irish par liameni, and soon rendered himself conspicuous as the great leader of opposition. The first im- portant measure which he attempted was, an explanation of Poyning’s law, by a misconstruc- tion of which the privy council had assumed a degree of power so unconstitutional, as to render the Irish parliament a mere cypher. See Poy- ning’s Law. By his repeated efforts, the ob- noxious part of that law was repealed. He next introduced a bill for limiting tlie duration of the Irish parliament, which till then had always con- tinued during the life of the king. This mea- sure, after much opposition, he at last effected, under the administration of lord Townshend, in 1769, when the octennial bill was passed, which first gave Ireland a constitution somewhat re- sembling the British. In 1775 lie was appoint- ed a privy counsellor in both kingdoms, and a vice-treasurer of Ireland ; but resigned this office in 1781 ; upon which his name was struck out of the list of the privy council. In 1782, the British par’iameiit having repealed the act, 6 Geo. 1- c. 5, declaring Ireland subordinate to, and dependent on, the imperial crown of (ircat

Britain, Mr. Flood, in two able speeches, ni sisted, that the simple repeal of this act was no security against similar future claims ; and, though he was supported by only three members in the Irish parliament, yet his doctrine was soon after adopted and ratiiied by the British parliament, who passed an act renouncing the claim for ever. In November, 1783, a violent altercation took place between Mr. Flood and Mr. Grattan, and he was soon after elected a member of the British parliament for Win- chester ; and in the suhsec[uent one for Seaford, which he continued to represent till

its dissolu- tion in 1790; soon after which he died of a pleurisy. His first known production was verses on the death of Frederick prince of Wales; in the Oxford collection, 1751. He also wrote an (3de to Fame ; translated the first Pythian (Jde of Pindar, printed in 1785; and several orations of Demosthenes, TEschines, and Cicero ; still in MS. Several of his speeches are extant; the last of which, delivered March 4th, 1790, on a parliamentary reform, was cele- brated by Mr. Yox as containing the most rational scheme ever proposed on the subject. He married Lady Frances Beresford, daughter of the earl of Tyrone, in 1762, but had no issue.

FLOOK, n. s. German, pflug, a plough. The broad part of an anchor which takes hold of the ground ; a flounder, a flat river fish.

FLOOR, n. s. & V. a. ˆ Sax. ploji, plojie ;

Flooring, n. s. ˆ Goth, flor (from Jla,

flat; low. — Thomson). ls. Jha?; Belg. vloer; Teut. flur; Fr. fleur. The bottom of an apart ment: Dr. Johnson says, ‘ the pavement : a pave- ment is always of stone : the floor of wood or stone’ ; but sec his own extract from Shaks- oeare : the part on which one treads : a story of a house ; a suite of rooms, either the ground, the first, or the second story, &c., they are also de- nominated floors : to cover the bottom with a floor : a modern cant term among boxers for knocking a man down.

Hewn stone and timber lo floor the houses.

2 Chron. xxxiv. What haukes sittcn on the perche above. What houndes liggen on the ˆoor adoun ; Of all this now I make no mentioun.

Chaucer. The Knightes Talc. He rent that iron door Where entered in, his foot could find no floor. But all a deep descent as dark as hell.

Faerie Queene. His step-mother, making all her gestures counterfeit afldirtion, lay almost grovelling upon ihc floor of her chamber. Sidney.

Look how the //<"(■ of heaven Is thick inlaid with patens of bright gold : There's not the smallest orb wliirh thou beholdest, But in his motion like an ;ingel sings. Still quiring to the young eyed cherubims.

Shaksj)rtire. The ground lay strewed with pikes so thick as a floor is usually strewed with rushes. Hayward.

He that building stays at one Floor, or the second, hath erected none. .Iniison.

The flooring is a kind of nd plaster made of lirick, ground to powder, and afterwards worked into mortar.

Additon.

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Whose spacious barns groan with increasing storo, And whirling flails disjoint the cracking /uor. Gatj.

Who fell as rolls an ox o'er in his pasture. And roared out, as ho writhed his native mud in. Unto his nearest follower or henchman, ' Oh Jack'. I'm Jlooied by that ere bloody Frenchman.'

Bi/run.

Floor, in building. Floors are of several sorts ; some of earth, some of brick, others of stone, of boards, &.c. See Favemekt. Car- penters never floor their rooms with boards till the carcase is set up, and also enclosed with walls, lest die weather should injure the flooring. Yet they generally rough plane their boards for flooring before they begin any thing else about the building, that tliey may set them by to dry and season, which is done in the most careful manner. The best wood for flooring is the fine yellow deal well seasoned, which when laid will keep its color for a long while; whereas the white sort becomes black by often washing, and looks very bad. The joints of the boards are commonly made plain so as to touch each other only ; but, when the stuff is not quite dry, and the boards shrink, the water runs through them whenever the floor is washed, and injures the ceiling underneath. For this reason they are made with feather edges, so as to cover each other about half an inch, sometimes they are made widi grooves and tenons ; and sometimes the joints are made with dove-tails ; in which case the lower edge is nailed down and the next drove into it, so that the nails are concealed. The manner of measuring floors is by squares of ten feet on each side, so that taking the length and breadth, and multiplying them together and cutting off" two decimals, the content of a floor in square will be given. Thus 18 by 16 gives 288, or 2 square and 88 decimal parts.

Floor of a Ship, stricUy taken, is only so much of her bottom as she rests on when a-ground. Such ships as have long, and withal broad floors, lie on the ground with most security and are not apt to heel, or tilt on one side ; whereas others, which are narrow in the floor, or, in the sea phrase, craned

by the ground, cannot be grounded without danger of being overturned.

Floors, Earthen, are commonly made of loam, and sometimes, especially to make malt on, of lime, and brooksand, and gun-dust, or anvil-dust from the forge. Ox blood and fine clay tempered together, Sir Hugh Plat says, make the finest floors. The manner of making earthen floors for plain country habitations is as follows : take two thirds of lime, and one of coal ashes well sifted, with a small quantity of loam clay ; mix the whole together, and temper it well with water, making it up into a heap ; let it lie a week or ten days and then temper it over again. After this, heap it up for three or four days, and repeat the tempering very high, till it become smooth, yielding, tough, and gluey. The ground being then levelled, lay the floor therewidi about two and a half or three inches thick, making it smooth with a trowel : the hotter the season is, the better ; and when it is thoroughly dried, it will make the best floor, especially for malt-houses. Those who would have their floors look better, let them take lime

made of rag-stones, well tempered with whites of eggs, covering the floor about half an inch thick with it, before the under flooring is too dry. If this be well done, and thoroughly dried, it will look, when rubbed with a little oil, as transparent as metal or glass. In farmers' houses, floors of this nature are made of stucco, or of plaster of Paris, beaten and sifted, and mixed with other ingredients.

Floor Timjsers, in a ship, are those parts of a ship's timbers which are placed immediately across the keel, and upon which the bottom of a ship is framed ; to these the upper parts of the timbers are united, being only a continuation of floor timbers upwards.

FLOP, V. a. From flap. To clap the wings with noise ; to play with any noisy motion of a broad body.

A blackbird was frighted almost to death with a hngc Jtoppin(j kite that she saw over her head.

L'Estrange.

FLORA, the reputed goddess of flowers, was, according to Lactantius, originally a lady of pleasure, who, having gained large sums of money by prostitution, made the Roman people her heir, on condition that certain games called Floralia might be annually celebrated on her birth-day. Some time afterwards, however, such a foundation appearing unwortliy the majesty of the Roman people, the senate, to en- noble the ceremony, converted Flora into a god- dess, whom they supposed to preside over flowers ; and so made it a part of religion to render her propitious, that it might be well with

their gardens, vineyards, Sec. But Vossius, De Idolol. lib. i. c. 12, will not allow the goddess Flora to have been a courtezan, but rather a Sabine deity, and thinks her worship commenced under Romulus. His reason is, that Varro, in his fourth book of the Latin tongue, ranks Flora among the deities to whom Tatius, king of the Sabines, oflTered up vows before he joined battle with the Romans. And from anodier passage in Varro it appears, that there were priests of Flora, with sacrifices, Sec, as early as the times of Romulus and Numa. The goddess Flora, was, according to the poets, the wife of Zephy- rus. Her image in the temple of Castor and Pollux was dressed in a close habit, and she held in her hands the flowers of peas and beans.

Flora, among botanists, is used for a catalo- gue of the plants and trees growing spontane- ously in any particular country or district. Thus Flora Scotica, and Flora Suecica, are the titles of works describing the plants growing in Scotland and Sweden.

FLORAC, a town of France, in the depart- ment of Lozere, near the Tarn ; thirteen miles and a half south of Mende. Long. 18 = ” 0′ E. of Ferro, lat. 44° 19′ N.

VLO’RAL, adj.

Flo’kET, 71. s.

Flor’id, adj. ‘ Florid’ity, n.s. Florid’ness,?i. s.

FLORIF’EROUS,«f/;.

Flo’rist.

ˆ All from Lat. jˆos,_//()ris, I a Gr. 0\o?, a flower. I Floral is relating to Flora; ˆ or flowers : floret (lM-.y//e?<- rette), a small or inqierfect flower: florid, Vx.Jlluride ;) La.t. Jiloridus ; productive

of flowers; covered with flowers; flushed with

FLORENCE.

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red ; decorated with brilliant colors; embellished ; •ˆaudy ; ambitious elegance ; particularly applied to the ruddy hue of the face : floriferous is pro- ductive of flowers : a florist, one who cultivates i>r is skilled in them.

For not iciadde in silk wos he, But all in flours and Jiourettes, Ipainted all

witl: amourettes.

Chaucer. Romaunt of the Rose. Our beauty is in colour inferiour to many flowers ; and, when it is most Jiorid and gay, three fits of an ao-ue can change it into yellowness and leanness.

Taylor's Rule of Living Holy. Nor that Nyseiar- isle Girt with the river Triton, where old Cham, Whom Gentiles Ammon call and Lybian Jove, Hid Amalthea and her Jiorid son Young Bacchus, from his step-dame Rhea's eye.

Milton. Though a philosopher need not delight readers with his floridness, yet he may take a care that he disgust them not by flatness. Boyle.

The florid, elevated, and figurative way, is for the passions; for love and hatred, fear and anger, are begotten in the soul, by shewing their objects out of their true proportion. Dryden.

Let one great day, To celebrate sports and foral play. Be set aside. Prior.

There is a Jtoridity in the face from the good diges- tion of the red part of the blood. Floyer.

The qualities of blood in a. healthy state are to be Jhrid, when let out of the vessel, the red part con- gealing strongly and soon. Arbuthnot, How did, pray, the_/?oW(f youth offend. Whose speech you took, and gave it to a friend ?

Pope. Some botanists ox florists at the least.

Id. Dunciad, And while they break On the charmed eye, the' exultingy/ on«< marks With secret pride the wonders of his hand.

Thomson, But with a heavenly rapture on his face The good old Khan, who long had ceased to see Houris, or aught except his Jiorid face. Who grew like cedars round him gloriously.

Byron.

Floral Games, florales ludi, in antiquity, were games held in honor of Flora. They were celebrated with shameful debaucheries. There were several sorts of shows exhibited on these occasrons ; Suetonius in Galba, and Vo- piscus in Carin-us, say, that these princes pre- sented elephants dancing on ropes on these occasions. They were chiefly held in the night-time, in the Patrician street ; some will have it there was a circus for the purpose on the CoUis Hdrtulorum.

FLOUALTA, i”n antiquity, a general name for the feasts, games and ceremonies, held in honor of the goddess Flora. See Flora, and Flo- ral Games.

FLOREAL; Fr. i. e. flowery month, from flcurir, to flourish; the eighth month in the French revolutionary calendar, which began on the 20th of April, and ended on the 19th of May. See Calendar.

FLOREF, a town of France, in the depart- ment of Sambre and Mease, late of the Nether- lands, and duchy of Namur, seated on the Sarn- bre, seven miles west of Namur.

FLO’REN, n. s. So named, says Camden, because made by Florentines. A gold coin of Edward III., in value six shillings.

This yongest, which that v/ente to the town,

Ful oft, in herte he roUetli up and down

The beautee of thise Floreiiu newo and bright.

Chaucer. The Parduneres Talc.

Floren, or Florence. Every pound weight of standard gold was, by act 18 Edw. ill., to be coined into fifty florences, to be current at six shillings each ; which made in tale fifteen pounds ; or into a proportionate number of half florences or quarter pieces, by indenture of the mint.

FLORENCE, the capital of the grand duchy of Tuscany, and one of the finest cities in Italy, is said to have been first founded by the soldiers of Sylla, and embellished and enlarged by the Roman triumviri. It was destroyed by Totla ; and rebuilt by Charlemagne. It is surrounded on all sides but one with high hills, whicii rise insensibly, and at last join with the Apperinines. Towards Pisa there is a vast plain, forty miles in length, so filled with villas and villages that they seem to be a continuation of the suburbs of the city.

This city is divided into two unequal parts by the Arno, over which there aie four bridges ; one of vvhich, the Delia Trinita, is much admired for its elegant lightness of appearance, and is en- tirely built of white marble. The quays, the buildings on each side, and the bridges, render that part of Florence through which the river runs by far the finest. The handsomest square is the Piazza del Duca, lined with elegant build- ings, and adorned with statues. The number of churches is unusually great, even for Italyˆ and they contain many excellent paintings and sta- tues. In the church of La Sante Crose are the tombs of Michael Angelo, and Machiavel ; be- tween

which has lately been placed that of Alfieri, the work of Canova. Galileo has likewise an ill- executed monument in this church. The palace of the grand duke, of heavy Tuscan architecture, is said to contain 900 apartments. The cathe- dral is of great extent and magnificence, its walls being cased, and its interior paved with marble, disposed in part by Michael Angelo. The dome of this building is much admited ; as well as the tower adjoining 280 feet in height. The chapel of St. Lorenzo is perhaps the finest and most expensive habitation that ever was reared for the dead ; it is encrusted with precious stones, and adorned by the workmanship of the best modern sculptors. Addison remaikˆd that this chapel advanced so very slowly in his time, tliat it was not impossible but the family of Medici might be extinct before their burial place was finished. This has actually happened, the Medici family is extinct, and the chapel remains still unfinished. The adjoining convent contains the fine library of this family, celebrated for its MSS. The Medicean gallery, known throughout the world as one of the finest collections of works of art, is more than 500 feet long, and so stored with biists, statues, and paintings, as perfectly to dazzle the spectator on his first entrance. The crowning boast of this gallery is the celebrated Venus dc Medicis, carried off by the French in the late

wars, but restored in 1815 : on which alone, says Lord Byron,

We gaze and turn away, and know not where,

Daˆ.zled and drunk with beauty.

CLilde Harold, Canto iv. 50.

Lady Morgan thus relates the history of its travels to France and re-establishuient here : —

- *In the commotions which shook Europe to its centre, Puccini (the Direttorre della Galleria) saw nothing to interest or to fear, but as the changes affected his gallery ; and when t!ie grand duke deserted Florence, Puccini, without seek- ing counsel or asking aid, packed up all the most precious pictures, and taking with him the 'enus de iVIedicis, he freighted an English vessel bound from Leghorn to Palermo, with his pre- cious charge. On his arrival, he presented his beauty of Cnidus to the king of Naples (then a fugitive like herself), and claimed and obtained liis le'ixilimate protection for the deposed queen of hearts. The king received the beautiful emi- c;rant, en Preux — a tribune only less superb than that of Florence was*

allotted to her; and Puc- cini saw his deity receiving the same homage at Palermo as at Paphos : when to the astonisliment of all, and to the utter consternation of her own high priest, the goddess deserted her temple for a French frigate, and exchanged her royal pro- tector for the Jacobin Directory of France. The Directory coquetted about her reception ; the king of Naples declared he knew nothing of the transaction ; and, after a variety of pour parler's on both sides, it appeared that Acton, the minister, an Englishman, and the favorite of queen Caroline of Naples (names alike con- secrated to national execration) had presented the Venus deMedicis to the French ; and Acton, whatever was the dessous des cartes, declared I'rankly, that he took the responsibiUty of the transfer on his own head ; — a head that stood re- sponsible for deeds of infinitely deeper conse- quence than this shameful breach of trust.

'When the restoration occurred, in 1814, the Venus de Medicis was to resume her ancient throne in the tribune, and to be reinstated, like other deposed sovereiu'usˆ with the horses of Venice, and the asses of the Annvmciata, et ail- leurs. In this instance, as in every similar one, an effect was endeavoured to be produced on the people by the ' glorious pomp and circumstance' of her triumphal entry ; but it wholly failed in the issue. It was in vain that an escort of ca- valry was sent to meet and convoy her to her ancient residence ; that she entered the city with colors flying and drums beating — not 300 peo- ple assembled to greet her as she passed. The lapse of near a quarter of a century liad changed their tastes, and dulled their .ipprehensions. They wanted statutes, not statues ; and the re storation of their ancient commerce, or the con- tinuation of that prosperity they had enjoyed under the more liberal institutions of their ultra- montane invaders, would have been a much more welcome result of the re-establishment of their old dynasty, than all the statues that ever filled and adorned the Capitol of ancient, or the Vatican of modern Rome.'

Speaking of the other parts of this gallery this lively writer says, ' The Tuscan school is natu-

*rally very rich and very exquisite ; some of the prime works of the Hierophants of the art are preserved here. In this precious cabinet is the famous Medusa head of Leonardo da Vinci, the work of his wondrous boy-hood ! Old * Messere Pietro,' his father, an honest notary of Florence, who took great pride in the talents of his son, requested him to paint a buckler for a peasant who dwell near his own Podere of Vinci. When Leonardo produced his work, the old man fled in horror. This buckler was the Me-dusa's head, for which the duke Galeas Sforzo of Milan atterwards gave 300 ducats ; and which is now deemed one of the most precious treasures of the gallery of Florence. It is a fact, that the venomous reptiles which*

tress the fine head of the Medusa, owe their terrific vitality to the deep study of the young artist in living specimens. When his shield was finished, his closet was found filled with the noxious productions of marshes and fens, the originals of the serpents, which hiss and dart round the brow of the dying monster, wiiose last sigh seems to mingle with their pestiferous breatli. The contrast to the horrible sublimity of the Medusa is his sweet portrait of Mona Lisa.

'The Adoration of the Kings, by Friar Filippo Leppi, is historically interesting, as preserving portraits of the Medici family ! Here too is a fine portrait, by Allori, of Eleonore, the ducliess of Cosmo the First, the mother of many murder- ed children, whose iieart breaks under the splen- did finery, which Cellini's exquisite taste de- signed for her. Here, by the same artist, is the portrait of the Syren Bianca Cappella, whose story is a romance, whose death was a tragedy : — and here is the Saint Lucia of Carlo Dolce (whose women always look as if they were painted by angels) : a gaping wound in her beautiful neck emits rays of light. The female martyrology of these Italian painters might serve for a gallery of Mahomet's Houris, or the Harem of Charles the Second ! Close by each other, hang two famous compositions of Allori and Carradi : the one represents St. Laurence broil- ing on a gridiron ! ! the other, St. Theaclea, boil- ing in a pot. This was

' A dainty dish to set before a king.'

' In the adjoining cabinet stands the fine Torso of Ganymede, so exquisitely restored by Cellini ; and the splendid bust of Alexander, who, with such a head, might well have believed himself to be the son of .love.

' The cabinets of Greek, Latin, and Egyptian monuments and inscriptions, that of coins and medals, and that of the Niobe, take days to see and require volumes as well as learning to de- scribe.

' The gallery of the academy, called the Gal- leria del Me7,zo-Giorno, fj- om the lights falling most favorably at that hour of the day, presents a chronological series, beginning with the GreCK painters, and the revival of the arts in the time of the Lower Empire, and continuing by Cima- bue, Giotto, Perugino, and Raphael, down to the decline of the arts in the latter end of the six- teenth century. This gallery was anciently the hospital-ward for female patients in the old con-

vent ; and it is a curious instance of the neglect wiiich falls on tine pictures

in such places, that a beautiful fresco of Andrea del Sarto, in chiaro- scuro, remains on the walls, where it was long exposed to the fading influence of the sun. It is now covered by an indifferent picture of Raf- faello del Garbo, which serves it as a screen. All the galleries of this academy are sufficiently interesting, as containing many noble specimens of the arts, as they existed in the great days of Italian genius. There is also a gallery tilled with casts from the antique, admirably executed in plaster of Paris. In the Academia delle Belle Arti is the school of that art so purely Florentine, La Scuola di Lavori in Scaglmola; and the studio, or work-room, of its present amiable and eminent professor, signore Pietro Stoppione.'

The Palazzo Pitti, the principal residence of the count of Tuscany, ' vast and noble as it is,' says lady Morgan, ' and most wonderful as the house of a merchant in the middle ages, is still the most notable for its precious collections of pictures, the chefs-d'oeuvre of the Tuscan, Flo- rentine, and Roman school. Here is Michael Angelo's picture of the Three Fates. They are Shakspeare's Weird Sisters. Here glows tiie divme beauty of Raphael's famous Madonna della Sedia, so known to the world by the count- less copies and engravings, the sure proof of its excellence. Here too are some of Saivator Rosa's finest sea-pieces, with those calm skies and waters, and brilliant lights, so contrasted to the force, gloom, and energy of his Catiline conspiracy. Here also is the noble Cleopatra of Guido, that true woman's painter-laureate ! and here, in short, are hundreds of pictures, some of supreme merit, and all of interest, liy the names attached to them, or the likenesses they preserve. Among the latter is, Titian's superb portrait of cardinal Ippolito de' Medici, the elegant voluptuary and princely virtuoso : Luther playing on the Spinette ; his strong marked and somewhat vulgar face turned to- wards a priest, who accompanies him on the guitar, evidently asking his opinion of a chro- matic transition, through which he has just modulated ; Luther's wife, who has exchanged her nun's veil for a smart Flemish hat and fea- ther, more lady-like and less hideous than in any other of ht'r pictures, is their ' sole audi- tress.' Numberless portraits of the ladies of the Medici family, particularly in the latter times, loaded with gold and jewels, simple and common- place looking-women, such as one meets making up the mass of assemblies, all ' very tine and all alike.' I could not trace ani>'ng their prim countenances the brilliancy of talent for which the accomplished and unfortunate Isabella was so celebrated, nor the ferocious genius of Ca- therine, nor the cold dull iniquity of Marie de Medici; yet some of them were handsome.'

The university of Florence was founded in 1438. In 1542 was instituted the Academia Florentina, for making translations from the Greek and Latin classier; the Academia della Crusca was intended to improve and reduce to a standard tlie Tuscan language ; the two were united some time Vjack, and now bear the name

of the Florentine Academy. Here are also schools, and an academy of the tine arts, where nearly thirty pupils receive gratuitous instruc- tion. The Georgotili is a royal agricultural society. Of the libraries, the largest is the Ma- gliabechiana of 90,000 volumes; the next the Marcelliana of 40,000. The museum of natural history is extensive and well arranged ; there is also a botanic garden. Uante, Machiavel, Guic- ciardini, Americus Vesputius, and other dis- tinguished characters were born here.

Florence is surrounded by a wall, and de- fended by two citadels. It has two theatres, and beautiful promenades, as well in the Boboli gardens, as along the banks of the Arno. It is the see of an archbishop, and was a place of great trade from the thirteentli to the fifteenth century; at present its productive industry is confined to a few manufactures, such as satin, taffetas, damask, straw hats, jewellery, and pre- cious stones; the woollen manufactures are adapted only to the common people, among whom are included many Jews, who principally conduct its trade. Population 75,000. Leghorn is its harbour.

Ml. Eustace, in his Classical Tour, thus de- scribes the general appearance of this far-famed city:— ■

‘ Florence is seated in a vale, intersected by the Arno, graced by numberless hills, and bor- dered, at no great distance, by mountains of various forms rising gradually towards the Ap- pennines. The whole vale is one continued grove and garden, where the beauty of the counti-y is enlivened by the animation of the town, and the fertility of the soil redoubled by the industry of its cultivators. White villas gleam through the orchards on every side, and large populous hamlets border the roads and almost line the banks of the river. Such is the scene of comfort and prosperity that surrounds the Tuscan capital (alas ! how different now), raised originally by the genius of liberty, and restored by the grand duke Leopold. Happy will it be for the inhabitants if its cliarms can resist the blasts from hell which have passed the Alps and the Appennines, and now brood in tempest over tlie Val d’Arno.

‘The city itself spreads along the side of the river, whicli forms one of its greatest ornaments, and contributes not a little to its fame. Its streets are well paved, or rather flagged, wider than usual in southern climates ; and its houses in general solid and rather stately. It has several squares, and many churches and palaces, so that its appearance is airy, clean, and some- times rising towards grandeur. I do not, how- ever, think that the number of great edifices corresponds with the reputation of the city, or with the figure which it has so long made in the annals of modern history ; it is, indeed, to be considered, that we came directly from Rome, and that the glories of that capital, when fresh upon the mind, must naturally eclipse the

infe- rior splendor of every other city.'

The cathedral and some other churches, in the edification or restoration of which Michael Angelo bore a part, are next described ; then lli< = ' Palazzi, and afterwards tlie gallerv, now,' says

he, ' strippe;! of its honors.' The delightful environs of Florence next engage Mr. Eustace, ever powerful for description. Amongst these Vallornbrosa, the supposed original of Milton's description of Eden, claimed first the traveller's attention. The sketch of this picturesque spot, the account of the abbey, its inhabitants, and their hospitality, is here given with much spirit and precision.

FLORENTIA, in ancient geography, a town of Etruria, on the Arnus, of great note in the wars of Sylla, now called Florenza, or Fiorenza, by the Italians, and Florence by the English. See FLORE^•cE.

FLORENTIN, or St. Florentin, a town of France in Champagne, situated at the conflux of the Armance and Armancon ; it has some cotton manufactures, and 3000 inhabitants. Thirteen miles north-east of Auxerre, and twenty-four south-west of Troyes.

*FLORENTINES, the people of Florence. Dr. Moord gives the following account of the amusements of the Florentines. ' Besides the conversazionis, which they have as in other towns of Italy, the nobility meet every day at a house called the casino. This society is much on the same footing with the clubs in London. The members are elected by ballot. They go at any time that is convenient. They play at billiards, cards, and other games, or continue conversing, as they think proper. They are served with tea, coflTee, lemonade, ices, or what other refresh- ments they choose; and each person pays for what he calls for. There is one material differ- ence between this and the English clubs, that women as well as men are mem.bers. The com- pany of both sexes behave with more frankness and familiarity to strangers, as well as to each other, than is customarj' in public assemblies in other parts of Italy.' Dr Moore adds, * that, at the opera, they pay much more attention to the dancing than to the music, though it is at best mere athletic jumping, compared with the elegant dancing of the French.'*

FLORES, one of the Azores, so named from the multitude of flowers found growing sponta- neously on it. It is thirty miles long, nine broad, and contains two towns, several villages, and about 1400 inhabitants. It exports

wheat and salt pork, and has excellent poultry. Cattle are also numerous, but they are small. Santa Cruz is the capital. Laˆena on the east coast is also a thriving town. Long. 30° 5.5'. W. lat. 39° 34'. N.

FLORIAN (John Peter Claris de), a popular modern French writer, was born at the chateau of that name in Languedoc, in 1755. His father was a gentleman of fortune, who spared no ex- pense on his education ; and being related to Voltaire, he obtained for him through that per- son's interest the rank of page to the duke of Penthievre. The duke soon gave him a com- mission in the army, but, observing the success of his literary efforts, judiciously confined him to literature, and furnished him with a library. His first production was Galathea, which was followed by the two volumes of his Theatre, the sacred drama of Ruth, and a succession of very successful dramas and novels. Under Robes-

pierre he was arrested and dragged to prison for having affixed to his Numa some verses in praise of the queen, and while in this situation he com- posed the first book of his Guillaume Tell, and a poem called Ebrahim. On his release he fell into a decline, which terminated his life on the 13th of September 1794.

Florid Style, a style too much enriched with figures and flowers of rhetoric.

FLORIDA, a country of North America, bounded on die north by Georgia, on the east by the Atlantic, on the south by the Gulfs of iMexico and Florida, and on the west by the Mississippi. It was the most southerly province of the Bri- tish empire in America before the war of inde- pendence.

It was first discovered in 1479, by Sebastian Cabot, a Venetian in the English service; whence a right to it was claimed by the kings of Eng- land ; and it was included with Georgia in the charter granted by Charles II. to Carolina. In 1512 Florida was more fully discovered by Ponce de Leon, an able navigator, but who un- dertook his voyage from the most absurd mo- tives. The Indians of the Caribbee Islands had among them a tradition, that somewhere on the continent there was a fountain whose waters had the property of restoring youth to all old men who tasted them. The romantic imaginations of the Spaniards were delighted with this idea. Many embarked in voyages to find out this imaginary fountain, who were never afterwards heard of. Their superstitious countrymen never imagined that these people had perished. They concluded that they did not return, only because they had drunk of the immortalising liquor, and had dis- covered a spot so delightful, that they did not choose to leave it. Ponce de Leon set out with this extravagant view, as well as others, fully persuaded of the existence of a third world, the conquest of which was to immortalise his

name. In the attempt to discover this country, he re- discovered Florida; but returned to the place from whence he came, visibly more advanced in years than when he set out. For some time this country was neglected by the Spaniards, and some Frenchmen settled in it. But the new colony being neglected by the ministry, and Philip II. of Spain pretending to be the sole proprietor of America, fitted out a fleet at Cadiz to destroy them. The tyrant's orders were exe- cuted with barbarity. The French entrench- ments were forced, and most of the people killed. The prisoners were hanged on trees, with this inscription, — ' Not as Frenchmen, but as Here- tics.' This cruelty was soon after revenged by Dominic de Gourgues, a skilful and intrepid seaman of Gascony, an enemy to the Spaniards, and passionately fond of glory and hazard. He sold his estate, built some ships, and with a select band of bold adventurers embarked for Florida. He drove the Spaniards from all their posts wnth incredible valor and activitj', de- feated them in every rencounter — and, by way of retaliation, hung the prisoners on trees with this inscription, — ' Not as Spaniards, but as Assas- sins.' He then blew up the forts he had taken, and returned home. This patriotic and heroic act of justice certainly merited reward, but no

notice wljutever was taken of Gourg:ues by tlie French government. Florida was conquered in 1539, by the Spaniards under Ferdinand de Soto, not without a great deal of bloodshed, as the natives were very warlike, and made a vigor- ous resistance. The settlement, however, was not fully established till 1665, when St. Augustine was founded. In 1586 tliis place was taken and pillaged by Sir Francis Drake. In 1665 it was taken and plundered by Davis, and a body of buccaneers. In 1702 an attempt was made upon it by colonel More, governor of Carolina. lie set out with 500 English and 700 Indians, and, having reached St. Augustine, he besieged it for three months ; at the end of which, the Spaniards having sent some ships to its relief, he was ob- liged to retire. In 1740 another attempt was made by general Oglethorpe, but he was forced to raise the siege with loss ; and Florida conti- nued in the hands of the Spaniards till 1763, •when it was ceded to Great Britain. During the American war it was again reduced by the Spaniards, in 1781, and was guaranteed to the crown of Spain at tlie peace, in 1783.

The length of this country, following the coast, has been estimated at about 800 miles. Its breadth is various. The broadest part of West Florida is about 130 miles, while the narrow pen- insula of East Florida extends from south to north 400 miles. The shape of the country is irregular, and nearly resembles the letter L. It was divided by the British government into East

and West Florida.

Florida, West, as designated by Great Bri- tain, is situated between the Mississippi on the west, and the Appalachicola on the east, and is a strip of land running along the Gulf of Mexico for 400 miles. All the west coast of the penin- sula of Florida is low, sandy, and lined by a reef. The Gulf of Ponce de Leon (Chatham I3ay of the English), is much infested by the accumu- lation of sand. Cerasecos (Charlotte Harbour of the English), is an extensive inlet with many islands before it, forming several channels, in the deepest of which, named Boca Grande, the depth is fifteen feet. The inlet receives the river Caloosa. Palm Sound, within Palm and Clam Islands, is only navigable by long boats. Es- piritu Santo Bay is a considerable gulf with a channel in twenty feet deep. St. Martin's Keys are the southernmost of a chain of islands that line the coast to the river St. Juan. This part of the coast is so shoal, that a canoe can scarcely approach it. The river Apalacha falls into a bay 'of the same name, at the fort of St. Mark.

The coast from the Apalacha to Pensacola is tolerably fit for cultivation ; but from this last place to the Mobile it is sandy and baiTen, pro- ducing only dwarf pines and cedars. The river Apalachicola, or Chattahochc, falls into St. George's Sound, witliin the island of this name, which is two leagues from the main, and four leagues long, but very narrow. The Bay or lagoon of St. .Joseph is enclosed on the south by the curving peninsula of which Cape St. Blaize is the extreme point. St. Hose Island, twenty miles long but very narrow, has plenty of fresh Avater : its west end forms the east side of the entrance to Pensacola Bay. Santa Maria Galvez,

or Pensacola Bay, is a large inlet, entirely land- locked, the entrance two miles wide, with sixteen or twenty-four feet depth, and within thirty to thirty-five feet, according as the water is elevated or depressed by the strength of the winds. Se- veral rivers fall into this inlet, of which the largest is the Shambe, and is navigable for sloops a few miles, and for canoes a considerable distance.

The town of Pensacola, the capital of the pro- vince, is on a plain on the west side of the bay, and is defended by a fort on a sand hill, close under which all vessels must pass to the town.

While Florida was an English possession, Pensacola carried on a considerable trade ; but, under the restrictive system and indolence of the Spaniards, it fell into insignificance and po- verty— the only branch of industry attended to, because it requires little labor, being the rearing of cattle. The sole trade was to New Orleans, and did not occupy above four or five schooners, of ten to twenty-five tons, which kept along shore to the

mouth of the Mobile, where they entered the sounds, between the islands and the main, to Lake Pontchartrain : from this lake they entered the river St. John, which communicates by a short canal to New Orleans. The length of this internal navigation is but fifty leagues, and it is usually accomplished in two days, while the outer passage to New Orleans, by the mouths of the Mississippi, is ninety leagues, and from the strong adverse current and prevailing winds from the west is often lengthened to forty days. The climate of Pensacola is so healthy that invalids are sent hither from Louisiana.

The river Alabama, or Mobile, falls into a large gulf, whose entrance is between a long pen- insula on the east, and Isle Dauphin on the west. The town of Mobile, at the mouth of the river, is built on the side of a hill.

The coast, west of Mobile Bay, is lined by low sandy islands, covered with cypress trees; their names in succession are, — Isle Dauphin, where the French formed their first settlements, Masseo, Horn, Dog, vˆaisseau, from having a harbour for vessels of burden, Cat, &c. Farther west a great number of alluvion islands front the entrance of Lake Pontchartrain and the Bay of St. Esprit. The channels between these islands have in general but ten to twelve feet, and the depth of Lake Pontchartrain decreases annually, so that it is probable a few years will convert it into a marsh, as well as Lakes Maurepas and Borgne, the former communicating with the Mississippi by Iberville River, which is quite dry in summer, its bed being twelve feet above the lowest level of the Mississippi ; but in spring, when the river rises, it discharges a part of its waters by tlie Iberville into Lake Pontchartrain, Biloxi, on the main land within Vaisseaux Island, was one of the first establishments of the French in Louisiana.

Florida, East, is separated from Georgiaby the river St- Mary, and includes the peninsula and tract of coast on the gulf of Mexico to the river Apalachicola. The Eastern, or Atlantic Coast, of the peninsula, is lined by islands, forming an interior navigation through lagoons or inlets. The principal rivers on this coast are the St. Juan and Indian , the former rises in a swamp

in the heart of the peninsula, and pursues u northern course in

St. Augustine, the chief town of East Florida, is on the main opposite the north end of Anas- tasia Island. It consists of four streets, mter- secting each other at right angles ; is fortified by bastions, encompassed by a ditch

and wall, and defended by the castle of St. John, mount- ing fifty guns. The entrance to the harbour is crossed by a bar, with only five feet at low water and ten at high. St. Anastasia Island is six leagues long, and affords good building stone, which is not to be had on the main.

From Cape Florida, near the south-east ex- tremity of the peninsula, a great belt of keys and reefs curves round the promontory into the gulf of Mexico, bearing the general name of the IVIartyrs, or Florida Keys ; the numerous channels or inlets between them are only fit for small craft. Almost all these keys are covered with the mangrove, and frequented by turtle ; all of them have received names from the En- glish, when in possession of Florida. The only farther notice they deserve is, that on the north end of Old Matacumbe, an islet four miles long and two broad, is a harbour for vessels of seven or eight feet, where fresh water maybe procured from a natural well, in a rock four feet deep. On Key Hueso, or West, which is seven miles long, is also a good harbour, with four fathoms at the west end, and at the south-vyest several wells of tolerable water. The dry tortugas (turtle) are a cluster of keys, forming the western extreme of the Florida Keys. Punta Blanco, or Cape Sable, is the south-west point of the penin- sula of Florida, doubling which we enter the gulf of Mexico.

The Floridas abound in vegetable productions of the most luxuriant and rank growth. They are said to produce eight different kinds of oak, white and black walnut, hickory, chestnuts, three kinds of mulberry, four of the magnolia, orange, and fig trees, persimmon and sycamore ; as also a vast variety of plums, and other indigenous fruits, such as limes, prunes, peaches, figs, grapes, melons, &c. Olives are also cultivated with success ; and St. John's River, and some of the lakes, are bordered with orange groves. The annona, lime, and mahoe, are indigenous, as also many medicinal plants.

West Florida is the most fertile in grain : wheat, oats, barley, rice, peas, buck-wheat, and rye, flourish. The climate is various.

In winter it seldom freezes, nor is the cold ever so severe as to injure the orange tree. In West Florida the mercury seldom falls below 30° of Fahrenheit, and seldom rises above 94° in the shade. The climate towards the west is more

temperate. On the eastern coast the trade winds prevail, and cool the air in summer; but in the west the air is refreshed by breezes from the Apalachian Mountains, which are still more cool and temperate. During the summer heavy gales of wind beat against the east side of the peninsula, while the interior is subject to dread- ful squalls. Along the gulf storms and hurri- canes are common just before and after the au- tumnal equinox ; but

thunder and lightning are less frequent and violent than in the neighbouring territory of Georgia, or in the Carolinas. In the forests and deserts are found the panther, wild cat, buffalo, fox, hare, goat, rabbit, otter, racoon, flying squirrel, armadillo, opossum, guano, and several sorts of serpents. Birds are in great variety, and numerous: among others, are found the crar.e, heron, goose, wild duck, pigeon, partrid^f , thrush, jay, hawk, maccaw, and a great number of others. The rivers abound in fish, but are at the same time infested with voracious alligators.

From the first of July to the middle of Oc- tober fevers are prevalent. They are usually preceded by heavy rains, and sultry weather. Those of plethoric habits, and sanguine consti- tutions, are the most liable to be attacked. Inflammatory fevers, of domestic origin, are rarely experienced. The yellow fever occasionally makes its appearance ; but it has always been traced to the islands, particularly to the Ha- vannah. Intermittents are endemical, and often prove tedious ; but they commonly yield to the prescriptions of skilful physicians.

In 1810 a revolution took place in West Florida, and agents were despatched to Wash- ington, who had an interview with the American president, for the purpose of being admitted into tlie confederation of the United States. In the mean time the American government took means for occupying the country, conformable to a claim which they had been urging since the year 1801. In that year they had purchased Louisiana from the French, of which they con- tended that West Florida formed a part. It was declared by the treaty to be ceded with the same extent that it had in the hands of Spain, and as it had been ceded by Spain to France. The terms of this cession gave rise to a claim on the part of the United States to the countiy west of the Perdido River ; and, to prevent the occu- pation of this territory by any other power, the government of the union took possession, in 1811, of the principarl posts, except the town and fort of Mobile, which vi-as surrendered to their forces in the following, year. East Florida, however, remained in the undisturbed possession of the Spanish authorities, with the exception of some revolutionary movements of no long continuance, until the second war between the United States and Great Britain. In 1814 a British ex- pedition having been fitted out from Pensacola against the American territories, Genera' Jack- son resolved to take possession of the place. Accordingly, with a small body of regulars and some mounted volunteers, he marched from Mobile, and, after a show of resistance from the Spaniards and British, carried the town. The fort of Barrancas was soon afterwards destroyed

by the British, and general Jackson having no authority to rebuild it, evacuated the place, and returned to Mobile. A similar disregard of the duties of neutrality on the part of the Spanish government, drew upon this province another invasion in 1818. The Seminole Indians, with whom the United States were at war, residing within the limits of Florida, and making their incursions thence without restraint from the Spaniards, it became necessary, for the purpose of chastising them, to cross the territorial line, and subsequently possession was taken by general Jackson of Fort St. Marks and Pensacola. The American troops remained in these posts until November, 1818, when they were restored by the government of the United States to Spain. A negotiation, which had been for a long time pending, for the transfer of the whole province to the United States, was consummated by treaty in 1819; and, after many vexatious de- lays, the treaty was ratified by Spain in October, 1820, and finally by the United States in the month of February, 1821. Possession was de- livered to general Jackson, the commissioner of the United States, in July, 1821, and the pro- vince now forms one of the territories of the United States.

Florida, Gulf of, is a common name for the channel between the peninsula of Florida, and the Bahama Isles, north of Cuba.

Through this gulf the celebrated stream, some- times called the gulf, sometimes the Florida- Stream, first make sits way to the north-east along the coast of America.

Various attempts have been made to account for this current, and as it is an object of general interest in natural history, though we have no ticed it in another place (see America, Index) we conceive it may gratify our readers to present them with a concise view of its causes from an able paper in the Edinburgh Philosophical Jour- nal, for 1820. 'It is known, that the tides in the ocean are produced by the combined actions of the sun and moon, causing the waters, in ge- neral, when their course is not obstructed by continents, islands, &c., to take a westerly direc- tion. The winds in the tropical climates, from nearly the same cau?e, blow generally the same way. It is also observed by navigators, that when a wind blows for any length of time, in a given direction, the waters of the sea move in the same direction, forming a current, at least at the surface, more or less strong, according to circumstances, setting in that direction. The whole body of the waters of the Atlantic, then, must have a general tendency to move from the coasts of Europe and Africa, towards the shores of America, which must be modified in its ef- fects, according to the different conformations of the coasts and other combining circumstances. If we examine the coast of North America, we shall find, that its direction is nearly that of the meridian, or north and south, at least from about New York to Cape Sable in East Florida. Therefore, the mass of waters coming from the east, will

strike it nearly at right angles, which, after high water, will gradually retire into the ocean towards the east, without producing any considerable current along the coast, or any ac-

cumulation in a particular place, as it otherwise would have done, if that coast had been more oblique to the direction of the tide, though the Bahama Islands, and shallows, must prove a con- siderable obstruction to the flood-tide setting directly westerly, near Florida, and will have some tendency to cause it to tlow more to the north.

‘ If we now turn our attention to the northern coast of South America, we shall find that it follows nearly tlie direction of a parallel of latitude, or east and west, and of course, very oblique to the tide coming from the east; and, therefore, it is natural to suppose, tliat a current will be pro- duced, setting westward, from Cape St. Roque, along the shores of Guiana, Cumana, Terra Firma, the Musquito Shore., &.c, towards Cape Catouche in Yucatan. This, indeed, is verified by observation, for it is found, that the flood-tide combined with a current, runs along these coasts, generally at about the rate of two or three miles an hour. This current setting along the Caril)- bean Sea, will enter the Gulf of Mexico between Cape Antonio, in Cuba, and Cape Catouche, in Yucatan, and must, of course, raise the waters of that Gulf, to a considerable height above the general level of the ocean. A part of these wa- ters after the time of high water, will fall back into the Caribbean Sea ; and there actually has been observed a current off” Cape Antonio, set- ting eastward along the south coast of Cuba. Indeed it has been asserted, by Captain Man- derson of the Royal Navy, in his Observations on the Gulf Stream, that the waters about Cape Antonio, ‘ move sometimes one way, sometimes another, and are sometimes stationary,’ wliich may be expected, according as it is flood-tide, ebb-tide, or high water.

‘ From what we have already advanced, it is clear that the waters between Cuba and Yucatan, must be higher than those between Cuba and Florida ; and, therefore, the mass of waters car- ried into the Gulf of Mexico, in the manner al- ready mentioned, must flow out between Cuba and East Florida. If we also take into consi- deration the number of great rivers, and among them the Mississippi, itself like a sea, that falls into the Gulf of Mexico, which is, comparativelv speaking, small, their waters must endeavour to extend themselves over a portion of sea greater than that gulf; and since, from the accumulation of water coming from the Caribbean Sea, de- pending on causes already pointed out, the wa- ters of the Mississippi, and other rivers, falling into the Gulf of Mexico from the west and nortli, cannot extend themselves over that sea towards the south, they must flow along its nortliern shore towards the east. That the waters of great rivers do flow to a considerable distance in the ocean, can be easily proved. In

Columbus's first voyage to America, he found his vessel in fresh water, at the mouth of die Orinoco, before he discovered land, whence he inferred, he was near some great continent, which alone could produce such a stream. In Macleod's voyage to China, a stream of fresh water was found at a considerable distance from the shores of Java, and the British fleet, which blockaded Toulon, occasionally took in fresh water at the mouth of

tlie Rhone, at a considerable distance from land. Hence, tlien, it is clear, that the streams of larpje rivers flow a considerable way into the ocean. The Mississippi, and other large rivers which fall into the Gulf of Mexico, must therefore, in some direction or other do the same. But since a cur- rent of water flows generally into the Gulf of]\Iexico, between Yucatan and Cuba, the waters of the Mississippi cannot flow out in that direc- tion ; they must therefore, with more or less ve- locity, flow out between Cuba and Florida. Tliis, combining witii the superabundant waters of the ocean collected in the Gulf, flowing round between Cuba and Cape Sable in Florida, is, by the north-west shores of Cuba, the Bahama Isles, and banks, turned round the eastern shores of East Florida, and must set northward along the east coast of America, with considerable ve- locity, constituting what is called the Florida or Gulf Stream. This conclusion is verified by obsenation; for the waters in the Gulf Stream, in the greater part of its course to the north of the Bahama Islands, are found, by the thermo- meter, to be warmer than tliose of the seas im- mediately bordering on it, whence they must come from a warmer climate, and, when chemi- cally examined, to possess a less degree of salt- ness, and therefore must consist chiefly of fresh water. Hence, from these two causes, namely, the current formed by the flood-tide setting in between Cuba and Yucatan, and the fresh water from the Mississippi, and other large rivers, fal- ling into the Gulf of Mexico, combined and modified in the manner we have described, and not either of them separately, as has been some- times affirmed, making its escape northward, along the eastern coast of America, we think, it will evidently appear, is derived the true cause of the Gulf Stream. Hence, too, the circular motion of the waters in the northern Atlantic, and other phenomena, attempted to be esta- blislied by Humboldt, will receive a satisfactory solution.'

FLORIDA BLANCA (Francis Anthony Mo- ■nino, count de), a principal minister of Spain in modern times, first distinguished himself as an opponent of the French revolution : his ene- mies availed themselves of his

unpopularity to procure his dismission from the king's service in the beginning of 1792. He was shortly after permitted to retire to his estates in the province of Murcia, and to retain his titles and dignities, but arrested again in July the same year, and committed ♦o the castle of Pampeluna, and again soon released. After several years of seclusion, he was in 1808 chosen president of die cortes, and died in that year November 20th, aged near eighty.

FLORILEGIUM, Florilege, a name the Latins have given to what the Greeks call avGo- Xoyiov, anthology ; viz. a collection of choice pieces, containing tlie finest and brightest things in their kind.

Florilegium, or Anthologia, is particularly used for a breviary, in the eastern church, com- piled by Arcadius, for the conveniency of the Greek priests and monks, who cannot carry with them, in their travels and pilgrimages, all the volumes wherein their office is dispersed. It con-

tains the general rubrics, psalter, canticles, liic horologium, and the office of the ferioe, &c.

FLO'RIN, n. s. Fr. A coin first made by the Florentines. That of Germany is in value 2s. id. ; that of Spain 4s. 4ˆc/. ; that of Palermo and Sicily 2s. 6rf. ; that of Holland 2s.

In the Imperial chamber the proctors have half a Jlorin taxed and allowed them for every substantial recess. Ayliffe.

I'lorin is sometimes used for a coin, and sometimes for a money of account. As a coin, it is of different values, according to the different metals, and difi'erent countries where it is struck. Tiie gold florins are most of them of a very coarse alloy, some of them not exceeding thirteen or fourteen carats, and none of them seventeen and a half. As a money of account, it is used by the Italian, Dutch, and German merchants and bankers, but admits of different divisions in dif- ferent places. See Coixs.

FLORINIANI, or Floriani, a sect of here- I'.cs, of the second century, so named from its author Florinus. Philastrius says, that they were the same with the Carpophorians. He adds, that they were also called soldiers, mdites, quia de militaribus fuerunt. St. Irenxus calls them Gnostics ; St. Epiphanius, Phibionites ; and Theodoret, Borborites, on account of the irapm-i- ties of their lives.

FLORINUS, or Florianus, a heretic of the second century, and a priest of the Roman church, deposed for his errors along with Blastus. He had been a disciple of St. Polycarp, along with Irenseus. He made God the author of evil ; or rather asserted, that the things forbidden by God are not evil, but

of his own appointing; in which he followed the errors of Valentinus, and joined himself with the Carpocratians.

FLORIS (Francis), an eminent historical painter, born at Antwerp in 1320. He fol- lowed the profession of a statuary till twenty years of age; when, preferring painting, he en- tered the school of Lambert Lombard, whose manner he imitated very perfectly. He after- wards went into Italy, and completed his studies from the most eminent masters. The great pro- gress he had made in historical painting, at his return procured him much employment; and his countrymen complimented him with the title of the Flemish Raphael. He obtained consi- derable prices for his pictures, and might have rendered himself more worthy of the attention of the great, had he not debased his character by frequent intoxication. He died in 1570, aged fifty.

Floris, or Ende Isle, a considerable island of the Eastern Seas, situated between the 8° and 9° S. lat., and the 120° and 123° of E. long. In length, it is about 200 miles, by thirty-six the average breadth. The interior is mountainous and woody, but near the sea is a fine open country ; but tliis island is little known to Eu- ropeans. Over the sreater part, the Birma, a kindred languacce to the Javanese, prevails. At the village of Larantooca in the straits, which separate Floris from Sabraon and Solor, Euro- pean vessels procure refreshments in exchange for ammunition, cutlery, &c. Formerly sandal wood might be procured here in considerable

quantities. Wax and ambergris are the other exports. The Portuguese never effected a regu- lar settlement here.

FLORUS (Lucius Annxus), a Latin historian of the same family with Seneca and Lucan. He flourished in the reigns of Trajan and Adrian; and wrote an Abridgment of the Roman History, of which there have been many editions. It is composed in a florid and poetical style ; and is rather a panegyric on many of the great actions of the Romans, than a faithful and correct recital of their history. He also wrote poetry, and en- tered the lists against the emperor Adrian, who satirically reproaches him with frequenting places of dissipation.

FLORY, a cross, differs from the potence, by having the flow- ers at the ends circumflex and turning down. See diagram azure (a cross flory), argent a chief gules — name Henricson.

FLOS'CULOUS, adj. Lat. flosculus. Com- posed of flowers ; having the nature or form of flowers.

The outward part is a thick and carnous covering, and the second a dry and Jiosculous coat. Browne.

FLOS FoEMiNEus, a flower which is furnished with the pointal or female organ of generation, but wants the stamina or male organ. Female flowers may be produced apart from the male, either on the same root or on distinct plants. Birch and mulberry are examples of tlie first case; willow and poplar of the second.

Flos Masculus, a male flower. By this name, Linnseus and the sexualists distintˆuish a flower which contains the stamen, or male organ of generation ; but not the stigma or female or- gan. See Botany.

FLOTE, V. a.

Flot'ten, adj.

uch cheeses, good Cisley, yejloted too nigh.

Ttuser.

FLOT'SON, n. s. From flote. Goods that swim without an owner on the sea.

Flotson, or F"lotsom, signifies goods lost by shipwreck ; which, with jetson and lagan, are generally given to the lord admiral, when the owners are not known. See Jetson and Lagan.

FLOUNCE, V. n., v. a. & n. s. Swed ftunsa , Dut. plonscn, to plunge. To move with violence in the water or mire ; to struggle or dash in the water; to move with weight and tumult; henceˆ metaphorically, to move with passionate agitation. The noun and active verb have a different application ; yet the derivation from the neuter is traceable, if not obvious : a flounce is any thing sewed to the garment, and hanging loose so as to swell and shake ; and to flounce is thus to deck with flounces.

Six flouncing Flanders mares Are even as good as any two of theirs.

Prior. With his broad fins and forky tail he laves The rising surge, and flounces in the waves.

Addison's Ovid, Vol,. IX.

When I'm duller than a post. Nor can the plainest word pronounce. You neither fume, nor fret, nor flounce.

i.\

See To Fleet. To skim.

Swift

She was flounced and furbelowed from head to foot ; every ribbon was crinkled, and every part of her gar- ments in curl. Addison.

They have got into the fashion oi flouncing the pet- ticoat so very deep, that it looks like an entire coat of lutestring. Pope,

Nay, oft in dreams invention we bestow. To change afloun.e, or add a furbelow. Id.

FLOU'NDER, n.s. & v. n. Banish fli/nder; Scotchjluke. The verb is derived from flounce. The noun is the name of a small flat fish : the verb signifies to struggle with violent and irre- gular motions; as ahorse in the mire. It is figu- ratively applied to a public speaker, when he plunges from one subject to another without the least order or connexion. Mental and verbal confusion, by which a man exposes himself to contempt.

Like the flounder, out of the frying-pan into the fire. Camden.

Down goes at once the horseman and the horse ; That courser stumbles on the fallen steed, And flound'rinf) throws the rider o'er his head.

Dryden.

He plunged for sense, but found no bottom there ; Then writ and floundered on in mere despair. Pope.

Flounders will both thrive and breed in any pond.

Mortimer.

FLOUR, n. s. Formerly written Flower, which see. The choice part of grain; the fine meal of corn.

The bread I would have \n flower, so as it might be baked still to serve

their necessary want. Spenser I can make my audit up, that all From me do back receive the flower of all. And leave me but the bran. Shakspeare.

Bnt by thy care twelve urns of wine be filled. Next these in worth, and firm those urns be sealed ; Be twice ten measures of the choicest ˆy?

Pope's Odyssey,

Flour (St.), a town of France, in the de- partment of the Cantal, standing on a perpen- dicular basalt rock, accessible only on one side. It is full 200 feet above the level of the road, and contains a population of 5300. General Desaix, the favorite companion of Buonaparte, was born here. It is thirty-four miles east of Aurillar and fifty south of Clermont.

FLOURTSH, v.n., v. a. 8c n. s., \ L,at.Jloreo,

Flotje'isher, n. s. Sfloresco, from

fl,os,floris. See Floral. It is equally applied to vigor and to beauty ; to strength and to em- bellishment ; to prosperity and its accompani- ments; to splendor and ambitious show; to bra- very and the parade of it. Something more than the thing itself; an adjunct for the purpose of recommendation and effect : thus it is applied to florid language ; to speak with ambitious co- piousness and elegance ; to boast ; to brag ; to adorn ; to grace ; to ornament. It has also other applications : e. g. to describe various figures by intersecting lines; to wcik figures with a needle ; to play in wanton and irregular motions. In music, to play some prelude without any settled rule.

The righteous sh&W Jiourish like tlie palin-troe.

Psnbn xcii. Beside his head there sat a fair young man. Of wondrous beauty and of freshest years,

Wh-ˆse tender bud to blossom new began. And Jiourish faire above his equal pearcs.

Spensers's Faerie Queene, To bring you thus together, 'tis no sin, Sith t!>at the justice of your title to him J)oth Jiourish the deceit. Shakspeare.

I called thee then va.in Jiourish of my fortune I called thee then poor shadow, painted queen.

Id. If I could find example Of thousands, that had struck anointed kings. And Jiourished after, I'd not do it : but since Nor brass, nor stone, nor parchment, bears not one. Let villany itself forswear't. Id.

The labours of Hercules, though Jiourished with mudi fabulous matter ; yet notably set forth the con- sent of all nations and ages in the approbation of tlic extirpating and debellating giants, monsters and ty- rants. Bacon.

Ali that I shall say will be but like bottoms of thread close wound up, which, with a good needle, perhaps may he Jiourislied into large works.

Id. War with Spain. They count him of the green-haired eld, they may, or in his flower ; For not our greatest_/Zo?/Ws/jt'r can equal him in power.

Cliapman. The /Egyptians of old, and mziny Jiovrishittg com- monwealths since, have enjoyned labour and exercise to all sorts of men, to be of some vocation and calling, and to give an account of their time, to prevent those grievous mischiefs that come by idleness.

Burton's A TMtomy of Meianclioly. And all the powers of hell in full applause Flourished their snakes, and tossed their flaming brands. Crashaw.

The presentation of but what I was.

The Jiourish of his sober youth. Was the pride of naked truth. Id.

We can excuse the duty of our knowledge, if we only bestow the Jiourish of poetry thereon, or those commendatory conceits which popularly set forth the eminence of this creature. Browne.

A child with delight looks upon "mblems finely drawn and painted, and takes some pleasure in be- holding the neat characters and Jiourisltes of a bible curiously printed. Boyle.

Studious to please the genius of the times. With periods, points, £uid tropes he slurs his crimes ; He lards vfilh Jtourishes his long harangue ; 'Tis fine, sayest thou ; what, to be praised and hang?

Dryden. He was the patron of my manhood, when I Jlou- rished in the opinion of the world, though with small advantage to my fortune. Id.

Against the post their wicker shields they crush. Flourish the sword, and at the plastron push.

Id. Juvenal. Villanics have not the same countenance, when there ai-e great

interests, plausible colours, and Jitni- rishes of wit and rhctorick interposed between the sight and the object. L'Estrange.

The so much repeated jornamcnt and Jiourish of their former speeches was commonly tlie truest word they spoke, though least believed by them.

South's Sernums. As they are likely to over-Jlourish their own case, so their flattery is hardest to be discovered.

Collier. Who knows not that the coachman Iftshing by. Oft with his Jiourish cuts the heedless eye ? Gay.

Where'er you tread, the blushing flowers shall rise. And all things _//oi/ru/ i where you turn your eyes.

Pope. People seek for what they call wit, on all subjects, and in all places ; not considering that nature loves truth so well, that it hardly ever admits of Jiou- rishing. Conceit is to nature what paint is to beauty j it is not only needless, but impairs what it would im- prove. Id.

Impetuous spreaa The stream and smoaking,y/o«Ws/ted o'er his head.

Id. Tlioy dilate sometimes, and Jlourisli long upon little incidents, and thev skip over and but lightly touch the

Tlioy wer" intended only for ludicrous ornaments

of nature, like the flourishes about a great letter that

signify nothing, but are made only to delight the eye.

More against Atheism.

Whilst Cicero acts the part of a rhetorician, he di"

lates a.nd Nourishes, and gives example instead of rule-

Baker.

— Ye toppling crags of ice I

Ye avalanches, whom a breath draws down

In mountainous o'erwhelming, come and crush me !

I hear ye momently, above, beneath.

Crash with a frequent conflict ; but ye pass,

And only fall on things which still would Uve ;

On the young Jiourisliing forest, or the hut

And hamlet of the harmless villager.

Byron. Manfred. The gentle 3 \i?lu Jiourished, though at times He felt like other plants called sensitive, Wliich shrink from touch as monarchs do from rhymes. Save such as Southey can afi'ord to give. Byron,

FLOUT, v.a., v. n. h,n.s.\ Dutch jiuyten ; Flout'er, w. s. S Frii. Jiouive- To

mock; to jeer; to insult; to treat with con- tempt.

Scambling, out-facing, fashion-mongering boys. That lie, and coy, &udJiout, deprave and slander. Go antickly, and show outward hideousness.

Slialwpeare. You vansijiout my iusufliiciency. Id.

ˆhe railed at her, that she should be so immodest to write to one she knew would _//ou< her. Id.

The Norweyan hannetsjiout the sky. And fan our people cold. Id. Macbeth,

He would ask of those that had been at the other's table. Tell truly, was there never ajiout or dry blow given ? liitcon.

Flouting persons for their constancy in devotion, or their strict adherence to a conscientious p-actice of duty, is most detestable. Barrow.

She opened it, and read it out. With many a smile and letrmgjiout.

Hudibras. 'PhiWida. Jiouls me. Walton's Angler.

Their doors are barred against a hitter Jiont ; Snarl, if you please ; but you shall snarl without.

Drydcn. With talents well endued. To be scurrilous and rude ; Wlien you pertly raise your snout. Fleer and gibe, and laugh and Jioul. Swift. FLOW, V. 11., V. a. &. U.S. } Sax. pleopan ; Flow'ingly, rtrfy. j Goth, floa ; Fr.

finer; La.t. fiuo ; Gr. (iXvu, or 0\j;w,connected with ptw, which signifies literally to flow. Flow is a generic term, and thus diiicrs from stream and gust, which are modes of flowing. The con- tinued running of water cither

in a large Iwdy,

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or in a long but narrow course, is the flowing of the water : to flow then is to run in an equable uninterrupted course. It is opposed to water at rest, as in a lake or pool. It is applied to the rising, in opposition to the ebbing of the tide. It metaphorically signifies, to proceed ; to issue ; to glide smoothly : when applied tO'sentences, either spoken or written : to composition generally, to abound ; to overflow ; to be copious ; to be full ; to deluge.

The se eke with his sterne wawes, Eche daye yjioweth new againe ; And by the coiicoui-s of his lawes. The ebbe yjioweth in ceiteine.

Chaucer. Balade. Whilorae I usde (as thou right well doest know) My little flock on westerne downes to keep. Not far from whence Sabriuacs streams Aolhjiow, And flowrie bankes with silver liquor steepe.

Spenser. Daphnaida. ril use that tongue I have : if v/it flow from't, I shall do good. Shakspeare. Winter's Taie.

This river hath thrice, flowed, no ebb between.

Shaksjieare. Then shall our names Be in their flowing cups freshly remembered.

Id. Henry V. The dry streets ˆoiueJ with men. Chapman.

This discourse of Cyprian, and the flowers of rheto- lick in it, shew him to haw; been of a great wit and flowing eloquence. Hahewdl on Providence.

Some, from the diurnal and annual motion of the earth, endeavour to solve the flows and motions of these seas, illustrating the same by water ia a bowl, that rises or falls according to the motion of the vessel. Browne's Vulgar Errours. Fountains and ye that warble as ye flow IMelodious murmurs, warbling tune his praise.

Bliltons Paradise Lost.

Her eyes confused and doubled o'er With tears, suspended ere ihey flow. Seem bending upwards to restore To heaven, whence it came, their woe.

Marvell.

With osier floats the standing water strow •, Of massy stones make bridges, if it flow. Dryden.

Silent they move, majestically slow. Like ebbing Nile, or Ganges in hisflow. Id.

Virgil is sweet and flowing in his hexameters. /(/. Watering hops is scarce practicable, unless you have a stream at hand to flow the ground.

Mortimer's Husbandry. Teaching is not a. flow of words, nor the draining of an liourglass ; but an effectual procuring that a man know something which he knew not before, or to know it better. South.

The knowledge drawn from experience is quite of uiolhcr kind from that which flows from speculation rir discourse. Id.

Did sweeter sounds adorn my flowing tongue Than ever man pronounced, or angels sung. Prior. Thusy/ow her hours with constant peace of mind, 'J'ill age tlie latest thread of life unwind. Gay.

The noble power of sulTering bravely is as far above that of enterprising greatly, as an unblemished con- science and inflexible resolution are above an acci- dental _//o«j of spirits, or a sudden tide of blood.

Pope. There every eye witli slumberous chains she bound. And (lashed the flowing goblet to the ground.

/(/. Odyssey. F'.ndless toAra flow down in streams. Swift.

Behold the measure of the promise filled ; See Salem built, the labour of a. God I Bright as a sun the sacred city shines ; All kingdoms and all princes of the earth Flock to that light; the glory of all lands Flows into her ; unbounded is her joy. And endless her increase. Cowper.

Though no tear Flowed from his blood-shot eyes, all red with strife. They honoured such determined scorn of life.

Byron.

FLOWER, M.S., v. «. Sx.v.a.-ˆ Goih.flur;FT. Flow'erage, ?i. s. IJIeur; Latˆ ˆos,

Flow'eret, ?i. s. [floris. The part

Flow'er-garden, n. s. fof a plant which

Flow'eriness, n. s. \ contains the

Flow'ery, adj. j seeds. An orna-

ment; an embellishment : the choice, prime, or flourishing part. See Flour. The most excel- lent, or valuable, part of any thing : quintessence; tliat which is most distinguished for worth or excellence ; the mantling on the surface of fer- mented liquors : floweret the diminutive of flower : the verb is used in all the senses applicable to the noun, and signifies, also, to adorn with frj- titious, or imitated, flowers; 'to bloom; to put forth flowers; to blossom.

Such are reckoned per{zcl flowers which have petala, a stamen, apex, and stylus ; and whatever^ower wants either of these is reckoned imperfect. Perfect flowers are divided into simple ones, which are not composed of other smaller, and which usually have but one sin- gle style ; and compounded, which consist of many flosculi, all making but one flower. Miller.

And Zephyrus and Flora gentelly Yave to the floures, soft and tenderly, Hir sote breth, and made him for to spede. As god and goddesse oi the flourie mode.

C/uiucer. Prologue to the Legends of Good Women. Venemous thorns that are so sharp and keen. Sometimes hear flowers fair, and fresh of hue. Poison is put oft time in medicine. And causeth health in man for to renew. Wyatt.

Fresh Spring, the herald of love's mighty king. In whose cote-armour richly are displayed All sorts oi flowers, the which on earth do spring, In goodly colours gloriously arrayed.

Spenser's Sonnets. Sometimes her head she fondly would aguise With gaudy garlands, or fresh flowerets dight. About her neck, or rings of rushes plight.

Faerie Queene.

The shepherds guarded from the sparkling heat Of blazing air, upon the. flowery banks. Where various y/o!«er.? damask the fragrant seat And all the grove perfume.

Fletcher's Purple Island.

That same dew which sometimes on the buds Was wont to swell, like round and orient pearls, .Stood now within the \>-eliy floweret's eyes. Like tears that did their own disgrace bewail.

Shuhspeare.

He is not the^ou'erof courtesy, but, I warrant him 98 gentle as a lamb. Id.

Good men's lives Expire before the flowers in their caps. Dying or eie they sicken. Id. Mucheih.

An extreme clarificiition doth spread the spirits so smooth that they become dull, and the drink dead, which ought to have a little /?o!Ci>'in/;.

Bacon's Natural History. Z2

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FLOWER.

Flora herself envies to seo Flowers fairer than her own, and durable as she.

Cowley. Iris there with humid bow,

Waters the odorous banks that blow Flowers of more mingled hew

Than her purple scan" can shew. Milton.

If jou can accept of these few observations, which h3.vc Jioivertd off, and are, as it were, the burnishing of many studious and contemplative years, I here giTc you them to dispose of. Id.

Day's harbinger Comes dancing from the East, and leads with her The Jiowert/ May, who from her green lap throws The yellow cowslip and the pale primrose. Id.

The nomination of persons to those places being so prime and inseparable ^ Jiower of his crown, he would reserve to himself. Clarendon.

Then laughs the childish year with fioverets crowned, And lavishly perfumes the fields around ; But no substantial nourishment receives. Infirm the stalks, unsolid are the leaves. Dryden.

Observing that this mani'rc produced flowers in the field, I made my gardener try those shells in ray Hower-garden, and I never saw better carnations or flowers. Mortimer's Husbandry.

The French monarchy is exhausted of its bravest subjects : the flower of the nation is consumed in its wars. Addison.

Alas', young man, youi days can ne'er be long : In flower of age you perish

for a song. Pope,

O'er his fair limbs a fiowery vest he threw. Id. To her the shady grove, the flowery field. The streams and fountains no delight could yield.

Id. Beauty That transitory ˆoioer ; even while it lasts Palls on the roving sense when held too near. Or dwelling there too long : by fits it pleases. And smells at distance best ; its sweets familiar By frequent converse, soon grow dull and cloy you.

Jeffery's Edwin. If the blossom of the plant be of most importance, we call it z. flower ; such arc daisies, tulips, and car- nations. Watts. But man, associated and leagued with man By regal warrant, or self-joined by bond For interest sake, or swarming into clans Beneath one head for purposes of war. Like yˆoiiTjj selected from the rest, and bound And bundled close to fill some crowded vase. Fades rapidly, and, by compression marred. Contracts defilement not to be endured, Cowper,

Bow their white heads, admire the changing clime. Shake from their candied trunks the tinkling rime j With bursting buds their wrinkled barks adorn, And wed the tiraoTOXis floret to her thorn. Darwin. O Death why arm with cruelty thy power. And spare the idle weed, yet lop the flower?

Beattie. Of late with cumbersome though pompous show, Edwin would oft his flowery rhyme deface. Through ardour to adorn. Id.

jMany and beautiful lay those around, i/ike flowers of different hue, and clime, and root. In some exotic garden sometimes found With cost and care, and warmth induced to shoot.

Byron.

Flower, flos, among botanists and gardeners, the most beautiful part of trees and plants con- taining the organs of generation and fructifica- tion. See Botany. Flowers designed for me- dical use, should be plucked when they are

moderately blown, and on a clear day before noon ; for conserves, roses must be taken in the bud. Flowers were in great request at the en- tertainments of the ancients, being provided by the master of the feast, and brought in before the second course ; or, as some thmk, at the be- ginning of the entertainment. They not only adorned their heads, necks, and breasts, with flowers, but often bestrewed the beds whereon they lay, and all parts of the room with them. But the head was chiefly regarded. See Gar- land. Flowers were likewise used in bedecking tombs.

A method of preserving flowers in their na- tural beauty througli the whole year has been much sought after. Some have attempted it by gathering them when dry and not too much opened, and burying tliem in dry sand; but this, though it preserves their figure well, takes ofl" from the liveliness of their color. 1. Muntin- gius prefers the following method to all others. Gather the flowers, when they are not yet tho- roughly open in the middle of a dry day ; put them into a good earthen vessel glazed within; fill the vessel up to the top with them; and when full sprinkle them over with some good French wine, with a little salt in it: then set them in a cel- lar, tying down the mouth of the pot. After this they may be taken out at pleasure ; and, on set- ting them in the sun, or within reach of the fire, they will open as if growing naturally ; and not only the color, but the smell also will be pre- served. The flowers of plants are by much the most difficult parts of them to preserve in any tolerable degree of perfection ; of which we have instances in all the horti sicci, or collections of dried plants. In these the leaves, stalks, roo s, and seeds of the plants appear very well pre served ; the strong texture of these parts making them always retain their natural form, and the color in many species naturally remaining. But where these fade, the plant is little worse for use as to the knowing the species by it. But it is very much otherwise in regard to flowers ; these are naturally by much the most beautiful parts of the plants to which they belong: but they are so much injured in the common way of drying, that they not only lose, but change iheir colors one into another, by which means they occasion nany errors ; and they usually also wither up, so as to lose their very form and natural shape. The primrose and cowslip ntlbrd remarkable in- stances of the change of colors in the flowers of dried specimens: for those of this class of plants easily dry in their natural shape ; but they lose their yellow, and, instead of it, acquire a fine green color, much superior to that of the leaves in their most perfect state. The flowers of all the violet kind lose their beautiful blue, and be- come of a dead white : so that in dried specimens there is no difference between the blue-flowered violet and the white-flowered. 2. Another me- thod of preserving both flowers and fruit found throughout the whole year, is also given by the same autlior. Take of salt-petre one pound, ar- menian bole two pounds, clean common sand three pounds; mix all well together; then gather fruit of any kind that is not fully ripe, with the stalk to each ; put these in, one by one, into

wide-mouthed glass, laying them in good order : Ue over the top with an oil cloth, and carry them into a dry cellar, and set the wliole upon a hed of the prepared matter, of two inches thick, in a box. Fill up tlie remainder of the box with tlie same])reparation; and let it be four inches thick all over the

top of the glass, and all round its sides. Flowers are to be preserved in the same sort of glasses, and in the same manner; and they may be taken up after a whole year as plump and fair as when they were buried.

Flowers, in chemistry, generally imply dry bodies reduced into very fine parts, either spon- taneously, or by some operation of art ; but the term is chiefly applied to volatile solid substances, reduced into a kind of fine meal by sublimation. Some flowers are nothing else than the bodies themselves, which are sublimed entire, without suffering any alteration or decomposition ; others are some of the constituent parts of the body subjected to sublimation.

Flowering of Bulbous Plants in Water. That tliese plants will grow and flower in water alone, without any earth, is evident from daily observation ; but it has been generally confined to single roots. The elegant appearance tliat these make, however, may be greatly increased by causing several roots to grow in the same vessel ; and that even in a common garden pot. Stop the hole at the bottom of the pot with a cork, and lute it with putty so as no water can get through ; fit a board to the top of the pot, with a number of holes, proportioned to its size, bored in it for the bulbs, and as many smaller ones to receive sticks for supporting the flowers. Fill up the pot with water to the board, and place tulips, jonquils, narcissuses, and the like plants, in the root upon the holes, so that the bottom of the roots may touch the water : thus they will all flower early in the season, and be much more beautiful than any pot of gathered flowers ; and will last many weeks in their full perfection. When the season of flowering is over, the roots will gradually sink through the holes of the board, and get loose into the water; where, instead of spoiling, tliey will soon in- crease in size, so that they cannot return through the holes, but will produce several offsets. From this it has been tried to keep the roots under water all the time of their blowing, which has succeeded very well, the flower being stronger and more beautiful than those growing from the ground. In a room properly regulated, as to heat, flowers may thus be kept in blow from be- fore Christmas till March or April. But in this last method, as it is difficult to keep the board under water, a piece of sheet lead (four pounds to the foot) may be substituted for the board, and, besides the piece for the top, it will be neces- sary to have another plate of lead fitted to the bottom of ttie pot, with holes for the sticks cor- responding with those in the upper plate, so that tile slicks being put through both holes will be kept perfectly steady. Each of the leads sliould have a notch in tiie edge, for the free ascent and descent of tjie water. The roots tlius kept under water will flower in the most vigor- ous and beautiful manner. To add to the virtues of the water some have tried the putting in small

quantities of nitre, and others have tried earth and sand at the bottom ; but

the flowers always succeed better without any addition. Instead of earthen pots, some use glass jars with the leads ; in which the flowers not only succeed as well, but the progress of tlie roots is visible, and the supply of water is better managed. Dried bulbs have been found, by repeated experiments, to succeed in this way better than those taken fresli out of the ground ; the latter, being full of moisture, are long of imbibing nourishment from their new element, the fibres they struck in the ground rot, and new ones shoot out, before they produce flowers. Narcissuses and hyacinths do well together; as also tulips and jonquils, and crocuses and snow-drops. One species of hyacinth, called Kci/scr's jewel, seldom or never produces seed vessels in the common way flower- ing in' the ground ; but it will often produce some pods when blown in water. Ranunculus and anemone roots have been found to shoot up their stalks very well in this way; but the flowˆers are usually blasted, probably for want of free air. Pinks will flower very well in this manner; and auriculas may, with care, be brought to flower, but not strongly. Roses, jessamines, and honey-suckles, may also be made to flower in this way, and will thrive and send out suckers: the best pieces to plant are suckers cut off" about three inches under ground, without any fibres. Some succulent plants may also be raised in this way ; for instance, the opuntia or Indian fig. If a fragment of a leaf of this plant be cut and laid by to dry for a month, till it is an absolute skin, as soon as it is put in this manner into water, it begins to plump up, and soon sends out fibrous roots, and produces new leaves as quickly as it would do in the ground. This is the more remarkable in these sorts of plants, because in their natural state in the ground, they cannot bear much water. The growing of plants in water is, however, not peculiar to those .vith bulbous roots, for others may be thus raised, even from seed. A bean or a pea set in this manner, will grow up to its proper standard, produce pods and ripen seed. Smaller seeds may also be raised, if sown upon a piece of woollen cloth spread on the surface of the water. Though no vegetable transplanted out of the earth into water will thrive kindly, any plant, wliether raised from the root or seed in water, may be transplanted to the earth, and will suc ceed very well. This method of raising plants in the water, would therefore suggest an im- provement upon the usual practice in raising some roots in the earth which are subject to rot there; such as anemonies, ranunculuses, and hyacinths. A bulb acidentally dropped upon the ground, will .strike out both stronger and more numerous fibres than those planted in the usual way ; and from this it would seem to be jjroper to take out the earth of the bed where the bulbs are designed to stand, to such a depth as they are to be placed under it, when set for flowering. The bulbs should then be set in their places, on the surface of this low ground ; to stand there till they have shot out their filireˆ and their head ; after which the earth should bo added over them by degrees, till they are covered

as high above the head as in the usual manner of planting them. Thus they would be pre- served from the danger of rotting ; tlieir fibres would be much stronger, and consequently they would draw more nourishment, and ilower better than in the common way. The ordinary method of planting these roots renders them liable to be destroyed by either extreme of a wet or dry season: in the former case, they immediately rot by the superabundant moisture; and, in tlie latter, they become as dry as a stick and mouldy, so that the first rain that falls afterwards infalli- bly rots them.

Flo'wer de Luce, n.s. From Yi.jlcur dc Us. A btilbous iris.

Cropped

Of England's coat one half is cut away.

Shakspeare.

The iris is the flower de luce. Peacham.

Flower'ingbush, n. s. A plant.

FLOWK, n. s. Scoit. fluke. A flounder ; the name of a fish. See Flounder.

Amongst these the ˆowJt, sole, and plaice, follow the tide up into the fresh waters. Carew.

Flowk'wort, 71. s. The name of a plant. FLOWN, participle of fly. Gone away ; puffed ; inflated ; elate. For those. Appointed to sit there, had left their charge, Flown to the upper world. .Milton's Paradise Lost.

4nd when night Darkens the streets, then wander forth the sons Of Belial, flown with insolence and wine. Id.

Where, my deluded sense ! was reason /?oi«ra ? Where the high majesty of David's throne ?

Prior. Is this a bridal or a friendly feast ? Or from your deeds I rightly may divine. Unseemly _//()«;« with insolence or wine. Pope. FLUCTUATE, v. n. ˆ Lat. fluduatus, part. Fluc'tuant, adj. ˆoifluctuo iromfluctus, Fluctua'tiOxV, 71. s. J a. wave. It conveys the idea of strong agitation : it

expresses tlie motion of the waves perpetually heaving back wards and forwards : hence it is applied to what- ever is uncertain, or is the subject of sudden vicissitudes. Applied to the mind, it signifies to be irresolute ; undetermined.

The Tempter, but with shew of zeal and love To man, and indignation at his wrong. New parts puts on, and as to passion moved, Fhtctuales disturbed, yet comely and in act Raised, as of some great nuitter to begin.

Milton's Paradise Lost. Fluctuations are but motions subservient, which winds, storms, shores, shelves, and every intcrjacency irregulatcs. Browne.

Even the influence of superstition isfluctuatinj and precarious ; and the slave whose reason is subdued, will often be delivered by his avarice or pride.

Gibbon, It will not hinder it from making a proselyte of a person, that loves fluctuation of judgment little enough to be willing to be eased of it by any thing but errour. Boyle.

To be longing for this thing to-day, and for that thing to-morrow • to change likings for loathings, and to stand wishing and hankering ai a venluro, liow is it possible for any man to be at rest in this fluctuant wandering humour and opinion ? L' Es;ranijc.

As the greatest part of my estate has hitherto been of an unsteady and volatile nature, either tossed upon seas, ov fluctuating in funds, it is now fixed and settled in substantial acres and tenements. Addison The fluctuating fields of liquid air. With all the curious meteors hovering there. And the wide regions of the land, proclaim The Power Divine, that raised the mighty frame.

Blackmorc.

FLUDD (Robert), the son of Sir Thomas Fludd, was born at Milgate in Kent, in 1574. He was educated at St. John's College, Oxford, where he took his degrees in arts, after which he travelled abroad. He returned to England in 1603, took tlie degree of M. D. and became fellow of the college of physicians in London. He was a most voluminous writer; doated greatly on the wonders of alchemy; was a zealous bro- ther of the Rosicrucian order; and his books, which are mostly in Latin, are as dark and mysterious in their language as in their matter. He died in 1637.

FLUE, n. s. A word of which I know not the etymology, says Dr. Johnson, unless it be derived from flew of fly. Mr. Todd suggests the Fr. I'ouverte, an opening : Mr. Thomson, with more probability, the Ldit. flatus ; a puff" or

blast as its origin. A small pipe or chimney to con- vey air, heat, or smoke. Soft down or fur, such as may fly in the wind.

FLU'ELLIN, 11. s. The herb speedwell. FLU'ENCY, n. s. ˆ Lat. Jtuens, fluo ; a Flu'ent, adj. & 71. s. > Gr. /3Xvw. The adjec Flu'ently, adv. y tive is tlie etymon; and literally signifies flowing, liquid ; the motion of water in flux : thus it is also applied to what- ever is ready; copious; voluble. The noun signifies the quality of flowing; smoothness; freedom from harshness or asperity; affluence; abundance : but the latter sense is obsolete.

God riches and renown to men imparts. Even all they wish ; and yet their narrow hearts Cannot so great a. fluency receive. But their fruition to a stranger leave. Sandys.

Those have some natural dispositions, which have better grace in youth than in age, such as is & fluent and luxurious speech. Bacon.

It is not malleable ; but yet is not fluent, but stu- pified. Jd.

Motion being a. fltunt thing, and one part of its du- ration being independent upon another, it doth not follow that because any thing moves this moment, it must do so the next. Ray on the Creation.

Confiding in their hands, that sed'lous strive To cut the outrageous fluent ; in this distress. Even in the sight of death. Philips.

Fluency of numbers, and most expressive figures for the poet, morals for the serious, and pleasantries for admirers of points of wit. Garth.

The common fluency oi speech in many men, and most women, is owing to a scarcity of matter, and a scarcity of words ; for whoever is master of language, and hath a mind full of ideas, will be apt, in speak- ing, to hesitate upon the choice of both. Swift.

YLUW, adj. ˆ n. t.-\ Lat. fluo, fluidtis. See

Fluio'ity, 7t. s. vˆ Fluency, Ft. fluide,

Flu'idness, 7«. s. jfluidite. That which,

from its nature, flows; that quality in bodies

which is opposite to .solidity and stability; any

tiling not solid.

FLUOR.

ˆ)r serve they as a flowery verge to bind

The fuid skirts of that same watery cloud.

Lest it again dissolve, and shower the earth ?

Milton. What if we should say tha.t fluidness and stability depend so much upon the texture of the parts, that by the change of that texture the same parts may be made to constitute either ajiuid or a dry body, and that permanently too. Boyle.

If panicles slip easily, and are of a fit size to be agitated by heat, and the heat is big enough to keep them in agitation, the body isfiuid; and if it be apt to stick to things, it is humid. Newton.

Heat promotes fluidity very much, by diminishing the tenacity of bodies : it makes many bodies fluid, which are not fluid in cold, and increases the fluidity of tenacious liquids ; as of oil, balsam, and honey ; and thereby decreases their resistance. Id.

As when the fig's prest juice, infused in cream. To curds coagulates the liquid stream. Sudden the fluids fix, the parts combine. Pope.

Consider how luxury hath introduced new diseases, and with them, not ˆimprobably, altered the whole course of the fluids. Arhuthnot.

The permanently elastic_ˆuid generated in the fir- ing of gunpowder, is calculated by Mr. Robins to be about 244, if the bulk of the powder be one.

Darwin.

Fluids, Elastic. See Aerology, Air, Fixed Air, Gas, Vapor, &c.

Fluids, Laws and Properties of. See Hydrostatics.

Fluke-Worm. SeeFASCiOLA.

FLUMET, a town of France, in the depart- ment of Mont Blanc, ci-devant duchy of Savoy, and lordship of Faussigny; seated on the Arly, among the moimtains, thirty miles north-east of Chambery, and thirty-one south-east of Geneva.

FLUM'MEKY, n. s. A kind of food, made by coagulation of wheat-flour or oatmeal.

Milk and flummery are very fit for children. Locke.

Flummery is thus prepared : steep three large handfuls of finely ground oat-meal, for twenty-four hours, in two quarts of fair water: tlien pour off the clear water, and put two quarts of fresh water to it: strain it through a fine hair sieve, putting in two spoonfuls of orange-flower water and a spoonfid of sugar : boil it till it is as thick as a hasty pudding, stirring it con- tinually while it is boiling, that it may be very smooth.

FLUMS, a town of Switzerland, in the late county of Sargans, on the Mat, five miles west of Sargans.

FLUNG, participle and preterite of fling. Thrown; cast.

Several statues the Romans themselves flung into the river, when they would revenge themselves.

A ddison on Italy.

FLUOBORIC Acid. This is a gaseous acid, and may be obtained by heating in a glass re- tort twelve parts of sulphuric acid with a mix- ture of one part of fused boracic acid, and two of fluor-spar, reduced to a very fine powder, and it must be received over mercury. Its density is 2-41 ; it is colorless ; its smell is pungent, re- sembling that of muriatic acid ; it cannot be breathed without instant suflbcation ; it extin- guishes combustion; and reddens strongly the tincture of turnsole. It has no manner of action on glass, but attacks vegetable and animal matters

with as much force as concentrated sulphuric acid, and appears to operate by the production of water; for, while it carbonises these sub- tances, they may be touched without any risk of burning. Exposed to a high temperature, it is not decomposed ; and is condensed by cold with- out changing its form. When it is put in contact with oxygen, or air, either at a high or low tem- perature, it experiences no change, except seizing, at ordinary temperatures, the moisture which these gases contain. It may hence be employed with advantage, to show whether or not a gas contains moisture.

No combustible body attacks fluoboric gas, if we except potassium and sodium, which, with the aid of heat, burn in this gas, almost as brilliantly as in oxygen. Boron, and fluate of potash, are the products of this decomposition ; the fluoboric gas being a compound of fluorme and boron, the potassium unites to the former, giving rise to the fluoride of potassium, while the boron remains disengaged. Fluoboric gas is very so- luble in water. According to Dr. John Davy water combines with 700 times its own volume, or twice its weight, at the ordinary temperature and pressure of the

air. Water saturated with this gas is limpid, fuming, and very caustic. By heat, about one-fifth of the absorbed gas may be expelled ; but it is impossible to abstract more. It then resembles concentrated sul phuric acid, and boils at a temperature consi- derably above 212°. It afterwards condenses altogether in strise, although it contains still a very large quantity of gas. It unites with the bases, forming salts, called fluoborates, none of which have been applied to any use in the arts. See Chemistry.

FLU'OR, n. s., Lat. A fluid state ; catamenia.

The particles of fluids, which do not cohere too strongly, and are of such a smallness as renders them most susceptible of those agitations which keep liquors in a.fluor, are most easily separated and rarefied into vapours. Newton's Opticks.

Hence silvery selenite her crystal moulds. And soft asbestos smooths his silky folds ; His cubic forms phosphoric y/«or prints. Or rays in spheres his amethystine tints. Darwin.

Fluor, in physics, signifies properly the state of a body that was before hard or solid, but is reduced by fusion or fire into a state of fluidity.

Fluor, or Fluor-Spar, in mineralogy, a genus of calcareous earth, the eleventh of that class in Kirwan's arrangement, the octohedral fluor of Jameson, and flus of Werner. It is divided into three sub-species, viz. compact fluor, foliated fluor, and earthy or sandy fluor.

1. Compact fluor. Colors, greenish-gray and greenish-white. Dull or feebly glimmering. Massive. Fracture even. Fragments sliarp- edged. Harder than calcareous spar, but not so hard as apatite, the eighth of Kirwan's scale fur hardness. Brittle, and easily frangible. Specific gravity 3-17. It is found in veins, associated with sparry fluor, at Stolberg in the Hartz.

2. Foliated fluor. Its colors are very nume- rous, pure, and creenish-wliite, or yellowish or reddish-white, or gray or bluisVi-gray, or light or violet-blue, or grass, leek, or olive-green, or dark red verging to purple, or purple inclining to

black, or wine or honey yellow, or yellowish- brown. Many of these occur often in spots, blotches, or veins pervading the mass of one and the same specimen. It is found either amorphous, or crystallised ; the most usual of the crystallised forms is that of a perfect cube, the angles or edges rarely

truncated or bevelled ; these last have sometimes concave planes. The octohedral form is also sometimes met with. Its surface mostly smooth, or frosted over with mi- nute crystals. Lustre 2, 3. Transparency 2,3,4. Fracture foliated, generally straight, seldom curved; some parts, however, are found splin- tery, as if passing into the compact. Fragments tend to the form of triangular or quadrangular pyramids, and present coarse or small-grained, seldom prismatic, distinct concretions.

Hardness 8, being harder than calcareous spar, but not so hard as apatite ; very brittle. Specific gravity 3'09 to 3-19; that of the speci- men, Leske, O. 1613, is 3-154. Before the blow-pipe it generally decrepitates, gradually loses its color and transparency, and ?Vielts, without any flux, into a grayish-white glass. "When two fragments are rubbed together, they become luminous in the dark. When gently heated it phosphoresces with a blue and green light; but, by ignition, loses its phosphorescent property. The violet-blue variety, from Nerts- chinsky, called chlorophane, when placed on glowing coals, does not decrepitate, but soon throws out a green light. It occurs principally in veins that traverse primitive, transition, and sometimes secondary rocks. It has been found only in four places in Scotland ; but occurs much more abundantly in England, being found in all the galena veins that traverse the coal for- mation in Cumberland and Durham : in secon- dary or floetz limestone in Derbyshire ; and it is the most common veinstone in the copper, tin, and lead veins, that traverse granite, clay-slate, &c., in Cornwall and Devonshire. It is also frequent on the continent of Europe.

We need offer no apology for extracting the following account of an experiment, by Dr. Brewster, on the phosphorescence of a specimen of the blue foliated fluor: 'When a thin slice w as cut from this specimen, so as to be transpa- rent, it resembled a leaf with veins inclined to the ridge or central line which divided it into two parts. The central line, and several of the veins were colorless; while some of the veins were of a deep amethyst color, and others of a pale amethyst color.'

' Upon placing this slice on a hot iron,' says Dr. Brewster, ' in order to examine its phospho- rescence, I was surprised to observe that the phosphorescent matter was arranged in strata or veins, parallel to those of the specimen, and each stratum emitted a phosphoric light peculiar to itself, and difl'ering from that of the other strata either in color or intensity. Some of the veins discharged a purple light; others a yel- lowish-green light ; others a whitish light, and others exhibited no phosphorescence at all. The most singular circumstance, however, was that the different strata of phosphoric light pre- served their boundaries sharp and well defined, and were far more minute and numerous thin

the strata seen by a microscopical examination of the specimen.'

3. Common sand, or earthy fluor. It is of a light gray color and loose consistence; when strewed on an iron plate, heated a little below redness, it diffuses a blue or pale-yellow phos- phoric light. According to the experiments of Klaproth and Gmelin, it contains the fluor acid .singly, and not the]iiiosphoric. IMr. Pelletier found 100 parts of it to contain thirty-one of silex, twenty-one of calx, 15-5 argil, 23'5 sparry acid, one of phosphoric acid, and one of iron. In an unconnected substance of this sort, dif- ferent specimens must undoubtedly contain dif- ferent proportions of ingredients ; among these the silex is evidently adventitious, the phosphoric acid being in such small quantity, may be found in some specimens, and not in others. It occurs in veins along with fluor spar at Bceralstone in Devonshire, in Cumberland, in Saxony, and Norway. It has also been found at Kobola Poiana, in tlie district of Marmaros, in Hungary,

The whole of this genus is nearly insoluble in water. It does not effervesce with any acid, except the concentrated vitriolic acid, and with that but feebly. The nitrous and marine acids, in the common temperature of the atmosphere, are not absolutely inert with respect to it, but scarcely dissolve it without decomposition. It is insoluble in the acetous. In a moderate heat it decrepitates; and, if pulverised, phosphoresces, particularly the blue or purple colored ; but, if heated to redness, it will never afterwards phos- phoresce. In a heat of 130° of Wedgwood, it melts in clay crucibles, or, but less perfectly, in those of chalk, but on charcoal very imperfectly. By concentrated solar heat, or that given out by pure air, it melts into a button which is gene- rally white and opaque when cold ; if that heat be long continued, it becomes less fusible.

FLUORIC Acid, in chemistry, is an acid generally supposed among chemists, to be a compound of an unknown radical fluorine and hydrogen. Such, at least, is the opinion ex- pressed by Dr. Henry, Dr. Thomson, and Sir H. Davy.

Put one part of fluate of lime, i. e. fluor spar, in coarse powder into a leaden or tin retort, and pour upon it two parts of sulphuric acid. Lute the retort to a leaden receiver, containing one part of water, and apply a gentle heat. The fluoric acid gas disengaged will be absorbed by the water, and form liquid fluoric acid, which must be kept in well-closed leaden or tin bottles, or phials coated within with wax or varnish. If the receiver be cooled with ice, and no water put in it, then the condensed acid is an intensely active liquid, first procured byM. Gay Lussac. It has the ajipearance of sulphuric acid, but is much more volatile, and sends off white fumes when exposed to the moist air. Its specific gravity is only 1-0609. It must be examined with great caution, for when applied to the

skin it instantly disorganises it, and pro- duces very painful wounds ; and it instantly corrodes and disorganises glass, flints, &c. Its odor resembles muriatic acid, and its action ujion -all inflammable substances is very feeble, as it does not afford any oxygen to them. With

ammonia, it forms a concrete body, and has no action upon platina, gold, silver, mercury, tin, lead, antmiony, cobalt, nickel, or bismuth ; but it corrodes iron, arsenic, and manganese. It combines readily with water without depositing any earth, and has an astringent acidulous taste. A candle immersed in it is extinguished without any change in the color of the flame : it com- bines with ammoniacal gas, forming a white cloud : it dissolves camphor, and is taken up in large quantity by oil of turpentine, to which it communicates an orange color, and a pungent acid odor.

Fluoric acid gas volatilises siiicious earth ; which may be shown by decomposing fluate of lime in a glass retort, and receiving the gas in a vessel filled with water over mercury. Each bubble of the gas, which ptisses through the mercury into the water, becomes immediately enveloped in a siiicious crust, and leaves, as it ascends to the surface of the water, traces in the form of tubes, which frequently decrease up- wards, the bubble diminishing as the water dis- solves it.

The gas, when disengaged in the glass retort, dissolves part of the silex of the retort, which it keeps in an aeriform state. On coming into the water, it abandons its caloric, and is converted into fluoric acid, depositing at the same time the silex.

With the view of separating its hydrogen. Sir H. Davy appl.ed the power of the great Voltaic batteries of the Royal Institution to the liquid fluoric acid. ‘ In this case,’ says that eminent chemist in his account of his experiments in the Philosophical Transactions, ‘ gas appeared to be produced from both the negative and positive surfaces ; but it was probably only the undecom- pounded acid rendered gaseous which was evolved at the positive surface ; for during the operation the fluid became very hot, and speedily diminished.’ — ‘ In the course of these investiga- tions I made several attempts to detach hydro- gen from the liquid fluoric acid, by the agency of oxygen and chlorine. It was not decom- posed when passed through a platina tube heat- ed red-hot with chlorine, nor by being distilled from salts containing abundance of oxygen, or those containing abundance of chlorine.’ By the strict rules of chemical logic, therefore, we ought to regard fluoric acid as a simple body, as there is no evidence of its ever having been

decompounded ; and nothing but analogy with the other acids has given rise to the assumption of its being a compound.

The marvellous activity of this powerful acid may be inferred from the following remarks of Sir II. Davy, from which also may be estimated, in some measure, the difficulty attending retined investigations on this extraordinary substance.

*‘ I undertook,’ continues he, * the experiment of electrising pure liquid fluoric acid with con- siderable interest, as it seemed to offer the most probable method of ascertaining its real nature; but considerable difficulties occurred in ex- ecuting the process. The liquid fluoric acid im- mediately destroys glass, and all animal and vegetable substances; it acts on all bodies con- taining metallic oxides; and I know of no sub-*

stances which are not rapidly dissolved or de- composed by it, except metals, charcoal, phosphorus, sulphur, and certain combinations of chlorine. I attempted to make tubes of sulphur, of muriates of lead, and of copper containing metallic wires, by which it might be electrised, but without success. I succeeded, however, in boring a piece of horn silver in such a manner that I was able to cement a platina wire into it by means of a spirit lamp ; and by inverting this in a tray of platina, filled with liquid fluoric acid, I contrived to submit the fluid to the agency of electricity in such a manner, that, in successive experiments, it was possible to collect any elastic fluid that might be produced. Operating in this way with a very weak Voltaic power, and keeping the appa- ratus cool by a freezing mixture, I ascertained that the platina wire at the positive pole rapidly corroded, and became covered with a chocolate powder ; gaseous matter separated at the nega- tive pole, which I could never obtain i;i suffici- ent quantities to analyse witli accuracy, but it inflamed like hydrogen. No other inflammable matter was produced when the acid wa-s pure.’ The following is Lavoisier’s table of the com- binations of fluoric acid with the salifiable bases, in the order of affinity.

Names of the neutral salts. Fluate of lime, or fluor spar. Barytes Strontites. Magnesia. Potash. Soda. Ammoniac.

Names of the bases.

Lime

Barytes

Strontites

Magnesia

Potash

Soda

Ammoniac

Oxide of

Zinc

Manganese

Iron

Lead

Tin

Cobalt

Copper

Nickel

Arsenic

Bismuth

Mercury

Silver

Gold

Platina

Arcil

Zinc.

Manganese. Iron. Lead. Tin. Cobalt. Copper. Nickel. Arsenic. Bismuth. Mercury. Silver. Gold. Platina. ;ind, by the dry way,

Fluat of argil.

The native fluate of lime, the fluor s/wr already mentioned, is the most common. At the heat 130° of Wedgwood, it enters into fusion in a clay crucible. It is not acted upon by the air, and is insoluble in water.

Concentrated sul- phuric acid deprives it of the fluoric acid with effervescence, at the common temperature, but heat promotes its action.

The affinity of the fluoric acid for silex has already appeared. If the acid solution, obtained by kee))ing the solution of the acid in glass ves- sels, be evaporated to dryness, the fluoric acid may be disengaged from the solid salt remaining cither by the powerful acids, or by a strong heat;

and, if tiie solution be kept in a vessel that ad- Tiiits of a slow evaporation, small brilliant crys- tals, tnuisparent, hard, and apparently of a rhomboidal figure, will form, as Bergman found, on the bottom of the vessel, in the course of two years standing.

Fluatc of potash, soda, aiitinonia, or magnesia, may be prepared by saturating their carbonates with fluoric acid. Fluate of barytcs is precipi- tated by adding fluoric acid to the nitrate, or muriate of barytes ; and fluate of strontia is pre- pared in a similar manner. Fluate of iron is obtained by dissolving the red oxide of iron in fluoric acid. i ■

Scheele observed, that the fluor acid united with alumina into a salt that could not be crys- tallised, but assumed a gelatinous form. Four- croy adds that the solution is always acid, astrin- gent, decomposable and precipitable by all the earthy and alkaline bases.

The only use to which fluoric acid has been applied is engraving on glass. It appears from Beckman that this was first practised by an artist of Nuremberg, in the year 1670, who prepared his etching liquor by digesting together nitrous acid and finely powdered fluor spar for several hours on a warm sand-bath, and then using the clear liquor as aquafortis is employed by the copper-plate engravers. But the knowledge and application of this liquor was confined to a few German artists, till, after the discoveries of Scheele and Priestley, the fluoric acid in a pure state was used by various ingenious artists in England and France. Puymaurin found the liquid acid prepared according to Scheele's pro- cess to answer very well for this purpose in warm weather. The gaseous acid however is much more eflicacious. To engrave on glass, select a piece of plate glass of the requisite size, cover it with hard engraver's wax, and with a needle or other suitable instrument trace the intended de- sign as in common etching, observing that every stroke passes quite through the wax to the surface of the glass. When the etching is completed, lay the plate with the engraved side downwards on a frame, in a box lined with strong sheet lead or thick tin foil, and place

on the bottom of the box a few leaden cups containing a mixture of one part of very fine pulverised fluor spar and two parts of sulphuric acid; then close the lid of the box, and place it on a stove, or in any other convenient situation where it may be ex- posed to as high a heat as it can bear without risking the melting of the wax : fluoric acid gas will be copiously disengaged, and in a short time (from one hour to three, according to cir- cumstances) the plate will be found sufficiently corroded.

M. Kortum, of Warsaw, having found that some pieces of glass were more easily acted upon than others, tried its effect on various stones. Rock crystal, ruby, sapphire, emerald, oriental garnet, amethyst, chrysolite, aventurine, girasol, a Saxon topaz, a Brasilian topaz burnt, and an opal, being exposed to the fluoric gas at a temperature of 122^ F. were not acted upon. Diamond ex- posed to the vapor on a common German stove for four days, was unaffected. Of polished gra- nite, neither the quartz nor mica appeared to be*

attacked, but the feldt-spar was rendered opaque and muddy, and covered with a white powder. Chrysoprase, an opal from Hungary, onyx, a corneliaTi from I'ersia, agate, chalcedony, green Siberian jasper, and common flint, were etched by it in twenty-four hours ; the chrysoprase, nearly half a line deep, the onyx pretty deeply, the opal widi the finest and most regular strokes, and all the rest more or less irregularly. The unco- vered part of the brown flint had become white, but was still compact: water, alcohol, and other liquids, rendered the whiteness invisible, but, as soon as the flint became dry, it appeared again. The same effect was produced on cornelian and on a dark brown jasper, if the ojjeration of the acid was stopped as soon as it had whitened the part exposed, without destroying its texture. A piece of black flint with efflorescent white spots, and partly covered with the common white crust, being: exposed five days to the gas at a heat of about 68'^ F. was reduced from 103 grains to 91, and rendered white throughout. Some parts of it were rendered friable. White Carrara marble in twenty-four hours, at 77°, lost one- thirtieth of its weight, but the shining surface of its crystallised texture was distinguishable. Black marble was not aff'ected, either in weight or color, and agate was not attacked. Trans- parent foliated gypsum fell into white powder on its surface in a few hours; but this powder was not soluble in dilute nitric acid, — so that the fluoric acid had not destroyed the combination of its principles ; but deprived it of its water of crystallisation. A striated zeolite, weighing 102 grains, was rendered friable on its surface in forty-eight hours, and weighed only eighty-five grains and a half. On being immersed in water, and then dried, it gained two grains and a half, but did not recover its lustre. Barytes of a fibrous texture remained unchanged. A thin plate of Venetian talc, weighing 124 grains, was reduced to eighty-one grains in forty-eight hours, and had flillen into a soft

powder, which floated on water. See Chemistry.

Fluo-Silic Acid. If instead of being dis- tilled in metallic vessels, the mixture of fluor spar and sulphuric acid be distilled in glass vessels, little of the liquid will be obtained ; but the glass will be corroded, and a peculiar gas will be produced, v/hich must be collected over mercury. The best mode of procuring this is to mix the fluor spar with pounded glass or quartz ; and, in this case, the retort may be preserved from corrosion, and the gas obtained in greater quantities. This gas, which is called silicated fluoric gas, is very heavy; 100 cubic inches of it weigh 110,77 grains. It is about forty-eight times denser than hydrogen, and, when brought into contact with water, instantly deposits a white gelatinous substance, which is hydrate of silica and it produces white fumes when suffered to pass into the atmosphere. It is not aff'ected by any of the common combustibles ; but when potassium is strongly heated in it, it takes fire and burns with a deep red light ; the gas is ab- sorbed, and a fawn-colored substance is formed, which yields alkali to water with sligiit eflTerves- cence, and contains a combustible body. The washings afford potash, and a salt, from whit-h

the strong acid fluid previously described, may be separated by sulphuric acid. It affords, when decomposed by solution of ammonia, 61-4 per cent, of silica; and hence was at first sup- posed by Sir. II. Davy to consist of two prime proportions of acid^:2-65'2, and one of silica=: 4-06(3, the sum of which numbers may represent its equivalent— 6-718. One volume of it con- denses two volumes of ammonia, and they form together a peculiar saline substance, deconrpi?38d by water. The composition of this salt is easiiv reconciled to the numbers given as represent! -rrg silica and fluoric acid, on the supposition that it contains one prime of ammonia to one of the fluosilicic gas; for 200 cubic inches of ammonia weigh 36-2 grains and lOOof the acid gas 11 0-7 7. Now 36-2: 2-13 :: 110-77 : 652.

FLU'RRY, n. s., Goth, fokra. Hurry ; vio- lent commotion ; a gust or storm of wind ; a hasty blast.

The boat was overset by a sndde.n Jlurri/ from the North. Swift.

He lived (not Death, but Juau) in a hurry Of waste, and haste, and glare, and gloss, and glitter.

In this gay ciirae of bear-skin:, black and furry — Which (though I hate to

say a thing that's better)

Peep out sometimes when kings are in z. flurry. Through all "the purple and fine linen" — fitter

For Babylon's than Russias' royal harlot. And neutralize her outward show of scarlet. Byron.

FLUSH, v.n.f v., a., adj., 8c n. s. Yr-flus, or J}ux> Lat. fliiflus ; Dutch, fiiii/scn. To flow ; to flow with violence ; to approach with rapidity : ap- plied to a rapid motion of the blood, from men- tal or any other excitemenf, which produces a glow in the skin, and a redness in the cheeks ; it is used of a transient change of color in the face, not of a settled complexion. Thus it is ap- plied to any sudden elation of the mind. The substantive expresses afflux; sudden impulse; violent flow. The adjective is used as a cant term for affluent ; abounding. It sometimes means fresh ; full of vigor.

Ere yet the salt of most unrighteous tears Had left the Jiushinrj in her galled eyes. She married. ShaksjKare. Hamlet.

He took my father grossly, full of brc ad. With all his crimes broad blown, and Jiush as May ; And how his audit stands, who knows, save Heaven?

Shakspearc. If the place but affords Any store of lucky birds. As I make 'cm iojlush, Each owl out of his bush.

lien Jonxons Owls. Thus Eve with countenance blithe her story told ; But in licr cheek dislezapnT Jitishim/ glowed.

Milton X Paradise Lost. Wliat means that lovely fruit ? What means, alas ! That blood, v/hich Jiushe.i guilty in your face ?

Dry den . Never had any man such a loss, cries a widower, in the ˆtuih oi his extravagancies for a dead wife.

L'Extrange. The pulse of the arteries is not only caused by the pulsation of the heart, driving the hlood through them in manner of a wave or Jiiuh, but by the coats of the arteries themselves. Roy.

The pulse of the heart he attributes to an ebullition and .ludden expansion of the blood in the ventricles, aficT the manner of the milk, which, biing heated to

such a degree, doth suddenly, and a!i at once, Jluxh up and run over the vessel. -Rˆy.

It flushes violently out of the cock for about a quart, and then stops. Mortimer's Hu.shundry.

The glowing dames of Zama's royal court Have iaces Jluihed with more exalted charms.

Addison's Cuiu. Some court, or secret corner seek, Horjiush with shame the passing virgin's cheek.

Gay's Trivia. As prosperous people, Jiushed with great victories and successes, are rarely known to confine their joys within the bounds of moderation and innocence.

Atterbury's SerDwnt. At once, arrayed In all the colours of the Jliishing year. The garden glows. Thomson's Spring,

It is enough that Fortune found hha Jiush Of youth and vigour, beauty, and those things Which for an instant clip Enjoyment's strings.

Byron.

FLUSHING, an important sea-port of the island of Walcheren, situated on the north side of the Scheldt, at the mouth of that river. The approach to the harbour is between jetties, and inside the town are two basins, one of which will contain a fleet of men of war ; hence the im- portance of this])lace to the French, who, in 1795, stipulated for its possession jointly with the Dutch, and after\vards obtained it exclu- sively. The batteries nearly command the ♦mouth of tlie Scheldt. This town is a noted resort of English smugglers. It is well built, and was the birth place of De Ruyter. In 1809 it sustained a successful siege from the Bri tish army landed in Walcheren, and was not evacuated until the 23rd December, when our troops endeavoured to destroy the inner basins. Eiionaparte soon after aimexed the island Walcheren to France, and thus it continued until 1814. Population 5700. Old Flushing is a suburb on the west side of the New town.

Flushing, a town of America, on a bay in Long Island. Long. 73° 50′ W., lat. 40° 45′ N. FLUSTER, V. a. From to flush. To make hot and rosy with drinking; to make half drunk. Three lads of Cyprus, noble swelling spirits. Have I to-nig,ht Jlustered with flowing cups. And they watch too. Shakspeare. Othello.

FLUTE, V. a. & n. s. Yr.fuiite, flute ; Ital. flauto ; Belg. flnitc (a musical pipe). To cut columns into hollows ; a channel or furrow in a pillar; a regular ornamental concave extending from the base to the capital of a column : a wind instrument, with stops for the fingers. In yˆOiVes. made he

discordaunco And in his musike, with mischaunce. He would seine with notes ncwe. That he ne fonde no woman trewe.

Chaucer. Romaunt of the Ruse. Singing he was, or floyti/iy, allc tlie day ; He was as fresshc as is the moncth of May.

Ch'auccr. Prvhujue to Cant. Tales. The oars were silver, Which to the tune oijilutes kjpt stroke.

Shalapearc. Anon thry move In perfect phalanx to the Dorian mood Vfjlulcs and soft recorders.

.ˆniton's Paradise Lost,

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FLUTE.

The soft complaining ˆu

Drydeii.

Flute, in music, is the simplest of all musical instruments of the wind kind. It is played on by blowing it with the mouth ; and the tones or notes are clianged by stoppnig and openuig tlie holes disposed for that purpose along its side. The ancient fistulae, or flutes, were made at first of reeds ; afterwards of wood, and at length of metal. Hut how they were blown, whether as our flutes, or liautboys, does not appear.

The flute was of such nnportance in antiquity, that several female divinities laid claim to the honor of hs invention. Of this number the prin- cipal was ˆlinerva, or Pallas, the daughter of Jupiter : sometimes called Musica, or the musi- cian, from a statue made by Demetrius, in which, when the serpents of the Gorgon were struck, they resounded like a lute. She is said by Hy- ginus to have found herself laughed at by Juno and Vˆenus, whenever she played the flute in their presence ; and on examining herself in a foun- tain, which served as a mirror, was convinced that she had been justly derided for the distor- tion of her countenance, occasioned by swelling her cheeks in the act of blowing the flute. How- ever, a canse more worthy of her wisdom is as- signed for her throwing aside the flute, upon seeing Apollo perform on the lyre ; for, by hav- ing his mouth at liberty, she found that it enabled him to sing during the time he played. The performer upon the ancient flutes played always upon two at the same time, and placed round his mouth a species of bandage, tied behind the head, in order that the cheeks might not pro- trude, and for the better management of the breath. The right flute had only two holes, and produced low sounds

; the left had several holes, and produced higher sounds. When the musi- cians performed, upon these two flutes of differ- ent sounds, it was said die piece was performed ‘ tibiis imparibus’ or ‘ tibiis dextris et sinis- tris.’ \Yhen they performed upon two flutes of the same sound it was said, that the piece was performed ‘ tibiis paribus dextris,’ if upon those of grave sounds ; and ‘ tibiis paribus sinistris’ if upon high-souviding flutes.

The present flute was originally called the flute a bee, or beaked flute, from the reed resembling the mouth of a bird. This instrument, at the be- ginning of the last century, till the works of Co- relli came over, was in far more general use as a concert instrument than the violin. Sonatas for two flutes, and a thorough base, violone or theorbo, were innumerable: with solos, duets, and concertos for the same instrument; nor was there a ballad tlien printed which was not trans- posed for the flute at the bottom of the page. The concert flutes for which this music was com- posed were generally F and C. Besides the true concert flute, others of a less size were soon introduced into concerts of violins ; in which case the method was to write the flute part in a key correspondent to its pitch. This practice was introduced in 1710, by one Woodcock, a celebrated performer, and William Babell, organ-

ist of All-Hallows Church, London. They failed, however, in procuring for the flute a reception into concerts of various instruments ; for which reason one Thomas Stanesby, a very curious maker of llutes and of the instruments of the like kind, about 1732, adverting to the scale of Mar- sennus, in which the lowest note was C, invented what he called the new system ; in which, by making the flute of such a size as to be a fifth above concert pitch, the lowest note became C sol fa ut. By this contrivance the necessity of transposing the flute part was taken away ; for a ilute of this size, adjusted to the system above mentioned, became an octave to the violin. To further this invention of Stanesby, one Lewis IVIerci, an excellent performer on the flute, pub- lished, about 1735, six solos for this instrument, three of which are said to be accommodated to Mr. Stanesby’s new system ; but the German flute was now become a favorite instrument, and Stanesby’s ingenuity failed of its eff’ect. One great objection, indeed, lies against this instru- ment, which, however, equally affects all perfo- rated pipes ; namely, that they are never perfectly in tune, or cannot be made to play all their notes with equal exactness.

Flutes have a compass of nineteen diatonic intervals, viz. from D, first space below the tre- ble clef, to A-sharp (or B-flat), the octave above the first ledger line, including every chromatic interval ; but, generally, only to tlie second oc- tave above the second line, treble clef.

Flute, German, an instrument entirely dif- ferent from the common flute. It

is not,' like that, put into the mouth to be played ; but the end is stopped with a tompion or plug, and the lower lip is applied to a hole about two inches and a half or three inches distant from the end. This instrument is usually about a foot and a half long ; rather bigger at the upper end than the lower; and perforated with holes, besides that for the moutii, the lowest of which is stopped and opened by the little finger's pressing on a brass or sometimes a silver key, like those in hautboys, bassoons, &c. Its sound is exceedingly sweet and agreeable; and serves as a treble in a concert.

F"LrTE, or Fluyt, from fiotte, a little boat, is a kind of long vessel with flat ribs or floor- timbers, round behind, and swelled in the mid- dle ; serving chiefly for the carrying of provisions in fleets or squadrons of ships ; though it is often used in merchandise.

Flutes, or Flutings, in architecture, are per- pendicular cavities cut along the shaft of a co- lumn or pilaster. They are supposed to have been first introduced in imitation of the plaits of women's robes ; and are tlierefore called by the Latins striges and rugae. The French call them cannelures, as being excavations; and we, flutes or flutings, as bearing some resemblance to the musical flute. They are chiefly afi'ected in the Ionic order, in which they had their first rise ; though they are also used in all the richer or- ders, as the Corinthian and Composite ; but rarely in the Doric, and scarcely ever in the Tuscan.

FLUTTER, i-. n., v. a. & n. s. Sax. rlotefian ; Tr. flotter; Be\g. Jl odder on. Is a frequentative

i)f fly, and signifies to take short flights witli great agitation of the wings. The noun is used to express vibration ; undulation ; quick and irregular motion; hurry; tumult; confusion; irregular position ; disorder of mind. The verb, in addition to these applications, signifies to move with great show and bustle ; to move irre- gidarly ; to be in a state of uncertainty. Flut- tering, agitating between hope and fear. To drive in disorder like a flock of birds sud- denly roused.

As an eagle siirreth up her nest, fluttereth over ber young, and spreadeth abroad her wings, so the Lord alone did lead him. Deut.

And there withall astonce at him let fly Their Jluttering arrowes, thicke as flakes of snow. Spenser. Faerie Queene. Like an eagle in a dovecoat, I

Fluttered yovLT Volscians in Corioli.

Shakspeare. Think you've an angel by the wings ; One that gladly will be nigh. To wait upon each morning sigh ; To Jiutter in the balmy air Of your well perfumed prayer. Crashaw.

The heavenly city very few have a just notion of, or are at pains to seek after ; nay, they know not what it is they are seeking ; they flutter from one object to another, and live at hazard ; they have no cer- tain harbour in view, nor direct their course by any fixed star. Abp. Leiyhton.

They fed, s.nd, fluttering, by degrees withdrew.

Dryden. It is impossible that men should certainly dis- cover the agreement or discernment of ideas, whilst their thoughts flutter about, or stick only in sounds of doubtful signification. Locke.

An infinite number of motions are to be made use of in the flutter of a fan : there is the angry flutter, the laodest flutter, and the timorous flutter.

Addison's Spectator. Esteem we these, my friends ! event and chance. Produced by atoms from their uMerin dance !

Prior. Then (lest some sentry fowl the fraud descry . And bid his fellows from the danger fly) Close to the ground in expectation lies Till in the snare the fluttering covey rise.

Gay's Rural Sports. Ye spirits ! to your charge repair ; The fluttering fan be Zephyretta's care. Pope, No rag, no scrap of all the beau or wit. That once so fluttered, and that once so writ. Id.

His thoughts are \ery fluttering and wandering, and cannot be fixed attentively to a few ideas successively.

Watts. Fair crews triumphant, leaning from above. Shall wave then fluttering kerchiefs as they move.

Daruiin, NhaX singular emotions fill Their bosoms who have been Induced to roam "With fluttering doubts if all be well or ill — With love for many and with fears for some ; All feelings which o'erleap the years long lost. And bring our hearts back to their starting-post.

Bi/ron. Bon Juan. FLUVANNA, a county of Virginia, bounded north by Albemarle, north-east by Louisa, east by Goocliland, west by Amherst, and south by James River, which divides it from Buckingham. It is twenty-two miles long, and thirty broad, and contains about .5000 inhabitants.

Columbia is the chief town.

Fluvanna, a river of Virginia, which rises in the Blue Mountains, and rinis into the Rivanna at Columbia, to form James River.

FLUVTA, a river of Spain in Catalonia, which runs into the Mediterranean at Ampurias. On the 14th June, 1793, there was an engagement on its banks, between the French under general Scherer, and the Spaniards under general Ur- ratia, wherein the latter were defeated, with the loss of above 600 men, though they displayed the utmost bravery, and crossed the river up to the waist in water, to attack the French, who lost only eighty-five men.

FLUVˆIATIC, adj. 'Lat.flluviaticus. Belong- ing to rivers.

FLUX, n. s., adj. Sc v. a. ■\ Lat. fluxus ; Fr.

Fluxil'ity, n. s. \flux. The act of

Flux'ion. 5 flowing; the state of

passing away ; any flow or issue of matter. Con- course ; confluence ; the state of being melted. Fluxion is frequently used as a synonyme of flux ; in mathematics it is defined by Harris, ' The arithmetic or analysis of infinitely small variable quantities; or the method of finding an infinitely small quantity, which, being taken an infinite number of times, becomes equal to a quantity given :' as an adjective, flux signifies inconstant ; not durable ; maintained by a con- stant succession of parts. Fluxility, capability j possibility, or tendency to liquefaction.

Left and abandoned of his velvet friends ;

'Tis right, quoth he ; thus misery doth part

The flux of company. Shahspearc. As You Like It.

The simple and primary motion of fire is flux, in a direct line from the centre of the fuel to its cir- cumference. Dighy,

Whether the heat of the sun in animals whose parts are successive, and in a continual flux, can produce a deep and perfect gloss of blackness.

Browne's Vulgar Errours.

Experiments seem to teach, that the supposed aver- sation of nature to a vacuum is but accidental, or in consequence, partly of the weight and fluidity, or at leAst fluxility of the bodies here below. Boyle.

What the stated rate of interest should be, in the constant change of affairs, dˆndflux of money, is hard ♦o determine. Locke.

Quinces stop fluxes of blood. Arbuthnot.

By the perpetual ˆ«ar of the liquids, a great part of them is thrown out of the body. Id.

The fluxion increased, and abscesses were raised.

Wiseman.

A penetration into the abstruse difficulties and depths of modern algebra and fluxions, is not worth the labour of those who design the learned professions as the business of life. Watts.

Eat eastern spice, secure

From hvixmng fluxes and hot calenture. Halifax.

Flux, in hydrography, a regular periodical motion of the sea, happening twice in twenty- four hours ; wherein the water is raised and driven violently against tiie shores. The flux or flow is one of the motions of the tide; the other, whereby the water sinks and retires, is called the reflux or ebb. See Tide.

Flux, in medicine, an extraordinary evacua- tion of some humor. Fluxes are variously de- nominated according to their seats and the hu- mors voided ; as a flux of the belly, uterine flux, hepatic flux, salival flux, &c. The flux of

ihe belly is of two kinds, \n. the di.urliaeu, and the dysentery, or liloody Hux. See Medicine.

Tlux, in metallurgy, is sometimes used syno- nymously with fusion. An ore is said to be in liquid Hux, when it is completely fused. But the wˆord is most generally used to signify cer- tain saline matters, which facilitate the fusion of ores, and other substances, which are difficultly fusible in assays and reductions of ores. Fixed alkalies, nitre, borax, tartar, and common salt, are the saline matters of which fluxes are gene- rally composed. The word is more p '.icularly applied to mixtures of different prop./rlJons Jof only nitre and tartar ; and these fluxes are called by particular names,

according to the propor tions of these ingredients. Black flux is pro- duced from the mixture of two parts of tartar and one part of nitre detonated together. As the quantity of nitre which enters into the com- position of this flux IS not sufficient to consume all the inflammable matter of the tartar, the al- kali which remains after the detonation contains much black matter, of the nature of coal, and is therefore called black flux. This flux is so pre- pared, that it shall contain a certain quantity of inflammable matter; for it is thereby capable, not only of facilitating the fusion of metallic earths like the white flux, but also of reviving these metals. From this property it is also called reducing flux ; the black flux, therefore, or crude flux, made with such proportions of the ingre- dients as to be convertible into black flux, ought always to be used when metallic matters are at once to be fused and reduced, or even when' de- structive metals are to be fused.

The advantage of JNI. Morveau's reducing flux, seems to depend on its containing no ex- cess of alkali. It is made of eight parts of pul- verised glass, one of calcined borax, and half a part of powder of charcoal. Care must be taken to use a glass which contains no lead. The white glasses contain in general a large propor- tion, and the green bottle glasses are not perhaps entirely free from it.

Flux, Crude, is the mixture of nitre and tartar in any proportions, without detonation. Thus the mixture of equal parts of the two salts used in the preparation of the white flux, or the mixture of one part of nitre and two parts of tartar for the preparation of the black flux, are each of them a crude flux before detonation. It has also been called white flux, from its color ; but the name of crude flux is more conve- nient. Crude flux is detonated and alkalised during the reductions and fusions in which it is employed ; and is then changed into white or black flux, according to tlie proportions of which it is composed. This detonation produces good effects in these fusions and reductions, if tlie swelling and extravasation of the detonating matters be guarded against. Accordingly crude flux may be employed successfully in many ope- rations; as, in that for procuring the regulus of antimony.

Fi.ux, White, is made with equal parts of nitre and of tartar detonated together, by which they are alkalised. The residuum of tliis deto- nation is an alkali composed of the alkalies of the nitre and of the tartar, both which are abso-

lutely of ilie same nature. As the proportion of nitre in this mixture is more than is sufficient to consume entirely all tlie inflammable matter of the tartar, the alkali remaining after tlie detona- tion is perfectly white, and is therefore called white flux: and, as this alkali is made very quickly, it is also called extemporaneous alkali. ^\ hen a small quantity only of white

flux is made, some nitre always remains undecomposed, and a little of the inflammable principle of the tartar, which gives a red or even a black color to some part of the flux; but this does not hap- pen when a large quantity of white flux is made; because then the heat is much greater. This small quantity of undecomposed nitre and tartar which remains in white flux is not hurtful in most of the metallic fusions in which this flux is employed : but if the flux be required perfectly l)ure, it may easily be disengaged from those ex- traneous matters by a long and strong calcination, without fusion.

F'luxes for Assaying Minerals. Under the article Blow-Pipe, we have described the method of vitrifying any small portion of mine- ral substance, by which the process of assaying may be very quickly performed. The fluxes re- commended by Sir T. Bergman, for this purpose, are the following: 1. The phosphoric acid, or rather the raicrocosmic salt, which contains that acid partly saturated with mineral, partly with volatile alkali, and loaded besides with much water and a gelatinous fat. This salt, when ex- posed to the flame, boils and foams violently, with a continual crackling noise, until the water and volatile alkali have flown off; afterwards it is less agitated, sending forth something like black scorjae arising from the burnt gelatinous part : these, however, are soon dispelled, and exhibit a pellucid sphericle encompassed by a beautiful green cloud, which is occasioned by the deflagration of the phosphorus, arising from the extrication of the acid by the inflammable matter. The clear globule which remains, upon the removal of the flame, continues longer soft than that formed by borax ; and therefore is more fit for the addition. of the matter to be dis- solved. The volatile alkali is expelled by the fire ; therefore an excess of acid remains in what is left behind, which readily attracts moisture in a cool place. 2. The mineral alkali, or sal sodre, when put upon charcoal, melts superficially, pe- netrates the charcoal with a crackling noise, and then disappears. In the spoon it yields a per- manent and pellucid sphericle, as long as it is kept fluid by the blue apex of tlie flame ; but, when the heat is diminished, it becomes opaque, and assumes a milky color. It attacks several earthy matters, particularly those of the silicious kind, but cannot be employed on charcoal. 3. Crystallised borax, exposed to the flame urged by the blow-pipe or charcoal, first becomes opaque, white, and excessively swelled, with va- rious protuberances, or branches proceeding out from it. When the water is expelled, it easily collects itself into a mass, which, when well fused, yields a transparent sphericle, retaining its transparency even after cooling. If calcined borax be employed, the clear sphericle is ob- tained the sooner. See Metallurgy.

Sect. I. — History of the Method of Fluxions.

1. Tlie doctrine oi Jiuxions, by many degrees tlie most important discovery that lias been made in abstract science in modern times, compre- hends the analysis of quantities considered as variable. It consists of two principal branches, the first of which shows how the relation may be found between the variation in any quantity and the variation of any function of that quantity; and the second shows how, from the variation in the function, the quantity on which the function depends may be discovered. The former of these is by English mathematicians called the direct, and tlie latter the inverse method of fluxions, but by foreigners they have been ge- nerally denominated tlie diˆerential, and the in- tegral calculus.

2. It is agreed on all hands that either to Sir Isaac Newton, or M. Leibnitz, the honor of dis- covering this admirable method of investigation belongs. But whether they separately made the discovery, or Leibnitz took advantage of some hints which he wight have had from a common friend of Newton and himself, and published as his own what he thus obtained, has never been satisfactorily determined. Certain it is that the method came from the hand of Leibnitz both in its form and metaphysics, in a shape exceedingly different from the manner in which it was ex- plained by Newton; and experience has shown that the Leibnitzian form of the calculus is much better adapted to the higher class of investiga- tions than that of Newton.

3. M. Leibnitz unquestionably was the first per- son that laid the principles of the method before the public. This he did in the Leipsic acts of' 1684; where he gave precepts, but without de- monstrations,for performing some elementary ope- rations in the method; and there can be no doubt that, long before that period, he was intimately acquainted with its principles.

4. But though Leibnitz was the first that pub- lished any thing on the subject, there can be little doubt that Newton had first made the dis- covery; for he had made use of it prior to 1669 in his Compendium of Analysis and Quadrature of Curves; and there are traces of this method in matters which must have engaged his atten- tion three or four years before that period. In 1687 his Principia appeared ; the most stupendous achievement of human intellect that the world has ever seen, a work entirely founded on the fluxionary calculus. Till about 1699, it ap- peared to be generally taken for granted that Newton and Leibnitz had separately and inde- pendently made the discovery ; but about this pe- riod Nicholas Facio de Duillier, a Genoese, re- tired to England, and, it has been said, conceiving that he had been undervalued by Leibnitz, published a little tract on the curve of swiftest descent ; and he took occasion to say, that, for the sake of truth and his own conscience,

he was obliged to declare Newton the Jirst in- ventor of the new calculus; and that he left others the task of determining whether Leibnitz the second inventor had borrowed from the English mathematician.

5. Leibnitz, hurt at the remark and the insinu- ation conveyed in it, answered, however, with great moderation; that he could not believe that M. Facio's remark was made with Newton's ap- probation; and that he would not enter into any dispute with that great man for whom he had the most profound veneration. That when he pub- lished his differential calculus, in 1684, he had been master of it about eight years. He ad- mitted tliat Newton informed him, about the same time, of his knowing how to draw tan- gents by a general method which was not im- peded . by irrational quantities ; but, as the information was unaccompanied by any expla- nation, he could not know whether this method was or was not deduced from the differential calculus ; especially as Iluygens, who was at that time unacquainted witli this calculus, af- firmed himself to be in possession of a method of drawing tangents which possessed the same advantages. That the first English work in which he had seen the differential calculus ex- plained was in the preface to Wallis's Algebra, not published till 1693 ; and that, relying on all circumstances, he appealed entirely to the candor of Newton.

G. Writings succeeded each other at first but slowly ; but, as the partizans of each grew more zealous and positive, tlie controversy grew hotter, till at length, in 1711, M. Leibnitz complained loudly to the Royal Society, of the conduct of Dr. Keil, who had accused him of having pub- lished the method of fluxions invented by New- ton as his own, merely disguising his piracy by devising other names and characters. The Royal Society accordingly appointed a com- mittee to examine all the writings relative to the question, and in 1712 published these writings with the report of the commttee under the title of Commercium epistolicum de Analysi pro- inota. The conclusion of the report is, that Keil had not calumniated Leibnitz. It has been said that in this business Newton did not ap- pear, but left the care of his reputation to his countrymen ; but this is a mistake, for in the •course of the dispute Newton wrote two very •sharp letters against Leibnitz, in which there is evidently some art employed to weaken those strong testimonies of esteem which on previous occasions he had expressed for him,])nrliculnrly in the celebrated scholia to prop. 7. book 2, of the Principia, in which Newton says, ' In a corre- spondence in which I was engaged with the very learned geometrician Mr. Leibnitz ten years ago, having informed him that I was actjuainted with a method of determining the maxima and minima, drawing tangents, and doing other similar tilings which succeeded equally in rational equations

ar radical quantities, and having concealed this met'nod by transposing the letters of th«; \vords, whicli signified, an equation coittuining any num- ber ofjiowiiig quantities being given, to find the Jlvxions, and inversely ; that celebrated gentleman answered that he had found a similar method ; and this which he communicated to me, differed from mine only in the enunciation and rotation.' To this the edition of 1714 adds ' and in the idea of the generation of the quantities.' Tliis shows clearly that Newton at that time believed that the discovery of Leibnitz was independent of his own. In the edition of the Frincipia which was published in 1726, ten years after the death of Newton, the above scholium was omitted. It appears too, that the Royal Society was sensi- ble that in hastening the publication of the do- cuments that made against Leibnitz, without waiting for those which he promised in his de- fence, it might be accused of partiality, for it declared soon after that it had no intention of []assing judgment in the case, but left the world .'it liberty to discuss it, and give its opinion.

7. On the whole, while w-e think that the Com- niereium Epiatolicum has made it plain that Newton was the first inventor, yet we are bound in candor to state that we do not think that Leibnitz was indebted for what he discovered on the subject to the previous inventions of his il- lustrious contemporary.

8. The method of fluxions was brought to a considerable degree of perfection by the labors of its inventors, and the Messrs. Bernouilli ; but none of the great men of that day perhaps fore- saw the improvements which a century would make in this new instrument of investigation, that had just been put into their hands. Mac- laurin, Simpson, Lander, Waring, and Emerson, among our own countrymen, have all contributed to the improvement of some parts of the analysis. Tiiey were all of the school of Newton. But the lead in improvement has been taken by our con- tinental neighbours of the Leibnitzian school; Euler, D'Alembert, Arbogort, and, above all. La Grange, have immensely extended the bounds of the method.

9. At present, among the leading mathema- ticians of this country, the logarithm of Newton has been generally abandoned for that of Leib- nitz ; and the labors and the talents of Wood- house, Herschel, Babbage, Lardner, Airy, and a host of other enthusiastic cultivators of science, induce us to hope that Britain will soon, as in by-gone days, be foremost in the ranks, as well of science as of art.

Sect. IL — Definitions, Principles, and

Notation.

10. In the fluxionary calculus, quantities of all kinds are considered as generated by motion, by means of which they increase or decrease ; as a line by the motion of a point, a surface by the motion of a line, a solid by the motion of a sur- face, and an angle by the rotation of one of the lines which contain it; time in all cases flowing uniformly: and since, when we consider magni- tude only, without regarding position, figure, and other affections, all quantities may be represent-

ed by lines, we may conceive whatever can be the subject of computation, as generated by motion.

11. Any variable quantity thus generated is called by English mathematicians a Jluent, or flowing quantity ; and by the continental mathe- maticians an integ7-al ; and the rate of increase or decrease of the variable quantity at any instant, is in this country called the Jluxion, and on the continent the difftrential of that quantity.

12. To illustrate these definitions, suppose a point »« be conceived

to move from the posi- m

tion A, and to generate -^ P -^^

a line AP, by a motion

any how regulated ; and suppose the celerity of the point m, at any position P, to be such as would, if from thence it should become, or con- tinue uniform, be sufticient to cause the point to pass uniformly over the distance Pp in the time allowed for the fluxion, then will t;ie said line P/> represent the fluxion of the fluent, or flowing line AP, at that position.

1 3. Again, suppose the right line m n, to move from the position

A B, continually pa- fj Q <7 C

mallei to itself, with any continued mo- tion, so as to gene- rate the fluent, or flowing rectangle A

BQP, whilst the point m describes the line AP; also let the distance Pp be taken, as before, to represent the fluxion of the line, or base A B, and complete the rectangle PQ^;?, then, like as P;j is the fluxion of the line AP, so is Py the fluxion of the flowing parallelogram AQ; for if the line P/) be supposed to be generated with a uniform celerity in a given time, the parallelo- gram P^ will also be generated with a uniform celerity in the same time.

14. In like manner, if the solid AERP be conceived to

be generated ” ^^ ^

by the plane P Q R, mov- ing from the position AB E, always pa- rallel to itself, along the line A D, and if Pju denote the fluxion of the line AP : Then, like as the rectangle PQˆp expresses the fluxion of the flowing rectangle A BQP, so also shall the fluxion of the variable solid, or prism A B E R Q P, be expressed by the prism P Q R r qj). And in both of these last two cases, it appears that the fluxion of the generated rectangle, or prism, is equal to the product of the generating line, or plane, drawn into the fluxion o’f the line along which it moves.

15. Hitherto the generating line or plane has been considered as of a constant, or invariable magnitude; in which case the fluent, or quantity generated, is a rectangle or a prism, the former being described by the motion of a line, and the latter by the motion of a plane. So in like man- ner are other figures, whether plane or solid,

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conceived to be described by the motion of a vaiiable magnitude,

whether it be a line <7 ,-'

or a plane. Thus, let Q^,

a variable line PQ, fig. 4 and 5, be car- ried with a parallel motion along the line AP, so that while the point P generates the line AP, the line PQ may generate the curvili- near area A PQ, by this means the point Q will generate the curve line AQ. Here, therefore, there are several flueats, or flowing quantities, namely, the absciss, or base AP, the ordinate P Q, the cxH-vilinear area A P Q, and the curve line A Q.

16. In order to exhibit the fluxions of these quantities, let Pp, as before, be the fluxion of the base, complete the rectangle PQrp, this rectangle will be the fluxion of the cur- vilinear area A P Q. For if the generating line were supposed to

become invariable at the position P Q, it is evi- dent that while the line Pp, was described by the point P with a uniform celerity, the parallelo- gram Pr would also be generated by the line P Q uniformly, and with the very celerity with which the area APQ was increasing at the position PQ. Next, suppose that the variable line PQ increases uniformly, after leaving the position P Q, with

the very degree of ^ Z-—

celerity of increase it had when in that position; it is evi- dent that the point Q will now describe

a straight line Q, ^ P~P*

which will be a tan- gent to tlie curve at Q ; this line will also be generated with a uniform celerity, viz. the very celerity with wliich tlie generating point was moving in the curve at the position Q. Hence it appears, that like as Pp is the fluxion of the base, or absciss A P, and Pr the fluxion of the area APQ, so is the line rs the fluxion of the ordinate, or generating line PQ, and Q.? the fluxion of the curve line AQ.

17. In the doctrine of fluxions, the initial let- ters of the alphabet, a, b, c, d, &c., are commonly used to denote constant, or invariable quantities; and the last letters z, .r, y, tc, Sec, to denote varia- ble, or flowing quantities. Thus, the variable line A F', fig. 3, may be represented by .r, and the constant line PQby«; also in fig. 4, the variable absciss AP may be represented by .r, the ordinate PQ by _y, and the curve line AQ by z.

18. The fluxion of avariaMe quantity is repre- sented by the same letter, with a point over it. Thus the fluxion of x is represented by x, the fluxion of

7/ by y, &c. The continental mathe- maticians represent the fluxion, or differential of any quantity, by prefixing d to the quantity. Thus the fluxion, or difl^^rential, of a is rcpre-

sented by d.r, that of y by di^, &c. In this article we siiall adopt the Engiisii notation, as, in the principal works on the application of fluxions that have hitherto been published in this countiy, it has been employed.

Sect. III. — ^To find the Fluxion of any Proposf.d Variable Quantity.

19. The fluxion of x is x, and that of y ia y, therefore the fluxion of x \ y is f + ^ ; and similarly the fluxion of x — 3′ is i — y. To find the fluxion of the product of any two variable quantities as i and y ; let x be increased by any small quantity x', and y by y', then the quantities become x \ x' and y \ y, whose product is xy f xy' -^ y x' \ x y' ; which exceeds x y, the product of the two proposed quantities, by ,r y ^• yxf- jr'y, the quantity by which, with any assign- able values of x' and y, the product of .r y is increased. In the same manner if x and j/ were diminished severally by x' and y', their product would be diminished by x y ■}- y x' — x'y, a quantity which is equal to the former when x' and y are indefinitely small, or when for x', y', we substitute their fluxions i-, y, in which case the fluxion of the product is simply .r ^ + ?/ i-. If for X t/ 2 we were to substitute w z, we should as above find its fluxion w i \ z wiz: xyz \ z (xy --yx):zzxys-{-x3y--yz i\ Hence the fluxion of the product of any number of variable quantities is obtained by multiplying the fluxion of each by the product of the others, and adViing the results together.

20. To find the fluxion of the quotient of two

X ^ X

variable quantities, as — ^'put – — w, then x zz w y, whence, by article 1 9, r rr w y --y u; or iv zz

X

X — wy X — y . y ?/ ^_ .r V

zz. ^ — – ^^ '-• Hence from

the fluxion of the dividend multiplied by the divisor, subtract the fluxion of the divisor multi- plied by the dividend, and divide the remainder by the square of the divisor, and the result will be the fluxion of the quotient. By considering the divisor and dividend as the denominator and numerator of

a fraction, the fluxion of the frac- tion may be found in the same manner.

21. To find the fluxion of any power of a

variable quantity, as .r. Let x be increased by

the indefinitely small part x, then if a- | r be

raised to the «”• power, it becomes x” j n r

n 1

n — ‘ .r f n ■ — – — xn — ‘ .^^ &c. ; whence tlie

increase of the n’^ power arising from an increase

*of i in the root iswx” — ‘i-|-ra — – — j: ” — **

i’, &c. If X had been negative, then the dimi- nution in the «”■ power , arising from a diminu- tion of X in the root, would have been n x ‘ — •

7? — 1 X — n — ^ — i’^ Sec.; which in the nascent state

of i would agree with the preceding, that is,

when all the terms after the first were zero.

Hence, generally, the fluxion of x”, rj x ” — ‘ i.

That is, multiply the fluxion of the root by the

index of the power, and the product by the next

lower power of the root for the fluxion of tht

proposed power.

2 A.

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22. To find the fluxion of a power of any quantity of wliidi the root is constant, but the exponent variable, as «v. From the common ijrinciples of algebra we have

a = 1 + A X + -^-2 + jT^r^, &c., where

A = „ – 1 _ K« – 0′ + i (« – !)'» &c- lleiioe lakin"- the fluxion of each term we have ˆ .„ Aˆarˆ'.r , Aˆ.r'i- ,

(« ') = A i + A- J- i- + ˆ . ., + fTˆ3 +

&c.

A i. A + A.r + 'ˆ', &c. ˆ = Ai- X /.

Now A is the hyperbolic logarithm of a, there-

X

fore the fluxion of an exponential quantity, as c is equal to the product of the exponential, by the liyperbolic logarithm of the root.

23. To determine the liuxion of the logarithm of X, a being the base of the system.

Let u— log. x; then x z=. a" , whence, by ar-

■ *; or the*

motion of the point B, arid let its rate of increase or diminution be represented by the distance of D from a given point C. Then, if the velocity of B be not uniform, C D will be a variable line ; and its rate of increase or decrease will be its fluxion, or the second fluxion of A B. And if the motion of B be such that E F, which by the variations in its length may represent the rate of variation in C D, is also variable ; then E F will have its second fluxion G H, which is the third fluxion of A B.

Example. — The fluxion of r' is 3 x x, and the fluxion 3 j-ˆ i is 6 X iˆ + 3 .r' .r, the second flux" ion of JT*. The fluxion of this quantity again is*

6 i X i' + 6 .1′ X ixx + Q X i'x \ ˆ xˆ x =. 6 i' + 18 .r.r.i'+ 3 X- .)■'.

tide 22, i = x log. a X n, or " — ˆ jˆˆ ˆ

fluxion of a logarithm is equal to the fluxion of the quantity divided by the product of that quan- tity, and the hyperbolic logarithm of the base of the svstem.

If log. « =r 1, as in hyperbolic logarithms, then

X

the fluxion of log. .r — — .

24. To find the fluxion of .rˆ, the root and the exponent being both variable.

Let u rz x", then log. u — v. log. x, hence-rz

u

X V

D

V. log. X + – —, whence u ■=. v x, log. x + i vx

Sect. IV. — Of the Different Orders or Fluxions.

25. If the proportion between the fluxion of a root, and the fluxion of any algebraic quantity in which that root may be involved, be constant, the fluxion of that quantity.is also constant ; otherwise the fluxion itself will be a variable quantity, and consequently that fluxion will itself have a flux- ion, or rate of increase corresponding to its value, at any given instant. This fluxion is called the second fluxion of the original quantity; and this second fluxion may also be still a variable quan- tity, and consetjuently have its fluxion, which is called the third fluxion of the proposed magni- tude. These orders of fluxions are denominated by the same fluent letter, with a number of points over it corresponding to its order ; thus of

X, the first fluxion is i, the second x, the third x, &c.

26. For the sake of illustration, let Piˆ repre- sent any variable quantity generated by the

A B

If .V rz n .r .r, then j/ ■=. n- 7i — 1 .r

X- \ n X X ; if 3 ˆ zz x y, then 2 i: z 7=. x y { y X, See.

Sect. V. — Of the Inverse method of Flux- roX'S, OR the methods of deducing the Flu- ents FROM their FlUaIONS.

27. Having given in the preceding sections the methods of determining the fluxion of the most usual forms of flowing quantities, we proceed to consider the much more difficult process by which the flowing quantity may be determined from its fluent. There is indeed no method by which the fluent can in all cases be deduced from its fluxion; all that can be done is in general to discover whether the given fluxion agrees, can be made to agree, or to have a known relation to a fluxion, which has been deduced

from a known quantity by the direct method, and thence to deduce the fluent of the given fluxion.

Thus we know that the fluxion of x is n x

‘ X, and conversely therefore the fluent of n

X iisx . The fluent of .r^_y is 2 a’ j/ x-f- j.r^,

therefore the fluent of 2 a x y x j ay x’^ is a x”^ y.

28. The principal rules for finding fluents, de- duced from the various forms of fluxions investi- gated in the preceding section, are the following :

29. If there is only one fluxional quantity, and no variable quantity, the fluent is found by merely substituting the flowing quantity for its fluxion. Thus the fluent of ax is ax, that of

v’ a^ + X- is / a } x’.*

30. When any power of a flowing quantity is multiplied by the fluxion of the root, divide by the fluxion of the root ; add 1 to the exponent of the power; divide by the exponent so increased, and the quotient will be the fluent of the pro- posed flowing quantity.

3 3^ X

For example, the fluent of 3 x i is — — zr ‘^ 6 X*

J i, the fluent of*

\/ a — X

, or of X a — X

zr 2 rt — X

H

31. When the root under the vinculum is a compound quantity, and the index of the factor without the vinculum increased by 1 is some

multiple of that under the vinculum, put a single variable letter for the

compound root, and put its powers and fluxion for those of the same value in the given quantity, and it will then be reduced to a form in which the last rule may be applied. Example. — Let the given fluxion be F :^

3

(a^ \ J-)' .r^ X, where 3, the index of the quan- tity without the vinculum, increased by 1 makes 4, double the index of x^ under the vinculum. Put 2 :z: a' + x^, then j^ n ^ — a^; and 2 x ic-^z

2, whence x xiz -, and x' x'n rz – (2 —

2 2 2^

a*) ; whence F =r ^ 2^ 2 (2 — a^) — i 2^ 2 — ^

a^2^ J,thefluentof which is -^ 2^ — a'z = 3

z^ (-^ — fg' zn (by substitution and reduction)

k ^

2 a X

n: vi, we found

For instance, taking ^

in the last article that u zz hyp. log. ^ ■-. But

2 a

a^ — x^ = a + X ■ a — X. Put therefore

+

B

_A +B- a — A — Bax

a + x a — x a2 — x^

then A + B — 2 andJA — B rz 0, or A zz 1 and

B zz 1 , whence it :^

7. +

hyp. log,

a { X

a -^ X a

-, and u

a — X

Again, let u zz

j‘2 — 5 X \ 6

As x^ —

1

i^ ■ d- + 1-2 3 ^ ^ ^^.

32. When there are several terms involving two or more variable quantities, having the fluxion of each multiplied by the other quantity or quanti- ties, take the fluent of each term as if there were only one variable quantity in it; then, if the fluent of each term be the same, that quantity is the required fluent of the whole.

Example. — Required the fluent of xy z •{- xy z + xyb

The fluent of each term being x y z, consider- ing X in the first, y in the second, and z in the third, as the variable quantities, xy z is therefore the required fluent.

X y — X y

+ 6 TH X — 3 ■ X — 2, assume -^ ^

x-‘ — 5 X \ 6

A ^B

3 ^ .r — 2

A-l-B-a: — 2A-H3B;

x^ — 5 X \ 6 then A I B zz 0, and 2 A f 3 B iz — 1,

whence A z= 1 and B zz — 1, and ic iz

.r — o

X X — 3 -, and consequently u rz hyp. log. ■

36. Tlie fluents of many expressions may be derived from the fluents of others ; thus, we have

seen above that the fluent of — ‘ is the

n/ˆ’ + oˆ

33. As the fluxion of – is

.T y — .r y

2/2

-, therefore

hyp. log. of ;r -h ∕ x’ + aˆ, let it be required to find from this the fluent of

ar X

— . Multi-

the fluent of

3/2

. 2 .r X yˆ — 2y y x- . ent of ‘- rˆ is

is-; similarly the flu-

V a- I .rˆ

plying both numerator and denominator by x we xˆ X , , , I aˆ X X

have

y A ” y2

34. As the fluxion of hyp. log. a:’ is – the fluent we have

-, and add

V «2 X- 4- xˆ’ ˆ/a2i•*-f- x*

ˆ aˆ X X \ xˆ X

:,and

whose fluent is *

V «* x^ \ X* 2

of – is the hyp. log of J". In the same manner v^ a* | x"^. From this, if the fluent of

^ a^ X X

we find that the fluent of . — 2 , 2 is the hyp. log. of .r 4 v' j: rh a* ; for the fluxion of x -f V J^' + a' is ar 1 ^ ^ = ^ X

-, or

^ a^ x' + X* ^a? \ x""

^ a» X hyp. log.

\/ J^^ ± «' + x)j which divided by the given quantity, jt | > ^ x'^ ± a^, gives-

In the same way may the fluent of ■

> / 2 a X \ X' be shown to be equal to the hyp. log. of a-- x +

2 a X

^ 2 a X \ x^\ the fluent of ;. _ r; to be the hyp.

log. of- ^ , and the fluent of

X s/ a^±x*

to be

the hyp. log. of

a \ K^ a' ^ x" 35. V/hen the fluxion is a rational Traction, its denominator may be decomposed into its factors ; and, by means of indeterminate inefticients, the fluxion may be decomposed into others of a sim pler form. 2 A 2

(x + s/ a' + x^) be deducted, the remainder ^ a? + .r — ^ hyp. log. {x \ ^ a" \ .r«) is the required fluent.

37. Sometimes fluents may be found by ex- panding the terms of their

fluxions in a series, when no other method is applicable; and in many instances this method of finding fluents is of the highest importance. An example or two will explain the principles of the method.

Let it be required to find the fluent of i ˆ a' — J^^ by means of series.

ˆ a" — x" expiuided into a series by the bi- nomial theorem, or the method of indeterminate

.r" .rˆ i" 5 j-ˆ

co-efficients, is a – — – ˆ—r – igˆs ~ 128 aˆ

ˆ_ . .r'.f

See. ; hence x ˆ a' — rˆ_ a ,r — -ˆ

- tjL &c. Hence by taking the fluent of

*80 = * 16 a'" ■ .*

each term we have the fluent of .r «y aˆ — jˆ rz

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js ys J.7 5 js 38. There have been collected by several

ax — – -ˆ — -pr-s — 7779777' 'ˆ authors a great many forms of fluxions, with theii

Oa 40 a Ilia iˆ" correspondin

Again, let U be required to find the fluent ot "'jˆPˆTin finding the fluents of complicated

ax- " • • , ,n . • . 1 r 1 r „

a" + a-

_- by means of series.

expressions, when a fluent is to be found from a fluxion which either agrees with, or has an assign-

ˆ gr a' • aˆ + x" expanded into a able relation to, a fluxion on those collections. They

a’ + x^ serve in this case much the same purpose to the

series is analyst, that logarithmic tables do to the compu-

“^^ 4- •!! _ “^ 4 &c • whence ”’ ^ = ter. We give the following as the forms which

“^^”^ a ?” ” a^ + J-‘ are of most frequent occurrence in practice, and*

r» i r i r« i , , », refer for the most extensive collection with which*

i – 4 + ^ – ^ ‘ &c., and consequently ^^ ^^.^ acquainted, to a work on the subject by

*” ** J.3 3^ Jc^ Meyer Hirsch, which has been lately translated*

the required fluent is j — oT”^ 7~ — t’oS’ into English : —*

39. A Table of Fluxions and Fluents.

No.

Fluxions.

1— 1

1. X

m n

y

2. a ± .r” ‘

tnn — 1

3. X X

(a ± T)

n m — ‘

4. (a ± X)

Twn + ‘

i

5. (li + ‘^I).

\ X y^

\ X y i /

7. i —

X {a± X)

n— «

8. J i

a — X

n — ‘

9. X X

m n p

y –

10.

a + X fi —

11.

12.

v/a±x=’» n — »

V a — x’”

r X v” a ± x”

13.

X «/ X

14. X ^ a X —

15.

16.

+ a:+: t

a f ^ x^

17. -^=

>/ X (± o ip 6 x)

18. — 1 =

19.

»y X (a \ b x)

V ^a”’± a

Fluents.

1 n

± a ± X’

f?j n

??j n a

{a±x’r

- ‘ X

nm (a±x)

mn a

X “*”

m n

+ X y

m n p

X y z

1 ,

• log.

n

X

^ • log. ‘^ a+ ^”

2n ^ a ^ a— x”

=. arc to tan. -^=r, or

n sj a sj o.

1 a— x’*

2nsJ a

-^= arc to cos.

a] x’

•log. (x”+ V ±a + x’)

1 • arc to sin. ‘V=’ “ — ■ ”*-‘ ‘ ^^’^^• 7t ,J a 2n

2 x»»

J ± ^/ a± .t” ± y/ g

/—log- ^a±,,n ^ ^-

n /y/ a

2 . . Vx” 1

=. arc to sin. ■ ; or . — = arc to cos.

n ^ a »y a n ^/ a

2a — X”

\ cir. seg. to di. or a, and vers. x. 1 , ~a + V bx

± — =.• log. y ^ ^

s/ a b ^ ±aziib X*

-\ -. • arc to log. ^Z ^^

ˆ a b a

> >/ a b ˆ ±aq: b X

+

■arc

to tan. \ˆAJL

ˆ ab

+ —L- ■ log. {s/TT' + s/ b x-±a

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Mo.

20.

21.

22.

23. 24. 25. 26. 27. 28. 29.

30.

Fluxions,

a-bs

X

ˆ b xˆ ±: a X

X

tj a X — b xˆ

X

X ˆ a ± b X

X

X s/ b X — a

r

*X V « ± 6 j-^**

X

X ^ b x”^ — a

x”^ X

■ ± *ar^bx^*

x^x

*a + bx”^*

•J X X

+ a + 6 X

s/ X ie

a \ b X

31. «

32. ,r . log. X X

33, a X

*34, x 3/ . log. y--xyy *

On the Correction of Fluents

40. Though, by tlie rules which have been given for finding fluxions, the fluxion of any flu- ent may be found, and by a reverse operation the fluent may in most cases be found from the fluxion; yet the fluent so found may often require to be increased or diminished by some constant quantity depending on the nature of the problem under consideration. For example, the fluxion

n n — ‘ , , „ ■ *^ ”*

of .r IS n X ,r, and the fluxion of .r ± « is

the same quantity ; we cannot therefore afiirm without reference to the

nature of the problem in

M — ‘

which the fluxion n x x arises, whether

„ . n 11

Its fluent IS .r or r + «.

The most direct and simple method of finding whether a fluent does or docs not require correc- tion, and the amount of that correction, if any, is to see what the variable part of the fluent (the

Fluents.

I ‘ / bx’

“1 — – -arc to tan. ╲/ –

s/ b ˆ a — xˆ

+ — =ˆ-log. (v/ b X -ˆ s/ bx ± a

V o

. 2 ˆ / bx

-╲ =, arc to tan. ╲/ —

ˆ b a — b X

2 , J a ■╲ ˆ a-- b X — _-log. :^^-^^=

+ 4 =:-arctotan. V^^jLZLˆ

V a

1

log. , arc

n/«

+ s/ a

*+ 6 J-**

ˆ a

to tan

X

1

) jˆ— 2 a

, ˆ a + ˆ b X ., log. — =

b ˆ b ˆ ± azfb X

2 ˆ/“a~ y b X

— ^^=:., arc to tan.‘v

b ˆ b «

j/i • log n • n — 1

(n X m

log. o

2x

+

n • n — 1 .r

log.ˆ a

mˆ log

+ &c

.)

m+ ‘

n • n — 1

log.

m t 1

log. X f

• n — 1 • n — 2

m I 1

«— 3 \

X | &c.)

m + 1

>

n • log.

only part given by the preceding rules) differs

from the truth in some circumstance of the

problem in which its valne is known; and this

difference added to, or subtracted from, the varia-

able part, as may be required, will give the fluent

truly corrected.

a* ,r» Example 1. — Letˆ zz a”ˆ x r, then y rz — ;

where if y rz 0, then x zz 0; if therefore .r andy are by the conditions of the prol)leni simul-

taneously ˆ 0, the quantity — _ — is the true

fluent.

Example 2. — r and y commencing together let the true fluent of y r= u 4ˆ ‘ • r be required.

By the common rules y zz — – — , where

when ?/ rz 0, ˆ ~ — which should also

4 4

kave been o, hence y zz

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ft + xV

— the cor-

rected fluent.

*The true fluent of this quantity, however, and many others may be found without correction ; in the present case (yzzu--x^ i) if a + .r ^ be expanded, we have j rz a' i + 3 a^ x i + 3 a x^ X + x^ X, whose fluent is y zz. a^ x *

3 a^ X-

+ a .r' + —=

*o + •^ — a**

as before.

2 ■ ■ 4 — 4

In the precedinjj examples x and y are sup- posed to be ecpial to nothing at the same time; but in the solution of problems this will often not be the case. Thus, though the sine and the tangent of an arc are nothing, when the arc itself is nothing, yet the secant and the cosine are then equal to the radius. We shall therefore add an example or two, in which vfhenyzi 0, jris equal to a given quantity a.

Let ji zz x^ x be the proposed fluxion, then its

fluent is y zz — -. Here when y zz 0, — zz

*— ; hence the corrected fluent is w r: 3 -^*

3

n +

Again, let j» in — a " i, then y "= ■ – n +

Ti-l-l'

which, corrected, becomes y zz . '-

n j 1.

Application of Fluxions to the Determi- nation OF THE Maxima and Minima of Variable Quantities. 41. When a quantity is in its maximum or minimum state, it neither increases or dimin- ishes ; therefore if tiie quantity be represented algebraically, and its fluxion put:^ 0,the result- ing equation will give the maximum or minimum value of the quantity.

Exa?vple. 1.— Divide a right line a into two such parts, that their rectangle may be a mini- mum.

Let .r :=. one of the segments, then a — a- is the other, whence ax — x is by the hypothesis to be a maximum, and consequently its fluxion,*

or a i — 2 X xzzO, when xzz — > or the given

term must be bisected.

Example 2. — What fraction is that whose n”” power exceeds its m”’ power by the greatest pos- sible quantity?

Let X zz the required fraction, the j: ” — x” is , n — • m — ‘*

to be a maximum, oinx — mx x zzo.

X- V -r

*Put AC n a, C D rr b, AP ~ p, P R — rj^ and VQ,zz X, then by c&nics Q,W ■ =. ^^^ • {pq *

q X — p X — jt) and P B- n -v {p q + q x —

p X — x”^) ■- .r-. Hence, by putting the fluxion

*p — q b’^*

^2~ ‘ a =— ‘.*

whence

Example 3. — From a giren point P, in the transverse axis of an ellipse, to draw PB, the shortest line to the curve : —

zz 0, and reducing, we get x zz

Example 4. — To determine the dimensions of a cylindrical vessel, open at the top, that shall contain a given quantity under the least internal

superficies.

Let the diameter of its base be x, and its alti- tude J/, and put p for the circumference of a circle, whose diameter is 1, then p x zz the cir-

p yp" cumference of the base, ~ — its area, and p x y

the area of the concave superficies of the cylin-

ti X V

*der. Hence a "^^ ^■> *-he given quantity that*

4 c the vessel will hold, or pxy zz — ; therefore

27 (Z 4 C*

— – — I is a maximum and consequently —

4 c X , p X X „ „, /c

— 7 - —- — zz 0,ox x-=. 2^ x/ — ; and as

x^ 2 p

p .x' zz 8 c, and p x^ y zz i c, xzz 2 y; whence

y is also known, and it appears hence too that

the diameter of the base must be just double the

altitude.

Example 5. — If two bodies move at the same time from two given points A and B, and pro- ceed uniformly with given velocities in given directions A P and B Q ; required their positions, when they are nearest to each other.

Let M and N be any two contemporary posi- tions of the bodies, and upon AP let fall the perpendiculars N E and BD: produce QB to meet A P in C, and draw M N. Let the velocity in B Q be to that in A P, as w to m, and let A C, B C, and C D (which are also given) be denoted by a, b, and c, respectively, and put the variable i istance C N zz x. Then we have b ', x ','. c '.

C E = -i^ ; and n : /» : : BN (x— 6) : AM =

m X — mb , , ^ ,, in b

; and hence C M =: a -f

n n

—zd ˆ (by substituting rf for a H I

71 71 \ ˆ “ˆ n. /

Hence MN- = CMˆ | CN’— 2 CM • CE = 2d7nx mˆr’ , , 2cdx,2cmx’ˆ 7i ˆ nˆ b 71 b,

the fluxion of which put =: 0, gives — ‘- \

2 m* X X

■- 2x:

2 c d X 4 c m X X

7 + —L = 0;

n b

whence by reduction j: zz

d’ m b -ˆ n c

b’ ni’ + Tt’ ■{■2m nc;

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:-ad from this all the other quantities may be :eter mined.

On the Method of Drawing Tangents TO Curves.

Bv this method the tangent and subtangent to a curve are determined when its equation are given, and vice versa.

If A E be a curve, let it be i-equfsed to draw a ‘ :ngent TE at any point E. Draw the ordinate .■ > E, and another d a e indefinitely near to it, meeting the curve, or the tangent produced in e, and draw E a parallel to the axis AD. Then the triangles E a e, and TED are similar, and therefore e a : « E ; ; ED : DT. Or ji : i : ‘. 3/ :

ˆ-ˆnDT, the subtangent; x being the absciss

y

AD, and 1/ the ordinate DE.

Example 1 . — To draw a tangent to a parabole, whose equation is a x'^y'^.

y X 2 y * 2 ax

Here a i- 1 = 2 w V 5 whence -7— — – —

-^■^ y a a

:= 2 .r ; or the subtangent is double the corres- ponding absciss.

Example 2. — Draw a tangent to the cissoid of

Diodes, whose equation is y^ zz. —— —

3 a x"^ x — 2x-

yy – .— r^s

Here

and conse-

2.1-

y X 2v*'« — .

quen y J — 3 ^ ^a _ 2 j3 ~a^x 3c^ 2 .r • a — X

3 a—2 X.

.rr?

Example 1 . — It is required to find the length of the arc of a circle, in terms of its sine, versed sine, tangent, and secant.

Let C in the preceding figure represent the centre of the circle; call the radius AC, r, the versed sine AD, .r; the sine DE, v; the tan- gent TE, t; and the secant TC, s. "Then by the property of the circle

V — 2 r a- — JT rr: -i • zz :; — ■ 1" ;

^ r' + t- s' '

and by taking the fluxions of these equations, and making proper

substitutions in the general fluxional equation, iz^ s/ x^ + >'"> ^^^ obtain

r X r y r' t

"" — ^ 2rx-x" ~~ ^ r'-yi' ~ r' ^ t' – r 2 s

-2x'

To DETERMINE THE LENGTHS OF CuRVES WHOSE Eq-JATIONS ARE GIVEN.

43. In the annexed figure E a, e o, and E e, are simultaneous in- crements of Xf y, and z, or of the absciss AD, the ordinateDE, and the curve A E ; and the triangle Eae is (see arti- cle 42) similar to TED; it may

therefore be considered as a right-angled tri- angle. Hence, i' — i' + ^', or s — y i ^ f j" *. Therefore substituting for y its value in terms of X, and taking the fluent, the value of z is obtained.*

s ^ s^-r.*

Any of these quantities may be expanded in a series, and the fluent of each term being taken, a general value of 2 will be obtained. We shall

r^ t'

take as an example s zz ~z r

H + t-.*

This form of the series, however, is one of very slow convergency, so that a great m.any terms of it must be collected before a result of sufficient practical accuracy can be obtained.

But it may easily be transformed into series of almost any required degree of convergency. The foUowiqg are amongst the most useful forms tliat have yet been discovered ; A representing the circumference to radius unity, and a, (3, y. Sec, the preceding terms in each series : —

ist A := <;

2d Azi-<;

By collecting a sufficient number of terms of any of the three preceding series, we find the cir- cumference of a circle, whose diameter is unity, to be 3-1415926, &c.

Example 2. — Let it be required to determine the length of any parabola, the general equation

n — ‘ n

for curves of tliat kind being a x :=.y .

Here i – V I ,i-sj t’ H/, is ihere

-y/’-i

n y

2 V» . . :

n-v

-?i

fore rr: V j +

and the fluent of this in a series gives z—y-V

360

FLUXIONS.

n’tj

in — 1

‘ .V*

2 n

- - -la fi 11 — 5

4 » — 3 • 8 a

4 n — .

. , &.C.

6 w — 3 • 1 6 a

But when 2 ra — 2 is either unity, or an aliquot part of it, this series will always terminate, and consequently the length of the arc will be accurately obtained from it.

To FIND THE Areas of Curves, whose Equa- tions ARE GIVEN.

44. Adopting the previous notation, it is obvious that V J- is the fluxion of the area; and y being from the equation known in terms of x, "the fluent of this expression is the area of the curve.

Example 1.— Required the area of a parabola, m \ n whose equation is a "x" zr 3/

m + n m m--n

Hereyiz:a " J «, whence j/izr a "

'IL m --n n — m

X , whose fluent is u a " ' r " .

11 — m Example 2. — Let it be required to find the area of a circle from the equation j/ m: s/ u r — x^.

x\ k

*Her« 1/ i :^ X ^ u X — x^ ^ a ■^ r * 1 —*

ZZ a X X » 1 — ^ ,

*< 2 a 8 u^*

_ &c. I

16 r/- >*

r 1 a

*zr k/ a- .Vr * i- ' '^ r J*

*_ j^i , &c. *

, – i 2 X x"

whose fluent gives x -J a x • t ~ — : rn^ — ;

*^ ^ I 3 o a 28 o-**

_ — — – _.&.c. > for the area of the

72 a^ 704 a ■ S*

semicircle.

To FIND THE Surfaces of Soiids.

45. A surface may be conceived to be gene- rated by the circumference of a plane moving forward, and expanding at thesame instant; there- fore tlie fluxion of the surface is equal to the fluxion of the curve, in which the expanding cir- cumference moves forward at any instant, multi- plied by the periphery of the variable circum- ference at tlie same instant ; and the fluent of this fluxion is the value of the generated surface.

If f ::r: the circumference of a circle, whose diameter is l,,rthe abscissor, _vthe ordinate, and 2 the curve in which the expanding circumfer- ence moves forward ; then 2 c y zz tlie circum- ference, and 2cvi~ 2cjy s/ i'^ -^- J'ʳ the fluxion of the surface S, and consequently by takinqr the fluent, S is obtained.

Example l.^Let the proposed curve surface

be a sphere. In this case j/ ir ^/ a ,r — x',

a — 2 X a — 2 X , ,

whence j zz 2 • – —rrx := — r, and

consequently y — —

2i/

therefore

/ J-' /del> y = z ■ =. —— , and 2 c y i ■ =. a c X,

whose fluent is a ex, the value of the spherical surface. But « c is the circumference of the generating circle ; hence the surface of any seg- ment is equal to the circumference of a great circle, multiplied by the versed sine; or height of the segment; and, when this versed sine is the whole diameter, the expression is r o^, or four times the area of a great circle of the sphere.

Example 2. — Let the proposed curve surface

be that of a parabolic conoid.

2 y y Here a x :y', whence i zr. ■ , and there-

V \/ a^ I 4 1/^

fore i — \/ i' + y^—- ^ — '—, and 2cy'z

2 r ?/ V

reeled is

. a- + 4 j/^^, the fluent of which cor-*

To find thi: Solid Contents of Bodies.

46. As a curve surface may be conceived to b^ generated by the expanding circumference of a plane moving forward, as the solid itself which tlie surface bounds may be conceived to be gene- rated by the plane itself. Hence, if .r, y, and c, represent the same tilings as they did in art. 44, we have c y^ x for the fluxion of the solid, and the fluent of this quantity will be the required solid.

Example 1. — Required the solid content of a cone, whose altitude is a, and base 6.

b T Here a : b :: x : y zz , whence c y x zz*

c b- "

X zz. a, becomes

whose fluent is cb

which when

, or one-third of a cylin-

der, having the same base and altitude.

Example 2. — Let the proposed body be a spheroid, the tranverse and conjugate of whose generating ellipse are a and b.

By the nature of the curve (see Conics) y^ zz.

b- , ,._^^ ^~ar

— • a j: — X- , whence c y' xzz — —-axx — arx,

whose fluent is ^— • (—); which when

a- \ 2 3 /*

X zz. a is • , the content of the whole sphe-

roid. And if a iz 6, the spheroid becomes a

f a”* sphere, whose solidity is —— .

Hence a sphere, or a spheroid, is two-thirds of its circumscribing cylinder, for the .solidity of the cylinder whose base diameter is b, and altitude n,

.cab* ˆ ...cab”. . , , ˆ ˆu- 1

IS , of which — : — IS evidently two-thirds.

4 b

To FIND the Points of contrary Flexure of Curves from their Equations.

47. It is evident when a curve is concave towards its area, that the fluxion of the ordinate decreases with respect to the fluxion of the ab- sciss; and the contrary when the curve is con- vex towards its axis; hence, at the point of

contrary fluxion %■ or-~ is a constant quantity, and y X

consequently its fluxion is zr 0. Therefore, if

from the given equation the value of-f orr- be

found, the fluxion of that value will give an equation, from which the relation of x and y at the point of contrary flexure may be found.

Example 1. — Required the point of inflexion in a curve, whose equation is a j* — «ˆ j/ + ■>■”]/■

This equation in fluxions is 2 a x i- zz a’ j> j

X a* + X*

2 X y X \ xˆ y, whence – — ; the

ˆ -” y2ax— 2×7/

fluxion of which made r: 0, gives 2 xi {ax — xi/)

zz («’■’ + .1’^) • (a .r — xy — X 3/), and this again

; which being equa-

gives .-zz

y

a’ + .r^

— X* a — y

a’ + .r”-*

ted with the former value of — , gives

y a’ — X’

• — — • ; whence jrr^a v’ \,

u —y ~ 2 X a, — y

„ „3

and consequently y zz

«■• 4. 0.”’

Example 2. — Required the point of contrary flexure in a curve whose equation is a y^ zn a\T + x^’>

J- 3^ — J, and ^ rr — ‘ ” ■ The

X 2^a,$^{a-x + x}$

Auction of this put zz 0, and reduced, gives .r rz « (V 3 — 1) 4 V 12 ■

To FIND THE Radius of Curvature of Curves.

48. The radius of curvature is that of a circle having the same curvature as that of the curve at any proposed point; the general method of finding the radius of this equicurve circle may be thus explaiaed.

Let AD and DE be the absciss and ordinate to the curve A E, EC the radius of the equi- curve circle at E, consequently per- pendicular to the curve at E. From C as a centre, with radius CE, describe the circular arc BE|e; draw C B parallel to A]), and let E D pro- duced, meet H C in G ; draw Erf, and e U parallel to E D and A D, to represent the fluxions of A D and D E. Put

AD:zzx, E D = y, and A E = z. Then by similar triangles G C : G E : : j- : x, or G C • i :^ GE • y. Whence by fluxing GC • x + G • C • i G E • y + G E • ^. But GC — BG, therefore, GC • .r”— BG • in GE -“y + G E ■ ji. Now i is the fluxion of BG, as well as of AD, and j is the fluxion G E as well

as of D E; hence the equation maybe put in this form G C j: — ix G E^ — yy ; or G C ■ X — G E • 3^ i^ ^ yi ^3 J and if each of the terms of this equation be respectively multi-

plied by the equivalent expressions 7, —^, , it becomes i _ ,^ Jl, £. .

whence r —r. ~ ; a general expression

yx—xy for r in any curve. But as neither x oxy may be considered as varying uniformly, or either x ox y may be considered as 0, we may have r

• — —- or rr according as _y or i is con-

— y X — xy

sidered constant.

Example. — Required the radius of curvature at the joints of an ellipse, at the point corre- sponding to the absciss and ordinate j: and 3/, the equation of the curve being a^ y’zz. c- ax—^x^l

By taking the first and second fluxions of the given equation we have 2 a* yy ■^.c’ x • a — 2x, and 2 a^ y’^ \ 2 a^ y yzz — 2 c^ i”, considering c’ x • a — 2 ,r, and

X as constant; whence y zzz a^y ^ \ c’* X*

a’y

the values of y and y, become j —

2 a’y ; which, by substituting c X • a — 2 X

2as/ ax — x*

and

■ yzz.

a — 2 a1 ‘

4a»

+

a s/ a X — jT*

ax — X* ■ a c • ,y ax — x*

c a iP ,

= .: ,; hence 2

4 ax ■

?)^

(v^x2 +_^2) =

±y

/c^ x'-a — 2i; \ c? ' a X — ,

2 a

c" a' + (i"

iJLinlf', and r

(—;)

_Cfl^

y ■" 2 a* c '

which when a and c are equal becomes as it

ought simply — , the ellipse in that case degene- rating into a circle.

To FIND THE Involutes and Evolutes of

Curves.

49. If a thread wrapped close round a curve were fastened at one end, and unwound from the other in the plane of the curve, the thread being always kept stretched, the end of the tliread in winding off' will describe a curve which is called the involute, that from which the thread is un- wound being the evolute.

Now it is obvious that the length of the thread wound off will bo the radius of curvature of the involute at the instant, and also that it will at that point

be perpendicular to the involute ; and that the evolute will be the locus of the ccn/rts of the radii of curvatuis at every point of tl.e curve.

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in the annexed figure let A B Z be the involute ; A D X its absciss ; D B Y its ordi- date; EC, r, the radius of curva- ture at B ; E F,; r, the absciss of the evolute EC; FC, Wjits ordinate ;AE, a, a right line given from the relation of the curves. Then from the

last article we have r rz '—^. — n B C :=

y X — X y A E | E C ; and by similar triangles z : x \r ;

X z^

— r. ; also '- '. y

GB = !lf =

GC

'y-y =

yx — X y

— ; whence E F = G B — DB

X z-

— — 7-. :t- — y — V, and F C z: A D —

y x~i y

AE + GCr=,r— a + ^ r. = u,

y X — X y from which equations the absciss and ordinate of the evolute may be found when the involute is a given curve.

Conversely if v and ii, and s, be put for E Cj then r zza \ s, and by similar triangles we have the following proportions, viz. s ', v '.'. r]

r i: n f s . r It

"^ — — : — * i iz G E, and s ; it, ' ; r ! — =z

s s ' s

a \ s

— : — • ?i HZ G C ; whence A D zz a + w —

s ‘

— : — ?t =z X, and D B ˆ: ■ v — i; — ?/.

On the preceding equations it may be observed that P — i’ + u\ and 2ˆ =z i + f, and either X ox y may be supposed to flow uniformly, when X or y will in consequence be 0, and the corres- ponding term my x — x y will vanish.*

Example. — What is the evolute of the com- mon parabola in which ?/ zz ˆZ c a: ?

Here y

= if\/-

, and 7/ = -77 making x constant. Hence EF zz ■!; zz

X- +y ~

y-:.

y

-y

_ —y

— y — A. .r\/-,andFC =

u rz .r a |

yl”-

zi 3 X — — «, But it

— X y may readily be shown from the principles of art.

48, that a-=. —-; whence F C := 3 r, and lienee

by comparing the values of v and u wo get 27 c vˆ zz 16 u, an equation to a semicircular pa- rabola.

To FIND THE Centre of Guavitv.

■50. The centre of gravity of any body is that

point in which, if all the matter in tlie body were

collected, the product of its distance from a

given line or a given plane, would be cfmiva-

IONS.

lent to the sum of all the products of each mdi- vidual particle in the body into their respective distances from the same line or plane.

Let therefore p represent the distance of the centre of gravity from the vorte.v of any variable body, whose variable absciss is x, and corres- ponding variable section is z/, thenpzz ^

fluent h fluent X y

If the thing in contemplation is a curve line,

if

fluent r y x

,, fluent J' 2 „ .r ^ i* 4- i2

then n =z rz fluent — -^ !^

^2 2

it is a plane, then p rz

if it

curve surface, then p ^z solid, then p zz

fluent .i- y fluent of y x i

if

fluent of _y ; ■ fluent of y^ x x fluent of y- x Example 1. — Let it be required to find the centre of gravity of BAC, the segment of a circle ?

Put r zz the radius, r zz A N, and 3/ r: N M,

1\X'^^

ˆ\ivr

v/ ""

.

1

\

G

then 3/ ::z: V 2 r x — x-, whence the fluent of

3

y X X, or of .r x s/ 2r x

r X area A N M, which divided by A N M gives

N iVP

r . ˆ■. ˆˆ for tne distance A O of the

3 • area AN M

centre of gravity from the vortex. When the

segment is a semicircle, this expression gives

A O n nearly.

1000

Example 2. — Required the centre of gravity

of the arc B A Cˆ- Here fluent .r s zz fluent

rxx , . „ r • M N

-r= =z :=■ r, whence A O ::= ?• r— ;— –

2ra — x AˆˆI

Example 3. — Let it be required to find the centre of gravity of the segment of a sphere ?

ˆ , . fluent >r X x fluentox — r'ˆxi

In this case

fluent y^ x A a — 3 T

fluent a x

6 a — 4 or When the body cannot be divided inta two equal and similar parts, the position of two lines must be determined as above whose point of intersection will be the centre of gravity. To FIND THE Fluxion of sine x and of

COSINE X.

Let A B be any arc of a circle whose centre is C, draw any two ordinate B D, G E, indefinitely near to each other, and draw B F parallel to A C then in tbe elementary triangle G B F, similar to O B D, G B will represent the fluxion of

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A B, G F that of B D, and B F that of CD, g^* + C x ” +, &c. and let, x become by the

which is diminishing, or its fluxion is negative. ^^^-^^^^^ of :r = x + /,, then v:-f{x + h) = K

Represent the one A B, by x, then C D will be ‘ ‘ ^

COS. x; B D, sin. x; C B, i; G F (sin. x)- ; and (,, + ;;)«+ B (x + /,)”+ C (x + h) —

BF fcos..!)’ NowbysimilartriangleswehaveCB a h c

:CD::GB: GF,andCB: BD::GB:BF. A.r + B .i + C .r +

Hence considering C B as unity we haye (sin. x)- A(aAr’”” + tBr~^-<-cCx'''~*

*- i- cos. X, and (cos. x)- :=. — x • sin. x. T \ • t ■ -^*

To find the fluxion oftan.x,&c. we have (tan. i)- A^ ^ ^_2

/sin. jV _(sin^- _ (cos, x)- sin, x ^ \ ■ 2\a ■ a—\ • K^ +6-6 — 1-B

” Vcos. j/ “ cos. X cos.-x ^_2 Y

_x ■ cos X J; in. x _ x (cos.’ x + sin.” x) ‘^ “^Z

- cos.x “^ cos.^^- – cos.^^ ^___(^^.;trT-c:r^-A-x” ■■^+6-

- i — .r seet.2 J = i. (1 + tan.^ x). i – 3 \ cos.^r 6— 1 • i — 2- B,r +)

Again (cot. x). = (tan. 90 — x)- = a b

— X — ic . ^,. . bv the binomial theorem. But A x +Bx +

= r- — x-cosect.‘x — X •’ n—^ b 1

cos.’ (90 — X sin.‘x &c. =:/(x) = w; « A x +6xBx

a — 2

1 + COt.» X.

Also (sec. X)- ^^^_ ^ –

(cos. x)

COS.^ X

-r Sin. X

„ — X tan. X ‘ sect, x

COS.*’ X

i- • sect. X •

J sect.- X — 1 ; and (cosect. x)’

(sect. •

sin. PO — .r

— X cos X

y*^ ~ ■^“y •’■ ■ 27^^ —

sin.” X

+ &c. = — ; a ■ a— 1 ■ A X --b-b — \

X

B • X + &c. =— , 5cc. Hence u’ = /

x-

u , . « P ‘I’l h^

(x+A)M«+^/. +T. -n + TT-T^Fa

+ &c. which is Taylor’s Theorem, i cot. X- cosect. X .i-cosect.xVcosect.«x-l. ^ instead of A we put i; the theerem gives

.WESTIGATION OF THE DiFFEKENTIAL ThEO- f (x + x) = U + il + -^ -j ; r; + ^■..y.o.l

REMS OF MaCLAURIN, TaYLOR, AND La- ‘ 1 • 2 1 ‘ 2 • o ITd-^

GRANGE. + ^C.

Let/(x) represent a quantity in which x is in Suppose that t/ = a+ x ■ (py, that u =/>/ =

any manner involved, it is proposed to find the f-(a+x 3/),^ and. /“denoting given combina-

value of /x in a series of the ascending powers tions, and a independent of x and 3/, it is pro-

”’ •!■• posed to expand u in terms of x.

Assume^z. =/(•’;) = A + B x + C x^ + D g,^^ = a + x ■ ,p y = a + xv, making ,py

:■*, &c. Then by taking the fluxions we have ^ ^ ■■ ° s.-‘

. = Bx + 2Cxx + 3Dx’i: + 4Ex-=>.i+,&c., = ^; we have -^ = z; +i-M = ^’ + -‘

u – = B + 2 C X + 3 D X- H- 4 E X, &c. Flux- ... .. J! “■’ ”’”’

• « ■’ — – ^ 4- ‘— &

ing again we have— rz 2 C r f 3 • 2 • Dx + p” x* i ‘

° ^ x

• 4 • 3 ■ E • x^ X + 5 • 4 • F x3 X, &c. or 1,= 2 C ^^”’^ ‘^ ‘^ . ’”^^^’ ^°™ ^’ “- ^‘^ ‘”’ ”’

+ 3 • 2 • Dx + 4 • 3 • E x^ + 5 • 4 • F x^ &c. ^^^^ J = J ” “7’ ^^^ ^^”’^^ F

~ J ‘

Performing a similar operation we have— sn 3 • ^ \^ • 2L ^ • j J • JL Src •— =

^ i- “^ T X- y’ i’ “^ y i’ ‘ ‘ X

2 • D + 4 • 3 • 2 • E • X + 5 • 4 • 3 • F X-, the “^ . . “^ – . “^ . ^•

law of continuation being evident. j, 1 j. • J. • r^- _j^ 3— 2 ! ■ — + x r ‘ ^

Let x:= O, and the correspQiiding valves of ?^, ^ i .i- y x y x

“, -. &c. be (denoted byU,U ,U, &c. ; then + .^/Z^l_^ &c.

X x-‘ 12 \ X / y

we have A rr U, B rr U , C zz U + — , D =U Again from ii = f (y) taking x as the varia-

1 2 2 3 , ji u y « i’(y^ , 1/ ” q „

1 ble,wehave”= -■^; — = — -^-l—^- – &c.

5-75, &c. X 7/ X x» j’ x» X- y,

,2 But by Maclaurin’s Theorem, investigated above

Hence f (x) = U f U • x + U • — + x-* ,, x%

• 1 22^ \vchavet/ = U + U,x + U,—Y+ U,/del>

I^ ■ X — ;; -H, &c., the theorem of Maclaurin. „ , ^^ ., s , ^ .u r

3 2-3 &c., and U =/(«) when x = 0; therefore u,

Resuming again the equation w =:/(x), let (fa)- ^, Ua =>)• (fa)- , , .,

, a ^^ ‘ — ‘■ — ” 0 ”’ *-‘ 5 ^^ ^ ‘ ‘^~~- r v9 ‘^y ‘

this be represented by the general series Ax + a a a

”•^ ”’ — r rt J &c., whe

en’ sin. ?! # • cos. nt’nt’n

?nce u rr

7t / ‘

= ?i’-sin. 2 n t, &c.

By performing in a similar way the successive operations, we finally obtain

/fl +

1 • 2 • 3

(frtV, .r’ j(0a)’-^=^;^ j _ y = n

i = &c., which theo- (4′ • sin. 4 n « — 4 • 2^ • sm. 2 n 0 + .3..3..^^ (5* sin. 5 71^ — 5-3* sin. 3n^ + —— sin.rj^^

[{^ay

(/«)■

rem, ^^‘hen .r rr 1, is the theorem of Lagrancje.

As an example of the application of Mac- laurin’s Theorem, let it be proposed to expand log 1 + jr.

u-l--^x, .’. U=Z.(1) = 0, -=T— .,

X i. i X

+ , &c.

As an example of the use of Taylor’s theorem, let it be required to expand the function n rz sin. X.

Here w = siu. x + h; and from u = sin. .r,

we nave -^ cos. x, — ^ — sm. x—= cos. x, -r X x^ or X

= sin. X, &c. Hence by substituting in the ge- neral formula we have, sin. j: 4- A := sin. \ x

h . h^ h^ .

cos. X – — sm. X – — — cos. x 1- sm. x

1 1-2 l-2-3^

&c. or sin. x + A zz: sin. x\i 1-

1-2-3-4

■ ‘^^c. J -U cos. X I h + ,

1-2-3-4) ^\ 1-2-3 1-2-3-4-5

— , &c. ^

Here if x rr 0, then sin. x ^ 0, and we hare

then sin A = A — +— &c. : or

1-2-3 1-2-3-4-5 ‘

puttmg X for h, sm. x= x — – ^ ^ +

+ &c., a series which, from the comp rative smallness of e, converges very rapidly.

On the Fluxional Analogies of Spherical Triangles.

53. In the annexed figures let Abe the pole of the circle H G F E, F the pole of A B H, E the

1-2-3 ■ 1-2-3-4-5 — &c.

As an example of the application of Lag- grange’s theorem, let it be required to express the eccentric anomaly of a planet, in terms of the ascending powers of the eccentricity of the orbit.

If y denote the eccentric anomaly, not the mean anomaly, and e the eccentricity, then it is well known that y=- n t +e • sin. y ; which being compared with u =fy = a + x (py, gives n= y, a= nt, X = e, (j) y= sin. y ; therefore fa = a nt, ipa = sin. a = sin. n t ; and hence

pole of C G I, and C the pole of E D I ; let the positions of these circles be conceived to be invariable, while another great circle revolves about F; let C 71 and Ed be perpendicular to md, the revolving circle. Then in the right angled triangle ABC, the angle A will be con- stant, and the other parts variable ; B m will be the increment of AB, no the increment of BC, C 0 the increment of A C, and D s the increment of I D, which measures the angle C.

In the right-angled triangle C G F, the side F G will be constant, and the other parts vari- able ; C 0 will be the decrement of C G, 7J 0 the

decrement of F G ; B tk the decrement of the angle CFG; and D s the increment of the angle C.

In the triangle EDF, the hypothenuse EF will be constant, and the other parts variable ; sdˆznv will be the increment of FD rz BC; sD the decrement of ED; and B 77? the de- crement of the angle E F D ˆ: CFG.

Now by trigonometry sin. FB : sin. FC ;;

tan. B m : tan. C 71 or rad. : cos. BC : “. B m :

C 71 zz cos. BC. Bm, radius being unity and

B m and C n small arcs, may be substituted for

their tangents.

Again, tan. DI : sin. CI I! tan. C n : sin. m7io, or tan. LC : rad. ; “. C n (cos. BC . Bm)

COS. BC.Bwj

no — ; pq .

tan. b Again, sin. D I : sin. D C : ‘. sin. C n : sin. C O COS. BC . B ?».

.“LC: rad. :: C’n.C’O —

sin. LC

Further, sin. F B : sin. B m ; ‘. sin. F D : sin. Ds; or rad. : B w ; ‘. sin. BC : Dsn: sin. BC.Bw.

Hence calling; A, B, C, the angles of a right- angled spherical triangle (B being the right angle, and A constant) and a, b, c, their opposite sides, we have the following fluxional equations.

• a tan. C b sin. C C •

cos. a cos. a sin. a ‘

c . COS. a ; ˆ C . cot. a

tan. C

iz b COS. C' TZ. —_

ziz c sin. a ˆ

tan. C

c COS. a a C cot.

sin. C COS. C sin. C

a tan. C b sin. C

cot. a. cot. A From the first of these equations we have cos. b sin. c

COS. a : sin. c or.

cos. c sin. b COS. 6 . sin 6 : cos. c . sin. c ; '. sin 2 b : sin. 2 c.

In the right-angled triangle FCG, if FG be considered as constant, and the values of n o, C 0, and D s, obtained above be substituted in the trigonometrical equations which connect the sides and angles ; and call F G r , F C 6, and C C «, and the opposite angles respectively C, B, and A, we shall obtain the following equa- tions.

;C =

b tan C

A = —. — — sin. 0

a sin. C sin. b

= –

C

COS. b '

— A COS. b = —

b tan. C_ tan. B

—

a . sin. C tan. b

A . sin.

b ‘b

= —

C tan. b

” – sin. C

COS. C

sin. C

A . sin. b • f-,, a , = a COS L =

tan

b

;b

tan. C ” tan. C

Hence a : A ‘,’. sin. b : sin. C.

If similar substitutions be made in the equa- tions connecting the sides and angles of the triangle EDF, we shall have.

A

= —

c . cot.

a

= –

C cos. a

a

sin. C ‘

cos.c

COS. c

A

. cos. c

=

= —

a . cot. c COS. a.

c

sin a

cot. a

C

= —

A . cos. cot. a

C

=

a . cot. c cot. a

= C sin.

a

= A.

sin. C =

= –

c

. cot. A

C . COS.

a

cot. c

cot. c

In the oblique-angled spherical triangle ABC, if the angle A artd its adjacent side AB remain constant, it is required to find the fluxion of the other parts.

From B, on AC, demit the perpen- diculai- B D, then all the parts of the triangle A B D are constant, and in the right-angled trian- gle BDC, BD is constant, and the other parts varia- ble.

Hence, from what is done above, we have the following equation.

b . sin. C iz: B . sin a; b . cos C zz a; b sin. C iz C . tan. u; a . tan. C := B . sin. a ; B . cos. a rz C, C . tan. a zz a tan. C.

In the oblique-angled triangle ABC, if A and BC be constant, it is required to find the flux- ions of the other parts.

Let B C change its position into n o, and let these circles inter- sect in an indefinitely small angle at r ; make r n =: r B, and r C = rp; then will nm be the decrement of r B, p 0 the increment of r C, and because n p = B C, and ?« o = B C, therefore m o = n p, and consequently n m = op.

Now, considering the elementary triangles B 11 w, C p 0, as rectilinear, we have o p = cos. o, and m ?i ˆ H m . sin. n B m; whence C o : mn '.'. sin, n B m : cos. poC, orAC:AB;i cos. B : cos. C.

*By taking the supplemental triangle, and ap- plying the property that has just been deduced we obtain B : C *. '. cos. AC : cos. AB.*

*By spherics we have sin. A : sin. a ; ; sin. C : sin. c. — But (art. 5L) (sin. x)' = i . cos. x ; hence sin. A : sin a *. I C . cos. C : c . cos. c ; 1 B cos. B : 6 cos. b, or C -. c '.'. sin A . cos. C sin. a . cos. C, and B : 6 ; ; sin. A . cos. b : sin. a . cos. B ; and as it has been shown above that b : c :'. cos. B : cos. C, it follows that C : b '. '. sin. A COS. C : sin. a cos. B.*

We have hence the following equations.

b . cos. C = c . COS. B ; B . cos. c = C t ; C . sin. a . cos. C = c sin. A . cos. c ; B a . cos. B . =: t sin A . cos. b; C • sin. a B =: 6 . sin A . cos. c.

From these we may readily deduce many of the expressions ; from the third we obtain C . tan. c := c tan. C.

If two sides, AB and AC, remain constant, the fluxions of the other parts may be deter- mined with equal facility. The following are the principal results.

cos. sin. cos

A sin. b . sin. C zs a ˆ: sin c. . sin. B; A . sin. B = a cosect. c ; A . sin. c = a eosect. C ; A. COS. C . sin. 6 n B . sin. a ; A sin. c . cos B = 0 . sin. a; C . sin. u in a . cot B ; B sin. a = a . cot. C ; B . cot. B = C . cot. C ; B . tan C = C . tan. B.

If B and C be constant, the following equa- tions exhibit the principal relations among the fluxions of the other parts.

a . sin. 6 = A cosect. C ; a sin. C = A co- sect. 6; a . sin. C . COS. 6 = c . sin. A ; b sin. A ˆ A cot. c ; b . cot. b =ˆ c . cot. C.

Examples of the Application of the fluxional Ana- logies of Spherical Triangles.

Example 1 . — When is that part of the equa- tion of time which depends on the obliquity of the ecliptic a maximum ?

Here if b denote the sun's longitude, and c his right ascension, we have b : c :: sin. 2 b : sin. 2 c, and when b = c, sin. 2 6= sin. 2 c, hence 2 b and 2 c must be supplements of each other, or in the first quadrant of the ecliptic that part of the equation of time which depends on the obliquity is a maximum, when b + c = 90°.

Example 2. — The error in altitude being given to find the corresponding error in the hour angle.

In the last figure let A be the zenith, B the pole, and C the object observed. Then B . sin. A . sin. c = b, or B = 6 cosect. A . cosect. C ; whence B is a minimum, when cosect. A is a minimum, or when A is 90°, that is, when the ob- ject is on tlie prime vertical.

We shall terminate this article with a few miscellaneous problems to illustrate the method of applying the fluxionary calculus in the dif- ferent departments of science.

Problem 1. — The force of attraction above the earth being inversely as the

square of the dis- tance from the centre, it is proposed to deter- mine the time, velocity, and other circumstances of a heavy body falling from any given height, the descent in the first second at the earth's sur- face being 193 inches.

Put r = the earth's radius, a = the height fallen from, .r = any variable distance from the earth's centre, v the velocity acquired in any time ˆ g = 193, and/= the force of gravity at

any mstant. Then sin. .r= : r' : : 1 : /" = — ,

,r 2 the force at the distance x, that of gravity at the earlli's surface being considered as i ; and tv =

■ *1 . ˆ 2 J? r= i*

— X, also vv = — 2 gfx = ˆ, and by tak

ar ing the correctˆ fluent of this last equation, we

get V = \/ˆ4 g r .a

V

g r . a — r

— ; which when ,r ˆ r, , the velocity when the body

When a is very great with respect to r, v is nearly = (l — .) . JT r, or nearly =

\/ \ gr, and it is accurately equal to this latter quantity when a is infinite. Making r = 3965 miles, and the distance of the sun 12,000 times that quantity, this expression gives v = 6-" 05 miles per second, the velocity acquired in falling from the distance of the sun; and that acquired in falling from the distance of the moon would be found to be 6-8927 miles per second.

Problem 2. — To determine the resistance of a fluid to any body moving in it with a curved end, as a sphere, or a cylinder with a hemi- spherical end.

Let BEADbe a section through the axis CA, of the solid moving in the direction of its axis. To any point in the curve draw the tangent EG, meeting the axis pro- duced in G, draw the ordinates EF, e f, indefi- nitely near to each other, and draw a e parallel to CG.

Put C F = J-, EF =: 3/, B E = ˆ, sin. G = s' andpn3"1416, n the specific

gravity of the fluid, and v = the velocity; then 2 p 1/ is the circumference described by the point E, in revolving about the axis, and 2 pi/ s is the flux-ion of the surface, or it is the surface described

P by E f in the sam.e revolution. Hence ^—

2?

• 1/ z is the resistance on that ring, or th6 fluxion of the resistance to the body, whatever may be its figure ; and the fluent of the expression will be the resistance required.

If the form is spherical, put CA or C B = r,

then y = sj r- — .r^, s = — , and

y- = r X,

T) 71 V

hence the general fluxion becomes-^ 5

whose fluent is

p n V-

the resistance on the

8 g r 2 '

spherical surface generated by B E, which when p n v'^ r'

X = r becomes

the resistance for the

hemisphere ; and if — be substituted for r, we

, p n v^

have .

32 g

But tiie perpendicular resistance to a circle of

7) 71 V (i

the same diameter is —— , whence the resist

1 6g

ance to a sphere is exactly half the resistance to

a cylinder of the same diameter.

ProbkmZ. — Determine the sum of the infinite

series.

1 +.r +

- +

—I-&C.

strikes the earth.

1-2 ‘ 1-2-3 ‘ 1-2-3-4

Put .

-^ + 1 – 2 ^

divide by .r, and we have-= 1 j .r |

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— – I 1- &c. = s, wlience j rr –

or X, is the hyperbolic log. of s, whence .9 =r t”, e being the base of tlie hyperbolic system of logarithms.

Problem 4. — Find the relation of x and y from the fluxional equation {x^ + y-) y z:z {m y x) i.

Put jT = y-* ; then i y s + z jr. By sub- stituting these values of x and x in the proposed equation, and dividing by y, we get z’ + 1- j/=

m y z z + 7« z^ y, whence— -f^ •

•^ -^ y 2 m — 2

2 z z

= = ˆ j-6, and by taking the fluents,

zˆ — m — 1

hyp. log.y + ^^^^^ hyp. log. {z'-m-l ‘) e correction); whence37 • (•” — ‘« — 1 /

varies as tlie ?i”’ power of the distance from the centre.

Let r denote the radius of the spher.?, d the density at the surface, a = the area of a circle whose radius is 1, and x any distance from the centre ; then 4 « xˆ x' is the fluxion of the mag- nitude, and — ˆ- — is the density : whence

4 fl rfar ” + 2 ^”, f, . ., .

— ■ — ■ = the fluxion of the mass, the

4 adx» + 3 fluent of which is 7-7, ; and wlien x

, 4 « rfr'

~ K-j. 3

n + 3 • r w is the quantity of matter in the

2 ?n — 2 = C ; an equation which by reduction 2 m — 2 2rn — 2

y ju ‘ —

becomes m — 1 2 m — 2 m — 1 • c m

y

for 2 put-, and put a for

y

the constant quantity on the right of the equator,

and after reduction we obtain m — 1 • ,v- — j/'=

2

a

ym

Problem 5. — Given the height of an inclined plane ; required its length, so that a given power, acting on a given weight, in a direction parallel to the plane, may draw it up in the least time possible.

Let a denote the height of the plane, x its

length, p the power, and w the weight. Now,

by mechanics, the tendency down the plane is

aw , aw . , . r 1

= — , hence p is the motive force, and

X ‘ X

p — aw

X pX — aW , .- f r

; — = 1 _;: =the accelerative force / ;

*P+W p+u}X “^*

*5 ff “4~ It) * X*

hence t^ = —j= -^^= — —which must

•’ px — awg be a minimum; or in fluxions 2 (px — aw) X x’ — p x’ x = j5, OT p : w : : 2 a : X : : double the height of the .plane to its length.

Problem 6. — It is required to determine the quantity of matter in a sphere, whose density

sphere.

We have given as full an account of the prin- ciples of this important branch of science, and’ the method of applying them,’ as the space to which we are limited will admit. Happily the English language is rich in works in which the student who intends to devote himself to scienti- fic pursuits, may find all the aid that he can re- quire. The treatises on fluxions by Simpson and Emersoii are justly held in esteem by Eng- lish mathematicians. A new edition of Simp- son’s treatise has lately been published, with very valuable appendixes on the modern im- provements in the science, by a member of the university of Cambridge. Maclaurin’s work contains, perhaps, upon the whole, the most elementary exposition of the principles of the science. Indeed it was written chiefly with the view of confuting some objections

which the acute and ingenious Btjrkeley had advanced against the metaphysics of the science.

ˆDr Lardner of Dublin has recently published a work on the subject, marked by that elegance and originality which distinguishes whatever comes from his pen ; and Mr. Jephson of Cam- bridge has in course of publication an element- ary work on the subject, which, from what we have seen of it, will, we are persuaded, form a very valuable acquisition to the scientific world.

We should not, however, discharge our duty to our readers if we omitted to recommend the translation of Lacroix's work on this subject by Herschel, Babbage, and Peacock, with the col- lection of examples for exercise which they com- piled ; nor the very elegant and methodical work of Dealtry, a work in which the subject of fluents, and the application of the science to the doctrine of forces, are expounded with re- markable perspicuity.

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FLY, V. a. 5c v. n.] ') Pret. flew, or fled ;

Fly'boat, n. s. j part, fled, or flown,

Fly'er, or Flier, n. s. [v. n. Sax. pleosan.

Flight', n. s. fTo fly is properly to

Flight'y, adj. use wings, and gives

Fligiit'ixess, n. s. J flew and flown. To flee is to escape, or to go away. Sax. plean, and makes fled : they are now confounded. To move through the air with wings ; to pass through the air; to pass away with the idea of swiftness or escape ; to move with rapidity; applied to a vio- lent and sudden separation of adhering parts : to shiver; to burst asunder with a sudden ex- plosion. Sax. flean; Germ. Jiic hen. To run away ; to attempt escape. In this sense the verb is properly to flee, when fled is formed : the verb active is used in the sense of to strain ; to de- cline ; to avoid ; to refuse association with ; to quit by flight ; to attack by a bird of prey. It is probable that flew was originally the preterite o'f fly, when it signified volation, and fled when it signified escape : flown should be confined like- wise to volation ; but these distiuctions are now confounded. We know not any book except the Scriptures in which fly and flee are careful' y kept

separate. The substantives are more restricted, and somewhat diff"erent in their ap- plication. Flyer, or flier, is one that flies, or runs away ; one that uses wings : it is used in mechanics and in architecture : in the one to the wheel in a machine of a particular use and con- struction ; Dr. Johnson says it is ' that part of a machine which, by being put into a more rapid motion than the other parts, equalises and regu- lates the motion of the rest, as in a jack ; in the other it is the technical name for a certain kind of stairs. Stairs made of an oblong square figure, whrse fore, and back sides are parallel to each other, and so are their ends : the second of these flyers stand parallel behind the first, the third behind the second, and so are said to fly off' from one another. — INIoxon's]Mech. Exer. Flight is the act of flying, or escaping from danger ; the act of using wings ; removal from place to place, by means of wings, or impelled by fear : a flock (f birds flying together ; the birds produced in t' e same season ; a volley ; a shower : the space • assed by flying ; heat of the imagination ; sally of the soul ; excursion on the wing ; the power of flying; a shower of arrows. Flightiness is ap- plied to wildness and irregularity of mind, or conduct: the adjective signifies fleeting ; swift; wild : full of imagination. Flyboat is a kind of vessel, nimble and light for sailing.

Fowl that may fy above the earth in the open fir- mament of heaven. Gen. i. 20.

Abiathar escaped and _/?ed after David.

1 Sam. xxii.

Man is born unto trouble as the sparksy/y upward.

Job V.

Ye shall flee, as ye fed from before the earthquake.

Zecfi. xiv. 5. As hirdefyeth up in the aire, And liveth by birdes that ben mcke.

So these ben flowe up in despair And shenden sely scales eke.

Chaucer. The Plowman's Tale.

Flie, fro the prese and dwell with sothfastnesse, Suffise unto thy gode though it be small.

FoT horde hath hate, and elimbyng tikilnrss< >, Prece hath envie, and wele it brent oer all.

Cliaucer. So that I mighten lyven and nat faile To morowe for to taken my bataile, I ne wolde never fro this place Jlt/e, Tyl that ye shulde the very profe yei For, now if that the soth I shall you say, I have loved you ful many adaie.

Id. Legend A riadne. They hit one another with darts, as the others do ■with their hands, which they never throw counter, but at the back oi the fiier. Sandy's Journal.

For he so swift and nimble was oi Jiiyht, That from this lower tract he dared to stie Up to the clowdes, and thence with pineons light To mount aloft unto the crystall skie. To view the workmanship of heaven's height : Whence down descending, he along would _//(e Upon the streaming rivers, sport to finde ; And oft would dare to tempt the troublous winde.

Spenser. Muiojjotmos. Which when the valient elf perceived, he leapt. As lion iierce, upon thejiying prey. Spenser.

These men's hastiness the warier sort of you do not commend : ye wish they had held their.se! trps longer in, and not flown so dangerously abroad before the feathers of the cause had been grown. Houher. At the &rst flight of arrows sent Full threescore Scots they slew. Chery Chase.

A flight drawn home,

A round stone from a sling.

Beaumont and Fletcher. Ronduca. The gates are ope, now prove good seconds ; 'Tis for the followers fortune widens them. Not for the fliers. Shakspeare. Coriolanui.

Ere the bat hoith flown His cloistered fiight. Id. Macbeth.

Time thou anticipatest my dread exploits : The flighty purpose never is o'ertook. Unless the deed go with it. Id.

Glad to catch this good occasion. Most thoroughly to be winnowed, where my chaff And corn shall y?^ asunder. Shakspeare.

He set up his bills here in Messina, and challenged Cupid at the flight. , Id.

In my school-days, when I had lost one shaft, I shot his fellow of the se\i-sa.me flight The self-same way. Id.

Love like a shadow flies, when substance love pursues ; Pursuing that which flies, and flying what pursues.

Id. They take great pride in the feathers of birds, and this they took from their ancestors of the mountains who were invited into it by the xnAnite flights of birds that came up to the high grounds.

Bacon. New Atlantis.

If a man can tame this monster, and with herfltf

other ravening fowl, and kill them, it is somewhat

worth. Bacim.

Here be of all •sorts ; flights, rovers, and biitshafts.

Ben Jonson. Cynthian Rtvels.

1 can at will, doubt not.

Command a table in this wilderness ; And call sw\it flights of angels ministrant. Arrayed in glory, on my cup t' attend. Milton.

O whither shall I run, or which way/y The sight of this so horrid spectacle ? Id.

The dfovrsy flighted steeds. That draw the litter of close-curtained sleep

Id. Cumua,

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No wonder that ihcflyhig roll, or quick and inevita- ble curse, doth surprise the swearer, and cut him ofF, as it is in the prophet. Barrow.

The conscious stag tho' once the forests' dread Flys to the wood and hides his armless head.

Marvell. Say from the golden quivers of the sky, Do all thy winged arcows Jily 1 Swiftness cind power by birth are thine ; From the great sire they came, thy sire the Word Divine. Cowley.

Old PindM'sJlights by him are reacht. When on that gale his wings are strecht.

Denham, He grieves so many Britons should be lost; Taking more pains, when he beheld them yield. To save the Jliers than to win the field. Waller. Sleep Jlies the wretch ; for when with cares opprest. And his tossed limbs are wearied into rest. Then dreams invade. Dryden's Juvenal.

Dedalus, to Jiy the Cretan shore. His heavy limbs on jointed pinions bore,- The first who sailed in air. Id. ˆneid.

He thinks hy flight his mistress must be won. And claims the prize because he best did run.

Oryden. As stripplings whip the top for sport, On,the smooth pavement of an empty court. The wooden engine flies and whirls about. Id, Fowls, by Winter forced, forsake the floods. And wing their ha.sty flight to happier lands. Id. The scouts yi'ith flying speed Return, and through the city spread the news.

Id. In half-whipt muslin, needles useless lie. And shuttle-cocks across the counter ˆˆ. Gay. You now a more delusive art must try. And tempt their hunger with the curiousˆ?!/. Id, Earth rolls back beneath the flying steed. Pope, V\ fly from shepherds,ˆflocks, and flow'ry plains;) From shepherds, flocks, and plains I may remove. Forsake mankind, and all the world but love. Id,

Strange graces still, and strnnger flights she had ; Was just not ugly and was just not mad. Id.

It is not only the utmost pitch of impiety, but the highest flight of folly, to deride these things.

Tillotson. If there were any certain height where the flights of ambition end, one might imagine that the interest of France were but to conserve its present greatness.

Temple. Above an hundred arrows, discharged on my left hand, pricked me like so many needles ; and besides they shot aaother flight into the air as we do bombs.

Swift, The flier, tho't had leaden feet. Turned so quick, you scarce could sec't. Id. One song employs all nations ; and all cry. Worthy the lamb, for he was slain for us ! The dwellers in the vales and on the rocks Shout to each other, and the mountain tops From distant mountains catch the flying joy ; Till nation after nation taught the strain. Earth rolls the rapturous Hosanna round.

Cowper. Black Hassan from the }ia.ra.m flies , Nor bends on woman's

form his eyes ; The unwonted chase each hour employs Yet shares he not the hunter's joys. Not thus was Hassan wont to fly , When Leila dwelt in his Scraii.

Byron. Giaour.

To fly is used in connexion witli other words which form phrases, and has in each a specific Vol. IX.

meaning. The following phrases are instanced by Dr. Johnson : —

To fly at. To spring with violence upon; to fall on suddenly.

A servant that he bred, thrilled with remorse. Opposed against the act, bending his sword To his great master ; who, thereat enraged. Flew on him, and amongst them felled him dead.

Sliakspeare, Though the dogs have never seen the dog-killer, yet they will come forth, and fly at him.

Bacon's Natural History. No honour, no fortune, can keep a man from being miserable, when an enraged conscience shall fly at him, and take him by the throat. South.

This is an age th?Lt flies at all learning, and enquires especially into faults. Id,

To fly in the face. To insult. This would discourage any man from doing you good, when you will either neglect him, or fly in his face; and he must expect only danger to himself.

Swift's Drapier's Letters. To f,y in the face. To act in defiance. Fly in nature 's yace .' — But how, if nature y/y in my face first? — Then nature's the aggressor. Dryden.

Tofiy off. To revolt.

Deny to speak to me I They're sick, they're weary. They have travelled all the night ! mean fetches ; The images of revolt a.nd flying oflf. Sliakspeare.

The traytor Syphax Flew off at once with his Numidian horse.

Addison's Cato, To fly out. To burst into passion. How easy is a noble spirit discerned. From harsh and sulphurous matter thˆt flies out In contumelies, makes a noise, and stinks.

Ben Jonson's Citiiline, Passion is apt to ruffle, and pride will fl'y out into

contumely and neglect. Collier of Friendship.

To fly out. To break out into license.

You use me like a courser spurred and reined, III fly out, my fierceness you command. Dryden,

Papists, when \iaopposed , fly out into all the pagean- tries of worship ; but, when they are hard pressed by arguments, lie close intrenched behind the council of Trent. Id.

To fly out. To start violently from any direc- tion.

All bodies, moved circularly, have a perpetual en- deavour to recede from the centre, and every moment would y/y out in right lines, if they were not restrained.

Bentley's Sermons.

To let fly. To discharge. The noisy culverin, o'erchargcd, lets fly.

And bursts, unaiming, in the reudcd sky.

Granville,

To be light and unincumbered : as a flying camp.

FLY, w. s. -\ Sax. pleoˆe ; Goth.

Fi.y'HLOw, V. a. ifli'gu ; Ttint.Jliege ; Belg.

Yi.'-c\icn}LR,n.s.\viugcn ; all clearly from

Fly'-fish, i tlie corresponding words

Fly'flap. J in those languages, signi

fying to ˆy. A small winged insect of many species : ap{)'liBd to a wheel, in mechanics, it has the same meaning with flier : thai part of a vane which points from what quarter the wind blows : to fly-blow is to taint with flies; to fill with mag- gots: a fly-catcher is one that hunts flies: to fly-

2 1}

FLY

fish, is to angle with a hook baited with a fly, either natural or artificial : a fly-tlap is a fty or flapper to keep flies off".

For lo the gentil kinde of the lion ; For whan njiie offendeth Lim or biteth. He with his taile awaie thejlie ysmiteth Al easily, for of his genterie Him deineth nat to wrecke him on njlie, As doth a curre or els another best,

Chaucer, Leg. of Good Women, Prologue. Like as the JJy that seeth the flame. And thinks to play her in the fire. That found her woe and sought her game Where grief did grow by her desire.

Earl of Surrey. The fresh young Flie, in whom the kindly fire Of lustful! youth began to kindle fast. Did much disdaine to subject his desire To loathsom sloth, or houses in ease to wast. But ioyd to range abroad in fresh attire Through the wide compas of the ayrie coast.

Spenser. Muiopoimos, As flies to wanton boysˆ are we to the gods; They kill us for their sport. Shakspeare.

To sacrifice the honour of sacred things to our vain pleasure, being like the ridiculous fondness of that people, which, as /Elian reporteth, worshipping a.Jly, did offer up an ox thereto. Barrow.

I am unwilling to believe that he designs to play tricks, and to fyblow my yiords, to make others distaste them. Stillingjieet.

There was more need of Brutus in Domitian's days, to mend, than of Horace, to laugh at a fiycatcher.

Dryden. The swallow was Bl flycatcher as well as the spider.

L'Estrange. My country neighbours begin to think of being in general, before they come to think of thefy in their sheep, or the tares in their corn. Locke.

To prevent thefy, some propose to sow ashes with the seed. Mortimer's Husbandry.

So morning insects, that in muck begun. Shine, buz, s-niX fyblow in the setting sun. Pope. Like d, fy-blown cake of tallow ; Or, on parchment, ink turned yellow. Swift.

To heedless fies the window proves A constant death. Thomson's Summer.

None save the Spanish Fiy and Attic Bee As yet are strongly stinging to be

free. Byron. Fly, or Musca, in entomology, a large order of insects, the distinguishing characteristic of which is, that their wings are transparent. By this they are distinguished from beetles, butter- flies, grasshoppers, &c. See Entomology.

Fly, in mechanics, a cross, with leaden weights at its ends ; or rather, a heavy wheel at right angles, to the axis of a windlass, jack, or ilie like; by means of which the force of the power, whatever it is, is not only preserved, but equally distributed in all parts of the revolution of the machine. See Mechanics. Fly, Electric See Electricity. Fly Island, an island in the South Pacific Ocean, discovered by Le Maire and Schouten, in the year 1616, and so named from the number of flies seen there. It is covered with trees, and a lagoon seems to be formed in the inte- rior by the flowing of the tide. The naviga- tors observed a few naked inhabitants. Lone. 150° 20′ W., lat. 15° S.

Fly, Vegetable, a very curious natural pro- duction, cliiefly found in the West Indies. It

resembles the drone botli in size and color, ex- cepting that it has no wings, more than any other British insect. In the month of May it buries itself in the earth, and begins to vegetate. By the end of July the tree has arrived at its full growth, and resembles a coral branch: it is about three inches in height, and bears several little pods, which dropping off", become worms, and thence flies, like the British caterpillar. Such was the account originally given of this extraordinary production. But several boxes of these flies having been sent to Dr. Hill, for his examination, his report was as follows : ' There is in Martinique a fungus of the clavaria kind, diff"erent in species from those hitherto known. It produces soboles from its sides; I call it, therefore, clavaria sobolifera. It grows on putrid animal bodies, as our fungus ex pede equino, from the dead horse's hoof. ITie cicada is common in Martinique, and in its nymph state, in which the old authors call it tettigome- tra, it buries itself under the dead leaves to await its change ; and, when the season is unfa- vorable, many perish. The seeds of the clavaria find a proper bed in this dead insect, and grow.' This is the solution of the mystery; though the untaught inhabitants suppose a fly to vegetate, and though there is a Spanish drawing of the plants growing into a trifoliate tree, and it has been figured with the creature flying with this tree upon its back. Mr. Edwards treats of this extraordinary production in his Gleanings of Natural History.

Fly, Honeysuckle. See Lonicera.

Fly, Honeysuckle, African. See Halleria.

Flying, the progressive motion of a bird, or other winged animal in the air. The parts of birds chiefly concerned in flying are the wings and the tail; by the former, the bird sustains and wafts himself along; and, by the latter, he is assisted in ascending and descending, to keep his body poised and upright, and to obviate the vacillations thereof. It is by the largeness and strength of the pectoral muscles, that birds are so well disposed for quick, strong, and continued flying. These, muscles, which, in men, are scarcely a seventieth part of the muscles of the body, in birds exceed and outweigh all the other muscles taken together. The tail, Messrs. Willoughby, Ray, and many others, imagined to be principally employed in steering and turn- ing the body, as a rudder; but Borelli has shown that this is the least use of it. Its chief use is to asssist the bird in its ascent and de- scent in the air, and to obviate the vacillations of the body and wings ; for, as to turning the body to this or to that side, it is performed by the wings and inclination of the body, and but very little by the help of the tail. The flying of a bird, in fact, is a very diff'erent thing from the rowing of a vessel. Birds do not vibrate their wings towards the tail, as oars are struck towards the stern, but waft them downwards; nor does the tail of the bird cut tlie air at right angles, as the rudder does the water; but is disposed ho- rizontally, and preserves the same situation what way soever the bird turns. In effect, as a vessel is turned about on its centre of gravity to the right, by a brisk application of the oars to the

left; so a bird, in beating the air with its right wing alone, towards the tail, will turn its fore part to the left. Thus pigeon>, changing their course to the left, would labor it with their right •wing, keeping the other almost at rest. Birds of a long neck, alter their course by the inclina- tion of their head and neck, which altering the course of gravity, the bird will proceed in a new direction. The act of flying is thus per- formed : the bird first bends his legs, and springs with a violent leap from the ground ; then opens and expands the joints of his wings, so as to make a right line perpendicular to the sides of his body : thus the wings, with all the feathers there- in, constitute one contmued lamina. Being now raised a little above the horizon, and vibrating the wings with great force and velocity perpen- dicularly against the subject air, that fluid resists those successions, both from its natural inactivity and elasticity, by means of which the whole body of the bird is protruded. The resistance the air makes to the withdrawing of the wings, and consequently the progress of the bird, will be so much the greater, as the stroke of the fan of the wing is longer; but, as the force of

the wing is continually diminished by this resist- ance, when the two forces continue to be in equilibrio, the bird will remain suspended in the same place ; for the bird only ascends so long as the arch of air the wing describes, makes a resistance greater than the excess of the specific gravity of the bird above the air. If the air, therefore, be so rare as to give way with the same velocity as it is struck withal, there will be no resistance, and consequently the bird can never mount. Birds never fly upwards in a perpendicular line, but always in a parabola. In a direct ascent, the natural and artificial ten- dency wovild oppose and destroy each other, so that the progress would be very slow. In a di- rect descent they would aid one another, so that the fall would be too precipitate.

Flying, Aktificial, that attempted by men, by the assistance of mechanics. The art of flying has been attempted by several persons in all ages. The Leucadians, out of superstition, are reported to have had a custom of precipi- tating a man from a high cliff" into the sea, first fixing feathers, variously expanded, round his body, in order to break the fall. Friar Bacon not only affirms the art of flying possible, but assures us, that he himself knew how to make an engine, wherein a man sitting, might convey himself through the air like a bird ; and further adds^ that there was then one who had tried it with success. The secret consisted in a couple of large thin hollow copper globes, exhausted of air, which, being much lighter than air, would sustain a chair whereon a person might sit. Father Francisco Lana, in his Prodromo, pro- poses the same thing as his own thought. lie computes that a vessel of brass, fourteen feet in diameter, weighinp: three ounces the square foot, will only weigh 1848 ounces, whereas a quantity of air, of the same bulk, will weigh 2155| ounces ; so that the globe will not only be sus- tained in the air, but will carry with it a weight of 373§ ounces; and by increasing the bulk of the globe, without increasing the thickness of the

metal, lie adds, a vessel migiit be made to carry a much greater weight. But a globe of the di- mensions he describes. Dr. Hook shows, would not sustain the pressure of the air, but be crush- ed inwards. Besides, in whatever ratio the bulk of the globe were increased, in the same must the tliickness of the metal, and consequently thn weight be increased ; so that there would be no advantage in such augmentation. See Aeros- tation. The same author describes an engine for flying, invented by the sieur Besnier, a smith, of Sable, in the county of Main. The pliiloso- phers of king Charles II.'s reign were greatly employed in endeavouring to attain this art. Bishop Wilkins was so confident of success, that he says, he does not question, but in future ages it will be as usual to hear a man call for his wings, when he is going a journey, as it is now to call for his boots.

Flying Bridges. See Bridge.

Flying Fish, a name given to several species of fish, which, by means of their long fins, keep themselves out of water a considerable time. See ExocoETUS.

Flying Pinion, a part of a clock, having a fly or fan to gather air, and so bridle the rapi- dity of the clock's motion, when the weight de- scends in the striking pace.

Fly-Trap, Venus's. See Dion.'ea.

Fly-Wort, in botany. See Silene.

FO, or Foe, an idol of the Chinese, originally worshipped in the Indies, and thence trans- ported into China. See China.

FOA, one of the Happaee islands, in the South Pacific Ocean, between Haano and Lefooga, to each of which it is connected by a reef.

TOAL, n.s.,v. a., &LV. 11. Sax. pola; Goth, fid; Swed. fole ; Belg. veide ; qu. Lat. piilliis ; Gr. TrwXof. The offspring of a mare, or other beast of burthen. The custom now is to use colt for a young horse, and foal for a young mare ; but there was not, originally, any such distinction. To bring forth ; to be disburthened of the foetus.

Twenty she-asses and ten foals. Gen. xxxii. 15. The fend, quod he, you fecche body and bones. As ferforthly as ever ye were foled. So mochel wo as I have with you tholed.

Chaucer. The Feeres Tale. Also flew his steed. And with his winged heels did tread the wind. As he had been a.Jbal of Pegasus's kind.

Faerie Qiteene. Give my horse to Timon : it foals me straight Ten able horses. Shahnpeare. Timon.

Such colts as are Of generous race, straight when they first avc foaled. Walk proudly. May's Georgicks.

About Septomhrr take your marcs into the house, where keep them till they foal. Mortimer's Husbandry. FOAM, n. .?., V. n. f Sax. pam ; Tcut. J'ainn ; Foam'y, wr//. ^' Lat. /«w»s, smoke. The

white substance which agitation or fermentation gathers on the top of liquors ; froth ; spume. To froth ; to gather spume. The adjective sig- nifies covered with foam ; frothy. The verb is, metaphorically, to rage; a violent agitation of mind.

The foam upon the water. Hosea x. 7.*

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As wild bores, gan tliey togcdci' smite That frothen white as fume for ire wood, Up to the ancle loughte they in hir blood.

Chaucer. The Knightes Tale. My love and lord alas ! in whom consists my wealth. Hath fortune sent to pass the seas, in hazard of his

health — Whom I was wont to embrace with well contented

mind. Is now amid the foaming floods, at pleasure of the wind. Earl of Surrey.

There also, where the winged ships were scene In liquid waves to cut their f'oamie waio. And thousand lisliers numbered to have been Tn that wide lake, looking for plenteous praic Of tish, which they with baits used to betraie, Is now no lake. Spenser. The Ruines if Time.

Cassar fell down in the market-place, and foamed at mouth, and was speechless. Shukspeare.

What a beard of the general's cut will do among foaming bottles and ale-washed wits, is wonderful.

Id. Henry V.

I have been gathering wolves hairs. The mad-dogs' ybam, and adders' ears. The spurging of a dead man's eyes. And all since the evening-star did rise. Ben Jonson.*

More white than Neptune's yoa»!_!/ face. When struggling rocks he would embrace. Sidney.

Behold how high the foamy billows ride I The winds and waves are on the juster side. Dryden.

To Pallas high the foaming bowl he crowned. And sprinkled large libations on the ground. Pope.

Whitening down their mossy tinctured stream Descends the billowy ybam. Thomson's Spring.

O'er the glad waters of the dark blue sea. Our thoughts as boundless, and our souls as free — Far as the breeze can bear the billows' y<)a»« Survey our empire and behold our home I Byron.

P"OB, n. s. & V. a. Germ. Juppe, fiipsackc ; Ital. fioppe (breeches), a small pocket. The verb, from the same root (fuppcn), signifies to clieat ; to trick ; to defraud : probably from being first applied to stealing out of the fob. It is used colloquially with off. To fob off" is, to shift off"; to put aside with an artifice ; to delude by a trick.

1 think it is scurvy, and begin to find myself fobbed in it. Shukspeare. Othello.

Shall there be a gallows standing in England when thou art king, and resolution thus fobbed as it is with the rusty curb of old father antick the law. Id. Henry IV,

You must not think To fob off your disgraces with a tale. Shakspeare, For they, poor knaves, were glad to cheat.

To get their wives and children meat ;

But these will not he fvbbed off so.

They must have wealth and power too. Hudibras. Who picked a_/b6 at holding forth. Id.

" He goes pressing forward, till he was fobbed again with another story. L' Estrange.

He put bis hand into his fob, and presented me in his name with a tobacco-stopper. Addison.

Two pockets he called his fobs : they were two large slits squeezed close by the pressure of his belly.

Swift.

FOCHABERS, a town of Scotland, in Banff"- shire, on the Spey, formerly in the neighbour- hood of Gordon Castle, but removed, not many years ago, to a rising ground about a mile south, and built on a neat plan, having a square in the centre, and streets entering it at right angles.

It is a borough of barony, governed by a baron- bailie appointed l)y the

Duke of Gordon, who is superior. An elegant bridge has been lately built over the Spey at this town. It is a thriv- ing place, and lies eighteen miles west of Banff, and forty-eight north-west of Aberdeen.

Fo-CiiAN, a populous town near Canton, in China, on the banks of the river whereon that city stands. It extends about three miles along the river, and is composed principally of a single street of large well built-houses. The tide flows up to this town, and one of the custom-houses is a fine building; not far dis- tant is a temple. Grosnier observes that Fo- ohan, ‘ properly speaking, is only a village, being unenclosed by walls, and not having a governor ; but that it is the largest and most populous in the universe, because it is three leagues in cir- cuit, and contains 1,000,000 of inhabitants.’

P’OCHEA, or FocniA Nova, a sea-port town of Asiatic Turkey, in Natolia; with a castle and harbour, seated on the Gulf of Smyrna, at the mouth of the Hermus ; twenty-eight miles north- west of Smyrna, and thirty-two S. S.VV. of Per- gamo. In 1G50 the Venetians defeated the Turkish fleet near this town.

FOCIL, n. s. Ft. facile. The greater or less bone between the knee and ankle, or elbow and wrist.

The fracture was of both the focils of the left leg.

Wiseman,

FOCILLA’TION, w. s. Lai.fociUo. Comfort; support.

FO’CUS, n. s. } Lat. In optics. The focus of

Focal, adj. i a glass is the point of conver- gence or concourse, where the rays meet and cross the axis after their refraction by the glass.

The point from which rays diverge, or to which they converge, may be called their focus.

Newton’s Opticks.

Schelhammer demandeth whether the convexity or concavity of the drum collects rays into a focal point or scatters them. Derham.

If the candle be placed nearer the glass than its focal distance, the rays will diverge after passing through the glass, more or less, as the candle is more or less distant from the focus. Ferguson,

But Juan was not meant to die so soon : We left him in the focus of such glory As may be seen, by favour of the moon Or ladies' fancies, — rather transitory.

ByroH.

Focus, in geometry, certain points in the transverse axis of the ellipse hyperbola and pa- rabola from which two lines drawn to any point in the curve will bear a certain proportion; namely, their sum in the ellipse or parabola, and their difference in the hyperbola is equal to the transverse axis. See Conic Sections.

Focus, in optics, the point of convergence in which several rays meet, or are collected after being either reflected or refracted.

Focus OF A Parabola, a point in the axis within the figure, and distant from the vertex by a fourth part of the parameter, or latus rectum.

Focus OF AN Elipsis, a point towards each end of the longer axis ; from \ hence two right lines being drawn to any point in the circumference, shall be together equal to that longer axis.

Focus OF THE Hyberbola, a point in tlie principal axis, within the opposite hyperbolas; from which if any two right lines are drawn, meeting in either of the opposite hyperbolas, the difference will be equal to the principal axis.

FOD'DER, n. s. & v. a. I Sax. potSpe, poSeji,

Fod'derer, n. s. S from pod, food.

Dry food stored up for cattle against winter. To feed with dry food ; he who fodders cattle.

Being not to be raised without wintering, they will help to force men into improvement of land by a necessity o{ fodder. Temple.

Of grass and fodder thou defraudest the dams. And of their mother's dugs the starving lambs.

Dryden's Virgil. From winter keep

Well foddered in the stalls, thy tender sheep. Id.

Natural earth is taken from just under the turf of the best pasture ground, in a place that has been well foddered on. Evelyn.

Fodder, in agriculture, all such substances as hay, straw, haulm. Sec, wliich are kept for the winter food of cattle. In the giving of fodder to all sorts of animals, care should be taken that it is not wasted by their having too much, or by its not being well put into racks or cribs, which should be sufficiently numerous. Where these points are not properly attended to, there must be great loss, not only by the fodder being littered about the yard, but from many of the more weak cattle not getting the quantity of food that may be necessary for their support. In respect to racks, those of the staddling and basket kinds are best for foddering, if made strong enough, that is, so as not to be overturned ; for these racks may be lifted up as the dung rises in the yard, which those fixed in the ground cannot be.

FOE, n. s. > Sax. fah ; Goth, fcga ; old

Foe'man. 5Teut. fian, to haste. One that bears hatred and malice against another. Tinemy is not properly the synonyme of foe. Enemy, inimicus, Lat. merely signifies one that is un- friendly. Foe implies deadly aversion. Crabbe well observes, ' An enemy is not so formidable as a foe ; the former may be reconciled ; but the latter remains always deadly. An enemy may be so in spirit, in action, or in relation ; a /oe is always so in spirit, if not in action likewise ; a man may be an enemy to himself, though not a /of.' These distinctions, however, are not strictly regarded even by our best writers. For foe is often used to denote an enemy in war, — an enemy in common life; a persecutor; an oppo- nent ; an ill wisher. Foeman is obsolete, except in poetry, vvliere it is often introduced instead of foe, to eke out the number of feet.

To these gret conqueroutfis two. Fortune was first a friend and sith a/o.

Chaucer. Ttie Munkes Tale.

Wii fomen made a festc upon a day, And made him as hir fool before hem pleyc. And this was in a temple of gret array : — But, at the last, he made a foulo affray, For he two pillcrs sliokc, and made hem fallo; And down foil a temple and all, and ther it lay ; And slew himself, and eke his /bmcn alle. Id.

Eftsoones he spide a knight approaching nyo ; Who seeing one in so great danger set Mongst many foes himself did faster hyc

To rcskue him, and his weak part abet. For pity so to see him overset.

Spenser. Faerie Queene. Here haunts that fiend, and does his daily spoil ; Therefore henceforth be at your keeping well, And ever ready for your fuemaii fell. Id.

God's benison go with you, and with those That would make good of bad, and friends oi foes.

Shtikspeare. What \a.lia.nt foeman, like to Autumn's corn, Have we mowed down in top of all their pride ?

Id. Henry VI. Let us not slip the occasion, whether scorn Or satiate fury yield it from onr foe. Milton,

Nature, her own sex's ybe. Long had taught her to be coy ; But she neither knew to enjoy Nor yet let her lover go. Marvell.

Forced by thy worth, thy /ye in death become. Thy friend has lodged thee in a costly tomb.

Dryden's Fables. Thy defects to know. Make use of every friend, and every foe. Pope.

He that considers and enquires into the reason of things, is counted 9- foe to received doctrines.

Watts on the Mind. Tell us who brought, and whence these colonies ; Who is their king, what /oes, and what allies ; What laws maintain their peace ; what wars and vic- tories ? Fletcher's Purple Island. Old flames new wives, become our bitterest /oe. Converted foes should scern to join with those.*

Byron.

FQˆNUS Nauticum. Where money was lent to a merchant, to be employed in a beneficial trade upon condition to be repaid, with extra- ordinary interest, in case such voyage was safely performed, the agreement was sometimes caWedfcemis nauticum, sometimes usura maritima. But, as this gave an opening for usurious con- tracts, 19 Geo. II. cap. 37 enacts, that all money lent on bottomry, on vessels bound to or from the East Indies, shall be expressly lent only upon the ship or merchandise : the lender to have the benefit of salvage, &c. Blackstone. See Bottomry.

FCESIUS (Anulius), a learned physician of Paris, born at Mentz in 1528. He published a translation of Galen's Commentaries upon tlie second book of Hippocrates, under the title of Ilippocratis Coi Liber secundus de morbis vulgaribus, difficillimus et pulcherrimus : olim ;i Galeno Commentariis illustratus qui temporis injuria interciderunt ; nunc vero penc in inte- grum

restitutus Commentariis sex, et Latinitate donatus, 8vo. In the following year he pub- lished a pharmacopoeia, in order to fix the re- gular fornuila; and the particular medicines to be used by the apothecaries of Mentz: its title was. Pharmacopeia Medicamentorum omnium, qua; hodie ad publica medontium munia in officinis extant, tractationem et usum ex anti- quorum Medicoruin prascripto continens; Basilea;, 1561, 8vo. His constant meditations on the works of Hippocrates led liim to arrange, in alphabetical order, all the terms which con- tributed to occasion any doubt or obscurity in the perusal of this ancient writer, under the title oT (Economia Ilippocratis. After i)rac- tising physic a long time with great reputation,

la Lorrain and otlier places, he died in the year

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FCETIDIA, in botany, a genus of plants of the icosandria class and monogynia order : cal. superior, tour-cleft: cor. none: caps, woody: four-celled: the cells one or two-seeded. Species, one only ; a tree of jMauritius, with one-Howered terminal peduncles.

1'Gl,T01v, Narium (stench of the nostrils), a sort of disease arising from a deep ulcer with- in the nose, yielding a fetid smell, and remark- able as one of the causes for whicii marriage might formerly be annulled.

FCETUS, n. s. Lat. foetus, from foveo, to che- rish; Fr.J'ctus. Both signify the thing cherished. It refers to what is formed in tlie womb of the mother : it differs from embryo, though it is ap- plied to the same substance. Embryo is the first germ of conception ; foetus the same germ ad- vanced to maturity of formation.

A J'oetus, in ihe mother's worm, ditfers not much from the state of a vegetable. Locke.

FcETUs, the young of all viviparous animals whilst in the womb, and of oviparous animals before being hatched. The name is transferred by botanists to the c>i>l»\)/os of vegetables. Till the young is perfectly formed, it is more pro- perly called Embryo. See Anatomy, and Min- wii KRY. In the human foetus there exist se- veral peculiarities not to be found in the adult: I. The arteries of the naval string, which are continuations of the hypogastrics, are after the birth shrivelled up, and form the lower umbi-

lical ligament. 2. The veins of the navel-string are formed by the union of all the venous branches in the placenta; and, passing into the abdomen, become the falciform ligament of the liver. 3. The lungs, before being inflated with air, are compact and heavy ; but after one in- spiration they become light, and lu; it were spongy ; and it may be noted here, that the notion of the lungs sinking in water before the chdd breathes, and of their swimming after the reception of air, are no certain proofs that the child had or had not breathed, much less that it was murdered : for the uninflated lungs become specifically lighter than water, as soon as any

FcETus, Petrified. Bartholine, Pare, Licetns,

tocks being perfect stone of a reddish color, and as hard as common cjuarry-stone ; the grain and surface of this part appears exactly like that of the calculi or stones taken oui of human bladders : and the whole substance examined ever so nearly, and felt ever so carefully, appears to be absolute stone. It was carried from Sens to Paris, and there purchased by a goldsmith of \enice; from whom Frederic III. king of Den- mark purchased it for a very large sum.

FOG, 71. s. Low Lat. fogagium. Gramen inforesta 7-egis locatur pro fogagio Leges foi-est. ScoticcB. Aftergrass ; grass which grows in au- tumn after the hay is mown.

Fog, or Fogg, is a term that prcperly signifies the fine soft grass that immediately springs up after the hay crop has been taken from the ground ; but which is sometimes used for the long grass remaining in the pastures till the win- ter season.

Fog, n. s. “) Dan. fog, a storm. A

Fog’gixess, n. s. > thick mist; a most dense Tog’gy, adj. 3 vapor near the surface of the land or water. Metaphorically applied to the understanding, when it is unapprehensive, mys- tified, and dull.

Huge routs of people did about them band. Shouting for joy ; and still before their way A fo(j(jy mist had covered all the land.

Spenser’s Faerie Qucene. Infect her beauty. You fcnsucked fogs drawn by the powerful sun. To fall and blast her pride. Shakspeare,

Whence have they this mettle ? Is not their cWrndXa foggy , raw and dull ?

Id. Henry V, Lesser mists and fogs than those which covered Greece with so long darkness, present great alterations in the sun and moon. Raleigh.

Fly, fly, YtTodae fogs ! far hence fly away ; Taint not the pure streams of the springing day With your dull influence : it is for you To sit and scowl upon night's heavy brow.

Crashaw. Alas ! while we are wrapt in foggy mist Of our self-love, so passions do deceive. We think they hurt, when most they do assist.

Sidney. About JMichaelmas, the weather fair, and by no means foggy, retire your rarest plants.

Evelyn's Kalendar. When sleep is 6rst disturbed by morning cries. From sure prognostics learn to know tlie skies, Lest you of rheums and coughs at night complain. Surprised in dreary fogs or driving rain. Oay.

Mean time his soul weighed down with muddy chains. Can neither work nor move in captive bands ; But dulled in vap'rous fogs all ceaseless reigns,

Fletcher. Purple Island. As when from fenny moors the lumpish clouds With rising streams damp the light morning's face j At length the piercing sun his beam unshrouds. And with his arrows tlie uWc fog doth chase : The broken mist lies melted all in tears. Id.

Fog, or Mist, according to lord Bacon, is an imperfect condensation of the air, consisting of a large proportion of the air, and a small one of the acˆueous vapor. Fogs happen in winter, about the change of the weather i'rom frost to thaw, or from ihaw to frost ; but in summer and

spring, from the expansion of the dew. The vapors, which are raised plentifully from the earth and waters, either by the solar or subter- raneous heat, at their first entrance into the at- mosphere meet with cold enough to condense them to a considerable degree ; their specific gravity is by that means increased, and so they will be stopped from ascending; and either re- turn back in form of dew or of drizzling rain, or remain suspended some time in the form of a fog. Vapors may be seen on the high grounds as well as the low, but more especially about marshy places. They are easily dissipated by the wind, as well as by the heat of the sun. They continue longest in the lowest grounds, because these places contain most moisture, and are least exposed to the action of the wind. Hence we may easily conceive, that fogs are only low clouds, or clouds in the lowest region of the air; as clouds are no other than fogs raised on high. See Cloud, and Mist.

FOGGIA, a large town of Naples, in the Capi- tanata, formerly of great importance, from being a staple for wool and corn, and the seat of the dogano or register-office for collecting the tax on the sheep which pass to and from the pas- tures of Puglia. The office of Foggia appointed deputations to other towns. The principal square, and several of its streets, are under- mined with vaults, where corn is stored and preserved ; die sides are said to be faced with stone, and all the orifices carefully closed. The town has been almost entirely rebuilt since the earthquake of 1732. A great fair is held here in May. It contains 17,000 inhabitants. It is sixteen miles south-west of Manfredonia, and forty-two north-east of Benevento.

FOGLIETO (Oberto, or Hubert), a Genoese priest, and one of the most learned writers of the sixteenth century. He had a share in the disturbances that were raised at Genoa, for which he was banished ; and died at Rome in 1581, aged sixty-three. He wrote a History of Genoa in Italian, which is highly esteemed ; and many works in Latin.

FOH, interj. From Sax. pah, an enemy. An interjection of abhorrence : as if one should at sight of any thing hated cry out a foe ! Not to affect many proposed matches Of her own clime, complexion and degree. Whereto we see in all things nature tends, Foh ! one may smell in such a will most rank. Foul disproportions, thoughts unnatural.

Shakspeare. Indeed, Sir John, pray good my dear, Tis wrong to make your kennel here — Dogs in their place are good I own. But in the parlour, ybA .' be gene! Somervile. Foh 'twas a bribe that left it, he has touched Corruption. Cowper.

FO-HI, another name for Fo, the chief deity of the Chinese. They represent him shining all in light, with liis hands hid under his robes, to show that his power does all things invisibly. He has at his left Lanza, or Lanca, chief of the second sect of their religion. See China.

FOUR, or FoRA, a fertile island of Denmark, on the coast of Sleswick; twelve miles in cir- cuit, with a safe harbour.

FOFBLE, n. s. French. A little fault; a mental weakness rather than a moral taint. It is synonymous, or nearly so, with failing; fail- ings and foibles are the smallest degrees of im- perfection. Failings, perhaps, relate more to temper and disposition, and foibles to habit and prepossession.

He knew the foibles of human nature. Friend.

The witty men sometimes have sense enough to know their own fuible, and therefore they craftily shun the attacks of argument. Watts's Lotjick.

If you insist upon your right to examine, they retreat, either in confusion or equivocation ; and, like the scuttle-fish, throw a large quantity of ink behind them, that you may not see where to pursue- Whence this foilble flows is obvious enough, il/cwore.

FOIL, V. a. & n. s. 1 Old Fr. affoler, to

Foi'ler n.s. J wound. Crabbe thinks

from fail, and the Lat./a//o to deceive ; to make to fail. Thus it signifies to put to the worst ; to defeat, though without a complete victory ; and equally applies to the accomplishment of this, whether by stratagem or open resistance. A person is foiled, whatever the means, who is re- buffed and turned away from his meditated pur- pose : it is also used in the sense of puzzling and perplexing.

Bonduca, that victorious conqueresse. That, lifting up her brave heroick thought Bove womens weaknesse, with the Romanes fouglu. Fought, and in field against them thrice prevailed ; Yet was she foyled whenas she me assailed.

Spenser. The Raines of Time.

We of thy cunning had no diffidence ; One sudden /oj/ shall never breed distrust.

Shakspeare. Amazement seized The rebel thrones ; but greater rage to see Thus foiled their mightiest. Milton.

Strange, that your fingers should the pencil /oiV, Without" the help of colours or of oil I WaUer.

Virtue, disdain, despair, I oft have tried ; knˆ, foiled, have with new arms my foe defied.

Dryden.

Death never won a stake with greater toil. Nor e'er was fate so near a /oiL Id.

Whilst I am following one character, I am crossed in my way by another, and put up such a variety of odd creatures in both sexes, that they/oi/ the scent of one another, and puzzle the chace. Addison.

He had been foiled in the cure, and had left it to nature. Wiseman's Surgery.

la their conflicts with sin they have been so often foiled, that they now despair of ever getting the day.

Calamy's Sermons.

When age shall level me to impotence. And sweating pleasure leave me on the full.

Southern.

Foil, n. s. & v. a.' Yr.fouiller. A blunt sword used in fencing : to blunt ; to dull.

He that plays the king shall be welcome ; his ma. jesty shall have tribute of nic : the adventurous knight shall use his foil and target. Sliukspeare.

When light-winged toys Of feathered Cupid/oi7, with wanton dulness. My speculative and officed instruments. Id.

Foil, n. .?. \:ii. folium ;'.fcuille. Leaf; gilding : something of another color near which jewels are set to raise their lustre ; applied me- taphorically to whatever enhances the value or beauty of any thing by contrast: tlic steel or

quicksilver placed at the back of a glass by which it is converted into a mirror.

Fructified olive oifoiles fairc and thicke.

Chaucer. Baladc III.

A stately palace, built of squared brick. Which cunningly was without mortar laid. Whose walls were high, but nothing strong nor thick, And golden foil all over them displayed.

Faerie Quecne.

Like bright metal on a sullen ground. My reformation glittering o'er my fault. Shall shew more goodly, and attract more eyes, Thau that which hath no foil to set it oft".

Sliakspearc.

Fame is no plant that grows on mortal soil, Nor in the glistering foil Set olFio the' world, nor in broad rumour lies.

Milioti.

As she a black silk cap on him begun To set ior foil of his milk-white to serve. Sidney.

Hector has a foil to set him off ; we oppose the in- continence of Paris to the temperance of Hector.

Broome on the Odyssc}/.

Foil, among looking-glass grinders, is a sheet of tin with quicksilver, or the like, laid ou tho backside of a looking-glass, to make it reflect. Chambers.

Foil, in fencing, a long piece of steel of an clastic temper, mounted like a sword, which is used in fencing. It is witliout a point, having a button at the extremity, covered with leather. The amateurs of fencing caution the learner never to fence with short foils; they ought to measure from one extremity to the other three feet two inches ; he will thus be enabled to keep ;i regtilar distance, and execute his movements with a greater degree of justness and dexterity.

Foil, among jewellers, a thin leaf of metal placed under a precious stone, in order to make It look transparent, and give it an agreeable dif- ferent color, either deep or pale : thus, if a stone is wanted to be of a pale color, put a pale- colored foil under it; or if deep, a dark one. These foils are made either of copper, gold, or gold and silver together. The copper foils are commonly known by the name of Nuremberg or German foils, and are thus prepared: Procure very tliin copper-plates ; beat these gently upon a well-polished anvil, with a polished hammer, as thin as possible; and placing them between two iron plates, as thin as writing-paper, heat them in the fire; then boil the foil in a pipkin with equal quantities of tartar and salt, constantly stirring them, till, by boiling, they become white ; after which, taking them out and drying them, give them another hammering, till liiey are made fit for your purpose. Care must be taken not to give the foils too much heat, for tear of melting; nor must they be too long l)oiled, lest they should attract too much salt. The method of polishing them is this : Take a plate of the best copper, one foot long and about live or six inches wide, polished to the greatest])erfection ; bend this to a long convex, fasten it upon a half roll, and fix it to a bench or ;table; then take some chalk, washed as' clean as pos- sible, and filtered through a fine linen cloth, till it be as fine as it can be made; and, having laid some of it on the roll, and wetted the copper all over, lay the foils on it, and, with a polishing- stone

and the chalk, polish them, till they are as

bright as a looking-glass; after which they roust |je dried, and laid up secure from dust.

FOIN, V. n. & 71. s. > Fr. foindre, poindre ;

Foin'ingly, «£/y. yhai. puiiga. In fencing, to push ; to thrust : a thrust ; or push. In a pushing manner.

Ne no man shal unto his felow ride But o cours, with a sharpe ygrounden sperc, Foin if him list on foot himself to were. And he that is at mesrhief shal be take. And not slaine, but be brought unto the stake That shal ben ordeined on eyther side ; Thider he shal by force ; and ther abide.

Chaucer. The Knightea Tale,

And, after that, with sharpe speres strong, They foineden eche at other wonder long. Id. •

He hewed, and lashed, and foined, and thundered blows, And every way did seek into his life !

Ne plate, ne mail, could ward so mighty throws. But yielded passage to his^ cruel knife.

Faerie Queene.

He cares not what mischief he doth, if his weapon be out : he will foin like any devil ; he will spare neither man, woman, nor child. Shakspeare.

Then both, no moment lost, at once advance Against each other, armed with sword and lance : They lash, they foui, thej' pass, they strive to bore Their corslets, and the thinnest parts explore.

Dry den.

FOTSON, n. s. Fr. foison; Lat. fusio, pro- fusio. Plenty; abundance. A word now out of use.

Who fed the Egyptian Mary in the cave Or in desert ? no wight but Crist sans faille. Five thousand folk it was as gret marvaille. With loves five and fishes two, to fede ; God sent his foyson at hire grete nede.

Chaucer. The Man of Lawes Tale, Be wilful to kill, and unskilful to store.

And look for no foiison, I tell thee before, Tusser. Nature should bring

forth.

Of its own kind, M foison, all abundance.

To feed my innocent people. Shakspeare. Tempest.

FOIST, V. a. Fr. J'ausser ; perhaps of Lat. fuls'do. To insert by forgery ; or in a forced and improper manner.

Lest negligence or partiality might admit or foiit in abuses and corruption, an archdeacon was ap- pointed to take account of their doings. Carew.

To what purpose, I pray, is God's name hooked and haled into our idle talk 1 why should we so often mention him, when we do not mean any thing about him? would it not, into every sentence to foist a dog or a horse, be altogether as proper and pertinent ?

Barrow.

VOVSTY, adj. I See Fusty. Mouldy;

Fois'tiness, n. s. S fusty.

Dress mustard, and lay it in cellar up sweet, hestfoistiness make it for table unmeet. Tt/sser.

FOIX (Gaston de), a nephew of Louis XII. of France, was born in 1489, and was the son of Jolin de Foix, viscount of Narbonne. In 1512 he succeeded the duke of Longueville, in the command of tlie French army in Ittily, and forced I'eter Navarro, the Spanish general, to raise the siege of Bologna, relieved Brescia, and laid siege to Ravenna. His daring exploits, whicli])rocured him the name of the Thunder- bolt of Italy, were productive, however, of no permanent advantage; and he fell at tlie battle of Ravenna, in which he defeated the Spaniards,

Easter Sunday, in 1512. Louis XII., on hear- ing of his death, exclaimed, ' I would surrender almost every inch of ground I possess in Italy to restore to life my nephew and his brave comrades. God preserve us from many such victories !'

Foix (Louis de), a French architect, was employed by Philip II., of Spain, in

the erection of the palace of the Escurial. He is said to have been in the confidence of don Carlos, by betraying which, he contributed to the destruction of that prince; soon after which he left Spain and returned to France. In 1579 he was employed in the port of Bay- onne, and constructed the canal of the Adour. De Foix was also, in 1610, the architect of the tower of Cordouan, at the mouth of the Ga- ronne.

FOKIEN, a province of China, bounded on the north by that of Tche-Kiang ; east by the sea ; south by Quang-Tong, and west by Kian- Si. It is commodiously situated for navigation and commerce. The natives catch large quan- tities of fish, which they send to other parts of the empire. Its shores are indented with many bays ; and there are many forts built on the coast. The air is hot, but pure and wholesome. The mountains are disposed into a kind of am- phitheatres, by the labor of the inhabitants, with terraces one above another. The fields are watered with rivers and springs, which issue out of the mountains, and which the husband- men conduct so as to overflow the fields of rice when they please, by pipes of bamboo. It produces all the commodities common in China, particularly musk, precious stones, quicksilver, silk, iron, &c. The natives make hempen cloth, calico, and all sorts of utensils. They import cloves, cinnamon, pepper, sandal -wood, amber, coral, &c. The capital is Fou-tcheou- Fou, or Fucherofu. As for Fokien, which most geographers make the capital, Grosier informs us there is no such place. The silks and cloth of Fokien are of extraordinary fineness and beauty. The port of Enfouy was formerly open to European vessels, but all the trade has been since transferred to Canton. Considerable com- merce is carried on between this province and Japan, Formosa, the Philippine Islands, Java, and Siam. Every city is said to have a peculiar dialect. Fou-tcheou, the capital, is celebrated for its literati ; besides which, there are other large towns, Tsuen-Tschosu, Yeu-Ping, and Tchang-Tcheou. The population has been com- puted at 15,000,000.

FOLARD (Charles), an eminent French ge- neral, born at Avignon in 1669, of a noble fa- mily. He discovered an early passion for arms; which was so inflamed by reading Casar's Com- mentaries, that he enlisted at sixteen years of age. His father procured his discharge and im- mured him in a monastery ; but he escaped about two years after, and entered again as a cadet. His inclination for military affairs recommended him to notice. M. de X'endome, who com- manded in Italy in 1720, made him his aid-de-camp; and soon after sent him with part of his forces into Lombardy. Here his services were such, that he iiad a pension of 400 livres settled upon liiui, and was honored with the

cross of St. Louis. He distinguished him- self greatly at the battle of Cassano; where he received a wound in his left hand, which de- prived him

of the use of it ever after. At this battle he conceived the first idea of columns, which he afterwards prefixed to his Commen- taries on Polybius. In 1706 Folard had orders to throw himself into Modena, to defend it against prince Eugene : where he was very near being assassinated. He received a dangerous wound in the thigh at the battle of Malplaquet, and was some time after made prisoner by prince Eugene. Being exchanged in 1711, he was made governor of Bourbourg. In 1714 he went to Malta, to assist in defending that island against the Turks. Upon his return to France he embarked for Sweden, to see Charles XII, He acquired the esteem and confidence of that monarch, who sent him to France to negociate the restoration of James II : but, that project being given up, he returned to Sweden, follow- ed Charles XII. in his expedition to Norway, and served under him at the siege of Frederick- shall. Folard then returned to France ; and made his last campaign in 1710, as colonel under the duke of Berwick. From that time he ap- plied intensely to the study of the military art ; and built his theories upon the foundation of his experience. He contracted an intimacy with count Saxe ; and was chosen F. R. S. of London in 1749; and, in 1751, made a journey to Avignon, where he died in 1752, aged eighty- three. His chief works are, 1. Commentaries upon Polybius, 6 vols. 4to. 2. New Disco- veries in War. 3. A Treatise concerning the defence of Places, in French.

FOLCZ (John), originally a barber of Nu- remberg, and born at Ulm about the middle of tlie fifteenth century, became one of the most celebrated of the German poets belonging to the class called Mastersingers, or Suabian bards. They consisted of clubs or societies established for the cultivation of the old German poetry, and were principally composed of the lower classes. Strasburgh and Nuremberg were the cities in which were found the most famous societies of Mastersmgers ; but they also existed at Memin- gen, Ulm, and Augsbourg. Taverns were their usual places of meeting. The epoch of these bards lasted from 1350 to 1519, when Luther produced a reform in the German language ; but the soci- eties continued, that of Strasburgh i)articularly, till the latter part of the eighteenth century. Folcz, distinguished himself by the invention of a multitude of new metres. He printed at Nu- remberg a great number of his poems. The earliest, finished in 1470, was imprinted, or en- graved on wood, in 1474, and reprinted in a collection which appeared in 1534 at Nurem- berg, in 3 vols. 4to. This includes Ein teutsch worhaftig poetisch ystori ; an abridged History of the German Empire, in rhyme; and Vitfc Patrum, vel I>ibcr Colacionum. Of these productions Fischer has given a description, in his Typographical Rarities, Mentz, 1800, 8vo.

FOLD, n. s. & V. a. Sax. palacb, pal ; from Goth, faldar, to enclose. There is also a barb. Latm word, faldagmm (a fold). The ground on*

which sheep are confined ; the place where sheep are housed ; the flock of sheep ; a limit ; a boun- dary.

Then said he, O cruel Goddes ! that governe This world with binding of your word eterne. And writen in'the table of Athament Your parlement and your eterne grant, — What is mankind unto yhold Than is the shepe that rouketh in the to fold.

Chaucer. The Kniyhtes Tale,

Time drives the flocks from field fold, When rivers rage and rocks grow cold ; And Philomel becometh dumb. And all complain of cares to come. Raleigh.

We see that the folding of sheep helps ground, as well by their warmth as by their compost. Bacon.

His eyes he opened, and beheld a field Part arable and tilth ; whereon were sheaves New reaped ; the other part, sheep walks and/oWj.

Milton,

In thy book record their groans. Who were thy sheep, and in their ancient fold Slain. Id.

~ The star that bids the shepherd fold. Now the top of heaven doth hold. Id,

And this you see I scarcely drag along. Who yeaning on the rocks has left her young. The hope and promise of my failing fold. Dryden,

The bridegroom sun, who late the earth espoused. Leaves his star-chamber ; early in the east He shook his sparkling locks, head lively roused. While Morn his couch with blushing roses drest ; His shines the Earth soon latcht to gild her flowers : Phosphor his gold fleeced drove /oWi in their bowers. Which all the night had grazed about the' Olympic towers. Fletcher's Purple Island.

Fold, n. s., v. a. & v. n. Sax. pilˆ, paldan ; Coih. faldun. See the foregoing word. A dou- ble ; a complication ; an involution ; one part added to another ; one part doubled upon ano- ther. From the foregoing signification

is de- rived the use of fold in composition. Fold sig- nifies the same quantity added : as two-fold, twice the quantity ; twenty-fold, twenty times repeated. To double ; to complicate ; to inclose ; include; to close over another of the same kind ; to join with another of the same kind.

The two leaves of the one door were folding, and the two leaves of the other door y/eve folding.

1 Kings vi. 34.

Yet a little sleep, a little slumber, a little folding of the hands to sleep. Prov. vi. 10.

They be folden together as thorns. Nah. i. 10.

But other fell into good ground, and brought forth fruit ; some an hundred fold, some sixty fold, some thiriy fold. Matt.

As a vesture shalt thou fold them up. Heh. i. 12. And if that excellent were hire beautee,

A thousand yo/i/ more vcrtuous was she.

Chaucer. The Doctoure's Tale, She in this trice of time

Commits a thing so monstrous, to dismantle

So many folds of favour I

Shakspeare. King Lear.

I have seen her rise from her bed, unlock her clo- set, take forth paper, fold it, write upon't, read it, seal it, and again return to bed. Shakspeare.

We will descend and fold him in our arms. Jd, Witness my son, now in the shade of death.

Whose bright outshining beams thy cloudy wrath

Hath in eternal dˆvkacss folded up. Id.

The ancient Egyptian mummies were Bhrowded iu a number of folds of linen, besmeared with gums. Bacon's Nat. History.

At last appear Hell bounds high reaching to the horrid roof. And thrice three fold the gates : three fold were*

brass. Three iron, three of adamantine rock. Milton.

Their martyred blood and ashes sow O'er all the Italian fields, where still doth sway The triple tyrant ; that from these may grow A huudred /oZrf. Id.

Not with indented wave, the serpent then Prone on the ground, as since ; but on his rear Circular base of rising/o/di, that towered Fold above fold, a surging maze ! Id.

Let the draperies be nobly spread upon the body, and let the folds be large ; the parts should be often traversed by the flowing of the folds. Dryden.

Both furl their sails, and strip them for the fight ; Thoˆiv folded sheets dismiss the useless air. Id.

Conscious of its own impotence, it folds its arms in despair, and sits cursing in a comer. Collier,

The inward coat of a lion's stomach has stronger folds than a human, but in other things not much dif- ferent. Arbuthnot.

FOLENGIO (Theophilus), of Mantua, known also by the title of Merlin Coccaye, an Italian poet. He was born at Mantua in 1491, and be- came a Benedictine ; but soon after quitted his habit, and, after leading a rambling life for some years, resumed it again. He wrote several works, mostly of a licentious nature ; but is me- morable for his macaronic verses. This mode of writing, which has not very frequently been imitated with success, consists in interweaving with Latin verse a number of words and phrases in the vernacular tongue, thrown in at random, and made to fit the metre by Latin terminations. Folingio, if not the inventor of macaronic verse, was the first who brought it into vogue. He died in 1544.

FOLIA'CEOUS, udj.'ˆ La.t. fulictceous,folia- Fo'liage, n, s. I tus,fuli(itio, fromfoli-

Fo'li ate, v. a. 1ˆ um ; Yv.feuillage. Con-

Folia'tion, n. s. f sisting of lamince or

Fo'liatuue, n. s. | leaves. Leaves ; tufts

Fo'liomort, adj. J of leaves ; the appa-

rel of leaves to a plant. To beat into laminae or leaves. Foliation is tlie act of beating mto thin leaves ; it is also one of the parts of the flower, being

the collection of those fugacious colored leaves called petala, which constitute the compass of the flower, and sometimes guard the fruit which succeeds the foliation, as in apples and pears, and sometimes stand within it, as in cher- ries and apricots ; for these, being tender and pulpous, and coming forth in the spring, would be injured by the weather if they were not lodged up within their flowers. — Quincy. Foliature, is the state of being hammered into leaves. Fo- liomort { folium murtuum)., is a dark yellow ; the color of a leaf faded : vulgarly called philomot.

Gold foliated, or any metal foliated, cleaveth.

Bacon,

The great columns are finely engraven with fruits and foliage, ih&t run twisting about them from the very top to the bottom. Addison,

If gold be foliated, and held between your eyes and the light, the light looks of a greenish blue.

Newton's Opticks.

A piece of another, consisting of an outer crust, of a ruddy talky spar, and a blue talky foliaciom spar. Woodward on Fossils.

A flinty pobble was of a dark green colour, and the exterior cortex of & foliomort colour. Id.

And too The trees withyb/i'aˆe, clitfs with flowers are crownd. Pure rills through walls of verdure warbling go. And wonder, love, and joy, the peasant's heart o'er- flow. Beattie.

Foliage, in architecture, used for the repre- sentations of flowers, leaves, branches, rinds, &,c., whether natural or artiticial, that are used for en- richments on capitals, friezes, pediments, &c.

FOLIATING ;0F Glass Plates for Mik- RORS, the spreading the plates over, after they are polished, with quicksilver. Sec, to make them jertect images. It is performed thus : — A thin blottmg paper is spread on the table, and then a fine lamina or leaf of tin, called foil, is laid over the paper ; upon this is poured mercury, which 15 to be distributed equally over the leaf

with a hare's foot, or cotton : over this is laid a clean paper, and over that the glass plate, which is pressed down with the right hand, and the paper drawn gently out with the left ; this being done, the plate is covered with a thicker paper, and loaded with a greater weight, that the surperflu- ous mercury may be driven out and the tin ad- here more closely to the glass. When it is dried, the weight is removed, and the looking-glass is complete. Some add an ounce of marcasite melted by the fire ; and, lest the mercury should evaporate in smoke, they pour it into cold water; and when cooled, squeeze through a cloth, or through leather. Some add a quarter of an ounce of tui and lead to the marcasite, that the glass may dry the sooner.

Foliating of Gloke Glasses for Mirrors, is done as follows. Take five ounces of quick- .silver and one ounce of bismuth ; of lead and tin half an oiuice each: first put the lead and tin into fusion, then put in the bismuth ; and, when that is also in fusion, let it stand till it is almost cold, and pour the quicksilver into it : after this take the glass globe, which must be very clean, and the inside free from dust: make a paper funnel, which put into the hole of the globe, as near the glass as possible, so that the amalgam, when poured in, may not splash, and cause the glass to be full of spots ; pour it in gently, and move it about so tliat the amalgam may touch every where; if the amalgam begin to be curdly and fixed, hold it over a gentle fire, and it will easily flow again ; and, if it be too thin, add a little more lead, tin, and bismuth to it. The finer and clearer the globe is, the better will the looking-glass be.

FO'LIO, n. s. La.t. in folio. A large book of •which the pages are formed by a sheet of paper once doubled.

Pluinbinus and Plumco made less progress in knowledge, though ibcy had read over more yii/ro.s. yVults OH the Mind,

FOLK, n. s. "^ Sax. pole, from pol^ian, Folks, n. s. Mo follow; Swed. folc, fol-

Folk'mote, 71. s. J gia, to follow; Bdg.volk, from Goth, folgia, to follow. It is properly a noun collective, and has no plural but by modern corruption. People, in familiar language; any kind of people as discriminated from others. It is now seldom used but in familial- or burlesque language.

Infinite ben the sorwe and the teres Of o\de folk and folk of tendre years In all the town, for deth of this Theban.

Chaucer. The KniglUes Tale, Those hills were appointed for two special uses, and built by two several nations . the one is that which you call folkmotes, built by the Saxons, and signifies in the Saxon a meeting oi folk.

Spenser on Ireland.

The river thrice hath flowed, no ebb between j And the old folk, time's doting chronicles, Saj' it did so a little time before. Shakspeare.

Anger is a kind of baseness : as it appears well in the weakness of children, women, old folks, and sick folks. Bacon.

When with greatest art he spoke. You'd think he talked like other yb/A; For all a rhetorician's rules Teach nothing but to name his tools,

Hudibias. Dorilaus, having married his sister, had his mar- riage in short time blest, for so are folk wont to say, how unhappy so ever the children after grow, with a son. Sidney.

Old good man Dobson of t)ie green. Remembers he the tree has seen. And goes y/hh folks to shew the sight. Swift. He walked and wore a threadbare cloak ; He dined and supped at charge of other folk. Id. When I call ' fading' martial immortality

I mean, that every age and every year,ˆ| And almost every day, in sad reality

Some sucking hero is compelled to rear. Who, when we come to sum up the totality Of deeds to human happiness most dear. Turns out to be a butcher in great business, Aflecting younˆ folks with a sort of dizziness. Byron.

FOLKES (Martin), an English antiquary, mathematician, and philosopher, born at West- minster about 1690, a fellow of the Royal So- ciety of London, and of the Academy of Sciences at Paris. He was admitted into the former at twenty-four years of age; made one of their council two years after; named by Sir Isaac Newton himself, as vice-president; and, after Sir Hans Sloane, became president. Coins, an- cient and modern, were his great object : and his last production was a book upon the English Silver Coin, from the conquest to his own times. A table of all the English gold coins, drawn up by Mr. Folkes, was afterwards printed at the re- quest of the Royal Society, before whom he laid his Remarks on the Standard Measure preserved in the Capitol of Rome, and a moflel of an an- cient sphere preserved in the Farnesian palace. A representation of this sphere was published in Dr. JJentley's edition of Manilius. He died in London in 1754. Dr. Birch drew up materials for his life, which are preserved in the Anec- dotes of Bowyer.

FOLKESTONE, a sea-port and market town of Kent, between Dover and Hythe, and which appears to have been a very ancient place, from

the Roman coins and British bricks often found in it. Stillingfleet and Tanner take it for the Lapis Tituli of Nenuius. It was burnt by earl Godwin, and by the French in the reign of Ed- ward III. It had formerly five churches, but has now only one. It is a member of the town and port of Dover ; and has a weekly market and an annual fair. The houses are mostly of brick, and form tliree streets, which are narrow, irregular, and badly paved ; in a clear day, from this town distinct views of the French coast may be obtained. Folkestone contains three chapels for Baptists, Quakers, and Methodists ; also a good charity-school, founded by the celebrated Dr. Harvey, who was a native of this place. It is a prescriptive corporation, and consists of a mayor, tsvelve jurats, and twenty-four common- council-men, a recorder, town-clerk, and cham- berlain. The custom-house has several riding- officers attached to it, on account of the number of smugglers who frequent the 'coast. On" the heights is a strong battery, and this part of the coast is also defended by three martello towers. It is chiefly noted for the multitude of fishing boats that belong to its harbour, which are em- ployed in the season in catching mackerel for London ; to which tliey are carried by the mack- erel boats of London and Barking. About Michaelmas, the Folkstone barks go to the Suf- folk and Norfolk coasts, to catch herrings for the merchants of Yarmouth and Lowestoft. It is seven miles south-west of Dover, and seventy-two E. S. E. of London.

FˆOLKMOTE, or Folcmote, Sax. folcgemote, i. e. a meeting of the people, is compounded of folk, the people, and mote, or gemote, to meet ; and signified originally, as Somner, in his Saxon Dictionary informs us, a general assembly of the people, to consider of and order matters of the commonwealth. Sir Henry Spelman says, the folcmote was a sort of annual parliament, or convention of the bishops, thanes, aldermen, and freemen upon every May-day yearly ; where the laymen were sworn to defend one another and the king, and to preserve the laws of the king- dom ; and then consulted of the common safety. But Dr. Brady infers from the laws of the Saxon kings of England, that it was an inferior court, held before the king's reeve or steward, every month, to do folk right, or compose smaller dif- ferences, from whence there lay appeal to the superior courts. Manwood mentions folc- mote as a court holden in London, wherein all the folk and people of the city did complain of the mayor and aldermen, for misgovernment within the said city. According to Rennet, the folcmote was a common council of al! the inha- bitants of a city, town, or borough,

convened often by sound of bell, to the mote, hall, or house ; or it was applied to a larger congress of all the freemen within a county, called the shire- mote, where formerly all knights and military tenants did fealty to the king, and elected the annual sheriff on the 1st of October; till this popular election, to avoid tumults and riots, devolved to the king's nomination, anno 1315, 3 Edw. I.

'The folc-gemot' says Mr. Turner, is often mentioned ' in the Saxon laws. It is esta-

blished for ceap-men, or merchants, that they bring the men that they lead with them before the king's gerefa in the folc-gemot, and say how many of tiiem there be, and that they take these men up with them, that they may bring them again to the folc-gemot, if sued. And when they shall want to have more men with them in their journey, they shall announce it as often as it occurs to the king's gerefa, in the witness of the folc-gemot.

' These folc-gemots were ordered not to be held on a Sunday ; and if any one disturbed them by a drawn weapon he had to pay a wite of 120s. to the ealdorman.

- *The following may be considered as proceed- ings before a folc-gemot. Begmund having un- justly seized some lands of a monastery, when the ealdorman came to Ely, the offenders were summoned to the placitum of the citizens and of the hundred, several times, but they never ap- peared. The abbot did not desist, but renewed his pleading, both within and witiiout the city, and often made his complaint to the people. At length the ealdorman, coming to Cambridge, held a great placitum of the citizens and hun- dreds, before twenty-four judges. There the abbot narrated before all, how Begmund had seized his lands, and though summoned had not appeared. They adjudged the land to the^"abbot , and decreed Begmund to pay the produce of his fishery to the abbot for six years, and to give the king the were ; and, if he neglected to pay, they authorised a seizure of his goods.'*

F'OL'LICLE, 71. s. Lat. folliculus. A cavity in any body with strong coats. A term in botany, signifying the seed-vessels, capsula semi- nalis, or case, which some fruits and seeds have over them ; as that of the alkengi, pedicularis, &c. — Quincy.

Although there be no eminent and circular /o/Zide, no round bag or vesicle, which long containeth this humour ; yet is there a manifest receptacle of choler from the liver into the guts. Browne.

FOLLICULI are defined by Linnseus to be small glandular vessels distended with air, which appear on the surface of some plants ; as at the root of water milfoil, and on the leaves of aldro- vanda. In the former, the vessels in question are roundish, with an appearance like two horns ; in the latter pot-shaped, and semicircular.

FOLLIS, or Folis, anciently signified a little bag or purse ; whence it came to be used for a sum of money, and very different sums were called by that name: thus the scholiast on the Basilics, mentions a foUis of copper which was worth but [the twenty-fourth part of the milia- rensis ; the Glossa; Nomicae, quoted by Grono- vius and others, one of 125 niiliarenses, and another of 250 denarii, which was the ancient sestertium ; and three different sums of eight, four, and two pounds of gold, were each . called follis. According to the scholiast, the ounce of silver, which contained five miliarenses of sixty in the pound, was worth 150 folles of copper. The glossographer, describing a follis of 250 de- narii, says it was equal to 312 lbs. 6 oz. of cop- per; and as the denarius of that age was the eighth part of an ounce, an ounce of silver must have been worth 120 ozs. of copper; and, there-

fore, the scholiast's follis was an ounce of copper, and equal to the glossographer's nummus. But, as Constantine's copper money weighed a quar- ter of a Roman ounce, the scholiast's follis and the glossographer's nummus contained four of them, as the ancient nummus contained four asses.

FOL'LOWjV. a.&v.n. "^ Sax. poljian; Dut.

Fol' LOWER, 7«. s. yvolgen, from Gr. oX-

Fol'lowing, a. part. J koq, a trace, or tXjcw, to draw. It is applied to persons and things, and signifies the going in order, in a trace or line : it is taken literally for the motion of one physical body in relation to another : to follow as in a procession ; to go after in point of time, and to the same place, as persons follow each other to the grave : to follow in relation to things is said either simply of the order in which they go, or of such as go by a connexion between them. Follow is used in abstract propositions — as sin and misery follow each other as cause and effect. See Crabbe. It is also used in the sense of imitation ; to copy as a pupil ; to take up the opinions of others ; to be subordinate to them ; — partizans are followers, hangers

on to great men ; servants, retinues, are all followers : — busily to pursue an object; to take up any pursuit, and diligently to persevere in it, is to follow. It is often explained as meaning to succeed; to ensue; to pursue; to continue; and to imitate. But these, though they assist us in discovering the sense, are far from being strictly synonymous with this word, or with each other.

A better preest I trowe that nowher non is.

He waited after no pompe ne reverence,

Ne maked him no spiced conscience .

But Cristes lore, and his apostles twelve.

He taught — but first he folwed it himselve.

Chaucer. Prologue to Canterbury Tales. The nexte houre of Mars folwing this Arcite unto the temple walked is Of fierce Mars, to don his sacrifice With all the rites of his payen wise.

Id. The Kˆiightes Tale,

Where Rome keepeth that which is ancienter and better, others, whom we much more affect, leaving it for newer, and changing it for worse, we had rather follow the perfections of them whom we like not, than in defects resemble them whom we love. Hooker,

They bound themselves to his laws and obedience ; and in case it had been followed upon them, as it should have been, they should have been reduced to perpetual civility. Spenser.

Little gallant, you were wont to be 9. follower; but now you are a leader ; whether had you rather lead mine eyes, or eye your master's heels ?

Shakspeare. Merry Wives of Windsor.

Such smiling rogues as these sooth every passion. That in the nature of their lords rebels ; As knowing nought, like dogs, h\it following,

Id. King Lear. Welcome all that lead or follow To the oracle of Apollo. Ren Jonson.

I laugh, when those who at the spear are bold And vent'rous, if that fail them, shrink and fear What yet they know must follow, to endure Exile, or ignominy, or bonds, or pain. Milton.

Yet doubt not but in valley and in plain

God is as here, and will be found alike

Present, and of his presence many a sign

SiiU following thee, still compassing thee round

With goodness and paternal love, his face

Express, and of his steps the track divine. Id. '

Up he rode. Followed with acclamation and the sound Symphonious of ten thousand harps that tuned Angelic harmonies. Id.

The understanding, that should be eyes|to the blind faculty of the will, is blind itself ; and so brings all the inconveniences that attend a blind follower, under the conduct of a blind guide. Smith's Sermons.

The true profession of Christianity inviolably en- gages all its followers to do good to all men.

Sprat's Sermons. Some pious tears the pitying hero paid, Anii followed with his eyes the fleeting shade.

Dryden's Mneid. And forced ˆneas, when his ships were lost. To leave h.i& followers on a foreign coast. Id.

We follow fate, which does too fast pursue. Id. To tempt them to do what is neither for their own, nor the good of those 'under their care, great mis- chiefs cannot but follow. Locke.

Dangerous doctrine must necessarily /oWom>, from making all political power to be nothing else hut Adam's paternal power. Id.

Fair virtue, should \ follow thee, I should be naked and alone.

For thou art not in company. And scarce art to be found in one. Evelyn.

Signs following signs, lead on the mighty year.

Pope. Let not the muse then flatter lawless sway, 'Sot follow fortune where she leads the way. Id.

The studious head, or generous mind. Follower of God, or friend of human kind. Poet or patriot, rose but to restore The faith and moral nature gave before. Id.

I can't complain whose ancestors are there : Goneis Radulphus eight-and forty manors

(If that my memory doth not greatly err) Were their reward ioz following Billy's banners.

I Byron.

' What followed V — ' A shot laid me on the back,

' And I became a prisoner to the foe. Id.

FOLLY. Tr.foUe. See Fool. ' Folly,' says Crabbe, ' is the abstract of foolish, and charac- terises the thing ; foolery, the abstract of fool, and characterises the person : it signifies want of understanding ; weakness of intellect ; crimi- nal weakness, having its source in depravity of mind : an act of negligence, or passion, unbe- lieving gravity or wisdom : in this sense it has a plural.

I say that it is no foulie to chaungc conseil whan the thing is changed, or elles whan the thing senieth otherwise than it semed afore.

Chaucer. The Tale of Mdibetu.

For who my passed follies now pursewes Beginnes his own, and my old fault renewcs.

Spenser. Hymns.

Thinkest thou, that duty should have dread to speak. When power to flattery bows ? To plainness honour Is bound, when majesty to folly falls. Sluikspeare,

Love is blind, and lovers cannot sec The pretty follies that themselves commit ; For if they could, Cupid himself would blush To see me thus transformed into a boy. Id.

He finds, where'er he succour might expect, Confusion, /((//»/, treachery, fear, neglect. Marvell. Heaven hath timely tried their youth.

Their faith, their patience and their truth ;

And send them here through hard assays Wilh a crown of deathless praise.
To triumph in victorious dance O'er sensual yb//^ and intemperance.
Milton.

Would'st see the world abroad and have a share In all the follies and the tumults there. Cowley.

Thy hum'rous vein, thy pleasing_/b//y. Lies all neglected, all forgot. Prior.

Leave such to trifle with more grace and ease, Vfhom folly pleases, or whose /y//it;s please. Pope. This is folly, childhood's guide. This is childhood at her side. Hawkeswurth.

Tired with the busy crowds that all the day

Impatient throng where Folly's altars flame. My languid powers dissolve with quick decay. Till genial sleep repair the sinking frame.

Beattie. FOMENT', r. a. \ Fr./owfH/er; Lat./) Fomekta'tion, n. s. >7)ientor. To cherish with Foment'er, v. s. j heat ; to bathe with warm lotions ; to encourage ; to support ; to cherisli ; to soothe. A fomentation is partial bathing, called also stuping, which is applying hot flan nels to any part, dipped in medicated decoc- tions, whereby the steams breathe into the parts, and discuss obstructed humors.

Fomentation ca.]\eth forth the humour by vapours ; but yet, in regard of the way made by the poultis, draweth gently the humours out ; for it is a gentle fomentation, and bath withal a mixture of some stu. pefactive. Bacon's Natural History,

These fatal distempers, as they did much hurt to the body politick at home, being like humours stirred in the natural without evacuation, so did they pro- duce disadvantageous effects abroad ; and better had it been that the raisers and fomenters of them had never sprung up. Howel.

Every kind that lives. Fomented by his virtual power, and warmed. Milton.

Blame then thyself, as reason's law requires. Since nature gave, and thou, foment' st my fires.

Dryden.

They are troubled with those ill humours, which they themselves infused s- nA fomented in them.

Locke.

He fomented the head with opiates to procure sleep, and a solution of opium in water to foment the fore- head. Arbuthnot.

The medicines were prepared by the physicians, and the lotions or fomentations by the nurses. Id.

Fomentations are usually applied as warm as the patient can bear, in the following manner : — Two flannel cloths are dipped into the heated liquor, one of which is wrung as dry as the ne- cessary speed will admit, then immediately ap- plied to the part aff'ected ; it lies on until the heat begins to go off, and the other is in readi- ness to apply at the instant in which the first is removed : thus these flannels are alternately ap- plied, so as to keep the affected part constantly supplied with them warm. This is continued fifteen or twenty minutes, and repeated two or three times a day. Every intention of relaxing and soothing by fomentations may be answered as well by warm water alone, as when emollients are boiled in it ; but when discutients or antisep- tics are required, such ingredients must be called in as are adapted to that end. The degree of heat should never exceed that of producing a pleasing sensation : great heat produces effects

very opposite to that intended by the use of fo- mentations.

FON, n. s. Scott. A word now obsolete. A fool ; an idiot.

Sicker I hold him for a greater fon. That loves the thing he cannot purchase. Spenser.

FOND, ra. s.,r. a. &.f.72.ˆ From the Saxon Fond'le, v. a. I fandian, to gape; or

Foxd'ler, n. s. I the German findeii,

Fond'ling, 7J.S. [to find or seek. In

Fon d'ly, «(/(;. | Scottish it is foti.

Fond'ness, 71. s. J Chaucer uses fonne

in the sense of to doat ; to be foolish. It is now applied to the manner of displaying a too vehe- ment and childish attachment, and generally sig- nifies foolish ; silly; indiscreet; imprudent; inju- diciotis; foolishly tender; injudiciously indulgent; pleased in too great a degree ; foolishly delighted. These senses apply to all the parts of the word fond.

He was beaten out of all love of learning by s. fond school-master. Ascham.

Fondness it were, for any, being free. To covet fetters, though they golden be. Spenser.

That the Grecians or Gentiles ever did th'nk it a fond cr unlikely way to seek men's conversion by sermons, we have not heard. Hooker.

How will this fadge ? My master loves her dearly ; And I, poor monster, fond as much on him ; And she, mistaken, seems to doat on me. Shakspeare.

Tell these sad women, Tis fond to wail inevitable strokes. As 'tis to laugh at them. Id, Coriolanus.

They err, that either through indulgence to others, or fondness to any sin in themselves, substitute for re- pentance any thing that is less than a sincere reso- lution of new obedience, attended with faithful en- deavour, and meet fruits of this change. Hammond. Thou see'st

How subtly to detain thee I devise.

Inviting; thee to hear while I relate ; Fond ! were it not in hope of thy reply. Milton,

As we should not be sour, so we ought not to be fond. Barrow,

'Twas not revenge for grieved Apollo's wrong Those ass's ears on IMidas' temple hung ; But fond repentance of his happy wish. Waller.

The bent of our own minds may favour any opinion or action, that may shew it to be a. fondling of our own.

Locke. Like Venus I'll shine. Be fond and be fine. Addison.

I, fond of my well-chosen seat. My pictures, medals, books complete. Prior. Any body would have guessed Miss to have been bred up under a cruel stepdame, and John to be the fondling of a tender mother.

Arbuthnot's John Bull. Fondly or severely kind . Savage.

Even before the fatal engine closed, A wretched sylph too foridly interposed : Fate urged the shears, and cut the sylph in twain.

Pape. Some valuing those of their own side or mind. Still make themselves the measure of mankind : Fondly we think we merit honour then. When we but praise ourselves in other men. Id.

Bred a fondling and an heiress. Dressed like any lady may'ress ; Cockered by the servants round. Was too good to touch the ground, Suift.

FON

They are allowed to kiss the child at meeting and parting ; but a professor, who always stands by, will not suffer them to use any fondling expressions.

Id. Corinna, with that youthful air. Is thirty, and a bit to spare : Her fondness fer a certain earl Began when I was but a girl. Id.

Some are so fond to know a great deal at once> and love to talk of things with freedom and boldnesˆ before they thoroughly understand them. Watts.

This is fond, because it is the way to cheat thyself.

Tillotson. Your extreme yonrfjjeM was perhaps as displeasing to God before, as now your extreme affliction.

Temple, But reason with your ybnd religion fights ; For many gods are many infinites. Dryden,

Fame is in itself a real good, if we may believe Cicero, who was perhaps too fond of it. Id.

upon a tone

A touch of hers, his blood would ebb and flow. And his cheek change tempestuously — his heart Unknowing of its agony. But she in these /onrf feelings had no share : Her sighs were not for him •, to her he was Even as a brother — but no more.

Byron. The Dream.

FONE, n.s. Plural of foe. Obsolete.

A barbarous troop of clownish ybwe. Spenser.

FONG-YANG, a city of China, in the pro- vince of Kiang-Nan, situated on a mountain, which hangs over the Yellow River, and encloses with its walls several fertile little hills. Its ju- risdiction is very extensive, comprehending eighteen cities ; five of which are of the second, and thirteen of the third class. As this was the birth-place of the emperorllong-Vou, chief of the preceding dynasty, he formed a design of ren- dering it a magnificent city, and making it the seat of empire. After having expelled the west- ern Tartars, who had taken possession of China, he transferred his court hither, and named the city Fong-Yang, i. e. the Place of the Eagle's Splendor. His intention was to beautify and enlarge it : but the inequality

of the ground, the scarcity of fresh water, and above all the vicinity of his father's tomb, made him change hisjdesign. By the unanimous advice of his principal officers he established his court at Nan-King, and put a stop to the intended works, and nothing was fi- nished but three monuments, which still remain. The extent and magnificence of these show what the beauty of this city would have been, had the emperor pursued his original design. The first is the tomb of his father, to decorate which no expense was spared : it is called IIoan-Lin, or the Royal Tomb. The second is a tower of an oblong form, and 100 feet high. The third is a magnificent temple erectcid to the god Fo. At first it was only a pagod to which Ilong-Vou re- tired after having lost his parents, and where he was admitted as an inferior domestic (See IIong- Vou) ; but, as soon as he mounted the throne, he caused this superb temple to bo raised out of gratitude to the Bonzes, who had received him in his distress, and assigned them a revenue sufficient for the maintenance of 300 persons, under a chief of their own sect, whom he con-

stituted a mandarin, with power of governing them independent of the officers of the city. This pagod was supported as long as this dynasty lasted ; but that of the eastern Tartars, which succeeded, suffered it to fall to ruin.

FONSECA (Eleanor, marchioness de), a mo- dern Neapolitan political writer, was born in Na- ples about 1768, and married the marquis de Fonseca, a Spanish nobleman settled in that city in 1784. She was an attendant on the late queen ; but having given offence to her majesty, and the English minister, she was dismissed, and forbid- den to appear again at court. She now engasted in her studies, and assisted the celebrated Spal- lanzani in his scientific researches. On the breaking out of the French revolution, she be- came one of its warmest partizans : and engaged in various intrigues against her country. In 1 799, the king and royal family being obliged to quit Naples, the Lazaroni rose and threatened the lives of those who were in the French interest ; among whom the marchioness de Fonseca nar- rowly escaped their fury. When her party ob- tained the ascendancy, she commenced the Nea- politan Monitor, a journal in which she vehe- mently attacked the royal family, and especially the queen. Madame Fonseca was in the zenith of her fame when the measures of cardinal Ruffb obliged the French to quit Naples, and she was persuaded to seek her safety in flight ; but she refused, and the cardinal caused her to be ar- rested. She was hanged July 29th, 1790.

FONT, n. s. iM.fons; Yr.ftmte. A stone vessel in which the water for holy baptism is contained in the church.

The presenting of infants at the holy font is by their godfathers. Hooker.

The time is come, a knave child she here ;

Mauricius at the font-stone they him calle.

Chaucer. The Manof Lawes Tale. I have no name, no title ;

No, not that name was given me at the font.

Shaksˆteare There the large olive rains its amber store,

In tna.rh\e fonts. Byron, Don Juan.

Font was anciently used for the place, whe- ther river, lake, or artificial reservoir, in which persons received their initiation into Christianity by the ceremony of immersion. It is now gen- erally confined to those marble vessels in the churches in which the water for the sprinkling of infants is kept. Great Britain can boast of many extraordinary fonts highly interesting to the ec- clesiastical antiquary. That of Bridekirk, in Cumberland, is allowed to be of Dauisli origin ; and that which was recently removed, in the spirit of modern improvement, from the church of St. Peter in the East, Oxford, exhibited proofs of an antiquity nearly as early. Tiie font in St. Mary's church, Lincoln, dated 1340, is handsome and of good proportions, as is the elaborately sculptured one in Winchester catliedral.

FONTAINBLEAU, a town of France, in the department of tlie Seine and Marno, and chief place of a canton in the district of Melun. It is celebrated for its magnificent palace, once the general autiuunal residence of the kings of France. It was erected in the thirteentli century, and considerably improved by Louis XIV. and

XV. It is a vast irregular pile of building ; sur- rounded by the forest of Fontainbleau, anciently called the forest of Bierre, of a circular form, and said to contain 26,480 acres. The town and chateau sUind in the centre. The town princi- pally consists of one street, of considerable length. Hither Buonaparte brought the royal family of Spain, and made a memorable treaty with them, in 1807. Here also he first resigned his impe- rial dignity. The town is said to contain a po- pulation of 9000.

FONTAINE (John), a celebrated French poet, was born at Chateau-Thierri in Cham- paigne, July 8th, 1621. At nineteen he entered amongst the Oratorians, but quitted that order in eighteen months. At the age of twenty-

two, on hearing an ode of Malherbe's read, upon the assassination of Henry IV., he was so taken with it, that the poetical fire, which had before lain dormant within him, seemed to be kindled from that of Malherbe. He read his works with those of the best Latin and Greek authors, as well as the best compositions in French and Italian. Some time afterwards he married a daughter of a lieutenant-general, a relation of the great Racine. This young lady was remark- able for the delicacy of her wit, and Fontaine never composed any work without consulting her. The famous duchess of Bouillon, niece to cardinal Mazarine, being exiled to Chateau- Thierri, took particular notice of Fontaine. Upon her recall, he followed her to Paris, where he ob- tained a pension, and met with many friends and patrons at court. She took him to live at her house, where, divested of domestic concerns, he cultivated an acquaintance with all the great men of the age. It was his custom, after he was fixed at Paris, to go every year, in September, to Chateau-Thierri, and visit his wife, carrying with him Racine, Despreaux, Chapelle, and otlier celebrated writers. After the death of M. de la Sabliere, he was invited into England, parti- cularly by St. Evremond, who promised him all the comforts of life ; but the difficulty of learning English, and the liberality of the duke of Bur- gundy, prevented his voyage. About the end of 1692 he fell dangerously ill, made a general confession, and, before he received the sacrament, sent for the gentlemen of the French Academy, and in their presence declared his sincere com- punction for having composed his Tales ; a work which he said he could not reflect upon without the greatest detestation. He survived this illness two years, living in the most exemplary manner, and died 13th of March 1695, aged seventy-four. He had one son by his wife in 1660. At the age of fourteen he put him into the hands of M. de Harley, the first president, recommending to him his education and fortune. Having been a long time without seeing him, he happened to meet him one day visiting, without recollecting him, and mentioned to the company that he tJiought that young man had a good deal of wit. When they told him it was his own son, he an- swered, 'Ha? truly, I am glad of it.' His de- scendants were before the revolution, exempted in France from all taxes and impositions. Ac- cording to D'Alembert Fontaine, ' if not the

greatest, is the most singularly original of all the writers of the age of Louis XIV. the most an object of despair to imitators, and the writer whom it would cost nature most pains to repro- duce.'

Fontaine L'Eveque, in the department of the North, and ci-devant province of Hainault, between the Sambre and Meuse, three miles west of Charleroi, and ten east of Mons, It was ceded to France in 1667. Near it the French were defeated by the troops of the allies under the prince of Orange, in June 1794.

FONTAINES (Peter Francis), a French critic, born at Rouen in 1685. At fifteen he entered into the society of the Jesuits, and at thirty quitted it, though he was a priest, and had a cure in Normandy. Having excited some at- tention at Paris by his critical productions, the abbe Bignon in 1724 committed to him the Journal de Sfavans. In 1731 he began a work entitled Novelliste du Parnasse, ou Reflexions sur les Ouvrages Nouveaux ; but only proceeded to two volumes ; the work having been sup- pressed by authority, from the incessant com- plaints of authors ridiculed therein. In 1735 he obtained a new privilege for a periodical pro- duction entitled, Observations sur les Ecrits Modernes; which, after continuing to thirty-three volumes, was suppressed in 1733. Yet in 1744 he published another weekly paper, called Juge- mens sur les Ouvrages Nouveaux which pro- ceeded to eleven volumes; the last two being completed by other hands. In 1745 he was attacked with a disorder in the breast which ended in a dropsy that proved fatal in five weeks. The abbe de la Porte, published, in 1757, L'Esprit de I'Abbfe des Fontaines, in 4 vols. 12mo. with his Life, a catalogue of his works, and of writings against him.

FO'NTANEL,?j.s. Yx.fontanellc. An issue; a discharge opened in the body.

A person pletorick, subject to hot defluxions, was advised to a. fontanel in her arm.

Wiieman.

FONTA'NGE, n. s. From the name of the first wearer. A knot of ribands on the top of the head-dress. Out of use.

Those old-fashioned fontanges rose an ell above the head : they were pointed like steeples, and had long loose pieces of crape, which were fringed, and hung down their backs. Addison.

FONTENAY (John Baptist Blain De), a painter of fruits and flowers, born at Caen in 1654. Louis XIV. gave him a pension, and an apartment in the Louvre. His fruits and flowers have all the freshness of nature ; the very dew seems to trickle down their stalks, with all the lustre and transparency of the diamond, while the insects upon them seem perfectly alive. He died at Paris in 1715.

FoNTENAY, ci-devant Le-Comte, the capital of the department of the Vendee, seated in a fer- tile vale on the Vendee, and containing about 6600 inhabitants. It has a good trade in cattle, mules, woollen cloths, &c., with three annual fairs. It lies near the sea, twenty-eight miles north-east of Rochelle.

F O N T A N A.

FONTANA (Felix), a distinguished Italian physiologist and philosopher, was born 15tli of April 1730, at Pomarolo, in the Tyrol.

He began his education at Roveredo, and pursued it in the schools of Verona and Parma ; •whence he was afterwards removed to the universities of Padua and Bologna. He then visited Rome, and Florence, where he obtained from the emperor Francis I., then grand duke of Tuscany, the appointment of professor of philo- sophy at Pisa ; hut the grand duke Peter LeojX)ld (also afterwards emperor) invited him to settle at Florence, and gave him an establishment as fisico or naturalist, and director of the cabinet of natural history to his household. In 1757 Fontana engaged in an investigation, tending to confirm the doctrines of Haller respecting the irritability of the muscles, considered as a dis- tinct inherent quality of those organs, and Haller published several of his letters as a part of his own Memoires upon that subject, Florence, 1775. One of the most important of Fontana's works is his Ricerche fisiche sopra '1 veneno della vi- pera, Lucca,- 1767; containing a great variety of experiments, calculated to show that the poi- son of the viper acts by mixing with the blood, and destroying the irritability of the muscles to which it is conveyed. In 1766 our author pub- lished an essay entitled Nuove Osservazioni sopra i Globetti rossi del Sangue, confuting the assertions which had lately been advanced by Delia Torre, respecting the complicated struc- ture and changes of form of the globules of the blood. In the next year Osservazioni sopra la Ruggine del Grano, describing an animalcule like an eel, to which he attributes the rust of coin. There is also a Lettre sur I'ergot. Journ. Phys. VII. p. 42. The Lettera sopra le Ida- tidi e le Tenie, Opuscoli Scelti. VI. p. 108, Milan, 1783, contains an account of the hydatids which produce the symptoms of vertigo in sheep.

Fontana entered also minutely, but not very accurately, into the chemical discoveries which occupied so much attention throughout Europe in the latter half of the last century, and seems to have had the merit of first applying the disco- veries of Priestley respecting nitric oxide to the examination of the qualities of the atmosphere, by means of the eudiometer. This is the subject of his Descrizione e usi di alcuni stromenti per misurar la salubrita dell' aria, 8vo. Flor. 1774, 4to. 1775; and it is further illustrated in his Recherches Physiques sur la Nature de I'Air DephlogistiqucetderAirNitreux,8vo. Par. 1776. The Philosophical Transactions for 1779, p. 187, contain his Experiments and Observations on the Inflammable Air breathed by various Ani- mals, consisting of a repetition of Scheele's at- tempt to breathe hydrogen gas. To the Memoirs of the Italian Society Fontana also contributed several short essays.

In 1790 our author remarks that his chemical pursuits had, of late, been interrupted by the attention required for the completion of his wax models of anatomical subjects, and by the duplicates which he was preparing for the ca- binet of Vienna at the request of the emperor. At a later period, a series of copies of these models was ordered by Buonaparte to be sent to Paris; Vol. IX.— Part 2.

but, it being tliere found inferior to the prepara- tions already existing in the Ecole de Medicine, it was sent to Montpelier. Fontana was latuˆrly engaged in the preparation of a colossal model of a man, built up anatomically of all his com- ponent parts, represented in wood; but this de- sign he never completed. Wearing the habit oi an ecclesiastic (though he never, we believe, took orders), Fontana was called abbe, and treated with great respect by the French generals on their irruptions into Tuscany in 1799; a circumstance which gave rise to a jealousy on the part of his Imperial patrons, and he was for a short time im- prisoned, on the re-establishment of the Austrian authorities. His last illness arose from a fall from his horse, in January 1806 : he died the 9th of March of that year, and was buried near the tomb of Galileo, in the church of the Holy Cross, Florence.

Fontana (George), adistinguished Italian ma- thematician, brotlier of the preceding, was born in 1735, and educated at Roveredo and Rome, where he entered the order of the Pia Schola. He early formed an intimacy with the marquis Julio Fagnani, who inspired him with a taste for the mathematics. In 1763 count de Firmian ap- pointed him professor of logic and metaphysics, and director of the library, at Pavia. Five years after, he succeeded Boscovitch in the chair of ma- thematics, and filled it with the greatest reputa- tion during nearly thirty years. In 1796 he was appointed a member of the legislative body of the Cisalpine republic. After the battle of Ma- rengo, having become professor emeritus of the university, he removed to Milan. On the new organization of the republic of Italy, he became a member of the electoral college De' Dotti ; but, in the midst of his literary and political labors, was seized by a violent fever, which caused his death, August the 24th, 1803.

FONTANES (M. de), a political writer and member of the French Institute, was bom of a noble family at Mort in 1761. He edited in the commencement of the French revolution a journal, entitled The Moderator, and after the fall of Robespierre joined La Ilarpe and others in Le Memorial, which was, together with about forty more of the same description, suppressed by the National Convention on the 6th of September, 1797, the proprietors, editors, &c., being all included in a common sentence of ba- nishment. M. de Fontanes now came to Eng- land, where he contracted an intimacy with M. de Chateaubriand, in company

with whom he returned to his native country, and joined Messrs. Ronald and La Harpe in conducting the Mercure de I'rance. Shortly after he obtained a seat in the corps legislatif, of which body he became the president. In 1808 he was appointed grand-master of the university of Paris; and, in 1814, possessing the dignity of a senator, he made a decided speech in favor of the restoration of the Bourbons. He was placed on the committee for drawing up the constitutional charter; and, on tlie re-cstablishment of that body, raised to the peerage. M. de l-'ontaines died at Paris, March 17th, 1821.

FONTENELLE (Bernard de), a celebrated French author, born in 1657. He discharge^l

the office of perpetual secretary to the Academy of Sciences above forty years witli universal ap- plausii ; and his History of that Academy tlirows great liglit upon tlieir memoirs. In his poeticxil performances, and his Dialogues of tlie Dead, the spirit of Voiture was discernible, though more extended and more phdosophical. His Plurality of Worlds is a singular work, the design of which was to present that part of phi- losophy to view in a pleasing dress. In his advanced years, he published comedies, which were little fitted to the stage ; and An Apology for Des Cartes's 'ortices. Voltaire, who de- clares him to have been the most universal genius the age of Louis XIV. produced, says, 'We must excuse his comedies, on account of his age, and his Cartesian opinions, as they were those of his youth.' He died in 1756, nearly 100 years old.

FONTENO Y, a village of France, in the depart- ment of Youne, and ci-devant duchy of Bur- gundy, remarkable for a bloody battle, in 841, between the Germans and the French, in which the Germans were defeated, and above 100,000 men killed. It lies twenty miles soutli-east of Auxerre.

FONTEVRAULD, a town of France, in the department of Maine and Loire, and late pro- vince of Anjou ; famous for its abl>ey, in the church of which several kings and queens of England lie interred. It is six miles south-east of Saumur, and ICO south-west of Paris.

FoNTEvr.AULD, or F"rontevaux, Order of, in ecclesiastical history, a religious order instituted by Robert d'Arbrissel, about the end of the eleventh century ; taken under the protection of the holy see, by pope Pascal II. in 1 106 ; con- firmed by a bull in 1113, and invested by his

successors with extraordinary privileges. The chief of this order is a female, who is appointed to inspect both the monks and the nuns. It is divided into four provinces, which are those of FVance, Aquitaine, Auvergne, and Bretagne, in each of which they have several priories.

FONTICULUS, or Fontanf.lla, in surgery, an issue, seton, or small ulcer, made to eliminate the latent- corruption of the body.

FONTINALIA, or Fontanalia, in antiquity, a religious feast held among the Romans in honor of the deities who presided over fountains or springs. Varro says, it was the custom to visit the wells on those days, and to cast crowns into foimtains. Scaliger, in liis conjectures on Varro, takes this not to be a feast of fountains in general, as i'cstus insinuates, but of the fountain which had a temple at Rome, near the Porta Capena, called also Porta Fontintdis ; and that oi this fountain Cicero speaks in his second book De Leffibus. The fontinalia were held on the 13th of October.

lONTINALIS, water moss, in botany, a genus of the natural order of musci, belonging to the cryptogamia class. The anthera is hooded ; the calyptra, or covering of the anthera, sessile, enclosed in a perichaitium or empalement of leaf- lets different from those of the rest of the plant. There are four species, all natives of Britain. They grow on the banks of rivulets, and on die trunks of trees. The most remarkable is the

F. antipyretica, with purple stalks. The Scandinavians line tlie insides of their chimneys with this moss, to defend them against the fire ; for, contrary to the nature of other mosses, it is difficult of combustion.

F()( )D, n. s. ˆ Gr. Bortiv ; Low German,

Fooo'eul, flrf/. ˆfodc, 01 fodtr ; Sax. pae"»an;

Food'y, adj. J Dutch, veeden, to feed ; Scot. feed. The general term for what is eaten : regi- men and diet are specific ; both are particular modes of living : the latter respects the quality of food ; the former the quantity, as well as quality. Food specifies no circumstances, and is appli- cable to all living creatures. See Crabbe. Food, then, is victuals ; provision for the mouth ; any thing that nourishes : the adjectives signify full of food ; plenteous : eatable ; fit for food.

Worldely ybdc and sustenaunce I desire none j Soche living as I finde, soch wol I take. Rotes that growen on the craggy stone Shal me saffise with water of the lake.

Ch'iucer. Lament of Mary Magdeleine, On my knees I beg. That you'll vouchsafe me raiment, bed, and food.

Shaksp'-cre^ Give mc some musidi ; inusick., moody /ocd Of us that trade in love. Id. Antony and Cleopatra. O dear son Edgar, The food of thy abused father's wrath. Might I but live to see thee in my touch, I'd say I hid eyes again. Id. King Lear.

To vessels, wine she drew , And into well-sewed sacks poured _/bo(/t/ meal.

Chajnnat%. Under my lowly roof thou hast votxchsafed To enter, and these earthly fruits to taste ; FoodnoX, of angels, yet accepted so. As that more willingly thou could'st not seem At heaven's high feasts t' have fed , Milton.

They give \xs food, which may with nectar vie. And wax that does the absent sun supply. Waller. There Tityus was to see, who took his birth From heaven, his nursing from the foodful earth.

Dryden. Food. Although in the article Aliment we have presented the reader with extensive Tables of human food, and in that of Medicine and Stom Acu purpose to treat more fully of the modern theories of digestion, we feel disposed here to offer for the benefit of our unprofessional readers some general oliservations on the subject of diet, in the course of which we shall be largely indebted to the late valuable work of Dr. Paris on this subject.

The most remarkable distinction of foods, in a medical view, is into those which are already assimilated into the animal nature, and such as are not. Of the first kind are animal substances in general ; which, if not entirely similar, are nearly so, to our nature. The second compre- hends vegetables, which are much more difficultly assimilated. But as the nourishment of aH ani- mals, even those which live on other animals, can be traced originally to the vegetable kingdom, it is plain, that the principle of all nourishment is in vegetables. Tliough there is perhaps no vegetable which does not afford nourishment to some species of animal or other ; yet, with regard to mankind, a very considerable distinction is to be made. Those vegetables which are of a mild.

bland, agreeable taste, yield proper nourishment ; while those of an acrid, bitter, and nauseous taste are generally improper. We use, indeed, several acrid substances as food ; but the mild, ihe bland, and palatable, are in the largest pro- portion in almost every vegetable. Such as are very acrid, and at the same time of an aromatic nature, are not used as food, but as spices or condiments which answer tlie purposes of medi- cine rather than any

thing else. Sometimes, in- deed, acrid and bitter vegetables seem to be admitted as food. Thus celery and endive are used in common food, though both are substances of considerable acrimony ; but they are previously blanched, which almost totally destroys their acrimony. Or, if we employ other acrid sub- stances, we generally, in a great measure, de- prive them of their acrimony by boiling. In different countries the same plants grow with different degrees of acrimony. Thus, garlic sel- dom enters our food ; but in the southern coun- tries, where the plants grow more mild, they are frequently used for that purpose. The plant which furnishes cassada, being very acrimonious, and even poisonous in its recent state, affords an instance of the necessity of preparing acrid sub- stances even in the hot countries ; and there are other plants, such as arum roots, which are so exceedingly acrimonious in their natural state, that they cannot be swallowed with safety; yet, when deprived of that acrimony, afford good nourishment.

Animal food, although it gives strength, yet loads the body ; and Hippocrates long ago ob- served, that the athletic habit, by a small increase, was exposed to the greatest hazards. In the first stage of life animal food is seldom necessary to give strength ; in manhood, when we are ex- posed to active scenes, it is more proper ; and in the decline of life a considerable proportion of it is necessary to keep the body in vigor. There are some diseases, says Dr CuUen, which come on in the decay of life, that are at least aggravated by it : among these he ranks the gout as the most remarkable. But the late Dr. Brown, from repeated experience, found that the gout was highly aggravated by vegetable food, and that animal food was the most proper regimen in that disease, and all others arising from debility. It is allowed, however, on all hands, by the friends of both the old and new systems of medicine, that animal food, although it gives strength, is yet of some hazard to the constitution, which, by the frequent repetition of this stimulus, is sooner ex- hausted than by a diet chiefly vegetable. There- fore it is to be questioned, whether we should desire this high degree of bodily strength, with all the inconveniences and dangers attending it. Those who are chiefly employed in mental re- searches, and not exposed to much bodily labor, should avoid an excess of animal food. But ni nervous disorders, hysterical and hypochondriacal cases, and in general all diseases arising from weakness, fresh animal food, given frequently, and not in too great quantities, either in the form of soup, or that of a steak, will be found a much more speedy and effectual restorative.

Another question, Dr. Cullen observes, has been much agitated, viz. What are the effects of

variety in food ? Is it necessary and allowable, or universally hurtful ? Variety of a certain kind seems necessary ; as vegetable and animal foods have their mutual advantages, tending to correct each other. Another

variety, whicli is very proper, is that of liquid and solid food, which should be so managed as to temper each other ; for liquid food, especially of the vegetable kind, is too ready to pass off before it is properly assimilated, while solid food makes a long stay. But this does not properly belong to the question, whether variety of the same kind is necessary or proper, as in animal foods, beef, fish, fowl, Sec. It does not appear that there is any inconveni- ence arising from this mixture or difficulty of as- similation, provided • a moderate quantity be taken. When any inconvenience does arise, it probably proceeds from this, that one of the par- ticular substances in the mixture, when taken by itself, would produce the same effects ; and in- deed it would appear, that this effect is not heightened by the mixture, but properly obviated by it. There are few exceptions to this, if any, e. g. taking a large proportion of acescent sub- stances with milk. The coldness, &c., acidity, flatulency, &c., may appear; and it is possible that the coagulum, from the acescency of the vegetables being somewhat stronger induced, may give occasion to too long retention in the stomach, and to acidity in too great degree. Again, the mixture of fish and milk often occa- sions inconvenience. The theory of this is dif- ficult, though, from universal consent, it must certainly be just. Can we suppose that fish gives occasion to such a coagulum as runnet? If it does so, it may produce bad effects. Be- sides, fishes approach somewhat to vegetables, in giving little stimulus ; and are accused of the same bad effects as these, viz. bringing on the cold tit of fever. Thus much may be said for variety. But it has also its disadvantages, provoking to gluttony ; this and the art of cook- ery making men take in more than they properly can digest ; and hence, perhaps very justly, physicians have almost universally recommended simplicity of diet ; for, in spite of rules, man's eating will only be measured by his appetite, and satiety is sooner produced by one than by many substances. But this is so far from being an argument against variety, that it is one for it ; as file best way of avoiding a full meal of animal food, and its bad effects, is by introducing a quantity of vegetables. Another means of pre- venting the bad effects of animal food is to take a large proportion of liquid ; and hence llie Ixid effects of animal food are less felt in Scotland on account of their drinking much willi it, iind using broths, which are at once excellent correctors of animal food and preventives of gluttony.

Dr. Paris thus compares the relative- advan- tages of an animal and vegetable diet, particularly in this country. ' As every description of food,' says he, ' whether derived from the animal or vegetable kin'uidom, is converted into blood, it may be inferred tluit the ultunate effect of all aliments must be virtually the same ; and that the several species can only differ from eacli other in the quantity of nutriment they aflbrd,

.n the comparative degree of stimulus they im- part to the organs through which they pass, and in the proportion of vital energy tliey require for their assimilation. Were the degree of ex- citement which attends the digestion of a meal commensurate with tlie labor imposed upon the organs which perform it, less irritation and heat would attend tlie digestion of animal than of vegetable food; for, in the one case, the aliment already possesses a composition analogous to that of the structure which it is designed to supply, and requires little more than division and depu- ration ; wliereas, in the other, a complicated se- ries of decompositions and recompositions must be efTected before the matter can be animalised, or assimilated to tlie body. But the digestive fever, if we may be allowed the use of that expression, and the complexity of the alimentary changes, would appear, in every case, to bear an inverse relation to each other. This must depend upon the fact of animal food affording a more liighly animalised chyle, or a greater proportion of that principle which is essentially nutritive, as well as upon the immediate stimulus which the alimen- tary nerves receive from its contact. In hot countries therefore, or during the heats of sum- mer, we are instinctively led to prefer vegetable food ; and we accordingly find that the inhab- itants of tropical climates select a diet of this description : the Brahmins in India, and the people of the Canary Islands, Brasils, &c., live almost entirely on lierbage, grains, and roots, while those of the north use little besides animal food. On account of the superior nutritive power of animal matter, it is equally evident that the degree of bodily exertion, or exercise, ■sustained by an individual should not be over- looked in an attempt to adjust the proportion in which animal and vegetable food should be mixed. Persons of sedentary habits are op- pressed, and ultimately become diseased, from the excess of nutriment which a full diet of animal food will occasion ; such a condition, by some process not understood, is best corrected by acescent vegetables. It is well known that artizans and laborers, in the confined manufac- tories of large towns, suffer prodigiously in their health whenever a failure occurs in the crops of common fruits; this fact was remarkably striking in the years 1804 and 1805. Young children and growing youths generally thrive upon a ge- nerous diet of animal food ; the excess of nu- tritive matter is consumed in the development of the body, and, if properly disjested, imparts strength without repletion. Adults and old persons comparatively require but a small pro- portion of aliment, unless die nutritive move- ment be accelerated by violent exercise and hard labor.

'Those who advocate the exclusive value of animal food, and deny the utility of its admixture with vesjetable matter, adduce in proof of their

system the rude health and Herculean strength of our hardy ancestors. The British aborigines, when first visited by the Romans, certainly do not appear to have been conversant with the cul- tivation of the ground, and according to the early writers, Caesar, Strabo, Diodorus, Siculus, and others, their principal subsistence was on

flesh and milk ; but, before any valid conclusion can be deduced from this circumstance, the habits of the people must be compared with those of their descendants. The history of later time-o will furnish us with a satisfactory answer to those who deny the necessity of vegetable aliment. We learn from the London bills, that scurvy raged to such an excess in the seventeenth century as to have occasioned a very great mortality : at this period the art of gardening had not long been introduced. It appears that the most common articles of the kitchen garden, such as cabbages, wire not cultivated in England until the reign of Catharine of Arragon ; indeed, we are told that this queen could not procure a salad until a gardener was sent for from the Ne- therlands to raise it. Since the change thus happily introduced into our diet, the ravages of the scurvy are unknown. It follows, then, that in our climate a diet of animal food cannot, with safety, be exclusively employed. It is too highly stimulant ; the springs of life are urged on too fast ; and disease necessarily follows. There may, nevertheless, exist certain states of the sys- tem which require such a preternatural stimulus; and the physician may, therefore, confine his patient to an animal regimen with as much pro- priety as he would prescribe opium, or any other remedy. By a parity of reasoning, the exclu- sive use of vegetable food may be shown to be inconsistent with the acknowledged principles of dietetics, and to be incapable of conveying a nourishment sufticiently stimulating for the active exertions which belong to our present civilised condition. At the same time it must be allowed, that an adherence to vegetable diet is usually productive of far less evil than that which fol- lows the use of an exclusively animal regimen.' Dr. Paris quotes some curious experiments made by M. Rlajendie to ascertain the relative quantities of azote (nitrogen) yielded by animal and vegetable food. ' He took a small dog of three years old, fat, and in good health, and put it to feed upon sugar alone, and gave it distilled water to drink : it had as much as it chose of both. It appeared very well in this way of living for the first seven or eight days ; it was brisk, active, ate eagerly, and drank in its usual man- ner. It began to get thin in the second week, although its appetite continued good, and it took about six or eight ounces of sugar in twenty- four hours. Its alvine excretions were neither fre- quent nor copious ; that of the urine was very abundant. In the third week its leanness in- creased, itD strength diminished, the animal lost its liveliness, and its appetite declined. At this period there was developed upon one eye, and then on the other, a small ulceration on the centre of the transparent cornea; it

increased very quickly, and in a few days it was more than a line in diameter; its depth increased in the same proportion ; the cornea was very soon entirely perforated, and the humors of the eye ran out. This singular phenomenon was accompanied with an abundant secretion of the glands of the eyelids. It, however, became weaker and weaker, and lost it3 strength; and, though the animal ate from three to four ounces of sugar per day, ii became so weak that it could neither chew nor

swallow ; for the same reason every other motion was impossible. It expired the thirty-second day of the experiment. M. Majendie opened tlio animal with every suitable precaution. He found a total want of fat; the muscles were re- duced more than five-sixths of their ordinary .size ; the stomacli and iniestines were also much diminished in volume, and strongly contracted. The gall and urinary bladders were distended by their proper fluids, which M. Chevreul was called upon to examine. That distinguished chemist found in them nearly all the characters which belong to the urine and bile of herbivo- rous animals ; that is, that the urine, instead of being acid, as it is in carnivorous animals, was sensibly alkaline, and did not present any trace of uric acid, nor of phosphate. Tiie bile con- tained a considerable portion of picromel ; a character considered as peculiar to the Ijile of tiie ox, and, in general, to that of herbivorous animals. The excrements were also examined by M. Chevreul, and were found to contain very little azote, whereas they usually furnish a con- siderable quantity.

‘ M. Majendie considered that such results re- quired to be verified by new experiments : he accordingly repeated them on other dogs, but always with the same conclusions. He there- fore considered it proved, that sugar, by itself, is incapable of supporting dogs. This want of the nutritive quality, however, might possibly be peculiar to sugar : he therefore proceeded to enquire, whether other substances, non-azotised, but generally considered as nutritive, would be attended with the same consequences. He fed two dogs with olive oil and distilled water, upon which they appeared to live well for about fifteen days : but they afterwards underwent the same series of accidents, and died on the thirty-sixth day of the experiment. In these cases, however, the ulceration of the cornea did not occur.’

The result of these experiments, in M. Ma- jendie’s opinion, was, that the azote of the organs is produced by the food, and consequently that no substance which does not contain this prin- ciple can support life. Dr. Paris distributes what he calls the Nutrientia, into the following classes.

Class I. Fibrinous Aliments. — Comprehend- ing the flesh and blood of various animals, es- pecially such as have arrived at puberty : ve- nison, beef, mutton, hare.

Class II. Albuminous. — Eggs; certain animal matter.

Class III. Gelatinous Aliments. The flesh of young animals: veal, chickens, calf's foot, certain fishes.

Class IV. Fatti/ and Oily Aliments. — Animal fats, oils, and butter ; cocoa, &c. ; ducks, pork, geese, eels, &c.

Class V. Caseous Aliments.— Vae different kinds of milk, cheese, &c.

Class VI. Farinaceous vlˆjmenis. — Wlieat, barley, oats, rice, rye, potatoe ; sago, arrow- root, 8cc.

Class VII. Muvilaginous Aliments. — Carrots, turnips, asparagus, cabbage, Sec.

Class VIII. .S'?('fc/ Aliments. — Tlie different kinds of sugar, figs, dates, &c.; carrots.

Class IX. Acidulous Aliments. — Oranges, ap- ples, and other acescent fruits.

To these we may add condiments; such as salt, the varieties of pepper, mustard, horse- radish, vinegar, &,c.

In classing the different species of potations, we may, in like manner, be governed by the chemical composition wliich d.stinguishes tiiem. They may be arranged under four divisions, viz.

Class I. Water. — S])ring, river, we. I water, &c.

Class II. I'he Juices and InJ'uaions of' Vege- tables and Anhnuli. — VVliey, tea, coffee, &c.

Class III. Fermented Liquors. — Wine, beer, &c.

Class IV. The Alcoholic Liquors, or Spirits. — Alcohol, brandy, rum, &c.

- *By cookery,ˆ he says, ' alimentary substances undergo a twofold change; their principles are chemically modified, and their textures me- chanically changed. The extent and nature, however, of these changes, will greatly depend upon the manner in which heat has been applied to them ; and if we enquire into the culinary history of*

different countries, we shall; trace its connexion with tlie fuel most accessible to them. This fact readily explains the prevalence of the peculiar species of cookery which distinguishes the French table, and which has no reference, as some have imagined, to the dietetic theory, or superior refinement, of the inhabitants.'

By boiling, according to this author, 'the prin- ciples not properly soluble are rendered softer, more pulpy, and, consequently, easier of diges- tion ; but the meat, at the same time, is de- prived of some of its nutritive properties by the removal of a portion of its soluble constituents: the albumen and gelatin are also acted upon ; the former being solidified, and the latter converted into a gelatinous substance. If, therefore, our meat be boded too long or too fast, we shall ob- tain, where the albumen predominates, as in beef, a hard and indigestible mass, like an over- boded egg; or, where the gelatin predommates, as in young meats, such as veal, a gelatinous substance equally injurious to the digestive organs. Young and viscid food, therefore, as veal, chickens, Sec, are more wholesome when roasted than when boiled, and are easier di- gested. Dr. Prout has very justly remarked, that the boiling temperature is too high for a great many of the processes of cookinu, and that a lower temperature and a greater time, or a sjiecies of infusion, are better adapted for most of them. This is notorious with substances in- tended to be stewed, which, even in cookery books, are directed to be boiled slowly (that is, not at all), and for a considerable time. The ignorance and prejudice existing on these points is very great, and combated with difficulty ; yiˆt, when we take into account their importance, and how intimately they are connecterl witli Iiealtl), they will be found to deserve no small share of our attention. Tlie loss occasioned by boiling partly depends upon the melting of the fat, but cliiefly from the solution tif the gelatine and os- niazone : mutton generally loses about cne-fifth, and beef about one-fourth, of its original vveiuht. Boiling is particularly applicable to vegetables, rendering them more soluble in the stomach, and

depriving them of a considerable quantity of air, so injurious to weak stomachs. But, even in this case, the operation may be carried to an in- jurious extent; thus, potatoes are frequently boiled to the state of a dry, insipid powder, instead of being preserved in that state in which the parts of which they are composed are ren- dered soft and gelatmous, so as to retain their shape, yet be very easily separated. On the other hand, the cabbage tribe, and carrots, are frequently not boiled long enough, in which state they are highly indigestible. In conduct- ing this process, it is necessary to

pay some at- tention to the quality of the water employed ; thus, mutton boiled in hard water is more tender and juicy than when soft water is used ; while vegetables, on the contrary, are rendered harder and less digestible when boiled in hard water.

‘ By roasting the fibrine is corrugated, the al- bumen coeigulated, the fat liquefied, and the water evaporated. As the operation proceeds, the surface becomes first brown, and then scorched ; and the tendinous parts are ren- dered softer and gluey. Care should always be taken that the meat should not be over-done, nor ought it to be under-dressed; for, although in such a state it may contain more nutriment, yet it will be less digestible, on account of the density of its texture. This fact has been satisfactorily proved by the experiments of Spallanzani ; and Mr. Hunter observes, that ‘ boiled, and roasted, and even putrid meat, is easier of digestion than raw.’ Animal matter loses more by roasting than by boiling : it has been stated above, that by this latter process mutton loses one-fifth, and beef one-fourth ; but by roasting, these meats lose about one-third of tlieir weight. In roasting, the loss arises from the melting out of the fat, and the evaporating of the water; but the nutritious matter remains condensed in the cooked solid ; whereas, in boiling, the gelatine is partly abstracted. Roast are, therefore, more nutritive than boiled meats.’

- *Frying,’ Dr. P. thinks, ‘is, perhaps, the most objectionable of all the culinary operations. The heat is applied through the medium of boiling oil, or fat, which is rendered empyreumatic, and therefore extremely liable to disagree with the stomach.*

‘ By the operation of broiling, the sudden browning or hardening of the surface prevents the evaporation of the juices of the meat, which imparts a peculiar tenderness to it. It is the form selected, as the most eligible, by those who seek to invigorate themselves by the art of training.

‘ The peculiarity of baking depends upon the substance being heated in a confined space, which does not permit the escape of the fumes arising from it ; the meat is, therefore, from the retention of its juices, rendered more sapid and tender. But baked meats are not so easily digested, on account of the greater retention of their oils, which are, moreover, in an empyreumatic state. Such dishes accordingly require the stimulus of various condiments to increase the digestive powers of the stomach.’

Condiments and Drinks have not so distinctly -eceived our attention, in the former part of this

work, as the more solid contributions of nature to the food of man. The former are divided by the popular author whom we have already quoted

into the saline, the aromatic, and the oily.

‘ Salt,’ he says, ‘ appears to be a necessary and universal stimulus to animated beings ; and its effects upon tiie vegetable as well as animal kingdom have furnished objects of the most inter- esting enquiry to the physiologist, the chemist, the physician, and the agriculturist. It ap- pears to be a natural stimulant to the digestive organs of all warm-blooded animals, and that they are instinctively led to immense distances in pursuit of it. This is strikingly exemplified in the avidity with which animals in a wild state seek the salt pans of Africa and America, and in the difficulties they will encounter lo reach them : this cannot arise from accident or caprice, but from a powerful instinct, which, beyond control, compels them to seek, at all risks, that which is salubrious. To those who are anxious to gain further information upon this curious subject, I would recommend the perusal of a work en- titled Thoughts on the Laws relating to Salt, by Samuel Parkes, Esq., and a small volume by my late lamented friend. Sir Thomas Bernard, on the Case of the Salt Duties, with Proofs and Illustrations. We are all sensible of the effect of salt on the human body; we know how un- palatable fresh meat and vegetables are without it. During the course of my professional prac- tice, I have had frequent opportunities of wit- nessing the evils which have attended an absti- nence from salt. In my examination before a committee of the house of commons in 1818, appointed for the purpose of enquiring into the laws respecting the salt duties, I stated, from my own experience, the bad effects of a diet of unsalted fish, and the injury which the poorer classes, in many districts, sustained in their health from an inability to procure this essential condiment. I had some years ago a gentleman of rank and fortune under my care, for a deranged state of the digestive organs, accompanied with extreme emaciation. I found that, from some cause which he could not explain, he had never eaten any salt with his meals : I enforced the necessity of his taking it in moderate quantities, and the recovery of his digestive powers was soon erinced in the increase of his strength and condition. One of the ill effects produced by an unsalted diet is the generation of worms. Mr. Marshall has published the case of a lady who had a natural antipathy to salt, and was in con- sequence most dreadfully infested with worms during the whole of her life. — (London Medical and Physical Journal, vol. xxix. No. 231). In Ireland, where, from the bad quality of the food, the lower classes are greatly infested with worms, a draught of salt and water is a popular and efficacious anthelmintic. Lord Somerville, in his Address to the Board of Agriculture, gave an interesting account of the effects of a punish- ment which formerly existed in Holland. “Vhe ancient laws of the country ordained men to be kept on bread alone, unmixed with salt, as the severest punishment that could be inflicted upon them in their moist climate. The effect was horrible ; these Avretched

criminals are said to

have been devoured by worms engendered in their own stomachs.' The wholesoraeness and digestibility of our bread are undoubtedly much promoted by the addition of salt which it so universally receives.

' An excess of salt is,' however, we are told, ' as injurious as its moderate application is salutary. This observation applies with as much force to the vegetable as to the animal kingdom ; a small proportion, applied as a manure, promotes vege- tation in a very remarkable manner; whereas a larger quantity actually destroys it The experi- ments of Sir John Pringle have also shown, that a little salt will accelerate putrefaction, and a large quantity prevent it. In explaining the operation of salting meat, and in appreciating the effects of such meat as food, it will be ne- cessary to advert to a chemical fact which has not hitherto attracted the attention which its im- portance merits. The salt thus combined with the animal fibre ought no longer to be considered as the coadiment upon which so much has been said ; a chemical combination has taken place, juid, although it is difficult to explain the nature of the affi'nities .which have been brought into action, or that ,of the compound to which they have given origin, it is sufficiently evident that the texture of the fibre is so changed as to be less nutritive, as well as less digestible. If we are called upon to produce any chemical evi- dence in support of such an assertion, we need only relate the experiment of M. Eller, who found, that if salt and water be boiled in a cop- per vessel, the solution will contain a notable quantity of that metal; whereas, if, instead of heating a simple solution, the salt be previously mixed with beef, bacon, or fish, the fluid resulting from it will not contain an atom of copper. Does not this prove that the process of salting meat is something more than the mere saturation of the animal fibre with muriate of soda?

' Vinegar, in small quantities, is recommended as a gratefui and wholesome stimulant; it will often check the chemical fermentation of certain substances in the stomach, and prevent vegetable matter in its raw state from inducing flatulence ; but its use requires caution, and in some morbid states of the system it is obviously improper. Fatty and gelatinous substances frequently ap- pear to be rendered more digestible in the sto- mach by the addition of vinegar, although it is difficult to offer either a chemical or physiological explanation of the fact. The native vetretable acids may also be occasionally substituted : the addition of lemon juice to rich and glutinous soups renders them less liable to disagree with the

stomach ; and the custom of eating apple- sauce with])ork is, undoubtedly, indebted for its origin to the same cause.

‘ The aromatic condiments comprise the foreign spices, as pepper, Cayenne pepper, cinnamon, nutmeg, cloves, ginger; and the indigenous herbs and roots, such as parsley, thyme, sage, garlick, leek, onion, horse-radish, mustard, i

the child of nature, nor the passive inhabitant of any particular region : he ranges over every part of the globe, and elicits nourishment from the productions of every climate. Itmay be there- fore necessary that he should accompany the ingestion of foreign aliment with foreign condi- ment. If we go to the East for tea, there is no reason why we should not go to the West for sugar. The dyspeptic invalid, however, should be cau- tious in their use; they may afford temporary benefit at the expense of permanent mischief. It has been well said, that the best quality ot spices is to stimulate the appetite, and their worst to destroy, by insensible degrees, tiie tone of the stomach. The intrinsic goodness of meats should always be suspected, wlien they require spicy seasoning to compensate for their natural want of sapidity. But, mischievous as the abuse of aromatic condiments may be, it is innocent in comparison with the custom of swallowing a quantity of brandy to prevent the upbraiding of our stomachs, or an increased libation of wine to counteract the distress which supervenes a too copious meal — as if drunkenness were an anti- dote to gluttony.

‘ Oil and butter, constitute what is called the oleaginous condiments. Melted butter is, per- haps, the most injurious of all the inventions of cookery: oil, when used in extremely small quantities, as a seasoning to salads, appears to prevent their running into fermentation, and con- sequently obviates flatulency.’

Of the different kinds of water used as drink we are told

‘ ilain waif r, when collected in the open fields, is certainly the purest natural water, being pro- duced as it were by a natural distillation. When, however, it is collected near large towns, it de- rives some impregnation from the smoky and contaminated atmosphere through whicii it falls ; and, if allowed to come in contact with tlie houses, will be found to contain calcareous matter ; in which case it ought never to be used without being previously boiled and strained. Hippocrates gave this advice ; and M. Margraaf, of Berlin, has shown the wisdom of the pre- caution, by a satisfactory series of experiments.

‘ Spring wafer, in addition to the substances detected in rain water, generally contains a small portion of muriate of soda, and frequently otiier

salts : but the larger springs are purer tlian the smaller ones ; and those which occur in primi- tive countries, and in silicious rocks, or beds of gravel, necessarily contain the least impregna- tion. An important practical distinction has been founded u]ion the fact, that the water of some springs dissolves soap, while that of others decomposes and curdles it : tlie former has been termed soft, the latter iiard, water. Soft water is a more powerful solvent of all vegetable mat- ters, and is consequently to be preferred for do- mestic as well as medicina; purposes. The brewer knows well, from experience, how much more readily and copiously soft water will dis- solve the extractive matter of his malt; and the housewife does not recpiire to be told, that hard water is incapable of making good tea. Sul- phate of lime is the salt which generally imparts the quality of hardness to water ; and it has

been said that its presence will sometimes oc- casion an uneasy sense of weight in a weak stomach. The quantity of this salt varies con- siderably ; but, in general, it appears that the proportion of live grains in a pint of water will constitute hardness, unfit for washing with soap, and for many other purposes of domestic use. Animals appear to be more sensible of the im- purities of water than man. Horses, by an in- stinctive sagacity, always prefer soft water; and when, by necessity or inattention, they are con- fined to the use of that which is hard, their coats become rough and ill-conditioned, and they are frequently attacked with tiie gripes. Pigeons are also known to refuse hard, after they have been accustomed to soft water.

‘ River water. — This, being derived from the conflux of numerous springs with rain water, generally possesses considerable purity ; that the proportion of its saline contents should be small, is easily explained by the precipitation which must necessarily take place from the union of different solutions : it is, however, liable to hold in suspension particles of earthy matter, which impair its transparency, and sometimes its sa- lubrity. This is particularly the case with the Seine, the Ganges, and the Nile : but as the im- purities are, for the most part, only suspended, and not truly dissolved, mere rest or filtration will therefore restore to it its original purity. The chemist, therefore, after such a process, would be unable to distinguish water taken up at London from that procured at Hampton-court. There exists a popular belief, that the water of the Thames is peculiarly adapted for the brewery of porter ; it is only necessary to observe, that such water is never used in the London breweries. The vapid taste of river, when compared with spring, water, depends upon the loss of air and carbonic acid, from its long exposure.

‘ Well water is essentially the same as spring water, being derived from the same source ; it is, however, more liable to impurity from its stagnation or slow infiltration : hence our old wells furnish much purer water than those which are more recent, as the soluble particles are gradually washed away. Mr. Dalton observes, that the more any spring is drawn from, the softer the water will become.

- *Snow water has been supposed to be unwhole- some, and in particular to produce bronchocele, from the prevalence of that disease in the Alps ; but it does not appear upon what principle its insalubrity can depend. The same strumous affection occurs at Sumatra, where ice and snow are never seen ; while, on the contrary, the dis- ease is quite unkno-wn in Chili and Thibet, although the rivers of those countries are sup-])lied by the melting of the snow with which the mountains are covered. The same observations will ai)ply to ice water. The trials of Captain Cook, in his voyage round the world, prove its wholesomeness beyond a doubt : in the high southern latitudes he found a salutary supply of fre*

contains no air, as it is expelled during the act of freezing, consequently it is remarkably vapid ; but it soon recovers the air it had lost, by ex- posure to the atmosphere.

‘ hake water is a collection of rain, spring, and river waters, contaminated with various animal and vegetable matter, which from its stagnant nature have undergone putrefaction in it. This objection may be urged with greater force against the use of water collected in ponds and ditches, and which the inhabitants of some districts are often under the necessity of drinking. I have known an endemic diarrhoea to arise from such a circumstance.

‘ Marsh water, being the most stagnant, is the most impure of all water, and is generally loaded with decomposing vegetable matter. There can be no doubt, that numerous diseases have sprung up frorr its use.’

‘ The juices and infusions of vegetable and animal matter,’ says Dr. Paris, ‘ constitute the second division of drinks. By impregnating water with the soluble parts of toasted bread, it will frequently agree with those stomachs which rebel against the use of the pure fluid. It is thus rendered slightly nutritive, holding a certain por- tion of gum and starch in solution. Sir A. Carlisle recommends that it should be prepared with hard biscuit, reduced by fire to a coffee color. This drink, he says, being free from yeast, is a most agreeable beverage. Much depends upon the water being at a boiling temperature, and it ought to be drank as soon as it has cooled sufficiently ; for, by keeping, it acquires an unpleasant flavor. Infusions of other kinds of bread, in particular of toasted oat-cakes, also dried or toasted oat- meal,

have been recommended ; but the taste of such [infusions would not be palatable to any one who has not been accustomed to oat-bread.

‘ Barley water. — The decoction of barley is a very ancient beverage : it is recommended by Hippocrates, and preferred by him to every other aliment in acute diseases. Barley has the ad- vantage over other grains, in affording less viscid potations. The invention of pearl barley has greatly increased the value of this grain ; it is prepared by the removal of its husk or cuticle, and afterwards by being rounded and polished in a mill. These well-known granules consist chiefly of fecula, with portions of mucilage, gluten, and sugar, which water extracts by de- coction :’ but the solution soon passes into the acetous fermentation. The bran of barley con- tains an acrid resin, and it is to get rid of such an ingredient that it is deprived of its cuticle. The addition of lemon juice and sugar-candy greatly improve the flavor of this drink.

‘ Gruel. — Oats, when freed from their cuticle, are called groats ; in which state, as well as when ground into mealj they yield to water, by coction, the fecula they contain, and form a nu- tritious gruel, which has also the property of being slightly aperient. It should never be kept longer than forty-eight hours, as it becomes aces- cent after that])eriod. Gruel may be made of a different degree of consistence, according to the object of its potation. If it be used as a de- mulcent drink, it should be thin ; and may be made, as Dr. Kitchener, our culinary censor,

informs us, by mixing well together, by degrees, in a pint basin, one table-spoonful of oatmeal with three of cold water, and then adding care- fully a pint of boiling water, which is to be boiled for five minutes, stirring it all the time, to prevent the oatmeal from burning at the bottom of the stewpan ; then strain through a hair sieve, to separate the undissolved parts of the meal from the gruel. If a more substantial repast is required, double the above quantity of oatmeal must be treated in a similar manner. To in- crease the nutritive quality of this aliment, broth or milk may be substituted for water. Some persons are in the habit of introducing a piece of butter into gruel ; but the propriety of this practice is questionable, where the stomach is disposed to generate acidity.

‘ Sage tea. — The virtues of sage have been so extravagantly praised, that, like many of our remedies, the plant is fallen into disuse from the disgust which its panegyrists have excited. I am convinced, however, that in the form of in- fusion it possesses some power in allaying the irritability of the

stomach, and that, on many occasions, it will furnish a salutary beverage. The same observation will apply to balm tea.' We cannot here find room for the entire obser- vations of this author on Tea; but see this article.

' When drunk four hours after the principal meal,' he observes, ' it will assist the ulterior stages of digestion, and promote the insensible perspiration ; while it will afford to the stomach a grateful stimulus after its labors. In enume- rating, however, the advantages of tea, it must not be forgotten that it has introduced and che- rished a spirit of sobriety ; and it must have been remarked by every physician of general practice, that those persons who dislike tea, fre- quently supply its place by spirit and water. The addition of milk certainly diminishes the astrin- gency of tea; that of sugar may please the palate, but cannot modify the virtues of the in- fusion.

' Coffee. The hostility which has been mani- fested against the use of tea has been ex- tended, with equal rancour, against that of coffee; and, probably, with equal injustice. The principle upon which its qualities de- pend is more stimulant than that of tea, and certainly exerts a different species of action upon the nervous system, although it is very difhcult to define the nature of this difference. If taken immediately after a meal, it is not found to create that disturbance in its digestion which has been noticed as the occasional consequence of tea; on the contrary, it accelerates the operations of the stomach, and will frequently enable the dyspeptic to digest substances, such as fat and oily aliment, which would othei-wise occa- sion much disturbance. The custom of taking coffee immediately after dinner, as so universally practised by the French, no doubt must coun- teract the evil effects which the peculiar form of their diet is calculated to produce. Coffee, like tea, has certainly an antisoporific effect on many individuals ; it imparts an activity to the mind which is incompatible with sleep ; but this will rarely occur if the beverage be taken for several

hours before our accustomed period of repose. It seems to be generally admitted, that it pos- sesses the power of counteracting the effects of nar- cotics; and hence it is used by the Turks with much advantage, in abating the influence of the in- ordinate quantities of opium they are accustomed to swallow. Where our object is to administer it as a promoter of digestion, it should be carefully made by infusion ; decoction dissipates its aroma. Ttie addition of milk is one of unquestionable pro- priety ; that of sugar, or rather sugar-candy, may be allowed. I have known some persons who have never taken this beverage without suffering from acidity in the stomach : where this happens, the practice must be abandoned.

' Chocolate. — In consequence of the large quan- tity of nutritive matter which this liquid contains, it should be regarded,' Dr. .Paris observes, ' rather as food than drink. It is prepared by reducing the cocoa-nut into

paste, with sugar, milk, or eggs : it is also frequently mixed with different aro- matics, the most common of which is the vanilla, a substance very liable to disagree with the stomach, and to produce a train of nervous symptoms. As a common beverage, chocolate is highly objectionable ; it contains an oil which is difficult of assimilation ; it therefose oppresses the stomach : this effect is of course increased by the application of too much heat in its prepara- tion. Another objection against its use is to be found in the observations which I have already offered upon the subject of too great concen- tration.

‘ Cocoa is usually considered as a substitute for chocolate. As it contains less nutritive matter, it is not so objectionable ; and, as the oily matter exists only in small quantities, it is less likely to disagree with the stomach.

‘ Whei/ is a delightful beverage; but as its nature and operation cannot be well understood until the composition of milk is investigated, the observations which I have to offer upon its use will be deferred until the history of that fluid has been examined.

‘ There are certain saline solutions which are frequently employed as drinks, and deserve some attention in this place : such are imperial and soda water. Imperial is a solution of cream of tartar flavored with lemon peel. It ought never to be used except as a medicine. If em- ployed as an ordinary drink, it is apt to retard digestion. If ever useful as an article of diet, it will be under circumstances of robust health, and where a large quantity of animal food has been taken.

‘ Soda Water. — The modern custom of drink- ing this inviting beverage during, or immediately after dinner, has been a pregnant source of dys- pepsia. By inflating the stomach at such a period, we inevitably counteract those muscular contractions of its coats which are essential to cliymification. The quantity of soda thus intro- duced scarcely deserves notice : with the excep- tion of the carbonic acid gas, it may be regarded as water, more mischievous only in consequence of the exhilarating quality inducing us to take it at a period at whicli we should not require the more simple fluid.’

*0/ Matt liquors.— Dr. Paris says, * malt*

liquors differ from wines in several essential points : they contain a much larger proportion of nutritive matter, and a less proportion of spirit; while they contain a peculiar bitter and narcotic principle derived from tlie hop.

It would appear, that the extractive matter fur- nished by the malt is highly nutritive ; and we accordingly find, that those persons addicted to such potations are in general fat. Where, how- ever, they are indulged in to any extent, without a corresponding degree of exercise, they induce a plethoric state of the body, and all the dis- eases consequent upon such a condition. To those whose diet is not very nutritive, ale may be considered not only as an innocent, but as a salubrious article ; and happy is that coun- try, whose labouring classes prefer such a beve- rage to the mischievous potations of ardent spirit. These remarks, however, caimot apply to those classes of the community who ' fare sumptuously every day.' Tliey will not require a nutritive potation of such a character ; and light wines

bably an essential part, of the food of plants ; that it is decomposed by them, and contributes materially to their growth ; and that manures serve rather to prepare the water for decomposi- tion, than to form of themselves, substantially and directly, the nourishment of the vegetables. Now a very clear analogy may be traced, be- tween the vegetation and growth of plants, and the digestion and nourishment of animals ; and as water is indispensably necessary in both pro- cesses, and as in one of them (vegetation) it appears evidently to serve as food, why should we not suppose it may serve as food in the other? There is, in my opinion, abundant reason to sus- pect that this is really the case ; and I shall now briefly state the grounds upon- which this opinion is founded. Having been engaged for a consi- derable length of time in providing food for the poor at Munich, I was naturally led, as well by curiosity as motives of economy, to make a great variety of experiments upon that subject; and I had not proceeded far in my opinions, before I

have accordingly, in these days of luxury, very began to perceive that they were very important ;

properly superseded its use : but I am not dis- posed to extend this remark to its more humble companion, ' table-beer.' I regard its dismissal from the tables of the great as a matter of regret ; its slight, but invigorating bitter is much better adapted to promote digestion than its more costly substitutes. But it should be soft and mild; for, when stale and hard, it is likely to disturb the bowels, and occasion effects the very opposite to those it is intended to produce. Nor' ought it to have too great a proportion of hops, but should be thoroughly fermented and purified. Syden- ham always took a glass of small beer at his meals, and he considered it as a preservative against gravel.'

For Wine, see that article.

On the subject oi the food of the poor we have

even much more so than I had imagined. The difference in the apparent goodness, or the pala- tableness, and apparent nutritiousness of the same kinds of food, when prepared or cooked in dif- ferent ways, struck me very forcibly ; and I con- stantly found that the richness or quality of a soup depended more upon a proper choice of ingredients, and a proper management of the fire in the combination of these ingredients, than upon the quantity of solid nutritious matter em- ployed ; much more upon the art and skill of the cook, than upon the amount of the sums laid out in the market. I found likewise, that the nutritiousness of a soup, or its power of satisfying hunger, and affording nourishment, appeared al- ways to be in proportion to its apparent richness But what surprised me not a

or palatableness. seen no remarks more intelligent than those of little was, the discovery of the very small quan- Count Rumford, in his ingenious Essay on Food, tity of solid food, which, when properly prepared, He observes; 'There is, perhaps, no operation will suffice to satisfy hunger, and support life

of nature which falls under the cognizance of our senses, more surprising, or more curious, than the nourishment and growth of plants and ani- mals ; and there is certainly no subject of inves- tigation more interesting to mankind. As pro- viding subsistence is, and ever must be, an ob- ject of the first concern in all countries, any dis- covery or improvement by which the procuring

and health; and the very trifling expense at which the stoutest and most laborious man may in any country be fed. After an experience of more than five years in feeding the poor at Munich, during which time every experiment was made that could be devised, not only with regard to tlie choice of the articles used as food, but also in respect to their different combina-

good and wholesome food can be facilitated, tions and proportions, and to the various ways

must contribute very powerfully to increase the in which they could be prepared or cooked ; it

comforts and promote the happiness of society, was found that the cheapest, most savoury, and

That our knowledge in regard to the science of most nourishing food that could be provided,

nutrition is still very imperfect, is certain ; but was a soup composed of pearl barley, peas.

T think there is reason to believe, that we are upon the eve of some very important discoveries relative to that mysterious operation. Since it has been known that water is not a simple ele- ment, but a compound, and capable of being de- composed, mucli light has been thrown upon many operations of nature, which formerly were wrapped up in obscurity. In vegetation, for in- stance, it has been rendered extremely probable, that water acts a much more important part than

potatoes, cuttings of fine wheaten bread, vinegar, salt and water, in certain proportions. The method of preparing this soup is as follows. The water and the pearl barley are first put together into the boiler, and made to boil ; the peas are then added, and the boiling is conti- nued over a gentle fire about two hours; the potatoes are then added (having been previously peeled with a knife, or having been boiled, in order to their being more easily deprived of

was formerly assigned to it by philosophers ; that their skins), and the boiling is continued for it serves not merely as the vehicle of nourish- about one hour more ; during which time the ment, but constitutes at least one part, and pro- contents of the boiler are frequently stirred

about with a large wooden spoon or ladle, to destroy the texture of the potatoes, and to reduce the soup to one uniform mass. When this is done, the vinegar and salt are added ; and last of all, at the moment it is to be served up, the cuttings of bread. The soup should never be suffered to boil, or even to stand long before it is served up, after the cuttings of bread are put to it. It will, indeed, for reasons which will hereafter be explained, be best never to put the cuttings of bread into the boiler at all, but (as is always done at Munich) to put them into the tubs in which the soup is carried from the kitchen into the dming hall ; pouring the soup hot from the boiler upon them, and stirring the whole well together with the iron ladles used for measuring out the soup to the poor in the hall. It is of more importance than can well be imagined, that this bread, which is mixed with the soup, should not be boiled. It is likewise of use it should not be cut as fine or thin as possible ; and if it be dry and hard, it will be so much the better. The bread we use at Mu- nich is what is called semel bread, being small loaves, weighing from two to three ounces ; and as we receive this bread in donations from the bakers, it is commonly dry and hard, being that which, not being sold in time, remains on hand, and becomes stale and unsaleable ; and we have found by experience, that this hard and stale bread answers for our purpose much better than any other, for it renders

mastication necessary ; and mastication seems very powerfully to assist: in promoting digestion ; it likewise prolongs the duration of the enjoyment of eating, a matter of very great importance indeed, and which has not hitherto been sufficiently attended to. The quantity of this soup furnished to each person at each meal, or one portion of it (the -cuttings of the bread included) is just one Bavarian pound in weight ; and as the Bavarian pound is to the pound avoirdupois as 1,125,842 to 1, — it is equal to about nineteen ounces and nine-tenths avoirdupois. Now, to those who know that a full pint of soup weighs no more than about six- teen ounces avoirdupois, it will not, perhaps, at the very first view, appear extraordinary, that a portion weighing nearly twenty ounces, and consequently making nearly one pint and a quarter of this rich, strong, savoury soup, should be found sufficient to satisfy the hungerof a grown person ; but when the matter is examined narrowly, and properly analysed, and it is found that the whole quantity of solid food which enters into the composition of .one of these portions of soup does not amount to quite six ounces, it will then appear to be almost impossible that this allow- ance should be sufficient. That it is quite suf- ficient, however, to make a good meal for a strong healthy person has been abundantly proved by long experience. I have even found that a soup composed of nearly the same ingredients, except the potatoes, but in different proportions, was sufficiently nutritive, and very •i)alatablc, in which only about four ounces and three-quarters of solid food entered into the composition of a portion weighing twenty ounces. But this will not ap- pear incredible to those who know, that one single spoonful of salope, weighing less than one quarter of an ounce, put into a pint of boiling

water, forms the thickest and most nourishing soup that can be taken ; and that the quantity of solid matter which enters into the composition of another very nutrhive food, hartshorn jelly, is not much more considerable. The barley in my soup seems to act much the same part as the salope in this famous restorative ; and no sub- stitute that 1 could ever find for it, among all the variety of corn and pulse of the growth of Eu- rope, "ever produced half tlie effect ; that is to say, half the nourishment at the same expense. Barley may therefore be considered as the rice of Great Britain. It requires, it is true, a great deal of boiling; but, when it is properly managed, it thickens a vast quantity 'of water; and, as I suppose, prepares it for decomposition. It also gives the soup, into which it enters as an ingre- dient, a degree "of richness which nothing else can give. It has iittle or no taste in itself, but, when mixed with other ingredients which are savory, it renders them peculiarly grateful to the palate. It is a maxim as ancient, I believe, as the time of Hippocrates, that whatever pleases the palate nourishes ; and I have often had reason to think it perfectly just. Could it be clearly ascertained and demonstrated, it would tend to place cookery in

a more respectable situation among the arts than it now holds. That the manner in which food is prepared is a matter of real importance ; and that the water used in that process acts a much more important part than has hitherto been generally imagined, is, I think, quite evident ; for it seems to me to be impossi- ble, upon any other supposition, to account for the appearances. If the very small quantity of solid food which enters into the composition of a portion of some very nutritive soup were to be prepared differently, and taken under some other form, that of bread, for instance ; so far from being sufficient to satisfy hunger, and afford a comfortable and nutritive meal, a person would absolutely starve upon such a slender allowance ; and no great relief would be derived from drink ing crude water to fill up the void in the stomach. But it is not merely from an observation of the apparent effects of 'cookery upon those articles which are used as food for man, that we are led to discover the importance of these culinary pro- cesses. Their utility is proved in a manner equally conclusive and satisfactory, by the effects which have been produced by employing the same process in preparing food for brute animals. It is well known that boiling the potatoes with which hogs are fed renders them much more nu- tritive ; and, since the introduction of the new system of feeding horned cattle, that of keeping them confined in the stables all the year round (a method which is now coming fiist into common use in many parts of (iermaiiy), great improve- ments have been made in the art of providing nourishment for those animals ; and particularly by preparing their food, by operations similar to those of cookery ; and to these improvements it is most probably owing, that stall feeding has in that country, been so universally successful. It has long been a practice in Germany for those who fatten bullocks for the butcher, or feed milch cows, to give them frequently what is called a drank or drink ; which is a kind of pot- tage, prepared differently in different parts

of the country and in different seasons, accord- ing to the greater facility with which one or other of tlte articles occasionally enaployed in the composition of it may be procured, and ac- cording to the particular fancies of individuals. Many feeders make a great secret of the compo- sition of their drinks, and some have, to my knowledge, carried their refinement so far, as actually to mix brandy in them in small quanti- ties ; and pretend to have found their advantage in addmg this costly ingredient. The articles most c-ommonly used are, bran, oat meal, brewers' grains, mashed potatoes, mashed turnips, rye meal, and barley meal, with a large

proportion of water; sometimes two or three or more of these articles are united in forming a drink : and, of whatever ingredients the drink is composed, a large proportion of salt is always added to it. There is perhaps nothing new in the method of feeding cattle with liquid mixtures, but the man- ner in which these drinks are now prepared in Germany is, I believe, quite new ; and shows, what 1 wish to prove, that cooking renders food really more nutritive. These drinks were formerly given cold, but it was afterwards discovered that they were more nourishing when given warm ; and of late their preparation is, in many places, become a very regular culinary process. Kitchens have been built, and large boilers provided and fitted up, merely for the cooking for the cattle in the stables ; and 1 have been assured by many very intelligent farmers, who have adopted this new mode of feeding (and have also found by my own experience), that it is very advantageous indeed ; that the drinks are evidently rendered much more nourishing and wholesome by being boiled ; and that the expense of fuel, and the trouble attend- ing this process, are amply compensated by the advantages derived from the improvement of the food. We even find it advantageous to continue the boiling a considerable time, two or three hours for instance ; as the food goes on to be still farther improved, the longer the boiling is continued. These facts seem evidently to show, that there is some very important secret with re- gard to nutrition, which has not yet been pro- perly investigated ; and it seems to me to be more than probable, that the number of inhabi- tants who may be supported in any country upon its internal produce, depends almost as much upon the state of the art of cookery, as upon that of agriculture. The Chinese, perhaps, understand both these arts better than any other nation. Savages understand neither of them. But, if cookery be of so much importance, it certainly deserves to be studied with the greatest care; and it ought to be particularly attended to in times of general alarm on account of a scarcity of provisions ; for the relief which may in many cases be derived from it is immediate and effec- tual, while all other sources are distant and un- certain.' After anticipating some objections to his plan, Count Rumford recommends the estab- lishment of public kitchens in all towns and large villages throughout the kingdom. See Kitchen. FOOL, 71. s., V. 71. & V. a.~\ Greek (pavXog; Fool' FRY, n. s. i German fatd, and

FooL'isn, «rf;. N probably foul in

Fool'isui.y, adv. i English. Thus,

Fool'jshmss, n. s. J the original mean-

ing of fool is worthless, or good for nothing ; dirty or idle : applied to the mind, weak, mud- dy in its ideas ; slow of apprehension ; reluctant to think. It is now generally applied to a na- tural, an idiot; one to whom

nature has denied reason; to one who counterfeits folly ; a buffoon or jester. In Scripture the term is employed to designate a wicked man, to intimate that wicked- ness is folly; as it debases reason, and dishonors the character. The neuter verb is used in the sense to trifle ; to toy ; to play ; to idle ; to sport. The active signifies to treat with contempt ; to disappoint ; to frustrate ; to cheat ; to defeat ; to infatuate; to allure from the dictates of reason and sobriety. Foolery is either habitual folly, or a solitary act, or the object of folly. Foolish, to be void of understanding ; weak of intellect; imprudent; indiscreet; ridiculous; contempti- ble. Foolishly, weakly ; without understanding. In Scripture all these terms signify wicked and wickedly. Foolishness is folly ; want of under- standing ; actual deviation from the right. Fool is used in composition and in phrases idiomatic and peculiar — the following are instances of both, and their illustrations are placed in the regular chronological order with those of their etymon.

FOOL'BORN, adj. Fool and born. Foolish from the birth.

FOOL'-HAPPY,arfj. Fool and happy. Lucky; without contrivance or judgment.

Fogl'-hardixess, n. s."^ Fool and hardy.

Fool'hardise, n. s. >Mad rashness; cou

Fool'-hardy, adj.) rage without sense.

The second noun is obsolete: it is however used by Spenser, and signifies adventurousness without judgment : the adjective signifies foolishly bold.

FooL'-LARGE,at//. Fool and large. Foolishly liberal.

Fool'-trap, H. s. Fool and trap. A snare to catch fools in, generally set by rogues.

To plai/ the fool. To play pranks like a hired jester; to jest; to make sport; to act like one void of common understanding.

To 77iake a fool of. To disappoint; to defeat.

To fool au'uy. To squander ; to waste sub- stance ; to exchange without an adequate equiva- lent.

To fool one of his money, is to cheat him by flattering his vanity, or cajoling his understand- ing; that is, to rob him through the medium of his folly or his ignorance.

The /ooZ hath said in his heart there is no God.

Psalm xiv. 1. A ful gret fool is any conscillour. That serveth any lord of high honour, That dare presume, or ones thinken it That his conseil shuld pass his lordes wit.

Chaucer. The Marchantes Tale.

But for as moche as som folk ben unmesurable, men oughten for to avoid and eschue fool-larffesse, the whiche men clepen waste. Certes, he that is /oo/-/ar(/e, he geveth not his catel, but he leseth his catel.

Id. The Pertones Tale.

This is my lif but if that I wol fight ; And out at dore anon I mote me dight. Or elles I am lost, but if that I Be, like a wild \eon, fool-hardy.

Id. Prologue to the Menkes Tale.

As whoa a ship, that flies fair under sail. An hidden rock escaped \inawares,

That lay in wait her wreck for to bewail ; The mariner, yet half amazed, stares At perils past, and yet in doubt he dares To joy at his fool-happy oversight. Faerie Queens. More huge in strength than wise in works he was. And reason vtilh foolhardise over-ran ;

Stern melancholy did his courage pass. And was, for terror more, all armed in shining brass.

Id. One mother, when as her foolhardy child Did come too near, and with his talons play. Half dead through fear, her little babe reviled.

Id. Pray do not mock ms ; I am a very foolinh fond old man : I fear I am not in my perfect mind.

Shakipeare. He, of all the men that ever my foolish eyes looked upon^ was the best deserving a fair lady.

Id. Merchant of Venice. Do’st thou call xnefool, boy? — All thy other titles thou hast given away that thou wast born with. Id. King Lear.

If it be you that stir these daughters hearts Against their father, _/c>oi me not so much To bear it tamely. Id,

Well, thus we play the fool with the time, and the spirits of the wise sit in the clouds and mock us.

Id. Henry IV. Reply not to me with a. fuolborn }cst. Id.

We are come off Like Romans : ne'iihp.r foolish in our stands. Nor cowardly in retire. Id. Coridanus.

'Twere as good a deed as to drink when a man's a-hungry, to challenge him to the field, and then to break promise with him, and make a fool of him.

Id. Twelfth Night. Foolery, Sir, does walk about the orb like th'; sun ; it shines every where : I would be sorry. Sir, but the fool should be as oft with your master as with my mistress. Id.

When I am read, thou feign'st a weak applause. As if thou wert my friend, but lackest a cause :

This but thy judgment yboifs; the other way Would both thy folly and thy spite betray.

Ben Jons in. That Pythagoras, Plato, or Orpheus, helieve,! in any of these fooleries, it cannot be suspected.

Raleigh's Hisiory, Fool not ; for all may have. If they dare try, a glorious life, a grave. Herbert. If you have the luck to be coxirt-fools, tliosc that have either wit or honesty, you may fool withal, and spare not. Denham.

If this disguise sit not naturally on so grave a per- son, yet it may become him better than that fool's coat. /,/,

Him over-wraning To over-reach ; but wi'hthe serpent meeting, Fooled and beguiled. Milton's Paradise Lost.

I scorn, although their drudge, to be their fool or jester. Milton.

If any yet be so foolhardy, T' expose themsclvei? to vain jeopardy ; If they come wounded off and lame. No honour's got by such a maim. Hudihras. I returning where I left his armour, found another instead thereof, and armed myself therein to play the fool. Sidney.

Is this a time {or fooling ? Dryden.

When I consider life, 'tis all a cheat ; For fooled with hope, men favour the deceit. Id.

There is a dilftironce betwixt daring and foolhardi- ness : Lucan and Statius often ventured them too far, our Virgil never. Id,

I am tired with waiting for this chemick gold. Which fools us young, and beggars us when old.

Id. To be thought knowing, you must first put the /ooi upon all mankind. Id. Juvenal, Preface.

Bets at the first, vtere fooltrtps, where the wise Like spiders lay in ambush for the flies. Dryden.

We are transported wkh fooleries, which, if we un- derstood, we should despise. L'Estranqe.

It must be an industrious youth that provides against age ; and he that fools away the one, must either beg or starve in the other. Id.

He must be happy that knows the true measures of fooling. Id.

Is it worth the name of freedom to be at liberty to play the fool, and draw shame and misery upon a man's self ? Locke.

It may be asked, whether the eldest son, being a fool, shall inherit paternal power before the younger, a wise man. Id

If men loved to be deceived and fooled about their spiritual estate, they cannot take a surer course than by taking their neighbour's word for that, which can 1)0 known only from their own heart. Sovth.

A false glozing parasite would call hi% foolhardineis valour, and then he may go on boldly because blindly.

Id. Foolishness being properly a man's deviation from right reason, in point of practice, must needs consist in his pitching upon such an end as is unsuitable to his condition, or pitching upon means unsuitable to the compassing of his cnii. Id.

Charmed by thoir eyes, their manners I acquire. And shape my foolishness to their desire. Prior.

What could the head perform alone. If all their friendly aids were gone ? A foolish figure he must make ; Do nothing else but sleep and ake. Id.

I would advise this blinded set of men not to give credit to those, by whom they have been so often fooled and imposed upon. Addison's Freeholder.

A woman, who is not a fun!, can have but one rea- son for associating with a man who is one.

Congreve. Way of the World. 'Tis not so hard to counterfeit joy in the depth of affliction, as to dissemble mirth in the coiiip

He thanks his stars he was not born a. fool. Pope. Although we boast our winter sun looks briglit, ' And foolishly are glad to see it in its height ; Yet so much sooner comes the long and gloomy night.

Swift. It is mere foolery to multiply distinct particulars in treating of things, where the difference lies only in words. Walts.

He allows himself in foolish hatreds and resent- ments against particular persons, without considering that he is to love every body as himself. Law.

——^—^— 1 Call me not

Mother ; for if I brought thee forth, it was As foolish hens at times hatch vipers, by Sitting upon strange eggs.

Byron. Deformed Trarufformcd.

FOOLADOO, a district of Africa, near the sources of the Senegal, situated between Kaarta, Konkodoo, Jallonkadoo , and Manding. It is rocky, and watered by the numerous streams that fall into the S(;negal, of which the principal are the Wonda, the I?a Lee, and the Ba WooUima. This country is tlie original residence of the

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."Swed. Jot , Dan.

foet ; Teui.feus :

' qu. of Gr. TTsg ?

that on or by which

Foulahs, a people widely diffused over Western Africa.

FOOLICONDA, a town of Yam, in Western Africa, on the northern side of the Gambia, sixty miles nortli-west of Pisania.

Fool'stones, 71. s. A plant.

FOOSHT, an island in the Red Sea, situated, according to the observations of Mr. Bruiie, in N. lat. 15° 59′ 43". It is described by him as about five miles long from nortli to south, though only nine in circumference. It is low and sandy in tlie south, but the north rises in a black hill of inconsiderable height. It is co- vered with a kind of bent grass, which never arrives at any great length, by reason of want of rain and the constant browsing of the goats. There are great appearances of the black hill having once been a volcano ; and near the north cape the ground sounds hollow like the Solfaterra in Italy. The inhabitants are poor fishermen }f a swarthy color, going almost naked.

FOOT, 11. s., V. 11. &c V. a. -V Sax. pot ; Scot.

Foot'ed, adj. IfiLt ; Gothic and

Foot'ing, n. s.

Feet, n. s. plural,

Feet' LESS, adj. The lower part ; the base ,

any body or thing is supported; the lowest member of the human frame; the end ; the lowest part. It is applied to the practice of walking; and to the posture and action of those that walk. It is used in a military sense to designate infan- try from cavalry, and in this application has no plural. Footing seems to have been once prover- bially used for the level ; the square ; the par. It metaphorically designates state ; character ; con- d ition ; scheme ; plan ; settlement. It is used in the singular, to characterise one of a certain number of syllables, constituting a distinct part of a verse which are called feet. It is also used for a measure containing twelve inches ; on foot, a phrase denoting walking as distinguished from riding or being conveyed. The verb differs little fromihe noun, except in the following instances : to dance; to tread wantonly; to trip. Footed signifies, shaped in the foot. Footing is ground for the foot ; support ; root ; basis ; place ; pos- session ; tread ; walk ; dance ; steps ; road ; track ; entrance ; beginning ; establishment ; state ; condition ; settlement. The following are instances of its use in composition :—

FooT-BALL, n. s. Foot and ball. A ball com- monly made of a blown bladder, cased with lea- ther, driven by the foot. The sport or practice of kicking the foot-ball.

FooT-Bov, n. s. Foot and boy. A male do- mestic servant, usually in livery.

FooT-BRtDGE, u. s. Foot and bridge. A bridge on which passengers walk ; a narrow bridge.

FooT-cLOTH, 71. s. Foot and cloth. A sump- ter cloth.

FooT-FiGHT, n. s. Foot and fight. A fight

made on foot, in opposition to that on horseback,

FooT-iioLD, n. s Foot and hold. Space to

hold the foot ; space on which one may tread

surely.

FooT-LiCKER, n. s. Foot and licker. A slave ; a humble fawner : one who licks the foot.

FooT-MAN, n. s. Foot and man. A soldier belonging to the infantry, as distinguished from the cavalry ; a domestic servant in or out of li- very. One who practices to walk or run.

FooTMANSiiip, n. s. From foot-man. The art or faculty of a runner.

Foot-pace, n. j. Foot and pace. Part of a pair of stairs, whereon, after four or five steps, you arrive to abroad place, where you make two or three paces before you ascend another step, thereby to ease the legs in ascending the rest of the stairs ; a pace no faster than a slow walk.

FooT-PAD, n. s. Foot and pad A highway- man, that robs on foot.

Foot-path, n. s. Foot and path. A narrow way, which will not admit horses or carriages.

Foot-post, n. s. Foot and post. A post or messenger that travels on foot.

Foot-stall, w.s. Foot and stall. A woman's stirrup.

Footstep, n. s. Foot and step. ˆImpression left by the foot ; hence trace ; track-mark ; print ; impression, token, and evidence of any thing ; To follow the footsteps of another is also to fol- low his example.

FooT-STOoL, 71. s. Foot and stool. Stool on which he that sits places his feet.

Antiochus departed, ■weening in his pride to make the land navigable, and the sea passable hy foot.

2 5Iac. V. 21. Ther, stomblen stedes strong, and doun goth all He rolleth underfoot as doth a ball.

Chaucer. The Knightes Tale. And eke his stede driven forth with staves Vfith footmen, bothe yemen and eke knaves. Id. Feet, in our English versifying, without quantity and joints, be sure signs that the verse is either born deformed, unnatural, or lame.

Ascham's Schoolmaster, A wounded dragon under him did ly. Whose hideous tayle his lefte /oo< did enfold. And with a stafte was shot through either eye. That no man forth might draw, ne no man remedye.

Spenter. By this the dreadful beast drew nigh to land. Half flying and ha\i footing in his haste.

Faerie Queene. Didst thou hear these verses ? — O yes, I heard them all, and more too ; for some o' them had in them more feet than the verses would bear. Shakspeare.

Yond towers, whose wanton tops do buss the clouds, Must kiss their own feet. Id. Troilua and Creseide.*

Take heed, have open eye ; for thieves do foot by ainrht. Shakspeare.

While other jests are something rank on foot. Her father hath commanded her to slip Away with Slender to marry. Id.

What confederacy have you with the traitors La.te footed in the kingdom? Id. King Lear.

You, that did void your rheum upon my beard, ano foot me as you spurn a stranger cur over your "threshold. Shakipeare.

The queen that bore thee, Oft'ner upon her knees than on her/ee<. Died every day she lived. Id. Macbeth.

Saint Withold footed thrice the wold : He met the knight-mare, and her name told ; Bid her alight, and her troth plight, And aroynt thee, witch, aroynt thee right. Id.

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The centurions and their charges billeted already in the entertainment, and to be on foot at an hour's warning. Shakspeare.

I'll read you matter deep and dangerous ; As full of peril and adventurous spirit As to oi'erwalk a current, roaring loud. On the unsteadfast /oo

Id. Henry VI. Thus have we swept suspicion from our seat. And made out jSpotitool of security. Id.

Knowest thou the way to Dover ? — Both stile and gate, horseway and footpath.

Shakspeare.

Was it discretion, lords, to let this man This honest man, wait like a \ovrsy footboy At chamber-door ? Id. Henry VIII.

Do that good mischief which may make this island Thine own for ever ; and I, thy Caliban, For ay thy footlicker. Id. Tempest.

Three times a day my footcloth horse did stumble. And started when he looked upon the Tower, As loath to bear me to the slaughterhouse.

*Shakspea/rc. Am I so round with you as you with me. That \i.e z. football you do spurn me thus ? Id. The numbers levied by her lieutenant did consist oi footmen three millions, of horsemen one million. Raleigh's History. Were it not for this easy borrowing upon interest, men's necessities would draw upon them a most sud- den undoing, in that they would be forced to sell their means, be it lands or goods, far under /tlo^*

Bacon's Essays. An, orange, lemon, and apple, wrapt in a linen cloth, being buried for a fortnight's space four foot deep within the earth, came forth no ways mouldy or rotten. Bacon.

He was carried in a rich chariot, litterwise, with two horses at either end, and two footmen on each side. Id.

Like running weeds that have no certain root ; or \\Le footings up and down, impossible to be traced.

Id. Henry VII.

The Irish archers espying this, suddenly broke up, and committed the safety of their lives to their nimble footmanship. Hayward.

For carrying such letters, every thoroughfare weekly appointeth a footpost, whose dispatch is well near as speedy as the horses. Carew.

We are the earth, and they. Like moles within us, heave and cast about j

And till they foot and clutch their prey. They never cool, much less give out. Herbert.

Fretting, by little and little, washes away and eaU oat both, the tops, and sides, a.nd feet of mountains.

Hakewill. Little need we stir our feet, to learn to tell either loud lies, or large truths. Bp. Hall.

Break off, break off, I feel the different pace Of some chaste /oo<»n

Milton, Yet then with foot, as stumbling as his tongue. Pressed for his place among the learned throng.

ManieU. Palemon's shepherd, fearing the footbridge was not strong enough, loaded it so long, 'till he broke that which would have borne a bigger burden, Sidney.

So began our foutfight in such sort, that we were well entered to blood of both sides. Id.

Let echoing anthems make his praises known On earth, his footstool, as ia heaven his throne.

Roscomitwn.

As when a sort of lusty shepherds try Their force sx football, care of victory Makes them salute so rudely, breast to breast. That their encounter seems too rough for jest.

Waller. By the phrase of worshipping his footstool, no more is meant than worshipping God at hxs footstool.

Stillingjieet. Thrice horse and ybo< about the fires are led. And thrice with loud laments they wail the dead.

Dryden. Lonely the vale and full of horror stood. Brown with the shade of a religious wood ; The moon was up, and shot a gleamy light ; He saw a quire of ladies in a round. That featly footing seemed to skim the ground.

Id. What dismal cries are those ? — Nothing ; a trifling sum of misery. New added to the foot of thy account : Thy wife is seized by force, and

borne a.vrtiy.Id. Set cloven stakes ; and wond'rous to behold. Their sharpened ends in earth the'tr footing place. And the dry poles produce a living race. Id. Virgil.

This man's son would, every foot and anon, be tak- ing some of his companions into the orchard.

L' Estrange. All fell to work at the roots of the tree, and lei'c it so VM\e foothold, that the first blast laid it flat on the ground. Id,

Yet, says the fox, I have baffled more of them with my wiles and shifts than ever you did with your footmanship. Id.

A man shall never want crooked paths to walk in, if he thinks Ihat he is in the right way, wherever he has the footsteps of others to follow. Locke.

All those sublime thoughts take their rise diTxA foot- ing here : the mind stirs not one jot beyond those ideas which sense or reflection have offered. Id.

Snouted and tailed like a boar, and footed like a goat. Grew.

What colour of excuse can be for the contempt with which we treat this part of our species, the negroes, that we should not put them upon the comraon foot of humanity, that we should only set an insignificant fine upon the man who murders them ? Addison.

JAV^ footmen running before coaches. To tell the inn what lord approaches. Prior When suffocating mists obscure the morn. Let thy worst wig, long used to storms be worn j This knows the powdered footman, and, with care. Beneath his flapping hat secures his hair. Gay, Let us turn our thoughts to the frame of our sys- tem, if ther« we may trace any visible footsteps of Di- vine wisdom and beneficence. Bentlcy's Sermoiu, And Sidney's verse halts ill on Roman feet.

Pope, His brother's image to his mind appears. Inflames his heart with rage, and wings hXs feet with fears. Id,

I ask, whether upon the foot of our constitution, as it stood in the reign of the late king James, a king of England may be deposed ? Swift.

Sacred Thespio ! which in Sinai's grove First took'st thy being and immortal breath.

And vaunt'st thy offspring from the highest Jove, Yet deign 'st to dwell with mortals here beneath. With vilest earth, and men more vile residing j Come

ho'y Virgin, to my bosom gliding ; With thy glad angel-light my blind-fold footsteps guiding. Fletcfier'a Purple Island,

The trumpet sounds, your legions swarm abroad Through the ripe harvest lies their destined road ; At every step beneath their /ee they tread The life of multitudes, a nation's bread. Cowper.*

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o'er her fair limbs couvulsive tremors fleet. Start in her hands, and struggle in her feet ; In vain to scream with quivering lips she tries, Aud strains in palsied lids her tremulous eyes.

Darwin, 'Tis necessary for the further daring Of our too needy army, that their chief Plant the lirst_/'i)c(< upon the foremost ladder's First step, Byron. Deformed Transformed.

You may sometimes trace

A feeling in each, footstep as disclosed By Sallust, in his Catiline, who chased By all the demons of all passions showed Their work even by the way in which he trodc.

Byron. Foot. See Anatomy, Index. Foot, in the Latin and Greek poetry, a mea- sure composed of a certain number of long and short 'syllables. They are commonly reckoned twenty-eight : of these some are simple, as con- sisting of two or three syllables, and therefore called dissyllabic or trisyllabic feet; otliers compound, consisting of four syllables, and therefore called tetrasyllable feet. The dissyl- labic feet are four in number, viz. the pyrrhichius, spondeus, iambus, and trocheus. See Pyrrhic, &c. The trisyllabic feet are eight in number, viz. the dactylus, anapcestus, tribrachys, molossus, amphibrachys, amphimacer, bacchius, and an- libacchius. See Dactylus, &c. The tetrasyl- lable are sixteen in number, viz. the procleusma- ticus, dispondeus, choriambus, antispastus, diiam- bus, dichoreus, ionicus a majore, ionicus a rainore, epitritus primus, secundus, tertius, and quartus, paeon primus, secundus, tertius, and quartus. See Procleusmaticus.

Foot, in measures, a division of length, con- taining twelve inches. See Arithmetic. The Roman foot was equal to about "965 of the English foot ; the Ancona foot is 1-282 English; Bologna foot, 1-244; Brescia foot, 1-560; Fer- rara foot, 1-317; Florence foot, -995 ; Geneva foot, 1-919;

Leghorn foot, -992; Milan decimal foot, -8.55 ; Modena foot, 2-081 ; Naples palm, •861; Paris foot, 1-066; Paris metre, 3-281; Parma foot, 1-869; Pavia foot, 1-540; Piacenza, same as the Parmese; Rhinland, 1-023 to 1-030; Rome foot, -966; Sienna foot, 1-239; Trent foot, 1-201; Turin foot, 1-676; Venice foot, 1-137; Verona foot, 1-117; Vicenza foot, 1-136. The ancient Greek foot is eleven inches -875 of the English foot.

Foot of a Horse, in the manege, the ex- tremity of the leg, from the coronet to the lower part of the hoof. See Farriery.

Foot, Solid or Cubic, is the same measure in all the three dimensions, length, breadth, and depth or thickness, containing 1728 cubic inches.

Foot, StyuARE, is the same measure both in breadtli and length, containing 144 square or superficial iriches.

F(30TA .Tallo, an extensive country of Western Africa, near the sources of the Gambia, the Rio Grande, and probably the Niger. It is computed to be 350 miles from east to west, and 200 from north to south. The climate is good, and parts of it are extremely fertile . The ob- jects of cultivation are rice and maize, which are both raised and carried to market by females.

The hilly grounds afford pasture to sheep. Tliey also contain iron stone, which is dug and manu- factured. The mines are deep, and worked with long galleries or horizontal passages, having openings for the admission of air. Here too the women are said chiefly to perform the la- bor. The inhabitants are Foulahs, and have numerous mosques. Their houses are detached, neat, and convenient. In the towns are manu- factories of narrrow cloth, workmen in iron, silver, wood, leather, &c. Many of the natives undertake long commercial journeys, and are acquainted both with Cassina and Tombuctoo, with which there is a free communication by a journey of four months. The principal towns are Teemboo and Laby, the former containing 7000, and the latter 5000 inhabitants.

FOOTA ToRRA, a country of Western Af- rica, between the higher parts of the Senegal and Gambia; to the west of Bondou. It is ex- tensive, and occupied by Foulahs, but is little known. The king is said to be a zealous Ma- hommedan ; and Park, in returning from his first journey, received accounts of a species of crusade in which he had engaged against his western neighbour, the damel of the JalofTs, with a view to compelling him to embrace Ma- hommedanism. The latter, however, carried on a harassing warfare, cutting off his supples, and, having thus reduced his force, surprised and took him prisoner. After compelling him to labour as a slave for three months, however, he restored him to his kingdom.

FOOTE (Samuel), was born at Truro, in Cornwall, and descended from a very ancient family. His father was M. P. for Tiverton, in Devonshire, and commissioner of the prize otRce and fine contract. Through his mother's rela- tions, Foote became possessed of a considerable part of the Goodere estate, which was worth ra- ther more than £5000 a-year. ' He was educated at Worcester College, Oxford, and, on leaving the university, commenced student of law in the Temple; but as the dryness of this study did not suit the liveliness of his genius, he soon, re- linquished it. He married a young lady of a good family and fortune ; but the connexion was not productive of happiness. He now launched into gaming and all the fashionable follies of the age ; and in a few years spent his whole fortune. His necessities led him to the stage, and he made his first appearance in Othello. But as Mr. Foote was never a dis- tinguished actor in the plays of others, his salary was very unequal to his gay and extravagant turn : and he contracted debts which forced him to take refuge within the verge of the court. On this occasion, he relieved his necessities by the following stratagem : — Sir Francis Delavai had long been his intimate friend, and had dis- sipated his fortune by similar extravagance. A lady, who was likewise an intimate acquaintance of Foote 's, and who was exceedingly rich, was fortunately at that time bent upon a matrimonial scheme. Foote strongly recommended to her to consult upon this momentous affair the conjurer in the Old Bailey, whom he represented as a man of surprising skill and penetration. He employed an acquaintance of his own to per-

sonate the conjurer ; who depicted Sir Francis at full length; described the time when, the place where, and the dress in which she would see hira. The lady was so struck with the coin- cidence of every circumstance, that she married Delaval in a few days. For this service Sir Francis settled an annuity upon Foote, which enabled him once more to emerge from obscurity. ˆn 1747 he opened the little theatre in the Hay- market, taking upon himself the double charac- tei of author ami performer ; and appeared in a dramatic piece of his own composing, called the Diversions of the Morning. This piece con- sisted of nothing more than the exhibition of several characters well known in real life ; whose manner of conversation and expression Foote very happily hit off in his drama, and still more happily represented on the stage. In the con- cluding part of his speech, under the character •of a theatrical director, Mr. Foote took off, with great humor and accuracy, the styles of acting of every principal performer on the English stage. This entertainment at first met with some

opposition ; but Foote being patronised by many of the nobility, and other persons of distinc- tion, the oppasition was over-ruled : and, having altered the title of his performance, he proceeded, without further molestation, to give Tea in a Morning to his friends, and represented it through a run of forty mornings to crowded and splendid audiences. The ensuing season he produced another piece which he called An Auction of Pictures. This piece aJiso had a great run. His Knights, which was the produce of the ensuing 6eason, was a performance of somewhat more dramatic regularity. His dramatic pieces, ex- clusive of the interlude called Piety in Pattens, are, Taste, The Knights, The Author, The En- glishman in Paris, The Englishman returned from Paris, The Mayor of Garrat, The Liar, The Patron, The Minor, The Orators, The Commis- sary, The Devil upon Two Sticks, The Lame Lover, The Maid of Bath, The Nabob, The Cozeners, The Capuchin, The Bankrupt, and an unfinished comedy called the Slanderer. In 1766, being on a party of pleasure with the then duke of York, lord Mexborough, and Sir Francis Delaval, Mr. Foote broke his leg, by a fall from his horse ; in consequence of which he suffered an amputation. The duke on this occasion obtained for Mr. Foote a patent for life ; whereby he was allowed to perform at the little theatre in Hay- market, from the 15th May to the 15th Sep- ten.ber, every year. He now became a greater favorite of the town than ever : his laughable pieces, with his more laughable performance, constantly filled his house; ard his receipts were in some seasons almost incredible. Parsi- mony was never one of his vices ; his hospitality and generosity were ever conspicuous; he was visited by the first nobility, and he was some- times honored even by royal guests. In the midst of this success an attacTc was made upon his character by a villainous domestic, whom he had dismissed for misbehaviour; and though he was honorably acquitted of the crime imputed, it was thought that the shock which he received frora.it accelerated his death. Mr. Foote on the decline of his health, entered into an agreement Vol. IX.

■with Mr. Colman, for his patent of the theatre ; according to which he was to receive from the latter £1600 a-year, besides a stipulated sum whenever he chose to perform. Mr. Foote made his appearance two or three times in some of his most admired characters ; but was suddenly af- fected with a paralytic stroke one night whilst upon the stage, and compelled to retire. Being advised to bathe, he repaired to Brighton, where he recovered his health and spirits, and a few weeks before his death returned to London: but, by the advice of his physicians, set out with an intention to spend the winter at Paris and in the south of France. At Dover he was suadenly attacked by another stroke of the palsy, which in a few hours terminated his existence, on the 21st of October, 1777, in the fifty-sixth year of his age. He was privately interred in the cloisters of Westminster Abbey. Foote has often been styled the English Aristophanes ; and a better

*proof of his comic powers cannot, perhaps, be needed than the following anecdote from Bos well's Life of Johnson. 'The first time,' says Dr. Johnson, * I was in company with Foote, was at Fitzherbert's, Having no good opinion of the fellow, I was resolved not to be pleased ; end it is very difficult to please a man against his will. I went on eating my dinner pretty sullenly, affecting not to mind him ; but the dog was so very comical, that I was obliged to lay down my knife and fork, throw myself back in my chair, and fairly laugh it out. Sir, he was irresistible.'*

Foot-Halt, a disorder incident to sheep. It takes its source from an insect, which, when it comes to a certain maturity, resembles a worm of two, three, or four inches in length. The first appearance of this malady is, when the sheep gives signs of lameness, which increases to so high a degree as to prevent grazing ; when, with want of sufficient food, and pain, the poor ani- mal suffers greatly, and lingers till it dies, if not cured by extracting the insect or worm. The sooner this is done the better, as it is easily per- formed. As soon as the lam.eness is perceived, let the foot that is lame be examined between the close of the claws, and it will be found that in the skin where the close separates is a small hole (not natural), through which the insect, when yet small, gets its entrance, and by degrees has worked itself upwards along the leg, between the outward skin and bone, and obtains its largest magnitude. Proportionally it finds its nourish- ment, when it is left undisturbed. This worni must be extracted by moving the claws backward and forward in contrary directions; when the under part of the worm will soon make its ap- pearance at the above-mentioned small hole, and continuing the same operation of moving the claws, the whole worm will work itself out. This is better than at its first appearance to draw it out with danger of breaking off; lest part of it should remain in the sheep's leg, and, by rotting there, prove hurtful. This easy operation will be effectual without any application whatever, and the channel, which the worm had made along the leg, will cure of itself. This malady is in some years more prevalent than in others, particularly in wet seasons ; and is oftener ob-

servea to begin in spring and autumn than in summer and winter; notwithstanding sheep suf- fer more by the wet in winter than in any of tlie other seasons. lu high grounds they are less liable to it than in low marshy and meadow grounds.

FOP, n. s. “1 A word probably made

Fop’DOODLE, n. s. by chance, and therefore I’op’PERY, n. s. \ without etymology, says Fop’pisii, at/;’. ˆDr. Johnson: but there Fop’pisuLY, adv. I is a regular Teut. sub Fop’pisuNESS,?j.s. I stantive fop (Belg. vop) ; Fop’pLiNG, Ti.s. J from which it is clearly derived. A simpleton; a coxcomb; a man of small understanding and much ostentation; a pretender; a man fond of show, dress, and flutter ; an impertinent : foppery is derived from fop, and signifies that kind of folly which dis- plays itself in dress and manners : to be foppish is to be fantastically and affectedly fine ; vain ; ostentatious ; showy, and ridiculous : foppling is the diminutive of fop, a fool half grown ; a stunted and insignificant coxcomb; a thing without species or gender, that endeavours to attract admiration to its pretty person, its pretty dress, &c. In composition it makes fop-doodle, a fool double distilled ; one that provokes ridi- cule and contempt, who thrusts himself into dan- ger with no otlier chancethan a sound beating for his pains.

A whole tribe olfops. Got ‘tween asleep and awake.

Shakˆpeare. King Lear.

This is the excellent foppery of the world, that when we are sick in fortune, often the surfeits of our own beiiaviour, we make guilty of our disasters, the sun, the moon, and stars, as if we were villains on necessity. Id.

Fools ne’er had less grace in a year ; For wise men are grown foppish.

And know not how their wits to wear. Their manners are so apish. Id.

Let not the sound of shs.Wo’w foppery enter My sober house. Id. Merchant of Venice.

I was three or four times in the thought they were not fairies; and yet the guiltiness of my mind, the sudden surprise of my powers, drove the grossness of the ybjD/jei-ˆ into a received belief, in despight of the teeth of all rhyme and reason, that they were fairies. Id. Merry Wives of Windsor. Where sturdy butchers broke your noddle. And handled you like a.fopdoodle. Hudibrai,

When such a positive abandoned fop, “iraong his numerous absurdities. Stumbles upon some tolerable line, I fret to see them in such company.

Roscommon. vc had to-day a dozen billet-doux, m fops, and wits, and cits, and Bow Street beaux ; Some from Whitehall, but from the Temple more, A Covent Garden porter brought me four. Dryden.

The leopard's beauty, without the fox's wit, is no better than a. fup in a gay coat. L'Eitramje,

The Romans grew extremely expensive and fop- pish ; so that the emperor Aurelian forbid men that variety of colours on their shoes, allowing it siill to women. Arhuthnot.

I wish I could say quaint fopperies were wholly absent from graver subjects. Swift,

But though we fetch from Italy and France Oar fopperies of tune and modes of dance Our sturdy Britons scorn to borrow sense.

CrranoUle. Thy works in Chloe's toilet gain a part. And with his taylor share the foppling' s heart.

Tickell. You would know who is rudo and ill-natured, v/ho is vain lind foppish, who lives too high, and who is iu debt. I-aw.

FOR, prep, and conj. Sax. poji. Dr. Johnsoii says preposition. Jimius derives it from the Greek Trpo, transposing the p and changing n into p. Skinner and Tyrwhitt from the Latin pro. Mr. Home Tooke fiom the Gothic vounfairinaˆ cause. ' I imagine,' observes Mr. Tooke, ' the word for (whether denominated preposition, con- junction, or adverb) to be a nonn, and to have always one and the same single signification, viz. cause, and nothing else. Though Greenwood at- tributes to it eighteen, and S. Johnson forty-s-ix different meanings; for which Greenwood cites above forty, and Johnson above 200 instances. But, with a little attention to these instances, you will easily perceive, that they usually attribute to the preposition the meaning of some other words in the sentence'; — vide Diversions of Purler/, p. 345. We are, speaking generally, of Mr. Tooke'a opinion as to this word : but the instances of Dr. Johnson will fully illustrate both his defini- tions, and this more simple one of Mr. Tooke's. We therefore subjoin them, with some few addi- tions and rectifying the chronology.*

Because of.

That which wey

Hooker. Edward and Richard, With fiery eyes, sparkling /or very wrath. Are at our backs. Shakspeare. Henry VI.

Speak, good Cominius ■ Leave nothing out for length. Shakspeare. For as much as the question cannot be scanned, unless the time of Abraham's journey be considered of, I will search into a tradition concerning his travels. Raleigh's History.

An astrologer saith, if it were not for two things that are constant, no individual would last one mo- ment. Bacon.

For as much as it is a fundamental law in the Turkish empire, that they may, without any other provocation, make war upon Christendom for the propagation of their laws ; so the Christians may at all times, as they think good, be upon the preven- tion. Id. War with Spain.

Let no man, for his own poverty, become more oppressive in his bargains ; but quietly recommend his estate to God, and leave tJje success to him.

Taylor.

I but revenge my fate; disdained, betrayed. And suffering death /or this ungrateful maid.

Dryden. Sole on the barren sands, the suffering chief Roared out /or anguish, and indulged his grief.

Id. Children, discountenanced by their parents /or any fault, find a refuge in the caresses of foolish flatterers.

Locke. A sound mind in a sound body is a short but full description of a happy state in this world : he that has these two has little more tv> wish for, and he iha;

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\rants either of them will be but little better /or any thing else. Locke..

Persons who have lost most of their grinders, having been compelled to use throe or four only in chewing, wore them so low, that the inward nerve lay bare, and they would no longer for pain make use of them. Hat/ on the Creadon.

The middle of the gulph is remarkable/or tempests.

Addisim. My opened thought to joyous prospect raise. And for thy mercy let me sing thy praise. Prior.

Which best or worst you could not think ; 4nd die you must ybr want of drink. Id.

It is a most infamous scandal upon the nation, to reproach them for treating foreigners with contempt.

Swift. We can only give them that liberty now for some- thing, which they have so many years exercised for nothing, of railing and scribbling against us. Id. With respect to ; with regard to.

Rather our state's defective _/br requital. Than we to stretch it out. Shakspeare. Coriolamu. A paltry ring That she did give me, whose poesy was. For all the world, like cutler's poetry Upon a knife j love me and leave me not.

Shakspeare. For all the world. As thou art at this hour, was Richard then. Id. It was young counsel for the persons, and violent counsel ybr the matters. Bacon's Essays.

Authority foUoweth old men, and favour and po- pularity youth J h\xi for the moral part, perhaps, youth ■will have the pre-eminence, as age hath for the poli- tick. Id.

After death, we sprights have just such natures We had, for all the world, when human creatures.

Dryden. Such little wasps, and yet so full of spite ; For bulk mere insects, yet in mischief strong.

Tate. Hobbes has given us a correct explanation of the sense in general ; but for particulars and circum- stances, he continually lops them. Pope.

ho, some are vellum, and the rest as good. For all his lordship knows, but they are wood. Id. In this sense it has often as before it. As for Maramaldus the general, they had no just cause to mislike him, being an old captain of great experience. KnoUes.

In the character of.

If a man can be fully assured of any thing for a truth, without having examined, what is there that he may not embrace /or truth? Locke.

Say, is it fitting in this very field. This field, where from my youth I've been a carter, I, in this field, should die /"or a deserter? Guy.

She thinks you favoured : But let her go, for an ungrateful woman.

A. Phillips.

With resemblance of.

I hear/ur certain, and do speak the truth. The gentle York is up. SJiakipeare. Henry IV.

Now, now ybr sure, deliverance is at hand. The kingdom shall to Israel be restored. Milton. The startling steed was seized with sudden fright. And, bounding, o'er the pommel cast the knight ; Forward he flew, and pitching on his head. He quivered with his feet, and lay /or dead.

Dryden. Considered as ; in the place of. The council-table and star-chamber held for ho- nourable that which pleased, and for just that which profited. Claremlon.

Our present lot. appears For happy, though but ill ; for ill, not worst. If we procure not to ourselves more woe. Milton. In advantage of; for the sake of. An ant is a wise creature /or itself ; but it is a shrewd thing in an orchard. Bacon.

He refused not to die /or those that killed him. And shed his blood /or some of those that spilt it.

Boyle. Shall I think tne world was made /or one. And men are born /or kings, as beasts /or men. Not /or protection, but to be devoured ?

Dryden. Read all the prefaces of Dryden, For those our criticks much confide in ; Though merely writ at first /or filling. To raise the volume's price a shilling. Swift. Conducive to ; beneficial to. It is for the general good of human society, and consequently of particular persons, to be true and just ; and it is /or men's health to be temperate.

Tillotson. It can never oe for the interest of a believer to do me a mischief, because he is sure, upon the ba- lance of accounts, to find himself a loser by it.

Addison. With intention of going to a certain place. We sailed from Peru / or China and Japan.

Bacon. As she was brought for England, she was cast away near Harwich haven. Hayward.

We sailed directly /or Genoa, and had a fair wind.

Addison. In comparative respect. For tusks with Indian elephants he strove. And Jove's own thunder from his mouth he drove.

Dryden, With appropriation to.

Shadow will serve for Summer : prick him ; for we have a number of shadows to fill up the muster- book. Shakspeare. After O an expression of desire.

O for a muse of fire that would ascend The brightest heaven of invention ! Shakspeare.

In account of; in solution of. Thus much /or the beginning and progress of the deluge. Burnet's Theory of the Earth.

Inducing to as a motive.

There is a natural, immutable, and eternal reason for that which we call virtue, and against that which we call vice. Tillotson.

In expectation of.

Ho must be back again by one and twenty, to marry and propagate : the father cannot stay any longer /or the portion, nor the mother for a new set of babies to play with. Locke.

Noting power or possibility.

For a holy person to be humble, /or one, whom all men esteem a saint, to fear lest himself become a devil, is as hard as for a prince to submit himself to be guided by tutors. Taylor.

Noting dependence.

The colours of outward objects, brought into a darkened room, depend for their visibility upon the dimness of the light they are beheld by. Boyle.

In prevention of; for fear of.

Corn being had down, any way ye allow. Should wither as necdeth /or burning in mow.

Tusser. And, for the time shall not seem tedious, I'll tell thee what befcl me on a day. In this self place. Sfiukspea7V. Henry VI.

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There must be no alleys with hedges at the hither end, for letting your prospect upon this fair hedge from the green : nor at the farther end, for letting your prospect from the hedge through the arches upon the heath. Bacon's Essat/.^.

She wrapped him close _/br catching cold.

Lovelace. Tn remedy of.

Sometimes hot, sometimes cold things are good for the toothach. GarreUon.

In exchange of.

He made considerable progress in the study of the law, before he quitted that profession for this of poetry. Dryden,

In the place of; instead of To make him copious is to alter his character ; and to translate him lineybr line is impossible.

Dryden. We take a falling meteor /tT a star. Cowley.

In supply of; to serve in the place of.

Most of our ingenious young men take up sotne cried-up English poet for their model, adore hiin, and imitate him, as they think, without knowing wherein he is defective. Dryden.

Through a certain duration.

Some please _/br once, some will for ever please,

Roscommon,

Those who sleep without dreaming, can never be convinced that their thoughts sue for four hours busy, without their knowing it. Locke.

The administration of this bank is for life, and partly in the hands of the chief citizens. Addison.

In search of; in quest of.

Philosophers have run so far back ybr arguments of comfort against pain, as to doubt whether there were any such thing ; and yet, for all that, when any great evil has been upon them, they would cry out as loud as other men. Tillotson,

According to.

Chymists have not been able, for aught is vulgarly known, by fire alone to separate true sulphur from antimony. Boyle.

Noting a state of fitness or readiness.

Nay, if you be an undertaker, I a.va for you.

Sliakspeare. If he be brave, he's ready /or the stroke.

Dryden.

In hope of; for the sake of; noting the final cause.

How quickly nature Falls to revolt, when gold becomes her object! For this the foolish, over-careful fathers. Have broke their sleeps with thought, their brains

with care. Their bones with industry : for this, engrossed The cankered heaps of strong atchieved gold • For this they have been thoughtful to invest Their sons with arts and martial exercises.

Shakspeare. The kingdom of God was first rent by ill counsel ; upon which counsel there are set, for our instruction, two marks. . Bacon.

Whether some hero's fate, >

In words worth dying for, he celebrate.

Cowley. For he writes not /or money, nor ybr praise. Nor to be called a wit, nor to wear bays.

Denham. There we shall see a sight, woithy dying for, that blessed Saviour, who so highly deserves of us.

Boyle. He it not disposed to be a fool, and to be miserable for company. Tillotson.

Even death's become to me no dreadful name ; In fighting fields, where our acquaintance grew, I saw him, and contemned him first /or you.

Dryden. For this, 'tis needful to prevent her art. And fire with love the proud Phcenician's heart.

Id. Virgil. Some pray /or riches ; riches they obtain ; But watched by robbers, for their wealth are slain.

Dryden. Let them who truly would appear my friends. Employ their swords

like mine for noble ends.

Id. Of tendency to ; towards.

The kettle to the top was hoist : But with its upside down, to show Its indiaaxion/or below. Swift,

In favor of; on the part of; on the side of. Ye suppose the laws for which ye strive are found ill Scripture ; but those not against which we strive. Hooker. Preface. It becomes me not to draw my pen in the defence of a bad cause, when I have so often drawn it /or a good one. Dryden.

Jove was /or Venus ; but he feared his wife.

Id. Noting accommodation or adaptation. Fortune, if there be such a thing as she. Spies that I bear so well her tyranny. That she thinks nothing else so fit/or me.

Donne. It is for wicked men to dread God ; but a virtuous man may have undisturbed thoughts, even of the justice of God. Tillotson.

A few rules of logick are thought sufficient, in this case, for those who pretend to the highest improve- ment. Locke.

His country has good havens, both /or the Adriatic and Mediterranean. Addison on Italy.

Persia is commodiously situated for trade both b/- sea and land. Arbuthnot tin Coins.

With intention of.

And by that justice hast removed the cause Of those rude tempests, which, for rapine sent. Too oft, alas, involved the innocent. Waller

Here huntsmen with delight may read How to chuse dogs /or scent or speed. Id

For this, from Trivia's temple and her wood. Are coursers driven, who shed their master's blood.

Dryden. Such examples should be set before them, as pat- terns/(>r their daily imitation. Locke. The next question usually is, what is it for?

Id. 4chilles is for revenging himself upon Agamem- non by means of Hector. Broome, Becoming; belonging to.

It were more /or his honour to raise his siege than to spend so many gooH men in the winning of it by force. Knolles.

It were not /or your quiet, nor your good, 'Hot for my manhood, honesty, and wisdom. To let you know my thoughts.

Sluibepeare. Othello. Jests for Dutchmen and English boys.

Cowlejf. The' offers he doth make. Were not for him to give, nor them to take.

Daniel. It is a reasonable account /or any man to give, why he does not live as the greatest part «f the world do, that he has no mind to die as they do, and perish with them. Tillotson.

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Is it /or you to ravage seas and land. Unauthorized by my supreme command ?

Dri/den. His sire already signs him for the skies. And marks the seat amidst the deities. Id.

Notwithstanding.

This, for any thing we know to the contrary, might be the self-same form which Philojudaeus expresseth.

Hooker. God's desertion shall, for aught he knows, the next minute supervene. Decay of Piety.

Probability supposes that a thing may or may not be so, for any thing yet certainly determined on either side. South

If such vast masses of matter had been situated nearer to the sun, or to each other, as they might as easily have been, for any mechanical or fortuitous agent, they must necessarily have caused a consi- derable disorder in the whole system. Bentley.

For any thing that legally appears to the contrary, it may be a contrivance to fright us. Swift.

To the use of; to be used in.

The oak /or nothing ill. The osier good /or twigs, the poplar _/br the mill.

Spenser. Your understandings are not bright enough for the exercise of the highest acts of reason. Tillotson.

In consequence of.

For love they force through thickets of the wood. They climb the steepy hills and stem the flood.

Dryden. In recompense of; in return of.

Now, /or so many glorious actions done. For peace at home, and ybr the publick wealth, I mean to crown a bowl /or Cassar's health j Besides, in gratitude /or such high matters. Know I have vowed two hundred gladiators,

Bryden, First the wily wizard vanit be caught ; For unconstrained he nothing tells/or nought.

Id. In proportion to. He is not very tall, yet for his years he's tall.

Shakspeare. As he could see clear, for those times, through superstition ; so he would be blinded, now and then, by human policy. Bacon.

Exalted Socrates ! divinely brave ! Injured he fell, and dying he forgave ; Too nobleybr revenge. Dryden's Juvenal. By means of; by interposition of. Moral consideration can no way move the sensible appetite, were it not for the will. Hale.

Of some calamity we can have no relief but from God alone ; and what would men do in such a case, if it were not fur God ? Tillotson.

In regard of; in preservation of; I cannot for ffiiy life, is, I cannot if my life might be saved by it.

I bid the rascal knock upon your gate ; .But could not get him for my heart.

Shakspeare. I cannot ybr my heart leave a room, before I have thoroughly examined the papers pasted upon the walls. Addison's Spectator. For all. Notwithstanding. For all the carefulness of the Christians the Eng- lish bulwark was undermined by the enemy, and upon the fourth of September part thereof was blown ap. KnoUet's History.

But as Noah's pigeon, which returned no more. Did shew she footing found /or all the flood.

Davici,

Neither doubt you, because I wear a woman's ap- parel, I will be the more womanish ; since I assure you, for all my apparel, there is nothing I desire more than fully to prove myself a man in this enter- prize. Sidney.

They resolute, /or all this, do proceed Unto that judgment. Daniel.

Though that very ingenious person has anticipated part of what I should say, yet you will, for all thart, expect that I should give you a fuller account.

Boyle.

If we apprehend the greatest things in the world of the emperor of China or Japan, we arc well enough contented, /or all that, to let them govern at home.

StUlimjJleet.

She might have passed over my businesses ; but my rabble is not to be mumbled up in silence, for all her pertness. Dryden.

For all his exact plot, down was he cast from all his greatness, and forced to end his days in a mean con- dition. South.

For to. In the language used two centuries ago for was commonly used before to, the sign of the infinitive mood, to note the final cause. As, I come for to see you, for I love to see you: in the same sense with the French pour. Thus it is used in the translation of the Bible. But this distinction was by the best writers some- times forgotten; and /or, by wrong use, appear- ing superfluous, is now always omitted. But, for to tellen you of his araie, — His hors wos good, but he ne wos not gaie.

Chaucer. Prologue to Cant, Tales. Who shall let me now On this vile body/ or to wreak my wrong ?

Faerie Queene. A large posterity Up to your happy palaces may mount. Of blessed saints/or to increase the count.

Spenser. These things may serve for to represent how just cause of fear this kingdom may have towards Spain.

Bacon. For, C071J. The word by which the reason is introduced of something advanced before.

Goth now your way, ' fjuod he,' al stille and soft. And let us dine as sone

as that ye may, jFor by my kalendar it is prime of day.

Chaucer. The Shipmannes Tale. Heaven doth with us as we with torches deal. Not light them for themselves ; for if our virtues Did not go forth of us, 'twere all alike As if we had them not.

Shakspeare. Measure for Measure,

Tell me what kind of thing is wit : For the first matter loves variety less. Cowley. Old husbandmen I at Sabinum know. Who for another year dig, plough, and sow ; For never any man was yet so old. But hoped his life one Winter fliore would hold.

Denham. For the hope of happiness, said he, is so strongly impressed, that the longest experience is not able to cflacc it. Johnsi/n's liasselas.

Nor swelled his breast with uncouth pride, That heaven on him above his charge had laid ; But, /or his great Creator would llie same. His will increased ; so fire augmcnteth flame.

Fairfax,

Because ; on this account that. It is in this sense properly followed by that, and, without it, is elliptical. This sense is almost obsolete.

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Many excrescences of trees grow chiefly where the tree is dead or faded ; for that the natural sap of the tree corrupteth into some preternatural substance.

JJjcon'jf T'iatural History.

Tor as much. In regard to that; in considera- tion of.

For as much as in publick prayer we are not only to consider what is needful, in respect of God ; but there is also in men that which we must regard : we somewhat incline to length, lest ovcrquick dispatch should give occasion to deem that the thing itself is but little accounted of. Hooker.

For as much as the thirst is intolerable, the patient may be indulged the free use of spa water.

ArhiUhnot. For why. Because ; for this reason that. Solyman had three hundred fieldpieces ; for why, Solyman purposing to draw the emperor into battle, had brought no pieces of battery with him. Knolles. FOll'AGE, V. n., v. a. & ri. s. From Lat. foris, abroad ; Germ, and FT.fourruge. To wander far; to rove at a distance ; to wander in search of spoil, generally of provisions for an army; to ravage; to feed on spoil; to plunder; to strip; to spoil. Provisions in general ; provisions sought abroad ; search of provisions ; the act of feeding abroad.

They will both strengthen all the country round, and also be as continual holds for her majesty, if the people should revolt ; for without such it is easy to forage and over-run the whole land. Spenser.

He wearie sate To rest himselfe, foreby a fountaine syde. Disarmed all of yron-coted plate ; And by his side his steed the grassy forage ate.

Spenser't Faerie Queerie. Forage, and run To meet displeasure farther from the doors. And grapple with him, ere he come so nigh.

Shakspears. His most mighty father on a hill Stood smiling, to behold his lion's whelp Forage in blood of French nobility. Id.

One way a band select hova forage drives A herd of beeves, fair oxen, and fairkine. From a fat meadow ground ; or fleecy flock. Ewes and their bleating lambs, over the plains Their booty. Milton's Paradise Lost.

The victorious Philistines were worsted by the captivated ark, -which foraged their country more than a conquering army. Souths

Some o'er the publick magazines preside. And some are sent aevf forage to provide.

Dry den. Nor dare they stray When rain is promised or a stormy day ; But near the city walls their watering take, "Sot forage far, but short excursions make. Id. Provided forage, our spent arms renewed. Id,

FORAMEN, in anatomy, a name given to several apertures or perforations in divers parts of the body ; as, 1 . The external and internal fo- ramen of the cranium or skull. 2. The foiamina in the upper and lower jaw. 3. Foramen lachry- male. 4. Foramen merabranse tympani. See Anatomy.

Foramen Ovale, an oval aperture or passage through the heart of a foetus, which closes up after birth. It arises from the coronal vein, near the riglit auricle, and passes directly into the left auricle of the heart, serving for the circulation of the blood in the foetus, till tlie infant breathe.';,

ar.d the lungs are open : generally reckoned one of the temporary parts of the foetus, wherein it differs from an adult ; although almost all anatomists assure us, that the foramen ovale has sometimes been found in adults. See Foetus.

FORAM'INOUS, adj. From Lat. foramen. Full of holes ; perforated in many places ; po- rous.

Soft and foraminous bodies, in the first creation of the sound, will deaden it ; but in the passage of the sound they will admit it better than harder bodies. Bacon's Natural History,

FORBE'AR, V. n. pret. & u. a. "ˆ I forbore, an-

Forbe'arance, n. s. > ciently forbare ;

Forbe'arer, ?i. s. 3 part, forborn;

Sax. pojibjefian. For has in composition the power of privation, as forbear; or depravation, as forswear; and other powers not easily ex- plained.— Dr. Johnson. To cease from any thing ; to intermit ; to pause ; to delay ; to omit voluntarily; not to do; to abstain; to restrain any violence of temper ; to be patient ; to de- cline ; to avoid voluntarily ; to spare ; to treat with clemency; to withhold. The noun is used in all these senses. Forbearer, in addition to intermitter, signifies an interceptor of any thing ; as well as that which does not yield, bear, or bring forth.

Forbear thee from meddling with God, who is with me, that he destroy thee not. 2 Chron. xxxv. 21.

With all lowliness and meekness, with long suffer- ing,/wieannˆ one another in love. Eph. iv. 2.

Ye shul understond also, that Fasting stent in three thinges ; — in forhering of bodily mete and drinke ; in forbering of worldly jolitee ; and in forbering of dedly sinue ; this is to say, that a man shall kepe him fro dedly sinne with all his might.

Chaucer, The Persones Tale. The West as a father all goodness doth bring. The East ˆforbearer, no manner of thing. Tusser

But by what meanes that shame to her befell. And how thereof herselfe she did acquite, I must awhile forbeare to you to tell ; Till that, as comes by course, I doe recite What fortune to the Briton prince did lite.

Spenser, Faerie Queene. Have a continent forbearance, 'till the speed of his

rage goes slower. Shakspeare. King Lear,

Forbear his presence, until time hath qualified the heat of his displeasure. Id,

True nobleness would Learn him forbearance from so foul a wrong.

Shakspeare. I pray you, tarry : pause a day or two. Before you hazard ; for in chusing wrong, I lose your company ; therefore forbear a while. Id.

*I remember Gerson brings in an Englishman asking a Frenchman, Quot annos habes? ‘ How many years are you V a usual Latin phrase when we ask after a man’s age : His answer is, Annos non habeo ; * I am no years at all, but death bath forborne me these fifty.’ Bp. Hall, Sermon 30.*

The wolf, the lion, and the bear. When they their prey in pieces tear. To quarrel with themselves /orJear. Denham. If it passed only by the house of peers, it should be looked upon as invalid and void, and execution should be thereupon /ortoin or suspended.

Clarendon. O Trojan race ! your needless vlA forbear, And know my ships are my peculiar care.

D’yden,

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At this he started, &nA forbore to swear;

Not out of conscience of the sin, but fear. Dryden.

Liberty is the power a man has to dn, or forbear doing, any particular action, according as its doing or furhearame has the actual preference in the mind.

Locke,

There is not any one action whatsoever which a man ought to do, or io forbear, but the Scripture will give him a clear precept or prohibition for it.

South.

This may convince us how vastly greater a pleasure is consequent upon the

forbearaixce of sin, than can possibly accompany the commission of it. Id,

Kor do I take notice of this instance of severity in our own country to justify such a proceeding, but only to display the mildness and forbearance made use of under the reign of his present majesty.

Addison's Freeholder,

Who can forbear to admire and adore him who •weighed the mountains in scales, and the hills in a balance. Cheyne.

FORBES (Duncan), Esq. of CuUoden, an eminent Scots lavvj'er and judge, born in 1685, By the advice of liis friends he early applied him- self to the civil law ; in which he made a quick progress, and in 1709 was admitted an advo- cate. From 1722 to 1737 he represented the boroughs of Inverness, &c. In 1725 he was made king's advocate ; and in 1737 Lord Pre- sident. In 1744 and 1745 he espoused the royal cause, and almost ruined his private fortune ; but government did not make him the smallest recompense. He was well versed in the Hebrew language ; and wrote some treatises concerning natural and revealed religion. He died in 1747, in the sixty-second year of his age ; and his works have since been published in 2 vols. 8vo. • Forbes (Patrick), bishop of Aberdeen, was born in 1654, when the affairs of the church of Scotland were in much confusion ; to the settle- ment of which he greatly contributed. As chan- cellor of the university of Aberdeen, he improved that seat of learning by repairing the fabric, aug- menting the library, and reviving the professor- ships. He published a Commentary on the Revelations, at London, 1613 ; and died in

1635.

Forbes (John), the son of Patrick, also bishop of Aberdeen ; but was expelled by the Cove- nanters, and forced to fly beyond sea. Upon his return, he lived privately on an estate at Corse, till he died at 1648. His works were printed in 2 vols, folio, in Amsterdam in 1703. His Historical and Theological Institutes have been highly valued.

Forbes (William), bom in 1585, was the first bishop of Edinburgh. His ill health and the anti-episcopal disposition of the Scots, confined him chiefly to a retired life : and he died three months after his consecration in 1634.

Forbes (Sir William), was born in 1739 at Pitsligo, in Scotland. Bom to the inheritance of an ample fortune, he early devoted himself to the promotion of the commercial interests of his country, and was, in conjunction with the late Sir James Hunter Blnir, the founder of the well known banking establishment at Edin- burgh which bears their name. In his youth he had devoted much of his time to tlie study of literature ; and, during the course

of his long

life, he never lost sight of those literary pursuits which early association had endeared to him, and which relieved the pressure of his more serious avocations, and lent a distinguished grace to his character. Sii W. Forbes was one of the earliest members of the celebrated literary club which boasted amongst its illustrious associates the names of Johnson, Reynolds, Garrick, and Burke. The literary leisure of his latter days was devoted to the drawing up an account of the life and writings of his friend Dr. Beattie, which was published in 2 vols. 4to. 1806. He died at his seat near Edinburgh in 1806, in the sixty-eighth year of his age.

Forbes (James), an accomplished modem writer, was born in London in 1749, and early sent out by the East India Company to Bombay as a cadet. While in India he traversed various parts of that continent, making observations and forming drawings of every thing worthy of no- tice. He returned to England with an ample fortune in 1784. At the rupture of the peace of Amiens, he was detained with the other English visitors in France, but obtained his release after a stay of a few months, at the request of the National Institute. He died at Aix-la-Chapelle, Ausfust 1st, 1819. Mr. Forbes was the author of Letters from France, 2 vols. 8vo. Reflections on the Character of the Hindoos, 8vo. and Ori- ental Memoirs, 4 vols. 4to. splendidly illustrated with nearly 100 plates.

FORBID', u. a. &r.«.-\ Pret. I forbade;

Forbid'dance, n. s. I part, forbidden or for-

Forbid'dingly, aJf. ˆbid. Saxon, pofibeo-

Forbid'der,

Forbid'dixg, To prohibit ; to interdict any thing ; to command to forbear any thing ; to oppose ; to hinder : to accurse, to blast ; in this sense obsolete : to utter a prohibition. Forbiddance signifies an edict against any thing : to do any thing forbiddingly is to do it in an unlawful manner. Forbidding, the participial adjective, is used to signify rais- ing abhorrence, repelling approach; causing aversion.

Here may ye see, that not only the dede of this is forboden, but eke the desire to don that sinne.

Chaucer. The Persones Tale.

Trouth is a thing that I wol CTcr kepe Unto the day in whiche that I shal crepe Into my grave, and elles God forbede : Beliveth this as sikcr as your

crede.

Id, The Chanones Yemannes Tale.

Ere long to him a homely groome there came. That in rude wise him asked what he wos. That durst so boldly, without let or shame. Into his lords forbidden hall to passe.

Spenser's Faerie Queene. Now the good gods forbid, That our renowned Rome Should now eat up her own I

Shakspeare. Coriolanus, Sleep shall neither night nor day Hang upon his penthouse lid ; He shall live a man forbid. Id, Macbeth. A witch, a quean, an old cozening quean ; have I not forbid her my house ? Shukipcare.

With all confidence he swears, as he had soen't. That you have touched his queen forbiddeidi/ . Id

SLY, adv. > bid. Saxon, pofibeo- ,n.s. i'oan; Gothic, foibu-

-j,part.ndj.J da; Dut. verbieckn.

The moisture being forbidden to come up iB the plant, stayeth longer in the root, and so dilateth it. Bacon's Natural Hittory, How hast thou yielded to transgress The strict /orfciAinnce? how to violate The sacred lx\ni forbidderil

Milton'i Paradise Loit. Other care, perhaps. May have diverted from continual watch Our great yoriidi/er. Id.

She with so sweet a rigour forbad him, that he durst not rebel. Sidiiey.

The chaste and holy race re all forbidden this polluted place.

Dryden's JSneid. Trasedv was made forbiddinq and horrible,

° ^ -^ . A. Hill.

We left our hero and third heroine in A kind of state more awkward than uncommon j For gentlemen must sometimes risk their skin For that sad tempter, a. forbidden woman. Byron. FORCADO Rio, a river of Waree, in Africa, said to rise from a source far inland, and to have a winding course. It is about two English miles broad, but so shallow as not to be navi- gable for vessels of more than seven or eight feet water. Its banks are covered with trees, and produce a species of colored stones. The Por- tuguese carry on a trade here in slaves. Lat. 6° N.

FORCE, n. s. & v. a. Forc'es, n. s. plu. Fouc'edly, adv. Forceful, adj. Force'fully, adv. Force'less, adj. For'cer, n.s. For'cible, adj.

Tt. force; "Ldii.fortis. Literally it signifies the exertion of strength : it is however applied to (persons, words, and 'things, iu a variety of senses, all of them, however, to be easily

For'cibleness, n. s. I resolved into the pri-

For'cibly, aJy. J mary meaning. Force

is power in action, either pliysical, mechanical, legal, militaiy, moral, or literary. To force is to compel ; to overpower ; to impel. — In the active sense it also signifies to lay stress upon. Dr. Johnson says this word he only

found in the passage quoted below from Camden's Remains.

Thou shall not destroy the trees by forcing an ax against them. DeuteroTMiny xx. 19.

How forcible are right words! Job.

A testament is oi force after men are dead.

Hebrews ix. For certes, by no forte, ne by no mede.

Him thought he wos not able for to spede.

For she was strong of frcndet.

C/taucer. The Doctoures Tale.

I can not se ne why nc how, That he hath trespossed again you. Save that he loveth, wherefore ye shold The more in charite of him bold ; TUc force of Love makcth him doe this; Who would him blame, he did amis,

Chaucer. Romaunt of the Rote. He himself with grefdy great desire Into the castle entered forcibly. Faerie Queene. Manifest it is, that the very majesty and holiness of the place where God is worshipped, hath, in regard of us, great virtue, force, and efficacy ; for that it ■erveth as a sensible help to stir up devotion.

Hooker.

He never coiJd maintain his part but in the force of his ■will. Shnkspeare. Much Ado about Nothing.

Thus got the bouse of Lancaster the crown. Which now they hold hy force, and not by right.

Shakspeare. WTiy, what need we Commune with you of this, but rather follow Ourybrce/unnstigation ? Id. Winter's Talet

Here let them lye. Till famine and the ague eat them up : Were they not forced with those that should be our5« We might have met them dareful, beard to beard,

Shakipeare. O Thou ! whose captain I account myself. Look on my forces with a gracious eye.

Id. Richard III. God hath assured us, that there is no inclination of temptation so forcible which our humble prayers and desires may not

frustrate and break asunder.

Raleiyh's History. That morning that he was to join battle with Harold, his armorer put on hisbackpiece before, and his breast- plate behind ; the which being espied by some that stood by, was taken among them fur an ill token, and therefore advised hirn not to fight that day •, to whom the duke answered, I force not of such fooleries •, but if I have any skill in soothsaying, as in sooth I have none, it doth prognosticate that I shall change copy from a duke to a king. Camden's Remains.

The secret of the power of Spain consisteth in a Veteran army, compounded of miscellany forces of all nations. Bacon.

The taking and carrying away of women forcibly, and against their will, except female wards and bond- women, was made capital. Id. Henry VII.

Dangers are light, if they once seem light ; and more dangers have deceived men than forced them.

Bactm, A ship, which hath struck sail, doth run By force of that ybrce which before it won.

Dontie, Liberal Nature did dispense To all things arms for their defence ; And some she arms with sinewy force And some with swiftness in the course.

Cowley. The usual means for the ascent of water is either by suckers or forcers. Wilkitu's Dcedalus.

Not long in ybrce this charter stood ; Wanting that seal, it must be scaled in blood.

Denham. 0 that fortune Had brought me to the field where thou art famed To have wrought such wonders with an ass's jaw, I should have forced thee soon with other arms.

Milton. Who therefore can invent With what more forcible we may offend Our yet unwounded enemies ? Id.

Ye myrtles brown, with ivy never sere, I come to pluck your berries harsh and crude. And with /breed fingers rude

Shatter our leaves before the mellowing year. Id. He swifter far. Me overtook, his mother all dismayed. And in embraces ybrcift/e and foul Ingendering with me. Id.

The Gospel offers such considerations as are fit to work very forcibly upon two of the most swaying and governing passions iu the mind, our hopes and our fears. Tillotton.

Stooping, the spear descended on his chine. Just where the bone distinguished either loin : It stuck so fast, so deeply bury'd lay. That scarce the victor forced the steel away.

Dryden.

FORCE.

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To free the ports, aud ope the Punique land To Trojan guests ; lest, ignorant of fate. The queen might force them from her town and state.

Id, Force her.— I like it not. Id.

This foundation of the earth upon the waters doth most aptly agree to that structure of the abyss and antediluvian earth ; but very iin[,roperly and forcedly to the present form of the earth and the waters.

Burnet's Tlieory, Jersey, beloved by all ; for all must feel The influence of a form and mind,

Where comely grace and constant virtue dwell. Like mingled streams, raoTe forcible when joined : Jersey shall at thy altars stand. Shall there receive the azure band. Prior.

Now to the copse thy lesser spaniel take. Teach him to range the ditch and force the brake.

Gay't Rural Sports. The heat of the dispute had forced out from Luther expressions that seemed to make his doctrine run higher than really it did. Atterbury.

He poised in air, the javelin sent. Through Paris' shield the forceful weapon went.

Pope. A^hat tender/orcc, what dignity divine. What virtue consecrating every feature ; Around that neck what dross are gold and pearl !

Young's Btisiris. But when the day had his meridian run. Between his highest throme and low declining, Thirsil again his forced task begun. His wonted audience his sides entwining.

Fletcher's Purple Island.

With what force, my Lord, with what protection are you prepared to meet the united detestation of the ptople of England. Junius.

All philosophy is on]y forcing the trade of happiness, when nature neems to deny the means. Goldsmith.

There the vast mill-stone with inebriate whirl On trembling floors his forceful fingers twirl. Whose flinty teeth the golden harvests grind," Feast without blood ! and nourish human-kind.

Darwin, He stumbled on to try if he could find A path to add his own slight arm a.nd forces, To corps the greatest part of which were corses.

Byron,

Force, in philosophy, denotes the cause of the change in the state of a body, when being at rest, it begins to move, or has a motion which is either not uniform or not direct. While a body remains in the same state, either of rest or of uniform and rectilinear motion, the cause of its remaining in such a state is in the nature of the body, and it cannot be said that any extrinsic ■force has acted on it. This internal cause or principle is called Inertia. Mechanical forces may be reduced to two sorts ; one of a body at rest, the other of a body in motion. The force of a body at rest, is that which we conceive to be in a body lying still, on a table, or hanging by a rope, or supported by a spring, &c., and this is called by the names of pressure, tension, force, or vis mortua, solicitatio, conatus mo vendi, conamen, &c. To this class also of forces we must refer centripetal and centrifugal forces, though they reside in a body in motion; because these forces are homogeneous tf> weights, pressures, or tensions of any kind. The force of a body in motion is a power residing in that body so long as it continues its motion ; by

means of which it is able to remore obstacles lying in its way ; to lessen, destroy, or overcome the force of any other moving body, which meets it in an opposite direction ; or to surmount any dead pressure or resistance, as tension, gravity, friction, &c., for some time ; but which will be lessened or destroyed by such resistance as les- sens or destroys the motion of the body. This is called vis motrix, moving force, and by some late writers vis viva, to distinguish it from the vis mortua spoken of before ; and by these appel- lations, however different, the same thing is un- derstood by all mathematicians, viz. that power of displacing, of withstanding opposite moving forces, or of overcoming any dead resistance, which resides in a moving body, and which, in whole or in part, continues to accompany it, so

long as the body moves. See Mecha- nics,

Force, Comparative, of Men and Horses. There are several curious as well as useful ob- servations in Desagulier's Experimental Philo- sophy, concerning the comparative forces of men and horses, and the best way of applying them. A horse draws with the greatest advan- tage when the line of direction is level with his breast ; in such a situation, he is able to drav? 200 pounds eight hours a day, walking about two miles and a half, an hour. And if the same horse is made to draw 240 pounds he can work but six hours a day, and cannot go quite so fast. On a carriage, indeed, where friction alone is to be overcome, a middling horse will draw 1000 pounds. But the best way to try a horse's force is by making him draw up out of a well, over a single pulley or roller; and in such a case, one horse with another will draw 200 pounds. Five men are found to be equal in strength to one horse, and can, with as much ease, push round the horizontal beam of a mill, in a walk forty feet wide ; whereas three men will do it in a walk only nineteen feet wide. The woist way of applying the force of a horse, is to make him carry or draw up hill ; for if the hill be steep, three men will do more than a horse, each man climbing up faster with a burden of 100 pounds weight, than a horse that is loaded with 300 pounds, a difference which is owing to the posi- tion of the parts of the human body being better adapted to climb than those of a horse. On the other hand, the best way of applying the force of a horse, is in an horizontal direction, wherein a man can exert least force ; thus a man, weigh- ing 140 pounds and drawing a boat along by m.eans of a rope coming over his shoulders, can- not draw above twenty-seven pounds, or exert above one-seventh part of the force of a horse employed to the same purpose. The very best and most effectual posture in a man, is that of rowing; wherein he not only acts with more muscles at once for overcoming the resistance, than in any otlier position ; but as he pulls back- wards, the weight of his body assists by way of lever. See Desaguliers, Exp. Phil. vol. i. p. 241 ; where we have several other observations relative to force acquired by certain positions oi the body, from whicli that author accounts for most feats of strength and activity. See also a Memoire on this subject by M. de la Hire, in

Mem. Roy. Acad. Sc. 1629; or in Desaguliers, Kxp., &c. p. 267, &€., who has published a tratisiation of part of it with remarks.

Force, or La Force, in geography, a town of France, in the department of

Dordogne, six miles west of Bergerac ; famed for its trade in cattle, grain, and wine.

Force, in law, signifies any unlawful violence offered to things or persons, and is divided into simple and compound.

Force, Compound, is where some other violence is committed with such an act as of itself alone is criminal ; as if one enters by force into another's house, and there kills a person, or ravishes si woman. There is likewise a force implied in law, as in every trespass, rescue, or disseisin, and an actual force with weapons, number of persons, &c. ' Any persons may law-fully enter a tavern, inn, or victualling house ; so may a landlord his tenant's house, to view repairs, &c. But if, in these cases, the person that enters 'commits any violence or force, the law will intend that he entered for that purpose.

Force, Simple, is what is so committed that it has no other crime attending it ; as where a person, by force, enters on another's possession, without committing any other unlawful act.

Forcible Detainer, in law, is where one by violence withholds the possession of lands, &c., so that the person who haj a right of entry is barred, or hmdered therefrom.

Forcible Entry is a violent and actual entry into houses or lands. At common law, any person that had a right tonenter into lands, &c., might retain possession of it by force But this liberty being abused, to the breach of the peace, it was therefore found necessary that the same should be restrained ; though, at this day, he who is wrongfully dispossessed of goods may by force retake them. By statute, no persons shall make an entry on any lands or tenements, except where it is given b;y law, and in a peaceable manner, even though they have title of entry, on pain of imprisonine.it ; ˆand where a forcible entry is committed, justices of peace are authorised to view the place, and enquire of the force by a jury, summoned by the sheriff of the county; and they may cause the tenements, &c., to be restored, and imprison the offenders till they pay a fine. A writ of forcible entry also lies, where a person seised of a freehold is by force put out thereof.

Forcible Marriage, of a woman of estate, is felony. For, by the statute 3 Hen. VII. c. 2., it is enacted, ' That if any persons shall take away any woman having lands or goods, or that is heir apparent to her ancestor, by force, and against her will, and marry or defile her; tlie takers, procurers, abettors, and receivers of the woman taken away against her will, and knowing the same, shall be deemect principal felon? ;' but as to procurers

and accessories, they arc, before the offence be committed, to be ex- cluded the benefit of clergy, by 39 Eliz. c. 9. The indictment on the statute 3 Hen. VII. is expressly to set forth, that the woman taken away had lands or goods, or was heii apparent ; and also that she was married or defiled, because no other case is within the statute : and it ought

*to allege that the taking was for lucre. It is no excuse that the woman at first was taken away with her own consent : for if she afterwards refuse to continue with the offender, and be forced against her will, she may from that time properly be said to be taken against her will ; and it is not material whether a woman so taken away be at last married or defiled with her own consent or not, if she were under fcrce at the time; the offender being in both cases equally within the words of the act. Those persons who, after the fact, received the offender, are bu accessories after the offsnce, according to the rules of common law; and those that are only privy to the damage, but not parties to the forcible taking away, are not within the act, H. P. C. 119. A man may be indicted for taking away a woman by force in another country; for the continuing of the force in any country, amounts to a forcible taking there. Ibid. Taking away any *voman child under the age ot sixteen years and unmarried, out of the custody and without the consent of the father or guardian, &c. the offender shall suffer fine and imprisonment; end if the woman agrees to any contract of matrimony with such person, she shall forfeit her estate during life, to the next of kin to whom the inheritance should descend, &Ci Statute 4. and 5. P. & M. c. 8. This is a force against the parents ; and an information will lie for seducing a young man or woman from tlieir parents, against their consents, in order to marry them, &c. See Marriage.*

Forcing, in gardening, a method of pro- ducing ripe fruits from trees, before their natural season. The method of doing it is this : a wall should be erected ten feet high ; a border must be marked out on the south side of it, of about four feet wide, and some stakes must be fastened into the ground, all along the edge of the border; tnese should be four inches thick. Thsy are intended to rest the glass lights upon, which are to slope backwards to the wall, to shelter the fruit as there shall be occasion : and there must be, at each end, a door to open either way, according as the wind blows. The frame should be made moveable along the wall, that when a tree has been forced one year, the frame may be removed to another, and so on, that the trees may each of them be forced only once in three years, at which rate they will last a long time. They must be always well grown trees that are chosen for forcing; foi young ones are soon destroyed, and the fruit that is produced from them is never so well tasted. The dung, before it is put to the wall, should be laid in a heap for five or six days, that it may heat thoroughly; and when thus prepared, it must be laid four feet thick at the base of the wall, and go sloping up till it is two feet thick at the top. It must

be laid at least within three or four inches of the top of the wall ; and when it sinks, as it will sink two or three feet, more dung must be laid on ; for the first heat will do little more thnnjust swell the blossom-buds. The covering the trees with glasses is of great service ; but they should be taken off to admit the benefit of gentle showers to the trees, and the doors at the ends should be either left entirely ooen, or one or both

of them opened, and a mat hung before them, at once to let the air circulate and keep off the frosts. The dung is never to be applied till towards the end of November ; and three changes of it will be sufficient to i-ipen the cherries, which will be very fine in February. As to the apri- cots, grapes, nectarines, peaches, and plu.ns, if the weather be milder, the glasses are to be opened, to let in sunshine, or gˆˆntle showers. If a row or two of scarlet strawberries be planted at the back of the frame, they will ripen in February, or the beginning of March ; the vines will blossom in April, and the grapes will be ripe in June. It should be carefully observed, not to place early and late ripening fruits together, be- cause the heat necessary to force the late ones will be of great injury to the early ones after they have fruited. The masculine apricot will be ripe in the beginning of April; the early nec- tarines will be ripe about the same time ; and the forward sort of plums by the end of that month. Gooseberries will have fruit fit for tarts in Janu- ary or February, and will ripen in March ; and currants will have ripe fruit in April. Tlie trees need not be planted so distant at these walls as at others, for they do not shoot so freely as in the open air ; nine feet asunder is sufficient. They should be pruned about three weeks before the heat is applied. See Horticulture and Hot House.

Forcing, in the wine trade, a term used by wine merchants, for the fining down wines, and rendering them fit for immediate draught. The principal inconvenience of the common way of fining down the white wines by isinglass, and the red by whites of eggs, is the slowness of the operatipn ; these ingredients not- performing their office in less than a week, or sometimes a fortnight, according as the weather proves favor- able, cloudy or clear, windy or calm : this appears to be matter of constant observation. But the wine-merchant frequently requires a method that shall, with certainty, make the wines fit for tasting in a few hours. A method of this kind there is, but it is kept in a few hands as a vuluable secret. Perhaps it depends upon a prudent use of a tartarised spirit of wine, and the common forcing, along with gj'psum, as the j)rincipal ; all of which are to be well

stirred about in wine, for half an hour before it is suffered to rest.

FO'RCEPS, n. s. Lat.

Forceps properly signifies a pair of tongs ; but is u'sed for an instrument in cliirurgcry, to extract any thing out of wounds, and the like occasions. Quincy.

Forceps, in surgery, &c., is also used for a pair of scissars for cutting off, or dividing, the fleshy membranous parts of the body. See Surgery.

F0'RCIPATED,a<7;. From forceps. Formed like a pair of pincers to open and enclose.

The locusts have antennae, or long horns before, ■with along falcatioa or forcipated tail behind.

Browiie.

When they hava seized their prey, they will so te- naciously hold It with Xheir forcipated mouth, that they will not part therewith, even when taken out of the waters. Berham.

FORD, n. s. & V, a. > Sax. po/ito, from pa-

Ford'able, adj. \ fian, to go, proceed. See Fare. Goth, fiord; Swed. fiord; Welsh fford. A shallow part of a river where it may be passed without swimming. It sometimes signifies the stream ; the current : to pass with- out swimming.

Adam's shin-bones must have contained a thou- san'd fathom, and much more, if he had forded the ocean. Raleigh's History.

Pliny placeth the Schenitse upon the Euphrates, ■where the same beginneth to be fordable. Raleigh.

Her men the" paths rode through made by her sword J They pass the stream, when she had found the ford.

Fairfax. Medusa with Gorgonian terror guards The ford, and of itself the water flies All taste of living wight.

Milton's Paradise Lost,

Rise, wretched widow I rise ; nor undeplored Permit my ghost to pass the Stygian /oj-rf: But rise, prepared in black to mourn thy perished lord. Dry den.

A countryman sounded a river up and down, to try where it was most foidablc ; and where the water ran too smooth, he found it deepest; and, on the contrary, shallowest where it made most noise.

L' Estrange.

Ford (John), a dramatic writer of consider- able elegance, was the second son of a gentleman of Devonshire, where he was born in 1586. He entered in the Middle Temple in 1602, for the purpose of studying lavv, and, while there, pub- lished in 1606 a piece entitled Fame's Memoriail, a species of monody on the earl oi Devonshire. In his twenty-first year, having been disappomted by the death of lord Mountjoy, an expected patron, he resolved to travel, but it is doubtful whether he did so, as nothing more is known of him until he printed his first tragedy of the Lover's Melancholy in 1629. But this was not his first play, as a piece of his, entitled A Bad Beginning makes a good Ending, was previously acted at court. He wrote, or assisted to write, at least eleven dramas; and such as were printed appeared from 1629 to 1634. Most of these .vere his own composition, but some were writ- ten in conjunction witli Decker, Drayton, Hatli- erewaye, &c. The date of his death is uncertain, but it is thought that he did not long survive 1639. A writer in the Censura Literaria, has attributed to him an able little manual, entitled A Line of Life pointing to the Immortalitie of a Vertuous Name, 1620, 12mo.

FouD (Sir John), a gentleman of considerable talents as an engineer of the seventeenth century, was the son o' Sir John Ford, of Ilarting, Sussex, where he was born in 1605. He was educated at Trinity College, Oxford, and knighted by Charles I., after serving the office of high-sheriff of Sussex. He afterwards commanded a regi- ment of horse in the royal cause, and was imprisoned on suspicion of aiding the escape of the king from Hampton Court. He was however soon released by the interest, as it is thought, of Ireton, whose sistoi; he had married, and in 1656 employed himself in several mechanical inven- tions of importance. With Cromwell's en- couragement, and at tlie request of tlic citizens of*

London, he contrived machinery for raising the Thames water into all the high streets. He also suggested several improvements in the coinage, which he acquired a patent to try in Ireland, but died there before he could put it into execution, September 3d, 1670. He was the author of a Design for

bringing up a River from Rickmans- worth, Herts, to St. Giles' in the Fields, London, 1641, 4to.; Experimental Proposals to pay the Fleet, re-build London, establish the Fishing Trade, &c., 1666, 4to. To this last work was added A Defence of Bill Credit; and in 1663 he printed a Proposal for raising Money by Bills of Exchange, which should pass current instead of JMoney, to prevent Robbery. Wood .speaks of him as a man of promising talents.

FORDINGBRIDGE, a town of Hampshire situated on the north-west side of the Avon, and on the borders of the New Forest. Although it is a small inland town, it is mentioned in Domes- day-book, as having formerly had a church, and two mills. The fmcipal manufacture is that of CneCiCb and bed-ticks, and there is a calico printing-field. A the south-east entranceˆof the town there is a handsome stone bridge of seven arches over the Avon, The government of the town is vested in a constable, who is chosen annually at the court-leet of the lord of the manor. It has a weekly market on Saturday, and a fair September 9th. It lies six miles from Ringvrood, twelve from Salisbury, and ninety- one from London.

FORDUN (John de), a Scotch ecclesiastic of the fourteenth century, the author of the Scoto- chronicon. He was possessed of the benefice of Fordun in 1377, having dedicated his history to the bishop of Glasgow from thence. In 1722 Hearne published at Oxford, Joannis de Fordun Scoto-chronicon Genuinum, una cum ejusdcm Supplemento ac Continuatione, 3 vols., 8vo. Part of the work had previously appeared in the Quindecim Scriptores ; it was also published by Goodall, 2 vols., folio, Edinburgh, 1759.

FORDWICH, a town of Kent, called in the Domesday Book, 'the little borough of Ford- wich,' is a member of the port of Sandwich, and was anciently incorporated by the style of the barony of the town of Fordwich, and enjoys the same privileges as the cinque-ports. It is famous for excellent trouts, taken in the Stour. It is said to have once been a more extensive place than at present, having suffered frequently by fire.

FORDYCE (David), an elegant and learned writer, born at Aberdeen in 1711. After rece'v- ing the early part of his education at the gram- mar-school, he was, at the age of thirteen, entered at the Greek class in the INIarischal College, Aberdeen; and in 1728 he obtained the degree of M. A., and became a professor of moral philosophy in the same college in 1742. He was designed for the ministry, and in 1748 pub- lished a work entitled Theodorus, or the Art of Preaching. Having finished this work, he went abroad in 1750; but, after a successful tour through several parts of Europe, he was unfortu- nately shipwrecked in a storm on the coast of Holland, in the forty-first year of his age. He wrote also Dialogues on

Education, 8vo. ; and a Treatise on Moral Philosophy, published in the

Preceptor. The third edition of his Theodoria was published in London by his brother.

F'oRDYCE (George), an eminent physician and lecturer on medicine, nephew of the preceding was born near Aberdeen in 1736. He received his education at the university of that city, and attained the literary degree of M. A. when only fourteen years of age. In about a year after this he was placed with an uncle, a surgeon and apothecary, at Uppingham in Rutlandshire. After residing some time at Lˆppingham, he went to prosecute his studies at the university of Edin- burgh, and there his assiduity and attainments gained particular attention from Dr. CuUen, then professor of chemistry. From Edinburgh he went to Leyden, where, in 1733, he took his doctor's degree, though only twenty-two years of age. After residing one winter at Leyden, the greater part of his patrimony being spent in the prose- cution of his studies, he determined to settle in London, vvhich he did in 1739. In this metro- polis he commenced with a course of lectures on the materia medica; and in 1768 published his Elements of the Practice of Physic, which formed the text book of his medical course. By this time he had acquired a very respectable private practice; and in 1770 was appointed physician to St. Thomas's Hospital. In 1776 he was chosen FeliOw of the Royal Society; and in 1787 a Fellow of the College of Physicians. About this time he published his Elements of Agriculture and Vegetation; besides which he wrote an Essay on Digestion, four Essays on Fever, and various miscellaneous papers. Though his constitutioD discovered symptoms of premature decay, he continued to discharge his professional duties till the 26th of June, 1802, when he was carried oflf by an irregular goiit and water in the chest, in the sixty-sixth year of his age.

FoRDYCE (James), an eminent Scottish divine, was born at Aberdeen in 1720. His first settlement as a minister was at Brechin, in the county of Angus ; whence he was called to Alloa near Stirling. While he resided at Alloa, the attention of the public was particularly drawn towards him by the excellence of his pulpit compositions. The university of Glasgow conferred on him the de- gree of D.D. Having many friends in London, he received an invitation to go there, as assistant to Dr. Lawrence, minister of a respectable con- gregation in Monkwell Street, which he accepted about 1762 ; and Dr. Lawrence dying a few months after, the eloquence of Dr. Fordyce soon became famous, and for several years attracted crowded audiences. But Dr. Fordyce lived to see his popularity decline, and his pews became thin. Many of his most steady hearers and libe- ral supporters withdrew from him on account of the losses they sustained by the failure of a youn£;er brother, an extensive banker; and his hearers were still farther diminished by an un- happy difference which took place between him and

his coUeasrue, Mr. Toller, about 1775. In a short time after this, the declining state of his health made it necessary for him to resign his charge ; Mr. James Lindsay was accordingly ap- pointed his successor in 1782 ; and at his ordi- nation the doctor delivered one of his most eloquent sermons. Dr. Fordyce now retired to

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Ilampsliire, where lie lived in the vicinity of the earl of Bute, being very intimate with that no- bleman, and liaving the freest access to his va- luable library ; but he afterwards removed to Bath, where he died of an asthmatic complaint, on the 1st October, 1796, in the seventy-sixth year of his age. Dr. Fordyce is known" as the author of Sermons to Young Women, 2 vols. 12mo., which have been translated into several European languages ; A Sermon on the Charac- ter and Conduct of the Female Sex ; Address to Young Men, 2 vols. 12mo. ; Addresses to the Deity ˆ a volume of Poems; A Discourse on Pain, and Additions to his brother's Temple of Virtue.

FORE, adj. & adv. Sax. pojie ; Goth, vor ; Belg. voor. Anterior; coming first in a pro- gressive motion : fore is a word much used in composition to mark priority of time. A vi- cio\i5 orthography, says Dr. Johnson, has con- founded for and fore in composition.

Each of them will bear sis demiculverins and four eakers, needing no other addition than a slight spar deck fore and aft, which i» a slight deck throughout.

Raleigh's Essays.

Though there is an orb or spherical area of the sound, yet they move strongest and go farthest in the fore lines from the first local impression.

Bac

Resistance in fluids arises from their greater pres- sing on the fine than hind part of the bodies moving in them. Cheyne.

Fore, a town of Ireland, in Westmeath, twenty-two miles from Dublin, is a small bo- rough, supposed anciently to have bee i a seat of /.earning. It contains the ruins of a monastery and three churches, as well as the cell of an an- chorite. It is seated on Lough-Lane, meaning -he Lake of Learning.

FOREADVI'SE, v. a. Fore and advise. To counsel early ; to counsel before the time of ac- tion, or the event.

Thus to have said.

As you were foreadvised, had touched his spirit.

And tried his inclination.

Shakspeare- Coriolamts.

FOREAPPOINr, V. a. Fore and appoint. To order beforehand.

FOREARM', v.a. Fore and arm. To pro- vide for attack or resistance before the time of need.

Hp forearms his care With rules to push his fortune, or to bear.

Dryden. A man should fix and foirearm his mind with this persuasion, that, during his passion, whatsoever is offered to his imagination tends (mly to deceive.

South. FOREBODE',!!. n.& v. a. } Fore and bode. Forebo'deu, n- s. S Sax. poftebo&ian ;

fiwed. J'ortotic. To prognosticate; to foretell; to foreknow ; to feel a secret sense of something future with a mixture of dread and appre- hension : foreboder is a soothsayer, or a croaker who is always predicting evil.

An ancient augur, skilled in future fate. With these /ore6odtn^ words restrains their hate,

Dryden, Fate makes you deaf, while I in vain implore : My htajt fonebodes I ne'er shall sec you mote. Id.

Your raven has a reputation in the world for a bird of omen, and a kind of small prophet : a crow that had observed the raven's manner and way of deli- vering his predictions, sets up for a foreboder,

L' Estrange. My so\A foreboded I should find the bower Of some fell monster, fierce with barb'rous power.

Pope. Spirit of freedom I when on Phyle's brow Tnou sat'st with Thrasybulus and his train, Couldst ihoM. forebode the dismal hour which now Dims the green beauties of thine Attic plain.

Byrun. Childe Harold. FOREBY', prep. Fore and by. Near ; hard by; fast

by.

Not far away he hence dolh won Foreby a fountain, where I late him left.

Faerie Queene. FORE'CAST, V. «., v. a. ˆn. s.\ Fore and Foreca'ster, n. s. S cast. To

scheme ; to plan before execution ; to contrive an- tecedently : scheme ; plan ; antecedent policy.

He shall forecast his devices against the strong holds. Daniel xi.

The spices that sourden of pride, sothly whan sourden of malice imagined, avised and forecasts, or elles of usage ben dedly sinnes it is no doute.

Chaucer. Persones Tale. And whatso heavens in their secret doom Ordained have, how can frail fleshy wight Forecast, but it must needs to issue come ?

Spenser. When broad awake, she finds in troublous flit. Forecasting how his foe he might annoy.

Faerie Queene. Alas! that Warwick had no more forecast. But while he thought to steal the single ten. The king was slily fingered from the dock !

Shakspeare. The feast was served ; the time so well forecast. That just when the dessert and fruits were placed. The fiend's alarm began.

Drydcn's Theodore and Honoria, It is wisdom to consider the end of things before we embark, and to forecast consequences.

L'Estrange, He makes this difference to arise from the forecast •nd predetermination of the gods. Addison.

The last, scarce ripened into perfect man, Saw helpless him from whom their life began : Memory anii forecast]ast returns engage; That pointed back to youth, this on to age. Pope.

FO'RECASTLE, n. s. Fore and castle. In a ship, is that part where the foremast stands, and is divided from the rest of tlie floor by a bulk-head: that part of the forecastle which is aloft, and not in the hold, is called the prow. — Harris.

Tlie commodity of the new cook-room thp mer- chants have found to be so great, as that, in all their ships, the cook-rooms are built in their forecastles, contrary to that which had be.cn anciently used.

Raleigh's Essays.

Forecastle, a short deck placed in the fore part of the ship, above tlie upper deck : it is usually terminated, in vessels of war, by a breast-work, botli before and behind ; the foremost part forming the top of the beak-head, and the hind-part reaching to the after-part of the fore-chains.

FORECHO'SEN, part. Fore and chosen, Pre-elected.

FORECITED, part. Fore and cite. Quoted before, or above.

Sreaves is of opinion, that the alteration men- tioned in ihaX forecited passage ii continued.

ArlnUhnot.

FORE'CLOSE, v. a. Fore and close. To sliut up ; to preclude ; to prevent.

The embargo with Spain foreclosed this trade.

Carew.

To foreclose a mortgage, is to cut off the power of redemption.

FO'REDECK n. s. Fore and deck. The anterior part of the ship.

I to the foredeck went, and thence did look

For rocky Scylla. Chapman's Odyssey.

FOREDESI'GN, v. a. Fore and design. To plan beforehand.

All tue stops of the t;rowth and vegetation, both of animals and plants, have been foreseen and fore- deiigned by the wise Author of nature. Chryne.

*FORE'DO, V. a. From for and do, not fore, says Dr. Johnson. Mr. Home Tooke considers it as a corruption of * forth-done, i. e. done, to go forth ; or caused to go forth, i. e. out of doors; in modern language, turned out of doors.' But we have a Saxon compound pojioon, of the same signification; and we cannot but regard Dr. Johnson as nearer the truth : to fore or*

fordo, for it is found both ways, is to ‘ do for,’ to finish; a common colloquial expression: to ruin ; to destroy ; opposed to making Lappy ; to overdo; to weary; to harass. But al so colde towardes the’ Tliy ladies is — as frost in winter mone; And thou ybrdu/i — -as suowe in fire is sone.

Chaucer. Troihu and Creseide. Beseeching him, if either salves or oils, A foredone wight from door of death might raise. He would at her request prolong her nephew’s days.

Faerie Queene. This is the night That cither makes me, or furedoes me quite.

SItakspeare. Whilst the heavy plowman snores. All with weary task / yredone. W.

OREDO’O^L, V. a. Sax. pojitteman. Fore and doom. To predestinate ; to determine be- forehand.

Through various hazards and events we’ move To Latium, and the realms foredoomed by Jove.

Drydcn’s jEneid. The willing metal will obey thy band. Following with ease : if favoured by thy fate. Thou &it foredoomed to view the Stygian state.

Dryden. V Ate foredoomed, and all things tend By course of time to their appointed end. Id,

Here Britain’s statesmen oft ihc ia.\ foredoom Of foreign tyrants, and of nymphs at home.

Pope. FORF>END, n. s. Fore and end. The an terior part.

I have lived at honest freedom ; paid More pious debts to heaven than in all The fore-end of my time.

Shahspeare. Cymbeline. In ihe fore-end of it, which was towards him, grew a small green branch of palm. Bacon.

FOREFATHER, n. s. Fore and father. Ancestor ; one who in any degree of ascending genealogy precedes another.

The custom of the people of God, and the decree of OUT forefathers, are to be kept, touching those things whereof the Scripture hath neither one way or other given us charge, . Hooker*

Conceit is still derived From som^ forefather grief j mine is not so.

Sliakspeare, Shall I not be distraught. And madly play with my forefathers' joints ? Id. If it be a generous desire in men to know from whence their own forefathers have come, it cannot be displeasing to understand the place of our first ances- tor. Raleigh's History.

When a man sees the prodigious pains our fore- fathers have been at in these barbarous buildings, one cannot but fancy what miracles of architecture they would have left us, had they been instructed in the right way, Addison on Italy,

Blest Peer! his great ybre/aˆAer' every grace Reflecting, and reflected in his race. Pope,*

FOREFE'ND, v. a. It is doubtful whether from fore or for and defend. ' If from fore, it implies antecedent provision ; as forearm : if from for, prohibitory security ; as forbid. Of the two following examples one favors for, and the other fore.' — Johnson. To prohibit; to avert.

I would not kill thy unprepared spirit ; No, heavens /ore/end .' I would not kill thy soul.

Shahspeare, Down with the nose, Down with it flat : take the bridge quite away Of him, that, his particular to foref end. Smells from the general weal. Id.

Perhaps a fever, which the gods forefend, May bring your youth to some untimely end.

Dryden.

FOREFI'NGER, n. s. Fore and finger. The finger next the thumb ; the index.

An agate stone On the forefinger of an alderman. Shahspeare, Polymnia shall be drawn, as it were, acting her speech with her forefinger. Peacham on Drawing.

Some wear this on the middle-finger, as the ancient Gauls and Britons j and some upon the for efnger.

Browne.

FO'REFOOT, n. s. Plural forefeet. Fore and foot. The anterior foot of a quadruped : in contempt, a hand.

He ran fiercely, and smote at Heliodorus with his forefeet. 2 Mac. iii. 25.

Give me thy fist, thy forefoot to me give.

Shahspeare. I continue my line from thence to the heel ; then making the breast with the eminency thereof, bring ou his near forefoot, which I finish.*

Peacham on Drawing.

FoRE-FooT, a piece of timber which termi- nates the keel at the fore end. It is connected by a scarf to the extremity of the keel, of which it makes a part ; and the other end of it, which is incurvated upwards into a sort of knee, is at- tached to the lower end of the stem : of which it also makes a part, being also called the gripe.

FORE'FRONT, n. s. Fore and front. The anterior front of a thing or place.

Upon the forefront of the mitre it shall be. ^ ■' •' Exod. xxviii. 31.

Set ve Uriah ia the forefront of the hottest battle. •^ 2 Sam, xi. 15.

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FOREGO', V. a.) Fore and go. To quit ; Forego'er, n. s. J to give up ; to resign ; to go before; to be past; to provide for; to se- cure : foregoer is used in the sense of ancestor ; progenitor.

What shal my soroufuU life done, in this caas. If I forgo that I so dere have bought?

Chancer, Troitus and Crcsetdc, Special reason oftentimes causeth the will to prefer one good thing before another; to leave one for another's sake, lo forego meaner for the attainment of higher degrees. Hooker.

It it her nature, or is it her will. To be so cruel to an humble foe ?

If nature, then she may it mend with «kill ;

If will, then she at will may wiU forego. Spenser.

Having all before absolutely in his power, it re-

maineth so still, he having already neither foregiveu

nor foregone any thing thereby unto them, but having

received something from them. Id.

Must I then leave you? Must I need^ forego So good, so noble, and so trile a master 1

Shakspeare. Let us not forego That for a trifle which was bought with blood. Id. Honours best thrive, When rather from our acts we them derivo Than our foregoers. Id.

By our remembrances of days foregone. Such were our faults : O 1 then we thought them not.

Id. It is to be understood of Cain, that many years foregone, and when his people were increased, he built the city of Enoch. Raleigh.

How can I live without th«e ! hoyf forego Thy sweet converse, and love so dearly joined. To live again in these wild woods forlora !

Milton, This argument might prevail with you to forego a little of your repose for the publick benefit. Dryden.

I was seated in my elbow-chair, where I had in- dulged the foregoing speculations. Addison.

FORF/GROUND, n. s. Fore and ground. The part of the field, or expanse of a picture, which seems to lie before the figures.

All agree that white can subsist on the foreground of the picture : the question therefore is to know, if it can equally be placed upon that which is backward, the light being universal, and the figures supposed to be in an open field. Dryden.

FORE'HAND,n.s.&a

FouE'iiANnED, n. s. S hand. The part of

a horse which is before the rider. The chief part. Not in use. Done sooner tlian is regular; early; timely ; formed in the foreparts.

The great Achilles whom opinion crowns

The sinew and the forehand of our host.

Shakspeare.

You'll say she did embrace me as a husband. And so extenuate the forehand sin. Id.

If by thus doing you have not secured your time by an early and forthanded care, yet be sure, by a timely diligence, to redeem the time. Taylor.

He’s a substantial true-bred beast, bravely fore- handed: mark but the cleanness of his shapes too.

Dryden,

FORE’HRAD, w. . <;, Sax. poriheapo'o. Fore and head. That part of the face which reaches from the eyes upward to the hair. Impudence; confidence; assurance; audaciousness; audacity. The forehead is the part on which shame visibly operates.

FOR

‘RiT& forehed shone as bright as any day So wos it washen when she lete her werk.

Chaucer, The Milleres Tale, KcT yyorie forhead, full of bounty bravo. Like a broad table did itselfe dispred For Love his loftie triumplics to engrave. And write the battailes of his great godhed : All good and honour might therein be red ; For there their dwelling was.

Spenser’s Faerie Queene. The breast of Hecuba, When she did suckle Hector, looked not lovelier Than Hector’s /ure/jead when it spit forth blood At Grecian swords contending.

Shakspeare. Coriolanits. The sea o’er fraught would swell, and the unsought diamonds Would so imblaze the forehead of the deep. And so bestud with stars, that they bnlow Would grow inured to light, and come at last To gaze upon the Sua with shameless brows.

Milton’s Comus. Some angel copied, while I slept, each grace. And moulded every feature from my face : Such majesty does from her forehead rise. Her cheeks such blushes cast, such rays her eyes.

Dryden. A man of confidence presseth forward upon every appearance of advantage ; where his force is too feeble, he prevails by dint of impudence : these men ol fore- head are magnificent in promises, and infallible ia their prescriptions. Collier.

I would fain know to what branch of tha legislature they can have the forehead to apply. Swift,

Upon her forehead Love his trophies fits, A thousand spoils in silver arch displaying : And in the midst himself full proudly sits Himself in awful majesty arraying : Upon her brows lies his bent ebon bow And ready shafts : deadly those weapons show ; Yet sweet the death appeared, lovely that deadly olow, Fletcher’s Purple Island,

FOREnO'LDING,w.s. Fore and hold. Pre« dictions; ominous accounts; superstitious prog- nostications.

How are superstitious mea bagged out of their wits with the fancy of omens, foreholdings, and old wives' tales ! L' Estrange.

FOR'EIGN,aˆ". ") Fr./oram; Span./om- from Lat. forts; Gr. a gate or door ; i. e. from witliout doors. Not domestic ; not of this country; alien; remote; not allied. It is often used with to; but more properly with _/7wn. Ex- cluded; not admitted ; held at distance; extrane- ous. Inlaw. A foreign plea, ˆ/acj7i»HyormfCM7H ; as being a plea out of the proper court of justice. A man that comes from another country ; not a native ; a stranger. Remoteness ; want of rela- tion to sometlung.

They will not stick to say you envied him ; And fearing ho would rise, he was so virtuous. Kept him <ˆ foreign man still; which so grieved him. That he ran mad and died.

Shakspeare. Henry VIII. Your son, that with a fearful soul Leads discontented stops in foreign soil. This fair alliance quickly shall call home.

S/utkspearc, I'll speak to hei And she shall be my qucca, — Haiil foreign wonder!

Miltmt.

FOR'EIGN,aˆj. "ˆ Fr.

Foii'eigner, ?i. s. Sno; fr(For'eignness, n.s. ˆ Ovpa, ;

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The learned correspondence you hold in foreign parts. Id.

Soy is such n foreigner. So mere a stranger to my thoughts, I linow Not how to entertain him. Denham'i Sophy,

To this false ybreiˆner yoo give your throne. And wronged a friend, a kinsman, and a son.

Dryden's JEneid. Let not the foreiqnness of the subject hinder you from endeavouring to set me right. Locke.

There are wlio, fondly studious of increase. Rich foreign moukl in their ill-natured land Induce. Philips.

I must dissemble. And speak a language _/breiˆn to my heart.

Addison. Fame is a good so wholly foreign to our natures, that we have no faculty in the. soul adapted to it, nor any organ in the body to relish it, placed out of the possibility of fruition. Id.

Water is the only native of England made use of in punch ; but the lemons, the brandy, the sugar, and the nutmegs, are all /oreiˆner. Id.*

The parties and divisions amongst us may several ■ways bring destruction upon our country, at the same time that our united force would secure us against all the attempts of a ybre/ˆn enemy. Id. Freeholder.

This design is not foreign from some people's thoughts. Swift.

Nor could the majesty of the English crown appear in a greater lustre, either to foreigners or subjects.

Id. The positions are so far from heing new, that they are commonly to be met with in both ancient and modern, domestick and foreign, writers. Atterbury.

'Twas merely known, that on a secret mission A foreigner of rank had graced our shore. Young, handsome, and accomplished, who was said (In whispers) to have turned his sovereign's head.

Byron.

Foreign, in the English law, is used in va- rious significations. Thus : —

Foreign Attachment, is an attachment of the goods of foreigners found within a city or liberty, for the satisfaction of some citizen to whom the foreigner is indebted ; or it signifies an attachment of a foreigner's money in the hands of another person.

At the instance ot an ambassador or consul, any offender against the laws here may be sent for hither from a foreign kingdom to which he hath fled. And, where a stranger of Holland, or any foreign country, buys goods in London, for instance, and there gives a note under his hand for payment, and then goes away privately into Holland : in that case, the seller may have a certificate from the lord mayor, on the proof of the sale and delivery of such goods, whereupon a process will be executed on the party in Hol- land.

FOREIMAG'INE, v. a. Fore and imagine. To conceive or fimcy before proof.

We are within compass of k foreimagined possibility in that behalf. Camden's Remains.

FOREJUDGE', v. a. Fore and judge. To judge beforehand ; to be prepossessed ; to pre- judge.

FOREKNO'W, V. a, -% Fore and know.

Foreknowl'edgEjTi.s. >To have prescience

Foreknow'abi.EjOi//. j of; to foresee : possi-

ble to be known before they happen : prescience ; knowledge of that which has not yet happened. Wherefore for to departen softily, Tokc purpose ful this wighi, forknowing, wise j And to the Grekes host, ful prively. He stale anon.

Chaucer. Troilus and Creseide. It is certainly foreknowahle what they will do in such and such circumstances. More.

Our being la Christ by eternal foreknowledge, saveth us not without our actual and real adoption into the fellowship of his saints in this present world.

Hooker. I told him you was asleep : he seems to have a foreknowledge of l^attoo, and therefore chuses to speak with you. Shakspeare.

We foreknow that the sun will rise and set, that all men born in the world shall die again ; that after Winter the Spring shall come ; after the Spring, Sum mer and Harvest ; yet is not our foreknowledge the cause of any of those. Raleigh.*

He foreknew John should not suffer a violent death, but go into his grave in peace. Browne.

If I foreknew. Foreknowledge had no influence on their fault. Which had no less proved certain unforeknown.

Milton. Who would the miseries of man foreknow ? Not knowing, we but share our part of woe.

Dryden. I hope the foreknowledge you had of my esteem for you, is the reason that you do not dislike my letters.

Pope. FORE'LAND, n. s. Fore and land. A pro- montory ; headland ; high land jutting into the sea; a cape.

As when a ship, by skilful steersman wrought. Nigh river's mouth, «t foreland, where the wind Veers oft, as oft so steers, and shifts her sails.

Milton.

FORELA'Y, r. a. Fore and lay. To lay wait for; to iiitrap by ambush; to contrive antece- dently.

A serpent shoots his sting at unaware ; An ambushed tlAei forelays a traveller : The man lies murdered, while the thief and snake. One gains the thickets, and one thrids the brake.

Dryden.

FORELIFT', V. a. Fore and lift. To raise aloft any interior part.

So dreadfully he towards him did pass, Forelifting up aloft his speckled breast ;

And often bounding on the bruised grass. As for great joy of his new comen guest. Spenser. FORE'LOCK, n.s. Fore and lock. The hair that grows from the forepart of the head. Tell her the joyous time will not be staid. Unless she do him by the forelock take. Spenser.

Hyacinthine locks. Round from his parted /orc/oc/t manly hung. Clustering, but not beneath his shoulders broad.

Milton. Zeal and duty are not slow. But on occasion's forelock watchful wait. Id, Time is painted with a lock before, and bald be- hind, signifying thereby that we must take time by the forelock ; for, when it is once past, there is no recalling it. . S'i'if'-

FORE'MAN, n. s. Fore and man. The first or chief person.

He ia a very sensible man, shoots flying, and has been several times foreinan of the petty jury. Addison.

FOREMEN'TIONED, adj. Fore and men- tioned. Mentioned or recited

before. It is ob- servable that many particles are compounded with fore, whose verbs have no such composition.

Dacier, in the life of Aurelius, has net taken notice of the forementianed figure on the pillar.

Addison on Italy.

FORE'MOSTjflff;. From fore. First in place : first in dignity.

All three were set among ihe foremost ranks of fame, for great minds to attempt, and great force to pprform what they did attempt. Sidney.

These xiAe foremost in the field. As fhey the /yremost rank of honour held.

Dryderi. The bold Sempronius, That still hvoV.^ foremost through the crowd of patriots. As with a hurricane of zeal transported. And virtuous even to madness. Addison's Caio

FORENA'MED, flrfj. Fore and name. Nomi- nated before.

And such are sure ones. As Curius and the forenamed Lentulus.

Ben Jonson.

FORE'NOON, n. s. Fore and noon. The time of day reckoned from the middle point, be- tween the dawn and the meridian, to the meridian : opposed to afternoon.

The manner was, that the forenoon they should run at tilt, the afternoon in a broad field in manner of a battle, 'till either the strangers or the country knights won the field. Sidney.

Curio, at the funeral of his father, built a temporary theatre, consisting of two parts turning on hinges, ac- cording to the position of the sun, for the conveniency oi forenoon's and afternoon's diversion.

Arhuthnot on Coin.*

FORENOTICE, n. s. Fore and notice. In- formation of an event before it happens.

So strange a revolution never happens in poetry, but either heaven or earth give some forenotice of it.

Rymer's Tragedies.

FOREN'SIC, ad]. Lat. forensis. Belonging to courts of judicature.

Peroou is a forensick term, appropriating actions aaid their merit ; and so belongs only to intelligent agents, capable of a law, and happiness and misery. This personality extends itself beyond present exist- e«ce to what is past, only by consciousness. Locke.

The forum was a public place in Rome, where law- yers and orators made their speeches before the proper judges in matters of property, or in criminal cases : thence all sorts of disputations in courts of justice, where several persons make their distinct speeches, may come under the name oi forensick disputes.

Watts on the Mind.

FOREORDAIN', u. a. Fore and ordain. To predestinate ; to predetermine ; to preordain.

The church can discharge, in manner convenient, a work of so great importance, by foreordaining some short collect wherein briefly to mention thanks.

Hooker.

FORETART, 71. s. Fore and part. The part first in time : the part anterior in place.

Had it been so raised, it would deprive ug of the sun's light all the forepart of the day. Raleigh.

The ribs have no cavity in them, and towards the forepart or breast are broad and thin, to bend and give way without danger of fracture. Ray

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FOREPA'ST, adi Fore and past. Past be- fore a certain time.

Now cease, ye damsels, your delights forepast ; Enough it is that all the day is yours. Spenier.

My forepast proofs, howe'er the matter fall.

Shall lax my fears of little vanity.

Having vainly feared too little. Shalispeare.

Such is the treaty which he negociates with us, an offer and tender of a

reconciliation, an act of oblivion, of a.\ forepast sins, and of a new covenant.

Hammond on Fundamentals.

FOREPOSSES'SED, adj. Fore and possess Preoccupied; prepossessed; preengaged.

The testimony either of the ancient fathers, or of other classical divines, may be clearly and abundantly answered to the satisfaction of any rational man, not e-fXremely forepossessed with prejudice. Sanderson.

FORERA'NK, n.s. Fore and rank First rank ; front.

Yet leave our cousin Catherine here with us ; She is our capital demand, comprised Within the forerank of our articles. Shakspeare,

FORERECI'TED, adj. Fore and recite. Mentioned or enumerated before. Bid him recount The for erecited practices, whereof We cannot feel too little, hear too much.

Sluikspeare. FORERU'N, V. a. j Fore and run. To come Forerun'ner, 71. s. i before as an earnest of something following; to introduce as an har- binger: to precede; to have the start of: an har- binger; a messenger sent before to give notice of the approach of those that follow : a prognobiic ; a sign foreshowing any thing.

Against ill chances men are ever merry ; But heaviness /oreruns the good event.

*Shakspeare. The six strangers seek for you, madam, to take their leave ; and there is a. forerunner come from a seventh, the prince of Morocco. [^^*

O Eve ! some further change awaits us nigh. Which heaven, by these mute signs in nature, shews Forerunners of his purpose. Milton's Paradise Lost. The sun Was set, and twilight from the East came on. Forerunning night. / (f,

A cock was sacrificed as the forerunner of day and the sun, thereby acknowledging the light of life to be derived from the divine bounty, the daughter of Pro vidence. Stillingfieet.

She bids me hope : oh heavens, she pities me : And pity still /ortTMTU approaching love. As lightning does the thunder. Dryden.

My elder brothers, vay forerunners came. Rough draughts of nature, ill

designed, and lame : Blown off, like blossoms, never made to bear; 'Till I came finished, her last laboured care. Td.

Loss of sight is the misery of life, and usuaKy the forerunner of death. South.

The keeping insensible perspiration up in due mea- sure is the cause as well as sign of health, and the least deviation from that due quantity, the certain forerunner of a disease. Arbuthnot.

Already opera prepares the way. The sure forerunner of her gentle sway. Pope. For I have drawn much less with a long bow

Than my forerunners. Byron.

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FOR

FORESAY', V. a. Fore and say. To pie- •-Fict; to prophesy ; to foretell.

Let ordinance Come as the gods foresay it.

Shahspeare. Cymheline.

FORFSEE', V. a. Fore and see. To see be- fore hand ; to see what has not yet happened ; to have prescience ; to foreknow. To provide for ; with to. Out of use.

The first of them could things to come foresee ; The next could of things present best advise ; The third things pust could keep in memory.

Faerie Queene. A king a°-ainst a storm mnsl foresee to a convenient stock of treasure. B"^""

If there be any thin- foreseen that is not usual, be armed for it by a he'arty though a short prayer, and an earnest resolution beforehand, and then watch when it comes. "'f"-

No sooner by his incomprehensible wisdom did he foresee we should lose ourselves, than by his immense 'grace he did conclude to restore us. Barrow.

At his foreseen approach, already quake The Caspian kingdoms and Meotian lake : Their seers behold the tempest from afar. And threatening oracles denounce the war.

Dry lien.

FORESHAD'OW, v. a. Fore and shadow. To prefigure ; to pity. ˆ

The great excellency and efficacy of our Saviour 6 death— was by manifold types foresMdowed, and in diverse prophecies foretold. Barrow-

FORESHAME, v. a. F&re and shame. To shame ; to bring reproach upon.

Oh bill, foreshammg Those rich-left heirs, that let their fathers lie Without a monument. Shahspeare. Cymbeline.

FO'RESHEW, V. a. See Foreshow.

FO'RESHIP, 71. s. Fore and ship. The an- terior part of the ship.

The shipmen would have cast anchors out of the foreship. ˆc

FORESHORTEN, v. a. Fore and shorten- To shorten figures for the sake of showing those behind.

The greatest parts of the body ought to appear foremost ; and he forbids the /oresAor

Dry den's Dufretnoy.

FORESHOW, V. a. Fore and show. To discover before it happens ; to predict ; to prog- nosticate ; to represent before it comes.

What else is the law but the gospel foreshowed ? What other the gospel than the law fulfilled ?

Hooker.

Christ had called him to be a witness of his death,

and resurrection from the dead, according to that

which the prophets and Moses hdiA foreshowed. Id.

Next, like Aurora, Spenser rose.

Whose purple blush the dˆy foreshows.

Denham. You chose to withdraw yourself from publick busi- ness, when the face of heaven grew troubled, and the frequent shifting of the yfiad foreshowed a storm.

Dryden.

FORE'SIGHT, n. s. J Fore and sight. Pre- Foresigut'ful, at//, i science; prognostica- tion; foreknowledge; the accent anciently on the last syllable. Provident care of futurity ; prescient; provident.

Therefore of clay, base, vile, and next to nought. Yet formed by wondrous skill, and by his might. According to an heavenly patterne wrought. Which He had fashioned in his wise foresight. He man did make, and breathed a living spright Into his face, most beautifuU and fayre, Endewd with wisdomes riches, heavenly rare.

Speruer. He had a sharp foresijht, and working wit. That never i-dle was, ne once could rest a whit.

Id. In matters of arms ho was both skilful and indus- trious, and as well in foresight as resolution present and great. Hayivard.

Death gave him no such pangs as the foresightful care he had of his silly successor. Sidney.

Let Eve, for I have drenched her eyes. Here sleep below ; while thou to foresight wak'st. As once thou sleep'st, whilst she to life was formed.

lUilton. For their wise general, with forseeinq care. Had charged them not to tempt the doubtful war ; Nor though provoked in open fields advance. But close within their lines attend their chance.

Drydeii.

FORESIG'NIFY, v. a. Fore and signify. To betoken beforehand ; to foreshow ; to ty- pify.

Discoveries of Christ already present, whoso future coming the Psalms did hut foresignify. Hooker.

Yet as being past times noxious, where they light On man, beast, plant, wasteful and turbulent. They oft foresignify, and threaten ill. Millon.

FORE'SKIN, n. s. Fore and skin. The prepuce.

Their own hand An hundred of the faithless foe shall slay. And for a dower their hundred /oresftirw pay. Be Blichal thy reward. Cowley's Davideis.

FORE'SKIRT, n.s. Fore and skirt. The pendulous or loose part of tlie coat before. A thousand pounds a year for pure respect ! No other obligation ?

That promises more thousands : honour's train Is longer than his forcskirt.

Shakspeare. Henry VIII.

FORESLACK', v. a. Fore and slack. To neglect by idleness.

it is a great pity that so good an opportunity was omitted, and so happy an occasion /orei/acAcrf, that might have been the eternal good of the land.

Spenser's State of Ireland.

FORESLOW, V. a. & v. n. Fore and slow. To delay; to hinder; to impede; to obstruct; to neglect; to omit; to loiter; to be dilatory.

This may plant courage in their quailing breasts. For yet is hope of life and victory ; Foreslow no longer, make we hence amain.

Sliakspeare.

When the rebels were on Blackheath, the king knowing well that h stood him upon, by how much the more he had hitherto protracted the time in not encountering them, by so much the sooner to dis- patch with them, that it might appear to have i-een no coldness in forcslowing, but wisdom in chusing his time, resolved with speed to assail them.

Bacon's Henry VII.

No stream, no wood, no mountain could foreslow Their hasty pace. Fairfax.

Our good purposes foreslowed arc become our tor- mentors upon our death-bed. Bishop Hall.

Now the illustrious nymph returned again. Brings every grace triumphant in her tram ; The wondering Nereids, though they raised no storm, Foreslowed her passage to behold her form. Bryden.

Chremes, how many fishers do y.JU know That rule their boats and use

their nets aright.

That neither wind, nor time, nor tiAa foreslow ? Some such have been : but, ah ! by tempests spite Their boats are lost, ; while we may sit and moan That few were such, and now these few are none.

P. Fletcher.

FORESPEAK', v. n. Fore and speak. To predict; to foresay ; to foreshow; to foretell. To forbid. From for and speak.

Thou hast /oi-eˆjDoAe my being in these wars. And sayest it is not tit.

Shakspeare. Antony and Cleopatra. Old Godfrey of Winchester, thinketh no ominous forespeaking to lie in names. Camden's Remains.

FORES PENT',arf;. Foreand spent. Wasted; tired; spent. Forepassed ; past. Fore and spent. Bestowed before.

Is not enough thy evil life forespent 1

Faerie Queene. You shall find his vanities /ore.v/jen Were but the outside of the Roman Brutus, Covering discretion with a coat of folly.*

Shakspeare. We must receive him According to the honour of his sender ; And towards himself, his goodness /orcsjJent on us. We must extend our notice. J

After him came spurring hard, A gentleman, almost /ore«pent with speed. Id. FORE'SPURRER, n. s. Fore and spur. One that rides before.

A day in April never came so sweet,. To show how costly summer was at hand. As this forexpurrer comes before his lord.

Shakspeare.

FOR'EST, n. s. -\ Tt. forest ; Ital .foresta ;

Fouest'kr, n. s. > Welsh, fforest ; Teut. fo-

Forest'born", adj. J rest. According to Du

Cange from the Lat.ˆt'rjs, i. e.ferarumstatio, a

station for wild beasts : according to Vossius

and Spelman from the Lat. /oris, i. e. beyond

the gate of towns. A wild uncultivated tract of

ground interspersed with wood; an officer of

the forest; an inhabitant of a wild country.

First on the wall was peinted a forest In which ther wonneth neyther man ne best ; With knotty, knarry, barrein trees old. Of stubbes sharpe, and hidous to behold ; In which ther ran a romblc and a swough. As though a storme shuld brcstcn every bough.

Chaucer. The Knightet Tale. There overtoke. Ta grete route Of hunters and oi foresters.

Id. Boke of the Duchesse. By many tribulations we enter into the kingdom of heaven, because, in deforest of many wolves, sheep cannot chuse but feed in continual danger of life.

Hooker. Macbeth shall never vanquished be, until Great Birnham-wood to Dunsinane's high hill Shall come against him.

That will never be :

Who can impress the forest, bid the tree

Unfix his earth-bound root. ShcJixpcarc. Macbeth.

Forester, my friend, where is the bush. That we may stand and play the murthcrcr in ? —Here by, upon the edge of yonder coppice.

Shakspeare.

This boy is foi'estborh. And hath been tutored in the rudiments Of desperate studies. Id. As You Like It.

There be airs, which the physicians advise their patients to remove unto, which commonly arc plain champaigns, but grasing, and not overgrown with heath ; or else timber-shades, as in forests. Bacon. How the &rst forest raised its shady head.

Roscomynon, Now Cancer glows with Phoebus' fiery car, The youth rush eager to the Sylvan war ; Swarm o'er the lawns, tha forest walk surround. Rouse the fleet hart and cheer the opening hound.

Pope. A mighty mass of brick, and smoke and shipping. Dirty and dusky, but as wide as eye Could reach, with here and there a sail just skipping In sight, then lost amidst the forestry Of masts. Byron.

But when the rising moon begins to climb Its topmost arch, and gently pauses there ; When the stars twinkle through the loops of time. And the low night-breeze waves along the air. The garland-/ores<, which the grey walls wear. Like laurels on the bald first Caesar's head ; When the light shines serene but doth not glare. Then in this magic circle, raise the dead : Heroes have trod this spot — 'tis on their dust ye tread. Id. Childe Harold.

Forest, in geography. The Caledonian and Hercynian forests are famous in history. The first was a celebrated retreat of the ancient Picts and Scots; the latter anciently occupied the greatest part of Europe ; particularly Germany, Poland, Hungary, &c. In Cassar's time it ex- tended from the borders of Alsatia and Switzer- land to Transylvania, and was computed sixty days' journey long, and nine broad : some parts or cantons thereof are still remaining. The an- cients adored forests, and imagined a great part of their gods to reside therein ; temples were frequently built in the thickest forests; the gloom and silence whereof naturally inspire sentiments of devotion, and turn men's thoughts within themselves. For similar reasons the Druids made forests the place of their residence, per- formed their sacrifices, instructed their youth, and gave laws in them.

Forest, in law. Forests are bounded with unremoveable marks and meres ; either known by record or prescription ; replenished with wild beasts of venery or chase, widi great coverts of vert for the said beasts ; for preservation . and continuance whereof, with the vert and venison, there are certain particular laws, privileges, and officers. A forest in tlie hands of a subject is properly the same thing with a chase ; being subject to the common law, and not to the forest laws. But a chase difliers from a forest, in that it is not enclosed ; and likewise that a man may have a chase in another man's ground as well as his own; being, indeed, the liberty of keeping beasts of chase, or royal game tlierein, protected even from the owner of the land, with a power of hunting them thereon. See Park. Though the king may erect a forest on his own ground and waste, he may not do it on the ground of other persons without their consent ; and agreements witli them for that purpose ought to be confirmed by parliament. If he grants a forest to a subject, on request made in the chancery, that subject

and his lifirs shall have justices of the forest, in which case the subject has a forest in law. A second property of a forest is, the courts thereof. A third property is the officers belonging to it, as the justices, warden, verderer, forester, agistor, regarder, keeper, bailiff, beadle, Sec. See Bailiff, Forester, &c. By the laws of the forest, the receivers of trespasses in hunting or killing of the deer, if they know them to be the king's property, are principal trespassers. If a trespass be committed in a forest, and the trespasser dies, after his death it may be punished in the life-time of the heir, contrary to common law. The Anglo-Norman kings punished such as killed deer in any of their forests with great s'everity ; also in various manners ; as by hanging, loss of limbs, gelding, and putting out eyes. By magna charta de foresta, it is ordained, that no person shall lose life or member for killing the king's deer in forests, but shall be fined ; and, if the offender has nothing to pay the fine, he shall be imprisoned a year and a day, and then be delivered, if he can give security not to offend for the future, &C. 9 Hen. III. c. 1. Before this statute, it was felony to hunt the king's deer; and by a late act, persons armed and disguised, ap- pearing in any forest, &c., if they hunt, kill, or steal, any deer. Sec, are guilty of felony. 9 Geo. I. c. 22. He who has any license to hunt in a forest or chase, &c., is to take care that he does not exceed his authority; otherwise he shall be deemed a trespasser from the beginning, and be punished for that fact, as if he had no license. See Game and Game Laws.

Forest Courts, courts instituted for the government of the king's forests, and for the punishment of all injuries done to the king's deer, to the vert or greensward, and to tlie covert in which such deer are lodged. These are the courts of attachments, of regard, of sweinmote, and of Justice-seat. 1. The court of attach- ments, wood-mote, or forty-days' court, j udge Blackstone observes, is to be held before the verderers of the forest once in every forty days; and is instituted to enquire into all offenders against vert and venison : who may be attached by their bodies, if taken with the mainour Tma-nopuvrea manu\that is, in the very act of killing venison, or stealing wood, or in the preparing so to do, or by fresh and immediate pursuit after the act is done; else they must be attached by their goods. And, in this forty days' court, the forestf s or keepers are to bring in the attach- ments, or presentments de viridi et venatione; and the verderers are to receive the same, and to enrol them, and to certify them under their seals to the court of justice seat or sweinmote : for this court can only enquire of, but not convict offenders. 2. The court of regard, or survey of dogs, is to be holden every third year for the lawiiig or expeditation of mastiffs; which s done by cutting off the claws of the forefeet, to prevent them from running after deer. No other dogs but mastiffs are to be thus lawed or expe- ditated,for none other were permitted to be kept within the precincts of the forests ; it being sup- Dosed that the keeping of these, and these only, ■was necessary

for the defence of a man's house. 3. The court of sweinmote is to be holden before

the verderers, as judges, by the steward of die sweinmote, thrice in every year ; the sweins or freeholders within the forest composing the jury. The principal jurisdiction of this court is, first, to enquire into the ojipressions and grievances committed by the officers of the forest : ' de super- oneratione forestarorium, et aliorum minis- trorum forest ; et de eorum oppressionibus populo regis illatis ;' and secondly, to receive and try presentments certified from the court of attachments against offences in vert and venison. And this court may not only enquire, but con- vict also ; which conviction shall be certified to the court of justice seat under the seals of the jury, for this court cannot proceed to judgment. But the prirrcipal court is, 4. The court of justice seat, which is held before the chief justice in eyre, or chief itinerant judge, capitalisjustitiarius in itinere, or his deputy ; to hear and determine all trespasses within the forest, and all claims of franchises, liberties, and privileges, and all pleas and causes whatsoever therein arising. It may also proceed to try presentments in the inferior courts of the forests, and to give judgment upon conviction of the sweinmote. And the chief justice may therefore, after presentment made or indictment found, but not before, issue his war- rant to the officers of the forest to apprehend the offenders. It may be held every third year ; and forty days' notice ought to be given of its sitting. The court may fine and imprison for offences within the forest, it being a court of record : and therefore a writ of error lies from hence to the court of king's bench, to rectify and redress any mal-administration of justice -, or the chief justice in eyre may adjourn any matter of law into the court of king's bench.*

Forest Laws are peculiar laws, different from the common law of England. Before the making of Charta de Foresta, in the time of king John and his son Henry III., confirmed in parliament by 9 Henry III. offences committed therein were punished at the pleasure of the king in the severest manner. By this charter, many forests were disafforested and stripped of their oppres- sive privileges, and regulations were made for the government of those that remained ; particu- larly, killing the king's deer was made no longer a capital offence, but only punished by fine, imprisonment, or abjuration of the realm : yet even in the charter there were some grievous articles, which the clemency of later princes has since, by statute, thought fit to alter per assisas forestfe. And to this day, in trespasses relating to the forest, voluntas reputabitur pro facto; so that if a man be taken hunting a deer, he may be arrested as if. he had taken a deer. To hunt in a forest, park, &c., in the night, disguised, if denied or concealed, upon examination before a justice of the peace, it is felony ; but, if confessed, it is only fineable. Keepers, &c., may seize instruments used in unlawful cutting of trees. Stat. 4 Geo. III. c. 31. Between the years 1787 and 1793 a series of Reports,

seventeen in num- ber, was made by commissioners specially ap- pointed to enquire into the state of the woods, forests, and land-revenues of the crown. The third report gives a list of the forests, parks, and chases in Enigland, then under the survey of the

surveyor general of the woods, in which there was any stock of timber : these are in Bcrkuhire, Windsor Forest, Cranburn Chase, and VVindsor Great and Little Park. Essex, Waltham Forest, anciently called the Forest of Essex, and some- times Epping or Hainault Forest. Gloucester- shire, Dean Forest. Hampshire, the New F'orest, Alice Holt and Woolmer Forest, Bere Forest. Kent, Greenwich Park. Middlesex, St. James's Park, Hyde Park, Bushy Park, and Hampton Court Park. Northamptonshire, the Forests of Whitilebury, Salcey, and Rockingham. Not- tmgharishire, Sherwood Forest. Oxfordshire, Wiiicnwood Forest. Surrey/, Richmond Park. Of these, Sherwood is the only one north of Trent ; the others all being south of Trent. By several acts, passed in consequence of these Reports and further enquiries, the boundaries of several of these and other forests have been ascertained, and regulations made for disaf- foresting and enclosing tliem in part or in the whole, and applying them to the benefit of the public.

Forest, Black, or Schwartzwakl, an ex- tensive forest in Germany, in Suabia, on the right side of the Rhine, consisting chiefly of mountains, which run across the greatest part of Suabia from north to south, and from east to west. This forest lies chiefly between Switzer- land, the Rhine, and Wurtemburg.

Forest sur Sevre, a town of France, in the department of the Two Sevres, eight miles south- west of Bressuire.

Forest, or Forrest (Arthur), an English naval officer of the eighteenth century. He was lieutenant of one of the ships sent under Vernon on the unsuccessful expedition against Cartha- gena. lie distinguished himself under the cap- tains Boscawen, Watson, and Cotes, in the attack of the Barradera battery, being among the fore- most who entered the enemy's work, at the head of a party of seamen. He was not, however, advanced to the rank of a post-captain till the 9th of March, 1745, at which time he was ap- pointed to the Wager. In 1746 he was employed in this ship on the .Jamaica station, where he took a large Spanish privateer. In 1755 he was appointed to the Rye ; and soon after to the Augusta, in wliich ship he was

ordered to tlie West Indies. In the month of October, 1757, as he, in the Augusta, with the Dreadnought and Edinburgh under his command, was cruising off Cape Francois, a remarkable head-land of St. Domingo, on the 21st at seven in the morning, the Dreadnought made a signal for seeing the enemy's fleet coming out of Cape Francois ; in consequence of which captain Forest made sail towards them. About half an hour after eidit he could enumerate seven sail of large ships, a schooner, and a pilot boat, lie, nevertheless, bore down upon the French"; and, about twenty minutes after three, the action commenced with great spirit on both sides, and continued for two hours and a half; when, in consequence of a signal from the French commodore, one of the frigates bore down to tow liim out of tlie line, and the rest of the IVench sliips folh)wcd him. The British ships had sufl'ered so much in their masts and rigging during tlie engagement, that

they were not in a condition to pursue them In this engagement, besides the damage which their ships sustained, the French had 500 men among the killed and wounded, while the British had only twenty-three men killed and eighty- nine wounded. This brilliant display of intre- pidity was followed, on the 24th of Decemberl759, by the capture of the Mars, a French frigate of thirty-two guns, with her whole convoy, con- sisting of eight sail, laden with sugar, indigo, coffee, cotton, &c., which cost £170,000. The Mars struck on receiving tlie first broadside, and all the rest instantly followed her example. Soon after this event captain Forest returned to En- gland, and, in 1760, was appointed to the Cen- taur, and sent out to .Jamaica as commodore and temporai-y commander on that station. He sailed from England, with a convoy of thirty-four s!iips, on the 16th of January, and arrived at Port Royal on the 6th of March. He continued on tliat station till the conclusion of the war, and, in 1769, was again appointed to the same com- mand, with the established rank of commodore ; but died soon after his arrival in that country, on the 26th of May, 1770.

Forest (John), a celebrated landscape painter, born at Paris in 1636. His landscapes gained him the appointment of painter to the king of France. He died in 1712.

Fore-staff, an instrument formerly used at sea for taking the altitudes of heavenly bodies, so called because the observer, in using it, turned his face towards the object; in contradistinction to the back-staff", where he turned his back to the object. This instrument is now, however, en- tirely exploded.

FORESTALL,?;, a. f Sax.pOfieprallan, i.e. FoRESTALLER, w. X. 5 FˆPˆ ˆ"d Ttal, a sta tion ; i. e. to stop from coming to, or to antici- pate a market, or station of c:oods : hence to anticipate; take up beforehand ; hinder by pre- occupation or prevention ; to seize or gain]>os- session of before another ; to buy, in order to raise the price; one that anticipates the market; one

that purchases before others, to raise the price.

He bold spake, Sir kiiiiilit, if knight thou bo. Abandon this forettctled plncc at erst. For fear of further harm, I counsel thoe.

Spenser. Faerie Qiicnie. j\nA though good luck prolonged hath thy date. Yet death then would the like mishap forestall.

Id. What's in prayer, but this twofold force To he. foreslalted ere we come to fall. Or pardoned being down.

S/iakiti}eare. llamlct. But for jnv tears, I hdii\ furextalled this clear and deep rebuke. Ere you with grief had spoke. /'/.

May This night /orcsta// him of the coming day. Id. If thou be master-gunner, spend not all That thou can'st speak at ones •, 1 ut husband it. And give men turns of speech ; do not forestall T\y lavishness thine own and others wit, As if thou mad'st thy will. HcrKrt

What need a nv.\vi forestall his date of grief. And run to meet what ho \ %ould most avoid ?

Milton.

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If you covet death, as utmost end Of misery, so thinking to evade The penalty pronounced, doubt not but God Hath wiselier armed his vengeful ire, than so To he forestalled. Id. Paradise Lust.

Commodities, good or bad, tlic workman must take at his master's rate, or sit still and starve ; whilst, by this means, this new sort of ingrossers or forestallers having the feeding and supplying this numerous body of workmen, set the price upon the poor landholder.

Locke.

FORESTALLING, in law, buying or bargain- ing for any corn, cattle, victuals, or merchandise, in tlie way as they come to fairs or markets to be sold, before they get thither, with an intent to sell the same again at a higher price. The punish- ment for this offence upon conviction at the quarter sessions, by two or more witnesses, is, for the first time, two months imprisonment and the loss of the goods, or the value ; for the

second offence, the offender shall be imprisoned six months, and lose double the value of the goods; for the tliird offence he shall suffer imprison- ment during the king's displeasure, forfeit all his goods an<3 chiltels.

FouKSTKKs are appointed by the king's letters patent, and sworn to walk tlie forest at all hours, and watch over the vert and venison ; also to make attachments and true presentments of all trespasses committed within the forest. If a man comes into a forest by night, a forester can- not lawfully beat him before he makes some resistance ; but in case such a person resists the forester, he may justify a battery. And a forester shall not be questioned for killing a trespasser that, after the peace cried to him, will not sur- render himself, if it be not done on any former malice ; though where trespassers in a forest, &:c., kill a person that opposes them, it is murder in all, because they were engaged in an unlawful act, and therefore malice is implied to the person killed.

FORESTTJS (Peter), a Dutch physician, born in 1522. He studied in Italy, and afterwards became medical professor at Leyden. lie died in 1597. lie wrote Observations on Medicine, which were printed at Frankfort in 1623, in 6 vols, folio.

FO'RESWAT, adj. } From for and swat, Fo'beswart. V from sweat. Spent with

heat.

Miso and Mopsa, like a couple of foreawat mnltcrs, were getting the pure silver of their hodii.-s out of tiie ore of their garments. Sidney.

FORETASTE, v. a. k n. s. Fore and taste. To have antepast of; to have prescience of: to taste before another; anticipation of

Perhaps the fact Is not so heinous now, foretasted fruit. Profaned first by the serpent, by him first Made common, and unhallowed, ere our taste.

Milton. A pleasure that a man may call as properly his own as his soul and his conscience, neither liable to acci- dent, nor exposed to injury : it is the foretaste of heaven, and the earnest of eternity. South.

FORETELL, v. a. & i-. 71. } Preter. and part. FoRinEt.LER, ,;. .s. 5 puss, foretold;

(fore and tell.) To predict ; to prophesy ; to foretoken ; to foreshow ; to utter prophecy : pre- dicter ; foreshower.

All the prophets from Samuel, and those thatfollovir after, have likewise

_ˆoretoW of these days.

Acti iii. 4. What art thou, whose heavy \ooks foretell Some dreadful story hanging on thy tongue ?

Sha/ispeaˆe, I fo\ind The new-created world, which fame in heaven Long had foretold. Milton.

Otliers arc proposed, not that the foretold events should be known ; but that the accomplishment that expounds them may evince, that the foreteller of them was able to foresee them. Bot/le on Colours.

Mercia's king. Warned in a dream, his murder did foretell, From point to point, as after it befell. Dryden. When great Ulysses sought the Phrygian shores. Deeds then undone my faithful tongne foretold ; Heaven sealed sny wo. Js,and you those deeds behold.

Pope.

FORETIIIXK, v.a. &: v. n. ˆ Fore and think.

FoiiETiiouGUT, n. s. 5 To anticipate in

the mind; to have prescience of; to contrive

antecedently ; to contrive beforehand : provident

care; prescience; anticipation.

But niay I live a litel while He shal _/br

Cliaucer. Romaunt of the Rose. The soul of every man Prophetically does forethink thy fall.

Shakspeare. I do pray to thee Thou virtuous Dauphin, alter not the doom Forethought by heaven. Id. King John.

A dam could not be ignorant of the punishments due to neglect and disobedience ; and felt, by the proof thereof, in himself another terror than he had fore- thought, or could imagine. Raleigh.

Friday ! the fat,.l day ! when next it came. Her son\ forethought the fiend would change his game.

Dryden.

He that is undone, is equally undone, whether it be by spitefulness of

forethought, or by the folly of oversight, or evil counsel. L' Estrange.

What's my frenzy will be called my crime : What then is thine ? Thou cool deliberate villain ! Thou wise, forethinking , weighing politician I

Smith.

Blessed be that God which hath given you an heart to forethink this, and a will to honour him with his own. Bishop Hall.

FORETOKEN, v. n. & n. s. Fore and token. To foreshow; to prognosticate as a sign: pre- venient sign ; prognostic.

They misllked nothing more in king Edward the Confessor, than that he was Fronchified, and account- ed the desire of foreign language then to be z foretoken of bringing in of foreign powers, which indeed liap- pcned. Camden's Remains

The king from Ireland hastes; but did no good ; Whilst strange prodigious signs /yre/o/ien blood.

DanieL

It may prove some ominous foretoken of misfortune.

Sidney.

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FORE'TOOTII, n. s. Fore and tooth. The fooUi in the anterior part of the mouth; the incisor.

The foreteeth should be formed broad, and with a fhin sharp edge like chisels. Rai/ on the Creation.

FO'RETOP, ra. s. Fore and top. That part of a woman's head-dress that is forward, or the top of a periwig.

So may your hats yoar foretops never press. Untouched your ribbons, sacred be your dress.

Dryde7i.

FOREVO'UCHED, part. Fore and vouch- Affirmed before ; formerly told. Sure her offence

Must be of such unnatural degree.

That monsters it j or your furevouched affection

Fallen into taint. Sha/ispeare. King Lear.

FO'REWARD, n. s. Fore and ward. The van ; the front.

They that marched in the forevoard were all mighry Men. 1 Mac. ix. 11.

FOREWARN, v. a. Fore and warn. To admonish beforehand ; to inform previously of any future event ; to caution against any thing beforehand.*

I viiW forewarn you whom you shall fear : fear him ■which, after he hath killed, hath power to cast into bell. Luke xii. 5.

Well I will arm me, being ihva forewarned,

Shahspeare, Henry VI. Divine interpreter, by favour sent Down from the empyrean to forewarn Us timely of what might else have been our loss Unknown. Milton's Paradise Lust.

Thy pride. And wandering vanity, when least was safe. Rejected my forewarning, and disdained Not to be trusted. Id.

Though Phcebus had forewarned him of singing wars, yet the search of nature was free.

Dry den's Virgil, Dedication. Young Choraebus, who by love was led To win renown and fair Cassandra's bed. Had lately brought his troops to Priam's aid ; Forewarned in vain by the prophetick maid. Id.
FOREWA'STE, u. a. Fore and waste. To desolate ; to destroy. Out of use.

Vespasian, with great spoil and rage, Forewasted all, until Gcinissa gent Persuaded him to cease. Faerie Queene.

High time 'gan it wex for Una fair, To think of those her captive parents dear. And ihelr forewasted kingdom to repair. Id.

lOREWEA'RY, u.a. For and weary. To dispirit with labor.

By your toil And labour long, through which ye hither came. Ye both forewearied be : therefore a while I read your rest, jind to your bowers recoil.

Faerie Queene. FOREWrSH, V. a. Fore and wish. To de- sire beforehand.

The wiser sort ceased not to do what in them lay, 10 procure that the good commonly forewislu'd might in time come to effect. Krwllcs.

FOREWO'RN, part. Fore and worn, from wear. Worn out ; wasted by time or use.

Neither the light was enough to read the words, and the ink was already foreworn, and in many places I'loltcd. Sidney.

FORFAR, or Angus, a county of Scotland, is bounded on the north by Aberdeen and Kincar dine, on the east by the German Ocean, on the south by the fritli of Tay, and on the west by the county of Perth. It is tyv-enty-eight miles and a hal. from north to south, twenty-nine from east to west, and has a superficial area of 831 Scottish, or, ac- cording to some authorities, 977 square English miles-, or 625,901 acres. It includes the districts of Gienisla, Glenesk, and Glenprassin. Part of the Grampian mountains runs through this coun- ty, which is agreeably diversified with hill and dale, well watered with lakes, rivers, rivulets, and fountains, shaded with large forests, inter- spersed with fields and meadows, and adorned with fine seats and })lantations. The rivers are — the North Esk, which, rising in mountain tor- rents, and afterwards issuing from a small lake called Lochlee, falls into the sea about three miles north of Montrose : the South Esk,. which rises arnorig the Grampians, and falls into an in- land bay culled ihe basin of I\Iontrose ; and die Isla, which has it^ source in the glen of Isla among the Grampians, and, aftfr being joLned by the Melgam, is received by the Tay, in Perth- shire. Besides these, there are the smaller streams of the Dean, Lunan, Dighty, and Noran. All the rivers rise towards the north, and, except- ing the Isla, fall into the sea. Near INIoiitrose, Aberbrothock, in the parish of Dunnichen, and in some other parts, tliere are chalybeate springs; the second more resorted to than the others. The heaths and woods abound with harts, hinds, roebucks, and moor fowls ; the streams are stocked with trout and salmon, and the hills co- vered with flocks of sheep. The mountains on the west and north are inhabited by Highlanders. Forfar contains five royal boroughs, viz. Dundee, Arbroath,]Montrose, Brechin, and Forfar, with the small towns of Glanimis, and Kirriemuir, which are all employed in the linen manufac- ture. It contains also fifty-six parishes, in many of which a considerable quantity of linen cloth is made. The annual export of this manufac- ture has been estimated at 11,000,000 yards. In the low country the soil is various, but gene- rally fertile ; and the most approved modes of agriculture encouraged by the landlord, and fol- lowed by the tenant, with enclosures and stone fences and ditches. In wheat and barley, the produce is generally more than sufficient for the consumption of the country ; but in oats a sup-

ply is frequently required. Considerable num.- bers of black cattle are reared in the county ; but the sheep are not numerous. The horses, which in the Highlands are indigenous and small, are estimated at 9000. The mineral products of this county consist of inexhaustible beds of limestone, veins of porphyry, large quantities of jasper of different colors, from bright yellow to deep red, susceptible of the highest polish ; and all varieties of pebbles : it is said that the real topaz is found here; colored crystals, called cairngorms, commonly five-sided prisms, and terminating in a pyramid of the same descrip- tion, are frequently found. Lead and iron ore were wrouglit, in the year 1678, to some extent, the lead yield mg a sixty-fourth part of silver. Shell marl is procured plentifully at the bottom

of lakes, and used as manure. Not more than half the surface of this county is cultivated. But about a fifth of the families are engaged in agri- culture, which has rapidly improved here of late years. The fisheries are conducted with great vigor and success : large quantities of sal- mon are sent to London in wooden boxes and preserved with pounded ice. Grain, fish, and linen are the chief exports. The burden of ves- sels engaged in the whole fishery was estimated a short time since at 21,859 tons. Some few antiquities are found in Forfar : amongst which the encampment at Cartherun has been said to be most worth notice.

For TAR, a royal burgh of Scotland, is the ca- pital of the foregoing county, and was anciently the residence of several of the Scottish aio- narchs. Malcolm Canmore held his first parlia- ment here in 1 057, and the vestiges of the castle used for this purpose are still to be seen in the neighbourhood. From the time of this mo- narch, we have little or no account of Forfar lil'. ihe middle of the seventeenth century, except an act passed in the thirteenth parliament of James VI. 21st of July, 1593, changing the weekly market day from Sunday to Friday. It is now held on Saturday. During the usurpa- tion of Oliver Cromwell, a detachment of his forces, after sacking Dundee, came to Forfar and burnt all the public records of the town. The only charter it now has, is one granted by Charles II. after his restoration, confirming all its an- cient rights and privileges. Nine persons were condemned and burnt here for witchcraft betwixt 1650 and 1662 ; and there is still preserved here a strange and barbarous implement of torture, called the witch bridle, by which, and an iron chain, uiose miserable persons were led to the stake. The ground on which the town stands, ■with that for a considerable way around, is un- even, and,

though low with respect to the cir- cumjacent country on every side except the west, it is high in comparison to tlie general level of the country. Forfar has been the seat of the sheriff-courts for upwards of two centuries. The streets are irregular, but those of modern con- struction are much superior in this respect. A spacious church, capable of admitting a congre- gation of between 2000 and 3000 persons, was erected in 1790, to which a fine steeple, 150 feet high, was added in the year 1814. Besides this there are places of worship for the Episcopalians and Antiburghers. A modern town-house fronts the market place, and contains a noble room for pirl>lic meetings. There arc three public schools; two endowed by the magistracy, and one by them and the heritors of the parish jointly. The principal manufactures are of brown linens, which were introduced about the year 1 745. The scarcity of fuel is an impediment to manufac- tures in general. Forfar unites with Dundee, Perth, Cupar in Fife, and St. Andrews, in re- turning a representative to parliament. It lies fourteen miles west of Montrose, twelve north- west of Arbroath, and fourteen north of Dun- dee.

FOR'FEIT, n. s., v. a. & part. adj. -% Fr. forfait;

~ ■ > VVelsh,/or-

For'fkitable, adj. For'f Em-RF, n. s.

J fed; Scotch,

forfault; from barb. Lat. foris facere, Jons factum, i. e. (Du Cange) extra rationem, ou- of reason; therefore to incense, offend. Somet thing lost by the commission of a crime : a fine ; a mulct ; something paid for expiation for crime; to lose by some breach of condition ; to lose by some offence. Forfeit and forfeiture mean the same, with this difference, that the one signifies in the primary acceptation the thing forfeited, and the other the act of forfeiting. All the souls that are, vtexe forfeit once ; And he that might the 'vantage best have took. Found out the remedy.

Shakspeare. Measure for Measure. Beg that thou mayest have leave to hang thyself- And yet, thy wealth being _/br/ei< to the state. Thou hast not left the value of a cord. Id.

Thy slanders I forgive, and therewithal Remit thy oihex forfeits. Id.

The court is as well a Chancery to save and debar forfeitures, as a court of common law to decide rights ; and there would be work enough in Germany and Italy, if imperial forfeitures should go for good titles. Bacon's War with Spain. Ancient privileges and acts of grace indulged by former kings, must not without high reason be re- voked by their successors ; not forfeitures be exacted violently, nor penal laws urged rigorously. Taylor.

He asked, but all the heavenly quire stood mute. And silence was in Heaven : on Man's behalf Patron or intercessor none appeared, Much less that durst upon his own head draw The deadly ybryetVure and ransom set.

Milton. Paradise Lost. The execution leave to high disposal, And let another hand, not thine, exact Thy }ˆenn\ forfeit from thyself. Id. Agonistes.

Thy life, Melantius ! I am come to take. Of whirli foul treason does a. forfeit make.

Waller. Men displeased God, and consequently /oTˆetˆerf all right to happiness. Boyle,

Straight all his hopes exhaled in empty smoke. And his long toils were forfeit for a look.

Dryden. Methought with wonderous ease he swallowed down His forfeit honour, to betray the town. Id.

A father cannot alien the power he has over his

child : he may perhaps to some degrees _/br/t:i(it, but

cannot transfer it. Locke.

How the murderer paid his forfeit breath ;

What lands so distant from that scene of death.

But trembling heard tLˆ fame .' Pope's Odyssey.

Forfeiture originally signifies a transgres- sion or offence against some penal law. Lobi- neau in his glossary will have forisfacta properly to signify a mulct or amend, not a forfeit ; which last he derives from the base British forfed, a penalty. But it is now more frequently used for the effect of such transgression; or the losing some right, privilege, estate, honor, office, or effects, in consequence thereof; than for the transgression itself Forfeiture differs from con- fiscair:,!., in that the former is more general; while confiscation is particularly applied to such things as become forfeited to the king's ex- chequer ; and goods confiscated are said to be such as nobody claims. Forfeitures may be either in civil or criminal cases.

Fcrfeiture in Civil Cases. A man who hns an estate for life or years, may forfeit it many

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ways, as well as by treason or felony ; such as alienation, claiming a greater estate than he hath, for affirming the reversion to be in a stranger, &c. When a tenant in tail makes leases not war- ranted by the statute ; a copyholder commits waste, refuses to pay his rent, or do suit of court ; and where an estate is granted upon con- dition, on non-performance thereof, &c., they will make a forfeiture. Entry for a forfeiture ought to be by him who is next in reversion, or remainder, after the estate forfeited. As if tenant for life or years commits a forfeiture, he who has the immediate reversion or remainder ought to enter ; though he has the fee only an estate tail.

Forfeiture in Criminal Cases is two-fold; of real and personal estates.

Forfeiture of Personal Estates. The forfeiture of goods and chattels accrues in every one of the high kinds of offence ; in high treason, or misprision thereof, petit treason, felonies of all sorts, whether clergyable or not, self murder or felony de se, petty larceny, stand- ing mute, &c. For flight also on an accusation of treason, felony, or even petit larceny, whether the party be found guilty or acquitted, if the jury find the flight, the party shall forfeit his goods and cliattels ; for the very flight is an offence, carrying with it a strong presumption of guilt, and is at least an endeavour to elude and stifle the course of justice prescribed by t1. :■ law . Bui the jury very seldom find the flight; forfeiture being looked upon, since the vast in- crease of personal property of late years, as too large a penalty for an off'ence to which a man is prompted by the natural love of liberty. There is a remarkable difference or two between the forfeiture of lands, and of goods and chattels. 1. Landˆ- ure forfeited upon attainder, and not before; ooJs and chattels are forfeited by couviolioii. i > ecuuse, in many of the cases where goods are forfeited, there never is any attainder; wiiicli happens only where judgment of death or outlawry is given ; therefore, in those cases, the forfeiture must be upon convic- tion or not at all ; and, being necessarily upon conviction in those, it is so ordered in all other cases, for the law loves uniformity. 2. The forfeiture of lands has relation to the time the fact was commuted, s- • i to avoid all subsequent sales and incumbrances ; but the forfeiture of goods and chattels has no relation backwards ; so that those only which a man has at the time of conviciion shall be forfeited. Therefore a traitor or felon may bona fide sell any of his chattels, real or personal, for the sustenance of himself and family between the fact and con- viction; for personal property is of so fluctuating a nature, that it passes through many hands in a short time ; and no buyer could be safe, if he were liable to return the goods which he had fairly bought, provided any of the prior venders had committed a treason or felony. Yet if they be collusively and not bona fide parted with, merely to defraud the crown, the law (and par- ticularly the statute 13

Elizabeth c. f)) will reach them ; for they are all the while truly and substantially the goods of the off"ender ; and as he, if acquitted, miglit recover them himself, as not

parted with for a good consideration ; so, in case he happens to be convicted, the law will recover them for the king.

Forfeiture of Real Estates. By attainder in high treason, says Blackstone, a man forfeits to the king all his lands and tenements of in- heritance, whether fee-simple or fee-tail; and all his rights of entry on lands and tenements, which he had at the time of the off'ence committed, or at any time afterwards , to be for ever vested in the crown; and also the profits of all lands and tenements, which he had in his own right for life or years, so long as such interest shall subsist. — This forfeiture relates backwards to the time of the treason committed ; so as to avoid all intermediate sales and incumbrances, but not those before the fact ; and therefore a wife's jointure is not forfeitable for the treason of her husband ; because settled upon her previous to the treason committed. But her dower is for- feited, by the express provision of statutes 5 & 6 of Edward 'I. c. 11. And yet the husband shall be tenant by the courtesy of the wife's lands, if the wife be attainted of treason ; for that is not prohibited by the statute. But though, after attainder, the forfeiture relates back to the time of the treason committed, yet it does not take effect unless an attainder be had, of which it is one of the fruits ; and there- fore, if a traitor dies before judgment is pro- nounced, or is killed in open rebellion, or is hanged by martial law, it works no forfeiture of his land ; for he never was attainted of treason. But if the chief justice of the king's bench (the supreme coroner of all England) in person, upon the view of the body of him killed in open rebellion, records it, and returns the record into his own court, both lands and goods shall be forfeited. The natural justice of forfeiture or confiscation of property for treason, is found- ed on this consideration : that he who hath thus violated the fundamental prmciples of govern- ment, and broken his part of the original con- tract between king and people, hath abandoned his connexions with society, and hath no longer any right to those advantages which before be- longed to him purely as a member of the com- munity ; among which social advantages the right of transferring or transmitting property to others is one of the chief. Such Torieitures, moreover, whereby his posterity must suffer as well as himself, will help to restrain a man, not only by the sense of his duty, and dread of personal punishment, but also by his passions and natural aff"ections ; and will interest every dependent and relation he has to keep him from offending; according to that beautiful sentiment of Cicero, ' nee vero me fugit quani sit acerbum, parentum scelera nliorum panis lui : sed hoc prseclare legibus comparatum est, ut caritas li- berorum amiciores parentes reipublica; redderet.' And therefore Aulus Cascellius, a Roman lawyer in the time of the triumvirate, used to

boast that he had two reasons for despising the power of the tyrants; his old age and his want of children ; for children are pledges to the prince of the father's obedience. Yet many nations have thought that this posthulnou! punishment savours of hardship to the innocent;

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*especially for crimes that do not strike at the very root and foundation of society, as treason against the government expressly does. And therefore, although confiscations were very fre- fjuent in the times of the earlier emperors, yet Arcadius and Honorius, in every other instance but that of treason, thought it more just, ibi esse psenam, ubi et noxa est ; and ordered, diat ' peccata suos teneant auctores, nee ulterius progrediatur metus quam reperiatur delictum : ' and Justinian also made a law to restrain the punishment of relations ; which directs the forfeiture to go, except in the case of crimen majestatis, to the next of kin to the delinquent. Qn the other hand, the Macedonian laws ex- tended even the capital punishment of treason, not only to the children, but to all the relations of the delinquent; and of course their estates must be also forfeited, as no man was left to in- herit them. And in Germany, by the famous golden bull (copied almost verbatim from Justi- nian's code), the lives of the sons of such as conspire to kill an elector are spared, as it is expressed by the emperor's particular bounty. But they are deprived of all their effects and rights of succession, and are rendered incapable of any honor ecclesiastical and civil : to the end that, being always poor and necessitous, they may for ever be accompanied by the infamy of their father; may languish in continual indi- gence; and ' may find,' says this merciless edict, * their punishment in living, and their relief in dying.' In England, forfeiture of lands and tenements to the crown for treason is by no means derived from the feudal policy, but was antecedent to the establishment of that system in this island ; being transmitted from their Saxon ancestors, and forming a part of the ancient Scandinavian constitution. But in certain trea- sons relating to the coin (which seem rather a species of the crimen falsi, than the crimen Icesae majestatis, it is provided by some of the modern statutes which constitute the offence, that it shall work no forfeiture of lands, save only for the life of the ofiTenders ; and by all, that it shall not deprive the wife of her dower. And, in order to abolish such hereditary punishment entirely, it was enacted by statute 7 Ann. c. 21, that, after the decease of the late pretender, no attainder for treason should extend to the disinheriting of any heir, nor to the prejudice of any person, other than the traitor himself. By which the law of forfeitures for high treason would by*

this time have been at an end, had not a subsequent statute intervened to give them a longer duration. The history of this matter is somewhat singular, and worthy observation. At the time of the union, the crime of treason in Scotland was, by the Scots law, in many respects different from that of treason in England ; and particularly in its consequence of forfeitures of entailed estates, which was more peculiarly English ; yet it seemed necessary, that a crime so nearly affecting government should, both in its essence and con- sequences, be put upon the same footing in both parts of the united kingdoms. In new modelling these laws, the Scots nation and the English house of lords struggled hard, partly to maintain, and partly to acquire, a total immunity

from forfeiture and corruption of blood ; which tlie house of lords as firmly resisted. At length a compromise was agreed to, which is esta- blished by this statute, viz. that the same crimes, and no other, should be treason in Scotland that are so in England ; and that the forfeitures and corruption of blood should take place in Scotland till the death of the then preten- der, and then cease throughout the whole of Great Britain : the lords artfully proposing this temporary clause, in hopes (it is said) that the prudence of succeeding parliaments would make it perpetual. This has partly been done by the statute 17 Geo. II. c. 39 (made in the year preceding the late rebellion), the operation of these indemnifying clauses being thereby still farther suspended till the death of the sons of the pretender. In petit treason and felony, the offender also forfeits all his chattel interest abso- lutely, and the profits of all freehold estates dur- ing life ; and after his death all his lands and tenements in fee simple (but not those in tail) to the crown, for a very short period of time : for the king shall have them for a year and a day, and may commit therein what waste he pleases : which is called the king's year, day, and waste. Formerly the king had only a liberty of com- mitting waste on the lands of felons, by pulling down their houses, extirpating their gardens, ploughing their meadows, and cutting down their woods. And a punishment of a similar spirit appears to have obtained in the oriental countries, from the decrees of Nebuchadnezzar and Cyrus, in the books of Daniel and Ezra ; which, besides the pain of death inflicted on the delinquents there specified, ordain, ' that their houses shall be made a dunghill.' But this tending greatly to the prejudice of the public, it was agreed in the reign of Henry I. in Eng- land, that the king should have the profits of the land for one year and a day, in lieu of the de- struction he was otherwise at liberty to commit : and therefore magna charta provides, that the king shall only hold such lands for a year and a day, and then restore them to the lord of the fee, without any mention made of waste. But the statute 17 Edw. II. de prerogativa regis, seems to suppose that the king shall have his year, day, and waste ; and not the year and day instead of waste : which Sir Edward Coke (and the author of the Mirror before him)

very justly look upon as an encroachment, though a very ancient one, of the royal prerogative. This year, day, and waste, are now usually compounded for; but otherwise they regularly belong to the crown ; and after their expiration the land would natu- rally have descended to the heir (as in gavel-kind tenure it still does), did not its feudal quality in- tercept such descent, and give it by way of escheat to the lord. These forfeitures for felony do also arise only upon attainder ; and therefore a felo de se forfeits no lands of inheritance or freehold, as he never is attainted as a felon. They likewise relate back to the time the offence was committed, as well as forfeitures for treason, so as to avoid all intermediate charges and con- veyances. This maybe hard upon such as have unwarily engaged with the offender : but the cruelty and reproach must lie on the part, not of

the law, but of the criminal ; who has thus know- ingly and dishonestly involved others in his own calamities.

FORFEX, in Roman antiquity, a way of drawing up an army in the form of a pair of shears. It was intended to receive the cuneus, or wedge, if the enemy should make use of that hgure. For when the forfex opened to admit the wedge, they had an opportunity of defeating their design, and cutting them in pieces.

FORFICULA, the ear-wig, in zoology, a ge- nus of insects belonging to die order of coleop- tera. The antennre are bristly ; the elytra are dimidiated; the wings are covered; and the tail is forked. This genus of insects is one of the best known, the forceps at the extremity of their abdomen forming a very distinctive character. It is this seeming weapon that has occasioned those insects to be called forficula ; and the name of ear-wigs has been given them : the forceps, however, which the ear-wig carries at his tail, and with which he seems provided for his de- fence, are not so formidable as at first appears, being destitute of strength sufficient to produce the least sensible impression. The larva differs very little from the perfect insect. Ear- wigs are very mischievous vermin in gardens, especially where carnations are preserved ; for they are so fond of these flowers, that, if care is not taken to prevent them, they will entirely destroy them, by eating off' the sweet parts at the bottom of the leaves. To prevent which, most people have stands erected, which have a basin of earth or lead round each supporter, which is constantly kept filled with water. Others hang the hollow claws of crabs and lobsters upon sticks in divers parts of the garden into which those

vermin get ; and, by often searching them, one will destroy them without much trouble, which will be of great service to the wall-fruit.

FORGAVE, the preterite of forgive.

FORGE, H.s. Scv.a.

Forger, n.s. I gtft-

Forgery, ??. ,?.)/«mfa, corrupted from

Jitbrica, as some think ; to fabricate ; put to- gether: but the lce. Jh-gia is suggested by Mr. Callendcr as tlie more probable etymology. The place where iron is beaten into form. In com- mon language we use forge for large work, and smithy for small ; but in books the distinction is not kept. Any place where any thing is made or shaped. Manufacture of metalline bodies; the act of working. To form by the hammer; to beat into shape. To make by any means. To counterfeit; to falsify. One who makes or forms. One who counterfeits any thing; a falsifier. The crime of falsification. Smith's work; fabri- cation ; the act of the forge.

But in his slovc, he gan to thriiig A rasour sharpc and woll biting. That was t/fhu/ed in a furge Whichc iba: men clepon coupe Gorge.

Chaucer. Romaunt of the Ro»e.

I know iinil.-r the irrocn, the serpent how he lurks The hanimrr of the restless forye I know cko bow it

works, 1 know, and can by rote the tale that I would tell ; But oft the words come forth aury of him that lovcth well. Surrij.

The flashing fier flies.

."J ¥t. forge ; Ital._/br- J gia ; barb. Lat. forica ;

.4s from a. forge, out of their burning shields, And streams of purple bloud new die the verdant fieUls. Spen.ter. Faerie Queenei

Of those he cbose out two, the falsest twoo. And fittest for .o furge true seeming lyes ; The one of them bo gave a message too. The other by himself staide other work to do.

Id. From no other forge hath proceeded a strange con- ceit, that to serve God with any set form of common prayer is superstitious. Hooker.

Were I king, I should cut otT the nobles for their lands ; For my more

having would be but as sauce To make me hunger more, that I should forge Quarrels unjust against the good and loyal. Destroying them for wealth.

Shafispeare, Macbeth. He was a kind of nothing, titleless, 'Till he had forged himself a name i' the fire Of burning Rome. Id. Coriolanus.

His heart's his mouth : What his breast jforˆes, that his tongue must vent.

S/iakspeare. Has your king married the lady Gray ? And now to sooth yo \xx forgery and hi-i. Sends me a paper to persuade me patience. Id. Now behold. In the quick _/orˆe and working-house cf thought. How Loudon doth pour out her citizens. Id.

In the greater bodies the forge was easy, the matter being ductile and sequai ious and obedient to the stroke of the artincer, and apt to be drawn, formed and moulded. Bacon.

He ran on embattled armies clad in iron. And, weaponless himself. Made arms ridiculous, useless the forgery Of brazen shield and spear, the hammered cuirass, Chalybean tempered steel, and frock of mail Adamantean proof.]\ldtoii's Agonistes.

In other part stood one, who at the forge Labouring, two massy clods of iron and brass Had melted. Id. Paradise Lost.

The queen of raartials. And Mars himself conducted them ; both which, being

forged of gold. Must needs have golden furniture.

Chapman's Iliad. Those names that the schools forged, and put into the mouths of scholars, could never get admittance into common use, or obtain the licence of publick ap- probation. Locke. t As in stealing, if there were no receivers there would be no thieves ; so in slander, if there were fewer spreaders, there would be ivwer forgers of libels. Government of the Tongue. Tyger with tyger, bear with bear you'll find In leagues offensive and defensive joined ; But lawless man the anvil dares profane. And forge that steel by which a man is slain, Which earth at first for plough-shares did aft'ord. Nor yet the smith had learned to form a sword.

Tate's Juvenal. Tlie o'er laboured Cyclop from his task retires. The jEolian forge exhausted of its fires. Pope.

A forgery, in setting a false name to a writing, which may j)rejudico another's forunc, the law pun- ishes with the loss of cars ; but has inflicted no ade- quate penalty for doing the same think in print, though books sold

under a false name arc so many forgeries.

Swift. No forger of lies willingly and wittingly furnishes out the means of his own detection. West.

A subtil craftman framed him seemly arms. Forged in the shop of wrangling sophistry ; And ■wrought with curious arts, and mighty charms Tempered with lies, and false philosophy.

Fletcher's Purple Island.

Forge properly signifies a little furnace, •wherein smiths and other artificers of iron or steel, &c., heat their metals red-hot, to soften them, and render them more malleable and ma- nageable on the anvil. An ordinary forge is nothing but a pair of bellows, the nozzle of which is directed upon a smooth area, on which coals are)\aced. The nozzle of a pair of bellows may be also directed to the bottom of any fur nace, to excite the combustion of the coals placed there by which a kind of forge is formed. In laboratories, there is generally a small furnace consisting of one cylindrical piece open at top, ■which has at its lower side a hole for receiving the nozzle of a double bellows. This kind of forge furnace is very convenient for fusions, as the operation is quickly performed, and with few coals. In its lower part, two inches above the hole for receiving the nozzle of the bellows, may be placed an iron plate of the same diameter, supported upon two horizontal bars, and pierced near its circumference with four holes diametri- cally opposite to each other. By this disposition, the wind of the bellows, pushed forcibly under this plate, enters at these four holes ; and thus the heat of the fire is equally distributed, and the crucible in the furnace is equally surrounded by it. This contrivance is used in the forge fur- naces for melting copper, with this difference only, that these furnaces are square, which is a matter of no consequence. As the wind of bel- lows strongly and rapidly excites the action of the fire, a forge is very convenient when a great heat is to be applied quickly : but it is not suit- able when the heat is to be gradually increased. The forge or blast of bellows, is used in several operations; as to fuse salts, metals, ores, &c., and chiefly in the smelting of ores, and fusion of metallic matters.

Forge is also used for a large furnace, wherein iron ore taken out of the mine is melted down : or it is more properly applied to another kind of furnace, wherein the iron ore, melted down and separated in a former furnace, and tlien cast into sows and pigs, is heated ■ ˆid fused over again,

and beaten afterwards \»iih large hammers, and thus rendered more soft, pure, ductile, and fit for use.

Forge, in the train of artillery, is generally called a travelling forge, and may not be impro- perly called a portable smith's sliop : at this forge all manner of smith's work is made, and it can be xisedupou a march as well as in camp. Formerly they were very ill contrived, with two wheels only, and wooden supporters to prop the forge for working when in the park. Of late they are made with four wheels, which answers their pur- j ose much better.

Forge for red-hot Balls is a place where the balls are made red-hot before they are fired off; it is built about five or six feet below the surface of the ground, of strong brick-work, and an iron grate, upon which the balls are laid, with a very large fire under them.

Forgery, in law, is the fraudulent imitation of a name, or alteration of a writing, to the pre- judice of another man's right. By statute 5 Eliz. c. 14. to forge or make, or knowingly to publish or give in evidence, any forged deed, court-roll, or will, with intent to affect the right of real property, either freehold or copyhold is punished by a forfeiture to the party aggrieved of double costs and damages; by standing in the pillory, and having both his ears cut off, and his nostrils slit, and seared ; by forfeiture to the crown of the profits of his lands, and by perpe- tual imprisonment. For any forgery relating to a term of years or annuity, bond, obligation, ac- quittance, release, or discharge of any debt or demand of any personal chattels, the same for- feiture is given to the party grieved; and on the offender is inflicted the pillory, loss of one of his ears, and half a year's imprisonment : the second offence, in both cases, being felony without be- nefit of clergy. Besides this general act, a mul- titude of others, since the Revolution, when paper credit was first established, have inflicted capital punishment on the forging, altering, or utter- ing as true when forged, of any bank bills or notes, or other securities; of bills of credit issued from the exchequer; of south-sea bonds. See. ; of lottery tickets or orders; of army or navy debentures ; of East India bonds ; of writings under the seal of the London or Royal Exchange Assurance ; of the hand of the receiver of the prefines, or of the accountant-general and certain other officers of the chancery; of a letter of attorney, or other power, to receive or transfer stock or annuities ; and on the personating a proprietor thereof, to receive or transfer such annuities, stock, or divi- dends : also on the personating, or procuring to be personated, any seaman or other person, in- titled to wages or other naval emoluments, or any of his personal representatives; and the taking, or procuring to be taken, any false oath in order to obtain a probate, or letters of admi- nistration, in order to receive such payments ; and the forging, or procuring to be forged, and likewise the uttering or

publishing, as true, of any counterfeited seaman's will, or power : to which may be added, though not strictly reduci- ble to this head, the counterfeiting of Mediterra- nean passes, under the hands of the lords of the admiralty, to protect one from the piratical states of Barbary ; the forging, or imitating, of any stamps to defraud the public revenue : and the forging of any marriage register or license: all which are, by distinct acts of parliament, made felonies without benefit of clergy. By statutes 13 Geo. III. c. 52 and 59, forging, or counter- feiting, any stamp or mark, to denote the standard of gold and silver plate, and certain other offences of the like tendency, are punished with transportation for fourteen years. By sta- tute 12 Geo. III. c. 48, certain frauds on the stamp duties, therein described, principally by using the same stamps more than once, are made single felony, and liable to transportation for seven years. And the same punishment is inflicted by statute 13 Geo. III. c. 38, on such as counter- feit the common seal of the corporation for ma- nufacturing plate glass (thereby erectedl, or knowingly demand money of the company by

virtue of any writing under such counterfeit seal. Tliere are also two other general laws with re- gard to forgery; the one, 2 Geo. II. c. 25, whereby the first offence in forging or procuring to be forged, acting or assisting therein, or utter- ing or publishing as true, any forged deed, will, bond, writing obligatory, bill of exchange, pro- missory note, indorsement or assignment thereof, or any acquittance or receipt for money or goods, with intention to defraud any person, or corpo- ration, is made felony without benefit of clergy. And, by statute, 7 Geo. II. c. 22, it is equally penal to forge, or cause to be forged, or utter as true, a counterfeit acceptance of a bill of ex- change, or the number of any accountable receipt for any note, bill, or any other security for money, or any warrant or order for the pay- ment of money, or delivery of goods. So that, through the number of these general and special provisions, there is now hardly a case possible to be conceived, wherein forgery that tends to de- fraud, whether in the name of a real or fictitious person, is not made a capital crime.

A deed forged in the name of a person who never had existence is within the statute 2 Geo. II. c. 25. for the statute does not use the words the deed of any person, or the deed of another, or any words of like import, but any deed. Lord Coke's description of forgery, 3 Inst. 169, ' When the act is done in the name of another person,' is apparently too narrow, and only takes in that species of forgery which is most com- monly practised ; but there are many other species of forgery which will not come within the letter of that description. Fost. 116. That the use of a name merely

fictitious is sufficient to constitute forgery, was also solemnly determined in BoUand's case, O. B. 1772: 1 Leach, 83: 2 East's P. C. c. 19, sect. 49.

This offence of forgery may be complete though there be no publication or uttering of the forged instrument : for the very making, with a frau- dulent intention, and without lawful authority, of any instrument which at common law or by statute is the subject of forgery, is of itself a sufficient completion of the offence before pub- lication ; and though the publication of the in- strument be the medium by which the intent is usually made manifest, yet it may be proved as plainly by other evidence. 2 East's P. C. c. 19. sect. 4, 44 : Elliot's case, 1777 : 1 Leach, 173 : 2 New Rep. 93.

By 45 Geo. III. c. 89, sect. 1, consolidating and amending the provisions of former acts, the penalty of felony without clergy, is enacted against all persons who shall falsely make, forge, counterfeit, or alter (or cause or procure to be so done, or willingly act or assist in so doing), any deed, will, testament, bond, writing obli- gator)', bill of exchange, promissory note, or any indorsement, assignment, or acceptance of any such bill or note, or any acquittance or receipt for money or goods, or any accountable receipt for any security for money, or any warrant or order for payment of money or delivery of goods, with intent to defraud any person or cor- poration : and the like penalty on all persons •who shall offer, dispose of, or put away any such forged deed, will, or instrument, knowing !t to be forged, and with intent to defraud as afore-

said. By Stat. 41 Geo. ill. c. 57, persons, not autliorised, makmg any iit>per, &c., with the name or firm of any private bankers, &c., are punishable by imprisonment from six months to two years for the first offence ; and for the se- cond by transportation for seven years. By the sam-e act the like punishment is imposed on persons engraving plates of private bankers without authority ; and persons engraving sig- natures of private bankers in hair strokes, &c., are punishable by imprisonment from one year to three, and for the second offence to transport- ation. By Stat. 43 Geo. III. c. 139, sect. 2, the engraving plates for foreign bills of exchange, is declared a misdemeanor punishable by six months' imprisonment, and whipping, and fine ; and for the second offence by fourteen years' transportation.

Forgery, by the common-law, extends to false and fraudulent making or altering of a deed or writing, whether it be a matter of record, in which sc^r.^s to be included a parish register; which is punishable by fine, imprisonment, and corporeal punishment at the discretion of the court; or any other writing, deed, or will. 3 Inst. 169. 1 Rol. Abr. 65. 1 Iiawk. P. C. c. 70. Not only where one makes a false deed ; but where a fraudulent alteration is made of a true deed, in a material part of it, as by making a

lease of the manor of Dale, and it appears to be a lease of the manor of Sale, by changing the letter D. into an S. or by altering a bond, &c., for £500 expressed in figures, to £5000 by adding a new cypher, these are forgery : so it is, if one finding another's name at the bottom of a letter, at a considerable distance from the other writing, causes the letter to be cut off, and a ge- neral release to be written above the name, &,c. 1 Hawk. P. C. c. 70.

A writing is said to be forged, where one being directed to draw up a will for a sick per- son, doth insert some legacies therein falsely of his own head ; though there be no forgery of the hand or seal ; for the crime of forgery consists as vˆell in endeavouring to give an appearance of truth to a mere falsity, as in counterfeiting a man's hand, &c. 1 Hawk. P. C. c. 70 ; 3 Inst. 170. But a person cannot regularly be guilty of forgery by an act of- omission; as by omitting a legacy out of a will, which he is directed to draw for another : though it has been held, that, if the wilful omission of a bequest to one cause a material alteration in the limitation of an estate to another, as if the devisor directs a gift for life to one man, and the remainder to another in fee, and the writer omit the estate for life, so that he in remainder hath a present estate upon the death of the devisor, not intended to pass, this is a forgery. Noy, 118. Moor, 760.

It seems to be no way material, whether a forged instrument be made in such manner, that if it were in truth such as it is counterfeited for, it would be of validity or not. 1 Sid. 142. Nei- ther is it necessary that this resemblance to the known instrument should be exact. 2 East's P. C. c, 19, sect. 6. 44.

If a person engraves a counterfeit stamp (for medicines under 44 Geo. III. c. 98), similar m some parts, dissimilar in otliers, to the legal stamps, and, cutting out the dissimilar parts,

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utters the similar parts as genuine, concealina;, by a seal, the space whence the dissimilar part is cut out, the ofl'ence is complete under the act, 4 W. V. Taunton, 400. The counterfeiting wri- tings oˆf an inferior nature, as letters and such like, it hath been said, is not properly forgery ; but the deceit is punishable. — But in the case of John Ward, of llackney, it was determined tiiat to forge a release or acquittance for the delivery of goods, although not under seal, was forgery at common law. See Barn. K. B. 10.

Raym. 81. Stra. 747. And this case is considered as having now settled the rule that the counterfeiting of any writing with a fraudulent intent, whereby another may be prejudiced, is forgery at common law. 2 East's P. C. c. 19, sect. 7.

The offence of forgery at common law cannot be tried at the quarter sessions, nor can they take cognizance of it as a cheat. 2 Hawk. P. C. c. 8, sect. 64 : 2 East, P. C. c. 19, sect. 7. The trial of forgery must be had in the county where the offence is committed, as the indictment can only be preferred in that county.

In Scotland the punishment of forgery is not expressly laid down by statute, but the common law and practice of that country hath been to inflict a capital punishment in all cases of gross forgery. Bell's Scotch Law Diet. See further on this subject, Russel on Crimes, c. 27 — 34, where it is treated with great accuracy.

Forging, in smithery, the beating, or ham- mering iron on the anvil, after having first made it red-hot in the forge, to extend it into various forms, and fashion it into works. See Forge. There are two ways of forging and hammering iron. One is by the force of the hand, in wliich there are usually several persons employed, one of them turning the iron and hammering like- wise, and the rest only hammering. The other is by the force of a water-mill, which raises and works several huge hammers beyond the force cf man ; under the strokes whereof the workmen pre- sent large lumps of iron, which are sustained at one end by the anvils, and at the other by iron chains fastened to the ceiling of the forge. This last way of forging is only used in the largest works, as anchors for ships, ike, which usually weigh several thousand pounds. For light works, a single man holds, beats, and turns, with one hand, while he hammers with the other. Each purpose the work is designed for requires its proper heat ; for if it be too cold it will not feel the weight of the hammer, as the smiths call it, when it will not batter under the hammer ; and, if it be too hot, it will red-sear, that is, break or crack under the hammer. The several degrees of heat the smiths give their iron are, 1 . A blood-red heat ; 2. A white flame heat ; and 3. A sparkling, or welding heat.

FORGET', iJ. a. ˆ Prefer. forgot; part.

Foi-.ftF.T'riiL, adj. \ forgotten, or forgot ;

Fokget'iulness, w. s. [Sax. ponsyran; Dut.

Forget'teu, n. s. (vcrgeten ; iˆweiX.forga-

Fokgot', or I ta ; from /'or, a regular

FouGOT'TEN,p«.'>.p«r/.J prefix, and Goth, ga, gcta,to heed, Thomson. To lose memory of; to let go from the remembrance ; not to at- tend ; to neglect ; not retaining the memory of; causing oblivion ; oblivious ; inattentive ; neg- ligent; neglectful; careless: oblivion; cessa-

tion to remember; loss of memory; inattention; one that forgets ; a careless person. ' Forget- fulness, ' says Crabbe', characterises the person ; oblivion the state of the thing : the former refers to him who forgets, the latter to that which is forgotten : we blame a person for his forgetful- ness ; but we sometimes bury things in ob- livion.

Forget not thy friend in thy mind, and be not un- mindful of him in thy riches. Eccltts. xxxvii. 6.

Can a woman forget her sucking child ? Y;'?., they may forget ; yet 1 will ˆoi forget thee.

haiah xlis, 5. As though the erthe, there envye wolde To be gayer than is the heven To have mo fioures soche [sithe] seven As in the welken .sterres be. It had forget the poverte

Of Winter. Chaucer. Boke of the Duchesse.

Thou hast dronke so muche bony of swcte temporal richesscs, and delices, and honours of tliis world, that thou art dronken, and host forgotten Jesu Crist thy Creatour. Id. The Tale of Melibeus.

The church of England is grievously charged with forgelftdness of her duty. Hooker.

That is T\o. forgot Which ne'er I did icmomber ; to my knowledge, T never in my life did look on him. Sha/tspeare

When I am forgotten, as I shall be. And sleep in dull cold marble, where no mention Of me must more be heard. Id,

O gentle sleep ! Nature's soft nurse, how have I frighted thee, That thou no more wilt weigh my eyelids down. And steep my senses in forgetfulness I Id.

I have read in ancient authors invitations to lay aside care and anxiety, and give a loose to that pleasing forgetfulness wherein men put off their char- acters of business. Steele. But when a thousand rolling years are past. So long their punishments and penance last. Whole droves of minds are by the driving god Compelled to drink the deep Lethean flood. In \a.Tge forgetful draughts to steep the cares Of their past labours, and their irksome years.

Dryden's jˆneid. I, in fact, a real interest have. Which to my own advantage I would save ; And, with the usual courtier's trick, intend To serve myself, fornetfvl of roy friend. Prior. Thro' the long Strand togttlier let us stray ; With thee conversing, 1 forget the way, (jay-

No sooner was our deliverance compleated, but we forgot our danger and our duty. Atterbury.

Alive, ridiculous ; and dead, /on/fX. Pope.

All birds and beasts lie hashed : sleep steals away The wild desires of men and toils of day ; And brings, descending through the silent air, 4 sweet forgetfulness of human care.

Pope's Staliut. How often hope, despair, resent, regret Conceal, disdain, — do all things but forget.

Pope. If we vaight forget ourselves, or forget God ; if we might disregard our reason, and live by humour and fancy in any thing, or at any time, or at any place, it would be as lawful to do the same in every thing, at every time, and every place. Law.

To forget or to remember at pleasure, arc equally beyond the power of man. Yet as memory may be assisted by method, r.nd the decays of knowledge re- paired by stated times of recollection, so the power of forgetting is capable of improvement.

Johnson. Idler.

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And, pausing as she saw him kneel With hjs despatch, /orˆo to break the seal. Byron, Adieu fair Cadiz! yea a long adieu : Who vany forget how well thy walls have stood ? When all were changing thou alone wert true. First to be free and last to be subdued.*

Id. Cliilde Harold.

FOR

iOilKilMtj, v.a. "ˆ sax. pofijipan ; bwed.

Forgive'nesSjW.s. yforgifiva , Teut. vergeben ;

Forgiv'er, Ti.s. 3 compounded of the pri- vative for, and give. Signifies not

to give the punishment that is due ; to relax from the rigor of justice in demanding retribution : to remit what is due either on the score of demerit or any other obligation. To pardon a crime; not to exact debt or penalty. Forgiveness not only relates to the act but to the disposition — thus it iihplies clemency, placability, readiness to for- give.

The people that dwell therein shall he forgiven their iniquity. Isaiah xxxiii. 24.

The lord of that servant was moved with compas- sion, loosed him, and forgave him the debt.

Matt, xviii. 27.

To the Lord our God belong mercies and forgive- nesses. Daniel. And they answered al unto hire, fayre,

Thaf they forgave it hire, for it was right.

It was no gylte, it lay not in hire might ;

And sayden hire cnsamples many one —

But al for naught ; for thus she said anone.

• Be it as it may' (quod she), ' of forgivyng,

I will not have no forgifte, for nothing.'

Chaucer. Legende of Good Women,

Then heaven forgive him too 1 Shakfpeare.

I do beseech your grace for charity ; • If ever any malice in your heart Were hid against me, now forgive me frankly. — Sir Thomas Lovell, I as ire/i forgive you. As I would he forgiven; I forgive all. Id.

Exchange forgiveness with me, noble Hamlet ; Mine and my father's death come not upon thee. Nor thine on me. Id,

Mercy above did hourly plead For her resemblance here below ; And nu\(i forgiveness intercede To stop the coming blow. Dryden.

Forgiveness to the injured does belong ; But they ne'er pardon who commit the wrong.

Id. God has certainly promised forgiveness of sin to every one who repents.

South.

Slowly provoked, she easily /orr/iue«. Prior.

Ye stars which are the poetry of heaven ! If in your bright leaves we would read the fate Of men and empires, 'tis to bo forgiven. That in our aspirations to be great. Our destinies o'erleap their mortal state. And claim a kindred with you : for ye are A beauty and a mystery, and create In us such love and reverence from afar. That fortune, fame, power, life have named themselves a star. Byron. Childe Harold.

FORHA'IL, V. a. An old word. Probably iox forlmnl, ixom for ˆnd haul. To harass; tear; torment.

All this long tale Nought easeth the care that doth mcforliail.

Spenser's Pait.

FORK, n. s. & V. n. "ˆ Saxon pojic ; Welsh Fork'ed, adj. I fforch ; French, jfourc/w ;

Fork'eijly, arfy. (ˆItal. forca; IjoX. furca. Fork'edness, n.s. TAn instrument divided Fork'head, [at the end into two or

Fouk'y, adj. J more points or prongs,

used on many occasions ; to shoot into blades, as corn does out of the ground. It is sometimes used for the point of an arrow ; a point ; opening into two or more parts.

It seizing, no way enter might ; But back resounding, left the forkhead keen, Eftsoons it fled away, and might no where be seen.

Faerie Queene. The bow is bent and drawn : make from the shaft. — Let it fall rather, though the fork invade The region of my heart. Shakspeare. King Lear.

Naked, he was, for all the world, like a forked radish, with a head fantastically carved upon it with a knife. Shakspeare.

Sometimes we see a cloud that's dragonish, A forked mountain, or blue promontory. Id.

Come, shall we go and kill us venison ? And yet it irks me the poor dappled fools Should in their own confines, with forked heads. Have their round haunches gorsd. Id.

He would have spoke : But hiss for hiss returned, with ybrfted tongue To forked tongue. Milton's Paradise Lost.

Ye dragons, whose contagious breath Peoples the dark retreats of death. Change your fierce hissing into joyful song. And praise your Maker with y oar forked tongue.

Roscommoji, The vicar first, and after him the crew, WithybrA and staves the felon to pursue. Ran Coll our dog. Dryden's Nun's Priest.*

The corn beginneth to fork.

Mortimer's Husbandry, Several are amazed at the wisdom of the ancients, that represented a thunderbolt with three forks., since nothing could have better explained its triple quality of piercing, burning, and melting. Addison.

The smiling infant in his hand shall take The crested basilisk and speckled snake ; Pleased the green lustre of the scales survey. And with then J'orky tongue and pointless sting shall play. Pope's Messiah,

I dine viith forks that have but two prongs.

Swift. In this heart-city, four main streams appear ; One from the Hepar, where the tribute landeth. Largely pours out his purple river hern ; At whose wide mouth, a band of Tritons standeth, (Three Tritons stand) who with their three forked

mace Drive on, and speed the river's flowing race ; But strongly stop the wave, if once it back repass.

Fletcher's Purple Island. Now, where the quick Rhone hath cleft her way. The mightiest of the storms hath ta'en his stand : For here not one, but many, make their play. And fling their thunder-bolts from hand to hand. Flashing and cast around : of all the band The brigiitcst through these parted hills hath forked His lightnings, — as if he did understand. That in such gaps as desolation worked. There the hot shaft should blast whatever therein lurked. Byron. Childe Harold.

Forks, Tarle, according to 'oltaire, were in use on the continent in the thirteenth and fourteenth centuries ; but that they were a novelty in England in the reign of queen Elizabeth, i

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evident from tlie following passage in the first part of Fynes IVIorison's Itinerary, where, speak- ing of his bargain with the patron of the vessel which conveyed him from Venice to Constanti- nople, he says, ' We agreed with the master him- self, who, for seven gold crowns by tlie month, paid by each of us, did courteously admit us to his table, and gave us good diet, serving each man with his knife, and spoone, and his forke (to hold tlie meat, while he cuts it, for they hold it iU manners that one should touch the meat with his hand), and with a glass or cup to drink in peculiar to himself.' Still farther, Thomas Croyate, who travelled in 1608, after describing with no small solemnity thu manner of using them, ' in all parts of Italy ;' adds, ' Hereupon I myself thought good to imitate the Italian fashion by this forked cutting of meate, not only while I was in Italy, but also in Germany, and often- times in England since I came home.' Thus they seem to have been introduced into Britain.

I'OllLI, a considerable town of the Papal States, Ital, in the province of Romagna, at the confluence of the Rones and Montone. It is situated near the site of the ancient Forum Livii whence it had its name and first inhabi- tants. In 1521 the French defeated the Spanish and Papal forces near it; and on February 12th, 1797, the French army, under Buonaparte, en- tered it, after defeating the troops of pope Pius 'I. It is a bishoj)'s see, has various handsome public buildings, and a noble square. There is a manufacture of wax cloth. The town and the environs are fertile. Population 13,000. It lies fourteen miles S. S.W. of Ravenna, and thirty-three south-east of Bologna.

FORLIMPOPOLI,atown of the Papal States, in the province of Romagna, formerly a bishop's see, but ruined in 1630, by the cardinal of Bur- gundy. It was anciently named Forum Populi, and stood on the Via Emilia; being one of the Fora, where the Roman magistrates had a court. The present population is 5800. It is three miles north of Bertinero.

¥ORLORTif,prct. k, part.'\ Sax. pojilo/ien.

Forlorn', adj. & n.s. Sfrom poftleopan ;

Forlorn'nf.ss, n. s. j Goih.forlura; Sw.

forloren ; Dat. verloren. Forlore is the old preterite and participle of this verb. Deserted ; destitute ; forsaken ; wretched ; helpless ; solitary ; taken away. This sense shows that it is the participle of an active verb, now lost : small ; despicable : in a ludicrous sense ; a lost, solitary, forsaken man : destitution ; misery ; solitude.

For it is Cristcs conseil that I say And if thou tell it man, thou art orlore

For this vengeance thou shalt have therefore. That if thou prey me thou shalt be wood.

Chaucer. The Milleres Tale.

Such as Diana by the sandy shore Of swift Eurotas, or on Cynthus' green. Where all the nymphs have her orlore.

Spenser. Faerie Queene.

That wrotched world he 'gan for to abhor. And mortal life 'gan loth as thing orlore. Id.

When as night hath us of light /or/orn I wish that day would shortly rcascend.

Spenser.

What is become of great Aerates son ! Or where hath he hung up his mortal blade.*

That hath so many haughty conquests won ? Is all his force forlorn, and all his glory done ?

Faerie Queene. Tell me, good Hobinol, what gars thee greet ? What ! hath some wolf thy tender lambs ytorn? Or is thy bagpipe broke, that sounds so sweet? Or art thou of thy loved lass ybr/arn ? Spenser. In every place was hcird the lau-ˆntation of wo- men and children •, every thing shewed the heaviness of the time, and seemed as altogether lost and for- lorn. Knolles's History.

He was so forlorn, that his dimensions to any thick sight were invincible. Shakspeare. Henry IV.

Henry Is of a king become a banished man. And forced to live in Scotland a forlorn.

Shakspeare, Thus fell the trees, with noise the desarts roar ; The beasts their caves, the birds their nesls forlore.

Fairfax. Like a declining statesman, left ybr/orn To his friends' pity and -irsuers' scorn.

Denham. Men displeased God, and consequently forfeited all right to happiness ; even v-hilst they compleated the forlornness of their condition by the lethargy of not being sensible of it. Boyle.

Tlius roving on.

In confused march /bWoiw, the' adventurous bands With shuddering horror, pale, and eyes ai'hast. Viewed first thair lamentable lot, and f und No rest. Milton. Pnrndise Lost,

How can I live without thee ! li' v. foruˆo Thy sweet converse, and love so dearly joined. To live again in those wild woods forlorn '

Milton. Their way Lies through the perplexed paths of this drear wood ; The nodding horrour of whose shady brows. Threat the forlorn and wandering passenger. Id. The good old man, forlorn of human aid. For vengeance to his heavenly patron prayed.

Dryden. The raven croaks ybrZorn on naked spray. And hark ! the river bursting every mound Down the vale thunders, and with wasteful sway Uproots the groves, and rolls the shattered rocks away. Beatlie.

I know You like to be the hope of the forlorn. And doubtless would be foremost After the hardships you've already borne.

Byron.

Forlorn Hope. The soldiers who are sent first to the attack and are therefore doomed to perish.

Criticks in plume. Who lolling on our foremost benches sit. And still charge first, the true forlorn of wit.

Vryden,

Forlorn Hope, in the military art, a body of men detached from several regiments, or other- wise, appointed, to make the first attack in the day of battle ; or at a siege, to storm the coun- terscarp, mount the breach, &c. They are so called from the great danger to which they are unavoidably exposed.

FORLI'E, V. n. From fore and lie. To lie before.

Knit with a golden baldric, y/hichforlay Athwart her snowy breast, and did divide

Her dainty paps, which, like young fruit in May, Now little 'gan to swell ; and being tyed 'I'hrough her thin weed, their places only signified.

Faerie Queene.

FORM, w.s. &u. aO For'mal, adj. For'malist, n. s. Formal'ity, n. s For'malize, v. a Forma'tion, n. s. For'mative, adj. For'mer, n. s. For'merly, adv. Form'less, adj. ˆ

Fr.formc ; Swed. and Dan. form ; Lai. for ma ; probably from (poprjixa, & (popeu), to bear, signifies properly the image borne for stamped. It is used with its derivatives, in a great variety of senses, which all however re- cognise the primary de- finition. Its generic meaning is being, as mo- dified by a particular shape, or rather it is the ' essential, specifical, or distinguishing modifica- tion of the matter of which any thing is com- posed, so as thereby to give it such a peculiar manner of existence.' Thus it is applied to the external shape or appearance of any thing ; to mere appearance ; empty show ; to elegance and beauty ; to order, regularity, and method ; to ceremonies and external rites ; to established usage ; ritual and prescribed mode. To form, signifies not merely to impress, to shape, and to methodise; but also to make out of materials, or out of nothing. The proper meaning of formal is, done according to established modes, rules, and methods : not irregular ; not sudden ; not extemporaneous ; it also signifies ceremonious ; solemn; precise; exact to affectation. The illus- trations will show the various senses in which the other derivatives of form are used. Forma- list is one who practises external ceremony ; one who prefers appearance to reality ; one who seems what he is not.

Haue thou the fourme of hoolsum wor lis whiche thou herdist of me in feith and loue in Crist lesus. Wiclif. 2 Tymo. ii. And the earth was without /on», and void.

Genesis i. 2. God formed man of the dust of the ground.

Id. ii. 7. It stood still ; but I could not discern the form thereof. Job iv. 16.

He hath ao form nor comeliness.

Isaiah liii. 2. Not a word spoke he more than was nede ; And that was said in forme and reverence. And short and quike and full of high sentence. Chaucer. ProUicjue to Canterbury Tales. As in a. fourme, sitteth a wery hare.

Chaucer. The Shipmannes Tale, The same spirit which anointed the blessed soul of our Saviour Christ, doth so formalise, unite, and actuate his whole race, as if both he and they were so many limbs compacted into one body.

Hooker.

In definitions, whether they be framed larger to augment, or stricter to abridge the number of sacra- ments, we find grace expressly mentioned as their true essential form, and elements as the matter whercunto that form did adjoin itself. Id.

He who aflirmcth speech to bo necessary amongst all men, throughout the world, doth not thereby im- port that all men must necessarily speak one kind of lanijuagc •, even so the necessity of policy and regimen in all churches may be held, without holding any one certain /orm to be necessary in them all. Id.

You and your followers do stand formally divided against the authorised guides of the church, and the rest of the people. Id,

VOT.. IX.

The justice. In fair round belly, with good capon lined. With eyes severe, and beard oi formal cut. Full of wise saws and modem instances. And so he plays his part.

S/utkspeare. As You Like It. Though well we may not pass upon his life. Without the form of Justice : yet our power Shall do a courtesy to our wrath, which men May blame, but not controul. Id. King Lear.

What he spoke though it lacked /or/n a little. Was not like madness. Id. Hamlet.

Formal in apparel. In gait and countenance surely like a father.

Shaksjjeare. Formally, according to our law. Depose him. Id.

I will not let him stir. Till I have used the approved means I have ; With wholesome syrups, drugs and holy prayers. To make of him a formal man again. Id.

When noble benefits shall prove Not well disposed, the mind grown once corrupt. They turn to vicious forms, tea times more ugly Than ever they were fair. Id, Henry VIII.

As there are formal and written leagues, respective to certain enemies ; so there is a natural and tacit confederation amongst all men against the common enemies of human society, so as there needs no inti- mation or denunciation of the war ; but all these formalities the law of nature supplies, as in the case of pirates. Bacon.

It is a ridiculous thing, and fit for a satyr to per- sons of judgment, to see what shifts formalists have-, and what prospectives to make superficies to seem a body that hath depth and bulk. Id.

Ceremonies be not to be omitted to strangers and formal natures ; but the exalting them above the mean is not only tedious, but doth diminish the credit of him that speaks. Id.

A long table, and a square table, or a seat about the walls, seem things of form, but are things of sub- stance ; for at a long table, a few at the upper end, in effect, sway all the business ; but in the other form, there is more use of the counsellors' opinions that sit lower. Id. Essays.

They inferred, if the world were a living creature, it had a soul and spirit, by which they did not intend God, for they did admit of a deity besides, but only the soul, or essential form of the universe.

Id. Natural History. That the parliaments of Ireland might want no decent or honourable /orm used in England, he caused a particular act to pass, that the lords of Ireland should appear in parliament robes. Davies.

Nor are constant forms of prayer more likely to flat and hinder the spirit of prayer and devotion, than un- premeditated and confused variety to distract and lose it. Kini) Charles.

Fornuilities of extraordmary zeal and piety are never more studied and elaborate than in desperate designs.

Id. Their general used, in all dispatches made by him- self, to observe all decency in tlieir/wHis.

Clarendon. The liquid ore he drained Into fit molds prepared ; from which ha formed First his own tools ; then, what might else be wrought.

Milton. Creature in whom excelled Whatever can to sight or thought he formed, Holy, divine, good, amiable, or sweet. Id,

To fix on God the formality of faculties, or affec- tions, is the imposture of our fancies, and contradic- tory to his divinity. GlanvilL's Sccpsif

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The chorion, a thick mombrane obscuring the form- ation, the dam doth tear asunder. Browne. The formal stars do travel so. As we their names and courses know ; And he that on their changes looks. Would think them governed by our books.

Waller. May not a man vow to A. and B. that he will give a hundred pounds to an hospital ? Here the vow is made both to God and to A. and B. But here A. and B. are only witnesses to the vow ; but the form- ality of tlie vow lies in the promise made to God.

Stillingjieet. He makes the mere apprehension of excellency to include the /orma/ reason of it: whereas mere excel- lency, without superiority, doth not require any sub- jection, but only estimation. Id- Oi formal duty, make no more thy boast ; Thou disobeyest where it concerns me most.

Dry den . Here toils and death, and death's half-brother, sleep. Forms terrible to view, their sentry keep ; With anxious pleasures of a guilty mind. Deep frauds before, and open force behind. Id.

Nor seek to know Their process, or the forms of law below. Id. If men forswear the deeds and bonds they draw. Though signed with all formality of law ', And though the signing and the seal proclaim The barefaced perjury, and fix the shame. Id.

It will be necessary to see and examine those workˆ which have given so great a reputation to the masters of the first form. Id.

Lucretius taught him not to form his heroe, to give him piety or valour for his manners. Id.

Many a worthy man sacrifices his peace to formali- ties of compliment and good manners. L'Estraiiye.

He that will look into many parts of Asia and America, will find men reason there perhaps as acutely as himself, who yet never heard of a syllo- gism, nor can reduce any ono argument to those /ormj.

Locke.

The wonderful art and providence of the contriver and former of our bodies, appears in the multitude of intentions he must have in the formation of several parts for several uses. Ray on the Creation.

A grave, staunch, skilfully managed face, set upon a grasping aspiring mind, having got many a %\y form- alist the reputation of a primitive and severe piety.

South. He dies too soon ; And fate, if possible, must be delayed : The thought that labours in my forming brain. Yet crude and immature, demands more time.

Rome. The Heathens and the Christians may agree in material acts of charity ; but that which formally makes this a Christian grace, is tho spring from which •' flows. Smalridge.

It lengthens out every act of worship, and produces more lasting and permanent impressions in the mind, than those which accompany any transient form of words that are uttered in the ordinary method of religious worship. Addison.

Have you observed a sitting hare, Listenmg, and fearful of the storm

Of horns and hounds, clap back her ear. Afraid to keep or leave her /orn» ? Prior.

To be stiff and formally reserved, as if the company did not deserve our familiarity, is a downright chal- lenge of homage. Collier on Pride.

The matter discharged forth of volcanos, and other spiracles, contributes to the formation of meteors.

Woodward. Nor was his attendance on divine offices a matter oi formality and custom, but of conscience.

Atterbury. The very life and vital motion, and the formal essence and nature of man, is wholly owing to Ibe power of God. Bentley.

As we have established our assertion of the seminal production of all kinds of animals ; so likewise we afErm, that the meanest plant cannot be raised with- out S3ed, by a.ay formative power residing in the soil.

Id. Sermons. Still in constraint your suffering sex remains. Or bound informal or in real chains. Pope.

She formed the phantom of well-bodied air. Id. To enter the palace of learning at the great gate, requires an expense of times and forms ; therefore, men of much haste and little ceremony are content to get in by the back-door. Swift.

Matter, as wise logicians say. Cannot without a form subsist ;

And form, say I as well as they. Must fail, if matter brings no grist. Id. The pretender would have infallibly landed in our northern parts, and found

them all sat down in their formalities, as the Gauls did the Roman senators.

Id They were young heirs sent only for forms from schools where they were not suffered to stay three months. Id.

Complicated ideas, growing up under obiervation, give not the same confusion, as if they were all offered to the mind at once, without your observing the origi- nal aad formation oi them. Watts.

If a chair be defined a seat for a single person, with a back belonging to it, then a stool is a seat for a singl« person without a back ; and a/orm is a seat for seve ral persons, without a back. Id.*

Windows and doors in nameless sculptures drest. With order, symmetry, or taste unblest. Forms like some bedlam statuary's dream The crazed creation of misguided whim. Burns,

— So when ill-fated Orpheus tuned to woe His potent lyre, and sought the realms below • Charmed into life unreal ybrms respired. And listening shades the dulcet notes admired.

Darwin. His Highness, the sublimest of mankind,—

So styled according to the usual forms Of every monarch, tili they are consigned

To those sad hungry jacobins the worms. Who on the very loftiest kings have dined —

His Highness gazed upon Gulbeyaz' charms. Expecting all the welcome of a lover, (A 'Highland welcome' all the wide world over.)

Byron. Some seek devotion, toil, war, good, or crime. According as their souls were formed to sink or climb.

Id. But Juan seasoned, as he migh't well be , By former voyages, stood to watch the skiffs Which passed, or catch the first glimpse of the cliffs.

Id.

Form, among sportsmen, is the spot in which the hare takes her seat at the davyn of day, to secrete herself. When found sitting, she is said to be in her form. Hares vary their places of sitting according to the season, the sun, and the wind. Soon after harvest they are found in wheat, barley, and oat stubbles, and in rushy gra;ss moors : when these become bare, they re- tire

to coverts, bank?ˆ and hedges In the spring

months, dry fallows, particularly those lying to- wards the sun with an ascent, are seldom without hares.

Form, in law, the rules established and requi- site to be observed in legal proceedings. — The formal part of the law, or method of proceeding, cannot be altered but by parliament • for if once these outworks were demolished, there would be an inlet to all manner of innovation in the body of the law itself.

Form is also used among mechanics for a sort of mould whereon any thing is fasnioned or wrought. Thus, the

Hatter's form is a large block or piece of wood, of a cylindrical figure ; the top thereof rounded, and the bottom quite flat. Its use is to mould or fashion the crown of the hat, after the matter thereof has been beaten and fulled.

Printer's form, a number of pages of types, few or many, according to the size of the book, laid in order, by the compositor, enclosed in an iron chase, and firmly locked by quoins of wood, so as the whole may at once be laid on the press, for printing. Two forms are required for every sheet; one for each side; but, in many of the sizes of books, both sides of a sheet may be printed on the same form, by laying the pages in a different order, so as those in one end or side of the chase may answer exactly those in the e)ther, when the sheet is turned. Tliis is called half sheet work, because each half of the sheet, when printed, contains a complete copy of the number of pages in the form.

Form, in physics, denotes the manner of being peculiar to each body ; or that which constitutes it such a particular body, and distinguishes it from every other. Mr. Harris uses the term form likewise in another sense, as an efficient anima- ting principle ; ' These animating forms,' says he, 'are of themselves no objects either of the ear or of the eye ; but their nature or character is understood in this, that were they never to exert their proper energies on their proper sub- jects, the marble on which the sculptor exercises his art would remain for ever shapeless, and the harp from which the harper calls forth sounds would remain for ever silent :' that is, in plain language, the former would have no peculiar form, and the latter no sound.

*Then why waste words and render language unintelligible, by such an ambiguous use of the word form ? Phi- losophy, we humbly apprehend, can never be advanced by confounding cause and effect, as Mr. Harris seems to do in the following defini- tion : * The animating form of a natural body is r.either its organisation nor its figure, nor any other of those inferior forms which make up the system of its visible qualities ; but it is the power, which is yet able to produce, preserve, and employ these.' If words conveying so very different and opposite ideas, as form and power, are to be thus used synonymously, there will soon be an end of all accuracy in philosophical language. Philosophers generally allow two principles of bodies : matter, as the common basis or substratum of all ; and form, as that which specifies and distinˆiishcs each ; and which, adaed to a quantity of common matter, determines or denominates it this or that ; wood,*

or fire, or ashes, «kc. Substantial forms seem to have been first broached by the followers of Aris- totle, who thought matter, under different modes or modifications, not sufficient to constitute dif- ferent bodies ; but that something substantial was necessary to set them at a greater distance ; and thus introduced substantial forms, on the footing of souls, which specify and distinguish animals. What led to this erroneous notion was the cir- cumstances of life and death : for observing that, as soon as the soul was departed out of a man, all motion, respiration, nutrition, Sec, imme- diately ceased, they concluded that all these functions depended on the soul, and conse- quently that the soul was the form of the animal body, or that which constituted it such : that the soul was a substance independent of matter, no- body doubted ; and hence the forms of other bodies were concluded equally substantial. But to this it is answered, that though the soul be that by which man is man, and consequently is the form of the human body, as human ; yet it does not follow, that it is properly the form of this body of ours, as it is a body ; nor of the several parts thereof, considered as distinct from each other: for those several Darts have their proper forms so closely connected with their matter, that it remains inseparable therefrom long after the soul has quitted the body : thus, flesh has the form of flesn, bone of bone, &c., long after the soul is removed, as well as before. The truth is, the body does not become incapa- ble of performing its accustomed functions be- cause the soul has deserted it ; but the soul takes its leave because the boay is not in a condition to perform its functions. The ancient and mo- dern corpuscular philosophers, therefore, with the Cartesians, exclude the notion of substantial forms; and show, by many arguments, that the form is only the modus, or manner of the pri- mary modes of matter, viz. figure, rest, and mo- tion, with two others arising therefrom, viz. magnitude and situation, the form of all bodies they hold to consist therein ; and suppose the variations these modes are capable of, sufficient to present all tne variety observable in bodies. Forms are

usually distinguished into essential and accidental.

Forms, accidental, are those really inherent in bodies, but in such a manner as that the body may exist in all its perfection without them. Such as whiteness on a wall, heat in water, a figure of a man in wax, &c.

Forms, essential. Though the five modes above mentioned, generally taken, be adventiti- ous; yet to this or that body, e.g. to fire or water, they are essential ; thus, it is accidental to iron to have this or that magnitude, figure, or situation, since it might exist in different ones ; yet to a knife or hammer, the figure, magnitude, and position of parts which constitute it a ham- mer or knife are essential ; and they cannot exist oi be conceived without them. Hence it is in- feired, that though there be no substantial, there are essential, forms, whereby the several species of bodies become what they are, and are distin- guished from all others.

FORMA Paui'eris, is when a person has just cause of suit, but is so poor that he cannot de-

fray the usual charges of suing at law or in eqviity ; in wliich case, on making oatli tliat he is not worth £5 in the world, on all his debts being paid, and producing a certificate from some law- yer that he lias good cause of suit, the judge will admit him to sue in forma pauperis; that is, without paying any fee to counsellors, at- torneys, or clerk; the statute 11 Hen. VII. c. 12, having enacted, that counsel and attorneys, &c., shall be assigned to such poor persons gratis. Where it appears that any pauper has sold or contracted for the benefit of his suit, whilst it is depending in court, such cause shall be thence- forth totally dismissed; and a person suing in forma pauperis shall not have a new trial granted him, but is to acquiesce in the judgment of the court.

FORMAN (Andrew), archbishop of St. An- drews, earl of Pittenweem, and of Cottingham in England, and primate of all Scotland. lie was employed in 1501, along with archbishop Black- ader, and Patrick, earl of Bothwell, to negociate a match between James IV. of Scotland, and Margaret, eldest daughter of Henry VII. of Eng- land ; which was next year ratified by the Scot- tish ambassadors. He was afterwards employed as Scots ambassador to Rome, England, and France, upon the most important occasions. In

1502 he was appointed archbishop of Moray, and in 1514 archbishop of St. Andrew's. Pre- vious to this last promotion, he was employed as mediator betwixt pope Julius 11. and Louis XII. of France, and he succeeded in conciliating the difference. Having taken leave of the pope, he passed through France, where he was kindly received by Louis, who bestowed upon him the bishopric of Bourges, which brought him in 400 tons of wines, 10,000 franks of gold annually, besides other revenues. He was also liberally rewarded by Julius, who, besides the archbishop- ric, conferred on him the two rich abbeys of Dunfe.Tnline and Aberbrothic ; and made him his legate a latere. In 1517 he was appointed by the states one of the lords of the regency, during the rr.inority of James V., on occasion of the duke of Albany's going to France. Arch- bishop Forman died in 1521, and was buried at Dunfermline. According to Dempster, he wrote a book against Luther, another concerning tlie Stoic Philosophy, and a Collection out of Decretals.

FORMEDON, in law (breve de formft dona- tionis), a writ that lies for a person who has a right to lands or tenements, by virtue of any entail, arising from the statute of Westm. 2 Ch. II. This writ is of three kinds, viz.: — Formedon in Ascender lies where a tenant in tail infeoffs a stranger, or is disseised and dies, and the heir may bring this writ to recover the lands. For- tnrdon in remainder lies where a man gives lands, &c. to a person in tail, and, for default of issue of his body, the remainder to another in tail : here if the tenant in tail die without issue, and a stranger abates and enters into the land, he in remainder shall have this writ. Tormedon in re- verter lies where lands are entailed on certain persons and their issue, with remainder over for want of issue ; and, oh that remainder failing, then to revert to the donor and his heirs : in this

case, if the tenant in tail dies without issue, and also he in remainder, the donor and his heirs, to whom the reversion returns, may have this writ for the recovery of the estate, though the same be alienated, &c.

FORMENTERA, the ancient Pithyusa Minor, is the second of the Pithyusa Islands, situated to the south of Ivica, from which it is separated by a channel four miles wide. It belongs to Spain, and contains about 1200 inhabitants. Long. 1° 23′ 20′ E., lat. 38° 37′ 6″ N.

FOR'MER, adj. \ ' From Sax. pojima, first ;

For'iMerly, adv. S whence former, and formost, now commonly written foremost, as if derived from before. Foremost is generally applied to place, rank, or degree, and former only to time,' says Dr. Johnson : but both former and foremost are the degrees of Sax. pope, anterior (either in time or place), and meaning respectively, more, and most fore. See Fore. Before

another in time, or place ; mentioned before another ; past ; as ‘ this was the custom in former times.’ Thy air.

Thou other gold-bound brow, is like the first :

— A third is like ihe former.

Shaktpeare. Macbeth.

Counsel and conversation is a second education, that improves all the virtue and corrects all the vice of the former, and of nature itself. Clarendon.

The places were all of them formerly the cool re- tirements of the Romans, where they used to hide themselves among the woods and mountains, during the excessive heats of their Summer. Adduon.

A bad author deserves better usage than a bad critick : a man may be the former merely through the misfortune of an ill judgment ; but he cannot be the latter without both that and an ill temper. Pope.

As an animal degenerates by diseases, the animal salts, formerly benign, approach towards an alkaline nature. Arbuthnot.

The present point of time is all thou hast.

The future doubtful, and the former past. Harte.

FORMEY (John Henry Samuel), a celebrated Prussian writer, bom at Berlin in 1711. He became pastor of a French church in that city, in which office he continued for several years, but resigned it on being chosen professor of philoso- phy in the French college ; and, .upon the resto- ration of the Royal Academy of Sciences at Berlin, hr was appointed secretary to the philosophical department, and afterwards made sole secretary. He was also chosen a privy counsellor. Formey, in conjunction with Beausobre, conducted the Bibliotheque Germanique ; besides which he was the author of 1. Le Philosophe Chretien; 2. Pensees Raisonnables ; 3. Anti-Emile, against Rousseau ; 4. The History of Philosophy Abridged ; 5. An Abridgment of Ecclesiasti cal History; 6. Researches on the Elements of Matter; 7. Thoughts on the Tusculums of Cicero, Sec. He died in 1797. Some of his works have been translated into English.

FORMIA, or Formiˆe, in ancient geography, a maritime town of the Adjected, or New Latium, on the south-east of Cajeta; built by the Lace- demonians, called originally Hormia;, on account of its commodious harbour. It was an ancient municipium, but is now in ruins, near Mola.

FORMIANI, the people of Formia, who were admitted to the liberty of the city the year in

which Alexandria was built, but not to the riglit of suffrage till long after the second Punic war.

FORMICA, in^"entomology, a genus of insects of tne hyraenoptera order, which have four feelers, with cylindrical articulatiens placed at the tip of the lip, which is cylindrical and membranaceous : antcnniE filiform, a small erect scale between the diorax and the abdomen; males and females with wings; neuters wingless. See Entomo- logy.

La Marck explains the genus somewhat dif- ferently, and by the adoption of his character, several of the Linnaean and Fabrician formicae are excluded. This writer lays down the essen- tial character as follows : antennae filiform and broken, the first joint very long; feelers unequal, the anterior pair longer; mandibles strong; tongue short, concave and truncated. To this is added, as a secondary character, that the abdo- men is attached to the corselet by a pedicle, bearing a small scale, or vertical knob ; and that of each species there are th.ee kinds, males, fe males, and neuters, which latter are without wings. The larva destitute of feet.

The species, according to Fabricius, are above ninety. See Ant : where we have described at some length the habits of this well-known insect. We shall, however, here give a short account from Mr. Huber of the masonry and buildings of the brown ants : — Tlieir nests are formed of parallel or concentric stories, each four or. five lines in height ; the partitions being about half a line in thickness, and built of such fine mate- rials that the interior appears perfectly smooth. On examining each of these stories, we discover chambers of different sizes, having long galleries of communication. The ceilings of the larger species are supported by .small pillars, sometimes by slender walls, and in other cases by arches. Some cells have but a single entrance ; others have passages, which open from the story under- neath. In other parts, still larger central spaces, or halls, are met with, in which a great number of passages terminate, like the streets and avenues to a market-place. The whole nest often con- tains twenty of these stories above the level of the ground, and at least as many below it. The use of this numerous series of rooms will appear in the sequel. The surface of the nest is co- vered with a thicker wall, and has several doors, admitting, in the day-time, free ingress and egress. This species of ant is unable to bear much heat. During the day, therefore, and par- ticularly

when the sun shines, their doors are closed ; and they either keep at home, or venture out only through the subterraneous passages. When the dew has given freshness to the nest, and softened the earthy materials on its surface, they begin to make their appearance above ground. On the first shower of rain that occurs, the whole swarm are apprised of it, and imme- diately resume their architectural labors. While some are engaged in moving the earth below, others are employed in building an additional i-tory on the top; the masons making use of the materials furnished by the miners. The plan of the cells and partitions is first traced in relief on the walls, which are seen gradually to rise, leav- ing empty spaces between them. The beginnings

of pillars indicate the situation of the future halls ; and the rising partitions show the form of the intended passages. Upon the plan thus traced, they continue building, till they have ar- rived at a sufficient elevation. Masses of mois- tened earth are then applied at right angles to the tops of the walls, on each side, and continued in a horizontal direction till they meet in the middle. The ceilings of the larger chambers are completed in the same manner ; the workers be- ginning from the angle of the walls, and from the tops of the pillars which have been raised in the centre. The largest of these chambers, which might be compared to the town-hall, and is fre- quently more than two inches in diameter, is completed with apparently as much ease as the rest. This busy crowd of masons arriving in every direction, laden with materials for the building, hastening to avail themselves of the rain to carry on their work, and yet observing the most perfect order in their operations, must present the most interesting and amusing specta- cle. They raise a single story in about seven or eight hours, forming a general roof as a cover- ing to the whole; and they go on, adding other stories, so long as the rain affords them facility of moulding the materials.

FORMIC Acid. It has long been known that ants contain a strong acid which they occa- sionally emit ; and which may be obtained from the ants, either by simple distillation, or by infu- sion of them in boiling water, and subsequent distillation of as much of the water as can be brought over without burning the residue. After this it may be purified by repeated rectifications, or by boiling to separate the impurities ; or after rectification it may be concentrated by frost. The existence of this acid was first made known by Mr. Ray, in a correspondence with Dr. Hulse. The doctor informed him that these insects, when irritated, give out a clear liquid, which tinges blue flowers red ; a fact which had been obsers'ed by others. Hence it was found to be an acid, which was obtained by bruising the insects, by distilling them, and by infusing them in water. The French chemists obtained the acid by bruis- ing ants, and macerating them in alcohol. When the alcohol was distilled over, an acid liquor re- mained, which saturated with lime, mixed with sulphuric acid, and distilled, yielded

a liquid that possessed all the properties of acetic acid This acid has been thought by some chemists, and especially by Margraaf, to be acetic acid, or at least to have a great analogy to vinegar ; and by others to be a mixture of acetic and malic acid. A minute examination of it, however, sufficiently proves, that it differs very essentially from both, whether separate or in conjunction, quite as much, indeed, as these differ from each other ; it differs in its specific gravity, its effects WMth alkalies, its metallic salts, and its affinities.

Thouvenel, on the contrary, contended, that it is very closely related to the pliosphoric, or, as he calls It, the microcosmic ; but he has not stated in what the relation or analogy consists. Lister affirmed that he had extracted a similar acid from wasps and bees ; but Arvidson and Oehrn failed in making the attempt after him, nor has any one been able to succeed since.

This acid has a very sour taste, and continues li(fuid even at very low temperatures. Its spe- cific gravity is 1”1168 at 68°, which is much denser than acetic acid ever is. Berzelius finds, that the forraiate of lead consists of 4-696 acid, and 14 oxide of lead ; and that the ultimate constituents of the dry acid are hydrogen 2‘84 + carbon 32-40 + oxygen 64-76— 100.

M. Dobereiner has recently succeeded (see Gilbert’s Annales, xi. 107) in forming this acid artificially. When a mixture of tartaric acid, or of cream of tartar, black oxide of manganese and water is heated, a tumultuous action ensues, carbonic acid is evolved, and a liquid acid distils over, which, on superficial examination, was mis- taken for acetic acid, but which now proves to be formic acid. This acid, mixed with concen- trated sulphuric acid, is at common temperatures converted into water and carbonic oxide; nitrate of silver or of mercury converts it, when gently heated, into carbonic acid, the oxides being at the same time reduced to the metallic state. With barytes, oxide of lead, and oxide of copper, it produces compounds having all the properties of the genuine formiates of these metals. If a portion of sulphuric acid be employed in the above process, the tartaric acid is resolved en- tirely into carbonic acid, water, and formic acid ; and the product of the latter is much increased. The best proportions are, two parts tartaric acid, five peroxide of manganese, and five sulphuric acid diluted with about twice its weight of water.

Formica-Leo, the ant-lion, in zoology, an in- sect so called from its devouring great numbers of ants. It is the caterpillar worm of a fly much resembling the libellulae or dragon-flies. It has, in its general figure,

somewhat of the appearance of the wood-louse, so that some have mistaken it at first sight for that animal. It is of a dirty grayish color, marked with black spots ; and these also appear composed of many points when viewed with a microscope. Its body is com- posed of several rings, and has thence a wrinkled look. It has six legs ; four are joined to the breast, and the other two to a longer part, which may be taken for its neck. Its head is small and flat, and it has two remarkable horns : these are about a sixth part of an inch long, and as thick as a hair : they are hard, hollow^ and hooked at the end like the claws of a cat. At the origin of each of these horns, it has a clear and bright black eye, which sees very distinctly, and gives the creature notice to escape on sight of the smallest object. This creature is not able to hunt after its prey, nor to destroy large in- sects ; it can only draw into its snares such as come near its habitation, and of these very few are such as he can manage : all the winged kind are able to escape by flight ; and the beetle kinds, and others that have hard shells upon their bo- dies, are of no use, as his horns cannot pierce them. The smallness of the ant, and the want of wings in the neuters, make them the destined prey of this devourer. The manner in which he catches his prey is as follows : — He usually en- camps under an old wall, that he may be shel- tered from the injuries of the weather ; and he always chooses a place wliere the soil is com-

posed of a fine dry sand. In this he makes a pit of the shape of a funnel, or an inverted hollow cone. If he intends the pit to he but small, he thrusts down his hinder part into the sand, and by degrees plunges himself backwards into it ; and, when he has got into a certain depth, he tosses out the loose sand which has run down with his head, artfully throwing it ofi" beyond the edges of his pit. Thus he lies at the bottom of a small hollow, which is widest at the top, and comes sloping down to his body. But if he is to make a larger pit, more pains are required to bring it to perfection. He first traces, in the surface of the sand, a large circle, which is the erected base or mouth of the pit he is to make in form of an inverted cone. He then buries him- self in the sand near the edge of this circle, and carefully throwing up the sand above him, with his head, tossing it out beyond the circumference of the circle. Thus he continues his work, running down backwards in a spiral line all the way, and carefully throws off" the sand from above him, till he is come to the place of his rest, which is the point or reverted apex of the hollow cone he has formed by his passage. The length of his neck, and the flatness of his head, give him a power of using the whole as a spade, and throwing off the sand with great ease ; and his strength in this part is so great, that he is able to throw off a quantity of it to six inches distance. This is a power he exerts oftener, however, in throwing away the remains of the animals he has fed upon, that his den may not become frightful to others of the same species, by seeing their

fellows' car- cases about it. When this insect forms its pit in a bed of pure sand, it is made and repaired with great ease : but where it meets with other sub- stances among the sand, the labor becomes more embarrassing. If, for instance, when the crea- ture has half formed its pit, it comes to a stone of some moderate size, it does not desert the work for this, but goes on, intending to re- move that impediment at last. When the pit is finished, the creature crawls backward up the side of the place where the stone is, and, getting its back under it, takes great pains and time to get it on a true poise, and then begins to crawl backwards with it up the edge to the top of the pit, to get it out of the way. It is a very com- mon thing to see a formica-leo in this manner laboring at a stone four times as big as its own body; and as it can only move backward, and the poise is hard to keep, especially up a slope of such crumbly matter as sand, which moulders away from under its feet, and necessarily alters the position of its body, the stone very frequently falls down when near the verge, and rolls to the bottom. In this case the animal attacks it again in the same way, and often is not discouraged by five or six miscarriages of this kind ; but attempts again, and at length gets it over the verge of the place. When it has done this, it does not leave it there, lest it should roll in again ; but always pushes it farther on, till it has removed it to a necessary distance from the edge of the pit. When he has finished his pit, he buries himself at the bottom of it among the sand, leaving no part above ground but the tips of his two horns, which he expands to the two sides of his pit. In

this condition he lies and waits for his prey. When an ant, or any otiier insect chances to walk over the edges of his pit, its steps throw down a little of the sand, which naturally running down to the bottom of the pit, gives the enemy notice of his prey; he then tosses up the sand which covers his head, to bury the ant, and bring him down with its returning force to the bottom ; and as one such attempt cannot be sufficient to prevent the ant's escape, he throws more and more sand upon him, till he by degrees brings him down. AH the endeavours of the ant to escape, when once it is within the verge of the pit, are in vain ; for as it attempts to climb, the sand runs away from under its feet, it sinks the lower for every attempt. This motion of the sand also informs the enemy where it is, and directs him to throw up more sand in the right pLce ; which it does, till the poor ant falls to the bottom between its horns. It then plunges the points deep into the ant's body ; and, having sucked all the juice out of the prey, it throws out the empty skin as far from the hole as it can. This done, it mounts up the edges

of its pit, and, if it has suffered any injury, repairs it with great care, and immediately buries itself again in the centre to wait for another meal. The horns of this creature are its only organs for receiving nourishment; it never brings any animal which it has seized near to its head, but always holds it at the tip of the horns. They therefore plainly serve as syringes, to draw into its stomach the juices of the bodies of the insects it feeds upon : neither is there any mouth or trunk, or any other organ to be discovered about its head, which could answer the purpose of eating; the head seeming only intended for throwing away the sand in forming the pit. The horns of this animal being so necessary to its life, nature has provided for the restoring them in case of acci- dents ; and, if cut off, they are found to grow again.

When the formica-leo has lived a proper time in this state, it leaves its pit, and is only seen drawing lines and traces on the surface of the sand. After this it buries itself under the sur- face; and there encloses itself in a fine web, in which it is to pass its transformation into the winged state. This case is made of a sort of silk which the creature spins in the manner of the spider, and of a quantity of the grains of sand cemented together by a glutinous humor which flows from its pores. This case, however, would be too harsh and coarse for the body of the crea- ture, and therefore it serves only for the outer covering to defend it from injuries; the creature spinning one of fine silk, of a beautiful pearl color within it, which covers its whole body. When the creature has lain some time in this manner, it throws off its outer skin, with the eyes, horns, and every other part necessary to its life before, and becomes an oblong nymph, in which a careful eye may trace the form of the fly into which it is to be transformed. There may be seen, through its transparent covering, new eyes, new horns, wings, and all the other parts of the animal in its perfect state. This nymph makes its way about half out of the shell, and remains in this condition, but without far-

ther life or motion, till the perfect fly maices its way out at a slit in the back. In this last state it much resembles the libellulae or dragon-flies, common about our waters. The male couples with the female in this state only ; and M. Pou- part, to whom the world is indebted for this curious description, is of opinion that the females lay only one egg; iDut this is very different from the course of nature in the other animals of the same class.

FORMICHE, a cluster of small fishing islands, between the coast of Florence and Corsica. They are in lat. 42° 40′ N., and long. 10° 25′ E.

FORMICATION, n. s. From Lat. formica, an ant. A sensation like that produced by the creeping or biting of ants.

One of tlie signs of this disorder (spasmus) is. a sense oi formication. Hill's Medical Dictionary.

FOil'MI DABLE, adj. ˆ Tr. formidable ; Lat.

FoR'MiDABLENESS,7i.s. \ formidaliUs, a formi-

For'midably, adv. jt/o, tofear. Terrible; dreadful ; tremendous ; to be feared : the last is its most distinguishing meaning. It is applied to that which is apt to excite fear. The formida- ble acts neither suddenly nor violently : thus it differs from dreadful, which is usually considered as its synonyme ; for the dreadful may act vio- lently, but not suddenly : thus the appearance of an army may be formidable ; that of a field of battle is dreadful.

Behold ! e'en to remoter shores, A conquering navy proudly spread ; The British cz.nnon formidably roars.

Dryden They seemed to fear ihe formidable sight.

And rolled their billows on, to speed his flight.

Id.

I swell my preface into a volume, and make ilfor- viidable, when you see so many pages behind.

Dryden's ˆneid. Dedication.

They rather chust to be shewed the formidableness of their danger, than by a blind embracing it, to perish.

Decay of Piety.

But let fancy muster up all the discouraging circum- stances, and set them in the most formidable light, to bar your way to a supposed duty. Mason.

France continued not only powerful, but formidable, to the hour of the ruin of the monarchy. Burke,

Arnold. — Rival!

C/ESAR. — I could be one right formidable,

Byron. Deformed Transformed.

FORMOSA, or Taiwan, an island in the Pa- cific Ocean, about 100 miles east of Canton in China, separated from the province of Fokien by a strait about sixty miles broad. Its most productive portion is subject to the Chinese ; who, however, knew not of its existence imtil 1430. It is about

eighty leagues long, and twenty-five broad. A long chain of mountains, which runs from north to south, divides it into two parts, the east and west. The Dutch formed an establishment in the west part in 1634, and built the fort of Zealand, which secured to them the principal port of the island ; but they were driven thence in 1659 or 1661, by a celebrated Chinese pirate, who made himself master of all the western part, which afterwards submitted in 1682 to the authority of the emperor Kang-IIe. This western part of Formosa is divided into three distinct governments, all subordinate to the

governor of Tai-wan, the capital of the island, «fho is himself subject to the viceroy of the pro- vince of Fo-kien. This island presents extensive and fertile plains, watered by a great number of rivulets that fall from the eastern mountains. Tile air is pure and whole'some, and the soil pro- duces in abundance corn and rice, with other grain, and Indian fruits; such as oranges, ba- nanas, pineapples, guavas, papawa, cocoa-nuts; as well as many of Europe. Tobacco, sugar, pepper, camphire, and cinnamon, are also com- mon. The island has few w'ild animals, except deer and monkeys, and it is without horses, asses, or sheep. Bullocks are used in lieu of the former for labor. The woods abound in pheasants, heath cocks, wild pigeons, &c. The climate is healthy and temperate, but the island is subject to frequent eartliquakes. One of these happened' in 1782, that almost destroyed the island, and either sunk or damaged most of the shins that were in the harbour.*

Tai-wan is on the west coast, and is very popu- lous and rich, in all respects resembling the Chi- nese cities of the Continent. It is defended by a fortress built by the Dutch, and still in good repair. The harbour only admits vessels of eight feet, and in general the other ports are also shoal, and the navigation obstructed by sands. The Chinese ha^e sometimes a garrison of 10,000 men on this island. The only natives who are allowed to live in the 'towns and villages, peo- pled by the Chinese, are either slaves or domes- tics. Tiie native islanders of this western part have more than forty villages, mostly situated towards the northern extremity, built after the Chinese maimer, while those in the southern parts are merely earthen huts. The inhabitants of the eastern side of the island are described as savages, without regular government. In their features and complexions they resemble the Malays, but speak a language that has no affi- nity to any other. Their cabins are of bamboo, without furniture ; their cl'oathing only*

a piece of cloth wrapped round the waist, and their food wliat they procure by the chase. They raise or- namental cicatrices on the skin to resemble trees, flowers, and animals, and blacken their teeth. Their religion is an idolatrous polytheism. They dispose of" their dead in the same manner as the islanders of the Pacific, exposing the bodies on stages. They are represented as courteous and honest, but very implacable. This latter quality the Chinese have experienced to their cost. Some of the earlier settlers of that nation massa- cred the inhabitants of a village for the sake of some ingots of gold they saw there, and though the natives set little value upon gold or silver, they could never be prevailed upon to forgive the atrocity. Their chief subsistence is derived from the cattle they breed on the mountains, and the fish they catch in the rivers and off the adjacent coasts. In 180.5 some Ladronc pirates had ac- quired possession of a great part of the south- west coast of Formosa, which exported a great deal of grain to the province of Fo-kien in China.

Formosa, an island in the Atlantic, near the western coast of Africa, about thirty miles long, and eighteen broad, one of the Archipelago of the liissagos. The soil is fertile, and covered

with trees, but the island is deficient in water. Long, le" 10′ W., lat. 11° 29′ N.*

Formosa Bay, a bay on the eastern coast of Africa, immediately north of Melinda, and receiving a small river of the same name, in lat. 2° 45′ S.

Formosa, Cape, a cape on the coast of Ma- lacca, thirty miles south-east of Malacca.

Formosa, Rio, one of the principal estuaries which open into the Gulf of Benin, has its mouth about four miles wide, but does not afford above twelve feet average depth of water. The country for some distance up is entirely intersected with its branches. The navigation is also often im- peded by. floating islands, covered with reeds. The banks are fertile, and covered with fine trees, but the air is extremely damp and un- wholesome. The rise and early course of this river are unknown ; according to Rechard, this streanf is supposed to be the termination of the Niger. No vessel should venture into its mouth without a pilot. Long. 4° 20′ E., lat. 5° 40′ N.

FORMULA, or Formulary, a rule or model, or certain terms prescribed or decreed by authority, for the form and manner of an act, instrument, proceeding, or the like.

Formula, in churdi history and theology, signifies a profession of faith.

Formula, in medicine, imports the constitu- tion of medicines, either simple

or compound, both with respect to the prescription and con- sistence.

FORNELLA, a sea-port of Minorca, six miles from Mount Toro. The harbour is capable of containing the largest fleet of merchantmen, and is defended by three forts. In the neighbourhood is a small fishing place of the same name.

F0R'NICATE,t;.a,-\ Fr-fornicaieur; Lat.

Fornica'tion, n. s. ffornicatio, fornix, an

Forxica'tor, n. s. fˆarch or vault; the usual

Fornica'tress, ra. .s. .'place of the ancient brothels. But some etymologists trace this word to the Gr. TTopvt}, Trepvao), to hire. To commit lewdness as distinguished from adultery ; the one being committed with the unbetrothed, the other with the married. Ib the sacred writings the word fornication is metaphorically applied to idolatry.

Thou didst trust in thino own beauty, thou playcdst the harlot, because of thy renown, and pourcdst out thy fornications on every one that passed by.

Ezekiel xvi. 15.

Another circumstance is this, whether it be don in fornication, or in advoutrie, or no ; in manner of homicide or non ; a horrible gret sinne, or smal ; and how long thou host continued in sinne.

Cliaucer. The Persones Tale.

Bless me 1 what a fry oi fornicution is at the door.

Shakspeare. See you the fornicatress be removed ;

Let her have needful but not slavish means. Id.

A fornicator or adulterer steals the soul, as well as dishonours the body of his neighbour. Taylor.

*The law ought to be strict against fornications and adulteries ; for, if there were universal liberty, the in- crease of mankind would be but like that of foxes at best. Sraunt^*

It is a new way to fornicate at a distance. Browne.

Our Saviour warns us against these, as a kind of spiritual fornication, and inconsistent with that purity of heart which his gospel requires. Mason.

Fornication (Lat. fornicatio), from the for- nices in Rome, where lewd women prostituted themselves for money. Formerly court-leets had power to enquire of and punish fornication and adultery; in which courts the king had a fine assessed on the otrenders,as appears by tlie book of Domesday. In 1630 not only incest and wilful adultery were made capital crimes, but also the repeated act of keeping a brodiel, or committing fornication, was (upon a second con- viction) made felony, without benefit of clergy. But at the Restoration it was not thought proper to renew this law : and theee offences have been ever since left to the feeble coercion of a spirit- ual court. In the Scriptures, as Dr. Paley observes, fornication is absolutely and peremp- torily condemned. ‘ Out of the heart proceedeth evil thoughts, murders, adulteries, fornications, &c., these are the things which defile a man.’ These are Clirist’s own words ; and one word from him upon the subject is final. The apostles are more full upon this topic. One well-known passage in the Epistle to the Hebrews may suffice ; because, admitting the authority by which the apostles wrote, it is decisive. ‘Marriage and the bed undefiled is honorable amongst all men, but whoremongers and adulterers God will judge ;’ which was a great deal to say, at a time when it was not agreed even amongst philosophers that fornication was a crime.’ ‘ The Scriptures gave no sanction,’ adds this justly esteemed moralist, ‘to those austerities which have been imposed upon the world under the name of Christ’s religion, as the celibacy of the clergy, the praise of perpetual virginity, the prohibitio concubitus cum gravidˆ uxore ; but with a just knowledge of, and regard to the condition and interest of the human species, have provided in the mar- riage of one man with one woman an adequate gratification for the propensities of their nature, and have restrained them to that gratification. The avowed toleration, and in some countries the licensing, taking, and reˆiulating of public bro- thels, has appeared to the people an authorising of fornication, and has contributed, with other causes, so far to vitiate the public opinion, that there is no practice of which the immorality is so little thought of, or acknowledged, although there are few in which it can more plainly be made out. The legislators who have patronised receptacles of prostitution, ought to have foreseen this effect, as well as considered, that whatever facilitates fornication, diminishes marriages. And as to the usual apology for this relaxed discip- line, the danger of greater enormities, if access to prostitutes were too strictly watched and pro- hibited ; it will be time enough to look to that, after the laws and the magistrates have done their utmost. The greatest vigilance of both will do no more than oppose some bounds, and

some difficulties to this intercourse. And, after all, these pretended fears are without foundation in experience. The men are in all respects the most virtuous in countries where the women are most chaste. If fornication be criminal, all those incentives which lead to it are accessary to the crime; as lascivious conversation, whether ex- pressed in obscene, or disguised under modest i)!aas(,'s; also wanton songs, pictures, books:

the writing, publishing, and circulation of which, whether out of frolic, or for some pitiful profit, are productive of so extensive a mischief from so mean a temptation, that few crimes within the reach of private wickedness have more to ansvvei: for, or less to plead in their excuse. Indecent conversation and by parity of reason all the rest, are forbidden by St. Paul, Eph. iv. 29. 'Let no corrupt communication proceed out of your mouth;' and again, Col. iii. 8. 'Put filthy com- munications out of your mouth.' The invitation, or voluntary admission of impure thoughts, or the suffering them to get possession of the imagi- nation, falls within the same description, and is condemned by Christ, Matt. v. 28. ' Whoswever looketh on a woman to lust after her, hath com- mitted adultery with her already in his heart.' Christ, by thus enjoining a regulation of the thought, strikes at the root of the evil.' — Moral Philosophy, vol. 1.

FORRES, a royal borough of Scotland, in the parish of the same name, which joins with Inver- ness, Fortrose, and Nairn, in electing a repre- sentative in parliament It is a small well-built town, pleasantly situated on an eminence near the Findhorn, about a mile from F'indhorn Bay, and commands an extensive prospect. Ancient records speak of Forres as a town of consider- able note, so early as the thirteenth century. It is governed by a provost, two bailies, and dean of guild, annually elected; and contains 2400 inhabitants. It has a grammar-school of great repute, besides several private schools. About 300 barrels of salmon are annually ex- ported. Linen yarn is the chief manufacture. Forres lies ten miles west of Elgin, and eight east of Nairn. About a mile from Forres, on the left hand side of the road, is a remarkable obe- lisk of the Gothic kind, and supposed to have been erected in memory of the treaty between Malcolm II. and Canute the Great, in 1008. Others have imagined that it was erected in memory of the assassination of king Duff'; and this opinion is conceived to be strengthened by the discovery of eight human skeletons laid along a trench, in a little green mount close by the obelisk, supposed to be the assassins of the king. On the declivity ofCluny's Hill, looking towards Sweno's stone, there are obvious remains of ex- tensive entrenchments. It is thus described by Mr. Cordiner, in a letter to Pennant : — ' In the first division, underneath the Gothic ornaments at the top, are nine horses with their riders, marching forth in order : in the next is a line of warriors on foot, brandishing their weapons, and appear to be shouting for the battle. The import of the attitudes in the third division is very dubious, their

expression indefinite. The figures which form a square in the middle of the column are pretty complex, but distinct; four Serjeants with their halberts, guard a company, under which are placed several human heads, which have belonged to the dead bodies piled up at the left of the division : one appears in the character of executioner, severing the head from anotlier body; behind him are three trumpeters sounding their trumpets, and before him two pairs of com- batants, fighting witli sword and target. A troop of iiorse next ajipcais put to flight by infantry,

whose first line have bows and arrows; and the three following, swords and targets. In the lowermost division now visible, the horses seem to be seized by the victorious party, their riders beheaded, and the head of their chief hung m chains, or placed in a frame ; the others bemg thrown together beside the dead bodies under an arched cover. The greatest part of the other side of the obelisk, occupied by a sumptuous cross, is covered over with a uniform figure, elaborately raised, and interwoven with great mathematical exactness. Under the cross are two august personages, with some attendants, much obl'iterated,but evidently in an attitude of recon- ciliation; and if the monument was erected m memory of the peace concluded between Mal- colm and Canute upon the final retreat of the Danes, these larg-. figures may represent the reconciled monarchs. On the edge below the fretwork are some rows of figures joined hand in hand, which may also imply the new degree of confidence and security that took place after the feuds were composed, which are characterised on the front of the pillar. But, to whatever par- ticular transaction it may allude, it can hardly be imao-ined, that in so early an age of the arts in Scotland as it must have been raised, so elabo- rate a performance would have been undertaken, but in consequence of an event of the most general importance; it is therefore surprising that no more distinct traditions of it arrived at the era when letters were known. The height of this monument (called King Sueno's Stone) above the ground is twenty-three feet ; besides twelve or fifteen feet under ground. Its breadth is three feet ten inches, by one foot three inches in thickness.'

FORSAKE', I), a. > Sax. popraoan ;_ Belg. Forsa'ker, n. s. S versaaken ; Swed.torsaka : preter. forsook ; part. pass, forsook, or forsaken. Compounded of the negative for and sake, seek, secan, i.e. to seek no more. To leave that which has been pursued ; to abandon that which has been chosen: to be forsaken is to be deprived of the company and assistance of

others. Forlorn, and destitute, which are sometimes used as sy- nonymous with forsake, are more comprehensive. To be forsaken, says Crabb, is a partial situation : to be forlorn and destitute, is a permanent con- dition.

Thou didst deliver us into the hands of lawless enemies, iBOSt hateful forsaker, of God. Apocrypha. The devils engins -would me take. If ever I Love would forsake Or Bialacoil falsly betraie.

Chaucer. Romaunt of the Rose. At his sight the sun hath turned, Neptune in the waters burned ; Hell hath felt a greater heat, Jove himscU forsook his seat. Ben Jonson. 'Twas now the time when first Saul God forsook. God Saul ; the room in's heart wild passions took

Luuiky. Truth, modesty, and shame, the world forsook ; Fraud, avarice, and force, their places took.

Dryden. When even che flying sails were seen no more. Forsaken of all sight she left the shore. Id.

Unwilling I forsook your friendly state. Commanded by the goAs, and forced by fats. Id.

Their purple majesty. And all those outward shows which we call greatness. Languish and droop, seem empty and forsaken. And" draw the wondering gazer's eyes no more.

Rowe. Daughter of Jove, whose arms in thunder wield The' avenging bolt, and shake the dreadful shield. Forsook by thee, iu vain I sought thy aid. Pope.

Orestes comes in time To save your honour ; Pyrrhus cools apace ; Prevent his falshood, and forsake him first ; I know you hate him.

A. Phillips's Distresi Mother. Soon as these saints the treacherous Isle / orsooA, Rushed in a false, foul, ficndlike, company. And every fort and every castle took. All to this rabble yield the sovereignty.

Fletcher's Purple Island.

This were the worst desertion : — renegadoes.

Even shuffling South sy, that incarnate lie,

"Would scarcely Join again the ' reformadoes,'

Whom he forsook to fill the Laureate's sty.

Byron.

FORSKAL (Peter), a celebrated Swedish na- turalist and traveller, born in 1736. He studied first at Goltingen, and afterwards at Upsal ; at which last place he became a pupil of Linn6. In 1761 he was requested by the king of Den- mark to travel, with Niebuhr and others, for the purpose of making discoveries in Arabia; and died at Jeriin, in that country, in 1763. He was the author of a tract entitled Thoughts on Civil Liberty, printed in 1759; and from his papers, which Niebuhr brought home with him, were published Descripliones Animalium, &c. quEe in Itinere Orientali Observavit, 4to. ; Flora xEgyptiaco-Arabica, 4to.; Icones rerum Natu- rallum quas in Itinere Orientali depingi curavit Forskal, 4to.

FORSKOHLEA, in botany, a genus of the pentaoynia order, decandria class of plants ; CAL. pentaphyllous, and longer than the corolla. There are ten petals spatulated, i. e. roundish before, with a linear base. Species three; natives of Egypt, Teneriffe, and the Cape.

FORSOOTH, adv. Sax. pojipoje, for, and sooth, truth. See Sooth. In truth ; certainly ; very well. It is now used almost always in an ironical or contemptuous sense.

A thefe he was, fursoth of com and mele. And that a slie, and usant for to stele His name hoten Deinous Simekin.

Chaucer. Tke Rene's Tale. Wherefore doth Lysander Deny your love, so rich within his soul. And tender me, forsooth, affection ?

Shakspeare.

A fi.xaz.TL, forsooth, to govern a realm, who had so goodly government iu his own estate. Hayward.

Thou would 'st/orsoof/ be something in a state And business thou would'st find and would'st create.*

Cowley. Unlearned persons use such letters as justly express the power or sound of their speech ; yet forsooth, we say, write not true English, or true French.

Holder on Speech.

In the East Indies a widow, who has any regard to her character, throws herself into the flames of her husband's funeral pile, to shew, forsooth, that she is faithful to the memory of her deceased lord.

Addison I Freeholder.

FOR

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She would cry out murder, and disturb tbe whole neighbourhood ; and when John came running down the stairs to enquire what the matter was, nothing, fiTsuoth, only her maid had stuck a pin wrong in her gown. Arbuthnot's H'ntory of John Bull.

Some question the genuineness of his books, be- cause,/ursoo^A, they cannot discover in them ths flu- inen orationis that Cicero speaks of. Baker.

Upon his arm a tinsel scarf he wore.

Forsooth his madam's favour, spangled fair Light as himself ; a fan his helmet bore, With ribbons, dressed, begged from his mistress' nair. Fletcher's Purple Island.

Forsoo'th, n. s. Golh. frawshat ; of frau, a lady. A female title of honor or respect. This is quite a different word to the foregoinsj.

Our old English word forsooth has been changed for the French madam. Gtiardian.

FORSTER (John Reinhold), a celebrated Prussian naturalist, born in 1729. In his youth he made great progress in the learned and mo- dern languages ; and in 1748 became a student at the University of Halle, where he chiefly de- voted himself to those branches of learning con- nected with divinity. From Halle he removed to Dantzic, where he commenced preacher; but, being afterwards led to expect some consi- derable preferment in Russia, he proceeded to that country. His expectations, however, proved fruitless, and he left Russia and came over to England, where he for some time acted as tutor in the French and German languages at War- rington. When captain Cook's second voyage was projected, in 1772, he was chosen to accom- pany that navigator roimd the world, and after his return, in 1775, the University of Oxford ho- nored him with the degree of LL.D. But, con- trary to the engagements he had lintered into with the government, he published a botanical account of the plants discovered during the voyage, which occasioned his being treated with such coolness, that he left England and went to Halle, where he was appointed professor of natural his- tory. He died in 1798. He was the author of Observations made in a Voyage round the World ; History of Voyages and Discoveries in the North ; On the

I3yssus of the Ancients ; Several Papers in the Philosophical Transac- tions, &c.

FoRSTER (John George Adam), son of the above, was born at Dantzic in 1754, and came to England with his father in 1 766. He was edu- cated at \^"arrington, and, having accompanied his father in the voyage round the world, became, after his return to Europe, professor of natural history at Cassel ; from which place he removed to Wilna, in Poland, and afterwards to Mentz, where he was appointed president of the Uni- versity. At the beginning of the revolution, he was chosen by the inhabitants of Mentz us their representative at Paris ; and died therein 1792. He wrote an account of his Voyage round the World, 2 vols. 4to. ; a Defence of the same against Mr. Wales, 4to. ; a Philosophical and Picturesque Journey along the Banks of the Rhine, 2 vols. 8vo. Sec.

FoRSTER (George), an English traveller some- times confounded with the above, was in 1782 in the civil service of the East India Company,

and one of the few servants in the Madras Esta- blishment who had at that period studied the language of Hindostan. He commenced in this year a journey from Bengal to Persia and came through Russia to England, when he pub- lished an account of it, in 2 vols. 4to. He tra- velled chiefly in the character of a Mahommedan merchant. Mr. Forster died in India in 1792.

FoRSTER (Nathaniel), a learned English divine, born at Plymstock in Devonshire, in 1717. He received the first part of his education at Ply- mouth, and afterwards at Eton ; whence, in 1733, he proceeded to Corpus Christi College, Oxford, where he took his degree in arts, and was elected fellow. His first church preferment was the rectory of Hethe in Oxfordshire. In 1750 he became chaplain to bishop Burnet of Durham, who appointed him his executor. About this time he took his degree of D. D. After the death of bishop Burnet, in 17o2, he was chosen by archbishop Herring as his chap- lain : and in 1754 he obtained a prebend in the cathedral of Bristol, and the vicarage of Rochdale in Lancashire. In 1756 he was appointed chaplain to his majesty, and the following year preacher at the Rolls ; he died the same year at Westminster. His writings are, 1. Reflections on the Antiquity, Sec, of Egypt ; 2. Platonis Dialogi quimpie. Sec, 1745; 3. Appendix Liviana, 1746; 4. Popery Destructive of the Evidence of Christianity, a Sermon ; 5. A Dis- sertation on the Account given of Jesus Christ by Josephus ; 6. Biblia Hebraica, sine Punctis; 7. On tlie Marriages of Minors, 8vo.

FORSTERA, in botany, a genus of the trian- dria order, and gynandria class of plants, cal. double ; the exterior one beneath three-leaved ; the interior one above, and six-cleft : gor. tubu- lar ; berry inferior, one-celled

and one-seeded. Species one ; a climber of New Zealand.

FORSWEAR', V. a. Scv.n.l Preterite for-

Forswear'er, 71. s i swore; partici-

ple forsworn ; Sax. FOjij-jjaefiian. For, neg. and swear : to swear contrary to the truth ; or to re- nounce an oath ; to abjure. Forswearing and perjury, however, are not in use strictly synony- mous. To forswear is applied to all kinds of oaths; to perjure is employed only for such oaths as have been administered by civil or ec- clesiastical authorities.

Now drinke I not this yere clarre If that I lie or forsworns be. For of the goddes the usage is That whoso him forswereth amis Shall that yere drinken no clarre Now have I sworne enough parde. If I forswere, than am I lome : But I woU never be forsworne.

Chaucer. Ilomaunt of the Rose, I firmly vow Never to wooe her more ; but do forswear her. As one unworthy all the former favours That I have fondly flattered her withal.

Shakspeare. To leave my Julia, shall I he forsworn? To leave fair Sylvia, shall I he forsivorn ? To wrong my friend, shall I be much forsworn? And even that power which gave me lirst my oath. Provokes rac to this lluccfold perjury. Id,

And that, self chain about his nsck.

Which he forswore most monstrously to have.

Shahspeare.

One says, he never shall endure the sight Of i\i3X foTiwom, that wrongs both lands and laws.

Daniel,

Observe the wretch who hath his face forsook, How clear his voice, and how assured his look ! Like innocence, and as serenely bold As truth, how loudly he forswears thy gold !

Dryden's Juvenal.

I too have sworn, even at the altar sworn. Eternal love and endless faith to Theseus ; And yet am false, ybrxicoin : the hallowed shrine. That heard me swear, is witness to my falsehood.

Smith.

FORSYTH (VVilliatn), an able modern horti- culturist, was born at Old Meldrum in the county of Aberdeen, in 1737. He was a pupil of the celebrated Miller, gardener to the com- pany of apothecaries, at Chelsea, and in 1771 succeeded him in that situation. In 1784 he was appointed superintendent of the royal gardens at Kensington and St. James's. Mr. Forsyth was a member of the Linnaean and other learned so- cieties. He died in 1804; leaving Observations on the Diseases, Defects, and Injuries of Fruit and Forest Trees, and A Treatise on the Culture and Management of Fruit Trees. Mr. Forsyth discovered a composition to remedy the dis- eases of trees, for which he received a grant from parliament.

Fr. fort, fortifier, fortrcsse ; Ital. and Teut. fort, from Lat. fortis, strong. A fort I is a place or castle strengthened against attacks by walls or works. Budt for strength and defence. Fortification is em-

FORT, n. s. -)

FoRTED, adj. Fortifi'able, adj.

FoRTIFICa'tION, 71. s

For'tifier, For'tify, v. a. 8c u. 71 For'tilage, n.s. For'tin, n. s. Fort'let, n. s.

For'tRESS, 71. s. j

ployed in the same sense ; but also designates the science of military architecture. Fortin and fortilage signify a little fort ; and the former is especially applied to a fort raised to defend a camp during a siege. To fortify, is used not only in its primary application, but metaphorically, to confirm ; to encourage ; to fix ; to establish in resolution. Fortress is something more con- siderable than a fort ; a strong-hold ; a castle of defence.

Ylt fortified the city against besieging. Ecclus. 1. 4. Alas I I trowe, it woll nat ben ; For how should I ere more him sene ? He maio nat out, and that is wrong, Bicause the toure is so strong : How should he out, or by whose prowesse. Out of so strong a. fortiresse ?

Chatirer. Rumavnt of the Rose. What warre so cruel, or what siege so sore. As that which strong affection doc apply Against the forte of reason evermore. To bring the sowle into captivity ?

Spenser. Faerie Queene. Yet was the fence thereof but weak and thin. Nought feared their force ih&t fortilage to win.

Spenser. In all straits and narrow passages there should be some little fortilage, or wooden castle set, which should keep and command the strait. Spenser.

Breaking forth like a sudden tempest, he overran all, breaking down all the holds and fortresses.

Id. On Ireland. Great Dunsinane he strongly fortifies.

Shahsptare. Tliou hast talked Of paIisadoes,yor«, parapets. Id

God is o\iT fortress, in whose conquering name Let us resolve to scale their flinty bulwarks. Id

Your desert speaks loud, and I should wrong To lock it in the wards of covert bosom. When it deserves with characters of brass A forted residence, 'gainst the tooth of time And rasure of oblivion.

Shakspeare. Measure for Measure. To fortify the former opinions Tostatus adds, that those which dwell near the falls of water are deaf from their infancy ; but this I hold as feigned.

Raleigh. They erected a. fort, which they called the fort de I'or : and from thence they bolted like beasts of the forest. Bacon.

Hence while unsettled here he fighting reigns. Shut in a tow'r where thousand enemies Assault the fort ; with wary care and pains He guards all entrance, and by divers spies Searcheth into his foes' and friends' designs. For most he fears his subjects wav'ring mind ; This tower then only falls when treason undermines. Fletcher's Purple Island. The trump of death sounds in their hearing shrill ; Their weapon, faith ; their fortress was the grave.

Fairfax. The fortifier of Pendennis made his advantage of the commodity afforded by the ground. Carew.

He that views z.fort to take it. Plants his artillery against the weakest part.

Denham. Thou us impowered To fortify thus far and overlay With this

portentous bridge the dark abyss.

Milton. It greatly fortified her desires, to see that her mother had the like desires. Sidney.

The hounds were uncoupled, and the stag thought it better to trust to the nimbleness of his feet, than to the sleadei fortification of his lodging. Id.

Excellent devices were used to make even their sports profitable ; images, battles, and fortifications being then delivered to their memory, which, after stronger judgments, might dispense some advantage.

Id. He was led forth by many armed men, who often had been the fortifiers of wickedness, to the place of execution. Id.

Now to their fort they are about to send For the loud engines which their isle defend.

Waller. But in-born worth that fortune can controul. New-strung and stiffer bent her softer soul The heroine assumed the woman's place. Confirmed her mind, a.nil fortified her face.

Dryden. My fury does, like jealous forts, pursue With death ev'n strangers who but come to view.

Id. There is no such way to give defence to absurd doctrines, as to guard them round about with legions of obscure and undefined words ; which yet makes these retreats more like the dens of robbers, or holes of foxes, than the fortresses of fair warriors. Locke.

Fortification is an art shewing how to fortify a place with ramparts, parapets, moats, and other bul- warks ; to the end that a small number of men within

may be able to defend themselves, for a considerable time, against the assaults of a numerous army without.

Harris.

The Phoenicians, though an unwarlike nation, yet understood the art of fortijication. Broome.

They battle it beyond the wall, and not As in late midnight conflict in the very Chambers : the palace has become a fortress Since that insidious hour ; and here within The very centre, girded by vast courts And legal halls of pyramid proportions. Which must be carried one by one before. They penetrate to where they then arrived : We are as much shut in even from the sound Of peril as from glory. Byron. Sardanapalus.

Fort (Francis Le), a Russian military and naval commander, was descended from a noble family of Geneva, where he was born in 1656. At the age of fourteen he entered the French service ; but afterwards, in hopes of preferment, joined a German colonel who was enlisting a body of men for the czar Alexis. He returned with him to Moscow, and became secretary to the Danish resident there. Tiie young czar, Peter, now made him a captain of foot and his contidant. Le Fort suggested to this ori- ginal despot many of his plans for the improve- ment of Russia. Being employed to raise a body of 12,000 men intended to av?e the Strelitzes, he was made their general. Soon after created an admiral ; and, though previously unacquainted with maritime affairs, was very useful in form- ing the commencement of the Russian marine. In 1696 his conduct at the seige of Asoph was so admirable that the czar gave him the chief command of his troops both by land and sea. He was also appointed to the government of Novogorod, and the first place in the ministry. On the czar's determination to travel he created Le Fort his ambassador to the different courts he intended to visit, and travelled in his train as a private person. He retained his influence until his death, which happened at Moscow in

1699.

Fort George, a fortress in the county of Inver- ness, Scotland, situated on a low peninsula, pro- jecting from the south side upwards of a mile into the Moray frith. It is an irregular polygon of six bastions, constructed on the principles of Vauban, and mounting eighty pieces of ordnance. All the sides but one are washed by the sea : the one facing the land is defended by a ditch that may be kept wet or dry at pleasure, a ravelin, lunettes, a covered way, and glacis. These communicate with the body of the fort by draw- bridges. Although the position is low, no neighbouring ground commands it ; and its guns ranging on the sea fronts, from shore to shore of the frith, protect the entrance of the bay leading to the Caledonian canal. Within the works are barracks for 3000 troops, good quar- ters for a governor and staff", bomb-proof maga- zines, an armoury, chapel, storehouses, hospital, workshops, excellent water, &c. In two of the curtains are bomb-proof casemates, where a con- siderable number of men could retire. This fort was begun in 1746, and completed in 1764. It has since been frequently garrisoned by High- land regiments. It is ten miles north of CuUoden

moor, twelve north-east of Inverness, and 165 north of Edinburgh.

Fort Augustine, and Fort William, were fortresses of Inverness, of some consequence in the last rebellion in favor of the house of Stuart. The former had accommodation for 400, the latter for 2000 troops: it was the garrison of Inverlochy in Cromwell's time. But orders were issued by government in 1818 to dismantle both these forts.

Fort St. David, a town of Hindostan, situa- ted on the coast of the Carnatic, and on the river Tripapolore. Two other rivers of considerable size are found in this neighbourhood ; and the town is the emporium of the country for fine dimitties and painted cottons. An English fac- tory was established here as early as 1686or 1691, when a small territory was purchased from a Mahratta rajah. When Madras was captured by the French in 1746, the English were be- sieged here, but made a successful resistance. The town was taken however in 1785, by M. de Lally, and the fortifications destroyed. It is fif- teen miles S.S. W. of Pondicherry, and 100 S.S.W. of Madras.

Fort William. See Calcutta. FORTALICE, in Scots law, signified an- ciently a small place of strength, origmally built for the defence of the country ; and which on that account was formerly reckoned inter regalia, and did not go along with the lands upon which it was situated without a special grant from the crown. Now, fortalices are carried by a general grant of the lands ; and the word is become sy- nonymous with manor place, messuage, &c.

FORTESCUE (Sir John), lord high chan- cellor of England, under Henry VI., was de- scended from an ancient family in Devonshire. He studied the municipal law in Lincoln's Inn, of which he was made a governor, in the fourth and seventh years of Henry VI. In 1430 he was made a serjeant at law, and, in 1441, king's Serjeant. In 1442 he was made lord chief justice of the king's bench ; and afterwards lord high chancellor. During the reign of Edward IV. he was many years in exile with queen Margaret and prince Edward her son. When they returned to England, Sir John Fortescue accompanied them, but soon after the decisive battle of Tewksbury, he was thrown into pi-ison and attainted, with other Lancastrians ; but was pardoned by Edward IV. He wrote, 1. A Commentary on the Politic Laws of England ; to one edition of which Selden wrote notes. 2. The diff'erence between an absolute and a li- mited Monarchy, as it more particularly regards the English constitution (which was published, with some remarks, by John Fortescue, after- wards lord Fortescue, in 8vo. in 1714; and a second edition was published with amendments, in 1719): and several works which still remain in MS. He died, nearly ninety years of age, and was buried in the parish church of Ebburton, where a monument was

erected to his memory in 1677.

FORTEVˆENTURA,or Fuerteventura, one of the Canary Isles, and next to Tenerifte tlie largest of the group, is about fifty miles in length, and twenty-four in its greatest breadth ; it co»i –

tains several large sandy plains, and is inferior in fertility and population to several others of this group. The camel has been introduced here, it is said, with advantage. In those spots which are sufficiently watered, vegetation is luxuriant, and corn is an object of exportation. The goats are numerous, and their flesh excellent : a great part of their milk is made into cheese. Of late years soda has been produced on the coast ; and in 1798 49,373 quintals were exported toTeneriffe. The principal towns are Pajara, Oliva, and St. Maria de Betencuria, the last being so called from De Bethencourt, the first settler in the Canaries. The population is estimated by St. Vincent at 8600, by Humboldt at 9000.' In 1745 it was only 7382. Long. 14° W. and lat.

28° S.

FORTH, adv. Si, prep. Forth'coming, adj. Forth'issuing, Forth'right, adv. Forth'with.

Sax. pofiS, whence

further and furthest.

• The Saxon word is

from old Fr-fors, says

Mr. Tooke, as that is

from the Latin ˆbris, the door. Forward, ' fore- out,' or out beyond the door ; onward in time or place ; abroad : hence beyond any limit or boundary of place or character ; completely or thoroughly out ; and as a preposition, out of. Forthcoming is coming, or ready to come ; for- ward. Forthright, straight-forward. Forthwith, immediately; with promptitude, forwardness, or readiness : forward, onward in time.

For then the nightingale, that all the day- Had in taurer sete, and did hire

might The whole service to sing longing to May ; All sodainly, began to take hire flight ; And to the lady of the lefe forthright. She flew, and set hire on hire hand softly; Which was a thing I mervailed at gretly.

Chaucer. The Floure and the Leafe. And when this prince, this lustie knight. With his peple in armes bright. Was comen where he thought to pas j And knew, well, none abiding wos Behind, but all were there present; Fm-thwith anon, all his intent He told them there. Id. Boke of the Duchesie. From that ddty forth I loved that face divine ; From that day forth I cast in careful mind To seek her out. Faerie Qtteene,

They will privily relieve their friends that are forth ; they will sena the enemy secret advertise- ments ; and they will not also stick to draw the ene-i&y privily upon them. Spenser.

Arrived there, they passed ia forthright ; For still to all the gate stood open wide.

Faerie Queene. Forthwith he runs, with feigned faithful haste. Unto his guest ; who, after troublous sights And dreams, 'gan now to take more sound repast.

Spejiser. Few things are so restrained to any one end or purpose, thut the same being extinct, they should forthwith utterly become frustrate. Hooker.

Look at the second admonition, and so forth, v/hcvc they speak in most unchristian manner. Whitgifte. Weil see your trinkets here forthcoming all.

Shakspeare. Henry VI. Uncle, I must come forth. Id. Othello.

I have no mind of feasting /or?/i to-night.

Sliaktpeare. Attend you here the door of our stern daughtei ? Will she not / orf/»? Id.

Ev'n that sunshine brewed a shower for him. That washed his father's fortunes forth of France.

Id. You, cousin.

Whom it concerns to hear this razXtev forth,

Do with your injuries as seems you best. Id.

And here's a prophet that I brought with me

From forth the streets of Pomfret. Id,

Carry this mad knave to jail : I charge you see that he be forthcoming. Id. Taming of the Shrew.

Here's a maze trod, indeed. Through forthrights and meanders. Id. Tempest.

Neither did the martial men dally or prosecute the service faintly, but did forthwith quench that fire.

Daviei on Ireland. Some forth their cabins peep. And trembling ask what news, and do hear so As jealous husbands, what they would not know.

D'fnne.

You may set forth the same with farmhouses.

Peacham. Forthwith began these fury-moving sounds. The notes of wrath, the musick brought from hell. The rattling drums. Daniel's Civil War.

The winged heralds, by command Of sov'reign power, throughout the host proclaim A solemn council forthwith to be held At Pandsmonium. Milton's Paradise Lost.

He ever going so just with the horse, either yor/A- right or turning, that it seemed Eis he borrowed the horse's body, so he lent the horse his mind. Sidney.

The river not running forthright , but almost conti- nually winding, as if the lower streams would return to their spring, or that the river had a delight to play with itself. Id,

But when your troubled country called you forth. Your flaming courage, and your matchless worth. To fierce contention gave a prosperous end. Waller.

Mad Pandarus steˆs forth, with vengeance vowed For Bitias' demh. Dryden's Mneid.

When winter past, and Summer scarce begun. Invites ihem forth to labour in the sun. Dryden.

Thither forthright he rode to rouse the prey. Id.

In his passage thither one put into his hand a note of the whole conspiracy, desiring him to read il forth- with, and to remember the giver of it as long as he lived. South.

I repeated the Ave Maria : the inquisitor bad me say forth ; I said I was taught no more.

Memoir in Slrype.

Hence we learn, how iar forth we may expect justi- fication and salvation from the sufferings of Christ ; no further than we are wrought on by his^ renewing grace.

Hammond.

Forthissuing thus, she gave him first to wield A weighty ax,

I understand thee — thou would'st have me go Forth as a conqueror. By all the stars Which the Chaldeans read ! the restless slaves Deserve that I should curse them with their wishes. And lead them forth to glory. Byron. Sardanapaltu.

Since it must be, and this churl has checked Thy gentle spirit, go ; but recollect That we must forthwith meet : I had rather lose An empire than thy presence Id.

Forth, in geography, one of the finest rivers of Scotland, and the largest of the island of Great Britain. It takes its rise in the Lomond hills ; and, mnning from west to east, receives, in its passage, many considerable streams, deriving their waters from the eminences in the midland counties of Scotland. Between Stirling and

Alloa, it winds ia a most beautiful and pictu- resque manner : so that, though it is but four miles by land, it is twenty-four by water between those two places. Below Alloa the river ex- pands itself to a great breadth between the coun- ties of Lothian and Fife, till at Queensferry it is contracted by promontories shooting into it from both coasts; so that, from being four to five miles broad, it becomes not above two miles. Here in the middle of the channel lies a small island called Inchgarvy, and, a little below that, those of Inchcolm and Inch-keith. The north and south shores receding, below Queensferry, the body of the water gradually en- larges till it becomes two or three leagues broad, affording several safe harbours on both sides, and excellent roads throughout, unembarrassed with latent rocks, shoals, or sands ; and allowing se- cure anchorage to the largest ships within a league of the coast in almost any part of the Frith, and to vessels of a smaller size within a mile or less. The Forth was known to the

ancients by the name of Bodotria, or, as Ptolemy calls it, Bode- ria, and has been ever famous for the number of its havens. It is navigable for merchantmen as high as Alloa, fifty miles from the sea ; and, for coasters, as far as Stirling, twenty-four miles further by water, though only four by land in a direct line, as already observed. The tide flows only a full mile above Stirling. The direct course of this river is scarcely less than 100 miles, and its sinuosities do not occupy a shorter space than 200. Its depth is from three to thirty-seven fathoms, or more ; the bottom, in many ur per- haps most places, covered with sleach, especially above the ferries. The principal tributary rivers of the Forth are the Goodie, Teith, and Allan, above Stirling bridge ; and, below it, the Devon, Carron, Avon, Almond, Leith, Esk, Leven, Tyne, and others : these chiefly flow into the river on the south shore. A navigable canal, com- mencing near Grangemouth, communicates with the Clyde.

In the Forth are found great variety and abun-

dance of fish. Whales have frequented it during several centuries : the porpoise is common. Ai Stirling salmon are exceedingly plentiful; cod and haddocks are taken in great quantities ; and it is frequented by myriads of herrings. At times these are so plentiful that they are sold at the cheap rate of sixpence a hundred. Crabs are caught in many places ; lobsters are not rare, but bear a much higher price ; and oysters and muscles are in great profusion. Valuable mine- rals are obtained from almost every part of the environing shores. The beds of coal are inex- haustible, apparently lying under the whole bed of the river between Culross and Borrowstown- ness. Lime is wrought on both sides, but chiefly at Charleston, in the county of Fife, about thir- teen miles north-west of Edinburgh. Along the coast numerous petrifactions occur. Ironstone is plentifully obtained from pits, or collected in scattered nodules ; and small portions of fine jasper are frequently seen. The Forth contains several islands, of which the chief are Inchgarvie, Inchcolm, Inchkeith, the Bass, and the isle of May. Light-houses are erected on Inchkeith and on the Isle of May ; and the ruins of castles or religious houses appear on all the islands. The towns connected with the river, though they, in general, drive a brisk trade, are principally small ; for, excepting Stirling, Alloa, and Leith, few of them contain 3000 inhabitants. Batteries have been erected on diff'erent parts of the banks, as also on the island of Inchcolm, for the pur- pose of protecting the channel. In the year 1774 it was proposed to render the Forth navi- gable from Stirling bridge to Gartmore, and to cut a canal ia a straight line from Stirling to APoa, whereby the navigation would be shortened from twenty- four miles to six. At a later period, namely, in 1806, a project was entertained of excavating a tunnel under the bed of the river, to obviate the interruption which passengers experience at the two ferries, and elsewhere, from occasional storms ; but, after an elaborate survey, the plan was

abandoned.

FORTIFICATION.

Fortification. The origin of fortification ■was doubtless that principle of rapacity, which has influenced too many of mankind in all ages and nation;- to invade the rights and properties of those whom they considered weak or defence- less. In the first ages of the world men were dispersed over the earth in separate families, as appears in the records of the Jews and Scythi- ans, and they wandered from place to place in search 6{ pasture for their cattle. But families soon became numerous, and formed large com- munities which settled in one place ; even before the deluge ‘ the earth was filled with vio- lence,’ and towns and cities arose. It was now found necessary, for the common security, to surround these towns with walls, and the first, of course, were of the simplest construction ; they were single, and perhaps perforated. Then they were built of more solid materials ; the best arts of masonry were here called into

exercise : they afforded sufficient space for the defenders to use them as stations for attack, and they were crowned by other and smaller works, through which they discharged missiles. Long before Rome was founded, the ancient Grecians used brick, and rubble stone, with which they built a vast wall, joining Mount Hymettus to the city of Athens. The Babylonian walls, built by Semiramis, or, as others state, by Belus, were thirty-two feet thick, and 100 feet high, with towers ten feet higher built u])on them, cemented with bitumen or asphaltus. Those of Jerusalem seem to have come but little short of them, since, in the siege by Titus, all the Roman battering- rams, joined with Roman art and courage, could remove but four stones out of the tower of Antonia in the assault of a whole night.

The square towers at first used would suffi- ciently protect every part of the wall, adjacen to the sides of these towers. But, as there al-

ways remained one of the faces of the towers which fronted the field that could not be seen from any other part, the circular form was early preferred. This had also the recommendation of presenting a better resistance to battering engines. Still there remained parts of these towers unseen and incapable of being defended ; which caused a second change in their figure, i. 6. they made them square as before; but, instead of presenting a face to the field as for- merly, they presented an angle, the origin of our modern bastion ; and thus was effected such a disposition of

the works, that no part could be attacked witliout being seen or defended from some other part. Ditches were added ; and thus remained long stationary tlie art of fortifi- cation : indeed until the invention of that terri- ble assailant gunpowder. This entirely changed the mode of attack, and by consequence that of defence.

In the history of fortification we find this obvious division, and we need not take back the modern reader beyond the period of this cele- brated invention.

When the besiegers began regularly to use artillery, it became requisite that the besieged should also employ it ; and, to furnish room for this, a rampart was first raised behind and close to the main wall of fortresses : the towers were enlarged ; and the smaller walls were thickened by parapets of earth behind, so as to secure the besieged from the fire of the enemy.

For a length of time fortified towns were placed, by these means, in a situation to take their full advantage of the new art of war. Sieges were by no means diminished in their ordinary length : a wall of Magdebourg is re- corded to have received 1530 cannon-shot, in the early part of the seventeenth century, without injury to it. If the siege of an important place was not early successful, it generally terminated in the loss of the major part of those who as- saulted it.

But the great modern proficient in this art, M. Vauban, now appeared, and effected at the end of the seventeenth century a complete revolution in it. He invented a method of attack, against which no mode of defence hitherto adopted has been able finally to stand ; and though, during the latter part of his life, he applied his great talents also to a system of defence, upon which Coehorn, Cormontaingne, and others as we shall see have improved, nothing has as yet fully counteracted the mode of ricochet firing intro- duced by this celebrated commander at the siege of Ath. We shall not fail, in the sketch of this art that follows, to include every princi- pal suggestion that has been made on this sub- ject, and, among others, the plan of M. Carnot, so justly celebrated for his mathematical skill and military talents. But we have completely satis- fied ourselves that the vertical fire on which he mainly relies is a chimera.

Modern fortification treats of the plan of de- fence now used, i.e. turning the walls into ram- parts, and square and round towers into bastions, defended by numerous outworks ; all which are made so solid that they cannot be beaten down, but by the continual fire of batteries. These bastions at first were small, and at a great dis-

tance from each other, as are those still to be seen at Antwerp, their gorges narrow, and their flanks and faces short. For the invariable practice then, and for some time after the introduction of tiiem, was to attack the curtains and not the faces of the bastions. But since that time they have been considerably improved and enlarged, and are now arrived to that degree of strength, that it has been a received opinion, that the art of fortification is at its height, and incapable of being carried to greater perfection. This, how- ever, Mr. Glenie, p. 9, Military Construction, disputes, and M. Carnot seemed resolved, a few years since, to confirm his opinions as to all past methods.

Offensive fortification is a term improperly applied to the besieging and taking fortified places ; it is said further to teach a general how to take all advantages for his troops ; the manner of encamping, and method of carrying on either a regular or irregular siege, according as circum- stances may direct. It may with much greater propriety be called the war of sieges. See Sieges.

Fortification has been sometimes treated of under the terms regular aud irregular.

Regular fortification is tliat which Ls erected according to the rules of art, and is particularly applied to a construction made from a figure or polygon, which has all its sides and angles equal. Tlie flanked or salient angles in such a fortifica- tion are equal to one another, equally distant from one another, and are each of them at the distance of about that of serious musket shot from the flanks which defend it. For an irre- gular fortification having the flanked angles, as also the flanks and lines of defence, unequal, may be constructed from the sides of a regular polygon, as well as from those of an irregular polygon, by drawing the perpendiculars to the regular polygon from points different from those of their bisections. See Glenie s General Rule for Irregular Construction.

Irregular fortification, on the contrary, is that where the sides and angles are not uniform, equi-distant, or equal ; which is owing to the irregularity of the ground, valleys, rivers, hills, &c.

Most fortifications are a mixture of regular and irregular works. The position of waters, hills, and other principal geographical features of a site of ground, previous plans adopted, and various other considerations induce the ablest engineer to be content with arriving only at the utmost practical regularity. In this ar- ticle, therefore, we shall pursue the main divisions of pei-manent and field fortification, as embra- cing all the principal topics we need discuss ; and shall present under each a brief sketch of the most approved systems from that of M. Vauban downwards. We shall subjoin a

few observa- tions on the mode of attacking fortified places.

PART I. OF PERMANENT FORTIFICATIONS.

Sect. I.— M. Vauban's First System. M. Vauban was clearly indebted to his predeces- sor in this art, the count de Pagan, for his general definitions and dispositions, especially in his first

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system. The former has the same divisions of the art into little, mean, and great fortifications, &c. But his line of defence was too long to allow the musquetry fire of the flanks to bear properly, and his ravelins were too small. The large size of his orillons was also objectionable, and the faces of his cavaliers were not flanked. Vauban also materially improved his covert way. His first system adopted, as we said. Pagan’s divisions of little, mean, and great fortification ; by the first he intended the construction of ci- tadels; by mean fortification, that of all sorts of towns ; and by great, that of particular and im- portant places. We shall give the construction of the mean as being most useful ; and refer to the table hereafter inserted for those dimen- sions which are different in other fortifications.

Inscribe in a circle a polygon of as many sides as the fortification is designed to have fronts ; let AB, fig. 1, Fortification, plate I. be one of the sides of half an hexagon, which bi- sect by the perpendicular C D ; divide half of it A C into nine equal parts, and one of these into ten others ; then these divisions will serve as a scale to construct all parts of the fortifica- tion, and each of them is supposed to be a toise or fathom, that is six French feet ; and, there- fore, the whole side AB is supposed to be 180 toises. As the dividing a line into so many equal parts is very troublesome, it is much easier to have a scale of equal parts by which the works may be constructed.

If, therefore, in this case, the raJius is taken equal to 180 toises, and the circle described with that radius be divided into six equal parts, or the radius be carried six times round, we shall have an hexagon inscribed ; A B being bisected by the perpendicular C D as before, set off thirty toises from C to D, and draw the indefinite lines A D G, B D F ; in which take the parts A E, B H, each equal to fifty toises ; from the centre E describe an arc through the point H, meeting A D in G, and from the centre H describe an arc through the point E, meeting BD in F; or, which is the same, make each of the lines E G, H F, equal to the distance E H ; then the lines joining the points A, B, F, G, H, B, will be the principal or outline of the front.

If the same construction be performed on the other sides of the polygon, we shall have the prin- cipal or outline of the whole fortification. If, with a radius of twenty toises, there be de- scribed circular arcs, from the angular points, B, A, M, T, and lines drawn from the oppo- site angles, E, H, &c., so as to touch these

arcs, their parts ah, be, Sec, together with these arcs, will represent the outline of the ditch.

It will be now necessary to attend to the fol- lowing Definition of Terms: — 1. The part, F E A L N, is called the bastion. 2. A E, A L, ihQ faces of the bastion. 3. E F, L N, the fianks. 4. F G, the curtain. 5. F N, the gorge "of the bastion. 6. AG, BF, the lines of defence. 7. A B, the exterior side of the polygon. 8. C D, the perpendicular. 9. Any line, which divides a work into two equal parts, is called the capital of that work. 10. ab c, the counterscarp of the ditch. 11. A, M, the Jlanked angles. 12. H, E, L, the angles of the shoulder, or the shoulder only. 13. G, F, N, the angles of the flank. 14. Any angle whose point turns from the place is called cisaliant angle, such as AM: and any angle whose point turns towards the place, re- entering angle, such as b, F, N. 15. If two lines be drawn parallel to the principal or out- line, the one at three toises distance, and the other at eight from it ; then the space y x in- cluded between the principal one and that farthest distant, is called the rampart. And the space XX, contained by the principal line, and that near to it, and which is generally stained black, is called the parapet. 16. There is a fine line drawn within four feet of the parapet, which ex- presses a step called banquette.

N. B. All works have a parapet of three toises thick, and a rampart of eight to ten, be- sides their slopes.

17. The rampart is elevated more or less above the level of the place, from ten to twenty feet, according to the nature of the ground and the particular constructions of engineers.

lb. l^he parapet is a part of the rampart ele- vated from six to seven feet and a half above the rest, in order to cover the troops which are drawn up there from the fire of the enemy in a siege ; and the banquette is two or three feet higher than the rampart, or about four feet lower than the parapet ; so that when the troops stand upon it, they may just be able to fire over the parapet.

19. The body of the place, is all that which is contained within the first rampart ; for which reason it is often said to construct the body of the place ; which means, properly, the construc- tion of the bastions and curtains.

20. All the works which are constructed be- yond the ditch before the body of the place are called outworks.

M. Vauban gives the following Table of Di- mensions : —

Forts.

Little fortification.

Mean. 1 Great.

Sides of polygons .

80

90

100

110

120

130

140

150

160

170

180

190 31 53 55

200 25 55 60

260 32 60 70

Perpendiculars . .

10

11

m

14

15

16

20

21

23

25 47 52

30 50 55

Faces of bastions .

22

25

28

30

33 38

35 40

40 ~47

42 50

45 50

Capital of ravelin .

25

28

30

35

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FORTIFICATION.

in the first vertical column are the numbers expressing the lengths of the exterior sides from eighty to 260. In the second, the perpendiculars answering to these sides. In the third, the lengtlis of the faces of bastions ; and in the fourtli, the lengths of the capitals of the ravelins.

The forts are mostly, if not always, squares : for which reason, the perpendiculars are made one-eighth of the exterior sides ; because, if they were more, the gorges of the bastions would be- come too narrow.

In the little fortification or citadels, chiefly pentagons, the perpendiculars are made one- seventh of the exterior side. In mean fortifica- tion, from any number of sides to an hexagon up- wards is used ; and the great is seldom used but m an irregular fortification, where there are some sides that cannot be made less without much ex- pense ; or in a town which lies near a great river, where the side next the river is made from 200 to 260 toises ; and, as that side is less ex- posed to be attacked than any other, the per- pendicular is made shorter, which saves much expense.

Tlie faces of the bastions are all two-sevenths of the exterior sides, or nearly so, because the frac- tions are neglected.

In general, in all squares, the perpendicular is one-eighth of the exterior side, and all penta- gons one-seventh, and in all the rest upwards of one-sixth.

Of the Construction of Orillons and retired F/anA-s.— Describe the front M P Q R S T as be- fore, and divide the flank into three equal parts, of

which suppose S r to be one ; from the op- posite flanked angle I\I draw a line M r, in which take the part m r of five toises ; take like- wise R n in the line of defence M R, produced equal to five toises, and join w?», upon which as abase describe the equilateral triangle npm, and from the angle p, opposite to the base as centre, is described the circular flank n m. And if Sr be bisected by the perpendicular 1, 2, and another be erected upon the face S T, at S, the intersection 2 of these two perpendiculars will be the centre of the arc which forms the orillon.

The orillons are very useful in covering the retired flanks, which cannot be seen but d.rectly in the front ; and, as these orillons are round, they cannot be so easily destroyed as they would be if they were of any other figure.

Of the Construction of Ravelins or Half-moons. — Fig. 2. Set ofl" fifty-five toises, from the re-enter- ing angle O of the counterscarp, on the capital O L, or on the perpendicular produced; and from the point L draw lines to the shoulder A B ; whose parts LM, LN, terminated by the coun- terscarp, will be the faces, and M O, O N, the semi-gorges of the ravelin required. This is Mr. Vauban's method of constructing ravelins, ac- cording to some authors : others say the faces of the ravelin should terminate on those of the bas- tions within three toises of the shoulders ; which seems to be the best way, for these ravelins cover the flanks much better than the others.

The ditch before the ravelin is twelve toises, its counterscarp parallel to the faces of the rave- lins, and is made in a circular arc, before the

saliant angle; as likewise all ditches are in general.

When the ravelins are made with flanks, as in plate I. fig. 3, the faces should terminate on those of the bastions, at least five toises from the shoulders. The flanks are made by setting off ten toises from the extremities of the faces, from ˆto h, and from m to /; and from the points h, I, the flanks h k,l p, are drawn parallel to the capital L O of the ravelin.

There are sometimes redoubts made in the ra- velin, such as in fig. 2, which is done by setting off" sixteen toises from the extremities of the faces on the semi-gorges from N to h, and from M to a ; and from the points b, a, the faces are drawn parallel to those of the ravelin ; the ditch before the redoubts is six toises, and its counterscarp parallel to the faces.

Of Tenailles. — A tenaille is a work made in the ditch before the curtains ; the parapet is only two or three feet higher than the level ground of the ravelin. There are three different sorts ; the first are those, as in fig. 4, which are made in the direction of the lines of defence, leaving a pas- sage of five toises between their extremities and the flanks of the bastions, as

likewise another of two in the middle for a bridge of communication to the ravelin.

The second sort are as those in fig. 5. Their faces are in the lines of defence, and sixteen toises long, besides the passage of three toises between them and the flanks of the bastion ; their flanks are found by describing arcs from one shoulder of the tenaille as centre through the other, or on which are set ten toises for the flanks desired.

The third sort are those as in fig. 6. Their faces are sixteen toises, as in the second sort, and the flanks are parallel to those of the bas- tions.*

The use of tenailles, in general, is to defend the bottom of the ditch by a grazing fire, as like- wise the level ground of the ravelin, and espe- cially the ditch before the redoubt within the ravelin, which can be defended from no where else so well as from them.

The first sort do not defend the ditch so well as the others, as being too oblique a defence ; but, as they are not subject to be enfiladed, M. Vauban generally preferred them in the fortify- ing of places, as in the citadel of Lille, at Lan- dau, New Brisac, and in many other places.

The second sort defend the ditch much better than the first, and add a low flank to those of the bastions ; but, as these flanks are liable to be en- filaded, they have not been much put in practice. This defect might however be remedied, by ma- king them so as to be covered by the extremities of the parapets of the opposite ravelins, or by some other work.

As to the third sort, they have the same ad- vantage as the second, and are likewise liable to the same objections; for which reasonˆ they may be used widi the same precautions which have been mentioned in the second.

Tenailles are esteemed so necessary, that there is hardly any place fortified without them ; and with reason : for, when the ditch is dry, the part behind the tenailles serves as a place of arms

from which the troops may sally, and destroy the works of the enemy and the ditch, oppose their descent, and retire with safety ; and the com- munication from the body of the place to the ravelin becomes easy and secure, which is a great advantage; for by that means the ravelin may be a much better defence, as it can be supplied with troops and necessaries at any time. And, if the ditch is wet, they serve as harbours for boats, which

may carry out armed men to op- pose the passage over the ditch whenever they please; and the communication from the tenailles to the ravelin becomes likewise much easier than it would be without them.

Of Lunettes. — Fig. 7, plate I. Lunettes are placed^^on both sides of the ravelin, such as B, to increase the strength of a place : they are con- structed by bisecting the faces of the ravelin with the perpendicular LN; on which is set off thirty toises from the counterscarp of the ditch, for one of its faces ; the other face, P N, is found by making the semi-gorge, T P, of twenty-five toises ; the ditch before the lunettes is twelve toises, the parapet three, and the rampart eight, as in the ravelin.

There is sometimes anotner work made to co- ver the saliant angle of the ravelin, such as A, called the bonnet, whose faces are parallel to those of the ravelin, and when produced bisect those of the lunettes; the ditch before is ten toises.

There are likewise lunettes, such as D in fig. 8, whose faces are drawn perpendicular to those of the ravelin, within a third part from the saliant angle; and their semi-gorges are only twenty toises.

These kinds of works may make a good de- fence, at no very great cost ; for, as they are so near the ravelin, the communication with it is very easy, and one cannot well be maintained till they are all three taken.

Of Tenaillons. — Fig. 9, plate I. Produce the faces of the ravelin beyond the counterscarp of the ditch, at a distance M N of thirty toises, and take on the counterscarp of the great ditch fif- teen toises from the re-entering angle p to q, and draw N q ; then 9 N M p will be the tenailles re- quired; its ditch is twelve toises, that is, the same as that of the ravelin. Sometimes a retired battery is made in the front of the tenaillons, as in B ; this battery is ten toises from the front to which it is parallel, and fifteen toises long.

Retrenchments are commonly made in the tenaillons, such as O ; their parapets are paral- lel to the fronts M N, and bisect the side q N ; the ditch before the retrenchment is three toises; and there is a banquette before the parapet next to the ditch of about eight feet, called berm ; which serves to prevent the earth of the parapet which seldom hasany revetment from falling into the ditch.

The ravelin, before which tenaillons are con- structed, must have its saliant angle much greater than the former construction makes them ; otherwise the saliant angles of the tenaillons become too acute ; for which reason we made the capital of this ravelin forty-five toises, and the faces terminate within three toises of the shoulders.

Of Counterguards.—Vig. 10, -ii. When the counterguard is placed before the ravelin, set ofif forty toises on the capital of the ravelin from the saliant angle A to the saliant angle B, of the counterguard; and ten from C to D, on the counterscarp of the ditch.

When the counterguard is before the bastion, such as in fig. 2, its saliant angle F is fifty toises from the saliant angle E of the bastion, and the breadth near the ditch of the ravelin ten toises as before.

The ditch before the counterguards is twelve toises, and its counterscarp parallel to the faces. Counterguards are made before the ravelin on some particular occasions only ; but are fre- quently constructed before the bastions, as co- vering the flanks wonderfully well. Some au- thors, as Mr. Blondel and Mr. Coehorn, will have them much narrower than they are here.

Of Horn-works.— Fig. 12, plate I. Produce the capital of the ravelin beyond the saliant angle A, at a distance A B of about eighty toises draw DBE at right angles toAB; in which take B D, B E, each equal to fifty-five toises ; and on the exterior side, D E, trace a front of a polygon in the same manner as that of the body of the place, making the perpendicular B F ten toises, and the faces thirty.

The branches D a, E6, of the horn-work, when produced, terminate on the faces of the bastions, within five toises of the shoulders. The ditch of the horn-work is twelve toises, and its counter- scarp parallel to the branches ; and in tlie front terminates at the shoulders, in tlie same manner as the great ditch be/ore the bastions.

The capital of the ravelin before the front of the horn-work is thirty-five toises, and the faces terminate on the shoulders, or rather two or three toises beyond them : and the ditch before the ravelin is eight toises.

Retrenchments are sometimes made within the horn-works, such as S, S ; which are con- structed by erecting perpendiculars to the faces of the ravelins, within twenty-five toises of their extremities. This retrenchment, like all others, has a parapet turfed only with a berm of eight feet before it ; as likewise a ditch from three to five toises broad.

Fig. 13. When a horn-work is made before the bastion, the distance D L of the front from the saliant angle of the bastion is 100 toises, and the branches terminate on the faces of the adjacent ravelins within five toises from their extremities ; all the rest is the same as before.

Of Crown-works. — From the saliant angle. A, fig. 1, plate II. of the ravelin, as a centre, de- scribe an arc of a circle with a radius of about 120

toises, cutting the capital of the ravelin pro- duced at C ; from the point C, set off the cords CB, CF, each of them equal to 110 toises; and on each of which, as an exterior side, construct a front of polygon of the same dimensions as in the horn-work ; that is, the perpendicular should be eighteen toises, the faces thirty, and thp branches terminate on the faces of the bastions within twenty-five toises of the shoulders.

The ditch is twelve toises, the capital of the ravelins thirty-five, and its ditch eight ; that is, the same as in the horn-work.

Sometimes the crown-work is made before the bastions, as in fig. 2. The arc is described from the salidiit angle A of the bastion, with a radius of 120 toises as before; and the branches ter- minate on the faces of the adjacent ravelins within twenty-five toises of their extremities: the rest of the dimensions and constructions are the same as before.

Horn-works, as well as crown-works, are never made but when a large spot of ground falls beyond the fortification, which might be advan- tageous to an enemy in a siege, or to cover some gate or entrance into a town.

0/' Covert-ways and Glacis. — ˆThese are es- teemed some of the most essential parts of a modern fortification ; and it is certain the taking the covert-way, when it is in good condition and well defended, is generally the most bloody ac- tion of the siege. After having constructed the body of the place, and all the outworks which are thought necessary, lines are drawn parallel to the utmost counterscarp of the ditches, at six toises distant from it ; and the space m n, in n, included between that line and the counterscarp, will be the covert-way required.

Fig. 3. There is in every re-entering angle of the counterscarp a place of arms, m ; which is found by setting off twenty toises from the re- entering and angle a, on both sides from a to h, and from a to c : and from the points b c, as centres, arcs are described with a radius of twenty-five toises, so as to intersect each other in d; then the lines drawn from this intersection to tlie point b, c, will be the faces of the places of arms.

If lines are drawn parallel to the lines which terminate the covert-way, and the places of arms, at twenty toises distant from them, the space .r, .r, X, between these lines and those which termi- nate the covert-way, will be the glacis.

At the extremities of the places of arms are traverses made, such as v, v, which serve to en- close them ; these traverses are three toises thick, and as long as the covert-way is broad, and a passage is cut in the glacis round them, of about six or eiglit feet, in order to have a free commu- nication with the rest of the covert-way.

There are also traverses of the same dimensions before every saliant angle of the bastion and out- works, and are in the same direction as the faces of those works produced ; and the thickness lies at the same side as the parapets.

The passages round these last traverses are likewise from six to eight feet wide.

In each place of arms are two sally ports, r,;:, which are ten or twelve feet wide, for the troops to sally out : in time of a siege they are shut up, with barriers of gates.

Of Arrows and Detached Redoubts. — An arrow is a work made before the saliant angles of the glacis, such as A, fig. 3. It is composed of a parapet of three toises thick, and forty long ; and the ditch before it five toises, terminating in a slope at both ends. The communication from the covert-way into these arrows is four or five toises wide ; and there is a traverse, r, at the entrance, of three toises thick, with a passage of six or eight feet round it.

A detached redoubt is a kind of work much

like a ravelin, with flanks placed beyond the glacis, such as B; they are made to occupy some spot of ground which might be advantageous to the besiegers ; likewise to oblige the enemy to open their trenches farther off than they would do otherwise. The distance from the covert-way ought not to exceed 120 toises, that it may be defended by musket-shot from thence.

The gorge, a b, is forty toises; the flanks, ac, bf, which are perpendicular to the gorge, ten; and the faces c d,fd, thirty : the ditch before it is six toises, ending in slopes at both ends; the covert-way four; the branches of the covert- way are forty-two toises long, or thereabouts ; the faces of the places of arms y, y, which are perpendicular to the branches, ten ; and the other, which is parallel to them, fourteen.

The communication from the covert-way into the redoubt, is five or six toises wide : a traverse is made just at the entrance, and another in the middle when i'. is pretty long. The parapets of this communication terminate in a slope or glacis.

If these redoubts are above fifty toises distant from the covert-way, the besiegers carry their trenches round, and enter through the gorge ; by which means the troops that are in them are made prisoners of war, if they do not retire betimes ; to prevent wliich some other outworks should be made to support them.

Of Second Ditches and Covert-ways. — Plate II. fig. 4. \Vˆhen the ground is low, and water to be found, there is often a ditch about ten or twelve toises made round the glacis; and opposite to the places of arms are constructed lunettes, be- yond the ditch : such as D, whose breadth on the counterscarp of the ditch is ten toises, from b to a, and from c to rf ; and the faces aL, d L, are parallel to those of the places of arms ; the ditch before them is from eight to ten toises wide.

The second covert-way is four toises, the semi- gorges of the places of arms, m, about fifteeen, and the faces perpendicular to the counterscrap ; the second glacis is from fifteen to eighteen toises broad. This second covert-way has traverses every where in the same manner as the first.

Of Profits. — A profile is the representation of a vertical section of a work ; it serves to show tliose dimensions which cannot be represented in plans, and is necessary in the building of a fortification. Profiles are generally constructed upon thirty feet to an inch. It would be endless to describe all their particular dimensions ; we shall, therefore, lay down the principal rules only, given by M. 'auban, on this subject.

1. Every work ought to be at least six feet higher than that before it, so that it may com- mand those before it ; that is, that the garrison may fire from all the works at the same time, with great and small arms, at the besiegers in their aproaches. Several authors, however, ob- ject against it. For, say they, if you can discover the enemy from all the works, they can discover, by the same reason, all the works from their batteries ; so that they may destroy them with- out being obliged to change their situation, and thereby dismount all the guns of the place before they come near it. But, if all the works were of

the same height, those within cannot be destroyed till such time as those before tliem are taken : guns might be placed in the covert-way and out-works to obstruct the enemy's approach ; and, when they come near the place, they might be transported into the inner works ; and, as the body of ihe place would be much lower, the ex- pense would be considerably

diminished. It should not, however, be forgotten diat, when works are low, they are easily enfiladed by the ricochet batteries, though this might be partly prevented by making the parapets near the saliant angles, for the space of eight toises on each side, five or six feet higher than the rest of the works.

2. The covert-way should be lower than the level ground, otherwise the body of the place must be raised very high, especially where there are several outworks : this is to be understood only when the works exceed each other in height, otherwise it need not be below the level.

3. The bases of all inward slopes of earth should be at least equal to the height, if not more.

4. The bases of all outward slopes of earth, two-thirds of their heights.

5. The slopes of all walls or revetments should be one-fifth of their height ; or one-sixth might, perhaps, be sufficient ; the height of a wall is estimated from the bottom of the ditch, and not from the beginning of its foundation.

6. The slopes of all parapets and traverses are one-sixth of their breadth ; that is, three feet towards the field, or the inside, where the ban- quettes should be three feet higher than the out- side.

7. When the revetment of a rampart goes quite up to the top, four feet of the upper part is a vertical wall of three feet thick, with a square stone at the top of it projecting six inches ; and a circular one below, or where the slope begins, of eight or ten inches diameter ; they go quite round the rampart, and the circular projection is called the cordon. Where the straight part of the wall ends, and the slope begins, the wall is always made five feet thick ; and the counter- forts or buttresses reach no higher than that place.

8. When the rampart is partly walled and partly turfed, then one-fifth of the height which is turfed must be added to five feet, to get the thickness of the wall above. And, having the thickness of any wall above, by adding one-fifth of its height from the bottom of the ditch, the sum will be the thickness of the wall at the bottom ; but, if a sixth part is only taken for the slope, then a sixth part must be added.

For instance, suppose a rampart of thirty feet high from the bottom of the ditch, and that ten of these are to be turfed, then the fifth part of ten, which is two, added to five, gives seven for the wall above ; and as this wall is twenty feet high, the fifth of which is added four, and four to the thickness seven above, gives eleven for the thick- ness near the foundation. Plate III. fig. 1, represents, in military perspective, the profiles of the body

of a place, the ravelin and covert- way : which gives a clear idea of what js meant by a profile, and from which those of all other works may be easily conceived.

Sect II. — Of the Second and Third Systems OF M. V'auban.

M. Vauban's Second and Third Systems were chiefly designed, as we have stated, to protect the besieged from the ricochet fire of his own inven- tion, and to improve the near defence. To ac- complish these and some minor purposes, he composed the body of the plan of works which resemble small bastions, and are called tower- hastions. His second method is thus exemplified. He begins his construction inwards, and fortifies outwards, which is found a very convenient plan for improving a place.

Let A B, Plate III. fig. 2, be the interior side , of an hexagon of 120 toises, some authors will have it 130, and say that they are so at Landau; draw AC, BD, from the centre through the ex- tremities of the sides ; set off six toises from A to b, and from B to c ; through the points b and C-, draw lines at right angles to AB, from the point b set off" six toises to /'outwards, and four from 6 to d inwards; and from the points /,(/, draw perpendiculars/ r, d n, to the capital AC ; then, if r E is made equal to rj] the point E will be the saliant angle of the tower bastion ; and E f (I n half that tower.

If in the capitals there be taken from the sali- ant angles of the tower-bastions, the distances E C, F D, each of forty toises, the points C and D will be the saliant angles of the counterguards before the towers ; from the points C and D draw the lines of defence C c , D 6, to the points where the flanks of the towers cut the cur- tain; and which set off" fifty-six toises for the faces of the counterguards ; the flanks are found as in the first method, and likewise the tenailles.

The ditch before the saliant angles of the towers is six toises, and its counterscarp drawn to the extremities of the flanks of the counterguards ; the right line which joins the ends of these flanks will determine the inside of the tenailles.

The ditch before the counterguards is twelve toises at the saliant angles, and the counterscarp is drawn to the opposite shoulders in the same manner as in the first method.

The capital of the ravelin is forty-five toises ; its faces, when produced, terminate on those of the counterguards, within ten toises of the shoul- ders ; ten toises are cut off" from the faces by the flanks which are parallel to the capital as usual.

The ditch before the ravelin is ten toises, the covert-way five, the semi-gorges of the places of arms twelve, the faces seventeen, and the glacis twenty.

The following is the construction of M. Vau- ban's third method, according to his plan of New-Brisach. This method is applied to an oc- tagon, whose exteriorside, A B fig. 3, is 180 toises; the perpendicular CD thirty; the faces AK, BL, of the counterguards sixty ; tlie flanks LN, K M, are found by setting off"'twenty-tvvo toises, as chords to the arcs described from the opposite shoulders as centres ; from tiie extremities of the flanks a line is drawn, which will be parallel to tlie exterior side AB, meeting the capitals AE, B F, of the counterguards at G and H ; this line terminates the inside of the tenaille, as

ikewise the saliant angles G,H, of the tower- bastions.

If EF be drawn parallel to GH, and at nine toises distant from it, the intersections E, F, with the capitals of the counterguards, will be the centres of the towers ; from which set off seven toises from E to n for the semi-gorges, and draw the Hanks b c through the extremities of these semi-gorges perpendicular to the line EF; these flanks are four toises inwards from a to c, and five outwards from a to 6 ; the faces b G are drawn from the point b to tlie point G, and the lines joining the inside of the Hanks at the end of four toises will complete the towers.

The ditch is six toises before the saliant angle o" the towers, and its counterscarp meets the line GH, within ten toises of the extremities M,N, of the Hanks of the counterguards.*

If from the point n, where the line EF inter- sects the perpendicular CD produced, you set off five toises to the point r, and tlie lines of de- fence are drawn from the extremities of the semi- gorges a of the towers through this point r : then the flanks of the coiuiterguards produced ■will determine the little Hanks p,q, of the inside rampart, and the extremities of these little flanks, being j(uned, will give the curtain between them.

The great ditch before the counterguards is fifteen toises, and its counterscarp parallel to the faces ; the capital of the ravelin is fifty -five toises, and that of the redoubt within it twenty-three ; the faces of the ravelin are drawn to the faces of the counterguards within fifteen toises from the shoulders, and those of the redoubt parallel to these : twelve toises are cut oft' from the faces of the ravelin, and six from those of the redoubt,

by the flanks which are parallel to the capital ; the ditch before the ravelin is twelve toises, and that before the redoubt six ; the covert-way and glacis are the same as in the second method. It must be observed, that the parapets of the counter- guards, on both sides of the saliant angles, are raised four feet higher, for the space of twenty feet, above the rest, to prevent the enfilades of the ricochet batteries.

Sect. III. — Of the Systems of M. Minjjo, Baron of Coehorn.

This officer, a contemporary with Vauban, was a lieutenant general in the Dutch service, and director general of all the fortified places belong- ing to the united provinces and along the Scheldt. He was the inventor of three systems of fortifica- tion, in which he chiefly attended to the means of flanking and covering the works as efiectually as possible, whilst those parts of tlie fortifications which are advantageously situated for the be- sieger's batteries, would not aff'ord suflicient space for them. He also had for his object to facilitate an active and obstinate defence to the garrison ; for which purpose he contrived such dispositions as would, in his opinion, enable the besieged troops to oppose the besieged, within the fortifications, with forces superior to his, and upon a larger front ; besides securing the retreat of these troops, and exposing those of the be- sieger to the fire of the casemated batteries, co- vered caponiers, crenelled galleries, and coffers, ˆhich are employed in the systems. Coehorn

likewise disposed the covert-ways and dry ditches insucha manner thatthe besieger, not being able to dig the ground deeper than about one foot with- out finding water, may be obliged to convey to the spot the requisite materials for his lodgments and the passage of tiie ditclies in question. But this disposition, as well as the combined use that Coehorn makes of wet and dry ditches, and whicli forms an essential part of his systems, evidently requires that the fortifications should be erected in aquatic ground, as he supposes them to be. We shall therefore only advert to their principal and more general features.

In his first system, Coehorn supposes the polygon to be a regular hexagon, and that the surface of the water is but four feet lower than the ground.

Let therefore the interior side, A B plate IV. fig. 1, of an hexagonbe 150 toises, take AC, BD, each equal to thirty-nine, and the capitals A E, B F, each of eighty ; and AG, B H, of forty ; from the points E, F, draw the lines of defence through the points D, C ; and through the points G, H, lines parallel to E D, F C ; in which take G I, H K, each equal to forty toises, for the length of the higher faces of the bastions.

To determine the lower faces EM, FN, draw I O perpendicular to I G, equal

to four toises ; or parallel to I G, likewise equal to four ; then 7- M perpendicular to EM will determine tlie lower face EM.

In order to determine the tower 3, see fig. 2, in r M, take rS of five toises ; draw Sm parallel to E M, and equal to fourteen ; in O r produced take likewise r n equal to four, and in E M, M V, to eight ; then if the points 7i, m, are joined by a right line, and m, V, by an arc of sixty degrees you will have the outline of the tower.

The lines I O, and O r, express two walls, the first has two embrasures, and the second three ; by which the author intended to defend the dry ditch, and the approach to the tower.

If from the points C,D, fig. 1, there be set off on the lines of defence fourteen toises to the points Y, W, and upon each of the bases Y I, W K, be described an equilateral triangle, the angles opposite to these bases, will be the centres of the higher flanks Y I, W K.

And if R be the intersection of the two lines of defence, R M bisected at S, and R C at Q ; by drawing S Q, v S Q R will be half the tenaille; and drawing from the point C, a line parallel to I Y, so as to meet the tower upon which the mean flank is described in the same manner as the former.

The parapets o. the three flanks, and those of th" parts m V, \ M, of the towers, are twenty- four feet thick; the other parts M r, r n t??, but sixteen ; and all the other parapets in general are twenty feet.*

There is a wet ditch before the mean flank of six toises broarl, and another z behind the towers of the same breadth, over which are made two draw-bridges, parallel to the higher faces.

The space X between the higher and lower faces of the bastions is a dry ditch, whose bottom is but six inches above the surface of the water in the wet ditch.

Behind the lower parapet there is a banquette of three feet, and a rampart of five ; and under this rampart a stone gallery, which runs from one end to the other, and is divided into several apartments, wrhich are shut with doors; as like- wise another, going from the saliant angle of the lower faces, to that of the higher, with loop-holes from distance to distance facing the dry ditch ; there is like%vise a row of palisades placed pa- rallel to the higher faces, and at four toises dis- tant from them.

Tliere are three embrasures in O r, as has been said, to flank the ditch 2 behind the towers ; and two in I () to flank the dry ditch near the higher faces.

The great ditcli is twenty-four toises broad ; and its counterscarp parallel to the lower faces of the bastions ; the semi-gorges O L of the rave- lin are twenty-nine toises, and the faces L P, forty-five ; the dry ditch Y is sixteen toises, the rampart twenty-eight feet, atid the lower faces a T are parallel to the higher ones ; the parapet of which is twenty and the banquette three.

The level ground of the rampart in the ravelin near the saliant angle is twenty feet broad, for the length of twenty toises from that angle, and the rest but fifteen.

In the gorge of the ravelin is a small redoubt a, of about five feet high, and underneath a lodg- ment of stones, the walls being eighteen inches thick at the sides ; the roof is made of planks, with three feet of earth over them.

There is a dry ditch going from the extremities of the faces to the redoubt, and round its angle, having a row of palisades before it, to secure the retreat from the ravelin into this redoubt ; there is likewise another row going from the extremities of the faces, in a round form, turning towards the gorge of the ravelin.

In the dry ditch of the ravelin, within sixtoises from the great ditch, is a coff'er, and a ditch p of six toises before it : this coffer has a wall on both sides, and the roof is planked and covered with a foot and a half of earth ; above this is a stone parapet of five feet high, with a banquette behind it.

There runs a covered gallery under the ram- part of the lower faces, and another joining the two saliant angles, together with a row of pali- sades, in the same manner as in the dry ditch be- fore the bastions.

The wet ditch before the ravelin is eighteen toises ; the counterguards x, which the author calls cover-faces, are twenty-five feet broad, and the ditch before them fourteen toises ; the covert- way is twelve toises broad, and the glacis twenty ; the semi-gorgesyg,g ˆ, of the places of arms, are twenty-two toises, and are taken from the point g, where the branches of the covert- way meet, and the fdces fk,hk, are twenty-eight ; witiiin these places of arms are traverses of twenty feet thick and eighteen toises long, within ten or twelve feet from, and parallel to the faces.

The stone lodgments b, within the places of arms, are found by setting off" twelve toises from the point g, for the semi-gorges, and the feces are drawn parallel to those of the places of arms.

At six toises from tlie places of arms are

coff'ers q of eight feet broad, made with planks at the sides, and above with a foot of earth over and before them.

There are two banquettes all round the covert way, and before the traverses ; as also two rows of palisades before the traverses, one of which joins them, and the other goes round the covert- way.

Lastly, the re-entering angles of the coun- terscarp next to the covert-way are made a little round as likewise that in the ravelin : but the contrary way, that is, they are made hollow.

His Second System he adapts to a heptagon whose interior side is 126 toises, and the level of the ground to be three feet above the surface of the water.

Let, therefore, the interior side, AB plate IV. fig. 3, of an heptagon be 126 toises ; take in the capitals, AC, B D, each of seventy-two toises; at the extremities C,D, make the angles ACE, BDF, each of forty degrees; and set oft' sixty- six toises for the faces C E, D F, of the bastions ; on the interior side, take AG, BH, each of thirty toises, and from the point D, as centre, describe an arc through the point G, on which set off a chord of thirty ; and on this chord describe the mean flank GI, which is an arc of sixty degrees.

Draw a line from the saliant angle D through the extremity I of this flank, on which take I a often toises; join a E, on which describe the orillon as usual.

The outline of the higher flank is thirteen toises distant from that of the outline of the mean ; this flank is an arc described from the the same centre as that of the former, the chord of which is forty toises.

From the points G, II, draw the broken parts of the curtain, perpendicular to the capital of the bastion, and make it nine toises long ; the extre- mity of the higher flank is terminated by the in- side line of the parapet of the curtain produced.

The tenaille is found by producing the faces of the bastions ten toises ;

through the extremity of which an arc is described from the opposite saliant angle of the bastion, as centre; on this arc is set off" a chord of twenty toises ; and this chord serves to describe the flank, upon which is an arc ot sixty degrees ; the curtain is a right line.

There is a wet ditch before the tenailles of .en toises broad, with two bridges at each end, near the orillons ; the one directly over it, and the other along the faces of the bastion.

The dry ditch round the body of the place is twenty toises broad, before the faces of the bas- tion to which it is parallel, and the lower ram- part, K L, twenty-nine feet ; the semi-gorges M L are fifteen toises, and the flanks L N eigii ten, and are described from the saliant angles K of the lower faces as centres.

The saliant angle of the ravelin is 125 toises distant from the cur'ain of the body of the place, and is seventy degrees; the faces are fifty toises long; the faces of the redoubt .r are sixteen toises distant from those of the ravelin, and four- teen long.

The wet ditch round the lower faces of the ravelin is twenty-four toises broad : the work be-

yond this ditch, which the author calls the second counterscarp, is twenty, parallel to the ditch.

To find the broken part of this work, join the two re-entering angles, m,r ; on which take m r of thirty toises, and draw r t,r v, parallel to the outline of the counterscarp, each equal to twelve; set ofl" twenty-two from t to s, and from v Xo q ; and upon these lines as chords describe the round flanks, whicli are arcs of sixty degrees.

The traverses in this counterscarp are drawn at ten toises from the flanks perpendicular to the parapet.

The redoubt z, in the re-entering angles, are found by setting off sixteen toises from the points m to n, for their capitals, and the faces are parallel to the broken curtain before them ; those marked y, which are in the saliant angles, are found by producing the counterscarps of the great ditch, and setting off twelve toises from the points of tlieir intersections for their faces ; and the flanks are drawn parallel to their capitals.

The ditch before this work is fourteen toises ; as to the covert-way and glacis, they are the same as in the author's tirst method.

Coehorn applies his third system to an octa- gon, and supposes tlie level of the water to be five feet below the horizontal ground. The ex- terior works of this system, that is, the detached bastions and the counterguards, ravelins, covert- ways, &c., alone present the same arrangement as that of tlie whole first system ; with the ex- ception, however, that independently of the de- tached bastions being not joined together by any curtains, they only have double flanks instead of treble ones. Each of these bastions also has a redoubt at its gorge, with a dry ditch in front and a crenelled gallery adapted to the counterscarp of this ditch. There is likewise a dry ditch be- fore the redoubt at the gorge of every capital ravelin, which ditch is connected with the faces of the ravelin, as the dotted lines show, by means of coupures made in the direction of the cofi'ers between the capital and the lower ravelins, or nearly in that direction. Besides, in addition to the coffers in front of the re-entering places of arms, Coehorn constructs a crenelled gallery along the faces of these works, on which account the palisades in this part of the covert-way are to be two toises distant from the crest of the glacis.

Behind the exterior works above mentioned is the body of the place, consisting of bastions with common orillons, arevetment, and double flanks. The curtains which connect the lower flanks are broken as m the first system, and at each of their extremities, between them and the principal curtains, a kind of harbour is constructed, by means of which, as well as of vaulted passages made under the lower curtains, the garrison is able to keep up a communication with the exte- rior works. Tiiere is also a kind of circular har- bour at the gorge of these works.

Some of Coehorn's dispositions in his third system are certainly not below the high reputa- tion of such an eminent engineer; but, indepen- dently of the great labor and quantity of masonry which this system requires, the communications with the exterior works, across wet ditches, are

difficult; the arrangement of the system in question also has the inconvenience of occasion- ing several openings to be left, through which the besieger can see the exterior works and the body of the place from the crowning of the covert-way. Therefore, all engineers coincide in their opinion that it if inferior to the first system, and conse- quently to the second.

We shall not therefore detain the reader by a more particular description of it.

This is, in fact, with some modifications, the modern bastion system of fortification. Upon Vauban's first or general system, this able engi- neer suggested the improvement, first of a much greater projection which he allowed to the rave- lins, whereby he considerably augmented their action upon the attacks. Secondly, of con- structing the ravelins without flanks, and di- recting their faces to a smaller distance from the flanked angles of the bastions, by which he covered the shoulders of these works still more effectually than 'auban had done, as well as the curtains, and the openings between the flanks of the bastions and the profiles of the tenailles. Thirdly, Cormontaingne's redoubts in the rave- lins are better contrived than those of N'auban, and answer purposes much more important; whilst the larger size of his re-entering places of arms renders them also more beneficial to the defence, and particularly on account of their substantial redoubts, w- hich, besides the other material advantages derived from them, have their faces so disposed as to secure them from enfilade, and allow their fire to have a direction close and nearly parallel to the prolongations of the capitals. This advantage, which none of Vauban's systems afford, is so much more impor- tant as the besieger generally advances in the di- rection of the capitals. Cormontaingne likewise concealed the masonry of all the revetments of the place from the view of the besieger previous to his gaining the glacis, and thereby secured it from the fire of his more distant batteries. Lastly, this engineer much improved the commu- nications, although not to such a degree as would be requisite for attacking the besieger to advantage, in the works which he may have taken so as to drive him out of them.

Independently of the above improvements, which Cormontaingne has made in 'auban's First System, he also illustrated the superioi properties that a fortification acquires, from the exterior sides of the fronts which compose it either forming very obtuse angles with each other, or being all in the same straight line.

To describe Cormontaingne's system, with such alterations as have been since suggested and are at present most generally adopted, proceed as follows : —

The length of the exterior side being at least 1.30 toises, but not exceeding 180 toises, con- struct the bastions and curtains as in Vauban's First System : with the exception, however, that the lenˆnh of the faces A C and B D (plate V.) of the bastions is to be one-third of the exterior side, and the direction of the flanks perpendicu- lar to the lines of defence. It is here supposed

that the polygon is at least a hexagon ; but in the square and the pentagon, the length of the faces should not exceed two-sevenths of the exterior side, so that the flanks may be sufficiently long. To construct the tenaille draw be and HI pa- rallel to the curtain, b c being five toises distant from it, and II I from twelve to thirteen toises, according to the length of the flanks of the bas- tions; and if, after making G a and Kd parallel to these flanks, with an interval of five toises between them, ab and c d are drawn parallel to G II and I K, at a distance from them equal to that between be and III, the tenaille will be completed. Its nearest extremities to the shoulders of the bastions may be rounded off, and the interior side of the parapet broken for a length efoi about three toises, as the figure shows.

The principal ditch is fifteen toises broad op- posite the flanked angles of the bastions; but may be made narrower to advantage, provided a proper depth can be allowed to it, as well as such a direction to the superior slope of the parapet of the bastions as will render the fire of the faces eifectual upon the counterscarp in front.

Set off fifteen toises from C to g, as well as from D to h, and, supposing g and h to be joined' by a line, construct upon it the equilateral trian- gle gMˆ, so as to have the principal line of the faces M L and MN of the ravelin; then draw P/c and P/ parallel to these faces, directing them towards, the interior meeting i of the pa rapet of the face and the flank of the bastion contiguous to them, and they will give the di- rection of the principal line of the faces of the redoubt.

The gorge of the ravelin and its redoubt is to be determined by means of drawing, from the flanked angle of each collateral bastion, a line ti mn passing through the extremity ?« of the opposite face of the ravelin ; that is, of the in- terior side of the parapet. In this manner, the gorge will be entirely secured from the fire which the besieger might otherwise direct upon it from the crowning of the saliant places of arms in front of the bastions.

In respect to the flanks of the redoubt of the ravelin, — from g, where the principal line of the face ML of the ravelin meets the face of the bastion, draw an indefinite line through the in- tersection /c of P /c and the gorge of the redoubt; and, after settinc; off' six toises and a half from k to g upon this line, describe the flank Op form- ing with gq the angle gqO oi 100 degrees.

Tlie ditch of tlie ravelin is nine or ten toises broad, and that of the redoubt five toises ; the counterscarp of both these works is parallel to their faces,

excepting that part in front of the saliants which is made circular : the breadth of the covert-way is five toises. ‘ To describe the re-entering places of arms, measure off five or six toises from r to s, upon the interior side of the parapet of the face of the bastion; and from x draw the indefinite line su, making with rs an an<;le of 100 detˆrees ; take the distance vf, from the angle v to the intersec- tion i of su and the counterscarp, and set it off from V to w ; then draw wu forming the same an-

gle with the counterscarp of the ravelin, as tu with that of the bastion; and such parts of v; u and tu as project beyond the covert-way will give the faces of the re-entering place of arms, al- lowing for the passages between the two contigu- ous traverses and the glacis.

Fo: the redoubt of the re-entering place of arms, set off eleven toises upon the counterscarp jrom t to X and from w; to z ; as well as seven toises and a halt from a’ to b’, and from c’ to d’, upon the collateral branches of the covert-way. Then draw the interior side Jˆg’ 2 of the parapet of the faces, in the direction of zb’ and zd’, and cut off part of g’ X in order to describe the small flankye’, the length of which should be three and a half or four toises, and its direction such as to allow it to see in reverse the breach of the ra- velin. The escarp and counterscarp of the re- doubt are to be made parallel to the faces, three toises being allowed for the breadth of the ditch; whilst its gorge, on the side next to the contiguous ravelin, should terminate upon the line M It’ drawn from the saliant of this work through the extremity e’ of the flank /‘e’, so as not to be ex- posed to the fire of the besieger from tSie crown- ing of the saliant place of arms in front of the ravelin.

Eighteen feet are allowed for the thickness of the traverses at the re-entering places of arms ; but those at the saliant places of arms, as well as the intermediate traverses, are only nine feet thick, the breadth of the passages i’ between the latter and the counterscarp being six feet.

In regulating the inclination of any glacis, care should be taken that its superior surface, being indefinitely produced towards the works behind, may not pass above any of their lower lines of fire, which are those of the artillery. Therefore, this inclination depends upon the command of the said works, as well as upon their distance from the crest of the glacis ; but, in general circumstances, it is regulated at the rate of about three inches to each toise of the breadth of the glacis.

It is materially important that the glacis should have a proper inclination ; for, if it be too steep, the great depression which the fire of the garrison should have, in order to defend it will render this fire ineffectual ; and if, on the con- trary, the inclination of the glacis is too little, the besieger’s

cavaliers of trenches will only require a small height ; on which account they will be less liable to be destroyed by the artillery of the place. Cavaliers of trenches are works which the besieger constructs upon the glacis, for the purpose of raising the troo])s who occupy them, so that these troops may plunge their fire into the covert-way.

Passages c (plate VI. fig. 1) called sally-ports, are cut in the glacis, which, as their name indi- cates, serve for the sallies; they form ramps twelve feet wide, having a gentle slope, so as to allow artillery and cavalry to pass conveniently through them. A curved direction is requisite for these ramps, because, if they were straight, the besieger would enfidale them, and destroy the double barriers that the garrison places across them, in the direction of the crest of the glacis, for the purpose of securing the opening into the

covert-way, which they occasion, whilst the covert-way oj)posite this opening would also be much exposed. The sally ports are to be placed in the faces of the re-entering places of arms, and in the branches of the covert-way of the ravelins between the second and third tra- verses, as tliese situations will allow tiie sallies to be effectually protected in their retreat by tlie sa- lianls of the covert-way of both the bastions and ravelins. Besides the sally-ports will be better secured than if tliey were in the saliant places of arms, or near them. In those parts of the fortifi- cations where a road d is made across the glacis, in order to communicate with the country, it is commonly placed between the traverse of a re-entering place of arms (on the side towards the ravelin) and the contiguous traverse of the covert-way of the ravelin. Tlie road is made winding, and from eighteen to twenty or twenty- one feet are generally allowed for' its breadth, the profile of the glacis on each side being sup- ported by a wall.

Supposing a to be the middle of that end of the sally-port (fig. 2, plate VI.), which is in the direction of the crest of the glacis, erect at a, the, perpendicular ab to that crest, and make it equal to eighteen feet, or any other dimension which the requisite length of the sally-port, ac- cording to the greater or smaller elevation of the glacis above the covert-way, may render neces- sary. Set off one toise from a to b, as well as from a to c, for ilie breadth of the sally-port, and from c and b as centres, with c 6 as a radius, describe arcs, cutting each other in e ; then from e describe the arc c b. Make c/" equal to the base of the interior slope of the glacis, or a little longer, and describe from/ and 6 as centres, with fb as a radius, arcs intersecting at g, from which point, as a centre, the arc fb is to be*

described.

In respect to the other profile of the sally-port, make d h equal to ud, and erect the perpendicular h i of the same length as o b. Next, from d and i as centres, with di as a radius, describe arcs intersecting at ?h, and m describe the arc di; set off the length of cf from d to ii, and from n and i as centres, with ni as a radius, describe arcs cutting each other in o; then from o as a centre, describe the arc n i.

On the subject of the communications of this system, an able commentator upon it, colonel de Malortie, observes, tlie gates should as much as possible be placed on the least exposed fronts, as this situation will not only render them more secure, but allow sallies to be conveniently made, consisting either of cavalry or infantry, in order to attack in flank and in reverse the besieger's approaches towards some of the other fronts; and, whenever fronts having gates are liable to be attacked, it is proper that they should be flanked by works inaccessible to the besieger. Those parts of the principal roads leading to the gates, which are beyond the glacis, should also be enfiladed by the artillery of the place, so that they may not serve for any purposes useful to the enemy.

The gates nearest to the town are those which belong to the body of the place, and lead to the bridges constructed across the principal ditch, in yrder to gain the gorges of the redoubts in the

opposite ravelins. These gates should be placed in the middle of the curtains, this part of the fortification being the best covered, and the least exposed to be breached ; and they have a bomb- proof archway, which, at the exterior opening, is twelve feet high in the clear, or a little more, and about ten feet broad ; wider spaces are con- trived inside of it, from distance to distance, where people on foot may retire when any car- riage happens to pass. The exterior of the en- trances into the gateways generally has orna- ments of masonry, but the architecture should be simple, as any superfluous decorations would augment the expense, without answering any useful purpose; and it is also to be observed, that the masonry should not be carried up higher than the top of the parapet, since, other- wise, it would become a mark for the besieger's artillery: nor should any buildings be con- structed over the archway, although this has been formerly done.

In respect to the standing bridges they may be constructed wholly with stone, when the fronts where they are situated are neither liable to be attacked, or much exposed to the effiect of the besieger's shells; provision should, however, be made, in two of the central piles, for placing a few mines to blow up the bridge, if, on ac- count of any unexpected circumstances, it should become instantly necessary to destroy the

communication. But it is preferable, under all suppositions, that the bridges should be so con- trived as to allow them to be speedily taken to pieces, without encumbering the ditch with rub- bish. In consecjuence, the upper part of the bridges should consist of timber, and be sup- ported by piles of masonry fifteen feet distant from each other, from centre to centre. The length of the draw-bridges is in general twelve feet, and their breadth eleven feet.

From the redoubt of the ravelin, a gate con- structed in one of its faces, with a bridge across the ditch in front, leads to the terreplein of the opposite face of the ravelin ; whence another gate, also preceded by a bridge which is thrown across the ditch of the ravelin, serves to commu- nicate with the covert-way, and from this work with the road cut through the glacis. But nei- ther of these gateways is arched over, and each consists of an uncovered passage made through the rampart, the profile on each side being sup- ported by a wall in which recesses are contrived for the security of people on foot, if any carriage should happen to pass.

The proper situations for the ramps depend on the nature of the works, and the localities ; they are generally placed in the middle of the crtains at the gorges of cavaliers and full bastions, in the flanks and faces of empty bastions, in the faces of out-works, in barbet batteries, &c. In short, wherever this kind of communication may be usefully employed.

The arrangement of the nosterns of each front is as follows : there is a postern underneath the curtain, which serves to communicate from the place with the principal ditch ; and, when this ditch is dry, another postern i.s made under the tenaille, leading to the caponier in front. The communication from the redoubt of the ravelin

with its own ditch takes place by means of a postern situated under each flank, near the angle of the shoulder; and the redoubts of the re-en- tering places of arms have each two posterns forming the communication from the redoubt with its ditch.

Before explaining the usual distribution of the pas de sourib, it is necessary that the following remarks, relating to the ditches and other objects should be premised.

When the principal ditch contains water, or is dry but very deep, a smaller depth is allowed to the ditch of the ravelin, as in both circumstances this ditch will be better seen from the faces of the bastions which flank it, and

therefore more efl"ec- tually defended; whilst, if the principal ditch is wet, that of the ravelin will be kept dry, which is another advantage.

The ditch of the redoubt in the ravelin is made less deep than that of the ravelin, so as to im- pede the besieger in his attempt to penetrate into it from the principal ditch, after gaining this ditch through that of the ravelin, in order to cut off the troops which defend the ravelin. And, as a further precaution for the security of these troops in their retreat, the ditch of the redoubt is sunk a little deeper opposite the flanks than along the faces, besides being covered by half- caponiers U, which, in addition to the coupures X in the ravelin, deprive the besieger of the means of plunging his fire, from the terreplein of the ravelin, into those parts of the ditch of the redoubt where the posterns are placed. Ano- ther advantage that is derived from allowing a smaller depth to Hhis ditch than to the ditch of the ravelin, is to render more eflfectual the flank- ing defence which it receives from the faces of the bastions.

The ditch of the redoubts in the re-entering places of arms is still less deep than that of the redoubt in the ravelin, by which means its flank- ing defence from the bastion on one side, and the ravelin on the other, is improved. It has no communication with the ditch of the ravelin, so that the besieger cannot penetrate into it from this ditch.

The manner in which the pas de souris are ge- nerally distributed shall now be explained.

A double pas de souris is placed in the m:ddle of the gorge of the tenaille, in order to mount upon its terreplein, and there is a double one also at the gorge of the redoubt of the ravelin, which serves to get up to the plane of site, whence the terreplein of this redoubt is mounted upon by means of ramps. A single pas de souris leads from the main ditch to that part of the ditch of the redoubt in the ravelin which is opposite each flank, and small ramps communicate from thence with the ditch along the faces. The communi- cation with the ravelin, from the ditch of its re- doubt, consists of a single pas de souris con- structed near the extremity of each face of the ravelin, opposite the postern of the redoubt, be- sides a double pas de souris at the circular part of the counterscaqi of tliis work ; whilst the communication from the main ditch with the redoubts of the re-entering places of arms takes place by means of a pas de souris, either single or double, which is made at tiie re-entering angle of the gorge. From the ditch of these redoubts,

two single pas de souris, one at each end of the counterscarp, lead to the terreplein of the re-en- tering places of arms, and double pas de souris are made in the circular parts of the counterscarp at the gorge of the saliant

places of arms, in or- der to ascend upon their terreplein.

When the ditch of the ravelin is not so deep as the principal ditch, a communication from one to the other is established by means of a single pas de souris.

In respect to the caponiers and half-caponiers : besides the caponier Q, which secures the com- munication from the tenaille to the pas de souris at the gorge of the redoubt of the ravelin, a half- caponier R covers, on each side of the tenaille, the passage from the opening between its profile and the flank of the bastion, to the pas de souris leading to the ditch of this redoubt, opposite its flank. A half-caponier S also traverses the main ditch, perpendicularly to the face of the bastion, for the purpose of covering, on the side towards the saliant place of arms in front of the bastion, the communication with the pas de souris at the gorge of the redoubt in the re-entering place of arms; this communication is covered on the other side, by a half-caponier T, placed across the ditch of the ravelin. A half-caponier U is like- wise constructed 'across the ditch of the redoubt of the ravelin, which, as has been previously said, serves to secure the postern, and the pasde souris situated in that part of the ditch which is opposite the flank.

In consequence of the manner in which the gorge of the ravelin and its redoubt is deter- mined, the besieger can see in reverse, from the crest of the glacis in front of the bastions, not only the caponier Q, but also the half-caponiers R nearest to it; and as, according to the present method of constructing all these works, they merely consist of earth, the communications which they are intended to cover do not appear sufficiently secure. It has therefore been sug- gested that the caponier should form a perma- nent work consisting of a vaulted bomb proof gallery. A, seven feet six inches high internally, and ten feet wide; this gallery should be sunk at bottom about four feet six inches below the ditch, its sides, as well as the crown of the arch, being protected by a covering of earth. In this manner the caponier, besides forming a commu- nication of itself, will secure from the besieger's reverse fire two common caponiers constructed near it, and which, being open at top, may be covered by means of blinds, when circumstances require it.

It has bijen said that Cormontaingne contrived a retrenchment ' for the bastions, which also answers the purpose of a cavalier: in order to construct it, draw i'k' and i' I' parallel to the faces of the bastion, at the distance of eighteen toises from them; and, at the same distance from the flanks, draw k' p' and /'«', also parallel to them, which should be produced inwardly fifteen feet beyond their intersections m' and n' with the prolongations F q' and W q' of the lines of de- fence of the collateral bastions; then join // and o', and p' o' will represent the gorge of the re-

trenchment. The ditch is six toises broad, an<} the counterscarp parallel to i'k' and »'/.'

In a line with the face M L of the ravelin, draw gr', and, after making r'^ equal to seven t= ises, draw t it directed towards the extremity L of this face. For the retirade, v' w' s', set off four toises from I' to v, and make u'w' perpendi- cular to i' I' ; then draw i'w', and produce gr' until it meets it.

The method of fortifying just explained, evi- dently has a great superiority over Vaui)an's first system, but is still liable to material defects, the principal of which are the following : —

First, with the exception of the superior po- lygons, and of the fronts disposed either in a straight line or on a concave-curve, the body of the place is not better secured than any other part of the fortification from the ricochet fire, ■which the besieger can use from the beginning ef the siege; and no portion of the ground, within the sphere of the works, is sufficiently re-entering to render the attacks subject to a very effectual fire from them, in flank and in re- verse; whilst the sallies are but feebly protected, and the besieger can crown at one time the whole covert-way of the front of attack, without much risk from this operation. Secondly, this system is as much deficient as that of Vauban, in places of security for the artillery and troops; the consequences of which are that no batteries can be preserved entire, for the most important period of the siege; whilst the troops after having felt the destructive effect of the ricochet fire, kept up by the besieger from the commence- ment of his operations, become still further ex- posed to such a vertical fire from his nearer bat- teries as must render the terrepleins almost un- tenable, if not entirely so.

Thirdly, although the larger size of the re-en- tering places of arms, besides their substantial redoubts, much improves the defence of the covert-way, yet this work can be stormed ; and further improvements in its disposition are still requisite, to enable the garrison to defend it with great obstinacy.

Fourthly, tlie besieger can breach the body of the place through the ditch of the ravelin, even before he has taken this work; and after taking it he can execute the same operation through the ditch of the redoubt. The body of the pldce is also liable to be breached from the terreplein of the redoubts in the re-entering places of arms, through the openings between the pro- files of the tenaille and the flanks of the bastions ; and it is to be observed,

likewise, that the be- sieger has it in his power to dislodge the garrison of the re-entering places of arms and their re- doubts without making any direct attack upon these works, as, after taking the ravelin and de- stroying its coupures, he can advance in the rear of the above places of arms and redoubts, by means of a single sap which he constructs in the parapet of the ravelin, in order to keep up from this sap a plunging and reverse fire upon the troops stationed in them.

Fifthly, the flanking defence that the ditches of the ravelin and its redoubt receive from the faces of the bastions, is not so effectual as might be wished ; and, as has been previously re- marked, the ditch along the escarp of the te- naille is but imperfectly defended.

Lastly, this system has the same inconveni- ences as that of Vauban, with respect to the re- trenchments in the bastions, the requisite quan- tity of timber during the siege, &c.

The duration of the defence which the system just described can afford, consists of thirty-six days in such inferior polygons as allow the be- sieger to carry on the attacks upon a ravelin and the two collateral bastions, but it may be ex- tended to forty-two or forty-four days in the other polygons.

Besides the modifications which have been effected in Cormontaingne's original system, several engineers of eminence, amongst whom are Virgin, La Chiche, Montalembert, Bousmard, Mouze, and Carnot, have some years since pub- lished methods of their own : but notwithstand- ing the great ingenuity, profound views and con- siderable degree of professional knowledge, which these engineers have displayed in their productions, yet they have not entirely solved the very difficult problem of contriving a system of fortification to which no well-founded objec- tions can be made. The reader, however, will derive much benefit from making himself ac- quainted with the several systems, according to his professional or other connexions with this art, as well as with the reasonings of their au- thors in order to support them ; and particularly, if not being yet sufficiently proficient in fortifi- cation to trust to his own discrimination, he con- sults the judicious analysis of those systems which men of experience have given.

*As to irregular fortifications the great variety of combinations which they require evidently shows, as colonel Maloitie observes, that any expectation of acquiring an effectual knowledge of it from such general explanations, accompa- nied by few plates, as might be given in an ordinary treatise, or in other works of the same moderate extent, would be visionary. * Indeed, the best and even the only method of gaining real information on this subject, is to learn at first the general principles of fortification, together with the use of the works most com- monly employed, and the proper*

method of disposing them in a fortress perfectly regular. The learner is then to examine attentively plans of irregular fortresses situated in various kinds of ground, particularly those of the most cele- brated fortresses, and to avail himself of any verbal explanation which experienced profes- sional men may give him, in respect to the in- tended purposes and the merits of the works composing the fortresses in question ; he may undoubtedly also consult the publications of such authors as have treated of irregular fortifi- cations ; and, if circumstances should allow him to visit fortresses, he certainly will derive great advantage from viewing upon the spot the forti- fications and the country round them.'

We refer to the few observations of this gen- tleman in his treatise on Permanent Fortifica- tions, chap, x., as well worthy the learner's par- ticular attention.

Sect. V. — M. Carnot's System. But it is due to the reputation of Carnot, be- fore we close this part of our subject, to notice

distinctly his New Principles of Fortification- His Treatise on the Defence of Fortified Places is in very general circulation ; it has been trans- lated into our language, and the unquestionable talents of the author as a mathematician and an engineer have powerfully patronised his theory, that a fortified place may be renderea impregna- ble by a general use of vertical fire.

M. Carnot tells us, that he had long been convinced of the vast advantages which would result from adopting vertical fire as the basis of defence, instead of using it as an accessory mean; but that he did not make his theory known, lest the discovery should be practised against the of- fensive operations of his countrymen. ' But now,' he observes, ' that our enemies have few places left to defend, I no longer hesitate to render my ideas public, since any improvement in the defensive art must turn, almost exclusively, to the advantage of the French frontiers.'

That is, as Sir Howard Douglas remarks, ' when France had succeeded in establishing almost universal dominion over the continent of Europe, M. Carnot promulgated his new doctrine, in obedience, as he informs us, to the commands of Buonaparte, to show the military intrusted with the defence of the bulwarks of the state, the importance of their functions, and the extent of their obligations — the glory which attends the faithful discharge of their duties, and the misfor- tunes which those, who either neglect or

betray them, must draw upon themselves and upon their country. This appeal was particularly ad- dressed to the troops occupying the fortresses which the French retained in foreign territory, and to the garrisons of their frontier and interior places, at the time Napoleon began to prepare his might}/ means for the Russian war. To stimulate to the utmost the defensive energies of his gar- risons, the work contains succinct and very par- tial accounts of memorable sieges, together with a code of imperial laws detailing the circum- starces, and evidences of extremity, under which, only, governors or commandants of fortresses and places should be justified in capitulating, without incurring the severe and summary penal- ties denounced against those who should sur- render their posts without full compliance with the terms of this decree.

‘ Before Napoleon entered on the remote enter- prise which his insatiable ambition impelled him to undertake, it became essentially necessary to adopt every possible precaution to enforce the constancy of his allies, maintain the internal trantjuillity of his empire, and stimulate else- where a defensive system, during the absence of the grand army ; and to urge to the last ex- tremity the defence of his frontier places, in the event of any failure in his external operations. These great objects, he rightly considered, would all be best promoted by giving to])ublic opinion, from high professional authority, such imjjressions of the security in which these strong-holds were left, and of the impossibility of reducing them, as miglit deter enterprises of defection and con- spiracy, and give enthusiastic confidence in the means of resistance. To effect this, it was ne- ce.ssary to assert the discovery of some fallacy in

the well known balance which, since the days of Vauban, has remained decidedly, and wiihcalcu lable certainty, in favor of attack ; but as such a revolution in public opinion could not be estab- lished by any new arrangement of known or ordinary means, M. Carnot boldly and inge- niously proclaimed the discovery of a new mode of defence, by which fortresses might be ren- dered absolutely impregnable, and by means so simple as to be easily adapted to all places. In promulgating this new doctrine the author has filled-in some useful materials and observations calculated to excite protracted defence ; but his general reasoning is quite delusive. He wrote as a political engineer ; or rather he compiled the treatise which, he informs ns. Napoleon sketched ; and the deduction drawn from it is, perhaps, one of the most curious and interest- ing passages that has every emanated from the imperial press. ‘ From what we have just read,’ says our author, ‘ results, I think, very evidently, this tranquillising truth, that the barriers of the French empire are absolutely inexpugnable by any power, or coalition of powers, whatever, if well defended.’

The chief recommendation of this writer is, that the besieged should begin to make use of vertical fire upon the commencement of the con- struction of the third parallel, and from that stage of the siege keep up an incessant discharge of musketry and four-ounce iron balls, at great elevation, ipon the enemy's works, so as to form a rain (pluie) of shot upon the trenches. The iron balls to be discharged from a number of twelve-inch mortars, two of which are placed in the saliants of each bastion and ravelin in the front or fronts attacked : each mortar throwing COO balls at every discharge. He introduces his theory of the effect of these balls by observing, that of any number which fall in the trenches, the number that take effect will depend upon the proportion which the unoccupied part of the trench bears to the part which is covered by the men posted and working in it. Thus, supposing a man standing upon an horizontal plane to cover a space of about a foot square, and a man in the attitude of working somewhat more, M. Carnot calculates that the projections of the bodies of the men usually working and posted in the trenches will occupy about ˆJg part of their sur- face; from which he infers, that of every 180 balls that fall in the trench, one should, according to the doctrine of chances, hit a man ; and he does not doubt that it will put him ' hors de combat.'

The distribution which M. Carnot proposes to make of his mortars and pierriersfor vertical fire, on a front of fortification, is as follows : —

Three mortars in the saliant angle of each bastion and demi-lune.

Three to fire d'echarpe on each of the four branches of the covered way.

The mortars or pierriers are placeo behind the ramparts in small bomb-proof casemates, each large enough to contain a mortar and two or three men. The casemates, or as M. Carnot calls them, ' petites cases blindces a I'dpreuvc,' for the defence of the capitals, are placed per- pendicularly to tlie capitals of the bastions or

demi-lune ; and those to defend the four bran- ches of the covered way are placed parallel to the works behind which they are erected, form- ing a sort of interior enclosurp at the foot of the interior slope of tlie rampart. A large port, or embrasure, is left in the end of each casemate to admit of the discharge of the mortar.

By this disposition the terre-plein of the ram- part is left free for the reception of the ordinary artillery and nmsketry, which however, he says, should not be used at the same time with the ' 'latteries-blindees,' but,

according to circum- stances, in alternation with them. The artillery in tl'.e saliants are mounted en barbette, protected by merlons of sand-bags, until the ricochet bat- teries of attack are established ; after which the ordnance of the])lace is to be withdrawn from the ramparts, until the fire of the ricochet batte- ries is masked l)y the advanced works of the attack. Thus, as soon as the enemy's ricochet batteries gain ascendancy over the artillery of the place, M. Carnot withdraws his ordnance and troops, and brings into action his ' batteries blindees,' tw()-thirds of which are, at this stage of tlie siege, furnished with ginis or howitzers to fire a ricochet, and the other third armed with mortars. This arrangement of ordnance in the casemates is to continue imtil the third parallel be finished, when the guns and howitzers in the ' batteries blindees' are to be replaced by pier- riers, which, together with the mortars, are then to discharge small iron balls, pieces of iron, case shot, shells, and stones, on the enemy's ap- proaches.

This writer presses the importance of ricochet fire for defence, and says, it is not sufficiently practised. He recommends its more general ap- plication both from behind the ramparts and dry ditches : and thinks it even more important in defending than in attacking a place.

- *The enemy's troops,' says he, ' are every night exposed, without shelter, in constructing their works and covering their parties. Now a bullet which grazes five or six times will be much more likely to do execution than a direct shot, which may either strike short of the mark, and in the next bound pass far beyond the trenches, or go over without touching at all.'*

*lie also gravely recommends a revival of the ancient weapons, particularly the cross-bow, in the defence of fortified places, and quotes many instances of brilliant defence, in ancient and modern history, to support his doctrine of the efficacy of ' armes blanches.' * A man,' says he, ' armed with a cross-bow, may easily discharge an arrow every minute, which is 1440 in twenty- four hours. Supposing then that the besieged employ 200 cross-bow men, there would be 288,000 arrows discharged from the ramparts in that time. But it has been shown,' he adds, * that at least one arrow in every IBO will take effect, whence, of the whole number thrown, 1 600 will do execution, from which it follows that IGOO men will be put hors de combat daily. Supposing this defense rapproch^e to continue only ten days, the besiegers he calculates will have lost 16,000 men, and it would be easy to douV)le the result by augmenting the number of cross-bowmen.'*

M. Carnot has imbibed many of M. Pollard's prejudices in favor of the defensive powers of ancient arms. The latter says 'all prejudice apart, this arm (the cross-bow) is infinitely more destructive than our musket, its force being at le;ist equal, and its effect more certain.' But our author's assertion

that 200 arbalˆtriers would put 1600 men of the besiegers 'hors de combat' daily, is going much further than ever the pre- judiced Follanl ventured to retrograde upon the path of improvement.

M. Guicliard gives more correct readings of the practice and character of ancient sieges; and to all those on whom the reasoning of Car- not, supported by the fancies of FoUard, have had any effect, we recommend the perusal of that work, as a sensible antidote, M. Guichard says, page 13, ' I have examined in the original language, the passages upon which he (M. Fol- lard) appuys his system, and soon convinced myself that there is no authority for what he as- serts, and that the authors express themselves very clearly upon the subjects they have under- taken to explain.' We might extract many other observations bearing with equal force upon the erroneous conclusions M. FoUard has drawn ; but it is quite idle to compare modern and ancient modes of warfare for any purpose of practical utility. The invention of gunpowder turned the balance in favor of attack, and the introduction of the ricochet system has confirmed this superiority. All M. Carnot's theory and ingenuity are insufficient to restore the equili- brium of this settled preponderance. His sug- gestions, if strictly followed, would on the contrary turn the scale more in the direction of their present inequality, from the little vigor he excites in the first stages of defence. The intro- duction of artillery gives a momentum, equal to that of a battering-ram, to a cannon ball which may be projected with such a degree of accuracy, as to enable us to injure defences at very con- siderable distances. The largest battering-ram we read of was 120 feet long, and, including a head of cast iron of one ton and a half, was about 35,000lbs. weight. Supposing it to be worked by 500 men, each exerting a force of 701bs. the force of momentum produced by their action, when the ram moves one foot per second, is about 3,'),000lbs. — The momentum of a 24lb. shot, moving with a velocity of 1500 feet per second, is about 36,000lbs. The invention of gunpowder thus proved utterly destructive of all former modes of war ; and the gradual im- provements made in artillery, and in the science of attack, explain the causes of what M. Carnot considers so extraordinary, when he says, page 327, ' from what cause does it happen that the strongest places are commonly taken in sieges which rarely exceed six weeks, and generally last only twenty-two or twenty-three days?' These are the causes which have produced the short duration of modern sieges: and it is quite useless and absurd, as colonel Douglas well observes, to attempt any comparison between the obsolete and the existing practices, with any hope of improvement.

M. Carnot closes this part of his treatise by noticing, and certainly favoring (ˆp. 349), a

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singular idea of a M. Flachoii de la Jomarifcre, who proposes to pour upon the besiegers, when they are about to crown tlie covered-way, an enormous quantity of water from powerful en- gines, which, he says, will make the soil so liquid that it cannot he worked.

Ilis New System of Improving Fortifications is, of course, grounded on these principles. ‘ The spirit,’ says M. Carnot, ‘ of the new system of fortification, consists in procuring, by the par- ticular combination of the parts which compose it, numerous debouches on all the avennes of the place, so that the besiegers may not be able to establish themselves near it without being ex- posed to be suddenly attacked, at all times, by all the garrison. From this the enemy will not be able to present himself any where, without keeping troops constantly drawn out, ready to repulse any sortie the besieged may unexpectedly make, and which they may renew whenever they please. The besiegers will therefore be obliged to accumulate troops on all parts of the immense circumference which they must occupy, to em- brace the defences of the place ; and as in the defense raprochee all this development of force is within the influence of vertical fire, showers of projectiles will carry off some men every moment, and at length entirely crush the be- siegers.’

This ‘ torrent of vertical fire’ is thrown from casemated mortar-batteries, the positions of which are determined from an acknowledged defect in Vauban’s systems, viz. the deficiency of fire on the prolongations of the capitals of the bastions, but which faub M. Cormontaingne has remedied by constructing redoubts in the re- entering places of arms.

M. Carnot’s ideas of the irresistible effect, and exclusive advantage, of this profusion of vertical fire in defence, are such, he asserts, p. 445, that it will change entirely the character of the operations of a siege. ‘ According to the existing practice,’ he says, ‘the besiegers are covered, and the besieged exposed. In the new system, on the contrary, the besieged are covered, but the besiesers exposed to a profusion of feux verticaux, which will reach them behind their parapets and lodgments, enabling the besieged to defend their out-works, without occupying them, merely by pouring upon them torrents of vertical fire when the assailants move forward to the attack.’

M. Carnot then arranges his new system ; the casemated mortar-batteries are placed in interior enclosures in the gorges of the bastions, so as to fire in the direction of their capitals. There are nine casemates in each battery : of these, seven contain mortars or pierriers, two in each ; the other two (the extreme casemates) are each armed with three guns, for the defence of tlie ditch of the retranchement genC’ral. The escarpe of the retranchement gen<;ral is a detached wall placed in front of the rampart, leaving a

chemin des rondes eighteen feet wide. The exterior slopes of the ramparts are all forty-five degrees. The bastions arc also covered by a detached wall erected near the base of the exterior slope of the rampart, leaving a chemin des rondes six feet wide.

The ditch of the bastion is thirty-six feet wide. Counterguards are placed before the bas- tions. The demi-lunes are works of the same profile as the counterguards. Sometimes M. Carnot calls his counterguards and demi-lunes glacis coupes, and under this name recommends them for improving the defences of existing places. The cavaliers are placed in front of the tenailles, and communicate with them by capon- niferes.

The counterguards and demi-lunes have ditches thirty-six feet wide at bottom, the counter slopes forming a reverse glacis of forty-three yards which M. Carnot calls glacis en contrepente.

In old fortresses M. Carnot proposes to con- vert a portion of each bastion into a counter- guard, by making a ditch, about thirty-six feet wide across the bastion, from the middle of each flank, in the directions of lines of defence ; the two branches of the ditch meeting, consequently, on the capital. The part thus enclosed is formed into a bastion, by making parapets upon the in- terior lines of the ditch, which thus become the faces of a bastion so small that its flanks are but sixty feet long — sufficient only to receive three guns. The new ditch is consequently very little defended by flank-fire ; but this, consistently with the principles already noticed, M. Carnot has here also sacrificed to the superiority of ver- tical fire.

For the purpose, chiefly, of being able to make sorties with facility, M. Carnot proposes to con- vert the glacis into a glacis en contrepente, and, with the earth furnished by the excavation, to form the upper part of the old glacis into a counterguard or glacis coupe, raised nearly as high as the body of the place. The interior slope of the new work occupies the greater part of the old covered-way. The traverses are re- moved; and, instead of palisades, a brick wall furnished with loop-holes is constructed very near the counterscarp. The exterior slope of the glacis coupe is so abrupt that no part of it can be seen from the body of the place ; and the greater part of the advanced ditch formed by this alteration cannot be seen at all.

Colonel Sir Howard Douglas has published some spirited and scientific Observations on the Motives, Errors, and Tendency of M. Carnot's Principles. We have already quoted this writer, and it is but fair to add, that he seems to make a formidable attack upon the principles and constructions of that able engineer. We abstract a sufficient portion of his remarks and experi- ments to place the whole subject fairly before the reader.

- *It is quite clear,' observes this writer, ' that M.' Carnot has formed his theory upon the parabolic hypothesis, which, I must inform such readers as are not acquainted with these matters, is tlie theory of a projectile's flight in a non- resisting medium. This tlieory, considerably erroneous in all cases, is particularly and greatly so with small projectiles ; and its deductions, as applied to the velocity of descent of small balls used in very elevated short ranges, are quite fallacious. The velocity of the ball in a horizontal direction (which by this theory would be constant, and to the projectile velocity as radius to the cosine*

of the angle of elevation) being inconsiderable, it is evident that the effect of vertical fire must depend upon the velocity of descent in the di- rection of the curve. Estimating this according to the parabolic theory (as the secant of the angle of elevation), the motion would be slowest at the ver- tex of the curve, and the velocities of the projec- tile be equal at equal distances from that point. According to this supposition we should assign to the descent of small balls, discharged at an elevation of seventy-five degrees, or eighty de- grees, such accelerated velocities, as would, if true, be quite sufficient to do good service in the way M. Carnot suggests ; but the fact is, that there can be no acceleration beyond a limit which, with small balls, is very much less than is generally imagined. From the vertex of the curve, where all the vertical motion is lost, the ball begins to descend by an urging force which is nearly constant, viz. its own weight. This force would produce equal increments of ve- locity, in equal times in vacuo, but in air, the descent of the ball being resisted more and more as the velocity accelerates, the urging force will, at a certain velocity, be opposed by an equal resistance of air, after which there can be no further acceleration of motion, and the ball will continue to descend with a velocity nearly ter- minal.

' When I began to consider this interesting problem, as applied to vertical fire, I was soon satisfied that M. Carnot had entirely overlooked terminal velocity ; and I shall show, from his own words, that this is the case. It is not ne- cessary to exhibit here the investigations by which I have established the impotency of M. Carnot's vertical fire ; I shall only state the results, not to embarrass the conclusions with abstruse mat- ter. The solutions are computed from the theo- rems given in Dr. Hutton's tracts, and, although the results may diff"er a little from the truth, yet it is quite clear, that in the descent of the balls there can be no acceleration of motion beyond a certain limit ; that with small balls this ve- locity is very much

less than persons who have not investigated this curious problem would imagine; and that M. Carnot has evidently overlooked this circumstance.

‘ The velocity which a musket ball has acquired when the resistance becomes ecjual to the weight, or urging force of descent, is only about 180 feet in a second. The potential altitude, or the height from which the ball must descend in vacuo, to acquire a velocity equal nearly to the termi- nal velocity, is 523 feet. Hence, in the first place, it would be a waste of means to use the full charge ; for a musket ball fired upwards, with the ordinary quantity of powder, would be projected to a greater height than 323 feet; and it is evident that all above this is unnecessary. The indentation which a musket ball, moving with a velocity of 180 feet per second, makes on a piece of elm timber, is about -fg of an inch : this might, perhaps, be sufficient to knock a man down, if by great chance it were to fall upon his head ; but in no other case would it put him ‘ hors de combat.’

‘ Now, as to the four-ounce balls. The diameter of a French four-ounce ball is one

inch, two lines, five points, which, reduced to

Enghsh measure, is 1-28038 inches.

Its content is 1‘09909 inches.

The weight is 4-72247 ounces, if made of cast

iron, and 4-8624 ounces if of wrought iron.

The terminal velocity of the cast-iron

ball is about .... 201 feet The terminal velocity of the wrought-

iron ball is about . . . 204

The potential altitude of the cast-iron

ball is about .... 631 Ditto ditto wrought ditto ditto . . 650

‘ M. Carnot recommends that the balls should be made of hammered iron ; but adds, that, as the charge of powder for a mortar is small, balls of cast-iron may resist the explosion without breaking, and will answer as well. Now this observation shows that the author had not con- sidered the effect of the air’s resistance, nor doubted a sufficiency of force in his vertical fire : for the weight of a ball of hammered iron is greater than that of a ball of cast-iron of equal diameter, and the superior weight or urging force of the

former would generate greater ter- minal velocity than a lighter ball of the same size could acquire ; the momenta of the two balls in question would be as nineteen to eighteen.

‘ Four-ounce balls, discharged at elevations even considerably above forty-five degrees, to the distance of 120 yards, would not inflict a mortal wound, excepting upon an uncovered head. They would not have force sufficient to break any principal bone ; there would be no penetration, but merely a contusion. This cer- tainly would not oblige the besiegers to cover themselves with blindages, as I\I. Carnot ima- gines ; for a strong cap or hat, and a cover of thick leather for the back and shoulders, would be sufficient protection from the eflfects of his vertical fire with small balls. As the quantity of balls required to feed mortars discharging 600 balls at a time would be very considerable, M. Carnot observes that cubes of iron of eight or ten lines side, cut from square bars of this di- mension, may be substituted. These, he says, maybe fired from mortars, howitzers, or stone-mortars, and will produce the same effect as balls (page 491, Carnot)..

*‘ Let us consider this : Ten lines French are equal to -89523 in. English. The content of the cube is -71746 Its weight is . . . 3*0822 ounces.*

‘Now take a ball of the same weight: Its diameter is . . . I’ll inches. Its terminal velocity is . . 185 feet per sec. Its potential altitude is .534 feet

- *We have no experiments from which we can ascertain the terminal velocity of square shot; but, from comparative experiments with round and flat surfaces, we know that the resistance of the air to the flat end of a cylinder is more than double the resistance to a ball of the same diameter. Thus, although the urging force of a ball and cube of the same weight be the same, yet the surfaces upon which the resistance acts (and very irregularly in regard to the cube) are very different :*

The surface of the ball is . . . 3-87045

the cube is . . . 4-80862

F O R T i F I C A T 1 O N.

46:

- *From this, together with what lias been said respecting the descent of balls, we know, and th;it is enough for our present purpose, that the terminal velocity of the cube must be much less than 185 feet per second; and consequently its effect or momentum inferior to that of a 3-08 ounce ball. The motion of a cubical shot will, besides, be*

quite irregular, descending sometimes with an angle, then a face, then an edge foremost, tumbling over and over in oblique, irregidar di- rections, without any certainty, excepting that the velocity and effect will be much less than those of a round shot of equal weight.'

Our author smiles at the preference of the French writer for cross bows and ancient wea- pons of attack and defence ; and compares the far shorter time in which Calais, Tournai, Thouars, Naples, &c., have fallen before fire- arms, lie contends that sieges became uniformly shorter as gunnery was improved. Upon the main topic of this writer, he adds, ' I give the results of some very careful experiments, made purposely to ascertain the precise effects of those natures of vertical fiie, which M. Carnot pro- poses to adopt as the principal means of de- fence.'

E.rjxriments rvtfh different charges of stones from a ten-inch iron mortar. Klevution 45°.

1. Charge 10 oz. of powder, and fifty flint stones, each about 14 oz. The average range was 107 yards ; but most of the stones were blown to pieces.

2. Cliarge 12 oz. of powder, and forty stones of hard granite of about 1 lb. each. The nearest stones fell at forty, and the furthest at 120 yards; the transverse spread was thirty yards.

3. Charge 16 oz. of powder, and forty-six stones, as before. The nearest stones fell at fifty, and the furthest at 130 yards from the mortar: the spread was forty-five yards. One stone went off to the right in an angle of about ˆorty-five degrees, and fell at the distance of 100 yards in that direction, very near a spectator placed, as he thought, in perfect safety.

Experiments with a brass pierrier. Diameter sixteen inches. Elevation 45°.

1. Charge 2J-lbs. of powder (which filled the chamber), and 100 granite stones of 1 lb. each, piled up to the mouth of the pierrier in a basket with a l)ottom of wood. The nearest effect was twenty-eight yards ; the furthest 300 : the spread was seventy yards. Many of the stones broke.

2. Charge li lb. of powder, and seventy-five granite stones of 1ˆ lb. each. l"lie nearest efl'ect was twelve yards, and the furtliest 180. The spread was fifty yards.

In both cases it could not well be ascertraned where the greatest effect was, on account of the great dispersion of the stones, many of which broke even with the reduced charge.

Applying these experiments to the new de- fences of M. Carnot, Sir Howard

found that the nearest effect wcndd take place in the gorge of the bastion ; and that the furthest effect, P, plate I., would not reach the crest of the glacis, even with the full charge of powder. It apppisrs, therefore, says hp, that neither tlie third paiallel,

'0L. IX

nor the couronnement of the glacis, are v.ithni the reach of stones forced to the utmost, from pierriers in the casemated battery ; and the hori- zontal area of all those parts of the attack whicli come within its influence is so small, compared with the vast magnitude of the oval surface upon which the stones fall, that, it may be relied upon, not one stone in 1000 would take effect upon the besiegers.

A substitution of large balls and grenades, adds this writer, fired from mortars, would be less uncertain and more formidable; but even with these the dispersion is very great. 1 00 iron balls, of one pound each, were discharged from a ten-inch iron mortar, at forty-five degrees elevation, with a charge of 1 lb. 4 oz. of powder. The spread was fifty yards ; the nearest effect 150, and the furthest 210 yards : the longitudinal dispersion was therefore sixty yards, and consequently the area of the surface affected by the descent of the balls, supposing it to be an ellipse whose axes are sixty and fifty yards, was 20,476 square feet. The chances of hitting would therefore be very remote, whilst the expenditure of iron would be immense. At the rate of discharge which M. Carnot mentions, page 231, it would require a provision of nearly 1,500,000 lbs. of iron for the seven casemates of one batterie de goi,"-

' In regard to the display of vigor r.nd resolu- tion in personal conflict, which M. Carnot seems to think comparatively deficient in modern de- fences, it is clear,' says the above writer, ' that the invention of gunpowder has narrowed the oppor- tunitiesof displaying those qualities in the opera- tions of a siege, properly conducted, more than in any other military enterprise. There is no oppor- tunity for personal conflict, excepting in sorties, which, we have already shown, prove too fre- quently but a waste of life and valor, and in the defence of breaches, where also there is that to encounter .which the ancients were not exposed to. M. Carnot's object in quoting so many sieges, is, to show that the defence of places by ' amies blanches' has constantly been more bril- liant, more efficacious, of longer duration than by armes a feu. What, he says (p. 239), has the invention of powder, or the new process of attack, to do with the vigor and resolution that were used by the ancients ? These, he observes, may alter the means but not the principles of resistance.

' Now here we differ from M. Carnot; and to close properly with this

assertion, we have, rather fully, compared the ancient with the modern means of attack, for the purpose of showing tliat the general principles as well as means of de- fence are altered, and that both are inferior to those of attack when directed by scientific intelligence, and furnished with sufficient means. What can personal vigor and resolution do against the establishment of the ricochet batte- ries, and all the process of attack, until it come near enough to bo checkt>d by sorties ? The de- fence by ‘ armes blanches’ can only be applied to the defence of a breach ; but a breach may always be w(«(/e,” whatever be tlie vigor, resolu- tion, or strength of the garrison. The only means to oppose and retard the opening of a breach are by « powerful fire of artillery in the

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*fiisi instance, then hy counter-mines, and oc- casionally by sorties. These may, at a great sacrifice, retard the operation, but cannot alto- gether defeat it. Do not these alter the princi- ples as well as the means of defence ? The sieges of the ancients gave occasion for a great many personal conflicts from the beginning of the enterptise; and so did modern sieges, until parallels or places of arms were ap- plied to protect the approaches and repel sor- ties : but there is now no such field for personal prowess, and a place may certainly be breached, and exposed to the consequences of an assault, without giving the besieged any favorable op- portunity of displaying personal exertion with ‘ armes blanches.’ The operations of a siege, to this period, are chiefly what the French call * par industrie,’ w^hicli, instead of being secon- dary, as M. Carnot says, to the objects of per- sonal valor, are the means which introduce the display of it; and w^e cainiot see that his reason- ing can attach to any thing but the defence of a breach. With this also gunpowder has, or at least ought to have, a great deal to do ; for the guns that made the breach, can render it practi- cable ; they can prevent the besieged from closing it by exterior obstacles, and the interior defences may be molested by sliells, stones, &c. M. Carnot applies personal valor and determination less, in the first instance, to the defence of a breach than we should do. He proposes (p. 333, 4to. edition) to have fifteen or twenty ‘ pier- riers blindes’ ranged ro’.ind the breach as a focus, and to keep near them, also under cover, a corps d’elite ready to march forth. When the besie- ger’s troops put tliemselves in motion, to advance to the assault, “S. Carnot recommends that the troops sliould be withdrawn from the rampart, in order to allow the stone-mortars to act. It is evident, he observes, that the enemy either will not arrive, or if he does, that it will be in dis- order, after immense loss from the fire of the stone-mortars ; ‘*

upon which the fire should suddenly cease, the corps d'elite march forth, charge the enemy, and will very soon sweep them from the field of battle, whilst a good sortie will take them in flank and rear, destroy their epaulement,' &c. This is indeed a sweeping clause in M. Carnot's tiieory, and there needs no comment to show that it is the most fallacious part of his doctrine. The way to oppose an assault is undoubtedly to render the breach as inaccessible as possible, by every obstacle that can be applied, and to hurl upon the storming party quantities of stones, live-shells, grenades, combustibles, &c.; and some of the expedients proposed by M. Carnot for these purposes, and practised by the French in tiie Peninsula, are among the best parts of his elaborate treatise. He recommends, p. 310, that the breacli should be strewed with crow's feet, harrows, chevaux- de-frise, &;c. ; and that when the assault is about to be made, or expected to take place, the be- sieged should form a barrier on the summit of the breach, of strong six-pointed crow's feet, made of wood armed with iron points, firmly fastened to each other : that when the storming party advances to tlie assault, they should be as- sailed witli a prodigious quantity of combustibles

and any other destructive missile that can be procured ; and tliat a deep trench, previously dug and filled with tarred faggots, and other combustible materials, should be set on fire when the storming party is about to moinit the breach. He also recommends (p. 297) cuts to be made into the parapet, on the flanks of the breach, from which the besieged can either fire, or drop shells upon the assailants ; — an expedient which, after the breach is carried, will prevent the enemy from extending himself, by sapping in the parapet, towards the shoulders and gorge of the bastion to tiie attack of the retrenchments. But, what- ever obstacles and expedients be applied to close the breach, they will inevitably be destroyed, broken, or deranged by the heavy fire from the breaching batteries established on the crest of the glacis, which is always the immediate pre- lude to an assault. Consequently little reliance should be placed on any other means than the personal valor and determination of the troops actually placed behind these obstacles, who should thtre use the most determined, devoted exertions to prevent the enemy from gaining a footing 0(1 the breach. According to M. Car- not's method of opposing an assault, a footing might be gained, and a lodgment partly formed, before the corps d'elite could be drawn out from their cover, and march forth to ' balayer' the rampar ; and when once a fooling is obtained, or a lodgment made, it is not easily recovered, if proper measures have been taken to support the assault ; and the attempt is always very bloody and seldom successful.*

' M. Carnot inserts a long quotation from the Sieur Antoine de 'ille's Ingˆnieur parfait, pub- lished in 1629, wˆhich, he says, only requires some modifications which follow from the im- provements that have been made

*in fire-arms since the period in which this work was written. This passage conmiences in the original (book iii. part ii. p. 372) with an enunciation (whicli INI. Carnot suppresses, as he does several other parts of the passage), which shows how com- pletely the author's directions must be considered, as indeed they are, obsolete. * In proportion,' says M. de V'ille, 'as the enemy make a breach, the besieged should endeavour during the follow- ing night to undo his work, restore, and throw it up again.' Whoever reads this jiassage in the original will perceive that very little of it can apply at all to the defence of a breach made by a battery established on the crest of the glacis, in a face which has been ricoched from the com- mencement of the siege, and whose acting flank is directly counter- battered, and also enfiladed from the third parallel. It were madness indeed to attempt to defend a breach made in this regu- lar way, unless the besieged have a retrenchment. M. (Carnot may adduce, and my readers may recur to, the sieges made in the Peninsula, in opposition to this assertion ; but we have the public authority of a very distingiiished British engineer (lieutenant-colonel Jones) to remark, that those sieges having been undertaken and executed under circumstances and deficiencies which did not admit of regular attacks accord- ing to established rule, cannot be received as cases which afford any reason for departing from*

long-established practice ; and that tlm defence of tlie breaches at Badajoz, whicli has thrown some popular- lustre on M. Carnot's woik, could not have succeeded against an attack conducted, throughout, according to regular process. M. Carnot may perhaps dispute illustrations from British talent and experience, or we should have presented him with other references to facts con- tained in colonel Jones's excellent work, in sup- port of other parts of our reasoning.'

PART II. OF FIELD FORTIFICATION.

'•ˆield, or temporary fortification, having the same general objects as more permanent works, only differs from them in the means that may be accessible foi attacking or defending them.

Field works are thrown up, merely for a short time : often in haste, without either choice or preparation of the materials employed ; with very few means at hand, and sometimes in presence, as it were, of the enemy ; besides, there are many cases in which they are not in- tended to resist an attack supported by cannon, and, when they are, the nature of the guns wliich will probably be brought against them may be different, according to

the importance of the works. Lastly, field-works are usually attacked by troops formed into columns ; which, advanc- ing rapidly in the direction of their capitals, threaten many points at once ; therefore, the dispositions for their defence, ought to be differ- ent from those of permanent works, &c. The maxims or general rules that are to be observed in them are;

1. In general, a saliant angle should not be less than sixty degrees, especially when it is un- defended by any flank fire.

2. The saliants being the most exposed points, particularly when they are not flanked, their defence ought to be carefully attended to ; when the ground, and intended object of the work you construct, will allow you to direct the saliants towards some natural obstacles which prevent the enemy approaching them on the prolonga- tion of the capitals, you ought to avail yourself of that advantage ,• but, if you cannot direct the sali- ants thus, they must be protected, if possible, by some artificial obstacles.

3. In tracing field-works, let there be as many flank defences as possible.

4. When one part of a fortification is to flank another, it must be so disposed as to make with it an angle not less than ninety degrees, and ex- ceeding as little as possible ninety degrees; in order that the ditch and counterscarp of tlie part flanked, may be defended by a direct fire from that which flanks it.

5. The lengtli of the lines of defence ought not to exceed eighty toises at most.

6. Avoid the second flank defence, unless you are obliged to have recourse- to it.

7. Be careful not to suffer any cover in the vicinity of a work, under which the assailants may approacli unperceived.

8. Dead angles are to be avoided as much as possible.

9. A fortification must always be proportioned to the number of men who are to defend it;

and, the length of the parapet remaining the same, you ought to enclose within it the greatest possible surface.

10. Before you begin a work, you ought to ascertain whether you have sufficient means for completing it in time.

We can only find room for a sketch of the principal or out-line of field-

works.

Of redans or ficches. As redans or fleches, plate VI. fig. 3, can be quickly and easily con- structed, they are frequently used in the field, where few means are at hand ; besides, in many circumstances, the intended object of a work does not require that it should be able to afford an obstinate defence. Weak indeed is that which a redan can make, particularly when isolated ; for then, independent of being easily carried in front, owing to the undefended sector fag, its gorge 6 c is also greatly exposed, and you ought not to rely on the defence of a redan, unless it is supported in its rear; such as, for instance, redans thrown up in front of an army you intend to intrench, and on the banks of a river to cover a bridge, or defend a ford.

Sometimes redans are placed in front of a main work, either to cover its comnmnications with the country, or to defend some parts of the ground which cannot be seen from it, and would be of advantage to the enemy in directing their attacks : or in short to procure a cross fire on the capitals of the main work, and keep the enemy at a distance from it. Redans so dis- posed are called lunettes.

No fixed rules can be given with regard to the length and direction of the faces of a redan, since both vary according to the ground, the in- tended object of the work, and the strength of the detachment that it is to cover, &c.

Of redoubts. — Redoubts, as well as redans, are frequently used in the field ; where, as iso- lated works, they are employed, when the post or detachment to be intrenched being abandoned to its own strength, and without any protection in its rear that may prevent its being turned, it becomes necessary to enclose it entirely, so as to secure it from the attacks which the enemy may make upon it on all sides. Redoubts are ex- tremely proper for covering an advanced post, a grand guard, or a communication ; for defend- ing a defile, a height ; for protecting a retreat, the passage of a river, ford, or bridge; for sup- porting the wings of an army, a line of frontiers, Sec. ; independent of lieing ea.sily constructed, they have also the advantage of afibrding a very good defence when supported from without, and even of being sometimes eflectually used instead of fortins or field- forts, which in general require more time and materials for their construction, and a more numerous garrison for their defence.

The requisite length of the sides of a redovd)t depends, not only on the extent which the para- pet must have, in order that the garrison may man it properly, but on the necessary interior space for containing the men. It should also be considered, whether the troops are to reside in the work, or to remain tiicre for a short time; as it happens, for instance, wiien a work is

suffi- ciently near a main body of troops to com- municate easily with them, and receive reinforce-

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tnents, should an attack be (.'xpccled ; in tliis case, it will suffice to regulate the size of the redoubt in sucli a manner that the number of men intended for its defence can man the para- pet properly, without being crowded and ob- structed in their motions; but if the garrison is to reside in the work, its interior surface must be larger.

Various methods have been proposed for cal- culating the necessary length of the interior sides of a redoubt, accordnig to the strength of its garrison ; but most have the double defect of not being applicable to small detachments, as the redoubts would then be considerably too little, and to increase beyond measure the in- terior surfaces of those works, when their garri- son exceeds a certain number of men.

The method proposed by Noize de St. Paul, a French engineer, is better in general than any we have seen. We shall observe, however, that it is rather complicated, as it varies according to the strength of the detachments ; it contains, besides, several inaccuracies; we point out the two following : —

This author says, No. 32, page 39, of liis work on field-fortification, ' if the detachment which you intend to place in a redoubt, is com- posed of more than ninety men, and does not exceed 120. tsl-o -ne-fourth of the number o' men for a reserve, which you may make ecjual to one-third of that number, if the detachment consists of 130 men or thereabout: then divide the remainder by eight, and the quotient will give the length in toises, &c., of each interior side.' — According to this rule, a detachment of 100 men requires that the length of the interior sides should be nearly nine toises and three feet; whereas it is proved by experience, that eight toises and three feet, or thereabout, are enough ; thus Noize de St. Paul's rule increases, without necessity, the size of the redoubt, which requires thereby more time, and a greater quan- tity of materials for its construction : — besides, the author is inconsistent with himself; for he says, p. 44, note ft, in the same work, that a detachment of 100 men requires a redoubt, whose interior sides should have from eight to nine toises at most. But let us proceed further, and suppose that the detachment consists of 120 men ; according to the same rule, the interior sides of the redoubt should be eleven toises one foot and six inches : but Noize de St. Paul re- commends

the same length for those of a redoubt constructed for 180 men; since he says, p. 30, ‘ if the number of men exceeds 150, as they will be able to man in two ranks the parapet of a redoubt capable of containing them, the length of the interior sides will be found by dividing the detachment by sixteen. Now, why should a redoubt, calculated for 120 men, be exactly of the same size as a redoubt constructed for 180 ? And is it not evident, that Noize de St. Paul’s method, which may give satisfactory results in some other instances is very defective in these two? Indeed it appears that he was aware of its insufficiency with regard to certain detach- ments ; for he says, No. 32, p. 40, ‘ that he proposes it as a scale of comparison, which should be used merely as a guide in practice.

since it is very difllcult, not to .s.iy impossible, to give a general rule of computing the neces- sary lengtb of the interior sides of redoubts ac- cording to the strength of tlie detachments, and that trying is the only way.’ This author’s work, however, ni which he has codected and generally exposed with perspicuity, most of the modern principles on which field- fortification is ground- ed, deserves no small degree of praise.

M. Malortie de Martimont proposes the fol- lowing rule, supposing the redoubts to be square, and tiiat the garrison is to reside within tliem : —

1. Multiply by ten the number of men of which the detachment is composed, and the product will give, in square feet, the necessary extent of the surface contained between the foot of the slopes of the banquettes.

2. Extract the square root of that product to one decimal, and it will give in feet and tenths of a foot, the lengths of one of the sides whicii enclose the above-mentioned surface.

3. Add to this length twice the number of feet which the base of the interior slope of the parapet, the breadth of the banquette, and the base of its slope, are to have, and the sum will be the length, in feet and tenths of a foot, of one of the interior sides of tlie redoubt.

Let us suppose, for instance, that you have to construct a square redoubt abed, plate VI. fig. 4, for ninety men : multiply ninety by ten, and the product 900 will show that the surface i k I m, which is contained between the foot of the slopes of the banquettes, ought to be 900 square feet : extract the square root, thirty, of that pro- duct for the length of feet in the side i k, which is represented by a 6 in the profile fig. 5. Now, supposing the base of the slope c of the ban- quette to be six feet, the breadth of the ban- quette d three feet, and the base of the interior slope e of the parapet one foot; multiply tlie sum of those dimensions by two, and add the product twei;ty to the square root thirty which you have found before ; then will the

sum fifty be the length in feet of the interior side e e fig. 5, and cf fig. 4. It is evident, that in all redoubts constructed by this simple method, every man of the detachment has for himself ten square feet of the clear surface which is contained between the foot of the slopes of the banquettes ; and ten feet, in addition to the space aflbrded by the banquettes and their slopes, as this writer con- tends, will suffice in all redoubts, let their size and figure be what they may.

Square redoubts are more simple and easy to construct than any other; but the configuration of the ground, and the number and situation of the points which a redoubt may have to defend, &c., frequently require that its figure should not be square ; in this case, plant staves at all the points, where, in your opinion, the vertex of the angles, formed by the interior sides of the work, can be placed to the greatest advantage; and after taking, with the plain table, or by any other means which you have at hand, the plan of the figure delineated by lines which you suppose to join those staves, consider it as representing the interior contour of the parapet: measure the angles formed by those lines, in order to ascer- tain whether they are sufficiently open. Max. 1,

and if some are not, rectify them : inside of the pLm draw a parallel to its outline, and at a distance from it, equal to the number of feet wliich you intend to allow to the base of the interior slope of the parapet, the breadth of the banquette, and to the base of its sloj)e : and, as the figure described by diis parallel represents that of the space which is contained between the foot of the slopes of the banquettes, compute its area in square feet ; if it appears from your calculations, that the re- doubt will be considerably too large, according to its garrison and artillery, this defect may be remedied by shortening the interior sides, or diminishing their number when it exceeds four, or by giving a smaller opening to the angles : but, if the work is small beyond measure, the contrary should be done.

Should a redoubt be circular, compute the radius of the circle, bounded by the foot of the slope of the banquette, so that the enclosed sur- face may allow ten square feet to each man, and 324 square feet to each piece of cannon : add to this radius twice the base of the interior slope of the parapet, twice the breadth of the ban- quette, and twice the base of its slope ; then drive a picket at the centre of the redoubt, and lasten to it one end of a cord equal to the radius thus increased ; and with the other end, to which a pointed picket is fastened, describe a circum- ference vipon the ground.

To ascertain how many men and guns a re- dou])t which is constructed can contain : — Com- pute the area in square feet of the surface contained between the foot of the slopes of the banquettes, and divide it by ten if no artillery is to be placed in the redoubt; the quotient will give the number of men that can be lodged in tlie work : but, should the redoubt be supplied vvitii cannon, subtract 324 square feet for each piece from the above area, and divide the re- mainder by ten, which will give the number of men.

Of fortim or field-forts. — Two kinds of fortius or field-forts are most generally used, when the ground, the intended olyect of the work you have to construct, and the strength of its detach- ment, will allow you to make it regular, or nearly so ; these are the forts with tenailles or star-forts, and the forts with bastions ; but sometimes you are compelled to construct a fort which is com- posed of different figures at once, and in this case no particular name can be given to it.

Field-forts take a particular name also from their number of saliants ; thus, a fort is said to be square, pentagonal, or hexagonal, k,c., ac- cording as it has four, five, or six saliants.

Star forts, or forts a tenaille, are such as form a regular suite of saliant and re-entering angles. They are, in fact, polygons, whose sides are broken so as to form the re-entering angles. If possible, the saliant angles should never be less than seventy degrees, and the nearer they ap- proach to ninety the better, as a rectangular defence is always the best. The brisures, or faces, forming the re-entering angle, should not be less tliun fifty feet, or more than 100. If they are longer they require a numerous garrison to defend them, and it would therefore be better.

in such cases, to construct a small fortress, es- pecially if you have guns to use. Star forts are seldom constructed either in the triangular or square form, a redoubt being almost always pre- ferable to either. In a triangle there can be no brisures, in a square their angles are 150°. A pentagon is somewhat superior to both, the defence of its saliant angles being better, and the angles of the brisure 132°. The hexagon is still better than the pentagon, though its saliants are by no means well defended. The heptagon has saliant angles of 128ˆ, and those of the brisures 112. This form might therefore be used with considerable advantage, were the construction not difficult ; the most convenient, however, as well as the most advantageous polygon for works of this kind, is the octagon. The constioiction is made either upon the interior polygon, by plac- ing equilateral triangles on its sides, or on the exterior side, by means of the perjˆendiculars from the saliant and re-entering angles.

Bastion forts have often been jiroposed, but are inferior to star forts; the triangular half bastion particularly. They are difficult to con- struct; the saliants are too acute and ill-defended ; the faces of the demi-lunes are without cover, and the interior surface is too small. The square half-bastion is little better than the triangular, but it encloses a larger space. When the bastions are full, the work may sometimes be very advan- tageous, and the construction is the same as in permanent fortification. In bastion forts the sides should not be less than 100, nor more than 200 yards, that the flanked parts may be within musket shot : 130 yards is a good medium. The best form of the curtain is to break it twice, by which a very advantageous fire is obtained.

Tctes de pont are thrown up for covering a communication across a river, and favoring the movements of an army or detachment, either when advancing into the enemy's country, or retreating from it. The form, size, and strength of a tete de pont, ought to be regulated accord- ing to various circumstances, and before you fix upon them it is necessary to consider; 1. The importance of the comm\inication which it is to cover, and the probable length of time, during which the communication is to be kept up ; for its utility may be confined to a temporary move- ment of the troops, or extended to die sequel of operations for a long time : 2. The breadth and form of the river at the point where the tete de pont is to be thrown up ; and, likewise, the nature of the country on both banks : 3. Whe- ther the tt'te de pont can be supported by mus- ketry from the opposite banks, or by artillery only, or by neither ; 4. Whether the river has only one arm, or forms an island ; and in this case, what is the breadth of its arms, and the form of the ground in the island itself, so that you may determine, with more certainty, the defensive dispositions which can be made to the greatest advantage : 5. When you are to construct a tete de pont for covering the retreat of an army, or strong detachment, you ought to consider, whe- ther, according to their composition and the stale of things, that retreat is likely to be exe- cuted with celerity or slowness ; whether there is any fear that the retreating troops will be

closely followed up by considerable forces, or whether they can retire (juietly, and without being exposed to any attack which may endanger them : 6, and lastly, you ought to examine what is the strength of the army, or detacliment, its number of cannon, the quantity of stores, and equipage, &.O., and regulate accordingly the size of the tfete de pout, as well as tlie passages through it, in order that the wliole may hie off without stoppage and confusion; all these va- rious circumstances oblige us to make

a differ- ence in the siz-;, form, and strength of a tete de pont. If an army or considerable detachment, for instance, is closely pursued by a great force, and can retreat but slowly, either on account of its composition, or because it is compelled to take particular precautions, which require time, the tete de pont, which is intended to favor its passage across the river, ought to be of a certain extent, and capable of making a good defence ; for then, not only the troops, artillery, &c., must tile off through it without any ob- struciion or confusion, but it ought to check the enemy, sliould he attempt to approach it : on the contrary, if a tete de pont has to cover a com- munication of no great importance, or the passage across a river, of an army or detachment which is not closely pursued, and can retreat quietly and speedily, it will not require as much extent and strength as the former.

The bridge or bridges, which a ttUe de pont covers, should be concealed as much as possible from the enemy's sight, as he would baiter and ruin them with his cannon; and that, in (jeneral, the most advantageous points for construct- ing those works are where the river bends in- wards.

When a tete de pont is to cover only a com- munication of no great importance, and across a small river, a simple redan will suffice: provided, however, that the river is so shaped as to prevent the enemy perceiving the bridge from some point ; but, if he can perceive it, a piece should be constructed, whose flank defends the ground from which the bridge can be seen. These small t£tes de pont will acquire a greater strength, if the ground on the opposite bank allows us to construct small redans where fusi- leers are placed ; these redans ought to be dis- posed in such manner, that their fire, after grazing the faces of the tete de pont, may cross in front of the saliant, and as near to it as pos- sible ; the redan is intended to graze the flank of the piece.

When the river is so broad as to prevent the musketry hre of tlie redans doing any execution for the defence of the tete de pont, batteries may be constructed and disposed in the same manner as the redans.

A tˆte de pont which is intended to cover a communication of importance, and necessary for the movements of large bodies of troops, requires a greater extent and strength than the preceding. That represented by fig. 6, plate 'I. is capable of making a good defence, particularly when it can be supported))y batteries a, placed on the opposite bank ; its outline does not differ widely from that of a redan, except that the faces are broken, in order to procure the two flanks l> c

and d e, the direction of which ought, in general to be as jerpendicular as possible, loefˆnddf, which they defend. Care must be taken, how- ever, that

they are not exposed to be enfiladed, which depends, of course, on the configuration of the river, and tlie disposition of the surround- ing ground.

Sometimes, also, a t£te de pont may be com- posed of a horn work, the inside and branches of which are defended by batteries a, erected on the opposite bank. When the ground does not allow you to construct these batteries, the branches of the horn work may be broken.

Half a square fort, with bastions, makes a strong tete de pont, particularly when you can construct on the opposite bank batteries and intrenchnients. Half a star-fort, or redoubts so disposed as to flank each other, may also be used for a tete de pont.

Of intrenchinents of armies. — ˆThe whole of the works and obstacles by which an army or a considerable body of troops cover themselves, for their own defence, may be called intrench- ments of armies. In general the object is, to in- terpose between themselves and the enemy a de- fensive line, whose protection may compensate for their inferiority in number ; this line may be composed of parts so connected together, that no uncovered space is left between them, in which case it is called a continued line ; or those parts may be isolated from each other, and uncovered intervals left between them ; and then it is named a line with intervals.

Intrenchnients of armies can seldom be com- posed of regular and similar works, nor even of works different in their nature, but symmetrically disposed, and so constructed, that all those of the same kind may have the same dimensions; for, on account of the ground, or because of a necessity to direct more fire to certain points than to others, some irregularities will be re- quisite ; thus it is impossible to foresee all the variations that may occur in the tracing of in- trenchments of armies ; wherefore no particular rules can be given for every case ; there are, however, general principles which ought to guide an engineer.

The works most commonly used for intrench- meiits of armies, in a continued line, are redans, tenailles, or queues d'hironde, cremaillferes and bastions ; hence intrenchments take the name of intrenchnients with redans, intrenchments with tenailles, or queues d'hironde, intrenchments with cremailleres, and intrenchments with bas- tions ; sometimes also lunettes are placed in front and to a certain distance from a main in- trenchment, which is then called intrenchment with lunettes.

For the detailed construction of these works, we must refer the reader to the professional pub- lications on the subject.

The following general principles should be observed, as much as possible, in

the formation of intrenchments of armies.

1 . Their flanks must be supported, and not exposed to be turned ; for, of what avail would be the defence in front which intrenchments afford, could they be attacked in tlie rear ?

2. Their extent should be proportionate to the

strength of the army which they cover, since tliey are to be defended by it.

3. In tracing those intrenchments, you ought 10 avail yourself of every natural accident of tlie ground which they traverse; a low and marshy spot, a stream whose banks may be overflowed, a ravine, a wood where an abatis may be formed, and other natural obstacles, fre- quently afford great advantages, wlien properly connected with the other defences ; either by in- creasing the strength of some parts of the line, or, when they suffice to stop the assailants, by saving you the time and labor, which, without them, the construction of works would require.

4. The line formed by intrenchments of armies should occupy, as much as possible, the elevated parts of the ground which it crosses, and border the summits of the heights or hills in its direction; by which means the intrench- ments will have a superiority over the assailants, who cannot approach them without passing through uneven and difficult ground.

5. Every point of the ground, in front of an intrenchment, must be seen and defended by some of its parts.

6. The habitations in front of the line should be occupied and fortified, when they are suffici- ently near to be supported by it; but should they be too distant, and so situated as to conceal the movements of the enemy, they must be de- stroyed.

7. For the same reason, a wood, which the line can support, must be occupied ; but should its distance prevent it, and its situation be such as to conceal the movements of the assailants, it requires to be cut down.

8. The line ought to cover all the habitations in its direction, so as to make them serve as points of support, and to reap advantage from their reverse fire.

9. The number and strength of the respective •works, depend on the greater

or less danger to which the part of the line where they stand may be exposed ; if, for instance, the enemy could scarcely approach it, and should he not be able to bring his cannon against it, the works thrown up for its defence, would undoubtedly not re- quire the same extent and strength as they would, in case the assailants could easily ap- proach and batter it.

10. All obstacles which may obstruct the communications of the line, with such parts m its front as must be protected by it, or which may impede the retreat of the army, sliould tlie intrenchments be carried, must be removed.

Intrenchments with intervals are now pre- ferred to those which form a continued line. The following are the reasons which are assigned for it ; 1st, the former require less troops for their defence than the latter ; so that, with an equal number of men, a greater force can be placed at the most exposed points, or stronger reserves kept; 2dly, the intrenched army can form in such order as will not impede its move- ments; wherefore it will be alile to pass succes- sively from tlie defensive to the offensive, and vice versa, according as circumstances may re- quire ; whereas, on the contrary, an army placed behind continued intrenchments must be de-

ployed ; and, as it. can scarcely execute any movements outside of them, it is reduced to defend passively, if I may use that expression, the works which cover it, and are sometimes very im- perfect : 3dly, a line with intervals requires less labor than a continued line ; therefore, the works which compose it can be constructed with great- er care in the same time, and with the same number of workmen. Lastly, the former line is more easily adapted to the ground than the lat- ter ; as the engineer, who is not confined to a fixed tracing whose parts must all be connected, can place the works at the most essential parts of defence.

In the late continental wars frontiers of coun- tries have been the frequent objects of attack and defence. They constitute important objects of field fortification. M. Malorti furnishes some excellent directions for forming the principal works of this kind.

i. Of lines of frontiers. — The works and ob- stacles disposed along some open parts of a fron- tier, to shut up the country from one place, or post, to another, are called lines of frontiers.

These lines may answer very useful purposes ; first, they protect the army which defends tlie country behind them, and also to secure its movements ; secondly, they prevent the incursions of the enemy's parties, and the devastation which they would occasion ; thirdly, they remove the fears of the inhabitants, who then attend to agri- culture. Lastly, they connect the defences of the frontier, and therefore increase the resistance which can be

made. Indeed, a line of frontiers will not afford those advantages, unless it be con- sidered in its proper light and used accordingly ; for should the army consider it, as forming its own intrenchments, and actually defend it, as lines of frontiers have in general a greater extent than is proportionate to the strength of the army, it follows that the troops would be weak every where ; and that they would undoubtedly be crushed by the columns which the enemy would march to several points at once ; thus the line would be disadvantageous rather than useful; but on the contrary should the army support it only with a limited number of troops, and oc- cupy a position beliind, from whicli it could re- pair rapidly to all points, and take in flank the enemy's columns when they begin to advance, no doubt can be entertained, in this case, of the utility of the line, and particularly when its extent is not so great as to jireciude the army from the possibility of supporting all its parts ; for the enemy will be compelled to form partial attacks, and therefore to weaken himself by di- viding his forces. The following are tlie general niles to be attended to, in tlie construction of lines of frontiers.

1. They require, like intrenchments of armies, that the extremities siiould be supported, and not exposed to be turned. SliouWl a line of fron- tiers be very extensive, it must be directed from one fortress to another, when there are any on the frontier.

2. Their front ought not to present any un- protected openings, by means of which the ene- my may penetrate into die country which they are intended to cover. The reason is evident.

since a line of frontiers is chiefly intended to shut up the country wliich it covers-

3. When you are to construct a line of fron- tiers, you should avail yourself of all the obsta- cles which the ground that it traverses may offer.

4. That the line may have points of support, the open towns and villages enclosed by it sliould be fortified ; this is particularly reciuisile wlien tliey occupy important points, and when, by their situ- ation, tliey can see in reverse some other parts of the line.

5. As all the points of a line of frontiers are not equally accessible to the enemy, the obstacles which form it do not all require the same degree of resistance ; for instance, should some parts of the line traverse an open country, through which the enemy might easily penetrate, whilst others pass

over a marshy or woody ground, Sec, which scarcely allows iiim to approach, the former would imJoubtedly require stronger defences than the latter.

6. Since a line of frontiers is chiefly intended to secure the country behind it from the enemy's parties, the works which it contains do not re- quire a greater relief than that which tield-works commonly have; not even in its most accessible points; and, according to circumstances, from three to eight feet at most will suffice for the thickness of their parapets. It is scarcely ne- cessary to observe, that the former dimension is apphcable to such works as are only to be secured from tiie fire of musketry; and the latter to those which may be attacked with cannon.

7. Great advantages may be derived from streams, and particularly when they are broad and deep and have steep banks, or when the ground on their banks is marshy ; should they contain islands, those on the side of the army must be occupied, in order to prevent the enemy from throwing up defences within them, under the protection of which he could more easily pass the stream ; with regard to those on the the other side, they ought to be observed by posts which are ordered to retreat when the enemy ap- pears with a superior force; all thickets, brush- wood, &c., which might favor and conceal his movements, should be cut down. It is less im- portant to occupy those islands than the others; besides, should they be attacked, you could not keep them on account of the impossibility of conveying a sufficient force to defend them.

8. All fords must be guarded by strong posts, and no bridges suffered to remain, except those which are indispensal)ly necessary to penetrate into the enemy's country, should circum.stances require it; when they are not situated within a fortress, or protected by it, the place where they stand should be more or less strongly fortified, according to the importance of the passage, and to the greater or less facility which the enemy may have of approaching tnem.

9. A small stream may also be rendered ser- viceable, by means of dams thrown across its bed; so as to form small inundations which ren- der the access to the low parts of the ground more difficult to the enemy. The sluices of tlie water mills, manufactories, &c., which are com- monly found on the banks of such streams, may be used likewi;i; to that purpose, and tliose

buildings should be fortified. Morasses too, and even marshes, are a very good barrier, as the enemy cannot attempt to pass them without danger, and particularly with his cannon ; there- fore, when die disposition and direction of the line allow some parts of it to be protected by such

obstacles, you ought to avail yourself of them.

10. A few redoubts placed near the most ac- cessible points of a ravine, and on Uiose whence a reverse fire can be most easily obtained, will sufhce to defend such passages.

11. The woods which are in the .direction of the line, may also procure advantages by means of abatis made within them, and supported by a few detached works. The ground in front of the abatis should be cleared to a certain distance, in order that the enemy may not conceal his move- ments and approach imperceived.

12. Should a mountain be in the direction of the line, its passages must be guarded by posts suthciently strong to secure them.

13. Wherever the country is open, and un- protected by natural obstacles, works ought to be thrown up, whose requisite strength depends on the importance of the points which they cover, the facility which the enemy may have of ap- proaching them, and on the advantages which the ground affords for his mancEUvres.

ii. Of Posts of Frontiers and other Posts. — Posts of frontiers are intended to secure, with a limited number of troops, the principal points of a frontier which is not defended by an army, nor by fortresses, the number, situation, and extent of which, are properly adapted to localities : for, should it be protected by such fortresses, their garrisons would suffice to guard it. It happens frequently that a frontier is actually defended by fortresses, but that they are not properly adapted to localities : in which case, intermediate points must be occupied by posts, so as to rectify the defects in the defence.'

In a mountainous country, the valleys are chiefly inhabited, as tliey are more fertile and better supplied with water, communications and accommodations of all sorts, than tlie elevated parts; wherefore tlie towns, or villages situated within them, or near their openings, and in the plains contiguous to them, are particularly suita- ble to the establishment of posts: those which defend llie principal gorges, and serve as places of rendezvous and depots, should be strongly fortified, and preceded by smaller posts, in order to watch the enemy's movements ; with regard to the other gorges, they should be guarded by posts whose requisite strength depends on the fa- cility which they may give to the enemy to pene- trate into the country.

Flat and open countries are more difficult to guard than tlie preceding; 'n such countries, the chief towns sliould be occupied, and those placed on the communications be more or less strongly fortified, according to the

importance of the])oints where they are situated ; intrenched camps, of which we shall speak hereafter, may also be formed, where their position enables them to be of service for the general defence of the fron- tier. It is particularly requisite that those towns should be cipuble oi" a strong resistance, wh'>-/»

are situated in fertile plains, as armies attempt Sjenerally to advance through the most fruitful parts of a country.

No particular rule can be given, with regard to the method of fortifying posts of frontiers, since it depends on the configuration of the ground, the time which you can command, &c. But, as those posts are intended to serve instead of fortresses, particular attention must be paid to the dispositions for their defence; and that you should avail yourself of every advantage which localities may offer ; a stream which allows an inundation to be formed, or whose passage may be rendered ditbcult to tlie enemy by other con- venient means, an impassible morass which se- cures part of the post, or a marshy ground which obstructs the approach to it; a wood where an abatis, properly supported, can be made ; or which must be entirely cut down, as it would conceal the enemy's movements, and expose the post to be surprised; buildings, which, being placed between two works, form a sort of cur- tain connecthig their defences, and whose walls may be pierced with loop-holes ; or which pro- ject in front of the post, and will flank part of it, after being secured by works, or by other practi- cable dispositions : some other buddings which must be pulled down, either because they would mask the fire of the post and render it less effec- tive, or because they would favor the enemy's ap- proach, and enable him to see into the post; a street, which should be barricaded, or cut across by trenchos : some particular points, where works must be thrown up, as, on account of their situ- ations, their fire will flank other works, or defend tliem in reverse : a ravine, a ditch, a steep ground, &c., which may strengthen the defence, or which would weaken it, should not proper precautions be taken : these, and other consi- derations, which circumstances may require, should fix the attention of an engineer, in form- ing his plan for the defence of a post, and, if he cannot depend upon suf5cient time to complete all the dispositions which are requisite, he must attend, first, to the most essential ; next, to those which are less important ; and ultimately to the formation of such works and obstacles as wdl improve the defence of the post, although it may not indispensably require them. The first step to be taken, in such a case, is to secure the post from a coup de main. It is scarcely necessary to ob- serve, that the defences thrown up for thai pur- pose must be so disposed as not to

prevent the addition of others, should circumstances permit It.

Let us suppose that an army intends to invade tlie territory of the enemy, and to remain there- in ; in tiiis case, the march of the army requires particular precautions suitable to the nature of the frontier through which it proposes to pene- trate: for instance, should the frontier be pro- tected by fortresses well calculated in all respects for its defence, they must be taken as the army advances, and then be repaired, garrisoned, and supplied with stores and provisions, in order to keep in awe the invaded country, and afford points of support wl-.ich may secure the army's retreat, should it be compelled to fall back, and supply all its wants ; but if the country is open.

and destitute of fortresses, posts strongly fortifiea must be established near the principal communi- cations, and in the points most advantageously situated to defend it, and secure the army's re- treat, if necessary ; indeed, less precautions are requisite, when tlie army which invades such a country intends only to make a temporary stand, either to levy contributions, or to draw in the enemy and make a diversion ; however, it should occupy, as it advances, the principal conmiuuica- tions, and the positions which will secure its flanks and rear; as, otherwise, its subsistencies would be continually exposed to be burnt or taken away by the parties of the enemy ; besides the rearoi the army would be annoyed, and the army, per- haps, be cut off.

The winter quarters of an army, and particu- larly in a hostile country, should also be covered by posts so placed as to defend the principal communications ; for without it the quarters will not be secure, nor will the troops enjoy any repose, as they may be attacked at every mo- ment: nay, should the enemy take the field early, and attack the quarters before they have time to assemble, he might crush them, and thus de- stroy part of the army in the beginning of the campaign.

As all posts should be fortified according to the same general principles, we refer the reader to the hints which we have given, when speaking of posts of frontiers.

iii. ()/' intrenched Camps of Frontiers. — Some of the positions to be occupied along a frontier, for its defence, may not be inhabited, or the number of habitations which they contain may be too small for the troops, which in tliose two cases must be encamped; and then the positions take the name of intrenched camps of frontiers.

There are two sorts of intrenched camps of frontiers ; namely, those which have a small ex- tent, and are only intended to guard the points where they are placed; they differ from posts of frontiers, of which we have been

speaking in the preceding section, merely" because they are situ- ated in an uninhabited place; and wliat we have explained, with regard to the former, is also ap- plicable to the latter, with some modifications which the difference in their situation may re- quire. The other intrenched camps of frontiers contain a considerable body of troops, and are intended not only to guard the points wiiere they are established, but to cover the country ; these camps, which are formed for the same purpose as flying camps, and only dilTer from them as they are fortified, afford great advanta-ˆies, when properly disposed ; they keep the enemy in check, and prevent him from |)eiK'tratin'j; through some weak points of the frontier, in order to ad- vance in tlie country ; for then his flanks ami rear would be exjiosed to he attacked by the en> camped troops, as they can march in all direc- tions; his lines of communication would not b;' safe, and his retreat might be cut off. It is evi- dent that camps of this sort retiulre to be so for- tified as to afford a resistance proportionate U\ their object, and to the importance of the]>oints which they occupy ; and that tiicir situations must be such as not to expose them to be rapidly and unexpectedly surrounded ; for the troops

could not march to the tnreatened points, nor make sjood tlieir retreat when their safety recjuired it ; and therefore they would be exposed to no purpose.

The proper situation for an intrenched camp of frontiers requires, likewise, that it cannot be taken in reverse, nor the troops prevented from retreating or communicating with other parts of the frontier, according to circumstances; and that the enemy may not, by crushing some posts, oblige the encamped troops to withdraw from their intrenched position, for fear of tiieir retreat being cut off. Lastly, it should be examined, whether the situation of the camp affords easy means to penetrate into the enemy's country, should such offensive movement be requisite, and whether it can be placed in a spot protected by some natural obstacles, as then it will require less time and labor in fortifying.

iv. Of grand tetcs de punt. — When part of a frontier is covered by a river, it is necessary to secure the principal communications across it, so that an army may march to the enemy's country, or retreat from it, according to circumstances: grand tˆtes de pont are constructed for that pur- pose.

It is evident that grand tfetes de pont ought to be capable of a great resistance; for, as their object is very important, the enemy has a ma- terial

interest in destroying them; they require also a rather considerable extent, in order to contain a sufficient number of troops to check him, when the army is advancing or retreating through them. Lastly, they must be so disposed as to prevent him from perceiving the bridges ■which they encompass ; otherwise he would at- tempt to destroy them from a distance, with his cannon.

When the communication to be secured is situated in a town, and not seen from without, the part of the town beyond the river must be fortihed, and then it serves as a tfete de pont.

But should the opening of the communication be outside of the town, and seen from the coun- try, not only the town must be fortified, but the opening requires to be covered by works suffici- ently extensive to hide the bridges; or the points from which the enemy can see and batter them must be fortified.

Lastly, if the communication is at a certain distance from the town, its opening towards the enemy should be fortified, and the requisite pre- cautions taken to secure the bridges from being battered.

It happens frequently that these grand commu- nications across rivers are only estiiblished in time of war ; wherefore, the bridges which form them have no great solidity: in this case, stoc- cados should be constructed in the upper part of the river, so as to stop every thing which the enemy may let go with the current, to break open or destroy the bridges. When there are islands near a tfete de pont, those whence the enemy could take it in reverse or batter the bridges should be fortified.

A sinple house, when it has no stone walls, may be fortified in the following manner : the walls may be strengthened by boards in the in- side, or by rafters applied as in blockhouses, or.

if these are wanting, by making a ditch round it, and using the earth to strengthen the wall. The doors and windows are fortified with boards, and barricadoed. Loop-holes are every where made, but in such a direction that the enemy cannot reach them with his firelocks', so as to fire into the inside of the house. If there is no ditch round it, other impediments are to be made use of, to hinder the enemy from approaching close to the wall. The roof is broken down, and all combustible matter covered with earth and rub- bish, to defend the house from an attack from above, which might otherwise be executed by ladders. In a stone house, the walls will gene- rally be strong enough, or, if not, they aie to be prepared as above. The same is also to be ob- served respecting the windows and the roof; and, if possible, it is to be made shell proof from above. The doors are either

barricadoed, or de- fended by a tambour constructed before them, to have a flanking fire.

A church-yard, a farm, or an estate, is fortified in a similar manner; but, if surrounded by a wall, either loop-holes are made through it, or, if too high, a kind of scaffolds, called echafau- dages, are to be erected, serving for the soldiers to stand upon while firing. The church, or the buildmg on an estate, are then generally used as a corps de garde, and made shell proof, by breaking down the roof and the uppermost story, and using it to cover the building. The doors, and particularly the corners of the walls round such a place, are generally covered by tambours ; but, if time permits, caponniers, and other impe- diments to the advancing of the enemy, are made use of. The street and roads, leading towards them, are generally made impracticable by old or broken carts, harrows, boards with nails, wheels, Sec. All the houses in the neighbour- hood, which may be advantageous for the enemy, or which may favor or cover his approach, are levelled, and the rubbish of them used to strengthen the walls. The trees near such a place, if large, are hewed down or sawed off, that even not a single rifleman may approach covered by any of these parts.

A small, or country town, if surrounded by a wall, is fortified in a similar manner; but echa- faudages are generally used behind its walls, and, if possible, two rows of soldiers are employed, one firing through loop-holes, and the other over the walls. Guns are placed wherever their fire is of the best effect. 'The gates are barricadoed, and covered by impediments which hinder the enemy from advancing ; besides this, they are covered by traverses, and a flanking fire is estab- lished before them, if possible. Only such parts of the gates as are essentially necessary to be open for the communication are not barricadoed, but strongly defended, while every thing is to be done that may render the interior communica- tion better and more easy, by means of sufficien passages.*

PART III.

ON THE ATTACK OF FORTIFIED PLACES.

It has been suggested that our treatise on the

above art requires some detailed mode of attack,

as one of the best exemplifications of the doc-

trine of fortification or defence. We do not hesitate to avail ourselves of that suggested by colonel Douglas, and which he insists will over- come all the 'obstacles opposed as well by the ordinary modes of fortification, as by the new method of M. Carnot.

The ordnance required for the attack shown in plate VII. is as follows : —

No. of Battery.

Guns.

Mortara.

Howitzers.

Pierriers.

1

7

2

2

4

2

3

4

2

4

7

2

5

10

4

6

10

4

7

3

8

3

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4

12

4

13

5

14

5

15

8

4

()0

24

20

10

16

5 1

2

17

5

2

18 19 20

5 5 5

Brouglit forward frc

2

m 2

2

the other batteries

21

5

2

22

5J

35

This proportion of ordnance is about the same as that usually estimated for the attack of a front of Vauban's first system, calculated at the lowest rate.

The attack (plate VII.) is made upon a bastion and its collateral demi-

lunes.

The first parallel is traced, as usual, about 300 toises from the most advanced points of de- fence, and extended sufficiently to embrace the prolongations of all the works which have in- fluence on the attack.

The inward faces of the adjoininp- bastions, and their counterguards, are ricoched by the batteries 1 and 4 at the extremities of the parallel; and the batteries 2 and 3 are estab- lished to ricocher the inward faces of the two demi-lunes and their ditches.

At the same time that these batteries are con- structing, approaches are pushed forward on the three capitals; and the second jiarallel com- menced as soon as the ricochet batteries, 1, 2, 3, and 4, are in activity, which should be in thirty- six hours after their commencement.

M. Carnot despises so completely all the early operations of attack, that we may presume upon being very little opposed in constructing these works ; and consequently that they may

easily be finished in tlie usual manner and time. The barbet batteries in the saliants of the demi- lunes would soon be destroyed and the guns dismounted, if not removed upon the completion of the batteries 2 and 3, by which the inward faces of the demi-lunes are ricoched. The faces of the two collateral bastions and their counter- guards would also be ravaged and swept by the batteries 1 and 4 ; and, if necessary, batteries might also be placed in the first parallel, to rico- cher the faces of the bastion attacked, and its counterguard ; but the importance of throwing a more powerful fire upon these works should in- duce us to reserve this battery for position in the second parallel, satisfied that it may be con- structed without establishing more ricochet bat- teries in the first place of arms. The battery marked in dotted lines in the plan, may, how- ever, be constructed, and should be armed with heavy mortars and howitzers, to fire, at low ele- vations, to ruin the circular portion of the es- carpe-wall opposite to the casemated battery of the gorge ; and to injure or break in the case- mates, if eight-inch mortars are placed in this battery, they should use, occasionally, sixty- eight pound shot, or shells filled with lead; but heavy iron howitzers, or carronades, will do better : there can be no doubt that with such means the escarpe-wall and casemates would sustain very considerable injury.

As soon as the second parallel is completed, the batteries 5 and 6 are established to ricocher the faces, chemins-des-rondes, ditch, and counter- guard of the bastion attacked ; and the outward faces of the adjoining demi-lunes with their ditches. The ends of the parallel are secured by

redoubts, armed with field artillery.

When batteries 5 and 6 are in activity, the demi-places-d'armes are commenced : they are run out from the flank branches of batteries 5 and 6, untd the prolongations of the inward faces of the demi-lunes are intercepted, and there the howitzer-batteries 7 and 8 are constructed.

The batteries made in the second parallel, to ricocher the faces of the bastion attacked will be so effectual in ruining thei" defences, that it does not appear necessary to construct half-parallels and howitzer-batteries against them, as has been done against the faces of the demi-lunes.

The zig-zags upon the capital of the bastion are pushed forward, from the second parallel, simultaneously with the construction of the half parallels ; and, as soon as the batteries 7 and 8 are in activity, the third jrarallel is commenced, traced, in a right line nearly, joining the three saliants of the glacis en contrcpente.

The half-parallels are now extemled outwards from batteries 7 and 8 to embrace the prolonga- tions of the flanks of the adjoining bastions, and the batteries 11 and 12 there constructed. The extremities of the half parallels are connected with the second parallel by trenches or places of arms, which are thus flanked by the adjoinmg faces of the redoubts, and cover tlie batteries in the half- parallels from being turned by sorties. At the same time that this is doing, the howitzer-batteries 9 and 10 are established in the third]iarallel, to ricocher the faces of the bastion attacked, its ditch and counterguard, if no half-parallel and

howitzer-batteries have been constructed for these purposes.

The objects of the mortar-howitzer-batlery, No. 15, are to endeavour to ruin as much as possible the escarpe-vvall of the bastion, and the casemated batteries; also to ricocher, and shell, the communications, chemins-des-rondes, and retranchement geiierale.

An attentive inspection of the plate will show, that tiie besieged must suffer greatly from this battery, particularly at that advanced period of the siege which will oblige them to keep their defences manned : for the entrances to the chemins-des-rondes of the bastion being in its gorge at the base of the interior slope, the troops entering and returning will be continually pass- ing, close to tlie back-wall of the detached case- mates wliich iiank the ditch, in directions pa- rallel to the capital of the work, ard consequently

exposed to ricochet fire from battery No. 16; and the ramp leadmg to the interior of the bas- tion, being constructed exactly u])on its capital, vvill be much ravaged by the continual ricochets fired in that direction. The sevei casemates a [)ierriers being open at the ends, all well directed shot or shells which do not pass more than fif- teen feet over the top of the escarpe-wall, will either enter a casemate, or, striking the piers, or the ends of the arches, knock off splinters of stones that cannot fail to commit great destruc- tion among the troops lining the wall immedi- ately in front.

Nor will the battery itself remain in a perfect .state to this period of the siege. It is not too much to expect that eight heavy mortars, or liowitzers, in action since the opening of the bat- teries, will have done very material damage to the escarpe-wall by which the ends of the case- mates are covered ; and it is evident that, where- ever a breach or fracture is made in it, the inte- rior of the adjoining casemate will be completely exposed to direct fire, whenever a lodgment on the saliant of the bastion is established : and it should be remarked that the escarpe-wall is only four feet six inches thick, in the recesses made ˆor receiving troops.

As soon as the third parallel is finished, lodgments should be made on the crest of the vlacis, by saps branching outwards from the three capitals, in circular directions round the saliants, and thence parallel to the edge of the glacis ; constrnctiu'j traverses and parades wherever it may be necessary to defilade the interior of the trenches from any of the works of the place.

Double-saps are pushed forward at the same time from tlie third parallel, and an advanced]iarallel worked riglit and left to join the lodg- ments, or com'onnement, of the glacis.

At the same time that these works are commenced, trenches are worked from the half-parallels near batteries 11 and 12, to obtain ˆprolongations upon which to construct the batteries 13 and 14, which have very important objects to accomplish, viz. to ri- cocher the faces of the cavaliers, and the re- tranchement general. It appears by measure- ment and calculation obtained from the difference of command of the cavalier and demi lune, tofcll'ier with t'le distance between tlieir sections

on the line of this prolongation, that the cavalier may be seen at the point marked by the right of battery number 13; and terms taken from the respective commands and distances of the retrenchment and other works on the line of its prolongation show that it may be seen at the places marked for batteries 13 and 14 and consequently that it may be ricoched in both directions. The prolongations of tlie re- trenchment are obtained, as the plate will show, clear of the cavaliers ; for the command of these works is such as to cover batteries 13 and 14 from all the intercepted portions of the

retrenchment. It is only therefore from the parts most remote to the bastion attacked, that these batteries can be seen, and that very obliquely : — they cannot be counterbattered. Thus the por- tion of the retrenchment from which battery 13 may be seen, would be ravaged by the alternate ricochet battery 14 ; and the part affecting it, be ricoched by battery 13. The apparint exposure of batteries 13 and 14 to several stages of fire, renders it necessary to notice these circumstances, in order to meet here any observation that might occur as to dif- ficulty in constructing and using these batteries. The nature of the polygon affects some of these circumstances, and would require some modifi- cation in the plan of attack ; but we must con- fine our reasoning to the case before us. The batteries 13 and 14 are connected, by trenches, with the couronnement of the glacis, and armed with five twenty-four pounders each.

The trenches, saps, and parallels, should bt defiladed from the fire of the place, by making their terrepleins parallel to the" plane in which the crests of the enemy's works, and the hˆ- sieger's trenches lie, so that the lines of direct fire, passing close over the parapets of the trenches, parallel to the plane of their interior spaces, do not command them any more than if both were in the same horizontal plane. This only requires the additional labor of taking out the prism of earth necessary to slope the bottom of the trench in a plane parallel to that of the command (which, in the present case, is very trifling), and to make the parapets of the batte- ries a little higher than usual. If this be care- fidly executed, it will effectually cancel the ad- vantages which M. Carnot dwells so much upon, as arising from this effect of command.

We are now come to that part of tlie o{)era- tion at which M. Carnot says the besiegers will find themselves exposed to the full effect of sjrties.

Before parallels were introduced, sorties, it appears, were very generally successful. This has furnished M. Carnot with many facts cal- culated to show the good effect of these enter- prises of valor before the science of attack re- ceived its vast improvement from the experience of its great master, Vauban ; and there is no want of examples to show that sorties may always be made with success from places attacked with insufficient force. But if approaches and batte- ries be well protected by parallels, and tlie.y. intrenched poaitiom be properly occupied, vigi- lantly gnaided, and crallantly defended, sorties will be so severely punished, whatever degree of

temporary, transient success may attend them, that, perhaps, a siege

cannot commence ivith a circumstance more auspicious to the besiegers, than that of meeting an attack of this nature with proper means and prudent dispositions. The experience gained during the wars of Louis XIV'., in which the science of attack was perfected to its present state ; and the opmion of all the great military authorities, of which that age was so prolific, are condensed in the maxims and instruction given in the eighth volume of the Military History of that period, by the marquis (le Quincy, who observes, ' Sorties are dangerous enterprises when the attacks are supported by parallels; and generally produce little advan- tage, and always sustain great loss. We are often tempted to estimate the character of a de- fence by the sorties d'eclat made during the siege ; but these contribute more to the reputa- tion of the governor for gallantry, than to the advantage of the prince ; since it is certain that any retardation they may occasion to the enemy, bears no comparison to the loss which the be- sieged always sustain on such occasions.' Similar opinions may be traced in every work of charac- ter that has been written upon this subject, from the date of the authorities just mentioned, to the admirable record of our practice, which, together with corrective observations for future guidance, lieutenant colonel Jones has given in his Journal of Sieges. If the example set by the publica- tion of that work be followed by officers who may be charged with similar duties hereafter, we may reasonably hope that the British service will not always remain dependent on foreign works or systems for its guidance

Now if it appear that the attack marked upon the plan, be as well supported and covered by places of arms ; as little exposed to be taken in flank ; in short, as capable of opposing and de- fefiting sorties as that disposition of parallels, trenches, &c.,upon which the opinions and max- ims just mentioned have been formed, then it only remains for us to consider, whether the facilities which i\I. Carnot has contrived for bringing out liis troops should overturn what has been so generally experienced, and taught, as to the or- dinary failure, and disadvantageous results of such enterprises — a question which resolves itself into this : Whether the expediency of making sorties depends upon the mere convenience, or facility, in bringing out the troops; or, with whatever ease they may get out, upon the de- fensive measures and force opposed to them ; the])rospects of success ; the consequences of fai- lure ; — the loss likely to be sustained ; — and the circumstances of the c;arrison as to being strong enough in force, to afford that loss, and good enough in quality, to resist the moral effects of a defeat, which M. Vauban justly observes is so hurtful to the spirit of the garrison. If these be the governing considerations which sho\ild deter- mine the propriety of undertaking sorties, thc-n the accessibility of all M. Carnot's outworks, and consequently their exposure to be assaulted when weakly garrisoned, is a sacrifice made to that on • which tlio issue

does not essentially depend, and one that would oblige the besieged to keep bodies of troops continually posted in works of such

plain, unbroken capacity, -is to suffer dreadfully from the very nature of fire which M. Caruot had intended only to inflict.

When a garrison is so numerous, or wlien the besieging force is so inadequate to the enterprise, as to just.fy the measure of making sorties in force, there is no difficulty in filing out troops for this purpose through the numerous debouches provided in an ordinary covered-way. If a sortie is to be made against the second parallel, the troops and workmen composing tlie main- body, move out in eight columns (immediately afterwards formed into four), from eight d iflerent outlets in the four re-entering places of arms, each passage admitting easily four men abreast, and consequently of the transit of 320 men per minute, if moving at the rate of eighty paces of thirty inches each in that time. Two flanking par- ties to cover the operation move out, each in two columns, from the passages in the more remote places of arms of the adjoining fronts. Tliese debouches altogether admit of filing out, and forming in line at the foot of the glacis, a body of 2560 men, exclusive of the flanking parties, in about seven minutes ; and the time required for this operation may be shortened by placing a number of step-ladders to mount over the pali- sades in the three saliant places of arms of the front attacked. If a sortie is to be made against the third parallel, eight or ten step-ladders should be placed in each of the three saliant places of arms, and the eight communications from the four re-entering places of arms used besides.

It does not appear then that there is any such difficulty in filing out troops for sorties from ex- isting places, as should induce us on this account to abandon obstacles which are absolutely ne- cessary to prevent the besiegers from easily get- ting in. The new system of glacis coupes may be calculated to admit some brilliant, though generally rash exploits, from a place provided with a numerous garrison, or attacked with in- sufficient means ; but it will prove most alarmingly defective when the places to which such works may be added come to fulfill the true purpose for wliich fortifications are erected — to enable a small force to oppose seven or eight times their number. When this occurs, the very f\tcilities of egress, which under such circumstances the the besieged cannot use, will give facility of in- gress which the besiegers will not fail to a^ail themselves of; and it appears to me that the purely defensive qualities of these works are so defective, that a small garrison, capable enough of defending for a time ordinary works of equal development, would be insecure in this ; and that a weak garrison would be utterly inca))able of defending such a place at all : and j)erhaps these works are more defective in partial appli- cation to old systems, than in a full adoption of the whole scheme of defence.

M. Carnot is so we'd aware of the impossibility of defending his glacis coupes de pied-ferme, and of using vertical fire at the same time, that he says ' these works should not be occupied lest the enemy should take them by assault, and, getting mixed with the troops posted in them, take prisoners in the mMee, and thus prevent the besieged from firin

M. Carnot here again asserts the efficacy of ver- tical fire, to answer this obvious inference — that if the counterguard is not occupied, the besiegers may easily carry it by assault, and establish themselves upon it. He says that this cannot be done, on account, chiefly, of vertical fire; but we have shown that if he resorts to this mode of defence, he cannot occupy the escarpe-wall or saliant of the bastion either ; and if so, the be- siegers may not only take the counterguard, but proceed, without loss of time, to the attack of the bastion. We shall here say no more on the subject of sorties, but refer the reader to the plan.

All the works — all the exterior debouches and ditches from which sorties can proceed, are, at this stage of the siege, under all sorts of fire. The passages between the ends of the demi-lunes and the faces of the counterguards are enfi- laded and flanked from the different lodgments on the saliants of the glacis. The flanks of the attack are well secured against sorties from the adjoining fronts. The second parallel is ap- piiyed upon redoubts, and covered from being turned, by being outflanked by the first place of arms. The third parallel is connected with the second by trenches of defence, or places of arms, flanked by the adjoining faces of the redoubts. The couronnement of the glacis is also covered in flank by the places of arms connecting bat- teries 11 and 13 at one extremity, and 12 and 14 at the other; and there is absolutely nothing in the proposed attack, bearing upon the question of making sorties, that should over- turn the general principles already established by long experience as the governing considera- tions which should be consulted, and which it has been sl'own are not at all connected with any principles of construction.

When the couronnement of the glacis is com- pleted, and the counterbatteries established, the position of the besiegers would be found still more capable of defeating and punishing the sorties ; for the counter-slope forms a good old- fashioned glacis to the besieger's trenches on its crest, and gives them all the advantages of a covered-way and glacis opposed to the place ; — advantages surrendered to them for a very de- fective, and, in some cases, dangerous substitu- tion, which saves the monstrous difficulties and labor attending the descent into the ditch, and

enaljles the besiegers to cover the passage of it from batteries placed on the crest of (to them) a glacis proper.

M. Carnot mentions repeateoly, tne defence of Grave, in 1674, as a brilliant instance of pro- tracted defence arising entirely from the effects of continual sorties ; and supports his opinion of the advantages of a glacis en contrepente by stating, that ‘ the chief cause which contributed to the success of those enterprises of active de- fence which took place at Grave, was, precisely, that the place had nether Counterscarp revetment, traverses, nor other obstacles in the covered-way ;’ and consequently that sorties were made with facility. It is proper therefore that wo should look rianowly into the circumstances attending this sinrre, to see how far they confirm the theory which M, Carnot has endeavoured to establish upon it.

M. Rabenhaupt was detached by the prince of Orange, with about 11,000 men, to besiege Grave, in which there was a garrison of 4000 men commanded by M. Chamily, an oflScer already distinguished by his conduct at Candia and in Portugal.

The investing force required to attack a place such as Grave, containing a garrison of 4000 men, should not be under 21,000 men, at the very least. This is the very lowest calculation that can be made consistently with the number of troops required to furnish working parties, guard the trenches, and provide for camp and line duties.

lire force required for giiarding the trenches should not be less than three-fourths of the strength of the garrison, and unless this be ob- served the works of attack will be continually exposed to interruption, and perhaps to destruc- tion, by sorties. Now, what sufficient appro- priation of force to these several duties could M. Rabenhaupt have made with 11,000 men? The proportion required for line, camp, and other duties, is generally rated at, and cannot well be under, one-tenth of the whole. This taken at three reliefs is . . . 3300

Working parties, at least 1200 men, ”

taken at three reliefs, is . . 3600

Which taken from

6900 11,000

Leaves, for guarding the trenches, &c. . 4100 This, taken at three reliefs, only furnishes 1366 men to oppose sorties which, no doubt, were made with 3000 men ; and in the above calcula- tion no allowance is made for sickness or casual- ties, and all the duty taken at three reliefs, which no

troops could stand but for a very short ser- vice, in very fine weather.

It appears, therefore, that M. Rabenhaupt attacked the place with means so insufficient as necessarily to expose himself to all that occurred, even had he been opposed to a less enterprising officer. This, indeed, is admitted as the cause of the protracted defence, by the very historian who celebrates the event. M. Quincy, in his Ilistoire Militaire de Louis XI\ˆ, vol. i. page 387, says that ‘ from the frequency of the sorties it was difficult to pronounce whether JVL Raben- haupt was the assailant or the defender; which showed the general the error he had committed in having flattered himself that he could re- duce the place with the small force which had been given him.’

M. Carnot is in error as to what he auvances respecting there having been no traverses in the covered-way, or other exterior obstacles at Grave. The Ilistoire du Corps Impˆ‘rial du Gˆmie in- forms us, page 114, ‘ that M. de Chamilly, cer- tain of being attacked, had perfected all the works — thickened and reveted the parapets — made bomb-proof magazines under the ramparts — placed a double row of palisades, barriers, and traverses, in the covercd-u-ay ;’ and that he op- posed all sorts of exterior obstacles to the ‘ che- minemens de I’ennemi.’ This differs very mate- rially from M. Carnot’s account. It shows that the usual defensive obstacles of a regular covered-

v.i\y do not prevent active defence by sorties, wlien circumstances of relative force and other considerations, justify their being undertaken; and so far are the real circumstances of this siege from holding it up as a splendid example to show, generally, the vast advantages, and en- force the propriety, of making continual sorties, it appears, that the attack was a very condemna- ble attempt with a force that could not hold out any fair prospect of success. It is well known that, when the prince of Orange was obliged to raise the siege of (Judenarde, he marched to Grave witli the Dutch contingent, and that M. Chaniilly’s garrison had been so nmch reduced in the sorties it had made, that the place soon surrendered, although its defences were not much injured. The terms granted to the garrison were such as were due to brave men who had done their duty in chastising, with vigor and spirit, a rash attempt made upon their fortress, but who surrendered to a force which made any further resistance vain and hopeless.

We now proceed with the attack. Batteries 17 and 18 are constructed to

countcrbatter the faces of the collateral bastions; 16 and 19, against the faces of the bastion attacked : bat- teries 20 and 21 counterbatter the acting faces of the cavaliers, which it must be recollected have already been ricoched by batteries 13 and

14.

Without ascribing any superior degree of efficacy to the fire of the batteries by which the faces of the demi-lunes will have been ricoched, there can be no doubt that they may easily be taken by assault. We have, indeed, the admis- sion of the author for asserting that troops oc- cupying them would suffer so dreadfully as to oe incapable of defending them. — He admits, ex- pressly, page 492, ‘ that the demi-lunes are so much exposed to stones and ricochets, that troops cannot remain in them.’ The form given to the cavaliers for the purpose of strengthening their saliants, shows that they are designed to prevent lodgments from being established on the demi- lunes ; but the batteries 13 and 14 counter- batter these saliants, whilst 20 and 21 take them in flank and in reverse ; and, as the command of the cavalier prevents the salients of the demi-lunes from being seen from the in- tercepted parts of the retrenchment and fausse- braye, we may assert that the besiegers will not experience much difficulty in establishing themselves on the saliants of the demi-lunes, as shown in plate VII.

These lodgments should not be much extended at present; — it will be sufficient to occupy the saliant of the rampart with a good, solid, lodg- ment, commanding the interior of the work; and particularly observing the spaces between the ends of counterguards, and the faces of the cavaliers, by which only the troops for the retours offensifs can come forth.

It will now be necessary for the besieged to show which mode of defence he means to adopt for the counterguards and bastions ; — whether he intends to defend them de pied ferme, or by vertical fire — both he cannot use. If he prefer the latter, the besiegers should assault the coun- terguard and form a lodgment on it, as soon as

the trenches and epaulements are made acros? the ditch. These trenches should be fitted as places of arms to oppose sorties. The progress of the attack is not marked on the plan, further than the occupation of the counterguard and the passage of the ditch, not to deface the fortifi- cations.

A mine will then be made in the saliant of the counterguard. If it be countermined, as M. Carnot suggests, then ‘ a war of mines’ will ensue ; but the result will be, that the saliant of the work will be demolished by one, or other, or both parties ; and thus the main obstacle re- moved which M. Carnot admits, page 480, ‘ is so indispensable to cover the escarpe-wall of

the bastion.' If a war of mines should not be re- sorted to, the besiegers should drive a gallery perpendicularly through one of the faces of the counterguard, on a level with the ditch, as soon as a lodgment is made on the crest of the work. The labor attending this operation is much less than in making the usual galleries of descent into a ditch. "The length of a gallery through M. Carnot's counterguard is about ten toises : the galleries of descent into the ditch of an or- dinary place are about eighteen toises each.

When the counterbatteries and epaulements in the ditches are finished, the position of the besiegers on the crest of the glacis en contre- pente would be so formidable, that we do not see how it Is possible for the besieged to make sorties. The only debouches from which they can issue to attack, directly, the works of the besiegers, are exposed to two double tiers of enfilade and flank fire : for batteries 20 and 21 look directly into the spaces between the ends of the demi-lunes and the faces of the counterguard ; and the countersloped glacis enables these batteries to fire over the epaule- ments in the ditch, and to combine their fire with that of the troops lodged in these works ; for a shot fired from battery 20 to the bottom of the exterior slope of the cavalier, passes eight feet over the crest of the epaulement. A sortie issuing from either of these debouches would also be exposed to batteries 16 or 19, and to the epaulements in front of them, as soon as the enemy's troops appear ; so tViat no sortie can come forth from these debouches without being exposed to a quadruple line of fire, under a continuation of which they would then have a very formidable line of connected places of arms, to attack.

The debouches from the other sides of the demi-lunes are under fire of the batteries 17 and 18, and the corresponding epaulements respectively ; and the position of the besiegers opposite to these outlets is no less formidable than the other.

From the counterguard the besiegers proceeil into the ditch of the bastion, in wliich strong epaulements are constructed to cover the passage, and to oppose sorties from the opposite debouche. If the saliant of the counterguard has been destroyed, or even much lowered, the saliant of the escarpe-wall may be wholly or partially breached by the battery 22. If the coun- terguard be entire, tlie saliant of the escarpe- wall will be destroyed by mine. M. Carnot

asserts, that should the besiegers oven succeed in opening the counterguard,

and in breacliing the escarpe-wall, it would nevertheless be impossible for them to assault the bastion, because the columns of attack would be taken in both flanks by sorties from the ditch of the bastion, and by the chemin-des-rondes; — turned and cut off' by great sorties issuing from the glacis en contre- pente. But it is evident that, whenever the saliant of the escarpe-wall is breached, both branches of the chemin-des-rondes may be enfi-laded from the lodgments on the counterguard ; or, if only a few feet of the top of the wall were knocked down, that the remote ends of the che- min-des-rondes would be so much exposed as to prevent the besieged from re-occupying them, when, ceasing their vertical fire, they send forth their 'corps d'elite,' as M.Carnot st".ites,to chase away the debris of the assailant's columns. It may indeed reasonably be expected that, when the lodgments on the counterguards aie formed, tlie escarpe-wall will he found to have received very material injury from the ricochet batteries; and the chemin-des-rondes he much encumbered, and perhaps rendered impassable in many places, by fragments of masonry, and rubbish from the slopes of the work, which the ricochet fire will iiave beaten off, and rolled down into the hollow space. With respect to the sorties to be made in the main ditch, ' to take the columns of assault in both flanks,' the attack has provided against such enterprises, by lodgments and epaulements which oppose them with double tiers of fire, and against which the troops would have to advance in narrow columns, presenting their alinements to these batteries. As to the large sorties issuing from the glacis en contrepente, to turn or cut off" the assailants, M. Carnot must l|ive aimed this observation at such assaults as might be impru- dently made before a complete lodgment should be established on the crest of the covered-way ; c\nd to have fancied, throughout, that his system would be attacked in the same spirit of rash bravery and 'brute force,' — disregard of science and human life, as that in which the defensive scheme has been conceived.

A lodgment should now be made on the sa- liant of the bastion, either by assault, or by sap- ping up the exterior slope. Battery 13 will cover this operation by throwing shells into the interior of the work ; and the howitzer-batteriesy 9 and 10 will participate, first by a heavy fire on the saliant and faces of the bastion ; and, during the assault, by throwing shells into the interior of the bastion and upon the battery on

t!io circular])ortion of tlie retrenchment general. According to M. Carnot's doctrine, the actual assault of the breach will be opposed by vertical fire : so long therefore as the batterie de gorge continues to throw vertical fire, the assailants are safe from ' coups de main ;' for no part of the interior of the bastion can then be occupied by the besieged. When the fire ceases, they may be expected. This is what INI. Carnot calls reversing the character of the operations of a siege : it does so ; and brings the alternation to this — that the besieged must now move forward, :

dccouvert, from the gorge of the bastion, under a great profusion of all sorts of yertical fire, to attack the besiegers lodged on its saliant ; for it is clear that the batteries which we have enume- rated may play upon tlie interior of the bastion during the assault, and also whilst the besiegers are establishing and defending their lodgment on its saliant. This lodgment being formed, the mode of further proceeding will depend upon the condition in which the besiegers find the circular portion of the escarpe-wall. If, as ma)- reasonably be expected, it is much ruined, there will be little to apprehend from the batteries blindees. The most formidable battery is that on the circular portion of the retrenchment, against which therefore every piece of ordnance that can be brought to bear should be directed. The mortar-howitzer-battery 15 — all the guns of 13 and 14 — the howitzer-batteries 7, 8, 9, and 10, may all combine in various degrees ; and under the influence of such a mass of fire there can \)e no doubt that a lodgment may be formed in the saliant of the bastion ; when the guns of battery 22 Avill be brought up to arm a battery established there. This will soon complete the ruin of the scarp-wall : the interior of the casemates will then be completely exposed ; and the barricades in the postern, being seen through the central case- mate, may then be broken open and des- troyed. But it is evident that the place can oppose no further effectual resistance, after a lodgment in the bastion is established : for, as soon as the escarpe-wall is ruined, the casemates become untenable, and may then prove extremely useful to the assailants in the assault of tlie re- trenchment, by the cover they afford to prepara- tory dispositions: and the chemins-dci-rondos being gained from the back of the casemates, columns of attack may circulate in them, to turp the troops opposing the direct assault of the s.v liant.

Fortified Island, an island in the Eastern Sea, lying about a mile from the coast of Canara, nearly opposite to Onore. Its name is derived from its fortifications, which were greatly strengthened by Tippoo Saib, from whom it was taken, in 1792, by three British frigates, when it contained a garrison of 200 men, and mounted thirty-four pieces of cannon. Cocoa-nut trees, palms and plantations, are produced here. It is about a mile in circuit. Long. 74° 27′ E., lat. 14° i6′ N.

FOR'TITUDE, n. s. Lat. fortitudo, kfortis, strong. Courage ; bravery ; magnanimity ; great- ness of mind; power of acting or suffering well. Strength, force ; not in use.

He wrongs his fame. Despairing of his owa arm's fortitude. To joia with witches and the help of hell.

Shakspeare. The king-becoming graces. Devotion, patience, co\xTa.go, fortitude, I have no relish of them. Id. 3facbeth,

The hetter fortitude Of patience and heroick martyrdom Unsung. Milton. Paradise Lost,

Fortitude is the guard and support of the other virtues ; and without courage, a man will scaixe keep steady to his duty, and fill up the character of a truly worthy man. Locke.

They thought it reasonable to do all possible ho- nour to the memories of martyrs •, partly that others might be encouraged to the same patience and forti- tude, and partly that virtue, even in this world, might not lose its reward. Nelson.

FO'RTNIGHT, /t. s. Contracted rom four- teen nights. Sax. peopjieryne nisht. It was the custom of the ancient northern nations to count time by nights: thus we say, this day seven- night. So Tacitus, Non dierum nuraerum, ut nos, sed noctium computant. — Johnson. The space of two weeks.

And cerles. Lord ! to abiden your presence. Here in this temple of the goddesse Clemence We han ben waiting all this fourtenight ; Now helpe us Lord ! sin it lieth'in thy might.

Chaucer. The Knightes Tale,

Hanging on a deep well, somewhat above the water, for some fortnight's space, is an excellent means of making drink fresh and quick. Bacon.

She would give her a lesson for walking so late, that should make her keep within doors for one fort- night. Sidney.

About a fortnight before I had finished it, his ma- jesty's declaration for liberty of conscience came abroad. Bryden.

He often had it in^his head, bfit never, with much apprehension, 'till about a fortnight before. Swift.

FORTROSE, a town of Scotland, in Ross- shire, on the Frith of Moray, nearly opposite to P'ort George. It is composed of the ancient royal borough of Rosemarkie, and Chanonry, where the bishop of Ross resided ; now the seat of the presbytery. Though the latter of these is about a mile west from

the former, they were united by a charter from king James II. in 1444, under the common name of Fort Ross, now softened into Fortrose ; and tliis charter was ra- tified by James VI. in 1592, who again confirmed it with greate”” nnmunities in 1G12. These char- ters entitled the borough to the ‘ privileges, liberties, and immunities, heretofore granted to Vet. IX.

the town of Inverness.’ It is now l)ut a suuill town, and owes its consequence principally to an academy, under the direction of a rector and two masters. The salaries arise from the accumula- tion of a bequest of 1800 marks Scots in 1669. by a Mr. Thomas Forbes, bailie of Fortrose. Here are still some small remains of tlie ancient cathedral ; part of it being used as a court-house, with tiie vaulted prisons below; and anotlier part as the burying place of the family of Mac- kenzie. There is a regular ferry between this place and Fort George. Fortrose lies six miles south-west of Cromarty, and nine north-east of Inverness.

FORTUTTOUS, arfj. -ˆ Yv. fortuit; Lat.

FoRTu’iTOUSLY, adv. yfoituitus. Acciden-

FoRTu’iTOUSNEss, u. s. > tal ; casual ; happenˆ ing by chance.

A wonder it must bo, that there should be any man found so stupid as to persuade himself that this most beautiful world could be produced by thi fortuitous concourse of atoms. Riy.

It is partly evaporated into air, and partly diluted into water, and fortuitously shared between all the elements. Rogers.

If casual concourse did the world compose.

And things and acts fortuitous arose.

Then any thing might come from any thing ;

For how from chance can constant order spring ?

Blackmore.

FORTUNATE, adj. ˆ Goth, fortu ; Lat.

For’tiinately, adv. >fortunatns. Lucky ;

For’tunateness, n.s. j happy ; successful ; not subject to miscarriage. Used of persons or actions.

I am most /or

O me, said she, whose greatest fortunateness is rnore unfortunate than my sister's greatest unfortunatencss.

Sid7iey. He sighed ; and could no but their fate deplore. So wretched now, so firtunateheiora. Dryden,*

*No, there is a necessity in fate Why still the brave bold man \& fortunate : He keeps his object ever full in sight. And that assurance holds him tirui and right : True, 'tis a narrow path that leads to bliss, '^*

But right before there is no precipice ; f

Fear makes them look aside, and so their footing C miss. Id. 3

Bright Eliza ruled Britannia's state. And boldly wise, and fortunately great. Prior.

Fortunate Islands, in ancient geography, certain islands, concerning tlie situation of which authors are not agreed, famous in mythology for the golden apples of the Ilesperides. The common opinion is, that they are the Canary Islands.

FORTUNE, n.s.&r.n.

For'tuned, adj.

I'or'tUNE-BOOK, 71. s.

For'tune-hunter, n. s.

For'tuneteli., v. n.

For'tuneteller, n.s. own humor ; the good or ill that befalls man success good or bad ; estate ; i)03sessions. To fortune, to befall ; to fall out ; to come to pass casually. Fortuned, lucky; supplied by for- tune. The word as used in composition cannot

2 I

Ft. fortune ; Lat. J for tuna; from /or.s-, •lumce. The power supposed to distri- bute tlie lots of life according to her

FOR

be misunderstood. Fortunetcll, is to foretell events in the lives of individuals : a fortune- teller is one who pretends to this power : a for- tune-book is the book which contains the art of tbrtunetelling, or that is consulted by the impos- tor wlio undertakes tlie task of unveiling futurity. A fortune-hunter means, in common parlance, a man whose employment is to enquire after women with great portions, to enrich himself by marrying them.

Lo ! who may trust on Fortune any throw ? For him. that folweth all iliis world of pres, Or he be ware, is oft ylaid ful lowe : Ful wise is he that can himselven knowc Beth ware ; for whan that Furtune list to glose. Than waiteth she hire man to overthrowe, 15y swicbe a way as he wold lest suppose.

Chaucer. The Monkcs Tale. It fortuned, as fair it then befel Behind his back, unweeting, where he stood. Of anciint time there was a springing well. From which fast trickled forth a silvrr flood.

Spenser. Faerie Qtteene. Fortune, that arrant whore. Ne'er turns the key to the poor.

Shukspeare. King Lear. If thou do'st. And this instructs thee, thou do'st make thy way To noble fortunes. Id.

Not the' imperious shew Of the full fortuned Cxsar ever shall Be brooked with me.

Id. Antony and Cleopatra. I'll conjure you, I'll fortunetell you.

Shakspeare. I'll tell you as we pass along, That you will wonder what ha.th fortuned. Id. They brouglit one Pinch, a hungry lean-faced villain A thread-bare juggler, and a, fortuneteller. Id.

A Wclchman being at a sessions-house, and seeing the prisoners hold up their hands at the bar, related to some of his acquaintance that the judges were good fortunetellers ; for if they did but look upon their hand, they could certainly tell whether thry should live or die. Bacon's Apophthegms.

Forhtne is like the market, where many times, if you can stay a little, the price will fall ; and, again, it is sometimes like a Sibylla's offer, wl)ich at lirst offereth the commodity at full, then consumcth part and part, and still holdetb up the price.

Lord Bacon. An alchemist spends his fortunes to find out the philosopher's stone forsooth, cure all diseases, make men long-lived, victorious, fortunate, invisible, and beggars himself, misled by those seducing impostos (which he shall never attain) to make gold.

Burton. Anat. Mel. Thrice, oh, thrice happy shepherd's life and state. When courts arc happiness, unhappy pawns : His cottage low, and safely humble gate Shuts out proud Fortune, with her scorns and fawns : No feared treason breaks his quiet sleep : Singing all day, his flocks he learns to keep; Himself as innocent as are his simple sheep.

Fletcher's Purple Island. Thou knowest a face, in whose each look Beauty lays ope love's fortunebook ; On whose fair revolutions wait The obsequious motions of love's fate.

Crasfiaw. Here, while his canting drone-pipe scanned The inystick figures of her hand.

He tipples palmcstry, and dines On all her furtnnetellini) lines. Cleaveland.

You who mens fortunes in their faces read. To find out mine, look not, alas, on me :

But mark her face, and all the features heed : For only there is writ my destiny. Cowley's Mist. The gypsies were to divide the money got by stealing linen, or by fortunetelling. Walton's Angler.

Of many who say they do not believe in fortune- telling, I have known few on whom it had not a very sensible effect. Mackcnsie.

This terrestrial globe has been surrounded by the fortune and boldness of many navigators. Temple. No, he shall cat, and die with me, or live ; Our equal crimes shall equal fortune give.

Dryden. Rejoice, said he, to day ; In you the fortune of Great Britain lies : Among so brave a people you are they Whom heaven has chose to fight for such a prize.

Id. But tell me, Tityrus, what heavenly power Preserved yonr fortunes in that fatal hour? Id.

The fate which governs poets thought it fit He should not raise Ins fortunes by his wit. Id. We must, however, distinguish between fortune- hunters and fortunestealers. Spectator,

The adequate meaning of chance, as distinguished from fortune, is that the latter is understood to befal only rational agents, but chance to be among inani- mate bodies. Benfley.

He was younger son to a gentleman of a good birth, but small _/ <

When Miss delights in her spinnet, A fiddler may d. fortune get. Id.

His father dying, he was driven to London to seek his fortune. Id.

Long ago z. fortuneteller Exactly said what now befell her. Id.

My lord, I am no boaster of my love. Nor of my attributes ; I have shared your splendour. And will partake yoMr fortunes.

Byron. Sardanapalus.

ToKTUNE, Tvxt], a name which among the ancients seems to have denoted a principle of fortuity, whereby things came to pass without being necessitated thereto : but what and whence that principle is, they do not seem to have ever precisely defined. Hence their philosophers often intimate that men only framed tlie phantom fortune to hide their ignorance, and that tney call fortune whatever befals a man without his knowing for what purpose. Hence Juvenal, Sat. X., affirms, they were men who made a deitv of Fortune :

Nullum numen abest si sit prudentia. Nos te Nos facimus, Fortuna, Deara, casloque locamus. And Mr. Spence says, that he has seen an an- cient gem in which Cybele, the mother of the gods, is represented as turning away her head from Fortune, in attitude of disowning and re- jecting her. In the opinion of the heathen, there- fore, fortune was only the arrival of things in a sudden and unexpected manner, without any ap|)arent cause or reason : so that the philoso- phical sense of the word coincides with what is? vulgarly called chance. But in religion it had a farther force ; altars and temples in great numbers were consecrated to Fortune, as a de- ity. Hence that beautiful ode of Horace begin-

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O diva, gratum qua roˆis Antiuiu Praesens vel imo tollere de gradu Mortale corpus, vel superbos Vertere funeribus triumphos.

Lib. i. carin. 35.

where he recommends Augustus, then preparing for a visit to Britain, to her protection. I'rom these different sentiments it may be inferred that the ancients at one time took Fortune for a per- emptory cause bent upon d'oing good to some, and persecuting others; and at others for a blind inconstant cause, without any view or de- termination at all. Horace represents Fortune preceded by Necessity, holding nails and wedges in her hands, with a cramp-iron and melted lead to fasten it ; rarely accompanied with Fidelity, unless when she abandons a family ; for in that case Fidelity

never fails to depart with her. She is disrespectfully spoken of by most of the Ro- man writers, and represented as blind, inconstant, unjust, and delighting in mischief. Ilor. lib. iii. carm. 29, ver. 49. Juvenal alludes to a statue of Fortune, which exhibited her as the patroness of the poor infants that were exposed by their pa- rents in the streets. Sat. vi. ver. 605. The painters represent her in a woman's habit, with a bandage before her eyes, to show that she acts without discernment ; and standing on a wheel, to express her instaibility. The Romans, says Lactantius, represented her with a cornucopia, and the helm of a ship, to show that she distri- butes riches and directs the affairs of the world. It is wiili such characters that we see her repre- sented on so many medals, with the inscriptions,

fORTVNA AUG. FORTUNA REDUX. FORTUN.E AUG.

or REDucis, &c. ■ Sometimes she is pointing at a globe before her feet, with a sceptre in one hand, and holding the cornucopia in the other. They borrowed the worship of her from the Greeks, in the reign of Servius Tullius, who de- dicated the first temple to her in the public market. Nero also built a temple to Fortune. The Fortune worshipped at ADlium was proba- bly of the most exalted character of any among the Romans. But the most celebrated temple of Fortune was at Praeneste. Statius speaks of se- veral Fortune there, and calls them the Praenes- tina; sorores.

Fortune Bay, a bay on the south-west coast of Newfoundland, having considerable depth of water, and numerous islets.

Fortune Island, or Good Fortune Island, an island in the Indian Sea, near the south-west coast of the island of Sumatra. Long. 90° 25′ E., lat. 1°35'S.

Fortune Island, a small island in the Eastern Indian Sea, near the north coast of the island of Celebes. Long. 123° 48′ E., lat. 0° 50′ N.

FORTY, adj. } Sax-peopefitij. Four times

Fortieth, w//. 5 ten. The fourth-tenth ; next after the thirty-ninth.

Thannc Jhesus was led of a spirit into desert, to be tomptid of the fecnd. And whanne lie ha

Cliaucer. The Sompnoures Talc.

FOR

Dn fair ground I could hf.sA. forty of them.

Sliakspeare. What doth it avail To be the fortieth man in an entail *

Donne. He that upon levity quits his station, in hopes to be better, 'tis forty to one loses. L' Ettranye.

Burnet says, Scotland is not above a fortieth part in value to the rest of Britain; and, with respect to the profit that England gains from hence, not the four- thousandth part. Swift.

Methinks I see amongst you

*A face I know not — Senator ! your name. Yon, by your garb, Chief of the Forty *

Byron. The Two Foscari.

Forty-feet Way, a part of the Roman road from Castor to Stamford, Northamptonshire.

FO'RUM, w. s. Lat. Any public place.

Close to the bay great Neptune's fame adjoins. And near a forum flanked with marble shines. Where the bold youth, the numerous fleets to store. Shape the broad sail, or smooth the taper oar.

Pope.

The forum was a publick place in Rome, whcro lawyers and orators made their speeches before their proper judge in matters of property, or in criminal cases, to accuse or excuse, to complain or defend.

Watts on the Mind.

FoRUM, in Roman antiquity, was a public place, within the city, where causes were judicially tried, and orations delivered to the people. Fo- rum was also used for a place of traffic, answer- ing to our market place. These were generally called fora venalia ; in contradistinction to the former, which were called fora civilia. The Grecian Ayopac exactly correspond with the Roman fora, being places where courts and mar- kets were held. At Athens they had many fora, but the chief of them were the old and the new. The fora venalia were very numerous. The chief of them were — the forum boarium, for oxen or beef; suarium for swine ; pistorium for bread; cupidinarium for dainties ; olitorium for garden stuffs. The fora civilia were public courts of justice, very magnificent in themselves, and surroundetl with porticoes and stately edi- fices.

At first there were only three principal fora, viz. Romanum, Julianura, and Augustum; but there were afterwards added Transitorium, Tra- janum, and

Sallustii. The first or most eminent of these was the forum Romanum, often called the Forum, on account of its antiquity and its ge- neral use in public affairs. The Comitium, used for holding the Comitia (which see), was a part of this forum, in which stood the rostra, a sort of pulpit, adorned with the beaks of ships taken in a sea-fight from the inhabitants of Antiura.

The ' Julian forum,' called also Cesar's, was built by Julius Ca'sar with tlie spoils taken in the Gallic war. Its area alone, as Suetonius in- forms us, cost 100,000 sesterces; and Dio af- firms, that in size it much exceeded the Roman forum.

'Augustus's foriim' was built by Augustus C;csar, and was .recKoned by Pliny among the wonders of tlie city, "rhe most remarkable cu- riosity it presented was the statues in the two porticoes on each side of «hc main building. In one were all the Latin kings, beginning witl» /I'.neas ; in the other all the kings of Rome, be

ginning with Romulus ; most of the eminent persons in the commonwealth, and Augustus himself among the rest ; with an inscription upon the pedestal of every statue, expressing the ciiie" actions and exploits of the person it represented. This forum was restored by the emperor Adrian.*

Forum is also ui;ed among casuists, &c., for juiisdiction; as In foro legis, &c. The following metaphorical uses of the word are also com- mon in the classics, as Cicero, Suetonius, Flo- rus, &c.

FouuM Agere denoted the bringing on causes out of Rome, in a Roman province ; signifying the same with agere conventum.

Forum Indicere was the act of the prsetor appointing the place in Rome where causes were to be tried.

Forum, in ancient geography, prefixed to a proper name, denoted a market town cr bofough. Of these there were many ; as,

Forum Aliem, a place mentioned only by Tacitus ; and, from his account of it, thought to be Ferrara in Italy.

Forum Appii, a town of the Volsci, in La- tmm, on the Via Appia, a little beyond tne Tres Tabernae, mentioned by St. Luke, as well as by Cicero. It

is set down in the Jerusalem Itine- rary as situated near the river Nymphseus ; now entirely desolate.

Forum Domitii, a town of Gallia Narbo- nensis ; probably built by Ahenobarbus Domi- tius, who commanded in those parts : now Frontigniac, in Languedoc, near the Mediter- ranean.

Forum Fulvii, a town of Liguria, surnamed Valentinum ; from which it is conjectured that it is now Valenza, in the duchy of I\Iilan ; which is confirmed by Peutinger's distances.

Forum Gallorum, a small town of the Cis- padana, on the Via /Emilia, eight miles from' Mutina, beyond the Scultenna. Here Antony defeated Pansa, and was in his turn defeated by Hirtius.

Forum Jut.ium, a town of Gallia Narbonen- sis ; or Forojulium : now Frejus in France.

Forum Julium Carnorum, a town north of Aquileia, in Transpadana.

Forum Tiberii, a town of Gallia Belgica, in the Pagus Tigurinus, on the left or west side of the Rhine ; literally the tribunal of Tiberius, which he held tliere when commander in the Rhetian war.

Forum Vulcani, the Campi Phlegraei of Pliny, a place in Campania, encompassed with rocky eminences, near Puteoli, and distant from it two miles towards Naples, emitting smoke, and in some places flame, like a large extensive furnace, and yielding sulphur.

FORWA'NDER, v. a. For and wander. To wander wildly and wearily.

Than, dismayd, I — left all sole, For-werie — for-wandred , as a fole ; For I nc knewe no cherisaunce.

Chaucer. Ronuiunt of the Rose.

The better part now of the lingering day They travelled had, when as they far espied A weary yiight forwanderiiiy by the way.

Faerie Queene.

FOR'WARD, adv., adj. 5c -j Sax. F0ripean&, For'warder, n. s. [v. a. I formerly written For'wardlv, adv. Vfarthward. See

For'wardness, n. s. i I'ortii. To-

For'wards, adv. J ward^ ; to a part

or place before; onward; progressively. Crabb says, ‘ Onv/ard is taken in the literal sense of going nearer to an object ; forward is taken in the sense of going from an object, or gointj further in the line before one ; progressive has the sense of going gradually, or step by step before one.’ Thus it also signifies anterior ; antecedent ; not behind hand ; not inferior ; premature ; early ; ripe too soon. Applied to the mind, it means warm ; earnest ; ardent ; eager ; violent , ready ; confi- dent ; presumptuous ; impudent ; quick ; hasty. A forwarder is one tliat promotes an object, or fa- cilitates the execution of any thing. To forward, is to hasten ; to quicken ; to accelerate in growth or improvement ; to patronise; to advance.

Only they would that we should remember the poor J the same which I also was forward to do.

Gal. ii. 10. First and forward, ye han erred in the assembling of youre conseillours ; for ye sholde first han cleped a fewe folk to your conseil, and after ye mighte han shewed it to mo folk if it hadde be nede : but certes ye han sodeinly cleped to your conseil a gret multi- tude of peple, full chargeant and full anoyous for to here. Chaucer. Tale of Melibeus.

From smaller things the mind of the hearers may go forward to the knowledge of greater, and climb up from the lowest to the highest things. Hooker.

Absolutely wc cannot discommend, we cannot ab- solutely approve either willingness to live, or forward- ness to die. Id.

Is it so strange a matter to find a good thing fur- thered by ill men of a sinister intent and purpose, whose forwardness is not therefore a bridle to such as <'avour the same cause with a better and sincere mean- ing. Id. When fervent sorrow slaked was. She up arose, resolving him to find Alive or dead, and forward forth doth pass.

Faerie Queene. ‘Tis a perilous boy, Bold, quick, ingenious, ybiu’nrd, capable; He’s all the mother’s from the top to toe.

Sfutkspeare. Let us take the instant by the forward top ; For we arc old, and on our quickest decrees The inaudible and noiseless foot of time Steals, ere we can effect them. Id,

Short Summer lightly has a /brtcard Spring. Id. My good Camillo, She is as forward of her breeding, as She is i’ th’ rear o’ our birth.

Id. Winter’s Tale. You’ll still be too forward.

Id. Two Gentlemen of Verona. The great ones were in forwardness, the

people in fury, entertaining this airy fantasm with incredible affection. Bacon.

He that is used to go forward, and findeth a stop, falleth ofiF his own favour, and is not the thing he was. Id. Essays.

As wc house hot country plants, as lemons, to save them ; so we may house our own country plants to forward them, and make them come in the cold sea- sons. Id. Natural History.

He had such a dexterous proclivity, as his teachers were fain to restrain his forwardness : that his bro-

thers, who were under the same training, might hold pace with him. Wotton.

Old Butes' form he took, Anchises squire. Now left to rule Ascanius by his sire •, And thus salutes the boy too /orjˆard for his years.

Dri/den. The mind makes not that benpfit it should o' ihe infonuation it receives from civil or natural historians, in being too forward or too slow in making observa- tions on the particular facts recorded in them.*

Ldcke. Had they, who would persuade us that there are innate principles, considered separately the parts out of which these propositions are made, they would not perhaps have been so forward to believe they were innate. Id.

When in the sweet and pleasant month of May, We see both leaves and blossomes on the tree ; And view the meadowes in their best array. We hopeful are a joyful! spring to see ; Yet oft before the following uight be past. It chanceth that a vapor, or a frost, Doth all lhQ%t forward bloomings wholly waste. And then their sweetnesse and their beautie's lost.

Geo. Withers. In France it is usual to bring their children into company, and to cherish in them, from their infancy, a kind of forwardness and assurance. Addison.

Unskilled to dart the pointed spear. Or lead the forward youth to noble war. Prior. The sudden and surprising turns we ourselves have felt, should

not suffer us too forwardly to admit pre- sumption. Atterbury.

The Rhodian ship passed through the whole Roman fleet, backwards a.ad forwards several times, carrying intelligence to Drepanum. ArbuthiMt.

Whenever I shine, I forward the grass and I ripen the vine.

Swift. The troops have long arrears of pay oft promised. And murmur deeply — any hope of change Will draw them forward. Byron. Doge of Venice.

FOSSA, in our ancient customs, was a ditch full of water, where women committing felony were drowned ; as men were hanged : nam et ipsi in omnibus tenementis suis omnem ab anti- quo logalem habuere justitiam, videlicet ferrum, fossum, furcas, et similia. In another sense it is taken for a grave, as appears by these ancient verses :

Hie jacent in fossa Bedae venerabilis ossa ;

Flic estfossatus, qui bis erat hie cathedratus.

Fossa, Foss, in anatomy, a kind of cavity in a bone, with a large aperture, but no exit or per- foration. When the aperture is very narrow, it is called a sinus. Foss is particularly used for the cavity or denture in the back part of the neck.

FOSSANO, a town of Italy in Piedmont, seated on the Stura; famed for its medicinal springs, wlience its ancient name Fons Sanus, smce corrupted into its modern one. It was surrounded with walls in 123G. It contains a cathedral, three parisli churches, three convents, and about 900 souls. It lies five miles east of Savigliano, seven south-west of Cherasco, and ten nortl-east of Coni. Long. 7° 5G' E., lat. 44° 45′ N.

FOSSAUII, in antiquity, officers in the eastern cliurcli, whose business was to inter the dead. C'iaconius relates, tliat (Jonstantinu cre-

ated 950 fossarii, whom he took out of the companies of tradesmen ; he adds, that they were exempted from taxes, services, burdensome offices, &,c. F. Goar, in his notes on the Greek Euchologion, insinuates that the fossarii were established in the times of the apostles ; and that the young men who carried off the body of Ananias, and those who interred St. Stephen, were of the number. St. Jerome assures us, that the fossarii held the first place among, the clerks, who had the direction of tlie interment ot the devout.

FOSSE, n. s. Lat. fossa ; . Welsh Jus. A ditch ; a moat.

If a second ditch is made before the glacis, it is called the advanced /osse. Muller on Fortification.

Fosse, a military way in South Britain, begins at Totness, and passes through Exeter, Ivelchester, Shipton-Mallet, Bath, Cirencester, Leicester, the Vale of Belvoir, Newark, Lincoln, to Barton upon the Humber, being still visible in several parts, though of 1400 years standing. It derived its name from the fosses or ditches made by the sides of it.

FO'SSET. See Faucet.

FO'SSIL, adj. 8c n. s. Yv.fossile; Lat. /bssi- lis. Literally that which is dug out of the earth.

In this globe are many other bodies, which, be- cause we discover them by digging into the bowels of the earth, are called by one common mmc fossils; under which are comprehended metals and minerals.

Locke.

The fosiil shells are many of' them of the same kinds with those that now appear upon the neigh- bouring shores ; and the rest such as may be pre- sumed to be at the bottom of the adjacent seas.

Woodward's Natural History.

Fossil or rock salt, and sal gemm, differ not in na- ture from each other ; nor from the common salt of salt springs, or that of the sea, when pure. Id.

It is of a middle nature, between fossil and ani- mal, being produced from animal excrements, in- termixed with vegetable salts-

Arbuthnot on Aliments.

M&ny fossils are very oddly and elegantly shaped.

Bentley.

Those bodies which will melt in the fire are called minerals, the rest fossils. Pembcrton.

By the word fossil, used as a denomination of one of three general divisions of natural productions, we understand bodies formed usually within the earth, sometimes on its surface, and sometimes in waters ; of a plain and simple structure, in which there is no visible difference of parts, no distinct on of vessels and their contents, but every portion of which is simi lar to and perfect as the whole.

Hill's Materia Medica.

Fossti,, ALKALI. See Alkali.

Fossil? I'lTcu. See Petuoleum.

Fossils, h> natural history, have been divided into native or extraneous. E.rt.rancoits Fossils are bodies of the vegetable or animal kingdoms accidentally buried in tlie earth by some extra- ordinary meanS; as earthquakes, the deluge, &c. Of the vegetable kingdom tliere are principally three kinds; trees or parts of them, herbaceous plants, and corals ; and of tiie animal kingdom, sea sliells, the tectli, or bony palates, and bones of fishes, complete fishes, and the bones of land

animals. These adventitious or extraneous fossils, thus found buried in ˆreat abundance in various parts of the earth, have employed the curiosity of several of our naturalists, who have each their ditferent systems to account for these surprising appearances. Some consider these shells, &c. to be real stones, emd stone plants, formed after the usual manner of other figured stones ; of which opinion was the learned Dr. Lister. Another opinion is, that these fossil shells, with all their foreign bodies found within the earth, as bones, trees, plants, &c. were buried at the time of the universal deluge ; and that, having been penetrated either by the bituminous matter abounding chiefly in watery places, or by the salts of the earth, they have been pre- served entire, and sometimes petrified. Others think, that those shells, found at the tops of the highest mountains, could never have been carried thither by the waters, even of the deluge ; inas- much as most of tliese aquatic animals, on account of the weight of their shells, always remain at the bottom of the water, and never move but close along the ground.

Dr. Woodward, in his Natural History of the Earth, pursuing and improving the hypothesis of Burnet, maintains that the whole mass of earth, with every thing belonging to it, was so broken and dissolved at the time of the deluge, that a new earth was formed on the bosom of the water, consisting of ditferent strata, or beds of terrestrial matter, ranged over each other usually according to the order of their specific gravities. By these means, plants, animals, and especially fishes, and shells not yet dissolved among the rest, remained mixed and blended among the mineral and fossil matters; which preserved them, or at least assumed and re- tained their

figures and impressions either indentedly, or in relievo. See farther under the articles Deluge, Organic Remains, and Pe- trification.

Native Fossils are substances found either naturally existing in the earth, or lying on its surface ; of a plain simple structure, and show- ing no signs of containing vessels or circulating juices. These Dr. Hill subdivides into csscntiallT/ and naturalli/ simple fossils. Of these some are neither inflammable nor soluble in water ; as simple earths, talcs, fibrariae, gypsum, selenitae, crystal, and s])ars : others, though simple and Uninflammable, are soluble in water ; as all the salts ; and others, on the contrary, are inflam- mable, but not soluble in water ; as sulphur, auripigmentum, zarnich, amber, ambergris, as- phaltum, ampelites, lithanthrax, naphtha, and pissasphalta. 2. Nafiiralli/ compound, but ujimetal- lic fossils. Of these some are neither inflammable nor soluble in water, as compound earths, stones, septarias, siderochita, semipellucid gems, &o. ; others are soluble In water, but not inflammable ; as all the metallic salts ; and, lastly, some are inflammable, but not soluble in water; as the marcasites, pyritae, and phlogonia. 3. Fossils of a metallic Jiaturc. These are bodies naturally hard, remarkably heavy, and fusible in fire. Of these some are perfectly metallic, as being malleable when pure ; such are gold, lead, silver, copper, iron, and tin; others are imperfectly

metallic, as not being malleable even in their purest state ; such are antimony, bismuth, cobalt, zinc, and quicksilver, or mercury. Of all these substances, descriptions will be found under their respective heads ; as well as under Chemistry, Metallurgy, &c.

Fossil Copal, or Highgate resin. A mineral of a pale yellowish-brown color. It occurs in irregular roundish pieces. Lustre resinous. Semitransparent. Brittle. Yields easily to the knife. Specific gravity 1-046. When heated, it gives out a resinous aromatic odor, melts into a limpid fluid, takes fire at a lighted candle, and burns entirely away before the blowpipe. In- soluble in potash lie. Found in the bed of blue clay at Highgate near London.

FOSTER, V. a. ˆ Sax. portjiian, poj-tep-

Fos’terage, n. s. bpoˆeji, poj-tejicil’c, pop

Fos’terer, rejipabefi; Goth. Swed.

Fos’ter-brotheRj and Icel. fostra ; Belg.

Fos’ter-child, voedsteren (from vodir, a

Fos’ter-dam, Vfather. — Minsheu). To

Fos'ter-earth, nurse; to feed; to sup-

Fos'ter-father, port; cherish; train up ;

Fos'ter-mother, to pamper ; to encourage.

Fos'ter-son, Fosterer is one that takes

Fos'terer. J the charge of nourishing

and bringing up. Fosterage is the charge itself;

and all the words in composition speak for

themselves.

Fader I she said, thy wretched child Custance, Thy yonge doughter, fostered up so soft ; And ye, my moder! my soveraine plesance Over all thing (out take Crist on loft) ; Custance your child hire recommendeth oft Unto your grace ; for I shal to Surrie, Ne shal I never seen you more with eye.

Chaucer. The Man of Lawes Tale. I am a man of little sustenance : My spirit hath his fostriyig in the Bible; My body is, ay so ready and so penible To waken, that my stomak is destroied.

Chaucer. The Sompnourea Tale.

She was yfostered in a nonnerie.

Id. The Reves Tale. Fostered she was with milk of Irish breast ; Her sire an Earl ; her dame of Princes blood. From tender years in Britain did she rest. With a king's child, who tasteth ghostly food.

Sttrrei/. Come forth, yonr fottress bids ! Ben Jonson.

Some say that xzMfas foster forlorn children.

Bhakgpeare. Our kingdom's earth should not be soiled With that dear blood which it hath f ottered. Id.

That base wretch, Bred but on alms, and /ostered wito cold dishes. With scraps o' the court. Id Cymbeline.

Some one adjoining to this lake had the charge and fosterage of this child. Raleigh's History.

The duke of Bretagne having been an host and a kind of parent or fosterfather to the king, in his ten- derness of age and weakness of fortune, did look for aid this time from king Henry. Bacon.

In Ireland fosterchildren do love and are beloved by their fotterfathers, and their sept, more than of their own natural parents and kindred. Oavies-

In Ireland they put their children to fosterers ; the rich men selling, the meaner sort buying the alteragc

of their children : in the opinion of the Irish, Jhstertrig has always been a stronger alliance than blood.

Id. oii Ireland,

No more let Ireland brag her harmless nation Falters no venom since that Scots plantation.

Cleaaeland,

A prince of great courage and beauty, but fostered up in blood by his naughty father. Sidney.

The son of Mulciber, Found in the fire, und fostered in the plains, A shepherd and a king at once he reigns.

Drt/den.

There, by the wolf, were laid the martial twins : Intrepid on her swelling dugs they hung ; The foaterdam lolled out her fawning tongue. Id.

Tyrrheus, the fosterfather of the beast. Then clenche'd a hatchet in his horny fist. Id,

Mature in years, to ready honours move j O of celestial seed ! O fosterson of Jove !

Id. Virgil, In vain the nursling grove Seems fair a while, cherished yi'nh fosterearth ; But when the alien compost is exhaust. Its native poverty again prevails I Philips.

The goddess thus beguileo , With pleasant stories, her iahe festerchild.

Addison. Ye fostering breezes blow ; Yo softening dews, ye tender showers, descend.

Thomson. With him his nurse, went careful Acoe ; Whose hands first from his mother's womb did take

him. And ever since hz.\e fostered tenderly : She never might, she never would, forsake him.

Fletcher's Purple Island, My father was your father's client, I His son's scarce less than foster-brother,

Byron. Doge of Venice.

FOSTER (James), D.D., a distinguished and popular dissenting minister, born at Exeter in 1697, and educated there under Mr. Ilallet. He began to preach in 1718, but he became ob- noxious on account of his opinions concerning the Trinity. His. talents were hid among obscure country congregations until 1724, when he was chosen to succeed Dr. Gale, in Barbican, where he labored as pastor above twenty years. The Sunday evening lecture, which he began in the Old Jewry meeting-house in 1728, he conducted till within a short time of his death, and persons of all persuasions and ranks in life flocked to hear hinˆ. His eloquence as a preacher was of the first order, and Pope has honored him with the following commendatory couplet in the epilogue to his Satires :

Let modest Foster, if he will, excel Ten metropolitans in preaching well.

In 1748 the Marischal College of Aberdeen conferred on him the degree of D.D. He pub- lished, in 1720, an Essay on Fundamentals, with a particular regard to the ever blessed Trinity, Jtc. ; in 1731 a valuable work, entitled the Usefulness, Truth, and Excellency of the Christian Revelation against the objections con- tained in a late book, called Christianity as old as the Creation, &c.; several volumes of sermons in 1734 and 1744; and in 1746 an account of the behaviour of the late earl of Kilmarnock, after

his sentence, and on the day of his execution. His attendance upon this nobleman at the scaffold, is said to have deeply affected his health and spirits. Dr. Foster afterwards published, by sub- scription, Discourses on all tlie Principal Branch- es of Natural Religion and Social Virtue ; the first volume of which came out in 1749, and the second in 1752. There were 2000 names sub- scribed for tliese volumes, many of tliem those of persons of distinguished eminence and lite- rary abilities. Before the appearance of the second volume of these discourses his healtli had been much impaired, and he died in 1753.

Foster (Mark), an eminent English mathe- matician, of the seventeenth century, who pub- lished a Treatise on Trignometry.

Foster (Samuel), another ingenious mathe- matician of the seventeenth century, and astro- nomical professor in Gresham College, was one of that learned association which met for the cultivation of philosophy, during the political confusions under the commonwealth, and which Charles II. afterwards established into the Royal Society. He died, however, in 1652, before this incorporation took place ; but wrote a number of mathematical and astronomical treatises.

Foster (William), a third eminent English mathematician of the seventeenth century, was a disciple of Mr. Oughtred, and afterwards taught mathematics in London. He distinguished him- self by a work, entitled The Circles of Propor- tion, and the Horizontal Instrument ; published in 1633 in 4to., and dedicated to Sir Kenelm Digby.

Foster (Sir Michael), an eminent English lawyer, born at Marlborough in Wiltshire, in 1689. He received the early part of his educa- tion at the free school of Marlborough, from whence he was removed to Exeter College., Oxford, in which he was a commoner. In 17G7 he was entered of the Middle Temple, and in regular course called to the bar. In 1735 he was chosen recorder of Bristol ; and the same year he published a pamphlet, entitled An Ex- amination of the Scheme of Church Power, laid down in the Codex of Bishop Gibson. In 1745 he was appointed one of the justices

of the King's Bench, on which occasion he had the honor of knighthood conferred upon him. In 1762 he published a Report of some Proceed- ings on the Commission of the Trial of the Rebels in the year 1746, in the county of Surrey. He died in 1763.

FOTHERGILL (George), D D., was born in Westmoreland, 1705, where his ancestors had enjoyed a competent estate for several genera- tions. He studied at Queen's College, Oxford, of which he became a fellow ; and in 1751 was elected principal of St. Edmund's Hall, and vicar of Bromley in Hampshire. He died in 1760 of an asthma. He was author of a collection of much esteemed sermons, in 2 vols. 8vo. The first volume was published by himself, the se- cond was printed from his MSS.

FoTHEUGiLL (John), M. D., an eminent phy- sician, was born in 1712, at Carr-End in York- shire; his parents being I'riends or (Quakers. He was the second of five children, and educated under his grandfather. He afterwards served

his time to I\Ir. Bartlett an apothecary at Brad- ford ; thence he removed to London, and became a pupil to Dr. Wilmot at St. Thomas's Hospital. He then went to the university of Edinburgh to study physic, and took his degree. From Edin- burgh he went to Leyden ; whence, after a short stay, he returned to London, and began to prac- tise about 1740, in a house in Lombard-street, where he acquired most of his fortune. In 1746 he was admitted a licentiate of the college of physicians in London; and, in 1754, a fellow of that of Edinburgh. He afterwards became a member of the Royal Medical Society at Paris, and of the Royal and Antiquarian Societies. He continued his practice with uninterrupted suc- cess till 1778, when disease obliged liim to give up a considerable part of it. Besides his ap- plication to medical science, he had imbibed an early taste for natural history and botany. He was for many years a valuable contributor to the Gen- tleman's Magazine; wliere his observations on the weather and diseases, begun in April 1751, and dis- continued in the beginning of 17.56, became the ex- emplar of similar periodical reports, that have since appeared in various publications. His pamphlet on the ulcerous sore throat, is esteemed the best of his publications; but owes much of its merit to the late Dr. Letherland. It was first printed in 1748, on the re-appearance of that fatal disor- der, which in 1739 had carried off Mr. Pelham's only two sons. In 1762 Dr. Fothergill purchased an estate at Upton in Essex ; and

formed a bo- tanic garden there. In 1766 he began regularly to witlidraw, from Midsummer to Michaelmas, from the fatigues of his profession, to Lee Hall, in Cheshire. He took no fees during this recess, but prescribed gratis at Middlewich once a-week. He was the patron of Sidney Parkinson, and drew up the preface prefixed to his account of the voyage to the South Seas. Dr. Fothergill was also the associate of Mr. Howard, in his at- tempt to alleviate the condition of poor priso- ners. He was likewise zealous for the political interests of the country, and interfered to pre- vent that fatal breach witli the colonies, which produced the final separation of America from the mother country. His public benefactions, his encouragements of science, the instances of his attention to the health, the police, and the con- venience of the metropolis, are too numerous to be particularised. The fortune which he had acquired amounted to £80,000, near £7000 per annum. In the 'nfluenza of 1775 and 1776, he is said to have had sixty patients on his list daily. The disorder which hastened his death was a scirrhus of the prostata, and an obstruction in the bladder, which had been gradually coming on him for six years. He died December 26th, 1780; and his remains were interred in the Quakers' burying-ground at Winchmore Hill. His charac- ter is thus summed up by Dr. Franklin, in a let- ter to their common friend Lettsom : — ' If we may estimate the goodness of a man by his dis- position to do good, and his constant endeavours and success in doing it, I can hardly conceive that a better man has ever existed." His works, con- sisting of medical pieces and pamphlets, of two elegant pieces of biographical eulogy on Dr. Alexander Russel and Peter C'ollinson, and of

some political and miscellaneous essays and let ters, were published, with memoirs of his life, by Dr. Lettsom, in 3 vols. 8vo, 1784.

FOTHERGILLA, in botany, a genus of the digynia order, and polyandria class of plants : CAL. lobed, most entire: cor. none; the germen bifid.' CAPS, bilocular; cells two-valved : seeds solitary and bony. Species one only, a Carolina somewhat resembling the alder.

POTHERING, a peculiar method of endea- vouring to stop a leak in the bottom of a ship while she is afloat, either under sail or at anchor. A basket is filled with ashes, cinders, and chop- ped rope yarns, and loosely covered with a piece of canvas ; to this is fastened a long pole, by which it is plunged repeatedly into the water, as close as possible to the place where the leak is conjectured to lie. The oakum or chopped rope-yarns being thus gradually shaken through the twigs, or over the top of the basket, are fre- quently sucked into the hole along with the water, sc that the leak becqnies immediately choked; and the future entrance of the water is thereby prevented.

A superior method of fothering is now prac- tised, which is performed in the following man- ner : — fasten a sail at the four corners, let it down under the ship's bottom, and then put a quantity of chopped rope-yarns, oakum, wool, cotton, &c., between it and the ship's side : by repeating the latter part of this operation several times, the leak generally sucks in a portion of the loose stuft', and thereby becomes partly, and sometimes wholly stopped. Some persons prefer thrumming the sail, instead of letting down the loose stuff; but in this mode the sail is soon chafed through by the hole if the leak is considerable, without affording sufficient substance to stop it.

FOTHERINGAY, a town of Northampton- shire, about four miles from Stamford, situated on the river Nen. Edmund, duke of York, in the reign of Henry V. founded and endowed a fine collegiate church here, iri which he was in- terred. At the dissolution the college and the choir were pulled down, and the bodies of the founder and his family left exposed, till queen Elizabeth ordered them to be interred, and the present monuments to be erected. The remains of Richard duke of York, slain at Wakefiel I, and of his wife Cecilia Neville, are also buried in this church ; their monuments were re-built by queen Elizabeth. The windows contain some handsome painted glass. Near the church is a free-school. On the north side of the' church is a free-school, founded by Henry 'III. Edward VI. or, as some say, by queen Elizabeth, and endowed with £20 per annum for a master, payable out of the exchequer by the receiver of the county. The bridge over the river was first built by queen Elizabeth in 1573, of timber, with three pillars upon the foundation. Daniel, first earl of Nottingham, and the other trustees for the marquis of Halifax, re-built it in 1 722, of free-stone from King's Cliff. On the south-east side of the Cliff stood the castle, which was of great antiquity and strength. Mary queen of Scots, who had been in the custody of Sir Amias Powlet here, was tried and beheaded in the hall ; and her son James so completely de-

molished the castle, that nothing but the earth works now remain.

FOUGETTE, in military affairs, a species of fire-work frequently used by tiie Indians who in- habit the western peninsula of the Ganges. A French military writer makes the following ob- servations relative to advantages which might be derived from this weapon against cavalry, and for the defence of fortified places or entrench- ments. He observes, that the

tougette, in shape, resembles a sky-rocket, whose flight is brought to run along an horizontal direction. By throw- ing several fougettes into parks of artillery, and upon the caissons, &c., considerable damage might be occasioned from the fire which would inevitably be communicated to some part. A fougette forces itself immediately forward, cuts as it penetrates, by the formation of its sides, which are filled with small spikes, and becomes combustible and on fire at all its points at once.

FOUGHT. The preterite and participle of fight. See Fight.

FOUL, adj. & V. a. Foulfa'ced, adj. Foul'ly, adv. F'oul'mouthed, adj. I Foul'ness, n. it is opposed to fair.

Sax. pul; Goth, and Swed. ful; Gr. tpavkoQ. Not clean; filthy; dirty; miry; nasty. Through most of its significations Crabb observes of this

and its kindred words, that they differ only as degrees of comparison. Dirtiness, he says, is common to these terms, but in different degrees and with different modifications. Whatever dirt is offensive to any of the senses, renders that thing nasty which is soiled with it : the filthy exceeds the nasty not only in the quantity, but in the offensive quality of the dirt: and the foul exceeds the filthy in the same proportion. It is metaphorically applied to what is impure, pol- luted, and unchaste ; to whatever is wicked, detestable, abominable ; the reverse of fair play in conflict or controversy ; hateful ; ugly ; loath- some; disgraceful, coarse, and gross; not bright; not serene ; dishonesty ; want of candor.

My face k foul with weeping. Joftxvi. 16. Seemeth it a small thing unto you to have eaten up the good pasture, but ye must tread down with your feet the residue of your pastures ? and to liavo drunk of the deep waters, but ye vcmˆX foul the residue with your feet? Ezek. xxxiv. 18.

When Jesus saw that the people came running together, he rebuked \he foul spirit. Mark ix. 25.

For cerstes outrageous wratho doth all that ever the Joule fende willeth or commandeth him.

Chaticer. The Peraones Tale. A lord is lost if he be vicious ; And dronkcnncsse is eke a fuule record Of any man, and namely of a lord.

Id. The Sompnoures Tale. All tilings that seem so foul and disagreeable in nature, are not really so in themselves, but only rela- tively. More.

The other half did woman's shape retain. Most loathsome, filthy, foul, and full of vile disdain. S])etu:er's Faerie Queene. He liBites foul leasings and

vile flattery. Two filthy blots in noble gentery.

Huhberd's Tale, It is no vicious blot, murder, or foulness. No unchaste action, or dishonoured step. That hath deprived mc of your grace and favour.

Shakspeare.

Hast thou forgot The fotil witch Sycorax, who with aˆe and envy Was grown into a hoop? Id. Tempest.

He's fallen in love with yowv foulness, and she'll fall in love with my anger. Id. As You Like It.

Not to affect many proposed matches Of her own clime, complexion, and degree. Whereto we see in all things nature tends : Fob I one may smell, in such, a will most rank, Foui disproportion, thoughts unnatural.

Id. Othello. With foul mouth. And in the witness of his proper ear. To call him villain.

Id. Measure for Measure. Kill thy physician, and the fee bestow Upon .he foul disease. Id. King Lear.

It's monstrous labour when I wash my brain. And it grows _/bu/er. Id. Antony and Cleopatra My lord, he speaks most vilely of you, like a foul-mouthed man as he is, and said he would cudgel you.

Id. Henry IV. If black scandal, ox foulfaeed reproach. Attend the sequel of your imposition. Your meie enforcement shall acquittance me From all the impure blots and stains thereof.

Shakipeare. You perceive the body of our kingdom, Hof! foul it is ; what rank diseases grow. And with what danger near the heart of it. Id. Thou play'dst most foully for't. Id.

Who's there besidesybu/ weather ? One minded like the weather, most inquietly. Id. There is not so chaste a nation as this, nor so fre& from all pollution or foulness : it is the virgin of tha world. Bacon.

Foul sights do rather displease, in that they excite the memory of foul things than in the immediate objects ; and therefore, in pictures, those foul sights do not much offend. Id.

The letter to the protector was gilded over with many smooth words ; but the other two did fully and foully set forth his obstinacy, avarice, and

ambition.

Hayward. Consul, you are too mild : The foulness of some facts takes thence all mercy.

Ben Jonson. Piety is opposed to hypocrisy and insincerity and ail falseness or foulness of intentions ; especially to that personated devotion, under which any kind of impiety is wont to be disguised. Hammond.

In his sallies their men might fall foul of each other. Clarendon.

Too well I see and rue the dire event. That with sad overthrow and foul defeat Hath lost us heaven. Milton's Paradise Lost.

In Sion also not unsung where stood Her temple on the offensive mountain, built By that uxorious king whose heart though large Beguiled by fair idolatresses fell To idols foul. Id.

This is the grossest and most irrational supposition, as well as the foulest atheism, that can be imagined.

Hale. So in this throng brif;ht Sacharissa fared. Oppressed by those who strove to be her guard : As ships, though never so obsequious, fall Foul in a tempest on their admiral. Waller.

He that can trave' in deep and foul ways, ought not to say that he cannot walk in fair. TiUotson.

The fury laid aside Her looks and limbs, and with new methods tried The foulness of the infernal form to hide. Dryderu

FOU

Satire has always shone among the rest, AnJ is the boldest way if not the best. To ti'll men truly of their /ou/ei< faults. To laugh at tlicir vaiu dceils, and vainer thoughts.

Id.

Be fair or fold, or rain or shine. The joys I have professed, in spite of fate are mine.

Sweep your walks from autumnal leaves, lest the worms draw them into their holes, and foul your garden. Evelyn.

It is the wickedness of a whole life, discharging all iu lillh ditiAfmilnesi into this one quality, as into a great sink or common shore. South.

The stream is foul with stains Of rushing torrents and descending rains,

AddisoTi.

It was allowed by every body, that so foulmouthed a witness never appeared in any cause. Id.

O brother, brother ! Filbert still is true ;

I foully wronged him : do, forgive me, do. Gay.

My reputation is too well established in the world to receive any hurt from such a /ou/mouˆAerf scoundrel as he. Arbuthnol.

You will have no notion of delicacies if you table ■with them : they are all for rank and foul feeding, and spoil the best provisions in cooking. Felton.

Now singing shrill, and scolding oft between, Scolds answer/wu/m(m

The first born man still in his mind he bore, Foully arrayed in guiltless brother's gore. Which for revenge to Heaven, from earth did loudly roar. Fletcher's Purple Island.

While Traulus all his ordure scatters. To foul the man he chiefly flatters. Swift.

She fouls a smock more in one hour than the kitchen-maid doth in a week.

Id. Direction to Servants. Reason half extinct. Or impotent, or else approving, sees Tho foul disorder. Thomson's Spring.

However the poorjackalls are less foul

(As being the brave lion's keen providers)

Than human insects, catering for spiders. Byron.

Foul, in sea-lan

Foul, in husbandry, a disease of cattle, pro- ceeding from blood, and a waterish rheum that fulls down into the legs, and makes them swell.

Foul Water. A ship is said to make foul water, when, being under sail, she comes into such shoal water, that though her keel do not touch the ground, yet it comes so near it, that the motion of the water under her raises the mud from the bottom.

FOULA, or Foul Island, one of the Shet- land Isles, lying between six and seven leagues

west from 'he main land. It is about three miles long ; narrow, and full of rough, steep, and bare rocks ; one of whicli is so large, and runs up to such an height, that it may be clearly seen from Orkney. This, therefore, may be reckoned with the greatest probability to be the Thule of Taci- tus, whatever might be the Thule of the Phoeni- cians and Greeks. It affords good pasturage for sheep, though very little arable land ; but that, however small in extent, is very fertile, out of the produce of which, with fowl and fish, the poor inhabitants (about twenty-six or twenty-seven families), subsist. They have nothing that can be called a port ; and their only commodities are stock-fish, train-oil, and feathers ; but they are much attached to their situation.

FOULAHS {ATd.h.falahu, tillage, this people being principally agriculturists), the name of a race of negroes, very widely diffused throughout Western Africa. Their original seat has been thought to be that mountainous tract near the sources of the Senegal, bearing the name of Foo- ladoo; and their most powerful existing kingdom is that of Foota Jallo, situated to the south of Gambia; but they also possess Brooks, situated on the higher parts of the Senegal, conterminous with Fooladoo ; Bondou and Foota Torra, between the Senegal and Gambia ; the kingdom of the Seratic, on the lower part of the Senegal ; Ma- sina, on the Niger, between Bambarra and Tom- buctoo ; and Wassela, to the south of the upper part of the Niger. They likewise hold detached districts of various kingdoms in this part of Africa, and often pay to the sovereign a rent or tax for their use of the land. Their employment, as we have intimated, is chiefly pasturage, and they are usually in some degree migratory ; during the wet season, driving their herds to the top of the mountains, and when it becomes dry and parched, bringing them to the side of the rivers. For the defence of their herds against wild beasts, they collect the cattle at night, within a circle of tents or huts, and light fires all round. In the dis- tricts where they do not rule, their villages form a kind of independent republic, governed by their own chiefs. If they are oppressed or en- croached upon, they quietly remove themselves to another territory ; and as no people in Africa bear a higher character, ' to have a Foulah town in the neighbourhood,' says Moore, ' is by the na- tives reckoned a blessing.' They apply occasion- ally to trade, and sometimes to hunting. There is no known instance of a Foulah selling one of his countrymen as a slave; on the contrary, if any of them is found in that condition, they will unite in raising

a sum sufficient for his redemp- tion. The hospitality of the Foulahs is also mucii celebrated. The passion for dancing they share with all the negro tribes, and are extremely fond of music, a proficiency in which is deemed an accomplishment in their chiefs : their airs are said to be very pleasing and tender. Their com- plexion is a dark olive ; they have a thin face, small, high, but expressive features, and long soft hair. Their hue varies with the districts they inhabit ; in the vicinity of the Moors it ap- proaches to yellow ; while among the Mandin- goes it deepens into a muddy black. They are of the middle size, of a graceful form, and of a pe-

cuUarly insinuating air. Maliommedans in reli- gion, they still do not observe the rules of the prophet with any strictness; nor do they exhil)it that intolerance which prevails among the Moors. They speak a language of their own ; but the Arabic is their only written one. Such is the general account which travellers have given of the Foulahs.

M. Mollien, the last writer and observer of the habits of this race, delineates their character, however, in darker shades. He represents them as very intolerant and haughty, encroaching and treacherous ; while he allows them many of the good qualities we have mentioned. As, however, he says, tnat all the Foulahs are en- gaged in trade, his descnptions may ap])ly to the trading class near the banks of the Senegal, and it is impossible to say how far the odious parts of their character may have been produced 'by their intercourse with Europeans.

A difference in the forms of government, re- ligion, and other circumstances, in the nations with whom the original Foulahs have united, must also have produced a greater variety in the present race of Foulahs than in any of the other negro tribes. Respecting those of Foota-Jallo, this traveller observes, ' The native of Foota- Jallo is in general ugly ; his look is as ferocious as that of a tiger ; his nose is broad and flat, his teeth bad, his stature low, and his clothes, which hang in rags, and the manner in which he ar- ranges his hair, naturally very long, by dividing it into small braids, according to the custom of the ancient Figyptians, give a savage appearance calculated to alarm the traveller : however, he is not cruel, butvery irascible ; the least trifle offends and irritates him, he rarely leaves an injustice unpunished, hence revolutions are frequent in Timbo. They are often attended with the death of the sovereign. The inhabitant of Foota-Jallo is proud of his coinitry ; he is incessantly asking strangers if they do not think

it beautiful. Among the Foulahs fanaticism is carried to phrenzy; every moment tiiey draw their daggers, and look- ing furiously at them exclaim, ‘ I will plunge thee into the heart of a pagan.’ ‘

The Foulahs are said to be superior workmen in many of the mechanical arts. Every village has its weavers, smiths, and shoe-makers. Their domestic concerns are all managed by the fe- males, respecting whom, M. Mollien says, ‘ The women are pretty, and well shaped, have oval faces, and delicate features ; their hair is long, and they braid it round their heads ; their feet are small, but their legs somewhat bowed ; they are seldom so stout as the negresses. They load their hair with ornaments of yellow itnber and coral, and their necks with gold or glass beads ; over the head they throw a muslin veil ; some wear a jacket with sleeves ; like the negro women, thoy have a cloth fastened round the waist. Lively and warm, they hlways wear a smiling look, and they seem to sigh for nothing ‘»ut pleasure ; their virtue rarely resists a grain ˆf coral, but the senses alone are concerned in ;he passion of these females ; they are by no means susceptible of a delicate or lasting attach- nent; very malignant, they employ their charms ˆ0 shake off” their yoke, and to obtain a share in

the empire of the hut ; they are not slaves like the Jaloff women, but wives, and in reality mis- tresses of the house.’

FouLWEATHER C-APE, a couspicuous and very singular promontory on the north-west coast of North America. A high round bluff point pro- jects abruptly into the sea; a remarkable table hill is situated on the north, and a lower round bluff to the south of it. Vancouver places it in long. 236° 4′ W., lat. 44° 49′ N.

FOUND. The preterite and participle passive oi find. See Find.

Found, v. o -\ Yr-fonder ; LrLJuiv-

FoxfjJDA’xioN, n. s. tdare. To lay the basis of

Found’er, 7i. s. t any building; to build;

Found’ress, n. s. J to raise ; to establish ;

to erect; to begin; to originate; to fix firmly;

to raise upon a principle or ground. The

derivatives are applied in all these senses : the

agent, the subject, and the action, stand in each

of these relations to the verb, and in no other.

He is lyk to a man that bildith an hous that dig- gide depe, and sette the foujidetnent on a stoon.

Wiclif, Luk. vi. It fell not ; for it y/&s founded upon a rock. Matt. He hath founded it upon the seas, and estabhshed it upon the floods. Psalm xxiv. 2.

For of their order she was patroness, Albe Clarissa was their chiefest/ otinrfres.*

Faerie Qveene. Throughout the world, even from the Arst foundation thereof, all men have cither been taken as lords or lawful kings in their own houses. Hooker.

The stateliness of houses, the goodliness of trees, when we behold them, delighteth the eye ; but that foundation which bearcth up the one, that rout which ministereth unto the other nourishment,. is in the bosom of tije earth concealed. Id.

Fleance is escaped, — Then comes my fit again : I had else jeen perfect. Whole as the marble, founded as the rock

Shaksveare. That is the way to make the city flat. To bring the roof to the foundation. To bury all. Id. Coriolanus.

O Jove, I think. Foundations fly the wretched ; such I mean. Where they should be relieved. Id.

These tunes of reason are Amphion's lyre Wherewith he did the Theban city found.

Davies, — Come no more. This is mere moral babble, and direct Against the canon-laws of omt foundalio7i.

Milton's Comus. This also shall they gain by their delay In the wide wilderness ; there they shall /ouwi Their government, and their great senate chusc. Through the twelve tribes, to rule by laws ordained.

Miltim. And the rude notions of pedantic schools Blasipheme the sacred / ounder of our rules.

Roscommon. Of famous cities wo the founders know ; But rivers, old as seas to which they go. Are nature's bounty : 'lis of more renown To make a river than to build a town. Waller. If we give way tn our p;issions, we do but gratify ourselves for the present, in order to our future dis- quiet ; but if

we resist and con(iuer them, we lay the foundation of perpetual peace in our minds.

Tillotsm.

FOU 492

The wanting orphans saw with wat'ry eyes Their/ounder'i charity in the dust laid low.

Drydcn. For zeal like hers, her servants were to show ; ^ She was the first, where need required to go >

Herself x,h^ foundress and attendant too. 5

Id.

FOU

Id.

Id.

Id.

Id.

I draw a line along shore ; I lay the deep ybundafion of a wall, And Enos, named from me, the city call. When Jove, who saw from high, with just disdain. The dead inspired with vital breath again. Struck to the centre with his flaming dart The unhappy founder of the godlike art.*

Korwas Prueneste's/ouHder wanting there, Whom fame reports the sou of Mulciber. They Gabian walls, and strong Fideua; rear. Nomentum, Bola with Pometia found. And raise Colatian towers on rocky ground.

That she should be subject to her husband, the laws of mankind and customs of nations have ordered it so ; and there is a foundation in nature for it.

Locke. A right to the use of the creatures is founded origi- nally in the right a man has to subsist. 'd.

Power, founded on contract, can descend only to him who has a right by that contract. Id.

King James I. the founder of the Stewart race, had he not confined all his

views to the peace of his own reign, his son had not been involved in such fatal troubles. Addison's Freeholder.

This hath been experimentally proved by the ho- nourable founder of this lecture in his treatise of the air. Bentlet/.

Ne'er to these chambers where the mighty rest. Since their foundation, came a nobler guest. Ticket.

The reputation of the Iliad they /ound upon the ignorance of his times. Pope's Preface to the Iliad, Nor can the skilful herald trace The founder of thy ancient race. Swift.

He had an opportunity of going to school on a foundation. Id.

The fiTit foundation of friendship is not the power of conferring benefits, but the equality with which they are received, and may be returned.

Junius's Letters. Gregory the Seventh, who may be adored or de. tested as the founder of the Papal monarchy, was driven from Rome, and died in exile at Salerno.

Gibbon. Foundation, in architecture. See Archi- tecture, Index. Palladio allows a sixth part of the height of the whole building for the hollowing or under-digging, unless there be cel- lars under ground, in which case he would have it somewhat lower.

Foundation, in law, denotes a donation or legacy, either in money or lands, foi the main- tenance and support of some community, hos- pital, school, &c. The king only can found a coUeee, but there may be a college in reputation founded by others. If it cannot appear by in- quisition who founded ? church or college, it shall be intended that it was the king, who has power to found a new church, &c. The king may found and erect an hospital, and give a name to the house upon the inheritance of an- other, or license another person to do it upon his own lands ; and the words fundo, creo, &c., are not necessary in every foundation, either of a college or hospital, made by the king ; but it is sufficient if there be words equivalent ; the incorporation of a college or hospital is the very

foundation ; but he who endows it with lands is the founder : and to the erection of an hospital, nothing else is requisite but the incorporation and foundation. Persons seised of estates, in fee-simple, may found hospitals for the poor by deed enrolled in chancery, &c., which shall be incorporated, and subject to such visitors as the founder shall appoint, &c. stat. 39 Eliz. c. 5. Found, V. a. "^ Yx.fondre,fondeur;'LdX. Found'ek, n. s. ˆfundere. To form by melt- Found'ry, n. s J ing and pouring into moulds ; to ca.st. A.

founder is the agent, and foundry is the casting-house or place of his operation.

A second multitude With wondrous art /ounrfed the massy ore, Severing each kind, scummed the bullion dross.

Miltort. Founders add a little antimony to their bell-metal, to make it more sonorous ; juid so pewterers to their pewter, to make it sound more clear like silver.

Grew') Museum.

FOUNDERS, persons who cast metals in va- rious forms and for different uses ; as guns, bells, statues, printing characters, candlesticks, buc- kles, &c., whence they are denominated gun- founders, bell-founders, figure-founders, letter-founders, foun- ders of small works, &c. The company of founders was in- corporated in 1614. Their arm? are azure, an ewer between two pillars, or, as in the annexed dia- gram.

Found'er, v. a. & V. n. Yt. fondre ; It. forid, the bottom. To cause such a soreness and ten- derness in a horse's foot, that he is unable to set it to the ground. To sink to the bottom ; to fail; to miscarry.

Out of the ground, a fury infernal sterto. From Pluto sent, at requeste of Saturne ; — For which his hors for fere gan to turne. And lepte aside, a,Xid foundred as he lepe.

Chaucer. The Knightes Tale. PhoBbus' steeds H.ie foundered. Or night kept chained below.

Shakspeare Tempeit. In this point A.11 his tricks ybuTider ; and he brings his physick After his patient's death. Id. Henry VIII.

New ships, built at those rates, have been ready to founder in the seas with every extraordinary storm,

Raleigh's Essays. El. Br. For certain.

Either some one, like us, n\ghl-foundered here. Or else some neighbour woodman, or at worst Some roving robber calling to his fellows. Milton. Brutes find out where their talents lie : A bear will not attempt to fly; A foundered horse will oft debate. Before he tries a five-barred gate. The roar

Of breakers has not daunted my slight trim. But still sea-worthy skiff, and she may float Where ships have foundered, as doth many a boat.

Byron. To Founder, in sea language, is used, when a ship, by an extraordinary leak, or by a great sea breaking in upon her, is so filled with water that she cannot be freed of it ; so that she can neither veer nor steer, but lies like a log; and not being able to swim long, will at last sink.

Swift.

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FOUNDING.

Founding, in the mechanical arts, will strictly include castings in brass and bronze, the found- ing of cannon, all tlie otlier operations of the iron foundry, and bell and type founding. But some of these are of sufficient importance to re- quire distinct treatment.

For the fovuiding of cannon, see Gunnery.

For the operations of the iron foundry, see Iron Foundry.

For type-founding, see Type.

This paper will be confined to founding in brass and bronze ; and to bell founding.

Brass is a compound of copper and zinc, which become, by being fused together, a homo- geneous malleable yellow metal, of great utility in various articles of our domestic economy, and in the arts, in which it is also employed in the founding of statues, &c. Sec. See Brass.

Founders of brass articles of a general de- scription require an exact model, in wood or otherwise, of the article to be founded ; and this is most frequently required to be in two parts, exactly joined together, and fitted by small pins: the casting, in such a case, is performed by two operations, that is, one half at one time and one half at another, and in manner following, viz. The founder provides himself with a yellowish sharp sand, which is required to be well washed, to free it of all earthy and other particles. This sand is prepared for use by a process called tewing, which consists in working up the sand in a moist state, over a board about one foot square, which is placed over a box to receive what may fall over in the tewing. A roller about two feet long and two inches in diameter is employed in rolling the sand about until it is brought into that state which is deemed proper for its business : a long-bladed knife is also re- quired to cut it in pieces. With the roller and the knife the tewing is finished for use, by being alternately rolled and cut. When the sand is so far prepared, the moulder provides himself with a table or board, which in size must be regulated by the

castings about to be performed on it. The edges of the table or board are surrounded by a ledge, in order to support the tewed stuff; the table so previously prepared is filled up with the sand as high as the top of the ledge, which is in a moderately moistened state, and which must be pressed closely down upon the table in every part. When the operation has so far ad- vanced, the models must be all examined, to see that they are in a state to come nicely out of the mould, and if not found so, they must be cleaned or altered till the founder is satisfied with them. All models require the greatest accuracy in their making, or it will be vain to suppose any thing good can be performed by the founder.

When tlie models are found to be in a state to be founded, one half, generally longitudinally, is taken first, and this is applied on the mould, and pressed down into the tewed stuff or sand, so as to leave its form completely indented in it: this must be very carefully looked to, to see that there are no small holes ; as every part in the

indented sana must be a perfect cameo of the models submitted and pressed into it. If it should not be found perfect, new sand must be added, and the model re-indented and pressed, till it leaves its impression in a state proper to receive the metal. In the same manner, other models intended to be founded on the same ta- ble, must be prepared and indented into the sand. When the table is completely ready for the metal, it is carried to the melter, who him- self examines its state, and also tlie cameos, and who lays along the middle of the mould the half of a small wire of brass, which he presses into the sand, so as to form a small channel for the melted brass to flow in, and which he terms the master-jet or canal. It is so disposed as to meet the ledge on one side, and far enough to reach the last pattern on the other; from this are made several less jets or branches, extending themselves to each pattern on the table, and by which means the fluid metal is conveyed to all the different indented impressions required to be cast on the table. When the work is so far for- warded, it is deemed ready for the foundry; previously to which, however, the wnole is sprinkled over with mill-dust, and when it is so sprinkled, the table is placed in an oven of mo- derate temperature till it gets dry, or in a state which is deemed proper to receive the melted brass.

The first table being thus far completed, it is either turned upside down and the moulds or patterns taken out, or the moulder begins to pre- pare another table exactly similar to the one he has just completed, in which he indents and presses the other half of the mould, or he turns the table already finished and containing the first half of the patterns upside down; previ- ously, however, to doing which, it will be ne- cessary for him to loosen the pattern which is fixed in the sand a little all round, with any small instrument that will just open away the sand from its edges, in order

to its coming from out of the table more easily. This economy in founding, of making one-half of each pattern to be cast answer the purpose of the whole pat- tern, is a very common practice in brass found- ing, and enables the manufacturer to sell his goods at a much cheaper rate than he would otherwise be enabled to do, if he were obliged to have a full pattern of all goods to be founded. When he has loosened the sand from about the pattern, and taken it out of the first table, the work is proceeded in, of])reparing the counterpart or other half of the mould with the same pattern, or otherwise, and in a frame exactly correspond- ing with the former, excepting only that it is prepared with small pins, to enter holes which are made in the first half of the model, and into which the pins enter, and secure the two halves together. It is obvious, that the accuracy in the joining will depend wholly upon the neatness and truth of fixing and boring for the pins.

When the table containing the counterpart is finished, the patterns are all properly indented

in tiie sand, which is done as has been before described for tlie first table, and when com- pleted, it is carried away to the melter, who, after enlarging the principal jet of the counter- part, and making the cross jets to the various patterns, sprinkles them as before with mill- dust : it is then set in the oven till it has re- ceived a sufficient drying to be ready for the melted metal ; after which, and when both parts of the model are deemed sufficiently dry, they are joined together by means of the pins and holes, previously prepared in the upper and un- der model : and to prevent their rising up or slipping aside by the force of the melted brass, whicli is to come in flaming with heat, and through a small hole contrived in the principal or master-jet, the precaution is taken of locking the two tables down in a kind of press made with screws ; or, if the mould be too large to admit of being screwed easily, wedges are had recourse to, to fix the tables together, to prevent accidents. The moulds thus fixed in the press, or wedged, are placed near the furnace, and every arrangement is made for it to receive the melted brass as it comes out of the crucible.

All being so far arranged, and the moulds ready, the metal is prepared, by being heated to a complete fusion in an earthen crucible, com- monly about ten inches high and four inches in diameter. The furnace for promoting the fusion of the brass is similar to a smith's forge, having bellows of large dimensions operated upon by a lever, and a chimney over the furnace. The hearth is of masonry or brick-work, secured by an outer rim of iron, in the

centre of which is the fire-place, and which consists in making a void or cavity, from twelve to eighteen inches square, and reaching quite down to the bottom or floor of the foundry. The void or cavity is divided inio two parts by an iron grating, on the upper side of wliich is placed the fuel, and in the midst of it the crucible containing the me- tal ; the lower part of the cavity is appropriated to admit the air to the fire, and also to receive the waste or cinders falling from the fire. The fuel consists of dry beechen wood cut into small billets, and previously baked, to make them more readily combustible, and which are, when a fire is required, put into the cavity in the hearth, and well lighted. The crucible, when full of brass, should be placed down in the centre of the fire, so that it may play all round it, and it should be covered with an earthen co- ver, or tile, to promote the heat of the fire upon the metal. All the time the metal is preparing, the attendant keeps blowing up the fire ; and in order to keep the heat from escaping through the chimney, or in flame, a piece of tile is placed over the fire and aperture of the furnace. As the heat operates in melting the metal, it sinks nearer to the bottom of the crucible, when fresh metal is added till the crucible is quite full. The brass is previously prepared for melting, by be- ing broken into small fragments in a mortar, and, when sufficiently beaten and broken for use. It is put into the crucible by an iron ladle, which has a long hollow arm or shank of small dia- meter, but sufficiently large to admit the frag- ments of metal rolling through it into the cru-

cible, into which the fresh brass is dropped from out of the cylindrical arm of the iron ladle. As the crucible is filled with metal, preparation must be made, when it is deemed ready to be removed for the purpose of running it into the moulds, to remove it easily from out of the fire, which is done by a pair of iron tongs with their feet bent inwards. The crucible is taken hold of by these tongs, and carried away to the mould, into which the melted brass is poured, through the aperture communicating to the mas- ter-jet of each mould ; the metal is carried round to each jet, and poured in till the cru- cible is emptied, or the moulds filled. It is usual to fuse rather more brass than is required for th,e casting ; as, by having too little, the work could not be at that time finished, which would occasion delays in opening the tables. As soon as the moulds are run, water is sprinkled over the tables, to cool and fix the metal ; after which the presses or wedges are removed from the frames, and the works just founded are removed out of the sand, to be cleaned and finished for sale. The tewing-stuff or sand is afterwards taken out of the frames to be worked up again for another casting. The sand, by a repetition of use, becomes quite black, by reason of the charcoal that it collects from the foundry ; but its blackness does not render it unfit to be employed in other tables for moulding or cast- ing.

In foundings of brass in which the models are large, an expedient is had

recourse to, of ren- dering them lighter and more economical, by performing the casting hollow. This is done by making a core or heart, roughly resembling the pattern, and composed of clay and white cruci- ble dust well kneaded and mixed together with water, and which is covered with wax, exactly representing the article to be cast ; or the core may be suspended in the centre of the indents made in the sand. When the article is required to have but one perfect side, as is common in most cabinet articles, the melted metal, in such a case, is prevented from filling the indent by the space occupied by the core, and it will be in thickness corresponding to the size which the heart or core takes up, in proportion to the size of the work to be founded. In the former case, when the article is to have both or all round of a full pattern, wax is employed, and is so ad- justed to the core, that the metal may, in passing the jet, displace it, and leave its resemblance, and also its thickness, of brass, in the indent in the table. If it be a pattern of a complicated form, there would arise a difficulty in getting the core out after it was founded. The pattern must then be performed or moulded in two separate ones, and also the foundings ; the part left out of the first pattern must be performed in a se- cond ; and afterwards fitted and soldered to the first. Tliis mode is common at Birmingham, in making handles for locks, and shutter fastenings, which are commonly round. The plain knobs, for locks, &c., are made in halves and soldered together : the wrouglit ones, (as they are called from being ornamented) arc cast with a solid shank and spindle, and the bell or handle part of the knob is hollow, and open at its opposite

end, which is afterwards supplied by a separate piece or cap. The cores of many of these Bir- mingham brass-works are made to occupy so much of the pattern, that the brass is not thicker than a shilling.

Many of the brass-manufacturers who work on a large scale, employ a - steam-engine to punch articles from sheet metal, from dies previously formed. By this operation almost all the com- mon brass goods, (such as hand-plates to doors, roses to door and cabinet furniture, and many li?ht goods) are now made. The punched goods are very cheap, but of very little strength or du- rability, as may be noticed in many of the brass articles employed in our domestic economy. Brass mouldings, plain or wrought, are gene- rally cast solid, and in moderate lengths; a pat- tern in wood, clay, or wax, is required, and the only precautions previously to founding them are, that they be carefully indented in the sand- table. If the moxildings be large and much carved, a core may be used for these also, taking care to leave the metal sufficiently thick to allow of finishing up afterwards, without

injuring the effect of the pattern.

All brass, as well as other foundings, require, when taken out of the sand, to be cleanecˆ up and made complete; as they seldom come out perfect. This is done in brkss-founding, by fil- ing off the cores, and filhng up the small holes with melted metal or solder. Some brass-works are cast to a rough pattern, for instance, all those which are cylindrical in shape ; and such kind of goods are put into a lathe and turned, and smoothed up afterwards. Articles in brass which are sculptured, are generally left in a mat-state on their grounds, and the raised parts burnished up by hand ; the mat-state refers to such parts only which are left without polish, or in a state in which the brass is found when it first comes out of the sand, with the addition of cleaning and perfecting only.

The burnishing consists in making the raised parts quite complete, and afterwards laying them down tight upon a bench, or in a vice, whichever is most convenient ; and working up the face of the brass with a bent tool composed of a shaft of steel, about half an inch wide and eight or nine inches in length, fixed firmly in a handle of wood. The end of the tool is turned up about a quarter of an inch, and ground away on its inner edge. With Ihis tool the workmen rub the part to be heightened, as it is termed. They have these heightening tools of various widths, some one-eighth of an inch wide only, and others as much as three-quarters of an inch. With such tools they operate upon all the various sized parts to be heightened ; and, as the part is thus rubbed, the workman dips his tool in a lacker, which is standing near him in an earthenware dish. This lacker is commonly prepared from turmeric dissolved in spirits of wine, and which will be afterwards explained under the head of lackering.

Chasing, or enchasing as it is called, is also employed in brass works. It is a similar opera- tion to heightening, except that it is employed in the more delicate works of sculpture to give them greater sharpness and effect. The French

excel in chasing, as their numerous small orna- ments used as decorations to chimney-pieees time-pieces, vases, &c. &c., fully demonˆstrate ; many of which are in brass as well as in or molu.

Brass castings which are plain are cleaned up for sale by being filed smooth or turned so by the turner, and afterwards polished by being rubbed with emery till the surface becomes regular and tolerably even, after which they are finished with tripoli. To keep brass works from tarnishing and getting; black, by exposure to the air, the brass-workers have recourse to lacker ing. This consists in covering the brass, moder- ately heated over a stove containing an open charcoal fire, with a liquid, also moderately warm,

composed of saffron and Spanish annotta, each two drams, put into a bottle with a pint of highly rectified spirits of wine, which wlien together should be placed in a moderate heat and often shaken • from this a very strong tinc- ture will be obtained, which must be afterwards strained through a coarse linen cloth to take out the dregs of the annotta and saffron ; it is then to be returned to the bottle, and three ounces of seed-lac powdered must be added to it, and the whole again heated till the seed-lac be com- pletely dissolved ; after which it is fit for use, and will form a good and pale-colored lacker, which will prevent the brass from changing color Dy exposure to the air. It is laid on the brass by a camel's-hair pencil as thin as it can be spread, and requires nothing to be done to it after it is so spread but a moderate rubbing. If the brass be required to be of a redder color, increase the proportion of annotta in the la?ker, and it will be accomplished. All the best kinds of brass-works are gilt to prevent their changing color, and this constitutes the desideratum in the works in or molu.

The more important part of casting in brass consists in founding statues, busts, basso-relievos, vases, &c. The Greeks and Romans practised it to an immense extent, as may be seen from the vast number of statues and other works which have come down to us of both these people. The Greeks also formed most of those instruments of brass, which we make of iron and steel. Thus Homer describes the arms offensive and defensive, in his poems, as brazen. He calls the Greeks by the general epithet of brass-coated, and seldom mentions steel. In Herculaneum, Pompeii, Stabea, &;c., were found many arms and instruments formed of brass or bronze, while very few of iron were discovered. Those of brass were adapted to the purposes of agriculture, mechanics, mathematics, architec- ture, &c. In Pompeii was found a complete set of surgeons' instruments formed of bronze, which shows that a preference was given to that metal.

In the founding of statues, busts, kc, three things in particular require attention : namely, the mould, the wax, and shell or coat, the inner mould or core, so called from Ixnng in the middle or heart of the statue. In preparing the core, the moulder is required to give it the attitude and contour of tlie figure intended to be founded. The use of the core is to sujjport the

wax and shell, to lesson the weight, and save the metal. T,he core is made and raised on an iron grate sufficiently strong to sustain it, and it is farther strengthened by bars or ribs of iron. The core is made of strong potter's-

clay tem- pered with water, and mixed up Avith horse- dung and hair, all kneaded and incorporated together; with this it is modelled and fashioned previously to the sculptor's laying over it the wax ; some moulders use plaster of Paris and sifted brick-dust mixed together with water for tlieir cores. The iron bars which support the core are so adjusted, that they can be taken from out of the figure after it is founded, and the holes are restored by solder, &,c. ; but it is ne- cessary in full-sized figures to leave some of the iron bars affixed to the core to steady its project- ing parts. After the core is finished and ˆot tolerably firm and dry, the operation of laymg on the waxen covering to represent the figure is performed, which must be all done, wrought and fashioned by the sculptor himself, and by him adjusted to the core. Some sculptors work the wax separately, and afterwards dispose and arrange it on the ribs of iron, filling up the void spaces in the middle afterwards with liquid plaster and brick-dust, by which plan the core is made as, or in proportion to, the sculptor's progress in working the wax-model. Care must be taken, however, in modelling the wax in both cases to make it of a uniform substance, in order to the metal being so in the work, of which the wax is its previous representative. When the waxen model is finished to the core, or adapted and filled afterwards, small tubes of wax are fixed perpendicularly to it from top to bottom, to serve not only as jets to convey the melted metal to all parts of the work, but as vent-holes to allow a passage to the air gener- ated by the heated brass in flowing into the mould, and which, if not admitted readily to escape, would occasion so much disorder in it as would much injure the beauty of the work. Sculptors adjust the weight of the metal re- quired in this kind of founding by the wax taken up in the model. One pound of wax so employed will require ten pounds of metal to occupy its space in the casting. The work having advanced in progress so far, will now require covering with a shell. This consists of a kind of coat or crust laid over the wax, which, being of a soft nature, easily takes and pre- serves the impression which it afterwards com- municates to the metal, upon its occupying the place of the wax, which is between the shell and core. The shell is composed of clay and white crucible dust, well ground, screened, and mixed up with water to the consistence of paint, like which it is used. The moulder applies it by laying it over the wax with a camel's-hair or other soft pencil, which will require eight or nine times going over, allowing it time to dry between each successive coat. After this coating is firm upon the wax, and which is used only to Drotert it from those which are to follow, the .“ccond part, or coating, is made up of common earth, mixed with horse-dung : this is spread all over the model, and in such thickness as to withstand, in some measure, the weight of the

intended metal. To this coating or impression is added a third, composed almost wholly of dung, with a proportion of earth sufficient only to render

it a little more tough and firm when used. When this is tolerably dry, the shell is finished by laying on several more coats or im- pressions of the same composition, made strong and stiff by successive workings with the hand. When this is finished, and is deemed adequate to support the heated metal, it is farther secured and strengthened by several bands or hoops of iron, bound round it at about six inches from each other, and fastened at bottom to the grate on which the statue stands. Above the head of the statue is made an iron circle for the purpose also of confining the shell and statue, to this circle the hoops are fastened at top. It may be considered when the moulding has arrived at this state, to be in a condition to receive the melted metal ; but it is not so exactly, as will soon appear. The mould, as has been before observed, is made upon an iion grate: under this grate is a furnace and flue, in which at this period of the work a moderate fire is to be made, and the aperture of communication therewith stopped up so as to keep in the heat. As the heat increases, and begins to operate on the mould, preparation must be made to allow of the wax running freely from out of the shell : for this purpose, pipes are contrived at the base of the mould, so that it may run gently off and through these pipes. As soon as it is all run off, the pipes are nicely stopped up with earth to prevent the air entering them, Jcc. When this is done, the shell is surrounded by any matter that has non-conducting properties, for instance, pieces of brick put round and piled up of good thickness, secured by earth, will answer the end ; and the whole should be finally coated outside with loam as a farther protection to keep in the heat.

After the shell is adequately surrounded with materials to keep off the effect of the air, the fire in the furnace is augmented, till such time as both the matter surrounding the shell and it also become red-hot, and which in ordinary cir- cumstances will take place in twenty-four hours' time ; the fire is then extinguished, and tlie whole allowed to cool : after which, the matter which has been packed round the shell is taken away, and its place occupied with earth moist- ened and closely pressed to the mould in order to make it more firm and steady. It will, when having advanced so far, be in a state to receive the melted metal ; to prepare which for the casting, a furnace is made a few feet above the one employed to heat the mould : it is formed like an oven, having three apertures, one of which is for a vent, the other to admit the fuel, and the last to let the melted metal flow throueh and out of the furnace. This last aperture should be kept very close whilst the metal is fusincf, when it has arrived at that state which is deemed proper for running it into the shell, and which is known by the quick separation and escape of the zinc of the brass. A little tube is laid to convey it into an earthenware basin, which is fixed over the top of the mould. Into this basin all the large branches from the jets

enter, and from which is conveyed the metal into all the parts of the mould. The jets are all stopped up with a kind of plugs, which are kept close till the basin which is to supply the metal be full. When the furnace is first opened for this purpose, the melted brass gushes for- ward like a torrent of fire, and is prevented from entering any of the jets by the plugs, till the basin is sufficiently full to be ready to begin with the mould, and which is esteemed so when the brass it contains is adequate to the supply of all the jets at once, upon which occasion the plugs from all of them are withdrawn. The plugs consist of a long iron rod, with a head at one end capable of filling the whole diameter of each tube. The hole in the furnace in which the melted metal is contained, is opened with a long piece of iron, fitted on the end of a pole to allow of the furnace-man keeping at a distance from it, as many accidents occur by the red-hot metal coming in contact with the air, particu- larly if it be damp, in which case the most violent explosions take place. The basin is filled almost in an instant after the furnace-plug is withdrawn, and the metal is then let into the several jets communicating with the model, which when they have emptied themselves into the shell or mould, the founding is finished, in as far as the casting is concerned. The rest of the work is completed by the sculptor, who takes the new brass figure from out of the mould and earth in which it was encompassed, saws off the jets, and repairs and restores the parts where re- quired. His tools for this purpose consist of chisels of various sizes, gravers, puncheons, tiles, &c.

In casting colossal statues a somewhat differ- ent mode is pursued than the one already de- scribed : this arises wholly from the size, it being tViund difficult to remove the moulds of such uorks ; they are therefore worked and prepared upon the spot where they are to be cast. There are two ways of performing this. By the first])lan a square hole is dug into the earth some- what larger than would be required for the mould, and its sides are hemmed up with brick- work : at its bottom is formed a hole below the bottom of the one already prepared, as a fur- nace, and which must be builtup with brick-work, liaving an aperture made outwards into another pit prepared near it, from which the fuel is put into the furnace. The top of the furnace in the first hole is covered by a grating of iron, and on tliis is moulded and placed the case of the statue to be cast, and also its waxen coating ; in doing whicli the same process is observed by the sculptor as that already described. Near the f:dge of the large pit, in which the model is placed, is erected the furnace to melt the metal, and which is similar to tlie one already described for common figure-casting, except being of larger dimensions ; it has like that three aper- tures, one for putting ih the wood, another for vent, and a third to run the metal out at. By the second plan of founding colossal figures, it is thought sufficient to work the mould above ;

round, adopting the same mode with respect to I furnace and grate underneath it. For, whether under ground or above it, to keep in the heat Vol. IX.

when drying the core and melting the wax, is that which is more particularly sought for ; to do which, in the most effectual way, four walls of brick-work are built up round the model, in the middle of which is fixed the grate and fur- nace ; and on one side above is formed the mass of building intended for the furnace, which is to be appropriated to the melting of the metal. When the whole is finished and ready, a fire is made in the fire-place under the core of the model, and kept up so as to produce a moderate heat to dry the core, and also to melt away the wax from off it, which runs down by tubes as has been before remarked upon, and indeed no difference whatever takes place in such founding, except every thing being on a larger scale. When the wax is run off, and the fire extinguish- ed in the furnace, bricks are filled in at random, either into the hole, if founding under ground, or into the area between the walls if above ground ; after this is done the fire in the furnace is again lighted, and blown up and augmented, till such time as both the core and bricks are of a red-heat ; when the fire is again extinguished, and the whole is left to cool ; and when cooled the bricks are again removed, and all is cleared away, and the spacg again occupied by moist- ened earth to secure and steady the model. Nothing now remains but running in the metal, which is performed as has been before described for smaller foundings of statues.

All the principal cities of ancient Greece and Rome, boasted of their wealth by enumerating their statues of brass. Athens, Delphi, and Rhodes, are each reported to have had in and about their temples 3000 brass statues. And Marcus Scaurus, though an edile only, adorned the circus at Rome with upwards of that num- ber of statues of brass, during the time of the celebrating of the Circensian shows. It after- wards, in consequence of this tasie continuing to prevail at Rome, of forming and collecting works in brass, used to be a proverb among the visitors of that celebrated city, ‘ that in Rome the people of brass wˆre not less numerous than the Roman people.’

Bronze, by the Italians called Bronzo, was well known to the ancients. Egyptians, Greeks, and Romans all made use of it, and that in most cases to tlieir important works as connected with sculpture and the ornamental parts of architec- ture. Bronze was selected by these people as bearing a finer edge, and not so likely as either of its component parts to oxydate by exposure to the air : hence they made statues of it to adorn the approaches to their cities and public edifices, affixed it in beautiful and highly relieved ornaments to the friezes of their temples, cast it in basso-relievos to represent the paraphernalia of their games and festivals, which were

retained in compartments about their works dedicated to their gods ; and, finally, wrought it into baths, tripods, vases, lamps, and other purposes of utility and ornament ; specimens of many of whicli have by its indestructil)ility come down to us, as may be seen exhibited in the numerous public galleries on the continent, at Rome, Naples, Florence, and Paris, with some in our own Museum.

The Eiˆyptian bronze consisted, according to Basari, ol iwo-tlurds brass, and one-third cop- per. Pliny says, ‘ the Grecian bronze was formed by adding one-tenth lead, and one- twentieth silver, to the two-thirds brass and the one-third copper of the Egyptian bronze,’ and this was the proportion afterwards made use of by the Roman statuaries. The Greek bronzes very obviously appear to possess a difference of composition to any that have been founded among the moderns. The famous Venetian horses (four in number), said to iiave been the work of Lysippus, exhibit at once, to bronzists, that the ancient metal of that name was, in its composi- tion, very different from that which is now made and called after that designation : — the modern bronze is commonly made of two-thirds copper, fused wth one-third of brass; and very lately, from the great demand for all kinds of ornaments in this metal, in forming the decorative parts to our apartments, and supports to our articles of furniture, lead, with zinc in small proportions, have been added to the copper and brass. These variations have been one cause of the greater brilliancy and compactness to be observed in modern castings of this metal, in comparison of those founded a few years since. So common is bronze-work become at this time, that every petty brass-worker pretends to be an adept in founding of this metal ; however, nothing is to be feared in the attempt, as the efforts of such bronzists will not carry them beyond the work of the furnace.

The alloying of the several metals to form bronze is found to promote in it a readier fusi- bility than is possessed by either of its compo- nent parts in their pure metallic state ; and this is a property very much to its advantage in the castings of large works. Modern works in bronze become numerous in proportion to the advance- ment in the arts. Bronze-casting is employed in forming equestrian statues, colossal and other figures in alto-relievo, to set oft’ and adorn pub- lic places. It is competent, when in the hand of an artist, of giving a zest to architecture ; inasmuch as by its tint, as well as by the great variety of the forms it is susceptible of being made into, it is able to add richness by its oppo- sition, and at the same time it finishes the

forms of those parts of architecture requiring it. See Bronze. In that article we have noticed Mac- queir's mode of casting large works.

Bronze-casting is also performed in the follow- ing manner, viz. 1. The figure or pattern to be cast must have a mould, and this is prepared and laid on a plaster cast, previously wrought and finished by the sculptor. The tpould is made of plaster of Paris, rendered moist by being mixed up with water ; to this preparation is added brick-dust, in the proportion of one-third of the former to two- thirds of the latter. This is carefully laid on the mould, with strength in proportion to the weight of metal intended to be used in the founding. In its joints small channels should be cut tending upwards, and from different parts of the internal hollow, to allow of vent for the air to escape through, as the heated metal runs in upon the mould. A thin layer of clay should be spread

over the inside of it, and of the thickness which it is intended the bronze should be. Within-side the clay, a filling up of plaster and brick-dust, in the proportions as before described, will be required to compose the core: but, if the work to be cast be large, before the plaster and brick- dust are poured into the mould to form the core, a skeleton composed of iron bars, as a support for the figure, should be prepared and fixed ; after which the filling up of the core may be proceeded in. When this is done, the mould must be opened again, and the layer of clay taken out of it, and the core thoroughly dried, and even burned with a charcoal fire, or with straw ; for, if the least damp remain, the cast will be blown to pieces when the hot metal comes in contact with it, in running it into the mould, and the workmen employed about the work be maimed or killed by the dispersion of the heated bronze. After the core, &;c., has been properly dried, and is deemed ready for the work, it should be laid in the mould, and supported in its place by short rods of bronze, which should run through the mould into the core. All being so far advanced, the mould should be clad and bound round with iron, of strength proportionate to the size of the work to be cast ; after which, the mould should be laid in a situation for run- ning in the metal, and must be supported for the purpose by bricks, &c. Great care should be taken that every part be perfectly dried, before any metal be run into the mould ; or, as has been before observed, the most fatal consequences will arise to those who may be about the work. A channel must be made from the furnace \n which the melted metal is, in order to its running to the principal jet of the mouldy and with a descent, to promote its flowing rapidly. The jets, fur- nace, &c. &c., are all contrived, as has been before described, for casting figures in brass. In V'esaris's Lives is a chapter on brass-founding; and there are also some very useful observations in the Life of Beivenuto Cellin; vide Pliny's Natural History.

The smaller works in bronze are founded by previously being modelled in

wax, to which a coating of clay is adapted and dried.

Bronze works are cleaned up and repaired after being founded, in a similar manner to what figures in brass are, and with the same kind of tools ; but this last touch of perfecting what may have been left imperfect by the mould, should invariably be done by the statuary or modeller himself; as no one is so competent to keep up the spirit of the original work, as he who invented it, and gave effect to hi.'— invention, by making the model.

The principal works executed in London in bronze, claiming particular notice, are, the eques- trian statue at Charing Cross, of Charles I. ; the colossal statue of nis late majesty, in the square of Somerset Place, by the late Mr. Bacon ; the statue of Francis, duke of Bedford, on the south side of Russell Square: the equestrian statue of William III., in the centre of St. James's Square, the work of Mr. J. Bacon, jun.; and the ' Achilles,' in commemoration of Lord Wellington's victories, in Hyde Park. There

are also many bronzes of great nˆerit in the pro- vinces.

The manner of casting Bells is similar to that of statues, except that the metal is different, there being in bell-metal about one fifth of tin, whereas there is no tin in the brass of statues. The dimensions of the core and wax in mo- delling a bell, if it be to be one of a ring of several, must be formed on a kind of scale or di- apason, which will give the height, aperture, and diickness of the shell necessary to the several tones required. The exterior of the bell is formed into rings fashioned into mouldings, and sometimes inscriptions, mottos, and figures are also added to adorn its exterior ; all these are previously modelled and afterwards moulded in wax upon the core. The clapper or tongue is not properly a part of the bell, and is furnished by other hands; with us it is usually of iron, and is suspended in the middle of the bell. The Chi- nese make it of wood, leaving a hole vmder the cannon of the bell to increase its sound. Our proportions of bells consist in making the di- ameter fifteen times as thick as the brim, and its length twelve times. The bell itself consists of its sounding bow, which is terminated by an in- ferior circle, which diminishes thinner and thinner as it approaches to the brim or that part on which the clapper strikes, and which is re- quired to be left rather thicker than the rest both above and below; also the outward sinking or properly the waist of the bell, or the point under which it grows wider to the brim; and the upper A ase, or top or dome of the bell, or that part which is above the waist. The pallet is the in- side of the vase or dome to which the clapper is suspended. The vent

and hollowed branches of metal which unite with the cannon to receive the iron keys by which the bell is hung to its beam of support, where it must be exactly counter- poised. The height of a bell is in proportion to its diameter as twelve is to fifteen, or in the pro- portion of the fundamental sound to its third major, from which it follows that the sound of a bell is principally composed of the sound of its extremity or brim as a fundamental of the sound of the crown, and which is an octave to it, and that of the height, which is a third.

To mould a bell for casting, the following pre- parations must be made. Earth must be col- lected, and that which is most cohesive is the best, and it must be well ground and sifted. Brick or stone must be obtained for the mine, with which it must be stained. Horse-dung, hair, and hemp, must be mixed with the earth, to render the composition for moulding more firm and binding. The wax to mould the in- scriptions, coats of arms, and other insignia about the outer surface of the bell : also tallow must be mixed with the wax in equal propor- tions, to make it mould more freely; when mixed, a slight layer of the compound is put upon the model or outer mould, previously to any of the ornaments being applied to it. A scaffold is raised upon tressels round the mine, upon which is placed the earth grossly diluted with water, to make it mix better with the dung ; and, last of all, shelves are to be placed, on which the models. &c., of the different orna-

ments or inscriptions to be cast upon the bell are put. A hole is now dug of an adequate depth to contain the mould of the bell, together with the case of it, or cannon, under ground, and about six inches below the level of the ground of the foundry. It must be wide enough to allow of a free passage between the mould and walls, or between one mould and another when several bells are to be cast. At the centre of the hole a stake is erected, which is fixed firmly in the ground ; this supports an iron peg, on which the pivot of the second branch of the compasses of construction turns : these compasses are the chief instruments for making the mould, and consist of two legs joined to a third at its apex. The stake is surrounded by solid brick-work, of about six inches in height and of the diameter of the bell ; thjs is called the mill-stone. The parts of the mould consist of the core, the model of the bell, and the shell.

When the outer surface, of the core is formed, it is raised up with bricks, which are laid in courses of equal height upon a layer of earth ; as each brick is laid the work is brought near to the branch of the compasses on which the curve of the core is shaped, so as that there may re- main between it and the curve the distance of a line, to be afterwards filled up with layers of ce- ment. The building of the core is continued to the top, leaving only an opening for the coals to be put in to bake the core. This work is covered with a layer of cement made of earth and horse- dung, and

on which is moved the compass of construction, to make it of an even smoothness every where. Having finished the first layer in this way, the fire is put into the core by filling it half with coals through an opening kept shut during the baking, and with a cake of earth which has been separately baked. The first fire consumes the stake, and it is left in the core a half and sometimes a whole day: the first layer having become thoroughly dry, it is covered with a second, also a third and fourth, each being sur- rounded with a board and also the compasses, and also thoroughly dried before another is pro- ceeded on. The core being thus finished, the compasses are taken to pieces with the intention of cutting away the thickness of the model, which when done they are again put in their places to begin another piece of the mould. This piece consists of a mixture of earth ana hair applied with the hand upon the core in several cakes, these all close together if properly applied. This part of the work is finished afterwards in several additional layers of cement of the same matter smoothed by the compasses, and tho- roughly dried before another is laid on. The first layer of the model is a mixture of wax and tallow, which is spread over the whole.

When the work has so far proceeded, the inscriptions or other insignia intended to be cast upon the bell are applied, for doing which a pencil is used dipped in a vessel of wax melted in a chafing dish; this is done for every letter, or figure intended to be upon the bell. Before the shell is begun, the compasses are taken to pieces, in order to cut away all the wood that fills the place of the thickness which is intended to be given to the shell. When this is done and

all IS clear, the shell is begun, the first layer of which is the same earth sifted very fine. While it is tempering with, water, it is mixed up with cow-hair to make it cohere; the whole, being a third cullis, is gently poured on the model, and fills exactly all the sinuosities of the figures; and this is repeated till the whole is two lines in thickness upon the model ; when these layers are properly dried they cover it with a second of the same matter, but somewhat thicker than those previously laid on; the compasses are now tried and a fire is lighted in the core, so as to melt off the wax of the inscription, &c.; after which the layers of the shell are proceeded in by means of the compasses. There is now to be added to the composition a quantity of hemp, which is spread upon the layers and afterwards smoothed upon the board of the compasses. The shell varies from four to

five inches lower than the mill- stone before observed, but surrounds it quite close, and prevents the extravasation of the me- tal. The wax should be taken out before melt- ing the metal. The case of the bell requires a separate work, which is done during the drying of the several incrustations of the cements. It has seven rings; the last is called the bridge, and united to the others, it being a perpendicular support to strengthen the curves. It has an aperture at its top to admit an iron peg and bent at its bottom, and this is introduced into two holes in the beam fastened with two strong iron keys. The rings are modelled with masses of beaten earth, that are dried in the fire in order to have them hollow. The rings are gently pressed upon a layer of earth and cow-hair to about one half of their depth, and then taken out, and care should be taken not to break the mould. This operation is repeated twelve times for twelve half moulds, that is, two and two united make the hollow of the six rings ; the same is done for the hollow of the bridge. They are all united together upon the open place left for the coals to be put into the oven. The rings which are to form the ears are put first into this open place, with the iron ring to support the clapper of the bell. After which a round cake of clay is make to fill up the diameter of the thickness of the core. This cake after having been baked is placed upon the opening, and fas- tened by a thin mortar spread over it, which binds the cover close to the core. The hollow of the mould is filled with an earth sufficiently moist to fix itself on the place which is strewed at several times upon the cover of the core; it is then beaten gently with a pestle, and afterwards smoothed .by a workman at top witli a wooden trowel dipped in water. Upon this cover, which is afterwards to be taken off, is assembled the hollow of the rings ; and, when every thing is in its proper place, the outside of the hollows are strengthened with mortar, in order to bind them to the bridge and keep them steady, and at the bottom by means of a cake of the same mor- tar, and which fills up the whole aperture of the shell. This is left to dry, that it may afterwards be removed without breaking. To make room for the heated metal, the rings are taken out of the hollows in the mould, as it is m these hol- lows that the metal is to pass as it enters into the

voids in the mould. The shell being thus un- loaded of its rings, tlie mill-stone is arranged by having placed under it five or six pieces of wood of about two feet long, and thick enough to reach almost to the lower part of the shell ; between these and the mould wooden wedges are driven, in order to shake the shell from off the model, so as to be pulled away and removed up out of the pit. When this and the wax are removed, the model and layer of earth are arranged for the founding, as it is through these the melted metal must pass into the hollows made by the rings, and which are between the shell and core. The inside of the shell is last of all dried by burning straw under it, this helps to smooth thei surface of the bell. The shell is put

in the place so as to leave the same interval between it and the core as was before ; and before the hollows of the rings on the cap are put on again two vents are made, which are united to the rings, and also to each other, by a mass of baked cement; after which this mass of the cap is put on, the rings and the vent over the bell are soldered to the cap by cement; which is dried by gradual heat by covering it with burning coals. So much having been done, the pit surrounding the whole is filled up with earth, being pressed strongly all the time of putting in close round the mould.

The furnace- has a place for the fire and ano- ther to contain the metal ; the fire-place has a large chimney with a spacious ash-hole. The furnace which contains the metal is vaulted, and its bottom is made of earth rammed down, the rest is built of brick-work. It has four apertures, the first of which admits the flame projected by the fire to reverberate, the second is closed by a stopple, which is opened for the metal to run through; the other two are to separate the dross and scoriae by allowing the attendant of the fur- nace to introduce a wooden rake through it for the purpose. These apertures also pass the thick smoke. The ground or floor of the furnace is built sloping for the metal to run down. When the metal is fused and ready to fill the shell, which should be examined minutely in every part to see if it be diy and ready to receive it ; when all is deemed ready, the metal is suffered to run into the shell by the apertures prepared to admit it, after which it is allowed to fix and cool. It is then taken out, examined, and cleaned, in a si- milar manner to what has been before explained for brass and bronze castings.

The theory of the sound of bells is notice 1 in our article of that name ; together with several curious facts of their history. See Bell.

Tlie metliod of forming the profile of a bell, previous to its being cast, in which the propor- tion of the several parts may be seen, is as fol- lows : the thickness of the brim C 1, of the dia- gram, is the foundation of every other measure, and is divided into three equal parts. First, draw the line IID, which represents the diameter of the bell ; bisect it in F, and erect the perpen- dicular F /■; let D F and 11 F be also bisected in Fˆ and G, and two other perpendiculars E e, G a, be erected at F and G ; G E will be the diameter of the top or upper vase, i. e. the dia- meter of the top will be half ihat of the bell ; and it will, therefore, be the diameter of a bell

which will sound an octave to the other. Divide the diameter of the bell, or the line II D, into fifteen equal parts, and one of these will give Cl the thickness of the brim : divide again each of these fifteen equal parts into three other equal parts, and then form a scale. P'rom this scale take twelve of the larger divisions or 2-15ths of the whole scale in the compass, and setting one leg in D describe an arc to cut the line Ee in N; draw N D, and divide this line into twelve equal parts ; at the point 1 erect the perpendicular 1 C rn 10, and C 1 will be the thickness of the brinî'l-15th of the diameter; draw the line C D ; bisect DN ; and at the point of the bisection 6, erect the perpendicular 6 K= 1ˆ of the larger divisions on the scale. With an opening of the compass equal to twice the length of the scale, or thirty brims, setting one leg in N, describe an arc of a circle, and with the same leg in K, and the same opening, describe another arc to intersect the former : on this point of intersection as a centre, and, with a radius equal to thirty brims, describe the arc N K ; in 6 K produced take K B = |- of the larger measure of the scale or one-third of the brim, and on the same centre with the radius 30| brims describe an arc A B parallel to N K, For the arc B C, take twelve divisions of the scale or twelve brims in the compass ; find a centre, and from that centre, with this opening, describe the arc B C, in the same manner as N K or A B were described. There are various ways of describing the arc Kp, some describe it on a centre at the distance of nine brims from the points ip and K ; others, as it is done in the figure, on a centre at the dis- tance only of seven brims from those points. But it is necessary first to find the point /), and to determine the rounding of the bell j9 1. For this purpose, on the point C as a centre, and

with the radius Cl, describe the arc Xipn; bi- sect the part 1 2, of the line D n, and, erecting the perpendicular p m, this perpendicular will cut the arc \fn in 7«, which terminates the rounding 1 p. Some founders make the bend- ings, K, a third of a brim lower than the middle of the line D N ; others make the part C 1 D more acute, and instead of making C 1 perpendicular toDN at 1, draw it out one-sixth of a brim higher, making it still equal to one brim ; so that the line 1 D is longer than the brim C 1 . In order to trace out the top part, N «, take in the compass eight divisions of the scale or eight brims ; and on the points N and D as centres, describe arcs to intersect each other in 8 : on this point 8, with a radius of eight brims, describe the arc N 6 ; this arc will be the exterior curve of the top or crown ; on the same point 8 as a centre, and with a radius equal to 7| brims, describe the arc Ae, and this will be the interior curve of the crown, and its whole thickness will be one- third of the brim. As the point 8 does not fall in the axis of the bell, a centre M may be found in the axis by describing, with the interval of eight brims on the centres D and H, arcs which will intersect in M ; and tliis point may be made the centre of tlie

inner and outer curves of the crown as before. Tlie thickness of the cap, which strengthens the crown at Q, is about one-third of the thickness of the brim ; and the hollow branches or ears about one-sixth of the diameter of the bell. The height of tlie bell is in propor- tion to its diameter as twelve to fifteen, or in the proportion of the fundamental sound to its third major ; whence it follows that the sound of a bell is principally composed of the sound of its ex- tremity or brim, as a fundamental) of the sound of the crown which is an octave to it, and of that of the height which is a third.

FOUND'LING, n. s. From found, of find. A child exposed to chance ; a child found without any parent or owner.

A piece of charity, practised by most of the nations about us, is a provision for foundlings, or for those children who are exposed to the barbarity of cruel and unnatural parents. Addison.

The goddess long had marked the child's distress. And long had sought his sufferings to redress ; She prays the gods to take the foundlijig's part. To teach his hands some beneficial art, Gai/.

FOUNT, jj.s. ■\ Lat. fans, (romf undo,

Foun'tain, n.s. f to pour out, and signi- Foun'tainless, «f//. i^fies the spring wliich is FouNTFUL, adj. J visible on the earth. A well ; |a spring; whether natural or artificial : a jet ; a spout of water : the head or first spring of water; hence, metaphorically, original ; first prin- ciple; first cause. The adjectives are in direct opposition as to meaning.

Unkindncssc past they gan of solace treat, AnH. h;'(»-. > in pleasauncc of the joyous shade.

Wliich ghielded them against the boyling heat, And with greene boughes decking a gloomy glade. About the fountaine like a girlond made.

Spenser's Faerie Queene. Proofs as clear 3isfou7its in July, when We see each grain of gravel.

Shakspeare. Henry VIII. Founlaini I intend to be of two natures ; the one that sprinkleth or spouteth water ; the other a fair re- ceipt of water, without fish, or slime, or mud.

Bacon. But when the fountful Ida's top they scaled with utmost haste. All foil upon the high-haired oaks. Chapman.

Oh fountains', when in you shall I Myself eased of peaceful thoughts espy ? Oh fields 1 oh woods I when, when shall I be made The happy tenant of your shade ? Cowley.

Can a man drink better from the fountain finely paved with marble, than when it swells over the green turf? Taylor.

He set before him spread A table of celestial food divine. Ambrosial fruits, fetched from the tree of life; And from the fount of life, ambrosial drink.

Milton. So large The prospect was, that here and there was room. For barren dcsevt fuuntainless and dry. Id.

Near this a. fountain's liquid bell Tinkles within the concave shell. Marvell. All actions of your grace are of a piece, as waters keep the tenor of .he\t fountains : your compassion is general, and has the same effect as well on enemies as friends. Dryden.

This one city may well be reckoned not only the seat of trade and commerce, not only the fountain of habits and fashions, and good breeding, but of mo- rally good or bad manners to all England.

Sprat's Sermons. Narcissus on the grassy verdure lies; But whilst within tJie crystal /own^ he tries To quench his heat, he feels new heat arise.

Addison, For the eye In love drinks all life's fountains (save tears) dry.

Byron.

Fount, or Font, among printers, &c., a set or quantity of characters or letters of each kind, cast by a letter- founder, and sorted. When ■we say, a founder has cast a fount of bourgeois, of long primer, of brevier, &c., we mean that he has cast a set of characters of these kinds. A complete fount not only includes the running letters, but also large and small capitals, single letters, double letters, lines, numeral characters, points, commas, &c. Founts are large and small, according to the demand of the printer, nho orders them by the hundred weight, or by sheets. When the printer orders a fount of 400, he means that the fount should weigh 400 pounds. When he demands a fount of eight sheets, it is understood, that with that fount lie should be able to compose eight sheets, or sixteen forms, without being obli- ged to distribute; and the founder-takes his measure accordingly. The letter founders have a kind of list, or tariff', whereby they regulate their founts ; some letters being in much more use, and oftencr repeated than others,

their cells or boxes should be better filled and stored than those of the letters vvhicli

do not return to frequently. Thus the o and j, for instance, are always in greater quantity than the k or x. This difference will be best per- ceived from a proportional comparison of those letters with themselves, or some others.

Fountain. Among the ancients, fountains were generally esteemed sacred ; but some were held to be so in a more particular manner. The goods effects received from cold baths gave springs and rivers this high reputation : for the salutary influence was supposed to proceed from some presiding deity. Particular accidents might occasion some to be held in greater vene- ration than others. It was customary to throw little pieces of money into those springs, lakes, or rivers, which were esteemed sacred, to render the presiding divinities propitious ; as the touch of a naked body was supposed to pollute their hallowed waters. For the phenomena, theory, and origin of fountains or springs, see Spring.

FOUPE, V. a. To drive with sudden impe- tuosity. A word out of use.

We pronounce, by the confession of strangers, as smoothly and moderately as any of the northern na- tions, who foupe their words out of the throat with fat and full spirits. Camden.

FOUQUIERES (James), an eminent painter, born at Antwerp in 1580. lie received his chief instructions from Velvet Brughel; and applied himself to the study of landscapes, and visited Rome and Venice to improve himself in color- ing. His works are said to be nearly equal to those of Titian. lie was much caressed at the elector Palatine's court, and afterwards spent several years in France ; where his works met with uni- versal approbation, and where he painted several pictures in the gallery of the Louvre, for which Louis XIII. conferred on him the honor of knighthood. This mark of distinction made him insolent, and his conduct was so bad to Nicolo Poussin, as to compel that incomparable artist to leave France. Fouquieres himself fell after- wards into disgrace, and died in poverty at Paris, in 1659.

FOUR, adj. "^ Sax. jreopeji. Twice

Fourfold, adj. > two : fourfold is four times FouRFOOTED, flf//. J told : fourfooted, applied to quadrupeds having four feet.

He shall restore the \a.vah fourfold, because he had no pity. 2 Sajn. xii. 6.

And thou shalt understond, that a man suffereih foure maner of grcvances

in outward thinges ; ayenst the whiche foure, he must have foure manor of pa- tiences. Chaucer. The Personcs Tale. Augur Astylos, whose art in vain From fight dissuaded ihc fourfooted train. Now beat the hoof with Nessus on the plain.

Dryden. Just as I wished, the lots were cast on /our; Myself the fifth. Pope's Odyssey.

FOURBE, n.s. Fr. A cheat; a tricking fellow. Not in use.

Jove's envoy, through the air. Brings dismal tidings ; as if such low care Could reach their thoughts, or their repose disturb ! Thou art a false impostor, and a foiirbe: Denh(tm.

FOURCROY.

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FOURCROY (Antoine Francois de), was born at Paris on the 15th of June, 1735. His family had long resided in the capital, and several of his ancestors had distinguished themselves at the bar. His father, however, was a poor apothe- cary, and he was at length even compelled to give up that business by the corporation of apothecaries. Tlie care of an elder sister preserved the subject of this memoir with difficulty till he reached the age at which it was usual to be sent to college. Here he was unlucky enough to meet with a brutal master, who treated him with cruelty. The consequence was a dislike to study; and he quitted the college at the age of fourteen, scarcely better instructed than when he went to it. His poverty now was such, thai he was under the ne- cessity of endeavouring to suppoit himself by commencing writing-master. He had even some thoughts of going upon the stage; but, while un- certain what plan to follow, the advice of Viq. d'Azyr induced him to commence the study of medicine. This to a man in his situation was by no means an easy task. Fourcroy, however, studied with so much zeal and ardor that he soon became well acquainted with the subject of me- dicine. It was now necessary to get a doctor's degree ; and all the expenses, at that time, amounted to £'250 sterling. Viq. d'Azyr was particularly obnoxious to the faculty of medicine at Paris; and Fourcroy was unluckily the ac- knowledged protegee of this eminent anatomist. This was sufficient to induce the faculty of me- dicine to refuse him a gratuitous degree ; and he would have been excluded in consequence from entering upon the career of a practitioner, had not the friends of d'Azyr, enraged at this treat- ment, formed a subscription, and contributed the necessary expenses. But above the simple de- gree of doctor, there was a higher one, entitled, Docteur Regent, which depended entirely upon the votes of the faculty ; and this was unani- mously refused to M. de Fourcroy. Fourcroy

being thus entitled to practise in Paris, his suc- cess depended entirely upon the reputation which he could contrive to establish. For this purpose he devoted himself to the sciences connected with medicine, as the shortest and most certain road by which he could reach his object. His first writings showed no predilection for any particular branch of science. He wrote upon chemistry, anatomy, and on natural history. He published an Abridgment of the History of In- sects, and a Description of the Bursae Mucosre of the Tendons. This last piece seems to have given him the greatest celebrity ; for in 1785 he was admitted, in consequence of it, into the Academy of Sciences as an anatomist; but the reputation of Bucquet, which at that time was very high, gradually directed his particular at- tention to chemistry, and he retained this predi- lection during the rest of his life. Bucquet was at that time professor of chemistry in the medical school of Paris, and was then greatly celebrated on account of his eloquence. Fourcroy became in the first place his pupil, and soon after his particular friend. One day, when illness pre- vented him from lecturing as usual, he entreated IM, de Fourcroy to sup{)ly his place : he at last ""onsented ; and acquitted himself to the satisfac-

tion of his whole audience. Bucquet soon after substituted bun in his place; and it was in his laboratory and in his class-room that Fourcroy first made himself acquainted with chemistry. There was a college established in the king's garden, which was at that time under the super- intendance of Bufibn, and Macquer was the pro- fessor of chemistry in this institution. On the death of this chemist, in 1784, though Lavoisier stood candidate- for the chair, Fourcroy was ap- pointed; and continued professor at the Jardin des Plantes during the remainder of his life, which lasted twenty- five years; and such was his eloquence, that his celebrity as a lecturer con- tinued always upon the increase. We must now notice the political career of Fourcroy during the progress of the revolution. In the autumn of 1793 he was elected, a member of the Na- tional Convention. The National Convention, and France herself, were at that time in a state of abject slavery; and so sanguinary was the ty- rant who ruled over that unhappy country, that Fourcroy, notwithstanding his reputation for elo- quence, and the love of eclat which appears all along to have been his domineering passion, had sufficient wisdom never to open his mouth in tiie convention till after the death of Robespierre. During this unfortunate and disgraceful period, several of the most eminent literary characters of France were destroyed ; among others, La- voisier; and Fourcroy has been accused of con- tributing to the death of this illustrious philo- sopher, his former rival, and his master in chemistry. How far such an accusation is de- serving of credit, there are no means of deter- mining; but Cuvier, who was upon the spot, and in a situation which enabled him to investi- gate its truth or falsehood, acquits Fourcroy en- tirely of the charge. ' If in the rigorous

*researches which we have made,' says Cuvier, in his Eloge of Fourcroy, * we had found the smallest proof of an atrocity so horrible, no human power could have induced us to sully our mouths with his Eloge, or to have pronounced it witiiin the walls of this temple, which ought to be no less sacred to honor than to genius.' Fourcroy began to acquire influence only after the ninth thermidor, when the nation was wearied with destruction, and when efforts were making to re- store those monuments of science, and those public institutions for education, which, during tiie wantonness and folly of the revolution, had been overturned and destroyed. Fourcroy was particularly active in this renovation, and it was to him chiefly that almost all the schools esta- blished in France for the education of youth are to be ascribed. The convention had destroyed all the colleges, and universities, and academics, tliroughout France. The efiects of this ridicu- lous abolition soon became visible. The army stood in need of surgeons and i)hysicians, and there were none educated to supply the vacant places. Three new schools were founded for educating medical men. They were nobly en- dowed, and still continue connected with the university of Paris. The term schools of medi- cine was proscribed as too aristocratical. They were distinguished by the ridiculous appellation of schools of health. The Polytechnic School*

was next instituted, as a kind of preparation for the exercise of the military profession, where young men could be instructed in mathematics and natural philosophy, to make them fit for en- tering the schools of the artillery, and of the marine. Fourcroy, either as member of the con- vention, or of the council of ancients, took an active part in all these institutions, both as far as regarded the plan and the establishment. He was equally concerned in the establishment of the Institute, and of the INIuseum d'Histoire Na- turelle. This last was endowed w'th the utmost liberality, and Fourcroy was one of the first pro- fessors; as he was, also, in the School of Medi- cine, and the Polytechnic School. The violent exertions which M. de Fourcroy made in the nu- merous situations which he filled, and the pro- digious activity which he displayed, gradually undermined his constitution. He himself was sensible of his approaching death, and announced it to his friends as an event which would spee- dily take place. On the 16th of December, 1809, after signing some despatches, he suddenly cried out, Je suis mort,and dropped lifeless on the ground. He was twice married : first to Made- moiselle Bettinger, by whom he had two chil- dren ; a son, an officer in the artillery, who inherits his title ; and a

daughter, Madame Fou- caud. He was married a second time to Madame Belleville, the widow of Vailly, by whom he had no family. He left but little fortune behind him ; and two maiden sisters who lived with him, depended for their support iipon his friend M. Vauquelin. The character of M. de Fourcroy is sufficiently obvious. It was exactly fitted to the country in which he lived, and the revolu- tionary government, in the midst of which he was destined to finish his career. Vanity was his ruling passion, and the master-spring of all his actions. It was the source of all the happi- ness, and of all the misery of his life; for every attack, from what quarter soever it proceeded, was felt by him with equal acuteness. The changes which took place in the science of che- mistry were brought about by others, who were placed in a different situation, and endowed with different talents; but no man contributed so much as Fourcroy to the popularity of the Lavoisierian opinions, and the rapidity with which they were propagated over France, and most countries in Europe. He must have pos- sessed an uncommon facility in writing, for his literary labors are exceedingly numerous. Be- sides those essays which have been already no- ticed, he published five editions of his System of Chemistry ; the first edition being in two volumes, and the fifth in ten. It contains a vast quantity of valuable matter, and contributed considerably to the general diffusion of chemical knowledge. Perhaps the best of all Fourcroy's productions is his Philosophy of Chemistry, which is remarkable for its conciseness, its per- spicuity, and the neatness of its arrangement. Besides these works, and the periodical work called Le Medecin Eclaire, of which he was the editor, there are above 160 papers on chemical subjects, with his name attached to them as the author, which appeared in the Memoirs of the Academy of the Institute, in the Annales de

Chimie, or the Annales de Museum d'Histoire Naturelle, of which last work he was the origiiial projector. As in most of these papers the name of Vauquelin is associated with his own, as the author; and as during the publication of those which appeared with his own name alone, Vau- quelin was the operator in his laboratory, it is not possible to determine what part of the expe- riments were made by Fourcroy, and what by Vauquelih.

FOURMONT (Stephen), professor of the Arabic and Chinese languages, was born at Herbelai, a village twelve miles from Paris, in 1683. He studied in Mazarine College He was at length appointed professor of Arabic in the Royal College, and was made a member of the Academy of Inscriptions. In 1738 he was chosen F. R. S. of London, and of Berlin in 1741. He was often consulted by the duke of Orleans, who greatly estetmed him, and made him one of his secretaries. He wrote a great number of works. The chief of which are, 1. The Roots of the Latin Tongue, in verse. 2. Critical Reflections on the Histories of ancient Nations, 2 vols. 4to. 3. Meditationes Senecae, folio. 4. A Chinese Grammar, in Latin, folio. 5.

Several Dissertations printed in the Memoirs of the Academy of Inscriptions, &c. He died at Paris in 1745.

*FOURNESS,*a track in Loynsdale, Lanca- shire, between the Kent, Leven, and Dudden Sands, which runs north parallel with the west sides of Cumberland and Westmoreland, and on the south runs into the sea as a promontory. Here, as Camden expresses it, ‘ the sea, as if en- raged at it, lashes it more furiously, and in high tides has even devoured the shore, and made three large bays ; viz. Kent-sand, into which the river Ken empties itself; Leven-sand and Dud- den-sand, between which the land projects in such a manner that it has its name thence; Foreness and Foreland, signifying the same with us as promontorium anterius in Latin.’ Bishop Gibson, however, derives the name of Fourness, or Furness, from the numerous furnaces that were there anciently, the rents and services of which, called bloomsmithy rents, are still paid. Here are several cotton mills ; and in the mosses of Fourness much fir is found, but more oak : the trunks in general lie with their heads to ‘.he east, the high winds having been from the west. Fourness produces all sorts of grain, but prin- cipally oats,of which the bread is generally made : and there are veins of a very rich iron ore, which is not only melted and wrought, but ex- ported in great quantities. The three sands above-mentioned are very dangerous to travel- lers, by the tides and the many quicksands. There is a guide on horseback appointed to Kent or Lancaster-sand at £lO a year, to Leven at £6 out of the public revenue; but to Dudden-sands, which are most dangerous, none; and it is no uncommon thing for persons to pass over in par- ties of 100 at a time like caravans, under the di- rection of the carriers, who pass every day. The sands are less dangerous than formerly, being much more frequently passed and better known, and travellers vvho are strangers, never going without guides.*

FouRNESs Abbey, or ‘ Furnis Abbey up in tlie mountains,’ was begun at Tulket in Amoun- derness, in 1124, by Stephen earl of Boulogne, afterwards king of England, for the monks of Savigny in France, and three years after removed to the valley, then called Bekangesgill, or ‘ the vale of night-shade.’ It was of the Cistertian order, endowed with above £800 per annum. Out of the monks of this abbey, Camden says,

half an inch from the end. Two inches and a half inwards from the last mentioned notch, holding the above end from you, there is a cut made on

the right side to half the breadth of the stick, quite through; from wliich, towards the outer end on the same side, a little within the first mentioned notch, the wood is cut out in a circular manner. The inner end is tapered and left rough, in order to make the bait at (b)

the bishops of the Isle of Man, which lies over hold the latter upon it. The upper piece (cj i's against it, used to be chosen by ancient custom ; three inches long, half an inch broad, and one- it being as it were the mother of many monas- sixteenth of an inch thick. At half an inch teries in Man and Ireland. Some ruins, and from what is to be the highest part of the trap, it part of the fosse which surroimded the monas- is to be notched, like tlie outer end of the bait- tery, are still to be seen at Tulket. The remains stick, to one-fourth of its thickness: the otlier at Fourness breathe the plain simplicity of the end is made sharp like the face of a chisel. The Cistertian abbeys ; the chapter-house was the third piece is of the same thickness and breadth, only piece of elegant Gothic about it. Part of and four inches long, sharpened at one of its the painted glass from the east window, repre- ends like the above, and cut square at the other.

senting the crucifixion, &c., is preserved at Winder-mere church in Bowlness, Westmore- land.

FOURSCORE, adj. Four and score. Four times twenty ; eighty. It is used elliptically for fourscore years in numbering the age of man.

This piece is called the pillai- (d).

There are two slates required ; one to lie upon the ground, and this must be pressed so deep into it as to cause its upper side to be equal with the general surface ; because, if access to the bait is any way difficult, the mice will take the

When they were out of reach, th«iy turned and seeds as the readiest food, although not perhaps crossed the ocean to Spain, having lost fourscore of the most palatable. Having laid the above slate.

their ships, and the greater part of their men

Bacon's War with Spain. In the mean time, the batteries proceeded. And fourscore cannon on the Danube's border Were briskly fired and answered in due order.

Bt/ron, And so all ye, who would be in the right.

In health and purse, begin your day to date From day-break, and when coffined m fourscore. Engrave upon the plate, you rose at four. Id.

FOURSQUARE, adj. Four and square. Quadrangular; having four sides and angles equal.

The temple of Bel was environed with a wall car-

and being provided with another, from six to seven inches square, and from one and a half to two pounds weight, take the upper piece (c) .into the left hand, holding the sharp end towards you, and the notch downwards. Next place the sharpened end of the pillar into this notch, forming an acute angle ; hold these two pieces in this position with the fingers and thumb of the left hand, and place the under end of the pillar upon the lower slate, and the outer edge of the upper slate near the extremity of the upper part of the trap ; then take the bait-stick (pre- viously baited) with your right hand, and place it

*xuc (.eiunic ui r>ei was environeu wun a wau car- „„ „„ tT,„j. jl;, * i j ^ .i*

,:„j f c .1.1..JI, J so as that the notched part near the extremity xw^ foursquare, oi great height and beauty : and on ■ ,, i ‘ , , . «- ^—wiici.i.ij- eacL square certain brazen gates curiously engraven. ™.y ””^fV^ “ sharpened end of the upper Raleigh’s History. Stick, and let that place of it which was cut half

Sax. peopeptyn. Four

FOURTEEN, adj. and ten ; twice seven

I am not fourteen pence on the score for sheer ale.

Shakspeare.

FOURTE’ENTII, cr/j. From fourteen. The ordinal of fourteen ; the fourth after the tenth.

I have not found any that see the ninth day, few before the twelfth, and the eyes of some not open be- fore the fourteenth day. Browne’s Vulgar Errours.

FOURTH, at/;. From four. The ordinal of four; the first after the third.

A third is like the former : filthy hags ! Why do you shew me this ? A fourth ? start eye ! What ! will the line stretch out to the crack of doom ?

Shakspeare.

Fourth Figure Trap, the trap generally used in gardens, plantations, &:c., to catch the mice which devour the seeds. It is composed of three pieces of

wood in the shape of a figure 4 (see diagram) supporting a piece of slate. The following is the account given of it in NichoUs's Planter. The longest of these pieces '^^ of wood, or the baif-sdck (a), should be seven inches in length, half an inch broad, and one- sixteenth thick; the outward end on the upper side is notched to one-fourth of its thickness, at

through hold the pillar, but so as that the baited end of the bait-stick may slightly rest upon the slate ; and the trap is set.

A very little practice will enable any person who is a stranger to tiiis kind of trap to use it with facility ; and a great number may be placed in the nursery grounds at no expense. Bricks are sometimes used in place of slates. The best bait is oatmeal made into dough by butter, and tied on the bait-stick with a little flax : after being tied on, it will be of use to burn the bait a little, to make it smell. Such a quantity of bait must not be used as may prevent the mou$c from being killed by the fall of the slate.

FO'URTHLY, adv. From fourth. In the fourth place.

Fourthly, plants have their seed and seminal parts uppermost, and living creatures have them lowermost. Bacon's Natural History.

FOURVVHE'ELED, aˆ". Four and wheel. Running upon twice two wheels.

Scarce tvienty fourwheeled cars, compact and strong. The massy load could bear, and roll along. Pope.

FOU-TCIIEOU, a city of China of the first rank, in the province of Fo-Kien. It carries on a great trade, and has a 'ˆood harbour and a most magnificent bridge, which has more than 100 arches, constructed of white stone, and orna- mented with a double balustrade throughout. It is the residence of a viceroy, and has under its jurisdiction nine cities of the third class. It lies 870 miles south of Pekin. Long. 136° 50′ E. of FeiTO, lat. 26″ 4′ N.

Fou-TCHEOU, a city of China of the first rank, in the province of Kiang-si ; formerly one of the finest cities in the empire, but almost ruined by the Tartar invasion. It lies 735 miles east of Pekin. Long. 133° 42′ E. of Ferro, lat. 27° 55′ N.

FO'UTRA, 71. ,9. Fr. fuutre. A fig ; a scoff; a word of contempt. Not used.

Afuutra for the world, and worldlings base.

Shakspeare.

FOWEY, Fawey, or Foy, a populous and flourishing town of Cornwall, with a commodious haven on the British Channel. It extends above a mile on the east side of the river, and has a spacious market-house, with a town-hall above it, erected by the then representatives of the borough, Philip Rashleigh, Esq., and lord vis- count Valletort. It has also a fine old church, a free-school, and an hospital. It rose so much formerly by naval wars and piracies, that, in the reign of Edward III., its ships refusing to strike •when required, as they sailed by Rye and Win- chelsea, were attacked by the ships of those ports, but defeated them ; whereupon they bore their arms mixed with the arms of those two cinque ports, which gave rise to the name of the Gallants of Fowey. And Camden informs us that this town quartered a part of the arms of all the other cinque ports with their own; intima- ting that they had at times triumphed over them all. In the same reign they rescued cer- tain ships of Rye from distress, for which this town was made a member of cinque ports. Ed- ward IV'. favored Fowey so much, that when the French threatened to come up the river to burn it, he caused two towers, the ruins of which are yet visible, to be built at the public charge for its security : but he was afterwards so pro- voked at the i"nhat)itants for attacking the French, after a truce proclaimed with Louis XL, that he took away all their ships' and naval stores, toge ther with a chain drawn across the river between the two forts, which was carried to Dartmouth. For the present defence of the harbour three batteries have been erected at the entrance, which stand so high that no ship can bring her puns to bear upon them. The market-house is large and spacious, over which there is a neat lown-hall. Here are also two free-schools, an

FOWL, n. s. Sc v.n. ˆ Sax Fow'ler, 71. s. > Belg.

Fow'ling-pjece, 71. s. jfugl ;

excellent poor-house, and an alms-house for eight decayed widows. No wheeled carriages can come into this town, owing to the narrow- ness and sudden turnings of the streets. Most of the inhabitants are in the pilchard fishery, which employs a great number of vessels. About 28,000 hhds. of fish are annually brought into this port. Tlie corporation consists of a mayor, recorder, eight aldermen, a town clerk, and two assistants : the market is on Saturday. The tolls of the market, fairs, and harbour, were vested in the corporation on the payment of a fee-farm rent of about 40s. It has sent two members to parliament since the 1 3th of queen Elizabeth. Fowey lies twenty-two miles E. N. E. of Truro, and 239 W. S. W. of London.

FOWL, ra. s. & u. n. “) Sax. pujel, puhl ; vogal ; Goth, from Jlyga, to fly. A winged animal ; a bird. It is collo- quially used of edible birds, but in books, of all the feathered tribes. Fowl is used collectively ; as, we dined upon fish ˆnd fowl : to kill birds for food or game : a sportsman who pursues birds ; a gun for birds.

, the foules of ravine

Were highest set ; and, then, the foules smale.

That eten as hem nature would encline.

As worme or thing, of whiche I tell no tale ;

And ■water fiiule sate, lowest, in the dale ;

And foules that liveth by sede, sat on the greene.

And that so fele, that wonder wos to sene.

Chaucer. Assemble of Fvules. The fowler we defy And all his craft. Id. Legend of Good Women. The beasts, the fishes, and the winged ˆotrZs, Are their males’ subjects, and at their controuls.

Shak’ipeare. Lucullus entertained Pompey in a magnificent house : Pompey said, this is a marvellous house for the Summer ; but methinks very cold for Winter. Lucullus answered. Do you not think me as wise as divers fowls, to change my habitation in the Winter season ? Bacon’s Ayophtkeyms,

‘Tis necessary that the countryman be provided with a good fowlingpiece. Mortimer.

The fiwler, warned By those good omens, with swift early steps Treads the crimp earth, ranging through fields and

glades, OfTensivc to the birds. Philips.

With slaughtering guns the’ unwearied /oiwfer roves. When frosts have whitened all the naked groves.

Pope. This mighty breath Instructs the fowls of heaven.

Thomson’s Spring.

TowL, among zoologists, denotes the larger sorts of birds, whether domestic or wild : such as geese, pheasants, partridges, turkeys, ducks, &c. Tame fowl make a necessary part of the stock of a country farm. See Poultry.

Fowls are again distinguished into two kinds, viz. land and water fowls, these last being so called from their living much in and about water ; also into those which are counted game, and those which are not. See Game.

Fowling Pieces are reckoned best when they have a long barrel, from five feet and a half to six feet, with a moderc te bore. But every fowler should have them of different sizes suitable to

the game he designs to kill. The barrel should oe well polished and smooth within, and the bore of an equal size from one end to the other; which may be proved by putting in a piece of pasteboard cut to the exact roundness of the top, for if this goes down without stops or slipping, you may conclude the bore good. The bridge- pan must be somewhat above the touch hole. As to the locks, choose such as are well filled with true work, whose springs must be neither too strong nor too weak. The hammer ought to be well hardened, and pliable to go down to the pan with a quick motion.

FOX, 71. s. Sax. pox; Be\g. vos, vosch, from Goth. /ox. A wild animal of the canine kind, with sharp ears and a bushy tail, remarkable for his cunning, living in holes, and preying upon fowls or small animals ; by way of reproach, applied to a knave or cunning fellow.

The sely widewe, and hire daughtrer troo. Her len these henncs crie and maken wo ; And out at the doors sterten they anon ; And saw the fox toward the wode is gon. And bare upon his back the cok away ; They crieden, out harou and wala wa I ‘ A ha the fox !’ and after him they ran And eke with staves many another man.

Chaucer. The Noimcs Preestes Tale. The fux barks not when he would steal the lamb.

Shakspeare. He that trusts to you. Where he should find you lions, finds you hares ; Where fojres, geese. Id. Macbeth.

These retreats are more like the dens of robbers, or holes of foxes, than the fortresses of fair warriours.

Locke. Fox, in zoology. See Can is. The fox is a great nuisance to the husbandman, by taking away and destroying his lambs, geese, poultry, &c. The common way to catch him is by gins ; which being baited, and a train made by drawing raw flesh across in his usual paths or haunts to the gin, it proves an inducement to bring him to the place of destruction. The fox- is also a beast of chase, and is taken with greyhounds, terriers, &c. See Hunting.

Fox (Charles James), an illustrious states- man, who took a large and important share in all the public business of the British empire, from 1768 to 1806. The period of Mr. Fox's political life was filled with measures of such interest and magnitude as would have conferred celebrity on a meaner agent ; while his talents were so considerable as to exalt and dignify even the ordinary course of affairs. His era and character, therefore, mutually aid eacli other's immortality ; and, when taken together, com- mand a double portion of that historical interest which either of them would have separately pos- sessed. Another accessary circumstance, whicii serves to augment his natural and intrinsic claims to fame, was the distinguished eminence of his chief political opponent. The mind, like the body, is generally disposed to exert no more of its power than the occasion reqnires ; and, from the want of a sufficient stimidus, many have allowed their intellectual vigor to degenerate by inaction, and its extent to remain unknown both to others and themselves. But the co-existence and competition of Fox and Pitt tasked the facul-

ties of each to their full strength, and revealed to the world the ultimate resources of two of the most distinguished men that ever strug- gled for superiority, by eloquence and wis- dom. The nearness of their deaths, too, secures the complete coincidence of their histories ; so that, in all future periods, the name of the one must naturally suggest that of the other, and each communicate to his rival a portion of his own renown. It is fair, however, to observe that, if their comparative merit is to be weighed by their celebrity alone, the balance must incline towards the claims of him who, without place or power, and acting more as a commentator on great national measui'es, than as their author, created for himself a, splendor of reputation equal to that of an opponent, who enjoyed nearly through life the most eminent and efficient station. No antagonist of Godolphin or Harley, of Walpole or Pelham, fills so large a space in the eye of the historian, as these long established dispensers of profit and preferment : and even of the great Chatham it is the glorious administration, not the animated opposition, that is most frequently in the mouths of his admirers. If Fox, therefore, contrary to all former example, contrived, during a life of political adversity, to acquire an equal name with his more fortunate competitor, it is natural to ascribe to him a superiority of that genius which captivates popular attention.

Mr. Fox was born on the 13th of January, 1749. He was the second son of Henry lord Holland, who, by a public career in an opposite direction to that of his son, at once ennobled and enriched his family. The former was as zealous in maintaining, as the latter in resisting, the principles of the court ; yet, notwitiistanding this contrariety of conduct, some features of a family likeness may be traced between the father and the son. We find in both a certain mascu- line vigor of character, united with a kind, indul-

gent, and affectionate temper ; political activity with domestic indolence ; and an equal ardor in public enmities and private friendships. The more pleasing qualities in lord Holland's charac- ter were remarkably displayed towards his favo- rite boy, whose genius he had sufficient pene- tration very early to discern. To its growth he is reported to have given the fullest scope, by freeing him from every species of restraint ; conversing with him on state affairs ; and, at times, even profiting by his suggestions. His mother was lady Georgina Caroline Lennox, sis- ter to the late duke of Kichmond, through whom he inherited the blood, and even the features, of the royal house of Stuart ; but in character, as has been observed by I\Ir. Burke, he bore a much closer resemblance to Henry IV. of I'rance, ano- ther of his royal progenitors. He enjoyed the full advantage of a public education, havinij been sent to Eton, during the mastership of Dr. Barnard, and under the private tuition of Dr. Newcome, the late primate of Ireland. Pitt spent his boy- hood at home, and it is amusing to remark how complete a contrast, in every particular, these illustrious men have been destined to exhibit to the world ; since they even assist us to appreciate, in minds nearly of equal force, the comparative benefits of public and private education. Fox,

by mingling with society, and acting in that little world, where all the principles and passions, which are afterwards to operate in the great one, are exercised and disciplined on a narrow scale, acquired, together with literary accomplish- ments, a wider knowledge of human nature and human conduct, than his rival ever attained. There, he was formed to that companionable cordiality ; that open and friend-making benig- nity ; and that skill to manage, to attach, and to act with others, which distinguished him through life ; and probably also to that love of dissipation and profuseness, which can be indulged only in society. In Pitt, on the contrary, were seen that sobriety and caution, that backwardness and re- serve, that deficiency in interestingness, attrac- tion, and power of popular captivation, and perhaps that high sense of his own sufficiency, which are too often the effect of privacy and seclusion, and of the want of an early necessity to conciliate and compare ourselves with others. His attachments, we have reason to believe, had more steadiness than enthusiasm; his manner was more unexceptionable than engaging; and his conduct more guarded by discretion, than the strength of his passions appeared to require. Fox passed through all the gradations of boy- hood, youth, and maturity, with that change of character which is naturally created by each ; but Pitt, like the northern year, in which sum- mer commences without any spring, seemed to leap at once from infancy to manhood, without any intervening period

of adolescence. Nature had, no doubt, laid the foundation of this diffe- rence ; but what nature began was consummated by education.

Though, in the traditionary history of Eton, Mr. Fox is better remembered for his extrava- gances than for his literary industry, yet he by no means neglected the proper business of the place. His active and elastic mind found no enjoyment in idleness. Dissipation requires fre- quent intervals : and every pause in its pursuit was occupied by the acquisition of knowledge. He was not the first scholar of his day, but cer- tainly, parvo intervallo proximus. As a specimen of his boyish talents, we shall quote from his school exercises the concluding lines of his address to the dove : —

Quis caeli tibi claudet iter ? dum lumina fallens Vana virum, scindis tuta sub astra fugam.

Saevit unda maris, movoant iusana tumultus TEquora, et eversas concitet Eurus aquas.

Tu fugis incolurais, volucri pernicior Euro, Carpis et aerias inviolata vias.

Garrulitas nostras quondam temeraria lingua Indicio prodit multa facenda levi :

At tibi vox nulla est ; nee, si loquereris, amoris Furta Cytheriacae lingua loquatur avis.

Hoc Venus ipsa vetat, te saepe experta fidelem, Usa ministeriis in sua furta tuis :

Ncmpe alis invecta tuis, tibi semper amores Fidit in amplexus Martis iiura Venus.

Nunc quoque (dilectam docet hoc Cytherea volu- crem) Nunc quoque amatori, fida columba, fave.

I, pete per coelos nostram festina Susannamy Sic mihi, sic Veneri grata futura tuae.

From Eton he was removed to Oxford, where his associates and mode of life continued nearly

the same. At both places he was so lavishly supplied with money, that similar supplies became necessary to the companions who wished to keep pace with him in his amusements; and larger sums were, about that period, risqued at the gaming table, than was ever previously known to be tlie case, either at school or college. It is reported that one member of this dissipated

circle demanded of another, in after life, a debt of £10,000, which had been contracted while they were fellow students. And though the latter declared that he never believed this sum to have been seriously staked, yet the rate of the frolic may serve, in some measure, as a standard by which we may estimate the rate of their play.

From Oxford Mr. Fox, according to the fashionable plan of education, set out on a tour to the continent, during which his expenses were supplied by his father with an injudicious indulgence, which betrayed him into habits of unbounded extravagance. The present writer is enabled to give some idea of the prodigious sums which he carelessly squandered, having been personally informed by an eminent banker, that in the house, of which he was a partner, £100,000 had been paid, by lord H's order, to discharge the debts contracted by his son before he was of age ! On his return to England, and at the age of nineteen, he was elected into parliament for Mid- hurst. Here he was the advocate, under the duke of Grafton, and afterwards under lord North, of the unpopular proceedings against Wilkes, and against the liberty of the press; and drew upon himself the distinction of a sarcasm from Junius. As his talents gave him early importance, he was placed, in 1770, on the board of admiralty; and, in 1772, promoted to the Treasury. But on the death of his father in 1774, finding himself possessed not only of a patrimonial independence, but perhaps too of more freedom of action than he had before en- joyed, he attached himself to the opposition. Whether the minister, as has been affirmed, had disappointed his ambitious solicitations, or was himself disappointed with Mr. Fox's support in some favorite design, it is now almost impossible to discover : but, on the 12th of March, a new commission of treasury was issued ; in which, as lord North laconically informed him, his name was not observable. It was fortunate for his future consistency, that this happened before he had been called upon to deliver any decided opinion on the controversy with America: as he was thus left free to reprobate, with all liis natural vehemence, the conduct" of his former colleagues through the whole of that unhappy contest. Leagued in the same cause with Mr. Burke, his penetration enabled him immediately to perceive and justly to estimate the vast intellectual supe- riority of that accomplished senator. Under his tuition he, in a manner, recommenced and new- modelled his political studies ; and declared afterwards that, ' if all he had learned from other sources were put in one scale, and what he had been taught by Burke in the other, the latter would preponderate.' The brilfiancy of his parliamentary course, during the American war, was attended with more public curiosity than public favor. We are old enough to remember

that he was then less talked of as a statesman, who could occasionally be a dissolute wit, than as a dissolute wit who could occasionally be a statesman. Business appeared to be a subordi- nate object of his attention : and he was repre- sented as one of those intellectual prodigies, in whom singular extremes were united ; whose powers a life of irregularity could neither cloud nor enfeeble ; and who, issuing from the orgies of Brookes's, or the squabbles of Newmarket, could drop, as if accidently into the senate, and astonish the world by unpremeditated mvectives, far surpassing the eloquence of those who had devoted their days and nights to laborious study. This procured him universally the familiar and companionable appellation of Charles Fox, and to this idol of the sprightly and unscrupulous, every epigrammatic sally, every gambling anec- dote, and every humorous subterfuge to disarm importuning creditors were at that time ascribed. Towards the end of the war, however, whether from the effect of time, of disgust at dissipation, or of connecting himself with a female companion, which rendered his habits more domestic, he seemed to apply his mind more assiduously to public affairs, and his parliamentary exertions increased both in frequency and force. In No- vember, 1779, in a debate on the address, having used some expressions, which were interpreted by Mr. Adam into a personal insult, he was challenged by that gentleman; and, on the 27th, received a wound, by which he was for some time confined. On his recovery, however, he renewed his attacks with unabated vigor.

The ministry 'at last, beginning to give way, his ardor increased with the prospect of success; and he pressed them so powerfully and uncea- singly by his logical invectives, that, in March] 782, they were driven from their stations.

On the arrangement of a new administration, the office generally held by the premier was given to the marquis of Rockingham ; but Mr. Fox, and lord Shelburne, the secretaries of state, were understood to be the efficient ministers. The cabinet had no sooner begun their delibera- tions for restoring peace, than a considerable difference of opinion, however, was found to exist, particularly with regard to the acknow- ledgment of American independence: Mr. Fox judging that it should be made without delay or solicitation, and the States afterwards treated with, as an independent power; and the earl of Shelburne that it should be granted as part of the concessions, necessary tp purchase peace. On the 1st of July, the marquis of Rockingham died, and Mr. Fox, foreseeing that he would be outvoted in the cabinet, resigned his office. Of his motives for this step, which was blamed by several of his friends, as inexpedient and preci- pitate, he gave a full account, both to parlia- ment and to the electors of Westminster, who had chosen iiim their representative in 1780.

Tlie present period was an important one, on many accounts, to Mr. Fox; and more so on none, than by introducing to public notice his future antagonist, Mr. Pitt. This gentleman took his seat, in his twenty-second year, for the borough of Appleby, in 1780, and his first con-

spicuous exertion was on the 19th of February, 1781, when he was highly complimented by Mr. Dundas, then opposing him, but probably fore-seeing, with his usual sagacity, the possibility of their future concurrence. When the Shelburne administration was formed, Mr. Pitt became chancellor of the exchequer, and having thus embraced a party, which Mr. Fox had just in- dignantly abandoned, an opposition began be- tween these two conspicuous statesmen, which never ceased during the remainder of their lives. As the latter found himself now embarked in the same interest, and contending on the same side, with his former opponent, lord North, a daily agreement in argument began to blunt the remem- brance of their past animosity A cordial alli- ance, indeed, was gradually formed ; and they united their power, to accomplish another revo- lution in the cabinet. From the number and attachment of their respective adherents, whom lord Shelburne had not thinned, by the usual ex- pedient of a dissolution, this was an easy achieve- ment; and, on April 1783, the new allies took their seat on the treasury bench, Mr. Fox occu- pying his former office of foreign secretary. By a step so unexpected, this gentleman lost a portion of the popular favor, which he never afterwards recovered. It was thought an indecent violation and public mockery of his previous professions ; induced suspicions of the apparent simplicity and sincerity of his conduct ; and cherished a com- fortless belief that the attachments and aversions of statesmen are always guided by their interest and convenience. Its defenders pleaded the necessity of constituting a vigorous gove^-nment, which could be effected by no other means; but those who censured it were more numerous, and seemed only on the watch for a favorable occa- sion, to make the effects of their censure sub- stantially felt. Such an occasion was soon presented, by the first business of national im- portance which occupied the attention of the coalition, as this administration was significantly named. It was a plan for the better govern- ment of India. The affairs of the company had, under their own uncontroled direction, fallen into great disorder; and had been conducted with such disregard, both to policy and justice, as was extremely hurtful, not merely to the na- tional interests in that quarter of the empire, but to those of the mercantile sovereign* themselves. It was absolutely necessary, therefore, that go- vernment should interfere ; and a bill, prepared, as is supposed, by Mr. Burke, was brought into parliament by Mr. F'ox, soon after its meeting in the end of 1783. By this bill, the rights- and property of the company, and the management of their affairs, were to be vested in a board of commissioners named by the legislature. It was certainly a bold, direct, and*

unequivocal mea- sure ; and was supported by its advocates on the plea that the company, having become insolvent, were disqualified for the direction of their own affairs, and that no palliative, nothing short of a radical remedy, could be of any avail. The sus- picion, however, was very general that its authors, finding themselves neither the personal favorites of the crown, nor firmly established in the ap-

probaiicu of the country, wished to augment their strength by seizing a portion of the execu- tive power, and a patronage so valuable as would soon have enabled them to purchase popular support. Though opposed in parliament, as a breach of faith with the company, and as creating an imperium in imperio, prejudicial to the con- stitution, the bill passed the lower house: but the king, if we may credit the universal whisper, being alarmed at the prospect of seeing his ser- vants possess themselves of a power which might render them independent of his prerogative, communicated his apprehension through lord Thurlow to some members of the upper house, by whose intiuence the bill was rejected. With the failure of this bill, the second short adminis- tration of Mr. Fox unexpectedly expired : and though still supported by a majority of the com- mons, by the family interest of the highest and wealthiest nobles, and by associates of the most splendid and diversified genius, he was forced by the union of royal and popular displeasure, to retire into an opposition, which he subse- quently continued to direct for more than twenty years.

To assume the reins of government, in defi- ance of such an opposition, required a character of no ordinary force. Such a one, however, was found in Mr. Pitt, who immediately succeeded to the premiership, and who, contrary, as it was contended, to the spirit, though not to the letter, of the constitution, maintained his place, in con- tradiction to the will of the commons, expressed by repeated reprehensory votes. But as the na- tional business could not proceed, under such circumstances, and as Mr. Pitt relied securely on the favor of the people, parliament was dis- solved in March 1784. At the general election, Mr. Fox, standing again for Westminster, had to combat the whole influence of government, over which, however, after a tumultuous contest, and tedious scrutiny, he finally prevailed. During the time when the issueof the election was undecided, he sat for the boroughs of Orkney and Caithness. For some years after, the history of his poli- tical life must chiefly be traced by the measures which he resisted. The first of these was the new India bill, by which the property and con- cerns of the company were left in their own hands, but their appointments to office subjected to the control and correction of a board,

to be named by the crown. This plan differed little, in some points, from that of Mr. Fox ; but, in form, was more palateable both to the company and the public ; and was certainly exempted from the charge of a tendency to give undue prepon- derance to any particular party. Mr. Fox also, during 1785 and 1786, opposed the propositions for regulating trade with Ireland, and the treaty of commerce concluded with France : but ex- pressed, with a candor which does him the highest honor, his approbation of the measures pur- sued by the ministry in 1787, for re-establishing the Stadtholder, and destroying the French ascen- dancy in Holland. But the attention of Mr. Fox and his colleagues in opposition, was now, and for some succeeding years, principally directed to the impeachment of Mr. Hastings ; a measure which was acquiesced in by administration, but

of which the execution fell upon the proposers Mr. Fox displayed his usual ability, and an un- expected extent of legal erudition, during the course of this trial, which lasted seven years ; and began now to acquire that graver character, essential to the abiding influence of a public man. He appears to have divided his time be- tween political business and domestic retirement. For this change he was probably, in part, in- debted to the embarrassment of his affairs, and partly to his connexion already alluded to, with a lady whom he is supposed privately to have married in 1780. He is likewise said to have had a son, though not by this lady, on whom he bestowed an aff'eclionate attention.

In the summer of 1788 Mr. and Mrs. Fox made an excursion to the Continent, and were enjoying the charms of Switzerland, when he was recalled by notice of the king's indisposition, and travelled with a rapidity which evinced the ardor of his expectations on this occasion. On his arrival, a few days previous to the meeting of parliament, he found a doctrine prepared by his party for its promulgation and support, which we think would scarcely have suggested itself to his own mind ; but which he adopted with that in- dolent facility, and at the same time with that zeal, which, from constitutional temperament, were equally natural to him. This was, that there belonged to the Prince of Wales a right, on the incapacity of the king being declared, to as- sume the exercise of the royal authority, in the same way as if the crown had actually demised. On the statement of this proposition, Mr. Pitt having whispered to a friend that he would now unwhig his opponent for ever, instantly seized the more constitutional ground of asserting that, in a case so unprecedented and unprovided for, it belonged solely to parliament to decide upon the means by which the deficient part of the legislature should be supplied. Mr. F'ox imme- diately perceived, from the general opinion, both within and without the house, that he had advanced with too much impetuosity, and was obliged, next day, to declare, that, though the existence of this right was not retracted, its as- sertion at present should be waived. But Pitt would not suffer him to

escape, without taking farther advantage of his error; and, on the 16th of December, brought the question to a debate, at which the narrator had the felicity of being present, and of thus seeing the powers of the two greatest men of his age fairly matched and fully exerted. Seldom indeed has such a con- test been presented to the world ; whether we consider the splendid theatre in which it was exhibited — the importance of its consequences — the greatness and novelty of the subject — the eminence and equality of the combatants — or the numbers whose eyes were anxiously fixed on its result.

In Mr. Pitt, who opened the discussion, and whose mind was elevated by the popularity of his cause, were to be admired the clearness and precision with which he stated the principles of the constitution ; the extent and exactness of his historical knowledge ; the luminous arrange- ment, the consecutive relation, and the increasing force of his arguments; the aptness and beauty

of his illustrations; the classical purity of his expression; the stately richness and magnifi- cent swell of his periods; the distinct and sylla- bic emphasis of his articulation; the mellow and majestic sublimity of his tones; the dignified energy, and commanding animation of his man- ner; and the disciplined co-operation of all these concentrated powers, to overwhelm the mind with complete and permanent conviction. Mr. Fox, on the other hand, was no less dis- tin-ˆuished for the masterly skill with which he repaired by eloquence the faults of indiscretion ; and for appearing with as much splendor, in managing a retreat from aukward and imprac- ticable ground, as his rival in conducting an attack under every propitious circumstance. By rising late, he gave himself credit for having wished to decline a contest, which his previous explanation had rendered unnecessary, and of being forced up only by the wretched and pro- voking sophistry of his opponent. Adopting a looseness of method, which seemed excusable, when thus starting under an involuntary impulse into the debate, he began, not with the first, nor the last, but with the weakest and most ques- tionable of the opposite positions, exposing its absurdity, stating it in a variety of ridiculous shapes, challenging a vote upon it under these corrected statements, and artfully passing, with slighter notice, or with a happy sarcasm, all that was more invulnerable. With a repetition of his departure from the claim of right, he had the address to blend the best arguments for its truth ; and to discuss every part of the subject, in an argument against the propriety of the discussion. Confounding, with imperceptible subtlety, the question of superior pretension with that of ab- solute right, and giving

the mind, by his vehe- mence, no time to make the distinction, he hur- ried it on to a belief that Pitt had mistaken the nature of the constitution, and had uttered sen- timents the most indecent, and offensive, if not actually seditious. We felt our ideas, as if under the influence of sorcery, become dim and confused, by a change in the position of their objects, and by the intervention of new ones ; seemingly as substantial as those which they eclipsed. We were conscious, for the moment, of two co-existent, yet contradictory, impressions; a conviction of Pitt's doctrine, and astonishment that it could haˆe been produced, by arguments so false, so absurd, and so detestable. Decep- tion, we knew, must somewhere have existed, but we were unable to detect it, while undulatijig on the line between two parallel but contrary currents. In his satire, Pitt kept at a dignified distance from his adversary, seldom applying harsh or contemptuous epitliets to his reasonings, but contenting himself with showing what they deserved by their refutation ; and contriving, with a proud forbearance from personal severity, not as unworthy of his opponents, but of him- self, to involve in general, remarks the most galling censure of their principles. Fox, on the contrary, grappled closely and familiarly with his foe ; frequently introducing with objurgatory epithets the argument by which they were to be justified. For this he was peculiarly qualified, by his concise and pointed stvle : of which the

poignancy delighted the violent, in eveiy rank as much as the graver and more solemn repre- hensions of Pitt were applauded by the lofty. Better stored than his rival with general know- ledge, and practised in the compression of his thoughts into verse, Fox was richer in allusion, wider in his range of analogy, and more able to give power to his sarcasms, by drawing them to a focus. On the present occasion, almost every sentence was a stinging epigram, and, like a Parthian, he inflicted the severest wounds while he retired. In Fox all the parts were separately excellent, though ungraced by formal connexion. In Pitt the happy connexion gave artificial ex- cellence to the parts. Fox charmed by a caustic brevity; Pitt by a finished rotundity. ' Densior ille, hie copiosior : illi nihil adjicJi potuit, huic nihil detrahi.' Their exertions con- tinued equally brilliant and characteristic, during the further progress of the regency bUl, which was rejected in the upper house on the king's recovery. In this afl[;iir, the adherents of Fox applauded his reverence for the monarchical principles of the constitution ; and those of Pitt his respect for the supremacy of parliament. It was, however, triumphantly observed by those who disbelieve the existence of political integrity, that the personal interest of each was on the side which he embraced : and it may be pre- sumed, without any harsh impeachment of their sincerity, that they, like other men, were partly influenced by this coincidence. Quod volumus, says Tacitus, facile credimus.

In 1791 the powerful remonstrances of Mr. Fox prevented a war with Russia, to which the minister was disposed, for the purpose of check- ing the aggrandisement of that extensive empire ; and, by preserving Turkey still formidable on her southern frontier, to counteract any design, she might afterwards entertain, of making new aggressions towards the west. The danger of Poland was, we believe, not specified in the dis- cussion, because that kingdom had not been par- ticularly threatened ; but we k now, on the best authority, confirmed by the distinct declaration of Mr. Dundas on the iSth of December, 1792, that it was what chiefly influenced the minister in proposing an armed interference. From this affair we may learn the shortness of political foresight. Mr. Fox, by preventing the embar- rassment of Russia, promoted the final partition of Poland, an event which took place almost immediately after, and which he never ceased to deplore: while, if Mr. Pitt had been indulged in his project, he would have weakened, with a view to maintain the balance of Europe, that power which, with the same view, it soon became his object to strengthen to the utmost.

*The French revolution had now taken place, and Mr. Fox, on the 9th of February, 1790, pro- nounced its unqualified panegyric, declaring that this event was * the most glorious effort oi" human wisdom, for the promotion of human happiness;' Mr. Burke, if not more wisely, more warily remarked, ' I do not rejoice to hear that men may do what they please, unless I know what it pleases tliem to do ' On this topic Mr. Fox had ultimately tlie disappointment of draw- ing- on himself the hitter censure of his friend*

and preceptor, Mr. Burke, and it terminated, on the next mention of tlie subject (5th of May, 1791), in a total breach. This event, by which Fox was affected even to tears, formed a crisis of no small importance in the history of his life. Having witlistood all the endeavours that were pnvately made by Burke to bring him over to his opinions, having even undergone the mor- titication of hearing that gentleman publicly re- nounce his friendship, he seemed, after so painful a sacrifice, to breathe more freely, and to feel more at liberty to patronise and protect the ad- vocates of reform, even those whose regard for the constitution was thought at least equivocal.

In 1792, when the French Jacobins had de- stroyed the monarchy, and were gaining import- ance by foreign conquests, the zeal of their British imitators kept exact pace with their success; and after the battle of

Jemappes, a deep anxiety for the public safety was excited, by the boldness of their language, and the freedom with which they avowed tlieir immediate expectation of a new order of things. They acted, in short, precisely as the insurgents in France at the commence- ment of the revolution. About this period tlie eyes of all men were anxiously turned on Mr. Fox : those who, to preserve the constitution, clung to the ministers of the crown, hoping that in the moment of danger he would suspend po- litical hostility, and support their measures; and those who wished to imitate the example of France, eagerly expecting that he would throw oiT all reserve, and openly take his station at their head. He declared against the former, but by no means in favor of the latter. It com- monly happens, however, that those who con- tend against tie same foe are supposed to be friends ; and as he united with the second party in condemning 'he first, their agreement being public, and their difference less attended to, he was very [;>:>perally involved with them in the cliarge of republican or revolutionary views. To obviate the eiTecH of this charge on his consti- tuents, he joined the Association of St. George's parish, in defence of the constitution, and pub- lished a Letter to the Westminster Electors, ex- plaining and vindicating the part which he had acted. The composition of this letter was generally admired.

On the 1st of December, ministers began to arm for the double purpose of preventing in- surrection at home, and repelling aggression abroad: and on the 10th, when parliament met, Mr. Fox took the lead in condemning their con- duct ; but had the mortification of finding him- self bereaved of his usual support. Many of his oldest friends, and almost all the new ones whom he had gained by his coalition, partaking of the general alarm, gave their concurrence to the pre- cautionary' steps adopted by the minister.

In 1794 the duke of Portland, and others of Mr. Fox's former adherents, who had separated from him partially in 1792, completed their se- paration by the acceptance of offices. About the same period a number of his friends, considering with regret the lowness of bis circumstances, made a private subscription for the purpose of providing him with a comfortable annuity. Among the chief contributors to this design

were some of those who had recently quitted his party, but still retained their attachment to his person ; and who thus gave the most unequivo- cal testimony of its constancy and warmth.

It is unecessary to follow i\Ir. Fox through the detail of his parliamentary conduct, which con- sisted in a regular condemnation of the war, and in combating the measures by which it was con- , ducted. In the course of these discussions, he seemed uniformly to act on a conviction that the war, having originated from no call for self- defence, but from the folly or

ambition of the minister, might be terminated at his discretion; and we cannot wonder that, under this con- viction, he lavished the charges of weakness, infatuation, and profligacy, against one who per- sisted in a criminality so desolating and destruc- tive. We are surprised, however, that the opinion which he entertained, at the commence- ment of the contest, should not have been corrected by the conduct of the French during its progress ; a conduct too plainly evincing that the lust of dominion, the restlessness of foreign intrigue, and the insolence of national vanity, by which they had been actuated for a century and a half, were rather increased than abated, by such a change in their institutions, as gave the popular sentiment a freer expression, and more efficient sway. In the early part of INIr. Fox's life, he appeared to think that, if these vices, so pernicious to Europe, could not be restrained by physical coercion, no other means, no expe- dients of policy, management, or conciliation could be of any avail : and the cause is not very apparent, why, in 1796, confidence in the justice and amity of France should have been the fa- vorite recommendation of one, who, ten years before, made the speeches, from which the fol- lowing passages are extracted. In 1786 Mr. Fox, while strenuously opposing the commercial treaty, after he had dwelt on the danger of cul- tivating the friendship of a power, so hostile to Britain, added, ' that he might possibly be mis- represented, as a man prepossessed by vulgar and illiberal prejudices. But, be that as it might, he could not easily forget, that those prejudices had been productive of no ill consequences to this country, and that the wars, in which they had engaged us, had contributed more than any other circumstance to make us great and glori- ous. He condemned the conduct of the present ministers as resembling that of the tory adminis- tration of queen Anne, who had endeavoured to represent all apprehensions of the inordinate power of France as a bugbear. — France, he maintained, was the inveterate and unalterable enemy of Great Britain. No ties of affection or mutual interest could possibly eradicate what was so deeply rooted in her constitution. Was not her whole conduct to this country an unwea- ried and systematical series of measures distin- guished either by their sinister intrigue, or their declared hostility? The incessant object of her ambition was universal monarchy, and it was from us she feared to be traversed in her pursuit. From us alone did the other powers of Europe hope for protection, to maintain that balance of power, which could preserve their respective liberties from her incroachments. — He would

acquit the first minister from the charge he was now going to make : but he beheved there were men in this country, so lost to the memory of its former

greatness, so sunk in their own base de- epondency, as to think it right for us, diminished as our splendor was, to seize the earliest oppor- tunity of making terms witii our rising neighbour, of forming an intimate connexion with her, and by that means artfully securing her favor and protection.' When we read these sentences, we seem to be looking at a picture in a mirror, where the sides change places. We can scarcely help believing them to be some of those pro- nounced by Pitt, and indignantly rebuked by Fox, during the war of 1793 : and the consist- ency of their author can be maintained, only by proving, that the principles, the policy, and the practices of the French were by that time re- versed ; a task which in the face of facts, we dare not attempt. We are far, however, from admitting, that this inconsistency, of wliich we believe Mr. Fox to have been wholly unconsci- ous, proceeded from any unworthy motive, or that he ever uttered, what he did not, at the mo- ment, think. The eagerness of his party attach- ments and aversions, operating on his sensibility and imagination, often impeded the movements of his comprehensive and philosophical mind. It made him see things, as he wished to see them, in order that he might draw from them topics of accusation. Disgusted at length with a tiresome and unavailing opposition, Mr. Fox, in 1797, took the resolution of discontinuing his attendance ; and the loss of popularity which he incurred by this proceeeding was increased, during the mutiny of the fleet, in 1797, by his forc- ing a parliamentary discussion of the subject (for he had at this time renewed his attendance) and by seizing an opportunity to impute the evil to his antagonists, at the risk of exasperating and pro- longing it to the country.

Mr. Fox, during his secession, and in the recesses of parliament when he attended, resided much at St. Ann's Hill, a pleasing retreat near Chertsey, where he indulged himself in pursuits of rural or classical elegance. Devoting part of the dˆy to study, as we have been informed was his custom through life, he about this time began a reperusal of the best Greek writers. About this time, also, he projected a history of the early part of the reign of James II., which he did not live to complete. In 1798 Mr. Fox having at a numerous meeting of the Whig club, proposed for a toast ' The sovereignty of the people of England,' a certain disrespect which this seemed to imply towards the actual sovereign made the latter strike his name from the list of his Privy Counsellors. We are too little versed in the rules of ministerial discipline, to judge of the propriety of this punishment. It was probably not much felt ; for the consequence which Fox enjoyed was of a species not to be impaired by the frowns of a court ; and he would, as usually happens, become more wedded to tenets, which had exposed him to what he would term minis- terial persecution, and to associates who, having applauded the fault, would think him honored by the censure. But it was perhaps the only

method by which the royal displeasure could be signified.

In March 1801, Mr. Addington having become minister, preliminaries of peace with France were signed in September, and a definitive treaty, in March 1802. During a debate on this event, Mr. Fox gave offence to some, by letting exultation in his foresight of the issue of the war hurry him into a declaration, that he ‘ rejoiced in the peace, because its terms were glorious to France.’ If he thought the object of the war unjust, a high-strained and stoical mo- rality might lead him to triumph in its failure, though this country was the sufferer. But, since few can keep pace with a sentiment so exalted, it would certainly have been more congenial to the general feeling, had this romantic sense of political justice been subdued by the infirmity of filial partiality, even for a mistaken or misgui- ded country. About this time Mr. Fox lost a valued friend and powerful supporter, in Francis duke of Bedford, and on the next meeting of parliament, pronounced a Eulogy on his virtues, which, for eloquence and pathos, might have done honor to Pericles.

No sooner had access to France been facilitated by peace, than Fox repaired to Paris, and was honored with the public and particular notice of Buonaparte. Soon after his return, the offensive measures of France, and particularly her insist- ing on our instant performance of a contract, of which her own stipulations were to remain un- performed, occasioned a renewal of the war. This Mr. Fox resisted, and his opposition can be imputed to no sinister motive; when we con- sider that his great opponent was no longer minister, and that the power of Mr. Addington was likely to be more precarious in war than in peace.

Mr. Addington remained in office for a year after the commencement of the war, but Mr. Pitt at length in May, 1 804, concurred with our states- man in censuring the feebleness of administra- tion. Encouraged by this unusual agreement, a number of their friends, who had no other object than to secure to the country, at an hour of unex- ampled danger, the union and exertion of all the ability it possessed, strongly urged the for- mation of a cabinet including both of these fa- vorite statesmen, and they are said to have signi- fied their willingness to act together. Mr. Pitt accordingly proposed this plan to the king, but finding his majesty averse from employing Mr. Fox, and feeling himself under no engagement, on account of this aversion, to forego his own pretensions to serve his country, he yielded to the royal pleasure, and again accepted of his former offices.

Soon after this great minister found himself again established in power, he bent all his en- deavours to form a third coalition of the conti- nental powers against France, a measure which Mr. Fox condemned, from the despair which he entertained of it.’ success. Ilis predictions, in the present

case, unfortunately received almost instant completion; for the war, which began on the 8th October 1805, was terminated, in less than two months, by the total discomfiture of the

*allies. The health of Mr. Pitt was at this time declining, and the force of his disease was pro- bably augmented by disappointment and chagrin at the immediate failure of a sclieme, from which he had formed considerable expectations, lie died on tlie 23rd January 180*3 ; and, like Aris- tides, wlio had been treasurer of confederated Cire(;ce during the lavishment of a long and expensive war, did not leave money sufficient to pay his debts, or the expenses of his funeral.*

Immediately after this event, Mr. Fox and lord Urenville, wiUi their respective friends, were called into office, the former again holding the seals of foreign secretary, and much was expected by their friends from an administration supported by such a weigiit of senatorial talents, and family influence. As Mr. Fox had strongly and uniformly recommended peace, it was na- tural that he should lose no time in accomplish- ing his favorite object. lie accordingly seized a singular occasion, suspected by some to have been thrown in his way by the subtlety and shrewdness of Talleyrand, to engage in a private correspondence with that minister, which gradu- ally terminated in a public negociation. The abolition of the slave trade was another object for which he had strenuously contended, and to this he enjoyed the pleasure of obtaining the full and final consent of parliament. So far was he, however, from succeeding in his pacific measures, that, within a few weeks after his accession to office, he found himself constrained to extend h(>stilities to Prussia, who had taken forcible possession of Hanover ; and, in the course of ♦he negociation at Paris, he had the mortification to discover that France was not actuated by that desire of peace, and that readiness to treat on fair and equal terms, for which he had always given her credit. But, though he saw the nego- ciation assume a hopeless aspect, he was not de- stined to outlive its actual rupture.

In the middle of June he made his last ap- pearance in parliament, being immediately after confined by a dropsical complaint, the progress of which was too rapid for medical aid to resist. Towards the end of August he was witii difficulty removed to the villa of the duke of Devonshire, at Ciiiswick, where, undergoing repeated opera- tions, he breathed his last on the 13th

September, having lived exactly fifty-seven years and eight months. His last words, addressed to his ne- phew and others, who were around him, are re- ported to have been, • I die happy, but I pity you.' He was buried on the 10th October, with a magnificent attendance of illustrious mourners, in a vault of Westminster Abbey, adjoining to that, where the ashes of his celebrated rival re- pose. W^e conclude our memoir, with a cha- racter of its subject, from the able and elegant pen of Sir James Mackintosh. ' !Mr. Fox united, in a most remarkable degree, the seemingly re- pugnant characters of the mildest of men, and the most vehement of orators. In private life he was gentle, modest, placable, kind, of simple manners, and so averse from parade and dog- matism, as to be not only unostentatious, but even somewhat inactive, in conversation. His superiority was never felt but in the instruction which he imparted, or in the attention which his

generous preference usually directed to the more obscure members of the company. The simpli- city of his manners was far from excluding that jierfect urbanity and amenity which flowed still more from the mildness of his nature than from similar intercourse widi the most polished so- ciety in Europe. His conversation, where it was not repressed by modesty or indolence, was de- lightful. The pleasantry perhaps of no man of wit had so unlabored an appearance. It seemed rather to escape from his mind than to be pro- duced by it. He had lived in the most intimate terms with all his contemporaries, distinguished by wit, politeness, or philosophy, or learning, or the talents of public life. In the course of thirty years he had known almost every man in Europe whose intercourse could strengthen or enlighten or polish the mind. His own literature was various and elegant. In classical erudition, which by the custom of England is more par- ticularly called learning, he was inferior to few professed scholars. Like all men of genius, he delighted to take refuge in poetry, from the vul- garity and irritation of business. His own verses were easy and pleasing, and might liare clain^ed no low place among those which the French call vers de society. The poetical cha- racter of his mind 'was displayed in his extra- ordinary partiality for the poetry of the two most poetical nations, or at least languages, of the West, those of the Greeks and of the Italians. He disliked political conversation, and never willingly took any part in it. To speak of him justly, as an orator, would require a long essay. Every where natural, he carried into public something of that simple and negligent exterior which belonged to him in private. — When he began to speak, a common observer would have thought him awkward ; and even a consummate judge could only have been struck with the ex- quisite justness of his ideas, and the transparent simplicity of his manners. But no sooner had he spoken for some time, than he was changed into another being. He forgot himself and every thing around him. He thought only of his subject. His genius warmed and kindled, as he went on. He darted fire into his

audience. Torrents of impetuous and irresistible eloquence swept along their feelings and conviction. — He certainly pos- sessed above all moderns that union of reason, simplicity, and vehemence, which formed the Prince of Orators. He was the most Demos- thenean speaker since Demosthenes. ‘ I knew him,’ says Mr. Burke, in a pamphlet written after their unhappy difference, ‘ when he was nineteen ; since which time he has risen by slow degrees to be the most brilliant and accomplished debater that the world ever saw.’ The quiet dignity of a mind roused only by great objects, the absence of petty bustle, the contempt of show, the abhor’ence of intrigue, the plainness and downnghtness, and the thorough good na ture which distinguished Mr. Fox, seem to ren- der him no very unfif representative of that old English national character, which, if it ever changed, we should be sanguine indeed to ex- pect to see succeeded by a better. The simpli- city of his character inspired confioence, the ardor of his eloquence roused enthusiasm, and

*the gentleness of his manners invited friendship. * I admire,’ says Mr. Gibbon, ‘ the powers of a superior man, as they are blended, — his attrac- tive character, with all the softness and sim- plicity of a child : no human being was ever more free from any taint of malignity, vanity, or falsehood.’*

‘ Perhaps nothing can more strongly prove the deep impression made by this part of Mr. Fox’s character, than the words of Mr. Burke, who, in January, 1797, six years after all intercourse be- tween them had ceased, speaking to a person honored with some degree of Mr. Fox’s friend- ship, said, ‘ To be sure he is a man made to be loved !’ and these emphatical words were uttered •with a fervour of manner which left no doubt of their sincerity.’

]VIr. Fox is said to have written a few num- bers of a paper entitled The Englishman, but published nothing separate during his life- time except a Letter to the Electors of Westminster 1793. Lord Holland gave to the world his posthumous publication entitled. The History of the early part of the Reign of James IL with an introductory chapter, which was intended to form a commencement of the History of the Ilevolution of 1688. There have also been pub- lished since his death some elegant and able let- ters of this statesman, on Greek Literature, ad- dressed to the late Gilbert Wakefield.

Fox (George), the founder of the society of Friends or Quakers, was a native of Leicester- shire, and born at Drayton some time in 1624. His

father was a weaver, and apprenticed him to a grazier, by whom he was much employed in the keeping of sheep. At the age of nineteen he affirmed that he had received a divine com- mand to forsake every thing else, and devote himself to a religious mission. Fie accordingly forsook his relations, equipped himself in a leathern doublet, and wandered from place to place. Being discovered in the metropolis, his friends for a time induced him to return home; but he quickly resumed a life of itinerancy, in which he fasted nmch, walked abroad in retired places, studying the Bible, and sometimes sat in a tree fora day together. He began in 1648 to pro- pagate his opinions publicly at Manchester, and in the neighbouring counties, where he preached to the people in the market-places. At Derby the followers of Fox were first denominated quakers, in consequence of their trembling mode of delivery, and calls on the magistracy to trem- ble before the Lord, See Friends. In 1635 he was sent a prisoner to Cromwell, who, how- ever, set him at liberty, and from time to time protected him from the country magistracy. He would often interrupt the church services ; and on occasion of a fast appointed on account of the persecution of the protestants abroad, he addressed a paper to the heads of the nation, in which he forcibly describes the inconsistency of similar practices at home. In 1666 he was li- berated from prison by Charles II. and im- mediately set about forming the people who had followed his doctrines into a society. In 1669 he married the widow of judge Fell, and soon after went to America, where he remained two years. On his return he was thrown for a

short time into Worcester gaol, after which lie went to Holland. In 1G84 he again visited the continent, where he did not long remain ; and, his health becoming impaired, he lived more re- tired until his death in 1690. The writings of Fox are collected into 3 vols, folio ; the first of which contains his Journal ; the second his Epistles ; and the third his Doctrinal Pieces. Penn speaks in high terms of his humility, meekness, and temperance.

Fox (John), the martyrologist, was born at Boston, in Lincolnshire, in 1517. At sixteen he was entered a student of Brazen-nose College, Oxford; and in 1543 he proceeded M.A., and was chosen fellow of Magdalen College. He discovered an early genius for poetry, and wrote several Latin comedies, on scriptural subjects. He now applied himself with uncommon assiduity to theology and church history ; and, discovering a preference for the doctrines of the Reformation, was expelled the college as a heretic. His distress on this occasion was very great ; but he soon found an asylum in the house of Sir Thomas Lucy, of Warwickshire, who employed him as a tutor to his children. Here he married the daugh- ter of a citizen of Coventry. He next came to London, where," finding no immediate means of subsistence, he was reduced to the utmost de- gree of want ; but was at length taken into the family of the duchess of Richmond, as tutor to the earl of Surrey's children. In this family he lived, at Ryegate in Surrey,

during the latter part of the reign of Henry VIII. the entire reign of Edward VI. and part of that of queen Mary I. : but at length, persecuted by bishop Gar- diner, he was obliged to seek refuge abroad. Basil, in Switzerland, was the place of his re- treat, where he subsisted by correcting the press. On the death of Mary he returned to England ; where he was graciously received by his former pupil, the duke of Norfolk, who retained him in his family as long as he lived, and bequeathed him a pension at his death. Cecil also obtained for him the rectory of Shipton near Salisbury ; and he might have had considerable preferment, had he been willing to subscribe to the canons. He died in 1587, aged seventy ; and was buried in the chancel of St. Giles's, Cripplegate. He was a man of great industry and considerable learn- ing ; a zealous, but not a violent nonconformist. He left two sons ; one of whom was bred a di- vine, the other a physician. He wrote many pieces : but his principal w-ork is, the Acts and Monuments of the Church, &ˆc., commonly called Fox's Book of Martyrs.

Fox (Richard), an English prelate, born about the end of the reign of Henry VI. at Grantham, was a student at IVIagdalen College, Oxford, whence he removed on account of the jilague to Pembroke Hall, Cambridge. He afterwards travelled about, and we find him at Paris with Dr. Morton, bishop of Ely, who introduced hini to Henry VII., then earl of Richmond. Dr. Fox soon acquired the favor of the latter, and was admitted into his most secret councils. In 1485, when, by the victory of Bosworth field, Henry became king of England, he appointed him a privy counsellor, and in 1486 and 1487 he was created bishop of Exeter, keeper of the

privy-seal, and principal secretary of state. He was subsequently employed on various embassies, and translated in 1492 to the bishopiic of Baih and Wells, whence in 1494 he was aiˆain removed to that of Durham. In 1503 he was finally removed to the see of Win- chester, where he passed the rest of his life. In the reign of Henry VIII. his influence greatly declined. Howard, earl of Surrey, by accomnat- dating himself to the passions of his master, became the favorite ; and Wolsey, whom Fox introduced to counteract his influence, grew more powerful than either. He was the founder of Corpus Christi College, Oxford, and of the free-schools of Taunton and Grantham: and is said to have been a generous patron of literature, though he never published any thing himself. He (iied in 1528.

Fox (Stephen), a distinguished statesman, was born at Farley in Wiltshire in 1627, and entered first into the "service of the earl of Northumber- land, who was abroad with Charles II. At the Restoration he was made clerk of the green cloth, paymaster of the forces, &c. In the next reign he was dismissed, but was restored after the Re- volution. By opposing the bill for a standing army, he lost the favor of William III., but on the reign of Anne was replaced. He built a new cluirch at Farley, founded several alms-houses, and first projected Chelsea College. He died at Farley in 1716. Sir Stephen Fox mar- ried twice ; the second time when near eighty, and had issue by both 'wives, being father, by his first wife to the first earl of llchester, and by his second, to the first lord Holland.

FO'XCASE, n.s. Fox and case. A fox's skin.

One had better be laughed at for taking a foxcate for a fox, than be destroyed by taking a live fox for a case. L'Estrange.

FO'XCHASE, n. s. Fox and chase. The pursuit of the fox with hounds.

See the same man, in vigour, in the gout ; Alone, in company ; in place or out ; Early at business, and at hazard late ; Mad at ˆfoxchase, wise at a debate. Pope.

FO'XEVIL, 11. s. Fox and evil. A kind of disease in which the hair sheds.

FO'XFISH,n.s. Vulpecula piscis. A fish.

FO'XGLOVE, n. s. Digitalis. A plant. See Digitalis.

FO'XHUNTER, n.s. Fox and hunter. A man whose chief ambition is to show his bravery in hunting foxes. A term of reproach used of country gentlemen.

The foxhtcnters went their way, and then out steals thp fox. L'Estrange.

John Wildfire, /or/iunter, broke his neck over a six- bar tate. Spectator.

The world maybe divided into people that read, people that write, people that think, and fox hunters.

Shenslone.

Fox Islands. See Aleutian Islands.

Fox Islands, a cluster of small islands on the south side of the gulf of St. Laurence. Long. 59° 10′ \y., lat. 51° N.

Fox River, a river of Canada, which runs into the gidf of St. Laurence, nine miles N.N.W.

of Cape Ros'eres. 2. A river of North Ame- rica, which runs through lake Winnebago, and falls into Green Bay in lake Michigan. Long, of the mouth 87° 53′ W., lat. 43° 48′ N. 3. A river of the western territory of America, which runs into the Theakiki. Long. 87° 58′ W., lat. 41° 28′ N. 4. A river of the western ter- ritory of America, which runs into the Wabash. Long. 88° 31′ W., lat. 33° N.

FCrXSHIP, 71. s. From fox. Tlie character or qualities of a fox ,• cunning ; mischievous art.

Had'st thou foxship To banish him that struck more blows for Rome, Than thou hast spoken words.

Sliakspeare. Coriolanus. FO'XTAIL, n. s. Alopecurus. A plant. FO'XTRAP, 71. s. Fox and trap. A gin or snare to catch foxes.

Answer a question, at what hour of the night to set a foxtrap ? Tatler.

FOY, n.s. ¥t, foi. Faith; allegiance. An obsolete word.

He Easterland subdued, and Denmark won. And of them both did foi/ and tribute raise.

Faerie Queene. FOYLE, LouGii, a large bay of Ireland, at the mouth of a river of the sa:me name, four miles below Londonderry. It is twelve miles long and seven broad, and is well sheltered by land on all sides ; the entrance not exceeding half a mile wide, having only one deep channel in the middle between sands and shallows.

FRACASTOR (Jerome), an eminent Italian poet and physician, boin at Verona in 1482. He was eminently sk'lled in the belles lettres, and in the arts and scie.ices. Pope Paul III. made use of his authority to remove the council of Trent to Boulogne, under the pretext of a contagious distemper, which, as Fracastor deposed, made it no longer safe to continue at Trent. He was in- timately acquainted with cardinal Bembo, Julius Scaliger, and others of the great men of his tijre. He died of an apoplexy at Casi near Verona., in 1553, and in 1559 the town of Verona erected a statue in honor of him. All that remains of his Avorks are three books of Siphilis, or of the French disease ; a book of Miscellaneous Poems ; and two books of a poem, entitled, Joseph, which he began towards the end of his life, but did not live to finish. His medical pieces are, De Sympathia ct Antipathia ; De Contagione et Contagiosis Morbis; De Causis Criticorum Die- rum ; DeVini Temperature, fee. His works, which are all in Latin, have been printed

sepa- rately, and collectively. The best edition is that of Padua, 1735, in 2 vols. 4to.

FRACHES, in the glass trade, are the flat iron pans into which the glass vessels already formed .ire put when in the tower over the work- ing furnace, but by means of which they are drawn out through the leers, that they may be taken gradually from the fire, and cool by de- grees.

FRACT, V. a. ■\ Latin frango, to

Frac tion, n. s. (^ break, applied to the

Frac tional, adj. i breaking of hard sub-

Frac'ture, n. s. & v. a. J stances, or the frac- ture of a bone. Fractional is applied to numbers that are imperfect or broken. A fraction is a

broken part of an integral. In sliort, fraction denotes different kinds of breaking according to the objects to which the action is applied. His days and times are past, 4nd ray reliance on his f) acted dates Has smit my credit. Shakspeare. Timon.

The fractions of her faith, arts of her love. The fragments, scraps, the bits and greasy reliques Of her o'er eaten faith, are bound to Diomedc.

Shaks})eare. But thou wilt sin and grief destroy. That so the broken bones may joy. And tune together in a well-set song. Full of his praises. Who dead men raises ; Fracture well cured make us more strong.*

Herbert.

We make a cypher the medium between increasing ond decreasing numbers, commonly called absolute or whole numbers, and negative ox fractional numbers. Cocker's Arithmetick.

That may do it without any great fracfure of the more stable and fixed parts of nature, or the infringe- ment of the laws thereof. Hale.

The surface of the earth hath been broke, and the parts of it dislocated ; several parcels of nature retain still the evident marks ai fraction and ruin.

Burnet's Theory of the Earth.

Fractures of the scull are dangerous, not in conse- quence of the injury done to the cranium itself, but as the brain becomes affected. Sharp's Sargery.

The leg was dressed, and the fractured bones united together. Wiaemans Surgery.

Fraction, in arithmetic and algebra, a part or division of a unit or integer; or a number which stands to a unit in the relation of a part to its whole. The word literally imports a broken number. Fractions are usually divided into de- cimals, sexagesimal, and vulgar. See Algebra and Arithmetic

Fractures. See Surgery.

FRˆNUM, or Frenum, Bridle, in anatomy, a name given to divers ligaments, from their of- tice in retaining and curbing the motions of the parts they are fitted to ; as,

FrjEnum Lingua, or Bridle of the Tongue, a membranous ligament, which ties the tongue to the OS hyoides, larynx, fauces, and lower parts of the mouth. In some subjects, the fracnum runs the whole length of the tongue to the very tip ; in which cases, if it were not cut, it would take away all possibility of gpeech. See Sur- gery.

FRAGA, a strong town of Spain, in the king- dom of Arragon. It is situated among the mountains, having the river Cinca before it, vrhose high banks are difficult of access ; and at its back a hill which cannot easily be approached with large cannon. Alphonso VII. king of Ar- ragon, and I. of Castile, was killed by the Moors in 1134, in besieging this town. It is fifty-three miles E. S. E. of Saragossa, and thirty south of Balbastio. Long. 0° 23′ E., lat. 41° 27′ N.

FRAGARIA, the strawberry. A genus of the polygynia order, and icosandria class of plants : natural order thirty-fifth, senticosse : cal. decemfid ; the petals five ; the receptacle of the seeds ovate, in the form of a berry, and decidu- ous. There are seven species — The principal is i'. vesca, the common strawberry, of which the F. vesca moschata, the hautboy, is the finest. All

these varieties are hardy, low peretmials, dura- ble in root, but the leaves and fruit-stalks are renewed annually in spring. Tiiey flower in May and June, and their fruit comes to perfec- tion in June, July, and August; the Alpine kind continuing till the beginning of winter. They all prosper in any common garden soil, produc- ing abundant crops annually witliout much

trou- ble. They increase exceeduigly every summer, both by off-sets or suckers from the sides of the plants, and by runners or strings, all of these rooting and forming plants at every joint, each of which separately planted bears a few fruit the following year, and bears in great perfection the succeeding summer. Those of the Alpine kind will even bear fruit tlie same year that they are formed. All the sorts are commonly cultivated in kitchen gardens, in beds or borders of common earth, in rows lengthwise fifteen or eighteen inches dis- tance ; the plants the same distance from one another in each row. Patches of the different sorts, disposed here and there in the fronts of the different compartments of the pleasure ground, will appear ornamental both in their flowers and fruit, and make an agreeable variety. Strawber- ries, eaten either alone, or with sugar and cream, are universally esteemed a most delicious fruit. They are grateful, cooling, subacid, and juicy. Though taken in large quantities, they seldom disagree. They promote perspiration, impart a violet smell to the urine, and dissolve the tarta- reous incrustations on the teeth. People afflicted with the stone have found relief by using them very largely ; and Hoffman says, he has known consumptive people cured by them. Tlie bark of the root is astringent. Sheep and goats ea the plant ; cows are not fond of it ; horses and swine refuse it.*

FRA'GILE, flrf;. > Yv. fragile ; Lat. JragUis.

Fragil'ity, 7j. s. 5 Brittle; easily snapped or broken ; frail ; uncertain ; easily destroyed.

Fear the uncertainty of znan'^ fragility, the common chance of war, the violence of fortvme. Knollcs.

To case them of their griefs.

Their pangs of love, and other incident throes.

That nature's fragile vessel doth sustain

In life's uncertain voyage. Shakspeare. Timon.

The stalk of ivy is tough, and not fragile. Bacon.

To make an induration with toughness, and less fragility, decoct bodies in water for two or three days. Bacon's N^atural History.

All could not be right, in Such a state, in this lower age of fragility. IVotton.

When subtle wits have spun their threads too fine, 'Tis weak and fragile,

like Arachne's line. Deuliam. Much ostentation, vain of flcslily arms.

And fragile arms, much instrument of war.

Long in preparing, soon to nothing Iirought,

Before mine eyes thou'st set.

Milton's Paradise Regained.

FRAG'MENT, n. s. 5 Lai. fragment um. A

Frag Imentary, «

She, she is gone ; she's gone : when thou knowos this, Vs'haX. fragmentary rubbish this world is. Thou knowest, and that it is not worth a thouglit ; He knows it too too much that thinks it nought.

Bonne.

FRA

>18

FRA

He who late a sceptre did command, Now grasps a Qoatiag fragment in his hand.

Dri/den. If a thin or plated body, which, being of an even thickness, appears all over of one uniform colour, should be slit into threads, or broken iato fragments of the same thickness with the plate, I see no reason why every thread or fragment should nut keep its colour. Newton's Opticks.

Some on painted wood Transfixed ihe fragments, some prepared the food.

Pope's Odysiey.

Cowley, in his unfinished /rajmfnt of the Davideis, has shewn us this way to improvement.

Watts on the Mind.

FRA'GOR, n. s. Lat. A noise ; a crack ; a crash. Not used.

Pursued by hideous /razors, as before The flames descend, they iu their breaches roar.

Sandys.

FRA'GRANCE, n.s.\ Lat. frugrans, fra Fka'grancy, w.s. (ˆgrantia. Sweetness of Fua'c. RANT, adj. ˆ smell; grateful odor;

FRA'GRANTLY,a£/i-. .) odorous ; with sweet smell.

Eve separate ho spies. Veiled in a cloud oi fragrance, where she stood Half spyed. Milton's Paradise Lost.

And first behold this cordial julep here. That fiames and dances iu his crystal bounds, With spirits of halm ˆwl fragrant syrups mixed.

Milton's Comus. As the hops begin to change colour, and smell fra- grantly, you may conclude them ripe. Mortimer. Net lovelier seemed Narcissus to the eye ; Nor, when a flower, could boast more fragrancy.

Gart/i. I am more pleased to survey my rows of coleworts and cabba<;es springing up iu their full fragrancy and verdure, than to sec the tender plants of foreign countries kept alive by artificial heats.

Additon's Spectator. The nymph vouchsafed to place Upon her head the various wreath :

The flowers, less blooming than her face ; Their scent less/raˆran< than her breath. Prior. Such was the wine ; to quench whose fervent steam .Scarce twenty measures from the living stream To cool one cup sufiiciˆd : the goblet crowned. Breathed aromatick /ruˆranciea around.

Pope's Odyssey. See in the rear of the warm sunny shower The visionary boy from shelter fly ; For now the storm of summcr-raiu is o'er. And cool, and fresh, and fragrant, is the sky.

Beattie.

FRAIL, adj. kius."ˆ Lat. fragilis. Weak ;

Frail'ness, U.S. /tender; soon injured and

Frail'ty, ti. s. J destroyed : a fragile basket made of rushes ; a rush for weaving baskets : liable to error or seduction ; instability ; weak- ness of resolution : infirm of purpose : applied to sins of infirmity it has a plural.

Though Page be a secure fool, and stands so firmly on his wife's frailty, yet I cannot put off my opinion so easily. Shakspeare.

I know my body's of so frail a kind. As force, without fevers within, can

kill.

Davie.$.

The truly virtuous do not easily credit evil that is told them of thfir neighbours ; for if others may do

amiss, then may these also speak amiss : man iˆfraUr and prone to evil, and therefore may soon fail in words- Taylor's Guide to Devotioii. Nor should'st thou have trusted that to woman's frail /y : Ere I to thee, thou to thyself wast cruel. Milton.

But you invert the covenants of her trust. And harshly ileal, like an ill borrower. With that which you received on other terms. Scorning the umxempt condition. By which all mortal /'rai/<_y must subsist. Refreshment after toil, ease after pain. That have been tired all day without repast. And timely rest have wanted. Id. Cutrnu.

Love did liis reason blind. And love's the nohlesl frailty of the mind.

Dryden. God knows our frailty, pities our weakness, and requires of us no more than we are able to do.

Locke. There is nothing among all the frailnesses and un- certainties of this sublunary world so tottering and unstable as the virtue of a coward. Norris.

When with care we have raised an imaginary trea- sure of happiness, we find, at last, that the materials of the structure are frail and perishing, and the foun- dation itself is laid in the sand. Rogers. Death, only death, can break the lasting chain ; And here, even then, shall my cold dust remain ; Here all hs fraillies, all its flames resign. And wait, 'till 'tis no sin to mix with thine.

Pope. That Christians are now not only like other men in the'iT frailties and infirmities, might be in some degree excusable ; but the complaint is, they are like heathens in all the main and chief articles of their lives.

Law. A man of superior rank and character, that knows himself, knows that he is but a man ; subject to the same sicknesses, /rai/iiej, disappointments, pains, pas- sions, and sorrows, as other men. Mason, And that's enough, for love is vanity.

Selfish in its beginning as its end. Except where 'tis a mere insanity,

A maddening Spirit which would strive to blend Itself with Beauty's /roi7 inanity.

On which the passion's self seems to depend.

Byron ,

FRAI'SCHEUR, n. s. Fr. Freshness; cool- ness. A word innovated by Dryden.

Hither in Summer-evenings you repair, To taste the fraitcheur of the purer air.

Dryden.

FRAISE,w. .9. Fr. Tlie caul of an animal. A pancake with bacon in it.

Fraise, in fortification, a kind of defence, consisting of pointed stakes, six or seven feet long, driven parallel to the horizon into the re- trenchments of a camp, a half-moon, or the like, to prevent any approach or scalade. Fraises dif- fer from palisades chiefly in this, that the latter stand perpendicular to the horizon, and the for- mer jet out parallel to it, or nearly so, being usually made a little sloping, or with the points hanging down. Fraises are chiefly used in en- trenchments and other works thrown up of earth ; sometimes they are found under the parapet of a rampart, serving instead of the cordon of stone used in stone-works.

To Fraise a Battalion is to line the mus- t-jueteers round with pikes, that, in case they s'^.ould be charged by a body of horse, the

pikes being presented may cover the soldiers from the shock, and serve as a barricade.

FRAME, ?;.«.& M. A.) Fr. foi-me ; Arm. Framer, n. s. ifram ; both clearly

from the Lat. forma. To frame signifies to make according to a frame : and frame, in its natural sense, is that which forms the exterior edging of any thing, and consecjuently determines its form. It is however far mo re general in its application: tiius it is used in the senses, to invent; to fabri- cate ; to fabricate by orderly construction and union of various parts; to fit one thing to another ; to make ; to compose ; to regulate ; to adjust ; to form any rule or method by study or precept ; to form and digest by thought ; to con- trive; to plan; to scheme out.

At last, as nigh out of the wood she came, A stately castle far away she spyde. To which her steps directly she did. frame.

Spenser. Faerie Queene. Then chusiug out few words most horrible. Thereof did verses frame. Spenser.

The double gates he findeth locked fast ; The one iair framed of burnished ivory. The other all with silver overcast. Id.

If the frame if the heavenly arch should dissolve itself, if celestial spheres should forget their wonted motions, and by irregular volubility turn themselves any way, as it might happen. Hooker.

Fight valiantly to-day ; And yet I do thee wrong to mind thee of it ; For thou art framed of the firm trulh of valour.

SJiakapeare. I have been a truant to the law ; I never yet could frame my will to it, And therefore /'r«7ne the law unto my will. Id.

A woman, that is like a German clock. Still a repairing, ever out of frame. And never going aright. Id.

John the Bastard, Whose spirits toil in frame of villanies. Id.

Though I cannot make true wars, I'll yVame convenient peace. Id. Coriolamts. Lou art their soldier, and, being bred in broils. Hast not the soft way ; but thou v/ih frame Thyself forsooth hereafter theirs. Id.

Astronomers, to solve the phenomena, framed to their conceit eccentricks and epicycles. Bacon.

Upon his shield was framed that vent'rous lad. That durst assay the sun's bright flaming team j Spite of his feeble hands, the horses mad Fling down on burning Earth the scorching beam ; So made the flame in which himself was fired ; The world the bonfire was, where he expired : His motto written thus, yet had what he desired.

Fletcher. Purple fxland. The forger of his own fate, the framer of his fortune, should be improper, if actions were predeter- mined. Hammond.

Unpardonable the presumption and insolence in contriving and framing this letter was. Clarendon.

Another party did resolve to change the whole frame of the government in state as well as church.

Id. These are thy glorious works, parent of good ! Almighty! thine this

universal /rame. Milton.

A bear's a savage beast, Whelp'd without form, until the dam Has licked it into shape anil frame.

Iludibras. Put both the tube and the vessel it leaned on into a convenient wooden ■ˆrame, to keep them from mis- chances. Bovlc.

Let us not deceive oursfilves by pretending to this excellent knowledge of Christ Jesus our Lord, if we do not frame our lives according to it. Tillotson.

The most abstruse ideas arc only such as the un- derstanding /rames to itself, by joining together ideas that it had either from objects of sense or from its own operations about them. Locke.

Hew timber, saw \t, frame it, and set it together.

aior timer.

There was want of accurateness in experiments in the first original framer of those medals.

Arbuihnot .

Full of that flame his tender scenes he warms, Andy»•a»ˆe4• his goddess by your matchless charms.

Granville.

Urge him with truth to frame his sure replies. And sure he will ; for wisdom never lies. Pope.

How many excellent reasonings are framed in the mind of a man of wisdom and study in a lengtli of years. Watts.

From Nature's beauties variously compared. And variously combined, he learns to frame Those forms of bright perfection which the bard. While boundless hopes and boundless views inflame. Enamoured consecrates to never-dying fame.

Beaftie.

Frame, among founders, a kind of ledge, which, being filled with wetted sand, serves as a mould to cast their works in. See Foundry.

Frame, in joinery, a kind of case, wherein a thing is set or enclosed, or even

supported ; as a window frame, a picture frame, &c.

Frame, among painters, a kind of square, con- sisting of four long slips of wood joined together, wliose intermediate space is divided by threads into several little squares like a net ; and hence sometimes called reticula. It serves to reduce figures from great to small ; or, on the contrary, to augment their size from small to great

Frame, among printers, is the stand which supports the cases.

*FRAMLINGHAlVI, a large and ancient town of Suffolk. It has the remains of a castle, said to have been built by one of the first kings of the East Angles. Its walls, which are still to be *ieen, are forty-four feet high, and eight thick ; and have thirteen towers, fourteen feet each above the walls. Two of these are watch-towers. To this castle Mary Tudor, afterwards queen Mary, retired, when the unfortunate Lady Jane Gray was proclaimed queen. See England. Fram- lingham has a stately church, built of black flint, with a steeple 100 feet high, and a spacious market-place, with a weekly market on Saturday. It is pleasantly seated upon a clay hill near the source of the Ore, sixteen miles north-east of Ipswicli, and eighty-seven N. N. E. of London.*

FRA'MPOLD, 71. s. Tiiis word is written by Dr. Ilacket, fiawpul. I know not its original, says Dr. Johnson. It seems to be derived from the Sax. pjiam ; Goth. Jrain, corruptions of the Ij^X. forma (see Frame). Peevish ; boisterous ; rugged ; crossgrained.

Her husband ! Alas, the sweet woman leads an ill life with him : she leads a very frampled life with him. Skakspeart-.

The frampul man could not be pacified,

Ilacket. FRANCAVILLA, a town in the province of Otranto, Naples. It is lai jeand we'd built; the

streets being wide and straight : the houses, though showy, are of a heavy style of architec- ture. A great part of the town was thrown down by an earthquake in 1734, and the houses since erected, are only one story high. Tiie in- habitants derive their chief subsistence from ma- nufacturing the cotton and tobacco of the neighbourhood; olive oil is also sold here in large quantities. The name of this place is said to have arisen from an exemption from taxes during

ten years, granted to the first settlers in the four- teenth century. It is tifiecn miles E. N. E. of Tarento, and twenty west of Brindisi. Popula- tion 11,000

Francavilla is also the name of a town in Sicily, in the V'al di Demona, near the river of Francavilla, where the Imperialists, under count Merci, obtained a victory over the Spaniards, under the marquis de Leyda, in 1719. Twelve miles W. N. W. of Taormina

FRANCE.

France. We shall pursue in this article the l)lan of first describing this interesting country ; its geographical, statistical, and great political features. Then we shall furnish the details of its history, divided into certain convenient pe- riods, as that of our article England, by the dif- ferent dynasties that have successively occupied the throne.

PART I. GEOGRAPHY AND STATISTICS OF FRANCE.

France, a portion of the ancient Gallia, and by the peace of 1815 reduced to its boundaries in the year 1790, with a small addition which we shall hereafter notice, has the natural limits of the English Channel on the north, the Bay of Biscay on the west, and the Pyrenees and the Mediterranean south. Its eastern boundary is of a more mixed cliaracter, and touches the fron- tiers of the kingdom of the Netherlands, Ger- many, Switzerland, and Savoy. It extends from 4i° 30′ to nearly 51″ of N. lat., and from 5° W. tc 8ˆ of E. long, from Greenwich. Its form is nearly square, and its area was estimated by M. Necker at 26,951 square leagues, of 2282 toises; or 156,024,213 arpents of Paris, which are equal to 131,722,295 English acres : by the committee of the first national assembly at 26,463 square leagues : the later estimate of M Jorse, author of the Credit National, is 27,000 leagues, at 2282 toises 5785 arpents Paris, to a league. In English miles itj extent from north to south is taken at 560 ; from east to west at nearly 650. The whole area is 204,000 English square miles. The present population is 30,451,187. and the number of persons to each square mile is, consequently, 144. France is, therefore, less populous proportionably than either England or Ireland, as the former contains about 190 and and the latter 170 persons on the same space.

The ancient Gallia contained not only the pre- sent kingdom of France, and that part of Ger- many and Belgium west of the Ithine, but the important addition of Gallia Cisalpina, on the south side of the Alps. Du Fresnoy describes Gallia Transalpina as bounded on the south by the Pyrenees, the Mediterranean Sea, and the V'ar; on the east by the Alps and the Rhine; on the north by the same river; and on the west by the Ocean. The Roman subdivision of this country was into three principal regions — the Celtic,

Belgic, and Aquitaine. The bounds of Gallia Celtica were — the Ocean, the Seine, the

Mame, the Saone, the Rhine, and the Garonne. Gallia Belgica was bounded by the Seing, the Marne, the mountains of Vosges, the Rhine, and the Ocean; and Gallia Aquitania by the Ocean, Garonne, and the Pyrenees. Gaul w'as divided by Augustus into four parts — Gallia Narbonen- sis, which comprehended Languedoc, Foix, Vi- varres, Provence, Dauphiny, and Savoy ; Aqui- tania, which was of larger extent than it had been in the time of Julius Caesar, and comprehended all the country between the Pyrenees, the Ocean, and the Loire; Lugdunensis, the largest of all, which was bounded by the ocean, the Loire, the Seine, the Marne, and the mountains of Vosges ; and Belgica, which was bounded by the ocean, the country of Caux, the Seine, the Marne, the mountains of Vosges, aiid the Rhine.

In the fourth century of the Christian era, the Notitia Imperii divided Gaul into the five great provinces of Lugdunensis, Belgica, Germania, X'ienensis, and Aquitania; each of which was subdivided into several others. Constantine the Great divided it into seventeen provinces or go- vernments, six of which were consular, and eleven under certain presidents sent by the emperor, who resided in the capital cities. The names of the provinces and their capitals were — 1. Narbo- nensis prima, capital Narbonne ; 2. Narbonen- sis secunda, capital Aix in Provence; 3. Vien- nensis, capital 'ienne in Dauphiny ; 4. Alpes Graiae and Penninis, capital Moustenon in Ta- rentaise, a province of Savoy; 5. Alpes Mari- timac, capital Embnin in Dauphiny ; 6. Lugdu- nensis prima, capital Lyons ; 7. Lugdunensis secunda, capital Rouen ; 8. Lugdunensis tertia, capital Tours; 9. Lugdunensis quarta, capital Sens in Champagne; 10. Sequania, capital Be- sanf on ; 11, Aquitania prima, capital Bourges ; 12. Aquitania secunda, capital Bourdeaux ; 13. Novempopularia, capital Auch in Gascony ; 14. Germania prima, capital Mentz; 15. Germania secunda, capital Cologne ; 16. Belgica prima, ca- pital Triers; and 17. Belgica secunda, capital Rheims.

Under the dominion of the Franks, the Roman divisions gradually disappeared, and new ones were substituted. Several kingdoms were after- wards comprised within the present territorial limits, the divisions and subdivisions of which it is unnecessary to trace. Under the Merovin- gian dynasty, it is generally considered that France had about the same limits as at present ; under the Carlovingian race of kings almost the

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whole, as we have seen, was wrested from the so- vereign by the prevalence of the feudal system : and the gradual recovery of the various provinces under the Capetians we shall have hereafter to state.

Neither need we further notice here the addi- tions to and subtractions from the French terri- tory, which took place during the wars that arose out of the late revolution, except to remark that the period of the greatest aggrandisement of France was between 1801 and 1810. In the former year the peace of Luneville extended the boundary of France east%vard to the Rhine, and to the Adige between the Austrian territories in Italy, and the Cisalpine republic. By the peace of Tilsit, concluded on the 7th of July 1807, the Ionian Islands were assigned to France. Etru-

ria was incorporated with France on the 30th of the following May ; the Papal territories on the 17th of May, 1809 ; and by the peace of Vienna, concluded on the 14th of October, of that year, the lUyrian provinces, on the right bank of the Save, were ceded by Austria. In^lSlO the annex- ation of Holland to France took place, as well as of the Hanse towns of Hamburg, Lubeck, and Bremen, with the north-western district of Ger- many, within a line from Wesel on the Rhine, to Lauenbourg on the Elbe. The Valais was like- wise united to France m No%^ember 1810. The following is a summary view of the territory and population acquired by France, from the com mencement of the Revolution to the beginnmc of 1811:—

Dates.

I. Acquired Territories.

Extent in sq. miles.

Population.

1801

1802 1806 1808 1810

Department of Mont Blanc (four-fifths), Leman, Maritime Alps, with 'enaissain, Montebiliard, and other enclaves

Austrian and Dutch Netherlands

Bishopric of Liege, part of the archbishoprics of Cologne, Treves, Mentz, Duchy of Juliers, Palatinate, Mouers, and Guelder-

*land * . .*

*Piedmont -^*

Genoa and Tuscany . . . . . f

Parma t

Roman states and the Valais ‘

Holland, Bremen, Hamburg, Lubeck, part of Hanover, Oldenburg, Munster, and Osnaburg .... . .

Illyrian provinces, including Venetian Dalmatia

Total \1. Territory and Population of Old France, \^\2

Extent and subjects of the entire Empire

4,810 10,000

12,600 26,600

36,500 19,300

825,000 2,150,000

2,050,000 5,130,000

4,530,000 1,372,000

■

16,057,000 28,500,000

109,810 204,000

313,810

44,557,000

France, before the revolution, was divided into thirty-two distinct governments, eighteen of which are in the circuit, and fourteen in the middle of the kingdom. The first national assembly, by its decrees of the 15th of January, and the 16th and 26th of February 1790, divided France into eighty-three departments. As, how- ever, the divisions as they existed before the revolution are often referred to, and a knowledge of them is absolutely necessary to the right un- derstanding of the history of F”rance,

we shall enumerate them in connexion with the corre- sponding departments. Each department, it is proper to premise, is subdivided into three, four, or five districts, called communes arrondisse- mens. These districts are again divided into cantons, and each canton is composed of a cer- tam number of communes, that is to say, of towns and villages. A commune is sometimes a single town, and sometimes a union of several villages, possessing a mayor and communal municipality. All the cities of large size are divided into several communes.

1. The province of Flanders, or the territories which France possessed in the western part of the Netherlands before the revolution, and which she still retains. This forms the department of the north, which contains six districts, sixty can- tons, and 671 communes; its territorial extent

is 6030 kilometers, twenty-four kilometers being very nearly equal to seven square miles, or sixty to a degree. The principal town is Douay.

2. The province of Artois forms the depart- ment of the. Straits of Calais, which contains six districts, forty-tliree cantons, and 953 com- munes; its territorial extent is 7042ˆ kilometers: its principal town is Arras.

3. The principal part of Picardy forms the department of the Somnw, which contains five districts, forty-one cantons, and 848 communes. Its territorial extent is 6512ˆ- kilometers: its principal town is Amiens.

4. Normandy is divided into the departments of the Lower Seine, the Eiire, the Oniie, Calva- dos, and the Channel. The Lower Seine contains three districts, twenty cantons, and seventy-nine communes ; its territorial extent is 6372ˆ kilo- meters : its principal town is Rouen. The depart- ment of the Eure contains five districts, thirty-six cantons, and 843 communes ; its territorial extent is 6182ˆ kilometers: its principal town is Evreaux. The department oftheOrme contains four districts, thirty-eight cantons, and 627 communes ; its territorial extent is 6375 kilometers ; its principal town is Alenfon. The department of (>al- vados contains six districts, thirty-seven cantons,, and 896 communes ; its territorial extent is 564<ˆ kilometers • its principal town is Caen. The

department of the Channel contains five districts, forty-ei'ˆht cantons, and 669 communes; its ter- ritorial extent is 6890 kilometers ; its principal town is Coutances.

3. The province of the Isle of France is di- vided into the departments of the

Aisue, the Oise, tiie Seine, tlie Seine and Marne, and the Seine and Oise. The department of the Aisne contains five districts, thirty-seven cantons, and 853 communes ; its territorial extent is 7422 i kilo- meters ; its principal town' is Laon. The de- partment of the Oise contains four districts, thirty-five cantons, and 738 communes ; its ter- ritorial extent is 6082ˆ kilometers; its principal town is Beauvois. Ti\e department of the Seine contains three districts, twenty cantons, and seventy-nine communes ; its territorial extent is 453j kilometers ; its principal town is Paris. Tlie department of the Seine and the Marne contains five districts, twenty-nine cantons, and 561 communes; its territorial extent is 6127ˆ kilometers; its principal town is Melun. The department of the Seine and Oise contains five districts, thirty-six cantons, and 696 communes; its territorial extent is 5880 kilometers ; its prin- cipal town is Versailles.

6. The province of Champagne contains the departments of the Ardennes, of the Marne, of the Higher Marne, of the Aube, and the Yonne. The department of the Ardennes contains five districts, thirty-four cantons, and 599 communes; its territorial extent is 6242ˆ- kilometers; it's principal town is Mezieres. The department of the Marne contains five districts, thirty-two cantons, and 699 communes ; its territorial ex- tent is 8486 kilometers ; its principal town is Chalons. The department of the Higher Marne contains three districts, twenty-eight cantons, and 552 communes ; its territorial extent is 6540 ki- lometers ; its principal town is Chaumont. The department of the Aube contains five districts, twenty-six cantons, and 423 communes ; its ter- ritorial extent is 6242 kilometers ; its principal town is Troyes. The department of the Yonne contains five districts, thirty-four cantons, and 484 communes ; its territorial extent is 7740 ki- lometers ; its principal town is Auxerre.

7. The province of Lorraine is divided into the departments of the Memc, the Moselle, the Meurthe, and the Vosges. The department of the Meuse contains four districts, twenty-eight cantons, and 591 communes; its territorial ex- tent is 6275 kilometers; its principal town is Bar-le-duc. The department of the Moselle contains four districts, thirty cantons, and 934 communes; its territorial extent is 6552'- kilo- meters ; its principal town is Metz. The de- partment of the Meurthe contains five districts, twenty-nine cantons, and 718 communes; its territorial extent is 6430 kilometers ; its principal town is Nancy. The department of Vosges contains five districts, thirty cantons, and 550 communes ; its territorial extent is 6522ˆ kilo- meters; its principal town is Epinal.

8. The province of Alsace is divided into the departments of the l.ou-er and the Higher Rhine. The department of the Higher Rhine contains five districts, thirty-nine cantons, and 703 com- munes • its territorial extent is 6030 kilometers ;

its principal town is Colmar. The department of the Lower Rhine contains four districts, thirty-seven cantons, and 616 communes; its territorial extent is 5695 kilometers ; its principal town is Strasburg.

9. The province of Brittany comprehends the departments of the Hie and Villuine, the Lower Loire, IMorbihun, the North Coast, and i'inisterre. The department of the lUe and Villaine contains six districts, forty-three cantons, and 352 com- munes; its territorial extent is 7185 kilometers; its principal town is Rennes. The department of the Lower Loire contains five districts, forty- five cantons, and 209 communes ; its territorial extent is 7660 kilometers ; its principal town is Nantes. The department of Morbihan contains four districts, thirty-seven cantons, and 231 com- munes; its territorial extent is 7067ˆ kilometers; its principal town is Vannes. The department of the North Coast contains five districts, forty-seven cantons, and 376 communes ; its territorial extent is 7567ˆ kilometers ; its principal town is Saint Brieux. The department of Finisterre contains five districts, forty-three cantons, and 287 communes; its territorial extent is 7292ˆ kilometers ; its principal town is Quimper.

10. The province of Maine is divided into the department of the Maine and the Sarthc. The department of the Maine contains three districts, twenty-seven cantons, and 288 com- munes ; its territorial extent is 5452 J kilometers ; its principal town is Laval. The department of the Sarthe contains four districts, thirty-three cantons, and 413 communes; its territorial ex- tent is 6467ˆ kilometers ; its principal town is Leillans.

11. The province of Anjou forms the depart- ment of the Maine and Loire, which contains five districts, thirty-four cantons, and 385 com- munes ; its territorial extent is 7637ˆ kilometers; its principal town is Angers.

12. The province of Touraine forms the de- partment of the Indre and Loire, which con- tains three districts, twenty-four cantons, and 311 communes; its territorial extent is 6452ˆ kilo- meters ; its principal town is Tours.

13. The province of Orleannois comprehends the departments of the Eure and Loire, the Loire and Cher, and the Loiret The depart- met of the Eure and Loire contains five districts, thirty-six cantons, and 843 communes ; its ter- ritorial extent is 6182| kilometers; its principal town is Chartres. The department of the Loire and Cher contains three districts, twenty-four cantons, and 309 communes ; its territorial ex- tent is 6717ˆ kilometers; its principal town is Blois. The department of the Loiret contains four districts, thirty-one cantons, and 363 com- munes ; its territorial extent is 7047i kilometers; its principal town is Orleans.

14. The province of Poitou comprehends the departments of Vievere, the Tivo Sevres, and La Vendee. • The department of Vievere contains five districts, thirty-one cantons, and 344 com- munes ; its territorial extent is 7340 kilometers ; its principal town is Poitiers. The department of the Two Sevres contains four districts, thirty- one cantons, and 363 communes ; its territorial extent is 6337ˆ kilometers; its principal town is

Niort. The department of La Vendee contains three districts, twenty-nine cantons, and 324 communes; its territorial extent is 7242 J kilo- meters ; its principal town is Fontenay.

15. The province of Berry comprehends the departments of the Ind?'e and the C/ier. The department of the Indre contains four districts, twenty-three cantons, and 275 communes; its territorial extent is 7395 kilometers; its chief town is Chateauroux. The department of the Cher contains three districts, twenty-nine can- tons, and 307 communes ; its territorial ex- tent is 7385 kilometers ; its principal town is Bourges.

16. The Nivernois forms the department of the Nievre, which contains four districts, twenty- five cantons, and 330 communes ; its territorial extent is 7365 kilometers; its principal town is Nevers.

17. The Bourbonnois forms the department of the Alher, which contains four districts, twenty-six cantons, and 350 communes ; its ter- ritorial extent is 7427ˆ kilometers ; its principal town is Moulins.

18. The province of Burgundy forms the de- partments of the Cote cVOr, the Saone and Jboire, and theJin. The department of the Cote d'Or contains four districts, thirty-six cantons, and 733 communes : its territorial extent is 9192ˆ kilometers ; its principal town Dijon. The de- partment of the Saone and Loire contains five districts, forty-eight cantons, and 609 communes : its territorial extent ig 8912ˆ kilometers; its principal town Macon. The department of the Ain contains four districts, thirty-two can- tons, and 416 communes; its territorial ex- tent is 5675 kilometers ; its principal town is Bourg.

19. The province of Franche Compte com- prehends the departments of the Hig/wr Saone, the Doubs, and Jura. The department of the Higher Saone contains three districts, twenty- seven cantons, and 640 communes ; its terri- torial extent is 5582ˆ kilometers; its principal town is Vesoid. The department of the Doubs contains four districts, twenty-five cantons, and 605 communes ; its territorial extent is 5340 ki- lometers ; its principal

town is Besanj on. The department of Jura contains four districts, thirty-two cantons, and 728 communes ; its ter- ritorial extent is 5237ˆ kilometers ; its principal town is Lons-le-Saulnier.

20. The Pays d'Aunis forms the department of the Lower Charente, which contains six dis- tricts, thirty-seven cantons, and 506 communes ; its territorial extent is 7247ˆ kilometers; its principal town is Saintes.

21. The province of Saintonge forms the de- partment of the Charente, which contains five districts, twenty-eight cantons, and 455 com- munes; its territorial extent is 63tO kilometers; its principal town is Anijouleme

22. The province of Marche comprehends the departments of the Higher Vienne, and tiie Creuse. Tiie department of the Higher Vienne contains four districts, twenty-six cantons, and 224 communes ; its territorial extent is 6002J kilometers ; its princioal town is Limoges. The department of the Creuse contains four districts, twenty-five cantons, and 296 communes; its

territorial extent is 5902ˆ kilometers ; its prin- cipal town IS Gueret.

23. The Limosin forms the department of Correge, which contains three districts, twenty- nine cantons, and 294 communes ; its territorial extent is 5857ˆ kilometers; its principal town is Tulles.

24. The province of Auvergne comprehends the departments of Put/ de Dome and Cantal. The department of Puy de Dome contains three districts, fifty cantons, and 458 communes ; its territorial extent is 8450 kilometers; its prin- cipal town Clermont. The department of Can- tal contains four districts, twenty-three cantons, and 270 communes; its territorial extent is,"5937ˆ kilometers; and its principal town isAurillac.

25. The province of Lyonnois is divided into the departments of the Rhone, and the Loire. The department of the Rhone contains two dis- tricts, twenty-five cantons, and 261 communes ; its territorial extent is 2935 kilometers ; its principal town is Lyons. The department of the Loire contains three districts, twenty-eight cantons, and 327 communes ; its territorial ex- tent is 5135 kilometers ; its principal town is Monbrison.

26. The province of Guienne is divided into the departments of the Giroiule, the Dordogne, the Lot and Garonne, the Lot, Aveyron, the Gers, the Higher Pyrenees, and the Landes. The de- partment of the Gironde contains six districts, forty-eight cantons, and 580 communes ; its ter- ritorial extent is 1170 kilometers; its principal town is Bourdeaux. The department of the Dordogne contains five districts, forty-seven cantons, and 642 communes ; its territorial ex- tent is 9482ˆ kilometers ; its principal town is Perigueux. The department of the Lot and Garonne contains four districts, thirty-eight

cantons, and 469 communes ; its territorial ex- tent is 6100 kilometers; its principal town is Agen. The department of the Lot contains four districts, forty-one cantons, and 440 com- munes; its territorial extent is 7432ˆ kilometers; its principal town is Cahors. The department of Aveyron contains five districts, forty-three can- tons, and 589 communes; its territorial extent is 94771 kilometers ; and its principal town is Ilhodez. The department of Gers contains five districts, thirty cantons, and 700 communes ; its territorial extent is 7047ˆ kilometers; and its principal town is Auch. The department of tlie Higher Pyrenees contains three districts, twenty- six cantons, and 501 communes ; its territorial extent is 4937ˆ kilometers ; and its princijial town is Tarbes. The department of the I-andes contains three districts, twenty-eight cantons, and 368 communes ; its territorial extent is 9475 kilometers; its principal town is Mont de Marsan.

27. The province of Beam forms the dejiart- ment of the Lower Pyrenees, whicli contains five districts, forty cantons, and 660 communes; its territorial extent is 8072i kilometers ; its principal town is Pan.

28. The province of Foix forms the depart- ment of the Arriege, which contains three dis- tricts, twenty cantons, and 337 communes ; its ter- itorial extent is 5050 kilometers ; its prin- cipal town is Foix.

29. The province of Koussillun, forms the de- partment of the Eastern Pyrenees, which con- tains three districts, seventeen cantons, und 249 communes; the territorial extent is 337ˆ kilo- meters ; its principal town is Perpignan.

30. The province of Languedoc is divided into the departments of tlie ‘luKn, the Higher Garonne, the Heruult, the Aude, the Garde, the Ardcche, the Higher Loire, and tlib Loztre. The department of the Tarn contains four districts, thirty-five cantons, and 356 communes ; its ter« ritonal extent is 6080 kilometers ; its principal town is Castres. The department of the Higher extent is 7412 Garonne contains five districts, forty-two cantons, town is Digne

twenty-eight cantons, a.id 360 communes ; its territorial extent is 6927 kilometers ; its prin- cipal town is Valence. The department of the Higher Alps contains three districts, twenty- three cantons, and 183 communes ; its territo- rial extent is 5650 kilometers ; its principal town is Gap.

32. The province of Provence contains the departments of the Lower Alps, the Var, and the Mouths of the lihone. The department of the Lower Alps

contains five districts, twenty- eight cantons, and 260 communes ; its territorial kilometers; and its principal The department of the Var

and 691 communes; its territorial extent is contains four districts, thirty-two cantons, and 8077ˆ kilometers; its principal town is Tou- 210 communes; its territorial extent is 7510 ki- louse. The department of the Herault contains lometers ; its principal town Toulon. The de- four districts, thirty-six cantons, and 333 com- partment of the Mouths of the Rhone contains munes; its territorial extent is 6512ˆ kilometers; tlu-ee districts, twenty-six cantons, and 108 com- its principal town is Montpellier. The depart- munes; its territorial extent is 5315 kilometers ; ment of the Aude contains four districts, thirty- its principal town is Aix.

one cantons, and 436 communes ; its territorial Avignon and the adjoining territory, which extent is 6542| kilometers ; its principal town is belonged to the pope before the revolution, are Carcassone. The department of the Garde con- now incorporated with France, and form the tains four districts, thirty-eight cantons, 365 department of Vaucluse, which contains four communes ; its territorial extent is 6280 kilo- districts, twenty-two cantons, and 150 corn- meters ; its principal town is Nismes. The de- munes ; its territorial extent is 3700 kilometers; partment of the Ardeche contains three districts, its principal town is Avignon, thirty-one cantons, and 335 communes; its ter- The island of Corsica is formed into the two ritorial extent is 5710 kilometers; its principal departments of the Golo and the Liamone. town is Privas. The department of the Higher The department of the Golo contains three dis- Loire contains three districts, twenty-eight can- tricts, thirty-nine cantons, and 235 communes ; tons, and 272 communes ; its territorial extent its territorial extent is 3267^ kilometers ; its is 5282^ kilometers ; its principal town is Le principal town is Bastia. The department of Puy. The department of the Lozere contains the Liamone contains three districts, twenty-one three districts, twenty-four cantons, and 193 cantons, and 156 communes; its territorial

communes ; its territorial extent is 5390 kilo- meters ; its principal town is Mende.

31. The province of Dauphiny comprehends the departments of the here, the Drome, and

extent is 2955 kilometers ; its principal town is Ajaccio.

France is divided into twenty-two military provinces, each containing a certain number of

the Higher Alps. The departments of the Isere the civil departments. These are each under

contains four districts, forty-four cantons, and the command of a general, who is stationed at a

.'>o8 communes; its territorial extent is 8910 central town, whence the division or province

kilometers; its principal town is Grenoble. The commonly derives its name, and are as follows:

department of the Drome contains four districts, the departments included

in each division, are,

Resident Towns. Departments in each Division.

1. Paris. . . Seine, Seine and Oise, Aisne, Seine and Marne, Oise, Loiret, Eure and Loire.

2. Chalons . . Ardennes, Meuse, Marne.

3. Metz. . . Moselle.

4. Nancy. . . Murthe, Vosges.

5. Strasburg. . Upper Rhine, Lower Rhine.

6. Besancon . . Upper Saone, Doubs, Jura and Ain.

7. Grenoble. . Isere, Drome, Upper Alps.

8. Marseilles. . Lower Alps, '^aucluse. Mouths of the Rhone, Var.

9. Montpellier . Ardeche, Gard, Lozere, Herault, Tarn, Aveyron.

q, , c Aude, Eastern Pyrenees, Ariege, Upper Garonne, Upper Pyrenees, Gers, Tarn, ‘ I and Garonne.

11. Bordeaux. . Lower Pyrenees, Landes, Gironde.

12. Rochelle. . Charente-Inferieure, Deux-Sevres, Vendue, Loire-Inferieure, Vienne.

13. Rennes. . . Ille and Villaine, Morhihan, Finisterre, Cotes du Nord.

14. Caen. . . . Manche, Calvados, Orne.

15. Rouen. . . Seine-Inferieure, Somme, Eure.

16. Lisle. . . . Nord, Pas-de-Calais.

17. Dijon. . . Aube, Upper Marne, Yonne, Cote-d’Or, Saonne and Loire.

18. Lyons. . . Rhone, Loire, Cantal, Puy-de-Dome, Upper Loire.

19. Perigueux. . Correze, Lot, Lot and Garonne, Dordogne, Charente.

20. Bourges. . Cher, Indre, AUier, Creuze, Nievre, Upper Vienne.

21. Tours. . . Sarthe, Indre and Loire, Maine and Loire, Mayenne, Loir and

Cher.

22. Bastia. . . Corsica,

FRANCE.

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The articles of the definitive treaty between France and the allied powers relative to tlie boundaries of that kingdom, signed at Paris, 20th November, 1815, are so important, and so clearlj mark the outline of her present territory, that we think proper to subjoin them.

Article I. — ‘ The frontiers of France shall be the same as they were in the year 1790, save and except the modifications on one side and on the other, which are detailed in the present article. First, on the nor- thern frontiers, the line of demarcation shall remain as it was fixed by the treaty of Paris, as far as op- posite to Quiverain ; from theoce it shall follow the ancient limits of the Belgian provinces, of the late bishopric of Liege, and of the duchy of Bouillon, as they existed in the year 1790, having the territories included (enclaves^ within that line of Pliillipeville and Marienliourg, with the fortresses so called, to- gether with the whole of the duchy of Bouillon without the frontiers of France. From Villers near Orval upon the confines of the department Des Ardennes, and of the grand duchy of Luxembourg as far as Pcrlc, upon the great road leading from Thionville to Treves, the line shall remain as it was laid down by the treaty of Paris. From Perle it shall pass by Lauensdorf, Walwich, Schardorif, Niederv’eiling, Pelweiler (all these places with their banlieus or dependencies re- maining to France) to Houvre ; and shall follow from thence the old limits of the district (Pays) of Sarre- bruck, leaving Sarrelouis and ths course of the Sarre, together with the places situated to the right of the line above described, and their banlieus or de- pendencies without the limits of France. From the limits of the district of Sarrebruck, the lino of demarcation shall be the same which at present se- parates from Germany the departments of the Moselle and of the Lower Rhine, as far as to the Lauter, which river shall from thence serve as the frontier until it falls into the Rhine. All the territory on the left bank of the Lauter, including the fortress of Landau, shall form part of Germany. The town of Weissen- bourg, however, through which that river runs, shall remain entirely to France, with a rayon on the left bank, not exceeding 1000 toises, and which shall be more particularly determined by the commission- ers who shall be charged with the approaching desig- nation of the boundaries.

n. — Leaving the mouth of the Lauter, and con- tinuing along the departments of the Lower Rhine, the Upper Rhine, the Doubs, and the Jura,

to the canton de Vaud, the frontiers shall remain as fixed by the treaty of Paris. The Thalweg of the Rhine shall form the boundary between France and the states of Germany, but the property of the islands shall remain in perpetuity, as it shall be fixed by a new survey of the course of that river, and continue, un- changed, whatever variation that course may undergo in the lapse of time. Commissioners shall be named on both tides by the high contracting parties, within the space of three months, to proceed upon the said survey. One-half of the bridge between Strasbourg and Kchl, shall belong to France, and the other half to the grand duchy of Baden.

III. — In order to establish a direct communication between the canton of Geneva and Sw'tzerland, that part of the Pays de Gex, bounded on the cast by the lake Lenian ; on the south, by the territory of the canton of Geneva ; on the north, by that of the Can- ton de Vaud ; on the west by the course of the Vcr- soix, and by a line which comprehends the communes of CoUex, Bossy, and Meyrin, leaving the commune of Ferney to France, shall be ceded to the Helvetic confederacy, in order to be united to the canton of Geneva. The line of the French custom-houses shall

be placed to the west of the Jura, so that the whole of the Pays de Gex, shall be without that line.

IV. — From tlie frontiers of the canton of Geneva, as far as the Mediterranean, the line of demarcation shall be that which, in the year 1790, separated France from Savoy, and from the county of Niee. The relations which the treaty of Paris of 1814 had re-established between France and the principality of Monaco, shall cease for ever, and the same relations shall exist between that principality and his majesty the king of Sardinia.

V. — All the territories and districts included (en- claves) within the boundary of th«; French territory, as determined by the present article, shall remain united to France.

VI. — The high contracting parties shall name, within three months after the signature of the present treaty, commissioners to regulate every thing relating to the designation of the boundaries of the respective countries, and as soon as the labors of the commis- sioners shall have terminated, maps shall bo drawn, and land-marks shall be erected, which shall point out the respective limits.'

Such are the general and departmental out- lines of this important part of Europe. The surface of France is in general flat ; not rising into any elevations that can be called mountainous, except in the central and southern provinces, i. e. upwards of 300 miles south of Calais, where

among the sources of the Meuse, the Moselle, the Seine and the Saone, we meet with the mountains of Auvergne. Hence the Cevennes, a long range of mountains, proceeds from north to south in a course at first parallel with that of the Saone and subsequently of the Rhone, until, on approaching the Mediterranean, it branches off to the south-west and joins the Pyrenees. The greatest height of this range is in Auvergne, about lat. 45°, where this chain, or more properly a branch of it, attains, at the mountains called Cantal and Puy de Dome, an elevation of 600O feet, and is covered in its higher parts with snow during a great part of the year. Another, but a much less lofty range, extends from Bor- deaux to the south-east, a distance of 150 miles, until it reaches the Pyrenees. The smaller "hains are numerous in the east and south-east of the kingdom, viz. in Lorraine, the Nivernois, Dauphiny, Provence; also in part of the interior, particularly the Limousin and Guienne. They are interspersed with extensive plains, but con- vert the whole of the south and south-east of France into rugged and elevated tracts. Down the eastern frontier, and nearly parallel to the course of the Rliine, run the Vosges, until they join Mount Jura, in the Alps, north of the lake of Geneva. The grandest range, however, for scenery is that portion of the Alps which sepa- rates France from Switzerland. Here is found the towering Mont Blanc, the highest point of Europe, and so much above the surrounding Alps as to be illuminated by the sun twenty minutes earlier and later. See our articles Blanc Mount, and Europe. Other remarkable peaks in this direction are Reculet and Dole, which are 5660 feet above the level of the sea. On the south of France the chain of the Pyrenees stretches from the port of Vendies, on the co;ist of the Mediterranean, to the Atlantic Ocean on the coast of Spain. Its greatest breadth is forty)eaKrues ;

its highest summit 1751 toises above the level of the sea; the length about 212 miles. Mont Pari) u is the highest elevation of the Pyrenees; JNlout Canigou the chief of the Eastern Pyrenees : the hill is of difficult ascent, and is 1440 toises above the Mediterranean. The Pyrenean chain appears at a distance like a shaggy ridge, pre- senting the segment of a circle fronting France, and descending at each extremity. To the south and west they are sterile, but on the north and east, where fhe descent is more gradual, they afford frequent woods and excellent pasturage : near the summit of INIont Perdu is a large lake, upwards of 9000 feet above the level of the sea, which discharges its waters into Spain.

The forests of France constitute one of its principal geographical features. They are es- timated to cover altogether a surface of 29,220 square miles,

or upwards of 18,000,000 English acres ; that is about an eighth of its territorial surface. S'nce the time of Caesar, that of Ar- dennes has been the largest in France : it then extended from the Rhine to the Rhone, but is now much diminished at its extremities. The forest of Fontainbleau covers a space of about 25,000 acres. That of Orleans, including several plains and villages, is fifteen leagues in length, and from three to eight in breadth. It contains great variety of timber, such as oak, elm, fir, aspen, &c. Before the revolution the value of its timber annually was 100,000 livres: the profit being part of the appanage of the duke of Orleans.

M. Chaptal, in his treatise d'Industrie Fran- caise, estimates the woods which are

Hectares. Regularly cut for fuel, equal to .6,612,000 Those allowed to grow for timber 460,000 And the chestnut woods . . . 406,000

7,478,000

The hectare is about two-fifths of the English acre. Under the old government, the national for- ests yielded about 12,000,000 francs to the royal treasury. By the revolution, all forests formerly held by the corporate bodies and the emigrants were annexed to those of the state, which were thus increased to upwards of 4,000,000 arpents, or about one-fourth. These, added to the forests in Belgium, and on the left bank of the Rhine, in the year 1806, yielded rather more than 70,000,000 francs, according to the budget for that year. All forests above 300 acres were also added to the national domains, and declared inalienable. In the year 1800 the nationa' forests were exempted from the land-tax. But the revolution did not abolish the arbitrary laws to which the private proprietors of woodlands were subject. According to these laws, the go- vernment appoints persons, who are proper judges of ship timber, to examine all the woods, and to mark such trees as they deem fit for their purpose, after which the proprietor must not lay the axe to them.

The rirers of France are n\imerous, and inter- sect and beautify the country in every direction. The Rhine un-w only waters the eastern frontiers of two departments. The Rhone, Seine, Loire, and

fiaronne, are the other great streams. Tlie Rhone enters F' ranee from the lake of Geneva, and enters the Mediterranean by several mouths a few miles west of Marseilles. It passes in its course Lyons, Vienne, Valence, Montelimart, Avignon, Beaucaire, Tarascon, and Aries. The Seine, having a direction generally towards the north-west, rises in the department of Cote d'Or, and waters a series of beautiful valleys previous to its arriving at Paris; whence it follows a si- nuous course to the English Channel, receiving

a great number of tributary streams. The prin- cipal towns on its banks are Troyes, Melun, Paris, and Rouen. The Loire has its source in the western side of the Cevennes, and flows to- wards the north for about half its way. It then turns to the west and falls into the Bay of Biscay after a course of more than 450 miles. It receives about forty of the central rivers of the country, and is navigable foi' nearly ninety miles. The principal places it passes are Nevers, Orleans, Blois, Tours, Saumur, and Nantes.

The Garonne, rising in the northern side of the Pyrenees, flows nearly north-west into the Bay of Biscay : having most cf iti course throiigU a flat country. It is joined by the Dordogne before it reaches the sea, and after the junction is called the Gironde. It passes Toulouse, Agen, and Bourdeaux, below which it opens into a large estuary, having an entire course of above 200 miles.

Other rivers in the northern departments are the Somme, which falls into the British Channel below Abbeville; the Oise and the Manie which enter the Seine ; the Aisne tributary to the Oise ; and the Meuse, the Moselle, and the Scheldt (I'Escaut) watering the central depart- ments. The "N'ilaine discharges its waters into the ocean below La Roche-Bernard. The Sarthe and the Loir unite above Angers, and, having joined the Mayenne at that town, they augment the Loire a little helow. These collect their waters on the north of that river. Tlie Creuse joins the Vienne, which with the Cher and the Indre enter the Loire from the south. The Yonne discharges itself into the Seine at Montereau. The Saone and the Doubs unite and afterwards flow into the Rhone. Of the southern rivers the three which fall into the Garonne are the Dordogne, the Lot, and the Tarn. The Adour runs into the sea at Bayonne. The AUier discharges itself into the Loire at IVevers ; while the Isere and the Durance are both tributary to the Rhone.

The canals of France are few, and the general management of them very far behind that of our own internal navigation. The principal e.xisting canals are: — 1. The Canal de Briare, which unites the Loire near Briare, with the Loing at Cepoix ; where also it receives the canal d'Or- leans. From this place the canal of Montargis continues the navigation to the Seine. By means ■of these, and the connecting rivers, France may be traversed from north to south. This canal contains forty-two locks, and is about fifty-five miles in length. — 2. The Canal du Centre, alsa called the Canal of CharoUois, and the Canal of the Three Seas, or of Digoin, is about twenty French leagues in length, and by means of the

Rhone, the Loire, and the Seine, unites tl>e Me- diterranean, the Ocean, and the Channel. — 3. The Canal de la Cote d'Or, likewise called the Canal de Bourgogne, connects the Saone and the Yonne, at a short distance from Joigny ; and two other intermediate rivers. Its whole length is about 140 miles. — 4- The Canal de Montargis, constructed as early as 1720, to continue the na- vigation of the Canal de Briare to the Seine. — 5. The Canal d'Orleans which joins the Loire and the I>oing. It commences at the former river, two leagues above Orleans, and unites with the latter near Montargis. It has thirty locks in a length of about fifty miles. — 6. The Canal du Midi or Canal of Languedoc, the most noted and extensive in France. It was constructed under the auspices of Colbert, during the reign of Louis XIV. ; and employed a great number of men for fifteen years, among whom nearly half a million of money was distributed. This canal commences at the bay of Languedoc, and enters the Garonne near the city of Toulouse, after a course of 126 miles. Its breadth, including the towing paths, is 144 feet, and its depth about six. The French government has recently formed many plans for improving the internal navigation. A Report drawn up by tlie Administration des Fonts et Chaussees, for the information of the French ministry, enumerates all the canals which are finished — all those on which they are at work, and all those which they recommend to be un- dertaken.

Of the canals which are in progress the most important are — Canal de Monsieur, parallel with the Rhine, which will facilitate the exportation of the Alsace manufactures both to Paris and Marseilles — Canal de Bourgogne, joining the Canal de Monsieur with the Seine by way of Dijon — Canal lateral de la Loire — Canal du Due de Berry, striking off from the Loire near Tours and passing by Bourges and joining the Loire again near Nevers — Canal de Bretagne — Canal du Nivernois, to intersect the Nivernois, and give some means of communication to a district in which hitherto all goods have been carried on horseback.

France contains no lakes of importance, and the sea-coast is singularly deficient in harbours considering its extent. In thirty leagues of coast Languedoc has not one good harbour; and while Provence abounds in inlets arising from the sand and other accretions, which the Rhone brings down, being driven to the westward, these render the coast extremely shelving, and full of shoals. The coast of Provence, is on the con- trary steep and rocky, and inclines gradually to the southward, from the mouths of the Rhone to near Toulon. But here all the harbours want

merchantmen. Fartlier to the south, we find at La Rochelle a small, but secure harbour, and at Bourdeaux, a river nearly equal in width to the Thames at London. From this there is no sea- port, until reaching Bayoune, a place of no easy access. On the Alediterranean, the ports are the Cette

and Marseilles, the latter considered spa- cious and secure. At Brest and Toulon, are the great dock yards and naval stations, both having excellent harbours; Rochefort is nearly equal to them, situated on the river Charente near its mouth. At Cherburgthe labor and expense that have been bestowed on the public works have been, as we have seen, immense. SeeCHERBUKO. Its roadstead, is extensive and open, but it has a sea-wall, which, affords considerable protec- tion from the swell of the sea; and its spacious dock is capable of containing fifty sail of the line. Havre de Grace, the best mercantile har- bour perhaps in France, has also been formed at a great expense.

The climate of France has been divided into that of the North, the Central, and the Southern regions. The north, comprising Flanders, Pi- cardy, Normandy, Brittany, and, in general, all that part of France that would be bounded on the south by a diagonal line from lat. 47° on the west to lat. 49° on the east frontier, bears a great resemblance in temperature and produce, to the south of England; and the chief culture is in wheat, barley, oats, rye ; apples, pears, and cher- ries; hemp, flax, and rapeseed. Here also, and here only in France, is pasturage rich and extensive; while the timber is also remarkably like our own. The central region comprising the country to the south of the Loire, or of the diagonal line we have mentioned, until reaching a similar line in lat. 45° on the west and 47° on the east frontier, has its winters, except in the highest parts, sensi- bly shorter and milder. Wheat, barley, oats,, and rye, are here mingled with maize in the culture, and vines are general. The weather in this great inland tract is also more steady than northward. In the summer it has little rain, and few storms: but when they occur they are frequently accompanied with hail. This is altogether perhaps the most plea.sant part of France ; it is certainly generally prefer- red by English visitors and residents. Tlie southern region comprehending ilie whole breadth of France, from lat. 43° and 46° to lat. 42° 30', approaches in climate' to tlie warmth of Italy ; it being necessary, in the summer months, to suspend all active exertions in the middle of the day. Wheat is here but partially grown ; barley, oats, and rye, on the high grounds ; and maize very generally. The vines supply in their rich produce and cultivation the main article of export. The common fruits are olives, mulber- ries, and in warm parts oranges and lemons. Tlie pasturage is good only on mountainous or •well watered tracts.

The quantity of i-ain that annually falls in Paris is very nearly the same as in London; the average in both places being between twenty-one and twenty-two inches. Tiie mean (juantity fi)r the whole of France is about twenty-one inciies. At Marseilles it is 22".^) inches ; at Bourdeaux twenty-six; and at Montpelier nearly thirty

inches. Brittany is considered as rainy as Ion. Tlie variations of climate are considerably

Cornwall. In the interior the rains are less fre- greater on the ^\ hole between the north and south

quent, but more heavy ; so that there is much less of France than between the north and south of

diflerence in the quantity of rain that falls in the Britain, where the ditTerence of latitude is so

course of the year than in the number of rainy much modihed by the vicinity of the sea. days. The atmosphere of this country is much France has a most diversified and abundant

less cloudy than ours : but the most frequent soil, speaking generally. Arthur Young consi-

wind in the north and central part of France is, ders it much freer from poor lands than that of

as in Britain and Ireland, the south-west. In England. It consists chiefly of different kinds

the south of France tiie winds are commonly of loam, varying from the deepest and richest to

from the north. Nor is the difference of tempe- the calcareous and gravelly. This author gives

rature between London and Paris considerable : the following estimate of the proportion of the

the degree of heat indeed, along the west coast different soils. But his numbers it is to be ob-

of France, is not felt to be intense until passing served include the whole surface of the kingdom,

Poitou. In the interior it is more perceptible, making no deductions for roads, rivers, ponds,

being strongly felt at Lyons, and still more in &c. Necker estimated the roads of France alone

the latitude of Nismes, Aix, Marseilles, and Tou- at 9000 square leagues.

Acres. Acres.

Rich district of the north-east, containing the provinces of Flanders, Artois,

ˆicardy, Normandy, the Isle of France, &c 18,179,590

Plain of Garonne 7,654,564

Plain of Alsace 637,880

Lower Poitou, &c 1,913,641

Rich loam . ■ 28,385,675

The heath district of Brittany, Anjou, and parts of Normandy, &c. . 15,307,128

The heath district of Guyenne and Gascony 10,206,085

Heath . . — 25,513,213

The mountainous district of Auvergne, Dauphiny, Provence, Languedoc, Sec. . 28,707,037 The chalky district of Champagne, Sologne, Touraine, Poitou, Saintonge, Angoumois,

&c 16,584,889

The district of gravel of the Bourbonnais and Nivernais 3,827,282

The district of stony soils in Lorraine, Burgundy, Franche Compt^, &c. . . 20,412,171

The district of various loams in the Limousin, Berry, La Manche, &cc. . . . 8,292,444

Total 131,722,711

The agriculture of France is not equal to its advantages in point of soil and climate. Before the revolution it languished under the seigneur- ships and ecclesiastical tenures : and since that event the law which directs an equal division of landed property among the children of a family, in most cases, has greatly increased the evils of its minute subdivision. The parent of two children has the free disposal of only one-third of his property ; the parent of three children of only one-fourth ; the residue being shared equally among all. The claim of primogeniture is thus in a great degree annulled.

One-half of the population of France, it is considered, have from these provisions, and the extensive sales of land in modern times, become landed proprietors ; and one-fourth agricultural laborers : consequently two-thirds of the whole are employed in agricultural pursuits ; while, in Great Britain, those so occxipied do not amount to more than one-third of the population. A re- cent statement of M. Chaptal (De ITndustrie Francois) reckons the surface of France at 52,000,000 hectares, which are thus distri- buted : —

Arable land .... Woods regularly cut for fuel . Woods allowed to grow for tim- ber . . . . . Pastures . , . .

Hectares.

22,818,000 6,612,000

460,000 3,525,000

Hectares

Meadows ....

3,488,000

Chestnut woods

406,000

Oichards . . . .

359,000

Kitchen gardens

328,000

Lakes, Ponds, &c. .

213,000

Marshes ....

186,000

Hops and Hemp .

60,000

Osieries ....

53,000

Olives

43,000

Mines and Quarries

28,000

Gardens, Parks, and Plea ur,-

Grounds ....

16,000

Canals

9,000

Cultures particulieres, crops u o

small to be classed but as sun-

dries

787,000

Waste lands, heaths, sands

3,841,000

Buildings ....

213,000

Unproductive, as Towns,

Roads, Rocks, Rivers.

6,555,000

Total

52,000,000

It further appears, from this writer, that the whole value of the agricultural produce of France is 4,678,708,855 francs. The expenses of rais- ing this

he estimates at 3,334,005,515 francs, which reduces the net profits to 1,334,703,370 francs. Besides this statement of the net pro- fit^, three others have been given, arising from them —

According to the registered customs

Average value per acre

According to the return of special commissioners

The mean of these three gives

if, to find the average result of all these state- ments, we take the mean of this last and of M. Chaptal's, we shall have 1,411,582,273 francs; which has been thought a near approximation to the truth. From the estimate of this author, it appears that the capital employed in agricultural pursuits in France is 37,522,061,476 francs ; which, compared with the statement of profits, gives only three and a half per cent, upon the whole capital employed.

Buck wheat is largely cultivated in Normandy and the south of France, both as green food for cattle, and for the diet of the peasantry : it is sown generally in the month of June, and har vested in the end of Septembei. Rape-seed is also general here and in French Flanders ; and supplies, as in several districts in England, oil for the market and food for the cattle, either green or in cake. Cole-seed is also raised in this part. Flax is very generally raised in Flan- ders, Alsace, and Normandy, as well as in the provinces of the west and south, where it is spun in the cottages. Hemp also is raised in many parts of France, particularly in the north. To- bacco flourishes in Alsace and Picardy, and would it is said be extensively reared throughout France but for the excise restrictions, which only license its growth in particular parts. We have often thought our own excise laws sufficiently in- tmsive upon all the works of man, but this is an interference with natural productions which we do not recollect that they equal. Maize is a cul- ture of great importance, both for the food of man and cattle, in the warm parts of France ; when intended to stand for harvest it is planted in rows with but little seed, and yields more than twice the quantity of wheat that would be produced on the same area. During its growth, the leaves are regularly stripped for the cattle ; and in some districts it is sown thick and mown for that purpose only. Potatoes are little known, and as little approved, speaking generally.

Francs.

1,323,138,877 1,486,244,653 1,626,000,000

1,478,461,176

Chestnuts supply, in the central part of France, no inconsiderable portion of human food. In the south the fraits are almonds, olives, prunes, figs, and oranges.

The vine is cultivated over, perhaps, one-half of France, beginning, in a limited degree, in Champagne and Burgundy; in Provence and the lower part of Languedoc, the climate becom- ing much warmer, the culture of it is general ; though it is no where managed with such skill as along the banks of the Garonne. The quality of French wines, it is well known, is very various. The entire amount produced is said to have been considerably increased since the revolution, as well from the division of the larger estates as from the quantity of waste land that has been brought under culture : 5,000,000 acres of land are, we are told, planted with vines ; and that the value of the annual produce is from £28,000,000 to £30,000,000 sterling, of which about a tenth or twelfth part only is exported. A farther quantity, equal to about a sixth of the above, is made into brandy.

The official calculations of the produce of France are no where else equalled in point of minuteness. They give the following as tlie value of articles produced annually in France : —

Wine 20,000,000

Raw silk .... 9,600,000 Hemp 1,200,000

Flax 800,000

Madder 200,000

Wood for fuel and timber of all

kinds . . . 5,600,000

Olive oil, rape-seed, and cole-seed 2,800,000 Tobacco 300,000

Chestnuts 300,000

40,800,000

Of the following articles also, produced in Great Britain, we extract uot the value only, but the quantity and average price.

Quantity in

Winchester

Quarters.

Average Price.

Annual Prodiice.

Wheat

Rye and mixed corn (raeteil)

Buck- wheat

Barley

Peas and beans

Potatoes (56,928,000 boisseaux)

Oats .....

Maize and Indian corn ....

Wool, Merino, 2,000,000 lbs. at Is. Qd. per lb. ; second quality, metisse, 8,000,000 lbs. at !.<;. Zd. ; a third, or common quality, 70,000,000 lbs. lOJ.

18,508,000

10,886,000

3,022,000

4,520,000

646,000

11,524,000 2,265,000

s. d.

41 8 27 10 14 0 23 2 41 8

0 i0|

20 10 27 10

£

38,558,000

15,150,000

2,115,000

5,236,000

1,346,000

2,491,000

12,000,000

3,152,000

3,583,000

83,631,000

The pasturage is, as we have stated, chiefly confined to the north and west of France : and liere clover and sainfoin abound ; lucerne is much more general, being raised not merely in the nortli, but in the central and southern provinces, wherever irrigation is practicable and the soil and climate suitable.

Tiie art of breeding cattle is little understood in France, nor is there much judgment shown in fattening them. The beef and mutton of the north and west are, however, very tolerable, and their price, tiiougli varying indifferent provinces, thirty per cent, less than in England. Butter is made and used extensively, but cheese much less than in England. In the south, however, olive oil, largely supplies the place of butter in cooking. The French horses are inferior, both in size, number, and general appearance, to those of our own country. In the performance of labor, however, they are found strong and tolerably expeditious. A French mail-coach performs

only five instead of seven miles an hour, as with us ; but this is owing less to in- feriority in the horses, than to the state of the roads, and to general want of despatch at post- houses. More than one-half of the horses be- long to the northern provinces, viz. Normandy, Brittany, Picardy, Alsace, and the Isle of France. In tlie central and southern departments the work is chiefly done by oxen. The total of horned cattle in France, in 1812, was reported officially as follows : — Chaptal, vol. i. p. 197.

Bulls Oxen Cows Heifers

214,000 1,702,000 3,910,000

856,000

Sheep are reared almost every where, and the mutton is good. Merinos were first brought from Spain in 1787, and formed into a royal flock at Rambouillet. The quality has been progressively improved, and distributions of Merinos have been successively made to pro- prietors of sheep pastures in all parts of France. The consequence is that, in many districts, the weight of the fleece has been nearly doubled. The animals are not folded during night, but crowded into covered buildings (bergeries), and suffer, particularly in winter, much injury from sudden ex])osure. Mules, tliough little known in the north of France, are reared in the central and southern parts very generally. Poultry, in France, is both larger and more abundant than with us.

France has some considerable 7innes of silver in tlie mountainous districts; but is very

rich in iron. The Ardennes, Vosges, Jura, Puy de Dome, Pyrenees, &c., &c., all abound with this mineral ; and numerous forges, estimated in all at about 250, have been built, principally in the departments des Ardennes, du Cher, du Cote d'(Jr, de la Dordogne, de la Haute Maine, du Nievre, de la Haute Saone. There are besides 100 forces a la Catalane, and about 900 faux d'affinerie, for refining the metal, producing nearly 75,000,000 kilos per annum. But, w.m the exception of that found near Beffort (Bas Rhin), the quality is inferior. It is in general too brittle to be employed in machinery. Cop- per is only found, in any considerable quantities, at Baygorri (Basses Pyrenees), and at Chessy and St. Bel, near Lyons. A small supply is also derived from a few mines in the depart- ments des Hautes Alpes and de Haut Rhin. Lead is found in the departments de I'Arriege, de la Haute Loire, and du Finisterre ; and tin is found near St. Omar ; but the whole product of these mines is quite insuflicient to answer the demand in France, and zinc is frequently sub- stituted for copper, especially for sheathing &hips.

The fields of coal m France are inexhaustible, and the collieries very numerous. They are to be found in the north, near Valenciennes and Lisle, near the banks of the Allier, in the depart- ment du Puy de Dome, de I'Aveyron, du Cantal, and in many other places. Many of them, how- ever, are not worked, in great measure owing to the difficulty of carrying the coal away when brought to the surface. The whole value of coal annually extracted from the mines in France is not above £2,000,000 sterling ; nor is the quality in general so good as in England.

Besides the mines that are actually worked, there are many others which exist, but which, owing to the impediments thrown in the way of speculators by the government, have not yet been opened. By the French law, all minerals of every kind belong to the crown, and the only advantage the proprietor of the soil enjoys, is the having the refusal of the mine at the rent fixed upon it by tl>e crown surveyors. There is great diflSculty sometimes in even obtaining the leave of the crown to sink a shaft upon the property of the individual, who is anxious to undertake the speculation, and to pay the rent usually de- manded, a certain portion of the gross product.

The comte Alexandre de B , it is said, has

been vainly seeking this permission for a lead mine on his estate in Brittany for upwards of ten years.

The imports of these metals, of course, are very considerable : —

Irox.

1822 .

1823 .

Imports Kilos.

. 15,616,818 . 14,806,880

Value.

5,772,540 5,328,222

Kilos.

3,032,335 .3,558,451

Exports.

Value.

2,714,527

3,601,207

1822 .

1823 .

. 5,023,904 3,987,736

CoPPEU.

10,265,944 8,126,761

Tin.

1,550,848 1,592,998

231,886 178,964

1,075,277 228,793

1822 .

1823 .

784,156 807,675

24.784 21,362

93,676 68,988

F R A N C E.

531

Salt is nrade in varions parts of France. Works corresponding witli the salt mines, or brine springs of Cheshire, and called, from their posi- tion, Salines de I'Est, are situated at the small town of Salins in Franche Comte. They are wrought by undertakers on lease, yield about 20,000 tons a year, and afford a considerable revenue to government. The heat of the climate on the south and south-west coast, being favorable to the evaporation of salt water, bay salt is made here extensively, not by the action of fiie, but by the heat of the sun, operating on sea water, enclosed in a shallow bay (in French etang), so as to produce a saline deposit. The duty raised from

salt in France in all is nearly £2,000,000.

Mineral waters are found at Aix, Bagneres, Bareges. The first seem to have been known to the Romans, and a bath was erected by C. Sex- tius Calvinius. See Aix. The water has nearly the same temperature as some of those at Bath. Bagneres, in the eastern part of Guyenne, was also known to the Romans, and the hottest of its springs is about 123° of Fahrenheit's scale, and the coldest 86°. The baths are about thirty in number. Bareges is situated in a chasm among the mountains, and is only a summer residence, in consequence of the torrents and avalanches that so often prove destructive in winter. The waters issue from a hill in the cen- tre of the village, and are distributed into three baths, the hottest of which exceeds 112°. They are strongly sulphureous and fetid, greasy to the touch, and turn silver black. The waters at St. Sauveur, near Luz, in the department of the Upper Pyrenees, are not so hot as those of Bareges, but are more nauseous to the taste. Hot springs also arise in the midst of beautiful scenery at Cauterets, in this department, the hottest of which is 118°. Other springs are found among the Pyrenees ; and there are baths at Forges, Vichi, Bourbonne, Balaruc, and Plom- bieres.

Woollen cloth is perhaps the most important and most extensive manufacture of France. The best superfine cloths are made at Louvieres in Normandy ; those of Abbeville, in Picardy, though fine, are not to be compared with them in quality. The Londrines, made at Carcassone in Languedoc, which were formerly the most successful manufacture in France, and were manufactured expressly for the Turkish and Chi- nese markets, are also of beautiful quality. The cloths of Julienne, and the superfine fabrics of Sedan, as well in scarlet as in other bright colors, and in black, are only suitable to the affluent. Fine cloths are also manufactured at Rouen, Da- rental, Audelis, Montauban, and in various places in Languedoc and Champagne. Those of Andelis in Normandy are fine mixed clotiis. Fabrics of a second sort of cloth are found at Elbeuf in Normandy, and at Sedan : those of Elbeuf are best suited for workmen and mechanics. Chateaurouge, before the revolution, furnished a great deal of livery cloth. Roma- rantin, Issodoren, and Lodeve, furnish cloths for military clothing. There are still inferior coarser cloths, made for the wear of tlie country laborer. The fabrics at Rheims, before the revolution, besides the sort called draps de Rheims, consisted

of an imitation of Silesian drapery, called Silesies, imitations of our Wiltons, called Wiltons, and casimeres, which they called maroes. Ratteens were made at Roybons, Crest, and Saillans; cloths and ratteens at Romans ; cloths for bil- liard tables at St. Jean-en Royans. Cloths of different descriptions and qualities were also made at Grenoble, Valence, Troyes, St. Leo, Bayeux, Amboise, Niort, Coutange, Lusignon, &c. In the rank of

coarse cloths may also be placed the woollen stuffs of Aix, Apt, Taraspon, Oleron, Orthes, Bagneres, Pau, Auch, the valley of Aure ; the cloths of Cevennes, Sommieres, Limoux, &c. The greater part of these cloths bear the names of the various places in which they were fabricated. Besides cloths, properly so called, camblets, callimancoes, baizes, kerseys, wool and hair plushes, are made at Amiens ; druggets, flannels, blankets, at Rheims ; blankets in the suburbs of 'Paris ; flannels at Beauvais ; serges at Aumale, Bicomt, &c. ; camblets and plushes at Margny.

It has been thought that the woollen manu- facture decreased during the revolution, and even subsequently ; but the following are the official numbers of the workmen employed in this branch in the three specified years : —

1789

1800

1812'

4,400

6,700

10,400

3,000

8,000 4,500 8,500 13,600 3,800

9,000

6,200

10,000

18,300

4,800

The machinery used is very defective. It was only in 1804 that carding engines were intro- duced. The greater part of the spinning-mills, too, are worked by water, or by horses. In Elbceuf and its vicinity several are situated on the small streams : upwards of twenty are turned by horses; there were here in 1825 eleven steam- engines.

The greatest woollen manufacturer, in 1825 in France, was M. Ternaux,

late deputy of Paris. He had twenty-two different mannfoctories, situ- ated in different towns : four at Rheims, two at Sedan, two at Louviers, at Liege, &c. &c. Yet although possessed of the abundant capital which such manufactories must require, he had not thought fit, at that period, to concentrate his estab- lishments, nor even at any one to erect a steam-engine. He employed nearly 6,000 men in that year ; twenty years ago he had upwards of 12,000 in his pay ; the 6,000 now producing probal)ly as much as the 12,000 then, owing to the use of improved machinery. Besides his general trade as a clothier, M. Ternaux has pursued with great eagerness one particular branch which, till' this time, was quite unknown in Europe, the making of Cashmere shawls. He imported with great difficulty, and at considerable expense, a certain number of the Thibet, Angola, and othet oriental goats, from whose duvet these celebrated shawls are made. They have bred in France, and ho has been very successful in increasing the number

of his flock. The climate seems to suit them, and as tlieir food is, for the most part, what Qfher animals reject, such as horse-chestnuts, of which they are particularly fond, weeds, &c., the expense of keeping them is but small. He has a flock of upwards of 100 at his country-house at St. Ouen, near Paris; another somewhat larger in the Pyrenees ; and one or two more of less extent in different parts of France. ' He sells besides from seventy to eighty goats annually. As the quantity of duvet which each animal produces is not above three ounces and a half, he is trying whether, by a cross between the Thibet and Angola goats, he may not be able to obtain a greater (juantity, as at present he is, of course, unable to make many shawls of the pure duvet. Nor would the speculation have succeeded, if indeed it has succeeded in a pecu- niary point of view, were it not for the reputation his shawls enjoy ; as it is an idea generally re- ceived that they are made precisely of the same materials as the Cashmere shawls, which bear so high a price, and are so much esteemed in France.' Qucirterh/ Review, No. 62.

It is calculated that in the whole of France wool, value £4,000,000 sterling, becomes con- verted into a manufactured value of £9,000,000, of which about a tenth is exported.

The cotton manufacture has been carried on in France about half a century. Forty years ago the system of spinning by machinery was almost

entirely unknown. The cotton was then spun, by hand, principally in those mountainous districts where tlie price of labor was low; but the greater part was imported from England and Switzerland. In the three years ending 1789, the average value of cotton goods imported was 25,831,233 francs (£1,033,500), of which a very large proportion was of the finer kinds ; as the French manufactures of that day were for the most part confined to the coarser goods, such as the handkerchiefs furnished by Rouen and Montpelier, principally for the use of the lower classes. Since that time the English improve- ments in machinery have been slowly adopted in France. New manufiictories have sprung up ; and the long war, which cut ofi" all communica- tion with Great Britain, compelled them to exert themselves in order to supply, in some degree, the demand for those cotton goods for which formerly tliey had recourse to our markets. Buonaparte, pursuing a system which, in his own view of it, promised at once to ruin his great enemy, and to add eclat to his reign, attempted, by prohibitions and premiums, to give new acti- vity to the manufactures. He so far succeeded, that machinery of an imperfect description is now generally used, and the French manufac- turers are able to supply to their countrymen most of the articles of which they stand in need. There are some, however, which they have found themselves incapable of making. India nan- keens for instance, have (since 181(3) been ad- mitted as an import on paying a duty of five francs per kilo (equal to 2lb. 3oz. 5dr. I3grs. 755 avoirdupois weight). And the consequence has been that the departments de I'Ain, de la Seine Inferieure, de la Somme, and du Nord,

which formerly made about 1,500,000 pieces an- nually, have almost abandoned the manufacture. Other branches of this manufacture are carried on to a very considerable extent, in the depart- ments du Nord, Pas de Calais, Aisne, Somme, Seine and Oise, Seine Inferieure, Seine, Calvados, in the north : Haut Rhin, Bas Riiin, Aube, in the north-east : Rhone, Loire, and other places in the south-east : and Ciard and Herault in the south.

The most extensive manufactories are those at and near St. Quentin and Lisle. In 1812 de I'Aisne and du Nord produced more than half the cotton yarn spun in France; and, though the same proportion no longer exists, still Lisle and the neighbouring villages of Roubaix and Tourcoing are among the most important manufacturing districts of France. Neither at St. Quentin, nor at Lisle, however, is much of the cotton yarn woven into goods. From St. Quentin it is sent to the neighbouring peasantry, as it is also from Lisle, Aubenton, St. Michel, and other towns in the departments de I'Aisne, and du Pas de Calais. There is a loom in almost every cottage; and the peasantry, when prevented by the severity of the weather or any other reason from pursuing their agricul- tural labors, weave those coarse stuff's which are the principal products of that department. At Lisle part is woven in the town, and part, the finest, is sent to Tarare, near Lyons, for

the manufacture of muslins.

The cotton trade carried on in Paris and its vicinity has of late much diminished, except at Jouy, where the manufactory of printed goods is still flourishing. It was originally established by M. Oberkamf, who was almost the first indi- vidual in France who pursued this particular line. Of later years 31. Widmer has greatly in- creased the sale of these articles, by his chemical discoveries in dyes. The elegance of the patterns, and the beauty of the colors, have rendered them in appearance second only to the cottons of Alsace, while in price they are considerably lower. In Paris itself the diminution both of spinning mills and of looms has been very con- siderable within these few years.

The exports of cotton goods from Paris wer.ˆ in value in

1819 . 708,108 francs, of which in

printed goods . 489,701

1820 . 476,987. . . . 306,226

1821 . 255,830. . . . 173,200

In Alsace, however, the manufacturers are

highly prosperous, and though the trade, perhaps is no longer increasing so rapidly as formerly, yet it is progressive. Nor is this surprising when the excellence of the goods is taken into consi- deration. In some points indeed, especially in the dyes, they surpass those of British manufac- ture.

Round Lyons, the cotton trade has of late fallen off", being injured by the progress of the silk manufactories. At Tarare, however, from peculiar circumstances, one branch, the weaving of fine muslins, prospers ; and it is almost the only place in France where that particular article is made. The principal product of the cotton factories in the south of France is hosiery, of

which Nismes and Montpelier used formerly to export a very large quantity. Beside the de- partments just enumerated, in which the greater part of the cotton manufactories of France are situated, there are many others in which the in- habitants make part of what is wanted for their own consumption. M. Chaptal mentions forty- five departments in which tliere are spinning mills, besides much cotton-spinning in the cot- tages of the

peasantry. To what extent this is carried, it would be very difficult to ascertain, as no official returns can be procured of the quantity so consumed.

Steam is comparatively but little used anywhere; water-wheels, wherever currents can be obtained, are established; in level districts horses are constantly employed, and occasionally even manual labor. In the department de la Seine Inferieure there are 109 spinning-mills situated on small streams. The country round Lisle is flat, and here recourse is had to horse-power, or tlte more uncertain action of wind : sixty wind-mills, prin- cipally used for expressing oil from poppies, rape, and trefoil, may be seen at one time on leaving Lisle by one gate ; but there are not above ten or twelve steam-engines in the town. St. Quentin is almost the only considerable manufac- turingtown in France in which the steam-engines bear any proportion to the number of mills. There are here twenty-four in the whole, of which all but two or three are used in the cotton mills.

In the department de la Seine there are — In Paris . . . . .35 Arrondisseraent de Sceaux . . 8 de St. Denis . 8

51

Of these several are used at Charenton and the otlier iron manufactories ; some for raising water, and one of less than half horse power for grind- ing chocolate. This unwillingness to employ steam, which not only adds to the expense of spinning, but prevents the thread from being so regular from a want of uniformity in the motion, may be attributed partly to the high price of the machines, partly to the badness of the iron and the workmanship, whence accidents repeatedly occur, which naturally tend to deter otliers from setting them up. The low rate of wages also renders manufacturers less attentive to that eco- nomy of manual labor which has so much con- contributed to the prosperity of the Fnglish manufacturer. Yet, indifferent as the machinery is, it was in a far worse state when M. Chaptal came into office under the imperial govern- ment.

In the linen manufacture, flax to the value of ‘20,000,000 francs (10,000,000 home and 1 ,000,000 foreign) is said to be given out to the ^^ cavers; which sells manufactured for about 7.”),000,000 ; and goods to the value of about 2. “,000, 000 morp are worked up in their cottages by the peasantry. They estimate that about 390,000 quintals of hemp are grown in France, valued at 30,000,000 francs. Five millions more ill value are imnortod ; and, when manufactured, the whole is estimated at 110,000,000 francs; tb which must again be added the cottage products, wjiich arc 35,000,000 francs more.

The principal manufactures for these twc arti- cles are in Normandy, Brittany, Dauphiny, Mayenne, and also in I'icardy — departments de I'Aisne and du Nord. Since 1790 fine linen has in France, as in England, been in a great mea- sure displaced by cotton : the two together em- ploy, at St. Quentin (in Ficardy)and the neigh- bourhood, no fewer than 40;000 workmen. In a very different part of the kingdom, the province of Dauphiny, there are also carried on linen manufactures of various qualities.

Cambrics, thread, gauze, lawn, — made at St. Quentin, "alenciennes, Cambray, Douay, Chau- ney, and Guise,ˆrank among the leading ma- nufactures of the north-east part of France. Lace is still more general, being made in great quantities at Valenciennes, Dieppe, Alenjon, Caen, Bayeux, Argentan. Machinery has as yet been very little applied to this manufacture in France, and the number of women employed in it is very great. In general the French is thicker and stiffer than Irish linen ; while, in whiteness, it is inferior to that of the Netherlands. It is, however, a very serviceable article.

Tlie silk manufactures of France are more con- fined "to particular districts than either the cotton or the woollen trade. They originated at Tours in the fifteenth century, and gradually spread thence over the south of France. Henri I\ˆ en- couraged by every means in his power the culti- vation of the mulberry tree in Provence, and his exertions were finally so successful that to this day a large part of the population of the ten de- partments on the banks of the Rhone, and of de I'Herault, de ITndre, and Loire, in different proportions, are occupied in this manufacture. There are, on an average of many years, about 5,150,000 kilos of coccoons produced in the eleven first-mentioned departments, and about 30,000 in that of the Indre and Loire, making altoo;ether something under 5,200,000, valued at 15,600,000, francs. This produces, when washed and spun, about 280,000 kilos of raw silk, 160,000 kilos of organised silk, valued at 23,600,000 francs. Abcut an equal value is imported from foreign countries, making about 47,000,000 francs (in value) of silk, in thread, furnished to the manufactories.

The most important of these are at Lyons, where almost every species of silk goods is made. That town, however, is more particularly cele- brated for its etoffes, especially those intended for furniture. In its neighbourhood however, at the villages of St. Rtienne and St. Chumand, and the vicinity, almost all the silk ribands con- sumed in France are woven. At Avignon they make principally satins, Levantines, and taffetas ; at Nismes, stockings, gauzes, crapes, mixed goods, Sec; and at (lauges, and the other towns in the Cevennes, they are princiiv.iUy occupied with hosiery. The manufacture of Tours, where, as we have already mentioned, the silk trade

began, is confined to stufl's for furniture, and some few other articles of little importance.

Next to Lyons, the greatest variety of silk goods is made at Paris. Out of about 18,600,000 francs worth of silk annually exported from Paris nearly ."., 000,000 come under the class of objets de luxe. The total value of the silk goods madt

in France does not exceed 110,000,000 fnincs (£4,200,000), of which about 30,000,000 (£1,200,000) is exported — the trade having, if there is any variation, rather diminished.

'The French,' says an able writer in the Quar- terly Ileview, No. 62, to which we have been much indebted on the subject of the French manufactures generally, ' have long been supposed to be unrivalled in the silk manufacture. Obvi- ous causes have contributed to give them a su- periority in this respect over England ; for, besides the other disadvantages under which the English manufacturer labors, of a high rate of wages and high taxation, he has to import the raw material, much of it either from France itself or from its immediiite neighbourhood — the north of Italy ; while the duty imposed upon silk, 5s. Qd. per lb. upon raw, and 13s. 8d. upon organzined, was so heavy as to put the price of ma- nufactured articles beyond the reach of that class of persons who, in France, are the principal consumers. Yet, even under these disadvantages, by our superior skill and superior machinery, our manufacturers contrived to produce articles which, in appearance, were equal to the French goods, though inferior in quality ; thus in some measure compensating for the larger quantity of silk which the French manufacturer could afford

to put into his goods. And, those heavy duties beuig now removed, there cannot be a doubt but that we shall be able in this, as in every other trade, to drive the foreign manufacturer out of the market.'

The i rench, it is well known, have long ex- celled in jewellery, as well as watch and clock making. These are carried te a considerable extent at Paris : the number of new watches made animally in the kingdom is calculated at 300,000 ; and the value of these different kinds of workmanship altogethnr at £1,500,000, of which more than the half is made in the capital. The works in bronze, also belonging almost exclusively to Paris, are taken at a farther annual value of £1,500,000 sterling.

The porcelain of Sevres near St. Cloud, and the beautiful tapestry of the Gobelins, are also peculiar to this vicmity. The materials of the latter are silk and fine woollen thread ; the sub- jects woven itUo the work being taken from paintings executed on purpose. Both the establishments have been long conducted by the government at a sacrifice.

The inferior manufactories, common to every country in the high state of civilisation which France is, we need not particularise. ThefoUow- ins: is

A Summary of the present state of

Manufactures. Value.

Silks 107,560,000

Woollens 238,133,932

Flax 100,000,000

Hemp 142,796,012

Paper 31,700,000

Cotton 191,600,000

Gold, Silver, and Worsted Lace 7,000,000

Iron 207,390,377

Copper 16,171,260

Lead 4,830,460

Other Metals 4,000,000

Watch-making and mending . 22,500,000 Gold and Silversmith and .Tew-

ellery 38,000,000

Gilding Bronzes . . . 38,000,000

Glass 20,500,000

Earthenware of all kinds – 26,000,000

Bricks and Tiles . • . 17,500,000

Lime and Plaster . . . 15,000,000

Common Salt . . . 6,600,000

The foreign commerce of France has been so materially shaken and irregular, since the revo- lution, that we find no regular schemes of the imports and exports since the average of the

years ending 1789, which are thus stated by M. Chaptal.

With Imports. Exports.

Spain 43,711,800 8.5,084,133

Portugal 9,180,353 3,751,933

Switzerlantl . . . 6,796,467 21,124,033

Russia 6,854,d33 6,523,467

Piedmont 24,571,067 18,981,433

Genoa 9,525,833 5,853,967

Two Sicilies . . . 18,717,000 Not stated

Minor states of Ger- J g 513,033 23,681,000

many . . S

Prussia 4,037,167 10,428,267

the Manufactures, stated in francs.

Manufactures. Value.

Alum 6,000.000

Copperas . . . ‘ 3,000,000

Saltpetre 3,000,000

Nitric Acid 6,000,000

Muriatic Acid . . . 240,000

Other Salts and acids . . 6,000,000

Soap 33,000,000

Sugar 60,823,910

Hats 24,375,000

Prepared Skins '. . . 155,392,600

Dyeing 44,117,950

'arnishing 5,000,000

Perfumery 13,000,000

Starch 6,000,000

Books, Printing . . . 21,652,726 Cabinet-ware and Musical In- struments 40,000,000

Beer 47,635,377

Cider and Perry . . . 48,622,435

Spirits 55,000,000

Of this amount there was in wine, brandy, corn,

and other products of the soil, £10,000,000

Raw materials for manufactures, 2,000,000

Manufactured goods, 6,500,000

Miscellaneous articles, ... 1,500,000

With Holland . . . Sweden . . Denmark . . . Austria . . . . England . . . American states ˆ Smyrna • Hans Towns . Levant in general

Imports.

28,287,467

7,051,067

3,978,533 32,858,200 62,295,800 10,244,833

6,196,302 12,789,167 37,317,048

Exports.

40,796,533

3,943,600

6,451,867

Not stated

33,486,333

1,543,633

14,535,072

62,310,967

18,214,734

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FRANCE.

53i

The war of 1793 compelled the French to desist from exporting a number of articles, and to raise or fabricate others, for which they had hitherto depended on their neighbours : and the interruption of intercourse continued, either by sea or land, for more than twenty years. Since the peace of 1815 the relations of the com- merc.al world have been almost equally un- settled : at present, the imports and exports of France are supposed to be less than before the revolution, and afford a remarkable contrast to the rapid extension of foreign trade in a country like our own possessing the coreimsind of the sea.

The same causes that almost destroyed the commerce nearly annihilated the fisheries of France, which are now carried on chiefly for her- rings, mackerel, sardine, anchovy, tunny, and other species, on her own coasts. One branch of the French fishery is that for coral, in the Mediterranean, for which a company has long been established at Marseilles. In the middle of the last century the French fisheries in Ame- rica employed annually about 5000 seamen ; but the unsuccessful contest with England in 1756 reduced them greatly, and deprived them of Cape Breton, their principal station. The peace of 1783, reneviˆed their right to fish on the banks of Newfoundland, a right subsequently acknow- ledged by the treaties of 1802 and 1814; and though their only permanent possessions for this purpose

are the small islands of St. Pierre and Miquelon in the Gulf of St. Lawrence, they liave not been backward to avail themselves of their advantages.

Since 1814 various efforts have been made by the ship-owners of Havre, Bourdeaux, Marseilles, &c., to re-establish the shipping interest, but this at present has been attended with but limited success.

The roads of France are managed by govern- ment Bureaux or Boards, the chief of which are at Paris. The extent of roads, under their direc- tion, is estimated at 30,000 miles ; and the an- nual expenditure at from £1,300,000 to £1,500,000, the whole being defrayed without a single toll or turnpike. The great roads are, in general, paved and in tolerable condition ; but the cross roads in almost every department are most wretched ; and receive hardly any repair.

The chief bridges in France are those of stone, over the Loire at Orleans, Tours, and Nantes ; those on a smaller scale over the Seine at Paris, and those ovei the Saone and llhone at Lyons. The Pont du St. Esprit above Orange, over the Rhone, is a long structure of sixteen arches. At no great distance from it is the Pont du (}ard, one of the most entire existing monuments of Roman architecture. It is composed of a triple tier of arches, erected for the purpose of con- ducting an aqueduct over the river Gardon, This magnificent structure is 157 feet in height, 530 feet in length at the bottom, and 872 at the top. Of bridges lately erected in France, the most re- markable are those over the Seine at Neuilly near Paris, and over the Oise at St. Maixent, along with two of larger dimensions, viz. one over the Garonne at Bourdeaux, the oilier ove; the Soiue at Kouen

*Government. — The constitution of France since 1814 greatly resembles that of England, the king being a limited monarch, and the re- sponsibility of all the public measures resting with his ministers. The royal title is * king of France and Navarre.'*

The French cabinet consists of a Keeper of the seals (corresponding to our chancellor), the mi- nisters of Foreign affairs, of Finance, of Police, of War, of the Navy and Colonies, of the Home Department, and finally of the Head of the Royal Household. Each minister is independ- ent in his department, but general measures pro- ceed from the premier. The king has also as with us a privy council, which is convened only on particular occasions : but his Council of State is an efficient body, divided into five com- mittees appropriated respectively to legislation, finance, home affairs, the navy, and the colonies. Each committee is in connexion with the minister of the department to which its labors are directed, and receives from him the materials of its deli- beration. The members of these

committees are called conseillers d'etat en activite; as the title of conseiller d'etat is in the case of many persons merely honorary ; and, what is more re- markable, the appellation of ministre d'etat is given to about thirty public men, exclusive of the cabinet ministers. It implies in that case no participation in ministerial business ; but is accompanied with a pension, and is accounted one of the highest marks of royal favor.

The king exclusively has the right of bringing in bills into the Chambers. The opposition act there as in Britain, except that they are denied this important privilege — a denial founded on the supposed agitation which might be produced by the proposition of popular measures in a coun- try where the constitution is as yet unsettled. The chamber of Peers comprises upwards of 200 members, who possess privileges similar to those of the peerage of Great Britain; their number, as with us, is unlimited ; the grant of titles being vested in the king, and the dignity hereditary. But no clerical dignitaries have seats as such in the legislature : a few cardinals, who are members, owe it altogether to their titles as temporal peers. The peers take cognizance, as in England, of charges of high treason, and of public misdemeanours. Their discussions are not made public.

The house of Commons, or chamber of De- puties, are elected by the people: the number returned may in some measure be altered at tiie will of the king; the smallest number allowed is 256. |The election is vested in the voters at once, the only qualification required for a voter being the payment of £12 of annual taxes. For a deputy the requisites are, that lie shall be of the age of forty, and pay taxes to the amount of £40 a year. One-fifth of the chamber of depu- ties is re-elected annually.

By the charter, ajipealed to by all parties ns the safeguard of the I'rench constitution, al' ranks are equally admissible to public employ- ments, whether civil or military. (The object of this clause is to do away any claim for (ireter- ence on the part of the noblesse). The catholic i-i the state retiirion, but all other religions may

be openly professed, and none imply political disqualification : all sales of national property during the revolution are confirmed to the pur- chasers: the judges are named by the king; but when appointed are not removeable. Juries are employed in criminal cases only.

Tile most comprehensive, though the most modern of the honorary orders is that of the legion d'lloiiiieur; instituted by Buonaparte, and maintained on

nearly the same plan by the Bour- bons. The usual title to admission is the dis- charge of functions, civil or military with distinction ; and, in time of war, the perform- ance of an action of eclat. The gradations are, ciievaliers, of whom the number is unlimited, and very great; officers, who amount to no less than 2000; commanders, to the number of 400; grand officers, 160; and grand croix, to the num- ber of 80. A member must serve several years as a chevalier before becoming an officer, and the same progressively through the other ranks. Admissions take place once, and frequently twice a year ; a specific number being allotted to eacli great department of the public service, the mi- litary, tlie judicial, and the administrative. Other orders are, that of St. Louis, which is strictly military : that of St. Michel, which dates from 1469, is limited to 100 members, and is con- ferred as a recompense for distinction in science, literature, or the arts. Eminent professional men and artists, and the authors of discoveries of public utility, constitute the members of this order. The order du St. Esprit, created in 1578, and of the very highest rank, comprises princes of the blood, prelates, and members of the order of St. Michel — the whole limited to the number of 100.

Each department throughout France has at its head a prefet or civil officer, who acts as the medium between it and government, maintaining a daily correspondence with the minister of the home department, and reporting on the execu- tion of his orders, as well as on all local transac- tions and the state of political feeling. He is aided in his laborious office by a conseil de pre- fecture, consisting of three,' four, or five mem- bers, whose duty consists in making up the details of business. The departmental coun- cil (conseil general de departement) is much more numerous, comprising sixteen, eighteen, twenty, or more members ; but they meet only a few weeks in the year, nor are they of much use, except to share, as a collective body, the respon- sibility attendant on the distribution of taxes, or other similar measures. A sous prefet is an officer much inferior to the prefet. There is one to each of the districts called arrondissemens, and he is aided in his labors by a council of eleven members.

Lastly, the communes, the smallest of the official divisions of the French territory, and of which there are above 38,000 in the kingdom, are little else in fact than parishes ; but their distinguishing characteristic consists in having each a mavor and municipal council.

Law. — In this important department France has the great advantage of a compact and defi- nite code, completed at the beginning of the pre- sent century, when it was promulgated under

Buonaparte, and gave to the jurisprudence and judicial constitution of France nearly the form they now bear. This body of law consists of five

divisions, entitled respectively, 1. code civil; 2. code de procedure civile; 3. code de commerce ; 4. code d'instruction criminelle ; 5. code penal.

The code civil, the first and the most compre- hensive of these divisions, defines the rights of persons in their various capacities of citizens, parents, sons, daughters, guardians, minors, married, unmarried. It next treats of property in its respective modes of acquisition and pos- session, as inheritances, marriage portions, sales, leases, loans, bonds, mortgages.

The code de procedure civile ordains the manner of proceeding before the different courts of justice, beginning with the juge de paix; also the mode of carrying into effect sentences, whe- ther the payment of damages, the distrainmg of goods, or the imprisoning of the party con- demned. It declares, likewise, the course to be followed in transactions distinct from those of the law courts; as, in arbitration, taking possession of an inheritance, or a separation of property between man and wife.

The code de commerce defines the duties of certaui officers, or commercial agents, such as sworn brokers and appraisers ; it next treats of partnerships — of sales and purchases — of bills of exchange — of shipping, freight, and insurance — of temporary suspensions of payment, and bank- ruptcies.

The code d'instruction criminelle, explains the duties of all public officers connected with the judicial police, whether mayors, assistants of mayors (adjoints), procureurs du roi, juges d'in- struction, &C. A-fter prescribing the rules re- garding evidence, it regulates the manner of ap- pointing juries and the questions which fall within their competency. Its farther dispositions relate to the mode and nature of appeals, and to the very unpopular courts authorised to try state offences, termed cours speciales under Buona- parte, and cours prevotales under the Bourbons.

The code penal describes accurately the pu- nishments awarded for offences in all tiie variety of gradation from the penalties of tlie police Correctionelle, to the severest sentence of the law. All offences are classed under two general heads, — state offences, such as counterfeiting coin, resisting police officers, sedition, rebellion ; and offences against individuals, as calumny, false evidence, manslaughter, murder.

These codes, — the first attempt to reduce the laws of a great nation to the compass of a vo- lume— consist of a number of sections and short paragraphs, each paragraph marked by a number, as a means of reference. The style is as concise as is compatible with clearness, and the arrange- ment very minute and elaborate. The whole is sold for a few shillings, in the shape of one oc- tavo, or of two duodecimo volumes ; and copies of it are in tlie possession, not only of all judges, pleaders, and attornies, but of

agents, merchants, and persons in business generally, who, without being enabled by it to dispense with the aid of lawyers, find in it a variety of useful explanations, relative to questions of frequent occurrence.

The juge de paix is authorised to pronounce finally in petty questions (under 50 francs, or £2), and to give, in questions of somewhat greater amount (up to 100 francs, or £4), a de- cision subject to appeal. lie takes cognizance, likewise, of disputes about tenants' repairs, ser- vants' wages, and the displacing of the landmarks of property. No action can be brought before a court of justice in France until the plaintiff has summoned his adversary before a juge de paix, with an amicable intent (cite en conciliation), and received from the juge a proces verbal, showing that the difference could not be ad- justed.

A Primary Court exists in every arrondisse- ment, making above 360 for the whole of France. It is composed of three or four members, two or three suppleans or assistant members, and a pro- cureur du roi, acting on the part of the crown. In populous districts, cours de premifere instance comprise six, seven, eight, or more members, and are divided into two or three chambers. They are chiefly occupied with questions of civil law, and hold, in the extent of their jurisdiction, a medium between the duties, of the juge de paix and the powers of the cour royale ; their decisions being final wherever tlie income from a property does not exceed forty shillings, or the prmcipal forty pounds ; but subject, in greater matters, to an appeal to the cour royale. The members of these inferior courts are named, like other judges, by the crown, and hold their places for life; their number, throughout all France, including suppleans, is not far short of 3000.

A section of the Tribunal de premiere instance is appropriated to the trial of offences under the name of tribunal de police correctionnelle ; and here the English reader must be careful to dis- tinguish between judicial and government police; the former having no reference to state offences, such as libel or treason, but comprisinsj a very numerous list of another kind, viz. all offences that do not amount to crimes, or subject the of- fender to a punisliment afflictif ou infamant. These offences when slight, are called contraven- tions de police, and are brought before a juge de paix, or the mayor of the commune ; when of a graver stamp, or requiring a punishment exceed- ing five days' imprisonment, or a fine of fifteen francs, they are brought before the court now mentioned, whose sentences, in point of impri- sonment, may extend to the term of five years. The trespasses brought before a justice of the peace or mayor, are such as damaging

standing corn, driving incautiously in the high-way, en- dangering a neighbour's property by neglecting repairs. The offences referred to the tribunal correctionnel are such as assault and battery, swindling, privately stealing, using false weiglits or measures, Sec.

The Cours Iloyales, in number twenty-seven, are attached to the chief provincial towns. They are all formed on the same model, and possessed of equal power ; the number of their members depends on the population of the tract of country, (generally three departments), subject to their jurisdiction. In a populous quarter, like Normandy, a Cour Royale, comprises twenty, twenty-five, or even thirty judges, and is divided

into three or four chambers, of which one per- forms the duty of our Grand Jury, in deciding on the bills of indictment (mises en accusation) ; another is for the trial of oflences (police correc- tionnelle) ; and a third, with perhaps a fourth, is for civil suits. These courts are often called Cours d'Appel, as all the cases that come before them must previously have been tried by an in- ferior court. The collective number of judges in these higher courts is not sliort of 900. Paris has only its Cour Royale on a large scale (five chambers and fifty judges), and confined in its jurisdiction to the metropolis, and the seven ad- jacent departments. There is a procureur du roi for every tribunal de premiere instance, and a procureur general for every Cour d'Appel.

The Assize Courts have cognizance of criminal cases only, that is, of crimes and offences re- ferred to them by the cours royales. They con- sist of three, four, or five judges, members of the cours royales, but never belonging to the section that finds the indictments. The grand accom- paniment of a French Assize court is a jury, which, as in England, consists of twelve mem- bers, and decides on the facts of the case, leaving the application of the law to the judges. Com- plete unanimity was at no time necessary in a French jury. At first a majority of ten to two was required ; but this was afterwards altered to a simple majority, with the qualification, that, in case of condemnation by only two voices (seven to five), the verdict should be re-considered by the judges and the party acquitted, if, on taking judges and jurymen collectively, there was a majority in his favor. The assizes are the only courts in France that are not stationary. They are, however, generally held in the chief town of a department once in three months. The costs of suit are very exactly defined by a printed tarif; and it is a rule in criminal, as in civil cases, that the party condemned is liable for all.

The Special Courts were constituted out of the usual course for the trial of state offences. The Cours Speciales were appointed by Buona- parte, the Prevotales by the present government, during the period of disturbance

which succeed- ed the second entry of the king. In botli cases they were considered as under the infiuence of government, and, of course, were very obnoxious to the public.

The name of Tribunal, or Court, is also given in France to a body of five merchants, or leading tradesmen, appointed by the mercantile body in every town of considerable business, and who settle all disputes occurring in mercantile busi- ness, and falling within the provisions of the Code de Commerce. Their decisions are found- ed on that code, and the customs of trade. They are final in all cases below £40. The presence of three members is necessary to form a court. The duty is performed gratuitously.

The court of Cassation, the highest court of justice in the kingdom, is held at Paris, and is composed of three chambers, each of sixteen members and a president, makintr, with the pre- mier president, a total of fifty-two members. Its province is to decide definitively in all aj.peals from the decrees of the Cours Royale^ inves- tigating not the facts of n case, but the forms of

law, and ordering, wlierever these have been in- fringed or deviated from, a new trial before ano- ther Cour Royale. This revision takes place in criminal as well as in civil cases. The royal court chosen for the new trial is generally, for the convenience of the parties, the nearest in situation to the other. The Cour de Cassation has farther powers of the highest kind. It deter- mines all differences as to jurisdiction between one court and another ; and exercises a control over every court in the kingdom. It has power to call the judges to account before the minister of justice, and even to suspend them from their functions.

The minister bearing the title of ' Keeper of the Seals and Minister of Justice,' may be com- pared to the Chancellor of England, but his patronage is much less extensive. He exercises a general superintendence over the judicial body, and is the medium between the king and the courts, in the same way as the minister of the home department is in regard to the civil autho- rities. The expenses of the judicial body fall under his cognizance. Ttie procureurs generaux and procureurs du roi throughout the kingdom address their correspondence to him, and it is his province to report to the king on the allevia- tion of punishment; on pardons; in short, on all disputed points of administration. He rarely acts as a judge.

Juries were introduced into France in 1791, and are confined to criminal

trials. During several years there were in France grand juries as in England ; but under Buonaparte their functions were transferred to the Cours Royales. By the juries, at present, the nature of evidence seems little understood.

A considerable improvement made by the National Assembly was a general mitigation of the penal code, or rather the substitution of pu- nishments likely to be enforced, for others of such severity as in general to defeat their object. Stealing privately in a dwelling-house was for- merly punishable in France by the rack and death — an extreme which prevented respectable persons from bringing delinquents before a court. Of the state of crime in France at a recent period, and of the nature of the punish- ments, an idea may be formed from the follow- ing return made by the minister of justice :

In 1817. In 1818.

Individuals tried . 14,146 9,722

Condemned . . . 9,431 6,712

Acquitted . . . 4,715 3,010

Of these the crimes or offences were,

Agamst the state . . 438 166

. the person . 1,638 1,262

the property . 7,086 5,547

Sentences.

Death ... 558 324

Compulsory labor for life 511 393

Transportation . . 52 6 Compulsory labor for a term of

months, or years . 2,645 1,992 Compulsory labor, and to be

branded ... 172 184

Solitary confinement . 2,774 2,116

*Pillory * 4 1*

In 1817. In 1818. Banishment ... 12 2

Degradation from the rank of

citizen ... 2 5

Imprisonment and fine . 2,029 1,619

The old laws regulate all questions arising out of transactions passed, or out of rights acquired, prior to 1803 and 1804, the date of promul- gating the code. The law students in France thus regard the code as the sole authority. They, however, still read the more celebrated writers on the old law as collateral illustration. There still exists it is said in France the singular prac- tice of parties engaged in a law-suit visiting the judges in private; a practice originating in an age when suitors thought a personal interview the only effectual mode of explaining their case. But such interviews are little else than an ex- change of compliments, nor have the judges either before or since the revolution, been charge^, with acting under the influence of ex parte state ment. The law style in France is much more brief than ours ; their deeds, leases, mortgages, sales, &c., being generally contained in very few pages, and remarkably free from obscure or an- tiquated phrases.*

Revenue. — France before the revolution raised nearly half her revenue by taxes on consump- tion, viz. ou salt, wine, brandy, tobacco, stamps, leather, and foreign goods imported. These were all abrogated, in 1791, by the National Assembly, and replaced partly by a property- tax (foncier) and partly by the ruinous expedient of issuing assignats. The people thus continued exempt from their old burdens above ten years, and so necessary was it to observe caution in recurring to them, that it was not till 1803 and 1804, when the power of Buonaparte was fully consolidated, that taxes on consumption were re- newed. The revenue of France in 1790 was about £22,000,000 sterling. The sum required for payment of the interest of the public debt was nearly £10,000,000 leaving only £12,000,000 for the army, navy, civil list, and other public ex- penses. In the era of confiscation and judicial murder, the national debt was not openly can- celled, but the interest was issued in assignats of no value except for purchases of national pro- perty. At last, in 1798, there was passed a law, declaring that one-third of the old national debt should be sacred, and the interest on it payable in bonds, or paper receiveable in discharge of taxes. This third was called La tiers provisoire, but its price in the market continued very low until Buonaparte succeeded to power, and placed Gaudin, afterwards duke of Gaeta, at the head of the treasury, when means were found to re- deem the stocks from their depression, and to resume the payment of the dividends in cash. Could Buonaparte, it is said, have obtained large sums on loan, his career of aggression and con- quest would have been still more rapid ; but on the restoration of the Bourbons, in 1814, the public debt,

funded and unfunded, did not exceed £123,000,000; its interest £7,000,000. In 1799 the expenditure exceeded the receipt by £8,000,000 sterling. The continental peace, a partial reduction of expenditure and improve- ments in the collection of the taxes, brought, in

i

1803, tlie receipts to £19,500,000, while the ex- penditure was £20,000,000. In subsequent years, both received a progressive augmentation, and, in 1813, the revenue derived from France, exclusive of conquered territory, was about £27,000,000. Such was about its amount in

1815, when, the sums raised by public loan prov- ing insufficient, it became indispensable to impose additional taxes. These carried the re- venue, in 1818, to nearly £35,000,000, but tlie following is the form in which in 1820 the re- venue of France became permanently settled.

Income and Expenditure of France in 1820, after the discharge of her engagements to the allied powers, and on funding her floating debt.

INCOME.

EXPENDITURE.

Foncier, or tax on real property, viz. the lands and houses of the king- dom at large. This tax has yielded £10,000,000, but IS not reckoned to produce permanently more than

Mobilier, or tax on houses, with reference to the furniture and other effects

Window-tax

Patentes, or tax on persons exer- cising trades and professions The above form the direct taxes.

Enregistrement, domaine et timbre, Tliese comprise the stamp-duties, and a heavy tax on sales, legacies, &c.

Sale of wood from the government forests, average

Customs

Salt tax

Droits reunis, or indirect taxes, being a combination of excise duties on wine, spirits, beer, &c.

Tobacco and snuff, including the monopoly of the manufacture

r.ottery

Post Office

Newspapers, stamps, licenses for theatres, gaming-houses, Jcc.

Other receipts and contingencies .

Total

8,000,000

1,300,000 600,000

600,000

6,000,000

800,000 2,000,000 1,600,000

5,000,000

1,500,000 300,000 600,000

220,000 1.480,000

30,000,000

Interest of the national debt . .

Life annuities

Interest of deposits made by pub- lic functionaries on entering on their'places

Annual appropriation to the sinking fund

Pensions and half-pay allowances, civil and military

Clergy — stipends, pensions, and all allowances

Civil list and princes of the blood

House of Peers, chiefly in pensions for life .....

House of Commons, for printing and other expenses (no pensions)

The annual votes to the different ministers are nearly as follows :

Administration of justice through- out the kingdom ....

Department of foreign affairs for ofl[ice, charges, ambassadors, con- suls, &c.

Treasury-office charges and abate- ments of taxes

Police

Army estimates

Navy estimates

Home department, comprising pub- lic works, and a variety of local expenses, the funds for which, though raised on the spot, are held at the disposal of the minis- ter of the home department, and re-issued on an application to him- from the prefects or mayors

Discount to collectors and others

Add a computed amount for all ex- tra or contingent charges, such as relief to the poor under a bad harvest, defalcation of particular taxes, &c

Total £

£

8,000,000 500,000

360,000

1,600,000

2,700,000

1,300,000 1,300,000

80,000

27,000

700,000

360,000

850,000

100,000

6,000,000

1,800,000

2,500,000 600,000

1,223,000

30,000,000

ij, *The octrois, &c., borne by the towns and country districts, amount, beside the above, to £1,500,000 ; and if to these be added the charge of collecting, the aggregate of taxation in France will be found to be about £35,000,000, equal nearly to £47,000,000 in England. Each person in France, as computed by the individual, pays about £l lis. Od. English sterling per head: while we have paid in England £3 10s. and £4. But the French taxes are on the whole more unfavorable to productive labor. The droit de patentc is a direct charge on labor, while luxuries, such as carriages, horses, men-servants, are exempt from all imposts. In the assessment of the great tax, the foncier, there also exists a surprising number of overratings and omissions. Finally, the enregistre- ment exceeds in pressure all our stamp taxes ; being a duty on sales to the extent of five per cent, on the principal. The expense of collecting taxes in France is fully nine per cent, on the principal, or three per cent, higher than in England.*

Akvy axd Navt. — At the com-nencement of the revohition France had not an effective army of above 140,000 men : although as early as 1688 slie had sent into the field a force of double tiiat number. The compulsory levies of 1793 and 1794 augmented this force prodigiously ; and between 500,000 and 600,000 are said to have followed the republican banners.

During the campaigns of 179.5, 1796, and 1797, and in those of 1799 and 1800, tlie force maintained by France and Holland was between 300,000 and 400,000. Buonaparte, at the peace of Amiens, settled his

peace establishment at 300,000 men. At the renewal of war it was raised to 400,000, a force with which, in 1805, he overcame the united armies of Austria and Russia. His annual levy of French conscripts averaged at tliis period 100,000 ; a supply which, joined to the recruits of his allies, kept up his numbers, and even increased them, notwithstand- ing the wasteful campaigns of 1806 and 1807. So that in 1812 the force at the command of this mighty despot reached its maximum, and he led into Russia a mass of 360,000 men, while there remained at home, and in Spain and Germany, a number which carried the aggregate to nearly 600,000. With the latter, after the almost total loss of his troops in Russia, and with the aid of fresh levies, he withstood the efforts of Europe in arms against him during two campaigns.

In 1815, on his return from Elba, Buonaparte found about 120,000 men under arms in France. But the disposition of the French people in re- gard to war was so changed, that the greatest efforts, during the next three months, could only add 60,000 to this number, and the loss of one battle happily disappointed all his hopes. In 1817 the Bourbon government had recourse to the conscription as the only effectual method of filling the ranks ; but it was greatly modified, the numbers required being limited to 40,000, and the term of service to six years ; still the mea- sure was compulsory, and fell heavy on the mid- dle and lower classes ; the alternative for a youth, when drawn, being either to give up his intended profession, or to pay £40 or £50 for a substitute. In 1819 the French army thus amounted to 100,000 men ; and soon after to 150,000, a num- ber likely to form its permanent peace establish- ment. This force is composed of sixteen regi- ments of the guarda ; viz. eight of infantry, and eight of cavalry ; each of the former having three battalions, and each of the latter six squ'adrons: the caviilri/ of the line, under the various denomi- nations of chasseurs, dragoons, cuirassiers, and hussars, in all forty-eight regiments, but in peace they are on a reduced scale : the infantry of the line, classed during the revolution by brigades, and under Buonaparte by regiments, now (since February 1819) by legions, of which there is one for each department, making in all eighty-six, each generally of three battalions : the total num- ber of battalions is 258 : the arlillcn/, composed of eight regiments serving on foot, and eight of horse.

The engineers are a numerous and well-edu- cated body of officers ; the corps of Iniienieurs Geographes comprises five colonels. There are Swiss troops in the French service amounting lo

10,000, of whom above 4000 are in the guards.

Tiie Maison du Roi, or body guards, are a corps of young men of family, who go through this service as an introduction to military life. The

gradations of rank in tlie service generally are, sous-lieutenant, lieutenant, capitaine, chef d'escadron, colonel, marechal-de-camp, lieu- tenant-general, marechal de F'rance. Tlie num- ber of the marshals of France is limited to twelve ; the number of the other ranks, even that of lieu- tenant-general, is large, for the etat major, or staff of the army, after a reduction in 1818, con- sists of 130 lieutenants-genˆraux, and 260 mar€- chaux de camp. There are on full pay twice as many officers as are necessary for the duty, but the number of half-pay officers exceeds all pro- portion. Promotion in the French army never takes place by purchase, and not often by special order ; seniority at present determines more than half the appointments.

Of the military schools of France, the Ecole Polytechnique is in highest repute, for the in- struction of young men in mathematics and drawing ; for the engineer and artillery corps is a seminary in which none but candidates of talent are admitted. The entire war department under Buonaparte cost annually, for some years, £20,000,000.

In 1791 the effective French navy was stated at seventy-four sail of the line, sixty-two frigates, and twenty-nine corvettes. Our victories of Toulon in 1794, and at Aboukir, reduced this, so that Buonaparte found the marine force on his accession to power in a very weak state : and it was not until after the peace of Amiens that he ever could muster a fleet of sixty sail of the line. This was destined to an early humiliation at Trafalgar; and, on the accession of the Bourbons, they could not muster above thirty sail of the lino. In 1820 the official accounts give forty- eight sail of the line, and twenty-nine frigates, as the navy of France; eleven of the former being on the stocks, and four of the latter. Tlie annual vote for the navy is 1,800,000.

Tlie garde nationale is a popular corps in France, answering to the description of our volunteer infantry and yeomanry. In Pans alone, at the period of its late dissolution, it amounted to nearly 50,000 ; it is found in all the large towns of F'rance. The gendarmerie is a much similar corps, chiefly used in aid of the police, and not exceeding in the whole 20,000 men.

Religion and Editcation. — The old French church, though catliolic, was singularly inde- pendent of the interference of the papal see in its ecclesiastical affairs. It had very extensive landed property, which in the early part of the revolution (in 1790) was computed to be worth £100,000,000 sterling, and was assumed by the national assembly, who granted a fixed in- come in money lo the clergy in lieu of these possessions. This arrangement is still in force ; and the total fund thus annually payable is not short of £1,500,000, a sum which, though large, leaves but small

incomes when divided among so many thousand claimants. A cardinal, of whicli there are at present six, has £1300 per annum ; an archbishop has from £700 to f800

a-year; a bishoj) from £500 to £600, a curˆ in a large town i'GO or £70 ; in a country parish £40; and in many cases only £30, with a house and garden. At the revolution all religion, as we, shall see, was abandoned for an avowal of deism and the worship of rfature : this was suc- ceeded by that species of public indifferentism to religion which now so singularly mixes witli the most wretched occasional exhibitions of su- perstition and fanaticism on the continent. However it has effected in France the toleration of all sects; or rather their full liberty to wor- ship God as they please.

After the revolutionary troubles Buonaparte first concluded a convention with the pope, whereby fifty only, of the 130 sees existing be- fore the revolution, were restored. The Bour- bons afterwards agreed that forty-two more should be added, but very gradually filled them up.

The nomination of all clergymen, whether Catholic or Protestant, is vested in the crown ; and the latter receive an income according to the size of the congregations. In respect to po- litical feeling, the Catholic clergy are, almost without exception, warmly attached to the Bour- bons, while the Protestants have felt a consider- able and just distrust of the reigning family. Tliey are said, however, of late, to be very stea- dily protected.

Female convents have from time immemorial existed in France, except for a few years of the worst part of the revolution, and respectable fe- males are largely educated in them. Monaste- ries are, with very few exceptions, abolished, and no idea is entertained of re-establishing the abbeys, priories, and other endowed establish- ments. The Protestants amount to about 2,000,000, and are found chiefly in the south, particularly in tlie neighbourhood of Nismes. They are eligible to any civil office.

At the revolution the old funds appropriated to the education of the lower orders were sup- posed to amount to about £1,000,000 sterling, and were chiefly expended in foundations at- tached to monasteries and the universities. These, were absorbed in the destruction of the church; and it was not until 1796 that an act was passed to provide in their place primary and central schools : but new troubles retard- ing the execution of this plan, Buonaparte placed, by a special act, all the schools of the empire under the

control of le grand maitre et conseil de I'Universite de Paris, and a board called Commission d'Instruction Publique. This board is continued by the Bourbons. It is com- puted that not more than half the lower orders in France are taught to read, chiefly in con- sequence of the want of schools in thiiily-peo])led districts. The legislature has, at difi"erent times, acknowledged this want, and authorised rectors of universities to grant certificates of capacity as teachers to all persons who should be found duly qualified ; but no salary is provided, and the aid given by the magistrates of a commune is, in general, limited to a school-room or a dwelling for the teacher. In this state of edu- cation, schools on the plan of Bell and Lancas- ter could hardly fail to be favorably received

in France. They bear the name of ecoles d'en- seignement mu.tuel ; and in 1820 amounted in number nearly to 800.

But, though the establishment of elementary schools was thus tarJy, the case was very dif- ferent in regard to the lycees, or schools of the middle and upper classes. These were the par- ticular objects of Buonaparte's care, both as a nursery for officers, and to increase his interest with the parents. Hence he provided them with a number of bourses or scholarships, and granted them exclusive licenses for teaching. A lycee con- sists, in general, of a spacious range of respectable buildings, like one of our English colleges, with courts and playgrounds, enclosed with walls. The pupils, at least those who board in the establish- ment, go out only with the leave of the proviseviror superintendent. The principal objects of edu- cation are Latin and the mathematics; the former occupying four or five years, the latter about two. Along with these are taught writing and drawing ; geography and history ; to which, in the time of Buonaparte, was added the military exercise. The whole course occupies six, seven, or eight years. The teachers, or professors, as the French style them, are, in general, men of education, but seldom animated with much acti- vity. The board and education of a boy, at a lycee, costs from £l5 to £30 in provincial towns, and £36 at Paris. On these payments is levied a tax of five per cent., called taxe universitaire. A similar impost exists on private schools, with the exception of those for mere reading and writing ; and the money thus collected is remit- ted to the central board at Paris. To this fund is added, by the chambers, an annual vote of from £60,000 to £80,000, and the whole is ap- propriated to purposes connected with educa- tion ; in particular to the salaries of the teachers of the less frequented lycees. Public examina- tions are held at these establishments, and prizes distributed periodically-!— the whole on a plan calculated to excite emulation.

There are throughout France twenty-six aca- demies, similar to our universities ; and the towns where they are situated are,

Orleans

Paris

Pan

Poitiers

Rennes

Rouen

Strasburg

Toulouse.

The University of Paris comprises a greater variety of classes than any other in Europe, both in theology, medicine, science, law, and belles lettres.

Facultes de droit (classes for a course of law) are held at

Aix Grenoble Rennes

Caen Paris Strasburg

Dijon Poitiers Toulouse.

The facult6s de medicine are confined to Paris, Montpelier, and Strasburg; but every medical man who aims at a complete know-

Aix

Dijon

Amiens Angus Besanˆon Bourdeaux

Douay Grenoble Limoges Lyons

Bourges

Metz

Caen

Montpelier

Cahors Clermont

ledge of his profession, repairs, as in England, to the capital, for the sake of the hospitals.

The Protestants iiave theological seminaries at Montauban and Strasburg, and students who have gone through their course at Geneva and Lausanne are eligible to clerical stations in France.

A return of the public schools and their pupils throughout France, in 181.5, states them thus : —

Schools.

1

Pupils.

Universities

Lycees, or Royal Colleges Secondary schools Divinity schools of the

second class (one in

each Diocese) Primary schools

Total

26

36

368

41 22,300

6,329

9,000

28,000 i

5,233 737,379

22,771

785,941

On the subject of the French manners and cus- toms we feel disposed to say little, because ge- neral observations, on the habits of so large and diversified a community, are rarely just, and because our extended intercourse with France, for the last ten years, must have given to the majority of our readers full opportunity to form their judgment upon this topic, either from per- sonal observation, or the remarks of our numer- ous travellers.

While an Englishman, on landing in France, will be to a degree surprised and disgusted with the apparent negligence and want of cleanliness and decorum which pervade the manners of the people, he will feel these in no small degree counterbalanced by the uniform cheerfulness, hospitality, and frankness of all classes. Every thing is out of order; the common inns are complete Irish cabins, and the streets much re- sembling those of the ‘ Auld Town’ of Edin- burgh, in regard to certain accumulations and general filthiness ; while each sex considers the most unreserved enquiries into your business and objects fully warranted by the universal wil- lingness to acquaint you with their own. The eyes of our countrymen are also particularly en- gaged by the remarkable activity of the women of the middle and lower classes. While in England the domestic circle and its cares are felt to occupy them sufficiently, particularly as we advance frona the lowest stations in life; in France they are in the habit of taking part in almost every kind of business, and appear even more frequently than the male sex in shops and warehouses. This produces naturally a degree of coarseness in the manners of the middle class of females not seen in this country. There is also said to be a remarkable contrast between the restraint observable in the females of France before marriage, and the unbounded license of their deportment afterwards.

His vivacity and love of society, urge a Frenchman to singular excesses : he is all ardor of course in love and friendship, but he is con-

*sumed with ‘ ennui ‘ out of society. It is his element, to the utter neglect of personal stability of character ; * the life of his pleasures and llie centre of his gratifications.’ Hence all ranks of society love display ; effect is the great and almost sole aim of a parliamentary oration ; and the middle and lower ranks work, sit, debate, and converse in the streets with a pantomimic eager- ness to accomplish that great object. No one has, on the whole, characterised the French with more true English feeling, than the late lamented Mr. Scott.*

‘ The essence of their character,’ he observes, ‘ is an exuberance of animal spirits, producing excess of mobility, and a perpetual restless activity. They are quick, ingenious, fertile in expedient, buoyant against difficulty or adver- sity; but mutable, trifling, confident, vain, cre- dulous, and incapable of moderation. With much that renders them amiable in society, as readiness to oblige, delicate attentions, kind sympathy, and lively sensibility, they are often of insecure commerce, from laxity of principle, unmeaning professions, jealous irritability, and a strong propensity to intrigue.’

‘ They are a clever people, they are an active people, they are a gay people ; but they are not deep or sound thinkers ; they do not feel virtu- ously, or permanently ; they have no native relish for the charms of nature, the shallow so- phistications and theatrical forms of artificial systems are their favorites ; — they can see nothing but simple facts, — they cannot detect causes, consequences, and connexion, — and (what is worst of all) their actions are not indexes to their hearts. Hence they must be, and are, smart conversers, amiable talkers, dexterous workers, — persons who pull down pyramids to see what they contain, — who make drawings of ruins, exhibitions of statues, and speeches at institutes : — but hence they cannot be, and are not, either inspired poets, sound moralists, or correct politicians. Look at all the great modern discoveries of concealed truths, that have done honor to human knowledge, and ad- vantage to human condition, scarcely one of them has been made by France — but France has robbed the discoverers of their honors, and France has raised many splendid but false theories, and Frenchmen have been very able and industrious compilers, collectors, linguists,- and travellers. On the other hand, by far the majority of the atrocities, disappointments, and sufferings, which have befallen the world during the last 100 years, have had their source in France ; there is scarcely an imaginable extreme of opposite follies and crimes into which she has not plunged herself within that period; — there is not an example of imprudence which she has not afforded, not a possible boast of vanity which she has not offensively made, and from whicli she has not been disgracefully driven. It would be unworthy of a rational man to feel incensed against a nation, — but it would be dastardly and unfaithful towards all the most important interests of our nature, to fall silently in with pretensions that are untrue, unfair, and mischievous. There is no shape in which the claim of being the greatest people in the world

can be made, in which it lias not been made by the French. — It is

repeated day after day, under every possible change of circumstances ; now as conquerors, now as vanquished, now as republi- cans, now as imperialists, now as royalists. Whatever freak they cut, whatever tumble they take, — whether they stand on their heads or their heels, — or lie or sit, — they poke their faces in those of their neighbours, with a supercilious grin of satisfaction, and an intolerable assump- tion of superiority.'

Population. France in 1791, when of about the present extent of territoiy, according to a survey then made, contained 26,363,600 inha-

bitants : in 1817 slie was computed to number 29,000,000 of inhabitants.

The ratio of the increase of population in this country is found to be greatest in the lower classes ; the middle and upper ranks seldom having large families, and men of such stations being little habituated to steady industry. The illegitimate births are not numerous except in Paris.

The following tables exhibit both the actual existing state of the population according to the latest returns; and the progress of it with regard to births, marriages, and deaths

TABLE I.

Population of each Department of France, according to the Returns made under ' la Di- rection de la Statistique' of the Minister of the Interior in 1820, according to the limits fixed by the treaties of peace in 1814 and 1815.

1

Departments.

Population.

Chief Towns.

Population.

Ain

328,838

Bourg . . . . .

8,132

Aisne

459,666

Laon

6,837

AUier

280,025

Moulins .

13,883

Alpes (Basses) .

149,310

Digne

3,621

Alpes (Ilautes) .

121,418

Gap

6,714 1

Ardˆche

304,339

Privas .

3,878

Ardennes .

266,985

Mezibres

3,781

Ariege

234,878

Foix

4,552

Aube

230,688

Troyes .

25,078

Aude

25.3,194

Carcassonne .

15,752

Aveyron

339,422

Rodez

7,352

Bouches-du-Rhone

313,614

Marseille

109,483 ,

Calvados

492,613

Caen

36,644

Cantal

252,100

Aurillac .

9,190

Charente

347,541

Angoulfime

15,025

C harente-inferieure

409,477

La Rochelle .

12,327 i

Cher .

239,561

Bourges .

18,910

Corrfeze

273,418

Tulles .

8,097

Corse

180,348

Ajaccio .

7,401

C'ote-d'Or .

358,148

Dijon

22,397

Cotes-du-Nord .

552,424

Saint-Bricuc .

9,956

C reuse

248,785

Gueret .

4,014

Dordogne .

453,136

Perigueux

8,452

Doubs

242,663

Besan9on

26,388

Drome

273,511

Valence .

9,805

Eure .

416,178

Evreux .

9,728

Eure-et-Loir

264,448

Chartres

13,714

Finistfere

483,095

Quimper

9,400

Card

334,164

Nismes .

37,908

(jaronne (Haute)

391,118

Toulouse

89,202

Gers .

301,336

Auch

9,670

Gironde

522,041

Bourdeaux

89,202

Herault

324,126

Montpelier

35,123

Ille-et-Yilaine

533,207

Rennes .

29,589

Indre

230,373

Chiiteauroux .

10,429

Indre-et-Loire

282,372

Tours .

21,928

Isfere

505,585

Grenoble

23,602

Jura

301,768

Lons-le-Sauln

7,796

Landes

256,311

Mont-de-Marsan

3,065

Loir-et-Cher

227,527

Blois

15,147

Loire

343,524

Montbrison

.5,486

Loire (Haute) ....

276,830

Le Puy .

14,844

544

FRANCE.

Departments.

Population.

Chief Towns.

Population.

Loire-inferieure . . . .

433,815

Nantes

68,427

Loiret

291,394

Orleans .

40,233

Lot .

275,296

Cahors .

12,224

Lot et-Garonne

330,121

Agen

11,659

Lozˆre

133,934

Mende .

5,370

Maine-et-Loire

442,859

Angers .

29,873

Manche

594,196

Saint-Lo

8,271

Rlarne

309,444

Chaions

11,629

Marne (Haute)

233,258

Chaumont

5,487

Mayenne .

343,819

Laval

15,736

Meurthe

379,985

Nancy

29,241

Meuse

292,385

Bar-le-Duc

11,432

Morbihan .

416,224

Vannes .

11,289

Moselle

376,928

Metz

42,030

Nifevre

257,990

Nevers .

12,280

Nord

905,764

Lille

64,291

Oise .

375,817

Beauvais

12,798

Orne

422,884

Alenˆon

13,955

Pas-de-Calais

610,344

Arras

19,798

Puy-de-D6me

553,410

Clermont-Ferr

30,010

Pyrenees (Basses

)

399,474

Pau

11,444

Pyrenees (Hautes)

212,077

Tarbes .

8,035

Pyr^n^es-orientales

143,054

Perpignan

14,864

Rhin (Bas)

502,638

Strasbourg

49,680

Rhin (Haut)

370,062

Colmar

14,300

Rhone

391,580

Lyon

149,171

Saone (Haute) .

308,171

“V’esoul .

5,391

Saone-et-Loire

498,057

Macon .

10,411

Sarthe

428,432

Le Mans

18,881

Seine

821,706

Paris

713,966

Seine-inferieure .

655,804

Rouen

86,736

Seine-et-Marne .

303,150

Melun .

6,818

Seine-et-Oise

424,490

Versailles

27,528

Sfevres (Deux) .

279,845

Niort

15,499

Somme

508,910

Amiens

41,107

Tarn .

313,713

Alby

10,644

Tam-et-Garonne

238,143

Montauban

25,357

Var .

305,096

Draguignan

8,616

Vaucluse .

224,431

Avignon

29,407

Vendue

316,587

Bourb .-Vendee

2,792

Vienna

260,697

Poitiers

21,315

Vienne (Haute)

274,470

Limoges

24,992

Vosges

357,727

Epinal

7,941

Yonne

332,905

Auxerre

12,065

Total

30,451,187

FRANCE.

645

Table II. — Progress of the Population of France during the year 1823, furnished by the

Minister of the Interior.

Births.

1

I

Total of

Mar-

Deaths.

Total of

Departments.

Legitimate.

Illeg

timate.

Births.

riages.

Deaths.

Males.

Females.

Males.

Females.

Males.

Females.

Ain

5213

5111

114

83

10521

2471

3885

4249

8134

Aisne

8137

7773

555

490

16955

5268

5720

5552

11272

Allier

4205

3805

540

468

9018

2551

4592

4432

9024

Alpes (Basses) . .

2459

2347

148

149

5103

1299

2146

2062

4208

Alpes (Hautes) . .

2133

1967

120

173

4393

1164

1671

1696

3367

Ardfeche . . . .

5173

4858

126

131

10288

2704

4840

2083

6923

Ardennes . . . .

4529

4067

254

241

9091

2861

2692

2792

5484

Arifege

3544

3263

217

195

7219

1638

2465

2344

4809

Aube

3128

3057

123

115

6423

2134

2428

2252

4680

Aude

3717

3612

261

258

7848

1828

3210

3290

6500

Aveyron . . . .

4920

4903

258

235

10316

2479

3800

3763

7563

Bouches-du-Rhone .

4938

4936

587

547

11008

2415

5283

5156

10439

Calvados . . . .

5105

4807

670

614

11196

3626

5517

5652

11169

Cantal

3327

3074

215

196

6812

1793

2328

2826

5154

4651

4305

231

208

9395

2696

3579

3602

7181

Charente-inferieure .

6334

5893

235

218

12680

3646

5158

4693

9851

Cher

4261

4454

223

188

9126

2669

3402

3699

7101

Corrfeze . . . .

4548

4425

246

262

9481

2441

3378

3250

6628

Corse

2621

2151

72

70

4914

1300

2676

2219

4895

Cote-d'Or . . .

5225

4914

398

419

10956

2649

3772

3714

7486

C6tes-du-Nord . .

10226

9642

325

311

20504

4867

6573

6519

13092

Creuse

3522

3293

253

246

7314

2294

2856

3067

5923

Dordogne . . .

6497

*5995**

281

317

13090

3524

4922

4773

9695

Doubs

3776

3645

228

199

7848

1726

3124

3108

6232

Drome

4497

4226

325

291

9339

2235

3716

3384

7100

Eure

Eure-et-Loir . .

3942

3689

224

220

8075

2928

3147

3105

6252

Finistfere ....

9041

8698

279

274

18292

4367

7240

6683

13923

Gard

5665

5310

213

188

11376

2647

5037

4459

9496

Garonne (Haute)

5592

5414

417

361

11784

2811

4906

4753

9659

Gers

3324

3169

304

270

7067

1930

3007

3151

6158

Gironde ....

6490

6289

791

702

14272

3600

5452

5191

10643

Hˆrault ....

5394

5002

273

254

10923

2531

4624

4213

8837

Ille-et-Vilaine . .

8318

7749

205

216

16488

4403

7122

7270

14392

Indre

3976

3456

227

186

7845

2293

3292

3191

6483

Indre-et-Loire . .

3551

3361

353

327

7592

2995

3121

2917

C038

Isere

8692

7583

692

669

17636

4200

6491

6373

12864

Jura

4449

4207

259

216

9131

2387

3065

3219

6284

Landes

3786

3375

478

421

8060

2071

3763

3618

7;;8i

Loir-et-Cher . . .

3658

3405

282

269

7614

2651

2874

2992

.“fitJG

Loire

6595

6223

266

217

13301

2887

4765

4587

0352

Loire (Haute) . .

4287

4048

150

132

8617

2189

3271

3536

6807

Loire-infcrieure .

6497

5823

374

383

13077

3226

4945

5016

9961

Loiret

4601

4435

585

548

10169

3290

4132

3774

7906

Lot

3566

3239

203

232

7240

1928

2954

2845

5799

Lot-et-Garonne . –

4065

3537

255

179

8036

2771

3003

3156

6159

Loztˆre

1890

1824

86

76

3876

988

1543

1446

2989

Mainc-et-Loire

6077

5415

367

335

12194

3445

4157

4453

8610

Manche ....

6926

6813

413

440

14592

4409

6006

6045

12051

Marno

4820

4456

356

386

10018

3527

3666

3720

7386

Marne (Haute) . .

3280

3076

165

193

6714

2142

2348

2324

4672

Mayenne ....

5235

4818

305

263

10621

2742

3822

3731

7553

Meurthe ....

5965

5760

645

638

13008

2956

4498

4656

9154

Meuse

4666

4456

243

231

9596

2652

3470

3445

6915

Morbihan ....

7229

6812

238

240

14519

3408

5628

5653

11281

Moselle ....

6440

5953

401

343

13137

2946

3862

3710

7572

Nifevre

4784

4443

230

211

9668

2865

3560

3278

6838

Nord

15954

14954

1615

1640

34163

7801

13010

12316

1

25326

Vol. IX.

2

N

546

FRANCE.

(

Births.

1

Total of

Mar-

Deaths.

Total of

Departments.

Legitimate.

Illegitimate.

Births.

riages.

Deaths.

Males.

Females.

Males.

Females.

Males.

Females.

Oise

5434

5175

296

261

11165

4545

4528

4485

9013

Orne

4854

4659

241

248

10002

3382

3574

4093

7667

Pas-de-Calais . .

9318

8899

894

854

19965 1 5257

7129

6607

13736

Puy-de-Dome . .

8079

7677

292

285

16333

4564

6329

6385

12714

Pyrenees (Basses) .

4895

4691

455

505

10546

2566

4174

4260

8434

Pyrenees (Hautes) .

2828

2699

351

266

6144

1268

2159

1970

4129

Pyrenees-orientales

2378

2255

366

327

5326

1075

2930

2398

5328

Rhin (Has) . . .

8950

8242

568

514

18274

3513

6397

6211

12608

Rhin (Haut) . .

6612

6347

510

475

13944

2964

4956

4822

9778

Rhone

6324

6073

1058

1058

14513

3497

5587

5725

11312

Saone (Haute) . .

4686

4468

566

473

10193

2441

3337

3275

6612

Saone-et-Loire . .

8189

7706

480

431

16806

4664

6920

6802

13722

Sarthe

Seine

10798

10426

5186

5008

31418

9017

14373

14262

28635

Seine-inferieure . .

9576

9223

1174

1138

21111

5933

8461

8247

16708

Seine-et-Marne . .

5118

4650

260

278

10306

3570

4138

3919

8057

Seine-et-Oise . .

6224

5687

395

380

12686

4474

6058

5614

H672

Sevres (Deux) . .

3668

3339

136

141

7284

2253

2558

2729

5287

Somme ....

7367

6925

702

639

15633

4781

6146

6162

12308

Tarn

4697

4477

193

186

9553

2403

3718

3576

7294

Tarn-et-Garonne

,2887

2748

143

168

5946

1612

2404

2407

4811

Var

4279

3951

284

325

8839

2011

3937

3497

7434

Vaucluse . . .

3932

3683

309

261

8185

1625

3647

3358

7005

Vendee ....

4582

4227

90

105

9064

2603

3517

3673

7190

Vienne . .

3833

3537

78

88

7536

2031

2924

2827

5751

\^ienne (Haute) . .

4338

4173

223

232

• 8965

2482

4418

4403

8821

Vosges

5732

5223

441

396

11792

2849

3786

3771

7557

Yonne

4776

4656

251

292

9975

3999

3828

3506

7334 1

Table III. — Comparison of the Progress of Population in France in the following Years.

Years.

Total Total Total Total Total Total Total

1817 1818 1819 1820 1821 1822 1823

Births.

Legitimate.

Males. Females.

456,570 440,972 475,651 460,463 463,069 465,274 461,015

425,002 414,332 446,606 432,121 432,803 437,774 433,735

Illegitimate.

Males. Females.

31,887 30,216 33,660 33,915 34,552 35,820 35,901

30,666 28,335 32,001 32,434 32,934 33,928 34,142

Total of Births.

Mar- riages.

Deaths.

Males. Females

944,125 913,855 987,918 958,933 963,358 972,796 964,793

205,244 212,979 215,088 208,893 221,868 247,495 260,423

382,813 376,412 398,260 389,822 377,062 391,44 376,98

365,410 375,495 389,795 380,884 374,152 382,719 367,353

Total of Deaths.

748,223 751,907 788,055 770,706 751,214 774,162 744,342

Increase of Popu- lation.

195,902 161,948 199,863 188,227 212,144 198,634 220,451

PART II.

HISTORY OF FRANCE.

Sect. I. — The Various Races of Ancient

Gaul.

The people who inhabited France at the most distant epoch of its history are scarcely known but in the writings of their conquerors, the Romans. They undoubtedly owed their origin to other conquering nations mixed with the peo- ple they had subdued. Caesar represents them as warlike, going always armed, and ready on all occasions to terminate their differences by the sworH ; as a people of great levity, and little inclined to idleness; but hospitable, generous.

ronfiding, and sincere. They were so possessed •with the idea of what has been called the right of the atrongest, that they claimed the power of life and death over their wives and children. The Druids, their priests, who were the sole de- positaries of learning amongst them, were in- debted to the credulity of the people for the deference they paid to thera. These

priests ruled the people by the terror of their anathe- mas; they were exempt from all tribute to the state, and abounded in riches. Like many other barbarians, they sacrificed human victims. It is said, however, ti.at they taught the doctrine of one Supreme Being; but it seems more proba- ble, that they maintained only the superstitions

of polytheism, or a species of gross feticliism. Their bards or poets composed war son js ˆto animate the combatants, and to perpetuate the memory of their heroes.

These people, wliom the Romans called Gauls, but who denominated themselves Kelts or Celts, were governed mostly by an aristocracy. The elders, notables, or senators of their towns, to- gether with the military and their chiefs, formed what we call the nobility; these, in conjunction with the priests, possessed the riches and the nower ; vassalage and misery were the portion of the commonalty. The nation of Gaul formed a kind of confederation, most of the states of which were governed by chiefs elected by tiie military. These chiefs were by no means possessed of ab- solute authority ; one of them said to Caesar, ‘ the commonwealth has not less power over me, than I liave over it.’

The discipline of the Romans, and the genius and good fortune of Ca;sar, Triumphed in ten years over the valor of the Gauls. It was the policy of these conquerors to sow divisions among minor states ; and thus”, by intriguing with their allies and partisans, to vanquish them by means of themselves. As the Gauls were impetuous in attacking their enemies, so they were easily discouraged by a reverse of fortune. Colonies had commenced the work of their sub- jugation, and conquest completed it ; the Gauls became Romans; the latter introduced among them the arts and new manners; they subdued them by civilisation. The municipal regulations, and the agriculture of the Romans soon rendered the country flourishing, and despotism afterwards despoiled it. This state of things continued for four centuries, when the people were reduced to the lowest depths of misery, devoured by the proconsuls, the prey of factions, and alternately passing from insurrection to slavery, under ty- rants who were perpetually changing.

About this time, and in th’ iˆidst of the con- fusion occasioned by the inroads of various bar- barous tribes, Christianity was established in the Roman empire. At first it was tl>8 religion of the oppressed and the persecuted ; and the consolation of the unfortunate ; and it quickly spread

as such among the Gauls. In the year 32.5 the emjieror Constantine decreed the public exercise of the new religion, and soon re-esta- blished order. The bishops enjoyed the affections of the people; despotic power tiiorefore caressed them, in order to jain the obedience of the mul- titude. They, on the other hand, hesitated not to avail themselves by degrees of the civil juris- diction ; and the bishop of Rome, since that time

Sect. II. — The MEnoviNGiAN Dynasty Attracted by the salubrious climate, and great

riches of the provinces of the aupire, the barba- rous tribes of the north of Europe frequently in- vaded it; but were driven back, sometimes by force, and sometimes by treaties and presents. This latter proceeding however, though despotism in its weakness often employed it, soon increased the mischiefs it was designed to cure. Degene- rate Rome had '•ecourse even to the arms of its enemies to defend itself against its own subjects. Lands were allotted to legions of barbarians, who were set to guard the frontiers. The Franks, a Germanic tribe, were for a long time appointed to defend the banks of the Rhine, from which ■ they derived the name of Ripuarius (from ripa, the bank of a river); but these barbarians no sooner learned the arts of war from the Romans, than they began to turn them to their own ad- vantage ; they chose rather to invade the empire, than to defend it, and jaw the important oppor- tunity offered, by the confusion which prevailed, for them to form durable establishments where they pleased. The Vesogothˆ or 'isigoths, set- tled in Spain and the south of France ; The Burgundiones, or Bourguignons, fixed themselves in the east; and the Franks established their do- minion in Belgium. Of al\ the uncivilised tribes, the Franks bore the greatest resemblance to the Romans ; they marched in different tribes or ar- mies, at the head of each of which was an elective cliief. The monks, who have written chronicles of these times, have handed down to us the names of some of their princes, whom the mo- narchical historians of that country have deno- minated kings of France. But Theudemer, H'IolI, Merveg, and Ilild-rik, can only be regard ed as powerful provincial chieftains : and the very existence of Faramund, or Pharamond, is doubtful. Actius, a Roman general, obtained some advantages over Illod, or Clodion ; he also vanquished several barbarous tribes, and for a short time re-established the Roman authority in Gaul, with the exception of Armorica (now Brit- tany), which was declared independent. About this tiip.e the cloud of Tartars which Attila, called the scourge of. God, led on to the plunder of the world, fell upon Gaul; when \ctius, concluding treaties of peace with the other enemies of tiie empire, united his army to that of the Visigoths, and overcame Attila in the plains of Chalons, in (Champagne. But for this great victory, proba- bly, the race of the Gauls would have been at this day mixed with that of the Huns.

At that time (A. D. 458), the son of Merveg, Mˆrovee, or Childeric, commanded the Franks at Tournay ; but they deposed him, because he debauched their daughters. The fact is remark- able, and proves that these tribes were accustomed to exercise this important right of sovereignty. In his room they chose /F.gidius, the commander of the Roman militia ; who, in consequence ot a Patrician, that was his personal enemy, stirring up the v'isigoths, and even the tribe of Ripuary Franks against him, entered into an alliance with Childeric, and they together vanquished the Vi- sigotlis at Orleans. Childeric upon this was re- conciled lo his Franks : he was a brave soldier, and resided at Tournay, nev'jr penetrating far into Gaul.

At his death (A. D. 481) he loft his sop, a

youth of sixteen years old, at the head of his tribe, now known as the Salic tribe. Onr limits do not allow us to trace all the events which pre- sent themselves in the history of the Gauls about this period ; and indeed they are not very inter- esting : we behold alternately wars and alliances among the Romans and Franks, tiie Visigotlis, and other barbarians ; ambitious generals, raised to power by the intrigues of the imperial court, but quickly overcoming their feeble masters, and calling in the aid of the barbarous tribes to serve the ever-changing purposes of their personal am- bition. The Western Empire was tlien just fall- ing ; the Saxons seized upon Anjou and Maine ; the Burgundians occupied the Seine ; the Goths and Visigoths extended their dominion as far as the Loire; the Franks and the AU-manns, branches of the different hordes of German plunderers, contended for the possession of the North ; while the Romans or Gauls kept the re- main ins part of the country, and the Armoricaiis were independent.

Hlodwech or Chlodovech, was the son of Hil- drik ; and is the French Clovis, a name which ap- pears to have a common origin with that of Hlud- vik or Louis. His territories were very limited ; but he was ambitious, and possessing superior ta- lents, formed the design of making himself master of Gaul. Having united himself with a Frankish tribe, he first of all defeated Syagrius, the son of .'Egidius, who governed the Gallo-Romans of Soissonnais, and, having forced him to surrender at discretion, he caused him to be beheaded. Clovis very soon entered into alliance with the Ripuary Franks ; and still farther increased his power and influence amOng the Gauls, by mar- rying Clotilda, the daushter of the king of Bur- gundy. This princess being a professed Christian, Clovis, by this marriage, appeared to

come for- ward as the protector of the Christians of Gaul, who composed the greater part of the population : he at the same time availed himself of their support, and soon found that he needed it. Some powerful competitors presented themselves, among the German tribes, to whom, in conjunc- tion with his allies the Ripuarii, he gave battle at Tolbiac near Cologne, in 49G, and defeated them. Gregory, the chronicler, relates a circum- stance respecting this battle that too much re- sembles the labarum of Constantino, to be consi- dered as any thing but a fable. It is possible, however, that while the battle was doubtful, the French monarch, imitating the policy of the Roman, publicly made a vow to become a Chris- tian, in order to reanimate the courage of the numerous soldiers of that religion who served in his army. Remigius, or Remi, the bishop, afterwards baptised him at Rheims, as well as part of his army ; the coronation is a doubtful cir- cumstance, ami the story of the miraculous phial was invented since that time. The history of this age abounds in legends and pretended miracles.

The Romans had often bestowed dignities on barbarous princes, in order to command their influence by means of their vanity. Clivis al- ready held the title of master of the Roman mi- litia; after the defeat of Syagrius he became so in point of fact. His conversion subjected all

the Roman orthodox party to his power. The kings of the Visigoths were also Christians, but Ariaiis. The confederated Armoricans hastened to treat with Clovis, who had been for a long time at war with them, and who, in 494, had taken Paris, one of the cities of the coalition. It re- mained for him only to subdue the Visigoths and the Burgundians, and he began with the latter. Clotilda herself excited hini to it, through her resentment against Gondebaud, the murderer of her father. Clovis, who undertook nothing without an ally, proposed, in 500, to share the contest with the powerful Theodoric, who, while he reigned over the Goths, was endeavouring to restore in Italy the civilisation of the Romans ; but Clovis conquered without his assistance. Theodoric, however, took possession of his part of the spoil. The revolt of the Christians had great influence in the defeat of Gondebaud ; too late he perceived, that he could not withstand the ruling opinions ; he became a Christian, and Clovis re-established him on his throne, making him tributary to himself. Theodoric, who dreaded the aggrandisement of Clovis, constrained him, without doubt, to adopt this moderate proceed- » ing ; he is also said to have raised impediments | in the way of the defeat of the Visigoths. Their king Alaric, however, having given dissatisfaction to his subjects, Clovis took advantage of this cir- cumstance, formed a junction with Gondebaud, and beat the army of Alaric at 'ouille, near Poitiers, in 507 ; the consequence of this victory was the conquest of almost the whole of the south of Gaul, which in later times received from its conquerors the name of France. Clovis returned in triumph to Tours, where he presented offerings at the tomb of St. Martin.

Here also he received a diploma from the emperor, con- ferring on him the dignity of Roman consul, and the title of Augustus. This, hov.ever, added but little to his power, and deprived him of none of his independence.

Clovis now took up his residence at Paris, the chief city of the Parisian tribe, but still called Lutetia. Here Julius Ccesar, we are told, resided wlien he so gloriously conducted the administra- tion of Gaul. In order to extend his own domi- nions, Clovis destroyed the various tributary kings of the Franks, and caused himself to be elected in their place. He died at Paris in 511. The similarity of character that may be traced between tliis [jrince and Constantine is very striking : the (irst professed Christian monarchs, they were alike ambitious, and their principal knowledge of religion seems to have consisted in the art of making it subservient to their own designs. Tliis was in fatˆt the secret of their con- quests.

With respect to the situation of the nations that inhabited France, at this period, the Franks were either freedmen or slaves ; but slavery was not so much a personal bond among them as amoncT the Romans. Those of the tribe of Clo- vis, called the Salic, were governed by the law of that name, which had been enacted by their chiefs : the tribe of the Ripuarii had its own in- stitutions. The freemen assembled every year in the Champ-de-Mars, and there passed the

Laws. They nominated their kings ; but they generally chose the eldest son of the former mo- narch. The Burgundians, governed by the laws of Gondebaud, which went by the appellation of Gombette, maintained the form of a nation until the second dynasty ; their manners were more fierce than those of the others. The Visi- goths had for the most part gone over into Spain, while the Romans or Gauls preserved their civil condition, as far as the rights of conquest would permit. As the ecclesiastics belonged to this nation, it on that account preserved a remnant of influence ; the clergy being able for a long time to perpetuate the Roman society and civili- sation. Religion was the only restraint they could oppose to force ; unhappily in later times they were destined to abuse it. But at tliis pe- riod they retained much of their primitive simpli- city, and the docile confidence of the barbarous tribes rendered the power of the bishops salutary in preserving peace, and effecting reconcilia- tions fo' them. When a Frank was made a priest, they cut off his long hair, which was a mark of distinction among the freemen of his nation, and he became in a manner a Roman or literary man. A lighter fine, it is said, was exacted for having killed a Roman than a Frank. In other respects the Romans were judged by

their own tribunals, and when a Roman and a Frank were parties in a cause, the tribunal was formed of an equal number of the two nations. The degenerated Latin language evidently predominated, and was employed in the public decrees of the Franks ; in fine, the Franks became united with the Ro- mans. It is only necessary to glance over the history of these times, in which we do not find a single insurrection of the Gauls against the Franks, and in which we see that the ascendancy of the bishops tended to maintain a kind of equality and union between the two nations, to reject the notion of Montesquieu and others, who have asserted that the Gauls were reduced to a state of slavery. Neither can we admit the con- clusions that the abbe Dubos has drawn from the consulship of Clovis, that the king of the Franks was the real heir to the authority and magistracy of the Romans.

The conquerors dispersed among the Gauls did not meet to appoint a successor to Clovis ; his sons divided his dominions among them. Similar divisions were often made, and from this circumstance have arisen great evils to the people, and great confusion in the history of these times. We shall not occupy our pages with the name of a crowd of obscure kings, who reigned at Orleans, at Metz, at Soissons, or at Paris, or with the wars which they waged in disputing what they called their inheritances. In this tissue of cruelties, assassinations, and in- glorious combats, we find no one point to which we can refer for any great changes, or for events of any political importance. After two succes- sive wars the Franks completely subjugated the Burgundians ; they afterwards drove the Goths from the provinces of the Alps. The emperor Justinian about this time (A. D. 535) granted to the French kings the rights of empire over the Gauls. Clotaire, who was at first only king of Soissons, was at the time of iiis death in posses-

sion of the entire monarchy of Clovis. Iiis children shared his dominions among them ; but they had Paris for their common centre : yet the queens Fredegonda and Brunehaut excited perpetual wars among them. The former was a prodigy of boldness, of wickedness, and genius; and gamed several battles in person; the other, if we may believe records which generally abound in contradictions, died a most dreadful death. Dagobert was a prodigal king, who burdened France with taxes, to found monaste- ries and support his mistresses. Although a popular song has styled him the good king, the treacherous massacre of 15,000 Bulgarians, who sought an asylum in his dominions, and whom he had permitted to pass the winter there, by no means proves his humanity. The mon'ts have made him a saint ; but it must be remembered, that Eloi, his goldsmith and trea- surer, scarcely ever concerned himself with the finances, except for the purpose of adding to the number of monasteries. This period of the his- tory of France affords very little that is interest- ing ; we, however, find in it the

beginnings of the feudal system, which for so long a time op- pressed the people and devoured France.

What were exactly the countries which fell to the Franks after the above conquest, or were given to them by their kings, is a point on which historians are not agreed. A similar obscurity rests on the subject of those lands called Salic, which, having been granted in recompense for military service, could not be inherited by wo- men, a custom from which is derived the famous Salic law, which excludes females from the throne of France. Certain it is, that the kings, after the example of the Romans, granted lands, or military benefices, at first for a time, and af- terwards for life. The great men, called fidelles, who had the nearest access to the kings, who fought at their sides, who formed their council, and swore allegiance to them, transmitted these concessions in inheritance to their posterity. Each of them possessed a seniorate or seigniory, a name borrowed from the municipal regulations of the Romans, and by which the Franks, or even the Gauls before them, designated the pub- lic autliority attached to the domain, and a su- periority over the neighbouring estates. This was the commencement of feudality, a kind of sovereignty of the castle over the country, of the landlord over the tenant. The seniores or seigniors would necessarily soon become so many petty tyrants. From that time they exer- cised the right of civil and political justice in their several cantons; fines and confiscatiors became their perquisites of office. These seig- niories were then few in number, but in after- times they spread over Europe. The bisliops and monks also became seigniors, as the seigniors and military men became bishops and abbots ; the priests held the highest station at tliis epoch. The most ignorant superstition enslaved the minds of men, and from this the church derived immense riches. But oppression was perpetu- ally changing places, and thus accomplishing in part the work of justice. The soldiers pillaged tlie people, and the churchmen levied a tax upon the territories of the soldiers ; again the king

would afterwards seize on the property of the clergy to give the temporary use of it to the mi- litary or seigniors who sometimes paid the cliurch an annual indemnity to secure an entrance into Paradise. Wlien a king had committed a mur- der, he was absolved on his founding a mo- nastery. When the people wished to depose a king, they shut him up ui a cloister, and made him a monk. The kings, however, often laifl claim to the nomination of the bishops, who ought to have been chosen by tlie people, if a laymati on horseback met a priest, he was forced to dismount in order to salute him. These trails are sutKcient to characterise the age, and to de-

monstrate that the feudal system, barbarism, and the power of the clergy grew together. Accord- ing to the customs of the Franks, the domestic offices of the palace were appropriated by the nobility; and perhaps the chief places of trust were borrowed by the barbarous kings from the court of the emperors of Constantinople. The last kings of the Merovingian dynasty liad nothing more than the shadow of authority. Tlie chief of these haughty servants, was the major domo or mayor of the palace. The office was at first reversible ; afterwards it was made here- ditary, and thus in fact a new race of kings commenced. The titulary kings, shut up by the mayors in their palaces, were doomed to a life of inactivity and nothingness, which gave rise to the appallation /(/(«ea?is or idlers, as they were called, on whose names we shall not dwell. When imprisonment in a cloister did not save them, they were often the victims of assassination.

While Neustra (A. D. 690), vegetated under the power of the monks, the mayor Pippin, or Pepin Ileristal, governed Austrasia, a French kingdom near the Rhine. This able chief suc- ceeded in reducing the whole of France under his power; and re-established, under the ancient name of Champ-de-Mars, the assemblies of tiie nobles, which liad fallen into disuse. His son Karl, one of the most warlike men of his time, was surnamed Martel, or Marteau, and con- stantly kept the soldiers underarms ; he became, in fact, their idol. On the Saracens, who had concjuered Spain under the banners of Maho- met, invading France, Charles vanquished them at Poitiers in a very memorable battle, and drove tliem beyond the Pyrenees. That which chiefly renders the measures of Charles INIartel, as he is commonly called, remarkable, is, that in order to recompense liis lords, and to defray the expense of continual wars, he ventured to seize the wealth of the church, then possessing the grea'er part of 1 ranee. On this account the monkish historians load him with obloquy. It is supposed that the origin of fiefs is to Ije traced to the mjmerous benefices thus granted by him: it is, however, remarkable, that the first feudal lords were the detainers of the property of the clergy by a gratuitous title.

Sect. III. — The Cariovingiax Dynasty.

Charles Martel, it is said, refused the crown, but his son Pepin thought it necessary to liis political plans. On obtaining it he rendered himself popular both with the army and clergy, to the latter of whom he ordered the restitution

*of part of their wealth ; and sent the following case of conscience to the pope for his deci- sion : ' should the title of king belong to an individual unfit to reign, when tlie royal power is actuallv in the hands of one who knows how to use it well ?' Z-'hiry replied, * that he who had power shoula assume the title' ; on vvhich the legitimate king was made a Tuonk. Pepin*

was the first of the French kings who sought for a sanc tion to his regal claims from the ceremonies of the church : he caused himself to be anointed, or consecrated by a prelate ; and thus introduced the coronation of kings, to give eclat to an usurpation.

Tlie reign of Pepin was glorious ; he drove the Saracens from the south, and rendered him- self powerful in Germany. He is said to have selected able public officers, and to have com- mitted all afiairs of importance, together v.ith the reformation of the laws, to the assemblies of bishops and seigniors, at that time called pleas and councils, who held it as a principle that the laws are made by the consent of tlie people and of the king. The usurper Pepin is extolled by the churchmen ; the pope styled him a new Moses, a second David : and it was perhaps to recompense the clergy for their submission that Pepin granted them great influence in the na- tional assemblies.

A man endowed with great activity of mind, and possessing powerful means, may found a new political order ; but he can effect nothing durable, but as the people are disposed to second him, and as his designs are in accordance with the general inclinations. Pepin, as early as A. D. 768, had div.ded his kingdom between his two sons : one of tliem died soon after, and the other, the celebrated Charlemagne, reigned alone. The king of the Lombards, who possessed all the north of Italy, was at that time a powerful prince : Charlemagne, to whom he offered his daughter in marriage, accepted her, repudiating his former wife, notwithstanding the remon- strances of the pope. He soon after, however, divorced this princess also, and taking part against his father-in-law, in behalf of the inhabi- tants of Rome, who were his enemies, he de- throned him, and received from the hand of pope Adrian the iron crown of the Lombards. Having become king of the Romans, Charles determined to subjugate the Saxons, a poor and valiant people, whose only crime was their hatred of a foreign yoke. Thirty years were devoted to overcoming them with missionaries and with garrisons; for he, in common with many of his predecessors, sought for tlieir conversion only as the prelude and the guarantee of their allegiance. He slaughtered many thousands ; and transported whole bands of these unfortunate people into other parts of his dominions. Vitekind, their chief, is said to have been a prodicy of constancy and courage. About this time Charles resolved on pushing his conquests into Spain ; but his arms were less successful against the Saracens, who were in pos- session of that country. In one great project, however, he finally succeeded. At the end of the eighth century, he placed the imperial crown upon his own head at Rome, pope Leo IIL as- sisting him in the accomplishment of this design.

FRANCE.

and the fallen people of Rome crying ‘ Live Charles, the august and pacific emperor of the llomans, trowned by the hand of God.’ The vain thought of re-establishing; the empire of the Caesars is remarkable in the successor of a race of barbarous kings who had Lent all their efforts towards its overthrow. The papacy, however, inherited the fruits of bi.s work ; and, two cen- turies afterwards, almost re-established the Roman empire by means of the hierarchy.

Thinking now that he ought in the first place to enlighten the people, he instituted schools for the teaching of reading, arithmetic, and church singing. These schools were allowed to be held only in cloisters and episcopal palaces ; and the jiriests alone were the tutors. An English monk was sent for to court to superintend one of them. Charles, who had been driving through Europe, sword in hand, thought all at once of applymg himself to the study of grammar. He passed the whole of the winter and the spring at Aix- la-Chapelle, and there he assembled those champs-de-mars, or great councils, in which the bishops, the abbots, the lords, and twelve free- men from every county, discussed the capitu- laries that he promulgated as laws. His legis- lation was pernaps as agreeable to the general interests as the times would allow. Montesquieu, who draws a brilliant and strongly marked por- trait of Charlemagne, assures us, that he pre- vented the nobles from oppressing the clergy and the people, by always employing them in war. The capitularies were certainly useful at a period when so many nations, united in one em- pire, were governed by different laws, and Charles evidently loved industry and the arts. He was indefatiffable in every thing he undertook ; he was well fitted altogether to struggle against barbarism ; but he was able to re-establish nei- ther the Roman empire nor civilisation. The social state was at this time territorial and mili- tary ; and the nations had to undergo long revo- lutions before they could arrive at that social condition on which modern civilisation is founded.

During his long reign, Charlemagne engaged in various treaties with the court of (Constanti- nople, received an embassy of congratulation from the caliph Haroun the Just, and presided over all the public councils. In order to lessen the influence of the bishops, he exempted them from military service, and by one of his capitu- laries established the dime or tenth (an offering then voluntary), to compensate them for the loss of that property which the kings had taken from them. He applied himself alˆo to the reform of ecclesiastical discipline, and prevented the riˆht of sanctuary enjoyed by the monasteries from degenerating into the imy)unity of crime. He made sumptuary laws, and instituted various Teguhitions concerning exchanges and commerce; finally, he established administrative assemblies in the

provinces, to which he regularly sent his judges or deputies to collect and decide upon the complaints of the people : but during his whole time the system of feudality was, as we have intimated, generally and finally established.

Charles, now master of the greater part of Europe, determined to share his empire

among his children. He made Pepin king oi Italy, and Louis king of Aquitain ; and, whea the former died, he united Louis with himself in the administration of the government. But the end of this, powerful reign presaged disasters; the pirates of Denmark and Sweden, then called Northmanns, or men of the North, began to carry fire and sword through the coasts; and it was in vain that 'Charles, thinking to repulse them, visited the ports, and ordered ressels to be built. He died, however, when he had only foreseen the evils which these greedy barbarians were about to bring upon France. Charlemagne is described as of an unusually high stature, and amazing strength ; he was sober, just, econo- mical, and generous ; simple in his diet, and neglectful of nothing; he governed his imme- diate domains with the same precision as he did his empire, and ordered the produce of his gar- den, to be sold. How could such a prince, asks M. Bodin, order the massacre of 30,000 Saxons? After his death, the bands that had been ce- mented by power were soon loosened by weak- ness, and the whole fabric of Charlemagne in a short time crumbled into dust. Louis the Pious, or the meek, had great private virtues, some courage, information, and humanity ; but more than these were necessary in the successor of Charlemagne. He also divided the empire between his sons, and associated one of thpm with himself; but, as he was far less able than his predecessor to command obedience, four extensive revolts made his reign a long series of wars. Bernard, king of Italy, was subdued and chastised : the emperor, departing for once from his usual moderation, had his eyes put out (he had been condemned to death); but soon, yielding to the scruples of his con- science, he descended to every species of pe- nance and humiliation, that the clergy chose to require. This conduct excited fresh rebellions. Judith of Bavaria, his second wife, had pre- vailed on him to divide his dominions a second time in favor of her son, when the other chil- dren revolted. The emperor yielded, humbled himself, and consented to the imprisonment of the empress. He soon, however, recalled her, and endeavoured to resume some authority over his sons ; but they rose a second time against him, drew the pope over to their party, dis- seminated treason among the troops, and de- throned the emperor. Lothaire took possession of the throne. Some infamous bishops con- demned the unfortunate monarch to public penance during the whole of his life ; he, there- fore, suffered himself to be disarmed, clothed himself in hair-cloth, was covered with ashes, and retired into a monastery. This excess of

humiliation moved the people in his favor ; a party was formed ; the kinsjs of Aquitain and Bavaria, induced by remorse, joined it ; Lothaire was vanquished ; but he obtained his pardon, and the restoration of his kingdom of Italy. The bishops, who had insiilted the fallen monarch were punished. Still the ambitious pro- jects of Judith in favor of her son Charlas ,)ro- voked another war, in which the emperor subdued Louis of Bavaria, and he soon after- wards died, overwhelmed with grief.

What especially fixes our attention on this reign, is the rank which, the clergy enjoyed. Charlemagne availed himself of them as a po- litical instrument ; Louis submitted to them as a mighty power. The one enriched the popes in order to purchase their gratitude, together with the homage and obedience of the people; the other made them temporal princes, and pros- trated himself at the feet of those very men who had bowed at the footstool of h° father. From this reign we may chiefly date the arrogant pre- tensions of the tiara over crowns, and that des- potism of a false theocracy which became terrible under Innocent III. The bishops at this time arrogated to themselves the only legitimate right to power ; they possessed immense riclies, wore armor like the military, and were scandalously luxurious. An instance is cited of one abbot wlio alone had 20,000 vassals. Louis wisned to ri form these abuses, so contrary to the doctrine of tlie gospel; and this drew on him the wrath and vengeance of the clergy. To undertake the reform of a class of men, whose supremacy we at the same time acknowledge, is a dangerous project.

Justice was at this time perverted by the most ignorant barbarism. It was believed, that God would sooner work a miracle, than suffer an in- nocent person to perish; in order, therefore, to wipe off an accusation it was necessary to plunge the arms into boiling water, or walk over red-hot iron, &c. ; if no injury resulted from it, the per- son was acquitted. At other times their differ- ences were decided and crimes judged by single combat ; the parties pleaded by battle ; women and infirm persons were represented by a cham- pion whose thumb was cut off if he was con- quered. Every monastery had one of these to defend its interests ; the clergy, however, pre- ferred the trial by ordeal. Charles ordered the stick to be substituted for the sword, and this order was renewed five centuries after ; but for a long time serfs were the only persons who fought with sticks. Witnesses and even the judges themselves were often obliged to fight duels. Re- ligious ceremonies preceded these decisions, which, though they may be traced

The Romans had rendered the Latin language popular among the Gauls;

and the Franks and other barbarians corrupted it. From this sprung a dialect called llomance, a mixtirie of Celtic, Teutonic, and Gothic, in which the Latin predo- minated. This is the language which, after the polish of eight centuries, forms the basis of the French tongue.

Under Louis the Meek, the monarchy, though torn with divisions within, yet maintained itself without; under his son, Louis the Bald, every thing went to ruin. He was a weak and cowardly prince, and his reign was a long series of calami- ties. After the death of their father, the three brothers again made war upon each other. He who held the title of emperor was conquered at the battle of Fontenay in Burgundy, where 100,000 men perished. The bishops, who then disposed of the crown,-dethroned him, and made n nrw partition of tho empire. At that time the

Danes, or Normans, were a terrible scourge to France; they pillaged one-half of the country; burned Paris, and, after the custom of the em- perors of degraded Rome, Charles lavished upon his enemies that treasure, \vhich was to Urem only a new motive for returning Every year fresh fleets of robbers landed on the coasts, and the king crushed the people with taxes to satisfy them. During this confusion (A.D. 846) the lords and bishops disputed for power ; the former prevailed in an assembly, from which the people were ex- cluded ; the latter revenged themselves by de- posing the king, in order to give the crown to his brother the German, and afterwards excommuni- cated the latter. Thus the priests and the gran- dees were occupied only in sharing among them, or disputing for, the spoils of the people, while the pirates were invading France. The king of Lorrain narrowly escaped being deprived of his kingdom by excommunication, because he had been divorced. It was about this period that Bardouin, a French lord, who had also been ex- communicated for having carried off Charles's daughter, received from him the earldom of Flanders,whichhe transmitted to his posterity. We must now, however, explain, how a government came to be established,which rendered the people so miserable, and yet contributed so much to the abolition of slavery.

At the time of the conquest the provinces were governed by Roman officers, sometime' called counts, or companions of the emperor, and sometimes dukes or generals. The king after- wards continued to appoint these military and civil functionaries. During the confusion of the reign of Charles the Bald, they rendered them- selves independent of the royal power, and even wrested from its feebleness the hereditary pos- session of their offices. By these means a new government was established, or rather the govern- ment was divided into as many part* as there were provinces. The king was considered as the supreme head ; but his power was an illusion ; force still prevailed, and the exercise of force is the origin of continual war. This political sys- tem was founded on fidelity. The inferior*

was called a vassal ; the superior a suzerain or lord. The king, as king, was the vassal of none but God, as they were accustomed to speak ; and his vassals had others under them, over whom they were lords ; these subdivisions were endless. The fief was a kind of temporary payment ; the lord gave the fief to the vassal, on the condition that the latter should follow him to the war ; and in return he guaranteed him security and protec- tion. There could be but little regularity in such a system, only as the conditions of this treaty were well fixed and reciprocally guarded ; it was indeed organised insubordination. The plebeians, vulgar, or rustics, were not vassals, but subjects of the lord, and constrained, on a requisition from him, to march under his banner. In this political and social scale, each degree had no direct authority, but over the rank immediately below it. Such is, in substance, that political system which has been called the feudal govern- ment.

The royal power could not thus exist for a long period. Charles the Bald was exceeded in

weakness and inanity by his successors. Their ftames, and a date, are all that history affords of them. Louis the Stammerer was the son of Charles the Bald. Louis II [. and Carloman succeeded him. After their time a powerful no- bleman set up the small kingdom of Provence. There was another ˆon of Louis the Stammerer, named Charles, who was five years old when the crown, together with the title of emperor, was offered to Charles the Fat, who reigned in Ger- many. The Normans, who still continued their depredations, proceeded to lay siege to Paris. Udon, or Eudes, who was the earl, defended it valiantly. After the siege had lasted two years, the emperor went to its assistance with an army ; but the Normans frightened him, and he pur- chased a peace. At the time of his death (A. D. 888) he was dethroned, imprisoned, despised, and miserable ; his superstitious notions had driven him mad. Eudes, who then accepted the crown as the guardian of young Charles, might easily have seized on it for himself; but Charles, surnamed the Simple, for a little while shared the throne with Eudes, and after his death reigned alone.

It was about this time that the Saxon pirates established themselves in that part of France which was formerly called Neustria, and has from them taken the name of Normandy, Thus the descendants of the Franks, degenerated as under the idle kings, suffered in their turn the disgrace of conquest. The king sent his daugh- ter to Rollo, their chief, inviting him to become a Christian, and to acknowledge himself as his vassal. The Norman

accepted the proposal, but he refused, on paying feudal homage to the king, to kiss his feet. One of his officers, who com- plied with this ceremony, performed it in such a manner that he almost overturned Charles. This breach of manners only produced laughter, to such a state had the priestly regime reduced France. Rollo, however, rendered Normandy prosperous. He enacted the most severe laws against every species of dishonesty ; and his peo- ple devoted themselves to agriculture.

The minister of Charles the Simple having excited the discontents of the lords, these latter attacked the king and dethroned him. Rotbert, or Robert, brother of the late king Eudes, as- sumed his place; but he was killed in battle by the hand of Charles; who claims at least the character of some military coiu'age. Ilugues, called the White, the son of Robert, obtained the victory on another occasion, and Charles, having fled to the residence of one of his lords, was de- tained a prisoner until his death. His rival, who already had the title of duke of France, did not wish for that of king; but left it to Raoul duke of BurgTiudy, whose reign was constantly disturl)ed by factious wars. A powerful lord having formed the design of making his son, a child of five years old, a bishop, with a dis])en- sation from the pope ; a war ensued on that ac- count that lasted eighteen years, and the bishops took part in it, both by levying armies, and laun-'hing their excommunications. Raoul dy- ing, alter a reign of eifiht years, Ilugues put in his place the son of Charles the Simple, Louis IV. called Outremer, because he had been brought

up in Great Britain. This young king wished to get rid of his guardian, but the latter soon made him feel that a king of feudal France was nothing. He made him prisoner, but afterwards released him. A question of legitimacy was now agitated in Germany; whether the succes- sion must proceed in a direct line, ar.d whether the grandson could exclude his uncles from the throne? This case was decided by single com])at between two champions; the champion of the direct succession gained the victory : since that time the grandson has always represented his father.

On the death of Louis, Lothaire, his son, suc- ceeded to the crown ; an arrangement to which Hugues the White willingly consented, and, dying two years after, transmitted his power to Hugues Capet his son. These Hugues, counts of Paris and dukes of France, had seized at this time on several of the richest abbeys, and were enjoying their revenues, as lay lords were accustomed to do without any scruple. They even assumed the title of abbot. The surname of Capet (cappat us) came from the chape or cope of St. Martin of Tours, which they wore as the possessors of the abbey of that name. Lothaire, who had some strength of mind, now assumed a degree of authority over these lords. Under his reign, however, Lorrain, which had been for 100 years past the subject of contention be- tween the kings of

France and Germany, was given up to the emperor Otho, who did liomage for it to Louis as his suzerain. On the death of the latter, Louis V. succeeded to a short reign, i. e. of one year, which terminated the Carlovingian dynasty. According to hereditary right, the brotiier of Lothaire, his uncle, should have as- cended the throne, but Hugues Capet, being all-powerful, was proclaimed king by his vassals and friends; while the other dukes and counts, who paid little respect to the monarchy of that period, aided in or suffered the usurpation, which elevated their equal without depressing themselves.

Sect. IV.— The Capetian Dynasty.

Hugues Capet was, as we have seen, the grand nephew of Eudes, a descendant of Robert le Fort, or I'Angevin, a chieftain of great cou- rage, who had been sent by Charles the Bald into Anjou to defend that country against the Normans. The French genealogists have written volumes upon the origin of this chief: some of them have called him a Frank, others a Gaul, a ^"isigoth, or a Saxon. Louis XIV. placed much dependence on the proofs of his being descended from the Franks. The reader may find his history in the Historical Researches of Anjou, by J. F. Bodin, ex-deputy of the Maine and Loire ; published by Lecoint and Durey, Paris.

Hugues was crowned at Rheims ; and ob- serving a caution that had now become common among those who attempted to found a new dy- nasty, associated with himself his son Robert, in order to secure his succession to the throne. Charles, due of Lorrain, his rival, endeavoured to give weight to his claims to the throne by an armed force; but he was delivered up at Laon by a bishop and died two years ajfterwards.

Ilugues died at Paris, much regretted by the from its decisions. It was necessary to be priests and the army, whom he had equally either the oppressor or the oppressed. The jherisiied : the people, however, held no rank in churchmen and the lords pillaged each other by the state. The elevation of the Capetians may be turns, while each contributed to. the ruin of the attriliuted to the feudal anarchy: feudality' as people, and natural streiig-th or religious autho- cended the throne with king Hug-ues. He sent rity were the only prevailing forces. The use of one day the following question to an earl who cavalry, of which the Franks were almost en- had revolted, 'who made thee an earl?' The tirely ignorant, was become, together with that

latter replied, ‘ who made thee a king?’

Robert was a prince of great devotion and mildness, very charitable and very unfortunate. He was related to his wife in the fourth degree, and had been her god-fatiier ; relationships which the pope, notwithstnnding the dispensations of the bishops, judged so in(mpatihle, that he an- nulled the marriage and suspended the prelates who had allowed it. The latter, on this, excom- municated the king, who was refractory ; althou”': ho constantly chaunted at the reading desk j ai. ! from this time, if we may believe the recitals of the priests, he was abandoned by all his lords, and avoided by his domestics. The same prince, after a penance, caused to be condemned and burnt at Orleans, with great pomp, some unfor- tunate creatures who were called heretics and Manicheans. His second wife, Constance, was a sort of fury, who stirred up her sons to revolt. He had one of them crowned, whose name was

of bearing arms, the exclusive privilege of the nobles ; and a lord on horseback, clad in iron armour, made a whole canton tremble. The serfs, who composed the main strength of the army, fought on foot. (Overwhelmed with services, tells, and subsidies of all sorts, im- posed bv ihe military or the ecclesiastics, humbled by seignioral claims which were revolting to na- ture and modesty, they knew not whom to obey, and fought only to rivet their ciiains more firmly, i hose who lived in the tctintry were called villeins, those of the cities and towns boursjeois. Neither of them could labor but for the advan- tage of their lords, who often came to live upon them with their men, their Serjeants, and varlets. The latter were the candidates for the profession of cavaliers or men at arms. 'alets have, it thus appears, rather a noble origin.

Among themselves the lords were equally ar- bitrary and ferocious ; the.r declarations of war

Henry; but he was not the eldest, which proves extended to relations and al’ies, and the quarrel

that the right of primogeniture was not yet ac- knowledged. Under his melancholy reign, which, moreover, had nothing to do with nine- tenths of France, there was a dreadful famine, during which human flesh was devoured by the peopl

of a single family was sufficient to deluge a whole district with blood for thirty years together. It was a state of constant war ; all the castles and abbeys were .fortresses, or rather retreats, where 100,000 tyrants shut tliemselves up with their bootv. France became one vast field of

Henry I. (A. D. 1031) had at first to struggle blood, and perpetual carnage at length wearied

against Constance, the queen-mother, who stirred up his brother against bim. He then endeavoured to wrest Normandy from duke William, at whose father's he had found an asylum ; but he wa.s defeated in this project. At

even ferocity itself. It was thought, by means of a council, to impose on these factious spirits what was called the peace of God. The bishops ordained fasts and penances, during which hu- manity breathed; but this peace, as well as ' the

this period the hierarchical supremacy of the truce of God,' which forbad their fighting on

popes was first solemnly proclaimed, and Leo Saturday evening or Monday morning, soon fell

IX. held a council in France, contrary to the into disuse. Such was the feudal system, as it has

wish of Henry. The king, wishing to have his been called, in France ; a state of real anarchy,

son crowned, assembled the bishops, monks, in which force was only temoered by anathema.

and lords ; among whom the archbishop of Rheims at that time had the right of consecrating him, and the legates granted him their sufl'iages in tlie name of the pope. The Capetians thus transmitted their crown as far downward as to Philip Augustus, who married a princess of the house of Lorrain (a branch of the Carloviugians), and wlio ihought himself sufiiciently powerful not to need the coronation of his son.

The long reign of Philip I., son of the pre- ceding king, is an epoch of remarkable events. William the Bastard, duke of Normandy, crossed the channel (A. D. 1066), and effected the con- quest of England, where he established his own rigorous modification of the feudal regime. He had the firmness to refuse homage to the pope. A jest of the king of France on the excessive fatness of William kindled a war, from which we

Let us pause here : this is the middle epoch of may date a lontr-continned enmity between

pure feudalism ; of that frightful system which burdened France for almost

three centuries, and reduced mankind to the lowest depths of misery. The whole nation had become serfs or slaves; the condition of the people was little better than that of brutes. Any one might strike, mutilate, or even kill, a serf, with impunity. Almost all the freemen had given up their liberty of their own accord, that they might be less harassed by the lords; who, in return, condemned, taxed, and plundered them at pleasure. The feudal axiom, ‘ No land without a lord,’ was established every ■s’.‘here; and there existed no asylum or appeal

France and England : Normandy and the Beauce were at first the scene of the contest. About this time also began the quarrels of the em- perors and the popes about investitures. The imperious and turbulent Hildebrand (Gregory \TI.) was the originator of them. It was this pontiff who made emperors and kings his dependents, who established despotism in the church, and a Christian theocracy throughout Europe.

The king tired of his wife, Bertha, attempted to prove that she was related to h m, and under this pretext divorced her, according to tha

abuses of the times. He then seized on the per- son of Bertrade, countess of Anjou, and married her : but was intimidated in his career by the papal see. Being excommunicated by Urban II. he at first separated from Bertrade : then took her aˆain, on which the pope proceeded to Poi- tiers to repeat his ana’ “ma ina council, at which the bishops and lor 1ˆ are ■: ud literally to have pelted each other with sto.ies. An insurrection ensued, in which several noblemen, who had divorced their wives, tjok part with the king. Tiie latter associated iiis son Louis with him, in order the better to resist the storm ; but Bertrade became jealous of the prince, and attempted to poison him. In fine, the bishops found it was for their interest to grant the king absolution ; and he came, by the consent of the pope, in the winter and barefooted, to receive it at a council held in Paris.*

From this state of degradation and brutality, in which the feudal system held the human race, the ambition of ecclesiastics was at last destined to deliver it. A French pope, tlie celebrated Gerbert, conceived the idea of conquering the Holy Land, or Palestine; and a hermit realised the project. Returning from the pilgrimage to Jerusalem, which was then so much in vogue, Peter travelled through Europe, preaching in courts and cities and councils ; he inflamed the minds of men with zeal for the holy sepulchre, and indignation against the Mussulmans, who held it in their polluted grasp. All classes heard him with attention, and entered with ardor into the

undertaking he proposed. The serfs, to •avoid thp grinding slavery of the soil ; the vas- sals to escape the despotism of their lords, and debtors, in order to free themselves by indulgences ; old men, women, children, princes, monks, lords, bishops, set out on the expedition, crying out, ‘ It is the will of God.’ They bore on their garments a cross of red stuff, and thus were called croises. An undisciplined multitude, witii Peter for their general, now carried devasta- tion thri7u:;h some of the finest parts of Europe : they massacred the Jews, wherever they found them, and at kst found a tomb for themselves in Hungary. Thirty thousand men, the remains of a regular feudal army, however, took Jerusalem in the year 1099, and made Godfrey of Bouillon, one of their chiefs, king. This was called the first crusade. These follies, devoutly warlike, were useful to tlie cause of humanity, though they were the cause of much bloodshed. The people were delivered from the presence of many of their lords ; the latter sold part of their estates to the king or the clergy to defray the expenses of the expedition ; and the royal power, freed from many of its fetters, began in some measure to re-est&blis)i itself.

The dominions of the French kings did not extend farther at this time than about fifteen or twenty leagues round Paris. Louis the Fat dis- playˆ‘l his a “

the emperor, the son-in-law of the former, tooK part with him and determined on the invasion of France, Louis called together the great vassals of the crown, whose duty it was to march under the royal standard against a foreign power; and an army of 100,000 men was raised. The Germans passed the Rhine. The French were soon able to attack the Normans ; but the counts and dukes, fearing to render the king too power- ful, returned home, and left him without an army. Peace however was concluded between the two monarchs in 1128, and Louis applied himself to the internal regulation of his kingdom. Not- withstanding his piety Louis could not escape, being excommunicated even by the bishop of Paris. He died after having procured the co- ronation of his son.

This reign forms a very important epoch of French history. The miserable people began now to emerge from their nothingness, and to be- come of some importance in the state. Various insurrections took place in several of the towns possessed by the clergy and the barons, as well as within the domains of the king; who, being unable or unwilling to repress them, gradually found his advantage in recognising the liberty of the inferior classes. They were allowed to in- stitute their own civil governments ; to name their own magistracy; to assess themselves in the annual rent, which they had engaged to pay their former tyrants ; to raise their own militia, &c. These little democracies, independent under cer- tain conditions of the lords, were called com- munes. It is true, that the king sold them char- ters,

by which he granted them these rights of nature; but it was a great advancement of the public liberty that they were to be thus obtained, and greatly to the mortification of the barons, the bishops, and the monks. Afterwards several of the feudal sovereigns imitated the king, and, in order to recruit their finances, sold their li- berty to the serfs of the cities and boroughs. But in many places the citizens, rising against the barons, established the communes by their own power.

Louis, surnamed the Young, by marrying Ele- anora, the heiress of Aquitaine and Poitou, made a temnorary addition to the domains of the crown. In a war against the earl of Cham- pagne, he set fire to a church, in which 1300 persons were burned to death. St. Bernard an enthusiast, who perhaps possessed some portion of genius, having preached up a second crusade, Louis, penetrated with remorse, inflamed him- self with pious zeal and enlisted in the cause with his court, his queen, and 200.000 men. Tins crusade produced no other result than nu- merous pillages along the road ; it was, however, I'.seful. A foundling, who had risen to the post of abbot of St. Dennis, in this period, in which tiie abbots of this monastery were the king's counsellors, became regent of the kingdom, and continued the work of liberty begun under Louis the Fat, whose minister he had been; his name was Suger. He was born for this station; and t(ˆnk that interest in the welfare of the people which rendered the provinces of the royal terri- tory the most flourishing part of France. On his return, however, the king, contrary to Suger's

advice, committed liie fault of repudiating his wife. She married Henry, duke of Plantagenet, who already possessed Anjou and Normandy, and had become king of England. As her dowiy she brought him a third part of France ; and thus the antipathy of husband and wife changed the face of the two kingdoms. The sons of the king of England had revolted against their father; Louis abetted them, but without success. He died (A. D. 1180), after having proved himself a weak devotee and an impru- dent sovereign.

His son, Philip II. surnamed the August, com- menced his reign by an act wliich, even in those times of superstition and rapine, was thought outrageous. The Jews were masters of the little commerce that existed, their political situation having forced them to become industrious, and the king drove tliem out of the kingdom by an edict. He was capable, however, of better deeds ; he exterminated the banditti called Brabantins, and withstood the pope's legate. He overcame the king of England, who was in

possession of the half of France, and went on the crusade with his successor Richard, the Lion-hearted, to rescue Jemsalem from the Saracens. The two kings suceeeded only in taking St. Jean d' Acre; and Philip, on his return, invaded Normandy during Richard's absence. Having divorced himself from his wife, he was excommunicated by the pope, and the kingdom put under an in- terdict; that is to say, masses and divine wor- ship were suspended ; meat was not allowed to be eaten; marriages were put off, &c. Philip had the good sense to laugh at this interdict, and he seized on the temporalities of the bishops. Another bold action distinguished his reign : John, surnamed Lackland, king of England, had murdered young Arthur, his competitor; and Philip caused him to be tried by his peers, as his vassal, declaring Normandy, Anjou, Tourain, &c., on his conviction, to be forfeited to the crown of France. He executed this judgment at the head of an army. Thus the French mon- archy, which had been dismembered by the feudal government, began to recover its unity. Philip Augustus, we may add, was the first of the French kings wlio kept a standing army, and this was a new blow to the feudal system.

A fourth crusade, which was set on foot at this time, (A.D. 1 204), produced only a short-lived conquest over the Greek empire. The crusaders crowned their chief, Badouin of Flanders, at Constantinople. A more lamentable crusade was directed against the Christians of the south of France, called the Albigenses. Myriads of them were exterminated, and many burned, be- cause they entertained doubts, as their adver- saries alleged, on some mysterious doctrines. It was to this prince that Pope Innocent III. offered the crown of England ; John, on his oart, surrendered his kingdom to the pope, who upon this became his protector. A powerful league was formed against Philip. John, earl of Flanders and emperor, assembled 200,000 men, and they were already partition- ing France, when Philip with 50,000 defeated them in the plains of Bovines. A French bishop signalised himself in this famous battle ; he

killed his enemies with an iron club, that be might not infringe tlie canons of a council, which prohibited priests to shed blood. The English barons, after having compelled John to sign their great charter, rose against him, when he retracted it ; upon which some of them ac- knowledged Louis, the son of Philip Augustus, as their king ; and this young and very warlike prince kej)t his ground for some time in England.

Ill looking back on this twelfth century, we observe several efforts of the human mind to break through its vassalage to lords and priests. On the one hand we see an increasing multitude of monastic orders, and begging friars, the de- vourers of the nation, and the militia of the pope ; and we see laymen, the dupes of their interpretations of the apocalypse, and various parts of Scripture, leaving their wealth to])ious foundations. But we

behold also some men, driven to extremity by the luxury and pomp, pride and rapacity of th« clergy, coming for- ward as reformers, or shaking of}' the yoke of credulity. We may notice also in this account a vicissitufle that has frequently occurred ; the clergy, at first poor and austere, enriching them- selves by abusing the terrors of the people ; when rich, arriving at a high pitch of corrup- tion; then falling into contempt, and disgracing religion ; spoiled, and growing rich again, only to be despoiled afresh. The popes exacted of the nations of Christendom taxes of every de- scription, and proclaimed themselves infallible ; upon this arose Berenger and Arnold of Brescia, those forerunners of the Reformation. Unto the time of Luther, the same causes produced the same effects. Every thing in human affairs tends to abuse, and abuse leads to resistance and revolution.

Schools began at this time to be established in the bishoprics. That of Paris soon became the most famous in Europe, although the course of instruction pursued in it was very imperfect 3000 students listened in the open air to the lectures of the logician Abelard the lover of Heloise, names which seem hardly to belong to so rude an age. But truth was sought for, not in nature and reason, but in the distorted doctrines of Aristotle ; men did not reason, they wrangled. During this period, chivalry flourished in castles and tournaments, while the people were oppressed by the most gallant of its votaries. The troubadours were incessantly singing of beauty and love ; and these men opened the path for the career of Dante and Petrarch, those ,11 fathers of modern literature in Italy, where in- '11 surrections, like those which had produced the communes in I'rance, were just beginning to lay the foundation of republics. The crusaders had brouglit a dreadful malady from Asia; and France was filled with leprous people. Conta- gious and pestilential diseases were in this age also as frequent as want. Perpetual war, by interrupting the cultivation of the country, brought on famine and mortality ; the dead corpses, lying unburied, produced the plagiie.

Louis VIII., called the I ion, defeated the king of England in France, where he was endeavour- ' ing to establish himself; after which, as the agent of the Inquisition, founded by Innocent

HI., he went (A. D. 1223) on the crusade against Raymond of Toulouse, expecting to deprive him of his dominions, on the pretext, that lie favored heretics. Hai-ing failed in this enter- prise, he died, leaving a son about twelve years old, who was made king, and a widow, Blanch of Castile, who became regent. This princess first quelled the factions of some of the great lords; she then pursued the war against the un- fortunate earl of Toulouse,

who basely submit- ting, suffered the inquisition to continue its ra- vages among the Albigenses, and ,even engaged himself to exterminate them. The piles were again lighted ; councils prohibited the laity from reading the Bible; and the breviary was given to them only in Latin. ‘ This,’ as a modern French historian observes, ‘ speaks volumes.’

l^oung Louis IX., whom the church counted as a saint, was really as good a prince as the times would permit. He vanquished the Eng- lish at Taillebourg and at Saintes, where they were assisting a rebellious vassal The pope, who had just excommunicated the emperor, be- ing obliged to flee from Rome, went to ask an asylum in France; which Louis had the firmness to refuse, and this disturber took refuge at Lyons, a city of which the archbishop was. the lord. But, being at the point of death, Louis vowed if he recovered to set out on the crusade, and neither the queen, nor the bishops, could divert him from his purpose. He performed prodigies of valor in Egypt, (A. D. 1249), but without any useful result ; sickness and famine annihilated his army, until, made prisoner by the Mussulmans, with all his men, he was com- pelled to contract for his liberty at the price of an enormous ransom. During this time a mad- man took upon himself to preach the crusades to the sliepherds and peasants; 100,000 fana- tics, called pastoreaux, followed him ; they did nothing but rob, say the historians, and they were massacred. It is conjectured however that at least a portion of these unfortunate wretches fell in with tliis project only to shake off the feudal yoke.

After the death of his mother Louis returned to France, and devoted himself wholly to the administration of the kingdom. He maintained peace as much as possible among the great vas- sals, and often yielded with more delicacy than good policy to the claims of the neighbouring kings. The pope had just laid the king of the Two Sicilies under an interdict; he offered his king- dom to the brother of Louis iX., who held the earldom of Anjou in apanage, but he reserved to himself an annual tribute, imder pain of ex- communication. The earl accepted it, and went over into Italy with a multitude of volunteers, who thus became crusaders, because they were called together in the name of the pope ; and who thought it o cious work to dispossess an ex- communicated perso’i. Naples was conquered in a short time, and the usurper beheaded the legitimate king. ‘Louis, in the meanwhile, seized on the temporalities of the bishops, while they were pillaging the people ; and yet woidd have become a cordelier, if it had not been for the queen. This superstitious prince still uniformly wore the cross; and, notwithstanding his age,

determined on a new crusade. Alleging that he should be able to convert the bey of Tunis, he disembarked in Africa, A.D. 1270; and, after having seen his army perish under a scorching sun, died miserably.

The reign of Louis IX. was the epoch of great political improvements. Since the capitu- laries of Charlemagne had fallen into disuse, there were no longer any national laws ; every province, or rather every feudal sovereignty, was governed by the caprice of its lord, or by usages not committed to writing, which were called customs. Every lord had his own tribunal, before which the people pleaded and combated. Louis IX. caused laws or establishments to be reduced to writing, to govern that part of France which was immediately subject to him : he abolished judicial combat, which had been already prohibited by a council, and fixed a scale of pecuniary mulcts, though it must be allowed imperfectly. He bestowed upon all the towns, which were formed into communes, the privilege of trial by peers, or juries, and gave them new guarantees for their freedom from the feudal yoke. He also established appeals in the place of citations, which forced the judges to act with the utmost rigor against the appellants ; and personally administered as king the last degree of the feudal jurisdiction. A private gentleman, imprisoned by the count of Anjou, with whom he had a suit, appealed to the king, who heard the cause ; he was acquitted and the king's brother was condemned. So greal an act of justice was then an unheard of novelty. Feudal family wars, in which relations were obliged to take part, under penalty of "losing their inheritance, were forbidden. The art of coining money, of which a multitude of lords had possessed them- selves, was restricted. Justinian's code, whicli had been taught at Bologna since the twelfth century, began at this time to be known in France. The priests, or clergy were still, how- ever, the only literary men ; they filled the offices of barristers ; they also practised medicine, and thus rendered themselves indispensable, for the time being, to the community. When any per- son died intestate, and on this account the church was deprived of the legacy of part of his money, which was obligatory in the case of all wills, the whole or part of the inheritance was confiscated : the establishments repressed these abuses. Louis IX. was in many respects the restorer of justice; but his religious zeal was too violent. He inflicted dreadful punishments upon those who swore by the name of God or the saints, and he established by ordonnances the frightful regimen of the Inquisition. He, how- ever, showed the firmest op])osition to the covetous despotism of the popes : declaring, in his famous law denominated the Pragmatic sanction, that the kingdom was dependent on God alone.

After the death of the king (A. D. 1270) his son continued the war against the Tunisians, and granted them a peace on their paying a tri- bute. This was the issue of one of those dis- tant expeditions which had impoverished Europe. The young king, Philip III. sur- named the Bold, returned into France, where

he added to the possessions of the crown the vast assignments of his uncle, the earl of Poi- tiers, who died without children. In this reign the Sicilians, resolving to shake off the heavy yoke of Charles of Aiijou, rose at Palermo, at the hour of vespers, and slew all the French throughout Sicily. Charles was from home. The king of Arragon endeavoured to seize on this island, when the pope excommunicated him and proclaimed a crusade against him. Philip put himself at the head of the crusaders, but returned to die at Perpignan, having taken only Gironne, after a long siege. Two monasteries disputed for his heart. This prince was much under the influence of the pope; and to him the holy see was indebted for the Venaissiii, which it retained till the revolution.

Philip IV'., his son, surnamed the Fair, suc- ceeded to the throne. Edward I. king of Eng- land paid homage to him for Guienne, which he acknowledged he possessed as a vassal of the crown of France ; but, some disagreement having taken place between the two nations, Philip cited Edward before his court, and on his refusal to appear, he fell upon Guienne sword in hand. Tiie war was then transferred to the dominions of the earl of Flanders, who was in allegiance with Edward. Here the French beat the English and conquered Flanders. A pope, who yielded in pride to none of his predecessors, Boniface VI II., was the second enemy against whom Philip had to contend. Being in urgent need of money, and wishing to spare the people, who were already overwhelmed vvith imposts, he laid a light tax upon the clergy. The pope imme- diately issued a bull, forbidding the ecclesiastics to pay it without the permission of the holy see. Philip replied by prohibiting the laity to pay any thing to the cliurch. The pope insulted the king in another bull ; but, being forced to yield, he made peace by canonising Louis IX., and he was allowed a small tax for St. Peter. Siiortly after, however, the])ope re-commenced his insolent proceedings. A French bishop, his Icicate, insulting the king, was driven by him from his presence; when the pope, rendered furious, fulminated now bulls, and summoned the king, under penalty of an interdict, to ac- knowledge himself king by the favor of the pontiff. Philip on this called an assembly of the people (1 302) to his assistance. The national assemblies had fallen into disuse, but he now included in them the deputies of the communes, which have been since called the tiers-etat. The three orders voted separately for the main- tenance ot the independence of the crown ; and, though the clergy at hrst wished some respect to be shown to the pope, the nobility opposed it. Money, however, was the main thing wanted, and an old French historian well re- marks on this subject, ' Public assemblies are a good means of levying taxes.'

The pope, on the other hand, called a council, which declared the

omnipotence of the tiara. The king; retorted by causing the French bishops and nobles to accuse the pope of imposture and heresy. Excommunication was then hurled asjainst him ; and the crown of France was offered to a prince of the house of Austria. The

pope, after this, was seized and insulted in his own territory, by the French partisans; and> though afterwards rescued, died, it is said, from vexation and anger. During this timn the Flemings, headed by an aged weaver, had revolted, and massacred the French ; and, on the count of Artois proceeding thither with ;ra army, he lost the battle of Courtrn\ , :;; vsi;,, :) 20,000 Frenciunen were killed. Tlie Iving now took the command of the army in person, but also failed to reduce the rebels : all he could do was to re-instate the earl of Inlanders in the pos- session of a few cities. Some time after the pope excommunicated his successor.

The proceedings against the Templars is a notable event of this reign. Philip the Fair pur- sued them to destruction with a fury that is in- explicable, but did not seize upon their wealth. The pope showed, also, as much animosity against them as the king. They were suddenly arrested throughout all France, and put to the tor- ture, when tlie confessions they were expected to make were dictated; and if they retracted they vvere burnt in a slow fire. Among those who were thus sacrificed were the grand master himself and all tlie great officers. The posses- sions of the order were given to the Hospitallers, since called the order of Malta.

The re-uniting of Champagne and Lyons to France, and the rendering of the parliament stationary at Paris, are also to be attributed to Philip the Fair. This latter was before a move- able and feudal assembly, following the court, and composed of noblemen chosen by the king. As these men of war could neither read nor write, men of the law, called clerks, or learned men, were added to the number, who acted as their counsellors. By degrees, the nobles hav- ing retired, these men remained sole judges. The peers, great lords of the soil, or domestics of the court, also possessed the right of admis- sion to the parliament. This assembly was, pro- perly speaking, the king's tribunal; and, since the time of Louis IX., took cognizance of all the appeals in the kingdom. It now generally sanctioned the Roman law, and made the study of the laws necessary; transferring to the learned men, and gentlemen of the long robe, a part of that authority and influence which had hitherto been engrossed by the military order. Thus the code of Justinian at first inflicted a heavy olow on feudalism ; but, in later times, the agents of the kine:s derived from it precepts and precedents in i ivor of despotic power.

In the thirteenth century some progress was made towards modern civilisation. Under Louis IX. a public library was formed in France; and

Roger Bacon, the English monk, a prodigy for his time, discovered part of the science of na- tural philosophy; and invented the camera ob- scura. Mean shows, and mountebank theatri- cals, under the name of mysteries, were at least steps that now lead ns f rwa,'] to Polyeuctes and the Tartuffe. Theological disputes and wranglin:: 'itill ccnt;r;;;ri!, ;! is true, but the Sor- bonne was founded in Paris, and the citizens derived, even from the disorders of the univer- sity, habits of anti-feuda\ independence ; while the brotherhoods, or corporations, gave them the

strength of political organisation. The mayors, provosts, and sheriffs, were also accustomed to resist arbitrary measures; and the tiers-etat at- tained a solidity of character and power which the crown felt to be useful to itself.

Upon the death of Philip, A. D. 1314, the royal authority was exercised successively, during ■a sl)ort space of time, by his three sons. Louis X., surnamed le Hulin, caused Enguerrand de Marigny, thi superintendant of the finances, to be condemned tc death ; they were only able to prove him a rogue, tho gh they accused him of SOI eery, and the king soon after repented of this unjust prosecution. The most memorable event of tins reign was the enfranchisement of a great part of the serfs in the country districts. The king set the example in his domains, which the lords by degrees imitated. In the preamble of the edict, dated 3rd July, 1315, it is declared that ' according to the rights of nature every one ought to be born free.' Liberty, however, was sold to the peasants as it had been to the citizens, and many of them, accustomed to slavery, and judging that liberty was not worth the price, wished to remain in that state. The want of money has often made men commit or repair acts of inju.itice. The Jews were recalled in the hope of plundering them ; but, o»i 'he whole, Louis occupied himself much for the public good. He died in 1316, not without suspicion of his being poisoned.

Some historians here introduce, as king, a posthumous child of Louis, who lived only eight

Charles IV., surnamed the Fair, punished many of the extortionate financiers of this period, who were generally Italians. He made war on the English A. D. 1321, in Guienne : and his sister, the wife of Edward IL, dethroned that prince. Charles having died without chil- dren, Edward III. laid claim to the throne of France, as the nephew, by his mother's side, to the late king. The peers, however, decided, that Philip of V'alois, who was descended from St. Louis by a younger branch, ought to be preferred. The

crown had been almost elective under Philip the August, and women had been excluded under Philip the Long; but it was since thˆt time agreed, that they did not even transmit the suc- cession to a male; ‘ thus in process of lime,’

says Mr. Bodin, ‘ was established the usage, once called the Salic law, now legitimacy.’

Section V. — The Branch of the Valois.

The reign of Philip VI. was one chain of calamities. He at first determined upon the reduction of the Flemings, who had revolted against their count, under the conduct of the brazier Arteveldt. He afterwards succeeded in making the king of England do homage to hira for Guienne, as that prince was not then in a situation capable of supporting a war. But his brother-in-law, whom he had justly banished, having taken refuge in England, stirred up, A. D. 1336, a terrible combmation against him. Edward III. entered into an alliance with the J’lemings and the emperor, and took up arms to reclaim the crown of France. The earl of Hainault joined him, with several other of the French lords. A strong fleet, consisting it is said, of 120 vessels, and manned by 40,000 men, was defeated by that of the English in the battle of Ecluse ; Edward was there in person. He supported a furious war in Brittany, which the earl, the king’s nephew, had excited, and availed himself of the advice of another traitor, Geoffrey of Ilarcourt, who counselled him to make a descent upon Normandy, and penetrated as far as the gates of Paris. He then retired into Picardy, followed by the French, who, urged by their imprudent impetuosity, attacked him at Crecy, August 26th, 1346. The Genoese cross- bow men gave way, and threw the French army into confusion ; it was defeated, and 30,000 slain were left on the field of battle. The French historians say, that, through an excess of honor or military pride, their troops would not use the cross-bow, considering it as a cowardly weapon ; hence they hired foreigners for this purpose. The English, less scrupulous, formed bodies of cross-bow-men among themselves. It is also stated that they first used cannon in this battle.

After this victory, Edward laid siege to Calais which did not surrender, until it had endured a dreadful famine. The devoted conduct of six citizens of this town, who, in order to save it, went bare-footed, and with ropes round their necks, to expose themselves to the wrath of Edward, appears like an incident in ancient history. Voltaire, however, disputes the truth of tills, story. To all these reverses were added a famine and a plague, which depopulated France. Disaster was now at its height ; the people could no longer fight or pay. Some fanatics, called flagellants, went about the country scourging themselves till they drew blood, think- ing to appease the wrath of heaven. Tlie king died, broken-hearted as it is said, and hated by

his subjects. He had established the gabelle, a tax upon salt. Under his reign Dauphiny was added to France, on. condition that the prince royal should bear the name of Dauphin; and Jane of Anjou sold Avignon to tlic pope.

John, the son of the former king, was also an impolitic and still more unfortunate prince. He at first caused the earl of Eu, his constable, to be beheaded, because he was suspected of keep- ing up a corresjjondence with Charles the Bad

king of Navarre, a powerful and active monarch, who had some claims to the crown. Edward III. now again carried the war into Fn.nce ; upon which John summoned the states-general, in order to procure svibsidies. BUt here again we must pause to surrey one of the great epochs of tliis history.

Philip the Fair succeeded in rendering the royal power almost absolute ; he had freed him- self from that of the Pope, and he strengthened himself by assembling the states-general, who had no proper idea of their own rights. The rivalry of the three orders had only tended to secure the preponderating influence of the king, and the states at first looked upon themselves only as a council destined to record his will. Now we see them assuming another attitude. Those of the north, or of Langue d'Oil, had the greatest influence on the public affairs. The states of 1355 acted upon the principle that the king had no right to impose taxes, but with the consent of the nation, represented by them, and determined to take upon themselves the receipt and employment of the revenues. For this purpose they sent into the Bailiwicks de- puties with the title of officers of the receipts, and named a standing commission, consisting of three members of each order, to watch over the conduct of the kmg, during their vacations. They took also the greatest precautions to guarantee the useful employ of the surplus funds, and to fix the limit of the king's expenses.

The prince of Wales, called the Black Prince, the son of Edward, and one of the heroes of this age, now headed the English forces in France. Entrenched with 8000 men, most of them Gas- cons, in an advantageous post, near Poitiers, and attacked by John, who had 60,000, he com- pletely beat him and took him prisoner. Charles, the Dauphin, assembled the states, who, as the organ of the nation, appeared now to be sensi- ble of its rights. ' They were strong,' says a French historian, ' in the unanimity of discon- tent.' They ordered an enquiry into the causes of the people's complaints, and granted subsidies, but on such conditions that the court,

being of- fended, endeavoured to collect them on its own authority, but this the people refused to obey. The states were again assembled, and it was found necessary to comply with the prescribed con- ditions.

The Dauphin tried one means of raising money, which his predecessors had often em- ployed ; the alteration of the exchanges. On this the Parisians revolted under the conduct of a private citizen, IM. Marcel; and the king of Na- varre, who had been imprisoned by John, escaped and supported the insurrection. The people ■were harangued alternately by him, by the Dauphin, and INIarcel. Paris became at this time a true democracy ; the revolters having, for their rallying signal, a red and blue hood. Mar- cel now began to form a confederation between the cities of France and the capital; when the Dauphin, having taken the title of regent, slipped away, and went to Compiegne to assemble the states general.

France upon this was thrown into the greatest confusion. Profiting by the disorder, the nobility

endeavoured to bring the peasantry again under the ancient yoke of iron: the latter, armed with forks and sticks, pillaged the castles and murder- ed the nobles, who, forming themselves into troops, slaughtered in their turn immense multitudes. This war of extermination is known by the name of Jacquerie, and the revolted pea- sants were called Jacques bons hommes.

There was but one step from this excess of anarchy and the evils of civil war to the restora- tion of absolute power, and to that every thing was at last yielded. The states of Compiegne first granted, it is true, the taxes under the names of hids and free gifts ; but they annulled every thing that the former states had done, as tlie work of seditious men and traitors ; and several deputies were condemned to death. Paris, hav- ing been blockaded, surrendered ; Marcel was assassinated, and the regent made his entry.

A treaty with England restored his liberty to John, who stipulated for the cession of one-third of the kingdom, and 3,000.000 of gold crowns. Not being able to raise this enormous sum, John voluntarilv returned to London, where he dieo in the Savoy, 1364. He is said to have been tlie author of that fine saying, that if good faith were banished, she would take refuge in the hearts of kings. Having obtained Burgundy by inherit- ance, John left it in apanage to one of his sons : thus conmienced the famous house of Burgundy, and thus this feudal custom of apanage began again the dismembering of the kingdom.

When Charles V. ascended the throne the whole of the public affairs were disorganised, but, being both prudent and clever, he rapidly retrieved his affairs. Charles the Bad of Bur- gundy did not cease to conspire, and

proved a formidable opponent: Bertrand de Guesclin however defeated him, when the war still raging furiously in Brittany that accomplished captain proceeded thither. Here he found Montfort, sup- ported by the English, wlio made him prisoner in the first battle that was fought, and peace was soon after restored.

Charles V. had by good management recniited his treasury, when, the people of Guienne being dissatisfied with the English, he declared war against them and the talents of de Guesclin ren- dered him every where successful. The court of peers condemned the English princes as re- bellious vassals, and confiscated their French provinces. De Guesclin, appointed constable, executed this decree. New treasons on the part of the king of Navarre, a long and ill-advised war, undertaken against the duke of Brittany, and extirpation of the English, wholly occupied the rest of Charles's reign. About this time the western schism of the church took place ; the pontifical see having been removed from Rome to Avignon, two, and even three popes were elected at once ; and the different kings espousing differ- ent sides, disputes, wars, and scandalous offences, were multiplied in all directions.

Charles, during his whole reign, assembled no meetings of the states ; he conceived the plan of holdinsr, instead of parliaments, seats of justice, where he obtained the ratification of tlie laws, in the presence ol the peers, the nobles, and a few of the principal citizens. His administration.

liowever, was throughout skili'ul und paternal ; aiuJ the historians have surnamed him l)oth the Good and the Wise.

In this fourteenth century an almost impercep- tible proijress was made by the human mind. While the capuchins were disputing, and even lighting on tlie question, whether their scourges siiould be made round or pointed, a Neapolitan invented the compass, and a Swiss cordelier gun-i)owder. Charles encouraged learning ; he collected 900 volumes, which, however, treated of little else than astrology. Universities were multiplied, but they were only occupied in the study of theology and logic. At this time Sal lust and Ctesar were translated into French, and a few other Latin works preserved in the monasteries. Some curious particulars of the domestic life of this prince are on record : he always rose at six o'clock; and having performed his private devotions, as well as attended mass, he gave audience to all who presented themselves, rich and poor, receiving tlieir petitions, and read- ing them himself. At ten o'clock he dined, spending but

a very short time at table, and eat- ing only of one dish ; he always diluted his wine with a considerable portion of water. During dinner he listened to tlie discourse of some learned man. After dinner he gave audience to foreign ambassadors, and then admitted his own ministers, to learn from them the state of the kingdom. At one o'clock he retired into his chamber and reposed himself; an hour after- wards his chamberlains entered and entertained him with light conversation ; at three he attended vespers, and afterwards walked in his garden. On his return the queen brought in his children, whom he examined respecting their progress in education. In winter, instead of walking, he employed himself, it is said, in reading the Holy Scriptures. lie took little supper, and early went to bed. Though he spent his time at home, in tliis plain and simple manner, he always appeared in public with considerable splendor. His dress was magnificent ; the gens d'armes preceded him ; his squires carried his ermine mantle, his sword, and his regal hat; and he walked always by himself, his brothers and the princes of the blood following him at some dis- tance. He seems to have been fond of literature, and no present was more acceptable to him than books.

We now again come to one of the most un- fortunate reigns in this history, that of Charles VI. He was a minor ; his uncles, the former king's brothers, disputed for the regency, and the duke of Anjou, who obtained it, took the opportunity to enrich himself by a system of ra- pine. He had completely plundered the treasury, when the king came to age. The Parisians, however, rose, and refused to pay the taxes ; when the government, intimidated, pretended to suppress them by an ordinance, and convened the states. These granted some subsidies ; but, when the court wished to obtain others by arbi- trary means, the people murdered the collectors. Tliis is what is called the insurrection of the swaddlers. The king returning out of Vlanders, where a revolt against the duke had been sup- pressed by the carnage of Rosbeck, entered Vol. IX.

Paris at the head of his army, caused the richest of the citizens to be arrested, executed Eeveral, among whom is mentioned a venerable magis- trate of seventy years old, declared that the whole of them deserved death, and was satisfied only by the payment of an enormous sum. Thus in the fourteentli century an end was put to the resistance of the Flemisli and French communes against arbitrary power.

The war continued in Flanders ; and was on the poiulof being carried into Brittany, to revenge the sudden arrest of the constable Clisson, when the king, passing through the Ibrestof Alans, a man clothed in white, and of a hideous form, issuing from a thicket, seized his horse, and cried out, ' King, go no farther; you are betrayed.' This was suibcient to drive Charles out of his senses; he became raving mad. Some time after, having recovered the

use of his reason, he relapsed at a masked ball, at which the fire had caught his clothes. It was in vain that a pretended magi- cian endeavoured to cure hiin ; he had but ano- ther lucid interval, and his madness became the signal of the most frightful discord. It was during this period, that Richard II. of England married the daughter of Charles VL

Two monks, who had boasted that they could cure the king, but who had only increased his mala- dy, were executed on the Place de Greve, because they had given rise to atrocious suspicions about the duke of Orleans, his only brother. These suspicions were af erwards revived; the duchess, who was a Milanese, M-as accused of having at- tempted to poison the dauphin ; and the duke was said to have employed enchantments against his brother, and to maintain a criminal corres- pondence with tlie queen, Isabella of Bavaria. This prhicess, on her side, had the king entirely under her influence, and treated him most un- worthily ; he was often, together with his chil- dren, deprived of the necessaries of life. About this time, the duke of Orleans having been named lieutenant-general of the kingdom, John, sur- named the Fearless, duke of Burgundy, be- came jealous of him. A dreadful enmity was excited between these two princes, and two fu- rious parties were formed. The duke proposed a new tax ; John, who was present at the coun- cil, opposed it, in order to make himself popular ; he left Paris, and returned with some troops to support his views. The queen and the duke fled, while John kept possession of the dauphin. These two enemies afterwards appeared to be reconciled; they consulted together; they shares! the same bed ; but on a sudden the duke of Orleans was surrounded by assassins and sacri- ficed. The perfidious John, forced to acknow- ledge his guilt, at first left Paris, and occupied himself in subjugating the people of I- iege who had risen against their bishop, but entered it again at the head of his army, and behaved with the utmost haughtiness. No one regretted the duke; he was generally detested, and a corde- lier was found, who uvmU) an ajiology for the assassination, alleging, that it was lawful to kill a tyrant, a doctrine that the Jesuits have since often revived.

But the young duke of Orleans, assisted by the count of Armagnac, his father-in-law, raised

the standard of revolt to revenge his liulier's death, and various battles ensued in different parts of France. The two parties were known as tlie Armaiˆmians and Burgundians. A third faction, tlie Cabochians, allies of

John, at the same time desolated Paris ; while the king, dur- ing an interval of reason, took part against the latter, and headed an army against liim.

France at tiiis time was the theatre of the ex- ploits of factious nobles, and all the interests of the people were forgotten in the strife. Untaught as yet by an experience that had still been se- vere, tliey became in fact subscirvient as dupes or victims to those passions of tlieir rulers which they foolishly shared, and were driven to and fro like the inert mass, struck by the hammer, and repelled by the anvil, until they became the rea- dy prize of a foreign conqueror.

Henry '., king of England, disembarked an army in France, with which he passed the Somme ia the autumn of 1415. The French, much su- perior in numbers, gave him battle at Agincourt in a very unfavorable situation, and were de- feated. (See our article Agincourt). But this victory was of no consequence to the Englisli at the time ; too weak to proceed, they again crossed the channel. The factions now revived : D'Ar- magnac entered into a treaty with Henry V., ac- knowledging him king of France, while the queen went over to the side of John, who had delivered her from prison, and the latter, enter- ing Paris, again put his enemies to the sword. Villaret relates, that 3500 persons were massa- cred in three days in the prisons, the streets, and the court of the palace. 2000 nobles, men in arms, presided at these Septembrisades ; and their chiefs, the Luxembourgs, the Harcourts, the Chevreuses, &c., epriched themselves with the spoils of their victims. Tt was during this time that Henry V. seized upon Normandy.

But the course of the despot John was hasten- hig to a close. One day the dauphin had an in- terview with him on- the bridge of Montereau, and the latter was assassinated. The queen (A. I). 1419) joined the son of John against the daupliin, when Henry went to them at Troyes, and was there proclaimed regent. He entered F'aris with great magnificence, married one of the daughters of Charles VI., and committed to prison a French marshal, who had failed in re- spect to him. He died soon after, and Charles VI. speedily followed him, lamented, it is said, by the people, as an unfortunate, if not a merito- rious prince.

Tiie parliament, which before had been ap- pointed only for a year, now became permanent ; tiie counsellors even possessed the right of pre- senting the new members to the king for instal- ment. Thus commenced the power of this body of men, who were becoming respected for their integrity ; we shall soon see how quickly they abused their influence. At this time of confu- sion, the university of Parts also exercised a species of independent power. By virtue of one of iis liberties, which was an abuse, crimes committed by its members were not cognizable by the civil courts, and impunity often was the result.

The daupliin (Charles VII.) proscribed by the queen and by Henry V.,ha(l,in the character

of regent, transferred the parliament from Paris to Poitiers. At the death of the two kings, he began to rally his party, and Marshal de la Fayette had gained for him the battle of Bauge, against the English. On the other side, the duke of Bedford caused himself to be declared at Paris, regent of France for Henrj' VI., now an infant The English had possession of more than half llie kingdom : they had for their al- lies the powerful duke of Burgundy, and the duke of Brittany ; and though Charles VII. was brave, he was weak and voluptuous, sufTering himself to be governed by his debauched com- panions and mistresses. At first partially suc- cessful, and attended by the valiant knights Du- nois, Lahire, and Tremoile, he lost the battle of Vˆerneuil, and all his commanders were bad ge- nerals. Orleans, now besieged, was on the point of surrendering, when a young shepherdess, gifted with a lofty imagination, persuaded herself that she was destined by heaven" to save France, and undertook to do it. She spoke like an in- spired person, and communicated her enthusiasm to others. Covered with armour, and with a banner in her hands, she marched at the head of the army and raised the siege. Possessed with the idea that her mission was to go to Rheims, to crown the king, she traverse I with him eighty leagues of the enemy's country, and accom- plished her astonishing enterprise. For once, reli- gious insanity produced a signal benefit ; but her good fortune abandoned the heroine personally : wounded and taken by the English, she was con- demned by some infamous judges and burnt at Rouen. Thus perished Joan of Arc, whose only crime was that of having saved her country. The tribunal that condemned her was composed of nine doctors of the Sorbonne, and thirty-five abbots and monks ; at the head of it was brother Martin, vicar of the inquisition, and Cauchon, bishop of Beauvais, both Frenchmen !

Henry VI., however, was crowned at Paris, and diaries Vlt. consumed his limited resources in festivals. 'No one can lose a kingdom move gaily,' said

I.ahire to him. But events took ano- ther turn, and his cliaracter ro.se with them. The duke of Burgundy, weary of the despotism of Bedford, and ashamed of being in alliance with a foreigner against his relation, entered into a treaty with Charles. Paris opened its gates to him J the English evacuated it, and the king entered in triumph. Agnes Sorel, his mistress, had reanimated his courage, and he signalised himself at Montereau. Normandy was conquered; Talbot was vanquished ; and the English were driven out of France. The nation having now recovered its energies, and found that union was its strength, the king applied himself to the re-establishment of order, being thwarted only by the unnatural revolt of the dauphin, afterwards called Louis XI. Already had the latter drawn into his treasonable designs theold friends of the kins', and retired into Dauphiny, then under the dominion of the duke of Burgundy. Other French princes also endeavoured, about this time, to treat with the English, and the king died full of trouble and mortification. His mother, the inhimous Isabella, died in misery at Paris, du- riuiT the residence of the English.

Some important chanis:es in the political condi- tion and the manners of the nation were produced in this reign. The royal power was extended and consolidated ; tlie knights and nobles assisting in this, because it gave scope for their exploits. The gendarmerie, or body of perma- nent cavalry, was formed, and a corps of foot archers. Formerly, wlien these veterans required their arrears of pay, some of the communes were resigned to them as garrisons : this was called living on the people. Now a perpetual tax was raised for the payment of the troops by the royal authority. According to Philip of Comines, * Charles VII. was the hrst who gained this point of raising taxes without the consent of the states. To this the nobles of France consented, for cer- tain pensions, which were promised to them in consideration of the money which should be raised on their estates.' Thus then it was the nobles who bartered this important right of the nation, and it is a noble who records it ! Now also were reduced to form the customs of every province, and fresh parliaments, like that of Paris, were established with a view of extending tlie royal jurisdiction in France. The council of Basle, in 1431, had set limits to the power of the popes, and an assembly of the clergy, at Bourges, composed, with this intention, the fa- mous Pragmatic Sanction, the charter of the liberties of the Gallican church. It also abolished t!ie reserves and the annats, re-established the election of bishops, and stopped the abuses of appeals to the holy see. The parliament regis- tered this decree. Under the following reign, this law, odious to the court of Rome, was for- mally abolished ; but it nevertheless continued partially to be observed.

Every thing in Europe, and especially in France, now tended to a central monarchy ; and in Louis XI. appeared a prince who, more than any other, assisted this movement. The example of this prince became fatal, and was a direful school for tyranny. Many princes, such as Richard III., and Borgia, took Louis for their model.

*The feudal sovereignty, relieved by the apa- nages, or the present assignment of an estate or province, in lieu of the future right of succession to the whole, was still in force : the king con- ceived the design of overthrowing it, and in this the interests of the nation were for once consis- tent witli his own. But the nobles formed a league against him, which was called * The league for the public good :' an expression used by all the factions. Charles the Rasli, heir of Burgundy, duke of Brittany, and the dukes of Bourbon and Berry united, yielded to the king at the bloody and undecisive battle of Montlheri, and Louis fmished the war by negociations, in order to gain time. Soon after he resumed Normandy, which he had granted in apanage to his brother, the states, which he had convened at Tours, sup- porting him by a unanimous decision.*

Some time afterwards the king was taken in a. snare laid by himself. During an interview, in which he was carˆessing and betraying Charles the Rash, the latter was informed that French emissaries had been sent to raise the pf ople of Liege against him. Charles, therefore, boldly

seized the perfidious Louis, and compelled him to march widi him against the Liegese. (Jn Liege being reduced, Louis was permitted to de- part for his own dominions. During the re- mainder of his reign, this monarch continued to act with his habitual duplicity. He first excited his people to rebel, and then, having crushed them, divided their possessions with his minis- ters, equally infamous with himself. At last they almost universally conspired against him. His brother Charles was poisoned ; the constable St. Paul, his brother-in-law the count of Armag- nac, and the dukes of Alencon and Nemours, were beheaded ; and the children of the last named nobleman were sent to the Bastile sprin- kled with the warm blood of their father.

England at this period, as well as France, had been for a long time the prey of factions. In an interval of repose its king endeavoured to renew the old claims on France, and Louis only main- tained peace by engaging to pay a tribute. He lost, however, nothing by this ; but gained an op- portunity to accomplish other objects. Having a great wish to obtain the dominions of Rene of Anjou, earl of Provence and king of Sicily, the latter entered into negociations with the duke of Burgundy, upon which Louis threatened the good Rene, his uncle, with a citation before the parliament : Rene yielded, and Anjou was united to the crown. Not long after Provence was ceded by

the will of Rene's heir.

Louis XL made many conquests by his pen and his knavery ; his cunning, however, was de- ceived by the marriage of the heiress of Bur- gundy with Maximilian of Austria, the emperor's son. This alliance raised up a powerful enemy for France. Burgundy, according to the law of apanage, was restored to the crown ; but Flan- ders refused to submit to Louis, and a war ensued ; in which the French conquered Franche-Comte, and some time after a treaty united to it Artois. Thus fell the monarchy of Burgundy, which had caused so many evils to France.

*The last years of Louis XL were disturbed by terrors and crimes. Shut up in a fortress he was afraid of his subjects, his servants, his own son, and even his physician. V/hile, an impos- tor in his superstition, he wore relics over his dirty linen, and perjured himself without ceasing. * He wished to deceive even the saints,' say the lively French writers. With respect to the people, if this prince was the author of some useful and popular measures, it seems only to have been with the view of rendering himself more despotic. He encouraged industry, for instance, as the great means of his own aggran- disement: he wished to see the people pros- perous only that he might lay on them the heavier taxes ; and if he first established posts in France, as Buonaparte afterwards formed mili- tary roads, it was only that he might the more readily clutch the victims of an iron despotism. He took tlie title of the ' most Christian king,' while his ruling maxim was, ' He who knows not how to dissemble knows not how to reign.' A clause of one of his charters, hoNvever, granted for the organisation of the communes, deserves particular notice : ' No citizen shall be detained in prison if he can give bail for his appearance*

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before the court.' This is exactly, says a French historian, the habeas corpus of the English. We tind it also in the institutions of St. Louis, and the capitularies of Charlemagne.

Charles V'lII. was thirteen years old at the time of his father's death: his eldest sister was recent. The duke of Orleans, a descendant of Ciiarles V., ambitiously sought her in marriage, and made great efforts to obtain her . but the states were assembled at Tours and he lost his cause. Some doubts were entertained of the coinpetency of the states on this occasion : ' To whom does it belong to decide this question,' said Pot, a deputy of the

nobility, ‘ if not to the same people, who first elected their kings, who conferred on them all the authority with which they are invested, and in whom, definitively, the sovereign power resides ? When 1 say the people, I mean the assembly of all the citizens, of whatever rank they may be.’ Such language was new, and must have produced a deep im- pression. The states consulted on the miseries of the people, which the records describe in energetic terms : they were wandering about in the forests without food ; men, women, and children, harnessed themselves to the plough in the night, through fear of being extorted upon during the day by the tax-gatherers and military. The states now, therefore, decreed the reduction of two-thirds of the taxes, with which Louis XL had burdened the nation. The ministers ob- jected, that they were paring the nails of the king ; they replied, ‘ that the interest of the king was that of the people, and to cherish the one is to serve the other.’ Bat they afterwards showed themselves very tractable.

On the duke of Orleans appearing to raise a party in Brittany, he was worsted at St. Aubin by that of the court ; and jNIaximilian, the suitor of Anne, the heiress of Brittany, being rejected, she was married to Charles 'IIL Brittany being thus united to France, the duke of Orleans was restored to favor. The young kinti now tliought he would become a conqueror; and remembering that he held, by the succession of Sicilian Anjou, some pretended rights over Naples, he marched thither (1494) with an ill-equipped army. At Rome he was alternately flattered and betrayed by the execrable Borgia, pope Alexander V’L Naples, however, was con- quered in haste, and fetes and tournaments were given by him in the capital ; while a powerful league was formed against him in Lombardy. The French army repassed the Appennines, and 8000 men in less than an hour beat 30,000 Italians at Fornova. The conquest of Naples, however, was already lost ; Ferdinand, king of Spain, who appeared in that country with the Frencli as an ally, caused the rest of the army to be driven out by Gonsalvo of Cordova. The French gained nothing by this expedition but a dreadful malady, and Charles died of an apo- plexy. Comines describes him as having a good heart but a bad head.

We are now arrived at the end of the fifteenth <;entury. The Genevese Columbus had discovered America; the Portuguese Gama had doubled tlie Cape of Good Hope ; the compass had opened the way to the new world, and commerce had

proceeded tliither as well as ambition. Specula- tions, until this time confined within narrow limits, extended themselves over the two hemi-spheres. X’oyages informed the minds of men and banished their prejudices. A German, by the invention of printmg, had rendered a still more important service to the human mind. In the mean time men disputed, as they will always dispute, and the realists and the nominalists con- tended

with one another to know whether they ought to employ themselves about words or things. The sum of observation and experience, however, increased ; dogmas became less imperious and creeds less exclusive; men began to think more of laboring to some useful purpose, and of know- ing, in order to en,oy.

Tlie reign of which we have now to speak is de- scribed, by the French historians, as the happiest in their history, yet without much appearance of external policy. Louis XIL was perhaps the best of the kings of France. He had a real and ardent love for the people, of whom he was called the father, and restrained the great, without ill-treat- ing them. ‘ The king of France,’ said he, ‘ does not avenge the injuries of the duke of Orleans.’ For it was he, whom we have seen disputing for the regency in his youth, as the first prince of the blood ; but age had matured him. Unfortunately the mania of conquest, however, pervaded the nation ; and he yielded to the infatuation. At that time civil relations began to be more exten- sive in Europe. That ridiculous feudal policy, unknown to the ancients, whicli treats a nation as a dowry, an inheritance, an indemnity, and which makes the fate of nations depend on a bad ad- ministration, prevailed more than ever. Louis divorced his wife in order to marry the widow of Charles VTIL, and to retain possession of Brit- tany. He had some claims on the Milanese in right of his grand-father, and he set out with an army (A D. 1501) to assert them. The Milanese were conquered in twenty days ; Naples soon fol- lowed ; and, always the dupes of Ferdinand’s perfidy, the French, beaten at Carignoles, were again driven out of Naples. Louis by a treaty was about to give his daughter, witli a third part of France as her dowry, to this treacherous ally, when the states, which he assembled at Tours, diverted him from it.

He afterwards had to contend with Julius IL the pope who made war in person, and mounted the breach. It was then that almost the whole of Europe entered into a league at Cambray against Venice, a powerful republic founded by poor fishermen. Louis marched first against the 'enetians. Until betrayed by the pope and the Spaniards, forsaken by the Swiss, who were no longer the men of jNlorat, and fought only for those who would pay them best, he assembled the clergy, who decided on a war against the pope, and furnished a subsidy. The battle of Ravenna was gained over the Spaniards by Gaston de Foix, who perished in it. Money was now wanted, and the French were obliged to with- draw from the Milanese, notwithstanding the prowess of the famous Bayard. La Tremouille, however, re-entered that territory, and was de- feated by the Swiss at Navarre. At the same time the English, united to the Imperialists, beat

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the French in Picardy. The Swiss penetrated as far as Dijon ; in fine, after entering into a treaty with Henry VIII. king of England, wliose sister he married as his second wife, Louis XII. died, the victim of numerous disappointments. He was economical and diminished the taxes ; he knew how to search out merit in obscurity ; pro- tected the laborer and the artisan ; watched over the administration of justice, and wished the law to be sovereign. It must be remembered, how- ever, that at that time tlie law was nothing else than the will of the monarch. Unfortunately, in this reign, the states general only acted in appear- ance : the sole authority which seemed to plead the cause of the nation, was the parliament, which, according to its constitution, should have meddled with nothing but the judgment of suits. The people, however, deprived of the states, saw with pleasure a permanent and respected body becoming their defenders, although it was to give importance to itself. These judges sometimes resisted the royal power, refusing the formality of registering its edicts, and they shared the privi- lege of a veto with the legislative authority. Perhaps it was well that there should be the image of a deliberative assembly, which might struggle with the nobles ; but it was often only the advocate of despotism. The parliament was at least useful in reducing arbitrary power within certain forms and regulations.

Louis XII. was called the plebeian king; Francis I. was the king of the gentlemen. He was also a descendant of Charles V. by another branch, and was a prince of handsome person, brave, prodigal, gallant, with high ideas of honor, a very brilliant knight, but a bad politician. ‘ We are laboring in vain,’ said Louis XII., ‘ this great boy will spoil all ;’ his prediction was just. In order to carry on the war in Italy, the king began by selling the fees of the courts of justice, and setting out to gain over the Swiss in the pay of the emperor at the battle of Marignan ; he beat them during two days. He then con- cluded a concordat with Leo X., which, annulling thePragmatic sanction, and abolishing the elections of the clergy, transferred to the pope and the king the rights of the cluirch of France : the Chan- cellor Duprat made this wretched treaty, because he wished to be a cardinal. The imperial throne being now vacant the king wished to compete with the emperor’s heir and king of Spain, who, however, obtained the dignity and became Charles the Fifth. This rival of her prince was a terrible enemy to France, opposing the most refined policy to imprudence the most self con- ceited. Francis entered into alliance with Henry VIII ; but Charles prevailed to disunite them ; while another enemy, Leo X., assisted the emperor to deprive the French of the Milanese, where they had rendered themselves hated. All Europe was now therefore leagued against F”rance, and one of

her best and noblest war- riors, the constable of Bourbon, being discontented, entrred into the service of her enemies. Francis was not intimidated ; he passed over into Italy, Charles's attempt upon Provence having been repulsed : but here slighting tiie advice of his oldest generals, he 'fought and lost the fatal battle of Pavia, and being made prisoner, alter

exhibiting prodigies of valor, graced the return of his conqueror to INIadrid. Francis now agreed to ransom himself by the cession of Burgundy ; but the treaty was not executed, the states of Burgundy refusing to pass under a foreign yoke. The king of France, however, obtained his liberty ; and leagued against Charles with a new pope, Henry VIII. and the Venetians, he re-passed the Alps and laid seige to Naples. But Jiere the plague broke out in his army, and he again eva- cuated Italy. On a definitive treaty of peace bemg signed at Cambray, his ransom was finally settled at 2,000,000 of gold crowns.

About this time the duke of Bourbon, not having the means of paying his imperialists, led them on to pillage Rome : on which the pope, who was taken prisoner, also paid a great ran- som to Charles V., who begged pardon of him for this violence; but kept the money.

*At this same period * anew religious schism,' as our French neighbours call it, was preparing for the emancipation of the human mind, and for great political changes. Leo X., wanting money to build St. Peter's at Rome, commanded the preaching of indulgences ; and when the Do- minicans fulfilled this mission in Germany, and publicly sold in the ale-houses seats in Paradise, the Augustinians were much discontented at being deprived of all share of the profits. One of these monks, named Luther, say the historians whom we follow in this article, a fiery theologian, preached against the Dominicans, the pope, and all the clergy. The scandals of which he complained, were open, and served to support his discourses. He then attacked with the Scriptures, the doctrine and discipline of tlie church; he rejected the confession, broke the monastic vows, claimed for every man the right of praying to God in the language that he un- derstood, and demanded the reform of Christi- anity. The pope excommunicated him ; but in opposition to some juggling tricks, which might have made a few dupes in a credulous age, this reformer converted the whole of the north of Germany. Henry VIII. , excommunicated for having changed his wife, and on account of the delay of a courier, separated from Rome through private pique, and constituted himself the regu- lator of the protestanls of England ; the reformed were so called, because they had protested against the diet of Spires, which condemned them. Charles V., after persecuting them, ma- naged them with prudence. Francis, who had entered into alliance with them in Germany, burned them in a slow fire in France, with the approbation of the parliament and for the amusement of his court.*

Sforza, the duke of Milan, having furnislied a pretext, the king again asserted his claims to that territory. The emperor, on iiis side, undertook to invade France but without success. Being accused of poisoning the daupliin, he was cited before the parliament, which confiscated Artois and Flanders by a decree of default, and after this the king contracted an alliance with the sultan Soliman; with whom we have al ready seen the pope in alliance. The concerted plan failed ; the cunning Charles obtained a truce, and u passage through France to go to

Ghent, which had revolted from him. Any other than Francis I. would have seized this opportunity of exacting a ransom in his turn ; but this confi- dence of a man of bad faith is a fine testimony to the honor of his dupe.

Tlie two princes having quarrelled, a new war broke out, A.D. 1542, and raged along all the frontiers. The king's galleys joined tliose of Barbarossa the Turk, and the count d'Enghien gained the battle of Cerisoles, in Italy, but with- out any advantage to France. Charles, in league with Henry VIII., penetrated as far as Soissons, and a peace y/as again signed at Crecy, which did not, however, procure the slightest rest to the world. On the inhabitants of Cabriferes and Merindol, cantons of Provence, where the tra- ditions of the Albigenses had been preserved, embracing Lutheranism, the parliament of Pro- vence condemned them to the flames : the troops which were returning out of Italy executed this decree, and .3000 persons were massacred for the honor of the faith, by bands of robbers. These things did not prevent Cauvin or Calvin from making fresh proselytes to a reform more entire than that of Luther. He denied the real pre- sence, suppressed the ceremonies of worship, and submitted the Scriptures and the faith to tiie test of reason. He, however, caused poor Ser- '. etus to be burned, who did not believe in the trinity. His doctrine spread in Switzerland, France, Holland, and England. Francis I. died of a disease called the Neapolitan in France, and at Naples the French.

Francis I. was the most absolute of the kings of France ; he loaded the people with taxes without the authority of the states ; and sub- stituted, instead of these, assemblies of the nobles, that is to say, courtiers, whom it was his plea- sure to consult, and who always approved his actions. He enslaved the Gallican church, in- stituted the censorship, sold the office of the judges, and corrupted the nation by his bad ex- ample. He was called the restorer of learning and the arts, because they grew while he was on the throne ; he doubtless protected them, but the age for their advancement had arrived. The genius of republicanism had prepared the way

The character of Henry II. much resembled that of his father; their reigns are also in some respects similar. The war was still carried on against Charles, in the course of which the king took Metz, Taul, and Verdun, and the emperor laid siege to Metz with 100,000 men. The duko

of Guise, a celebrated member of tlie ancient house of Lorrain, repulsed him, when Charles avenged himself by rasing to the ground 400 towns, and soon after Europe heard with asto- nishment, that he had quitted the empire to re- tire into a convent. Ferdinand, his brother, was made emperor, and his son Philip II. king of Spain. The latter was the Louis XI. of this age, and the most powerful prince in Europe. He moved it with two great levers, the gold of Mexico and Peru, and religious zeal. While the French were carrying on a fruitless war in Italy, the duke of Savoy, his general, obtained at St. Quentin, a victory disastrous to France. Terror spread on all sides ; Paris was fortified ; the Spaniards could have easily entered it ; Philip, however, thouglit proper to retreat. The duke of Guise, who was now appointed lieute- nant general of the kingdom, repaired this loss by taking Calais from the English ; but, when a peace was signed at Cateau Cambresis, it was stipulated that Calais should be restored in eight years (which has never been done) while the French were to keep possession of Metz, Toul, and Verdun. Henry II. was killed soon after this at a tournament, while jousting with one of his knights.

Under this reign, as under the preceding, wo- men began to assume great influence at court ; their intrigues, say the historians, have always been fatal to France. Henry II. suffered him- self to be governed by his mistress, Diana of Poitiers, who had already governed his father. The ingenious Rabelais, and the lively Brantome, have satirised these two kings, and described the dissolute manners of the age. In 1558 the states were assembled in conjunction with the parliament, and figured in it as a fourtli order : an anomaly which has not since been renewed. The nobles, humbled by Louis XL, had become the courtiers of his successors, until the luxury of the court had completely attached them to the king, and they appeared formed for obedience to his will. External wars now no longer oc- cupied them, and, while they resumed a portion of their independence, those factions re-ap- peared of which religion was the motive or the pretext. The prince of Conde, and the king of Navarre, his brother, of the brancli of Bourbon, were the chiefs of the protestant party ; Guise, the uncle of Mary Stuart, the king's wife, di- rected that of the Catholics. The constable, Montmorency, had also his party. The imperi- ous queen dowager, Catharine of Medicis, al- ternately protected and betrayed each party, while slie endeavoured to preserve tlie balance between them, by the celebrated maxim, 'divide and rule.'

The magistrate, Anne Dubourg, having been hanged as a protestant, A. D.

1560, his brethren formed a conspiracy at Aniboise, to revenge hiˆ death. This the duke of Guise defeated, and the conspirators perished in arms. The punish- ments of the Calvinists were now redoubled ; they defended themselves, and in the assembly of Fontainbleau claimed liberty of conscience, but in vain : the states were convened at Or- leans, in order to draw the Bourbons thither; and when Conde attended he was arrested, and

condemned, and would have been executed, had not the king died. Francis II. is descnbed as an excellent young man ; but he was a weak prince. His brother Charles IX. succeeded him at the age of ten years.

The states were now very much agitated : L'Hospital, a virtuous citizen, and philosophical raatˆistrate, a prodigy for his time, endeavoured in vain to bring their minds back to moderation and union. He merely succeeded m re-esta- blishing the Pragmatic sanction in relation to the election of bishops. Catharine then turned about from the Calvinist or Huguenot party (from a German word signifying confederates), and pro- posed to terminate the existing differences, by a conference at Poissy which only revived them. It was at this period that the Jesuits first esta- blished themselves in France.

A massacre of the Huguenots now took place at V'assy in Champagne, in consequence of some injuries committed by the duke of Guise's peo- ple. At Toulouse 4000 of the Protestants were murdered ; an outrage which the people of Tou- louse, for two centuries, have annually celebrated, and this furnished a fresh motive for rupture. The civil v/ar broke out; the Protestants were conquered by the royalists at Dreux ; and two of their ablest generals were taken. The rapacious and ambitious duke of Guise laid siege to Or- leans, and was assassinated there : he had made use of religion wholly as a means of aggran- disinghimself. Ashort peace ensued; butthe per- secution of the Protestants soon re-commenced; and was continued with impunity. The Hugue- nots were driven to extremities. Conde under- took to carry off the king, in order to get posses- sion of the government; for so absurd are the consequences of absolute power, that it is often exercised in the name of the titulary sovereign against himself. This attempt failed, and the doubtful battle of St. Denis took place soon after (A. D. 1567), in which the able Montmo- rency was slain. On a renewal of the war, the Huguenots, assisted by the Protestants of Ger- many and England, ventured upon another pitched battle at Jurnac, and were defeated by the duke of Anjou, the king's brother. Here tlie prince of Conde fell ;

assassinated it is said, near the field of battle, and while surrendering himself-to his enemies as a prisoner. Coligny, a prudent chief, repaired this defeat, and rallied the forces, until Henry of Navarre, whom he h;id formed for war, was placed at the head of the party. The duke of Anjou was again victor, however, at IVLocontour.

After these checks, the Protestants again made an advantageous peace, and having had four cities surrendered to them as pledges for their civil and religious liberty, Catherine drew their chiefs to court, and lulled them into a false confidence of security. Young Henry had just married the king's sister; and scarcely had the festivities closed, when on a sudden, in the dead of the night, the alarm bell was sounded, and the roy- alists rushed into the houses of the Huguenots, and massacred them without distinction of age or sex. The Iˆouvre flowed with blood ; the infamous king fired from his balcony upon the French. At the same moment similar liorrors

were perpetrated in the different provinces of the kingdom; but in the midst of this infatuation of cruelty, every one was filled with admiration at beholding two of the king's officers (D'Orthezand Curzay) who refused to act as executioners. The illustrious Coligny, however, was sacrificed ; and on this occasion the infamous Charles IX. said, ' A dead enemy always smells well.' Henry and the new prince of Conde were compelled to a sudden abjuration of their sentiments; and the king openly avowed that every thing had been done by his orders: even the parliament ap- plauded this massacre, and decreed an annual procession to commemorate the murder of 100,000 Frenchmen ! It is sufficient at this day to mention St. Bartholomew's day to excite horror; and yet at this day, observes an able French vˆriter, it finds some apologists.

If ever men were justified in assuming the sword in defence of religion, the Protestants of France were at this period. (A. D. 1573). The war was again kindled; and the duke of Anjou lost 4000 men at the siege of La Rochelle ; the women even fought with the courage of despair. The year following the party of the malcontents was formed, to which the Huguenots united themselves, and the contest still continued. In the midst of these transactions the king died. We learn with some surprise, says the worthy writer above alluded to, that this monster had some sense, wrote verses, and protected learning. During this reign the long continued council of Trent terminated its sitting ; after being occu- pied wholly in matters of diplomatic etiquette, and in condemning the doctrines of the Protes- tants. At this time also the Belgians and the Hollanders rose against the Catholic despot, Philip II. The duke of A/va, his general, com- mitted in those countries horrible excesses against the Huguenots, who were here called Beggars. But the latter found happily those means of resistance which enabled them to found one of the richest and most industrious communities

of Europe. The manners of this aie are a mixture of corruption and barbarity, of stoicism united witii superstition, and de- bauchery with crime. By an ordinance of 1574, in conformity with a bull of Gregory XIII., the year, which used to commence with Easter, and consequently to alter every year, was fixed to begin regularly on the 1st of January. The parliament for three years opposed this reform : it had always an antipathy to useful innovations. The duke of Anjou, who had just come from Poland, where he had been chosen king, returned to France under the name of Henry III. He proved himself a very successful general of an army: as a king he was idle, trifling, super- stitiously devout, and given up to infamous debaucheries. He was advised to act mildly towards the Calvinists ; he declared war against them. His brother, the duke of Alenˆon, and Henry of Navarre, afterwards Henry IV., united against him, and, in an edict of 1576, the Cal- vinists obtained some political advantages. The holy league was then formed : a combination of mad Catholics who pledged themselves to de- fend religion and the king in blind obedience to their chief, Henry of Guise. The states were

*assembled at Blois, and the leagruers had the as- cendancy, for the king was compelled to autho- rise the league ; but they soon began to treat him with little respect; and having consulted the pope, to know if tliey might disobey him for the service of religion, were answered in the athrma- tive. Guise put forward the old cardinal Bour- bon, who issued a manifesto in the name of all the Catholic monarchsof Europe; and the court, intimidated, yielded entirely to the leaguers. After this, however, the war called that of the three Henries broke out. Sixtus V. excommu- nicated Henry of Navarre ; and the punishment of Mary Stuart, ordered by the Protestant Elizabeth, increased the fury of the Catholics. Henry, however, beat the royalists, under the command of Joyeuse and other favorites, at Coutras ; while Guise, on the other hand, defeated the German Calvinists who were coming to his assistance. In the mean time, insurrections were organised at Paris under the name of the Sixteen ; that is, the sixteen quarters of the com- mune. The Sorbonne, which supported them, decided that the government might be taken out of the hands of weak princes ; and, having as- sembled at Nancy, the leaguers dictated orders to the king, who sent for the Swiss to Paris. The fanatical citizens immediately ran to arms, bar- ricadoed the streets, even up to the Louvre, and surrounded the troops. The king fled and left the capital to Guise and the league. This was * the day of the barricading.' The leaguers im- posed on the king a new union against the heretics ; and, about the same time, the English defeated the great invincible fleet of Philip.*

The states re-assembled at Blois (A. D. 1588), when the leaguers again had the majority. They occupied themselves much about the council of Trent, and not at all in the establishment of order. The Guises were now at the summit of their power, and could widi equal ease play tlie parts of Pepin or of Capet. This the king perceived, and, being unable to resist them, procured, to his disgrace, their assassination. The rage of the leaguers was thus redoubled : in the duke of Mayenne they soon found a second head : they cursed the king in the pulpit; and those members of the parliament who resisted them were im- prisoned in the bastile. At last the king, having only a few towns left, felt the necessity of being reconciled to Henry of Beam ; who received him very cordially and led him back towards Paris. They had already reached St. Cloud, when a young Dominican, under the direction of the leaguers, stabbed the king with a knife ; a mur- der which the Parisians celebrated w-ith joy : the Catholics generally, instigated by the Jesuits, endeavoured to prove from Scripture that it was lawful to kill a tyrant ; and Cle, the assassin, was regarded as a saint. In this reign the order of St. Michael, founded by Louis XI., having fallen into discredit, that of the Holy Spirit was instituted to flatter the Catholics. The intriguing Catherine died in 1589, detested by all parties.

Sect. V, — ˆThe Branch of the Bourbons.

The branch of the Valois being extinct, Henry of Bourbon Navarre ascended the throne as a descendant of Louis IX. : he merited it bv his

virtues. Brought up in the mountains, and among shepherds, he had little knowledge of that which corrupts princes ; he was a man long before he was a king ; and became, so to speak, the author of that legitimacy which he had to prove sword in hand. Acknowledged only by a few provinces, in full possession of none, he first struggled against Mayenne, whose numerous army included a considerable body of Spanish infantry, at that time the best in Europe. He was on tiie point of determining to go over to England, when encountering Mayenne at Arques he defeated him with 5000 men, and marched immediately towards Paris, which he was very near surprising. Here the old cardinal of Bour- bon, his cousin, had just been declared king under the title of Charles X. Henry, after this, vanquished Mayenne, in another battle, at Ivri, where he was heard to cry out ‘ Save the French,’ and then blockaded Paris. The leaguers de- fended themselves with fury ; fanaticism sup- ported them ; they even formed regiments of priests and monks ; but the famine became frightful and bread was made of the bones of the dead. Henry at last suffered provisions to be sent in to the besieged until the celebrated Ear- nese, the general of Philip II. came with an army to raise the siege.

During this time the duke of Savoy invaded Dauphiny and Provence ; and,

the new pope having proscribed Henry IV., Philip II., ‘ the demon of the south,’ assisted by the Sixteen, la- bored to gethimselfelectedkingof Erance. Henry laid siege to Rouen, which Earnese delivered, and war raged throughout almost all the country. To increase the anarchy a new faction was formed at Paris, called the party of the politi- cians, which united with that of the malcontents. It consisted of some moderate Catholics who sought for peace by recognising the king. At length the various parties came to a conference. The king decided on recantation, and said, ‘ Paris is worth a mass ;’ Mayenne signed a truce, and the league fell by the power of ridi- cule and contempt in an attempt to assassinate Henry, who entered Paris on the 2”2nd of March,

1594.

Thus closed the sixteenth century, the cen- tury of the Reformation, and of the most glorious events for mankind. Copernicus, Galileo, and Torricelli, notwithstanding the power of the inquisition, applied themselves in this memor- able era to the study of the philosophy of ex- perience and reason, while the pedants of the university were contending about the pronuncia- tion of the letter Q. Bacon, the chancellor of England, introduced some order into the cata- logue of human sciences ; Montaigne carried independence of mind into the study of man ; but political questions were still approached with much timidity. Morus, Bodin, and Gro- tius sought for the laws of the social body, ra- ther among the ancients than in nature, while Boetius attacked despotism with quotations and declamation. The Reformation, however, it must be admitted, spread something of a repub- lican spirit : the Calvini.st politicians, in 1575, traced the plan of a constitutional organisation, and were the liberals of the age; but public

opinion was not ripe for their efforts. Then also, as at all times when the human mind is emancipated, the enemies of religious and civil liberty were leagued together to reduce it again under their yoke. The Spanish kings had strengthened their throne by a union of the tiara with the sword ; the inquisition had been esta- blished ; and though for this time, at least, it was repulsed by France, the policy and fanati- cism of the priests again rallied, and the society of the Jesuits was founded, to become the curse of the world.

Holland, struggling both against the ocean and the Spanish aggression, triumphed over both. Called forward by the states of this republic, the brother of Henry III. wanted to assume the au- thority of a king, but the

French stupidly cried out ‘ Live the mass,’ and they were irritated, and drove them away.

Henry IV. at first re-established the parlia- ment ; then he undertook to allay the animosities of the Calvinists and the leaguers ; which the Jesuits as steadily inflamed. They were, how- ever, by the advice of the parliament, driven out of the university and the church, until they ob- tained from the pope the absolution of the king, as the price of their re-establishment. At this time Mayenne was not reduced, but the king defeated him at French Fontaine, and granted him an amnesty. The duke of Epernon also having revolted, submitted, and war was de- clared against Philip II., who took Calais. On this the king, w!)u wanted money to oppose him, summoned the nobles at Rouen, to take their advice; that is to say, to ask for subsidies, and told them, that his fairest title was the quality of a gentleman.

Ultimately, the Spaniards were driven back; MerccEur, governor of Brittany, who still held with the league, submitted, and a treaty was signed with Pliilip, who died soon after. At this time, the Calvinists having loudly expressed, in their meeting at Saumur, their discontent at the little favor they enjoyed, Henry issued the celebrated edict of Nantes, in which the exercise of their religion was tolerated under s”me re- strictions.

An event of this period leads us to speak of the French peerage. According to one of the principles of feudalism, a man was to be tried by his peers. The dukes of Normandy, Bur- gundy, and Aquitaine, the earls of Champagne, Toulouse, and Flanders, and other great vassals, could alone judge in matters that concerned each other; and they had a right to enter the king’s council at any time, as they were tiiemselves so- vereigns : it has been seen how the royal power was oppressed by such counsellors ; but, by their pride or their carelessness, the chief of them were kept from repairing to the court. Philip the Fair created new peers, in order to weaken and pervert this institution, which was still .so imposing that the rank of peer was su]ierior to that of prince of the blood. During tlie civil wars, however, the peerage had declined ; the nobles, being divided, became less formidable, and Henry IV. lowered their claims by a vigo- rpus display of the royal will. But the governors of the provinces had usurped immense power in

the time of the anarchy. They formed the pro- ject of preserving this in the same way as the counts of the time of Charles the Bald had done ; in fact, they wished to recommence the feudal government. Mayenne, Mercceur, and Nemours strove to make their honors hereditary. Biron treated with the duke of Savoy to attain the same object. The plan was to make France a feudal and electoral confederation like Germany. But the conspiracy was

discovered, and Biron, al- though the king's old companion in arms, was beheaded by a decree of parliament, A. D. 1602.

The latter events of this reign were, the pro- mise made to the pope to recall the Jesuits; the conspiracy of Henrietta of Entragues, to whom Henry had made a promise of marriage ; and the mediation between the pope, the Venetians, Spain, and Holland. Henry took arms against Austria, and proposed, they say, to execute the plan of a perpetual peace and confederation of Europe. At this time he was assassinated by Ravaillac. Two other fanatics had already at- tempted this crime ; excited to it, as was this wretch, by the Jesuits.

Henry, assisted by Sully, his friend and mi- nister, introduced order and economy into the public treasury, which formerly not more than one-fifth of the taxes ever reached. He was truly a good man, though he reigned like an absolute monarch ; and repressed every rising attempt at freedom, even to the resistance of parliament, by the empty parade of seats of justice. How, indeed, could such a man sign the cruel edict, that condemned his subjects to the whip and the galleys for killing a rabbit ? The reason may be easily given, though it is with pain; the despo- tism of Richelieu and of Louis XI Vˆ is to be traced to Henry IV. After this we may cease to reproach him for loving gambling, and se- ducing the wives of his subjects. But he was popular, and still lives in the gratitude of the nation ; a glory which, to the present day, be- longs almost solely to him.

Louis XIII. being only nine years old, the parliament gave the regency to his mother, Mary of Medicis: this tribunal thus again as- sumed the rights of the states-general. The benefits of the preceding administration were lost; Sully was dismissed, and his savings dis- sipated. The Florentine Concini, since marshal of Ancre, and his wife Galigai, ruined France by their influence over the regent. Tiie nobles and the factions rose again, and, when the states- general were assembled, their time was spent in empty discussions. They had not since that time been convened up to the period of the re- volution. The complaints of parliament about the bad administration of affairs were resented ; the prince of (Jondc was arrested ; he was at the head of the discontented and the Calvinists, who rose several times, and obtained some advan- tageous treaties. One of tlie king's young pages, who had his ear, persuaded him to dis- miss his minister, in order to shake off the yoke of the regent, whom he treated very harshly and banished. She twice revolted, assisted by some of the lords. The prince, cruel through his weakness, caused Concini to be assassinated, while his wife was accused of sorcery and burned

The new favorite received, as a gift from the king, the immense riclies arising from their mal- practices. Louis XIII. was one of tiiose men, who execute witliout ener'gy the suggestions of others, and wlio avenge tliemselves for their ha- bitual submission, by tits of brutality.

At this time appeared ihe celebrated cardinal Richelieu; he was the creature of Concini, and had lived retired since the fall of the hitter. Possessed of a disposition the most inflexible, and the most ardent desire of making others feel his power, he subjected every thing to the force of his despotic but able mind, lie at first attempted to make himself feared by the great, and caused several of them to be condemned to death by commissions. He surrounded himself with guards; suppressed the iiigh offices of ad- miral and constable, which formerly conferred immense authority; and treated the Calvinists with 'luf+icient kindness to excite tiieir hopes, that he might afterwards succeed in iiis project for oppressing them, by taking away tlieir towns. After a famous siege, which he con- ducted in person, and a truly heroic resistance of a year, displayed in all the horrors of famine, he took Rochfc'lle, which was defended by an English fleet, and he caused this bulwark of the Calvinistic fuith to be rased to the ground. He then reduced Rohan, the general of the reformed army, and discovered, it is said, that the plan of the Protestants was to found a federative repub- lic, like that which they had seen so prosperous in Holland. Had they succeeded, how dift'erent would the history of Europe have appeared !

We are, in fact, not now treating of the reign of Louis, but of Richelieu, before whom every thing bowed. Roussillon was conquered in 1628; the house of Austria was humbled, and several XIII. breathed a "little, and then died also, * as if,' say our French authorities, ' Riche- lieu had ordered hira to follow him to the tomb!'

The absolute power of Charles \TI. and Henry IV'. at least preserved the elasticity of the French character. R.ichelicu, like Louis XL, humbled and degraded it ; under him France

was rendered miserable; it seems as if despot- ism stupiiied the people, and inflicted barren- ness on the soil. The claims of parliament were of very little avail under such a master. One day, the magistrates having refused a regis- tration, Richelieu had them cited before the king, and kept them on their knees during ttie whole of the audience. He, however, instituted the academy, which had the patience to draw up his apotheosis annually for 130 years; but the Cid, whicli he suppressed, gave scope to the genius of French literature, and Descartes, per- secuted by the devotees, went to philosophise in Sweden.

Louis XIV. was at this time (A. D. 1643) five years old. The parliament still arrogated to itself the right of appointing the regency. The queen dowager, Anne of Austria, a coquettish and versatile woman, obtained it. Mazarine, an Italian cardinal, her favorite, who had been elevated by Richelieu, governed for her. He was a clever and supple man, who cunningly acted the despot, and seemed to regard the art of making dupes as the only art of reigning. The war with Austria continued, but without any result. The young d'Enghien, afterwards the great Conde, showed himself on this occa- sion : he triumplicd at Rocroy and at Fribourg; Turenne was victor (1644) at Nordlingen, and took Dunkirk ; and Conde was again victorious at Lens. This war, in which the Swedes were useful allies, terminated in the treaty of West- phalia (A. D. 1648), which arrangeil the Ger- manic body, and limited the imi'erial powej".

At the peace, the discontents of the nobles broke out against cardinal Mazarine, and, united with the parliament, they began the association called La Fronde, while the people sometimes supported them, and opposed the two magis- trates appointed by the court. There was, however, hardly any thing interesting to them in these quarrels of a few ambitious and turbu- lent men : bowed down under the yoke, they gained nothing by these disputes ; these fac- tions were in fact the clubs of despots, who laughed and jested at the public wrongs while they were contending for po\'er. A libertine prelate was seen playing the part of Catiline, and, while he recited his strange exploits, he rendered civil war amusing. At length Condˆ, discontented with the court, which he had vt first served, forsook it ; and though Mazarine had him arrested, he afterwards released him. Seeing the storm growing blacker, this great man at first left France ; but, a price being set on his head, he returned, raised 7000 men, and united himself with the Frondeurs and the Spaniards. Mazarine now raised a force, which, he placed under the command of Turenne, and an engagement ensued near the fauxbourg of St. Anthony ; in which Conde was victorious after a bloody battle. The parliament on this ap- pointed the irresolute Gaston, duke of Orleans, lieutenant of the kingdom. Mazarine retired from court, and the Fronde having no longer any pretext dispersed ; but the king and the cardinal soon re-entered Paris, and the natural result of this parade of insurrection was to render their power more absolute. Conde now

rejoined the Spaniards in the Low Countries, and the war continued for a long time between liini and Turenne; it was terminated, however, at last, by

the treaty of the Tyrenees. France re- tained possession of Artois, Koussillon, and Alsace, and Louis XIV. married (A. D. 1659) the infanta Maria Theresa of Spain. Mazarine died, leaving the despotism in good hands. Louis declared, that he wished to reign in his turn. He had already gone into the parliament in his hunting dress, his boots, and his whip in his hand, to forbid them meddling with state affairs.

Louis XIV. formed the design of being the most powerful monarch in Europe ; he succeeded in it by the assistance of some superior men, whom he had the talent of discovering. Colbert restored the finances, encouraged commerce and industry, protected the sciences, and organised the administration. A man of genius, named lliquet, devoted his fortune and his life to the construction of the canal of Languedoc. A marine was formed, which was able to contend with those of Holland and England ; the king made his ambassadors respected abroad ; and, Philip IV. being dead, pretended claims were set up in favor of his daughter Maria Theresa, in order to declare war upon Spain. Flanders was conquered in 1668, and Franche Comte in three weeks. Holland, England, and Sweden united as mediating powers ; and, by the treaty of Aix-la-Chapelle, la Comte was restored, but Flanders was retained by this fortunate prince and fortified by Vauban.

Louis, however, became enraged against Holland ; he must necessarily have an antipathy to a republic as bold as it was proud. He raised against them 200,000 men ; and, after having entered into an alliance with the king of England, effected the passage of the Rhine (A. D. 1672) in company with Conde, Turin, and Luxembourg, which at that time was extolled as a great military explo;t. Holland was in- vaded, and the king proposed the most ruinous conditions as the price of peace; but despair produced exasperation ; Ruyter, who had risen from the rank of a cabin-boy to that of an ad- miral, often beat the English and French fleets ; the Hollanders laid their country under water to preserve its liberty, and Louis evacuated it. Various neighbours of this imperious despot now took arms to quell his pride ; he reconquer- ed Franche-Comte, and made Turenne bum the palatinate. Conde gave battle to the stadt- holder of Holland, which cost the lives of 25,000 men. Duquesne by three naval victories ren- dered the French flag formidable ; and the peace of Nimeguen consolidated the conquests of the French arms.

After this, however, the stadtholder attempted an invasion of France, and the marshal of Lux- embourg was sent to repulse liim. In 1681 Strasburg was taken. The king sent a fleet about the same time to bombard Algiers, in order to teach the pirates of the Mediterranean to respect the F'rench commerce; he afterwards bombarded (Jenoa for having assisted Algiers. He was now at the height of iiis power; his I'lTson, his palaces, iiis exploit-^,

were endless

themes of flattery ; he was said to be tiie model of all that was handsome and magnificent, and the unheard of splendor of Versailles, in which the wealth of France was swallowed up, still intoxicates the people. He now became in- spired with the desire of extirpating heresy : and the Jesuits, the ladies, the poets, and orators applauded it. ˆMissionaries were sent into the Cevennes, accompanied by dragoons, who mas- sacred tire Calvinists, in order to convert them. The perpetual edict of Nantes was revoked, the temples demolished, children were torn from their parents to be made Catholics, and 800,000 peaceable Christians compelled to carry into strange lands their industry and resentments. Indignant Europe at last entered into a league against this persecuting despotism ; of which tiie stadtholder, the prince of Orange, became the soul and strength. This prince having been called as William 111. to the throne of England, and the parliament having driven out the Stuarts, Louis offered his protection to the dethroned king, James II. A terrible viˆar broke out ; the palatinate was again set in flames by order of the minister Louvois : Luxemboug gained vic- tories at Fleurus, Steinkerque, and Neawin, over king William, ‘ an unsuccessful soldier, but a man of great ability,’ say the French writers; and the philosophical and fortunate general, Catinat, triumphed over Savoy at Staffarde, and Marseilles. On the other hand, Tourville, at first superior to the Anglo-IIollanders, lost four- teen ships of the line at la llogue ; while the privateer, Duguay-Trouin, ruined the commerce of the enemy. Every where humanity groaned under useless carnage. The peace at Ilyswick was finally made (1697) through weariness. Louis, as formerly, did not sign it oSicially, and France was ruined. Money was made of every thing ; the title of nobility, hitherto purchased by fiefs until the time of Henry III., was sold for 2000 crowns.

The king of Spain, having no direct heir, suf- fered himself to have extorted from him, after much hesitation between the houses of France and Austria, a will in favor of Louis’s grand-son, the duke of Anjou ; and this prince accepted the crown of that country, knowing, however, that he exposed himself to a terrible war. When Louis sent him as Philip V. into Spain, he told him to come no more over the Pyrenees. A little coun- terfeit abbe, whom the proud Louis had dis- dained, and who had become one of the emperor’s best generals, prince Eugene, obtained great advantages in Savoy over old 'illeroi. The duke of Savoy, 'ictor Amadeus, abandoned Louis, notwithstanding the bands which united him to the Bourbons. Marlborough now tri- umphed (A. D. 1703) in the Low Countries; but 'illars also defeated the imperialists atllochstet, where the year following the French were defeat- ed in their turn, by Eugene and Marlborou’.;!!, while he was absent”. The English took (iibraltar and Barcelona ; Vendome, however, tlie worthy grandson of Henry IV., repulsed luigene in Italy, while

Marlborough gained the decisive victory of ilamilies over X'illeroi. Fortune then changed in the south; the French army was beaten at Turin ; Toulon was besieged ; the arch-duke was

crowned at Madrid, and Louis's protege, Philip v., was on the point of losing Spain, if Berwick had not gained for him the battle of Almanza. Eugene now traversed the Netherlands, went from north to south, and south to north, and took Lille, in conjunction with Marlborough. Louis, on this, stooped to seek a peace ; but such hard conditions were imposed upon iiim, among which was that he should set aside tlie succession of iiis grandson, that he preferred conturuing the war. After many efforts of heroic constancy, the French army, commanded by 'illars, was defeated in 1710 at Malplaquet, where the loss of the enemy however was immense. The kmg now again humbled himself, but his ofiers were rejected. Vendome then retrieved his affairs in Spain; Marlborough retired in disgrace ; a truce was concluded with England; and Villars, having surprised Eugene at Denain, obtained one of those splendid victories whioh often save em- pires.

A respectable historian assures us, that the allied sovereigns declared, before the battle of Denain, that they were not fighting with the nation of France, but with its head, whose ambition and despotism were incompatible with the peace of Europe. They demanded, as a condition of the peace, the periodical convocation of the states-general in France. Preparations were making at court to retire behind the Loire. VVe might thus think we were reading the his- tory of our own times, as it has been observed : and can it be true, asks a modern French writer, thai but for the victory of Denain, the represen- tative government would have been established in France a century sooner?

The peace of Utrecht was the consequence of this victory. 'illars, on the emperor hesitating to sign it, passed towards the Rhine, repulsed the imperialists, and signed with Eugene the peace of Ilastadt. The issue' of this ruinous war was less fatal than France might have ex- pected : the most humiliating condition was the destruction of the port of Dunkirk. At its close, the death of the dauphin, and of his son the duke of Burgundy, almost at the same time, put a finishing stroke to the misfortunes of Louis. He died at the age of seventy-seven, having reigned sixty-two years ; bequeathed to France 3,11 1,000,000 livres of debt, and been the means of the slaughter of more than 1,000,000 of men. Almost deified, while alive, he died, as might be expected, forsaken, and the people insulted his corpse.

The seventeenth century has been called the age of Louis XI V'., because this prince contributed to give splendor to it by his magnificence and taste for a certain sort of greatness. But what good did he effect for France or Europe ? lie rendered the former powerful, but a slave; ' he is the cause,' say some of their best historians, ' of the French having lost their national spirit.' By constituting himself the dispenser of glory, as ■well as of fortune, he demoralised the nation ; it forgot itself, to think only of him ; and when he uttered that saying, ' I am the state,' he was believed. His vain s])lendor gave false ideas to the nation, which is but too much inclined to make the man of the present moment its idol and

its palladium. Under Louis XIV'. Racine, Boileau, and Molicre, it is true, corrected the public taste and produced some masterpieces; but without Louis, Corneille, Pascal, La F'on- taine, Fenelon,and La Bruyere, would have ren- dered France illustrious; reason would have had more free instruments ; genius, delivered from the contemplation of the great king, would have aspired to conceptions more noble because mere useful. The spirit of independence, roused by the struggle of the Fronde, would not have 'jeen re- pressed ; the examination of the true interests of nations would not have been retarded ; and the seventeenth century would, perhaps, have been at once the age of reason and of genius. In order to oppress thought, despotism borrowed, as usual, the yoke of the faith. Bossuet was the apostle ol the monarchy of Louis XIV. and preached his in- fallibility. The jansenists were persecuted less on account of the doctrines about which they dis- puted, than because they thought in their own way, and destroyed the unity of the church. All France must think like the king ; from this arose that thick varnish of hypocrisy which concealed the corruption of manners. The Tartuffe, sanc- tioned by the court, is the triumph of genius ! This Louis XIV. moreover, so absolute, who would not suffer himself to be governed by his mistresses, closed his reign by allowing a Jesuit his confessor, to share his power with him ; to- gether with an old woman, whom he had married the widow Scarron, the governess of his legit' mate bastards.

The great grandson of Louis XlV. also be- came king at the age of five years. The parlia- ment violated the will of the late king, and named his son, the duke of Orleans, absolute regent. He was a very witty debauchee, and careless about business. The monotonous grandeur of the former reign, joined to its reverses, had, at length, wearied the French ; and, delivered from the oppressive constraint which ceremony an

The regent died in 1723, just as the king^ entered into his majority, and the duke of Bour- bon was appointed minister. He signalized himself only by some persecutions of the Pro- testants, lire abbe de Fleury, wlio succeeded him, was a very moderate and prudent man, about seventy-three years old

; he possessed the talent of quieting and conciliating the minds of

the people, and procured a long peace for France, which had been disturbed by the ex- pulsion of Stanislaus, the king of Brittany, father-in-law to Louis XV. Alliances were contracted ; a war was undertaken against the em- peror, allied to Peter the Great, who for the first time made Russia the theme of conversation in Europe. The campaign in Italy in 1734 was decisive; peace was signed at Vienna, and France gained Lorraine, of which Stanislaus had the sovereignty only for his life.

The war of 1740, for the emperor's succession, which his daughter, the illustrious Maria The- resa wished to preserve entire, was less success- fid. Several French armies were destroyed withoTit fighting : but the retreat of the marshal from Belle Isle into Germany has been much admired. Frederic, the famous king of Prussia, now began to exhibit his great talents as a poli- tician and general ; he conquered Silesia. In this war France was the ally of Prussia and the elector of Bavaria, the candidate for the empire. She had to contend against England, Holland, and Piedmont. The battle of Fontenay, in France, was gained ao;ainst the two former powers by marshal Saxe ; Louis XV. being pre- sent at the battle in which his family fought va- liantly. Success was balanced in Italy, and Maria Theresa's courageous perseverance was crowned (A. D. 1748) by the peace of Aix-la-Chapelle. The war also raged at sea : some French mer- chants made themselves masters of Madras, and their trade was respected in the Indies. At this ■ iine Charles Edward Stuart, assisted by France, !;nided in Scotland, but failed after some sur- jirising exploits.

The war soon began again, or rather the hos- tilities in the colonies were not interrupted; an En<;lish expedition was despatched thither with- out the form of a declaration of war, and the French armies were at first successfid in Canada and in Europe ; Richelieu took Mahon ; a naval battle was gained ; D'Estrees beat the English at Tlastembeck, and Hanover was conquered. In this war the ancient policy of Europe was overturned ; the strongest alliances were formed. France united with Austria against Prussia ; Frederic was lost ; Soubise marched against him with the powerful army of the coalition ; when his army met with a defeat as complete as that which fifty years afterwards took place at Jena. The war continued until the treaty of Paris, which deprived France of all its American possessions except New Orleans. The alliance then con- tracted with Spain, under the name of the family compact, was not to the advantage of France. Chatham i;foverned England, the power of which he raised to the highest pitch.

To finish the picture of this reign, we must mention the endless religious disputes and])0- litical intriu;ues excited by the bull imigcnitns, which assumed the infallibility of the pope ; the persecution renewed by the .Tesuits and the go- vernment against the Jansenists and the parlia- ment ; and the ridiculous miracles with which tlie latter endeavoured to defend themselves. The dissolute conduct of the court at this time, in- deed, and the scandal of the private life of the king, who gave himself up to the most abandoned

women, and spent the greater part of his time in the orgies of the Parc-au-cerfs, while the French were in want of bread, is stdl in lively recollec- tion throughout France ; as well as the mean despotism of the leltres de oachet, and their at- tendant oppressions. But why should we be delayed by this base spectacle of the decrepitude of arbitrary power ? It is enough that, by a re- action, it has produced the greatest benefits. The reign of Louis XV^., therefore, has been said to be that to which France owes the most ; it made the people think ; it fully opened their eyes to the evils of absolute power; and then hastened the epoch of national manhood and deliverance. Degraded despotism is as instructive to nations, as despotism, surrounded with its glory, is fatal to them. We need only therefore speak of the ministry of Choiseul, who rendered France glo rious in her external relations, and conquered Corsica, and of the expulsion of the Jesuits, who had just been assassinating a king of Portugal, and were suspected of directing the poniard of Damien against Louis XV. This is a curious event in a reign in which fanaticism sacrificed the old Calas and the young Labarre ; and in which Avignon was restored to the philosophical pope, Clement XIV., as a recompense for abolishing the Jesuits. The patriot Chalotais was impri- soned in this reign for making use of the parlia- ment of Brittany to denounce the tyranny of an extortionate governor.

In reviewing the march of the eighteenth cen- tury, the subject, on the one hand, of the male- diction of the partisans of ignorance, fanaticism, and passive obedience, and extolled on the other by the disciples of anarchy, and of a false philo- sophy, we shall allow our French authorities, as we have frequently done in this paper, to speak freely on French topics. Whatever blame may be attributed to the corruption of the regency, it is to this period that the French are indebted for the emancipation of their minds. The most popular of their historians say, ‘ The literary])aradoxes of Lamotte attested at least some independence of mind, and the desire of opening up new paths to knowledge. Fortenelle rendered science popular. Montesquieu took a bold view of the manners, faith, and laws of nations. Vol- taire carried a philosophic spirit into literature ; while Massillon, by introducing it into the pul- pit, rendered in a moment Christian eloquence the interpreter of close reason inij. The protes- tant refugees also. Bayle especially, contributed more or less to the emancipation of thon

elusive inductions from principles at this day disputed, we owe them some gratitude for having directed the curious enquiry of all towards the examination of questions of public interest. Strange systems have multiplied, but the atten- tion has been generally turned to the useful; the causes of the misery of the people liave been enquired into, and the public mind has been formed. Adam Smith, and the Scotch, have ap- plied to this study that rectitude of mind which they have manifested in philosophical history. The Italians distinguished themselves by their sagacity and investigation, but the French econo- mists must still be regarded, say the French writers, as the forerunners of the enlightened philanthropists, at this day spread over both hemispheres. Voltaire, D'Alembert, Diderot, Duclos, Mably, Condillac, Marmontel, and Ilel- vetius, certainly sapped the foundation of many baleful prejudices, which obstructed the march of the human mind ; Raynal displayed to the new world an immense futurity of prosperity ; and Rousseau, in his unnatural way, developed something of the philosophy of the heart and of nature.

Section VII.— The French Revolution.

It is difficult to know how to commence the history of the Revolution ; its true preamble has certainly been already given in the history of the entire monarchy. The existence of a nation (observe our lively neighbours) may be com- pared to the life of man : he is born, he grows, he prospers or meets with adversity ; he has his ailments, and their cures and relapses ; and he dies after having given life to a new man. The nation of the old regime exists no longer, a new nation has taken its place ; it is of impor- tance to know how it has arisen, and for that purpose to take as copious a view of its original and progressive courses as possible.

Strange social combinations, established by chance, by force, or by error, must in time, it has been well said, be subverted by law, that is, ■written reason: we shall not decide whether this reason is absolute or relative ; we only consider it as the expression of the ideas and wants of the greatest number. The general interest, the sharing, as much as possible among men, of the advantages of the social state, is the proper ob- ject of law. Men dispute about a crowd of differing theories, which, however, agree in this point ; and while they contend respecting the seat of sovereignty, its exercise, and its attributes, all political doctrines and systems must bow be- fore tlie general interest, manifested by the opinion of the greatest number.

The French revolution, according to the re- spectable writers of that

country, is the application of this idea ; it was nothing else but the solemn manifestation of the general interest, situations and antecedent circumstances givinij^])lace to the reign of opinion and law. We shall see this chan^je effected, they observe, in the midst of terrible outrages, and, notwithstanding obstinate resistance, we shall see it consolidated in dangers, and])lots, in passions, and errors, and crimes. The interests and ambition of a few will for a long time be injurious to the interests and wants

of almost the whole community. We shall be hold the revolution, hurried and irritated, passing far beyond tlie bounds it had at first intended, and returning to them as all revolutions do. We shall be astonished at the recital of deplorable excesses, which critical situations, resentments, and mistrust, do not sufficiently palliate, and which are not compensated by a few sublime actions. We shall find moments of delirium, and even of madness ; schisms, and purifications in parties, when they possessed power ; alliances with the most opposite parties, when they were not in power; opinions bending to circumstan- ces; weakness rendered hardy by fear ; egotism, bold when it is poor ; timid or apostate, when rich ; in fine, we shall see disinterestedness and good faith often the dupes of avarice and hypo- crisy. 'The new nation conceived during the time of a declining despotism, has however spent its childhood amidst these frightful sorrows; but it is strong, and full of hopes. It is tlie most substantial result of the revolution, and this result will last.' IVIay the prediction be verified, we add most cordially !

The revolution had already taken place in the public mhid, when Louis XVI. (1774) ascended the throne. Nothing was wanted but to reduce it into a palpable form. The king could accom- plish this end in two ways; either by assembling the nation, and leaving it to digest the particular forms of a constitution, or execute it himself, by granting the nation what it demanded. He began to take this last course, but afterwards abandoned it, because, though he had a real love for that which is good, he wanted the perseverance indis- pensable for doing it. He called to the ministry Turgot and Malesherbes, men who united great talents to great virtues. The former, who pro- fessed the principles of the economists, and who had rendered himself famous by the wisdom and popularity of his administration in a province, came with the desire of producing those reforms which public opinion claimed, and of which the king acknowledged the necessity. He wished to abolish the services, to destroy the vestiges of feudalism, to suppress the monks, recall the Pro- testants, give liberty of conscience, fix the civil interest on the foundation of law, &c. ; in fine, he wished to apply the theories which the econo- mists had developed. A reformer of this sort must necessarily draw upon himself disgrace from the court, and all the privileged orders. Abuses are naturally inimical to

reformers. An old courtier called Maurepas rallied them, and leagued diem with the parliament, recently renewed. A storm gathered against the patriot ministers, and the young king sacrificed them to the clamors of a corrupted court, which turned his good intentions and kind manners into ridicule, and which especially feared economy. Their dismissal, the momentary triumph of the court, disgusted and distressed the people. The scandals of prodigality increased more than ever. Maurepas, however, placed at the head of the finances (the chief place in the ministry, since here the disease chiefly lay) Necker, aGenevese, and a Calvinist, which was at least a concession to the spirit of tiie age.

At tliis time the memorable war broke out in

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the English colonies of America. Tliey followed perhaps the course of nature, in separating from their mother country, and the desire of independence was the real cause, though a miserable tax on tea became the ostensible one- When a revo- ivition is to take place, it is very often a financial (juestion that determines it : we shall see another example of this in France. The cause of the American insurgents naturally at any rate excited great enthusiasm in France, such as the eigh- teenth century had made it. ' To help in resist- ing oppression, to found a republic,' were invitations sufficiently dazzling to the French youth; and even among the nobility philosophi- cal and liberal principles were imbibed. The young marquis de la Fayette setting off the first, at his own expense, gave the signal to the whole nation. He was the first volunteer for the new liberty. Franklin, who was the patriarch of it, hurried away the cabinet of Versailles with die tliought of humbling England; and this was cer- tainly the result of the war. The French fleet appeared witii honor on all the seas ; the army worthily seconded general Washington : by the treaty of Paris (1783) the independence of the United States was acknowledged in Europe, and the French, who returned from them, gave those flattering accounts of the new republic, which induced the people to think they had seen a nation at once free and wise.

Still it was necessary to borrow, in order to support this war; and the embarrassment of the finances increased. Necker unfolded the cause of this in a book that he published, as well as the means of obviating the evil, by an equali- sation of the rates; when the nobility and clergy attacked this plan and displaced the minister, Calonne came forward promising confidently to set all things right. He spoke of economy while iie smiled on the prodigality of the court; he liad resources against every event, systems to suit every circumstance. But the nation soon jjerceived that he was a mere blunderer, who ••elied on loans, as a convenient tax imposed upon

futurity, to relieve the present. The affair of tlie necklace, and the disgrace of the prince de Ilolian (see our article Antoinette), then fol lowed, and still farther diminished the respect of the people for the crown. Calonne wanted to give to his projects the support and assistance of an appearance, at least, of public opinion. He had an assembly of the notables convened, that is of the principal persons of the court and the magistracy, before whom he laid the existing deficiency of 140,000,000, and requested money. He addressed himself to the wrong sort of men ; they were the privileged ; they exclaimed against it, and separated after having overthrown Ca- lonne ; the assembly of notables, over which Monsieur, afterwards Louis XVIII., presided, contributed much to his fall. Still the French owe to this assembly the demanding of the king the edicts, which abolished the feudal services and created provincial assemblies, such as Turgot suggested.

Archbishop Brienne, a man of the court, brought into the ministry a complete incapacity for business. A territorial tax and one upon timber were rejected by the parliament, notwith-

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standing the efforts of the seat of justice, which it was thought would carry them with a higii hand. The better to intimidate the court, the parliament called for the states-general, and thus made itself popular ; but it did not dream that it was signing its own abdication. Ba- nished from Troyes, where it had become wea- risome, it returned to Paris with the intention of granting the ministry a loan of 420,000,000, and then suddenly refused it to tlie king, who had too sharply pressed the registration. In these circumstances it was, that the duke of Orleans began to show that opposition in consequence of whicli he was banished.

In order to humble the parliament, the minis- try formed the plan of the division into bailiwics, and the creation of a plenary court, composed of the great functionaries, civil, military, and ec clesiastic, which was appointed to accomplish the registrations. The counsellor d'Epremesnil unveiled the secret of this absurd plan, and de- nounced it to his colleagues, when the parlia- ment protested immediately against every system- founded on the good pleasure of the sovereign : and the people applauded and protected the ma- gistrates against the armed force, which had vio- lated their precincts. The financial distress, however, increasing, the king recalled Necker, who was the popular minister, and at the same time fixed the meeting of the states-general for 1789. The dismissal of Brienne was celebrated at Paris by the burning of a little man in a mitre before the statue of Henry IV. Blood was shed several times on this occasion. The fermentation was not less in the provinces. The parliament of Brittany appeared to wish to begin the revo- lution ; while the states of Dauphiny

exhibited the three orders united by the same patriotism and leagued against arbitrary power.

Necker commenced by repairing the faults and outrages of Brienne. The parliaments were re- newed ; but that of Paris was already retiring before the states-general. According to his custom of allowing legislative consultations, he declared that the deliberations and vote> of the orders would take place, as in 1614. But the old antecedents were no longer seasonable, and the patriots demanded that the third state should at least be equally represented with the two other orders. A multitude of writers attempted to discuss this question, and in Sieyes's book en- titled, What is the third order ? it was answered plainly — the nation. P>om that time two parties were very clearly distinguished. The aristocrats were those who wished to preserve the exclusive privileges, and resist the reformers ; they were weak, and had only the court, the dignified clergy, and the majority of the nobles for their partisans. The patriots consisted of the peasan- try, the industrious laborers, the citizens, the inferior clergy, and a small part of the nobility. INIonsieur, and a multitude of young officers who had returned from America, showed themselves patriots at court. Duport was at the head of those in parliament. Necker appealed from the decision of this assembly to a second meeting of the notables, which confirmed it; Monsieur's board alone supported the opinion of the king ill favor of the double representation. In oppo-

sition to the advice of the notables, the king de- clared, that it should take place, but with sepa- rate votes. Then tlie election was contemplated, and France was prepared for the revolution.

It will be impossible to mention all the local insurrections and partial acts of violence that took place, and had more or less influence on the march of the great events of this time ; it is of more importance that we should observe the progress of the great parties. With the meetings of the bailiwics for the elections commenced

people against a foreign regiment, the universal cry was ' To arms ! The mingled soldiery and popu- lace rushed into the arsenals, the workshops, and finally (July 14) to the Bastile, in which despo- tism had so often buried its victims, carried it by assault, and rased it to the foundations. It is however to be observed that the prisoners re- leased, neither in their number, nor in the de- scription of tlieir cases, justified this measure of open revolt against all existing authority.*

Tlie court, stupified with astonishment, now

political clubs, after the pattern of those of Eng- ordered tiie dismissal of the troops, and the recall

land : but in France they were destined to be- of Necker. Paris nominated Bailly, who presided

come more turbulent. At that time they were at the tennis court, its mayor, and La Fayette

peaceably conducted, and the speakers asto- became commander of the national guards. The

nished the people by informing them of their king came to Paris from Versailles, and received

rights ; but they did not excite them to obtain from Bailly the tri-colored cockade, the mark of

them by murder. his union with the people, who saluted him with

Some of the elections were tempestuous ; the sincere acclamations. At that time, perhaps, the

nobility of Brittany refused to send deputies ; revolution was completed ; but emigration com-

that of Provence excluded from the election of menced, and the public agitation continued,

the three states one of their members, as a pas- While the assembly was discussing the ‘ Decla-

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.sionate and violent orator ; a politician of lofty and prompt measures ; a man of a clever and active conduct ; ambitious, because he was cor-

ration of the rights of man,’ which was to be the basis of the constitutional edifice, the fanatics of liberty assassinated various individuals, and set

rupt ; and an implacable enemy of arbitrary fire to the chatetiux. Robbery succeeded to con- power, because he had been in the Bastile : fusion. The clergy and nobility consented to this was Mirabeau. The constituents sent back give up their privileges for the public peace, and to their mandtoaries some papers in which their in one memorable night (Aug. 4) every vestige

wishes were expressed. These sheets contained of feudalism was annihilated by the voice of the the voice of the people; they fully admitted that deputed nobles and prelates. Their constituents the nation needed a revolution; and the three were far from subscribing to this act of disinter- orders now agreed to demand the reforms that estedness, wrested fioin them in a moment of the general interest required. The court assem- fear and enthusiasm, and the discontent of these bled the states at Versailles, thinking the more orders united with the menaces of foreign troops easily to influence their proceedings. At the to increase the exasperation of the people : every ceremony of installation the tiers etat, in a mo- where they were ready to run to arms. The king dest s'lit of black, received from the etiquette of and queen vacillated towards each party by the court all the pitiful mortifications that could turns. Now they seemed by their presence to

be inflicted. But the people perceived it, and cried out, live the states ; while the order in question kept silence, ' thinking of the time, when they should raise their heads.'

Neither tVie clergy nor the nobility attended at the hall of the sittings for the verifying of the powers. Tlie urgent representations of the states to avoid a schism havingbeen rejected, they con- stituted themselves a National Assembly, and de- clared every other kind of representation illegal. This vigorous measure overawed the court, which prepared some half concessions for- the royal sitting, and brought troops into the hall, in order to support them. When the king, at his sitting,

approve of the counter-revolutionary vows uttered at a banquet by the body guards and the officers of the army ; again they would hold interviews (espe'cially the queen) with known aristocrats ; and evidently acted on the mere intimidation of the moment. A want of bread was experienced at Paris, when an immense crowd went to Versailles, and though restrained by the national guard, who ran to the assistance of the queen when the furious wretches, who had forced the palace, were about to sacrifice her, they proclaimed aloud tlieir determination to bring the king to Paris, together with the assembly ; wliich they accom- plished. Many of the members belonging to the

ordered the states to separate into three cham- nobility now separated from the latter, hers, the states remained, declaring the inviola- At this time was formed the famous Jacobin bility of the representatives ; Mirabeau declared Club, an illegal and violent power, which raised that they would yield only to the force of bayo- itself at the side of the national representation, nets. From this time the people assumed a real in order soon after to crush it. At first it con- sovereignty, and though apart only of the nobility sisted of a

few well-disposed deputies and and the majority ofthe clergy united themselves to patriots; but every thing was lost when the the great body at first, the rest severally joined it, in leaders made themselves the distributers of popu- deference to the king and to the necessity of the larity. This focus united in itself that violent case. Still were the privileged orders strong excitement which was perhaps necessary for the enough to disturb if not to resist the stream of defence of the new system against attacks both events : they conspired, and 20,000 men surroun- from without and within. But the frequent ded Paris. At this juncture M. Necker was once insurrections began to brutalise the manners of more sent away. The assembly in vain demanded the people, and the assembly decreed martial the dismissal of the troops: the tumult was at its law to stop their excesses. The liberty of the height, and the French guards, uniting with the press and of religious opinions was, at the same

time decreed ! Some real services, however, were performed by the National Assembly.— France was divided into departments; the titles of the nobility were abolished ; the wealth of the clergy, who possessed a fifth of the territory of France, was, notwithstanding their outcries, declared national property, and appropriated as a pledge for the issue of the assignats ; while the array was purified of aristocratic privileges, and boy-officers. The oppositions and protestations of the parliament and the emigration, however, increased. At last the idea of a great patriotic festival was conceived, in order to eft'ect a general reconciliation. The 14th of July, 1790, the anniversary of the taking of the Bastile, was chosen for this confederation, and 100,000 depu- ties of the people, of the army, and the national guards assembled at the Champ-de-Mars, to swear fidelity to the nation, the law, and the king, who appeared in the midst of them. Never had there been a more solemn compact, or greater enthusiasm manifested ; all hearts were intoxi- cated with hope, and the whole people appeared (alas ! what a mere appearance !) like a nation of brothers. The aristocracy, who took no part in this national emotion, turned it into ridicule. Amidst all the patriotic donations the embarrass- ment of the finances increased, and Necker, whose too great confidence in himself had fettered his designs, now finally retired. Some clubs of aris- tocrats were formed, and a camp of the enemies of the revolution appeared at Jalbs.

Insurrections among the people, the army, and navy, now extended : the constitutional monar- chy lost its defender, Mirabeau, who received the honors of the Pa>ntheon ; when on a sudden it was reported that the king, yielding to the suggestions of his court, had escaped, but had been stopped

at Vareanes, on his way into Germany. The design of this emigration ap- peared very suspicious to the people : to every reflecting mind, out of France, it was obviously the retreat of worn-out patience and frustrated hope. The unhappy prince re-entered Paris in the midst of a silent population : and the assem- bly suspended him from his functions until they could finish the constitution, and offer it to him for his acceptance. This however was only a tardy formality ; the words forfeiture and repub- lic had been pronounced, and all their supposed consequences contemplated, and they met with a multitude of echoes among a people whom every thing conspired to sour or irritate. A republican insurrection, against the constitution, took place in the Champ-de-Mars, and was only suppressed by the martial measures of La Fayette and Bailly. On the other hand, the right side of the assembly, that is, the partisans of privileges, de- claimed against a constitution which gave the king only the title of Hereditary Representative of the nation. The acceptance of the constitu- tion, however, gave the people another festival ; but fears of all kinds now occupied the minds of men.

According to the terms of this constitution, the constituent assembly gave place to a new meet- ing of representatives, and committed the fault of excluding from it its own most valuable mem- bers. The legislative assembly was elected Vol. IX.

according to die opinions of tiie moment; and, republicanism prevailing in it, a consultation was soon held about the abolition of the mon- archy. In the mean time the princes were wait- ing at Coblentz for an opportunity of introducing the former state of things into France. The em- peror and the king of ^^'russia had just entered into a coalition against it. Tiie kings in alliance with them thought perhaps of sharing this fine country among them.

Whatever opinion may be entertained of the constituent assembly, the mere enumeration of its labors will astonish posterity. It directed its attention to the foundations of things ; it organ- ised the national guard, and constituted the army of the line according to the strictest principles of liberty : it practically applied the principle of the separation of the authorities ; instituted a real jury and justices of the peace; made rural, mu- nicipal, and penal laws ; freed industry from monopoly and the yoke of the masters ; gave back to society myriads of monks who were of no pre- vious use to it; restored the property of the church to the circulation, to agriculture, and to the exchecjuer; suppressed burdensome taxes, entries, and exemptions (those rattles of vanity which become strong instruments to degrade an 1 corrupt men) ; and, above all, regulated public instruction, and placed it on a basis which sub- sequent changes have not been able to destroy. 'Little remains to us of the good that it did,' ob- serves a modern

*historian of this era, * but we owe it not the less gratitude on that account.'*

In the constituent assembly the aristocratic opposition was very feeble : Maury, Cazales, and Epremesnil in vain rendered it remarkable by their eloquence. The royalists, Mounier, Cler- mont-Tonnere, and Lally ToUendal, who wished for the two English houses, could scarcely find any support ; neither could the republicans Pe- tion, Buzot, and Robespierre. That imposing majority, in which were Rabaut St. Etienne, Chapelier, Montmorency, Noailles, Volney, Sieyes, the originator of])rojects, the profound Duport, the Jansenist Camus, the judicious Barnave, the lawyer Thouret, the skilful Lameth, and so many other celebrated men, among whonr was the great Mirabeau, stood steadfast. The le- gislative assembly was divided into three parts : the moderate republicans, of whom may be men- tioned the 'eloquent Vergniaud, the virtuous Con- dorcet, Brissot, and Guadet, the logician Gen- sonne, and those who were called the Girondists (because the deputation from the Gironde were the .most distinguished of them), the Cordeliers, who suffered Danton to direct their club, Camille Desmoulines, Fab re d'Eglantine, and the con- stitutional royalists, who wore very feeble against enemies •supported by popular opinion. At first the majority assumed the attitude of hostility to the royal power, both by restraining it and by failing in the respect due to its functions. The king made some resistance, by opposing to some decrees, that wereoftcred to him for his sanction, his veto, the right of which tlie constitution gave him. But this right was illusory, and without suff cient strength to secure respect.

The Girondist Petion was now elected mayor of Paris, and proaired a decree for the closing

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of the club of royalists called Feuillans. The property of the emigrants was sequestrated, and a new oath was required of tlie priests. Some unpopular ministers increased unhappily the distrust of the royal power, and, at tlie moment when the assignats were depreciated at home, in- formation was received, from St. Domingo, that the disturbances which had taken place between the whites and the men of color, in the time of the constituent assembly, had become much more serious since the blacks had taken part in them. News also arrived of massacres in difier- ent cities of the kingdom, especially at Avignon, where one party desired uniouj with France, according to the decree of the constituent assem- bly ; while the other wished to remain under the government of the pope. Terrible reprisals were

made upon this party in the massacre of the Glacier (1792), but the assassins were pardoned. The emigrant princes were now denounced at the bar of the assembly ; and war was evidently coming on. In the midst of this universal agi- tation the king was without any adequate sup-])ort. He appeared to turn to the side of the (Jirondists, and took a ministry of their choice : among whom were Roland, whose wife is so ce- lebrated for her republican virtues, her writings, and her death, and Dumouriez, afterwards so suc- cessful as a general. It was the latter who per- suaded the king to come into the assembly and declare war against Austria.

But the assembly was disposed to undertake a still more important contest at home ; it conti- nued to contend with the king, who at once thwarted the measures of his new ministers and corresponded w-ith the princes. They began with depriving him of the means of defence and attack, by disbanding his constitutional guard; and decreed the formation of a camp of 20,000 men near Paris. It was evident, they wished eitlier to dethrone the king, or to induce him, by dint of mortifications, to abdicate. This unfor- tunate monarch, who adopted through uncer- tainty, hasty and unseasonable measures, and who was obstinate only through bad advice, dis- missed liis ministry. Immediately the rabble of Paris rose; and, passing the assembly with sym- bols grotesquely hideous, went to the Thuilleries to insist upon placing the red bonnet on the head of the king. The Girondists and Petion were accused of aidin

Suddenly La Fayette appeared at the bar of the assembly, at the head of an armed force, to demand the punishment of the guilty, and the closing of the Jacobin club ; a step which, thougii it astonished the demagogues of the day by its boldness, effected nothing ; it was supported by no authority present, and even the terrified court yielded it no sanction. The king had an insur- mountable dislike to receiving any constitutional assistance, lie was now evidently and naturally, may it not be said, looking for protection from without. Three places that had been taken by general Luckner had been just retaken by the enemy; on this, the animosity against the king ■seemed redoubled, and the Jacobins demanded

liis deposition ; when a scene of a singular de- scription took place in the assembly: a woman had made an appeal to concord from the gal- lery, and painted, in a very lively manner, the evils of anarchy ; on which a deputy seized the opportunity of proposing to his colleagues to rally round the constitution; that the one party should renounce every ailer-thought of a repub- lic, and the other should give up the project of an aristocratic chamber : at once all present ap- peared inspired with the spirit of reconciliation; they mingled with each other; they ran to em- brace those on the opposite benches. A moment after they resumed their resentment and their opposition. This proceeding was truly ridi- culous, too truly

French (speaking of what Frenchmen had becme publicly at this time), because it could not be sincere.

*The catastrophe of this tragi-comedy was now approaching; it was decided by a declaration that the country was in danger; and, when the annual confederation of the 14th of July was held, the cry was * Petion, or death ;' for the par- ties always attached themselves to some man in vogue. Oa certain marshalled confederates, who had made proof of their energy in the south, ar- riving in Paris, the leaders of the Jacobin club resolved on an open attack upon the authorities; the refusal of the assembly to encourage their animosity against La Fayette still further exas- perated them. At length the enemy invaded the frontiers; the insolent manifesto of the duke of Brunswick irritated and distressed the people ; and Petion instituted in the sections a delibera- tion about deposing the king. On the 9th of August the insurrection, that was in preparation, was denounced to the assembly on the part of the department, which was composed of consti- tutional nobles, such as the virtuous La Roche- foucault-Liancourt. A frightful tumult took place in the hall, where poniards were brandish- ed : as the night advanced, the tocsin sounded ; when the Swiss guards, some ex- nobles, and vo- lunteers of the national or disbanded guard re- paired to the palace to defend the king. He now condescended to accept the proposition made to him by Rcederer, the chief attorney of the de- partment, to seek an asylum in the midst of the assembly, after enlarging Petion, who had been detained a prisoner in the palace. The insur- rection, however, proceeded. The Jacobin club had installed in the commune a municipality devoted to Danton; confusion reigned in the palace, until the Marseillais, who formed the advanced guard of the mob, though at first re- pulsed by the brave Swiss, returned with fury to the charge ; and their cannon, aided by a multi- tude armed in haste, overturned the ancient throne of France.*

The assembly, in confusion, pronounced the deposition of the king, and removed him to the Temple with his family; while the statues of all the kings, even that of Henry I'., and the in- signia of royalty, were trampled under foot by the mob. An extraordinary tribunal, over which Danton, the minister of justice presided, shed torrents of blood. The first days of September were signalised by the massacre of several thou- sands of citizens, with whom the prisons vvcre

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crowded; aaˆ’ those detained by the high court instituted at Orleans, for crimes aganist the state, were assassinated.

While the French were thus murdering one another, they resisted invasion with astonishing devotion and firmness : the king of Prussia, who liad penetrated as far as the plains of Cham- pagne, was checked in his march by Dumouriez, and beaten by Kellerman : 300,000 men rushed, at the call of their country, to the frontiers, with an enthusiasm which only belonged to this period,” and in what may be called the very fanati- cism of liberty.

It is impossible to read tranquilly the history of these times. In all factions there are a few leaders ; the immense troop that follows consists of dupes, people of integrity, in many instances, who are perpetrators of mischief, with the inten- tion of doing good. In these dreadful times a man did not walk, he was dragged along ; it was a terrible sea, in which you must follow the cur- rents, or be broken to pieces, says an eloquent French historian. ‘ Faults were committed on both sides ; but we must especially execrate two things : despotism exercised in the name of liberty, and the shedding of blood for political causes, without the necessity of legitimate and immediate defence.’

The legislative assembly had summoned a convention, which on the 21st of September began its operations by abolishing royalty, and proclaiming the republic. It immediately as- sumed to itself the whole power, even the judici- ary ; for it proceeded to judge Louis XVI., whom only part of its members had accused. The €nemy was at the gates, however ; anarchy and treason existed in the interior; to proceed, a species of dictatorship, the French say a despot- ism, was necessary. This monstrous despotism had a thousand heads, and three principal direct- ing powers : the convention, the jacobin club, and the commune of Paris ; the two last were the most real, and certainly the most illegal. The assembly was shared between the Girondists and the Jacobins, when the struggle finally com- menced. The former possessed fine talents ; the latter derived their strength from the club and the commune. The execrable Marat, and the horrible Hebert assisted these, by rousing the passions of the people with the bait of an impos- sible equality, until they drew the Marseillais into their party : and a man who, under the calm external show of moderation and patriotism, con- cealed a cruel fanaticism; a man, whose wicked- ness can only be accounted for from his envy, Robespierre, conceived the design of elevating himself on the ruins of the state. In vain did the courageous Louvet attack him ; the hypocrite of citizenship meditated a terrible vengeance, in which all France was doomed to suffer.

The Mountain, or the Jacobins (so called from their sitting on the high seats of the amphitheatre kOf the hall of the convention) from the first thought of sacrificing Louis as a victim to the consolidation of the_ republic. The Girondists wished, they say, to save him ; but several of them condemned him. The virtuous Male- sherbes in vain exerted the eloquence of friend- ship in favor of a king, who too late repented the

not having followed his patriotic counsels, Vergniaud also made some efforts ; but a mob of furies, male and female, surrounded the hall of the convention, aud threatened the judges ; while the Mountain dictated the sentence. The guilt of the unfortunate monarch was almost unani- mously voted ; one-third of the assembly how- ever wished for an appeal to the sanction of the people: 387 voted for his death, almost all of them without any condition; 334 demanded either imprisonment, banishment, or death, with a formal reprieve. The Girondists attempted in vain, by returning to the question of reprieve, to annul a sentence of death pronounced by so small a majority. Louis however was led to death on the 21st of January, 1793: the crime for which he suffered being the possession of those ideas of royalty m which all the kings of France had been educated (so say even the apologists of the revolution now), and wishing to preserve the power which he inherited. Two good and up- right men, observes M. Bodin, Charles I. anu Louis XVI., have perished on the scaffold, but their families have re-ascended the throne. The Tarquins were banished from Rome, and nevei more appeared there:

The death of the queen soon followed : the absurd and infamous charges brought against her astonished all Europe; see our article Antoi- nette. La Vendee rose, and the continent as well as England armed in hostility to the convention, whom nothing seemed to intimidate. Fourteen armies, without experience, and merely with the aid of paper-money, were set in motion. Cus- tine took Mentz ; Montesquieu invaded Savoy ; Lille repulsed the Austrians, who bombarded it; and Dumouriez making a descent upon Belgium, which since 1789 had been in a ferment, and impatient of the yoke of Austria, carried the redoubts of Jemappes with the bayonet, now substituted for the old French tactics. Th generals had only to sound the Marseillais hymn, and the citizen soldiers saw in the republic a futurity of peace and prosperity, although the roots of what was called the tree of liberty had been bedewed with blood, A descendant of Turenne was honored with the title of the first grenadier in France ; a Biron marched against the royalists in La \ˆendˆe. The young Orleans fought for national independence, while his father, under the name of Egalite, passed from the Mountain, where he sat, to the scaffold.

But the Mountain men still meditated venge- ance on the Girondists for their superiority, their constant opposition to their barbarous atrocities,

their denunciations of Marat for his demand of 60,000 heads, and their causing the arrest of Ilebert. After an attempt at assassination, the Mountain ordered an insurrection. A hired multi- tude went on the 31st of May, to dictate to the representation, and on the 2d. of the next month demanded twenty-two heads, that had been pointed out to it among the Girondists! The proscribed all perished with the exception of one who survived the entire revolution, the virtuous Languinais, This first attack on the inviolability of the representation became a fatal example. Charlotte Corday now devoted herself to aveng the Girondists by sacrificing Marat; a monster*

of iniquity who was buried in the Pantheon. Seventy-three deputies were decreed in a state of arrest, and though a constitution was drawn up. it was strangled in its birth, and the revolutionary government, or regime of terror, was organiseil, tlie administration of which was the gudlotine, and its functionaries the executioners.

The Convention is a political phenomenon, which has existed but once, say our authorities : in it the most audacious energy was often the result of fear. Its terrible power was wielded mainly by men of the most base but ambitious chiiracter, deluding and controlling a few ardent and sincere patriots ; and some men of pacific dis- positions, with the axe hanging over their heads. The Mountain was a volcano, which vomited its fires over Europe, while it inundated France with its incendiary lava : and the jacobin club, the cave where the tiiunderbolts of power were forged. Rapidity and strength marked all the acts of this inconceivable depotism. Its thousand arms extended in every direction, and carried with it at once, heroism and astonishment, fero- city, obedience, and death. Every thing that re- sisted it was suddenly crushed. Wliile cunning or perfi,dious apostles of a chimerical liberty preached up the dominion of the laws, the des- potism of the Convention, with its bandage en its eyes, knew no bounds ; it decreed in opposi- tion to nature. Never was madness greater, or produced things more gigantic or more pitiful : Europe was vanquished, and the fraternity of Sans-culottes was instituted ; it seemed as if the world were turned upside down : to crown the triumph of moral and political insanity, a festival was proclaimed for Reason ; religion was openly renounced; death decreed to be an everlasting sleep ; and a naked prostitute exalted on the altar of the church of Notre-Dame as a represen- tation of the goddess of their idolatry ! Still these fanatics of liberty remained poor, while they were

denouncing death on the rich ; as they depo-])ulated the earth, while they were promising themselves to share its blessings and live like brethren. Every thing in fict was immolated to the fierce inflexibility of their passions or abstrac- tions.

Some attempts, however, were made to shake off this frightful yoke. The Girondists and constitutionalists, who had been proscribed as moderate men and as wishing to break the unity of the republic, rose at Caen and at Lyons : when the Convention decreed, that Lyons should be destroyed ! and Collot avenged himself there with case-shot for the hisses he had experienced at the theatre ! ! Marseilles was decimated, and its name suppressed. Toulon opened its gates to the English, but Nantes repulsed the Vendeans. The Mountain sent out its chiefs on all sides to establish its power; a revolutionary army fol- lowed them, they established in fact a mission of terror ; and extended their works of death even to St. Domingo. The Noyades of Carrier and the atrocities of Lebon are well known. Every where tribunals of blood were in horrible activity : even tlie camps were not an asylum : Houchard, who had just conquered the English at Houdscoote, soon followed his predecessor, Custine, to the scaffold. To crown these evils,

industry and commerce were proscribed. Re- quisitions and a maximum, which lieavily taxed provisions, produced a famine ; the west of France was set on fire, and the same men decreed the conflagration who pronounced as legislators the abolition of the puuisliment of death, and founded the Institute, the Conservatories, and the Polytechnic school.

Great talents were certainly displayed in the committee of public safety, a select part of the Mountain faction. But Caniot had Only begun to secure victory to the French arms by his ar- rangements, when he had to contend against the treason of Dumouriez. This general had delivered up to the enemy the commissaries of the Convention, who were coming to bring him instructions, and take him back to the guillotine. So far he acted in self-defence; but, before he emigrated, he endeavoured to unite the French and the Germans against the republic to which he owed allegiance, in order to march to Paris. The lines of Weissembourg had also been sur- rendered by traitors. On the other hand, a young lieutenant of artillery, named Buonaparte, con- tributed to the retaking of Toulon, where the English destroyed the fleet, before they evacuated the place.

Robespierre] (1794) was now rising to his bad eminence ; but there were still around him some men who surpassed him in merit or in wicked- ness. He commenced by ridding himself of Hebert and his companions ; he afterwards sa- crificed his old associate in crimes, Danton, who saw in the revolution a means of enriching him- self, and who was afterwards

*disowned by the rigid jacobins ; and science,reputation,and talents, became but titles to proscription. Every thing was sacrificed in order to attaint distinguished patriots and illustrious constituents, such as Bailly, Thouret, Chapelier, and Andre-Chenur. Lavoisier's unequalled talents, as a chemist, could not avert or delay the fatal decree ; Condorcet wrote on the perfectibility of man almost under the knife of the executioner. At last this prince of homicides Robespierre, surrounded with corpses, insulted, while he proclaimed, the name of' a God,' and appointed a festival for him, at which he acted as high priest *

Robespierre closed his career, by making the Mountain itself tremble, demanding ' those pu- rifications,' which threatened to attaint even the executioners themselves. Billaud first shook ofli the yoke ; the Jacobin speculators, the remains of Danton's party who saw themselves in danger, united with the remaining part of the Girondists, and on the 9th of Thermidor, Tallien braved and unmasked the villain whom St. Just, his confidant, in vain endeavoured to defend. Cries of ' J3own with the tyrant' issued from every mouth. Robespierre and his party were hurried away, but the mob, at the sound of the tocsin, rose in their favor. Barras now put himself at the head of the national guard, in the name of , the "Convention; and they easily made them- selves masters of the hotel de ville. The tyrant fell : quaking, and, after having shot away his own jaw, he received his well-deserved death- blow. But a cruel re-action blemished this crisis ; the Thermidorians proscribed the Moun-

tain in their tum ; and some royalists rising in the south organised themselves into companies of assassins. The guillotine devoured those who had fed it; vengeance continued the reign of terror, and yet the festival of Marat's apo- theosis continued to be observed. In the midst of this confusion the powder magazine at Cre- nelle was blown up.

The Jacobins in 1795 made some further strug- gles for power : the Thermidorians opposed to them the golden youth of Freron, an armed as- sociation of all those, who had to avenge some victim of the system of terror, and who sung the ' awakening of the people.' On the 12th of Ger- minal an assemblage of the people, excited to violence by tiie famine, was dispersed, and seventeen Movuitain men were arrested ; Billaud and CoUot were transported to Guiana. The remainder of the Mountain, however, obtained some advantage on the 1st of Prairial, by getting possession of the hall of the Convention, where the deputy Feraud, who had been taken for Freron, was assassinated. Already had the ter- rible Faubourg advanced in

a columYi. The Thermidorian committees were conquerors at last without striking a blow ; the 31st of May was cruelly avenged ; and six Mountain men, doomed to death, put an end to their own lives. A peace was then concluded with the Vendeans,who formed the hope of an approaching restoration.

The Convention, who were enacting a new constitution, decreed, that two-thirds of its mem- bers should of right enter into the new legis- lative body. This measure, rejected by the electors of Paris, was the pretext for an insur- rection. The sections, weary of the Convention, and a few Vendeans marched against it on the 13th of Vˆendemiaire in the year 3 ; it called the Jacobins to its assistance, when young Buona- parte saved it at the head of some troops. The Convention also triumphed without. Prussia and Spain requested peace ; Hoche retook the lines; Jourdan recovered, at Watignies and at Fleurus, that Flanders which a decree re-united to France. Holland conquered by Pichegru in his famous campaign on the ice, where some hussars took some vessels, was formed into the Batavian republic. But Pitt and England as well as Austria, remained the enemies of France. It is said that Barrere being interrogated upon the severe measures pursued by the famous com- mittee, replied, ‘ It repulsed the enemy, would you have done as much?’ This justification is definite, certainly, but it is fearful.

Sect. VIII. — Buonaparte’s Elevation.

Tlie most enlightened civilians of the Con- vention, among whom was the learned and vir- tuous Uaunou, modelled the representative system after that of the United States ; two elec- tive councils, one of the Five hundred and the other of the ancients, were to be re-elected every year by thirds. The executive power was confided to five directors, elected by the councils, and re- newed by a fifth : the directory found, on their succession to an anarchical despotism, 30,000,000 of assignats without value, some distrusts and citations distracting the people, a civil war and a foreign war. It became necessary for

them to find employment for a multitude of persons, to whom insurrection had become a kind of profession, in which they had regularly received high wages. They endeavoured to tum their attention to the mass of the people, who wished for repose, and to keep that middle course so slippery in France, which, as it inclines sometimes to the right and sometimes to the left, has been called la bascule. The mandats softened a little the shock, that the repayment of the assignats occasioned. The royalist mas- sacres in the south ceased by degrees : and La 'endee, where so many thousands of the French had been buried, was pacified by the moderation and activity of Iluche, a young hero, wlio knew how to negociate as well as to conquer. The administration was organised according to the principles of liberty ;

and the republic was no more a vain word. The metric system equalised the weights and measures. The fine idea of central schools, the focuses of instruction, free and worthy of the age, was executed, while in its external affairs the directory followed the bold policy of the Convention; and bearing at least the promise of liberty to the vanquished, it undertook the emancipation of Europe from absolute power and the feudal system. In Ger- many Moreau triumphed by retiring, and ren- dered himself illustrious by a retreat, interspersed with victories. If Corsica was again taken by the English, an expedition, conducted by Hum- bert, intimidated that power in Ireland. Buo- naparte now at the age of twenty-six, in his brilliant campaign in Italy, took the Milanese from the Austrians, and overturned the ancient and glorious aristocracy of Venice. iNIarching directly towards terrified Vienna, he only stop- ped to sign the fundamental articles of the treaty, which declared, at Campo-Formio, the superiority of France over her enemies ; and founded in Italy two provisional republics.

The remembrance of the conventional despo- tism had occasioned a restraint of the executive power, that was accompanied with excessive dis- trust. It was feeble and poor : instead of dis- playing that royal magnificence which the French admire, while they are paying for it, it lived upon nothing, and met, with a few light taxes, the expenses of numerous armies. Foreigners spent more money in France, to corrupt and divide it, than it had to subsist upon. The liberty of the press too was now more entire than it had ever been. The journals of the opposite parties declaimed against the government at their plea- sure ; and blame or ridicule was poured upon its acts, or its members ‘ In France people love the power which dazzles, and which has a lofty bearing ; a republic is too citizen-like for them.’ The royalist party, organised by the numerous agents of the Bourbons, conspired at Clichy, and endeavoured to make a monk of some ceneral. To the simple-hearted and credulous Vendeans succeeded the Chouans ; nocturnal insurgents, who infested the high roads. The Anarchists made an attempt, at the camp of Crenelle, to raise the Mountain party again ; while the new election brought into the coun- cils amajority of royalists, who concealed, in some measure, theirdesign ofovcrturningllic directory

Two of the directors themselves (Carnot was one) were in this plot. The three others had their choice, either to commit the crime of vio- lating the constitution, or to suffer it to fall. They violated it in order to defend it. Supported by the army of Italy, from whence they had sent for Augereau, and by that of lloche, they seized, in military style, upon the legislative

body, and fifty-one representatives, the two direc- tors, and some journalists were condemned to transportation on the 18th of Tructidor. 'Mer- lin and Francis de Neufchateau replaced the pro- scribe 1 "directors.

General Buonaparte, who had rendered him- self popular by his victories, received at Paris that homage, which must have excited his am- bition, and wliich now brought it into action. It was already evident that he was aiming to play the part of Caesar, when he made the directory adopt the project of an expedition as adventurous as the crusades ; the army of Italy ■was embarked at Toulon. In Europe the lofti- ness of the republican plenipotentiaries had embroiled France, a second time, with all her neighbours; the gold of England had united Russia and Austria in a coalition (1798); Suwaroff was marching upon Italy, and the directory had sent Massena into Switzerland, to humble the aristocratic despotism of Bern by protecting the democracy of the Pays de 'aud, ■when the news reached them, that the French fleet had been destroyed at Aboukir, while the army was victorious by land. Nelson returned to Naples to enjoy his triumph, and hang the ablest men of the country at the instigation of the queen. A detachment of Frenchmen quickly succeeded in chastising Rome and Naples, and founded (1799) the Roman republic. Italy, however, ■was soon retaken from Moreau, and Joubert's army was reduced to great feebleness. The Austro-llussians and the army of the emi- tˆrants already were on their march towards France. But the fortune of the day was again changed : Massena routed the allied army at Zurich. Italy was reconquered, and new and flattering accounts reached France of the expedition to Egypt. Bruno, in the mean time, had beaten the English and the Russians in Holland, where he re-es- tablished the Batavian republic.

France triumphed, but some intriguing per- sons were preparing a revolution by sowing the seeds of trouble in the nation and the public councils ; tile latter of which opposed or per- verted all the measures of the directory. The persecution and transporting of the priests ex- cited discontent, as ajso did the reduction of two- thirds of the debt. Speculators, who had en- riched themselves by stock-jobbing; the royalists, who wished to get into favor with the monarchy, expecting its restoration ; the contractors, who had introduced licentiousness, and corruption, into the expenses of the unfortunate soldiers; generals and governors, who had acted as judges in foreign countries, all ciied out that France had need of a stro-nger government ; that is, one that might ennoble and decorate them. The systematic Sieyes had at this time been called fo the directory ; on the 30th of Prairial, year 7, the councils had introduced three members ; and

while the momentary confusion increased, a man was wanted to grasp the falling reins of power. Buonaparte, informed of this state of things, did not hesitate to leave the array in Egypt; where he also left Kleber, ' the just,' in

a desperate situation ; but the opportunity was a fine one for him. His disembarkation surprised every body: he was received with great pomp, although his conduct in returning was, in the estimation of cool and reflecting men, that of a coward and a rebel. :Sieyes now took from the republican, Bernadotte, the post of minister of war. A con- spiracy was pretended ; the councils were called together at St. Cloud, and Buonaparte j)ut him- self at the head of the directory's guard in order to overturn it. He gained over the ancients by promising to make them senators ; but the re- sistance of the Five-hundred disconcerted him for a moment : he grew pale and hesitated in the sight of the danger he had created for himself, and which the president Lucien, his brother, alone succeeded in turning aside by presence of mind. They resumed their courage for him : the grenadiers, with tayonets fixed, rushed in upon the national representatives and dispersed them. On the 18th of Brumaire (1 0th of No- vember, 1799), Buonaparte became a usurper and Sieyes a dupe.

Buonaparte now digested a constitution which was intended to deliver the power to a consul (that is to say, himself), assisted, for form's sake, by two under-consuls ; and a mute legislative assembly passed the laws, under which a tribu- nate alone had the right of speaking. A public body, called the conservative senate, was paid to approve of all that was done. ' What shows,' say her own historians, ' how they make a jest of every thing in France, is, that they still preserved the name of a republic' Buonaparte, who had already discovered the way of fascinating the nation by his enterprising disposition, his supe- rior talents, his prodigious fire, and his skilful charlatanism, met with more opposition in the army, where the republican spirit was still pre- served. He left that of Egypt to the English and the Turks ; only some feeble remains of it returned to France. A little while after he sent to St. Domingo, in order to repress the indepen- dence of the negroes, 40,000 of the old soldiers of the republic. The burning sky of the tropics killed numbers of them; for Hayti knew how to defend the liberty of which she now shows lier- self worthy. The only trophy ever gained by France in this ruinous expedition was the black chief Toussaint Louverture, whom Buonaparte suffered to perish miserably in a strong fortress, where he was immured.

Six months had hardly passed away since Buonaparte became consul when he unexpect- edly passed the St. Bernard, to fall upon the Austrians, and gained the battle of Marengo, where the virtuous Desaix met his death in giving him victory. During this time Moreau, commanding the army of the Rhine, triumphed at Ilohenlinden, and threatened Vienna. The peace concluded at I.uneville further aggrandised France. Italy and Switzerland placed themselves under her protection ; Piedmont became French tprritnry ; when Spain, and England herself.

signed the peace of Amiens, March 22nd, 1802. Though a peace of but eighteen months, this gave welcome repose to France and to the rest of Europe. Soon after several republicans were arrested, under the accusation of having wished to assassinate the first consul ; and the royalists made no scruple of attempting his life by an ex- plosion, which might have destroyed a multitude of citizens. 'Buonaparte gained a party by tliis danger; he strengthened his guard and increased his power; while the formidable police, and his vile minister Fouche, gave him an account of the actions and thoughts of all France. lie even procured a more powerful police still ; and made for himself some zealous friends among all classes of the people, by granting the pope a concordat, which re-establislied the Catholic clergy. An act still more politic and just fol- lowed this : he put an end to the proscription of the emigrants, and opened the country to them ; giving them possession of such part of their pro- perty as had not been sold. A concert of sin- cere praises now arose to him ; the senate had agreed to continue the consulship during ten years, but this true and all powerful dictator now procured a popular vote, which declared him consul for life. It was at this time (1803) that he proved his respect for legitimacy, by de- manding of the Bourbons a cession of their right to the throne.

Soon after he avenged their refusal, while he disgraced himself indelibly, by the seizure of the young Bourbon Condc, the duke d'Enghien, whom he caused to be shot (see our article En- GHir.N). Pichegru, and Cadoudal, who wished to restore the Bourbons, and Moreau, who impa- tiently submitted to the yoke of a man who was his equal, were said at this time to be implicated in a conspiracy against Buonaparte; and, though the punishment of the two former excited little interest, the latter, surrounded with republican glory, was considered, as it were, the represen- tative of his brethren in arms, who discovered with bitter regret that they had shed their blood only to raise a dictator to power.

The sympathy for Moreau threatened a dan- gerous ferment ; but the camp at Boulogne, which was made to resound with a threatened descent upon England, created a diversion : Moreau was forgotten. Buonaparte had the po- licy of astonishing the people by numerous . changes of sights, and keeping the French conti- nually at bay. He immediately obtained the decree of the imperial crown from the Tribunate, in which Carnot signalised himself by his resist- ance, as the polytechnic school also did ; and these were the last sighs of expiring Liberty : the senate bowed itself, notwithstanding tlio opposi- tion of the jxitriotic Lambrechts and the virtuous Gregoire, the friend of the blacks. Napoleon demanded the

adherence of the public function- aries, and of the army ; an empty formality, to wliich the people expressed little eagerness to add theirs. The pope now proceeded to Faris to crown the emperor, and to sanction tliat which the royalists must have considered as a usurpa- tion. Most of them, however, applauded, no more expecting to find a monk in Buonaparte ; they saluted him king, when Napoleon substi-

tuted the ea.;le fur the tri-colored flag ; and passing to Milan, to make a kingdom of the re- public of Italy, assumed the iron crown of the ancient kings of Lombardy, and m.ade a dowry for his sister out of one of its principalities : he was already, also, preparing thrones to establish his brothers.

England influenced Russia, after the emperor Paul, the admirer of Buonaparte, had been as- sassinated by the grandees of his court. A league was formed with Austria and Sweden. Napo- leon had the address, however, to detach Prussia from it by promising Hanover to the king. The camp at Boulogne was now suddenly raised ; an Austrian army as suddenly capitulated at Ulm ; and two emperors, Alexander and Francis, were beaten at Austerlitz. The emperor of Germany was now compelled to submit to the terms of his conqueror. Joseph Buonaparte was sent to Naples with the title of king, while Louis was placed, as king, in Holland, and Prussia lost her Rhenish provinces. The confe- deration of the Rhine was confirmed to Napo- leon, in order to supply him with solchers. Prussia, at this period, still trembling for her own safety, was once more excited by England and Russia to resistance ; upon which. Napoleon transports his immense, army across the conti- nent, and in less than one month arrives at Ber- lin, having gained the battle of Jena. In that city he launched his famous interdict against tlie English trade; and, shortly after, the Russian army was crushed at Eylau and at Friedland : finally, the peace of Tilsit confirms Napoleon in the highest degree of power which he could reach; Prussia, punished for her temporising policy, is occupied by the military: Jerome Buonaparte is installed king of Westiihalia, and Poland forms the hope of raising herself from the ashes of her freedom, under the auspices of the great emperor. Never had the fortune of a man been more brilliant; the whole world was struck with astonishment at the recital of victo- ries so rapid, and seemed to bow itself before so colossal a power. But the ambition of Napoleon did not permit him to stop here ; Europe was the devoted prey of his ambition, and every freeman was iiis enemy. No sovereign could be more absolute; he regarded other men as insignificant cyphers, destined to increase the amount of that unity which centred in himself; their wealth, their thoughts, their life — all was nothing. He wislied to fill the pages of history with the account of his time, and he has succeeded; there was no further anxiety about France.

It has been often said, that Buonaparte re- compensed France for the loss of liberty and fepose by the illusions of his glory; but nothing tan make up for tiie want of liberty. It is true, that, always ready to suffer herself to be seduced by the false glory of conquest, France appeared to offer her shoulders to the yoke; but it is not less a crime, on that account, to have enslaved her. We shall see Napoleon soon after laboring to bring back the ancient order of things, by abolishing all the customs and eff;icing all tlie images of liberty. The tribunate, which existed only in name, and which had been lionorpd with tlse discussion of the civil law, Napoleon closed;

he made a monopoly of public education, in which youth were taught the glories of the em- peror, as children are taught their catechism. Some of the priests declared from tlie pulpit, that he had a divine mission. He created a mi- litary nobility, something like that which existed before the time of Henry IV'.; and his generals, adorned with ribands, endowed with pensions, and enriched with the spoils of an enemy's country, respected him as their chief. They were no longer those poor leaders, who led the French on foot to the defence of their country ; the times of the patriots Jourdan and Perignon had passed away ; Hoche, Desaix, JNIarceau, Du- gomier, and Kleber were dea 1 : yet the army could still reckon in the list of its worthies such men as Lecourbe, Gouvion-Saint-Cyr, Lefebvre, Dejeau, DesoUes, and Lannes, who preserved their dignity, and were not cowed by their new master. Some of the old Jacobins, strangely decorated witli feudal titles, and some emigrants installed in the antechambers, rivalled one another in submission, and in prostrating them- selves around him. He re-established the im- posts, the abuses and prodigalities of die ancient monarchy. The aids and monopolies re-appeared under the name of united duties. The press was kept under by a merciless censorship; juries were perverted ; prefects and other petty subaltern despots assumed the place of free administra- tions of justice ; the emperor nominated all the public functionaries, and all, even down to the field-keepers, were inviolable: the council of state, a dependent and removable body, was the sole arbiter of their responsibility. The election of the deputies was a ridiculous thing in this pre- tended representative government, the laws of which were the dicta of the emperor, under the name of decrees, or senatorial edicts. Individual liberty no longer existed ; and while the 14th of July was often celebrated, many bastiles were occupied throughout France in the service of this arbitrary despot. A police, that was a true po- litical inquisition, suspected even silence itself; accused even the thoughts of men, and extended over Europe a net of iron. All this time too the conscription, a dreadful tax upon human life, was levied with unsparing activity ; and the

French youth were surrendered to his will by the senate as a sort of annual contribution. It is said that Napoleon held the human race in so- vereign contempt; he had, indeed, good reason to do so !

Portugal was now in the emperor's possession, and Spain placed herself at his feet : the army of the latter tine country he transported into the nortli to fight the battles of his future ambition. Discord prevailed at this time among the Bour- bons at Madrid, who chose Napoleon arbitrator, and he made them prisoners, in order to raise his brother Joseph to the throne ; Murat, his brother- in-law, being transferrer! to Naples. The em- peror went to Erfurt to meet Alexander of Russia, and they agreed to shut up the Continent of Europe against the English who had blockaded it. The Spaniards, however, rose against the con- querors of Europe, and for several years Spain became the grave of the French. Both Napo- leon and France well knew what the most

stupid nation could achieve, when directed by enlightened men, and roused to a pitch of fana- ticism by the priests ; and yet to this unjust ag- gression Spain owes the dawn of liberty she has seen ; and Europe her deliverance from his iron grasp. Suddenly Napoleon was once more (A. D. 1809), obliged to transport his powerful army to Vienna; where, after having beaten Austria at Essling and at Wagram, he de- manded Maria Louisa in marriage. To accom- plish this adulterous alliance Josephine Beau- harnais was divorced ; and an arch-duchess espouses a man whom the nobility of Germany looked upon as an upstart. Half-a-dozen kings were present at the marriage ; and Napoleon, a year after, was presented with a son, whom he decorated, from his cradle, with the title of king of Rome.

The French departments now (1811), extended from Rome to Hamburg : all Europe bowed to Napoleon but it could not contain him. He undertook to chastise Russia, which had just broken the blockade ; and the English, whose at- tempt upon Belgium had been repulsed by the national guards, effected a coalition between Russia and Sweden, which had just elected Ber- nadotte her crown prince. Napoleon now urges the whole of Europe upon Russia: 400,00!.) men, who might have crowned him on the way emperor of Constantinople, arrived in time to wit- ness the heroic and ever to be lamented burning of INIoscow. Nature at length subdued the pride of a man who never started at impossibilities; and, while an unusual severity of cold annihilated his superb army, he who had dated his decrees from the Kremlin returned alone to Paris to put him- self into a terrible and ridiculous passion against the liberal sentiments of the people. During his absence (181 2) the conspiracy of Mallet had failed of effecting a change in the government. The senate, however, furnished men, money, and horses, and Napoleon went to Saxony to subdue the Prussians and Austrians who had declared against him. There Moreau fell, with the re-

proach of having fought against his country, but wiiii the satisfaction of knowing, at the same time, that he was defending the cause of Europe and civilisation. The emperor, however, could not stand out against the defection of all his allies, and even of the kings whom he himself had made. Still, however, he might have concluded a glorious peace; but he would yield nothing, and therefore lost all. His campaign in France evinced the energy, the constancy, and the supe- riority of his genius ; tliere, strugfgling with a handful of men against immense forces, he gave a sufficient answer to those who would pretend that he never conquered but with vast armies at his command. But France, enslaved and gagged, had forsaken him ; the mutes of the legislative body had found their tongues ; a cry of liberty resounded in Germany ; the kings seemed to ap- prove it, and accepted the assistance of those liberal notions which at this day they fear ami disavow.

The English and Portuguese, united with the whole Spanish people, had driven into the south of France the few forces that opposed them, and the battle of Toulouse left the glory uncer-

tain between the success of numbers and the resistance of the vanquished. Jiourdeaux was betrayed to the English by its mayor; while Paris, defended by its inhabitants, a few invalids, and the young pupils of that school, all the thoughts and labors of which were consecrated to the good of their country, opened its gates to a foreign force. The people now (1814) learned that he who had been emperor but the night before, was the next day to retire to a little island in the Mediterranean: and some persons, in white robes, proclaimed the Bourbons, who were advancing with a promise of the abolition of the conscription and the united duties. Led on by M. de Talleyrand, ever skilful in taking advantage of circumstances, the senators formed a plan of a constitution, nearly the same as that which exists in the charter, and recalled Louis XVIII., on condition that he would continue to them their situations. They then signed the projected deposition of Napoleon. The allied monarchs approved it; France was reduced to its ancient limits; the remainder of the fleet, which had been almost annihilated at Trafalgar in 1805, and by the fireships at llochefort, was delivered up, as well as part of the artillery.

*' If,' says the able French writer whom we have permitted chiefly to tell this tale of France, * we have judged Napoleon with rigor, we render homage to his great actions. At a time when his will, in conjunction with his genius, directed him to that which was good, he deepened the port of Cherbourg,*

*and formed the roads of mount Cenis and the Simplon ; he despoiled Rome and Nismes, to embellish Paris. His con- tinental system and his prohibitions, which were good as far as they were reprisals, gave to French industry that activity which peace has redoubled. But he depopulated the country parts, and already covered France with military fiefs. There is an author, a declared supporter of feudalism, who admires Napoleon, ' because,' as he says, * he alone could and would have established it. Certain it is that he destroyed the revolution by its own power; while he was to be pitied for his predi- lection for nobility and the splendor and etiquette of courts ; one cause, perhaps, of his own fall.'*

Wearied with the imperial yoke, and with continual war, France hailed the approach of peace with acclamations of joy and hope. The declaration of St. Ouen, which included in it several of the fundamental principles of the revolution, re-assured all hearts. France, and even Europe are indebted to Louis XVIII. for having set a useful example, by assisting in the re-establishment of the representative system. Tlie senators, in conjunction with some others, formed a chamber of peers. At the same time was convened the legislative body of the empire, whicli formed the chamber of deputies ; and Louis, who had declared his determination to adopt a liberal constitution, granted the chartcM-, which, notwithstiHiding some omissions and imperfections, contains sufficient guarantees for liberty, were they well execnled; but here lies the difficulty. The imperial institutions still (xisted, and these alone had any real effect. The charter promised, but it organised nothing ; the constitutit'n of the year 8 remained in force

with regard to the people, and the charter was founded on that constitution, and on tlie des- potic decrees of Napoleon. Had Buonaparte been bribed to smooth the way for the restoration of royalty, he could not more faithfully have ful- filled his mission. The Bourbons found the communes, the national guard, trial by jury, the department, the elections even, and an enormous budget in the hands of the executive authority ; they found a hierarchy of irresponsible officers, rising in various degrees around this centre, from which every thing emanated, and to which all tended. It has been disputed, whether or not a counter-revolution had taken place : the fact is, Napoleon had already in part formed a counter-revolution ; take away the right of general tax- ation, and the equality of men in the eye of the law, and it is completed. Louis re-established, with the representative system,apart of tiie revo- lution ; to restore it entirely, it was necessary to put in the place of the imperial institutions, which govern France, the liberal institutions that she hopes to behold.

Little alteration in fact was made at this time : the ministers contented themselves with display- ing the charter, and, without fulfilling its con- ditions, cavilled about its meaning. There was need of economy, but

prodigality was the order of the day. The parties which had not been dissolved, but only depressed by Napoleon, raised themselves again. The most ridiculous claims were urged with insatiable eagerness; the satellites of despotism, in order to reinstate themselves, openly displaypd their treason ; and prefects, who had executed the conscription in a way similar to the treatment of negroes, dreamed only of serving the legitimacy in the same man- ner. The possessors of national property were disturbed alternately by hopes or by fears ; the army, discontented at having lost its political ascendancy, had already begun to move. On a sudden in the spring of 1815 it was reported that Napoleon, having escaped the vinsuspicious com- missioners of the allies, had landed at Cannes with a few soldiers, which in CJrenoble were taken for a regiment; that he was entering Lyons, and would soon bo at Paris with an army. Every thing was thrown into confusion ; the king and the princes again swore fidelity to the charter; they confided the security of it to the citizens and the army, and protested their love for liberty. Napoleon also promised liberty; he was again placed on the throne, and the Bour- bons fled to Ghent.

France now knew not what law to obey, but order was restored. A chamber of representa- tives was convoked; and an assembly of the l“rench electors announced under the name of champ-de-mai. Napoleon obliged, in these cir- cumstances to have something to do with liberty, ofl’ered for the jjrovisional acceptanct! of the Jieople, the additional act, in imitation of the charter. The congress of 'ienna, however, where the kings had divided among themselves the nations, to whom they owed their deliverance, still continued. One of the king’s ministers, Talleyrand, still accredited there, stirred up the coalition against the usurper of Eurojie. The army and tlie national giiartls hastened to the*

frontiers ; but tlie foreign troops entered on ail sides. Willie tlie west, wliere an insurrection had with much dilHculty been excited, ˆand the south, aided by the king of Spain, were yielding to the discipline of a few regiments, and to the power of patriotic confederations, Napoleon at Waterloo lost his throne in a moment. Paris, where Fouchd still was, capitulated ; the repre- sentatives wlio, at the call of la Fayette, had renewed the declaration of rights, and enacted even at the cannon’s moutli a free constitution, separated. Napoleon abdicating a second time, went to deliver himself up to the English, who imprisoned him in the midst of the ocean, at the distance of near 5000 miles. The army retired beyond the Loire, to submit peaceably to its dis- charge, and to sacrifice to the tranquillity of the country, even the irritated feelings of a disap- pointed

hope. The allies proceeded to seize on and pillage a great part of France, and the king re-entered Paris on the 18th of July.

This disastrous epoch of the hundred days was a very remarkable one. The spirit of liberty had roused itself in P'rance, after a slumber of fifteen years ; Napoleon was resisted; the army and the National guards recollected the re-action of 1792; the citizens and soldiers began to ap- proach one another ; the military again became citizens; Napoleon was no longer their idol, he had been only a rallying point imposed by cir- cumstances ; they resolved, in fine, for the cause of their country, and of liberty, both of which they had too much forgotten. Some few places held out for a length of time, and an Austrian army, that was besieging Huningen, were as- tonished at being stopped in their course by an invalid and a few veterans. The situation of the king, on the whole, was a critical one; he en- tered his capital, preceded by irritated foreigners, who exacted an enormous contribution, part of which was paid on the spot by means of a forced loan ; cannon was planted on his palace, and the greatest disorder prevailed in France. The king proclaimed, on the 29th of June, that his government had perhaps been faulty in some respects, promised to add to the charter all the guarantees which secure its execution, and declared that the representative government should be maintained. The rest belonged to his ministers and to circumstances ; the respon- sibility of the former has been unnoticed in the charter, but it ought not to escape the notice of history.

The chamber of 181.5, called the Unsearch- ables, was nominated by the yet incomplete electoral colleges, and the knights of St. Louis, who were united to it. It seemed as if it gave the signal for a re-action of the most furious passions. The tribunals, the military commis- sions, and the provostal courts, shed the blood of a great number of persons, accused of political crimes. Denunciators, partly some of the old Jacobins, filled the places of the former func- tionaries, and the standing commissions were re- newed. The impunity of assassination organised, in the south, a set of royalists called green-men, who made the country tremble. Brune killed himself at Avignon ; Ramel, sent in the name of the king, was assassinated ; some unfortunate

Mamelukes, who had attached themselves to the fortunes of Napoleon, expired under the cruel hand of the JViarseillais; while the Pro- testants were murdered at Nismes by ■ some wretches, who walked about boldly, encouraged by a chamber, which imposed silence on Argen- son, their accuser. Enquiries pursued the mili- tary, and the amnesty was on the point of becoming dreadful to i ranee, if the ministry had not opposed the chamber. Espionage and do- miciliary visits were for a long time the reprisals for .some measures of a similar kind, adopted during the hundred days. Fiery orators signalised themselves in the chamber by propositions,

little encouraging to the nation, or perhaps to the throne itself. In fine, the discontented state of France, that had already manifested itself by an insurrection in the Iserer, which had been severely repressed, warned the minister, that it was time to stop this torrent, wiiich grew more rapid the more it was confined. The foreign cabinets even showed a desire for this step. The charter itself was threatened, and, to place things in safety, the ordinance of the 5th of September was renewed, and the chamber dissolved.

A new assembly, elected under the influence of a moderate policy, adopted, notwithstanding the opposition of the aristocratic party, a law for elections agreeable to the charter : this was the chief requisite of the representative government. Prosecutions gradually ceased ; the public spirit revived ; the ministry, withoul- granting all that was claimed, seemed at least to allow the people to hope. Other institutions, conformable with the charter, were promised ; the administration became more lenient, and mutual instruction was encouraged and already made great pro gress. Fifteen members, introduced into the chamber by the new law, strengthened the con- stitutional majority; salutary measures, with re- gard to military promotion, were defended with talent by the conscientious minister, Gouvion Saint Cyr; and the frontiers were delivered from 100,000 foreigners, whose presence had given all its force to the re-action. Still, however, that system of policy which, while it sought support on the right and the left, was finally influenced rather by private interest, and the advantage of a set of pensioners, than by public opinion, in- sinuated itself slowly. Expenses swelled, not- withstanding extraordinary public burdens; but the frank opposition avowed by the nation marked these abuses, and expressed their wants.

The aristocratic party, which appeared to have assumed, in their parliamentary tactics, the lan- guage of the liberals, and implored in vain by their secret notices for the aid of a foreign power, foresaw that they would soon be reduced in the chamber to the rank they held in the nation ; they therefore stirred up opposition to the elec- toral law. The chamber of peers, which till then had excited little notice, received the proposition for modifying this law — a proposition which a ministry, appointed at this crisis, rejected ; an < 5 sixty new peers were created to displace thf. majority. The ministry resting on public opinion, a satisfactory law on the freedom of the press was adopted, and the journals became free. Soon, however, an injudicious discussion on the re-

railing of the banished, and some disturbance, that had occurred in the law school, broke the unanimity wliich prevailed between the ministry and the liberal majority. Some persons, un- doubtedly with the best intentions, contemplated the alteration of the law of elections, until the ministers, St. Cyr, Dessoles, and Louis, refusing to take part in this business, retired (1820) with popularity for their only reward. The Spanish revolution, which then broke out, and the re- jection of a deputy legally elected, again exas- perated the new schism.

Suddenly a pr,nce of the royal family, the Duke de Berri, fell beneath the knife of a fana- tical assassin ; and a sad presentiment seized on all uprigiit minds, to whom the experience of the past is not useless, and who well know, how power can form a party for its support from a bloody robe. Two laws immediately suspended individual liberty, and the liberty of the press. A minister who, notwithstanding the new attack on the law of election, preserved a popularity that he owed to the remembrance of tiie 5th of September, M. Decaze, was overthrown. His successors, with the majority of five voices (their own) passed a law, which establishes two kinds of elections, and gives the richest electors ˆthe right of voting twice. Some outrages committed on the deputies, who refused their consent to this law, occasioned reprisals and numerous mobs ; on which several days after, the cavalry made a charge and dispersed them. Soon (1821) the ministry brought before the court of peers a great number of military men, accused of a formidable conspiracy. In this proceeding were seen, among others, some of those men, known by the name of exciting agents, who have done much mischief in every period of the revolution, and who make the police an instrument of promoting confusion. As to the legislative session, it pre- sented only the continued triumph of a strong majority, introduced into the chamber of depu- ties by the new law.

During this year the Neapolitan and Pied- montese nations, wliich had established among them the representative government, and the constitution of the Cortes, were subdued and chastised by the Austrians. It was also in the year 1821, that the news reached Europe of the

deatli of Napoleon. A few years before, this event would have convulsed the world : at this period it only produced the effect of the resound- ing of the far distant, but still formidable storm. The new election in 1821, reinforced the right side of the chamber, already so numerous. At the opening of the session, the majority over- threw the ministers to whom it was indebted for the law, and some of the presidents, under whose direction it had been chosen. A minister, whom they deemed more decided, had been named. The ex-ministers, according to custom, retreated to the

chamber of peers, or received appoint- ments as ministers of state. A very severe and restrictive law now passed, with regard to the press, subjecting authors to the judgment of a jury, and a new law on the publication of news- papers took the place of tlie censorship. A budget of more than 900,000,000, or much above any that had been proposed in times when the kingdom was at its greatest height of power, passed without difficulty, supported by the ma- jority of the right side : while still the left con- tinued to render itself worthy of its popularity, and of the national gratitude, by its devoted conduct, its fine talents, and its indefatigable zeal in defending the general interests.

Louis XVIII. died in 1824. Our review of the factions and changes of modern French history has been perhaps already continued too far — the events are hardly cooled from the cru- cible in which they have taken their apparent form. It will suffice to say that this prince was truly a Frenchman : that at least in his second though short exile he learned much, and that France has resumed and retained a power of teaching her future kings more. — Siie will be free.

Our intelligent readers will observe that the whole of the preceding History of France has been recast, on the basis of the most esteemed French authorities, for the present work : we have in some cases simply translated particular pas- sages, and exercised a supervisory care over the whole ; conceiving that an intelligent and mode- rate French historian would be able to give us the fairest and best digested account of French history.

France, Isle of, the name of an important province of France before the revolution. It comprised Paris, and probably received its name from being surrounded by the Seine, the Marne, the Oise, the Aisne, and the Ourcq. It is in general level, fertile, and populous; but is now divided into the departments of the Aisnk, Oise, Sf.inf,, Seine and Oise, and Seine and Marne, which see.

France, Isle of, or Mauritius, an island in the Indian Ocean. See Mauritius.

FRANCFORT. See Frankfort.

FRANCIIE Comte', or Upper Burgundy, the name, before the revolution, of a province of France, adjacent to Switzerland and Lorraine. It now forms the departments of the Doubs, •Ti RA, and Upper [Saone, which see. Its nor-

thern part is level : its southern hilly and better adapted to pasturage. Its principal rivers are the Saone, the Doubs, the Oignon, and the Louve ; along the banks of the first two are many iron works; and in tlie vicinity of

Salins extensive salt works. Franche Comtd has be- longed to France since 1674, and was confirmed to that country by the peace of Nimeguen. Its capital town was Bosanˆon.

FRANCHEMONT, or Franchimont, a town and district of France, in the department of Ourte ; formerly a marquisate of Germany, in the bishopric of Liege. The town lies thirteen miles south-east of Liege.

FRAN'CIITSE, n.s. & v. a. Tr. franchise. Privilege ; immunity ; right granted ; exemption from slavery or any onerous duty. Frankness ;

generosity; district; extent of jurisdiction; to make free ; to keep free.

Certain, thought she, whom that this thing displcse I rekke not for here I him assure To love him best of any creature Though he no more hadde than his sherte. Lo, pitee runneth sore in gcntil herte Here may ye seen, how excellent franchise In women is, whan they hem nawe avise.

Chaucer. The Merchantes Tale. There are other privileges granted unto most of the corporations, that they shall not be travelled forth of their own franchises. Spenser's State of Ireland.

I lose no honour In seeking to augment it ; but still keep My hosomfranchised, and allegiance clear.

Shakspeare. They granted them markets, and ether franchises, and erected corporate towns among them.

Davics on Ireland.

His gracious edict the same franchise yields To all the wild increase of woods and fields.

Dry den.

Franchise, is also used for an asylum or sanctuary, where people are secure of their per- sons, &c. Churches and monasteries in Spain are franchises for criminals ; so were they anci- ently in England, till they were abused to such a degree that there was a necessity for abolish- ing the custom. One of the most remarkable capitulars made by Charlemagne in his palace of Heristal, in 779, was that relating to the fran- chises of churches, by which

he forbad any pro- vision to be carried to criminals retired into churches for refuge.

Franchise, and Liberty, in law, are used as synonymous terms ; for ‘ a royal privilege, or branch of the king’s prerogative, subsisting in the hands of a subject.’ Being therefore derived from the crown, they must arise from the king’s grant ; or, in some cases, may be held by pre- scription, which presupposes a grant. We sliall briefly mention some of the principal kinds of franchise, preirJiuig only, that they may be vested either in natural persons or bodies poli- tic ; in one man, or in many : but the same identical franchise, that has before been granted to one, cannot be bestowed on another, for that would prejudice the former grant. A county Palatine is a franchise vested in several persons. It is likewise a franchise for a number of per- sons to be incorporated and subsist as a body politic; with a power to maintain perpetual succession, and do other corporate acts : and each individual member of such corporation is also said to have a franchise. Other franchises are, to hold a court-leet ; to have a manor or lordship ; or, at least, to have a lordship para- mount : to have waifs, estrays, treasure-trove, royal fish, forfeitures, and deodands : to have a court of one’s own, or liberty of holding pleas and trying causes ; to have cognisance of pleas ; which is still a greater liberty, being an exclusive right, so that no other court shall try causes arising within that jurisdiction : to have a baili- wic, or liberty exempt from the sheriff of the county ; wherein the grantee only, and his officers, are to execute all processes : to have a fair or market; with the right of taking toll.

either there or at any other public places, as at bridges, wharfs, or the like ; which tolls must have a reasonable cause of commencement (as in consideration of repairs, or the like), else the franchise is illegal and void : or lastly, to have a forest, chase, park, warren, or fishery, endowed with privileges or royalty. Usage may uphold a franchise without either record or creation, al- lowance or confirmation ; but it hath been ad- judged that grants of franchises, made before the time of memory, ought to have allowance within the time of memory, in the king’s bench ; or by some confirmation on record ; and such ancient grants shall be construed as the law was when they were made, and not as it hath been since altered ; but franchises granted within time of memory are pleadable without any al- lowance or confirmation ; and, if they have been allowed or confirmed, the franchises may be claimed by force thereof, without showing the charter.

Franchises may be forfeited and seized for mis-user, or non-user, and, when there are many points, a mis-user of any one will make a forfei- ture of the whole. For contempt of the king’s writ, in a county palatine, &c., the liberties may be seized, and the offenders fined ; and the tem- poralities of a bishop have been adjudged to be seized until he satisfied the king for such

a con- tempt.

FRANCIA (Francis), a celebrated Bolognese painter, born in 1450. He was first a jeweller, afterwards a graver of coins and medals ; and, applying at last to painting, obtained great repu- tation by his works, particularly by a painting of St. Sebastian, whom he had drawn bound to a tree, with his hands tied over his head. Hearing much of the works of RafTaelle he greatly desired to see some work of so celebrated an artist ; and Rafiaelle, having painted a St. Cecilia for the church of St. Giovanni del Monte at Bologna, wrote to Francia, requesting him to see it properly fixed. The letter was received with rapture ; but when he came to ex- amine the picture, the sight of so much perfection in design, grace, expression, and exquisite finishing, struck Francia with astonishment, and threw him into a state of melancholy ; and the feeling of how much Rafiaelle was superior to himself is said to have occasioned his death, in

1518.

FRANCIS (Philip) ,D.D., an ingenious writer, of Irish extraction, his father being dean of a cathedral in that kingdom. He was more dis- tinguished as a translator than as an original writer. His versions of Horace and Demos- thenes have been justly valued ; the former is accompanied with learned and useful notes. He was also a considerable political writer : and is supposed to have been employed by the govern- ment ; for which service he was appointed rector of Barrow in Suffolk, and chaplain of Chelsea hospital. He was also the author of two trage- dies, Eugenia, and Constantia. He died at Bath in March 1773, leaving a son, then one of the supreme council at Bengal.

Francis (Sir [Philip), a celebrated whig politician of modern times, was the son of the last mentioned, and was bom in Ireland in 1740.

He was educated partly by bis fatlier, and after- wards at St. Paul's school; on leaving which he became a clerk in the secretary of state's office. He went out to Portugal with the British envoy in 1760; and on his return obtained a situation in the war-office under lord Barrington. He wa.s dismissed, or relinquished the post, in consequence of a quarrel with that nobleman ; and in 1773 he went to the East Indies, when he became a member of the Bengal council, and distinguished himself by his opposition to the measures of governor Hastings, the violence of which at length

occasioned a duel, in which Mr. Hastings was wounded. In 1781 Mr. Francis returned to England, and was chosen M. P. for the borough of Yarmouth in the Isle of Wight. In the house of commons he joined the oppo- sition; and, on the impeachment of Mr. Has- tings, actively supported his accusers. He came into office with the whig administration ; where he was honored with the order ol' the bath. He died in 1818, having published several clever political pamphlets, and to him has been some- what plausibly assigned the credit of having written the famous Letters of Junius. See JuNrus.

Francis (St), the founder of the society of the Franciscans, was the son of a merchant of Assisi, in the province of Umbria. Having led a dissolute life, he was reclaimed by a fit of sickness, and in 1208, hearing the passage quoted. Matt. x. 9, 10. ' Provide neither gold, nor silver,' &c., he was led to consider a volun- tary and absolute poverty as the essence of the gospel, and to prescribe it as a sacred rule to nimself and those who followed him. See Franciscans. He died in 1226.

FRANCISCANS, in ecclesiastical history, re- ligious of the order of St. Francis, founded by him in 1209. This society, which appeared to Innocent III. extremely adapted to the state of the church, was solemnly approved and con- firmed by Honorius III. in 1223. Francis, through an excessive humility, would not suffer the monks of his order to be called fratres, i. e. brethren or friars, but fraterculi, i. e. little bre- thren, or friars minor, by which denomination they still continue to be distinguished. They are also called gray friars, on account of the color of their clothing, and Cordeliers, &c. — The Franciscans and Dominicans were zealous and active friends to the papal hierarchy. In 1287 Matthew of Aqua Sparta, being elected general of the order, discouraged the ancient discipline of the Franciscans, and indulged his monks in abandoning even the apoearance of poverty. This conduct raised the indignation of the spiritual or austere Franciscans ; so that from 1290 schisms arose in an order that bad been femous for its pretended disinterestedness and humility. Such was the enthusiastic frenzy of the Franciscans, that they impiously maintained, that St. Francis was a second Christ, in all re- spects similar to the first ; and that their insti- tution and discipline were the true gospel of Jesus. Accordingly, Albizi, a Franciscan of Pisa, published a book in 1383, with the applause of his order, entitled. The Book of the Confor- mities of St. Francis with Jesus Christ! In the

beginning of the eighteenth cenluiy, the whole Franciscan order was divided into two parties; the one called Spirituals, who embraced the severe discipline and absolute poverty of St. Francis; and the other. Brethren of the Com- munity, who insisted on mitigating the austere injunctions of their founder. These wore long, loose, and good habits, with large hoods ; the

former were clad in a strait, coarse, and short dress, pretending that this dress was enjoined by St. Francis, and that no power on earth had a right to alter it. Neither the moderation of Clement V. nor the violence of John XXII. could appease the tumult occasioned by these two parties : however their rage subsided from A. D. 1329. In 1368 these two parties were formed into two large bodies, which still subsist, comprehending .the whole Franciscan order ; viz. the conventual brethren, and the brethren of the observances or observation, from whom sprung the Capuchins and Recollects. The Franciscans are said to have come over to England in 1224, and to have had their first house at Canterbury, and their second at London ; but there is no certain account of their being here till Henry VII. built two or three houses for them. At the dissolution of the monasteries, the conventual Franciscans had about fifty-five houses, which were under seven wardenships ; viz. those of London, York, Cambridge, Bristol, Oxford, Newcastle, and Worcester.

FRANCISCO (St.), a capacious town and harbour on the coast of Brasil, on the south frontier of tiie province of St. Paul. The bay has three fortified entrances, of which that to the south is the most frequented. The inhabitants in the neighbouring countrv are chiefly employed in cutting timber, and ship-building; in which many negroes are also employed. The town is situated on a small island at the entrance of the bay, in lat. 26° 153'. Behind it, is a ridge of mountains, which rise to the height of 4000 feet. Over this impassable barrier a road is constructing, at an incredible expense, which when it is finished will be of great importance to this port.

Francisco Rio, a large river of Brasil, which has its rise in the province of Minas Geraes, between 20° and 21° of S. lat., in that low valley which is formed in the interior, beyond the first ridge of the Andes, which here run in a direction nearly north and south. It runs north for many miles, with an inclination to the north-north-east, and then, turning east, after a course of about 800 miles it falls into the Atlantic, in lat. 6° .55′ S., and is the boundary between Bahia and Pernambuco.

FRANCKLIN (Thomas), I). D., a miscella- neous critic, and writer, was the son of a printer and bookseller of Covont Cjarden, where ho was born in 1721. His father, who was printer of the Craftsman, devoted him to the cimrcli, and he was educated at Westminster school, and Trinity College, Cambridge. He afterwards was an usher in the school in which he was educated, and in 1750 became (Jreek professor at Cambridge. He first appeared as an author in a translation of The Epistles of [‘halaris, 1749 and of Cicero’s tract Ue Natural Dcoruin

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About the same time he published An l,nquiry into the Astronomy :uid Anatomy of the Anci- ents, reprinted m 1775, S3vo. In 1759 appeared his Sopliocles, 2 vols. 4to. whicli is allowed to be a fair and forcible translation of that great poet. This was followed by a Dissertation on Ancient Trage ly : he is also supposed to have aided SmoUet in the Critical Review, and in the ti'anslation of the works of Voltaire. In 1757 he received from Trinity College the livings of Ware and Thundri'Jge in Hertfordshire, and published in 1765 a volume of popular Sermons on the relative Duties. The next year he pro- duced at. Drury-lane theatre the tragedy of the Earl of Warwick, borrowed without acknow- ledgment from the French of La Harpe ; and although in 1767 he was made one of the king's ohaplams, and in 1770 D. D., he paid a constant attention to the stage, by the occasional produc- tion of dramas, chiefly adapted from the French, and on one occasion descended even to farce. In 1776 he was presented to the living of Brasted in Surrey. In 1780 Dr. Francklin published his excellent translation of Lucian, in 2 vols. 4to. and died March 15th, 1784. Besides the works already mentioned, he was the author of a hu- morous piece entitled A Letter on Lecture- ships, An Ode on the Instrtution of the Royal Academy, and three volumes of posthumous Sermons.

FRANCOIS, Cape, a town on the north coast of Hispaniola, and one of the principal towns of the island. Its port is advantageously situated on a cape at the edge of a large plain, sixty miles long and twelve broad. It is screened too much from the land wind by the mountains, and thus left exposed to the unmitigated heat of the sun. The plain on which it stands is well watered and cultivated. Here are straight roads, forty feet broad, lined with hedges of lime and lemon trees, intermixed with long avenues of other trees, and leading to plantations which produce a greater quantity of sugar than any other spot of the same size in the world. The town once possessed several elegant public buildings, such as the Jesuits' College, converted since the revolution into a government house ; the governor's house, the barracks, the arsenal, the theatre, and two hospitals. The port is one of the most secure and convenient in the whole island. It is exposed to no wind but the north- east.

Cape Francois was founded in 1 670, and was burnt in 1793 by the people of color. It has suffered severely since the intestine commotions by which the island has been distracted. Pre- viously it contained 8000 inhabitants, and was the last town retained by the French in the island in 1803. It was called Cape Henry by Christophe. Long. 72° 16′ W,, lat. 19" 46′ N.

FRANCONIA, a circle of the old German Empire, bounded on the north by Meissen and Thuringia, on the south by Bavaria and Suabia, on the east by Bohemia and the Upper Pala- tinate, and on the west by the Lower, and the eh ctorate of Mentz ; being eighty-eight miles from north t) south, and ninety-five from east to west. The middle is fertile in corn, wine, and

t'ruits ; !)ul the borders are full of woods and barren mountains. The majority of the people are Lutherans ; but there are also many Calvin- ists, Roman Catholic, and Jews. The Franks, who coiuiuered and gave narr.e to France, came from this province. See France. Nuremburg IS the capital.*

FRAiN FKER, Franf.quer, or Franker, a town of the Netherlands, in north Friesland. It has a castle, and many magnificent buildings, and stands on the canal between Haarlem and Lewarden. There is also a university or Athe- naeum, once famous foi its learned professors ; particularly Adrian Metius, George Pasor, Pierius Winsemus, &c. It lies nine miles west of Lewarden, and five east of Karlingen. Po- jjulation 3400.

FRANGIBLE, cui/'. Lat. /rawgo. Fragile; brittle ; easily broken.

Though it seems the solidest wood, if wrought be- fore it be well seasoned, it will shew itself very fran- gible. Boyle.

FRA'NION, n.s. Sax. ppeon, a lover; a paramour; a boon companion.

First, by her side did sit the bold Sansloy,

Fit mate for such a mincing minion.

Who in her looseness took exceeding joy.

Might EOi be found a franker /rcwiion.

Faerie Qveene.

FRANK, a(/;. "^ Fr. /ranc ; Germ. /Van/c,

Feank'ly, adv. >is connected with the word

Frank'ness, n.s.jfrech, bold, and frei, free. Liberal ; generous ; not niggardly ; unreserved ; free without restraint ; without conditions ; without payment. Frank is not, however, quite synonymous with candid, free, open, and plain : Frankness is a voluntary effusion of the mind between equals : candor is a debt paid to justice from one independent being to another. The frank, free, and open, all speak without constraint; but the frank man is not imperti- T.ent like the free man, nor indiscreet like tlie open man. See Crabb.

Thou hast it won ; for it is of frank gift,

And he will care for all the rest to shift.

Huhherd. Oh, were it but my life, I'd throw it down for your deliverance, k % frankly as a pin.

Shakspeare. Measure for Measure If ever any maHce in your heart

Were hid against me, now forgive me frankly.

Id. Henry VHI.

The ablest men that ever were, have had all ax» openness and frankness of dealing, and a name of cer- tainty and veracity. Bacon.

The moister sorts of trees yield little moss, for iui reason of the frank putting up of the sap into the boughs. Id.

He entered very frankly into those new designs, which were contrived at court. Clarendon.

The lords mounted their servants upon their own horses ; and they, with the volunteers, who frankly listed themselves, amounted to a body of two hundred and fifty horse. Id,

When the Conde duke had some eclaircissement with the duke, in which he made all the protestations of his sincere affection, the other received his protes- tations with all contempt ; and declared with a very unnecessary / ran/mcis, that he would have ao friend- ship with him. ^'•'

FRA

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FRA

He delivered with the frankness of a friend's tongue, word by word, what Kalander had told him touching the strange story. Sidney.

Tis the ordinary practice of the world to be frank of civilities that cost them nothing. L' Estrange.

They were left destitute, either by narrow provision, or by their/ran/t hearts and their open hands, and their charity towards others. Sprat's Sermons.

Tom made love to a woman of sr nse, and always treated her as such during the whole time of court- ship : his natural temper and good breeding hindered him from doing any thing disagreeable, as his sin- cerity and frankness of behaviour made him converse with her before marriage in the same manner he intended to do afterwards. Addiio?t's Guardian.

I value my garden more for being full of blackbirds than cherries, and very frankly give them fruit for their songs. Spectator.

Conscience, what art thou ? thou tremendous power. Who dost inhabit us without our leave. And art within ourselves, another self, A master-self that loves to domineer. And tread the monarch frankly as the slave.

Young.

Frank, k. s. &f. a. Fr. franc, a stye. A hogstye; a place to feed hogs in, so called from liberality of food ; a letter which goes free and pays no postage. It is also the name of a Freucli coin. To frank is used in the various applica- tions of the noun, and, in addition, it signifies to feed high , to fatten ; to cram.

Where sups he ? Doth the old boar feed in the old frank ? Shakspeare. Henry I V.

In the sty of this most bloody boar.

My son George Stanly \% franked up in hold.

Shakipeare.

You'll have immediately, by several franks, my epistle to lord Cobham. Pupe to Swift.

Gazette sent gratis down, and franked. For which thy patron's weekly thanked. Pope.

My lord Orrery writes to you to-morrow ; and you see I send this under his cover, or at least franked by him. Swift.

Frank, or Franc, in the ancient English cus- toms, signifies literally free from charges and impositions, orexeraptfrom public taxes ; is used in various senses, sometimes compounded, and sometimes not ; though the latter is doubtless more proper. Thus,

FRANKALM(jrGNE, n. s. The same which we in Latin call libei'a eleemosyna, or free arms in English ; whence that tenure is commonly

known among our English lawyers by the name .of a tenure in frank aiimone, or frankalmoigne, which, according to Briton, is a tenure by divine service. Aylifft's Parcrgon.

Frank Almoigne is a tenure, whereby a religious corporation, aggregate or sole, hoideth lands of the donor to them and their successors for ever. The services which they were])ound to render for their lands were not defined : but only in general to pray for the souls of the donor and his heirs, dead or alive; therefore they did no fealty (which was incident to all other services), because this divine service was of a more exalted nature. This is the tenure by which almost all the ancient monasteries and religious houses held their lands; and by which the parochial clergy, and very many ecclesiastical and eleemosynary foundations, still hold them ; the nature of the service being upon the reformation altered, and

made conformable to the purer doctrines of the church of England. It was an old Saxon tenure, and continued under the Roman revolution through the great respect that was shown to religion and religious men in ancient times. This is also the reason that tenants in frankal- moigne were discharged of all other services except the trinoda necessitas of repairing the highways, building castles, and repelling inva- sions ; just as the druids among the ancient Britons had omnium rerum immunitatem. And even at present this is a tenure of a very diffe- rent nature from all others, bemg not in the least feudal but merely spiritual. For, if the service be neglected, the law gives no remedy by dis- tress, or otherwise, to the lord of whom the lands are holden ; but merely a complaint to the ordi- nary or visitor to correct it.

Frank Chase is a liberty of free chase, whereby persons, that have lands within the compass of the same, are prohibited to cut down any wood, &c., out of the view of the forester.

Frank Fee signifies the same thing as hold- ing lands and tenements in fee simple ; that is, to any person and his heirs, and not by such service as is required by ar.cient demesne, but is pleaded at common law. See Fee.

Frank Law, the free and common law of the land, or the benefit a person has by it. He that for any offence loseth this frank law incurs these inconveniences, viz. he may not be permitted to serve on juries, nor used as an evidence to the truth ; and, if he has any thing to do in the king's court, he must not approach it in person, but appoint his attorney ; his lands, goods, and chat- tels shall be seized into the king's hands ; and his lands be estreated, his trees rooted up, and his body committed to custody.

Frank Marriage, in law, is where tenements are given by one man to

another, together with a wife, who is the daughter or cousin to the donor, to hold in frank marriage. By such gift, though nothing but frank marriage is expressed, the do- nees shall have the tenements to them, and the heirs of their two bodies begotten ; that is, they are tenants in special tail. For this expression, frank marriage, denotes ex vi termini, not only an inheritance, but likewise limits that inheri- tance; supplying, not only words of descent, but of procreation also. Such donees in frank mar- riage are liable to no service but fealty; for a rent reserved therein is void until the fourth de- gree of consanguinity be past between the issues of the donor and donee.

FRANKPLEDGE, Lat. franciplegium, of franc, i. e. liber and pleige, i. e. fidejussor. A pledge of surety for freemen. For the ancient custom of Plngland for the preservation of the public peace was, that every freeborn man at fourteen years of age, religious persons, clerks, knights and their eldest sons excepted, should find security for his fidelity to the king, or else he kept in prison ; whence it became customary for a certain number of neighbours to be bound for one another, to see each man of their pledge forthcoming at all times, or to answer the trans- gression of any one absenting himself. Thi.s was called frankpledge, and the circuit thereof was called decenna, because it commonly con-

sisted often houstholils; and every particular per- son, thus mutually bound, was called decenner. This custom was so strictly observed that the sheriffs, in every co-anty, did from time to time take the oaths of youn;^' ones as they grew to the age of fourteen years, and see that they combined in one deceiina ; this branch of the sheriff's authority was called visus franciplegii, view of frankpledge.

Franked Letters. The privilege of letters passing free of postage to and from members of parliament was claimed by. the house of commons in 10(30, wlien the first legal settlement of the })resent post-office was made; but afterwards dropped, upon a private assurance from the crown tliat this privilege should be allowed the members. Accordingly a warrant was constantly issued to the postmaster-general, directing the allowance thereof to the extent of two ounces in weight : till at length it was expressly confirmed by 4 Geo. III. c. 24, which added many new regulations, rendered necessary by the great abuses in franking ; wliereby the annual amount of franked letters had increased from £'23,600 in tlie year 171o, to £170,700 in th.e year 17G3. Other regulations afterwards took place ; in par- ticular, franks were reriuired to be dated (the month written at length), and put mto the office the same day; notwithstanding which, the reve- nue still lost by its privilege above £80,000 per •innum. Tlie following are the regulations of franking required by 33 Geo. III., and now in force. No letter directed by or to any M. P. shall be exempted from postage if it exceeds one oz. in weight. No letter directed by any membc shall be exempted, unless he shall actually be in the post town, or within the limits of its delivery of letters, or within twenty miles of it on the day, or the day

before it, on which tlie letter shall be put into the office. No member shall be entitled to send free from postage more than ten letters in one day, nor to receive more than fif- teen. Whenever the numlDer of letters sent or received by such member in one day shall exceed the number exempted, and the postage upon any of them shall differ, the letters chargeable with a liigher postage shall be included in the number exemjitcd, in preference to any chargeable with a lower postage, and the remainder shall be chargeable with the postage to which common letters are now chargeable. Persons who may now in right of their offices send and receive letters free may continue so to do. Printed votes or proceedings in jiarliament, and printed news- papers, may also be sent as usual. No single letter sent by the])Ost from any non-commis sioned officer, seaman, or private, in the navy, army, militia, fencible reˆiiments, artillery, or marines, shall be charged with more postage than one penny, but must be paid at the time of put- ting it into the post office ; and such letter must have written thoreoiˆ, in the hand writing of, and signed by, the commanding officer, the name of such commanding officer, aud of the ship, vessel, corps, regiment, or detachment. Also no single letter directed to any such non-commissioned officer, seaman, or private, shall be charged with more postage than one penny, to be paid on the delivery thereof; but such letter must be directed

to such persons, specifying the ship, vessel, rai- ment, tioop, corps, company, or detachment, to which they belong : and the postmaster must de- liver such letter either to the party to whom it shall be directed, or to some person appointed to receive the same by the commanding officer, and to no other. Every cover containing patterns or samples of goods, not exceeding one ounce, shall be charged only as a single letter, if sent open at the sides, and without any letter or writing therewith, other than the name of the person sending the same, the place of his abode, and the prices of the articles.

FRANKEN (Francis), commonly called Old Frank, a famous Flemish painter, supposed to have been born about A, D. 1544. He painted historical subjects from the Old and New Testa- ments ; and was remarkable for introducing a great number of figures into his compositions, which lie had the address to group very distinctly. Vˆandyck greatly commended his works.

Fran KEN (Francis), or Young Frank, the son of the former, born in 1580, was instructed by his father, whose style he adopted so closely, that their works are not easily distinguished. He travelled into Italy for improvement in coloring. His chief performances are, a Scriptu- ral piece in the church of Notre Dame at Antwerp, and another of Solomon's idolatry. He died in

1642.

FRANKENBERG, a town of Hesse-Cassel^ Germany, ontheEder. It contains 2700 inhabi- tants, and is the chief place of a district, which once had some gold and silver mines, and still contains lead ore. Thirty-five miles south-wes of Cassel.*

Frankenberg, a town of Upper Saxony, in Erzgeburg, nine miles west of Freyberg, and seven N. N. E. of Chemnitz. It is a place of great antirjuity, and contains at the present time some flourishing woollen, cotton, and leather manufactories. Charlemagne fortified it against the Saxons.

FRANKENDAL, a strong town of France, in the department of Mont Tonnerre, late of Ger- many, in the dominions of the elector palatine. It was taken by the Spaniards in 1623, by the Swedes in 1632, and burnt by the French ir» 1688. It has a good trade in porcelain, cloth, silks, &c. ; and a navigable canal to the Rhine. It lies eight miles north-west of Manheim, and eight south of Worms. Long. 8° 29′ E., lat. 49° 25′ N.

FRANKENHAUSEN, a town of Germany, in the principality of Schwartzburg-Rudolstadt^ having extensive salt works, and 3000 inhabi- tants. It stands on the Wipper, ten miles east of Sonderhausen, and twenty- six north of Erfurt.

FRANKENIA, in botany, a genus of the monogynia order, and hexandria class of plants; natural order seventeenth, calycanthemae : cal. qiiinquefid, funnel-shaped; petals five; stigma sexpartite : caps, unilocular and trivahoilar. Species four ; two natives of our own country^ one of thfe Cape, and one of Siberia.

FRANKENSTEIN, a town of Silesia, on the Bautze, containing a flourishing linen manufac- tory. It is twelve miles S. S. W. of Glatz, and has 4150 inhabitants.

FRANKENTHAL, a town in the province of the Rhine, Bavaria, which was destroyed in 1688, with several other tovras of the palatinate, but rebuilt. It suffered also greatly in the wars of 1794 and 1795. Its present population is about 3500, engaged in the linen and woollen manufactory. Here is a canal which communi- cates with the Rhine. Twelve miles from Hei- delberg.

FRANKFORT, a town of the United States, on the river and in the state of

Kentucky. Long. 83° 12′ W., lat. 38° 3′ N.

Fr.4Nkfort on the Maine, a considerable city of Germany, the seat of the Germanic diet, is situated on the INIaine, about twenty miles above its influx into the Rhine, over which is a good stone bridge. It is divided by the Maine into two parts : the one on the north bank, by much the larger, called Frankfort Proper; the other Sachsenhausen. Frankfort was formerly fortified, but most of its works are now converted into promenades or gardens. The houses are partly of wood, but the principal streets, ‘ the Zeile’ in particular, are wide ; there are also three noble squares. This town, the residence of ancient electors, princes, and counts, is now divi- ded, in religion, between the Catholics, who have nine churches, the Lutherans seven, the Calvinists two. The Jews are said to amount to between 7000 and 9000. They formerly lived in a quarter of the city blocked up at one end, and regularly shut in at night; but since 1796 they nre at liberty to live in any part of the town, though they are still not exempt from vexatious treatment. Population 41,000.

Frankfort is much frequented by travellers, and carries on a great trade in books and print- ing. It is the birth-place of Goethe. It con- tains, among its public establisliments, a Lutheran academy, and Catliolic gymnasium. The library of St. Bartholom-ew has some valuable MSS., and there are also several great private collec- tions. Two great fairs are held here annually in spring and autumn ; and its commercial activity is always great. Merchandise of all kinds ar- rives by the Rhine from all parts of Europe, and the exchange transactions are very considerable. The local manufactures, however, are on a small scale ; the principal are in silk, velvet, and cotton sl-uffs.

Frankfort, long a free city, was under the iron •yoke of Buonaparte from 1806 to 1813 : its con- stitution at present is a mixture of democracy and aristocracy, affording a perfect equality to the different denominations of Christians, and a final appeal to the Diet. The town possesses an adjacent territory of 110 square miles, with a population of 48,000 ; its yearly revenue is about £80,000 sterling, but it is burdened with a debt of more than £300,000, chiefly the result of the forced contributions of the French. It is twenty miles E.N.E. of Mentr, and fifty south-east of Cologne.

Frankfort, Grand Duchy or, is the name of a temporary sovereignty formed in Germany in 1806 by Buonaparte, in favor of the arch- chancellor or elector of Mentz, who was named prince primate of the confederation of the Rhine. He added to this territory the city of Frankfort Vol. L.

on the Maine. The population of this duchy was in 1811 as follows ; —

Square miles.

Population

Aschaffenburg

880

86,000

Wetzlar

22

4,983

Frankfort

66

52,000

Fulda

946

90,000

Hanau

462

60,000

2376 292,983

At the congress of Vienna, the primate was deprived of his states, and treated as the secu- larised bishops of 1803, receiving an annual pen- sion of 100,000 florins from those powers who obtained his possessions.

Frankfort on the Oder is a considerable town of Prussia, and the capital of the middle mark of Brandenburg. It is defended by a fort, standing on the bridge of the Oder. The town is well built, and has a university, founded in 1506 ; but the number of students is seldom more than 200. It has three annual fairs, and is a place of considerable trade, communicating with the North Sea by the Muhlrose canal; 2000 boats and barges are said to be employed on that canal and on the Oder. Here are manu- factures of silks,

woollens, leather, and earthen- ware. The neighbourhood was the scene of a sanguinary battle between the Prussians and Russians in 1759. It is twelve miles S.S.W.of Custrin, and forty-eight east of Berlin. Popula- tion 12,000.

Frankfort, the metropolis of Kentucky, United States of North America, is situated in Franklin county, on the north-east bank of Ken- tucky River, about twenty-four miles from its junction with the Ohio. It is a flourishing and regularly built town, with a handsome state- house. Population, in 1816, 1099. Twenty-five miles north by west of Danville.

FRANKINCENSE, n.s. 'Frank and in- cense ;' so called perhaps from its liberal dis- tribution of odor ; says Dr. Johnson. Mr. Thomson more probably from Goth, ve, holy, and 7-auck ; Tent, ranch, smoke or odor.

Take unto thee sweet spices, with ˆxixc frankincense.

Ejodus.

1 find in Dioscorides record o{ frankincense gotten in India. Brerewood on Language.

See how it weeps ! the tears do come. Sad, slowly dropping like a gum. So weeps the wounded balsam ; so The holy frankiricense doth flow. The brothcrless Heliadcs Melt in such amber tear.< as theee. Man-ell.

Black ebon only will in India grow, And nd'vous frankinceiise on the Sabasan bough.

Dryden's Virgil.

Cedar zni frankincense, an od'rous pile. Flamed on the hearth, and wide perfumed the isle.

Pope.

Frankincense is a dry resinous substance in pieces o. drops, of a pale yellowish white color ; a strong smell, but not disagreeal)le, and a bitter, acrid, and resinous taste. It is very inflamruablc. The earliest histories inform \&,i\M frankincense was used among the sacred rites and sacrifices, as it continues to be in many parts. M'e arc still uncertain as to the place whence frankincense is brought, and as to the tree wliich pro- duces it. H»ll.

FRANKLAND'S Islands, a cluster of islands in the South Pacific, on the north-east coast ot" New Holland, about six miles from the land. Long. 146″ E., lat. 17° 12′ S.

FRANK'LIN, n. s. From fra?ik, a freeholder; an ancient name for a freeholder of considerable pro{)erty. Fortescue (de L L. Ang. c. 29) describes a Franklin to be a pater familias, ma.jnis ditatus possessionibus. He is classed with, but after, the miles and armiger, and is distinguished from the libere tenentes and valecti ; though as it should seem the only real distinction between him and other freeholders consisted in the largeness of his estate. Spelman, in v. Franklein, quotes the following passage from Trivet's Fr. Chronicle (M S. Bibl. R. S. n. 56). Thomas de Brother- ton, filius, Edwardi I. (Mareschallus Anglia;), apres la mort resposa la fille de un Francheslyn apelee Alice. There appears no foundation for Dr. Johnson's definition of a franklin as ' a gentleman servant, steward, or bailiff.' A modern life of Dr. Franklin, whose memorable name with that of various other English families has been derived from this word, alludes to the following passage from Chaucer as contradicting our le\i- cographer : —

A frankflein was in this compa'j;nie While was his Lerd as is the dayesie — An householder and that a grete was he Seint Julian he was in his contree — At sessions ther was he lord ami sire. Full often I'tne he was knight of the shire An anelace and a gipciere all of silk Heng at his gerdel whits as morwc milk.

Chaucer, A spacious court they see. Both plain and pleasant to be walked in Where them does meet a franklin fair and free.

Faerie Queene.

Franklik (Benjamin), LL.D. and F.R.S., one of the iRost celebrated philosophers and politicians of the eighteenth century, was born at Boston, January 6th, 1706. He was the son of Josias Franklin, -a tallow-chandler, descended from an ancient English family, who had re- sided upwards of three centuries at Ecton in Northamptonshire, possessing a small freehold estate of thirty acres, and the eldest son whereof had been uniibrmly bred up to the profession of a blacksmith. This family had early embraced the opinions of the reformation, and were in danger of suffering for them, under the bloody reign of queen INIary I. Josias was the youngest branch of this family. He had joined the non- conformists, and upon the

prohibition of con- venticles, under Charles IE, emigrated with his wife and family to New England in 1682; where, on the death of his first wife, he married Abiah Folger, daughter of Peter Folger, author of several tracts on liberty of conscience, who bore him nine children besides the subject of the present memoir. Benjamin early acquired reading and writing, but made no progress in arithmetic, as he states in his Eife written by himself. F"rom ten to twelve years of age he worked at his father's business ; but his inclination for books determined the latter to make him a printer, though his elder brother James was already of that profession. To this

brother he was accordingly bound ap,prentice, and by his rapid proficiency in the busmess soon became of great use to him, though he was often treated ratiier tyrannically. Meantime he im- proved himself m arithmetic and other branches of science, as well as in composition, by writing anonymous essays for his brother's paper, The New England Courant, and which, being much admired, were for some time of advantage to it. But one of them, upon a political subject, hap- pening to give offence to the Assembly, his bro- ther was taken up, imprisoned for a month, and prohibited from printing his newspaper. The paper was then continued under the name of Benjamin Franklin, whose indentures were dis- charged, and a new secret contract agreed upon : but fresh differences afterwards arising between the brothers, our author, at the age of seventeen, emigrated to Philadelphia, where he arrived, without knowing a single individual in it, after escaping the danger of being taken up as a run- away servant, and various other adventures, which he humorously describes in his Memoirs. Here he soon obtained employment from Brad- ford and Keimer, the only two printers then in the city. After this he was introduced by his brother-in-law. Captain Holmes, to Sir William Keith, governor of the province, who promised to do much for him, but, except entertaining hiia occasionally, in his own house or a tavern, per- formed nothing. By his advice, however, he paid a visit to his parents, and in the end of 1724, sailed for London, whereby his own merit, without Sir William's promised letters of recom- mendation and credit, he obtained the best em- ployment, first in Palmer's printing office, and afterwards in Watt's. At this time our author falling in with some Deistical companions, re- nounced the religious principles in which he had been educated, commenced sceptic, and pub- lished a Dissertation on Liberty and Necessity, Pleasure and Pain, wherein he endeavoured to prove that there is no difference between virtue and vice ; which he afterwards considered as one of the grand errors of his life. This work, how- ever, introduced him to the acquaintance of Drs. Mandeville, and Pemberton, Sir Hans Sloane, and other celebratetl authors. But he had been only eighteen months in London, during which time, living very temperately, or rather abstemiously, he had begun to lay up money, when a proposal was- made to him by his friend, 3Ir. Denham, of returning to

Philadelphia. This gentleman had been formerly a mercnant in Bristol, and, having failed, emigrated to Aine- rica, where he made a fortune ; then returned, invited his creditors to a feast, and paid their ba- lances with interest. He engaged Franklin as his clerk and book-keeper, and to superintend the goods he was carrying back to America. Tliey accordingly sailed on the 3d of July, 1726, and arrived at Philadelphia, October 11; but Den- ham dying in F'ebruary, 1727, our author en- gaged once more as a printer with Keimer; whom he also served as a letter-founder, ink- maker, engraver, and copper-plate prmter ; as well as constructor of a press for that purpose. This press, which was the first that had been seen in the country, was erected

by Mr. Franklin, at Burlington, to print some New Jersey money-bills; and proved the means of his acquaintance witji judge Allen, and several other members of the assembly, who were after- wards of great service to him. After this, ho commissioned types from London, set up a printmg-office, in company with Hugh Mere- dith, a fellow-workman, whose father advanced some money for them ; and, at the same time, Franklin established a weekly club, for mutual improvement, which proved an excellent school of philosophy. This society, which was called the Junto, lasted nearly forty years. Mean time his industry, which was habitual, receiving addi- tional energy from the idea of working for him- self, rapidly advanced his credit, and Keimer, being unable to continue his newspaper, sold the copyright to Franklin for a mere tnfle; who, by his improvements in the conduct and execu- tion of it, soon raised it to a high degree of cele- brity. After this, his accurate and elegant manner of printing recommended him to the employment of the assembly: and his partner Meredith, giv- ing up the printing, turned farmer, and thus left Franklin sole proprietor of the business in 1720. Whereupon his friends, Messrs. Coleman and Grace, offered him money to carry it on exten- sively, and he accepted of half the offered sum from each. Soon after, a new emission of paper currency being wished for by the public, but opposed by the opulent part of the assembly, Franklin published a pamphlet on the sul)ject, which, being unanswerable, occasioned the mea- sure to be carried through, and himself to be re- warded by being employed to print tlie bills. Public and private employment now flowing upon him more and more, he, in 1730, married a lady, whose maiden name was Read, for whom he had entertained an affection before he went to London, and whose attachment was mutual : although, during his absence, she had been pre- vailed on by her mother, to marry one

Rogers, a potter, who had used her so ill, that she did not so much as bear his name. (See Franklin's J-ife, written by himself, and published by Dr. I'rice). To our author she proved an excellent wife, and contributed much to the success of his .shop. In 1731 Franklin's love of literature led him to set on foot, first a private, and afterwards a public library, which, in 1742, was incorpo- jiorated by the name of the Library Company of Philadelphia; which now consists of many thou- sand volumes, besides a philosophical apparatus, ike. In 1732 he began to publish Poor Richard's Almanack, a work which he rendered remarkable by its numerous valuable and concise moral max- ims, recommending industry and economy, and which he at last collected into one humorous address to the reader, entitled The Way to Wealth, which has since been translated into va- rious languages. In 1736 he entered on his po- litical career, by being appointed clerk to the general assembly of Pennsylvania. In 1737 he was appointed post-master. In 1738 he formed the first company for preventing damages by fires, and soon after got an insurance oflice erected. In 1744, during the war between France and Britain, the French and Indians having made inroads upon the frontiers of the provmce, he

proposed a voluntary association for its defence; which was approved of, and immediately signed by 1200 citizens, who chose Franklin their colo- nel. But he was then too deeply engaged in philosophical and political pursuits, to accept of that honor. In 1745 he published an account of his new invented fire-place (see Fire-place); and in 1725, was elected a member of the General Assembly, where he supported the rights of the citizens in opposition to the pro- prietaries. In 1749 he completed the plan of the Philadelphia Academy, upon the most liltiai principles, which was incorporated in 1753. Franklin had now conducted himself so well in his office of post-master to the province, that in 1765 he was appointed deputy post-master ge- neral for the British colonies ; and, in his hands, this branch of the revenue soon yielded thrice as much, annually, as that of Ireland. Yet none of these public avocations prevented his making important discoveries in science. The Leyden experiment in electricity having rendered that science an object of general curiosity, Mr. Frank- lin applied himself to it, and soon distinguished himself so eminently in that science, as to attract the attention and applause of not only the count de Buffon, and other French philosophers, but even of Louis XV. himself lie was the first who thought of securing buildings from light- ning; and he was also the first inventor of the electrical kite ; having completed his experiment in June 1752, a full year before M. de Romas's discovery. His theory of positive and negative electricity has likewise received the sanction of public approbation ; though many think it is not fully capable of supporting itself. See ELECTRicixy, index. His theories were at first opposed by the members of the Royal Society in London; but in 1755,

when he returned to that city, they voted him the gold medal, which is annually given to the author of a memoir on the most curious and interesti.ng subject. He was likewise admitted a member of the society, and had the degree of LL.U. conferred upon him by the universities of St. Andrews, Edin- burgh, and Oxford. When the war broke out between Britain and France, he returned to America, to take a share in the public affairs of his native country. About 1753 he set on foot, and prevailed on the assembly to establish, the Pennsylvania hospital. In 1754, the American colonies having suffered much by the depreda- tions of the Indians on tlieir frontiers, he drew up, and presented to the commissioners from several colonics, a plan of union (called the Albany Plan, from the place where they met), which, though unanimously approved of by the commissioners, was at last rejected by the as- semblies, as giving too much influence to the j)resident, who was to be appointed by the king; and disapproved of by the British ministry, as giving too nmch power to the representatives of the people. This rejection on both sides affords the strongest proof of the excellency and impar- tiality of his plan, as suited to the situation of Britain and America at that period. It ajjpears to have steered exactly between the opposite interests of both countries. In 1757 he restored trancpiillity to the province, bv an amicable and

equitable settlement of the differences that had long subsisted between the proprietaries and the people, as to taxation. In 1766 he travelled into Holland and Germany, and in 1767 he visited France ; being every where received with the greatest marks of attention by men of science. He was introduced in the latter king- dom to Louis X\^ Returning to England in 1767, he was examined before the house of com- mons concerning the stamp Act. In 1773, having been appointed agent for Pennsylvania, he again came over to England, while the dis- putes between Great Britain and America were on the pomt of coming to extremities ; when he attracted the public attention by a letter on the duel betwixt Mr. Whatley and Mr. Temple, concerning the publication of governor Hutchin- son's letters. On the 28th January 1774 he was examined before the privy council on a petition he had presented long before, as agent for Mas- sachusett's Bay, against Mr. Hutchinson ; but this petition, being disagreeable to ministry, was precipitately rejected, and Dr. Franklin was soon after removed from his office of post-master general. He was now looked upon by govern- ment with such a jealous eye, that it was pro- posed to arrest him as a fomenter of rebellion. The Dr., however, departed for America in the be^rinning of

1775 with such privacy, that he had left England before it was suspected that he entertained any sucli design. Bemg elected a delegate to the continental Congress, he had a principal share in bringing about the revolution, and declaration of independency. In 1776 he was deputed by congress to Canada, to persuade the Canadians to throw off the British yoko; but they had been so much disgusted with the hot-headed zeal of the New Englanders, who had burnt some of their chapels, that they re- fused to listen to their proposals, though en- forced by all the arguments Dr. Franklin could urge. On his return to Philadelphia, Congress, sensible how much lie was esteemed m France, sent him to finish the negociations of Mr. Silas Dean. This important commission was readdy accepted by the Dr., though then in the seventy-first year of his age. The event is well known ; a treaty was signed between France and America; and M. le Ra asserts, that the Dr. strongly advised M. Maurepas not to lose a single moment, if he wished to secure the friendship of America, and to detach it from the mother country. In 1777 he wˆas regularly ap- pointed plenipotentiary from Congress to the French court. Having at last seen the full ac- complishment of his wishes by the conclusion of the peace in 1783, which confirmed the inde- pendence of America, he requested to be re- called, and ˆIr. Jefferson was appointed to suc- ceed him. Dr. Franklin arrived safe at Phila- delphia in September 1785, and was received amidst the acclamations of a vast multitude, who conducted him in triumph to his own house. In a few days he was visited by the members of Congress and the principal inha- bitants. He was afterwards twice elected presi- dent of the assembly. In 1787 he was appoint- ed a delegate from Pennsylvania, for revising the articles of confederation ; and signed the new

constitution in the name of the state. He was also chosen president of the Philadel- phia Society for alleviating the miseries of prisons, and of the Pennsylvania Society for Promoting the Abolition of Slavery. His last public act was signing a memorial on this sub- ject, I'ith February, 1789. During the greatest part of his life he had been very healthy. In 1735, indeed, he was attacked by a pleurisy, which ended in a suppuration of the left lobe of the lungs, so that he was almost suffocated by the quantity of matter thrown up. But from this, as well as another attack, he recovered so com- pletely, that his breathing was not affected. As he advanced in years, however, he became sub- ject to fits of the gout, to which, in 1782, a nephritic colic was added. From this time he became subject also to the stone; and during the last year of his life these complaints almost en- tirely confined him to his bed; notwithstandirˆ which, neither his mental abilities, nor his cheer- fulness forsook him. His memory was tenacious to the last; a remarkable instance of which is, that he learned to speak French after he was seventy. About sixteen days before he died, he was seized with a feverish disorder; which, about the third or fourth day, was attended with a

pain in the left breast, accompanied with a cough and laborious breathing. Thus he con- tinued for five days, when the painful symptoms ceased ; but a new imposthume had now taken place in the lungs, which suddenly breaking, he was unable to expectorate the matter fully, and expired on the 17th April, 1790. He left one son, governor William Franklin, a zealous loyalist ; and a daughter, married to JNIr. William Bache, merchant in Philadelphia, who waited upon him during his last illness. Dr. Franklin was sententious but not fluent in society; more inclined to listen than to talk ; and an instructive rather than a pleasing companion. He was author of many tracts on electricity, and other branches of natural philosophy, on politics and miscellaneous subjects. The following epitaph on himself was written by Dr. Franklin many years before his death : —

The Body of BENJAMIN FRANKLIN, PRINTER,

Like the cover of an old book.

Its contents torn out.

And stript of its leUering and gilding,

Lies here food for worms.

Yet the work itself shall not be lost ;

For it will (as he believed) appear once more.

In a new and more beautiful Edition,

Corrected and amended

By the Author.

His funeral is said to have been more nume- rously and more respectably attended than any other that had ever taken place in America. The concourse of people assembled upon the occa- sion was immense. All the bells in the city were muffled, the newspapers published with black borders, &c. The body was interred amid peals of artillery, and nothing is said to have been omitted that could display the venera- tion of the citizens for so illustrious a character.

Congress ordered a public mourning througli-

ovit Ameiica for one month. Dr. Smith, pro- vost of the College of Philadelphia, and Mr. llitteahouse, one of its members, were selected by the Philosophical Society to prepare a eulo- puin to the memory of its founder; and the subscribers to the city libraiy, who had just erected a handsome buiklingfor containing their nooks, left a vacant niche for a statue of their t)enefactor. This has since been placed there by the munificence of an estimable citizen of Phila- delphia.

Franklin (Mrs. Eleanor A.nne), known as ;. authoress, as Miss Porden, was the younge'»t daughter of Mr. Porden, an architect ; and was born in July, 1795. She exhibited in her youth a remarkable memory, and a strong bias towards literature, which led her to make considerable])rogess in the acquirement of the Greek and other languages. She wrote, in her seventeenth year, her first poem, The Veils, or the Triumph of Constancy, which wa? published in 1815, witn a dedication to countess Spencer. Three years afterwards appeared a small Poetical Tri- !;ute, under the name of The Arctic Expedition, sug;,'e5ted by a visit to the Isabella and Alex- ander discovery ships, which led to an acquaint- ance with captain Franklin, the celebrated navigator, whom she married after his returu Viome, in August, 1823. The year previously appeared Miss Porden's epic poem on the sub- ject of the third crusade, entitled Coeur de Lion, dedicated by permission to the king. In JuuPj 1824, the birth of a daughter encouiaged hopes m her friends that a tendency to a pulmonary complaint, increased by the bursting of a blood- vessel in 1822, might be counteracted, but these expectations were soon destroyed, and she died February 22nd, 1825, a few days after her hus- band had sailed from England on his second ex- pedition.

Franklin, the north-westernmost county of Vermont, United States, is bounded north by Eower Canada, and west by Lake Champlain Population, in 1816, 16,427. The chief town is St. Alban's.

Franklin, a county of Pennsylvania, is bounded on the north by Mifflin, north-east and east by Cumberland and York, south by Wash- ington county in Maryland, west by Bedford county, and north-west by Hunterdon. It pro- duces iron, and is well watered by the Conne- gocheague river. Population, in 1816,23,083. The chief town is Chambersburg.

Franklin, a county of Kentucky, bounded Rorth by Scott county, north-west and west by Shelby, south-east by Fayette, and south by Woodford. Population in 1816, 8013. Frank- fort is the chief town.

1'ranklin, a county of North Carolina, in Halifax district. It is bounded on the north by (ireenville, south by Johnston, north-east by Warren, south-west by Wake, and west by Orange county. Population, in 1816, 10,166. Louisburg is the chief town.

Franklin, a county of Virginia, bounded on the north by Bedford, north-west by Botetourt, west by Montgomery, south-west by Henry, south by Patrick, and east by Campbell county. It is about forty miles long, and twenty-five

broad, and contained, in 1816, 10,724 inhabi- tants.

Franklin, a county of Georgia, situated in the upper district, bounded east and north-east by Tugulo River, west and north-west by the coun- try of the Cherokees, south by the branches of Broad River, and south-east by Filbert county. Population, in 1816, 10,815.

FRANKS, Francs, Frankis, or I'ranquis, a name which the Turks, Arabs, Greeks, &c., give to all the people of the western parts of Europe. Tlie appellation is commonly sup- posed to have had its rise in Asia, at the time of the crusades, when the French made the most considerable figure among the croissees ; from which time the Turks, Saracens, Greeks, Abys- sinians, &c., used it as a common term for all the Christians of Europe, and called Europe it- self Frankistan. E. Goar, in his notes on Con- dinus, cap. 5, N. 43, gives another origin of the appellation F'ranks, of greater antiquity. The Greeks, he says, at first confined the name to the Fraiici, or German Franks, who had settled in Gaul (see France); but afteiAvards they gave it to the Apulians and Calabrians, after they had been conquered by the Normans; and at length they extended it to all the Latins. In this sense is the name used by several Greek writers ; as Cfiinnenus, kc; who, to distinguish the French, called them the Western Franks. Du Cange adds, thai about the time of Charlemagne, they distinguished eastern France, or western France, Latin ot Roman France, and German France, which was the ancient France, afterwards called Franconia.

FRAN'TICK, adj. ^ Lat. phrcnetlcus; Gr.

Fran'tickly, flf/w. ^ (p(>ivr]TiKOQ. Phrenetick;

Fran'tickness, n. S.3 mad; deprived of un- derstanding by violent madness; outrageously and turbulently mad; transported by violence of passion ; outrageous ; turbulent. Simply mad

Par off, he wonders what makes them so glad ; Of Bacchus' merry fruit they did invent, Oi Cybel's /ran/Jc-A rites have made them mad.

Faerie Quecne. Esteeming, in the frantick error of their minds, the greatest madness in the world to be wisdom, and thu highest wisdom foolishness. Hooker.

The \ovcv frantick. Sees Helen's beauty in a brow of Egypt.

SItakspeare. Fie, lie, hovi frantickly I square my talk. Id.

To such height theiryranˆicA passion grows. That what both love, both hazard to destroy.

Drydcn. She tears her hair, -i-ni, fruntick in her griefs. Calls out Lucia. Addison s Cato

I had not strength to stir, or strive. But felt tliat 1 was still alive — A frantic feeling when we Know That what we love shall ne'er be so.

Byrvn. Prisoner of Cldllon.

FRASCATI, a small but beautiful town and bishop's sec of the ecclesiastical state, in tiie Campagna di Roma, on the side of a hill near the site of the ancient Tusculum. It contains nothing remarkable, except a seminary, endowed by the late cardinal York, once bishop here. Population about 9000 In the environ? are a

number of villas belonging to Roman families, who pass the summer here. The ruins of Tus- culum are scattered in long lines of walls and arches higher up the hill, intermingled with shrubs and bushes. The view is particularly in- teresting towards the north-east. Frascati is ten miles south-east of Rome.

I'RASEllBURGli, or Fraseusburgh, a small sea-port town in Aberdeenshire, seated on the south extremity of the Murray Frith, called Kinnaird's Head. It was erectetl in the six- teenth century, on Sir Alexander Fraser's estate, whence the name. It has a good harbour, made and kept up at a considerable expense by the proprietor and tiie town, and well adapted for building small vessels. There are from eleven to fifteen feet water within the harbour, and twenty feet immediately without at spring tides; with- out is a tolerable road for shipping, in a bay nearly a league in length, and half a league in breadth, with good anchorage in a sandy bottom. Vessels of about

200 tons burden enter tlie har- bour. Fraserburgh contains above 1000 inhabi- tants ; and is well situated for trade with the east coast of Europe. The town has been much im- proved of late years. It is sixteen miles east of Banff, and forty north of Aberdeen.

FRATELLINI (Joanna), a celebrated Italian paintress, born at Florence, in 1666. The arch- duchess Vittoria, having noticed in her a readi- ness at her pencil, procured for her the best masters, and in a short time she acquired such a command of the pencil, that she surpassed her instructors in elegance, as well as in beauty of coloring. She painted delicately in enamel, and in crayon painting was equal to Rosalba ; one of her best works is a picture of herself and son in the ducal gallery of Florence, in which city she died in 1731.

Fratellini (Laurence Maria), the son of Joanna, was born in 1690, and studied under Gabbiani. lie painted principally portraits, animals, landscapes, and historical subjects. He died in 1729.

FRATERNAL, arf/.^ Fr. fraternel ; Lat. Frater'nally, adv. yfraternus. Brotherly ; Fra'ternity, 72. s. J pertaining to brothers ; becoming brothers. The state or quality of a brother. Body of men united ; corporation ; society; association; brotherhood; men of the same class and character.

The admonitions, fraternal or paternal, of his fcllcv Christians, or of the governors of the church, then more puhlick reprehensions; and, upon their unsuc- cossfulncss, the censures of the church, until he reform and return. Havimcmd.

One shall arise Of proud ambitious heart; who, not content With fair equality, fraternal ftate, VVill arrogate dominion undcservi d Over his brethren. Milton's Paradfe Lost.

'Tis a necessary rule in alliances, societies, and fratrrnities, and all niannor of civil contracts, to have a strict regard to the humour of those we have to do withal. L'Estrannc.

With what terms of respect knaves and sots will speak of their own fratcrnil;/. Soulh's Sci-mons.

Plead it to her, With all the strength and heats of eloquence Fraternal love and friendship can inspire. Addison.

Fraternity, in the Roman Catholic religion, signifies a society originated for the purposes of devotion. Of these there were several sorts; as, 1. The fraternity of the rosary, founded by St. Dominic. It is divided into two branches, called the common rosary, and the perpetual ro- sary; the former

of whom are obliged to confess and communicate every first Sunday in the month, and the latter to repeat the rosary con- tinually. 2. The fraternity of the scapulary, whom the blessed Virgin, according to the sabbatine bull of pope John XXII., has promised to de- liver out of hell the first Sunday after their death.

3. The fraternity of St. Francis's girdle are clothed with a sack of a gray color, which they tie with a cord ; and in processions walk bare- footed, carrying in their hands a wooden cross.

4. That of St. Austin's leathern girdle compre- hends many devotees. Italy, Spain, and Por- tugal are countries where the greatest "number of these fraternities, some of which assume the name of arch-fraternities, resided. Pope Cle- ment VII. instituted the arch-fraternity of cha- rity, which distributed bread every Sunday among the poor, and gave portions to forty poor girls on the feast of St. Jerome their patron. 5. The fraternity of death buried such dead as were abandoned by their relations, and caused masses to be celebrated for them.

FRATRICELLI, or Fratelli, Ital. q. d. fraterculi, little brothers, in ecclesiastical history, an enthusiastic sect of Franciscans, which rose in Italy, particularly in Ancona, about A. D. 1294. The word was used as a term of deri- sion, as they were most of them apostate monks. For this reason the term, as a nick-name, was given to many other sects, as the Catharists, Waldenses, ike, however different in their opinions and in their conduct. But this deno- mination, applied to the austere part of the Franciscans, was considered by them as honor- able. See Franciscans. The founders were P. Maurato, and Foiombroni, who having ob- tained of pope Celestin V. a permission to live in solitude, after tiie manner of hermits, and to observe the rule of St. Francis in all its rigor, several idle vagabond monks joined them, who, living after their own fancies, and making all perfection to consist in poverty, were soon con- demned by pope Boniface VIII. and his suc- cessor, and the inquisitors ordered to proceed against them as heretics ; which commission they executed with great barbarity. Upon this, re- tiring into Sicily, Peter John Oliva de Serignan had no sooner published his Comment on the Apocalypse, than they adopted his opinions. They held the Romish church to be Babylon, and proposed to establish another far more perfect one. They maintained, that the rule of St. Francis was the evangelical rule observed by Jesus Christ and his apostles. They foretold the reformation of the church, and the restoration of the true gospel of Christ, by the genuine fol- lowers of St. Francis ; and declared their assent to most of the doctrines published under the name of the abbot Joachim, in the Introduction to the everlasting Gospel, a book published in 1 250, and explained by one of the spiritual friars, whose name was Gerhard. Among other enor-

inities, iiiculciUed in this book, it is pretended that St. Francis waˆ the anojel mentioned in Rev. xiv. 6, and had promulgated to the world the true and everlasting gospel of God ; that the gospel of Christ was to be abrogated in 1260, and to give place to this new gospel ; and that the ministers of this great reformation were to be humble and bare-footed friars, destitute of all worldly employments. Some say they even elected a pope of their church ; at least they appointed a general, with superiors, and l)uilt monasteries, &c. Besides the opinions of Oliva, they held, that the sacraments of the church were invalid ; because those wlio administered them had no longer any power or jurisdiction. They were condemned afresh by pope John XXII. in consequence of whose cruelty they regarded him as the true antichrist ; but several of them, re- turning into Germany, were sheltered by Louis, duke of Bavaria, the emperor. Tliere are au- thentic records from which it appears tliat no fewer than 2000 persons were burnt by the inqui- sition, from 1318 to tiie time of Innocent VˆI. The severities against tliem were again revived towards tiie close of the fifteenth century, by pope Nicolas V. and his successors. However, all the persecutions which this sect endured were not sufficient to extinguish it ; for it sub- sisted till the time of the Reformation in Germany, when its remaining votaries embraced the doc- trine and discipline of Luther. And this has led Popish writers to charge the Fratricelli with many enormities, some of which are recounted by Bayle, under the article Fratricelli. They had several other denominations : they were called Dulcini, from one of their doctors; Bizochi, Beguins, and Beghardi.

FRATRICIDE, ?i. s. Ih. fratricide ; Lat. fratricidium. The murder of a brother.

The fratricide [of Abel] is said by some to have been committed in this place.

lilaundrell. Jov/rneij to Aleppo,

FRATTA, La, a considerable town of Italy, in the Venetian states, and standing on the Scorta : here reside a number of the old and noble families of this once flourishing state. It is in the Polesino di Rovigo, six miles south-west of Rovigo, and has 6,300 inhabitants.

Fratta Magoiore, a considerable town of Naples, not far from the capital. A great quan- tity of cordage is manufactured liere ; and the principal church is an elegant building. Popu- lation 8.500.

F RAUBRUNNEN, a town of the canton of Berne, Switzerland, on the road to Saleure. Here was founded a celebrated abbey of this name in 1246. The Bernois were here viciori- ous, in 1375, over the Burgundians and Normans. In 1798 the troops of the canton sustained a defeat near this town from the French. It is seven miles north of Borne. It contains about 1400 inhabitants, and is a bishop's see.

FTIAUD, ?t. s. ˆ L:it.fraus;VT.fraude.

Vravu'vvl, adj. > Deceit ; cheat; trick;

F'raud'fully, adv. J artifice ; subtilty ; stra- tagem. Artful ; trickisli ; deceitful ; subtle.

Whi rather take ghe no wrong ? whi rather sufTren ghe not dysseit.' but a)so ghe doen wrong, and donn fraude and that to briihcrcn. Wiclif. 1 Cor. vi.

The welfare of us all Hangs on the cutting short th&t fraudful man.

Shakspeare. Henry VI Our better part remains To work in close design, by fraud or guile. What force effected not. 3Iilton

Nor content with such Audacious neighbourhood, the wisest heart Of Solomoa he led by fraud to build His temple right against the temple of God, On that opprobrious liill, and made liis grove The pleas.int valley of Hinnoin, Tophet thence And black Gehenna called the type of llell. Id None need tha frauds oi sly Ulysses fear.

Dryden. He, full oi fraudful arts. This well-invented tale for truth im[)arts. Id.

If success a lover's toil attends. Who asks if force or fraud obtained his ends.

Pope. Sucli is the knowledge of vice, the various temp- ations to it, and the secret ways of practising it, especially the arts of dissimulation, fraud, and dis- honesty. 3Iason.

Fraud, in law, signifies deceit in grants, or conveyances of lands, &c. or in bargains and sales of goods, &c., to the damage of another person. A fraudulent conveyance of lands or goods, to deceive creditors, as to

creditors is void in law. And a fraudulent conveyance, to defraud purchaserˆ, is also to such purchasers void ; and the persons justifying or putting off such grants as good, shall forfeit a year's value of the lands, and the full value of the goods and chattels, and likewise sliall be imprisoned. See Cheat.

All frauds and deceits, for which there is no remedy by the ordinary course of law, are pro- perly cognizable in equity ; and it is admitted, that matters of fraud were one of the chief branches to which the jurisdiction of chancery was originally confined. 4 Inst. 84. It would be endless to enumerate the several cases, wherein relief has been given against frauds ; but the fol- lowing instances are too material to be omitted. Wherever fraud or surprise can be imputed to, or collected from the circumstances of the trans- action, equity will interpose and relieve against it. Toth. 101. 2. 2 Ch. Ca. 103. Finch. 161. 2 P. Wms. 203, 270. 3 P. Wms. 130. 2 Vern. 189. 2 Atk, 324. 2 Vez. 407. It is said, however, that it must not be understood, from cases of this kind being generally brought into equity, that tlie courts of law are incompetent to relieve ; for, where the fraud can be clearly established, courts of law exercise a concurrent jurisdiction with courts of equity ; and will re- lieve by making void the instrument obtained by such corrupt agreement or fraud. 1 Burr. 396. Wood's Inst. 296. Therefore where the obliger was an unlettered man, and the bond was not read over to him, he was allowed to plead this circumstance in an action on the bond. 9 Hen. V. 15, cited 11 Co. 27, b. So if tlie bond be in part read to an unlettered man, and some of its material contents be omitted or misrepresented. 2 Rol. Ab. 28,]). 8. It is observable that lord Coke in the same passage where he confines the jurisdiction of courts of eijuity to such ' frauds covin and deceit, for wliicli there is no remedy

by the ordinary course of law,' seems to admit that all frauds were not relievable at law. See 3 Inst. 84.

The chancery may decree a cenveyance to be fraudulent, merely for being voluntary, and with- out any trial at law ; yet it has been insisted, that fraud or not, was triable only by a jury. Pre. Ch. 14, 15.

As to those gifts or conveyances which want a good or meritorious consideration for their sup- port ; their being voluntary seems to have been always a sufficient ground to conclude that they were fraudulent ; but

though the statute protects the legal right of creditors against the fraud of their debtors, it anxiously excepts from such im- putation the bona fide discharge of a moral duty. It therefore does not declare all volun- tary conveyances, but all fraudulent conveyances, to be void ; and whether the conveyance be fraudulent or not is declared to depend on the consideration being good, and also bona fide.

A good consideration is that of blood, or of natural love and affection. A gift made for such consideration ought certaiidy to prevail, unless it be found to break in upon the legal rights of others; in that case it is e(iually 'clear it ought to be set aside. If therefore a man being in- debted convey to the use of his wife or children, such conveyance would be within the statute ; for though the consideration be good, yet it is not bona fide ; that is, the circumstances of the grantor render it inconsistent with that good faith which is due to his creditors. Fonblanque's Treat. Eq. c. 4, sect. 12 in notes.

Fraudulent gifts, or grants of goods to defraud the lord of his heriot, shall be void ; and the value of the goods forfeited, under statute 13 Eliz. c. 5.

Fraudulent conveyances to multiply votes at election of knights of the shire, shall be taken against the persons making them as free and ab- solute ; and all securities for redeeming and re- storing, &c. ; to be void, statute 10 Ann. c. 23.

Gross criminal frauds are punishable by way of indictment or information ; such as playing with false dice, causing an illiterate person to execute a deed to his prejudice, ike; for these and such like offences the party may be pu- nished not only vˆith fine and imprisonment, but also with such farther infamous punish- ment as the judges in their discretion shall think proper.

FRAUD'ULENCE, n. s.ˆ Lat. fraudukn-

Fiiatjd'ulency, n. s. (ˆ tia. Deceitful-

Fraud'ulent, adj. i ness; trickishness ;

Fraud'ulently, adv. J proneness to arti- fice.

We admire the Providence of God in the continu- ance of Scripture, notwithslandins the endeavours of infidels to abolish, and the fraudulence of hereticks always to deprave the same. Hooker.

He that by fact, word, or sign, eiiheT fraudulently or violently, docs hurt to his neighbour, is bound to make restitution. Tat/lor.

*He with serpent tongue His fraudulent temptation thus began. Milton. Now thou hast avenged Supplanted Adam, And frustrated the conquest /raudi/? *«/. Id.*

He that upon the score of a small debt, doth extor' a great sum, is no less a thief, in regard to what amounts beyond his due, than if without any pretence he had violently or fraudulently seized on it.

Barrow. She mixed the folion, fraudulent of soul ; The potion mantled in the golden bowl.

Pope' I Odyssey.

FRAUENBOURG, a town of East Prussia, in Poland, on the river Frischellaff, six or seven leagues to the north-east of Elbing. In the ca- tliedral is the tomb of the great Copernicus, on the subject of which the eminent Joi)n Ber- nouilli, of Berlin, wrote to the earl of Buchan a letter, dated the 22nd of February, 1794, of which the following is a translation : — ' In the year 1777 the bishop of Warmia, whom I met m the abbey of Oliva, near Dantzic, told me that he had the pleasure to discover, in his cathedral of Frauenbourg, the long neglected tomb of Copernicus. In the year 1778, on my journey to Russia, passing through that town, and having nothing to do during my short stay there that could interest me more, I went to the cathedral in search of this precious monument. I knew nobody in Frauenbourg, but in the street I ac- costed a canon, whose 'countenance and manner encouraged my address, and I was not disap- pointed. He told me, that as for the spot where lay interred the ashes of Copernicus, there was no certainty, because it was usual to place the coffins of the deceased canons in a vault, where, in the course of time, from their number, it was impossible to distinguish them from each other ; but that with respect to the sepulchral stone, it was a slab of marble, such as was usual for others of the same station, with the short inscrip- tion, Nic. Copernicus, Thor. That this stone had been hidden, from neglect, many years, and afterwards accidentally observed and placed in the chapter-house of the cathedral, with a view to consider maturely of a proper place for its erection. I regret, however, very mucli, that I did not make a point with my guide to show me this stone, as, if a part of the inscription be not effaced, it does not tally with that recorded by Gassendi, who says, p. 325, in his life of Co- pernicus, that bishop Martin Cromer, a celebrated Polish historian, caused to be erected to the me- mory of that great astronomer unam tabulam marmoream, with this inscription : —

D. O. M.

N. D. NICOLAO COPERNICO

TORUNEXSI ARTIUiM ET

MEDICINiE DOCTORI.

CANONICO VARMIENSI.

PRiSTANTI ASTROLOGO ET

EJUS DISCIPLIN.E INSTAURATORI.

MARTIXUS CROMERUS

EPISCOPUS VARMIENSIS

HONORIS ET AD POSTERITATEM

MEMORI« CAUSA POSUIT.

M.D.LXXXI.

Gassendi adds, that it was thirty-six years after the death of Copernicus; but this does not agree with the date of our stone. My canon had for his apartment the dormitory of Copernicus, and he kindly asked me to pay it a sentimental visit,

an invitation you may believe I accepted witli emotion, and enjoyed with pleasure. Above the range of the dormitories there is another little apartment, which my guide allotted to the memory of his greˆt predecessor, and which he has decorated with his portrait in oil colors, well preserved, and perhaps only a copy from some original painting. It was from this place that Copernicus enjoyed a fine scope of the heavens, and a large horizon ; here that he made the heavens his study, and rendered himself a lumi- nary of the first magnitude in the constellation of modern astronomers; and, when he found it necessary to make his observations in the open air, there is a little gallery or terrace that com- municates with this apartment, and the adjoining steeple or belfry, which served to accommodate the great Copernicus in his researches. You, my lord, are able to conceive the divine satisfac- tion I enjoyed in this place — classic and sacred — where I inhaled as it were the spirit of depart- ed greatness ! and it was the shock of these transcendant emotions that made me to forget the stone I have described in the former part of my letter, my time being

elapsed, and my car- riage ready to depart. Near the cathedral my canon showed me a large reservoir of water, with a high tower, which contains the remains of a hydiaulic machine, said to have been invented by Copernicus, for carrying and distributing the water by pipes to the different apartments of the canons, his brethren : a convenience now lost, and which, from the ruin of the machine, they are obliged to fetch from a fountain in the lower part of Frauenbourg. I have read in an old German journal, tliat in the ancient town of Konigsberg there are, or were, preserved many of the books belonging to Copernicus at the time of his death, with his portrait in oil colors, which were purchased at Thorn, probably in his house in that town, possessed by the family so late as the year 1720 ; and in this house Copernicus was born.' — Frauenbourg was built in 1279, and lies thirty-eiglit miles south-west of Konigsberg. Several monuments of the genius of Copernicus remam here, particularly the hydraulic machine, which supplied Frauenbourg with water, and which is supposed to have served as a model for that of Marli. See our article Copernicus. FRAUGHT, part, pass., n. s. & v. a.) Part, of Fraught'age, n. s. ji fraight,

now written freight. Laden ; charged ; filled ; stored ; thronged : freight ; a cargo : to load ; to crowd.

These inarchants han don fraught her shippos tiowc ; And whan they han this blisful maden seen. Home to Surrie ben they went ful fayn.

Chaucer. The Man of Lawes Tale. By this sad Una, frautjht with anguish sore, Arrived, where they in earth their blood had spilt.

Spejuer.

The Scripture is fraught even with laws of nature.

Hooker.

I am so fraught with curious business, that I leave out ceremony. Shakspeare, Winter's Tale,

Yield up, oh love, thy crown and parted throne To tyrannous hate ! swell, bosom, with Ihy fraught ; For 'tis of aspicks tongues. Id. Othello.

Hence from my sight : If after tliis command tliou fraujht the court With thy unworlhiness, thou dyest.

Id. Cymbeline. OxxT fraughtage , sir, I have conveyed abroad.

Id. Comedy of Errors. In the narrow seas, that part The French and

EngHsh, there miscarried A vessel of our country, richly fraught.

Shakspeare. Whosoever hath his mind fraught with many thoughts, his wits, and understanding do clarify and break up in the communicating and discoursing with another. Bacon.

Hell, their fit habitation, yVauˆ/t< with fire. Unquenchable, the house of woe and pain.

]\filton. With joy And tidings fraught, to hell he now returned.

Id. Paradise Lost. Perhaps some cold bank is her bolster now. Or 'gainst the rugged bark of some broad elm Leans her unpillowed head, fraught with sad fears.

Id. Cumus, Of all our navy none should now survive. But that the ships themselves were taught to dive. And the kind river in its creek them hides, Fraughting their pierced keels with ouzy sides.

Marvcll. And now approached their fleet ixoxalndidi., fraught With all the riches of the rising sun. And precious sand from southern chmates brought.

Drydeii. The bark that all our blessings brought. Charged with thyself and James, a doubly royal fraught. Id.

Abdallah and Belfora were so fraught with all kinds of knowledge, and possessed with so constant a passion for each other, that their solitude never lay heavy on them. Addison.

FRAUSTADT, a town in the grand duchy of Posen, Poland, in a sandy tract on the bor- ders of Silesia. It is subject to Prussia, and is a place of considerable traffic in Polish wool, woollen and linen clotii, stockings and leather. Here are barracks in an old building, formerly the Jesuits' college. The Swedes obtained a signal victory in this neighbourhood over the Saxons and Russians, in F'ebruary, 1706, and in 1802 a number of houses were destroyed by fire. It is twenty miles north-east of Glogau, and seventy N. N. W. of Breslau. Population 5600, chiefly Germans, but including about 500 Jews.

FRAXINELLA, in botany, see Dictamnus. It is lemarkable of this odorous plant tliat, when in full blossom, tlie air which surrounds it in a still night may be inflamed by tlie approacli of a lighted candle. Dr. Watson doubts whether this inflammability proceeds from an inflamma- ble air exhaled by the plant, or from some of the finer parts of the essential od of tlie plant being dissolved in the common atmospherical air. The latter, Cavallo thinks, is most probable, for were it the pure inflammable air, it would, on

account of its small specific ^^ravity, leave tlie plant as soon as it was produced. Common air accjuires the property of becoming inflammable, by being transmitted through several essential oils.

FRAXINUS, the ash, a genus of the diiEcia order, and polygamia class of plants : n.Vjiral

order forty-fourth, sepiariae. There is no her- maphrodite calyx, or it is quadripartite; and there is eith'er no corolla, or it is tetrapetalous; there are two stamina ; one pistil ; one lance- olated seed ; and the pistil of the female is lance- olated. Tliere are fifteen species, of which the most useful is the F. excelsior, common ash. If a wood of these trees is rightly managed, it will turn out greatly to the advantage of the owner; for, by the underwood, which will be fit to cut every eight or ten years, there will be a continual income, more than sufficient to pay the rent of the ground, and all other charges ; and still there will be a stock preserved for timber, which in a few years will be worth 40s. or 50s. per tree. This tree flourishes best in groves, but grows very well in a rich soil in open fields. It is found in the highest perfection on dry loamy soils. In moist ground it grows fast, but soon sickens. It will in short grow freely on most kinds of soils, if the situation be tolerably good, excepting on retentive clays or tills. In wet soils it quickly shoots up, but soon languishes and dies. In rich lands its wood is sliort and brittle; in sandy soils it is tough nnd reedy: qualities which, for several purposes, very much enhance its value. Much has been said against admitting the common ash as an ornamental tree. Some discard it, because it has no leaf till late in the spring ; for the same reason, the oak and the platanus might also be rejected. Others deny it admission, because it sheds its leaves early in autumn ; the same objection would apply to the beech, the cherry, and the sycamore. Others again denounce it, because its foliage is thin, and its branches bare and ugly. It forms liowever an agreeable variety, when judiciously intermingled with other trees ; and, as it will bear almost any topping or cutting, it is easily accommodated to its position. Cattle in general are fond of its leaves, and in Lancashire they lop the tops of these trees to feed them in autumn, when the' grass is on the decline ; the cattle peeling off the bark as food. The wood has the singular pro- perty of being nearly as good when young as when old. It is hard and tough, and is much used to make the tools employed in husbandry. The ashes of the wood afford very good potash. Thf bark is used in tanning calf-skin. A slight infusion of it appears of a pale yellowish color when viewed between

the eye and the light ; but when placed betwixt the eye and an opaque object, it appears blue. This blueness is destroyed by the addition of an acid, but recovered by alkalies. The seeds are acrid and bitter. Horses, cows, sheep, and goats, eat it : but it spoils the milk of cows.

FRAY, n. s. & v. a. Fr. fracas, effrayer, to fright. A battle; a fight; a duel; a combat; a broil ; a quarrel ; a riot. To fright; to terrify. Vt. frayer, to rub.

The panther, knowing that his spotted hide Dotli please all boasts, but that his looks them yraˆ,

Within a bush his dreadful head doth hide. To let them gaze, while he on them may prey.

Spenser, So diversely themselves in vain they fray. Whilst some more bold to measures him stand ni

I'll speak between the change of man and boy With a reed voice, and turn two mincing .steps Into a manly stride ; and speak oi frays. Like a fine bragging youth. Shakapeare.

Time tells, that on that ever blessed day. When Christian swords with Persian blood were dyed.

The furious prince Taucredie from that yVaˆ His coward foes chased through forests wide.

Fairfax. Fishes are thought to be frayed with the motion caused by noise upon the water. Bacon.

Since, if we fall before the appointed day. Nature and death continue long their fray.

Denham. The boaster Paris oft desired the day With Sparta's king to meet in single /rai/.

Pope. But why should I his childish feats display ? Concourse and noise, and toil he ever fled. Nor cared to mingle in the clamorous yVay Of squabbling imps. Beattk.

And so he says no more — but pays his court To some distinguished strangers in that/ru.v, The Prince de Ligne, and Largeron, and Damas, Names great as any that the roll of Fame has.

Byron. FREA, or Frigga, the wife of Odin, or Wo- den, was, next to him, the most revered divinity among the Heathen Saxons, Danes, and other

northern nations. As Odin was believed to be father, Frea was esteemed the mother of all the other gods. In the earliest times Frea was the same with the goddess Herthus, or Earth, who was so devoutly worshipped by the Angli, and other German nations. But when Odin, the conqueror of the north, usurped the honors due only to the true Odin, his wife Frea usurped those which had been formerly paid to mother Earth. She was worshipped as the goddess of love and pleasure, who bestowed on her votaries a variety of delights, particularly happy mar- riages, and easy births. To Frea the sixth day of the week was consecrated, which still bears her name, Friday, or Frea's day.

FREAK, n.s. 5c i'. fl.-\ Sax. Ffisec, fugitive;

Freak'ish, aJ/. (ˆ Ger. /ref/', saucy ; pet-

Freak'ishly, adv. i ulant. A sudden and

Frkak'ishness, n.s. J causeless change of

place. A sudden fancy; a humor; a whim ; a

capricious prank. Of the verb Dr. Johnson says,

' I suppose Scotch, brought into England by

Thomson;' but Milton uses it to variegate; to

chequer. Capricious ; humorsome.

O ! but I fear the fickle /reafo, quoth she. Of fortune, and the odds of arms in field.

Faerie Queene. The white pink and the pansy /reufcfrf with jet.

Milton. Lycidas.

One grain of true science and sound wisdom in real worth and use doth outweigh loads, if any loads can be oi freakish wit. Barrow.

When that freak has taken possession of a fantasti ■ tal head, the distemper is incurable. L' Estrangp.

It may be a question, whether the wife or ihi? woman w as the more freakish of the two ; for she was still the same uneasy fop. Id

She is restless and peevish, and sometimes in a freak will instantly change her habitation.

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FREDERICK.

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To vex me more, he took a freak To slit ray tongue, and make uie speak. Sicift. There furry nations harbour : Sables of glossy black, and dark embrowned. Or beauteous, /reaAed with many a mingled hue.

Thomsmi. But the long pomp, the midnight masquerade. With all the freaks of wanton wealth airayed. In these, ere trifles half their wish obtain. The toiling pleasure sickens into pain. Guldsmith. FREAM, V. n. Lat. fremere ; Fr. fremir. To growl or grunt as a boai .

FRECK'LE, 7). s.i Goth. _/rff/c; Ger. Jlec/i, ¥ TLRCK.' LED, adj. >a spot, whence fleckle, Freck'ly, adv. j freckle. A spot raised in the skin by the sun. Any small spot or dis coloration.

A fewe fraknes in his face ysprent, Betwixen yelwe and blake soiudel ymeint.

Chaucer. The Knightcs Tale. The cowslips tall her pensioners be ; In their gold coats spots you see : Those be rubies fairy favours ; In those /reei/e* live their favours.

Shakspeare. The even mead that erst brought sweetly forth The freckled cowslip.

Wanting the scythe, all uncorrected, rank. Conceives by idleness. Id. Henry V.

The farewell frosts and easterly winds now spot vour tulips ; therefore cover such with mats, to pre- vent/recA/ej. Evelyn. Sometimes we'll angle at the brook, The freckled trout to take With silken worms, Drayton's Cynthia. Ruddy his lips, and fresh and fair his hue ; Some spriuklfdyjec/i(/ e.s on his face wei-e seen. Whose dusk set oft' the whiteness of the skin.

Dry den. Now thy face charms every shepherd. Spotted over like a leopard ; 4nd, thy freckled neck displayed. Envy breeds in every ma'd. Swift.

FiiECKLES, lentigines, are spots of a yellowish color, of the biiˆncss of a lentile seed, scattered over the face, neck, and hands. Freckles are either

natural, or proceed from the jaundice, or the action of the sun upon the part. Heat, or a sud- den change of weather, will often make the skin appear of a darker color than is natural, and thereby produ(;e what is called tan, sunburn, and morphew ; which seem to differ only in degree, and usually disappear in winter Persons of a fine complexion, and those whose hair is red, are most subject to freckles, especially in parts exposed to the sun and air. To remove freckles put juice of lemons in a glass phial, and, mixing it with sugar and borax finely powdered, let it digest eight days, and then use it. Homberg proposes bullock's gall mixed with alum, and, after the alum has precipitated, exposed three or four months to the sun in a close phial, as one of the best menstrua for removing freckles.

FRED. The same with peace ; upon which o\ir forefathers called their sanctuaries fredstole, i. e. the seats of])eace. So Frederick is powerful or wealthy in peace ; Winfred, victorious peace ; Reinfred, sincere peace.

FREDBERG, or Freukkerg, a rich and strong town of Germany, in Misnia, remarkabh"

for its mines, and for being the burying-place of the princes and of the house of Saxony. It is a delightful place, seated on the rivei Multa. Long. 13° 40′ E., lat. 31° 2′ N.

FREDERICIA, a town of Jutland, on the Little Belt, with a custom-house, where all ves- sels pay a toll on passing the Belt. The walls enclose a large extent of ground, but the popu- lation is only 3500. It was founded in 1651, but the fortifications were not completed when it was taken by storm and burnt by the Swedes. After this the town and walls were repaired; but, though the Danish government has made various efforts to induce a resort of population, the want of a good harbour has much counter- acted them. Tobacco is cultivated here; but the chief manufactures are silk and woollen. Five miles north of Middlefarth.

FREDERICK, the name of eleven European monarchs, viz. four emperors of Germany, five kings of Denmark, and two kings of Prussia; and part of the names of two other kings of Prussia, and two of Poland. See Denmark, Germany, Poland, and Prussia. Amongst these we shall here only take notice of the two follow- ing:—

Frederick L, king of Prussia, the son of Frederick-William the Great, elector of Branden- burg, was born in 1657; and succeeded his father in the electorate, A. D. 1688. In 1700 he entered into a negociation with the emperor, Leopold 1., to get Prussia erected into a king- dom ; which he at last obtained by a singular accident. While appearances were rather un- promising he received a letter from his minister, written in cyphers, advising

him to use the interest of a certain prince ; but he, mistaking the cyphers, applied to the emperor's confessor ; who, being a Jesuit, was so much struck with the honor done him by a Protestant elector, that he exerted his whole interest, and that of his order, to procure him the desired object. Frederick was accordingly crowned king of Prussia January 18th, 1701. He was endued with many virtues. He was magnificent, generous, constant to his marriage vows, and studied the true in- terest of his subjects, by preserving his domini- ons in peace. He was three times married : his second queen was sister to king George I. He founded the university of Ilalle, and the royal academy at Berlin. He died in 1713.

Frede-rick II., surnamed the Great, king of Prussia, one of the greatest warriors the present acje has produced, was the son of Frederick- William, then hereditary prince of Brandenburg, and princess Sophia Dorothea, daughter of king George I. He was born in 171 '2, the year be- fore his father mounted the throne, who was so far from being a patron of literatiuT, that he re- garded nothing but what related to the military art ; and most of his generals scarcely knew how to sign their names. His son was of a disposiˆ tion the very reverse. Being put from his birth under the care of Vˆal dc Recoule, a French lady of great merit and understanding, he early ac- quired a taste for literature, and a predilection for the French language, which were never obli- terated. At seven years of age young Fredericl$: was put under the militarv tuition of genera)

count de Finkestein, and colonel de Ralkstein, officers renowned for courage and experience. He was taught mathematics and fortification by major Senning ; Han dt Jendun, a Frenclmian, instructed him in other branches of knowledge ; and a cadet, of the name of Kenzel, taught him his exercise. At eight he was furnished with a small arsenal, stored with all sorts of arms pro- portioned to his age and strength, of which his father left him absolute master. Soon after he was named captain and chief of tiie corps of ca- dets; and he performed every day, in miniature, with his little soldiers, all the evolutions with which his father exercised his giants. At last he received the command of a company in his father's famous gigantic regiment, composed of men of whom scarcely one was short of seven French feet. Endued, however, with a taste for the arts, he devoted to their cultivation every moment he could escape the vigilance of his guardians. He was particularly fond of poetry and music, and, when he could find a moment's leisure, read French authors or played on the flute; but his father, as often as he surprised hinr playing or reading, broke his flute and threvyhis books into the fire. The prince, chagrined at this treatment, and

having a great desire to visit Germany, England, France, and Italy, desired permission to travel. This, however, his father refused, but permitted him to accompany himself occasionally into Germany; and, in 1728, took him to Dresden to see the king of Poland. By tliese little expeditions the prince's desire to travel was only the more inflamed ; so that at last he resolved to set out without his father's knowledge. The design was entrusted to two of his young friends, named Kat and Keit ; money was borrowed, and the day of departure fixed, when unluckily the whole project was discover- ed. The old king, implacable in his resentment, and considering his son as a deserter, determined to put him to death. He was shut up in the fortress of Custrin ; and it was with difficulty that the count de Seckendorf, sent purposely by the emperor Charles VI., was able to alter the king's resolution. Certain vengeance, however, was determined on both his intended associates. Keit escaped the danger by flying into Holland ; but Kat had not that good fortune. The king first directed that he should be tried by a court- martial ; but, as they only sentenced Kat to per- petual imprisonment, the revengeful monarch, bv an unheard of exercise of his prerogative, caused him to be beheaded. The execution was per- formed under the windows of the prince, whose face being held towards the scaffold, by four grenadiers, he fainted away at the shocking sight: and, during the remainder of his life, he considered ca])ital punishments with so great a degree of horror that they were rare throughout his dominions while he reigned. Wlien the em- peror had succeeded in preventing the execution of Frederick, the old king remarked, that ' Aus- tria would one day see what a serpent siie had nourished.' The prince remained prisoner a year at Custrin ; during which time his father wished that lie should learn the maxims of eo- vemment and finance. For this purpose M. de Munchow, president of the chamber of domains

and finances, was ordered to make him assist a all their assemblies, to consider him as a simple counsellor and to treat him as such. But, though Frederick assisted at their meetings, he did not trouble himself with reading acts or copying de- crees. Instead of this he amused himself some- times with reading French pamphlets, and at others with drawing caricatures of the president or members of the assembly. Munchow was also very favorable to tlie prince at this time, by furnishing him with books and other articles of amusement, notwithstanding the express prohi- bition of his father : though in this he certainly ran a great risk of his life. Frederick, after this, was recalled to Berlin, on pretence of being pre- sent at the celebration of his eldest sister's mar- riage with the hereditary prince of Bareith ; but the true reason was, that the king had now pre- pared a match for the prince himself. This was the princess Elizabeth Christina of Brunswick, niece to the empress. Frederick, who was not only totally indifferent to the fair sex in general, but particularly prejudiced against this*

princess, made some objections ; his father, however, overcame all obstacles with ‘ his usual aj-guments (says the author of the Life of Frederick), viz. his cane and a few kicks.’ But the coldness which Frederick at this time showed for the fair sex was not natural ; for as early as 1723, though then only in his eleventh year, he became enam oured of the princess nne, daughter of king George II. Even at this early period he vowed to refuse every otherbutherfor his consort, norwas his vow ever broken, as far as depended on him- self. This marriage might have taken place had it not been for some differences which arose, be- tween the courts of Prussia and Hanover, about a few acres of meadow land, and two or three Hanoverians enlisted by the Prussian recruiters. The princess whom he espoused had a large share of beauty, and, what was still better, an excellent heart; but Frederick is said to have suffered so much in his former amours, that cer- tain insurmountable impediments remained to tlie completing of his marriage with any woman. On this occasion Frederick received from his father the county of Rupin. He resided in Ru- pin, the capital, for some time ; but afterwards preferred Rheinsberg, which then contained only 1000 inhabitants. Having inscribed over the great gate of the castle Fredirico Tranquilli- TATEM CoLENTi, his father was displeased with it, and therefore hurried him into the noise and tumult of war. The succession to the crown of Poland had kindled a general war throughout Europe, and tlie king of Prussia was to send 1 0,000 auxiliaries to the imperial army, then commanded by prince Eugene. The king conducted his troops in person, and took this opportunity of giving his son an idea of war. At this time, how- ever he learnt but little, and only saw, as he ex- pressed it, the shadow of the great Eugene. That consummate general, however, predicted that he would one day be a great captain. Frederick havin’g gone to reconnoitre the lines at Philips- burg, in his return through a very open wood, was exposed to the cannon of the lines, which thundered incessantly. The balls broke a num- ber of branches on every side of him ; notwith

standing which he never caused his horse to move quicker, nor altered the motion of his hand which held the bridle ; but contmued to converse calmly witli the generals who attended him. During this campaign, the health of the old king was so much impaired, that Frederick was for some time intrusted with signing all the orders in his name. On his recovery the prince was sent to Stetten, under the prince of Dessau, to see the fortifications. He was afterwards sent to Konigsberg to see king Stanislaus, who was no less remarkable for his philosophy and constancy than for his misfortunes. With him Frederick remained for some weeks, and contracted a friendship which was not dissolved but by death. At last he was allowed to return to his peaceful mansion at llheinsberg, where he remained till the death of his father. In this place his time was occupied alternately by the study of the arts and sciences, and die pleasures of friendship. Philosophy, history, politics, the military art, poetry, and music, aˆeal:)ly succeeded each other, and had each its stated period. The prince passed the greatest part of the day in his li- brary ; and the remainder in the society of a select company of learned men. In these meet- iD;’«, saitty generally prernled; there were generals to speak of war, musicians to charm the ear, and excellent painters to decorate the apart- ments. The morning was usually dedicated to study ; agreeable conversation prevailed at each repast ; and every

evening there was a con- cert. In this retreat Frederick conceived that ardent passion for military glory, for which he became at last so remarkable ; and here he formed the most sublime and daring projects. He was fired widi a desire of imitating the celebrated lieroes of antiquity, of whom he read in an- cient authors. lie never spoke but with enthu- siasm of the great warriors of Greece and Rome ; and, when seated on the throne, thought«he could not distinguish an able soldier in a more honor- able manner, than by conferring on him a Roman surname. Hence he distinguished by the name of (iuintus Icilius M. Guichard, who had written some treatises on the military art of the ancients ; giving him at the same time a free battalion. In his pursuit of glory Frederick cultivated the friendship of the celebrated poets, and philoso- phers of his day, and commended, compli- mented, and even flattered, all the most celebrated literati of Europe. 'The philosopners (says the author of his Life) answered him as a mad lover writes to his mistress. They wrote to him that he was a great poet, a great philosopher, the Solomon of the north. All these hyperboles were printed : and Solomon was not sorry for it, though he had too much understanding to believe in them. Wolff, Rollin, Gravesande, Mauper- tuis, Algarotti, Voltaire, were honored with his correspondence. The last especially, accustomed to offer up incense to the idol of the day, were it transported from the dunghill to the altar, did not fail to exalt as the first man of the universe a prince who was in expectancy of the throne, and who assured iiim that he was the greatest philo- .sopherof the age, and the first poet in the world.' That Frederick might keep up his character with the literati, or Dcrhaps from a real uredilcction for

his principles, he patronised the Apology of Wolf, (a philosopher whom his father had banished, for writing a work on pre-established harmony), and had his principal treatises translated into French. He even prevailed upon his father to relax a little in favor of that philosopher. In 1736 a letter was sent to Wolf al Marpourg, in- viting him to return ; but he did not venture to make his appearance till 1740, when his protector was seated on the throne. During his residence at Rheinsbersr, Frederick composed his refutation of the principles of Machiavel, under the title of Anti-Machiavel ; of which he sent the MS. to Voltaire to correct, and to get printed. The old king, now worn out with infirmity, saw with re- gret the predilection his son entertained for men of letters ; and, in his peevish fits, often threat- ened the whole society with confinement in the fortress of Spandau. These threats frequently occasioned a vj^lent alarm among the joyous company at Rheinsberg, which it required all the eloquence of Frederick to quiet. Their ap- prehensions, however, were removed, in 1740, when the old monarch died on 31st May, and left the throne to his son. Tiie possession of a kingdom did not abate Frederick's passion for li- terature, though to this he was now obliged to superadd the qualities and labors of a great king. His

transactions in this character will be found under the article Prussia ; and therefore little more remains to be said here, than to relate some anecdotes by which we may be able to trace the character of this great and singular monarch. Having, soon after his accession, gone into Prus- sia and Westphalia to receive the homage of the inhabitants, he formed a resolution of proceeding incognito as far as Paris. Being discovered at Strasbourg, however, he laid aside his design, and went to see his states in Lower Germany. Here he wrote the celebrated Voltaire, that he should come incognito to visit him at Brussels ; but being seized with an indisposition in the little palace of Meuse, two leagues from Cleves, he wrote again to that philosopher, requesting liira to make the first advances. The following curious account is given by him of his reception, &c. ‘ The only guard I found at the gate was one soldier. The privy counsellor, Bambontt, was cooling his heels in the court ; he had large ruf- fles of dirty linen ; a hat full of holes ; and an old magisterial peruke, one end of which descended as low as his pockets, and the other scarcely reached his shoulder. I was conducted into his majesty's apartment, where there was nothing but bare walls. I perceived in a cabinet, by tiie glimmering of a taper, a truckle bed, two feet and a half wide, on which lay a little man, muf- fled up in a night gown of coarse blue cloth. This was the king, in a strong perspiration, and evenlrembling under a wretched blanket, in a violent fit of the ague. I bowed to him, and becan by feeling his pulse, as if I had been his first physician. The fit over, he dressed himselt and sat down to table. Algarotti, Kayserling, Maupcrtuis, the king's minister to the states general, and myself were of the party ; where we conversed profoundly on the immortality of the soul, on liberty, and the Androgynes of Plato.' Tills rigid economy, and contempt of every

luxury, was maintained bv Frederick as long as he lived. The foUowino; account, likewise from Voltaire, will give an idea of his manner of living. ‘ He rose at 3 A. M. in summer, and 6 in winter. A lacquey came to light his tire, and dress and shave him ; though indeed he almost wholly dressed himself. His room was not in- elegant. A rich balustrade of silver, ornamented with little cupids, seemed to enclose an alcove bed, the curtains of which were visible ; but be- hind them, instead of a bed, there was a library ; the king slept on a truckle bed with a slight mattress concealed behind a screen. Marcus Aurelius and Julian, those apostles of Stoicism, did not sleep in a more homely manner. At seven his prime minister arrived with a great bundle of papers under his arm. This prime minister was no other than a clerk, who had for- merly been a soldier and valet-de-chambre. To him the secretaries sent all their despatches, and he bruught

extracts of them, to which the king wrote answers in two words on the margin : and tims the afiairs of the whole kingdom were expe- dited in an hour. At eleven the king put on his l>oots, reviewed his regiment of guards in tlie garden, and at the same hour the colonels were following his example in their respective pro- vinces. The princes his brothers, the general officers, and one or two chamberlains, dined at his table ; which was as good as it could be in a country where there is neither game, tolerable butcher's meat, nor a pullet, and where the very wheat is brought from Magdebourg. After the repast he retired alone into his cabinet, wliere he made verses till five or six o'clock. Then came a young man named D'Arget, who read to him. A little concert began at seven, in which the king played on the flute with as much skill as the first performer ; and pieces of his composi- tion were frequently executed. Supper was served in a little liall, the most singular and strik- ing ornament of which was a fine picture of Priapus. These repasts were not in general the less philosophic on that account. Never did men converse in any part of the world with so much liberty respecting all the superstitions ot mankind, and never were they treated with more pleasantry and contempt. God was respected : but none of those who had deceived men in his name were spared. Neither women nor priests ever entered the palace. In a word, Frederick lived witliout a court, without counsel, and with- out religious worship.' As Frederick had espous- ed his princess contrary to his inclination, it was imagined, that on his accession, he would set himself free from engagements so disagreeable to himself. The queen impressed with suspicions of this kind, was on the point of fainting away when he made his first visit to her. To the sur- prise of all parties, however, he made her a very affectionate speech, apologising for his indiffer- ence, and invitinc her to participate with him the throne of which she was worthy. In the first year of his reign, he restored the academy of sciences at Berlin. See Academy. His war with the queen of Ilunuary, however, which look place almost immediately after his accession, for some time prevented him from taking such an active part in literary matters as he was inclined to do.

After the peace, he gave full scope to his passion for literature; and, in tlie interval betwixt the conclusion of the first war and beginning of that of 1756, he composed most of his works; parti- cularly his History of My own Time. Vˆoltaire was his principal literary correspondent, whom he invited to reside with him. Afraid of losing his liberty, that philosopher hesitated, excused himself, and entered into pecuniary treaties. At last he was determined by seeing a poem from Frederick to M. D'Arnaud, in which the latter was compared to the rising, and Voltaire to the setting, sun. By this Voltaire was so mucli piqued, that he set out for Berlin without delay, and arrived there in June 1750. He was received in the most magnificent and affectionate manner, and for some time his situation was very agree-' able;

but the disputes and rivalship which took place betwixt him and Maupertuis soon threw every thing into confusion. In these the king interfered in such a manner as was certainly below his dignity ; and he often exercised him- self in maknig a jest of the other men of letters, in a way which induced many of them to leave him. The squabbles with Voltaire were sometimes very diverting. See Voltaire. They ended at last in a final quarrel with that wit, and his de- parture from the kingdom. The restless dispo- sition of Frederick showed itself after his depar- ture by his attempts to provoke the literati wlio remained at his court, to quarrel with him as "oltaire had done. But they were of too passive a disposition toeratifyhmi in this respect, choosing rather to suffer the most mortifyin.; strokes of raillery, or to leave the kingdom, than to contend with him. This proved so uneasy to the king, that he one day exclaimed, ‘ Shall we have no more quarrels then !’ The breaking out of the war in 1756, however, put a stop to this diversion, and afforded him as many enemies as he could wish. The exploits he performed, du- ring the seven years which this unequal contest lasted, are almost incredible (See Prussia); and it is amazing how the fortitude and resolu- tion of any man could enable him to sustain the difficulties which during this period he encoun- tered. Once however even the resolution of Frederick was on the point of giving way. After the battle of Colin, when his affairs seemed alto- gether desperate, he wrote to his sister at Barcith that he was on the point of putting an end to his own life. And, as he wished to have it said that he made verses even on the brink of the grave, he wrote a long poetical epistle to the marquis d’Argens, in which he communicated to him his design, and bade him farewell. His affairs, how- ever, took a better turn, and such desperate thoughts were laid aside. But his constitution was irreparably injured by the excessive fatignes he had sustained. Soon after the peace, his body began to bend, and his head to incline to the right side : by degrees he became very infirm ; he was tormented with the gout, and subject to frequent indigestion. All his distempers, however, were borne with invincible patience ; and, till a very short time before his death, he never ceased to attend his reviews, or visit the provinces. He has been known to review his troops, and gallop through all the ranks, as if he felt no pain, while

an abscess, which approached to a suppuration, touched the saddle. In August, 1785, he im- paired his health still farther by assisting at a review, where he was exposed without a cloak to a heavy rain for four or five hours. (Jn his return to Potsdam he was seized with a fever ; and, for the first time, became unable to assist at the military exercises, llis malady, however, did not prevent him from dictating the disposi- tion of these

exercises during the three days they lasted. About the end of autumn the fever left him, but was succeeded by a violent cough; by which he was greatly weakened and prevented from sleeping ; but this did not interrupt either the execution of business, or the routine of liis literary exertions ; wherein he continued to em- ploy himself till the day before he died. On the 17th and 18th of May, 1786, he was unable to assist at the ordinary reviews. At last his disor- der terminated in a dropsy. Being now no longer able to remain in bed, he sat day and night in an arm-chair with springs, which could be moved at pleasure. For nearly a month before hiˆ death the swelling of his feet gave him vio- lent pain, so that he wished an incision to be made ; but the surgeon refused to perform the operation, suspecting that it might hasten his death. Nature, however, accomplished his de- sires ; his right leg opened, and discharged such a quantity of matter, that he was greatly relieved. But on the 16th August, 1706, his throat began to rattle violently ; and he soon after fell into a stupor ; though from this he recovered so far as to be able to speak. His respiration and voice became gradually more feeble ; and he expired on the morning of the 17th, at nineteen minutes after two, in the seventy-fiftli year of his age, and forty-seventh of his reign. — This great monarch was of the middle size, had large blue eyes and a piercing look. He spoke German incorrectly and in a very rough manner ; but talked French very fluently and agreeably. His constitution was naturally feeble, but he had greatly improved it by his laborious life. He had the art of re- lievingevery one from that embarrassment, which is apt to occur in accosting a monarch. His universal knowledge enabled him to converse on all subjects. He talked of war with military men, of verses with the poet, of agriculture with the farmer, of jurisprudence with the lawyer, of commerce with the niercliant, and politics with the Englishman. He had a very retentive me- mory; was fond of solitude and gardening; and took great pleasure in dogs, of which animals he constantly kept a number about him, giving tiiem little balls to play with. In company he was fond of asking questions and jesting; in which last he proceeded such lengths as undoubtedly were unbecoming in a superior towards his infe- riois. In military affairs he was excessively severe, not to say cruel ; of which the following anecdote may serve as an instance. In the first war of Silesia, wishing to make sorno alteration in his camp during the night, he forbade every person, under pain of death, to keep, after a certain hour, a fire or other light in his tent. He himself went the rounds ; and in passing tlie tent of a captain Zittern he perceived a light. Enˆerin the tent, he ffnind the captain sealing

a letter to his wife, fur whom he had a great af- fection. ‘ What are you doing there ?’ said he, ‘ do not you know the order (‘ The captain fell on his knees and asked pardon. ‘ Sit down,’ cor. tinned the king, ‘and add a few words I am going to dictate to you.’ Zittern obeyed ; and the king

dictated 'To morrow I shall die on a scaff'old.' The unfortunate man wrote them, and next day was executed. His cruel treatment of Baron Trenck is well known. In matters of do- mestic legislation, he was more arbitrary than just ; of which we have a notable example in the famous case of Arnold the miller. This man hatl refused to pay the rent of his mill, on pretencu that the stream which turned it had been divert- ed into a fish-pond. But as the water which ran into the pond also van out of it into the same channel as before, the miller evidently suffered no damage. The judges therefore gave sentence against him, but the king not only reversed tiieir sentence but disgraced them. For this he was celebrated through all the newspapers in Europe ; and yet he was in the wrong, and afterwards even acknowledged nimselfto have been so: but, not- withstanding this, he not only made no reparation to the parties injured, but allowed them to lie in prison all his life-time. He entertained most un- accountable prejudices against certain places and persons, which neither conduct nor merit could eradicate. One of these unfortunate places was Westphalia, on which he never conferred any bounty ; and one day a native of that country, a man of great merit, being proposed to him for a place, he refused, saying, ' He is a Westphalian ; he is good for nothing.' Voltaire justly accuses him of ingratitude to the count de Seckendorf ; who saved his life, and against whom he conceived the most implacable hatred. His neglect of others who afforded him die most essential ser- vice was shameful. When a robust butcher pre- vented him from falling, horse and all, over a precipice, where both would undoubtedly have been killed, the king only turned about and say- ing. Thank you friend, rode off without ever en- quiring farther about his preserver. ˆVith regard to his literary merits, 'oltaire boasts of having corrected his works, and others of having fur- nished him with materials for his history. He has been accused of stealing whole hemistichs of poetry from Voltaire, Boileau, Rousseau, and others ; nor does the charge seem void of foun- dation. Such of his verses, as have undergone no correction, are very indifferent. But while we thus mention the foibles of Frederick, it is but just to record his acts of virtue. Upon his accession he treated his mother witli great respect ; ordered that she should bear tlio title of queen mother, and that instead of addressing liim as his majesty she should call him son. As he was passing soon after between Berlin and Potsdam, 1000 boys, who had been marked out for military service by his fatlier, surrounded liis coach, and cried out ' Merciful king deliver us from our slavery.' He promised them their liberty, and next day ordered their badges to be taken off. He granted a general toleration of religion; and among other concessions allowed the prof«'s- sion of free-masonry. The reign of this monarch was illustrious, as well for the variety of charac-

ters he sustained, as for the important vicissitudes he experienced. But the pacification of Dresden, in 1745, enabled him to api>ear in a character far more glorious than that of the con- queror of Silesia. He was now entitled to the noblest eulogy, as the wise legislator of his coun- try. Exclusive of his general attention to agri- culture, commerce, and manufactures, he peopled, in particular, the deserts of Pomeraiiia, by en- couraging, with royal bounties, a great number of industrious emigrantsto settlejin that province ; the face of which, in a very few years, miderwent the most agreeable alteration. Above sixty new villages arose amidst a barren waste; and every part of the country exhibited marks of successful cultivation. Those desolate plains, where not a footstep had been seen for ages, were now con- verted into fields of corn; and the happy pea- sants, under the protection of a patriot king, sowed their grounds in peace, and reaped their harvests in security

Frederick (Colonel), the son ofTheodore, king of Corsica, by an Irish lady, was born in Spain. lie came to England in 1754, and taught the Italian language for some years. He afterwards went to the continent, where he obtained the rank of Colonel, and the cross of merit, from the late duke of Wirtemberg; for whom he acted as agent, upon his return, and disposed of a regiment to the East India Company. He married a German lady while abroad, by whom he had a son, who fell in the American war, and also a daughter. His finances falling low at last, he shot himself, at Westminster Abbey, on the 1st February 1796. He was a raan of general knowledge, and considerable talents. He wrote 1 . Memoires pour servir I'histoire de Corse, 8vo. 1768. 2. The description of Corsica; with an account of its union to the crown of Great Bri- tain, 8vo. &c. 1796.

Frederick, a county of Maryland, bounded on the north bj Pennsylvania, east by Baltimore, south-west by the Potomac, and west by Wash- ington ; extending thirty miles everyway. Fre- dericktown is the capital.

Frederick, a county of Virginia, bounded on the north by Berkley, east and south by the Shanandoah, and west by Hampshire ; thirty miles long, and twenty broad. It abounds with limestone and iron ore ; iron works have been erected in various parts. Winchester is the chief town.

FREDERICKSBURG, a town of Virginia, in Spotsylvania county, on the south-west bank of the Rappahannock, 110 miles from its mouth. The chief street runs parallel with the river. It is fifty miles S. S. W. of Alexandria.

FREDERICKSHALL, a town of Norway in the province of Aggerhuys, on the frontiers of Sweden, and on the extremity of the Swinesund, at the

mouth of the Tiste. The harbour is safe and commodious ; but the saw-dust brought down the river from the mills occasions an annual expense to clear it. It contains 3000 inhabit- ants ; and lies thirty-one miles south-east of Christiania, and fifty north of Uddevalla.

FREDERICKStADT,arespectable manufac- turing town of Denmark, in theduchy ofSlesvvick, at the confluence of theTreen and Eyder. Silk,

woollen, starch, and oil, are its chief manufactures It was founded in 1621, by a body of Arminians who emigrated from Holland upon the decisions of the synod of Dort. Population 2200. Eigh- teen miles W. S. W. of Sleswick.

FREDERICKSTEIN, a strong fortress of Norway, on the summit of a rock, which over- hangs Frederickshall ; famous for the death of Charles XII. killed while besieging it, in 1718.

FREDERICKS WERK, a sea-port of Den- mark, in a bay on the north coast of the island of Zealand. Here are a cannon foundry, and manufactures of various military articles, esta- blished in the year 1756, by general Classen.

FREDERICKTOWN, a flourishing town of Maryland, capital of Frederick county seated on Caroll's creek, Sec. It is forty-seven miles west by north of Baltimore, and 148 south-west of Philadelphia.

FREE, adj. & v.a.-\ Sax. pjieah, pjreo ; Bel.

Free'pom, 71. s. tviy ; Goth.ˆrj ; Teutonic

Free'ly, adv. ifrcy- ^^ ˆ shall give the

Free'ness, n.s. ˆnumerous applications of this word, and the illustrations in the usual order, and then present it distinctly in every word in which it is used in composition. At liberty ; not a vassal ; not enslaved ; not a prisoner; not dependent; uncompelled ; un- restrained : of choosing, as opposed to bon- dage or necessity; permitted; allowed; li- centious ; open ; ingenuous ; frank ; without reserve ; liberal ; spontaneous ; clear from ; guilt- less ; innocent ; exempt from ; invested with franchises ; possessing any thing without vassal- age ; admitted to the privileges of any body corporate ; without expense ; a free-school, is a charity-f.chool ; to set at liberty ; to rescue from slavery or captivity ; to manumit ; to loose ; to rid from ; to clear from any thing ill : with of ox from ; to clear from impediments or obstruc- tions.

This 6ong I have heard say

Was inaked of our blisful lady/rc.

Hire to salue, and eke hire for to prey

To ben our help, and socour, whan we dey.

Chaucer. The Prioresses Tale And Jason is as coy as is a maide ; He looked pitously, but nought he saiede : But frely yave he to hire counsailers Yeftes full grete and to hire officers : As would God, that I leser had and time By processe, all his woeing for to rime

Id. Legend Hypsipyle and Medea, ‘ In prison though thy bodie be At large kepc thine herte fre A trewe hert ne will not plie. For no manace that it mai drie.

Id. Romaunt of the Rose Yet shall they not escape so freely all ; For some shall pay the price of others guilt :

And he, the man that made Sansfoy to fall. Shall with his owne blood price that he hath spilt. Spenser’s Faerie Queene. The laws themselves they do specially rage at, as most repugnant to their liberty and natural /reerfom. Spenser on Ireland. Their use of meats was not like unto our ceremo- nies, that being a matter of private action in common life, where every man was free to order that which himself did ; but this is a publick. constitution for the ordering of the church. Hooker.

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FRE

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FRE

Do faithful homage, and receive /we honours, A) I which we pine for now. Shakspeare. Macbetli. Glo’ster too, a foe to citizens, O’erchanging yo\ir free purses ; with large fines, That seeks to overthrow religion. Shakspeare.

If my son were my husband, I would freelier re- joice in that absence wherein he won honour, than in the embracements of his bed, where he would show most love- Id. Coriolanus.

Who alone suffers, suffers most i’ th’ mind. Leaving yVee things and happy shows behind.

Shakspeare. Make mad the guilty, and appal the free. Confound the ignorant. Id. Hamlet.

The child was prisoner to the womb, and is By law and process of great nature thence Freed and enfranchised ; not a party to The anger of the king, nor guilty of. If any be, the trespass of the queen. Sliakspeare.

These Are such allowed infirmities, that honesty Is aeverfree of. Id. Winter's Tale.

'Tis not to make me jealous ; To say my wife is fair, feeds well, loves company. Is free of speech, sings, plays, and dances well. Where virtue is, these make more virtuous.

Shakspeare. Why, sir, I pray, are not the streets as free For me as for you ? Id. Taminy of the Shrew.

We may again Give to our tables meat, sleep to our nights. Free from our feasts and banquets bloody knives.

Shakspeare. By our holy vSabbathTiave I sworn To have the due and forfeit of my bond : If you deny it, let the danger light Upon your charter and cily's freedom. Id.

We wanted twords to express our thanks ; his noble free offers left us nothing to ask. Bacon.

And ever since I strive in vain My ravished freedom to regain. Cowley.

It is no marvail, that he could think of no better way to be freed of these inconveniences the passions of those meetings gave him, than to dissolve them.

Clarendon, Defaming as impure what God declares Pure ; and commands to some, leavesyree to all.

Milton. Freely they stood who stood, and fell who fell. NotyVee, what proof could they have given sincere Of true allegiance, constant faith, or love. Where only what they needs must do, appeared ; Not what they .would ? Milton's Paradise Lost.

I else must change Their nature, and revoke the high decree Unchangeable, eternal, which ordained 'ihc'iT freedom ; they themselves ord.-jined their fall.

Milton. Castalio, I have doubts within my heart ; Will you he free and candid to your friend?

Otway. From which the happy never must be free.

Dry den. Their steeds around. Free /roni the harness, graze the flowery ground. Id. The reader may pardon it, if he please, for the

freeness of the confession.

The path to peace is virtue : what I show. Thyself may yree(y on thyself bestow ; Fortune was never worshipped by the wise ; But, set aloft by fools, usurps the skies.

He therefore makes all birds of every sect Free of his farm, with promise to respect Their several kinds alike, and equally protect.

Vol. IX.

Id.

Id.

Id.

'I'he chaste Sibylla shall your steps convey, And blood of offered victims/ ree the way. /-/.

Fierce was the fight ; but, hast'ning to his prey. By force the furious lover freed his way. Id.

Free ! what, and fettered with so many chains ?

Id. 3Iy hands are guilty, but my heart is free. Id.

O freedom ! first delight of human kind I Not that which bondmeii from their masters find. The privilege of doles ; nor yet to inscribe Their names in this or t' other Roman tribe : That false enfranchisement with ease is found ; Slaves are made citizens by turning round. Id. The will, free from the determination of such de- sires, is left to the pursuit of nearer satisfactions.

Locke. How can we think any one freer than to have the power to do what he will ? Id.

I hope it will never be said that the laity, who by the clergy are taught to be charitable, shall in their corporations exceed the clergy itself, and their sons, in freeness of giving. Sprat.

By nature all things have an equally common use : nature freely and indifferently opens the bosoms of the universe to all mankind. South.

In every sin by how much the more free will is in its choice, by so much is the act the more sinful, and where there is nothing to importune, urge, or provoke the will to any act, there is so much an higher and perfecter degree of freedom about that act. Id.

Free and familiar with misfortune grow. Be used to sorrow, and inured to woe. Prior.

Should thy coward tongue Spread its cold poison through the martial throng. My javelin shall revenge so base a part. And free the soul that quivers in thy heart. Pope. I know there are to whose presumptuous thoughts Those freer beauties, e'en in them, seem faults. Id.

To gloomy cares my thoughts alone arafree, III the gay sports with troubled

thoughts agree.

Id. Let such teach others who themselves excel. And censare freely who have written well. Id. Alexandrian verses, of twelve syllables, should never be allowed but when some remarkable beauty or propriety in them atones for the liberty : Mr. Dry- den has been too free of these in his latter works. Id. This prince first gave freedom to servants, so as to become citizens of equal privileges with the rest, which very much increased the power of the peop'e. Swift. Freedom of Conscience. See Toleration. Freedom of a Co'Rporation. See Corpo- ration. The freedom of cities, aad other cor- porations, is regularly obtained by serving aii apprenticeship : but it is also purchased with money, and sometimes conferred by way of compliment.

FREE-BENCH. See Bench, Free. FREE'BO()TER, w. s. > Free and booty. Free'booting, 71. s. 5 A robber; a plun- derer; a pillager ; robbery; plunder; the act of pillaging.

Under it he may cleanly convey any fit pillage, that comcth handsomely in his way j and when he goeth abroad in the night on -freebooting , it is his best and surest friend. Spenser.

Pcrkin was not followed by any English of name, his forces consisted mostly of base people and free- booters, fitter to spoil a coast than to recover a kingdom.

Bacon. The earl of Warwick had, as often as he met with any Irish frigates, or such freebooters as sailed under their commission, taken all the seamen. Clarendon.

FRE'EBORN, n. s. Free and born. Not born a slave ; inheriting liberty.

O baseness, to support a tyrant's throne. And crush your /reeftom brethren of the world !

Dryden.

I shall speak my thoughts like a freeborn subjoct, such things perhaps as no Dutch commentator could, and I am sure no Frenchman durst. W-

Shall freeborn men, in humble awe. Submit to servile shame ;

Who from consent and custom draw The same right to be ruled by law. Which kings pretend to reign ! Id-*

FREECILVPEL, n. s. Free and chapel. Such chapels as are of the king's foundations, and by him exempted from the jurisdiction of the ordinary. The king may also license a sub- ject to found such a chapel, and by his charter exempt it from the ordinary's visitation.

FREE'COST, n. s. Free and cost. With- out expense ; free from charges.

We must not vouch any man for an exact master in the rules of our modern policy, but such a one as has brought himself so far to hate and despise the absurdity of being kind upon freecnst, as not so much as to tell a friend what it is o'clock for nothing.

South.

FRE'EDMAN.M. s. Freed and man. Lat. lihertus. A slave manumitted.

The freedman jostles, and will be preferred ; First come, first served, he cries.

Dryden's Juvenal.

FREEFO'OTED, adj. Free and foot. Not restrained in the march.

We will fetters put upon this fear. Which now goes too freefuoted.

Sliakspeare. Hamlet.

FREE'HEARTED, adj. Free and heart. Liberal ; unrestrained.

Love must freehearted be, and voluntary ; And not inchanted, or by fate constrained.

DM'ies,

FREEIIO'LD, n. s. Free and hold. That land or tenement which a man holdeth in fee, fee-tail, or for term of life. Freehold in deed is the real possession of lands or tenements in fee, fee-tail, or for life. Freehold in law is the right that a man has to such land or tenements before his entry or seizure. Freehold is sometimes taken in opposition to villenage. Land, in the time of the Saxons, was called either bockland, that is holden by book or writing, or foreland, that is holden without writing. The former was held by far better conditions, and by the better sort of tenants, as noblemen and

gentlemen, being such as we now call freehold. The latter was commonly in the possession of clowns, being that which we now call at the will of the lord.

Freehold is extended to office.s, which a man holds either in fee, or during life ; and, in the re- gister of writs, it is said, that he who holds land upon an execution of a statute-merchant until he is satisfied, the debt holds as freehold to him and his assigns, and the same of a tenant by elegit ; but such tenants are not in fact freeholders, only as freeholders for their time, till they have re- ceived the profits of the land to the value of their debt. Reg. Judic.68. 73.

A lease for ninety-nine years, &c., determina ble upon a life or lives, is not a lease for life to make a freehold, but a lease for years, or chattel determinable upon life or lives ; and an estate for 1000 years is not a freehold, or of so high a nature as an estate for life. Co. Lit. 6. He that hath an estate for the term of his own life, or the life of another hath a freehold, and no other of a less estate ; though they of a greater estate have a freehold, as tenant in fee, &c., Lit. 57.

Freehold, or frank tenement; liberura tene- mentum. See Fee and Tail.

A Freehold, by the common law, cannot commence in futuro ; but it must take effect pre- sently, either in possession, reversion, or remain- der. Whatever is part of the freehold goes to the heir ; and things fixed thereto may not be taken in distress for renter in execution, &c. No man shall be disseised of his freehold by statute Magna Charta, cap. 29, but by judgment of his peers, or according to the laws of the land : nor shall any distrain freeholders to answer for their freehold in any thing concerning the same without the king's writ. Freehold estates, of certain value, are required by statutes to qualify jurors, electors of the knights of the shire in parliament, &c.

Freehold, in geography, a town of New Jersey, in Monmouth county, fifteen miles west of Shrewsbury, twenty south-east by south of New Brunswick, and forty-four north-east of Philadelphia. It has an academy. A bloody battle was fought here between the British under Sir H. Clinton, and the Americans under general Washington, on the 28th June, 1778.

FREEIIO'LD ER, n. s. From freehold. One who has a freehold.

No alienation of lands holden in chief should be available, touching the freehold or inheritance thereof, but only where it were made by matter of record.

Bacon's Office of Alienation. As extortion did banish the old English

freeholder, who could not live but under the law ; so the law did banish the Irish lord, who could not live but by ex- tortion. Davies.

There is an unspeakable pleasure in calling any thing one's own : a freehold, though it be but in ice and snow, will make the owner pleased in the pos- session, and stout in the defence of it. Addison.

My friends here are very few, and fixed to the freehold, from whence nothing but death will remove them. Swift.

I should be glad to possess a freehold that could not be taken from me by any law to which I did not give consent. Id.

Freeholders, in the ancient laws of Scotland, are called milites, knights. In Reg. Judicia, it is expressed, that he who holds lands upon an execution of a statute merchant, until he hath satisfied the debt, tenet ut liberum tenementum sibi et assignatis suis ; and the same of a tenant per elegit; the meaning of which seems to be, not that such tenants are freeholders, but as free- holders for the time, till they have received pro- fits to the value of their debt.

FRE'EMAN, n. s. F'ree and man. One not a slave ; not a vassal ; one partaking of rights, privileges or immunities.

Had you rather Casar were living, and die all slaves, than that Caesar were dead, to live all frec- ,)xgjf 9 SItakspeure.

He made m freemen of the continent.

What nature did like captives treat before.

Dry den.

If to break loose from the conduct of reason, and to want that restraint of examination and judgment which keeps us from; chusing or doing the worst, be liberty, true liberty, madmen and fools are the only freemen. Locke.

What this union was is expressed in the preceding verse, by their both having been made freemen on the same day. Addison.

FREEMl'NDED, adj. Free and mind. Un- perplexed ; without load of care.

To be freeminded, and cheerfully disposed at hours of meat, sleep, and exercise, is one of the best pre- cepts of long lasting. Bacon.

FREESCHO'OL, n. s. Free and school. A school in which learning is given without pay.

To give a civil education to the youth of this land in the time to come, provision was made by another law, that there should be one freeschool at least erected in every diocese. Davies.

Two clergymen stood candidates for a small free- ■ichool ; a gentleman who happened to have a better understanding than his neighbours, procured the place for him who was the better scholar. Swift.

FREESPO'KEN, adj. Free and spoken. Accustomed to speak without reserve.

Ncrva one night supped privately with some six or seven ; amongst whom there was one that was a dangerous man, and began to take the like courses us Marcellas and Regulus had done : the emperor fell into discourse of the injustice and tyranny of the former time, and, by name, of the two accusers j and said. What should we do with them, if we had them now ? One of them that was at supper, and was a frecspoken senator, said. Marry, they should sup with us. Bacon,

FRE'ESTONE, n. s. Free and stone. Stone commonly used in building.

I saw her hand ; she has a leathern hand ; z.free- .s.'one-coloured hand. Shakspeare. As You Like It.

The streets are generally paved with brick or free- stone, and always kept very neat. Addison on Italy.

Freestone is sc named from its being of such a con- stitution as to be wrought and cut freely in any direc- tion. Woodward.

Freestone is a whitish stone, dug up in many parts of Britain, tliat works like alabaster, but is more hard and durable ; being of great use in building, &c. It is a species of the grit stone, but finer grained, and smoother. The f| ualities of the several kinds of freestones used in the different parts of Europe vary much. Tlioy all agree in this general property indeed, that they are softer while in the quarry, than when they have been some time exposed to the air : but even this general property differs greatly ill degree. They have a sort of gray freestone in use in Paris (of which we have not

yet met with any in this country), which has the above- mentioned quality in so great a degree, that the expense of working it is in a great measure saved. This stone lies every wiiere on the south side of the river Seine, and is of a coarse and large grit. It is so soft, wlien newly taken out of tlie strata, that they fashion it very conveniently with a sort of broad axe, and form as many stones for build-

ing in this manner in an hour, as an equal num- ber of our people do in a day or two. Though this stone is as soft as dry clay when first taken up, it is found to harden so considerably in the air, that it becomes more than equal to our ordinary free- stone. The Portland stone of the finest kind, which is white, and of a close grit, is very fit for hewing and carving ; but it will neither resist water nor fire; while the free-stone of Kent, which is less beautiful to the eye, and is of a grayish color, and considerably close, though of a larger grain, resists the air and water very well. The freestone of Derbyshire, on the other hand, is so brittle as to be unfit for any fine working; and so coarse and open in its texture, that it lets water through ; yet it bears the fire extremely well, and is fit for ovens, hearths, &c.

FREETHI'JSfKER, n. s. Free and think. A libertine ; a contemner of religion.

Atheist is an old-fashioned word j I'm i. freethinker, child. Addison.

Of what use is freedo-m of thought, if it will not produce freedom of action, which is the sole end, how remote soever in appearance, of all objections against Christianity ? And therefore the freethinkers consider it as an edifice, wherein all the parts have such a mutual dependence on each other, that if you pull out one single nail, the whole fabrick must fall to the ground. Swift.

Freethinker. See Deism and Deist.

FREEWI'LL, n. s. Free and will. The power of directing our own actions without restraint by necessity or fate ; voluntariness ; spontaneity.

I make a decree, that all they of the people of Israel in my realm, which are minded of their own freewill to go up to Jerusalem, go with thee.

Ezra vii. 13.

We have a power to suspend the prosecution of this or that desire ; this seems to me the source of all liberty ; in this seems to consist that which is im- properly coWqA freewill. Locke.

Freewill Islands, three small and low islands in the east of the Indian

Ocean, dis- covered by Carteret in 1767. The natives called them Pegan, Onata, and Onella. They are almost entirely surrounded by a reef, except towards the east, whe^^e there is a narrow passage through which a canoe can pass. Onata and Onella lie nearly in a direction east ;and wes't, and Pegan is about two miles to the north of them. The inhabitants are friendly, and readily exchanged with captain Carteret some cocoa- nuts for small pieces of iron, which they much value. They set a high value on iron, so that for some iron tools captain Carteret thought tliat they might have purchased every thing upon tlie island. They are tall copper Indians, with long black hair, and small beards, which they pluck by the roots from their chin and upper lip. Their features are])leasing, and their teeth good. They are remarkably agile and vigorous in their movements. On their waist tlicy wear a fine matting covering. Their canoes are well constructed, and planke'd at the sides ; with a sail of matting, an outrigger, and ro|)os and net- ting. One of tlie inhabitants insisting o:i remain- ing with the ship's crew, was nanu'd Joseph Freewill; from whom they learned that tliero were other islands northward, whose inhabitants

liad iron, and who always killed his countrymen. The islands are in long. 137'' 51′ E., lat. O'^ 30′ S.

FREEWO'MAN, n. s. Free and woman. A woman not eivslaved.

All her oi naments are taken away of a freewomnn ; she is become a bontl slave. 1 Jl/ac. ii. 1 1.

FREEZE, V. n. & v. a. Belg. vriesen ; Teut. freisen; pret. froze; part, frozen or froze. To be congealed with cold ; to be of that degree of cold by which water is congealed ; to congeal with cold; to kill by cold; to chill by the loss of power or motion.

And now, though on the sun I drive. Whose fervent flame all things decays ; His beaTus in brightness may not strive With light of your sweet golden rays ; Nor from my breast his heat remove. The frozen thoughts graven by love.

Earl of Surrey. When we both lay in the field. Frozen almost to death, how did he lap me. Even in his garments I Shakspeare.

My master and mistress are almost /coae/j to death.

Id.

Orpheus with his lute made trees

4nd mountain tops, that/reeze.

Bow themselves when he did sing. Id.

Thou art all ice, thy kindness /rceze. Id.*

I have a faint cold fear thrills through my veins.

That almost /reeves up the heat of life. Id.

What was that snaky-headed Gorgon shield That wise Minerva wore, unconquered virgin. Wherewith she frcezed her foes to congealed stone. But rigid looks of chaste austerity And noble grace, that dashed brute violence With sudden adoration and blank awe ?

Milton's ConuLs. The cynic loves his poverty ; The pelican her wilderness; And 'tis the Indian's pride to be Naked on frozen Caucasus: Contentment cannot smart ; stoics, we see, Mfdce torments easie to their apathy.

L' Estrange. Old Song, Heaven /roze above severe, the clouds congeal And through the crystal vault appeared the standing hail. Dryden.

Death came on amain. And exercised below his iron reign ; Then upward to the seat of life he goes ; Sense fled before him, what he touched he froze.

Id.

The freezing of water, or the blowing of a plant, returning at equidistant periods in all parts of the CEirth, would as well serve men to reckon their years by as the motions of the sun. Locke.

The aqueous humour of the eye will not freeze, which is very admirable, seeing it hath the perspi- cuity and fluidity of common water. Ray, A thousand and a thousand colours they

Assume, t\ien leave us on our freezing way.

Byron.

Freezing, in philosophy, the same with con- gelation. See Cold and Congelation, where the latest experiments and observations on that subject are detailed. Freezing may be defined the fixing a fluid body into a solid mass, by the action of cold. Water and some other fluids suddenly dilate

and expand in the act of freez- ing, so as to occupy a greater space in the solid than in the liquid state : in consequence of which

ice is specifically ligliter than water, and .float> upon it. Water also loses of its weight by freezing, being found ligliter after it is thawed than before it was frozen. And it even evaporates nearly as fast wliile frozen, as while it is fluid. Water wliich has been boiled freezes more rea- dily than that which has not been boiled ; and a slight disturbance of the fluid disposes it to freeze more speedily ; having sometimes been cooled several degrees below the freezing point, without congealing when kept quite still, but suddenly freezing into ice on the least motion or disturbance. Water, covered over with a sur- face of oil of olives, does not freeze so readily as without it ; and nut oil absolutely preserves it under a strong frost, when olive oil would not. Rectified spirit of wine, nut oil, and oil of tur- pentine, seldom freeze. The surface of water, in freezing, appears all wrinkled ; the wrinkles being sometimes in parallel lines, and sometimes like rays, proceeding from a centre to the cir- cumference. Fluids standing in a current of air grow much colder than before. Fahrenheit had long ago observed, that a pond, which stands quite calm, often acquires a degree of cold much beyond what is sufticient for freezing, and yet no congelation ensued : but if a slight breatli of.air happens in such a case to brush over the surface of the water, it freezes the whole in an instant. It has also been discovered, that all substances grow colder by the evaporation of the fluids whicii they contain, or with which they are mixed. If both these methods, therefore, be practised upon the same body at tlie same time, they will in- crease the cold to almost any degree of intense- ness we please.

Although cold, in general, contracts most bo- dies, and heat expands them, yet there are some instances to the contrary, especially in the ex- treme cases or states of these qualities of bodies. Thus, though iron, in common with other bodies, expands with heat, yet, when melted, it is always found to expand in cooling again. Thus also, though water expands gradually as it is lieated, and contracts as it cools, yet in the act of freezing- it suddenly expands again, and that with an enor- mous force, capable of rending rocks, or bursting the very thick shells of metil, &c. A computation of the force of freezing water was made by the Florentine Academicians, from the bursting of a very strong brass globe or shell by freezing w'ater in it ; when, from the known thickness and tena- city of the metal, it was found that the expansive power of a spherule of water, only one inch in diameter, was sufficient to overcome a resistance of more than 27,000 pounds, or thirteen tons and a half. See the experiments on bursting thick bomb-shells, by freezing water in them, by major Edward Williams of the royal artillery, in the Edin. Philos. Trans, vol. 2. Such a pro- digious power of expansion, almost double that of the most powerful steam-engines, and exerted in so small a mass, seemingly by the force, of cold, was thought a very material

argument in favor of those who supposed that cold, like heat, is a positive substance. Dr. Black's discovery of latent heat, however, has aff'orded an easy and natural explication of this phenomenon. He has sliown that, in the act of congelation, water

is not cooled more than it was before, but rather grows warmer : that as much heat is discharged and passes from a latent to a sensible state, as, had it been applied to water in its fluid state, would have heated it to 135". In this process, the ex- pansion is occasioned by a great number of mi- nute bubbles suddenly produced. Formerly these were supposed to be cold in the abstract; and to be so subtile, that, insinuating themselves into the substance of the fluid, they augmented its bulk, at the same time that, by impeding the motion of its particles upon each other, they changed it from a fluid to a solid. But Dr. Black shows, that these are only air extricated during the congelation ; and to the extrication of this air he ascribes the prodigious expansive force exerted by freezing water. The only ques- tion, therefore, is, by what means this air comes to be extricated, and to take up more room than it naturally does in the fluid ? To this it may be answered, that perhaps part of the heat, which is discharged from the freezing water, com- bines with the air in its unelastic state, and, by restoring its elasticity, gives it that extraordinary force ; as is seen also in the case of air suddenly extricated in the explosion of gun-powder. The degree of expansion of water, in the state of ice, is by some authors computed at about one-tenth of its volume. Oil and quicksilver shrink and contract after freezing.

' If avessel of water,' says Mr. Cavendish, ' with a thermometer in it, be exposed to the cold, the tliermometer will sink several degrees below the freezing point, especially if the water be covered up so as to be defended from the wind, and care taken not to agitate it ; and then on dropping in a bit of ice, or on mere agitation, spicule of ice shoot suddenly through the water, and the en- closed thermometer rises quickly to the freezing point, where it remains stationary.' In a note, he adds, ' that though, in conformity to tlie com- mon opinion, he has allowed that mere agitation may set the water a freezing, yet some experi- ments made by Dr. Blagden seem to show, that it has not much, if any, effect of that kind, otherwise than by bringing the water in contact with some substance colder than itself. Though in general also the ice shoots rapidly, and tlie en- closed tliermometer is raised very quickly; yet ne once observed it to rise very slowly, taking up not less than half a minute, before it ascended to the freezing point ; but in this experiment the water was cooled not more than one or two de- grees below freezing ; and it should seem, that the more the

water is cooled below the freezing point, the more rapidly the ice shoots and the en- closed thermometer rises.' Mr. Cavendish then observes, ' that from the foregoing experiments we learn, that water is capable of being cooled considerably below the freezing point, without any congelation taking place ; and that, as soon as by any means a small part of it is made to freeze, the ice spreads rapidly through the whole of the water. Tlie cause of this rise of the ther- mometer is, that all or almost all bodies, by chang- ing from a fluid to a solid state, or from the state of an elastic to that of an unelastic fluid, gene- rate heat; and that cold is produced by the con- trary process. Thus all the circumstances of the

phenomenon may be perfectly well explained ; for, as soon as any part of the water freezes, heat will be generated thereby, in consequence of the above-mentioned law, so that the newly formed ice and remaining water will be warmed, and must continue to receive heat by the freezing of fresh portions of water, till it is heated exactly to the freezing pohit, unless the water could be- come quite solid before a sufficient quantity of heat was generated to raise it to that point, which is not the case ; and it is evident, that it cannot be heated above the freezing point ; for as soon as It comes thereto, no more water will freeze, and consequently no more heat will be generated. The reason why the ice spreads all over the wa- ter, instead of forming a solid lump in one part, is, that, as soon as any small portion of ice is formed, the water in contact with it will be so much warmed as to be prevented from freezing, but the water at a little distance from it will still be below the freezing point, and will consequently begin to freeze. Were it not for this generation of heat, the whole of any quantity of water would freeze as soon as the process of congelation began; and in like manner the cold is generated by the melting of ice ; which is the cause of the long time required to thaw ice and snow. It was formerly found that, by adding snow to warm water, and stirring it about until all was melted, the water was as much cooled as it would have been by the addition of the same quantity of wa- ter rather more than 150° colder than the snow ; or, in other words, somewhat more than 150° of cold are generated by the thawing of the snow ; and there is great reason to believe that just as much heat is produced by the freezing of water. The cold generated in the experiment just men- tioned was the same whether ice or snow was used.'

Freezing Point denotes the point or degree of cold, by a mercurial thermometer, at which certain fluids begin to freeze, or, when frozen, at which they begin to thaw again. See Che- mistry.

Freezing Rain, or raining ice, a very un- common kind of shower, which fell in the west of England, in December 1672, of which we have several accounts in the Philosophical Transac- tions. This rain, as soon as it touched any thing above ground, as a bough or tlie like, immedi- ately

*settled into ice ; and, by multiplying and enlarging the icicles, broke all down with its weight. The rain that fell on the snow imme- diately froze into ice, without sinking into the snow at all. It made an incredible destruction of trees, beyond any thing in all history. ‘ Had it concluded with some gust of wind,’ says a gentleman who was on the spot, * it might have been of terrible consequence. I weighed the sprig of an ash tree, of just three quarters of a pound, the ice on which weighed sixteen pounds. Some were frighted with the noise in the air ; till they discerned it was the clatter of icy boughs dashed against each other.’ Dr. Beale observes, that there was no considerable frost observed on the ground during the whole ; whence he con- cludes, that a frost may be very intense and dangerous on the tops of some hills and plains; while in other places it keeps at two*

thr.ee, or four feet distant above the ground, rivers, lakes, &c., and may wander about very furious in some places, and remiss in others not far off. The frost was followed by glowing heats, and an unusual forwardness of flowers and fruits.

FREIGHT, V. a. & «. s.) Yr.frctter; pret.

Freuuiter, n.s. \ freighted; particip.

fraught ; which being now used as an adjective, freighted is adopted. To load a ship or vessel of carriage with goods for transportation ; to load as the burden : to be the thing with whlcii a vessel is freighted ; any thing with wiiich a ship is loaded ; the money due for transportation of goods ; he who freights a vessel. I would

Have sunk the sea within the earth, or ere

It should tiie good ship so have swallowed, and

The freighting souls within her. Shakspeure .

The princes Have to tlic port of Athens sent their ships, Frauijlit wUh the ministers and instruments Of cruel war.

Shakspeare. Truilus and Crcssida. Prologue. ■Nor is, indeed, that man less mad than these,

Wiio freights a ship to venture on the seas ;

Wilh one frail interposing plank to save

From certain death rolled on by every wave.

Dryden.

He clears the deck, receives the mighty freight ; The leaky vessel groans beneath the weight. Id.

Freighted with iron, from my native land

I steer my voyage. Pope's Odyssey.

A small vessel should not be stuffed with lumber. Rut if ha freight be precious, and judiciously stowed, it may be moro valuable than a ship of twice its bur- den. Mason.

Freight, in commerce, is the money paid for carriage of goods by sea; or the price paid for the use of a ship to transport goods. Ships are freighted either by the ton, or by the great : and, in respect of time, the freight is agreed for, at so much per month, or at a certain sum for tlie whole voyage. If a sliip freighted by the great, happens to be cast away, the freight is lost ; but vf a merchant agrees by the ton, or at so much for every piece of commodities, and by any ac- cident the ship is cast away, if part of the goods is saved, she ought to be answered her freight pro rata. The freight is most frequently deter- mined for the whole voyage, without respect to lime. Sometimes it depends on the time. In the former case, it is either fixed at a certain sum for the whole cargo ; or at so much per ton, barrel-bulk, or other weight or measure ; or so much per cent, on the value of the cargo. This last is common on goods sent to America ; and the invoices are produced to ascertain the value. The burden of the ship is generally mentioned in the contract, in this manner, ' one hundred tons, or thereby ;' and the number mentioned ought not to differ above five tons, at most, from the exact measure. If a certain sum be agreed on for th<; freight of the ship, it must all be paid, altiiough the ship, when measured, should prove less, unless the burden be warranted. If the ship be freighted for transporting cattle, or slaves, at so much a head, and some of them die on the passage, freight is only due for such as are delivered alive; but, if for lading them, it is

due for all that were put on board. When a whole ship is freighted, if the master suffers any other goods besides those of tiie freighter to be put on board, he is liable for damages. It is common to mention the number of days that the ship shall continue at each port to load or unload. The expression used is work weather days ; to signify, that Sundays, holidays, and days when the weather stops the work, are not reckoned. If tiie ship be

detained longer, a daily allow- ance iˆ often agreed on, in name of demurrage. If the voyage be completed in terms of the agreement, without any misfortune, the master has a right to demand payment of the freight before he delivers the goods. But if the safe delivery be prevented by any fault or accident, the parties are liable, according to the following rules. If the merchant do not load the ship within the time agreed on, the master may en- gage with another, and recover damages. If the merchant load the ship, and recal it after it has set sail, he must pay the whole freight; but if he unload it before it sets sail, he is liable for damages only. If a merchant loads goods which it is not lawful to export, and the ship be prevented from proceeding on that account, he must pay the freight notwithstanding. If the shipmaster be not ready to proceed on the voyage at the time agreed on, the merchant may load the whole, or part of the cargo, on board another ship, and recover damages ; but chance, or notorious accident, by the marine law, releases the master from damages. If an em- bargo be laid on the ship before it sails, the charter-party is dissolved, and the merchant pays the expense of loading and unloading ; but if the embargo be only for a short limited time, the voyage shall be performed when it expires, and neither party is liable for damages. If the ship- master sails to any other port than that agreed on, without necessity, he is liable for damages ; if, through necessity, he must sail to the port agreed on at his own expense. If a ship be taken by the enemy, and retaken, or ransomed, the charter-party continues in force. If the master transfer the goods from his own ship to another, without necessity, and they perish, he is liable for the value; but if his own ship be in imminent danger, the goods may be put on board another ship at the risk of the owner. If a ship be freighted out and home, and a sum agreed on for the whole voyage, nothing is due till it return : and the whole is lost if the ship be lost on the return. If a certain sum be specified for the homeward voyage, it is due, although the factor abroad should have no.goods to send home. In the case of a ship freighted to Madeira, Carolina, and home, a particular freight fixed for the homeward voyage, and an option reserved for the factor at Carolina toˆ decline it, unless the ship arrived before 1st of March ; the ship-master, foreseeing he could not arrive there within tliat time, and might be disappointed of a freight, did not go there at all. lie was found liable in damages, as the obliga- tion was absolute on his part, and conditiona. only on the other. If the goods be damaged without fault of the ship or master, the owner i.s not obliged to receive them and pay freight, bu4

he must either receive tlie whole, or abandon the whole ; he cannot choose those that are in best order, and reject the others. If the goods be damasked through the insufficiency of the ship, the master is liable ; but, if it be owing to stress of weather, he is not accountable. It is cus- tomary for shipmasters, when they suspect da- ma"e, to take a protest against wind and weather at their arrival. But as this is the declaration of a party, it does not bear credit, unless sup ported by collateral circumstances. If part of the goods be thrown over-board, or taken by the enemy, the part delivered pays freight. The ship-master is accountable for all the goods re- ceived on board, by himself or mariners, unless they perish by the act of God, or of the king's enemies. Ship-masters are not liable for leakage on liquors ; nor accountable for the contents of packages, unless packed and delivered in their presence.

FREGOSO (Baptist), doge of Venice, A. D. 1478, was author of several works: as, 1. The Life of Pope Martin V.; 2. A Treatise on Learned Ladies, in Latin: 3. On ˆlemorable Actions; and 4. Against Love, both in Italian. He was deposed for arbitrary conduct, and banished.

FREHER (Marciuard-), a learned German p.uthor, born at Augsburg in 1705. He studied inder Cujacius in France, and in his twenty- third year was made professor-at-law, at Heidel- burg. He was afterwards made vice-president of court, by Frederic IVˆ. elector palatine, who sent him to other courts as his ambassador. He wrote many works on antiquities, law, and his- tory, though he died in 1614, aged only forty- nine.

FREIGIUS (John Thomas), a learned Ger- man, born at Fribourg, in the sixteenth century. He studied under Zasius and Remus, and was made "ector of the College at Altorf in 1575. He died at Basil in 1583. He wrote, 1. Ques tiones Geometricae et Stereometries ; 2. Logica Consultorum; 3. A Latin Translation of Fro- bisher's \ˆoyages ; 4. Notes, Historical and Poli- tical, &c., on Cicero's Orations.

FREIMERSHEIM, a town of France, in the depsrlment of Mont Tonnerre, late of Germany, in the palatinate of tne Rhine, taken by the French in 1794. It is four miles N.N.E. of Landau

FREIND (John), a learned English physician and ttUthor, born at Croton, in Northampton- shire, in 1675. In 1696 ne published, in con- junction with Mr. P. Foulkes-, an edition of two Greek orations, viz. of iLschines against Ctesi- phon, and Demosthenes de Corona, with a new Latin version. In 1699 he wrote a letter to Dr. Sloane concerning a case of hydrocephalus, published in the Philosophical Transactions, and another letter in Latin to the same gentle- man, De Spasmi Rarioris Historia, printed in the same Transactions. In 1703 his Emmenologia appeared ; which

gained him great reputation. In 1704 he was .chosen professor .of chemistry in the university of Oxford. In 1705 he attended the earl of Peterborough to Spain, as physician to tile army there; and upon his return, in 1707, published an account of the earl's expedition.

In 1709 he published his Chemical Lectures. In 1712 he attended the duke of Ormond in Flanders, as his physician. In 1716 he was admitted a fellow of the college of physicians in London. The same year he published the first and third books of Hippocrates De Morbis Popularibus, with a Commentary on Fevers, written by himself. He sat M. P. for Launceston in Cornwall in 1722, where he distinguished himself by his opposition to the ministry. In JMarcli, 1722, he was committed to the tower on suspicion of being concerned in Atter- bury's Plot, but was soon released on bail. While he was under confinement he wrote a Latin epistle to Dr. Mead, De Quibusdam Va- riorum Generibus; and began his History of Physic, the first part of which was published in 1725, and the second in 1726. Upon the acces- sion of George II. he was appointed physician to the queen, who showed the utmost esteem for him. He died in London in 1728. His works were published together in Latin, folio, 1733, and dedicated to the queen.

FREINSHEMIUS (John), a learned and ele- gant author, born at Ulm in 1608. He published supplements to Livy, Tacitus, and Quintus Cur- tius, in sixty books, printed at Strasburg in 1664. He wrote likewise Notes upon Quintus Curtius, Florus, Tacitus, and some other Latin classics; and died in 1660. He was professor at Upsal and Heidelburg.*

FliEISCHBACH, a town of France, in the department of Mont Tonnerre, late of Germany, in tne palatinate of the Rhine,ˆ taken by the French in 1794- It is six miles E. N.E. of Landau.

FREJUS, the Forum Julii of ancient history, is a small town on the coast of Provence, France, situated amidst marshes on the river Argens. Its harbour has long been dry, the sea having re- tired nearly sixteen miles, but anchorage is found in the roadstead ; and here are vestiges of an amphitheatre and of a large aqueduct. Fre- jus was the birth place of Agricola, but is more noted for being, in modern times, the place where Buopaparte landed on his return from Egypt in 1799, and on liis more celebrated return from Elba in 1815. Population 2200. Thirty miles south-west of Nice, and forty north-east of Toulon.

FREN, n. s. A stranger ; an old word wholly forgotten here, but retained in Scotland.

But now from me his madding mind is start.

And wooes the widow's daughter of the glen; And now fair Rosalind hath bred his smart.

So now his friend is changed for a fren.

Spenser,

FRENCH, in geography, a river of the United States, in Massachusetts, which rises from a pond in Worcester county, and runs into the (iuinebauge in Connecticut; so named from tlie French Protestants, who settled on its banks, after the revocation of the Edict of Nantz, in

1685.

French Broad, a navigable river of Tennesse, from 400 to 500 yards broad, formed by several head waters tiiat rise in North Carolina, on tlie south-east of the Great Iron and Bald Mountains. After running fifty-six miles north-west between

these mountains, and twenty-five miles north, it joins the Holstein eleven miles above Knoxville.

French Creek, a river of North America, the north head water of the Alleghany, into which It falls on the north side of Fort Franklin, eighty miles north-east of Pittsburg.

French Chalk, n. s.

French chalk is unctuous to the touch, as steatities is, but harder, and nearer approaching the consis- tence of stone. Woodward.

French chalk is an indurated clay, extremely dense, of a smooth glossy surface, and soft and unctuous to the touch ; of a greyish white colour, variegated with a dusky green. Hill.

French Language, the language now spoken in France, which, like the English, is not an original language, but a medley of several. Those that prevail most, and are the basis of it, are, 1. The Celtic ; whether that were a particular language itself, or whether it were only a dialect of the Gothic, as spoken in the west and North : 2. The Latin, which the Romans carried with them into Gaul, when they conquered it: and 3, The Teutonic, or that

dialect of the Teutonic spoken by the Franks, when they passed the Rhine, and established themselves in Gaul. Of these three languages, in the space of about 1300 years, was the modern French gradually formed. Its progress was very slow. Both the Italian and Spanish were regular languages long before the French. Pasquier observes, it was under Philip of Valois that the French tongue first began to be polished ; and that, in the re- gister of the chamber of accounts of that time, there is a purity almost equal to that of the pre- sent age. However, the French was still very imperfect till the reign of Francis I. The custom of speaking Latin at the bar, and of writing the public acts and instruments of the courts of justice in that language, had made the French overlook their own language. The preceding ages had been remarkable for their ignorance, owing, in a great measure, to the long and cala- mitous wars in which France had been engaged : whence the French nobility deemed ignorance a kind of merit ; and the generals did not regard whether they wrote or talked politely or not, provided they could fight well. But Francis L restored learning, and changed the face of af- fairs; and after his time Henry Stevens printed his book, De la Precellence du Language Francois. The change was become very con- spicuous at the end of the sixteenth century ; and under Henry IV. Amyot, Coeffetau, and Mal- herbe, contributed towards bringing it to per- fection ; which cardinal Richelieu completed, by the establishment of the French Academy ; a society of which the niost distinguished persons in church and slate have been members. Nor did the long reign of Louis XIV. cointribute little to the improvement of the language ; his taste for the fine arts rendered his court the politest in Europe. Wit and magnificence seemed to vie ; and his generals might have dis- puted with the Greeks, Romans, &c., the glory of writing well, if they could not that of fighting. From the court, the elegance and purity of the language soon spread itself into the provinces ; where there arc now very few who do not write

and speak good French. One character of the French language is, that it is natural and easy. The words are ranged in it much in the same order as the ideas in our minds ; in which it dif- fers exceedingly from the Greek and Latin, wherR the inversion of the natural order of words is reputed a beauty. The Hebrew sur- passes even the French in this point, but comes short of it in copiousness and variety. But, as to the analogy of grammar, and the simplicity wherewith the moods of verbs are formed, the English has the advantage not only over the French, but over all the known languages in the world; though the peovdiar expressions and idioms of the English are sometimes so quaint and extraordinary, that it loses a good deal of the advantage which its grammatical simplicity gives it over the rest. The French has few compound words, wherein it differs widely from the Greek, high Dutch, and English. This the French authors acknowledge to be a great dis- advantage ; the Greek and Dutch deriving a great part of their

force and energy from the composition of words, and frequently expressing that in one sounding word, which the French cannot express but by a periphrasis. The dimi- nutives in the French are as few as the com- pounds, the greatest part of those ia use having lost their diminutive signification. The French is chiefly admired for its justness, purity, accu- racy, and flexibility. It is the most universal and extensive language in Europe. The policy of states and courts has rendered it necessary for the ministers of princes, &c. ; and the dis- coveries and improvements made by the French in arts and sciences have had the same effect among the learned. In Germany, and else- where, the princesses and persons of distinction value themselves on understanding French ; and, in several courts of Europe, French is almost as much used as the language of the country.

French Republic. See France, Republic, and Revolution.

French River, a river of Upper Canada, which runs from Lake Huron, to Lake Nipissing.

FRE'NCHIFY, u. a. From French. To in- fect with the manner of France ; to make a cox- comb.

Has he familiarly disliked Your yellow starch, or said your doublet Was not c\a.ci\y frenchijied ? Shakspeare.

They mislikcd nothing more in king Edward the

Confessor than that he y;a.s frenchijied ; and accounted

the desire of foreign language then to be a foretoken

of bringing in foreign powers, which indeed happened.

Camden's Remains.

FRE'NETIC, adj. Fr. frenetique ; (ppev7)Ti- koq; generally therefore written phrenetic. Mad; distracted.

He himself impotent. By means of his frenetick malady. Darnel.

FRE'NZY, n. R. ˆpiviriQ-, Lat. phrenitis whence phrenetisy, phrenetsy, phrenzy, or frenzy. Madness ; distraction of mind ; aliena- tion of understanding; any violent passion ap- proaching to madness.

Yet Troilus for all this no worde saide. But lout; ho laic as still he dcd were ;

FRˆ:

And after this, wjtii sikmg he aljrai'ic, And to Pandarua voici; h>i lent his ere. And up his eicn cast he. And than in fore Was Pandarus, lest tliat in a fretiseye He should yfal, cir elles sone deyc.

Chaucer- Troilus and Creseide. That knave. Ford, hath the finest mad devil of jealousy in him that ever governed ycejis/y.

Shakspeare. True fortitude is seen in great exploits. That justice warrants, and that wisdom guides ; All else is tow'ring /rejtaˆ and distraction.

Addison. Why such a disposition of the body induceth sleep, another disturbs all the operations of the soul, and occasions a lethargy or frenxii : this knowledge ex- ceeds our narrow faculties. Bentley.

FRE'QUENCE, n. s. ˆ Vr. frequence ; Lat. Fre'quemcy, ?j. s. \frequentia. Crowd;

Fre'quent, adj. & v. a. i concourse ; assem- Frequent'able, adj. ' bly; common occur- Frequent'er, n. s. j rence ; the condition Fre'quently, adv. J of being- often seen or done ; often done ; often seen ; often occur- ring; used often to practise any thing; full of concourse ; to visit often : to be much in any place ; to resort often to.

They in latter day, Finding in it fit ports for fishers' trade, Gan more the same freqzcent, and further to invade.

Spenser. There were synagogues for men to resort unto : our Saviour himself and the apostles frequented them.

Hooker. The frequence of degree. From high to low throughout.

Shalispeare. Tiinon. This fellow here, this thy creature, I5y night freqicenis my house. Id.

At that time this land was known ami frequented .

Bacon. rhou earnest ere while into this senate : who Of such A frequency, so many friends And kindred thou hast here, saluted thee ?

Ben Jonson. While youth lasted in him, the exercises of that age and his humour not yet fully discovered, made him somewhat the more f'requentable and less dan- gerous. Sidney. He, in full frequence bright Of angels, thus to Gabriel smiling spake.

Milton. Frequent and full. Id.

With tears Watering the ground, and with our sighs the air Frequenting, sent from hearts contrite, in sign, Of sorrow unfeigned, and humiliation meek. Id,

An ancient and imperial city falls ; The streets are filled v/ilh frequent funerals.

Urydeu. Should a miracle be indulged to one, others would think themselves equally entitled to it ; and, if in- dulged to many, it would no longer havn the effect of a miracle : its force and influence would be lost by ih-G frequency of it. Altcrbury.

Frequcid horses shall besiege your gates.

Pope. Kvery man thinks ho may pretend to any employ- ment, provided hi: has been loud and frequent in declaring himself hearty for the government.

Swift.

I cou.d noi, without much grief, observe how fre^ queiilly both gentlemen and ladies arc at a loss for questions and answers. Id.

Persons under bad imputations are no great fre- quenters of churches. Id.

FREQUENTATIVE, adj. Yx.frequentutif , L'^t. frequentatlviis. A grammatical term applied to verbs, signifying the frequent repetition of an action. ,

FRERET (Nicholas), a learned French author born at Paris in 1688. At the age of t\^-enty-l^ve his merits recommended him to the Academy of Inscriptions, of which he became a member. On that occasion he presented the society with a dissertation on tlie origin of the French, which tliough learned, was so bold, that he was re- warded for it with a place in the Bastile. His subsequent writings were mostly against revela- tion. He died in 1749.

FRERON (Elias Catherine), an eminent French autlior and reviewer, born at Quimper in 1719. He was educated among the Jesuits, but quitted their society in 1739. His critical works were much esteemed, but containing some free strictures upon M. Voltaire's writings, that satirist attacked him with his usual asperity. In 1749 Freron commenced his Letters on certain Writings of the Times, which extended to thir- teen volumes. He then began his Annees Lite- raires, which he continued till his death in 1776. He was an able opponent of the new philosophy, and an acute critic. Besides the

above he wrote, 1. Miscellanies; 2. Les Vrais Plaisirs; and 3. Part of a Translation of Lucretius.

FRESCATI, or Frascati, an episcopal town of Italy, seated on the brow of a hill, in the Campagna di Roma. It derives its name from the coolness of the air, and fresh verdure of the fields around. It is built on the ruins of the ancient Tusculum ; two miles from the Tusculan villa where Cicero wrote his famous questions, now called Grotta Ferrata. There is a very fine prospect from this town into tlie neighbouring country. It is surrounded by some of the most beautiful villas in Italy; the principal of which are the villa of Aldobrandini, belonging to prince Pamfili ; villa Taberna, belonging to prince Borghese ; and villa Ludovisi, to the family of Colonna. Frescati, Tivoli, and Albano, are the favor te abodes of the landscape painters, who travel into Italy for improvement. Nothing can surpass the admirable assemblage of hills, mea- dows, lakes, cascades, gardens, ruins, groves, and terraces, which charm the eye while wandering among the shades of these delightful villages. It is ten miles south-east of Rome. Long. 11° 42′ E., lat. 41'^ 48′ N.

FRESCLONE, a town of Naples, in the pro- vince of INIolise, two miles south-weˆst of Molise.

FRES'CO, «. s. Ital. Coolness; sliade; dus- kiness ; like that of the evening or morning : to paint in fresco is to throw the scene or the object into duskiness, as distinguished from glaring light.

Hellish sprites Love more ihv fresco of the niglits. Prior.

Here thy well-studied marbles fix our eye ; A ianiiag fresco here dcmauds a sigh. Pupc.

Fresco, a method of painting in relievo ou walls, so as to endure the weather. It is per- formed with water colors on fresh plaster, or on a wall laid witli mortar not yet dry. This sort of painting has a great advantage by its incor- porating with the mortar, and, drying along with it, becomes very durable. The Italians, from whom we borrow tlie term, call it fresco, because it is frequently used for walls, alcoves, and other buildings in tlie open air. Vitruvius (lib. vii. cap. 4) calls it udo tectorio. In executing paintings in fresco, tiie necessary preparations are the sketch, the cartoon, in full size, cut in suitable pieces, the colors, prepared only with water, and

tlie two sorts of plaster, the render- ing and finishing coats on which the picture is to be painted. Every part must be determined upon, as no alteration or amendment can take])lace ; and the painter must be well acquainted witli the qualities of his colors, as they dry lighter than when laid on. There are two operators in constant attendance, the plasterer, and tlie painter, who follows him, and dyes his colors into the very body of the plaster while yet wet ; the plasterer first renders the wall with a coat of coarse stucco formed of lime and sand, and finishes with the finer to such a surface as the artist requires ; who then pricks his outline tlirough the cartoon, and draws it with a style, to prevent the colors running beyond them. The colors must then be dashed on at once in a broad, bold, and general manner, that, by an able artist, must produce a grand style. Paint- ing in fresco is very ancient, having been prac- tised in tlie earliest ages of Greece and Rome. FRESH, at//. & ?i.s. ˆ Saxon FJiefc; Fr. Freˆii'f.s, V. a. k. V. n. \ fraische. Cool; not Fresh'et, n. s. ! vapid with heal; not

Fuesh'ly, adv. | salt; new; not had be-

FnEsii'NESs, n. s. \ fore; not impaired by Fresii-wa'ier, 71. s. J time; recent; recency; re-invigorated ; brisk ; strong ; cheerful ; unfaded ; unimpaired ; florid ; ruddy ; sweet, as opposed to stale or stinking ; pure, not salt-water. Freshet signifies a pool of fresh-water ; and fresh-water is a compound word of fresh and water, used as an adjective. Raw; unskilled; unacquainted. A low term borrowed from the sailors, who stig- matise those who ccme first to sea as fresh-water men, or novices.

Upon his hcde he worcd of laurer grenc, A gerlond yiei/ie and lusty for to scne.

Chancer. The Knightes Tale. 4.S oft as I behold, and sepˆ The sovereign brauty that me bound ; The nighor ray comfort is to me, Alas ihe fresher is my wound. Surrey.

And wise Cambina taking by her side Faire Canacce, a.ˆ fresh as morning rose, Unto her coch remounting, home did ride. Admired of all the people, and much glorifide.

Spenser. Faerie Qtietnc. And chalenging the virgin as his dew Uis foe was soone addrest : the trumpets /rw/i/y blew.

Id. The weeds of heresy being grown unto such ripeness as that was, do, even in the very cutting down, scatter oftentimes those seeds wliich for a while lie unseen and buri-ˆd in the earth ; but afterwards freshly spring up ugain no less pirnicious than at the lirst. linukcr.

Those nobility, as freshwater soldiers which had never seen but some light

skirmishes, in their vain bravery made light account of the Turks. Knolles. Then shall our names. Familiar in their mouth as household words Be in their flowing caˆs freshly remembered.

Shakspeare. He shall drink nought but brine ; for I'll not shew hi in Where the quick freshes are. Id. Tempeet.

Tell me Hast thou beheld a, fresher gentlewoman. Such war of white and red within her cheeks ?

Shuksjieare. Looks he as freshly as he did the day ha wrestled t

Id. They are now freshly in difference with them.

liacon. Most odours smell best broken or crushed ; but flowers pressed or beaten, do lose the freshness and sweetness of their odour. Id.

This pope is decrepid, and the bell goeth for him ; take order that when he is dead there be chosen a pup;; oi fresh years, between fifty and threescore.

Id. Holy War. The Scots had the advantage both for number and freshness of men. Hayward.

Think not, 'cause men flattering say. Ye are fresh as April, sweet as May, Bright as is the morning star. That you are so. Carciv.

They keep themselves unmixt with the salt water ; so that, a very great way within the sea, men luay take up as. fresh water as if they were near the land.

Abbot's Desc. of tlie World. All fish from sea or shore. Freshet or purling brook, or shell or fin.

Milton. Thou sun, said I, fair light! And thou enlightened earth, so fresh and gay !

Id. Fresh gales and gentle airs Whispered it to the woods, and from their wings Flung rose, flung odours, from the spicy shrub Disporting ' Id.

This second source of men, while yet but few. And while the dread of judgment past remain Fresh in their minds, fearing the Deity, With some regard to what is just and right. Shall lead their lives. Id. Paradise Lost.

With such a care As roses from their stalks we tear. When we would still preserve them new, And fresh as on the bush they grew. Waller. As afresh gale of wind fills the sails of a ship.

Holder No borrowed bays his temples did adorn. But to our crown he did fresk jewels bring.

Dryden. Amidst the spirits Palinurus pressed ; Yi:t fresh from life, a new admitted guest. Id. Fresh from the fact, as in the present case. The criminals are seized upon the place ; Stiff in denial, as the law appoints. On Engines they dist .nd their tortured joint.s. Id.

Nor lies she long ; but as her fates ordain. Springs up to life, and fresh to second pain ; Is saved to-day, to-morrow to be slain. Id.

That love which first was set, will first decay ; Mine of a fresher i.Iate will longer stay. Id.

Say, if she please, she hither may repair. And breathe the frcshjiess of the open air. Id,

For the coixslant freshness of it, it is such a pleasure as can never cloy or overwork the mind ; for surely

no man was ever weary of thinking that he had done wull or virtuously. South.

She laid her down to rest, 4nd to the winds exposed her glowing breast. To take the freshness of the morning air.

Addison. They represent to themselves a thousand poor, tall, innocent, / res'/j coloured young gentlemen. Id. I'll cull the farthest mead for thy repast ; The choicest herbs I to thy board will bring. And draw thy water from the freshest spring.

Prior. The secret venom, circling in her veins, Works through her skin, and bursts in bloating stains , Her cheeks their freshness lose and wonted grace. And an unusual paleness spreads her face.

Gra7iville. A freshening breeze the magick power supplied. While the winged vessel flew along the tide. Pope. Preclusive drops let all their moisture flow In large effusion o'er the fresJiened world.

Thomson. But no one doubted on the whole, that she Was what her dress bespoke, a damsel fair And fresh, and beautiful exceedingly. Who with the

brightest Georgias might compare.

Bi/ron.

Fresh Disseisin, in law, such a disseisin, as a man may defeat of himself, as where it is within fifteen days.

Fresh Shot, in sea language, the falling down of any large river into the sea, whereby the sea has fresh water a great way from its mouth.

To Freshen the hawse, in nautical language, signifies to change the old canvas, &c., which is usually wrapped round the cable, to prevent its being worn through by the friction against the side of the vessel, &c., in heavy seas.

FRESHES, a local term signifying annual inun- dations from the rivers being swollen by the melted snows and other fresh waters from the uplands, as in the Nile, &c., from periodical or tropical rains. As a sailor's term, it is opposed to marine or salt-water floodings, tides, &c. The word is of common use in America, where tlie inundations so called are of great service. They bring down the soil to the intervales below, and form a fine mould, producing corn, grain, and herbage in the most luxuriant plenty. They also afi"ord another benefit, in regard to many rivers in America, viz. in equalising the surface of the stream, where rapid falls, or cascades, obstruct the navigation ; so that rafts of timber and other gross produce are floated down to the sea-ports in great quantities.

FR'ESNE (Charles de), Sieur du Cange, one of the most learned writers of his time, was born at Amiens in 1610, and studied at the .Jesuits' College in that city. lie afterwards studied the law at Orleans, and gained great reputation by his works; among which are, 1. The History of Constantinople un'der the French Emperors. 2. John Cinnamus's History of the affairs of .lohn and Manuel Comnenus, in Greek and Latin, with historical and philological notes. 3. Glos- sarium ad Scriptores Media; et Infimx Latini- tatis; 6 vols, folio. 4. A Greek Glossary, con- sisting of curious passages from rare MSS. 2 vols, folio. He died in 1683, aged seventy-eight. Louis XTV. settled pensions on his four children.

I'RESNOY (Cluules Alplionso du), an excel-

lent poet and painter, born at Paris in 1611. He was instructed by Perrier and Simon Vonet in painting, but, as soon as he fixed himself at Rome, he made the works of Titian his models. He was, however, more celebrated as a poet tlian as a painter ; and is better known by his incom- parable poem De Arte Graphicˆ, than by his per- formances on the canvas. He bestowed so much pains on it, that he died in 1665, before it was published. It was

printed afterwards with a French prose translation and notes, by M. de Piles ; and was translated into English by Mr. Dryden, who prefixed an original preface with a parallel between painting and poetry.

FRET, n.s.,v.(i.Si,v.n.-\ Of this word, as Fret'e UL, adj. f Dr. Johnson says, the

• etymolQgy is doubt- ful : 'some derive it from pfietan to eat;

Fret'f ULLY, adv.

Iret'fulness, n.

Fret'ty, adj. others from pperpan to adorn ; some from ˆpirro; Skinner more probably ivomfremo, or the Fr. fre- tillcr : perhaps it comes immediately from the Lat. fretum.' Mr. Todd suggests a more probable origin of it ; i. e. from Sax. p;ieo<5an, or the Fr. f rotter, to rub. A frith, or strait of the sea, where the water by confinement is always rough. The first idea is fermentation ; commotion ; agitation ; applied to water; to liquors ; to vibrations; attri- tion ; corrosion ; however occasioned : also to protuberances, excrescences, or ornaments, re- sembling the effects which are visible on an agi- tated surface. Wliatever interrupts smoothness, or diversifies appearances, giving such a variety as motion often does to liquids. It is also applied to the agitations of the mind ; to the peevishness and discontent which wear away the patience of others and destroy our own peace. Fretful- ness is self-vexation, as distinguished from being vexed : Chaucer also makes use of it in the sense of eating or devouring.

His heart yre

Chaucer. The Man of Lawes Tale. Ther I saw I Atteon an hart ymaked. For vengeance that he saw Diane all naked : I saw how that his houndcs have him caught. And freten him ; for that they knew him naught. Id. The Knightes Tale. Yet, saw I brent the shippes hoppesteres ; The hunte ystrangled with the wild beres ; The sow fretimj the child right in the cradel. Id.

There Saintes have hir cominge and icsorte. To seen the kingo so riolly bcscne In purple clad and eke the queenc in sortc ; And on hir heddes sawe I crownes twcinc With stones yVe< ; so that it was no peine Wilhoutcn mete and drinke to stand and see The kingcs honor and the rialto.

/(/. The Court of Lwe. Helpless, what may it boot To fret for anger, or for grief to moan !

Faerie Queenc. They trouble themselves with frcttimj at the igno- rance of

such as withstand them in their opinion.

Hooker.

FRE

620

FRE

We are in a frettim) mind at the church of Rome, and with anajry di»pnsiuon enter into cogitation. Id. Thoir wounded steeds Fret fetlock deep in gore, and with wild rage Yerk out their armed heels at their dead masters. Sha/ispeare. Henrˆ V.

Be lion-mettled, proud, and take no care Who chafes, who frets, or where conspirers are.

Id. Macbeth. Are you positive and fretful ? Heedless, ignorant, forgetful ?

Sliahspeare. You may as well forbid the mountain pines To wag their high tops, and to make a noise When they axe fretted with the gusts of heaven.

Id. Yon grey lines. That fret the clouds, arc messengers of day. Id. Thy knotty and combined locks to part. And each particular hair to stand on end. Like quills upon the fretful porcupine. Id.

Where's the king ? — Contending with the fretful elements ; Bids the wind blow the earth into the sea. Id,

Antonj' T: valiant and dejected; and, by starts, }A\% fretted fortunes give him hope and fear Of what he has and has not.*

Id. Antony and Cleopatra. It requireth good winding of a string bcltjre it will make any note ; and, in the tops of lutes, the higher they go, the less distance is between l\ic frets.

Bacon. The frets of houses, and all equal figures, please ; whereas unequal figures are but deformities. Id.

Take a piece of glover's leather that is very thin, and put your gold therein, with sal armoniac, bind- ing it close, and then hang it up ; the sal armoniac vi'\\ fret away, and the gold remain behind.

Peacham. In the banks of rivers, with the washings of the water, there were divers times fretted out big pieces of gold. Abbot.

Calmness is great advantage : he that lets Another chafe, may warm him at his fire,

*Mark all his wand'rings, and enjoy his frets. As cunning fencers sutYer heat to tire. Herbert. The painful husband, plowing up his ground. Shall .*ind all fret with rust, both pikes and shields. And empty helms under his harrow sound.*

Hakewill. You, too weak the slightest loss to bear. Arc on the fret of passion, boil and rage.

Creech. The harp Had work, and rested not : the solemn pipe And dulcimer, all organs of sweet stop. All sounds on fret by string or golden wire, Tempercl soft tunings, intermixed with voice Choral or unison.

Milton s Paradise Lost. Nor did there want Cornice or freeze, with bossy sculptures graven : The roof was /re«ed gold. Id.

The better part with Mary and with Ruth Choseu thou hast ; and they that overween. And at thy growing virtues fret their spleen. No anger find in theo but pity and truth.

Milton. Hudibras fretting Conquest should be so long a getting, Drew up his force. Hudibras.

Euripus generally signifieth any strait, fret, or channel of the sea, running between tvyro shores.

Browne.

He swells with wrath, he makes outrageous moan.

He frets, he fumes, he stares, he stamps the ground.

Dri/den. These do but indeed scrape oS' the exuberances, or fret into the wood, and therefore they are very sel- dom used to soft wood. Moxon,

They are fitted to answer the most variable harmo- ny : two or three pipes to all those of a ehurch-organ, or to all the strings anA frets of a lute.

Grew's Cosmot. Sac. The incredulous Pheac, having yet Drank but one round, replied in sober fret.

Tate. No benefits whatsoever, shall ever alter or allay that diabolical rancoiir, that frets and ferments in some hellish breasts, but that it will foam out in slan- der and invective. South.

Of this river the surface is covered with froth and bubbles ; for it rans along upon the fret, and is still breaking against the stones that oppose its passage. Addison on Italy. We take d.elight in a prospect well laid out, and diversified with fields and meadows, woods and rivers, in the curiousyrei- works of rocks and grottos.

Id. Spectator. Such an expectation, cries one, will never come to pass : therefore I'll even give it up, and go and fret myself. Collier.

Before I ground the object-metal on the pitch, I always ground the putty on it with the concave cop- per, 'till it had done making a noise ; because, if the particles of the putty were not made to stick fast in the pitch, they would, by rolling up and down, grate and yVe the object-metal, and fill it full of little holes. Newton's Opticks. It inflamed and swelled very much ; many wheals arose, and fretted one into another with great excoria- tion. yViseman,*

Injuries from friends fret and gall more, and the memory of them is not so easily obliterated.

Arlmthnot. The blood, in a fever, if well governed, like wine upon the fret, dischargeth itself of heterogeneous mixtures. Derhain.

How shoijd I fret to mangle every line. In reverence to the sins of thirty- nine. Pope.

Yet then did Dennis rave in furious yVe< ; I never answered, I was not in debt.

The' adjoining brook that purls along The vocal grove, noˆ fretting o'er a rock. Now scarcely moving through a reedy pool.

Tho)r.svn. A bad old woman making a worse will. Which loaves you minus of the cash you counted As certain ; — these are paltry things, and yet I've rarely seen the man they did not fret.

Byro7i.

Fret, in heraldry, one of the sub-onlinaries composed of a saltier and niascle ; it has been called by some a true lover's knot. Guillim as- serts that its origin may be found in the net-work used to fosten the raw hides on the ancient turrets as a defence against the arrows of the enemy. See diagram.

FllETTS, in mineralogy, a term used by miners to express the worn side of the banks of the rivers in mine couulries, where they search

for the shoad stones or grewts washed down from the hills, in order thence to trace out the running of the shoad up to the mine.

Fret-Work, work adorned with frets. It is sometimes used to fill up and enrich fiat empty spaces; but it is mostly practised in roofs wluch are fretted over with plasterwork.

FIIEUDENSTADT, a fortified town of Wirtemberg, founded in 1600, as an asylum for the persecuted German Protestants. It is seated in the Black Forest, twenty-four miles south-east of Strasburg, and thirty-six south-west of Stutt- gard. A part of the French army, under general Jourdan, were posted here on the 7th April 1799, when they attacked the Austrians under the archduke Charles, but were forced to retreat. Population about 2400.

FREUDENTHAL, a town of Silesia, la Troppau, famous for fine linen and good horses. It is eleven miles south-west of Jagendorf, and seventeen west of Troppau.

FREYE-.EMTER, a territory of Switzerland, surrounded by the cantons of Zurich, Bern, Lucern, and Zug; anciently called Rori and Waggenthal. The Swiss took it from count liapsburg in 1415. It is twenty-four miles long, and twelve broad, and was united in 1803 to the canton of Argau. The soil is fertile, and the population, chiefly Catholics, about 20,000 souls.

FRE V BERG, a celebrated mining town of Saxony, the capital of the Erzgebirg. It is situ- ated 1200 feet above the level of the sea, on a small river called the Freybergische-Mulda. It is tolerably well built, and contains 9000 inhabi- tants, and the officers here have the superinten- dance of all similar establishments tlirough out Saxony. A mining academy was founded in 1765, and has been superintended or distin- guished by the researches of Werner, Charpen- tier, Lampe, &c. There are attached to it a library, a cabinet, and a collection of models. A part of the students are educated gratis. The mines in the neighbouring district, 250 in num- ber, employ about 5000 men. The establish- ment for amalgamation is said to be the most perfect in Europe. About a mile from the town are silver mines, of which the annual produce is from 10,000 to 15,000 lbs. of lead; the Frey- berg mines yield only 1000 lbs. : they afford also copper, tin, silver, and vitriol. Here are also manufactures of hardware and cloth. Frey- berg was

the scene of a victory gained by Prince Henry of Prussia in 1762. It is eighteen miles S.S.W. of Meissen, and nineteen W.S.W. of Dresden.

Freybeug, or Przibor, a town of Moravia, twenty-eight miles E. N. E. of Prerau, and thirty-six east of Olmutz, with 3500 inhabitants.

Freyburg, or Friburg, a well built town of Baden, in the entrance of the Black Forest, at the fool of a mountain. It was till lately the capital of Brisgau, and now of tlic circle of the Treisam. It has a population of about 10,000, and was formerly fortified, but was dismantled by the French in 1744. It is the seat of a uni- versity founded in 1456, and still flourishincc.

FREYSINGEN, a town and bishopric of Bavaria, formerly an independent bishopric, now the chief place of a district in the circle of the

Iser. It stands in a valley between two emi- nences, and there is a bridge here across the Iser. The town is well built : population 3500. The territory of Freysingen was given to Bavarin in 1802, and then contained 27,000 inhabitants. The bishopric, now become strictly a spiritual dignitary, was transferred in 1817 to Munich. Seventeen miles N. N. E. of Munich, and eighteen south-west of Landshut.

Freysixgen, or Friesingex, an ecclesiastical principality of Germany in Bavaria, between Munich and Landshut. It comprehends the counties of Ismaning and Werdenfels, and the lordship of Burgkrain.

FRI'ABILITY, n. s. i Fr.friahle ; Lat./ri-

Fri'able, adj. 5 ubilis. Easily crum-

bled ; easily reduced to powder. The noun designates the capacity or tendency to such re- duction.

A spongy excrescence groweth upon the roots of the laser-tree, and sometimes on cedar, very white, light, and friable, which we call agarick. Bacon.

Hardiness, friability, and power to draw iron, arc qualities to be found in a loadstone.

The liver, of all the viscera, is the xnost friable, and easily crumbled or dissolved. Arbttthnot on Diet.

FRI'AR, n. s. '\ ˆ corruption of the

Fri'ar-like, aˆ/- (ˆ French y > e7'e,ˆ A reli

Fri'arly, adj. i gious ; a brother of

Fri'ary, ?i. s. &«(/;. J some regular order in the church of Rome. The derivatives have all a direct or remote relation to this etymon : thus friar-like is monastic, after the m.anaer of those who are secluded in religious houses, unskilled in the world. So also, friarly and friary, except that the latter is used as a noun, and signifies a monastery or convent of friars.

A Frere there was, a wanton and a mcry,

A limitour, a full solempue man.

In all the ordres fourc is non that can

So moche of daliance and fayro langage.

He hadde ymade ful many a mariage

Of yonge wimmen at his owen cost ;

Until his ordre he wos a noble post.

Chaucer. Prologue to the Cant. Tales.

Their friarlike general would the next day make

one holyday in the Christian calendars, in remcm

brance of thirty thousand Hungarian martyrs slain of

the Turks. Knolles.

Holy Franciscan friar ! brother ! ho !

Shahpeare. All the priests and friars in my realm, Shall in procession sing her endless praise. Id.

Francis Cornfield did scratch his elbow when ho had sweetly invented to signify his name, St. Francis, with a. friary cowl in a corn field. Camden's Remaiiu,

Seek not proud riches, but such as thou inaycst gel justly, use soberly, distribute cheerfully, and leave contentedly ; yet have no abstract aor friarly contempt of them. Bacon's Essays.

He's but a friar, but he's big enough to be a pope.

Dryden.

Many Jesuits and friars went about in the disguise of Presbyterian and Independent ministers to preach up rebellion. Swift.

Friar, or Frier. Lat. /ra/e;- ; Ital. //-a; and Fr. frere, i. e. brother. A term common to monks of all orders, founded on the supposition that there is a khid of brotherhood presumed between the religious persons of the same monas- tery. Friars are generally distinguished into

these four principal branches, viz. 1. Fkancis- cvNS, minors, or gray t'nars; 2. Augustinks; 3. Dominicans, or black friars; 4. Carme- lites, or white friars. From tliese four the rest of the orders descend. See diese articles.

FuiAU, in a more peculiar sense, is restrained to such monks as are not priests ; for those in or- ders are usually dignilied with the appellation of father.

Friars Okservant (fratres ohservantes) were a branch of the Franciscans ; thus called because nut combined together in any cloister, convent, or corporation, as the conventuals are ; but only agreeing among themselves to observe the rules of their order more strictly tlian the conventuals did, from whom they separated themselves out of a singularity of zeal, living in certain places of their own choosing.

FRrAllSCOWL, n. s. Friar and cowl. A plant. It agrees with arum, from which it dif- fers only in having a flower resembling a cowl. FRIB'BLE, V. n. & n. s.) VT.frivole ; Lat. Frib'kler, «. .s. Sfrivoius, trifling.

To trifle : atrifler; a fop; an imbecUe. Though cheats, yet more intelligible Than those that with the stars do fribble.

Hudibras. A frilblcr is one who professes rapture for the wo- man, and dreads her consent. Spectator,

FRIBOUKG, a canton of Switzerland, be- tween that of Berne and the Pays de V^aud : its extent is computed at 2836 square miles ; and its population at 68,000. The north division contains extensive and fertile plains : southward it is mountainous and sterile. Its principal river is the Sane, which flows northward through the centre of the canton. Pasturage is the

chief oc- cupation of the inhabitants, who export cattle, butter, and cheese, particularly that known tliroughout the continent by the name of gruyere, and import much of their corn from France. The inhabitants are chiefly Catholics, the Cal- vinists not exceeding 800U : in some parts they speak German, in others a corrupt Frencii. "There are few manufactures ; and the govern- ment is a mixture of aristocracy and democracy : in 1803 the canton was divided into the five dis- tricts of Fribourg Proper, Marten, Bulle, Ilo- moiit, and Estavayer.

F'ribouug, a large town of Switzerland, the capital of the foregoing canton, situated on the Sane, in a most singular and picturesque situa- tion, thus elegantly described by Mr. archdeacon Coxe : —

' It stands partly in a small plain, partly on bold accliv ties on a ridge of rugged rocks, half en- circled by tlie Sane; and is so entirely concealed by the circumjacent hills, that the traveller scarcely catches the smallest glimpse, until he bursts upon a view of the wliole town from the overhanging eminence. The fortifications, which consist of high stone walls and towers, enclose a circumference of about four miles ; within which space the eye comprehends a singular mixture of houses, rocks, thickets, and meadows, vary- ing instantly from wild to agreeable, from the hustle of a town to the solitude of the deepest retirement. The Sane winds in such a serpen- tine manner as to form in its course, within the

space of two miles, five obtuse angles, between which tlie intervening parts of the current are parallel to eacli other. On all sides the descent to the town is extremely steep : in one place the streets even pass over the roofs of tlie houses. Many of the edifices are raised in regular grada- tion, like the seats of an amphitheatre ; and many overhang the edge of a precipice in such a man- ner that, on looking down, a weak head would be apt to turn giddy. But the most extraordinary point of view is from the Pont-neuf. On the nortli-west a part of the town stands boldly on the sides and the piked back of an abrupt ridge; and from east to west a semicircle of high per- pendicular rocks is seen, whose base is washed and undermined by the winding Sane, and whose tops and sides are thinly scattered with shrubs and underwood. On the highest point of the rocks, and on the very edge of the preci- pice, appears, half hanging in the air, the gate called Bourgviillon : a stranger standing on the bridge would compare it to Laputa, or the Fly- ing Island in Gulliver's Travels ; and would not conceive it to be accessible but by means of a cord and pulleys. The houses, constructed with a gray sandstone, are neat and well built ; and the public edifices, particularly the cathedral, are extremely elegant.' Population 6500. Fribourg lies sixteen miles south-west of Bern, and seventy- five of Zurich. The best buildings are the Je- suits' church, and the cathedral of St. Nicholas ; the principal seminary for education is called the college of St. Michael. This town was

taken by the French in 1798.

FRICASSEE', n. s. Fr. A dish made by cutting chickens or other small things in pieces, and dressing them with strong sauce.

Oh, how would Homer praise their dancing dogs. Their stinking cheese, and fricacy of frogs ; He'd raise no fables, sing no flagrant lie. Of boys with custard choaked at Newberry. King.

FRICA'TION, n. s. Lat. frkatio. The act of rubbing one thing against another.

Gentle frication drawcth forth the nourishment, by making the parts a little hungry, and heating them : ihis frication I wish to he done in the morning.

Baco7i's Natural History.

Resinous or unctuous bodies, and such as will flame, attract vigorously, and most thereof without yWcaiion, as good hard wax, which will convert the needle al- most as actively as the loadstone. Browne.

FRICKTIIAL, a district in the canton of Aargau, Switzerland, on the south side of the Rhine, extending from Augst to Botzberg, Population about 20,000; chiefly Catholics. This district, important as a military position, belonged to the Brisgau until 1801.

FRICTION, Fr. friction, frictio, from Latin frico ; a Gr. ˆpiK/;, cold (because those who are cold rub themselves). — Ainsworth. The act of rubbing two bodies together ; the resistance in machines caused by the motion of one body upon another ; medical rubbing with the flesh- brush or cloths.

Frictiuns make the parts more fleshy and full, as we sec both in men and in the currying of horses ; so that they draw a greater quantity of spirits to flie parts. Racon.

Do not all bodies which abound with terrestrial parts, and especially with sulphureous ones, emit light as often as those parts are sufficiently agitated, whether the agitation be made by heat, friction, per- cussion, putrefaction, or by any vital motion ?

Newton's Opticks.

Friction is called also attrition. The phe nomeiia arising upon the friction of divers bo- dies, under different circumstances, are very nu- merous and considerable. Mr. Hawksbee gives a number of experiments of this kind ; particu- larly of the attrition or friction of glass, under various circumstances, the result of which was that it yielded light and became electrical All bodies by friction are brought to conceive heat ; many of them to emit light ; particularly a cat's back, sugar, beaten sulphur, mercury, sea water, gold, copper, &c. but above all diamonds, which when briskly rubbed against glass, gold, or the like, yield a light equal to that of a live coal when blowed by the bellows. See Electricity.

Friction, in mechanics, arises from the roughness or asperity of the surface of the body moved on, and that of the body m.oving : or such surfaces consisting alternately of eminences and cavities, either the emnieuces of the one must be raised over those of the other, or they must be both broken and worn off; but neither can happen without motion, nor can motion be produced without a force impressed. Hence the force applied to move the body is either wholly or partly spent to this effect ; and consequently tl)ere arises a resistance, or friction, which will be greater, coBteris paribus, as the eminences are the greater and the substance the harder: and as the body, by continual friction, diminislies. ˆlessrs. Amontons, De la Hire, Camus, Desa- guliers, Muschenbroek, Ferguson, F!,uler, and other mechanicians, have made a number of in- genious experiments to settle a principle for the exact calculation of the quantity of friction. But the most successful set of experiments made on this subject are those of the Kev. Samuel 'ince, A. M. of Cambridge ; published in the 75th vo- \\me of tlie Philosophical Transactions, p. 16,5. Mr. Emerson, in his Principles of Mechanics, has also made several important remarks on the friction of wood and metals. See Mechanics.

Friction, in medicine and surgery, is per- formed with oils, unguents, or other matters, to relieve or cure a diseased part. Frictions with mercurial ointment are much used in venereal cases. The application of mercury externally by friction is preferred to giving it internally, to raise a salivation. Frictions with the flesh-brush, a linen cloth, or even the hand alone, contribute greatly to health, in all diseases where tlie circulation of the blood and humors is impeded, or the])ower of the nerves weakened. Persons therefore of weak nerves, and sedentary lives, should supply the want of other exercise by s])endiiig half an hour, morning and night, in rubbing their whole body, especially their liml)s, with a desh-brush. Tiiis is most advantageously performed when the prima: via; are most empty.

FRI'DAY, n. s. Sax. ppise'tiaj. The sixth day of the week, so named of

Freya, a Saxon deity.

Right as the Friday, sothly for to tell. Now shineth it, and now it raineth fast ; Right so can gery Venus overcast The hertes of hire folk ; right as hire day Is gerfuU, right so changeth she aray : Selde is the Friday all the weke ylike.

Chaucer. The Knightes Tale.

An' she were not kin to me, she would be as fair on Friday as Helen is on Sunday. Shakspeare.

For Venus, like her day, will change her cheer. And seldom shall we see a Friday clear. JJryden.

Friday, by the Romans, was called dies Ve- neris. See Frea.

FRIDSTOL, one of the ancient immunities granted to churches. The word signifies a seat, chair, or place of peace and security, where cri- minals might find safety and protection. Of these there were many in England ; but the most famous were tliose at Beverly, and in St. Peter's church at York, granted by charter of king Henry I.

FRIEDLAND, a town of Mecklenburg, in Stargard. It contains 3400 inhabitants; but the neighbourhood is marshy. It is fourteen miles north-east of New Brandenburg, and twenty-five south-east of Demmin.

Friedland, a town in the circle of Konigs- berg. East Prussia, on the AUe, famous for a battle gained by Buonaparte over the Russians and Prussians on the 14th of June 1807, which led to the peace of Tilsit. Inhabitants 2120. The loss of the allies, in killed and wounded, was nearly 20,000 men.

FRIEND, n. s. icv.a.ˆ Saxon pfieob;

Friend'ed, aˆ'. I 'QG\ˆ.vrieml.vriend-

Fri end'less, adj. [schap ; Goth, fraud ;

Friend'liness, 11. St. j Dan. /W'Hf/e} Scot.

Friend'ly, «(/;.&, aJi'. \ frmd, all probably

Friend'ship, n. s. j from Gothic free,

fran, Swed. vred. This word, with its derivatives, is pronounced frend, frendly : the i totally ne- glected. One united to another in mutual bene-

volence and intimacy ; one reconciled to ano- ther : distinguished from an enemy or one that has hostile intentions ; a favorer of our persons or interests; a familiar compellation. The de- rivatives speak for themselves, or their illustra- tions will explain them.

Friefid, how earnest thou in hither ?

Matt. xxii. 12.

Some man is a friend for his own occasion, and will not abide in the day of thy trouble. Eccl. vi. 8.

Forsoth nature driveth us to love onr frendes ; and, parfay, our enemies have more nede of love than our frendes, and they that more nede have, certes to hem shal men do goodncsse.

Chaucer. The Persones Tale.

Than coraeth discord that unbindeth all manner of friendship. Id,

Be careful to make friendship the child, and not the father of virtue ; for many strongly knit minds are rather good friends than good men ; so altliough they do not .like the evil their friend does, yet tliey like him who does the evil. Sir P. Sidney.

For Rhodorickc, whose surname shal be Great, Shall of himselfo a brave ensample shew.

That Saxon kings his fricndsliip shall intrcat j And Ifowell Dha shall goodly well endow TIio salv.igc minds with skill of just and frew.

Spenser's Faerie Qtiecne.

Raw captains arc usually sciU, only [jrefcrred I)y friendship, and not chosen by sufficiency. Sjimser.

God's benison go with you, and -with those That would make good of bad, and friends of foes.

SItuhsjieare. Who comes so fast in silence of the night ? — A friend. — What /Wend ? Your name. Id.

Here between the armies. Let's drink together /rtem////, and embrace ;

That all th-.ir eyes may bear those tokens home Of our restored love and amity. Id. Henry IV.

“Soi friended by his wish to your high person. His will is most malignant, and it stretches Beyond you to your friends. Shah

I know that we shall have him well to friend. Id. When vice makes mercy, mercy ‘s so extended. That, for the fault’s love, is the’ offender /rienderf.

Id. Gracious, my lord, hard by here is a hovel : Siome friendship will it lend you ‘gainst the tempest : Repose you there. M King Lear.

There is little friendship in the world, and least of

all between equals, which was wont to be magnified ;

that that is, is between superior and inferior, whose

fortunes may comprehend the one the other. Bacon.

If she repent, and would make me amends.

Bid her but send me hers, and we zre friends.

Curew. False friendship, like the ivy, decays, and ruins the walls it embraces ; but true friendship gives new life and animation to the object it supports. Burton,

Hope! thou sad lover’s only friend ! Thou way that may’st dispute it with the end ! For love I fear ‘s a fruit that docs delight The taste itself less than the smell than sight.

Cowley. Let all the intervals be employed in prayers, cha- rity, friendliness and neighbourhood, and means of spiritual and corporal health. Taylor.

Not that Nephente, which the wife of Thone In Egypt gave to Jove-born Helena, Is of such power to stir up joy as this. To life so friendly, or so c(5ol to thirst. Milton.

What supports me, dost thou ask ? The conscience, /We«

Thou to mankind Be good and friendly still, and oft return. Id.

The friendly loadstone has not more combined Than bishops cramped the commerce of mankind.

Marvell. Such a liking and friendliness as hath brought forth tie effects.

Sidney.

We know those colours which have a friendship

with each other, and those which are incompatible,

in mixing together those colours of which we would

make trial. Dryden's Dufresnoy.

My sons, let your unseemly discord cease.

If not in friendship, live at least in peace.

Dryden. The king ordains their entrance, anu ascends His regal seat, surrounded by his friends. Id.

To some new clime, or to thy native sky. Oh friendless and forsaken Virtue fly. Id.

Every man is ready to give in a long catalogue of those virtues and gootl qualities he expects to find in the person of a friend ; but very few of us are careful to cultivate them in ourselves. Spectator.

Woe to him that is alone, is verified upon none so much as upon the friendless person. South.

Learn to dissemble wrongs, to smile at injuries. And suffer crimes thou want'st the power to punish : Be easy, affable, familiar, /rie/u////. Rome's Ulysses.

Let the Naussau-siar in lising majesty appear. And guide the prosperous mariner. With everlasting beams o{ friendly light. Prior.

Yet there are watchmen, who v/ilh. friendly light Will teach thy reeling steps to tread aright. For sixpence will support thy helpless arm And home conduct thee safe from nightly har.n.

Gay.

hike friendly colours found our hearts unite. And eac-h from each contract new strength and light.

Pope

To what new crime, what distant sky. Forsaken, yWenrf/ess, will ye fly ? Id.

His friendships, still to few confined. Were always of the middling kind. Swift.

What watchful care must fence that weary state. Which deadly foes begirt with cruel siege ;

And frailest wall of glass, and trait'rous gate Strive which should first yield up their woeful siege ? By enemies assailed, hy friends betrayed When others hurt, himself refuses aid : By weakness 'self, his strength is foiled and over-

layed. Fletcher\t Purple Island.

At the same time that you carefully decline the friendship of knaves and fools, if it can be called friendship, there is no occasion to make either of them your enemies, wantonly and unprovoked ; for they arc numerous bodies ; and I would rather choose a secure neutrality, than an alliance or war, with either of them. Chesterjield.

How bright soe'cr the prospect seems, All thoughts of Friendship are but dreams If envy chance to creep in ; An envious, if you succeed. May prove a dangerous foe indeed. But not a Friend worth keeping. Cowper.

Hail to the welcome shout! — the friendly speech ! When hand grasps hand uniting on the beach ; The smile, the question, and the quick reply. And the heart's promise of festivity !

Byron. Corsair. Friendly Islands, a group, or archipelago of islands in the Southern Pacific Ocean, of very considerable extent, and consisting of more than 100 islands, the greater part of which are either bare rocks or shoals, or barren and desert. Tho following are the most important that have been enumerated : — Amsterdam, as it was called by Tasman, who discovered it in 1642, now more generally known hy the native names Tonga, or Tongataboo ; Annamooka, or Rotterdam, accord- ing to Tasman ; Eooa, called by Tasman, Mid- dlebiugh ; the Hapaee Islands, namely, Haanno, Foa, Lefooga, and Iloolawa; Mayorga, a group ofislands about 100 miles north of Hapaee, dis- covered in 1781 by Maurelle, the Spanish navi- gator, and visited by Edwards m 1791, by whom the group was named Howe's Islands ; Neoota- bootaboo, and KootahCj discovered by Schouten and Lemaire in 1616, and visited by captain VVallis in 1767, who called them Keppel's and Boscawen's Islands ; Toofoa, or Amattafoa ; Hamoa and Vavaoo. The Fedjee Islands have also been sometimes included. Captain Cook gave them this name from what he observed of their friendly disposition ; and to his 'oyages we owe the principal knowledge of them : but more modern navigators have, as we shall see, con- siderably qualified

his eulogium on their cha- racter. The general appearance of these islands is throughout very similar.

FRIENDLY ISLANDS.

C2-

Tongataboo, i. e. Sacred Island, is the largest and best known of the group, being twenty leagues in circumference E. S. E. and W.N.W. The south, east, and west, shores are formed of steep coral rocks, ten to twelve feet higli, with intervals of sandy beach, on which, at low water, a line of black rocks is observed. The north shore is level with the water, bordered by a sandy beach, and lined with shoals and islets. The whole island is low and level, and its appearance conveys an idea of the most exuberant fertility ; the entire surface being covered with verdure, and amongst the trees the cocoa palm raises its head pre-eminent ; unhappily, however, the island is deficient in fresh water, and what there is, in general, is very indifferent.

The coral rock, which forms the base of the island, is in many places naked ; but the soil in other parts is of considerable depth, and is in the cultivated grounds a black vegetable mould over a sub-stratum of clay. In the lowest ground the soil is a mere coral sand, but still covered with vegetation. The only stones, except coral, ob- served on the island, are small blue pebbles, and a smooth black stone, lapis lydius, of which the natives make their hatchets; but it is not certain that both these are not brought from other islands.

The following description of a village, from captain Cook, will give a general idea of the dwellings of the natives : —

‘ It is delightfully situated on the bank of the inlet, where all or most of the principal persons of the island reside, each having his house in the midst of a small plantation, with lesser houses and offices for servants. These plantations are neatly fenced round, and, for the most part, have only one entrance. This is by a door fastened on the inside by a prop of wood, so that a per- son has to knock before he can get admittance. Public roads and narrow lanes lie between each plantation, so that no one trespasseth upon another. Great part of some of these enclosures is laid out in grass-plats, and planted with such things as seem more for ornament than use ; but hardly any were without the kava-plant, from which they make their favorite liquor. Every article of the vegetable produce of the island abounded in others of these plantations ; but these, I observed, are not the residence of people of the first rank. There are some large houses near the public roads, with spacious smooth grass-plats before them, and unenclosed. These, I was told, belonged to the king; and, probably, they are

the places where their public assemblies are held.' This island has the best harbour of the group, within several islands and reefs on the north side.

Annamooka, the Rotterdam of Tasman, is more elevated than the small islands which surround it, but still can be considered only as a low island. In the centre is a salt lake, one mile and a half broad, round which the land rises with a gradual ascent, and its surface is covered with wild ducks. The north shore is composed of steep coral cliffs, nine or ten feet high, with some intervals of sandy beach. There is no stone but coral on the island, except a single rock twenty to thirty feet high, of a yellow calcareous and very hard stone. The population captain Cook 'OL. IX.

estimated at 2,000. The water on the island is better than that at Tongataljoo, but yet is indif- ferent : the best is procured by digging holes near the side of the lake. Fruit is more abun- dant on this island than on the former, and the undulating surface gives it a more pleasingly varied appearance.

Eooa, the Middleburg of Tasman, may be con- sidered as an elevated island, in comparison with the generality of those of these seas, being visible twelve leagues. The highest partis on the south- east, and is almost flat, whence it declines very gently towards the sea, and presents an ex- tensive prospect, where groves of trees are only interspersed at irregular distances, in beautiful disorder, and the rest of the land covered with grass. Near the shore it is shaded with trees, among which the natives dwell. On the north- west side is English Road, where boats may always land; and captain Cook found some good water in this direction.

Happee, though considered by the natives as one island, is in reality composed of four very low islands, about half a mile distant from each other, lying north-east and south-west, but all joined by coral reefs, which are dry at low water. The whole occupies a space of nineteen miles in length, and each island is about six or seven miles long, and two to four miles broad. Le- fooga is well cultivated and inhabited. Hoola- iva, on the contrary, is entirely desert and abandoned. On each of these islands is an arti- ficial mount, said by the natives to be erected in memory of some of their chiefs. The only water either of these islands possesses is from very brackish wells.

Between Happee and Annamooka the sea is sprinkled with islets and reefs, two of which only deserve notice, Toofooa and Kao. The former is a volcano, which, according to the natives, sometimes throws out large stones ; and while captain Cook was here smoke and flames issued from it. It is inhabited.

Kao is north-west two miles and a half from Toofooa, and is a vast rock of a conical figure. The other islands in the vicinity are mere coral reefs, from a mile to half a mile in circumference, but all covered with verdure, and particularly cocoa palms.

Komango has a pretty large pond of tolerable water, but no appearance of a running stream.

Kootoo is two miles long, and nearly the same breadth. Its north-west end is low, but it rises suddenly towards the middle ; and on the south- east it terminates in reddish clayey cliffs. It is cultivated and inhabited. Its only water is from dirty and brackish ponds.

From the situation of the Friendly Islands towards the tropic, the climate is more variable than nearer the equator. The winds are usually from some point between south and east, and when moderate the weather is fair, but when fresh there is often rain. They sometimes veer to the north, and even north-west, with hot sultry weather, and heavy rain ; but these winds never last long, nor blow fresh. All the vegetable productions are evergreens : of cultivated fruits the principal are plantains, of which there are thirteen varieties ; the bread-fruit, the jambu, and

eHvee, the latter a kind of plum, and the shad- dock. Besides cocoa-nuts, they have three other kinds of palms. There is also a species of wild fig, which is sometimes eaten. The other culti- vated vegetables are sugar-cane, bamboo, gourds, turmeric, yams of two sorts, one black and very large, the other white and small. A large root culled kappe, and one not unlike our white potatoe, the manioc, and the jee jee.

The only quadrupeds, besides hogs, are a few rats, and some dogs, which are not originally natives of this group, but were introduced by captain Cook in his second voyage; and some were also brought from the Fidjee Islands. A large breed of fowls i- found in a domestic state. The birds are parrots and parroquets, owls, cuckoos, kingfishers, and a bird the size of a thrush, which is tlie only one that sings, but which compensates the want of others by the strength and melody of its notes. The otiier land birds are rails, of two kinds, one as large as a pigeon, the other not bigger than a lark ; coots, fly-catchers, a very small swallow, and three sorts of pigeons, one of which is tiie bronze- winged. The water fowl are ducks, blue and white herons, tropic birds, noddies, two species of terns, a small curlew,*

and a large plover spot- ted with yellow. There are also the large bat, or flying fox, and the common sort The only noxious or disagreeable reptiles and insects are sea-snakes, scorpions, and centipedes, guanas, and small lizards. Amongst the insects are beautiful moths, butterflies, and very large spiders, making in the whole about fifiy species.

The fish of the coasts and reefs are abundant, and the shell-fish in particular, in great variety : among them are the true hammer, and pearl-oyster.

In all the islands good water is scarce : ,t is indeed to be found in most of them, but either in so small a quantity, or in situations so inconve- nient, as rarely to serve the purpose of navigators.

Th.ˆ natives of the Friendly Islands seldom exceed the middle size, but are strong, well- made, and of very various features : among them, we are told, are many true European counte- nances, and Roman noses. Their eyes and teeth are good, but the latter not very white, or well set. The women are not so much distinguished from the men by their features as by their shape, which is much more delicate; and, though there are some very beautiful females to be met with, they are not common. Tlie general color is a shade deeper than the copper brown, but many of both sexes have an olive complexion, and some of the women are even much fairer. Their hair is in general straight, thick, and strong, though a few have it brushy or frizzled : tlie men cut their beards short, and both sexes eradicate the hair from under their arms. Both men and women are partially tattooed. The natural color is black, but most of the men, and some of the women, have it stained of a brown, or purple color, and a few of an orange cast. Their coun- tenances express cheerfulness, mildness, and good nature, though sometimes in the presence of their chiefs they assume an air of gravity, which, however, is evidently foreign to their general character.

Tiie graceful air and firm step with which they in general walk, are proofs of their personal accom- plishments, and their moral qualities have been described as highly estimable : captain Cook found them frank, good humored, industrious, ingenious, and persevering; above all, most hos- pitable, and courting an intercourse by barter, which they seemed to understand perfectly. Both sexes and all ages are said, however, to exhibit a strong propensity to thieving from strangers, but thefts among tliemselves seem to be un- common.

Tiiere are few natural defects or deformities to be found amongst them, nor do they appear sub- ject to numerous, or acute diseases. Amonust those with wliich they are occasionally afflicted are a sort of blindness, caused by a disease of the cornea, the ring-worm, and an indolent swel- ling of the

legs and arms.

The dress of both sexes consists of a piece of cloth, or matting, wound once and a half round the waist, where it is confined by a girdle or cord ; it is double before, and hangs down like a petticoat to the middle of the leg; the upper part above the girdle is formed into several folds, so that there is sufticient cloth to draw up and wrap round the shoulders. The size of this gar- ment is in proportion to the consequence of the wearer, the inferior class being content with very small ones, and often wearing nothing but a piece of narrow cloth, or matting, like a sash, and called a maro, which they pass between the thighs, and wrap round the waist, but the use of it is chiefly confined to the men. In their great entertainments they have dresses made for the purpose of the same form, but covered with red feathers. Botli men and women shade their faces from the sun with little bonnets of various mate- rials. The ornaments of botli sexes are neck- laces of the fruit of the pandanus, and various sweet-smelling flowers, of small shells, sharks' teeth, and other things. On the upper part of the arm they sometimes wear a polished mother of pearl shell ring, rings of tortoise-shell on the fingers, and a number of these joined together as bracelets. The lobes of the ears, though most frequently but one, are perforated with two holes, in which they wear cylindrical bits of ivory or reed, three inches long, thrust in at one hole, and out at the other. The women rub themselves all over with tlie powder of turmeric. They fre- quently bathe in the fresh water ponds, though the water in most of them stinks intolerably, and these they prefer to the sea-water, which they think hurts their skin. They rub their bodies all over, and particularly their heads, with cocoa- nut oil, which preserves the skin smooth and soft.

Their mode of life is a medium between indo- lence and labor. The climate, and the natural fertility of the soil, render the latter unnecessary, and their active disposition is a bar to the former. The female employments are generally confined to domestic concerns, and the manufiic- turing cloth and mats, which latter are used for dress, for sleeping on, and for mere ornament ■ the last being made from the tough membraneous part of the stock of the plantain-tree, and those for clothing of the pandanus, cultivated for that purpose.

FRIENDLY ISLANDS.

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The men are laborious agriculturists, archi- tects, and fishermen : boat-building is also one of their principal employments.

Cultivated roots forming the chief part of their food, they have brought

them to considerable per- fection. Their plantain walks and yam fields are very extensive, and are enclosed by neat reed fences. These vegetables are planted in regular lines, with a kind of wooden spade, three or four inches broad. The cocoa-nut and bread-fruit are scattered without regularity, and require no trouble after they are at a certain height.

Their habitations, particularly of the lower class, are but very poor, scarcely capable of shel- tering them from the weather ; those of the higher orders are neither agreeable nor comfortable. The dimensions of one of a middle size are about thirty feet long, twenty broad, and twelve high : it is a kind of thatched shed, supported by posts and rafters, and roofed with matting and branches of the cocoa-nut tree. The whole of their furni- ture consists of a bowl or two (in which they make their kava), gourds, cocoa-nut shells, small wooden stools, which serve for pillows, and a large stool for the head of the family to sit on. Their houses are, however, of little other use than io sleep in, and shelter them from the weather, for they usually take their meals in the open air. In the construction of their boats they show much ingenuity and dexterity, though their tools are only adzes of a smooth black stone, augers of bharks' teeth, and rasps of the rough skin of a fish, fixed on flat slips of wood. The implements which they use as knives are of shells. Their fishing-lines are made from the fibres of the cocoa-nut husk, plaited ; and the large cordage, by twisting several of these plaits togetlier. Their small fishing-hooks are entirely of pearl shell, but the large ones are only covered with i on the back, the points or barbs being of tor- toise-shell. They have also nets, some of which are of a very delicate texture : these they use to catch the fish which remain in the holes of the reefs, when the tide is out.

Tlie other employments are making musicai reeds, flutes, warlike weapons, and stools, or pil- lows. The reeds have eight, nine, or ten pieces placed parallel to each other, but not in any regular progression, so that none of them have iT.ore than six notes; and the flutes are a joint of bamboo, close at both ends, with six holes, three of which only are used in playing, which is done by applying the thumb of the left hand to the left nostril, and blowing into one of the holes with the other; and though the notes are but three, they produce a pleasing simple music. Tlieir weapons are clubs, highly carved, spears, darts, and bows and arrows, which latter, how- ever, seem to be used only to kill birJs, and not in war.

Of their animal food, the chief articles are hogs, fowls, fish, and all sorts of shell-fish. The lower f/eople also eat rats and dogs. Fowl and turtle seem to be only occasional dainties re- served for their chiefs. Their meat is in general drest by baking, and is eaten without any kind of sauce; their beverage at their meals is confined to water, or cocoa-nut milk. Their food is divided into portions, each to serve a certain

number, and these portions are again subdivided 60 that seldom more than two or three persons are seen eating together at their repasts. The women and men in general eat together, but there are certain ranks that can neither eat nor drink in company. They seem to have no set time for their meals, but they all take one during the night. They go to rest as soon as it is dark, and rise with the dawn. They are fond of society, and form conversation parties at ane another's houses. Their other amusements are singing, dancing, and music performed by the women. Their public diversions are single com- bats and wrestling, in which women as well as men exhibit; dances, in which upwards of 100 men sometimes are engaged, to the music of hol- low pieces of wood, beat on with sticks, and accompanied by a chorus of vocal music : the women also perform in their public dances.

One of their chief pleasures is the urinking kava, a beverage composed of the root of a spe- cies of pepper; the process of brewing which is not very delicate. A company being assembled, the root is produced, and being broken in small pieces, and the dirt scraped off by servants, each person receives a piece, which, after chewing, he spits into a plantain leaf. The person appointed to prepare the liquor receives all the mouthfuls into a wooden bowl, and adds as much water as will make it of a proper strength ; it is then well mixed with the hands, and some loose stuff", of which the mats are made, is thrown on the sur- face, which intercepts the fibres, and is wrung hard to get as much liquor out of it as possible. It is then served out to the company in cups of about a quarter of a pint each. This liquor has an intoxicating, or rather stupifying effect, on those not used to it ; and it is so disagreeable, that even the natives, though they drink it several times in the forenoon, cannot swallow it without making wry faces.

Polygamy is not common, but is practised by the chiefs ; and though female chastity in the unmarried of the lower order is in little esti- mation, those of the higher orders are discreet, it is said, and conjugal infidelity is rare.

Their mourning is singularly severe and bar- barous ; consisting in cutting and burning their flesh, beating their teeth with stones, and inflict- ing on themselves every kind of torment. The dead are buried, wrapped up in mats or cloih.

Round the graves of their kings and principal chiefs they often mangle one another in a kind of bacchanalian frenzy, of which the following account is given by one of the missionaries, who resided here lately for several years: — 'The space round the tomb was, on this occasion, a palajstra for savage gladiators. Hundreds ran about it with ferocious emulation, to signalise their grief for the venerated chief, or their con- tempt of pain and death, by inflicting on tliom- selves the mn«t gliaslly v.oundi, and exhibiting s|"cct

and shrieks and clashing arms, and the rushin;f and violence of the multitude, re-echoed round our abode, and rendered it a scene of continual horror and alarm.' When they lahor under any severe and dangerous malady, tliey cut off one, or both of their little fingers, which they think the divinity will accept in lieu of their bodies.

They have no priests, but are not, tlierefore, without religious ideas ; and, tliough tliey seem to have no notion of future puinsliment, they believe that they are justly punished on eartli. Each district, and every family of the higher orders, has its respective tutelary god, and each indi- vidual his odooa, or attendant spirit, who par- takes more of the evil tlian the good genius, being supposed to inflict diseases, and who is, therefore, propitiated by sacrifices, and even sometimes by liuman ones.

The greatest of tlieir gods is Higgo-layo, the lord of the country of the dead, whicli lies far distant, and wliither the souls of their chiefs, on their release, are immediately conveyed in a fast- sailing canoe, there to riot for ever in tlie enjoy- me It of all sensual pleasures. As to the souls i>f tlie lower class, they are eaten by an imagi- nary bird, which walks on their graves : they seem to represent tlie pleasures of tlieir future Paradise as above the conception of the vulgar. The elements have their subordinate deities wlio are often at variance witli each other. The goddess of the wind is named Cala Filatonga, and is believed to cause the hurricanes which sometimes visit the islands. Their islands they suppose to rest on the shoulders of the god JMovvee, who, being tired of his burden, often en deavours to shakje it oft", which produces th earthquakes, to which the islands are also sub- ject. The same religious system is not, however, prevalent throughout all the islands, but the general ideas are the same. Their morals, or burying-grounds, are also places of religious worship.

The missionaries were not able to learn whnt ideas they form of the origin of their existence, or of any other parts of the creation ; when spoken to on these subjects, they seem quite lost. Among their superstitious practices may be men- tioned the 'taboo/ which means, in its literal signification, proliibited, or set apart from com- mon use. Thus a house becomes tabooed by the king's])resence in it, and can no longc- be inliabited even by its owner; and iience there are generally houses provided in every quarter for the use of his majesty. A space of ground, or any article of food may be tabooed ; and in this case the ground canrot be passed, nor is it lawful to

use the food until the taboo be taken off. By assisting at a funeral, or touching a dead body, the hands are tabooed, and cannot be employed in taking food ; and in this case the person is fed by others.

Their form of government somewhat resembles the feudal system of our forefathers, being com- posed of a king, several powerful hereditary chiefs, almost independent of the king, and nu- merous smaller dependent chiefs. As to the lower class, they are almost the slaves of these chiefs, to whom they are profoundly submissive. The

j)eculiar honors paid to the king are, that no one is allowed to walk over his head, and, whenever he walks out, every one must sit down till he is past. The method of saluting his majesty is by sitting down before him, bowing the head to the sole of his foot, and touching it with the upper and under sides of the fingers of both hands. After thus saluting the king, or any great chief, the hands must not touch food of any kind, until they are washed or rubbed with the leaves oi plants, as a substitute for water.

The language of the Friendly Islanders, which is from the Malay root, is sufficiently copious for all the ideas of the people; harmonious in con- versation ; and is adapted both to song and reci- tative. Its construction is simple, and in some of its rules it agrees with other languages ; as, for instance, in the degrees of comparison, but the nouns or verbs seem to have no inflections. The whole extent of their verbal numeration is

100,000.

The cloth of their garments is made of the bark of the slender stalks of the paper mulberry, cultivated for the purpose, which is thus per- formed : — The outer rind of the bark being scraped off, the inner is rolled up to make it flat, and is macerated in water for a night ; it is then laid on the trunk, of a tree, squared, and beaten with a wooden instrument full of grooves on all sides, until a piece of cloth is produced, and the longer it is beaten, the fi.ier and closer is the cloth. When this opeiation is finished, the pieces, v/ hich are usually from four to six feet in length, and half as broad, art spread out to dry, and are afterwards joined together by smearing the edges with the viscous juice of a berry. Having been thus lengthened, they are laid over a large piece of wood with a kind of stamp between made of a fibrous substance closely interwoven. They then take a bit of cloth, and, dipping it in a certain juice expressed from the bark of a tree, rub it briskly over the cloth, which gives it a d'll brown color and a dry gloss.

The earlier navigators who have described these islanders have, as we have intimated, repre- sented their moral character in terms of higher ap])robation than experience seems to warrant. The account of tlieii

*unprovoked attack and seizure of the siii]) Port au Prince, by Mr. Mariner, and the murder of all the crew in 1806, with circumstances of extraordinary barnarity, stamps upon them a character of cruelty rarely exceeded in the annals of savage life; and their wars are said also to present all the usual fea- tures of absolute barbarism. The charge of cannibalism, too, has been brought against them under such circumstances as leaves little reason to doubt the fact Several missionaries who landed on these islands have also fallen victims either to the barbarity or superstition of the natives. One of them who had adopted their customs, and joined in their expeditions, says, * Spectacles too shocking for humanity to contemplate soon sickened my sight, and sunk mj' spirits : I beheld, with shaking horror, large stacks of human bodies piled up, by being laid transversely upon each other, as a monumental trophy of the victory. Proceeding a little farther,*

a horrid spectacle ulmost froze my Wood. It was a woman in a sitting posture, with folded arms, holding a child to her breast, as in the act of suckling it. Upon approaching them, I found both the mother and child cold and stiff with death. The enemy had killed them while in tills posture, and indulged their savage revenge in amusing themselves with placing the dead bodies in this affecting attitude.' He elsewhere states that ' one of the common modes of war- fare among them is to tootang, as they express it; that is to come upon the adverse party by sur- prise, to massacre in secret, to carry off plunder, to cut down the plantains and cocoa-trees, and to commit every species of devastation. Women, children, and prisoners, are murdered without mercy ; and tiie dead bodies, after being exposed to the most brutal indignities, are roasted and devoured with voracious satisfaction.'

Friendly Societies. See Societies, Friendly.

Friends or Quakers, a numerous and re- spectable religious society, which took its rise about the middle of the seventeenth century, and spread very quickly into the British co- lonies in North America, as well as into various countries in Europe. The members called them- selves at first Seekers, from their seeking the truth ; but after their society was formed assumed the name of Friends. The name of Quakers was given them in derision, and though it is, perhaps to the reproach of those who use it, the appellation by which they are generally desig- nated, we here prefer to describe the history and peculiarities of the sect under the denomina- tion and principally in the terms they themselves admit. George Fox, sometimes described as a

shoemaker, but originally intended for the church, is generally allowed to have been the founder of this society. They were soon after joined by a number of learned, ingenious, and pious men. The chief of these were George Keith, the ju.stly celebrated William Penn (see Penn), and Ilo- bert Barclay of IJry. See Barclay. Keith, after associating with them for nearly thirty years, became the author of the only schism among them, of which we have read. He was a native of Scotland, and educated at Aberdeen ; and being imprisoned as a Quaker, in 1G64, and having, in 1675, assisted Barclay in a public disputation against the students at Aberdeen, he attracted notice, and wrote much in defence of the prmciples of the Quakers, which he tlioroughly understood : he was also employed in the education of their youth ; but was thought by them to have indtilged too much in curious and useless speculations. Being again repeatedly imprisoned, he removed to America about 1684. Here, after some pre- vious general censure of his friends, he accused several, in particular, of gross error in doctrine; the pretext for which was, their holding (as he himself had done) that the knowledge and be- lief of the history of Christ is not necessary for the salvation of those who have no possible means of acquiring it. His complaints against individuals leading to more general rcmtention, the Friends in I'ngland interfered, and the par- ties were heard before the yearly meeting in

London, which decided the cause against Keith, and he remained under the ' disownment ' pro- nounced again^ him in America. He now set up a separate Quakers' meeting in London, attacked the principles he had formerly defended (on which occasions the Friends replied by quotations from his own works), and finally entered into the church of England. He was soon after ordained priest, and sent as a missionary to America, to bring over his former brethren. But his efibrts, though for a while troublesome to the Friends, were attended with very little success; he re- turned to England, sunk into obscurity on a small living in Sussex, and his party soon dis- appeared.

Of' the Religious Docti'ine of Friends. — The Friends may be said to be chiefly distinguish- able from other sects as to doctrine in asserting the continuance, to the present time, of immedi- ate revelation, or the communication of divine instruction to the mind, by the testimony of the Spirit of God. This revelation they afHrm to be necessary for the production of true faith, while they also say it neither does nor can contradict the outward testimony of the Scriptures or right and sound reason. Tiieir doctrine on this sub- ject has been often misunderstood ; and they have in consequence been subjected to much obloquy. It is, however, the principal feature in that peculiar view of Christianity which has occasioned their separation from other churches. A publication placed in our hands by a member of this society, and originally drawn up by Mr. J.

G. Bevan, we believe, thus states their doc- trine.

- *We believe in God the Father Almighty, the creator and preserver of the universe, in Jesus Christ his Son, the Messiah and mediator of the new covenant, and in the Holy Spirit, the com- forter, or Spirit of Truth. The divinity of Christ, and his oneness witli the Father, we ac- knowledge and assert according to the Scrip- tures ; we also believe in Him as the sacrifice and propitiation for the sins of the whole world, whereby mankind are placed in a capacity for salvation ; and that, as each individual submits unreservedly to the purifying operations of the Holy Spirit, he comes fully to partake of the benefits of redemption, and to experience ‘ the blood .of Jesus Christ to cleanse him from all sin.’ In expressing ourselves on the subject of the gracious display of the love of God to man- kind in the coming of our Saviour, we include a belief in his miraculous conception, birth, life, miracles, death, resurrection, and ascension. We may add, that in reference to these, to the foregoing, and to other points of Christian doc- trine, we prefer the use of such terms as we find in Scripture ; and contented with that know- ledge which divine wisdom hath seen meet to reveal, we attempt not to explain those mysteries which remain under the veil.’*

In an early confession of their faith (that of 1673) they thus further ex])lain themselves on these important points. ‘ We sincerely profess faith in fiod by his only-begotten son Jesus Christ, as being our light and life, our only way to the Father, and also our only mediator and advocate with the Father ; — that God created

all things, he made the vTorlds by his son Jesus Christ, he beint, that powerful and living Word of God by whoi.t all things were made; and that the Father, the Word, and the Holy Spirit, are one, in divine being inseparable ; one true, living, and eternal God blessed for ever ; — yet that this Word, or Son of Cod, in the fulness of time, took flesh, became perfect man, according to the flesh descended and came of the seed of Abraham and David, but was miraculously con- ceived by the Holy Ghost, and born of the Virgin Mary, and also, farther, declared powerfully to be the Son of God, according to the Spirit of sanctification, by the resurrection from the dead; — that, as man, Christ died for our sins, rose again, and was received up into glory in the heavens ; he having, in his dying for all, been that one, great, universal offering and sacrifice for peace, atonement, and reconciliation be- tween God and man ; and he is the propitiation not for

our sins only, but for the sins of the whole world ; we were reconciled by his death, but saved by his life ; — that divine honor and ■worship is due to the Son of God ; and that he is in true faith to be prayed unto, and the name of the Lord Jesus Christ called upon (as the primitive Christians did), because of the glorious union or oneness of the Father and the Son.' Sewel's History, p. 643.

*We resume l\Ir. Bevan's summary statement. ' To Christ alone we give the title of the Word of God, and not to the Scriptures; al- though we highly esteem these sacred writings, in subordination to the Spirit from which they were given forth ; and we hold, with the apostle Paul, that they ' are able to make wise unto salvation, through faith which is in Christ Jesus.' * We revere those most excellent precepts which are recorded in Scripture to have been delivered by our great Lord, and we firmly be- lieve that they are "practicable, and binding on every Christian : and that in the life to come every man will be rewarded according to his works. And further it is our belief, that, in order to enable mankind to put in practice these sacred precepts, many of which are contradic- tory to the unregenerate will of man, every man coming into the world is endued with a measure of the light, grace, or cood Spirit of Christ ; by which, as it is attended to, he is enabled to dis- tinguish good from evil, and to correct the dis- orderly passions and corrupt propensities of his fallen nature, which mere reason is altogether insufficient to overcome. For all that belongs to man is fallible, and within the reach of temp- tation ; but this divine grace, which comes by Him who hath overcome the world, is, to those who humbly and sincerely seek it, an all-suffici- ent and present help in time of need. By this the snares of the enemy are detected, his allure- ments avoided, and deliverance is experienced through faith in its efl'ectual operation ; whereby (as before in other words expressed), the soul is translated out of the kingdom of darkness, and from under the power of Satan, into the mar'el- lous light and kingdom of the Son of God. Being thus persuaded, that man, without the Spirit of Christ inwardly revealed, can do nothing to the glory of God, or fo effect his own salvation, we*

think this influence especially necessary to the performance of the highest act of which the human mind is capable ; even the wor- ship of the Father of lights and of spirits, in spirit and in tmth : therefore we con- sider as obstructions to pure worship all forms which divert the attention of the mind from the secret influence of this ' unction from the Holy One.' Yet, although true worship is not confined to time and place, we think it in- cumbent on Christians to meet often together, in testimony of their dependence on their heavenly Father, and for a renewal of their spiritual strength : we therefore, in common with almost all who profess the Christian name, are in the prac- tice of assembling for this purpose on the first day of the week ; and it is also our practice to hold a meeting for

worship on some other day, about the middle of the week. — The due observance of one day in seven as a day of rest, and a day more especially set apart for the purpose of public worship, and for other duties of a religious nature, we believe to be incumbent on a Christian community, agreeably to the authority of Holy Scripture ; and of incalculable importance in its results. Although we liˆve thus our stated times for assembling together for the per- formance of public worship, nevertheless, we dare not depend, for our acceptance with God, on a formal repetition of the words and experi- ences of others ; but we believe it to be our duty to lay aside the activity of the imagination, and to wait in silence to have a true sight of our condition bestowed upon us : believing even a single sigh, arising from such a sense of our in- firmities, and of the need we have of divine help, to be more acceptable to God, than any performances, however specious, which originate in the will of man.

' From what has been said respecting worship, it follows, that the ministry we approve must have its origin from the same source ; for that which is needful for a man's own direction, and for his acceptance with God, must be eminently so to enable him to be helpful to others. Ac- cordingly we believe that the renewed assistance of the light and power of Christ is indispensa- bly necessary for all true ministry ; and that this holy influence is not at our command, or to be procured by study, but is the free gift of God to chosen and devoted servants. — Hence arises our testimony against preaching for hire, in contradiction to Christ's positive command, ' Freely ye have received, freely give ;' and hence our conscientious refusal to support such ministry, by tithes or other means.

' As we dare not encourage any ministrj', but that which we believe to spring from the influ- ence of the Holy Spirit, so neither dare we at- tempt to restrain this ministry to persons of any condition in life, or to the male sex alone ; but, as male and female are one in Christ, we hold it proper that such of the female sex as we believe to be endued with a right qualification for the ministry, should exercise their gifts for the ge- neral edification of the church : and this liberty we esteem a peculiar mark of the gospel dis pensation, as foretold by the prophet Joel, and noticed by the aposlle Peter.

FRIENDS.

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Tliere are two ceremonies in use among a.ost professors of the Cliristian name, Water- Baptism, and what is termed the Lord's Supper. The first of these is generally esteemed the essential means of initiation into the church of Christ ; and the latter of maintaining commu- nion with him. But as we

have been convinced tlut nothing short of his redeeming power, in- wardly revealed, can set the soul free from the thraldom of sin ; by this power alone we believe salvation to be effected. We hold that as there is one Lord and faith, so his baptism is one, in nature and operation; that nothmg short of it can make us living members of his mystical body ; and that the baptism with water, administered by his forerunner John, belonged, as the latter confessed, to an inferior and decreasing dispen- sation. With respect to the other rite, we believe that communion between Christ and his church is not maintained by that, or by any other exter- nal performance, but only by a real participation of his divine nature through faith; that this is the supper alluded to in the Revelation, ‘ Be- hold I stand at the door and knock, if any man hear my voice and open the door, I will come in to him, and will’ sup with him, and he with me;’ and that where the substance is attained, it is unnecessary to attend to the shadow ; which doth not confer grace, and concerning which, opinions so diiferent, and animosities so violent, have arisen.

‘ Now, as we thus believe that the grace of God, which comes by Jesus Christ, is alone sufficient for salvation, we can neither admit that it is conferred on a few only, whilst others are left without it ; nor, thus asserting its uni- versality, can we limit its operation to a partial cleansing of the soul from sin, even in this life. We entertain worthier notions both of the power and goodness of our heavenly Father, and be- lieve that he doth vouchsafe to assist the obedi- ent to experience a total surrender of the na- tural will, to the guidance of his pure unerring spirit; through whose renewed assistance they are enabled to bring forth fruits unto holiness, and to stand perfect in their present rank.

‘ There are not many of our tenets more gene- rally known than our testimony against oaths and against war. With respect to the former of these, we abide literally by Christ’s positive injunc- tion, delivered in his sermon on the mount, ‘ Swear not at all.’ From the same sacred col- lection of the most excellent precepts of moral and religious duty, from the example of our Lord himself, and from the correspondent convictions of his Spirit in our hearts, we are confirmed in the belief that wars and lightings are, in their origin and eff”ects, utterly repugnant to the gospel ; which still breathes peace and good-will to men. We also are clearly of the judgment, that if the benevolence of the gospel ■were generally prevalent in the minds of raeiiˆ it would effectually prevent them from oppressing, much more from enslaving, their bretliren (of whatever color or complexion), for wiiom, as for themselves, Christ died ; and would even influence their conduct in their treatment of the brute crea- tion ; which would no longer groan the victims of their avarice, or of their false ideas of pleasure.

‘ Some of our tenets have in former times, cis hath been shown, subjected

our friends to much suffering from government; though to the salu- tary purposes of government, our principles are a security. They inculcate submission to the laws in all cases wherein conscience is not vio- lated. But we hold, that as Christ's kingdom is not of this world, it is not the business of the civil magistrate to interfere in matters of religion ; but to maintain the external peace and good order of the community. We therefore think persecution, even in the smallest degree, unwar- rantable. We are careful in requiring our members not to be concerned in any illicit trade, nor in any manner to defraud the revenue.

' It is well known that the society, from its first appearance, has disused those names of the months and days, which having been given in honor of the heroes or false gods of the heathen, originated in their flattery or superstition; and also the custom of speaking to a single person in the plural number, as having likewise arisen from motives of adulation. Compliments, su- perfluity of apparel, of furniture, and of provi- sion for the table, outward shows of rejoicing and mourning, and the observation of days and times, we esteem to be incompatible with the simplicity of a Christian life ; and public diver- sions, gaming, and other vain amusements of the world, we cannot but condemn. They are a waste of that time which is given us for nobler purposes ; and divert the attention of the mind from the sober duties of life, and from the re- proofs of instruction, by which we are guided to an everlasting inheritance.

- *To conclude : although we have exhibited the several tenets, which distinguish our religious society, as objects of our belief ; yet we are sensible that a true and living faith is not pro- duced in the mind of man by his own effort ; but is the free gift of God in Christ Jesus, nourished and increased by tlie progressive operation of his Spirit in our hearts, and our pro- portionate obedience. Therefore, although for the preservation of the testimonies given us to bear, and for the peace and good order of the society, we deem it necessary that those who are admitted into membership with us, should he previously convinced of those doctrines which we esteem essential ; yet we require no formal subscription to any articles, either as a condition of membership, or a qualification for the service of the church. We prefer judging of men by their fruits, and depending on the aid of llim, who, by his prophet, hath promised to be ' for a spirit of judgment to him that sitteth in judg- ment.' Without this, there is a danger of re- ceiving numbers into outward communion, with- out any addition to that sjjiritual shecpfold, whereof our blessed Lord declared himself to be botli the door and the shepherd ; that is, of such as know his voice, and follow him in the paths of obedience.'*

The (Jiscipline of the Society is thus stated in the same document : —

‘ The purposes which our discipline hath chiefly in view, are, the relief of the poor, — the maintenance of good order, — the support of the testimonies whicii we believe it is our duty to

bear to the world, — and the lielp and recovery of such as are overtaken in faults : — in a few words, the promotion of piety and charity. In the prac- tice of discipline, we think it indispensable that the order recommended by Christ himself be in- variably observed : ‘ If thy brother shall trespass against thee, go and tell him his fault l)etvveen thee and him alone : if he shall hear thee, thou hast gained thy brother ; but if he will not hear thee, then take witli thee one or two more, that, in the mouth of two or ttiree witnesses, every word may be established : and, if he shall neglect to hear them, tell it unto the church.’

‘To effect the salutary purposes of discipline, meetings were appointed at an early period of the society, which, from the times of their being held, were called quarterly-meetings. It was afterwards found expedient to divide the dis- tricts of those meetings, and to meet more fre- quently ; from whence arose monthly-meetings, subordinate to those held quarterly. At length, in 1G69, a yearly-meeting was established, to superintend, assist, and provide rules for the wliole : previously to which, general meetings had been occasionally held.

**A monthly-meeting is usually composed of several particular congregations, situated within a convenient distance from each other. Its busi- ness is to provide for the subsistence of the poor, and for the education of their offspring ; to judge of the sincerity and fitness of persons appearing to be convinced of the religious principles of the society, and desiring to be admitted into mem- bership ; to excite due attention to the discharge of religious and moral duty ; and to deal with disorderly members. Monthly-meetings also grant, to such of their members as remove into other monthly-meetings, certificates of their mem- bership and conduct; without which they cannot gain membership in such meetings. Each monthly-meeting is required to appoint certain persons, under the name of overseers, who are to take care that the rules of our discipline be put in practice ; and when any case of complaint, or disorderly conduct, comes to their knov/ledge, to see that private admonition, agreeal)ly to the gospel rule before mentioned, be given, pre- viously to its being laid before the monthly- meeting. When a case is introduced to the monthly-meeting, it is usual for a small com- mittee to be appointed to visit the offender, in order to endeavour to convince him of liis error, and induce him to forsake*

and condemn it. Time is allowed to judge of the effect of this la- bor of love, and, if needful, the visit is repeated. If the endeavours prove successful, the person is by minute declared to have made satisfaction for the offence ; if not, he is disowned as a member of the society. In disputes between individuals, it has long been the decided judgment of the so- ciety, that its members should not sue each other at law. It therefore enjoins all to end their dif- ferences by speedy and impartial nrbitration, agreeably to rules laid down. Jf any refuse to adopt this mode, or, having adopted it, to submit to the award, it is the direction of the yearly- meeting that such be disowned. To monthly- meetings also belong the allowing of marriages; for our society hath always scrupled to acknow-

ledge the exclusive authority of the priests in the solemnisation of marriage. Those who intend to marry, appear together and propose their inten- tion to the monthly-meeting ; and, if not attended by their parents or guardians, produce a written certificate of their consent, signed in the presence of witnesses. The meeting then appoints a com- mittee to enquire whether they are clear of other engagements respecting marriage ; and if at a suljsequent meeting no objections are reporte 1, they have the meeting's consent to solemnise their intended marriage. This is done in a public meeting for worship, towards the close whereof the parties stand up, and solemnly take each other for husband and wife. A certificate of the proceedings is then publicly read, and signed by the parties, and afterwards by the relations and others as witnesses. Of such marriages the monthly-meeting keeps a record ; as also of the births and burials of its members. A certificate of the date, of the name of the infant, and of its parents, signed by those present at the birth, is tlie subject of one of these last-mentioned re- cords ; and an order for the interment, counter- signed by the grave-maker, of the other. The naming of children is without ceremony. Burials are also conducted in a simple manner. The body, followed by the relations and friends, is sometimes, previously to interment, carried to a meeting; and at the grave a pause is generally made ; on both which occasions it frequently oc- curs that one or more friends present have some- what to express for the edification of those who attend ; but no religious rite is considered as an essential part of burial.

' Several monthly-meetings compose a quar- terly-meeting. At the quarterly-meeting are pro- duced written answers from the monthly-meetings, to certain queries respecting the conduct of their members, and the meeting's care over them. The accounts thus received are digested into one, which is sent also, in the form of answers to queries, by representatives to the yearly-meeting. Appeals from the judgment of monthly-meetings are brought to the quarterly-meetings ; whose business also it is to assist in any difficult case, or where remissness appears in the care of the monthly-meetings over the individuals who com- pose them.

The yearly-meeting has the general superin- tendence of the society in the country in which it is established ; and therefore, as the accounts which it receives discover the state of inferior meetings, as particular exigencies require, or as the meeting is impressed with a sense of duty, it gives forth its advice, makes such regulations as appear to be requisite, or excites to the observance of those already made ; and sometimes appoints committees to visit those quarterly- >meetings which appear to be in need of immediate advice. Appeals from the judgment of quarterly-meetings are here finally determined ; and a brotherly cor- respondence, by epistles, is maintained with other yearly-meetings. There are nine yearly meetings, viz. 1. London, to which come representatives from Ireland; 2. New-England; 3. New-York ; 4. Pennsylvania and New-Jersey; 5. Maryland; 6. X'irginia; 7. The Carolinas and Georgia; 8. Ohio; 9. Indiana.

' In this place it is proper to add that, as we believe women may be rightly called to the work of the ministry, we also think that to them be- longs a share in the support of our Christian discipline; and that some parts of it, wherein their own sex is concerned, devolve on them with peculiar propriety. Accordingly they have monthly, quarterly, and yearly-meetings of their own sex, held at the same time with those of the men ; but separately, and without the power of making niles : and it may be remarked that during the persecutions, which formerly oc- casioned the imprisonment of so many of the men, the care of the poor often fell on the women, and was by them satisfactorily administered.

' In order that those who are in the situation of ministers may have the tender sympathy and counsel of those of either sex, who, by their ex- perience in the work of religion, are qualified for that service, the monthly-meetings are advised to select such, under the denomination of elders. These, and ministers approved by their monthly- meetings, have meetings peculiar to themselves, called meetings of ministers and elders ; in wliich they have an opportunity of exciting each other to a discharge of their several duties, and of extending advice to those who may ap-])ear to be weak, without any needless exposure. Such meetings are generally held in the compass of each monthly, quarterly, and yearly-meeting. They are conducted by rules prescribed by the yearly-meeting, and have no authority to make any alteration or addition to them. The mem- bers of them unite with their brethren in the meetings for discipline, and are equally account- able to the latter for their conduct.

' It is to a meeting of this kind in London, called the second-day's morning-

meeting, that the revisal of manuscripts concerning our principles, previously to publication, is intrusted by the yearly-meeting held in London ; and also the granting, in the intervals of the yearly-meeting, of certificates of approbation to such ministers as are concerned to travel in the work of the minis- try in foreign parts ; in addition to those granted by their monthly and quarterly-meetings. When a visit of this kind doth not extend beyond Great Britain, a certificate from the monthly- meeting of which the minister is a member is .sufficient; if to Ireland, the concurrence of the quarterly-meeting is also required. Regulations of similar tendency obtain in other yearly- meetings.

‘ The yearly-meeting of London, in the year 1G7,5, appointed a meeting to be held in that city, for the purpose of advising and assisting in cases of suffering for conscience sake, which hath continued with great use to the society to this Jay. It is composed of friends under the name of correspondents, chosen by the several quarterly- meetings, and who reside in or near the city. The same meetings also appoint members of their own in the country as correspondents, who are to join their brethren in London on emer- gency. Tlu! names of all these correspondents, previously to their being recorded, are submitted to the approbation of the yearly-meeting. Such men as are approved ministers are also members of this meeting, which is called the meeting for

.sufferings ; a name arising from its original pur- pose, and which is not yet become entirely obso- lete. The yearly-meeting has intrusted tlie meeting for sufferings with the care of printing and distributing books, and with the manage- ment of its stock ; and, considered as a standing committee of the yearly-meeting, it hath a gene- ral care of whatever may arise, during the inter- vals of that meeting, affecting the society, and re- quiring immediate attention : particularly of those circumstances which may occasion an ap- plication to government. The stock here men- tioned is an occasional voluntary contribution, expended in printing books, — salary of a clerk for keeping records, — the passage of ministers who visit their brethren beyond sea, — and some small incidental charges : but not, as has been falsely supposed, the reimbursement of those who suffer distraint for tithes and other demands with which they scruple to comply.

‘ There is not in any of the meetings which have been mentioned, any president, as we be- lieve that divine Wisdom alone ought to preside ; nor hath any member a right to claim pre- eminence over the rest. The office of clerk, with a few exceptions, is undertaken voluntarily by some membet ; as is also the keeping of the records. Where these are very voluminous, and require a house for their deposit (as is the case in London, where the general records of the society in Great Britain are kept), a clerk is hired to have the care of them ; but except a few clerks of this kind, and persons

who have the care of meeting-houses, none receive any stipend or gratuity for their services in our religious so- ciety.'

The Friends trace the origin and history of their society to the beginning of the seventeenth century, when, as they state, many pious persons had been dissatisfied with the settlement of the church of England in the reign of queen Eliza- beth; and, though various societies of dissenters had arisen, they seem to have stopped short in their progress towards a complete reformation. Hence, they say, some of ' their most enlightened members lamented the want of something more instructive and consolatory to the soul,' until, finding the insufficiency of them all, they with- drew from the communion of every visible church.

' These people were at first hidden from each other, and each probably conceived his own heart to be the single repository of a discovery so important ; butit did not consist with divine goodness, that the candle thus lighted should alwavs remain under the bed, or the bushel. Our honorable elder George Fox, who had signally experienced the aflHicting dispensations which we have described, and had also been quickened by the immediate touches of divine love, could not .satisfy his apprehensions of duty to God, without bearing public testimony against the common modes of worship, and directing the- peoi:)le where to find the like consolation and in- stiruction. As he travelled in this service, he met with divers of those seeking persons who had been exercised in a similar manner; these readily received his testimony ; several of them also be- came preachers of the same docliiue ; muUiludca

were convinced of tlie reality of this inward manifestation ; and many meetings were settled.'

Laws, made either in the times of popery, or since the Reformation, against non-confor- mists, served as the means of gratifying the jea- lousy of the priests, and the intolerance of the magistrates, against our first Friends. Indeed, at the time Friends first attracted public notice, legal pretences were not always thought neces- sary to justify the abuse which they suffered. It was during the time of the commonwealth, when opposition to a national ministry, which was sup- posed to be peculiarly reformed, was deemed an offence of no small import. Much personal abuse was accordingly bestowed; imprisonment was common, and corporal punishment frequent. Imprisonment was often rendered more severe and disgusting by the cruelty of particular magis- trates, and from the numbers which were con- fined

together; and stripes, under pretence of vagrancy, were inflicted without regard to sex, and on persons of unimpeached character, and of good circumstances in the world.

Cromwell, though he did not employ his au- thority to put a stop to persecution, gave several friends access to him : persecution however con- tinued ; but when Charles II., on the prospect of his restoration, issued from Breda, amongst other things, his declaration for liberty of con- science, it might well have been expected that Friends would be permitted to exercise their re- ligion without molestation. Yet, during this reign, they not only were harassed with the oath of allegiance, which, in common with all oaths, they scrupled to take, and by which they often incurred tedious imprisonment, and not unfre- quently premunire; but new laws (16 Car. II. cap. 4. ; 22 Car. II. cap. 1. ; also 13 & 14 Car. II. cap. 1) were made, l3y which even their meet- ings for worship subjected them to punishment.

Still the monarch, when he acted independ- ently of the parliament, was the means of affording relief in the most sanguinary persecu- tion which the Friends ever experienced, i. e. that in New-England, where it was made penal for a Friend even to reside.

Tiie first Friends who arrived at Boston were women. These were imprisoned, and otherwise cruelly treated. The date of this transaction is 1656. The following year the scourge was em- ployed, and a woman is also recorded to have been the first who suffered stripes. She was the wife of a tradesman in London, and had made a voyage to Boston, to warn the people against persecution. Great numbers un- derwent this punishment ; but stripes proving insufficient to deter our Friends from the exer- cise of their religious duty, in going to such places, and performing such services, as they be- lieved to be required by the divine will ; it was next attempted to discourage them by a law for cutting off their ears. This was executed in vain; and accordingly the intolerance of the persons in power produced another, which sub- jected Friends to banishment on pain of death. Their constancy, however, was not thus to be shaken, and four P'riends, amongst whom also wa.s a woman, were hanged at Boston.

In 1659 they stated to parliament that

2000 individuals had suffered imprisonment as quakers, and 164 Friends offered themselves at this time by name to the government to be im- prisoned in the place of an equal number, who were, as they conceived, in danger of death from the confinement.

In 1665, 120 quakers were in Newgate, sen- tenced to transportation, imder an act recently made ' to prevent and suppress seditious con-

venticles.' The masters of ships generally re- fusing to carry tliem, an embargo was laid, and it was made a condition of sailing to the West Indies, that some quakers should be taken thither by every vessel. A mercenary wretcli being at length found for the service, the quakers, unwilling to be active in their own banishment, refused to walk on board, as did also the seamen to hoist them in. By the help of soldiers from the Tower, fifty-five of them were at length shipped. But the master was now in prison for debt ; and the ship after seven months' detention quitting the coast was imme- diately taken by a Dutchman, and twenty-eight of the prisoners (the remainder having died of the plague) were liberated in Holland and sent home. Other parties of quakers were set on shore again from different vessels, so that the number which actually reached the West Indies was small.

James II. it is well known, to favor the Catho- lics, suspended the operation of the penal laws against all dissenters. Our Friends had their share in the benefit arising from this measure ; but it was not until the reign of William and Mary, that they obtained some degree of legal protection. Besides their disuse of the national forms of worship, their refusing to swear and to pay tithes had been among the principal causes of their sufferings. In the reign of king Wil- liam an act was made, which, with a few excep- tions, allowed to their atfirmation the legal force of an oath ; and provided a less oppressive mode of recovering tithes, under a stated amount. These provisions were made perpetual in the reign of George I., and thus Friends, who re- ceived the advantage of the act of toleration, in common with other dissenters, have been in a great measure relieved from persecution.

In Ireland also the Friends propagated their principles, settled meetings, suffered perse- cution and were at length relieved by law.

They regard their persecutions as still not wholly removed, as they are yet liable to suffer in the exclicquer, and the ecclesiastical court, under distraint for tithes, militia dues, &c. : but this must be understood only with respect to Great Britain and Ireland ; for in America tiie people at present are not bound to support a national ministry ; nor, when this was in some parts the case, were methods of enforcing payment em- ployed, so tedious and so severe, they say, as those which have been sometimes resorted to in England.

It is due to them to add, that the Friends are generally allowed to excel in their morals, their prudence, and industry, and the branches of education which they cultivate. The children of their poor commonly obtain a plain but solid education, by means of which they rise generally

in civil society. They have several excellent establishments for this purpose : the principal of which, situated at Ackworth in Yorkshire, con- tains, 300 children, of both sexes, and was founded in 1778, at the instance of Dr. Fother- gill. But they have few accomplished men in the higher branches of literature and science : of late years, however, many of them have cul- tivated natural philosopliy with success. In its earlier history, the society, including many men of regular scholastic education, who had joined it on principle, had of course the advantage, in point of theological knowledge, over the modern Friends.

We must record, in conclusion, their noble and persevering efforts in modern times, for the ac- complishment of the abolition of tlie slave trade, to which they materially contributed ; and their steady support of the Bible Society throughout the country.

FRIESLAND is a name which, in the ancient geography of Europe, comprehended all the country extending northward from the Scheldt to the Weser, including not only the seven united provinces, but a part of Germany. The Zuyder Zee divided it into West and East Friesland. At present this name is confined to two portions of this tract, viz. a Dutch province situated to the west of Groningen, and a German principality, or maritime district, lying eastward of Groningen.

Dutch Friesland has for its boundaries the Zuyder Zee on the west, and the German Ocean on the north; and contains about 1200 square miles, and 176,500 inhabitants. Its general ap- pearance is that of all the Netherlands : secured against the sea by large old dikes, which were considerably improved in the sixteenth century ; and enclosing land much fitter for pasture than tillage. The chief exports are butter and cheese. On the higher grounds wheat and oats are pro- duced; and peas are extensively cultivated. Turf is dug in several parts for fuel ; but it is of inferior quality. In the south-east are extensive heaths and woods ; and in the south-west a number of small lakes. The chief manufacture is sailcloth and linen, also the coarse woollen cloth called from this province frieze.

The province is divided into the three districts of Leeuwarden, Sneek, and Heerenveen ; Leeu- warden being tlie capital. It is throughout inter- sected with canals, which mostly run east and west, connecting Ilarlingen, Francker, Leeuwar- den, and Dokkum, the chief towns of the province. The Frieslanders are much attached to fishing in general, and many are engaged in the Greenland trade. They are principally Cal- vinists ; part of

them, however, are Baptists and Catholics. Their chief peculiarity is the preser- vation of their ancient dialect, which difi'ers considerably from the Dutch, and much resem- bles the English.

East or German Friesland borders on West- phalia, and is separated from the Dutch province Ijy Groningen : on the south it has the princi- pality of Munster. Its extent is computed at 1155 square miles, and its population at 120,000. The atmosphere is in general foggy, but not un- healthy ; the soil good, and very similar in its

ctiaracter and productions, as is the whole of this province in its general features and appearance, to those of the preceding one. But here is a strong breed of liorses, of wiiich it is reckoned that an annual export of 3000 takes place to France, Italy, and other parts of Europe ; horned cattle are likewise exported, together with corn, butter, and cheese. The manufactures are in- considerable. The inhabitants are generally Calvinists, but in part Catholics and Baptists. Embden, at the mouth of the river Ems, is the chief and almost only sea-port. Along the coast a succession of small islands extends from east to west.

This principality, once governed by its own counts, became in 1744, on their ancient line be- coming extinct, a subject "of dispute between Prussia and Hanover : in which the former pre- vailed ; and Prussia held the province until ejected by Napoleon in 1806, when it was first annexed to the kingdom of Holland, and after- wards to the French empire. Regained by Prussia in the peace of 1814, it was soon after ceded to Hanover ; and its states now form part of the Hanoverian diet. Aurich is the chief town next to Embden.

Friesland is also the name of a flat trict of land in the duchy of Sleswick and peninsula of South Jutland, on the German Ocean.

FRIEZE, n. s. -^ Fr. drap de /rise. A

Frizzed, adj. > coarse warm cloth, made

Frieze'likf.,«c(;. J perhaps first in Friesland.

Shagged, or napped, after the fashion of this

kind of cloth. Resembling it.

If all the world

Should in a pet of temperance feed on pulse.

Drink the clear stream, and nothing v/eav hat frieze.

The All-giver would be unthanked. Milton,

The captive Germans nf gigantic size.

Are ranked in order, and are clad in frieze.

Dryden. He could no more live without his frieze coat than without his skin. Addison's Guardian.

I have seen the figure of Thalia, the comick muse, sometimes with an entire headpiece and a little frieze- like tower, running round the edges of the face, and sometimes with a mask for the face only.

Id. on Italy. See how the double nation lies. Like a rich coat with skirts oi frieze ; As if a man, in making posies. Should bundle thistles up with roses. Swift.

Frieze, \ In architecture, is a large flat Prize. 5 member which separates the archi- trave from tiie cornice ; of which there are as many kinds as orders of columns.

I saw raysde up on yvoric pillowes tall. Whose bases were of richest mettals warke. The chapters alabaster, the /n/se. < chrislall. The double front of a triumphiall arke : On each side purtraid was a Victorie, Clad like a nymph, that wings of Silver wcarcs. And in triumphant chayrc was set on hie. The auncicnt glory uf the Romaine peares.

Spenser. Visions of Bellay, No jutting frieze, Buttrice, nor coigne 'vantage, but this bird Hath made his pendant-bed, and procreant cradle.

Shuhjieare,

FRI

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FRI

Nor did there want

Cornice or frieze with bossy sculptures graven ;

The roof was fretted gold. Milton's Paradise Lost.

Polydoru designed admirably well, as to the practi- cal part, having a

particular genius ioT friezes.

Dryden's Dufrcsuny.

FRIG'AT, or ^ Fr. frigate; Ital. fixguta.

Frig'atEjM. s. i A small ship. Ships under fifty guns are generally terni'id frigates. Used by Spenser to designate a diminutive vessel in the water.

Behold the water work and play About her VMlcfrigat, therein making way.

Faerie Queene.

The treasure they sought for was, in their view, embezzled in cevtiHn frii/ ats. Raleiyh's Apology.

On high-raised docks the haughty Belgians ride. Beneath whose shades our humble friyats go.

Dryden.

Frigates are usually of two decks li'j;ht built, designed for swift sailing. When smaller, with but one deck, tliey are called light frigates. Tiiose mounting from twenty to forty-four guns are esteemed excellent cruisers. The name was formerly known only in tlie Mediterranean, and applied to a long' kind of vessel navigated in that sea with sails and oars. The English were the first who appeared on the ocean witli these ships, equipped for war as well as for commerce.

Frigate-Built, denotes the disposition of the decks of such merchant sliips as have a descent of four or five steps from the quarter deck and fore castle into the waist : in contradistinction to those whose decks are on a continued line for the whole length of the ship, which are called galley-built.

FIIIGATOON, a Venetian vessel commonly used in the Adriatic, built with a square stern, and without any fore-mast, having only 'a main mast, mizen mast, and a bow sprit.

FRKJEFAC'TIGN, n. s. Lat. frigus and fucio. The act of making cold.

FRIGin'u. a.&?i.s. -^ Sax. ppijpran ; Teut.

Fright'en, V. «. I fare lit, fear; Danish

Frigiit'ful, adj. \friliiht ; implying a state

Frigut'fully, adv. i of fear. To terrify; to

Fright'fulnm.ss, W..5. J disturb witli fear; to shock with fear ; to daunt ; to dismay. This was in the old authors more frequently wiitten af- fright, as it is always found in the Scripture. Fright is a sudden terror : to frighten is to shock with dread : frightful, full of what causes fright or apprehension. Johnson says it is a cant word among women for any tiling unpleasing. I pray you that ye take it not agrefe :

By God me mette I '.vas in swichc mischefe.

Right now that yr t min hcrte is sore afriyhl.

Chaucer, The Nunnes Preestcs Tale.

rho when that villayn he aviyed, which late Aff'rii/hted had the fairest Florimcll, Full of tierce fury and indignant hate To him he turned, and with rigor fell Smote him so rudtˆly on the pannikell That to the chin he clcfte his head in twaine.

Speriser. Faerie Queene.

Tetchy and wayward was thy infancy. Thy school dtiyafriyhlful, desperate, wild, and furious.

Shdiisiienre. The herds

Were strongly clara'rous in tht; frighted ficlils.

Id. Henry 1 V.

And I ha been choosing out of this skull*

From charnel-houses, that were full.

Front private grots, and public pits.

And friijhted a sexton out of his wits. Jutmon.

Such a numerous host

Fled not in silence through the frighted deep.

With ruin upon ruin, rout on routs.

Confusion was confounded. Milton.

Cherubic watch, and of a sword the flame

Wide-waving, all approach far off io fright.

And guard all passage to the tree of life. Id.

This will make a prodigious mass of water, and looks frightfully to the imagination ; 'lis huge and great. Burnet.

Without aid you durst not undertake

This y > ('(///(/u/ passage o'er the Stygian- lake.

Dryden.

You, if your goodness does not plead my cause. May think I broke all hospitable laws, To bear you from your palace-yard by might. And put your noble person in ˆfright. Id.

The mind frights itself with any thing reflected on in gross, and at a distance : things thus offered to the mind, carry the shew of nothing but ditfic-.ilty.

Locke. The rugged bear's, or spotted lynx's brood.

Frighten the valleys and infest the wood. Prior. Then to her glass ; and Betty, pray. Don't I look frightfully to-day ? Swift.

Whence glaring oft with many a broadened orb. He frigh/s the nations. Thomson's Autumn.

His sense, he dare not trust (nor eyes, nor ears) ; And, when no other cause ol fright appears. Himself he much suspects, and fears his causeless fears. Fletcher's Purple Island.

Fright, or terror. See Fear. Sudden fear is frequently productive of very remarkable effects upon the human system. Of this many instances occur in medical writings. In general the effects of terror are a contraction of the small vessels and a repulsion of the blood in the large and internal ones; hence proceed general oppression, trembling, and irregularity in the motions of the heart; while the lungs are also overcharged with blood. Frights often occasion incurable diseases, as epilepsy, stupor, madness, Sec. We have also accounts of persons abso- lutely killed by terror, when in perfect health at the time of receiving the shock. Persons or- dered to be led to execution, bat with private orders to be reprieved on the scaffold, have e.x- pired at the block without a wound. Out of many instances of the fatal

effects of fear, the following is selected as one of the most singular : — George Grochantzy, a Polander, who had en- listed as a soldier in the service of the king of Prussia, deserted during the war. A small party was sent in pursuit of him, and, when he least expected it, surprised him singing and dancing among a company of peasants in an inn. This event so sudden, and so dreadful in its conse- quences, struck him in such a manner, that giving a loud cry, he became altogether stupid and insensible, and was seized without the least resistance. They carried him away to Glocaii, where he was brought before the council of war, and received sentence as a deserter. He suffered himself to be led and disposed of, at the will of those about him, without uttering a word, or giving the least sign that he knew wliat iiad happened or would happen to him. He re-

mained immoveable as a statue wherever he was placed, and was wholly passive with respect to all that was done to him or about him. During all the time that he was in custody, he neither eat, nor drank, nor slept, nor had any evacua- tion. Some of his comrades were sent to see him; after that he was visited by some officers of his corps, and by some priests ; but he still continued in the same state, without discovering the least signs of sensibility. Promises, entrea- ties, and threatenings, were equally ineffectual. It was at first suspected, that those appearances were feigned ; but these suspicions gave way, when it was known that he took no sustenance, and that the involuntary functions of nature were in a great measure suspended. The physicians concluded that he was in a state of hopeless idiocy; and after some time they knocked off his fetters, and left him at liberty to go whither he would. He received his liberty with the same insensibility that he had shown upon other occasions ; he remained fixed and immoveable ; his eyes turned wildly here and there without taking cognizance of any object, and the muscles of his face were fallen and fixed like those of a dead body. He passed nineteen days in this condition, without eating or any evacuation, and died on the twentieth day. He had been some- times heard to fetch deep sighs ; and once he rushed with great violence on a soldier, who had a mug of liquor in his hand, forced the mug from him, and having drunk the liquor with great eagerness let the mug drop to the ground. Yet frights have been known to cure, as well as to cause diseases. Mr. Boyle mentions agues, gout, and sciatica thus cured. Among the lu- dicrous effects of fear, the following instance, quoted from a French author, shows upon what slight occasions this passion may be sometimes excited in a very high degree. When Charles Gustavus was

besieging Prague, a boor of most extraordinary visage desired admittance to his tent; and, being allowed entrance, offered, by way of amusing the king, to devour a whole hog of 100 cwt. in his presence. The old general, Konigsmark, who stood by the king's side, and who, soldier as he was, had not got rid of the prejudices of his childhood, hinted to his royal master that the peasant ought to be burnt as a sorcerer. ' Sir,' said the fellow, irritated at the remark, ' if your majesty will but make that old gentleman take off his sword and his spurs, I will eat him immediately before 1 begin the hog.' Konigsmark (who had, at the head of a body of Swedes, performed wonders against the Austrians, and who was looked upon as one of the bravest men of the age) could not stand this proposal, especially as it was accompanied by a most hideous and preternatural expansion of the frightful peasant's jaws. Without uttering a word, the veteran suddenly turned roiuid, ran out of the court, and thought not himself safe until he had arrived at his quarters; where he remained above twenty-four hours locked up securely, before he had got rid of the panic which had so severely affected him. The inge- nious Dr. Beattie observes, in his Elements of Moral Science, that fear should not rise higher than to make us attentive and cautious; when it

gains an ascendancy in tlie mind it becomes an insupportable tyranny, and renders life a burden. The object of fear is evil ; and to be exempt from fear, or at least not enslaved to it, gives dignity to our nature, and invigorates all our faculties. Yet there are evils which we ought to fear. Those that arise from ourselves, or which it is in our power to prevent, it would be madness to despise, and audacity not to guard against. External evils, which we cannot prevent, or could not avoid without a breach of duty, it is manly and honor- able to bear with fortitude. Insensibility to danger is not fortitude any more than tlie m- capacity of feeling pain can be called patience ; and to expose ourselves unnecessarily to evil is worse than folly, and very blameable presump- tion.

FRIG'ID, adj. -\ 'L'aX. frigidus, frigiditas.

Frigid'ity, n. s. f Cold; wanting warmth.

Frig'idly, adv. i It is usually applied to the

Frig'idxess, ?!. s. 'human mind, body, and heart; thus it is dull, without fire of fancy, or in- tellectual energy ; impotent; destitute of animal warmth ; unaffectionate ; not easily moved to friendship or love.

Driving at these as at the highest elegancies, which are but the frigidities of wit.

Browne's Vulgar Errotirs.

The boiling blood of youth hinders that serenity which is necessary to severe intenscness ; an 1 the friyidity oi Aecveˆ"it age is as much its enemy, by rea- son of its dulling moisture. Glanville's Scepsin.

In the torrid zone the heat would have been inˆ tolerable, and in the frigid zones the cold would have destroyed both animals and vegetables.

Cheyne's Philosophic Principles.

Of the two extremes, one would sooner pardon ph):enzy ihaa frigidity. Pope.

If justice Philip's costive head SoJne frigid rhymes disburses.

They shall like Persian tales be reaa. And glad both babes and nurses. Swift.

Frigid Zone. See Zone.

FRIGORIF'IC, adj. Of the same derivation and signifies causing cold.

Frigorijick atoms or particles mean those nitrous salts which float in the air in cold weather, and occa sion freezing. Quincy.

FRILAZIN, a class or rank of people among the Anglo-Saxons', consisting of those who had been slaves, but had obtained their liberty, cither by purchase or otherwise. Though these were in reality freemen, they were not considered as of the same rank and dignity with those who had been born free, but were still in a more depen- dent condition, either on their former masters oi on some new patrons. This custom the Anglo- Saxons seem to liave derived from their ancestors in Germany, among whom those who had been made free did not differ much in point of dignity or importance from those who continued in ser- vitude. This distinction, between those who had been born free and those who enjoy freedom by descent from a long race of freemen, still prevails in many parts of Germany ; and particularly in the original seats of the Anglo-Saxons. Many of tlie inhabitants of towns and cities in England, in that period, seem to have been of this class of men, who were in a kind of middle state between slaves and freemen.

FRILL, V. n. Fr. Jrilleux. To (luake' or shiver with cold. Used of a hawk ; as ' tlie hawk frills.'

FRING E, n. s. k. v. a. Vv.J'range ; liˆX.frangia ; Belii. (range, of Goth, rem, runs ; whence rand, the border of a shoe. sOrnamental appendages added to dress or furniture; chiefly that which adorns the edge or the extremity of any thing : to fringe is thus to decorate : the eyelids are metaphorically said to be the fringes of the eyes. Of silver wings he look a shining pair. Fringed with gold. Fairfax.

Those offices and dignities were but the facings or fringes of his greatness. Wutton.

Either side of the bank, fringed with most beautiful trees, resisted the sun's

darts. Sidney.

Then from a cloud, fringed round with golden fires. Were timbrels heard, and lierecynthian choirs.

Dryden.

The go\A&n fringo even set the ground on flame. And drew a precious trail. Id. Flower and Leaf.

The shadows of all bodies, in this light, were bor dered with three parallel fringes, or bands of coloured light, whereof that which was contiguous to the shadow was broadest and most luminous ; and that which was remotest from it was narrowest, and so faint as not easily to be visible. Newton's Opticks.

Here, by the sacred bramble tinged. My petticoat is doubly /rinˆfcd. Swift.

FRINGILLA, in ornithology, a genus be- longing to the order of passeres. The bill is conical, straight, and sharp pointed. There are no less than 112 species comprehended under this genus, distinguished principally by varieties m their color. The following are the most noted : —

F. amandava, the amaduvade bird, about the size of a wren. The color of the bill is of a dull red; all the upper parts are brown, with a mix- ture of red ; the under the same, but paler, the middle of tiie belly darkest; all the feathers of the upper wing-coverts, breasts, and sides, have a spot of white at the tip ; the quills are of a gray brown; the tail is black; and the legs are of a pale yellowish white. It inhabits Bengal, .Java, Malacca, and other parts of Asia ; and feeds on millet,

F. Calebs, the chaffinch, has black limbs, and the wings white on both sides, the first three feathers of the tail are without spots, but the two chief ones are obliquely spotted. It has its name from its delighting in chalf. This species enter- tains us agreeably with its song very early in the year, but towards tiie end of summer assumes a chirping note ; both sexes continue with us the whole year. In Sweden the females quit that country in September, migrate in flocks into Holland, leaving their mates behind ; and return n spring. Their nest is almost as elegantly con- structed as that of the goldfinch, and of much the same materials, only the inside has the ad- dition of some large feathers. They lay four or five eggs of a dull white color, tinged and spotted with deep purple. They are caught in plenty in flight-time; bu their nests are rarely found, though they build in hedges and trees, and have young ones thrice a-year. They are seldom bred from the nest, being not apt to learn another bird's song, nor to whistle; so that it is best to leave the old ones to bring them up. The Essex

finches are generally allowed to be the best, both for length and variety of song, ending with several very fine notes. They are hardy, and will live almost upon any seeds.

F. Canaria, the Canary bird, has a whitish body and bill, with the prime feathers of the wings and tail greenish. The Canary bird, as found in the island from which it derives its name, is of a plain gray color, with the down at the base of the feathers blackish, the tail somewhat forked, and the legs pale. It was originally peculiar to those isles to which it owes its name. Though the an- cients celebrate the isle of Canaria, for its multitude of birds, they have not mentioned any in particular. It is probable, then, that our species was not introduced into Europe till after tlie second discovery of these isles in 1402. Belon, who wrote in 1555, is silent in respect to these birds: Gesner is the first who mentions them; and Aldrovand speaks of them as rarities, ob- serving that they were very dear on account of the difficulty attending the bringing them from so distant a country, and that they were pur- chased by people of rank alone. They are still found on the same spot to which we were first indebted for the production of these charm- ing songsters ; but they are now become so numerous in our own country, that we are under no necessity of crossing the ocean for them. They are reared principally by the Germans and Italians, who are celebrated for their skill in im- proving the note of these birds by tuition. INIost of the Canary birds that are imported from the Tyrol, have been brought up by parents instructed by the nightingale; but our English Canary birds have commonly more of the tit-lark note. Those brought from Germany are generally variegated or mottled, and are the least valued, because the heat of the houses in that country renders the birds bred there tender and short-lived. German birds seldom live above two or three years in this country : whereas the Canary birds bred in Eng- land in the usual way are said to live eight, ten, or fifteen years. The birds that come from the junction of the citril, the fiskin, and the gold- finch, with a hen Canary bird, are generally stronger than those from a cock and hen Canary bird. They sing longer; and their voice is more sonorous and strong, but they are taught with difficulty. The fiskin alone will breed with the Canary bird equally well, whether male or fe- male; the hen Canary bird produces likewise easily enough with the male goldfinch; not quite so easily with the male linnet; and it will breed, though more reluctantly, with the males of the chaffinch, the yellow-hammer, and sparrow. Among a variety of other sorts, there are two kinds ol Canary birds much esteemed among breeders; namely, those birds which are all yellow, called gay birds, and those which are mottled and have a yellow crown; called spatigled, or fancy birds. The fancy breed are esteemed the strongest, and have the boldest song. We find it stated in the Memoirs of the Society of Natural History of Wetterau, that a Mr. Schwpf of Gottorp, reared a feather- less Canary bird, wnich

continued living and in good health for upwards of three years.

F. cannabir.a, the greater red-pole, is rather

less than the common linnet, and has a blood- colored spot on the forehead, and the breast of the male is tinged with a fine rose color. It is a common fraud in the bird shops in London, when a male bird is distinguished from the fe male by a red breast, as in this species, to paint the feathers, so that the deceit is not easily dis- covered. These birds are frequent on our coasts ; and are often taken in flight time near London.

F. carduelis, the goldfinch, with the quill fea- thers red forwards, and the outermost without any spots; the two outermost are white in the middle, as the rest are at the point. The young bird before it moults is gray on the head ; and hence it is termed by the bud-catchers a gray- pate. There is a variety of this species, called by the London bird-catchers a cheverel, from the manner in which it concludes its jerk. It is dis- tinguished from the common sort by a white streak, or by two, sometimes three, white spots under the throat. Their note is very sweet, and they are much esteemed on that account, as well as for tlieir great docility. Towards winter, they assemble in flocks ; and feed on various seeds, particularly those of the thistle. Tliey are fond of orchards, and often, build in apple or pear trees. Their nests are very elegantly formed of fine moss, liverworts, and bents, on the outside; lined first with wool and hair, and then with the gosling or cotton of the sallow. The hen lays five white eggs, marked with deep purple spots on the upper end : and has two broods in the year. When kept in cages they are commonly fed much on hemp seed, which they eat freely, but which is said to make them grow black, and lose both their red and yellow. Gold- finches often attain the age of twenty years. They abound thro.ughout Europe ; and are also met with in Asia and Africa, but less com- monly.

F. domestica, the sparrow, has the prime fea- thers of the wings and tail brown, the body va- riegated with gray and black, and a single white streak on the wings. These birds are proverbi- ally salacious, and have three broods in a year. They are every where common about our houses, where they build in every place they can find ad- mittance; under the roof, corner of the brick- work, or in holes of the wall. They make a slo- venly nest; generally a little hay ill put together, but lined well with feathers; where they lay five or six eggs of a reddish white color, spotted with brown. They sometimes build in trees, in which case they take more pains with tlie nest;

and often expel the martins from theirs, to save the trouble of constructing one of their own. Spar- rows, from frequenting only habitations and parts adjacent, may be said to be chiefly fed from human industry, for, in spite of every precaution, they will partake with the. pigeons, poultry, i

tolerable by many. The sparrow has no song, only a chirp or two frequently repeated. This species is found every where throughout Europe ; and is also met with in Egypt, Senegal, Syria, and other parts of Africa and Asia.

F. linaria, the less red-pole, is about half the size of the greater red-pole, and has a rich spot of purplish red on the forehead: the breast is of the same color, but less bright. The female is less lively in color ; has no red on the breast ; and the spot on the forehead is of a saff"ron hue. This species is common in England ; and lays four or five eggs of a bluish green, thickly sprinkled near the blunt end with small reddish spots. Pennant mentions an instance of this bird being so tenacious of her nest, as to suff"er herself to be taken off" by the hand ; and when rele ased she would not forsake it. This species is known about London by the name of the stone red pole. Whole flocks of them, mixed with the fiskin, frequent places where alders grow, for the sake of picking the catkins : they generally hang like the titmouse, with the back downwards ; and in this state are so intent on their work, that they may be entangled by dozens, by means of a twig smeared with birdlime fastened to the end of a long pole. This species seems to be plentiful throughout Europe, from the extreme parts of Russia to Italy. It is very common in Green- land, and in America it is likewise well known,

F. linota, the linnet, has the bottom of the breast of a fine blood red, which heightens as the spring advances. These birds are much es- teemed for their song. They feed on seeds of diff'erent kinds, which they peel before they eat; the seed of the linum, or flax, is their favorite food, from whence they derive their name. They breed among furze and white thorn : the outside of their nests is made with moss and bents, and lined with wood and hair. They lay five whitish eggs, spotted like those of the goldfinch. They are remarkable for their attachment to their young, and the following instance is given by a Mr. Strang, of the Isle of Sanda, Orkney, in the Edinburgh Philosophical Journal :— ' During the summer of 1818,' says Mr. Strang, ' my children having found a linnet's nest, containing four young ones nearly fledged, resolved to carry home nest and brood, with the view of feeding and taming the young birds. The parent birds, at- tracted by the chirping of their young, continued fluttering around the children until they reached the house. The nest was carried up stairs to the nursery, and placed outside the window. The old birds soon afterwards made their appearance; approached the nest, and fed their family, with- out showing alarm. This being noticed, the nest was soon afterwards placed on a talile in the middle of the

apartment, and the window left open. The parent birds came boldly in, and led their off^spring as before, I was called up stairs to witness this remarkable instance of strong])a- lental attachment. To put it still further to the test, I placed the nest and young within a bird- cage; still the old ones returned, entered boldly within the cage, and supplied the wants of theii brood as before; nay, towards evening, the pa rent birds actually perched on the cage, re^ird less of the noise made around them by several

cliildren. Tliis pleas'.n^ scene continued for se- veral days ; when an unlucky accident p\it an end to it, to the great grief of my young naturalists. The cage had been again set on tlie outside of the window, and was unluckily left exposed to one of those sudden and heavy falls of rain "which often occur in the Orkneys; the conse- quence was, that the whole of the young were drowned 'n the nest. The poor parents, who had so lioldly and indefatigably performed ilieirduty, continued hovering around the house, and look- ing wistfully in at the window for some days, and then disappeared.'

r. montifringilla, the brambling, has a yellow bill tipt with black ; the head, hind part of the neck, and back, are black ; die throat, fore part of the neck, and breast, pale lufous orange; lower part of the breast and belly white ; the quill-feadiers brown, with yellowish edges ; the tail a little forked; the legs gray. This species migrates into England at certain seasons, but does not build. It is frequently found among ohatKnches, and sometimes comes in vast flocks. Tliey are also seen at certain times in vast clouds in France, insomuch that the ground has been quite covered with their dung, and more than 600 dozen were killed each night. They eat various seeds, but are particularly fond of beech mast. They are said to bteed about Lux- emburg, making their nests on the tall fir-trees, composed of long moss without, and lined with wool and feathers within : the hen lays four or five eggs, yellowish and spotted ; and the young are fledged at the end of May. This species is found more or less throughout Europe ; and is common in the pine forests of Russia and Si- beria, but those of the last are darker in color and less in size.

F. montium, the twite, is about the size of a linnet. It has the feathers of the upper part of the body dusky; those on the head edged widi ash-color, the others with brownish-red ; the rump is pale crimson ; the wings and tail are dusky, the tips of the greater coverts and secon- daries whitish; the legs pale brown. The fe- male wants the red mark on the rump. Twites are taken in the flight season near London, along with linnets. The name seems to have

been taken from their twittering note, and bird- catchers tell at some distance whether there be any twites among linnets, merely from this. The twite is supposed to breed in the more nor- thern parts of Britain.

F. Sehegala, the Senegal finch, is a very little bigger than the wren. The bill is reddish, edged all round with brown; on the ridge of the upper, and beneath the under mandible, is a line of brown quite to the tip : the upper parts of the body are of a vinaceous red color ; the lower parts, with the thighs and under tail-coverts, of a greenish-brown ; the hind part of the head and neck, the back, scapulars, and wing coverts, are brown ; the tail is black, and the legs are pale gray. It inhabits Bengal, and feeds on millet. The natives catch them by supporting a large hollowed gourd, bottom uppermost, on a stick, with a string leading to some covered place, and strewing under it some millet; the little birds, hnstening in numbers to pick it up, are caught

beneath the trap, by pulling away the stick The females sing nearly as well as the males They are familiar, and, when once used to the climate, frequently live five or six years in a cage. They have been bred in Holland.

F. spinus, the siskin, has the, prime feathers of the wings yellow in the middle, and the first four chief tad feathers without spots; but they are yellow at the base, and black at the points. Mr. Willoughby says that this is a song bird ; and that in Sussex it is called the barley bird, be cause it comes to them in barley seed time. It visits these islands at very uncertain times, like the gross-beak, &c. It is to be met with in the bird-shops in London; and, being rather scarce, sells at a higher price than the merit of its song deserves : it is known there by the name of the aberdavine. It is very tame and docile ; and is often kept and paired with the Canary bird, with which it breeds freely. Dr. Kramer informs us that this bird conceals its nest with great art ; and though there are infinite numbers of young birds in the woods on the banks of the Danube, which seem just to have taken flight, yet no one could discover it.

FRINGY Bazar, a town in the district of Dacca, Bengal, situated on the western bank of the Dullasery, near its junction with the Megna River. This town was founded in 1666 by the nabob Shaista Khan, after the reduction of Chit- tagong, for the residence of a colony of Indian Portuguese. Some of their descendants are still to be found in the vicinity, but the greater num- ber of them have emigrated to Hooghly, and other European settlements. During the rainy season the waters of the rivers near swell to an amazing extent.

FRIPTERER, n. s. } Yr.fripper, fripperie ; Fiiip'pERY, n. s. S Ital. frippcria i ' from

fraporrc, cont. of Lat. i7)fra poncre, to piece.' — Thomson. One who deals in old things vamped up : hence frippery either signifies old cloaths, cast dresses fantastically decorated, or tattered rags. It was formerly applied to the place where such merchandise is disposed of.

We know what belongs to afripperi/. Shakspcare. The fighting-place now seamens' rage supply. And all the tackling is k frippery. Donne.

Poor poet ape, that would be thought our chief. Whose works are even the frippery of wit ; From brocage is become so bold a thief. As we, the robbed, leave rage, and pity it.

Ben Jonson. Lurana is a frippery of bankrupts, who fly thither from Druina (o play their aftcr-gamc. Huwcl.

Ragfair is a place near the Tower of London, where old cloaths and frippery are sold. Pupe.

FRISCU (John Leonard), an eminent natu- ralist of the last century , was born at Sultzbach in the Palatinate ia 1666. He travelled through France and Switzerland, and then succeeded to the preachership at Neusol, in Hungary; but, being persecuted, left the place, and became, during the Turkish war, an interpreter. He finally settled at Berlin, where he was appointed rector of the Gray Convent gymnasium. He was also chosen, through the recommendation of Leibnitz, a member of the Royal Academy of Sciences, and of the Imperial Academy of the

Searches into Nature. Here he died in 1743. He is said to have been the first person who cul- tivated mulberry-trees in the neighbourhood of Berbn, and he was the founder of the silk ma- nufactory in this vicinity. His works are, a German and Latin Dictionary; Dictionnaire Nouveau des Passagers, Franˆois-Allemand et AUemand-Franfois ; Descriptions of all the German Insects, with Observations, and the ne- cessary Figures, &c.

FRISCHLIN (Nicodemus), a learned German classic and poet, born at Balingen, in the duchy of Wirtemberg, in 1547 : he was educated by his fa- ther with great care, and sent to the university of . Tubingen, where he made a rapid progress, and became a composer of Greek verse at the age of thirteen. At twenty years of age he obtained a professorship at this university, and soon after wrote a work against former systems of

grammar, entitled Strigil Grammmatica. In 1580 he published an Oration izi praise of a Country Life, with a Paraphrase upon Virgil's Eclogues and Georgics, in which he indulged much acri- mony against the manners of the great, and was obliged, in consequence, to quit the univer- sity. He now composed sixteen books of elegies, two tragedies, seven comedies, and innumer- able odes, anagrams, &c. His comedy of Rebecca obtained for him the golden laurel, and title of crowned poet, from the emperor Rodolph. Having, however, made a pecuniary application to the duke of Wirtemberg, it was refused, and he wrote back an answer so full of abuse, that he was arrested and imprisoned in the prison of Aurach. Attempting to escape from hence by ropes not strong enough to support him, he fell down a prodigious precipice, and was dashed to pieces: this happened in 1590. He left com- mentaries upon the Epistles of Horace and the Satires of Persius, and translations of Aristo- phanes, Callimachus, Heliodorus, and Oppian.

FRISK, r. n. & 71. s."~v Ital. /;722are. To leap;

Frisk'er, n. s. \ fto skip; to whisk; to

Frisk'iness, ra. s. tˆ gambol; to frolic; to

Yrisk'y, adj. 'move wantonly: liveli-

ness ; gaiety ; gay ; airy ; wanton.

Then doe the salvage beasts begin to play Their pleasant /rwAes, and loathe their wonted food : The lyons rorc ; the tygers loudly bray ; TJie raging buls rebellow through the wood. And breaking forth dare tempt the deepest flood.

Spe7iser's Faerie Quecne.

We are rs twinned lambs, that did frisk in the sun. And bleat the one at the other : what we changed. Was innocence for innocence ; we knew not The doctrine of ill-doing.

Shakspeare. Winter's Talc.

Now I will wear this, and now I will wear that ; Now [will wear I cannot tell what : All new fashions be pleasant to me : Now I am z.frisker, all men on me look ; What should I do but set cock on the hoop ?

Camden.

Put water into a glass, and wet your hnger, and draw it round about the lip

of the glass, pressing it somewhat hard ; and, after drawing it some few times about, it will make the water frisk and sprinkle up in a fine dew. Bacon's Natural History.

About them frisking played All beasts of the earth, since wild, and of all chace, In wood or wilderness, forest or den. Milton.

Watch the quick motions of the. fritkinij tail. Then serve their fury with the rushing male.

Brt/den. So Bacchus through the conquered Indies rode. And beasts in gambols /rwAed before their honest god.

Id. A wanton heifer /risAerf up and down in a meadow, at ease and pleasure. L' Estrange.

Whether every one hath experimented this troulile- some intrusion of some frisking ideas, which thus im- portune the understanding, and hinder it from beincr better employed, I know not. Locke.

Oft to the mountains' airy tops advanced. The frisking satyrs on the summits danced. Addison, Those merry blades. That frisk it under Pindus' shades. Prior. When the meridian sun contracts the shade. And frisking heifers seek the cooling shade ; Or when the country floats with sudden rains. Or driving mists deface the moistened plains ; In vain his toils the unskilful fowler tries. While in thick woods the feeding partridge lies.

Gay's Rural Sports. Peg faints at the sound of an organ, and yet will dance aad frisk at the noise of a bagpipe.

Arbuthnot. Sly hunters thus, in Borneo's Isle, To catch a, monkey by a. wile. The mimick animal amuse : They place before him gloves and slioes j Which when the brute puts aukward on. All his agility is gone : In vain lofriik or climb he tries ; The huntsmen seize the grinning prize. Swift, He went forth with the lovely Oaltilis-ques, At the given signal joined to their array ; And though he certainly ran many risks. Yet he could not at any time keep by the way (Although the consequences of %\xch frisks Are .vorse than the worst damages we pay In moral England, where the thing's a tax) From ogling all their charms from breasts to backs.

Byron. FRISRUTTER, an instrument of iron, used for the purpose of blocking up a haven, or river. The following description of it is given by ge- neral Monk : — The beams through which the up- right bars pass must be twelve feet in length, and the upright bars that go through the beam must be of such a length that when one of these frisrutters is let down into a haven, or river, the perpendi- cular bars shall be deep enough to reach, at higu

water, within five feet of the surface.

Frit, or FRiTT,in the glass manufacture, is the matter or ingredients whereof glass is to be made, when they have been calcined or baked :n a furnace. A salt drawn from the ashes of the plant kali, or from fern or other plants, mixed with sand or flint, and baked together, maKes an opaque mass, called by glass-men frit; and by the ancients ammonitrum, of a/i/xof, sand, and virpov, nitre; under which name it is thus described by Pliny : — fine sand from the Vˆoltur- nian sea, mixed with three times the quantity of nitre, and melted, makes a mass called ammoni- trum, which being rebakcd, makes pure glass. Frit, Nerj observes, is only the calx of the mate- rials that make glass; which, though they might be melted, and glass be made, vvithout thus calcining them, yet it would take much more time- This calcining, or making of frit, serves to mix and incorporate the materials lo- ■2 T

cether, and to evaporate all the superfluous hu- midity. The frit, once made, is readily fused and turned into glass. There are three kinds of frits : 1. The crystal frit, or that for crystal metal, made with salt of pulverine and sand. 2. The ordinary frit, made with bare ashes of pulverine, or barilla, without extracting the salt from them. This makes the ordinary white, or crystal metal. 3. Tiie frit for green glasses, made of common ashes, without any preparation, lliis last re- qnires ten or twelve hours baking. The mate- rials in each are to be finely powdered, washed, and searced, then equally mixed, and frequently stirred together in the melting-pot. See Glass. FRITH, n. s. Lat. /return ; Ital. freto. A straight of the sea, where the water bemg con- fined" is rough. It once signified a kind of net ; but this sense is obsolete.

The Wear is a frith, reaching through ihe Ose, from the land to low water mark, and having in it a bunt or cod with an eye hook ; where the fish entering, opon their coming back with the ebb, are stopt from issuing out again. <ˆ«"ˆ«'-

Into this wild abyss the wary fiend Stood on the brink of hell and looked a while. Pondering his voyage ; lor no narrow frith lie had to cross. Milton.

What desperate madman then would venture o'er The frith, oi haul his cables from the shore ?

Drydcii's Virgil.

Batavian fleets Defraud us of the glittering finjjy swarms That heave out friths, and crowd upon our shores.

Thomson.

FRITILLARIA, m botany, a genus of the monogynia order, and hexandria class of plants; natural order tenth, coronarise : cor. hexapeta- lous and campanulated, with a nectariferous ca- vity above the heel in each petal : the stamina are as long as the corolla. There are eight spe- cies, all bulbous-rooted flowery perennials, pro- ducing annual stalks from about one foot to a yard or mere high, terminated by large, bell- shaped, liliaceous flowefs, of a great variety of colors. They are all propagated by offsets, which they furnish abundantly from the sides of their roots, and which may be separated every second or third year. They are hardy plants, and will thrive in any of the common borders.

FRITIL'LARY, M.S. Yr. fritillaire. A plant.

FRITI'NANCY, n. s. Lat. fritinio. The Ncream of an insect, as the cricket or cicada.

The note or fritinancy thereof is far more shrill than that of the locust, and its life short.

Browne's Vulgar Errours.

FRITTER, n. s. & V. a Yr.friture. A smaller Kind of pancake ; u fragment ; a small piece. On the authority of Ainsworth, Johnson adds, a .•;lieesecake ; a wig : but gives no illustrations. To fritter is to cut into small pieces to be fried ; to break into small fragments ; to diminish any larger substance by slow degrees, and in minute uarticles : thus, to fritter away any thing is im- hecceptibly to dissipate it till all is gone one kno\^s not how.

Maids, fritters and pancakes ynow see ye make ; uet Slut have one panrake ^or company sake.

Tusser.

Sense and putter! have I lived to stand in the tauut of one thai makes fritters of English '

Shahtpeare. Merry Wives of Windsor. If you strike a solid body that is brittle, as glass or sugar, it breaketh not only where the immediate force is, but breaketh all about into shivers and fritters ; the motion, upon the

pressure, searching all ways, and breaking where it findeth the body weakest.

Bacon's Natural History.

Our eating of fritters, whipping of tops, roasting o' nerrings, jack of lents, &c., they were all in imitation of church works, emblems of martyrdom. Sdden. The ancient errant knights Won all their ladies hearts in fights And cut whole giants into fritters. To put them into amorous twitters.

Hudibras. Joy to great Chaos ! let Division reign '. My racks and tortures soon shall drive them hence. Break all their nerves, Stad fritter all their sense.

Dunciad. How prologues into prefaces decay. And these to notes are frittered quite away.

Pope,

FRITZLAR, a district of Hesse-Cassel, lying in Lower and Upper Hesse, containing 137 square miles. The population, chiefly Catho- lics, was, in 1812, 15,328. It belonged formerly to the elector of Mentz, but in 1802 was made over to Hesse-Cassel.

Fritzlar, a town of Hesse-Cassel, the capital of the district of that name, is situated on the Edder, and has 2600 inhabitants, many of whom are Jews. Here are manufactures of tobacco and earthenware. It is thirteen miles S.S.W. of Cassel.

FRIULI, a considerable province of Italy, now subject to Austria, bounded on the north by the Tyrol and Carinthia ; east by Carniola and Gradisca; south by the Adriatic, and west by the Trevisan, Feltrin, and Bellunese. It has an area of 2500 square miles, containing four ci ties, twenty towns and boroughs, and 600 vil- lages, and a population of 120,000 Germans, Italians, and Sclavonians, intermixed. The country is partly level and partly mountainous. The former is very fertile, producing all kinds of corn, wine, fruits, &c. ; but the mountains pro- duce only timber and game; and the roads through them are in many places hardly pas- sable, either on foot or horseback. The chief rivers are the Tagliamento, Meduna, Cellina, and Stellar. Cattle are numerous, and the cul- ture of silk is extensive Tlie inhabitants, called Furlani or Friulani, are reckoned, says Dr. Op- penheim, the wildest in Italy. They speak a dialect resembling the ancient French, and widely difi'ering from both the modern Italian and Ger- man. This country was called by the Romans Forum Julii. It was taken from the Lombards by Charlemagne, but belonged to the Venetians from 1420 till its partial alienation to Austria in the following century. In 1797 she obtained

the whole by the treaty of Campo Formio, but ceded it to France by that of Presburg in 1806. In 1814 Friuli fell once more into the possession of Austria : it is now divided into two parts, the circle of Goritz, or Austrian Friuli, and the le- gation of Udina, corresponding to Venetian Friuli: the former belongs to the Illyrian, Int

!atter to the Lombard part oi tf.? An.Tian do minions. The emperor wears tb? title ˆi.d Jrms of duke of Friuli, but the name is not otherwise used.

Friuli, Cividad, or Cividad di. See Ci- viDAD. This town, anciently called Forum Ju- lii, is reckoned the second capital of the above province, and contained 4000 inhabitants in 1 795.

FRIVOL'ITY,n.s. ■\ Fr./huo/e ; Ital. Sp.

Friv'oloi;s, arf?. fand Fort, frivolu ; Lat.

Friv'oloijsness, K.s. Cfrivolus, most probably

Friv'olously, adv. J from Jrio, to crumble into dust ; signifying reduced to nothing. French /h'«o/e, slight ; trifling; of no moment ; without weight, importance, or consideration.

These seem very frivolous and fruitless ; for, tiy the breach of them, little damage can come to the com- monwealth. Spenser.

It is frivolozis to say we ought not to use bad cere- monies of the church of Rome, and presume all such bad as it pleaseth tnemselves to dislike. Hooker.

Hence had the huntress Dian her dread bow. Fair silver-shafted queen for ever chaste, Wherewith she tamed the brinded lioness And spotted mountain pard, but set at nought The frivolous bolt of Cupid ; gods and men Feared her stern frown, and she was Queen o' the woods. Milton's Comtis.

Business the frivolous pretence Of human lusts to shake off inno'ience.

Cowley.

All the impeachments in Greece and Rome agreed in a motion of being

concerned, in point of honour, to condemn whatever person they impeached, however frivolous the articles, or however weak the proofs.

Swift.

I will not defend any mistake, and do not think myself obliged to answer every frivolotis objection.

Arbuthnot.

When I reflect on what I have seen, what 1 have heard, and what I have done, I can hardly persuade my- self that all that frivolous hurry and bustle of pleasure in the world had any reality ; Ijut I look upon all that is past as one of those romantic dreams whirhopium commonly occasions, and I do by no means desire to reptat the nauseous dose. Chesterjield.

It is an endless and frivolous pursuit to act by any other rule than the care of satisfying our own minds.

Steele.

FRIZING OF Cloth, a term in the woollen manufactory, applied to the forming of the nap of stuff into a number of little hard burrs or prominences, covering almost the whole ground thereof. Some cloths are only frized on the back, as black cloths ; others on the right side, as colored and mixed cloths, ratteens, bays, friezes, &c. Frizing- may be performed two ways ; one with the hand, by two workmen, who conduct a kind of plank that serves for a frizing instrument; the other, by a mill, worked either by water or a horse, and sometimes by men. The latter is esteemed the better way ; as, the motion being uniform and regular, the little knobs are formed more equably and regtilarly. The structure of this useful machine is as follows : the three principal parts are the frizer, or crisper, the frizing t;i.ble and the drawer, or beam. ^\l\c two first are two equal planks, or bourds, each about ten feet long and fifteen inches broad ; differing only in this, that the frizing table is Hned or covered with a kind of coarse woollen

stuff, of a rough sturdy nap; and the frizer is incrustated with a kind of cement, composed of glue, gum arable, and a yellow sand, with a little aqua vitae, or urine. The beam, or drawer, thus called because it draws the stuff from between the frizer and the frizing table, is a wooden roller, beset all over witii little, fine, short points or ends of wire, like those of cards used in card- ing of wool. The disposition and use of the machine are thus: the table stands immoveable, and bears or sustains the cloth to be frized, which is laid with that side uppermost on which the nap is to be raised; over the table is placed the frizer, at such a distance from it as to give room

for the stuff to be passed between them : so that the frizer, having a very slow semicircular motion, meeting the long hairs or naps of the cloth, twists and rolls them into little knobs or burrs; while, at the same time, the drawer, ˆvhich is continually turning, draws away the stuff from under the frizer, and winds it over its own points. All that the workman has to do, while the machine is going, is to stretcli the stuff on the table, as fast as the drawer takes it off, and from time to time to take off the stuff from the points of the drawer. The design of having the frizing table lined with stuff of a short, stiff, stubby nap is that it may detain the cloth between the tal)le and the frizer long enough for the grain to be formed, that the drawer may not take it away too readily, which, must otherwise be the case, as it is not held by any thing at the other end. It is unnecessary to say any thing particular of die manner of frizing stuffs with the hand, it being the aim of the work- men, to imitate as near as they carr, with their wooden instrument, the slow, equable, and cir- cular motion of the machine. We need only add, that their frizer is but about two feet long, and one broad; and that, to form the nap more easily, they moisten the surface lightly with water, mingled with whites of eggs or honey. FRIZ'ZLE, V. a. a Fr. Jriser. To curl in Friz'zler, n. s. 5 short curls like nap of frieze. A crisp kind of curl induced by heat. They frixled and curled their hair with hot irons.

Ilakewill.

up stood the corny reed

Embattled in her field, and the' humble shrub. And bush with frizzled hair implicit. Milton,

I doffed my shoe, and sweat Therein I spied this ycWov! frizzled ha.\r. Gay. The chiefs were set, while o'er their head The furze ˆ\ts frizzled covering spread. Beatlie,

FRO, adv. Of Sax ppa. Backward ; regres- sively It is only used in opposition to the word to : to and /ro, backward and forward ; to and from. As a contraction oi from it is not now used.

The fayrnessc of a lady that I se Youd in the gardin, roming to ami fro, Is cause of all my crying and my wo.

CiMucer, The Kniglites Tale. For those same islands, seeming now and then Are not firme land nor any cortein wonnc, I5ut stragling plots, which to and fro doe ronne la the wide waters ; therefore are they bight The wandrings Islands : therefore doe them shonnc j For they have oft drowne many a wandring wight Into most deadly daunger and distressed plight.

Spenser, Faerie Queene, 2 T 2

They turn round like grindlestones. Which ihey dig outfiv' the delves. For their bairns' bread, wives, and selves.

B. Jonson, As when a heap of gathered thorns is cast, jS'ow to, novf fro, before the autumnal blast. Together clung, it rolls around the field. Pope. And others hurried to and fro and fed Their funeral piles with fuel, and looked up With mad disquietude on the dull sky.

Byron. Darkness.

FROBENIUS (John), an eminent printer of the sixteenth century, horn at Hammelburg in Franconia. He studied in the university of Basil, where he acquired great reputation for learning ; and, setting up a printing-house in that city, was the first of the German printers who brought .'hat art to any degree of perfection. The great character of this printer was the principal mo- tive which induced Erasmus to reside at Basil, in order to have his works printed by him. A great number of valuable books were printed by him with care and accuracy. He died in 1527. Erasmus wrote his epitaph in Greek and Latin. John Frobenius left a son named Jerome Frobe- nius, and a daughter married to Nicholas Epis- copius; who, joining in partnership, continue.! Frobenius's prmting-house with reputation, and printed very correct editions of the Greek Fa- thers.

FROBISHER, or Forbisher (Sir Martin), a celebrated navigator and sea officer of the sixteenth century, born at Doncaster in Yorkshire, and from his youth brought up to navigation. He was the first Englishman who attempted to find a north- west passage to China; and, in 1576, he sailed with two barks and a pinnace for that purpose. In this voyage he discovered a cape, to which he gave the name of Queen Elizabeth's Foreland, and the next day a strait, to which he gave his own name. This voyage proving unsuccessful, he attempted the same passage in 1577; but, dis- covering some ore in an island, and his commis- sion directing him only to search for ore, he re- turned to England with it. He sailed again with fifteen ships, and a great number of adventurers, to form a settlement; but, being obstructed by the ice, and driven out to sea by a violent storm, they, after encountering many difficulties, re- turned home, without making any settlement, but with a large quantity of ore. He afterwards commanded the Aid, in Sir Francis Drake's ex- pedition to the West Indies, in which St. Do- mingo, Carthagena,and Santa Justina, in Florida, were taken and sacked. In 1588 he bravely ex- erted himself against the Spanish armada, when he commanded the Triumph, one of the largest ships in that service;

and, as a reward for his distinguished bravery, received the honor of knighthood from the lord high admiral at sea. He afterwards commanded a squadron which cruised on the Spanish coast; and, in 1592, took two valuable ships and a rich carrac. In 1594 he was sent to the assistance of Henry IV., king of France,against a body of the Leaguers and S pa- niards, who had strongly entrenched themselves at Croyzon, near Brest ; but in an assault upon that fort, on the 7th of November, he was unfor- tunately woimded with a ball, of which he died

soon after he had brought back the fleet to Ply- mouth, and was buried in that town.

FROCK, n. s. Yx.froc. A dress; a coat; a kind of gown for children.

That monster, custom, is angel yet iu this. That to the use of actions fair and good. He likewise gives a frock or livery. That aptly is put on. Shukspeare. Hamlet,

Chalybean tempered steel, tind frock of mail 4damantean proof. Milton's Agonistes,

I strip my body of my shepherd's yVocA. Drydcn.

FRODSIIAM, a market town of Cheshire, noted for its ancient castle. It has a stone bridge over the Weaver, near its conflux with the Mersey, and a harbour for ships of good burden. By the late inland navigation, it has communication with the rivers Dee, Ribble, Darwent, Ouse, Trent, Severn, Humber, Thames, Avon, ˆc, which navigation, including its windings, extends about 500 miles in the counties of Lincoln, Nottingham, York, Lancaster, Westmoreland, Stafford, Warwick, Leicester, Oxford, Worcester, &c. Frodsham is ten miles north-east of Chester, and 193 N.N.W. of London.

FROG, n. s. Sax. pfiojsa; Swedish ywf/; Tewi. frosch ; Goth, freja. A small animal with four feet, living both by land and water, and placed by naturalists among mixed animals, as partaking of beast and fish ; famous in Homer's poem. The hollow part of a horse's hoof.

Poor Tom, that eats the swimming /roˆ, t he toad the tadpole. Skakspeare. King Lear.

The screech-owl's eggs and the feathers black ; The blood of the frog and the bone in his back, I have been getting : and made of his skin A purset to keep sir Cranion in. Ben Jonson.

Auster is drawn with a pot or urn, pouring forth water, with which sliall

descendyVoˆs. Peucham.

Frog'-Bit, n. s. Frog and bit. An herb. Froo'-Fish, n. s. Frog and fish. A kind of fish.

Frog'-Grass, 71. s. Frog and grass. A kind of herb.

Frog'-Lettlce, 71. s. Frog and lettuce. A plant.

FROISE, n. .t. From the Fr. froisser, as the pancake is crisped or crimpled in frying. A kind of food made by frying bacon enclosed in a pancake.

FROISSARD, or Froissart (John), an emi- nent English chronicler and poet, was born at Valenciennes in 1337. He was canon and trea- surer of Ciiimay in Hainault. His chief work is a Chronicle of the Transactions in France, Spain, and England, from 1326 to 1400: whicii is reckoned very accurate, and highly valued by all earnest students of ancient manners. Tlie best edition is that of Lyons in 4 vols, folio, 1559. Sleidan abridged it, and Monstrclet continued it down to 1466. It was translated in the reign of Henry 'III. by lord Berners, and latterly by Mr. Johnes of Hafod. Froissard resided long m the court of queen Phillippa, wife of Edward III. He has often been accused of partiality to the English. He died about 1410.

Belgic vrolyk ; Teui. fro/tlic/i, frok.

\t>'o. Gay ; full of

joy ; iioXh.froleica,

FROLIC, ad). & n. s FEor/icLY, adv. Froi/icsome, adj. Fkol'icsomeness, n.s.

I'rol'icsomly, adv. J levity and of wild {)ranks ; a flight of whim and wild joyousness.

And, for more joy, that captive lady faire. The faire Pceana, he enlarged free.

And by the rest did set in sumptuous chaire To feast and frolicke ; nathemore would she Shew gladsome countenance nor pleasant glee.

Spoiser's Faerie Queene. We fairies, that do run By the triple Hecate's team.

From the presence of the sun. Following darkness like a dream. Now TLve frolick. S/iakspeare.

Whether, as some sages sing, The frolick wind that breathes the Spring, Zephyr with Aurora playing. As he met her once a Maying • There on beds of violets blue. And fresh-blown roses washed in dew. Filled her with thee a daughter fair. So buxom, blithe, and debonnair. Milton. Who ripe, and frolick of his full-grown age. Roving the Celtic and Iberian fields. At last betakes him to this ominous wood. Id. Manly spirit and genius plays not tricks with vrords, nor frolicks with the caprices of a frothy ima- gination. Glanvilte. He would be at his frolick once again. And his pretensions to divinity. Roscommon, The gay, the frolick, and the loud. Waller. Then to her new love let her go. And deck her in golden array ; Be finest at every fine show, And frolick it all the long day. Rowe. have heard of some very merry fellows, among whom the frolic was started, and passed by a great majority, that every man should immediately draw a tooth. Steele.

Alcibiades, having been formerly noted for the]ikc frolicks and excursions, was immediately accused of this. Swift.

While rain depends, the pensive cat gives o'er Ucr frolicks, and pursues her tail no more. Id.

From morn till night, from night till startled morn, Peeps blushing on the Revel's laughing crew.

The song is heard, the rosy garland worn. Devices quaint, and frolicks ever new. Tread on each other's kibes.

Byron. Childe Harold.

FROM, prep. Sax, and Scott, pjiam. Of this monosyllable, Dr. Johnson has given no fewer than twenty meanings, and to these he has added twenty-two other manners of using it, ac- companying each with instances sufficiently numerous as proofs ; yet in all his instances from continues, says Tooke (in his Diversions of Purley), to retain invariably one and the same single meaning. See the following (juotation. Proceeding ' on the basis of Dr. Johnson's dic- tionary,' we give his entire article ; but must here again advertise the reader that we consider Mr. Tooke to have demonstrated the utter fallacy of his numerous distinctions.

Mr. Tooke first notices Mr. Harris's view of what he considers the three different relations of this word, the two last of which are in absolute

contradiction to each other. He then adduces

the following illustrations of these different re- lations : — ‘ From,’ he says, ‘ denotes the de- tached relation of body ; as when we say — these Jigs came from Turkey. So as to motion and rest, only with this difference, that here the pre- position varies its character with the verb ; thus if we say, that lamp hangs from the ceiling, the preposition from assumes a character of quies- cence ; but if we say, that lamp is falling from the ceiling, the preposition in such case assumes a character of motion.ˆ And to the whole he thus replies : — ‘ I take the word frovi to have as clear, precise, and at all times, as uniform and unequivocal meaning as any word in the lan- guage. From means merely beginning and nothing else. It is simply the Anglo-Saxon and Gothic noun fjium, ˆIˆHM? beginning, origiti, source, fountain, author. Now then, if you please,we will apply this meaning to Mr. Harris’s formidable instances, and try whether we cannot make from speak clearly for itself, without the assistance of the interpreting verbs ; which are supposed by Mr. Harris, to vary its character at will, and make the preposition appear as incon- sistent and contradictory as himself.

Figs came from Turkey. Laxaˆp falls from ceiling. Lamp hayrgs from ceiling. Came is a complex term for one species of motion.

Falls is a complex term for another species of motion.

Hangs is a complex term for a species of at- tachment.

Have we occasion to communicate or mention the commencement or beginning of these mo- tions and of this attachment; and the place where these motions and this attachment com- mence or begin ? It is impossible to have com- plex terms for each occasion of this sort. What more natural then, or more simple, than to add the signs of those ideas, viz. the word begin- ning (which will remain always the same), and the name of the place (which will perpetually vary) ?

*Tluis, * Figs came — beginning Turkey. Lamp falls — beginning ceiling. Lamp hangs — beginning ceiling.’*

That is,

Turkey the place of beginning to come.

Ceiling the place of beginning to fall.

Ceiling the place of beginning to hang.’

Having thus assigned its meaning, when it re- lates to place, Mr. Tooke

proceeds to comment on what Wilkins calls its secondary application to time.

‘ From morn till night the’ eternal larum rung.’ He admits that there is no])lace referred to in tliis line ; but he contends tliat from relates to every thing to which iu-ginning relates, and to nothing else ; and therefore is referable to time as well as to motion, without which indeed there can be no time. ‘The larum rung beginning morning.’ That is, morning being the time of its beeinning to ring. The Diversions of I’urlcy, chap. 9, page 321. Here follows Dr.

FRO

G46

FRO

Johnson’s list of meanings, with a few superadded illustrations.

Away ; noting privation.

Jubal first made the wilder notes agree. And Jubal timed Musick’s Jubilee ; He oallfˆd ‘.he euho-ˆs from their sullen cell. And built the origan’s lity wlit-re tht-y dwi-U.

‘ MarvM. Musick’s Empire. Your slighting Zulema, this very hour Will take ten thousand subjects from your power.

Driˆden, In fetters one the barking porter ty’d, And took him trembliug/rom his sovereign’s side.

Id. Clarissa drew, with tempting grace, A two-edged weapon /rom the shining case. Pops.

But ne’er from strife — captivity — remorse — From all his feelings in their inmost force — So thrilled — so shuddered every creeping vein As now they froze before that purple stain.

Byron. Corsair,

Noting reception.

What time would spare /rom steel receives its date.

Pope. Noting procession, descent, or birth. The song began /)-am Jove. Dryden.

Thus the hard and stubborn race of man From animated rock and flint began. Blachmore. Succeeding kings rise /rom the happy bed. Irene. Noting transmission. The messengers /(wn our sister and the king.

Shakspeare. This is the colony to plant his knaves From hence he picks and culls his murdering braves.

Marvell. And from the summit of that craggy mound The perching eagle oft was heard to cry. Or on resounding wings to shoot athwart the sky.

Beatiie. Noting abstraction or vacation.

I shall find time From this enormous state, and seek to give Losses their remedies. Shcikˆpeare. King Lear,

With to following ; noting succession. These motions we must examine from first tu last, to find out what was the form of the earth. Burnet. He bid her /rom time to time be comforted.

Addison.

Out of; noting emission.

When the most high Eternal Father, from his secret cloud Amidst, in thunder uttered thus his voice.

Milton. Then, pierced with pain, she shook her haughty head. Sighed from her inward soul, and thus she said.

Dryden.

Noting progress from premises to inferences.

If the objection be not removed, the conclusion of experience /rom the time past to the time present will not be sound and perfect. Bacon.

This is evident /rojii that high and refined morality, which shined forth in some of the ancient heathens.

South.

Noting the place or person from whom a mes- sage is brought.

The king is coming, and I must speak with him from the bridge. — How now, Fluellan, cam'st thou /rom the bridge ? Shakipeare. Henry V.

Out of; noting extraction.

From high Meonia's rocky shores I came. Of poor descent : Ac«tes is my name. Addison.

Because of ; noting the reason or motive of an act or effect.

David celebrates the glory of God from the consi- deration of the greatness of his works. Tillotson. You are good, but /rom a nobler cause ; From your own knowledge, not /rom nature's laws.

Dryden, We sicken soon /rom her contagious care j Grieve for her sorrows, groan for her despair.

Prior. Relaxation from plenitude is cured by spare diet, and from any cause by that which is contrary to it. Arbuthnot on Aliments. Out of; noting the ground or cause of any- thing.

By the sacred radiance of the sun. The mysteries of Hecate, and the night j By all the operations of the orbs. From whom we do exist, and cease to be. Here I disclaim all my paternal care.

Shahpeare. They who believe that the praises which arise from valour are superior to those which proceed from any other virtues, have not considered. Dryden.

What entertainment can be raised from so pitiful a machine ? We see the success of the battle from the very beginning. Id.

'Tis true /ro»>i force the strongest title springs, I therefore hold /rom that which first made kings.

Id. Not near to ; noting distance.

His regiment lies half a mile at least South /rom the mighty power of the king.

Shakspeare. Noting separation or recession.

To die by thee, were but to die iu jest ; From thee to die, were torture more than death.

Shakspeare. Hast thou beheld, when /rom the goal they start. The youthful charioteers with heaving heart. Rush to the race, and panting, scarcely bear. The' extremes of feverish hope and chilling fear.

Id. Viryil. Noting exemption or deliverance. And whos child that it was he hade hire hide From every wight, for aught that may betide.

Chaucer. The Clcrkes Tale. From Jealousy's tormenting strife. For ever be thy bosom freed. Prior.

Noting alisence.

Our father he hath writ, so hath our sister. Of ditferences, which I best thought it fit. To answer /rom our home.

Shakspeare. King Lear. Noting derivation.

I lay the deep foundations of a wall. And Enos, named from me, the city call.

Dryden. Since. Noting distance from the past. The flood was not the cause of mountains, but there were mountains /rom the creation. Raleigh.

I had from my childhood a wart upon one of my fingers. Bacon.

The other had been trained up from his youth in the war of Flanders. Clarendon.

Were there, from all eternity, no memorable ac- tions done 'till about that time ? Tillotson. The milk of tigers was his infant food. Taught /rom his tender years the Uste of blood.

Dryden.

FRO

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FRO

Contrary to. Not in use.

Any thing so overdone in from the purpose of play- ing ; whose end, both at the first and now, was and is to hold, as 'twere, the mirrour up to nature.

S/takspeare. Hamlet. Do not believe. That from the sense of all civility, I thus would play and trifle with your reverence.

Id. Did you draw bonds to forfeit ? Sign, to break ? Or must we read you quite yi-ynt what we speak. And find the truth out the wrong way ? Dunne.

Noting removal.

Thrice from the groun3 she leaped. Dryden. From i3 very frequently joined

by an ellipsis with adverbs : as, from above, from the parts above ; from below, from tlie places below ; of which some are here exemplified. From above.

He, which gave them from above such power, for miraculous confirmation of that which they taught, endued them also with wisdom from above, to teach that which they so did confirm. Hooker.

No sooner were his eyes in slumber bound. When, from above, a more than mortal sound Invades his ears. Dryden's JEneid.

From (fur.

Light demilances yVoOT afar they throw.

Dryden. Fi'om beneath.

With whirlwindsyVom beneath she tossed the ship And bare exposed the bottom of the deep. Dryden.

An arm arises out of Stygian flood. Which, breaking from beneath with bellowing sound. Whirls the black waves and rattling stones round.

Id. From behind.

See, to their base restored, earth, seas, and air. And joyful agesyVom behind, in crowding ranks appear.

Dryden. From far.

A ship of merchants, that fetches her wares from far, is the good housewife of the commonwealth.

Bp. Hall. Their train proceeding on their way. From far the town and lofty towers survey.

Dryden. From high. Then heaven's imperious queen shot down from

high. Dryden.

From hence. Here /"ro/n is superfluous. In the necessary dill'erences which arise fro/n thence, they rather break into several divisions than join in any one public interest ; and from hence have always risen the most dangerous factions, which have rained the peace of nations. Clarendon.

From wheticv. From is here superflaous.

While future realms his wandering thoughts de- light. His daily vision, and his dream by night. Forbidden Thebes appears before his eye. From whence he sees his absent brother fly. Pope.

From where.

From where high Ithaca o'erlooks the floods. Brown with o'erarching shades and pendent woods. Us to tlicse shores our filial duty draws.

Pojie's Odyssey.

From inilhout.

When the plantation grows to strength, then it is time to plant it with women as well as with men, that it may spread into generations, and not bo pierced fronˆ without. Bacon.

If native power prevail not, shall I doubt To seek for needful succour from without

Dryden. From is sometimes followed by another pre- position, with its proper case. From amidst.

Thou too shalt fall by time or barbarous foes, Whose circling walls the seven famed hills enclose; And thou, whose rival towers invade the skies. And from amidst the waves with equal glory rise.

Addison. From among.

Here had new begun My wandering, had not he, who was my guide Up h \.h&x, from among the trees appeared. Presence divine. Milton's Paradise Lost.

From beneath.

My worthy wife our arms mislaid, AndyVoni beneath my head my sword conveyed.

Dryden's Mneid. From beyond.

There followed him great multitudes of people from Galileo, and _/Voot fteˆoni Jordan.

Matthew iv. 25. From forth.

Young Aretus, from forth his bridal bower. Brought the full laver o'er their hands to pour. And canisters of consecrated flour.

Pope's Odyssey, From of.

Knights, unhorsed, may rise /rom oˆthe plain. And fight on foot, their honour to regain. Dryden.

The sea being constrained to withdraw from off certain tracts of lands, which lay till then at the bot- tom of it. Woodward. From out.

And join thy voice unto the angel-quire. From out his secret altar touched with hallowed fire.

Milton. The king with angry threatnings from out a win- dow, where he was not ashamed the world should behold him a beholder, commanded his guard and the rest of his soldiers to hasten their death.

Sidney. Now shake, /rom out thy fruitful breast, the seeds Of envy, discord, and of cruel deeds.

Dryden's ˆneid. Strong god of arms, whose iron sceptre sways The freezing North and hyperborean seas. Terror is thine, and wild amazement, flung From out thy chariot, withers even the strong.

Dryden, From out of.

Whatsoever such principle there is, it was at the first found out by discourse, and drawn from out of the very bowels of heaven and earth. Hooker.

From under.

He, though blind of sight. Despised, and thought extinguished quite, With inward eyes illuminated. His fiery virtue roused From under ashes into sudden flame.

Milton's Agonistes. From within.

From withhi The broken bowels, and the bloated skia A buzzing noise of bees his cars alarms.

Dryden.

FROME, a river of England, that rises from

several springs in the south-west of Dorsetshire,

and, running almost due west, passes, under

Frampton-bridge to Dorchester, and falls into a

bay of the English Channel, called Poolhaven, near Wareham.

l-‘iioME, or Frome-Selwood, a town of Somer- setshire, and one of the most considerable of this part of the country, which was anciently one great forest, called Selwoodshire. Here is a large handsome church, 150 feet long, and fifty- four broad, comprising a nave, chancel, north and south aisles, four chapels, and a vestry-room, with a square embattled tower and an octagonal spire, 120 feet hi«h. Tliere are likewise several meeting-houses in the town, belonging to dif- ferent denominations of dissenters, two of which are large handsome edifices. Near the bridge stands a free-school for twenty boys, and an alms-house for widows ; tlie latter is a handsome building, and was erected, by subscnption, in 1720. Here is also an hospital for old men, a charity-school for boys, and an asylum for girls, to- gether with various Sunday-schools, which afford instruction to 2000 children. The chief manufac- ture is broad and narrow cloth. Formerly more wire cards, for carding wool for the spin- ners, were made at this place than in all the rest of England, and there were no fewer than twenty master card-makers, one of whom employed 400 men, women, and children, in that manufactory at once. This town has been long noted for its fine ale, which is kept to a great age. It is thir- teen miles south of Eath, and 105 west by south of London.

FRO’MWARDˆ prep. Sax. pjˆam and jˆeapt). Away from ; the contrary to the word towards. Not now in use.

As cheerfully going towards as Pyrocles went fro- ward yroOTzuard his death. Sidney.

The horizontal needle is continually varying to- wards East and West ; and so the dipping or inclining needle is varying up and down, towards or fromwards the zenith. Cheyne.

FROND ESC ENTIiE TEMPUs,in botany, the precise time of the year and month, in which each species of plants unfolds its first leaves. All plants produce new leaves every year ; but all do not renew them at the same time. Among woody plants, the elder, and most of the honey- suckles ; among the perennial herbs, the crocus and tulip are the first that push or expand their leaves. The time of sowing the seeds decides with respect to

annuals. The oak and ash are constantly the latest in pushing their leaves ; the greatest number unfold them in spring ; the mosses and firs in winter. These striking differences seem to indicate that eacti species of plants has a temperature proper or peculiar to itself, and requires a certain degree of heat to extricate the leaves from the buds. This temperature, however, is not so fixed or constant as it may at first view appear. Among plants of the same species, there are some more enrly than others ; whether that circumstance depends, as it most commonly does, on the nature of the plants, or is owing to differences in heat, exposure, and soil. In general, it may be affirmed that small and young trees are always earlier than larger or old ones. The pushing of the leaves is likewise accelerated or retarded, according to the temperature of the season ; that is, according as the sun is sooner or later in dispensing the degree of heat suitable to each species.

FRONDI'FEROUS, ac^. Latin frondifer Bearing leaves.

FRONT, 71. s., ». a. & V. n. -^ Fr. front ; Lat.

Front'ed, adj. y^frons. Face and

Fuont'less, adj. j front both signify

the human countenance, and figuratively desig- nate the particular parts of bodies, which bear some sort of resemblance to it, or to the fore- head. Crabb thus distinguishes their peculiar application : ' Face is applied to that part of bo- dies which serves as an index or rule, and con- tains certain marks to direct the observer; front is employed for that part which is most promi- nent or foremost : hence we speak of the face of a wheel or clock, the face of a painting, or the face of nature; but the front of a house or build- ing, and the front of a stage : hence likewise the propriety of the expressions, to put a good face on a thing; to show a bold front.' The verb signifies to oppose directly, or face to face, in the sense of confront; to stand opposed or over against any place or thing ; to stand foremost. Front! ess is used in the sense of barefaced un- blushing impudence.

1 front but in that file. Where others tell steps with me.

Shakspeare. Henry VI 11. You four shall front them in the narrow lane ; we will walk lower : if they 'scape from your encounter^ then they light on us. Shakspeare.

Can you, when you have pushed out of your gates the very defender of them, think to front his revenges with easy groans ? Id.

Some are either to be won to the state in a fast and true manner, or fronted with some other of the same party that may oppose them, and so divide tlie

reputation. Bacon's Essays.

Both these sides are not only returns, but parts of the front ; and uniform without, though severally portioned within, and are on both sides of a great and stately tower, in the midst of the front. Bacon.

The access of the town was only by a neck of land : our men had shot, that thundered upon them from the rampier ia front, and from the gallies that lay at sea in flank. Id.

His forward hand, inured to wounds, makes way Upon the sharpest fronts of the most fierce. Daniel. They stand not front to front, but each doth view The other's tail, pursued as they pursue. Creech.

Fdit fronted brigades form. Milton.

'Twixt host and host but narrow space was left, A dreadful interval 1 and front to front Presented, stood in terrible array.

Id. Paradise Lost. Next do the lawyers sordid band appear. Finch in the front and Thurlaud in the roar.

Ularvell. Palladius adviseth the front of his edifice should so respect the South, that in its first angle it receive the rising rays of the Winter's sun, and decline a little from the winter setting thereof. Browne,

The prince approached the door. Possessed the porch, and on the fro7it above He fixed the fatal bough. Dryden's Mneid.

Thee, frontless man, we followed from afar. Thy instruments of death and tools of war.

Dry den. For vice, though frontless, and of hardened face. Is daunted at the sight of awful grace. Id.

The square will be one of the most beautiful in Italy when this statUR is erected, and a town house

built iit one end to front the churcu that stands at the (3t)ier_ Addison on Italy.

One sees .he front of a palace covered with painted pillars of different orders. Id.

His front yet threatens, and his frowns command.

Prior. Strike a blush through frontless flattery. Pope. Where the deep trench in length extended lay. Compacted troops stand wedged in firm array, A dreadful front. Id.

The patriot virtues that distend thy thought. Spread on thy front and in thy bosom glow.

Tliomson.

The high moon sails upon her beauteous way. Serenely smoothing o'er the lofty walls Of those tall piles and sea-girt palaces. Whose porphyry pillars, and whose costly fronts, Fraught with the orient spoil of many marbles. Like altars ranged along the broad canal. Seem each a trophy of some mighty deed Reared up from out the waters.

Bi/ron. The Doge of Venice .

They erred, as aged men will do ; but by And by we'll talk of that ; and if we don't 'Twill be because our notion is not high Of politicians, and their double yroni Who live by lies, yet dare not boldly lie. Byron. They reached the hotel : forth streamed from the front door A tide of well clad waiters ; and around The mob stood, and as usual several score Of those pedestrian Paphians, who abound In decent London, when the day light's o'er. Id.

Front, in architecture, denotes the principal face or side of a building, or that presented to their chief aspect or view.

FRO'NTAL, n. s. Yx.frontale; LaX.frontale. Any external form of medicine to be applied to the forehead, generally composed among the an- cients of coolers and hypaoticks.

We may apply intercipients upon the temples of mastick : frontalet may also be applied. Wiseman.

The torpedo, alive, stupefies at a distance ; but after death produceth no such effect ; which had they retained, they might have supplied opium, and served us frontals in phrensies. Browne.

Frontal, Frontlet, or brow-band, in the Jewish ceremonies, consists of four several pieces of vellum, on each of which is written some text of scripture. They are all laid on a piece of lilack calf's leather with thongs to tie it by.

The Jews apply the leather with the vellum on their foreheads in the synagogue, and tie it round the head with the thongs.

FRO'NTATED, «

FRO'NTBOX, n. s. Front and box. The box in the playhouse from which there is a direct view to tlie stage.

How vain are all those gUries, all our pains, Unless good sense preserve what beauty gains ! That men may say, when we the frontbox grace. Behold the first in virtue, as in face. Pope.

FRO'NTIER, n. s. & adj. ¥T.froutieic. The limit or utmost verge of any territory ; the bor- der ; properly that which terminates not at the

sea, but fronts another country ; bordering ; con terminous.

Draw all the inhabitants of those borders away, or plant garrisons upon all those frontiers about him.

Spenser on Ireland, I upon vny frontiers here keep residence. That little which is left so to defend. Milton.

Yet had his temple high Reared in Azotus, dreaded through the coast Of Palestine, in Gath and Astalon, An Accaron and Gs.zi,'s frontier bounds.

Id. Paradise Lost. A place there lies on Gallia's utmost bounds. Where rising seas insult the frontier grounds.

Addisott, Beyond the frontiers, his anxious view could dis- cover nothing, except the ocean, inhospitable deserts, hostile tribes of barbarians of fierce manners and un- known language, or dependant kings who would gladly purchase the emperor's protection by the sacri- fice of an obnoxious fugitive. Gibbon.

Frontiers are the extremes of a kingdom or country, which the enemies find in front when they would enter it. They were anciently called marches.

FRONTINAC, Fort, a fortress of Canada, on the north-west side of Lake Ontario, three miles from its mouth, and 300 from Quebec. It was taken from the French, in August 1759, by the British under colonel Bradstreet, though de- fended by 110 men and sixty pieces of cannon, besides Indians.

FRONTINUS (Sextus Julius), an ancient Roman author, of consular dignity, who flou- rished under Vespasian, Titus, Domitian, Nerva, and Trajan. He commanded the Roman armies in Britain ; was made city

pra;tor when 'espa- sian and Titus were consuls ; and curator of the aqueducts by Nerva, which occasioned his writmg De Aquaeductibus Urbis Romae. lie wrote four books upon the Greek and Roman art of war ; a tract De re Agrariii, and anothei De Limitibus. These have been often separately pr.nted ; but were all collected in a neat edition at Amster- dam, in 1661, with notes by Robert Keuchen. He died under Trajan.

FRO'NTISPIECE, «.s. Yv.frontispice ; Lat. frontispicium, id quod infronte conspicitur. That part of any building or other body that directly meets the eye.

With frontispiecs of diamond and gold

Embellished, thick with sparkling orient gems

The portal shone. Mikon's Paradise Lost

Who is It has informed us that a rational soul can inhabit no tenement, unless it has just such a sort of frontispiece ? Locke.

The frontispiece of the townhouse has pillars of a beautiful black marble, streaked with white.

A ddison

FRO'NTLET, Ji.s. Fr. frontcau ; Lat. from A bandage worn upon the forehead.

They shall be a.s frontlets between thine eyes.

Dctit. vi. 8. How, now, daughter, what makes that fronll-;' on ? You are too much of late i' the frown.

Shnlispeare. To the forehead frontlets were apjdiod, to restrain and intercept the influx. Wiscmati's Surgery.

FRONTO (Marcus Cornelius), a Roman orator, preceptor to the emperor Marcus Aurelius and

Lucius Verus. The former made him consul, ami erected a statue to his honor.

FllONTlIO'OM, n. s. Front and room. An : partment in the fore part of the

house.

If your shop stands in an eminent street, the front' rooms are commonly more airy than the backrooms ; and it will be inconvenient to make the frontroom shallow. Moron.

*FRONZELLA, one of the seventeen almost inaccessible passes througli the mountains of Vicenza, in Italy, commencing in the Valley of Brenta. It is the narrowest of them, and is so 'covered by perpendicular rocks, 300 feet high, that a ray of the sun can scarcely penetrate into the pass, and the eye cannot perceive the sky.' Yet 'this road (says. Dr. Oppenheim), is the easiest and most passable' of the seventeen, • except during rain or snow, when it is the most perilous.**

FROllE, adj.) Dutch bevrozen, frozen.

Froune.] Frozen. This word is not

used since the time of Milton.

O, my heart-blood is well nigh, frorne I feel.

And my galag-e grown fast to my heel.

Spenser') Past. The parching air

Untasfrore, and cold performs the' effect of fire.

Milton.

FROST, n. s. \ Sax. FAOrt; Dan. Swed. Fros'ted, adj. i and Teut. frost ; Belg. Fros't I LY, a:/i; \vroxt. The last effect of Frost'iness, n. s. i cold; the power or act of Fros'ty, adj. J congelation ; the appear ance of plants and trees sparkling with congela- tion of dew : the adjective is applied to whatever in appearance resembles this : the adverb is ap- plied not only to natural cold but to want' of nnimal warmth, and to coldness of affection; likewise to the head that is gray with age. His eyen twinkeled in his hed aright. As don the sterrcs in a frosty night.

Chaucer. Prologue to Cant. Tales. There they doe finde that godly aged sire. With snowy lockes adowne bis shoulders shed ;

As hoary frost with spangles doth attire The mossy branches of an okc halfe ded.

Spenser's Faerie Queene. This is the state of man ; to-day he puts forth The tender leaves of hope, to-morrow blossoms And bears his blushing honours

thick upon him ; The third day comes di frost, a killing /roi<. And when he thinks, good easy man, full surely His greatness is a ripening, nips his root. And then he falls. Shali»i>eare. Henri/ VIII.

Where is loyalty ? If it be banished from ihi'. frosfi/ head. Where shall it find a harbour in the earth ?

Shakspeare. What a frosty spirited rogue is this ! Id.

For all my blood in Rome's great quarrel shed, for all .he frosty nights that I have watched, JJe pitiful to my condemned sons.

Id. Titus Andronicus. The air, if very cold, irritateth the flame, and makcth it burn more fiercely ; as fire scorcheth in frosty weather. Bacon.

Courtling, I rather thou should'st utterly Dispraise my work, than praise it frostily.

Ben Jonson. A gnat half-starved with cold and hunger, went out ime /rosty morning to a bee-hive. L' Estrange.

When the frost seizes upon wine, only the more watcrish parts are congealed ; there is a mighty spi- rit which can retreat into itself, and within its own compass lies secure from the freezing impression.

South. The rich brocaded silk unfold. Where rising flowers grow stiff with frosted gold.

Gay. Behold the groves that shine with silver yro<. Their beauty withered, Aud their verdure lost.*

Pope. The Hours had now unlocked the gate of day.

When fair Aurora leaves her frosty bed. Hasting with youthful Cephalus to play

Unmasked her face, and rosy beauties spread : Tithonus' silver age was much despised ; Ah ! who in love that cruel law devised. That old love's little worth, and new too highly prized ? Fletcher's Purple Island.

Tis the same landscape which the modern Mars saw Who marched to Moscow, led by Fame the Syren I To lose by one month's yVoit some twenty years Of conquest and his guard of grenadiers. Byron.

FROST, in physiology. Having under the articles Cold, Congelation, and Freezing, entered fully into the various phenomena of freezing, we shall only here add a few miscella- neous observations on particular effects of

frost.

Being derived from the atmosphere, (see Mete- orology), frost naturally proceeds from the upper parts of bodies downwards, as the water and the earth : so, the longer a frost is continued, the thicker the ice becomes upon the water in ponds, and the deeper into the earth the ground is frozen. In about sixteen or seventeen days frost, Mr. Boyle found it had penetrated fourteen inches into the ground. At Moscow, in a hard season, the frost will penetrate two feet deep in the ground ; and captain James found it pene- trated ten feet deep in Charlton Island, and the water in the same island was frozen to the depth of six feet. Scheffer assures us, that in Sweden the frost pierces two cubits or Swedish ells into the earth, and turns what moisture it finds there into a whitish substance, like ice ; and standing waters to three ells, or more. The same author also mentions sudden cracks in the ice of the lakes of Sweden, nine or ten feet deep, and many leagues long ; the rupture being made with a noise not less loud than if many guns were dis- charged together. By such means, however, the fishes are furnished with air; so that they are rarely found dead. In the northern parts of the world the most compact bodies are affected by frost. Timber is often apparently frozen, and rendered exceedingly difficult to saw. Marl, chalk, and other less solid terrestrial concretions, will be shattered by strong and durable frosts. Metals are contracted by frost, thus, an iron tube twelve feet long, upon being exposed to the air in a frosty night, lost two lines of its length. On the contrary, frost swells or dilates water nearly one tenth of its bulk. Mr. Boyle made several experiments with metalline vessels, ex- ceedingly thick andstrorˆg; which being filled with water, close stopped, and exposed to the cold, burst by the expansion of the frozen fluid within them. Trees are often destroyed by frost.

as if burnt up by the most excessive heat ; and, in very strong frosts, walnut trees, ashes, and even oaks, are sometimes split and cleft, so as to be seen through, and this with a terrible noise, like the explosion of fire-arms. In cold coun- tries, the frost often proves fatal to mankind ; producing gangrenes, and even death itself. Those who die of it have their hands and feet tirst seized, till they grow past feeling it; after which the rest of their bodies are so invaded, that they are taken with a drowsiness, which if indulged, they awake no more, but die insensibly. It also sometimes seizes the abdomen and viscera, which on dissection are found to be mortified and black.

The great power of frost on vegetables is sufficiently known : but the

differences between the frosts of a severe winter, and those which happen in the spring mornings, in their effects on plants and trees, were never perfectly explained till by Messrs. Du Ilamel and Buffon, in the Memoirs of the Paris Academy. The frosts of severe winters are much more terrible than those of the spring, as they bring on a privation of all the products of the tenderer parts of the vegetable world ; but then they are not frequent, such winters happening perhaps but once in an age ; and the frosts of the spring are in reality greater injuries to us than these, as they are every year repeated. In regard to trees, the great difference IS this, that the frosts of severe winters affect even their wood, their trunks and large branches ; whereas those of the spring have only power to hurt the buds. The winter frosts happening at a time when most of the trees in our woods and gardens have neither leaves, flowers, nor fruits upon them, and have their buds so hard as to be proof against slight injuries of weather, espe- cially if the preceding summer has not been too wet ; in this state, if there are no unlucky cir- cumstances attending, most trees bear moderate winters very well : but hard frosts, which happen late in winter, cause very great injuries even to those trees which they do not utterly destroy. These are, 1. Long cracks following the direc- tion of the fibres. 2. Parcels of dead wood en- closed round with wood yet in a living state. And 3. That distemperature which foresters call the double blea, which is a perfect circle of blea, or soft white wood, which, when the tree is after- wards felled, is found covered by a circle of hard and solid wood.

The opinions of authors about the exposition of trees to the different quarters, have been very different, and most of them grounded on no rational foundation. Many are of opinion that the effects of frosts are most violently felt on those trees which are exposed to the north, and others think the south, or the west the most strongly af- fected by them. There is no doubt but the north exposure is subject to the greatest cold. It does not, however, follow from this, that the injury must be always greatest on the trees exposed to the north in frosts: on the contrary, there are abundant proofs, that it is on the south side that trees are generally most injured by frost : and it is plain from repeated experiments, that there are par- ticular accidents, under which a more moderate frost may do more injury to vegetables, than the

most severe one which happens to them under more favorable circumstances. It is plain from the accounts of the injuries trees received by the frost in 1709, that the greatest of all were owing to repeated false thaws, succeeded by repeated new frosts. But the frosts of the spring furnish abundantly more numerous example^ of this truth ; and some experiments made by the count de Buffon, in his own woods, prove incontestably, that it is not the severest cold or most frxed frost that does the greatest injury to vegetables. This is an observation directly opposite to the common opinions,

yet it is not the less true, nor any way discordant to reason.

We find, by a number of experiments, that it is humidity that makes frost fatal to vegetables ; and tlierefore every thing that can occasion hu- midity in them, exposes them to these injuries, and every thing that can prevent or take off an over proportion of humidity in them, every thing that can dry them, though with ever so increased a cold, must prevent or preserve them from those injuries. Numerous experiments and observa- tions tend to prove this. It is well known that vegetables always feel the frost very desperately in low places where there are fogs. The plants which stand by a river side are frequently found destroyed by the spring and auiumnal frosts, while those of the same species, wliich stand in a drier place, suffer little or perhaps not at all by them ; and the low and wet parts of forests are well known to produce worse wood than the high and drier. The coppice wood in wet and low parts of common woods, though it push out more vigorously at first than that of other places, yet never comes to so good a growth ; for tlie frost of the spring killing these early top shoots, obliges the lower part of the trees to throw out lateral branches : and the same thing happens in a greater or less degree to the coppice wood that grows under cover of larger trees in great forests ; for here the vapors, not being carried off either by the sun or wind, stagnate and freeze, and in the same manner destroy the young shoots, as the fogs of marshy places. It is a general observation, also, that the frost is never hurtful to the late shoots of the vine, or to the flower-buds of trees, except when it follows heavy dews, or a long rainy season, and tlien it never fails to do great mischief, though it be ever so slight. The frost is always observed to be more mischievous in its consequences on newly cultivated ground than in other places ; and this is because the vapors, which continually arise from the earth, find an easier passage from those places than from others. Trees also which have been newly cut, suffer more than others by the spring frosts, which is owing to their shooting out more vigorously. Frosts also do more damage on light and sandy grounds, than on the tougher and firmer soils, supposing botii equally dry ; and this seems partly owing to their being more early in their productions, and partly to their lax texture suffering a greater quantity of vapors to transpire. It has also been frequently observed, that the side-shoots of trees are more subject to perish by the spring frosts than those from the top ; and M. Buffon, who examined into this with great accuracy, always found thg

effects of the spring frosts much greater near the ground than elsewhere. The shoots witlnn a foot of the ground quickly perished by them ; those which stood at two or three feet high bore them nmch better ; and those at

four feet and upwards frequently remained wholly unhurt, while the lower ones were entirely destroyed. A series of observations have, proved, beyond all doubt, that it is not the hard frosts which so much hurt plants, as those frosts, though less severe, which happen when they are full of moisture ; and this clearly explains the account of all the great damages done by the severe frosts being on the south side of the trees which are affected by them, though that side has been plainly all the while less cold than the north. Great damage is also done to the western sides of trees and plantations, when after a rain with a west wind the wind turns about to the north at sunset, as is frequently the case in spring, or when an easi wind blows upon a thick fog before sunrising.

It should be added that frost is in the northern parts of the world a constant assistant in pre- serving meat. It has also other recommendations, and becomes an important assistant of their ar- chitecture, in the hands of the Esquimaux tribes.

Their winter huts are built entirely of snow frozen into a solid mass. The snow is formed into blocks, which laid over each other, and gradually bending inwards, terminate in a regular dome, sometimes nine or ten feet high. A plate of ice forms the window. When clusters of these huts have had their intervals filled up with snow and drift, they cannot be distinguished from the surrounding plain, and may be walked over; hence the idea of Greenland subterranean habitations ; but, when the roof is thinned by thawing, a leg is apt to come down through it. The entrance is long, and under ground, as de- scribed by Scoresby. In the interior, raised benches of snow, covered with skins, serve for sitting or sleeping on. Heat, light, and cooking, are afforded by one lamp, having a wick eigh- teen inches long, fed with oil or blubber, and which, when lighted through its whole length, makes a most brilliant and beautiful flame. Close to it the temperature is raised to thirty-eight degrees, but in receding falls to twenty-three de- grees, and cannot be raised higher without the danger of melting this frail mansion. In spring, indeed, the dripping causes much inconvenience, and brings on severe colds. These mansions, however, are said to be much more comfortable than those roofed with skins, the heat and close- ness of which produce very bad effects.

*Captain Franklin mentions a curious fact with regard to frozen fish in his late Journey to the Polar Seas. * It may be worthy of notice here, he says, that the fish froze as they were taken out of the nets, and in a short time became a solid mass of ice ; and by a blow or two of the hatchet were easily split open, when the intes- tines might be removed in one lump. If in this completely frozen state they were thawed before the fire, they recovered their animation. This was particularly the case with the carp, and we had occasion to observe it repeatedly, as Dr. Richardson occupied*

himself in examining the

structure of the different species of fish, and was always, in the winter, under the necessity of thawing them before he could cut them. We have seen a carp recover so far as to leap about with much vigor, after it had been frozen for thirty-six hours.' p. 248.

*A few pages onward he gives us the following statement of other effects of extreme cold in these regions. * The weather durin»g this montii (December) was the coldest we experienced during our residence in America. The ther- mometer sunk on one occasion to 57° below zero, and never rose beyond 6° above it; the mean for the month was — 29'7°. During these intense colds, however, the atmosphere was gene- rally calm, and the wood-cutters and others went about their ordinary occupations without using any extraordinary precautions, yet without feeling any bad effects. They had their rein-deer shirts on, leathern mittens lined with blankets, and furred caps; but none of tliem used any defence for the face, nor did they need to do so. Indeed we have already mentioned that the heat is ab- stracted most rapidly from the body during strong breezes, and most of those who have perished from cold, in this country, have fallen a sacrifice to their being overtaken on a lake, or other un- sheltered place, by a storm of wind. The in- tense colds were, however, detrimental to us in another way. The trees froze to'their very cen- tres, and became as hard as stones, and more difficult to cut. Some of the axes were broken daily, and by the end of the month we had only one left that was fit for felling trees. By en- trusting it only to one of the party who had been bred a carpenter, and who could use it with dex- terity, it was fortunately preserved until the ar- rival of our men with others from Fort Provi- dence.*

' A thermometer hung in our bed room at the distance of sixteen feet from the fire, but exposed to its direct radiation, stood, even in the day- time, occasionally at 15° below zero, and was observed more than once, previous to the kind- ling of the fire in the morning, to be as low as 40° below zero. On two of these occasions the chronometers (Nos. 2149 and 2151), which during the night lay under Mr. Hood's and Dr. Richardson's pillows, stopped while they were dressing themselves.' — pp. 254, 255.

We subjoin a chronological list of some of the most remarkable frosts recorded in history.

A. D.

220. The frost in Britain that lasted five

months. 250. The Thames frozen nine weeks. 291. Most rivers in Britain

frozen six weeks. 359. Severe frosts in Scotland for fourteen

weeks. 508. The rivers in Britain frozen for two

months. 558. The Danube quite Irozen over. 095. The Thames frozen six weeks ; booths built

on it. 759. Frost from October 1st, till February 26th,

760.

827. Frost in England for nine weeks. 859. Carriages used on the Adriatic Sea.

FROST.

653

A. n.

908. Most rivers in England frozen two

months. 923. Tiie Thames frozen thirteen weeks. 987. Frost lasted 120 days; began December

22d. 998. The Thames frozen five weeks. 1035. Severe frost on June 24th; the corn and

fruits destroyed. 1063. The Thames frozen fourteen weeks. 1076. Frost in England from November till

April. 1114. Several wooden bridges carried away by

ice. 1205. Frost from January 14th till March 22d. 1407. Frost that lasted fifteen weeks. 1434. From November 24th to February 10th,

Thames frozen down to Gravesend. 1683. Frost for thirteen weeks. 1708-9. Severe frost for many weeks. 1715. The same for many weeks. 1739. One for nine weeks; began December

24th. ; 742. Severe frost for many weeks. 1747. Severe frost in Russia. 1754. Severe one in England. 1760. The same in Germany. 1776. The same in England, 1788. Thames frozen below bridge; booths on

it. !795. Severe frost in England. 1814. The Thames was frozen over in Janvrary

and booths erected on various parts of it. The

river Tyne also was frozen at Newcastle to

the depth of twenty inches.

From a bulky work of the German writer Pil- ■gram, published at Vienna 1788, some' interest- ing facts with regard to the severity of the frosts abroad, for above 1000 years may be ga- thered : the later dates are supplied from the ob- servations of professor Piatt of Kiel.

A. D.

I ri 401 the Black Sea was entirely frozen over.

In 462 the Danube was frozen, and Theodo- mir marched over it to avenge his brother's death in Suabia.

In 763 the Black Sea and the Dardanelles were both frozen over. The snow in some places rose fifty feet high, and the ice was so heaped in the cities as to push down the walls.

In 800 the winter was intensely cold.

In 822 the great rivers of Europe, such as the Danube, the Elbe, and the Seine, were so hard frozen as to bear heavy waggons for a month.

In 860 the Adriatic was frozen.

In 874 the winter was very long and severe. The snow continued to fall from the beginning of November to the end of March, and in- cumbered tVie ground so much, that the forests were inaccessible for the supply of fuel.

In 891, and again in 893, the vines were killed by the frost, and the cattle perished in their stalls.

In 991 the winter lasted very long, with extreme severity. Every thing was frozen ; the crops totally failed ; and famine and pestilence closed the year.

A.D.

In 1044 great quantities of snow lay oa tlie ground. The vines and fruit- trees were des- troyed, and famine ensued.

In 1067 the cold was so intense, that most of the travellers in Germany were frozen to death on the roads.

In 1124 the winter was uncommonly severe, and the snow lay very long.

In 1133 it was extremely cold in Italy; the Pc. was frozen from Cremona to the sea; the heaps of snow rendered the roads impassable , the wine casks were burst, and even the trees split, by the action of the frost, with immense noise.

In 1179 the snow was eight feet deep in Austria, and lay till Easter. The crops and vintage failed ; and a great murrain consumed the cattle.

The winters of 1209 and 1210 were both of them very severe; insomuch that the cattle died for want of fodder.

In 1216 the Po froze fifteen ells deep, and wimˆ burst the caˆiks.

In 1234 the Po was again frozen; and loaded waggons crossed the Adriatic to Venice. A pine forest was killed by the frost at Ravenna.

In 1236 the Danube was frozen to the bottom, and remained long in that state.

In 1269 the frost was most intense in Scotland, and the ground bound up. The Categat was frozen between Norway and Jutland.

In 1281 such quantities of snow fell in Austria as to bury the very houses.

In 1292 the Rhme was frozen over at Breysach, and bore loaded waggons. One sheet of ice extended between Norway and Jutland, so that travellers passed with ease ; and, in Ger- many, 600 peasants were employed to clear away the snow, for the advance of the Austrian army.

In 1305 the rivers in Germany were frozen, and much distress was occasioned by the scarcity of provisions and forage.

In 1316 the crops wholly failed in Germany. Wheat, which some years before sold in England at 6s. a quarter, now rose to £2.

In 1323 the winter was so severe, that both horse and foot passengers travelled over the ice from Denmark to Liibeck and Dantzic.

In 1339 the crops failed in Scotland, and such a famine ensued, that the poorer sort of people were reduced to feed on grass, and many of them perislied miserably in the fields. Yet in England wheat was at this time sold so low as 3s. id. a quarter.

In 1344 it was clear frost from November to March, and all the rivers in Italy were frozen over.

In 1392 the vineyards and orchards were destroyed by the frost, and the trees torn to pieces.

The year 1408 had one of the coldest winters ever remembered : — Not only the Danube was frozen over, but the sea between Gothland and Oeland, and between Norway and Denmark ; so that wolves, driven from their forests; came over the ice into Jutland. In France the vineyards and orchards were destroyed.

In 1423 both the North Sea and the Baltic were frozen. Travellers passed on foot from Liibeck to Dantzic. In France the frost penetrated into the very cellars. Corn and wine failed, and men and cattle perished for want of t) ()d.

The successive winters of 1432, 1433, and 1434, were uncommonly severe. It snowed forty days without interruption. All the rivers in Germany were frozen ; and the very birds took shelter in the towns. The price of wheat rose, in England, to 27.s. a quarter, but was reduced to 5.?. in the following year.

In 1460 the Baltic was frozen, and both foot and liorse passengers crossed over the ice from Denmark to Sweden. The Danube likewise continued frozen two months, and the vine- yards in CJerniany were destroyed.

In 1468 the winter was so severe in Flanders, that the wine distributed to the soldiers was cut in pieces with hatchets.

In 1544 the same thing happened again, the wine being frozen into solid lumps.

In 1548 the winter was very cold and protracted. Between Denmark and Rostock, sledges drawn by horses or oxen travelled over the ice.

In 1564, and again in 1565, the winter was ex- tremely severe over all Europe. The Scheldt froze so hard as to support loaded waggons for three months.

In 1571 the winter was severe and protracted. All the rivers in France were covered with hard and solid ice, and fruit trees, even in Laiiguedoc, were killed by the frost.

In 1594 the weather was so severe, that the Rhine and the Scheldt were frozen, and even the sea at 'enice.

The year 1608 was uncommonly cold, and snow lay of immense depth even at Padua. Wheat rose, in the Windsor market, from 36s. to 56s. a quarter.

In 1621 and 1622 all the rivers of Europe were frozen, and even the Zuyder Zee. A sheet of ice covered the Hellespont, and the Venetian fleet was choaked up in the lagoons of the Adriatic.

In 1655 the winter was very severe, especially in Sweden. The excessive quantities of snow and rain which fell did great injury in Scot- land.

The winters of 1658, 1659, and 1660, were in- tensely cold. The rivers in Italy bore heavy carriages, and so much snow had not fallen at Rome for several centuries. It was in 1658 that Charles X. of Sweden crossed the Little Belt, over the ice, from Holstein to Denmark, with his whole army, foot and horse, followed by the train of baggage and artillery. During these years, the price of grain was nearly doubled in England ; a circumstance which contributed, among othei causes, to the resto- ration.

In 1670 the frost was most intense in England and in Denmark, both the Little and Great Belt being frozen.

In 1G84 the winter was excessively cold. Many forest trees, and even the oaks in England, were split by the frost. Most of the hollies

A.D.

were killed. The Thames was covered with ice eleven inches thick. Almost all the birds perished.

In 1691 the cold was so excessive, that the famished wolves entered V'ienna, and attacked the cattle, and even men.

The winter of 1695 was extremely severe and protracted. The frost in Germany began m October, and continued till April ; and many people were frozen to death.

The years 1697 and 1699 were nearly as bad. In England the price of wheat which, in pre- ceding years, had seldom reached to 30s. a quarter, now mounted to 71.*

In 1709 occurred that famous winter, called, by distinction, ' the cold winter.' All tiie rivers and lakes were frozen, and even tlie seas, id the

distance of several miles from the shore. The frost is said to have penetrated three yards into the ground. Birds and wild beasts were strewed dead in the fields, and men perished by thousands in their houses. The more ten- der shrubs and vegetables in England were killed ; and wheat rose in its price from £2 to £4 a quarter. In the south of France the olive plantations were almost entirely de- stroyed ; nor have they yet recovered that fatal disaster. The Adriatic Sea was quite frozen over, and even the coast of the Medi- terranean about Genoa ; and the citron and orange groves suffered extremely in the finest parts of Italy.

Ill 1716 the winter was very cold. On tiie Thames, booths were erected and fairs held.

In 1726 the winter was so intense, that people travelled in sledges across the Strait, from Copenhagen to the province of Scania in Sweden.

In 1729 much injuiy was done by tne frost, which lasted from October till May. In Scot- land multitudes of cattle and sheep were buried in the snow ; and many of the forest trees in other parts of Europe were killed.

The successive winters of 1731 and 1732 were likewise extremely cold.

The cold of 1740 was scarcely inferior to that of 1709. The snow lay eight or ten feet deep in Spain and Portugal. The Zuyder Zee was frozen over, and many thousand persons walked or skaited on it. At Leydfen the thermometer fell 10° below the zero of Fahrenheit's scale. All the lakes in England froze, and a whole ox was roasted on the Thames. Many trees were killed by the frost, and postilions were benumbed on their saddles. — In both the years 1709 and 1740 the General Assembly of the Church of Scotland ordained a national fast to be held on account of the dearth which then prevailed.

In 1744 the winter was again very cold. The Mayne was covered seven weeks with ice ; and at Evora, in Portugal, people could hardly creep out of their houses for heaps of snow. ˆ

The winters during the five successive years 1745, 1746, 1747, 1748, and 1749, were all of them very cold.

In 1754, and again in 1755, the winter was par- hcularly cold. At Paris Fahrenheit's ther-

mometer sanV to the beginning of the scale ; and, in England, the strongest ale exposed to the air in a glass, was covered, in less than a quarter of an hour, with ice an eighth of an inch thick.

Tlie winters of 1766, 1767, and 1768, were very cold all over Europe. In France the ther- mometer fell six degrees below the zero of Fahrenheit's scale. The large rivers and the most copious springs in many parts were frozen. The thermometer, laid on the surface of th« snow at Glasgow, fell two degrees below zero.

In 1771 the snow lay very deep, and the Elbe was frozen to the bottom.

In 1776 much snow fell, and the cold was in- tense. The Danube bore ice five feet thick below Vienna. Wine froze in the cellars both in France and in Holland. Many people were frost-bitten ; and vast multitudes, both of the feathered and of the finny tribes, perished. Yet the quantity of snow which lay on the ground had checked the penetration of the frost. Van Swinden found, in Holland, that the earth was congealed to the depth of twen- ty-one inches, on a spot of a garden which had been kept cleared, but only nine inches at ano- ther place near it, which was covered with four inches of snow.

The successive winters of 1784 and 1785 were uncommonly severe, insomuch, that the Little Belt was frozen over.

In 1789 the cold was excessive; and again in 1795, when the republican armies of France overran Holland.

The successive winters of 1799 and 1800 were both very cold.

In 1809, and again in 1812, the winters were remarkably cold.

Fro'stbitten, adj. Frost and bitten Nipped or withered by the frost.

The leaves are too m.\ich. frostbitten, Mortimer.

Fro'stnail, n. s, Frost and nail. A nail with a prominent head driven into the horse's shoes, that it may pierce the ice.

The claws are strait only to take hold, for better progression ; as a horse that is shod with frost)iails. Crew's Cosmologia.

Fro'stwork, n. s. Frost and work. Work in which the substance is laid on with inequali- ties, like the dew congealed upon shrubs.

By nature shaped to various figures, those The fruitful rain, and these the hail compose ; The snowy fleece and c\i\o\x& frostwork these. Produce the dew, and those the gentle breeze.

Blackmore.

FROTH, n. s. & tj. n.ˆ Dan. and Scottish Froth'ii.y, arfp. >froe; Swed.yrrt, per

Froth'y, tfc/;'. 3 haps of (Jreok afpoˆ,

foam. Spume ; foam ; the bubbles caused in liquors by agitation. Any empty or senseless show of wit or eloquence ; any thing not hard, solid, or substantial : to foam ; to throw out spume; to gene-ate .spume. Soft; not solid; wasting; vain; empty; trifling.

A wilde bores 'gan they togeder smite, That froihen while as fome for ire wood. Up to their ancle foughte they in hir blood.

Chaucer. Tlie Knightes Tale, Who eateth his veal, pig and lamb hemˆ froth. Shall twice in a week go to bed without broth.

Ttuser. His hideous tail then hurled he about And therewith all enwrapt the nimble thighs Of Yii& froth foamy steed. Faerie Qiieene,

Their bodies are so solid and hard as you need not fear that bathing should make them frothy. Bacon.

When wind expireth from under the sea, as it causeth some resounding of the water, so it causeth some light motions of bubbles, and white circles of froth. Id. Nat. History.

Tlie sap of trees is of difTeriug natures ; some wa- tery and dear, as vines, beeches, pears ; some thick, as apples ; some gummy, as cherries ; and some frothy, as elms. Bacon.

Surging waves against a solid rock. Though all to shivers dashed the assault renew ; Vain battery, and in froth or bubbles end.

Milton. The useless froth swims on the surface, but the pearl lies covered with a mass of waters.

Glanville. Though the principles of religion were never so clear and evident, yet they may be made ridiculous by vain and frothy men ; as the gravest

and wisest person in the world may be abused by being put in a fool's coat. Tillotson.

The scattered ocean flies ; Black sands, discoloured froth, and mingled mud arise.

Dryden^ They were the froth my raging folly moved When it boiled up, I knew not then I loved. Yet then loved most. Id. Aurengxehe.

He frets within, /jo^Ai treason at his mouth. And churns it through his teeth. Dryden.

What's a voluptuous dinner, and the frothy va- nity of discourse that commonly attends these pom- pous entertainments ? What is it but a mortificatioa to a man of sense and virtue? L' Estrange.

Excess muddies the best wit, and only makes it flutter and /ro//j high. Grew.

If now the colours of natural bodies are to be min- gled, let water, a little thickened with soap, be agi- tated to raise a froth ; and after that froth has stood a little, there will appear, to one that shall view it intently, various colours every where in the surfaces of the bubbles ; but to one that shall go so far off that he cannot distinguish the colours from one another, the whole froth will grow white, wiih a perfect white- ness. Newton.

A painter having finished the picture of a horse, excepting the loose froth about his mouth and his bridle ; and, after many unsuccessful essays, despair- ing to do that to his satisfaction, in a great rage threw a sponge at it, all besmeared with the colours, which fortunately hitting upon the right place, by one bold stroke of chance most exactly supplied the want of skill in the artist. Bentley's Ser7nona,

Behold a. frothy substance rise j Be cautious, or your bottle flies. Swift.

Froth-Spit, or Cuckow-Spit, a name given to a white froth, or spume, very common in spring and the first months of summer, on the leaves of certain plants, j)articidarly on those of the common white field lyclmis, or catchfly, thence called by some s])atliiig poppy. All wri- ters on vegetables have taken notice of tiiis froth, though few have understood the cause or origin of it till of late. It is formed by a little

leaping animal, called by some the flea gross- hopper, by applying its anus close to the leaf, and discharging thereon a small drop of a white viscous fluid, which, containing some air in it, is soon elevated into a small bubble : before tliis is well formed, it deposits such another drop; and so on, till it is every way overwhelmed with a quantity of these bubbles, which form the white froth which we see. Within this spume it is seen to acquire four tubercles on its back, wherein the wings are enclosed : these bursting, from a reptile it becomes a winged animal ; and thus, rendered perfect, it flies to meet its mate, and propagate its kind. It has an oblong, ob- tuse body ; a large head with small eyes ; four external wings, of a dusky brown color, marked with two white spots ; tlie head is black. It is a species of Cicada, which see.

FROUNCE, n. s. & v. a.. As a disease, from Arm./roenj, snivel; Welsh jfroe«, the nose. A word used by falconers for a distemper, in which white spittle gathers about the hawk's bill. Fr. Jroncer; Teut. fronsen, to frizzle or curl the hair about the face,' This word was at first probably used in contempt.

Her forhedde frounceles all plain.

Chaucer. Romaunt of the Ruse. Some warlike sign must be used ; eilher a slovenly buskin, or an overstaring ^Voimced head. Ascham.

Some frounce their curled hair in courtly guise. Some prank their ruffs, and others timely dight Their gay attire. Faerie Queene.

Thus, Night, oft see me in thy pale career, 'Till civil suited Morn appear ; Not tricked and frounced as she was wont, With the attick boy to hunt. Milton.

FROUZY, adj. A cant word, signifies fetid; musty ; dim ; cloudy.

Petticoats infrouzi/ hnaps. Swift.

When first Diana leaves her bed. Vapours and steams her looks disgrace ;

A fruuzy dirty-coloured red Sits on her cloudy wrinkled face. Id.

FRO'WARD, adj. "^ Saxon Fpampeapb. Fro'wardly, flf/t;. ^Peevish; ungovern- Fro'wardness, 71. s. J able ; angry ; perverse : the contrary to toward. Thus Chaucer speaks of youth being ' froward from sadnesse.' See the instance.

Whose ways are crooked, and they /rowori in their paths. Prov. ii. 15.

He went on frowardly in the way of his heart.

/. Ivii, 17. Youth — of naught cllis takith heedc. But only folkis for to lede Into disport and wildenesse So froward is it from sadnesse.*

Chaucer. Romaunt of the Roue, 4940. She's not froward, but modest as the dove : She is not hot, but temperate as the morn.

Shakspeare. Time moveth so round, that a froward retention of custom is as turbulent a thing as innovation.

Bacon. The froward pain of mine own heart made me de- light to punish him, whom I esteemed the chiefest let in the way. Siducy.

Tis with /rouiord men, and froward factions loo, as it is wilh froward children : they'll be sooner ((uieted by fear than by any sense of duty. L Estrange.

Hov/ many frowardnesses of ours does he smother ? how many indignities does he pass by ? how many affronts does he put up at our hands 1 South.

We'll mutually forget The warmth of youth, and frowardness of age.

Addison's Cato.

FRO'WER, n. s. Dr. J»hnsou says, ' I know not the etymology.' Teut. hautr, vcrhauer. — Thomson. A cleaving-tool.

Afrower of iron for cleaving of lath, With roll for a sawpit, good husbandry hath.

Tusier.

FROWN, V. a. & n. s. ^ Belg.froiissn ; old Frown'ing, ar//. \Yr. frogner, to wrin-

Frown'ingly, adv. j kle. — Skinner. To ex- press displeasure by contracting the face to wrin- kles ; to look stern.

With that the chorle his clubbe gan shake j Frowning his even 'gan to make An hideous chere, as man in rage ; For yre he brent in his visage.

ChaiKer. Romaunt of tJie Rose. For age and winter accord full nie. This chill, that cold ; this crooked, that wrie ; 4nd as the louring weather looks doune. So seemsl thou like Good Friday to frowne.

Spenser. Shepheards Calender. Patiently endure that frown of fortune, and by some notable exploit win again her favour. Knolles. Say, that she fro ivns ; I'll say, she looks as clear As morning roses newly washed with dew.

Shakspeare. They chuse their magistrate ; And such a one as he, who puts his shall. His popular shall, against a graver bench Than ever frowned. Id. Coriolanus.

How now, daughter, what makes that frontlet on ? you are too much of late i' the frown.

— Thou wast a pretty fellow, when thou hadst no need to care for her yVouˆninˆ. Id. King Lear.

What, looked he frowninglyl — A countenance more in sorrow than in anger.

Shakspeare, In his half-closed eyes Stern vengeance yet and hostile terror stand ; His front yet threatens, and h\i frovns command.

Prior. Heroes in animated marble frown. Pope. The wood. Whose shady horrors on a rising brow Waved high, and frowned upon the stream below.

Id. The courtiers stared, the ladies whispered, and The empress smiled ; the reigning favourite /roioneci — ' I quite forget which of them was in hand Just then, as they are rather numerous found. Who took by turns that difficult command Since her first majesty was singly crowned. Byron.

They sleep not In their accelerated graves, nor will Till Foscari fills his. Each night I see them Stalk yrotoni'ny round my couch, and, pointing towards The ducal palace, marshal me to vengeance.

Id. The Two Foseari.

FROWY, arf;. Musty; mossy. This word is now not use 1 ; but instead of it frowzy. But if they with thy gotes should yede. They soon might be corrupted ;

Or like not of the frowy fede. Or with the weeds be glutted.

Spenser's Pastorals.

FRO'ZEN, part. pass, of freeze. See Freeze. Congealed with cold ; chill in affection ; void of heat or appetite.

Be not ever frozen, coy ; One beiim of love will soon destroy And melt '.hat ice to floods of joy. Carew, What was t'ne waste of war, what tierce alarms Shook Asia's crown with European arms ? Even such have heard, if any such there be. Whose earth is bounded by the frozen sea.

Dry den. Even here, where /ro«e» Chastity retires, Love finds an altar for forbidden fires. Pope.

Frozen Ocean, or the Icy Sea, is a name sometimes given to that sea of Asia which ex- tends towards the nortli into the polar regions, and whose boundaries east and west are Nova Zembla and Fonutski Noss. Several ineffectual attempts have been made to navigate this sea ; but mariners have always been obstructed. In- surmountable barriers of ice obstruct all navi- gation far from the shores ; and from this cir- cumstance it has its name. The ice never breaks ud until the end of July ; and fogs, which resemble at a distance islands or vast columns of smoke, are constantly hovering over it. When the cold is at its greatest extreme, the horizon is clear. It has islands inhabited by white bears and arctic foxes. But no tides are felt in this ocean ; a series of very irregular currents take their place; seldom setting one way longer than the wind blows, and running at very une- qual rates. Whales are rare : the beluga is seen ; and herrings, together with a small species of salmon, maybe caught, but there are no traces of shell-fish.

The Frozen Ocean receives some of the largest Asiatic river3,as the Ob, the Lena, and the Kovima. The coast is generally high, formed by project- ing promontories and exposed bays : it is covered with drift wood, from the mouth of the Kovima to Bacranof, in 168° 29′ E. long., but no farther east. On the coasts are numerous rein-deer, foxes, bears, wild sheep, and 'the whistling mar- mot : the bones of the mammoth, as they are called, are also found here.

F. R. S. Fellow of the Royal Society. Who virtu profess Shin in the dignity of F. R. S. Pope.

FRUCTESCENTIA, from fructus, fruit, in botany, literally signifies the growth of the fruit, but is used clliptically for the precise time in which, after the fall of the flowers, the fruits arrive at maturity, and disperse their seeds. In general, plants which flower in spring ripen their fruits in summer, as rye ; those which flower in summer have their fruits ripe in autumn, as the vine; the fruit of autumnal flowers ripens in winter, or the following spring, if kept in a stove, or otherwise defended from excessive frosts. Tiiese

frosts, says M. Adanson, are fre- quently so pernicious and violent, as to destroy the greatest part of the perennial plants of Vir- ginia and Mississippi, that are cultivated in France, even before they have exhibited their fruit. The plants which flower during our wmter, such as those of the Cape of CJood Hope, ripen their fruit in spring, in our stoves. V'>\ . TV .

FRUCTIDOR (i. e. the fruit month, from Lat. fructus), the name of the twelth month, in the Frencli revolutionary calendar. It begins August 19th, and ends September 16th.

FRUCTIFY, V. a. & v. n. ˆ Fr. frucfifk?- ;

I"ructifica'tion, 74. s. ˆL.a.t.Jructifer. To

Fructifeuol'S, af//. 3 make fruitful ; to

fertilise ; to bear fruit.

It watereth the heart, to the end it may fructify ; maketh the virtuous, in trouble, full of magnanimity and courage ; and scrvpth as a most approved remedy against all doleful and heavy accidents which befal men in this present life. Hooker.

The legal levies the sovereign raises are as vapours which the sun exhales, which fall down in sweet showers to fructify the earth. Howel's Vocal Forest.

Thus would there nothing fructify, either near or under them, the sun being horizontal to the polts.

Browne.

That the sap doth powerfully rise in the Spring, to put the plant in a capacity of fructification, he that hath beheld how many gallons of water may be dratvn from a birch tree, hath slender reason to doubt.

Id. Vulgar Errours.

FRU'CTUOUS, adj. Fr. fructueux ; from fructify. Fruitful ; fertile ; impregnating with fertility.

Say what you list, and we shul gladly here :

And with that word, he said, ' In this manere :

Telleth,' quod he, ' your meditatioun ;

But hastcth you ; the sonne wol adoun :

Hieih fructuou^, and that in little space ;

And, to do wcl, God sonde you his grace.

Chaucer. Proloyue to the Pemones Tele.

Apples of price, and plenteous sheaves of corn Oft interlaced occur ; and both imbibe Fitting congenial juice ; so rich the soil. So much does fructaous moisture o'erabound.

Philips.

FRU'GAL, adj. \ Yi.frugalUe ; Lat. fru-

Y \v'cAV,i.\, adv. ygalis, J'ruges, fruits: its

Frugal'ity, n. s. j primary meaning is tem- perance. Thrifty ; sparing ; not profuse ; not lavish ; nor yet strictly parsimonious. Crabb acutely observes, ' The frugal man spares ex- pense on himself or on his indulgences ; he may however be liberal to others, whilst he is frugal towards himself; the parsimonious man saves from himself as well as others; he has no other object than saving.'

As for the general sort of men, frugality may be the cause of drinking water; for that is no small saving, to ^.ay nothing for one's drink. Bacon.

Reasoning, I oft admire. How nature wise and frugal could commit Such disproportions, with superfluous hand So many nobler bodies to create, Greater so manifold to this one use. Milton. Frugality and bounty too. Those dilleriug virtues meet in you. Waller. In this frugality of your praises, some things I cannot omit. Bryden's Fables, Dedication.

Mean time young I'asimond his marriage pressed. And frugally resolved, the charge to shun. To join his brotlier's bridal with his own. Dryden. If through mists he shoots liis sullen btams. Frugal of light, in loose and straggling streams. Suspect a drizling day. /(/. Virgil.

The boundaries of virtue are indivisible lines : it is impossible to march up close to the frontiers of frugality, without entering the territories of modesty. Arbuthnot's John Btdl. 2 I

Frugality is founded on the principle, tliat all riches have limit';. Burke.

On the Grampian hills. My father feeds his flocks ; a frugal swain. Whose constant cares were to increase his store. And keep his only son, myaelf, at home.

Home. Be silent, — Conrad ! — dearest — come and share The feast these hands delighted to prepare — Light toil! to cull and dress thy frugal fare.

Byron. The Corsair.

Why call the miser miserable ? as I said before, i\B fnigal life is his Which in a saint or cynic ever was The theme of praise. Byron.

FRUGI'FEROUS, adj. L3.t.frugifer. Bear- ing fruit. — Ainsuorth.

FRUIT, H.s. ■) Fr. fncit ; Welsh

Fruit'age, H. s. frwyth ; Lat. fructus.

Fruit'beareu, n. s. Tlie primary and coin- FRriT'flEAiiiNG, adj. prehensive meanins; of Fruit'ereu,)(. s. this etymon is procluc-

Fruit'euy, n. s. tion — it is applied first

Fruit'ful, adj. to inanimate nature;

Fruit'fully, adv. J>-to the production of Fruit'fulness, 71. s. plants, trees, &c.; next Fruit'less, adj. to the animal kingdom

Fruit'lessly, udv. in the infinite variety Fruit'grov'es, w. s. of its offspring; fiicu- I"Run'sTER, n. s. ratively to the thoughts

Fruit'time, 71. s. and imaginations of the

Fruit'tree, ?(. s. J mind ; and lastly, to the actions of men, to the advantages derived from them, and to their effects and consequences. Some of the derivatives have a precise and tech- nical meaning, such as fruiterer, fruitster, and the words in composition. The illustrations of these are sufficient to convey the sense.

— And other fel into good erthe, and it sprong up and made an hundrid ioldfriiyl. Widif. Luk. viii. For while that Adam fasted, as I rede. He was in Paridis : and when that he Ete of the fruit defended on a tree. Anon he w.;s outcast to wo and peine. O, glotouie ! on thee wel ought us plaine.

Chaucer. The Pardonsres Tale. ‘ Alas!’ quod he, ‘ Arcita, cosin min ! Of all our strife God wot, the frute is thin.

Id. The Knighles Tale. And, right anon, in comen tombesteres Fetis and smale, and y onge fruitesteres, Singers with harpes, bandes, wafereres. Which ben the very devils officeres.

Id. The Pardoneret Tale. Then doth the dadale Earth throw forth to thee Out of hcT fruitful lap abundant flowres ; And then all living wights, soone as they sec The Spring breake forth out of his lusty bowres They all do learne to play the paramours.

Spenser’s Faerie Qjteenc. The fruit of the spirit is in all goodness and right- eousness, and truth. Ephes. v. 9. Cans’t thou their reckonings keep ? the time com- pute. When their swol’n bellies shall enlarge tho fruit,

Sandys. O ! let me not, quoth he, return again Back to the world, whose joys so fruitiest are ;

But let me here for ay in peace remain. Or straightway on that last long voyage fare.

Sjienser.

Hear, Nature, hear ! dear goddess, hear a father Suspend thy purpose, if thou did’st intend To make this creature fruitful : Into her womb convey sterility.

Shahpeare. King Lear. Upon my head they placed a. fruitless crown. And put a barren sceptre in my gripe ; No son of mine succeeding. Id. Mucbelh.

Adonis’ gardens, That one day bloomed, and fruitful were the next.

Shakspeare. I did fight with one Sampson Stockfish, a fruiterer, behind Gray’s-inn. Id. Henry 1 1’.

Lady, by yonder blessed moon I vow. That tips with silvc all these /i-ui^rce tops.

SJtakspeare, The strawberry grows underneath the nettle. And wholesome berries thrive and ripen best. Neighboured hy fruit of baser quality. Id.

You have many opportunities to cut him off : if your will want not, time and place will be fruitfully offere

Neither can we ascribe the same fruitfulness to any part of the earth, nor the same virtue to any plant thereon growing, that they had before the

flood.

Raleigh's History. The Spaniards of Mexico, for the first forty years, could not make our kind of wheat bear seed ; but it grew up as high as the trees, and was fruitless.

LI. By tasting of that fruit forbid. Where they sought knowledge, they did error find,

Davies. Enter the town which thou hast won. The fruits of conquest now begin j To triumph, enter in. Ben Jonson.

The remedy of fruitfulness is easy, but no labour will help the contrary : I will like and praise some things in a young writer, which yet, if he continues in, I cannot but justly hate him for. Id. Discoveries. Rich people who are covetous, are like the cypress tree j they may appear well but 3.Te fruitless.

Bp. Hall. Male he created thee, but thy consort Female for race ; then blessed mankind, and said, "Be, fruitful, multiply, and fill the earth ; Subdue it, and throughout dominion hold.

Milton, The Earth, Though in comparison of fieaven so small. Nor glistering, may of solid good contain More plenty than the sun that barren shines. Whose virtue on itself works no effect. But in the yVuiˆ/M? earth. Id,

In heaven the trees

Of life, ambrosial yVujVaje bear, and vines

Yield nectar. Milton's Paradise Lost.

Greedily they plucked

The fruitage, fair to sight, like that which grew

Near that bituminous lake where Sodom flamed.

Milton. Serpent ! wc might have spared our coming hiihcr ; Fruitless to me, though fruit be here to' excess. Id. My brothers when they saw me wearied out With this long way resolving here to lodge. Under the spreading favour of these pines Slept, as they said, to the next thicket's side To bring me berries or some cooling fruit As the kind hospitabl;; woods provide. Id.

She blushed when she considered the effect of granting ; she was pale when she remembered the fruits of denying. Sidney.

If she continued cruel, he could no more sustain tis life than the earth remain frtiitful in the sun's continual absence. Id,

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How sacred seeds of sea, and air, and earth. And purer fire through universal night. And empty space did fruitfully unite.

Roscommon. All with a border of rich fruittrccs crowned. Whose loaded branches hide the lofty mound.

Waller. Walking they talked, &ni fruitlessly divined What friend the priestess by those words designed.

Dryden. The goddess present at the match she made. So blessed the bed, such fruitfulness conveyed. That ere ten moons had sharped either horn. To crown their bliss a lovely boy was born. Id. Another fruit, from considering things in them- selves, will be, that each man will pursue his thoughts in that method which will be most agreeable to the nature of the thing, and to his apprehension of what it suggests to him. Locke.

Trees, especially fruitbearers, are often infected with the measles. Mortimer's Husbandry.

By this way graft trees of different kinds one on another, as fruitbearing trees on those that bear not.

Id. Oft, notwithstanding all thy care To help thy plants, on the small fruitery Exempt from ills, an oriental blast Disastrous flies. Philips.

While you, my lord, the rural shades admire. And from Britannia's publick posts retire. Me into foreign realms my fate conveys. Through nations fruitful of immortal lays.

Addison. See how the x\%\ag fruits the gardens crown. Imbibe the sun, and make his light their own.

Blackmore. It is a large one, much more great Than e'er was bred in Afric

yet. From which we boldly may infer. The moon is much the fruitfuller. Gay.

I have copied Nature, making the youths amorous and the da.insels fruitful. Id.

The faithful slave. Whom to my nuptial train Icarus gave To tend the fruitgroves. Pope's Odyssey.

What is become of all the king of Sweden's vic- tories ? Where are the fruits of them at this day ? Or of what benefit will they be to posterity ? Swift.

What is more ordinary with them than the taking in flowers and fruitage for the garnishing of their work ? More.

But thou who Heaven's just vengeance darest defy. This deed with fruitless tears shall soon deplore When death lays waste thy house, and flames con- sume thy store. Beattie. His infant muse though artless was not mute. Of elegance as yet he took no care For this of time and culture is the fruit : And Edwin gained at last this fruit so rare. As in some future verse I purpose to declare. Id.

And that this wood was full of pleasant fruits And trees of goodly growth, and spreading shoots.

Byron. FuuiTs, Colors Extracted from, See Color-Making.

Fruits, in commerce, are distinguished into recent or fresh, and dry.

Fruits Dry are those dried in the sun, or by the fire, with other ingredients sometimes added to them to make them keep ; imported chiefly from beyond sea, and sold by the grocers. Such are Raisins, Currants, Figs, Capers, Olives,

Cloves, Nutmegs, Pepper, and other spices: which see in their order. Under the denomination of dry fruits are also frequently included app'es pears, almonds, filberds, &c.

Fruits Fresh or recent, are those sold just as they are gathered from the tree, without any farther preparation ; as are most of the pro- duc'ions of our gardens and orchards, sold by the fruiterers.

Fruit-Flies, a name given by gardeners and others to a sort of small black flies, found in vast numbers among fruit-trees in the spring season, and supposed to do great injury to them. Mr. Leeuwenhoek preserved some of

these flies for his microscopical observations. He found that they did not live longer than a day or two, but that the females during this time laid a great number of longish eggs. The gardeners who suppose that these flies wound the leaves of the trees, are mistaken : it is true tliat they feed on their juices ; but they have no instruments where- with they can extract these for themselves ; they feed on such as are naturally extravasated ; and when there is not a suflScient quantity of these for their purpose, they haunt the places to which the pucerons resort, and feed on the juices which these little creatures extravasate, by means of the holes they bore in the leaves with their trunks.

Fruit-Gatherers, in horticulture, are instru- ments much used in taking the fruit from the trees in preference to gathering it by the hand by which it is often much bruised &c., and also on high wall trees or espaliers where tlie hand can- not reach. The best of these instruments is one invented by Mr. Saul, of which the diagram annexed is a representation, a and h are a pair of cutters fixed to a pole which may be lengthened by means of screwed joints if necesssary. At the lower end of the pole is a lever c, which may be fixed by a screw and socket to any part of the pole. The lever d, of the moving blade h, has a spring under it, to keep it open, and from the end of d, a string passes over the pulley e, to the handle c. By means of the arch and joint at f, the cutters may be set at any required angle.

\'hen the fruit-gatherer is raised, so that the stalks of the fruit are included be- tween the cutters, the string c e is pulled ; the stalks are cut, and the fruit [drops into the basket h.

Fruit-Trees. See Horticulture.

FRUITION, n. s. X Lat. fruor, to enjoy,

Fruit'ive, at//. i Enjoyment; possession;

pleasure given by possession or use. Crabb

says, that this word is employed only for the

act of enjoying pleasures which are derived from

fruition, as distingtiished from those which are had ill expectation.

God riches and renown to men imparts, Even all they wish ; and yet their narrow hearts Cannot so great a fluency receive. But their fruition to a stranger leave. Sandi/s.

I am driven, by breath of her renown. Either to seek shipwreck, or to arrive Where I may have fruition of her love.

ShaJtspeare. Man doth not seem to rest satisfied either with fruition of that wherewith his life is preserved, or with performance of such actions as advance him most deservedly in estimation. HooUer.

Wit once, like beauty, without art or dress. Naked and unadorned, could find success; 'Till by fruition, novelty destroyed. The nymph must find new charms to be enjoyed.

Granville. That which wc desire, ofttimes discontents ns more in \hc fruition. Bp. Hull.

Fruition more deceitful is Than thou canst be when thou dost miss.

Cowley. Abstinence from ill-speaking he (the Psalmist) seemcth to propose as the first step towards the frui- tion of a durably happy life. Barrow.

To whet our longings for fruitive or experimental knowledge, it is reserved, among the prerogatives of being in heaven, to know how happy we shall be ■when there. Boyle.

FRUMENTARII, akindof soldiers or archers under the western empire. The first mention we find made of these officers is in the reign of the emperor Adrian, who made use of them to inform himself of whatever passed. They did not make any particular corps distinct from the rest of the forces, but there was a certain number of them in each legion. It is supposed that they were at first a numoer of young persons, dispo- sed by Augustus throughout the provinces, par- ticularly on all the grand roads, to acquaint the emperor, with all expedition, of every thing that happened. Afterwards they were incorporated into the troops themselves, where they still retain their ancient name. As their principal office was the giving intelligence, they were often joined with the Curiosi, with whom tiiey agreed in this part of their office. Their name is derived from their being also a sort of purveyors to the armies, cities, &c., collecting the corn from the several provinces.

FRUMENTATION, in Roman antiquity, a largess of corn bestowed on the people. This practice of giving corn to the people was very ancient among the Romans, and frequently used to sooth their turbulent humor. At first

the number of those to whom this largess was given was indeterminate, till Augustus fixed it at

200,000.

FRUME'NTY, n. s.) From Lat. frumcn-

Frumf.ntaceous, ru/;. ˆ

FRUMP, I', a. To mock ; to browbeat.

FRUSII, v. a. & n. s. Yr.froisscr. To break, bruise, or crush. A sort of tender horn that grows in the middle of tlie sole, and at some distance from the toe : it divides into two branches, run- ning towards the heel, in the form of a fork.

I like thy armour well ; I'W frwih it, and unlock the rivets all, But I'll be master of it. Shaksrpeare.

FRUSTRANEA Polygamia. See Botany. FRUSTRA'NEOUS, «(//. .2ˆ..frustra. Vain; useless ; unprofitable ; without advantage.

He timely withdraws his frustraneoiis baffled kind- nesses, and sees the folly of endeavouring to stroke a tyger into a lamb, or to court an Ethiopian out of his colour. South.

Their attempts being so ftistraneous, and the de- monstrations to the contrary so perspicuous, it is a marvel that any man should be zealously affected ia a cause that has neither truth nor any honest useful- ness in it. More. FRUSTRATE, v. a. & part. adj. ˆ Yr.frus- Frustra'tion, 72. s. ttirj-; Lat. Frus'trative, adj. ifrustror. Frus'tratory, adj. J To make vain ; to nullify ; defeat ; disappoint.

The act of parliament which gave all his lands to the queen, did cut off and frustrate all such convey- ances. Speriser.

Few things are so restrained to any one end or pur- pose, that the same being extinct, they should forth- with utterly hecome frtcstraie. Hooker.

It is an axiom of nature, that natural desire cannot utterly be frustrate. Id.

I survive. To mock the expectations of the world ; To frustrate prophecies, and to raze out Rotten opinion. Shakspeare. Henry IV

He is drowned Whom thus we stray to find, and the sea mocks Our frustrate search on land. [d, Tempest.

The ruler of the province of Judea being by Julian busied in the re-edifying of this temple, flaming balls of fire issuing near the foundation, and oft consuming the workmen, made the cnieviˆx'v.a frustrate.

Raleigh's History, Now thou hast avenged Supplanted Adam; and, by vanquishing Temptation, hast regained lost Paradise, AnA frustrated the conquest fraudulent.

3IiUon. Not more almighty to resist our might. Than wise to frustrate all our plots and wiles.

Id. Thus do kingdoms frustrating Other titles to their crown

In the cradle crown their king.

So all foreign claims to drown. Marvell.

Stern looked the fiend, a.s frustrate of his will ;

Not half sufficed, and greedy yet to kill. Dryden.

Bartolus restrains this to a. frustratory appeal.

Ayliffe. In states notoriously irreligious, a secret and irre- sistible power countermands their deepest projects, splits their counsels, and smites their most refined policies -ˆilh. fnistration and a curse. South.

Frustum, n. s. Lat. A piece cut off from a regular figure ; a term of science.

FRUSTUM, in mathematics, a part of some solid body separated from the rest. Thus,

The Frustum of a Cone is the part that remains when the top is cut off by a plane, pa- rallel to the base ; and is otherwise called a trun- cated cone.

The Frustum of a Globe, or Sphere, is any part thereof cut off by a plane, the solid contents of which may be found !)y this rule : To three ' times the square of the semidiameter of the basfr-j

add the square of its lieight; then multiply that sum by the heiglit, and this product multiplied by -5326 gives the solidity of the frustum.

The Frustum of a Pyramid is what remains after the top is cut off by a plane parallel to its base.

FRUTEX, a shrub. Shrubs, according to Linnaeus, make a branch of the seventh family in the vegetable kingdom ; and are distinguished from trees, in that they come up without buds. But this distinction is not universal, though it be generally just with regard to those of Europe. Nature has made no absolute distinction between trees and shrubs. Frutex, in its general accep- tation, is a plant whose trunk is perennial, gem- miparous, woody, dividing and subdividing into a great number of branches. In short, it is the epitome of a tree, exemplified in the rose bush. See Botany.

FRY, w. s. Dan. and Swed. /roe ; Goth. frae, fraiw, seed. The swarm of little tishes just produced from the spawn; any swarm of the young of animals; it also signifies a kind of sieve.

Out of the /r!/ of these rakehell horseboys, growing up in knavery and villainy, are their kern continually supplied and maintained. Spenser on Ireland,

Them before the frt/ of children young, Tlioir wanton sports and childish mirth did play. And to the maidens sounding timbrels sung.

Faerie Queene. They come to us, but as love draws ;

He swallows us, and never chaws ;

By hira, as by chained shot, whole ranks do die ;

He is the tyrant pike, and we the fri/. Donne.

Forthwith the sounds and seas, each creek and bay, With fry innumerable swarm, and shoals Of fish, that with their fins and shining scales Glide under the green wave in sculls, that oft IJank the mid-sea. Milton's Paradise Lost.

So close behind some promontory lie The huge leviathans, to attend their prey ;

And give no chace, but swallow in theyVˆ, Which through iheir gaping jaws mistake the way.

Dryden.

The angler had the hap to draw up a very little fish from among the fry. L' Estrange.

He dresseth the dust from malt, by running it through a fan or fry, Mortimer's Husbandry.

The young yW/ must be held at a distance, and kept under the discipline of contempt. Collier.

Fry, v. a., v. n., & n. s. ˆ Fr. frire; Lat.

Fryingpan, n. s. S frˆgo ; Welsh, ffrio;

Erse. J'rljck. To dress food by roasting it in a pan on the fire ; to melt and agitate with heat ; to suffer the action of fire : applied metapliorically, to any thing that agitates the mind with indigna- tion, or shame, and from which the sufferer can- not escape.

He coude rostp, and scthe, and broil, anAfrie Maken mortrcwos, and wcl bake a pie.

Chaucer. Prologue to the Canterbury Talcs.

Oil of sweet almonds, newly drawn with sugar, and a little spice, spread upon bread toasted is an excel- lent nourishcr j but then, to keep the oil from frying in the stomach, drink mild boor after it.

Baco?i's Natural Histi>ry.

If I pass by sea, I may cliancc to fall from the fryingiiuH into the fire. Howel's Vocal Forest.

Spices and gums about them melting yVy, And, phuenix-like, in that rich nest they die.

Waller.

So when with crackling flames a cauldron yVie, The bubbling waters from the bottom rise ; Above the brims they force their fiery way. Black vapours climb aloft, and cloud the day.*

Dryden, Where no ford he finds, no water /rJes, Nor billows with unequal murmurs roar. But smoothly slide along, and swell the shore. That course he steered. Id. JEneid,

We understand by out of the fryingpan into the fire, that things go from bad to worse. V Estrange.

The soul there restless, helpless, hopeless lies ; The body frying roars, and roaring fries : There's life that never lives, there's death that never

dies. Fletcher's Purple Island.

But let it go : — it will one day be found

With other relics of a ' former world ;' When this world shall be former, under ground.

Thrown topsy-turvj', twisted, crisped, and curled ; Baked, yVied, or burnt, turned inside-out, or drowned.

Like all the worlds before, which have been hurled First out of and then back again to chaos, The superstratum which will overlay us. Byron.

But Zoe, the mean time, some eggs \va,s frying. Since, after all, no doubt, the youthful pair Must breakfast, and betimes — lest they should ask it. She drew out her provision from the basket.

Id. Don Juan.

FRYTH (John), a martyr to the Protestant religion, under Henry VIII. He was the son of an inn-kepeer at Seven-Oaks in Kent, and edu- cated in King's College, Cambridge, where he took the degree of B.A. Thence he removed to Oxford, and was made a junior canon of Wolsey's College. He there became acquainted with Wil- liam Tyndale, a zealous Lutheran, who converted him to Lutheranism. Avowing his opinions publicly, he was apprehended, examined, and con- fined to his college. At length having obtained his liberty, in 1328, he went over to Germany, where he contmued about two years, and then returned to England. At last he was taken up at Reading as a vagrant, and set in the stocks, where he remained till he was nearly expiring for want of sustenance. He was at length relieved by the humanity of Leonard Cox, a schoolmaster, who procured his enlargement, and supplied his wants. He then set out for London, where he began to make proselytes, but was apprehended by order of Sir Thomas More, and sent prisoner to the Tower. Refusing to recant, he was burnt in Smithfield, on the 4th July L533. He left several works, which were printed in folio, in

1573.

FUB, V. a. See For.

Fun, 71. s. A plump chubby boy or girl.

FUCA, Straits of St. Juan de, an inlet on the north-west coast of North America, about fifteen miles wide, between Cape Flattery on the south side, in lat. 48ˆ 20′ N., long. 124° 23′ W., and Quadra's Isles on the north side,

in lat. 48° 40′ N. These straits are said to have been ori- ginally discovered by a Greek pilot of the island of Cephalouia (Juan de Fuca), wlio was des- patclied in 1j92, by tlie viceroy of Mexico, to explore the west coast of Nortli America for an inlet wliich might lead to a communication with the Atlantic. But the account of this discoveryˆ

was mingled with such romantic tales that it re- mained disbelieved in modern times until the trading vessels, which frequent this coast, in the fur trade, having approaclied the shore from which captain Cook had been driven by contrary winds, discovered the inlet mentioned by Du Fuca between tlie forty-eighth and forty-nintli para'lels. Captam Meares, in particular, who visited this coast in 1783, was anxious to explore this inlet, and he accordingly equipped his boat on an expedition for that purpose. After his crew had entered the inlet, they were attacked by the inhabitants, who collected around them in canoes. A desperate attack was commenced. The savages had greatly the advantage in point of numbers, and were armed with clubs, spears, bows and arrows, and slings ; but the courage of captain Meares's crew prevailed, and the assailants though with great difficulty were repulsed. Cap- tain Meares, however, in consequence of these hostile dispositions of the inhabitants, abandoned all further thoughts of exploring this shore.

Vancouver arrived on this part of the American coast in 1792, and discovered this inlet, in lat, 48° 23′ 30": continuing his course almost directly into the continent for nearly 100 miles he found that the strait bore round to the north-west and south-east. The southerly branch was found to terminate at the distance of about seventy miles, in lat. 47° 21′ N. long. 237° 6′ E., in low and apparently swampy lands. This branch was ac- curately surveyed in its numerous inlets by cap- tain 'ancouver, and after running in a north- west direction, generally parallel with the coast, was found to issue in the Pacific Ocean, by Queen Charlotte's Sound, in N. lat. 51° 45', long. 232° 1′ E. The investigation was conducted with great perseverance, and through a course of peril- ous navigation, occasioned by the numerous islands and sunken rocks. The inhabitants were generally friendly; but on one occasion they showed an intention of attacking a boat's crew, and it was only by the conviction of the power- ful means of resistance possessed by the British, that they desisted from this attempt. At some of the villages along the shore they were found well armed with muskets, and dexterous marks- men.

FUCINUS Lacus, in ancient geography, a lake of Italy, in the country of the

Marsi, now called Celano, from a cognominal citadel, in the south of Abruzzo Ultra. According to the testi- mony of ancient authors, it was subject to extra- ordinary risings and decreasings. The actual circumference is about thirty-five miles : the breadth in the widest part is ten, in the narrowest four ; its depth twelve feet upon an average. All round this noble piece of water rises a cir- cle of Errand mountains, some of them the highest in Italy, except the Alps, and many of them co- vered with snow. At the foot of them are nu- merous villages, with rich and well cultivated farms. As the swelling of the lake was attended with incredible damage, the Marsi had often pe- titioned the senate to drain it, and Julius Ca'sar would have attempted it, had he lived. His successors were averse to the project, until Clau- dius, who delighted in expensive difficult enter- prises, undertook it. During the space of eleven

years he employed 30,000 men in digging a passage through the mountain ; and, when every thing was ready for letting oif the water, exhibit- ed a superb naval spectacle on the lake. A great number of condemned criminals were obliged to act tlie parts of Rhodians and Sicilians in separate fleets; to engage in earnest, and to destroy one another, for the entertainment of the court and the multitude of spectators that covered the hills. A line of well armed vessels and rafts loaded with soldiers surrounded the scene of action, to prevent any of the wretches from escaping ; but it was with great difficulty and many threats that they could be brought to engage. When this savage diversion was ended, the operations for opening the outlet commenced, and the emperor was very near being swept away and drowned, by the sudden rushing of the waters. However, either through the ignorance or negligence of the engineers the work did not answer as was expect- ed, and Claudius did not live long enough to have the faults amended ; and none of the water now escapes except through hidden channels formed by nature, which are probably subject to be obstructed, and thus occasion a superabund- ance of water in the lake, till some unknown cause remove the obstructions and again give free passage. Sir William Hamilton says, ' It is the most beautiful lake I ever saw, and it would be complete if the neighbouring mountains were better wooded.' It furnislies abundance of fish, though not of the best quality. There are a few large trouts, with many tenches, barbels, and dace. In the shallow water on the borders of the lake, he saw thousands of water snakes pur- suing and preying upon a little kind offish like our thornbacks, but much better armed ; though their defensive weapons seemed to avail them but little against such ravenous foes. Claudius's Outlet he describes as still entire, though filled with earth and rubbish in many parts. He went into it with torches as far as he could. It is a covered canal, three miles long, and part of it cut through hard rock; and other parts supported by mason work, with wells to give light. Adrian is said to have let off the waters of the lake : and our

author is of opinion, that, if the canal were cleared and repaired, it would still answer that purpose, and thereby restore a great deal of rich land fit for cultivation.

EU'CUS, n. s. } La.t. fucatus. Paint for the

Fu'cATED, adj. i face : painted ; disguised with paint : disguised by false show.

Women chat 0(fucus this, and fuctis that. Ben Jonson,

Those who paint for debauchery should have the fuacs pulled off, and the coarseness underneath dis- covered. Collier.

Fucus, in antiquity, a name given to certain dyes and paints ; particularly to a purple sea plant used to dye woollen and linens of that color. The dye, says Theophrastus, was very beau- tiful, but not lasting ; for it soon began to change, and in time went wholly off. The women also used a substance called fucus to stain their cheeks red ; and many have supposed that the same sub- stance was used on both occasions; but this, on a strict enquiry, proves not te be the case. The Greeks called every thing ˆvkoq that

would stain or paint the flesh. But this pe- culiar substance, used by the women to paint their cheeks, was distinguished from the others by the name of rizion among the more accurate writers, from piˆa, a root ; and was indeed a root brought from Syria into Greece, The La- tins, in imitation of tlie Greek name, called this root radicula : and Pliny erroneously confounds the plant with the radix lunaria, or Tpuˆtov of the Greeks. The name fucus was in those times such a universal name for paint, that the Greeks and Romans had a fucus metallicus, which was the ceruse used for painting the neck and arms white : after which they used the purpurissum, or red fucus of the rizium, to give the color to the cheeks. In after times they also used a fucus or paiutforthe purpose, prepared of thecretaargenta- ria, or silver chalk, and some of the rich purple dyes that were in use at.thattime ; and this seems to have been very little different from our rose- pink, a color used on like occasions.

Fucus, in botany, a genus of the monogynia order of algae, and cryptogamia class of plants. All the species afford a quantity of impure alkaline salt. The most remarkable are the following : —

F. ciliatus, the ciliated or ligulated fucus, is found on the shores of lona and

other places, but is not common. The color is red, the substance membranous and pellucid, without rib or nerve ; the ordinary height of the whole plant about four or five inches. It is variable in its appearance according to the different stages of its growth. It is eaten by the Scotch and Irish promiscuously with dilse.

F. esculentus, the eatable fucus, or bladder- locks, commonly called tangle in Scotland, is likewise a native of the British shores. It is commonly about four feet long, and seven or eight inches wide ; but is sometimes found three yards or more in length, and a foot in width. Small specimens are not above a cubit long, and two inches broad. The substance is thin, mem- branaceous, and pellucid ; the color green or olive. The root consists of tough cartilaginous fibres. The stalk is about six inches long, and half an inch wide, nearly square, and pinnated in the middle between the root and origin of the leaf, with ten or twelve pairs of thick, cartilagin- ous, oval, obtuse, foliaceous ligaments, each about two inches long, and crowded together. The leaf is of an oval lanceolate, or long elliptic form, simple and undivided, waved on the edges, and widely ribbed m tlie middle from bottom to top ; the stalk running through its whole length, and standing out on both sides of the leaf. It is eaten in the north both by men and cattle. Its proper season is September, when it is in perfec- tion. The membraneous part is rejected, and the stalk onty is eaten.

l\ giganteus, the gigantic fucus, is a native of the Straits of Le Maire ; and grows on rocky ground, which in those countries is distinguished from sand or ooze by the enormous length of the sea-weeds that grow upon it. The leaves are four feet long and some of the stalks, though not thicker than a man's thumb, arc 120. Sir Joseph B:inks and Dr. Solander soimded over some of them which were eighty-four feet deep; and, as they made a very acute angle with the

bottom, they were thought to be at least one half longer.

F. palmatus, the palmated or sweet fucus, commonly called dulse, or dilse, grows plenti- fully on our sea-coasts and islands. Its sub- stance is membraneous, thin, and pellucid; the color red, sometimes green, with a little mixture of red; its length generally about five or six inches, but varies from three to twelve :" it is fan-shaped, or gradually dilated from the base upwards. Its divisions are extremely various. The inhabitants, both of Scotland and England, take pleasure in eating this plant ; and women of weak habits often recover an appetite by eating it raw. The inhabitants of the Archipe- lago also are fond of it, as we learn from Steller. They sometimes eat it raw, but esteem it most when added to ragout, oglios, &c., to which it gives a red color ; and, dissolving, renders them thick and gelatinous. In the Isle of Skye, it is sometimes used in fevers to promote

perspira- tion, being boiled in water with butter. In this manner it also frequently purges. The dried leaves when infused in water, exhale the scent of violets.

F, pinnatifidus, the jagged fucus, or pepper dilse, is frequent on sea-rocks which are covered by the tides, both on the east and west coasts. It is of a yellow-olive color, often tinged with red. The substance is cartilaginous, but tender and transparent; the height about two or three inches. This species has a hot taste in the mouth, and is therefore called pepper dilse, in this country. It is often eaten as a salad, like the preceeding.

F. plicatus, the matted or Indian grass fucus, grows on the sea-shores in many places of Scot- land and England. It is generally about three or four, sometimes six inches long. Its color, after being exposed to the sun and air, is yellow- ish, or auburn; its substance pellucid, tough, and horny, so as to bear a strong resemblance to what the anglers call Indian grass.

F. plocamium, or pectinated fucus, is fre- quent on the sea-rocks, and in basins of water left by the recess of the tides. Its natural color is a most beautiful bright red or purple, but is often variegated with white or yellow. Its sub- stance is cartilaginous, but extremely thin, deli- cate, and transparent ; its height commonly about three or four inches. The stalk is com- pressed about half a line in diameter, erect, but waved in its growth, and divided almost from the base into many widely expanded branches. These primary branches are very long, alternate, exactly like the stalk, and subdivided into alter- nate secondary branches ; which are again fre- quently compounded in like manner, and these divisions decorated with subulated teeth, grow- ing in alternate rows, curiously pectinated or toothed on the upper side like a comb, the smallest of these teeth scarcely visible to the naked eye. The fructifications are minute spherical cajisules, or smooth dark-red globules, scattered without order on the sides of the branches; generally sessile, but some few of them supported on short peduncles. This species, on account of its elegant colors and fine div.sions, is the species most admired by those

who are fond of pictures and mimic landscapes, composed of marine vegetables.

F. prolifer, the proUferous fucus, is found on the shores of the western coast, adhering to shells and stones. The color is red ; the sub- stance meml)ranaceous, but tough, and some- what cartilaginous, witliout rib or

nerve, though thicker in the middle than at the edges. Its whole length is about four or five inches, the breadth of each leaf about a quarter of an inch. The growth of this fucus, when examined with attention, appears to be extremely singular and wonderful. It takes its origin either from a simple, entire, narrow, elliptic leaf, about an inch and a half long ; or from a dilated forked one, of the same length. Near the extremity of the elliptic leaf, or the points of the forked one (but out of the surface, and not out of the edge), arise one or more elliptic forked leaves, which produce other similar ones, in the same manner, near the summits ; and so on continually one or more leaves from the ends of each other, in a proliferous and dichotomous order, to the top of the plant : which in tlie manner of its growth much resembles the cactus opuntia, or flat-leaved Indian fig. Sometimes two or three leaves, or more, grow out of the middle of the disc of another leaf; but this is not the common order of their growth. The fructifications are red, spherical, rough warts, less than the smallest pin's head, scattered without order on the sur- face of the leaves. These warts, when highly magnified, appear to be the curled rudiments of young leaves ; which in due time either drop off and form new plants, or continue on and germinate upon the parent. The plant is very much infested with tlie flustra pilosa, the man- drepora verrucaria, and other corallines, which make it appear as if covered with white scabs.

F. saccharinus, the sweet fucus or sea belt, is very common on the sea coast. Its substance is cartilaginous and leatliern ; and the leaf is quite ribless. By these cliaracters it is distinguished from the esculeutus, to which it is nearly allied. It consists only of one simple, linear, elliptic leaf, of a tawny-green color, about five feet long, and three inches wide in its full grown state; but varies so exceedingly as to be found from a foot to four yards in length. The ordinary length of the stalk is two inches, but it varies even to a foot. The root is composed of branched fibres, which adhere to the stones like claws. This plant is often infested with the sertularia ciliata. The inhabitants of Iceland make a kind of pot- tage of it; boiling it in milk and eating it with a spoon. Tliey also soak it in fresh water, dry it in the sun, and tlien lay it up in wooden vessels, where it is soon covered with a white effl- orescence of sea salt, which has a sweet taste like sugar. This they eat with butter; but if taken in too great a quantity, the salt is apt to irritate the bowels. Their cattle feed and get fat upon this plant, both in its recent and dry state ; but their flesh acquires a bad flavor. It is some- times eaten by the people on the coast of Eng- land, boiled as a pot-herb.

F. serratus, the serrated fucus, or sea wrack, is frequent at all seasons upon the sea rocks at low water mark, but produces its seeds in July and

August. It consists of a flat, radical, and dicho tomous leaf, about two feet long; the branches half an inch wide, serrated on the edges with dents of

unequal size, and at unequal distances, having a flat stalk or rib divided like the leaf, and running in the middle of it through all its various ramifications. A small species of coral- line, called by Linnteus sertularia pumila, fre- quently creeps along the loaf. This species affords a much smaller quantity of alkaline salt than most others, eight oz. of the ashes yielding only three of fixed salt. The Dutch cover their crabs and lobsters with this fucus to keep them alive and moist ; and prefer it to any other, as being destitute of those mucous vesicles with which some of the rest abound, and which would sooner ferment and become putrid.

F. vesiculosus, the bladder fucus, common sea wrack, or sea ware, grows in great abundance on the sea rocks about low water mark; pro- ducing its fructifications in July and August. It has the same habit, color, and substance, as the foregoing ; but the edges of the leaf have no serratures, being quite entire; in the disc or surface are immersed hollow, spherical, or oval air-bladders, hairy within, growing generally in pairs, but often single in the angles of the branches, which are probably destined to buoy up the plant in the water: and, on the extreme segments of the leaves, appear tumid vesicles about three quarters of an inch long, sometimes oval and in pairs, sometimes single and bifid, with a clear viscid mucus interspersed with downy hairs. — This species is an excellent ma- nure for land ; for which purpose it is often applied in the maritime parts of Scotland and other countries. In the islands of Jura and Skye it serves as a winter food for cattle, which regularly come down to the shores at the recess of the tides to seek it. And sometmies even the stags, after a storm, descend from the mountains to the sea-sides to feed upon it. Linnteus in- forms us, that the inhabitants of Gothland boil it in water, and, mixing a little coarse meal or flour, feed their hogs with it ; for which reason they call the plant swintang. And in Scania, he says, the poor people cover their cottages with it, and sometimes use it for fuel. In Jura, and some other of the Hebrides, the inhabitants dry their cheeses without salt, by covering them with the ashes of this plant; which abounds with such a quantity of salts, that from five oz. of the ashes may be procured two and a half of fixed alkaline salts. But the most beneficial use, to whicli the fucus vesiculosus is applied, is in making potash, or kelp, a work much prac- tised in the Western Isles. There is a great dif- ference in the goodness and price of this com- modity, and much care and skill required in properly making it. That is esteemed the best which is hardest, finest grained, and free from sand or earth. The process of making it is this: when it is cut, it is carried to the beach and dried ; and a hollow is dug in the ground, three or four feet wide; round its margin is laid a row of stones, on which the sea-weed is placed, and set on fire within; and, quantities of this fuel being continually heaped upon the circle, there is in the centre a perpetual flame, from which a liquid,

like melted metal, drops into the hollow beneath: when it is full, as it commonly is ere the close of day, all heterogeneous matter being re- moved, the kelp is wrought with iron rakes, and brought to a uniform consistence in a state of fusion. When cool, it consolidates into a heavy dark-colored alkaline substance, which undergoes in the glass-houses a second vitrification, and assumes a perfect transparency.

Kelp is generally divided into two kinds ; the cut-weed kelp, and the drift-weed kelp ; the former made from the weed which has been re- cently cut from the rocks, _ the latter from that which has been drifted ashore. The latter is supposed to yield a kelp of inferior quality. Weed which has been exposed to rain, during the process of drying, affords a kelp of inferior quality. It is, therefore, of the utmost import- ance to keep the weed as much as possible free from rain. For this purpose, many employ sheds ; when these are not at hand, the weed, whicli has been laid out to dry, should be col- lected into one heap during the rain ; when this ceases, it should again be immediately spread out. It has often been matter of dispute, how old the plants should be before they be cut. In general tliree years is the time allotted. This, however, from some trials which have been made to as- certain this point, seems to be too long. From experiments, it appears, that the produce of kelp, from one ton of three years old weed, is only eight pounds more than that from the same quantity of two years old ; from this we would conclude, that the weed ought to be cut every two years.

So great a value is set upon this plant by the inhabitants, that they roll fragments of rocks and huge stones into the sea to increase the growth of it. Its medical virtues have been much celebrated by Dr. Russel, in his disserta- tion concerning the use of sea water in the diseases of the glands. He found the sapona- ceous liquor, or mucus, in the vesicles of tliis plant, to be an excellent resolvent, extremely serviceable in dispersing all scorbutic and scro- fulous swellings of the glands. He recommends the patient to rub the tumor with these vesicles liruised in his liand, till the mucus has thoroughly])enetrated the part, and afterwards to wash with sea water. Or to gather 2 lbs. of the tumid vesicles, in July, when they are full of mucus, and infuse them in a fjuart of sea-water, in a glass vessel, for fifteen days, when the liquor will have acquired nearly the consistency of honey. Then strain it off through a linen cloth, and rub tliis liquoi', three or four times a day, upon any hard scrofulous swellings, washing the parts after- wards with sea water, and nothing can be more efficacious to disperse tliem. Even scirr]iosities,he says, in women's breasts, have been dispelled by this

treatment. By calcining the plant in the open air, he made a very black salt powder, which he called vegetable Tl'ˆthiops; a medicine much used as a resolvent and deobstrueni, and recommended also as an excellent dentifrice to correct the scorbutic laxity of the gums, and take off the foulness of the teeth.

WD'DLE, v.a. ii, v.n. A frequentative of

Svfed. full : whence Scotch, _/«//, fou. To make drunk ; to drink to excess.

Men will be whoring ;s.ni\ fuddling on still.

L'Esirayige. The table floating round. And pavement faithless to the fuddled feet. Thomson.

FUEGO, FoGo, or St. Philip's, one of the Cape de Verd Islands, in the Atlantic, so named from its volcano, and from its having been dis- covered on St. Philip's day. It is fifteen miles long, and is much higher than any of tiie rest; seeming at sea to be one single mountain, though on the sides there are deep valleys. There is a volcano at the top which burns con- tinually, and may be seen a great way off. It throws out huge pieces of rocks to a vast height, and torrents of melted lava run down its sides. The Portuguese, who first inhabited it, brought negro slaves with them, and a stock of cows, horses, and hogs ; but their descendants are not now distinguishable from the negroes, the chief inhabitants being blacks, and of the Romish religion. The interior of the island is little known, but it is reported to suffer much from the want of water, which renders it unfit for the production of any vegetable except water melons, pompions, and fruits of a dry soil. Cotton was formerly raised, but never flourished here. The coast is abrupt and rocky, so that tliere are only a very few points at which it can be approached. The best road is that of Fonte de Villa, opj)o- site the chief town. Long. 24ˆ 20′ W., lat. 13° O'N.

FuEGo, Terra del. See Terra del Fuego.

FUEGOS, one of the Philippine Islands,

about thirty-six miles in circuit; the land rises

gradually from the shore to the centre. Long.

123° 26′ E., lat. 9° 20′ N

FUE'ILLEMOIlTE,??.,s. Fr. Also corruptly pronounced and written philomot. Fueillemorte color signifies the color of withered leaves in autumn.

FU'EL, n. s. &. V. a. Yt. feu, fire, of Lat. o- cus. The matter, or aliment, of fire : to feed fire with combustible matter: to store with firing. This shall be burning andyMc of fire. ha. ix. 5.

This spark will prove a raging fire If wind and fuel be brought to feed it with.

Shakspeare. And yet she cannot waste by this, Nor long endure this torturing wrong ;

For more corruption needless is, 'To fuel such a fever long, Donne.

Some arc plainly opconomical, as that the sea be well watered, and ■v.-eW fuelled. Wotton's Architect.

As a lamp is choked by a superabundance of oil, a fire extinguished by excess of fuel, so is the natural heat of the body destroyed by intemperate diet.

Binton. Never, alas ! the dreadful name ThzX fuels the infernal flame. Cowley.

Moved by my charms, with them your love may cease ; And as Xho.fuel sinks, the flame decrease. Prior.

The fuelled chimney blazes wide. Thomson.

Gain may be temporary and uncertain ; but ever while you live expense is constant and certain ; and it is easier to build two chimueys, than to keep one in fuel. Franklin,

Here wrecks were in such plenty That there was fuel to have furnished twenty.

Byron. Don Juan.

FUENIIOA, a city of China, in the province of Pe-Tcheli, celebrated for its extent, and the number of its inhabitants, as well as for the beauty of its streets and triumphal arclies. It is situated near the great wall amidst mountains ; and has under its jurisdiction two cities of the second, and eiglit of the third class, and a great number of fortresses, which bar the entrance of China auainst the Tartars.

FUEllTEVENTURA, or Fortaventira,

one of the Canary Islands, consisting of two

peninsulas, joined by an isthmus twelve miles

broad. The soil is fertile, producmg wheat,

barley, mastic, orchel, dates, olives, and various

other fruits ; particularly a species of fig-tree,

that yields a medicinal balm. It abounds in

cattle and goats; 30,000 kids have been bred

here annually. Long. 14° 32′ W., lat. 28° 4′ N.

FUGA'CITY, 71. s. ˆ Lat. fugax. 'ola-

Fuga'cious, adj. Mile : the quality of fly-

Fuga'ciousness, n. s. } ingaway: uncertainty;

instability.

Spirits and salts, which, by their fugacity, colour, smell, taste, and divers experiments that I purposely made to examine them, were like the salt and spirit of urine and soot. Boyle.

FUGALIA, in Roman antiquity, a feast sup- posed by some to be the same with the regifu- gium, held on the 24th of February, in memory of the expulsion of the kings, and the abolition of monarchy. Others think that the fugalia was the same with poplifugia, or the feast of Fugia, the goddess of joy, occasioned by the rout of an enemy ; which was the reason the people aban- doned themselves to riot and debauchery.

FUGH, inter j. Perhaps from Gr. ˆ?v. An expression of abhorrence. Commonly fob.

A very filthy fellow : how odiously ho smells nf his country garlick! fugh, how he stinks of Spain'.

Dryden's Don Sebastian.

FU'GITIVE, adj. & «. s. } Fr. fugitif; Lat.

FuGiTiVENESS, n. s. S fugitivus. Not

tenable ; not to be held or detained ; unsteady ; evanescent ; volatile ; apt to fly away : a wan- derer; a runagate; a vajiabond : one Itard to be caught, or detained : volatility ; fugacity.

Whilst yet with Parthian hlood thy sword is warm. The fugitive Parthians follow.

Sliakipeare. Antony and Cleopatra.

Unmarried men arc best friends, best masters, best servants, but not always best subjects ; for they are light to run away, and almost all fugitives arc of that condition. Bacon.

The most malicious surmise was countenanced by a libellous pamphlet of a. fugitive physician. Wotton. The Trojan chief

Thx'icc fugitive about Troy wall. Milton.

Back to thy punishment. False /«jfi<«t)e .' and to thy speed add wings. Lest with a whip of scorpions I pursue Thy lingering. Id. Paradise Lost.

That divers salts, emerging upon the analysis of many concretes, are very volatile, is plain from the fugitiveness of salt and of hartshorn attemling in dis- tillation. Boyle.

Your royal highness is too great and too ju3t_ either to want or to receive the homage of rebellious fugitives. Dryden.

Our idea of infinity is a growing and fugitive idea, still in a boundless progression, that can stop no where. Locke.

Happiness, object of that waking dream. Which we call life, mistaking : fugitive theme Of my pursuing verse, ideal shade. National good, by fancy only made. Prior,

The more tunder and fugitive parts, the leaves, of many of the more sturdy vegetables, fall otT for want of the supply from beneath : those only which are more tenacious, making a shift to subsist without such recruit. Woodward's Natural History.

Can a fugitive daughter enjoy herself, while her parents are in tears ? Clarissa.

What muse but his can Nature's beauties hit, Or catch that airy fugitive, called Wit ? Harte.

I cannot find my hero : he is mi.xed

With the heroic crowd that now pursue

The fugitives , or battle with the desperate.

Byron. Deformed Transformed.

Fugitive Pieces, in literature, essays, poems, or other short compositions, inserted ˆin news- papers, magazines, or the like periodical publi- cations ; or printed on loose sheets, or half sheets; so called, because easily lost and soon forgotten.

FUGUE, n. s. From Fr. and La.t. Juga. In music, some point consisting of four, five, six, or any other number of notes begun by some one single part, and then seconded by a thirdˆ fourth, fifth, and sixth part, if the composition consists of so many ; repeating the same, or such like notes, so that the several parts follow, or come in one after another in the same manner, the leading parts still flying before those that follow. Harris.

The reports a.nd fugiies have an agreement with the figures in rhetorick of repetition and traduction.

Bacon's Natural Hist, His volant touch Instinct through all proportions, lowˆ and high. Fled, and pursued transverse the resonant _/i«;«€.

Milton.

The skilful organist plies bis grave and fancieo descant in lofty fugues. Id. on Education.

Long has a race of heroes filled the stagCj,

That rant by note, and through the gamut rage ;

In songs and airs express their martial fire,

Comliat in trills, and in z. fugue expire. Addison.

A Fug IE is a piece of music sometimes longer and sometimes shorter, in which, agreeably tn the rules of harmony and modulation, the com- poser treats a subject; or, in other words, what expresses the capital thought or sentiment of the piece, in causing it to pass successively and al- ternately from one part to another. Some are peculiar to itself; and others common to it with what the French call imitation. 1. The subject proceeds from tlie tonic to the dominant, or from the dominant to the tonic, in rising or descend- ing. 2. Every fugue finds its response in the part immediately

following that wliich commenced. 3. That response ought to resume the subject in the interval of a fourth or fifth above or below the key, and to pursue it as exactly as the laws of harmony will admit ; proceeding from the dominant to the tonic when the subject is intro- duced from the tonic to the dominant, and mov.

iiig in a contrary direction when the ‘^■jojec’ is introduced from the dominant to the tonic. One part may likewise resume the same subject in the octave or unison of the preceding; but in thaf case, it is a repetition rather than a real response 4. As the octave is divided into two unequal parts, of wliich the one contams four gradations descending from the -tonic to the dominant, and ti;e other only three in continuing the ascent from the dominant to the tonic ; this renders it necessary to have some regard to this cliange in the expression of the subject, and to make some alterations in the response, tliat we may not quit the chords that are essential to the mode. It is a different case when the composer intends to altei the modulation; for these the exactness of the response it-elf, when taken in a diftVrent tone, produces the alteration proper for this change. 5. Tiie fugue should be planned in such a manner, that the response may commence before the close of the best air, so that both the one and the other may be in part heard at the same time : that, by this anticipation, the subject may be as it were connected with itself, and that the art of the composer may discover itself in this concourse. It is absolute mockery, instead of a fugue, to impose upon the hearers the same air, merely transposed from one key to another, without any other restraint tlian an accompani- ment afterwards formed at pleasure. This de- serves at best no better name than what the French call imitation. See Imitation.

Rousseau defines a fugue ‘ a piece of music in which a trait of melody, called the subject, is treated, according to certain established rules of harmony and modulation in making it pass successively and alternately from one part to another.’ The subject resembles the text of a sermon, out of which, all that is said should na- turally arise, and serve as a commentary and illustration. But though, for variety, or to in- dulge caprice, fugues and canons have been composed in all intervals, yet orthodox contra- puntists allow no fugues to be regular, but those of which the answer is made in the fifth, fourtli, eighth, or unison, as then the intervals will be the same. And of the answers, the preference is given to the fifth, then to the fourth, eighth and unison ; as the effect is pleasing in that order. It must be remembered that the subject itself, as of all other movements, should begin on the key note, its fifth or its eighth. Of the

various rules by which a true answer to a fuˆue maybe tried. Dr. Pepusch advises solmisation; Padre Martini the modes of the Romish church, called authentic and plagal : both good in tlie three hexachords and their minor relatives; but in transposed keys, in which several flats or sharps occur at the clef, there is no rule more certain and unexceptionable than giving the answer in exactly the same intervals as the sub- ject, only remembering that if one part rises a fifth, the other will only rise a fourth, as C 3g — G« — G — C *— ete contra : as G :8& — C « — C 3& — G 3S:. But this is only in leading off. The rest of the answer must be in the same intervals, and charac- ters for time, as the subject, except in prolation, augmentation and diminution, which give the*

answer in longer or shorter notes than the theme. All fugues and canons are imitations; but the term imitation is only applied to irregular fugues, when the intervals are not the same. The answer to a regular fugue may commence in the middle of the subject, which will unite them together, and make them reciprocally accompaniments to each otlier. ‘ The fugued style, says Mr. Donnely, is that where all the parts are nearly of the same importance, and where the harmony, whether for two, three, or four, parts, is rich, pure, and concise; a style in whicli, not only all common- place passages are carefully avoided, but every thing unworthy of the attention of the learned. This style is, and ever will be, that whicli the connoisseur and man of taste will esteem the most, not only because it is the most difficult, but because it is not subjected to the caprice of a frivolous and transitory taste, as is the case with most other musical productions, which get out of fashion, and never resist time. For this reason, the works of Handel, Marcello, Sebas- tian Bach, &c., have, for us, the same interest they had for past generations. There are some admirable specimens of fugues, in dementi’s Practical Harmony, a work, which has, in a most extraordinary degree, improved the taste for good music in England.’

It is impossible to enumerate all the ingenious contrivances that have been used in the works of great fughists. The following are the most frequent.

FuGA FER Arsin et Thesin, Or fugue in con- trary motion.

FuGA PER CONTRARI MOVIMENTI.

FuGA IN CoxsEQUENZA, is’somctimes uscd for canon.

FuoA Omofona, a fugue in unison.

Fug A Libera, free fugue. A canon is so called.

Fug A Leg ATA, and a strict- fugue, a canon.

Fuga Perpetua, perpetual fugue.

FUL'CIMENT, n.s.. hat. fulcimen, fulcimen- tum. That on which a body rests, whicli acts or is acted upon at each end, as a balance or a • lever.

The power that equiponderates with any weiglit, must have the same proportion unto it, as there is he- twixt their several distances from the centre or fu!ci- ment. yVilkinj.

FULCRUM, in mechanics, the prop or sup- port by which a lever is sustained.

FuLciiUM, in botany. See Botany, Index.

FULDA, or 1' ulue, a province, once an epis- copal principality of Germany, in tiie circle of the Upper Rhine, bounded on the north by Hesse Cassel, east by llenneberg, soutii by Wurzburg, and west by Isemburg and Hesse. It now belongs chiefly to Hesse Cassel, and is forty miles long, and from seven to twenty-five broad : containing 642 square miles; and is full of woods, mountains, medicinal springs, and rich arable lands. It was erected into a bishopric, in 1752, by Boniface XIV. This is a mountainous district, and little adapted to tillage in any part : but the pasturage is extensive, and the culture of culinary vegetables considerabh. The inhabi- tants are generally poor, and manufacture nothing but a little yarn, and linen. The Fulda is the*

chief river, and the town of that name, described hereafter, the capital.

In 1802 the territory was secularised, and given to the prince of Nassau Orange : but Buonaparte seized it in 1810. In 1814 a portion of this district, containing 27,000 inhabitants, was given to Saxe Weimar, and the rest to Prussia, wlio has subsequently ceded her portion to Hesse-Cassel, and the latter government has given it the title of the grand duchy of Fulda, uith a constitution of its own. It is divided into eight bailiwics. Population 64,000.

FuLD.i, or FuLDE, the capital of the above principality, has a celebrated abbey, erected by Benedictine monks, in 744. The abbot was formerly primate (Jf the imperial abbeys, and chancellor to the emperor. It is seated on the river of this name, fifty-five miles south of Cassel, fifty-eight north of

Frankfort, and sixty-three E. N. E. of Mentz. Here is a university or lyceum with six teachers, and an ecclesiastical academy, the inhabitants manufacture woollen, linen, and earthenware. Population 7500.

Fulda. (Charles Frederic), a Protestant eccle- siastic, born at Wimpfen, in 1722, possessed considerable learning, as well as some skill in mechanics, and was the author of Treatises, On the Goths ; On the Cimbri ; On the ancient German Mythology ; A Chart of History.; and a Dictionary of the German Roots. lie died in 1788, at Einzingen.

FULFILL, V. a. (Full and fill.) To fulfill is literally to fill quite full, that is, to bring about full to the wishes of a person : it also signifies to accomplish, or to keep to the end, or to the full extent.

Woo to you that hen ful/iUid,ioi ye schulen hungur.

Wiclif. Luk. vi. And it was don whanne the dayes of his office wercn fulfillid : he wente into his hous. Id,

O Salomon ! richest of all richesse, FuIJilled of sapience, and worldlie glorie Ful wortliy ben thy wordes to memorie To every wight, that wit and rcson can.

Chaucer. The Marchuntes Tale.

■ — ■ *I woll tell a tale to your consolacioune*

In ensampill to yowe, that when that I have do Another be right redy then for to tell ; ryght so To fulfyl our Hoostes wˆyll and his ordiuauncc There shall no fawte be found in me.

Id. The Pardonere and Tapstere. Six gates i' th' city, with massy staples. And corresponsive and fulfilling bolts, Sparre up the sons of Troy.

Shakipeare. Troilus and Cressida. Tliis I my glory account My exaltation, and my whole delight. That thou in me well-pleased declarest thy will FuIJilled, which io fulfil is all my bliss. Milton. Here nature seems fuljilled in all her ends.

Id. Paradise Lost. The fury bathed them in each other's blood ; Then, having fixed the fight, exulting flies. And hears fulfilled her promise to the skies.

I) r If den. If on my wounded breast thou drop'st a tear. Think for whose sake my breast that wound did bear ; And faithfully my last desires y?<(/ i7, As I perform my cruel father's will. Id. Ovid.

, FULFRA'UGHT (uij. Full and frauglit. Fully stored.

Thy fall hath left a kind of blot To mark the ful fraught man, the best endued. With some suspicion. Shakspeare. Henri/ V.

Y\JL'GENCY,n.s.-\ All from L?it.fulgens>

Ful'gent, «(/;'. iˆfulgidns. Splendor; glit"

Fil'gid, uf/;. { ter; sliining ; dazzling;

Fulgid'ity, ti.s. J exquisitely bright. As from a cloud his fulgent head. And shape star-bright, appeared.

Milton's Paradise Lost.

The illumination is not so bright and fulgent as to obscure or extinguish all perceptibility of reason.

More's Divine Dialogues.

JULGENTIUS (St.), an orthodox father, of the 'fiftli century, born at Talepta, in 468, of a noble family. Tiiough he had a liberal educa- tion, and a lucrative post, he left it and turned monk. In 507 lie was elected bishop of Ruspa; but was banished, with the other trinitarian Afri- can bishops, by Thrasimond, the Arian king of the Vandals ; on whose death they were recalled. Fulgentius died in 533. His works were printed at Paris in 1 vol. 4to. 1684.

FULGORA, in zoology, a genus of insects belonging to the order of hemiptera. The cha- racters are these : The front or fore part of the head is drawn extended and empty; the antenna are seated below the eyes, having two articu- lations, whereof the exterior is larger, and of a globular form; the rostrum is reflected, or bent inwards under the body ; and the feet are made for walking. There are twenty-five species, the most remarkable of which are : —

F. candelaria, or lantern fly. The head and thorax are generally of a ruddy brown ; and the ground color of the elytra is fresh green, but quaintly figured with spots of a yellowish clay color, sometimes pale, at other seasons of a deeper hue. The wings are of a deep and beau- tiful yellow, with a broad band of glossy black bordering tlie extremities. The tarsi of the feet are composed of three articulations, and are paler than the legs and thighs, which are brown. \Vhen the insect is on the wing, the waving of the elytra (whose thinness renders the spots thereon transparent), assisted by the luminous quality peculiar to the tribe, and the golden yellow of the

under wings, bordered witli black, occasion the flashes they dart around in the night. It is an inhabitant of. China.

F. Europaea. Front conic; body green, wings hyaline, reticulate : inhabiting Europe ; and the only species of the genns found in England. It was the earliest discovered in Europe, hence its specific name.

FULGOR', n. s. } l^iA. fulgor ; fulguratio.

Fulgura'tion, n.s. S Dazzling brightness, like that of lightning ; the act of lightning.

Glow-worms alive project a lustre in the dark ; which fulgour, notwithstanding, ceaseth after death.

Browne,

When I set my eyes on this side of things, there shines from them such an intellectual fulgour, that iiiethinks the very glory of the Deity becomes visible through them. More.

FUL'HAIM, V. s. A cant word for false dice.

Let vultures gripe thy guts, for gourd and Fulham's hold. And high and low beguile the rich and poor.

Sltahfpeare.

FuLHAM, a Tillage of Middlesex, four miles from London. Tlfe Danes in 869 wintered at this place till they retired to the continent. In William the Conqueror's time it was held of the king by the canons of St. Paul's ; and there' is an ancient house in it, which is moated about, and belongs to the see of London, whose bishop has a palace here, and the demesne has belonged to that diocese from 1067. . From this place to Putney there is a wooden bridge over the Thames, where not only horses, coaches, and all carriages, but even foot passengers, pay toll. The church here is both a rectory and a vi- carage.

FULICA, in ornithology, the gallinule and coot, a genus of birds of the order of grallse. Tlie bill convex : the upper mandible fornicated over the lower at the edge ; the lower manaible is gibbous behind the tip. The

forehead is bald ; and the feet have four toes, subpinnated. There are twenty-five species ; eighteen of which be- long to the gallinule division, distinguished by having the toes furnished with broad scalloped membranes; and seven comprehend the coots which have the toes divided to their origin. The following are among the most remarkable : —

F. aterrima, the greater coot, is of a larger size than the common coot, and its plumage is blacker. This species is found in Lancashire and Scotland ; but is more plentiful on the con- tinent, being found in Russia, and the west of Siberia very common ; also at Sologne and the neighbouring parts, where they call it judelle. Its flesh is much esteemed.

F. atra, the common coot, has a bald forehead, a black body and lobated toes ; and is about fifteen inches long. They frequent lakes and still rivers ; making their nests among the rushes, with grass, reeds, &c., floating on the water, so as to rise and fall with it. They lay five or six large eggs, of a dirty whitish hue, sprinkled over with minute deep rust-colored spots ; and it is said, that tliey will lay fourteen or more. The young when just hatched are very deformed, and the head mixed with a red coarse down. In winter they often repair to the sea, and the channel near Southampton is sometimes observed almost covered with them. They are often brought to that market, where they are exposed to sale with- out their feathers, and scalded like pigs. This species is not numerous, for vast numbers fall a prey while young to the buzzards, which frequent the marshes. Their food is small fish and water insects ; but they sometimes eat the roots of the bulrush, and with it feed their young ; they are said likewise to eat grain. This species is sup- posed to extend throughout the old continent, and perhaps the new also. It inhabits Green- land, Sweden, Norway, Russia, Siberia, Persia, China, and many of the intermediate parts. It is also met with in Jamaica, Carolina, and other parts of North America. The Indians about Niagara dress the skins, and use them for pouches. They are called in Carolina, flus- terers.

F. chloropus, the common gallinule, is in length about fourteen inches, and has a bald forehead and broad flat toes. It gets its food on grassy banks, and borders near fresh waters, and

ill the very waters, if they be weedy. It builds upon low trees and shrubs by the water side ; breeding twice or thrice in a summer; and, when the young "are grown up, drives them away to shift for themselves. The hen lays seven eggs of a dirty white, thinly spotted with rust color. The gallinule strikes with its bill, and in spring has a shrill call. In flying, it hangs down its legs ; and in running, it often flirts up its tail, and sliovvs the white feathers. The bottoms of its toes are so very flat and broad (to enable it to swim) that it seems to be the species which connects the cloven-footed

aqua- tics with the fin-toed. It is pretty common on the continent, and inhabits America, from New York to Carolina ; as well as Jamaica and other islands in the West Indies. It feeds on plants and small fish, and the flesh is pretty good.

F. porphyrio, the purple gallinule, is about the size of a fowl, or seventeen inches in length. The bill is an inch and a half long, and of a deep red color. The forehead is bare and red ; the head and hind part of the neck are glossy violet ; the legs are very stout, and of the color of the bill. This species is more or less common in all the warmer parts of the globe. On the coasts of Barbary they abound, as well as in some of the islands of the Mediterranean. In Sicily they are bred in plenty, and kept for their beauty. They are often met with in the south of Russia and west of Siberia, among reedy places ; and near the Caspian Sea; but in the cultivated rice grounds of Ghilar, in Persia, they are in great plenty and high plumage. The female makes the nest among the reeds in the middle of March ; lays three or four eggs, and sits from three to four weeks. That they are common in China, the Chinese paper hangings testify. They are al'so met with in the East Indies, the island of Java, Madagascar, &c. They are also common in South America. They are very docile, easily tamed, and feed wifh the poultry; scratching the ground with their feet, like our cocks and hens. They feed on fruits, roots, and grain, but eat fish with avidity, dipping them in the water before swallowing. They often stand on one leg, and lift the food to their mouths with the other. A pair of them, kept in an aviary in France, made a nest of small sticks mixed with a quantity of straw, and laid six white eggs, perfectly round ; but the hen was careless of them, and they pro- duced nothing. The flesh is said to be exquisite. FULIGINOUS, arf;. Yv.fuliginciix-se; Lat. fuliginosus. Sooty; smoky.

Burrage hath an excellent spirit to repress the fu- liginous vapours of dusky melancholy, and so cure madness. Bacon.

Whereas History should be the torch of truth, he makes her in divers places s. fuliijinotis link of lies.

Howel,

FUL'IMART, n. x. This word, of which Skin- ner observes that he found it only in this passage, seems to mean the same with stoat. A kind ot stinking ferret.

The fichat, the fulimart, and the ferret, live upon the face, and within the bowels of the earth.

Walton's Angler.

FuLivART, in zoology. See Mustela.

FULK (William), D. D., an eminent English divine, born at London, in the sixteenth century. He w;xs patronised by the earl of Leicester, who, in 1571, presented him to the livings of VVarley and D.ddington. He attended Leicester, when he went ambassador to France ; and on his re- turn was made master of Pembroke-hall, and Margaret professor of divinity in Cambridge. His works are very numerous, and chiefly against the Papists ; the most noted is his Com- ment on the Ilhemish New Testament. He died in 1589.

¥\J l.L, adj., n.s.k. adv. ˆ Sax. puUe; Goth.

Ful'ly, adv. [full ; Teui. Jul ; Belg.

Fu l'n ESS, n.s. J vol; perhaps of Gr.

5 > X£0(;, TrXtoc- Replete ; without vacuity ; leaving no space void : stored ; well supplied : plump ; fat; saturated; complete; without abatement; strong; not faint; not attenuated ; mature; per- fect : applied to the moon when complete in its orb : spread to view in all dimensions. The idea of fulness i:. plenitude, and is used either in the proper sense to express the state of' objects that are fall, or in the improper sense to express screat quantity, which is the accompaniment of fulness. See Crahb. Full is much used in com position, instances of which immediately follow the illustrations of this adjective and its deri- vatives.

And the fast was fid nygh, a feeste day of the Jewia. Wiclif. Jon. vi.

Better is an handful with quietness, than both the hands /mH with travel and vexation of spirit.

Eccl. iv. 6.

Valley /uˆi of chariots. Isaiah.

The trees of the Lord are full of sap. Psalms.

Alnne I stande /«/i sorie and full sad.

Which hoped for to see my Lorde and Kyng :

Small cause have I to be merie or glad

Remembryng this bitterful departyng.

Chaucer. Lament of Mary Magdeleine.

Pvdl wos the fest of deinties and richesse. Of instrumentes, of song, and of gladuesse.

Id. The Legende of Good Wimien.

This markis yet his wif to terapten more, — To the uttereste prefe of hire corage Ftilly to have experience and lore, — If that she were as stedfast as before ; He on a day in open audience, Ful boisteresly, hath said hire this sentence.

Id. The Clerkes Tale. Tp,i me why o.\ your shield, so goodly scored. Boar ye the picture of that lady's head ? Full lively is the semblant, though the suDsJance dead.

Spenser.

There are many graces for which we may not cease hourly to sue, graces which are in bestowing always, but never come to be full;/ had in this present life ; and therefore, when all things here have an end, endless thanks must have their beginning in a st.ue which bringeth the full and final satisfaction of all »ach j/erpetual desires. Hcoker.

I was set at work Among my maids ; full little, God knows, looking Either for such men or such business. S'uikspeare. You should tread a course Pretty and /uH of view. Id. Cymbeline.

To lapse in fulness is sorer than to lie for need ; and falshood Is worse in kinifs thdn '>egear5. Id.

The swan's down feathei. That stands upon the swell a.t full of tide. Neither way inclines.

Shakspeare. Antony and Cleopatra. He is the half part of a blessed man. Left to be finished by such as she ; And she a fair divided excellence, 'Whose fulness of p-rfection lies in him.

Shaktpeare. The king hath won, and hath sent out A speedy power to encounter you, my lord : This is the news al full. Id. Henry IV.

But whit at full I know, thou knowest no part ; I knowing all my peril, thou no art. Shakspeare. When we return. We'll see those things affected to the

full. Id. The king set forwards to London, receiving the ac- clamations and applauses of the people as he went ; which indeed were true and unfeigned, as might well , appear in the very demonstration and fulness of the cry. Bacon's Henry VII.

Barrels placed under the floor of a chamber, make all noises in the same more full and resounding.

Id. Natural History. Brains in rabbits, woodcocks, and calves, are fullest m ihn full of the moon. Id.

' The alteration of scenes feeds and relieves the eye, before it be full of tlie same object. Bacon.

Followers, who make themselves as trumpets of the commendation of those they follow, are full of inconve- nience ; they taint business through want of secrecy, and export hoBourfrom a man, and make him a return in envy. Id.

To the houses I wished nothing more than safety, f finest, and freedom. King Charles.

I need not instance in the habitual intemperance of rich tables, nor the evil accidents and effects ol fulness, pride and last, wantounesi and softness.

Taylor's Rule of Holy Living, Where my expressions are not so full as his, either cur language or my art were defective ; but where mine are fuller than his, they are but the impressions which tiie often reading of him have left upon my thoughts. Denham.

That must be our cure. To be no more ; sad cure ; for who would lose. Though full of pain, this intellectual being. Those thoughcs that wander through eternity ?

Milton, lie full Resplendent all his Father manifest Expressed.

What remains, ye gods. But up and enter now into full bliss ? So law appears imperfect, and but given With purpose to resign them in full time Up to a belter covenant.

These thoughts Full counsel must mature. Then all thy saints assembled, thou shalt judge Bad men and angels ; they arraigned shall sinic Beneath thy sentence ; Hell her numbers /u// Thenceforth shall be for ever shut.

Id. Paradise Lost. Therewith he ended, making a. full point of a heariy sigh. Sidney

With pretence from Strephon her to guard. He met her full, hat full of warefulness. Id,

Your enjoyments are so complete, I turn wishes intc- congratulations, and congratulating their fulness only wish their continuance. South.

The most judicious writer is sometimes mistaken, after all his care ; but the hasty criiick. who judges on a view, is ftill as liable to be deceived. Dryden.

Id.

Id.

Id.

Id.

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From harmony, from heavenly harmony. This universal frame began :

From harmony to harmony. Through all the compass of the notes it ran The diapason closing/u// in man. Id.

At length resolved, he throws with all his force Full at the temples of the warrior horse. Id.

Since you may Suspect my courage, if I should not lay, The pawn I proffer shall he full as good.

Id. Vmjil. Every one is full of the miracles done by col J baths on decayed and weak constitutions. Locke.

Full in the centre of the sacred wood. An arm ariseth of the Stygian flood. Addison. Till about the end of the third century, I do not re- member to have selu the head of a Roman emperor drawn with a full face : they always appear in profile.

Id. on Medals. Towards the full moon, as he was coming home one morning ho felt his legs fuulter. IViseman.

A gentleman of a. full body having broken his skin by a fall, the wound inflamed. Id. Surgery.

Water digesteth a full meal sooner than any liquor.

Arbuthnot. Full ni days was he ; Two ages past, he lived the third to see.

Tickel. This sort of pastoral derives almost its whole beauty from a natural ease of thought and smoothness of verse ; whereas that of most other kinds consists iu the strength and fulness of both. Pope.

Where all must full or not coherent be. Id.

If where the rules not far enough extend. Some lucky licence answer to the full The' intent proposed, that licence is a rule. Id. There is a perquisite fidl as honest, by which you liave the best part of a bottle of wine for yourself.

Swift. After hard riding plunge the horses into water, and allow them to drink as they please : but gallop them full speed, to warm the water in their bellies. Id.

For when his bright eye. full our eye opposes None gains his glorious sight, but his own sight he loses. Fletcher's Purple Island.

Glowing, and circumfused in speechless love, • Their full divinity inadequate That feeling to express, or to improve. The gods become as mortals, and man's fate Has moments like their brightest : but the weight Of earth recoils upon us. Byron. Ckilde Harold. Your crimes Are fully proved by your accomplices. And all which circumstance can add to aid them, Yet we would hear from your own lips complete Avowal of your treason. Id. Voije of Venice.

Full, u. a. -v Sax. pulhan; Swed.

Ful'lage, n.s. i.fulla; Lsit'mfullo. To

Ful'leu, n. s.

cleanse cloth from its oil

X UL Ltu, 71. s. > Cleanse ciotn irom us oil

Ful'lery, 71. s. i or grease : the money Ful'lingmill, W.S.J paid for fulling; or clean- sing cloth : one whose trade is to cleanse cloth ; the place where the trade of a fuller is exercised : and tlie fullinnmill is a mill where the water raises hammers, which beat the cloth till it be cleansed.

His raiment became shining, exceeding white as snow ; so as no fuller on earth can whiten them.

Mark ix, 3. The clothiers have put cflT The spinsters, carders, /uZ/er, weavers.*

Shakipeare.

By large hammers, like those used for paper and fullingmilh, they beat their hemp. Mortimer.

■ *FULL-BLOWN, («//. Full and blown. Spread to the utmost extent, as a perfect blossom : stretched by the wind to the utmost extent.*

My glories are past danger ; they're full-blown : Things, that are blasted, are but in the bud.

Dcnham, My full-blown youth already fades apace j Of our short being 'tis the shortest space !

Drt/dcn. He who with bold Cratinus is inspired. With zeal and equal indignation fired ; Who at enormous villany turns pale, And steers against it with a full-blown sail. Id,

FULL-BO'TTOMED, adj. Full and bottom. Having a large bottom.

I was obliged to sit at home in my morning-gown, having pawned a new suit of cloaths and a. full-bot- tomed wig for a sum of money. Guardian.

FULL-EA'RED. adj. Full and ear. Having the heads full of grain.

As flames rolled by the winds conspiring force.

O'er full-eared corn, or torrents raging course.

Denham.

FULLER (Andrew), a distinguished dissent- ing divine, secretary to the Baptist Missionary Society, was born at Wicken, in Cambridge- shire, in 1754. His father was a small farmer, who gave his son the rudiments of education at the free-school of Soham, and in 1775, on an invitation to become the pastor of a congrega- tion at that place, he entered into the ministry and married. After a few years' residence at Soham, he accepted a similar charge at Kettering, where he wrote and published his Treatise on Faith. In the establishment of the Baptist Missionary Society, by Dr. Carey and others, Mr. Fuller exerted himself with great energy, and the whole of his future life was identified with its labors. He was also an able contro- versialist, and his treatise On the Calvinisiic and Socinian Systems compared as to their Moral Tendency, attracted much attention. His other

works, besides various published sermons, are Socinianism Indefensible ; The Gospel its own Witness ; Memoirs of Samuel Pearce ; An En- quiry into the nature of Religious Declension ; Discourses on the Book of Genesis ; Dialogues, Letters, and Essays, 12rao.; Apology for the Cliristian Missions to India, &c. \q. The eulogy upon Mr. Fuller, from the pen of tlie Rev. Rob. Hall, is so creditable to both parties, that we must gratify our readers by subjoining it. It occurs in a controversial pamphlet, On Terms of Communion, respecting which Mr. Fuller differed with the writer.

‘ It lias been insinuated that the author has taken an unfair advantage of his opponents, by choosing to bring forward this disquisition just at tlie moment when we have to lament the loss of a person whose judgment would have dis- posed, and his abilities enabled him to do ample justice to the opposite side of the question. He can assure his readers, that none entertained a higher veneration for Mr. Fuller than himself, notwithstanding their difference of sentiment on this subject; and that, when he entered on this discussion, it was with the fullest expectation of

having his opposition to encounter. At that time his state of health, though not good, was such as suggested a hope tliat the event was very distant which we all deplore. Having been led to mention this aftecting circumstance, I cannot refrain from expressing in a few words the senti- ments of affectionate veneration with which I always regarded that excellent person while living, and cherish his memory now that he is no more ; a man, whose sagacity enabled him to penetrate to the depths of every subject he ex- plored, whose conceptions were so powerful and luminous, that what was recondite and original appeared familiar ; what was intricate, easy and perspicuous in his hands ; equally successful in enforcing the practical, in stating the theoretical, and discussing the polemical branches of theo- logy: without the advantage of early education, he rose to high distinction amongst the religious writers of his day, and, in the midst of a most active and laborious” life, left monuments of his piety and genius which will survive to distant posterity. Were I making his eulogium, I should necessarily dwell on the spotless integrity of his private life, his fidelity in friendship, his neglect of self-interest, his ardent attachment to truth, and especially the series of unceasing la- bors and exertions, in superintending the mission to India, to which he most probably fell a vic- tim. He had nothing feeble or undecisive in his character, but, to every undertaking in which he engaged, he brought all the powers of his

under- standing, all the energies of his heart ; and if he were less distinguished by the comprehension, than the acumen and solidity of his thoughts ; less eminent for the gentler graces, than for stern mtegrity and native grandeur of mind, we have only to remember the necessary limitations of numan excellence. While he endeared himself to his denomination by a long course of most useful laboi, by his excellent works on the Socinian and Deistical controversies, as well as his devotion to the cause of missions, he laid the world under lasting obligations.' Mr. Fuller died at Kettering in 1815.

FrLLEii (Nicholas), prebendary of Salisbury, a learned Ens:lish critic, who published, in 1617, Miscellanea Theologica in four books, and after- wards tv,o more of Miscellanea Sacra. He died in 1623, and there are some MSS. of his re- maining in the Bodleian library.

Fuller (Thomas), D.D., a learned English historian and divine, born at Aldwinkle, Nor- thamptonshire, in 1608. He studied at Cam- bridge, and was chosen minister of St. Bennet's. In his twenty-third year his merit procured him a fellowship ia Sidney College, and prebend in Salisbury cathedral. He was afterwards ap- pointed rector of Broad Windsor, and lecturer of the Savoy in London ; but, upon the pressing of the covenant, he retired to Oxford, and soon after accompanied Hopton as his chaplain in the army, which he attended in their marches. Upon the Restoration, he recovered his prebend, was appointed chaplain extraordinary to Charles II., and created D.D. His memory was so excel- lent that he could repeat a sermon if he heard it but once. He wrote, 1. History of the Holy War. 2. The Church History of Britain, in

folio. 3. Andronicus, or the Unfortune Poli- tician, in 8vo. 4. A Pisgah sight of Palestine. 5. A History of English Worthies; and other works. He died in August, 1661. He was fond of punning: but once, attempting to play off a joke upon a gentleman named Sparrow- hawk, met with the following retort : ' What is the difference, said the Dr. (who was very cor- pulent) 'between an owl and a sparrowhawk ?' ' It is,' replied the other, ' fuller in the head, fuller in the body, and fuller all over." In the Memoirs of Mr. Pepys, recently published, that writer says — ' Jan. 22nd, 1661. I met with Dr. Thomas Fuller. He tells me of his last and great book that is coming out : that is, the History of all the Families in England ; and could tell me more of ray owne than I knew myself. And also to what perfection he hath now brought the art of memory; that he did lately, to four eminently great scholars, dictate together in the Latin upon different subjects of their proposing, faster than they were able tio write, till they were tired ; and that the best way of beginning a sentence, if a man should be out and forget his last sentence (which he never was), that then his last refuge is to begin with an utcunque.'. His Worthies appeared in a new edition, with his

life prefixed, in]810, 2 vols 4to.

Fullers' Earth, n. s.

'The fullers' earth of England very much exceeds any yet discovered abroad in goodness ; which is one great reason why the English surpass all other nati'^ns in the woollen manufacture. Woodward.

Fullers' earth is a marl of a close texture, extremely soft and unctuous to the touch : when dry it is of a greyish colour, in all degrees, from very pale to almost black, and generally has a greenish cast in it. The finest /uWeri' earth is dug in our own island.

Hill's Materia Medica.

Fullers' Earth, in natural history, a species of clay, of a grayish ash-colored brown, in all degrees, from very pale to almost black, and it has generally something of a greenish cast. It is very hard and firm, of a compact texture, of a rough and somewhat dusty surface, that adheres slightly to the tongue. It is very soft to the touch, not staining the hands, nor breaking easily between the fingers. It has a little harsh- ness between the teeth, and melts freely in the mouth. Thrown into water, it makes no ebulli- tion or hissing ; but swells gradually in bulk, and falls into a fine soft powder. It makes no effervescence with aquafortis. Bergman has given an accurate account of the fullers' earth of Hampshire; its color is brown, whh a scarcely perceptible shade of green, and streaked with pale yellowish veins, with some slaty appear- ance. Water boiled on it for half an hour, though filtered, still retains so much of it as to diminish its transparency. In this water the so- lution of marine baro selenite discovers nothing vitriolic ; but the solution of silver does indi- cate some traces of marine acid. If this earth be heated to redness, it blackens ; but this black- ness vanishes in a higher heat, which shows it to proceed from some vegetable or coaly matter. When heated it slightly decrepitates, and in a strong heat forms a brown spongy mass. Heated

with microcosmic salt, it at first effervesces sliglitly, but afterwards is scarcely acted on; borax corrodes it better, but consumes it slowly. Soda attacks it with considerable effervescence. By bis analysis it contains 0-518 silex, 0-2.") argill, 0-033 aerated calx, 0-037 calx of iron, 0-007 aerated magnesia, 0- 155 moisture, or vola- tile matter.

Tliough this earth contains 4 per cent, of sub- stances that should eff'ervesce, yet it does not effervesce with acids ; which induces Bergman to think that the calx and magnesia may be chemically combined with the argill, and not merely mechanically mixed as in marls. It melts into a brown spongy scoria before the blowpipe. Its constituents, according to Klap- roth, are, 53 silica, 10 alumina, 1'25 magnesia, 0-50 lime, 0-10 muriate of soda, trace of potassa, oxide of iron 9-75, water 24.

In Saxony this earth commonly lies under mould ; in England under sandstone or sand, and over sandstone or limestone ; in Germany it is often found immediately under the soil. The best is procured from the counties of Surry and Buckingham.

The greatest quantity, and the finest earth of this kind in the world, is dug in the pits at Wavedon, near Woburn in Bedfordshire. The strata in these pits lie thus : from the surface to the depth of six feet, there are several layers of sand, all reddish, but some lighter colored than others. Under these there is a thin stratum of sandstone, which they break through, and then they find the fullers' earth. The upper stratum of this is about a foot thick ; the workmen call it cledge, and throw it aside as useless ; being commonly fouled with the sand which covered it, and which insinuates itself a good way into it. After this they come to the fine fuller's earth, which lies eight feet deep. The matter of this is divided into several layers, there being commonly about a foot and a half between one horizontal fissure and another. Of these several layers, the upper half, where the earth breaks it- self, is tinged red ; which seems to be owing to the running of the water upon it from among the sands above ; some of which are probably of a ferruginous nature, or have ferruginous matter among them. This reddish fullers' earth the workmen call crop ; and between the cledge and this there is a thin stratum of matter, of less than an inch, which in taste, color, and external appearance, resembles the terra Japonica of the shops. The lower half of the .strata of fuller's earth they call wall earth. This is untinged with the red color of the other, and seems tlie most proper for fulling. Under the fullers' earth there is a stratum of white and coarse stone about two feet thick. They seldom dig through this ; out if they do, they find more strata of sand. Fullers' earth is of great use in scouring cloths, stuffs, &c., imbibing all the grease and oil used in preparing, dressing, &c., of the wool ; for which reason it is made a contraband com- modity, and is not to be exported under the penalty of Is. for every pound weight. See Fulling.

Fullers' Thistle, or weed, n. s. Dipsacus. A plant.

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FULLING, the art or act of cleansing, scourmg, and pressing cloths, stuff's,

and stockings, to render them stronger, closer, and firmer: called also mil- ling. Pliny, lib. vii. cap. 56, assures us, that one Nicias, thesonof Hermias,wasthe first inventor of the art of fulling : and it appears by an inscription, quoted by Sir G. Wheeler, in his Travels through Greece, tliat this Nicias was a governor in Greece in the time of the Romans. The fulling of cloths and other stuff's is performed by a kind of water-mill, thence called a fulling-mill, or scour- ing-mill. These mills, excepting in what relates to the mill-stones and hopper, are much the same with ccrn-mills : and there are even some which serve indifferently for either use : corn being ground, and cloths fulled, by the motion of the same wheel. Whence, in some places, particularly in France, the fullers are called mil- lers ; as grinding corn and milling stutfs at the same time. The principal parts of the fulling- mill are, the wheel, with its trundle ; which gives motion to the tree or spindle, whose teeth com- municate it to the pestles or stampers, which are hereby raised and made to fall alternately, ac- cording as its teeth catch on or quit a kind of latch in the middle of each pestle. The pestles and troughs are of wood ; each trough having at least two, sometimes three pestles, at the dis- cretion of the master, or according to the force of the stream of water. In these troughs are laid the cloths, stuffs, &c., intended to be fulled : then, letting the current of water fall on the wheel, the pestles are successively let fall thereon, and by their weight and velocity stamp and press the stuffTs very strongly, wliich thus become thickened and condensed. In the course of 'the operation, they sometimes make use of urine, sometimes of fullers' earth, and sometimes of soap. To prepare the stuff's to receive the first impressions of the pestle, they are usually laid in urine ; then in fuller's earth and water ; and, lastly, in soap dissolved in hot water. Soap alone would do very well ; but this is expen- sive : though fullers' earth, in the way of our dressing, is scarcely inferior thereto ; but then it must be well cleared of all stones and grittinesses, which are apt to make holes in the stuff". As to urine, it is certainly])rejudicial, and ought to be entirely discarded ; not so much on account of its ill smell, as of its sharpness and saltness, which cjualities are apt to render the stuff's dry and harsh. See Cloth, Woollen.

The best method of fulling with soap is de- livered by M. Colinet, in a memoir on that sub- ject, supported by experiments, made by order of the marquis de Louvois, then superintendant of the arts and manufactories of France. 1. The substance of it is as follow? : — A colored cloth, of about forty-five ells, is to be laid in the usual manner, in the trough of a fulling mill ; without first soaking it in water, as is commonly prac- tised in many places. To full this trough of cloth, fifteen pounds of soap are required ; one half of which is to be melted in two pails of river or spring water, made as hot as the hand can bear it. This solution is to be jioured by little and little upon the clotli, in proportion as it is laid in the trough : and thus it is to be

fulled for at least two liours ; after which it is to

be taken out and stretched. This done, tlie cloth is immediately returned into the same trough, without any new soap, and there fulled two hours more. Then taking it out, tliey wring it well, to express all the grease and filth. After the second fulling, the remainder of the soap is dissolved as in the former, and cast four different times on the cloth ; remembering to take out the cloth every two hours, to stretch it, and undo the plaits and wrinkles it has acquired in the trough. When they perceive it sufficiently fulled, and brought to the quality and thickness required, they scour it for good in hot weather, keeping it in the trough till it be <|uite clean. As to white cloths, as these full more easily and in less time thun colored ones, a third part of the soap may be spared.

Fulling of Stockings, Caps, Sec, should be performed somewhat differently; viz. either with the feet or the hands ; or a kind of rack or wooden machine, either armed with teeth of the same matter, or else horses' or bullocks' teeth. The ingredients made use of herein are, urine, green soap, white soap, and fullers' earth. But the urine is also reckoned prejudicial here. Woven stockings, Sec, should be fulled with soap alone : for those that are knit, earth may be used with the soap. Indeed it is common to full these kinds of works with the mill, after the usual manner of cloth, Sec. But that is too coarse and violent a method, and apt to damage the work, unless it be very strong.

FULL-EY'ED, adj. Full and eye. Having large prominent eyes.

FULL-FED, af/j. Full and fed. Sated; fat; saginated.

All as a partridge plump, /KH-/erf, and fair. She formed this image of well bodied air. Pope,

FULL-LA'DEN, adj. Full and laden. Laden till there can be no more added.

It were unlit that so excellent a reward as the Gos- pel promises should stoop down, like fruit upon a. full- laden bough, to be plucked by every idle and wanton hand. Tillotson.

FULLO (Peter), an heretical bishop of An- tioch, in the fifth century, who embraced the Eutychian heresy, to which he added, tliat all the persons in the Trinity sufi'ered on the cross ; whence his followers were styled Theopaschatites. lie visurped the see of Antioch from Martyrius in 471, for which he was afterwards deposed, but the emperor Zeno restored him. lie died in 486.

FULL-SPRF/AD, adj. Full and spread. Spread to the utmost extent.

How easy 'tis, when destiny proves kind. With full-spread sails to run before tlie wind ; But those that 'gainst stiff gales laveering go. Must be at once resolved and skilful too.

D)i/den.

FULL-SU'MMED, adj. Full and summed- Complete in all its parts.

The cedar stretched forth its branches, and the king of birds nested within its leaves, thick feathered, and with full-summed wings fastening his talons East and West; but now the eagle is become half naked.

Howel's Vocal Forest.

FULMEN, in mythology, the thunderbolt or weapon which Uranus presented to Jupiter for having delivered him from captivity, and which, according to V irgil, was forged by the Cyclops. The fulmen in the hand of Jupiter was repre- sented in three diflerent ways. The first is a sort of wreatii of flames in a conical shape, resembling the stone commonly called a thunderbolt. This was adapted to Jupiter when mild and calm, and was held down in his hand. The second is a similar figure, with two transverse darts of light- ning, or sometimes wings, and was given to him when in the attitude of punishing. The third is a handful oi" radiating flames, which Jupiter held up, when in the act of inflicting some exemplary punishment. The Jupiter Tonans is represented on antique medals, as holding up the triple-forked fulraen, and standing in a quadriga thundering with his rapid coursers, and throwing the fulmen out of his hand, which darts at the same time out of the clouds beneath him. On a gem in the Florentine Gallery Jupiter is represented driving his chariot against one of the giants, and grasping the fulmen as ready to dart it at his head

The fulmen is also given to the eagle of Jupi- ter, who grasps it in his claws, and uses it in a similar manner to the thimderer himself. IMinerva is also so armed on a medal of Syracuse, and, according to Virgd, she used it against Ajax the son of Oileus for having ravished Cassandra in her temple on his return homeward from Troy.

There is a figure of Jupiter in Buonarotti's collection at Florence, holding up the three- forked boit as just ready to dart at some guilty wretch ; but with the conical body of the fulmen lying undei his feet, as of no use in cases of severity.

FUL'MINATE, v. a. & v. n.ˆ Yr.fulminer ; Ful'minant, adj. ˆ Latin, fulmino.

Fulmina'tion, n. s. i To thunder; to

Ful'minatohy, adj. J denounce and

curse : the one is the prerogative of God, the other the frequent presumption of bigoted, intole- rant, and blasphemous man. Fulmination is not only what is usually understood by thunder, but is applied to any loud crack, or rumbling noise, especially to that which accompanies explosion of any kind.

I connot fulminate nor tonitruate words To puzzle intellects ; my ninth lap affords No Lycophronian buskins. Thomas Randolph.

As excommunication is not greatly regarded here in England, as now fulminated; so this constitu- tion is out of use among us in a great measure.

Ayliffe. The ftilminations from the Vatican were turned into ridicule. Id. Parergon.

Whilst it was in fusion we cast into it a live coal, which presently kindled it, and made it boil and flash for a pretty while ; after which we cast in another glowing coal, which made it fulminate afresh.

Boyle. In damps one is called the suffocating, and the other ihe fulminating damp.

Woodward's Natural History.

Fulminating Powders. See Powders, Ful- minating.

Fulmination, in the Romish canon law, a

sentence of a bishop, official, or other ecclesiastic, appointed by the pope, by which it is decreed that some bull sent from the pope shall be exe- cuted.

FU'LSOME, ttrfj. -^ From Sax. pulle, foul.

FuLSOMELY, a(iy. > Nauseous: offensive;

FuLSOMENESS, n. i. 3 rank ; lustful; gross to the smell ; tending to obscenity.

The knotte why that every tale is tolde.

If it be tarried till the Juste be colde

Of hem, that han herkened after yore.

The savour passeth, ever the lenger the more,

Pov fulsumnesse of the proHxitic.

Chaucer. The Squieres Tale.

He stuck them up before the fultome ewes.

Shakspeare.

Wliite satyrion is of a dainty smell, if the plant puts forth -white flowers only, and those not thin or dry, they are commonly of rank a.nA fulsome smell.

Bacon.

He that hrmgs fulsome objects to my view. With nauseous images my fancy tills. And all goes down like oxymel of squills.

Roscommon.

Now half the youth of Europe are in arms, How fuhome must it be to stay behind. And die of rank diseases here at liome ! Otway.

No decency is considered, no fulsomcncss is omitted, no venom is wanting, as far as dulness can supply it,

Dri/den.

A certain epigram, which is inscribed to the em- peror, is more fuhome than any passage I have met with in our poet. Id.

FULTA, a town of Bengal, on the eastern bank of the Hoogly or Bhagguarutty River, about twenty-five miles below Calcutta. At this place

the English, who escaped the horrors of the black-hole, took refuge on ship-board in 1756, and continued here for nearly six months, during whicli they lost a great number of people, from the unhealthiness of the place, and their being much crowded. The anchorage is good here, being protected from the swell of the sea, and the bottom a stiff clay. Good water may also be procured ; and there is an excellent market and inn.

FU'MADO, n. s. Lat. fumus. A smoked fish.

Fish that serve for the hotter countries, they used at first to fume, by hanging them upon long sticks one by one, drying them with the smoke of a soft and continual fire, from which they purchased the name of fumadoes. Carew.

FUMARIA, fumitory, a genus' of the pen- tandria order, and diadelphia class of plants, natural order twenty-fourth, corydales : cal. di- phyllous : coR. ringent : there are two membra- naceous filaments, each of which has three antheree. There are many different species, all low, shrubby, deciduous and evergreen plants, growing from two to six or seven feet high, adorned with small simple leaves, and papilio- naceous flowers of different colors. The most remarkable is the

F. Officinalis, or common fumitory. It grows naturally in shady cultivated grounds, and pro- duces spikes of purplish flowers in May and June. It is very juicy, of a bitter taste, without any remarkable smell. Its medical effects are to strengthen the tone of the bowels, and promote

the natural secretions. It is chiefly recommended in scorbutic, and cutaneous disorders, for open- ing obstructions of the viscera, attenuating, and promoting the evacuation of viscid juices. Hoff- man had a great opinion of it as a purifier of the blood; and assures us that in this intention scarcely any plant exceeds it. Cows and sheep eat it ; goats are not fond of it ; horses and swine refuse it.

FU'M ATORY, n. s. Lat. fumayia ; Fr. fumc- terre. An herb.

Her fallow leas

The darnel, hemlock, and xtiuˆ fumatory doth root over. Shakspeare. Henry V.

FUM'BLE, v.n. k, v. a. "ˆ Goth, and Swed.

Fum'bler, 71. s. \fali)ia,famla ; Dan.

P'um'blixgly, «rfr. jj'amle ; Belg. fum-

■nclen. To attempt that to which we are incom- petent : aukwardly and unfairly : to play like a child; without object, or intention; any thing attempted without precision, decision, or effect.

I saw him fumble with the sheets, and play with flowers, and smile upon his finger's end.

Shakspeare.

As many farewells as be stars in lieaven. With distinct breath and consigned kisses to them. He fumbles up all in one loose adieu. M.

Our mechanick theists will have their atoms never once to have fumbled in these their motions, nor to have produced any inept system. Cudworth.

Am not I a friend to help you out ? You would have been fumbling half an hour for this excuse.

Dryden's Spanish Fryar, His greasy bald-pate choir Came fumbling o'er the beads, in such an agony riiey told 'em false for fear. Id.

FUME, n. s., V. n., & v. a.ˆ Fu'mid, adj. Fumid'ity, n. s. Fumigate, v. n. Fumiga'tion, n. s. Fu'mingly, adv.

FuMOS'lTY, u. s.

Fu'mous, adj. Fu'my.

Yx.fumce; Ita. fumo ; Lat. fu- mus. Literally smoke, or exha- lation of any kind. It is not only applied to vapor, and to the volatile parts of bodies which fly off by het.t, but to the rage and passion of the mind when expressed in empty sounding words : to any thing unsubstantial ; to idle conceits; vain imaginations. Fumiga- tion is a process of applying aromatic vapor, or smoke, for the purpose of medication or healing . scents raised by fire are likewise called fumiga- tions. Fumosity is used by Chaucer, and signi- fies the flatulent and steamy effect of excessive drinking: that which arises from the stomach tlius disordered is denominated fume.

nir dremcs shul not now be told for me : Ful were hir hedes oi fumositee. That causeth dreme, of wliich ther is no charge.

Chaucer. The Squieres Tale.

This wine of Spaigne crepeth subtilly In other wines growing faste by. Of which ther riseth swiche fumusitee That whan a man hath dronkcn draughtes three. And weneth that he at home in Chcpe, He is in Spaigne,

right at the town of Lepe.

Id. The Pardoncres Tale.

That which we move for our better learning and instruction sake, tumeth unto anger and choler in ihem : they grow altogether out of quietness with it ;

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they answer fmningly, that they are ashamed to defile thoir pens witli making answer to such idle questions.

Hooknr. Love is a smoke raised with the /w»ne of sighs ; Being purged, a fire sparkling in lover's eyes.

Sluiksjieare. Tie up the libertine in a field of feasts. Keep his brain /«)m«(/. Id. Antony a7id Cleopatra.

When Duncan is asleep, his two chamberlains Will I with wine and wassel so convince. That memory, the warder of the brain. Shall be a fume. Id. Macbeth.

It were good to try the taking of/«mesby pipes, as they do in tobacco, or other things, to dry and com- fort. Bacon.

Plato's great year would have some etTect, not in renewing the state of like individuals ; for that is the fume of those that conceive the celestial bodies have more accurate inDuence upon these things below than they have, but in gross. I'^-

To lay aside all that may seem to have a shew of fumet and fancies, and to speak solids, a war with Spain is a mighty work. ^d.

We have No anger in our eyes, no storm, no lightning : Our heat is spent aaA fumed away in vapor. Before our hands be at work.

Ben Jonson's Catiline. Those that serve for hot countries they used at first to fume, by hanging them upon long sticks one by one, and drying them with the smoke of a soft fire.

Carew. Their prayers passed Dimensionless through heavenly doors ; then clad With incense, where the golden altar /Mn!e<^/ By the great intercessor, came in sight Before their father's throne. Milton's Paradise Lost.

A crass and fumid exhalation is caused from the combat of the sulphur and iron with the acid and nitrous spirits of aquafortis. Brown.

Silenus lay. Whose constant cups \ayfumi71g to his brain. And always boil in each extended vein. Roscommo7i. Power, like uew wine, does your weak brain sur- prize. And its ma.d fumes in your discourses rise; But time these yielding vapours will remove : Mean while I'll taste the sober joys of love.

Drydeji. Plunged in sloth we lie, and snore supine. As tilled with fumes of undigested wine. Id.

When he knew his rival freed and gone. He swells with wrath ; he makes outrageous moan : He frets, he fumet, he stares, he stamps the ground. The hollow tower with clamours ring around. Id.

Thus fighting fires awhile themselves consume ; But straight, like Turks, forced on to win or die. They first lay tender bridges of their/ame. And o'er the breach in unctuous vapours fly.

From dice and wine the youth retired to rest. And pulled the fumy god from out his breast : Ev'n then he dreamt of drink and lucky play : More lucky had it lasted 'till the day.

My fumiyation is to Venus just The souls of roses, and red coral's dust : And, last, to make my fumigation good, 'Tis mixt with sparrows' brains and pigeons' blood.

Id.

She fumed the temples with an odorous flame, '

And oft before the sacred altars came.

To pray for him who was an empty name.

Woiiid thou preserve thy famished family With fragrant lime the city fumigate. And break the waxen walls to save the state. Id.

Id.

Id.

Id.

The heat will yu»ne away most of the scent.

Mortimer. The fumes of drink discompose and stupify thn brains of a man overcharged with it. South.

Fumigations, often repeated, are very lieueficial.

Arbuthnot. The first fresh dawn then waked t!ic gladdened race Of uncorrupted man, nor blushed to see The sluggard sleep beneath its sacred beam ; For their light slumbers gentle yumet/ away.

Thomson. Yet there will still be bards ; though fame is smoke. Its fumes arc frankincense to human thought I

Byron. Don Juan. FuMir.ATiox, in medicine. By the subtile fumes produced by burning certain substances, much l)enefit or prejudice may be produced, according to the nature of the case, and the con- stitution on which the effects are to be exerted ; as is evident front the palsies produced anions metal-gilders, workers in lead-mines, Sfc. ; and also from the benefits received in many cases when the air is impregnated with salutary mate- rials. Catarrhs and colds, for instance, are re- lieved by fumes received with the breath ; by the same means expectoration is assisted in the asthma ; and even ulcers in the lungs have been relieved by this method. This is still more strongly exemplified by a practice of curing ulcers, and exciting the general action of quick- silver in the system, by enclosing the naked body of the patient in a box fitted to receive the fumes of quicksilver, raised by sprinkluig cinnabar upon a red hot iron, or, what is still better, the hydrai- gyrus prfficipitatus cinereus of the Pharmacopoeia, which, not emitting any sulphureous vapors, proves less inconvenient to the patient. Mr. Pearson made a considerable number of experi- ments with a view to examine into the compara- tive efiicacy of this treatment and the common friction. He found that by fumigating the gums became turgid and tender very quickly, and the local appearances were sooner removed than by the other metliod ; but it sooner brought on debility, vapid and premature salivation, and, of course, could not he steadily continued. This gentleman therefore concludes, that where check- ing the progress of the disease suddenly is an object of great moment, or where the body is so covered with venereal ulcers that tliere scarcely remains a surface large enough to absorb the ointment, the vapor of mercury will be advan- tageous. The vapor of mercury is also singularly efficacious when applied to venereal ulcers, fungi, and excrescences; but this plan retjuires an equal quantity of mercury to be given internally, as if the local application itself were not a mercurial one.

FUM'ET, n. s. The dung of the deer. FUME'TTE, n. s. Fr. A word introduced by cooks, and the pupils of cooks, for the smell of meat.

A haunch of venison made her sweat. Unless it had the right /«Hie«<;. Swift.

FUMIGATOR, in surgery, an instrument used for injecting tobacco-smoke into the anus of drowned persons, with a view to excite the ir- ritability of the muscles. The best kind is one

made by W. Willurgby, the bowl of which is of cast brass, and is large enough to contain about an ounce and a half of tobacco. The pipe pro- jecting from the lower part of it is bored out of a solid piece of brass, and also those to which eacli extremity of the leathern tube is affixed. The cover is likewise made of cast brass ; from the upper extremity of which projects a neck about an inch and a half in length, the opening or bore of it being about half an inch in diameter. The cover is fixed to the box by means of two notches made on each side of a circular ridge or edge, admitting two ears, that project from the upper part of the box, which by a circular motion lock upon the brim. The nozzle of the bellows is ac- curately fitted to the neck of the cover, and is about an inch and a half or two inches long; the lower end of the nozzle is rounded and smooth, like the lower extremity of a glyster-pipe, and perforated like a cullender, in order to prevent the ashes of the tobacco from rising into the bel- lows. The bellows are fastened upon the cover or lid in a manner similar to the preceding; an ear projects from the upper part of the neck, and is admitted into a notch, in a circular rim, upon the nozzle. The pipe, projecting from the lower extremity of the bowl, locks into the cross-pipe to which the leathern tube is affixed, in the man- ner of a bayonet. By this kind of fastening the whole apparatus may be made ready in the space of a minute, and forms one compact body, free from the hazard of falling in pieces, and thus in- terrupting the operation; and yet either part may Ije taken off, when tlie occasion requires, with the utmost ease and expedition. The bowl is enclosed in a thick case of wood, removable at pleasure, which secures the hand from injury during the whole process.

FUMING Liquor, in chemistry. The fuming liquors of Boyle and Libavius have been long known. To prepare the first, which is a hy- droguretted

sulphuret of ammonia, three parts of lime fallen to powder in the air, one of muriate of ammonia, and one of flowers of sulphur, are to be mixed in a mortar, and distilled with a gen- tle heat. The yellow liquor, that first comes over, emits fetid fumes. It is followed by a deeper colored fluid that is not fuming.

The fuming liquor of Libavius is made by amalgamating tin witli half its weight of mercury, triturating this amalgam with an equal weight of corrosive muriate of mercury, and distilling by a gentle heat. A colorless fluid at first passes over : after this, a thick vapor is thrown out at one single jet with a sort of explosion, which con- denses into a transparent liquor, that emits copious, white, heavy, acrid fumes, on exposure to the air. In a closf;ly stopped bottle, no fumes from it are perceptible ; but needle-shaped crys- tals form against tlie top of the bottle, so as fre- quently to close the aperture.

Cadet's fuming liquor is prepared by distilling equal parts of acetate of potash and arsenious acid, and receiving the product into glass bodies, kept cool by a mixture of ice and salt. The liquor produced, emits a very dense, heavy, fetid, noxious vapor, and infl.ames spontaneously in the open air.

FUMITER, V. s. A plant.

A (lay or two ye shul lian digestives Of wornies (or ye take your laxatives), Of laureole cenlaurie, a.ni fwnetere.

Chaucer. The Nunnes Prcesles Tale. Why, he was met even now. As mad as the vext sea ; singing aloud. Crowned with vnaW fumiter and furrow weeds.

Skakspeure. FUMONE, a town of Italy, in the Campagna (Ecclesiastical States), with a. castle in which pope Celestine V., after having resigned his dig- nity, is said to have been starved to death, it is four miles north-west of Alatri.

FUN, n. .9. A low cant word. Sport; high merriment; frolicsome delight.

Dont mind me, though, for all my fun and jokes. You bards may find us bloods good-natured folks.

More.

FUNAMBULUS, among the Romans, was what we call a rope dancer, and the Greeks schoenobates. At Rome the funambuli first ap- peared under the consulate of Sulpicms Paticus and Licinius Stolo, who were the first introducers of tlie scenic representations. They were first exhibited in the

island of the Tyber, and the cen- sors Messala and Cassius afterwards promoted them to the theatre. In the Floralia, or ludi Florales, held under Galba, there were funambu- latory elephants, as we are informed by Suetonius. Nero also showed the like, in honor of his mother Agrippina. Vopiscus relates the same of Carinus and Numerianus.

FUNCHAL, or Funchial, the capital of Ma- deira, is a large and populous town, situated on the south coast of the island, having four forts. And several fine churches. The bay is large and open, affording at no season convenient ancho- rage ; but extremely dangerous in the winter, when heavy gales from the south-west are com- mon. The beach is composed of large burnt stones, rounded by the action of the sea, and has often a surf on it that renders landing impossible ; yet it is the most accessible part of the island. The town extends three-quarters of a mile along the beach, and about half a mile inland ; its streets are narrow and crooked, paved with tlie stones from the beach, or with large masses of rugged lava, disagreeable to the feet. Several small streams, descending from the mountains, run through the town into the bay ; but, as the inhabitants throw all their ordure into them, they add little to the cleanliness of the streets. The only handsome houses are those of the English merchants. But there is a curious chapel of sculls, in which those monuments of mortality are symmetrically disposed, after the manner of a similar chapel at Rome. The population is from 12,000 to 1.5,000.

Funchal is defended, as we have said, by four forts, viz. 1 . St. .Tago, at the east extremity of the bay, immediately under a steep hill ; 2. St. Lorenzo, in which is the government house; 3. Peak Castle, on a hill north-west of the town, half a mile from the shore, and of difficult access on the south, but commanded by another hill ; this is, however, the chief fortification, tlie walls being very high, but without a ditch, and not mounting above twelve guns; 4. Tlie Loo Rock, on which is a fort with numerous cannon, en

barbette, and surrounded by a weak parapet. This rock, the name of which is properly Ilheo, the island, is distant from a rocky point of the bay 120 fathoms, and this narrow channel is 768 fathoms deep; the small craft belonging to the island, in winter, lie under this rock, with a rope fast to it ; but, on the first appearance of bad weather, the people quit them and leave them to their fate. 200 paces west of the town is a work 100 paces long, with three small bastions, and a redoubt towards the sea, washed by the waves. The beach is also defended by a long low wall with cannon at

intervals, but which could be of very little effect in preventing the landing of troops, did not the surf assist it.

The plantations in the neighbourhood are adorned with a great number of country houses, churches, and monasteries, which, from their elevated site, and in contrast with the white houses of the town, produce a striking and pleas- ing effect.

The trade of this port consists almost entirely in exporting the wine of the island, which is principally consumed in the British dominions and dependencies ; and they export the Madeira not only to Britain, but to the East and West Indies. Ships touching here may obtain water, wine, fruits, and vegetables ; but fresh meat and poultry are high, and cannot be obtained without permission of the governor.

FUNCTION, n. s. Lat. fttnctio, is properly the act of discharging, or completing, an office, or business, from Liit.fungor, \z.jinem and ago, to put an end to, or bring to a conclusion. It is, in general acceptation, extended to the office it- self, or to the thing undertaken. Thus it is not only the single act of an office, but the trade and occupation which the office implies : it signifies, likewise, power and faculty, as applied to any particular part of the body and the office it per- forms, as well as to the intellectual powers and their operations.

Follow yoMT function ; go, and batten on cold bits.

Shakspeiire. You have paid the heavens your function, and the prisoner the very debt of your calling.

Id. Measure for Pleasure, Tears in his eyes, distraction in his aspect, A broken voice, and his viYioIq function suiting With forms to his conceit. Id. Hamlet.

Nor was it any policy or obstinacy, or partiality of affection either to the men or their function, which fixed me. King Charles.

Nature sooins In all hiˆ.x functions weary of herself : My race of glory run, and race of shame -, And I shall shortly be with them that rest.

Milloii. They have several offices and prayers against fire, tempests, and especially for the dead, in y.hich func tions they use sacerdotal garments. Stiltinqjleet.

This double function of the goddess gives a consider- able light and beauty to the ode which Horace has addressed to her. Addison.

Let not these indignities discourage us from assert- ing the just privileges and pre-eminence of our holy function and character. Atterhury.

Tlio bodies of men, and other animals, are excel- ently well fitted for life and motion ; and the several parts of them well adapted to their particular func- tions. Bentley's Sermons.

Whatever warms the heart, or fills the head. As the mind opens, and its functions spread. Imagination plies her dangerous art. And pours it all upon the peccant part. Pope.

There is hardly a greater difference between two things than there is between a representing com- moner in the function of his publick calling, and the same person in common life. Swift.

I have sworn to die In full exertion of the functions, which My country called me here to exercise. According to my honour and my conscience — I cannot break my oath.

Byron. The Two Foscari. Function, in the animal economy, is by phy- sicians divided into vital, animal, and natural.

Functions, Animal. The animal functions perform the motion of the body by the action of the muscles ; and this action consists chiefly in the shortening the fleshy fibres, which is called contraction, the principal agents of which are the arteries and nerves distributed in the fleshy fibres. All parts of the body have their own functions, or actions, peculiar to themselves. Life consists in the exercise of these functions, and health in the free and ready exercise of them.

Functions, Natural, are such as the creature cannot subsist any considerable time without ; as the digestion of the aliment, and its conversion into blood.

Functions, Vital, are those necessary to life, and without which the individual cannot subsist; as the motion of the heart, lungs, &.c.

FUND, ?i.s. & v.a. Fr. fond; h&t.funda, a bag. Stock ; capital ; that by which any expense is supported. Bank of money. To fund is to place money in the funds, either of a company, a corporation, or the public.

He touches the passions more delicately than Ovid, and performs all this out of his own fund, without diving into the arts and sciences for a supply. Dryden. Part must be left, a. fund when foes invade, And part employed to roll the wat'ry tide. Id.

As my estate has been hitherto either tost upon seas, or fluctuating in funds, it is now fixed in sub- stantial acres. Addison.

In preaching, no men succeed better than those who trust entirely to the stock or fund of their own reason, advanced indeed, but not overlaid by commerce with books. Swift.

They have been at a vast expense of time, and pains, and patience, to heap together, and to confirm themselves in a set of wrong notions, which they lay up in their minds as a fund of valuable knowledge.

Mason.

FiJNDS. Upon this extensive topic, after the various statistical tables, and other elemen- tary matter relating to it, which will be found by our readers in the articles Bank, England, and Great Britain, we do not propose to enter at much length. It is a topic for entire volumes, even of more ample extent than ours. The principles on which our funding system is con- structed and upheld, particularly by what is called the sinking fund; the principal periods of the accumulation of our immense national debt ; and the relative advantages and disadvantages of that part of our public policy which has ori- ginated and increased it, at the best mode of providing for the national expenditure, are the chief subjects of our enf[uiry. These will bo

introduced with some propriety by ;i definit.on of the principal terms of tlie discussion.

As the term funds will describe any sum or sums of money appropriated to a particular purpose, it includes, in popular language, both tlie national debt and revenue ; the stocks and every thing relating to their management ; the measures of Downing Street and Thread needle Street, as well as those of Capel Court. Tech- nically, the public debt and revenue are thus di- vided: the capitals of the several sums which the government has borrowed of contractors and other individuals, from time to time, is called stock ; and the portions of the revenue appro- priated to pay the interest and management of the debt only, are called the funds : and, by this appropriation of revenue, the debt is said to be funded. The different funds were established on different occasions, and are not all committed to the same managers ; nor is the interest, or, in the technical language, the dividends, payable in all of them at the same time. But the only material circumstance in which they differ from each other, is the rate of interest on

their ca- pitals or stock ; and, in this view, we have dif- ferent funds, denominated the 3 per cents., the 4 per cents., &c. ; from the respective rates of their yearly interests. The creditor is also, in some cases, recompensed by a temporary an- nuity, in addition to the interest of his stock; and his title to the annuity, like his title to the stock, is authenticated by a record, transferable at pleasure ; and each annuity, whether it is for life, or for a certain number of years, may be considered as equivalent to a certain quantity of stock.

The interest or dividend on the stock is paid half-yearly; and the purchaser has the benefit of the interest due on the stock he buys, from the last term to the time of purchase. Therefore, the prices of the stocks rise gradually, ceteris paribus, from term to term, and fall at the term when the interest Is paid. In comparing the prices of the different stocks, it is necessary to advert to the term when the last interest was paid ; and, allowance being made for this cir- cumstance, the prices of all the government stocks, which bear interest at the same rate, must be nearly the same, as they all depend on the same security.

When a loan Is proposed, such terms must be offered to the lenders as may render the trans- action beneficial; and this is now regulated by the prices of the old stocks. If the stocks which bear interest at 4 per cent, sell at par, or rather above, the government may expect to borrow money at that rate ; but, if these stocks are under par, the government must either grant a higher interest, or some other advantage to the lenders, in compensation for the difference. Lotteries have formerly been employed to facili- tate the loan, by entitling the subscribers to a certain number of tickets, for which no higher price was charged than the exact value distri- buted in prizes. Sometimes an abatement of a certain proportion of the capital has been grant- ed, and a lender entitled to hold £100 stock, though, in reality, he advanced no more, per- haps, than £95.

It belongs to the chancellor of the exchequer to propose the terms of the loan in parliament; and he generally makes a previous agreement with some wealthy bankers or mercliants, who are willing to advance the money on the terms proposed. The subscribers to the loan deposit a certain part of the sum subscribed, and are bound to pay the rest by instalments or stated proportions, on appointed days, under pain of forfeiting what they have deposited. For this they are entitled, perhaps, not only to hold their share in the capital, but to an annuity as we have stated ; but happily the right of receiving a certain number of lottery-tickets is abolished. Tliey may sell their capital to one person, their annuity to a second, at their own option. The value of all these interests together is called om- nium; and, in order to obtain a ready subscrip- tion, it ought to amount to £l02, or upwards, on blOO of capital. This difference is called the £onus to the subscribers.

The capital advanced to the public, in the form of transferable stocks, and bearing interest from taxes apportioned for that purpose, is called, as we have said, the funded debt. Besides, there is generally a considerable sum due by go- vernment which is not disposed of in that manner ; and, therefore, is distinguished by the appella- tion of the unfunded debt. This may arise from any sort of national expense, for which no provision has been made, or for which the pro- vision has proved insufficient. The chief branches are, 1st, exchequer-bills : these are issued from the exchequer, generally by appointment of parliament, and sometimes without such appoint- ment, when exigencies require. They bear in- terest from the time when issued, and are taken in by the bank of England, which promotes their circulation. 2d, navy-bills : the suras an- nually granted for the navy have always fallen short of what that service required. To supply that deficiency, the admiralty issues bills in pay- ment of victuals, stores, and the like, which bear interest six months after the time issued. The debt of the navy, thus contracted, is discharg^-O, from time to time, by parliament.

The interest on all the public debts was for- merly paid at the exchequer; but, the bank being found a much more convenient place for this purpose, nearly the whole is now payable there, the company receiving a certain allowance from government for managing all business relative to the public funds. See our article Bank.

The nature of the sinking fund may be thus explained : — By 3 Geo. I. c. 7, the surpluses of the three great national funds, the aggregate, ge- neral, and South Sea funds, over and above the interest and annuities charged upon them, are directed to be carried together, and to attend the disposition of parliament ; and were denominated a sinki7igj'und,heca.\se originally destined to sink and lower the national debt. To this have been since added many other entire duties granted in subse- quent years ; and the annual interest of the sums borrowed on their respective credits is charged on, and payable out of, the produce of the sinking fund. However, the nett surpluses and savings, after all deductions paid, amount annually to a very considerable sum. For, as the inteicsl on

the national debt has been at several times re- duced by the consent of the proprietors, who had their option either to lower their interest or be paid their principal, the savings from the ap- propriated revenues have been large. But, be- fore any part of the aggregate fund (the surpluses whereof were one of the chief ingredients that formed the sinking fund) could he applied to diminish the principal of the public debt, it was mortgaged by

parliament to raise an annual sum for the maintenance of the king's household and the civil list. For this purpose, in tlie late reigns, the produce of certain brandies of the excise and customs, the post-office, the duty on wine- licenses, the revenues of the remaining crowu- iands, the profits arising from the courts of jus- tice (which articles include all the hereditary re- venues of the crown), and also a clear annuity of £120,000 in mimey, were settled on the king for life, for the support of his majesty's house- hold, and the honor and dignity of the crown. And, as the amount of these several branches was uncertain (though in the reign of Geo. II. they were computed to have sometimes raised almost a million), if they did not arise annually to £800,000, the parliament engaged to make up the deficiency. But Geo. III. having, soon after his accession, spontaneously signified his consent, thaf his own hereditary revenues might be so disposed of as might best conduce to the utility and satisfaction of the public, and having graci- ously accepted a limited sum, the said hereditary and other revenues are now carried into, and made a part of, the aggregate fund ; and the aggregate fund is charged with the payment of the wliole annuity to the crown. The limited annuity accepted by his late majesty was at first £800,000, but it has been since augmented to £900,000. The expenses themselves, being put under the same care and management as the other branches of the public patrimony, produce more, and are better collected than heretofore : and the public is a gainer of upwards of £100,000 per annum by this transaction.

The sinking fund, though often called the last resource of the nation, long, however, proved very inadequate to the purpose for which it was esta- blished. Ministers found pretences for diverting it into other channels ; and the diminution of the national debt proceeded slowly during the inter- vals of peace, whilst each succeeding war in- creased it with great rapidity. To remedy this evil, and restore the public credit, to which the American war had given a considerable shock, Mr. Pitt conceived a plan for diminishing the debt by a fund which should be rendered unalie- nable to any other purpose.

In the session of 1786 he moved that the an- imal surplus of the revenue above the expendi- ture should be raised, by additional taxes, from £900,000 to£l ,000,000 sterling, and that certain commissioners should be vested with the full power of disposing of this sum in the purchase of stock for the public, in their own names. These <'ommissioners should receive the annual million by quarterly payments of £2.50,000, to he issued out of the exchequer before any other money, except the interest of the national debt itself; by these provisions, the fund woidd

be secured, and no deficiencies in the national revenues could afiect it, but such must be sepa- rately provided for by parliament. The accu- mulated

compound interest on a million yearly, together with the annuities that would fall into that fund, would, he said, in twenty-eight years, amount to such a sum as would leave a surplus of £4,000,000 annually, to be applied, if neces- sary, to the exigencies of the state. In appoint- ing the commissioners, he should, he said, endeavour to choose persons of such weight and character as corresponded with the importance of the commission they were to execute. The speaker of the house of commons, the chancellor of the exchequer, the master of the rolls, the go- vernor and deputy governor of the bank of England, and the accountant-general of the high court of chancery, were persons, who, from th.jir several situations, he should think highly prope: to be of the number.

To the principle of this bill no objection was made, though several specious, but ill-founded ones were urged against the suflSciency of the mode which the chancellor of the exchequer had adopted for the accomplish.nent of so ijreat and so desirable an end. lie had made it a clause in his bill, that the accunmlating million should never be applied but to the purchase of stock. To this clause Mr. Fox oojected, and moved that the commissioners therein named should be im powered to accept so much of any future loan as they should have cash belonging to the public to pay for. This, he said, would relieve that distress the country would otherwise be under, when, on account of a war, it might be necessary to raise a new loan : whenever that should be the case, his opinion was, that the minister should not only raise taxes sufficiently productive to pay the interest of the loan, but also sufficient to make good to the sinking fund wh.atsoever had been taken from it. If, therefore, for instance, at any future period a loan of £6,000,000 was proposed, and there was at that time £1,000,000 in tlie hands of the commissioners, in such case they should take £1,000,000 of the loan, and the bonus or douceur thereupon should be received by them for the public. Thus government would only have £3,000,000 to borrow instead of £6,000 O00,andfrom such a mode of proceeding, he said, it was evident great benefit would arise to the public. This clause was received by Mr. Pitt with the strongest marks of ajjprobation, as was likewise another moved by Mr. Pulteney, enabling the commissioners named in the bill to continue purchasing stock for the public when it was above par, unless other\vise directed by parliament. With these additional clauses the bill was read a third time on the 15th of]\Iay, and carried up to the lords, where it also passed without meeting with any material oppo- sition, and afterwards received the royal assent.

The operation of this bill surpassed perhaps the minister's most sanguine expectation. The fund was ably managed, and judiciously applied ; and in 1793 the commissioners had extinguished some millions of the public debt. The war, however, in which the nation was that year in- vt)lved, made it necessary to borrow immense additii.mal sums

The income of the whole sinkino; fund, on the 1st of February, 1802, was £5,809,330. The wiiole sum which had been paid for the purchase of stock, up to that period, was £38,110,795.

In 1792, we should perhaps have observed, it was further provided, that whenever any new debt might be contracted, a sinking fund of one per cent, upon the capital stock created, should be appropriated to it, unless other provision sliouid have been made by parliament for re- deeming it within forty-five years ; and such a sinking fund of one per cent, was, in conformity to this act, provided for almost every future loan of the war ; but in two or three instances parliament availed itself of the alternative allowed of finding other means of repayment within forty-five years. In 1802, particularly, no imme- diate sinking fund was assigned for £87,000,000 of stock provided for in that year, and which consisted partly of the loan of the year, and jiartly of a sum of £56,000,000, previously laised at different times on the credit of the in- come tax, which was then repealed ; but the ul- timate redemption of that debt was secured by a continuation of the several sinking funds pro- vided for antecedent loans, and which for that purpose were continued and formed into what was called the consolidated sinking fund. This arrangement was, by calculation, amply sufficient to effect the redemption of the debt within forty- five years, and even within a shorter period than it could otherwise have oeen brought about ; but it would, if literally carried into execution, be liable to produce inconveniences, which it is one of the principal objects of the present plan to obviate.

Some of the principal provisions of the act of 1802 were repealed by an act of Mr. Vansit- t:irt in 1813, and an additional sum of £870,000 [)er annum appropriated by it to the sinking fund, to make good the usual proportion of one per cent, on the capital stock provided for in that year, and for the redemption of which another mode had then been substituted, as has been above-mentioned.

Enough at present has thus been said, to give the reader a general view of the technical terms of our subject. But, as Mr. Vansittart's altera- tion of the sinking fund in 1813 was the last and most important interference with its machinery that has been attempted, we may be allowed to illustrate it somewhat further.

When, in 1792, Mr. Pitt proposed to add £200,000 per annum to the sinking fund, he ob- served, ' When the sum of £4,000,000 was ori- ginally

fixed as the limit for the sinking fund, it was not in contemplation to issue more annually for the surplus revenue than £1,000,000 ; con- sequently, the fund would not rise to £4,000,000 till a proportion of debt was paid off, the interest of which, together with the annuities which might fall in, in the interval, sliould amount to £3,000,000. But as, on the present supposition, additional sums beyond the original .£1,000,000 arc to be annually issued from tlie revenue, and applied to the aid of the sinking fund, the con- sequence would be, that, if that fund, with those additions carried to it, were still to be limited to £4,000,000, it would reach tliut amount, and

cease to accumulate, before as great a portion of the debt is reduced as was originally in contem- plation.' ' In order to avoid this consequence, which would, as far as it went,' he continued, ' be a relaxation in our system, I should propose, that whatever may be the additional annual sums applied to the reduction of the debt, the fund should not cease to accumulate till the interest of the capital discharged, and the amount of the expired annuities should, together with the annual £1,000,000 only, and exclusive of any additio- nal sums, amount to £4,000,000.'

We have stated that, in 1792, a provision was made for attaching a sinking fund of 1 per cent, to each loan separately, which was to be exclusively employed in the discharge of the debt contracted by that loan, but that no part of these 1 per cents, was to be employed in the reduction of the original debt of £238,000,000, and that the act of 1802 consolidated all these sinking funds ; so that the public were not to be exempted from the payment of the sinking fund itself, nor of the dividends on the stock to be purchased by the commissioners, till tlie whole debt existing in 1802 was paid off".

Mr. Vansittart proposed to repeal the act of 1802, and to restore the spirit of Mr. Pitt's act of 1792. He acknowledged, that it would be a breach of faith to the national creditor if the fair construction of that act, the act of 1792, were not adhered to ; but it was, in Mr. Vansit- tart's opinion, no breach of faith to do away the conditions of the act of 1802. It was declared by the new act, that, as the sinking fund, conso- lidated in 1802, had redeemed £238,350,143 18s. Id. exceeding the amount of the debt in 1786 by £118,895 I2s. lOirf., a sum of capital stock equal to the total capital of the public debt, existing on the 5th January 1786, viz. £238,231,248 5s. 2y. had been satisfied and discharged ; ' and that, in like manner, an amount of public debt equal to the capital and charge of every loan contracted since the said 5th January 1786, shall successively, and in its proper order, be deemed and declared to be wholly satisfied and discharged, when, and as soon as a further amount of capital stock, not less than the capital of such loan, and producing an interest equal to the

dividends thereupon, shall be so redeemed or transferred.' It was also resolved, ' that, after such declaration as afore- said, the capital stock purchased by tlie commis- sioners for the reduction of the national debt, shall from time to time be cancelled ; at such times, and in such pro]iortions, as shall be di- rected by any act of parliament to be passed for such purpose, in order to make provision for the charge of any loan or loans thereafter to be con- tracted.'

It was further resolved, that, in order to carry into eflTect the provisions of the acts of the 32d and 42d of the king, for redeeming every jrart of the national debt within the])eriod of forty-five years from the time of its creation, it is also ex- pedient that, in future, whenever the amoimt of the sum to bo raised by loan, or by any other ad- dition to tlic public funded debt, shall in any year exceed the sum estimated, to be applicable in the same year to tiie reduction of the public

debt, an annual sum equal to one-half of the in- terest of the excess if the said loan or other addition, beyond the sum so estimated to be ap- plicable, shall be set apart out of the monies composing the consolidated fund of Great Britain, and shall be issued at the receipt of the exche- quer to the governor and company of tiie bank of England, to be by them placed to the account of the commissioners for the reduction of the national debt; and, upon the remainder of such loan or other addition, the annual sum of one percent, on the capital thereof, according to tlie provisions of the said act of the 32d year of liis present majesty.

A provision was also made, for the first time (as we have seen), for one per cent, sinking fund on the unfiuided debt then existing, or which might thereafter be contracted.

in 1B02, it has also been already observed, it was deemed expedient that no provision should be made for a sinking fund of one per cent, on a capital of £86,796,300; and as it was considered by the proposer of the new regulation, in 1813, that he was reverting to the principle of Mr. Pitt's act of 1792, he provided that £867,963 should be added to the sinking fund for the one per cent, on the capital stock created, and which was omitted to be provided for in 1802.

We cannot here follow into detail the far- reaching calculations, either of the advocates or opponents of our funding system. By the former it has been perhaps extravagantly eulogised ; while it has been rashly, because

totally, con- demned by the latter. Its advantages have been to render possible the struggle of some parts and periods of the late contests for our political exis- tence ; and to prevent those sudden drafts on private incomes, for the public use, which must in numerous cases have been overwhelming, if the expenditure of the year had been provided within the year. By this system, instead of calling on the people to pay at once the whole additional expense of the war, the government obtained the money wanted by selling annuities, either temporary or perpetual, to those who w iuld give most for them ; and contracted for the whole community a moral and political obli- ga'^^ion to provide the means of regularly and punctually paying the ammities which it sold. The transaction, say its advocates, more nearly resembles that of raising money by sale of annu- ities and rent charges in private life, than the contracting of demandable debts; differing in nothing from the former as to temporary annui- ties, and, with respect to the iier]ietual annuities, oidy differing from an absolute sale of rent charges, by retaining a right to re-purchase them at a stipulated price, which price ditlers from that obtained by their sale, according to the con- ditions made at the time of the contract.

Tt is often objected to this .system, that by raising money in this manner, instead of provi- ding it by adetpiate contemporary taxes, so far as we exonerate ourselves, we burden posterity.

In a national view, and as concerns the future resources of the government, many inconve- niences may obviously arise from too great an extension of this system, but we apprehend that tlie popidar objection to it which we have jtist

now stated, is at least overcharged, if not altogether erroneous.

If any one, instead of being called upon to pay £l00 as his share of the extraordinary ex- penditure, is only called upon to pay about the usual interest of that sum, the difference as res- pecting his posterity amounts to this — that if his property is of such a sort that £l00 cannot give £5 a year of reveime, he and his posterity lose the annual difference ; but this may almost always be avoided by a change of such property for other of a more profitable kind. If his pro- perty is so employed as to give him more than 5 per cent, profit, he, and through him, his pos- terity, gain the whole of die difference. In any case, if he retains £l00 capital, he has so much more to leave behind him. But if, according to the present system, he is also annually charged by increase of taxes with a sum to redeem his assumed proportion of the annuity created, tlie only difference is, that the term during which he pays interest, instead of its principal money, becomes limited in proportion to the efficacy of the addition.

The principle of the mechanism of the British funding system, continues the above class of wri- ters, gives to it that certainty and equability of effect, which may safely be made the basis of political calculations, by which the plans of war- fare may be regulated in due proportion to the known pecuniary resources.

On the undiminishing permanence of those resources, the means almost entirely depend of protracting hostilities till they may be advanta- geously terminated. Doubtless where the ruling power is sufficiently dreaded, various ways may be adopted for extorting an adequate supply of money, and a country previously rich and pros- perous may be long and greatly declining before its government, if despotic, may be much en- feebled by poverty. But the grand question is, by what pecuniary system this may be done %uith- out impoverishing the people — without taking more for the public use than a portion of an in- creasing addition to the national capital ? The answer is found in the principle of the funding ‘ system of Britain.

Some amount of national funded debt is cer- ■ tainly convenient in many respects ; the punctu- ality with which, in this country, the inte.est is paid ; the facility with which money may be made productive, for any short period, by invest ing it in public securities, and with which it may ˆ be received back again at the moment when I wanted, by the transfer of those securities : these and various other circumstances concur to make a national debt, such as ours is, a material advan- tage to many persons of moderate incomes, who canno aflbrd to wait for an uncertain receipt, and to many, whose commercial or other active em- ployments of their capital are materially irregular. But all these advantages in their fullest extent might probably be obtained by a national debt of very far less magnitude than that to which ours has been swelled ; and which cannot be contemplated without awful apprehensions of the consequences which may ultimately follow, un- less some eflectual means can be provided to retard its increase during war, and accelerate its*

diminution during peace ; the means undoubt- edly exists of doing both, and the necessity of employing them is generally felt ; but the manner and extent in which they may be most conveni- ently adopted so as to avoid sudden changes in the state of political and private economy, is a problem of much more ditTicult solution than may generally be imagined, and is, indeed, a practical question, materially depending on cir- cumstances as they arise. An important effect of our funding system has been to create appa- rently a new capital of great magnitude.

‘ Nominally, without doubt, a new capital is created, but really it is a portion of the value of the intrinsic capital of the nation, transferred from those who hold that capital with entire power to manage it, to a new class of proprietors, who receive a portion of its profits through the agencyof government,and to whom their respective portions of these profits are guaranteed by the nati- onal faith. The effect of this system must always be to transfer a portion of the intrinsic private re- venue of the nation to a new, and as to this re- venue, unemployed and unproductive class; and if any considerable proportion of those who receive it were, in all other respects, unemployed and unproductive, and were tempted to fold their hands in idleness by an income thus obtained without any exertion, the moral and political mischief would be of considerable magnitude. Practically the evil is not seen, and perhaps does not exist beyond an extent which is outweighed by the advantages which this system affords to very many, who from sex, or the infirmities of either extreme of life, are incapable of making a due profit of their property by personal ex- ertions.

‘ But another effect of this system is to increase the nominal capital of the nation, as valued in money, though probably by no means to the ex- tent whidi some have imagined. Direct taxes on the private revenue, derived from property, if applied to pay the interest of a funded national debt, can have no effect in increasing the nominal amount of the national capital. In estimating the value of any estate, such a rent-charge to the nation would be deducted like any rent-charge paid to an individual, and the remaining capital would be less in due proportion to the capital virtually transferred rather than created. But so far as the revenue paid to the national creditors is obtained by direct taxes, personally charged, there probably results from the funding system a double representation in money value of intrinsic capital ; for the money value of that capital suf- fers no alteration, but only a portion is substract- ed from its profits, while the right of receiving that portion of the profits becomes the foundation of a new species of capital, estimated in due proportion to the contemporary value of any other secure and permanent source of clear in- come. If, therefore, the question is properly examined, it will be found that, as the greater part of the public revenue of this country is raised by personal or by indirect taxes, for that reason the greater part of the national debt, both funded and unfunded, is an additional represen- tation in money value of the intrinsic capital, by the profits of which its interest is paid ; and to

this extent, therefore, the profit of money em- ployed in purchasing productive capital is likely to be diminished. The money value of the whole national capital is made up of the united prices of the intrinsic capital, and of the national debts with which it is charged. If, therefore, the prices of the intrinsic capital, as of lands, merchandise, &c. &c., remain undiminished, more money must he employed to purchase its whole clear revenue ;

including in that revenue the part which is paid to the national creditors.

‘ Personal taxes also, as well as other direct taxes, by producing a diminution of the private income, which might otherwise be expended, have obviously a tendency to increase rather than to diminish the value of money, by dimi- nishing the means of purchasing at former prices, and therefore either reducing the consumption or the money value : which have ultimately equiva- lent effects, though liable to be controuled and counteracted by the mode in which the taxes are expended. Indirect taxes on consumption are generally supposed to have an important effect in increasing the prices of things so taxed much beyond a due proportion to their actual amount ; in this manner diminishing the value of money, and, by a general effect on all profits of capital actively employed, increasing the nominal amount of the private incomes out of which the public revenue is paid. Without doubt all taxes on merchandise of any kind will cause an effort on the part of those who sell it to indemnify them- selves, and in many cases may give them an op- portunity of making an additional profit ; but we apprehend that this must altogether depend on the general state of the country where they are levied. The burden of all indirect taxes will fall either on the merchant and tradesman, or on the consumer, precisely according to the increasing or diminishing means of the latter to make his usual purchases. If his means diminish, he must buy less or give a lower price ; and in either case the effect of taxes on his commodities will be to di- minish the profits of the trader : and the value of money, as a medium of commerce, will be in- creased in equal proportion. We have no doubt that, in an ultimate analysis, it will be found that a national debt, and the taxes which must be levied to pay its interest, are rather instrumental than primary causes of changes in the value of money, and in the proportion of private incomes to the demands on them for national purposes.’

Such are some of the fairest observations we have seen on the part of the friends to this sys- tem. We refer the reader to p. 300 and 301 of our article ENOLANnforother considerations of a similar tendency.

On the other hand Dr. Hamilton and Mr. Kicardo contend that ‘The excess of revenue above expenditure is the only real sinking fund by which public debt can be discharged. The increase of the revenue and the diminution of ex- pense are the only means by which this sinking fund can be enlarged, and its operation rendered more effectual : and every scheme for discharging the public debt by sinking funds operating by compound interest, or in any other manner, un- less so far as they are founded upon this princi pie, are illusory.’ P. 10.

FUNDS.

‘ Suppose,’ says the latter able writer, ‘ a coun- try at peace, and its expenditure, including the interest of its debt, to be £-10,000,000, its re- venue to be £41,000,000, it would possess £1,000,000 of sinking fund. This million would accumulate at compound interest ; for stock would be purchased with it in the market, and placed in the names of the commissioners for paying off the debt. These commissioners would be entitled to the dividends before re- ceived by private stockholders, which would be added to the capital of the sinking fund. The fund thus increased would make additional pur- chases the following year ; and would be en- titled to a larger amount of dividends; and thus would go on accumulating, till in time the whole debt would be discharged. Suppose such a country to increase its expenditure £1,000,000, without adding to its taxes, and to keep up the machinery of the sinking fund ; it is evident, that it would make no progress in the reduction of its debt, for, though it would accumulate a fund in the same manner as before in the hands of the commissioners, it would, by means of adding to its funded or unfunded debt, and by constantly borrowing, in the same way, the sum necessary to pay tlie interest on such loans, ac- cumulate its million of debt annually, at com- pound interest, in the same manner as it accu- mulated its million animally of sinking fund.

‘ But suppose that it continued its operations of investing the sinking fund in the purchase of stock, and made a loan for the million which it was deficient in its expenditure, and that, in order to defray the interest and sinking fund of such loan, it imposed new taxes on the people to the amount of £60,000, the real and efficient sinking fund would, in that case, be £60,,000 per annum, and no more, for there would be £1,060,000, and no more to invest in the pur- chase of stock, while £1,000,000 was raised by the sale of stock, or, in other words, the revenue would exceed the expenditure by £60,000.

‘ Suppose a war to take place, and the expen- diture to be increased to £60,000,000, while its revenue continued as before £41,000,000, still keeping on the operation of the commissioners, with respect to the investment of £1,000,000. If it were to raise war-taxes for the payment of the £-20,000,000 additional expense, the million of sinking fund would operate to the reduction of the national debt at compound interest as it did before. If it raised £20,000,000 by loan in the stocks or in exchequer bills, and did not provide for the interest by new taxes, but ob- tained it by an addition to the loan of tlie fol- lowing year, it would be accumulating a debt of £20,000,000 at compound interest, and while the war lasted, and the same expenditure con-

tinued, it would not only be accumulating a debt of £"20,000,000 at compound interest, but a debt of £20,000,000 per annum, and, consequently, the real increase of its debt, after allowing for the operation of the million of sinking fund, would be at the rate of £19,000,000 per annum at compound interest. But if it provided by new taxes 5 per cent, interest for this annual loan of £20,000,000, it would, on one hand, simply increase the debt £'20,000,000 per an- num ; on the other, it would diminish it by £1,000,000 per annum, %vith its com])ound in- terest. If we suppose tliat, in addition to the 5 per cent, interest, it raised also by annual taxes £200,000 per annum, as a sinking fund, for each loan of £20,000,000, it would, the first year of the war, add £200,000 to the sinking fund ; the second year £400,000 ; the third year £600,000, and so on, £200,000 for every loan of £20,000,000. Every year it would add, by means of the ad- ditional taxes, to its annual revenue, without in- creasing its expenditure. Every year too that part of this revenue which was devoted to the])urpose of purchasing debt would increase by the amount of the dividends on the stock pur- chased, and thus would its revenue still farther increase, till at last the revenue would overtake the expenditure, and then once again it would have an efficient sinking fund for the reduction of debt.

' It is evident, that the result of these opera- tions would be the same, the rate of interest being supposed to be always at 5 per cent, or any other rate, if during the excess of expenditure above revenue, the operation of the commis- sioners in the purchase of stock were to cease. The real increase of the national debt must de- pend upon the excess of expenditure above re- venue, and that would be no ways altered by a different arrangement. Suppose that, instead of raising £20,000,000 the first year, and paying off £1,000,000, only £19,000,000 had been raised by loan, and the same taxes had been raised, namely, £1,200,000. As 5 per cent, would be paid on £19,000,000 only, instead of on £20,000,000, or £950,000 for interest instead of £1,000,000, there would remain, in addition to the original million, £250,000 towards the loan of the following year, consequently, the loan of the second year would be only for £18,750,000, — but as £1,200,000 would be again raised by additional taxes, or £2,400,000 in the whole the second year, besides the original million, there would be a surplus, after paying the interest of both loans, of £1,512,500, and therefore the loan of the third year would be for £18,487,500. The progress during five years is shown in the following table : —

Loan each

Amount of

Amount of

Amount of

Surplus.

year.

Loans.

Interest.

Taxes.

Years.

£.

£.

£.

£.

£.

First . .

19,000,000

19,000,000

950,000

2,200,000

1,250,000

Second .

18,750,000

37,750,000

1,887,500

3,400,000

1,512,500

Third .

18,487,500

56,237,500

2,811,875

4,600,000

1,788,125

Fourth

18,211,875

74,449,375

3,722,469

5,800,000

2,077,531

Fifth . .

17,922,469

92,371,844

4,618,592

7,000 000

2,381,408

If, instead of tlius diminishing the loan each year, tlie same amount of taxes precisely had been raised, and the sinking fund had been ap- plied in tlie usual manner, the amount of debt would have been exactly the same at any one of these periods. These considerations led Dr. Hamilton to the conclusion, that this first mode of raising the supplies during war, viz. by di- minishing the amount of the annual loans, and stopping the purchases of the commissioners in the market, would be more economical, and that it ought therefore to be adopted. In the first place, all the expenses of agency would be saved. In the second, the premium usually ob- tained by the contractor for the loan, would be saved, on that part of it which is repurchased by the commissioners in the open market. It is true that the

stocks may fall as well as rise be- tween the time of contracting for the loan, and the time of the purchases made by the commis- sioners ; and, therefore, in some cases, the public may gain by the present arrangement ; but as these chances are equal, and a certain advantage is given to the loan contractor to induce him to advance his money, independently of all con- tingency of future price, the public now give this advantage on the larger sum instead of on the smaller. On an average of years this can- not fail to amount to a very considerable sum.

' But both these objections would be obviated,' .says Mr. Ricardo, 'if the clause in the original sinking fund bill, authorising the commissioners to subscribe to any loan for the public service, to the amount of the annual fund which they have to invest, were uniformly complied with. This is the mode which has, for several years, been strongly urged on ministers by Mr. Grenfell, and is far preferable to that which Dr. Hamilton recommends.'

This great, and on the whole, perhaps, most impartial of modern political economists, finally observes, ' Suppose a country to be free from debt, and a war to take place, which should in- volve it in an annual additional expenditure of £20,000,000, there are three modes by which this expenditure maybe provided; first, taxes may be raised to the amount of £20,000,000 per armum, from which the country would be totally freed on the return of peace ; or, secondly, the money might be annually borrowed and funded ; in which case, if the interest agreed upon was 5 per cent., a perpetual charge of £1,000,000 per annum taxes would be incurred for the first year's expense, from which there would be no relief during peace, or in any future war ; of an additional million for the second year's expense, and so on for every year that the war might last. At the end of twenty years, if the war lasted so long, the country would be per- petually encumbered with taxes of £20,000,000 per annum, and would have to repeat tlie same course on the recurrence of any new war. The third mode of providing for the expenses of the war woTild be to borrow animally the £20,000,000 required as before, but to provide, by taxes, a fund, in addition to the interest, which, accumu- lating at compound interest, should finally be equal to the debt. In the case supposed, if rnoney was raised at 5 per cent., and a sum of

£200,000 per annum, in addition to the million for interest, were provided, it would accumulate to £20,000,000 in forty-five years; and, by con- senting to raise £1,200,000 per annum by taxes, for every loan of £20,000,000, each loan would be paid oft' in forty-five years from the time of its creation ; and in forty-five years from the termination of the war, if no new debt were created, the whole would be redeemed, and the whole of the taxes would be repealed. Of these three modes, we are decidedly of opinion that the preference should be given to the first. The

burthens of the war are undoubtedly great during its continuance, but at its termination they cease altogether. When the pressure of the war is Jet t at once, ivithout mitigation, we shall be less dis- posed wantonly to engage in an expensive contest, and if engaged in it, we shall be sooner disposed to get out of it, unless it be a contest for some great national interest. In point of economy, there is no real diff'erence in either of the modes.'

The objections to this mode of Mr. Ricardo's are, however, as we have indeed already inti- mated, serious : suppose the extraordinary sup- plies to be raised by extraordinary taxes witliin the year, pressed upon merchants, manufacturers, and landholders, in short on all classes whose capital is invested in property not immediately accessible or convertible into money, so that they could not meet these large demands. It has been answered that all these descriptions of people may obtain the same accommodation which they enjoy under the present system, by going into the money market and borrowing for themselves. But here a difficulty occurs, in the necessity of finding security for private loans which does not occur in the funding system. This the trader has not to offer, unless either the whole of his capital is not invested in his business, in which case he is, as to the part not invested, a capitalist, not concerned in trade ; or, unless his trading capital is fixed, that is to say, invested in buildings and machinery which may be mort- gaged, in which case he is pro tanto in the same situation as a landowner. But if his capital be wholly circulating, that is, constantly passing from him in the shape of wages, price of raw material, or purchase of goods, and returning to him by the produce of his sales, he can give no security, and must withdraw from his trade the portion of capital required of him, contract his dealings, and probably ruin his prospects. Tlie fact is, that, when the government goes into the market, it is able to borrow on the credit of all the capitals of the country as one great capital, managed indeed by different individuals, some of whom will fail, but others will succeed, and by their success will keep the national capital entire ; and therefore, as it makes no difference to the creditor of the public whether A is ru- ined and B enriched, or B ruined and A en- riched, both A and B are left to possess and manage their respective capitals in their own way. But to the private creditor of A it is every thing that A, and A alone and individually should retain his property entire, and tlierefore the private creditor will require to have such a hold upon that property as to make it impos-

sible for A to dissipate it, and if it is so se- cured, A cannot embark it in trading specu- lations so as to hazard its loss.

It is not only the trader who would often find it difficult to offer such security for the sum de- manded of him by the state as would be accepted in the money market. How many landholders are there of large and clear incomes, the titles of whose estates will hardly bear the minute in- spection to which they must submit them if they attempt to borrow money upon mortgage ! At what a disadvantage must the owners of life- estates borrow the sums assessed upon them ! and yet even these would be better off than some other classes of borrowers. For instance, the interest, which a fellow of a college has in his fellowship, may by possibility endure through his life, and is therefore recognised by the law as a freehold ; yet it is determinable by marriage, which the law will permit no man to bind him- self not to contract, and by the commission or omission of various other acts, against which no covenant could secure the lender, and upon which the judgment of a domestic forum, namely that of a visitor, is conclusive, however summary or informal. Naval and military officers are similarly situated ; and it would probably not be easy for either fellow or captain, having no other properly but his fellowship or commission, to anticipate his revenue by raising a loan upon it, even if the law had not prevented officers from borrowing on the security of their commissions. And the same remarks apply to all those nume- rous classes of persons, some high and some low, whose incomes arise from the enjoyment of offices of which they are liable to be deprived at the will of their employers, for their own mis- conduct, or in consequence of supervening ina- bility to perform the duties, arising from sick- ness, accident, &c. But the government can borrow upon the credit of all these incomes, as if they were permanent ; for, though A B and C lose their situations, others must succeed to them, in whose hands the emoluments will be equally accessible to the government. And, in like manner, wherever a fund is divided between a tenant for life and a remainder-man, either of these parties must borrow to a disadvantage ; the first on account of the insecurity, the second on account of the remoteness of his interest ; but the government can borrow on the credit of the whole fund, which it can reach in either of their hands. But further, where the borrower is an individual, he must submit to the inconvenience of being liable to have the loan called in at the pleasure of the lender; or, if he stipulates that it shall not be called in for a certain time, or without a certain notice, or the like, all such sti- pulations are valuable considerations in addition to the loan, and must of course be paid for by an equivalent in some shape or other. But the facility with which government securities are ne- gociated renders all arrangements of this sort unnecessary ; the holder can at all times get their value at the market price, and as that price, if the character of the government for stability and punctuality in its payments be good, is liable only to the same fluctuations inversely to which the value of money in the market is liable, and

as those fluctuations are uncertain in their nature, and as likely to be to the benefit of the holder as to his detriment, it amounts to nearly the same thing, so far as he is concerned, as if the value of these securities were fixed to the most perfect uniformity. This, indeed, is impossible, not from any peculiarity in the nature of go- vernment securities, but because no commodity is free from fluctuation in value ; and money lent to be repaid in numero as little as any other ; for the borrower may force the lender to receive it again at a very disadvantageous time ; and, if he be restricted from so doing, that agreement must be paid for by an equivalent, as was before observed in the corresponding case.

' Supposing, however,' says a writer on this subject in the Quarterly Review, 'all the diffi- culties attending the negociation of private loans to be surmounted, still the use of this expedient neutralises the first of the two advantages pro- posed by the advocates of the new plan of finance. For if, at the end of the war, individuals are to remain oppressed by the weight of debts contracted 'for the purpose of paying off in each year their shares of its charge, they will be no less distressed than they now are by remaining liable to their shares of the public debt.

' We will now consider whether, by the use of the same expedient, the other anticipated ad- vantage, namely, the saving the expense of col- lecting the interest-taxes, negociating public loans, and managing the accounts of the debt, would be more effectually realised. It is mate- rial and obvious to remark, though it seems to have escaped the notice of our projectors, that the expense of collection must be added to the weight of taxes levied for the purpose of raising the supply within the year, as well as to that of interest-taxes. If both were to be collected at the same rate per cent., nothing would be saved upon this head by the remission of the extraor- dinary taxes at the end of the war. The two principal branches of the revenue of the united kingdom, the customs and the excise, are col- lected, the former at an expense of about 12, the latter of about 4§ per cent. The net receipt of the customs, after deducting repayments, allowances, discounts, drawbacks, &c., amounted, in the year ending on the 5th of January, 1823, to £12,923,420 and a fraction ; the cost of col- lection to £1,547,486 and a fraction ; the net receipt of the excise amounted to £28,976,344 and a fraction; the cost of collection to £1,360,869 and a fraction. The total net receipt then of these two taxes, about £42,000,000, costs nearly 7 per cent., in collecting. We will assume that any additional taxes to be imposed for the ser- vice of a war would be collected at the same rate, and that the sum required to be raised is £1,000,000. If this is raised by loan at 5 per cent., the expense of collecting the interest-taxes, £50,000, at 7 per cent., will be £3,500 a year, and an annuity to that amount must be raised by the people, in addition to the interest-taxes ; but if the whole million is to be raised within the year by war taxes, the expense of collecting these taxes

will, at 7 per cent., amount to £70,000 ; and this £70,000 must also be raised by the contributors by private loan, and the

yearly interest of it at 5 per cent., will also be £3,500 a year. The same reasoning applies, whatever rate of interest money may be supposed to bear at the date of the transaction, or at what- ever rate per cent, the taxes may be supposed to be collected ; because any increase or dimi- nution of either of these rates would affect both sides of the account alike. It is true, indeed, tliat, if the selection of the objects and modes of taxation were guided by perfect political wis- dom, there ought to be no other difference be- tween the cost of collecting a large and a small revenue, than that trifling one, which would arise from the necessity of employing in the former case agents of greater responsibility, and conse- quently requiring larger pay, than such as would be sufficient in the latter. For, as all taxes ought to be so contrived as to bear equally upon every man's property in proportion to its value, nothing more ought to be necessary, when the public service requires a larger amount of money to be raised, tlian to increase the weight of the existing taxes, without creating any new ones, which would require the introduction of new machinery for the purpose of collecting them. But this contrivance is one of the most difficult problems in political economy. The property- tax was perhaps the nearest approach that has ever been made to 'the solution of it; and ac- cordingly the expense of collecting that tax was incomparably less than that of any other that ever was imposed in this country, being, in the year ending on the 5th of January, 1814, only £306,158, upon a receipt of £14,318,816. Still the repugnance, with which it was endured, showed that it had defects, unatoned for in the opinion of the contributors, even by the high merits which it possessed as a measure of public economy. If, however, it should be maintained, and we acknowledge ourselves inclined to lean to this opinion, that the public dislike to this tax was occasioned more by the great weight, which it added to the already enormous pressure of the public burdens, than by any thing pecu- liarly obnoxious in its own nature ; that a pro- perty-tax judiciously imposed might be advan- tageously substituted for all others, or nearly all, even in time of peace, and that by increasing it upon occasions of extraordinary emergency, any additional sum of money, which the public ne- cessities required, and the national resources could furnish, might be collected with a very small, if any, additional (!xpense ; then we would observe that, as by reason of the exclusive em- ployment of this tax, the collection of the supply- taxes would cost no more, or but little more, during the war, than that of the interest-taxes would have cost under the funding system ; so neither would the collection of the interest-taxes after

the return of peace, under this latter system, add materially, if at all, to the cost which must have been incurred in raising the ordinary taxes of the peace estal)lishment. If it should be said that in point of fact the people of this country did submit during the war to raise large supplies by the property-tax, which was brought into the Exchequer at a cheap rate, and are now paying the interest of the public debt by other taxes ga- thered at a great expense, we answer that this

circumstance does not at all affect the merits of the two systems under consideration, inasmuch as this heavier charge is voluntarily incurred by the contributors in preference to the lighter charge, on account of their dislike to a peculiar mode of taxation, and is therefore not fairly at- tributable to the funding system, to wliich a pro- perty-tax would be quite as applicable as to that of raising the supplies within the year. It is therefore immaterial to the present question, whether an increased expense of collection does or does not attend an increase of taxation ; be- cause, in the latter case, the gathering either of the supply or the interest taxes will cost nothing in addition to the expense of collecting the ordi- nary revenue ; in the former case, the collecting of the supply-taxes for one year will be as bur- thensome as the collecting for ever of those which would be necessary to defray the interest of a loan of equal amount. The funding system then is not more expensive, as far as relates to the collection of taxes, than that which is op- posed to it.' This writer then endeavours to show that in the negociation of its loans, and the ma- nagement of the accounts, which become neces- sary in consequence of them, it is far more economical. But we cannot further pursue the discussion. I

FUN'DAMENT, n. s. % Old Yx.fimde Fundamen'tal, adj. & n. s. > ment ; Lat. fun- Fundament'ally, «(ir;. j damentum. The foundation of any thing. That on which the body, building, proposition, argument, or procedure rests. Essential ; not merely accidental, but of the very nature and essence of the thing.

Yfcve me then of thy gold to make our cloistre ; Quod he; ' for mouy a muscle and mony an oistre,' Whan other men han ben ful wel at ese. Hath ben our food our cloistre for to rese ; And yet God wot, unneth xhˆ fundament Parfourmed is ; ne of our pavement, N'is not a tile, yet within wones : By God we owen fourty pound for stones.

Chaucer. Tlie Snmpnotires Tale. You that will he less fearful than discreet. That love ihe fundamental part of state. More than you doubt the charge of it.

Shakspeare. Until this can be agreed upon, one main and fun- damental cause of the most grievous war is not like to be taken from the earth.

Raleigh.

We propose the question, whether those who hold the fundamentals of faith may deny Christ damnably in respect of superstructures and consequences that arise from them. South.

Such we find they are, as can controu! The servile actions of our wavering soul, Can fright, can alter, or can chain the will ; Their ills all built on life, that fundamental ill.

Prior. Religion is not only useful to civil society, !iut fun- damentally necessary to its very birth and constitution.

lientl.'y. Yet some there were among the sounder few. Of those who less presumed, and bettor know. Who durst assert the juster ancient cause. And here restored v/il's fundamental laws. Pope. The unlimited power placed fundamentally in the body of a people, the legislators endeavour to deposit in such hands as would preserve the people. Swift.

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It is a very just reproach, that there shouhl he so much violence and hatred in religious matters among men who agree in all fundamentals, and only differ in some ceremonies, or mere speculative points. Id.

Gain some general and fundamental truths, both in philosophy, in religion, and in human life. Watts.

Fundamental Bass, in music, that which serves for a foundation to the harmony. This part is according to Rousseau, and all authors who have proceeded upon IVI. llameau's experi- ment, in its primary idea, that bass which is formed by the fundamental notes of every per- fect chord that constitutes the harmony of the piece; so tliat under each chord it causes to be beard, or understood, tlie fundamental sound of that particular chord ; that is, the sound from whence it is derived by the rules of harmony. From whence we may see that the fundamental bass can have no other contexture than that of a regular and fundamental succession, without which the procedure of the upper parts would be illegitimate. To understand this well, it is necessary to be known, that, according to the system of Rameau, which Rousseau has followed in his dictionary, every chord, though composed of several sounds, can only have one which is its fundamental, viz. that which produces this chord, and which is its bass

according to the direct and natural order. See Music.

A Fundamental Chord is that whose bass is fundamental, and in which the sounds are ranged in the same order as when they are gene- rated, according to the experiment so often re- peated by M. d'Alembert, in his Preliminary Discourse and Elements of Music. See Music. But, as this order removes the parts to an extreme distance one from the other, they must be ap- proximated by combinations or inversions ; but if the bass remains the same, the chord does not for this reason cease to bear the name of funda- mental. Such an example is this chord, ut mi sol, included in the interval of a fifth: whereas, in the order of its generation, ut sol mi, it includes a tenth, and even a seventeenth ; since the fundamental ut is not the fifth of sol, but the octave of that fifth.

A Fundamental Sound is that which forms the lowest note of the chord, and from wlience are deduced the harmonial relations of the rest ; or which serves for a key to the tone. See Tonic

FUNDY, a bay of North America, between New England and Nova Scotia, remarkable for its tides, which rise to the height of fifty or sixty feet, and flow so rapidly as to overtake animals which feed upon the shore. Its extent north- ward, or rather to the north-east, is about 200 miles. From its mouth up to Passamaquoddy Bay, on its north-west side, situated between the province of New Brunswick and the district of Maine, are a number of bays and islands on both sides, and thus far it contracts its breadth gradually. It is twelve leagues across from St. John's, in New Brunswick, to the gut of Anna- polis, in Nova Scotia. The fishery is here very abundant and profitable.

FUNEN, FiONiA, or Fyen, a considerable island of Denmark, in the Baltic, separated from Jutland by a stra t called the Less Belt, and

from the island of Zealand by the Great Belt It is 340 miles in circuit, and contains 1 376 square miles, and 120,000 inhabitants. On the north- east is the gulf of Odenzee, the only conside- rable indentation of the island, which lias several hills, lakes, and rivers. Here also are forests of oak and birch. Funen is fertile in rye, barley, oats, peas, and maize for exportation ; and has, besides, extensive orchards and hop grounds. Fattening cattle for export, and raising bees, form also considerable branches of its rural economy. The chief places are, 1. Odenzee, at the head of the gulf of the same name, with 6000 inhabi- tants, and some manufactures of woollens, and skins for gloves ; the water of the rivulet which runs through it being particularly proper for this last purpose. From twenty to thirty trading vessels belong to it, and 200 enter and clear out annually. 2. Nyborg, a fortified town; of 1,600 inhabitants, on the Great Belt, where a duty is paid

by all merchant ships passing through. It is also the usual crossing place to Corsoer, in Zealand, and has a good port, and forty to fifty single-masted vessels belong |to it. 3. Svend- borg, on the south end of the island, and 4. Faa- borg on the south-west, having each 2000 or 3000 inhabitants. 5. Middelfart, on the nar- rowest part of the Litde Belt, the usual crossing place to Snoghoe, in Jutland ; it is a small town, chiefly inhabited by fishermen and boatmen. 6. Bogenzee on the north, and 7. Lessens on the west, both of little consequence. FU'NERAL, n.s. & adj. } FT.funerailles ; Lat. Fune'real, adj. Sfunits,fu)ieiea. Funus

is derived from funis, a cord, because lighted cords, or torches, were carried before bodies which were interred by night. The term funeral therefore denotes the ordinary solemnity which attends the consignment of a body to the grave ; the payment of the last honors to the dead. Fu- nereal is used poetically to describe what is dark, black, or dismal.

And after that, came woful Emelie, With fire in hand, as was that time the gise. To don the office oi funeral service.

Chaucer. The Knighies Tale. The lady, when she saw her champion fall. Like the old mines of a broken towre. Staid not to waile his woefull funeral ; But from him fled away with all her powre.

Spenser. Faerie Queene. Here, under leave cf Brutus, and the rest. Come I to speak in Cxsuv's funeral, Shakspeare. All things that wo ordained festival. Turned from their office to black funeral. Id.

Our instruments to melancholy bells. Our wedding chear to a sad funeral feast. /(/. May he find his funeral r the' sands, when he before his day shall fall.

Denham. No day he saw but that which breaks. Thro' frighted clouds, in forked streaks ; While round the rattling thunder hurled. As at the fu7ieral of the world.

Blarvel. The Unfortunate Lover. Thy hand o'er towns ihc funeral torch displays. And forms a thousand ills ten thousand ways.

Dryden, But if liis soul hath winged the destined flight. Inhabitant of deep disastrous night.

FUNERAL.

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Homeward with pious speed repass the main. To the pale shade/««ereai rites ordain. Pope.

The long funerals blacken all the way. Id.

You are sometimes rtesirous to see a funeral pass by in the street. Swift.

Italia ! oh Italia, thou who hast The fatal gift of beauty, which became A funeral dower of present woes and past. On thy sweet brow is sorrow ploughed by shame. And annals graved in characters of flame.

Byron. Childe Harold. He has not had The misery to die a subject where He reigned : then let his funeral riles be princely.

Id. The Two Foscari. What shall he be ere night ? perchance a thing O'er which the raven flaps hei funeral wing.

Id. Corsair.

Funeral Games, a part of the ceremony of the ancient funerals. It was customary for persons of rank, among the ancient Greeks and Romans, to institute games, with all sorts of exercises, to render the death of their friends more remarkable. This practice was general, and is often mentioned by ancient writers. The celebration of these games, among the Greeks, mostly consisted of horse races ; the prizes were of different sorts and value, according to the quality and magnificence of the person that celebrated them. The garlands given to victors on such occasions were usually of parsley, which was thought to have some par- ticular relation to the dead. Among the Romans these games consisted chiefly of processions ; and sometimes of mortal combats of gladiators around the funeral pile. They, as well as the Greeks, had also a custom of slaying a number of captives before the pile, as victims to appease the manes of the deceased. Caesar relates, that the Gauls had also this custom. The funeral games were abolished by the emperor Claudius. Funeral Oration, a discourse pronounced m praise of a person deceased, at the ceremony of his funeral. This custom is also very ancient. In the annexed account of the Egyptian rites of interment, may be perceived the first rudiments of funeral orations, which were afterwards moulded into a more regular form by other nations, who adopted this practise. Nor can we omit remarking, that those funeral solemnities were attended not only with orations in praise of the deceased, but with prayers for him, made by one who personated the deceased. An entire form of one of these is preserved by Porphyry. ' When,' says he, ' they (the Egyptians) embalm their deceased nobles, they privately take out the entrails, and lay them up in an ark or chest; moreover, among other things which they do in favor of the deceased, lifting up the arc or chest to

the sun, they invoke him ; one of the Libiti- narii making a prayer for the deceased, which Euphantus has translated out of the Egyptian language, and is as follows : — O lord, the sun, and all the gods who give life to man, receive me, and admit me into the society of the immortal ones; for, as long as I lived in this world, I have religiously worshipped the gods whom my parents showed me, and have always honored those who begot my body ; nor have I killed any man, nor have I defrauded any of what has Deen committed to my trust, nor have I done Vol. IX.

any thing which is inexpiable. Indeed, whilst I was alive, if I have sinned either by eating or drinking any thing which was not lawful ; not through myself have I sinned, but through these, showing the ark and chest where the entrails were. And, having thus spoke, he casts it into the river, but the rest of the body he embalms as pure.' The Grecians received the seeds of superstition and idolatrous worship from the Egyptians, by Cecrops, Cadmus, Danaus, and Erechtheus, coining into Greece; and, among other customs transplanted from Egypt, were the solemnities used at the burial of the uead. Of these an encomium on the deceased always formed a part. From the Egyptians and Grecians, especially the latter, the Romans received many of their laws and customs, as well as much of their polytheism and idolatrous wor- ship. The corpse being brought to their great oratory, called the rostra, the next of the kin laudabat defunctum pro rostris, i. e. made a funeral oration, in the commendation principally of the party deceased, but touching the worthy acts also of those his predecessors whose images were there present. Dr. Kennet says, that ' In all the funerals of note, especially in the public or indictive, the corpse was first brought with a vast train of followers into the forum ; here one of the nearest relations ascended the rostra, and delivered an oration in praise of the deceased. If none of the kindred undertook the office, it was discharged by some of the most eminent persons in the city for learning and eloquence, as Appian reports of the funeral of Sylla. And Pliny, the younger, reckons it as the last addition to the hap- piness of a very great man, that he had the honor to be praised at his funeral by the most eloquent Tacitus, then consul. The invention of this custom is generally attributed to Valerius Popli- cola, soon after the expulsion of the regal family. Plutarch tells us, that honoring his colleague's obsequies with a funeral oration, it so pleased the Romans, that it became customary for the best men to celebrate the funerals of great persons with speeches in their commendation.' Thus Julius Coesar, according to custom, made an ora- tion in the rostra, in praise of his wife Cornelia, and his aunt Julia, when dead ; wherein he showed, that his aunt's descent, by her mother's side, was from kings, and, by her father's, from the gods. Plutarch says, that 'he approved of the law of the Romans, which ordered suitable praises to be given to women as well as to men after death.' Though, by what ho says in another place, it seems that

the old Roman law was, that funeral orations should be made only for the elder women ; and therefore ho says, that Cffisar was the first that made one upon his own wife, it not being then usual to take notice of younger women in that way ; but by that action he gained much favor from the populace, who afterwards looked upon him, and loved him as a very mild and good man. The reason why such a law was made in favor of the women, Livy tells us, was this, That when there was such a scarcity of money in the public treasury, that the sum agreed upon to give the Gauls to break up the siege of the city and capitol could not be raised, the women collected among themselves and made

it up; who hereupon had not only thanks given tliem, liut this additional lienor, that after death tiiey should be solemnly praised as well as the men : whence it appears, that, Viefore tliis time, the men only had those funeral orations made for them.

Funeral Rites, ceremonies accompanying the burial of any person. These rites differed among- tlie ancients according to the different genius and religion of each country.

The first people who seem to have paid any particular respect to their dead, were the Egyp- tians, tiie posterity of Ham ; as they were the first cultivators of idolatrous worship and super- stition, after the flood, they were also the first who asserted the immortality of the soul, in its migra- liou into all kinds of animals in earth, air, and sea, and its return to the human body ; which they supposed to be within the term of 3000 years. Hence proceeded their great care in em- balming their dead bodies, and their vast expense in building proper repositories for them ; for tliey were more solicitous about their graves than tlieir houses. Whenever a person died among the Egyptians, his parents and friends put on mournful habits, and abstained from all banquets and entertainments. This mourning lasted from forty to seventy days, during which time they em- balmed the body. The embalmed body was restored to the friends, who placed it in a kind of opencliest, which was preserved either in their houses, or in tlie sepulchres of their ancestors. But before the dead were deposited in the tomb, they underwent a solemn judgment, which ex- tended even to their kings. Of this remarkable custom we have a particular account in the first book of Diodorus Siculus. ‘ Those who prepare to bury a relation, give notice of the day intended for the ceremony to the judges, and to all the friends of the

deceased ; informing them that the body will pass over the lake of that district to which the dead belonged ; when on the judges assembling, to the number of more than forty, aTid ranging themselves in a semicircle on the further side of the lake, the vessel is set afloat, which those who superintend the funeral have prepared for this purpose. This vessel is managed i>y a pilot, called, in the Egyptian language, Charon ; and hence they say that Orpheus, travelling in old times into Egypt, and seeing this ceremony, formed his fable of the infernal regions, partly from what he saw, and partly from invention. The vessel being launched on the lake, before the coffin, which contains the body, is put on board, the law permits all, who are so inclined, to produce an accusation against it. If any one steps forth, and proves that the deceased lias led an evil life, the judges pronounce sen- tence, and the body is precluded from burial ; but if the accuser is convicted of injustice in his charge, he falls himself under a considerable penalty. When no accuser appears, or when the accuser is proved to be an unfair one, the rela- tions who are assembled change their expressions of sorrow into encomiums on the dead; yet do not, like the Greeks, speak in honor of his family, because they consider all Egyptians as equally ■well born ; but they set forth the education and manners of his youth, his piety and justice in

maturer life, his moderation, and every virtue by which he was distinguished ; and they suppli- cate the infernal deities to receive him as an associate among tlie blest. The multitude join their acclamations of applause in this celebration of the dead, whom they consider as going to pass an eternity among the just below.' Such is the description which Diodorus gives of this funeral judicature, to which even ihe kings of Egypt were subject. The same author asserts, that many sovereigns had been thus judicially deprived of the honors of burial by the indigna- tion of their people ; and that the terrors of such a fate had the most salutary influence on the virtue of their kings.

Among the Greeks it was usual sometimes be- fore the interment, to put a piece of money into tile mouth of the deceased, which was thought to be Charon's fare for wafting the departed soul over the infernal river. This ceremony was not used in those countries which were supposed to be situated in the neighbourhood of the infernal regions, and to lead thither by a ready and di- rect road. The corpse was likewise furnished with a cake composed of flour, honey, &c., which was designed to appease the fury of Cer- berus, the door-keeper of hell, and to procure the ghost a safe and quiet entrance. During the time the corpse continued in the house, there stood before the door a vessel of water : the de- sign of which was, that those concerned about the body might purify themselves by washing ; it being the opinion of the Greeks, as we'l as of the Jews, that pollution was contracted by touch- ing a dead body. The ceremonies by which they

expressed their sorrow for the death of their friends were various ; but it seems to have been a constant rule to recede as much as possible in habit and behaviour from their ordinary customs. For this reason they abstained from banquets and entertainments ; they divested themselves of all ornaments; they tore, cut off, or shaved their hair, which they cast into'the funeral pile, to be consumed with the body of their deceased friend. Sometimes they threw themselves on the ground, and rolled in the dust, or covered their head with ashes; they beat their breasts, and even tore their flesh with their nails, upon the loss of a person they much lamented. When persons of rank, such as public magistrates or great generals, died, the whole city put on a face of mourning ; all public meetings were intermitted ; theschools, baths, shops, temples, and all places of con- course, were shut up. After interment followed the epxila; or feasts, at which the company used to appear crowned ; when they spoke in praise of the dead ; and not only at those feasts, but even before the company departed from the se- pulchre, they were sometimes entertained with a panegyric upon the dead person. The Grecian soldiers, who died in war, had not only their tombs adorned with inscriptions, showing their names, parentage, and exploits, but were also honored with an oration in their praise. The custom among the Athenians in the interment of their soldiers was as follows, namely, ' They used to place the bodies of their dead in tents three days before the funeral, that all persons miˆit have opportunity to find out their rela-

'ions, and pay their last respects to tliem. Upon the fourth day a coffin of cypress was sent from every tribe, to convey the bones of their own relations ; after which went a covered hearse in memory of those whose bodies could not be found. All tliese, accompanied with the wliole body of the people, were carried to the public burying-place, called Ceramicus, and there in- terred. One oration was spoken in commenda- tion of them all, and their monuments adorned with pillars, inscriptions, and all other ornaments usual ibout the tombs of tlie most honorable persons. The oration was pronounced by the fathers of those deceased persons who behaved themselves most valiantly. Thus, after the fa- mous battle at Marathon, the fathers of Callima- chus and Cynaegyrus were appointed to make the funeral oration. And, upon the return of the day upon which the solemnity was first held, the same oration was constantly repeated every year.' Interring, or laying the dead in the ground, seems to have been the most ancient practice among the Greeks ; though burning came after- wards to be generally used among them. It was customary to throw into the funeral pile those garments the deceased usually wore. The pile was lighted by one of the deceased's nearest relations or friends, who made prayers

and vows to the winds to assist the flames, that the body might quickly be reduced to ashes ; and, during the time the pile was burning, the dead person's friends stood by it, pouring libations of wine, and calling upon the deceased.

The funeral rites among the ancient Jews were solemn and magnificent. When any person was dead, his relations and friends rent their clothes ; which ousiom is but faintly imitated by the mo- dern Jews, who only cut off a bit of their gar- ment in token of affliction. It was usual to bend the dead person's thumb into the hand, and fasten it in that posture with a string : be- cause the thumb then having the figure of the name of God, they thought the devil would not dare to approach it. When they came to the burying-place, they made a speech to the dead in the following terms : ' Blessed be God, who has formed thee, fed thee, maintained thee, and taken away thy life, O dead ! he knows your numbers, and shall one day restore your life, &c.' Then they spoke the eulogium, or funeral oration, of the deceased ; after which they said a prayer, called the righteousness of judgment ; then, turning the face of tiie deceased towards heaven, they called out, ' Go in peace.'

The funeral rites among the ancient Romans, were very numerous. The deceased was kept seven days ; and every day washed with hot wa- ter, and sometimes with oil, that, in case he were oidy in a slumber, he might be thus waked ; and every now and then his friends meeting, made a horrible outcry or shout, with the same view ; which last action they called conclamatio. The last conclamationwas on the seventh day ; when, if no signs of life appeared, the defunct was dressed and embalmed by the pollinctores ; placed in a bed near the door, with his face and iieels towards the street ; and the outside of the gate, if tlie deceased were of condition, wasgar- aished with cypress boughs. In the course of

these seven days, an altar was raised near his bed- side, calledacerra ; on which his friends every day offered incense ; and the libitinarii provided things for the funeral. On the seventh day, a crier was sent about the city, to invite the people to the solemnisation of the funeral in these words : ' Exequias L.Tit. L. filii, quibus est commodum ire, jam tempus est. Ollus (i. e. ille) ex scdibus effertur.' The people being asse.mbled, and the last concla- mation ended, the bed was covered with purple : a trumpeter marched forth, followed by old wo- men called pra;fica;, singing songs in praise of the deceased : lastly, the bed foUowˆed, borne by the next relations ; and, if the person were of quality and office, the waxen images of all his predecessors were carried before him on poles. The bed was followed by his children, kindred, &c., atrati, i. e. in mourning: from which act of following the corpse, these funeral rites were called exequiae. The body thus brought to the rostra, the next of kin laudabat defunc- tum pro

rostris, made a funeral oration in his praise and that of his ancestors. This done, the body was carried to the pyra, or funeral pile, and there burnt ; his friends first cutting off a finger, to be buried with a second solemnity. The body consumed, the ashes were gathered ; and the priest sprinkling the company thrice with clean water, the eldest of the preficae crying aloud ilicet, dismissed the people, who took their leave of the deceased in this form : — ' Vale, vale, vale : nos te ordine quo natura permiserit sequeraur:' The ashes, enclosed in an urn, were laid in the sepulchre or tomb.

The ancient Christians testified their abhor- rence of the Pagan custom of burning the dead, and always deposited the body entire in the ground ; and it was usual to bestow the honor of embalming upon the martyrs at least, if not upon others. They prepared the body for burial by washing it with water, and dressing it in a funeral attire. The carrying forth of the body was per- formed by near relations, or persons of such dig- nity as the circumstances of the deceased required. Singing of psalms was the great ceremony used in all funeral processions among the ancient Chris- tians.

The funeral rites of the Greek church are much the same with those of the Latin. It needs only to be added, that after the funeral ser- vice, they kiss the crucifix, and salute the mouth and forehead of the deceased : after which each of the company eats a bit of bread and drinks a glass of wine in the church, wishing the soul a good repose, and the afflicted family all conso- lation.

Funeral Sermons. The custom of the Pa- gan Romans, in pronouncing funeral orations in praise of their deceased heroes, appears to have been very early adopted by the ancient Christians. Some of their funeral sermons or orations are still extant, as that of Eusebius on Constantine ; those of Nazianzen on Basil and Cscsarius; and of Ambrose on Valentinian, Theodosius, and others. Gregory, the brother of Basil, made iinKr]hiov \oyov, a funeral oration, for Melilius bishop of Antioch; in which orations, thoy not only praised the dead, but addressed themselves to them, which seems to have introduced the custom of

praying to departed saints. Now these orations were usually made before the bodies of the deceased were committed to the ground ; which custom has been more or less continued ever since, to this day. The heathens

honored those alone, ■with this part of the funeral solemnity, who were men of probity and justice, renowned for their wisdom and knowledge, or famous for warlike exploits ; this, as Cicero informs us, being part of the law for burials, which directs, that the praises only of honorable persons shall be men- tioned in the oration. It would be much more proper, if our funeral discourses were not so common, and if the characters given of the de- ceased were more just ; dcToid of that fulsome flattery with which they too often abound.

FUNKKIIICHEN, or Pets, a town and bi- shop's see of Hungary, in Baranga, situated on a hill between theDrave and the Danube. The neigh- bourhood is particularly fertile in wine ; the epis- copa' library has several rare books and MSS. and Roman antiquities abound in the neig'i- bourhood. Tliis place was in possession of the Turks from 1543 to 1686; and in 1664 it was aitacked by an Austrian army, and given up for three days to plunder. A university was founded in 1364, but soon fell into decay. Inhabitants 1 1,.500. 140 miles W. N. W. of Belgrade, and 175 S. S. E. of Vienna.

FUNGI, from (j(poyyoQ, fungus, in botany, the fourth order of the twenty- fourth class of vege- tables, in the Linnsean system ; comprehending all those which are of the mushroom kind. The ancients called fungi children of the earth, to in- dicate the obscurity of their origin. The moderns have likewise been at a loss in what rank to place them ; some referring them to the animal, some to the vegetable, and others to the mineral kingdom. IMessrs. Wilck and Miinchausen have not scrupled to rank these bodies among animal productions ; because, when fragments of them or their seeds were macerated in water, these gentlemen perceived a quantity of animalcules discharged, which they supposed capable of being changed into the same substance. Hedwig has lately shown how ill founded this opinion is with respect to the lichen; and M. Durande has demonstrated its falsity with regard to the corallines. ' Indeed,' says M. Bonnet, speak- ing of the animality of fungi, ' nothing but the rage for paradox could induce any one to pub- lish such a fable; and I regret that posterity will be able to reproach our times with it. Ob- servation and experiment should enable us to overcome the prejudices of modern philosophy ; now, that those of the ancient have disappeared and are forgotten.' It cannot be denied that the mushroom is one of the most perishable of all plants, and it is therefore the most favorable for the generation of insects. Considering the quick- ness of its growth, it must be furnished with the power of copious absorption : the extremity of its vessels must be more dilated than in other plants. Its root seems, in many cases, to be merely intended for its support ; for some spe- cies cˆrow upon stones or moveable sand, from ■which it is impossible they can draw much norrishment. We must therefore suppose, that it is chiefly by the stalk that they absorb. These

stalks grow in a moist, and tainted air, in which float multitudes of eggs, so small that the very insects they produce are with difficulty seen by the microscope. Can it be surprising, then, that the corruption of the mushroom should make the water capable of disclosing certain beings that are really foreign to both? It is not more easy to acquiesce in the opinions of those naturalists who place the fungi in the mineral kingdom, because they are found growing on porous stones, thence called lapides fungarii : which, however, must be covered with a little earth, and be watered with tepid water, in order to favor the growth. Such mushrooms are no more the produce of the stone, than the lichen is of the rock to which it adheres, or the moss of the tree on which it is found. We have only to observe the growth of mushrooms, to be con- vinced, that this happens by development, and not by addition or combination of parts as in minerals. The opinion of Boccone, who attri- buted them to an unctuous matter performing the function of seed, and acquiring extension by apposition of similar parts ; and that of Morison, who conceived that they grew spontaneously out of the earth by a certain mixture of salt and sul- phur, joined with oils from the dung of quad- rupeds, have now no longer any adherents. Fungi are produced, they live, they grow, by development ; they are exposed to those vicissi- tudes natural to the different peiods of life which characterise living substances; they perish and die. They extract, by the extremity of iheir vessels, the juices with which they are nourished ; they elaborate and assimilate them to their own substance. They are, therefore, organised and living beings, and consequently belong to the vegetable kingdom. But whether they are real plants, or only the production of plants, is still a matter in dispute with the ablest naturalists. These productions were generally attributed to the superfluous humidity of rotten wood, or other putrid substances. Tlie opinion took its rise from observing that they grew most copiously in rainy weather. Such was the opinion of Tragus, of Bauhin, and even of Columna, who, talking of the peziza, says, that its substance was more solid and harder, because it did not originate from rotten wood, but from the pituita of the earth. It is not surprising that, in times when the want of experiment and observation made people believe that insects could be generated by putrefaction, we should find the opinion general, that fungi owed their origin to the putrescence of bodies, or to a viscous humor analogous to putridity. Malpiohi could not satisfy himself as to the existence of seeds which other botanists had pretended to discover. He only says, that these plants must have them, or that they per- petuate themselves and shoot by fragments. Micheli, among the moderns, appears to have employed himself most successfully on this sub- ject. He imagined that he not only saw the seeds, but even the stamina, as well as the little transparent bodies destined to favor the dissemi- nation and the fecundation of these seeds. Be- fore this author. Lister thought he perceived seeds in the fungus perosus crassus magnus of John Bauhin: the little round

bodies that are

found in the pezizs and helvellae, at that time, passed for seeds ; which did not appear at ˆall probable to Marsigli, considering that the eye, when assisted with the very best microscopes, could perceive notiiing similar in much larger fungi. Indeed these bodies may be the capsules or covers of the seeds, if tliey are not the seeds themselves. However this may be, Marsigli, observing that fungi were often without roots or branches, and that they wanted flowers and seeds, the means which nature employs for the production of perfect plants, thought himself warranted in doubting whether these beings could be ranked in the number of vegetables. The doubts of Marsigli prompted him to observe the formation of fungi. Their matrix he called situs : he imagined they grew in places where they met with an unctuous matter, composed of an oil mixed with nitrous salt, which, by fer- mentation, produced heat and moisture, and in- sinuated itself between the fibres of wood ; that is,"he imagined them the production of a viscous and putrescent humor. Lancisi, in like man- ner, considered fungi as owing their existence to the putrefaction of vegetables, and supposed them a disease in the plant; but he imagined, ' that the fibres of the trees were necessary to their production,' as is the case in the formation of galls; he compared them to the warts and other excrescences of the human body. He added, that such fungous vegetable tumors must necessarily assume various forms and figures, from the fluids which distend the tubes and vessels relaxed by putrescence, from the ductility of the fibres and their direction, and from the action of the air. This opinion has been refuted by the celebrated naturalist M. de Jussieu, in the Memoirs of the Academy of Sciences for 1728. He maintains, that the fungi have a great analogy with the lichen, which is allowed to be a vegetable ; that, like the lichen, they are divested of stalk, branches, and leaves ; that, like it, they grow and are nourished upon the trunks of trees ; on pieces of rotten wood, and on all sorts of putrid vegetables; that they re- semble the lichen too in the rapidity of their growth, and the facility with which many of them may be dried and restored to their former figure, upon being immersed in water; and, lastly, that there is a great similarity in the manner in which their seeds are produced. He affirms, that only the warts and excrescences which grow on animal bodies, and the knots and other tumors that are to be found on trees, can be compared with one another ; for they are composed equally of the solid and liquid sub- stance of the plant or animal on which they grow ; whereas, the matter of the fungi is not only quite distinct from that of the plants on which they are found, but often entirely similar to the substance of those that spring immediately from the earth. The

organisation, says M. de Jussieu, which distinguishes plants and other productions of nature, is visible in the fungi ; and the particular organisation of each species is constant at all times and in all places; a circumstance which could not lui|)pen, if tliere were not an animal reproduction of species, and consequently a multiplication and propu'.ˆa-

tionby seed. This is not, he says, an imaginary supposition ; for the seeds may be felt like meat upon mushrooms with gills, especially when they begin to decay ; they may be seen with a magnifying glass, in those that hare gills with black margins; and, lastly, says he, botanists can have no doubt that fungi are a distinct class of plants ; because, by comparing the observa- tions made in different countries with the figures and descriptions of such as have been engraven, the same genera and the same species are every where found. Notwithstanding this refutation, by M. de Jussieu, another naturalist, M. de Necker, has lately maintained, in his Mycitologia, that the fungi ought to be excluded from the three kingdoms of nature, and be considered as intermediate beings. He has observed, like Marsigli, the matrix of the fungi : and has sub- stituted the word carchte (initium faciens) in- stead of situs ; imagining that the rudiment of the fungus cannot exist beyond that point in which the development of the filaments or fibrous roots is perceived. He allows, that fungi are nourished and grow like vegetables; but he thinks that they differ very much from them in respect of their origin, structure, nutrition, and rapidity of growth. He says, that the various vessels which compose the organisation of vege- tables are not to be found in the fungi, and that they seem entirely composed of cellular substance and bark ; so that this simple ©rganisa- tion is nothing more than an aggregation of vessels endowed with a common nature, that suck up the moisture in the manner of a sponge ; with this difference, that the moisture is assimi- lated into a part of the fungus. Lastly, that the fructification, the only essential part of a vege- table, and which distinguishes it from all other organised bodies, being wanting, fungi cannot be considered as plants. This he thinks confirmed, by the constant observation of those people who gather the morelle and the mush- room, and who never find them in the same spots where they had formerly grown. As the genera- tion of fungi, says M. Necker, is always per- formed when the parenchymatous or cellular substance has changed its nature, form, and function, we must conclude that it is the degene- ration of that part which produces these bodies. But, if fungi were owing merely to the degenera- tion of plants, they would be still better entitled to constitute a new kingdom. They would then be a decomposition, not a new forwiation or new bodies. Besides, we cannot deny that, in those bodies wliich form the limit between the animal and vegetable kingdoms, the organisation becomes simple, as the organs destined for nutrition are multiplied : but, as the last in the class of in- sects belongs to the animal kingdom, fungi ought,

notwithstanding the simplicity of their erganisa- tion, still to belong to the vegetable kingdom. The parenchymatous or cellular substance, which, as M. Bonnet says, is universally extended, embraces the whole fibrous system, and becomes the prin- cipal instrument of growth, must naturally be more abundant in these productions ; and this accounts for the rapidity of their enlargement. Besides growth, whether slow or rapid, never was employed to determine the presence or al>-

sence of the vegetable or animal character. The draba yerna, which in a few weeks shoots, puts forth its loaves, its flowers, and fruit, is not less a plant than the palm. The insect that exists but for a day, is as much an animal as the ele- phant that lives for centuries. As to the seeds of the fungi, it is probable that nature meant to withdraw from our eyes the dissemination of these plants, by making the seeds almost imper- ceptible; and it is likewise probable, tliat natu- ralists have seen nothing but their capsules. Since, however, from the imperfection of our senses, we are unable to perceive these seeds, ought we to infer that they do not exist ? Are we authorised to conclude this, because we do not find mushrooms where vve have found them a year before ? Undoubtedly not ; for the greater part of plants require a particular soil, and the same mould that tliis year will foster a rare plant, will next year allow it to perish. Neither are we at liberty to deny the existence of these seeds, because those bodies which have been called their seeds, and the fragments or cuttings of the plants themselves, have not produced others of the same species. Nature seems to have reserved for herself the care of disseminating certain plants. It is in vain, for instance, that the bo- tanist sows the dust found in the capsules of the orchis, which every one allows to be the seed. But, after all, what are those parts in the fungi casually observed by naturalists, and which they have taken for the parts of fructification? These are quite distinct from the other parts; and, whatever may be their use, they cannot have been formed by prolongation of tlie cellular sub- stance, or of the fibres of the tree on which the fungus grows: they are, therefore, owing, like flower and fruit, to the proper organisation of the plant. These plants, therefore, have a particular existence, independent of their putrefying nidus. The gills of certain fungi, which difl^er essentially from the rest of the plant in their conformation, would be sufficient to authorise this latter opi- nion. But can putrefaction create an organic substance? Nature undoubtedly disseminates through the air, and over the surface of the earth, innumerable seeds of fimgi, as well as eggs of insects. The plant and

the animal are excluded, when the nidus or the temperature is favorable for their development. No fortuitous concourse, either of atoms or fluids, could pro- duce bodies so exquisitely and so regularly or- ganised. It is sufficient to throw one's eyes on the beautiful plates which Schaffer has pub- lished of them, and compare them by the glass, with the warts and other excrescences of ani- mals, to be convinced that they have not the same origin. The function of the cellular sub- stance in vegetables must be ereatly superior to that in animals, if it could produce any tiling but deformities. The greater part of fungi ex- hibit a configuration much too regular, constant, and uniform, to be the effect of chance or putre- faction. As this form is preserved tlie same in all places, where fungi have been found, it follows that they contain in themselves the principles of their reproduction. They resemble the mislotoe, and nther parasitic plants, which are perfectly distinct fiom the trees on which they grow. The fungi,

therefore, are organised and living substances, or true plants.

FUNGIC Acid. The expressed juice of the boletus juglandis, boletus pseudoigniarius, the phallus impudicus, meralius cantharellus, or the peziza nigra, being boiled to coagulate the albumen, then filtered, evaporated to the con- sistence of an extract, and acted on by pure al- cohol, leaves a substance which has been called by Braconnot fungic acid. He dissolved that residue in water, added solution of acetate of lead, whence resulted fungate of lead, which he decomposed ai a gentle heat by dilute sulphuric acid. The evolved fungic acid, being saturated with ammonia, yielded a crystallised fungate of ammonia, which he purified by repeated solu- tion and crystallisation. From this salt by ace- tate of lead, and thereafter sulphuric acid, as above detailed, he procured the pure fungic acid. It is a colorless, uncrystallisable, and deliquescent mass, of a very sour taste. The fungates of pot- ash and soda are uncrystallisable; that of am- monia forms regular six-sided prisms; that of lime is moderately soluble, and is not affected by the air ; that of barytes is soluble in fifteen times its weight of water, and crystallises with diffi- culty; that of magnesia appears in soluble gra- nular crystals. This acid precipitates from the acetate of lead a white flocculent fungate, which is soluble in distilled vinegar. When insulated, it does not affect solution of nitre of silver ; but the fungates decompose this salt.

FUN'GUS, M. s. ~\ Lat. fungus. Strictly a

FuNGOs'iTY, H.s. Vmushroom. A word used to

Fun'gous, adj. j express such excrescences of flesh as grow out upon the lips of wounds, or any other excrescence from trees or plants not naturally belonging to them ; as the agaric from the larch-tree, and auriculae Judee

from elder. Excrescent ; spongy ; wanting firmness.

Many men, knowing that merry company is the only medicine against melancholy, spend all their days among good fellows in a tavern or ale-house, drinking venenum pro vino, like so many malt-worms, men- fishes, water-snakes, or frogs in a puddle, and become jnere funguses and casks. Biirlun.

The surgeon ought to vary the diet as the fibres lengthen too much, are too fluid, and iproiince funguses , or as they harden and produce callosities.

Arhuthnot on Diet.

This eminence is composed of little points, or gra- nula, caWcd fungtts, or proud flesh. Sharp.

It is often employed to keep down the fungous lips that spread upon the bone ; but it is much more pain- ful than the escharotick medicines. Id. Surgery.

Fungus. See Surgery.

I Yv. funiculaire ; Lat. /"«- \ niculus. A ligature ; a fibre ;

FU'NICLE, n.5.

FUNIC'ULAR, «(//.

a small cord.

FUNK,?!, s. Sen. 7?. Sax. ry"'S; Ooih. fuiv. finik, a stink: Lye says from YlGm.fonck, per- plexity. Dr. Johnson calls it a low word ; but it seems to be of academical origin; being com- monly used at Oxford for ' a scrape,' or per- plexity. Every school boy knows its meaning.

The best part of the veal and the Greek for hunc. Is the name of a man that makes n% funk.

Oxford Epigram.

FUN'NEL, n. s. Lat. infundibulum, whence fundible, fundle, funnel. An inverted hollow

cone with a pipe descending from it, tlirough which liquors are poured into vessels with nar- row mouths; a tun dish; a pipe or passage of communication.

If yoxi pour a glut of water upon a bottle, it receives little of it; but with a funnel, and by degrees, you shall till many of them. Ben Jonson.

The outward ear or auricula is made hollow, and contracted by degrees, to araw the sound inward, to take in as much as may be of it, as we use a funnel to pour liquor into any vessel. H"!/

Towards the middle are two large funnels, bored through the roof of the grotto, to let in light or fresh air. Addison.

Sonje the \ong funnel's curious mouth extend. Through which ingested meats with ease descend.

Blachmore. He put some live coals into an insulated funnel of metal, and, throwing on them a little water, observed that the ascending stream was electrised plus, and the water which descended through the funnel was electrised minus. Darwin.

Funnel of a. Chimney, the shaft, or smallest part of the waste, where it is gathered into its least dimensions. Palladio directs that the funnels of chimneys he. carried throughout the roof four or five feet at least, that they may carry the smoke clear from the house into the air. See Chimney, Fire-Place, &c. He also advises that chamber chimneys be not made narrower than ten or eleven inches, nor broader than fif- teen ; for if too narrow, the smoke will not be able to make its way ; and if too wide the wind will drive it back into the room.

FUNSTERMUNSTER, or Finsteuminster, a town of Switzerland, in Engandina, which tlie French, under Massena and Lecourbe, took possession of on the 2Gth of March, 1799, but were soon afterwards dislodged by the Austrian?. FUR, adv. Now written far. At a distance.

The white lovely dove Doth on her wings her utmost swiftness prove. Finding the gripe of faulcon fierce notyur.

Sidney.

Fur, n.s. &u.a.^ Yx.fourrure ; Barb. Lat.

Fur'rier, n.s. (furra, a hairy skin. Skin

Fur'ry, adj. ˆ with soft hair, with which

Fur'wrought. } garments are lined for

warmth, or covered for ornament: soft hair of

beasts found in cold countries ; hair in general ;

any moisture exhaled to such a degree as that

the remainder sticks on the part : fur-wrought

is made of fur : to line or cover with skins that

have soft hair ; to cover with soft matter.

The third had a mantell of lusty fresh colour The utter part of purpill, yfurred with pelur.

Chaucer. The Merchantes Second Tale.

Through tattered cloaths small vices do appear ; Robes and furred gowns hide all. Sluikspeare.

You are for dreams and slumbers, brother priest ; You fur your gloves with reasons. Id.

This night, wherein the cubdrawn bear would couch. The lion and the belly-pinched wolf Keep their fur dry, unbonnotted he runs. And bids what will take all. Id. King Lear.

O foolishness of men I that lend their ears To those budge Doctors of the stoic /"ur. And fetch their precepts from the Cynic tub. Praising the lean and sallow abstinence.

Milton's Comus.

How mad a sight it was to see Dametas, like rich t'lsˆm furred with lambskins I Sidnci/.

Methinks I am not right in every part ; I feel a kind of trembling at my heart :

My pulse unequal, and my breath is strong ; Besides a lilthy /i/i- upon my tongue. l)rt/den.

Stretch out thy lazy limbs, awake, awake. And Winter from thy furry

mantle shake. Id.

Not armed with horns of arbitrary might. Or claws to seize their furry spoils in light. Id. Three sisters, mourning for their brother's loss. Their bodies hid in bark, vmd furred with moss. Id.

'Tis but dressing up a bird of prey in his cap and furs to make a judge of him. L' Estrange .

Such animals as feed upon flesh qualify it, the one by swallowing the hair or fur of the beasts they prey upon, the other by devouring some part of the feathers of the birds they gorge themselves with.

Ray on the Creation. Their frying blood compels to irrigate Their dry yioTed tongues. Philips.

A dungeon wide and horrible ; the walls On all sides /wrred with mouldy damps, and hung With clots of ropy gore. Addison.

Silent along the mazy margin stray. And with the fur-wrought fly delude the prey.

Gay's Pa'itorals. From Volga's banks the' imperious Czar Leads forth his furry troops to war. Felton.

And lordly gout wrapt up iTxfur, And wheezing asthma, loth to stir. Swift. He had a bed of furs, and a pelisse. For Haidee stripped her sables oif to make His couch. Byron. Don Jaaru

Fur, or Furr, in commerce, signifies the skins of wild beasts, dressed in alum with the haii on, and used as a part of dress by princes, ma- gistrates, and others. The kinds most in use are those of the ermine, sable, castor, hare, coney, &c. It was not till the later ages that the furs of beasts became an article of luxury. The refined nations of antiquity never made use of them; those alone who were stigmatised as barbarians were clothed in the skins of animals. Strabo describes the Indians covered with the skins of lions, panthers, and bears ; and Seneca the Scythians clothed with the skins of foxes and the smaller quadrupeds. V'irgil exhibits a picture of the savage Hyperboreans, similar to that which might be witnessed in the clothing of the wild Americans. Most part of Europe was then in similar circumstances. Caesar was, per- haps, as much amazed with the skin-dressed he- roes of Britain, as our celebrated Cook was at those of his new discovered regions. What time has done to us, it may also eft'ect for them ; and, it is to be hoped, with much less bloodshed. Civilisation may take place ; and those spoils of animals) which are at present essential for their clothing, become merely objects of ornament and luxury. It does not appear that the Greeks

or ancient Romans ever made use of furs. It originated in those regions where they n^.ost abounded, and where the severity of the climate reijuired that species of clothing. At first, it consisted of the skins only, almost in the state in which they were torn from the body of the beast ; but, as soon as civilisation took place, and manufactures were introduced, furs became the lining of the dress, and often the elegant facing of the robes. It is probable that

the northern conquerors introduced the fashion into Europe. We find that, about A. D. 522, when Totila, king of the Visip^oths, reigned in Italy, the Suethons, or natives of Sweden, found means, by help of tlie commerce of numberless intervening people, to transmit, for the use of the Romans, saphilinas pelles, the skins of the sables. As luxury advanced, furs of the most valuable kinds were used by princes as linings for their tents. Marco Polo, in 1252, found those of the cham of Tartary lined with ern>ine3 and sables. He calls the last zibelines and zam- bolincs. He says that those and otlier precious furs were brought from countries far north ; from the land of darkness, and regions almost inac- cessible by reason of morasses and ice. The Welsh set a high value on furs, as early as the time of Howel Ddha, who reigned about 940. In the next age, furs became the fashionable magnificence of Europe. When Godfrey of Boulogne, and his followers, appeared before the emperor Alexius Comnenus, on their way to the Holy Land, he was struck with the rich- ness of their dresses, tarn ex ostro quam aurifri- gio et niveo opere harmelino et ex mardrino grisioque et vario. How different was the ad- vance of luxury in France, from the time of their great monarch Charlemagne, who contented himself with the plain fur of the otter ! King Henry I. wore furs; yet, in his dress, was obliged to change them for warm Welsh flannel. But, in 1337, luxury had obtained to such a degree, that Edward III. enacted, that all per- sons who could not spend £lOO a-year, should be prohibited the use of this kind of finery. These, from their great expense, must have been foreign furs, olitained from the Italian commer- cial states, whose traffic was at this period bound less. How strange is the revolution in the fur- trade ! The north of Asia at that time supplied us with every valuable kind ; at present, we send, by means of the possession of Hudson's Bay, furs to an immense amount, to Turkey, and even to China.

EURA'CIOUS, a(/j.) Lat. /wrax-. Thie- Fi'ra'city, n. s. ^vishness; disposition

to steal.

FUR'BELOW, n.s.Scv.a. Yr.falbala ; Span. farfala ,- Goth, farfulla, the fold of a garment. A piece of stuff plaited and puckered toe-ether, either below or above, on the petticoats or gowns of women. This, like a great many other words, is the child of mere caprice. To adorn with ornamental appendages of dress.

A ball is a great help to discourse, and a birthday furnishes conversation for a twelvemonth after. A furbelow of precious stones, a hat buttoned with a diamond, a brocade waistcoat or petticoat, are standing '•'P'"- Addison.

She wcis flounced and furbelowed ; every ribbon was crinkled, and every part of her garments in curl.

Id.

When arguments too fiercely glare, Vou calm them with a milder air ; To break their points, you turn their force, And furbelow the plain discourse. Prior.

Nay, oft in dreams invention -we bestow To change a flounce, or add it furbelow. Pope.

FUR'BISH, I', a. } Fr. fourhh-, to burnish ; FtJR'BiSKER, n. s. S to polish ; to rub to bright- ness.

Furbish the spears, and put on the brigandines.

Jer. xlvi. 4. It may enter Mowbray's waxen coat. And furbish new the name of Jolin o'Gaunt.

a/iakxpeare. Richard II. As after Numa's peaceful reign. The martial Ancus did the sceptre wield ; Furbiihed the rusty sword again. Resumed the long-forgotten shie.d, And led the Latins to the dusty tield. Dryden. Some others who furbish up and reprint his old errours, hold that the sufferings of the damned are not to be, in a strict sense, eternal ; but that, after a certain period of lime, there shall be a general gaol- delivery of the souls in prison, and that not a farther e.xecutiou, but a final release. South.

FURCA, so called from its resembling a fork, a remarkable moulitahi in the central part of the Alps, Switzerland, in the north-east comer of the canton of Valais. It is 14,000 feet abo^e the level of the sea, a road passing between its two divisions.

FiRCA, in antiquity, a piece of timber resem- bling a fork, used by the

Romans as an instru- meftt of punishment. The punishment of the furca was of three kinds; the first only ignomi- nious, when a master, for small oflFences, forced a servant to carry a furca on his shoulders about the city. The second was painful, when the party was led about the circus or other place, with the furca about his neck, and whipped all the way. The third was capital, when the malefactor, hav- ing his head fastened on the furca, was whipped to death.

FURCATION, n.s. Lat. /?/rcfl. Forkiness; the state of shooting two ways like the blades of a fork.

When stags grow old they grow less branched, and first lose their brow-antlers, or lowest furcations next the head. Browne.

FURETIERE (Antony), a learned French lawyer, born at Paris in 1 620. He was eminent in the civil and canon law, and an advocate in the parliament. Afterwards, taking orders, he became abbot of Chalivoy, and prior of Chuines. He wrote many works, but is chiefly valued for his Universal Dictionary of the French Tongue, in which he explains the terms of art in all sciences, and which was published after his death. He died in 1688

FU'RFUR, n. s. Lat. Husk or chafT, scurf or dandruff, that grows upon the skin, with some likeness to»bran.

FURFURA'CEOUS, adj. Lat. furfuraceus. Husky ; branny ; scaly.

FURIA, in zoology, a genus of insects be- longing to the order of vermes zoophyta. There is but one species, viz. the V. infernalis. It has a linear smooth body, ciliated on each side, with reflexed feelers pressed to its body. In Finland, Bothnia, and the northern provinces of Sweden, people were often seized with a ptmgent pain, confined to a point, in the hand, or other exposed part of the body, which presently in- creased to a most excniciating degree, and some- times proved suddenly fatal. This disoider was particularly observed in Finland, especially about boggy and marshy places, and always in

autumn. At length it was discovered, tliat this pain instantly succeeded somevviiat that dropped out of the air, and in a moment penetrated and buried itself in the flesh. The Finlanders had tried a variety of applications

to no purpose, until, at length, a poultice of curds or cheese was found the most eftectual in easing the pain ; and the event confirmed that the insect was allured by this application to leave the flesh ; as, on its removal, this worm, no longer than the sixth of an inch, was found in it, and thus the cause of this painful disease explained. Linnaus tells us that he himself once experienced the effects of ■ this animal, near the city of Lund, in Sweden. Dr. Srlander once gave a slight description of this worm ; but, from the difficulty of obtaining recent specimens, its nature is still obscure ; and even its very existence has been occasionally doubted, particularly by Blumenbach and Mul- ler. There seems, however, to be no good reason for questioning the existence of some such animal, though the accounts of its extraordinary qualities may have been exaggerated. The best account of it is in a qxiarto pamphlet, published by a Dr. Hagen, as an academical thesis : in which all the observations relative to it are summed up in a concise manner, and its real existence seem- ingly well ascertained. It is said to be gene- rally about three-quarters of an inch long.

FURIiE, Furies, in Pagan mythology, goddesses, whose office it was to punish the guilty after death. Tliey sprang from the blood of the wound which Ccelus received from his son Saturn. Some make them daughters of Acheron and Night, or Pluto and Proserpine. Accord- ing to the more received opinions, they were three in number, Tisiphone, Megsera, and Alec- to, to which some add Nemesis. Plutarch men- tions only one called Adrasta, daughter of Jupiter and Necessity. They were supposed to be the ministers of the vengeance of the gods ; stern and inexorable ; always employed in pu- nishing the guilty upon earth, as well as in the infernal regions. They were also called Eume- nides and Erinnydes. The Athenians styled them asuvai Oeai, venerable goddesses. Their worship was almost universal; and people dared not to mention their names, or fix their eyes upon their temples. They were honored with sacri- fices and libations; and in Achaia they had a temple, which, when entered by any one guilty of a crime, suddenly rendered him furious, and de- prived him of the use of his reason. In the sa- crifices, the votaries used branches of cedar and of alder, hawthorn, saffron, and juniper; and the victims were generally turtle doves and sheep, witii libations of wine and honey. They were usually represented with a grim and frightful aspect, with a black and bloody garment, and with serpents wreathing round their heads in- stead of hair. They held a bumiog torch in one hand, to discover the guilty, and iron chains and whips of scorpions in the other, to punish thein , and were always attended by Terror, Rage, T'ale- ness, and Death. In hell they were seated around Pluto's throne, as the ministers of his vengeance. They were worship))ed at Casina ill Arcadia, and at Carmia in Peloponnesus. Tliey had a temple at Athens, near the Areo-

pagus, and their priests were chosen from amongst the judges of that court.

At Telyjhusia, a city in Arcadia, a black ewe was sacrificed to them. On medals they are mostly , represented as in the annexed diagram : the middle one bearing a torch in both hands ; that on the right, a serpent in one hand, and a key in the other; that on the left, a scourge in one hand, and a dagger in the other.

FURL, v.a. Fr. freskr. To draw up; to contract.

When fortune sends a stormy wind. Then show a brave and present mind ; And when with too indulgent gales She swells too much, then /uri thy sails.

Creech. FURLING, in the sea language, signifies the wrapping up and binding any sail close to the yard ; which is done by hauling upon the clew-lines, bunt-lines, &c., which wraps the sail close together, and, being bound fast to the yard, the sail is furled.

FU'RLONG, n. s. Sax. paplanj. A measure of length ; the eighth part of a mile.

If a man stand in the middle of a field and speak aloud, he shall be heard z. furlong in round, and that in artirulate sounds. Bacon.

Coming within a few furlongs of the temple, they passed through a very thick grove. Addison.

FU'RLOUGH, n. s. Belg. vcrloef. A tem- porary dismission from military service ; a license given to a soldier to be absent.

Brutus and Cato might discharge their souls. And give ihem furlo's for another world ; But we, like sentries, are obliged to stand In starless nights, and wait the appointed hour.

Vrydcn. FUR'MENTY, n. s. More properly frumen- ty or frumety, of 'LTiXm frumentum. Food made by boiling wheat in milk.

Remember, wife, therefore, though I do it not. The seed-cake, the pasties, and fvrmenty pot.

Tusser. FURNACE, n. s. & v. a. Sax. Fymhup ; Lat. furnus. (Probably a compound in the Saxon o fire and house). An enclosed place where fire is heated intensely for the purpose of fusing or hardening substances. The verb is low and ob- solete, occurring only in Shakspeare, and but once.

The fining pot is for vilver and the furnace for gold.

Proverbs. WTioso falleth not down and worshippcth, shall the same hour

be cast into the midst of a burning fiery furnace. Daniel,

This proudc king let make a statue of gold. Sixty cubitcs long, and seven in brede , To which image, both yongc and old Commanded he to loute, and have in drede. Or, in a fourncis full of flames rede He shuld be brent that woldc not obeye.

Chaucer. The Monkcs Talc. He furnaces The thick sighs from hira.

Shakspeare. Cymbeline. Heat not a furnace for your foe so hot That it may singe yourself. Id. Henry VllL

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FURNACES.

We bavo also furnacet of great diversities, that keep great diversity of heats. Bacon.

The kings of Spain have erected divers furnaces and forges, for the trying and fining of their gold.

Abbot.

A dungeon horrible, on all sides round. As one great _/urnnce, flamed. Milton.

Furnaces, in chemistry, are instniments of most universal use; and, as the success of a great number of experiments depends upon their being well or ill constructedj it is of great importance that a laboratory be well provided in this respect. In all furnaces the principal things to be attended to, are, to confine the heat as much as possible to the matter to be operated upon; and to pro- duce as much heat with as little fuel as possible. To answer the first intention, the fire is usually confined in a chamber or cavity built on pur- pose for it, and furnished with adoor for putting in the fuel, and a grate for supporting it, and allow- ing air to pass through, as well as the ashes to drop down into a cavity provided on purpose, and called the ash-pit. Thus the heat, produced by the inflamed fuel, is confined by the sides of the furnace, and obliged to spend great part of its force upon the subject enclosed. The second intention, which is the most important, is at the same time the most ditiicult to answer, and de- pends entirely upon the proportion between the spaces betwixt the furnace bars and the wideness and height of the chimney. This will appear from a consideration of the principles on which the degrees of inflammation are produced. These depend entirely on the current of air which passes through the inflamed fuel. As soon as the fuel is set on fire, a certain degree of heat is produced ;

but, unless a constant influx of air is admitted through the burning fuel, the fire is instantly extinguished ; nor is it possible by any means to renew the inflammation until we admit a stream of fresh air amongst the fuel. When this is done, a rarefaction commences in the air of the fire-place of the furnace; so that it is no longer a counterpoise to the external air, and is, therefore, driven up the chimney by that wiiich enters at the ash-pit. This again, passing through the fuel, is rarefied in its turn; and, giving place to fresh quantities, there is a constant flow of air up the chimney. In proportion to the ra- refaction of the air in the fire-place, the greater is the heat. But, by a certain construction of the furnace, the under part of the chimney will become almost as strongly heated as the fire- place; by which means, though a very strong current of air is forced through the fuel, yet as great part of the heat is spent on the chimney, where it can be of no use, the fuel is wasted in a very considerable degree. To avoid this, we have no other method than to contract the throat of the chimney occasionally by a sliding plate ; which, when put quite in, shuts up the whole vent ; and, by being drawn out more or less, leaves a larger or smaller vent at pleasure. This plate ought to be quite drawn out till the fuel is tho- roughly kindled, and the furnace well heated, so that a current of air may flow strongly through the fuel. After this, the plate is to be put in a certain length, so as just to prevent the smoke

from coming out at the door of the furnace. The rarefaction of the air in the fire-place will elicit a very considerable draught of air, which will keep the fuel inflamed to a great degree ; at the same time that the heat, being reflected from every part of the furnace excepting that narrow passage where the smoke goes up, becomes very intense. A large quantity of fuel may be put in at once, which will consume slowly, and thus require but little attention, in comparison with those furnaces where no such precaution is used. This sliding plate may be made of cast iron in those furnaces where no great heat is excited ; but in others fire-clay will be more convenient. The contrivance, however, is scarcely applicable to those furnaces where great quantities of metal are to be melted ; and, accordingly, the waste of fuel there is immense. It is computed that the iron-works of Carron, in Stirlingshire, consume annually as many coals as would be sufficient for a city containing 700,000 inhabitants. In order to regulate the heat, says Dr. Black, it is necessary to have the command of the furnace below ; the parts above being frequently filled witii small quantities of soot. The best method of managing this is to shut up the door of the ash-hole perfectly close, and to have a set of round holes, bearing a certain proportion to oiie another; and their areas being as 1, 2, 4, 8, 16, &c. Seven or eight of these ought to be made in the door of the ash-pit, which will give a suf- ficient command over the fire. When the fire is to be increased to the utmost, all the passages both above and below are to be

thrown open, and the height of the vent augmented ; which, by increasing the height of the column of rarefied air, increases also the motion of that through the fuel, and of consequence also the heat of the fur- nace. Macquer recommends another tube ap-' plied to the ash-pit, widest at the end farthest from the furnace, and tapering gradually towards it. The intention of this is to augment the cur- rent and velocity of the air, by its being made to pass from a wider into a narrower vent; but, though this is no doubt true, the air will not ul- timately move with greater velocity than if the tube were not there. It can only be useful, therefore, in cases where the furnace is placed in a small room, and the tube itself has a commu- nication with the external air. See Chemistry and Laboratory.

FURNEAUX (Philip), D. D., an able non- conformist divine of the eighteenth century, was born in 1726, at Totnes in Devonshire. Being designed for the ministry, he was sent to Lon- don for his academical studios ; and, on becoming a preacher, was chosen assistant to Mr. Henry Read, pastor of a presbyterian congregation in St. Thomas's, Southwark. lie afterwards became one of the Sunday evening lecturers at Salters' Hall. In 1753 he succeeded the Rev. Moses Lowman, as pastor of the congregation of Clap- ham. Dr. Furneaux continued a popular preacher for upwards of twenty-three years, but was attacked, in 1777, by a malady which ended in mental derangement, from which he never re- covered. He died in 1783. His principal works are — Letters to the honorable Mr. Justice Black- stone, concerning his Exposition of the Act of

ToleraUon, and some Positions relating to Reli- gious Liberty, in his celebrated Commentaries on the Laws of England ; and Essays on Tole- ration, 8vo., 1788.

Fkuneaux, an island of the South Pacific Ocean, first discovered by Bougainville, and af- terwards by captain Cook. It is surrounded by a coral bank, and produces cocoa-nut trees. A large lagoon of sea water occupies the interior. Long. 143° 10′ W., lat. 17° 11′ S.

FuRNEAUX Islands is a cluster of islands, of unknown number, in Bass Strait, be- tween Van Diemen's Land and New Holland. The principal are — Great Island, upwards of forty miles in length. Cape Barren Island, Clarke's, and Preservation Island. The lower parts of them are sandy and swampy ; but the basis of most of them is a white granite. All are overran

with brushwood, and have a few stunted trees, which never exceed the height of twelve feet. Vegetables in general are scanty ; and, as if the soil itself were unfit for vegetation, in a certain spot of Preservation Island the trees have undergone a petrifaction towards the roots. Two species of seals are found here, and invite the temporary abode of those engaged in the fishery, otherwise these islands are uninhabited. Here are also the kangaroo, wombat, duck-billed ant-eater, and snakes of difterent species with venomous fangs. The sheer water, or sooty pe- terel, appears in innumerable flocks, and burrows in the gTOund. As well as the navigation being here very difficult, the water is bad. Furneaux Islands were first visited by Bass and Flinders, in

1798.

FURNES, a town of West Flanders, near the sea, on a canal whicli extends from Bruges to Dunkirk. It is a neat town, and has an elegant town-house. It was taken by the French in May 1793, and soon after evacuated; but was again taken by general Pichegru in May 1794. The air, once unhealthy on account of the neighbourhood of marshes, is much improved since they were drained. It has a brisk trade in corn, hops, butter, and cheese. Population 3200. Fifteen miles south-west of Ostend, and twenty N.N.W. of Ypres.

FUR'NISH, tJ. a."^ Yx.fournir ; It. fournir.

Fur'nisher, ?«. .s. >To supply with what is

Fur'niture, 71. s. J necessary to a certain pur- pose. Furniture is generally that which is sup- plied ; but now the specific term for goods in a house whether for use or ornament ; a furnisher is tlie agent who grants or procures supplies. Upon a day as on their way they went,

It channst some furniture about her steed

To be disordered by some accident.

Spenser. Faerie Qceene. Young Clarion, with vauntful lustyhed. After his guiso did cast abroad to fare. And thereto 'gan his furnitures prepare.

Spetuicr.

The diikc is coming : sec the barge bo ready. And fit it with such furniture as suits The greatness of Lis person.

Sha/ispeare. Henri/ VIII. She hath directed

How I shall take her from her father's house ;

What gold and jewels she is furnished witli.

i > huhpcctre.

His training such.

That he may furnish and instruct great teachers,

And never seek for aid out of himself. Id.

Will your lordship lend me a thousand pounds to furnish me ? Id. Henri/ I V.

Something deeper.

Whereof perchance these are h\x. furnishinys.

Sha/ispeare.

Plato entertained somo of his friends at dinner, and had in the chamber abed or couch, neatly and cost]y furnished. Diogenes came in, and got up upon the bed, and trampled it, saying, I trample upon the pride of Plato. Plato mildly answered, but with greater pride, Diogenes. Bacon's Apophthcyms.

First thou madest the great house of the world, and furnishedst it : then thou broughtest in thy tenant to possess it. Bp. Hall.

By a general conflagration mankind shall be des- troyed, with the form and all the furniture of the earth. Tillotson.

The ground must be of a mixt brown, and large enough, or the horse's furniture must be of very sen- sible colours. Dryden.

I shall not need to heap up instances ; every one's reading and conversation will sufficiently yjirni'jA him, if he wants to be better stored. Locke.

The wounded arm would yjfrm'sA all their rooms. And bleed for ever scarlet in the looms. Halifax.

No man can transport his large retinue, his sump- tuous fare, and his rich furniture into another world.

South.

It is not the state, but a compact among private persons that h&ih furnislied out these several remittan- ces. Addisun.

Doubtless the man Jesus Christ is furnished with superior powers to all the angels in heaven, because he is employed in superior work. Watti.

Here wealth had done its utmost to encumber With furniture an exquisite apartment. Which puzzled nature much to know what art meant, Byron. Don Juan. 'lis said that persons living on annuities

Are longer lived than others.

So true it is.

That some I really think, do never die ;

Of any creditors the worst a Jew is.

And that's their mode oi furnishiny supply ;

In my young days they lent me cash that way.

Which I found very troublesome to pay. Id.

FURROW, n. s. &: v. u. Sax. pu;ih, pypian ; Dan. Jure; Belg. voore. Any long trench or hollow ; particularly a small trench made by the plough for the reception of seed. The verb sig- nifies to cut in furrows ; to divide in long hol- lows ; to make by cutting.

But eft when yc count you freed from fearc. Comes the brcme Winter with chamfred browes. Full of wrinkles and irosty furrowes, Drorily shooting his slormie darte. Which curdles the bloud and pricks the harte.

Spenser. The Shcjihcard's Calendar. With greedy force each other doth assaylo. And strike so fiercely that thoy do improsso Dcpe (lialeil furrowes in the battrcd niaylc.

/(/. Faerie Quenu-. There go the ships that furrotv out their way ; Yea, there of whales enormous sights wo see.

Wollmi. While the ploughman near at hand. Whistles o'er the furrowed land. Milton.

Two such I saw, wliat time the labored ox. In his loose traces from ihc furrow came. And the swinkt hcdger at his supper sat.

/(/. Comus.

The billows fall, while Ncptun'j lays his mace On tha rough sea, and smooths its furrowed facj.

Dryden. Then ploughs for seed the fruitfu furrows broke. And oxon laboured first beneath the yoke. Id.

My lord it is, though time has ploughed that face With many/iirrows since I saw it first ; Yet I'm too well acquainted with the ground quite to

forget it. Bryden and Lee's Oedipus.

Oft did the harvest to their sickle yield ;

TI\c\t furrow oft the stubborn glebe has broke ; How jocund did they drive their teams afield !

How bowed the woods beneath their sturdy stroke .

Gray's Elegy.

Furrow-weed, n. s. Furrow and weed. A weed that grows in furrowed land.

Crowned with rank fumiter, and furrow-uecds.

Shahtpeare,

FURRUCKABAD, a district of the province of Agra, Hindostan, between the rivers Ganges and Jumna, or between the twenty-seventh and twenty-eighth degrees of northern latitude. It formerly belonged to Canouge ; but, in the early part of the last century, was assigned to an Afghan chief named Mohammed Khan Bungush, whose descendants became independent, and were frequently engaged in war with the nabobs of Oude ; but at length became tributary to that power. The British, in the year 1801, took the nabob of Furruckabad under their protection ; when the state of the country was found very wretched. lie shortly after agreed to make it over, with all the civil and military jurisdiction , for an annual pension of 180,000 rupees. Since that period it has improved ; and is managed by a judge, collector, &c., subject to the circuit court of Bareilly.

Furruckabad, a fortified town of Hindostan, capital of the above district, is situated about a mile from the western bank of the Ganges, and contains a

small citadel and the former palace of the nabob. To preserve his dignity, the British authorities reside in the suburbs. It carries on an advantageous trade with Cashmeer. The inhabitants are Hindoos and Mahommedans in nearly equal proportions. They are said to he handsome and brave, but not of very exem- plary character. Under the walls of this place lord Lake, in 1804, after several days' pursuit, came up with and totally defeated the Mahratta chief llolkar.

FURSTENBERG, or Furstenbiirg, a late principality of Suabia, which was partitioned among different powers by the treaty of the Con- federation of the Rhine. It was erected in the thirteenth century, and divided into several branches : the brothers and other children were called landgraves. The estate gave six voices in the assemblies of the circle, and a seat on the bench of princes at the diet of the empire. It now chiefly belongs to Baden. The whole con- tains about 860 square miles, and 83,000 inha- bitants. It is in general a mountainous and woody district ; but has good pastures. Here are also mines of iron and copper: the chief manufactures are straw hats, and time-pieces in wood, brass, or iron. The in.iabitants are chiefly Catholics. A branch, of the old family of Furs- tenberg, we believe the Stuklingen, has itˆ resi-

dence at Donau Eschingen. The town of Furs- tenberg is an insignificant place, fourteen miles N.N.W. of Schatfhausen, and remarkable for nothing but a ruined castle, the original seat ot this family.

Furstenberg is also the name of other towns of Germany, viz. 1. In Lusatia on the Oder, taken by the Prussians in 1745, thirtean miles south of Frankfort; 2. One in the duchy of Mecklenburg, on the Havel, ten miles south-east of Strelitz, containing about 1800 inhabitants; 3. Anotlier in the county of Waldeck, ten miles west of Waldeck.

FURSTENWALD, a well built town of the Middle Mark of Brandenburgh, on the Spree. It has manufactures of woollen stuff's ; and is a place of some antiquity, having been taken in 1631 by the Swedes. In 1633 it was burned by the imperialists. Population 2350. Twenty-six miles east of Berlin, and twenty west of Frank- fort on the Oder.

FURTADO (Abraham), a modern French Jew of some celebrity, was born in 1759, and be- came one of the leading members of the Parisian Sanhedrim convoked by Buonaparte. He is said to have possessed considerable eloquence, and was the author of a Poetical Version of tlie Book of Job ; Political Harmonics, 4 vols. ; a Transla- tion of Lucretius, &c.

FURTII, a considerable manufacturing town of Franconia, subject to

Bavaria, four miles west of Nuremberg. It is situated near the junction of the Rednitz and Pegnitz. It is entirely in- debted for its increase to the liberality of its civil management. Artisans who are unable to obtain admission at Nuremberg settle without difficulty here : glass of all kinds, but in particular large mirrors, are made. There is also a number of watch-makers, gold-beaters, joiners, saddlers, stocking-weavers, &c. ; and the total population amounts to nearly 1 3,000 ; of which the Jews form 2700 : they have a separate spiritual and temporal jurisd.iction ; their judge being a rabbi, from whom there is an appeal to the other ma- gistrates.

FURTHER, adj. & adv.”^ From forth, not Fur’tuermore, a(/y. >from far, as is com-

Fur’tiiest, adj. f monly imagined ;

forth, further, furthest, corrupted from forther, forthest ; Sax. poptSep. Forther is used by Sir Thomas More. See Forth and Farther. It signifies at a greater distance; V^eyond this: and ‘it has, in some sort, the force of a substantive in the phrase no further for nothing further.

And the ang’el of the Lord went further, and stood in a narrow place. Numb. xxii. 2.

Than furthermore I went as I wos lad : And there I sawe withouten any faile A chaice yset with ful riche aparaile.

Chaucer. The Assemblie of Ladiet. And, furthermore, understond wel, that thise Conqucrours or tyrantes maker, ful oft thrallcs Of hem that ben borne of as royal blood as ben They that hem conqucrcn. Id. The Personet Tale, Upon that famous t’ivct’s further shore. There stood a snowie swan of heavenly hicw And EPntle kinde, as ever fowle afore A fairer one in all the goodly criew : Of white Strimonian brood might no man viow :

There he most sweetly sung the prophecie Of his owne death in doleful elegie.

Spenser. The Ruines of Time. They bring them wines of Greece and Araby, And daintie spices fetch imm furthest Ynd.

Id. Faerie Queenc. This ring I do accept most thankfully. And so, I pray

you tell Lim : furthermore, I pray you, shew my youth old Shylock's house.

Shakspeare. Satan had joumied on, pensive and slow : But further way found none, so thick entwined. As one continued brake, the undergrowth Of shrubs and tangling bushes had perplexed All path of man or beast that passed that way.

Milton. Thfir earnest eyes they fixed, imagining For one forbidden tree a multitude Now risen to work them further woe or shame. Id.

I may meet Soma wandering spirit, from him to draw Whut further would be learned. Id.

Let this appease Thy doubt, since human reach no /urtAer knows. Id.

Sin is never at a stay j if we do not retreat from it, we shall advance iu it ; and the further on we go, the more we have to come back. Barrow,

I am commanded to inform you that Yo\XT fur tfter trial is postponed.

Byron. The Two Foscari.

Fur'ther, V. a. "^ From the adverb ;

P'ur'therance, n. s. >Sax. poji<5riian. To put Fur'therer, n. s. J onward ; to forward ; to promote; to countenance; to assist; to help. It were, quod he, to thee no gret honour For to be false, ne for to be traytour To me that am thy cosin and thy brother Yswome ful depe, and eche of us to other. That never (for to dien in the peine !) Til that thp deth departen shal us tweine, Neyther of us in love to hindre other. But that thou shouldest trewely ybr^^er me In every cas, as I shuld farther thee.

Chaucer. The Knightcs Tale. This gracelnose man, iov furtherance of his guile Did court the handmayd of my lady deare. Who, glad t'embosome his affection vile. Did all she might more pleasing to appeare.

Spenter. Faerie Qneene.

That earnest favourer and furthcrer of God's true

religion, that faithful servitor to his prince and

country. Ascham.

Things thus set in order, in quiet and rest.

Shall further thy harvest, and pleasure thee best.

Tusscr. Could their fond superstition have furthered so great attempts, without the mixture of a true persuasion con- cerning the irresistible force of divine power.

Hooker. Our diligence must search out all helps ami further- antes of direction, which scriptures, councils, fathers, histories, the laws and practices of all churches aflbrd.

Id. Cannot my body, nor blood -sacrifice, Intrcat you to your wonlcA furtherance?

Sluilispeare. Henri/ VI. If men were minded to live righteously, to believe a God would be no hindrance or prrjudice to any such design, but very much for the advancement and fur- therance of it. Tillotson.

FU'llTIVE, Of/;. Vv. furtive ; "LaX. furtivus. Stolen ; gotten by theft.

Or do they, as your schemes, I think, have shown. Dart yurtiue beams and glory not their own. All servants to that source of light, the sun? Prior.

FU'RUNCLE, n. s. Yi./urojicle ; LaX.furun- cuius. A bile ; an angry pustule.

A furuncle is in its beginning round, hard, and in- flamed ; and, as it increaseth, it riseth up with an acute head, and sometimes a pustule ; and then it is more inflamed and painful, when it arrives at its state, which is about the eighth or ninth day. Wiseman.

FU'RY, n. s. •\ ¥t. fureur; hˆLt. furor.

Tv'riovs, adj. /Madness; rage; passion

Fu'riously, adv. ˆof anger; tumult of mind, Fu'riousness, 71. s. ' approaching to madness: enthusiasm ; exaltation of fancy : also, from Lat. furia, one of the deities of vengeance, and thence a stormy, turbulent, violent, raging woman. But at the feste redy ben, rivis. The Furis three, with all her mortale bronde.

C/iaucer. Legende of Good Women. Much was Cambello daunted with his blowes ; So thicke they fell, and forcibly were sent. That he was first from daunger of the throwers Backe to retire, and somewhat to relent. Till th' heat of his fierce fury he had spent.

Spenser. Faerie Queene. A mighty speare eftsoones at him he bent j Who, seeing him come on so furiously , Met him mid-way with equall hardiment. That forcibly to ground they both together went.

Id. Which when his brother saw, fraught with great grief And wrath, he to him leapt furiously. Id.

Taking up the lute, her wˆit began to be with a divine fury inspired ; and her voice would, in so be- loved an occasion, second her wit. Sidney.

No man did ever think the hurtful actions oi furioia men and innocents to be punishable. Hooker,

A sybil, that had numbered in the world The sun to course two hundred compasses, la her prophetick _/«ry sewed the work.

S/iakspeare. To he furious, Is to be frighted out of fear ; and in that mood The dove will peck the estridge. Id.

The sight of any of the house of York Is as a fury to torment my soul. Id.

I do oppose my patience to his fury ; and am armed To suffer with a quietness of spirit Tho very tyranny and rage of his. Id.

Who can be wise, amazed, temperate, and furious. Loyal and neutral iu a moment ? No man.

Id. Macbeth. With clamour thence the rapid currents drive Towards the retreating sea their furious tide.

Milton, They observe countenance to attend the practice ; and this carries them on furiously to that which of themselves they are inclined. South,

She heard not half, so furiously she flies ; Fear gave her wings. Dryden.

It was the most proper place for a fury to make her exit j and I believe every reader's imagination is pleased, when he sees tho angry goddess thus sinking in a tempest, and plunging herself into hell, amidst such a scene of horror and confusion.

Addiion on Italy. Prone on their routed rear the cranes descend ; Their bills bite/urioiw, and their talons rend.

Be«atie.

Fl IIZ, n. s.)

Sax. pipfj I^^^- goiiiiti spino- Tvnz\,adi. i sa. Gorse; goss; overgrown with gorse. The whole plant is very thorny ; the flowers, which are of the pea-bloom kind,| are disposed in short thick spikes, which are suc- ceeded by sliort compressed pods, in each of which are contained three or four kidney-shaped seeds. — Miller.

We may know. And when to reap the grain, and when to sow. Or when to sell the furzes. Dryden's Virgil.

Wide through .h.e. furzy field their rout they take. Their bleeding bosoms force the thorny brake. Gay.

FUSAROLE, in architecture, a moulding or ornament placed immediately under the echi- nus, in the Doric, Ionic, and Composite ca- pitals.

FUSE, V. a., V. n., & n. s.\ Lat. /undo, fu

Fu'siiiLE, flf/j, / s«?n, fusio. To

Fusibil'ity, n.s. > melt; to put into

Fu'siL, or//. i fusion; to liquefy

Fu'sioN, H. s. J by heat : capable

of being melted ; of being made liquid by heat ;

capacity of being melted : liquefiable ; running by

the force of heat. The substantive is the name

of that part of a bomb, or grenado-shell, which

makes the whole powder, or composition, in the

shell take fire. It is usually a wooden pipe, or

tap, filled with wildfire, or some such matter ;

and is intended to burn no longer than is the

time of the motion of the bomb from the mouth

of the mortar to the place where it is to fall,

which time Anderson makes twenty-seven

seconds. — Harris. Fusion is the act of melting,

or the state of being melted, or running with

heat.

Yet forgatc I to make rehersaile Gf waters corrosif, and of limaileˆ 'Ind of bodies molification. And also of hir induration ; Oils, ablusions, metal ywiiWe To tellen all wold passen any bible Tliat o wher is.

Chaucer. The Chanones Yemannes Tale. The liquid ore he drained Into fit molds prepared ; from which ho formed Fii-st his own tools : then, what might else be wrought Fiisile, or graven in metal. Milton's Paradise Lost.

Colours afforded by metalline bodies, either colli- quatc with, or otherwise penetrate into other bodies, especially /iaii/e ones. Boyle.

The bodies of most use, that arc sought for out of the depths of the earth, are the metals which are dis- tinguished from other bodies by their -wcighl, fusibility , and mallcablencss. Locke.

Metals in fusion do not flame for want of a copious fume, except spelter, which fumes copiously, and thereby flames. Newton's Opticks,

Perpetual flames. O'er sand and ashes, and the stubborn flint. Prevailing, turn into a. fusil sea. Philips.

FUSEE,' 71. s. Fr. fuseau." The cone round which is wound the cord, or chain, of a clock or watch : a firelock, or small neat musket. Track of a buck.

The reason of the motion of the balance is by the motion of the next wheel, and that by the motion of the next, amd that by the motion of i\c fusee, and that by the motion of the spring : the whole frame of the watch carries a reasonableness in it, the passive im- pression of the intellectual idea that was in the artist.

Hale.

Fusee. See Watch-Making.

FUS ELI, or Fueseli (Henry), a distinguished modern painter and author, was born at Zurich in 1739. His father was anxious to educate him for the church, but some prints, copies from the works of Michael Aiigelo, with whose peculiar merits and style he became especially struck, de- cided young Fuseli for the life of an artist. He was placed, however, at the

Humanity Col- lege, and there contracted a friendship with Lavatcr, which terminated only with the life of the latter. At this period the two friends exhi- bited united zeal and ability in bringing to justice a leading magistrate in one of the baili- wics of Zurich, who had committed an act of great oppression ; and a pamphlet appearing from tliem on the subject compelled the authori- ties to take the matter up, and the culprit ab- sconded. Fuseli, after taking his degree of M.A., in the college, now accompanied his friend to Vienna and Berlin, in which latter capital they both prosecuted tjieir studies under the learned Sulzer. Fuseli here also obtained an intimate acquaintance with the English language, and was induced by our ambassador at that court, Sir Robert Smith, to visit this country. He arrived in London in 1762, and, obtaining the situation of tutor to a nobleman's son, accompanied him to Paris. On his return he published Reflections on the Painting and Sculpture of the Greeks ; and soon after an Essay in defence of Rousseau, against Voltaire. His early drawings being about this time shown to Sir Joshua Reynolds, the encouragement bestowed on him by that artist decided young Fuseli's fate, when he was finally vacillating between the palette and the pulpit. His first picture was Joseph interpreting the Dreams of the chief Baker and Butler, which was purchased by the late Mr. Johnson, of St. Paul's Church Yard. In 1770 Mr. Fuseli visited Italy in company with a friend, and while in that country transmitted to England several pictures, especially two from the works of Shakspeare, The Death of Beaufort, and a Scene from Macbeth. In 1778 he left Italy, and after paying a short visit to Zurich returned to England, where he suggested to the late alder- man Boydell the idea of forming his Shakspeare Gallery, and supplied him with eight pictures. In 1790 he became a Royal Academician, and, in the course of the next nine years, painted a series of forty-seven pictures from Milton, after- wards exhibited as the Mdton Gallery. He suc- ceeded Mr. Barry, in 1799, as professor of painting to the Royal Academy; and, in 1804, Mr. Wilson as keeper to that association. In 1805 he published an improved edition of Pilkington's Dictionary of Painters, and in 1817 received the diploma of the first class of tiie Academy of St. Luke at Rome. Fuseli conti- nued to practise his art till within a week of his death, whicli took place at Putney Hill, while he was on a visit to the countess of Guildford.

Fuses of Bombs or Gkenadoes are chiefly made of very dry beech-wood, and sometimes of hornbeam, taken near the root. They are turned rough, and bored ; and tlien kept for se- veral years in a dry place : the diameter of the hole is about one-fom-th of an inch ; the hole does not come quite through, leaving about one

fourlli of an inch at the bottom ; and the head is made liollow, in the form of a bowl. The com- position for fuses is saltpetre three parts, sulphur one, and mealed powder three, four, and some- times live. This composition is driven in with an iron driver (whose ends are capped with copper, to prevent the composition from taking fire), and pressed as hard as possible ; the last sliovel-fuU being all mealed powder, and two stands of quickmatch laid across each otlier be- ing driven in with it, the ends of which are folded tip into the hollow top, and a cap of parchment tied over it till it be used. When these fuses are driven into the loaded shell, the lower end is cut cff in a slope, so that the composition may inflame the powder in the shell. The fuse must

have such a length as to continue burning all the time the shell is in its range, and to set fire to the powder as soon as it touches the ground, which instantly bursts into many pieces- When the distance of the battery from the ob- ject is known, the time of the shell's flight may be computed to a second or two; which being known, the fuse may be cut accordingly, by burning two or tliree, and making use of a watch', or a string by way of a pendulum, to vibrate se- conds.

The Fusibility of metals is very various, but the following table is given of their respective powers of resisting heat, as given by M. The- nard : —

1, Fusible below a red heat.

2. Tnfusi'ole below a red lieat.

]\Iercury

Potassium

Sodium

Tin

Bismuth

Lead

Tellurium

Arsenic

Zint

Antimony

Cadmium

Silver Copper Gold Cobalt

Iron

- *Gay Lussac and Tlienard. J Newton.*

Manganese

Nickel

Palladium

Molybdenum

Uranium

Tungsten

Chromium

Titanium

Cerium

Osmium.

Iridium

Rhodium

Platinum

Columbium

Centigr. —39″

+ 58 90 210 2.56

260 Biot.

A little less fusible than lead. — Klaproth. Undetermined. 370° Brogniart. A little below a red heat. Stromeyer. Pyrometer of Wedgewood

20° Kennedy.

27 ?

> Wedgewood.

A little less difficult to melt than iron. ˆ130 Wˆedgewood. I 158 Sir G. M'Kenzie.

160 Guy ton.

As manganese. — Richter.

1

Nearly infusible ; and to be obtained at a forge heat, only in small buttons.

Infusible at the forge furnace. Fusible at the oxyhydrogen blowpipe. See Blowi'/fe.

J

> Ft. fusil. A firelock; the \ same kind of musket which

FU'SIL, n.s.

Fisi'i.iER, n. s. is sometimes called a Fusee. The fusilier is a soldier armed with such a musket. Fusil is also a term in heraldry, from hat. fusus, and the figure it designates is something like a spindle.

Fusilsmust be made long, and small in the middle, in the ancient coat of Montague, argent three fusils in fesse gules. Pcacham.

FrsiL, in heraldry, abearingof a rhomboidal figure, longer than the lozenge, and having its tipper and lower angles more acute and sharp than the other two in the middle. It is called in Latin fusus, a spindle, from its shape. See diagram fig. 1. Ardent a fusil, azure; name Hoby. Wiien the shield is covered with fusils it is called fusilly : fig. 2. Awent, fusilly gules; name Toyers.

Fig. 1.

FusiLEEKS, in the British service, arc soldiers armed like the rest of the infantry, with this dif- ference only, that their muskets are shorter and lighter than those of the battalion and the gre- nediers.

FUSS, 71. .•>. A low cant word. A tumult; a bustle.

End as it befits your station. Conic to use and application ; Nor witli

.senates keep o. ftiss : I submit, and answer thus. Swift,

FUT

FUST, n. s. & V. n.~\ Fv.fuste, the trunk or Fus'tiax, 71. s. (body of a column: also

Fus'ty, adj. i a cask. Its second

FusTiNESS, 71. s. J sense, therefore, is a strong smell, as that of a mouldy barrel. The verb signifies to grow mouldy or to smell ill ; while the second noun and the adjective, though derived from the same root Juste, a tree, signify a kind of cloth made of cotton, because cotton grows on trees. They are further applied to a high swelling kind of writing made up of hetero- geneous parts, or of words and ideas ill-as- sociated : bombast. Swelling : unnaturally pompous; ridiculously tumid; used of styles. But for to tcUen you of his araie, — His hors was good, but he ne wos not gaie. Oi fustian he wered a gipon Alio besmotred with his habergeon. For he was late ycome, fro his viage. And wcnte for to don his pilgrimage.

Chaucer. Prologue to the Cant. Tales. Hector shall have a great catch, if he knock out either of your brains : he were as good crack a fusty nut with no kernel. Shakspeare.

The fusty plebeians hate thine honours. Id.

The large Achilles, atthis/iw<ˆ stuff. From his deep chest laughs out a loud applause.

Id. Is supper ready, the house trimmed, the serving- men in their new fustian and their white stockings ?

Id. When men argue, the greatest part O' the contest falls on terms of art. Until the fustian stuff be spent. And then they fall to the argument.

Hudihras. Nor will you raise in me combustion, By dint of high heroickyWˆian. Id.

Virgil, if he could have seen the first verses of the Sylvae, would have thought Statius mad in his fustian description of the statue on the brazen horse.

Dryden's Dufresnoy. What fustian have I heard these gentlemen find out in Mr. Cowley's odes ! In general, I will say, that nothing can appear more beautiful to me than the strength of those images which they condemn.

Dryden. Fustian is thoughts and words ill sorted, and with- out the least relation to each other. Id.

Chance thoughts, when governed by the close. Oft rise to fustian, or descend to prose. Smith.

Fust, Faustus, or Faust. See Faust.

Fustian, in commerce, is akind of cotton stuff. Fustians should be altogether made of cotton yarn, both woof and warp ; but many pieces are made, the warp of which is flax, or even hemp. Fustians are made of various kinds, wide, nar- row, fine, coarse ; with shag or nap, and without it,

FU'STIC, n. s. A sort of wood brought from the West Indies, used in dyeing of cloth.

To FU'STIGATE, v. a. Lat. fustigo. To beat with a stick; to cane.

FUSTIGATIO, in the Roman customs, a pun- ishment inflicted by beating with a stafi". This punishment was peculiar to freemen ; the slaves were scourged with whips.

FUSTILA'RIAN, n. s. From fusty. A low fellow ; a stinkard ; a scoundrel. A word used by Shakspeare only.

Away, you scullion, you rampallion, yoxifustilarian : I'll tickle your catastrophe. Shakspeare,

'04 FUT

VU'TlhE, adj. 3 Yrench futile ; hat. futilis.

1'util'ity, U.S. 5 Talkative ; loquacious : tri- fling; worthless; of no weight.

One futile person, that maketh it his glory to tell, will do more hurt than many that know it their duty to conceal, Baeon.

This fable does not strike so much at the futility of woman, as at the incontinent levity of a prying hu- mour. L'Ettrange.

Trifling futility appears in their signs of the xo- diack, and their mutual relations and aspects.

BerUley.

To pursue trifles is the lot of humanity ; and whe- ther we bustle in a pantomime, or strut at a corona- tion ; whether we shout at a bonfire, or

harangue in a senate-house ; whatever object we follow, it will at last surely conduct us to futility and disappointment.

Goldsmith.

FUTTEHABAD, a town of Ilindostan, in the province of Dehly and district of Hissar. — Futteh signifying victory, wherever a battle was at one time gained by the imperial arms, the name of the nearest place was changed to the town of victory ; hence towns of Ilindostan beginning in this way are numerous.

FUTTIPOOR, a town in the province of Agra, enclosed by a stone wall of great extent, built by the emperor Acber. The site within does not appear ever to have been filled with buildings, and the part now inhabited is inconsi- derable. The neighbouring hills composed of a grayish stone, have supplied the materials of which the town is built. On the most elevated part stands the tomb of Shah Selim Cheestee, by the efficacy of whose devotion the empress of Acber, after remaining several years barren, be- came pregnant it is said and bore a son, who in honor of the saint, was named Selim ; and, on ascending the throne of Hindostan, took the name of Jchangeer. Futtipoor is twenty-five miles W.S. W. from the city of Agra, Hindostan.

FU'TTOCKS, n. s. Corrupted from foot hooks. Skinner. The lower timbers that hold the ship together.

FUTURE, adj. & 71. s."\ Fr. J'utur ; Latin

Fu'turely, adv. (ˆfuturus. To come ;

Fu'turition, 71. s. i that which will be

Fu'turity, 71. s. } hereafter. Time to

come; something to happen hereafter. Futu- rition is the state of being to be ; the condition of being to come hereafter. Futurity applies to time chiefly ; if not exclusively as distinct from circumstances and events that may occur, yet it belongs to eternity, and like that it never is, but ever is to be.

That, but aforne her, she male se In the yuˆwre, some smale socoure. To leggen her of her doloure.

Chaucer. Romaunt of the Rose. Not my service past, nor present sorrows.

Nor purposed merit in futurity.

Can ransom me. Shakspeare. Othello.

Thy letters have transported me beyond

This ign'raut present time; and I feel now

The/u(urc in the instant. Id. Macbeth.

This prescience of God, as it is prescience, is not the cause of any thing futurely succeeding ; neither doth God's aforeknowlcdge impose any necessity, or bind. Raleigh.

We will freely part with all our other fortunes, substance, endure any misery, drink bitter potions.

FY

70/

FYE

swallow those distasteful pHls, suffer our joynt'; to 1)0 seared, to be cut off, any thing for future hcaltli ; so sweet, so dear, so precious above all things in this world is life. Burton. Anut. Mel.

Glory they sung to the most High '. good will To future men, and in their dwellings peace. Bliltun.

It may be well reckoned among the bare possibili- ties, which never commence into z. futurity ; it requir- ing such a free, sedate, and intent mind, as, it may be, is no where found but among the Plalonical ideas, Glanville's Scepsis.

The mind, once jaded by an attempt above its power, cither is disabled for the future, or else checks at any vigorous undertaking ever after. Locke.

Is it imaginable that t'le great means of the world's redemption should rest only in the number of possibili- ties, and hang so loose in respect of its futurilion, as to leave the event in an equal poise, whether ever there should be such a thing or no ? South.

All futurities arc naked before that All-seeing Eye, the sight of which is no more hindred by distance of time than the sight of an angel can be determined by distance of place. Id.

He sows the teeth at Pallas's command.

And flings the future people fronˆ his hand.

Addison's Ovid. This, great Amphiarus, lay hid from thee.

Thou skilled in fate and A&vk futurity. Pope.

I will contrive some way to make it known to fu- turity, that I had your lordship for a patron. Swift.

in the dust

The fair-haired Daughter of the isles is laid, The love of millions I How did we entrust Futurity to her I and though it must Darken above our bones, yet fondly deemed Our children should obey her child, and blessed Her and her hoped-for seed, whose promise scemeo Like stars to shophcj'd's eyes : — 'twas but a meteor beamed. Byon. Chitde Harold's Pilyrimuge.

Future, or Future Tense, in grammar, sig- nifies an inflexion of verbs, whereby they denote, that a tiling will be in some time yet to come. See Grammar.

FUZZ, u. «. 3 Swed. fisa ; Fr. vesscr ;

Fuzz'ball, 11. s. 3 probably of Gr. (pvcraoj. To fly out in small particles : a kind of fungus which, when pressed, bursts and scatters dust in the eyes.

FY, interj. Fr. and Vlem.fi/; Gr. ˆtv; Lat. vuh. A word of blame and disapprobation, What aileth you to grone in this manere ?

Ye ben a very sleyiQT,fy for shame.

Chaucer. The Nonncs Preestes Tale. Of thilko wicked ensamplo of Canace,

That loved hire owen brother sinfully,

Of all swiche cursed stories I say fy.

Id. Prologue to th" Man of Laves Talc.

AnA fy on fortune, mine avowed foe. Whose wrathful wreaks themselves do now allay.

Fy, my \orA, fy I a soldier, and afraid ? What need we fear who knows it, v/hcn none can call our power to account ? Shakspcare.

A bawd, sir, fy upon him ! Id.

V>\it fy, my wandering muse, how thou do'st stray ! Expectance calls thee now another way, Milton.

}^ay,fy, what mean you in this open place ? Unhand me, or, I swear, I'll scratch your face : Let go, for shame ; you make me mad for spite : My mouth's my own ; and if you kiss. 111 bite.

Dryden.

Fy, fy, Nephew you would not pull off your boots lirrc — Go down into the hall.

Conqreve, Way of the World.

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Fy, madam, he cried, we must »c past all these gaie- ties. Taller.

FYAL or Fayal, one o(the Azores. See Fayal.

FYERS, or Foyers, a river of Invernessliire, which descending from the south through the vale of Fyers, and forming a stupendous water-fall, flows into Loch Ness, ten miles north-east- of Fort Augustus. Dr. Garnett gives the follow- ing description of tlie falls of Foyers. ' Having left our horses at General's Hut, we were con- ducted by our landlord to the falls. We first visited the upper one, which is about a mile and a half from the house, and nearly half a mile above the lower fall. Here the river Foyers, being confined on each side by steep rocks, pre- cipitates itself with great velocity, forming a very fine cataract. A little below the fall a bridge has been tlirown over by the proprietor, Frazer of Foyers, from which the fall is seen ; but, in order to obtain a proper view of it, we, with some dif- ficulty, scrambled down the steep banks of the rocks below, from whence we beheld this roman- tic scene in perfection. The bridge and rocks formed a fine frame or fore-ground, behind which, at tne distance of perhaps twenty yards, appeared the first part of the fall ; the second and most important break was a few yards nearer, and the lowest almost under the arch. Our guide was present when very accurate measurements were taken of these falls. The following particulars are therefore put down from his information : —

Feet. From the arch of the bridge to the surface of

the water, after the lowest part of the fall 200 Height of the fall 70

' The bridge was built about twelve years ago ;' says the Dr. in 1798 ; ' before which time the only passage over this torrent was a rude alpine

bridge, consisting of some sticks thrown over the rocks, and covered with turf. It was crossed by the peasantry on foot, but muˆ certainly have turned giddy the steadiest head unaccustomed to sucli scenes. About three years before the present bridge was built, a neighbouring farmer, on his way home from Inverness, had called at the Ge- neral's Hut, to shelter himself from the inclemency of the storm, and drive out the invading cold by reinforcing the garrison in the stomach. Hero he met with some old acquaintance, with wliom he conversed of former times, without observing the frequency of the circulating glass. The snow continued to fall in thick flakes, and they were silting by a comfortable fire. At last, when the fumes of the whisky iiad taken possession of his brain, and raised his spirits to no ordinary pitch, lie determined to go home. When he came to this place, having been accustomed to cross tlic bridge on foot, he habitually took the road, tind forced his horse over it. Nc.\t morning he had some faint recollection of the circumslance, though the seeming impossibility of the thing made him suspcict that it was a dream ; but, as the ground was covered witli snow, it was easy to convince himself: he accordingly went, and when he perceived the tracks of his horse's feet along the bridge, he fell ill, and died shortly af-

terwards. — Tn our way to the lower fall, our guiJe showed a cave of considerable size, near tlie river, wliere the freebooters used to shelter themselves in turbulent times. There was a way of escape towards the water, should the main entry be dis- covered. Our next object was the lower fall. When we came to the rude pillars, before-men- tioned, vve left the road, and went down the side of the hill. The descent to the point of view is difficult, but we were amply repaid for our trou- ble.' The following beautiful description of this fall was written by Bums as he was standing by it :

Among the heathy hills and ragged woods. The roaring Fyers pours his mossy floods j Till full he dashes on the rocky mounds. Where thro' a shapeless beach his stream resounds. As high in air the bursting torrents flow. As deep recoiling surges foam belcw. Prone down the rock the whitening sheet descends. And viewless echo's ear, astonished rends. Dim- seen, thro' rising mists and careless showers. The hoary cavern, wide surrounding, lowers. Still thro' the gap the struggling river toils. And still,

below, the horrid caldron boils.

FYNE, Loch, a large inlet of the sea in Ar- gyleshire, about thirty-two miles in length, and from twelve to three, or at an average, four or five in breadth. It receives and returns a tide on

each side of the isle of Arran, which is directly opposite to its entrance. Its coasts, which are in general flat and sandy, are adorned with many elegant seats, and beautifully indented with bays. For time immemorial it has been noted for its herring fishery.

FYZABAD (the City of Abundance), also called Bungala, is situated in the Dewah province of Oude, llindostan, and is said to owe its origin to the nabob Sufder Jung having, about the year 1 740, erected some temporary houses in a garden near this place. His son Shuja Addowleh, after the battle of Buxar, removed his residence hither, and gave orders for erecting a palace and other buildings. The court following his example, the city rose in a few years ; but as the greater num- ber of the houses were slightly built, and had only tiled roofs, many of them fell to decay soon after the nabob Assup Addowleh had transferred the capital to Lucknow. This is, however, still a considerable city, and was the constant residence of the mother and grandmother of the last-men- tioned nabob. It contains some handsome tombs belonging to the reigning family : and its gardens are celebrated. The palace of Shuja Addowleh is said to have contained 1000 women at the time of his death, and fifty of his children. Being asked at one time how many he had of the latter, he was obliged to refer to a confidential servant before he could give an answer.

G.

G is the seventh letter and the fifth consonant of our alphabet. In the alphabets of all the oriental languages, the Hebrew, Phenician, Chaldee, Syriac, Samaritan, Arabic, and even the Greek, it is the third letter. The Hebrews call it ghiniel or gimel, i.e. camel, because it re- sembles the neck of that animal ; and it bears the same appellation in the Samaritan, Phenician, Chaldee : in the Synac it is called game), in Arabic giim, and in Greek gamma. The gamma (r) of the Greeks is evidently the gimel (S) of the Hebrews or Samaritans. The chief differ- ence between the gamma and gimel consists in this, that the one is turned to the right, and the other to the left, according to the different man- ners of writing and readhig which obtained among those nations ; though Salmasius, on Solinus, attempted to prove that the G was de- rived from the Greek kappa. It is clear that the Latins borrowed their form of this letter from the Greeks ; the Latin G being only a varia- tion of the Greek gamma, r ; as might easily be proved by an examination of the fornis of this letter, which may be met with in the Greek

and Latin MSS. through which it has passed from r to G. Diomed, lib. ii. cap. De Litera, calls G a new letter. His reason is, that the Romans had not introduced it before the first Punic war : as appears from the rostral column erected by C. Diiilius, on which we every where find a C instead of G. It was Sp. Carvilius who first distinguished between these two letters, and in-

vented the figure of the G; hs we are assured by Terentius Scaurus. The C served very well for G ; it being the third letter of the Latin alphabet, as the r or y was of the Greek. The G is found instead of C on several medals : and M. Beger produces a medal of the Familia Ogulnia, where Gar is read instead of Car, which is on those of M. Patin. But theC is more frequently seen on medals instead of G ; as Aucustalis Callafcia Cartacinensis, &c. for Augustalis, &,c. Not that the pronunciation of those words was altered, but only that the G was ignorantly or negli- gently cut by the workmen : as is the case in divers inscriptions of the eastern empire ; where auc, aucc, auccc, are often found for aug, &c. The northern nations frequently changed the G into V or W ; as in Gallus, Wallus ; Gallia, Wallia, Vallia, Ike. the French change the W of the northern nations, and the V consonant, into G; as, Willielmes, William, into Guillaume ; Wul- philas into Gulphilas; Vasco into Gascon, &c. The modern G takes its form from that of the Latins. It is a mute, and cannot be sounded at all without the help of a vowel. Its hard sound is formed by the reflexion of the air against the palate, made by the tongue ;is the air passes out of the throat ; which Martianus expresses thus, G spiritus cum palato. G often sounds hard before i, as give. Sec, and sometimes before e, as get, &c. It is also hard in derivatives from words ending in g,,as singing, stronger, &c., and generally before er, at the end of words, as

finger. G is mute before 7i, as gnash, sign. G h has the sound of hard G in the beginning of a word, as ghostly; sometimes at the end it is quite silent, as though. But at the end of many otlier words GA has tlie sound of/, as laugh, rough, tough, &c. In music, G is the character or mark of the treble cleff ; and from its being placed at the head, or marking the first sound in Guido's scale, the whole scale took tlie name Gamut. IV. As a numeral, G was ancienily used to denote 400 ; and with a dash over it thus G for 40,000.

GAB, V. n. ■) Mr. Todd observes

Gabble, v.n. & ii.s. >of tliis word that it is

Gabbler, n. s. j one of the most ancient

in our own language, and found in many others with much the same meaning : Old Fr. gaber, to laugh at, from gab, mockery : Goth, begabba ; Ice. gabba: the same from gubb, a mocker; Sax. jab- ban, to tritle ; to joke; to talk a mere jargon : Ital. gabbare, to mock ; Pers. ghab, a foolish or bitter expression. The European word is to be traced, perhaps, to the Celt, gob, a beak ; Irish, gob, a beak, or mouth : whence gab, for the mouth : and hence gabble. To make an indis- tinct noise, or talk loudly without meaning ; to prate, or chatter.

I am no labbe, Ne though I say it I a'am not lefe to gabbe Say what thou wolt, I shal it never telle.

Chaucer. The Milleres Tale.

I gabbe not so have I joy and bliss.

Id. The Nonnes Preestes Tale. When thou couldest not, savage. Shew thine own meaning, but wouldest gabble like A thing most brutish, I endowed thy purposes With words that made them known '.' Shakspeare.

Have you no wit, manners, nor honesty, but to gabble like tinkers at this time of night ? Do ye make an alehouse of my lady's house ?

Id. Twelfth Night.

Not to know what we speak one to another, so we seem to know, is to know straight our purpose : chough's language, ˆfflftWe enough and good enough. Id. All's Well that Ends Well.

Forthwith a hideous ˆaftife rises loud Among the builders ; each to other calls. Not understood. Milton's Paradise Lost.

Which made some think, when he did gabble, The' had heard three labourers of Babel. Hudibras.

Flocks of fowl, that when the tempest roar. With their hoarse gabbling seek the silent shore.

Dryden. Such a rout, and such a rabble,

Ran to hear Jack pudding gabble. Swift.

GABARDINE. Sirdn. gubardma ; lta.. gavar- dina. A coarse frock; any

mean dress. You call me misbeliever cut-throat dog. And spit upon my Jewish gabardine. Shakspeare. The knight did straight submit. And laid his weapons at her feet : Next he disrobed his gabardine, Andv/ith it did himself resign. Hudibrat.

GABEL, n. >:. Sax. japel ; Fr. gabelle ; Ital. gabella. A tribute ; an excise ; a tax.

The gabels of Naples are very high on oil, wine, and tobacco. Addison on Italy.

Gabel. Lat. cabella, gabium, gablagium, and vectigal, has the same signification among the ancient English writers, that gabelle had in France, before the revolution. It has been va-

riously used, for a rent, custom, service, &c. Where it was a payment for rent, those who paid it were termed Gablatores. Formerly, when mentioned without any addition, gabel signified tlie tax on salt, though afterwards it was applied to all other taxes.

GABINIAN Laws, in Roman antiquity, laws instituted upon several occasions by persons of the name of Gabinius : 1. Gabinius lex de Co-mitiis by Gabinius the tribune, A. U.C. 614; re- quiring that in the public assemblies for electing magistrates, the votes should be given by tables, and not viva voce : 2. DeComitiis, which made it a capital punishment to convene any clandestine assembly, agreeably to the old law of the twelve tables : 3. De Militia, by A. Gabinius the tri- bune, A.U.C. 685. It granted Pompey the power of carrying on the war against the pirates during three years, and of obliging all kings, governors, and states, to supply him with all the necessaries he wanted, over all the Mediterranean Sea, and in the maritime provinces as far as 400 stadia from the sea: 4. De Usura by Aul. Gabinius the tribune, A.U.C. 685 ; ordaining that no action should be granted for the recovery of any money borrowed upon small interest to be lent upon larger. This was a usual practice at Rome, which obtained the name of versuram facere : 5. Against fornication.

GABINUS CiNCTUs, in Roman antiquity, a particular way of tucking the gown, by drawing it forwards on the breast, and tying it into a knot ; as the people of Gabii did at a solemn sacrifice, on the sudden attack of an enemy, in order to be fitter for action. In this manner the consul used to declare war, to sacrifice, and burn the spoils of the enemy; and then he was said to be prfficinctus.

GABION, n. s. Fr. A wicker basket filled with earth to make a fortification or entrench- ment.

His battery was defended all along with gabions, and casks filled witli sand. Knulles,

Gabions, in fortifica- tions, are baskets made of ozier twigs, of a cy- lindrical form, six feet high, and four wide ; which, being filled wisli earth, serve as a shelter from the enemy's fire. See diagram :

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GABLE, n. s. Fr. gable ; Welsh and Belg. gavat ; Swcd. gofwcl; Teut. gabel, gibel. The sloping roof at the end of a building.

Take care that all your brick-work be covered with the lilting, according to the new way of building, without gable ends, which are very heavy, and very apt to let the water into the brick-work.

Mortimer'i Husbandry.

Gabi.e, or Gable-enh, of a house; is the upright triangular end from the cornice or eaves to the top of the house.

GABON, a river of Western Africa, flowing through a country of this name, and opening with a considerable estuary between Cape Lopez Gonsalvo and Benin. In its mouth are

a number of small island.-; called the Pongos. V^essels frequently stop here to take iu water, which is better than at Cape Lopez. The articles of trade are ivory, wax, and honey; but the natives are licentious in their manners, and very difficult and tedious palavering. Here also are conveniences for repairing and refitting of ships.

GABRES, Gebres, Guebres, or Gheber. See Gheber.

GABRIEL, Snaj, Ileb. i. e. the strength of God, one of the angels. There are a few events, in which this exalted being was concerned re- corded in Scripture. He was sent to the pro- phet Daniel, to explain to him the vision of the ram and goat, an(l the mystery of the seventy weeks ; to Zecharias, to declare to him the fu- ture birth of John tiie Baptist ; and, six months after, to the 'irgin]\lary, at Nazareth, to warn her of the birth of Jesus

Christ. The Mahom- medans call him the faith.ful spirit; and the Persians, the peacock of heaven. In the second chapter of the Koran, it is said, that whosoever is an enemy to Gabriel shall be confounded. It was Gabriel, JVIahomet pretended, who brought the revelations which he published ; and who conducted him to heaven mounted upon the animal Borak.

GABRIELITES, in ecclesiastical history, a sect of Anabaptists that appeared in Pomerania, in 1530 ; so named from Gabriel Scherling, who, after having been for some time tolerated in that country, was obliged to remove, and died in Po- land.

GABRIELLI (Caterina), a celebrated and accomplished Italian singer of the last century, was born at Rome, 1730. She was a pupil of Porpora and Metastasio, and, from the circum- stance of her father having been a cook, she acquired in her earlier years the epithet of La Cuochetina. Wherever she visited, she excited the greatest admiration of her talents. In Russia, she remained three years, and ranked high at court. Visiting England, in 1775, she appeared at the king's theatre during that and the follow- ing year, and is said to have exhibited fewer of her capricious freaks here than abroad, from a salutary fear lest an English audience should break her bones.

Brydone gives a curious instance of one of her whims during her stay at the court of Pa- lermo. The viceroy had honored her, it ap- pears, with an invitation to a party, which she accepted, but not arriving at the appointed hour, the dinner was put back, and a messenger des- patched to her residence, who found her reading in bed. She rose and accompanied him, apo- logising to the company, which consisted of a great number of noble persons, on the ground that she had forgotten the engagement. This offended the viceroy ; but when, on coming to the opera, no persuasion could induce her to sing a note above her breath, he threatened her with punishment. She was now, however, only liie more obstinate, and returned for answer, that his excellency ' might indeed make her cry, but he never should make her to sing.' On this she was committed to prison ; and remained in confinement twelve days, during which she £,ave magnificent entertainments, and paid the debts

of the poorer prisoners, till the viceroy, who was a good-tempered man, gave up the contest, and set her at liberty. One expedient to ensure her best etlbrts was found to be, placing a fa- vorite admirer in a conspicuous part of the theatre, when she would generally address her airs to him. Gabrielli amassed great wealth, although by no means mercenary, being enriched as well by her boundless success, as by the bounty of the emperor of Germany, who was much attached to her. He at length, however, banished her from Vienna, on account of the continual broils occasioned by her influence. The time of her decease is not recorded. ■

GAD, n. s. Sax. 5a”^; Goth, and Swed. gudd; Isl. gaddcur, a club, or wedge. • A wedge or in- got of steel : it is also used for a stile or graver.

I will go get a leaf of brass. And with a gad of steel will write these words.

Shaktpeare.

Flemish steel is brought down the Rhine to Dort. and other parts, some in bars, and some in gadi; and therefore called Flemish steel, and sometimes gad steel. Mojcon’s Mechanical Exercises.

Ga.d, v. n. -\ Derived by Skinner from

Gadder, K. s. /gadfly; by Junius from

Gaddingly, flrfv.V Welsh, gadaw, to forsake ;

Gadling, n. s. i by others thought to bo

G.iDFLY, 7j. s. J the preterite of the old word agaan, to go. IVIinsheu says a Belg. gaen, to journey ; or Belg. gadcn, to please. To ramble about ; to rove loosely, or wildly : one that runs abroad without object or business: gadfly, a fly that by stinging cattle causes them to run madly about ; the breese.

A drunken woman, and a gadder abroad, causetli great anger, and she will not cover her own shame.

Ecclus. xxvi. 8. These bowes two held swete loking ; That ne seemed like no gadling \ And ten brode arrowes held he there Of whiche five in his honde were.

Chaucer. Romaunt of the Rose.

Row now, my headstrong, where have you been gadding 7 — Where I have learnt me to repent. Sfiakspeare.

Envy is a gadding passion, and walketh the streets, and doth not keep homo. Bacon.

The fly called i\e gadjly breedeth of somewhat that swimmeth upon the top of the water, and is most about ponds. Bacon’s Natural History.

The lesser devils arose with ghastly rore. And thronged forth about the world to gad ; Each land they filled, river, stream, and shore.

Fairfax.

Gad not abroad at every quest and call Of an untrained hope or passion ; To court each place or fortune that doth fall.

Is wantonness in contemplation. Herbert.

Thee, shepherd, thee the wood? and dcsart caves With wild thyme and the gadding vine o'ergrown. And all their echo'i moan. Milton.

A fierce loud buzxing breeze ; their stings draw blood. And drive the c&Mc gadding through the wood.

Dryden.

She wreaks her anger on her rival's head ; With furies frights her from hernative home. And drives her gadding, round the world to roam.

There's an ox lost, and this coxcomb runs a gadding aflcr wild fow' L'Estra'ig^.

G A D U S.

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No wonder their thoughts should be perpetually shifting from what disgusts them, and seek better entertainment in more pleasing objects, after which they will unavoidably be gadding. Locke.

Light fly his slumbers, if perchance a flight Of angry gadjliea fasten on the herd. Thumson.

Gad, "la, i. e. a troop, one of the twelve patriarchs, the son of Jacob of Zilpah, and pro- genitor of the tribe of the Gadites.

Gad, in ancient geography, a district of Transjordan Palestine, situated between Gilead and the kingdom of Bashan on the north, and that of the Amorites to the south, having the Jordan to the west, and bounded by various nations on the east, so called from the tribe of that name.

Gad, a prophet who attended David during his persecution by Saul, and gave him various admonitions afterwards. He wrote a history of David's life, which is lost.

Gad, among miners, a small punch of iron, with a long wooden iiandle, used to Vjreak up the ore. One of the miners holds this in his hand, directing the point to a proper place, while the other drives it into the vein, by striking it with a sledge hammer.

GAD AMIS, a town and territory of Northern Africa, forming a species of oasis in the great desert of Sahara. It is situated north-west from Fezzan, and south-west of Tripoli, and in the road between these countries and Tom- buctoo : but the caravan lliat passes rarely consists of more than 130 camels. It passes through Tuat or Souat, another oasis to the south-west. This territory is said to contain ninety-two vil- lages, and many Roman ruins. 300 miles south- west of Tripoli.

GADARENORUM Acer, in ancient geo- graphy, the country of the Gadarenes, called by Matthew the country of the Gergesenes ; a dis- trict that lay between Gadara and Gergesa, other- wise called Gerosa, both which lay within the Decapolis on the other side Jordan.

GADBURY (John), a noted professor of the wonderful revelations of astrology. He was a native of Oxfordshire, and bred a sailor; then he was the pupil and assistant of the famous Lilly. Being a Catholic, and on account of some ominous remarks in his Almanacks, he was arrested during the commotions excited by the so-called Popish plots in Charles II. reign : but liberated ; and died, it is said, by ship- wreck on a voyage to Jamaica : but the dates neitlier of his life or death appear. He pub- lished A Discourse of the Nature and Effects of Comets, Philosophically, Historically, and Astro- logically considered, 1665 : and Partridge, a professor of this art, gave the world in 1693, The Black Life of John Gadbury.

GADEBUSCH, a town of Mecklenburgh- Schwerin, on the Radegast, where the Swedes defeated d>e Danes and Saxons, on the 20th of December, 1712. Inhabitants 1500. It is fifteen miles south-west of Wismar, and sixteen W.N.W. of Schwerin.

GADES, or Gadira, in ancient geography, a small island in the Atlantic, on the panish coast, twenty-five miles from the Pillars of Her- cules. It was sometimes called Tartessus, and

Erythia, according to Pliny. Geryon, wliom Hercules killed, is said to have resided in it. Hercules (Jaditanus had there a celebrated temple, in which all his labors were engraved. This island was considered as the western ex- tremity of the habitable world, and as such was alluded to by the poets. Juvenal says,

Omnibus in terris qua; sunt ii Gadibus usque Auroram et Gangem pauci dignoscere possunt Vera bona, atque illis multum diversa, remota Erroris nebula. Sat. X.

Horace also,

Latius regnis avidum domando Spiritum, quiim si Libyam remotis Gadibus jungas, et uterque Panus

Serviat uni. Lib. ii. ml. 2.

GADIACZ, a town in the government of Pultava, Russia, containing 2300 inhabitants. 150 miles south-east of Czernigow.

GADOU, a country of Western Africa, having Brooko Fooladoo to the north, Konkodoo to the east, and Jallonhadoo to the south. It is crossed by streams, which descend from the mountains of Manding, and form the Senegal. The tract is mountainous, containing mines of gold, iron, and saltpetre.

GADUS, in ichthyology, a genus of fishes belonging to the order of jugulares. The head is smooth ; there are seven cylindrical rays in the branchiostege membrane ; the body is ob- long, with deciduous scales ; the whole fins are covered with the common skin of fish ; the rays of the back fins are blunt, and those of the breast are sharp. There are twenty-three species, principally distinguished by their cirri, and the number of back fins. The most remarkable are these : —

G. barbatus, the pout, never growing to a large size, and seldom exceeding a foot in length. It is distinguished from all others by its great depth ; one of the size above mentioned being nearly four inches deep in the broadest part. The back is very much arched, and cafinated ; the color of the fins and tail is black ; at the bottom of the pectoral fins is a black spot. The lateral line is white, broad, and crooked. The tail is even at the end, and of a dusky color. The color of the body is white ; but more obscure on the back than the belly, and tinged with y How. It is called at Scarborough a kleg, and is a very delicate fish.

G. carbonarius, the coal fish, is of a more elegant form than the cod, growing to the length of two feet and a half, and weighing about twenty-eight or tliirly pounds at most. The head is small ; the under jaw a little longer than the upper: the tail is broad and forked. They vary in color : some have their back, nose, dorsal fins, and tail, of a deep black ; the gill-covers silver and black, the ventral and anal fins, and the belly, white : others arc dusky, others brown ; but, in all, tlie lateral line is straight and white, and the lower parts, or the ventral and anal fins, white. This species takes its name from the black color that it sometimes assumes. Belon calls it the colfisch, imagining that it was so named by the English, from its producing tl;e ichtlnocolla: but Gesner gives the true etymo-

logy These fishes are common on most of our rocky and deep coasts, but particularly those of the north of Scotland. They swarm about the Orkneys, where the fry are the greatest support of the poor. The young begin to appear on the Yorkshire coast in the beginning of July, in vast shoals, and are then about an inch and a half long. In August they are from three to five inches, and are taken in great numbers with the angling rod ; they are esteemed very delicate ; but grow so coarse, when a year old, that few people eat them. Fish of that age are from eight to fifteen inciies long, and begin to have a little blackness'near the gills and on the back ; this blackness increases as they grow older. The fry is known by different names in different places : they are called at Scarborough parrs ; and, when a year old, billets. About twenty years ago sucli a quantity of parrs visited that part, that for several weeks it was impossible to dip a pail into the sea without taking some. Tliough this fish is so little esteemed when fresh, it is salted and dried for sale.

G. eglesinus, the haddock, has a long body; the up])er part of a dusky brown color, and the belly and lower part of the sides silvery : on the back are three fins, resembling those of the com- mon cod fish ; the lateral line is black ; and the lail is forked : the head slopes down to the nose ; on the chin is a short beard ; and on each side beyond the gills is a large black spot. Su- perstition assigns this mark to the impression St. Peter left with his finger and thumb when he took the piece of silver out of the mouth of a fish of this species, which has been continued to the whole race of haddocks ever since that mi- racle. Large haddocks begin to be in roe in the middle of November, and continue so till the end of January; from that time till May they are very thin-tailed, and out of season. In May they begin to recover; and the middling-sized fish are then very good, and continue improving till the time of their perfection. The small ones are extremely good from jNIay till February, and some even in February, March, and April, viz. those which are not old enough to breed. The fishermen assert, that in rougli weather haddocks sink down into the sand and ooze in the bottom of the sea, where they shelter themselves till the storm is over; for in stormy weather they take none, and those that are taken immediately after a storm have mud on their backs. In summer ihey live on young herrings and other small fish ; in winter on the stone-coated worms, a species of serpula, which the fishermen call haddock- meat. The grand shoal of haddocks comes pe- riodically on the Yorksiiire coast. It is remark- able that they appeared in 1766 on the 10th of December, and exactly on the same day in 1767 : these shoals extended from the shore nearly three miles in breadth, and in length from Flambo- rough Head to Tinmoutli Castle, and perhaps much farther northwards. An idea may be given of their numbers by the following fact : three fishermen, within the distance of a mile from

Scarborough harbour, frequently loaded their boats with them twice a-day, taking each time about a ton of fish ; when they put down their lines beyond the distance of tjiree miles from

the shore, they caught nothing but dog fish, which shows how exactly lliese fish keep their limits. The best haddocks were sold at from 8r/. to Is. per score, and the smaller sort at Id. and even ˆd. per score. The large haddocks quit the coast as soon as they go out of season, and leave behind great plenty of small ones. It ib said that they visit the coa.

G. lota, the burbot, in its body his some re- semblance to an eel, only shorter and thicker ; and its motions also resemble those of that fish : it is besides very smooth, slippery, and slimy. The head is very ugly, being fiat, and shaped like that of a toad : the teeth are very small, but nu- merous. On the end of the nose are tw'o small beads ; on the chin another. The color varies : some are dusky, others are of a dirty green, spotted with black, and oftentimes with yellow ; and the belly in some is white ; but the real colors are frequently concealed by the slime. This species abounds in the lake of Geneva, and is also met with in the lakes Maggiore and Lu- gano. In Britain it is found in the Trent ; but in greater plenty in the Withara, and the great east fen in Lincolnshire. It is a very delicate fish for the table, though of a disgusting appear- ance when alive. It is very voracious, and preys on the fry and smaller fish. It does not often take bait, but is generally caught in weels. The largest taken in our waters weigh between two and three pounds, but abroad they are sometimes found of double that weight.

G. merlangus, the whiting, is a fish of an ele- gant make: the upper jaw is the longest; the eyes are large, the nose is sharp : the teeth of the upper jaw are long, and appear above the lower when closed. The color of the head and back is a pale brown ; the lateral line white, and crooked ; the belly and sides are silvery, the last streaked lengthwise with yellow. These fish appear in vast shoals in spring, keeping at the distance of about half a mile to that of three miles from the shore. They are caught in vast numbers by the line, and afibrd excellent diver- sion. They are the most delicate, as well as the most wholesome, of any of the genus : but they do not grow to a large size, the biggest not ex- ceeding twenty inches ; and even that is very uncommon, the usual length being ten or twelve; though, it is said, that whitings from four to eight pounds in weight have been taken in the deep wafer at the edge of the Dogger Bank.

G. merlucius, the hake, is found in vast abun- dance on many of our coasts, and those of Ire- land. There was formerly a stationary fishery of hake on the Nymph bank off Waterford, im- mense quantities appearing there twice a-year; Jiie first shoal coming in June, during the mack-

ercl season ; the other in September, at the be- ginning of the herrhig season, probably in pur- suit of those fish. The hake is in England esteemed a very coarse fish, and is seldom ad- mitted to table either fresh or salted. When cured it is known by the name of Poor John. These fish are from one and a half to nearly three feet ; they are of a slender make, of a pale ash color on their backs, and of a dirty white on their bellies.

G. minutus, the poor, is the smallest species yet discovered, being little more than six inches long. On the chin is a small beard ; the eyes are covered with a loose membrane ; on each sid-e o>f the gill-covers and jaws there are nine punctures. The color on the back is a ligh't brown; on the belly a dirty white. It is taken near Marseilles, and sometimes in such quan- tities as to become a nuisance ; for no other kinds of fish are taken during their season. It is esteemed good, but incapable of being salted or dried. Belon says, that when it is dried in the sun, it grows as hard as horn.

G. molva, the ling, is usually from three to four feet long, but have been cauglit seven feet long. The body is very slender ; the head flat : the upper jaw is longest; the teeth in that jaw are small and very numerous ; in the lower, few, slender, and sharp : on the chin is a small beard. They vary in color, some being of an olive hue on the sides and back, others cinereous ; the belly white. The ventral fins are white : the dorsal and anal edged with while. The tail is marked near the end with a transverse black bar, and tipped with white. Its English name ling is derived from its length, being a corruption of long. It abounds about the Scilly Isles, on the coasts of Scarborough, Scotland, and Ireland, and forms a great branch of trade. It was con- siderable, so long ago as the reign of Edward III. an act for regulating the price of lob, ling, and cod, being made in the thirty-first year. In the Yorkshire fens they are in perfection from the beginning of February to that of May, and some to the end of it. In June they spawn, deposit- ing their eggs in the soft oozy ground of the mouth of the Tees. At that time the males se- parate from the females, and resort to some rocky ground near Flamborough Head, where the fish- ermen take great mnnbers without ever finding any of the female fish among them. While a ling is in season its liver is very white, and abounds with a fine flavored oil ; but as soon as it goes out of season, the liver becomes as red as that of a bullock, and affords no oil. The same hap- pens to the cod and other fish in a certain degree, but not so remarkably as in the ling. When in perfection, a very large quantity of oil may be melted out of the liver by a slow fire ; but if a violent sudden heat be used for tliat purpose, they yield very little. Vast quantities of ling are salted for exportation as well as for home

consumption. To be split, or cut for curing, it must measure twenty-six inches or upwards from the shoulder to the tail ; if less than that, it is not reckoned a sizeable fish, and consequently not entitled to the liounty on exportation ; sucli are called drizzles, and are in season all summer.

G. morlnia, the common cod, is cinereous on the bacit and sides, and commonly spotted with

yellow : the belly is white ; but they vary much, both in color and shape, particularly that of the head. The side line is wide, broad, and straight till opposite the vent, when it bends towards the tail. Codlings are often taken of a yellow, orange, and even red color, while they re- main among the rocks; but on changing their place assume the color of other codfish. The jaws are of an equal length, and at the end of the lower is a small beard ; the teeth are disposed in the palate as well as in the jaws. The cod is found only in the northern seas; being, as Ron- deletius calls it, an ocean fish, and never met with in the Mediterranean Sea. It affects cold climates and seems confined between the lati- tudes 66° and 50° ; those caught north and south of these degrees being either bad, or in small numbers. The Greenland cod are small, and emaciated ; being very voracious, and suff"ering in those seas a scarcity of provision. Most other species of this genus inhabit the cold seas, or sucli as lie within regions that can just claim the title of temperate. There is nevertheless a spe- cies found near the Canary Islands, called cher- ny, which are said to be better than the New- foundland kind. The great rendezvous of the cod fish is on the banks of Newfoundland, and the other sand-banks oft" the coasts of Cape Bre- ton, Nova Scotia, and New England. See our article Fisheries.

G. mustela, the five-bearded cod, very much resembles the lota. The beards on the upper jaw are four, viz. two at the very end of the nose, and two a little above them : on the end of the lower jaw is a single one. The fish are of a deep olive brown, their belly whitish. They grow to the same size as the lota.

G. poUachius, the pollack, has the under jaw longer than the upper ; tlie head and body rise pretty high, as far as the first dorsal fin. The side line is incurvated, rising towards the middle of the back, then sinking and running straight to the tail ; it is broad and of a brown color. The color of the back is dusky, sometimes inclining to green : the sides beneath the lateral line are marked with lines of yellow ; and the belly is white. This species is common on many of our rocky coasts : during summer tliey are seen in great shoals frolicking on the surface of the water, and flinging themselves mto a tliousand forms. They will then bite at any thing that appears on the top of the waves, and are often taken with a goose feather fixed to the hook. They are very strong, being observed to keep their station at the feet of the rocks

in the most turbulent and rapid sea. They do not grow to a very large size; the biggest seldom exceed six or seven pounds, but some have been taken near Scarborough, during winter, that weighed nearly twenty-eight pounds. They are tliere called leets.

G. toricius, the torsk, tusk, or brismack, is a northern fish ; and as yet not discovered lower than about the Orkneys, and even there it is rather scarce. In the seas about Shetland, it swarms, and forms (barrelled or dried) a cojisi- derable article of commerce. The length is about twenty inches, the greatest depth four and a half; the head is small ; the upper jaw a little longer than the lower; both jaws furnished with

many small teeth ; on the chin is a small single beard : frum the head to the dorsal fin is a deep furrow. The color of the head is dusky : the back and sides yellow ; belly white ; edges of the dorsal, anal, and cauilal fins, white, the other parts dusky ; the pectoral fins brown.

GAELIC Language, the language of the an- cient and modern Highlanders of Scotland. See HiGHLANnERS It is esteemed the most ancient as well as the purest dialect of the Celtic, now spoken. It has all the marks of an original lan- guage. Most of its words are expressive of some property or quality in the objects wliich they denote. This, with tlie variety of its sounds (many of which, especially those that express the soft and mournful passions, are peculiar to it), renders it highly adapted for poetry. It was the language of the Scottish court, till the reign of Malcolm Oanmore, and was even spoken so late as that of Roljcrt Bruce, particularly in a parliament held by him at Ardcliattan. Its al- phabet consists of eighteen letters, of which five are vowels. ‘ Those who understand it,’ says Dr. James Robertson, of Callander, ‘ know its energy and power ; the ease with which it is compounded ; the boldness of its figures ; and its tenderness in expressing the finest feelings of the luiman heart. But its genius and constitu- tion, the structure of its nouns and verbs, and the affinity it has to some other languages are not so much attended to. These point at a very remote era, and seem to deduce its oxigin from a very high antiquity. The verbs nave only tlu’ee tenses, which is the simplest and most na- tural division of time. The persons of each tense are distinguished, by adding pronominal particles to each person. The third person singoilar of each verb has genders, or admits of a masculine and feminine particle affixed. The moods are the indicative, imperative, and infinitive. The subjunctive differs from the indicative only by the addition of one syllable to the verb, and a «;onjunction before it. The imperative has only the second person in both numbers. The infini- tive is often used as a substantive noun, expres- sive of the abstract signification of the verb. There is only one conjugation and one

declen- sion. The cases of the noims are marked by different particles, or by a change of the last vowel. The degrees oi comparison are formed by placing certain syllables before the adjective ; and the superlative frequently by a repetition of the positive.' These and other peculiarities of the Gaelic language are illustrated by Dr. Ro- bertson in Sir J. Sinclair's Statistical Account of Scotland, vol. xi. p. 611 — 619, to which we refer the reader.

GAERTNER, an eminent naturalist, born at Calu, in Suabia, in 1732. His father was phy- sician to the duke of Wirtemberg, and Joseph, being destined for the church, received his edu- cation and studied theology at the University of Tubingen ; but, discovering a strong inclination to natural history and mathematics, he changed his profession, and applied to medicine. Erom Tubingen he removed to Gottingen, where he attended the lectures of Haller. He afterwards travelled through various parts of Europe, antl, on his return to his own country, took the degree

of M. D. In 1759 he went to Leyden, where he was particularly attentive to the botanical lec- tures, and about the same time applied himself to vegetable anatomy; in the prosecution of which he went to England, and gained the friendship of some of the most eminent men of the age. Here he communicated some interest- ing papers to the Philosophical Transactions, the principal of which is a Memoir on the Fructifi- cat.on and Propagation of Confervje, &c., and was admitted F.R. S. In 1768 he went to Pe- tersburg, where he was appointed professor of botany and natural history ; a place which he filled with the greatest credit, and explored the whole Ukraine for botanical discoveries ; but he returned to his native place in 1770. In 1770 he again visited London, for the purpose of making drawings and descriptions of fruits, to illustrate the great work in which he was then engaged, his Carpology, the first volume of which he dedicated to Sir Joseph Banks. He died in 1791, leaving many valuable MSS.

GAETA, a town, promontory, and gulf of Na- ples, in the Terra di Lavoro. The town lies along the shore, from the centre of the bay to the point of the promontory, and is a bishop's see ; it. con- tains a cathedral and nine churches. The cathedral is finely proportioned and well lighted, but not large. Opposite the great portal is an antique column, marked with the names of the winds in Greek and Latin, and the font is a fine antique of white marble, with bas reliefs. The streets are well built, and paved : and the environs ex- tremely picturesque. The tomb of Minutius Plaucus, now a battlemented tower called Torre d'Orlando, stands on a bold eminence in the narrow neck that unites the promontory or penin- sula of Gaeta to the continent. Buonaparte con- ferred the title of duke of Gaeta on Gaudir his

finance minister in 1809. Population 15,000. It is forty miles north-west of Naples.

GiETULI, the people of Gtttulia, were among the earliest inhabitants of Africa. They were distinguished by different epithets; as Nigri, Autololae, Darse, and Baniura;. — Pliny. They were a rough, unpolished, roving people, living on venison and the spontaneous productions of the earth, and resting in the first places in which night surprised them.

GAFF, n-s. } Fr.gaˆe, a harpoon, or large

Gaff'er, 7?. .9. 5hook ; Sax. gepcfie, compa- nion, says Dr. Johnson after Junius: others that it is a corruption of Sax. goewfather, or gefa'der: a word of respect now obsolete, and used only in contempt or ridicule.

For gnffcT Treadwell told us by the bye. Excessive sorrow is exceeding dry.

Gay's Pastor 'lis.

Gaff, a sort of boom or bole, frequently used in small ships, to extend the upper edge of the mizen; and always employed for the same pur- p(jse on those sails, whose foremast edges are joined to the mast by hoops, or lacings, and which are usually extended by a boom below. Such are the main sails of all sloops, brigs, and schooners.

GAFFAREL (James), a learned French divine, born at Mannes in Provence, about 1606. He acquired great skill ni the oriental languages, an'l

in the cabbalistic and occult sciences, which he exposed atid ridiculed. Cardinal llichelieu made him his librarian, and sent him into Italy to col- lect the best books and MSS. He published a work called Curiositez Inouies, i. e. Unheard of Curiosities. He died in 1681, aged eighty, leavin;ˆ an unfinished account of the caves, grot- toes, vaults, catacombs, and mines, he had met with in thirty yeais' travels.

GAF'FLES, n. s. Sax. gapelucar, spears. Artificial spurs put on fighting cocks : a steel contrivance to bend cross-bows.

The gaffie of a cross-bow. Sherwood.

GAFSA, a southern town of Tunis, anciently Caspa, bordering on the Bled el Jereede. It formed one of the fortresses of Numidia, and is situated on a

rising ground, surrounded with plantations of olives, almonds, pistachios, &,c. These plantations are supplied with water from two fountains, one in the citadel, and the other in the city, in forming which, and the baths con- nected, great labor appears to have been employ- ed. The citadel, is now a poor modern build- ing; but the walls ofmany of the houses exhibit altars, granite pillars, entablatures, &c. It is 140 miles S. S. W. of Tunis.

GAG, V. n. & n. s. Belg. gagkel, the palate ; or (Belg.) kau wegge, a jaw-wedge. — Thomson. To stop the mouth, and prevent utterance, whilst it allows breathing : the instrument with which this is done.

He's out of his guard already ; unless you laugh and minister occasion to hini, ha is gayyed.

Shakspeare. Twelfth Night. Some, when the kids their dams too deeply drain. With gags and muzzles their soft mouths restrain,

Dryderu Your woman would have run up stairs before me ; but I have secured her below with a gag in her chaps.

Id. There foamed rebellious logick, gagged and bound.

Pope. GAGE, n. s. & v. a. Fr. gage, a pledge ; se- curity. ‘ The past participle of Sax. 5a?5eian, to close up,’ says Mr. Tooke, ‘gage-bound, that by which one is bound to fulfil certain engagements.’ Rule or measure, especially of liquids, hence it is used as expressive of engagements and obligations, to which pledges and securities are annexed : to take the contents of vessels of liquid , to form an estimate.

They from their mother’s breasts poor orphans rend. Nor without (/af/e to the needy lend. Saiidi/.t,*

He, when the shamed shield of slain Sansfoy He spyed, with that same fairy champion’s page. He to him leapt ; and that same envious gage Of victor’s glory from him snatcht away.

Faerie Quecnn . There I throw my gage. Disclaiming here the kindred of a king. And lay aside my high blood’s royalty.

Shuksj)caro, There is my gage, tlie manual seal of death. That marks thee out for hell. /(/.

My chi(,f rare Is to come fairly ofl’ from the great debts Wherein my time, something too])ro(ligal Hath left me gaged. Id.

We shall see your bearing. — Nay, but I bar to-nijˆht : you shall not ga/jc me ily what we do to-night. ‘d.

A moiety compt^lcnt Was gaged by our king. LI.

But since it was decreed, auspicious king. In Britain’s right that tliou should’st wed the main. Heaven, as a gage, would cast some previous thing. And therefore doomed that Lawson should be slain.

Drj/dcn.

In any truth, that gets not possession cf our minds by self- evidence or demonstration, the arguments that gain it assent, are the vouchers and gage of its proba- bility. Locke. I am made the cautionary pledge. The gage and

hostage of your keeping it.

Southern. One judges, as the weather dictates, right The poem is at noon, and wrong at niglit ; Another judges by a surer gage. An author's principles or parentage. Young.

Gage is also used for a challenge to combat. See Cartel. It was a pledge which the accuser or challenger cast on the ground, and the other took up as accepting the challenge ; being usu- ally a glove, gauntlet, chaperoon, or the like. See Battle.

Gage, among letter founders, a piece of box, or other hard wood, variously notched : used to adjust tlie dimensions, slopes, &c., of the differ- ent sorts of letters.

Gage, in joinery, an instrument made to strike a line truly parallel to the straiglit side of any board or piece of stuflT, Its chief use is for gagin"- of tenons, to fit into mortises; and for gaging stuff of an equal thickness. It is made of an oval piece of wood, fitted upon a square stick, to slide up and down stiffly thereon, and with a tooth, at the end of the staff, to score, to strike a line upon the stuff at any distance, according to the distance of the oval from it.

Gage, in the sea language. When one ship is to the windward of another, she is said to have the weather-gage of her. They likewise call the number of feet that a vessel sinks in the water, the ship's gage ; this they find by driving a nail into a pike near the end, and putting it down beside the rudder till the nail catch hold under it : then as many feet as the pike is under water is called the ship's gage.

Gage, Bucket Sea, an instrument contrived by Dr. Hales to find the different degrees of coolness and saltness of the sea, at different deptiis. It consists of a common household pail or bucket, with two heads; which have eacii a round hole in tiie middle, about four inches in dia- meter, covered with square valves opening up- wards; and, tliat they may both open and sliut togetlier, there is a small iron rod fixed to the upper part of tlic lower valve, anil the other end to tlie lower side of tiie upper valve. So that as the bucket descends with its sinking weight into the sea, both the valves may open by the force of the water, which thus has a free passage througn the bucket. But, when the bucket is drawn up, then both the valves are sinit by the force of the water at the upper part ofthe bucket; so that the I>ucket is drawn tip full of the lowest sea water to which it has descended. When the bucket is drawn up, the mercurial thermometer fixed in it is examined ; but great care must be taken to observe the degree at wiiich the mercury stands, before the lower part of the thermometev

is taken out of the water in the bucket, lest it be affected by the different temperature of the air. To keep the bucket in a right position, there are four cords fixed tt) it, reaching about tiiree feet below it; to which the sinking weight is fixed. Dr. Hook also constructed an instrument for tiie same purpose for a representation of which see plale Gages, fig. 1. This consists of a square wooden bucket C, whose bottoms are so con- trived, that as the weight A sinks, the iron B, to which the bucket C is fastened by two handles I), U, on tlie end of which are the moveable bot- toms or valves E, E, and thereby draws down the bucket, the resistance of the water keeps up the bucket in the posture C, whereby the water, whilst the bucket is descending, has a free pas- sage through it ; wliereas, as soon as the bucket is pulled upwards by the line F, the resistance of the water to that motion beats the bucket downwards, and keeps it in the posture G, whereby the included water is kept from getting out, and the ambient water kept from getting in. There is also an instrument of this name in- vented by Dr. Hales and Dr. Desaguliers for find- ingthedepth of thesea; the description of which is this : AB, plate Gages fig. 2, is the gage bot- tle, in which is cemented the gage-tube F_/“inthe brass cape at G. The upper end of the tube V is hermetically sealed, and the open lower end f is immersed in mercury, marked C, on which swims a small thickness or surface of treacle. On the top of the bottle is screwed a tube of brass H G, pierced with several holes to admit the water into the bottle A B. The body K is a weight hanging by its shank L, in a socket N, witii a notch on one side at m, in which locks the catch / of the sp’^ing S, and passing through the hole L, in the shank of the weight K, prevents its falling out when once hung on. On the top, in the upper part of the brass tube at li, is fixed a large empty ball, or full-blown bladder I, which must not be so large, but that the weight K may be able to sink the whole under water. The in- strument thus constructed is used in the follow- ing manner : — The weight K being hung on, the gage is let fall into deep water, and sinks to the bottom : the socket N is somewhat longer than the shank L ; and therefore, after the weight K comes to the bottom, the gage will continue to descend till the lower part of the socket strikes against the .weight ; this gives liberty to the catch to fly out of the hole L, and let go the weight K ; when this is done, the ball or bladder I instantly buoys up the gage tothe top of the water. While the gage is under water, the water having free access to the treacle and mercury in the bottle, will by its pressure force it up into the tube F f, and the height to which it has been forced by the greatest pressure, viz. that at the bottom, will be shown by the mark in the tube which the treacle leaves behind it, and which is the only use of the treacle. This shows into what space the whole air in the tube F /‘is compressed; and consequently the height or

depth of water which by its weight produced that compression, which isthe thing required. If the gage-tube F/'be of glass, a scale might be drawn on it with the point of a diamond, showing, by inspection, what height the water stands above the bottom. But the

length of ten inches is not sufficient for fathom- ing depths at sea, since that, when all the air in such a length of tube is compressed into half an inch, the depth of water is no more than 634 feet, which is not half a quarter of a mile. If, to re- medy this, we make use of a tube fifty inches long, which for strength may be a musket barrel, and suppose the air compressed mto lOOdth part of half an inch ; then by saying, as 1 : 99 : : 400 : 39,600 inches, or 3300 feet ; even this is but little more than half a mile, or 2640 feet. But since it is rensonable to suppose the cavities of the sea bear some proportion to the mountainous parts of the land, .some of which are more than three miles above the earth's surface ; therefore to explore such great depths, the Dr. contrived a new form for his sea gage, or rather for the gage- tube in it, as follows : BC D F, fig. 3, is ahollow metalline globe communicating on the top witt a long tube A B, whose capacity is a ninth part of that globe. On the lower part, at D, it has also a short tube D E, to stand in the mercury and treacle. The air contained in the compound gage-tube is compressed by the water as before ; but the degree of compression, or height to which the treacle has been forced, cannot there be seen through the tube; therefore, to answer that end, a slender rod of metal or wood, with a knob on tiie top of the tube A B, will receive the mark of the treacle and show it when taken out. If the tube A B be fifty inches long, and of such a bore that every inch in length should be a cubic inch of air, and the contents of the globe and tube together 300 cubic inches ; then, when the air is compressed within lOOdth part of the whole, it is evident the treacle will not approach nearer than five inches of the top of the tube,which will agree to tlie depth of 3300 feet of water as above. Twice this depth will compress the air into half that space nearly, viz. two inches and a half, which correspond to 6600, which is a mile and a quar- ter. Agam, half that space, or one inch and a quarter, will show double the former depth, viz. 13,200 feet, or two miles and a half; which is probably v'ery nearly the greatest depth of the sea.

Gage, a Sliding, tool used by mathematical instrument-makers for measuring and setting off distances.

Gage, Tide, is the name of an instrument used for detennining the height of the tides by M. Bayly, m the course of a voyage towards the South Pole, &c., in the Resolution and Adventure, in 1772, 1773, 1774, and 1775. This instrument consists of a glass tube, whose Internal diameter was seven-tenths of an inch, lashed fiist to a ten- feet rod, divided into feet, inches, and quarters : this rod was fastened to a strong post fixed up- right and

firm in the water. At the lower end of the tube was an exceedingly small aperture, through which the water was admitted. In con- sequence of this construction, tiie surface of the water in the tube was so little affected by the agitation of the sea, that its height was not alter- ed one-tenth of an inch, when the swell of the sea was two feet.

Gage, Wind, an instrument for measuring the force of the wind upon r.ny given surface. It was invented by Dr. Lind, who gives the follow

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GAGE.

71g

ing description of it. Plate Gages, fig. 4. This instrument consists of two glass tubes A B, C D, of five or six inches in length. Their bores, which are so much the better for being equal, are about four-tenths of an inch in diameter. They are connected together like a siphon, by a small bent glass tube a b, the bore of which is about one-tenth of an inch in diameter. On the upper end of the leg A B there is a tube of latten brass, which is kneed, or bent perpendicularly outwards, and has its mouth open towards ¥. On the other leg, C D, is a cover with a round hole G in the iipper part of it, two-tenths of an inch in diameter. This cover and the kneed tube are connected together by a slip of brass ed, which not only gives strength to the whole in- strument, but also serves to hold the scale III. The kneed tube and cover are fixed on with hard ce- ment, or sealing wax. To the same tube is sol- dered a piece of brass e, with a round hole in it to receive the steel spindle KL; and at y there is just another piece of brass soldered to the brass hoop g h, which surrounds both legs of the in- strument. There is a small shoulder on the spin- dle aty, upon which the instrument rests, and a small nut at i, to prevent it from being blown off the spindle by the wind. The whole instrument is easily turned round upon the spindle by the wind, so as always to present the mouth of the kneed tube towards it. The end of the spindle has a screw on it ; by which it may be screwed into the top of a post or a stand made on purpose. It has also a hole at L, to admit a small

lever for screwing it into wood with more readiness and facility. A thin plate of brass k is soldered to the kneed tube, about half an inch above the round hole G, so as to prevent rain from falling into it. There is likewise a crooked tube Afi, fig. 6, to be put occasionally upon the mouth of the kneed tube F, to prevent rain from being blown into the mouth of the wind gage when it is left out all night, or exposed in the time of rain. The force or momentum of the wind may be as- certained by this instrument, by filling the tubes half full of water, and pushing the scale a little up or down, till the 0 of the scale, when the in- strument is held lip perpendicularly, be on a line with the surface of the water in both legs of the wind-gage. The instrument being thus ad- justed, hold it up perpendicularly, and turning the mouth of the kneed tube towards the wind, observe how much the water is depressed by it in the one leg, and raised in the other. The sum of the two is the height of a column of water which the wind is capable of sustaining at that time ; and every body tliat is o])posed to that wind will be pressed upon by a force equal to the weight of a column of water, having its base equal to the altitude of the column of water sus- tained by the wind in the wind gage. Hence the force of the wind upon any body, where the sur- face opposed to it is known, may be easily found ; and a ready comparison may be made betwixt the strength of one gale of wind and that of another. The force of the wind may be like- wise measured with this instrument, by filling it until the water runs out at the hole G. For, if we then hold it up to the wind as before, a quan- tity of water will be blown out; and, ifbotli legs

of the instrument are of the same bore, the height of the column sustained will be erual to double the column of water in either leg, cr the sum of what is vvantmg in both legs. But, if the legs are of unequal bores, neither of these will give the true height of the column of water which the wind sustained. But the true height may be ob- tained by the foUowmg formula. Suppose that after a gale of wind which had blown the water from A to B, fig. 7, forcing it at the same time through the other tube out at E, the surface of the water should be found standing at some level D G, and it were required to know what was the height of the column E F or A B, which tlie wind sustained. In order to obtain this, it is only ne- cessary to find the height of the columns D B o G F, which are constantly equal to one another ; for either of these added to one of the equal co- lumns AD, EG, will give the true height of the column of water which the wind sustained. The use of the small tube of communication a b, fig. 5, is to check the undulation of the water, so that the height of it may be read off" from the scale with ease and certainty. But it is particularly designed to prevent the water from being thrown u]) to a much greater or less altitude, than the true height of the column which the wind is able at that time to sustain, from its receiving a sudden impulse whilst it is vibrating either in its ascent

or descent. As in some cases the water in this instrument might be liable to freeze, and thus break the tubes. Dr. Lind recommends a satura- ted solution of sea salt to be used instead of it, which does not freeze till Fahrenheit's thermo- metor falls to 0.

GAG'GLE, V. n. Dutch, gagen, gagelen, to m;ike a noise like a goose.

Birds prune their feathers, geese gaygle, and crows seem to call upon rain ; which is but the comfort they receive in the relenting of the air.

Bacon's Natural History. May fat geese gaggle with melodious voice. And ne'er want gooseberries or apple-sauce.

King.

GAGNIER (John), M. A., a learned Oriental- ist, born at Paris in the seventeenth century. He was bred a Roman Catholic, but joined the church of England, and received the degree of M.A. from Cambridge and Oxford. In 1706 he published Joseph Ben Gorion's History of the Jews, in Hebrew, 4to. ; and, in 1723, Abul- feda's Life of Mahomet, in Arabic, folio : with Latin translations and notes. He succeeded Dr. Wallis, as professor of Arabic : and was much esteemed, as a judicious critic, and a man of great erudition. He died in 1725.

GAGUIN (Robert), LL. D., a French histo- rian, born at Colines, near Amiens, and educated at Paris. Charles V'lII. and Louis XII. employed him in embassies to England, Germany, and Italy. His chief work is De Gestis Francorum, from Pharamond to A. D. 1491 ; folio, Lyons, \S2A. He died in 1601.

GAHNIA, in botany, a genus of the monogy- nia order, and hexandria class of])lants : cal. an involucrum with two or five flowers : cor. two-valved ; the stamina six capillary and very short filaments ; the anther-cC linear, sharp-pointed at the apex, and as long as the corolla ; there is

no pericarp : seed single and Dblonˆ. Species two, Polynesian herbs.

GAILLAUD (Gabriel Henri), was born at Ostel, a small village in the former diocese of Soissons, on the 26th of March, 1726. His fa- tlier's inclination to the bar decided the choice of this profession ; but he soon

gave himself up to tlie exclusive cultivation of literature, in spite of the remonstrances of his friends. The study of the great writers of antiquity, and of the best I'rencii authors, occupied his days, and very of- ten also the hours of which he imprudently abridged his repose. He was not twenty when, in 1745, he produced La Rhetorique Franfoise a I'usage des Demoiselles, the success of which surpassed his expectations. It was, however, as he himself afterwards admitted, only the work of a school-boy ; but the singularity of the title ex- cited curiosity, and the youth of the author l)leaded for indulgence. The Poetique a I'usage des D.unes, published four years afterwards, in 1749, w;is not however so well received. A vo- lume of literary miscellanies, in which was a life of tlie young and gallant Gastoin De Foix, duke of Nemours, who died at Ravenna, appeared in 1756. Encouraged by the applause of several academicians, M. Gaillard, in 1757, published the History of Mary of Burgundy. This work was every where commended, and the Academy of Belles Lettres chose the new historian to fill the place of the industrious and learned abbe LeboEufjWho died in 1760. While pursuing the career of erudition and history, in which he thus distinguished himself, M. Gaillard did not re- nounce any of the branches of literature which lie IluJ loved and cultivated in his youth. His Dis- course on the Advantages of Peace obtained the second prize decreed, in 1767, by the French Academy. His Eulogy on Henry IVˆ., and that on Pierre Corneille, were crowned soon after- wards, in 1768, the former by the Academy of Rochelle, and the latter by the Academy of Rouen; and in 1770 he obtained the prize pro- posed by the Academy of Marseilles for the Eu- logy on Massillon. These successes opened to him, in 1771, the doors of the French Academy. The History of Francis I., the first four volumes of which appeared in 1766, and the others in 1769, in the midst of M. Gaillard's academic triumphs, hei'jjhtened tlieir lustre by the idea which it produced of his indefatigable industry, of the fertility of his mind, and the variety of his talents. This history was divided under tlie heads civil history, political history, &c. ; and, although almost the universal opinion had de- cided against it, M. Gaillard pursued the same method in the History of Cliarlemagne, which he gave to the world in 1782. The History of the Rivalship of France and England, wiiich M. Gaillard published previously to that of Cliarit!- magne, from 1771 to 1777, was received with that general approbation the justice of which time lias since confirmed. The History of the Rivalship of France and Spain is written on the same principles, on the same plan, and with the same ability. The Historical Dictionary of the Methodical Encyclopedia, in six quarto volumes, is likewise a highly esteemed production of M. Gaillard's, and combiut'S (lie judicious criticism,

and rich and easy style, which characterise his other historical compositions. The same quali- ties are to be found in the dissertations and

notes subjoined by him to the new edition of Debel- loy's works published in 1782, with a Life pre- fixed to them. When the revolution commenced Gaillard retired to St. Firmin, near Chantilly, to a simple but commodious habitation. In this retreat, where he made protectors and friends of his rustic neighbours, he found in the most cala- mitous times the security and repose necessary for continuing his cheering pursuits, and divert- ing his mind by study from the afflicting situation of his country. Here he attempted to conipose, in a great measure from recollection, an Eulogy on M. de Malesherbes, whose friendship he had enjoyed from his youth ; and in this performance, published in 1805, may be perceived striking traits of his best talents. Notwithstanding the pressure of years and infirmities, he was inces- santly engaged in revising and arranging the nu- merous observations which he had made in the course of his studies, on the History of France by 'elly, \jllaret, and Gamier; and was about to send them to press when the gout, to which he had been long subject, flying to his chest, carried him off on the 13th of February, 1806. GAIN, 71. s., V. a., V. n. & adj. ˆ Sax. jeasn,

GaIN'eR, 71. s.

G.\in'ful, adj. Gain'fully, aˆo.

GaIN'fULNESS, 71. s.

Gain'less, adj.

GaIn'lESSNESS, 71. s.

Gain'ly, adv.

from ajan, to possess; Goth. gai/n, geign ; Swedish, gaˆn ; Fr. gain. The primary mean- J ing is profit or

advantage, as contrary to loss : it is applied in a great variety of instances to persons and posses- sions, in a negative or affirmative sense.

That, sir, which serves for gain And follows but for form.

Will pack, when it begins to rain, And leave thee in the storm. Shakspeare.

Besides the purpose it were now, to teach how vic- tory should be used, or the gaiTis thereof communi- cated to the general consent. RaUiyh.

The client, besides retaining a clear conscience, is always a gainer, and by no means can be at any loss, as seeing, if the composition be overheard, he may relievo himself by recourse to his oath. Bacon.

It is in praise of men as in gettings and gains ; for light gains make heavy purses ; for light yaim come thick, whereas great come but now and then.

/(/. Essays. Moreover, Glories, Thrones, are so sublime. That whosoever thinkes their top to gaine. Till many thousand weary steps ho clime. Doth foole himselfe, by musings which are vainc.

Geo. Willwrs. You then, that would, with Pleasure, Glory gaine, Diana like, those modest things require, Wliich truly may bcsecme you to altaine ; And stoutly follow that which you desire. Id.

With hocus pocus and their heavenly sight They gain on tender consciences .it night. MarvcU. A leper once he lost, and gained a king.

Milton. I acceptance found, which gained This answer from the gracious voice divine, /c/.

He never shall find out fit mate, but such As some misfortune brings him, or mistake. Or whom he wishes most,,shall seldom gain

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Tlirongh her perverscness, but shall see her gained By a far worse. Id.

Death was the post, which I almost did gain : Shall I once more be tost into the main ? }Valler. Egypt became a gained ground by the muddy and limeous matter brought down by the Nilus, whicli set- tled by degrees into a firm land.

Browne's Vulgar Errours. They who were sent to the other pass, after a short resistance, gained it. Clareni/jn.

Come, with presents, laden from the port. To gratify the queen and gain the court.

Dry den. Maro's muse commodious precepts gives Instructive to the swains, nor wholly bent On what is gainful : sometimes she diverts From solid counsels. Philips.

There is a lawful gain, which, by the blessing of God, may be a comfort to a house ; ' a good man loaves an inheritance to children's children ;' but what is got by fraud and injustice is ill got, and will be ill gain ; it will not only do no good to a family, but will bring poverty and ruin upon it.

Henry. Hah. ii. 9, 10. If you have two vessels to fill, and you empty one to fill the other, you gain nothing by that.

Burnet's Theory of the Earth. Ha will dazzle his eyes, and bait him in with the luscious proposal of some gainful purchase, some rich match, or advantageous project. South.

The English have not only gained upon the Vene- tians in the Levant, but have their cloth in Venice itself. Addison.

We came to the roots of the mountain, and had a very troublesome march to gain the top of it.

Id. on Italy. So on the land, while here the ocean gains. In other parts it leaves wide sandy plains. Pope. Folly tights for kings or dives for gain. Id.

My good behaviour had gained so far on the em- peror, that I bpgan to conceive nopes of liberty.

Swift.

The parallel holds too in the gainlessness as well as

Saboriousness of the work : miners, buried in earth

and darkness, were never the richer for all the ore

they digged ; no more is the insatiable miser.

Decay of Piety. They gain by twilight's hour their lonely isle. To them the very rocks appear to smile.

Byron. Corsair.

Gafn, in architecture, is the workmen's term for the bevellincr shoulder of a joist or other tim- ber. It is used also for the lapping of the end of the joist, &c., upon a trimmer or girder; and then the thickness of the shoulder is cut into the trimmer, also bevelling upwards, that it may just receive the gain; and so the joist and trimmer lie oven and level with the surface. Tiiis way of working is used in floors and hearths.

GAIN-\GK, Gainagium, in ancient writers, signifies the draught oxen, horses, wain, plough, and furniture, for carrying on the work of tillage •ly tlie sokemen and villeins. Ciainage is the same with wainage. Bracton, lib. i. cap. 9, .speaking of lords and servants, says, Ut si eos destruant, quod saKum non possit cis essewain- agium suum. And again, lib. iii. tract. 2, cap. 1, X'illanus non amerciabitur, nisi salvo wainagio suo. For anciently,

as it appears both by Magna Charta and other books, the villein, when amerced, had his gainage free, that his plough jniglit not stand still : and the law, for the same

reason, still allows a like privilege to the hus- bandman, that is, his di- auglit iiorses are not in many cases dislraniable.

Gainac.e is also used for the land itself, or the profit raised by cultivating it.

GAINGIX'ING, n. s. Gainst and give, to give against, and is synonymous with misgiving ; a word nearly obsolete.

It is but foolery ; but it is such kind of gaingivintt as would, perhajjs, trouble a woman.

Shukspeare. Hamlet. GAIN'SAY, V. a. 3 Gainst and say, a word Gainsay'er, 71. s. 5 still in use, and implies contradiction, opposition, and controversy; also denial : gainsayers in a religious sense are those who dispute against, oppose, or deny its doc- trines.

Speeches which gainsay one another, must of ne- cefsity be applied both unto one and the same subject.

Hooker. Such as may satisfy gairuayert, when suddenly, and besides expectation, they require the same at our hands. Id.

We are, for this cause, challenged as manifest gainsayers of Scripture, even in that which we read for Scripture unto the people. Jd.

I never heard yet That any of those bolder vices wanted. Less impudence to gainsay what they did. Than to perform it first. Shukspeare.

Others sought themselves a name by being hisguin- saying, but failed of their purpose. Felt.

Too facile then, thou didst not much gaiiuay ; Vay, didst permit, approve, and fair dismiss.

Milton. It was full matter of conviction to all gainsayers.

Hammo7id.

GAINSBOROUGH (Thomas), a celebrated English painter, was born at Sudbury in Sufiblk in 1737. His father was a clothier in contracted circumstances ; and we first hear of our young art- ist as rambling in the woods, and sketching the scenery of this neighbourhood. At length lie came

to London for improvement, and is said at first to have practised modelling figures of ani- mals with success. He also made drawings for the engravers, and painted and sold small land- scapes. At last he had recourse to portrait painting, by which means he supported himself for some time, and then married and removed to Ipswich, and subsequently to Bath, where he en- joyed great reputation. In 1774 he returned, however, to London, and quickly rose to acknow- ledged and indeed unrivalled excellence in the landscape department of his profession. He was still also much employed as a painter of portraits. Ciainsborough died of a cancer in the neck, Au- gust 2iid, 1788, and was interred in Kew church- yard. The landscapes of Gainsborough are de- scribed as ‘ uniting the brilliancy of Claude witli the precision and simplicity of Ruysdael.’ He was much esteemed by Sir Joshua Reynolds, who says, ‘ if ever this nation should produce penius sufficient to acquire to us the honorable distinction of ti > e English school, the name of Ciainsborough will be transmitted to posterity, in the history of the art, anionic the very first of that rising name.’ He had also fine talents for mu- sic; and displayed, both in his letters and con- versation, considerable general taste and ability.

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His nephew, Gainsborough Dupont, distinguish- ed himself as an artist, but died in 1797, at the age of thirty.

Gainsborough, a market town of Liucohi- shire, 149 miles from Loudon, seated on tlie Trent near tlie sea. It is a large well-built town, and has a pretty good trade. The north marsh in its neighbourliood is noted for horse races. The town consists chiefly of one long street, pa- rallel with the river, and is well paved, and lighted. The church is a very neat edifice, and has been lately rebuilt at the expense of tiie inhabitants. Here are several meeting-houses for dissenters ; and several good charity-schools. Over the river is a handsome stone bridge, erected in 1791. Gainsborough gives title of earl to the Noel family. The Danes, when they invaded the kingdom, brought their ships to this place; and here Sueno their king was mur- dered. It lies eighteen miles north-west of Lincoln. Market on Tuesday.

GAINST, prep. For against. See Against.

Tremble, ye nations ! who, secure before. Laughed at those arms, that ‘gainst ourselves we bore.

Dryden.

GAINSTAND, v. a. Gainst and stand. To resist or withstand.

Love proved himself valiant, that durst with the sword of reverent duty gainstand the force of so many enraged desires. Sidney.

GAI'RISH, (ulj. } Sax. ˆeppiaji, to dress

Gai'rishness, 71. s. 5 fine ; old French gaicrie (finery). A term applicable to colors, as showy ; splendid, and fine, and by accommodation to flighty or extravagant joy ; opposed to sobriety and gravity.

Three or four will outrage in apparel, huge hose, monstrous hats, and gairkh colours. Ascham.

I called thee then poor shadow, painted queen. The presentation of but what I wjis ; A mother, only mocked with two fair babes j A dream of what thou wast, a gairish flag. To be the aim of every dangerous shot. Shakspeare.

Let your hope be without vanity, or gairishnesi of spirit, but sober, grave, and silent. Taylor.

There in close covert by some brook. Where no profaner rye may look. Hide me from day's yairiah eye. Milton.

Fame and glory transport a man out of himself : it makes the mind loose and gairish, scatters the spirits, and leaves a kind of dissolution upon all the faculties.

Sottih. GAIT, 71. s. Dutch gat ; Goth, gata ; from Goth, ga, to go. Movement from place to place, as walking ; marching : also the manner and air of walking.

With that worde Reson went her gate When she sawe for no sermoning She might ni« fro my folic bring.

Chaucer. Romaunt of the Rose. Nought regarding, they kept on their gait. And all her vain allurements did forsake.

Faerie Queene. Thou art so lean and meagre waxen late. That Bcarce thy legs uphold thy feeble gait.

Hubbard's Tale. Great Juno comes ; I know her by her gait.

Shaksjieare. Formal in apparel. In gait and countenance surely like a fathor. Id,

Good youth, address thy gait unto her •,

Be not denied access, stand at her door. Id.

A third, who, by his gait

And fierce demeanour, seems the prince of hell

Milton. Leviathans

Wallowing, unwieldly, enormous in their gait.

Id. I described his way.

Bent all on speed, and marked liis airy gait. Id.

GALACTITES, in natural history, a substance much resembling Frencii chalk, in many re- spects ; but different from it in color. The an- cients found it in the Nile, and in some rivers in Greece; and used it in medicine as an astrin- gent, for defluxions and ulcers of the eyes. At present it is common in Germany, Italy, and some parts of France, but it is little regarded, being esteemed an inferior kind of moroch- thus.

GALACTOPHAGI, and Galactopot^, from yaXa, yaXanroQ, milk ; (paytiv, to eat ; and ■KOTTiQ of TTivw, I driuk; in antiquity, persons who lived wholly on milk, without corn or any other food. Certain nations in Scythia Asiatica, as the Getae, Nomades, &c., are famous in an- cient history, as galactophagi. Homer makes their eloge. Iliad, lib. iii. Ptolemy, in his Geo- graphy, places the Galactophagi between the Riphaean Mountains on one side, and the Hirca- nian Sea on the other.

GALAGE, n. s. Obsolete. A shepherd's clog.

My heart-blood is well nigh frorne, I feel ;

And my galage grown fast to my heel. Spenser.

GALANGAL, 71. s. Fr. gulange. A medi- cinal root.

The lesser galangal is in pieces, about an inch or two long, of the thickness of a man's little linger ; a brownish red colour, extremely hot and pungent. The larger galangal is in pieces, about two inches or niore in length, and an inch in thickness : its colour is brown, with a faint cast of red in it : it has a disa- greeable, hut much less acrid and pungent taste.

Hill.

Galangal. See Kˆhmpferia.

GALANTHUS, the snow-drop, in botany, a genus of the monogynia order, and hexandria class of plants, natural order nineteenth, spa- thaceae. There are three concave petals; and the nectarium consists of three emarginated pe- tals ; the stigma is simple. There is but one species, viz. the

G. Nivalis, a bulbous-rooted flowery peren- nial, rising but a few inches in height, and adorned at top with small tripetalous flowers of a white color. There are three varieties, viz. the com- mon single-flowered snow-drop, the semi-double snow-drop, and the double snow-drop. They are beautiful little plants ; and are much valued on account of their early appearance, often adorning the gardens in January or February, when scarcely any other flower is to be seen. They frequently burst forth when tlie ground is co- vered with snow, and continue very often till the beginning of March, making a veiy ornamental appearance, especially when disposed in clusters towards the fronts of the borders, &c. The single kind comes first into bloom, then the semi-double, and after that the double. They

succeed in any soil, and multiply exceedingly by offsets from the roots.

The GALAPAGOS are a group of thirteen or fourteen islands, 120 leagues distant from the coast of Quito.

The soil is not fertile, but is covered with cedar trees, proper for the construction of sloops of war ; the only cultivation is a small quantity of cotton, the inhabitants chiefly gaining a live- lihood by the sea, and particularly by going to Turks Islands, Bahamas, to collect salt. The main island is thirty-six miles long, and one to two broad, shaped like a fish-hook.

On St. George's Island is the chief settlement, containing about 500 houses built of a soft stone, which is sawed like timber, but when washed with lime becomes hard. These stones are sent to the West Indies for filtering water. The harbour of St. George can only receive twenty-gun ships ; the rise of tide is six feet. St. David's Island supplies St George with pro- visions. The fourth Island of any size is named Somerset, besides which, there are reckoned nearly 400 spots of sand and rocks.

Murray's Anchorage, though exposed from north-east to north-west is the

only port that admits a line of battle ship through a dangerous and narrow channel in the reef. Ships of war are watered from a cistern which receives the rain water in Tobacco Bay.

A considerable number of sloops and schoon- ers are built here of the cedar of the islands, and employed in the trade between the West Indies and North America. The population is about 5000 whites, and nearly the same number of blacks. The custom-house returns of im- ports from this island to England, and exports, were : —

Imports. Exports.

1809 . £11,648 . £34,279

1810 . 1,137 . 36,613

The only export of the island produce is cotton in 1809, 21,656 pounds; and in 1810 9,000 pounds.

The government is similar to the West India Islands.

GALAT7EA, or Galathˆa, in mythology, a sea nymph, daughter of Nereus and Doris." She was beloved by tlie Cyclops Polyphemus, whom she treated with disdain; while Acis,a shepherd of Sicily, enjoyed her affection. The Cyclops killed his rival with a piece of a rock while he reposed on the bosom of (ialataa. The nymph, inconsolable for tlie loss of Acis, as she could not restore him to life, changed him into a foun- tain.

GALATIA, the ancient name of a province of Asia Minor, now called Ainasia. It was bounded on the east by Cappadocia, on the soutii by I'amphyliii, on the north by the Kuxine Soa, and on the west by IJithynia. It was the north part of Phrygia Magna ; but, ujjon being occu- pied by the Gauls, was called (Jalatia; and be- cause situated amidst Greek colonies, and its natives mixed with Greeks, Gallogra;cia. Strabo calls it Gallatia, and Gallograecia; hence a two- fold name of tlie p-ople, Galatac and (Jallograjci. The Greeks called it Gallia Parva,to distinguish

it from Gallia Transalpina, both which they called Galatia. It was reduced by the Romans under Augustus, and now belongs to the Turks. Here St. Paul founded a church.

GALATIANS, Epistle to the, a canonical book of the New Testament, written by tlie apostle Paul to the primitive Christians in Gala- tia, to reclaim them from the observation of Jewish ordinances, into which they had been se- duced by the Judaising teachers.

GALATZ, or Galacz, a town and harbour of European Turkey, in Moldavia, on a lake near the confluence of the Pruth and the Danube. It is fortitied, and the harbour admits large ships up the town. Almost all the trade between Moldavia and Constantinople in cattle, corn, &c., passes through it. The environs produce very good wine ; the inhabitants, about 5000, are chiefly Greeks. Medals found here have shown that it was built near the ruins of an ancient town, founded by Trajan. In 1789 an obstinate battle was fought in the neighbourhood of this town, between the Russians and the Turks : in which the latter lost 8000 men, the town was taken and set on fire. Fifty-four miles west of Ismail, and 120 S. S. W. of Bender.

GALAX, in botany, a genus of the monogy- nia order, and pentandria class of plants : cor. is salver-shaped: cal. decaphyllous : caps, uni- locular, bivalved, and elastic. Species one only a native of Virginia.

GALAXIA, in botany, a genus of the trian- dria order, and monadelphia class of plants : CAL. none : cor. one : petal six cleft, with a long tube : spathe one or two leaved : style one : caps. three-celled inferior. Species three, natives of Madagascar and the Cape.

GALAXY, n. s. Fr. galaxie ; Gr. yaXa?iaf. A stream of light in the sky, formed by lunumerable stars, and called the milky way.

‘ Lo there !’ quod he, ‘ cast up thine eye ; See yonder, lo, the galaxie. The whiche men clepe the milky way. For it is white. Chaucer. Hotise of Fame.

A brown, for which heaven would disband The galaxy, and stars be tanned. Cleaveland.

Several lights will not be seen. If there be nothing else between ; Men doubt, because they stand so thick i’ the’ sky. If those be stars that paint the galaxy, Cowley.

A broad and ample road, whose dust is gold. And pavement stars, as stars to thee appear. Seen in the galaxy. Milton’s Paradise Lost.

We dare not undertake to shew what advantage is brought to us by those innumerable stars in the galaxy. Bentley.

The Galaxy is that long white luimnous track which seems to encompass the heavens like a girdle, and is easily perceivable in a clear night, especially when tlie moon does not shine. The Greeks called it VaXaˆiac, ami tiie Romans via lactea, the milky way, on account of its color and appearance. It passes between Sagittarius and Gemini, and divides tlie sphere into two parts ; it is unequally broad ; in some parts single, in others

double. The ancient poets, and even philosopliers, speak of the CJalaxy as the road by which the heroes went to heaven. The Egyptians called it tlu; Way of Straw, from the story of its rising from burning straw, thrown

] > ehincl the goddess Isis in her flisht from the parts of Africa. Soe Bubon. The juice is

giant Typhon. The Greeks give, however, two semipellucid, soft, tenacious; of a strong smell,

different accounts of it: the one, that Juno, and a bitterish warm taste; the better sort is in

without perceiving it, accidentally gave suck to pale colored masses, composed of clear white

Mercury when an" infant ; but that as soon as tears. Geoffroy relates, that a dark greenish oil

she turned her eyes upon him, she threw him from is to be obtained from this by distillation, which,

her, and as the nipple was drawn from his mouth, upon repeated rectiticalions, becomes of an ele-

the'milk ran about for a moment: the other, gant sky-blue color. The purer sorts of galba

that the infont Hercules being laid by the side of Juno when asleep, on waking she gave him tiie breast; but soon perceiving who he was, she threw him from her, and the heavens were marked by the wasted milk. Aristotle supposed

num are said by some to dissolve entirely in wine, vinegar, or water; but these liquors are only partial menstrua with regard to this drug ; nor do spirits of wine or oils prove more effec- tual in this respect : the best solvent is a mixture

it a kindof meteor, formed of a crowd of va- of two parts spirits of wine and one of water,

pors, drawn into that part by certain large stars Galbanum agrees in virtue with gum ammonia,

disposed in the region of the heavens answering but is generally accounted less efficacious in

hereto. ()thers, finding that the Galaxy was asthmas, and more so in hysterical complaints,

seen all over the globe, that it always corres- It is an ingredient in the gum pills, the gum

T)onded to the samefixed stars, and that it tran- plaster, and some other officinal compositions, scended the height of the highest planets, set GALE, ?i. s. Goth, gol; Belg. /ioe/e ; Germ

aside Aristotle's "opinion; placed the Galaxy in gafding, hasty; sudden. A wind which blows

the firmament, or region of the fixed stars, and somewhat stronger than a breeze, but not tem-

concluded it to be nothing but an assemblage of pestuously. an infinite number of minute stars. Since the What happy gale

invention of the telescope, this opinion has been Blows you to Padua here, from old Verona? abundantly confirmed. By directing a good Shakspeare.

telescope to any part of the milky way, where "N^or is there greater basenessc, then those mindes

before we only saw a confused whiteness, we now That from an honest purpose can be wrought

descry an innumerable multitude of little stars, ^^y ''''';. ^^f;;i^S'' '"'' '°'°°''' ^''''' °' W^trous so remote, that a naked eye confounds them.

See Astronomy. GALBA (Servius Sulpicius), emperor of Rome,

windes. Whatever colour or excuse be brou>;ht.

George Withers.

Winds

*"- **-■■-"' ■'■■ v'-'' • '''^^ '-^—■Y /J — I — ' Wind''*

and the seventh of the Csesars, born the 24th of Qf gentlest gale Arabian odours fanned

December A. A. C. 5. He was gradually raised to the highest offices of the state, and exercised his power in the provinces with the greatest equity. He dedicated much of his tiiae to soli- tary pursuits, to avoid the suspicions of Nero.

Expressing his disapprobation of the emperor's And all the watery plain ia wrinkles flows, oppression in the provinces, Nero ordered hira Then let tlie tisherman his art repeat, to be put to death ; but he escaped from the Whore bubblins eddies favor the deceit.

From their soft wings, and Flora's earliest smells.

Milton. Umbria's green retreats. Where western gales eternally reside. Addismi. When a brisk f^nZe against the current blows.

Gay's Rural Sports. When the long-sounding curfew from afar

Loaded witli loud lament the lonely gale. Young Edwin, lighted by the evening star.

Lingering and listening, wandered down the vale.

Beattie. No prize, alas, but yet a welcome sail. The blood-red signal glitters in the gale.

Byron, Childe Harolde.

Gale, in sea language, a term of various im- port. When the wind blows not so hard but that a ship may carry her top-sails a-trip (that is,

executioner, and was publicly saluted emperor When seated on the throne, he suffered himself to be governed by favorites, who oppressed the citizens. Exemptions were sold at a high price ; and impunity even for murder was to be pur- chased. Such irregularities greatly displeased the people ; and Galba refusing to pay the sol- diers the money he had promised them, they assassinated him in the seventy-thirJ year of his age, and eighth month of his reign. The virtues which had shone so bright in Galba, when a private man, totally disappeared when he as- f smp may carry iit^r ……. ..···, y..^. ..,

*Lnded the hrone ;^ and he who had showed hoisted up to the highest) they say it is a loom himself the most impartial judge, forgot his duty g^le. When it blows very strong, it ,s a stiff, when he became emperor. s^on?' o'" '^^' g^^^*

GALBANUM, n. s. Sax. galbanum; Gr. xaKftavr]. A resinous gum.

We meet with galbanum sometimes in loose granules, called drops of tears, which is the purest, and some- times in large masses. It is soft, like wax, and duc- tile between the fingers ; of a yellowish or reddish colour : its smell is strong and disagreeable. It is of » middle nature between a gum and a resin, being in- flammable as a resin, and soluble in water as a gum, and will not dissolve in oil as pure resins do. It is the produce of an umbelliferous plant. Hill.

Galbanum issues from the stem of an um- belliferous plant, growing in Persia and many

When two ships are near one another at sea, and, there being but little wind blowing, one of them finds more of it than the other, they say that the one ship gales away from the other.

Gale (Dr. John), an eminent Baptist mi- nister of the last century, was born in London in 1G80. He studied at Leyden, and afterwards at Amsterdam, under Limborch, and was chosen minister of the Baptist congregation in Bar- bican in 1715. He became a popular preacher, but is principally known by his Reflections on Dr. Wall's History of Infant Baptism, 8vo He died in 1721. Four volumes of his sermons

were published after his death, lie is said to have projected an English translation of the Sep- tuagint of Grabe.

Gale (Theophilus), an eminent nonconfor- mist minister, was born in 1628. He was in- vited to Winchester in 1657, and continued a stated preacher there until the re-establishment of the church by Charles II., when he quitted Ins preferment. He was afterwards engaged by Philip lord Wharton as tutor to his sons, whom he attended to an academy at Caen, in Nor- mandy ; and afterwards became pastor to a con- gregation of Dissenters in Holborn, and master of a respectable academy at Newington. lie died in 1678; and is principally known by his Court of the Gentiles, calculated to show, that the Pagan philosophers derived their most sub- lime sentiments from the Scriptures. Besides tliis work, he was the author of Philosophia Ge- ueralis, in duas partes disterminata, 8vo. Idea Theologise tarn contemplative quam activcE, ad fonnam S. Scripture delineata, Bvo. The Ana- tomy of Infidelity, 8vo. &c.

Gale (Thomas), D. D. and F. R. S., a learned divine, born at Scruton, in Yorkshire, in 1636. He was educated at Cambridge, and became professor of Greek in that university. He was afterwards chosen head master of St. Paul's school, London ; and wrote the inscriptions on the monument erected in memory of the con- flagration in 1666. In 1676 he was made a prebendary in St. Paul's; and being elected F. R. S. presented a Roman urn to the society. About 1697 he gave to the new library of Tri- nity College, in Cambridge, a great number of Arabic MSS., and in 1697 was admitted dean of York. He died in that city in 1702 ; and was interred in the cathedral, where a monu- ment was erected to his memory. lie was one of the best Greek scholars of his age, and kept up a correspondence with the most learned men at home and abroad. He published, 1, Historiae PoeticjE Antiqui Scriptores, 8vo. 2. Opuscula Mythologica, Ethica, et Physica, in Gr. and Lat. Bvo. 3. Herodoti llistoria, fol. 4. Historise Anglicanas Scriptores quinque, in fol. 5. His- toric Britannicae, Saxonicse, Anglo-Danicae, Scriptores quindecim, fol. 6. RhetoresSelecti, &c. Gale (Roger), F. R. S. and A. S. S., eldest son of the preceding, was educated at Trinity College, Cambridge, of which he was chosen fellow in 1697. He was M. P. for North AUerton, m the first three parliaments of Great Britain. He was first vice-president of the Society of Antiquaries, and treasurer to the Royal Society. He died in 1744, and was esteemed one of the most learned men of his age. He])ublished several valuable books, particularly an edition of Antoniniis's Commentary.

GALEA, in antiquity, a light casque, head- piece, or morrion, which came down to the shoulders, commonly of brass. Camillus, ac- cording to Plutarch, ordered those of his army to be of iron, as being the stronger metal. The lower part of it was called buccula, and on the top was a crest. The Velites wore a light galea, made of the skin of some wild beast.

GALEANO (Joseph), a learned physician of Palermo, born in 1605. He was author of so- Voi.. IX.

veral medical works, and published a Collection of the Sicilian Poets, in 5 vols. He died in

1675.

GALEATED, adj. Lat. iˆakatus. Covered, as with a helmet; and n\ botany descriptive of plants which bear a flower resembling a helmet, as monkshood.

A galeated eschinus copped, aud in shape some, what more conick than any of the foregoing.

Woodward vn Fossils.

GALEGA, in botany, a genus of the decan- dria order, and diadelphia class of plants ; na- tural order thirty-second, papilionaceae : cal. composed of subulated nearly equal dents or segments ; the legume has oblique striae : seeds lying between them. Species thirty-six ; chiefly natives of the Cape, South America, and India.

GALEN (Claudius), prince of the Greek physicians after Hippocrates, was born at Per- gamus, in Asia Minor, A. D. 131. His father being possessed of an ample fortune, and well versed in philosophy, instructed his son in the first rudiments of learning, and afterwards pro- cured him the greatest masters of the age. Galen, having finished his studies, chose physic for his profession, studied the works of Hippo- crates, and at length resolved to travel, and to embrace every opportunity of inspecting on the spot the plants and drugs of various countries. With this view he went to Alexandria, where he staid some years ; thence through Cilicia, Palestine, Crete, Cyprus, Lemnos, and the Lower Syria; in which last places he obtained a thorough insight into the nature of the Lenmian earth, and the opobalsamum : after this he re- turned home by Alexandria. Galen had been four years at Pergamus, where he had the care of the public gladiators, and his practice was attended with extraordinary applause, when some com- motions induced him to settle at Rome, but the proofs he gave of his superior skill, added to the respect shown him by several persons of high rank, created him so many enemies among his brethren of the faculty, that he was obliged to quit that city, after having resided there four or five years. He had not long however returned to Pergamus, when he was recalled by the em- perors Aurelius and Verus. After their death, he retired to his native country; where he died, about A. D. 200. He wrote in Greek ; and is said to have composed 200 volumes, most of which were unhappily burnt in the temple of Peace. The best editions of those that remain, are, those of Basil in 1558, in 5 vols, and of Venice in 1625, in 7 vols. Galen was of a weak and delicate constitution, as he himself asserts; but nevertheless, by his temperance and skill in physic, arrived to a great age. One of his rules was, always to rise from table with some degree of appetite. He is justly considered as the greatest physician of antiquity, next to Ilippox crates; and performed such surprising cures, that he was frequently accused of magic.

GALENIA, in botany, a genus of the digyrna order, and octandria class of plants , natural order thirteenth, succulentsc : cal. trifid : coR, none : cap. roundish and dispcrmous.

GALENIC, or Galenical, mlj. in medicine, is applied to that manner of considering and

treating diseases, founded on the principles of Galen, or introduced by Galen.

GALENISTS, or Galenites, in church his- tory, a branch of JNIennonites, who take in seve- ral of the opinions of the Socinians, or rather Arians, touching- the divinity of our Saviour. In]66-ithe Waterlandians divided into two parties, of wliich the one were called Galenists, from their leader Abraham Galenus, a learned and eloquent physician of Amsterdam, and tlie other Apostolians.

GALEOPSIS, in botany, a genus of the an- giospcrmia order, and didynamia class of plants ; natural order forty-second, verticillatae. The upper lip of the corolla is a little crenated or arched ; the under lip more than bidentate. Species four, all indigenous to our own cornfields.

GALEOTI (Martio), secretary to Matthias, king- of Hungary, tutor to his son John, and librarian at Buda, wasbornatNarniin Italy- lie published a work entitled, De Ilomine Interiore et de Corpore ejus, in 4to, and a collection of bons mots of king Matthias. Being invited by Louis XI. of France, to his court, he went to Lyons, but meeting the king unexpectedly, he, in descending hastily to pay his respects to the monarch, fell, and, being very corpulent, was so much hurt, that he died soon after.

GALERICULATE, adj. Lat. galerus. Co- vered as with a hat.

GALEIMCLˆLUM, in Roman antiquity, a cap worn both by men and women, consisting of skin so neatly dressed with liair, that the artifi- cial covering could scarcely be distinguished from the natural. They were used by those whose hair was thin ; and by wrestlers, to keep their own hair from receiving any injury from the oils with which they were rubbed before they exercised.

GALGACUS, the name given by Tacitus, and other Roman historians, to the king of Scots, who opposed Agricola, called by Buchanan, and our other Scots historians, Corbredus Galdus.

GALIANI (Ferdinand), an Italian ecclesiastic and writer, was born at Naples in 1720. His uncle, was archbislˆ-op and almoner to the king, and

took care of his education. At the age of twenty, he wrote some popular verses on the death of the public executioner, in ridicule of the custom, then universal, of celebrating the memory of opulent persons, by eulogies. Not long: after this, Benedict XIV. desiring Galiani's uncle to send him some of the stones thrown up by Mount Vesuvius, the archbishop entrusted the commission to his nephew, who wrote in the box, ' Si filius Dei es, fac ut lapidcs isti faˆjcs fiant.' For this piece of wit, the pope, it is said, gave him an abbey worth £700 a-year. In 17.50 he published his Tractata della Moneta, which was followed by An Essay on the Commerce of Corn, printed at Paris, where he resided with the Neapolitan ambassador. On his return to Rome he was appointed a counsellor in the triliunal of commerce, and died in 1789. Besides the above works, he wrote a Treatise on the Nea- politan language, and another on the Armed Neutralitv.

GALICIA, or Gai.licia, an important pro- vince of Spain, forming the north-west angle of

that country. It is bounded on the north and west by the Atlantic, on the east by Asturia and Leon, and on the south by the Portuguese pro- vinces of Tras-los-Montes and Entre-douro-e- Minho. Its mean extent is about forty-six leagues from north to south, and 140 leagues from east to west, having a territorial area of 16,746 square miles, and upwards of 1,000,000 inhabitants. It lies between Q"" 37′ and 9° 13′ W. long., and 40° ,56′ and 43° 46′ N. lat.

Galicia has the title of a kingdom, and is di- vided into seven districts or provinces. The prin- cipal towns are Compostella, Corunna, Lugo, Tuy, Orense, Finisterre, Vigo, &c. &c. Its capital is generally said to be Compostella in San-Jago ; but Corunna has also been regarded as such. .It has an archbishopric (San Jago), and a university; four bishoprics, Tuy, Orense, Mondonnedo, and Lugo ; five cathedral and five collegiate chapters, several abbeys of Bene- dictines and Bernardines, two commanderies of religious orders, seven cities, 3683 parishes, and ninety-eight religious houses. This pro- vince has 100 leagues of coast, and its ports are numerous, both on the north and western ocean ; but they in general are small. Those that de- serve notice are, Maria, Corcuvion, Bayon.i, Pontevedra, Muroz, Guardia, Vigo, Corunna, Ferrol, Santa Marta, Vivero, Ribadeo, fee.

The climate of Galicia is mild upon the coast, and cold in the interior, which is exposed to winds and heavy rains. It is considered tlie most populous province in Spain, and is, in general, very mountainous, and well wooded, but intersected with beautiful valleys, and smalt plains. A chain of mountains proceeds from the Pv'renees near Roncevallos, between Biscay and Navarre, directing its course to the north- west, and leaving on its right

the Asturias, pene- trating by Leon into Galicia, which it traverses, and continues till it is stopped by the sea, after forming Cape Finisterre. Tlie mountains of this branch have different names; the most con- siderable of which is the Sierra de Mondonnedo, of great extent, occupying the whole extremity of the north-east of Galicia towards Asturia, and proceeding to the north as far as Cape Ortegal, and to the west as far as the Atlantic.

Its chief rivers are the Eo, or Rio de Miranda, which separates it from Asturias, and, after pur- suing a course of twenty-four leagues from south-east to the north, falls into the Northern Ocean above Ribadeo in Galicia, and Castropol in Asturia ; the Ulla or Ilia, which has a course of twenty-three leagues from the north-east to the south-west ; the Tambra, or Tamaris, which gives the name of Tamaricians to the people who occupy its banks, pursuing a course of twenty leagues from the north-east to the south- west ; the Mandeo, whose course is sixteen leagues, from the east to the north-east ; the Minho, which rises in the east of the Sierra INIondonnedo, and after receiving several tribu- tai-y streams, and separating Galicia from Por- tugal, in a course of about fifty-two leag"ues. iirst from north to south and then to the south-west, falls into the ocean near t!ie port of Guardia ; the Sil, which rises in the mountains to the west of Leon, and after a course of thirty-three

leagues falls into the Minho. In this province they reckon seventy rivers of some size.

Galicia waˆj formerly celebrated for its mines : those that are now chiefly known are copper, lead, and tin. White marble and jasper are found between Corunna and Betanzos, as well as marcasite, vitriol, sulphur, &c. These moun- tains also furnish excellent timber. Galicia likewise abounds in mineral waters, and game. Maize, wheat, oats, millet, hemp, flax, lemons, and other fruit, with some wine, are its chief products. Fine oak, walnut, chestnut, and hazle trees abound, and the inhabitants rear many horned cattle, mules, asses, hogs, and poultry. Every farmer keeps a flock of sheep and goats in proportion to the extent of his land; and the Galicians are deemed laborious in the culture of their soil, and their general attention to agricul- ture. But they are not much addicted to the \mechanical arts or to commerce. There are, however, manufactories of woollen stuflTs, coarse cloths and hosiery at Lugo ; of ropes and sail- cloth at Ferrol and Corunna ; of Unen at Tuy, and of silk in the territory of Montforte, in the county of Lamos. Yet, on the whole, Galicia is, with regard to manufactories, the least enter- prising part of Spain, and its natives are so fre- quently engaged in servile employment in the other parts of the country, and are so accustomed to ill treatment, that it has given rise to a pro- verb common in

the neighbouring provinces, ‘ he has treated me like a Gallego.’ They are said, however, to be not deficient in manly courage and spirit, and the temper evinced by them at home is often indicative of energy and elevation of character.

Its coasts and rivers are plentifully supplied with all kinds of fish. The exports are cattle, fish, and the cloth it manufactures. They also send, to other provinces of Spain, table-linen, skins, hides and leather, hats, tapes, knit stockings, wool and wine. The importations from the English, French, and Dutch, are received at Vigo, and the exportations sent generally from the port of Corunna. See Corunna.

This country took its name from its ancient inhabitants, the Callaeci, and was constituted a kingdom in the year 1060 by Ferdinand the Great, of Castile, who gave this province to his son Don Garcias. Till the reign of Ferdinand V. and Isabella, however, the inhabitants paid little respect to the royal authority, and the no- bility exercised a feudal sovereignty in their own territories, conniving at the pillage of strangers. The ancient inhabitants are cele- brated in history for their exploits in war and hunting, and fishing. Their wives ploughed the land, sowed, gathered the harvest, and took care of their families. The traveller, at present, finds in the mountains of Galicia simple and pure manners, and a quiet and very hospitable people, personally of good size, muscular, and robust : the women are fair and handsome, with black hair and eyes, and fine and regular teetli, but not very expressive features. Men, women, and children go barefoot. The Galicians were the first poets of Spain, and they composed and sung verses before the descent of the Romans. The

present language is a mixture of tlie ancieiit Castilian and Portuguese.

Galicia, an extensive province of Austrian Poland, bounded on the north oy Poland Pro- per, or the new kingdom of that name, on the east by Russia, on the south by Moldavia, Transylvania and Hungary, and on the west by Austrian Silesia. It lies between 18° 33′ and 26”^ 50′ of E. long., and 47° 50′ and 50° 45′ of N. lat., containing 32,521 square miles, and, including the adjacent province of the Bukowine, about 3,750,000 inhabitants.

With the exception of some branches of the Carpathians, towards the south, Galicia contains no mountains. It is watered by the Vistula, the Dniester, Dunajez, the San, and the Wisloka, besides other smaller streams ; and ponds are numerous throughout the country. The climate is warm, and the soil in general very fertile, but the agriculture is in a very low state; still a considerable quantity of corn is exported. The other products are flax, rapeseed, and fruit, in- cluding grapes ; but no good wine is made here. The horses are esteemed for their hardiness and swiftness, and black

cattle are an article of export. By an authentic statement delivered to the imperial cliambers of commerce at Vienna, in 1813, the stock of oxen, cows, and horses, wai thus taken : —

Oxen Cows Horses

340,168. 622,151. 238,790.

In the woods are wolves, bears, buffaloes, and game of all kinds; the beaver too is indigenous here, particularly in the neighbourhood of Grodek, and on the banks of the Bog. The coch- ineal insect is also found in Galicia, and gold is procured in small quantities from the sand of the Bistricza. Petroleum, flints of an excellent quality, and mineral waters, are found in differ- ent parts of the country ; the mountains also contain iron ore, but the most important mineral production is salt, which exists in almost every hill, and is either used as dug from the mines, or as prepared by evaporation. The quantity annually produced is about 200,000 tons.

The character, manners, and language, of the Galicians differ little from those of the Poles in general except toward the east, where Russian is used. Although servitude has been of late abolished by the Austrian government, the habits consequent on that state of society will long remain ; and the only difference as yet produced, has been to transfer the rod from the hand of the master to that of a magistrate or his deputy. Idleness is the bane of the com – try. The cottages of the peasantry are most wretched, and manufactures are almost unknown. The little inland commerce is in the hands of the Jews ; but the property of land in the nobility. The distance from the sea-coast is a great impediment to the export of corn ; but the level nature of the country is favorable to navigation; the boats used, draw little water, and the roads are generally good.

During the middle ages, Galicz and Wlodi- mir were two independent duchies of limited extent, occupying nearly the site of the present

Galicia. From tlie twelfth to the end of the fourteenth century tliey belonged to the kinijdom of Hungary, but came at the last period, by marriage, to the crown of Poland. Still the kings of Hungary, however, retained the title and arms of the duchies ; and at tlie partition of Poland, in 1772 and 1795, the emperor of Aus- tria resumed, as king of Hungary, these possessions of his a^‘cstors, together witii part of the palatinate of Cracow,

Masovia, Chelms, Vol- hynia, and Podolia, the whole of Sendomir, Lublin, Belcz, and Red llussia. These were formed into a kingdom, under the ancient title of Galicia and Lodomeria; but no division cor- responding to the two names took place. The latter is rarely found in maps either of Poland or Austria.

In 1796 the whole was divided into Eastern and Western Galicia, containing a population of nearly 5,000,000. But in 1809 Austria was obliged to make a cession of the chief part of Western Galicia to Russia, and to the newly established duchy of Warsaw ; which coun- try has not since been restored to Austria, but now forms part of the kingdom of Poland. In Eastern Galicia, Russia obtained a population of 400,000, in four districts or circles ; but these were restored to Austria in 1815. The language used in public proceedings is German, and the state religion of Galicia Catholic, but ♦he number of Greek parishes is double that of the Catholic. There is an archbishop of each religion resident at Lemberg, as well as a Lutheran superin- tendant. The Jews in 1817 were 422,000 in number.

Galicia now bears the title of kingdom, and is governed by a viceroy, who resides at Lemberg, which is also the meeting place of the diet, and the seat of the higher courts of law. The whole kingdom is divided into eighteen circles, and produces £1,200,000 of revenue. In 1817 a constitution was published, and a representative government established. The states consist of deputies from the clergy, the nobles, the knights, and the royal towns. The deputies receive a fixed salary from the state. Of the towns, Lem- berg is the only one of magnitude, and the only one which as yet sends deputies. The others are Halicz or Galitsch (which gave name to the province), Brody, Przemysl, Jaroslow, Stonislawow, Tarnopol, and Czernowitz. The last is the capital of the Bukowine.

Galicia, or Guadalaxara. See Guada-

LAXARA.

GALILEE, in ancient geography, a province of Judea, bounded by mount Lebanon on the north, by the .lordan and the sea of Galilee on the east, by the Chison on the south, and by the Mediterranean on the west. It was the scene of many of our Saviour's miracles ; but the bounds of the country are not now well known, nor the places where many of the towns stood. It be- longs to the Turks.

GALILEANS, a sect of the Jews. Their founder was one Judas, a native of Galilee, who, esteeming it an indignity to the Jews to pay tri- bute to strangers, raised up his countrymen against the edict of Augustus, which

had ordered a taxation of all the subjects ot the Roman em-

pire. They insisted that God alone should be owned as Lord. In other respects they were of tire opinion of the Pharisees ; but, as they judged it unlawful to pray for inhdel princes, they sepa- rated from the rest of the Jews, and performed their sacrifices apart. As our Saviour was sup- posed to be a native of Galilee, and his apostles were mostly Galileans, they were suspected to be of this sect ; and it was on this principle, as St. Jerome observes, that the Pharisees laid a snare for him, by asking, wliether it was lawful to give tribute to Ca;sar ; that, in case he denied it, they might nave an occasion of accusing him.

GALILEO ((ialilei), the famous mathemati- cian and astronomer, was the son of a Florentine nobleman, and born in 1564. He was designed by his father for the i)rofession of medicine, but had from his infancy a strong inclination to phi- losophy and the mathematics ; and made great progress in these sciences. In 1592 he was chosen professor of mathematics at Padua ; and during his abode there invented the telescope ; or, according to others, improved that instru- ment, so as to make it fit for astronomical obser- vations. In 1611 Cosmo II., grand duke of Tuscany, sent for him to Pisa, where he made him professor of mathematics, with a handsome salary; and soon after inviting him to Florence, gave him the office and title of principal philo- sopher and mathematician to his highness. He had been but a few years in Florence, before he was convinced, that Aristotle's doctrine, however ill-grounded, was held too sacred to be called in question. Having observed, however, some solar spots in 1612, he printed a tract on the subject in 1613 at Rome, in which, and in some other pieces, he ventured to assert the truth of the Coper- nican system. For these he was cited before the in- III. mitigated, by con- fining him in the palace of the Medici at Rome, and finally to his own country-house in the vi- cinity of Florence, where he spent the remainder of his days. Devoting himself, in this retreat, during eight years, to the perfecting of his teles- cope, until by continued application, and the effects of the night air, he became blind three years before his death. This event took place in January 1642, in the seventy-eighth year of his age.

Among various useful inventions, of which Galileo was the author, is that of the simple pendulum, which he had made use of in his as- tronomical observations, and which his natural

son Vicenzia first applied to clocks. The advances made by Galileo himself in this important disco- very, have been disputed, and are so admirably

*ber of vibrations be shown by the revolution of the wheel, which might likewise be connected with a larger wheel by means of a pinion.' ' But,' he adds, ' it is umiecessary to explain all this to you, who possess choice and practised artists in the construction of clocks and other machines ; because those people, on learning the new principle, that a pendulum performs its os- cillations in very equal times, whether it describes larger or smaller arches, will be able to draw from it much more subtile consequences than I can imagine.' From this it appears doubtful whether Galileo ever himself tried the contri- vance of the pin and wheel, and did not rather throw it out as a hint for others to improve upon, than as the result of actual experience. lie then concludes in these remarkable words : — * In these very simple pendulums, then, which are subject to no alteration whatever (alterazione al- cune), is contained the method to preserve in an easy manner a constant measure of time : and you will perceive their utility, and the advantages they possess in astronomical observations, which do not require that the oruolo should always go, but where it is sufficient to know from the hours of the noon, or of the setting of the sun, the smaller divisions of time, for an eclipse, con- junction, or other celestial phenomenon.'*

To Galileo also the world is indebted for the dis- covery of the rotation of the sun upon its own axis, and of the general planetary character of the moon. He also invented a machine by means of which the Venetians rendered their Laguna fluid and navigable; and the principles which he laid down in regard to gravitation, produced the barometer. A great number of his treatises were published in a collection by signior Mendessi, under the title of L'opera di Galilei Galileo Lynceo. A volume also of his letters to several learned men, and solutions of several problems, were printed at Bologna in 4to. Besides these, he wrote many others, which were unfortunately lost through his wife's superstition ; who, solicited by her con- fessor, gave him leave to peruse her husband's MSS., of which he tore and took away as many as he thought not fit to be published.

GALIOT, n. s. Fr. galiottc. A little galley; a sort of brigantine, built very sligiit, and fit for chace. It carries but one mast, and two or three pattereroes : it can both sail and row, and has sixteen or twenty seats for the rowers, with one man to each oar.

Barbarossa sent two notable pyrates witb thiity galiots, who, landing their men, were valiantly en- countered, and forced aiˆain to their galiot.

Knollei's Hislory.

GALIUM, in botany, a genus of the mono- gynia order, and tetrandia class of plants ; natu- ral order tbrty-seventh,stellatre : cor. monopeta- lous and plain ; and tjicre are two roundish seeds. Tliere are many species ; of which the most remarkable are the following: —

G. aparine, clivers, or goose-grass, has a square, very rough, jointed, very weak stem, two, three, or four feel long, and adhesive: the branches are opposite ; the joints hairy at the base : the leaves, consisting of eight or fen at each joint, are narrow, pointed, above rough, be- neath smooth, and curinated : the seeds are

roufjb ; flowers white, small, few, on slender foot-slalks on the tops of the branches. It is common in fields by the sides of hedpres, &.c. The expressed juice of this plant taken internally, and the bruised leaves applied by way of poul- tice, are said to have been used with success as a cure for the cancer.

(J. verum, tlie yellow lady's bed-straw, has a firm, erect, brown, square stem ; the leaves gene- rally ei<;ht in each whirl, linear, pointed, brittle, and often reflex ; branches short, generally two from each joint, terminating in spikes of small yellow flowers. It grows commonly in dry ground, and on road sides. The flowers coagu- late boiling milk; and the best Cheshire cheese is said to be prepared with them. The French prescribe them in hysteric and epileptic cases. Boiled in alum-water they tinge wool yellow. The roots dve a red not inferior to madder ; for which purpose they are used in the island of Jura. In the Edinburgh Medical Commenta- ries we have accounts of some violent scorbutic complaints being cured by the juice of this])lant. Sheep and goats eat the plant ; horses and swine refuse it ; cows are not fond of it.

GALL, 72. s., V. a. & V. n. Sax. jeala ; Dut. gcille ; Fr. galer. The bile, an animal secretion remarkable for its bitter taste : also the bladder which contains it. Preternatural tumors which grow on trees, and are used in the composition of ink. This word is used figuratively to denote rancor, malignity, or anger ; a slight scratch, or abrasion of the skin. The verb signifies to Inirt by fretting the skin; to wear away by attri- tion ; to fret ; to vex ; to harass; to keep in a ptate of uneasiness.

Then these wretches, full of all frowardnesse. Gave hym to drinke eisell temprpd with gall.

Chaucer. Lament of Mary Magdaleine.

They did great hurt unto his title, and have left a perpetual gall in the minds of the peo'^le.

Spenser on Ireland. In honour of tliat action, and to gall their minds who did not so much commend it, he wrote his book.

Hooker, Como to my woman's hreast, And take my milk for gall, you murthcring ministers I

Shakspeare. A honey tongue, a heart of gall. Is fancy's sprinsr, but sorrow's fall. Irl.

I have seen you glecking and galling at this gentle- man twice or thrice. Id.

Poison be their drink ! Hall, worse than gull, the daintiest meat they taste !

Id. He doth object, I am too great of birth ; And that my state being galled with my expence, I seek to heal it only by his weaUh. Id.

Thither write, my queen. And with mine eyes I'll drink the words you send. Though ink be made of ^a//. Id. Cymbeline.

I'll touch my point "With this contagion, that, if I gall him slightly. It may be death. Id. Hamlet.

Fading flowers in every field. To winter floods their treasures yield ; A honey'd tongue, a heart of gull Is fancy's spring, but sorrow's fall. Raleigh.

Besides the acorns, the oak beareth galh, oak- erples, and oak-nuts. Bacone Natural Hulory.

TIis married couple, as a testimony of future con. cord, did cast the gall of the sacrifice behind the altar.

Browne.

No man commits any sin but his conscience smites

him, and his guilty mind is frequently galled with the

remembrance of it. Tillotson,

She still insults, and you must still adore ;

Grant that the honey's much, the gall is more.

Dryden's Juvenal. Blalpighi, in his treatise oi galls, under which name he comprehends all preternatural and morbose ex- crescences, demonstrates that all such excrescences where any insects are found, are excited by some vf-nenose liquor, which, together with their eggs, such insects shed. Ray on the Creation.

In our wars against the French of old, we used to gall them with our long bows, at a greater distance than they could shoot their arrows. Addison.

Suppose your hero were a lover. Though he before had gall and rage j He grows dispirited and low. He hates the tight, and shuns the blow.

Prior. Gall is the greatest resolvent of curdled milk : Boerhaave has given at a time one drop of the gall of an eel with success. Arbuthnot on Diet.

The Aleppo galls, wherewith we make mk, are no other than cases of insects, which are bred in them.

Derham, How sore \ galled him only Heaven could know. And he that felt, and I that caused the woe. Pope.

The ˆa//-bladder is a very remarkable contrivance. It is the reservoir of a canal. Foley's T/teology.

Gall, in the animal economy. See Bile and Anatomy. Gall was generally given amongst the Jews to persons suffering death under the exe- cution of the law, to make them less sensible of their pain ; but gall and myrrh are supposed to have been the same thing ; because, at our Sa- viour's crucifixion, St. Matthew says, they gave Iiim vinegar to drink mingled with gall ; whereas St. Mark calls it wine mmgled with myrrh. Perhaps they distinsuished every thing bitter by the name of gall. The Greeks and Komans also gave such a mixture to persons suffering a death of torture. Many experiments have been made upon the gall of different animals, but few con- clusions can be drawn from them with any cer- tainty ; as there must always be a considerable difference between the effects of acids, or other menstrua, upon dead matter, and in the living system. Dr. Percival, however, showed that putrid bile may be perfectly corrected and sweet- ened by an admixture of the vegetable acids, vineirar, and juice of lemons. These, he observes, have this effect much more completely than the mineral ones ; and hence, he thinks, arises the great usefulness in the vegetable acids of autum- naV diseases ; which are always attended with a putrescent disposition of the bile, owing to the heat of the preceding summer. He takes notice of a common mistake among physicians, who fre- quently prescribe elixir of vitriol in those dis- eases where vinegar or lemon juice would be much more effectual. From this effect of acids on the gall, he also thinks,

we may see why tlie immoderate use of acids is so pernicious to di- gestion. It is necessary to health that the gall should be in some degree acrid and alkalescent . but, as acids have the property of rendering it])erfectly mild and sweet, they must be propor-

tionably pernicious to the due concoction and assimilation of the food ; which, without an acrid bile cannot be accomplished. Hence the body is deprived of its proper nourishment and sup- port, the blood becomes vapid and watery, and a fatal cachexy unavoidably ensues. This has been the case with many unfortunate persons, wiio, in order to reduce their excessive corpu- lency, have indulged themselves in the too free use of vinegar. From the mild state of the gall in young children, Dr. Percival also thinks it is, tliat they are so much troubled with acidities.

Gall, in natural history, denotes any protu- ■berance, or tumor, produced by the puncture of insects on plants and trees of different kinds. These galls are of various forms and sizes, and no less different with regard to their internal structure. Some have only one cavity, and others a number of small cells communicating with each other. Some of them are as hard as the wood of the tree they grow on, whilst others are soft and spongy ; the first being termed gall- nuts, and the latter berry-galls, or apple-galls. Se? Cynips. The external coat of the excres- cence described above, is dried by the air, and grows into a figure which bears some resem- blance to the bow of an arch, or the roundness of a kernel. This little ball receives its nutri- ment, growth, and vegetation, as the other parts of the tree, by slow degrees, and is called the gall-nut. The worm that is hatched under this spacious vault, finds in the substance of the ball, w'lich is as yet very tender, a nourishment suitable to its nature ; gnaws and digests it till the time of its transformation to a nymph, and from that state soon changes into a fly. After this the insect disengages itself from its confinement, and takes its flight into the open air. The case, however, is different with respect to the gall-nut that grows in autumn. The cold weather frequently comes on before the worm is transformed into a fly, or before the fly can pierce through its enclosure. "The nut falls with the leaves; but although it might now be supposed that the fly within is lost, yet in fact its being covered up so close is the means of its preservation. Thus it spends the winter in a warm house, where every crack and cranny of the nut is well stopped up ; and lies buried under a heap of leaves, which preserve it from the injuries of the weather. This apartment, however, though so commodious a retreat in ■winter, is a prison in spring. The fly, roused out of its lethargy by the vernal heat, breaks its ■way through and ranges where it pleases. A very

small aperture is sufticient, as at this time the fly is but a diminutive creature. Besides, the ringlets whereof its body is composed, dilate and become pliant in the passage. A very small quantity of oak galls, put into a solution of vi- triol in water, though but very weak, give it a purple or violet color ; which, as it grows stronger, becomes black ; and on this property de])ends the art of making our writing ink, as also the arts of dying and dressing leather, and other manufactures. See Ink. The best galls come from Aleppo : these are not quite roinid and smooth like the other sorts, but have several tubercles on the surface. Galls Irave a very austere styptic taste, without any smell : they

are very strong astringents, and as such have been sometmies made use of both internally and externally, but are not much taken notice of in the present practice. Some recommend an oint- ment of powdered galls and hog's lard as very effectual in certain painful states of hasmorrhois ; and it is alleged tliat the internal use of galls has cured intermittents after the Peruvian bark has failed. A mixture of galls with a bitter and aromatic has been proposed as a substitute for the bark. Deyeux investigated the properties of galls with considerable care ; and more lately Sir Humphry Davy examined the same subject. The strongest infusion Sir II. Davy could obtain at 56ˆ Fahrenheit, by repeated infusion of dis- tilled water, on the best Aleppo galls, broken into small pieces, was of the specificgavity of 1-068. 400 grains of this infusion, evaporated at a heat below 200°, left 53° of solid matter, whicli con- sisted of about 0-9 tannin, and 0ˆ1 gallic acid, united to a portion of extractive matter. 100 grains of the solid matter left, by incineration, nearly 4|, which were chiefly calcareous matter, mixed with a small portion of fixed alkali.

From 500 grains of Aleppo galls Sir H. Davy obtained, by infusion as above, 185 grains of solid matter, whicii on analysis appeared to consist of tannin 130; mucilage, and matter rendered insoluble by evaporation, 12; gallic acid, with a little extractive matter, 31 ; remain- der, calcareous earth and saline matter, 12.

Gall (St.), a tov/n and canton of Switzerland, bounded by Upper Austria and by the cantons of the Grisons, Glarus, Schweitz, and Zurich. The extent of 'the canton is about 1100 square miles, and its population 134,000, three-fifths Catholics. This was formerly one of the estates belonging to the ancient abbey of St. Gall. The southern part is mountainous and rugged; but to the north are beautiful cultivated hills, plains, and valleys, covered with vineyards and fiel is, adapted more particularly to pasture. The fre- quency of rain is favorable to this, and the breed of cattle is much esteemed.

The chief mountains of the canton are the Kammor and the Sentis ;

between 7C0O and 8000 feet above the level of the sea. The rivers are the Rhine, the Tamin, the Saar, the Sitter : part of the lakes of Zurich and Constance, and tlie greater part of that of Wallenstadt, are also in this canton. The products are corn, wine, flax, hemp, and maize. The chief mineral is iron, which the inhabitants are partly employed in manufacturing, as well as in the linen and cotton manufactures. The government is aristo- democratical ; the great council consisting of eighty-six Catholics and sixty-six Protestants ; the small or executive council of nine members. The canton is divided into eight districts, and is bound to furnish to the confederation of Switzer- land 2630 men, and £2500 sterling. The capital of the canton, situated between two mountains on the rivulet of Steinach, is an excellent trading town ; well built, and surrounded with walls and ditches. It contains, including its three suburbs, about 9000 inhabitants, for the nmst part Protes- tants. Objects of curiosity here are the old Benedic- tine Abbey, from whicli the town takes its name; the academy and the gyran;'>sium (with nine

classes), the cabinets of nutmal history and coins, and the public library.The principal church, coun- cil-house, arsenal, and hospital, are also worthy of notice. Cotton and linen stuffs of extreme fineness are made here, as well as valuable pieces of em- broidery, the inhabitants having carried spinning and other machines to great perfection. The environs are covered vˆich bleaching grounds.

GAL LA, a people of Ethiopia, or Southern Abyssinia, dwelling originally, as Mr. IJruce sup- poses, under the line, and exercising the profession of shepherds, which they still continue to do. For many years, he says, ' they have been constantly migratmg northwards, though the cause of this migration is not known.' At first they liad no horses ; but, as they proceeded northward, and conquennl the Abyssinian provinces, they soon furnished themselves with them, and now make little account of infantry in their armies. On the frontiers of Abyssinia, the multitude divided, and part directed their course towards the In- dian Ocean; after which, having made a settle- ment in the eastern part of the continent, they turned southward into the countries of Bali and Dawaw, which they entirely conquered, and set- tled there about 1537. Another division, having taken a westerly course, spread themselves along- the banks of the Nile, surrounding the country of Gojam, and, passing eastward behind the country of the Agows, extended their posses- sions as far as the territories of the Gongas and

Gasats. Since that time the Nile has been the boundary of their possessions ; though they have frequently plundered, and sometimes conquered the Abyssinian provinces on the other side of the river. A third division has settled to the south of the low country of Shoa, which the go- vernor of that province has permitted, in order to form a barrier betwixt him and the territories of the emperor, on whom he scarcely acknow- ledges any dependence. In modern times, the most remarkable of these tribes are, the Boren Galla, who, under Guxo, their chief, have ob- tained possession of the provinces of Gogam, Demot, and Uembea, including Gondar, the capital of Abyssinia. Another division is called the Adjow (jalla, who, under Gojee and Sibar, have occupied the southern provinces of Am- hara, Begemder, and Angott. Gojee lately at- tacked Tigre with 40,000 horse, but was defeated with great slaughter. Mr. Salt mentions two tribes, the Assabo in the west, and the Woldu- toki in the east, who retain all the original bar- barism of this race.

The Galla are of a brown complexion, and have long black hair ; but some of them, who live in the valleys, are entirely black. At first ilieir common food was milk and butter ; but, since their intercourse with the Abyssinians, they have learned to plough and sow their land, and to make bread : each of the three divisions are subdivided into seven tribes. In their beha- viour they are extremely barbarous ; and lived, until lately, in continual war with the Abyssinians, whom they murder without mercy. Yet, not- withstanding their cruelly abroad, they have always lived under the strictest discipline at home ; and every broil or quarrel is instantly punished. Bruce says they iiave a kind of

nobility, from among whom only the sovereign can be chosen; but Mr. Salt found no traces of this usage.

The Galla are reported to be very good sol- diers, especially in cases of surprise; but, like most other barbarians, have no constancy nor perseverance after the first attack. They will, however, perform extraordinary marches, and are excellent light horse for a regular army in an hostile country ; but are very indifferently armed. In their customs, they are described as filthy to the last degree. They anoint their heads and whole bodies; in which, as well as in other re- spects, they greatly resemble the Hottentots. It has been supposed that they have no religion whatever; but Mr. Bruce is of opinion that this is a mistake. The tree called wanzey, lie says, "is undoubtedly worshipped by all the three na- tions as a god ; and they have likewise certain stones which are worshipped as gods. They also worship the moon, and some stars, when in certain positions, and at some particular seiisons of the year. They also believe in a resurrec- tion ; and have some faint notions of a state of future happiness. To the south they profess the Mahommedan religion. They all intermarry with each

other, but will not allow strangers to live among them, though the Moors trade with them. They deal in blue Surat cloth, myrrh, and salt. Polygamy is allowed among them, and the women solicit their husbands to take others to their embraces, that they may have numerous families of children ; as the Galla, according to Mr. Bruce, always fight in families, whether against foreign enemies, or with one another. Mr. Salt contends, that the Mahom- medan religion, to which a large portion of these people have in modern times become con- verted, has decidedly improved them.

GALLAND (Anthony), a learned antiquarian, member of the Academy of Inscriptions, and professor of Arabic in the Royal College of Paris, was born of poor parents at Rollo, in Pi- cardy, in 1646. Having studied at the Sorbonne and other celebrated schools, he travelled into the east; where he acquired great skill in the Arabic language, and in the manners of the Ma- hommedans. He wrote, 1. An Account of the Death of the Sultan Osman, and the Coronation of the Sultan Mustapha. 2. A Collection of Maxims, drawn from the Works of the Orien- tals. 3. A Treatise on the Origin of Coftee. He also translated the Arabian Nights' Entertain- ment, and died in Paris in 1715.

GALTANT, adj. !k n.s.ˆ Fr. galant ; Ital.

Gal'lanti.y, udv. ygulante; Span.ˆ«/«,

Gal'lantry, 7i. s. J giilano, fine dress.

These words are descriptive of persons and actions; as tliey are gay, brave, fine, courtly to ladies : also used in a bad and licentious sense. But, fare thee well, thou art a gallant youth.

Shakspeare,

One, worn to pieces with age, shews himself a young gallant. Id.

Hector, Deiphobus, and all the gallantry of Troy, I would have armed to day. Id.

Thorc are no tricks in plain and simple faith ;

But hollow men, like horses hot at hand.

Make gallant shew and promise of their mettli'.

Id.

GAL

Scorn, ihat any should kill Lis uncle, made him seek his revenge in manner ˆ«/tenf enough. Sidney.

He discoursed, how qidtant and how brave a thing it would be for his highness to make a journey into Spain, and to fetch home his mistress. Clarendon. Make the sea shine with gallantrj/, and all The English youth flock to their admiraL

Waller. The gay, the wise, the gallanl, and the grave. Subdued alike, all but one passion have. Id.

The gallants, to protect the lady's right. Their faucliions brandished at the grisly spright.

Dri)den. Gallants look to't, you say there are no sprights ; But I'll come dance about your beds at nights. Id.

She had left the good man at home, and brought away hei gallant. Addison's Spectator.

I would, if possible, represent the errors of life, especially those arising from what we call gallantry, in such a manner as the people of pleasure may read me. In this case I must not be rough to gentlemen and .ladies, but speak of sin as a gentleman. Steele.

The martial Moors, in gallantry refinedˆ Invent new arts to make th'ˆir charmers kind.

Granville. You have not dealt so gallantly with us as we did with you in a parallel case : last year a paper was brought here from England, which we ordered to be burnt by the common hangman. Swift.

It looks like a sort of compounding between virtue and vice, as if a woman were allowed to be vicious, provided she be not a profligate ; as if there were a certain point where gallantry ends, and infamy begins.

Id. When first the soul of love is sent abroad. The gay troops begin In gallant thought to plume their painted wings.

Thomson. Then there weje Frenchmen, gallant, young, and

gay.

But I'm too great a patriot to record

Their Gallic names upon a glorious day. Byron.

GALLE, 01 Port Galle, a sea-port town and fort on the south-west coast of Ceylon ; taken by the Dutch from the Portuguese in 1C40, and by the British in February, 1796. See Ceylon. It is ninety-eight miles south of Candy.

GALLEASS, n. s. Fr. galeas. A heavy, low- built vessel, with both sails and oars; it carries three masts, but they cannot be lowered, as in a galley. It has thirty-two seats for rowers, and si.x or seven slaves to each. They carry three tier of guns at the head, and at the stern there are two tier of guns.

My father hath no less

Than three great argosies, besides tyro galleasses.

And twelve tiiˆht gallics. Shakspcare.

The Venetians pretend they could set out, in case of great necessity, thirty men of war, a hundred gal- leys, and ion galleasses. Addisu7i on Italy.

GALLF,()N, 72. .s. Yr. iialion, a large ship with four or sometimes five decks, now in use only among Spaniards.

I assured them that I would stay for them at Tri- uiJado, and that no force sliould drive me thence, ex- cept I were sunk, or set on lire by the Spanish gaU It'ons. Raleigh's Apoloqy.

The number of vessels were one hundred and thirty, whereof galleasses and galleons seventy-two, goodly ships, like floating towers or castle.s.

Bacon's War with Spain.

, G.\LLEONs were formerly employed m the Spanish West India trade. The Spaniards sent annually two fleets : the one for Mexico, which they call the flota; and the other for Peru, which they call the galleons. By a general re- gulation made in Spain, it was established, that there should be twelve men of war and five ten- ders animally fitted out for the armada, or gal- leons ; eight ships of 600 tons burden each, and three tenders, one of 100 tons, for the island of Margarita, and two of eighty each, to follow the armada; for the New Spani fleet, two ships of 600 tons each, and two tenders of eifjhty each ; and for the Honduras fleet, two ships of 500 tons each : and in case no fleet happened to sail any year, three galleons and a tender ."ˆhould be sent to New Spain for the plate. Tliese regulations, of course, the

independence of South America has superseded.

GALLERY, n.s. Ft. galerie ; Ital. and Lat. galeriu, a fine room. A covered walk along the floor of a house, into which the doors of the apartments open ; in general any building of which the length raucli exceeds tiie breadth ; the seats in the playhouse above the pit.

High lifted up were many lofty towers.

And goodly galleries fair overlaid. Spenser.

Your gallery Have we passed through, not without much content.

Shahspeare.

The row of return on the banquet side, let it be all stately galleries, in which galleries let there be three cupolas. Bacon.

In most part there had been framed by art such pleasant arbours, that, one answering another, they became .x gallery aloft from tree to tree, almost round about, which below gave a perfect shadow.

Sidney.

There are covered galleries that lead from the pah'.cc to five dilferent churches. Addison.

While all its throats the gallery extends.

And all the thunder of the pit ascends. Pope.

Bombastry and buffoonery, by nature lofty and light, soar highest of all, and would be lost in tire roof (of the theatre) if the prudent architect bad not, with much more foresight, contrived for them a fourth place, called the twelve-penny gallrry, and there planted a suitable colony, who greedily inUrccpt thera in their passage. Swift.

She clapped her hands and thro' the gallery poor. Equipped for flight, her vassals, Greek and Moor.

Byron. Corsair. I pass my evenings in long galleries solely.

And that's the reason I'm so melancholy.

Id. Don Juan.

Gallery, in gardening, an ornament made with trees of different kinds.

Galleries are very common in tiie Frencii gardens, but are seldom introduced into the Britisli ones, especially since the taste for clipped trees has been exploded. For those, lunvever, wlio may still choose to have them, Miller gives tlie following directions : — In order to make a gallery in a garden, witii porticoes and arclies, a line nuist first be drawn of the length you design the gallerv to be ; wiiich being done, it is to be planted witli hornbeam, as the foiuidation of the gallery. The management of galleries is not diflicult. They require only to be digged round about, and sheared a little when there is occasion. The chief diflficulty is in the ordering the fore part of the callery, and

i

in forming the arches. Each pillar of the porti- coes or arches OKight to be four feet distant from one anotlier, and the gallery twelve feet high, and twenty feet wide, that there may be room for two or tliree persons to walk abreast. Wlien the hornbeams are grown to the height of three feet, the distance of the pillars well regulated, and the ground-work of the gallery finished, the next thing to be done is to form the frontispiece; to perform which, you must stop the hornbeam between two pillars for that purpose, which , forms the arch. As it grows, cut off those boughs which outshoot the others. In time they will grow strong, and may be kept in form by tlie shears. Portico galleries may be covered with lime-trees.

Gallery, in a ship, is a frame, made in the form of a balcony, at the stern of a ship, without board ; into wliich there is a passage out of the admiral's or captain's cabin.

Gallery, in fortification, a covered walk across the ditch of a town, made of strong beams, covered with planks, and loaded with earth ; sometimes it is covered with raw hides, to defend it from, the artificial fires of the besieged.

Gallery of a Mine is a narrow passage, or branch of a mine, carried on under ground to a work designed to be blown up. See Mine.

GALLETYLE, n.s. This word has the same import as gallipot ; a fine painted tile.

Make a compound body of glass and gaUetyle ; that is, to have the colour

milky like a chalcedon, being a stuff between a porcellane and a glass.

Bacon's Physical Rem..

GALLEY, n. s. Ital. galea ; Fr. galere ; old Fr. ga/oie, guile; barb. Gr. yaXaia. Derived according to some from galea, a helmet, pictured formerly on the prow of a vessel, according to others from yaXfoirjjc, the sword fish, or from galleon, expressing in Syriac men exposed to the sea. Heb. 'jjja wave, Minsheu. This word is the root of galleass, gallion, galliot ; it has two general acceptations ; a vessel driven with oars, much in use in the Mediterranean ; and thus considered as a place of punishment, be- cause criminals are condemned to row in them.

In the ages following, navigation did every where greatly decay, by the use of gallies, and such vessels as could hardly brook the ocean. Bacon.

Jason ranged the coasts of Asia the Less in an open boat or kind of galleij. Raleigh's History.

On oozy ground his gallies moor ; Their heads are turned to sea, their sterns to shore.

Dryden,

The most voluptuous person, were he tied to follow his hawks and his hounds, his dice and his courtships every day, would find it the greatest torment that could befal him : he would fly to the mines and the gallies for his recreation, and to the spade and the mattock for a diversion from the misery of a continual uainterrupted pleasure. South.

In Coron's Bay floats many a galley light.

Byron. Corsair.

GALLEY'-SLAVE, r/.s. Galley and slave. A person condemned for some crime to row in the galleys.

As if one ehain were not sufficient to load poor men, he must be clogged with innumerable chains : this is just such another freedom as the Turkish yalley-slaves do enjoy. Bramhall.

The surges gently dash against the shore. Flocks quit the plains, and galley-slaves their oar.

Gartb.

Hardened galley-slaves despise manumission.

Decay of Piety.

Galleys are low flat-built vessels, furnished with one deck, and navigated with sails and oars. Tlie largest sort were those employed by the 'enetians. They were commonly 162 feet long above, and 133 feet by the keel: thirty-two feet wide, with twenty-tliree feet length of stern-post. They were furnished with three masts, and thirty-two banks of oars; every bank containing two oars, and every oar being managed by six or seven slaves, usually chained thereto. In the fore part they had three little batteries of cannon, of which the lowest consisted of two thirty-six- pounders, the second of two twenty-four-pound- ers, and the uppermost of two two-pounders ; three eighteen-pounders being also planted on each quarter. The complement of men for one of tiiese galleys was 1000 or 1200; and they were esteemed very convenient for bombarding or making a descent upon an enemy's coast, as drawing but little water ; and, having by their oars frequently the advantage of a ship of war, in light winds or calms, by cannonading the latter near the surface of the water, or by scour- ing her whole length with their shot, and at the same time keeping on her quarter or bow, so as to be out of the direction of her cannon. The galleys next in size to these, which are also called half-galleys, are from 120 to 130 feet long, eigliteen feet broad, and nine or ten feet deep. They have two masts, which may be struck at pleasure ; and are furnished with two large lat-teen sails, and five pieces of cannon. They have commonly twenty-five banks of oars. A size still less than these are called quarter-galleys, carrying from twelve to sixteen banks of oars. They generally keep close under the shore, but sometimes venture out to sea to perform a sum- mer cruise.

Galley-Head, a promontory of Ireland, on the coast of Cork, on the extremity of which stands Dundede Castle. This is sometimes fa- tally mistaken by sailors, for the Old Head of Kinsale, when the light of the latter is not seen. It lies eighteen miles S.S.W. of Bandon Bridge.

Galley Worm, in zoology. See Iulus.

GALL-FLY% in entomology. See Cynips.

GALLI, in antiquity, a name given to the priests of Cybele, from the river Gallus, in Phrygia ; but of the etymology of the name we have no certain account. These priests had the names also of Curetes, Corybantes, jind Dactyli. The chief priest was called Archi-Gallus. This order of priesthood is found both among the Greeks and Romans.

Galli. See Gallia and Gauls.

Galli, five small desolate islands on the coast of the Principato Citra of Naples. They are supposed to be the Syrenusae, or islands once inhabited by the Syrens, which Ulysses passed with so much caution and hazard. Great revo- lutions, however, have been occasioned in their shape, size, and number, by the eifects of sub- terranean fire ; and some learned persons go so

fkr as to assert, that these rocks have risen from the bottom of the sea since Homer's time ; con- sequently, that those monsters dwelt on some other spot, probably Sicily or Capri. The tra- dition of Syrens residing hereabouts is very an- cient, and universally admitted; but what they really were, divested of their fabulous and poeti- cal disguise, is not easy to discover. See Syren. The Syrenusffi were only three in number ; and, therefore, if these and the Galli be the same, two more must have since risen, or tlie three have been split into five by a subterraneous convul- sion. On the largest is a watch-tower, and the next has a deserted hermitage. The principal island is only a narrow semicircular ridge, co- vered with a shallow coat of soil; two other little islands, and some jagged rocks just peeping above the waves, correspond with this one so as to trace the outline of a volcanic crater. The composition of them all is, at top, a calcareous rock, extremely shaken, tumbled, and confused, mixed with masses of breccia, disposed in a most irregular manner ; below these is lava, and the deeper the eye follows it, the stronger are the marks of fire : below the surface of the water, and in some places above it, the layers are com- plete blocks of basaltes. Hence, we may pre- sume, that central fires have heaved up to light the torrified substances that originally lay near their focus, with all the intermediate strata that covered them from the sea. The layers incline down- ivards from east to west ; the air seems to have forced its way into part of the mass while in fu- sion, and, by checking its workings, caused many .arge caverns to be left in it. These islands are uncultivated and uninhabited since the old her- mit of St. Antonio died. Myrtle covers most of the surface.

GAI.LIA, in ancient geography, a large coun- try of Europe, called Galatia by the Greeks. The inhabitants were called Galli, Celtas, Celti- beri, and Celtoscythse. Ancient Gaul was divided into four different parts by the Romans, called Gallia Belgica, Narbonensis, Aquitanica, and Celtica; though Julius Csesar divides it only into three. Besides these grand divisions, there is often mention made of Gallia Cisalpina, or Citerior, and Transalpina, or Ulterior, which last comprehended the whole of Gaul, properly so called, as possessed by the ancient Gauls. The original

*inhabitants were descended from the Celtes, or Gomerians, by whom the greatest])art of Europe was peopled ; the name of Galli, or Gauls, being probably given them long after their settlement in that country. They were anciently divided into a great number of diffe- rent nations, who were continually at war with one another, and at variance among themselves. Caesar tells us, that not OTily all their cities, can- tons, and districts, but almost all their families, were divided and torn by factions ; and this, un- doubtedly, facilitated the conquest of the whole. The general character of all these people was an excessive love of liberty, even to ferocity. This they carried to such an extreme, tliat on the appearance of incapacity of action tlu'ough old age, wounds, or chronic diseases, they put an end to their lives, or prevailed upon their friends *o kill them. Tn cities, when they found them- selves so straitly besieged that they could hold*

out no longer, instead of thinking how to obtain honorable terms of capitulation, their chief care, very often, was to put their wives and children to death, and then to kill one anotlier, to avoid being led into slavery. Their contempt of death, according to Strabo, very much facilitated their conquest by Csesar; for, pouring their numerous forces upon such an ex- perienced enemy as Caesar, their want of con- duct very soon proved the ruin of the whole. Their chief diversion was hunting ; and indeed considering the vast forests with which their country abounded, and the multitude of wild beasts which lodged in them, they were under an absolute necessity to hunt and destroy them, to prevent the country from being rendered totally uninhabitable for man. The ancient history of the Gauls is entirely wrapped up in obscurity and darkness ; all we know concerning them for a long time is, that they multiplied so fast, that their country being unable to contain them, tliey poured forth in vast multitudes into other coun- tries, which they often subdued, and in which they then settled. It often happened, however, that these colonies were so molested by their neighbours, that they were obliged to send for assistance to the mother country. The Gauls were always ready to send forth great numbers ot new adventurers ; and, as these spread desolation wherever they came, the very name of Gauls proved terrible to most of the neighbourino- nations. The earliest excursion of these people, of which we have any distinct account, was into Italy, under a famed leader, named Bellovesus, about A. A. C. 622. He crossed the Rhone and the Alps, till then unattempted, defeated the Hetrurians, and seized upon that part of the country, since known by the names of Lombardy and Piedmont. The second grand expedition was made by the Cenomani, a people dwelling between the Seine and the Loire, under a general, named Elitonis. They settled in those parts of Italy, since known by the names of Bresciano, Cremonese, Mantuan, Carniola, and Venetia. In a third excursion, two other Gaulish nations settled on both sides of the Po ; and in a fourth the Boii and Lingones settled in the

*country between Ravenna and Bologna. The time of these last three expeditions is uncertain. Tlie fifth expedition of the Gauls was more remarkable than any of the former, and happened about 200 years after that of Bellovesus. The Senones, settled between Paris an-d Meaux, were invited into Italy by an Etrurian lord, and settled themselves in Umbria. Brennus, their king, laid siege to Clusium, a city in alliance with Rome ; and this produced a war witli the Romans, in which the latter were at first defeated, and their city taken and burnt ; but at length the whole army of the Gauls was cut off by Camillus, insomuch that not a single person escaped. See RoRtE. The Gauls after this undertook some other expeditions against the Romans ; in which, though they always finally])roved unsuccessful, by reason of their want of military discipline, yet their fierceness and courage made them so formidable to the republic, that, on the first news of their march, extraordinary levies of troops were made, and sacrifices and public supplica- tions ofl^ered to tlie gods. Against the Greeks, tht**

expeditions of the Gauls were very little more successful than against the Romans. The first of these we hear of was about A. A. C. 279, the year after Pyrrhus had invaded Italy. At this time tlie Gauls, finding themselves greatly over- stocked with inhabitants at home, sent out three great colonies to conquer new countries. One of tliese armies was commanded by Brennus, another by Cerethrivis, and the third by Belgius. The first entered Pannonia, or Hungary ; the second Thrace ; and the third marched into Illy- ricum and Macedonia. Piere Belgius at first met with great success ; and enriched himself by plunder to sucli a degree, that Brennus, envying liim, resolved to enter the same countries, in order to share the spoil. In a short time, how- ever, Belgius met with such a total defeat, that his army was almost entirely destroyed ; upon which Brennus hastened to the same place. His army at first consisted of 150,000 foot and 15,000 horse: but two of his principal officers revolted, and carried off 20,000 men, with whom they marched into Thrace ; where, having joined Cerethrius, they seized on Byzantium, and the western coast cf Propontis, making the adjacent ports tributary to them. To retrieve this loss, Brennus sent for fresh supplies from Gaul, and having increased his army to 150,000 foot, and upwards of 60,000 horse, he entered Macedonia, defeated the general who opposed him, and ravaged the whole country. He next marched towards the straits of Thermopylae, to invade Greece, but was stopped by the forces sent to defend that pass against him. He passed the mountains, however, as Xerxes had formerly done ; upon which the guards retired, to avoid being surrovmded. Brennus then having ordered Acichorius, the next to him in command, to follow at a distance with part of his army, marched

with the bulk of the forces to Delphi, in order to phinder the rich temple there. This enterprise proved veiy unfortunate : a great number of his men were destroyed by a dreadful storm of hail, thunder, and lightning ; another part of his army was destroyed by an earthquake ; and the leraainder, imagining themselves attacked by the enemy, fought against eacli other the whole night, so that in the morning scarcely one-half of them remained. The Greek forces then poured in upon them from all parts, and that in such numbers, that though Acichorius came up m due time with his forces, Brennus found himself un- able to make head against the Greeks, and was defeated witli great slaughter. He himself was desperately wounded, and so disheartened by his misfortiuies, tliat, having assembled all his chiefs, he advised them to kill all the wounded and dis- abled, and to make the best retreat they could ; after which he put an end to his own life. (Jn this occasion it is said, that 20,000 of these un- happy people were executed by their own coun- trymen. Acichorius then set out with the remain- der for Gaul ; but, being obliged to march through the country of their enemies, the calamities they met with in the way were so grievous, that not one of them reached their own country : a just judgment, say the Greek and Roman authors, for their sacrilegious intentions against Delphi. The Romans, having often felt the effects of the Gaulish ferocity and courage, thought proper at

last, in order to humble them, to mvade their country. Their first successful attempt was about A. A. C. 118, under Quintus Marcius Rex. He opened a way betwixt the Alps and the Pyie- nees, which laid the foundation for conquering the whole country. This was a work of immense labor of itself, and rendered still more difficult by the opposition of the Gauls, especially those called the Sta;ni, who lived at the foot of the Alps. These people at last, finding themselves overpowered by the Romans, set fire to their houses, killed their wives and children, and then threw themselves into the flames. After this Marcius built Narbonne, which became the capital of a pro\ince.

Scaurus, the successor of Marcius, also con- quered some Gaulish nations ; and, to facilitate the sending troops from Italy into that country, he made several excellent roads between them, which before were almost impassable. These successes gave rise to the invasion of the Cimbri and Tentones. From this time the Gauls ceased to be formidable to the Romans ; at last, however, the Helvetii kindled a war with the republic, which ended in the total subjection of the country. Orgetorix had engaged a vast num- ber of his countrymen to burn their towns and villages, and to go in search of new conquests ; but Julius Cffisar, to whose lot the whole country of Gaul had fallen, made such haste to suppress them, that he reached the Rlione in eight days, broke down the bridge of Geneva, and, in five days more, finished the famed wall between that city and mount Jura, now St.

Claude, which extended seventeen miles in length, was sixteen feet high, fortified with towers and castles at proper dis- tances, and a ditch that ran the whole length of it. V'hilst this was doing, and his reinforce- ments were coming, he amused the Helvetii, who had sent to demand a passage through the country of tiie Allobroges, till his troops had arrived, and then refused it to them ; whereupon a dreadful battle ensued, in which they lost 130,000 men, besides a number of prisoners, among whom were the wife and daughter of Orgetorix, the leader of this unfortunate expe- dition. The rest submitted, and begged they might be permitted to go and settle among the -/I'dui, from whom they originally sprung, and, at the request of these last, they were permitted to do so. The Gauls were constantly in a state of variance with one another; and Cjesar, who knew how to make the most of these intestine broils, soor became the protector of the oppressed, a terror to the oppressors, and the umpire of all their contentions. Among those who applied to him for help, were his allies the ,T,dui; against whom Ariovistus, king of the Germans, joined with the Averni, who inhabited the banks of the Loire, had taken the country of the Sequani from them, and obliged them to send hostages to him. Cresar forthwith sent to demand the restitution of both, and, in an interview which he soon after obtained with that haughty and treacherous prince, had almost fallen a sacrifice to his perfidy ; upon which he bent his whole power against him, forced him out of his intrencnments, and gave him a total overthrow. Ariovistus escaped, with difficulty, over tlie Rhine ; but his two wives, and a daughter, with a great number of Germans

of distinction, fell into tlie conqueror's Iiand. Caesar, after this signal victory, led his army into winter quarters, whilst he went over the Alps to make the necessary preparations for the next campaign. By this time the Belgae were so terrified at his success, that they entered into a •confederacy against the Romans as their common enemy. Of this, Labienus, who had been left in Gaul, sent Cajsar notice, upon which he im- mediately left Rome, and made such despatch, that he arrived upon their confines in about fif- teen days. Of his arrival, the Rhemi submitted to him ; but the rest, appointing Galba king of the Suessones, general of all their forces, which amounted to 130,000 men, marched directly against him. Caesar, who had seized on the bridge of the Axona (now Aisne), led his light horse and infantry over it; and, whilst the others were encumbered in crossing that river, made such terrible slaughter of them, that tlie river was filled with their dead, insomuch that their bodies served for a bridge to those who

escaped. This new victory struck such terror into the rest, that they dispersed themselves; immediately after which the Suessones, Bellovaci, AmI)iones, and some others, submitted to him. The Nervii, indeed, joined with the Atrebates and Veromandui against them ; and, having first secured their wives and children, made a vigorous resistance for some time; but were at length defeated, and the greatest part of them slain. The rest, with their wives and old men, surrendered, and were allowed to live in their own cities and towns as formerly. The Aduatici were next sub- dued ; and, for their treachery, were sold for slaves, to the number of 50,000. Young Crassus, the son of the triumvir, subdued also seven other nations, and took possesion of their cities ; which not only completed the conquest of the Belgffi, but brought several nations from beyond the Rhine to submit. The Veneti, or ancient inhabitants of Vannes in Britanny, who had been likewise obliged to send hostages to the con- queror, in the mean time made great prepara- tions by sea and land to recover their liberty. Csesar, then in lUyricum, equipped a fleet on the Loire, and, having given the command of it to Brutus, defeated them by land, as Brutus did by sea ; and, having put their chief men to death, sold the rest for slaves. The Unelli, with Veri- dorix their chief, together with the Lexovii and Aulercii, were, about the same time, subdued by Sabinus, and the Aquitani by Crassus, with the loss of 30,000 men. There remauied nothing but the countries of the Morini and Menapii to be conquered of all Gaul. Cassar marched against tliem, but found them so well intrenched ij their inaccessible fortresses, that he contented himself with burning and ravaging their country ; and, having led his troops into winter quarters, he again passed over the Alps. He was, however, soon after obliged to defend his Gaulish conquests against a body of Germans, who were attempting to settle there, to the number of 400,000. These he totally defeated, and then resolved to carry his conquering arms into Germany. See Ger- many.

Upon his return into Gaul, he found it labor- ing under a great famine, which had caused a kind of universal revolt. Cotta and Sabinus,

who were left in the country of the Eburones, now Liege, were betrayed nito an ambush by Ambiorix, one of the Gaulish chiefs, and had most of their men cutoff. The Aduatici had fallen upon Q. Cicero, who was left there with one legion, and had reduced him to great straits : while Labienus, with his legion, was attacked by Indutiomarus, at the head of the Rhemi and Senones : but, by one bold sally, he put them to flight, and killed their general. Csesar acquired no small credit by quelling all these revolts; but each victory cost so many of his troops, that lie was forced to have recourse to Pompey for a fresh supply, who readily granted him two of his own legions to secure his Gaulish conquests ; but the Gauls, ever restless under a foreign yoke, raised up a new revolt and obliged him to return. His fear lest Pompey should gain the aff"ections of the Roman people, had

obliged him to strip the Gauls of their gold and silver, to bribe them over to his interest ; and this was no small cause of those frequent revolts which hap- pened during his absence. He ([uickly, how- ever, reduced the Nervii, Aduatici, Menapii, and Treviri ; the last of whom had raised the revolt under the command of Ambiorix; but he found the flame spread much farther, even to the greatest part of the Gauls, who had chosen Ver- cingetorix their generalissimo. Csesar was forced to leave Insubria, whither he had retired to watch the motions of Pompey, and, in the midst of winter, to repass the Alps into the province of Narbonne. Here he gathered his scattered troops with all possible speed, besieged and took Noviodunum, now Noyons, and defeated \ˆercin- getorix, who was come to its relief. He next took the city of Avaricum, now Bourges, one of the strongest in Gaul, and which had a garrison of 40,000 men; of whom he made such a dreadful slaughter, that hardly 800 escaped. Whilst he was besieging Gergovia, the capital of the Arverni, he was informed that the Nitiobriges, or Agenois, were in arms, and that the .ˆidui were sending to Vercingetorix 10,000 men, whom they were to have sent to reinforce Cffisar. Upon this news, he left Fabius to carry on the siege, and marched against the iEdui. These, upon his approach, submitted in appearance, and were pardoned; but soon after that whole nation rose, and murdered all the Italian troops in their capital. Csesar, on this, resolved to raise the siege of Gergovia, and at once attack the enemy's camp, which he did with some success ; but when he thought to have gone to Noviodunum, where his baggage, military chest, &c., were left, he heard that the iF.dui had carried them off", and burnt the place. Labienus, justly think- ing that Caesar would need his assistance, went to join him, and, in his way, defeated a Gaulish general, named Camulogeno, who came to op- pose his march: but this did not hinder the revolt from spreading all over Celtic Gaul, whi- ther Vercingetorix had sent for fresh supplies, and, in the mean time, attacked Csesar; but was defeated, and forced to retire to Alesia, a strong place, now called Alise. Hither Csesar hastened, and besieged him ; and, having drawn a double oir- cumvallation, with a view to starve him, refused all offers of a surrender from him. At length, the long expected reinforcement came, consisting of

G. Lugdunensis, III"

7. Lugdunensis, IV'

8. Aquitania, I"

160,000 men, under four generals, wlio made several fruitless attacks on Cesar's trenches, but ■were defeated in three several battles, which at leno-th obliged Vercingetorix to surrender at dis- cretion. Caesar used all his prisoners with great severity, except the iEdui and Arverni,by whose means he hoped to gain their nations, which were the most potent of Celtic Gaul ; nor was he disappointed : for both of them submitted to him, and the former received him into their capital, where he spent the winter, after putting his army into winter quarters. The Gauls, upon their former ill success, resolving to have as many separate armies as provinces, in order to embarrass him the more, Ca;sar, and his generals Labienus and Fabius, were forced to fight them one after another ; which they did, however, with such success, that, notwithstanding the season, they subdued the Biturges, Carnuti, Rhemi, and Bellovaci, with their general Correus ; by which he at once quieted all the Belgic provinces bordering on Celtic Gaul. The next who follow ed were the Treviri, the Eburones, and the Andes, under their general Dunmarus. The last place which held out against him was Uxellodwum; which was defended by the two last actmg gene- rals of the Gauls, Drapes, the Senonian, and Lv'terius, the Cadurcean. The place being strong and well garrisoned, Cffisar was obliged to march thither from the farthest part of Belgic Gaul, and soon after reduced it. Here again he caused the right hands of all that were fit to bear arms to be cut off, to deter the rest from revolting a fresh. Thus was the conquest of Gaul finished from the Alps and Pyrenees to the Rhine, all which vast

tract was now reduced to a Roman province jq. Novempopulana under the government of a prator. During his several expeditions into Gaul, Cˆsar is said to have taken 800 cities ; to have subdued 300 dif- ferent nations; and to have defeated, in several battles, 3,000,000 of men, of whom 1,000,000 were killed, and another taken prisoners. The history of the country, from the time of its con- quest by the Romans to the present, will be found under the articles France, and Rome.

The following table exhibits a comparative view of the ancient and modern political division of Gaul : —

Provinces under the French Roman provinces under Monarchy P"°^^^ °^^|"=;I^""" Augustus. ' """" "

/- Bret; S iMair ") Anjo vTour

sion into departments. Bretague aine ou raine {'Mantois j Chartrain

Isle de France ! Brie Part of Champagne Bouruosne

i

W.i

9. Aquitania, IP

11. Gallia Belgica, I”

Roman provinces under

Augustus.

Narbonensis, I”

Provinces under the French Monarchy prior to the division into departments

/■ Languedoc) Conserans ˆ Comte de Foix (.Roussillon

12. Belgica, IP

13.

Maxima Sequano rum

2. Narbonensis, II”» r Part of Lower Provence

\ Upper Dauphine

<ˆ Eastern Province

i Nice

— Nivernois

‘lˆ Orleanois

f Berri Marche Limousin Part of Poitou Bouibonnais J Auvergne Velay Gevaudan Rouergue

Alby in Languedoc (ˆ Quercy rPart of Poitou I Angoumois] Saintonge Perigord Bordelais I Agenois rLandes j Bazadois

Condomois J Comminge “ˆ Bigorre

Beam I Navarre lˆGascogne (“Territory of Treves

I Luxembourg

1 Duchy of Gueldre i<; INIessin Toulonais Lorraine Barrois ('Laonois I

Beauvoisis J Noyonnais 1 Picardie Artois Flandre r Part of Bourgogne

) . Franche Comte

ˆ . Switzerland

Electorate of Mentz

___ Treves

ˆ Palatinate

3. Alpes Maritime

14. Germania, I”

J

4. Lugdunensis, 1°

.Monaco fLyonois

I Nivernois j Burgogne

Beaujolais I Forez

lˆPart of Champagne . C Normandie

5. Lugdunensis, 11″ | Vexin Francois

*15. Germania, IP *

16. Gallia Viennensis

Worms

Spire i Alsace

1 Some districts in Suabia 1ˆ and in Switzerland

United Provinces

Part of Westphalia, &c,

/- Savoy

\ 'ivarais

•ˆ Dauphinˆ

i Comtat-Venaissin

VPait of Provence

GAL

735

GAL'LIAIID, n. s. & atlj. } Span. gagUar- Galltau'dise, n. s. Sdo; lia. gall ardo;

Fr. gaillard, derived from

Gaillard he was as goldfinch in the showe.

Chancer. T did think, by the excellent constitution of thy leg, it was formed under the star of a fialliard.

Shakspeare. I'welfih NiylU. There's nought in France That can be with a nimble galliard won : You cannot revel into dukedoms there.

Shakspeare. If there be any that would take up all the time, let him find means to take them off, and bring others on ; as musicians used to do with those that dance too long galliards. Bacon.

The ti-ipla's and changing of times have an agree- ment with the changes of motion ; as when ijaUiard tims and measure time are in the medley of one dance.

Id. Selden is a galliard by himself. Cleaveland.

At my nativity my ascendant was the watery sign of Scorpius ; I was born in the planetary hour of Saturn, and I think I have a piece of that leaden planet in me ; I am no way facetious, nor disposed for the mirth and galliardise of company. Browne.

Galliard, or Galliarda, was a sort of dance anciently in great request, consisting of very dif- ferent motions and actions, sometimes proceed- ing terra a terra or smoothly along, sometimes capering, sometimes along the room, and some- times across. It was also called Romanesque, because brought from Rome. Thomot Arbeau, in his Orchesography, describes it as consisting of five steps and five positions of th'e feet, which the dancers performed before eacli other, and whereof he gives us the score or tablature, which is of six minims and two triple times.

Galliarda, in the Italian music, a tune that belongs to the dance called galliard. The air of it is lively in time.

GALLIC Acid. This acid is procured in the most easy manner by Mr. Friedler's method, which is tlie following : —

Dissolve two ounces of common alum-water, and precipitate the solution by letting fall into.it a solution of potash ; wash the precipitate well, and transfer it into a decoction of gall-nuts (ob- tained by infusing one ounce of gall-nuts in sixteen of water, and evaporating the liquor to one-half); agitate the mixture frequently during the course of twenty-four hours, and then filter it. The fluid whicli passes through the filter is gallic acid, which may be obtained in the form of needle- shaped crystals, by evaporating it slowly till a pellicle appears, and then letting it stand undis- turbed.

These crystals, however, according to Sir 11. Davy, are contaminated with a small portion of extractive matter ; and to purify them they may be placed in a glass capsule in a sand heat, and sublimed into another capsule, inverted over this and kept cool. M. Deyeux, indeed, recommends to procure the acid by sublimation in the first instance ; putting the powdered galls into a glass retort, and applying heat slowly and cautiously ;

when the acid will rise and be condensed in the neck of the retort. This process requires great care, as, if the heat be carried so fur as to distin- gage the oil, the crystals vv-ill be dissolved imme- diately. The crystals thuo obtained are pretty large, laminated, and brilliant.

M. Barmel, of the School of Medicine at Par.'<, finds that he can obtain pure gallic acid by pouring solution of white of egg into the infu- sion of nut-galls, till this ceases to be disturbed; then to evaporate the clarified liquid to dryness, to heat the residuum with alcohol, to filter the new liquid, and concentrate it to t!io proper de- gree for the formation of gallic acid.

The gallic acid; placed on a red-hot iron, burns with flame, and emits an aromatic smell, not unlike that of benzoic acid. It is soluble i;i twenty parts of cold water, and in threa parts .it a boiling heat. It is more soluble in alcohol, which takes up an equal weight if heated, and one-fourth of its weight cold.

It has an acido-astringent taste, and reddens tincture of litmus. It does not attract humidity from the air. It forms, with the several metals, precipitates of different colors. With gold it forms a brown precipitate; with silver a gray; mercury an orange; copper a brown; lead a white ; and iron a black precipitate.

From the gallate of lead, Berzelius infers the equivalent of this acid to be 8-00. Its ultimate constituents are — hydrogen 5-00 \ carbon 56-64 ˆ- oxygen 38 36 = : 100.

GAL'LICISM, n. s. Fr. gallicisme ; Lat. gul- licus. A mode of speech peculiar to the French language; such as, he figured in controversy, he held this conduct, he lield the same language that another held before. Vide Bolingbroke.

In English I would have gallicisms avoided, that we may keep to our own language, and not follow the French mode in our speech. Felton on the Classics.

GALLIG AS'KIN S, n. s. Caligce Gctllo- Vas- conum. — Skinner. Large open hose : generally used in a ludicrous manner.

There lived a taylor in Bristol, O ;

- *****

The more he did try

He did cut them all awry.

And he could'nt cut a pair oi galligaskins, O.

Old Song, My galligaskins, that have long withstood The Winter's fury, and encroaching frosts, By time subdued, what will not time subdue, 4n horrid chasm disclose. Philips, i

GALLIMA'TIA, n. s. Fr. guUmuthias. Non- sense ; talk without meaning.

GALLIMAU'FRY, n. s. Fr. galimafree. A medley, or mixture ; and applicable in descrip- tion, to acts, persons, and objects.

They have made of our English tongue a galli- maufry, or hodgepodge of all other speeches.

Spenser.

They have a dance, which the wenches say is a gallimaufry of gambols, because they are not in't.

Shakspeare. Winter's Tale.

Sir John affects thy wife. — Why, sir, my wife is not young. — He wooes both high and low, both rich and poor ; He loves thy gallimaufry friend.

Shakspeare.

The painter who, under pretence of diverting the eyes, would f.ll Lis picture with such varii^ties as

alter the truth of history, would make a ridiculous piece of painting, and a mere yaUimaufry of his work. Dryden's Dufrcsnoy.

Galling, or excoriation, in medicine. See Excoriation".

Galling cf a Horse's Back, a disorder, oc- casioned by heat, and tlie chating or pinching of the saddle. To prevent it, some take a hind's skin, well garnished with hair, and fit it neatly under the pannel of the saddle, so tliat the hairy side may be next the horse. When a horse's back is galled upon a journey, take out a little of the stufhng of tlie pannel, over the swelling, and sew a piece of soft white leather on the in- side of the pannel ; anoint the part with salt butter, and every evening wipe it clean, rubbing it till it grow soft, anointing it again with butter, or, for want of that, with grease ; wash the swelling or hurt, every evening, with cold water and soap ; and strew it with salt, which should be left on till the horse be saddled in the morn- ing

GAL'LIOT, n. s. Fr. galliotte. A small swift galley. See Galley.

Barbarossa departing out of Hellespontus, with eighty gallies and certain galliots, shaped his course towards Italy. Knulles's History.

GALLIPAGO JsLES. See Galipago.

GALLIPOLI, a fortified city of Naples, in the Terra d'Otranto, on a peninsula on the east side of the gulf of Tarento. It joins the main land by a bridge, and is a bishop's see, is well built, and has a convenient harbour, with manufactures of muslin, cotton stockings, and stufts. Its cliief article of trade, however, is in oil, which is stored in subterraneous vaults hollowed out in the rock on which the city is built, and where it is said to improve considerably by fermentation. Inhabitants 9000. It is twenty-three miles west of Otranto, and 224 east by south of Naples.

Gallipoli, a considerable commercial town in the province of Romagna, European Turkey, is situated on the north side of the strait of Gal- lipoli, the ancient Hellespont. Population 17,000, of whom 10,000 are Turks,

and the rest Greeks and Jews. It is the see of a bishop, and tolerably well built ; the bazaars are very exten- sive, and well furnished, forming a succession of streets, each appropriated to particular ki ads of merchandise Its fountains are also many of them elegant structures. Broken fragments of ancient sculpture and architecture are found in every part of the town.

Gallipoli has two harbours, and gives name to a government of the Turkish empire, called that of the Capudan Pacha, who resides in this town. It was once fortified, but is now open: the only defence being an old castle, seated on an emi- nence. It was the first town, in Europe, taken by the Turks, and fell into their hands in 1356. It is the see of a Greek bishop, and has a popu- lation of 17,000, of whom about 10,000 are Turks, and the rest Greeks and Jews. It is eighty miles south of Adrianople, and 108 south-west of Con- stantinople.

GAL'LIPOT, n. s. Dutch, gki/c, shining earth ; or Span, gala, finery. A pot, painted and glazed, commonly i'.5?d for medicines

Plato said his master Socrates was like the ajotbc- cary's gallipots, that had on the outsides apes, owls, and satyrs ; but within precious drugs.

Bacon's Apophth.

Alexandrinus thought it unsafe to trust the real secret of his phial and gallipot to any msin. Spectator.

Here phials in nice discipline are set ; Their gallipots are ranged in alphabet. Garth.

Thou that dost ˆsculapius decide. And o'er his gallipots, in triumph ride. Fenton.

GALLO, an island of the Pacific, on the coast of Peru, in long. SO"" 33′ W., lat. P 26′ S., and containing a small Indian settlement. There is another island of this name on the coast of Bra- sil, to the north oi the island of Santa Catalina, in long. 48° 43′ W., lat. 27° 10′ S.

Gallo, an island of the South Sea, near the coast of Peru, which was the first place possessed by the Spaniards when they attempted the con- quest of Peru ; it is also the place where the Buccaneers used to come for wood and water, and to refit their vessels. Long. 88″ 0′ W., lat. 2° 30′ N.

GALLO-GK.ECIA, a country of Asia INIinor, near Bithynia and Cappadocia. It was inhabited by a colony of Gaulsˆ who assumed the name of Gallograeci, because a number of Greeks had accompanied them in their emigration. See Ga-

LATIA.

GALLOIS (John), born at Paris in 1632, noted for having been, in conjunction with JM. de Sallo, who formed the plan, the first pub- lisher of the Journal des Syavans. The first Journal was published January 5th, 1665; but these gentlemen criticised new works so rigor- ously tliat the whole tribe of authors united against it. De Sallo declined entirely after the publication of the third immber; but Gallois ventured to send out a fourth on January 4th, 1666 ; though not without a most humble adver- tisement at the beginning, in which he declared, that the author ‘ would not presume to criticise, but simply give an account of the books.’ This, with the protection of M. Colbert, reconciled the public to it; and thus began literary journals which have been continued from that time to this, under various titles and by various vvriters. Gallois continued his journal to 1674, when more important occupations oblisred him to give U over to other hands. INI. Colbert had taken him into his house to teach him Latin ; and when he lost his patron, in 1683, he was first made librarian to the king, and then Greek pro- fessor in the royal college. He died in 1707.

GALLON, 71. s. Low Lat. gelo. A liquid measure of four quarts.

Beat them into powder, and boil them in a gallon of wine, in a vessel close stopped.

Wiseman’s Surgery.

GALLOO, a large town of Kaarta, in Africa, situated in a fertile and beautiful valley, sur- rounded by rocks, 140 miles north-west of Sego.

GAL’LOON,w.s. Tr.gahn. A kind of lace of gold, silver, or silk.

GAL’LGP, v. n. & n. i. > Fr. galoper ; de-

Gal’loper, ??..”;. i rived by all the ety-

mologists, after Budreus, from Gr. KaXTraˆtiv perhaps it may como from Dut. gunt, all, and

GAL

737

GAL

loopen, to run. To move forward by leaps, so that all the feet are off the ground at once ; to move with great rapidity : the motion itself : a horse or

man that gallops. They 'gan espy

An armed knight towards them gallop fast.

That seemed from some feared foe to fly.

Faerie Queene. I did hear The galloping of horse : who was't come by ?

Sliakspeare. The golden sun Gallops the zodiack in his glistering coach. Id.

Whom doth time gallop withall ?

With a thief to the gallows. Id.

His steeds will be restrained. But gallop lively down the western hill. Donne.

Seeing such streams of blood as threatened a drowning life, we galloped toward them to part them.

Sidney.

In such a shape grim Saturn did restrain His heavenly limbs, and flowed with such a mane, When half surprised, and fearing to be seen. The leacher ˆaWo/ied from his jealous queen. Dryden.

He that rides post through a country may, from the transient view, tell how in general the parts lie ; such superficial ideas he may collect in galloping over it. Locke.

He who fair and softly goes steadily forward, in a course that points right, will sooner be at his journey's end than he that runs after every one he meets, though he gallop all day full speed. Id.

Mules bred in cold countries are much better to ride than horses for their walk and trot ; but they are commonly rough gallopers, though some of them are very fleet. Mortimer's Husbandry.

For on the sixteenth at full gallop drew In sight two horsemen, who were deemed cossacques For some time, till they came in nearer view.

Byron.

Gallop Islands, a cluster of small islands in the St. Lawrence. Long. 75° 18′ W., lat. 44° 53′ N.

Galloper, in artillery, is the name of a car- riage which serves for a pound

and a half gun. This carriage has shafts so as to be drawn with- out a limber, and is thought by some to be more convenient and preferable to other field carriages; and it may also serve for our light three and six pounders.

CALLOW, v. a. Sax. ajEelpan. To terrify; to fright.

The wrathful skies

Galloxjo the very wanderers of the dark.

And make them keep their caves. Shahspeare.

Gal' LOW, n. s. "\ Used by some in the

Gal'lows, n.s. (singular, generally in the

Gal'lowsfree, «(/;". tˆ plural, or it sometimes

Gal'lowstree, 71. S.J has another plural, gal- lowses. Goth, galgo ; Sax. jealˆa ; Belg. gdgc ; Teut. galgen ; which some derive from Lat. gaha- lus, furca, others from r\2i, high, Minsheu, from Heb. ?13J, an end; but it is probably derived from gallow, aˆrelpan, to fright. A beam laid over two posts, on which malefactors are hanged : a wretch that deserves an ignominious death. Gallowstree, the tree of terror.

But, to beware, no grace yet he hadde Til Fortune on the galwes made liim gape.

Chaucer. The Menkes Tale. Vol. IX.

Who so that bildeth his hous all of salwes. And finketh his blind hors over the falwes. And sufiereth his wif to go seke halwes. Is worthy to be honged on the galwes.

Id. The Wif of' Bathes Tale He hung their conquered arms, for more defame. On gallowtrees, in honour of his dearest dame.

Spenser. Cupid hath been five thousand years a boy. — Ay, and a shrewd unhappy gallows too.

Shakspeare. I would we were all of one mind, and one mind good ; O there were desolation of gaolers and gallow- ses. Id. Cymbeliiie. I prophesied if s. gallows were on land. This fellow could not drown. Id. Tempest. A Scot, when from the gallowtree got loose. Drops into Styx, and turns a Soland goose.

Cleaveland. He (a rebel) is resolved to raise himself, though it be but upon the gallows. Butler.

This monster sat like a hangman upon a pair of gallows : in his right hand he was painted holding a crown of laurel, in his left hand a purse of money.

Sidney. Let him be gallowsfree by my consent. And nothing suffer, since he nothing meant.

Dryden. If Haman had not set up a gallows, perhaps the king would not have ordered him to be hanged ; but if he rear a gallows, for the man whom the king de- lights to honour, the humour is very natural that he should be ordered to try it himself.

Henry. Est, vii. 9. Gallows, among our ancestors, was called furca, fork; a name by which it is still denomina- nated abroad, particularly in France and Italy. In this latter country the reason of the name still subsists ; the gallows being a real fork driven into the ground, across the legs whereof is laid a beam, to which the rope is tied. See Furca.

GALLOWAY, n. s. A horse not more than fourteen hands high, much used in the north, and so named as coming originally from Gallo- way, a shire in Scotland.

Galloway, in geography, a county of Scot- land, which is divided into two districts; the western, called Upper, and the eastern. Lower.

Galloway, Lower, or the Stewartry of Kirk- cudbright. See Kirkcudbright.

Galloway, Upper, or the county of Wigton. See WiGTON.

Galloway, Mull of, the south cape or pro- montory of all Scotland, in the county of Gal- loway, on the Irish Sea. Long. 1° 43′ W., of Edinburgh, lat. 54° 44′ N.

Galloway, New, a town of Scotland, in Kirk- cudbrightshire, near the Ken, fifteen miles north of Kirkcudbright.

GAL'LOWGLASSES,«.s. GaWog/a, an Eng- lish servitor. A name given to footmen in Ire- land ; and to soldiers, amongst the wild Irish, who serve on horseback.

A puissant and mighty power Oi gallowglasses and stout kernes. Is marching hitherward in proud array. Shakipeare.

GALLUS (Cornelius), an ancient Roman poet, born at Forum .Tulium, in Gaul. He was a particular favorite with Augustus Caesar, who made him governor of Egypt : but his mal-ad- ministration there occasioned his banishment and

iheloss of his estate ; for grief of wliich he put an

end to his own life. He wrote four books of elegies.

Gallus, the cock, in ornithology. See Pii.v-

SIANUS.

GALLY, in printing, a frame into which the compositor empties the lines out of his compos- ing stick, and in which he ties up the page when it is completed. The gaily is formed of an ob- long square board, with a ledge on t'nree sides, and a groove to admit a false bottom called a gaily slice.

GALVˆANI (Lewis), a celebrated physiologist, born at Bologna, in 1737, where many of liis relations had arrived at distingiiished eminence in jurisprudence and divinity. In his youth he became enamoured of the greatest austerities of tlie Catholic religion, and attached himself to a convent of monks, who were noted for their particular attention to the sick and dying. lie was much inclined to become a member of this order, but was dissuaded from it by one of the brotherliood ; and he afterwards devoted his at- tention to the study of medicine in its various branches. These he prosecuted under Beccari, Tacconi, Galli, and particularly Galleazzi, with whom he became an inmate, and afterwards mar- ried his daughter. From the great reputation which he acquired by his inaugural thesis, De Ossibus, in 1762, ho was, not long after, chosen public lecturer in the university, and reader in anatomy to the institute of his native city. Ilis lectures were greatly admired, and he was con- stantly attended by vast numbers; while he employed his few leisure hours in making expe- riments, and in the useful study of comparative anatomy. With the results of his assiduity he enriched the Memoirs of the Institute of Bo- logna, by inserting a number of curious observ- ations on the urinary origans, and on the organs of hearing in birds. Having fully established his anatomical and pjiysiological knowledge throughout the Italian schools, he was accident- ally led to that interesting discovery which has exalted his name among the leaders in Science, and by which it will be honorably commemo- rated. The

health of his wife was on the de- cline, and by way of restorative she was using a soup of frogs. Some of these animals being skinned for this purpose, were lying on a table in (ialvaui's laboratory, in which also stood an electrical machine ; and a person who assisted him in conducting his experiments unintention- ally brought the point of a scalpel towards tlie crural nerves of a frog which lay near the con- ductor, when the muscles of tlie limb were very strongly convulsed. Galvani repeated the expe- riment, and discovered that the convulsions only happened when the scalpel was in contact with the nerve, and a spark was drawn from the con- ductor at the same time. This led him to vary the experiment in every possible way, and at last he oliserved that the same effect took place when the lumbar nerves having been laid bare and suspended by a hook of copper, to a bal- cony of iron, swung againgst the rails by their own weight. From a great number of experi- ments Galvani concluded that all animals have within them an electricity of a peculiar nature ; that this fluid is contained in most parts, but is most apparent in the nerves and n;u;-

cles ; that it is secreted by the brain, and diffused by the nerves througli varioas parts of the body. He compared each muscular fibre to a small Leyden phial, and attempted to explain the phenomena of muscular motion by analogies taken from that instrument. He first thought of its pathological influence in regard to rheumatic, convulsive, paralytic, and other nervous affec- tions. His first publication on this subject was entitled Aloysii Galvani de viribus Electricitatis in Motu Musculari Commentarius, printed in 1791 for the Institute of Bologna. Its appear- ance instantly roused the attention of philoso- phers botli in Italy and other countries, and it was soon followed by numerous publications, in some of which the sentiments of Galvani were defended, and in others they were opposed. A number of arguments were adduced by the ce- lebrated Volta, to prove that the opinion of Galvani respecting animal electric;ty was erro- neous, and deriving the phenomena from the electric matter of the atmosphere, without al- lowing the nerves and muscles any higher place than that of the most sensible tests hitherto disco- vered. Galvani also composed a variety of memoirs on subjects connected with his profession ; and with men of science he took much pleasure to converse, and to investigate the merits of new pub- lications. In private life the character of Gal- vani was truly amiable ; and the death of his wife, in 1790, was to him a very severe shock: it brought upon him an alarming melancholy, and he indulged in it by frequent visits to iier tomb in tlie nunnery of St. Catherine, where he gave vent to the poignancy of his grief. On the French taking possession of Bologna he refused to take the civic oath of allegiance to the Cisalpine Republic, on which account he was cruelly de- prived of all his offices and dignities; and obliged to take up his residence in the house of his brother James, where he fell into a state of debility, and died on the .'ith of

November, 1798, in the sixty- first year of his age.

GALVANISM. See Electro-Galvanism.

GALWAY, a county in Ireland, in the pro- vince of Connaught, bounded on the north by]\Iayo, on the east by the river Shannon, which separates it from the King's county and Tippe- rary ; on the south by Clare, and on the west by the Atlantic Ocean. It is in extent the second county in Ireland, being next to Cork, and con- tains 2593 English square miles, or 1,659,520 acres, divided into seventeen baronies, and, in- cluding the Soudi Arran Isles, three in number, at the entrance of Galway Bay, into 116 pa- rishes. It is within the archbishopric of Tuam.

The surface of this county consists, for about one-third, of mountains, bogs, or lakes, the greater part of which is contained in the three baronies on its western side. East and south the country is flat, interspersed with a few- hills, and the soil is warm and fertile; mucli better adapted, however, for grazing than tillage; the fields are enclosed with dry stone walls, and the general basis of the soil is lime-stone. Although this part of Galway contains more gentlemen's seats, than any other portion of Ireland of the same extent, few of them are imposing in their appearance, and the general want of trees gives a dreariness to the landscape.

Tlie country between the sea and the Shannon is well watered, and contains several beautiful lakes. Lough (Jorrib here extends about twenty miles in length, its greatest breadth being eleven ; but, in the middle, it is contracted to a narrow channel, which is crossed by a ferry at Knock. It yields a fresh water muscle, that produces pearls, ' of which,' says Beaufort, ' I nave seen some very fine specimens.' Next to the Sliannon, the principal rivers are, the Black lliver. Suck, Clare, Galway, and Dunmore ; the Black lliver, on the bounds of Mayo, is subter- raneous for about three miles, and the Clare and tlie Moyiie unite their waters under ground, alternately appearing and retiring from sight. Lough Reagh and Lough Contra are fine pieces of water; the latter, in particular, which is si- tuated near the borders of Clare, is much ad- mired for its combination of hills, woods, and islands.

The Arran Isles, on the western coast, in- cluded in this county, are rocky and' pre- cipitous near the shore, which, in many places, shoots up into stupendous perpendicular cliffs. They are called the South Arran Isles, to distin- guish them from Arran Island, on the coast of Donegal. They

formerly gave the title of earl to the Butler family, which is extinct, but the title is continued in that of Gore.

There are several large estates in Galway, af- fording an income of from £5000 to £l 0,000 a- year : one of these is said to be the most exten- sive in the British Isles, and stretches along the sea coast for seventy miles. In 1809 the lent of the green land averaged from a giiinea and a half to two guineas per acre, or about 22.5. Od. an English acre. A third, perhaps, of the land is let on partnership leases, at three lives or twenty-one years, to an indefinite number of persons, sometimes eighteen or twenty, who are joint tenants, and entitled to the benefit of sur- vivorship. ‘ These people,’ according to Mr. NVˆakefield, ‘divide the land,, and give portions to their children, which consist of a fourth cr fifth of what they call ‘ a man’s share ;’ that is, of the land which originally l)elonged to one name in the lease. A certain portion of tlie whole farm, or take, as it is styled, is appropri- ated for tillage, and this portion is then divided into lots, perhaps twenty or thirty. These lots are again subdivided into fields, which are par- titioned into small lots, each partner obtaining one or two ridges ; but these ridges do not con- tinue in the hands of the same occupier longer than the time they are in tillage. The pasture is held in common; and the elders of the village are the legislators, who establish such regidations as may be judged proper for their conmumity, and settle all disputes that arise among them. Their houses stand close to each other, and form what is here termed a village.’ Galway, how- ever, has a fair proportion of resident proprie- tors. The chief towns are Galway, Tuam, and Ballinasloe, where the greatest fairs in Ireland for cattle, sheep, and wool, are held in July and October.

The cattle here are long-horned, and fully equal, in the opinion of Mr. Wakefield, to any In England. But the most valuable part of the

live stock is sheep ; ‘ some of the finest flocks m the world,’ says this writer. Potatoes are not here cultivated to so great an extent as in some parts of Ireland ; they plant them on oat stubble, or on lea that has been burned or manured, and follow with wheat, bear or barley, or oats ; which grains often follow in this order. Paring and burning the soil is common, and a great part of the rent of some of tlie estates on the shore is paid from kelp. Mr. Wakefield states, that the wages of common labor in Galway, in 1811, were 9d. a day; and, in hay and corn harvest, Is. Id. The price of potatoes was Sˆd. per stone; beef 5ˆd., and pork 3ˆd. per lb.; oat- meal 14s. per cwt. ; milk 2d., and butter-milk three farthings per quart; and herrings 5s. 3d. per hundred.

The linen manufacture is not considerable in Galway, but is the only kind of manufacture pursued to any extent. There is a consider- able salmon fishery at the town of Galway; and, in the bay, herrings, lobsters, and

crabs abound. Of the latter, such as in Dublin would bring 7s. or 8s., may be often bought here for 6d., we are told, or even for less. The oysters found at Pouldoody are much esteemed. The hardy inhabitants of the Arran Isles are at one season of the year fishermen, and at another hus<-bandmen. The cavities and fissures on their coast also being the resort of great numbers of sea-fowl, they are caught for their feathers, by men suspended by a rope from the summit of the precipices. The mutton of these islands is highly esteemed for its flavor. The principal curiosity of these isles is a circle composed of very large stones, piled up without cement, called Dun Angus, on a high cliff' projecting into the sea, in the island of Arranmore : in the same island is said to have been an abbey, which was burnt early in the eleventh century.

Tlie county of Galway sends two members to parliament, and the borough one ; the landed property of the Roman Catholics returning the members for the county. The freelmlders umount to 4000. In 1809 the Catholics i.i this county were, to the Protestants, as forty or fifty to one. In the western parts, there are districts of fifty miles, perhaps, in extent, where there is neither a church nor a single Protestant inhabitant. The militia are nearly all Catholics ; and ten Catho- lics are called on the grand jury. The Pro- testant population seems to be stationary ; but, in several parishes, the increase of the Catholic, in fifteen years before 1811, is stated to have been as five and a half to seven. In the county of Galway, the services of the Catholic church are performed by the priests in Irisli,

Galway, a town of Ireland, and capital of the foregoing county, is situated on a bay, shel- tered by the isles of Arran, and having a safe and deep harbour. Its population has been conjecturally stated at about 15,000. It is the only parliamentary borough. The harbour is defended by a strong fort : tlie town is surrounded with strong walls, and contains several large and regular streets ; the houses are generally of stone and well built. The parish church is a largo and beautifiil gothic structure; it has also an exchange, an iiospital, a charter-house, and

Tin extensive baridck for foot soldiers. It is go- verned by a mayor, sheriffs, and recorder. Gal- way has been considered as one of the strongest towns in Ireland, and held out a considerable time against general G inkle, who

*invested and took it after the battle of Aghrim ; since which time the bastions have been suffered to go to decay. Several religious houses wore in this neighbourhood, but the ruins were entirely de- molished in 16.52, to prevent Cromwell from turning them into fortifications. The salmon and herring-fisheries are carried on here with great spirit, and employ several hundred boats : it has a considerable trade in making and export- ing kelp, and the linen manufactures have, of late, been much improved. It is 108 miles south-west of Dublin. ^^ *

GAMA (Vasco de), a Portuguese admiral, celebrated for his discovery of the passage to the East Indies, by the Cape of Good Hope, was bom at Synes ; and, in 1497, was sent to the Indies by king Emanuel; he returned in 1502, and sailed thither again with thirteen vessels richly ladeu. He was made viceroy of the In- dies by king John III^ and died at Cochin on the 24th of December, 1525. Stephen and Christopher de Gama, his sons, were also vice- roys of the Indies, and celebrated in history.

GAMBADE', 7J. s. ^ Italian, gamba, a leg.

Gamba'do, n. s. ^Spatterdashes, or boots worn upon the legs above the shoe.

The pettifogger amble.s to her in his gambadoes once a week. Dennis's Letters.

(iAMBIA, a river of Western Africa, for- merly supposed to be one of the branches by whicli the Niger emptied its waters into the ocean; an opinion which has been completely refuted by Mr. Park. Its sources have never been actually visited; but they are ascertained to exist among that range of lofty mountains which form the east(frn frontier of Foota Jallo. In the higher partsj 'of its course it is called the Ba Deema.

The Gambia empties itself by a mouth three leagues wide, between the Birds' Island on the north and Cape St. Mary on the south ; is navi- gable for vessels of 300 tons, sixty leagues ; and, for those of 150 tons, 250 leagues ; or to Barra- conda, to which distance the tide is felt in the dry season from December to June. From June to September the ascent is impossible, from the rapidity of tlie current, and in these months it also overflows and inundates the low country on its banks, which latter are generally covered with mangroves. Its waters are at all times muddy : it abounds in fish, but is infested with crocodiles. The fiippopotamus also inhabits it. At Barraconda it is crossed by a bank of rocks ; above which the obstructions increase in all di- rections.

There are two channels into the river ; the northernmost, or grand channel,

is between the Birds' Island and a bank named Banguion ; it is two leagues wide, with six and seven fathoms. The southern, or little channel, is between the same bank and Cape St. Mary, and has only eight or nine feet depth.

The trade of the Gambia belonging almost exclusively to Great Britain, she has several

establishments on it: of which tiie principalis Fort James, on an island ten leagues above the entrance ; and at which the depth of the river is not less than five fathoms. This island is only 200 yards long and fifty broad ; it was originally fortified by the English, but being taken by the French, in 1688, they destroyed the works, and it has never been found necessary to restore them. The second establishment is Jillifree, or» the riglit bank opposite Fort James; it is in an healthy situation, and the neighbouring country is extremely fertile. On the left, or south bank of the river, are Vintain, two leagues above Jilli- free ; Tancrowal, twelve leagues further ; Jou- kakonda, six day's navigation above Vintain. The French factory of Albi-eda is a league below Jillifree. The river Bintan empties itself into the Gambia on the left bank, a league above Fort James, and is navigable for large boats, at all seasons, to the village of Bintan, chiefly in- habited by African Portuguese, who are de- scribed as having good houses and a neat church. The territory along the banks of the Gambia is divided among a multitude of petty sovereign- ties, among which, that of Boor Salum is a principal one. The northern bank is chiefly inhabited by the Taloffs and Mandingoes ; the southern by the Feloops.

GAisrBiA is also the name of an island in the river Bunch, which falls into the Sierra Leone from the south ; on which the French attempted a settlement in 1784.

GAMBIER'S Islands, several high islands of the South Pacific Ocean, lying in 23° 12′ S. lat., 135° 0′ W. long., occupying a space six leagues long, surrounded by a coral reef, and appearing to be well inhabited. They were discovered by captain ^^'ilson, of the missionary ship Duff", in May, 1797. The inhabitants opposed all at- tempts to land. The principal island is high, and the reef by which they are surrounded shelters all of them from the billows of the main ocean, so that the sea around is calm. They present a barren appearance, but the val- leys seemed covered with trees. Duff's Moun- tains are two lofty mountains, visible here at the distance of fourteen or fifteen leagues, and are in long. 225° 0′ E., lat. 23» 12′ S.

Gambier's Isles are also several small islands on the south coast of New Holland, at the mouth of Spencer's Gulf. Wedge Island, the largest, is in long. 136° 29′ E., lat. 35° 11′ S.

GAM'BLER, n.i A cant wDrd for game

Gam'bling, part. 5 ster : a knave, whose prac- tice it is to invite the unwary, to game and cheat them,

She had an inward abhorrence of gamhling.

Looker-on xxi.

GAMBOGE', n. s. Pret. from Cambogia, whence it first came. A resinous gum, used in medicine and painting.

Gamboge ii a concreted vegetable juice, partly of a gummy, partly of a resinous nature, heavy, of a bright yellow colour, and scarce any smell. It is brought from America and the East Indies, particularly from Cambaja, or Cambogia. Hill.

Gamboge is a concrete vegetable juice, partly of a gummy, and partly of a resinous nature. It is chiefly brought to us in large cakes or rolls

irom Cambaja in the East Indies. The best sort is of a deep yellow or orange color, breaks shin- ing and free from dross : it has no smell. It immediately communicates a bright golden color to spirit of wine, which almost entirely dis- solves it. GeofTroy says, except the sixth part. Alkaline salts enable water to act upon this sub- stance powerfully as a menstruum : the solution is somewhat transparent, of a deep blood-red color, and passes the filtre : the dulcified spirit of sal ammoniac readily and entirely dissolves it, and takes up a considerable quantity; and this solution mixes either with water or spirit, without growing turbid. As a pigment, it makes a beautifid yellow, which is much used by the painters. Dr. Lewis says, that it makes a beau- tiful and durable citron yellow stain upon mar- ble, whether rubbed in substance on the hot stone, or applied in form of a spirituous tincture. When it is applied on cold marble, the stone must afterwards be heated, to make the color penetrate. As a medicine, gamboge evacuates powerfully botli ways ; some condemn it as act- ing with too great violence, and occasioning dangerous hypercatharses. Geoffroy seems fond of it, and informs us, that he has frequently given from two to four grains, without its proving at all emetic ; and that from four to eight grains it both vomits and purges, without violence ; that its operation is soon over ; and that if given in a liquid form, and sutficiently diluted, it stands not in need of any corrector; that in the form of a bolus or pill, it is most apt to prove emetic, but very rarely has this effect if joined with mer- curius dulcis. He nevertheless cautions against its use where the patient cannot easily bear vo- miting.— It has been used in dropsy with cream of tartar or jalap, or both, to quicken their ope- ration. It is also recommended by some to the extent of fifteen grains, with an equal quantity of vegetable alkali, in cases of the tape-worm. This dose is ordered in the morning; and, if the worm is not expelled in two or three hours, it is repeated even to the third time with safety and efficacy. It is asserted that it has been given to this extent even in delicate habits. This is said to be the remedy alluded to by Baron Van Swieten, which was employed by Dr. Herens- chward.

GAM'BOL, V. n. & n. s. Fr. gambiller. To dance, leap, or skip ; the act of dancing or leap- ing : a frolic ; a wild prank. From gamb — in Yr.jambe, the leg, literally leaping into the air. 'Tis not madness That I have uttered ; bring me to the test. And I the matter will record, which madness Would gainbul from. Shakspeare. Hamlet.

Bears, tigers, ounces, pards. Gambolled before them.

Milton's Paradise Lost, The king of elfs, and little fairy queen. Gambolled

on heaths, and danced on every green.

Vri/deti. The monsters of the flood Gambol around him in the wat'ry way. And heavy whales in awkward measures play.

Pope. GA.MBOLD (.Tolm), a modern bishop of the Moravian cimrch, was born at Haverfordwest in llic early part of the last century In 1?34 he

tooK the degree .of Master of Arts at Christ- church, Oxford, and was afterwards presented by archbishop Seeker to the living of Stanton Harcourt; but he resigned this preferment in 1748, having become a convert to the opinions of Zinzendorf, an account of whose life and cha- racter he now published. In 1754 he was con- secrated a prelate of this ancient episcopal church, in which situation he displayed much activity until his death, which took place at his native town in 1771. While at Oxford he publisheil in 1740 a sacred drama, on the martyrdom of St. Ignatius, and in 1742 superintended an edi- tion of the Greek Testament printed at the Cla- rendon press. At a subsequent period of his life he assisted in translating Crantz's History of Greenland, and was the author of Maxims and Theological Ideas; a volume of Sermons on the second article of the Church of England, &c.

GAMBREL, n. s. Ital. gamba, gambareUu, the leg of a horse.

What can be more admirable than for the principles of the fibres of a tendon to be so mixed as to make it a soft body, and yet to have the strength of iron ? as appears by the weight which the tendon, lying on a horse's gambrel, doth then command, when he rears up with a man upon his back. Grew.

GAME, n.s. & v.n. ^\ Saxon, ^aman, from Game'cock, n. s. I Goth, gamiii, a tipler ;

Game'-egg, n.s. I Isl. gaman,^ jest. The

Game'keeper, n. s. ! radical, game, whence J all the rest are derived, implies simply sport, I and this idea enters into J all the compounds, as gamecock, the bird which is bred to fight ; game- egg, that from which the birds are bred ; game- keeper, a person who takes care of the birds and animals which are kept for sport. The other derivatives are expressive of various acts, and manners connected with the original meaning : gamester is a person who is engaged at play, whether viciously, or otherwise ; a merry, frolic- ■ some person ; used also in a licentious sense.

Beryn wan the first, the seconde, and the third, — And at the fourth game, in the ches amid. The burgeyse was ymated.

Chaucer. The Merchantes Second Tale.

Game'some, adj. Game'someness, n.s. Game'somely, adv. Game'ster, n.s.

Take up also

The coper teine, (not knowing thilke preest,) And hid it ; and him hente by the brcst, — And to him spake, and thus said in his game. The ClinnuHcs Yemannes Tale. Then on her head they set a garland green. And crowned her 'twixt earnest and 'twixt game.

Spenser. The games are done, and Cicsar is returning.

Shakspeare. If about this hour he make his way. Under the colour of his usual game, He shall here rind his friends with horse and men, To set him free from his captivity. id.

She's impudent, my lord. And was a common gamester to the camp. Id.

We have had pastimes here, and pleasing game.

Id. Your're a vneny gamester. My lord Sandys. Id. Henry VIII.

A man may think, if he will, that two eyes see no more than one ; or that a gamester sceth always more

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Sban a looker-on : but, when all is done, the help of good counsel is that which settPth business strait.

Bacon. A gamester, the greater master he is in his art, the wor»e man he is. Id.

When we observe the ball, how to and fro

The gameitera for':e it ; we may ponder thus That whilst we live we shall be plajcd with so. And that the world will make her game, of us.

(icurge Withers. What moanps this countrey-peasant skipping here Through prickling thistles with sjch gamsom cheerc And plucking off their tops as though for posies He gathered violets or toothlesse roses. Id.

Milo, when en»ering the Olyaipick game. With a huge ox upon his shoulders came,

DeTiham. Do they not seek occasion of new quarrels. On my refusal, to distress me more ; Or make a game of my calamities ?

Milton's Agonistei. What arms to use, or nets to frame Wild beasts to combat, or to tame. With all the mysteries of that game. Waller. This seems to be the present game of that crown, and that they will begin no other 'till they see an end of this. Temple.

Mutual vouchers for our fame we stand. And play the game into each other's hand.

Dry den. Some sportsmen, that were abroad upon game, spied a. company of bustards and cranes.

L'Estrange. Gaming leaves no satisfaction behind it : it no way profits either body or mind. Locke.

They manage the dispute as fiercely as two game- cocks in the pit. Id.

This gamexome humour of children should rather be encouraged, to keep up their spirits and improve their strength and health, than curbed or restrained. Id.

When I see a young profligate sqandering his for- tune in bagnios, or at the gaming-table, I cannot help looking on him as hastening his own death, and in a manner digging his own grave. Connoisseur.

Thus boys hatch game-eggs under birds of prey. To make the fowl more furious for the fray. Garth.

Could we look into the mind of a common gamester, wc should see it full of nothing but trumps and mat- tadores : her slumbers are haunted with kings, queens, and knaves. Addison.

Whose table wit, or modest merit share, Unelbowed by Si gamester, pimp, or player. Pope. Proud Nimrod first the bloody chace began, A mighty hunter, and his prey was man : Our haughty Norman boasts that barbarous name. And makes his trembling slaves the royal (;aj7ie. Id. All the superfluous whims relate. That fill a female gamester's pate ; What agony of soul she feels To see a knave's inverted heels. Swift.

Her youngest daughter is run away with a gamester, a man of great beauty, who in dressing and dancing has no superior. Law.

Avarice itself does not calculate strictly when it games. Burke on Parliament.

It will bear a doubt, if a gamester has any other >itlc to be called a man, except under the distinction of Hobbes, and upon claim to the charter of homo houiiriis lupus. As a human wolf I grant he has a right to his wolfish prerogatives. Cumberland.

A phantasy which sometimes seizes warriors Unless they are game as bull-dogs and fox-terriers.

Byron.

Game, in law, signifies birds, or prey, taken or killed by fowling or hunting. The property of such animals ferae natura; as are known under the denomination of game, with the nght of pur- suing, taking, and destroying them, is vested in the king alone, and from him derived to such of his subjects as have received the grants of a chase, a park, or a free warren. By the law of nature, indeed, every man, from the prince to the peasant, has an equal right of pursuing, and taking to his own use, all such creatures as are ferae natura, and tlierefore the property of no- body, but liable to be seized by the first occu- pant. But it follows, says Blackstone, from the very end and constitution of society, that this natural right, as well as many others belonging to man as an individual, may be restrained by positive laws enacted for reasons of state, or for the supposed benefit of the community. This restriction may be either with respect to the place in which this right may, or may not, bo exercised ; with respect to the animals that are the subjects of this right ; or with respect to the persons allowed or forbidden to exercise it. And, in consequence of this authority, we find, tiiat the municipal laws of many nations have exerted such power of restraint ; have in general forbid- den the entering on another man's grounds, for any cause, without the owner's leave ; have ex- tended their protection to such part cular ani- mals as are usually the objects of pursuit; and have invested the prerogative of hunting and taking such animals in the sovereign of the state only, and such as he shall authorise. Many reasons have concurred for making these con- stitutions : as, 1. For the encouragement of agriculture and improvement of lands, by giving every man an exclusive dominion over his own soil. 2. For the preservation of the several species of these animals, which would soon be extirpated by a general liberty. 3. For preven- tion of idleness and dissipation in husbandmen, artificers, and others of lower rank ; which would be the unavoidable consequence of universal license. 4. For prevention of popular insur- rections and resistance to the government, by disarming the bulk of the people : which last is a reason oftener meant than avowed, by the makers of forest or game laws. Nor, certainly, in these prohibitions is there any natural injus- tice, as some have weakly enough supposed : since, as Puffendorf observes, the law does not hereby take from any man his present property, or what was already his own ; but barely abridges him of

one means of acquiring a fu- ture property, that of occupancy ; which indeed the law of nature would allow him, but of which the laws of society have in most instances very justly and reasonably deprived him. Yet, how- ever defensible these provisions in general may be, on the footing of reason, or justice, or civil policy, we must, notwithstanding, acknowledge, that, in their present shape, they owe their im- mediate original to slavery. It is not till after the irruption of the northern nations into the Roman empire, that we read of any other pro- liibition'!, than that natural one of not sporting on any private grounds without the owner's leave. With regard to the rise and original of our pre-

*sent civil prohibitions, it will be found, that all forest and game laws were introduced into Europe at the same time, and by the same po- licy, that gave birth to the feudal system ; when tliose swarms of barbarians issued from their northern hive, and laid the foundation of most of the present kingdoms of Europe on the ruins of the western empire. For when a conquering general came to settle the economy of a van- quished country, and to part it out among his buldiers or feudatories, who were to render him ioilitary service for such donation; it behoved him, in order to secure his new acquisitions, to keep the rustici or natives of the country, and all who were not his military tenants, in as low a condition as possible, and especially to pro- hibit them the use of arms. Nothing could do this more effectually than the prohibition of liunting and sporting, and therefore it was the policy of the conqueror to reserve this right to himself, and such on whom he should bestow it; which were only his capital feudatories or greater barons. And, accordingly, we find, in the feudal constitutions, one and the same law prohibiting the rustici in general from carrying arms, and also proscribing the use of nets, snares, or othe" engines for destroying the game. This exclusive privilege well suited the martial genius of the troops, who delighted in a sport, which in its pursuit and slaughter bore some resemblance to war. ' Vita omnis,' says Cssar, speaking o" the ancient Germans,' in venationibusatque in studiis rei militaris consistit.' And Tacitus in like manner observes, that * quoties bella non ineunt, multum venatibus, plus per otium transigunt.' And, indeed, like some of their modern succes- sors, they had no other amusement to entertain their vacant hours ; they despising all arts as ef- feminate, and having no other learning than was couched in such rude ditties as were sung at the solemn carousals, which succeeded these ancient huntings. It is remarkable, that in those na- tions where the feudal policy remains tlie most unaltered, the*

forest or game laws continue in their highest rigor. In France, before the revolution, all game was properly the king's ; and in some parts of Germany it was death for a peasant to be found hunting in the woods of the nobility. With us in Britain, also, hunting lias ever been esteemed a most princely diversion and exercise. The whole island was replenished with all sorts of game in the times of the Bri- tons ; who lived in a wild and pastoral manner, without enclosing or improving their grounds; and derived much of their substance from the chase, which they all enjoyed in common. But when husbandry took place under the Saxon go- vernment, and lands betran to be cultivated, im- jiroved, and enclosed, the beasts naturally tied into tlie woody and desert tracts, which were called the forests ; and, having never been dis- posed of in the first distribution of lands, were therefore held to belong to the crown. These were rilled w'th great])lenty of game, which our royal sportsmen reserved for their own diversion, on pain of pecuniary forfeiture for such as in- terfered with their sovereign. But every free- holder had the full liberty of sportinir upon his own territories, provided he abstainf d from the

king's forests. However, upon the Norman conquest, a new doct'ine took place ; and the right of pursuing and taking all beasts of chase or venary, and such other animals as were ac counted game, was then held to belong to the king, or to such only as were authorised under him. And this, as well upon the principles of the feudal law, tliat the king is the ultimate proprietor of all the lauds in the kingdom, they being all held of him as the chief lord, or lord paramount of the fee ; and that, therefore, he has the right of the universal soil, to enter thereon, and to chase and take such creatures at his pleasure : as also upon another maxim of the common law, that these animals are bona va- cantia, and, having no othe-r owner, belong to the king by his prerogative. As, therefore, the former reason was held to vest in the king a right to pursue and take them any where, the latter was supposed to give the king, and such as he should authorise, a sole and exclusive right. This right, thus vested in the crown, was exerted with the utmost rigor, at and after the time of the Norman establishment; not only in the ancient forests, but in the new ones which the conqueror made, by laying together vast tracts of country^ depopulated for that purpose, and reserTcd solely for the king's royal diversion ; in which were exercised the most horrid tyrannies and oppressions, under color of forest laws for the sake of preserving the beasts of chase; to kill any of which, within the limits of the forest, was as penal as the death of a man. And, in pursuance of the same principle, king John laid a total interdict upon the winged as well as the four-footed creation ; capturam avium per totam Angliam interdixit. The cruel and unsupport- able hardships, which these forest .laws created to the subject, occasioned our ancestors to be as zealous for their reformation, as for the relaxation of the feudal rigors and

the other exactions in- troduced by the Norman family ; and accord- ingly we find the immunities of charta de foresta as warmly contended for, and extorted from the king with as much difficulty, as those of magna charta itself. By this charter, confirmed in par- liament, 9 Hen. III., many forests were dis- afforested, or stripped of their oppressive pri- vileges, and regulations were made in the regimen of such as remained ; particularly kill- ing the king's deer was made no longer a capital offence, but only punished by a fine, imprison- ment, or abjuration of the realm. And by a variety of subsequent statutes, together with the long acquiescence of the crown without exerting the forest laws, this prerogative is now become no longer a grievance to the subject. But as the king reserved to himself the forest for his own exclusive diversion, so he granted out from time to time other tracts of land to his subjects under the names of chases or parks ; or gave them license to make such in their own grounds ; which indeed are smaller forests in the hands of a subject, but not governed by the forest laws ; and by the common law no person is at liberty to take or kill any beasts of chase, but such as hath an ancient chase or park ; unless they be also beasts of prey. As to all inferior species of game, called beasts and fowls of warren ; the

liberty of taking or killing them is another fran- chise, or royalty, derived likewise from the crown, and called free warren ; a word which signifies preservation or custody: as the exclu- sive liberty of taking and killing fish m a public stream or river is called a free fishery ; of which, however, no new franchise can at present be granted by the express provision of magna charta, c. 16. The principal intention of grant- ing a man these franchises, or liberties, was in order to protect the game, by giving him a sole and exclusive power of killing it himself, pro- vided he prevented other persons. And no man but he who has a chase or free warren,- by grant from the crown, or prescription, which supposes one, can justify hunting or sporting upon another man's soil ; nor indeed, in thorough strictness of common law, either hunting or sporting at all. However new this doctrine may seem, it is a regular consequence from what has been before delivered, that the sole right of taking and destroying game belongs exclusively to the king. This appears, as well from the historical deduction here made, as because he may grant to his subjects an exclusive right of taking them; which he could not do, unless such a right was first inherent in himself. And hence it will follow, that no person whatever, but he who has such derivative right from the crown, is by common law entitled to take or kill any beast of

chase, or other game whatsoever. It is true that, by the acquiescence of the crown, the frequent grants of free warren in ancient times, and the introduction of new penalties of late by certain statutes for preserving the game, this exclusive prerogative of the king is little known or consi- dered ; every man that is exempted from these modern penalties looking upon himself as at li- berty to do what he pleases with the game : whereas the contrary is strictly true, and that no man, however well qualified he may vulgarly be esteemed, has a right to encroach on the royal prerogative by the killing of game, unless he can show a particular grant of free warren, or a pre- scription which presumes a grant; or some au- thority under an act of parliament. As to the latter, there are but two instances wherein an express permission to kill game was ever given by statute ; the one by 1 .Tac. I. cap. 27, altered by 9 Jac. I. cap. 11, and virtually repealed by 22 and 23 Car. II. cap. 25, which gave authority, so long as they remained in force, to the owners of free warren, to lords of manors, and to all freeholders having £40 per annum in lands of inheritance, or £80 for life or lives, or £400 per- sonal estate (and their servants), to take par- tridges and pheasants upon their own, or their masters' free warren, inheritauce, or freehold ; the other by 5 Anne cup. 14, which empowers lords and ladies of manors to appoint game-keepers, to kill game for the use of such lord or lady, which with some alteration still subsists, and plainly supposes such power not to have been in them before. The truth of the matter is, that these game laws do indeed qualify nobody, ex- cept in the instance of a gamekeeper, to kill game : but only to save the trouble and formal process of an action by the person injured, who perhaps too might remit the ofTciicc, these sta-

tutes inflict additional penalties to be recovered eitlier in a regular or summary way, by any of the king's subjects, from certain persons of in- ferior rank, who may be found offending in this particular. But it does not follow that persons excused from these additional penalties are there- fore authorised to kill game. The circumstance of having £lOO per annum, and the rest, are not properly qualifications but exemptions. And these persons so exempted from the penalties of the game statutes, are not only liable to actions of trespass by the owners of the land ; but also, if they kill game within the limits of any royal franchise, they are liable to the actions of such who may have the right of chase or free warren therein. Upon the whole, it appears that the king, by his prerogative, and such persons as have, under his authority, the Royal Franchise of Chase, Park, or Free Warren (See these articles), are the only persons who may acquire any property, however fugitive and transitory, in these animals feras naturae, while living ; which is said to be vested in them propter privilegium. And such persons as may thus lawfully hunt, fish, or fowl, ratione privilegii, have only a qua- lified property in these animals: it not being absolute or

permanent, but lasting only so long as the creatures remain within the limits of such respective franchise or liberty, and ceasing the instant they voluntarily pass out of it. It is held indeed, that if a man starts any game within his own grounds, and follows it into another's, and kills it there, the property remains in himself. And this is grounded on reason and natural jus- tice ; for the property consists in the possession ; which possession commences by the finding it in his own liberty, and is continued by the im- mediate pursuit. And so, if a stranger starts game in one man's chase or free w-arren, and hunts it into another liberty, the property conti- nues in the owner of the chase or warren ; this property arising from privilege, and not being changed by the act of a mere stranger. Or if a man starts game on another's private grounds, and kills it there, the property belongs to him on whose grounds it was killed, because it was also started there ; this property arising ratione soli. Whereas if, after being started there, it is killed in the grounds of a third person, the pro- perty belongs not to the owner of the first ground, because the property is local; nor yet to the owner of the second, because it was not started in his soil; but it vests in the person who started and killed it, though guilty of a trespass against both the owners. See Laws respecting Game. Games, in antiquity, were public diversions, exhibited on solemn occasions. Such among the Greeks were the Olympic, Pythian, Isthmian, Nemean, Jcc. games ; and, among the Romans, the Apollinarian, Circensian, Capitoline, &c. games. See Apollinarian, Olympic, Py- thian.

Games, Modern, are usually distinguished into those of exercise and address, and those of hazard. To the first belong chess, tennis, bil- liards, &c. ; and to the latter those performed with cards, or dice, as back-gammon, ombre,])icquet, whist, &c. See Back-gammon, Cards, Dice, Gaming, &c.

GAMING.

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GAMELIA, in Grecian antiquity, a nuptial feast, o- ratiier sacrifice, held in the ancient Greek families on the day before a marriage ; so called, from a custom they had of shaving them- selves on this occasion, and presenting their hair to some deity to whom they had particular obli- gations.

GAMELION, in the ancient chronology, was the eighth month of the Athenian year, con- taining twenty-nine days, and answering to the end of January and beginning of February. It was thus called, as being, in the opinion of the Athenians, the most proper season of the year for marriage.

Gaming, the art of playing or practising any game, particularly those of

*hazard ; as cards, dice, tables, &c. Gaming has at all times been considered as of pernicious consequence to the commonwealth; and is therefore severely prohi- bited by law. It is esteemed a practice intended to supply, or retrieve, the expenses occasioned by luxury ; it being a kind of tacit confession, that the company therein engaged do, in general, exceed the bounds of their respective fortunes ; and therefore they cast lots to determine upon whom the ruin shall at present fall, that the rest may be saved a little longer. But, taken in any light, it is an offence of the most alarming nature; tending, by necessary consequence, to promote public idleness, theft, and debauchery, among those of a lower class ; and, among persons of a superior rank, it has frequently been attended with the sudden ruin and desolation of ancient and opulent families, and abandoned prostitution of every principle of honor and virtue, and too often has ended in suicide. To restrain tliis pernicious vice among the inferior sort of people, tlie statute 33 Henry VIII. cap. 9, was made ; which prohibits to all but gentlemen, the games of tennis, tables, cards, dice, bowls, and other unlawful diversions there specified, unless in the time of Christmas, under pecuniary pains and imprisonment. And the same law, and also the statute 23 Geo. II. cap. 14, inflict pecuniary pe- nalties upon the master of any public house, wherein servants are permitted to game, as well as upon servants themselves who are found gaming there. But this is not the principal ground of complaint; it is the gaming in high life that demands the attention of the magistrate ; a passion to which every valuable consideration is sacrificed, and which we seem to have inherited from our ancestors, the ancient Germans ; whom Tacitus describes to have been bewitched with the spirit of play to a most exorbitant degree. * They addict themselves,' says he, ' to dice (which is wonderful) when sober, and as a se- rious employment; with such a mad desire of winning or losing, that, when stripped of every thing else, they will stake at last their liberty, and their very selves. The loser goes into a vo- luntary slavery; and, though younger and stronger than his antagonist, suffers himself to be bound and sold. And this perseverance in so bad a cause they call the point of honor; ea est in re prava. pervicacia, ipsi fidein vocant.' One would almost be tempted to think Tacitus was describing a modern iMiglishman. When men are llius intoxicated with so frantic a s|iirit,*

laws will be of little avail : because the same false sense of honor that prompts a man to sacri- fice himself, will deter him from appealing to the magistrate. Yet it is proper that laws should be, and be known publicly, that gentlemen may consider what penalties they wilfully incur, and what a confidence they repose in sharpers ; who, if successful in play, are certain to be paid with honor, or, if unsuccessful, have it in their power to be still greater gainers by informing.

Gaming, Cuance in. Hazard, or chance, is a matter of mathematical

consideration, because it admits of more and less. Gamesters either set out upon an equality of chance, or are sup- posed to do so. This equality may be altered in the course of the game, by the greater good fortune or address of one of the gamesters, whereby he comes to have a bettet chance, so that his share in the stakes is proportionably better than at first. This more and less runs through all the ratios between equality and in- finite difference, or from an infinitely little dif- ference till it come to an infinitely great one, whereby the game is determined. The whole game, therefore, with regard to the issue of it, is a chance of the proportion the two shares bear to each other. The probability of an event is greater or less, according to the number of chances by which it may happen, compared with all the chances by which it may either happen or fail. M. de Moivre, in a treatise de Mensura Sortis, has computed the variety of chances in several cases that occur in gaming, the laws of which may be understood by what follows. Suppose p the number of cases in which an event may happen, and q the number of cases wherein it may not happen, both sides have the degree of probability, which is to each other as J) to q. If two gamesters, A and B, engage on this footing, that, if the cases p happen, A shall win ; but if q happen, B shall win, and the

stake be a; the chance of A will be ~ — -, and

that of B—ˆ ; consequentl}', if they sell the

expectancies, they should have that for them respectively. If A and B play with a single die, on this condition, that if A throw two or more aces at eight throws, he shall win ; otherwise B shall win ; what is the ratio of their chances ? Smce there is but one case wherein an ace may turn up, and five wherein it may not, let «:z:l, and 6:=5. And again, since there are eight throws ofthedie, letnr:8; and you will have a-f-ˆijn — 6″ — nab”ˆ — \, to bn-ˆnub” — 1 : that is, the chance of A will be that of B as 663,991 to 10,156,525, or nearly as 2 to 3. A and B are engaged at single quoits; and after playing some time, A wants 4 of being up, and B 6 ; but B is so much the better gamester, that his chance against A upon a single throw would be as 3 to 2 ; what is the ratio of their chances ? Since A wants 4, and B 6, the game will be ended at nine throws ; therefore, raise a--b to the ninth power, and it will be uˆ--9u’b--‘i& a“bb--Ma%-{-\26a“b’\\2(Juˆb”,io 84 uH)ˆ--2C> aaW--alˆ--bˆ : call a 3, and b 2, and you will nave the ratio of chances in numbeis,viz. 1,759,077 to 194,048. A and B play at single (juoils, and A

is the best gamester, so that lie can give B 2 in 3 : what is the ratio of their chances at a single throw ? Suppose the chances as z to 1, and raise z--l to its cube, which will be zˆ--3 zˆ+3 z-{-. Now, since A could give B 2 o\it of 3, A might under- take to win the throws running ; consequently the chances in this case will be as zˆ to 3z—- 32+1. Hence z'zzS z' +32+1; or 2z'z+ 3 zˆ

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— 3:r+l. And therefore zˆ2z=.z+l ; and, con-

setpiently, z=rˆ 2 — 1. The chances, therefore, are

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ˆ2 — 1, and 1, respectively. Again, suppose 1 have two wagers depending, in the first of which I have 3 to 2 the best of tlie lay, and in the second, 7 to 4 ; what is the probability I win both wagers? 1. The probability of winning the first is I, that is the number of chances I have to win divided by the number of all the chances : the probability of winning the second is ˆ : there- fore, multiplying these two fractions together, the product will be |l, which is the probability of winning both wagers. Now, this fraction being subtracted from 1, the remainder is fl, which is the probability I do not win both wagers : there- fore the odds against me are 34 to 21. 2. If I would know what the probability is of winning the first, and losing the second, I argue thus : the probability of winning the fir.st is |, the proba- bility of losingthe second is fi: therefore multiply- ing? byi\, the product ˆˆwill be the probability of my winning the first, and losing the second ; which being subtracted from 1 , there will remain ˆ,which is the probability I do not win the first, and at the same time lose the second. 3. If I would know what the probability is of winning the second, and at the same time losing the first, I say thus : The probability of winning the second is fj; the probability of losing Ihe first is § : therefore, mul- tiplying these two fractions together, the product ˆ is the probability I win the second, and also lose the first. 4. If I would know what the pro- bability is of losing both wagers, I say, the probability of losing the first is |, and the pro- bability of losing the second j*, : therefore the probability of losing them both is §ˆ : which, being subtracted from 1, there remains || : therefore, the odds of losing both wagers is 47 to 8. This reasoning is applicable to the happening or fail ing of any events that may fall under considera- tion. Thus if I would know what the probability is of missing an ace four times together with a die, this I consider as the failing of four diff'er- ent events. Now the probability of missing the first is g, the second is also |, the third |, and the fourth I ; therefore the proliability of missing it four times together is | x g X g X §— il"ˆ ; which being subtracted from 1, there will remain {:]ˆˆ for the

probability of throwing it once or oftener in four times; therefore the odds of throwing an ace in four times, is 671 to G2.5. But if the flinging of an ace was undertaken in three times, the probability of missing it three times would be t'>fi''i~M'> which being subtracted from 1, there will remain ^ for the probability of throw- ing it once or oftener in three times : tlierefore the odds against throwing it in ihroe times are 1'25 to 91. Agaiuj suppose we would know theproba- bility of tiirowing an ace once in four times and

*no more : since the probability of throwing it the first time is i, and of missing it the other three times, is 5 X i X i, it follows, that the probability of throwing it the first time, and missing it the other three successive times, is ^XiXiXgZi^il^; because it is possible to hit every throw as well as the first, it follows, that the probability of throwing ii once in four throws, and missing it the other three, is "^^^iziTSjOt ; which being subtracted from 1, there will remain ^^g for the probability of throwing it once, and no more, in four times. Therefore, if one undertake to throw an ace once, and no more, in four times, he has 500 to 796 the worst of tlie lay, or 5 to 8, very near. Suppose two events are such, that one of tiiem has twice as many chances to come up as the other: what is the probability that the event, wliich has the greater number of chances to come up, does not happen twice before the other hap- pens once, which is the case of flinging 7 with two dice before 4 once? Since the number of chances is as 2 to 1, the probability of the first happening before the second is §, but the proba- bility of its happening twice be.ore it is but §Xior *: therefore it is 5 to 4, sev^n does not come up twice before four once. But, if it were demanded, what must be the proportion of the facilities of the coming up of two events, to make that which has the most chances come up twice, before the other comes once? The answer is, 12 to 5 very nearly: whence it follows, that the probability of throw- ing the first before the second is jf, and the pro- bability of throwing it twice is ^^xj?. or a^ : therefore the probability of not doing it is ^| : therefore tlie odds against it are as 145 to 144, which comes very near an equality. Suppose there is a heap of thirteen red cards, and another heap of thirteen black cards, what is the])robabi- lity that, taking one card at a venture out of each heap, I shall take out the two aces. The probability of taking the ace out of the first heap is I'j, the probability of taking the ace out of the second heap is ^ ; therefore the probability of taking out both aces is t^, x T3=Tife» which being subtracted from 1, there will remain ^; there fore the odds against me are 168 to 1. In cases where the events depend on one another, the manner of arguing is somewhat altered. Thus, suppose that out of one single heap of thirteen cards of one color, I should undertake to take oat first the ace ; and, secondly, the two : though the probability of taking out the ace be ^, and the probability of taking out the two be likewise I'j : yet, the ace being supposed as taken out al- ready, there will remain only twelve cards in the heap, which will make*

the probability of taking out the two to be j'j; therefore the probability of taking out the ace, and then the two, will be T5 X t;. In this last question the two events have a dependence on each other; which consists in t!iis, that one of the events being supposed as having happened, the probability of the other's happening is thereby altered. But the case is not so in the two heaps of cards. If the events in question be n in number, and be such as have the same number it of chances by which they may happen, and likewise the same number b of chances by which they may fail, raise a-bic > the

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power n. And if A and B play together, on condition that if either one or more of the events in question happen, A shall win, and B lose, the probability of

A's winning will be ja_|_fc|» Jn

nn ; and that of B's

winning will be u--b\ ; for when a + 6 is actual- ly raised to the power 7i, the only term in which a does not occur is the last /;» : therefore all the terms but the last are favorable to A. Thus if HIT 3, raising a-{-b to the cube aˆ--3a'b--3ab', +63 all the terms but 6′ will be favorable to A ; and therefore the probability of A's winning will be a + 3aˆb + 3aP, 'ˆ\ˆ—bˆ

or

— Ti3 ; and the proba

a + bf bility of B's winning will be ˆrT\3 But if A

and B play on condition, that if either two or more of the events in question happen, A shall win; but in case one only happen, or none, B shall win ; the probability of A's winning will be

a + iln — nabP — ' — bv

; for the only two terms in

n + b" which aa does not occur are the two last, viz. nabp — ' and 6p.

Gaming, Laws AGAINST. Bystat. 16 Car. II. c. 7, if any person, by playing

or betting, shall lose more than £lOO at one time, he shall not be compellable to pay the same ; and the winner shall forfeit treble the value, one moiety to the king, the other to the informer. The statute 9 Ann. c. 14, enacts, that all bonds and ot'her se- curities, given for money won at play, or money lent at the time to play withal, sliall be utterly void : that all mortgages and incumbrances of lands, made upon the same consideration, shall be and enure to the heir of the mortgager : that, if any person at one time loses £lO at play, he may sue the winner, and recover it back by ac- tion of debt at law ; and, in case the loser does not, any other person may sue the winner for treble the sum so lost; and the plaintiff in either case may examine the defendant himself upon oath : and that in any of these suits no privilege of parliament shall be allowed. The statute far- ther enacts, that if any person cheats at play, and at one time wins more than £lO or any valuable thing, lie may be indicted thereupon, and shall forfeit five times the value, shall be deemed infa- mous, and suffer such corporeal punisliment as in case of wilful perjury. By several statutes of the reign of king George II. all private lotteries by tickets, cards, or dice (particularly the games of faro, basset, ace of hearts, hazard, passage, roUy- polly, and all other games with dice, except back- gammon), are prohibited under a penalty of £200 for him that shall erect such lotteries, and £50 a-time for the players. Public lotteries, unless by authority of parliament, and all manner of in- genious devices, under the denomination of sales or otherwise, which in the end are equivalent to lotteries, were before prohibited by a great variety of statutes under heavy pecuniary penalties. But particular descriptions will be ever lame and deficient, unless all games of mere chance are at once prohibited ; tlie invention of sharpers being

swifter than the punishment of the law, which only hunts them from one device to another. The statute 13 Geo. II. c. 19, to prevent the mul- tiplicity of horse-races, another fund of gaming, directs that no plates or matches under £50 value shall be run, under penalty of £200 to be paid by the owner of each horse running, and £100 by such as advertise the plate. By statute 18 Geo. II. c. 34, the statute of 9 Ann. is further en- forced, and some deficiencies supplied : the for- feitures of that act may now be recovered in a court of equity ; and, moreover, if any man be convicted, upon information or indictment, of winning or losing any sitting of £l0 or £20 within twenty-four hours, he shall forfeit five times the sum. Thus careful has the legi-slature been to prevent this destructive vice ; wnich may show that our laws against gaming are not so de- ficient, as ourselves and our magistrates in put- ting those laws in execution.

GAM'MER, n.s. Uncertain as to its etymo- logy ; probably from Fr. grand ni}re, a term ap- plied to old women, corresponding to gatfer, says Dr. Johnson ; it is simply its feminine.

GAM'MON, n. .?. Yr.jnwbon; \i'a. gambone, the buttock of a hog salted and dried. A term used in the game called back-gammon.

Our tansies at Easter have reference to the bitter herbs ; though at the same time 'twas always the fashion for a man to have a gammon of bacon, to shew himself to be no Jew. Seidell.

Ask for what price thy venal tongue was sold : A rusty gammon of some seven years old. Dryden, The quick dice. In thunder leaping from the box, awake The sounding gammr? Thomson's Autumn,

GAMMONING, among seamen, denotes se veral turns of a rope taken round the bowspiit, and reeved through holes in knees of the head, for the greater security of tlie bowsprit.

GAMUT, n. s. Ital. gama. The scale of

musical notes.

Madam, before you touch the instrument. To learn the order of my fingering, I must begin with rudiments of art. To teach you gamut in a briefer sort. Shaksyeare,

When by tho gamut some musicians make A perfect song, others will undertake. By the same gamut changed to equal it : Things simply good can never be unfit. Donne,

Long has a race of heroes filled the stage. That rant by note, and through the gamut rage ; Tn songs and airs express their martial fire. Combat in trills, and in a fugue expire. Addison.

Gamut, Gammut, or Gam-ut.. See Music, 'GAN, for began, from 'gin for begin. The noble kniglit 'gun feel His vital force to faint. Spenser.

GANA, or Guana, a city and state of Central Africa, on the Niger. Our knowledge of it is derived almost wholly from the Arabian writers of the eleventh and twelfth centuries, at which period it was the centre of an extensive empire. It appears to have been founded by one of a Saracen dynasty, expelled from Egypt; and being a convenient emporium of trade with Northern Africa, and in the vicinity of the gold mines ot Wangara, it soon rose to a high pitch of pros- perity. The vicinity is said to have been very

fertile, and the pomp of the sovereign to have excited the admiration of all the surrounding kingdoms. Gana is thought to have been the country described to Ilorneman under the name of Cano ; and to be now an appendage of Cas- sina, and tributary with it, to Bornou. The maps place it 100 nnles south-east of Cassina.

GANCII, t'. a. Ital. ganciare, from gancio, a hook ; Fr. ganclie. To drop from a high place upon hooks byway of punishment; a practice in Turkey, to which Smith alludes in his Po- cockius.

Cohors catenis qua pia stridulis

Gemunt onusti, vel sude trans sinum

Luctantur actˆ, pendulive

Sanguineis trepidant ia uncis. Musm Angl.

G A'NDE 11, 'rt.s. Sax. san-ajia. The male of the goose.

As deep d rinketh the goose as the gander.

Camden. One gander will serve five geese. Mortimer.

GANG, V. n. & «. s. Sax. ganjan ; Dutch gangen ; Scot, gang, from Goth, ga, to go. To go, an old word used ludicrously. A tribe or herd. The substantive is used in a contemp- tuous seuse.

But let them gang alone. As they have brewed, so let them bear blame.

Spenser. O, you panderly rascals ! there's a knot, a gang, a pack, a conspiracy against me. Shakspeare.

As a gang of thieves were robbing a house, a mas- tiff fell a barking. L' Estrange. Admitted in among the gang. He acts and talks as they befriend him. Prior. Your flaunting beaus gang with their breasts open.

Arhuthnot.

GANGES (Ganga, the River), called also Padda and Burra Ganga, the Great River. An important river of Hindostan, one of the largest in Asia, formed by two streams which take their rise in the mountains of Thibet. Some doubts having arisen respecting the direction of these streams, the Bengal government, in 1808, sent lieutenant Webb to survey the upper part of the river ; and, from all the information he could obtain, he fixed the source on the south side of the great Himalaya chain. All accounts, indeed, agreed in representing the origin of the Ganges as more remote than

Gangoutri (which see), and stated that, while the course was in many places visible, in others it was covered with snow and ice. The course of the Ganges and Alaca- nanda Rivers was followed, until the former be- came a shallow and almost stagnant pool, and the latter a small stream ; and both having, in addition to springs and rivulets, a considerable visible supply from the thawing of the snow. It is therefore concluded, from analogy, that the sources of tliese rivers can be little, if at all, re- moved from the station at which these remarks were collected. No doubt can remain, says Mr. Hamilton, that the different branches of the river above Hurdvˆar take their rise on the southern side of the Himalaya chain of snowy mountains ; and it is presumable, that all the tri- butary streams of the Ganges, including the Savjew or Goggrah, and tlie Jumna, whose most conspicuous founuiin is at little distance from

the Ganges, also rise on the soutiiern side of that chain of mountains.

This river winds through the rugged country of Sirinagur, until at Hurdwar it finally escapes through an opening from the mountainous tract and enters the plains of Bengal, after a course of 800 miles. The breadth and deptli of the river in its course through Bengal greatly vary, the former from tliree miles to half a mile, and in some places it is fordable; but for 500 miles from the sea, the depth in the channel is thirty feet, when the river is lowest; the current in the dry season runs three miles an hour and five miles in the wet.

At 300 miles from the sea the Ganges separates into two great branches, which in their course to the sea diverge from eac'i other and form a delta, whose base on the coast is 200 miles : and in which there are nearly twenty openings ; the whole of the delta towards the sea being composed of low alluvion islands covered with wood named Sundry, whence the tract is called the Sunder- bunds.

The western branch of the Ganges is again subdivided into lesser branches, the two western- most of which, named the Cossimbuzar and Jel- linghee, unite again and take the name of Hoogly or Hughly to the sea. See Hoogly.

The la,test account of the upper part of the Ganges is that given by captain Hodgson, of the tenth native infantry, v/ho undertook to survey it in 1807. On the 31st of May, he descended to the bed of tlie river, and saw the Ganges issue from a very low arch at the foot of a vast bed of snow. It was bounded on each side by rocks ; but in the front, over the debouche, the mass was nearly perpendicular, and from the river to the surface of the snow was 300 feet ; ' probably the accumulation,' says he, ' of ages. It is in lay- ers of some feet thick, each seemingly the remains of a fall of a separate year. From die brow of this curious wall of snow, and immediately

above the outlet of the stream, large and hoary icicles depend : they are formed by the freezing of the melted snow-water of the top of the bed ; for in the middle of the day the sun is powerful, and the water produced by its action falls over this place in cascade, but is frozen at night. The Gango tri Brahmin who came with us, and who is only an illiterate mountaineer, observed, that he thought these icicles must be INIahideva's Hairs, whence, as he understood, it is writ- ten in the Shastra, the Ganges flows. I mention this, thinking it a good idea : but the man had never heard of such a place actually existing, nor had he or any other person, to his knowledge, even been here. In modern times tliey may not, but Hindoos of research may formerly have been here; and if so, I cannot think of any place to which tliey might more aptly give the name of a Cow's Mouth, than to this extraordinary de- bouche. The height of the arch of snow is only sufKcient to let a stream flow under it. Blocks of snow were falling about us, so there was little time to do more here than to measure the size of the stream. iMeasured by a cliain, the mean breadth was twenty-seven feet, ; tlie greatest depth at that place being knee deep, or eighteen inches, but more generally a foot deep, and ra

ther less just at the edges, say nine or ten inches : however, call the mean depth fifteen inches. Be- lieving this to be (as I have every reason to suppose it is) the first appearance oi' the famous and true Ganges in daylight, we saluted her with a bugle-march, and proceeded (having to turn a little back to gain an oblique path) to the top of the snow-bed, having ascended it to the left.'

*Captain Hodges afterwards gives the follow- ing account of this bed or valley of snow, which gives rises to the Ganges. * It appears that we passed up it, somewhat more than a mile and a half. — From our last station we could see on- wards, as we estimated, about five miles, to where there seemed to be a crest or ridge of con- siderable elevation, though low when compared with the great peak which flanked it. The ge- neral slope of the surface of the snow valley was 7°, which was the angle of elevation of the crest, while that of die peak St. George, one of those which flanked it to the left, was 17° 49'. In the space we had passed over the snow bed, tlie Ganges was not to be seen ; it was concealed, probably, many hundred feet below the surface. We had a fair view onward, and there was no sign of the river ; but I am firmly convinced that its first appearance in day is at the debouche I have described. Perhaps, indeed, some of those various*

chasms and rents in the snow-bed, which intersect it in all sorts of irregular directions, may occasionally let in the light on some part of the bed of the stream ; but the general line and direction of it could only be guessed at, as it is altogether here far below the broken snowy surface. The breadth of the snow valley or bed is about a mile and a half, and its length may be six and a half or seven miles from the debouche of the river to the summit of the slope, which ter- minated our view ; as to the depth of the snow, it is impossible to form a correct judgment, but it must be very great. It may easily be ima- gined, that a large supply of water is furnished at this season, by the melting of this vast mass in tlie valley, as well as by the melting of that of the great peaks which bound it. From their bases torrents rush, which, cutting their way un- der snow, tend to the centre of the valley, and form the young Ganges, which is further aug- mented by the waters which filter through the rents of the snow-bed itself. In this manner, all the Himalaya rivers, whose heads I have visited, and passed over, are formed ; they all issue in a full stream from under thick beds of snow, and differ from the Ganges, inasmuch as their streams are less, and so are their parent snows. On our return down the snow valley, we passed nearer to its north side than in going up, and saw a v6ry considerable torrent cutting under it from the peak ; this was making its way to the centre. At times, we saw it through rents in the snow, and at others, only heard its noise. As there must be several more such feeders, they will be fully sufficient to form such a stream as we ob- served the Ganges to be at the debouche, in the space of six or seven miles. I am fully satisfied that, if we could have gone further, we should not have again seen the river, and that its ap- pearance at Mahiidfiva's Hair was the real and first d<3bouch"(; of the B'hagirathu, All I regret

is, that we could not go to the ridge, to see what was beyond it. I suspect there must be a de- scent, but over long and impassable wastes of snow, and not in such a direction as would lead direct to any plains, as the course to bring onft to such plains would be to the north-east or north ; whereas the line of the river's course, or rather of the ridge in front, was to the south-east, parallel to the run of the Himalaya, which is generally from south-east to north-west. Immediately in front of the ridge no peaks were seen, but on its south-east flank, and at the distance of about eighteen miles, a large snovvy peak appeared : so that I think there can be no plain within a con- siderable distance of the south-east side of the ridge : if there be streams from its other side, they must flow to the south-east. After all, I do not know how we should have existed, if we had been able to go to the ridge, for we could not have arrived there before night, and to pass the night on these extensive snows, without firewood or shelter, would have cost some of us our lives; but of that we did not then consider much. We had only a few trusty men with us, and a short allowance of grain for

them, for this and the fol- lowing day, and had sent orders to the people left at Gangotri, to make their way back towards Reital, leaving us what grain could be spared, and to forward on what they might meet, as I expected some from Reital, whence we were supplied during our absence from it, of altoge- ther twenty-eiglit days. I cannot suppose, that by this way there can be any practicable or use- ful pass to the Tartarian districts, or doubtless the people would have found it out, and used it, as they do that up the course of the Jahnavi.'

The Ganges from the Gangoutri descends for a considerable way among the mountains. This is the B'hagirath4, or most sacred brancli of it, but the Dauli, being longer, should be considered, it is said by some writers, the principal source. From Hurdwar to Allahabad, where it receives the Jumna, its width is about a mile or a mile and a quarter. After this junction its course is more winding, and its bed wider, until it is successively swelled by the Goggra, the Soane, the Gunduck and several minor streams. The channel is now at the widest, which is sometimes three miles, but it is often divided by islands. Before the in- flux of the Jumna some places are fordable ; but for 500 miles above the sea, the depth, when least, is as we have said about thirty feet. Previ- ously to its junction with the ocean its breadth suddenly expands, and the current becomes so weak that it has not power to disperse the banks of mud and sand accumulated by the strong south wind, which render the principal streams too shallow to admit large vessels. The descent of the bed is nearly nine inches per mile, but the windings of the river often reduce it to four. About 200 miles in a direct line from the sea, or 300 by the course of the stream, the Delta commences. That part of the Delta bordering on the sea consists of a labyrinth of creeks and rivers, spreading over a space of coast for nearly 200 miles, called the Sunderbunds, which are principally covered with marshes and jungles.

The Ganges is subject to periodical and import- ant inundations, botli from the melting of tlu

snows on the soutnern declivities of the Himalaya chain, and from the heavy rains of the Monsoons. The whole height of this increase is reckoned at thirty-two feet. The rain begins to descend on the mountains in April, and by the latter end of June the river has risen about six feet. The rainy season in the low country then sets in, and the rise becomes more rapid, increasing from two or three inches a day, to five or six. By the lat- ter end

of July, all tlie lower parts of Bengal, near the mouths of tlie Ganges and the Burram- pooter, are overflowed. One complete sea enve- lopes every thing for 100 miles in width, the villages and trees appearing here and there above the water.

The velocity of this stream, when the water is at the lowest, is about three miles an hour, but this is increased at other seasons ; and the quan- tity of water discharged in a second, when least, has been comouted at 80,000 cubic feet. When the river is full, the quantity is double, and the velocity being increased in the proportion of three to five, the discharge is about 405,000 cubic feet per second. The medium discharge of the whole year has been stated at 180,000 cubic feet. When the floods begin to subside, the waters are so charged with earth, that the quan- tity deposited is inconceivable. One instance is recorded, in which a branch was filled up in a week nearly to a level with the adjacent coun- try, though it must have required a quantity of materials" equal to 900,000,000 solid feet. It also frequently encroaches upon one of its banks, and deposits the soil either in islands or on the opposite bank : it is stated that between Colgong and Sooty alone, more than 25,000 acres, or forty square miles, have been in this manner re- moved. Between the mountains and the sea, the Ganges is swelled by eleven large rivers equal to the Thames, and some of them as large as the Rhine. The whole of its course is estimated at 1560 miles.

'Although,' says Mr. Hamilton, ' the water of the whole river from Gangoutri to Sagor is holy, yet there are places more eminently sacred than the rest, and to these pil'jrims from a distance resort to perform their ablutions, and to take up the water that is used in their ceremonies. The chief of tliese are the five Prayags, or holy junc- tions of rivers, of which Allahabad is the princi- pal, and by way of distinction named simply Prayag. The others are situated in the province of Serinagur, at the confluence of the Alacananda, with different small rivers, and are named Deva- pagraya, Rudraprayaga, Carnaprayaga, and Nan- daprayaga. Tiie other sacred places are Hurdwar, where the river first escapes from the mountains ; Uttara Janagiri, a short distance below Monghir and Sagor Island, at the mouth of the Calcutta River, named by I'uropeans the Iloogly. Be- sides its sanctity, the Ganges is much esteemed for its medicinal])roperties,and is on this account drunk by many Mahommedans. In 1792 Abd ul Hakeem, the reigning nabob of Shanoor, near the west coast of India, although at the distance of more than 1000 miles from this river, never drank any oUier water.

' In the Hindoo Mythology Ganga (the Gan- ges) is described as the eldest daughter of the

great mountain Himavata ; her sister Ooma as the spouse of Mehadeva, the

destroying power. She is called Ganga on account of her flowing through gang, the earth; she is called Ja/mavi from a choleric Hindoo saint, whose devotions slie interrupted on her passage to the sea, and, in a fit of displeasure, he drank her entirely up; but was afterwards induced, by the humble sup- plications of the Devas (demi-gods), to discharge her by his ears. She is called Bhaghirathi from the royal devotee Bhagaratha, who, by the inten- sity and austerity of his devotions, brought her from heaven to the earth, from whence she pro- ceeded to the infernal regions, to reanimate the ashes of some of his ancestors. She is called Triputltuga, on account of her proceeding for- ward in three different directions, watering the three worlds — heaven, earth, and the infernal regions. According to the Brahminical mytho- logy, the sea, although dug before the descent of the Ganges from heaven, is, ny the Hindoos, supposed to have been empty of water.'

GA'NGHON, n. s. Fr. A kind of flower.

GA'NGLION, n. s. Gr. yayyXtov. A tumor in the tendinous and nervous parts.

Bonesetters usually represent every bone dislocated, though possibly it be but a ganglion, or other crude tumour or preternatural protuberance of some part of a joint. Wiseman.

Ganglion, in surgery, is a hard tubercle, ge- nerally moveable, in the external or internal part of the carpus, upon the tendons or liga- ments in that part ; usually without any pain to the patient.

GANGOUTRI, a noted place of Hindoo pil- grimage, situated among the Himalaya Moun- tains, in the northern province of Serinagur. Here the Ganges, running from the north by east, is only fifteen or twenty yards broad, the current is moderate, and it is not in general more than three feet deep. Two miles higher up is the place commonly called the Cow's Mouth, or a large stone in the middle of the river, which the water passes on each side, leaving only a small piece above the surface, which the Hindoo fancies to bear the resemblance of the sacred animal. On the bank nearly opposite is a temple, in which are two images representing the Ganges and the Bhaghirathi rivers. The Brahmins here divide the bed of the river into three portions, for the use of the pilgrims. One of these portions is dedicated to Brahma, anotner to 'ishnu, and the third to Seva. The performance of the pil- grimage hither is supposed botJi to redeem the soul from troubles in this world, and to insure a happy transit through all the stages of transmi- gration which it may undergo. The water taken hence is drawn under the inspection of a Brahmin, to whom a trifling sum is paid for the privilege, and it is afterwards offered up by, or on the part of the pilgrim, at the

temple of Baidyanatit, a celebrated place of Hindoo wor- ship in Bengal. The water of this river is said to be here so pure, as neither to evaporate, nor to become corrupted by being kept. The moun- tains in the vicinitj have a barren appearance, the only tree produced being the Bhurjapatra.

GANGPOOR, a small independent town and district of the province ofGundwana, situated iu

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.ˆ Fr. gmi-

>g}-ene ; Lat. 3 gansnena ;

about the 22° of north latitude, and bounded on the north by the British district of Chuta Nag- poor, in Bahar. It was annexed to the Soubali of Allahabad, during the reign of Aurengzebe, but never in reality incorporated with his em- pire. It is barren and mountainous. The chief river is the Soank, and the prmcipal towns Gang- poor and Padah.

GAN'GRENE, n. s., v. a. & v. n. ˆ Fr.

Gan'grenous, adj.

Gan'grenate, v. a. j ganˆ

Gr. yayypaiva u ypanvu), comedo. Medical terms descriptive of the state and tendency to mortification, or death, in different parts of the body; and of appearances indicative of such state.

In cold countries, when men's noses and ears are mortified, and, as it were, (jangrened with cold, if they come to a fire they rot oiT presently ; for that the few spirits that remain in those parts, are suddenly drawn forth, and so putrefaction is made complete.

Bacon.

This experiment may be transferred unto the cure of gangrenes, either coming of themselves, or intro- duced by too much applying of opiates.

Id. Natural History. Wounds immedicable

Rankle and fester, and gangrene

To black mortification. Hilton's Agonisies.

Parts cauterized, gangrenated, siderated, and mor" tified, become black, the radical moisture or vital sul- phur suffering an extinction.

Browne's Vulgar Errours.

She saves the lover, as we gangrenes stay. By cutting hope, like a lopt limb, away. Waller.

Gangrened members must be loppeU away. Before the nobler parts are tainted to decay.

Drijden.

If the substance of the soul is festered with these passions, the gangrene is gone too far to be ever cured : these inflammations will rage to all eternity.

Addison's Spectator.

The blood, turned acrimonious, corrodes the vessels, producing haemorrhages, pustules red, lead-coloured, black Tini gangrenous, Arbuthnot on Aliments.

A Gangrene, is a very great and dangerous degree of inflammation, wherein the parts af- fected begin to corrupt. See Medicine, and

StJRGERY.

GANG'WAY, n. s. Sax. jangwas. In a ship ; the several ways, or passages, from one part of it to the other.

GANG' WEEK, ?i. s. Gang and week. A term applied to rogation week, when processions are made to lustrate the bounds of parishes.

GANJAM, a fertile district, town, and sea- port, of Ilindostan, in Cicacole, constituting one of the coUectorships into which that province was divided in the year 1803. The town is situated on the north-eastern bank of a river, only navigable during the rainy season, but de- fended by a small fort, which is a regular pen- tagon, well fortified, and generally garrisoned by sepoys. It is also the station of the civil judge, collector, and commercial resident of tlie dis- trict. Since the erection of tlie cotton manu- factories, in England and Scotland, the trade of the port has much declined.

GAN-KING-FOG, a town of China, the ca- pital of the province of Kiangnan, and situated

upon the great river Yang-Tse-Kiang. A great part of the space enclosed by the walls consists of gardens, hut the eastern quarter is composed chiefly of dwelling houses, and the western of shops, which are well furnished, particularly with porcelain, drapers' and mercers' goods, horn- lanterns, caps, and trinkets. A considerable number of shops also are in the suburbs. Long. 117° 20′ E., lat. 31° 30′ N.

GANNAT, a town in the department of the AUier, and the chief place of an arrondisse- ment, France, pleasantly situated, but not well built. It has m its vicinity an alum mine, and a mineral spring of deleterious quality. Popula- tion 4100. Twenty-two miles north of Cler- mont, and thirty-six south of Moulins.

GANNET, or Soland goose. See Peh-

CANUS.

GAN'TELOPE, n. s. i The latter is a cor-

Gan'tlet, n. s. J ruption of the former,

and derived from Dut. gant, all, and loopen, to run : a military punishment, in which the cri- minal, running between tlie ranks, receives a lash from each man.

But wouldest thou friend, who hast two legs alone, Wouldst thou to run the gantlet these expose. To a whole company of hob-nailed shoes ? Dryden.

Young gentlemen are driven with a whip, to run the gantlet through the several classes. Locke.

Gantelope, in Ships of War, is executed in the following manner: — The whole ships' crew are disposed in two rows, standing face to face on both sides of the deck, so as to form a lane, whereby to go forward on one side, and return aft on the other ; each person being fur- nished with a small twisted cord, called a knittle, having two or three knots upon it. The delin- quent is then stripped naked above the waist, and ordered to pass forward between the two rows of men, and aft on the other side a certain num. ber of times, rarely exceeding three, during which every person gives him a stripe as he runs along. In his passage through this painful ordeal, he is sometimes tripped up, and very severely handled while incapable of proceeding. This punishment, which is called running the gantlet, is seldom inflicted, except for such crimes as will naturally excite a general antipatliy among the seamen ; as, on some occasions, the culprit would pass without receiving a single blow.

Gantelope, in the land service. When a soldier is sentenced to run the gantelope, the regiment is drawn out in two ranks facing each other ; each soldier, having a switch in his hand, lashes the criminal as lie runs along naked from the waist upwards. While he runs, the drums beat at each end of the ranks. Sometimes he runs three, five, or seven times, according to the nature of the offence. The major is on horse- back, and takes care that each soldier does his duty.

GANYMEDES, in mythology, a beautiful youth of Phrygia, son of Tros and brother to Ilus king of Troy; or, according to Lucian, the son of Dardanus. Jupiter was charmed witli him, and, carrying him away, made him hiscuji-bcarer in the room of Hebe. Some say that he caused him to be carried away by an eagle, and

ollitTs affirm he was himself the ravislier under the form of that bird. He deified this youth; and to comfort his father made a present to him of some of those swift liorses that the gods rode upon.

GA'NZA, 71. s. Span, gansa, a

They are but idle dreams and fancies. And favour strongly of the ganza's. Hudibras.

GAOL, n. s. k, V. a. ˆ Fr. geole ; Welsh,

Gaol'-delivery, ra. s. yg'eol; fipa..jaula; Ital.

Gao'ler, n. s. J gaiola, cuiola ; all, per-

haps, from Lat. caveola, cavca. A prison : to confine in a prison : the keeper of a prison : the judicial process which evacuates the prison, either by condemnation, or acquittal of the prisoners.

For he had yeven drinke his r/ayler so —

Of a clarre made of a certain wine.

With narcotiltes and opie of Thebes fine. That all the night, though that men wold him shake. The (jailer slept -, he mighte not awake.

CItaucer. The Knighies Tale.

Then am I the prisoner, and his bed my gaol.

Shafispeare. King Lear.

Have I been ever free, and must my house Be my retentive enemy, my gaol? Shakspeare.

I . we mean to thrive and do good, break open the qaols, and let out the prisoners. Id.

This is a gentle provost ; seldom, wheo The steeled gaoler is the friend of men. Id.

Gaoling vagabonds was chargeable, pesterous, and of no open example. Bacon.

Then doth the' aspiring soul the body leave. Which we call death ; but were it known to all.

What life our souls do by this death receive. Men would it birth oi gaul-delivery call. Davies.

I know not how or why my sui'ly gaoler, Hard as his irons, and insolent as power When put in vulgar hands, Cleanthes, Put off the brute. Dryden's Cleomenes.

From the polite part of mankind she had been banished and immured, till the death of her gaoler.

Taller.

Gaol. Every county has two gaols, one for debtors, which may be any house where the sheriff pleases; the other for the peace and matters of the crown, which is the county gaol. If a gaol be out of repair, or insufficient, &,c., justices of peace, in their quarter-sessions, may contract with workmen for the rebuilding or re- pairing it: and by their warrant order the sura agreed on for that purpose to be levied on the several hundreds, and other divisions in the coun- ty by a just rate, 11 and 12 Will. III. c. 19. See Prison.

Gaol-delivery. The administration of jus- tice being originally in the crown, in former times our kings in person rode through the realm once in seven years, to judge of and determine crimes and offences ; afterwards justices in eyre were appointed ; and since, justices ef assize and gaol- delivery, &c. A commission of gaol-delivery is a patent, in nature of a letter from the king to certain persons, appointing them his justices, or two or three of

them, and authorising them to de- liver his gaol, at such a place, of the prisoner in it: for which purpose it commands them to meet at such a placcj at the time they themselves then

appoint; and informs them that, for the same purpose, the king hath appointed his sheriff of the same county to biing all the prisoners of the gaol and their attachments, before them at the day appointed. The justices of gaol-delivery are empowered by the common law to proceed upon indictments of felony, trespass, &c., and to order to execution or reprieve : they may like- wise discharge such prisoners, as on their trials are acquitted, and those against whom, on pro- clamation being made, no evidence has appeared; they have authority to try offenders for treason, and to punish many particular offences, by sta- tute 2 Hawk. 24. 2. Hale's Hist. Placit. Cor. 35. Gaolers. Sheriffs are to make such gaolers for whom they will be answerable : but iif there be any default in the gaoler, an action lies against him for an escape, &,c., yet the sheriff is most usually charged ; 2 Inst. 592. Where a gaoler kills a prisoner by hard usage, it is felony; 3 Inst. 52. No fee shall be taken by gaolers, but what is allowed by law, and settled by the judges, who may determine petitions against their extortions, &c., 2 Geo. II. c. 22.

GAONS, a certain order of Jewish doctors, who appeared in the East, after the closing of the Talmud. The word gaons signifies excellent or sublime ; as in the divinity schools we formerly had irrefragable, sublime, resolute, angelic, and subtile doctors. The Gaons succeeded the Sebu- rceans, or Opines, about the beginning of the sixth century. Chanan Meischtia was the head and first of the Gaons. He restored the academy of Pandebita, which had been shut up for thirty years.

GAP, n. s. ■N Saxon, ˆeapan; Goth.

Gape, u. n. f gˆ'P- Primary sense, an

Gaper, n.s. V opening; and used in re-

Gap-toothed, adj. i ference to a variety of

Gat-toothed. J subjects, both literally

and figuratively. One who opens his mouth ;

stares vacantly and foolishly. To stop a gap is

to supply a deficiency ; to stand in the gap is to

expose himself for the protection of some one in

danger. Gap-toothed, a person whose teeth are

widely separated from each other: gat-toothed

in Chaucer may be understood as debauched,

from Fr. gate ; or, perhaps, gat-toothed may be

simply goat-toothed.

Gat-toothed wos she sothly for to say,

Chaucer. Prologue to the Canierburtf Tales.

See how he galpeth, lo, this dronken wight. As though he wold us swallow anon aright. Hold close thy mouth, man.

Id. The Manciples Prolog-M.

The former kings of England passed into them a great part of their prerogatives ; which though then it was well intended, and perhaps well deserved, yet now such a gap of mischief lies open thereby, that could wish it were well stopt. Spenser.

The loss of that city concerned the Christian com- monweal : manifold miseries afterwards ensued by the opening of that gap to all that side of Christendom.

Knolles.

Each one demand, and answer to his part Performed in his wide gap of time, since first We were dissevered. Shakspeare. Winter's Tale.

If you violently proceed against him, mistaking his purpose, it would make a great gap in your honour

Id. King Lear.

i

May that ground [/ape, and swallow me alive. Where I shall kneel to him

that slew my father.

Shakspeare.

Some men there are love not a. gapiny pig ; Some, that are mad, if they behold a cat. Id.

The great horse-mussel, with the fine shell, doth gape and shut as the oysters do.

Bacon's Natural History.

The golden shower of the dissolved abbey-lands rained well near into every gaper's mouth. Carew.

To her grim death appears in all her shapes ; The hungry grave for her due tribute gapes.

Denham.

With terruurs and with furies to the bounds And crystal wall of heaven ; which, opening wide. Rolled inward, and a spacious gap disclosed Into the wasteful deep. Milton's Paradise Lost.

Others will gape to' anticipate

The cabinet designs of fate ;

Apply to wizards, to foresee

What shall, and what shall never be. Hudihras.

There is not, to the best of my remembrance, one vowel gaping on another for want of a caesura in this poem. Dryden.

The reeve, miller, and cook, are distinguished from each other, as much as the mincing lady prioress and the broad speaking gup-toothed wife of Bath. Id.

As callow birds. Whose mother's killed in seeking of the prey. Cry in their nest, and think hnr long away ; And at each leaf that stirs, each blast of wind. Gape for the food which they must never find. Id.

What "would become of the church if there were none more concerned for her rights than this ? Who would stand in the gap ? Lesley,

Where elevated o'er the gaping crowd. Clasped in the board the perjured

head is bowed. Betimes retreat. Gay's Trivia.

Gaping or yawning, and stretching, do pass from man to man ; for that that causeth gaping and stretch- ing is when the spirits are a little heavy by any vapour. Arbuthnot.

That all these actions can be performed by ali- ment, as well as medicines, is plain ; by observing the effects of different substances upon the fluids and solids, when the vessels are open and gape by a wound. Id.

The hiatus, or gap, between two words, is caused by two vowels opening on each other. Pope.

She stretches, gapes, unglues her eyes.

And asks if it be time to rise. Swift.

His policy consists in setting traps. In finding ways and means, and stopping gaps. Id.

Ah, Vice ! how soft are thy voluptuous ways While boyish blood is mantling who can 'scape The fascination of thy magic gaze ? A cherub-hydra round us dost thou gape, And mould to every taste thy dear delusive shape. Byron. Chslde Harold.

Gap, a town and bishop's see of France, the capital of the department of tyie Upper Alps. It stands in a deep funnel-shaped valley surrounded by barren mountains, though the soil in the vicinity is rich, and is an ill built place, with narrow streets and low houses. The museum of its literary society contains a variety of curious minerals, plants, and birds of the Alps. Here is also a magnificent monument of the due de Les- diguieres, too well known in the civil wars of France. Gap is an ancient town, being mentioned under the name of Vapinum by Antoninus. It was sacked and burnt in 1692 by the duke of Savoy, and which its present state shows but too Vol. IX.

plainly. Population 8000. Fifty-six miles south by east of Grenoble, and 426 south by east of Paris.

GAR, V. a. Isl. gkra. To make. Obsolete, except in Scotland.

But specially I pray the hoste dere I Gar us have mete and drinke, and make us chere And we sal paien, trewely at the full. '

Chaucer. The Reves Talc.

Tell me, good Hobbinol, what gars thee greet.' What ! hath some wolf thy tender lambs ytorn ?

Or is thy bagpipe broke, that sounds so sweet ? Or art thou of thy loved lass forlorne ? Spenser.

GARAMA, in ancient geography, the capital of the Garamantes in Libya Interior ; near the spring of the Cinyphus, now in ruins. It lay south of Gffitulia, extending from the springs of the Cinyphus, and the Gir, to the mountains which form at the Vallis Garamantica (Pliny) : or from the springs of the Bagrades to the lake Nuba (Ptolemy).

GARAMOND (Claude), a very ingenious letter-founder, born at Paris ; where he began, in the year 1510, to found his printing-types, free from all the remains of the Gothic, or (as it is generally called) the black letter, and brought them to such perfection, that in Italy, Germany, England, and Holland, the booksellers, by way of recommending their books, distinguished the types by his name ; and in particular, the small Roman was by way of excellence known among the printers of these nations by the name of Ga- ramond's small Roman. By the special command of king Francis I. he founded three sizes of Greek types for the use of Robert Stephens, who with them printed all his beautiful editions of the New Testament, and other Greek authors. He died at Paris in 1561.

GARASSE (Francis), a remarkable Jesuitical writer, the author of that irreconcileable enmity which so long subsisted between the Jesuits and Jansenists, was born at Angoulesme, in 1585, and entered the Jesuits' College in 1600. As he had a quick imagination, a strong voice, and a peculiar turn to wit, he became a popular preacher in the chief cities of France ; but distinguished himself still more by his writings, which were bold, licentious, and produced much contro- versy. The most considerable in its consequence was entitled La somme Theologique des veritez capitals de la Religion Chretienne; which was first attacked by the abbot of St. Cyran, who ob- serving in it a prodigious number of falsifications of the Scriptures and of the fathers, besides many heritical and impious opinions, conceived the honor of the church required him to undertake a refutation. Accordingly he publislicd a full answer to it; while Garasse's book was also under examination of the doctors of the |Sor- bonne, by whom it was afterwards condemned. Garasse replied to St. Cyran ; but tlie Jesuits were forced to remove their brother to a distance from Paris ; where, probably weary of his inac- tive obscurity, when the plague raged at Poic- tiers. in 1631, he bogged leave of his superior to attend the sick, in which charitable ofiice he was infected and died.

G-\RB, 7(. .s. Fr. garhe. ; Ital. garho ; Teut. garb. Dress ; fasiiion ; external

appearance.

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GAR

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GAR

This is som"; fellow. Who, having been praised for bluntness, doth affect A saucy roughness, and constrains the yarb Quite from his nature. Skakspcare. King Lear.

Horace's wit, and Virgil's state. He did not steal but emulate ; And when he would like them appear.

Their garb, but not their clothes, did wear.

J)enham.

Thus Belial, with words clothed in reason's garb, Counselled ignoble ease and peaceful sloth, Mitlon.

He puts himself into the garb and habit of a pro- fessor of physick, and sets up. U Estrange. He saw his white walls shining in the sun.

His garden trees ail shadowy and green; He heard his rivulet's light bubbling run ;

The distant dog-bark ; and perceived between The umbrage of the wood, so cool and deen.

The moving figures, and the sparkling sheen Of arms (in the East all arm) — and various dyes Of coloured garbs, as bright as butterflies.

Byron. Don Juan.

GAR'BAGE, 7i.s. ˆ .Goth, giorb ; or Span.

Gar'bidge, n.s. ˆgarbeai-. The internal

Gar'bish, n. s. J viscera of the body. The cloyed will. That satiate, yet unsatisfied desire, that tub Both filled and running, ravening first the lamb. Longs after for the garbage. Shakspeare. Cymbeline.

Lust, though to a radiant angel linked. Will sate itself in a celestial bed.

And prey on garbage. Id. Hamlet.

A flam more senseless than the roguery

Of old Aruspicy and augury.

That out of garbages of cattle

Presaged the' events of truce or battle. Hudibras.

All shavings of horns, hoofs of cattle, blood, and garbage, is good manure for land. Mortimer,

In Newfoundland they improve their ground with the garbish of fish. Id. Husbandry.

GAll'BLE, v.d. ˆ Ital. garhellare; Span.

Gar'bler, n. s. S garbcllar. To separate, either in a good or bad sense; generally in the latter : to mutilate or abbreviate.

But you, who fathers and traditions take. And garble some, and some you quite forsake.

Drydcn.

Had our author set down this command, without garbling, as God gave it, and joined mother to father, it had made directly against him. Locke.

The understanding works to collate, to combine, and garble the images and ideas, the imagination and memory present to it. Clieyne.

4 farther secret in this clause may best be dis- covered by the projectors, or at least the garblers of it. Stvift's Examiner.

GAR'BOTL, M. s. Fr. garbouUle ; \.A. gar- bitglio. Disorder or uproar.

Look here, and at thy sovereign leisure read What garboils she awaked. Shakspeare.

GARCIAS-LASSO, or Garcilasso de la Vega, a Spanish poet, was born at Toledo in 1503. The younger son of a noblemane he was early distinguished for his elegant wit and fancy, and adopted the poetical principles of his friend Boscan, which he was a principal instrument in rendering popular. His works consist princi- pally of pastorals. Garcilasso followed tlie pro- fession of arms, and attended Charles '. in many of his expeditions, in one of which he lost nis life at the early age of tliirty-three.

GARCINIA, in botany, a genus of the mono- gynia order and dodecandria class of plants, and in the natural method ranking under the eigh- teenth order, bicornes : gal. tetraphyllous infe- rior, there are four petals; tiie berry is octosper- mous, and crowned with a shield-like stigma. Species four, all East Indian trees; the princi- pal one is, G. niangostana, a tree of great ele- gance, growing to about seventeen or eighteen feet high, ‘ with a straight taper stem like a fir;’ having a regular tuft in form of an oblong cone, composed of many branches and twigs, spread- ing out equally on all sides without leaTing any hollow. Its leaves are oblong, pointed at both ends, entire, smooth, of a shining green on the upper side, and of an olive on tlie back. Its flower is composed of four petals almost round, or a little pointed ; their color resembles tiiat oi a rose, only deeper and less lively. Tlie calyx of this flower is of one piece, expanded, and cut into four lobes. Tlie two upper lobes are some- thing larger than the lower ones ; they are green- ish on the outside, and of a fine deep red witliin : the red of the upper ones is more lively tlian that of the lower ones. This calyx encloses all the parts of the flower; it is supported by a pe- dicle, which is green, and constantly comes out of the end of a twig above the last pair of leaves. The fruit is round, of the size of a small orange, from an inch and a half to two inches in diame- ter. The body of this fruit is a capsula of one cavity, composed of a thick rind, a little like tliat of a pomegranate, but softer, thicker, and fuller of juice. Its thickness is commonly of a quar- ter of an inch. Its outer color is a dark brown purple, mixed with a little gray and dark green. The inside of the peel is a rose color, and its juice is purple. This skin is of a styptic or astringent taste, like that of a pomegranate ; nor does it stick to the fruit it contains. The inside of this fruit is a furrowed globe, divided into seg- ments, like those of an orange, but unequal in size, and not adhering to each other. The num- ber of these segments is always equal to that of the rays of the top which covers the fruit. The fewer there are of these segments, the bigger they are. There are often in the same fruit segments as big again as any of those that are on the side of them. These segments are white, a little trans- parent, fleshy, membranous, full of juice like cherries or raspberries, of the taste of strawberries and grapes together. Each of the segments en- closes a seed of the figure and size of an almond stripped of its shell, having a protuberance on one of its sides. These seedˆ are covered with two small skins, the outermost of which serves for a basis to the filaments and membranes of which the pulp is composed. The substance of these seeds comes very near to that of chestnuts, as to their consistency, color, and astringent qua- lity. ‘ This tree originally grows in the Molucca islands, where it is called mangostan, Init has been transplanted thence to the islands of Java and Malacca, at which last place it thrives very well. Its tuft is so fine, so regular, so equal, and the appearance of its leaves so beau- tifiil, that it is at present looked upon at Batavia as the most proper for adorning a garden and af- fording an

agreeable shade. There are few seeds.

however, to be met with in this fruit that are good for planting, most part of tliem being abor- tive. Rumpliius oljserves, that the mangos- tan is universally acknowledged to be the best and wholesoraest fruit that grows in India ; that its flesh is juicy, white, almost transparent, and of as delicate and agreeable a flavor as the richest grapes; the taste and smell being so grateful, that it is scarcely possible to be cloyed witii eating it. He adds, tiiat wlien sick people have no re- lish for any other food, they generally eat tliis with great delight; but, should they refuse it, their recovery is no longer expected. On tiie top of the fruit is the figure of five or six small triangles joined in a circle ; and at the bottom several hollow green leaves, which are remains of theblossom. When they are to be eaten, the skin, or rather flesh, must be taken off; under which are found six or seven white kernels, placed in a circular order ; and the pulp with which these are enveloped is the fruit, than which nothing can be more delicious. It is a happy mixture of the tart and the sweet, which is no less whole- some than pleasant : and, like the sweet orange, is allowed in any quantity to those who are a/flicted with putrid or inflammatory fevers.

GAIIBIE, that division of Lower Egypt which is included between the Nile of Rosetta, and the Nile of Damietta. It is the best wa- tered and most fertile part of the Delta, and is intersected by numerous canals, but it has no natural variety of surface : its ornaments are tlie luxu'-iant vegetation, and numerous villages, with which it is covered. Me-Mehallet el Kibeer is the principal town.

GARD, a department of France, part of Lan- guedoc, and surrounded by the Mediterranean and the departments of the Lozere, the Ardeche, the Rhone, the Herault, and the Aveyron. It is divided into the four arrondissements of Nismes (the chief town), Uzes, Alais, and X'igan, and has a population of more than 322,000. It forms part of the ninth military division, and of the diocese of Avignon : in regard to jurisdic- tion, it is subject to the cour royale at Nismes.

This department is on the south, level and fertile : winter is here scarcely known, but the sirocco, and the crowds of mosquitoes are trou- blesome : thunderstorms are also frequent. The northern part lies among tlie Cevennes, is rugged and barren, but populous, and carrying on a number of

manufactures. It also has mines of copper, lead, iron, pit-coal, vitriol, and some of gold and silver. This department is on the •whole considered one of the most thriving in France. The Protestant and Catholic popula- tion, however, being nearly equal, frequent re- ligious disputes still occur, and are urged with disgraceful animosity. Hence the wars of the Cevennes so destructive. In our own day, the burning of houses, and the massacre of their inhabitants, occurred after the second return of Louis XV II I.

Gard, Font vv, is a celebrated Roman a(]ue- duct, in the department of the Gard,- joining two mountains, and passing over the Gard or Gardon. It is 157 feet in height, 530 in length at the bottom, and 872 at the top, and consists of three tiers of arches. The lowest tier has

six arches, the second eleven, and the third thirty-five, but these last are much smaller than tlie others. It support? a canal of four feet wide, and five deep, lined with a strong cement, ˆvhich has never failed. The road to Nismes is made by a band of some miles to pass by this aqueduct, and a bridge is thrown over the Gar- don, close to its eastern side. It is accessible only at its southern extremity. Its boldness and simplicity always excite the admiration of tra- vellers. Rousseau says, the Romans alone were capable of producing such a work.

Gard, or Gardon, a river of Lower Lan- guedoc, France, which rises in the Cevennes, and falls into the Rhone, three miles above Beau- caire. It is small, but is often increased by land floods.

GARDA, a lake of Austrian Italy, formed by the rivers Trent, Saraca, and Tuscolauo ; thirty- five miles long, and from three to fourteen broad : the depth varies from ten to 300 feet. The whirlwinds from the mountains of Trent and Verona gave it a stormy motion resembling the waves of the sea. It was anciently named Ba- nacus, and is described by Virgil in hisGeorgics, lib. 2, as peculiarly subject to the

‘ Benacus with tempestuous billo’.vs vci’.t.’

From this, its ancient name, is derived the mo- dern name of the department, Benaco, seated on its banks. Its fish are famous for their delicious flavor ; and the fishery was formerly farmed at 8000 silver ducats. It belonged entirely to Verona before the treaty of Campo Formio. Near this lake Buonaparte’s principal exploits against the Austrians took place in 1796.

Garda, a small open town of Italy, in the "eronese, north of Lacize ; it v/as anciently a fortress, with a citadel now in ruins, where the empress Adelheit, widow of Lothair, and wife of Otho I., was confined by Berenger

II. It is seated at the end of the above lake, seventeen miles north-west of Verona.

GARDEN, n.s. k.v.a.'i Sax. jarda; Swe.

Gardener, w. .'5. >g(irda; Goih. gard;

Gardening, n.s. J Vx.jurdin ; Ital. gi-

ardino; Welsh, gardd. A piece of ground en- closed and cultivated, or laid out for pleasure : and hence any place peculiar for its fruitfuiness and beauty, used in composition, as garden- mould, garden-tillage, garden-ware. The act of planning, and laying out a garden : the person who cultivates and superintends it.

Whan I thus herd the foulcs sing, I foil fast in a waimenting, By which e art or by what engin I might come into that gardin But waie I couthe ne 6ndcn none Into that gardin for to gone.

Chaucer, Romaunt of the Rose.

Thy promises are like Adonis's gardens, Wliicli one day bloomed, and fruitful were the next.

Shakspeare. My lord of Ely, when I was last in Holbourn,

I saw good strawberries in your garden there. Id.

Our bodies are our gardem, to tlie which our wills are gardeners ; so that, if we plant nettles, or sow let- tuce, the power lies in our will. Id. I am arrived from fruitful Lombardy, The pleasant garden of great Italy, fd. 3 C 2

In tlio roy:il ordoriiig o{ garderm, thers ought to be gardens for all the months in the year. Bacon.

When ages grow to civility and elegancy, men come to build stately sooner than to garden finely ; as if gardening were the greater perfection. Id.

Gardeners tread down any loose ground, after they have sown onions or turnips. Id. Natural History.

At first, in Rome's poor age. When both hor kings and consuls hold the plough. Or qardencd w;ll. Ken Jonson's Catiline,

Some Troes, when men oppresse their ag'^'d heads (With wai;:;hty stones) thi>y fructilic the more ; And, when upon some Herbs the gard'ner tread, They thrive and prosper, better than before.

Geo. Withers.

They delight most in rich black garden-mould, that is deep and light, and mixed rather with sand than clay. Mortimer.

A clay bottom is a much more pernicious soil for trees and garden-ware than gravel. Id.

Peas and beans are what belong io garden-tillage as well as that of the field. Id. Husbandry.

My compositions in gardening are after the Pindar- ics manner, and run into the beautiful wildness of nature, without affecting the nicer elegancies of art.

Spectator.

Common tmderstandings, like cits in gardening, allow no shades to their picture. Shenstone.

Earths coarsest tread , the garden's homeliest roots. And scarce the summer luxury of fruits His short repast in humbleness supply. With all a hermit's board would scarce deny.

Byron. Childe Harold,

Garuens, Floating. Abbe Clavigero, in his History of iNIexico, says, that when the Mex- icans were brought under subjection to the Col- huan and Tepanecan nations, and confined to the miserable little islands on the lake of Mexico, they liad no land to cultivate, until necessity compelled them to form moveable fields and gardens, which floated on the waters of the lake. The method which they adopted to make these is extremely simple. They plait and twist to- gether willows and roots of marsh plants or other materials, which are light, but capable of sup- porting the earth firmly united. Upon this foundation they lay the light bushes which float on the lake ; and over all the mud and dirt which they draw up from the bottom. Their regular figure is quadrangular; their length and breadth various ; but generally they are about eight perches long, and not more than three in breadth, and have less than a foot of elevation above the surf;\ce of the

water. These were the first fields which the Mexicans had after the foimdation of INIexico : there they first cultivated maize, pepper, and other plants. In time, as tliGse fields became numerous from the industry of the people, they cultivated gardens of flowers and odoriferous plants, which they employed in the worship of their gods, and for the recreation of their nobles. All plants thrive in them sur- prisingly ; the mud of the lake affords a very fertile soil, and requires no water from the clouds. In the large gardens there is commonly a little tree, and even a little hut to shelter the cultiva- tor and defend hiin from rain or the sun. When the Chinampa, or owner of a garden, wishes to change his situation, to remove from a disagree- able neighbour, or to come nearer to his own family, he gets into his little vessel, and by his

own strength alone, if tlie garden is small, he tows it after him, and conducts it whereve'" \f pleases.

Gardens, Hanging, in antiquity, gardens raised on arches by Nebuchadnezzar, king of Ba- bylon, to gratify his wife, Amyctis, daughter of Astyages, king of Media, (i. Curtius makes them equal in height to the walls of the city, viz. fifty feet. They contained a square of 400 feet on every side, and were carried up into the air in several terraces laid one above another, and the ascent from terrace to terrace was by stairs ten feet wide. The arches sustaining the whole pile were raised one above another, and it was strengthened by a wall, surrounding it on every side, of twenty-two feet in thickness. The floors of each of the terraces were laid in the fol- lowing manner : — On the top of the arches were first laid large flat stones, sixteen feet long and four broad. Over them was a layer of feed mixed with a great quantity of bitumen ; over which were two rows of bricks, closely cemented together by plaster, and over all were laid thick sheets of lead ; and upon the lead was laid the mould of the garden. The mould, or earth, was of such a depth as to admit the largest trees to take root and grow; and it was covered with various kinds of trees, plants, and flowers. In the upper terrace there was an engine, whereby water was drawn up out of the river for watering the whole garden.

Gardening. See Horticulture

GARDINIA, or Gardenia, a genus of the monogynia order, and pentandria class of plants, natural order tliirtieth, contortae. The lobes of the corollas are bent obliquely to the right ; style elevated ; two-lobed ; segments of the calyx vertical. Species nineteen ; chiefly East Indian plants. From the bark of some species exudes a gum, like gum elemi, and the fruit of G. dume- torum, thrown into the water, intoxicates fishes.

GAK,DINER (colonel James), a brave and pious officer in the army, the

son of captain Pa- trick Gardiner. His father had served under king William III. and queen Anne, and died in Germany after the battle of Hochstet. Our hero was born at Carriden, January the 10th, 1688. He was educated at Linlithgow, and made a very considerable progress in the languages, but, hav-. ing an attachment to the military life, he served very early as a cadet ; and, at fourteen years of age, bore an ensign's commission in a Scots re- giment in the Dutch service, wherein he conti- nued till 1702; when he received a similar commission in a British regiment from queen Anne, which he bore in the famous battle of Ramillies. In this memorable action, being sent on a desperate service, he very narrowly escaped with his life. While calling to his men, a musket ball entered his month, and, without touching his tongue or his teeth, went through his neck, and came out about an inch and a half on the left side of the vertebuv. Not feeling the pain at first, he began to suspect he had swallowed the ball, till he fell with loss of blood. After this he passed two nights and all next day in the open air, in extreme cold weather, and had his wound dressed at last by an ignorant barber-surceon; in spite of all which he reco

vered. In 1706 he was raised to a lieutenancy, and soon after made a cornet in lord Stair's regi- ment of Scots Greys; and, in 1715, a captain-lieutenant of dragoons. When the earl of Stair went ambassador to France, he appointed him his master of horse. In 1715 lie was promoted to a captaincy; and, in 1717, to a majority. In 1724 he was made major of an older regiment; in 1730 he was advanced to the rank of lieute- nant-colonel; and, in 1743, to that of colonel of a regiment of dragoons, at the head of which he fell, fighting bravely, at the battle of Preston Pans, on the 21st of September, 1745, in the fifty-eighth year of his age. In his person he was tall, graceful, strong built, and well-propor- tioned. He, in his younger years, plunged so deep in every fashionable vice, tliat his compa- nions styled him the happy rake. But, in this vortex of vice and dissipation, he was suddenly arrested in a manner which he always consi- dered as miraculous. Our limits permit us not to quote the full account, given by Dr. Dodd- ridge ; hut the substance of it is as follows : — In July/1719, major Gardiner, having spent the Sabbath evening with some gay company till eleven, and having an assignation with a married woman at twelve, in order 'to kill the tedious hour,' took up a book, left by his mother or aunt in his chamber, entitled the Christian Sol- dier; wherein he expected to find some amuse- ment from the author's spiritualising the terras of his

profession. But, while reading it care- lessly, he was surprised by a sudden and extra- ordinary blaze of light; and, upon looking up, beheld, to his astonishment, a visible represen- tation of our Saviour on the cross, suspended in the air, and surrounded with glory ; while, at the same time, he tliought he heard a voice, saying, ‘ Oh ! sinner, did I suffer this for thee, and are these thy returns?’ Struck with this amazing phenomenon, he sunk down in his arm-chair, and continued for some time insensible ; from which circumstance Dr. Doddridge often sug- gested to him, that he was, perhaps, all tlie time asleep, and dreaming; but he himself considered it as not a dream, but a real waking vision. From that time to his death he became as eminently distinguished for piety as he had formerly been for profanity. In July, 1726, he married lady Frances Erskine, daughter of the earl of Buchan, by whom he had thirteen children. From the numerous anecdotes recorded by Dr. Doddridge, we shall only add one more, which may aflbrd a useful example to others in an age wherein duelling is so frequent. He had been so much addicted to tliis fashionable folly in his younger years, tliat he had fought three duels before he was quite a man ; but, to a challenge he re- ceived after his conversion, he made this calm reply: — ‘ I fear sinning, though you know I do not fear fighting.’ Dr. Doddridge has summed up his character in few words, in the ciuotation froii Vˆirgil, prefixed as a motto to liis work : —

— Justior alter Nee pictate fuit, nee bello major et artnis.

Gardiner (Stephen), bishop of Winchester, and chancellor of England, was born at Bury St. Edmund’s, in 1483. lie was natural son to

Richard Woodville, the brother of queen Eli- zabeth, wife to Edward IV., and was educated at Cambridge. He signed the divorce of Henry VIll. from Katharine of Spain; abjured the pope’s supremacy; and wrote De 'era et Fa! s& Obedientia, in behalf of the king: yet in Ed- ward VI. ‘s reign he opposed the Reformation, and was imprisoned ; but was liberated by queen Mary. He drew up the articles of marriage be- tween her and Philip II. of Spain. He was violent against the reformers, but on his death- bed often repeated these words, Erravi cum Petro, sed non flevi cum Petro ; ‘ I have sinned with Peter, but I have not wept with Peter.’ He died in 1555.

GARDNER (Alan, lord) a distinguished naval officer, born in the north of England, at the age of thirteen became a midshipman, and was made post-captain in the Preston, of fifty guns, which he commanded on the Jamaica station in 1766. In 1782 he removed to the Duke, of ninety-eight guns, in which ship he first broke the French line on the 12th of April. He was made rear- admiral in 1793, and appointed commander- in-chief on the Leeward Island station. After an ineffectual attempt on Martinico he returned home, and was employed as rear-admiral of the white under lord Ilowe. On the

1st of June, 1794, he so distinguished himself that he was made a baronet and major-general of marines. In 1800 he was created an Irish peer, and suc- ceeded earl St. Vincent in 1807 in the command of the channel fleet. He sat in three successive parliaments, and was finally made a British peer with the title of baron Gardner of Uttox- eter. lie died at Bath in 1809.

GARGANO, Mont, a mountainous tract of Italy, bounded by the gulf of Venice on the north-east and south, and the Neapolitan pro- vince of the Capitanata on the west. It is sub- ject to Naples, and lies between 15° 37′ and 16″ 21′ of E. long, and 41° 30′ and 41° 58′ of N. let., including a territorial extent of 600 square miles. It consists of a circular range of mountains and hills, which enclose noble fertile valleys. The most remarkable points are Monte Calvo in the centre, Monte Sagro to the east, Monte Spigro to the north, Monte Gargarans to the west, and Monte di Rignano to tlie south. Monte Calvo, the highest, is supposed to be 5000 feet above the sea. The wliole mass con- sists of secondary limestone, formed apparently at different times ; containing metallic veins ; but no mines have ever been opened : and the unadventurous inhabitants manufacture notliing, and neglect agriculture : many medical plants are however reared. Population 86,000.

GAR'GARISM, n. s. } Fr.

Gau'hakizi:, u.a. ˆ yaiiyupiafioq- A liijuid form of medicine, used to wash tlie moutli and throat.

Apophlftgmatisms and yargarisms draw tJic rheum down by the palate. Bacon's Natural Hhtory.

Vinegar, put to the nostrils, ov gargariscd, dotli case the hiccough ; for that it is astringent, and inliibitcth tliC motion of the spirit. Id.

Gargarisms are used when the mouth and throat are inflamed, or ulcerated. A small quan- tity may be taken into the mouth, and moved

briskly about, and then spit out ; or, if the patient cannot do tliis, the liquor may be injected by a syringe. When gargles are required, tlieir use should be more frequently repeated than is done in common practice.

GARGET, n. s. A distemper in cattle.

The gargi't appears in the head, maw, or ki the hinder parts. Mortimer's

Htubandri/.

GARGIL, a distemper in geese, which by stuffing the head frequently proves mortal. Three or four cloves of garlic, beaten in a mortar ■with sweet butter, made into little balls, and given fastinsr, are the ordinary means of cure.

GARGLE, n. s. & v. a. Fr. gargouiller ; Ital. garga<;liari ; Ger. gurgel, from Lat. gurgnlio, the throat. To wash the throat with a liquid, which is not swallowed : a liquid prepared for this use. To warble a play in the throat — this use is improi)er.

Gargle twice or thrice with sharp oxycrate.

Harvey. Those which only warble long. And gargle in their throats a song. Waller. They comb, and then they order every hair ;

Next gargle well their throats. Dry den's Pers.

So charmed you were, you ceased awhile to doat On nonsense gargled in an eunuch's throat. Fenton.

The excision made, the bleeding will soon be stopt by gargling with oxycrate. Wiseman't Surgery.

His throat was washed with one of the gargles set down in the method of cure. Id.

GARGOL, n. s. A distemper in hogs.

The signs of the gargol in iiogs are, hanging doirn of the Lead, moist eyes, 'staggering, and loss of appe- tite. Mortimer.

GARIDEELA, in botany, fennel flower of Crete, a genus of the trigynia order, and dode- candria class of plants; natural order twenty- sixth, multisiliquaj : c.\l. pentaphyllous, with leaves resembling flower-petals ; there are five bilabiate and bifid nectaria : caps, polyspermous, and adhering together. Species one only, a Cape climber.

GARLAND, Yx.garlande, guirlande ; Span. girlanda, probably of Lat. giro, to bear : or ' from gird and ladu, or Undo, a fillet.' — Thomson. A wreath of flowers : used also figuratively as ex- pressive of esteem and value.

And to the grove of which that I you told. By avcnture, his way he gan to hold. To maken him a gorlond of the greves. Were it of woodbind or of hawthorn leves.

Chancer. The Knightes Tale. With every mi.nute you do change a mind. And call him noble that wao now your hate. Him vile, that was yonr garland. Shakspeare. A reeling world will never stand upriglit, 'Till Richard wear the garland of the realm. — How ! wear the garland ! do'st thou mean the crown ? — Ay, my good lord. fd. Richard III.

An Anne is with a garland here extended ; And as the Motto saith it is intended ' To all that persevere.' This being so Let none be faint in heart though they bt. Ao'ir For he that crccpes, until his Race be done Shall gaine a wreath, as well as thoy th.at runne This being so let no man walk in doubt As if God's Arme of Grace were stretched out To some small number : For, whoe'er begins And perseveres, the proferred garland winns.

Geo. Wifhers.

GAR

Strephon, with heavy twigs of laurel-tree, A garland made, on temples for to wear j

For he then chosen was the dignity Of village-lord that Whitsuntide to bear.

Sidney. Then party-coloured flowers of white and red She wove, to make a garland for her head.

Dryden. Vanquish again ; though she be gone. Whose garland crowned the victor's hair, .

And reign ; though she has left the throne. Who made thy glory worth thy care. Prtor.

Her gods and godlike heroes rise to view. And all her faded ˆar/ands bloom anew. Pope. From morn till night, from night till startled morn Peeps blushing on the Revels laughing crew. The song is heard, the rosy garland worn. Devices quaint, and frolicks ever new.

Byron. Childe Harold.

GARLIC K, ?i.s. ■) Saxon jan, a lance

Garlick-eater, n.s. i and leek. A well- known plant, having a bulbous root, consisting of many small tubercles included in its coats : the leaves are plain ; the flowers consist of six leaves, formed into a corymbus on the top of the stalk ; and are succeeded by subrotund fruit, divided into three cells, which contain roundish seeds. Garlick-eater is used to describe a mean dirty fellow.

You've made good work. You and vour apron-men, that stood so much Upon the voice of occupation, and The breath of garlickeaters.

Shakspeare. Coriolantu.

This tree is pretty common in Jamaica, and several other places of America, where it usually rises to the height of thirty or forty feet, and spreads into many branches. When the flowers fall off the pointal, it becomes a round fruit, which, when ripe, has a rough, brownish rind, and a mealy sweet pulp, but a strong scent of gnrlick. Miller.

Garlick is of an extremely strong smell , and of aa acid and pungent taste. It is extremely active, as may be proved by applying plasters of garlick to the feet, which will give a strong smell to the breath. Hill.

Garlick Pear tree. See Crateva. GARMENT. OXdYi. guarniment. A covering for the body.

My body to clothe, it maketh no force ; A morning mantle shal he sufficient The grevous woundes of his pitous corse Shal be to me a ful xoydX garnemcnt .

Chaucer. Lament of Mary Magdaleine. — ˆ— — — Each gan undight Their garments wett and weary armour free To dry thems Ives by Vukanes flamin? light. And eke their lately bruyed parts to bring in plight. Spenser. Faerie Queenc. Hence, rotten thing, or I shall shake thy bones Out of thy garments. Shakspeare. Coriolanus.

Our leaf, onre fallen, springeth no more ; neither doth the sun or summer adorn us again with the gar. menu of new leaves and flowers. Raleigh's History. Three worthy persons from his side it tore. And dved his garment with their scattered gore.

Waller. The peacock, in all his pride, does not display half the colours that appear in the garments of a British lady, when she is dressed. Addison's Spectator.

GARNER, n.s.ˆv.a. Fr. greniar, from LtU. grana; Ital. gremrio. A place in which

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threshed grain is kept : the act of storing it up in garners.

But se wliat golde haa userers. And silver eke in his yarncrs.

Chaucer. Romaunt of the Hose, For sothe it is^wlioin it displese — There maie no marchaunt live at ese ;

Ne never shall, though he hath getten Thousjh he have golde ia gamers yeten ; For to be nedy he drcdeth sore. Id.

Earth's increase, and foyson plenty. Barns and garners never empty. Slicikspeare. There, where I have garner'd up my heart. Where either 1 must live, or bear no life. Id.

For sundry foes the rural real n surround ; The fieldmouse builds hat garner under ground ; For gathered grain the Idind laborious mole. In winding mazes, works her hidden hole.

Dry den.

GARNERIN ( ), a celebrated aeronaut,

and the first who made the experiment of de- scending in a parachute. Tins he accomplished on the 21st of September, 1802, ascending from an enclosure in North Audley-street, Grosvenor- square. At the computed height of 4154 French feet, the intrepid voyager cut the rope which attached the car to the balloon, and descended safely m the fields near Kentisli Town, the bal- loon falling the next day near Farnham in Surry. M. Garnerin's death was occasioned by apoplexy in the Theatre du .Jardin Beaujolin at Paris, August, 1823. Having the rope which sustamed the curtain in his hand, by a sudden relaxation of his grasp, he allowed it to fall, when one of the weights struck him on the head, and he never fully recovered from the blow.

GARNET, M.S. lidA. gurnato, grenato {from its resemblance to the pomesranate seed, or from low Lat. granatus). A precious stone.

The garnet seems to be a species of the carbuncle of the ancients : the Bohemian is red, with a slight cast of a flame-colour; and the Syrian is red, with a slight cast of purple. Woudward's Met. Foss.

The garnet is a gem of a middle degree of hardness, between the sapphire and the common crystal. It is found of various sizes. Its surfaces are not so smooth or polite a:; those of a ruby, t-uA its colour is ever of a strong red, with a plain admixture of blurish : its degree of colour is very different, and it always wants much of the brightness of the ruby. Hill.

Garnet (Henry), an English Jesuit <ˆi noto- riety, was born in Nottingliamshire in 1555, and educated at Winchester school. He then went to Rome and entered the Jesuits' College in 1575, where he became professor of philosophy and the- ology. In 1586 he returned to England as provin- cial of his order ; and abode iiere without moles- tation for several years. Hut he now held a se- cret correspondence with the court of Spam ; and by an answer wliich he gave to a case of consci- ence submitted to him, in regard to the destruc- tion of heretics, is said to have given an impulse to the gunpowder plot. He was tried as an accomplice in it, and executed at the west end of St. Paul's, May 3rd, 1606.

Garnet, in mineralogy, a genus of the si- licious kind, divided by Kirwan into oriental

garnet, common garnet, and amorphous garnet and by professor Jameson, into pyramidal, dode- cahedral, and prismatic. We shall here, however, treat only of the garnet, properly so called, which is a dodecahedral of Jameson, and is divided into the precious or noble, and the common gar- net : — •

*Precious or noble garnet. — Colors dark red, falling into blue. Seldom massive, sometimes disseminated, most commonly in roundish grains, and crystallised. 1. In the rhomboidal dodeca- hedron, which is the primitive form ; 2. Ditto, truncated on all the edges ; 3. Acute double eight-sided pyramid ; and 4. Rectangular four- sided prism. The surface of the grains is gene- rally rough, uneven, or granulated ; that of the crystals is always smooth. Lustre externally glistening ; internally shining, bordering on splendent. Fracture conchoidal. Sometimes it occurs in lamellar distinct concretions. Trans- parent or translucent. Refracts single. Scratches ciuart? ˆ, but not topaz. Brittle. Rather difficultly frangible. Sp. gr. 4-0 to 4-2. Its constituents are, silica 39*66, alumina 19‘66, black oxide of iron 39-68, oxide of manganese 1-80. — Berzelius. Be- fore the blowpipe it fuses into a black enamel, or scoria. It occurs imbedded in primitive rocks, and primitive metalliferous beds. It is found in various northern counties in Scotland ; in Nor- way, Lapland, Sweden, Saxony, France, &c. It is cut for ring-stones.*

Common garnet. — Deep red, inclining to vio- let, or verging to black, or olive, or leek-green, or brown, seldom yellow. Its external lustre casual, internal 2‘3. Transparency, 2-31. Of the brownish and blackish, most frequently, 0. Of the green at most, 2. Crystallised as the former variety, the surface of the crystals often diagonally seamed, frequently found also in rough rounded grains, or fragments. Fracture uneven, inclining to the conchoidal, flat or im- perfect, often to the splintery. Hardness, from 10 to 11. Yet sometimes only 9. Sp. gr. of the red, from 3-941 Werner, to 4-000

Bnsson ; of the green, from 3-75 to 3-800.

Kirwan found that of some small garnets 3-63.

Both varieties exert most commonly some ac- tion on the magnetic needle. According to Bergman, they are fusible, per se, by the blow- pipe, sometimes into a transparent green glass, but most commonly into a black slagg. Alkalies flux them with great difficulty ; borax and micro- cosmic salt convert them into a green or black glass. Gerhard tells us, that in a strong heat they form a gray glass ; yet Fourcroy, in a strong heat of eleven hours, found garnets powdered, barely softened, and agglutinated. Observing these differentresults,he exposed thirty-five grains weight of small Bohemian garnets, whose sp. gr. was 3-63, to a blast heat for a few minutes, and found them melted into an opaque dark gray, fine-grained porcelain, by a heat of 136°.

By Bergman's account this stone contains more silex than argill, and more argill than calx ; of iron it contains from 0-02 to 0-20.

By Achard, red Bohemian garnet contains 0-483 silex, 0-30 argill, 0-116 calx, and 010 iron.

Weigleb found the green garnets of Saxony to

GAR

760

GAR

tDiitain 0-3G45 of silex, 03083 calx, and 0-'2875 of iron. If so, the green garnets being also spe- cifically lighter, we may suspect them to be spe- cifically different from the red. In another experiment, however, Weigleb found the argil- laceous ingredient also in the green; and so did Merz ; for, in that of Ehrenberg, he found 0'40 of silex, 0-20 argill, O'OB calx, and 0-20 of iron. The twelve grains missing must have been air and water, and perhaps a casual loss ; but it ap- pears the calx is aiiirated, as Weigleb found also a considerable deficit.

It is commonly found in schistose mica, or gneiss, more rarely in argillites or granites.

Gauxets, Counterfeit, are made as follows. Take prepared crystal, 2 oz. red lead, 6 oz. man- ganese, 16 gr. zaffi-e, 3 gr. : Mix all well, put them into a crucible, cover it well with lute, and set m a potter's kiln for twenty-four hours. Or take crystal 2 oz. minium, .5j oz. manganese, 15 gr. and zaffre,

4 gr. but the best are composed of,

Strass 0-6630

(;iass of antimony . . . 0-3320 Purple of Cassius . . . 0-0025

Oxide of manganese . . . 0-0025

1-0000

Mix and bake them as above.

GARNISH, v. a. & w. s. ˆ Fr. gflrnir; Ital.

Garnishment, w.s. > guarnii-e ; Span.

Garniture, ?t.s. 3 and Port, guarni-

ccr ; Lat. ah ornare. — Minsheu. To ornament ; embellish. Any decoration, whether of the per- son, table, or mind. It is a cant term in gaols for fetters : an acknowledgment in money when a prisoner goes to gaol.

All within with flowers was garnished. That, when mild Zephyrus amongst them blew, Did breathe out bounteous smelh, and painted colours shew. Spenser.

With taper light

To seek the beauteous eye of Ijeavcn to garnish.

Is wasteful and ridiculous excess. Shahspeare.

So are you, sweet. Even in the lovely garnish of a boy. Id.

Paradise was a terrestrial garden, garnished with fruits, delighting both the eye and the taste.

Raleigh.

All the streets were garnished with the citizens, standing in their liveries. Bacon's Henry VII.

The church of Sancta Guistiniana in Padoua is a sound piece of good art, where the materials being ordinary stone, without any garnishment of sculpture, ravish the beholders. Wotton.

There were bills which garnished their proud heights with stately trees.

Sidney.

With what expcnce and art, how richly drest !

Garnished with 'sparagus, himself a feast I

Drydcn.

As nature has poured out her charms upon the female part of our species, so they are very assiduous in bestowing upon themselves the finest garnitures of art. Addison's Spectator.

Plain sense, wliich pleased your sires an age ago. Is lost without tlie garniture of show. Granville.

(J.VRONN!", i'ppEi;, a south-west department of France, consisting of part of Languedoc and Gascony, and bounded on the south by Spain, and on the west by the department of the Upper Pyrenees. It ha.s a territorial extent of 2840 square miles, is divided into tlie four arrondisse-

ments of Toulouse (the capital), St. Gaudens, Muret, and Villefranche. The southern part, lying among the Pyrenees, is mountainous; the rest consists of hills, extensive valleys, and smaH plains. In the arrondissement of St. Gauden's the soil is scarcely fit for any thing but pasturage ; throughout the rest it is rich and fertile, produ- cing not only corn, but most of the fruits of warm countries, and particularly wine. The mountains contain mines of copper, lead, iron, and coal. Garonne exports corn, cattle, and the produce of its mines, together with woollen stuffs and leather. Population 367,500, of whom 18,000 are Protestants.

Garonne, a large river of France, which rises among tiie Pyrenees, on the borders of Catalonia, and flows in a north-west direction through part of Languedoc and Guienne. It becomes navi- gable at Muret, and receives the Dordogne at Bourg-sur-Mer, when it takes the name of the Gironde. Passing by Bourdeaux, it falls into the Atlantic, by two mouths, called the Pas des Anes and the Pas de Grave. At its mouth it is above three miles wide, and the tide rises to Beaucaire, nine miles below Bourdeaux. In its course, which is above 400 miles, it receives the Arriege, the Tarn, the Baise, the Lot, and the Dordogne, besides a number of smaller rivers.

GAllOUS, adj. Resembling pickle made of fish.

In a civet-cat an offensive odour proceeds, partly from its food, that being especially fish ; whereof this humour may be a garous excretion, and olidous sepa- ration. Browne.

GARRAN, n. s. Erse ; the same as geldinsj. A small horse. A Highland horse which when brought to the north of England is called a gal- loway, q. V. ˆ

When he comes forth, he will make their cows and garrans to walk, if he doth no other hurm to their persons. Spenser.

Every man would be forced to provide winter- fodder for liis team, whereas common garrans shift upon grass the year round ; and this would force men to the enclosing of grounds, so that the race of garrans would decrease. Temple.

GARRET, n.s. I Fr. garifc, the tower of a Garreteer, 7J.S. 5 citadel, from Goth, wara ; Sax. wariuii, to guard. A room on the highest floor of the house. Also rotten wood, but in this sense it is out of use. An inhabitant of a garret.

The colour of the shining part of rotten wood, by dayliglit, is in some pieces white, and in some pieces inclining to red, which they call the white and red garret. Bacon.

The mob, commissioned by the government. Are seldom to an empty' garret sent. Dryden.

Jolin Hull skipped from room to room ; ran up stairs and down stairs, from the kitchen to the. garret. Arlmtkiiot's John Bull. On earth the jcod of wealth was made Sole patron of the building trade ; rˆeaving the arts the spacious air. With licence to build castles there : And 'tis conceived their old pretence. To lodge in garrets, comes from thence. Swi/t.

GARRICK (David), the Roscius of his age and country, was born at the Angel Inn Hereford in ITKi. His father, captain Peter

Ganick, was of a French refugee family, and had d troop of horse which were then quartered in that city. This rank he maintained in the army for several years, and was a major at iiis death. Mr. Garrick received the first rudiments of his educa- tion at Litchfield ; which he afterwards completed at Rochester, under the celebrated Mr. Colson, since professor at Cambridge. Dr. Johnson and he were fellow students at the same school ; and went up to London to push themselves into ac- tive life, in the same

coach. On the 9th March 1736 he was entered at Lincoln's Inn. He soon quitted the law, and followed for some time the business of a wine merchant ; but at last he gave way to the irresistible bias of his mind, and joined a travelling company of comedians at Ips- wich, where he went by the name of Lyddle. Having in this poor school of Apollo obtained some acquaintance with the theatric art, he burst at once upon the world, in 1740, 1741, in all the lustre of perfection, at the little theatre in Good- man's Fields, then under the direction of Henry Giffard. The character he first performed was Richard 111. to witness which the theatres at the west end of the town were soon deserted ; and Goodman's Fields, from being the rendezvous of citizens and their wives, became the resort of all ranks till the close of the season. Being offered very advantageous terms for performing in Dub- lin, during part of the summer 1741, he went over to Ireland, and found the same just homage paid to his merit which he had received from his countrymen. In the following winter he en- gaged with Fleetwood then manager of Drury Lane : where he continued till the year 1745, when he again went over to Ireland, as joint manager with Mr. Sheridan of the theatre royal in Smoke Alley. Thence he returned to England, and engaged for the season of 1746 with Mr. Rich at Covent Garden. This was his last per- formance as an hired actor; for in the close of that season Fleetwood's patent for the manage- ment of the theatre in Drury Lane being expired, Mr. Garrick and Mr. Lacy purchased the pro- perty of it, with the renovation of the patent ; and in winter 1747 opened it with the greatest part of Mr. Fleetwood's company ; and with the addi- tion of Barry, Mrs. Pritchard,and Mrs.Cibberfrom Covent Garden. To trace Mr. Garrick tlirougli all the various occurrences of his public life would swell this account to many pages. Suf- fice it to say, he continued in the full enjoyment of fame to the period of his retirement, and that his universality of excellence never once admitted of a competitor. Tragedy, coiuedy, and farce, the lover and the hero, the jealous husband, and the thoughtless rake, were all alike his own. Rage and ridicule, doubt and despair, transport and tenderness, compassion and contempt ; love, jealousy, fear, fury, and simplicity ; all took in turn possession of his features, while each of them appeared to be the sole possessor of his heart. In the several characters of Lear and Hamlet, Richard, Dorilas, Romeo, and Lusig- nane ; in his Ranger, Bayes, Druggcr, Kithjy, Brute, and Benedict, we saw tlie appropriate in- dication of passion accurately discriminated. There is one part of his theatrical conduct which will ever be recorded to Mr. Garrick's honor,

viz. the zeal which he showed to banish from the stage all those plays that have an immoral tendency, and the purity of the English drama was beyond a doubt much more fully established during the administration of this theatrical mi- nister, than it had ever been under former ma-

nagement. Notwithstanding the numberless and laborious avocations attendant on his profession as an actor, and his station as a manager ; yet still his active genius frequently burst forth in vari- ous dramatic,and poetical productions,and though his merit as an author is not of the first class, yet his great knowledge of men, manners, and stage effect, and his happy turn for lively and striking satire, made him generally successful in the drama, and his innumerable prologues and epi- logues have? been greatly admired. His ode on the death of Mr. Pelham ran through four editions in less than six weeks. Among his original pro- ductions are, the Farmer's Return, and Linco's Travels, interludes ; The Guardian, Lethe, Lying Valet, Miss in her Teens, Male Coquet, Irish Widow, and other comedies in two acts : The Enchanter, a musical entertainment : Lilliput, the Christmas Tale, and many others. We have thus traced him to the period of his retirement in spring 1776 ; when with a splendid fortune, and advancing in years, he sought to enjoy in the vale of life that dignified and honorable ease, which he had so well earned by the activity and merits of his dramatic reign. But short was the period allotted to him for retirement : for he died on the 20th January 1779.

Garrick (Eva Maria), wife, and long the relict, of the celebrated David Garrick, was born at Vienna, February 29th, 1725. Her maiden name, Viegel, she changed by command of the empress-queen, Maria Theresa, to that of Vio- lette, a translation of the German word vielge, the anagram of her name. She was at this time a favorite dancer at the Imperial court. In 1744 she came to England, bringing with her a re- commendation from the countess of Stahremberg to lady Burlington, who received her as an in- mate of Burlington-house, and ever after treated her with great affection ; a circumstance which gave rise to a general but erroneous idea, that she was a natural daughter of the earl's. While under this protection, mademoiselle Violette formed an attachment with Mr. Garrick, and on the 22nd of June, 1749, the nuptials were cele- brated, with the sanction of the countess Bur- lington, a marriage portion of .£0000 being bestowed by her upon the bride. In 1751 and in 1763 she accompanied her husband to the continent ; after wliose death, though strongly solicited by several persons of rank and fortune, .she continued a widow, residing in her house on the Adelphi- terrace, where she died suddenly, October 16th, 1822.

GARRISON, H.x. & «.«. Tr. gaiiiiaon. See G/VRRET. A fortified town or place ; the soldiers who are placed there to defend it ; the act of securing by fortresses.

Eke jclousio may God confoundc ! That hath niakod a tourc so roundc,' And made about a garrison. To scttc Bialacoil iu prison.

Chuucer, RomawU of the Rose.

GARTER.

Some of them that are laid in garrison will do no great hurt to the enemies. Spenser on Ireland.

How oft he said to me, Thou art no soldier fit for Cnpid's garrison.

Sidney. Whom the old Roman wall sj ill confined. With a new chain of garrisons you bind.

Waller. Others those forces join. Which garrison the conquests near the Rhine.

Dryden's Juvenal.

GARROWS, a raountainous but fertile dis- tiict on the north-east frontier of Bengal, si- tuated between 25° and 26″ of N. lat. Its ch ef town is Ghosegong. In the bed of one of its rivers is abundance of coal; but the na- tives are half savages, and not acquainted with the art of working it. They go nearly naked, and, although they call themselves Hindoos, eat all kinds of food, and drink spirituous liquors. They are said to be mild in their tempers, and of gav dispositions. The poverty of this coun- try has alone prevented it from being added to Bengal ; but it is tributary to the British.

GARRU'LITY, n.s. ˆ Lzt. garrulus. The

Gar'rulous, adj. S disposition or act of talking too much ; inability to keep a secret. Let me here Expiate, if possible, my crime. Shameful garrulity. Milton's Agonistes,

Some vices of speech must carefully be avoided ; first of all, loquacity or garrulity.

Ray on the Creation. Old age looks out. And garrulous recounts the feats of youth.

Thomson.

GARRY, a lake in Perthshire, of consider- able extent, which discharges itself by a river of the same name. The river, taking a south- westerly course, receives tlie Bruar near Dalna- cordoch inn, the Tilt near the castle of Blair- Athol, and the Tummel several miles below the pass of Killicrankie, and finally falls into the Tay, near Logierait. In its turbulent and rapid course there are several small water-falls.

GARSTANG, a populous town of Lancashire, 229 miles from London, in the post road be- tween Preston and Lancaster. It is near a mile in length, but built very irregularly. The church is a stately Gothic structure. It is seated on the Wyre, and by means of the navigable canal from Kirby-Kendal to West Houghton, which passes the town end,Garston has communication ■with the Trent, Severn, and Zvlersey. There is no manufactory immediately in the town, except flax-dressing, and the weaving of sacks, and other coarse articles ; but there are considerable cotton-works in the adjacent townships, ˆ4■ithin the limits of the parisli. Three miles west of Garstang is the east-side of Pilling-moss, the scene of a phenomenon of which an account, to the following effect, was given in the Philosophi- cal Transactions, No. 475. ‘ On Sunday, the 26th of January, 1744 — 5, a part of Pilling- Moss, lying between Hescomb Houses and Wild Bear, was observed to rise to a surprising height. After a short time it shrunk as much below the level, and moved slowly towards the south side ; and in half an hour it covered twenty acres of land. The improved land adjoining to

that part of the moss which moves ?n a concave circle, containing nearly 100 acres, is nearly filled up with moss and water, and in some parts is thought to be five yards deep. One family is driven out of their house, which is quite sur- rounded, and the fabric is tumbling down. The part of the moss which is sunk, like the bed of a river, runs north and south, and is above a mile in length, and half a mile in breadth. When the moss began to move, a man was passing over it from the west, who perceived, to his great astonishment, that the ground moved southward. By a speedy return, he had the good fortune to escape being swallowed up.’

GARTER, n.s. & v. a. Fr. jarti’ere ; Welsh garders, gar. A string or riband which retains the stocking on the leg. A mark of the highest order of knighthood in England ; the name of the officer called the principal king at arms ; to bind as with a garter.

He, being in love, could not see to garter his hose.

Shakspeare. Now by my george, my garter, ■ — The george, profaned, hath lost his holy honour. The garter, blemished, pawned his knightly virtue.

Id. Richard III. Let their heads be sleekly combed, their blue coats brushed, and their garters of an indifferent knit.

Id. Taming of the Shrew. You owe your Ormond nothing but a son. To fill in future times his father’s place. And wear the garter of his mother’s race.

Dryden. When we rest in our clothes we loosen our garters, and other ligatures, to give the spirits free passage.

Ray. Handsome garters at your knees. Swift,

There lay three garters, half a pair of gloves. And all the trophies of his former loves. Pope,

Garter, Order of the, a military order of knighthood, the most noble and ancient of any lay order in the world, instituted by Edward III. The knights companions are generally princes and peers ; and the king of England is the so- vereign of the order. The number of knights was originally twenty-six ; but six were added in 1786, on account of the increase of the royal family. They are a corporation, having a great and little seal, &c. Their officers are a prelate, chancellor, register, king at arms, and usher of the black rod. They have also a dean, with twelve canons, and petty canons, vergers, and twenty-six pensioners, or poor knights. The prelate is the head. This office has always been invested in the bishop of Winchester. Next to the prelate is the chancellor; w-hich office is vested in the bishop of Salisbury, wdio keeps the seals, &c. The next is the register, who by his oath is to enter upon the registry, the scru- tinies, elections, penalties, and other acts of the Older with all fidelity : the dean of Windsor is always register ex officio. The fourth officer is garter, and king at arms, being two distinct of- fices united in one person. He is the principal officer within the college of arms, and chief of the heralds. All these officers, except the pre- late, have fees and pensions. The college of the order is seated in the castle of Windsor, within the chapel of St. George, and the charter-house, erected by the founder for that purpose. The

habit and ensign of the order are a garter, mantle, cape, George, and collar. The first three were assigned the knights companions by the founder; and the George and collar by IIeni7 'III. The garter challenges pre-eminence over all the other parts of the dress, as from it tlie order is deno- minated. It is the first part of the habit pre- sented to foreign princes and absent knights, who, as well as ail other knights elect, are there- with first adorned : and it is of so great honor and grandeur, that by the bare investiture wuth this noble ensign, the knights are esteemed com- panions of the greatest military order in the world. It is worn on the left leg between the knee and calf, and is enamelled with this motto, Honi soit qui mal y pense.

The mantle is the chief of those vestments made use of on solemn occasions. It is of blue velvet lined with white taffeta ; and to its collar is fastened a pair of long strings, with large tas- sels, called 'cordons,' made of blue silk inter- mixed with gold. On the left breast of this mantle are placed the arms of the order within the smarter, richly embroidered. The mantle worn by the sovereign is distinguished by having a longer train than that of the knights. The color of these mantles is, by the founder's statute, appointed to be blue ; and it so continued till the reign of queen Elizabeth, when it was changed to purple, and this was retained till about the twelfth year of king Charles I., when he restored the color of the mantle to its original institution.

The surcoat, or kirtle, as well as the mantle, was originally composed of woollen cloth, and so continued till the reign of Edward IV., about which time it was also made of velvet. Anciently, the color of this vesture changed every year, commonly into blue, scarlet, sanguine in grain, or white; it is now made of crimson velvet, lined with white taffeta.

The hood was formerly worn on the head at all public ceremonies, and made of the same ma- terials as the mantle, and sometimes was trimmed 3r set off w-ith a small proportion of garters ; but it is not now used in the same manner as for- merly, but remains fixed to the mantle as part of the habit; and, instead of the hoOd, the knights now wear on their heads a cap of black velvet, deep in the crown, lined with taffeta, and adorned with a large plume of ostrich feathers, in the cen- tre of which is a tuft or aigrette of heron's fea- thers ; these feathers are usually fixed to the cap by a band of diamonds. The custom of wearing these caps and feathers, at the great solemnities of the order, had sometimes been omitted, in and before the reign of James I., and therefore, in a chapter held on the 13th of April, in his tenth year, the custom of wearing the cap and feathers was established.

The collar of the order is of gold, weighing thirty ounces Troy ; it is composed of twenty-six pieces, in the form of the garter enamelled blue, with the motto of the order in gold ; in the cen- tre of each garter is a rose, enamelled red, seeded gold, and leaved green : these twenty-six garters are fastened together with as many knots of gold. At the middle of it, pendent to one of the garters, is the badge of the order, being the iigure of St, George armed, sitting on horseback,

and with a spear, encountering a dragon, wliich lies on his back under the horse's feet.

The left shoulder has from the institution been adorned with a larger garter, with the device, Honi soit, &c. Within this is the cross of the order, which was ordained to be worn at all times by king Charles I. At length the

star was introduced, being a sort of cross irradiated with beams of silver. In 1551 Edward \T. made some alterations in the ritual of this order : that prince composed it in Latin, the original whereof is still extant in his own hand-writing. He there ordained, that the order should no longer be called the order of St. George, but the order of the garter ; and, instead of the George, hung at the collar, he substituted a cavalier, bearing a book on the point of his sword, with the word, protectio graven on tlie sword, and verhura Dei on the book : with a buckle in the left hand and the word fides thereon. W hen the knights do not wear their robes, they are to have a silver star on the left side ; and they commonly bear the picture of St. George ; enamelled on gold, and beset with diamonds, at the end of a blue riband, crossing the body from the left shoulder. They are not to appear abroad without the gar- ter, on penalty of 6s. 8d. paid to the register.

As this is one of the most splendid and favorite orders of the knighthood in this country, or even in Europe, we add an account of the Installation of the duke of Rutland, the earl of Ilardwicke, the duke of Beaufort, the marquis of Abeicom, the earl of Pembroke and ˆMontgomery, the earl of Winchelsea and Nottingham, and the earl of Chesterfield, on the 23rd of April, 1805.

On the morning of installation, at ten o'clock, the Knights Companions began the procession, in the following complete habit of the order, consisting of a black velvet plume, white ostrich feathers, and heron sprig : aourple velvet mantle, lined with white silk ; gold and purple cordons ; collar of the order; crimson velvet hood, and crimson velvet surcoat ; silver tissue jacket, and puffed breeches ; white silk pantaloons ; white kid shoes ; silver shoe roses, and silver knee ditto, garter, &c. The officers of the order in their mantles, the Knights elect in their under habits, having their caps and feathers in their hands, and the honorable captain Yorke, the proxy of the earl of Hardwicke, in his ordinary habit, attended the Sovereigti in the royal apart- ment. Tlie Officers of Arms, and the four Serjeants at Arms, with their maces, attended in the Presence Chamber ; the Prebends, Poor and Naval Knights, as also the kettle drums, and house trumpets, in the Guard Chamber. The honorable captain Yorke, proxy for the earl of Hardwicke, walked in the procession, dressed in his naval uniform. At eleven o'clock, a dis- charge of guns announced the procession.

The Sovereign coming under his state. Garter King of Arms called over the knights ; and a procession was made from the royal apartment, through the Presence and Guard Chambers; the end of St. George's Hall ; the late private chapel: the passage leading to the great stairs; descending wliich, through the hall to the great court; and from thence, to the south door of St. George's Chapel, in tlie following order: —

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Two Fife-Majors.

Four Drum-Majors of the Household.

— Lamb, Esq. Drum-Major of England, uncovered.

Fourteen Trumpets.

Two Trombones.

Two side-Drums.

Six Naval Officers of Travers' College, two and two.

Eighteen Poor Knights of Windsor, two and two.

Ten Prebends, two and two.

Pursuivants and Heralds, two and two.

Norroy (King at Arms), Clarencieux (Ditto).

Knights Elect, (Having their caps and feathers in their hand) ; viz. Earl of Chestt'rtield. Earl of Winchelsea.

Earl of Pembroke. Marquis of Abercorn.

Duke of Beaufort.

Duke of Rutland.

Knights Companions ; viz.

Earls Camden, Spencer,

Westmoreland, Salisbury,

Earl of Chatham,

Duke of Devonshire,

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S 6 I' Prince William, D. of Gloucester,"^ D. of Cambridge, Duke of Sussex, D. of Cumberland, Duke of Kent, Duke of Clarence, Duke of York, Prince of Wales. [The Register (the Dean),

I Having Garter King at Arms on his right, and Deputy Black Rod on his left band. I The Chancellor with the Purse, L Having on his right hand the Prelate.

Lord Chamberlain. The Sword of State.

THE SOVEREIGN. ^ !? ^

His Train borne by the Marquisses of V. £. c:. Worcester and Tavistock, and the 4 § a Honourable Mr. Villiers. -^ 3 3

The Officers of State, viz. The Earl of Harrington, Gold Stick. Marquis of Hertford, Master of the Horse. Earl Macclesfield, Captain of the Yeoman of the Guards. Lord St. Helens, Lord in Waiting. Band of Gentlemen Pensioners. Ten of His Majesty's Pages, in a new uniform.

In this manner, moving to the Chapel, the pro- cession entered the south door ; passed down the south aisle, and up the centre, or nave, then turning to the left proceeded up the north aisle, to the Chapter-house ; the organ and band play- ing the March in Hercules ; the Naval and Poor Knights dividing on either side, at some distance from the Chapter-house ; then the Prebends, next above; and the Officers of Arms nearest to the Chapter-house. None entering with the Sovereign into the Chapter-house, but the Knights Companions, and the sworn Officers of the order ; the Knights elect retired to their chairs in the aisle behind the altar. The Sovereign's train was carried into the Chapter-house by Garter ; and borne out of the Chapter-house by Deputy Black Rod, and then again carried by the Train Bearers. Deputy Black Rod, and the Register, not having been sworn, remained in the aisle, opposite to the Knights elect. The Sovereign and the Knights Companions, being seated, the latter according to their seniority,

and their stalls in the Chapel ; Garter acquainted His

Majesty, that Robert Quarme, Esq. Deputy Black Rod, waited at the door and humbly prayed admittance to take the oath of Office : and he being thereupon introduced by Garter, kneeled near the Sovereign, on the left hand, when Gar- ter, holding the Gospels, administered the oath. Deputy Black Rod, having kissed the Sovereign's hand, retired to his place at the bottom of the table. Then Garter, in the absence of the Chan- cellor (who was indisposed), acquainted His Majesty that the dean of Windsor, the honor- able and reverend Dr. Edward Legge, attended at the door, and prayed admittance to take the oath, as the Register of the Order. He was thereupon introduced by Garter and Deputy Black Rod ; the latter carrying the ensigns of the Register's office : the locum tenens adminis- tered the oath ; and Register being invested, and having kissed the Sovereign's hand, withdrew to his place at the bottom of the table. Then, by the Sovereign's command, the officer acting for the Chancellor standing on the left hand of His Majesty, read the new statute. Which done, the Register returned to his place.

Garter then, by the sovereign's command, intro- duced the duke of Rutland between two knights, viz. their royal highnesses the dukes of York and Clarence, who was received at the door by the two junior knights, and conducted to the table, where the surcoat, girdle, and sword had been placed : and Garter presenting the surcoat to the two senior knights, they invested his grace therewith, the Register reading this admoni- tion : take this robe of crimson, to the increase of your honor, and in token and sign of the most noble order you have received, where- with you being defended, may be bold not only strong to fight, but also to ofl'er yourself to shed your blood for Christ's faith, the liberties of the church, and the just and necessary defence of them who are oppressed and needy. Then Gar- ter presented tlie girdle in like manner, and afterwards the sword, which they put on his grace, who then took his place near the table. Gartei then introduced the honorable captain Yorke, the proxy for the earl of Hard'wicke, lord lieutenant of Ireland, and knight elect of the order, who stood at his excellency's place near the table, between their royal highnesses the dukes of Cumberland and Kent.

The duke of Beaufort and his companions were then severally introduced between two knights in like manner, and invested with the surcoat, girdle, and sword.

The knights elect and the proxy continued in the Chapter-house, while the procession to the Chapel was made down to the bottom of the north aisle and up the nave, into the choir, in the following order : — First, the naval and poor knights, who, coming into the choir, made their reverences, first

to the altar, then to the sove- reign's stall, and placed themselves, on each side, near the altar. The prebends made their reve- rences in like manner, and went to their places under the stalls. The officers of arms, making iheir reverences, stood next to the poor knights. Then the knights companions, each in the ordei in which he had walked, made their reverences, and retired under their banners, where they re

mained standing. The Register, Garter, and Deputy Black Rod, making their reverences to- gether, stood before their form. The Prelate and Chancellor did the same. The Sword of State, with the Lord Chamberlain on his left hand (the Sovereign being seated), stood on the steps be- fore, or under the sovereign's stall. The Sove- reign made one reverence to the altar ; and, being in his stall, repeated the same ; the train bearers standing upon the steps leading to the sovereign's stall.

Garter then went into the middle of the choir, and making his double reverence, waved his scep- tre towards his Royal Highness the prince of Wales; who, thereupon came from under his banner, made his reverences, and ascended into his stall ; where, repeating his reverences, he sat down. All the other knights continued standing under their banners. The Prelate was conducted to the altar by the verger of St. George's Chapel ; and the two Prebends, by the same Verger.

Then Garter, with the usual reverences, the organ and band playing the Dead March in Saul, and Dirge in Sampson, took up the banner of his Serene Highness the late duke of Saxe Gotha; and holding it up, the Provincial Kings of Arms joined, and making their reverences, repaired to the two senior knights ; who there- upon joined, making their reverences together, and received the banner from Garter, which they carried, the point foremost, a little declining; and being preceded by the said Provincial Kings of Arms, advanced to the first step of the altar ; where they repeated their reverences ; and com- ing to the rails, made reverences to the altar ; then kneeling, they delivered the banner to the Prelate, who, assisted by the Prebends, placed it upright at the south end of the altar.

The two knights then returned with like re- verence, and stood upon their banners. The sword was then delivered by Garter to the next senior knights ; who, attended by the said Pro- vincial Kings of Arms, offered the same, the hilt upwards, with like ceremonies. The helm and crest were offered by

the two next senior knights, with the same ceremony, attended by the said Provincial Kings of Arms. The achievements of the late marquis of Stafford, of the late duke of Beaufort, and the late duke of Roxburgh, were offered with the same ceremonies, by the six se- nior knights, not of the blood royal, attended each time by two heralds, in rotation. Then Garter, bowing to each knight (the senior first), sum- moned him to ascend into his stall ; when he made his reverences, and the same were repeated when in the stalls. All the knights being in their stalls. Garter summoned the two senior knights under their banners, in order to install the duke of Rutland ; and a procession was made to the Chapter-house, all making the usual reverences, on going out of the choir.

The procession passing to the west end of the choir only, entered the choir, all making the usual reverences ; Garter, with the Register and Deputy Black Rod, went under the stall ap- pointed for his grace ; Garter placing the cushion upon the desk of the lower stall.

The two knights, with the duke, entered into the lower stall, where the Register administered the following oath, Deputy Black Rod holding

the Gospels : — ' You being chosen to be one of the honorable company of the most noble order of the Garter, shall promise and swear, by the Holy Evangelists, by you here touched, that wittingly, and willingly, you shall not break any statute of the said order, or any article in them contained, unless you shall have first received a dispensation from the sovereign, the same being agreeable, and not repugnant to the will of God and the laws of the realm, as far forth as to you belongeth and appertaineth, so help you God and his Holy Word.' The two knights then conducted his grace into the upper stall ; the Register and Garter entering into the lower stall; the Deputy Black Rod remaining in the area. Garter then presented the mantle to the knights, who invested his grace therewidi, the Register reading the following admonition : — ' Receive this robe of heavenly color, the livery of this most excellent order, in augmentation of thy honor, ennobled with the shield and red cross of our Lord, by whose power thou mayest safely pierce troops of thine enemies, and be over them ever victorious ; and, being in this temporal war- fare glorious in egregious and heroic actions, thou mayest obtain eternal and triumphant joy.' Next Garter presented the hood, which was put on over his grace's right shoulder, the ends of the tippets being brought in front, and passed under the girdle. Then garter presented the great col- lar and George, with which the knights invested the duke, whilst the Register read this admoni- tion : — ' Wear this collar about thy neck, adorned with the image of the blessed martyr and soldier in Christ, St. George, by whose imitation pro- voked, thou mayest so overpass both prosperous and adverse encounters, that, having stoutly van- quished thine enemies, both of body and soul, thou mayest not only survive

this transient com- bat, but be crowned with palms of eternal vic- tory.' Garter then presented the statute-book, which the knights delivered to his grace; and then placing the cap and feathers on his head, they seated him in his stall ; and his grace rising up, made his double reverence, viz., first to the altar, then to the sovereign : the knights, after embrac- ing and congratulating him, descended into the middle of the choir, and, making their reverences, went up into their stalls, and, repeating the same, sat down ; the officers returning to their places.

Then garter summoned the two knights next in seniority, in order to install the honorable captain Yorke, the proxy for the earl of Hard- wicke; who was thereupon conducted, with the same ceremony, into the stall under that ap- pointed for his principal, where the Register ad- ministered to him the oath. He was then con- ducted into the upper >tall ; and, the mantle being presented by Garter, the knights put the same over his left arm, so that the cross, em- broidered within the garter, might be seen. They then seated the said proxy in the stall, with the ceremony as before-mentioned, and returned to their stalls ; the proxy, immediately rising, made his reverences, and remained standing during the rest of the ceremony, with the mantle on his arm.

The duke of Beaufort, the marquis of Aber- corn, the earl of Pembroke, the earlofWinchilsea, and the earl ofC'hcstcrficld, wore severally intro-

duced and installed, in the same manner as the duke of Rutland, and by the same Knights re- spectively, who introduced them into the Chapter house. The Knights thus installed, divine ser- vice began ; which was the same with that used in St. George's Chapel on the Obiit Sundnys ; except that no sermon was preached. Proper psMlms, the 21st, 146th and 147th. First lesson, 44th chapter of Ecclesiaclicus. Te Deum, com- posed by (jibbons. Second lesson, 1 1th chapter of the epistles to the Hebrews. The anthem, a celebrated composition of Handel, selected for the occasion by his majesty, from Psalm the 21st, was sung at the conclusion of the first service.

Full chorus — Hallelujah. Communication service — Kyrie Eleeson, by Dr. Child.

At the words of the offertory, ' Let your light so shine, &c.' — the organ and band playing tlie air in ' Berenice,' — the officers of the wardrobe spread a carpet on the steps of the altar; and Deputy Black Rod, making

his obeisances, went up to the rails of the altar, on the right side : where he received from the yeoman of the ward- robe, a rich carpet and cushion, which with the assistance of the yeoman, he laid down for the sovereign to kneel upon. In the mean-time, Garter summoned the knights from their stalls, beginning with the junior; each knight making his reverence in his stall, and repeating the same with his companion, in the choir, retired under his banner. — AH the knights standing thus under their banners, and the prelate at the altar to re- ceive the offerings, the sovereign, making his re- verence to the altar, descended from his stall ; and then making another reverence to the mid- dle of the choir ; preceded to the offering in the following order :

Garter. The Register.

The Chancellor.

The Lord Chamberlain. The Sword of State.

The Sovereign.

His Majesty's Train, borne as before.

The senior Knight, not of the Blood Royal, being the Knight ajipointed to deliver the offer- ing to the Sovereign, made his reverence as the procession passed ; and thereupon, placed him- self a little behind his Majesty, on the right side. The Sovereign, coming to the rails of the altar, made a reverence ; when Deputy Black Rod, on his knee, delivered the offering to the Knight, who delivered it to the Sovereign ; and his Majesty, taking off his cap and feathers, put the offering into the basin, held by the Prelate, assisted by the Prebends. The Sovereign rising, made his reverence to the altar; and, retiring, made another in the middle of the choir; and, when in his stall, another, all the attendants turning as his Majesty did, and making their reverences at tlie same time. The Knight, who delivered the offering, retired under his banner, when the procession came opposite the same.

All the Knights standing under their banners, the P-ovincial Kings of Arms joined with usual reverences, and went to his Royal Higness the prince of Wales ; who, in the middle of the choir, made his double reverence, viz., first to the altar, then to the Sovereign, and was con- ducted to the altar ; where, taking off his capˆ

ended, the Prelate was seat by the Verger of St.

and making another reverence, he kneeled, and offered gold and silver into the bason; and, returning in the same order, went into his stall, wiiere he made his reverences, and sat down. Then two Officers of Arms attended

the two next Knights in seniority, being companions; who ofl'ered in like manner, and so on, till all tlie Knights and the Proxy, either singly or in pairs, had offered, and ascended into their Stalls. Tlie Provincial Kings of Arms attended those Kniglits who were of the Blood Royal; and tlie senior Heralds in rotation, the other Knights Com- panions.

Divine service beinr conducted to his George's chapel.

The origin of this order is variously related by historians. The common account is, that the countess of Salisbury happening at a ball to drop her garter, the king took it up and presented it to her with these words, ' Honi soit qui mal y pense,' i. e. evil to him that evil thinks. In the original statutes, however, there is not die least hint of allusion to such a circumstance, farther than is conveyed in the motto. (Camden, lern, &c., take the order to have been instituted on oc- casion of the victory obtained by Edward over the French, at the battle of Cressy. That prince, say some historians, ordered his garter to be dis- played, as a signal of battle ; in commemoration of which he made a garter the principal orna- ment of the order erected in memory of this sig- nal victory, and a symbol of the indissoluble union of the knights. And they account for the motto, that king Edward, having laid claim to the kingdom of France, denounced shame and defi- ance upon him that should dare to think amiss of the just enterprise he had undertaken for re- covering his lawful right to that crown ; and that the bravery of those knights whom he had elect- ed into this order was such as would enable him to maintain the quarrel against those that thought ill of it. This interpretation, however appears to be rather forced. A still more ancient origin of this order is given in Rastel's Chronicle, lib. vi. quoted by Granger, in the supplement to his Biographical History : viz. that it was devised by Richard I. at the siege of Acre, when he caused twenty-six knights, who firmly stood by him, to wear thongs of blue leather about their legs ; and that it was revived and perfected in the nineteenth year of Edward III.

Degradation of a Knight Companion. — The degradation of a knight companion, according to the second article of king Henry \TIIth's statutes, is to be inflicted on all those who shall be found guilty of heresy, treason, or flying from battle.

When a knitrht companion is found guilty of any of these offences, and is in the dominions of the sovereign, he is usually degraded at the ensuing chapter ; and, the sovereign having ac- quainted the knights companions with his inten- tion to have the ceremony performed, he com- mands Garter to attend "such of them as are appointed to go to the convict knight, who in a solenin manner, first take from him his George and riband, and then his garter. And at the following feast of St. George (or sooner, if the sovereign

appoint) publication of his crimes and

degradation is made by Garter, and a warrant issued out to him for taking down the achieve- ments of the knight, which is performed as fol- lows : —

First, Garter, in his coat of arras, usually before morning prayer, standing in the middle of the choir in St. George's chapel, the officers of arms standing about him, and the Black Rod also present, reads aloud the instrument for pub- lishing the knight's degradation. This being read, the deputed herald being placed on the back of the stall of the convict knight, when Garter pronounces these words: 'Be expelled and put from among the arms, &c.' takes his crest, and violently casts it down into the choir, and afterwards his bannei and sword ; and, when the publication is read out, all the officers at arms spurn the achievements out of the choir into the body of the church, first the sword, secondly, the banner, and lastly the crest ; so on, out of the west door, thence through the castle-gate, whence they are thrown into the castle ditch.

*At a chapter held 32d Henry VIII., it was de- termined, that wheresoever the actions and names of such offenders should be found in the books of the order, these words, * Vah Proditor,' should be written in the margin, as a mark of ignominy, by which means the registers would be preserved fair, and not defaced by erasements.*

The last knight who was thus degraded, was the duke of Ormond, anno 1, George I., for act- ing in concert with the French general.

Garter Principal King at Arms. This office was instituted by Henry V. Garter, and principal king at arms, are two distinct offices united in one person : garter's employment is to attend the service of the order of the garter; for which he is allowed a mantle and badge, a house in Windsor Castle, and pensions both from the sovereign and knights, besides fees. He also carries the rod and sceptre at every feast of St. George, when the sovereign is present, and noti- fies the election of such as are newly chosen ; attends the solemnity of their installations, and funerals ; takes care of placing their arms over their seats; and carries the garter to foreign kings and princes : for which service it has been usual to join him in commission with some peer, or other person of distinction. Garter's oath re- lates only to services being performed within the order, and is taken in chapter before the sove- reign and knights. His oath asking at arms is taken before the earl

marshal.

GARTH or Girth, from gird. See Girth.

Garth (Sir Samuel), an English poet and physician, descended from a good family in Yorkshire. He studied at Cambridge, where he took the degree of M, D. in 1691, and was ad- mitted into the college of physicians at London in 1693. He zealously promoted the erecting of the dispensary for the relief of the sick poor. This having exposed him to the resentment of others of the faculty, he ridiculed them, with pe- culiar spirit and vivacity, in a poem called the Dispensary, in six cantos, highly esteemed. He was one of the most eminent members of the Kit-Kat Club. Upon the accession of George I. Dr. Garth was knighted, and made physician to his majest" and the army. He had then gone

through the office of censor of the college in 1702; and had a very extensive practice. One of his last performances was his translation of tlie fourteentli book, and the story of Cippus in the fifteenth of Ovid's Metamorphoses. These were published ia 1717. He died in January, 1718 —19.

GARTMORN Dam, an artificial lake in Clackmannanshire, formed about the beginning of the eighteenth century, for tl>e use of the Alloa coal- works. When full it covers 162 English acres. The head is faced with rough hewn stone, and measures 320 yards. It has a sluice, which regulates the quantity of water to be conveyed into a lade, which fiist drives a mill for chipping wood and dye stuffs, next a liut- mill ,• then it is conveyed into pipes forcing it up to two engines, that draw up the water and the coals from the pits; after which it is collected into a smaller dam, and conveyed thence, in a lade, to a set of mills in Alloa for grinding wheat, oats, malt, and barley; which are capable of grinding 400 bolls, or 250 quarters, in a day. There are two large wheels, nineteen feet dia- meter, in the centre of the house, which drive the whole machinery in both ends of the mills. From these mills, the water falls into a rivulet, that runs through Alloa, drives a snuff and full- ing mill, and, passing through some pleasure grounds, comes near the harbour, where it is again confined by a strong dam of earth, a large sluice, and a long trough, both of stone; which gives it a considerable velocity for clearing the harbour; so that this little water, originally a branch of the Black Devon, is made to serve the most important purposes, by driving seven mills besides cleaning the harbour.

GARVE (Christian), an eminent German phi- losopher and public writer, was born on the 7th of January, 1742, at Breslau, where his father was a Jyer. He studied at the universities of Frankfort, Halle, and Leipsic; at which last place he obtained a professorship, but was soon compelled to

resign it on account of bad health. He now returned to his native town, where he continued to spend the remainder of his life. In his last years he suffered much from a painful disease, which he endured with great fortitude. He died at Breslau on the 1st of December, 1798. The celebrated Kant paid him the com- pliment of saying that ‘ Garve was a true philo- sopher, in the legitimate acceptation of the vyord.’

Garve invented no system of his own, nor did he attach himself to the tenets of any one master. He belonged to that class of philosophers who, without adopting any particular theory, take an impartial view of all systems of doctrine, and seek truth wherevei it is to be found. The just and rational view which he inculcated on the subject of our moral and social duties, entitle him to the praise of a genuine practical philoso- pher. The history of philosophy is indebted to him for several new and ingenious illustrations : and he has left us a faithful though rapid sketch of the ancient and modern doctrines respecting the fundamental principles of moral philosophy. His literary essays display a refined taste, and a genius at once elegant and philosophical. His

style is uniformly simple, perspicuous, and correct.

His principal works are, 1. Dissertatio de NonnuUis quae Pertinent ad Logicam Probabili- uni, 1766, 4to. 2. Dissertatio de Ratione Scri- bendi Historiam Philosophicam. 3. A prize essay, in German, on the Inclinations, which was crowned by the Royal Academy of Berlin, 1769, 4to. 4. Prosˆr. Legendorum Philosophorum NonnuUa et Exemplum, 1770, 4to. 5. Remarks on the Character and Writings of Gellert, 1770, 8vo. in German. 6. A Dissertation(in German) on the union of morals and politics, Breslau, 1788, 8vo.; also translated into French. 7. Es- says (in German) on various subjects in litera- ture, morals, and social life. 8. A sketch (in Ger- man) of the most remarkable principles of moral philosophy, from the time of Aristotle to the present day, &c., was first prefixed to his translation of Aristotle’s Ethics, and afterwards printed separately; Breslau, 1798, 8vo. 9. Some observations on the most general principles of morals, in German, ibid. 1798, 8vo.’ Besides these works Garve wrote a number of literary essays. He also translated into German a variety of English works. Garve’s Correspondence was published at Breslau, in 2 vols. 8vo. • GARUM, in ancient cookery and medicine, is a common term for a kind of pickle, in which fish had been preserved. The principal kind of fish thus preserved

was the mackerel ; and the garum principally consisted of the juices of the fish and salt. We find the old writers speaking of several kinds of it : one they call Spanish ga- rum, from the place whence they had it ; another kind, from its color, was termed the black garum : this last kind seems to have been that called f«cosum by the Latin poets, as if the faeces and remains of the fish were left among it ; and by others garum sanguineum, from its being some- times tinged with their blood to a reddish color. The Romans sometimes called the Spanish kind, which was esteemed the best, garum sociorum; and Galen says that the black garum was called oxyporum ; but he only means by this, that it was used in the preparations call'ed oxypora. It served to dilute them, and thence took the name of them to itself, by way of distinction from the Spanish, and other kinds, not used for this purpose. Pliny tells us that garum was com-

posed of all the oftals of fish, of every kind, macerated in salt ; it had its name, he says, from its being originally made of a fish, called by the Greeks garos ; but in his time the best seems to hare been made with the mackerel ; but that there were several other kinds used both in food and medicine, some of which must have been made from scarce fish, for they were of great price. They were used in glysters, and externally ap- plied in several kinds of cutaneous eruptions : the ancients had a great opinion of them in glys- ters, for removing the pain in the sciatica, and other like cases ; and the coarser sorts were their common medicine for cui ing cattle of the scab, by making incisions in the skin, and laying over the part cloths wetted with them. Strabo, lib. iii. 109; Plin. lib. xxxi. cap. 8. The exact way in which the ancients prepared their garum, which they so much valued as a delicacy at their tables, is unknown to us; but it appears that some kinds of garum had no fishy matter in them, from Aetius, who gives the following prescription of a liquor, which he calls by this name : — take of common water thirty-one pints, of sea-salt two pints, and of dried figs fifty ; let these all mace- rate together, and afterwards be strained clear for use. All the garums were esteemed hot and drying by the ancients, and were sometimes given as laxatives before food. The modern writers understand the word garum in a much more limited sense, meaning no more by it than the brine or pickle in which herrings or anchovies are preserved.

GARUMNA, a navigable river of Gaul, which, rising from the Pyrenees, anciently bounded Aquitain on the north ; but, by a regulation of Augustus, divided it in the middle : running to the north of Burdegala, into the Aquitanic Ocean. It is now called Garonne. Mela observes, that unless it is swelled by winter rains, or the melt- ing of the snow, it is for a great part of the year shoaly and scarcely navigable ; but, when in- creased by the meeting tide, by which its waters are repelled, it is somewhat fuller, and the far- ther the river advances, it is broader, till at length it resembles an extensive frith ; not only bearing large vessels, but swelling like a raging

sea, and tossing them extremely, especially if the direction of the wind be one way and that of the current another.

END OF VOL. IX.

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VOL. X

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THE

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AND APPROPRIATE DIAGRAMS.

Sic oportet ad librum, presertim misceUanei generis, Icgendum accedere lectorem, ut so'.et ad convivium couviva civilis. C!onviTator annltitur omnibus satisfacere ; et tamen si quid appoaitur, quod bujas aui lUiug palato non respondeat, et hie et ille urbane dissimuUnt, et alia fercula probant. ne quid contristent conviraiorem. Erasmus.

A reader ihould sit down Cu a book, especially of the mifcellaueooa kind, as a nell-liebaved visitor does to a banquet. The master of the feast exerts himself to satisfy his guests ; but if, after all his care and pains, something shotild appear on the cable that doe4 Dot suit this or that person's taste, they politely pas« it over without notice, and commend »ther dishes, that they m-iv not distress a kind host. Trnntlation.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPEDIA METROPOLITAN A,

ASSISTED IIY EMIMiNT mOFESSIONAL AND OIIIEH 6ENTLE.MEN.

IN TWENTY-TWO VOLUMES. VOL. X.

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1837.

THE

LONDON ENCYCLOPEDIA.

G A S.

GAS. Goth, and Swcd. gtesa, to ferment, a ferm first commonly used by Van Ilelmont for fluids of an aeriform character.

Gas. The various cˆˆaseous bodies have been enumerated, and their properties exphiined, in that department of chemistry, to which tliey peculiarly belong; and we now propose to direct tlie atten- tion of our readers to one of die most important practical applications of gaseous chemistry, in the illumination of buildings, and even large cities, by carbureted hydrogen gas.

The])roducing from coal an aeriform fluil, which could be distributed at pleasure in every direction, for the purpose of economical illumi- nation, has justly been ranked amongst tlie great- est benelits which the science and enterprise of this country have conferred on mankind.

Tliat coal evolves a permanently elastic and inflammable aeriform fluid, seems first to haˆ‘e been experimentally ascertained by the Rev. Di. Clayton, and a brief account of liis discovery is published in the Philosophical Transactions foi the year 1739. The following is an extract from bis paper: — ‘ I got some coal, and distilled it in a retort in an open fire. At first there came over only phlegm, afterwards a black oil, and then Ikcwise a spirit arose, which T could no ways condense ; but it forced my lute or broke my glasses. Once when it had forced my lute, coming close thereto, in order to try to repair it. 1 observed that the spirit which issnocl from it caught fire at the flame of the candle, and continued burn- ing with violence, as it issued out in a stream, which I blew out and lighted again alternately for several times. I then hnd a mind to try if I could save any of this spirit, in order to which, I took a turbinated receiver, and putting a can- dle to the pipe of the leceiver, whilst tlie spirit arose, I observed that it catched flame, and continued burning at the end of the pipe, though you could not discern what fed the flame. T ‘lien blew it out, and lighted it again several times; after which I fixed a bladder, squeeied and void of air, to the])ipe of the receiver. Tiie oil and plilegm descended into the receiver, hut the spirit, still ascending, blew u]) the blad- ˆc.T. I then filled a good many bladders there- with, and might have filled an inconceivable number more, for the spirit continued to rise for severnl hours, and filled the bladders almost ns fast as a man could have blown them with his mouth; and yet the quantity of coals distdled was inconsiderable.

- I kept this spirit in the bladders a consider- able time, and endeavoured several wavs to condense it, but in vain. And when 1 had a mind to divert strangers or friends, I have fre- quently taken one of these bladders, and prick- ing a liole therein with a pin, and compressing Voi.X.-PautL

gently the bladder near the flame of a candle till it once took fire, it

would then continue flamino- till all the spirit was compressed out of the bladder, which was tlie more surprisincr, because no one could discern any difference in the ap- pearance between these bladders, and those which are filled with common air.

‘ But then I found that this spirit must be kept in good thick bladders, as in those of an ox, or the like; for if I filled calves’ bladders there- with, it would lose its inflammability in twenty- four hours, though the bladders became not re- laxed at all.’

But the application of the gas thus generated to the purposes of economical illumination is of much more recent date, and the merit of introducing it is principally due to Mr, Mur- doch, whose observations upon the subject are published in the Philosophical Transactions for 1808. He first tried it in Cornwall, in the year 1792; and afterwards, in 1798, established an apparatus upon a more extended scale at Boul- ton and Watt’s foundry at Birmingham ; and it wa” there that the first public display of gas ligliij was made in 1802, upon the occasion of the rejoicings for peace. These, howerer, were but imperfect trials, when compared with that made in 1805 at INIessrs. Phillips and Lee’s cot- ton mills at Manchester; and upon the results of which, all subsequent procedures, with regard to gas lighting, may be said to be founded. The whole cotton mill, and many adjacent build- ings, were illuminated with coal gasˆ to the ex- clusion of lamps, candles, and other sources of artificial light. Nearly 1000 burners of diflerent forms were employed ; and the light produced was estimated equal to that of 2500 well managed candles of six to the pound.

The most important and curious part of IMr. Murdoch’s statement relates to the cost of the two modes of lighting (namely, by gas and candles) per annum. The cost of the coal, used to furnish the gas, amounting aniiually to 110 tons, was £l25. I’orty tons of coals to h.eat the retort £20, and the interest of capital sunk, with due allowance for accidents and rejiairs, £550. I’rom the joint amount of these items must be deducted the value of seventy tons ot coke, at Ix. Ad. per cwt., amounting to £93, which reduces ■ˆlic total annual expense to £(502; while that of candles to give the same light would amount to £2000.

Such was the flattering result of the first trial of gas illumination upon a tolerably extensive scale. In reuard to its efficacy, we are informed by Mr. INIurdoch, that the peculiar softness and clearness of the light, with its almost unvarying intensity, brought it into great favor with the work people • and its being free from the incoii

venience of sparks, and the frequent necessity of snuffiniT, are circumstances of material import- ance, as tending to diminish the hazard from fire, to which cotton mills are so much exposed.

When Mr. Lee was examined by Mr. Brougham, in 1809, before a committee of the house of commons, against the Gas-light and Coke Company's bill, his evidence was then equally favorable. He said, it gave no disagree- able smell; and when questioned as to the goodness and purity of the light, ' I burn it,' said he, * every night in my own house, in- stead of thirty pairs of candles.' He further added, that he found it perfectly wholesome, and that it was never complained of either in his own dwelling-house, or in the mill.

The president aiid council of the Royal So- ciety proved the high opinion which they enter- tained of the value and importˆaice of Mr. Murdoch's .communication, on the employment of the gas from coal for the purpose of illumi- nation, by adjudging to him count Ilumford's gold and silver medals.

We are indebted to Dr. Henry, of ˆlanchester, for some valuable researches concerning the composition of the aeriform products of several varieties of coal. He has pointed out the vari- ous composition of the gas at different periods of the distillation, and has shown the important influence of the circumstances under which the coal is distilled, upon the proportion of gas yielded, and its fitness for the purposes of illu- mination. This fact attracted the notice of Mr. Clegg, the engineer of the Gas-light Company, who has founded upon it several ingenious im- provements in the construction of the retorts employed at the Westminster gas works. Coal in large heaps, and gradually heated, affords less gas, and more water and tar, than when it is extended over a considerable surface, and sud- denly brought to a red heat. It is also very advantageous to dry the coal before its introduc- tion into the retort.

In a small gas apparatus, erected in the labo- ratory of the Royal Institution, it was found that 4 lbs. of good Newcastle coal, introduced into the retort previously heated red in a shallow iron pan, may be made to afford a produce of from twenty to twenty-six cubic feet of gas, con- sisting of

8 defiant gas. 72 Carbureted hydrogen. 13 Carbonic oxide and hydrogen.

4 Carbonic acid.

.3 Sulphureted hydrogen.

100

The carbonic acid and sulphureted hydrogen are separated by the lime in the purifiers.

Tlie same quantity of coal introduced into the cold retort, and gradually heated, afforded only twenty-two cubic feet of gas, consisting of

5 Olefiant gas.

70 Carbureted hydrogen.

18 Carbonic oxide and hydrogen,

6 Carbonic acid.

1 Sulphureted hydrogen.

100

The specific gravity of the former gas, that of air being :=: 1000, was::^: 560, and of the latter tz 555 : the fitness of gases for the purposes of illu- minating is, generally speaking, directly as their specific gravity.

These experiments lead to the conclusion, that a chaldron of good Wallsend Newcastle coals would afford from 17,000 to 20,000 cubical feet of gas, but the process of distillation, as now carried on in the large establishments for light- ing the metropolis, seldom affords a larger aver- age produce than 12,000 cubical feet. There can, however, be little doubt that, by improve- ments in the construction and management of the retorts, the highest of the above averages might be procured ; and calculating upon this produce of gas, and upon the other substances yielded by the operation, we obtain a curious and striking result.

The average value in London of a chaldron of the best Newcastle coals is £3. The value of the products of its distillation is as follov.s : —

£. s. d,

1 J chaldron of coke, at 31s. . . 1 18 9

12 gallons of tar, at 1 Of/. . . . 0 10 0

18 gallons of ammoniacal liquor, at 6(/. 0 9 0

20,000 cubic feet of gas, at 15s. per

1000 cubic feet 15 0 0

fl7 17 9

From the value of products must, of course, be deducted, the value of the common coal em- ployed in the furnaces for heating the retorts, amounting to about five chaldrons for every five- and-twenty chaldrons submitted to distillation, and the expense incurred by w ear and tear, with the wages of the laborers, and lastly, the inte- rest upon capital. Mr. INIurdoch's estimate, already quoted, will be found pretty accurate upon these heads.

The tar is frequently employed for the pro- duction of gas, either by mixing it with small coal in the retorts, or by passing it through a red hot tube. Every pound yields between se- venteen and eighteen cubic feet, containing from fifteen to twenty per cent, of olefiant gas. When, therefore, it has been cleansed by lime, it burns with a very brilliant flame, and is a most im- proving addition to the common gas. Wigan and Cannel coal yield the best and largest pro- portion of gas for the purposes of illumination, but it is seldom it can be employed on account of its high price.

The burners, or tubes whence the gas issues for combustion, may be infinitely and tastefully varied. The varieties commonly employed are the bat's-wing burner, and the Argand burner. The former consists of a brass lube having a slit at its extremity about a quarter of an inch long and one-fortieth of an inch wide. The latter is composed of two concentric brass tubes, about two inches long, closed at bottom by a ring of brass, and at the top by one of steel, perforated with sixteen or eighteen hˆles, of one-thirtieth of an inch in diameter. Tlie gas enters the cavity between the tubes, and issues from the circular row of apertures, where it is inflamed, and hav-

ing a due supply of air, within and without, burns very beautifully when a proper glass is placed over the burner. These burners, when very carefully regulated, consume about three cubical feet of gas per hour, and give light equal to that of six wax candles ; but it is requisite, on account of carelessness and mismanagement, to allow

four cubical feet to each burner per hour. The bat's wing burner should not consume more tlian three cubic feet per hour.

Besides the different varieties of coal, some of which, as has been hinted, are much preferable to others, and coal tar, a useful gas may be procured from a variety of other substances ; and in the laboratory of the Royal Institution, the retort is often fed with waste paper, saw-dust,))ieces of wood, ike, and the gas is consumed for a variety of purposes where oil was formerly employed.

The following are the results of some experi- ments upon these subjects, compared with the produce from coal.

1. The retort was charged with four pounds of coal. The quantity of gas amounted, after hav- uig passed the purifiers, to twenty cubic feet. The coke remaining in the retort weighed 2 lb. 8-7 ozs.

The heating power of the gas flame was com- lˆared with that of a wax candle, by ascertaining liic time required by each to raise two ounces of v'-ater, in a thin copper vessel, from 55° to 212°. Tlic flames were made as similar in dimensions as possible, and so placed that their joints just touciied the bottom of the vessel. The heating power of the candle being assumed as ~ 1, that >M* the coal gas flame was n 1*5.

2. Four pounds of the dried wood of the com- mon willow yielded sixteen cubical feet of gas, and fourteen ounces of charcoal remained in the retort. Tiie gas burned with a very pale blue flame, and was unfit for the purpose of illumi- nation, and contained no olefiant gas.

3. Four poimds of the wood of the mountain ash aff'orded fifteen cubical feet and a half of gas, and thirteen ounces and a half of charcoal. The flame was very pale and blue.

4. Four pounds of white birch wood gave fourteen cubical feet of gas, and twelve ounces of charcoal. The flame similar to 2 and 3.

5. Four pounds of hazel wood yielded thir- teen cubical feet and a half of gas, and twelve ounces and a half of charcoal. Its heating power was rr 1'2. It burned witli a better flame tiian 2, 3, and 4, but the intensity was not sufficient for any useful purpose of illumination.

G. I'our pounds of writing paper gave cigli- teen cubical feet of gas, and the remaining ciiar- coal, which beautifully retained the form and texture of tlio paper, weighed eleven ounces and a half. TIic heatintr power of the gas was rr: IC. It burned with a flame nearly approaching in illuminating power to that of coal gas.

These experiments, along with others which it is thought unnecessary to notice, prove tliat the gas from woods is not fit for the purposes of illumination, although, as evolved during the production of charcoal, it may conveniently bo consumed in the laboratory as a source of heat.

\Ve may now describe the retort oven for ge-

nerating gas on a large scale. Fig. 1, plate I. Gas Light, exhibits a longitudinal section, and fig. 1. shows the front elevation of the oven, built about ten feet above the ground, upon j)iers or .arclies, which saves brick-work, and allows a stage or platform to be erected in front of the fire places of the ovens. Between the back part of the ovens and the wall of the build- ing in which they are erected is left an empty space of a few inches to prevent the heat of the oven being communicated to the wall.

The whole interior of the oven, as well as the horizontal flue which passes tuiderneath the crown of it, near the upper tier of retorts, is lined with fire-bricks. The uppermost part or crown of the arch is constructed of large fire-bricks, of such a shape as will allow to flatten tlie upper part of the arch as much as possible, in order to contract the space between the two upper retorts and the crown of the arch of the oven.

R, R, fig. 2 and 3, are cylindrical retorts, placed horizontally in the oven, the lower series are either supported by a large fire-brick, placed edgeways underneath the retort, or by means of a stout wrought iron pillar, as shown in the de- sign. The two upper retorts are supported by wrought iron straps, T, T, T. The straps pass through the brick-work of the upper part of the oven, as shown in the designs, and they are se- cured with screws and nuts to an iron bearing bar, the extremities of which are supported by the outer walls of the oven. Each retort is fur- nished at the extremity opposite to the mouth- piece with a short projecting piece or tail let into the brick-work of the oven.

M, fig. 4, shows the mouth-piece of the retort with its cross bar and hand screw ; and fig. 5 shows the mouth-piece drawn to a larger scale. E is the hand-screvv-, with its cross or bearing bar D, which passes tln'ough the projecting arms C, C. The lid of the mouth-piece has a conical edge, so that it fits close when put into its place by means of tlie hand-screw E.

F, fig. 6, is the fire-place, with the ash-pit E of the oven. The door of

the ash-pit is provided with three slits covered within by a I'egister slide, to regulate the admission of air as occasion may require. The fire passes freely and uniformly round all tlie retorts, and the whole cavity of the oven acquires an equable temperature, which it retains, if the workman takes care to admit as little air as possible through the register door of the ash-pit, when the upper part of the arch, or crown of the oven has acquired a bright cherry red iieat. The liquid substances, namely the tar and ammoniacal fluid, collect in the hydraulic main II, which is furnished with a perpendicu- lar diaphragm or partition plate to cause a cer- tain quantity of the liquid deposited in it to ac- cumulate to a certain height, and thus to seal the perpendicular pipe P. The liquid cannot flow out of the horizontal pipe II, till it rises to the level of the diaphragm.

K, fig. 7, is the discharging pipe, connected witli the upper part of the horizontal main II: it serves to convey away the gaseous and liquid prod

tlie tar cistern, which is perfectly air-tight, and from this vessel tlie liquid may be drawn oft' by means of a pipe or stop-cock. The extremity of the pipe which communicates with tlie liquid is bent downwards, so that no air can enter the vessel.

It is essential that the condensation of the vaporous fluids should be fully completed before they reach the tar vessel. To effect this, there is usually allowed a considerable distance to inter- vene between the discharging pipe, K, and the reservoir destined to receive the condensable products ; or the pipe is made to pass through a vessel containing water, called the condenser, which acts in a similar manner as the refrigeratory of a common still. It is obvious that it is imma- terial how the condensation of tlie vaporous fluid is effected ; it is essential, however, that the con- densation sliould be complete before tlie licjuid tar and ammoniacal fluid reach the reservoir destined to receive these products. The gaseous fluid, which accompanies the condensable pro- ducts, is tlien made to pass into the lime ma- chine, in order to be deprived, by means of quicklime and water, of the portion of sul- jiiuireted hydrogen and carbonic acid gas which was combined with the gas. And, when this has been accomplished, the purified gas is con- veyed into the gas-holder, where it is stored up for use. In some establishments, the hydraulic main is furnished with two discharging pipes; ˆthe one carries away the condensable fluid, into

which the perpendicular pipes, P, fig. 8, dip, whilst the other serves to convey away the gaseous fluids to a condenser, in order to deposit the vaporous portion of condensable liquid it may contain, and from thence the gas passes into the purifying apparatus, or lime machine. X, fig. 9, is a small screw plug, which, when opened, re- stores the equilibrium of the air within and without the retort previous to the lid being taken off, to prevent the loud report which otherwise happens when the lid or cover of the retort is suddenly removed. To avoid these explosive reports, which had become a nuisance to the neighbourhood of gas works, the practice of gradually withdrawing the lid of the retort, and, at the same time, presenting a lighted torch, has been adopted at some works, which fully reme- dies the evil.

The quantity of gas to be obtained from coal varies according to the coal employed and the man- ner in which it is treated ; the quality also depends on the mode of applying the heat. Taking it for granted that the most advantageous method of decomposing it is followed, the quantity from the different kinds of coal varies. In stating the proportions, therefore, we can come only at an average conclusion.

Mr. Peckston, in his work on Coal-gas, states, that a chaldron of Newcastle Wall's End coal will yield 10,000 feet, supposing it decomposed under the most advantageous circumstances; 2 cwt. will, therefore, yield about T50 feet. At Edin- burgh, 2 cwt. of Parrot-coal yield, on an average, 860 feet of gas. According to Mr. Neilson, engineer, Glasgow, 2 cwt. of Lesmahago coal will produce 1 008 cubic feet of gas, allowing four and a half each pound. Mr. Russell, of London, has

stated the quantity from Newcastle coal to be flie same, four feet and a half per pound. Mr. Dewy, in a paper in the Annals of Philosophy, asseri>, that at Liverpool, Mr. King considers it goo.l economy to procure 70ˆ0 feet from a ton oi Wigan Orral coal, making it only 700 feet from 2 cwt., a very little more than three feet per pound, lie has stated also, that, at Glasgow, 1200 feet are procured from 2 cwt. of cannel- coal, which 4S considerably above that mentioned by Mr. Neilson. From these various statements, the general conclusion has been drawn, that 2 cwt. of good coal ought to yield about 1000 feel of gas.

With respect to the quantity to be obtained from oil, this must, of course, also depend on the nature of the oil, and the manner of decomposing it. Mr. llicardo mentions, that, from repeated trials in various oil-gas establishments, it has been ascertained that one gallon produces 1 00 cubic feet. From the experiments of Mr. Brande, and

Mr. Faraday, it appears that the same quantity aiibrds from 100 to 110 feet. In some instances it has been known to amount to about 1 20 ; but in tliese cases, it was not good, the additional quantity having been derived from substances put into the retort. At Leith, a gallon of whale oil affords from ninety-eight to 108 cubic feet; and the same quantity of palm-oil, from ninety-seven to 114. It may be considered a fair estimate to obtain 100 feet from each gallon, presuming, of course, that the oil is decomposed under the most favor- able circumstances, so as to get a gas possessing the greatest illuminating power; for on this every thing depends. From experiments performed on a small scale, and from trials made at Leith, Dr. Fyfe found, that if the oil be allowed to flow into a retort brought just to a red heat, there is com- paratively little gas, but a great deal of volati-le oil. When the retort is brought to an intense heat, lamp-black is formed in considerable quan- tity ; so that, in both of these ways, there is a great loss. When the retort is at a full red heat, the oil seems to undergo decomposition most easily, and to give off the largest proportion of good gas.

In conducting the decomposition af coal, the evolution of the gas is far from being, with regard to quantity, uniform, during different periods of the distillatory process. The formation of the gas is more rapid in the beginning of the process, and gradually slackens as the operation proceeds. The gas also differs in its chemical constitution, at different periods of the process ; although, iu the case of large supplies, this difference i-s of little consequence after the gas is purified i-n the usual manner. The former consideration, how- ever, has given rise to various modes of operating, of which it will be proper to take some notice.

It must be obvious that, in proportion as the mass of coal in the retort becomes carbonised or converted into coke, the exterior surface becomes a gradually increasing obstacle to the action of the heat upon the interior or central part of the coal remaining to be decomposed. The heat required on that account must be more intense, and kept up to purpose ; and the extrication of gas becomes slower and slower, as the ope- ration proceeds. The loss occasioned by this

I’lipid diminution of the means employed, is verious in every point of view, in regard both !o tlie quantity of fuel used and time wasted, but it is unavoidable in the operation of decomposing coal in masses or layers from five to ten inches HI thickness, and must be a great drawback on the vakie of the gas-light discovery. The loss of fuel, it is

obvious, must be just in proportion to tile quantity of carbonised matter, or coke, which is kept hot to no purpose, awaiting the decom- position of that portion of coal which it is the very means of protecting from becoming undecom- posed.

A striking exemplification of this statement will be seen in the following table, exhibiting the result of the progressive produce of coal gas, obtainable, in a given time, by means of cylin- drical and parallelepiped retorts.

Experiment with one Cylindrical Retort, con- taining two bushels of coal. Hours of the distil- Quantity of gas

lalory process. produced.

First hour . . . 115 cubic feet. Second hour . . . 81 Third hour ... 78

Tourth liour , Fifth hour Sixth hour Seventh hour Eighth hour .

70 66 55

49 42

555

The quantity of gas is at the rate of 10,000 cubic ♦eet to the chaldron (27 cwt.) of coal.

Experiment with eiglUecn Cylindrical Retorts, containing one chaldron of coal.

Quantity of gas produced. 2000 cubic feet.

1488

Hours of the distil- latory process. First iiour Second hour Third hour . Fourtli hour . Fifth hour Sixth hour . Seventh hour Eighth hour .

1400 1301 1208 1000 897 691

9985

This experiment was made with retorts set on the flue plan.

The coal employed was (Bewick and Craister's Wall's End) Newcastle coal.

Experiment with thirty-six Parallelopipedal Retorts, eacii contaniing two busliels of coal.

Hours of the distil- Quautity of gas

latory process, produced.

First hour .... 4-058 Second hour . . 3-0-28

Third hour . 2-871

Fourth hour . 2-526

Fifth hour . 2-.‘380

Sixth hour . 1-971

Seventh hour . 1754

Eighth hour . I —150

20-0.38

The same heat, as we have seen from the first table, wliicli is necessary during the hour of

operation, for the evolution of 115 cubic feet of gas, is required in the eightli hour for the])ro- duction of no more than forty-two cubic feet, being a decrease in effect of nearly two-thirds.

When larger retorts are employed for decom- posing coal, in masses from fire to ten inches in thickness, the loss of heat is in a much greater ratio.

In the hope of remedying, in some measure, the evils thus distinctly ascertained to arise from the undue thickness of the masses of coal sub- jected to the distillatory proce.ss, there have not been wanting manufacturers who have had re- course to experiments on a large scale, to ascer- tain with certainty whether they might not be gainers by suffering the distillatory process, when the retorts are charged with two bushels of coal, to proceed only for the space of six hours, instead of eight. But the result of tliese experiments has shown satisfactorily, that it is more profitable to keep up the distillatory process for a period of eight hours, widi the retorts fully charged, than to abridge the operation by terminating it at the end of six hours. Others, again, have imagined, that it would be more economical to decompose a less quantity of coal at once, or to decrease the thickness of the stratum of

coal in the cylindrical or in any of the before-named retorts ; but then, again, serious difficulties occur in the practice. The more frequent charging of the retorts and luting on the covers, whicii such a mode of operating requires, occasions a prodigious waste of fuel, time, and labor. A greater number of retorts, and more workmen, must likewise be employed, in order to produce the requisite quantity of gas daily, which the manufacturer is called upon to supply ; more s|)ace of ground is required, and more dead capital must be sunk in the establishment. The more frequent and sudden alteraticms of temperature which the retorts necessardy suffer, by tiie more frequent introduction of cold coal, renders them extremely liable to become injured; and it is almost im- possible to maintain a number of retorts, thus worked, at a uniform temperature.

One of the best purposes to wiiich the tar pro- duced in tlie distillation of coal can be applied, is to the production of gas, which yields in the proportion of about eighteen cubic feet from each]io\Hid, and of an excellent ciuality for illumi- nation. The following is an account of Mr. Clegg's apparatus for its decomjxjsition, and which appears to answer better than any yet devised : —

A, i)late I., fig. 10, is a tar cistern. B, a cock by which it is drawn olT. As a sufficiently small stream of tar is apt to stop, by its stiffness, a lar'ˆer quantity than is wanted is allowed to run into E, upon tlie edge of the dividing plate C, adjusted by the screw D : the excess runs off by a waste pipe into any proper vessel, while a due portion trickles through E into F, and runs down G,G, into II, where, when the tar has roa(lie

mouth-pieces N, O, may be easy of access, and one above another : the h)\ver branch L,JM, may be placed almost horizontally, and the upper should form with it an angle of about ten degrees. The retort being made red hot, the tar will be decom- posed, and the gas, and some other products, will tiow from the end M, by the pipe P, into the vessel Q, in which is a partition plate R, fig. 11, extending about half way down, and allowing the heavy products to accumulate for a convenient time before they can interfere with the passage of the gas, wˆhich passes to the puri- fiers, as usual, by the pipe S, S, fig. 12, is a moveable lid for cleansing the vessel. It is not thought necessary particularly to describe the construction of tlie furnace, which maybe varied according as circumstances require.

We may now describe the gas-metre erected by Mr. Accum at the

works in the royal mint. It consists of a hollow wheel or cylinder, made of thin iion plate ; revolving upon an horizontal axis, in the manner of a grind-stone ; this wheel is enclosed in a cast iron air-tight cask contain- ing w'ater.

The cylinder, or wheel, is composed of two circular channels, 1 and 2, fig. 1 plate II. con- centric to each other. The larger or outer chan- nel, 1, is divided into three equal compartments, by partition plates, marked a, as shown in the design. The compartments are provided with hydraulic ducts or valves, made at the upper part of every partition plate a, a, a, and by means of them a communication is formed between the larger concentric channel, 1, and the outer case in which the wheel revolves. Similar valves are also placed at the foot of each partition plate, they are seen near the letters a, a, a, and by this means a communication is established, between each compartment or chamber of the larger con- centric channel, 1, and the smaller interior circle, 2, of the wheel.

On inspecting the design, it will be seen that the valves are situated in opposite directions to each other ; hence there can be no communication 'Vither between the inner smaller concentric chan- nel 2, and the larger compartment of the wheel 1, nor between the latter compartment, and the exterior case, in which the wheel revolves, ex- cept through the valves «, a, a, which form the communicating ducts. It will be seen also, that these valves are carried from one chamber of tlie machine into another, but in opposite direc- tions ; the entry into one chamber being in the opposite direction to the hydraulic duct, placed in the other chamber. From these particulars the action of the machine will be obvious.

Let us suppose tliat the outer case, in which the wheel revolves, be filled with water to about an inch above the axis of the wlieel, and that gas is conveyed into the interior small channel, by a pipe, passing along the axis, so as to allow the wheel to turn freely round, and that the pipe is turned up at right angles in the inner cham- ber, and projects a little way above the sur- face of the water, as shown in the design. The gas then must enter into the interior cham- ber of the wheel above the surface of the water, and must press against the adjacent partition ; it will therefore cause the wheel to turn round, andj in consequence of this motion, the next par-

tition plate will press die gas against the surface of the water, and cause it to pass through the hydraulic opening, in an equal quantity to that which is introduced into the exterior chamber. This alternate filling, and discharging, of the contents of each chamber, will take

place once during every revolution of the wheel, and hence the number of times each particular chamber has been filled and emptied of gas may be known. In fact this machine performs the office of three revolving gas-holders, fixed on an hori- zontal axis, and moving in a cistern, which is the outer case of the machine. One gas-holder, or one compartment of the machine, is always in the act of becoming filled with gas, another is emptying its contents into the outer case, from which it passes into the reservoir, where it is to be stored up, or to the lamps, where it is to be burned, and the third compartment is stationary, or ra an equilibrium. The wheel in any situa- tion will therefore always have one of its receiv- ing, and one of its discharging valves open, and consequently it will revolve.

Now to ascertain the quantity of gas dis- charged by one revolution of the wheel, we need only to know the capacity of the chambers, and add them together. Let us for example suppose, that each chamber contains 576 cubic inches, then one revolution of the wheel discharges a cubic foot of gas. To register the total number of revolutions which the wheel makes in a cer- tain time, a train of wheel-work is con- nected with the axis of the metre ; it consists of a pinion impelling a common train of wheel- work, composed of any number of wheels. The pinion on the axis of one wheel, acts into the circumference of die next wheel, and, the circum- ference of the wheel being as ten to one, it is obvious while the metre makes 1,000,000 revo- lutions, if the series consist of six wheels, the last wheel of the series will only have made one revolution. Each axis of the wheels is provided with a finger and dial-plate, divided into ten parts ; therefore any number of revo- lutions may be read off at anytime by inspection betwixt 10,000,000 and one. The velocity with which the metre acts, is of course in proportion to the quantity of gas passing throuf;h it. Thus suppose there is a burner or gas-lamp connected with the machine, of one foot capacity, lighted, which consumes four cubic feet of gas in an hour, the gas metre performs four revolutions per hour, and so on for ever)' number of burn- ers or lamps, not exceeding the number which the machine is calculated to supply.

The gas-holder, of the original construction, consists of two principal parts ; first, of a cistern or reservoir of water, usually constructed of masonry, or of cast-iron plates, bolted and screwed together; and secondly, of an air-tight vessel which is closed at top and open at bot- tom, inverted with its open end downwards into the cistern of water. This vessel is always made of sheet-iron plates riveted together air- tight, and was suspended by a chain or chains, passing over wheels, supported by a frame work. If the common air be allowed to escape from the inner vessel, when its open end is under the edge of the

water in the outer cistern, it will freely descend, and water will occupy the place of the

lit ; but if the avenue of the escape be stopped, and air be made to pass through the water, the suspended inverted vessel will rise to make room for the air. And, again, if the suspended vessel be counterpoised by a weight, so as to allow it to be a little heavier than the quantity of water wliich it displaces, it will descend, if the entering gas be withdrawn through an outlet made in the vessel to permit the gas to escape. But if the outlet be stopped, and air again be admitted under the vessel, it will rise again. The apparatus, therefore, is not only a reser- ‘voir for storing up the gas introduced into it, but ser'es to expel the gas which it contains, when required, into the pipes and mains con- nected with this machine. According to this construction of the apparatus, the interior in- verted vessel forms strictly what is termed the gas-holder. It is suspended as already stated in the outer cistern, by a chain or chains, passing over pulleys, supported by blocks and frame work, and to the chain there is affixed a counter- jKtise balance, of such a relative weight as to allow the gas-holder a slow descent into the wa- ter, in order to propel the gas into the mains or vessel destined to receive it, with a very small and uniform weight.

It will be obvious that, when a gas-holder of tliis construction becomes immersed in the water, it loses as much of its weight as is equal to the bulk of water which it displaces ; and hence to render its descent uniform, and to preserˆ•e the gas within of an invariable density, at any de- gree of immersion, a greater counterpoise is required as the gas-holder rises out of the water. Among various methods which have been adopted to attain this object, the ends of tlie chains by which the gas-holder is suspended, have been fastened in separate grooves, in the edge of a large wheel or pulley, of such a diameter, that the gas-holder rises to its full height before the wheel makes one revolution. In another groove, in the edge of the same wheel, was fixed the end of another chain, to wliich a balance weight was suspended. This weight was made nearly equal to the weight of the gas-holder. To equalise the density of the gas within the gas-iiolder, at any degree of immersion of the vessel, the weicjht chain was made to pass over a wheel, furnished with a spiral groove, so as to make the radii of the wheel change reciprocally with the relative weight of the gas-holder, and consequently to rtjnder the pressure of the gas-holder constant and uniform.

Another and more elegant method of obtain – ing a uniform elasticity of the gas within the gas-holder, and which has been more generally adopted, consists in passine the chain or chains by which the gas-holder is suspended over a pulley or wheels, and making the weight of that portion of the chain which is equal to the depth of the gas-holder, or that part of it which be- comes immersed in the water, equal to one- lialf of the weight of the specific gravity of the gas-holder. It is obvious that, before the puri- fied gas can be admitted into tlie gas-holder, the vessel must be allowed to descend to the bottom of the exterior cistern, in order to get rid of the common air which it contains. This may '■•■ clfec ted rapidly by opening the man-hole at llie

top of the gas-holder, to c-ause the vessel to de- scend completely into the outer cistern filled with water. The man-hole is then screwed up again air-tight, and the machine is ready to re- ceive the gas. Tt is obvious that the operation of opening the man-hole, for letting out the com- mon air, requires only to be done once prior to the commencing of the working of the appa- ratus.

The collapsing gas-holder was contrived by Mr. Clegff, and certainly, of all the contrivances which have been invented for collecting and storing up large quantities of gas, this machine must be pronounced to be by far the most sim- ple, economical, and efficient. The striking advantage of the revolving gas-holder is, that it enables the dimensions of the tank to be very much diminished, where the nature of the ground will not permit of a cistern of great depth being- sunk, except at an extraordinary expense ; but the still superior feature of the collapsing gas holder which we now come to describe, is, that it may be constmcted of > any required capacity, and adapted to a tank or cistern of such di- minished deptii, as scarcely to deserve that name. It requires a sheet of water no more than eighteen inches in height, so that it may be constructed in or upon ground of all descrip- tions, not only with every possible facility, but at an immense saving of expense.

Fig. 2, plate II. Gas Light, exhibits a per- spective view of this gas-holder. It is composed of two quadrantrular side plates joined to two end plates meeting together at top in a ridge like the roof of a house. The side and end plates are united together by air-tight hinges, and the joints are covered with leather, to allow the side plates to fold together, and to open in the manner of a portfolio. The bottom edges of the gas-holder are immersed in a sliallow cistern of water, to confine the gas. By the opening out or closing up of the sides and ends of the gas-holder, its internal capacity is en- larged or diminished, and

this variation of capa- city is eflected without a deep tank of water to immerse tiie whole gas holder in, as required in tlie ordinary construction of rising and fr.lling gas-holders. The collapsing gas-holder requires therefore only a very shallow trough of water to immerse the bottom edues of the iras-holder to prevent the escape of the gas introduced into it. The lower edges of the thin gas lioider, which dip in water, are made to move in an horizontal plane or nearly so, when they are opened, so that they dip very little deeper in the water when shut or folded together, than wlien opened out.

For this jnirpose the top or ridsre joints, which unite the two sides of the gas-holder, are slightly raised up when the sides close or approacli to- gether, or slightly depressed svhcn the sides open out or recede from each other. To guide the whole gas-holder in this movement two perpen- dicidar rods rise from the bottom of tlie shallow tank which pass through sockets in the ridge joints at the upper part of the ga.s-holder. These sockets are secured by collars of leather round tlie shafts or rods, to prevent the escape of tlie gas, and they are braced by chains proceeding from tluir upper extremities and fistened at the ground on each side of t’;c tni.l-

The weight of the gas-holder is balanced by levers bent in the form of the letter L, and placed in the inside of the gas-holder. These levers move on centre-pins fixed at the bottom of the shallow trough, wliich pass through the angles of the L levers. The perpendicular arms of the levers are jointed at tlieir upper extremities to the sides of the gas-holder, nearly in the middle. At the ends of the horizontal arms of the L levers, are weights to counterbalance the weights of tlie gas-holder, and both sides of the gas liolder are provided with these kinds of levers, which, at the same time that they balance its weight, cause the ridge joint of the machine to rise and fall, as before described, so that the under edges of the gas-holder, which are im- mersed in tlie water to confine the gas, must move in an horizontal plane instead of describ- ing an arc of a circle as they would do if the ridge joint was a fixed centre of motion. When the gas-holder is closed, the perpendicular arms of tlie levers stand nearly in a perpendicular position ; but when the gas-holder is opened out, the levers become inclined. And as they move upon a fixed fulcrum at their lower extremities, and are jointed to the sides of the gas-holder at tlieir upper extremities, they allow the whole of the gas-holder to descend gradually upon the guide rods nearly in tlie same degree as the lower edges would rise up if the ridge joint was stable, and if the sides described an arc of a circle. It is obvious, however, that the latter

move- ment is not very essential, but it is convenient and necessary to make a very inconsiderable depth of water, in the trough or tank, serve the purpose intended. It may be also observed, that the sides of the collapsing gas-holder may be made to unfold or open on a fixed ridge point as a centre of motion ; but it will then require a considerable depth of water in the tank to keep the lower edges of the sides and ends of the machine always beneath the surface of the water, because tlie sides of the gas-holder then describe an arc of a circle when they are open.

Mr. Malam has contrived an instrument whicl. serves to exhibit upon a dial-plate the cjuantity of gas which passes through a tube in its progress to the burners. It is represented in fig. 3 plate II., where a is the pipe through which the gas passes that is to be measured ; b an air-tight vessel, like bellows, with the upper flap rising or falling upon a joint or hinge, and constructed of leather or cloth, protected against the chemi- cal action of the gas. From this vessel the gas escapes through the aperture c, into the outer case d d, and hence through the exit-pipe e, to the burners. The aperture c, is partially en- closed by the flat plate /‘suspended or swinging upon the rod g, and accommodating itself to the descent of the flap. When equal quantities of gas pass along in the direction a,/, b, c, d, e, in equal spaces of time, whicli is generally the case, the quantity of gas will be indicated by the clock movement shown in the upper part of the figure, provided the clock always stops with the supply of gas, and goes again when the supply com- mences ; for eff’ecting which, there is a particular contrivance, which sliall be afterwards described. The clock movement in the cylindrical box I,

supported and fixed upon legs m m, gives motioi. to an axle carrying a small eccentric wheel, or crank n, in order to raise the lever o, which has its fulcrum on the axle of the wheel q, and rest? upon the periphery of the eccentric wheel. The lever being thus raised, a small spring catch p, attached to it, takes into the teeth of the wheel q, and, when the lever again descends, the catch drives the wheel round a short way. Another spring r holds the wheel as the lever again rises ; and, in this manner, by many revolutions of the eccentric wheel n, raising and lowering the lever o, the wheel q is driven entirely round. A pinion upon the axle of q works in the wheel s, which carries the index round a dial-plate, and thus registers the quantity of gas which has pass- ed uniformly through the aperture c. Should the pressure of the gas, however, not be uniform, the flap of the vessel b will be raised or depressed accordingly, as indicated by the dotted line. When this happens, the connecting rods h, i, k, will raise or depress the lever o, so as to make it move through a greater or less arch, and conse-

quently drive forward a greater or less number of the teeth of the wheel q. Upon the arm k is a stop t, which, when the flap of b descends and contracts the passage of the gas, will, by the connecting arms, h, i, k, be raised so high as to prevent the lever from being acted upon by the eccentric wheel during a part of its revolution; consequently, the arch described by the lever o will be smaller, and the progress of

Messrs. J. and P. Taylor are the first persons who have resorted to oil as a substance from which gas for illumination could be easily and cheaply prepared; and, in the construction of a convenient apparatus for the decomposition of this body, they have fully shown its numerous advantages over coal, v/hile they have aff'orded the means of producing the most pure and bril- liant flame from the inferior and cheap oils, which could not be used in lamps. The appa- ratus for the purpose is much smaller, much

simpler, and yet equally effectual, with the best coal-gas apparatus. The retort is a bent cast-iron tube, which is heated red by a small convenient furnace, and into which oil is allowed to drop by a very ingenious apparatus ; the oil is immedi- ately volatilised, and the vapor in traversing the tube becomes perfectly decomposed. A mixture of inflammable gases, which contains a great portion of olefiant gas, passes off; it is washed by being passed through a vessel of water (which dissolves a little sebacic acid, and which seldom requires changing), and is then conducted into the gasometer.

The facility and cleanliness with which gas is prepared from oil, in the above manner, may be conceived from the description of the process. A small furnace is lighted, and a sufficient quan- tity of the commonest oil is put into a small iron vessel, a cock is turned, and the gas after pass- ing througli water in the washing vessel goes into the gasometer. The operation may be stop- ped by shutting off the oil, or, to a certain ex- tent, hastened by letting it on more freely ; the small quantity of charcoal deposited in the retort is drawn out by a small rake, and the water of the washer is very rarely changed.

The gas prepared from oil is very superior in quality to that from coal ; it cannot possibly contain sulphureted hydrogen, or any extraneous substance ; it gives a much brighter and denser flame ; and it is also , more effectual, viz. a smaller quantity will supply the burner with fuel. Tliese peculiarities are occasioned, in the first place, by the absence of sulphur from oil, and then by the gas containing more

carbon in solution. As the proportion of light given out by the flame of a gaseous compound of carbon and hydrogen is, in common circumstances, in proportion to tlie quantity of carbon present, it is evident that the gas which contains a greater proportion of olefiant gas, or supercarbureted hy- drogen than coal gas, will yield a better and brighter light on combustion. It is necessary, in consequence of the abundance of charcoal in solution, to supply the gas when burning with plenty of atmospheric air ; for as there is more combustible matter in a certain volume of it than in an equal volume of coal gas, it of neces- s:ty, must liave more oxysren for its consumption. The consequence is, that less gas must be burnt in a flame of equal size, which will still possess superior brilliancy; that less is necessary for the same purpose of illumination ; and that less heat will be occasioned. From five and a half to six cubical feet of coal gas are required to supply an Argand burner for an hour ; two cubical feet to two and a half of that from oil, are abundantly sufficient for the same purpose. One important advantage gained by tlie circumstance, that so small a quantity of this gas is necessary for burners, is, that the gasometer required may be small in proportion. The gasometer is the most bulky part of a gas apparatus, and that least ca- pable of concentration ; and wherever it is placed, it occupies room to the exclusion of every thinf else. Some very ingenious attempts have bccii made to diminish its size and weight, as in the ilouble gasometer, and others, but witliout re- markable success. litre, liowcvtr, where the

room reijuired to contain the gas is directly di- minished, t'ae object is so far obtained ; and when that takes place to one-half, or even one-third, it is of very great importance. It in a great number of cases brings tlie size of the appa- ratus within what can be allowed in private houses ; and, in consequence of the rapidity with which the retort can be worked, the gasometer may again be reduced to a still smaller size. Another advantage gained by the small quantity of gas required for a flame is the proportionate diminution of heat arising from the lights. The quantities of heat and light produced by the combustion of inflammable gases are by no means in the same constant relation to each other : one frequently increases, vvhilst the other diminishes, and this is eminently the case when coal gas and oil gas are burned against each other. The quantity of heat liberated is, speaking generally, as the quantity of gas consumed, and this is greatest with the coal gas; but the quantity of light is nearly as the quantity of carbon that is well burnt in the flame; and this is greatest in tile oil gas.

The very compact state in which the apparatus necessary for the decomposition of oil can be placed, the slight degree of attention

required, its certainty of action, its cleanliness, and the nu- merous applications of which it admits, in the u«e of its furnace for other convenient or economical purposes, render it not only unob- jectionable, but useful in manufactories and establishments; and these favorable circum- stances are accompanied, not by an inferiority in the flame, or increased expense, but by an im- proved state of the first, and saving in the latter. Messrs. Taylors have shown great ingenuity in the construction of their whole apparatus, but the washer and gasometer deserve particular notice for their remarkable simplicity also. In tlie washer, two planes are fixed in a box or cisiern, in a direction not quite horizontal, but inclined a little in opposite directions; theplanes are traversed nearly across by slips of wood or metal, fixed in an inclined position on the under surface, and which alternately touch one side of the cistern, leaving the other open and free. These planes being immersed in water, the gas is thrown in under the lowest ridge; and, by its ascending power, is made to traverse backward and forward along the ridges fixed on the planes, until it escapes at the highest part of the upper- most ridge. Thus, with a pressure of five or six inches of water only, it is made to pass tlirough a distance of fourteen or sixteen feet under the surface of the fluid, and become well washed. The smaller gasometers are made of thill plate iron, and, being placed in a frame of light iron work, look more like ornamental stoves than the bulky appendages to gas apparatus, which they supply. The larger ones are maile very light, and, when in pieces, very portable, by being constructed of a frame of wood work, in the edges of which are deep narrow grooves; plates of iron fit into these grooves, which, being caulked in and painted over, make a light ;iiid tight apparatus. These are easily put toircther in any place; and may therefore be introduced into a small apartment, or other confined sj)ate,

were a gasometer already made up would not enter.

The general advantages of oil gas, when con- trasted with coal gas, are as follows : — The ma- terial from which it is produced, containing no sulphur, or other matter, by which the gas is contaminated, there are no objections to its use, on account of the suffocating smell, in close rooms. It does no sort of injury to furni.ure, books, plate, pictures, paint, &c. All the costly and offensive operation of purifying the gas by lime, &c., is totally avoided when it is obtained from oil. Nothing is contained in oil-gas which can possibly injure the metal of which tlie

con- veyance pipes are made. The oil-gas, contain- ing no unmixed hydrogen, which occasions the great heat of coal-gas, there is no greater heat in proportion from the flame of oil-gas than from burning oil in lamps, wax-candles, &c.

The apparatus for tlie production of oil-gas is much less expensive than that necessary to make coal-gas; it occupies much less space; it re- (piires much less labor and skill to manage it ; it is not so liable to wear and tear, and not so costly to repair as a coal-gas apparatus ; there are no offensive products to remove ; and, on its present improved construction, it may be intro- duced into any dwelling-house without nuisance. The economy of light from oil-gas maybe judged of from the following data: — One gallon of com- mcn whale-oil will produce about ninety cubic feet of gas, and an Argand burner will require a cubic foot and a half per hour to maintain a per- fect light; consequently, a gallon of oil, made into gas, will afford such a light for sixty hours, and the expense, at a moderate price of oil, will be, allowing for coals, labor, &c., not more for one burner than three farthings per hour.

Such a burner will be equal in intensity of light to two Argand oil-lamps, or to ten mould candles. The expense of Argand oil-lamps is usually admitted to be about 1 d. per hour each. Supposing ten mould candles to be burning, at four to the lb., will be 2 lbs., costing 2s. lid., one-tenth part will be consumed in each hour, and the cost of the light is then Sˆ-cf. per hour. If wax-candles be employed, the expense of a quantity of light equal to a gas-burner, for one hour, by the same mode of reckoning allowing; a candle to burn ten hours, and taking the price of wax-candles at 4i'. Qd. per lb., will cost about Ud.

The account will, therefore, stand thus ; —

d.

Argand burner, oil-gas, per hour f Argand lamps, spermaceti oil . .3

Mould-candles 3ˆ

Wax-candles 14

In many cases it may be desirable to use a much smaller quantity of light, than such a burner, as the one above calculated upon, might produce; and, instead of the light of ten can- dles, that of one or more may be given, by using burners of a different description; and the ex- penditure of gas and the cost will be reduced in proportion.

The oil-gas has a material advantage over coal-gas, from its peculiar richness in olefiant

gas, which renders so small a volume necessary that one cubic foot of oil-gas will be found to go as far as four of coal-gas. This circumstance is of great importance, as it reduces in the same proportion the size of the gasometers which are necessary to contain it; this is not only a great saving of expense in the construction, but is a material convenience where room is limited.

The calculations on the cost of light from oil- gas are taken on the usual price of good whale- oil ; but, it is to be observed, that cheaper oils will answer the purpose nearly as well, and many of tliese are often to be procured; and the whole expense may be materially lessened by their use.

In the course of their first experiments, Messrs. John and Philip Taylor were surprised to land that the apparatus they employed gra- dually lost its power of decomposing oil, and generatmg gas. On investigation, they disco- vered that the metallic retorts, which had origi- nally decomposed oil and jjroduced gas in abundance, ceased in a very great degree to pos- sess this power, although no visible change had taken place in them. The most perfect cleaning of the interior ˆof the retort did not restore the effect, and some alteration appears to be pro- duced on the iron by the action of the oil, at a high temperature.

Fortunately the experiments on this subject led to a most' favorable result, for it was found that, by introducing fragments of brick into the retort, a great increase of the decomposing power was obtained, and the apparatus has been much improved by a circumstance, which, at one time, appeared to threaten its success. A small portion of the oil introduced into the retort, still passed off undecomposed ; and, being changed into a volatile oil, it carried with it a great por- tion of caloric, which rendered the construction of the apparatus more difficult tiian was at first anticipated ; but, by the present arrangement of its parts, this difficulty is fully provided for, and the volatilised oil is made to return into the oil- receiver, whence it again passes into the retort; so that a total conversion of the whole into gas is accomplished without trouble, or the escape of any unpleasant smell.

The only residuum in the retort is a small quantity of carbon, and the only products be- sides the gas are a minute quantity of sebacic and acetic acids, and a portion of water, all which are easily separated by passing the gas through a vessel containing water.

The superiority of the light from oil-gas over other artificial lights, is fully shown by its ren- dering the delicate shades of yellow and green nearly as distinct as when viev^'ed by solar light.

Mr. De Ville of the Strand, who has made many important experiments and observations on gas illumination, with a view of applying it to light-houses, is inclined to estimate the ave- rage produce in gas of a gallon of oil, at eighty cubical feet. A single jet burner, giving the light of two candles and a half, consumes half a cubical foot of gas per hour. A double jet con- sumes three quarters of a foot to give twice the above light, and a treble jet requires one foot. The light of an Argand burner of coal-gas, com-

pared with one of spermaceti oil, may be esti- mated as 2^ to 1 ; and of oil gas to coal gas, as 9 to 5.

A curious fact respecting Argand's burners for gas, is, that tliose with few holes consume a comparatively larger quantity of gas than those having a greater number : — thus,

» 1 1,-11 n^ S cubic feet

A burner with lo holes consumes 2 J- I ^^^^

Ditto . . 12 ditto . . 2i ditto. Ditto . . 10 ditto . . 2| ditto.

The holes being of the same dimensions in each lurner.

'arious statements have been given of the illu- minating power of oil and coal-gas ; nor is this to be wondered at, when we considerthat the quality of the gases depends so much on the mode of pre- paration, and take into account also the defective modes usually adopted for determining the in- tensity of the light afibrded by their combustion. Mr. Ricardo, in his early papers on this subject, has given a very flattering account of oil gas. He states, that an Argand burner, giving a light equal to six candles, six to a pound, consumed one cubic foot per hour; and, as Mr. Accum mentions, that an Argand of coal-gas, giving a light equal to three candles, eight to the pouid, consumes two feet in the same time, he has in- ferred, supposing the candles of the same size, the illuminating power as 4 to 1 ; but, taking the average of a number of experiments, he has fixed their comparative power of giving light as 3^ to 1.

In these trials, however, the gases were not brought into comparison with each other by burning them together, and the data on which he proceeds seem to- be very fallacious, as it is not stated whether the candles were of the same kind in both experiments. Messrs. Taylor and Martineau have, however, come to nearly the same conclusion, that the illuminating power is as 3J to 1, a conclusion drawn from the experi- ments of iSIr. Brande and jNIr. Faraday, A gentleman connected with the Liverpool Gas Company, in the answers to the queries put to him by the committee of the Dundee Company, replies, that the relative quantity of gas requi- site to supply the same light, is as 14 oil-gas to 51 coal-gas, making their power of affording light rather more than 3.ˆ to 1. Though the above statements place the illuminating power of oil-gas so high, a very different account is ˆiven by others. According to Mr. Neilson, Glasgow, it is not to be rated at above 2, or at all events beyond 2 J, to the other as 1 ; and the same conclusion is drawn from a series of expe- riments made at Bristol, by Messrs. Herapath and Uootsey, on whose results, Mr. I'eckstone has remarked, that every reliance may be placed, as they could not be actuated by party-feelinc, but solely by a desire to ascertain the truth. Tliese statements, so very discordant, must arise eitiier from the defective mode of ascertaining the intensity of the li'ˆht, or from the variable quality of the gas, both of which have had their effect.

The mode usually followed for ascertaining tiiC illuminating power, viz. of producing the

same intensity of shadow, and marking tl.e quantity of the gas consumed in a given time is liable to many objections. It is extremely difficult, for instance, to judge with precision of the depth of sliadows ; besides, -ˆ-nless each gas is burned under circumstances favorable for pro- ducing the greatest light, the conclusion with respect to their power of illumination is not cor- rect. Some of tlie experiments in which the oil- gas is stated as 3ˆ to 1, it has beer said, were conducted by using burners of equal dimen- sions for both : now, it is well known that the former requires a smaller one than the latter, otherwise the intensity of the light is not in pro- portion to the gas consumed, part of it probably escaping combustion. The remark, with respect to the variable quality of the gas, is also of equal force. In a paper published by Mr. Dewey, in the Annals of Philosophy, some experiments on the illuminating power of the gases are stated, with a view of ' setting the matter at rest.' This we conceive they have done, as far as can be ex- pected ; but we suspect the conclusion to be drawn from them, is very different from that at which Mr. Dewey arrives. The gases were taken from main-pipes running parallel to each other, the coal-gas from the Imperial Gas Works, the other from that at Bow. Being burned so as to

afford the same intensity of light, the quantities were found by accurate metres to be (taking the mean of seven trials) as 4850 to 1368, very nearly 3ˆ to 1 . It has been supposed by some, that the specific gravity of coal-gas is a good test of its purity, the lighter it is, the greater being its power of illumination. The experiments of Dr. Henry, and others, however, disprove this ; in- deed, after the gases are properly purified, the heavier they are, so much the more will be the light afforded by their combustion. The gas used by Mr. Dewey was of specific gravity 406, now this was less than pure carbureted hydro gen, which is ‘555. In a note to the same paper, the editor remarks, that the results of Mr. Dewey coincide with those obtained by him and i\Ir. Faraday. The coal-gas they subjected to trial was, in one instance, of specific gravity •429, in another, -406. The oil-gas was 965 and ‘939, and their illuminating power to the former was as 31 to 1. As the coal-gas in all of these experiments was of inferior specific gravity to carbureted hydrogen, we may reasonably infer, that they contained a considerable propor- tion of pure hydrogen, which, it is well known, affords a very feeble light. Dr. Henry has found the gas to vary in specific gravity from 345 to 650, its illuminating power increasing as it ap proached the maximum. The specific gravity of the coal-gasof Edinburgh, which is allowed by all to be of very superior quality, has been found to be so high as -QQO. The oil-gas used by Mr. Dewey was -939. Dr. Henry mentions, that in some of his experiments it was •906. Dr. Fyfe found tliat from the small apparatus of jNIr. Milne (Taylor and Martineau’s), to be -940, and which is generally allowed to be very fine, so that we take it for granted, that that of Mr. Dewey was of cood quality. If then, in these trials, a good oil-gas, pitched against a very in- ferior coal-gas, is only as 3.i to 1, the lUuminat

12

GAS.

ravity.

345

0

took of

xygen

78

500

—

166

620

—

194

630

—

196

650

—

217

464

—

116

590

—

178

758

—

220

905

—

260

iiig power of the former must be much reduced when brought in competition with the latter when of equally good quality ; consequently, it must be far short of that stated by Mr. Dewey.

Dr. Henry, in his paper on the nature of the gases produced by the decomposition of coal and oil, proposes to ascertain their illuminating power by finding the quantity of oxygen neces- ssry for their combustion ; for, according to him, the more a gas will consume, the more light it will atibrd. He has found, that oil and coal gas, produced under different circumstances, take different quantities of oxygen.

Specific

100 volumes of coal-gas of

Ditto ....

Ditto ....

Ditto ....

Ditto .... 100 volumes of oil-gas of

Dtto ....

Ditto ....

Ditto ....

From tlie above tables it would, of course, he inferred, thai the illuminating power of Oil-gas, No. 4, is the greatest ; that of coal-gas. No. 1, the least, these being to each other as 260 to 78 ; that is, as 3 J to 1. From this, then, it appears, that the best oil-gas is to the worst coal-gas as 3ˆ to 1 ; of course a very different conclusion with respect to their illuminating power would be drawn, were we to take an average from the above tables, by which we should diminish the light given out by the former, and increase that from the latter.

The gaseous matter, given off from coal ana oil, now known by the name of coal and oil gas, contains nearly the same ingredients, but in dif- ferent proportions. Dr. Henry has shown, that they are mixtures of hydrogen, carbonic oxide, carbureted hydrogen, and defiant gas, with oc- casionally a little nitrogen ; and, in addition to these, coal-gas, before it is subjected to the pro- cess of purification, always contains ammonia, carbonic acid, and sulphureted hydrogen ; but from which it is, or at least ought to be, freed before it is sent into the gas-holder ;

so that both gases, when exposed for sale, contain the same ingredients, but in different proportions. There is also given off, during the decomposition of coal and oil, an essential oil, which seems to be held in solution, in a state of vapor, in the gas, and which is the cause of the smell, and, as some suppose, adds to the illuminating power.

Dr. Henry, in his paper in the Annals of Phi- losophy for September 1821, has given the com- ponent parts of different samples of gas. The coal-gas was prepared from Wigan Canal, at the manufactory of Messrs. Phillips and Lee, and collected from an opening in a pipe between the retort and the tar-pit, generally about half an hour after the commencement of the distillation, except in the instance of the gas No. 4, which was taken five hours, and, No. 5, ten hours from that period ; the carbonic acid and sulphureted hydrogen being removed by washing it with so- lution of potassa.

Gas.

Spec. Gray.

Gas Condensable by Clilorine.

No. 1

2 3 4 5

650 620 630 500 345

13 per cent.

12

12

7

0

After the condensable gas was removed, there remained.

Gas.

Azote.

Carb. Hyd.

Carb. Ox.

Hydrog.

Total.

No. 1

1-5

‘94-5

4

0

100

2

6

82

2

10

100

3

2

66

14

18

100

4

5

60

12

23

100

5

10

20

10

60

100

In the following table, the oil-gas of the first three experiments was procured from whale-oil, previously boiled, to free it from water, the heat of the retort being in each succeeding experiment reduced till it was just sufficient to decompose it. The fourth gas was from a London work.

Gas.

Sp. Gi-.

Lost by Chlorine.

No. 1

2 3 4

404 590 758 206

6 per cent.

19 22-5 33

After this there remained a gas composed of,

Gas.

Azote.

Carb. Ilyd.

Ciirb. 0 > :.

Hydrog.

Total.

100

No. I

7

30

15

48

2

5

40

15

40

100

3

5

65

20

10

100

4

5

75

15

5

100

The gas condensed by chlorine is supposed to be partly olefiant, and partly a volatile oil. That not condensed, the above tables show to vary iu its composition. In the best specimen of oil-gas, the carbonic oxide is in larger proportion than in the best kinds of coal-gas ; and the carbureted hydrogen is most abundant in the latter. The hydrogen in both appears to increase as tlie tem- perature at which they are formed becomes higher, and is always greatest in the last propor- tions.

It has been proposed in Holland to substitute turf for coal, or oil, as a material from which to obtain a gas for illumination. The experiments that have been made promise much success; and the apparatus required may be of far simpler

construction than those used in the distillation of coal. The products do not require that careful imd elaborate process of puritication which is necessary for the gas from coal. It is said also that the light is better. The light may be better than that from coal-gas badly made, or carelessly xˆsed ; but it is not likely that, wiih equal pre- cautions, the first should surpass, or eveu equal the latter. With reference to the arrangement of the pipes, by which gas is distributed for the purpose of illuminating cities, it may be proper to state that all gas mains laid in public streets should be placed at least eighteen inches below the surface of the ground, to secure them from being disturbed by carriages, or interfering with the paving of the street ; they should be placed perfectly firm, so that they may not easily give way. The course of the pipes should be rectili- near, with a dip of about one inch in every ten feet distance.

In all wide streets, where the number of houses on both sides of the streets, to be supplied with gas, is numerous, it is more economical to em- ploy a separate gas main for each side of the street, than to make use of one larger main for both sides ; because smaller mains may then be employed, and the collateral branch pipes lead- ing into the houses are shorter; these circum- stances amply compensate for the additional main. \\ branch pipes proceeding from a main should have

a dip of about one inch in ten feet, towards the main from which they proceed, so that any fluid that may happen to collect in these pipes must run into the mains. All small wrought-iron branch pipes proceeding from the mains into the houses, or places to be lighted with gas, should be covered with a thick coat of coal tar, before they are laid down into the ground; this may easily be done by heating the pipe, and laying on the boiled tar with a brush.

Every separate length of branch pipe should be tried by condensing the gas in the pipe under water, in order to be certain that it is sound. The junctures of these pipes should be made by dipping tli£ male screw of the pipe into a mix- ture of wmte lead and linseed oil, before they are screwed together.

Notwithstanding tlie usual care which can be taken in proving pipes, before the gas is ad- mitted into them, a slieht leakage may be sometimes subsequently detected.

Therefore, before the gas is suflTered to enter the mains, they should be again proved, in order to be certain that all the junctures are air-tight. The most convenient manner of proving the mains wlien laid, is by means of a small portable gas-holder filled with common air, and connected, by means of a small pipe, with the system of the mains, to Ije tried. This gas-holder should be made to act with a pressure at least four times greater than the pressure which the pipes will have to sustain by the gas they are to convey. If the mains are air-tight, the gas-holder will remain stationary ; but, if they are not sound, the gas-holder will descend in proportion to the leak of the mains ; the qviantity of gas lost may be thus ascertained.

In order to guard against the danger of water entering from the external surface into the pipes,

a reservoir should always be placed at the lowest point, where two or more descending mains meet and form an angle, so as to receive the water that may happen to collect at this angular point, an accumulation of which would cut off the communication between the two pipes : this reservoir is usually called a syphon. It ought to be at least twice the diameter of the bore of the mains, between which it is interposed, and four times that diameter in depth. These re- servoirs afford the best indication to show the sound or leaky slate of the system of the mains. In all instances, where the pipes are perfectly sound, observation has sho’;\Ti, that half a mile of gas-mains, three inches in the bore, does not deposit more than a quart of water in a year; on the other hand, if the mains are leaky, the water of the

reservoir requires to be pumped out, sometimes as frequently aj every fortnight; and, during wet weather, much oftener. The loss of gas by such leakage is much greater than is generally imagined. Instances might be mentioned where, in order to keep the common air out of a system of faulty pipes, a constant influx of gas, which a pipe two inches in dia- meter can supply, has been found necessary and this, of course, is just so much gas lost to the economy of the establishment.

A\ ith regard to the diameter of the mains, no general rule can be given. It must vary ac- cording to the number of branch-pipes and lamps which the main has to supply within a given distance, — the angular direction of the mains, — the pressure of the gas-holder, — and, above all, with the relative altitude of the place where the gas-holder is situated, and the place at which the gas is to be supplied, or where the lamps are placed. Indeed, this is one of the most important considerations with regard to the economical distribution of gas-mains; and, by attending to this circumstance, a prodigious saving may be effected.

In order that the pipes for conveying the gas from the mains, and distributing it through the houses or other buildings to be lighted witli gas, may, in the first place, not be unnecessarily large, or too small, the following rule may serve as a guide to workmen : —

One gas-lamp, consuming four cubic feet of gas in an hour, if situated twenty feet distance from the main which supplies the gas, requires a tube not less than a quarter of an inch in the bore.

Two lamps, thirty feet distance from the main, require a tube three-eighths of an inch in the bore.

Three lamps, thirty feet distance from the main, require a tube three-eighths of an inch in the bore.

Four lamps, forty feet distance from the main, require a tube half an inch in the bore.

Six lamps, fifty feet distance from the main, require a tube five-eighths of an inch in the bore.

Ten lamps, 100 feet distance from the main, require a tube three-quarters of an inch in the bore.

Fifteen lamps, 130 feet distance from ti.e main, require a tube one inch in the borr.

Bore of the Pipe. Parts of an Inch.

Twenty lamps, 1.50 feet distance from the main, require a tube 1 ˆ inch in the bore.

Twenty-five lamps, 180 feet distance from the main, require a tube If of an inch in the bore.

Thirty lamps, 200 feet distance from the main, require a tube 1ˆ inch in the bore.

Thirty-five lamps, 250 feet distance from the main, require a tube of 1ˆ of an inch in the bore.

All copper pipes employed to convey gas through the interior of houses, should be of tlie following weight, with regard to a given length of the pipe : —

Weight per Foot. Ounces.

I ..... 3 t .... 5 ˆ .... 6 f .... 8 f 10

Mr. Phipson, of Birmingham, in order to obviate the effects produced by the action of gases on copper or brass pipes, through which they pass, has adopted the plan of lining them with lead. A tube is formed of rolled copper, by drawing it through a plate, and the edges are soldered together, so as to form a safe joint, the superfluous solder is dressed off, and the tube again drawn; a piece of lead-pipe is then drawn through a plate on a mandrill, of the diameter of the tube required, and placed within the cop- per pipe ; then, by passing through it a conical mandrill attached to a rod, the lead-pipe is forced against the inner surface of tlie copper tube, so as to leave them in perfect contact ; or, sometimes a lead-pipe is prepared on a mandrill, of the diameter of the tube required, and a cop- per-pipe, already soldered, drawn over it; they are then passed both together on a mandrill through a draw-plate, so as to bring the two into complete contact. The lead-pipe is proof against the action of gas, and the copper-pipe, at the same time that it supports and defends it, makes a better appearance.

Four gasometers of 25,000 feet each have been erected on a new principle at Ashton-undsv- Lyne Gas-VVorks, and in practice it is

found to answer very well ; there are four iron pillars at the four points of each gasometer, with an end- less chain fixed and made tight round the pillars and gasometer ; the latter is attached on one side of the pillars only, by which means it rises and falls as other gasometers. On this principle they are not acted on by the wind, though ex- posed; and another great advantage is, they are much cheaper than those erected on the old principle.

The great improvements which have taken place, both in the manufacture of gas, and in the methods of applying it for the pvirposes of illu- mination, render it extremely probal)!e that it will be much more extensively employed m lighting up private houses. Many persons ob- ject to introduce the gas directly into dieir apart- ments ; and it has accordingly been proyjosed to bring the gas to the windows, to allow it to bum on the outside, and thus to illuminate the room ■without any of the annoyances which arise, both

from the .smell of the gas, and from the heat generated during its combustion.

In order to do this to the greatest advantage, the gas-pipe should be brought to the cill of tlie window, and should then have a gas-tight joint by means of which it can be placed either verti- cally, when it is to be used, or horizontally, when the apparatus is to be removed altogether, or put aside during the day in a press or recess made in the wall to receive it. The lamp which is to protect the gas from wind and rain, should have fronts of glass either hemispherical or semicylin- drical, so that no opaque line or bar may interfere with or break the cone of rays which enters the window. The back part of the lamp must be a reflector, of such a surface that it will throw into the apartment all the rays that would other- wise not enter. The direct and reflected light which thus enter apartments, might be rendered uniform, by means of an ornamental blind of the finest muslin (varnished or not as may be found most advantageous) ; and, if the blind has a landscape upon it, the most luminous portion, or that nearest the gas flame, might be made to have the appearance of the sun in the heavens. In newly built houses, recesses might be con- structed, in such a way that the lamp and gas- tube might turn round a joint, and be entirely concealed from view in the day-time.

The advantages of such a metliod of illumina- tion are great and obvious.' Instead of being annoyed by the constant entrance of servants to trim the lamp ; — instead of having the furniture destroyed by the spilling of oil, and by the car- bonaceous matter necessarily produced either by oil or wax burning within an

apartment; — instead of having the temperature of over-heated rooms increased by the heat of the lights ; — instead of having the eye injured by the irritation wliich arises from brilliant flame ; — and instead of hav- ing the apartment illuminated by a light constantly varying in intensity, wa shall avoid all these evils, and have our houses lighted in the very same manner as they are by the light of day. The disadvantages which attend this method are very few. They are prevented from excluding the cold air of winter by shutters and curtains ; but in many cases this is an advantage, and, when it is not desirable, the heat on the outside of each window will diminish the currents of cold air which might otherwise be admitted. A greater quantity of light will no'doubt be necessary to pro- duce the same degree of illumination ; but the cheapness of gas renders such an objection of no weight.

The application of inflammable gas to the purposes of illumination, has hitherto been al- most wholly confined to the lighting of large cities, extensive manufactories, and public insti- tutions. Tl'.e ingenious apparatus invented by J. and P. Taylor, for obtaining gas from oil, has enabled gentlemen of fortune to light dieir houses with gas at a moderate expense, and without being annoyed by any of the disagreeable pro- ducts which arise from the distillation of coal. But, notwithstanding this valuable improvement, gas-light has never been rendered generally por- table, and the great body of private individuals, and all the lower classes of society, are unable to

derive any advantage from the extraordinary cheapness of this beautiful light.

In order to remove these limitations to the use of gas lights, and to render them available in nearly every case where lamps or candles can be used, Mr. Gordon conceived the idea of condens- mg a great quantity of gas into a small space, and set himself to construct a lamp in which this condensed gas could be burned with the same facility and security as an ordinary lamp. The body or reservoir of the lamp is commonly made of copper, about one-twentieth of an inch thick, in the form of a sphere or a cylinder with hemispheri- cal ends.. This reservoir may be put into a differ- ent apartment from that which is to be illumi- nated, or may be concealed under the table, or, when it is required to be ornamental, it may be put into a statue, or the pedestal of a statue, or may be suspended.

In order to regulate the escape of the con- densed gas, Mr. Gordon has employed two dif- ferent contrivances, which are extremely ingenious. The first of these is a stop-cock, constructed in the following manner : — After the cock has been drilled through, in the usual manner, the circular hole in the key is contracted at one side, by soldering into it two pieces of brass, which join at one side of the hole, and are about one-twentieth of an inch distant at the other side, forming an acute angular aperture. By this means the issue of gas can be regulated to the smallest possible stream, by bringing the acute angle of the open- ing in the key to communicate with the circular opening in the cock ; and, as the expansibility diminishes as the gas is consumed, the aperture can be increased in the same proportion. But to secure the above object more completely, and to prevent the possibility of turning the cock suddenly, so as to admit too great a discharge of gas, a ratchet wheel is fixed in the end of the key of the cock, in which an endless screw works. By turning this screw' with the nut, the flame may be enlarged or diminished to any extent, liowˆever highly condensed the gas may be.

The second contrivance which Mr. Gordon employs to produce the same effect, is a conical leather-valve, similar to that in the reservoir of an air-gun, placed in the opening of the reservoii of tlie lamp, where it screws on to the condensing pump. When the reservoir has been charged with gas, and removed from the pump, a brass instrument is screwed in above the valve. Through this piece of brass there passes a finger- screw, the point of wiiich, when made to press on the valve, forces it back, and allows the gas to issue III any Quantity that may be required. A bridge of brass, consisting of a hollow tube, in the form of a Gothic arch, passes over the head of this regulating screw, for the purpose of giving freedom to tlie fingers in turning the screw to re- gulate tlie flame, and to conduct the gas to the burner, which, in a standing lamp, is screwed on at the centre of tiie arch.

By eillier of tliese contrivances, the latter of wliicli Mr. Gordon prefers from the simplicity of its construction, tlie command of the flame is so complete, that it may be reduced to an almost im))crccptible quantity.

'I'he forcing-pump by which Mr. Gordon con-

denses the gas is nearly the same as that of the common condensing syringe, having a solid piston worked by a lever, with shears and a guide to produce a vertical motion. As a considerable degree of heat is created during the condensation of the gas, the pump must be kept cool by sur- rounding it with a case filled with water, and changing

the water as soon as it becomes heated. When it is required to fill a great number of lamps with condensed gas, Mr. Gordon employs the steam engine to work the forcing pump, and the gas should be condensed into a large re- servoir, from which the lamps of numerous indi- viduals may be filled at once with the condensed gas. A mercurial gauge, similar to that used for ascertaining the force of condensed aii, must be fixed to the large leservoir, for the purpose of enabling any person to see the degree of conden- sation to which the gas has been brought.

Although, at the first erection of gas works, the public feeling was strongly against them, on account of their supposed danger and offensive nature, this prejudice has gradually worn off. Though the danger of having large collections of gas lias been rated at an enormous extent by Sir William Congreve, only one instance of the ex- plosion of a gas-holder has happened ; and this occurred in the first filling of one at Manchester, through ignorance, and the carelessness of the workmen. The atmospheric air, not having been extracted, was of course allowed to mix with the coal-gas; and one of the men, wishing to ascer- tain if the gas-holder was tight, applied a candle to a part, from which gas, mixed with atmospheric air, was issuing, which caused it to explode, and tear the gas-holder in pieces.

A few accidents have occurred, from the escape of gas from the pipes, but these have, in general, been produced by the carelessness of the work- men, and were of a trifling natuie ; for when the gas does escape, it is only when it gets into some confined place, as a vault, or a common sewer, that it can, on the approach of flame, do any mischief. Shops and apartments of a dwelling house are not close enougli to keep the gas con- fined ; but allowing them to be so, the quantity emitted is too trifling, compared to tliat of the air. Coal gas is most explosive when mixed with about five of air. In a room, then, of twelve feet each way, one burner, consuming five cubic feet per hour, would be sufficient to light it, but in this apartment, there are 1728 feet, so that, to get an explosive mixture, and allowing there is no loss of gas, the burner must be left open up- wards of fifty hours, or at least two days and nights, which is not likely to happen. When more lights are used, tne apartments are of course larger, so tliat the same time would still be re- quired. In tliose cases, also, in which the burners are left open, the odor of the gas gives warning of its escape ; so that one of its proper- ties, considered ofl'ensive, actually proves a valu- able safe-guard.

GASCOIGNE (George), an English poet of some fame in the reign of queen Elizabetli. He was born in Essex, of an ancient family, and

educated at Oxford and Cambridge. Thence he removed to Gray's Inn, but, having a genius too volatile for the law, lie travelled, and for some

time served in the army in the Low L-ountries. lie afterwards went to France, where be became enamoured of a Scottish lady, and married her. At length he returned to England, and settled once more in Gray's Inn, where he wrote most of his poems. The latter part of his life he spent in his native village of Walthamstow, where he died m 1578. Ilis plays, first printed separately, were afterwards reprinted with other poems, in 2 vols. 4to. in 1577 and 1587.

Gascoigne (Sir William), chief justice of the king's bench under Henry IV., a celebrated judge, who, being insulted, it is said, on the bench by the then prince of Wales, afterwards Henry v., with great coolness and intrepidity committed him to prison. It is not well authenticated that tlie prince struck Sir William, as represented by Shakspeare ; but all authors agree that he inter- rupted the course of justice to screen a lewd servant. Sir William died in 1413. Several of his remarks and decisions are referred to in the law books.

GASCONADE, n.s. & v. n. From the Gas- cons, a people remarkable for boasting. A boast or bravado : to brag, or swagger.

Was it z. gasconade to please me, that you said your fortune was increased to one hundred a-year since I icft you ? Swift.

Gascon'ade, a river of North America, having a southern course into the]\Iissouri, anout 100 miles above its confluence with the Mississippi. It can be ascended from its mouth by boats about 100 miles, and is 157 yards wide and twenty feet deep where it enters the Mis- souri. On its banks are a number of sait-petre caves.

GASCONY, a ci-devant province of France, bounded by Guienne on the north, by Langue- doc on the east, by the Pyrenees on the south, and by the Bay of Biscay on the west. It had its name from the Gascons, its ancient inhabitants. After these were subdued by the Franks, they had for some time dukes of their own, who were subject to the duke of Aquitaine ; but both were at last dispossessed by the kings of France. It produces corn, wine, fruit, tobacco, hemp, bran- dy,

prunes, &c.; and abundance of fine timber in the department of the Landes. Gascony is watered by the Garonne and Adour, besides smaller streams, and becomes hilly towards the south, the mountains containing mines and warm springs. Bourdeaux and Bayonne are the principal harbours, and the former is one of the best trading ports in France. The principal ar- ticles of export are wine, brandy, and vinegar ; fruit, wool, linseed, pitch, cork, and wood : marble, iron, and coloring earths of all kinds, are also sent from the neighbourhood of the Pyrenees. Since the revolution Gascony forms the depart- ments of the Upper Pyrenees, the Gers, the Lan- des, and part of those of the Lower Pyrenees, the Upper Garonne, and the Lot and Garonne. It is ascertained to have a territorial extent of 11,000 square miles.

GASH, V. a. & n. s. Fr. hacher, to cut ; Belg. gihash. To make a wide and open wound ; the wound so made.

He glancing on his helmet, made a large Ani open r/ash therein ; were not his targe.

That hrok,, cio viDicnce of his luicni.

The weary soul from thence it would discharge.

Spenser. A perilous gash, a very limb lopt oiT.

Shakspeare. Hamilton drove Newton almost to the end of the lists : But Newton on a sudden gave him such a. gas/t on the leg, thai therewith ho fell to the ground,

Hayward. Where the Englishmen at arms had been defeated, many of their horses were found grievously gaslied ot gored to death. Id.

But the ethereal substan'-e closed. Not long divisible ; and from the gash A stream of nectareous humour issuing flowed,

Milton. Streaming with blood, all over gashed with wounds. He recied, he groaned, and at the altar fell.

Philips. See me gashed with iˆnives. Or scared with burning ste'ˆ1.

Rowe's Rnt/al Conv. I was fond of back-sword and cudgel play, and I now boar in my body many a black and blue gash and scar. Arbuthnut.

GAS'KINS. See Galligaskiss, GASP, 71. s. & V. n. Goth, gekfd ; Dzn.giape, to sob ; or probably from Sax. jeapan, to yawn. To open the

mouth wide for inspiration whether convulsively or not ; to breathe with difficulty ; to desire anxiously ; but this use is hardly to be justified, as not being analogous to nature. His fortunes all lie speechless, and his name Is at last gasp. Shakspeare, Cymbeline .

Ah, WarA-ick, Montague hath breathed his last ; And to the latest gasp cryed out for Warwick.

Shakspeare. The rich countrymen in Austria wera faint and gasping for breath. Brown'i Travels.

The sick for air before the portal gasp.

Dryden. They raised a feeble cry with trembling notes ; But the weak voice deceived their gasping throats.

Id. The gasping head flies off ; a purple flood Flows from the trunk. Dryden's ^^neid.

The ladies gasped, and scarcely could respire ; The breath they drew no longer air, but fire. Dryden.

A scantling of wit lay gaisping for life, and groaning beneath a heap of rul)bish. Id.

I lay me down to gasp my Intest breath ; The wolves will get a breakfast by my death. Id. He stasigers round, his eyeballs roll in death. And with short sobs he gasps away his bn ath.

Id. ^neid. Pale and faint. He gasps for breath ; and, as his life flows from him. Demands to see his friends. Addison's Cato..

If in the dreadful hour of death. If at the latest ga.^p of breath. When the cold damp bedews your brow. You hope for mercy, shew it now. Addison,

The Casliliaa and his wife had the comfort to be under the same master, who, seeing how de.irly they loved one another, and gasped after their liberty, de- manded a most exorbitant price for their ransom.

Id. Spectator, He now with pleasure views his gasping prize. Gnash his sharp teeth and roll his blood-shot eyes.

Gay Parting day Dies like the Dolphin, whom each pang imbues With a new colour as \x. gasps away.

CASPAR Stuait and Island, a passage and island in the Eastern seas, between the east coast of the island of Banca, and the west coast of the island of Bdliton. The island is high and con- spicuous, about five miles long ; and the strait, about fourteen leagues broad, is divided into two arms, and connects the China and Java seas.

GASPE, a district and county ,of Lower Ca- nada, North America, on the south side of the St. Lawrence, whicii lies between 64° and G6° 30′ W. long., and between 47° 20′ and 49° 10′ N. lat. Ii is boundsd on the west by the district of Quebec, on the cast and north-east by the river and gulf of St. Lawrence, and on the soutli by the province of New Brunswick and the bay of Chaleurs. It sends one member to the pro- vincial parliament; and is divided into two parts by a ridge of mountains, which run north- east. The tract on the northern declivity of tliese mountains to the St. Lawrence is rough and bar- ren ; being almost covered witli impenetrable forests. The south-east side of the ridge is also uneven and rugged in many parts. In 1808 the population amounted to 3200, and between 300 and 400 fishermen. New Carlisle is the princi- pal town.

Gaspe, a bay of the above district, in the gulf of St. Lawrence, between Cape Gaspe and \‘ha]e Head. It runs about sixteen miles into the land, and is about five miles broad. Two other inlets, called the north-west and south-west arms, penetrate from the end of it a considerable way into the interior, and receive the waters of numerous streams from the mountains. This bay is deep and well slieltered ; capable of af- fording protection to a large number of ships. The shores are lofty.

Gaspe is also the name of a cape on the coast of Canada, in the gulf of St. Lawrence. Long. 64° 10′ W., lat 48° 35′ N.

GASSENDI (Peter), a celebrated philosopher of France, was born at Chantersier in Provence, in 1592. His parents sent him to school at Digne, where he soon made such extraordinary progress in learning, that some persons, who had seen specimens of his gennis, removed him to Aix, to study philosophy under Fesay, a learned minor friar. He was afterwards invited to be professor of rhetoric at Digne, before he was quite sixteen years of age ; and he had been en- gaged in that

office but three years when, Fesay dying, he was made professor in his room at Aix. There he composed his Paradoxical Exercita- tions ; which coming to the hands of Nicholas Peiresc, Gassendi was first made canon of the cliurch of Digne and 13. 1)., and then obtained the rectorship of the church. Gassendi's fond- ness for astronomy increased with his years ; and, his reputation daily increasing, he was, in 1645, appoiiitf^d royal professor of mathematics at Pa- ris. Tliis institution being chiefly designed for astronomy, ho read lectures on that science to crowded audiences. He, however, did not hold this place long ; for a dangerous cougii, and in- flammation of the lungs, obliged him, in lfi47, to return to Digne for the benefit of his native air. Gassendi combated tlie metajihysics of Descartes ; antt divided with that great man the philoso- plicrs of Iiis time, almost all of wliom were Car-

tesians or Gassendians. He left nine volumes of his philosophical works. 1. Three on Epicurus's Philosophy, and six which contained his own. 2. Astronomical Works. 3. The Lives of Ni- cholas de Peiresc, Epicurus, Copernicus, Tjcho Brahe, Puerbach.us, and Regiomontanus. 4. Epistles, and other treatises. All his works were collected together, and printed at Lyons, in 1653, in 6 vols, folio. He died at Paris, in 1655, aged sixty-three.

GASSICOURT (Charles Louis Cadet de) a modern French pliilosopher, and advocate, who had the singular good fortune to survive the whole of the revolution, was the son of an apo- thecary of Paris. M. Gassicourt first attracted notice by a pamphlet, published in 1797, on the Theory of Elections. Then followed other essays on political and miscellaneous subjects, among which was one On the Private Life of INIirabeau; St. Geran, a Critique on the New Modes of Thinking, Writing, and Speaking, introduced into France by the Changes of the Times ; and others on the Influence of the Masonic Societies in the Process of the Revolution; and the Four Ages of the National Guard. About the same period appeared a volume of Travels in Nor- mandy, and a Dramatic Sketch, pourtraying the principal characters w"ho flourished; under Louis \IV, and his successor, entitled The Supper of Moliere. On the death of his father, himself a man of scientific pursuits and the personal friend of Buffon, Lalande, and Condorcet, he seems to have diverted his attention from politics to the study of chemistry and physics. He edited his father's treatise on Domestic Pharmacy, and a Formulary on the same subject; and gave the world a New Dictionary of Chemistry, afterwards introduced into the Polytechnic school. This book appeared first in 1803. He followed the Frencli army

into Austria in 1809, and subse- quently wrote an account of the Campaign, dur- ing which he invented a military instrument called les baquettes. The modern plan for the organisation of the French board of health owes its origin to him, and he had not only the satis- faction of seeing it eagerly adopted, but tliat of obtaining the appointment of Reporting Secn?- tury. In this capacity he continued till his death, which took place at Paris in the summer of lt>23. Besides the above, Gassicourt was the author of a series of epistles on London and the EnJish Nat on ; and a treatise on li.e applica- lioii of the Physical Science to Military Purposes,

GAST, Sax. 3a)-r. Vide «i:/iflsˆ To teriify.

Gast (John) D.D., archdeacon of Glenda- lou<;h, was born in Dublin, in 1715, where he attained a hitˆli reputation for his learning and morality. Amongst his literary memorials the prmcipul is his History of Greece, which ob- tained the public approbation of tiie University, and obtained for iis author tlie title of D. D., frei' of any expense : he died in 1788.

GA5TEKOS'L'i:US, the stickleback, in ich- thyology, a genus of fishes bilonging to the order of ihoracici. There are three rays in the mem- briine of the gills : the body is carinated ; and there are some distinct pr.ckles before tl-.e back fin. Ttiere are thirteen species, distinguished by the number of prickles on the back. One of these

G. aculeatus, stickleback, bansticle, or sliarp- liiif;, is common in many of the British rivers. In the fens of Lincolnshire, and some rivers that proceed from them, they are found in prodigious quantities. At Spaiding, once in seven or eight years, amazing shoals appear in the Welland, and come up the river in form of a vast column. They are supposed to be the multitudes that have been washed out of the fens by the floods of se- veral years, and collected in sonie deep place, till, overcharged with numbers, they are periodi- cally obliged to attempt a change of place. The quantity is so great that they are used to manure the land, and trials have been made to get oil from tliem. An idea may be conceived of this vast slioal,]ij being told that a man, having been employed by a farmer to take them, once ob- tained for a considerable time 4s. a day, by sell- ing them for a halfpenny per

bushel. This spe- cies is seldom two inches long : it has three sharp spines upon the back, that can be raised or de- pressed at pleasure. The color of the back and sides is an olive green ; the belly white ; but in some the lower jaws and belly are of a bright crimson.

GASTRELL (Francis), bishop of Chester, was born in 1662, appointed preacher to the society of Lincoln's Inn in 1694, and made bishop of Chester in 1714. He preached a course of ser- mons for Boyle's lectures ; engaged in the Tri- nitarian controversy with Mr. Collins and Ur. Clarke ; and published two popular pieces enti- tled Christian Institutes, and A Moral Proof of a Future State. He also vindicated the rights of the university of Oxford against the archbishop of Canterbury, m the appointment of the warden of Manchester College; and opposed the violent proceedings against bishop Atterbury in the house of lords, though he disliked the bishop's principles. He died in 1725.

GASTRIC, adj -\ The root of all these

Gastro'rapiiia, 7Z..S. 'words is the Gr. ya-r/j.),

Gastrot'omy, n. s. i the belly. It is used

Gastrox'omy, n. s.) in composition with

pa7rra>, to sow up ; Tifivm, to cut, and vouoq, a

law or rule, and in these cases refers to sewing

wounds, making incisions, or laying down laws

in reference to the stomach or belly.

The (yojˆric juice of an owl, falcon, or kite, will not touch grain. Palafs Theology.

Gastric Juice, a thin pellucid liquor, which distils from certain glands in the stomach, for the dilution, &c., of the food.

It is soluble in water, has a slight saline taste, and is quite limpid. Its peculiar property is that of dissolving the food in the stomach into a milky liquid called chyle. After death this sol- vent power even acts upon the stomach itself. By evaporation it is reduced to a dry mass, ■which gives out in destructive distillation ammo- nia and empyreumatic oil, leaving carbonaceous matter, which contains muriate of soda and other neutral salts.

GASTROMANC\, Gastromantia, from yaTijp, the belly, and fiavTiia, divination, a kind of divination practised among the ancients, by means of words coming, or seeming to come, out of tJic belly. There is another kind of gastro- mancy which is nerformed by means of glasses.

cr other round transparent vessels, within whicli certain figures appear by magic art. It is thus called, because the figure appears as in the belly of the vessels.

GASTUNI, a town of Greece, in the Morea, over against the island of Zante. It has a castle on the Igliaco, and contains 3000 inhabitants, who cultivate the vine, cotton, and silk, with great industry. The environs are very fertile. About six miles to the east are found the ruins of the ancient Elis. Twelve miles east of Chia- renza.

GAT, the preterite of get.

Moses gat him up into the mount.

Ex. xxiv. 13.

Gat, East, a channel W. N. W . of tlie island of Walcheren, Netherlands, between the Caloot Sand and the Querns Flat. It has from four to five fathoms water.

GATA, Cape, a promontory on the coast of Granada, Spain, forming the eastern limit of the bay of Almeria, and consisting of amass of rocks, twenty-four miles in circuit, and thirteen in breadth. In the centre of this promontory there are four hills, called the Sacristan, the Two Friars, the Captain, and the White Mountain ; and, about fifty paces from the beach, a rocky mass 200 feet higli, crystallised in pieces tliat have four or five plates chased one within another. Tliey are of the color of ashes, from eight to fourteen inches loni, with a large grain that takes a good polish. The other side of the promon- tory, is called El Puerto de la Plata. Long 2'^ 22′ W., lat. 36ˆ 43′ N.

GATAKER (Thomas), a learned critic and divine, born in London, in 1574. He studied at St. John's College, Cambridge, and was after- wards chosen preacher at Lincoln's Inn ; which he quitted, in 161 1, for the rectory of Rotherhithe. In 1620 he made a tour through the Low Coun- tries ; and, in 1624, published in London a work, entitled Transubstantiation declared by the con- fession of the Popish ˆVriters to have no neces- sary foundation in God's Word. He wrote also a defence of this discourse. In 1642 he was ajj- po.nted one of the assembly of divines, and was engaged with them in writing

annotations upon the Bible. He died m July, 1654, in the eightieth year of his age. He published also, 1. A Disser- tation upon the Style of the New Testament. 2. De Nomine Tetragrammata. 3. DeDipthongis, sive Bivocalibus. 4. An Edition and Transla- tion of Marcus Antoninus's Meditations. 5. A Collection of Sermons, in folio; and many other works.

GATE, H. s. ? Gate and way ; Sax. sear.

Gateway, n.a. 5 A frame of timber or ofiei material upon hinges giving access to a city castle, dwelling or field : also an avenue or open- ing itself.

That other gate was kept by Shame, Whiche opened, as it was coulhs Towardes the parte of the soulhe.

Chaucer. Ramawit of the Rose.

She tlien the cities sought from gate to gate. And everie one did aske, did he liim see.

Spenser. Faerie Queene.

Auria had done nothing but wisely and politically, in setting the Venetians together by the ears with tlie Turks, and opening a gate for a long war. Km'Jc.

GATES.

19

Knowcst thou the way lO i»over ?

— Ijotli stiie and gate, horseway, and footpath.

Shakspeare.

Open the gate of mercy, gracious God I My soul flies through these wounds to seek thee. Id.

Gateways between inciosures are so miry, that they cannot cart between one field and another.

Mortimer's Husbandry.

He feeds yon almshouse, neat but void of stale, M'ˆhere age and want sit smiling at the gate. Pope.

Gates, in agriculture, are the convenient moveable parts of fences, generally formed of timber or iron, which are designed to give the freest inlet or outlet to enclosures, and at the same time to keep in cattle and admit of being securely closed

The great object is generally said to be to com- bine strength with lightness in their construction. The common sort are constructed of timber, and, whatever kind may be used, it is essential that it be well seasoned, as without attention in this respect they are soon warped in their structure by the heat of the sun : they should also be well and conectl) put together. Oak is un“oubtedly the best sort of wood for the pur- pose, where durability is the object; though some of the lighter kind of woods, as deal, willow, tScc.,will often last a great length of time, and from their lightness they are not so apt to destroy themselves. The lighter gates are made tawards the licad or opening part, the better, provided tliey be sufficiently strong for tlie pur- pose they are to serve ; and, on this account, the top bars may in many cases, as where horses are to 1)6 kept, be left considerably stronger than the others. If this be not done, they are liable to be broken by tlie animals rubbing their necks upon them, except where they are made very high. Gates are generally made eight and a half or nine feet in width, and from five to six feet in heicrht ; the bars being three or four feet iiroad, and five or six in number. To prevent small animals getting through, a smaller bar is sometimes introduced between the two lower- most ones. At the ordinary prices of wrought iron and oak, the former will be found of doubt- ful economy, and cast iron gates are too heavy, ,ind too liable to be broken, for agricultural]iurposes, but they are frequently used for orna- mental gates, to divide pastures.

The posts to which gates are attached should, in all convenient cases, says Mr. I>oudon, be formed of stone; as this material, when hewn and properly constiucted, will last for ages. ˆN hen formed of wood, oak or larch are the best sorts. The latter, where suitable, should be used without removi-.ig the bark, wliich has been found to add greatly to their durability. In some places it is customary to plant trees for gate-j osts, and, after tlioy liave attained a certain size a:id tiiickness, to cut them over about ten feet above the surface: where tlie trees thrive, they form the most durable of all gate-posts; in many instances, however, they misgive, and much trouble is necessary to repair the defect. \ here the posts are made of dead timber, they sliould always be strong, and the wood well pre- pared ; that part which is let into the earth >houl(l also be defended, by dipping it in coarse “il, cr giving it a coat of pyrolignous liquor;

and all that is above ground exposed to the action of the weather

should lie well covered with one or two good coats of oil-paint. The expense of this preparation is but trifling, while the benefit is very great.

According to Parker, the substance of a gate- post should be from eight to ten inches square, or, for very heavy gates, a foot square would not be too large. If made of still larger size i* is better. And he says, that the steadiness of a gate-post depends, in a great measure, upon the depth to which it is set in the ground, which ought to be nearly equal to the height of it. Five or six feet is, in general, fully sufficiei\t. But the posts may be kept in their places by a strong frame-work placed under the ground, ex- tending between the posts.

The common slip-bar gate is, perhaps, the most durable of any, especially where the gate- posts are of stone, with proper openings for the reception of tlie bars. The only objection is the trouble of opening and shutting this gate ; which, when servants or others are passing through it in a hurry, occasions its being fre- quently left open. In other respects it is prefer- able to every other description of gate, says the above writer, both in the original cost and greater durability. It is to be noticed, however, that upon the verge of a farm or estate, especially wˆhere it is bounded by a high road, the slip-bar gate will not answer, as it does not admit of being locked, or secured in the same way as other gates. But the chained slip-bar gate, though more expensive, is not liable to this objection. Here the bars are connected by a chain down the middle of Uie gate, and there- fore, if one bar is padlocked to the post, none of them can be moved till that one is unlocked.

Tarker's compensation-hinge for gates is much in use, and forms an excellent corrective to tiieir falbng; all that is necessary when tlie gate sinks at the head is to screw it up by the nut n, till it regains its original position.

GATE S.

A gate should have one fall to the liangiiic; post to make it catch, and another to a point at a right angle with the gateway, so as to keep it open. To effect this, having set the post per- pendicular, let a plumb-line be drawn upon it : on this line, at a proper height, place the hook, so that it may project three inches and a half from the face of the post; and at a convenient distance below this place the lower hook an inch and a half to one side of the perpendicular line, and projecting two

inches from the face of the post ; then place the top loop, or eye, two inches from the face of the hanging stile, and the bottom loop three inches and a half. A gate thus hung will have a tendency to shut in every position ; because if the weight of the gate be represented by a diagonal line from the heel to the head, this, by the resolution of forces, is resolvable into other two lines, one perpendicular, and the other horizontal ; the former representing that part of > the weight which presses in a perpendicular position, and the latter that part of the weight which presses in a horizontal direction, and gives the gate a tendency to shut.

The fastenings of gates, it is ob- served by Parker, are as various as the blacksmiths who construct them the subject occupied his at- tention in connex- ion with the hang- ing of gates, and he has introduced various improve- ments. One of the

most secure is a spring latch a, opened by a lever b, which works in a groove of the upper bar of the gate, and therefore cannot be rubbed open by cattle ; while, by means of a knob at the end of the lever, and rising up against the top of the upright bar c, so that cat- tle cannot touch it, it is very easily opened by persons on horseback with or without a stick ˆr whip.

A cheap, simjile, and effective spring-latch consists of a bolt which is loose, and plays freely in two mortised openings in the upright bars, and is kept in place by a spring. The gate may be shut from either side, when the bar, striking against the projection on the falling post is pushed back, till, arriving at the mortir.e, the spring forces it in, and the gate is shut securely. Such a gate is easily opened by a rider. This is a good latch for the common field-gates of a farm.

Double, or folding gates, are sometimes con- sidered to be much more durable than those ot the swing kind ; because the bars, being only half the length, render the joints of the gate not so liable to be broken, or the hinges to be so much strained. On the other hand, such gates require more opening and shutting, and the latter operation is troublesome to perform, when both halves have fallen at all from the perpendi- cular. These gates are not, therefore, in such general use in agriculture, as the swing kind ; but are common only as gates to parks, &,c.

Clarke’s window-sash gate is the last invention we shall notice. It is suspended by two weiglits, and opens and shuts exactly on the principle of a window-sash. The weights may be of stone or cast iron ; the pulleys are of iron, and nine inches diameter. It was applied in the

first instance to a cattle-court ; but has since been erected in different situations. Its advantages the inventor states to be the following : — It is easy to open b, or shut a ; remains in whatever situation it is placed ; is not liable to be beaten to pieces by the action of the wind ; shuts always perfectly close, whatever be the height of the straw or dung in the court or gateway ; a cart may be driven quite close on either side before opening ; is perfectly out of the way when fully open, and not liable to shut on what is passing ; the gate bottom not liable to decay by being immersed in the dung, as is commonly the case with cattle court-gates ; not liable to go out of order ; may be erected in a hollow place, where a swinging-gaˆ could not open either outwardly or inwardly; and is likely to be more durable than ordinary gates. See diagram.

:-ˆr!rs|

Gates, in a military sense, are made of strong planks, with iron bars, to oppose an enemy. They are generally made in the middle of the curtain, whence they are seen and defend- ed by the two flanks of the bastions. They should be covered with a good ravelin, that they may not be seen or enfiladed by the enemy. These gates, belonging to a fortified place, are passages through the rampart, which may be shut and opened by means of doors and a port- cullis. They are either private or public.

Frivaie Gates are those passages by which

the troops can go out of the town unseen by the enemy, when they pass to and from the relief of the duty in the outworks, or on any other occa- sion which is to be concealed from the besieger?- Pubtic Gates are those passages, through the middle of such curtains, to which the great road.s of public ways lead. The dimensions of these are usually about thirteen or fourteen feet high, and nine or ten feet wide, continued through the rampart, with proper recesses for foot pas- sengers to stand in, out of the way of wheel car

GAT

GATESHEAD, a town of Duiham. separated from Newcastle, by the Tyne ; over which there IS a fine stone bridge, which formerly had an iron gate m the middle, with the arms of Dur- ham on one side, and those of Newcastle on the other; being the boundary between the bishop- ric and Northumberland. It is a borough by pre- scription, and is privileged to send a member to parliament. Here are considerable manufac- -ories of cast and wrought iron, whiting, &;c. The church is a

fine building, with a very high tower ; and in the church-yard are several ancient mo- numents. There are few traces left of its ancient monastery, except a stone gateway, of rather a modern erection. The house covered two acres and a half of land. Here is a free school for grammar, arithmetic, and navigation. Gates- lead Fell, a bˆeak and elevated ridge, extending £OUthward from the town, is famous for its grindstone quarries, whence the Newcastle stones are exported to all parts of the world. The view of Newcastle and the Tyne from the hill on the north of the Hexham road is uncommonly grand. Gateshead is thirteen miles north-east of Durham.

GATEVEIN, n. s. Gate and vein. The vein otherwise called vena porta.

Being a king that loved urealth, he could not en- dure to have trade sick, nor any obstruction to con- tinue in the gatevein which disperseth that blood.

Baconˆs Henry VII.

GATH, or Geth, in ancient geography, a city of the Philistines, and one of their five satrapies. It is famous for having given birth to Goli.itli. David made a conquest of it, and it continued subject to his successors, till the declension of the kingdom of Judah. Rehoboam rebuilt and fortified it; king Uzziah retook it, and Hezekiah once more reduced it under his subjection. Some authors, among whom is F. Calmet, have committed an egregious mistake in making Gath the most southern, and Ekron the most northern, of the Philistine cities ; as if these had been the two boundaries of their dominionsˆ, whereas they are not above five miles asunder; and Gaza is the last of the five satrapies south. Jbsephus expresses himself plainly enough, when he says, that Hezekiah took all the Philistine cities from (iazato Gath; there being many more cities of that name, which signifies in the Hebrew a wine- press. Several more of the name of Geth or Gath are mentioned in Eusebius and St. Jerome, whose situation, according to them, plainly shows them to have been different places from this, and from each other; besides those which had an adjunct to distinguish them. This city recovered its liberty and lustre in the time of the prophets Amos aixl Micah, but was afterwards demolished by Hazacl, king of Syria; since which it becani(? of but little consideration fill the time of the crusades, when Fulk king of .Jerusalem built a castle on its ruins. It was thirty-two miles west of Jerusalem.

fiATii'EK, r. «., U.K., i

(Jatiierii!, w. s. ˆ SaSejian.

Gatuerino, n. s J According

to some authors contracted from get here; but the Helgii; has ˆ

21 GAT

into a whole, as an act of necessity or conve- nience; and, according to this definition, appli- cable to objects and subjects, as thus separately illustrated : persons who are thus occupied.

Gather stones — and they took stones and made an heap. Genesis.

The seventh year we shall not sow, nor gather in our increase. Lev. xxv. 20.

Let every one lay by him ia store, that there be uo gathering when I come. 1 Cor. xvi. 2.

The luckless lucky maid A long time with that savage people staid. To gather breath in many miseries. Spenser.

Eftsoones he ‘gui to gather up around His weapons, whicli lay scattertid all abrode. And as it fell his steed he ready found. On whom remounting, fiercely forth he rode Like sparkes of fire that from the andvile glode.

Spenser’s Faerie Queene.

That which, out of the law of reason or of God, men probably gathering to be expedient, they make it law. Hooke.

His opinions

Have satisfied the king for his divorce.

Gathered from all the famous colIegn.«;. Shakspeare Tlie reason that 1 gather he is mad.

Is a mad tale he told to daj’ at dinner,

Of his own door being shut against his entrance.

Id.

All the way we went there were gathered some people on both sides, standing in a row. Bacon.

Tlieir snow-ball did not gather as it went ; for the people came in to them. Id. Ht'nry VII.

I will spend this preface about those from whom 1 have gathered my knowledge ; for 1 am but a gatliercr and disposer of other men's stuff. Wotton.

Nor in that land Uo poisonous herbs deceive ih;; gatherer's hand.

May's Virgil. And if the night Have gathered aught of evil, or concealed. Disperse it, as now light dispels the dark, Milton.

Returned By night, and listening where the hapless pair Sat in their sad discourse, and various plaint, ‘thence gathered his own iXooxn. Milton’s Paradise Lost.

Mademoiselle de Scudcry, who is as old as Sibyl, is translating Chaucer into French : from whirlj I gather that he has formerly been translated into the old Provencal. Dryden.

When the rival winds their quarrel try. South, E-ist, and West, on airy coursers born. The whirlwind gatlurs, and the woods are torn. Id.

He gathers ground upon her in the chace ; Now breathes upon her hair with nearer pace. Id.

What have I done ? To see my youth, my beauty, and my love No sooner gained, but slightfd and betrayed ; And like a rose just gathered from tlie stalk. But only smelt, and cheaply tlirown aside, ‘J”o wither on the ground ! Id. Spanish Fryar.

To pay the creditor, that lent him his rem, lie must gather up money by degrees. Locke.

‘I’liink on the storm .hdi{. gathers o’er your lioad. And threalens every hour to burst upon it. Addiaon.

Iiiiinortal Tully shone, ‘I’lic Uoiiian rostra decked the consul’s llirone ; (iiitlii-riiii/ bis flowing robe he seemed to stand. In act to Apeak, and graceful sirctclud his hand.

Pope.

And gathering loiterers on the land discern, Her boat descending from the latticed stem.

Byron. Corsair.

GATINOIS, or Gastinois, a ci-devant pro- vince of France, forty-five miles long and ihiity

Droad. In the cleventli century it had counts of its own, but was

afterwards joined to Anjou. It was next divided into Gatinois, Orleauois, and Tranˆois ; and now forms part of die departments of the Seine and Marne, Seine and Oise, and Loiret. ITiis district has been long celebrated for its saffron.

GA’TTEN-TREE, n. s. A species of Corne- lian cherry.

GATTON, a small town of Surrey, nineteen miles from London, on the side of a hill on the road to Ryegate. It is supposed to have been known to the Romans, from their coins and other antiquities found here. It was a borough by pre- scription ; and sent members to parliament ever since the 29th of Henry VI. The members were returned by its constable, annually chosen at the manor court. It was deprived of its franchise in 1832, by the Reform bill.

GAU RIL (Anthony), a French author, born at Caillac in 1708. lie was sent a missionary to China, and acted as interpreter at the court of Pekin. He published a history of Jengis Khan, and a translation of the Chou King. He died in

1759.

GAUBIUS (Hieronymus David), a celebrated physician of Holland. He studied under the il- lustrious Boerhaave ; and became so much his favorite, that he resigned the chemical chair in his favor. He taught at Leyden with great ap- plause for forty years. His reputation was ex- tended all over Europe by several valuable pub- lications, particularly by his Institutiones Patha- logiffi Medicinalis, and his Adversaria, which contributed not a little to the improvement of medicine. He died at Leyden, Nov. 20fh, aged seventy-six.

GAUDE, n. s. & v. a.-\ Lat. gaudcre, to be

Gau’dery, n. s. f glad. — Minsheu. Ex-

Gau’dily, adv. S-pressiveof what gives

Gau’dy, adj., & n.s. i pleasure; whether to

Gau’diness, n. s. J the eye, as splendid

colors ; to the taste, as a luxurious feast ; or to the heart, as good news, Sec. : of the pleasure it- self, or the agents and mode of its communica- tion.

By this gaude, have I wonnen, yere by yere An hundred mark, sin I

was Pardonere.

Chaucer. The Pardoneres Tale.

Of smale corall, aboute hire arm, she bare A pair of bedes gauded all with grene.

Id. Prologue to Canterbury Talcs.

He stole the' impression of her fantasy. With bracelets of thy hair, rings, gaudes, conceits. Knacks, trifles, nosegays, sweetmeats. Shakspeare.

The sun is in the heaven, and the proud day. Attended with the pleasures of the world. Is all too wanton, and too full oi gaudes. To give me audience. Id. King Lear.

My love to Hermia Is melted as the snow ; seems to me now As the remembrance of an idle gaude. Which in my childhood I did doat upon. Shakspeare.

Costly thy habit as thy purse can buy, But not exprest in fancy ; rich, not gaudy. For the apparel oft proclaims the man. Id.

Go to a gossip's feast, and gavde with me. After so long grief such nativity. Id.

Fancies fond with gaudy shapes possess. As thick and numberless As the gay motes that people the si'i-I.-ˆamt. Milton.

A gold-finch there I saw, witli gaudy pride Of painted plumes, that hopj.ed from side lo side.

Drydtn. A plain suit, since we can make but one.

Is better than to be by tarnished gau'dry known.

Id.

Some bound for Guiney, golden sand to find. Bore all the gaudet tlie simple natives wear;

Some for the pride of Turkish courts designed. For folded turbants finest Holland bear. Id.

Age, which is but one remove from death, tnd should have nothing about us but what looks like a decent preparation for it, scarce ever

appears, of late, but in the high mode, the flaunting garb, and utmost gaudtry of youth, with clothes as ridiculously, and as much in the fashion, as the person that wears them is usually grown out of it. South.

He may surely be content with a fast to-day, that is sure of a gaudy to-morrow. Cheyne.

A man who v'?iViis directly to his journey's end will arrive thither much sooner than he who wanders aside to gaze at every thing, or to gather every gaudy flower. Watts.

In costly sheen and gaudy cloak arrayed.

But all afoot, the light-limbed Matadore Stands in the centre, eager to invade

The lord of lowing herds. Byron, Childe Harold.

GAUDEN (Dr. Joseph), son of the Rev. John Gauden, vicar of Mayfield, in Essex, was born at Mayfield in 1605. At the commencement of the civil war, he was chaplain to Robert, earl of War\vick ; whom he followed, on his taking part with the parliament against the king. iJpon the establishment of the Presbyterian church govern- ment he complied with the ruling powers, and was nominated one of the assembly of divines who met at Westminster in 1643, and took the covenant; yet, having offered some objections to it, his name was afterwards struck out of the list. Nor did he espouse the cause of the parliament longer than they adhered to their first avowed principles of reforming only, instead of destroy- ing, monarchy and episcopacy. In this spirit he signed the protestation to the army against the violent proceedings that affected the life of the king : and a few days after his execution pub- lished the famous Eikwp BaffiXiKt), A Portraiture of his Sacred Majesty in his Solitude and Suf- ferings : which ran through fifty editions in the course of a year. Upon the return of Charles If. he was promoted to the see of Exeter ; and in 1662 removed to Worcester, where he died the same year. He wrote many controversial pieces, and has generally been considered as the author of the Eikon Basilike. After the bishop's death, his widow, in a letter to one of her sons, calls it The Jewel ; and said her husband had hoped to make a fortune by it. This assertion, as the earl of Clarendon had predicted, was eagerly espoused by the anti-royalists, in the view of disparaging Charles I. But it has been said, that Gauden had too luxuriant an imagination to be able to compose in so chaste but elevated a style ; and thence, as bishop Burnet and others argue, that

not he, but the king himself, was the true author. The whole of the arguments on each side of this disputed question may be found in Mr. Nichols's Literary Anecdotes.

GAUDENS (St.), a town of France, in the de- partment of Upper Garonne, and late province of Languedoc, seated on the Garonne ; eight mile.s north-east of Bertrand.

GAV 2

GAVE. The preterite of gi".

Thou can'st not every day give me thy heart ; If thou can'st give it, then thou never gav'st it :

Love's riddles are, that though thy heart depart. It stays at home, and thou with losing sav'st it.

Donne.

GA'VEL, n. s. A provincial word for ground. Let it lie upon the ground or gavel eight or ten limes. Mortimer.

GAVELET, in law, an ancient and special cessavit used in Kent, where ihe custom of gavel- Kind continues, by v hich the tenant, if he with- draws his rent and services due to tlie lord, for- teits his land and tenements. The process is thus : — The lord is first to seek by the steward of his court, from three weeks to three weeks, to find some distress upon the tenement, till the fourth oourt; and if at this time he find none, at tliis fourth court it is awarded, that he take the tenement in his hand in name of a distress, and keep it a year and a day without manuring; within which time, if the tenant pays his arrears, and makes reasonable amends for the with-hold- ing, he shall have and enjoy his tenement as be- fore : if he comes not before the year and day be past, the lord is to go to the next county court with witnesses of what had passed at his own court, and pronounce there his process, to have fjir»her witnesses ; and then, by the award of his own court, he shall enter and mannre the tene- ment as his own : so that if the tenant desired afterwards to have and hold it as before, he must agree with the lord ; according to tliis old say- ing : ' lias he not since any thing given, or any thing paid, then let him pay five pound for his were, ere he become healder again.' Other copies have the first part with some variation : * Let him nine times pay, and nine times repay.

Gavixet is also a writ used in the hustings, given to lords of rents in London. Here the parties, tenant and demandant, appear by scire

facias, to show cause why the one should not have his tenement again on payment of his rent, or the otlier recover the lands on default thereof.

(iA'ELKIND. A term in law. A custom whereby the lands of the fatlier are equally di- vided, at his death, amongst all his sons; or the land of the brother equally among the brothers, if he have no issue of his own. This custom prevails in divers places in England, but espe- cially in Kent.

Among other Welsh customs he abolished that of gavelkind, whorcby the heir* female were utterly ex- cluded, and the bastards did inherit as well as the legitimate, which is the very Irish gavelkind.

Davics on Ireland.

GAvr.iKiNn is a tenure belonging to lands in the county of Kent, and formerly universal in Ireland. The word is said by Lambard to be compounded of three Saxon words, gyf, eal,kyn, ‘ omnibus cognatione proximis data.’ Verstegan calls it gavelkind, quasi ‘give all kind,’ that is, to each child liis part : and Taylor, in his his- tory of gavelkind, derives it from the British gavel, i.e. a hold or tenure, and cenncd,’ gene- ratio aut familia;’ and so gavel cenned might signify tenura generationis. It is well known what struggles the Kentish men made to preserve ♦.heir ancient liberties, and with how much sue-

cess those struggles were attended. And as it is principally here that we meet with the custom of gavelkmd (though it was and is to be found in some other parts of the kingdom), we may con- clude, that this was a part of those liberties ; agreeably to Selden’s opinion, that gavelkind, before the Norman conquest, was the general custom of the realm. The distinguishmg pro- perties of this tenure are principally these : — 1. The tenant is of age sufilcient to alienate his estate by feoft’ment, at the age of fifteen. 2. The estate does not escheat in case of an attainder and execution for felony ; their maxim being, ‘ the father to the bough, the son to the plough.’ 3. In most places he had a power of devising lands by will, before the statute for that purpose was made. 4. The lands descend, not to the eldest, youngest, or any one son only, but to all the sons together ; which was indeed anciently the most usual course of descent all over Eng- land, though in particular places particular cus- toms prevailed ; and it must be allowed, that it is founded on strict justice, however contrary to the present general practice.

GAUGARIELA, in ancient geography, a vil- lage of Aturia, lying between tiie rivers Lycus and Tigris ; famous for Alexander's victory over Darius. It is said to have been allowed to Darius Ilystaspis for the maintenance of a ca- mel ; and hence the name. It was near a more considerable place called Arbela; whence the latter gave the name to the victory. See Ak-

BELA.

GAUGE, V. a. & n. s. ˆ Erench, gauge. See

Gauger, n. s. S Gage. A measure, or

standard. He who gauges; an exciseman.

Those earls and dukes liave been privileged with royal jurisdiction ; and appointed their special ofli- cers, as sheritT, admiral, gauger, and eschcator.

Carcw on Cornwall.

If money were to be hired, as land is, or to bo had from the owner himself, it might then be had at the market rate, which would be a constant (ˆojˆf/t; of your trade and wealth. Locke.

There is nothing more perfectly admirable in itself than that artful manner in Homer, of taking measure or qaiigiiH] his heroes by each other, and thereby ele- vating the character of one person by the opposition of it to some other he is made to excel. Pope.

Gauge. See Gage.

A Gauger is a king's officer, who is ap- pointed to examine all tuns, pipes, hogsheads, and barrels, of wine, beer, ale, oil, honey, &c., and g've them a mark of allowaiioe, before they are sold in any place within the extent of his office.

GAUGING. See Geometry.

Gauging Hon, an instrument used in gaug- ing or measuring the contents of any vessel.

GAUL. SeeGALMA.

GAULTIIERIA, in botany, a genus of the monogynia order, and decandria class of plants ; nat»:ral order eighteenth, bicornes : cal. exterior diphyllous, interior quinquefid : con. ovate; the nectarium

consists often subulated points: caps. qu.n

GAULTIKR (Louis), abbe, was a native of Italy but of Erench parentage, and taken

«arlv to France. IJere, devoted to the education of youth, he conceived the project of smoothing tiie rugsˆed path by the instructive a:ames, known to children liy the name of the ‘ Abbe Gaultier’s Games.’ The revolution forced him to quit France, however, for the Hague, where he ac- cepted the situation of tutor to the children of the British aml)assador, whom he accompanied to England. We now find him giving instruc- tion gratuitously to the children of French emi- grants ; until the peace of Amiens allowed him to return to Paris, where he resumed his teach- ing, which he continued until his death, in 1818, in his seventy-fifdi year. Some of his works nave gone tlirough twenty editions. The follow- ing are the principal — Lecons de Grammaire suivant la methode des Tableaux analytiques, 1787; Jeu raisonnable et moral pour les Enfans, 1791; Methode pour analyser la pensee et la reduire a scs Principes Elementaires ; Methode pour apprendre grammaticalement la Langue Latine sans connaitre les regies de la Compo- sition ; Traits caracteristiques d’une mauvaise Julucation, on Actions et Discours contraires a la Politesse, et regardcs comme tels par les Mora- listes tant Anciens que Modernes; Notions de geometric pratique, necessaires a I’exercice de la plupart des Arts et Metiers, 1807, &c. &c. GAUNT, adj. \ Saxon, gewaned, gewant, Gatjntly, adv. S from jepanian, to lessen. Thin; slender; meagre.

Oh, how that name befits my composition! Old Gaunt, indeed, and gaunt in being old : Within me grief hath kept a tedious fast; And who abstains from meat that is not gaunt 1 For sleeping England long time have I watched ; Watching breeds leanness, leanness is M gaunt : The pleasure that some fathers feed upon Is my strict fast ; I mean my children’s looks ; And therein fasting, thou hast made me gaunt : Gaunt am I for the grave, gaunt as a grave, Vi’hose hollow womb inherits nought but bones.

Sliakspeare. Richard II. Two masiifTs, ˆui(,“i,’ and |rrim, her flight pursued. And oft their fastened fangs in blood embrued.

Dry den. While the gaunt mastifif growling at the gate Affrights the beggar whom he longs to eat. Pope.

Then Judah raged by ruffian discord led. Drunk with the steamy carnage of the dead : He saw his sons by dubious slaughter fall. And war without, and death within the wall. Wide wasting plague, gaunt famine, mad despair. And dire debate, and clamorous strife was there.

Bp. Heber. GAUNTLET, n. s. French, gaiitelct ; Italian, giiunto; Goth, vanta; Belg. want; corrupted, pro- bably, ofx Latin, manica, manus, the hand. An iron glove, used for defence, and thrown down in cliallenges ; sometimes, in poetry, used for the cestus or boxing glove.

A scaly gauntlet now, with joints of steel. Must glove his hand. Shakspeare. Henry IV.

Feel but the difference, soft and rough ; This a gauntlet, that a muff. Cleaveland.

Then put on all thy gorgeous arms, thy helmet And brigandine of brass, thy broad habergeon, Vant-brass, and greves, and gauitlet, add thy spear, A weaver's beam, and seven times folded shield, I only with an oaken staff will meet thee.

Milton's Samson Agoniites.

Some shall in swiftness for the goal contend. And others try the twanging bow to bend ; The strong with iron gauntleti armed shall stand. Opposed in combat on the yellow sand. Dryden, Who naked wrestled best, besmeared with oil ; Or who with gauntlet) gave or took the foil. Id.

The funeral of some valiant knight May give this thing its proper light ; View his two gauntlets, these declare That both his hands were used to war.

Prior. So to repel the Vandals of the stage. Our vet'rau bard resumes his tragic rage ; He throws the gauntlet Otway used to wield. And calls for Englishmen to judge the field.

Suulhern

GAVOT, n. s. Fr. gavotte. A kind of dance.

The disposition in a fiddle to play tunes in preludes, sarabands, jigs, and gavots, are real qualities in the instrument. Arbuthnot.

Gavot, Gavotta, or Gavotte, is a kind of dance, the air of which lias two brisk and lively strains in common time, each of which is twice

played over. The first has usually four or eight bars; and the second contains eight, twelve, or more. The first begins with a minim, or two crotchets, or notes of equal value, and the hand rising ; and ends with the fall of the hand upon the dominant or mediant of the mode, but never upon the final, \inless it be a rondeau : and the last begins with the rise of the hand, and ends with the fall upon the final of the mode.

Gavotta, Tempi di, is when only the time or movement of a gavotte is imitated, without any regard to the measure or number of bars or strains.

GAURA, in botany, Virginian loose-strife, a genus of the monogynia order, and octandria class of plants ; natural order seventeenth, calycanthemse : cal. quadrifid and tubular : cor. pentapetalous, with the petals rising upwards. The nut is inferior, monospermous, and quadrangular. Species three ; natives of North and South America.

GAURITZ, one of the most considerable, as well as a very rapid and dangerous river of the colony of the Cape of Good Hope. It rises in the Nieuweldt mountains, crosses the Karroo and Zevarte Berg, and falls into the Indian Ocean, in lono. 21° 40′ E., lat. 34° 35′ S.

GAUSCHERKIE, a town of Upper Egypt, on the right bank of the Nile, opposite Tahta, sup- posed by Norden to be the ancient Diospolis. It contains a temple sixty paces in length and forty in breadth ; the roof being well preserved ; but it is emoloyed by the Arabs as a cattle- shed

GAUZE, n. s. tr. gaze ; barbarous Lat. gazaˆ turn; as some have thought from Gaza; whence this silk first came into Europe. A kind of thin transparent silk.

Silken clothes were used by the ladies; and it seems they were thin, like gauze. Arbuthnot.

Brocadoes and damasks, and tabbies and gauzes. Are lately brought over. Swift.

Gauze, Gause, or Gawse, in commerce, is woven sometimes of silk, and sometimes only of thread. To warp the silk for making gauze, they use a peculiar kind of mill, upon which

the silk is wound : this mill is a wooden ma- chine about six feet high, having an axis perpen- dicularly placed in the middle thereof, with six large wings, on which the silk is wound from off the bobbins by the

axis turning round. When all the silk is on the mill, they use another m- strument to wind it off again on two beams : this done, the silk is passed through as many little beads as there are threads of silk; and thus rolled on another beam to supply the loom. There are figured gauzes; some with flowers of Lold and silver, on a silk ground : these last are chiefly brought from China,

GAWK, n. s. Saxon, geac. Acuckow; a foolish fellow.

GAWN, «..?. ˆ Scotch. A corruption

Gawntree, n. s. S for gallon : a wooden frame in which beer-casks are set when tunned.

GAY, adj. & n.s.ˆ Fr. gai ; Italian, gaic ;

Gay'ety', u. s. i Arm. gae. Cheerful ;

Gax'ly, adv. flight; playful; or frolic-

Gav'ness, n. s. 3 some: also applied to cheerful colors.

A virgin that loves to go gay. liar. vi. 9.

There I was wont to be right fresh and gay. Of clothing, and of other gooi array.

Chaucer, The Chanonei Y '.marines Tale. Our qayety and our guilt are all besmirrhed.

With rainy marching in the painful fiehi.

Shahrpearc, And from those gayeiies our youth requires

To exercise their minds, our age retires. Denham.

Morose nnd untractable spirits look upon precepts in emblem, as they do upon gays and pictures, the fooleries of so many old wives' lˆles, L' Estrange,

The ladies, juˆy dressed, the Mall adorn

With curious dies, and paint the sunny morn.

Gay.

Gay Fiance shall male the Fan her artists' fare, And with the costly

trinket arm the fair. Id.

Like some fair flower, that early Spring supples, Tha.t gayly blooms, but ev?n in blooming dies.

Fope.

Smooth fiow tlie waves, the zephyrs gently play,

Reliuda smiled, and all the world was gay. Id

Kvcn rival wits

And the qay mourned, who ne”er mourned befor .

Gay (John), a celebrated English poet, de- scended from an ancient family in Devonshireˆ was born at Exeter, and educated at the free school of Barnstaple, under Mr. Rayner. H

> G.AY

monstrances were made on the occasion by his friend and matron the duke of Qucensberry, w!io withdrew from the court in consequence. The issue of such dependence on the delusive pro- mises of the great. Gay has figuratively and hu- morously described in his fable of the Ilare with many friends The profits of his poems he lost in 1720, in the Soutli Sea scheme. But the encouragement he met wˆth from the public soon made ample amends foi these private dis- appointments. In 1727-8, appeared his Beg- gar’s Opera; the success of which was not only unprecedented, but almost incredible. It had an uninterrupted run in Loudon for sixty-thre’; nights in the first season, and was renewed in tne ensuing one with ep’.al approbation It spread into all the great towns of England ; was acted in many places thiuy and forty times, and last of all it was performed at linorca. Noi was its fame confined to the reading and repre- sentation alone; the card table and drawing-room shared it with the theatre and closet ; the ladie? carried about its favorite songs engraven upon their fans, and screens and other pieces of fur- niture were decorated with them The profits were so great, both to the authoi and Mr. Ricn the manager, that it gave rise to a popular pun, viz. That it had made Rich gay, and Gay rich. In consequence of this success,]Mr. Gay was induced to write a second part to it, which he entitled Polly. But the disgust subsisting be- tween him and the court, together with the report of his having written seditious pamphlets, occa- sioned a prohibition to be sent from the lord chamberlain, at the time when e ery thing was in readiness for the rehearsal. A very consider- able sum, however, accrued to him from the publication of it afterwards in Ito. He wrote several other dramatic pieces, and many valu able ones in verse. Among the latter, his Trivia, or the Art of walking in the Streets of London, though his first poetical attempt, recommended him to the

esteem and friendship of ˆIr. Pope : but as, among his dramatic works, his Beggar's Opera will perhaps ever stand as an unrivalled masterpiece so among his poetical works, his Fables hold the highest estimation. Mr. Gay'<* disposition was affable, his temper generous, and his conversation agreeable. But ho had the foible, too often incident to men of great literary abilities, viz. an excess of indolence, without any economy. So that though his emoluments were, at some periods of his life, very consider- able, he was at others greatly straitened in his circumstances ; nor could he prevail on himself to follow the a 1 vice of his friend Dean Swift, who endeavoured to persuade him to purchase an annuity, as a resource for the exigencies of old age. IMr. Gay therefore, after having under- gone many vicissitudes of fortune, and being for some time chiefly supported by the duke and duchess of Queensberry, died at their house in Burlinijton gardens, in December, 1732. He was interred in Westminster Abbey, where a monument was erected to his memory, at their expense; with an epitaph by Pope.

(iAVAH, or Boonii Gayaii, a town of the province of Bahar, Ilindostan, one of the most celebrated places of Hindoo pilgrimage. It is

auid to have been the birth-place of Boodh, or Biidha. The revenue collected by government from the pilgrims amounts to above £16,000 per annum, a business managed entirely by the Brahmins. The image is that of a man sitting cross-legged, and so rudely carved as to give reason to suppose that it is of great antiquity. An inscription on one of the stones says ' The forefathers of him who shall perform the cere- mony of the Sradha at this place shall obtain salvation.' ' A crime of an hundred fold shall undoubtedly be expiated from a sight thereof, of a thousand fold from a touch thereof, and of a hundred thousand fold from vporshipping thereof.' Gayah is the residence of the civil establishment of the district of Bahar Proper, and has a cantonment for a battalion of native infantry.

GAZA (Theodore), a celebrated Greek of the fifteenth century, born in Thessalonica, in 1398. His country being invaded by the Turks, he re- tired into Italy; where he at first supported him- self by transcribing ancient authors. In 1450 he was invited to Rome by Pope Nicholas V. ; and on his death, in 1456, to Naples, by king Alphonso: who dying in

1458 he returned to Rome, where cardinal Bessarion procured him a benefice in Calabria. He translated from the Greek into Latin, Aristotle's History of Animals, Theophrastus on Plants, and Hippocrates's Aphorisms ; and into Greek, Scipio's Dream, and Cicero's Treatise on Old Age. He wrote a Grammar and several other works in Greek and Latin; and died at Rome in 1478, ?ged eighty.

Gaza, in ancient geography, a principal city and one of the five satrapies of the Philistines. It was situated about 100 stadia from the Medi- terranean, on an artificial mount, strongly walled round. It was destroyed by Alexander the Great, and afterwards by Antiochus. In the time of the Maccabees it was a strong and flourishing city ; but was destroyed a third time by Alexander Janna;us. At present it is a mean place ; but some remains of its ancient grandeur appear in the handsome pillars of Parian marble which are found here and there, in different parts of its streets. On the top of the hill, at the north- east corner of the town, are the ruins of large arches sunk low into the earth, and other foun- dations of a stately building. Soap and cotton cloths are the manufactures. Gaza is the resi- dence of a Turkish bashaw. It was taken by the French under General Kleber in February 1799, and lies fifty miles south-west of Jeru- salem.

GAZE, v.n.jV. a. n.s. Sax. ˆepean, to

Ga'zer,7«.s. /see; Goth, gasia ;

Gaze'ful, adj. > Gr. ayaˆicjOai. To

Gaze'hound, n.s. i look earnestly or in-

Ga'zingstock, Jtentlyupon: intense

regard, or earnest observation ; the object on

which attention is rivetted ; the person thus

occupied. A hound, that pursues not by scent,

but by sight. A person gazed at with derision

or abhorrence.

Being lightened with her beauty's beam. And thereby tilled with happy iufiuence.

And lifted up above the world's gaze. To slug with angels her

immortal praise.

Spenser. The brightness of her beauty clear. The ravisht hearts of gaxefid men might rear To admiration of that heavenly light. Id.

Do but note a wild and wanton herd. If any air of musick touch their ears. You shall perceive them make a mutual stand. Their savage eyes turned to a modest gaze. By the sweet power of musick. Shakspeare.

Not a month ‘Fore your queen dyed, &he was more worth such

gazes Than what you look on now. Id

A lover’s eyes will gaze an eagle blind. Id, What see’st thou there? King Henry’s diadem- Inchased with all the honours of the world : If so, gaze on. Id. Henry I V

Straight toward heaven my wondering eyes I turned. And gazed awhile the ample sky. Miitun.

With secret gaze. Or open admiration, him behold. On whom the great Creator hath bestowed Worlds. Id. Paradise Lost.

I must die Betrayed, captived, and both my eyes put out ; Made of mine enemies the scorn and gaze • To grind in brazen fetters, under task. With my heaven-gifted strength. Id. Agonistes. These things are offences to us, by making us gazing stocks to others, and objects of their scorn and de • rision. Ray.

See’st thou the gazehound ! how with glance severe From the close herds he marks the destined deer !

Tichel. Bright as the sun, her eyes the gazers strike ; And, like the sun, they shine on all alike. Pope. His learned ideas gave him a transcendent delight , and yet, at the same time, discover the blemishe:; which the common gazer never observed. Watts.

High stations tumults, but not bliss, create ; None think the great unhappy, but the great : Fools gaae and envy ; Envy darts a sting. Which makes a swain as wretched as a king.

Ytitmg. Her ruby lips lock up from gazing sight A troop of pearls, which march in goodly row : But when she deigns those precious bones undight. Soon heavenly notes from those divisions flow.

Fletcher’s Purple Inland. With awe and wonder gazed the adoring

swain ; His kindling cheeks great Virtue's power confessed But soon t'was o'er, for Vii-tue prompts in vain. When Pleasure's influence numbs the nerveless breast. Beattie. Judgment of Paris The tender blue of that large loving eye Grew frozen with its gaze on vacancy.

Byron. Corsair,

GAZF.L, n. s. An Arabian deer.

Crystal and marble, plate and porcelain. Had done their work of splendour; Indian mats. And Persian carpets, which the heart bled to stain. Over the floors were spread ; gazelles and cats, And dwarfs and blacks, and such like things, that gain Their bread as ministers and favorites — (ˆthat's To say, by degradation) — mingled there As plentiful as in a court or fair.

Byron, Don Juan.

GAZETTE, n.s. J Gazetta is a Venetian

Gazetteer, n. s. i halfpenny, the price of a

newspaper, of whicli the first was published in

X'enice. A paper uf public intelligence. A vyi-

(er of news; a dictionary of places or of geog- raphy.

And sometimes when the loss is small. And danger great, they challenge all ; Print new editions to their feasts. And emendations in gazettes. Hudibras.

An English gentleman, without geography, cannot ■well understand di gazette. Locke.

One cannot hear a name mentioned in it that does not bring to mind a piece of the gazette, Addison.

All, all but truth, falls dead-born from the press ; Like the last gazette, or the last address. Pope.

Satire is no more : I feel it die ; No gazetteer more innocent than I. Id.

He (Urookes) was also the author of a most ex- cMenl gazetteer. TUuring.

And more might be found out if I could poke enough Into gazettes, but Fame (capricious strumpet) It seems has got an ear as well as trumput. Byron.

Gazette is with us confined to that paper of news published by authority. The first English gazette was published at Oxford, the court being there, in a folio half sheet, November 7th, 1665. On the removal of the court to London, the title was changed to the London Gazette. The Oxford gazette was published on Tuesdays, the London on Saturdays : and these continued to oe the ilays of publication, after they were both pub- lished in London till very lately. It is now published every Tuesday and Friday evening.

GAZNA, a city of Asia, once much celebrated, and the capital of an extensive empire; now ruined and almost forgotten. During the vast and rapid conquests of the Arabs, all this coun- try had been reduced under their subjection. On the decline of the power of the caliphs, how- ever, the vast empire established by Mahomet and his successors was divided into a number of independent principalities, most of which were but of short duration. In the year of the Ilegira 384, answering to A. D. 99 1, Gazna, with some part of the adjacent country, was governed by Mahmud Gazni ; who became a great con- queror, and reduced under his subjection a con- siderable part of India and most of Persia. This empire continued in the family of Mahmud Gazni for upwards of 200 years. None of his succes- sors, however, possessed his abilities ; and there- fore the extent of the empire, instead of increas- ing, was very considerably diminished soon after his death. The Seljuks took Khorasan ; the greatest part of the Persian dominions fell off; and in the 547th year of tiie Ilegira, the race of the Gazni sultans was entirely set aside by one of the Gauri, who conquered Khofru Shah the reigning prince, and bestowed his dominions on his own nephew, Gayathoddin Mohammed. These new sultans proved greater conquerors than the former, and extended their dominions farther than even Mahmud Gazni liad done. They did not, however, long enjoy the sove- reignty of Gazna; for in 1218 Jenghiz Klian, having conquered the greatest part of China and almost all Tartary, becan to turn his arms west- ward ; and set out against Gazna at tlie head of 700,000 men. To oppose this formidable army, Mohammed, the reigning sultan, could muster only 400,000 men ; and, in the first battle, 1 60,000 of his troops perished. After this defeat, Mo- hammed, not daring to risk a second battle, dis-

tributed his army among ‘he strongest fortified towns in his dominions ; all of which Jenghiz Khan took one after another. The rapid pro- gress of his conquests, indeed, almost exceeds belief. Immediately after the destruction of Bamiyan, Jenghiz marched towards Gazna, which was strongly fortified, and where he ex- pected to have found Jaloloddin, who had now succeeded his father Mohammed. But he had left it fifteen days before ; and, when Jenghiz Khan’s army came up with him near the Indus, he attacked the vanguard in their camp ; and having cut them almost all to pieces, without the loss of a man on his side, returned with a considerable booty. Jenghiz Khan, finding by tliis that he had a vigilant enemy to deal with, proceeded with great circumspection. When he had brought up the main body of his forces, he gave the command of the right and left wings to Jagatay and Oktay ; and put himself in the centre, with 6000 of his guards. On the other side, Jaloloddin prepared for battle like one who had no resource but in victory. He first sent the boats on the Indus farther oflf; reserving only one to carry over his mother, wife, and children. He himself took the command of the main body. His left wing, drawn up under shelter of a moun- tain, was commanded by his vizier. The battle was terrible, and the success various throughout a whole day. At last, however, Jaloloddin’s men, who were in all 30,000, opposed to ten times their number, were seized with a panic, and fled. One part of them retired to the rocks on the shore of the Indus, where the enemy’s horse could not follow them; others threw them- selves into the river and were drowned, tliough some had the good fortune to cross over in safety : while the rest, surrounding their prince, conti- nued the fight through despair. The sultan, however, considering that he had scarce 7,000 men left, began to think of providing for his own safety : therefore, having bidden adieu to his mo- ther, wife, and children, he mounted a fresh horse and spurred him into the river, which he crossed in safety, and even stopped in the middle of it to insult Jenghiz Khan, who was now ar- rived at the bank. His family fell into the hands of the Moguls; who killed all the males, and carried the women into captivity. Jaloloddin, having landed in India, ascended a tree to pre- serve himself from wild beasts. Next day, as he sauntered among the rocks, he perceived a troop of his soldiers, with some officers, who at the beginning of the defeat had found a boat in which they had escaped, and soon after saw 300 horse coming towards him ; who informed him of 4,000 more that had passed the river. I’or some time after this the sultan’s afi’airs seemed to revive, and he gained some battles in India; but the native princes, envying his pros-])erity, conspired against him, and obliged him to repiiss the Indus. Here he again attempted to make head against the Moguls ; but was at last defeated and killed by them, who thus put an end to the once mighty empire of

(!azna. The metropolis was reduced by Oktay, who committed the most horrid cruelties in the neigh- bourhood. The city was well])rovided for sus- taining a siege ; had a strong garrison, and a bnivc and resolute governor; and the inhabitant'—

GED

expecting no mercy from Jenghiz Khan, resolved to make a desperate defence. They several times overthrew his works, and broke above 1000 of the battermg rams of the besiegers. But one night, after an obstinate conflict, part of the city wall fell down ; and a great number of Moguls, having filled up the ditch, entered the city sivord in hand. After the massacre had continued four or five hours, Oktay imposed a tax on those who were left alive, to redeem themselves and the city. After this time Gazna never made any considerable figure. It was taken by the Moguls A. D. 1222.

GAZON, n. s. Fr. Pieces of fresh earth covered with grass, and used to line parapets and the traverses of galleries, in fortification.

GAZYPOOR, a town and district of the pro- vince of Allahabad, Hindostan,in the collectorship of Benares. It is bounded on the north and east by the river Goggrah, on the south by the Ganges, and on the west by Joanpore. It is remarkably fertile and well watered ; producing maize and other grain, cotton, opium, and sago in great abundance : also some very fine indigo, and the otto of roses. The town of Gazypoor stands on the Ganges, and has a palace and mosque both of superior structure.

Gazypoou is also the name of a district of India, on the south bank of the Toombadre.

GEAR, n. s. Sax. ˆeapjie, furniture ; gyjiian, to clothe. Furniture, possessions, and orna- ments ; hence applied to the traces of oxen and horses : stuff.

An hundred lordes had he with him there. All armed, save hir hcdes in all hir gere Ful richely in alle manere thinges.

Chaucer. The Knightes Tale. Into a studie he fell sodenly. As don these lovers in hir queinte gcrei Now in the crop, and now down in the brercs. Id. Array thyself in her most gorgpous qear.

Spenser. Faerie Qtieene. If fortune be a woman, slie is a good wench for this

gear, Shakspeare. Merchant of Venice.

When he found her bound, stript from her gear, A ad vile tormentors ready saw in place. He broke through. Fairfax.

Apollo's spite Pallas discerned, and flew toTydeus' son ; I! is scourge reacht, and his horse made fresh; then

took her angry run At king Eumelus, brake his geara. Chapman's Iliad. When once her eye Hath met the virtue of this magick dust, 1 shaU appear some harmless villager. Whom thrift keeps up about his country gear.

Milton. The frauds he learned in his frantick years Made him uneasy in his lawful ˆears, Drydcn.

I fancy every body observes me as I walk the street, and long to be in my old plain gear again.

Addison's Guardian. To see some radiant nymph appear In all her glittering birthday gear. You think some goddess from the sky Descended, ready cut and dry. Swift.

GEASON, adj. Sax. jej-ean, to see or gaze: found only in Spenser. Wonderful. See Gaze. It to Leeches seemed strange and geasnn.

Hubbard's Tale.

GEAT, 71. s. Corruption of .jt'H. The hole through which the metal rims into iiie mould.

GEBER, a king or chief of the Arabs, who wrote several tracts on chemistry, or rather al- chemy, in Latin; printed from a copy in the Vatican, at Dantzic, in 1682 in 16mo. In this work he is styled not only rex Arabum, but phi- losophus perspicacissimus; and in two of these tracts, viz. Liber Investigationis Magisterii, and Testamentuin de salibus animalium, &c., he is also styled Indian rex, though it seems difficult to account for such very distinct titles.

Geber (John), a physician and astronomer of Arabia, who flourished in the ninth century. He wrote a commentary on Ptolemy's Syntaxis Mag- na, in which he attempted to correct his Astrono- my, but Copernicus styles him the Calumniator of Ptolemy. He wrote several other works,

and Boerhaave styles him a learned chemist. But his writings are so full of the jargon of the alche- mists, that Dr. Johnson traces the derivation of the word gibberish from them. See Gibberish.

GECK, ii.s.&cv.a. Sax. geac ; Ger. geek, a fool. A bubble (obsolete) : to cheat.

Why did ynu suffer Jachimo to taint his nob.e heart and braio with needless jealousy, and to become the geek and scorn o'th 'other's villainy ? Shakspeare.

Why have you suffered me to be imprisoned.

And made the most notorious geek and gull

That e'er invention played on ? Id,

GECKO. See Lacerta.

GED (William), a goldsmith of Edinburgh, was an higenious artist, and has been said to have first attempted to introduce the art of stereo-type printing. The invention, first practised by him in 1735, waˆ simply this: — From any types of Greek or Roman, or any other character, he formed a plate for every page, or sheet of a book, from which he printed, instead of using a type for every letter, as is done in the common way. In July, 1729, Ged entered into partnership with William Fenner, a London stationer, who was to have half the profits, in consideration of his ad- vancing all the money requisite. In 1730 the partners applied to the University of Cambridge to print bibles and common prayer books by blocks instead of single types ; and, in conse-quence, a lease was sealed to them, April 23d, 1731. In their attempt they sunk a large sum of money, and finished only two prayer books ; so that it was relinquished and the lease given up in 1738. Ged imputed his disappointment to the villany of the pressmen, and the ill treat- ment of his partners, particularly Fenner. He returned to Scotland in 1733, where he gave his friends a specimen of his performance, by an edition of Sallust. But, being still unsuccessful, he was preparing again to set out for London, to join with his son James as a printer there, when he died October 19th, 1749.

GEDDES (Alexander), LL. D., a Scottish Roman Catholic priest, born in Ruthven, in 1737. He very early discovered a taste for learning, and was accordingly sent to a school in the Highlands where those designed for the Catliolic priesthood received their early education; and here Geddes laid the foundation of that intimate acquaintance with the learned languages by which he was afterwards so

distinguished. In 1758 he went

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GEL

lo the Scottisli University at Pans, and soon after became a student in rhetoric and theology at the cellege of Navarre. lie returned to his native country in 1764, and became priest in the county of Angus ; but the following year he was made chaplain to the earl of Traquair; with whom he continued about three years. In 1768 he again visited Paris. Returning again to his native country, early in 1769, he undertook the charge of a congregation at Auchinlarig in Bamff- shire : the same year, however, he quitted his pastoral charge, and obtained the year following the degree of LL. D. from the University of Aberdeen, whicii had never so honored any Ro- man Catholic since the Reformation. About this time he removed to London, where he officiated some time in the imperial ambassador’s chapel, and afterwards at that in Duke-street, Lincoln’s Inn-fields. In 1782 he began to devote himself to a design which he had long entertained, of giving the world a new English translation of the Old and New Testaments. The prospectus of this work was published in 1786, and the fol- lowing year an Appendix to it, and a Letter to Bishop Lowth. This year also he gave a dis- play of his controversial talents, in an Answer to Ur. Priestley on the Divinity of Christ. In 1788 he published farther proposals for his Translation of the Bible, and two years after, a general An- swer to the Queries, Counsels, and Criticisms, communicated to him relative to the work. He was liberally supported in the undertaking by lord Petre; and the first volume of it, compris- ing the Pentateuch and the book of Joshua, ap-])eared in 1792 ; but even those of his own com- munion directly avowed their disapprobation of it, and some of the Roman Catholic bishops suspended the doctor from his ecclesiastical func- tions. He replied to these attacks in pamphlets written with great coarseness and illiberality. The second volume of his version was p\iblished in 1798; and in it he gives up and daringly combats the inspiration of Scripture. In the spring of 1800 he published his Apology for the Roman Catholics of Great Britain, and the same year Critical Remarks in vindication of his ver- sion of Scripture, which he prepared for the press as far as the 118th Psalm; but died on the 26th of February, 1802.

GEDINGOOMA, a fortified town of Kaarta, in Western Africa. Its walls

are of stone, and so high that, in the narrow pass here between two hills, they have enabled Doisy the king of this place, to set the power of Bambara at defiance. It is thirty miles north-west of Kemmoo.

GEESE. Plural of goose. See Goosr.

GEFLE, or Giawle, a town on the Gulf of Bothnia, belonging to Sweden, and the seat of several provincial courts. The river Gefle flows through the middle of the town, falling into the gulf in three branches, and forms a good har- bour, defended by a long jette. The inhabitants carry on a brisk maritime traffic, exporting pitch, tar, iron, and plank5. It has a castle, which was burnt in 1727, but rebuilt. Population be- tween 5000 and 6000. Sixty miles north of Upsal.

GEFLEBORG,anewly erected government of Sweden, situated between Dalecarlia and West

Noriland, and extending from the gulf of Bothuiri to tlie Norwegian mountains. Its extent is above 9000 square miles, but its population only about 90,000. It is mountainous on the side of Nor- way, and is, in general, covered with wood. Here are also a number of productive iron mines. The capital is Gefle.

GEHENNA, GEHiNN0N,Gr. Tstwa, of Heb. OlJnXa, a term which occurs in Matt. v. ver. 22,29,30: x. 28; xviii.9; xxiii. 15,33. Mark ix. 43, 45,47. Luke xii. 5. James iii. 6. The autliors of the Louvain and Geneva versions re- tain the word gthenna as it stands in the Greek ; as does M. Simon ; the English translators ren- der it by hell and hell-fire, and so do the trans- lators of Mons and Father Bouhours. In the valley of Hinnom, near Jerusalem, there was a place named Tophet, where the idolatrous Jews sacrificed their children to Moloch, by fire. (See Ben-Hinnom and Moloch). King Jo- sias, to render this place for ever abominable, made a common sewer of it, where all the filtli and carcases of the city were cast ; and where a continual fire was kept up, to burn those car- cases ; for which reason, as the Jews had no proper term in their language to signify hell, they made use of gehenna or gehinnon, to denote a perpetual fire.

GEISLINGEN, a town of Wirtemburg, re- markable for its bone turners, who amount to about 1600 or 1700. In the neighbourhood is a much frequented mineral spring. Twelve miles west of Ulm.

GELA, in ancient geography, a city of great extent on the south of Sicily, so named from the Gelas. It was built by colonists from Rhodes and Crete, forty-five years after the building of Syracuse, in the third

year of the twenty-second Olympiad, A. A. C. 690; and originally called Lindii, from the colonists of Lindus, a city of Rhodes, who settled there first. This city, after having stood 408 years, was destroyed by Phin- tias, tyrant of Agrigentum ; and the inhabitants were removed to a new city called Phintias after his name. It is now called Terra Nuova.

GEL'ABLE, adj. •\ Lat. gelu. Whatever Gel'atine, 71. s. f may be reduced to a jelly. Gelat'inoijs, adj. iˆ Gelatine is a term applied Gel'ly, «.s. 'to a substance of this

nature which forms part of animal bodies ; gela- tinous, that which partakes of a thick cohesive character.

My best blood turn To an infected ijelly.

Shakspcare, Winter's Tate. The tapers of the gods. The sun and moon, became like waxen globes. The shooting stars end all in purple gellies. And chaos is at hand. Dryden and Lee's Oedipus, Tliat pellucid tjelatinous substance is an excretncnt cast off from the slinals of lish that inhabit the main.

Woodivard. The white of an egg will coagulate by a moderate heat, and the hardest of the animal solids are resolv- able again inlo getlies. Arbuthnot.

You shall always sec their eggs laid carefully up in that spermatick gelatine matter, in whicli they aii; rcposited. Derhum.

Gelatin, or jelly, an animal substance, so- luble in water, capable of assuming a well-know n

elastic or tremulous consistence, by coolina;, when tlie water is not too abundant, and liqiiefi- able again by increasing its temperature. This last property distinguishes it from albumen, whicii becomes consistent by heat. With tannin it forms an insoluble compound already men- tioned. Its aqueous solution, evaporated to dryness, is glue. Decomposed by nitric acid, a large quantity of gas disengages, and oxalic acid is formed. In close vessels, it gives over car- bonic acid, hydro-carbonic gas, carbonate of am- monia, and empyreumatic

oil ; its carbonaceous residuum containing phosphate of lime. Hence gelatin is not nearly so much compounded as albumen, having only carbon, hydrogen, azote, phosphorus, lime, and oxygen, as its ultimate elements.

According to the analysis of MM. Gay Lussac and Thenard, gelatin is composed of

Carbon, . , . 47-881

Oxygen, . . . 27-207

Hydrogen, . . 7-914

Azote, ... 16.998

100000

GELD, u. a.’ -\ Goth, and Teut.geWera,

Gei-d’er, n.s. f Germ, gtlten. To cas-

GELD’iNG,n.s. ˆtrate, or emasculate. A

Gelt’, 71. s. &. pari. ‘ term also used figura- tively. The person who performs the operation. Any animal thus deprived, pnnicularly the horse.

No bcrde hadde he, ne never none shuldc have ; As smothe it wos as it were newe shave : t trowe he were a gelding or a mare.

Chaucer. Prologue to Cant. Tales. Geld later with gelders, as many one do. And look of a dozen to geld away two. Tusser. Geld bull-calf and ram-lamb as soon as they fall.

Id. Lord Say ha.lh gelded iha commonwealth, and made it an eunuch. Skakspeare. Henry VI.

H • bears his course, and runs me up With like advantage on the other side. Gelding the opposed continent as much As on the other side it takes from you.

Sliakspeare. Though naturally there be more males of horses, bulls, or rams, than females ; yet artificially, that is, by making gildings, oxen, and wethers, there are fewer. Graunt,

Never old lecher more repugnant felt Consenting for his rupture to be

gelt. Marvell.

No sow-gelder did blow his horn To geld a cat but cryed reform. Hudibras.

The lord-lieutenant may choose out one of the best horses, and two of the best geldings ; for which shall be paid one hundred pounds for the horse, and fifty pounds a-pi ace for the geldings. Temple.

They were diligent enough to make sure work, and to geld it so clearly in some places, that they took away the very manhood of it. Dryden.

The spayed gelts they esteem the most profitable.

Mortimer. Let the others be gelt for oxen.

Id. Husbandry. Geld, in the old English customs, a Saxor word signifying money, or tril)ute. It also de- noted a compensation for some crime committed : hence .vergeld, in their ancient laws, was used

for the value of a man slain; and orfgeld, of a. beast.

GELDENHARIUS, Geldenhaur (Gerard Eobanus), an historian and Protestant divine, born at Nimeguen in 1482. He studied classical learning at Deventer, and went through his course of philosophy at Louvaine, where he contracted a friendship with Erasmus. He be- came reader and historian to Charles of Austriaˆ and afterwards to Maximilian of Burgundy. At length he embraced the Protestant religion ; taught history at INIarpurg ; and afterwards divi- nity till his death, in 1542. He wroce, 1. History of Holland; 2. History of the Low Countries ; 3. History of the Bishops of Utrecht; and other- works.

GELDER-ROSE. A rose supposed to come originally from Guelderland. See Viburnum. The gelder-rose is increased by suckers and cuttings.

Mortimer. Geldeh Rose, Virginian. See Spir.5;a. GELDERS. See Gueldres.

GELiD’iTYrˆi s. \ ,Vˆ- Sˆ”’ˆ”*- Extreme /-, , ‘ 1 cold.

Gel idness, n.s. j

From the deep ooze and gelid cavern roused. They flounce. Thomson’s Spring.

GELLAH, or CoLLAH, a fortitied place cf Algiers, on a high and conical

mountain near the Mejerdah. It has become a place of refuge for criminals, and has only one narrow path leading to it. Eighty-six miles east of Constantina.

Gellah, a town of Tunis, in Africa, situated on a rugged promontory, near the river Mejer- dah. Publius Cornelius Scipio fixed his winter-quarters here, and it was called after him Castra Corneliana.

GELLERT (Christian Furchtegott), a Ger- man poet and critic, was born in 1715 at Hay- nichen, near Freyberg, in Saxony. His father was a clergyman, and placed him at a school at Meissen, where he contracted an intimacy with Rabener and Gaertner, which lasted until their respective deaths. In 1734 he went to Leipsic to study theology, and returned home, after four years, as a preacher. He afterwards became private tutor to young gentlemen of fortune, with one of whom he returned in 1741 to Leip- sic. His first poetical production was. Amuse- ments of Reason and Wit, begun 1742. In 1744 he took the degree of M. A., and published, the following year, the first volume of his Fables, some plays, and a novel, entitled The Swedish Countess. In 1748 appeared the second volume of his Fables, and a work called, Consolations for Valetudinarians, suggested by the state of his own health. In i751 he was made professor extraordinary of philosophy at Leipsic ; he died 13 th December, 1709. His works have often been published collectively or separately.

Gellert (Christlieb Ehregott), brother of the preceding, a distinguished metallurgist, first studied at Meissen, and then at the university of Leipsic. Being invited to Petersburg, he became an adjunct of tlie academy there for ten years ; and very intimate with the celebrated Euler. He returned to Saxony about 174G, to prosecute his researches, wlien liis mineralogi-

cal lectures attracted a great many strangers to Freyberg. In 1753 lie was nominated counsel- lor-commissary of the mines, and charged with the inspection of machines and the examination of the ores and minerals of his native country. In 1764 he became administrator in chief of foundries and forges at Freyberg; in 1765 pro- fessor of metallurgy at tl)e academy of mines in that city ; and at length, in 1782, effective coun- sellor of mines. He suggested great improve- ments in his mineralogical researches; and was the first introducer of the process of parting metals by amalgamation. He died May 1795 ; having published Elements of Docimastics, translated from the Latin of Cramer ; Elements of Chemical Metallurgy, 2 vols. 8vo., &c.

GELLIUS (Auius), a celebrated grammarian, who lived in tiie second century under Marcus Aurelius and some succeeding emperors. He wrote a collection of observations on authors, for the use of his children; and called it Noctes Atticae, because composed in the nights of a winter he spent at Athens, Tlie chief value of it is for preserving many facts and monuments of antiquity not to be found elsewhere.

GELON, son of Dinomenes, tyrant of Syra- cuse, of which he usurped the sovereignty about 491 or 500 B.C. He embellished tlie city and increased its population. When Greece was '.hreattned by Xerxes, Athens and Sparta sent ambassadors to him, to conclude an alliance against the king of Persia. Gelon offered 206 galleys, 20,000 heavy-armed soldiers, 4,000 horsemen, 2,000 archers, and as many slingers, with provisions for them during the war, if they would yield to him the supreme command by land and sea. The conditions were rejected. Gelon therefore refused the desired assistance, and sent to Delphi a man, by the name of Cad- mus, with orders to await the result of the war, and, if the Greeks were overcome, to pay ho- mage tn Xerxes in his name, and to send him valualle presents. He was not then aware that Xerxes had induced the Carthaginians, while he was as-ˆaulting the Greeks in their own country, to make an attack on their settlements in Sicily and Italy. Hamilcar finally landed at Panormus, with a fleet of 2,000 ships of war, and 3,000 transports, carrying, in all, 300,000 land troops, •.i:d laid siege to Himera. Gelon marched against this army with 50,000 infantry and 5,000 cavalry. He learnt from an intercepted letter that Hamilcar intended to engage in a solemn sacrifice the next day, and to receive auxiliary troops into his camp. Gelon succeeded in in- troducing, in the room of the auxiliaries, a de- tachment of ids own cavalry into the enemy's camp, which fell upon Hamilcar in the midst of his religious ceremony, slew iiim, and set fire to his ships. At the same lime, Gelon assailed the Carthaginians, who were dejected by the death of their general and the loss of their fleet, and totally discomfited them. This remarkable bat- tie happened on the same day on which the Greeks were victorious at Marathon. It is cele- brated in an ode by Pindar. The booty was immense, and (ielon ofl'ered the Carthaginians peace oidy on condition that they should pay 2,000 talents of silver, erect two temples for pre-

serving the conditions of peace, and abolish for ever human sacrifices. His next ambition was to obtain the title of royalty. For this purpose lie summoned a meeting of the people, before whom he appeared unarmed, and declared his intention of resigning his high power. All

were filled with wonder and astonishment ; and the general voice hailed him as the preserver of Sy- racuse. The royal title was unanimously con. ferred upon him, and the people persisted in compelling him to accept it. A statue, which represented him in a citizen's dress, perpetuated the memory of this event. Generosity and kind- ness were tlie characteristics of Gelon's adminis- tration. Ever striving to make his people happy, he died after a reign of seven years. He was succeeded by his brother Hiero.

GELT, n.s. Corrupted from gilt. Tinsel; gilt surface.

GEMAPPE, or Jemappes, a small town of the Netherlands, in Hainault, near the Scheldt.

GEMARA, or Ghemara, the second part of the Talmud. The Hebrew word m*::, gemara, is commonly supposed to denote a supplement ; but in strictness it rather signifies complement, or perfection ; being formed of the Chaldee D3, gemar or ghemar, ' to finish, perfect, or complete any thing.' The rabbins call the Pentateuch simply the law : the first part of the Talmud, which is only an explication of that law, or an explication thereof to particular cases, with the decisions of the ancient rabbins thereon, they call the Mischna, i.e. second law; and the se- cond part, which is a more extensive explication of the same law, and a collection of decisions of the rabbins posterior to the Mischna, they call Gemara, q.d. perfection, completion, finish- ing; because they esteem it the finishing of the law, or an explication beyond which there is nothing farther to be desired. The Gemara is often called simply the Talmud, the common name of the whole work. In this sense, there are two Gemaras or Talmuds ; that of Jerusalem and that of Babylon ; though in strictness the Gemara is only an explication of the Mischna, given by the Jewish doctors in their schools. See Mischna. A commentary, Mons. Tillomont observes was wrote on the Mischna, by on? Jo- hanan, whom the Jews placed about the end of the second century ; but Father Morin proves, from the work itself, wherein mention is made of the Turks, that it was not written till the time of Ileraclius, about A.D. 620 ; and this is what is called the Gemara, or Talmud of Jerusalem, which the Jews do not use or esteem much be- cause of its oliscurity. They set a much greater value on the Gemara, or Talmud of Babylon, begun by one Asa; discontinued for seventy- three years, on occasion of the wars with the Saracens and Persians ; and finished by one Josa, about the close of the seventh century. See Talmi'd. Though the name Talmud in its latitude includes both the Mischna and the two Gemaras, yet it is properly that of Asa and Josa alone which is meant under that name. This the Jews prize above all their other writings, and even set it on a level with Scripture itself: in efl'ecl, they conceive it as the word of God derived by traditign from Moses, and preserved without in-

terruption to their time. R. Jehuda, and after- wards R. Johanan, R. Asa, and R. Josa, fearing the traditions should be lost in the dispersion of the Jews, collected them into the Mischna and the Gemara.

GEMATRIA, or Gametria, the first kind of artificial cabbala used by the Jews. The word is formed from the rabbinical Hebrew K-IIOOˆJ, by corruption of the Greek. Gematria is a geometrical or arithmetical method of explaining these words, whereof there are two kinds; the first bearing a more immediate relation to arithmetic, and the latter to geometry. Thus a cabbalist, taking the two first words in Genesis, nˆBTSIS i, 300 ; •>, 10 ; n, 400 ; D, 2 ; 1, 200 ; and N, 1 ; which, together, make 1116. And as to the latter, 3 signifies 2 ; “l, 200 ; K, 1 ; U, 300 ; H, 5 ; i, 50; Vr, 300 ; n, 5 ; J, 50 ; 3, 2 ; n, 200; and N, 1 ; which, summed up, yield the same number

1116.

When.ce the cabbalist conclules, n’B’N”13, N‘13 in the beginning he created, signifies the same thing as N”13:“nJtt’nC?Nn3, it was created at the beginning of the year : and, accord- ingly, the received opinion of the cabbalists is, that the world was created at the beginning of tlie month Tisri, which was anciently the first month in the year, and answers to our first month in autumn, viz. September.

GEMBLOURS, or Giblou, a town of France, in the department of Dyle, and ci-devant pro- vince of Austrian Brabant, seated on the Orne. In 1578 a battle was fought near it between the Dutch and the Spaniards, under Don John of Austria, wherein the former were defeated. It was twice burned down, viz. on the 6th of Au- gust, 1678, and 17th August, 1712. It lies ten miles north-west of Namnr, and twenty-two south-east of Brussels.

GEMELLIP’AROUS, adj. Lat. gemelli and pa”io. Bearing twins.

GEM’INATE, v. a. ‘\ Lat. gemino. Repe-

Gemina’tion, K. s. fˆtition; whether used

Gem’iny, 7j. s. ˆ in relation to beings

Gem’inous, adj. J or arguments,

have grated upon ray good friends for three re- prieves for you, and j’our couch-fellow, Nim ; or else you had looked through the grate, like a gcviiny oi balloons, Shalispeare.

Christians have baptized these geminous h\t\hi , and double connascencies, with several names, as conceiv- ing in them a distinction of souls. Browne.

Be not afraid of them that kill the body ; fear him, which, after he hath killed, hath power to cast into hell ; yea, I say unto you, with a gemination, which the present controversy shows not to have been canse- less. fear him. Boyle.

A geminy of asses split will make just four of you.

Congreve.

GEMINI, in astronomy, the Twins ; a con- stellation or sign of the zodiac, the third in order, representing Castor and Pollux; and marked

t}lUS, II. See ASTROKOMY.

GEM

GEMINIANI (Francis), a celebrated musi- cian and composer, born at Lucca in 1G80. He received his first instructions in music from Alex. Scarlatti ; henextbecameapupil of Charles Ambrose Lunati, surnamed II Gobbo, a cele- brated performer on the violin ; after which he was a disciple of Correlli. In 1714 lie came to England, where he soon recommended himself greatly by his performances. In 1716 he pub- lished and dedicated to baron Kilmansegge, chamberlain to king George I. as elector of Ila nover, twelve sonatas a violino violine e cem- balo : the first six with fugues and double stops ; tiie last with airs of various measures, as ala- mandes, courants, and jiggs. This publication was so much admired by the baron, that he mentioned Geminiani to the king as an excellent performer; in consequence of which he had the honor to perform before his majesty, in concert with Handel. But, though Gemi-niani was ex- ceedingly admired, he had no genius for asso- ciating music with poetry, nor do we find that he ever became a public performer. He was therefore obliged to depend for his subsistence on the friendship of his patrons, aiiu the profits which accrued to him from teaoliing-. He was also an entnusiast m pamtmg, ana tne versatility of his temper v^‘as such, that, to gratify this pas- sion, he neglected to exercise his musical talents, and became involved in debt. In 1727 he was offered the place of master and composer of the state music in Ireland ; but this could not be conferred on a Catholic, and Geminiani refused to change his religion. He then began to com- pose parts to the opera quinta of Corelli ; and to make concertos of the first six of his solos. This work he completed, and,

with the help of a sub- scription, at the head of which were the names of the royal family, he published it in 1726. In 1732 he published his C)pera Secunda, containing a celebrated minuet that goes by his name, which did not much improve his circumstances ; but Geminiani was an utter stranger to the bu- siness of the orchestra, and had no idea of the labor necessary in the instruction of singers, for the performance of music to which they were strangers. The consequence of this was, that .i concerto spirituale, which he had advertised for his own benefit in 1748, failed entirely in the performance. He now went to Paris for six or seven years, and, about 1755, returned to Eng- land. In 1761 he went over to Ireland, where he was kindly received by Mr. IMatthew Du- bourg, wlio had been his pupil, and who was then master of the king's band. Here he died under very peculiar circumstances. He had spent many years in compiling an elaborate treatise on music, which he intended for publi- cation ; but soon after his arrival, ny the trea- chery of a female servant, who, it was said, was recommended to him for no other end, but that s!ie might steal it, it was conveyed away and could not be recovered. The greatness of this loss, and his inability to repair it, hastened his end; at least he survived it but a short time, dying on the 17th September, 1762. Of his solos the Opera Prima is esteemed the best. Of his concertos some are excellent, others of theiQ scarce pass the bounds of mediocrity. The sixth

of the third opera not only surpasses all the rest, but, in the opinion of the best judges of har- mony, is one of the finest instrumental composi- tions extant.

GEMISHKHANA, Silver House, a well- built town of Asia Minor, on the frontiers of ^\jmenia. Its name is derived from a silver mine in its neighbourhood, which, however, does not yield now a third part of the metal it once did. Inhabitants 7000. Thirty miles south of Trebisond.

GEMISTUS (George), sumamed Plethe, a native of Constantinople, from which, upon its capture by the Turks, he retired to Florence. In 1-138 he distinguished himself at the council of Florence, by his learning and abilities. He wrote, 1. Commentaries upon the INIagic Oracles of Zoroaster ; a work of considerable erudition ; 2. A

Comparison between Plato and Aristotle; and 3. Historical Treatises ; wherein he discovers great knowledge of Grecian history. He died aged above 100.

GEMMA (Reinier), an eminent Dutch physi- cian, born in I'riesland, in 1308. He was well versed in astronomy, and wrote several works on that and other branches of mathematics. He died in 1755, aged forty-seven.

Gemma, or bud, in botany. See Botakv. Buds, as well as bulbs, which are a species of buds, constitute that part of the herb called by Linnaeus hybernaculum, or the winter-quarters of the future vegetable. Buds are placed at the extremity of the young shoots, and along the branches, being fixed by a short foot-stalk upon a kind of brackets, the remainder of the leaves, in the wings or angles of which the buds in question were formed the preceding year. They are sometimes placed single ; sometimes two by two, either opposite or alternate ; sometimes collected in greater numbers in whirls or rings. With respect to their construction, buds are com- posed of several parts artificially arranged. Ex- ternally, we find a number of scales that are pretty hard, frequently armed with hairs, hol- lowed like a spoon, and placed over each other like tiles. These scales are fixed into the inner plates of the bark, of which they appear to be a prolongation. Their use is to defend the inter- nal parts of the bud ; which, being unfolded, will produce, some flowers, leaves, and stipuloe ; others, foot-stalks and scales. All these parts, while they remain in the bud, are tender, deli- cate, folded over each other, and covered with a thick clammy juice, which is sometimes resinous and odoriferous, as in the tacahamac tree. This juice serves not only to defend the more tender parts of the embryo plant from coid, the assaults of insects, and other external injuries; but like- wise from excessive perspiration, which, in its young and infant state, would be very destruc- tive. It is conspicuous in the buds of horse-chest- nut, poplar, and willow-trees. See Botany.

GEMOTE, n.s. Sax. 3emot, from meran, CO meet (obsolete). A public meeting: as of the court, with the hundred, the nobles, &c. See Folk MOTE.

GEMl'ND, an old and once free town of the empire of Germany, now sub ect to SVirtemberg. lis extent is considerable ; but its population Vol, X.

much thinner since the decay of its manufactures in cottons, plaˆe, and jewellery, and does not «exceed 3500. It is twenty-feur miles south of

Stutgard .

GENAP, or Genappe, a small town of South Brabant, in the Netherlands, on the Dyle. It was the scene of an action between some French and British cavalry, on the retreat of the French 17th of June, 1815, toward Waterloo; and of a great slaughter of the French by the Prussians on the 18th, after that memorable battle. Popu- lation 1200.

GENDARMERIE, in military affairs, was a select body of cavalry that took precedence of every regiment of horse in the French service, and ranked immediately after the king's house- hold. The reputation of the gendarmerie was so great, and its services so well estimated by the king of France, that when the emperor Charles V. in 1552 sent a formal embassy to the court of Versailles, to request a loan of money, and the assistance of the gendarmerie to enable him to repulse the Turks, Francis I. returned the following answer: — 'With respect to the first object of your mission,' addressing himself to the ambassador, ' I am not a banker ; and with regard to the other, as my gendarmerie is the arm which supports my sceptre, I nerer expose it to danger, without personally sharing its fatigue and glory.' The uniform of the gendar- merie, as well as of the light cavalrj-, under the old French government, was scarlet, with facings of the same color. The coat was formerly more or less laced with silver, according to the king's pleasure. Tlie waistcoat of buff leather, and the bandoulier of the same, silver-laced ; the hat was edged with broad silver lace. The horse-cloths and holster-caps were red, and the arms of the captain embroidered on the corners of the saddle- cloths, and on the front of the holsters. The gendarmerie are now however little more than an armed police.

GENDARMES, Scots, were originally insti- tuted by Charles \TI. of France, about the mid- dle of the fifth century, and formed a part of his guard ; in which station also they acted under other princes. It was their prerogative to take precedence of all the companies of the gendar- merie of France; and, on particular occasions, they even preceded the two companies of the king's mousquetaires. The sons of the Scottish monarchs were the usual captains of this com- pany ; and, after Mary's accession to the throne, its command belonged to them as a right. Hence .Tames VI. made a claim of it for his son prince Henry. This honor, and its emoluments, were also enjoyed by Charles I., and the next in com- mand to this prince was Lewis Stuart, duke of Lenox. George Gordon, marquis of Huntley, succeeded him in 1024, and took the title of comn ander in chief when Charles I. mounted the F.nglish throne. It is not certain whether Charles II. was ever captain of this company; but it was conferred on his brother the duke of York, who

was captain of the Scots gendarmes till 1667, when he resigned his commission into the hands of the French king. After that time no native of Great Britain enjoyed this com. mand.

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GEN 34

GEN'DER, n. s. Fr. gendrc ; Lat. genus. A quality; but seldom used in th;s sense: differ- ence of sex; a denomination given to nouns, from being joined to an adjective in this or that termination.

Our bodies are our gardens, to the which our wills are gardeners ; so that if we will supply it with one gender of herbs, or distract it with many, the power and corrigible authority of this lies in our will.

Shakspeare. The other motive. Why to a publick court I might not go. Is the great love the general gender bare me. Id. Cubitus, sometimes cubitum in the neutral gender, signifies the lower part of the arm on which we lean.

Arbuthnot. Ulysses speaks of Nausicaa, yet immediately changes the word into the masculine gender.

Broome.

Gender, m grammar, is a division of nouns* to distinguish the two sexes. This was the origi- nal intention of gender: but afterwards other words, which had no proper relation either to the one sex or the other, had genders assigned them, rather out of caprice than reason ; which is at length established by custom. Hence genders vary according to the languages, or even accord- ing to the words introduced from one language into another. Thus, arbor, a tree, in Lat. is feminine, but arbre in Fr. is masculine; and dens, a tooth, in Lat. is masculine, but dent in Tr. is feminine, though the meaning is the same. The oriental languages frequently neglect the use of genders, and the Persian has none at all. The Latins, Greeks, &c., generally content themselves to express the different genders by different ter- minations; as bonus equus, a good horse ; bona equa, a good mare, &c. But in English we frequently go further, and express the difference of sex by different words : as boar, sow ; boy, girl ; buck, doe ; bull, cow ; dog, bitch, Sec, We have also feminines distinguished from the males by the variation of the termination of the male into ess; as are abbot, abbess ; count, countess, &c. Gen'der, v. a. & V. n. Fr. oigendrcr. To produce ; to beget ; the act of generation oi breeding.

Thou shalt not let thy cattle gender with a diverse kind. Lev. xix. 19.

Foolish and unlearned questions avoid, knowing that they do gender strife. 2 Tim. ii. 23.

A cistern for foul toads To gender in. Shakspeare. Othello.

GENDRE (Gilbert Charles le), marquis of St- Aubin, counsellor in the parliament of Paris, and master of requests. He wrote several other works ; but is chiefly distinguished by his Traite de rOpinion, 9 vols., 12mo. ; a curious performance, in which the author attempts to show, by histori- cal examples, the powerful empire of fancy over the works of art and science. He died at Paris in 1746, aged fifty-six.

Gendre (Louis le), a French historian, educated under the patronage of De Harlai, afterwards archbishop of Paris, became a canon and subchanter of the cathedral of Notre Dame. He published a life of his patron, and a valuable Histoire de la France, 3 vols., folio, Paris, 1718; reprinted in 8 vols. 12mo. This work includes a catalogue of the ancient and modern French

historians, with criticisms on their vvritings; an able account of the manners and customs of the French in different ages, &c. &c. He was mado abbot of Notre Dame de Claire Fontaine, in the diocese of Chartres, and died February 1st,

1733.'

Gendre (Adrian Marie Le), professor of ma- thematics at the Military school of Paris, member of the Academie des Sciences, &c., was first dis- tinguished in 1787 in verifying the points placed between Dunkirk and Boulogne, with a view to compare the true position of the Paris and Lon- don observatories. Cassini and Mechain were also employed in this operation, and the means which they employed gave a much more exact result than any which had been before tried. In 1794 M. le Gendre published his Memoire sur les transcendantes elliptiques, and his Elemens de Geometrie. Le Gendre also made about this time many researches on the subject of the at- traction of elliptical spheroids ; and commenced others on heterogeneous spheroids. In 1774 he assisted de Prony to form his trigonometrical tables for the decimal division of the circle, and in 1795 was a member of the superintendancy of weights and measures. M. le Gendre was also a member of the Institute from the formation of that body; and was named under the imperial government counsellor for life of the

aniversity. On the re-establishment of the king he became, in 1815, member of the council for public in- struction, and in 1816, conjointly with M. Pois- son, examiner of the candidates for the Poly- technical school. He published, besides the above-mentioned works, Nouvelle Theorie de Paralleles ; Nouvelles Methodes pour la deter- mination des OrbitesdeCometes; Supplementˆ I'Essai sur la Theorie des nombres ; Exercises de Calcul integral. GENEALOGY, n.s. Genealoo' Geneal'i He who traces these descents. History of the regular succession in families : pedigree.

Thei schulden not teche otherwite neithir ghyue tent to fablis : and genologies that ben uncertain.

Wiclif. 1 Tim. i. The ancients ranged chaos into several regions ; and in that order successively rising one from ano- ther, as if it was a pedigree or genealogy.

Burnet's Theory. Genealogy, is more particularly a series or succession of ancestors, or progenitors ; or a summary account of the relations and kindred of a person, or family, both in the direct and col- lateral lines. In various chapters and military orders, it is required that the candidates produce their genealogy, to show that they are noble by so many descents. The genealogical degrees are usually represented in circles, ranged over, under, and aside of each other.

The ancients had similar tables, which they called stemmata, from a Greek word, signifying a crown, or garland. See Consanguinity.

The Jews were anxious to preserve their gene- alogies entire and uninterrupted; and this care on their part affords an argument of considerable importance with respect to the accomplishment of those propliecies that pertain to the Messiah.

. nuegrai.

A.'LOGY, n. s. ˆ Gr. ytvea and \oyoi:. log'ical, adj. > That which pertains to l'ogist, n. s. 3 descents or families.

Accordingly, in tlieir sacred writings, we find genealogies carried on for above 3500 years. It is observed (Ezra ii. 62) that such priests as

could not produce an exact genealogy of their families were not permitted to exercise their functions. Josephiis says that they had, in his nation, an uninterrupted succession of priests for 2000 years ; that the priests were particularly careful to preserve their genealogies, not only in Judaea, but also in Babylonia and Egypt ; and that, wherever they were, they never married below themselves, and had exact genealogical tables prepared from those authentic documents which were kept at Jerusalem, and to wliich they had recourse ; and that, in all their wars, perse- cutions, and calamities, they always were dili- gent in securing those documents, and in renewing tliem from time to time. Jerome says (ad Tit. iii.) that the Jews know so perfectly the genealogies, that they can repeat all the names from Abraham to Zerubbabel, as easily as their own. Nevertheless, smce the war of the Romans against the Jews, about thirty years after the death of our Saviour, and since their entire dis- persion in the reign of Adrian, the Jews have lost their ancient genealogies ; and perhaps there is not even one of the sacerdotal race who can produce authentic proofs of his genealogy. This circumstance has been alleged by Christian wri- ters as a presumptive proof of the actual advent of the Messiah, whose genealogy, corresponding to ancient predictions, the Jews are no longer able to trace, and consequently of the truth of Christianity.

The most natural order of genealogical tables seems to be to place the common stock at the head of th* table, and the several collateral de- scents and succeeding generations, each in a lower line appropriated to it; and not to make the order of generations to proceed from the left hand to the riglit, as is done by some. But every distinct generation should by all means be placed in a line, or space appropriated to itself; otherwise our ideas will be greatly confused. The order of birth in the same generation may easily be observed (as is done in some of our best tables) by placing the first-born to the left hand in the table, and the rest, according to the order of birth, to the right.

There is a variety of other relations, besides mere natural descent, of which it is very useful to have a clear idea, as the connexion by mar- riage, by adoption among the Romans, &c., by which different families are intermixed. And it is possible, by different kinds of lines, joining the names so connected, how remote soever, in the table of generation, to express all those relations without the use of words. But as the attempt to express them all by characters dis- figures the table with a great variety of lines, many of them of considerable length, and ex- tending themselves in every direction, it seems most convenient to express natural descent only by characters, and to subjoin to each name an account, in words, of all its other connexions, referring at most from one to another, by marks contrived for that purpose. This

method Rapin bas “taken in the excellent genealogical tables m his History of England. Valuable tables of

genealogy may be seen at the end of Petavius’s Chronology.

GENERABLE, arf/. Lzt. genero. That which may be produced.

“^ Fr. general; Latin generalis. Here the root or origin and simple meaning of the word general is a whole as opposed to particulars ; and under

GEN’ERAL, adj.

GeNERAL’iTY, 71. s.

Gen’erally, adv.

Gen’eRALNESS, 71. s

Gen’eralty, n.s.

Gen’eRAL, 71. s. GeNERALISS’iMO, 71. s.^

a great variety of modifications it preserves this meaning throughout ; thus it is applied to things ; when to persons, as general and generalissimo, it is an official term of honor given to those who have supreme command over one or more armies.

Flaterie is generally wrongful preising.

Chaucer. The Personcs Tale.

Because the curiosity of man’s wit doth with peril wade further in the search of things than were conve- nient, the same is thereby restrained unto such gene- ralities as, every where offering themselves, are appa- rent to men of the weakest conceit. Hooker.

They, because some have been admitted without trial, made that fault general which is particular.

Whitgift. I’ve been bold. For that I knew it the most general way.

Shakspeare.

Neither my place, nor aught I heard of business, Hath raised me from my bed ; nor doth the general

care Take hold on me ; for my particular grief Ingluts and swallows other sorrows. Id.

I am not a woman to be touched with so many giddy fancies as he hath generally taxed their whole sex withal. Id.

Nor would we deign him burial of his men.

Till he disbursed at St. Colmeskill Isle

Ten thousand dollars to our general use. Id.

Necessity, not extending to the generalitri, but resting upon private heads. Raleigh's Essays.

Generally we would not have those that read this work of Sylva Sylvarum, account it strange that we have set down particulars untried. Bacon.

Symachus the orator in his daycs, to procure a generall toleration, used this argument, ' Because God is immense and infinite, and his nature cannot be per- fectly known, it is convenient he should be as diversely worshipped, as every man shall perceive or under- stand. Burton's Anatomy of Melancholy.

In like sort amongst Papists, fasting at first was generally proposed as a good thing. Id.

Commission of

Nor failed they to express how much they praised That for the general safety he despised His own. Milton's Paradise Lost

The wall of Paradise upsprung.

Which to our general sire gave prospect large

Into his nether empire neighb'ring round. Milton.

The municipal laws of this kingdom arc of a vast extent, and include in their generally all those several laws which are allowed as the rule of justice and ju- dicial proceedings. Hale.

Yet they by restless toil became at length So proud and confident of their made strength. That they with joy their boasting general heard Wish tlicn for that assault ho lately feared. Marvell.

Pompcy had deserved the name of great ; and Alexander, of the same cognomination, was general- iuinto of Greece. Browne.

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They had with a general consent, rather springing by the generalness of the cause than of any artificial practice, set themselves in arms. Sidney.

A general is one that hath power to command an army. Locke.

In particulars our knowledge begins and so spreads itself by degrees to generals. ”’•

A general idea is an idea in the mind, considered there as separated from time ami place, and so capa- ble to represent any particular being that is conforma- ble to it. ■^”• The generals on the enemy’s side are inferior to several that once commanded the French armies.

Addison on the War. The war’s whole art each private soldier knows. And with a general’s Inve of conquest glows. •

Addison. I have considered Milton’s Paradise Lost in the fable, the characters, the sentiments, and the lan- guage ; and have shewn that he excels, in general, under each of these heads. Id.

The generality of the English have such a favou- rable opinion of treason, nothing can cure them.

Id. They publish their ill-natured discoveries with a secret pride, and applaud themselves for the singularity of their judgment, which has found a flaw in what the generality of mankind admires. Id.

Though what he learns he speaks, and may advance Some general maxims, or be right by chance. Fupe.

Generally speaking, they have been gaining ever since, though with frequent interruptions. Swift.

To conclude from particulars to generals is a false way of arguing. Broome.

Where the author speaks more strictly and particu- larly on any theme, it will explain the more loose and general expressions. Watts.

The knights oppressed with wounds and travel past. Did soon retire, and now were near to fainting : With that a winged post him speeded fast The general with these heavy news acquainting : He soon refreshed their hearts that ‘gan to tire. But, let our weary muse awhile respire : Shade we our scorched heads from Phoebus’ parching fire. Fletcher’s Purple Island.

I mean only to say that ladicrous writing in general s extremely subject to the injuries of time : and that .herefore the wit and humour of the ancient Greeks and Romans might have been far more exquisite than we at present have any positive reason to believe.

Beattie. Why general, if he hath no greater fault In war than love, he had belter lead the assault.

Byron. The second object was to profit by

The moment of the general consternation. To attack the Turk’s flotilla which lay nigh

Extremely tranquil anchored at its station. Id.

General, in military affairs, is an officer in chief, to whom the prince or senate of a country have judged proper to intrust the command of their troops.. He holds this important trust under various titles : as captain-general in Eng- land and Spain; feldt-mareschal in Germany; or mareschal in France. In the British service the king is in his own proper right captain-general. He has ten aides-de-camp ; every one of whom enjoys the brevet rank of full colonel in the army. Next to his majesty is the commander in chief. But the more general use of the word is •with regard to the commander of an army in actual service in the field. The office of a gene- ral is to regulate the march and encampment of

the army ; in the day of battle to choose out the most advantageous ground ; to make the dispo- sition of the army ; to post the artillery, and, where there is occasion, to send his orders by his aides-de-camp. At a siege he is to cause the place to be invested, to regulate the approaches and attacks, to visit the works, and to send out detachments to secure the convoy and foraging parties. In the day of battle, the station of a general is with the reserve, where he remains so situated, that he can see every thing which is going forward ; and by means of his own obser- vations, or the communications of his

aides-de- camp, he is enabled to send reinforcements, as the exigencies of the conflict may require. For Lieutenant-general, Major-general, Brio A- dier-general, &c., see their respective articles.

General, Adjutant, in the art of war, one who attends the general, assists in councils, and carries the general's orders to the army. He distributes the daily orders to the majors of bri- gade. He is likewise charged with the general detail of the duty of the army. The majors of brigade send every morning to the adjutant- general an exact return, by battalion and com- pany, of the men of his brigade. In a day of battle he sees the infantry drawn up ; after which he places himself by the general, to receive any orders which may regard the corps of which he has the detail. In a siege he orders the number of workmen demanded, and signs the warrant for their payment. He receives the guards of the trenches at their rendezvous, and examines their condition ; he gives and signs all orders for par- ties. He has an orderly serjeant from each brigade of infantry in the line, to carry such orders as he may have occasion to send from the general.

General is also used for the chief of an order of monks ; or of all the houses and congregations established under the same rule ; as, the general of the Franciscans, Cistertians, &c.

General is also used for a particular march, or beat of drum ; being the first which gives notice, commonly in the morning early, for the infantry to be in readiness to march.

General Terms, among logicians, those which are made the signs of general ideas. See Logic and Metaphysics.

Generalissimo is called also captain-general, and simply general. He commands all the mili- tary powers of a nation ; gives orders to all the other general officers, and receives no orders himself but from the king. M. Balzac observes, that cardinal Richelieu first coined this word, of his own absolute authority, upon his going to command tlie French army in Italy.

GEN'ERANT, n. s.-^ Lat. genero. To cause ;

Gen'erate, v. a. \ produce ; beget or give

Genera'tion, n. s.)>life : the act of produc-

Gen'erative, arf;. | tion : progeny; family;

Gen'erator, n. s. J an age or period : the faculty of propagation or

fruitfulness. In all these and similar meanings the radix is increase. Tlie power or being by whose agency this is ef- fected.

Great father he oi gemrutior\

Is rightly cald, the author of life and light :

And bis faire sister for creation

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M inistreth matter fit, which tempred right With heate and humour, breedes the living wight. Spgnser. Faerie Qucene. Every where throughout all generations and ages of the Christian world, no church ever perceived the word of God to be against it. Hooker.

Y' are a dog.

Thy mother's of my generation : what's she, if

I be a dog ? Shakspeare, Timon.

The barb'rous Scythian, Or he that makes his generation messes. To gorge his appetite, shall to my bosom Be as well neighboured. Id. King Lear.

A marvellous number were excited to the conquest of Palestine, which with singular virtue they per- formed, and held that kingdom some few generations. Raleigh's History. He gave to all, that have life, a power generative, thereby to continue their species and kinds. Id.

Sounds are generated where there is no air at all.

Bacon. Seals make excellent impressions; and so it may be thought of sounds in their hrat generation : but then the dilatation of them, without any new sealing; shews they cannot be impressions. Id.

Those creatures which being wild generate seldom, being tame, generate often. Id.

The last of these vegetal faculties is generation, which begets another by means of seed, like unto itself, to the perpetual preservation of the species.

Burton. Anatomy of Melancholy. Had I the power of creation As I have oi generation Where I the matter must obey. And cannot work plate out of clay. My creatures should be all like thee, Tis thou should'st their idea be. Cowley,

God created the great whales, and each Soul living, each that crept, which plenteously The waters generated by their kinds. Milton.

He longer will delay, to hear thee tell His

Or find some other way to generate Mankind. Id. Paradise Lost.

Some believe the soul made by God, some by angels, and some by the generant ; whether it be im- meciately created or traduced hath been the great ball of contention. Glanville's Scepsis.

Imagination assimilates the idea of the generator into the reality in the thing engendered. Browne.

In grains and kernels the greatest part is but the nutriment of that generative particle, so dispropor- tionable unto it. Id.

If we deduce the several races of mankind in the several parts of the world from generation, we must imagine the first numbers of them, who in any place agree upon any civil constitutions, to iissemble as so many heads of families whom they represent.

Temple. Whatever generates a quantity of good chyle, must likewise generate milk. Arbjithtwt.

If there hath been such a gradual diminution of the generative faculty upon the earth, why was not there the like decay in the production of vegetables ?

"Bentley. And if one lady's slip could leave a crime on All generations, I should like .o know What pedigree the best would have to show?

Byron. AtxA when his bones are dust, his grave a blank. His station, generation, even his nation.

Become a thing, or nothing, save to rank In cbroQulogical commemoration.

Some dull MS. oblivion long has sank. One gravenstone found in a barrack's station

In digging the foundation of a closet

May turn his name up as a rare deposit.

Id. Don Juan.

To Generate, in music, is used to signify the operation of that mechanical power in nature, which every sound has in producing one or more different sounds. Thus any given sound, however simple, psoduces, along with itself, its octave, and two other sounds extremely sharp, viz. its twelfth above, that is to say, the octave of its fifth ; and the other the seventh above, or, in other words, the double octave of its third major. Whether we suppose this procreation of sounds to result from an aptitude in the texture and mag- nitude of certain particles in the air, for convey- ing to our ears vibrations that bear those pro- portions one to another, as being determined at once by the partial and total' oscillations of any musical string; or from whatever economy of nature we choose to trace it; the power of one sound thus to produce another, when in action, is said to generate. The same word is applied, by signior Tartini, and his followers, to any two sounds which, simultaneously heard, produce a third.

GENERATED, or Genited, part. adj. is used, by some mathematical writers, for what- ever is produced, either in arithmetic, by the multiplication, division, or exlractioH of roote ; or, in geometry, by the invention of the contents, areas, and sides ; or of extreme and mean pro- portionals, without arithmetical addition and subtraction.

GENERATING Line, or Figure, in geo- metry, is that which, by its motion of revolution, produces any other figure, plane or solid. See Genesis.

Generation is also used, though somewhat improperly, for genealogy, or the series of children issued from the same stock. Thus the gospel of St. ˆlatthew commences with the book of the generation of Jesus Christ, Sec. The lat- ter and more accurate translators, instead of ge- neration use the word genealogy.

Generation, in mathematics, is used for the formation or production of any geometrical fi- gure; as of equations, curves, solids, &c.

Generation, in physiology. See Anatomy.

Generation of Fishes. See Icuthyolooy, and Zootomy. ,

Generation of Insects. See ENTOMOKOGt and Zootomy.

Generation of Plants. See Botaky.

Generator, in music, signifies the principal sound or sounds by which others are produced. Thus the lowest C for the treble of the harpsichord, besides its octave, will strike an attentive ear with its twelfth above, or G in alt, and with its seventeenth above, or E in alt. The C, therefore, is called their generator, the G and E its products or harmonics. But in the approxi- mation of chords, for G, its octave below is sub- stituted, which constitutes a fifth from the gene- rator, or lowest C ; and for E, is likewise substi- tuted its fifteenth below, which, with the above mentioned C, forms a third major. To tlie low- est notes, therefore, exchanged for these in alt by

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substitution, the denominations of products or harmonics are likewise given, whilst the C re- tains the name of their generator. But-still, ac- cording to the system of Tartini, two notes in concord, which when sounded produce a third, may be termed the concurring generators of that third.

GENER'ICAL, ac//.-> Fv. generique ; Lat.

Gener'ic, arf;. >genus. That which

Gener'ically, adv. 3 comprehends the genus .without reference to the species.

The word consumption being applicable to a proper, and improper to a true and 'bastard consumption, re- quires a generical description quadrate to both.

Harvey on Consumptions.

These have all the essential characters of sea-shells, and shew that they are of the very same specifick gra- vity with those to which they are so generically allied.

Woodward.

Though wine differs from other liquids, in that it is the juice of a certain fruit ; yet this is but a general or generick difference ; for it does not distinguish wine from cyder or perry ; the specifick difference of wine, therefore, is its pressure from the grape.

Watts's Logich.

Generical Name, in natural history, the word used to signify all the

species of natural bodies, which agree in certain essential and peculiar characters, and therefore comprehending all of the same genus, family or kind ; so that the word used as the generical name equally ex- presses every one of the genus, and other words expressive of the peculiar qualities or figures of each species are added, in order to denote them distinctly, and make up what is called the spe- cific name. See Botany and Zoology.

GEN'EROUS, arfj. \ Yx. generositc ; 'Lax. Generos'ity, n. s. tgenerositas. The dis Gen'erously, «rfu. ˆposition or act of li- Gen'erousness, n. s. J berality and magnani- mity ; courage and strength in animals ; nobility of birth, mind, or heart ; and the exercise of these several qualities.

Lo here Semiramis, the Quene of grete Babilon, The moste generous gem and the flourc of lovily favor ; AVhose excellent power from Mede unto Septentrion, Florished in her regally, as a mightie conqueror.

Chaucer. The Nine Ladies Worthie. A cup of generous wine to those whose minds are Btill or motionless, is, in my opinion, excellent pliysic.

Burton. So the imperial eagle does not stay Till the whole carcase he flevour. As if his generous hunger understood That he can never want plenty of food. He only sucks the tasteful blood. Cowley.

Having in a digestive furnace drawn off the ardent spirit from some good sack, the phlegm, even in this generovs wine, was copious. Boyle.

A generous virtue of a vigorous kind. Pure in the last recesses of the mind. Dryden.

When all the gods our ruin have foretold. Yet generously he does his arms withhold. Id. It would not have been your generosity, to have passed by such a fault as this. Locke.

Can he be better principled in the grounds of true virtue and generosity than his young tutor is ? Id. on Education. When from his vest the young companion bore The cup the generous landlord owned before. And paid profusely with the precious bowl Tlie stinted kindness of this churlish soul. Parnell.

Actson spies

His opening hounds, and now he hears their cries {

A generous pack. Addison.

Is it possible to conceive that the overflowing gene- rotisness of the divine nature would create immorta beings with mean or envious principles ?

Collier on KindneiS.

The generous critick fanned the poet's fire. And taught the world with reason to admire. Pope.

She speaks, behaves, and acts, just as she ought. But never, never reached one generous thought. Id. That generous boldness to defend An innocent or absent friend. Swift.

Those who in southern climes complain.

From Phoebus' rays they suffer pain.

Must own that pain is well repaid.

By generous wines beneath a shade. Id.

Generosity, the name of an order of knighthood, established in 1685, by Frede- rick III., when elector of Brandenburg. The badge was a gold cross of eight points enamelled azure, bearing in the centre La Generosity, and pendent to a blue riband.

GENESEE, a level county of the state of New York, North America, erected in 1802 from Ontario county, and situated between 42° 30′ and 43° 22′ N. lat. It is bounded by that county on the east, Lake Ontario on the north, Allegany county, and a small angle of Cataraugus county, on the south, and on the west by Niagara county. Its area is reckoned at 1743 square miles. It is generally fertile and has but little of waste. The alluvial flats on the shores of the river are distinguished for their su- perior richness. The chief town is Batavia.

Genesee, a river of the United States, which rises in Pennsylvania, and runs through the western part of the state of New York into Lake Ontario, between Gates and Boyle. At its en- trance is a harbour of this name. Within five miles of its mouth are falls of seventy-five and ninety-six feet in height, from which the river is navigable for boats

seventy miles, when other falls occur from sixty to ninety feet in height, one mile apart, south of Leicester.

GENESIS, n. s. Gr. ytvtaiQ. The first book of Moses, so called because it treats of the origin of all things.

Genesis, the first book of the Old Testament, contains the history of the creation, and the lives of the first patriarchs. This book stands at the head of the Pentateuch. Its author is held to be Moses : it contains the relation of 2369 years, viz. from the beginning of the world to the death of Joseph. The Hebrews called it Bere- schith, nˆîˆfXID, in the beginning, because be- ginning with that v/ord. The Greeks gave it the name rtpttrig, q. d. production or generation, because it begins with the history of the produc- tion, or generation, of all beings. This book, besides the history of the creation, contains an account of the original innocence and fall of man ; the propagation of mankind ; the general defection and corruption of the world ; the de- luge ; the restoration of the world ; the division and peopling of the earth ; and the history of the first patriarchs to the death of Joseph. The human means by which Moses might obtain information on the subject' of the fall, &c., are worthy of more notice than a superficial reader would observe, for the account of so

.nany years had to travel through but few hands; for from Adam to Noah there was one man, viz. Methuselah, who lived so long as to see them both : in like manner Shem conversed with Noah and Abraham; Isaac with Abraham and Joseph, from whom the facts recorded in this book, might easily be conveyed to Moses by Am- ram, who was contemporary with Joseph.

Genesis, in geometry, denotes the formation of a line, plain, or solid, by the motion or flux of a point, line or surface. See Fluxions. The genesis or formation, e. g. of a globe or sphere, is conceived by supposing a semicircle to re- volve upon a right line, drawn from one extreme thereof to the other, called its axis, or axis of circumvolution : the motion or revolution of that semicircle is the genesis of the sphere, &;c. In the genesis of figures, &c., the line or surface that moves is called the describent ; and the line round which, or according to which, the revolu- tion or motion is made, the dirigent.

GE'NET, 71. s. Fr. The word originally signified a horseman, and

perhaps a gentleman or knight. A small-sized, well-proportioned, Spanish horse.

You'll have }our nephews neigh to you; you'll have coursers for cousins, and genets for germanes. Shakspeare. Othello.

He shews his statue too, where placed on high. The genet underneath him seems to fly. Dryden.

It is no more likely that frogs should be engendered in the clouds, than Spanish genets be begotten by the wind. -Ka?/.

GENETHLrACAL,c(f;. "> Gr.y£i«6)X.j. What- Geneth'liacs, 7t.s. Sever refers to cal-

Genethliat'ic, 7J. s. .J culating nativities from the stars which were predominant at birth. The night immediately before he was slighting the art of those foolish astrologers, and genetldiacal ephe- merists, that used to pry into the horoscope of nati- vities. Howel's Vocal Forest.

The truth of astrological predictions is not to be referred to the constellations ; the genethliaticks con- jecture by the disposition, temper, and complexion of the person. Vrummond.

GENETHLIACI, in astrology, from ytvteXtj, origin, generation, or nativity, persons who erect horoscopes, and pretend to foretell what shall befall a man by means of the stars which pre- sided at his nativity. The ancients called them chahlx'i, and mathematici. Hence the several civil and canon laws, made against mathema- ticians, only respect the genethliaci, or astro- logers. They were ordered to be expelled Rome by a formal decree of the senate ; and yet found so much protection from the credulity of the people, that they remained therein unmolested. Hence an ancient author speaks of them as ho- minum genus, quod in civitate nostra semper et vetabitiir ot retinebitur.

GENESIUS (Josephus), one of the Byzan- tine historians of the tenth century. He flourished about the year 940, and wrote, by order of Con- sfantine Porphyrogenitus, a history of Constan- tinople, in four books : it extends from Leo the Armenian, to Basilius the Macedonian. It was imperfectly printed in 1733 at Venice, by Pas- quali, in his edition of tlie Byzantine historians.

GENE'VˆA, 71. s. A corrlˆption cf French gencvre ; ll. iˆinrpro ; 'LtiI. junipcrus, a juniper- berry; a spirit distilled from the jumper-berry.

The best geneva we now have, is made from an ordinary spirit, distilled a second time with an addi- tion of some juniper-berries ; but the original liquor of this kind was prepared in a very different manner.

Dr. A. Reel.

Geneva, a city, and the capital of a canton of Switzerland, is situated on the western shore of the lake of tiiat name, on the confines of France and Savoy. The Rhone has here its efflux from the lake and divides Geneva into three parts, the city, the town or quarter of St. Gervais, and the island.

Its situation and surrounding scenery (among which Mont Blanc rises pre-eminent), with its po- litical history, and literary fame, render Geneva one of the most interesting cities in Europe. The lofty houses towering above the walls, and en- closed by the verdure of the glacis, give to the distant prospect the appearance of an assem- blage of country seats, encompassed with gar- dens and lawns. On entering the city, however, the streets are found not regular, and the princi- pal one is encumbered with a row of shops ou each side, between the road and a sheltered foot- path. But the upper town contains many elegant houses. The public buildings of note are the college, the cathedral, the hotel de ville, the public library, the theatre, the hospital, and the arsenal. The library was founded at the Refor- mation, and contains about 50,000 volumes. The hospital, which is very extensive, was for- merly a monastery. The town-house is chiefly remarkable foi the manner of ascending to its upper floors, which is by an inclined plane, in- stead of a staircase. The city is supplied with water from the Rhone, by a machine which raises it to the height of 100 feet.

The Genevese, partaking early of the benefits of the Reformation, exhibit, very similarly to our Scottish neighbours, the advantages of universal education and industry. The morals of tlie lowest orders are in general exemplary, and the traveller is not here shocked by those objects of distress which infest almost every other conti- nental city. Wages are on the whole high ; and when a family is really unable to support itself by its. own labor, it receives relief from various well directed funds. On the other hand, the ex- cess of luxury is discouraged by sumptuary laws, and it is only since 1764 that the city has con- tained a theatre. Watch-making is the staple manufacture, and it is said to employ 7000 per- sons ; manufactures of silk, woollen, muslin, chintz, and porcelain are also carried on; as well as the making of mathematical, surgical, and other instruments, jewellery, toys, &c. The richer citizens are merchants of extensive agency, and

conduct money operations in all the public funds of Europe.

Literary societies abound among the citizens, and a. decided taste for reading is prevalent in both sexes. Several private individuals possess good collections of natural history. The prin- cipal are those of De Luc, Boissier, and Saus- sure, the son of the traveller of that name : they arc shown to strangers with great readiness. Be- sides the public library, there is a botanical garden, a museum of paintings, a public school, and a university. The school is conducted by eleven masters, and the university by twenty-two

professors ; the number of students at the latter amounting generally to 1000.

The Physical and Natural History Society of Geneva was founded in 1790, by a number of those distinguished ind ividuals who devoted them- selves to the pursuits of science. The principal papers read at their meetings found a place in the Philosophical Transactions, in the Memoirs of the Institute, or in those of the Academies of Berlin and Turin ; while those which were of a iess elaborate nature were transmitted to the popular scientific journals of the day. In con- sequence, however, of the deliverance of Geneva from a foreign yoke, all the public institutions received a vigorous impulse ; and the Physical Society, strengthened with an accession of mem- bers, as well as of zeal, has of late found itself in a situation to print its own Memoirs.

Calvin and Casaubon distinguished Geneva by their residence ; it also ranks among its illustri- ous men Rousseau, Trouchin, Bonnet, Saussure, Mallet de Pan, Necker, Berenger, Picot, Pictet, Boissier, and Sismondi. In the delightful envi- rons of this city are Ferney, once the residence of Voltaire ; and Copet, the retreat of M. Necker, and of his accomplished daughter the baroness de Stael.

In the time of Charlemagne the city and ter- ritory of Geneva made part of his empire ; and, under his successors, they became subject to the German emperors. By reason of the imbecility of these princes, however, tlie bishops of Geneva acquired such authority over the inhabitants, that the emperor had no other means of counter- balancing it than by augmenting the privileges of the people. In those barbarous ages also the bishops and counts had constant disputes, of

which the people took the advantage ; and by combining sometimes with one, and sometimes M'ith the other, they obtained an extension of their privileges from both. The house of Savoy at length purchased the territory, and succeeded the counts with additional power. Tlie bishops and people, therefore, united to resist their en- croachments : and, during this period, the go- vernment was strangely complicated, by the various pretensions of the three parties. The counts of Savoy, however, had at last the address to dissolve the union between the bishops and citizens, by procuring the episcopal see for their brothers, and illegitimate children ; by which means their power became gradually so exten- sive, that towards the commencement of the sixteenth century, Charles III. of Savoy, though the government was accounted republican, obtained an almost absolute authority over the people, and exercised it in a most unjust and arbitrary man- ner. Thus violent commotions took place; and the citizens became divided into two parties, one of which, viz. the patriots, were styled Eidgenos- sen, or confederates; the partisans of Savoy being disgraced by the appellation of Mamme- lucs, or slaves. The true period of Genevan liberty may therefore be considered as commenc- ing with the treaty concluded with Berne and Fribourg in 1526; in consequence of which the duke was soon deprived of his authority, the bishop driven from the city, and the reformed •■eligion and a republican form of government

introduced. A long war commenced with Savoy on this account ; but the Genevans proved supe- rior to their enemies, partly by their own bravery and partly by the assistance of the inhabitants of Berne.

In 1584 the republic concluded a treaty with Zurich and Berne, by which it became allied to the Swiss cantons. The house of Savoy made their last attempt against Geneva in 1602, when tlie city was treacherously attacked in the night time during a profound peace ; 200 soldiers had scaled the walls, and got into the town before any alarm was given ; but they were repulsed by the desperate valor of a few citizens, who perished in the encoun- ter. A petard had been fastened to one of the gates by the Savoyards ; but the gunner was killed before it could be discharged. The war occa- sioned by this treachery was next year concluded by a solemn treaty, wliich has ever since been observed on both sides; though the independence of Geneva was never formally acknowledcred by the king of Sardinia till 1754. The restoration of tranquillity from without, in consequence of the above treaty, was, however, soon followed by the flames of internal discord, so common in popular governments ; so that, during the whole of the seventeenth century, the history of Geneva affords little more than an account of the strug- gles betwixt the aristocratical

and popular parties. About the beginning of the eighteenth century the power of the grand council was become almost absolute ; but, to restrain its authority, an edict was procured in 1707 by the popular party, enacting that every five years a general council of the citizens and burghers should be summoned to deliberate upon the affairs of the republic. In consequence of this law, a general assembly was convened in 1712; and the very first act of that assembly was to abolish the edict by which they had been convened. A proceeding so extraor- dinary can scarcely be accounted for on the principles of popular fickleness and inconstancy. Rousseau, in his Miscellaneous Works, ascribes it to the artifices of the magistrates, and the equivocal terms marked on the billets then in use. For the question being put, * Whether the opinion of the council for abolishing the periodi- cal assemblies should pass into a law?' the words approbation or rejection, put upon the billets by which the votes were given, might be interpreted either way. Thus, if the billet was chosen on which the word approbation was written, the opinion of the councils which rejected the assem- blies was approved ; and by the word rejection, the periodical assembly was rejected of course. Hence several of the citizens complained that they had been deceived, and that they never meant to reject the general assembly ; but only the opinion of the councils.

In consequence of the abolition of the general assemblies, the power of the aristocratical party was greatly augmented, till at length the inhabi- tants, exerting themselves with uncommon spiric and perseverance, found means to limit the power of the magistrates, and enlarge their own rights. In 1776, as Mr. Coxe informs us, the govern- ment might be considered as a mean betwixt that of the aristocratical and popular cantons of Swit- -ˆerland. The members of the senate, or little

council of twenty-five, enjoyed in that capacity several very considerable prerogatives. By them half the members of the great council were named ; the principal magistrates were supplied from their own body ; they convoked the great and general councils, deliberating previously upon every question which was to be brought before these councils. They were vested also with the chief executive power, the administration of finances, and had, in a certain degree, the jurisdiction in civil and criminal causes. Most of the smaller posts were likewise filled by them, and they enjoyed the sole privilege of conferring the burghership. These, and other prerogatives, however, were balanced by those of the great council, and the privileges of the general council. The former had a right to choose the members of the senate from their own body ; receiving appeals in all causes above a certain value, pardoning criminals, &c., besides which they had the impor- tant privilege of approving or rejecting whatever was proposed by the senate to be laid before the people. The general council, or assembly of the people, was composed of the citizens and burghers of the town, their number, in general, amounting to 1500, though usually not more than 1200 were present; the remainder residing in foreign coun- tries, or being otherwise absent. They met twice a year, chose the principal magistrates, approved or rejected the laws and regulations proposed by the other councils, imposed taxes, contracted alliances, declared war or peace, and nominated half the members of the great council, &c. But the principal check to the power of the senate arose from the right of re-election, or the power of annually expelling four members from the senate at the nomination of the syndics or prin- cipal magistrates, and from the right of represen- ition. The syndics were four in number, chosen annually from the senate by the general council ; and three years elapsed before the same membei-s could be again appointed. In choosing these mag) trates, the senate appointed from its own body eight candidates, from

whom the four syndics were to be chosen by the general coun- cil. The latter, however, had it in their power to reject not only the first eight candidates, but also the whole body of senators in succession ; in which case four members of the senate retired into the great council, and their places were filled by an equal number from that coun- cil. As to the power of representation, every citizen had the privilege of applying to the senate to procure a new regulation in this respect, or of remonstrating against any act of the magis- tracy. To these remonstrances the magistrates were obliged to give an explicit answer; for if a satisfactory answer was not given to one, a second was immediately presented. The repre- sentation was made by a greater or smaller num- ber of citizens, according to the importance of the point in question. Since 1776, however, several changes have taken place. This right of re-election, which the aristocratical party were obliged to yield to the people in 1768, soon proved very disagreeable, being considered by the former as a kind of ostracism ; for which reason they ciught at every opportunity of pro- curing its abolition. They were now distin-

guished by the title of negatives, while the popu- lar party had that of representants ; and the point in dispute was the compilation of a new code of laws. This measure the negatives opposed, as supposing that it would tend to reduce their prerogatives ; while, on the other hand, the representants used their utmost endeavours to promote it, in hopes of having their privileges augmented by such means. At last, in January 1777, the negatives were obliged to comply with the demands of their antagonists ; and a com- mittee for forming a new code of laws was ap- pointed by the concurrence of the little, great, and general councils. The committee was to last for two years, and the code to be laid before the three councils, for their joint approbation or rejection. A sketch of the first part of the code was presented to the little and great councils on Sept. 1st, 1779, that they might profit by their observations before it was presented to the gene- ral council. Great disputes arose : and at length it was carried by the negatives that the code should be rejected, and the committee dissolved. The opposite party complained of this as uncon- stitutional, and violent disputes ensued ; the issue of which was, that the great council offered to compile the code, and submit it to the decision of the public. This did not give satisfaction to the popular party, who considered it as insidious : the contentions revived with piore fury than ever, until at length the negatives supposing, or pretending to suppose, that their country was in danger, applied to the guarantees France, Zurich, and Berae, intreating them to protect the laws and constitution. Tiiis was productive of no good effect ; so that the negatives found no other

method of gaining their point than by sowing dissention among the different classes of inhabi- tants. The natives were discontented and jealous on account of many exclusive privileges enjoyed by that class named citizens : they were besides exasperated against them for having, in 1770, banished eight of the principal natives, who pretended that the risht of burghership belonged to the natives as well as to the citizens, and demanded that this right should be gratui- tously conferred instead of being purchased. The negatives, in hopes of making such a con- siderable addition to their party, courted the natives, by all the methods they could think of, promising, by a public declaration, that they were ready to confer upon them those privileges of trade and commerce which had hitherto been confined exclusively to the citizens. The designs of the negatives were likewise openly favored by the court of France, and despatches were even written to the French resident at Geneva, to be communicated to the principal natives who sided with the aristocratic party. The attorney-general, conceiving this mode of interference to be highly unconstitutional, presented a spirited remon- strance ; by which the French court were so much displeased, that they procured his deposition from his office ; and thus their party was very con- siderably increased among the natives. The representants endeavoured to conciliate the favor of the same party, and even promised what they had hitherto opposed in the strongest manner, viz. to facilitate the acquisition of the burghe<—

ship, ana to bestow it as the recompense of in- dustry and good behaviour. Thus two parties were formed among the natives themselves ; and the dissensions becoming every day worse and worse, a general insurrection took place on the 5th of February 1781.

Tlie representants seized the avenues of the city, and though they aoreed to an augmentation of the commercial privileges of the natives, they absolutely refused to fulfil their promise of award- ing the burghership to them. Alarmed, how- ever, at the number and threats of the natives, and prevailed upon by the deputies from Zurich and Berne, who had been sent to conciliate the differences, they laid down their arms ; and this ■was no sooner done, than the same deputies declared the edict in favor of the natives to be null and illegal. The senate declared themselves of the same opinion ; and maintained, that the assent of the councils had been obtained only through fear of the representants who were under arms, and whom none at that time durst oppose. The representants, exasperated by this treacherous

proceeding, presented another re- monstrance on the 18th March, 1782, summon- ing the magistrates once more to confirm the edict ; but a month afterwards, received the laconic answer, that' the government was neither willing nor able to confirm it.' At last, how- ever, but not until a universal tumult had ensued, and the body of the citizens had deposed several members of both councils, the great council ex- ecuted the edict for conferring the burghership upon a number of the natives ; and appointed a committee of safety, composed of eleven mem- bers, with considerable authority.

The conciliation of the opposite party was now clearly the course of safety ; for the French and Sardinians had both advanced towards the city to support its pretensions. But the French general, .laucourt, proposed such humiliating terms to those in power, that it was unanimously determined to resist his entrance. The fortifica- tions were strengthened ; at the hour in which it was expected that an attack would begin, the ramparts were filled with defenders ; and though the most zealous of the popular party had cal- culated only on 3000, upwards of 5000 ap- peared in the public cause. The French general, however, justly alarmed for the prison- ers, who were now in imminent danger, again prolonged the period proposed for the capitula- tion. By these repeated delays, the ardor of the defendants began to abate. At last the com- mittee of safety themselves, who had so stre- nuously declared for hostilities, entirely changed their mind. A new council, composed of about 100 citizens, was formed ; in which the chiefs of the popular party, by various manoeuvres, first intimidating, and then endeavouring to persuade the members, of the necessity of surrendering, found means, first to take the thoughts of the people entu-ely off from the defence of the city, and then to engage them in a scheme of general emigration. A declaration was now drawn up to be delivered to the syndics with the keys of the city ; the chiefs summoned the principal officers from their posts, ordered the cannon of several batteries to be rendered unfit for service,

and at last took care of themselve-s by quitting the town, followed by large bodies of the people; so that when the Sardinians entered it in the morning, they found it almost deserted. This was followed by the restoration of the former magistrates, a complete subjection of the popu- lar party, a"nd the establishment of a military government.

The changes which took place on tnis occa- sion, were: 1. An abolition of the right of re- election. 2. The abolition of that right by which the general council nominated half the vacancies in the great council. 3. The right of remonstrating was taken from the citizens at large, and vested in thirty-six adjuncts, who might be present in the great council

the first Monday of every month. 4. The introduction of the grabeau, or annual confirmation of the members of the senate and of the great council, vested entirely in the latter. By this law, pan of the authority both of the senate and general council was transferred to the great council; and, by subjecting the senate to this annual revision, its power was greatly lessened, and it was made, in fact, dependent upon the general council. 5. The circles or clubs in which it was customary to convene the citizens, and all public assemblies whatever, were prohibited : and so rigorously was this carried into execution, that even the Society of Arts was forbidden to meet. 6. The militia were abolished ; firing at marks, even with bows and arrows, was prohibited, and the town, instead of being guarded by its own citizens, was now put under the care of 1000 foreign soldiers, whose colonel and major were both to be foreigners. These troops were to take an oath of fidelity to the republic, and of obedience to the great council and the com- mittee of war ; but were under the immediate command and inspection of the latter, and subject to the superior control of the former. 7. No person was permitted to bear arms, whether citizen, native, or inhabitant. It was not to be expected, that this constitution would be agreeable to people who had such a strong sense of liberty, and had been accustomed to put such a value upon it as the Genevans. But after the public resentment had time to subside, most of those who fled at first, returned ; and, in the opinion of Mr. Coxe, not more than 600 finally left their country, on ac- count of the revolution in 1782.

Above 1000 persons, however, of both sexes, applied to the earl of Temple, then lord lieu- tenant of Ireland, expressing a desire to settle in that kingdom : and the proposal met with such general approbation, that the Irish parliament voted £50,000 towards defraying the expenses of their journey, and affording them a proper settlement. Lands were purchased for £8000 near Waterford ; part of New Geneva was actu- ally completed at the expense of £10,000 ; a char- ter was granted with very considerable privileges ; the standard of gold was altered for the accom- modation of the watch manufacturers ; and the foundation of an academy laid upon a useful and liberal plan. Several Genevans landed in Ireland, in July 1783; but, when the nation had expend- ed nearly £30,000 on the scheme, it was sud-

denly abandoned by all parties. Several of the emigrants finally settled

at Constance and at Brussels.

In 1789 the people again rose on the magis- tracy, dissatisfied with a new regulation respect- ing the price of bread. The soldiers of the city on the 29th of January were driven from their posts and disarmed, while the gates were seized by the people. The solicitor-general at this time advocated the ancient liberties of the people, urging for them, however, those moder- ate demands which were received with universal satisfaction. A new edict of pacification was now published, under the title of Modifications a I'Edition de 1782, and approved by the senate, great council, and general council. The sons of the principal negatives frequented the circles of the burghers; and the magistrates obtained the confidence of the people, by dismissing the military, evacuating the barracks, and devoting them to the use of the university and public library. In a word, the constitution established in 1789, became a just medium between the too democratic form established in 1768, and the too aristocratic one of 1782. In 1798, however, the popular and aristocratic parties were both destined to feel the dire effects of the revolu- tionary principles of France, and their conti- guity to that political volcano. The French had ilways actively promoted the civil dissensions of Geneva, and, when the power and energy of ihe country was by these means so completely reduced that it was unable to defend itself against foreign encroachment, they seized upon the city, and annexed it this year, sans ceremonie, to the territory of the republic.

In 1813 the willingness of the inhabitants to shake off the yoke of France was abundantly manifest ; and on the Austrians under general Bubna entering the city the restoration of the old republic was to their great joy proclaimed. In September of the following year the diet admitted Geneva into the Swiss confederation. A con- stitution was framed for its future government in which it was declared that 'no patricians or pri- vileged classes are acknowledged by the state, but that all the Genevese are equal before the law,' and the public affairs were vested in the hands of a great council of 250 members, and a smaller council of twenty-eight, the latter being the executive. The late treaties also augmented the territory of the republic to an area of 120 square miles, with a population of 25,000, exclu- sive of the citizens. The canton furnishes to the Swiss confederation 600 men, and nearly £l000 sterling. The soil is gravelly, and not very fer- tile, but it is remarkably well cultivated, and the climate is salubrious, though cold. Geneva is forty-two miles north of Chamberry and seventy north-east of Lyons.

Geneva, Lake of. This lake, anciently call- ed Lemanus (whence the

name of the late French department, Lac Leman), is in the shape of a crescent ; along the concave side of which Mr. Coxe travelled fifty-four miles. Switzerland forms the concave, and Savoy the convex part : the greatest breadth being about twelve miles, and its greatest depth about 1000 feet. The country on the side of Mont Blanc is full of high

and craggy mountains ; but from Geneva to the environs of Lausanne it slopes to the margin of the lake, and is very rich and fertile. The banks rise considerably in the neighbourhood of Lau- sanne, and form a most beautiful terrace, with a rapid descent a few miles beyond the town. A plain begins in the neighbourhood of Vevay, which continues for a great way beyond the end of the lake, but contracts towards the water by the approach of the mountains. The lake itself appears at a distance of a beautiful blue color, and the water is very clear and and transparent. Near Geneva the coast abounds with pebbles ; between that city and Lausanne it is sandy ; from thence to Chillon it is bounded by hard calcare- ous rocks ; and the extremity of the shore is a marsh formed by mud collected from the Rhone. The greatest depth of tiiis lake, found by M. de Luc, is 160 fathoms. Here the birds called tippet grebes appear in December; but retire in February to other places where they breed, and make floating nests of reeds, as the lake of Ge- neva affords none. This lake, like all others situated betw^een mountains, is subject to sudden storms. The Rhone runs through its whole ex- tent from its east to its south-west extremity. It is never frozen. De Saussure published a full ac- count of its natural history, and notices the re- markable influence of electrical clouds on its surface.

Geneva, or Gin, is an ordinary malt spirit, distilled a second time, formerly with the ad- dition of some juniper berries. The berries were added to the malt in the grinding; so that the spirit thus obtained was flavored with the berries from the first, and exceeded all that could be made by any other method. At pre- sent, they leave out the berries entirely, and give their spirits a flavor by distilling them with a proper quantity of oil of turpentine ; which, though it nearly resembles the flavor of juniper- berries, has none of their valuable virtues.

GENEVIEVE (St.), the patroness of the city of Paris, flourished in the end of the fifth century, and died A. D. 512. Five years after her death, Clovis erected the church of St. Genevieve, under the name and invocation of St. Peter, where her relics were long said to be preserved, her shrine visited, and her image car- ried, with great processions and ceremonies.

Genevieve (St.), Fathers or Religious of, a congregation of regular

canons, established ir Fiance, in the seventeenth century. It was a reform of the Augustine canons, begun by St Charles Faure, in the abbey of St. Vincent de Senlis, in 1618. In 1634 the abbey was made elective ; and a general chapter, composed Ot the superiors of fifteen houses, who had received the refoim, chose F". Faure coadjutor of the abbey of St. Genevieve, and general of the con- gregation. It increased very much, and con- sisted of above 100 monasteries; in some of which the religious were employed in the ad- ministration of parishes and hospitals ; and in others, in the instruction of ecclesiastics. It took its name from the abbey of St. Genevieve, which was the chief of the order, and whose abbot was the general.

Genevieve (St.), a district and town of the

Missouri territory, in North America, bounded south-east by Apple Creek, north by the Meri- mack river, north-east by the Mississippi. Upon the latter it extends upwards of 100 miles. Its limits to the west are indefinite. The land is various, and perhaps less fertile than some of the neighbouring districts. It is rich, however, in minerals, particularly lead and salt. The town extends itself back upon ground consider- ably more elevated than the river. On an elevation in the rear of the town a handsome stone building has been erected for an academy, •which commands a fine prospect. This town has a considerable trade, being a place of depot for the lead obtained from the famous mines on the Marameck, and also the store-house from which those employed in working in the mines obtain their principal supplies. The mines are about fifty miles west of this town, and are so rich that 100 lbs. of the ore will yield eighty or ninety of fine lead. Inhabitants about 1500. The produce under the present management is about 100 tons annually.

Genevieve Bay, a bay on the coast of New- foundland, in the straits of Belleisle, twenty miles north of St. John's Bay.

GENEVOIS, a province of Savoy, bounded on one side by a part of the French frontier, on another by Savoy Proper. It lies to the south- ward of Geneva, and came to the house of Savoy in the fifteenth century. Its surface is mountainous, but cultivated with great and well-rewarded care. It belonged to France from 1793 to 1815, forming a part of the

department of Mont Blanc. Population 70,000.

GENEVRE, Mont, a celebrated mountain of the Alps, the boundary between Piedmont and France. Its altitude is about 6000 feet above the level of the sea; but the top, on which is a village and monastery, is of comparatively mild temperature. It is nine miles from Brianpon.

GE'NIAL, adj. \ Latgenialis. That which

Ge'nially, adv. S contributes to propagation; support ; mental endowments or cheerfulness. Nor will the light of life continue long.

But yields to double darkness, night at hand ;

So niuch I feel my ge7iial spirits droop. Milton. Higher of the genial bed by far. And with mysterious reverence I deem. Id.

Some men are genially disposed to some opinions, and naturally averse to others. Glanville,

Tt chiefly proceedeth from natural incapacity, and genial indisposition. Browne's Vulgar Errours.

Creator Venus, genial power of love.

The bliss of men below and gods above ! Dryden.

In genial Spring, beneath the quiv'ring shade. Where cooling vapours breathe along the mead. The patient fisher takes his silent stand Intent his angle trembling in his hand. Pope,

The Spring drew near, each felt a breast With genial instinct filled :

They paired, and would have built a nest.

But found not where to build. Cowper.

GENIC'ULATED, arfj. J Latin genicula-

Genicula'tion, n. s.] tus. The quality in plants of having knobs or joints.

A piece of some gcniculated plant seeming to be part of a sugar-cane. Woodward on Fossils.

GENII, in the Mahommedan theology, a sort of intermediate beings, supposed to exist between

men and angels. They are of a grosser fabric than the latter, but much more active and power- ful than the former. Some of them are good, others bad, and they are capable of future sal- vation or damnation like men. The orientals pretend that these genii inhabited the world many thousand years before the creation of Adam, under several princes, who all bore the common name of Solomon ; that falling at length into an almost general corruption, Eblis was sent to drive them into a remote part of the earth, there to be confined ; and that some of that generation still remainuig, were by Tahmu- rath, one of the ancient kings of Persia, forced to retreat into the famous mountain of Kaf. Of this king's successions and wars they have also many fabulous and romantic stories. They like- wise suppose several ranks and degrees or differ- ent species among this kind of beings ; some being peculiarly called Jin, or genii ; some Peri, or fairies ; some Div, or giants ; and others Tocwins, or fates.

GENIO, n. s. Ital. genio ; Lat. genius. A man of a particular turn of mind.

Some genios are not capable of pure affection ; and a man is born with talents for it as much as for poetry, or any other science. Tailer.

GETVJIOSTOMA, in botany, a genus of the monogynia order and pentandria class of plants : CAL. a turbinated quinquefid perianthium : cor. monopetalous and tubular; the stamina five short filaments ; the anthers oblong : seed nu- merous and subangulated, placed on a filiform receptacle. Species one only; a native of the island of Tama.

GENISTA, broom, or dyers'-weed, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, papilionaceae : CAL. bilabiate, the upper lip bidentated, the under one tridenate ; the vexillum is oblong and reflexed, turned back from the pistil and sta- mina. There are several species ; of which the following are the most remarkable : —

G. cytisus, or cytiso-genista, or common broom ; which is too well known to need description. Its young flowers are sometimes preserved as pickles ; and the plant, when burnt, aff'ords a tolerably pure alkaline salt. Dr. Mead relates the case of a dropsical patient, who was cured by taking half a pint of a decoction of green broom tops, with a spoonful of whole white mustard seed, every morning and evening. The patient had been tapped three times, and tried the usual remedies before. An infusion of the seeds, drunk freely, has been known to produce similar happy eff"ects. Cows, horses, and sheep, refuse the plant.

G. tinctoria is also a native of Britain. It rises with shrubby stalks three feet high, gar- nished with spear-shaped leaves, placed alternate, and terminated by several spikes of yellow flowers, succeeded by pods. The branches are used by dyers for giving a yellow color, from whence it is called dyers'-broom, green-wood, wood-waxen, or dyers'-weed. A dram and a half of the powdered seeds operates as a rriild purgative. A decoction of the plant is diuretic ; and, like the former, has proved serviceable in

dropsical cases. Horses, cows, goats, and sheep eat it.

GEN'ITALS, 71. s. Lat. genitalis. The organs of generation.

Ham is conceived to be Jupiter, who was the youngest snn, who is said to have cut off the genitals of his father. Brcrwjie.

GENITES, among the Hebrews, those de- scended from Abraham without any mixture of foreign blood. The Greeks distinguished by the name of genites, such of the Jews as were issued from parents who, during the Babylonish cap- tivity, had not allied with any gentile family.

GENITING, n. s. A corruption of janeton, an early apple gathered in June.

In July come early pears and plumbs in fruit, genit- i)>gs and codlins. Bacoiu

GE'NITIV'E, adj. Lat. yenitivus. In gram- mar, the name of a case, which, among other re- lations, signifies one begotten, as, the father of a son : or one begetting, as, son rf a father.

The Genitive is the second case of the declension of nouns. The relation of one thing considered as belonging in some manner to another, occasioned, in the Greek and Latin, a peculiar termination of nouns called the genitive case ; but in the modern tongues a particle is prefixed to express tiie relation of this case. In English we prefix the particle of; in French de or du, &c. ; though in strictness there are no cases in either of these languages ; inasmuch as they do not express the different relations of things by different terminations, but by

prepositions.

GENIUS, n. s. Fr. ffeiiie ; Lat. genius. A fabled ruling power; a person of superior men- tal faculties; peculiar disposition or nature.

GENII, n. s. Plural of genius, and always used in its primary sense : the annexed illus- tration is an example.

If there be infinite planetary and firmamental worlds, as some will, there be infinite Genii, or com- manding spirits belonging to each of them. Burtou.

Genius, a good or evil spirit or dfemon, whom the ancients supposed set over ea-h person, to direct his birth, accompany him in life, and to be his guard. See Dˆimon. Among the Ro- mans, Festus observes, the name genius was given to the god who had the power of doing all things, deum qui vim obtineret rerum omnium gerendarum : which Vossius, de Idol., rather chooses to read genendarum, who has the power of producing all things: by reason Cen- sorinus frequently uses gerere for gignere. I'es- tus adds, that Aufustius spake of the genius as the Son of God, and the Father of men, who gave them life ; others represented the genius as the tutelary god of each place ; and it is certain the last is the most usual meaning of the word. The ancients had their eenii of nations, of cities, of provinces, &c. The following wa§ a very common inscription on their medals, genius ropiLi KOM. 'The genius of the Roman people.' The Platonists, and other eastein phi- losophers, supposed the genii to inhabit the vast region of air between earth and heaven : tliat they were a sort of intermediate powers, who acted as mediators between gods and men : that they were the interpreters and agents of the gods; communicated their wills to men; and

the prayers and vows of men to the gods. As they thought it below the majesty of the gods to enter into such trifling concerns, they es- teemed this the lot of the genii, whose nature was a mean between the two ; who derived im mortality from the one, and passions from the other ; and who had a body framed of an aerial matter. Most of the philosophers, however, held, that the genii of particular men were born and died with them; and Plutarch attributes the ceasing of oracles partly to the death of the genii. See Oracle. Those heathens, who considered the genii as tlie guardians of particu- lar persons, believed that they rejoiced and were afflicted at the good or ill fortune that befel their wards. They never, or very rarely, appeared to them, and then only in favour cf some person of extraordinary virtue or dignity. They likewise held a great difference between the genii of

differ- ent men ; and that some were much more power- ful than others ; on this principle a wizard in Ap- pion bids Antony keep at a distance from Octa- vius, as Antony's genius was inferior to and stood in awe of that of Octavius. There were also evil genii, who took a pleasure in perse- cuting men, and bringing them evil tidings; such was that in Paterculus, kc, which ap- peared to Brutus the night before the battle of Pliiiippi.

GENLIS (Stephanie Felicite Ducrest de St. Aubin, marquise de Siilery), countess de. This popular authoress was born near Autun, in 1746. Mlie. de St. Aubin was celebrated for her beauty and musical talents, and favorably re- ceived in the most distinguished families. Count Genlis, who had never seen her, but had read a letter of hers, was so enraptured with the style in which it was written, that he offered her his hand, notwithstanding her want of fortune. The countess, now become the niece of madame de Montesson, gained access to the house of Orleans, and, in 1782, was made governess of the duke's children, Her new duties induced her to write the Theatre d'Education (1779), Adele et Theodore (1782), the Veillees du Chateau (1784), and the Annales de la Vertu (1783) — works on education, to which the reputation and station of the authoress attracted general atten- tion. She conducted the education of the chil- dren entirely herself, taking part, at the same time, in the other affairs of the house of Orleans. It appears, from her writings, that siie was favor- ably disposed towards the revolution ; that she had received Pction and Barrlre in her house, and had been present in the sessions of the Jacobins. She, however, left France as early as 1791. She relates herself, in her Precis de ma Conduite, that Pction conducted her to London, that she might meet with no obstruc- tions to her journey. About the time of the September massacres (1792), the duke of Or- leans recalled her to Paris. As the governess of the young duchess of Orleans, and the friend and confidant of the father, she had become sus- pected. She therefore retired, with the princess, to Tournay, where she married her adoptive daughter, the beautiful Pamela, to lord Edward Fitzgerald. Here she saw general Uumouriez, and followed him to St. Amand. Not approving

of the plan of the general (who had the sous ot the duke of Orleans with him), to march to Paris and overthrow the republic, she retired with the princess to Switzerland, in April, 1793, where she lived in a convent at Bremgarten, a few miles from Zvirich. The daughter of the

duke of Orleans having then gone to join her aunt, the princess of Condˆ, at Friburg, madame de Genlis retired with her foster-daughter, Hen- riette Sercy, who was now alone left to her, to Altona, in 1794, where, in monastic solitude, she devoted herself entirely to literature. At a country seat in the territory of Holstein, she wrote the Chevaliers du Cygne, a novel which contains many republican expressions, and very free descriptions. It appeared in 1805, in Paris, with many alterations. In 1795, she published Precis de la Conduite de Madame de Genlis. At the end of this work there is a letter to her eldest pupil, in which she exhorts him not to accept the crown if ever it should be offered to him, because the French republic seemed to rest upon moral and just foundations. When Bona- parte was placed at the head of the government, she returned to France, and received from him a house, and, in 1805, a pension of 6,000 francs. Her numerous works (upwards of 90 volumes), among which the Theatre d'Ediication, Made- moiselle de Clermont, and Madame de la Vallibre, appear to be tlie best, are distinguished by their pleasing style and noble sentiments. Most of the works of madame de Genlis belong to the class of historical novels.

GENNESARETH, in ancient geography, a lake of Lower Galilee, called also Cinnereth, Cinereth, or Chinnereth, by Moses; 140 stadia in length, and forty in breadth ; abounding in fish. St. Matthew calls it the Sea of Galilee, and St. John the Sea of Tiberias.

GENOA (Ital. Genova), a handsome mari- time city of Italy, formerly the capital of a re- publican state of this name, which extended along the shores of that part of the Mediterranean called the gulf of Genoa. This territory, while independent, was described as about 152 miles in length, but varying in its breadth from eight to twenty miles. It was bounded on the north by Piedmont, the Milanese, and the Parmesan, on the east by the states of the duke of Tuscany, on the south by the Mediterranean Sea, and on the west by the county of Nice. It was a part of the ancient Liguria, whence the French named it in modern times the Ligurian Republic. It lies between 7° 27′ and 9° 25′ E. long., and between 43° 40′ and 45° 0′ N. lat. It was transferred to Sardinia by the congress of Vienna, and now forms a province of that kingdom.

The city of Genoa rises from the northern ex- tremity of the gulf in the form of an amphi- theatre, the hill on which it is situated exhibiting its large white houses, and numerous public edifices, in striking contrast with the dark cliffs of the shore, and the naked sterility of the Appennines behind them. On the land side a double wall surrounds this ancient abode of commerce and the arts : the inner one is about six miles in circuit; the outer, called the Nuova Thura, including

several hills, is perhaps twice that length. Two of the streets at one time consisted entirely of a double

straight row of magnificent palaces : and the Strada Balbi, the Strada Nuova, and the Strada Nuovissima, are still spoken of by travellers aa having a striking and magnificent coup d'oeil. The others, though clean and well paved, are gene- rally narrow, crooked, and some of them re- markably steep. The palaces of the ci-devant nobility are almost all of marble, and many of them are painted on the outside. That where the doge resided, and where the great and little council, and the two colleges of the procura- tori and governatori assembled, is a large stone building in the centre of the city. It con- tains some fine paintings in fresco ; two sta- tues of Andrew and John Doria in white mar- ble ; and an arsenal, which used to contain arms for 34,000 men, and thirty-three coats of mail, which, it is said, were worn by as many Genoese heroines in a crusade. The residences of the Durazzo, Doria, Pallavicini, Balbi, and Corrego families are also much admired. Many of the faˆ'ades of tl'i€se palaces are painted in fresco in a very superior style.

The Palazzo Durazzo, still belonging to a sig- nore of that name, is one of the finest in Genoa. Lady Morgan's lively description of it will give the reader a correct idea both of the rest of these edifices and the existing manners of the Genoese. * The superb portico is ornamented with columns of white marble of the Doric order — its vast court is rich in architecture, fountains, and hang- ing terraces, and four flights of broad marble steps lead to its immense anti-chamber, the first apartment of that attic suite, called in Genoa the Mezzari Nobili Superior!: for the household economy of Genoa, as in many other cities of Italy, is the reverse of what it is in England. The narrow street and high dark opposite walls make the lower floors exceedingly disagreeable and gloomy ; and the garret contains the rooms of state and ceremony, the cabinets of the relics of former grandeur; while the impoverished or degenerated lords are niched into an entresol, or mezzanini, half way between tlie first floor and the last.

' The porticoes, or entrances of the Genoese palaces, resemble in nothing the hall of a noble English residence, or the court of a French hotel. There is no sturdy porter to be roused from his ' leathern convenience,' to give or deny admis- sion, with a growl and a frown : no bluff Swiss, nor maniˆree demoiselle, to pop their head over the half-door of the lodge, and receive commands and answer enquiries. The sole occupant of these magnificent structures (where there is any) is a cobbler, perhaps, or a stocking-grafter, who pays for being permitted to ply his profession amidst the sculptures of Michael

Angelo and the frescoes of Carloni, by keeping out dogs, or preventing the idle and the filthy from sleeping on the stairs, or corridors, — all open to public in- trusion. In one of the porticoes of these beautiful palaces we found a mattress-cleaner very busy at his filthy work ; and in the nobler apart- ments of another, the anti-room was occupied by a laundress. Several of the lower and lesser rooms were hired out to poor tradesmen ; and many of the superior apartments were occupied by the ministers of the corps diplomatique.

Some, however, were inhabited by the noble fa- milies to whom they belonged ; but in the au- tumn almost all the Genoese aristocracy are at their villas. It was to one of these Jobsons we were frequently indebted (when we went alone) for information of how we were to proceed, or which flight of stairs we were to ascend, or where we had a chance of finding the custode or person retained for showing the palace : but their Ge- noese jargon occasionally prevented our deriving any benefit from their information: — though all the lower orders understand Italian, few speak it.

‘ As we ascended the magnificent stairs of the Durazzo, we met a half-starved dog chasing down a hen; and, after repeatedly ringing at the fold- ing doors of the anti-room of the Mezzari nobili superiori, they were at last thrown open by a man with a boot on one hand and a brush in the other — who, at once understanding the object of our visit, drew on a fine old livery coat, which hung upon a marble bust by Filippo Parodi, and led the way through that long and interminable suite of apartments, whose walls were enriched with chefs-d’ceuvre of the arts, whose floors were of marble, and whose roofs were of gold. Galleries, cabinets, terraces, rooms va- riously named and variously decorated, appeared in endless succession — all covered with dust, touched by decay, and abandoned to solitude. Still there is something very fine in the Genoese nobility, under the weight of their ruined for- tunes and depressed spirits, retaining these noble mansions, preserving the least of their countless objects of art, and consecrating these images of their ancient wealth and influence to the memory of their nation’s past prosperity, and to the ad- miration of foreign curiosity. They can indeed no longer spread the splendid board, nor fill the gilded hall ; but their palaces are still open to gratify the stranger’s research, and to improve his taste. They are not even closed against the visitors of that nation who imposed the chain, while they accepted the rites of hospitality ; and who, under the

semblance of liberty and friendship, betrayed the confidence, and broke the trust, reposed in them by their generous hosts.

‘ The architectural defects of the Palazzo Du- razzo appear to be the breaking up of its vast- ness into a number of small rooms ; each indeed interesting, as bearing the name of the great master whose works cover its walls ; but defec- tive as forming a part of the great whole. Even the famous gallery is but a long narrow strip, infinitely too small for its splendid and curious collection of statues and sculptures, ancient and modern. The ornaments and roof of this apart- ment, all of the richest carving, gilding, and painting, are by Parodi. The frescoes represent the destruction of the four great empires ; a good republican subject, and curiously treated. Each empire is represented by some of its well-known historical tyrants, as Darius, Sardanapalus, Pto- lemy, and Augustulus, surrounded by Syrens — the Montespans, Pompadours, Nell Gwins, &c. of antiquity. Besides the historical paintings of the great masters, the family portraits of the Du- razzo, as in all the other palaces, by such painters as Titian, Vandyke, and Tintoretto, are of great interest. Mere, in their habits of ceremony, as

doges and ambassadors, range the ancient Du- razzi, with all their insignia of wealth and splen- dor. Here too with large, languid, dark eyes, and primitive airs, still bloom the Madonna Francescas, Caterinas, and other beauties of this distinguished house. Some of them are encir- cled (as the mothers of free states should be) by their children ; and all of them, clothed in the stand-on-end velvet of the Genoese looms, ex- hibit great richness of ornament, and are covered with Venetian chains and foreign gems, the pro- duce of their husbands’ commerce in the Levant. Among these domestic portraits, we found a pic- ture of our own unfortunate Anne Boleyn, by Hol- bein. It is extremely curious for its costume ; but in the meagre red-haired lady, here repre- sented, there is nothing to excuse the adulterous passion of Henry V’lII. though something to account for his cutting off” a head, which had not one charm to plead for it. Holbein, though a bold, was a most unlovely painter. Opposite to Anne Boleyn hangs a delicious picture of the holiest and fairest of royal saints, queen Cathe- rine of Sweden, by that painter whose type of beauty was all divine, yet all melancholy, the true delineator of a crucified Deity — Carlo Dolce! The Sala Paolo, so called from its chef- d’oeuvre, by Paul Veronese, is the most interest- ing of.the suite, merely because it doe? contain this picture, so well known, so often and so ac- curately copied, so delightful to gaze on, so_ˆ dan- gerous to describe. The subject is Mary Mag- dalen at the feet of Christ in the house of the Pharisee. Never was a sacred subject so hu- manly conceived, more

divinely executed.'

Genoa is the see of an archbishop who presides over the four suffragan' dioceses into which the former republic is divided. The established religion is Catholic, but all other sects (including even the Jews) are tolerated. There is an old university here having a vast library, but all ' the faculties' seem to languish within its walls. Before the late revolutionary times, the number of churches in Genoa was thirty-two, and of religious houses seventy. Several of the former are master-pieces of architecture, but all are most gaudily ornamented. The church of the Annunciation, and the cathedral, are the most admired. That of Carignano was built at the expense of a single citizen, whose grandson erected the bridge of that name, which joins two hills, and forms one of the most favorite pro- menades. The theatres are three in number. The great hospital for the sick and infirm, and the Albergo dei Poveri, or poor-house, are noble buildings; but their once ample funds have been greatly intruded upon by their late masters. The public stores of wine, oil, and wood, from which the middling and lower classes may pur- chase, are however still kept up : and the inns here are considered commodious.

Genoa still conducts a considerable export trade in rice, fruit, and olive oil, as likewise in her manufactures, of silk, damasks, and velvets. The annual value of the sdk and satin manufac- tures is from £200,000 to £300,000; the raw material being partly raised at home, and partly imported from .Sicily, Calabria, and the Levant. From Sicily also corn is imported, and occasion- ally from Barbary ; iron and* naval stores from

the Baltic, linen and sail-cloth from Germany, and from England, tin, lead, hardware, and cot- tons. To these may be added wool from Spain, wax and cotton from the Levant, and colonial produce from the United States, and fish from Newfoundland. A considerable transit trade was facilitated by a law passed in 1751, which ena- bled the merchants to deposit goods in a quarter of the town called Porto Franco, duty free unless taken out forconsumption. The exchange trans- actions are also considerable, though the different denominations and modes of reckoning money are complex, and the celebrated bank of Genoa no longer exists. The Genoese vessels in the coasting trade, do not exceed 100, and fifty perhaps trade in the open sea; but the chief busi- ness of the city is carried on under foreign

flags.

The port of Genoa is formed by two moles, with a light-house on one mole head, and a fort on the other, distant from each other a quarter of a mile : the depth within is seven to three fathoms, and, though a south wind throws in a considerable swell, it is sufficiently secure. Both east and west the shore is lined with towns and villages. Genoa contains a population of about 80,000 souls.

The ancient history of Genoa, like that of many other places, is involved in fable. Some say it was built by Genuus, a son of Saturn ; others by the god Janus, agreeably to which origin the an- cient Latin authors often call it Janua. Be that as it may, the city of Genoa was a celebrated emporium in the time of the second Punic war ; and, having declared for the Romans, was plun- dered and burnt by Mago the Carthaginian. It was afterwards rebuilt by the Romans; and with the rest of Italy continued under their dominion till the overthrow of the western empire in 476. In 498 it fell under the power of Theodoric the Ostrogoth ; who, having defeated the usurper Odoacer, became king of Italy. Not long after, the Goths being almost entirely subdued by Be- lisarius, Justinian's general, Genoa was re-an- nexed to the Roman or rather eastern empire. In 670 it was plundered and burnt by the Lom- bards, whose king, Protharis, erected it into a provincial dukedom. The Lombards continued masters of Genoa till 774, when they were con- quered by Charlemagne. He reduced Liguria to its ancient bounds settled by Augustus, and erected it into a marquisate ; appointing his re- lation Audemarus the first count or margrave. In 806 the Genoese reduced Corsica. Genoa at this time being distinguished for its wealth and populousness, began to give its name to the whole coast ; and continued under the dominion of these counts for about 100 years, till tlie Car- lovingian race became extinct in Italy, and the empire was transferred to the German princes. In 935, while the Genoese forces were absent on some expedition, the Saracens surprised the city, which they plundered and burnt, putting to death a great number of the inhabitants, and carrying others into captivity. Having embarked their captives, together with an immense booty, they set sail for Africa ; but the Genoese, immediately returning, pursued the invaders; and, having en- tirely defeated them, recovered all the captives and booty, and took a great number of the ene- my's ships. About A. D. 950, the Franks having

lost all authority in Italy, the Genoese began to form themselves into a republic, and to be go- verned by their own magistrates, who were freely elected, and took the name of consuls. To sup- port their independence they applied themselves to commerce and navigation ;

and being appre- hensive that some of the German emperors, who often invaded Italy, might renew their pretensions to their states, they acknowledged Berengarius III. duke of Friuli,who had been elected empe- ror by a party of Italian nobles. Berengarius, who with diihculty maintained himself in his new dignitj', endeavoured by his concessions to enlarge the number of bis adherents: and ac- cordingly confirmed the new republic in all its privileges. After this the Genoese began to ex- tend their commerce from Spain to Syria, and from Egypt to Constantinople; their vessels being fitted for fighting as well as merchandise. Having thus acquired great reputation, they were invited in 1017, by the Pisans, who had likewise formed themselves into a republic, to join with them in an expedition against Sardinia, which had been conquered by tiie Moors. In this expedition they were successful ; the island was reduced ; but from this time an enmity took place between the two republics, which did not end but with the ruin of that of Pisa. The first war with the Pi- sans commenced about thirty years after the Sar- dinian expedition, and lasted eighteen years; when the contending parties having concluded a peace, they sent their united forces against the Moors in Africa, of whom they are said to have killed

100,000.

The Genoese were very active in the time of the crusades, and had a principal share in the taking of Jerusalem. They also waged conside- rable wars with the Moors in Spain, whom they generally defeated. They also prevailed against the neighbouring states ; and, in 1220, had enlarged tlieir territories beyond the skirts of the Appennines, so that the rest of Italy looked upon them w ith a jealous eye ; but in 1311 the factions which had long reigned in the city, notwithstanding all its wealth and power, induced the inhabitants to submit for twenty years to the dominion of the emperor Henry VII. That emperor, however, died in August 1312 ; and the vicar he had left soon after went to Pisa, upon which the dissentions in Genoa revived with greater fury than ever. In 1317 a quarrel happened between the families of Spinola and Doria; which came to such a height, that both parties fought in the streets for'twenty-four days without intermission, raised battering engines against each other's houses, and filled the city with blood. At last the Spinolse quitted the city, and retired to their territories in the Appennine mountains. The civil war continued till 1331 : when, by the mediation of the king of Naple-s, it was agreed that all exiles should return to the city; that the republic should be governed by the king's vicar, and all the offices of the state be equally divided between the Guelfs and the Gi- bellines, the two contending parties. By this ruinous war the coast of Genoa, formerly adorned with

palaces and vineyards, was now reduced to the appearance o”f a barren waste. So great was the desolation that, according to Petrarch, the spectators who sailed along were stmck with

astonishment and horror. Villani, a contempo- rary autlxiir, relates, that the losses eacli party had sustained would have been sufficient to have purchased a kingdom ; the Genoese republic be- ing esteemed in his time the richest and most powf-ful state in Christendom. Stella informs us that, before the wai-, the most extravagant profusion and luxury prevailed among the Ge- noese ; but that, towards the end, many noble families were reduced to indigence ; so that, for about 100 years after, it became fashionable for the nobles to live in a plain and frugal manner. In 1336 both parties, suspending their animosi- ties, sent two fleets of twenty galleys each into the German Ocean, to assist Philip VI. king of Trance, against Edward III. of England. This naval expedition proved the cause of a most re- markable revolution m the Genoese government. The sailors accused their officers of defrauding them of their pay, proceeded to an open mutiny, and having expelled the admiral, and other com- manders, seized the galleys. Philip \T., being chosen arbitrator, decided in favor of the officers, and imprisoned sixteen chiefs of the mutineers. Upon this several of the sailors left the fleet, and returned to Genoa; where they went round the coasts, repeating their mutinous complaints, which were eagerly listened to upon a false report that the mutineers were broken upon the wheel. The factious spirit increased; and at last the Geno- ese insisted on having an abbot of their own choosing, and twenty of the people, with the consent of the captains of the republic, assem- bled fur that purpose. While the multitude, however, were impatiently expecting their deci- sion, a mechanic mounted a bench and proposed that Samuele Bucanigree should be chosen ab- bot. This being instantly echoed, by tlie popu- lace, he was first declared abbot, then lord, and at last doge, of Genoa. But the dissentions con- tinued as violent as ever, notwithstanding the power of the new magistrate ; and by these per- petual divisions the republic was at last so much weakened that, in 1390, Charles VI., king of France, was declared lord of Genoa. However the Genoese soon became exceedingly impatient of the French government; and, in 1422, the •luke of Milan obtained the sovereignty. With this situation they were soon equally displeased, and therefore revolted in 1436. In 1458, finding themselves pressed by a powerful fleet and army sent by Alphonso king of Naples, they conferred the sovereignty of their state upon Charles \TI. of France.

But in 1460 they revolted, and four years after put themselves again under the pro- tection of the duke of]Milan; from whom they revolted in 1478. lie was again declared sove- reign of the republic in 1488; and in 1499 the city and territories of Genoa were conquered by Louis XII. of France. The fickleness of the Genoese was not corrected by tliis misfortune. They revolted in 1506 ; but next year were asain subdued by Louis. In 1512 they again revolted ; and in 1516 the city was taken and' plundered by the Spaniards. In 1528 the celebrated An- drew Doria, then an admiral in the French service, undertook to rescue his country from the dominion of forci':rn princes, and restore it to its liberty. He told his countrymen that the French, Vol. X

who had again obtained the sovereignty, had left them only a shadow of liberty, while they pretended to protect them from their enemies. To the nobility he represented the disgrace of suffering the government to be vested in the hands of foreigners less worthy of authority than tliemselves. Thus he soon formed a strong fac- tion, and when almost three-fourths of the French garrison had been carried ofl" by the plague, he advanced with 500 men. His friends having opened the gates of the city to him, he seized the principal posts, and thus became master of it without drawmg his sword. The garr.son retired to the forts, wliere they soon after capitulated, and being driven out of the city, Doria re-estab- lished the ancient form of government. See Doria.

The republic continued throughout the rest of the eighteenth century to preserve her liberty, though greatly fallen from her ancient splendor. In 1684, the Genoese having fallen under the resentment of Louis XIV., the city was almost destroyed by a formidable bombardment. la 1688 it was bombarded by admiral Byng, and forced to capitulate : but the British government had no view of making a permanent conquest of it. In 1713 the emperor Charles VI. sold the town and marquisate of Finale to the republic, which, in 1743, involved it in a bloody war; for the queen of Hungary having, by the treaty of Worms, ceded to the king of Sardinia lier right to Finale, the Genoese formed an alliance with France, Spain, and Naples: and, in 1745, de- clared war against the king of Sardinia, who soon made himself master of great part of the state, while several Genoese ports were bom- barded by the British, and the city of Genoa was taken by the Imperialists : but after a terrible slaughter they were driven out by the Genoese ; who again defeated tliem in 1747, when they at- tempted to recover it. In 1730 the island of Corsica revolted from the Genoese, and could never afterwards be reduced by thom: for which reason they at last sold it to the French, who in 1770 totally reduced it. See Corsica.

The ancient constitution, from the time of its establishment by the brave Andrew Doria, in 1528, was aristocratic, though not so much so as that of Venice The nobility alone were capable of holding the chief offices in the republic. From this body were elected tlie doge, the great coun- cil, and the senate. The doge, or duke, was elected for two years, and was incapacitated from being re-elected for five years after; but had a procurator's office assigned him, and a pension of 500 scudi for life. No person could be elected doge till he was fifty years of age. and had left off trade for fifteen years before. The great council consisted of eighty counsellors, in whom the sovereignty chiefly resided. The se. ate con- sisted of twelve senators, who, with the doge, had the administration of affairs. In November, 1797, this form of government was overturned, hereditary titles and honors abolished, and a new democratic constitution establislied, by Buona- parte, with a directory, two councils, &c., simi- lar to the then constitution of France ; while the whole state, according to the then frantic rage of the French for republicanism, was called

the IJgurian republic, and, being under the rontrol of the rulers of France, it long shared 'n the warfare of that country. In 1801 the city eustained a severe siege from the Austrian army and the British fleet, till literally starved ; which obliged the French General, Massena, to evacu- ate it on the 7th of June. It was however soon afterwards delivered up to the French, upon the celebrated victory of Marengo-; and the republic restored to tranquillity by the treaty of Amiens. But Buonaparte having afterwards abjured his republican notions, and assumed the titles of em- peror of France and king of Italy, this, with the other republics which his military power had contributed to raise in Europe, was to ex- perience another revolution. Early in 1805 he forcibly seized upon the whole of this republic, abolished its constitution, and united it to his kingdom of Italy. In 1805 it was incorporated with its territory into the French empire, forming the departments of Genoa, Montenotte, and the Appennines. It remained subject to Buonaparte until his final reverses in Germany, and the in- vasion of France in 1814, when a British naval force once more blockaded the harbour. To this force the Genoese surrendered, April 18th 1814, and received a garrison, in the expectation of being reinstated in their former liberty. The congress of Vienna, however, decided otherwise, and made over the city, with its territory, to the

king of Sardinia. It is now said to be governed by its own laws ; the inhabitants preserving their senate, their supreme court of justice, and pro- vincial councils, who impose all new taxes, and conduct the entire police.

Genoa is distant 224 miles north-west of Rome, and stands in N. lat. 44° 25 , and E. long. 8° 50’.

GENO'ESI (Anthony), a modern Italian writer of celebrity, was born at Castiglione in 1712. He was brought up as a clergyman, but practised the law; and, in 1741, was appointed professor of metaphysics at Naples. He after- wards exchanged this for the ethical chair. He became also an unsuccessful candidate for the professorship of theology. He was made, how- ever, professor of political economy ; which place he held at his death, which took place in 1769. He wrote — 1. Disciplinarum Metaphysicarum Elementa INIathematicum in morem adornata, 4 vols. 8vo; 2. Elementorum Artis Logico- criticpe Libri Quinque; 3. Delle Lezioni di Commercio ; 4. Meditazioni Filosofiche Sulla Religione e Sulla Morale, &c.

GENTEE’L, adj. Genteel ly, adv. Genteel’ness, n. s. Gentilesse’, n. s. Gentil’ity, n. s. Gen’tle, adj., n. s. & Gen’tlefolk, n.s. [y.n. Gen’tleman, n. s. Gen’tlemanlike, adj. Gentle’manly, adv. Gen’tleness, 7t. s. Gen’tleship, n. s. Gen’ti.ewoman, n. s. Gex’tly, adv. Gek’try, n. s. Gent, aˆ.

Fr. gentil ; Italian gentile ; Lat. genti- lis. These words are indifferently applied to persons, disposi- tions, and manners, and primarily im-

)=-ply softness ; ease ; grace ; elegance ; su- periority; rank : us- ed either as descrip- tive, or ironically as terms of ridicule. The word gentle also is used for a worm

j used in angling ; the

only verb amongst them, which means to elevate or make gentle, is quite obsolete.

Fayre was this yonge wif ; and, therwithal. As any wesel hire body getit and smal.

Chaucer. The Milleres Tale. — And he that wol han pris of his genterie. For he wos boren of a gentil hous. And had his elders noble and vertuous — And ni’U himselven do no gentil dedes, Ne folwe his gentil auncestrie that ded is, — He n’is not gentil be he duk or eri ; For vilains sinful dedes make a cherl. For gentillesse n’is but the

renornee Of their auncestres for hir high bountee. Which is a strange thing to thy persone : Thy gentillesse cometh fro God alone. Than cometh our very gentillesse of grace ; It was no thing bequethed us with our place.

Id. The Wifof Bathes Tale. A gentilwoman, porter of the gate. There shal ye find, hire name is Countenance.

Id, The Assemblee of Ladies. Than opened she the gate, and in we go ; With wordes faire shesaide full gcntilly Ye are welcome ywis. Id,

Adue, the gentillest that er I knewe ! Adue my most excellent paramour. Fairer than rose, sweter than lylly flour.

Id. Lament of Mary Magdaleine, Adue, my soveraine and very gentilman Farewel, dere hcrte ! as hertely as I can. Id.

Some in France, which will needs be gentlemen, have more gentleship in their hal than in their head. Ascham's Schoolmaster. Thereto the heavens, alwayes joviall Lookte on them lovely, still in stedfast state, Ne suffred storme nor frost on them to fall. Their tender buds or leaves to violate ;

Nor scorching heat nor cold intemperate. To' afflict the creatures which therein did dwell ;

But the mild ayre with season moderate Gently attempred, and disposed so well

That still it breathed forth sweet spirit and hole- som smell. Spenser't Faerie Queene.

Vespasian, with great spoil and rage, Forewasted all : till Genuissa, gent Persuaded him to cease. Id.

He holdeth himself a gentleman, and scorneth to work, which, he saith, is the life of a peasant or churl ; but enureth himself to his weapon, and ta the gentlemanly trade of stealing. Spenser.

When people began to espy the falsehood of ora- cles, whereupon all geiitility was built, their hearts were utterly averted fi-om it. Hooker.

He to-day that sheds his blood with me. Shall be my brother ; be he never so vile. This day shall gentle his condition. Shakspeure. Where is my lovely bride ? How does my father? Gentles, methinks you frown.

Id, Pyramus is a sweet-faced man ; a proper man as one shall see in a summer's day ; a most lovely gen- tlemanlike man. Id.

You have trained me up like a peasant, hiding from me all gcKtlemanlike qualities. Id.

Inquire me out some mean-born gentleman. Whom I will marry strait to Clarence' daughter. Id. The queen's kindred are made gentlefolk. Id.

Her gentlewomen, like the Nereids, So many mermaids, tended her i' the' eyes. And made their bends adorings. Id.

Shew us so much gentry and good-will. As to extend yoiu- time with us a-while. Id.

Her voice was ever soft. Gentle and low ; an excellent thing in woman.

Id.

My lord Sebastian, The truth, you speak, doth lack some gentleness. Id.

The gentleness of all the gods go with thee. Id.

A?, gentle, and as jocund, as to jest. Go I to light. Id. Richard II.

Sir Thomas More, the Sunday after he gave up his chancellorship, taiue to his wife's pew, and used the usual words of his gentleman usher. Madam, my lord is gone. Camden.

Gentlewomen may do themselves much good by kneeling upon a cushion, and weeding. Bacon.

Gavelkind must needs in the end, make a poor gen- tility. Davies on Ireland.

And though this sense first gentle musick found. Her proper object is the speech of men. Davie*.

She tliat was noble, wise, as fair ZinA gent. Cast how she might their harmless lives preserve.

Fairfax.

Of all vanities and fopperies, to brag of gentility is the greatest. ~ Burton. Anat. Mel.

Consider the beginning, present estate, progresse, ending of gentry, and then tell me what it is. Id.

Art thou vcrtuous, honest, learned, well qualified, religious, are thy conditions good : thou art a true nobleman, perfectly noble, although born of Thersites. «■**

neither sword, nor fire, nor water, nor sickness, nor outward violence, nor the devil himself can take thy good parts fom thee. Be not ashamed of thy birth then, thou art a gentleman all the world over. Id.

The true gentleman is extracted from ancient and worshipful parentage. When a pepin is planted on a pepin stock, the fruit growing thence is called a renate, a most delicious apple, as both by sire and damme well descended. Thus his blood must needs be well purified who is gentilely born on both sides. Fuller. Your brave and haughty scorn of all. Was stately and monarchial ; All gentleness with that esteemed. And dull and slavish virtue seemed. Cowley, Still she retains Her maiden gentleness, and oft at eve Visits the herds. Milton.

These are the studies wherein our noble and gentle youth ought to bestow their time. Id. on Education, My gentler rest is on a thought. Conscious of doing what I ought. Maroell. She with her wedding-cloaths undresses Her complaisance z.ud gentilesses. Hudihras.

He will in the three hot months bite at a flag-worm, or at a green gentle. Walton's Angler.

A civil war was within the bowels of that state, be- twfon .\z gentleman diinX the peasants. Sidney.

They entering and killing all of the gentle and rich faction, for honesty sake broke open all prisons. Id. He hither came a private gentleman. But young and brave, and of a family- Ancient and noble. Otway's Orphan.

You say a long-descended race Makes gentlemen, and that your high degree Is much disparaged to be matched with me.

Dry den. He had a genius full of genteelnesi and spirit, hav- ing nothing that was ungraceful in his postures and dresses. Id. Dufresnoy.

The perpetual gentlenesi and inherent goodness of the Ormond family. Id. Fables, Dedication,

The mischiefs that come by inadvertency, or igno- rance, arc but verv gently to be taken notice of.

Locke.

Those that would be genteelly learned, need not purchase it at the dear rate of being atheists.

Glantiille.

After a long fatigue of eating and drinking, and babbling, he concludes the great work of dining gen- teelly. South,

So spruce that he can never be grnted. Tatler.

The same gentlemen who have fixed this piece of morality on the three naked sisters dancing hand in hand, would have found out as good a one had there been four of them sitting at a distance, and covered from head to foot, Addison.

Their poets have no notion o(genteel corned v, and fall into the most filthy double meanings when they have a mind to make their audience merry.

Id. On Italy. The many-coloured gentry there above. By turns are ruled by tumult and by love.

Prior. He had such a gentle method of reproving their faults, that they were not so much afraid as ashamed to repeat them. Atterbury.

Oi gentle blood, part shed in honour's cause, ■ˆach parent sprung. Pope.

He had a genteeler manner of binding the chains of this kingdom than most of his predecessors.

Swift to Gay, Gentlefolks will not care for the remainder of a bot- tle of wine ; therefore set afresh one before them.

Swift. How cheerfully the hawkers cry A satj'r, and the gentry buy. Id.

Several ladies that have twice her fortune, are not able to be always so genteel, and so constant at all places of pleasure and expence. Law.

He is so far from desiring to be used as a gentleman, that he desires to be used as the servant of all. Id, Nor shall my verse that elder bard forget. The gentle Spenser, Fancy's pleasing son j Who, like a copious river, poured his song O'er all the mazes of enchanted ground.

Thomson. Summer. Women ought not to think gentleness of heart despicable in a roan. Clarissa. Gentle he was, \i gentle birth Could make him such, and he had worth. If wealth can worth bestow. Cowper.

In truth he was a strange and wayward wight. Fond of each gentle and each dreadful scene.

Beattie. The ilinstrsl.

Though some unhappy instances of frivolous duels have occurred, I cannot think that it is the vice of the times to be fond of quarrelling ; the manners of our young men of distinction are certainly not of that cast, and if it lies with any of the present age, it is with those half made up gentry, who force their way into half-price plays in boots and spurs, and are cla- morous in the passages of the front boxes of a crowded theatre. Cumberland.

A band of children, round a snow-white ram. There wreathe his venerable horns with ilowcrs ;

While peaceful, as if still an unweancd lamb. The patriarch of the flock all gently cowers

His sober head, majestically tame. Or eats from out the])alra, or playful lowers

His brow, as if in act to butt, and then. Yielding to their small hands, draw back again.

Bj/ron Don Juan.

An honest gentleman at his return

May not have the good fortune of Ulysses ;

Not all lone matrons for their husbands mourn Or shew the same dislike to suitor's kisses. Id.

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GEN 5:

Why did he love him ? Curious fool ! — be still — Is humau love the growth of human will ? To her she might be gentleness. Byron.

GENTIAN, n. s. Fr. gentiane ; Lat. gentiana, cyaneus ; Gr. Kvavoc, blue; because this plant has a blue flower, Kvavtoq. A root used in medicine. See below.

If it be fistulous, aud the orifice small, dilate it with gentian roots. Wiseman's Surgery.

The root oi gentian is large and lonj^.of a tolerably firm texiure, and remarkably tough ; it has a faintish and disagreeable smell, and an extremely bitter taste.

Hill's Mat. Med.

GFATIANA, gentian, in botany, a genus of tl>e digjnia order, and pentandria class of plants; natural order twentieth, rotaceee: cor. raonopeta- lous : CAP. bivalved and unilocular : there are two longitudinal receptacles. The most remark- able species are the following : —

1. G. centaureum, the less centaury of the shops, is a native of many parts of Britain. It grows on dry pastures ; and its height is com- monly proportioned to the goodness of the soil; as, in rich soils, it grows to tlie height of a foot; but in poor ones not above three or four inches. It is an annual plant, witli upright branching stalks, garnished with small leaves, placed by pairs. The flowers grow in form of an umbel at the top of the stalk, and are of a bright purple color. They come out in July, and the seed ripens in autumn. The plant caiuiot be cultivated in gardens. The tops are a useful aperient bitter, in which view they are often used in medicine.

2. G. lutea, tlie common gentian of the shops. It is a native of the mountainous parts of Ger- many ; whence the roots, the only part used in medicine, are brought to this country. These have a yellowish brown color, and a very bitter taste. The lower leaves are of an oblong oval shape, a little pointed at the end, stiff, of a yel- lowish green, and have five large veins on the back of each. The stalk rises four or five feet high, garnished with leaves growing by pairs at each joint, almost embracing the stalk at their base. They are of the same form with the lower, but diminisli gradually in their size to the top. The flowers come out in whirls at the joints on the upper part of the stalks, standing on short foot-stalks, whose origin is in the wings of the leaves. They are of a pale yellow color. The roots of this plant are

often used in medicine as stomachic bitters. In tajte they are less excep- tionable than most of the substances of this class. Infusions of gentian root, flavored with orange peel, are sufficiently grateful. Some years ago a poisonous root was discovered among the gentian brought to London ; the use of which occasioned violent disorders, and in some cases death. This root is easily distinguished from the gentian, by its being internally of a white color, and void of bitterness.

GENTIANE'LLA, n. s. A kind of blue color.

GEN'TILE, n. s.

Gen'tilism, n.s.

Gentili'tious, adj. C to individuals of all na-

Gentil'itv, n. s. ˆ tions as opposed to

"\ Fr. gentil ; Lat. gen- \tiUs, gens. Applicable

Jews; peculiar to a nation ; hereditary disposi- tion ; Heathenism; of or belonging to national distinction.

Tribulation and smguish upon every soul that doeth evil, of the Jew first, and also of the gentile.

Romans. Fine Basil desireth it may be her lot

To grow as a gilliflower, trim in her pot ;

That ladies and gentiles, for whom we do serve.

May help him as needelh, poor life to preserve.

Tttsser.

Gentiles or infidels, in those actions, upon both the spiritual and temporal good, have been in one pursuic conjoined. Bacon.

A toleration of Jews is in most provinces of Eu- rope : in Asia they have their synagogues. Spaniards permit Moors to live among them; the Mogullians, Gentiles ; the Turks all religions.

Burton's Anat. Mel.

That an unsavory odour is gentilitious, or national unto the Jews, reason or sense will not induce.

Browne.

If invocation of saints had been produced in apos- tolical times, it would have looked like the introduc- ing of gentilism again. Stilling Jieet .

The common cause of this distemper is a particular and perhaps a gentilitious disposition of body.

A rbuthnot.

Gentile. The Jews called all those who were not of their race Q'^U? goji'"? i- ^- gentes, which in the Greek translations of the Old Testa- ment is rendered tu idva ; in which sense it often occurs in the New Testament; as in Matt. vi. 32. 'All these things do the Gentiles (or nations) seek.' Whence the Latin church also used gentes in the same sense as our Gentiles, especially in the New Testament. But the word gentes soon oljtained another significati(m, and no longer meant all who were not Je\% ; but those only who were neither Jews nor Christians, but fol- lowed the superstitions of the Greeks and Ro- mans, &c. In this sense it continued among the Christian writers, till their religion was publicly, and by authority, received in the empire ; when gentiles, from gentes, came into use : and then both words had two significations, viz., in trea- tises or laws concerning religion, they signified pagans, neither Jews nor Christians ; and, in civil affairs, they were used for all such as were not Romans.

Gextile, in the Roman law and history, some- times expresses what the Romans otherwise called barbarians, whether they were allies of Rome or not : but tliis word was used in a more particular sense for all strangers not subject to the Roman empire.

GENTILESClIl (Horatio), an Italian painter, born at Pisa in 1563. After painting with great reputation at Florence, Rome, Genoa, and other parts of Italy, he removed to Savoy, thence to France, and at last came over to England, upon the invitation of Charles I., who appointed him lodgings in his court, with a considerable salary ; and employed him in his palace at Greenwich, and other public places. The most remarkable of his performances in England, were the ceilings j of Greenwich and York house. He painted also a Madonna, a Magdalen, and Lot with his two daughters, for king Charles. After the death of

ihe king, when the royal collection was sold, nine of these pictures drew £600. His mos* esteemed work abroad was the portico of cardinal Beiitivoglio's palace at Rome. He made several attempts at portrait painting, but with little success ; his talent lying altogether in historical or mythological figures. After twelve years residence in England, he died in 1647, aged eighty-four ; and was buried in the Queen's Chapel at Somerset House. His head was drawn by Vandyke.

Gentileschi (Artemisia), daughter of the preceding, was little inferior to her father in his- torical painting, and excelled him in portraits. She drew some of the royal family, and many of the nobility.

Gentleman originally comprehended all above the rank of yeoman; whereby even noble- men are properly called gentlemen. See Commonalty. A gentleman is usually defined among heralds, to be one who, without any title, bears a coat of arms, or whose ancestors have been freemen : and by the coat that a gentleman giveth, he is known to be, or not to be, descended from those of his name who flourished many hundred years before. The Gauls observing that, during the empire of the Romans, the scutarii and gentiles had the best appointments of all the soldiers, became insensibly accustomed to apply the same names, gentils-homines and ecuyers, to such persons. Gentlemen and esquires are confounded together by Sir Edward Coke ; who observes, that every esquire is a gentleman, and a gentleman is defined to be one 'wlio bears coat armour.' It is indeed a matter somewhat unsettled, what constitutes the distinction, or who is a real esquire ; for it is not an estate, however large, that confers this rank upon its owner. ' As for gentlemen,' says Sir Thomas Smith, 'they be made good cheap in this king- dom : for whosoever studieth the laws of the realm, who studieth in the universities, who pro- fesseth liberal sciences, and who can live idly and without manual labor, and will bear cl'.arge and countenance of a gentleman, he shall l)e called master, and shall be taken for a gentle- man.'

Gentleman Usher of the Black Ron. See Usher.

Gentlemen of the Chapel; officers whose duty and attendance is in the royal chapel, being in number thirty-two. Twelve of them are priests : the other twenty, commonly called clerks of the chapel, assist in the performance of divine service. One of the first twelve is chosen for confessor of the household servants, to visit the sick, examine and prepare communicants, and administer the sacrament. One of the twenty clerks, well versed in music, is chosen first organist, who is

master of the children, to in- struct them in music, and whatever else is neces- sary for the service of the chapel ; a second is likewise an organist ; a third a lutanist; and a fourtti a violist. There are likewise three vergers, so called from the silver rods they carry in their Innds ; being a Serjeant, a yeoman, and groom of the vestry : the first attends the dean and sub- dean, and finds surplices and other necessaries for the chapel ; the second has the whole care of

the chapel, keeps the pews and seats of the nobility and gentry ; the groom has his attendance wuthin the chapel door, and looks after it.

GENTOOS, in modern history, according to the common acceptation of the term, denote the professors of the religion of the bramins or brachmans, who inhabit the country called Hin- dostan, or Indostan, in the East Indies, from the word stan, a region, and hind or hindoo : which Ferishteh, as we learn from colonel Dow's translation of his history, supposes to have been a son of Ham, the son of Noah. Hindoo, how- ever, is not the name by which the inhabitants originally styled themselves; but, according to the idiom of tiie Sanscrit which they use, jum- bodeep, from jAmboo, a jackall, an animal com mon in their country : and deep, a large portion of land surrounded by the sea : or bliertekhunt, from khunt, i. e. a continent, and bherihut, the name of one of the first Indian rajahs. They have assumed the name of Hindoos only since the eia of the Tartar government, to distinguish themselves from thei"" conquerors the Mussulmans. The term gentoo or gent, in the Sanscrit dia- lect, denotes animal in general, and, in its mora confined sense, mankind, and is never appr'— priated particularly to such as follow the doc- trines of Brhima. The Gentoos are divided into four great tribes, each of which has its owi separate appellation ; but they have no conunou or collective term that comprehends the whole nation, under the idea affixed by Europeans to the word Gentoo. Mr. llalhed, in the preface to his translation of the Code of Gentoo Laws, conjectures, that the Portuguese, on their first arrival in India, hearing the word frequently in the mouths of the natives, as applied to niaukind in general, might adopt it for tlie domestic ap- pellation of the Indians themselves; or perhaps their bigotry might figure from tlie word Gentoo a fanciful allusion to Gentile. The Hindoos, or Gentoos, vie with the Chinese as to the antiquity of their nation. They reckon the duration of the world by four jogues, or distinct ages: The first is the Suttee jogue, oi age of yjurity, which is said to have lasted about 3,200,000 years ; during which the life of man was 100,000 years, and his stature twenty-one cubits : The second, the Tirtah jogue, or the age in which one-third of mankind were reprobated ; which consisted of 2,400,000 years, when men lived to the age of 10,000 years: The third, the Dwapar jogue, in which half of the human race became

depraved ; which endured to 600,000 years, when men's lives were reduced to 1000 years: and, fourth, the CoUee jogue, in which all mankind were corrupted, or rather diminished, which the word coliee imports. This is the present era, which they suppose will subsist for 400,000, of which nearly 5000 are already past ; and man's life in this period is limited to 100 years. Many au- thors suppose that most of the Gentoo sliasters, • or scriptures, were composed about the beginning of the coliee jogue : but an objection occurs atrainst this supposition, viz. that the shasters take no notice of the deluge ; to which the brah- mins reply, that all their scriptures were written before the time of Noah, and the deluge never extended to Uindostan. Nevertheless, it ajv

pears from the shasters themselves, that they claim a much higher antiquity than this ; instances of which are recited by Mr. Halhed. The doc- trine of transmigration is one of the distinguish- ing tenets of the Gentoos. It is their opinion, according to Mr. Holvvell, that those souls which have attained to a certain degree of purity, either by the innocence of their manners or the severity of their mortifications, are removed to regions of happiness proportioned to their respective merits; but that those who cannot so far surmount the prevalence of bad examples, and the powerful degeneracy of the times, as to deserve such a promotion, are condemned to undergo continual punishment, in the animation of successive ani- mal forms, until, at the stated period, another renovation of the four jogues shall commence, upon the dissolution of the present. They ima- gine six different spheres above this earth ; the highest of which, called suttee, is the residence of Brhima or Brahma, and his particular favorites. This sphere is also the habitation of those men who never uttered a falsehood, and of those women who have voluntarily burned themselves with their husbands; which practice is expressly enjoined in the code of the Gentoo laws. This code, printed by the East India Company in 1776, is a very curious collection of Hindoo juris- prudence, which was selected from curious origi- nals in the Sanscrit language, by the most experienced pundits, or lawyers ; who were em- ployed for this purpose from l\Iay 1773 to February 1775; afterwards translated into the Persian, and then into English, by Mr. Ilalhed. The institutes contained in this collection are in- terwoven with the religion of the Gentoos, and revered as of the highest authority. The curious reader

will discover an astonishing similarity be- tween the institutes of this code and many of the ordinances of the Jewish law ; between the cha- racter of the brahmins or priests, and the Levites ; and between the ceremony of the scape goat under the Mosaic dispensation, and a Gentoo ceremony called the ashummed jug, in which a horse answers the purpose of the goat. Many obsolete customs and usages, alluded to in many parts of the Old Testament, may also receive il- lustration from the institutes of this code. It appears from the code, that the brahmins, who are the priests and legislators of the country, have resigned all the secular and executive power into the hands of another cast or tribe ; and no brahmin has been properly capable of the magis- tracy since the time of the suttee jogue. The only privilege of importance which they have appropriated to themselves, is an exemption from all capital punishment : they may be de- graded, branded, imprisoned for life, or sent into perpetual exile ; but it is every where expressly ordained, that a brahmin shall not be put to death on any account whatsoever. The four great and original tribes into which the Gentoos are divided, according to their theology, proceed from the four different members of Brahma, the supposed immediate agent of the creation under the spirit of the Almighty. These tribes are, 1 . The Brah- mins, which proceeded from the mouth, and whose office is to pray, read, and instruct : 2. The Chehteree, which pro'":eeded from his arms,

whose office is to draw the bow, to fight, and to govern : 3. The Bice, which proceeded from his belly or thighs, who are to provide the necessa- ries of life by agriculture and traffic : and, 4, The sooder, from his feet, which are ordained to la- bor, serve, and travel. Few Christians, says the translator of the Gentoo code, have expressed themselves with a more becoming reverence of the grand and impartial designs of Providence, in all his works, or with a more extensive charity towards all their fellow creatures of every pro- fession, than the Gentoos. It is indeed an article of faith among the brahmins, that God's all mer- ciful power would not have permitted such a number of different religions, if he had not found a pleasure in beholding their varieties.

GENUFLECTION, n. s. Lˆt. genu, the knee, and Jiecto, to bend. The act of kneeling ; ado- ration expressed thereby.

Here use all the rites of adoration, genuflectioTis, wax-candles, incense, oblations, prayers only excepted .

Stillingjleet .

Genuflection, says the Jesuit Rosweyd in his Onomasticon, has been a very ancient custom in the church, even under the Old Testament dispensation; and was observed throughout the year, excepting on Sundays, and from Easter to Whitsuntide, when kneeling was forbidden by the council of Nice. Others have shown, that the custom of not kneelin.g on Sundays had ob- tained from the time of the Apostles, as appears from St. Irenaius, and TertuUian; and the Ethi- opic church, scrupulously attached to the an- cient ceremonies still retains that of kneeling at divine service. The Russians esteem it an inde- cent posture to worship God on the knees. The Jews usually prayed standing. Rosweyd gives the reasons of the prohibition of genuflexion on Sundays, &c., from St. Basil, Anastasius, St. Justin, See.

GEN'UINE, adj. -\ Lat. genuinus. True ;

Gen'uinely, ttc/u. >real; opposed to what-

Gen'uineness, w. s. 3 ever is false, adulte- rated, impure, or mixed.

Experiments were at one time tried with genuine materials, and at another time with sophisticated ones.

Buyle.

There is another agent able to analize compound bodies less violently, more genuinely, and more uni- versally than the fire. Id, A sudden darkness covers all ;

True genuine night : night added to the groves.

Dryden, The stream of pure and genuine love Derives its current from above ; And earth a second Eden shows. Where'er the healing water flows, Cowper.

GENUS, n. s. Lat. A scientific term to de- signate a class of being which comprehends many species : thus quadruped is a genus including almost all terrestrial beasts.

If minerals are not convertible into another species, though of the same genus, much less can they be sur- mised reducible into a species of another genus.

Harvey on Consumptions.

A general idea is called by the schools genus, and it is one common nature agreeing to several other common natures : so animal is a

genus, because it agrees to horse, lion, whale, and butterfly. Waits.

Genus is also used for a character or manner applicable to every thing of a certain nature or condition : in which sense it serves to make divisions in divers sciences, as medicine, natural history, &c.

Genus, in medicine. See Medicine.

Genus, in metaphysics and logic, denotes a number of beings which agree in certain gene- ral properties common to them all; so that a genus is nothing else but an abstract idea, ex- pressed by some general name or terra. See LuGic and Metaphysics.

Genus, in natural history, a subdivision of any class or order of natural beings, whether of the animal, vegetable, or mineral kingdoms, all agree- ing in certain common characters. See Botany and Zoology.

Genus, in rhetoric. Authors distinguish the art of rhetoric, as well as orations or discourses produced thereby into three genera, demonstra- tive, deliberative, and judiciary. To the de- monstrative kind belong panegyrics, genethlia- cons, epithalamiums, funeral harangues, &c. To the deliberative, persuasions, dissuasions, com- mendations, &c. To the judiciary, accusations and defences.

GEOCE'NTRICK, adj. Fr. geocentrique ; Gr. yi} the earth, and cevrpov- Applied to a pla- net or crb having the earth for its centre, or the same centre with the earth.

GEOD.ESIA, n. s. > Gr. yeutSoKTia. A term

Geod.etical, adj. i that has been sometimes applied to that part of geometry which contains the doctrine of measuring surfaces, and finding the contents of all plain figures.

GEOFFR/EA. See Geoffroea.

GEOFFREY, of Monmouth, bishop of St. Asaph, called by our ancient biographers Gallo- fridus Monumeiensis. Leland conjectures that he was educated in a Benedictine convent at Monmouth, where he was born; and that he became a monk of that order. Bale, and after him Pits, call him archdeacon of Monmouth ; and it is generally asserted, that he was made bishop of St. Asaph, in 1151 or 1152 in the reign of

king Stephen. His history was probably finished after 1138. It contains a

fabulous account of British kings, from Brutus the grandson of iEneas the Trojan to Cadwallader in 690. But Geoffrey, though we may blame his credulity, was not the inventor of the legen- dary history. It is a translation from a MS. written in the British language, and brought to England from Armorica by his friend Gualter, archdeacon of Oxford. But the achievements of kmg Arthur, Merlin's prophecies, and many speeches and letters, were chiefly his own addi- tions.

GEOFFROY (Stephen Francis), M. D., a celebrated French physician, botanist, and che- mist, born in Paris, in 1672. After having finished his studies he travelled into England, Holland, and Italy. In 1704 he received the degree of M. D. at Paris; and at length became professor of chemistry, and physician of the Royal College. He was F. R. S. of London, and of the Academy of Sciences. He wrote several very curious theses in Latin, which were afterwards translated into French ; and a trea- tise entitled Tractatus de Materiti Medici, sive de Medicamentorum Simplicium, llistoriii, Virtute,. Delectu, et Usu. He died in Paris, in 1731.

GEOFFRQi\, or Geoffroya, in botany, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, pa- pilionaceae : cal. quinquefid, the fruit an oval plum, the kernel compressea. Species three, the principal is,

G. inermis, the cabbage-bark tree, a native of Brasil and Jamaica. The wood is used in building; but it is chiefly valued fur its bark, which is administered as an anthelmintic medi- cine. From this medical property it is also called the worm-bark tree. This bark is of a gray color externally, but black and furrowed on the inside. It has a mucilaginous and sweetish taste, and a disagreeable smell. It is given in cases of worms, in form of powder, decoction, syrup, and extract. The decoction is preferred, and is made by slowly boiling an ounce of the fresh dried bark in a quart of water, till it assume tlie color of IMadeira wine. This sweetness is the syrup; evaporated, it forms an extract.

GEOGRAPHY.

.■\ Gr. yjj the earth, ^^and ypa^w, to de-

GEOG'RAPHER, H.i.

(jEOCiRAPIl'iCAL, adj.

Geoo'kaphy, n. s. ˆscribe. The science

Geograpii'icam.y, a

Mcthinks it would please any man 'o look upon a geographical ma.ˆ. Hurton. Amit. Mel.

A greater part of the earth liath ever been ptopled than hath been known or described by geographers.

Browne.

The bay of Naples is called the Crater by tlie old geographers. Addison.

According to ancient fables the Argonauts sailed up the Danube, and from tb«nce passed into the Adrialick, carrying their ships upon their shoulders : a mark of great ignorance in ginqniphi/. Arbuthnot, From sea to sea, from realm lo realm 1 rovr.

And grow a nn:i:i gcˆ'graphcr by love. Tickcl.

Minerva lets Ulysses into the knowledge of his country ; she geographically describes it to him.

Broome on the Odyisey.

Geography, as a science, embrace?, together with a description of tlie earth itself, and its physical peculiarities, the consideration of all its great political and statistical divisions : the lat- ter being sometimes detailed in systems ; some- times, as in gazetteers, alphabetically. It has its own history as a science, and it is intimately connected with all history.

As we regard society in its earlier stages, and the jirogenitors of ma' kind gradually peopling the earth, the materials of this science accumulate. The progress of the wanderers becomes bounded by this formidable mountain range, or that mighty orf'

greater rivers of the world, and their access to them; while their])olitical and intellectual cha- racter, and even their moral and religious habits, are affected by the extent of their migrations, the intercourse they maintain with their parent tribes and with each

other, and the climate in which they finally settle. \Vhen history becomes more important, the name and description of each groupe of human abodes are still more interest- ing.

As the circle of civilisation spreads and en- larges, the knowledge of distant regions becomes at once more exact and more widely diff'used. Whether we trace its enlargement en a greater or less scale, as conducted by the emigration or ex- tended dominion of the more enlightened tribes, or as connected with the enterprise and restless- ness of individuals, man appears designed to multiply his accommodations by exchanging the varied advantages and productions of every part of the earth : and he either becomes, with his ex- tended knowledge of them, more contented with his existing allotment on its surface, or stimulated to seek out for himself a better.

If even we contemplate the march of concjuest, and the actual foundation which it has supplied of the existing political arrangements of the world, geographical information wdl be often found to have invited the successful expedition — always to have attended it. Ignorance, in fact, of the horrors of a northern winter, v.ill appear to have providentially hastened the downfal of a modern Alexander; while Alexander of Ma- cedon will be seen to have added greatly to our knowledge of the eartli, by including some of the ablest of ancient geographers in his suite; charged with the duty of making observations on both the coasts and the interior of the provinces through which he passed. In their journals, it is well known, we find to this day some of the oldest and most important land-marks between the real and fabulous geocrrapliy of Asia.

We propose to call the attention of our readers in this article to I. A History of the Progress of Geographical Discovery from the earliest periods. ir. Tlie Physical and Political Geography of the Globe. III. A Sketch of Technical or Artificial Geography.

PART I. •

OF THE PROGRESS OF GEOGRAPHICAL DIS- COVERY.

This will be found conveniently divided into the History of Ancient and Modern Geography; that is, the progress of this science as known to the ancient world, or until the period of the first Portuguese voyages ; and its important and rapid advances since that period. The geography of the middle ages has no distinctive characters that require in this place particular consideration

Sect. I. — Of Axciknt Geography.

Some portions of geographical knowledge are found amongst the most uncivilised tribes; but it is local, and confined to their own immediate haunts, or wild and visionary, associated with innu- merable superstitions. The geography of the most ancient nations was long and necessarily of the

former character: it was limited by the sphere of their own wants and their own experience. As mankind settled tiieinselves in permanent abodes they had more time to become speculative about distant regions; as they spread themselves on the surface of the earth they acquired a real know- ledge of its productions and peculiarities. It is easy to perceive how rapidly this kind of know- ledge would thus be generated amongst men, considered as a whole, and that it w-ould of ne- cessity, as amongst the most useful, be found amongst the earliest of their acquirements : but mankind never long remained as a whole ; there were the same means of geographical as of many other kinds of knowledge in the ancient, as in the modern world, but the difficulties of communi- cating and therefore of perfecting it were great, and the methods of perpetuating it few and very partially cultivated.

The antediluvian geography is altogether a matter of sacred history ; for, while all nations retain traditions of the flood and its conse- quences, in the writings of Moses only have we any consistent account of either : to the few traces, therefore, of this the 'earliest dawp' of the science, preserved in those writings, we may at once refer the reader. It chiefly involves two or three curious questions of biblical criticism, such as the locality of Eden, the site of Ararat, &c.

Both before and after the flood the longevity of man was favorable to the diffusion and trans- mission of this and every other kind of know- ledge ; but the dispersion of mankind, accord- ing to the most approved construction of Gen. xi., would more than counterbalance this: they were now compulsorily the dependent and pilgrim be- ings they were so unwilling to acknowledge themselves; and, thinly peopling large districts, would soon lose the remembrance of a common origin. It is worthy of remark, however, that near the plains of Shinar, where Moses fixes the scene of their early attempt to settle themselves, and the point of their dispersion, the two earli- est empires, Assyria and Babylon, were estab- lished ; and a more central spot, from which all the countries first inhabited could be reached (including even China) cannot be found upon the earth.

The Egyptians are the earliest settled people of whose internal polity

we have any account. Some writers have supposed that Misraim, which Moses informs us was its ancient name, is a word of dual termination, derived from Maser, a fortress ; and consider it to designate the two Egypts, Upper and Lower. This is conjectural enough ; but in the time of Abraham, 1920 years before the Christian era and above 1000 prior to the birth of Herodotus the father of Grecian his- tory, we learn from the pentateuch that Egypt was a monarchy, under a king of the name of Pharaoh ; under tillage, perhaps, or a corn coun- try, and therefore a resort in famine : and after the lapse of about 200 years we find it under the same form of government, rich and well culti- vated ; possessing an established priesthood, whatever were theii pretensions,' who had a con- siderable landed property ; and that the rest of

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the lands were held in fee simple, as we should say, by the private occupiers. It had also a class of men styled in our translation 'physicians.' Its monarch was surrounded by a court and ap- pointed officers. We read also of his chariots ; and of waggons, vestures of fine Imen, rings, gold chains, silver cups, and other traces of civi- lisation and opulence among the people.

The Phctnicians, less favored in regard to the soil of their country, are the first people of whose maritime expeditions we have any consistent ac- count ; the.r situation on the shores of the Mediterranean familiarised them to the sea; and so early as 600 years after the deluge, the naviga- tion and commerce of Sidon (one of their cities) had acquired a celebrity that the patriarch Jacob mentions at the moment of his death. Gen, xlix. 13. At a later period these merchants founded colonies in Africa, Spain, and other countries of the Mediterranean ; and even extended their na- vigation beyond the Pillars of Hercules into the ocean. It seems also certain that they navigated the Indian seas ; for the ships of Hiram are said to have brought gold to Solomon from Ophir, which is generally thought to have been situated on the western side of that peninsula. They seem, indeed, to have been the early carriers of all civi- lised nations, and to have been as careful to conceal their discoveries as possible, that they might retain this monopoly.

We now come to the earliest traces of geo- graphical knowledge among the Greeks. Homer, in the eighteenth book of the Iliad, describes the shield of Achilles as representing the cos- mography of the age, and on it the earth is figured as surrounded by the sea, or rather by a large river, the sources of whicli Ilesiod after- wards placed near the pillars of Hercules. The disk included the ˆMediterranean much con- tracted on the west, the vV.gean and part of the Kuxine seas, so that Greece is the centre of Homer's world. On the west, the geosˆraphyof tlie poet did not extend beyond the kingdom of Ulysses, coinprehending the isles of Same, Za- cynthus, and some others, with a part of the neighbouring continent : beyond this his know- ledge was vaiˆue and confined, and the strait which separates Sicily from Italy may be considered as the vestibule of his fabulous world ; wiiere the floating rocks, the howling of the monster Scylla, and the terrific Charybdis, all demon- strate that we are in tlie regions of romance.

Sicily, though known to Homer by its appro- priate name of Tliinacia (afterwards Tiirinacra), is also peo])led with wonders. Here he places the flocks of the sim guarded by nymjihs ; the Cyclops, and tlie Lestiy-'ˆones Anthropophaˆii. In following tlie poet west of Sicily, we find our- selves in the regions of pure fable, amongst the enchanted isles of Circe and Calypso, and the floating domains of Kolus. It is, uideed, evi- dent that Homer must have been almost totally ignorant of tlie geography of the Mediterranean, west of Sicily ; for he makes Ulysses go from the Isle of Circe to tho entrance of the ocean in one day, and allows him only the same time to return from t!ie Isle of the Enchantress to the Strait of Sicily.

Following the poet to the north-cast, we find

him in like manner gradually immerging into the regions of fable. After passing through the Hellespont, &c., into the Euxine, he mentions the Halizones, a people possibly inhabiting the banks of the Halys, beyond whom are the Ama- zons, a nation of female warriors, to whose country succeeds the kingdom of Colchis, near the circumference of the disk, on which the poet places the palace of the sun, and the theatre of the amours of Apollo, with a daughter of the ocean.

The geography of Homer to the south-east is more rational : we find him acquainted with the whole west coast of Asia Minor ; and not entirely ignorant of the country of the Phoenicians, whose purple stuffs, gold and silver works, naval science, avidity, and cunning, afford him the subjects of several strains; nor of Egypt, whose river he

knew by the name of Egyptos, and of whose inhabitants he praises the medical skill. Between Egypt and the Pillars of Her- cules the distance is much shortened, and is oc- cupied by a country named Lybia, where, says the poet, ‘the lambs are born with horns, and the sheep bring forth three times a-year.’

Above the earth, according to Homer, was a solid vault or firmament, under which the sun and moon])erformed their daily journeys in chariots rolling on the clouds. In the morning the luminary of day arose from the bosom of the eastern ocean, and in the evening sunk in the western ; a golden vessel, the workmanship of Vulcan, during the night, transported him back by the north to the east. Beneath the earth the poet also placed a vault, named Tartarus corresponding with the firmament, where, in eternal night, dwelt the Titans, the enemies of the gods. Hesiod even determines tlie height of the firmament, and the depth of the gulf of darkness; an anvil, says he, would be nine days falling from the heavens to the earth, and as many descending from the earth to the bottom of Tartarus.

On the west. Homer’s world was terminated by two fabulous countries. Near the sources of the ocean, and not far from the dismal caves of the dead, were the Cimmerians, an unhappy people, immersed in eternal darkness ; beyond them in the ocean, and, consequently, according to the poet, beyond the limits of the earth and the empire of the winds and seasons, is Elysium ; where neither tempests nor winter are ever felt, where the soft zephyr continually murmurs, and where the elect of Jupiter, snatched from the common lot of mortals, enjoy eternal felicity. Beyond tiiis happy region, the earth was enveloped by an indefinite chaos; ‘a confused mixture of existence and notliino-; a gulf, wliere all the elements of heaven and Tartarus, of the earth and the ocean, were confounded ; a gulf, dreaded by the gods themselves.’

Near the unhappy Cimmerians, and the ever blessed inhabitants of J’.lysium, Hesiod])laces the M aerobians, a people of large stature, adorned with all tlie virtues, and whose lives were prolontxed to 1000 years at least ; ‘ the nectar of flowers was tlieir food, and the dew of heaven their beverage.’ In the same neighbour- hood this poet places the Arimaspes, a very clca

sighted people thougli with but one eye ; and the Griphoiis or

guardians of the precious metals in the lliphaan mountains. As the geography of the west was extended, all these marvellous people were transferred onwards ; the Cimme- rians to Asia Minor and Germany, where two people were found with names somewhat similar, inhabiting the shores of the Cimmerian Bos- phorus, and the Cimbrick Chersonesus. The Hyperboreans, another fabulous people of the Greeks, were successively transferred to an island which corresponds with Great Britain, and to the northern extremities of the earth, where tliey were made to inhabit a very agree- able country, explained by the days and nights being each six months long, or by the momen- tary proxmiity of the sun, when, according to the ideas of Homer, he passes during the night by the northern ocean to return to his palace in the east

In the age of Homer indeed the Greeks were so little skilled in navigation, that the most tri- fling voyage was considered an heroic enter- prise. Thus Menelaus employed eight years in visiting the Isle of Cyprus, Phoenicia, Egypt, and Lyhia; and none but pirates ventured, he tells us, at the risk of their lives, to steer direct from Crete to Lybia.

The ancient and famous voyage of the Ar- gonauts is founded on the Homeric cosmography. Jason and his companions, according to Hesiod, passing from the Mediterranean by the Euxine and Phasis into the Eastern Ocean, were pre- vented from returning by the same route, in consequence of the fleet of Colchis blockading the Bosphorus, and were obliged to make the circuit of the coast of the Ethiopians, and to cross Lybia by land, drawing their vessels with them. After a journey of four days, in this manner, they arrived at the gulf of Syrtis in the Mediterranean. Other ancient writers conduct the Argonauts back by the Nile, which they supposed to communicate with the Eastern Ocean, while later ones endeavour to reconcile the ancient tradition with the discoveries of their own times, and make them take a route by the Palus Mccotis and Tanais into the northern ocean, and round the supposed northern limits of the earth, by the west to the Strait of Hercules, by which they again enter the Mediterranean. Finally, when the non-existence of the commu- nication between the Palus Mseotis and the northern ocean was proved, the Argonauts were supposed to have ascended the Danube; a branch of which was thouglit to empty itself into the Adriatic.

These vagiu- gei'g\a\ hical traditions were gradually, how(\>H, exploded by the foreign wars of the Greeks, and by the growing spirit of ambition, whiih obliged or induced a portion of them to seek new couulries, and new sources of riches and povveu Tlie Milesians and Me- garians formed commercial establishments on the Euxine. The

Corinthians colonised Sicily, while the Phocseans, flying from oppression, settled in Sardinia, in Corsica, and in Gaul, where they founded Marseilles. Coleus, a Sa- niian, driven out of his course by a tempest, passed the Strait of Hercules, and navigated the

Atlantic. After visiting Tartessus, the Peru of these ages (probably a portion of the South of Spain), he returned to Greece with such richej as awakened the enterprise of other adventurers The Phoenicians in vain attempted to check th navigation of the Greeks ; the latter, on the con- trary, appear to have procured some of the charts of that people, and Anaximander, a Milesian, first published a map of the world. He, how- ever, compared the earth to a cylinder, Leucip- pus to a drum, Heraclitus to a boat, while others gave it a cubic form, and Xenophon and Anaxi- menes are said to have thought it a vast moun- tain whose base extended to infinity, and which the heavenly bodies illuminated by revolving round it.

Herodotus now, however, challenges the praise of narrating only what he saw himself or learned from ocular witnesses. He visited in the course of his long voyages and journeys the Greek colonies of the Euxine from the Bos- phorus to the Phasis, but he adheres to the Ho- meric system in many respects. He describes the world as divided into three parts ; but Eu- rope separated, according to him, from Asia, by the rivers Phasis and Araxes and by the Caspian Sea, he supposes larger than Asia and Lybia taken together. He believes that a fleet sent by Darius circumnavigated Asia from the Indus to the confines of Egypt, while, with regard to Africa, he was unacquainted with any point be- tween Carthage and the Pillars of Hercules. On the east coast, he was well acquainted with the shores of the Arabian Gulf, but makes this con- tinent terminate considerably north of the equa- tor. He has also preserved to us the traditionary relation of a voyage of the Phoenicians round Africa. With respect to the North of Europe, he knew that the Phocnican colony of Gadez re- ceived tin and amber from these regions, but could not fix the position of the Cassiterides, whence came the first of these objects, and was yet more ignorant of the country where they ob- tained the second.

A voyage of Hanno, prince of tlie Carthagi- nians, the descendants of the Phoenicians, was performed about the time of Herodotus. He sailed from Carthage to found colonies on the coast of Lybia, beyond the Pillars of Hercules, with a fleet of sixty vessels, each rowed by fifty oars, and escorting a convoy with 30,000 persons of both sexes. Some geographers limit the extent of Hanno’s navigation on the coast of Africa to Cape Nun, others extend it to Caj)e Threepoints on the coast of Guinea. Major Rennell terminates it near Sierra Leone.

Hamilcar, in the same century, after a voyage of four months to the North, arrived at the isles Oystrymnides, probably Sci'.ly, and on the coast of Albion. It seems also probable, that the Car- thaginians had even before this discovered the Canaries. Aristotle, speaks of an island, the beauty of which had drawn to it in his time such numbers of the Carthaginians, that the senate forbade any further emigration thither, on pain of death; and Diodorus mentions a similar discovery of them.

Tliese ideas of a fertile distant island of the ocean, Plato found circulating in Egypt, and,

clothing them in his own poetic Linguage, creates his celebrated Atlantic Island, ' the most beautiful and fertile country of the universe, producing abundance of corn and fruits of the most ex(niisite flavor; containing immense forests, vast pastures, mines of various metals, hot and mineral springs, in short, everj' thing necessary to the wants or pleasures of life. Its political government was admirable, being go- verned by ten sovereigns, all descended from Neptune, and who, though independent of each other, all lived in harmony ; its commerce was fiounshincT, and it contained several large cities with a great number of towns and rich and po- pulous villages. Its ports were crowded with foreign vessels, and its arsenals tilled with mate- rials for the construction and equipment of fleets. Neptune, who was the father, legislator, and god of the Atlantides, had here a temple a stade in length, covered with silver and ivory, and which contained a golden statue of the god, the height of the temple. The descendants of Neptune reigned over the island 9000 years, and extended their conquests over all Lybia to Egypt, and over Europe to Tyrrhenia, their in- cursions even extending to Greece, but here they were repelled by the Athenians. At length this warlike nation, after having rendered its name celebrated throiighout the world, suddenly disappeared, an inundation, caused by an earth- quake, submerging the whole island in a night and a day.'

About the time of the Peloponnesian war, Scylax collected the itineraries of the navigators of his time, and what has been preserved of the collection contains the coasts of the Palus Mte- otis, the Euxine, the Archipelago, the Adriatic, and all the Mediterranean, with the west coast of Africa as far as the isle of Cerne of Ilanno, or Fedalle, according to Gosselin. Beyond this, says the Greek, the sea is not navigable on account of the thick herbs with which it is covered.

Half a century after, Eudoxus of Cnide first applied geographical observations to astronomy ; and Aristotle inferred about the same time the sphericity of the earth from the observations of travellers, that the stars seen in Greece were not visible in Cyprus or Egypt. The same philo- sopher supposed the coasts of Spain not very distant from those of India ; and describes the habitable earth as a great oval island surrounded by the ocean, terminated on the west by the river Tartessus, (probably the Guadalquivir), on the east by the Indus, and on the north by Albion and lerne.

Nearly in the century after Aristotle (B. C. 344) the voyage of Pytheas took place, respect- ing which great diversity of opinion exists amongst geographers. lie is said to have de- parted from Marseilles, coasted Spai.n, France, and the east side of Britain, to its northern ex- tremity; whence, still continuing his course to the north, after six days* navi>.ration he arrived at a land called Thule, the situation of which is a great object of discussion : the most probable conjecture is that it is a part of the coast of Jutland.

We liave intimated how important was the

expedition of Alexander to the progress of this science. As well as the direct services per- form.ed by his suite, we owe to him our know- ledge of the books previously buried in the ar- chives of Babylon and Tyre, which were now by his order transferred to the city to which he gave his name ; and thus the astronomical and hydrographical observations of the Phoeni- cians and Chaldeans became accessible to the Greeks.

Commercial etiterprise soon after stimulated the Greeks to further exertion : the iNIarsellais, endeavouring to follow the route of Pytheas, visited the north; and Euthymenes, in a voyage along the west coast of Africa, arrived at a large river, probably the Senegal, which he described as similar to the Nile. At about the same period the Greek kings of Egypt caused a trade to be opened with India from the ports of Berenice and Myoshormos on the lied Sea ; and Ptolemy Philadelphus sent geographers into Asia. In the same reign Timosthenes published a descrip- tion of the known sea-ports, and a work on the measure of the earth. The navigation of the Indian seas, however, was at this time very im- perfect; tiie Greek fleets continuing to creep along the shores as far as the Indus, but having their chief intercourse with the coasts of Ethi- opia and Arabia Felix : the monsoons appear indeed to have been entirely unknown to them. Hipparchus, it would seem, had some notions of India beyond the Ganges. He attempted to reduce geography to astronomical and

mathe- matical bases ; but, having few celestial obser- vations, his map of the world is filled with erroneous hypotheses. He was the first who conceived the notion of a southern continent uniting Africa and India. Eudoxus of Cyzicus first suggested the jiossibility of sailing round Africa by the south. Strabo relates, after Possi- donius, the grounds on which that navigator made this conjecture, and the voyage in which he found the prow of a ship, which came from the west, in returning towards the Arabian Gulf from India. But he never seems himself to have completed a voyage in that direction.

Polybius was the first Roman writer whose contributions to geographical science are of any importance. He himself examined the coast of Africa as far as Mount Atlas, and first ven- tured to think that the torrid zone might be ha- bitable.

Strabo, at the commencement of the Christian era, formed a complete system of geography. He first describes Iberia (Spain), with the coasts of which he seems pretty well acquainted. Near them he places the Cassiterides or Isles of Tin, which according to one part of his writings, are north of tlie port of Artabres (Corunna), accord- ing to another parallel with Britain. For all the geographers of this period made Britain a tri- angular island, of which the southern point was but little distant from the northern coast of Spain. The Cassiterides were therefore evi- dently the Scilly Islands, long the Carthaginian point of refreshment in their visits to Britain for tin.

Strabo was not so well acquainted with the coast of Gaul, and still less with Albion and

!‘erne ; the latter he says is reported to be alto- gether ster-le and inhabited only by Anthropo- phagi. This is the last country of his geography towards the north, and, as he disbelieved the voyage of Pytheas, the continent of Europe terminated with hnii at the Elbe.

This writer was also hut imperfectly acquainted with the north coast of Africa ; for he makes the distance between Sicily and the pillars of Her- cules only 13,000 stades. On the west coast his map is limited to about Cape Roxo, for he seems to have been unacquainted with lianno’s voyage, and on the east coast his knowledge did not extend, it would seem, beyond Cape Bandellans, his Noti Cornu or southern Horn. Thus the coasts of Africa were unknown beyond tlie latitude of

12° N. Strabo places at the south- west extremity the Ethiopes Etherii, and at the south-east the region of Cinnamon, Be- tween these extremes he admits but a small space, which the great heat had prevented being visited, and this extremity of Africa he supposed to be washed by the Indian and Atlantic Oceans, which here met: an opinion which maintained its ground against the idea of India and Africa being united, until the discovery of the Cape of Good Hope. Eastward the details of Strabo's geograpliy seem only to have included the mouth of the Indus ; though he had some conjectural knowledge of Taprobana (Ceylon), derived from the Greek expeditions to this neighbourhood.

It is only in the later years of the Roman re- public that we find any accurate description of the Canaries amongst that people. This was given by Statins Sebosus; who collected at Gadez all the particulars which Sestorius and others wlio had previously fled from Rome thi- ther had transmitted into Spain ; and they now received the name of the Fortunate Islands.

In the first century of the Christian era ap- peared the Periplus of the Erythrean Sea, a ■work which marks distinctly tlie progress of discovery at this time on the coasts of Africa and India. The Noti Cornu of Strabo, no longer bounded the voyages undertaken along the east- ern shores of the former continent, but they were extended to the port of Rapta and the isle of Menutias, corresponding with Bandel Velho and the island of Magadoxca. Beyond Rapta however, says the writer, ' the ocean is entirely unknown, but is believed to continue its western direction, and after having washed the south coast of Ethiopia to join the western ocean.' The Periplus gives a description of the west coast of India from the Indus to Ceylon, and mentions a part of the coast between Bombay and Goa as infested with pirates. Tlie east coast of the Indian Peninsula is less accurately traced. India beyond the Ganges was known to the au- thor of the Periplus only by report. This work however mentions the monsoon of these seas.

Great Britain seems to have been first ascer- tained to have been an island by the Roman fleet sailing round its north extremity, in the reign of Vespasian. Ireland also became at this period better known from the intercourse of the Impe- rial armies with tlie Britons. The Roman ar- mies in the; same century are thought .to have readied the shores of the Baltic through Ger-

many: they named this the Sarmatic Sra. The Cimbric Chersonesus of Ptolemy is evidently the Danish peninsula; the Codanus Sirius of Pliny, the Cattegat; and the isles of Scandia., east of the Chersonesus, the

larger Danish isles and perhaps the coast of Schonen. The Ncri gon of Pliny is probably a part of the southern coast of Norway.

Pliny, indeed, considers the Ganges as the nortii-eastern limit of Asia, from which he sup- posed the coasts to turn to the north and to be washed by the sea of Serica, between which and the pretended strait communicating from the Caspian Sea to the Scythian or Northern Ocean he admits but a small space : hence he supposes it possible, that some Indians miglit have been driven in a storm from their own coasts to those of Germany. In the system of Pliny, it there- fore follows, that the ocean occupies the vast spaces of Siberia, Mogul, Tartary, China, &c.

Ptolemy's knowledge of the east coast of Africa was l)ounded on the south by the promontory of Pracum (Brava), and by the bay of Gonzales de Cintro on the west. He thought that to the south of this bay the coast of Africa, after first forming a gulf which he names Ilespericus, ex- tended indefinitely between the east and south to India. (Jn the coast of that country beyond the Ganges he places a great gulf, now supposed to be the bight of Martaban, which on the east bounded the Golden Chersonesus ; the Thinse of this writer was the boundary of classical geo- graphy in this direction.

Two remarkable specimens remain of Roman itineraries. The first is that of Antoninus, con- taning merely, like our common road books, the names of the different places, and their distance from each other. The other, the Peutingerian Table, is of later origin, and professes to exhibit a map of the world. This is twenty one feet in length, and one foot broad. Every feature in fact, is increased immeasurably in one direction, and diminished as much in the other : the Me- diterranean and Black Seas appear like rivers, rolling an amazing length ; while the three con- tinents are narrow strips of land through which they flow. In the longitudinal measures the space from Babylon to the Eastern Ocean occu- pies only one-eighth of the map, though it fills nearly half the space represented. In fact, the only object of this production appears to have been to exhibit the great roads leading from east to west through the Roman empire ; and eery other purpose of a map was sacrificed, if indeed at all contemplated, to this.

On the decline of the Roman empire, geo- graphy, with every other species of scientific knowledge, was committed, in the Christian na- tions, to the custody of monks and ecclesiastics. The only original work of cosmography that ap- peared between the second and sixth centuries, or rather the only one that has come down to us, is that of Cosmas, an Egyptian monk, who wrote about the latter period. He

conceived of the earth as a vast square plain, surrounded by a wallwhich supported the vault of the firmament ; and the succession of day and night as the eflect of a great mountain placed to the north of the earth, behind which the sun conceals himself

every night. This system, differing only from that of Ilomer in the square figure of the earth, was adopted by many Cliristiau writers of the middle ages.

The earth, in a chart constructed in 787, is represented as a circular planisphere, composed of three unequal portions; and beyond Africa to the south, there is said to be a fourth, which the ex- treme heat*t)f the sun prevents us from visiting, and on the confines of which are tlie fabulous unfipodes.

The followers of Mahomet, however, culti- vated astronomy and geography more success- fully. In the ninth century the Arabian naviga- tors had visited China, Sumatra, Java, and other islands of the Malay archipelago, while on the eastern coast of Africa their religion was esta- blished from the Red Sea to cape Corientes. Edrisi, however, who composed a treatise on geography in 1153, seems to have been ignorant of the union of the Atlantic and Indian Oceans ; for he depicts a large country extending from the coast of Africa to India beyond the Ganges. The navigation of the Arabs on the west coast of Africa does not appear to have extended beyond Cape Blanco ; but they speak of an apocryphal voyage of discovery to the west, which at the best seems only to have extended to the Canary Isles.

All tlie Arabian geographers adopted the an- cient idea of the earth being every where bounded by an ocean : one of them curiously eiiough compares it to an egg floating in water. Abulfeda, after Eratosthenes, describes the sea as terminating Africa immediately on the other side of the mountains of the moon. But their information respecting the Niger is the most curious. This they describe as the Nile of the Negroes, every where bordered by opulent states, and Howing from east to west into the sea.

Their countrymen, it is to be observed, had at this time subdued all Egypt and the northern coast of Africa, held by their descendants the Moors to this day. lience by means of the cararvans, which penetrated Africa then as now, their information on the subject of its interior

geography was not so far behind ours as the dis- tance of time would teach us to expect. Their arms, on the other hand, at the period of which we are speaking, had not yet penetrated up the Nile into Nubia; therefore all that tract of coun- try, with Abyssinia, is described by them in a very confused manner. In Asia they occupied Persia, Cabul, Bukharia, and all the finest pro- vinces of Ilindostan. Thus they acquired very extensive opportunities of becoming acquainted both with the interior and eastern extremities of that continent. The provinces of Khowarezm and Bukharia are described in narratives, which form still our chief authority for the interior of those countries. India was divided into two parts, Sind and IIind,the former comprehending the western, and the other the eastern part of that vast region. Of the peninsula of the Decan, .scarcely any thing was known except the cf)ast of Malabar, considered as forming part of Sind, and along which the Arabs had sailed as fir as Cape Comorin. Their Seranda is evidently the Indian name for Cf-ylon, and their Lamcry is

marked, by its productions of camphor, dyeing- wood, gold, ivory, &,c. to be Sumatra ; Java also is mentioned under the name of Al-Djavah. These geographers also knevr that the Spice Islands were situated somewhere in this region. In Eastern Asia, Thibet is designated under the appellations of Tobbat or Alboton, and China under those of Cathay, and Tchin or Sin ; the former denoting the northern, and the latter the southern provinces of that empire. Indeed all the regions, known to us as India beyond the Ganges, seem by them to have been compre- hended under the name of Sin. But the northern extremity of Asia was a portion of the continent little known to these writers.

Perhaps we should not omit to notice, that they chiefly regarded it as the terrific abode of Gog and ilagog, two enormous giants, who gra- dually retreated before the march of discovery. At this period their castle was seriously de- scribed as surrounded with walls of iron ce- mented with brass, and towers to the skies. Towards its base was a gate fifty cubits higli, also of iron, and secured by enormous bolts and bars. The people belonging to these chieftains appear to have comprehended all those which extended to the north and north-east of Asia. Those of Magog, the most remote, are described as of small stature.

The Norwegians, about A. D. 860, discovered the Faroe Islands and Iceland. In the, conclu- sion of the same century OthjE made a voyage from Norway to Eiarma (the Dwina), or the White Sea, which is the first time we hear of tlic North Cape of Lapland being doubled.

In 9.52 an Icelandic nobleman devoted a period of exile from his country to voyages of discovery : and, having heard that land had been seen far to the west, he directed his course that way, and arrived at a verdant shore, to which he gave the name of Groen or Greenland, and which was shortly after colonised by the Icelanders and Norwegians.

Biorn, an Icelander, in 1001, sailing fronj Norway to Greenland, was driven upwards of 1000 miles to the south-west, where he discovered a country, to which, on a second visit, he gave the name of Wuiland, from the wild grapes he saw there. Five years after its discovery the Norman Greenlanders formed a colony in tliis country; and in 1121 Greenland sent a bishop hither to convert the pagan colonists ; but from this period Winland becomes lost to the world ; many modern geographers think it to be Newfoundland.

Important additions were made to the geo- grapliy of Asia in the thirteenth century by Marco Paulo, a 'enetian of noble birth, lie penetrated by land to China, about 1270, and describes it in detail from his own ob- servation. Of Japan he speaks from the ac- counts of others: but he visited the coast of Tsionipa, notices Great and Little Java, which seem to be Borneo and Sumatra, and the isles Necaurau and Angana, in the Bay of Bengal (Naucauvery, one of the Nicobars, and Anda- man), the inhabitants of which, according to I'.iMi, were anthropophagi, with the hf ads of dogs! India he describes throughout the east and west

coasts of the peninsula, between the Ganges and the Indus : but, on the east of Africa, his know- ledge extended no farther than Zanguebar and the opposite part of Madagascar which he first made known.

ECT. II. — Of Modern Geography.

The invention of the mariner's compass is tlie important connecting link between ancient and modern geography. The first person who availed himself of it is said to have been a friar and as- tronomer of Oxford, Nicholas Lynn, who steered to the nordiern isles of Europe with the new guide, A. D. 1360.

But the Portuguese have the merit of leading the way in that more extended career of mari- time enterprise which has distinguished modem times. Early in the fifteenth century, in one of their voyages to

the coast of Africa, Puerto Sancto, or the Holy Haven, the least of the Madeiras, was discovered; in 1432 another of their navi- gators was driven on the Azores, which were at first supposed to be to the easternmost of Marco Paulo's oriental islands. It was not, however, until 1471 that the equator was crossed, and the islands in the gulf of Guinea discovered. In 1484 they arrived at the river Zaire; and here the country was taken formal possession of for the king of Portugal, by virtue of a papal bull, obtained in 1432, from Alexander IV., an instru- ment which granted the full sovereignty and pro- perty of the countries of the Infidels discovered by his subjects, to that prince.

At length, the terrors of the torrid zone being gradually dissipated, a fleet was fitted out under Bartholemew Diaz for the express purpose of attempting the passage to India by the south of Africa. This commander coasted Africa to within sight of its southern point, to which he gave the name of Cabo de Todos los Tormientos, from the violent storms he experienced off it ; but the want of provisions obliged him to return to Lisbon : and it was not until ten years after- wards (20th November, 1497) that Vasco de Garaa had the honor of doubling the promon- tory. He now passed along the eastern coasts of Africa, through the Mosambique channel to Melinda, and arrived at Calicut six months after- wards.

In the interim Columbus (see our article America) had performed his first three voyages. Vaso Nunez, in 1513, first obtained a glimpse of the Pacific Ocean from the mountains of Darien, and gave it the absurd name of the South Sea; and two years afterwards the coast of South America had been explored to the southern tropic.

Between 1510 and 1515 the Portuguese had visited all the islands of the Malay archipelago to the Moluccas. But a discovery greater than any hitherto made was reserved for the Spaniards. In 1519 Magellan discovered and passed the straits which still bear his name : after which, sailing north-west across the Grand Ocean for three months and twenty days without seeing land, he fell in with an island in fifteen degrees south, and shortly after with another in nine degrees, to which he gave the name of P°saventurado?, or Unfortunate, from their

aflfording him neither water ncr refreshments, when his crew were perishing with famine. From these islands, the situation of which is not exactly known, steering still to the north-west, he arrived at the groifp which he named the Ladrones, or islands of thieves, from the dis- honest disposition of the natives; and thence directing his course to the west, on the Saturday of Passion W eek he discovered what he

called the Archipelago of St. Lazarus, but which were subsequently named the Philippines. The first of this archipelago that Magellan touched at was Cebu, with whose king he took part in a war against his neighbours, and was killed in an inva- sion. The squadron sailed thence to Borneo and the Moluccas; discovered Timor; and, after many disasters, one ressel only, the \ˆictoria, the Admiral's ship, returned to Spain, round the Cape of Good Hope, arriving at Seville the 7th September 1522. This being the first ship that circumnavigated the globe, she was in great triumph drawn up into the city of Seville, and long preserved tnere. Her commander, Sebastian Cano, was ennobled, and received orders to wear for his coat of arms, a terrestrial globe, with the motto ' Primus circumdedisti me.' On their return to Spain the companions of Magellan were not a little surprised on being the first to realize the well-known problem of losing a day in sail- ing round the world westerly.

The progress of discovery was now rapid : the Portuguese would appear to have reached New Guinea, and even New Holland, between 1530 and 1540. Passing over minor discoveries of the Spaniards in the Pacific, in 1577 we find our own countryman, Drake, first conspicuous in this noble career. He obtained a commission from queer Eli- zabeth, by virtue of which he equipped a squad ron of five vessels, the largest only 100 tons and the smallest fifteen, with acomplement of 104 persons. With this small force he sailed from Plymouth the 15th of November, 1577, entered the Strait of Magellan the 20th of August the next year, and cleared it the 6th of September : an extra-ordinarily short passage, for no navigator since has been able to accomplish it in less than thirty- six days. Having coasted the whole continent to the north extremity of Mexico, and being laden with the spoils of the enemy, he deter- mined to seek a northern passage into the Atlan- tic. In this pursuit he sailed along the coast to which, from its cliffs, he gave the name of New Albion, and took possession of it in the usual form for England. At Cape Blanco he found the cold so great, that he gave up the search of a passage by the north, and crossed the Pacific to the Molucca Islands, in which long route his only discoveries were some islands in twenty degrees north, which have not been since iden- tified : and, after an absence of 1501 days, arrived at Plymouth, the 3d of November, with only Ids own ship and fifty-seven men.

Drake was followed by Cavendish, Schouten, Quiros, Dampier, and other celebrated navi- gators, who each touched that numerous archipe- lago which' stretches across the Pacific at dif- ferent points. Meanwhile Cabot having dis- covered Newfoundland, Cortereal, a Portuguese navigatorˆ followed him to the north of Hudson's

Ray, to wliich he gave the name of the strait of Anian, and to the country that of Tierra de La- brador. It was now concluded that India miglit be reached in this direction ; and a large extent of the north-west coast of America was explored by the Spaniards from California. The attempt to find a passage in this direction was afterwards made from the opposite side by Frobisher, Davis, and Baffin, who explored in this way the great bays of Hudson and Baffin, the coast of Greenland, &c.

Nor was the Frozen Ocean of Northern Asia neglected during tliis period. The English and Dutch made vigorous exertions to open a passage through the icy barriers of that ocean ; and disco'ered Nova Zembla, tlie strait of Waygatz, and Spitzbergen. Russian travellers also pene- trated to Okhotzk, on the eastern shore of the continent; and Beering finally rounded the eastern shore of Asia. The extent and bounda- ries of tiie Pacific were now the most imascer- tained problems in geography. A vast conti- nent was still supposed to surround the South Pole ; and in the north the separation of Asia and America was doubted. At this period our immortal Cook commenced his survey of this vast expanse of waters. He completely es- tablisiied the non-existence of a southern con- tinent; examined the north-west coast of Ame- rica, and tlie eastern coast of New Holland, and sailed round New Zealand. He also discovered New Caledonia, and made Europe acquainted with those interesting groups the Society, the Friendly, and the Sandwich Islands. See Cook. A succession of French and Englisli navigators, Perouse, 'ancouver, Labillardiere, Flinders, Wilson, Sec., followed, and completed the sur- vey of the large islands which have been some- times denominated Australasia. The issue of their researches meets us in every part of our Gazetteer.

After all, large portions of terra incognita in- vite to future eflbrts. The interior of Africa or Asia, but especially the former, is little known : America has been more fortunate. We must still, however, not forget the obligations of science to a Park, Browne, Barrow, Lucas, Tuckey, Houghton, Denham, Sec, with regard to the first of these objects ; tlie eflbrts of Messrs. Elphin- stone, Hodges, Kenneir, Malcolm, and Mercer, with regard to the second ; or that the spirit of enterprise and discovery is roused to a greater extent than ever throughout the civilised world. The result cannot fail to give increasing interest to the study of this science.

At the iicad of the writers on modern geo- graphy may be])laced Sebastian Munster, the author of a valuable Cosmography, of the sixteenth century, and who has been called the Strabo of Germany. Next in order stands the Thesaurus Geographicus of a Fleming of the name of ()r- telius, a work of considerable and laborious research ; while superior to both in importance is Mercator's edition of Ptolemy's Geogra])hy, and the improvement he made in the construc- tion of maps. The chart which bears liis name was invented by him about the year IS."}?; but t'le true principles of its construction were first

given by an Englishman o*" the name of Wright in 1599. Mercalor was also a Fleming.

In the seventeenth century the whole science was revolutionised by the successive eflbrts of the erudite Cluverius, the well-informed astro- nomer Riccioli, and the profound Varenius. Sir Isaac Newton, it is well known, translated and commented upon the works of the last of these writers. Ancient geography was also systema- tised at this period by Cellarius ; while maps were much improved m France by Sanson, in Holland by Biaew, and in Sweden by Burreus.

One of the greatest geographical names in the last century is that of D'Anville. He greatly im- proved the method of comparing ancient and modern geography, abolished many foolish and arbitrary modes of delineation ; and accomplish- ed a complete reform in tlie historical part of the science. Statistical science in the mean time received an increased share of attention, and has been much indebted to the accurate Busching and his successors ; among whom may be mentioned Bruns, Ebelins, and Wahl. Other continental geographers of eminence in the eighteenth century were Delisle, Cassini, Lacaille, and Lalande, who, with several of their f

PART n.

OF PHYSICAL AND POLITICAL GEOGRAPHY.

The physical geography of the world, would in strict language embrace a complete description of its internal and external organization and produc- tions. Other sciences, however, take up the greater part of the details of these multifarious topics : geography only glances at tiiem generally, and in their great outlines. Its principal topics are 1. The earth; 2. The ocean and waters; #3. The atmosphere ; 4. The animal tribes; and, 5, Tlie vegetable productions. Metals and minerals will be fully disposed of in tlie following article Geology; or in Metallurgy or Mineralogy.

Political geography regards the general state of human society in the several divisions of the globe. This has been divided into the savage, the barbarous, the half civilised and civilised states. These are again diversified by the poli- tical institutions of each part of the world. On the whole we feel that this is a topic which it is impossible to treat correctly, but in detail ; and therefore refer the reader to the successive accounts of the political state and institutions of each portion of the globe ; as they will be found in the body of this work.

1. Of the earth. Geology and mineralogy explain the formation and value ofthe^arious strata of which wiiat we know of the earth is composed.

This is indeed but little. The deepest excava- tions that have been made by art do not exceed ‘2400 feet, which is less than half a mile, i. e. about •jjpjth part of the diameter of the earth; »o tliat

whatever lies below that depth is utterly un- known. We need here only observe that the substances which have been extracted from those excavations are not in general of a nature different from those which in some particular places have been found immediately upon the surface. The mean density of the earth, accord- ing to the observations of the late astronomer royal Dr. Maskelyne, is four and a half, reck- oning water, as usual, the standard of compa- rison. In this calculation Dr. Ilutton also coin- cides. The late INIr. Cavendish assigned a greater quantity, or about five and a half, from an elegant experiment on the principle of torsion. Perhaps the true proportion would be found to lie between these limits.

The most obvious natural division of the earth’s surface is into sea and land ; about seven-tenths of it being occupied by water, although to what com- parative depth is unknown. The remaining three- tenths consist of land, elevated more or less above the level of the sea, interspersed in some parts with small collections of water, at various heights, and, in a few instances, somevrhat lower than the surface of the ocean.

There is no regular plan or principle on which the relative distribution of land and water seems at present to be made. Le Brun’s Precis de la Geographie Universelle, thus calculates the pro- portion of dry land in the two hemispheres.

In the northern fi-ozen zone . . 0,400 temperate zone. . 0,559 northern tropic. . 0,297

each, when the whole surface of the earth is ro presented by unity. Tlie respective numbers for the quantities of land are, for the

Whole of the torrid zone . .•121191 The two temperate zones . . -164523 The two frigid zones . . . -0166

In the northern hemisphere

. 1,256

In the southern frozen zone . . 0,000 temperate zone . 0,075

southern tropic . 0,312

In the southern hemisphere

0,387

According to Mr. Myers, if the distribution of land be considered with respect to the two he- mispheres (London and our antipodes being taken for the poles of the hemisphere), formed by the equator and the zones, into which they are divided, the quantities will be found to be nearly in the following proportions, where the area of each zo'ae respectively is taken for unity. In the northern part of the torrid zone "297 In the northern temperate zone . . "559 In the northern frigid zone . . "400

The same estimate for i\e southern hemisphere, gives,

In the southern part of the torrid zone -312

In the southern temperate zone . . -075

In the southern frigid zone . . "000

By adding the numbers of the respective

zones together, and dividing each sum by 2, we

may obtain the proportion of land and water in

each.

The whole of the torrid zone being 1,

the land is -3045

Two temperate zones being 1, the

land is -317

Two frigid zones being 1, the land is -200

From these calculations, it is easy to ascertain the proportional quantities of land and water in

The total proportion of land

•302314

This writer calculates onthe above basis that there are on the entire surface of the globe 4,988,181 square leagues of land ; and 11,511,819 square leagues of water; the northern hemisphere containing more than three times the quantity of land which is in the southern.

The great outlines of the land are diversified in a very remarkable manner. All the great pro- montories, both in the Old and New World, ex- cepting the peninsulas of Jutland and Yucatan, are directed towards the south. Those in the Old World have been thus enumerated ; Scan- dinavia, Spain, and Portugal, Italy, Greece, Africa, Arabia, Hindostan, Malacca, Cambodia, Corea, and Kamtschatka : those in the New are California, Alaska, Greenland, Florida, and the whole of South America. There seems to be no other uniform feature in the general outline of the masses of land.

The character of its elevations may be consi- dered as professor Jameson suggests under the denominations of high and ‘ow lands. ‘In Europe,’ he says, ‘we find but two high lands, and one low land. The one is the great Euro- pean or Southern, the other is the Scandinavian or Northern. The one has its middle point in Switzerland, in the Tyrol, and in the Alps of Savoy. Hence it passes tlirough three-fourths of France, traverses the whole of Spain and Portu- gal, includes nearly two-thirds of Germany, passes through the greater part of Italy, and also part of Hungary and Turkey, and terminates on the borders of the Black Sea. The course of this high land determines that of the great low land. Saxony lies nearly on the border of this low-land or plain. It passes through the north part of Saxony to the east or Baltic Sea. It also passes by the foot of the rocky mountains through the upper part of Westphalia, and further through the whole of Holland, the Netherlands, and a part of France ; it even reaches the east coast of

this island. It extends very considerably to- wards the north, including in its course Prussia, Poland, and nearly all Russia in. Europe, and reaches to the Uralian Mountains, including the greater part of Moldavia. The other high land rises in Norway and Sweden, comprehends a portion of Russia, and extends with some inter- ruption to the Uralian Mountains.'

In the New World we find, however, the most remarkable and largest continued range of ele- vated land, stretching from Cape Horn to Bhe- ring's Strait. Through the whole of South Ame- rica this range is within a short distance of the Pacific Ocean, and contains the most magnifi- cent elevations. Chimborazo, near the equator, is its highest point ; whence it declines on one side to the southern extremity of the continent and on the other to the straits of Panama. In Mexico this chain assumes its former volcanic ciiaracter and majestic height. Tlien in a north-

west direction it declines again to the height of about 5000 feet, till at its northern extremity appears the lofty Mount St. Elias. On the eastern side of this continent, another chain runs parallel to the Atlantic ; and forms the Alleghany and Appalachian ˆMountains, at the back of the United States, North America is thus divided into two high, and three low land, districts. Of the latter the two which are between the moun- tain chains and the ocean, particularly that which borders on the Pacific, are the narrowest. The third, which occupies the space between these chains, is of great extent ; is partly occupied by the noble lakes of the interior, and watered throughout with the finest rivers in the world. In a similar manner we find in South Am.erica the sloping plain between the Andes and the Pacific Ocean is contracted to tlie breadth of only a few miles, while that which borders on the Atlantic expands far into the interior. Here again the low land of the central regions is inter- rupted by a branch of the Andes which separates various branches of the ˆlaranon from those of the La Plata : then it expands to the north-east, and on the one side gives egress to the largest river on the globe ; while far to the south, on the other, it supplies the mouths of the La Plata with their nighty collection of waters.

Humboldt considers the mountains of Karats- cnatka and of north-eastern Asia, as a prolonga- tion of the western chain of America. Their long south-western continuation, known as the Slanovas, the

Yablonay, and the Altaic ranges, extends through the greater part of Asia, till, in approaching the sea of Aral, it meets another chain from the south-east, which, under the names of Hemalleh and Hindoo Coosh, has been supposed to include the loftiest summits in na- ture. In traversing Persia these chains descend considerably, but throw up immense masses in Armenia, Asia Minor, and the frontier of Syria.

These ridges, it is worthy of remark, form Asia, like America, into three low lands, of which the first, between Hemalleh and the In- dian Ocean, consists of the maritime provinces of Persia, of Hindostan, and India beyond the Ganges ; the second, between the Hemalleh and Altai Mountains, includes Bukharia, the great desert of Sliamo and Gobi, and the greater part of Ghina; the third, stretching from the Altai to the Northern Ocean, is composed of the bleak plains of Siberia.

In Africa only this species of distinction be- comes uncertain. The Atlas at the north-western extremity rises to a great height, but it sinks en- tirely before reaching the eastern coast. To the south extends an immense plain, composed chiefly of sandy desert : and at its termination are found two very high ranges of mountains, running inwards, one from the eastern and the other from the western coast, which are generally supposed to unite and form a continuous chain across the continent. Similar ranges extend be- hind Gongo and Monomopata; and the southern extremity of Africa defends itself by a high mountain wall against the expanse of ocean which it overlooks. But the limits of mountain and plain, throuuhout all this part of Africa, are wholly unknown. Vol. X

It has been remarked, from this general view of the' earth's surface, that the principal chains of America and Asia are arranged in a species of irregular arch; and that it is not improbable, if we could connect the mountains of Arabia with those of Abyssinia and central Africa, they would form a continuation of the same figure ; the whole being ranged around the shores of the great ocean, in a species of semicircle corre- sponding to that formed by the shores of the three continents; and forming tlie common mighty bulwark of nature against the encroach- ment of the seas.

Some modern geologists contend that the se- ries of rugged and elevated peaks which we find in some of these extensive chains, has always its base in granite rock ; while the gentler and more uniform declivities are generally gneiss forma- tions. See our article Geology.

Baron Humboldt mentions one remarkable difference between the

formation of the moun- tains u! the Old and New Worlds.]Mont Blanc and others of the higher Alps rear their peaks of granite above the clouds. But, in America, ‘ the newest flcEtz trap, or wliinstone, which in Eu- rope appears only in low mountains, or at the foot of those of great magnitude, covers the mightiest heignts of the Andes. Ghimborazo and Antisana are crowned by vast walls of por- phyry, rising to the height of 6000 or 7000 feet; whde basalt, which in our continent has never been observed higher than 4000 feet, is, on the pinnacle of Pichincha, seen rearing aloft its crested steeps, like towers amid the sky. Other secondary formations, as limestone, with its ac- companiment of petrified shells and coal, fxe also found at greater heights in the New than in the Old World ; though the disproportion is not so remarkable in these.’

Volcanoes, one of the great physical distinc- tions of mountains, occur most commonly in the islands and promontories of the Old World un- connected with the principal chain ; but pene- trate every part of the New. These obsei a- tions, however, must only be taken generally : tlie following is]Mr. Jameson’s statement of the relative situation of all the principal ones : —

Gontinent of Europe ... 1 European Islands . . . .12 Gontinental Asia 8

/Vsiatic Islands 58

Continent of America ... 97 American Islands . .19

Total

19;

'esuvius is the only one on the continent of Europe ; those in the islands are chiefly in Ice- land, Sicily, and Stromboli. The volcanoes of continental Asia are on the peninsula of Kamt- schatka, and on some of the islands between that point and Sumatra. No volcano lias yet been discovered on the continent of Africa. Upon the subject of earthquakes, as coimected with volcanoes, see our article Eartuqiakes.

The low lands are divisible into valleys or river districts and plains: under the former we classify those fertile tracts generally borde.ed by hills or mountains, and sloping toward a mid I a

r

point or line where a river runs ; often of consi- derable magnitude, and fed by the mountain streams.

The larger plains, which are neither inter- rupted by mountain or river, are necessarily ste- rile, and consist generally either of hard, unpro- ductive clay land, or loose sand, as in the torrid regions of Africa; the central parts of Persia, &c.

2. Of the Ocean and Waters of the Earth. — The in)mense body of terrestrial waters is divi- sible into two great basins. That which may be denominated The Great Atlantic basin; and The Great Pacific, or Grand Ocean, as it has been called ; for it has strictly no particular re- lation to any quarter of the globe.

I. The Great Atlantic basin will include the Northern Frozen Ocean, or Arctic Sea, sur- rounding the North Pole, and washing the nor- thern extremities of both the old and new conti- nents. Its other branches in this part of the world are the White or Lapland Sea, and Baffin's Bay. This noble expanse of water now separates Eu- rope and Africa from America, and is limited on the south by a line drawn from the Cape of Good Hope to Cape Horn. The portion of this ocean north of the tropic of Cancer to the polar circle is the North Atlantic, that south of the tropic of Capricorn the South Atlantic, and that included between the tropics the Equinoctial Atlantic.

The branches of the North Atlantic on the side of the old continent are, 1 . The Sea of Norway ˆ comprised between the coasts of Norway and Ice- land, and the Zetland and Ferroe Islands, extend- ing from the Polar Circle to the sixtieth degree. 2. The British Sea, between Great Britain and the continent from the sixtieth degree to the Strait of Dover, The name of North Sea given to this branch of the Atlantic, first probably by the Dutch, in whose country alone it is applicable, has been generally adopted by the French and English, particularly in their sea charts; it is also frequently designated by its ancient name of the German Ocean. 3. The Baltic, which communicates with the British Sea by the Sca- gerack and Cattegut, the former of which may be confined to the space between the south coast of Norway and the north-west coast of Jutland, which extends nearly nordi-east and south-west; leaving the Cnttegat as a discriminating turn for the channel between the east coast of Jutland and the coast of Sweden. 4, The English Channel, separating England and France. 5. The Irish Channel, sometimes improperly called the Irish Sea, separating Great Britain and Ireland. 6. The Bai/ of Biscay, washing but twenty leagues

of the coast of Biscay, while it has 120 leagues of the coast of France, should receive the name of the Gulf of France. 7. The Mediterranean is the last branch of the North Atlantic on tlie side of the old continent, and the Equinoctial Atlantic on this side has only the Gulf of Guinea, between capes Palmas and Negro.

On the American side of the North Atlantic, the brancnes are, 1. Davis's Strait, separating the southern extremity of Greenland from the continent of America, and forming the entrance into the Bay of Baffin, Barrow's Straits, SfC. 2. Hudson's Bai/, which is properly a Northern Mediterranean sea.

On the American side of the Equinoctial At- lantic are the Gulf of Mexico ; and the Carib- bean Sea, running between the West India islands and the continent of America.

llound the promontory of Africa is the Indian Sea, one of the most extensive and important branches of this division of the ocean ; bounded on the west by the east coasts of Africa and Arabia, on the north by India, on the east by the west coast of New Holland, or Ten a Aus- tralis, and the Great Asiatic Archipelago, and on tVie south by a line drawn from the Cape of Good Hope to the south-west pomt of New Holland. The branches of this sea on the west are, 1 . The Channel of Madagascar, or of AIo- sambique, separating the island of Madagascar from the continent. 2. On the north-west the Great Gulf of Arabia, or sea of Oman, the limits of which are capes Guardafui and Co- raorin. The Red Sea and Gulf of Peisiu are branches of the Great Gulf of Arabia.

The north-east extremity of the Indian Sea forms the Bay of Bengal, which with more pro- priety would be named the Gulf of Indostan ; its limits are the south point of Ceylon and the north-west point of Sumatra. -On the east the Indian Sea forms a large gulf between the Sunda Isles on the north, and New Holland on the south.

To the east of the Indian Sea, and within the tropics, are several portions of the ocean, forming seas enclosed by the Malay Archipelago ; as the China Sea, the seas of Java, Celebes, and the Moluccas. The collective name of the Sunda Sea has been given to the last three.

II. The second great basin we have noticed separates Asia from America. It has the general denominations of South Sea and Pacific Ocean ; but the more appropriate name of Grand Ocean has been proposed for this great basin by M. Fleurieu. The great divisions of this ocean are, 1. The Great Northern Ocean, extending from the

Arctic Circle to the Northern tropic. 2. The Pacific, or Grand Equinoctial Ocean, included between the tropics. 3. The Great South Sea, extending from the southern tropic to the south cape of Van Diemen's Land and Cape Horn.

The Great Northern Ocean has several branches ; the first of which to the north is com- prised between the north-east extremity of Asia, the north-west extremity of America, and the Aleutian Islands, for which lias been pro- posed, with great propriety, the name of Bhe- ringh Basin, from the navigator who first visited it. On the coast of Asia to the north-west it forms the Gulf of Anadyr, and on that of Ame- rica to the south-east the great Bristol Bay of Cook. On the coast of Asia to the south, we now meet a series of internal seas from Kamts- chatka to Formosa ; the first bounded by Kamts- chatka on the east, and by Russian Tartary, or Siberia, on the west and north, is named by the Russians, the Sea of Ochotsk, from a miserable town and river on it, and the Sea of Lama by the Tongouth Tartars who inhabit its shores ; in some geographies it is also called the Sea of Kamtschatka ; as more appropriate, we propose to name it the Sea of Tartary, and to leave that of Gulf of Ochotsk to its we ;tern extremity.

The second of the interior chain of seas, callc'J

the Sec of Japan, is bounded by Chinese Tartary on the west, by the island of Sagalin on the north, and by the Japan Islands on tlie east and south: it has been called, with propriety, the Sea of Japan.

Southward this sea communicates with a third internal sea by the Strait of Corea. The gulf wliich it forms on the north, between Corea and China, is called by the C'hinese the Yellow Sea (iloang-hai), from the muddmess of the water, but which may with more propriety be named tlie Gulf of Corea. The Chinese (from the clearness of its waters) give the name of Blue Sea to the portion of the sea of Corea, between the south coast of the Peninsula and the island of Formosa.

The Pacific or Grand Equinoctial Ocean has several branches included between the chains of islands from Formosa on the north-west to New Caledonia on the south-east, which Mr. Tuckey has arranged under the following no- menclature. 1. The space between Formosa and the Philippines on the west, the chain of Mariannes on the east, and the Pelew Islands on the south, he proposes to call the Philippine Sea. 2.

The space between the chain of New Philippines or Carolinas (of which the Pelew Islands are the western extrem.e) on the north. Lord Mulgrave's range on the east, and New Guinea and Solomon's Islands or the Papua Archipelago on the south, he calls the Papua Sea. . 3. To the space of the Grand Ocean com prised between the Papua Archipelago on the north, Terra Australis or New Holland on the west, the New Hebrides, New Caledonia, and New Zealand on the east, he gives the name of the Sea of New Holland, or of Australia. At its north-west extremity, it forms the Gulf of* Louixiade of Bougainville, which by Torre's Strait communicates with the Gulf of Neiu Holland and the Indian Sea.

On the coast of America south of Rehring's basin the Grand Ocean has but the three gulfs formed, 1. By the peninsula of Alaska on the west, and the continent on the north and east.

2. That formed within the peninsula of Cali- fornia, called by the Spaniards the Vermilion Sea, and sometimes the Gulf of California.

3. The Gulf of Panama, between Nortii and South America. The Great Southern Ocean and the Southern Frozen Ocean may be considered as the List grand divisions of this basin.

Lakes form, from their occasional magnitude, the next toj)ic of our consideration. Those which have no visible communication with the sea, and form the final receptacle of rivers, are the Caspian and the Lake Aral, already noticed, in the heart of Asia. Similar ones have been reported to occupy part of the interior of Africa, but they have not yet been fonnd. The great lakes of North America have already been ad- verted to, in our article of that name ; it may suffice to notice here that the St. Lawrence !\veeps through them all ; and that South Ame- rica presents us with no lake of comparative magnitude. That of Chucuito or Titiaca, in Peru, is the only one worth noticing.

The great rivers of the earth descend usually from the upper part, and fall down the opposite

sides of a chain of mountains. Their channels are broad or steep in proportion to the quantity of water, and the level of the district through which they run. The principal rivers that have great periodical inundations, are, the Nile, the Senegal, the Euphrates, the Indus, the Ganges, the rivers of Pegu, ofSiam, and of Cambodia, the Amazons and Plata, and, in general, all the great rivers within the tropics ; the cause of these in- undations being the heavy periodical rains in tiie equatorial regions. In several of these large rivers a

phenomenon is observed, caused by an extraordinary strong ascending tide repelling the current of the river, when the conflict produces a mountainous ridge of water, capable of sweep- ing large ships from their moorings.

Many great rivers of slow current form bars of sand across their mouths, as the Nile, the Se- negal, &c. ; while others rush with such rapidity, and volume to the sea, that they freshen and dis- color its waters for many leagues ; as the Da- nube, the Plata, &c.

The velocity of rivers depends more on the weight and quantity of the anterior waters than on the declivity of their beds. Hence the stream of a river, whose bed has twice the declivity of anodier, does not move with twice the velocity only, but with treble or quadruple that velocity, according to the volume of its waters. If, there- fore, we intend to give greater velocity to a river or canal, by deepening its bed, the greatest de- clivity should be near the head, diminishing al- most to a cypher at its mouth, as is naturally the case near the mouths of large rivers, where, though the declivity of the bed is imperceptible, the velocity of the stream is increased by the accumulated weight of the anterior waters : some rivers are even known to acquire so rapid a movement, as not only to retain their velocity across a considerable extent of level ground, but also to surmount an eminence without spreading much.

The following is major Rennell's estimate of the proportional courses or lengths of the great rivers of the globe, taking the Thames as unity :

Europe.

Thames Rhine . Danube Wolga . .

Asia. Indus

Euphrates . Ganges Burrampooter AvaKiver . Jeuissei

1

5i

7

9i 9.i 9i

10

AstA.

Oby

Amour

11

Lena

llA

Hoanho .

13i

Kian Keu

15i-

Africa.

Nile

12}

Amf.ric»-

ˆlississippi

n

Amazons .

15!

Waters impregnated with saline and mineral particles, wa’fm springs, kScc, are so few, and have generally such remarkable local peculiarities, that we at once refer the reader to their alpha- betical places for a description of them. For the phenomena of tides and currents, see Tides and Sea CrRRF.NTS.

3. Of the atmosphere. — To the articles Air, Atmosphere, andCLiMATE, wc may also refcrthe reader for every thing important in the conside- ration of this great element of our earthly sys-

tein. M. Humboldt's isothermal lines, the greatest modern improvement in the consideration of cli- mates, are inserted in the last article ; the manner n which these, however, affect congelation, is oy no means uniform. Radiation and various local circumstances must be takfen into account. Thus on the side of Chimborazo, near the equa- tor, the Ime of perpetual congelation is found to be at the height of 15,746 feet; and in the 20″ of north latitude, on the Mexi'.-an mountains, 15,090 feet, giving a difference m 20° of latitude of only 656, when professor Leslie's table would

teach us to expect 1729 feet. In Tartary, again, according to the late observations of captain Webb, fine pastures are found on the Sutledge river at an elevation of 15,000 feet above the level of the sea; while, on Mont Blanc, the line of perpetual snow is marked by Saussure at 8640 feet. At 16,814 feet, not avestige of snow appeared, according to the foregoing writer, on the Nittie Pass of the great Himalaya chain. The principal circumstances that had been pre- viously observed on the subject, are thus brough together by baron Humboldt :-

Torrid Zone.

Temperate Zone.

Frigid Zone

Lat. 0 deg. Andes Quito.

Lat.20deg. Mount of Mexico.

Caucasus Latitude 42i deg.

Pyrenees Latitude 42| deg.

Alps. lat.45ˆto46deg.

Lat. 57ˆ to 78 degrees. Lapland.

N. Aspect

S. Aspect.

Inferior limit of per- petual snow

2460 fath.

2350 fath.

1650 fath.

1400 fath.

1370 fath.

1370 fath.

550 fath.

Mean annual tempe- rature at that height

34-7°

25-7°

24-8°

9

21-2° Fahr.

Mean temperature of winter at that height

34-4°

14″

4-9°

Mean temperature of August at that height ....

3515°

42-8°

49-1°

Distance between trees and snow

660 fath.

350 fath.

650 fath.

230 fath.

450 fath.

320 fath.

300 fath.

Upper limit of trees

1800 fath.

2000 fath.

1000 fath.

1170 fath.

920 fath.

1050 fath.

250 fath. 1

Last species of trees towards the snow

Escalonia Alstonia.

Pinus occiden- tal.

Betula alba.

Pinus rubra Puncin.

Pinus abies.

Pinus Larix.

Betula alba.

1

Upper limit of the ericineae

Bifarias (1600 f.)

Rhodod. caucas. (1380f.)

Rhodod.

ferrug.

(1170 f.)

Rhodod. Laponicum. (480 f.)

Distance between the snow and corn

860 fath.

630 fath.

700 fath.

450 fath.

4. Of the animal tribes. — Over a consider- aole portion of the globe we find the Linnaean vermes diffused ; while the zoophytes and ma- rine insects, those particularly which pro- duce coral, are restricted to particular regions; the latter, generally, to the torrid zone of the

Pacific and Indian oceans. The haunts of in- sects, and the brilliant plumage of the feathered tribes, belong to the same warm climates. The former are both more numerous and of incom- parably more annoying qualities in the torrid, than in jtemperate zones. Here they lay waste •whole regions over which they pass, driving the inhabitants before them, with the fury of a tem- pest; and particularly wherever forests and moisture abound in these climates, they swarm in countless myriads. In ‘hese regions also the

reptile and lizard tribes arrive at a fearfial per- fection. Here also fish of the largest size, the most ferocious habits, and most brilliant colors are found. The shark of the tropics is said to be unequalled in rapacity in any other region, and to rival even the wild beasts of the forest in that respect. Migratory fishes abound chiefly in the northern regions, and descend toward the equator. In the higher latitudes of those regions, also, the finny tribes attain their greatest magni- tude.

Birds in the peculiarity of their food, as weE. as their plumage, indicate the regions to which they belong. The vulture and eagle haunt the highest peaks over which animal life is eve found to hover — the Cordilleras of the Andes and the summits of the Alps and the Appenines ,

the sea-eagle, or osprey, is more common. The temperate zone is remarkable for the migration of birds as well as fishes ; the stork and the crane, as well as the swallow, instinctively se- lecting their summer as well as wmter abodes, and the same individual birds sometimes return- ing in spring to the same nests they left in autumn. The parrot tribes seem confined to the East Indies, the south-east of Asia, and the shores of Western Africa ; while tlie celebrated birds of Paradise are found in New Guinea and its neighbourhood alone.

M. Humboldt has asserted, and is confirmed in it by the distinguished naturalist Latrielle, that no quadruped, terrestrial bird, and hardly any insect is common to the New and Old worlds. We must beg leave, however, to doubt the cor- rectness of this last item. See our article Ento-mology. There are, at any rate, certain useful animals which thrive almost equally in all the zones, till the severity of the polar frosts chills them, or the hardened ground refuses sub- sistence. ‘ In this class, beneficent nature has placed all those whose services, in a domesti- cated state, are most useful to man ; the horse, the ox, the

sheep, the hog, the goat, the dog, and the cat. Others may be added, in the wide diffusion of which nature cannot be considered as having been so bounteous ; among these are the fox, the hare, the rabbit, the stag, the rat, and the mouse. These common features, however, leave room for others, in which the different climates are widely distinguished from each Other.'

' In the torrid zone, it has been justly ob- served, we find the same rank luxuriance of animal as of vegetable life. The inundated meadows, and the banks of rivers, are covered with the most overgrown and gigantic forms. The mighty elephant here dwells in the depths of the ancient forests, while the rhinoceros, and the hippopotamus, roll their enormous bulks along the banks of the streams. Other wild animals, not marked by so huge a size, distin- guish themselves by power and fierceness. The lion and the tiger extend little beyond the torrid zone. The same may be said of the leopard, the panther, the ounce, and the hysena. This zone produces also animals of striking beauty,, and of a gentle and harmless disposition; such are the antelope, the zebra, and the cameleopard. It is. still more advantageously characterised by an eminently useful species, that of the camel and dromedary, without whose services vast tracts of land in this zone would be wholly uninhabitable; and to which may be added, in the New World, the lama and the vicuna.'

Tlie wild beasts of temperate climes are but of two kinds, the wolf and wild boar; while here are reared in their highest perfection the horse and all the domestic tribes. In the higher lati- tudes, the ox, sheep, &:c., are stunted in their growth, and gradually disappear, and give place to the elk, the sable, the ermine, and other well furred animals. Tht most valuable animal in these climes, perhaps, is the rein-deer, devoted to most of the occupations of the horse and ox of the temperate zone.

The dog has been observed to be the faithful companion of man in all climates; but as he

approaches the equator, on the one hand, he loses his noble voice and bark ; wiiile on the other, in Kamtschatka, or even when removed from a temperate to a frozen clime, he assumes a new and thicker covering. Some of the dif- ferent species of fox are said also to be found almost every where.

5. Of t lie vegetable productions of the earth. — The geography of plants has been ably illus- trated by modern writers, among whom baron Humboldt is, as in many other branches of sci- ence, most

conspicuous. He considers the spe- cies of plants at present known, to amount to 44,000. Of these 6000 are cryptogamous. The remaining 38,000, phanerogamous plants, are distributed in the following manner: viz.

In Europe 7,000

— the temperate regions of Asia . 1,500

— Asia within the tropics, and islands . 4,500

— Africa 3,000

— both the temperate regions of Ame-

rica 4,000

— America between the tropics . 13,000

— New Holland and the islands of the

Pacific 5,000

In the Prolegomena to his Nova Genera et Species Plantarum, M. Humboldt states that the proportion of plants which grow in latitudes QP, 45°, 68°, are as the numbers 12, 4, 1. The mean annual temperEture in these regions is 81°, 55°, 32°; the mean summer tempera- ture 82^-°, 70°, 53°. Within the tropics, the monocotyledinous plants are to the dicotyledi- nous, as one to six. Between the latitudes 36^ and 52°, as one to four ; and at the polar circle as one to two. In Germany the monocotyledi- nous plants are to the whole phanerogamous plants as 1 to 4^- ; in France as 1 to 4|ths. The same proportion seems to hold good in North America.

Our author, in the spring of 1816, read to the French Institute, an important paper on the Dis- tribution of Vegetable Forms; on which we shall now mainly rely. ‘ The vegetables,’ he remarks, ‘ which cover the surface of the globe present, when studied by natural classes, or families, striking differences in the distribution of their forms. It is to the laws of this distri- bution that I have recently turned my attention. On limiting them to the countries where the number of the species is exactly known, and dividing this number by that of the glumaceae, the leguminous plants, the labiated, and the compound, we find numerical relations, which form very regular series. We see that certain forms become more common from the equatof towards the poles, like the ferns, the glumacea;, the cricineae, and the

rhododendrons. Other forms, on the contrary, increase from the poles to the equator, and may be considered in our hemisphere as southern forms : such are the rubiacea;, the malvaceae, the euphorbia, the leguminous and the composite plants. Finally, others attain the maximum in the temperate zone, and diminish towards the equator and the poles. Such are the labiated plants, the amentacea;, the cruoiferac, and the umbellifera;.' In the planes of the torrid zone, the criiciferx and umbel- lifera: almost eiMircly disapp'^wr.

In considering the manner in whicli numerous families of plants are distributed over the equa- torial, temperate, and frigid zones, this - writer further observes, that the vegetable forms present constant relations under the same isothermal lines. The grasses form in England a twelfth, in France a thirteenth, in North America a tenth of all the phanerogamous plants. The glumaceac form in Germany one-seventh ; in France one- eighth ; in North America one-eighth ; in New Holland, according to the researches of Brown, also one-eighth of the known phanerogamous plants. The composite plants rather increase in the northern parts of the transatlantic conti- nent ; for, according to the new Flora of Pursch, there is between the parallels of Georgia and Boston one-sixth ; in France one-seventh, and in Germany one-eighth, of the total number of spec.es which are endowed with a visible fructi- fication. In the whole temperate zone, the composite plants and the glumacece together con- stitute nearly one-fourth of the phanerogamous class ; the glumaceee, the compositse, the cruci- feroc, and the leguminoste together, nearly one- third. The last two classes, therefore, form the difference between one-third and one-fourth, which is one-twelfth of the whole flowering class. ' It results from these researches, that the forms of organised being have a mutual depend- ance upon each other, and that the unity of nature is such that the forms are limited, accord- ing to constant laws of determination. When, upon any point of the globe, we know the number of species presented by one of the great families or the glumaceae, the compositae, the cruciferous, or the leguminous plants, both the whole number of phanerogamous plants, and the number of species that compose the other vege- table families, may be estimated with consider- able accuracy. Thus, by knowing the number of cyperaceee, or composite plants, under the temperate zone, we may approximate to that of the grarainous or leguminous plants in the same regions. The differences between the relations exhibited in the central parts of Europe, and the same latitude in North America, are

accounted for by the different temperatures of these re- gions. The Flora of North America is a mixture of several Floras. The southern parts give it an abundance of malvacete and composite plants ; the northern regions, being colder than the same latitudes of Europe, furnish to this Flora nume- rous rhododendrons, amentacese, and coniferae. The caryophylleae, the umbelliferae, and the cru- 1 iferse are in general more scarce in North America, than in the temperate zones o*” the old continent.

These constant relations observed on the sur- face of the globe, in the plains from the equator to the poles, are again traced in the midst of perpetual snows on the summits of the moun- tains. On the Cordilleras of the torrid zone the northern forms, in general, become more frequent. Hence it is that the ericineae, the rliododendrons, and the grarainous plants, pre- vail at Quito, and on the summits of the Andes. On the contrary, the labiatse, the rubiaceae, mal- vaceae, and the euphorbiaceae, become as rare as in Lapland. This analogy, however, is not supported in the ferns, and the composite plants.

The latter abound on the Andes, but the former gradually disappear, above the height of 1800 fathoms. Thus the climate of the Andes resem bles that of the north of Europe, only with respect to the mean annual temperature. The heat of the different seasons is very different, and exercises great influence on the phenomena of the vegetable kingdom. In general the forms which prevail among the Alpine plants are, ac- cording to ray researches, under the torrid zone, the gramineae, the coinposite, and the caryo- phylleae ; under the temperate zone, thp com- positae, the caryophylleae, and the cruciferae ; and under the frozen zone, the caryophylleae, the eri- cineae, and the ranunculaceae.’

M. Humboldt delineates the distribution of plants at different altitudes in tl e torrid, tem- perate, and frigid zones, according to our plate. The names of the plants are placed at the heights at which they cease respectively to grow. The numbers mark the annual temperature, ac- cording to the centigrade scale : those between brackets indicate the temperature of August. The fathom is six French feet — 6-39453 English feet.

Upon the question whether there are plants common to the new and old world ; he con- cludes, that many of the mosses and lichens are to he found both in the equinoctial regions of America and in Europe. But the case is not the same with the vascular agamae as with the agamae of the cellular texture. The ferns and the lyco- podiaceae do not follow the same law as the mosses and the lichens. The former, in

parti- cular exhibit very few species universally to be found ; and the examples cited are frequently doubtful. In reference to phanerogamous plants, with a few exceptions, the law of Buffon seems to be correct as to the species furnished with two cotyledons. It is not true that the ridges of the Cordilleras of Peru, where the climate is ana- logous to that of France, or Sweden, produce similar plants. The oaks, the pines, the yews, the ranunculi, the rose trees, the draba of the Peruvian and Mexican Andes, have nearly the physiognomy of the species of the same genera of North America, Siberia, or Europe. But all these Alpine plants of the Cordilleras, without excepting one among 3000 or 4000 that have been examined, differ specifically from the analogous species of the temperate zone of the old continent. In general, in that part of Ame- rica situated between the tropics, the monocoty- ledinous plants alone, and the cyperaceae and the gramineae, almost exclusively, are common to the two worlds. These two families form an exception to the general law. M. Humboldt has given in his Prolegomena a catalogue of the plants common to the shores of the Orinoco, Germany, and the East Indies; the number of which does not exceed twenty-four species.

The gigantic growth of timber in the new continent has already been noticed by us. See America, North. There are said to be 137 species in North America, vdiose trunks exceed the height of thirty feet, while in Europe scarcely forty-five species reach that height: but no firs are to be found in the mountains of South Ame- rica, between the tropics. In temperate zones the same species of plants frequently grow toge-

ther in clusters ; but in the torrid zone the woods are formed of a much greater variety of trees. * The vegetable forms near the equator,' says baron Humboldt, ' are in general more majestic, more imposing ; and the varnish of the leaves is more brilliant. The largest trees are perpe- tually adorned with flowers larger, more beau- tiful, and more odoriferous, than herbaceous plants in the temperate zone.'

PART III.

OF TECHNICAL OR ARTIFICIAL GEOGRA- PHY.

Our preceding divisions have placed all the great natural features of this science before the reader. Geography, technically considered, teaches the doctrine of the figure, magnitude, and motions of the

earth; of the various lines, parallels, climates, 7ones, &c., with which those who have systematised the science have supposed its surface to be diversified ; the na- ture of latitude and longitude, and different po- sitions of the sphere, &c.

Sect. I. — Or the Figure and Magnitude of THE Earth.

The earth is a planet moving round the sun in an orbit nearly circular, and completing its revolution in the course of a year ; at the same time it revolves continually upon its own axis, which is inclined to the plane of its orbit at an angle of sixty-six degrees and a half ; the time of a revolution being twenty-three hours and fifty-six minutes. The revolution of the earth round the sun is called its annual motion, and the rotation it performs on its own axis is called its diurnal motion.

While the earth revolves round the sun in the course of its annual motion, its axis, round which the diurnal motion is constantly per- formed, moves always parallel to itself. It is by the parallelism of the axis, and the anˆ nual motion of the earth, that the changes of the seasons are produced, while by the diurnal mo- tion all places on the earth's surface are alter- nately turned towards the sun, and by these means the changes of day and night follow.

When the eartli was once known to be spheri- cal, the curiosity of man would naturally lead hira to endeavour to measure its dimensions ; and we accordingly learn from history that such attempts were made. But the first accurate ad- measurement that was made of the earth, of which we have any certain knowledge, vˆas that executed by M. Picaid, in France, towards the end of the seventeenth century, and which has been since several times verified.

It is not difficult to understand in what way the earth may be measured. The direction of gravity is always perpendicular to the earth's surface ; hence it follows that the zenith of any place, or point of the heavens directly over our head, and also liie horizon, which is a plane touching the earth's surface at that place, will be continually changing according as we change ■' ur position on the earth's surface. It follows accordingly, that, as we travel from south to north, the pole of tiie heavens (or that point in the heavens, in wliich the earth's axis whon [)io- duced meets the sphere of the (i>.cd stars) will

be more and more elevated above the horizon • the meridian altitude also of the stars in the northern regions of the heavens wil\ appear to in- crease; while that of the stars in the southern quarter will be diminished. By the elevation or depression of the stars, we shall know

the ancˆle formed at the point of concourse of perpendi- culars drawn to the earth's surface at each extre- mity of the terrestrial arc ; for this angle is equal to the difference of the meridian altitude of the same star as seen from the extremities of the arc, diminished by the angle which the aic itself subtends as seen from the star ; which last angle is altogether insensible. The number of degrees in the arc being found, it is only necessary to determine its length in some known measure, as a fathom, &c.; but, as it would be a work of great labor to apply a measure to an arc of great extent, it will be sufficient if its extremities be connected by a series of triangles to those of a bast line of 3000 or 4000 feet in length ; and, considering the accuracy with which the angles of these triangles can be observed, the lensth of the arc may be found with great precision. It is in this way that degrees of the meridian have been repeatedly measured. In France, for example, about 1793, an arc was measured ex- tending from Dunkirk to Barcelona (for the purpose of setting a universal standard of weights and measures) ; and the degree whose middfe is situated in lat 45° was by this means found to be 57,029 toises.

Although the spherical figure is the most sim- ple, and it is natural for man to suppose objects to be of that form which he most readily con- ceives, yet the simplicity of nature is not always measured by that of our conceptions. Infinitely varied in her eflTects, Nature is only simple in her causes; and her economy consists in producing a great number of phenomena, often the most complicated, by means of a few general laws. The figure of the earth is a result of these laws, which, modified by a great variety of circum- stances, may cause it to deviate sensibly from a spherical figure; and certain small variations repeatedly observed in the length of degrees of the meridian, sufficiently indicate that such a deviation exists.

The Academy of Sciences in France, in which this question has been warmly agitated, con- cluded with reason, that the difference of magni- tude in the degrees of the meridian, if real, would be most sensibly perceived by the comparison of degrees measured at the equator and towards the poles. Accordingly a company of academi- cians was sent to the equator, where, having measured a degree of the meridian, they found it to contain 56,753 toises; which was shorter by 274 toises than a degree in lat. 45° north. Other academicians were sent to the north, and having measured a degree of the meridian in Lapland, about the latitude of 66° 20', they found it to be 57,458 toises, which wai greater than the degree at the equator hy 6»5 toises; and by these measurements it was completely proved, that the earth was not exactly snherical; and other measurements of degrees made since that period have all tended to show, that the de- grees of the

meridian srradually increase from the equator (o tlie poles.

The ellipse is tl)e next curve ia point of sim- plicity to the circle, and the earth has been con- sidered as a spheroid formed by the revolution of an ellipse about its lesser axis : its oblateness or compression in the direction of its poles, is a neces- sary consequence of the observed increase of the degrees of the meridian from the equator to the poles. For the radii of these degrees being in the di- rection of gravity, they are by the law of the equi- librium of fluids perpendicular to the surface of the ocean, with which the earth is in a great measure covered. They do not therefore, as in the sphere, tend to the centre of the spheroid ; neither are they in the same direction, nor of the same magnitude, as the radii drawn from the centre to its surface ; which cut it obliquely every where, except at the equator and poles. The point at which two adjoining perpendicu- lars, situated under the same meridian, meet each other, is the centre of the small terrestrial arc which they comprehend between them. If this arc were a straight line, these perpendiculars would be parallel; or they could only be consi- dered as meeting at an iufinite distance ; but, in proportion as this arc became curved, they would meet at a distance so much the less, as the cur- vature of the arc was the greater. Hence it follows, that seeing the extremity of the lesser aris is the point where the curvature of the ellipse is the least, the radius of a degree at the pole, and consequently that degree itself, must be the greatest of any degree on the earth's sur- face. On the contrary, at the equator, or at tlie extremity of tlie greater axis, the curvature is the least, and therefore the degree in the direction of the meridian is there the smallest. And, in going from the equator to the pole, the degrees increase in such a manner, that, if the ellipse be not very eccentric, the increase is nearly propor- tional to the square of the sine of the latitude.

If the earth were exactly an oblate spheroid, its magnitude, as well as the proportion of its axes, might be determined by the mensuration of two degrees in the direction of the meridian. It should also follow, that by a comparison of all the degrees hitherto measured, taken two and two, we should obtain the same proportion be- tween the axes. This, however, has not been the case. The results have indeed shown, that the earth is flattened at the poles ; but tliey have left an uncertainty as to the quantity of the compres- sion, extending from between the 170th to the 330th part of the radius of the equator. Between these two quantities, the former of which is nearly double of

the latter, most of the results are placed ; but in such a maˆner, that those most entitled to credit are much nearer to the least extreme than to the greater.

In consequence of this disagreement in the result of comparisons of degrees of the meridian, measured in diff'erent latitudes, it has been con- cluded by mathematicians, that the figure of the earth is not that of a spheroid ; nor does it even appear, that the parts of it on each side of the equator are exactly similar.

It will, however, be sufficient for the purposes of geography, to suppose the earth a spheroid. Upon this hypothesis. La Place, by a comparison of the arc of the meridian measured at the equa- tor, and another measured between Dunkirk and

Mountjoy, has found, that the polar diameter ia less than the ecjuatorial by l-334th part of the latter ; and that a fourth part of the elliptic me- ridian is 5,130,740 toises ; the toise being that used in measuring the earth in Peru, and reduced to a temperature of sixteen degrees and a quarter of a mercurial thermometer, divided into 100 degrees from the freezing point to that (jf water, boiling under a pressure equivalent to a column of mercury seventy-six centimetres in height, or about thirty inches English measure. This de- termination also agrees nearly with the results from the combination of a great number of ex- periments, made at different places of the earth, upon the pendulum.

Because the measure of a degree at the equator has been assumed, in the preceding calculation, at 56,753 toises, it follows that the equatorial dia- meter is 3,271,267, and the polar diameter 3,261,471 toises; the difference between them being 9796 toises. From these data, and the rules of mensuration, it will be easy to find the surface, solidity, &c., of the earth, also the num- ber of miles in a degree, &c.

The following table of the dimensions of the earth is by Dr. Ilutton : — The diameter . . 79,579| miles. The circumference 25,000 miles. A degree contains . 69ˆ English miles. The superficies . . 198,944,206 square miles. The solidity. . . 263,930,000,000 cub. miles

Sect. 2. — Of the Circles supposed to be de- scribed ON the Earth's stjrface. In geography the circles which the sun appa- rently describes in the heavens, are supposed to be extended as far as the earth, and marked on its surface. In like manner we may imagine as many circles as we please to be described on the earth, and their planes to be extended to the celestial sphere, till they mark concentric ones on the

heavens. The most remarkable of those supposed by geographers to be described in this manner are the following : —

1. The axis of the earth, or that imaginaryline passing through the earth's centre, round which it continually revolves from west to east.

2. The poles, or points at which the axis meets the earth's surface. One of these is called the north-pole, and the other the south. These correspond to the poles of the heavens, or the points where the earth's axis, when produced, meets the starry sphere.

3. The equator, a great circle on the earth's surface, equally distant from both poles, and corresponding to the equinoctial circle in the heavens. It divides the earth's surface into two equal portions, called the northern and southern hemispheres. The equator is also sometimes, called the line or equinoctial line.

The distance of any place, northward or south- ward, from the equator, is called its latitude, and is reckoned in degrees and minutes, &c. The distance between the poles and equator, which is a quadrant of a great circle passing through the poles, has by all geographers hitherto been sup- posed to be divided into ninety degrees; and each of these again subdivided into sixty minutes, &c. But some French astronomers, and in par- ticular La Place, in his Exposition du Systeme

(lu Monde, as wall as in his Traite de Mecanique Celeste, has adopted the decimal division of the meridian They have supposed the distance between the equator and the poles to be divided into 100 degrees, and each degree to be subdi- vided into 100 minutes, each minute into 100 seconds, and so on.

All places lying on the north side of the equator are said to have north latitude ; on the contrary, all places on the south side of the equa- ti)r are said to have south latitude.

Purallels of latitude Tire lesser circles upon the panh's surface parallel to the equator. They may be considered as indefinite in number ; all places that lie directly east or west from each other are said to lie in the same parallel of lati- tude.

The tropics are two lesser circles on the earth, parallel to the equator, and twenty three degrees and a half distant , from it. That which lies

on the north side of the equator is called the tropic of Cancer ; 3.nd that which lies on the south side is called the tropic of Capricorn. These circles correspond to the circles of the same name, which limit the sun s north and south declination from the equinoctial in the heavens.

The polar circles are two lesser circles upon the earth's surface, parallel to the ecjuator. They are as far distant from the poles, which they sur- round, as the tropics are from the equator. That which lies towards the north pole is called the arctick circle, and that which lies next to the south pole is called the antarctick circle. To these there are corresponding circles, bearing the same names, in the heavens.

Great circles passing through the poles of the earth, and therefore perpendicular to the equa- tor, are called meridians. The meridian passing through any particular place lies in- the plane of the celestial meridian of that place. It also di- vides the surface of the earth into two equal por- tions, called the eastern and western hemispheres, in respect of that place. The meridians may be considered as indefinite in number ; and all places lying directly north and south from each other are upon the same meridian. Sometimes by the meridian of a place is understood the half of a great circle, passing through that place, and extendiTig from the one pole to the other ; and the other half of tbe circle is called the op- posite meridian.

If we suppose twelve groat circles, one of which is the meridian of a given place, to inter- sect each other at the poles of the earth, and di- vide the equator into twenty-four equal parts, these are the hour or hnrari/ circles of that yilace. These are by the poles divided into twenty-four semicircles, corresponding to the twenty-four hours of the day and night. The distance between each two of these semicircles is 15°, beintj the twenty-fourth part of 3C0.

The longitude of any yjlace on the earth is an arc of the equator intercepted between the me- ridian passing through that place and some other meridian previously agreed upon which is called the first meridian. The longitude is reckoned eastward and westward from the first meridian, by which means all places lying in the hemis- phere to the ea.stward of that place, through which the first meridian passes, will have east

longitude ; and all places lying in the hemi- sphere to the westward of that place will have west longitude.

Geographers at difiereut periods, and in dif- ferent countries, have

fixed upon different places for the first meridian. The rule among the ancients was to make it pass through tlie place farthest to the west that was known. But the moderns, knowing tnat there is no such place on the earth as can be considered the most west- erly, have laid aside that method of reckoning the longitude. Ptolemy assumed the meridian that passes through the farthest of the Canary Islands, as his first meridian. After him, as more countries were discovered in that quarter, the first meridian was removed farther off. The Arabian geographers fixed the first meridian upon the utmost shore of the western ocean. Then again it was fixed at the island of St. Ni- cholas, near Cape Verd ; then at the isle of St. James; and by Mercator at the isle Del Corvo one of the Azores, because there the magnetic needle pointed due north at that time.

The Dutch fixed upon the Peak of Teneriffe as their first meridian, when it was considered the highest mountain on the globe; and the French, by order of Louis XIII., on the island of Ferro, one of the Canaries.

In Great Britain, we reckon the longitudes of places eastward and westward from the royal Observatory, Greenwich, and the United States of America adopt the same meridian. The dif- ferences of longitude between the last-mentioned meridians, all of which are occasionally referred to, or constantly used by geographers, is as follow? (from Greenwich Observatory) :— Paris . . .2° 20′ 15′ E. Peak of Teneriffe 16 39 45 W. Isle of Ferro . .17 39 45 W.

The horizon of a place Is either sensible or ra- tional. The sensible horizon of any place is a circle of the sphere, the plane of which touches the spherical surface of the earth at that place.

The rational horizon is a great circle of the sphere, the plane of which passes through t!ie centre of the earth, and is parallel to the plane of the sensible horizon. Tiiis horizon divides the celestial sphere into two equal portions or he- mispheres ; one of these is visible, but the other, by reason of the interposed body of the earth, is invisible.

By the sensible horizon of a place is also sometimes understood a circle, which determines the segment of the surflice of the eaith, which is visible to the eye ; called also the visible horizon. It is evident that this circle will be most accu- rately defined at sea, and equally distant every where from the eye of an observer, but below the level of his eye. It will also be so much the more extensive, as the eye is raised above the earth’s surface.

The zenith of a place is the point of the heavens directly over the head of an observer; and the nadir is the point in the oppposite hemisphere, directly under his foot ; or the zenith and nadir are the])oles of the horizon.

Great circles of the sphere passing through the zenith and nadir are called vertical circles, or azimuths. They are also sometimes called se- condaries of the horizon; and in general any

great circle passing through the poles of another is called its secondary. That vertical circle, which has its plane perpendicular to the plane of the meridian, is called the prime vertical. The meridian and prime vertical, by their intersec- tions with the iiorizon, divide it into four equal parts : the points of their intersection are called the cardinal points. The meridian cuts the ho- rizon at right angles in the north and south points, and the prime vertical cuts it at right an- gles in the east and west points. Lesser circles of the sphere parallel to the horizon are called parallels of altitude or almacanta".

The armillary sphere was a machine formerly in use, which represented the principal circles above described, the poles of the earth, &c. ; but since globes which contain all those circles have been more general, this machine is become ex- ploded.

The degrees of longitude are not equal like those of latitude, but diminish in proportion as the meridians incline, or their distance contracts as they approach the pole. Thus in 60° of lati- tude, a degree of longitude is but half the length of a degree of the equator. We therefore here add

A Table, showing the Number of Miles con- tained in a Degree of Longitude in each Parallel of Latitude from the Equator.

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For the methods of calculating the latitude and longitude, see Latitude and Longitude.

Sect. IH. Of the different positions of THE Sphere, the Zones, Climates, &c.

If we suppose an inhabitant of the earth living at either of the poles, he will there have one of the celestial poles always in his zenith and the other in his nadir, the equator coinciding with the horizon. Hence all the celestial paral- lels are also parallel to the horizon ; and hence a person, or people, are said to live in a parallel sphere, or to have a parallel horizon.

Those who live under the equator have both poles in the horizon, all the celestial parallels cutting the horizon at right angles ; whence they are said to live in a right sphere, or to have a right horizon.

Those who live between either of the poles and the equator are said to live in an oblique sphere, or to have an oblique horizon; because the celestial equator cuts their horizon obliquely, and all the parallels in the celestial sphere have their planes oblique to that of the horizon. In this sphere some of the parallels intersect the horizon at oblique angles, some are entirely above it, and some entirely below it; all of

them, however, so situated, that they would obliquely intersect the plane of the horizon ex- tended.

The largest parallel which appears entire above the horizon of any place, in north latitude, is called by ancient astronomers the arctic circle of that place. Within this circle, i. e. between it and the arctic pole, are comprehended all the stars which never set in that place, but are car- ried perpetually round the horizon, in circles parallel to the equator.

The largest parallel which is hid entirely be- low the horizon of any place, in north latitude, was called the antarctic circle of that place by the ancients. This circle comprehends ail the stars which never rise in that place, but are carried perpetually round below the horizon, in circles parallel to the equator.

In a parallel sphere, however, the equator may be considered as both arctic and antarctic circles ; for, being coincident with the horizon, all the parallels on one side are entirely above it, and those on the other entirely below it. In an oblique sphere, the nearer any place is to either of the poles the larger are the arctic and antarctic circles, as being nearer to the celestial equator, which is a great circle. In a right sphere, the arctic and antarctic circles have no place, because no parallel appears either entirely above or below it.

By the ancients the arctic circle was called maximus semper apparentium, and circulus per- petuse apparatioiiis ; the antarctic circle, on the other hand, being named maximus semper oc- cultorum, and circulus perpetuae occultationis.

By the arctic and antarctic circles, however, modern geographers in general understand two fixed circles, at the distance of 23° 30′ from the poles. These mark out the space all round the globe where the sun appears to touch the horizon at midnight in mid-summer, and to be entirely sunk below it in winter.

According to the different positions of the

globe, with re2;ard to the sun, the celestial bodies exhibit different phenomena to the inhabitants. Thus, in a parallel sphere, they appear to move in ciicles round the horizon; in a right sphere they appear to rise and set as at present, but alwavs in circles cutting the horizon at

right angles; but, in an oblique sphere, the angle varies according to the degree of obliquity, and the position of the axis of the sphere with re- gard to the sun. The phenomena thence arising will be suthciently understood from what is said under the article Astronomy.

The space between the two tropics, called the torrid zone, extends 47° of latitude all round the globe ; and throughout the whole of that space the sun is vertical to some of the inhabi- tants twice a year, but to those who live directly under the tropics only once. Throughout the whole torrid zone also there is little difference between the length of the days and nights. The ancient geographers found themselves consider- ably embarrassed in their attempts to fix the northern tropic ; for though they took a very proper method, namely, to obsen'e the most northerly place where objects had no shadow on a certain day, yet they found that on the same day no shadow was cast for a space of no less than 300 stadia. The reason of this was, the apparent diameter of the sun ; which, being about half a degree, seemed to extend himself over as much of the surface of the earth, and to be vertical every where within that space.

The division of the earth into zones has arisen from the various appearances of the sun, and the effects of his light and heat upon different parts of it. These are five in number : 1 . The torrid zone lying between the two tropics for a space of 470 of latitude. This is divided into two equal parts by the equator ; and the inhabi- tants have tlie sun vertical to them twice a year, excepting only those who dwell under the tropics, to whom he is vertical only once. 2. The two tempe/ule zones lie between the polar circles and the tropics, containing a space of 43° of latitude. And, 3, The two frigid zones lie between the polar circles and the poles. In these last the lonuest day is never below twenty-four hours; in the temperate zones it is never quite so much, ;ind in the torrid zone it is never above fourteen. The zones are named from the degree of heat thoy were supposed to be subjected to. The torrid zone was supposed by the ancients to be uninhabitable by reason of its heat ; but this is now found to be a mistake, and many parts of the temperate zones are more intolerable in this respect than the torrid zone itself. Towards the polar circles, also, these zones are intolerably cold during winter. Only a small part of the northern frigid zone, and none of the southern, is inhabited. Some geograj)hers reckoned six zones, dividing the torrid zone into two by the equator.

From the difference in the length and positions bi tiie shadows of terrestrial substances, ancient geographers have given different names to the inhabitants of certain places of the earth ; the reason of which

will be easily understood from the following considerations : — 1. As the sun in

his apparent annual revolution never removes farther from the equator tlian 23° 30’, none of those who live without tiiat space, or beyond the tropics, can have that luminary vertical to them at any season of the year. 2. All who live between the tropics have the sun vertical twice a year, though not all at the same time. Thus, to those who live directly under the equa- tor, he is directly vertical in March and Sep- tember at the equinox. If a place is in 10° north latitude, the 3un is vertical when he has 10° north declination ; and so of every other place. 3. All who live between the tropics have the sun at noon sometimes north and sometimes south of them. Thus, they who live in a place situated in 20° north latitude, have the sun at noon to the northward when he has more than 20° north declination, and to the southward when he has less. 4. Such of the inhabitants of the earth as live without the tropics, if in the northern hemisphere, have the sun at noon to the south of them; but to the north, if in the southern hemisphere. 5. When the sun is in the zenith of any place, the shadow of a man or any upright object, falls directly upon the place where they stand, and consequently is invisible ; whence the inhabitants of such places were called Ascii, or without shadows. .Those who live between the tropics, and have the sun some- times to the nordi and sometimes to the south of them, have of consequence their shadows projecting north at some seasons of the year and south at others ; whence they were called Amphiscii, or having two kinds of shadows. They who live without the tropics have their noon shadows always the same way ; and are therefore called Ileteroscii, that is, having only one kind of shadow. If they are in north lati- tude the shadows are always turned towards the north, and, if in the southern hemisphere, to- wards the south. When a place is so far distant from the equator that the days are twenty-four hours long or longer, the inhabitants were called Periscii, because their shadows turn round them.

Names have likewise been given the inhabi- tants of different parts of the earth, from the parallels of latitude under which they live, and their situation with regard to one another. Thus, when two places are so near each other that the inhabitants have only one horizon, or at least that there is no perceptible difference between them, the inhabitants were called Synoeci, that is, near neighbours ; the seasons, days, nights, &c., in both places being perfectly alike. Those who lived at distant places, but under the same parallel, were called Perireci, that is, living in the same circle. Those who are on the same side of the equator have the seasons of the year at the same time; but, if on different sides, the summer season of the one is the winter of the other

; as explained under Astuonomy. Some writers, however, by the name of Peroeici, dis- tinguish those who live under opposite points ot the same parallel, where the noon of the one is the midnight of the other. When two places lie under parallels equally distant from the ecuator, but in opposite hemispheres, the inha-

bitaiits were called Antoeci. These have a si- milar increase of days and nights, and similar seasons, but in opposite months. According to some, the AntcEci were such as lived under the same geographical meridian, and had day and night at the same time. If two places are in parallels equally distant from the equator, and in opposite meridians, the inhabitants are called Antichthones witli respect to one another, that is, living on opposite sides of the earth; or An- tipodes, having their feet opposite to one ano- ther. When two persons are Antipodes, the zenith of the one is the nadir of the other. They have a like elevation of the pole, but it is of different poles : they have also days and nights alike, and simdar seasons of the year; but they have opposite hours of the day and night, as ■well as seasons of the year. Thus, when it is mid-day with us, it is midnight with our Anti- podes ; when it is summer, with us, it is winter with them, &c.

From observing the diversity in the length of the days and nights, the rising and setting of the sun, with tlie other phenomena already mentioned, ancient geographers divided the surface of the earth into certain districts which they called Cli- mates (see our article of that title); and instead of the method of describing the situation of places by their latitude and longitude, as we do now, they contented themselves with mentioning the climate in which they were situated. When niore accuracy was required they mentioned also the beginning, middle, and ending of the cli- mates.

This distinction, however, was vague and inac- curate : for the only method they had of deter- mining the difference was fey the length of the day ; and a climate,according to them, was such a space as had the day in its most northerly part half an hour longer tlian in the most southerly. For the beginning of their first climate they took that paral'el under which the day is twelve hours and three-quarters long : those parts of the world which lie nearer the equator not being supposed to be in any climate, either because in a loose sense they may be considered as in a right sphere, or because they were unknown, or thought to be uninhabitable by reason of the heat. The

prin- cipal ancient climates are mentioned in the article above referred to.

A parallel was said to pass through the mid- dle of a climate when the day under that parallel is a quarter of an hour longer than that which passes through the most southerly part. Hence it does not divide the space into two equal parts, but that part next the equator will always be the larger of the two ; because, the farther we recede from that circle, the less increase of latitude will be sufficient to lengthen the day a quarter of an hour. Thus, in every climate there are three pa- rallels ; one marking the beginning, the second the middle, and the third the ending of the cli- mate ; the ending of one being always the begin- ning of another. Some of *he ancients divided the earth by these parallels ; others by a parallel did not mean a mere line, but a space of some breadth : and hence the parallel may be understood as the same with half a cli- mate.

Sect. IV. — The Method of Finding the Length of the Da y, and the Beginning and Ending of the Twilight.

Tliis has been represented mathematically, thus : —

Let P Z E S of the diagram represent the ce- lestial meridian of any place, P and S being the poles of the sphere ; let E Q be the equator and 11 O 11 the horizon, stereographically projected upon the plane of the meridian ; let P C S re- present the six o'clock hour circle, and m 0 ?j the parallel of declination described by the sun or a star at any given day of the year ; the point O being that in which it cuts the horizon ; then n O represents half the arch described by the sun when above the horizon, and O m the half of the arch described when below the horizon. Let P OS represent an hour circle passing through the sun or star when in the horizon, and meeting the equator E Q in A ; the arch E A of the equator intercepted between the meridian and hour cir- cle, being found, and converted into time (allow- ing fifteen degrees to an hour), will evidently give half the time that the sun or star remains above the horizon, as the arch A Q will give half the time it remains below the horizon. As the arch E C contains ninety degrees, and corre- sponds to six hours, it is only necessary to find the aich C A, which is called the sun's ascen- sional difference, it being the difference between his right ascension and his oblique ascension ; and, having converted it into time, to add it to or subtract it from six hours, according as the latitude of the place and sun's declination are of the same or of contrary names, that is both north or both south, or the one north and the other south, and the sum or difference shall be half the length of the day as required.

In the spherical triangle C A O, rig ht angled at A, we have AO the complement of the sun's declination, to be found from astronomical tables, and the angle A C O, the complement of the latitude of the place, in order to find A C the right ascension. Hence, from the principles of spherics, we have the following propor- tion : —

As radius to the tangent of the latitude, so is the tangent of the sun's declination to the sirp of the sun's ascensions' difference required.

When the sun is in the same hemisphere with any place, and his declination is equal to the complement of its latitude, which can only hap- pen to pla'ses in the polar circles, then m n, the

*ˆrallel of declination, will not cut the horizon, and consequently the sun will not set in those places during the time his declination exceeds the co-latitude ; but when the sun and place are in opposite hemispheres, then he will never rise at that place so long as his declination exceeds the co-latitude ; and hence it is easy to see how to find the time when the sun begins to sliine con- stantly upon any given place within the polar circle ; and also the time when that place begins to be wholly in the dark for a considerable time together.

It has been observed, in our article Astrono- my, that the twilight commences in the morning and ends in the evening when the sun is eighteen degrees below the horizon. The time of its com- mencement, or ending, may be found by spheri- cal trigonometry as follows : — Let Z be the zenith, P the pole of the sphere, and T the place of the sun, eighteen degrees below the horizon H R. In the spherical triangle, P ZT, we have P Z the distance of the pole from the zenith, which is equal to the co-latitude of the place, and P T the complement of the sun's declination ; also ZT the distance of the sun from the zenith, which, in this case, is always 90° + 18° or 108°. From these we are to find the hour angle Z PT, which may be had by the following proportion. Let V'rzˆ the perimeter of the triangle. Then, as sine Z P x sine P T to the square of the radius, so is sine (V — ZP) X sine (V' — PT) to the square of the sine of half Z P T. The angle Z P T being turned into time will give the time from noon of the beginning or ending of the twilight.

Sect. V. — Of the Constructiox and Use or Maps.

A map is a representation of the earth, or a part of it. A map of the world is a delineation in ptrspeclive of the globe, as it would appear to

an eye placed in a particular point. The circles l>ounding such a map represent the brass meri- dian; and the curve lines running across, at every ten degrees, show the latitude nortii or south of the equator. The top and bottom are the nortli and south poles; and the curve lines uniting them are other meridians passing tlirough every tenth degree of the equator, and showing the longitude east or west from the first meridian. The straight line intersecting these meridians, and passing through the centre, is the equator or equinoctial ; at proper distances from which, on each side, are curve lines representing the tropics and polar circles.

Maps and charts, especially the latter, are sometimes drawn on what is called Mercator's projection, so called from the inventor, Gerard Mercator, an eminent cieographer in Flanders, who, about the middle of the sixteenth century, published a map of the world on this construction. In these maps the meridians and parallels -are

straight, and the former equidistant from each other. The degrees of longitude in every paral- lel are the same; wˆhile the degrees of latitude are all unequal, being lengthened towards the poles. Charts drawn on this construction are particularly of use to navigators, because the rhumbs, which point out the bearings of places, and consequently the courses to be steered to art ri\ e at them, are all straight lines. See our char- of the world on this projection.

In maps of particular countries the top is ge- nerally considered as the north, the bottom as the south ; and the east is consequently on the right hand, and the west on the left, ^^'here this rule is not followed a fleur-de-lis is usually placed on some part of the map, pointing towards the north, by which the other points may be easily known. From the top to the bottom of the map are drawn meridians, or lines of longitude ; and from side to side parallels of latitude. The outermost of the meridians and parallels are marked with degrees of latitude and longitude, by means of which, and the scale of miles commonly placed in the corner of the map, the situation, distance, &c., of places may be found. Thus, to find the distance of two places, suppose London and Paris, by the map, we have only to measure the space between them with t'.ie compasses, and to apply this distance to the scale of miles, which shows that London is 210 miles distant from Paris. If the places lie directly north or south, east or west, from each other, we have only to observe the degrees on the meridians and paral- lels ; and by turning these into miles we obtain the distance without measuring. Rivers are de- scribed in maps by black lines, and are wider towards the mouth than towards the head or spriiia:.]\Iountaius are sketched on maps as on a picture. Forests and woods are represented by a kind

of shrub ; bogs and morasses by shades ; sands and shallows are described by small dots; and roads usually by double lines. Near harbours the depth of the water is expressed by figures de- noting fathoms.

Having discovered by maps, or any other way, the trae situation of the different places of the earth with regard to each other, we may easily know many other particulars relative to them ; as, their distance from us, the hour of the day, the season of the year, Sec, at any particular place. As each of these problems, however, would require a particular and sometimes trou- blesome calculation, machines have been in- vented, by which all the calculations may be saved, and every problem in geography may be solved mechanically, and in the most easy and expeditious manner. These machines are the celestial and terrestrial globes, for the use of which see Giobe.

For the mechanical details of the construction of maps, see Mapimxg.

GEOLOGY.

GEOLOGY; from Or. yj/ithc earth, and XoyOf of the earth ; but, when we consider now small

a discourse; is a modern science which under- a portion of even the crust of the earth has as yet

takes to explain the structure of the earth. Some been examined and arranged by it, we]irefer the

of its more decided votaries have dignified it less assuming as the more suitable appellation, with tlie title of ‘ geognosy,’ or liie knowledge Tliose speculations and fictions which, under

the title of theories of the earth, amused the pub- lic in the infancy, or rather before the birth of this science, while they excited surprise by their paiadoxical boldness or ingenious contrivance, neither originated in observation, nor applied to existing appearances ; they were formed in the closet by naen who had never probably ascended a mountain or explored a mine ; who had never examined Nature in her operations, and of course were not fitted to become her interpreters. The enumeration and structure of the simple mine- rals, the arrangement of fossil bodies into moun- tain masses, or into the more level parts of

the earth's crust, the order in which the individual strata are placed with regard to each other, and the relation they bear to those parts that are not stratified, had not with them become an object of attention or enquiry. The theories or dreams which they formed must therefore be viewed merely in the light of philosophical romances, or ingenious works of fancy, and would apply to any other planet as well as to ours. Nineteen of them may be found in the introduction to Mr. Accum's Chemistry. They bear the same relation to the state and appearances of the earth as the Oceana or the Utopia bear to actually ex- isting governments; and can no more account for its jjhenomena than tlie fictions of enchant- ment can explain the events of history.

This general character, which will apply to all the attempts at forming geological systems ante- cedent to the last thirty or forty years, will save us the trouble of enumerating those productions, or of pointing out their errors and defects. Within this time the science of mineralogy has made very rapid progress, and geological enquiry and clas- sification have kept pace with it. The compre- hensive mind of Werner, upon an extensive ac- quaintance with the mineral kingdom, formed a new nomenclature and anangement, by which simple fossil bodies may be discriminated and described. Carrying the same inquisitive and generalising talents to the examination of the crust of the earth, he discovered and pointed out the structure of its compound masses, the relations of its different strata or beds to each other, the method in which they succeed each other, in ascending from the lowest level to the j)innacle of the highest mountain-group, and those great arrangements of them that pre- vail, with few interruptions, round the globe. He has given names to those different formations, and detailed the characters by which they may be distinguished. The apparent irregularities, disorder, and contortions, which interrupt the more general formations, have not escaped his notice nor transcended his powers of arrangement. These, with the veins occurring in the strata, the metallic and other deposits that fill them, have all been remarked, named, and classified. As- cending from the consideration of present ap- pearances to their cause, and inferring from changes that are now in progress the past history and revolutions of our globe, his disciples have formed a system of geology, with regard to the earth's formation, more reconcileable with ob- served phenomena, explaining a greater body of facts, and liable to fewer objections, than any previous or contemporary theory. Tliis theory lias been often called the Neptunian, from its

being founded on the supposed agency of watei in the original modification of the earth : there is but another modern theory called the Pluto- nian, from its supposing the agency of fire in a similar

manner, that is at all worth the stu- dent's notice.

Since the system of Wernerhas been adopted, and his disciples scattered all over Europe, ardor has been excited, and the number of ob- servers multiplied. Adventurous travellers, car- rying with them a precise nomenclature and distinctive marks of discrimination, have visited, and are visiting, the most distant regions, ob- serving the surface of the earth in situations tlie most remote from each other, and diffusing the results of their examination over the scientific world. We need only mention as instances such names as those of baron Humboldt, and M. Von Buch. More minute surveys are daily making in the different parts of civilised Europe ; facts are thus perpetually accumulating, and collec- tions increasing. In our country a taste f(ˆr mineralogy and geology has been created, and rapidly diffused, by the labors and fame of Mr Jameson, one of Werner's most eminent disciples ; by those of professor Buckland of Oxford ; by the institution and labors of the Geological Society ; and by the attractive nature of the science itself, and its important contributions to the arts.

In giving a brief notice of the present state of geology, the following natural division of tlie science will probably be found both comprehen- sive and precise.

The first will contain a general description of the surfaceof the earth, and an explanation of the terms to be employed in discussions concerning it. The second will contain a description of its in- ternal structure, and a similar detail of its nomenclature.

The third will embrace a geological survey of our globe, with an account of the particular structure, relative position, and geographical dis- tribution of its various mineral masses.

The fourth division will employ the knowledge thus collected, in support of some rational theory, with regard to its formation, or in overturning the fabric of chimerical hypotheses.

In the present stage of the science, this last part will contain a short view of the Huttonian and Wernerian theories ; the doctrines of which respectively compose the creeds or articles of faith in geology, of the two sects into which the mineralogists of this covmtry are divided.

I. We shall first then begin with a description of the earth's surface, and shall avail ourselves of the phraseology of Werner, employed by Mr Jameson in his System of Mineralogy, as being more precise, and more generally received, than any other that has hitherto been

invented.

The dry land of our globe may be, fo” the sake of precision and convenience of description, di- vided into four classes of inequalities, comprising, 1. The high land and low land ; 2. Alpine land and plain ; 3. Mountain range and valley ; 4. Single mountain and ravine. From the sound- ings taken in different seas, and in different parts of the ocean, the])ortion of the globe covered with w.iter would appear to be similar in its sur- face to that part of it which we inhabit, and to possess eminences and depressions as strongly

marked, if not so easily examined. Indeed, without any experiment to ascertain this fact, it might have been pretty certainly inferred from analogy, when we consider that the ocean covers more than a half of the crust of the earth, and that the various islands and continents that com- pose the exposed part of it, are merely to be viewed as elevations of greater or less extent, that rise out of its waters, and continuations of those below them. The bottom of the ocean may therefore be as much diversified by moun- tains and valleys as the surface of our continents. The most general division of the dry land is into high and low land. The low land is composed principally of plams, though it admits sometimes of mountainous and hilly ground of no consider- able elevation. It does not rise much above the level of the sea, and is made up principally of alluvial deposits or of secondary formations. The high land is composed of alpine, mountainous, and hilly ground, each rising above the other, and forming a suite of elevations from the low land to the most prominent points of a continent. The general distribution of the high lands we have stated in our preceding article on Geocraphv.

The characteristic feature of the mountain groups is the superior elevation of its central chain, and the gradual sinking of the moun- tain masses towards its extremities. Mountai- nous land is distinguished from Alpine by its less height, and by its want of that aggrega- tion of eminences that constitute the mountain- group ; and hilly land, although it sometimes possesses this appearance, is distinguished from the two former by its less elevation, and by the rounded wavy aspect of its inequalities. From the central chain of the mountain-group all the other parts decline on both sides. It is never intersected totally in its course, and is generally commensurate in length with the extent of the group. It is divided from those subordinate chains that are arranged with it, by valleys fre- quently traversed by rivers. The mountain- chain is subdivided into individual

mountains, which are separated from each other by small valleys or ravines, neither wide, deep, nor long, and seldom permeated by streams and rivers.

Most mountains have a foot, an acclivity, and a summit; meaning by these terms, what is gene- rally understood by them, the lowest jiortion, the intervening space, and the highest point. Some- times the acclivity is perpendicular, and then there can be no foot; sometimes inclined at an angle, that will not permit the growth of trees ; and sometimes possessing such a gentle inclina- tion as allows it to have soft mould, and to be- come fertile in vegetables. The character of the summit is very various, according to the kind of rock that predominates, and other causes. Granite and limestone often present angular, precipitous, and sharp-pointed summits, as may he seen in the Alps, the Appennines, the rock of Gibraltar, and other mountains. CJneiss forms flat or round-backed summits; basalt, and some other, obtuse conical ones.

Mountain-grou|)S vary very much in their length, their brcudtli, the shapes of their indivi- dual mountains, and the height of their summits. It is almost needless to mention instances of these

varieties, or to give terms by which they may be discriminated, as they cannot fail to occur to every one in the least acquainted with the ele- ments of geography.

The direction and magnitude of rivers fre- quently indicate the direction in the inequalities of the regions through which they flow, and in their course sometimes present us with particular appearances, which have not yet been enume- rated in any of the foregoing divisions. We allude to those basins, or concavities, which they seem once to have formed or occupied, and through which they now flow. These concavi- ties are of various shapes, sometimes inclining to circular or oval, and other times more elongated. The lips of the basin seem in general to rise pretty high from its bottom, and to be composed of rocks or earths in a different state of aggrega- tion. In the basin itself the surface consists chiefly of gravel, sand, clay, loam, or chalk, that appear to be late mechanical deposits from water, or rolled and rounded by its action. The sides or lips of it are either parts of mountains, or si- milar to the ground without it in structure. Ex- amples of these concavities will occur to almost every one. They are met with in the course of the Rhine, the Rhone, the Elbe, and the Danube. The Vallais, and the concavity in which tiie lake of Geneva is situated, may serve to show this appearance in the line of the Rhone; the lake of Constance in that of the Rhine; the circular valley of

Bohemia, and the plain on which Dresden is situated, in that of the Elbe ; and the Danube, beside many others, traverses a basin of this kind that composes a great part of Hun- gary. They occur in Scotland in Dumfriesshire, Perthshire, and Aberdeenshire. The Tay at Perth, before issuing from the narrow pass be- tween the hills of Kinnoul and Moncrieff', points out one instance of them.

These inequalities, which we have enumerated under the terms of low land and high land, mountain-groups and alpine summits, are not more remarkable for the manner in which they diversify the surface of the earth, than for the diff'eience of the mineral masses which they exhibit. The more elevated regions are composed of bare cliffy rocks, masses generally crystallised to a certain extent, and in some cases highly in- durated, and presenting pointed abrupt surfaces. As we descend, the rocks lose their crystalline appearance, and we meet with slime and clayey fossils in greater abundance. .Still lower down, we find fragments of rock, rolled pieces of sand- stone, sand, soil, or mould, and other soft, dis- continuous, and fortuitously arraneed substances. Another remarkable distinction of the fossils, ex- imined at these dift'orent altitudes, consists in their state with regard to petrifactions of organic remains. In the higher elevations, and among the fossils highly crystallised, such as granite, we can discover no trace of the exuvice of organised beinjj, no petrifaction of animal forms. In the middle regions these appearances are rare, and exhibit little variety. Tliey increase in abun- dance, and in tlie perfection of the animal struc- ture, as we descend, till we arrive at petrifac- tions of the animals that now inhabit the earth along with us. That many of those appearance*

which we have pointed out in the inequalities of the earth's surface have been mod, tied by the action of the elements both mechanical and che- mical, in a long course of ages, cannot be de- nied, and might be admitted with greater faci- lity, did our limits permit us to describe the pro- cesses tliat are now advancing, under the same causes. Differences of temperature in promoting a disunion of contiguous portions; great floods or continued falls of rain in swelling rivers, brooks or mountain torrents, and enabling them to detach and carry along pieces of rock or parts of loose soil from the higher to the lower ground ; the masses of snow and ice accumulated during the colder seasons, and precipitated on tlie lower ground by thaws; the powers of violent storms and earthquakes on the shores and lower levels, are among the agents whose forces and effects ought in such a view to be appreciated. Nor would the operation of chemical agency be un- deserving of notice, when we consider the vast quantities of lime and other matters that are held dissolved in springs and streams, and which, being deposited gradually from their waters, in- crust the edges of their channels, or petrify the wood upon their banks. Appearances

of this kind occur frequently in the Velino, the Teve- rone, and many other rivers of Italy, and pre- sent us sometimes with the appearance of petri- fied thickets. The deposition of saline sub- stances in many places, and the stalactitical form in which fossils of the flint genus sometimes occur, demonstrate that chemical precipitates from water are not confined to calcareous mine- rals. From these facts we may infer, that many of the phenomena on the earth's surface, which must have taken place in remote periods, are similar to those mechanical and chemical results, the causes of which are now in action ; and that we have thus, as it were, before our eyes, though on a very diminished scale, a specimen of these mighty processes by which, under Providence, our globe was brought into a state fitted for becoming our habitation ; but this inference we shall leave for future discussion, and proceed at present,

II. To give a very brief description of the in- ternal structure of the earth's crust, and the rela- tive position of its parts. And here fossils may be considered either, 1. With regard to the struc- ture of the smaller portions or fragments into which they may be divided; or, 2. With regard to their distribution, arrangement, and relative position, as composing greater or smaller por- tions of the frame of our globe. When viewed in regard to their fragments, or hand-specimens, they are either simple or compound. Simple fossils may be defined to be those, the whole mass of which is uniform and homogeneous, of which every separate division affords the same ma- terials, and exhibits the same appearances, and of which any given portion may be taken as a speci- men or sample of the whole. Of this kind are lime- stone, serpentine, and varieties of other rocks.

Compound minerals, from the manner in which their particles or individual portions are joined, are denominated either cemented or ag- gregated. The cemented structure is formed when the individual particles may be perceived

by the eye to be connected with a cement, and occurs m brecia, pudding-stone, and otliei fossils. The appearance of this structure allows us to infer, that the materials of the stone, where it is found, are not at present in the situation where they were first formed into a solid ; but that they have been broken off from larger frag- ments, that they have been carried from their original place, and, after being modified in their course, have been deposited from a fluid, and connected by a finer extraneous substance. The aggregated structure is distinguished from the ce- mented, by the immediate connexion of the parts of the rock where it occurs, without the interven- tion of cement. Of the aggregated structure there are two kinds, simple and double,

and each of these has its own subordinate differences.

Simple aggregation may characterise two states of a body. One of the component parts may predominate so much as to constitute a basis in which the others are imbedded, and consequently may prevent these others from mutual contact ; or the fossils may be so arranged, that all the parts may be brought into immediate and reci- procal connexion. The *irst of those kinds of simple aggregation is aga'n divided into two subordinate differences, denominated the por- phyritic and amygdaloidal structure. The cha- racteristic distinction of a porphyritic mineral is the dispersion of one of its constituent parts through a basis in the shape of grains or crystals ; the amygdaloidal structure, on the other hand, presents vesicles or spongy-like spaces, dispersed irregularly through a basis, sometimes half-filled, sometimes empty, and sometimes completely filled. The crystal or grains in the first kind of rock appear to be of contemporaneous formation with the base, the matter that fills up the vesi- cular spaces in the amygdaloidal structure. Those fossils that possess that kind of simple ag- gregation, in which all the parts come into coii- tact without the intervention of a base, are either granular or slaty. The granular structure is ex- hibited by rocks whose parts are nearly equal in all the dimensions of length, breadth, and thickness, and appear an aggregate of contempo- raneous formations. The slaty structure, on the other hand, though its constituents seem of contemporaneous formation, is composed of parts whose length and breadth are more consi- derable than their thickness. Of the former kind of aggregation, granite and sienite are good ex- amples ; of the latter, gneiss and mica-slate may serve as instances of frecpient occurrence.

Besides the aggregation called simple, which we have just described, there is what is called the compound aggregation, divided into five dis- tinct subordinate kinds; 1. The granular slaty ; 2. The slaty granular; 3. Granular porphyritic; 4. The slaty porphyritic ; 5. The porphyritic amygdaloidal. The five kinds of compound ag- gregated structure, it will be seen from the name, are merely combinations of the four simple ones formerly mentioned, and do not require, in an abridged account like the present, to be particu- larly described. It may be proper only to re- mark, that, when the two adjectives descriptive of the compound sU'ucture are applied to a mass, t!ie former expresses the appearance it exhibits

in the Bmall or more confined view of it, and the latter in the great, or on the more extensive scale. Thus, to take an example, granular slaty de- scribes a specimen which is granular in the small but slaty in the great, such as gneiss where the quartz and felspar form the granular texture, and the mica is disposed in the direction of the slaty structure. With tiiese terms, and under the head of simple and compound minerals, we might enumerate and describe the different kinds of fossil masses that compose the crust of the earth. But referring to the body of the work, and the following head, for a description and an analysis of them, we proceed to describe the structure of mountain-masses, and of their ge- neral arrangement and relative position, as con- stituting the habitable globe. And here we quote Mr. Jameson's account of those arrangements, as the passage of his work which contains it ex- presses every thingAiecessary to be observed, in language so perspicuous and concise, that it would be useless to extend it, and almost im- possible to abridge it.

Structure of Mountain-masses.

In the structure of mountain-masses, we have two principal kinds of structure to describe. These are the stratified structure, or that of strata, and the seamed structure, or that of distinct con- cretions.

Stratified structure. — AVhen a mountain, or mountain-mass, composed of one species of rock, is divided, by means of parallel seams, into masses, whose length and breadth are greater than their thickness, or into what may be deno- minated tabular masses, which extend through the whole mountain, it is said to be stratified, and the individual masses arc termed strata. Of this kind of structure we have instances in granite, limestone, clay-slate, and mica-slate. But if the mountain or mountain-mass consists of an alternation of different rocks, as of clay-slate and greenstone, or of gneiss and limestone, it is said to be composed of beds. The seams that separate the strata, are named strata seams, or seams of stratification.

Strata are in general from four to six feet thick in the older formations; but less consider- able in the newer. They also vary very mucli in their position. The examination of this ap- pearance of strata is of great importance to the geognost and mineralogical geographer.

The position of a stratum is determined by observing its inclination, dip, and direction.

The inclination is the angle which the stratum forms with the horizon, and is determined by the quadrant.

The dip is the point of the compass towards which the stratum inclines.

The direction is the angle which the stratum makes with the meridian, and is determined by the compass. It is always at right angles to the dip.

In making observations of this kind, it is of the greatest importance to distinguish the gene- ral direction and inclination from the partial. To effect this, we must take the results of a number of particular observations, and compare them together ; and those similar angles which Vol. X.

are the most numerous are to be considered as expressive of the general inclination and direc- tion. It sometimes happens, that this general position has also its variations ; these must also be attended to and noted. An acquaintance with the shape of a mountain group, will assist us very much in such investigations, as it is inti- mately connected with the general disposition of the stratification of the masses of which it is composed. It is also of importance to know the fall or declivity of a mountain group, as its direction and inclination are generally conforma- ble, particularly in the older formations, with that of the super-imposed masses. Sometimes, in- deed, there are exceptions to this rule ; but these are easily explained.

It is often very difficult to determine, whether the rock we are examining be stratified or not, and, when the seams of stratification are hid, to know the direction of the strata. The following observations will be useful in removing some of the difficulties attending such investigations. 1. Strata are almost always parallel with the slaty structure of the stone. In certain porphyritic granites, the crystals of felspar appear to lie parallel with the strata; the latter character, however, is by no means so decisive as the for- mer. 2. Strata can only be formed by parallel seams, which have the same direction and extent through the mountain-mass. Where parallel rents occur in different directions in the same species of rock, as in granite, sandstone, lime- stone. Sec, it is evident that they are to be con- sidered as accidental. 3. The seams of tabular distinct concretions, which are often of consider- able extent, must not be confounded with strata seams, because their extent is not so considerable; and in each group of concretions the direction is different. 4. Wˆhere parallel rents have a differ- ent direction from the slaty structure of the stone, th’ey are certainly accidental. Inattention to this circumstance has led several mineralogists into error. A striking instance of these rents was observed in a quarry of gneiss, in the forest of Tharand, in Upper

Saxony. The gneiss, at first sight, appeared to be disposed in vertical strata, and as such it was viewed by De Luc ; on a closer examination, however, the apparent vertical seams proved to l>e merely accidental parallel rents, perpendicular to the slaty struc- ture of the stone ; therefore the strata were hori- zontal, not vertical. 5. Beds are always parallel with the strata; these, therefore, point out the direction of the strata. 6. Although the slaty structure points out to us the direction which the strata must have, it does not follow, that a reck, having a slaty structure, is stratified. 7. In sandstone, limestone, and rock-salt, regular and very extensive stripes are sometimes observed, which have been confounded with true seams ot stratification. An attentive examination, how- ever, always discovers them traversing the real strata seams. Von Buch, in his description of Landeck, and geognostical observations made in Italy and Germany, and Friesleben, in his obsen-ations on Thuringia, descril)e striking in- stances of stripes resembling strata-seams.

Strata vary very considerably in the angle which they form with the horizon : they occur

from horizontal to vertical, but the general in- clination is between horizontal and 45°. The differences are either original, or have been pro- duced by subsequent changes. In strata com- posed almost entirely of mechanical depositions, any deviation from the horizontal position is generally to be considered as caused by a change of original position. We must be careful, however, not to confound highly inclined strata of sandstone with accidentally changed strata. This sandstone is in its original situation, and it owes this situation to the great portion of che- mically dissolved matter combined with it, and the inclination of the bottom on which it is deposited. It may be said, that the bottom on which it rests has been forced up while the strata were soft, and has thus given them their present situation; but this explanation will not suffice, as these strata sometimes rest on walls of clay- slate ; sometimes on loose sandstone ; sometimes on faces composed of horizontal beds of sandstone. In strata composed of chemical precipitates, all the ■variety of inclination depends on the inequality of the bottom. If the bottom be very much mclined, so are the strata ; if it be very flat, the superincum- bent strata are also flat. It is therefore a fact, says this author, that all inclined strata, with a very few exceptions, have been formed so origi- nally, and do not owe their inclination to a sub- sequent change.

Respecting the formation of strata and beds, many opinions have been proposed. Werner's explanation is satisfactory. He remarks, that strata and beds appear to be particular and in- dividual depositions from a state of solution or suspension in water.

The stratified structure, as well may be sup- posed, occurs in many different rocks, and, in a more extended view, probably in all. Gneiss, mica-slate, and clay-slate, are always stratified ; granite frequently ; sienite sometimes stratified, sometimes unstratified ; porphyry is seldom stra- tified ; primitive limestone occurs both stratified and unstratified ; flcEtz-limestone, sandstone, and chalk, are most distinctly stratified.

When we examine the structure of a moun- tain, we must be careful that our observations be not too micrological, otherwise we shall undoubt- edly fail in acquiring a distinct conception of it. This will appear evident, when we reflect that the geognostic features of nature are almost all on the great scale. In no case is this rule to be more strictly followed than in the examination of the stratified structure.

By not attending to this mode of examination, geognosts have fallen into numberless errors, and have frequently given to extensive tracts of country a most irregular and confused structure. Speculators building on these errors have repre- sented the whole crust of the globe as an irregu- lar and unseemly mass, it is, indeed, surprising, that men possessed of any knowledge of the beautiful harmony that prevails in the structure of organic beings, could for a moment believe it possible, that the great fabric of the globe itself, that magnificent display of omnipotence, should be destitute of all regularity in its structure, and be nothing more than a heap of i-uins.

Seamed struc Aire. — Tliis structure is formed in

those cases where there are scares which are parallel in one direction, but intersect each other in another. The most striking example of it is the columnar. The columns are sometimes regular, sometimes approach to the globular form, and occur even curvated. They are from a few inches to many fathoms long, the length being determined by the direction of the seams in one direction. In the islands of Staffa and Eigg there are admirable examples of this kind of structure. These columns are sometimes collected into groups, and such groups are often separated from each other by seams, or rather rents, which render them more distinct. Such groups may be considered as immense distinct concretions. The columns of such a group often tend towards a centre, some are parallel or perpendicular, others are

horizontal ; and all this variety sometimes occurs in the same hill. The columns are sometimes jointed, so that the con- vex extremity of the one column is fitted to the concave extremity of the other; and these columns are usually composed of globular dis- tinct concretions. These globular concretions are composed of curved lamellar concretions. The spaces between the different globular con- cretions are composed of a looser matter than the concretions themselves; and it is by the falling out of this less compact substance that the structure of such columns is first developed. No rock shows this kind of structure more dis- tinctly than basalt ; in it we have all the varieties of the seamed structure, from the smallest, which is the lamellar distinct concretion, to the largest, which is formed by the grouping of columns. This kind of structure occurs also in porphyry and greenstone. Lava never presents any of the varieties of the seamed structure; a negative character which sufficiently distinguishes it from greenstone or basalt, with which it has been confounded.

Another kind of seamed structure, which de- serves to be described, is the tabular seamed structure. It is distinguished from the lamellar by being always straight and much thicker. It is generally from three to nine feet in length, and rarely thicker than two or three inches. Basalt, in the lower parts of an individual deposition, has often this kind of structure. At first sigh* it is not unlike stratification. It also occurs in columnar porphyry.

The last, or third kind of seamed structure, is the large globular, or massive, in which all the dimensions are nearly alike. It occurs alone (that ii, without any other kind of structure), and is from one to three or more fathoms in diameter. The larger balls show Jamellar distinct concre- tions, which, we may observe, are always more solid the nearer we approach the centre. The roundish balls of granite, found dispersed over low countries, have been considered as bowlder or rolled stones, and many theories have been formed to account for their transportation. The granite of the island of Arran presents this kind of structure.

Structure of Formations. By a rock-formation we understand a deter- minate assemblage of similar or dissimilar rock-

masses, which are characterised by exteinal and internal relations as an independent whole, that is, as a unity in the series of rock-

formations. These masses are either simple or compound. When the mass is uniform throughout, as is the case with limestone or sandstone, it constitutes what may be denominated a simple formation. Granite, gneiss, and mica-slate, are also of this kind. When dissimilar masses occur in a for- mation, as in the case of black-coal and floetz- trap. It is said to be a compound formation.

Similar rocks are often repeated in very different periods. Each of these individual de- positions is a particular formation, and the whole is denominated a series or suite of forma- tions. Thus there is a limestone, a porphyry, a granite suite, &c.

It is a determinate character of certain forma- tions, to constitute the principal mass of the mountain in which they occur : this is the case with gneiss, clay-slate, porphyry, and others. With other formations, on the contrary, it is as essential a character to occur only in single beds in the others, and these are said to be embedded. The older porphyry, limestone, and many others, are of this kmd. When such individual beds occur in different principal formations (that is, are not confined to a single one), as primitive limestone, and primitive trap in gneiss, mica- slate, and clay-slate, Sec. ; when they, as is the case with these, form single independent wholes, which always continue the same, notwithstand- ing the difference of the rocks in which they are embedded ; and lastly, when they form members of a series of formations, as is also the case in these instances, they are to be considered as independent formations. If, on the contrary, they are confined to one rock mass ; if they bear no marks of a whole ; and lastly, if they are con- nected with no series, or suite of formations, they are associated with tlie formation in which they axe embedded, and it is said that they are subor- dinate to it. Roestone in the second sandstone formation, and copper-slate in the first flcetz- liniestone, are examples of this kind. Beds composed of various fossils sometimes occur in different rock-masses. These fossils are usually those of which the rock-mass is principally com- posed, irregularly mixed, or are simple stones. Such beds are usually very irregular, do not extend through the whole rock-rnass, and, in general, exhibit apparently great irregularity in all their relations. They are not alone capable of any discrimination, ai.d are referred to the rock in which they occur. They have been, but rather improperly, denominated foreign beds. When single beds are well distinguished by the kind of stone of which they are composed, and if their composition shows certain peculiarities (as, for example, the determinate presence of metallic fossils, &c.), they are referred to the particular repositories, which we shall afterwards consider particularly. Beds of iron- pyrites and magnetic ironstone are of this kind.

Structure of the Crust of the Globe.

The last kind of structure we have to describe is by far the most extensive and important. It is the structure of the crust of the globe itself,

in so far as it is composed of rock formations of different magnitudes, laid over each other ib certain directions.

Under the five following heads, Werner com- prehends every relation respecting the exten* and relative position of formations in general. 1. The original extent of formations. 2. Their present extent and continuity. 3. The position and direction of the strata of formations, in re- spect to the fundamental rock. 4. The direc- tion of the strata themselves, without reference to the fundamental rock. 5. The relation of the outgoings of the strata to the exterior of the mountain.

It may be previously remarked, that when one formation lies on another, it is said to rest on it, and the rock on which it rests is termed the fundamental rock; and the plane, which se- parates the fundamental rock from the formation that covers it, is denominated the plane of sepa- ration, which is always parallel with the seams of the strata.

1 . Qf the original extent of formations. — Werner observes, that the greater number of formations have been universally deposited ; and these he denominates universal formations. A very few, however, are to be considered as exceptions ; and these he terms partial or ano- malous formations.

Universal formations extend around the whole globe (not, however, without interruption), and constitute by far the greater part of the mass of which its crust is composed. Almost all the primitive, transition, and flcetz formations, are universal depositions; of these we may mention granite, gneiss, porphyry, limestone, and basalt.

Partial formations occur only here and there, and in single spots, and accompanied with appearances that indicate the partiality of their depositions. Thus, at Wehraw, in Lusatia, there is an excellent example of a partial formation. It consists of sandstone, limestone, bituminous shale, and iron-clay ; and these rest on loose sand. The sandstone resembles in many re- spects that found in other sandstone formations; yet It does not lielong to any of them, as is evident from its position, and the rocks with which it is associated. Werner conjectures that it may have been formed by asmall and partial flood.

The examination of these partial appearances is of much importance, not only in extending our knowledge of the variety of formations, but in connecting the history of the earth more nearly with that of man.

2. Of the present extent and eontinuifi/ of formaltons. — ˆThe present extent and continuity of formations is very different from what it was originally. We find them either extended un- interruptedly over great tracts of country, or they appear isolated, of little extent, and fre- quently resembling partial formations. In the one case they are said to be unbroken, in the other broken. The broken formations occur in small detached masses ; and these have peculiar denominations, according to their position and shape.

^^ hen detached portions occur on the summits of hills, these are called cops. When portion* occur, filling up hollow spaces between moun-

tains, they are denominated upfillings. And when a portion occurs only on one side of a mountain, it is said to be shield- formed, or to have the shape of a shield.

3. Of the position and direction of strata in re- gard to the fundamental rock. — When strata have the same direction as the fundamental rock, they are said to be conformable with it ; if the direction is different, they are said to be un- conformable. If they differ only in direction, we say that they are simply unconformable; but if they differ not only in direction, but lie over the ends of the strata of the fundamental rock, they are said to be unconformable and overlying. Overlying strata occur snore fre- quently than simply uncomformable, and have far greater extent.

4. Of the direction of the strata themselves, without reference to the fundamental rock. — Strata are either straight, that is, disposed in one direction on the fundamental rock, or they turn around it, and enclose it ; in this case they are said to be mantle-formed, or mantle-shaped. If the strata are not only wrapped around the funda- mental rock, but also cover its extremities, they are said to be saddle-shaped.

When the upper part of the saddle-shape is carried away, the mantle-shape is formed.

Strata are sometimes concave, and they are then said to be basin-snaped ; but, if the conca- vity be oblong, they are named trough-shaped. In the concave, that is, the basin and trough- shaped, and convex, that is, the saddle and man- tle-shaped strata, the outgoings form circles ; in the concave the outer and greatest circle is the oldest ; in the convex, on the contrary, the outer and largest circle is the newest.

5. Of the relation of the outgoings of the strata to the exterior of the mountain. — We have to con- sider, first, the relation of the outgoings of strata to mountain-masses of considerable extent ; and, secondly, to mountain caps.

In mountain- masses, the strata either cover each other completely, or the outgoings are open and exposed. When the outgoings are exposed, the newer strata have a rising or sinking level.

There are three different kinds of mountain- caps. In the first, the cap rests on a fundamen- tal rock ; the seams of the strata are parallel with the plane on which the strata rest, and these are unconformable and overlying ; the second kind of cap is formed by a rock rising through the sur- rounding strata; and the third kind of cap is formed by portions of harder beds remaining after the superincumbent and softer strata have been carried away.

In the first, the rock is unconformable and overlying. The floetz-trap and porphyry forma- tions afford numerous examples of this kind of mountain-cap.

In the second, the newer strata are mantle- shaped. Granite often occurs in caps of this kind.

In the third, all the strata are conformable, so that the subjacent and superincumbent strata have the same direction with the bed which forms the cap. Primitive greenstone, in clay-siate, some- times forms caps of this kind.

These strata and formations, and the kinds of

rocks that compose them, follow one another in rising from the lower levels toward the higher ; or, in other words, are placed above one ano- ther, not in an irregular or promiscuous manner; they follow a certain order of succession, and exhibit certain determinate relations. We do not, for instance, find a stratum of granite alter- nating with a stratum of sandstone, nor a forma- tion of gneiss covering a bed of pit-coal. In examining the crust of the earth to discover this order of

supraposition we observe a great class of rocks pushing in alpine chains, their summits above all the flatter strata, and affording on their sides, and at their base below, a resting place, or support for them. These rocks are found under- every other stratified mass, and never covering, or resting upon, any.

In like manner the rest of the strata have cer- tain relations to each other, from the granite to the most superficial mould.

III. We proceed now to the third division of the subject of geology, which was to give a short view of the various classes of rocks and mineral masses, that compose the earth's crust, arranged according to their relative situation. We shall best execute this part of our duty, by presenting to our readers Dr. Thomson's compressed, but comprehensive account of the Wernerian ar- rangement, drawn up with his usual acuteness, and displaying his usual extent of information and research. Some of the observations may be found in the article Mineralogy, and under the titles of the different minerals to which they refer; but we could not on that account omit the repetition of them, without destroying the continuity and systematic connexion of this article.

- Werner has chosen the relative situation of rocks as the basis of his classification. He di- vides them into five classes. The first class con- sists of those rocks, which, if we were to suppose each layer to be extended over the whole earth, would in that case lie lowest, or nearest the centre of all the rocks which we know, and be covered by all the other rocks. The second class consists of those rocks which in that case would be immediately above the first class, and cover them. The third class would cover the second in the same manner; the fourth the third ; and the fifth would be uppermost of all, and constitute the immediate surface of the earth. The first class of rocks are covered by all the rest, but never themselves lie over any other. The others lie in order over each other. These grand classes of rocks he has denominated formations, and dis- tinguished them by the following specific names : 1. Primitive formations; 2. Transition forma- tions; 3. Flcetz formations; 4. Alluvial forma- tions; 5. Volcanic.

The primitive formations are of course the lowest of all, and the alluvial constitute the very surface of the earth ; for the volcanic, as is ob- vious, are confined to particular points. Not that the primitive are always at a great depth under the surface, very often they are at the sur- face, or even constitute mountains. In such cases, the other classes

of formations are wanting altogether. In like manner the transition, and other formations, may each in its turn occupy

the surface, or constitute the mass of a mountain. In such cases, all the subsequent formations which ought to cover them are wanting in that particular spot.

Each of these grand classes of formations con- sists of a greater or smaller number of rocks, which occupy a determinate position with respect to each other, and which, like the great forma- tions themselves, may often be wanting in parti- cular places. Let us take a view of the rocks which compose all these different formations.

Class I. — Primitive Formations.

The rocks which constitute the primitive for- mations are very numerous. They have been divided therefore into seven sets ; which consti- tute as many primitive formations, and are dis- tinguished each by the name of that particular rock which constitutes the greatest proportion of the formation. These seven sets of primitive formations are the following: — 1. Granite; 2. Gneiss; 3. Mica-slate; 4. Clay-slate; 5. Newest primitive porphyry ; 6. Sienite ; 7. Newer ser- pentine.

The granite is the undermost, and the sienite the uppermost of the primitive formations. Gra- nite is scarcely mixed with any other rock ; but in gneiss, mica-slate, and clay-slate, there occur beds of old porphyry, primitive trap, primitive limestone, old serpentine, quartz rock. For that reason, these rocks are said to constitute forma- tions subordinate to gneiss, mica-slate, and clay- slate. Gypsum occurs in beds in mica-slate, and old flint-slate occurs in the same way in clay-slate. Thus, besides the seven principal primitive formations, there occur seven subordi- nate formations, interspersed through the second, third, and fourth formations ; and topaz rock, which lies over gneiss and under clay-slate, must be added to the list ; so that the primitive for- mations altogether amount to fifteen.

If we suppose the nucleus of the earth to have been first formed, and the formations to have been afterwards deposited in succession upon this nucleus, it will follow that the lowest forma- tion is the oldest, and that the formations are newer and newer according as they approach the surface. This supposition accounts for some of the names given to the primitive formations. That porphyry, for example, is

considered as the oldest which lies lowest down in the series of formations, and those formations of porphyry which lie nearer the surface are considered as newer. Granite, of course, according to this way of speaking, i.

Principal. 1. Granite.

2. Gneiss. •i. Mica-slate.

4. Topaz-rock.

5. Clay-slate.

■ <

Subordioatc.

6. Older porphyry.

7. Primitive-trap.

8. Primitive limestone.

9. Older serpentine.

10. (iuartz.

11. Gypsum.

Ll2. Older flint-slate

13. Newer porphyry.

14. Sienite.

15. Newer serpentine.

Let us consider each of them in the order of the formations.

1. Granite is the lowest of all the formations, and the basis upon which the others rest. It is composed of felspar, quartz, and mica ; each in a crystallised state, and cohering together with- out any cement. The felspar is usually the most abundant ingredient, and the mica the smallest in quantity. The color of the quartz and mica is usually gray ; but the felspar has a considera- ble variety of colors, occurring in different shades of white, gray, red, and green. The size of the constituents of granite varies considerably. Some- times the grains are very large, and sometimes they

are so small that the granite has the appear- ance of a sandstone. Sometimes it is porphy- ritic, large crystals of felspar occurring in a basis of fine-grained granite. Sometimes this rock is distinctly stratified, but in other cases no stratifi- cation can be perceived. The unstratified or massive granite is frequently composed of large globular masses, each of which is composed of concentric lamellar distinct concretions. The intervals between these balls consist of a softer granite, subject to crumble down when exposed to the action of the weather.

Besides the three constituents of which granite essentially consists, other crystallised minerals occasionally occur in it, though only in small quantities. These crystals are chiefly of schorl; sometimes garnet and tin-stone.

Granite very seldom contains among its strata beds of any foreign rock. Beds of felspar alone have occasionally been observed in it. It is not so rich in ores as some of the other formations. Tin and iron are the metals which are most abundant in it. Hitherto molybdena has been found chiefly in granite. It contains also silver, copper, lead, bismuth, arsenic, cobalt, tungsten, and titanium.

Besides the great granite formation, which has been just described, Werner has discovered a second ; which is supposed to occur nearly in the same geognostic situation as porphyry and sienite. The granite veins which traverse gneiss, mica-slate, and clay-slate, belong to this forma- tion; There are several particularities by which this newer granite may be distinguished from the other. It usually occurs in a lower level ; it has commonly a deep red color ; contains gar- nets ; and is not porphyritic.

When granite is not covered by any other for- mation, it forms high insulated cliffs and steep rugged rocks.

2. Gneiss is the formation which lies imme- diately over granite, and into which indeed it gradually passes. Gneiss consists of the same constituents as granite ; namely, felspar, quartz, and mica; but it differs in its structure, being disposed into slates from tlie prevalence of the mica. The texture of the individual slates is granular. Hence the structure of gneiss is granular slaty. Gneiss is always distinctly strati- fied. It sometimes conUiins crystals of schorl ; but they are smaller and much more uncommon than in granite. Tourmaline is more common,

and 90 likewise is garnet. It contains in it many foreign beds, whicli is not the case with granite. Beds of three of the first six subordi- nate formations

are found in it. It is, perhaps, richer in metallic ores than any other formation. Almost every metal occurs in it, either in beds or vems.

When gneiss is not covered by any other forma- tion, it forms round-backed mountams, and like- wise crags : but less steep and insulated than those composed of granite.

3. Mica-slate. — The formation which lies im- mediately over gneiss, and into which it insensi- bly passes, is mica-slate. This rock, like the preceding, is compound, and composed essen- tially of quartz and mica. Like gneiss it is slaty, but it differs from that rock in containing no felspar. It is always stratified. It very fre- quently contains garnet crystals in considerable quantity, so as to give it a porphyritic appear- ance. Its structure is then slaty porphyritic. ft sometimes also contains crystals of tourmaline, cyanite, and granatite. Felspar likewise occurs in it occasionally ; not, however, as a constituent, but in kidney-form and irregular masses. Like gneiss, it contains many foreign beds (older por- phyry, primitive trap, primitive limestone, older serpentine, and gypsum, occur in it). It is rich in ores ; containing beds of magnetic ironstone, pyrites, galena, copper pyrites (containing gold), blende, cinnabar, cobalt glance, magnetic pyrites, and sometimes even native gold. It abounds also in metalliferous veins.

4. Clay-slate. — Mica-slate gradually passes into clay-slate, the formation immediately over it. Clay-slate consists essentially of the mineral described in the preceding chapter under that name. This rock is always slaty and always stratified. When it approaches mica-slate, grains of quartz, and also of mica, may be dis- tinguished in it. Occasionally also it contains crystals of felspar, schorl, tourmaline, garnet, and hornblende.

Under the name of clay-slate formation are included not only clay-slate, strictly so called, but likewise chlorite-slate, talc-slate, whet-slate, drawing-slate, and alum-slate ; all of which occur along with pure clay-slate, are similarly stratified, and gradually pass into it and into each other, and therefore are considered as only constituting a part of the same formation : but these substances affect a particular order. The following table exhibits that order, beginning with the lowest or oldest, as it is called, and ter- minating with the uppermost or newest : —

1. Light yellowish gray clay-slate.

2. Dark gray clay-slate.

3. Green clay-slate.

4. Chlorite slate and potstone.

5. Talc slate.

6. Whet slate.

7. Bluish gray clay-slate.

8. Red clay-slate.

9. Drawing slate. 10. Alum slate.

Besides these different beds, which are con- sidered as constituting the clay-slate formation, it contains also beds of all the eight subordi-

nate formations. It contains also a considerable number of metallic ores in beds ; as iron py- rites, copper pyrites, arsenic pyrites, cobalt, ga- lena, &c. It contains also a variety of mineral veins.

Having now described the first four primitive formations, let us proceed to the subordinate formations ; taking topaz rock along with them, on account of its rarity. These are the older porphyry, primitive trap, primitive limestone, older serpentine, quartz, topaz rock, gypsum, and primitive flint-slate.

5. Older porphyry. — By porphyry, as defined by Werner, is to be understood a rock consisting of a basis or ground of some compact mineral, and in this ground are interspersed crystals of some other mineral. The ground or basis varies in different porphyries. Sometimes it is clay- stone, sometimes pitch-stone, &c. ; and the por- phyry is named from this basis. Tlie following are the species of porphyry that have been de- scribed: — . Clay porphyry; 2. Horn-stone porphyry; 3. Felspar porphyry ; 4. Pitch-stone porphyry; 5. Sienite porphyry; 6. Obsidian porphyry ; 7. Pearl-stone porphyry.

The crystals interspersed through the different bases are commonly felspar, sometimes quartz, and sometimes hornblende and mica; but the last two are uncommon, especially the mica.

There are two very different formations of por- phyry ; the first is found in beds in gneiss, mica- slate, and clay-slate; whereas the second always lies over all these formations. Hence the first is distinguished by the name of older, and the second is called newer porphyry. It is the first of tliese that we are to consider at present.

The basis of the older porphyry is usually a species of horn-stone, and sometimes felspar ; and the crystals which occur in it are felspar and quartz. Hence the older porphyry consists chiefly of horn-stone porphyry,

and felspar por- phyry. When not covered by other formations it sometimes forms single rocks, but never large mountains.

6. Primitive trap. — The word trap is Swedish, and signifies a stair. It was applied by the Swe- dish mineralogists to certain rocks, whose strata when exposed, from the one jutting out under the other, gave an appearance somewhat like a stair. The term was adopted by other nations, and was applied indiscriminately to a great variety of rocks, which bore a certain resem- blance to each other. This generalisation intro- duced much confusion into the subject, which was first cleared up by Werner and his disciples. Under the term traps Werner comprehends cer- tain series of rocks, distinguished chiefly by the hornblende, which they all contain. In the most ancient, the hornblende is almost pure ; this purity gradually diminishes, and in the mostrecent traps the hornblende degenerates to a kind of in- durated clay. There are, then, three formations of trap : 1 . Primitive trap ; 2. Transition trap ; 3. Flcetz trap. The first only occupies our at- tention at present.

The primitive trap formation contains a con- siderable number of rocks ; which, occurring in different parts of the earth in similar situations, and as it were substituted for each other, are coiv

sidered altogether as constituting only one for- mation. The following table exliibits a list of the rocks belonging to this formation :

I. Hornblende.

1. Granular or common hornblende.

2. Hornblende slate.

II. Hornblende and felspar united.

i. Granular.

1. Common green-stone.

2. Porphyritic green-stone. 'S. Green-stone porphyry. 4. Green porphyry.

ii. Slaty. 1. Green-stone slate.

III. Hornblende and mica united. 1. Porphyritic trap.

The first two of these rocks consist essentially ot the minerals described under the names of common hornblende and hornblende slate. The latter sometimes passes into fine slaty gneiss and into chlorite slate.

Common green-stone is composed of horn- blende and felspar, both in the state of grains or small crystals, and the hornblende usually con- stitutes by for the greatest proportion of the mass. The felspar is almost always tinged green from the hornblende. This rock sometimes contains a little mica; sometimes it is intersected by small veins of quartz and actinolite; and sometimes also, though less frequently, of felspar and calcareous spar.

Porphyritic green-stone, like tlie preceding rock, is a compound of granular hornblende and felspar; but it contains likewise large crystals of felspar and (}uartz, interspersed through the green- stone ground.

Green-stone porphyry (black porphyry of the antiquary) is a rock consisting of granular green- stone, so small grained that at first sight it has tlie appearance of being a simple stone; con- taining in it large crystals of felspar, colored green from hornblende.

Green porphyry (tlie verde antico serpentine) is a rock which has for its ground a mixture of hornblende and felspar, so intimate that the two ingredients cannot be distinguished by the naked eye, and having a blackish green or pislaciiio green color. This trap contains greenish colo- red felspar crystals, often cniciform.

Green-stone slate is a rock composed of horn- blende and felspar, and sometimes a little mica, and having a slaty texture. It is very hard, but, .ike the other species of greenstone, soon withers when exposed to the air.

Porphyritic trap is a rock composed of an intimate mixture of hornblende and felspar, con- taining in it large plates of mica, whicli give it a porpliyritic appearance.

All the rocks of the primitive trap formation are characterised by containing a mixture of iron pyrites. Their stratificition is indistinct ; and, indeed, if we except green-stone slate and horn- blende slate, usually not perceptible. When primitive trap is not covered by any other for- mation, it constitutes considerable hills and clilfs. It abounds in ores, especially green-stone slate.

7. Primitive limestone. — Limestone occurs in all the four grand classes of formations, but it assumes a peculiar and characteristic appear- ance in each. In the primitive it is distinctly crystalline and transparent. The crystalline texture gradually becomes less and less distinct, as the formations advance, till at last the lime- stone assumes the appearance of

an earthy deposite.

Primitive limestone occurs usually in beds, and seldom forms entire mountains. Its color is usually white, sometimes it is gray, but very seldom assumes any other color. It is the species of limestone described already under the name of granular foliated. It sometimes con- tains in it quartz, mica, hornblende, actilonite, garnet, tremolite, talc, clay-slate, serpentine, asbestus, blende, galena, common and magnetic pyrites, and magnetic ironstone. Tlie ores are usually found at the lower part of the beds of limestone. It is sometimes stratified, and some- times not. When not covered by any other formation, it forms steep bare rocks; and, when It occurs in considerable quantities, often con- tains caverns.

8. Older serpentine. — ˆThe serpentine forma- tion consists essentially of the mineral described already under that name. Two subspecies were thus described ; namely, the common and precious serpentine. The latter (at least chiefly) consti- tutes the formation at present to be described. It occurs, like the other subordinate primitive formations, in beds in gneiss, mica, and clay- slate, and alternates with limestone. It is seldom stratified. It contains in it galena, and aurifer- ous arsenic pyrites.

9. Quartz occurs in beds, and in no great quantity. It is usually granular and of a white color; sometimes it contains a mixture of mica, which gives it a slaty texture. It is very often unstratified ; but, as it abounds in rents, these have often been mistaken for strata.

10. Topa2 rock. — The rock which constitutes tliis formation is very rare, having been observed only in Saxony, where it constitutes a mountain. There it rests on gneiss, and is covered by clay- slate. It is composed of three ingredients ; namely, fine granular quartz, schorl in thin prismatic distinct concretions, and topaz almost massive. These are arranged in thin layers, and tiiese again are divided into roundish and granu- lar distinct concretions, so that the rock is slaty granular. The intervals between these concre- tions are filled up with a yellowish or greenish colored lithomarge.

1 1 . Gypsum was formerly believed to be peculiar to the fla-tz formations ; but an immense bed of it has lately been discovered in Switzer- land in mica-slate. This primitive gypsum is characterised by containing mica and clay- slate.

12. Primitive Jlint slate. — This rock consists essentially of the mineral, described already under the name of flint slate. It is often tra- versed by veins of quartz. There are two for- mations of it; n«tmely, the primitive, which occurs in beds in clay-slate, and another wiiich belongs to the transition formations.

Havnia now described the eight formatio

‘ which are subordinate to gneiss, mica, and clay- slates, let us proceed to the remaining primitive formations, which always cover clay-slate, and are therefore considered as newer than iˆ. These are the newer primitive porphyry, sienite, and the newer serpentine.

13. Newer Porphyry. — To this formation belong the following species of porphyry ; namely, clay porphyry, pitchstone porphyry, obsidian porphyry, pearlstone porphyry, and sometimes felspar porphyry. Clay porphyry is by far the most common. To this formation also belongs claystone, a mineral already described. It con- stitutes the basis of clay porphyry, and frequently occurs without any crystals of felspar or quartz. To it we must also refer a kind of breccia por- phyry, composed chiefly of fragments of horn- stone porphyry and felspar porphyry.

14. Sienite. — This rock occurs usually along with porphyry ; and, when they are both together, the sienite generally forms the uppermost part of the hill.

Sienite is a rock composed essentially of fel- spar and hornblende, the same constituents which form green-stone; but in sienite the felspar i’ˆ the prevailing ingredient, whereas in green-stone it is the hornblende. In sienite the felspar is usually red, and very seldom has a tinge of green, ■whereas in green-stone the felspar is never red, but almost always greenish white. The structure of sienite is granular, and the grains vary greatly in size ; sometimes small grained sienite contains in it large crystals of felspar ; it is then called porphyritic sienite. When the two ingredients that constitute sienite are so small, and so inti- mately mixed, that they cannot be distinguished by the naked eye, and when such a rock contains crystals of felspar and quartz, it is denominated sienite porphyry.

Sienite, like porphyry, contains few foreign beds : but it is rich in ores, containing gold, silver, iron, tin, copper, lead, &c., always how- ever in veins.

The rocks of sienite are often divided into columns. Like the newer porphyry it often occurs in round masses.

15. Newer serpentine. — This formation consists of the rock composed essentially of the mineral called common serpentine. It bears a striking resemblance to the newer porphyry formation, and occurs in similar

situations.

Class II. — Transition Formations.

Having described the primitive formations, let us now proceed to the second great class, the transition, which lie immediately over them. These are by no means so numerous, since they consist only of four sets; namely, 1. Greywacke; 2. Transition limestone; 3. Transition trap; 4. Transition flint-slate. They all alternate with each other.

It is in the transition rocks that petrifactions first make their appearance; and it deserves particular attention that they always consist of species of corals and zoophytes, which do not at present exist, and which therefore we must suppose extinct. The name transition has been imposed, as they are supposed to have

been formed when the earth was passing from an uninhabited to an inhabited state.

1. Greywacke. — ˆThis formation consists of two different rocks, which usually alternate with each other, and pass into each other. These are greywacke and greywacke slate. The first cha- racterises the formation. Greywacke is a rock composed of pieces of quartz, flint slate, felspar, and clay-slate, cemented together by a basis of clay-slate. The pieces are sometimes as large as a hen's egg ; sometimes so small that they cannot be perceived by the naked eye. The clay-slate basis likewise varies in quantity con- siderably. It often contains soft plates of mica, and quartz veins are very common in it; some- times it is so hard that it appears indurated by some siliceous cement. The texture of grey- wacke becomes gradually finer and finer grained, till at last it can no longer be perceived, and a slaty structure succeeds. It then passes into greywacke slate.

Greywacke slate is in fact a variety of clay- slate; distinguished from primitive slate by sel- dom showing a greenish or light yellowish grey color, or the silvery uninterrupted lustre of pri- mitive slate. It contains no beds of quartz, but very often veins of that mineral ; no crystals of felspar, schorl, tourmaline, garnet, or horn- blende; nor beds of garnet, chlorite slate, talc, or magnetic ironstone. It contains petrifaction The greywacke rocks are stratified. It contains immense beds of transition limestone, trap, and flint slate ; and is rich in ores both in beds and veins, and the veins are often of an uncommonly large size.

2. Transition limestone.— This, like primitive limestone, is a simple rock ; but it approaches more to compact, and is less transparent than the primitive. It contains often veins of calca- reous spar, and exhibits a variety

of colors, which give it a marbled appearance. It con- tains marine petrifactions of corals and zoo- phytes, which no longer exist, and which do not occur in the subsequent limestone formations. These petrifactions increase in quantity as the beds of transition limestone advance farther and farther in their position from the primitive for- mations. It is often mixed with greywacke slate, which gives it a slaty texture. It occurs in beds of greater and smaller size, and often forms whole mountains. It contains no foreign beds except of transition trap. It is scarcely stratified. It is rich in ores.

3. Transition traps. — Tliis formation, as the name imports, consists of rocks distinguished by the great proportion of hornblende which they contain. It comprehends four species of rocks; namely, 1. Transition greenstone. 2. Amygdaloid. 3. Porphyritic transition trap. 4. Globular trap (kugel fels).

Transition greenstone is a rock composed of fine granular hornblende and felspar intimately mixed together, and not so distinctly crystallised as in primitive greenstone. Sometimes the mix- ture is so intimate that the two minerals cannot be distinguished. In that state it often becomes loose in its texture, and approaches wacke and basalt. In this last case it often contains vesi

cles. When these are filled up with other mi- nerals, the rock passes into amygdaloid

Amygdaloid is nothing more than this Isist state of greenstone. The vesicles are filled up with calcareous spar, chalcedony, quartz, jasper agate, green earth, amethyst, &c., either com- pletely or partially.

Sometimes the transition greenstone, in this softened state, contains crystals of felspar co- lored green by the hornblende. It then consti- tutes porphyritic transition trap.

Globular trap is a fine granular hornblende rock of a loose texture, and tending very strongly to clay ; of a liver brown color, and containing in it globular masses composed of concentric lamellar concretions, and containing a hard kernel.

The transition trap rocks are only doubtfully stratified. They alternate with the other transi- tion formations in beds, and sometimes compose whole mountains. Common and lenticular clay ironstone occurs in it in beds.

4. Transition flint slate. — This formation con sists essentially of common flint slate and Ly- dian stone, which pass into each other. It is a simple stone, but is characterised by containing many veins of quartz. It is not stratified. When it ccmstitutes rocks they are usually steep, and appear very much lacerated and worn down by the weather. This is occasioned by the numerous rents which this species of rock contains.

To this formation seems to belong riband jas- per, which sometimes constitutes whole rocks. It may possibly occur also in some of the sub- sequent formations.

To these formations may be added transition gypsum, which Von Buch discovered, consti- tuting a bed in greywacke slate, at Leogang in Salzburg.

Class III. — Flcetz Formations.

The next grand class of formations have re- ceived the name of flcetz, because they lie usually in beds much more nearly horizontal than the preceding. When not covered by a succeeding formation, they form hills which do not rise to the same heisˆht as the primitive or transition. They contain abundance of petri- factions ; and these much more various in their nature than those which occur in the transition formations, consisting of shells, fish, plants, &c. indicating that they were formed at a period when organised beings abounded. The flaetz formations lie immediately over the transition in the following order.

1. Old red sandstone. — ˆThis formation lies immediately over the transition, or, wliere they are wanting, over the primitive rocks. Hence it is considered as the oldest of the flcetz for- -nations.

Sandstone is composed of grains of quartz, or some other siliceous stone, cemented together by some basis, and can only be considered as a mechanical mixture. The cement is sometimes clay, sometimes quartz, lime, marl, &c., and the sandstone is named, in consequence, argillace- ous, siliceous, calcareous, marly, &c. This cement varies muc'i in quantity, but never pre-

dominates; sometimes it is too small in quantity to be perceived. The size of the grains is ao less subject to variation ; when they are large the rock is sometimes called pudding stone. Of the old red sandstone the grains are large. It is dis- tinctly stratified, and contains few ores. Cobalt, however, occurs in it ; and it is often impreg- nated with copper.

2. First flatz limestone. — Flcfctz limestone is of a gray color ; its fracture compact ; has no lustre, and is only translucent on the cˆges. Sometimes thin beds of granular foliated lime- stone occur in it ; but they contain

petrifactions, which distinguish them from primitive lime- stone, Flcetz limestone is weft characterised by the masses of hornstone and flint which it contains.

The first floetz limestone is characterised by a bed of bituminous marl slate, containing copper. This bed is always lowest, and therefore imme- diately contiguous to the sandstone. It contains but few petrifactions. They consist chiefly of fish. "arious beds of marl occur in this for- mation, and likewise a species of vesicular limestone, known in Germany by the name of rauch wacke.

3. First fldtz gypsum. — Gypsum, in general, may be considered as a simple rock ; some- times, however, it contains crystals of boracite, arragonite, and quartz. Sulphur is likewise found in it, both disseminated and in compact masses. There are two formations of it.

The first floetz gypsum lies immediately over the first floetz limestone. It consists chiefly of foliated and compact gypsum, together with a good deal of selenite. It is in this formation that swinestone occurs, either in beds or mixed with the gypsum. Rock salt also belongs to it, and appears to lie over it in short thick beds, being usually mixed with a species of saline clay. Hence the saline springs, which obviously originate from rock salt, are likewise peculiar to this formation.

4. Variegated sandstone. — This formation lies immediately over the preceding. The rock which composes it consists of a fine granular argillaceous sandstone, usually of a green, brown, red, and white color. Several of these colors alternate in stripes, which gives the stone a variegated appearance. Hence the name. It often contains masses of a fat clay, of a greenish, reddish, or yellowish color.

This formation is characterised by two species of rocks, which occur in it in beds. These are, 1. The subspecies of limestone, described under the name of roestone ; and, 2, Sandstone slate.

5. Second flirtz gi/psum. — Tiiis formationlies over the preceding in beds, and is sometimes, to a certain degree, mixed with it. It contains foliated gypsum, but scarcely any seleniie, and no swinestone ; and is characterised by the fibrous gypsum, of which it is in a great mea- sure composed. It is of no great extent, and destitute of petrifactions.

6. Second flcetz limestone, or shell limestone. — This formation is separated from the first floetz limestone by the beds of older gypsum, of va- riegated sandstone, and of second gypsum,

which constitute the third, fourth, and fifth for- mations. It is characterised by the vast number of shells which it contains in the state of petri- factions. Particles of galena are likewise found scattered dirough it.

7. Third sandstone, or freestone. — The relative position of this formation has not been well as- certained, yet it is known to cover all the prece- ding;, and therefore to be much newer than either the first or second formations. It consists mostly of a sandstone of a white color, well adapted for building. It contains traces of coal, but no sand- stone, slate, nor roe-stone ; and gypsum never occurs either immediately over or under it. It is usually stratified, and contains natural rents or scams, which cross each other at right angles ; the one parallel to the stratification, the other perpendicular to it, so that it can be easily quar- ried into large square blocks. This indeed is a character that in some measure applies to all the sandstones. When not covered by any other formation it forms beautiful hills and romantic valleys.

8. Chalk. — Chalk is one of the newest floetz rocks. It is always near the sea coast. It con- tains numerous beds of nodular flint, often full of vesicles. Various petrifactions of echinites, belemnites, &c., occur in it. It is indistinctly stratified, and forms beautiful round knolls and hills of very small height. Pyrites is some- limes found in it, but scarcely any other metallic ore.

9. Independe7it coal formation. — This forma- tion is deposited in detached patches, usually in valleys over the preceding flretz rocks, or over the transition formation when the floetz rocks are wanting. These patches, in general, have no connexion with each other. Hence the epithet independent, by which the formation is distin- guished : but they are found in considerable quantities in the most distant parts of the earth, Europe, America, New Holland, and always si- milarly situated with respect to the other forma- tions. Coal occurs in it in great abundance ; though in the preceding formations it is very scarce, and indeed is only found in thin indivi- dual beds. Hence it is considered as character- istic of this formation. The rocks of which this formation is composed (not reckoning the coal) are the following : sandstone, coarse conglome- rate, slate-clay, bituminous shale, indurated clay, limestone, marl, clay ironstone, porphyritic stone, greenstone.

Layers of these rocks alternate a great many times with each other, and in them the coal oc- curs in numerous beds, varying extremely in thitjcness. The subspecies of coal which occur in this formation are coarse coal, foliated coal, cannel coal, slate coal, and a little pitch-coal. Professor

Jameson has likewise discovered glance coal in this formation.

All the different rocks of which this formation is composed seldom or never occur together. Hence it is presumed, that there are several sub- ordinate formations belonging to the indepen- dent coal, which occupy determinate situations with respect to each other. Three such forma- tions have been characterised. The oldest or lowest is composed of beds of indurated clay, limestone, marl, porphyritic stone, slate clay, bitu-

minous shale, greenstone, and soft sandstone, and is characterised by containing in it some metallic ores. These are ores of copper, iron, lead, and perhaps also mercury. The second is composed of beds of indurated clay, marl, limestone, and porphyritic stone. It contains some pyrites, but no other ore. The third, or newest, is composed of soft sandstone, conglomerate, and slate-clay, and contains no ore.

The rocks belonging to this formation are very distinctly stratified. Abundance of vegetable petrifactions occur in it, especially in the sand-stone and bituminous shale.

10. Flatz trap. — The rocks of this formation are very remarkable. They cover the other flcetz rocks, precisely as the newer porphyry and sienite do the primitive. The level of the unco- vered flcetz formations becomes gradually lower, in the order in which they have been described ; but that of the floetz trap is high, as it covers them all, and often forms the summit of hills, whose lower part consists of older formations. The rocks belonging to the floetz-trap formations are of two kinds : namely, those which are pecu- liar to it, and those which occur also in other for- mations. The following are the rocks peculiar to this formation : wacke, iron-clay, basalt, pitch- stone, greenstone, porphyry slate, gray stone, amygdaloid, trap-tuff.

Basalt, in many treatises, claims the first place, as it characterises the flcetz formation ; but it is now often referred to the volcanic formations. It consists essentially of the mineral described in another place under the name of basalt, for a basis, containing crystals of basaltic hornblende, augite, olivine, and iron-sand, which give it a porphyritic structure. It contains also vesicles, which are filled with zeolite, calcareous spar, lithomarge, See. The vesicles are sometimes filled with water. Sometimes it passes into v/acke ; sometimes into graystone ; and sometimes, though rarely, into porphyry slate.

Wacke is sometimes the simple mineral de- scribed already under that name. Sometimes it contains basaltic hornblende and mica, which give it a porphyritic appearance : sometimes it is spotted, from crystals which it contains. It passes sometimes into clay; sometimes into basalt. The iron-

clay likewise has been de- scribed already.

Pitchstone was first observed in this formation by professor Jameson. It is distinguished from that which occurs in the older rocks by the fol- lowing circumstances : Its colors are usually black or green ; it is composed of lamellar dis- tinct concretions, and it contains crystals of glassy felspar, or mionite as it is called.

Porphyry-slate is much less common than ba- salt ; but where it does occur it usually forms considerable hills. This rock is slaty in the large, compact and splintery in the small. The basis of it consists of clinkstone ; the crystals which it contains are of felspar and hornblende. It contains also zeolite, iron-sand, and some mi- nerals not yet described.

Greystone is still less common than porphyry slate. It appears to consist of an intimate mix- ture of much white felspar and a little black hornblende. This basis contains augite and olivine.

Floetz greenstone is an intimate mixture of

grains of felspar and hornblende. It is distin- guished from primitive and transition greenstone by the more intimate mixture and less crystallised appearance of the constituents. It passes into basalt.

Amygdaloid has for its basis sometimes wacke ; sometimes a fine granular greenstone, frequently already somewhat decomposed. The vesicles which it contains are filled with green earth, ii- thomarge, steatite, &c. Sometimes they re- main empty; sometimes this basis contains crystals of iiornblende, Sec, which gives the rock both a porphyritic and amygdaloidal struc- ture.

Trap-tuff consists of fragments of floetz trap and other rocks, cemented by a basis of alluvial clay. The minerals which this formation con- tains, in common with others, are not so numer- ous as the preceding. They are tlie following : sand, quartzy sandstone, clay, limestone, coal.

The grains of sand are of all degrees of mag- nitude. The clay sometimes contains schaum earth The coal consists chiefly of the following subspecies ; common brown coal, bituminous wood, and pitch coal. Sometimes, though sel- dom, glance coal and columnar coal occur in this formation.

It is chiefly in the beds of plaster that the great immber of fossil bones of land animals have been found, for the description of which we are chiefly

indebted to Cuvier.

Class IV. — Alluvial Formations.

The alluvial formations constitute the great mass of the earth's surface. They have been formed by the gradual action of rain and river water upon the other formations, and may be considered as very recent formations ; or rather as deposites, the formation of which is still con- stantly going on. They may be divided into two kinds ; namely, those deposited in the valleys of mountainous districts, or upon the elevated plains which often occur in mountains ; and those de- posited upon flat land.

The first kind consists of sand, gravel, &c., which constituted the more solid]3arts of the neighbouring mountain ; and which remained when the less solid parts were washed away. They sometimes contain ores (particularly gold and tin) which existed in the neighl/ouring mountains. Sometimes the alluvial soil is wash- ed, in order to separate these ores. On moun- tain plains there occur also beds of loam.

The second kind of alluvial deposite, or that which occupies the flat land, consists of loam, clay, sand, turf, and calctuff. Here also occur earth and brown coal (in this mineral amber is found), wood coal, bituminous wood, and bog iron ore. The sand contains some metals, among others gold. The calctuff is a chemical deposite, and extends widely. It contains plants, roots, moss, bones, &c., which it has encrusted. The clay and sand often contain petrified wood, and likewise skeletons of quadrupeds.

Class V". — Volcanic Formations.

The volcanic formations are of two kinds ; namely, the pseudo-volcanic and the true vol- cauic

The pseudo-volcanic consist of minerals altered in consequence of the burning of beds of coal situated in their neighbourhood. Porcelain jas- per, earth slag, burnt clay, columnar clay-iron stone, and perhaps also polishing slate, are the minerals which have been altered.

The real volcanic minerals are those which have been thrown out of the crater of a volcano. They are of three kinds; 1. Those substances which, having been thrown out from time to time, have formed the crater of the mount-'.in : 2. Those which have been thrown out of tlie crater in a stream, and rolled down the mountain ; they constitute lavas : 3. The water which is occasion- ally thrown out of volcanoes, containing ashes and other light substances, gradually evaporating, leaves the earthy matter behind it ; this substance constitutes volcanic tuff.

Of veins.- — 'eins are mineral repositories which cut through the strata or beds of which a mountain is composed, and which are filled with substances more or less different from the rocks through which they pass. We shall have a very distinct notion of veins, if we suppose that the mountains in which they occur were split by some means or other, and that he rifts thus formed were filled up by the matter which con- stitutes veins. They are distinguished from beds by their direction, which is either perpendicular to the stratifications, or at least forms an angle with it.

Sometimes the strata through which veins pass are merely separated from each other; so that if we cut through the vein we find the same strata of the rock ou both sides of it ; but some- times also the corresponding strata on one side are lower than on the other, as if the portion of the rock on one side of the vein had sunk a lit- tle, while the portion on the other side kept its original position. In such cases tlie side of the rock against which the vein leans, or the floor of the vein, has always its strata highest up ; while the strata of the portion of rock which leans over the vein, or the roof of the vein, are always lowest. So that this is the portion which appears to have sunk. Such a change of position in the strata is known in this country by die name of a shift.

In considering veins, there are two circum- stances which claim our attention; namely,!. The shape of veins ; and, 2, The substances with which they are filled.

All those mineralogists who have had the best opportunity of examiniig the shape of veins with correctness, agree in representing them as widest above, and as gradually diminishing in size as they deepen, till at last they terminate in a point, exactly as if they had been originally fissures. Sometimes, indeed, veins widen in different parts of their course, and afterwards contract again to their former size; but more, commonly they continue diminishing gradually to their extremity.

Sometimes these veins are either partially or tntircly empty. In that case they are denomin- ated fissures, but most commonly they are filled with a matter more or less different from the rock through which they pass. Sometimes the vein is filled up with one species of mineral.

Thus we have Teins of calcareous spar, of quartz, &c. ; but, when it is of any size, we frequently find a variety of substances ; these are disposed in regular layers always parallel to the sides of the vein, and they follow in

their position a very regular order. One species of mineral constitutes the centre of the vein; on each side of this cen- tral bed the very same layers occur in the same order from the centre to the side of the vein. Almost every mineral substance which occurs in the mass of rocks has been found in veins.

Veins of course, according to our theory, are newer than the rocks in which they occur; and, when two veins cross, that is obviously the new- est wnich traverses the other without interrup- tion, as the fissures constituting the second vein must have been formed after the first vein was filled up. But when different veins contain the same minerals, arranged in the same order, Wer- ner conceives that they were filled at the same time, and says that such veins belong to the same formation.

A general Synoptical Table of Geology was a desideratum in this science to a very late pe- riod. Dr. Aime Boue supplies us with the following : professing it to be his design to ex- hibit the science reduced to its most simple terms, and to enable every one to contemplate at a glance the principal geognostical facts ascertained by the labors of geologists. For the more clearly following the details in the synoptical table, he gives the following sketch of his theoretical views.

- *1. All geologists who have had opportunities of examining burning and extinct volcanoes, agree in admitting the existence of extinct vol- canoes, or of very anciently volcanised countries. 2. The greater number of geologists, and espe- cially those who have visited extinct volcanoes, believe in the igneous origin of tertiary basalt, in the form of streams (coulees), beds, cones, and veins, and also that of trachyte. 3. A good many distinguished geologists agree in consider- ing it as probable, that the secondary or floetz trap rocks are of igneous origin, because these rocks agree in nature, position, and accidents, with basalt and trachyte. 4, And lastly. The intimate connexion of the porphyries with gra-*

nite, syenite, and other unstratified rocks, not only in nature, but also in position, has induced some geologists to consider these also as of ig- neous formation.

‘ All the «tratifiedjrocks, with the exception of those ot the hi«t class, called primitive, are ge- nerally admitteU to be of Neptunian origin. These rocks are distinguished by their peculiar texture, and by ‘he imbedded crystalline mine- rals they contain, and which are foreign to stra- tified rocks. Although the stratified primitive rocks are placed under the head Neptunian, I consider them as Neptunian rocks which have been brought to their present state by the agency of heat, and that the imbedded minerals

they contain were introduced among them by the ac- tion of some igneous power, as sla'.ed in the Edinburgh Philosophical Journal for July 1823, and Annales des Sciences Naturelles 1824. These stratified primitive rocks, then, are partly of Neptunian, partly of igneous formation. The tufaceous or conglomerated productions of ancient and modern volcanoes are more appro- priately placed immediately after the igneous rocks, from which they are derived, than amongst the Neptunian rocks. Although the salt and gypsum deposites probably owe their origin to submarine solfataras, we have not separated them from the Neptunian series, because they were deposited by water. If these were removed from the Neptunian series, for the same reason we should be obliged also to separate from it masses of iron ore, and of other ores, certain salts, &c.

- *My theoretical ideas have induced me to sepa- rate from the Neptunian series the metalliferous veins, because their contents are more easily traced to Plutonic than to Neptunian agents. The alterations occasioned in Neptunian rocks, by their proximity to those of igneous origin, are stated in the table only in a cursory way, although phenomena of high interest.*

' The synoptical table also presents the most striking zoological characters of each formation, the different periods of the appearance and dis- appccirance of the different classes of vegetables and of animals, and a proper selection of syno- nyms of the different denominations given to the rock formations.'

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IV. After taking a view of the structure and arrangement of the crust of the earth, it is almost impossible to avoid forming some theory to ex- plain the mode by which it was brought to its present habitable condition. Almost erery ap- pearance it presents informs us that it has under- gone mighty revolutions : the regularly formed horizontal strata of some formations are similar to the arrangements of those mechanical deposits from water which at present come under our observation ; and the crystalline structure of others forces us to infer a liquidity, by which only, according to the present laws of nature, tliat structure could be produced. The globular form of the earth is a sulficient proof that it was once liquid, because the liquid condition only could have allowed it to assume such a shape. The occurrence of petrified sea-shells, and of the petrified remains of fishes on high mountains, is also a certain evidence that the waters must at one time have risen beyond their present level, and that these eminences were of posterior for- mation to the animals whose exuviae they enclose. When petrified bones and horns of land animals are found in fossils, the same inference may legi- timately be made. The immense quantities of mineral coal found in the bowels of the earth, and the connexion that may be traced between it and moss, or the remains of plants decaying under our observation, carry us back to a lux- uriant vegetation before the period when our present soil was formed, or perhaps before the crust was arranged that supports it.

It is needless to multiply examples where ge- neral appearances are so striking, or to en- gage in abstruse reasoning where inferences are so easily drawn. Indeed, without any induc- tion of facts, but what a very superficial

expe- rience affords, every one almost is compelled, from existing phenomena, to form some hypo- thesis ; and that hypothesis will be more or less rational, according as it is suggested by a greater or smaller number of observations, and explains consistently a greater or smaller number of facts. There can be no presumption in tracing the laws of Nature through her most magnificent opera- tions, any more than through her most minute, provided we strictly adhere to the course she points out, and do not twist her language to support our own preconceived notions. The yjower of gra- vitation, by which a stone is brought to the earth, retains the planets in their orbits ; and the prin- ciple of electricity which, when excited in apiece of glass or of wax, only enables it to attract a pith-ball or the fibres of a feather, produces, when collected in the sky, all the terrifying effects of a thunder-storm. There surely can be no good reason why we should not investigate the circumstances in these two classes of facts, and why, after due mve.stigation, wo should not refer tliem to the same law, though the scale on which we trace its OMcralions bo so oxtromoly differont. In the same manner, no prejudice should exist against the theories of the geologist, though he should apply those mechanical and chemical principles, wiiich he can trace in the formation of a minute crystal or a stalactite, or in the ar- r-"igenient of the bottom of a river, to account fo. the present ap[tcaranccs of the habitable world.

IIow far this class of philosophers have ad hered to well ascertained principles, in their geological investigations and reasoning, is a dif- ferent question. All that we mean to claim for them is^ that there is no natural presumption against a theory ; that their object is legitimate when they endeavour to form one ; and that there are not wanting appearances which may render one plausible. Of late years two principal theories have been proposed to account for geo- logical phenomena, which have attracted such interest as to cause a complete oblivion of every previous hypothesis. Though diametrically op- posite in many of their principles, each has men of science and ability for its supporters, and each explains a certain class of facts to the satisfaction of its friends. The one which ranges the greatest number of mineralogists and chemists among its adherents, is called, as we have already stated, the Neptunian or Wernerian, from Werner the great mineralogist of Freyberg, who gave it first the form of a theory founded on observation. The other is denominated the Plutonic system, from its employing the agency of subterranean fire, in accounting for actual appearances, or Huttonian, from the name of the late Dr. Hut- ton, who gave that particular modification of it which is now considered the most consistent and philosophical; and which Mr. Playfair and Sir James Hall have so ably advocated and illus- trated. Both these systems, it will easily be perceived, agree in assuming a state of fluidity as necessary to explain the texture of particular fossils, and the general structure of the mineral

kingdom; but they start in direct opposition with regard to its cause, and of course give a different account of every subsequent event, the Werne- rian attributing that fluidity to solution in water, the Huttonian to igneous fusion. The products of a mass held fluid, by one of those agents, is in many cases so different from those which would be formed by tlie other, that the geologist need not despair of being ultimately able to dis- criminate between them, and to determine what kind of agency has principally been employed. In the mean time we shall state the opinion entertained of the manner in which each is sup- posed to have operated, by those who make use of it in their respective systems.

The Wernerian supposes that the surface of our globe presented at first a chaotic mass, in which the materials that compose its solid strata were held in solution by water. In that mixed and confused state, certain changes in the rela tive situation of the principles took place by motions among thom, and the particles were thus placed in a condition favorable for the exer- tion of chemical aflinilies. The operation ot these chemical attractions was to bring the ma- terials on which they acted into the crystalline shape, which would bo more or less perfect in proportion to the freedom in which they were formed, or the interruptions to which in their formation they were subject. An aggregated mass of crystals was thus formed, consolidated and precipitated in the same manner as at pre- sent the crystals of salts are deposited from their solution in water. This first precipitation from tlio ciiaotic fluid coustituti'd tlio rocks of tlio pri- mitive class, so called fioiu this iul'errod priority*

of formation. In support of the conclusion on which this name is grounded, the nature and position of these rocks are appealed to. They are evidently in a highly crystalline condition, and they are found nearer the centre of the earth than any other strata of the mineral kingdom. From the nature of the mass before this primitive subsidence, neither animals nor vegetables could exist ; at least there have been found in these rocks none of their remains. After these preci- pitates were separated that compose the primi- tive class, a nucleus was formed on which sub- sequent depositions might rest ; and the waters ; from a cause which it may be difficult to explain, seem to have subsided and left a part of the solid aggregate nearly dry. There is nothing in this theory, however, which requires us to pronounce upon the question of the time which it might take for these crystallisations and subsidences to take place : or how rapidly or slowly (as we should term it) they might be effected by the Divine Power.

Still in the fluid the materials of the other strata existed, and these, from similar attractions, had their tendencies to precipitation and arrange- ment. Precipitates, accordingly, were formed, and arranged on the solid mass already existing. These, however, are found to differ considerably from the primitive class, in having a less perfect crystalline structure, and in containing mixtures like mechanical depositions. From these cir- cumstances they are classified apart under the name of the transition series, and their formation is accountedfor by supposing, that, as the chaotic fluid was now diminished in depth, its waves would descend still lower, and come into more immediate contact with that part of the earth's crust already consolidated, and by their agitation, might detach portions of it to mix with the mate- rials still in solution, but gradually depositing ; and thus might disturb their formation. In ad- dition to this constant wearing action of the waves, those parts that were gradually elevated above the subsiding waters would be exposed to other causes of attraction from the elements.

The waters continued to subside, and new strata began to make their appearance, forming rocks of the secondary class ; but as the action of the elements now extended over a greater surface, and the force of the chaotic waves in- creased, we find greater supplies of mechanical deposits. These rocks, therefore, having been partly composed of the debris, or disintegrated fragments of the two former classes, have less of the crystalline structure, and are arranged more generally in parallel layers, somewhat like suc- cessive mechanical deposits from a fluid. They occupy a lower level than the mountain masses, from the detrition of which they appear partly to have been formed, and rest upon the mora crystallised strata as their basis. They often exhibit striking characters of their origm and mode of formation, as may be seen in soide kinds of sandstone, puddingstone, and breccia.

When the waters had retired so much as to permit the formation of this class of rocks, and had ceased to cover them, the crust of the earth was prepared for supporting animal and vegetable life, and received from the hand of nature fami- ies of both in abundance. Accordingly, we find

that organic remains, no vestige of which can be found in rocks of the primitive class, and which can be but sparingly discovered in the tra:r.ition series, increase in quantity and variety as we ascend from the old red sandstone, the earliest of the secondary strata.

The earth, however, if now arranged in the form which it at present assumes, was destined to undergo a mighty catastrophe. The waters which had subsided and left the dry land for the support of animals and vegetables, from inscru- table causes, again rose, resumed their former bed,

and a second time a chaotic fluid invested the crust of the earth. This fluid must have ascended and almost covered the highest moun- tains, and in the words of Thomson,

‘ A shoreless ocean tumbled round the globe.’

This rise of |the waters, Werner finds necessary to account for the position and structure of the secondary trap formations, so strangely alter- nating with or overlying the other secondary strata. This kind of formation he supposes must once have surrounded the earth, and formed almost a continuous crust, enclosing within it the other strata ; but, by the sudden recession of the waters, that crust was broken, and, the great- est portion of it being carried away, there were only left those ‘ shreds and patches’ of it that appear in the shape of detached mountains, columnar eminences, or confused masses of tufa. To the same period may be referred the origin of the coal formation ; and to the same causes are its arrangements to be attributed. It is evi- dently and confessedly a substance of vegetable product, and presupposes the existence of a most luxuriant vegetation, before the organic king- doms were involved in destruction by waters of the ocean.

, After this great catastrophe, the waters again retired from off the face of the earth, and left the dry land for the plants and animals which now cover its surface. As they subsided, the exposed parts were acted upcm by the influence of the ocean and the elements. Fragments were broken off from the solid rock, the softer portions were separated from those more indurated, successive layers of the surface were rendered friable and worn away. The debris thus formed was washed from the higher to the less elevated ground, from mountainous country and precipitous eminences, to plains and valleys; and being accumulated On the lower levels, and mixed with decayed animal and vegetable substances, composes the different species of alluvial rocks, and all the varieties of fertile soil.

The only other portion of the crust of the earth for which it would be necessary to account, and for which the theory under consideration can afford no explanation on its peculiar principle, are those formed of the products of volcanic fire. This class of rocks is so inconsiderable when compared with the extent of the stratified masses, and apparently so unconnected with them, that any explanation that may be adopted concerning it will not much affect a geological hypothesis, calculated to apply to the state of the more universal formations. The foregoing is the ge- neral outline of the Wernerian system, but there is an observation or two still necessary to com- plete it.

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The formation of the beds or strata, by a suc- cessive deposition from water, would lead us to expect that the separate layers should be disposed horizontally, or that they should, in their whole extent, be arranged at right angles to the force of gravity ; that they should be continuous or with- out fissures ; and that they should have no ele- vations or depressions. The reverse of this, however, is the fact. Instead of universal hori- zontality, we frequently find them almost in a vertical position ; instead of a continuous surface, like the coats of an onion, we see wide irregular Tents and fissures ; and, instead of a uniformly ievel appearance, we find mountains and alpine chains shooting up many thousand feet above their surrounding regions. In a system that lays claim to consistency, some explanation must be provided for reconciling these apparent anoma- lies with its general principles, and many sup- positions may obviously be resorted to. The greatest inequalities of the earth's surface must have originated in the manner in whicli the primitive strata assumed the crystalline appear- ance, and the circumstances under which chemi- cal affinities acted upon the materials of the chaotic fluid. The irregularities of the subse- quent depositions may be partly owing to the kind of surface or bed on which tliey were arranged, and partly to an unequal subsidence in the contiguous parts deposited at the same time. Many rents, fissures, and dislocations, must have originated in the different degrees of solidity in the contiguous strata, in the unequal weight which crystallisation imposed upon tliem, in the withdrawing of the water sooner or later from different portions, and in several other causes, whic'i it is unnecessarj', in this short sketch, to enumerate. Many of these rents and fissures were made while the strata were still immersed in the waters, and, being filled up with precipi- tates of a more crystalline kind, constitute what are demominated veins, those repositories of mineral wealth. The structure of veins, narrowing in diameter as we descend, and the more regular disposition of their contents, according to laws of chemical attraction, are offered as decided proofs, both of their being filled by infiltration from above, and of their consolidation taking place in circumstances where the mass suffered no disturbance.

After this statement of the Wernerian theory it might be])roper to adduce some of the argu- ments that tend to confirm it, and some of the objections to which it has been thought liable ; but both these will be more duly appreciated, after we have drawn a similar outline of the rival system to which it is opjiosed.

Dr. Hutton does not go back to chaos to lay the foundation of his habitable world, nor does he borrow much assistance in constructing his fabric from chemical attractions. He rests upon a pre-existing continent, out of the

ruins of which our present dry land was formed and arranged principally by mechanical means. The portion of the ijlobe which we now possess was, accord- ing to his hypothesis, the bottom of the sea when the older continent was decaying to form it; this older continent was then, of course, immersed ; and, lest we should be alarmf^d at tiie recurrence of a similar catastrophe to this scene of our inte-

rests, we are told that it will be followed by a similar renovation. Thus, as one continent de- scends another rises, like the opposite scales of a balance ; and, in the resources of the system, that order of organic nature is supposed to be traced by which the continued existence of the different races is secured, not by the perpetuity of the in- dividual, but by the successive re-production of the kind. Our present world is thus one in an indefinite series of worlds which have existed in times past, and which are destined in future to appear; and all the less obvious or more striking cfianges which we witness are steps in the pro- gress of mighty revolutions, to whicb the imagi- nation can set no limits, either with regard to duration or magnitude.

He lays down as a certain position, that tne solid parts of our earth are suffering decay from the action of the elements ; that the portions de- tached from the more elevated ground are carried by the operation of water to the lower levels, and ultimately deposited in tlie basin of the ocean. He conceives, that tides and currents there ar- range what is carried within their influence in layers along the bottom of the sea. This ope- ration must proceed very slo%vly, but Dr. Hutton is not limited with respect to time, and can make as large a use of it as his system demands. Every river, every brook, every stream of water that we see, descends towards the ocean, cliarged with some portions of the surface over which it flows. All the soil and softer parts on which our plants are produced, have been confessedly loosened by water, and may be ultimately trans- ported by it to the lowest levels of the same ele- ment. The strata of our dry land have all been thus carried from a pre-existing one, and arranged by the ocean which then covered it.

For their consolidation and other appearances, a new principle is assumed by the Huttonian geologists, which forms the chief characteristic of their system. They conceive that there per- petually exists in the heart of the mineral king- dom an immense force of heat that has been suf- ficient to fuse or to soften the various strata of which its crust is composed. The greater or less degree of liquidity which it thus produced, allowed the substances on which it acted to be consolidated upon cooling, either into crystalline fossils, or into less regular masses. The strata that were arranged at the bottom of the ocean, from the debris of a former world, were thus brought from their sofl state of simple mechanical aggregation, to assume

the compact structure of mountain rocks. To this powerful agent of in- ternal heat, is not only assigned the office of first softening and finally indurating the strata, but that likewise of elevating them from the bottom of the sea, and converting them into dry land. The strata at the bottom of the ocean, being arranged by water, must, it is conceived, have been arranged in a horizontal direction, though now their appearance is extremely different. Their present fragmented and shattered surface, their deep chnsnis, their apparently ruinous con- tortions and dislocations, the vertical position of some of them, and the considerable declination of almost all, are also accounted for by the ope- ration of internal fire.

The volatile ingredients of many bodies are

easily dissipated by caloric, and some com- pounds are discovered in the mineral kincfdom, which must have been exposed, upon this hypo- thesis, to such an intensity of heat as would have effected a dissolution among their parts. To ob- viate objections of this kind, the modification of the effects of heat from the pressure under which it acts, is illustrated and applied with great inge- nuity. This modification of heat, by pressure, is a very important fact to the Plutonian theory. With regard to the order of time, or the suc- cession in which the different rocks were formed that compose the crust of our earth, the Huttonian differs as much from the Wernerian as in the agent he principally employs. It will be remembered that Werner calls granite the earliest of the pri- mitive rocks, from the supposition that it was separated from the chaos by crystalline precipi- tation, prior to the existence of any other mine- ral. Dr. Hutton, on the contrary, in his chrono- logy of the fossil kingdom, places granite among Its last formed products, and brings forward its appearance as a triumphant proof of the truth ot his system. He conceives it in a state of fusion to have burst the superior strata with which it was enveloped, aided by the expansive power of his central fire, and to have issued forth from its confined furnace somewhat in the manner of a stream of lava from a volcano. The greatest heights of our globe, and the most extensive mountain ranges, are thus nothing else but the consolidated torrents of mighty eruptions, the matter of which had been rendered liquid by a ■ subterranean fire, which still exists for the future accomplishment of similar effects, and gives proofs of present activity in the phenomena of the volcano. To its complete fusion is ascribed its perfect crystalline texture, its want of stratification, and its perfect freedom from organic remains.

A similar account is given by this system of the formation of veins, and of

the fossils which generally fill them. They are rents caused by a force acting from beneath, and filled with matters injected into them from the same quarter in a state of fusion. Their contents are thus different from the materials of the strata which they tra- verse, and almost always present a highly crys- talline structure.

Such is the outline of the Huttonian theory of the earth, as far as regards the manner in which its crust was stratified in the bottom of the ocean, consolidated into a compact mass, elevated into islands and continents, separated into distinct portions by veins and beds, and deranged in its horizontal appearances by an eruptive force. It is needless to mention the account which the suppcrters of this geological system give of vol- canoes. They accord with their opinions, or perhaps suggested them ; and the Wernerian leaves them in full possession of such ground without reluctance, satisfied that the central heat, which raised continents, is not necessary to ex- plain tlieir phenomena.

After giving a very imperfect account of these two theories, it may be necessary to say a few words with regard to their merits, the consistency of their parts, and their agreement with the phe- oomena which they profess to explain.

The Huttonian geologist commences with the

history of the formation of the strata, as in hig system the strata were deposited and arranged prior to the operation of fire upon them, and prior likewise to the existence of the more crys- tallised masses formed by fusion. With the mode of forming the stratified structure he therefore begins his system ; and here likewise begin the objections to which it has been thought liable.

He supposes that the materials of all the strata are the debris of a pre-existing world ; that they have been detached from it by the operation of the elements ; carried, by the agency of water, to the ocean ; and there spread in regular order over its bottom by the same power. Thus all the rocks that exhibit the stratified structure, are nothing but mechanical deposits, and rivers have been the great agents in conveying them to their present situation. Now it cannot fail to strike every one, that effects are here attributed to those streams that mark the surface of our globe, which they seem inadequate to produce. It is true that most rivers flow towards the ocean, charged with a part of the soil or softer rock which border their channels ; but it is not so true that they carry this burden to their ultimate destination. A great part of it is deposited on their banks, or in the hollows of their courses, and much of what reaches the sea goes to form bars, or, being driven back to the shore, makes an addition to the sea-coast. It is

evident that a small portion only can reach the ocean, and ‘ if the disintegra- tion be so slow as is admitted,’ observes INlr. Murray ; ‘ if, as Dr. Ilutton himself observes, the description which Polybius has given of the Pontus Euxinus, with the two opposite Bosphori, the Mffiotis, the Propontis, and the port of Dy- zantium, is as applicable to tlie present state oi things as it was at the writing of that history ; if the Isthmus of Corinth is apparently the same at present as it was 2000 or 3000 years ago ; if Scylla and Charybdis remain now as they were in ancient times, rocks hazard- ous for coasting vessels ; if the port of Syracuse, with the island which forms the greater and less, and the fountain of Arethusa, the water of which the ancients divided from the sea with a wall, do not seem to be altered ; and if, on the coast of Egypt, we find the rock on which was formerly built the famous tower of Pharos ; and, at the eastern extremity of the port Eunoste, the sea-bath cut in the solid rock on tlie shore, to all appearance the same at this day as they were in ancient times : if such be the extreme slowness of the disintegration, the reflection is obvious, that, admitting it, a duration will be allowed to the world infinitely beyond our conception, and adequate to any purpose which we can conceive it designed to serve ; and there is at least no necessity pointed out for supposing an arrange- ment by which it is to be perpetuated or restored. ‘ Neither are the facts conclusive which are stated by Dr. Kutton and Mr. Playfair, to prove that all our strata have originated from the waste of a former world, for they are equally well ac- counted for by the Wernerian system. It ia stated, that many rocks are found which contain fragments of others, or which are connected with collections of gravel loose or consolidated. Such fragments and gravel necessarily suppose the er. isteiice of former strata, from the waste of whicˆ

tliey had originated. It is also observed, that, in many of the most extensive strata of the earth, remains or impressions of organic substances are found, botli animal and vegetable, and of course these must have existed prior to the formation of such btrata.

‘ These facts are considered by the Huttonian geologist as sufficient proof of the existence of a habitable world, from the decay of which ours has been formed. They are, however, equally well accounted for by the Neptunist, without admitting such a supposition. It is supposed that the existence of marine animals commenced after tlie crystallisation of the great primary strata ; and that after that period, too, the waters of the ocean began to diminish in height, so as to leave elevated land, on which vegetation commenced. The retreat of the ocean continued to be gradual

for many ages, and during this time the second- ary strata were formed. It is obvious, there- fore, that the fragments of rock, the sand and gravel which these often contain, or with which they are associated, or which even in many cases compose the greatest part of their mass, might originate from the disintegration of the primary- strata above the level of the sea ; a disintegration to which, in this early period of their consolida- tion, they might even be more liable than they are now. And the origin of the remains of marine animals, and even of vegetables, found in the se- condary rocks, it is obvious, are equally well ac- counted for on this theory, since the existence of these may have begun previous to the existence of these strata. The facts, therefore, do not prove the hypothesis of Dr. Ilutton, since, on a different hypothesis, they are explained with equal facility.

' It has been affirmed, however, that the same appearances of sand and gravel, and of marine impressions, are occasionally to be met with in the primitive strata, and that of course the Wer- nerian explanation is defective; for marine ani- mals are not supposed to have existed at their formation ; and it is obvious that the presence of sand and gravel are true indications of strata hav- ing existed before them.

'But it is asserted, on the other hand, by Nep- tunian geologists, that such appearances are not to be met with in strata truly primitive; but that when they do occur in strata, not of the secon- dary class, it is in those of the intermediate kind, or what Werner terms the rocks of transition. These, it will be recollected, are supposed to be posterior in their formation to the primary, but prior to their secondary strata, and to have been formed at that period when the existence of ma- rine animals, or at least of some species of them, liad commenced ; and of course they may occa- sionally be found with impressions or remains of these beings. This supposition is liable to no difficulties, and seems to follow justly from the facts. Since certain rocks, having peculiar cha- racters, and composing the most elevated parts of the globe, are found destitute of organic re- mains, wiiile in others they arc in abundance, doth not this afford a presumption, that the for- mer had been produced prior to the period when tliesc beings began to exist? and if rocks are found intermediate in their character between

these, connected principally with the primary, but in general less elevated, and sometimes, though rarely, containing vestiges of sea animals, is it not reasonable to believe that these have been intermediate in their formation, and that at least the few species of those animals, whose re- mains are found in them, had begun to exist at the time they were formed.'

The Huttonian theory gives a solution of these phenomena, according to its own peculiar prin- ciples, which is pressed with greater difficulties than any which its adherents have been able to raise against its rival system. As all

strata, ac- cording to it, are arrangements from the wrecks of a former world, they ought all to have their proportion of animal remains and fragmented fossils assigned them. No reason can be given for their existence in one situation which would not lead us likewise to expect their occurrence in another. Gneiss, mica-slate, and clay-slate are stratified rocks, and should have these proofs of their prior history inscribed upon them as legibly as slate-clay, sandstone, and the calcare- ous fossils. In the former class, however, they are seldom or never found ; in the latter they are met with in abundance. The Huttonians endea- vour to remove this inconsistency, by answering, that the gneiss and mica-slate are in a higher de- gree of crystallisation than the other kinds ot rock in which petrifactions occur, and that, in the fusion which enabled them to assume that state, the traces of animal exuvite may have been destroyed. This statement would obviate the ob- jection, if it accorded with the fact ; but unfor- tunately it has not that recommendation. We need only refer to that species of marble in which organic remains occur in abundance, to show that a higher perfection of the crystalline struc- ture than is by this hypothesis consistent with their appearance in gneiss, actually admits of their existence in the carbonate of lime. With- out allowing, with the Wernerian, a priority in the arrangement of these different kinds of rocks how shall we account for such phenomena? and by allowing such successive formations, how easily are they explained ! Nor does the Hutto- nian theory labor with greater success, to recon- cile the occurrence of fragments in some peculiar situations with its general principle of stratifica- tion. There frequently occurs between the strata, or what Werner calls the prmritive and flcetz forma- tions, a bed of conglomerated fragments of rolled pieces. This appearance, for instance, occurs placed upon a basis of clay-slate, and covered with a stratum of sandstone, and is easily ac- counted for on the W'ernerian doctrine of the prior existence of granite, from the rocks of which such debris might be detached as formed these beds, while the waters of the chaos still covered the gneiss and the somewhat lower levels of the globe. Let us hear the Huttonian explanation of this fact, as detailed by Mr. Murray.

'The explanation, according to the Huttonian hypothesis, involves a supposition so extraordi- nary as to fiirnish a singular contrast wiih that of the Neptunian. It is supposed that the schistus had been formed in beds nearly horizontal, and that, by an expansive power exerted from beneath, these had been elevated to the surface, and

placed in a vertical position. In this situation, the bed of gravel, from which

the breccia is formed, had been deposited on the summit of the vertical schistus. To admit of the formation of the horizontal strata of sandstone, it is further supposed, that the schistus, with this superincum- bent breccia, had again sunk in the ocean, and remained depressed for ˆges, till the materials of the sandstone were deposited on it. These materials are supposed to have been then conso- lidated by the central lire operating on them, ■even with the intervention of the deep strata of schistus on which they are incumbent ; and, lastly, we are told that the whole, when thus prepared, were again elevated by a new exertion of heat. It may surely be affirmed, without far- ther reasoning, that suppositions so extravagant and improbable can never be real interpretations ■of the operations of nature.'

The second class of operations in the order of succession, according to the Huttonian theory, is the process of consolidating, deranging, and ele- vating the earth's crust, formed, as" above de- scribed, at the bottom of the sea; and the second great principle it assumes is the agency of inter- nal heat for accomplishing these purposes. By employing this agent, and assigning it so import- ant functions, the Huttonians have exposed their system to objections evident to those least ac- quainted with geological speculations, and which the most able Huttonian cannot satisfactorily ob- viate. The first thing that strikes us as a difficulty, in the conception of this theory, is the immense volume and intense force of that heat which could melt or soften masses so gigantic in their bulk, and so infusible in their nature, as those that compose the habitable world.

This, however, is an objection founded rather upon a comparison of the great operations of nature, with the limited scale on which we con- duct our own, than upon any natural inconsis- tency in the theory against which it was alleged.

There are objections to the principle of the Huttonian theory of a different kind, and not so easily answered. What is the nature and source of this central heat ? and what are the laws by which it is regulated ? These are questions, in the answers to which the supporters of the Plu- tonic system are certain to involve themselves in difficulties, if not in contradictions. Does this heat arise from combustion ? No ; for combus- tion requires conditions for its existence which are not to be found in the circumstances under which this central heat is supposed to act. Where could such a quantity of combustible matter be found, as could fuse and eject those mighty chains of mountains which extend so far and rise so high? If combustible substances should be found in the magazines of nature, whence could come that gas which is neces- sary for this operation ? The circumstances of compression under which the central heat is supposed to act, and the consequent exclusion from oxygen or atmospheric air, are sufficient to destroy every idea of combustion.

But even though we should adm't the possi- bility of ordinary burning, in tlie instance before us, are the stores, both of the combustible ma- terials and the supporters of combustion, inex-

hai>stible ? and will there always be sufficient quantities of them available for the purposes of making worlds when the old are worn out ? or, in other words, for answering the ends of the theory in the renovation of nature? We all know that a substance which has undergone combustion, forms products which are not capa- ble of undergoing a second time the same process.

It should be observed, however, that the ablest adherents of the Huttonian hypothesis have entirely renounced the use of fuel in the production of the central heat, and have resorted to other means of exciting and supporting it. Most of them also have given up the solar rays, friction, and condensation : indeed the suppo- sition on which Mr. Playfair, the ablest sup- porter of the system, finally rests, seems little else than the old doctrine of occult qualities. If his hypothesis has any meaning, it implies, that an immense heat was originally stored in the lower parts of the earth, and that it is there preserved by the mutual action and reaction of the bodies in which it resides upon each other.

But its preservation in the same volume and intensity, without any fresh supply, is contrary to all the laws by which tlie action of heat is regulated. The only condition on which the hypothesis of its accumulation would be con- ceivable, would be a state in the bodies that contained it, so completely insulated that they could diffuse no more of it than what they re- ceived ; or, in other words, a state in which no new distribution could take place, because the most perfect equilibrium of temperature was established among all the bodies which could, by their vicinity, partake of it, either by radia- tion or through the medium of conducting sub- stances. Now it will not surely be pretended that there is, in the bowels of the earth, any re- gion so insulated. Indeed the simple idea, that the central fire has softened the strata which were formerly cold meclianical deposits, presup- poses a new distribution of its influence, with a consequent decrease of intensity in its original repository ; and thus the very purpose for which its operation is assumed cannot be accom- plished, without destroying the necessary condi- tions of its existence.

The other phenomena exhibited by veins, beds, and individual fassils, are more hostile to the hypothesis that employs fire in producing them, than even those whic4i we have stated. But we cannot at present enter farther into the subject. We need only add that Dr. Boue seems to have adopted from the Huttonian theory some valuable suggestions, and that the com- mendation of M. Necker, with respect to the habits of Saussure as a

geologist, see«is well wor- thy the attention of all students of this science.

‘ In proportion to the avidity with which he sought for facts, was the care with which be avoided vain speculations. If he sometimes advances a hypothesis, it is with a reserve justly admired, although rarely imitated, and only when the facts seem imperiously to command it. When new facts come in opposition to his former opinions, he abandons or modifies them without regret.’

G E O M E T R Y.

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GEOMANCER, w. s. 1 Tij and fiavnc, a

Ge’omancv, n. s. S prophet. Whatever

Geomak’tic, adj. J relates to the persons

or acts of fortune-tellers, astrologers, &c.

What say we of hem that beleven ea divinales, as by flight, or by noise of briddes or of bestes, or by sort of geomancie. Ciuiucer. The Persones Tale.

Fortunetellers, jugglers, gcomancert, and the incan- tatory impostors, though commonly men of inferior rank, daily delude the vulgar. Browne.

According to some there arc four kinds of divina- tion ; hydromancy, pyromancy, aeromancy, and geo- mancy. Ayliffe.

Two geomantlck figures were displayed Above his head, a warrior and a maid ˆ One when direct, and one when retrograde. Dryden.

GnoMANCY, Geomantia, is performed by means of a number of little points, or dots, made on paper at random : and by fonning from the various lines and figures which those points present, a pretended judgment of futurity, upon any question proposed. The word is de- rived from the Greek yw and fiavrna, divination; it being the ancien’ custom to cast little pebbles on the earth, and thence to form their conjec- tures, instead of the points afterwards made use of. Polydore Virgil defines geomancy a kind of divination performed by means of clefts or chinks made in the ground ; and supposes the Persian Magi to have been the inventors of it.

GEOMETRY.

GEOM’ETRY, 77. s. Geum’eter, n. s. Geom’ktral, adj. Geomet’rical, adj. Geomet’ricj adj. Geom’etrize, v. n. Geomet’rically, adv.

Fr. geometric ; ye- ‘ ufiiTpia ; yia and fit- Tpt’i), to measure. Per- ! taining to the art of [measuring the earth : I the science of quan- tity, extension.

Geometric’ian, n. s. J magnitude, without regard to matter.

A geometrical scheme is let in by the eyes out the demonstration is discerned by reason. Mure.

What a world of books offers itself, in all subjects, arts, and sciences, to the sweet content and capacity of the reader ! In arithmetick, geometry, perspective, opticks, astronomy, architecture, sculptur&, pictura, of which so many and such elaborate treatises are of late written. Burton. Anat. Mel.

He that shall but see that geometrical tower of Ga- reganda at Bologna in Italy, the steeple and the clock at Straiiburgh, will admire the effects of art, or that engine of Archimedes to remove the earth itself, if he !iad but a place to fasten his instrument. Id.

“I’is possible geometrically to contrive such an arti- ficial motion as shall be of greater swiftness than the ri;v«>lmions of the heavens. Wilkin’s Math.

For he by getmetrick scale Could take the size of pots of ale. Hudihras.

Although there be a cnttain truth, ˆcomchimrw would not receive satisfaction without demonstration thereof. Browne.

Must men take the measure of God just by tlie fˆa-ute geometrical proportions that he did that gathered the height and bigness of Hercules by his foot?

Slilling/lcet. liim also for my censor I disdain. Who thinks all science, as all virtue, vain ; Who counts geometry and numbers toys. And with his foot the sacred dust destroys.

Dryden. All the bones, muscles, and vessels of the body are contrived moat geometrically, according to the strictest rules of mechanicks. Hiy-

Docs not this wise philosopher assert. That the vast orb, whicli casts so f.iir his beams. Is such, or not much bi’ˆpcr than he seems? That the dimensions of his glorious face Two geometrick feet do scarce surpass? Blackmore.

He became one of the chief ˆfomc/cr of his age.*

yVattt.

flow easily docs an expert geometrician, with one glance of his eye, take in a complicated diagram, made up of many lines and circles I Id.

Definitions of the Science.

Geometry, Gr. ytw/itrpta, Fr. geometrie, ori- ginally signified the art of measuring the earth, or any distances or dimensions on or within it ; but it is now used for the science of quantity, ex- tension, or magnitude, abstractedly considered, without any regard to matter. Geometry is usually divided into speculative and practical ; the former of which contemplates and treats of the properties of continued quantity abstracted- ly ; and the latter applies these speculations and theorems to use and practice.

The word geometry literally signifies measur- ing of the earth, as it was the necessity of mea- suring the land that first gave occasion to study the principles and rules of this science, which has since been extended to numberless other speculations. Some define it the science of en- quirincr, inventing, and demonstrating all the af- fections of magnitude. Proclus styles it thr> knowledge of magnitudes and figures, with their limitations; as also of their ratios, aflections, positions, and motions of every kind.

In a %vord, geometry, together with arithmetic, now forms the chief foundation of all the mathe- matics.

History of Geometry.

The invention of geometry is generally ascribed to the Egj'ptians. Herodotus, Diodorus, Strabo, and Proclus, all agree that the annual inunda- tions of the Nile gave rise to it, by carrying away the land-marks and boiuidaries of esUitcs and farms ; and covering the surface of the ground with mud, which effaced every trace of tlicir for- mer limits. Hence the Egyptians were oblige*' every year to distinguish and lay out thdir lands by the consideration of their figure and quantity, that every person might have his own property : and tiius, by repeated experience and practice, in drawing figures, lines, and schemes, for this purpose, they gradually fornu'd an art which, from its origin, in measuring of lands, the Greeks at last named ytwˆfrjun, geometry. By farther contemplation on the draughts of figures,' their

wonderful properties were more and more dis- covered, and the art

continually gained ground and improved, by the discoveries of succeeding mathematicians.

This appears to be the most probable origin of this science ; though Josephus seems to ascribe the invention to the Hebrews ; while others of the ancients make Mercury the inventor. Polyd. Virg. de Inv. Rer. 1. 1, c. 18.

Thales is said to have introduced this science from Egypt into Greece ; where it was greatly cultivated and improved by himself, as well as by Pythagoras, Anaxagoras of Clazomense, Hip- pocrates of Chios, and Plato; who testified his conviction of the necessity and importance of geometry to the successful study of philosopliy, by inscribing over the door of his academy, Let no one ignorant of geometry enter here. Plato thought the word geometry too mean a name for this science ; and substituted instead of it the more extensive name of mensuration ; and after him others gave it the title of pantometry. But even these are now become too confined in their import fully to comprehend its extent : for it not only enquires into, and demonstrates, the quan- tities of magnitudes, but also their qualities, as the species, figures, ratios, positions, transforma- tions, descriptions, divisions, the finding of their centres, diameters, tangents, asymptotes, curva- tures, &c.

About fifty years after Plato, Euclid collected together all these theorems, which had been in- vented by his predecessors in Egypt and Greece, and digested them into fifteen books, entitled the Elements of Geometry : demonstrating and ar- ranging the whole in a very accurate and perfect manner.

The next to Euclid, of those ancient authors whose works are extant, is ApoUonius Pergseus, wiio flourished in the reign of Ptolemy Euergetes, about A. A. C. 230, and 100 years after Euclid. He was author of the first and principal work on Conic Sections ; on account of which, and his other accurate and ingenious geometrical works, he acquired from his patron the em- phatic appellation of the Great Geometri- cian.

Contemporary with ApoUonius, or perhaps a few years before him, flourished Archimedes , ce- lebrated for his extraordinary mechanical inven- tions during the siege of Syracuse, and no less so for his many ingenious geometrical composi- tions. Eudoxus of Cnidus, Archytas of Tarentum, Philolaus, Eratostlienes, Aristarchus of Samos, Dinostratus the inventor of the quadratrix, Me- nechmus his brother and the disciple of Plato, the two Aristaeuses, Conon,Thracidius, Nicoteles, Leon, Theudius, Hermotimus, Hero, and Nico- medes, the inventor of the conchoid, besides many other ancient geometricians, have contri- buted to the improvement of geometry.

The Greeks continued their attention to it, even after they were subdued by the Romans ; whereas the Romans themselves were so little ac- quainted with it, even in the most flourishing time of their republic, that Tacitus informs us they gave the name of mathematicians to those who pursued the chimeras of divination and ju- dicial astroiˆgy. Nor does it appear they were

disposed to cultivate geometry during the decline, and after the fall of the Roman empire. But the case was diflerent with the Greeks; among whom are found many excellent geometricians since the commencement of the Christian era, and af- ter the translation of tlie Pi,oman empire. Pto- lemy lived under Marcus Aurelius ; and we have still extant the works of Pappus of Alexandria, who lived in the time of Theodosius; the com- mentary of Eutocius, the Ascalonite, who lived about A. D. 540, on Archimedes's mensuration of the circle ; and the commentary on Euclid by Proclus, who lived under the empire of Anastasius. The subsequent inundation of ignorance and barbarism was unfavorable to geometry, as' well as to the other sciences; and the few who applied themselves to this science were calumniated as magicians. But, in those times of European dark- ness, the Arabians were distinguished as the guardians and promoters of science; and from the ninth to the fourteenth century they produced many astronomers, geometricians, geographers, &c.; from whom the mathematical sciences were again received into Spain, Italy arid the rest of Europe, somewhat before the year 1400. Some of the earliest writers, after this period, are Leonardus Pisanus, Lucas Pacciolus or de Burgo, and others between 1400 and 1.500. And after this appeared many editions of Euclid, or commentaries upon him : thus Orontius Finaeus, in 1520, published a commentary on the first six books; as did James Peletarius in 1556; and about the same time Nicholas Tartaglia published a commentary on the whole fifteen books. There have been also various other editions, or com- mentaries ; but the completest edition of all the works of Euclid is that of Dr. Gregory, printed at Oxford in 1703, in Greek and Latin. The edition of Eviclid by Dr. Robert Simpson, of Glasgow, containing the first six books, with the eleventh and twelfth, is much est,eemed for its correctness; and Playfair's edition of the first six books, with two additional ones on solids, the intersection of planes, and tlie quadrature of the circle, is remarkable for the precision and taste which distinguished every thing that came from the pen of that accomplished philosopher.

Besides the diflerent editions of Euclid, we have several other elementary treatises on geo- metry; the principal of which are those by Emerson, Simpson, Legendre ?nd Iˆeslie. All these are works of considerable merit and use- fulness. Emerson's is quite a store-house of properties; Sim.pson's is distinguished by an elegant tract on geometrical maxima and minima, and by a copious collection of geometrical pro- blems, with their solutions,

exceedingly well adapted to improve the dexterity and to form the taste of the young student. Leslie's work contains the best introduction to geometrical analysis that is to be met with in the English language. Legendre's work, which has been recently translated into English, is, in many re- spects, exceedingly valuable; but there appears little reason to expect that it will supplant, in the English schools, the elements of Euclid, which, after all th-it has been done on the sub- ject, is, for the parposes of tuition, stdl unri- valled.

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GEOMETRY.

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Among those who have gone beyond EucUd, in the application of the elenrientary principles of geometry, may be named ApoUonius, in his Conies, Plane Loci, Determinate Section, Tan- gencies, &c.; Archimedes, in his Treatises on the Sphere and Cylinder, the Dimensions of the Circle, of Conoids, Spheroids, Spirals, the Quadrature of the Parabola, &c.

Since the application of algebra to the geo- metry of curve-lines, this science has been greatly extended, and we may number, among those who have contributed to its improvement, almost every name of eminence connected with abstract science. The names of Descartes, Schooten, Leibnitz, Bemouilli, Maclaurin, Cotes, and Waring, are intimately associated with the his*ory of this branch of the science. The most valuable work, however, on the algebraic geo- metry, is one recently published by Dr. Lardner, of Dublin.

On tlie subject of practical geometry, the writers may truly be said to be numberless; the chief are Beyer, Kepler, Ramus, Clavius, Mal- let, Tacquet, Ozcenam, Gregory, and Hulton.

On the whole, the history of geometry may be divided into four grand eras, viz. 1st, From its invention to its introduction into Greece by Thales ; 2d, From that period to the time of Euclid ; 3d, From Euclid and Archimedes to the application of algebra to the subject by Des- cartes ; and 4th, From Descartes to Newton and to the present time, a period in which the inven- tion of fluxions, and their application to this and otlier branches of science, has cast all pre- vious discoveries into shade.

This science is usually divided into two parts, theoretical geometry, and

practical geometry, the fvjrmer showing the principles of the science, and the latter their application. For their ap- plication, however, to MENStJRATiON, Trigono- metry, and N.4.V1GATI0N, we shall refer to the ar- ticles under those titles; and give in this article their application in the solution of practical pro- blems in pure geometry.

PART I.

THEORETICAL GEOMETRY; OR GENERAL PRINCIPLES OF THE SCIENCE.

Definitions.

1. A Point is that which has position but not magnitude.

2. A Line is length without breadth or thick- ness ; the extremities of a line are therefore points.

3. A Right Line, or Straight Line, is that which lies evenly between its extreme points. Fig. 1, Plate X.

4. A Si'Pj-.RFiciES is that which has only length and breadth ; the extremities of a super- ficies are therefore lines, and the intersections of superficies with one another are also lines.

5. A Plane SuPERficir.s is that in which any two points heing tiiken, the straiyht line between them lies wholly in that superficies.

6. A Plane Recti i, in eat. Angle is the in- clination oftwo straight lines to one another,vvhich meet together, but are not in the same straight l:nu. Fig.2.

Note. When several angles are formed at the same point, as at B fig. 3, each particular angle IS described by three letters, whereof the middle one shows the angular poi.n, and the other two the lines that form the angle, thus C B D or D B C denotes the angle contained by the line C B and DB.

7. When a straight line standing on another straight line makes the adjacent angles equal to one another, each of the angles is called a Right Angle, and the straight line which stands on the other is called a Perpendicular. Fig. 4.

8. An Obtuse Angle is that which is greater than a right angle. Fig. 5.

9. An Acute Angle is that which is less than a right angle. Fig. 6.

10. Parallel Straight Lines are such as are in the same plane, and which

being produced ever so far both ways do not meet. Fig. 7.

11. A Figure is that which is enclosed by one or more boundaries.

12. Rectilineal Figures are those which are contained by straight lines.

1 3. Every plane figure bounded by three straight lines is called a Triangle, of which the three straight lines are called the sides, that side upon which the triangle is conceived tvi stand is called the base, and the opposite angular point the ver- tex.

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14. An Equilateral Triangle is that which has three equal sides. Fig. 8.

15. An Isosceles Triangle is that which has only two e(jual sides. Fig. 9

16. A Scalene Triangle is that which has all its sides unequal. Fig. 1 1.

17. A Right-angled Triangle is that which has a right angle. Fig. 10.

18. An Obtuse-angled "Triangle is that which has an obtuse angle. 'Fig. 1 1 .

19. An Acute-angled Triangle is that which has all its angles acute. Fig. 12.

20. Every plane figure bounded by four straight lines is called a Quadrilateral, and the rightlinc joining the opposite angles is called a Diagonal.

21. A Parallelogram is a quadrilateral of which the opposite sides are parallel. Fig. 13.

22. ARECTANGLEisa parallelogram which has one right angle. Fig. 14.

23. A Square is a rectangle which has all its sides equal. Fig. 15.

24. A Rhombus is a parallelogram which has all its sides equal. Fig. 17.

25. A Trapezium is a quadrilateral which has not its opposite sides parallel. Fig. 18.

26. A Trapezoid is a quadrilateral which has two of its opposite sides parallel Fig. 19.

27. Plane figures bounded by more than four straight lines are called Polygons. Fig. 16.

28. A Pentagon is a polygon of five sides, a Hexagon has six sides, a Heptagon seven, an Octal on eight, a Nonagon nine, a Decagon ten, an Undecagon eleven, and a Dodecagon twelve sides.

29. A Regular Polygon has all its sides and all its angles equal ; if they arc not eqmd, the polygon is Irregular.

30. A Circle is aplane figure bounded by one

line called the circumference, which is such, that all straight lines drawn to it from a certain point within it called the centre are equal ; and these straiˆht lines are called the radii of the circle. The circumference itielf is also often called a cir- cle. Fig. 20.

31. The Diameter of a circle is a straight Ime passing through the centre, and terminated both ways by the circumference.

32. An Arc of a circle is any part of its cir- cumference. Fig. 21.

33. A Chord is a straight line joining the ex- tremities of an arc. Fig. 21.

34. A Segment is any part of a circle bound- ed by an arc and its chord. Fig. 21.

35. A Semicircle is half the circle, or a seg- ment cut off by a diameter. The half circum- ference is also sometimes called a semicircle. Fig. 20.

36. A Sector is any part of a circle which is bounded by an arc and two radii drawn to its circumference. Fig. 22.

37. A Quadrant, or quarter of a circle, is a sector having a quarter of a circle for its arc, and its two radii perpendicular to each other. A quarter of the circumference is also called a quad- rant. Fig. 23.

38. The Height, or Altitude, of a figure is a perpendicular let fall from an angle or its vertex to the opposite side or base. Fig. 24.

39. In a right-angled triangle the side oppo- site the right angle is called the Hypothenuse, and the other two sides are called the Legs, or sometimes the base and perpendicular. Fig. 10.

40. The circumference of every circle is sup- ‘ posed to be divided into 360 equal parts, called

Degrees, and each degree into sixty Mijjutes, each minute into sixty Seconds, and so on. Hence a semicircle contains 180 degrees, and a quadrant ninety degrees.

41. The Measure OF a Rectilineal Angle is an arc of any circle contained between the two lines which form that angle, the angular point being the centre, and it is estimated by the num- ber of degrees in that arc. Fig. 25.

42. Identical Figures are such as have all the sides and |all the angles of the one, respec- tively equal to all the sides and all the angles of the other, each to each, so that if the one figure were applied to, or laid upon the other, all the sides of the one would exactly fall upon and cover all the sides of the other, the two becoming, as it were, but one and the same figure.

43. The Distance of a Point from a Line is the straight line drawn from that point per- pendicular to, and terminating in that line.

44. An Angle in a Segment of a Circle is that which is contained by two lines drawn from any point in the arc of the segment to the extre- mities of that arc. Fig. 26.

45. An Angle on a Segment, or an Arc, is that which is contained by two lines drawn from any point in the opposite, or supplemental part of the circumference, to the extremities of the arc, and containing the arc between them. Fig. 26.

46. An Angle at the Circumference is that whose angular point is anywhere in the circum- ference; and an ancrle at the centre is that whose angular point is at the centre. Fig. 26.

47. A Tangent to a Circle is a straight line that meets the circle at one point, and every where else falls without it. Fig. 27.

48. A Secant is a straiglit line that cuts the circle ; lying partly within and partly without it. Fig. 27.

49. A Right-lined Figure is inscribed in a circle ; or the circle circumscribes it, when all the angular points of the figure are in the circumfe- rence of the circle. Fig. 28.

50. A Right-lined Figure circumscribes a circle ; or the circle is inscribed in it, when all the sides of the figure touch the circumference of the circle. Fig. 28.

51. One Right-lined Figure is inscribed in another ; or the latter circumscribes the former, when all the angular points of the former are placed in the sides of the latter. Fig. 28.

52. Similar Figures are those that have all the angles of the one equal to all the angles of the other, each to each, and the sides about these angles proportional.

53. The Perimeter of a Figure is the sum of all its sides taken together.

Note. When the word line occurs, without the addition of either straight or curved, a straight line is always meant.

Axioms.

1. Things which are equal to the same thing are equal to one another.

2. When equals are added to equals, the wholes are equal.

3. When equals are taken from equals, the re- mainders are equal.

4. When equals are added to unequals, the wholes are unequal.

5. When equals are taken from unequils, the remainders are unequal.

6. Things which are like multiples of the same thing are equal to one another.

7. Things which are like parts of the same thing are equal.

8. The whole is equal to all its parts taken to- gether.

9. Things which coincide, or fill the same space, are identical, or mutually equal in theii parts.

10. All right angles are equal to one another.

11. A line which meets one of two parallel lines will if produced meet the other.

12. If two straight lines intersect each other, they cannot both be parallel to the same straight line.

Properties of Straight Lines, and Plane Rectilineal Figures.

Theorem I. — In any two triangles, as ABC? DEF (fig. 30 p. I), if two sides, as AB, AC, in the one, be respectively equal to two sides, as D E, D F, in the other, and the angle A, in- cluded by the sides AB, AC, be equal to the angle D, included by the sides D E, D F ; then the triangles are equal in all respects, and nave the angles equal which are opposite the equal sides.

For, conceive the point A to be laid on the point D, and tlie line A B on the line D E, then, as these lines are equal, the point B will fall ou the point E. And as A B coincides with D E

and the angle A is equal to the angle D, the side A C will fall on the side D F ; and, these sides being equal, the point C will fall on the point F; and, consequently, the line BC will coincide with the line E F. Hence, the two triangles are identical, having all the parts in the one equal to the corresponding parts in the other, viz. the side B C to the side E F, the angle B to the angle E, the angle C to the angle F, and the whole triangle AB C to the triangle D E F.

Theorem II. — If two triangles, as ABC, D E F (fig. 30, p. I.), have two angles as B and C in the one, respectively equal to two angles, as E and F in the other, and the sides B C, and E F, adjacent to these angles also equal, the triangles are equal in all respects, and have those sides equal which are opposite the equal angles.

For, conceive the point B to be laid on the point E, and the line B C on the line E F, then, because these lines are equal, the point C will fall on the point F. And, as BC coincides with E F, and the angle B is equal to the angle E, the side B A will fall on the side C D ; and, for a like reason, A C will fall on D F, and the points A and D will consequently coincide; the triangles are, therefore, identical, having the parts in one respectively equal to the corres- ponding parts in the other.

Theorem III. — In any isosceles triangle, as ABC (fig. 31, p. I), the angles B and C, oppo- site the equal sides A B and A C, are equal.

For, conceive the angle B A C to be bisected by the line AD, then, as the two triangles ABD, A CD, have AC equal toAB, AD, common, and the angles BAD and D AC equal, they are identical (Theorem I.), and have there- fore tlie angles B and C equal.

Cor. 1. The line which bisects the angle included between the equal sides of an isosceles triangle, bisects the third side also, and is per- pendicular to it.

Cor. 2. An equilateral triangle is also an equiangular one.

Theorem IV. — If a triangle, as ABC (fig. 32, p. I.), have two equal angles, as A and B, the sides A C and BC, opposite those angles, are also equal.

For, if A C and B C are not equal, suppose one of them, as AC, to be longer than the other, and conceive AD to be the part of A C which is equal to BC, and join BD. Then, as AD is equal to B C, A B common to both, and the an- gles CAB and C B A equal, the triangles ABD and ABC are themselves equal (Theorem I.), the less equal to the greater which is impossible. AC and B C are, therefore, not unequal, that is, they are equal.

Cor. An equiangular triangle is also an equilateral one.

Theorem V. — Tf two triangles, Eis ABC, T)EF(fig. 33 p. I.), have the sides AC and J) F, A B and D E, and B C and E F, rcspec- tively erpial, the triangles arc identical, and have the angles equal, which are opposite the etjual sides.

For let the point A be laid on D, and the line A B on the line D E ; then, as these lines are etjual, the points B and E will coincide. Let

the point C fall at G, and join F G. Then, as D F and D G are equal, the angles D F G and D G F are equal (Theorem III.) ; and in the same way may the angles E F G and E G F be sliown to be equal. Hence the angles D F E, and D G E, or A C B, are equal ; and, consequently (Tlieorem I.), the triangles ABC, and D E F, are identical, and have the angles BAC, and EDF, equal, and the angles BAC, and EDF, also equal.

Theorem VI.— The angles DBA, DBC (fig. 34, p. I.), which one straight line, D B, makes with another, A C, on the same side of it, are either two right angles, or, together, they are equal to two right angles.

For, if B D is perpendicular to A C, each of the angles ABD and D B C is a right angle. If BD is not perpendicular to AC, let B E be per- pendicular to A ; then ABD exceeds llie right angle AB E by the right angle E B D, and D B C is less than the right angle E B C by the same angle E B D ; the angles A B D and DBC are, together, equal to two right angles.

Cor. All the angles that can be made at a point, as B, by any number of lines drawn on the same side of a line, as A C, are, together, equal to two right angles ; and, as all the angles that can be made at the same point by lines drawn on the other side of A(^ are also together equal to two right angles, we may infer that all the angles that can be made in the same plane about any point, are, together, equal to two right angles.

Theorem VII. — If two straight lines, as A B, D E (fig. 35 p. I.), intersect each other, any two vertical or opposite angles, as A C D, B C E, are equal.

For, as A C meets D E, the angles A C D and ACE are, together, equal to two riglit angles (Theorem VI.); and, as EC meets AD, the angles ACE and E C B are also, together, equal to two right angles. Hence the sum of the angles ACD and ACE is equal to the sum of the angles ACE and ECB, and, if the common angle AC E be omitted from each sum, the re- maining angles, ACD and ECB, are equal.

Theorem V'III. — If any side, as A B (fig. 36, p. I.), be produced, as to D, the outward angle C B D is greater than either of the i award and opposite

angles A and C

For bisect B C in E, join A E, and produce it till E F is equal to A E. and join B F. Then as A E is equal to E F, B E to E C, and the angles A EC and BEF are also equal (Theorem ATI.), the triangles A EC and BEF are identical (Theorem I.), and the angle E B F is equal to the angle ACE; consequently the whole angle C B D is greater than the angle C.

By producing C B as to C,it maybe shown in the same way that the angle A BG, which is equal to C B D is greater than BAC.

Theorem IX. — In any triangle, as A BC (fig. 37, p. I.), if a side A B he greater than another side A C, the angle A C B, opposite the greater side A B, is greater than the angle ABC, oppo- site the less side A C.

For let A D be the part of A B which is equal to A C, and join C D. Tlien the angles AC D and ADC are equal (Theorem III.) ; but the

angle A D C is greater than the anˆle B (Theorem VIII.) ; therefore the angle AC D is also greater than B, and consequently the angle A C B is much greater than B.

Theorem X.— In any triangle, as AB C (fig. 37, p. I.), the greater angle, as C, has the side A B opposite to it, greater than the side A C, opposite the less angle B-

For, if AB were equal to AC, the angles B and C would be equal (Theorem III.); and, if A B were less than A C, the angle C would be less than the angle B, both of which conclu- sions are inconsistent with the hypothesis that the angle C is greater than the angle B ; hence the side A B must be greater than the side A C.

Theorem XI. — If two triangles, as ABC, DEF (fig.38 p. I.), have two sides A B, B C, of the one, respectively equal to two sides D E, EF, of the other, but the angle ABC great,er than the angle DEF; then tlie side A C will be greater than t!ie side 1) F.

Let A BG be the part of the angle ABC which is e(iual to D E F, and let B G be equal to F. F or E C. Then (Theorem I.) the triangles A B G and DEF are identical, and have the sides A G and D F equal. And, as B G and B C are equal, the angles B G C and B C G are equal ; hence B G C is greater than A C G, and much more is AG C greater than A C G ; hence (Theorem X.)

A C is greater than A G, or than its equal D F.

Theorem XII. — If two triangles, as ABC, DEF (fig. 38, p. I.), have two sides AB, B C, of the one respectively equal to D E, EF, two sides of the other; but the third side AC of the one greater than the third side D F of the other, the anscle ABC will be greater than the angle

D E f:

For, if A B C and DEF were equal, A C and DF would be equal (Theorem I.), which, by hypothesis, they are not ; and, if A B C were less than D E F, A C would be less than D F (The- orem XL), which it is not. Hence, as ABC is neither equal to nor less than D E F, it must be greater.

Theorem XIII. — In any triangle, as ABC, (fig. 39, p. L), the sum of any two of its sides, as A C and (J B, is greater than the third side AB.

Produce A C till C D is equal to C B, and join D B ; then (Theorem III.) the angles D and D B C are equal, therefore the angle A B D is greater than the angle D, and hence (Theorem X.) A D, or the sum of A C and C B, is greater ban A B.

Theorem XIV. — In any triangle, as ABC (fig. 39, p. I.), the difference of any two of its sides, as AC and A B, is less than the third side BC.

For let A E be the part of A B the greater, which is equal to AC the less ; then, as AC and C B (Theorem XT 11.) are together greater than A E and E B ; if the equal parts, AC and A E, be taken from each, E B, the difference of A C and A B, will remain less than C B.

Theorem XV.— If a line, E F (fig. 40, p. L), intersect two parallel lines, A B and C D, the alternate angles B E F, C F E will be equal to each other.

If they are unequal, suppose B EF to be the greater, and that D E F is the part of it which is

equal to C F E. Then, as A B is parallel to C D, E D is not parallel to C D, it will, therefore, meet it in some point, as D; and in the triangle, EFD, the outward angle E F C, is greater than the angle DEF (Theorem VIIL), whicli was supposed equal to it, which is impossible. The angles C F E, and B E F, are therefore equal.

Theorem XVI. — If the alternate angles B E F and C F E (fig. 40, p. I.) are equal, AB and C D are parallel.

For, if A B is not parallel to C D, let E D drawn from E be parallel to it.

Tlien the angle C F E equal to the alternate angle FED (Theorem XV.), and also by hypothesis equal to the FEB, the angles F E D and F E B must be equal, which is impossible. Hence no line drawn through, except E B, can be parallel to C D.

Theorem XVIL— If AB, C D (fig. 40, p. I.), two parallel lines, be cut by another line E F, any outward angle, as A E G, is equal to the in- ward and opposite one C F E on the same side of E H, and any two inward angles, as A E F and EEC, are together equal to two right angles.

For the angle B E F being equal to the angle AEG (Theorem VIL), and also equal to tlie angle C F E (Theorem XV.), the angles AEG and C F E are equal. And as the angles A E F and B E F, together, are equal to two right angles (Theorem VI.), and the angle B EF is equal to the angle C F E, the angles A E F and C F E are together etjual to two right angles.

Theorem XVIII. — If two lines, as A B, E F (fig. 41 p. I), be each parallel to another line as C D, A B and E F are parallel to each other.

Let the lines be cut by the line G H I K L ; then as the angle H I C is equal to BH I (Theo- rem XV.), and also equal to IKE (Theorem XVIL), the angles B H I and IKE are equal, and consequently (Theorem XVI.) the lines A B and E F are parallel.

Theorem XIX. — If any side, as AB (fig. 42, p. I.) of a triangle A B C be produced, the out- ward angle C B D, is equal to both the inward and opposite angles A and C.

Let B E be a line parallel to A C : then (Theorem XV.) the angles A C B and C B E are equal; and (Theorem XVIL) the angles CAB and E B D are equal ; hence the angle C B D ia equal to the sum of the angles A and C.

Cor. 1. As the angles C B D and C B A are together equal to two right angles (Theorem VI.) and the angle C B D is equal to the sum of the angles A and C, the three interior angles of any triangle are equal to two right angles.

Cor. 2. Either of the angles C or A is the dif- ference between the other and the outward angle C BE.

Theorem XX. — All the interior angles of any rectilineal figure, A B C D E (fig. 43, p. I.t, are together equal to twice as many right angles as the figure has sides wanting four right angles.

For from any point, as F, within the figure, let lines be drawn to its angular points, dividing the figure into as many triangles as it has sides ; then the

interior angles of each triangle being equal to two right angles, the interior angles of all the triangles (which are the interior angles of the figure, and the angles about the point F, or the interior angles of the figure and four right angles), are equal to twice as

many right angles as the figure has sides. Hence the interior angles of the figure are equal to twice as many right angles as tlie figure has sides %vauting four right angles.

Cor. 1 . All the interior angles of a quadrilate- ral figure are together equal to four right angles.

Cor. 2. If the sides of the figure be produced the sum of the outward angles will be four right angles. — For, each interior with its corresponding exterior angle being equal to two right angles (Theorem VI.), all the interior and exterior an- gles will be equal to twice as many right angles as the figure has sides, or equal to the interior angles and four right angles ; therefore the exte- rior angles are equal to four right angles.

Theorem XXI. — In any parallelogram, as A BCD (fig. 44, p. I.), the opposite sides are equal to each other, and so are also the opposite an- gles, and the diagonal B I) divides it into two equal triangles.

For A B and C D being parallel, and A D and C B also parallel, the angle A B D is equal to the angle C D B and the angle A D B to the angle C B D (Theorem XV.) ; and, as D B is com- mon to both triangles, the triangles are (Theorem II.) identical, having A B equal to C D, A D to B C, and the angle A to the angle C, and as the two parts of the angle ADC are equal to the two parts of the angle ABC, the angles ADC and A B C are also equal.

Cor. If a parallelogram have one right angle, all its angles are right angles, and conse- quently all the angles of a rectangle are right angles.

Theorem XXII. — Any quadrilateral, as A B C D (fig. 44, p. I.), whose opposite sides are respec- tively equal is a parallelogram.

For, D B being joined, the triangles A B D and C D B are (Theorem V.) identical, having the angles C D B and A B D equal, and the angles A D B and C B D equal. Hence (Theorem XVI.) AB and C D are parallel, and AD and BC are parallel ; and consequently (Def. XXI.) the figure A B C D is a parallelogram.

Cor. Hence a square is a parallelogram.

Theorem XXIII.— The lines A C and B D (fig. 44, p. I.) which join the corresponding ex- tremities of equal and parallel lines, as A B and CD, are themselves equal and parallel.

For, BC being joined, the angles A B C and D C B are equal (Theorem XV.) and conse- quently (Theorem I.) the triangles ABC and D C B are identical, and have A C equal to B D, and the angles AC B and DEC equal, when A C and B D are parallel (Theorem XVI.).

Theorem XXIV. — If two parallelograms, as A B C D, A B E F (fig. 45, p. I.), be on the same base A B, and between the same parallels A B, and FC, those parallelograms are equal to each other.

For, (Theorem XXI.) F E and DC are each equal to A B, they are therefore equal to each other, and if E D be added to each, F D and E C will be equal ; and as A F is equal to B E, and A D to B C, the triangles A D F, and B C E, are equal (Theorem V). If therefore each of these equal triangles be taken from the whole figure A B C F, the remainders, or the parallelograms ABEF and ABCD are equal.

Cor. If the diagonals A E and D B be drawn, the triangles A E B and A D B, halves of equal parallelograms, are equal.

Theorem XXV. — Parallelograms, as A B C D, E F G H (fig. 46, p. I.), on equal bases A B and E F, and between the same parallels A F and DG, are equal to each other. For HG being equal and parallel to EF (Theorem XXI.) is equal and parallel to AB, hence (Theorem XXI 11.) AH is equal and parallel to B G, there- fore A H G B is a parallelogram ; and each of the parallelograms A C and E G being equal- to the parallelogram AG, they are equal to each other.

Cor. 1. If BD and EG be joined, the trian- gles A B D and E F G, the halves of the equal parallelograms AC and EG are equal.

Cor. 2. If a parallelogram and a triangle be on the same or on equal bases, and between the same parallels, the parallelogram will be double the triangle.

Theorem XXVI.— Equal triangles, as A B C, AD B (fig. 47, p. I.) on the same base A B, are between the same parallels.

For if DC is not parallel to A B, let D E meeting AC in E be parallel to A B, and join B E. then the triangles A B D and A B E are equal (Cor. Theorem XXIV.); and the triangles A B D and A BC are equal, by hypothesis ; hence

the triangles ABC and AB E are equal, the less to the greater, which is impossible. No line therefore, drawn through D, except DC, can be parallel to A B, and D C and A B are therefore parallel.

Theorem XXVII.— If AB (fig. 48, p. I.) be a line, and BC another divided into any number of parts, as BD, DE, EC, the rect- angle contained by A B and BC is equal to the rectangles contained by A B and B D, A B and DE, andAB and EC.

For let AC be the rectangle contained by AB and BC, and let DF and EG be drawn parallel to AB ; then the rectangle AC is the sum of the rectangles AD, F E, and EC. Now AD is contained by AB and BD, FE by FD and DE, and GC by GEandEC; and, asDE and EG are each equal to AB, their rectangles are equal to rectangles contained byAB and BD, ABand D E, and ABand EC.

Cor. 1. If A B be equal to B D, AD will be a square on B D, and DH will be a rectangle tinder BD and DC; therefore the rectangle under a line, and a part of itself, is equal to the square of that part, and the rectangle of the two parts.

CV. 2. If B A be equal to B C, B II will be a square on B C ; hence the rectangles under a line, and the several parts of itself, are equal to the square of that line.

Theorem XX'III. — The square of the sum of two lines, as A F and F B (fig. 49, p. I.), is equal to the square of each line, and twice the rectangle contained by these lines.

Let AC be the square on A B, and FI the square on F B, and produce EG and IG till tiiey meet D C. and A D in E and H ; then II I and EF are equal, being equal to A B and B C, sides of the same square ; if from these equals, the equal parts G 1 and F G be taken, the re-

maining parts GE and G H will be equal. But 11 G is equal to U E, and G E to H D, and the angle D being a right angle, II E is a square on II G, or it is equal to the square of A 13. But the parallelograms AC and G C are rectangles, each equal to the rectangle contained by A ¥ and F B ; for F G and G I are each equal to F B, and I C is equal to A F. Hence the square of A B, or the square of the sum of A F and ¥ B, is equal to the squares of A F and F B, and twice the rectangle of A F and F B.

Cor. The square of any line is four times the square of half that line.

Theorem XXIX.— The square of A C, the difference of two lines AB and BC (fig. 50, p. I.), is equal to the sum of the squares of those lines, all but twice the rectangle contained by them.

For let A D be the square on the difference A C, A F the square on the greater A B, and C I the square on the less B C ; and produce E D to meet F C in II. Then G H and H K are the excess of the two squares A F ana C I above the square AD. Now as A B is equal to A G, and A C to A E, E G is equal to B C ; and, A B being equal to G F, G H is equal to a rectangle under A B and B C. Again, as AC is equal to C D, and C B to C K, A B is equal to D K ; and, C B being equal to K I, H K is equal to a rectangle under A B and B C ; hence the square of the difference of A B and B C is equal to the square of each of those lines, di- minished by twice their rectangle.

Theorem XXX. — The difference of the squares of any two unequal lines, as A B, AC (fig. 51, p. I.), is equal to a rectangle under their sum and difference.

For let A D be the square on A B, and A F the square on A C ; produce B D till B K is equal to A C ; draw I K parallel to A B, and produce F C till it meet I K, and E D in I and H. Then the rectangles E F and C D together form the difference of the two squares A D and A F. But the rectangles E F and B I are equal ; forGF and BK are each equal to AC, and G E is equal to B C, as they are each equal to the difference of A B and A C, or of their equals AE and AG. The rectangles EF and CD are therefore together equal to the rectangles B I and C D, or to the whole rectangle D I, which is therefore equal to the difference of the squares A D and A F. But D I is a rectangle contained under D K the sum, and B C the difference of A B and A C ; hence the difference of the squares of A B and A C is equal to the rectangle under their sum and difference.

Theorem XXXI. — If two parallelograms AG, C E (fig. 52, p. II.), be described on AB, BC, two sides of a triangle ABC, and the outward sides F G, D E ; iif the parallelograms be produced till they meet in II ; and if II B be joined, and produced to meet the base AC in K ; and A L, C M be drawn parallel to H K, meeting F II and H D in L and M; then, if L M be joined, A M will be a parallelogram, and equal to the parallelograms A G and C E.

For, as A II and H C are parallelograms, A L and C M are, each equal and parallel to B II

(Theorem XXI.), they are equal and parallel to each other (Theorem

XXIII.), therefore A C and L M are also equal and parallel, and hence A M is a parallelogram.

Now (Theorem XXIV.) the parallelograms A G and A II are equal, for they are on the same base A B, and between the same parallels A B and C II. But the parallelogram A H is equal to the parallelogram A N, for they are on the same base A L, and between the same pa- rallels A L and K H ; hence the parallelograms A G and A N, being each equal to A H, are equal to each other. Similarly the parallelo- grams C E and C N may be shown to be equal ; and consequently the two parallelograms AG and C E are equal to the whole parallelogram AM.

Cor. If the parallelograms A G and C E be squares, and the angle A B C a right angle, then the parallelogram A M will also be a square, and equal to the two squares A G and C E.

Theorem XXXII, — In any triangle as ABC (fig. 63, p. II.), obtuse angled at A, if a perpen- dicular C D be drawn from C on the base pro- duced, then BC= =BA24-AC2-f 2BAD.

For (Theorem XXXI., Cor.) BC= =:BDˆ 4- DC; but (Theorem XXVIII.) BDˆˆBA* + AD—f-2BA-AD; therefore B Cˆ =z B A* + AD»H-DC'f 2BA-AD. But(Theorem XXXI. Cor.) A Dˆ -H D Cˆ = A CS hence BC* = BA»-1-AC=' + 2BA • AD.*

Theorem XXXIII. — In any triangle, as ABC (fig. 54, p. II.), if CD be a perpendicu- lar, drawn from C on the opposite side A B, then BC= = B A= f A C— 2 B A • AD.*

For (Theorem XXXI. Cor.), A Cˆ = A D' f D Cˆ and (Tlieorem XXVIII.) A B= = A D» | DBˆ-|-2BD-AD; hence A B -f A Cˆ = B Dˆ + D C" + 2 A D" + 2 B D A D. But (Theorem XXXI. Cor.) B D* t D Cˆ = BCˆ and (Theorem XXVII. Cor. 1,) 2 A D= } 2 B D, AD=2BA-AD; therefore A B- + A C= =: B C* [2 B A • AD, or B C* = A B* f A C— 2BA- AD.*

Theorem XXXIV. — In any triangle as A B C (figs. 53 & 54, p. II.) the rectangle under the sum and difference of two sides, as B C and A C is equal to the rectangle of the segments, A D and B D, of the third side, made by a per- pendicular from the angle C.

For B C = B D= + D C», and A Cˆz: AD" + D C*, (Theorem XXXI. Cor.) ; hence B C* — A C= (B D» f D C*) — (A D* f D C=) = B D* — A D'. But (Theorem XXX), B C« — A C" =: BC+AC • BC — AC; and B D*— AD*= B D + A D • B D —AD; therefore BC + AC • BC— AC=BD +AD-*

BD — AD.

Theorem XXXV.— If the base AB of a tri- angle, as A B C (fig. 55, p. II.), be bisected in D, then A Cˆ + B C= = 2 A Dˆ" + 2D Cˆ.

For let C E be a perpendicular from C on A B ; then (Theorem XXXII.) A C» = A D* } DC* 2 AD • DE; and (Theorem XX XII 1.) B C*rr B D- + D Cˆ— 2 B D • D E =: A D» ˆDC*— 2AD-DE; hence A C* + BC» = 2 A D* + 2 D C*.

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Theorem XXXV[.— If any point D (fig. .56, [). II.), be taken in A C B, the diameter of a circle D B, tliat part of the diameter which passes through the centre, C, is greater than any other line, as D P2, that can be drawn from D to the circumference of the circle ; and D E is greater ttiaii any other line DF drawn from D to the circumference ; but at a greater distance from D B.

For, join C E and C F, then as C E is equal to C B, D C and C E together are equal to D B ; and, as the sum of D C and C E is greater than D E (Theorem XIII.), D B is greater than D E. Again as D C and C £ are respectively equal to D C and C F, bat the angle D C E is greater than the angle D C F, DE (Theorem XI.) is greater than D F.

Theorem XXXVII.— An angle AC B (fig. 57, p. II.) at the centre of a circle is double the angle A D B at the circumference, when they both stand on the same arc A B.

For join D C, and produce it as to E ; then (Theorem XIX.) the angle A C E is equal to the sum of the angles CAD, and CD A; but, as C A is ecjual to C D, the angles CAD and C D A are eciual ; the angle A C E is therefore double the angle ADC. For a like reason the angle B (^- E is double the angle B D C, consequently tlie angle AC B is double the angle A D B.

Cor. 1 . As the angle A C B, at the centre, is measured by the arc A B on wliich it stands, the angle A D B at the circumference is measured by half tlie arc A B, on which it stands.

Cor. 2. All angles in the same segment of a circle, or standing on the same arc, are equal to each other.

Cor. 3. The angle in a semicircle is a right angle; for, when A C and C B become one straight line, the angle A C B becomes equal to two right angles, and the angle A D B, wliich is in that case an angle in a semicircle, is a right angle.

TuroiirM XXXVTII. — The sum of any two opposite angles BAD, B C D, of a quadrilateral inscribed in a circle, is two right angles (fig. 58, p. II.)

For the three angles of the triangle A D B are together equal to two right angles (Theorem XIX. Cor. 1). But (Theorem XXXVII. Cor. 2), the angle A D B is equal to the angle A C B, and the angle A B D to tlie angle A C D, hence the angles BAD and B DC are together equal to two right angles.

Cor. If A B be produced, as to E, then (Theorem \T.) the angles D A B and

DAE, to- gether, make two right angles ; hence the angle I) A E is equal to the inward and opposite one B C D.

Theorem XXXIX.— In any circle as A BCD (fig. 59, p. II.) parallel chords as AB, C D, in- tercept cfjual ones, A C and B D.

For, B C being joined, the angles ABC and B C D are equal (Theorem XV.), and hence (Theorem XXXVII. Cor. 1) half the arc AC is equal to half the arc B D, or tlie whole arc A C, to the arc B I).

Cor. If A B be conceived to move parallel to itself till it coincide with the tangent E G F, then the arcs C G and G 1) intercepli.d by a tangent and a cliord parallel to it %vill aj>peur to be (-(pial.

Theorem XL.— If A B (fig. 60, p. II.) be a tangent to a circle, and AC a chord drawn from the point of contact A, the angle D A C is equal to any angle in tlie alternate segment A D C.

For from C draw the chord D C parallel to A B, and join A D. Then, as the arcs A C and A D are equal (Theorem XXXIX. Cor.), the angles A C D and ADC are efjual (Theorem XXXVII. Cor. 2). But (Theorem XV.) the angles A C D and B A C are equal ; therefore the angles B A C and A C D are equal ; and, as A D C is equal to any angle in the same seg- ment, B A C is also equal to any angle in that segment.

Theorem XLL— The angle EAC (fig. 61, p. II.), formed by two lines cutting a circle, is measured by half the sum or half the difference of the intercepted arcs E C and B D, according as the point A is within or without the circle.

For join E B ; then when A is within the circle, the angle EAC is the sum of the angles C B E and DEB; but when A is without the circle, the angle E A C is the difference of the ansrles C B E and DEB (Theorem XIX. Cors. 1 and 2). But (Theorem XXXI. Cor. 1) CBE is measured by half E C, and the angle D E B by half B D ; hence the truth of the proposition is manifest.

Theorem XLII.— If A B (fig. 62, p. II.), any chord of a circle, be bisected by a line C D drawn to the centre, C D will be perpendicular to AB ; or if C D, drawn from the centre, be perpen- dicular to A B, A B will be bisected in D.

Draw the radii C A, C B, then A B is bisected in D, the triangles A C D and BCD will be identical (Theorem V.), and have the angles ADC and B D C, opposite to the equal sides AC and B C, equal to each other, and C D is there- fore perpendicular to AB. Or again, if C D is perpendicular to A B, the angles C D A and C D B will be equal, and, because of the equal sides

A C and C B, the ap.-les CAD and C B D will be equal (Theorem 111) ; hence the angles A C D and BCD will also be equal, and as C D is common to both triangles, the. side A D will be equal to the side B D (Theorem II.), or A B is bisected in D.

Cor. The angles A C D and B C D are equal, therefore the arcs A E and B E are equal.

Theorem XLIII.— If on A B, C D (fig. 63, p. II.), two chords in a circle, the perpendiculars E G and G F be drawn ; then if the perpendiculars are equal, the chords are equal ; and if the chords are equal, the perpendiculars are equal.

For join AG and GC, then (Theorem XLII.) the chords A B and C P are bisected in E and F, if therefore A B is equal toC D, A E is equal to CF. But (Theorem XXXI. Cor.) AG»=: A E,ˆ -h E G; and G C (or AC) = C'F' | G F". Hence A E» 1 E G* = C Fˆ + G F= ; and if from these equals the equal squares A E* and CF' be taken, we have EG* = GF*, or E G rr G F. In the same way it may be shown that, when E G =: C F, A E = C F, and conse- quently A B = C D.*

Theorem XLIV. — A perpendicular as BC (fig. 64, p. II.), at the extremity B of the radius of a circle, is a tangent to the circle.

For from the centre A draw A C to any point C in the line BC; then as ABC is a right angle, A C B is less than a right angle •, hence

(Theorem X." AC is greater than A B, or the point C is without the circle. In the same way it may be shown that B C meets the circle in the point B only, and it is therefore a tangent to the circle.

Of Proportion.

Proportion is the numerical relation which one quantity bears to another. Quantities be- tween which proportion can exist must be of the same kind, as a line and a line, a surface and a surface, a solid and a solid, an angle and an angle.

A greater quantity is said to be a multiple of a less, when it contains the less a certain number of times without any remainder ; and quantities so related are said to have the same relation to each other that unity has to the number which indicates how often tne less is contained in the greater.

If a quantity, as A (fig. 66, p. II.), be con- tained exactly a certain number of times in another quantity B, the quantity A is said to measure the quantity B ; and, if the same quan- tity A be contained exactly a certain number of times in anodier quantity C, A is also said to be a measure of C ; and it is called a common measure of the quantities B and C. The quan- tities B and C will evidently bear the same re- lation to each other, that the numbers do which represent the multiple that each quantity is of the common measure A.

*Again, if a quantity, D, be contained as often in another quantity, E, as A is contained in B, and as often in another quantity F, as A is con- tained in C, then the proportion that E has to F will be the same that B has to C, and the quan- tities B, C, E, and F, are said to be proportional quantities, a relation which is commonly ex- pressed thus B : C ; *. E ; F,*

Theorem XLV. — Any two quantities as A B, C D (fig. 67, p. II.), have the same proportion that their like multiples have.

Let A B be to C D as any number (say 3) to any other number (say 4) ; or let A B contain three such equal parts as those of which C D contains 4 ; and let Ef, fg, g F, be any like multiples Aa, ab, and b B ; and G h, h i, i k, and k H, the same multiples of C c, c rf, d e, and e D ; then E F is the same multiple of A B that G H is of C D ; and the same that each part of the one is of the corresponding part of the other. And, as the parts of A B and C D are equal, the like multiples of those parts which constitute the parts of EF and GH are also equal. Hence E F is to G H as 3 is to 4, the same proportion that A B has to C D. In the same vvay may the property be proved, whatever numerical relation A B may have to C D.

Cor. Quantities of the same kind are to each other as their like parts.

Theorem XLVI. — In any four quantities A B, B C, D E, and E F (fig. 68, p. II.) of the same kind, if A B : B C : : D E : E F, then also al- ternately A B : D E : : B C : E F. if a B con- tain any number of such equal parts A a (say 4), as those of which BC contains any other number (say 3), B 6, then D E also will contain four such equal parts D d as those of which E F con-

tains three, E e. Then (Theorem XLV. Cor.) A B will be to D E as Aa to D (i, and B C to EF as B 6 to Ee; or as A a to Dd; hence

AB : DE:: BC : EF.

Cor. If A B : B C : : D E : E F ; then B C : AB: : FE : ED.

Theorem XLVII. — In any four quantities A B, B C, D E, and E F (fig. 68,

p. II.), of the same kind, if A B : B C : : D E : E F ; then A B : A B ± B C : : DE : D E ± E F.

For let A B : B C, or D«E : E F : : m : n; then AB:AB±BC, orDE:DE ±EF:7n: m + n. In the same way it may be shown that AB ±BC:ABipBC::DEd-EF:DE + EF.

Theorem XLVIII. — Triangles, as ABC, D EF (fig. 69, p. II.), between the same paral- lels A E, C F, or that have equal altitudes, are to each other as their bases, A B and D E.

For let A B be to D E as any number, (3, for example), to any other number, (as 4) ; that is, let A B contain three such equal parts, A a, a b, b B, as those of which D E contains four, D c, c e, ej] _/"E ; and join C a, C 6, F c, F e, and ¥f.

Then the triangles C A a, C a 6, C t B, F D c , Fee, &c,, are all (Theorem XXV. Cor. 1) equal ; therefore the triangle ABC contains three such equal parts as those of which the triangle D E F contains four. Hence the triangle ABC is to the triangle D E F as the base A B is to the base D E.

Cor. Parallelograms and rectangles between the same parallels, or that have equal altitudes, are to each other as their bases ; for the parallelo- grams are doubles of their respective triangles.

Theorem XLIX. — If two triangles, as A B C, D E F (fig. 70, p. II.), stand on equal bases, A B, D E, the triangles are to each other as their altitudes C H, F I.

Let B P be perpendicular to A B and equal to C H ; in B P take B Q equal to F I, and join A P, A Q, and C P. Then the triangle A P B is equal to the triangle ABC, and the triangle A B Q to the triangle D F E. But A B P : A B Q : : B P : B Q (Theorem XLVIII.), there- fore A B C : D E F :: H C : F L

Cor. Parallelograms and recJtangles on equal bases are to each other as their altitudes.

Theorem L. — If four lines, as A, B, C, D (fig. 71, p. II.), be proportional, the rectangle under the extremes A and D will be equal to the rectangle under the means B and C.

*For A • D : B • D : : A : B (Theorem XLIX. Cor.), and B*C:B-D::C:D; consequently asA:B::C:D, AD:BD::B-C:BD; and therefore A • D and B • C are equal be- cause they bear the same proportion to B D.*

Cor. If the means are equal, the rectangle of the extremes will be equal to

the square of the mean.

Theorem LI. — If of four lines, as A, B, C, D (fig. 71, p. II.), the rectangle A • D of two of them, be equal to the rectangle B ■ C of the other two, then the sides of those rectangles will be inversely proportional ; viz. A : B : : C : D ; or B : A : : D : C, or A : C : : B : D, &c.

For as A • D = B • C, A D : B D : : BC : B D ; but (Theorem XLIX. Cor.) A • D : B D : : A : B, and B C : B D : : C : D ; hence A : B : : C : D.

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Theorem Lll. — If a lint, as B E (fig. 72, p. II.), be drawn parallel to C D, one of the sides of a triangle A CD, it divides the otlier two sides, A C and A D, in the same proportion, or so that A B : B C : : A E : E D.

For let C E and B D be joined, then the tri- angle B C E and B D E are equal (Theorem XXIV. Cor.), and therefore the triangle ABE bears the same proportion to B C E that it does to BDE. But (Theorem XLVIII.) ABE: BCE::AB:BC;andABE:BI)E::AE : E D ; hence A B : B C : : A E : E I).

Cor. A B : A B + B C, or A C : : A E : A E f E D or A D (Tlieorem XLVl II.) ; or alter nately A B : A E : : A C : A D ; and the tri- angles ABE, A C D, being equiangular or similar, we may hence infer that similar triangles have the sides about tlieir like angles in the same proportion, the homologous sides being opposite to tlie equal angles.

Theorem LIII. — If two triangles as ABC, D E F (fig. 74, p. II.), have one angle, as A, in the one, equal to an angle, as E, in the other, then if A B : B C- : : D E : E F, the triangles are similar.

For, if they are not, make the angle E D G equal to the angle B A C, then the angle A G B is also equal to tlie angle D G E, and the tri- • angles ABC and D E G are consequently simi- lar. Hence AB:BC::DE:EG (Theorem LI. Cor.) ;butAB:BC::DE:EF; there- fore E F and E G are equal, which is impossible. The triangle ABC and DEF are therefore similar.

Theorem LIV.— If C D (hg. 73, p. II.), be a perpendicular from C, the right angle of a right- angled triangle A B C, on the hypothenuse A B ; then AD : AC : : A C : A B ; B D : B C : : B C : A B, and A D : D C : : D C : D B.

For the triangles ABC, ADC, having the common angle A, and the right angles A I) C, and AC B, right angles, are similar ; and for a like reason A C B, and D C B, are similar, as also are ADC and D C B. Hence (Theorem

IJ. Cor.) AB :AC::AC:AD, AB: BC :: B C : B D and A D : D C : : D C : D B.

Cor. 1. AB,AD = AC=, AB- BD = BC* and A D • D B = I) C».

Cor. 2. A B • A D 4- A B • B D = A C» + BCˆ But (Theorem XXVII. Cor. 2), AB- AD-fAB-BD=ABˆ hence A B«=: A Cˆ f B C, another demonstration of the important property deduced at Theorem XXXI. Cor.

Theorem LV. — If an angle C, of a triangle ABC (fig. 75 p. I.), be bisected by C D, meet- ing the base in D, then A C : C B : *. A D : D B.

Let B E, parallel to C D, meet A C produced in E ; then the angles D C B and C B E are equal (Theorem X\ˆ), and the angles AC D and C EB are equal (Theorem XVII.); hence, as A C B and D C B are equal, C B E and C E B are equal, and therefore (Theorem IV.), C E is equal to C B. But ˆTheorem LIE, Cor.), A C : C E : : A D .- D B ; hence A C : C B : : A D : DB.

Theorem LVL— If two chords, CE and DB, intersect each other in any point A, witliin a cir- cle DCDE (fig. 76, p. II.), the rectangle C A – A E, of the segments of the one, is equal to

the rectangle, BA-AD, the segments of the other.

For join C, B, and D, E, then (Tlieorem XXXVIL, Cor. 2), the angles B C E, BDE, standing on the same arc B E, are equal, and tlie angles CBA and DEA are equal for a like reason, and the vertical angles BAC and DAE being equal, the triangles ABC and A E D are similar, and consequently (Theorem LIE, Cor.), AD:AE::AC:AB; therefore (Theorem L.), AD-AB = AE-AC.

In like manner, if, as in fig. 77, the chords C E and B D meet when produced without the circle, the rectangles AC-AE and AB-AD are equal. For the angles ABC and A E D are equal, as are also the angles ACB and ADE (Theorem XXXVIII., Cor.); and, the angle A being common to both the triangles ABC and A E D, those triangles are similar, and therefore (Theorem LIE, Cor.), AC : A B : : A D : A E ; whence (Theorem L.) A D • A B = A E – A C.

Cor. If AB (fig. 77, p. II.) revolve round A till the points B and D meet, then the rectangle AC-AE will be equal to the square of the tan- gent drawn from A ; and hence all tangents drawn to the same circle from the same point are equal.

Theorem LVII. — If in a triangle as ACB (fig. 78, p. II.) the vertical angle be bisected, as byCD, then AC-C = AE • E B j E C.»

For let C E produced meet the circumscribing circle in D, and join D B, then, as the angles A C E and D C B are equal, and the angles C A E and C D B are eciual (Theorem XXXVIL, Cor. 2), the angles A E (J and D B C are equal ; whence the triangles ACE and D C B are similar, and consequently (Theorem LIE, Cor.) AC : C E ; ; D C : C B ; whence (Theorem L.) A C – C B = C E • C D. But (Theorem XXVI. Cor.), C E ■ C D = C E» -f C E – E D ; and (Theorem LVL) CEED = AE-EB; therefore ACCBrz AE EB + EC^"

Theorem LVIIIL— If A BCD (fig. 79, p. II.) be a quadrilateral inscribed in a circle, the rectangle A C – B D is equal to the sum of the two rectangles A D – B C and A B ' C D.

From C draw C E, making the angle D C E equal to the angle ACB; then, as the angles C D E, CAB, are equal (Theorem XXXVIL, Cor. 2), the remaining angles D E C and A BC are equal, and the triangles ABC and D E C are similar ; therefore A B : A C : : D E : D C (Theorem LIE Cor.) ; whence (Theorem L.) A B • D C = A D • D E. Again, if from the equal angles D C E and ACB, the common angle A C E be taken, the remaining angles DC A and ECB will be equal; and, as the angles DAC and E BC are equal (Tlieorem XXXVIL, Cor. 2.), the remaining angles ADC and B E C are equal ; whence the triangles ADC and B E C are similar ; and therefore A I) : A C '. 1 B J-', : BC; or AD- BC = AC-EB. Hence A B – DC 4-AD-BC=:AC-DE-f AC-EB, or = AC – B D (Theorem XXVIL).

Theorem LIX.— If ABCDE (fig. 80, p. II.) be an equilateral polygon inscribed in a circle whose centre is M, and F G H I K an equi- lateral polygon of the same number of sides in-

scribed in a circle whose centre is L, the cir- cumference of the polygon A B C D E is to the circumference of the polygon F G H I K as the radius A M to the radius F L.

For join M and L to the angles of the poly- gons, then the triangles A M B, B M C, &c., being mutually identical, and the triangles FLG, G L H, &c., being also mutually identical (The- orem v.), the angles A M B, FLG, are equal, being like parts of four right angles; and there- fore, as the triangles are isosceles, they are simi- lar. Hence A M : F L : : A B : F C (Theorem LIT, Cor.); or :: perimeter ABODE A: perimeter F G II I K F (Theorem XLV.), since the perimeters are like multiples of AB and F C.

Cor. If we conceive the sides of the polygons to be equal in number, and

indefinitely small, their sides will coincide with the circumferences of the circumscribing circles. Hence the circumfe- rences of circles are to each other as their radii.

Theorem LX, — Similar triangles, as ABC, DE F (fig. 81. p. II.), are to each other as the squares of their like sides.

For let A K, DM, be squares on the like sides AB and D E, BI and EL, the diagonals of these squares, and C G, F B, perpendiculars from C and F upon A B and D E. Then as the angles C A G and F D II are equal, and the right angles A G C and D H F are also equal, the triangles A C G and D F H, as well as the triangles ABC, D F E, are similar. Hence (Theorem LII., Cor.), AC : DF:: CG :FH, and AC:DF::A B : D E or : : A I : D L ; therefore C G : F E : : AI : D I ; or C G : A I ; : F H : D I (The- orem XLVL). But (Theorem XLTX.) the tri- angle ABC is to the triangle A B I as C G is to A I ; and the triangle D E F is to the triangle D L E as F H is to D L, therefore the triangle ABC is to the triangle A B I as the triangle D F E to the triangle D L E ; or the triangle ABC is to the triangle D F E as twice the triangle A B I is to twice the triangle D L E ; or as A K to DM; that is as the square of A B is to the square of D E.

Theorem LXI. — All similar rectilineal figures, as A B C D E, F G H I K (fig. 81, p. II.), are to each other as the squares of their like sides.

For draw B E, B D, G K, G I ; then the two figures being similar they are equiangular, and have their like sides proportional. Hence, as the angles A and F are equal, the triangles A E B and K F G are similar (Theorem LIV.) ; and for a like reason the triangles D B C and I C H are similar. And if from the equal angles A E D and K F I xhe equal angles A E B and F K G be taken, the remaining angles E D B and I K C are equal ; similarly the angles E D B and K I G are equal ; therefore the triangles E B D and K I G are similar. Hence the triangles A E B and F K G are to each other as A Eˆ to K F,ˆ and E B D to KG I as ED2 : K I,« and D B C to IGH as DC:IHˆ; but the corresponding sides of the polygons, and consequently their squares, are proportional ; therefore, each of the triangles that compose A B C D E is to the cor- responding one in F G H I K, as the square of a side of the former is to a square of a like side of the latter, and consequently the whole polygons are to each other in the same proportion.*

Cor. The areas of circles are to each other as the squares of their rad ii ; for (fig. 80, p II.) AB : CF:: AM : FL; or A Bˆ : C F : : A M* : F L” ; but the areas of the polygons are by this theorem as A B’ : G Fˆ ; and therefore also A Mˆ : F L” ; which, when the polygons co- incide with their circumscribing circles, is the proportion that those circles have to each other.*

Of Planes, and their Intersections. Definitions.

1. A straight line is perpendicular to a plane when it is at right angles with every line which it meets in that plane.

2. If two planes cut each other, and, from any point in the line of their common section, two straight lines be drawn at right angles to that line, one in the one plane and the other in the other plane, the angle contained by these two lines is the angle made by the planes.

3. Two planes are perpendicular to each other when any straight line, drawn in one of the planes perpendicular to their line of common section, is perpendicular to the other plane

4. A straight line is parallel to a plane, when it does not meet the plane, though produced ever so far.

5. Planes are parallel to each other when they do not meet, though produced ever so far.

6. A solid angle is formed by the meeting, in one point, of three or more plane angles, which are not in the same plane with each other.

Theorem LXII. — Any three lines as A B, C D, C B (fig. 82, p. II.), which meet each other, not in the same point, are in the same plane.

For conceive a plane, passing through the line A B, to revolve round that line till it passes through the point C, then as the points E and C are in that plane, the line C D is in it ; and for a similar reason the line C B is in the same plane ; therefore all the three lines are in the same plane.

Theorem LXIII. — If two planes as A B, BC (fig. 83, p. II.), cut each other, their com- mon section B D is a straight line.

For join B, D, by a straight line; then, as the points B and D are in both the planes, the straight line B D, which joins them, is in both the planes ; and A, therefore, is their line of com- mon section.

Theorem LXIV. — If a line, as AB (fig. 84, p. II.), be at right angles to each of two other straight lines, A D and A C, at A, their point of meeting ; A B is also at right angles to the plane passing through AC and AD.

For through A, in the plane passing through A C and A D, draw any line A E ; and through any point E in that line draw E F parallel to A D, meeting A C in F. In A F produced take F C equal to A F ; join C E and produce A to D. Then (Theorem LII.) AF : F C : : D E : E C ; and consequently as A F

is equal to F C, D E is equal to A C. Hence (Theorem XXXV.) A Dˆ I A Cˆ = 2 D E» f 2 A E»; and therefore, by adding 2 A B to each of these equals, we have ABˆ-f- AD'-|-AB24-AC'ˆ=2AB2+ 2 AE=' + 2ED»; orBD»4-BC*=2AB'-f-2A*

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GEOMETRY.

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E* +2 E D^ But (Theorem XXXV.) B D^ + B C* = 2 D E* + 2 B F^ and consequently 2 D E* + 2 B £2 = 2 A B= + 2 A E» + 2 E D^; or, by omitting 2 D E' from each, 2 3E'=2AB' + 2 A E^ or B E- = A B= + A E- ; and there- fore the angle BAE is a right angle. AB is therefore at right angles to any line which it meets on the plane of AC, and AD, and it i3 consequently at right angles to that plane.

Theorem LXV. — If a straight line as A B (fig. 85, p. II.) be at right angles to each of three straight lines, as BC, B D, BE, at B, their point of meeting, then these straight lines are all in one plane.

If they are not, let the plane passing through BE and BD rneet the plane passing through BA and B C in the line BF; then B A (The- orem LXIV.) being perpendicular to the plane, BDE is perpendicular to BF, which it meets in that plane; hence the angles ABC and ABF in the same plane are equal, the less to the greater, which is impossible. Ilence B C cannot be out of the plane in which B E and E D are, and the three lines are consequently in the same plane.

Theorem LXV^I. — If two straight lines as AB, C D (fig. 86, p. II.), be at

right angles to the same plane, as B D E, they are parallel to each other.

In the plane BDE draw D E at right angles to B D ; take any point E in it, and join E A, E B, and AD. Then (Theorem LIV. Cor. 2) AE= = ABˆ + BE«= AB»+ BD»-f DE'zrAD' -f D Eˆ ; therefore the angle ADC is a right angle ; and, as the angles B DC and C DA are right angles, the lines C D, and A D, and B D, are in the same plane (Theorem LXJV.). But (Theorem LXII.) A B is in the plane of A D and B D ; hence A B and C I) are in the same planeˆ and, as the angles A B D and C D B are right angles, the lines A B and C D arc parallel.

Theorem LXVII.— If AB and C D (fig. 87,) p. II.) are parallel, and one of them, as AB, is perpendicular to a plane, as E F, the other, C D, is perpendicular to the same plane.

For if C D is not perpendicular to the plane E F, let D C, drawn through G, be perpendi- cular to A. Then (Theorem LXVI.) AB and D G are parallel ; consequently D C and D G which cut each other, are both parallel to C D, which is impossible. Therefore no line drawn through D, except DC, is perpendicular to the plane EF; and DC is consequently perpendi- cular to A.

Theorem LXVIII.— If two lines, as AB, C I) (fig. 88, p. II.), be each parallel to another Imc, as E F, though not in the same plane with it, these two lines are parallel to each other.

From any point G, in E F, draw G II, in the plane of A B and F F, and perpendicular to E F; and from the same point G, but in the plane of C D and E F, draw G K perpendicular to E F. Then (Theorem LXIV.) EG is perpendicular to the plane KGH, and therefore (Theorem LXVII.) A B and C O arc both perpendicular to the same plane ; and consequently (Theorem LXVI.) they are parallel to each other.

Theorem LXIX.— If two straight lines meet- ing each other, as A B, BC, (fig. 89, p. II.), are oarallel to two other straight lines, as D E, E F,

which also meet each other, but are not in the same plane with A B and B C, the angles ABC and D E F are equal .

For take A B equal to D E, B C to E C, and join A C, D F, A D, B E, and C F. Then A B being equal and parallel to D E, A D and B E are equal and parallel (Theorem XXIX.), and for the latter reason B E and C F are pa- rallel. Ilence AD and CF are equal and parallel, and therefore A C and D F are equal and parallel ; consequently (Theorem V.) the angles ABC and D E F are equal.

Theorem LXX. — If two planes as AB, C D (fig. 90, p. III.) be cut by a third plane, E n, the sections EF and GH are parallel.

For in the plane E H let E F and G H be drawn parallel to each other, and let E I and F K be perpendicular from E and ¥ on the plane CD ; then (Theorem LXVI.) EL and FK are parallels ; and consequently (Theorem LXIX.) the angles H F K and G E I are equal, and the right angles EIG and FIIK being enual, as well as F K and E L, the distance of the parallel planes; the triancles FIIK and EG I are identical, and have F'H equal to EG; but their lines are also parallel, therefore the lines E F and H G, which join them, are parallel (Theorem XXIII.)

Theorem LXXI. — If a straight line, as AB (fig. 91, p. III.), be perpendicular to a plane, as C K, any plane D E, passing through A B, is at right angles to the plane CK.

For from any point F, in C E, the common section of the two planes, draw FG, in the plane DE, perpendicular to C E. Then AB, being per- pendicular to C K, is perpendicular to C E, which it meets in that plane, and it is therefore parallel toFG; and consequently (Theorem LXVIII.) FG is perpendicular to the plane CK. Hence (Def. 3, Planes), the plane C H is perpendicular to the plane C K.

Theorem LXXII. — If each of two planes, as AB, BC (fig. 92. p. III.), be perpendicular to another plane, as A D C, the common section, B D, of the first two planes, is perpendicolar to the third plane.

For from D, in the plane ADC, draw DE perpendicular to AD, and DF to DC. Then as D E is perpendicular to D A, the common section of the planes AB and ADC, and those planes are at right angles to each other, E D is a» right angles to A B, and consequently at right angles to D B, which it meets in that plane. For the same reason, D F is at right angles to D B ; and hence, as B D is at right angles to D F and D E, it is at right angles to the plane ADC, in which those lines are (Theorem LXIV.)

Theorem LXXIH — If a solid angle, as A (fig. 93, p. III.) be contained by three plane angles as C A B, C A D, D A B, any two of these angles together are greater than tlie third.

If the angles are all equal, the proposition is manifest. — If they are not equal, let B A C; be the greatest, and, in the plane B A C, draw A E. making the angle BAE equal to the angle BAD; make A E equal to A D, and through E draw any straight line BEC, cutting AB and A C in B and C, and join B D, CD. Then (Theorem T.) the triangles BAE and BAD are

identical, and have B D and B E equal, and con- sequently E C is the difference of B C and B D, and (Theorem XIV.) E C is less than D C. Now as A E is equal to A D, A C common to botli the triangles ACE and A C D, but EC less than D C, it follows (Thv.orem XII.) that the anˆle E AC is less than the angle C A D. Hence the angles B A E and E A C together, oi the whole angle BAC, is less than the sum of the angles BAD and CAD.

Theorem LXXIV. — If a solid angle as A (fig. 94, p. III.) be contained by any number of plane angles, as BAC, CAD, DAB, EAB, these plane angles together are less tlian four right angles.

Let the planes which contain the solid angle, A, be cut lABE and A li C are less than C B E, A C B, A C D are less than B C I), A D C and A D E are less than C D E, and A E B and A E D arc less than BED. Hence the angles at the bases of the triangles which have their common vertex at A are greater than the interior angles of the rectilineal figure B C D E. But all the angles of the triangles B A C, C AD, D A E and B A E, are equal to twice as many angles as there are sides in the figure B C D E ; and the interior angles of that figure, together with four right angles, being also equal to twice as many right angles as the figure has sides (Theorem XX.), the angles of the tri- angles are equal to the interior angles of the plane figure and four right angles. And, as all l!ie angles at the bases of the triangles are greater than all the interior angles of the figure ; the re- maming angles of the triangles, or those which contain the solid anˆle A, are less than four right angles.

On the Comparison of Solids. Definitions.

1. Similar solids, contained by plane figures' ha'-e their corresponding solid angles equal, and are bounded by the same number of similar planes, alike placed.

2. A prism is a solid whose ends are parallel, equal, and similar plane figures, and its sides, connecting those ends, are parallelograms.

3. An upright prism is one having the planes of its sides perpendicular to the planes of its ends.

4. A parallelepiped, or parallelopipedon, is a prism bounded by six parallelograms, every opposite two of which are equal, similar, and parallel.

5. A rectangular parallelopipedon is one whose bounding planes are rectangles, perpendi- cular to each other.

6. A cube is a rectangular parallelopipedon, whose sides are all equal.

7. A cylinder is a prism whose ends are cir- cles; and its axis is the right line joining the centres of the parallel circles which form its ends.

8. A pyramid is a solid whose base is any rectilineal plane figure, and its sides triangles whose vertices meet in a point above the base, called the vertex of the pyramid.

9. A cone is a pyramid having a circle for its

base ; and the axis of a cone is the line joining the vertex to the centre of the circle which forms the base.

10. Similar cones, and cylinders, are those that have their altitudes in the same proportions as the diameters of their bases.

11. A sphere is a solid bounded by a curve surface, every point of which is at the same dis- tance from a point within, called the centre.

12. The diameter of a sphere is any right line passing through the centre and terminated both ways by the surface.

13. The altitude of a solid is the perpendi- cular drawn from the vertex to the opposite side or base.

Theorem LXXV. — A section of any pyramid as A BCD (fig. 95, p. HI.), parallel to the bast- B C D E, is similar to tlie base ; and these two planes are to each other as the squares of their distance from the vertex, or as A Hˆ to A P, A I H being a perpendicular from A on the two parallel planes.

For join C H, F I. Then (Theorem LXX.) B C and E F are parallel, and C D and F G are parallel, and consequently (Theorem LXVIII.) the angles E F G and BCD are equal. In the same way it may be shown that each angle in the plane E G is equal to the corresponding angle in the plane B D, and consequently these planes are equiangular.

Again the triangles ABC and A E F being equiangular, as are also the triangles A C D and AFG, we have (Theorem LII. Cor.) A C : AF : : B C : £ F : : C D : F G. In the same way it may be shown that all the sides of the plane of E G are proportional to the corresponding ones in B D, hence (Def. 52) the figures B C D E and E F G O are similar.

But (Theorem LXI.) the plane BD is to the plane E G as BC= : EFˆoras ACˆ: AF»; or as A H= : A Iˆ because the triangles AH C, A I F, having the angles H and I right angles, and the angle A common, are similar, and

therefore A C : A F : : A H : A I, oT A C : A F» : : A IP : A F, whence tbe plane B D is to the plane E G as A IP : A P.*

Cor. — If the point A be conceived to be in- finitely distant from the base, the pyramid will become a prism ; and the ratio of A H to A I, as well as that of A H-to A P,willbe that of equality. Hence in any prism a section by a plane pa- rallel to the base will be equal and similar to the base.

Theorem LXXVI. — In any cone as A B C D (fig. 96, p. III.), if G HI be a section parallel . to the base, then G H I is a circle ; and BCD, G H I are to each other as the squares of their distances from the vertex.

For let A L F be perpendicular to the parallel planes, and let the planes A C E, A D E, pass through the axis A K E of the cone, meeting the section in the points H, I, K.

Then (Theorem LXX.) H K and E C are pa- rallel, as well as K I and E D, and by similar triangles K H : EC : : AK : A E : : K L : ED; but E C is equal to E D, therefore K I is equal to K II; and, as the same may be shown of any other lines drawn from K to the circumference of the section G II I, that section is a circk.

Again, by similar triangles A L : A F : : A R : A E : : K I : E D, whence A L' : A F^ : : K P : E D^ : : circle G H I : circle D C D (The- orem LXI. Cor). Hence AL- : AF^ : : circle GUI: circle BCD.

Cor. If the point A be conceived to be infi- nitely distant from the base, the cone will become a cylinder, and the ratio of A L to A F, as well as that of A L" to A F^, will be that of equality. Hence in any cylinder, the sections parallel to the base are circles equal to the base.

Theorem LXXVII. — All pyramids and cones of equal bases and altitudes are equal to each other.

Let the pyramid ABCDI (fig. 95, p. ITT), and the cone ABCD (fig. 96, p. 111.) have equal bases and altitudes, and parallel to these bases, and at equal distances, A I and AL, con- ceive the planes EG and GKH I to be drawn. Then (Theorem LXX V. and LXXVI.) A P : A H» :: EG:BD;andAL2: AF»; GKHI ; BCD; and as A P,'A H, are equal to A L', A F*, therefore E G : B D: : G K n I : B C D ; and, as B D is equal to BCD, EG is equal to GKHI. In this manner may all rations in each figure at the same distance from the vertex be shown to be equal, and consequently, as the heiu;hts are*

equal, the solids which are composed of these sections are equal.

Cor. All prisms and cylinders whose bases and altitudes are equal, are equal to each other; and prisms and cylinders are equal to a rec- tangular parallelopipedoii of the same base and altitude.

Theorem LXXVIII. — A pyramid whose base IS triangular, as BDEF (fig. 97, p. III.), is the third part of a prism having the same base and altitude.

For let A B C D E F be a prism en the same triangular base DEF, and, on the three rectangu- lar sides of the y)rism, draw the diacronals BF, B D, C D. Then the planes B D F, B C D, divide the whole prism into three pyramids, BDEF, DABC, DBCF, which may be thus proved equal to each other.

The bases ABC and DEF being equal (Def. 2, Solids), the pyramids ABCD and I) EF B are equal (Thh3rem LXXVII.) ; and the bases BEF and BCF being equal (Theorem XXI.) the pyramids DEFB and BCFD are equal (Theorem LXX.). Hence all the three pyra- mids which compose the prism ore equal, and the pyramid is the third part of the prism, or the prism is three times the pyramid.

Cor. 1. Every pyramid, whatever may be its figure, is the third part of a prism havin'j: the same base and altitude, since the base of the prism may be divided into triangles, and the wliole solid into triangular prisms and pyramids.

Cor. 2. A cone is the third part of a cylinder, or of a prism having the same base and altitude; for it has been proved that a cylinder is equal to a prism, and a cone equal to a pyramid of equal base and altitude.

Theorem LXXIX.— If AC and EG (fig. 9ˆ, p. III.) be two rectangular parallelopipedons hav- ing equal altitudes, AD, ¥U, then AC is to EG as the base AB to the base EF.

For, let the base A B be to the base E F as any number (say 3) is to any other number

(as 2); and conceive A B to be divided into three equal rectangles, A I, LK, and MB ; and E F into two equal rectangles, EG and P F ; and thiouG;h the lines of division let the planes LR, M S, P V, pass, parallel to A Q, and ET. Then the parallelopipedons AR, LS, MC, EV, and P Q, having equal bases .and altitudes, are all equal (TheoremLXXX XL). Hence the solids are to each other in the same proportion as tlieir bases.

Cor. 1. From this theorem, (and Theorem LXXVII. Cor.) it appears that all

prisms and cylinders of equal altitudes are to each other as their bases ; and from tliis, combined with Theo- rem XLV". Cor., and Theorem LXXVTIL, it ap- pears that pyramids and cones of equal altitudes are to each other as their bases.

Cor. 2. By considering AQ and TE as the equal bases of the parallelopipedon AC, EG, those parallelopipedons will be to each otlirr as their altitudes AN, E W. Hence prisms and cy- linders of equal bases are to each other as their altitudes, and consequently pyramids and cones of equal bases are also to each other as their al- titudes.

Cor. 3. As prisms and cylinders arc as their altitudes when their bases are ecjual, and as their bases when their altitudes are ecIual, therefore, when neither are equal, they are in the com- pound ratio of their bases and altitudes.

Theorem LXXX. — Similar prisms and cylin- ders are to each other as the cubes of their like linear dimensions.

For the bases are as the squares of their like sides, and the altitudes are as those sides ; and the solidities being in the compound ratio of the bases and altitudes (Theorem LXXIX., Cor. 2) are as the cubes of those like sides.

Cor. Similar pyramids and similar cones, being the third parts of their corresponding prisms and cylinders, are to each other as the cubes of their like linear dimensions; and all similar solids whatever, being composed of simi- lar pyramids, are to each other as tlie cubes of their like linear dimensions.

Theorem LXX XL — Every section of a sphere by a plane, as C DEGF (fig. 99, p. III.), is a circle.

If the plane pass through ihe centre, tlien, as every point in the surface of the sphere is equi- distant from its centre, the section is a plane figure, every point of whose periphery is equidis- tant from a certain point within it, and the figure is therefore a circle.

But if the plane do not pass through the cen- tre, from the centre A, let AB be a perpen- dicular to the])lane ; take any two points, C, D, in the circumference of the section, and join AC, AD, BC, and BD. Then, as AB is per- pendicular to the plane C D EG F, it is]ierpen- dicular to the lines C H and B D, which it meets in that plane; therefore A Cˆ nz A Bˆ + B Cˆ, and A D= = A B» -f B IP ; hence, as A C =: A I), A IP i B C rz A B f B D=, and consequently B Cˆ IT B D*, or B C' =: B D. Hence all lines drawn from B in the plane (ˆDEGF, to the periphery of that plane, are equal, and the figure is therefore a circle.*

Theorem LXXXII. — A sphere is two-thirds of its circumscribing cylinder.

For, let AC (fig. 100, p. III.) be a section of

the sphere and cylinder; through the centre I, join AI, BI. Let Fill be parallel to AD or BC, EI G and K L parallel to AB or I) C, the base of the cylinder; K L meeting B I in M, and the circular section of the sphere in N.

Then, if the plane H F B C be conceived to revolve round the line li F as an axis, the square FG will describe the cylhider AG, the quadrant IFG will describe the hemisphere EFG, and the triangle IFB will describe the cone AlB; and, in the rotation, KL, KN, and KM, will describe corresponding sections of those solids, all of which have the common altitude FI

Now, as I F is equal to FB, by similar trian- gles K I is equal to KM, and I N is equal to IGorKL,and(TlieoremXXXI.,Cor.)INˆr=IK=' + K Nˆ; or K L rr K M* + K N= ; or the square of the longest radius of these circular sections is equal to the sum of the squares of the two others. And as circles are to each other as the squares of their radii (Theorem LXL, Cor.), the circle wiiose radius is KL is equal to the sum of those whose radii are respectively KM and KN; or the sec- tion of the cylinder is equal to tlie sum of the corresponding sections of tlie sphere and cone ; and hence, as tlie altitudes are the same, the cylinder is equal to the sphere and cone together. But(Theorem LXXV'IIL, Cor. 2) the coneisone- third of the cylinder ha zing the same base and altitude ; therefore a sphere is two-thirds of the cylinder whose base and altitude respectively are equal to the diameter of the sphere.*

Cor. 1 . Spheres are to each other as the cubes of their diameters, for they are like parts of their circumscribing cylinders.

PART IL SPHERICAL GEOMETRY.

Definitions.

1. Tlie circles of a sphere whose planes pass through the centre are called great circles ; and those whose planes do not pass through tlie cen- tre are called less circles of tiie sphere.

2. The pole of a circle, is a point on the sur- face of the sphere equidistant from every point in the circumference of the circle.

3. A spherical angle is an angle formed by the surface of a sphere by the arcs of two great cir- cles which intersect each other, and it is the same as the inclination of the planes of the cir- cles, or as the angle formed by the tangents of the aics at the point of intersection.

4. A spherical triangle is a figure formed on the surface of a sphere by the intersection of three planes which meet in the centre of the sphere.

Theorem LXXXIII. — Any two great circles as ADC, ABC (fig. 101, p. IIL), mutually bi- sect each other.

For the centre of the sphere being in the plane of each circle, is in their line of common section, . which line, being a straight line (Theorem LXIIL), is therefore a diameter ; and hence ADC, and ABC, are semicircles.

Theorem LXXXIV. — The distance of a great circle, ABC from its pole, D (fig. 101, p. IIL), is a quadrant.

For A D C is a semfcircle (Theorem LXXXIIL), and (Def. 2, Spueuical Geometry) D is equidis- tant from every part of A B C ; A is tiierefore eqjii- distant from the points A and C, and conse- quently AD and DC are quadrants.

Theorem LXXXV'. — If two great circles, as B A, C A (fig. 102, p. IIL), intersect each otiier in A, on the surface of a sphere whose centre is D ; and if B C be an arc of a great circle whose pole is A, then B C 's the measure of the spheri- cal angle ABC.

For, join A D, B D, and C D, then as A is the pole of B C, A B and A C are quadrants, and tlie angles A D B and ADC are right angles, and consequently (Planes Def. 3) the plane angle B DC is the angle made by the planes A I) B and A D C, or A is equal to the spherical angle ABC (Spherical Geometp.y Def. 3). But the angle B D C is measured by the arc B C, hence the equal angle B A C is measured by the same arc BC.

Cor. 1 . As A D is perpendicular to B I) and DC, it is perpendicular to the plane BDC (Theorem LXIV.), therefore the planes A D B and ADC, which pass through AD, are also per- pendicular to the plane BD(J. Hence the sphe- rical angles ABC and A C B are right angles.

Cor. 2. Great circles whose planes are at light angles to the plane of another great circle, meet in tiie poles of that circle.

Cor. 3. Great circles which are at right angles to each other, pass each through the poles of tlie other ; and if one circle pass through the pole of another, it cuts that great circle at right angles.

Theorem LXXXVI. — Any two sides, as A B and B C, of a triangle as A B C (fig. 103, p. III.) are together greater than the third side A C.

For if I) be the centre of the sphere, then the solid angle D is contained by three plane angles A D B, BDC, and A C I), any two of which ore greater than the third (Theorem LXXIII). But these angles are measured respectively by the arcs AB, BC, and AC, hence any two of these arcs as A B and B I) are together greater than the third arc A C.

Theorem LXXXVII. — The three sides of a spherical'triangle, as ABC (fig. 103, p. III.), are together less th.an a circle.

For the plane angles which form the solid angle D are altogether less than four right angles (Theo- rem LXXIV.), therefore the arcs AB, B C, and AC, which measure those plane angles are alto- gether less than a circle.

Theorem LXXXVIII. — In isosceles spherical triangles, the angles opposite the equal sides arc equal ; and if two angles of a spherical trian- gle are etjual, the sides which are opposite those angles are equal.

Let ABC (fig. 104, p. III.) be a spherical triangle, having two sides A B and B C equal, and let D be the centre of the sphere. Let B E and E C be tangents to A B and A C, and B F, C F two tangents drawn from B and C in the plane D B C, and intersecting each other in F, and join F E. Then the angles I) B E and D C E being right angles (Theorem XLIV.), and the angles E D B and E D C measured by the equa. arcs A B and A C being also equal, and the ad- jacent sides D B and D C, radii of the same

sphere being equal, the triangles E D B and E DC are identical (Theorem II.) and have E B and B C equal ; and B F being equal to F C (Theorem L"I. Cor.), and EF common to the iwo triangles E F B and E F C, those triangles are identical (Theorem V.) and have the angles E B F and E C F (which are equal to the sphe- rical angles ABC and A C D) equal to each other.

Again, the same construction being made, suppose the spherical angles ABC and A C B, or the plane angles E B F and E C F, to be equal ; then as D B is at right angles to B E and B F, A is at right angles to the plane B E F (Theorem LXIV); and therefore the plane D B C, which passes through D B, is at right angles to the plane B E F. (Theorem I<XXI.). For a like reason the plane D B C is at right angles to the plane E C F, and consequently (Theorem LXXTI.) F E, the common section of the planes EBF, ECF, is at

right angles to the plane D B C. llence E F B and E F C are right angles, and therefore as the angles EBF and E C F are equal, and the side BF equal 1:0 the side F C, the triangles EBF and E C F are identical (Theorem II). Whence B E is equal to E C, and as D B is equal to D C, and the angles D B C and D C E are equal, the angle ED B is equal to the E D C (Theorem I.); or the arc AB is equal to the arc A C.

Theorem LXXXtX. — In any spherical triangle as A B C (fig. 105, p. III.) the greater side is op- posite the greater angle, and the greater angle opposite the greater side.

If A BC be greater than A, let A B D, a part of A B C, be equal to A ; then (Theorem LXXXVIII.) A D is equal to D B, and conse- quently B D and D C are equal to A D and D C, but B D and D C are greater than B C (Theo- rom LXXXVI.) therefore A D and D C (or A C) are greater than B C.

Again if AC is greater than BC,then if the angle B is not greater than A, it must be equal to it, or less. If it were equal then A C and B C would be equal (Theorem LXXXVIII.), and if it were less then by the preceding part of the pro- position A C would be less than B C ; both of which conclusions are inconsistent with the given condition that AC is greater than B C. Hence the angle B must be greater than the angle A.

Tiii:oREM XC. — If A, B,C, the angles of the spherical triangle ABC (fig. 106, p. HI.), be the poles of three great circles D E, EF, and FD, then D, E, and F, the points where thase circles intersect will be the poles of A C, AB, and B C, respectively ; and the sides D E, E F, and 1″ 1), will be respectively the supplements of the mea- sures of the angles A, B, and C ; and tlie sides AB, BC, and AC, will also respectively be •he suj)plements of the measures of the angles E, F, and D.

For let A B, A C, and BC, be produced both ways, till they meet D E, E F, and D F, in (J, H, I, K, E, and M. Then G 1! is tlie measure of the angle B A I, K 1 the measure of A BC, and M . tlie measure of AC B (Tlieorora LXXX\). And as A is the pole of D E, the angle AH 1) is a figlit angle (Theorem LXXXV. Cor. 1), and for \ like reason the ingle C L D is a right angle ; Vol. X.

hence (Theorem LXXXV. Cor. £) D is the pok of L II. In the same way it may be shown that E is the pole of G K, and F the pole of M I ; therefore L II is the measure of D, G K the mea- sure of E, and M I the measure of F.

Now as D is the pole of LII, DH is a qua- drant, and as E is the pole of GK, EG is a qua- drant (Theorem LXXXR'.) ; therefore E G and DH, or ED and GH, together are a semicircle. Hence D E is th'r supplement of GH, the

mea- sure of the angle B AC. In a similar way it may be shown that E F is the supplement of the mea- sure ABC, and that DF is tb" supplement of the measure of AC B.

Again, because A is the pole of DE, AG is a quadrant, and, because B is the pole of E, F is a quadrant. Hence AG and BK, or AB and K G, together are ecjual to a semicircle ; or A B is the supplement of G K, the measure of the angle E. . And in the same way it may be shown that A C is the supplement of the measure of D, and BC the supplement of the measure of F.

Theorem XCI. — The sum of the interior an- gles of a spherical triangle is greater than two, and less than six right angles.

For (fig. 106, p. III.) the measures of the an- gles A, B, C, together with the sides of the sup- plemental triangle D E F are equal to three semi- circles; and as (Theorem LXXXVII.) the three sides of the triangle D E F, are less than four semicircles, the measures of the angles A, B, and C, are greater than two semicircles ; or those angles are greater than two right angles.

And, as the interior and exterior angles of any triangle are equal to six right angles, the inte- rior angles alone must be less than six righ, angles.

Theorem XCIL— If A G F B (fig. 107, p. III.) be the circumference of a great circle, of which D is the pole, and C any other point on the s'ar— face of the sphere, the greatest arc of a circle that can be drawn from C to the circle AGFB is that passing through D, and those which are nearer ADC are greater tlian tliose which are more remote.

For, as CA passes through the pole of AFB, tlie planes AC B and A F B are at right angles ; therefore C E drawn in the plane AC B, perpen- dicular to A B the common section of the two. plane.s, is perpendicular to AE, G E, and F E, which it meets in the plane AFB ; and (Theo- rem XXX\T.) AE is greater than G E, and GE greater than FE; and the rioht-anglcd triangles A EC, GEC, EEC, having EC common, the hypotlienuse A C is greater than G C, andGC" greater tlian FC. Hence the arc AC is greater tlian the arc GC, and the arc OC greater tlKin the arc FC.

Theorem XCHI. — In any right-angled sphe- rical (rianglf, the sides containing the right angle are of the same afl'ection as tiieir opposite angles ; that is, if the sides arc greater or less than qua- drants, the opposite angles are greater or less tiian right angles; and, conversely, if the angles are greater or less than right angles, tlie opposite sides are greater or h'ss than qiiadr.uiis.

Let ABC (fig. 108, p. HI.) be a spherical tri- angle, right-angled at A; produce AC, AB, till

they meet in G, and bisect the semicircles ABG and A C G in E and F. Then F will be the pole of ABG and E the pole of AFG; join CE, then CE will be a quadrant (Theorem LXXXIV.) and ECA will be a right angle (Theorem LXXXV. Cor. 3.)- Hence when AB is less than A E, or less than a quadrant, the op- posite angle ACB is less than a right angle.

Again/let ADC be a spherical triangle, right angled at A, having' A D greater than a qua- drant, then the angle D C A is greater than the angle E(^ A, or greater than a right angle.

The converse may be demonstrated in a simi- lar manner.

Theorem XCIV. — In the right-angled sphe- rical triangle, if the sides which contain the right angle are of the same affection, the hypothenuse, or the side opposite the right angle, is acute; but if they be of different affections, the hypothenuse is obtuse.

For when AC and AB (fig. 108, p. III.) are each less than a quadrant, CB being farther from CFG than C E, is less than C E (Theorem XCII.), and therefore less than a quadrant. But if AD be greater, and AC less than a quadrant, then C D, being nearer CFG than C E, is greater than C E, or greater than a quadrant.

Again, in the right-angled triangle C G B, where C G and GB are each greater than a qua- drant, CB being farther from CFG than CE is less than a quadrant.

Cor. 1 . Hence, conversely, if the hypothenuse of a right-angled spherical triangle is greater than a quadrant, the sides about the right angle are of different affections; and, if the hypothe- nuse is less than a quadrant, the sides are of the same affection.

Theorem XCV. — In any spherical triangle', as ABC (fig. 109, p. III.), if the perpendicular B D fall within the triangle, the angles A and C are of the same affection ; but, if the perpendicu- lar fall without the triangle, the angles at the base are of different affections.

For when BD falls within the triangle, the angles A and C of the right- angled triangles ADB and BDC, being each of the same affec- tion with BD (Theorem XCIII.), are of the same affection with each other.

But, when the perpendicular falls without the triangle, the angles D AB and DC B, being each of the same affection with B D, are of the same affection with each other; hence B AC and BCA are of different affections.

PART III. PRACTICAL GEOMETRY.

Problem I. — ˆTo bisect a straight line, as AB (fig. 110. p. III.).

From the points A and B, as centres, with any radius greater than half A B, describe arcs cutting each other in n and m ; join n m, and A B will be bisected in C, the point in which A is cut by m n.

For join A n, A m, B n, and B m ; then because A n, and A m, are respectively equal to B ra and B m, and « tw is common to both triansles Anm and B n m, the angles A n m and B w /» are equa'i. And hence, as A ra and B n are equal, n C is common to both triangles, and the angle

A n C equal to the angle B n C, the remainingˆ sides AC and BC are equal (Theorem I.), or A B is bisected in C.

Problem II. — To bisect a given angle, as ABC (fig. Ill, p. III.).

From the angular point B with any radius describe the arc AC, and from the points A and C, with the same or any other radius, describe arcs intersecting in n. Join B n, and A will bi- sect the angle ABC.

For A n and C n being joined, then (Theorem V.) the triangles AB? and ra BC are equal in every respect, and therefore the corresponding angles AB n and CB ra are equal, or the angle ABC intersected by the line B ra.*

Problem III. — From a given point C in a given line as AB (figs. 112 and 113, p. III.) to draw a perpendicular.

1. When the point C is near the middle of the line (fig. 112, p. III.) On each side of C take any two equal distances C ra, C m ; and from n and m, with any radius greater than C ra or C m, describe arcs cutting each other in s. Join s C, then that line will be the required perpendicular.

For (Theorem V.) the angles A C s, and B C s, are equal, and therefore (Def. 7.) C s is perpen- dicular to A B.

2. When the point C. is near the end of the line (fig. 113, p. III.). Take any point, o, as a centre, and with the radius o C describe an arc cutting AB in ?n and C. Through m and o, draw the line m o ra, cutting the arc in ra. Join ra C, and it will be the perpendicular required.

For the angle m C ra, being in a semicircle, is a right angle (Prop. 37, Cor. 3,) therefore ra C is perpendicular to A B.

Or from any scale of equal parts take C m equal to four parts, and with C as a centre and radius equal to two or three parts, describe an arc ; and with ?n as a centre, and radius equal to five of the- same equal parts, describe an arc, cutting the preceding one in w, join raC, which will be perpendicular to A B. ”

For 5ˆ=: 4ˆ I 3=; hence (Theorem LIV. Cor. 2), AC ra is a right angle.

Problem IV. — From a given point C, out of a given line A B, to draw a line perpendicular to AB (figs. 114 Sc 115, p. III.)

1. When the given point is nearly opposite the middle of the line, as in fig. 114. Take any point 0, on the other side of A B, and from the centre C, with the radius C o, describe an arc, cutting A B in m and ra ; bisect ra m in G, and join C G ; then C G is perpendicular to A B. For C n and C m are equal, and G ra and G m are equal, and G C common to the triangles C ra G and C m G, therefore the angles C G w and CGm are equal (Theorem V.), or C G is perpendicular to A B.

2. When the point is nearly opposite the end of the line, as in fig. 115. Draw any line Cwi, from C to A B ; bisect C m in n, and with centre n and radius Cra or mn describe a circle, cuttinjˆ A B in G ; then, if C G be joined, the line will be perpendicular to A B. For the angle CGm being in a semicircle is a right angle.

Problem V. — At a given point D, in a given line D E, to make an angle equal to a given angle ABC (fig. 116, p. HI.)

From B as a centre with any radius, describe the arc n7«, cutting B A, BC, in the points ;«,?i; and from D as a centre, with the same radius, describe the arc rs; take the distance 7/1 n, and apply it to the arc r s, from r to s. Draw D F through D and s, then the angle E D F will be equal to the angle A B C, as is evident from Theorem V.

Problem VJ. — Through a given point C (fig. 117, p. III.) to draw a line parallel to AB.

From C to A B draw any line C D ; then through C draw C E, making the angle E C D equal to the alternate angle C D A, then (Theorem XVI.)

CEisparallel to AB.

Problem VII. — To draw a line, as F C (fig. 118, p. III.), parallel to another line A B, and at tlie distance of C D from A.

At any point E in A B, draw E F perpendi- cular to A B, and equal to C D, and through F draw F G parallel to A B, and A will, as is evi- dent, be the required line.

Problem VIII. — To diˆ-ide a line as A D (fig. 119, p. III.) into « equal parts.

Through one extremity A, draw any line AC, and on it take u + 1 equal parts, D being the termination of the ?i + 1ˆ ”ˆ part, I that of the n ‘■’ part, and F that of the n — 1ˆ ‘■” part. Join D B, and produce it till B E is equal to B D, and join E F, cutting A B in P, then B P is the n*”” part of A B. For F I being equal to I B, and E B to B D, F E and I B are parallel, therefore A B : BP : : AL • IF : 1 : «; therefore B P is the ra’*’ part of A B.

Problem IX. — To find the centre of a circle ADBC (fig. 120, p. III.)

Draw any chord A B, and A, bisect it with the perpendicular C D ; bisect C D in O, and O will be the centre of the circle.

For if the centre is in C D, it must be in O, the middle of it. If it is not in C D let it be at F, and join F E, F A, and F B ; then A F will be equal to F B, A E to E B, and E F common to the two triangles A F E and B F E, which (Theorem V.) are therefore identical, and con- sequently the angles A E F and B E F, being equal, will be right angles, and each equal therefore to the angle B E C, which is impossible. Hence tlie centre is in C D, and consequently it is in the point O.

Problem X. — To describe the circumference of a circle through three given points. A, B, C, (fig. 121, p. III.)

Join AC, B C, and bisect these lines with the perpendiculars D O and E O, and from the point (), with the distance O A, OB, or O C, des- cribe the circle ABC, and it will be the circle required.

For as A D and D O are respectively equal to C D and D (), and the included angles A I) O, and C D O, are equal, A O and C O are equal ; and for a like reason B O is equal to C O.

Hence O is the centre of a circle passing through A, B, and C.

Note. By this problem a circle may be de- scribed about a triangle.

Problem XI — To inscribe a circle in a tri- angle, as A BC (fig. 122, p. III.) Bisect any two of the angles as A and B, and the bisecting lines A D and B D will meet in the centre of the circle.

For from D draw D E, D F, and D G, per- pendicular to the sides. Then as tlie angles DAG and DAE are equal, and the right angles D EA and D G A.are equal, the angles A D E and A DG are equal ; and consequently, as A D is common to both triangles, G D and D E are eqiial.

In the same way it may be shown that D E and D F are equal ; and as the angles E, F, and G, are right angles, a circle described from D as a centre, with any of these equal lines as a radius, will touch the sides in E, F, and G, and it will consequently be inscribed in the triangle.

Problem XII. — To make a triangle equal to any rectilineal figuTe, as ABCDE (fig. 123, p. III.).

Draw A D, and parallel to it draw E F, meet- ing A B produced in F, tlien the triangles A D E and A F D are equal (Theorem, XXIV. Cor.) Proceed similarly with D B and CG, and the triangle F D G will obviously be equal to the figures ABCDE.

In the same way the figure may be reduced to a triangle whatever be the number of sides.

Problem XIII. — To make a rectangle equal to a given triangle, ABC (fig. 125, p. III.)

Bisect A B in D with the perpendicular D E meeting C F, drawn parallel to A B in E ; and draw B F parallel to D E. Then the rectangle D F will be equal to the triangle ABC (Theorem XXV. Cor. 3).

Problem XIV.— To find B D, the side of a square whose area is equal to a rectangle con- tained by AB and BC (fig. 125, p. III.),

Upon A C, the sum of A B and B C, describe a semicircle, and draw the perpendicular BD, which will be the side of the square. For the rectangle of A B and BC is equal to the rect- angle of B D, and the other segment of the chord, of which B D is a part (Theorem LVI. >; but (Theorem XLII.) that segment is equal to B D ; therefore the rectangle A B • B C is equal to the square of B D.

Problem XV.— On a straight line A B (fig. 126, p. III.) to describe the segment of a circle, to contain an angle equal to a given angle.

Make B A C equal to the given angle, bisect A B with the perpendicular D

E, meeting A E, a perpendicular to AC in E, then with E as a centre, and E A or E B as a radius, describe the circle A F BG ; then (Theorem XL.) the angle B A C is equal to any angle in the segment AGB.

GEOPON'ICAL, adj. } Fed and Trovog. Tlie (JEoroN'ics, ?i. s. jl doctrine of agricul-

ture.

Such expressions arc frequent in authors geoponical, or such aˆ have treated de re rustica.

Browne's Vulyur Errmirs.

GEORGE, n. s. Lat. Georgius. A proper name ; a figure of St. George worn by the Knights of the Garter ; a name formerly given to a brown loaf, and at present applied to the rolls used at colleges in Oxford.

Look on my yeorgc, I am a gentleman ; Uate me at what thou wilt.

Shakspcare. Hcnrt/ VI. Cubbed in a cabin, on a mattrass laid. On a brown george, with lowsy swobbers fed.

Dryden.

George I., king of Great Britain. See Great BaiTAiN tind IIanoveu.

Geouge II. See Great Britain and Han- over.

George III. and IV. See Great Britain.

George (St.), a saint or hero, after whom several orders, both military and religious, are denominated. On some medals of the emperors John and Maimel Comneni, we have the figure of St. George armed, holding a sword or javelin in one hand, and in tlie other a buckler, with this inscription ; an O, and therein

P a little A, and TE — noC, making 0-Ari02-

O TEOPTIOS, O holy George. He is generally re- presented on horseback; and is highly venerated throughout Armenia, Muscovy, and all the

countries which adhere to the Greek church ; from the Greek, his worship has long been re- ceived into the Latin church; England and Por- tugal have both chosen him for their patron saint. Great difficulties have been raised about this saint or hero. His very existence has been called in question. Dr. Heylin supposed him only a symbolical device; and Dr. Pettingal as- serted him to be a mere Basil idian symbol of victory. The following is Mr. Gibbon's account of this saint. lie asserts him to have been an Arian bishop born at Epiphania in Cilicia, in a fuller's shop. From this obscure and servile origin, says this author, he raised himself by the talents of a parasite : and the patrons, whom he assiduously Hattered, procured for their worth- less dependent a lucrative commission, or con- tract, to supply the army with bacon. His em- ployment was mean : he rendered it infamous. He accumulated wealth by the basest arts of fraud and corruption; but his malversations were so notorious, that George was compelled to es- cape from the pursuits of justice. After this disgrace, in which he appears to have saved his fortune at the expence of his honor, he em- braced with real or affected zeal the profession of Arianism. From the love, or the ostentation, of learning, he collected a valuable library of history, rhetoric, philosophy, and theology; and tlie choice of the prevailing faction promoted George of Cappadocia to the throne of Athana- sius. His conduct in this station is represented by our historian as polluted by cruelty and avarice, anfl his death is by him considered as a

just punisliment for the enormities of his life The occasion of liis death, however, as narrated by ecclesiastical writers, will not add any stain to his memory. There was in Alexandria a place in which the priests used to offer human sacrifices. This place Constantius gave to the church of Alexandria, and George the bishop ordered it to be cleared, to build a Christian church on it. In doing this, they discovered a subter- raneous cavern, in which the heathen mysteries had been performed, and in it were many human skulls. "These, and other things which they found in the place, the Christians brought out and exposed to public ridicule. The heathens, provoked at this exhibition, took arms, and rush- ing upon the Christians killed many of them; they also seized the bishop in .the church, and put him in prison. The next day they despatched him; and then, fastening his body to a camel, dragged it about the streets all day, and in the evening they burnt it and the camel together. This fate, according to Sozomen, the bishop owed in part to his haughtiness while he was in favor with Constantius; but he ascribes it chiefly to the inveteracy of the heathens, whose super- stitions George had been very active in abolishing. But Mr. Gibbon gives a different turn to tiie affair of George's murder, and relates it with different circumstances. ' The Pagans,' says he, ' excited his devout avarice; and the rich temples of Alexandria were either pillaged or insulted by the haughty prelate, who exclaimed, in a loud and threatening tone, ' How long will these se-

pulchres be permitted to stand?' Under tl>e reign of Constantius, he was expelled by the fury, or rather by the justice of the people ; and it was not without a violent struggle that the civil and military powers of the state could re- store his authority and gratify his revenge. The messenger who proclaimed at Alexandria the ac- cession of Julian announced the downfal of the archbishop. George, with two of his obsequious ministers, count Diodorus and Dracontius mas- ter of the mint, was ignominiously dragged in chains to the public prison. At the end of twenty-four days the prison was forced open by the rage of a superstitious multitude, impatient of the tedious forms of judicial proceedings. The enemies of gods and men expired under their cruel insults ; tl.e lifeless bodies of the archbishop and his associates were carried in tri- umph through the streets on the back of a camel ; and the inactivity of the Atlianasian party was esteemed a shining example of evangelical pa- tience. The remains of these guilty wretches were thrown into the sea; and the popular lea- ders of the tumult declared their resolution to disappoint the devotion of tlie Christians, and to intercept the future honors of these martyrs who had been punished, like their predecessors, by the enemies of their religion. The fears of the Pagans were just and their precautions ineffec- tual. The meritorious death of the archbishop obliterated the memory of his life. The rival of Athanasius was dear and sacred to the Arians, and the seeming conversion of these sectaries in- troduced his worship into the bosom of the Catholic church. The odious stranger, dis- giiising every circumstance of time and place.

ftssumed tlie md.sk of a "martyr, a saint, and a Christian hero; and the infamous Georgt- of Cappadocia has been transformed into the re- nowned St. George of England, the patron of arms, of chivalry, and of the garter.' Hist. vol. ii. p. 404.

Geoiioe (St.), Kniguts of. See Garter. There have been various orders under tiiis deno- mination, most of which are now extinct; particu- larly one founded by the emperor Frederick 1^1. in 1470, to guard the frontiers of Bohemia and Hungary against the Turks; another called St. George of Alfama, founded by the kings of Arragon ; a third and fourth in Austria and Ca- rinthia, and a fifth in the republic of Genoa, &c.

George (St.), the largest of the Bermuda Isles, is about fifteen miles in length, and three in breadth; a reef of rocks, which extend some way into the sea, surrounds and greatly pro- tects it. Ships, however, can only approach in two places without great hazard, and here the as- sistance of an experienced pilot is needful. It is divided into nine parishes, or districts.

Long. 03ˆ 30′ W., lat. 32″ 45′ N.

George (St.), a small island in the Pacific Ocean, near the coast of New Ireland, above a league north from Cape St. George.

George's (St.), a large and deep bay on the west side of the island of Newfoundland. Lat. 48° 12′ N.

George's (St.)s a river of the United States, in Maryland, which runs into the Potowmack, twelve miles south-west of Fort Cumberland.

George's (St.), a river, or ratber an arm of the sea, in the United States, about two leagues south-west of Penobscot Bay. It is navigable for brigs and ships of burden, up to what are called tlie Narrows, and from thence about four miles higher up, to nearly the head of the tide water, for sloops and schooners of eiglity or ninety tons.

George's (St.), a cape and island on the coast of East Florida, opposite to the mouth of the Appalachia. The cape is formed by the largest of the islands of this name, and is six leagues east of Cape Blaize, in N. lat. 29° 38.

George's (St.), the capital of the island of Grenada, once called Fort Royal, has one of the best harbours in the West Indies. It is divided into two parts, the Bay Town and the Carenage Town, by a remarkable ridge which terminates in the sea. The harbour is fortified, and there is a large old work of the French on a promon- tory above the town. On the ridge stands the church. The town is altogether pretty well occu-)iied by the principal merchants residing in the Carenaga division : in the Bay town, however, is a handsome square and market place.

George's Bay (St.), a bay on the east coast of New Ireland, between Cape St. George and Cape Orford.

(Jeorge, Cape, a cape on the south coast of Kerguelen's Land. Long. 70° 13′ E., lat. 49° .54′ S. — It is also the name of a cape on the coast of Newfoundland. Long. 59° 17′ W., lat. 48° 28′ N., and of another on the coast of Peru. Lat. 23° 50′ S. — Also a cape on the noilh coast of the island of South Georgia. Long. 36′ 32′ NV., I;it. 5lM7'S.

George's Channel (St.), that part of the At- lantic which runs between Ireland and Wales, or which opens from the Scilly Islands on the south, and the south-east point of Ireland on the north, and up northward between the two lands till it takes the name of the Irish sea. Ships that are bound up St. George's Channel will receive ample instructions, by attending to the rules laid down for avoiding the Scilly Islands, and ensuring a proper entrance into the English channel. Some confine the name of St. George's channel to begin only from the entrance of the narrow sea between the south-east point of Ireland and St. David's head on the coast of Wales, nearly to the east from it ; in that case, all the sea to the nortliward of Scilly hither, is called the Bristol Channel, but in the former it is limited to the opening of the Severn Sea, be- tween Harlland Point on the soutli and St. Gowan's Point on the north. In some charts the whole of the narrow sea between St. David's Head and the Mull of Galloway is all called St. George's Channel, or the Irish Sea, indifferently.

George's Channel (St.), is also a channel along the south-west coast of New Ireland, and extends from Cape St. George to Queen Char- lotte's Foreland, and from thence about eight leagues to Portland's Island. This is about 100 leagues or 300 miles. In some part of this channel, near New Britain, the land seems to affect the needle, as the variation was consider- ably short of 5° E.

George, Fort, a strong and regular fortress of Scotland, in Inverness-shire. It has several handsome streets of barracks, and is seated on the point of Ardersier, a peninsula running into the frith of Murray. It completely

commands the entrance into the harbour of Inverness, and lies opposite to Fortrose, ten miles north-east of Inverness.

George, Fort, (St.). See Madras.

George Lake, a lake in the county of Wash- ington, state of New York, about thirty-three miles long, and nearly two broad, discharges itself north-ward into Lake Ciiamplain, atTiconderoga. The entire north end is not more than two miles and a half from that lake, towards which the water is said to descend nearly 100 feet. Surrounded by high mountains, and remarkably clear. Lake George is no where excelled in scenery of ro-mantic beauty. The water is also very deep, and the bottom so clean that neither winds or frcshet.s render it turbid. It abounds with the finest fish. Here are also several small islands : Fort George at the north end, and the once famous Fort Ticonderoga, are both now in ruins.

George, Lake, a lake of New York south- west of Lake Champlain, thirty-six miles long from north-cast to south-west, and from one to seven broad. Its waters are 100 feet higher than those of lake Champlain.

George, Lake, also called the Great Lake, in East Florida, is a division of the river St. John. It is about fifteen miles wide.

George's Town (St.), the principal town of St. George's, one of the Bermudas Islands, in the North Atlantic Ocean, is in Ijt. 32° 45′ N., and long. 03° 35′ W. It has a good church, townhouso and library and is well fortified.

GEORGIA, a mountainous country of Asia, between the Black Sea and the Caspian, to the ijortli of Armenia, and forming the frontier be- tween Russia and Persia. The Caucasian ranges supply it to the south with fertilising streams, and it unites the products of both the tropical and temperate climates. Mr. Kenneir speaks of It as ' perhaps the most beautiful and highly favored region in the world. The face of the country is diversified with extensive plains, and watered by innumerable rivers ; the hills are covered with forests of pine, oak, ash, beech, chestnuts, walnuts, and elms, entwined with vines, growing perfectly wild, and producing vast quantities of grapes. Tlie plains are ex- ceedingly fertile; cotton grows spontaneously, as well as the finest European fruit-trees ; and rice, wheat, millet, hemp, and flax, are raised almost without culture. The rivers are full o. the most delicious fish : poultry and game may be shot in the woods ; and in the hills are to be found mines of gold, silver, and other minerals.

Even the natives appear to more perfection than in any other country with which we are ac- quainted. The men are tall and elegantly formed, whilst the grace and beauty of a Georgian girl are proverbial throughout the East.'

Georgia originally included nearly the whole southern declivity of the Caucasus, and was re- garded as extending from the Black Sea to the Caspian. But of late the name has been confined to that part of the region which was once subject to Persia; and which asserted its independence inider its native prince, Heraclius, toward tlie close of the last cerftury. For a short time it was a sepa- rate kingdom ; but the colossal power of Russia, which was first favorable to its throwing off the yoke of servitude, finally crushed it. It is now a province of the Russian empire, and divided into the four provinces of Cartuel, Kaket or Ka- cheti, Kisik called sometimes Somchet, and Geor- gian Armenia. It has been the seat of various wars between Russia and Persia. The capital is Tiflis.

The inhabitants, who are about 370,000, are generally of the Greek church, but there are many Mahommedans among them. Their dre.ss nearly resembles that of the Cossacks ; but men of rank frequently wear the habit of Persia. They usually dye their hair, beard, and nails, with red. The women, remarkable for their beauty and fine forms, employ the same color to stain the palms of their hands. On their heads they wear a cap, or fillet, under which their black hair falls on their forehead : behind, it is braided into tresses. Their eye-brows are painted with black, so as to form one entire line, and their faces are frequently coated with white and red. Their robe is often open to the girdle, and their general air and manner are said to be voluptuous. Being generally educated in convents, they can read and write; a qualification very unusual among the men even of some respectability. Girls are betrothed as soon as possible, often at three or four years of age. Travellers accuse the Geor- gians of drunkenness, superstition, cruelty, and sloth: and the mountains are the haunt of nu- merous Danditti ; they are certainly the most powerful Dody of mountaineers in this neigh-

bourhood. The nobdity are numerous, and possess extensive private jurisdiction. See

TiFLIS.

Georgia, one of the southern United States of America, bounded on the east by the Atlantic Ocean, on the south by East and West Florida, on the west by the Mississippi, and on the north- east and north by South Carolina and Tennessee. It is 270 miles long and 250 broad, containing 620,000 square miles : and is divided into Up- per and Lower Georgia, which comprise the fol- lowing counties and chief towns.

Counties.

Baldwin

Bryan

Bullock

Burke

Camden

Chatham

Clarke

Columbia

Effingham

Elbert

Emanuel

Franklin

Glynn

Greene

Hancock

Jackson

Jasper

Jefferson

Jones

Laurens

Liberty

Lincoln

Madison

M'Intosh

Montgomery

Morgan

Oglethorpe

Pulaski

Putnam

Richmond

Scriven

Tattnal

Telfair

Twiggs

Walton

Warren

Washington

Wayne

Wilkes

Wilkinson

Chief Towns.

Milledgeville

C. H.

Statesburgh

Waynesborough

St. Mary's

Savannah

Athens

Applington

Ebenezer

Petersburg

Carnesville

Brunswick

Greensborough

Sparta

Jeffersonton

Monticello

Louisville

Clinton

Dublin

Riceborough

Lincolnton

Danielsville

Darien

C. H.

Madison

Lexington

Hartford

Eatonton

Augusta

Jacksonborougb

C. H.

C. H.

Marion

Warrenton Saundersville C. H.

Washington Irwinton.

This state is watered by the Savannah, sepa- rating it from South Carolina, the Ogeechee, Ala- tahama, Satilla, Oakmulgee, Oconee, St. Mary's, Flint, Chatahoochee, Tallapoosa, and Coosa The coast is bordered, for four or five miles in- land, with salt marshes, generally uninhabited. In front of them is a chain of islands of a grey rich soil, covered in their natural state with pine, hickory, and live oak, and yielding on cultivation sea-island cotton. The principal of these are Wassaw, Ossabaw, St. Catharine's, Sapello, St. Simon's, Jekyl, and Cumberland. The east part of the state between the mountains, the ocean, and the Savannah and St. Mary's rivers, is an entirely level tract of 120 miles

long from north to south, and from forty to fifty- broad, without a single hill or stone. About forty-five miles from the sea coast the lands be- gin to be uneven, ridges gradually rise into hills, and these into mountains, till they termi- nate in the Alleghany and Appalachian chains.

The rivers and creeks are generally bordered with marshes, in which are situated rice planta- tions, mingled with what are called the pine-bar- rens, which extend from sixty to eighty miles from the sea. Beyond these the country becomes uneven, diversified with hills and mountains, of a strong rich soil, producing cotton, tobacco, maize, wheat, and other grain. The north-western part of the state is mountainous, and abounds in sub- .ime and picturesque scenery.

The soil of Georgia is various; but a large proportion is very productive. At a distance from the sea it changes from gray to red ; in some places it is gravelly, but fertile ; and far- ther back in the country its tint is gradually deepened, till it becomes what is called the mu- latto soil, consisting of black mould and red earth. This sort of land is generally strong, and affords abundant crops of wheat, tobacco, corn, &c. It is succeeded in its turn by a soil that is nearly black, and very rich, on which are large quantities of black walnut and mulberry. The pine-barrens produce grapes

of large size and good flavor. The forests abound in fine oak, pine, hickory, cedar, and mulberry trees. Of fruits are plentiful, figs, melons, oranges, pome- granates, olives, lemons, limes, citrons, pears, and peaches. The exports, which consist chiefly of cotton, rice, lumber, tobacco, canes, deer skins, and maize, amounted, in 1816, to 7,511,939 dollars.

The winters in Georgia are mild and pleasant ; snow is seldom seen, nor is vegetation inter- rupted by severe frosts. There are several valu- able mineral springs in this state ; one near Washington ; one in Jefferson county, twelve miles south-east of Louisville ; and another in Madison county, five miles from Danielsville. A considerable part of the territory of this state is in the possession of the Creek and Cherokee Indians, the former inhabiting the south-iwest and west, and the latter the north-west parts. The seat of government is INIilledgeville, but Savan- nah and Augusta are the largest towns. Tlie other most considerable towns are Washington, Louisville, Darien, St. Mary's, Greensborough, Petersburg, and Sparta.

The legislature consists of a senate and a house of representatives, chosen annually by counties, each county sending one senator, and not less than one, nor more than four representatives. The governor is elected for two years, by a joint vote of both houses. The legislature meets on the second Tuesday in January. The constitu- tion provides for a census of the state to be made once in seven years. Georgia sends six repre- sentatives to Congress.

The le(i;islature has established a college at Athens, styled Franklin College, and has made provision for an academy in each county ; the college and academies all to be united under the name of the university of Georgia. Great atten- tion is paid to education throughout the state.

The settlement of a colony between the Sa- vannah and Alatamaha was first proposed in England in 1732, for the accommodation of poor emigrants from Great Britain and Ireland, and for the farther security of Carolina. Private compassion and public spirit conspired to pro- mote the benevolent design, and George IL granted letters patent, dated June 9th, 1732, for legally carrying it into execution. The new pro- vince was called Georgia, in honor of the king who encouraged the plan. A corporation, con- sisting of twenty-one persons, was constituted by the name of the Trustees for Settling and Establishing the Colony of Georgia. In No- vember, 1732, 116 settlers were conveyed thither free of expense, furnished with every thing re- quisite for building and for cultivating the soil. Mr. James Oglethorpe, one of the trustees, and an active promoter of the settlement, embarked as the head and director of these settlers. They arrived at Charlestown early in the following year, and soon began to build a small fort, on the site of the present Savannah, and a number of huts for their

defence and accommodation. A treaty of friendship was concluded between the settlers and their neighbours the Creek Indians, and every thing wore the aspect of peace and future prosperity. Afterwards 570 adventurers, among whom were 130 Highlanders, and 170 Germans, were prevailed on to emigrate to Georgia. But the fundamental regulations es- tablished by the trustees of Georgia were ill adapted to the circumstances and situation of the settlers. Like other distant legislators, who framed their regulations upon principles of spe- culation, they were liable to many errors and mistakes ; and however good their design, their rules were found impracticable. These, in fact, together with the wars in which they were in- volved with the Spaniards and Indians, and the frequent insurrections among themselves, threw the colonists into a state of confusion and wretchedness too great for human nature long to endure. Their oppressed situation was repre- sented to the trustees by repeated complaints ; till at length, finding that the province lan- guished under their care, and weary with the complaints of the people, the trustees in 1752 surrendered their charter to the king, and it was made a royal government. From this time till the peace of Paris, in 1763, the colony struggled under many diflficulties arising from the want of credit, and the frequent molestation of enemies. The good effects of the peace were sensibly felt. It now began to flourish under the care of go- vernor Wright ; and within ten years only, from 1763 to 1773, its exports arose from £27,021 to £121,676 sterling. During the American war, Georgia was over-run by the British, and the inhabitants were obliged to flee into the neigh- bouring states for safety. Since the period of the independence of the states, the population, agriculture, and commerce, have increased with astonisliing rapidity, though they have been oc- casionally retarded by the hostile irruptions of the Indians. In 1789 the constitution was new- modelled upon a plan similar to that of the other states, and in 1790, a pretty firm treaty of peace was concluded between the United States

and the Indians, In 1330 the]X)pulation was 51 6,567 of whom 1 80,000 were blacks.

Georgia, Gulf or, is a large gulf of the north "Pacific Ocean, between the continent of North America and Quadra and Vancouver's Island. Captain Vancouver describes upwards of twenty port-s in the gulf of Georgia, of which the easiest of access is Port de los Angelos, or Port Dis- covery, on the south shore. In the gulf are a number of islands, in general less rugged

and barren than the main land, which for the most part is extremely desolate, the naked rocky mountains rising abruptly from the shores, and vast torrents from the melted snows tumbling down their sides. The entire gulf is about 120 miles long from north to south, and varying from six to twenty iniles in breadth.

Georgia New or South, Island, was dis- covered by La Roche in 1675, but its extent was not ascertained until 1776, when Cook visited it. It presents nothing but mountains raising their heads to the clouds, and surmounted by glaciers, while the valleys are covered with perpetual snow. A strong bladed grass in tufts, and some small shrubs, is the only vegetation. The dung of an animal, supposed to be a fox, was the only indication of the existence of quadrupeds, and the onlv land bird seen was the lark. The at- mosphere is enveloped in constant mist, which, tojiether with the numerous detached islets and rocks, renders the navigation perilous. Sand- wich Cay, near the middle of the land, is in 54° 42′ S., 3/5ˆ 12′ W.

GEORGIC, n. s. & adj. Gr. yt] and epyov, a work. A description of agricultural pursuits: applied particularly to poems of Hesiod and Virgil.

GEORGIO Maggiore (St.), an island of the Adriatic near Nancy, and containing one of the noblest Benedictine establishments in Italy. The church 13 particu larly handsome, and contains the tombs of several of the Venetian doges.

GEORGIUM SiDUS, or the Georgian Planet, the name given by Herschel to the planet which he discovered. It is also sometimes called Uranus, but more generally Herschel, in compliment to its discoverer. Se.-ˆ Astronomy and Herschel. Foreign astronomers have already named this planet Herschel, after its discoverer.

GEPID.'E, Gepidks, or Gepidi, in ancient geography, according to Procopius, were a Gothic people, some of whom, in the migration of the Goths, settled in an island at the mouth of the Vistula, which they called Gepidos after their own name, which denotes lazy or slothful ; others in Dacia, calling their settlement there Gepidia.

GERA,atown of Saxony, in the Vogtland and on the White Elster River. It is the capital of a district belonging to the counts of Reuss, and surrounded by walls. The streets are straight and regular, having been almost entirely rebuilt after a fire in 1780. It is a considerable manu- facturing town in woollen and cotton cloths, and nas a provincial school. Population 7500. Thirty miles S. S. W. of Leipsic, and sixty-eight west of Dresden.

GERANIUM, crane's bill, in botany, a ge- nus of the decandria order, and

monadelphia class of plants; natural order fourteenth,' grui-

nales. Its characters are these : — the flower has a permanent empalement, composed of five small oval leaves, and five oval or heart-shaped petals, spreading open, which are in some species equal, and in others the two upper are much larger than tiie three lower. It has ten stamina, alternately longer than each other, but shorter than the petals, and terminated by oblong summits. In the bot- tom of the flower is situated a five-cornered ger- men, which is permanent. The flower is succeeded by five seeds, each being wrapped up in the husk of the beak, where they are twisted together at the point, so as to form the resem- blance of a stork's beak. There are above forty species. The common wild sorts, and those which are brought from the colder climates, are hardy enough, and require little care ; but the African species, and the others from hot coun- tries which make so very beautiful a figure in our green houses, require great care in their culture and propagation. These may be propagated by seed, which should be sown towards the end of March in beds of light earth, carefully shading them from the sun, and giving them freciuent, but gentle waterings, till they are well rooted . The mats with which these beds are covered are to be taken off in gentle showers, and always in the hot weather at nights, that the- plants may have the benefit of the dew. They should remain about two months in this bed, by which time they will have taken root. Some pots of about seven inches wide should then be filled with light earth, and the plants taken up with as much as possible of their own eartli about them, and planted severally in the middle of these pots ; when they are to be set in a shady place, and watered at times till they have taken root. When well rooted, they should be set in a more exposed place to harden them, and should stand out till the middle of October ; but, when the mornings begin to grow frosty, they must be removed into the green-house, and then placed as near the windows as possible, and the windows should be opened upon them till the weather is very cold. During the winter they must be often watered a little at a time, and their dead leaves should be pulled off. They must not stand under the shade of other plants, nor near any artificial heat. Those who wish that their plants should be large and flower soon, sow the seeds on a moderate hot-bed in the spring ; when they are come up, they should not be drawn weak, and the pots into which they are transplanted should be plunged into another moderate hot-bed ; shading them from the sun till they have taken root, and gra- dually inuring them to the open air, into which they should be removed in the beginning of June, and placed in a sheltered situation with other exotic plants. The shrubby African geraniums are commonly propagated by cuttings, which planted in a shady border, in June or July, will take good root in five or six weeks ; and they may then be taken up and planted in separate pots, placing them in the shade till they have ta- ken new root ; after which they may be

removed into a sheltered situation, and treated as the seedling plants.

GERAR, or Gerara, in ancient geograpliy, the south boundary of Canaan near Berse'.w ;

situated between Cades and Zur : two deserts, the one facing Egypt and the other Arabia Pe- traea.

GERARD (Alexander), D.D., professor of divinity in King's College, Aberdeen, was born In 1728. He received the rudiments of his edu- 'jation at Foveran, and Aberdeen; and at twelve years of age entered student at JMarischal College, and in four years afterwards was admitted A. M : after which he studied theology at the universities of Aberdeen and Edinburgh. Having been li- censed to preacn, ui 1 748, lie was chosen assistant to professor Dr. Fordyee in 1750, and was ap- pointed his successor, in 1752. On the 5th of September, 1759, he was ordained a minister of the church of Scotland: on the 11th of June, 1760, he was api)ointed professor of divinity in the Marisclial College, and minister of the Gray-friars church at Aberdeen ; and about the same time he was created D. D. On the 18th June, 1771, he resigned both these offices, and was appointed professor of divinity in King's College ; which situation he held till 1795, when, having just entered his sixty-eightli year, he died of a schirrous tumor in his face, lie was the au- thor of, 1. An Essay on Taste: 8vo. 1759. 2. Dissertations on subjects relating to the genius and Evidences of Christianity, 8vo. 1766. 3. An Essay on Genius, 8vo. 1774. 4. Several Sermons on various subjects, published from 1760 to 1782 ; and, 5, A part of his theological course, entitled The Pastoral Care, published in 1799, by his son. Dr. Gilbert Gerard, who suc- ceeded him in his professorship. His Essay on Taste gained the gold prize medal given by the Philosophical Society of Edinburgh in 1756. Dr. Gilbert Gerard also published 1. On Indif- ference with respect to Religious Truths, a ser- mon, Svo. 2. Institutes of Biblical Criticism, Bvo,, dedicated to Dr., now bishop, Herbert Marsh.

Geuakd (Tung, or Tom), founder and first grand master of the knight's hospitallers of St. John, or knights of jNIalla, was born at Amalfi in Italy, in the eleventh ceutury. In A. D. 1100 he assumed a religious habit, with a white cross on the breast, and, with many others, engaged in vows of chastity, poverty, and to relieve all Chris- tians in distress, &c. He died in 1120, and was succeeded as grand master by Raymond du Puy. See Malta.

GERARDE (John), an English surgeon and botanist, was born at Nantwich, in Cheshire, in 1545. He practised professionally as a surgeon in London, where also he became gardener to lord Burleigh ; he himself had also a large bo- tanic garden in Holborn, of vvhich he published a catalogue in 1596. His great work is his Her- bal, printed in 1597, and re-published by Dr. Thomas Johnson, in 1636, folio. Gerarde died in 1607.

GERARDIA, in botany, a genus of the angi- ospcrmia order, and didynamia class of plants ; natural order fortieth, personata?. CAL.quinquefid : coil, bilabiate ; the un(l(;r lip tripartite ; the side lobes emarginated, and tlie middle one bipartite : CAP3. b'locular and gaping. Species one; a na- tice ol Africa.

GERBIER (Sir Balthazar), a painter of Ant-

werp, born in 1592, who distinguished himself by painting small figures in distemper. King Charles I. was so pleased with his performances that he invited him to court, where he was in great favor. He was knighted, and sent to Brus- sels, where he long resided as agent for that monarch.

GERBILLON (John Francis), one of the most celebrated of the Jesuit missionaries in China, was born in 1651. He was in great favor with the emperor, for whom he composed two books on geometry, printed at Pekin in the Chinese and Tartarian languages. He wrote also Histo- rical Observations on Great Tartary, and an Ac- count of some of his Travels, inserted i'n Du Halde's History of China. He died at Pekin, superior general of all the missions in China.

G ERFALCON, n. s. Fr. gerfault. A bird of prey of the greatest strength next to the eagle.

Gerfalcon. S:e Falco.*

GERGESA, in ancient geography, aTransjor- dan town, no otherwise known than by the Ger- gesenes of St. Matthew, Gergesaeiof Moses ; sup- posed to have stood in tlie neighbourhood of Ga- dara, and near the sea of Tiberias.

GERGES/EI, or Geugesenes, one of the se- veti ancient nations of Canaan, less frequently mentioned than the rest. They appear to have been less considerable and more obscure : their name is from Girgasi, one of Canaan's sons. See

GlUGASHITES.

GERINA, or Cerina, a town on the northern coast of the island of Cyprus.

The wall about half a mile in circumference, was formerly strong ; but the greater part of it as well as the port is now in ruins. On the east side of the harbour stands a lofty castle, erected by tlie Ve- netians ; and defended by four guns. The trade is inconsiderable, and the place does not con- tain above 1500 families. Sixteen miles N. N. W. of Nicosia.

GERISM, Geuizim, or Garizim, in ancient geography, a mountain of Samaria, at the foot of which stood Shechem ; famous for the temple built on it by Sanballat, infavor of his son-in-law Manasseh, by the permission of Alexander the Great; and destroyed 200 years after, by John Ilyrcanus, son of Simon, the fourth in succession of the Asmoneans. Josephus.

GERMAIN, or St. Germain, a town o, France, in the department of the Seine and Oise, and ci-devant province of the Isle of France. It has a magnificent palace, embellished by Louis XIV'., who was born in it, with a fine forest and elegant gardens, &c., long the asylum of king James H. Several kings of France were born here. It is seated on the Seine, twelve miles north-west of Paris.

Germains (St.), a borough of England, in Cornwall, formerly the largest town in the coun- ty, ai? 1 a bishop's see. Part of the old cathedral is used as the parish church, and the priory is still standing. It is ten miles west of Plymouth, and 224 west by south of London.

GERMAN, 7J.S. !k, adj. Fr. gemiain; Latin ptrmanua. Brother ; one approaching to a bro- ther in proximity of blood : thus the children of brothers or sisters are called cousins german, the only sense in which the word is now used.

And to him said, go now, proud miscreant.

Thyself thy message do to german dear.

Spenser. Faerie Queene.

Wert thou a bear, thou wouldst he killed by the fcorse ; wert thou a horse, thou woaldst be seized by the leopard ; wert thou a leopard, thou wert german to the lion, and the spots of thy kindred were juries on thy life. S/ iakspeare, Timon.

Not he alone shall suffer what wit can make heavy, and vengeance make bitter ; but those that are german to him, though removed fifty times, shall

come under the hangman. Shakspeare.

You'll have your nephews neigh to you ; you'll have coursers for cousins, and genets for germans.

Id.

They knew it was their cousin german, the famous Amphialus. Sidney.

German- Ocean, otherwise called the North Sea, an extensive branch of the Atlantic on the north-west coast of Europe, bounded on the south by the straits of Calais, and on the north by the Orkney and Shetland Islands. The wa- ters of this sea are salter than those of the Baltic, but less so than those of the main Ocean, and they contain a large portion of unctuous matter, and marine plants. The fisheries on the Dogger Bank, as well as on the shores that bound this sea, viz. those of Britain, Holland, Denmark, and Norway, are extensive : they are still greater northward i. e. in the direction of the Orkney and Shetland Islands. This has accordingly been the nursery for seamen in Europe. Throughout it-s whole extent the tides prevail, but rise highest on the coasts of Lower Saxony and Holland, where the formation of the Zuyder Zee in the thirteenth century, by a great eruption, and the destruction of a whole island on the coast of Sleswick in 1634, were awful proofs of their poveer.

The German Ocean may be considered as di- vided into two unequal parts by the Dogger Bank, which traverses it in almost all its width, and is traditionally said to have been formerly a tract of dry land, joined to Jutland. The extent of this sea from south to north, between the pa- rallels of latitude quoted above, is reckoned by Mr. Stevenson at 233 leagues, and its greatest breadth from west to east, from St. Abb's-Head, on the coast of Scotland, to Ring Kiobing Froid, on the opposite shore of Denmark, at 133 leagues. The greatest depth of the water in this basin seems to be upon the Norwegian side, where the soundings give 190 fathoms ; but the mean depth of the whole may be stated at only about thirty- one fathoms.

The water gradually deepens from south to north, varying, after an irregular progression, from 120 fathoms towards the northern extremity to fifty-eight, thirty-eight, twenty-four and eigh- teen fathoms, as we proceed southwards, to with- in five miles of the shore, and the whole bottom presen'ing the character of a great bay encum- bered with numerous sand-banks. These great accumulations of debris, especially in the middle or central parts, and along the shores towards what may be termed the apex of the bay, extend from the river Thames along the shores of Hol- land, &c., to the Baltic. One of these great cen- tral banks, known to mariners as the Long For- ties, tends north-east in the direction of the

ebb-tibe from the entrance of the Fritb of Forth no less than 110 mues, while the Denmark and Jutland banks may also be traced from the entrance of the Baltic, upwards of 105 miles in a north-western direction. Besides these, we have also that other great central range of banks known under the common appellation of the Dogger Bank, which is subdivided by the navi- gator into the Long-Bank, the White-Bank, and the Well-Bank, including an extent of upwards of 354 miles from north to south. There are also a vast number of shoals and sand-banks, lying wholly to the southward of our section, between Flamborough-Head and Heligoland. Altoge- ther, therefore, the superficies of these extensive banks is found to occupy no inconsiderable por- tion of the whole area of the German Ocean; the surface of which, in making these investiga- tions, has been estimated to contain about 153,709 square miles, while the aggregate super- ficial contents of the sand-banks alone amount to no less than 27,443 square miles, or include an area of about five and three quarters of the whole surface of this Sea.

On the temperature of the German Ocean, the following observations were made in 1821 by Mr. John ˆlurray : —

Temperature. Feb. 22. Seven miles off Huntley Foot, Fahr. (River Tees), depth forty fa- thoms, at lOh 30′ A. M. . 42° Four miles off Red Cliff (to southward), depth, say thirty- five fathoms, at 10 o'clock P.M. 40-75

Three miles off Whitby, depth twenty-eight fathoms, at 4h 22′ A. M. ... 41

Feb. 23. Two. miles off Kelsey, depth seven fathoms, at 8 o'clock

A. M., 37-5

Two miles off Spurn Lights, depth 7-25 fathoms, at 9l» 22′

A.M 38

Three miles off Spurn Lamps, mouth of the Humber, depth seven fathoms, 10 o'clock

P.M 38

Feb. 24. In the Humber, three miles from

Hull,at 9 o'clock A.M. . 35-75

GERMANIA, in ancient geography, an exten- sive country of Europe, bounded on the north by the Baltic (Mare Suevicum), on the east by the Vistula, on the south by the Danube, and on the west by the Rhine and the

German Ocean. Tl»e origin of the name has been much disputed, but the most probable derivation is from ‘ ghar man’ (Celtic, a warlike man) from Teut. geier, or guer, a sword, whence Span, guerra ; Fr. guerre, war. Many of the best authorities however de- rive it from Lat. germanus, a relative, as havmg been given by the Celts, who were probably sprung from the same stock, viz. the Gomerians. The Romans divided Germania into two regions, viz. Germania Superior, and Gprmania Inferior, which were separated only by the Rhine.

Germania Superior, or Upper Germany, com- prised the whole country between the Rhine v.\d

the Danube. Between the Rhine and Elbe were the following nations: — 1. The Chauci, Upper and Lower, who were divided from each other by the river Visurges, now the Weser. Their country contained what is now called Bremen, Lunen- burg, Friesland, and Groningen. The Upper Chauci had the Cherusci, and the Lower the Chamavi on the south-east, and the German Ocean on the north-west. 2. The Frisii, Upper and Lower, were divided from the Lower Chauci by the river Amisia, now the Ems ; and from one another by an arm of the Rhine. Their country still retains the name of Friesland. 3. Beyond the Isela (now the Yssel), which bounded the country of the Frisii, were situated the Bructeri, who inhabited that tract now called Broecmor- land ; and the iNIarsi, about the river Luppe. On the other side of that river were the Usippii, or Usipites; but these were famed for often changing their territories, and therefore found in other places. 4. Next to these were the Juones, or inhabitants of Juliers, between the I\Iaese and the Rhine. 5. The Catti, another ancient and warlike nation, inhabited Hesse and Thuringia, from the Hartz ■Mountains to the Rhine and Weser ; among whom were comprehended the Mattiaci, whose capital is by some thought to be Marpurg, by others Baden. 6. Next to these were the Seducii, bordering upon Suabia; Na- risci, or the ancient inhabitants of Northgow, whose capital was Nuremberg ; and the]Marco- nianni, whose country anciently reached from the Rhine to the head of the Danube, and to the Neckar. The Marcomanni afterwards settled in Bohemia and Moravia, under their general or king Maroboduus, and some of them in Gaul, whence they drove the Boii, who had seated themselves there. 7. On the other side of the Danube, and between the Rhine and that river, were the Hermunduri, who possessed the country now called Misnia in Upper Saxony; though some make their territories to have extended much further, and to have reached to, or even beyond, Bohemia, then the seat of the Boii, whence its name. 8. Beyond them, on the north of the Danube, was another

seat of the Marcomanni, along the river Albis, or Elbe. 9. Next to Bohemia were situated the Quadi, whose territories extended from the Danube to Moravia, and the northern part of Austria. These are comprehended under the ancient name of Suevi ; part of whom at length forced their way into Spain, and settled a kingdom there. 10. East- ward of the Quadi were situated the Bastarnae, and parted from them by the Graima, now Gran, a river that falls into the Danube; and by the Carpathian Mountains, from them called Alpes Bastarnicar. The country of the Bastarnae indeed made part of the European Sarmatia, and was therefore without the limits of Germany, properly so called ; but we find these people so often in league with the German nations, and joining tiiem for the destruction of the Romans, that we cannot but account them as one people. Between those nations, seated along the other side of the Danube and the Ilercynian forest, were several others whose exact situation is uncertain, viz. the Martigni, Burii, Borades, Lygii, or Logiones,

and some others, who are placed by geographers along the forest above-mentioned, between the Danube and the 'istula.

On this side the Hercynian forest were the famed Rhaetii (now Grisons), seated among the Alps. Their country, which was also called Western lUyricum, was divided into Rhaetia Pri- ma, or Propria, and Secunda; and was then of much larger extent, spreading itself towards Suabia, Bavaria, and Austria. On the other side of the Hercynian forest were, 1. The Suevi, who spread thernselves from the Vistula to the river Elbe. 2. The Longobardi, so called, according _ to some, on account of their wearing long beards; but according to others, on account of their con- sisting of two nations, viz. the Bardi and Lin- gones. These dwelt along tlie river Elbe, and bordered southward on the Chauci above-men- tioned. 3. The Burgundi, possessing a part of Poland. 4. The Semnones, who, about the time of Tiberius, were seated on the river Elbe. 5. The Angles, Saxons, and Goths, were probably the descendants of the Cimbri; and inhabited the countries of Denmark, along the Baltic Sea, and the peninsula of Scandinavia, containing Norway, Sweden, Lapland, and Finmark. 6. The 'andals were a Gothic nation, who, pro- ceeding from Scandinavia, settle”d in the countries now called 3Iecklenburgh and Brandenburgh. 7. Of the same race were the Dacians, who set- tled themselves in the neighbourhood of Palus Maeotis, and extended their territories along the banks of the Danube.

Gcrwunia Inferior, or Lower Germany, lay between the Seine and the Rhine ; and in this we find a number of different nations, the most remarkable of which were the following: — 1. The Ubii, whose territory lay between the Rhine and the Mosa (or Maese), and whose capital was Cologne. 2. Next to them were the Tungri, supposed to be the same whom

Csesar calls Ebu- rones and Condrusi; and whose metropolis, then called Attuatica, has siiice been named Tongres. 3. Higher up from them, and on the other side of the Moselle, were the Treviri, whose capital was Augusta Trevirorum, now Triers. 4. Next to them were the Tribosci, Nemotes, and Van- giones. The former dwelt in Alsace, and had Argentoratum, now Strasburg, for their capital : the others inhabited the cities of Worms, Spire, and Mentz. 3 The Mediomatrici were situated along the Moselle, about the city of Metz in Lor- raine : and above them were situated another German nation, named Raurici, Rauraci, or Rauriaci, who inhabited that part of Helveti?. above Basil. To the west and south of these were the Narvi, Suessones, Silvanectes, Leuci, Rhemi, Lingones, &c., who inhabited Belgic Gaul. Betweeij the heads of the Rhine and Danube was seated the ancient kingdom of Vin- delicia, whose capital was calle

tained the kingdom of Hungary, divided into Upper and Lower; and extending from lUyri- cum to the Danube, and the mountains Ccetii in the neighbourhood of Vindebona, now Vienna.

The Germans did not begin to build towns of any consideration till after the arrival and settle- ment of the Romans, by whom the following towns were either built or enlarged, and received from them their names : — Colonia Ubiorum, or Agrip-

piua, now called Cologne. Golonia Ulpiana . . Cleves.

Argentoratum . . . Strasburg. Vindobona . . • Vienna.

Regenopolis . . . Ratisbon. Berolinum . . . Berlin.

Herbipolis . . . Wurzburg.

Bonna Julia . . . Bonne. Confluentes . . . Coblentz.

Augusta Vindelicorum . Augsbuvgh.

Colonia Trevirorum . . Triers, or Treves. Moguntiacum . . . Mentz. Neroberga, &c. . . Nurenberg, &c.

The following are the rivers, &c., known to the ancients as well as the moderns : — Lacus Brigantinus Lake of Constance. Sinus Codanus . The Baltic. Ister vel Danubius . The Danube, or Ister. Rhenus , . The Rhine.

Vistula . . The Weichsel, or Vistula.

Nicer . . . The Necker. Albis . . .The Elbe. Amisia . . T'->e Ems.

Visurgis . . 'lii>. Weser.

Dravus, vel Drabus The Drave. Moenus . . The Maine.

Luppia, &c. . The Lippe, &c.

The principal mountains and forests mentioned by the ancients are,

Jugum HercynoEum . The Bohemian Foret.t- Bacenis, vel Semana Sylva The liartz. Marliana Sylva . . The Black Forest, Saesia Sylva . . The Odenwald.

Abnoba . . . Abenow. Mons Rhffiticus . . The Sieben-bergen, Taunus, 8cc. . . The Hayrich, &c.

The ancient history of the Germans is alto- gether wrapped in obscurity ; nor do we, for many ages, know any thing more of them than what we learn from the history of their wars with the Romans. The first time they are men- tioned by the Roman historians is about A. A. C. 211, when Marcellus subdued Insubria and Liguria, and defeated the Gjesatse, a German nation, situated on the banks of the Rhine. From this time history is silent with regard to all these northern nations, till the eruption of the Cimbri and Teutones, who inhabited the most northerly parts of Gˆ'many. See Rome. We also find mention made of the Scordisci, a Thracian nation, who afterwards settled on the banks of the Danube. About A. A. C. 1 13 they ravaged Macedon, and cut off a whole Roman army sent against them ; the general, M. Porcius Cato, grandson to Cato the censor, being the only person who escaped. After this they ravaged all Thessaly, and advanced to the coasts of the

Adriatic, into which, because it stopped their further progress, they discharged a shower of darts. By another Roman general however they were driven back into their own country with great slaughter; and, soon after, Metellus so weakened them by repeated defeats, that they were incapa- ble, for some time, of making any more attempts on the Roman provinces. At last, in the consul- ship of M. Livius Drusus and L. Calpurnius Piso, the former prevailed on them to pass the Danube, which thenceforth became the boundary between the Romans and them. Notwithstand- ing this, in the time of the Jugurthine war, the Scordisci repassed the Danube on the ice every winter, and being joined by theTriballi, a people of Lower Massia, and the Daci of Upper Maesia, penetrated as far as Macedon, committing every where dreadful ravages. Till the time of Julius Cffisar,

however, we hear nothing more concern- ing the Germans.

About A. A. C. 68 Coesar undertook his expe- dition into Gaul, during which his assistance was implored by the iEdui against Ariovistus, a German prince, who oppressed them. Cajsar, pleased with this opportunity of increasing his power, invited Ariovistus to an interview; but, this being declined, he next sent deputies, desir- ing him to restore the hostages he had taken from the iEdui, and to bring no more troops over the Rhine into Gaul. To this a haughty answer was returned ; and a battle soon after ensued, in which Ariovistus was entirely defeated, and with great difficulty made his escape. In A. A. C. 55 Caesar having subdued the Suessones, Bellovaci, Ambiani, Nervii, and other nations of Belgic Gaul, hastened to oppose the Usipetes and Tenc- teri. These nations, having been driven out of their own country by the Suevi, had crossed the Rhine with a design to settle in Gaul. As soon as be appeared, the Germans sent him a depu- tation, offering to join him, provided he v/ould assign them lands. Caesar replied, that there wa-s no room in Gaul for them ; but he would desire the Ubii to give them leave to settle among them. Upon this, they desired time to treat with the Ubii ; but in the mean time fell upon some Ro- man squadrons, which so provoked Cassar, that he immediately marched against them, and, coming unexpectedly upon them, defeated them with great slaughter. They fled in the utmost confusion ; but the Romans pursued them to the conflux of the Rhine and the Maese, where the slaughter was renewed with such fury, that about 400,000 of the Germans perished. After this, Caesar, being resolved to spread the terror of the Roman name through Germany, built a bridge over the Rhine, and entered that country. In this expedition, however, which was his last in Germany, he performed no remarkable exploit.

Nothing further is recorded of the Germans till about A. A. C. 17, when the Tencteri made an irruption into Gaul, and defeated M.Lollius, proconsul of that province. At last, however, they were repulsed, and forced to retire with great loss beyond the Rhine. Soon after this the RhiEtii invaded Italy, where they committed the greatest devastations, putting all the males they met to the sword, without distinction of age ; and, when they happened to take women with

cliild, they consulted their augore to know whe- ther the child was a male or female; and if they pronounced it a male, the mother was imme- diately massacred. Against these barbarians was sent Drusus, the second son of Livia, a youth of extraordinary valor, and great accomplishments. “le

brought tliem to a battle, in which the lio- .nans proved victorious, and cut in pieces great numbers of them with very little loss. Those who escaped the general slaughter, being joined by the Vindelici, took their rout towards Gaul, Willi a design to invade that province. But Augustus, upon the first notice of their march, despatched against them Tiberius, with several chosen legions. He was no less successful than Drusus had been ; for having transported his troojjs over tlie lake Brigantium (now Constance) he fell unexpectedly on the enemy, gave them a total overthrow, took most of their strong holds, and obliged the whole nation to submit to his own terms. Tiberius, to keep the conquered countries in awe, planted two colonies in 'inde- licia, and opened from thence a road into Rha-tia and Noricum. One of the cities which he built for tlie defence of his colonies he called, from his father Drusus, Drasomagus ; tlie oilier by the name of Augustus, Augusta Vindelicorum. lie next encountered the Pannonians, who had been subdued by Agrippa, but revolted on hearing the news of that great commander's death, which linppened A. A. C. 11. Tiberius, however, with the assistance of the Scordisci, soon forced them to submit. They delivered up their arms, gave hostages, and put the Romans in possession of all their towns and strong holds. Tiberius spared their lives, but laid waste their fields, plundered their cities, and sent the finest of their youth into other countries. In the mean time Drusus, having prevented the Gauls from revolting, pre- pared to oppose the Germans who dwelt beyond the Rhine. They had collected the most nume- rous and formidable army that had ever been seen in those parts ; with which they were advancing towards the Rhine, to invade Gaul. Drusus, however, defeated them, as they attempted ..o cross that river ; and, pursuing his advantage, '•nfcred the country of the Usii)etes, now Relia chusen, and thence advanced against the Si-cambri, in the neighbourhood of the I-yppe md Yssel. Them he overthrew in a great battle, •aid waste their country, burnt most of their ,ities, and, following the course of the Rhine, approached the German Ocean, reducing the Frisii and the Chauci between the Ems and the Elbe. In these marches the troops suffered ex- remely for want of provisions ; and Drusus f.imself was often in great danger of being drowned, as the Romans wlio attended him were quite unacquainted with the flux and reflux of the tide. The Roman forces went into East Fries- land for winttyr quarters; and next year (A.A.C. to) Drusus marched against the Tenctcri, whom lie easily subdued. Afterwards, passing the Lupia-i (now the Lyppe), lie reduced the Catli and Cherusci, extending his conquests to the banks rrt" the Visurgis (or Wcser) ; which he would have i^assed, had he not been in want .of prov.isions, the enemy having laid waste the whole country. As lie was retiring, the Germans

unexpectedly fell upon him in a narrow passage, and, having surrounded tlie Roman army, cut a great number of them in pieces. But Drusus having

animated his men, after a bloody conflict, wliich lasted the whole day, the (Sermans were defeated with such slaughter, that the ground was strewed for several miles with dead bodies. Drusus found in their camp a great quantity of iron chains, which they had brought for the Romans; and so great was their confidence, that they had agreed before hand about the division of the booty. After this victory, Drusus built two forts to keep the conquered countries in awe; the one at the confluence of the Lyppe and the Almc, the other in the country of the Catti on the Rhine. He also made a famous canal, called in honor of him Fossa Drusiana, to convey the waters of tlie Rhine into the Sala. It extended eight miles, and was very convenient for convey- ing the Roman troops by water to the countries of the Frisii and Chauci. The following year (A. A. C. 9) Augustus, bent on subduing the whole of Germany, advanced to the banks of the Riiine, attended by Tiberius and Drusus. The former he sent against the Daci, who lived up to the south of the Danube ; and the latter to com- plete the conquest he had so successfully begun in the western parts of Germany. Tiie former easily overcame the Daci, and transplanted 40,000 of them into Gaul. The latter, having passed the Rhine, subdued all the nations from that river to the Elbe; but, having attempted in vain to cross this last, he set out for Rome : an end, however, was put to his conquests and his life by a violent fever, with which he was seized on his return.

After the death of Drusus, Tiberius again overran all those countries in which Drusus had spent the preceding summer; and struck some of the northern nations with such terror, that they sent deputies to sue for peace. This, how- ever, they could not obtain upon any terms ; the emperor declaring that he would not conclude a peace with one, unless they all desired it. But the Catti, or according to some the Sicambri, could nut be prevailed upon to submit; so that the war was carried on, though in a languid manner, for about eighteen years. During this period, some of the German nations had quitted their forests, and began to live in a civilised man- ner under the protection of the Romans ; but (ˆuinctilius 'arus being sent to command the Roman forces in iliat country, he so provoked the inhaliitants by his extortions, that not only those wjio still held out refused to submit, but ‘ˆven the nations that had submitted were seized with an eager desire of throwing oft’ the yoke. Among these was a young cliieftain of extra- ordinary skill and valor, named Arminius. He was the son of Sigimer, one of the most power- ful chiefs among the Catti, had served with great reputation in the Roman armies, and been ho- nored by Augustu.s with the privileges of a Roman citizen, and the title of knight. But, his patriotism and ambition prevailing over his gra- titude, he resolved to improve the creneral dis- content among his countrymen, to deliver them from the Roman yoke. With this view he en- gnged the leading men of all the natrons between

Ttie Rhine and the Elbe, in a conspiracy against ttie Romans. To put Varus off his guard, he advised him to show himself to the inhabitants of the more distant provinces, administer justice among them, and accustom them to live after the Roman manner. Varus, being a man of a peaceable temper, readily consented to this insi- dious proposal ; and, leaving the neighbourhood of the Rhine, marched into the country of the Cherusci. Having there spent some time in hearing causes, Arminius persuaded him to weaken his army, by sending out detachments to clear the country of robbers. This done, some distant nations of Germany rose up in arms by Arminius's directions; while those through which Varus was to pass in marching against them, pretended to be in a state of tranquillity, and ready to join the Romans against their ene- mies. On the first news of the revolt, Varus marched against the enemy with three legions and six cohorts ; but, being attacked by the Ger- mans as he passed through a wood, his army was almost totally cut off, while he himself and most of his officers fell by their own hands.

This terrible overthrow, though it raised a general consternation in Rome, did not, how- ever, cause Augustus to abandon his enterprise. About twD years after (A. D. 12) Tiberius and Germanicus were appointed to command in Germany. The death of Augustus, which hap- pened soon after, prevented Tiberius from going on his expedition ; and Germanicus was for some time hindered from proceeding in his, by a revolt of the legions, first in Pannonia, and then in Germany. About A. D. 15 Germa- nicus, having brought over the soldiers to their duty, laid a bridge across the Rhine, over which he marched 12,000 legionaries, twenty-six co- horts of the allies, and eight alse (squadrons of 300 each) of horse. With these he first traversed the CcEsian forest (part of the Hercynian, sup- posed to lie partly in the duchy of Cleves, and partly in Westphalia). On his march he was informed, that the Marsi were cele- brating a festival with great mirth and jol- lity. Upon this he advanced with such expedi- tion, that he surprised them in the midst of their debauch ; a terrible massacre ensued, and the country was destroyed with fire and sword for fifty miles round, without the loss of a single man on the part of the Romans. This general massacre roused the Bructeri, the Tubantes, and the Usipetes ; who, besetting the passes through which the Roman army was to return, fell upon the rear, and put them into disorder; but the Romans soon recovered themselves, and defeated the Germans with considerable loss. The fol- lowing year, (A. D. 16) Germanicus, taking advantage of some intestine broils which hap- pened among the Catti, entered their country, where he put great numbers to the sword. Most of their youth, however, escaped by

swimming over the Adrana (now the Eder), and attempted to prevent the Romans from laying a bridge over that river: but, being disappointed in this, some of them submided to Germanicus, while the greater part, abandoning their villages, took refuge iu the woods ; so that tlie Romans, with- out opposition, set fire to all their towns and

villages ; and, having burnt their capital, began their inarch back to the Rhine. Germanicus had scarcely reached his camp, when he received a message from Segestes, a German prince, in the interest of the Romans, acquainting him that he was besieged in his camp by Arminius. On this he instantly marched against the be- siegers, entirely defeated them, and took a great number of prisoners; among whom was Thuf- neldis, the wife of Arminius, and daughter of Segestes, whom the former had carried ofl', and married against her father's will. Arminius en- raged by the loss of his wife, whom he tenderly loved, stirred up all the neighbouring nations against the Romans. Germanicus, to avoid en- gaging such numerous forces at once, detached his lieutenant Caecina, at the head of forty co- horts, into the territories of the Bructeri; his cavalry, under the command of Pedo, entered the country of the Frisii ; while he himself em- barked the remainder of his army, consisting of four legions, on a neighbouring lake ; and trans- ported them by rivers and canals to the place appointed on the Ems, where the three bodies met. In their march they found the sad remains of the legions conducted by Varus, which they buried with all the ceremony their circumstances could admit. After this they advanced against Arminius, who retired and posted himself advan- tageously close to a wood. The Roman general, coming up with him,- ordered his cavalry to ad- vance and attack the enemy. Arminius, at their first approach, pretended to fly ; but suddenly wheeled about, and giving the signal to a body of troops, whom he had concealed in the wood, to rush out, obliged the cavalry to give ground. The cohorts then advanced to their relief; but they too were put into disorder, and would have been pushed into a morass, had not Germanicus himself advanced with the rest of the cavalry to their relief. Arminius did not think it prudent to engage these fresh troops, but retired in good order ; upon which Germanicus also retired to- wards the Ems. Here he embarked with four legions, ordered Caecina to reconduct the other four by land, and sent the cavaliy to the sea-side, with orders to march along the shore to the Rhine. Though Caecina was to return by roads well known, yet Germanicus advised him to pass, with all possible speed, a causeway, called the long bridges, which led across vast marshes, sur- rounded on all sides with woods and hills. But Arminius, having got notice of this, arrived at the long bridges before him, and filled the woods with his men ; who, on the approach of the Ro- mans, rushed out, and attacked them with great fury. The legions, unable to manage their arms in the marshy ground, were obliged to yield ; and would have been entirely

defeated, had not night put an end to the combat. The Germans, encouraged by their success, instead of sleeping spent the whole night in diverting the courses of the rivulets which rose in the neighbouring mountains ; so that, before day, the camp of the Romans was laid under water, and their works were overturned. Cnscina at last resolved to attack the enemy by day-break, and, having driven them to their woods, to keep them there till the baggage and wounded men should oass

the causeway, and get out of the enemy's reach. But when his army was drawn up, tlie legions posted on the wmgs deserted their stations, and occupied a field beyond the marshes. Caecina followed them, but tlie baggage stuck in the mire, as he attempted to cross the marshes, which greatly embarrassed the soldiers. Armi- nius, perceiving this, began the attack, and cryiˆig out, ' This is a second Varus, the same fate at- tends him and his legions,' fell on the Romans with inexpressible fury. As he had ordered his men to aim cliiefly at the horses, great numbers of them were killed ; and, the ground becoming slippery with their blood, the rest either fell or threw their riders, and galloping through the ranks, put them in disorder. Caecina distin- guished himself greatly, but his horse being killed he would have been taken prisoner, liad not the first legion rescued him. The avarice of tlie enemy, however, saved the Romans from de- struction; for just as the legions were quite spent, and on the point of yielding, the Germans suddenly abandoned them to seize the r baggage. During this respite, the Romans struggled out of the marsh, and, having gained the dry fields, formed a camp with all possible speed. The Germans having thus lost the opportunity of destroying the Romans, contrary to the advice of Arminius, attacked their camp next morning, but were repulsed with great slaughter; after which they gave Cajcina no more molestation till he reached the banks of the Rhine.

Germanicus, in the mean time, having con- veyed the legions he had with him down the Ems to the ocean, to return by sea to the Rhine, and finding his vessels overloaded, deli- vered the second and fourteenth legions to P. Vitellius, desiring him to conduct them by land. But this march proved fatal to great numbers, who were either buried in the quicksands, or swallowed up by the returning tide, to which tiiey were as yet utter strangers. Those who escaped lost their arms, utensils, and provisions; and passed a melancholy night upon an emi- nence, which they had gained by wading up to the cliin. The next morning at ebb, 'itellius, by a hasty march, reached the Usingis, by some thought to be the Iloerenster, on which the city of Groningen stands. There Germanicus, who liad reached that river with his

fleet, took the legions again on board, and conveyed them to the mouth of the Rhine, whence they all re- turned to Cologne, where it had been reported they were totally lost.

This expedition cost the Romans very dear, and procured very few advantages. Great num- bers of men had perished ; and the greatest part of those who ha(l escaped so many dangers, re- turned without arms, utensils, horses, &c., half naked, lamed, and unfit for service. The next year, however, Germanicus, bent on the entire reduction of Germany, made vast preparations for another expedition. Having found that the German'- were chiefly indebted for their safety to their woods and marshes, their short summers and long winters ; ard that his troops suffered more from their tedious marches than from the enemy, he resolved to enter the country by sea, hoping thus to begin the campaign cirlier, and

surprise the enemy. Having, therefore, btrilt 1000 vessels, with great despatch, during winter, he ordered them early in the spring (A. D. 16), to fall down the Rhine; and appointed the island of the Batavians for the general rendezvous of his forces. When the fleet was sailing, he de- tached Silius, one of his lieutenants, with orders to make a sudden irruption into tlie country of the Catti ; and in the mean time, he himself, hearing that a Roman fort on the Lupias was besieged, hastened with six legions to its relief. Silius was prevented, by sudden rains, from doing more than taking some booty, with the wife and daughter of Arpen, king of the Catti ; neither did those who besieged the fort wait the arrival of Germanicus. In the mean tmie, the fleet arriving at the island of the Batavians, the provisions and warlike engines were put on board and sent forward ; ships were assigned to the legions and allies ; and, the whole army being embarked, the fleet entered the canal formerly cut by Drusus, and from his name called Fossa Drusiana. Hence he sailed prosperously to the mouth of the Ems ; where, having landed his troops, he marched directly to the Weser, where he found Arminius encamped on the opposite bank, and determined to dispute his passage. The next day Arminius drew out his troops ia order of battle ; but Germanicus, not thinking it advisable to attack them, ordered the horse to ford over under the command of his lieutenants, Stertinius and Emilius ; who, to divide the enemies' forces, crossed the river in two different places. At the same time Cariovalda, the leader of the Batavian auxiliaries, crossed t'ue river where it was most rapid : but, being drawn into an ambuscade, he was killed, together with most of the Batavian nobility ; and the rest would have been totally cut off', had not Stertinius and Emiliug hastened to their assistance. Germa- nicus in the mean time passed the river without molestation. A battle soon after ensued ; in which the Germans were defeated with so great a slaughter that the ground was covered with arms and dead bodies for more than ten miles round : and among the spoils taken on this occa- sion were found, as formerly, the

chains with which the Germans iiad hoped to bind their captives.

In memory of this signal victory, Germanicus raised a mount, upon which he placed as tro- phies the arms of the enemy, and inscribed underneath the names of the conquered nations. This so provoked the Germans, though already vanfiuished and determined to abandon their country, thattiiey attacked the Roman army un- expectedly on its march, and put them into some disorder. Being repulsed, they encamped between a river and a large forest surrounded by a marsh, except on one side, where it was en- closed by a broad rampart, formerly raised by the Angrivarii as a barrier between them and the Chcrusci. Here another battle ensued ; in which the Germans behaved with great bravery, but in the end were defeated with great slaughter. After this second defeat, the Angrivarii submitted, and were taken under the protection of the Romans, and Germanicus put an end to the campaign. Some of the legions he sent to tlieir winter quarters by land, while he himself

embarked with the rest on the river Ems, in or- der to return by sea. The ocean proved at tirst very calm, and the wind favorable : but all of a sudden a storm arising, the fleet, consisting of 1000 vessels, was dispersed ; some of them were swallowed up by the waves ; others were dashed in pieces against the rocks, ordriven upon remote and inhospitable islands, where the men either perished with famine, or lived upon the flesh of the dead horses with which the shores soon appeared strewed; for, in order to lighten their vessels, and disengage them from the shoals, they had been obliged to throw over-board their horses and beasts of burden, nay, even their arms and baggage. Most of the men, however, were saved, and even great part of the fleet recovered. Some of them were driven upon the coast of Britain ; but the petty kings who reigned there generously sent them back. On the news of this misfortune, the Catti, taking new courage, ran to arms ; but Caius Silius being detached against them with 30,000 foot, and 3000 horse, kept them in awe. Germanicus himself, at the head of a numerous body, made a sudden irruption into the territories of the Marsi, where he recovered one of Varus's eagles ; and, having laid waste the country, he returned to the frontiers of Germany, and put his troops into winter quarters ; whence he was soon recalled by Tiberius, and never suffered to return into Germany again. After the departure of Germanicus, the more northern nations of Germany were no more molested by the Romans. Arminius carried on a long and successful war with Maroboduus king of the Marcomanni, whom he at last expelled, and forced to apply to the Romans for assistance ; but, excepting Ger- manicus, it seems they had

at this time no other general capable of opposing Arminius, so that Maroboduus was never restored. After the final departure of the Romans, however, Arminius having attempted to enslave his country, fell by the treachery of his own kindred. The Germans held his memory in great veneration ; and Taci- tus informs us, that in his time they still cele- brated him in their songs. Nothing remarkable occurs in the history of Germany from this time till the reign of Claudius I. A war indeed is said to have been carried on by Lucius Domitius the father of Nero. But of his exploits we know nothing more than that he penetrated beyond the river Elbe, and led his army farther mto the country than any of the Romans had ever done. In the reign of Claudius, however, the Ger- man territories were invaded by Cn. Domitius Corbulo, one of the greatest generals of his age. But, when he was on the point of forcing them to submit to the Roman yoke, he was recalled by Claudius, who was jealous of the reputation he had required. In the reign of Vespasian, a terrible revolt happened among the Batavians and those German nations who had submitted to the Romans ; an account of which will be found under the article Rome. The revolters were with difficulty subdued ; but in the reign of Do- initian the Dacians invaded the empire, and proved a more terrible enemy than any of the other German nations had been.

After repeated defeats, Domitian was at last obliged to consent to pay an annual tribute to Deccbalus king of the Dacians ; which continued

to the time of Trajan. But this warlike prince refused to pay tribute ; alleging, when it was de- manded of him, that ‘ he had never been con- quered by Decebalus.’ Upon this the Dacians passed the Danube, and began to commit hosti- lities in the Roman territories. Trajan, glad of this opportunity to Immble an enemy whom he began to fear, drew together a great army, and marched with the utmost expedition to tlie banks of tlie Danube. As Decebalus was not apprised of his arrival, the emperor passed the river with- out opposition, and entering Dacia laid waste the country. At last he was met by Decebalus with a numerous army. A bloody engagement ensued, in which the Dacians were defeated ; though the victory cost the Romans dear : the wounded were so numerous, that they wanted linen to bind up their wounds ; and to supply the defect, the emperor devoted his own ward- robe. After the victory, he pursued Decebalus from place to place, and at last obliged him to consent to a peace on the following terms: 1. That he should surrender the territories which lie had unjustly taken from the neighbouring na- tions. 2. That he should deliver up his arms, his warlike engines, with the artificers who made them, and all the Roman deserters. 3. That for the future he should entertain no deserters, nor take into his service the natives of any country subject to Rome. 4. That he should dismantle all his fortresses, castles, and strongholds. And, lastly, tliat he should have the same friends and foes

with tlie Romans. This peace was of short duration. Four years after (A. D. 105) Dece- balus began to raise men, provide arms, entertain deserters, fortify his castles, and invite the neigh- bouring nations to join him against the Romans as a common enemy. The Scythians hearkened to his solicitations ; but the Jazyges, a neigh- bouring nation, refusing to bear arms against Rome, Decebalus invaded their country. Here- upon Trajan marched against him ; but the Daˆ cian, finding himself unable to withstand him by open force, iiad recourse to treachery, and at- tempted to get the emperor murdered. His de- sign, however, proved abortive, and Trajan pur- sued his march into Dacia. That his troops might the more readily pass and repass the Danube, he built his celebrated bridge over that river. To guard the bridge, he ordered two cas- tles to be built ; one on each side the Danube. Trajan, however, as the season was far advanced, did not enter Dacia this year, but contented himself with making the necessary preparations. Early in the next spring (A. D. 106) Trajan set out for Dacia ; and, having passed the Danube by the new bridge, reduced the whole country, and would have taken Decebalus himself had he not put an end to his own life, to avoid falling into the hands of the Romans.

After the death of Decebalus, Dacia was re- duced to a Roman province ; and several castles were built in it, and garrisons placed in them to keep the country in awe. From the death of Trajan, the Roman empire began to decline, and the northern nations to be daily more and more formidable. Dacia indeed was held by the Ro- mans till the reign ofGalienus ; but Adrian, who succeeded Trajan, caused the arches of the bridge over the Danube to be broken down, lest thf

barbarians should make themselves masters of it, and invade the Roman territories. In the time of Marcus Aurelius, the Marcom5inni and Quadi invaded the empire, and gave the emperor a ter- rible overthrow. He continued the war, how- ever, with better succes? afterwards, and nivaded their country in his turc. In the end, the]Mar- comanni and Quadi were, by repeated defeats, brought to the verge of destruction ; insomuch that their country would probably have been re- duced to a Roman province, liad not Marcus Aurelius been diverted from pursuing his con- quests by the revolt of one of his generals.

After the death of iMarcus Aurelius, the Ger- manic nations became every day more and more formidable to the Romans. Far from being able to invade and attempt the conquest of these nor- thern countries, the Romans had the greatest difficulty to repress the incursions of their inha- bitants.

But for a particular account of their various invasions of the Roman empire, and its total destruction by them at last, see Rome. The immediate destroyers of the Roman empire were the Heruli; who, under their leader Odoacer, dethroned Augustulus the last Roman emperor, and proclaimed Odoacer king of Italy (A. D. 478). The Heruli were soon expelled by the Ostrogoths ; and these in their turn were sub- dued by Justinian I., who re-annexed Italy to the eastern empire. But the popes found means to obtain the temporal as well as spiritual juris- diction over a considerable part of the country, while the Lombards subdued the rest. These last proved very troublesome to the, popes, and at length besieged Adrian I. in his capital. In tliis distresshe applied to Charles the Great king of France ; who conquered both Italy and Ger- many, and was crowned emperor of the west (A. D. 800). See Germany.

We have now to notice the peculiar manners and customs of these nations. They are described by the Roman historians as resembling the Gauls ; and differing from other nations by their tall stature, ruddy complexion, blue eyes, yellow bushy hair, haughty and threatening looks, strong constitutions, and being proof against hunger, cold, and all kinds of hardships. Their native disposition appeared chiefly in their martial genius, and in their singular fidelity. Tlie for- mer they indeed carried to such an excess as came little sliort of downright ferocity : and as to the latter, they were greatly esteemed by other nations for it : insomuch that Augustus, and several of his successors, committed the guard of their persons to them, and other nations either courted their alliance, or hired them as auxilia- ries : though it must be owned that their ex- treme love of liberty, and tlu'ir hatred of tyraimy and oppression, often liurried them to treachery and murder, especially wlien tliey thought them- selves ill used by those who hired them; for in sudi cases they were easily provoked, and ex- tremely vindictive. In other cases, Tacitus tells as, they were noble, magnanimous, and benefi- cent, without ambition to aggrandise their do- minions, or invade those from whom they had received no injury; rather choosing to employ their strength and valor defeiisi\ely than oflen- sivcly ; to preserve tlieir own than to ravage those \or. X.

of their neighbours. Their friendship and inter- course were rather a compound of honest blunt- ness and hospitality, than of wit, humor, o(gallantry. All strangers were sure to meet with a kind reception from them to the utmost oi their ability : even those who were not in a ca- pacity to entertain them, reckoned it a duty to introduce them to those who could ; and nothing was held more detestable than to refuse them either the one or the other. They do not seem, indeed, to have had a taste for elegant entertain- ments ; they affected in every thing, in their houses, furniture, diet, &c., rather plainness and simplicity, than sumptuousness and luxury, if they learned of the Romans andˆGanls the use of money, it was rather

because they found it more convenient than their ancient way of bar- tering one commodity for anotlier; and then they preferred those ancient coins which had been stamped during the times of the Roman liberty, especially such as were either milled or cut in the rims, because they could not be so easily cheated in diem as in some others, which weiˆ frequently nothing but copper, or iron plated over with silver. This last metal they likewise preferred before gold, as more convenient for traffic ; and, as they became more feared by the Romans, they learned how to draw enough of it from them to supply their whole country, besides what flowed from other nations. As to mar- riage, every man was contented with one wife, except some few of the nobles, who kept a plurality, more for show than pleasure ; and both parties were so faitliful to each other, and chaste, true, and disinterested, in their conjugal aftifc- tion, that Tacitus prefers their manners in this respect to those of the Romans. The men sought not dowries from their wives, but bestowed them upon them. Their youth, in those cold climes, did not begin so soon to feel the warmth of love' as those in hotter ones : it was common with them not to marry young ; and those were most esteemed who continued longest in celibacy, be- cause they reckoned it an effectual means to make them grow tall and strong. To marry, or be concerned witli a woman, before they were full twenty years old, was accounted shameful wantonness. The women shared with their hus- bands not only the care of their families, and the education of their children, but even the hard- ships of war. They attended them in the field, cooked their victuals, dressed their wounds, ex- cited their courage to fight against their enemies, and sometimes by their own bravery recovered a victory when it was upon tlie point of being lost. In a word, they looked upon such constant at- tendance on them, not as a servitude, like the Roman dames, but as a duty and an honor. Yet what appears to have been still a harder fate upon t!ie ancient TJerman ladies was, that their great Odin, or Woden, excluded all those •from his valhalla, or paradise, who did not, by some violent death, follow their deceased husbands.

The authority of civil government was ex- tremely limited among the (Germans. In limes of peace they had no common or fixed magis- trate ; but the chief men of every district dis- pensed justice and accommodated diffi-rences

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In tlie far greater part of Germany, the form of government was a democracy, tempered indeed, and controlled, not so much by general and

positive laws, as by the occasional ascendant of birth and valor, of eloquence and superstition. Some tribes, however, on the coast of the Baltic, acknowledged the riglit of kings ; but their kings had not absolute or unbounded power; their authority consisted ratlier in the privilege of ad- vising than in the power of commanding. Mat- ters of small consequence were determined by the chief men ; affairs of importance by the wliole community.

On occasions of danger a general of the tribe was elected ; and, in circumstances of pressing and extensive danger, several tribes concurred in the choice of the same general. The bravest warrior was named to lead his countrymen into the field, by his example rather than his com- mands. Ilis power expired with the war, and in time of peace the German tribes acknowledged not any supreme chief. Princes were, however, appointed, in the general assembly, to adminis- ter justice, or rather to compose differences (minuunt controversias, Caisar) in their respec- tive districts. In the choice of these magistrates birth was regarded as much as merit. To each was assigned, by the public, a guard, and a council of 100 persons; and the first of the princes appears to have enjoyed a pre-eminence of rank and honor, which sometimes tempted the Romans to compliment him with the regal title.

They considered it as a badge of servitude to be obliged to dwell in a city surrounded with walls. Each barbarian fixed his independent dwelling on the spot to which a plain, a wood, or a stream of fresh water had induced iiim to give the preference. Neither stone, nor brick, nor tiles, were employed in these slight habita- tions. They were, indeed, no more than low huts of a circular figure, built of rough timber thatched with straw, and pierced at the top to leave a free passage for the smoke. That they considered cities as places of confinement, rather than of security, appears from the following cir- cumstance : when one of their tribes had shaken off the Roman yoke, their countrymen required of them, as an evidence of their having recovered liberty, to demolish the walls of the towns which the Romans had built in their country.

The military weapons of the cavalry among the Germans were shields and spears, which they used in common with the foot, but the latter had, besides their darts, bows and slings, and seldonc had recourse to their pikes and swords. Their arms were esteemed their favorite furniture and chief ornament ; so that they never appeared in public without them. The sword was so sacred, that the most solemn and obligatory oaths were those which they took upon a naked blade. Nor did they assist in any solemn rite, without their sword, shield, or spear. They even wore them at their familiar visits, banquets, and religious dances ; and they were frequently to be burnt or buried with them, when they died.

There is scarcely any thing in which the Ger- mans, though nearly allied in most of their other customs to the Gauls, were more opposite to them than in their funerals. Those of the latter

were performed with great pomp and profusion ; those of the former willi the same plainness and simplicity which they observed in all other things. The only grandeur they affected in thera was, to bum the bodies of their great men with some peculiar kinds of wood ; but the funeral pile was neither adorned with the clothes and other furniture of the deceased, nor perfumed with fragrant herbs and gums; each man's ar- mour, that is, his sword, shield, and spear, were flung into it, and sometimes his riding-horse. Tiie Danes, indeed, flung into the funeral pile of a prince, gold, silver, and other precious tilings, wliich the chief mourners, who walked in a gloomy guise round the fire, exhorted the by- standers to fling liberally into it in honor of the deceased. They afterwards deposited their ashes in urns, like the Gauls, Romans, &c., as plainly appears from the vast numbers which have been dug up all over the country, and il- lustrated by dissertations written upon tliem, by several learned moderns of that nation. And tlie sacrifices they offered for their dead, the presents they made to them at their funerals, and all the other superstitious rites performed at them, were done in consequence of those notions, Avhich their ancient religion had taught them, as to the immortality of the soul, and the bliss or misery of a future life. At these funerals, as well as in all their other feasts, they were famed for drinking to excess ; and one may say of them, above all the other descendants of the ancient Celtes, that their hospitality, banquets, &c., con- sisted much more in the quantity of strong liquors, than in the elegance of eating. Beer and strong mead, their natural drink, were reckoned the chief promoters of health, strength, fertility, and bravery ; upon which account, they indulged themselves to the utmost in them, not only in their feasts, and before battle, but even in their common meals.

As the ancient Germans did not commit any thing to writing, and as none of the ancient writ- ers have given us any account of it, it is impos- sible to guess how soon the belief of their great Woden, and his paradise, was received among them. It may have been much older than the times of Tacitus, and he have known nothing of it, from their care in concealing their religion from strangers ; but as they conveyed their doc- trines to posterity in songs and poems, and most of their northern poets tell us that tliey have drawn their intelligence from those very poems wliich were preserved amongst them, we may justly suppose that whatever doctrines are con- tained in them were formerly professed by tlie generality of the nation, especially as we find their ancient practice conformable to it. Thus, as the surest road to this paradise was to excei in martial deeds, and to die intrepidly in the field of batde ; and as none were excluded from it but base cowards, and betrayers of their coun- try, it is natural to think that the

signal and ex- cessive bravery of the Germans flowed from this ancient belief of theirs : and if their females were so brave and faithful as not only to share with their husbands all the dangers and fatigues of war, but at length to follow them by a volun- tary death into the other world, it can hardly be

attributed to any thing else but a strong persua- sion of their being admitted to live with them in that place of bliss. This belief therefore, whether received originally from the ancient Celtes, or af- terwards taught them by the since deified Woden, seems, from their general practice, to have been universally received by all the Germans, though they might differ from one another in their no- tions of that future life. The notion of a future happiness obtained by martial exploits, espe- cially by dying, sword in hand, made them be- wail the fate of those who lived to old age, as dishonorable here and hopeless hereafter : upon which account they had a barbarous way of send- ing them into the other world, willing or not willing. And this custom is said to have lasted several ages even after their receiving Christianity, especially among the Prussians and Veneti. These murders were preceded by a fast and followed by a feast.

GERMAN'DER, n. s.~\ Trench germandree ; Germe, n. s. I LrL germen. A plant;

Ger'mik, n.s. > sprout ; shoot; a

Ger'minate, i;. n. i sprouting seed: to

Geumina'tion, n. s. J bud ; increase ; or grow : used in a literal and figurative sense.

Though palaces and pyramids do slope Their heads to their foundations ; though the trezisure Of nature's gcrmins tumble all together. Even 'till destructioa sicken : answer me To what I ask you. S/iakspeare, Macbeth.

Thou all-shaking thunder.

Strike flat the thick rotundity of the world ;

Crack nature's mould, all germins spill at once

That make ungrateful man. Id. King Lear.

For acceleration of germination, wo shall handle the subject of plants generally. Bacon.

This action is furthered by the chalcites, which hath within a spirit that will put forth and germinate, as we see in chym>.cal trials. Bacon's Xat. History.

Whether it be not made out of the germe, or trea- dle of the egg, doth seem of lesser doubt. Browne.

The seeds of all kinds of vegetables being planted near the surface of the earth, in a convenient soil, amongst matter proper for the formation of vegeta- bles, would germinate, grow np, and replenish the face of the earth. Woodward.

Suppose the earth should be carried to the groat distance of Saturn ; there the whole globe would be one frigid zone j there would be no life, no germina- tion. Bentley's Sermons.

Germander, in botany. See Teucrium.

Germander, Rock. See Veronica.

GERMANICUS CˆSAR (Claudius), the son of Drusus, and nephew to the emperor Tiberius, who adopted him. He was much renowned as a general, and took the title of Gcrmanicus from his conquests in Germany; but though he re- fused the empire, offered to him by his army, Tiberius, jealous of his success and popularity, caused him to be poisoned, A. 1).29, a-jed thirty- four. He was a protector of learning ; and com- posed some Greek comedies and I-atin poems, some of which are still extant. Many medals of this commander were struck by his son Cali

gula among which are figs. 1 and 2. In the first he is represented in his triumphal chariot, his right hand being elevated and bearing the eagle in his left which he had recovered in a battle with the Germans; inscription germ a mcuscesar. In the second the eagle also is preserved and the inscription bears reference to its capture.

Fig. 1.

Fig. 2.

GERMANO (St.) is a town of Naples, in the Terra di Lavoro, at the foot of the hill on which stands the Benedictine abbey of Monte Cassino. The passage of the mountain is hazardous, either on mules or on foot. In 1734 it was taken by the Spaniards ; and on the 16th March, 1815, the

Austrians defeated jNIurat here. Near this are the ruins of Cassinum, an ancient town destroyed by Theodoric, king of the Goths. Inhabitants 5000. Seventeen miles south-east of Sora, and forty-eight N. N. W. of Naples.

GERMANTOWN, a town of New York, in Columbia county, containing 516 citizens in

1796.

Germantown, the name of two towns in North Carolina: 1. in Hyde county, Newbern district; 2. the capital of Stokes county, on a branch of the Dan, 528 miles south-west by south of Philadelphia,

Germantowx, a town of Pennsylvania, in Philadelphia county, chiefly inhabited by Ger- mans. It has one principal street, mostly of stone buildings, two miles long, with Lutheran and Calvinist churches, Quaker meeting-house, &c. Stockings are manufactured to a great extent, and there are several tanneries. It is seven miles north of Philadelphia.

GERMANY, as a modern empire, is in strict propriety no longer existent ; the repeated victories of the French in the late continental wars having, as we liave shown in a preceding part of this work, induced the emperor of Austria (see that article) to relinquish his ancient title of emperor of Germany, and that prince having no other preponderance in the general Germanic con- federation, settled by the congress of Vienna, than that which arises from the extent of his do- minions. See Diet and Elector.

Yet, as the new confederation maintains the old system so far as to combine the Germanic states in a diet, we may here notice some of the greater geograjihical and statistical features com- mon to those states, referring to each of them as d istinctly treated in their respective places of our alphabet for more minute particulars.

The following is a list of the states, with t!ie number of votes, and the revenue and population of each, according to the official returns in 1818 : —

1.1

14H

GERMANY.

Members of tlie Diet.

Austria (exclusive of

Hungary, Galicia,

and other states out

of the empire) Prussia (exclusive of her

Polish territories) Saxony, kingdom . Bavaria .... Hanover .... Wirtemberg . . Baden, grand duchy Hesse-Cassel, electorate Hesse-Darmstadtjgrand

duchy .... Holstein and Lauen-

burg, duchies Luxemburg, grand du'

chy .... Brunswick, duchy Mecklenburg-Schwerin

grand duchy Nassau, duchy Saxe-Weimar,

duchy Saxe-Gotha, duchy Saxe-Cobourg . . Saxe-Meinungen Saxe-Hildburghausen

Carry over

grand

Population from the of- ficial return in 1818.

Revenue computed in Pounds ster- linK.

50

9,482,227

7,923,439 1,200,000 3,560,000 1,305,351 1,395,463 1,000,000 540,000

619,500

360,000

214,058 209,600

358,000 302,767

201,000

185,682

80,012

54,400

27,706

6,370,000

4,300,000 850,000

1,800,000 900,000

1,000,000 550,000 380,000

370,000

200,000

120,000 130,000

150,000 176,000

150,000

150,000′

55,000

35,000

20,000

Members of the Diet.

Brought over . . . Mecklenburg – Strelitz,

grand duchy . . Oldenburg, gr. duchy Anhault-Dessau, duchy Anhalt-Bernburg . . Anhalt-Kothen . . Schwartzburg-Sonders-

hausen, principality Schwartzburg – Rudol-

stadt ... HohenzoUern – Hechin

gen ... Lichtenstein HohenzoUern – Sigma-

ringen ... Waldeck, county . Reuss (Elder Branch)

principality . . Reuss (Younger Br.) Hesse-Homburg Schaumburg-Lippe Lippe-Detmold |The free town of La

beck .... Do. of Frankfort Do. of Bremen Do. of Hamburgh

29,019,205 17,756,000

50

69

Population from the of- ficial return in 1818.

29,019,205

71,769 217,769 52,947 37,046 32,454

45,117

53,937

14,500 5,546

35,360 51,877

22,255 52,205 20,000 24,000 69,062

40,6.50

47,850

48,500

129,800

Revenue i

computed in

Pounds ster-:

lins. I

30,091,849

£ 17,756,000|

50,00o'

150,000 60,000, 30,000; 23,000'

25,000,

22,000;

80,000 3,000

30,000 40,000

;3,000|

29,000 17,000 18,000 50,000

30,000

60,000

40,000

120,000

18,646,000

The entire number of votes therefore in the Germanic diet is, according to this table, sixty- nine; but, as it would be evidently improper to give the smaller states an equal voice with the larger, a repartition of votes has been agreed on, in the manner we have more particularly stated in the article Diet.

Germany, thus defined, is bounded on the north by Denmark and the Baltic ; on the east by Poland ; on the south by Hungary, Italy, and Switzerland ; and on the west by France and tlie Netherlands. It is more extensive than either France or Spain, being about 650 miles from north to south, and 600 from east to west ; and embraces a surface of 220,000 square miles, with a population of more than 30,000,000 of inhabi- tants, or about 136 individuals to each square mile.

It is physically divided into two principal por- tions by the Sudetic chain of mountains, which beginning with the Westerwald in Westphalia, and traversing Hesse-Cassel, the south of Saxony, and Silesia, end in the Carpathians, on the fron- tier of Poland and Hungary. Almost all the country to the north of this range is flat, and the rivers hold a northerly course, without meeting any formidable impediment, until they reach the level of the German Ocean or the Baltic. South- ward of this chain Germany is much more d –

versified, consisting in part of extensive plains, but traversed also by vast ranges of mountains, as the Alps, extending from Switzerland on the west

to Hungary on the east. In its central part is a great ridge running north-west from the Bris- gau to Egra, and forming afterwards, by a semi-circular curve, the southern half of the barrier that separates Bohemia from the adjacent coun- tries. The course of the rivers also in southern Germany is less uniform than in the north : the Inn and the other great streams proceeding from the Alps run northward, and are absorbed in the Danube ; while other rivers, less both in number and magnitude, flow into the Danube by a south- erly course, from Franconia and Moravia ; and the Neckar and the Maine convey their waters westward to the Rhine. The inhabitants there- fore with great propriety call the southern half LTpper, the northern Lower Germany; and for the same reason apply the terms Upper and Lower Saxony, and Upper and Lower Rhine.

Sixty navigable rivers are said to penetrate this part of Europe, among which are the Da NUBE, the Rhine, the Maine, the Weser, the Elbe, and the Opek. See those articles.

The oldest canal is said to have been begun by Charlemagne in 793, to join the Rednitz and Altmuhl : it is not yet complete. The principal

are, the canal of Kiel, which joins the Baltic to the North Sea. That of Traremunde, which goes from Lubeck to Hamburgh ; and a few of considerable importance, but not of great length, in the Prussian states. Inland navigation is par- ti-cularly wanted in Southern Germany. The con-gress of Vienna enacted that, in the case of navi- gable rivers running through the states of differ- ent powers, commissioners should be named by these powers to regulate all that regarded the navigation, on the principle that such rivers ought to be open to all the nations interested, and that every thing should be done to diminish the obstacles to free intercourse. Other waters are not numerous in Germany ; there are a few small lakes in Bavaria, Austria, Pomerania, and Brandenburg; but the principal are in llie duchy of JMecklenburg. The lake of Constance belongs partly to Germany and partly to Switzerland. Germany on the other hand contains upwards of 1000 mineral springs and baths, cf which the most celebrated a7e at Carlsbad in Bohemia, at Toplitz in Austria, at Seltzer on ihe Upper Rhine, at I'yrmout in ^^'estphalia, and at Aix-la-Cha- pelle.

Germany, in point of climate, is as various as in her other great geographical features. It is colder in the north, than in Britain ; but the summer, even there, is on the whole warmer than ours. The range of latitude is from 46ˆ to 54° N., and the air is almost every where salu-

brious. But Vienna and some other northern districts are considered unhealthy, from their marshy position. Sandy plains and barren heaths abound in the north-east, swamps and marshes in the north-west ; but many of the in- terior and south-west parts are very fertile. A large proportion of the Prussian states is of a sandy and unproductive character : Bavaria, Wirtemberg, and the hereditary states of Aus- tria, much diversified ; while Saxony is in ge- neral fertile.

Germany grows wheat, barley, oats, and all our kinds of corn : flax, rapeseed, madder, and hops : but agriculture as a science, particularly in the south, is in a backward state. Valuable tracts lie uncultivated and there are throughout a number of extensive forests, in which wohes, wild boars, lynxes, &c., still hold dominion. The finest pastures are in the north-west, particularly in East Friesland, Oldenburg, Mecklenburg, and some parts of Hanover and Holstein. Here also are found excellent cattle and some good breeds of horses. Sheep are general throughout Germany, and the Merino breed, introduced a century ago into Saxony, is said to be equal to the finest of Spain. Our corn laws prohibiting, in fact, the German farmers to export that com- modity to Great Britain, have been the means even in the last year (1826) of turning a more de- lided attention to the improvement of the Ger- man wools.

The rvincs made along the banks of the Rhine liave long been celebrated. Next to these are the tvincs of the Moselle, and of particular districts in Ihe Austrian provinces. In the latter only, and in a few other parts of the south of Germany, silk is cultivated ; and while some of the rivers, particularly the Danube and the Elbe, aflford

small particles of gold, they harJly repay the expense of \ashing. The mountains are rich in iron, copper, lead, tin, silver, cobalt, and bis- muth, particularly the Erzgebirge chain in Saxony, and the Hartz Mountains, and those of Carinthia and Styria. Bavaria, as well as the duchy of Saltzburg, is also rich in salt mines. The mines of Idria, in Carniola, yield annually 5000 cwt. of quicksilver. Fullers" earth and porcelain clay are found near Dresden, and form the basis of extensive manufactures. jNIarble is found in various parts ; and coal is wrought in Westphalia, Saxony, and other provinces. In the south the great majority of the coal mines is said to be unwrought. The manufactures of Germany are not confined to any particular dis- tricts, as in England. The stock of wool being equal only to the home consumption, and the sheep of Germany which hardly exceed in nimiber those of England (a country ofnot one-third the extent), being scattered over the country, the woollen manufactures are in like manner diffused on a small scale throughout various towns. But flax being produced in great abundance, and of the best quality, in Northern Germany ; the linen made there has been famous for several centuries. It is

manufactured in Silesia, Saxony, and West- phalia, not only for home consumption, but also for export. Cotton manufactures are of recent origin here ; and a great competition has been intro- duced between their manufactures and ours. Cheapness of labor is a decided advantage pos- sessed here, but the machinery is inferior and their fuel dearer than ours.

In the important branch of hardware the Germans are also inferior to our manufactures, but they excel us perhaps in articles of wood, ivory, toys, &c.

Tlie imports of Germany are colonial produce from the East Indies, and America ; wine from France and Spain ; cottons and hardware from England. The chi«f commercial cities are Vi- enna, Hamburgh, Lubeck, Bremen, Frankfort on the Maine, Breslau, Leipsic, Augsburg, Nurem- berg ; to these are to be added in the second class Stralsund and Stettin on the Baltic, and in the interior Magdeburg, Ulm, and Naumburg. The pride of the educated ranks has proved a great impediment to the extension of commer- cial undertakings in Germany, the gentry])refcr- ring to educate their sons for the army, and al- lowing commerce to be confined to the inhab- itants of the free towns. Navigation and the fisheries are both very limited pursuits, being con- fined to the -shores of the Baltic and North Seas.

Several of the southern German states are still Catholic, but toleration prevails in most of them. The Lutheran and Calvinistic churches are chiefly in the north. Under the former con- stitution, several of the Catholic dignitaries were princes of the empire; but they have happily lost their temporal power, and most of the Catholic bishops receive salaries from the state. Many of the abbeys and monasteries were secularised by the treaty of Luneville, and the chief of those remaining are in Austria. In some of the north- ern parts of Germany, the Lutherans and Cal- vinists have agreed to relinquish their distin- guishing appellations, and unite in one body,

as tlie professors of the Evangelical Faith. Jews are numerous in most parts of Germany ; their political condition varying in different states. A few Greek Christians are likewise found in some of the south-eastern provinces.

Germany, in its language and literature, pre- sents wide fields of interesting research and at- tainment. The former embraces a vast number of dialects, and is altogether a barbarous mixture of the Northern and Latin tongues of all ages : the Latin has been very successfully cultivated of late by the

learned, and what is called High German, spoken by the superior and educated classes, is a copious and tolerably harmonious language. But the Low German of the North is dreadfully harsh to a foreign ear. German literature presents a large and useful mass of ma- terials ; and in the history of literature her writers excel; as indeed in every kind of his- torical research. But they are abstract in me- taphysics ; young in politics, and the true doc- trine of political liberty ; verbal as critics ; and sceptical in theology, particularly her modern Protestant divines. Poetry has been said to date in Germany no further back than the middle of the eighteenth century ; of course it is undisciplined by taste, and chiefly lyrical. Studying with a view to publish is often the set- tled object of life here : copyright being un- limited in duration ; and authorship considered a source of regular income. The libraries at the chief universities are on a very useful plan, con- taining an ample supply of recent publica- tions ; and booksellers have long acted on a plan of exchanging all new publications among each other. . All this, however, leads in Germany to the publication of much of that knov.'ledge which in other countries is not consigned to the press ; and often not to paper. In the fine arts the Germans are not backward : engraving is carried in some cities to a pitch of considerable excel- lence; and painting, particularly of late, has been successfully cultivated ; perhaps, however, their greatest progress is in music. In medi- cine, particularly in surgery, they are deficient, wanting almost every where hospital practice.

^'e must add, however, that in the mathe- matics and mechanics, in astronomy, geography, and chemistry, few countries can boast so long a list of able writers.

There are twenty-one universities in Germany (formerly thirty in number), of which thirteen are Protestant, viz. Berlin.

*Gottingen ... in Hanover. Leipsic"^*

Jena V ... in Saxony. Halle >

Heidelberg . . . in Baden. Tubingen .... in Wirtemberg. Erlangen .... in Franconia. Marburg .... in Hesse-Cassel. Giessen .... in Hesse-Darmstadt.

Kiel in Holstein.

Rostock .... in Mecklenburg Schwerin. Greifsvvalde ... in Pomerania.

Six Catholic, viz. Vienna. Prague

Paderborn ... in Prussian Westphalia, Landshut ... in Bavaria. Wurtzburg . . . in Franconia. Freyburg ... in Baden, and two partly Catholic and partly

Protestant, viz. Breslau in Silesia, and Bonn on the Rhine ; the latter was created in 1818. Wittenberg, Erfurt, Olrautz, and several others, have ceased to be universities. The total number of students at these seminaries is between 8000 and 9000 ; Gottingen is the most numerously attended, having above a tenth of the whole. Schools, literary societies, and museums, are every where increasing.

We now advert to the history of this mighty aggregate of nations in modern times. The extensive empire erected by Charles the Great, which he himself imprudently began to divide among his sons during his own lifetime, was not long enjoyed by his posterity. In France the Carlovingian race continued to reign for 183 years after his death ; but in Germany it continued only seventy four years; producing, within that period, six emperors, viz. Louis I. his son, Lothair I. and Louis II. his grandsons ; Charles IL, his great grandson ; Louis III., son of Charles IL, and Charles III., who was deposed in 888. On the deposition of Charles III. the German princes resumed their ancient independence ; and, rejecting the Carlovingian race (according to some), elected Arnulph, king of Bohemia. Others, however, say, this Arnulph was the son of Carloman, a descendant of Charlemagne. Be that as it may, he reigned twelve years, and con quered his rival Guido, or Guy, who had been set up in opposition to him, and crowned king of Germany, by pope Formosus in 892 ; who also, upon the death of Guy, next year, crowned his son Lambert. Arnulph, however, reigned till 899, when he died, and was succeeded by his son Louis IV., whom some style the last of the male line of Charlemagne. Upon his death, in 911, the nobles elected Otho, duke of Saxony, but he, being old, recommended Conrad, duke of Franconia, whom they elected accordingly in 912. Conrad, dying in 920, recommended to their election Henry I., surnamed the Fowler, the son of Otho. Henry conquered the Danes, Hunns, Vandals, and Bohemians ; and was succeeded, in 937, by his son Otho I., surnamed the Great; who, after reigning twenty-six years as king of Germany, was crowned emperor in 962. After this he reigned other ten years ; and, in 973, was succeeded by his son Otho IL, who, dying in 983, was succeeded by his son Otho III., a boy of ten years of age. The reigns of most of these monarchs contain little remark- able, except their contests with the popes. What more immediately merits attention is the progress of government in Germany, which was in a great measure opposite to that of the other kingdoms of Europe. When the empire, erected by Charlemagne, fell asunder, all the indepen- dent princes assumed the right of election ; and those now distinguished by the name of electors had no legal or peculiar right to appoint a suc- cessor to the imperial throne. Tliey were only the officers of the emperor's or king's household, his secretary, steward, chaplain, marshal, or

master of liorse, &c. By degrees, however, as they lived near his person, and had independent territories of their ovFn, they increased tlieir influence and authority ; and in the election of Otho III., A.D. 984, acquired the sole right of elect- ing the emperor. Thus, while in the other kingdoms of Europe the dignity of the great lords, who were all originally allodial or inde- pendent barons, was diminished by the power of the king, as in France, and by the influence of the people, as in Great Britain ; in Germany, on the other hand, the power of the electors was raised upon the ruins of the emperor's supre- macy, and of the people's jurisdiction.

Upon the death of Otho III., in 1001, an interregnum of four months ensued ; after whicii the princes elected Henry II., surnamed tlie Lame, the grandson of Henry I., wiio reigned twenty-three years. Of this emperor's successors, till the accession of the house of Austria, it is only necessary here to give a brief chronological list. Conrad II., surnamed Salicus, the son of Her- man, duke of Franconia, was elected in 1024; and after reigning nearly fifteen years, was succeeded, in 1039, by his son Henry III.; wlio, in 1056, ■was succeeded by his son Henry I\^,tliough not without opposition from Rodolph of Suabia, and Herman of Luxemburg. Henry IV'., after having reigned no less than fifty years, was deposed, in 1106, by his unnatural son Henry V.; on wiiose death, in 1125, Lothaire II., duke of Saxony, was elected. He died in 1137, and next year the diet chose Conrad III., duke of Fran- conia, the son of Frederick, duke of Suabia. He was succeeded, in 1152,by his brother, Frederick L, surnamed Barbarossa, who having embarked against the infidels, and taken Iconium, was drowned in Syria, in 1190. He was suc- ceeded by his son Henry VI., who behaved so villanously to Richard I. of England, and who was at last poisoned by his wife Constance, and succeeded by his son Otho IV., in 1197. But a party of the princes having chosen Pliilip, duke of Suabia, Henry's brother, a civil war ensued, which ended in favor of Otho, Philip being assassinated in 1208. l^ut four years after Otiio was deposed, and Frederick II., his younger brother, then king of Sicily, was elected emperor, and crowned by pope Honorius III. in 1220. Having afterwards oflTended pope Gre- gory IX., by making peace with the sultan of Babylon, Frederick was excommunicated, which gave rise to the factions of the Guelphs and Gibelines, who, by their inveterate virulence against each other, disturbed the empire for several ages. Conrad I'. was elected emperor on the deatli of his father Frederick II., in 1250. See Con It An IV. He died four years after, and was supposed to have been poisoned. His son was still more unfortunate. After an interregnum of two years, Richard, duke of Cornwall, brother to Henry HI. king of En- gland, was olectcd emperor in 1257; but, that prince residing mostly in England, Alphonso X., king of Castile, was elected in ojiposition to hnn. At last Rodolph I., count Haps-

linr,', was elected emperor in 1273. He coii- '^picred an

deur of the house of Austria, though upon his death, in 1291, Adolphus of Nassau was chosen emperor; but had not reigned seven years, when he was defeated and slain by Albert of Austria, the son of Rodolph, who was crowned emperor in 1298.

Albert I. was equally ambitious and rapacious, but having seized upon the paternal estates of his nephew, John of Suabia, he was assassinated by that prince in 1308. Henry VII. of Luxem- burg was then elected, upon whose death, in 1313, an interregnum of a year took place, when Louis V. the son of Louis duke of Bavaria, by Matilda, daughter of Rodolph I., was chosen by one party of the electors, and Frederick, the son of Albert I., by another. But Frederick, being taken prisoner, was obliged to renounce his dignity; and Louis, being killed by a fall from his horse in 1347, was succeeded by his other competitor, Charles I\^, the son of- John king of Bohemia, and grandson of Henry Vll, This prince was a great encourager of learning, and in his reign the golden bull, establishing the Germanic constitution, was given by pope Innocent VI. in 135G. Charles, dying in 1378, was succeeded by his son Wenceslaus, who was twice imprisoned by the Bohemians, and at last deposed in 1400, when Rupert, Prince Palatine, was elected. Rupert was succeeded, in 1410, by Jodocus Margrave of Aloravia, who, in 1411, was displaced by Sigismund, king of Hungary and Bohemia, the son of Charles IV. Albert II., duke of Austria, having married this mo- narcii's daughter, succeeded him in all his dominions in 1437, but reigned only two years. His sou Frederick III., archduke of Austria, &c. was elected emperor in 1440; and, from this period, the imperial dignity continued in the male line of that family for 300 years. His suc- cessor Maximilian T. married the heiress of Charles, duke of Burgundy ; whereby Burgundy and the seventeen provinces of the Netherlands w^ere annexed to the house of Austria. Charles v., grandson of Maximilian, and heir to the kingdom of Spain, was elected emperor, A. D. 1519. Under him Mexico and Peru were con- quered by the Spaniards ; and in his reign hap- pened the reformation in several parts of Ger- many ; which, however, was not confirmed by autliority till 1648, by the treaty of Westphalia.

The reign of Charles V. was continually dis- turbed by his wars with the German princes and the French king, Francis I. Thougii successful in the becjinning of his reign, his good fortune, towards the conclusion of it, forsook him ; \l)ich, with other causes, occasioned his abdication of the crown. His brother Ferdinand I., who suc- ceeded him in 1558, proved a moderate prince with regard to religion. He caused his son, Maximilian, to be elected king of tlie Romans in his own lifetime, and died in 1564, having or- dered, by his la.st will, that if either his own male issue, or that of his brother Charles, should fail, his Austrian estates should revert to his second

daughter Anne, wife to the elector of Bavaria, and her issue. This gave rise to the opposition afterwanls made by th.e house of Bavaria to the Pragn-.alic sanction, in favor of the empress queen of Hungary on the death of her fatiier. The

reitrn of Maximilian II. was disturbed with internal commotions, and an invasion from the Turks ; but he died in peace in 1576. lie was succeeded by his son Rodolph II., who was in- volved in wars with tlie Hungarians, and in diffe- rences with his brother Matthias, to whom he ceded Hungary and Austria in his lifetime, and by vrhom he was succeeded in the empire. Under Matthias the Lutherans and Calvinists were so much divided, as to threaten the empire with a civil war. His ambition, however, at last tended to reconcile them; but the Bohemians revolted, and threw the imperial commissaries out of a window at Prague. This gave rise to a ruinous war, which lasted thirty years. Matthias ex- pected to have exterminated both parties ; but they formed a confederacy, called the Evangelic League, which was counterbalanced by a Catho- lic League. Matthias, dying in 1618, was suc- ceeded by his cousin Ferdinand II. ; but the Bohemians offered their crown to Frederick, the elector Palatine, the most powerful Protestant prince in Germany, and son-in-law to king James I. That prince was so imprudent as to ac- cept of the crown ; but he lost it, being entirely defeated by the duke of Bavaria and the imperial generals at the battle of Prague ; and he was even deprived of his electorate, the best part of which was given to the duke of Bavaria. The Protes- tant princes in Germany, however, had among them, at this time, many able commanders, who were at the head of armies, and continued the war with wonderful obstinacy. Among these were the margrave of Baden Durlach, Christian duke of Brunswick, and count Mansfield. Chris- tian IV., king of Denmark, declared for them; and Richelieu, the French minister, was not fond of seeing the house of Austria aggrandised. The emperor, on the other hand, had excellent gene- rals; and Christian, having put himself at the head of tlie Evangelic League, was defeated by Tilly, an Imperialist of great military reputation. The Protestants formed a fresh confederacy at Leipsic, of which the celebrated Gustavus Adolphus, king of Sweden, was the head. An account of his victories will be found under the article Sweden. At last he was killed at the battle of Lutzen in 1632. But the Protestant cause did not die with him. He had brought up a set of heroes, such as the duke of Saxe-Weimar, Torstenson, Banier, and others, who shook the Austrian power ; till, under the medi- ation of Sweden, a general peace was concluded among all the belligerent powers, at Munster, in 1648: which formed the basis of the subsequent political system of Europe.

Ferdinand III. succeeded his father; but died in 1657, and was succeeded by his son Leopold I., a severe, unamiable, and not very fortunate prince. He had two great powers to contend with, France and the Turks, and was a loser in his wars with both. Louis XIV. had the two celebrated generals, Conde and Turenne, in his service. The latter had already distinguished himself by great exploits against the Spani- ards; and, on the accession of Leopold, the court of France had taken the opportunity of confirming the treaty of Munster, and attach- ing to her interest several independent princes of

Germany. The tranquillity which now too place, however, was not established upon any per- manent basis. War with Spain was resumed in 1668; and the great successes of Turenne in the Netherlands excited the ambition of the prince of Conde to attempt the conquest of Franclie Compte, then under the protection of the house of Austria. This was accomplished in three weeks : but the rapid success of Loui s had awakened he jealousy of his neighbours to such a degree, that a league was formed against him by England, Holland, and Sweden; and the French monarch, dreading to enter the lists with such formidable enemies, consented to the treaty of Aix-la-Chapelle ; by which, among other articles, Franche Compte was restored.

The flames of war were soon renewed by the insatiable ambition of Louis XIV., who, having entered into an alliance with Charles II. of Eng- land, aimed at the total overthrow of the Dutch republic. The events of that war will be found related under the article United Provinces. The misfortunes of the Dutch excited the com- passion of the emperor and king of Spain, who openly declared themselves their allies. Turenne was opposed by the prince of Orange and the celebrated general Montecuculi, whose artful conduct eluded even the penetrating eye of Tu- renne, and he sat down suddenly before Bonne. Here he was joined by the prince of Orange, who had likewise eluded the vigilance of the French generals. Bonne soon surrendered, and several other places in Cologne fell into the hands of the allies ; who likewise cut off the communication between France and the United Provinces ; so that Louis was soon obliged to recal his armies, and abandon all his conquests with greater rapidity than they had been made. In 1674 he was deserted by his ally Charles II. of England, and the bishop of Munster and elector of Cologne were compelled to renounce their allegiance to him ; but, notwitlistanding these misfortunes, he continued every where to make head against his enemies, and even meditated new conquests. With a powerful army he again invaded Franche Compte in person, and, in six weeks, reduced the whole province. In Alsace, Turenne de- feated the imperial general at Sintzheim, and ravaged the palatinate, surprised 70,000 Ger- mans, cut in pieces a considerable detachment at Mulhausen, routed the elector of Branden- burg, who had been entrusted

with the chief command, near Colmar; gave a third body a similar fate at Turkheim ; and obliged the whole German forces at last to evacuate the province, and repass the Rhine. In consequence of these disasters, Montecuculi was recalled to act against Turenne. The military skill of the two com- manders seemed to be nearly equal; but, before the superiority could be adjudged to either, Tu- renne was killed by a cannon ball, in reconnoitre- ing a situation for erecting a battery. By his death the Imperialists obtained a decided supe- riority. Montecuculi penetrated into Alsace ; and the French, under de Lorges, nephew to the deceased general, were happy in being able to avoid a defeat. Part of the Germap army now sat down before Treves, where they were opposed by Mareschal Crcqui; but his negligence exposed

nim lo such a dreadful defeat, that he was obliged to tiy into the city with only four attendants. Here he endeavoured in vain to animate the people to a vigorous defence. Tlie garrison mutinied ; and, when he refused to sign the capitulation they made, delivered him up prisoner to ttie enemy. Louis, in the mean tmje, had taken the field in person against the prince of Orange ; but the disastrous state of affairs in Germany induced him to recal the prince of Conde to make head against Montecuculi. In this campaign the prince seemed to have the ad- vantage. ■ He compelled the Germans to raise the sieges of Hagenau and Saverne ; and at last to repass the Rhine, without having been able to force him to a battle. This was the last cam- paign made by these celebrated commanders ; both of whom now retired from the field to spend the remainder of their days in peace. The excellent discipline, however, which the two great French generals had introduced into their armies, still continued to make them very formidable. In Germany the duke of Lorrain, who had re- covered Philipsburg, was repeatedly defeated by Mareschal Crequi, who had been ransomed. In Flanders the prince of Orange was over- matched by the duke of Orleans and Marshal Luxemburg. A peace was at length concluded at Nimeguen in 1679, by which Louis secured Franche Compte, with many cities in the Netherlands ; while the king of Sweden was reinstated in those places of whicli he had been stripped by the Danes and Germans. This tranquillity, however, was of sliort duration. Louis prepared for new contests: possessed him- self of Strasburg by treachery ; and dispossessed tlie elector palatine and the elector of Treves of the lordships of Falkenburg, Germansheim, and Valdentz. On the most frivolous pretences he had demanded Alost from the Spaniards; and, on their refusal, seized upon Luxemburg. Ilis conduct, in short, was so intolerable, that the prince of Orange, his inveterate enemy, found means to unite the whole empire in a league against him. Spain and

Holland became parties in the same cause ; and Sweden and Denmark seemed also inclined to accede to the general confederacy. Notwithstandinc: this for- midable combination, Louis seemed still to have the advantage. He made himself master of Philipsburg, Manheim, Frankcndal, Spire, Worms, and Oppenheim ; the palatinate was ravaged dreadfully; the towns were reduced to ashes ; and the people, driven from their habi- tations, were left to perish through the inclemency of the weather and the want of provisions. By this cruelty his enemies were rather exasperated than vanquished : the Imperialists, under the duke of Lorrain, resumed their courage, and put a stop to the French conquests. At length all parties, weary of a destructive war, consented to tiie treaty of Ryswick in 1G97.

By the treaty of Ryswick, Louis XIV. gave up to the empire I'ribourc:, Brisac, Kehl, and Philipsburg ; and consented to destroy the for- tifications of Strasburg. Fort Louis and Traer- l)ach, the works of which had exhausted the skill of the great Vauban, with Lorrain, Treves, and the palatinate, were resigned to their respective

princes; insomuch that the terms to which he now consented, after so many victories, were such as could scarcely have been expected undei the pressure of the greatest misfortunes. The views of Louis, however, in consenting to this apparently humiliating treaty, were beyond the views of ordinary politicians. The health of the king of Spain was in such a declining way, that his death appeared to be at hand; and Louis now resolved to renew his pretensions to that kingdom, which he had formerly, by a treaty, solemnly renounced. But his designs, in this respect, could not be concealed from tlie vigi- lance of William III. of England ; of which Louis being sensible, and knowing that the emperor had claims of the same nature on Spain, he entered into a very extraordinary treaty with William. This was no less than the par- tition of the whole Spanish dominions in the following manner : — To the young prince of Bavaria were to be assigned Spain and the East Indies ; the dauphin, son to Louis, was to have Naples, Sicily, and the province of Guipuscoa ; while the archduk^ Charles, son to Leopold, was to have only the duchy of Milan. By this scan- dalous treaty, the indignation of Charles was roused, so that he bequeathed the whole of his dominions to the prince of Bavaria. This scheme, however, was disconcerted by the sudden death of the prince ; upon which a new treaty of par- tition was concluded between Louis and William. By this the kingdom of Spain, with the East India territories, were to be bestowed on the archduke Charles, and the Duchy of Milan upon the duke of Lorrain. The last moments of the Spanish monarch were disturbed by the intrigues of the rival houses of Austria and Bourbon; but the haughtiness of the Austrian ministers so disgusted those of Spam, that they prevailed upon their dying monarch to make a new will. By this the whole of his dominions

were bequeathed to Philip, duke of Anjou, grandson to Louis, who, prompted by his ambition, accepted the king- dom bequeathed to his grandson, excusing !um- self to his allies in the best manner he could for departing from his engagements. For tliis, how- ever, he was made to pay dear. His insatiable ambition and his former successes had alarmed all Europe. The emperor, the Dutch, and the king of England, entered into a new confederacy against him ; and a bloody war ensued, which threatened to overthrow the French monarchy entirely. While this war was carried on with such success, the emperor Leopold died in 1705. He was succeeded by his son, Joseph I., who put the electors of Cologne and Bavaria to the ban of the empire ; but being ill served by Prince Louis of Baden, general of the empire, the French partly recovered their affairs, notwith- standing their repeated defeats. The duke of Marlborough had not all the success he expected or deserved. Joseph himself was suspected of a design to subvert the Germanic liberties ; and it was plain, by his conduct, that he expected England should take the laboring oar in the war, which was to be entirely carried on for his bene- fit. The English were disgusted at his slowness and selfishness : but he died, in 1711, before he had reduced the Hungarians; and, leaving no

male issue, was succeeded by his brother Charles .VI., whom the allies were endeavouring to place on the throne of Spain, in opposition to Philip, duke of Anjou, grandson to Louis XIV.

When the peace of Utrecht took place, in 1713, Charles at first conducted himself as if he would continue the war, but found himself un- able, being forsaken by the British. lie there- fore was obliged to conclude a peace with France at Baden in 1714, that he might attend the progress of the Turks in Hungary ; where they received a total defeat from prince Eugene at the battle of Peterwaradin. They received another of equal importance from the same general in 1717, before Belgrade, which fell into the hands of the Imperialists ; and, next year, the peace of Passarowitz, between them and the Turks, was concluded. Charles employed his leisure in making arrangements for increasing and preserving his hereditary dominions in Italy and the Mediterranean. Happily for him, the crown of Britain devolved to the house of Hano- ver ; an event which gave him a very decisive weight in Europe, by the connexions between George I. and II. and the empire. Charles was sensible of this, and became, in consequence, so haughty, that, about A. D. 1724 and 1725, a breach ensued between him and George I., and so unsteady was the system of affairs all over Europe at that time, that the capital powers often changed their old alliances, and

concluded new ones contradictory to their interest. It is suffi- cient to observe here that the safety of Hanover, and its aggrandisement, was the main object of the British court; as that of the emperor was the establishment of the Pragmatic sanction in favor of his daughter the late empress queen, he having no male issue. Mutual concessions upon these great points restored a good understanding be- tween George II. and Charles VI. ; and the elector of Saxony, flattered with the view of gaining the throne of Poland, relinquished his claims upon the Austrian succession. The em- peror, after this, had very bad success in a war with the Turks, which he had undertaken chiefly to indemnify liimself for the great sacrifices he had made in Italy to the house of Bourbon. Prince Eugene was then dead, and he had no general to supply his place. The system of France, however, under cardinal Fleury, hap- pened to be pacific ; and she obtained for him, from the Turks, a better peace than he had reason to expect. Charles, to keep the German and other powers contented, had, before his death, given his eldest daughter, Maria Theresa, after- wards empress-queen, in marriage to the duke of Lorrain, a prince who could bring no accession of power to the Austrian family. He died in 1740.

Charles VI. was no sooner in the grave than all he iiad so long labored for must have been overthrown, had it not been for the firmness of George. II. The young king of Prussia en- tered and conquered Silesia, which he said had been wrongfully dismembered from his family. The king of Spain and elector of Bavaria set up claims directly incompatible with tiie Prag- matic sanction, and in this they were joined by France ; though all tiiese powers had solemnly guaranteed it. The imperial throne, after a con-

siderable vacancy, was filled up by the elector of Bavaria, who took the title of Cliarles VII. in January 1742. The French at this time poured their armies into Bohemia, where they took Prague ; and the queen of Hungary, to divert the king of Prussia, ceded to that prince the most valuable part of the duchy of Silesia by a formal treaty. Her youth, her beauty, and her suflerings, together with the fortitude with which she bore them, touched the hearts of the Hungarians, into whose arms she threw herself and her young son ; and, though they bad been long remarkable for their disaffection to tlie house of Austria, they declared unanimously in her favor. Her generals drove the French out of Bohemia ; and George II., at the head of an Englisli and Hano- verian army, gained the battle of Dettingen, in 1743. Charles VII. was at this time miserable on the imperial throne, and would have given the queen of Hungary almost her own terms ; but she haughtily and iinpolitically rejected all ac- commodation, though advised to it by his Britan- nic majesty, her best and indeed only friend. This obstinacy gave a color to the king of Prussia to. invade Bohemia, under pretence of supporting the imperial dignity ; but though he took Prague, and subdued the greatest part of the kingdom, he was not

supported by the French ; upon which he abandoned all his conquests and re- tired into Silesia. This event confirmed the obstinacy of the queen of Hungary ; who came to an accommodation with the emperor that she might recover Silesia. He died soon after in 1745, and Francis I., duke of Lorrain, then grand duke of Tuscany, consort to the queen of Hungary, after surmounting some difficulties, was chosen emperor.

The bad success of the allies against the French and Bavarians in the Low Countries, and the loss of the battle of Fontenoy, retarded the operations of the empress-queen against the king of Prussia. The latter beat the emperor's brother, prince Charles of Lorrain, who had be- fore driven the Prussians out of Bohemia ; and'the conduct of the empress-queen was such, that his Britannic majesty thought proper to guarantee to him the possession of Silesia, as ceded by treaty. Soon after, the king of Prussia, alleging that he had discovered a secret convention between the em- press-queen, the empress of Russia, and the king of Poland, to strip him of his dominions and to divide them among themselves, suddenly drove the king of Poland out of Saxony, defeated his troops, and took possession of Dresden ; which he held till a treaty was made under the media- tion of king George II., by which the king of- Prussia acknowledged Francis I. for em- peror. The war, however, continued in the Low Countries, to the disadvantage and dis- credit of the Austrians and Dutch, till it was finished by the treaty of Aix-la-Chapclle, in April 1740. By that treaty Silesia was once more guaranteed to the king of Prussia. It was not long before that monarch's jealousies were renewed and verified ; and the empress of Russia's views falling in with those of the em- press-queen and the king of Poland, who were unnaturally supported by France in their new schemes, a fresh war was kindled. The king .of

Prussia declared against the admission of the Russians into Germany, and his Britannic majesty against that of the French. Upon these two principles all former differences between these two monarchs were forgotten, and the British parliament agreed to pay an annual subsidy of £670,000 to Frederick during the war. The flames of war therefore now broke out in Ger- many with more violence than ever. The armies of his Prussian majesty, like an irresistible torrent, burst into Saxony ; totally defeated the imperial general Brown at the battle of Lowositz ; forced the Saxons to lay down their arms, though almost impregnably fortified at Pirna ; and the elector of Saxony to flee to his regal dominions in Po- land. After this, the king of Prussia was put to the ban of the empire; and the French poured, by one quarter, their armies, as the Russians did by another, into the empire.

The conduct of Frederick on this occasion was most determined and most creditable to his fortitude. See Prussia. At last, however, the taking of Colberg by the Russians, and of Schweidnitz by the Austrians, was on the point of completing his ruin, when his most formidable enemy, the empress of Russia, died January 5th, 1762. George II., his only ally, died on the 25th of October 1760. The deaths of these illustrious person- ages were followed by great consequences. The British ministry of George III. sought to finish the War with honor, and the successor of Ca- tharine, recalled his armies. Frederick the Great was, notwithstanding, so much reduced, that the empress-queen, proliably, would hare completed his destruction, had it not been for the wise backwardness of other German princes, to annihilate the house of Brandenburg. At first the empress-queen rejected all terms pro- posed to her, and ordered 30,000 men to be added to her armies. The visible backwardness of lier generals to execute her orders, and the new successes obtained by the king of Prussia, at last prevailed on her, however, to agree to an armistice, which was soon followed by the treaty of Ilubertsburgh, which secured to Frederick the possession of Silesia. Upon the death of her husband, in 1765, her son Joseph II. who had been crowned king of the Romans in 1764, suc- ceeded him.

This prince showed an active and restless dispo- sition, much inclined to extend his territories by conrpiest, and to make reformations in the in- ternal policy of his dominions ; but he took few proper methods for accom[)lishing his pur- poses. Ilonce he was almost always disap- pointed ; and at last is said to have written for himself the following epitaph : ‘ Here lies Joseph, unfortunate in all his undertakings.’ In 1788 a war commenced betwixt him and the king of Prussia; in which, notwithstanding the impetu- ous valor of that monarch, Joseph acted with such caution, that his adversary could gain no advantage over him ; and an accommodation took place without any remarkable exploit on either side. In 1781 he took the opportunity of the quarrel betwixt Ikitain and the United Provinces, to deprive the latter of the barrier towns which had been secured to them by the treaty of Utrecht. These indeed had often been

of great use to the house of Austria in its state of weakness ; but Joseph, conscious of his own strength, looked upon it as derogatory to his honor to allow so many of his cities to remain in the hands of foreigners, and to be garrisoned at his expense. As the Dutch were unable to re- sist, the imperial orders for evacuating the bar- rier towns were instantly complied with ; nor did the court of France, though then in friend- ship with Holland, offer to interpose. Encou- raged by this success, Joseph next demanded the free navigation of the Scheldt; but, as this would have been 'ery detrimental to the co«i- mercial interests of Holland, a flat refusal was given to this requisition. In this the emperor was much disappointed ; having flattered him- self that the Dutch, intimidated by his power, would yield the

navigation of the river as easily as they had done the barrier. Great preparations were made by the emperor, which the Dutch seemed prepared to resist. But, while he ap- peared so much determined on this acquisition, he suddenly abandoned the project, and proposed exclianging the Netherlands for the duchy of Bavaria. This was opposed by the king of Prussia ; and, by the interference of the court of France, the emperor found himself at last obliged also to abandon his other scheme of opening the navigation of the Scheldt. A treaty of peace was concluded, under the guarantee of Louis XVI. wherein the states acknowledged the em- peror's sovereignty over the Scheldt from Ant- werp to Sestingen; agreed to demolish certain forts, and to pay a sum of money in lieu of some claims which the emperor had on Maestricht, and by way of indemnification for laying part of his territories under water. The treaty with the Dutch was no sooner concluded than a quar- rel with the Turks took place, which terminated in an open war. It does not appear that the em- peror had at this time any real provocation, but he seems to have acted merely in consequence of his engagements with Russia to reduce the domin- ions of the grand signior. These engagements, however, did not retard the progress of reforma- tion, which he carried on throughout his do- minions with unparalleled rapidity, and which at last produced the revolt of the Austrian Ne- therlands. In the course of this reform a com- plete code of laws was compiled. These were at first greatly commended for tht'ir humanity, as excluding almost entirely every species of capital punishment ; yet, when narrowly considered, the commutations were found to be so exceedingly severe, that the most cruel death would, compa ratively speaking, have been an act of mere/ Even for small crimes the punishments were se- vere beyond measure ; but the greatest fault of all was, that the modes of trial were so defec- tive, and the punishiuents so arbitraiy, that the most innocent character lay at the mercy of a tyrannical judge. The iimovations in ecclesias- tical matters were, however, most ofi'ensive to his subjects, though some of them were not un- reasonable ; such as the introduction of the ver- nacular language instead of the Latin, in ad- ministering the sacraments ; and the total abo- lition of the papal supremacy throughout the imperial dominions. Many favors were also

bestowed upon the Jews ; and in 1 786 the em- peror wrote with his own hand to the different corporations in Vienna, requesting that their youths might be received as apprentices in tliat city. Severe laws against gaming were likewise enacted, and executed with rigor ; and heavy restrictions

were laid on all the societies of free masons in Germany, while those in the Nether- lands were totally suppressed. But the innova- tions in religious matters were chiefly resented by the Belgians, who had long been remarkable for their attachment to the Romish religion in its most superstitious form. Indeed the altera-f tions in the civil constitutions of the empire were so great, that, even those who were least bigoted in this respect began to fear that their liberties were in danger, and a universal dissatisfaction was excited. The emperor at first behaved very haughtily, and refused to yield the smallest point to his subjects. Finding, however, that a general revolt was ready to take place, and being unable, on account of the Turkish war, to spare such a force as would be necessary to re- duce the provinces to obedience, he, in autumn 1787, promised a restoration of their ancient constitution and privileges. His promises, how- ever, were so delusive, and his conduct was so arbitrary and capricious, that in the end of 1789 the states of all the provinces in the Austrian Netherlands came to a resolution of entirely throwing off the yoke. Articles of federal union were drawn up, and a new republic was formed under the title of the United Belgic Provinces. The situation of the emperor's affairs at that time did not allow him to take the measures necessary for preventing this revolt; to which perhaps his ill state of health also contributed ; and, con- tinuing daily to grow worse, he sunk under it on the 20th of February 1790, in the fortieth year of his age, and twenty-sixtli of his reign.

The leaders of the Belgic revolution, however, soon became so unpopular that they were obliged to fly ; and the congress, which had been estab- lished as the supreme legislative body, behaved with such tyranny that they became generally detested. Mean time, in 1790, the emperor Joseph was succeeded by his brother Leopold II., under wliose administration matters soon took a more favorable turn. By his wisdom, moderation, and humanity, he in a considerable degree retrieved the bad consequences of his predecessor's conduct ; having made peace with the Turks, and in some measure regained the al- legiance of the Netherlands. But the death of Leopold II., in 1792, occasioned a new change of affairs. His son and successor, Francis II. having taken an early and active part in the war with France, the I3elgians once more threw off their allegiance, and petitioned the conven- tion to be united with the French republic. This, in consequence of the success of the re- publican arms, in 1793 and 1794, was accord- ingly done, and the ci-devant Austrian Nether- lands formed into nine of the new departments of the French republic. That part of Germany which lies on the left or west bank of the Rhine, was also annexed to France. In the year 1801 — 1803, and 1810, in consequence of three bloody and ruinous wars, Francis II. was obliged to

make peace with France on terms more and more humiliating, till the German constitution became, as we have intimated, completely des- troyed.

With large armies, maintained at the expense of the occupied countries, Germany remained completely under the power of France till 1813, when fairer prospects opened, and a memorable burst of patriotic zeal, taking advantage of the dawn of liberty in the Peninsula, liberated the German nations. The Confederation of the Rhine, which had stood the seven years' mo- nument of French ambition, on the one hand, and of t'le self-interest and pusillanimity of some of its states on the other, was then as we have seen dissolved, and the Constitution of Ger- many was remodeled by the Congress at Vienna ; since which its public affairs have remained without external disturbance.

GEllME, among shipping, a kind of bark used in the shallows on the coast of Egypt, as draw- ing but little water. They are strong and well- built ; but have no decks. They have one, two, or three masts, according to their sizes. The yards are fixed to the top of the masts, and, as well as the sails, are unmanageable from below. To effect the smallest change, the seaman must go aloft. The burden of these boats is five or six tons. They are chiefly used to convey goods from Alexandria to Rosetta.

Geumen, the seed bud. See Botany. In assimilating the vegetable and animal kingdoms, Linnaeus denominates the germen, the ovarium or uterus of plants ; and affirms its existence to be chiefly at the time of the dispersion of the male dust by the autheras ; as, after its impreg- nation, it becomes a seed-vessel. Germen, by Pliny and the ancient botanists, is used to sig- nify a bud containing the r..diments of the leaves.

GERMERSHEIil, a strong town of the Ba- varian circle of the Rhine, at the conflux of tlie Queich and the Rhine. It is surrounded partly by a wall, and partly by the Queich, the Rhine, and marshy grounds ; the diet of Frankfort, in 1819, fixed on it as one of the bulwarks of the empire, and appropriated no less than £600,000 sterling for additional works, particularly a double tfete de pont on the Rhine. In January, 1794, the French took it, and in May following they were defeated at this place by the Austn- ans. Population 1500. Five miles south of Spire, and eight south of Mauheim.

Germination, among botanists, also compre- hends the precise time which the seeds take to rise, after they have been committed to the soil. The different species of seeds are 'onger or shorter, in rising, according to the degree of heat which is proper to each. Millet, wheat, and several of the grasses, rise in one day ; blite, spinach, beans, mustard, kidney-beans, turnips, and rocket, in three days; lettuce and dill, in four ; cucumber, gourd, melon, and cress, in five ; radish and beet in feix ; barley in seven ; orach in eight; purslane in nine; cabbage in ten; hyssop in thirty; parsley in forty or fifty days; peach, almond, walnut, chestnut, paony, horned poppy,

hypecoum, and ranunculus fal- catus, in one year ; rose-bush, coruel-tree, haw-

thorn, medlar, and hazel-nut in two. The seeds of some species of orchis, and of some liliaceous plants, never rise at all. Some seeds require to be sown almost as soon as they are ripe, other- wise they will not sprout or germinate. Of this kind are the seeds of coffee and fraxinella. Others, particularly those of the pea-bloom flow- ers, preserve their germinating faculty for a series of years. IVIr. Adanson asserts, that the sensitive plant retains that virtue for thirty or forty years. Air and water are the agents of germination. The humidity of the air alone makes several seeds to rise that are exposed to it. Seeds too are abserved to rise in water, without the intervention of earth ; but water without air is insufficient. Mr. Romberg's experiments on this head are decisive. He put several seeds under the exhausted receiver of an air-pump, with a view to establish something certain on the causes of germination. Some of them did not rise at all ; and the greatest part of those which did, made very weak and feeble productions. Thus it is for want of air, that seeds, which are buried at a very great depth in the earth, either tjirive but indifferently, or do not rise at all. They frequently preserve, however, their germi- nating virtue for many years within the bowels of the earth; and it is not unusual, upon a piece of ground being newly dug to a consider- able depth, to obsen-e it soon after covered with several plants, which had not been seen there in the memory of man. Were this frequently repeated, it would doubtless be the means of re- covering certain species of plants which are regarded as lost ; or which perhaps have never come to the knowledge of botanists. Some seeds require a greater quantity of air than others. Thus purslane, which does not rise till after lettuce in the free air, rises before it in vacuo ; and both prosper but little, or perish altogether, while cresses vegetate as freely as in the open air.

GERONA, GiRONA, or Gironka, an ancient town of Spain, in Catalonia, and a bishop's see. In 1694 it was taken by the French and restored at the peace of Ryswick. In 1705 it was taken by the Austrians, and again by the French in 1711, under the duke of Noailles. In the year 1809 this city endured one of the most extraor- dinary sieges recorded in history ; but was at length, after the most vigorous and honorable defence, compelled to yield to the French. We regret we can only in this place refer to Dr. Sou- they's excellent narrative of this siege, ' Peninsu- lar War,' vol.ii. p. 520.

Gerona is built in the form of a triangle, on liie slope, and at the foot of a steep mountain; It is surrounded with good flanked walls, and covered by two forts erected on the mountain. Besides these, it has five fortified buildings. The streets are narrow and winding, but the houses respectable. There are thirteen monas- teries in the place, and about 1 4,000 inhabitants. Here is also an academy on a large scale, with professors of Latin, rhetoric, philosophy, and divinity; the students are numerous, and form one of the chief supports of the place. Gerona stands near the Onhal, forty-four miles south of Perpignan, and forty-seven north-east of Bar- celona.

GERONTES, from ytpuv, in antiquity, a kind of judges, or magistrates, in ancient Sparta, answering to what the Areopagites were at Athens. See Areopagus. The senate of ge- rontes was called gerusia, i. e. the assembly or council of old men. They were originally insti- tuted by Lycurgus ; their number, according to some, was twenty-eight; and according to others thirty-two. They governed in conjunction with the king, whose authority they were intended to balance, and to watch over the interests of the people. Polybius defines their office in few words, when he says, per ipsos, et cum ipsis, omnia administrari. None were ad- mitted into this office under sixty years of age, and they held it for life. They were succeeded by the ephori.

GEROPOGON, in botany, a genus of the polygamia aequalis order, and syngenesia class of plants; natural order forty-ninth, compositae. The receptacle is paleaceous, with the points of the paleae sharp or bristly: gal. simple; seeds in the disc have a feathered pappus, in the ra- dius have a pappus of five awns. Species three; natives of Italy.

GERS, a department of France, bounded on the north by those of Landes, and Lot and Garonne; on the east by that of Lˆpper Garonne; on the south by those of the Upper and Lower Pyrenees ; and on the west by that of Landes. It includes the ci-devant provinces of Armagnac and Gascony ; and is wholly in- land, having a territorial extent of 2620 square miles, and 286,500 inhabitants. It is divided into the five arrondissements of Auch, Condom, Lectoure, Lombez, and Mirande. It is princi- pally devoted to pasturage and the cultivation of the grape. Auch is the capital.

Gers, a river of France, which rises in the department of the Upper Pyrenees, crosses and gives name to that of the Gers, and falls into the Garonne, three miles south-east of Agen.

GERSAU, a town in the Swiss canton of Schweitz, on the lake of Lucern. It stands among mountains, and is accessible only by a single and hazardous path. It became, in 1315, independent, and is still the smallest free state

known, its whole territory being only two leagues long, and half a league broad. Popula- tion 1500.

GERTRUYDENBERG, asmall strong town of the Netherlands, situated on tiie Biesbosch, an arm of the sea, in North Brabant. It has about 1300 inhabitants, chiefly employed in salmon fishing, and, in 1709, it was the scene of a long negociation between Louis XIV. and the allied powers, and was taken by the French, under Dumouriez, on 4th May, 1793; ten miles south-east of Dort, and seven north-east of Breda.

GERVAISE, or Gervase, of Tilbury, a fa- mous English writer of the thirteenth century; born at Tilbury on the Thames. He was nephew to Henry II., king of England; and was in great credit with Otho I'. emperor of Germany, to whom he dedicated a Description of the World, and a Chronicle. He also composed a History of England, a History of the Holy Land, and other works.

GERUMENIIA, or GERUMEMir, an ancient town of Portugal, in Alentejo, with a strong castle, seated on a hill, near the Guadiana. In 1662 it stood a siege of a month, before it sur- rendered to the Spaniards. It lies eighteen miles below Badajoz.

GER'UND, n. s. Lat. gerundium. A kind of verbal noun, which governs cases like verbs, and in Latin ends in di, do, and dum.

GEllYON, or Geryones, in fabulous history, a king of Gades, in Iberia, who had three bodies, and fed his cattle with human flesh. Tliis monster was slain by Hercules, who carried oft" his cattle. liyginus makes him the son of Chrysaor, brother of the winged horse Pegasus, and the grandson of Neptune, by Medusa, one of the furies. The fable is supposed to mean that he was a king of three contiguous Spanish islands ; or, as others think, there were three kings brethren, so united as to seem to have but one soul.

GESNER (Conrad), M. D., a celebrated physician and naturalist, born at Zurich in 1516. Having finished his studies in France, he tra- velled into Italy, and taught medicine and philosophy at Lausanne, with extraordinary re- putation, and excelled so much in natural history, that he was sumamed the German Pliny. He died December 9th, 1565, leaving many works behind him, on botany, medicine, grammar, natural his- tory, &c. Of these the principal are, 1. A History of Animals, Plants, and Fossils ; 2.

*Bibliotheca Universalis ; a Greek and Latin Lexicon. Boerhaave emphatically styled him Monstrum Eruditionis, ‘ a prodigy of learning.’ * Those indeed,’ Mr. Coxe observes in his Letters on Switzerland, * who are conversant with the works of this great naturalist, cannot repress their admiration at the amplitude of his know- ledge in every species of erudition, and the variety of his discoveries in natural history. Their admiration is still furtlier augmented, when they consider the gross ignorance of the age which he helped to enlighten, and the scanty succours he possessed to aid him in thus extend- ing the bounds of knowledge ; that he composed his works, and made those discoveries which would have done honor to the most enlightened period, under the complicated evils of poverty, sickness, and domestic uneasiness.’ During his last twenty-four years, however, his salary, as a professor, enabled him to live in easy circum- stances.*

Gesner (John Matthew), an acute German critic, born at Neuburg, in 1691. After super- intending the public school of Weinheim for eleven years, he removed to Anspach, and thence to Gottingen, where he was made professor of humanity, and public librarian, ^“c. He died at Gottingen in 1761. His most esteemed works are, an excellent Latin Dictionary, and his edi- tions of the Classics.

Gesner (Solomon), the celebrated author of the Death of Abel, was born at Zurich in 1730. In his early years he showed no signs of supe- rior abilities. When he arrived at a proper age, he chose his father’s profession, viz. that of a printer. In 1752 he made a tour through Ger-

many ; and when at Berlin was admitted into a literary society, of which Gleim and Lessing were members. Every member read in turn some pieces of his own composition, and Gesner was very desirous of submitting to these able critics a small work, which was his first attempt. The piece which he wished, but had not eventu- ally the courage to show, was his poem, entitled Night, which he published on his return to Zurich in 1753. The success of this essay em- boldened him to publish a pastoral romance, called Daphnis, in three cantos. The applause deservedly bestowed upon this performance, in- duced him to publish his Idylls, and other rural poems in imitation of Theocritus. Pastoral poetry, which was then little known in Germany but by translations, began to be preferred to every other kind. These Idylls were the favorite object of his pursuit, and that part of his work which acquired him the greatest repu- tation. His Death of Abel was first published in 1758. It is written, like the rest of his pieces, in poetical prose ; and went through three edi- tions in one year. The French edition was followed by others, in Italian, Dutch, Danish, and, lastly, two in English, one in prose and the other in verse. He next published his First Navigator, a poem in three cantos, which many consider as his master-

piece. He produced, like- wise, in the dramatic style, Evander and Alcimne in three acts; and Erastus in one act, which was represented with applause at Leipsic and Vienna. In 1765 he was called to the grand council, in 1767 to the less; in 1768 he was appointed bailiff of Eilibach ; that of the four guards in 1776; and in 1781 superintend ant of waters, which office in 1787 w'as continued to him for six years. He died of a paralytic attack in 1788, aged fifty-eight. As a pastoral poet, Gesner, if he has been equalled by any, has been excelled by none. His pastoral romance of Daphnis is not inferior, in natural simplicity, to the cele- brated work of Longus ; but it surpasses it far in variety of images and incident. Erastus and Evander are instructive and interesting poems, on account of the contrast between the world and nature which reigns throughout them ; and his First Navigator unites the mildest philosophy with all the splendor and imagery of Fairy land. The late empress, Catharine 11. , presented him with a gold medal as a mark of her esteem. Travellers thought they had seen only the half of Switzerland, if they had not been in the com- pany of Gesner, or procured some of his drawings.

GESNER lA, in botany, a genus of the angios- permia order, and didynamia class of pl-ants ; na- tural order fortieth, personatse : cal. quinquefied, and placed on the germen : cor. incurvated and then recurvated : caps, inferior and bilocular. Species eleven ; all South American shrubs.

GESSORIACUM, in ancient geography, a port and station for ships of the Morini in Gallia Belgica. In Caesar's time, according to Dio, there was no town ; but Florus speaks of it as one ; and the Gessoriacenses Muri, are men- tioned by Eumcnius in his Panegyric. The author of Tabula Theodosiana, commonly called Peu- tenger's map, says expressly, that Gessoriacum

vias in his time called Bononiii. it is now called IJouIoˆe.

GEST, n. s. ‘\ Lat. gcro, to bear.

Gesta'tiox, n. s. / To bear or carry one's

Gestic'ulate, v. n. V self in a particular

Gesticdla'tion, i way; a deed ; rcjire-

Ges'ture, n. s. & V. a. 'J sentation ; journal ; a stage : to bear, as the parent its young in the womb : posture expressive of sentiment : to ridi- cule; to imitate.

And after that his dice turned on chaunccs.

So was he either glad or saidc, Alas,

And helde after his gestes, are his paas ;

And after suche answers as he hadde,

S9 weren his daies sory other gladde.

Chaitcer. Troilus and Creseide. Women full good, and trewe, and vertuous,

Witnesse on hem that dwelte in Cristes hous,

With martyrdom they preved hir Constance.

The Romain gestes maken remembrance

Of many a very trewe wif also.

Chaucer. The 3ferchantes Tale.

Who fair them quites, as him beseemed best. And goodly can discourse with many a noble gcst.

Spenser.

Our attire disgraccth it, it is not orderly read, nor gestured sls beseemeth. Hooker.

When we make profession of our faith, we stand ; when we acknowledge oux sins, or seek unto God for favour, we fall down ; because the gesture of constancy becometh us best in the one, in the other tho beha- viour of humility. Id, I'll give you my commission.

To let him there a month, behind the gest.

Prefixed for's parting. Shakspeare. Winter's Tale, To the dumbness of the gesture One might interpret. Id. Timon of Athens.

He undertook so to gesture and muffle up himself in his hood, as the duke's manner was, that none should discern him. Wotton,

Grace was in all her steps, heaven in her eye. In every gesture dignity and love !

Milton's Paradise Lost,

lie distinctly sets down the gests and progress thereof. Browne,

*Aristotle afErmeth the birth of the infant, or time of its ˆe**

Ah, my sister, if you had heard his words, or seen his gestures, when he made me know what and to whom his love was, you would have matched in your-, self those two rarely matched together, pity and de- light. Sidney.

Why in viviparous animals, in the time of gestation, should the nourishment be carried to the embryo in womb, which at other times goeth not that way ? Ray on the Creation.

Every one will agree in this, that we ought either to lay aside all kinds of gesture, or at least to make use of such only as are graceful and expressive.

A ddison's Spectator. Their classical profiles, and glittering dresses,

Thtir large black eyes, and soft seraphic checks. Crimson as cleft pomgranatcs, their long tresses.

The gesture which enchants, tho eye that speaks. The innocence which happy childhood blesses.

Made quite a picture of these little Greeks ; So that the philosophical beholder Sighed for their sakcs — that they should e'er grow older. Byron. Don Juan.

GESTRICIA, a province of Sweden, in the government of Gcfleborg, about 1 240 square miles

in extent, and having a population of 27,000 North and west it is mountainous and barren, but in the south it has beautiful valleys and plains, producing corn, flax, hemp, hops, &c., but the inhabitants depend chiefly on their forests, iron mines, and iron works. The chief town is Gefle. GET, V. a. Sc v.n. "l Sax. ˆetan, je ran; Get'teu, ?J. S; > Goth, gcta ; pret. I £;ot,

Get'ting. J anciently i>at ; part. pass,

got, or gotten. To obtain, whether by force or otherwise ; to arrive at any state or posture : thus, to get off is to dispose of or escape ; to get orcr, to conquer or suppress ; to get up, to arise fmm repose or from a seat ; to

remove from one place to another ; the act of acquisition or increase : sometimes used in the sense of beget. ‘ To get, in all its significations,’ says Dr. Johnson, ‘ both active and neutral, implies the acquisition of something, or the arrival at some state or place by some means ; except in the use of the])reterite compound, wliich often implies mere possession : as, he has got a good estate, does not always mean that he has acquired, but barely that he possesses it. So we say, the lady has got black eyes, merely meaning that she has them.’

Wisdom is the principal thing, therefore get wis- dom ; and with all thy getting, get understanding.

Prov. iv. 7. What hast thou to docn with hir live. Thy falshed every man maic fele. For thou ne canst no cattell gete, Butlivest in londe as a lorell. With glosing gettcst thou thy mete.

Chaucer. The PloummTis Tale. Have ye not seen sometime, a pale face

(Among a prees) of him that hath ben lad Toward his deth ; wher as he geteth no grace. And swiche a colour in his face hath had. Men mighten know him that wos so bestad, Amonges all the faces in that route ; So stant Custance, and loketh hire aboute.

Chaucer, TIte Man of Lawes Tale. Yet being pregnant still with powerful grace. And full of fruitful Love, that loves to get Things like himselfe, and to enlarge his race. His second brood, though not of powrc so great. Yet full of beautie, next he did beget. An infinite increase of angels bright. All glistring glorious in their Maker’s light.

Spenser’s Hymncs. Such losels and scatterlings cannot eisily, by any constable, or other ordinary officer, be gotten, when they are challenged for any such fact. Spenser.

Thine be the cosset, well hast thou it got. Id,

You knew he walked o’er perils, on an edge More likely to fall in than to get over.

Shakspeare. Henry IV. Get on thy boots ; we’ll ride all night.

Shakspeare. Take no repulse, whatever she doth say ; For get you gone, she doth not mean away. Id. Henry the sixth hath lost All that which Henry the fifth had gotten. Id. Peace is a very lethargy, aˆ getter of more bjtstard-children than war’s a destroyer of men. Id.

If they get ground and vantage of the king. Then join you with them like a

rib of steel. Id.

Those boys are boys of ice ; they'll none of her ; sure they arc bastards to the English, the French ne- ver got them. I^-

Get you to bed on the instant ; I will be returned forthwith. Id. Ollicllo.

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GET

The fox bragged what a number of shifts and devices he had to get from the hounds, and the cat said he had but one, which was to climb a tree.

Bacon. Who hath a state to repair may not despise small things ; and it is less dishonourable to abridge a petty charge than to stoop to petty gettings. Id.

Sheep will get up betimes in the morning to feed against rain. id. Nat. History.

Then forcing thee, by fire he made thee bright ; Nay thou hast got the face of man. Herbert.

They might get over the river A vonat Stratford, and get between the king and Worcester,

Clarendon. Phalantus was entrapped, and saw round about him but could uot get out. Sidney.

Women with studied arts they vex : Ye gods, destroy that impious sex : ^ ■ And if there must be some to invoke Your powers, and make your altars smoke. Come down yourselves, and, in their place. Get a more just and nobler race. Waller.

Like jewels to advantage set. Her beauty by the shade does get. Id.

All things, but one, you can restore ; The heart you get returns no more. Id.

The roving fumes of quicksilver, in evaporating, would oftentimes fasten upon the gold in such plenty, as would put him to much trouble to get them off from his rings . Boyle.

Most of these things might be more exactly tried by the Torricellian experiments, if we could get tubes so accurately blown that the cavity were

perfectly cy- lindrical. Id.

When an egg is made hard by boiling, since there is nothing that appears to get in at the shell, unless some little particles of the water, it is not easy to dis- cover from whence else this change proceeds than from a change made in the texture of the parts. Id.

Whatever thou dost, deliver not thy sword ; With that thou mayest get off, though odds oppose thee. Dryden.

O heaven, in what a lab'rinth am I led ! I could get out, but she detains the thread. Id. The laughing sot, like all unthinking men. Bathes and gets drunk ; then bathes and drinks again.

Id. If you'll take 'em as their fathers got 'em, so and well ; if not, you must stay 'till they get a better generation. Id.

Having no mines, nor any other way of getting or keeping of riches but by trade, so much of our trade as is lost, so much of our riches must necessarily go with it. , Locke.

Lying is so cheap a rover for any miscarriage, and so much in fashion, that a child can scarce be kept from getting into it. Id.

Though creditors will lose one-fifth of their prin- cipal and use, and landlords one-fifth of their in- come, yet the debtors and tenants will not get it. Id.

Any tax laid on foreign commodities in England raises their price, and makes the importer get more for them ; but a tax laid on your home-made com- modities lessens their price. Id. Two or three men of the town are got among them.

. Tatler. After having got out of you every thing you can spare, I scorn to trespass. Gtiardian.

'Tis very pleasant to hear the lady propose her doubts, and to see the pains he is at to get over them.

A ddison. By the marriage of his grandson Ferdinand he got into hia family the kingdoms o' Bohemia and Hun- gary. Id.

Imprisoned fires, in the close dungeons pent, Roar to get loose, and struggle for a vent ; Eating their way, and undermining all, 'Till with a mighty burst whole mountains fall, p

Id. Though the king could not get him to engage in a life of business, he made him however his chief com- panion. Id. Spectator,

The man who lives upon alms, gets him his set of admirers, and delights in superiority. Addison.

Sphinx was a monster that would eat Whatever stranger she could get. Unless his ready wit disclosed The subtle riddle she proposed.

Id. Whig Examiner. Those that are eager toget abundance of this world, and solicitous to lay up what they have gotten, little consider what may become of it, and in how little « time it may be all taken from them.

Henry. Isaiah, xv. 7. There is a sort of men who pretend to divest them- selves of partiality on both sides, and to get above that imperfect idea of their subject which little writers fall into. Pope on Homer.

A knot of ladies, got together by themselves, is a very school of impertinence. Swift.

Wood, to get his halfpence off, offered an hundred pounds in his coin for seventy in silver. Id.

This practice is to be used at first, in order to get a fixed habit of attention, and in some cases only.

Watts. Get by heart the more common and useful words out of some judicious vocabulary. Id.

Our studies will be for ever, in a very great degree, under the direction of chance ; like travellers we must take what we can get, and when we can get it.

Sir J. Reynolds. Yes. I nursed thee Because thou wert my firstborn, and I knew not If there would be another unlike thee. That monstrous sport of nature. But get hence And gather wood !

Byron. Deformed Transformed.

GETA (M. Septimius Autonius), the son of the emperor Severus, and brother to Caracalla. In the eighth year of his age he was moved with compassion at the fate of some of the par- tisans of Niger and Albinus, who were to be executed, and his father struck with his humanity retracted the sentence. After Severus's death, he reigned at Rome conjointly with his brother; but Caracalla, who envied his virtues and was jealous of his popularity, ordered him to be poisoned ; and, this not being effected, he mur- dered him in the arms of his mother Julia, who, in attempting to defend him, received a wound in her arm, from the hand of her worthless son, A. D. 212. Geta had not reached the twenty- third year of his age, and the Romans lamented the death of so virtuous a prince, while they groaned under the cruelties and oppression's of Caracalla.

Geta, is a town of Sweden, on the north coast of the island of Aland. Long. 9° 50′ E., lat. 60° 25′ N.

GETiE, an ancient nation of Thrace, who dwelt on both sides of the Ister, near Scythia, supposed to be the ancestors of the Dacians and Goths ; or, according to others, of the Walachians or Moldavians.

GETHSEMANE, in ancient geography, a village at the foot of Mount Olivet, whither our

Lord sometimes retired in the night-time. It was in a garden belonging to this village that he suft'ered his memorable agony in which he sweated blood ; and was arrested by Judas and nis band. The place is described by Maundrel as an even plot of ground, not above tifty-seven feel square, lying between the foot of]\Iount Olivet and the brook f'edron.

GETHYLLIS, in botany, a genus of die mo- nogynia order, and dodecandria class of plants ; natural order ninth, spathacese : cor. six-cleft, and the stamina are in six different directions : CAPS, is trilocular. Species five ; all Cape herbs.

GEWGAW, n. s- & adj. jejap; Yt. joi/au ; a Lat. gaudendo. That which is splendid or showy in appearance without sterling value ; trifling.

That metal they exchanged for the meanest trifles and gewgaws which the others could not bring.

Abbot.

Let her love whom she will I scorn to woo her. While she stays with me I'll be civil to her ; But if she offers once to move her wings I'll fling her back all her vain gewgaw things.

Bjickingham. As children, when they throw one toy away.

Straight a more foolish gewgaw comes in play.

Dryden.

Prefer that which Providence has pronounced- to be the staff of life, before a glittering ˆett'ˆaw that has no other value than what vanity has set upon it.

L'Eatrange.

When we load it (the head) with a pile of super- numerary ornaments, we destroy the symmetry of the human figure, and foolishly contrive to call off the eye from great and real beauties, to childish gewgaw;, ribands, and bone-lace. Addison.*

The first images were fans, silks, ribands, laces, and many olhev gewgaws, which lay so thick that the whole heart was nothing else but a toyshop.

Id. Guardian.

Let him that would learn the happiness of religion, see the poor gewgaw happiness of Feliciana.

Law's Serious Call,

Man,

Thou pendulum betwixt a smile and tear. Ages and realms are crowded in tliis span. This mountain whose obliterated plan The pyramid of empires pinnacled Of glory's gewgaws shining in the van. Till the sun's rays with added flame were filled ! Where are its golden roofs? Where those who dared to build ? Byron. CUilde Harold.

GEUM, avens, or herb bennet, a genus of the polygamia order, and icosandria class of plants; natural order thirty-fifth, seiiticoswe : cal. cleft into ten parts ; petals five : and each seed has a jointed awn. There are ten species ; of which the two following, both natives of Britain, are the most remarkable : —

G. rivale, with a very thick, fleshy, and fibrous root, hairy leaves, and upright stalks, ten or twelve inches high, terminated by purple flowers nodding on one side. Of this there are vari- eties with red and with yellow flowers. The root powdered is said to be efticacious in curing the tertian ague; and it is daily used for this purpose by the Canadians and other inhabitants of North America. Slicep and goats eat the Vol. X.

OH A

plant ; cows, horses, and swine are not fond of it.

G. urbanum, witli thick fibrous roots of an aromatic taste, rough serrated leaves, and tip- right, round, hairy stalks, terminated by laree yellow flowers, succeeded by globular fruit. The roots, gathered in spring before thp stem comes up, and infused in ale, give it a pleasant flavor, and prevent its growing sour. Infused in wine, they have a stomachic virttie. The taste is mildly austere and aromatic, especially when the plant grows in warm dry situations; but in moist shady places it hath little virtue. Roth these species are easily propagated either by the root or seed.

G EX, a town in the south-east of France, in the department of the Ain, not-ˆd for watch- making. It stands near the foot of INIount Jura, and contains a population of 2500 ; ten miles west of Geneva.

GEZULA, or Gazula, a country of Africa, south of Morocco, the inhabitants of which are allies of the emperor. They are numerous, and are reckoned the most ancient people of Africa. They have no towns, but live in camps and villages, and are hospitable to strangers. They have an annual fair, which lasts two months. The country abounds in corn, pasture, copper and iron.

GriAsrPUL, (idj.

Giiast'ly, n. s. Ghast'liness, w. s. Ghast'ness, n. s. Ghost, n. s., v. n. & v. a. Giiost'liness, n. s. Ghost'ly, adj.

"I Sax. jarr,aghost, and puUe; Belgic) gheest ; Teut. gcist ; J; Swed. gast. A spi-] ritual appearance ; a I being as opposed to J whatever is material.

The name of the third person in the Holy Tri- nity ; the soul of man ; and

by use applicable to whatever has a character of death, or is horrid, pale, emaciated.

Save and defend us from our ghostly enemies.

Common Prayer. There stood the temple of Mars Armi])olent,

Wrought all of burned stele ; of which the' entree

Was longe and streite, and gastly for to see.

Chaucer. The Knightcs Tale.

And thou shalt understond, that marchaudise is in two maneres ; that on is bodily, and that other is gostly : that on is honest and leful, and that other is dishonest and unlcful. Id. The Persones Tale.

Here will I dwell apart. In ghastful grave, 'till my last sleep Do close mine eyes ;

Help me, ye baneful birds, whose shrieking sound Is sign of dreary di ath. Spenser's Pastorals.

And when my weary ghost, with griefe oulwornc. By timely death shall winnc her wished rest. Then let this plaint unto his cares be borne. That blame it is to him that armes profcst. To let her die whom he might have redrcst.

Id. Faerie Qiieene. But, suddein catching hold, did her dismay

With quaking hands, and other signes of feare

Who, full oi ghastly fright and cold affray.

Can shut the door. W.

Our common necessities, and the lack which wc all have, as well of ghostly as of earthly favours, is in each kind easily known ; but the gifts of God, according to these degrees and times, which he in his secret wisdom sccth meet, arc so divorsly he- al

stowe < ˆ, that it seldom appcarcth what all receive : what all staad in need of seldom licth hid. Hooker. Often did I strive To yield the ghost ; but still the envious flood Kept in my soul. Shakspcare. Richard III.

Their shadows seem A canopy most fatal, under which Our army lies ready to give up the ghost.

Shakspeare. Vex not his ghost : O, let him pass ! He hates him. That would upon the rack of this rough world Stretch him out longer. Id. King Lear.

Look you pale, mistress ? Do you perceive the ghastnesa of the eye ?

*Shakspear-e. Julius C*sar Who at Philippi the good Brutus ghosted. There saw you labouring for him. Id.*

Why looks your grace so heavily to-day ?

O, I have past a miserable night ;

So full of ugly sights, of ghastly dreams.

So full of dismal terrour was the time. Id,

The ghostly father now hath done his shrift.

fd. The ghosts and munster-spinls that did presume A body's privilege to assume VaBish again invisibly And bodies gain again their visibility. Cowley.

— Marke what uglinesse

Stares through the sightlesse eye-holes from within. Note those Icane craggs and with what gastlinesse That horrid countenance doth seeme to grin.

Geo. Withers. Death Grinned horrible a ghastly smile, to hear His famine should be filled.

Milton's Paradise Lott. To be lets than gods Disdained ; but meaner thoughts learned in their

flight. Mangled with ghastly wounds through plate and mail.

Blilton. jct Cromwell's ghost smile with contempt to see Old England struggling under slavery. Maviell.

He could reduce all things to acts, And knew their natures by abstracts. Where entity and quiddity. The ghosts of defunct bodies fly •, Where truth

in person does appear Like words congealed in northern air.

Hudihras. Euryalus, taking leave of Lucretia, precipitated her into such a love-fit, that within a few hours she ghosted. Sidney.

Those departed friends, whom at our last separation we saw disfigured by all the ghaatly horrours of death, we shall then see assisting about the majestick throne of Christ, with their once vile bodies transfigured into the likeness of his glorious body, mingling their glad acclamations with the hallelujahs of thrones, princi- palities, and powers. Boyle.

The mighty ghosts of our great Harrys rose. And armed Edwards looked with anxious eyes.

To see this fleet among unequal foes, By which fate promised them their Charles should rise. Dry den.

I did not for these ghastly visions send ; Their sudden coming does some ill portend.

Id. I, who make the triumph of to-day, May of to-ir.orrow's pomp one par appear. Ghastly w ith wounds, and lifeless on the bier '?*

Prior

What beckoning ghost along the moonlight shade Invites my steps, and points to yonder glade.

Pope

But in his private thoughts and busy brain. Thousand thin forms and idle fancies flit -, The three-shaped Sphinx ; and direful Harpy's train. Which in the world had never being yet ; Oft dreams of fire, and water ; loose delight j And oft arrested by some ghostly spright. Nor can he think, nor speak, nor move, for great af- fright. Fletcher's Purple Idand.

There would he dream of graves and corses pale. And gfiosts that to the chamel-dungeon throng. And drag a length of clanking chain, and wail. Till silenced by the owl's terrific song ; Or blast that shrieks by fits the shuddering aisles along. Beattie.

' Besides, I hate to sleep alone,' quoth she. The matron frowned. ' Why so V — ' For fear of ghosts,'

Replied Katinka ; ' I am sure I see A phantom upon each of the four posts.' Byron.

GHAUTS (Arab, maber, a pass) is a term particularly applied to certain ranges of hills, which run north and south, through- the Indian peninsula; sometimes the highland is called Balagliaut (above the pass), and the bar Pagaenghauts (below the pass).

GuAUTs, The Western, are the most elevated of these ranges, and extend from Cape Comorin to the Tuptee, or Surat River, where they do not terminate in a point, or promontory ; but bend eastward in a wavy line parallel to the river, and are afterwards lost among the hills iu the neighbourhood of Boorhanpoor. Their

E roper name, in the language of Hindostan, is ukhein, Purbut, or the hills of Sukhein. They rise to an elevation of between 3000 and 4000 feet from the level of the sea. In its line along the Tuptee this ridge forms several passes, or ghauts, from which there is a descent into the low country of Khandesh. In their whole ex- tent the Western Ghauts, according to Mr. Ha- milton, include thirteen degrees of latittide, with the exception of a break in the ridge, about six- teen miles wide, in the latitude of Paniany, through which the River Paniany takes its course from the Coirabetoor province. Theii distance from the sea coast is seldom more than seventy miles, commonly about forty, and they are frequently visible from the sea. Within one short space betwixt Barcelore and Mirjaow they approach within six miles of the sea. The alti- tude of these hills is sufficiently great to prevent the body of the clouds from passing over them, and accordingly the alternate north-east and south-west winds (called the monsoons) occasion a rainy season on the windward side of the mountains only. In the parallel of Surat this cause ceases to operate, and here therefore the south-west wind, no longer opposed by a wall of mountains, carries its supply of moisture without interruption over the surface of the country. About the fifteenth degree of north latitude the Western Ghauts, although steep and stony, are by no means rugged, or broken with rocks; but the stones are buried in a rich mould, and in many places are not seen without dig- ging. Here therefore these fine mountains are covered with stately forests. There are no bam-

boos that can be compared with those that grow in this part of them. They compose a great part of the forest, growing in detached clumps, with open spots between ; and equal in height tlie most lofty palms. Near Cutaki, about half way up the Ghauts, the teak becomes common.

Ghauts, The Eastern, are commonly de- scribed as commencing in the south, about lat. 11° 20′ N., to the north of the Cavery, and ex- tending with little interruption, in a straight line to the banks of the Khrisna in lat. 16° N., sepa- rating the two Carnatics ; the one is called the Car- natic Balaghaut, or above the Ghauts, the true Camatic ; the other the Camatic Payeenghaut, or below the Ghauts, extending along the coast of Coromandel. About the latitude of Madras, the highes< part! of this ridge is estimated at 3000 feet ; and Bangaloor, which is within the chain, was found by barometrical observation to be 2901 feet above the level of the sea.

The component parts of these mountains are granite, composed of whhe feltspar and quartz, with dark green mica in a small proportion. The particles are angular, and of moderate size. The rocks appear stratified, but the strata are broken and confused. The country above the Eastern Ghauts rises into swells like the land in many parts of England, and is overlooked by the liigh barren peaks which close the view to the east. The soil here is very poor, and covered with copse, having a few large trees intermixed ; the whole of the copse land serving for inferior pasture. About two miles from Naiekan Eray a torrent in the rainy season brings down from the hills a quantity of iron ore in the form of black sand, which, in the dry season, is smelted, each forge paying a certain quantity of iron for permission to carry on the work.

GHEBEIIS, or GuEBERs, is the name by which the fire-worshippers of Persia are generally known. Those of this sect are dispersed through the country, and are the remains of the ancient Persians, or followers of Zoroaster. They have a suburb at Ispahan, called Gaurabad, or the town of the Gaurs, where they are employed in the meanest drudgery : some of them are dis- persed through other parts of Persia ; but they principally abound in Kerman, the most barren province in the whole country, vshere the Mahom- medans allowed them liberty and the exercise of their religion. Several of them fled many ages ago into India, and settled about Surat, where their posterity still remain. They are ignorarit, inoffensive i)eople, extremely superstitious, zea- lous for their rites, rigorous in their morals, and honest in their dealings. They believe a resur- rection and a future judgment, and worship only one God. Although they perform their worship before fire, and direct their devotion towards the rising sun, for which they have an extraordinary veneration, yet they strenuously maintain, that they worship neither ; but that, as these are the most expressive symbols of the Deity, they turn towards them in their devotional services. Zo- roaster, the founder of this sect, maintained that tliere were two principles, one the cause of all good, the other the cause of all evil: and, abo- minating the adoration of images, his followers worshipped God only by fire; which they looked

upon as the brightest and most glorious symbol of Oromasdes, or the good God ; as darkness is the tiuest symbol of Arimanius, or the evil god. Zoroaster taught his followers, that fire was the truest shechinah of the divine presence ; that the sun being the most perfect fire, God had there the throne of his glory, and the sesidence of his divine presence in a peculiar manner; and next to this in our elementary fire : and, there- fore, he ordered them to direct all their worship to God, first towards the sun, which they called Mithra, and next towards their sacred fires : and, when they came before these fires to worship, they always approached them on the west side, that having their faces towards them, and also towards the rising s»ui at the same time, they might direct their worship towards both.

GHENT, or Gaukt, a city of the Netherlands, the capital of East Flanders. It is a bishop's see, and seated on four navigable rivers, the Scheldt, the Lys, the Lievre, and the More, which, with a great number of canals, run through it, and divide it into twenty-six little isles, over which there are upwards of 300 wooden bridges.

Ghent is surrounded with walls and other for- tifications, but the ramparts are now chieily used as promenades. The streets are large and well paved, the market-places spacious, and the houses built mostly of brick. The large market-place is remarkable for a statue of Charles V. That of Cortere has a fine walk, between several rows of trees. In 1737 an opera-house was built here, and a guard-house for the garrison. Near the town is a very high tower, with a handsome clock and chimes. The great bell weighs 11,000 pounds. The cathedral is remarkable both for its outward appearance, and the splen- dor and richness of its interior; and here is a subterraneous church. The Benedictine abbey of St. Peter is also well worth notice, the church and library being elegant, and the esta- blishment richly endowed. Its paintings and tapestry are much admired. The inside of this and several of the eight churches in Ghent is of marble. Ghent was anciently the capital of the Nervii, and after them of the 'andals, who gave it the name of Wanda, or 'anda, whence Ganda and Ghent are supposed to have been derived. Odoacer of Flanders first surrounded it with walls; and in 1397 Philip, the twenty-fifth earl of Flanders, enlarjied it. Prince John, the third son of Edward III., of England, was born in it, and hence named John of Gaunt ; as was also the emperor Charles V. ; but the inhabitants have no reason to venerate his memory ; for, by his repeated oppressions, he provoked them to revolt in 1539; upon which he put to death twenty-six of the principal citizens, banished many others, and confiscated their estates; he at the same time deprived the city of its privi- leges, arms, and artillery ; fined the citiiens 12,000,000 of crowns, and ordered the magis- trates to walk in procession with ropes about their necks. Ghent is famous for the pacification signed here, in 157G, for settling the tninquillity of the seventeen provinces. In was taken by Louis XIV'., in 1678, but restored at

the treaty of Nimcguen. The French t

In 1706, it was taken by the duke of Marlbo- rough; and by the French in 1708;" but it was retaken tlie same year. The French also took n by surprise after the battle of Fontenoy ; but at the peace of Aix-la-Chapelle it was returned. On the 14th of November, 1792, it was taken possession of by the French under General La- bourdonnay, who were welcomed by ihe inha- bitants. In April, 1793, they evacuated it, upon tlie desertion of Dumouriez ; out recovered it again in July 1794, when the Austrians under Clairfait retreated. It remained with the rest of the Netherlands in their hands for twenty years : and hither Louis XVIII. , returned during the 100 days. Ghent is well seated for trade, on account of its rivers and canals. It carries on a great commerce in corn ; and has linen, woollen, and silk manufactures. Hence it was, indeed, that England first received her woollen manu- facture ; and she now rivals us in that of cotton. In 1816 the college here received a great exten- sion, being constituted one of tlie three univer- sities of the kingdom of the Netherlands, the current language is Flemish, but all people of education are capable of speaking French flu- ently. The citadel, built by Charles V., is one of the largest in Europe, but not proportionally strong. The number of citizens is about 65,000, but its population is not proportionable to its extent : of which Charles V. thus boasted to Francis I. ; ' I have a glove,' said he, alluding to its French name Gand, ' in which I could put your whole city of Paris.' Ghent lies twenty-six miles north-west of Brussels ; thirty south-west of Antwerp, and thirty-five north of Lisle. Long. 3° 49′ E., lat. 51° 4′ N.

GHERIAH, or Gherlah, a town of Hin- dostan, in Concan, on the west or pirate coast. It was the capital of the pirate Angria, from whom it was taken by admiral Watson and co- lonel Clive, in 1756, when his fleet was de- stroyed, and his fort taken, by the British and Mahrattas. It lies eighty miles N. N. W. of Goa, and 295 south by east of Bombay. Long. 73° 8′ E., lat. 160 45′ N.

Gheriah, a fortress situated on a promontory, on the south of India, a mile long, and a quarter of a mile broad. It is in the province of Con- can. This promontory lies about a mile from the entrance of a capacious harbour, formed by the mouth of a river which descends from the Western Ghauts.

In the year 1707 a Mahratta chief, named Conajee Angria, had established an independent sovereignty here, and possessed a numerous fleet. At a subsequent period, the depredations of these pirates drew on them an attack from the British by commodore James, when the whole of the enemy was either cap- tured or destroyed. There was found (1765) in the fort 206 pieces of ordnance, and an immense quantity of ammunition and naval stores, beside £120,000 in specie or valuables. It now belongs to the Peshwa of the Mahrattas.

GHER'KIN, 71. s. Germ, giircke, a cucum- ber. A small pickled cucumber.
GHESS. See Guess.

GHILAN, a province of Persia, on the south- west shore of the Caspian Sea, which it borders for upwards of 200 miles. It has no rivers of

importance, but the waters of the Kiziiuvein, ana numerous streams from its mountains, render it fertile in rice, wheat, and provisions. It is in fact, one vast narrow plain enclosed by moun- tains, through which there are only a few difli- cult passes. Silk is the staple produce, and As- trachan its chief market ; but the town of Retch carries on a considerable trade. Population of the district 50,000.

GHINALA, a town and country of West Africa, on the north of the Rio Grande. The capital is situated about seventy miles up that river.

GIIISLAIN (St.), or St. Gillian, a town of the Netherlands, in the ci-devant province ot French Ilainault, seated on the Haine, five miles west of Mons. It was taken by general La Fayette, in June 1792. Long. 3° 53′ E., lat. 50° 28′ N.

GIIIZNE, or Zabul,a level district of Afghaun- istaun, between the 33° and 34° of N. lat., and the 68° and 69° E. long. It is but poorly culti- vated ; the inhabitants, who are of the Ghiljee tribe, preferring a pastoral life, and raising a great number of sheep. The climate is very cold. Its principal toAvns are Ghizne. Karabay, and Gar- daiz.

Ghizne, the capital of the above district, was once the chief town of a powerful empire, ex- tending from the Ganges to the middle of Persia. It was then called Medineh, or The City, and Dar al Islam, the seat of the tme faith; was strongly fortified and contained many sumptuous palaces. In the year 1783 it was visited by Mr. Foster, who says, it stands on a hill of a mode- rate height, at the foot of which runs a small river. ' Its existence is principally supported by some Hindoo families, who carry on a small traffic, and supply the wants of the few INIahom- medan residents. At a short distance stands the tomb of sultan Mahmoud, to which pilgrims re-

sort from distant places. The climate of Ghizne is so cold as to have become proverbial; and the Afghauns told me, that the town has been more than once overwhelmed in snow. This city was in the year 960 taken possession of by Abistagy, a rebel governor of Khorassan, who threw off his allegiance to the Samonavian dynasty of Persia, and founded a new kingdom. He was suc- ceeded by his son-in-law Subaetageen, who ex- tended his dominions to the banks of the Indus. Mahmoud, the next in succession, invaded India several times, and accumulated greater wealth than was ever in possession of any other indi- vidual. It was he who raised the glory of the Ghiznean empire to its zenith, and first obtained from the caliph the title of sultan.' He died in the year 1030, and was buried in a magnificent tomb seen by our traveller. The kingdom con- tinued to flourish till the year 1116, when it was subdued by a Persian army. In the year 1150 it was again seized by Alaaddeen, the prince of Ghore, who, in revenge for an insult off"ered to his family by the inhabitants of this city, or- dered a massacre of them for seven days, and destroyed all the public buildings but the tombs. The royal family upon this fled to Lahore, where tlie dynasty only languished through two more weak reigns

GHORAGHAUT, or Idrackpool, is a dis- trict of Bengal, containing about 150 square miles. It formerly embraced great part of the district of Dinagepoor, and extended across the Brahmapootra River, including the district of Currybary. The greater portion of the inhabi- tants are now INIahommedans, and a quiet and tractable people; the zemindary is in the hands of a Hindoo family, promoted to that situation by the Shujaaddeen Khan, about tlie year 1727. It is included in the coUectorship of Momen- sing.

Ghoraghaut, also called Nusserutabad (the city of victory), the capital of the above district, is pleasantly situated on the west bank of the Curruttya, and formerly carried on a considera- ble trade with Bootan for Tangan horses, musk, &c.

GHORE, or Guour, a mountainous district of Afghaunistaun, situated between 35° and 37° of N. lat., and 67° and 69° of E. long. The climate is very cold. In the twelfth century its chiefs became independent, and, having over- turned the Ghiznean empire, carried their arms to the south-east as far as Benares ; and one of their slaves, named Cuttub, founded about the year 1205 the Mahoramedan kingdom of Dehly. This country in the thirteenth and fourteenth centuries was overrun by the armies of Jenghis Khan and Tamerlane, and is now in the posses- sion of the Usbeck Tartars.

Tlie tribe, being of pastoral habits, have emigrated to the vicinity oi Paishawur, and are now subdivided into three, called the Mehraund, KhuUeel, and Daoudyze tribes. Itsˆief towns were Ghore and Firoy Koh.

Chore, the capital of this district, once the residence of a long line of sovereigns, was taken from them by tlie king of Khuarizm, and subsequently sacked by the armies of Jenghis and Tamerlane, since which period it has not re- covered.

GIAGII, in chronology, a cycle oi twelve years, in use among the Turks and Cathayans. Each year of the giagh bears a name of some animal ; the first that of a mouse; the second that of a bullock ; the third a lynx or leopard ; the fourth a hare ; the fifth a crocodile ; the sixth a serpent ; the seventh a horse ; the eighth a sheep ; the ninth a monkey; tlic tenth a hen; the eleventh a dog; and the twelfth a hog. They also divide the day into twelve parts, called giaghs, and dis- tinguish them by the names of animals. Each giagh contains two of our hours, and is divided into eight kehs ; so that a keh is a quarter of our hour. •

GIAM'BEUX, n. s. Fr. jambes. Legs, or armour for legs, as greaves.

The mortal steel despiteously entailed. Peep ia their flesh, quite through the irrn walls That a large purple stream adowo their giambeux falls. Spenser.

GIANNONI (Peter), an Italian author, born at Naples, in 16i50. He wrote a History of Naples, which is admired for its purity of style, and vigor of sentiments. It gave such offence to the court of Rome that he was obliged to flee to Piedmont; where he died in 174f?,

GIA

\ Goth, geant; Ilal. Span /and Port, gioante; Fr.

GI'ANT, n. s. Gi'antess, n. s.

Gi'antlike, adj.\ geant ;Lˆt. gigas : all pro- Gi'antly, adv. i bably of Gr. yiyuQ, earth- Gi'antship, 71. s. J born; because the old fa- bles declared that the early giants were literally born of the earth. A man or woman of extraor- dinary or unnatural size, with reference to height : gigantic ; vast ; lofty ; strong.

Sire Kyng, quoth Merlin, though gifthou wolt here caste In the honour of men, a worke that ever schal yljiste. To the hul of Kilar send into Yrjonde, After the uoble stones that ther habbet 'onge ystonde. That was the tricke of giandes for a quoynte work

there is Of stones all with art ymad in the world such non is. Robert of Gloucetter. His mery men commandeth he To DQaken him bothe game and gle ; For nedcs must he fighte. With a geaunt with hedes three. For paramour and jolitee Of on that shone ful brighte.

Chaucer. The Rime of Sire Thopat. At last, by subtile sleights, she him bctraid Unto his foe, a gyaunt huge and tall.

Spenser. Faerie Queenc, Now does he feel his axle Hang loose about him, like a. giant's loht Upon a dwarfish thief. Shakspeare. Macbeth. Gates of monarchs Are archod so high, that giants may get througli. And keep their impious turbans on, without Good-morrow to the sun. Id. Cymbeline.

Woman's gentle brain Could not drop forth such giaiU rude invention ; Such Ethiop words. Id. At You Like It.

I had rather be a giantess, and lie under mount

Pelion. Shakspeare.

Those giants, those mighty men, and men of re- nown, far exceeded the proportion, nature, and strength of those giants remembered by Moses of his own time. Raleigh's History.

What though an apish pigmie in attire. His dwarfish body gy ant-like array. Turn brave, and get him stilts to seem the higher. What would so doing handsome him I pray? Now, surely such a mimicke sight as that Would with excessive laughter move your spleenc. Till you had made the little dandiprat. To lye within some auger-hole unscene.

Geo. Witlurs, Fierce faces thrcatouing wars. Giants of mighty bone, and bold emprise'

Hilton. His giantship is gone somewhat crest fallen. Stalking with less unconscionable strides, And lower looks. Id. Agonistes.

The giant brothers, in their camp, have found I was not forced with case to quit my ground.

Dry den. Notwithstanding all their talk of reason and phi- losophy, which they are deplorably strangers to, and tlioso unanswerable doubts and difficulties, which, over their cups, ihcy pretend to have against Chris- tianity ; persuade but the covetous man not to deify his money, the proud man not to adore himself, and I dare undertake tliat all their giantlike objections .-igainst the Christian religion shall presently vanish and quit the field. South.

By weary steps and slow. The groping giant, with a trunk of pine. Explored his way. Addison.

G T A N T S.

Neptune, bj' prayer repentant rarely won, Afflic'.s tlie chief to avenge hxˆ yianl ˆon. Great Poiypheme of more than mortal might.

Pope,

llocKS, torrents, gulphs, and shapes oi ijianl size.

And glittering clitTs on clilTs, and fiery ramparts rise.

Beattie, Oh enviable Briareus ! with thy hands And heads, if thou hadst all things multiplied In such proportion ! — But my Muse withstands The giant thought of being a Titan's bride. Or travelling in Patagonian lands. Byron.

.into life it came And grew ayiant tree : the mind may grow the same. Id. Childe Harold. Giants. The traditions of all ages have fur- nished us with so many extravagant accounts of giants of incredible bulk and strength, that the existence of such people is now generally dis- believed. It is commonly thought that the sta- Oiire of man has been the same in all ages ; and some have even pretended to demonstrate the impossibility of the existence of giants ma- thematically. Of these Mr. M'Laurin has been the most explicit. But his arguments and comparisons, drawn from the disproportion between t!ie cohesion of parts in small models and large works, of human workmanship, are by no means conclusive; because, along with an in- crease of stature in any animal, we must always suppose a proportional increase in the cohesion of the parts of its body. Large works sometimes fail when constructed on the plan of models, be- cause the cohesion of the materials whereof the model is made, and of the large work, are the same ; Init a difference in this respect will pro duce a very remarkable difference in the ultimate result. Thus, suppose a model is made of fir wood, the model may be firm and strong enough; but a large work made also of fir, when exe- cuted according to the plan of the model, may be so weak that it will fall to pieces from its own weight. If, however, we make use of iron for the large work instead of fir, the whole will be sufficiently strong, even though made exactly ac- cording to the plan of the model. The same may be said with regard to large and small animals. If we could find an animal whose bones exceeded in hardness and strength the bones of other animals as much as iron exceeds fir, such an animal might be of a monstrous .ˆize, and yet be exceedingly strong. In like manner, if we suppose the flesh and bones of a giant to be greatly superior, in hardness and strength, to those of

other men, the great size of his body ■will be no objection at all to his strength. The whole controversy, therefore, conceniing the ex- istence of giants must rest upon the credibility of the accounts given by those who profess to have seen them, and not on any arguments drawn a priori. In the Scripture we are told of giants who were produced from the marriages of the sons of God with the daughters of men. See AxTEni lu- viANs. This passage indeed has been differently interpreted, and it is very doubtful whether the ■word translated giants there implies any extra- ordinary stature. In other parts of Scripture, however, giants, with their dimensions, are men- tioned in such a manner that we cannot possibly doubt their existence; as in the cˆase of Og king

of Bashan, Goliath and his brethren. 1 Chron. XX. 4 — 8. The llev. Mr. Gun, minister of Latheron in Caithness, mentions Wiljiam Su- therland, tlie last proprietor of Berrydale Castle, who lived in the end of the fifteenth century, aud measured nine feet five inches high,

M. Le Cat, in a memoir read before the Aca- demy of Sciences at Rouen, gives the following account of giants that are said to have existed in different ages. ‘ Profane historians have given seven feet of height to Hercules their first hero ; and in our days we have seen men eight feet high. The giant who was shown in Rouen, in 1735, measured eight leet some inches. The em- peror Maximin was of that size; Shenkius and Platerus, physicians of the last century, saw seve- ral of that stature ; and Goropius saw a girl who was ten feet high. The body of Orestes, ac- cording to the Greeks, was eleven feet and a half; the giant Galbara, brought from Arabia to Rome under Claudius Csesar, was near ten feet ; and the bones of Secondilla and Pusio, keepers of the gardens of Sallust, were but six inches shorter. Funnam a Scotchman, who lived in the time of Engine II. king of Scotland, measured eleven feet and a half; and Jacob le Maire, in his voyage to the straits of Magellan, reports, that on the 17th of December, 1615, they found at Port Desire several graves covered with stones; and, having the curiosity to remove the stones, they discovered human skeletons of ten and eleven feet long. The chevalier Scory, in his voyage to the peak of Teneriffe, says, that they found in one of the sepulchral caverns of that mountain, the head of aGuanche which had eighty teeth, and that the body was not less than fifteen feet long. The giant Ferragus, slain by Orlando nephew of (‘harlemagne, was eighteen feet high. Rioland, a celebrated anatomist, -wlio wrote in 1614, says, that some years before there was to be seen in the suburbs of St. Germain the tomb of the giant Isoret, who was twenty feet high. In Rouen, in 1509, in digging in the ditches near the Dominicans, they found a stone tomb containing a skeleton whose skull held a bushel of corn, and whose shin bone reached up to the girdle of the tallest man there, being about four feet long, and consequently the body must have been seventeen or eighteen feet high. Upon the tomb was a plate

of copper, whereon was engraved, ‘ In this tomb lies the noble and puissant lord, the chevalier Ricon de Vallemont, and his bones.’ Platerus, a famous physician, declares, that he saw at Lucerne, the true human bones of a subject which must have been at least nineteen feet high. Valence in Dauphine boasts of possessing the bones of the giant Bucart, tyrant of the V’ivarais, who was slain by an arrow by the count De Cabillon his vassal. The Dominicans had a part of the shin bone, with the articulation of the knee, and his figure painted in fresco, with an inscription, showing that this giant was twenty-two feet and a half high, and that his bones were found in 1705, near the banks of the Morderi, a little river at the foot of the mountain of Crussol, upon which (tradition says) the giant dwelt.’ INI. Le Cat adds, that skeletons have been discovered of giants., of a still more incredible height, viz. that of Theuto-

bochus king of the Teutones, found January 11th, 1613, twenty-live feet and a half high ; of a giant near Mazarino, in Sicily in 1516, thirty feet; of another in 1548, near Palermo, thirty feet, &c. &c. But whether these accounts are credited or not, we are certain that the stature of the human body is by no means fixed. We are ourselves a kind of giants in comparison of the Laplan- ders ; nor are these the most diminutive people to be found upon the earth. The abbe la Chappe, in his journey into Siberia to observe the transit of Venus, passed through a village inhabited by people called Wotiacks, who were not above four feet high.

Giants, Rebellious, in ancient mythology, the sons of Ca-lus and Terra. According to He- siod they sprang from the blood of the wound which CceIus received from his son Saturn. Hyginus calls them sons of Tartarus and Terra. They are represented as endued with strength proportioned to their gigantic size. Some of them, as Cottus, Briareus, and Gyges, had each fifty heads and 100 arms, and serpents instead of legs ! They were of a terrible aspect, and their hair hung loose about their shoulders. Pallene and its neighbourhood was the place of their residence. The defeat of the Titans, to whom they were nearly related, incensed them against Jupiter, and they all conspired to dethrone him. Accord ingly they reared Mourn Ossa upon Pelion, and Olympus upon Ossa ; and from thence at- tacked the gods with huge rocks, some of which fell into the sea and became islands, and others fell on the earth and formed mountains. Jupiter summoned a council of the gods; when being informed that it was necessary to obtain the as- sistance of some mortal, he by the advice of Pallas called up his son Hercules ; and with the aid of this hero he exterminated the giants En- celadus, Polybates, Alcyon, Porphyrion, the two sons of Alceus, Ephialtes and Othus, Eurytus,

Clytius, Tythyus, Pallas, Hippolitus, Agrius, Thoon, jind Typhon, the last of whom it was more difficult to vanquish than all the rest. Ju- piter, having thus gained a complete victory, cast the rebels down to Tartarus, where they were to receive the full punishment of their crimes; or, according! to some of the poets, he buried them alive under Mount /Etna and different islands.

The Giant's Causeway is a natural pier or promontory, projecting 600 feet into the sea, on the north coast of the county of Antrim, Ire- land. It is sometimes described as the south part of the promontory of Bengou, which is eight miles west of Farehead. In describing this noble natural curiosity of Ireland, we shall avail ourselves of the published accounts of a gentleman (Rev. G. N. Wright) whose descrip- tive sketches of his native country have elsewhere enlivened our pages. He conducts us from Belfast by Glenarm and Bally-castle to Ballintoy and Bushmills, about one mile from the Causeway, where there is an inn called the Causeway Inn, being the nearest place of rest and refreshment.

'Approaching the shore at ' the Rock Heads' it becomes necessary to abandon all kinds of vehicles as well as our horses, and trust to pe- destrian activity for the remainder of the path to the Causeway.

*'A first object of curiosity in this direction ia Port Coon Cave ; this magnificent excavation is accessible both by sea and land. In the west side are two apertures by which it can be *^n- tered at all times, but the violence of the biiluws at its mouth sometimes forbids the most a-iven turous sailor to approach. The cave is of con- siderable length, and boats may row in 100 yards at least. The formation of the interior- is very extraordinary, and extremely interest- ing to the mineralogical tourist : the rouf and sides are composed of rounded stones, imbed- ded in a basaltic paste, of extreme hardness. These stones again are formed of concenlrin spheres, resembling the pellicles of an onion. The appearance of the cave, viewed from th? innermost recess, is not unlike the side aisle of a gothic cathedral, the roof being a tolerably re- gular pointed arch : the sides appear greasy, and do actually feel so : one of the unbidden attend- ants, who takes the trouble to accompany the party, is generally provided with a loaded piece, upon the discharge of which, a tremendous reverberation of sound is produced : musical in- struments also, when played with judicious ma- nagement, i. e. by allowing a short pause be- tween the succeeding notes, will be found to produce most agreeable echoes. Adjoining this cave is the little inlet called Port Coon, formed by a very remarkable whyndyke ; which seems to have been composed of seven walls, and to have been separated from the dyke in front of the precipice, by some great convulsion. In this shock a small pyramidal basaltic rock was de- tached from the great mass, and stands now in- sulated in the centre of the small bay. The ruins of the whyndyke*

are attached to its eastern side, separated into a number of distinct walls, exhibiting their construction by horizontal prisms, and forming, altogether, a very curious object. Beyond the projecting excavated rock, of which Port Coon Cave is composed, is a second of these whyndykes, being one side of the little estuary of Port Nabau

‘ On the west of Port Coon Cave and Dyke, in the dark perpendicular cliff, is a deep and lofty cave, accessible by water alone. The en- trance assumes the appearance of a pointed arch, and is remarkably regular. The boatmen are very expert in entering these caves; they bring the boat’s head right in front, and, watch- ing tire roll of the wave, quickly ship the oars, and sail in majestically upon the smooth rolling wave. The depth of Dunkerry Cave has not been ascertained, for the extremity is so con- structed as to render the management of a boat there impracticable and dangerous ; besides^ from the greasy character of the sides of the cave, the hand cannot be serviceable in forwarding or retarding the boat. Along the sides is a border- ing of marine plants, above the surface of the water, of considerable breadth. The roof and sides are clad over with green conferva-, which gives a very rich and beautiful effect : and not the least curious circumstance connected with a visit to this subterranean apartment, is the swel- ling of the water within. It has been already frequently observed, that the swell of the sea upon this coast is at all times heavy ; and, as

each successive wxve roils into the cave, the surface rises so slowly and awfully, that a ner- vous person would be apprehensive of a ceaseless increase in the elevation of the waters until they reached the s-^mmit of tlio cave. Of this, how- ever, there is not the most distant caus(i of ap- prehension, the roof lieing sixty feet above the high water mark. Tlie roaring of the waves in the interior is distinctly heard ; but no probable conclusion can be arrived at from this as to the depth. It is said too, that the inhabitants of some cottages a mile removed from the shore, have their slumbers frequently interrupted in the ■winter’s nights, by the sul)terranean sounds of Dunkerry Cavern. The entrance is very strik- ing and grand, being twenty-six feet in breadth, and enclosed between two natural walls of dark basalt and the visitor will enjoy a much more perfect view of the natural architecture at the entrance, by sitting iti the prow wit!) his face to the stern as the boat returns.

‘ Landing again, and returning to the Cause- way road, pursue its windings beneath the wild and barren cliff for about a quarter of a mile, when the first view of the Causeway is afforded. The impression at first produced is

that of the building of an extensive pier, for which the stones, blocked out, had many years ago been laid upon the beech ; but from some great national calamity, or otlier unknown cause, the work was interrupted, and tlie laborers all dismissed. And so the natives believe, that the giants once commenced this colossal task of forming a cause- \vay into Scotland, but that, being expelled by the ancient Irish heroes, they left the great work imperfect. It is not, however, the magnitude of the Causeway which surprises, nor the distant view which commands attention ; the wonder and admiration of the tourist are to be reserved until he steps upon the very surface of this great work of nature, when the expectation of the most sanguine and the amazement of the most experienced traveller will indeed be fully rea- lized. To the left are seen some bold projecting rocks, called the Stookins, forming a partition between Port-na-Baw and Port-na-Gange ; and a little farther west, close to the shore, stands the insulated rock called Sea-Gull Isle ; and between Port-na-Gange and Port-Noffer the Causeway runs out into the sea.

' The Causeway consists of three piers or moles, projecting from the base of a stratified cliff, about 400 feet in height : the principal mole is visible for about 300 yards in extent at low water, the others not more than half that distance. It is composed of polygonal pillars, of dark colored basalt, so closely united, that it is difficult to insert more than a knife-blade be- tween them ; and the formation of a continuous surface at each point in the pavement, by poly- gons whose angles vary so much in value!ˆ would have surprised even Proclus, yet no artificial formation can exceed this in accuracy. Towards the centre of die whole mass the pillars ascend ; and, from the peculiar appearance of the surface, this vertex is usually called the Honeycomb. The pillars are irregular prisms of an uncertain miiuber of sides, varying from three to nine : there is one of three sides near the centre of the

Honeycomb, and several of nine have been detected, but the hexagonal form prevails most generally.

' Each pillar is in itself a distinct piece of workmanship ; it is separable from all the adja- cent columns, and then is itself separable into distinct joints, wliose articulation is as perfect as human exertion could have formed them, the extremities of each joint being concave or con- vex, whicli is determined by the terminations of the joint with which it was united; but there is no regularity as to the upper or lower extremity being concave, or convex; the only law on this point is, that the contiguous joints are the one concave, the other convex. In order to ensure stability to this; piece of archi- tecture, the angles of the inferior joints fre- quently overlap those of the superior so finely, that the force required to dislocate them fre. quently fractures the joints. If the concavity of any pillar be examined, it will be

found to re_ present a circle inscribed in a polygon ; the in- terval in each angle intercepted between the peri- phery of the circle, and the sides of the polygon being perfectly horizontal. To make this more intelligible — suppose tlie extreinity of the pillar or joint had been originally in a soft state, but in a polygonal form, and that a heavy iron ball, whose diameter was equal to the shortest dia- meter of the polygon, was laid upon itˆ and, being removed again, left a basin-formed im- pression on tlie stone; this would give a perfect idea of tiie appearance which the concave ends exhibit : the convex, on the other hand, appears as if the ball was enclosed within the pillar still, and a portion of the sphere projected through the extremity of the column. This very mathe- matical appearance of the circle inscribed in an irregular polygon, has led some fanciful theorists to suppose, that these curious columns might have been formed by the compression of a num- ber of liquid globules, which at first only touched at one point, but, when the pressure was in- creased indefinitely, were formed into angular masses.

- *Though the polygons are all irregular, yet the contiguous sides of the adjacent pillars are equal, so that the contact of the columns is com- plete. And we have already mentioned, that, notwithstanding the number and different values of the concurring angles in each point, yet their sum is found to be so precisely equal to four right angles, that there is not the smallest aper- ture or open space left over the whole arena of basaltic pavement. So close is the flooring of this natural quay, that, whenever any subsidence of the surface has occurred, water will be found to lodge, and remain for a length of time. And this suggests also a curious circumstance, to which the attention of the visitor will be called, upon his arrival at the Causeway; that, although the union of the columns has been just repre- sented as impervious to a lodgment of water, yet on the west side of the Causeway is seen a spring of water bubbling up between in the in- terstices of the columns through which the blade of a knife could, with much difficulty, be intro- duced. This is called, of course, the Giants Well, and the water found in it is extremelN*

pure. It may be observed also, that the pillars, between which the water issues, are not in the least worn, nor are their angles less accurate than those of anv pillar in the Causeway. In the early ages of natural history, many ridiculous questions were proposed relative to this extra- ordinary

piece of nature's architecture, which would degrade the naturalist of the present age; amongst the rest, it was seriously proposed, as a difficult and important question, to discover the depth which the Causeway pillars run perpen- dicularly into the ground, and in the Encyclo- paedia Britannica we find this solemn sentence : ' How deep they are fixed in the strand was never yet discovered.' But the modern geolo- gist can assure these sage enquirers, that the mole or quay, called the Giants' Causeway, is only the continuation of a basaltic stratum, whose breadth may be measured in various parts of the range along the coast, and is ascertained to be forty-five feet in thickness or depth. The answer to tlie query, to what distance does it extend under water, is not so satisfactory in a nautical point of view ; but it is supposed to obey the same]aw here as the stratum to which it belongs is found to do elsewhere.

' The Causeway, which is entirely composed of basaltic pillars, is inclined to the horizon in a small angle, and may be traced up the cliff in an easterly direction, and culminates at the distance of one mile from the Causeway, where it attains the height of 250 feet above the level of the sea. It still proceeds towards the east, and ultimately immerges at Portmore. This is not the grandest nor most magnificent stratum of basalt : the next stratum but one to this forms the noblest natural colonnade in the world, the columns being more

f)erfect in their articulation than the great co- umns of Fair Head, and of more coUossal di- mensions than those of the Causeway.

'An expert guide will afford much satisfaction to the tourist in pointing out the variety of form and position in the different columns around the Causeway ; some are remarkable for the great length of their joints, others are seen in the lowest range of the precipice, lying in an horizontal position ; but this is evidently attributable to ex- ternal causes, as all the columns in these have a vertical position. In the face of the bold strati- fied cliff, east of the Causeway, some very perfect and regular colonnades of clustered pillars are seen, the most perfect of which are called the organs, from a very striking resemblance which the fafade bears to the range of frontal tubes in a large church organ. And opposite these is ano- ther, called generally the Giants' Loom, but the term giant has lost its distinguishing power in this vicinity now, as every stone around derives an epithet or name from its relative situation amongst these great men's supellectilia, their cliairs, their well, Sec.

' The scenery east of the Causeway is truly sublime : the dark preci}-)itous cliffs which rise regularly in gradually retiring strata, certainly suggest the idea of their having been deposited age after age, as Werner thought ; and the ex- traordinary appearance of the various colonnades might, for a

moment, seduce the fancy of the contemplating viiitor, and lead liim to imagine,

that here ˆThole palaces have been overwhelmed in ruin. These successive capes, which are vi- sible from the Causeway, are but a part of one great headlaud, called Bengore, the rival of Ben- more or Fair Head, and similarly formed. On a lofty projecting cliff, east of the Causeway, stand a few shattered columns, usually knowa by the appellation of ‘ the chimney tops,’ and said to have been mistaken by the crew of the vessels composing the invincible Armada of Spain, and fired upon as such.’ Wright’s Guide to the Giants’ Causeway, 12mo. London,

1823.

GIAOUR, a Turkish word, signifying dog, used by the Turks to designate the adherents of all religions except the Mohammedan, more particularly Christians. The use of it is so com- mon that it is often applied without intendmg an insult.

GIBBK, n. s. Heb. ba:, to end. Any old worn out animal.

GIBBER, V. n. ˆ To speak indistinctly,

Gib’berish, n.s. i or utter words without meaning; applied to the private language or cant terms of rogues and gipsies. According to Skinner from Fr. gaber, to cheat ; see Gibe. By others conjectured to be formed by corruption from jabber. But, as it was anciently written giberish, Dr. Johnson thinks it probably derived from the chemical cant, and originally implied the jargon of ‘Geber’ and his tribe. The sheeted dead,

Did squeak and gibber in the Roman streets.

Shakspeare.

Some of both sexes writing down a number of let- ters, just as it came into their heads ; upon reading this gibberish, that which the men had wrote sounded like High Dutch, and the other by the women like Italian. Swift.

GIB’BET, n. s. k v. n. Fr. gihet ; barb. Lat. gabalus, from Heb. bˆ2i, an end or boundary. — Minsheu. That on which malefactors are hanged or exposed ;■ any transverse beam.

He shall come off and on swifter than he that gibbett on the brewer’s bucket. Shaktpeare.

When was there ever cursed atheist brought Unto the gibbet, but he did

adore That blessed power which he had set at nought ?

Davies. You scandal to the stock of verse, a race

Able to bring the gibbet in disgrace. Cleavehind.

I'll gibbet up his name. Oldham.

Haman sulTered death himself upon the very gibbet that he had provided for another. L' Estrange.

Papers lay such principles to the Tories, as if they were true, our next business should be to erect gibbets in every parish, and hang them out of the way.

Swift. One to destroy is murder by the law. And gibbets keep tlie lifted hand in awe. To murder thousands takes a specious name War's glorious art, and gives immortal fame.

Young.

GIB'BIER, n.s. Fr. Game; wild fowl.

Those imposts are laid on all butchers' meat, while, at the same time, the fowl and gibbier arc tax-free. Addison on Italy.

GIBBON (Edward), Esq., a celebrated Eng- lish historian, born at Putney in Surrey, April 27th, 1737. He was the eldest son of Edward

Gibbon, Esq., and Judith, daughter of — Portcn, Esq. merchant, of London. His family was descended from John Gibbon, architect to Ed- ward III., who possessed lands in Kent. His constitution till his fifteenth year was ex- tremely feeble, as were those of his brethren and sisters, who all died in infancy ; and he com- plains that ' the chain of his education was bro- ken, as often as he was called from the school of learning to the bed of sickness.' To the care and attention of his maternal aunt he ascribes his preservation from a premature death. In 1745 he was sent to the grammar-school at Kingston; in January, 1749, to that of West- minster; and in April, 1752, to Oxford, where he matriculated in Magdalen College ; the pro- fessors of which he blames greatly for their remissness and inattention to his moral conduct and principles. In consequence of this he became a convert to the Roman Catholic faith in his sixteenth year. To

cure the young Catholic of liis errors, and bring him back to the Protestant txith, his father, within three weeks after his conversion (June 30th, 1753) sent him to Swit- zerland, and entrusted him to the tutorage of Mr. Pavilliard, a Calvinist minister at Lausanne, whom Mr. Gibbon mentions with gratitude, as a most excellent preceptor. Under his tuition he made rapid progress in the Latin, Greek, and French classics; in history, geography, logic, and metaphysics ; and was also soon reclaimed from the errors of popery ; so that on Christmas, 1754, he received the sacrament in the church of Lausanne. Thus had he communicated with three different churches before he was eighteen years old. These jarring opinions, however, successively adopted and rejected, and the repeated changes so rapidly made from the one to the other, perhaos contributed to weaken our author's faith in revelation, and to lead to his final change to deism, as much as his perusal of M. Voltaire's writings, or his conversation with that author, to whom he introduced himself in 1757. About this time Mr. Gibbon fell in love with Mad. Susan Curchod, daughter of the minister of Crassay, a lady whom he describes as possessed of every accomplishment, corporeal and mental, that can adorn a woman. But, though the consent of the young lady and her parents was easily obtained, yet his father's tyrannical veto, to which, 'after a painful strug- gle,' he submitted, deprived him of this inesti- mable treasure, and of matrimonial felicity for life. The lady was afterwards married to the celebrated M. Neckar. In spring, 1758, he was recalled to England, and well received by his father ; at whose house at Beriton, in Hampshire, he finished a worK he had begun at Lausanne, entitled Essai sur 1′ etude de la Literature, which he published in 1761, 12mo., with a dedication to his father. Previous to this period, he had been appointed a captain in the South Hamp- shire militia, in which he served two years, and which contributed to make him better acquainted with English manners, principles, and parties. At the peace in 1763 he went abroad; and after visiting Paris, where he was introduced to Messrs. D' Alembert and Diderot, returned to his favorite residence at Lausanne Having spent some time

there, he made the tour of Italy ; and at Rome on the 15th of October, 1764, while musing amidst the ruins of the capitol, the idea of his great work first started into his mind. Upon his return to Hampshire in June, 1765, he found his father involved in pecuniary difficidties, and, to relieve him, consented to the sale of part of the estate. After commencing a history of the revo- lutions of Switzerland, which he suppressed, he engaged in a journal entitled Memoires Literaires de la Grand Bretagne, and published 2 vols, for 1767 and 1768; but his partner in this under- taking, a native of Switzerland, going abroad, when the third volume was nearly finished, the work was discontinued. Bishop Warburton having about this time published an Interpre- tation of the Sixth Book of Virgil's ˆneid, he criticised it with

equal asperity and success. Of his History of the Decline and Fall of the Roman Empire, the 1st vol. was published in 1776, and met with extraordinary success ; the 2d and 3d vols, appeared in 1781 ; and the 4th, 5th, and 6th, in 1787, established Mr. Gibbon's fame as an historian. Encomiums were lavished on him from all quarters by Mr. Hume, Dr. Robertson, Dr. Watson, Zimmerman, &c. The last repre- sents Mr. Gibbon as even excelling both those eminent historians in point of style. 'AH the dignity,' he adds, ' all the charms of historic style are united in Gibbon ; his periods are melody itself, and all his thoughts have nerve and vigor.' But others, while they give our author full credit for acuteness of penetration, fertility of genius, luxuriance of fancy, elegance of style, harmony of language, and beauty of epithets, &c., object that ' the uniform stateliness of his diction sometimes imparts to his narrative a degree of obscurity, unless he descends to the miserable expedient of a note to explain the minuter circumstances,' and that 'his style on the whole is much too artificial; which gives a degree of monotony to his periods, that extends almost to the turn of his thoughts.' But a more serious objection, it has been added, is his attack upon Christian- ity ; the loose and disrespectful manner in which he mentions many points of morality, regarded as important on the principles of natural religion ; and the indecent allusions and expressions which too often occur in the work. An argumenta- tive attack upon Christianity will never, merely as such, be condemned or shunned by the Christian ; on the other hand, the attack is never to be carried on in an insidious manner, and with im- proper weapons : indeed Christianity itself, so far from dreading, will invite every mode of fair and candid discussion. But our historian often makes, when he cannot readily find, an opportunity to insult the Christian religion. Such indeed is his eagerness in the cause, that he stoops to the most despicable pun, or to the most awkward perver- sion of language, for the pleasure of turning the Scripture into ribaldry, or calling Jesus an im- postor. Yet of the Christian religion has Mr. Gibbon himself observed, that 'it contains a pure, benevolent, and universal system of ethics, adapted to every duty and every condition of life.' Various answers to Mr. Gibbon's attack on Christianity were published by Dr. Chelsam, Dr. Randolph, lord Hailes. Dr. Watson, bishop

of Llandaff, Dr. White, Mr. Apthorpe, Mr. D.avis, Mr. Taylor, Dr. Priestley, and others. To most of these our author made no reply, though his postliuraous memoirs show that he felt the weight of some of them. Our author, however, was no friend to new opinions in politics. Being intro-

duced into the house of commons as M. P. for Liskeard in 1774, he uniformly supported ad- ministration with his vote, during the American war ; and upon the French revolution he adopted Mr. Burke's creed, in every thing hut his reve- rence for church establishments. Soon after the downfal of lord North's administration, he returned to Lausanne ; but his Swiss friend dying, and French politics prevailing in Berne, he left his Paradise, as he styled it, and returned to London in June, 1793. He did not however enjoy this retreat long. His constitution had suffered much from repeated attacks of the gout, and a swelling of his ancles ; and, after having been often tapped for a hydrocele, he died at London, of the gout in his stomach, on the 16th of January, 1794, in the fifty-seventh year of his

a erg,

"gibbons (Grinling), a celebrated modern carver and statuary, was born in London of Dutch parents about the middle of the last cen- tury, lie was patronised both by Charles IL, and James IL ; and gave to wood and coin, to marble and to bronze, the lightness of flowers. His principal remaining works arc, the wooden throne at Canterbury', the monument of viscount Camden, at Exton in Rutlandshire, the font in St. James's Church, the statue of Charles II. at Charing Cross, and that of James 1 1, in the Privy Garden. He died in 1721.

GiHBOKS (Thomas), D.D., a dissenting minis- ter of some popularity, was born in 1720 at Swaft'ham, Norfolk. He became in 1742 pastor of an Independent meeting-house in Silver-street, London ; but the next year removed to Haber- dasher's Hall. In 17.54 he was one of the tutors of the Mile End Academy, and in 1764 received a diploma from the university of Aberdeen He died in 1785; having published, — 1. Juvenilia; or Poems on Several Occasions. 2. Family Sermons, 8vo. 3. A System of Rhetoric, 8vo. 4. Female Worthies; or the Lives of Pious Women, 2 vols., 8vo. 5. Memoirs of Dr. Isaac Watts, 8vo. After his death, diree volumes of his sermons were published,

GIBBSTTY,«.s.ˆ Fr. gibbonite ; Latin

Giu'bous, adj. ˆfˆibbus. An astronomical

G I u'bousn ESS, n.s. y term implying convexity; inequality. Crookbacked; deformed ; a promi- nence.

I demand how the camels of Baclria came to have two bunches on their back, wliereas the camel;' of Arabia liave but one? How oxen in some countries Ijcgan and continue gibbous or huuch-backed '

Browne. A pointed flinty rock, all barn and black.

Grow ijibbout from behind the mountain's back.

Drtjdcn.

When ships, sailing contrary ways, lose the sight one of another, what shoubl take away tlie siglit of sliips from each other, but the gibbosity of the interja- crnt water ? li-'iy-

The boues will rise, and make a gibbous member.

Wiicmun.

The sea, by this access and recess, shuffling the empty shells, wears them away, reducing those that are concave and gibbous to a flat.

Woodward's Natural History.

To make the convexity of the earth discernible, suppose a man lifted in the air, that he may have a spacious horizon ; but then, because of the distance, the convexity and gibboasness would vanish away, and he would only see r great circular flat.

Bentley's Sermon.*

Gibbosity, in surgery, denotes any protuber- ance, or convexity of tlie body, as in a person hump-backed. Infants are much more subject to gibbosity than adults, and it oftener proceeds from external than internal causes. A fall, blow, or the like, frequently tlius distorts the tender bones of infants. When it proceeds from an internal cause, it is generally from a relaxation of the ligaments that sustain the spine, or a caries of its vertebrae ; though the spine may be inflect- ed forward, and the vertebrje thrown o\it, by a too strong and repeated action of the abdominal muscles. This, if not timely redressed, grows up and fixes as the bones harden, till in adults it is totally irretrievable : but when the disorder is recent, and the person young, there are hopes of a cure.

Gibbous, in astronomy, is used in respect to the enlightening jxirts of the moon, whilst she is moving from the first quarter to the full, and from the full to the last (piarter : for all that time the dark part appears horned or falcated; and the light one hunched out, convex, or gib- bons.

GIBBS (James), A.M., a celebrated Scottish architect, born at Aberdeen in 1674. His father was a merchant of that city, and, parties running high about 1688, he named his two dogs Whig and Tory, in ridicule of both parties; — an offence for which the magistrates of Aberdeen summoned him before them, and condemned the two dogs to be hanged at the cross !

Young Gibbs was educated at the Marischal College, where he took his degree of A. i\I. About 1694 he travelled into Holland, where he spent some years with an eminent architect ; and where, in 1700, he was introduced to the earl of Mar, who generously assisted him with money and recom- mendatory letters, to enable him to complete himself under the best Italian masters. j\bout 1710 he left Italy, and returned to England, where he found his noble patron in favor with the queen. An act being passed for building fifty new churches, Mr. Gibbs was employed, and gave a specimen of his abilities by planning and executing St. Martin's Church, St. Mary's in die Strand, and several others. Among many other beautiful edifices planned by liim, and built by his direction, we shall only mention the lladcliffe Library at Oxford; the King's College, Royal Library, and Senate House at Cambridge ; and the duke of Newcastle's monument. He died 5th of August, 1754, leaving a fortune of £15,000.

Gibbs (Vicary), an English lawyer and judge of mo Icrn celebrity, was born in 1752 at Exeter, in which city his father was a surgeon. He was educated at Eton and King's College Cambridge on the royal foundation. in 1772 he obtained

a Craven scholarship. After this, entering him- self of Lincoln's Inn, he contracted an acquaint- ance with Mr Dunning, afterwards lord Ashbur- ton, whose patronage became important to him. He succeeded Mr. Burke in the recordership of the city of Bristol, and was an able and eloquent pleader at the bar. His exertions on the trials of Tooke, Hardy, Thelwall, &c, in particular, ranked him high in his profession; and he pro- ceeded rapidly through the situations of chief justice of Chester, solicitor, and attorney-general (on accepting which last office he was knighted), till, being raised to the bench, he was, in 1814, finally elevated to the dignity of lord chief justice of the common pleas. Sir ^^icary only filled this last post about four years, when his infirmities compelled him to resign. He survived about two years, and died in the month of February,

1820.

GIB'CAT, n. s. Gib and cat. An old worn- out cat.

I am as melancholy as a, gibcat, or a lugged bear.

Shakspeare. GIBE, V. n., V. a., & n. s. "i Old French ga- Gi'ber, n. s. >ber; Goth, gaber,

Gi'sifiGLY, adv. J gabba, to mock;

Belg. gabbim ; Ital. gabbare. To reproach ; ri- dicule; taunt; upbraid; or sneerˆ

When he saw her toy, and gibe, and geer. And pass the bounds of modest merry make. Her dalliance he despised. Spenser.

They sfˆem to imagine that we have erected of late a frame of some new religion, the furniture whereof we should not have borrowed from our enemies, lest they should afterwards laugh and gibe at our party.

Hooker, Mark the fleers, the gibes, and notable scorns That dwell in every region of his face. S/taktpeare.

You are well understood to be a more perfect giber of the table, than a necessary bencher of the capitol.

Id. Coriolanus. Why, that's the way to choke a gibing spirit. Whose influence is begot of that loose grace Which shallow laughing hearers give to fools.

Shakspeare. His present portance Gibingly and ungravely he did fashion After the inveterate hate he bears to you. Idt

He is a giber, and our present business Is of more serious consequence. Ben Jonson.

The good man was by nature gay ■ Could gibe and joke as well as pray.

Somervine. The rich have still -ti gibe in store. And will be monstrous witty on the poor.

Dry den. If they would hate from the bottom of their hearts, their aversion would be too strong for little gibes every moment. Spectator.

Draw the beasts as I describe them. From their features while I gibe them. Swift, Thus with talents well endued. To be scurrilous and rude. When you pertly raise your snout. Fleer and gibe, and laugh and flout. Id.

Hypocrisy with frown severe Scurrility with gibing air. Id.

Till the tried jade, the wheel forgets to hurl. Provoking envious gibe from each pedestrian churl.

Bgron. GIBEAH, a city of Benjamin, lying north of vTerusalem about twenty or thirty furlongs, and

built upon a hill as its name imports. This city gave birth to Saul, the first king of Israel, for which reason it is often called Gibeah of Saul.

GIBBON, a city seated on an eminencp about forty furlongs north of Jerusalem, and not far from Gibeah. It was the capital of the Gibeon- ites.

GIBEONITES, an ancient nation of Canaan, who, hearing of Joshua's great conquests, saved their lives at the expense of their liberty, by a representation that they belonged to a very re- mote country, and desired to make an alliance with the Hebrews. See Joshua ix. 3 — 27. The Gibeonites were descended from the Hivites, and possessed four cities ; viz. Chephirah, Bee- roth, Kirjathjearim, and Gibeon; which were afterwards given to the Benjamites, except the last, which fell to the tribe of Judah. The Gi- beonites continued subject to those burdens which Joshua had imposed on them, and were very faithful to the Israelites till the dispersion of that nation.

GIB'LETS, n. s. Minsheu says, from gobbet, a good mouthful ; Mr. Thomson refers us to the Saxon 3iblai ; M. Goth, gibla, a wing ; according to Junius, more properly from Fr. gibier, game. The parts of a goose which are cut off before it is roasted.

'Tis holyday ; provide me better cheer : Tis holyday ; and shall be round the year : Shall I my household gods and genius cheat. To make him rich who grudges me my meat ? That he may loll at ease -, and pampered high. When I am laid, may feed on giblet pie ?

Dryden.

GIBRALTAR, a promontory, and important fortress, in the south of Spain, at the entrance from the Atlantic into the Mediterranean. It is in fact a great rocky mountain, about three miles in length from north to south, from half to three-fourths of a mile in width, and from 1200 to 1400 feet in height. On the north side is an isthmus, about a mile and a half in length, and half as much in breadth, which connects this vast mass of rock with the continent. Its northern front is almost perpendicular ; and the east side is full of precipices, while the south, being nar- row and abrupt, presents hardly any possibility of approach even to an enemy in command of the sea. On none of these sides has this fortress ever been attacked ; there remains only the west- ern front, which is almost as abrupt as the others, but which may be approached in ship- ping from the bay, and on a level part of which the town is built.

The rock is in general calcareous; and, on blowing it up, fossil bones and teeth have been found, which at first were supposed to be human, but are

now known to belong to quadrupeds, The rock has also several caverns, of which that of St. Michael on the west, is the largest ; it i.s 1110 feet above the level of the sea. The rain water continually filtrates through, and forms stalactites, some of which extend from the roof to the bottom, forming columns two feet in diameter, and which continually increase in bulk. Excavations have been formed in the rock by blasting, capable of holding the entire garrison of GOOO men ; and these subterranean barracks

communicate with all the batteries by passages of the same kind, all of which may be traversed on horseback. Eiˆht bomb-proof cisterns, each containing 40,000 tons, are kept constantly full of water, by collecting all the little runs on the west side of the rock, and the water is allowed to deposit its sediment in immense troughs before it is let into the cisterns.

The bay of Gibraltar is nine miles long, and five broad, and forms a convenient and well- protected naval station. One side is formed by the promontoiy and isthmus ; to the soutli is the sea; the other sides of the bay (the west and north) are formed by the main land of Spain, but the command of the whole depends on the pos- session of the promontory.

The town of (Jibraltar consists of a principal street, from half to three-quarters of a mile long, and containing 12,000 inhabitants, English, Spa- niards, and Jews; each religion being fully tolerated. It is surrounded by a strong wall, supported by bastions and other works, and was formerly under strict military regulations, no inhabitant being allowed to be out of his home after eleven o'clock, without express permission from the governor; and neither hawkers nor beggars were permitted in it. The abuses and vexations consequent to this species of govern- ment, induced the parliament to erect it into a body corporate, and the civil power is now lodged in its magistrates. Its chief protection is derived from the batteries on the neighbouring heights, which sweep both the isthmus and the approach to the town by water. In the last siege the town was almost entirely destroyed, but it was afterwards rebuilt on an improved and en- larged plan. Tiie houses have flat roofs, and bow windows are used generally for shops ; they are painted black, to blunt the dazzling rays of the sun, with a white stripe to mark each story or floor. Out of the main streets the inhabitants are much crowded, as was exemplified in the rapid spreading of a contagious fever, communicated from Cadiz in 1804, which swept off" many thou- sand inhabitants; the military escaped only from tlie observance of the strictest precautions, and from their being lodged on higher ground. Tlie climate of Gibraltar is qualified by the vicinity of the

sea, and less hot than might be expected in the latitude of .30°.

Cottons, and other manufactures, are its im- ports from England ; sugar, rum, and other produce, from the West Indies; tobacco, rice, and flour, from iNorth America ; while wine, fruits, silk, wax, and other Mediterranean articles, are brought in from tlie east. The port is formed by moles of considerable extent. The chief public buildings are the navy hospital, the victualling office, barracks, and governor's house. The places of worship an English church, Catho- lic chapel, and three synagogues ; here is also a small but elei^ant playhouse ; and a respectable garrison library.

Tliis im]iortant fortress seems to have been fir;t particularly noticed as a place of consequence in the year 712. At that time the general of the caliph Al Walid landed with an army of 12,000 men on llie isthmus between tlie general of the Uie continent ; and, that he might secure an in-

tercourse wit'ii xYfrica, ordered a castle to be built on the face of the hill. Part of the build- ing still remains : and, from an inscription d\s- covered above tlie principal gate, appears to have been finished in 725. It continued in the pos- session of the Saracens till 1310, when it was taken by Perez de Guzman, under Ferdinand I'. king of Castile. In 1333, however, it was sur- rendered to the son of the emperor of Fez, who came to the assistance of the Moorish king of Granada. An attempt was made upon it in 1349 by Alphonso XL, king of Castile ; but, when the fortress had been reduced to the last extremity, a pestilential fever broke out in the Spanish camp, which carried oif the king himself, with great part of his army ; after which the enterprise was abandoned. The fortress continued in the pos- session of the Saracens of Fez until 1410, wlienit was taken by Joseph III. king of Granada. A design of attacking it was formed by Henry de Guzman in 1435 ; but, the enterprise mis- carried through his imprudence, and he was de- feated and slain. However it was at length taken, after a gallant defence, by his son John de Guzman in 1462 ; since which time it has re- mained in the hands of Europeans.

In 1540 Gibraltar was surprised and pillaged by Piali Ilainet, one of Barbarossa's corsairs; but the pirates, having fallen in with some Sici- lian galleys, were by tiiem defeated, and all either killed or taken. In the reign of Charles V. the fortifications of Gibraltar were modernised, and such additions made as to render them al- most impregnable. But in 1704, inconsequence of the resolution adopted by the C(mrt of Britain to assist tlie archduke Charles in his pretensions to the Spanish crown. Sir George Ilooke was sent with a powerful fleet into the ^lediterra- nean, and an attempt on Gibraltar was resolved upon. On the 21st of July, 1800 troops were landed upon the isthmus under the prince of Hesse Darmstadt; and,

on tlie refusal of the go- vernor to surrender, a cannonade was begun from the fleet on the 23d, and kept up so briskly that in five or six hours the Spaniards were driven from many of their guns, especially at the new mole-head. The admiral, perceiving that by gaining this part of the fortification the reduction, of the rest would be facilitated, ordered out some armed boats to take possession of it. On their approach the Spaniards sprung a mine, which demolished part of the works, killed two lieute- nants and forty men, wounding about sixty more. Notwithstanding this disaster the assailants kept possession of the work, and took a small bastion halfway between the mole and the town. On this the governor capitulated, and the prince of Hesse toek possession of the gates on the 24th. The garrison, consisting of 150 men, marched out with the honors of war ; and the Spaniards who chose to remain were allowed the same])rivileges they had enjoyed under Charles II. The works were found very strong, and the place well pro- vided with ammunition and military stores : yet the capture was held of little value by the British court.

This conquest was achieved with the loss of about sixty killed and 21(i wounded on the part of the English. The prince of Hesse remained

governor, and eighteen men of war were left at Lisbon under the command of Sir John Leake, to succour the garrison if there should be occa- sion. The loss of such an important fortress, . however, having alarmed botli the courts of Ma- drid and Paris, orders were sent to the marquis de Villadarias a Spanish grandee, to lay siege to it. Tiie prince of Ilesse immediately applied to Sir John Leake for assistance ; but, before the latter had time to comply with his request, a French fleet arrived, and debarked six battalions to assist the Spaniards ; after which they pro- ceeded to the westward, leaving only six frigates in the bay. The trenches were opened on the 1 1 th cf October, about which time Sir John ar- rived with twenty sail of English and Dutch ships ; but, hearing that the French were about to attack him with a superior force, he returned to refit. Having left orders at Lisbon to make preparations for this purpose, he accomplished the work with such expedition that, on the 29th, he returned, and surprised in the bay three frigates, a fire ship, two English prizes, a tartan, and a store ship. After this he landed some re- inforcements, supplied the garrison with six months' provisions, and sent on shore 500 sai- lors to assist in repairmg the breaches. The Spaniards supposing that the garrison would now be off their guard, on account of the vicinity of their fleet, formed the rash design of attempting to surprise the place, though the British admiral was still before it. Li this mad attempt 500 brave volunteers associated, taking the

sacrament never to return unless they accomplished their purpose. They were conducted by a goat-herd to the south side of the rock near the cave-guard. This they mounted, and lodged themselves the first night m the cave of St. Michael : the next they scaled Charles V.'s wall ; surprised and massacred the guard at Middle-hill; where afterwards, by ropes and ladders, several hundreds of the party de- signed to support them were hauled up ; but, being discovered, they were attacked by a party of grenadiers, and all either killed or taken. Notwithstanding these misfortunes the Spaniards conthmed the siege, and fitted out a strong squadron from Cadiz, to intercept the provisions sent to the garrison ; expecting that, on the ar- rival of their fleet, Sir John would be obliged to retire, and the garrison to surrender. They continued their fire therefore with additional fury, dismounted many of the cannon, and did es- sential injury to the works, in several different places. The prince of Hesse, however, exeited his utmost to disappoint their expectations. As it was probable that they might attempt to storm the curtain, a curvette was dug in the ditch, which was filled by the tide, and a double row of palisades placed parallel to the works ; and the chambers of the mine under the glacis were loaded ; but on a sudden the Spaniards altered their design, and threatened an attack on the lines which the garrison had on the declivity of the hill to flank the glacis, and overlook their advanced works. While affairs were in this situation, part of the succours they had long ex- pected arrived in the bay, Dec. 7th 1704 ; and in two days after, the remainder came in with nearly 2000 men, and a proportionable quantity of am-

munition and provisions. These had sailed from Cape Spartel, and were in danger of falling into the hands of the enemy, whose fleet they mis- took for their own : but escaped by being be- calmed. Sir John Leake, having thus powerfully reinforced the garrison, set sail for Lisbon, where he arrived about the end of the year. In the beginning of 1705 the Spaniards were reinforced by a considerable body of infantry, and on the llth of January made an attack on the King's Lines, but were repulsed. The attack was re- newed next day by 600 grenadiers, French and Walloons, supported by 1000 Spaniards, under lieutenant general Fuy. They showed an inten- tion to storm a breach which had been made in the round tower at the extremity of the King's Lines, and another in the entrenchment on the hill. The retrenchment which covered the latter, witli part of the entrenchment joining the preci- pice of the rock, was defended at night by a captain, three subalterns, and ninety men ; but the captain usually withdrew, with two subalterns and sixty men, at day break. The round tower was defended by 180 men, commanded by a lieutenant colonel. The marquis, by deserters from the garrison, had obtained mtelligence of the strength of these posts, and planned his at- tack accordingly. The detachment for the upper breach mounted the rock at midnight, and con-

cealed themselves in the clifts until the captain had withdrawn; after which, advancing to the point of the entrencliment, they threw grenades on the subaltern and his party, so that they were obliged to leave the place. At the same time 300 men stormed the round tower, where lieu- tenant colonel Bar made a vigorous defence, though the enemy annoyed them on the flanks with great stones and grenades. Observing, however, the Spaniards marching down to cut off his retreat from the town, he retired ; and, by getting over the parapet of the king's lines, descended into the covered way, where the Eng- lish guards were posted. Thus the garrison were alarmed ; all the regiments were assembled at their proper posts ; and captain Fisher endea- voured to stop the progress of the enemy with seventeen men, but they were repulsed, and liim- self taken prisoner. At last, however, the tower was retaken by lieutenant colonel Moncal at the head of 400 or 500 men, after it had been in the possession of the enemy upwards of an hour. The garrison were now farther reinforced by six companies of Dutch troops and 200 Englisii soldiers, with provisions and stores. The assail- ants, however, were still determined to go on. The marquis de Villadarias was superseded by marischal Tesse, a Frenchman, with whom ad- miral Pointis was desired to co-operate in block- ing up the place. The marischal joined the army with four fresh battalions, besides eight companies which had been sent before ; the ordnance, which had been greatly injured, was exchanged, and the works put into the best re- pair. On the part of the English, a reinforce- ment was ordered under Sir Thomas Dilkes and Sir John Hardy, to join admiral Leake at Lisbon: which being effected, the whole fleet, consisting of twenty-eight English, four Dutch, and eight Portuguese men of war, having on board two

battalions of land forces, set sail from Lisbon. And happily for the besieged, the incessant rains and storms had retarded the operations of the land forces, and greatly distressed the enemy's fleet; eight of their ships having been forced from their anchors. At this critical period Sir John Leake, with the allied fleet, entered the straits, when the few remaining French ships put out to sea, and he immediately gave chace. Three men of war were taken ; the admiral's ship and another were driven on shore, and burnt ; and the rest made the best of their way to Toulon. The garrison was now so well supplied, that raarischal Tesse withdrew his troops from the trenches, and formed a blockade, drawing an en- trenchment across the isthmus to prevent the garrison from ravaging the country. The prince of Hesse remained for some time in the place, where he repaired the batteries, and made forti- fications; after which he joined the archduke Charles at Lisbon. Major-general Raines was now appointed governor of Gibraltar, in which

only two new battalions were left, as nothing was to be feared from the enemy. In the course of this siege the Spaniards lost 10,000 men, in- cluding those who died of sickness; while the gar- rison lost only 400. The new governor brought with him 400 men for the greater security of the place ; but soon resigned his government to colo- nel Roger Elliot, during whose time Gibraltar was made a free port bya special order from queenAnne. Colonel Elliot was succeeded by colonel Con- greve before 1714, and he by colonel Cotton soon after. In 1720 the Spaniards threatened anotiier attack, but the design was abandoned. At last, however, in the end of 172G, they as- sembled an army near Algesiras, encamping, on the 20th of January^ 1727, on tiie plain below St. Roch, and erecting a batterj' on the beach to protect their camp. Though admiral Hopson was tlien at anchor in the Bay of Gibraltar, yet, as he had not heard of the commencement of hostilities between Britain and Spain, he allowed the boats of the latter to pass with provisions, arms, and ammunition, between Algesiras and the camp, at the same time that brigadier Kane, who had been a second time s»nt from Minorca, lay under similar embarrassments. Tlie opera- tions of the Spaniards, however seemed so evi- dently to tend towards an attack, that the gover- nor thought proper to order such of that nation as were in the town to leave it, and to forbid their galleys to anchor under his guns. The count de las Torres commanded the Spanish forces, amounting to nearly 20,000 men; and soon after forming his camp, he advanced within reach of the garrison. The brigadier then de- sired him to keep out of his reach, otherwise he should do liis utmost to force him ; but to this the Spanish commander rej)lied, that he should obey his Catholic majesty's orders, and encroach as far as possible Hostilities, Iiowever, were not commenced till the 20th of February 1727, when the Spaniards having brought materials for batteries to the old wind-mill on the neutral ground, it was determined in a council of war, thattheSpanish general i>ad commenced hostilities. Still, however, the governor sent to the count to know the reason of breaking grovmd before the

garrison ; but received for answer, that ' lie was in his master's territories, and was no answer- able to any other person for his conduct.' On this the governor opened the batteries of the Old INIole and those of Willis upon the Spanish workmen; however, they persisted in carrying on their operations, and at night marched a party down to the Devil's Tower, w'here they begfin a communication with their other works. The governor was now informed by some deserters, that the enemy were forming a mine in a cave under Willis's Battery, with a design to blow it up : but, the plot being thus discovered, a party was immediately stationed to cut off the com- munication. On the 22d of February the Spaniards opened on the garrison with seven- teen pieces of cannon besides mortars; and the day following brigadier Kane left Gib- raltar to send a reinforcement from Minorca. On

the third of March the enemy opened a new battery of twenty-two guns on the Old INIole, and on the 8th another of fifteen guns, bearing also upon the same Mole, the gims of which had annoyed the western flank of their approaches. All this time the garrison had kept up a constant and well directed tire from the batteries which bore upon the works of the enemy ; but the ordnance being old frequently burst ; by which they suffered more than from t'.ie fire of the be- siegers. The latter were also greatly annoyed by the fleet under admiral Hopson and Sir Charles Wager, who, since the beginning of the siege, had intercepted their home-bound ships, and greatly benefited the garrison by bringing the prizes into the bay. But on the arrival of a reinforcement from Minorca, they sailed to the westward, leaving the garrison to defend them- selves in the best way they could. The enemy continued to augment their batteries, and erect new ones, until they amounted at last to sixty cannon besides mortars ; and, on the 3rd of May, the governor received intelligence that a genera, assault was intended. Hostilities, however ceased on the 12tli, when news arrived that the preliminaries of a general peace were signed. In the course of this siege the loss of the Spaniards was computed at nearly ,3000 men, besides casu- alties, which could not be ascertained. That of the garrison amounted only to 300 ; a very small number, considering that during the siege se- venty cannon and thirty mortars burst on tlie batteries.

For upwards of half a century, no farther at- tempts were made on Gibraltar; but the hostile manifesto, presented by the Spanish ambassador to the court of London, at the commencement of the American war, was soon followed by an in- terruption of communication betwixt Spain and Gibraltar. No direct intention of attacking it, however, was manifested till the 16th of July 1779, when the port was completely blocked up by a squadron of two seventy-four gun ships, several frigates, galleys, &c. Ten days after they began to form a camp on the plain below St. Rod), three miles from the fortress. The garri- son at this time consisted of 5382 men, includ- ing officers, with a company of engineers and artificers ; but the greatest expectations were formed from the abilities and valor of general

Eliott, the governor. See Eliott. As soon as the breaking off the communication with Spain indicated approaching hostilities, the governor took every precaution that could be suggested by military wisdom; but though informed of the rupture betwixt the two courts, and though he beheld the hostile operations of the enemy, he used no means to interrupt them till the 12th September, when t!ie batteries of Green's Lodge, Willis, and Queen Charlotte, were opened for a few hours, with a view to disturb

the workmen. From this time to the beginning of 1780 tlie enemy continued the blockade both by sea and land, but without doing any damage to the works or garrison; and it was not until the 12th of Ja- nuary that a single person was wounded. This happened to be a woman, who, passing near one of the houses, was slightly hurt by a shot from the enemy. In the mean time, however, the usual supplies of provisions being cut off, the garrison began to feel all the horrors of famine. All the necessaries of life were very scarce, and to be procured only at most exorbitant prices. As the rock, however, is almost surrounded by the sea, it was natural to suppose, that in such a scarcity of other provisions great benefit would have been derived from the ocean ; but the fisher- men, being all foreigners, and under no regula- tion, took advantage of the scarcity in the garri- son to exact a most exorbitant price for the fish. Had matters remained long in this state, the fortress must have fallen into the hands of the enemy. They were, however, effectually re- lieved in consequence of the repeated victories gained by admiral Rodney over the Spanish fleets, on the 8th and 16th of January 1780; which proved equally serviceable to the garrison and detrimental to the enemy, who were now in great want both of provisions and materials for shipping. The news of the last of these impor- tant victories arrived at Gibraltar on the evening of the 17th, and in two days more the garrison was completely relieved by the arrival of the fleet and convoy ; when they were farther rein- forced by a regiment of Highlanders, consisting of 1051 men, officers included. An opportunity was also taken of sending away with the fleet all the invalids and women in the garrison ; with whom they set sail on the 10th of February, leaving in the bay only the Edgar and Panther, ships of the line, with two frigates.

On the departure of the British fleet the blockade was immediately resumed ; and, not- withstanding the ample supplies lately received, the garrison soon began again to experience the want of fresh provisions. It had hitherto re- ceived these in abundance from the coast of Barbary ; but the friendship of the emperor of Morocco was now transferred from Great Bri- tain to Spain in a manner totally unprecedented. Thus the garrison became daily more and more distressed, from being obliged to make constant use of their salt provisions, and even this with the strictest economy. At the same time the de- fence of the garrison was so vigorous, that while it continued to be supplied even in this scanty manner, the Spaniards began to lose all hope of reducing it ; for which reason they formed a pro- ject of burning all the British shipping in the

bay. The night fixed for executing this scheme was the 6th of June 1780, when ten fire ships, favored by an uncommon darkness, stood over from the Spanish to the British side of the bay. Their design was to set fire to the store-houses and shipping nearest the water side ; but, hav- ing been too precipitate in firing their ships, they met with a very heavy cannonade, and

the attempt was frustrated. On this occasion the skill and intrepidity of the British seamen were eminently displayed. Having manned their boats, they grappled with the fire-ships already in flames , and, notwithstanding the danger of their exploding, towed them clear of the vessels under the walls, and extinguished them. The failure of this project was a grievous disappointment to Don Barcelo the Spanish admiral, who lay ready with his squadron to intercept the British vessels that might attempt to escape; while the batteries on their lines were ready to bombard the town, if the fire-ships had succeeded in causing any conflagration on shore. The failure of this at- tempt was S30n followed by other disasters. As soon as they had, with great labor, constructed new liatteries, they were destroyed by the be- sieged ; and their mortification on these occa- sions was the grsater, as the governor allowed them to complete tlieir works before he com- menced his destructive operations. Thus the labor of many days was often lost in a few hours, and was again resumed with as little prospect of success as before. The garrison were now, how- ever, considerably annoyed by the Spanish gun- boats, to which indeed the shipping were equally exposed. These were vessels from thirty to forty tons burden, constructed so that they lay low and comparatively secure in the water. They had fifteen oars on a side, carried forty or fifty men, with a twenty-six pounder on the prow ; and, from the facility of managing them, two were deemed, in calm weather, to be a match for a frigate of moderate size. All their efforts, however, could only reduce the garrison to great straits for want of provisions ; and to this dreadful inconvenience the British submitted with the most stoical resignation. From admiral Rodney's departure in February, 1780, to Octo- ber, almost the only provisions in the garrison were such as tended to produce the scurvy which accordingly raged in such a manner as to threaten the most fatal consequences. The al- lowance of salt provisions haft hitherto continued undiminished ; but now it was judged necessary to reduce the allowance of bread and meat, and to enforce the strictest economy with regard to food. Every thing of this kind that could be practised, however, seemed insufficient to pre- serve the garrison from want. In the beginning of 1781 provisions became exceedingly scarce, by the almost total' expenditure of the public stores, and the vigilance of the enemy's cruisers. About the middle of February the bakers left off work for want of flour; many of the poorer sort wanted bread, and the price of fresh provisions again rose to a most enormous height ; while the scarcity of fuel was such, that it was sometimes scarcely procurable in quantity sufficient to dress their victuals. The garrison had hitherto derived assistance occasionally from the gardens*

*on the neutral ground, though vast quantities of vegetables had been removed thence by the enemy. Towards the end of October 1780, however, the Spaniards expelled the British from these gardens; and from this time the sup- ply of vegetables depended entirely upon culti- vation ; which, happily for the garrison, was at- tended with such success, that the produce came at last to be nearly equal to the demand. At last, on the 12th of April 1781, supplies were brought by the British fleet under admirals Darby, Digby, and Ross, though they could not be got in without great difficulty. This so irritated the court of Spain, that they determined to exert their utmost force rather than fail in obtaining their favorite object. The batteries of the besiegers were now mounted with 200 guns of the heaviest metal, and ten mortar-pieces of the largest size. In three weeks this prodigious mass of artillery consumed 100,000 lbs. of gunpowder, and threw into the town 4000 or 5000 shot and shells every day. By such an immense bom- bardment the town was almost totally laid in ruins. The inhabitants were at last all forced to leave the town, and take shelter under tents, with what accommodation could be jirovided for them in such scenes of horror and confusion. Numbers took the opportunity of retiring with the fleet; while many that remained were re- duced from a state of opulence to the greatest distress. The conduct of the governor, however, ■was now admirable : he allowed such as chose it a free passage to England, and supplied them with provisions for the voyage. During this bombardment, not only the greatest part of the effects belonging to the inhabitants were de- stroyed, but the fortifications were in many places greatly injured ; and the remainder was destroyed by the soldiers, *ho were often very insubordinate. Rigorous measures were, there- fore, now, of necessity, adopted ; and it was in- timated, that any soldier convicted of being drunk or asleep upon his post, or fouiid maraud- ing, should be immediately executed.*

By the beginning of June, 1781, the enemy •had relaxed considerably in their firing, seldom exceeding 600 shot in a day; and they continued jfradually to diminish this number so remarkably, that towards the end of August they seldom fired in the day, or above four times in the night. The batteries on land, however, were succeeded by the gun-boats; which renewed every day their attacks, keeping the garrison in continual alarm, and never failing to do more or less execution. To restrain them, a battery of guns, capable of throwing their shot to a great distance, was erected ; and, as it reached the enemy's camp, it was de- termined to open it upon them as often as the gun-boats made their attacks. Tlie besiegers continued still, however to improve their works, and for this p'lrpose employed the best engineers both of France and Spain ; so that by the end of November, 1781, they had brought them to such a state of perfection, as inspired both kin'^doms with the most sanguine expectations of success. Governor Eliott was undismayed at these forrni- dablo preparations, and suffered them to

procood without molestation that he might at once destroy ihcm. In the night of the 27lh of November a Vol. X

chosen party of 2000 men was detached to at- tack the enemies' works and batteries; and their success was equal to their most sanguine expec- tation. They marched out in great order and silence about 2 o'clock A. M. under brigadier- general Ross; and arrived with the utmost cele- rity at the enemy's works, which they stormed and overthrew ; spiking all their guns. Tlie a-r- tillery-men, artificers, and sailors, exerted them- selves so vigorously, that in an hour the whole of the enemy fled ; the magazines were blown up, the storehouses of arms, ammunition, and mili- tary implements, and all the works that had been constructed, were set on fire, and totally consumed: the whole damage done on this occasion being estimated at upwards of £2,000,000 sterimg. In the begintung of De- cember, a partial attempt was mads by the Spaniards to repair their works: but it was evi- dent, that if the place could be reduced at all, it must be by some means hitherto unattempted. The Spanish monarch seemed determined how- ever on his object, and was willing to employ the whole strength of his empire. Among the vari- ous projects formed, that of the chavalier D'Arcon, a French engineer, was adopted on a larger scale. His plan was to construct such floating batteries as might neither be liable to be sunk or set on fire. Their bottoms were made of the thickest timber, and their sides of wood and cork long soaked in water with a layer of wet sand betwixt them. Their thickness was such, that they were impenetrable to cannon shot; and, to prevent the effects of red hot balls, a number of pipes were contrived to carry water through every part of the vessel, connected with pumps sufficient to furnish a constant supply. The people at the batteries were sheltered from the bombs by a rope-netting made sloping, that they might roll off; and spread with wet skins ta prevent fire. Ten of these batteries were con- structed out of the hulls of large vessels, of fifty or sixty guns, cut down for that purpose, and carrying from ten to tweilty-eight guns each, with about half as many in reserve, in case of accident. Each gun was served by thirty-six artillery-men ; and the whole were seconded by eighty large boats carrying guns and mortars of heavy metal; a great number of ships of force and frigates, with some hundreds of small craft, were to accompany them with troops, for the instant execution of what might be judged neces- , sary.

On this occasion upwards of 1000 pieces of artillery, and 80,000 barrels of gunpowder, were provided. A body of 12,000, of the best troops of France were now added to the Spanish army before the place ; the body of engineers was the best that both kingdoms could produce ; and numbers of volunteers of the best families in both joined the attacking army. The command of it was committed to the duke of Crillon, who had distinguished himself by the conquest of Mi- norca; and two princes of the

blood royal of France, the count of Artois and the duke of Bourbon, came to be witnesses of the meditated enterjiriso. The former politely transmitted a packet of ietteis for various individuals in the garrison, which had been intercepted and carried

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to Ma Irid ; and which he requested that he 'night be the means of conveying to those for v.liom they were designed. Both he and the duke of Bourbon signified to general Eliott, the liigh regard they had for his person and charac- ter; the duke of Crillon expressing the same sentiments. Such a prodigious armament raised the confidence of the besiegers so high, that they looked upon the conquest of the place as an ab- solute certainty ; and the commander in chief was thought by far too modest, when he said, that the garrison might hold out a fortnight. ' It appear- ed,' says captain Drinkwater, ' that they meant, previous to their final efforts, to strike if possible a terror through their opponents, by displaying an armament more powerful than had probably ever been brought before any fortress. Forty-seven sail of the line, including three inferior two- deckers ; ten battering ships, deemed perfect in design, and esteemed invincible, carrying 212 guns; innumerable frigates, xebeques, 1iomb- ketches, cutters, gun and mortar boats, and smaller craft for disembarking men, were assembled in the bay. On the land side were most stupendous and strong batteries and works, mounting 200 pieces of heavy ordnance, and protected by an army of 40,000 men, commanded by a victorious and active general. In their certainty of success, however, the enemy seemed entirely to have over-looked the nature of that force which was op- posed to them ; for though the garrison scarcely consisted of more than 7000 effective men, in-cluding the marine brigade, they forgot that they were now veterans in this service, had long been habituated to the effects of artillery, and were by degrees prepared for the arduous conflict that awaited them. We were at the same time com- manded by officers of approved courage, pru- dence, and activity ; eminent for all the accom- plishments of their profession, and in whom we had unbounded confidence. Our spirits too ■were not a little elevated by the success attejid- ing the firing of red hot shot, which in this attack we hoped would enable us to bring our labors to a conclusion, and relieve us from the tedious cruelty of a vexatious blockade.' This was sug-gested by lieutenant-governor Boyd, and on the 8th September, 1782, their advanced works were almost destroyed by it.

As a prelude to the dreadful storm which was about to be poured forth on

this garrison, the enemy on the 9th September opened a battery of sixty-four of their largest cannon, accompanied with a terrible fire from other batteries, and a great number of mortars. On this and the follow- ing day an attack was also made upon the bat- teries erected on Europa Point, which at that time were entirely under the management of cap- tain Curtis of the Brilliant frigate. By these the fire of the Spaniards was so warmly returned, that they not only could make no impression, but \ver3 forced to retire, after being so much da- maged that two of the principal ships were obliged to withdraw to the bay of Algesiras. On the 12th the enemy made preparations for their grand and decisive attack. Accordingly, on the mc rning of the ISlh, the ten floating bat- teries came forward, under Don Buenventura de Moreno, a Spanish officer of great gallantry, who

had signalised himself at Minorca. Before ters o'clock they had all reached their proper stations, anchoring in a line about 1000 yards from the shore. They then began a heavy cannonade, and were seconded by all the cannon and mortars in the enemy's lines and approaches; at the same time that the garrison opened all its batteries both with hot and cold shot from the guns, and shells from the howitzers and mortars. This ter- rible fire continued on both sides without inter- mission until noon ; when that of the Spaniards began to slacken, and the fire of the garrison to obtain a superiority. About two o'clock the principal battering ship, commanded by Don Moreno, was observed to emit smoke as if on fire, and some men were seen busy upon the roof, searching from whence it proceeded. The fire from the garrison was now kept up without the least intermission or diminution, while that from the floating batteries was perceived sensibly to decrease ; so that about 7 P. M. they fired but few guns, and these only at intervals. At mid-night the admiral's ship was on fire, and soon completely in flames. Eight more of these bat- teries took fire successively ; and on the signals of distress made by them, the multitude of feluc- cas, launches, and boats, with which they were surrounded, all came to their assistance, and began to take the men out of the burning vessels. Captain Curtis, who lay ready with the gun boats to take advantage of any favourable circumstance, came upon them at two A. M., and, forming a line on the enemy's flank, advanced upon them with such expedition as to throw them into entire con-fusion; they now tlierefore fled precipitately with all their boats, totally abandoning the float- ing batteries and all who were in them to perish in the flames, This would undoubtedly have been their fate, had not captain Curtis extricated them at the imminent risk of his own life and that of his men. So zealous was he in this woik of benevolence that while his boat was along-side of one of the largest batteries, it blew up, and some heavy pieces of timber pierced the bottom of his boat, killing one man and wounding several others. He himself escaped with difficulty out of this boat, which was sunk, as well as another by the accident. The floating batteries were all

consumed ; about 400 people being saved from them ; many of whom were picked up floating on rafts and pieces of timber. Indeed the blowing up of the batteries as the flames reached their powder-rooms, and the discharge of the guns in succession as the metal became heated by the fire, rendered the attempt to rescue them very dangerous. This terrible catastrophe took place in sight of the combined fleets of France and Spain. It had been proposed that they should co-operate upon this important occasion, by attacking the garrison at Europa Point, and such places as appeared most exposed to an attempt by sea : but they remained inactive, assigning, as a reason for this, the want of wind.

A British fleet in the mean time had assembled at Portsmouth, consisting of thirty-five sad of the line, in excellent condition, and filled with the best officers and sailors in Europe. The com- mand was given to lord Howe, accompanied by admirals Barrington, Milbank, Hood, Sir Richard

Hughes, and commodore Holham. But the pro- gress of this force to Gibraltar was delayed by contrary winds, and it was not until he had gain ed the southern coast of Portugal, that lord Howe received information of the defeat of the enemy's attempt on the 13th September. On the 11th October he entered the Straits, and several of the storeships destined for Gibraltar came safe to anchor under the cannon of the fort, without any molestation from the enemy. The combined fleet in the mean time had been much damaged by a storm ; two ships of the line were driven ashore neai- Algesiras ; two more were driven out of the bay into the Mediterranean; others lost their masts, and most of them suffered consider- ably. One in particular, a ship of seventy guns, was carried by the storm across the bay, and ran aground under the works of Gibraltar, where she was taken by the garrison, with her whole complement of men. The combined fleet, how- ever, put to sea on the 13th, with a view to prevent the remaining store- ships that had over- shot the bay to the east from making good their entrance ; and at the same time to rejoin the two ships that had been separated from the main body. Having the advantage of the wind, they bore down upon the British fleet, which drew up in order of battle to receive them ; but, notwith- standing their superiority, they declined coming to an engagement. On the wind becoming more favorable next day, lord Howe took the oppor- tunity to bring in the storeships tliat were in com- pany ; and the day following the remainder were conveyed to Gibraltar, and the troops for the rein- forcement of the garrison were landed with a

large supply of powder, and provisions. This last relief proved entirely decisive ; for though the blockade continued till news arrived of the preliminaries of peace being signed, in the begin- ning of February, 1783, no other attack was made.

Gibraltar is now a decidedly favorite posses- sion of our government. In war it is a valuable place of rendezvous, and in peace a convenient mercantile depot. Yet it has been of late ques- tioned, whether all the advantages of this pos- session are not too dearly purchased, when we calculate the maintenance of a garrison not otherwise necessary, and the large disbursements made since the peace of 1783? It is said to cost annually little short of £400,000.

Gibraltar, Straits of, are a narrow sea, which forms the communication between the .At- lantic Ocean and the Mediterranean, thereby di- viding Europe from Africa; and runs from west to east about thirteen leagues. In this strait tliere are three remarkable promontories, or capes, on the Spanish side, and as many opposite to them on the Barbary side. The first of these, on the side of Spain, is Cape Trafalgar, opposite to which is Cape Spartel; and, in the neighbour- hood of this, stood the fortress of Tangier, once in the possession of the British. The next to the Spanish side is Tarisan, and over against it lies Malabata, near the town of Alcassar, where the straits are about five leagues broad. Lastly, Gibraltar, facing the mountain of Abyla, neat the fortress and town of Ceula, which make tlie east- ern entry of the straits.

(iIBSON (I)r. Edmund), bishop of London, w.is lK>rn at Knipe in Westmoreland, in KiOy.

He early displayed his knowledge in seTcral writings and translations, which recommended him to the patronage of archbishop Tennison, who appointed him his domestic chaplain ; and soon after rector of Lambeth, and archdeacon of Surry. Becoifting thus a member of the convo- cation, he defended his patron's rights, as presi- dent, in eleven pamphlets; he then completed his scheme of the legal duties and rights of liie Eng- lish clergy, under the title of Codex Juris Ec- clesiastici Anglicani, in folio. Archbishop Ten- nison dying in 1715, and Dr. Wake, bishop of Lincoln, being made archbishop of Canterbury, Dr. Gibson succeeded him in the see of Lincoln, and in 1720 was promoted to the bishopric of London. He spent the latter part of his life in publishing letters, charges, occasional sermons, and tracts against the prevading immoralities of the age. His pastoral letters are justly esteemed masterly productions against infidelity and en- thusiasm. His other publications are, 1. An edition of Drummond's Polemo-Middinia, and James V.'s Cantilena Rustica, with notes; 2. The Chronicon Saxonicum, wiih a Latin translation, and notes; 3. Reliquiae Spelmannianse, the post-

humous works of Sir Henry Spelman, relating to the laws and antiquities of England; 4. An edi- tion of Quintilian de Arte Oratoria, with notes; 5. An English translation of Camden's Britannia, with additions, 2 vols, folio ; and, 6, A number of small pieces, that have been collected and printed in 3 vols, folio. He died, aged seventy- nine, in September 1748.

Gibson (Richard), an English painter, com- monly called the Dwarf, was originally page to a lady at Mortlake ; who, observing his genius for painting, generously had him instructed in that art. He devoted himself to Sir Peter Lely's style, and copied his pictures to admiration. His paintings in water colors were also esteemed. He was in great favor with Charles I., who made him his page of the back-stairs ; and he had ilie honor to instruct in drawing queen Mary II., and queen Anne, when princesses. He married Anne Shepherd, who was also a dwarf; on which occasion king Charles I. honored their marriage with his presence, and gave away the bride. Waller wrote a poem on this occasion, entitled ' The Marriage of the Dwarfs.' Fenton, in his notes on this poem, observes, that he had seen this couple painted by Sir Peter Lely ; and that they were of an equal stature, each being tliree feet ten inches high. However, they had nine children, five of whom arrived at maturity, well- proportioned, and of the usual standard of man kind. Mr. Gibson died in the seventy-fifth year of his age ; and his wife, havinsc survived him al- most twenty years, died in 1709, aged eighty, nine.

GIBYLE, a sea-port town of Tripoli, on the river Jebilee, the ancient Byblos : it is in ruins, and thinly inhabited. It was repeatedly besieged by the Crujaders. Twelve miles S. S.W. of Tripoli.

GID'DILY, ailv. ^ Sax ^\x>\z; Gotb. Gid'diness, n. s. | t£/i,'«, to agitate. Hav-

Gid'dy,«

Gid'dy-urained, arf;. fcular motion or sen Gin'DY-nEAnr.D, j sation. Inconstant,

GiD'nv-rACi.i). J tlioughfless ; irroyu

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lar, whether it relate to mind or body ; intoxi- cated. This word is supposed also, to come from gad, to wander ; to be in motion.

The parts that fortune hath bestowed upon her, Tell her, T hold as giddily as fortune. Skakspeare. More than light airs, and recollacted terms, Ol these most brisk and giddypaced times. Id.

As we have paced along Upon the giddy footing of the liatches, Methought that Glo'ster stumbkd. Id.

*Our fancies are more giddy and unfirm. More longing, i*avering, sooner lost and won. Than women's are. Id. Twelfth Night.*

There be that delight in giddiness, and count it a bondage to fix a belief. Bacon.

Megrims and giddiness are rather when we rise after long sitting, than while we sit. Id.

It may be gnats and flies have their imagination more nmtable and giddy, as small birds likewise have.

Id. To roam Giddily, and be every where but at home. Such freedom doth a banishment become.

Donne. And sooner may a gulling weather-spy. By drawing forth heaven's scheme descry What fashioned hats or ruffs, or suits, next year. Our giddy-headed autick youth will wear. Id.

A sodaine north-wind fetcht. With an extreame sea, quite about againe. Our whole endeavours ; and our course constrain To (jiddie round. Chapman.

That men are so misafFected, melancholy, giddy- headed, hear the testimony of Solomon.

Burton on Melancholy. Turn him out again, you unnecessary, useless, giddybrained ass I Otway's Venice Preserved.

The giddy vulgar, as their fancies guide. With noise say nothing, and in parts divide.

Dryden's ˆneid. Them revelling thus the Tentyrites invade. By giddy heads and staggering legs betrayed.

Tate. The indignation of Leaven rolling and turning us, 'till at length such a giddiness seized upon government, that it fell into the very dregs of sectaries. South. Too many giddy foolish hours are gone. And in fantastic measures danced away. Rowe.

The frequent errors of the pathless wood. The giddy precipice, and the dangerous flood.

Prior. As Ixion fixed, the wretch shall feel The giddy motion of the whirling mill. Pope. Intestine war no more our passions wage And giddy factions tear away their rage. Id.

You are as giddy and volatile as ever, the reverse of Pope ; who hath always loved a domestic life.

Swift to Gay. GIDEON, Heb. t1J?"H i. e. a destroyer, the son of Joash, a Manassite, who had a very extraordi- nary call to deliver the Israelites from the op- pression of the Midianites. Having effected their deliverance by supernatural aid, he was chosen judge of Israel, A.M. 2759, and died in 2798. See Judges vi. vii. and viii.

GIENS, a town and arrondissement of the de- partment of the Loire, in a neighbourhood very fertile in corn, wine, and saffron. The arrondisse- ment contains forty-nine communes, and 38,550 inhabitants. In the town are brass-works and tanneries. Population of the town 5022. It is twenty-one miles south of Montargis, and thirty- three south-east of Orleans,

GIER-EAGLE, n. s. Sometimes it is written jer-eagle. An eagle of a particular kind. Bo- chart thinks the vulture is meant below.

These fowls shall not be eaten, the swan, and the pelican, and the gier-eagle, Leviticus xi. 18.

GIESSEN, a walled town of Hesse-Darmstadt, the seat of the civil and ecclesiastical courts of Upper Hesse, between the Lahn and the Wiesek. It has some woollen and cotton manufactures; but its trade is inconsiderable, and the arsenal of little military importance. A university was founded here in 1607. Population 7700. Six miles east of Wetzlar, and thirty-six north-east of Mentz.

GIFANIUS (Obertus, or Hubert), LL.D., a learned critic and civilian, born at Bueren in Guelderland, in 1534. He studied at Louvain and Paris, and erected the German library at Or- leans; where he took his degree in 1567. He taught civil law and philosophy at Strasburg, Altdorf, and Ingoldstadt ; and wrote several tracts, besides comments on ancient authors. Though bred a protestant, he turned Roman Catholic, and was made counsellor to the emperor Ro- dolph. He was very avaricious, and is accused of suppressing the MSS. of Fruterius, a youth of extraordinary genius, who died at Paris, aged twenty-five, and left them to his care. Gifanius died at Prague in 1604.

GIFFORD (Andrew), D.D., an eminent English dissenting divine and antiquarian, born August 17th, 1700. He was the son of Emanuel Gifford, minister of a Baptist churcii at Bristol, and was educated at Tewksbury, under the Rev. Mr. Jones, and the celebrated Dr. Ward. He joined his father's church, and was baptized in 172?; he preached to the church at Nottingham in 1725 ; and was ordained and settled at London, February 5th, 1730. In 1731 Sir Richard EUys appointed him his chaplain. In 1754 the Maris- chal College of Aberdeen presented him with a diploma. He was also admitted a member of the Society of Antiquaries, and, in 1757, was ap- pointed assistant librarian to the British Museum. He died 19th June, 1784, leaving his museum and library to the Baptist academy at Bristol.

Gifford (John), a modern political writer, whose real name is said to have been John Richardˆ Green. He was born in 1758, and edu- cated by his grandfather, who enabled him to enter as a gentleman commoner at St. John's College, Oxford. He adopted the legal profes- sion; but dissipated his fortune, and, having in- volved himself in difficulties, travelled on the continent under the above assumed name. Re- turning to England, in 1788, he became a political writer and alarmist; a contributor to the British Critic and Antijacobin Review, &c. He was also the author of The Reign of Louis XVL, and complete History of the French Revolution, 1794, 4to ; The History of France, from the earliest Times to the End of the Revolution, 1795, 5 vols. 4to ; A Residence in France in the Years 1792, 1 793, 1794, and 1 795, Sec, 1 797, 2 vols. 8vo ; and A History of the Political Life of the Right Honorable William Pitt, 3 vols. 4to. Mr. Gif- ford received finally a pension from the govern- ment, and was made one of the police magistrates

of the metropolis. He died at Bromley, Kent, March 6th, 1818.

GiFFORD, a small river in East Lothian, re- markable for an extraordinary flood on the 4th October, 1755, which carried down many trees and most of the bridges in the parish of Yester, though no quantiiy of rain had previously fallen. GIFFORD (William), a celebrated critic and satirist, the founder, and for a considerable period the editor, of the Quarterly Review. He was born at Ashburton, in Devonshire, in April, 1756. His father, a plumber and glazier, hav- ing dissipated his property by extravagance and intemperance, died when the son was about twelve years old ; and William fell under the guardianship of a person who sent him to sea with the master

of a coasting vessel, but in a few months removed him from that situation, and apprenticed him to a shoemaker at Ashbur- ton. Disgusted with this occupation, and pos- sessing a strong taste for study, he was fortunate enough to attract the notice of Mr. Cookesley, a surgeon of the town in which he resided, who raised a subscription to purchase his freedom for the latter part of the term of his indentures, and to pay for his education. After having passed two years at school, he was, through the exertions of the same friend, supplied with the means of continuing his studies at Oxford, where he also obtained the office of Bible reader, at Exeter college. While at the university, he un- dertook a poetical translation of the Satires of Juvenal, but the death of his patron, Mr. Cookes- ley, interrupted the progress of the work ; and at length, through a fortunate accident, lie was introduced to earl Grosvenor (Marquis of West- minster), and quitted Oxford to reside in the family of that nobleman. In 1791, he published The Baviad, a poetical satire ; and, in 1704, appeared The Maeviad, a severe animad- version on the degraded state of the drama. In 1797, he became editor of the Anti-Jacobin newspaper — an office which involved him in a quarrel with doctor Wolcot, against whom he published a pamphlet in verse, entitled An Epistle to Peter Pindar. His translation of the Satiies of Juvenal was published in 1802, and is executed in a manner highly creditable to his abilities. His next publication was an edition of the plays of Massinger, with notes, and the life of that dramatist; and he afterwards edited, in a similar manner, the works of Ben Jonson, Ford, and Shirley. In 1809, he commenced the putlication of the Quarterly Review, of which he continued to be conductor till 1824, when the infirmities of age obliged him to resign. His death took place, December 31, 1826, and he was interred on the 8th of January following, in Westminster Abbey. Besides the works already noticed, he was the author of a translation of the Satires of Persius. He enjoyed an annuity from lord Grosvenor, and held the office of paymaster of the band of gentlemen pensioners, with a salary of £300 a year ; and was, for a time, comptroller of the lottery, with a salary of £600 a year.

GiiT, donum, in law, is a conveyance which passes either in lands or goods ; and isofalargei extent than a grant, being applied to things moveable and immoveable; yet, as to things im-

moveable, when taken strictly, it is applicable only to lands and tenements given in tail ; but gift and grant are too often confounded.

Gift, or grant, as a method of transferring per- sonal property, answers in some measure to the conveyances of real estates. Gifts and grants are however thus to be distinguished from each other : gifts are always gratuitous; grants, on the con- trary, are upon some consideration or equivalent: and, in respect to their subject matter, they may be divided into

gifts or grants of chattels real, and gifts or grants of chattels personal. Under the former may be included all leases for years of land, ass.ignments, and surrenders of these leases ; and all the other methods of conveying an estate less than freehold ; though these very seldom carry the outward appearance of i gift, however freely bestowed ; being usually expressed to be made in consideration of blood, or natural affection, or of five or ten shillings nominally paid to the grantor; and, in case of leases, always re- serving a rent, though it be but a pepper-corn : — any of which considerations Will, in the eye of the law, convert the gift, if executed, into a grant; if • not executed, into a contract.

In grants or gifts of chattels personal, one man renounces, and another man immediatdy acquires, all title and interest therein : which may be done either in writing or by word of mouth, attested by sufHcieiit evidence, of which the delivery of pos- session is the strongest and the most essential. But this conveyance, vvhen merely voluntary, is somewhat suspicious; and is usually construed to be fraudulent, if creditors or others become suf- ferers thereby. By stat. 3 Hen. VII., cap. 4, all deeds of gift of goods, made in trust to the use of the donor, shall be void ; because, otherwise, persons might be tempted to commit treason or felony, without danger of forfeiture ; and the cre- ditors of the donor might also be defrauded of their right. And by 13 Eliz. cap. 5, every grant or gift of chattels, as well as lands, with an intent to defraud creditors or others, shall be void, as against such persons to whom such fraud would be prejudicial : but, as against the grantor himself, shall stand good and effectual ; and all persons partakers in, or privy to, such fraudulent grants, shall forfeit the whole value of the goods, one moiety to the king, and anotlier moiety to tiie party grieved ; and also, upon conviction, shall suffer imprisonment for half a year. See Frauh. The conveyance of lands by gift, ‘ donatio,’ is properly applied to the creation of an estate-tail, as feoffment is to an estate in fee, and lease to that of an estate for life or years. It differs in nothing from a feoff’ment, but in the nature of the estate passing by it ; for the operative words of conveyance in this case are do or dedi (West. Symbol. 256) ; and gifts in tail are equally im- perfect without livery of seisin, as feoffments in fee simple. (Litt. sect. 59.) This is the only distinction which Littleton seems to make, when he says (sect. 57), * it is to be understood, that there is feoffor and feoffee, donor and donee, les- sor and lessee ;’ viz., feoffor is applied to a feoff- ment in fee-simple, donor to a gift in tail, and lessor to a lea.se for life, or for years, or at will.

GIG, n. s. Fr. gigue ; Goth, ga, gega, to go ; Isl. gigin. A vehicle with two wheels ; a sound

produced by wind ; any thing that is whirled round in play ; a fiddle (now out of use). This house was al so full of gigges. And al so full, eke, of chirkinges, And of many other wirkinges.

Chaucer. House of Fume. Playthings, as tops, gigs, battledores, should be procured them. Locke.

Thy coach of hackney, whiskey, one horse chair. And humblest gig, through sundry suburbs whirl To Hampstead, Harrow, Brentford, make repair.

Bi/ron.

GIGA'NTIC, adj. Lat. gigantes. See Giant. Suitable to a giant ; big ; bulky ; enor- mous ; likewise wicked ; atrocious.

I dread him not, nor all his giant brood, Though fame divulged him father of five sons. All of gigantick size, Goliah chief.

Milton^ Agonistes. Others from the wall defend With dart and javelin, stones, and sulphurous fire ; On each hand slaughter and gigantick deeds.

Milton. The son of Hercules he justly seems. By his broad shoulders and gigantick limbs.

Dryden. The Cyclopean race in arms arose, A lawless nation of gigantic foes.

Pope's Odyssey. They w-ere gigantic minds, and their steep aim Was Titan-like, on daring doubts to pile Thoughts which could call down thunder and the flame Of heaven, again assailed, if heaven the while On man and man's research could deign do more than smile. Byron.

Gl'GGLE, V. n.) Sax. jea^l ; Dutch gich- Gi'ggler, ?K s. \ gden. To laugh idly; to titter.

A sad wise valour is the brave complexion. That leads the van, and swallows up the cities : The giggler is a milk-maid, whom infection. Or the fired beacon, frighleth from his ditties.

Herhert. We shew our present joking, giggling race ; True joy consists in gravity and grace.

Garrick's Ep. GIGHA, Giga, or Gico, one of the Hebrides ; lying on the west coast of Kintyre, in Argyleshire, eleven miles E. S.E. of Hay; it is seven miles long from north-east to south-west, and two and a half broad. The greater part of it is arable. The west coast is high and rocky. On the east there are several dangerous sunk rocks. Shell- fish, particularly lobsters, crabs, cockles, and razor or spout-fish, abound on the shores. Large cod, weighing from six to sixteen lbs. each, with skate, ling, large haddocks, &c.< also abound. There is a regular ferry between Gigha and Kin- tyre. On the island are several caves and cairns; and it abounds with excellent spring water, though it has neither lakes nor rivers. Nothing can exceed the view from Gigha in variety and grandeur. The soil is mostly a rich loam, with a mixture, in some places, of sand, moss, or clay; vegetation is quick, and the air salubrious. Great improvements have been lately made in its agri- culture, and particularly in the drainage ; large portions of land, formerly lying waste, having been inclosed, and now producing excellent crops. Population about 1000. Long. 5° 43′ W., lat. 55″ 44′ N.

GI'GLET, n.s. Sax. jea^l; Dut. geyl; Scot. g'dlet, is still retained. A wanton ; a lascivious girl. Now out of use.

Young Talbot was not bom To be the pillage of a giglet wench.

Shakspeare. Away with those giglett too, and with the other confederate companion. Id. Measure fur Measure.

GIGLIO, IsoLA Di, a wine island on the coast of Tuscany, at fourteen or fifteen miles dis- tance from the isthmus of Monte Argentaro, and seventeen west of Porto Ercale. It consists of hilly ground, covered with wood and vines, and containmg caves of beautiful marble. • It is in- habited by about 1200 persons, employed in agriculture and fishing, particularly for pilchards. Long. 10° 33′ E., lat. 42° 24′ N.

GI'GOT, n. s. Fr. The hip joint. It seems to mean in Chapman a joint for the spit.

The inwards slit. They broiled on coale.s, and eale : the rest, in gigota cut, they spit. Chapman.

GIJON, a sea-port, situated on a peninsula, in the province of Asturia, Spain. The harbour is well sheltered, has a sound bottom, and is ca- pable of admitting ships of any burden. The town contains a school for navigation, minera- logy, and mathematics ; and the environs pro- duce maize, rye, chestnuts, apples, and cyder. Millstones also are exported in quantities. Inhabitants 3200. Eighteen miles north of Oviedo.

GILBERD, or Gilbert (William), a cele- brated physician, born at

Colchester, in 1540. Having spent some time in both universities, he went abroad ; and at his return settled in Lon- don, where he practised vnth considerable re- putation. He became a member of the college of physicians, and physician in ordinary to queen Elizabeth, who gave him a pension. He was also phj sician to king James I. He died in 1603, aged sixty-three, in Colchester, where a handsome monument was erected to his memory. His books, globes, instruments, and fossils, he bequeathed to the college of physicians, and his picture to the school gallery at Oxford. He wrote, De Magnete, Magneticisque COrporibus, et de Magno Magnete Tellure,Physiologia Nova: London, 1600,fol. 2. De Mundo Nostro Sublu^r nari, Philosophia Nova; Amsterdam, 1651, 4to. He also invented two mathematical instruments for finding the latitude at sea without the help of sun, moon, or stars. A description of these instruments was afterwards published by Thomas Blondeville in his Theoriques of the planets.

Gilbert (Sir Humphrey), a skilful navigator, born about 1339, in Devonshire, of an ancient and honorable family. He was educated at Eton and Oxford for the le2;al profession, but being introduced at court by his aunt, Mrs. Catharine Ashley, then in the queen's service,, he was diverted from the study of the law, and commenced soldier. Having distinguished him- self in several military expeditions, particularly that of Newhaven, in 1563, he was sent over to ^reland to assist in suppressing a rebellion ; where, for his signal services, he was made commander-in-chief and governor of Munster,

and knighted by the lord deputy, Sir Henry Sidney, in 1570. He returned soon after to England, where he married a rich heiress. In 1572 he sailed with a squadron of nine ships to reinforce colonel Morgan, who meditated the re- covery of Flushing. In 1576 he published his book on the North-West Passage to the East Indies. In 1578 he obtained an ample patent, empowering him to possess in North America any lands then unsettled. He sailed to New- foundland, but soon after returned to England without success ; nevertheless, in 1583, he em- barked a second time with five ships, tiie largest of which put back on account of a contagious distemper on board. He landed on Newfound- land on the 3rd of August, and on the fifth took possession of the harbour of St. John's. By vir- tue of his patent, he granted leases to several people ; and, though none of them remained there at that time, they settled afterwards in conseciuence of these leases. On the 20th of August he put to sea again, on board a small sloop ; which

on the 29th foundered in a hard gale of wind. Thus perished Sir Humphrey Gilbert; a brave officer, a good mathematician, a skilful navigator, and of a very enterprising genius. He also was remarkable for his elo- quence, being much admired for his patriotic speeches in the English and Irish parliaments His work, entitled A Discourse to Prove a Pas- sage by the North-West to Cathaia and the East Indies, is a masterly performance, and is pre- served in Hakluyt's CoUection of 'oyages, vol. iii. p. 11. The style is superior to most, if not to all the writers of that age ; and shows the author to have been a man of considerable reading.

GILBERTINES, an order of religious, thus called from St. Gilbert, of Scmpringham, in Lin- colnshire, who founded it about 1 148. The monks observed the rule of St. Augustine, and were accounted canons ; and the nunˆs that of St. Be- nedict. The founder erected a double monastery, or rather two contiguous to each other, the one for men, the other for women, but separated by a very high wall. He founded thirteen monas- teries of this order, viz. four for men alone, and nine for men and women together, which had in them 700 brethren, and 1500 sisters. At the dissolution there were about twenty-five houses of this order in England and Wales.

GIFvBOA, in ancient geography, mountains of Samaria, stretching from west to east on the confines of the half tribe of Manasseh, and of the tribe of Issachar; and to the south of the valley of Jezreel, beginning westward at the city of Jezreel, at the foot of these mountains, reach ing almost quite to the Jordan, six miles from Scythopolis. They are famous for the death of Saul and Jonathan, and the defeat of ihe Is- raelites by the Philistines.

GILCHRIST (Octavius), F.S.A., a distin- guished modern critic, was the son of an officer of tlie third regiment of dragoon guards. He was born in 1770, at Twickenham, and educated at Magdalen College, Oxford. His principal works are, An Examination of the As- sertions of Ben Joriscn's enmity to Shakspeare, t3vo. 1808 ; an edition of the Foczns of Bishop

Corbet, with Notes, and a Life of the Author, 8vo. 1808; and a Letter to W. Gifford, Esq., on a late edition of Ford's Plays. He is said also to have collected materials for a work in- tended to illustrate the Rise and Progress of the English stage, comprehending specimens of the minor dramatic writers anterior to the Revolu- tion, &c. The appearance, however, of a similar publication in periodical numbers, entitled Old Plays, deterred him from publication. He died at Stamford, in Lincolnshire, in June, 1823, aged forty-four.

GILD, V. a. ^\ Sax. ˆil&an ; Goth, gil-

Gil'der, n. s. ' (fa ; from Gold, which see.

Gil'ding, n. s. (To overlay with gold ; to

Gilt, n. s. & jxtrt. J brighten, or illuminate ;

to recommend by adventitious ornaments : the

person who lays on |the gold ; a coin from one

shilling and sixpence to two shillings.

— Yclothed was this mightie god of lovo In silke, cmbroiJed full of grene grcvcs; In whiche there was a fret of red rose leves. The freshest sins the worlde was first begon : Hii gilt liere was ycrouned with a =••"0.

Chaucer. Prologue to Lerjende of Goo'J. Women,

The room was large and wide, As it some

Silvering will sully and canker more than gilding, which, if it might be corrected with a little mixturo of grid, there is profit. Bacon.

' Gilders used to have a piece of gold in their moutli, to draw the spirits of the quicksilver. Id.

Our gayness and oxxt gilt are all besmirched. With rainy marching in the painful field.

Shakspeare. When thou wast in thy gilt, and thy perfume, tliey mockt thee for too much curiosity : in thy rags thou knowest none, but art despised for the contrary.

Id, Timon of A thcns. I am bound To Persia, and want gilders for my voyage.

Shakspeare. For my part, if a lie may do thee grace, I'll gild it with the happiest terms I have. Id.

Thou did'st drink . The stale of horses and the gilded puddle Wliich beasts would cough at.

Id. Antony and Cleopatra. To gild refined gold, to paint the lily, To throw a perfume on the violet. Shakspeare. When Britain, looking with a just disdain Upon this gilded majesty of Spain, And knowing well that empire must decline. Whose chief support and sinews arc of coin.

}VaUer, \ .And the gilded car of day His glowing axle doth allay In the steep Atlantic stream. Milton.

Yet, oil ! the' imperfect piece moves more delight j 'Tis gilded o'er with youth, to catch the sight.

Dry den. The lightsome passion of joy was not tliat trivi;il, vanishing, superficial thing, that only gilds the appre- hension, and plays upon the surface of the soul.

South. Purchasing riches with our time and care. We lose our freedom in a gilded snare.

Roecomnum. Her joy in gilded chariots, when alive ; Aud hjM of ombre after death survive. Pope.

No more tho rising sun shall rjild the morn, Nor evening Cynthia fiil her silver horn.

Id. Messiah. Could laureate Dryden Pimp and Fryer engage. And I not strip the gilding off a knave. Unplaced, unpensioned, no man's heir or slave !

Pope. Where the gilt chariot never marked its way.

Id. We have here a gilder, with his anvil and hammer.

Broome. This waving field is gilded o'er with corn. That spreading tree with blushing fruit adorn.

Gai/. But death is imaged in shadowy beams, A picture is the past ; even ere its frame Be gilt who sate hath ceased to be the same.

Btfron,

Gild, or Guild. See Guild.

Gilding, as an adaptation of gold, in the fine and mechanical arts, was not unknown in the ancient world. Pliny states, that the first attempts at the practice of the art seen at Rome was under the censorship of Lucius Mummius, after the destruction of Carthage, when they began to gild the ceilings of the temples and palaces; the capitol being the first place on which this en- richment was bestowed. But he adds, that luxury advanced on them so hastily, that in a little time you might see all, even private and poor persons, gild the very walls, vaults, &c., of their houses. They seem to have had the method now practised of beating gold, and reducing it into leaves; though they did not carry it to the same extent. Pliny says, that they

only made 750 leaves of four fingers square out of a whole ounce. But he adds, that they could make more ; that the thicker leaves were called bracteas Prae- nestina?, from a statue of Fortune at Praeneste, gilt with such leaves ; and the thinner sort brac- teae questoriae. The ancients seem to have had no method of gilding bodies that would not en- dure the fire, but with whites of eggs or size, neither of which will endure the water; so that they could only gild such places as were shel- tered from the moisture of the weather. The Greeks called the composition with which they applied their gilding on wood leucophaeum, or leucophorum ; which is described as a sort of glutinous compound earth, serving in all proba- bility to make the gold adhere, and bear polish- ing. But the particulars of this earth, its color, ingredients, qualities, &c., antiquaries and natu- ralists are not agreed upon. Homer mentions the manner in which the horns of the ram brought by Nestor as an offering to Minerva, were gilt. — Odi/s. 1. iii. 492.

The diff'erent states in which gold is used for the purposes of modern gilding are the follow- ing:— (1.) In the shape of leaf gold of different degrees of thickness, and formed either of the pure metal, or of an alloy of this with silver; (2.) As an amalgam of gold ; and (3.) In gold pow- der.

1. The leaf-gold is procured by the gilder from the gold-beater, whose art consists in ham- mering a number of thin rolled plates of tlie metal, between skins, or animal membranes.

2. The amalgam of gold is made by heating in a crucible some pure quicksilver; and, when

it is nearly in the boiling state, about the sixth part of its weight of fine gold in thin plates, heated red-hot, is to be immersed in it. The mixture soon becomes homogeneous, and then it is allowed to cool. VVhen cold it is to be put in piece of soft leather, and by gradual pressure the fluid part of the amalgam, consisting almost wholly of mercury, may be forced through the pores of the leather, while the gold, combined with about twice its weight of mercury, will remain behind, forming a yellow silvery mass of the consistency of butter. This, after being bruised and ground in a mortar, or shaken in a strong phial, with repeated portions of salt and water, till the water comes away quite clear and unsoiled, is fit for use, and may be kept for any length of time, without injuring, in a corked phial. It is of the utmost importance that the materials of this amalgam, and especially the mercury, should be perfectly pure, as the least portion of lead or bismuth would very materially injure the beauty of the gilding, by deteriorating the color of the gold, and filling it with black specks.

3. Gold in powder is prepared by three dif- ferent methods ; the first and

most simple is, to put into a glass or earthen mortar same gold leaf, with a little honey, or thick gum-water, and to grind the mixture for a considerable time, till the gold is reduced to extremely minute frag- ments ; when this is done, the honey or gum may be washed away, leaving the gold behind in a flaky, or pulverulent state. A more effectual and quicker method of reducing gold to a state of powder, is to dissolve it in aqua regia, or, as it is now denominated, in nitro-muriatic acid, and then precipitate it with a piece of copper. The pre- cipitate, after being digested in distilled vinegar, and then washed with pure water, and dried, is in the form of a very fine powder, and is said to work better, and is fitter for burnishing, than the powder obtained from leaf-gold. The very finest ground gold is produced by heating very gradu- ally the gold amalgam already described, in an open earthen vessel, and containing the fire till the whole of the mercury is evaporated ; taking care that the amalgam shall be constantly stirred with a rod of glass, to prevent the particles of gold from adhering as the mercury flies off". When the mercury is completely evaporated, the residual gold being then ground in a Wedgwood- ware mortar, with a little water, and afterwards dried, is fit for \ise.

PART I. OF GILDING WITHOUT HEAT.

Gilding is performed either with or without heat. By the first of these methods those sub- stances are gilt which are not liable to alteration, by exposure to a moderate heat, such as metals, glass, and porcelain. The second method is practised with those substances, as wood, paper, lead, &c., which would be destroyed by being raised to»a temperature requisite for gilding the formei We shall first attend to the mechanical art of gilding on wood.

This, both in oil and burnish, is at present at its highest perfection, and is executed in London better than in any other part of the world. Tliat

which IS brought from France, and other parts of the continent, is by no means equal to the Lon- don work ; not that it is to be inferred from hence, that gilding is well executed by all who undertake it in the metropolis. Many men, who have practised this art all their lives, are unable properly to gild a common picture-frame.

Of burnished gilding on wood. — To begin with picture-frames or mouldings, which are the simplest. In an earthen pan, that will hold a quart, take three half-pints of strong size, make it warm, and add some of

the best whiting powdered fine ; mix them with a brush till they become thoroughly incorporated, and of the con- sistency of thick cream ; put a little of this mix- ture, with an equal quantity of size, half the former strength, into another pan, heat it till nearly boiling, and, with a brush, lay it over the whole work ; this is called thin whitening the work, and makes a ground for the other operations. When the wood is not clean, it is usual to wash it all over with a sponge dipped in hot water, before the thin white is applied, which precaution will pre- vent the chipping up of the preparation. The coat of thin white should be particularly well' dried ; after which the work is to receive four more coals of that which is made of the consis- tency of thick cream ; it must be warm, but not so hot as for the first white, taking care that one coat is dry before another is applied. Here it is necessary to observe that, throughout this process, one coat must be dry before another is applied, whatever may be the compo- sition used. The sixth coat, which is also of thick white, must be laid on by passing the brush in a smooth, even, and flowmg manner, over two feet of the work at a time, in order to gain a surface, and facilitate the smoothing, here- after to be described. Before the whitening is dry, the flat parts should be rubbea down with a chisel, the hollows with a gouge, and the rounds with the finger, or fingers, as is most convenient ; should the hollows be too large for a gouge, the finger will answer every purpose. When dry, any superfluous whitening that may have fallen over the edges of the mouldings, &c., may be pared off" with a chisel or a gouge, according as the parts are situated ; then give it a seventh coat, similar to the preceding, and it will be ready for smoothing, which should be performed in the following manner: —

Take some close-grained puraice-stone, and with a sash saw cutˆt into pieces about three or four inches long (if the work be very small, an inch, or inch and a half will do), rasping or filing them to fit the diflˆerent mouldings. The flats are to be made by rubbing a piece of the pumice on a smooth stone, making the sides at right angles, that it may smooth two sides at the same time. During these operations, the pumice-stone must be frequently dipped in water. Lay the pieces, thus prepared, in a large earthen pan full of water, not less than two quarts, take a hogs'-hair brush and a sponge, both of convenient sizes, dip tlie brush in the water, and wet about two feet of the work at a time, taking the mouldings alternately; then, with the pumice already fitted, rub up and down

till a smooth surface is obtained, remove the water with the brush, and squeeze it into the pan : what remaiiis may be taken off with the sponge, which will complete the smoothing of that piece. Proceed in the same manner with similar portions; for, if too much be wetted at a time, the whitening becomes soft and unfit to bear the pumice-stone ; the work must then be set aside to dry.

In carved work, the operations of whitening and smoothing differs somewhat from the pre- ceding. After the thin white is dry, the coats that follow must be rather weaker, and not so thick as for frames or mouldings ; they are to be laid on by carrying the brush over the work in an even and smooth, but not flowing manner. To smooth, or produce the surface that is required, pieces of lime-wood, or fir, soaked in water instead of pumice, are used, shaped round, flat, or angular, as may be found necessar)', occasionally wrapping round them strips of linen cloth. In smoothing, care must be taken not to rub off too much of the whitening, or the gilding will look poor, and it will prevent the burnishing of those parts thereby brought too near the wood. The drying may be hastened in summer by tiie sun, in winter by placing the work before the fire ; not too near, or the whiten- ing will chip.

Now mix a little strong size, with four times as much water, in a half pint earthen pan ; these proportions should be adapted so as to make it three parts full ; add a quantity twice the size of a large walnut, and half as much prepared yellow stone ochre : mix them well togethei with a brush, and coat the work once over, when dry, rub it slightly with glass-paper, half-worn out, to improve the surface ; then proceed to mix and lay on the gold-size. In another half-pint earthen pan, half full of clear size, mix a quan- tity of burnished gold-size, twice as big as a large walnut, with which coat the work twice over. When dry, burnish the parts intended to be mat- ted with a burnishing stone. (The burnishing is performed by the friction of a cur'ed polished flint, or agate set in ferules with wooden handles, and termed burnishing stones.) Then give it another coat of the same gold-size. But this must now be reduced by adding to it about two tea-spoons full of water, and as much gold-size as you can take upon the point of a knife. Coat those parts only that are intended to be burnished : and here it must be observed, that in laying gold- size on carved work after it is yellowed, those parts should be missed that are too small to receive the gold from the pencil, such as the small eyes of foliage, &c., to which effect must afterwards be given with high-colored or-moulu ; and proceed to lay on the gold with a cushion, knife, and tip, as will be described in oil gild- ing. But in burnish gilding, camels'hair pen cils must be used, dipped in clear water, to wet the work as fast as the gold can be laid on. The hollows and flats must be gilt first, and be perfectly dry before the other parts can be pro- ceeded with, when the work is all gilt and dry, burnish the parts intended. And should there be any defects which can only arise from the

work not having been carefully wetted, or from grease, those parts must be

rubbed off to the whitening, with linen wrapt round the finger. When they are dry, they must be gold-sized, gilt, and burnished as before stated.

Those parts not intended to be burnished are technically called mats, and are to be proceeded with in the following manner : — Reduce a little clear size with hot water, so that when cold it will not set ; this being the weakest size used in burnish-gilding, much care should be taken that it be not too strong, or it will show all the joints of the gold. When dry, lay on a coat of this weak size, and when again dry, rub it over with cotton. In double gilding, which is the best style, the matted parts should be again gilt, using water to wet as before ; after whicli, rub them again with cotton, and coat them over again with the same weak size. Then give one coat of clear size, to keep the gold firm, or a coat of or-moulu com- pletes the process. Observe, camels'hair pen cils only are used after the gold is laid on, and care must be taken in sizing the matted parts not to touch those that are burnished, which cannot be improved after the burnishing-stone.

If it be necessary to embellish the frames or work to be gilt in burnished gold, with compo- sition, it may be had in London, soft from the press, and can be put on after the smoothing, with a little hot thick whitening, or weak glue. What is squeezed out round the edges in press- ing it close, may be taken off with a brush and cold water : it must then have a coat of thin white, to remove any grease, and be finished like the rest of the work. The composition may also be put on oil-gold work that is not to stand in the weather, but does not require the thin white, and must be finished in the manner of oil-gild- ing ; composition is easily moistened when dry, by wrappmg it in a wet linen cloth, for twenty- four hours.

Of oil gilding to stand m the weather. — The object to be gilt, whether metal, stone, or wood, must be coated three times over with a mixture of linseed oil, white-lead, and a small quantity of spirits of turpentine ; if it be wood, it should be previously rubbed with glass-paper, or fish- skin. When the last coat is dry, the work should be gold-sized ; take any quantity of gold-size, and with a common hogs'hair brush, kept in water for the purpose, mix it with boiled linseed oil till it is so thin that, when a little of it be laid on the work to be gilt, the white paint before put on, will appear through, though it must not be made so thin as to lose the tinge of the yellow ochre : then proceed to lay it on sparingly, with fine hogs'-hair brushes, proportioned to the parts of the work. When the gold-size is good, it will dry in twelve hours ; if laid on in the evening it will be fit for gilding the next morning. Sometimes in winter, and when the gold-size is fresh made, it will take two or three days ; to prevent this, an expedient may be used, un- known to the generality of gilders, i. e. mixing with it a small quantity of japanners' gold-size, which will hasten the drying, but in this instance, when it begins to have the tack, hereafter to be explained, it dries

very quickly ; therefore, great

care should be taken to get the gold on as fast as])ossible.

In order to ascertain its fitness for receiving the gold, the work must be touched with the finger : if it feel somewhat adhesive or clammy, but not so as to be brought off by the finger, it has the tack, or in other words, is in a fit state for gilding ; but if it be so clammy as to come off on being touched, or have any inclination thereto, it is not sufficiently dry : if it have no sucking quality, it is too dry, and must be sized over again before it can be gilt. In laying on the gold, a tip is used which must be previously rubbed with a little tallow-grease to make it hold, but it must be so little as to make no appearance. When the surface to be gilt, whether round, hollow, or flat, is sufficiently large and plain to contain whole leaves, they may be taken from the book, which must be held in the left hand, by the part that is sewed, the leaves of it turned carefully over, and kept always so steady, that the gold may be undisturbed, and lie perfectly flat. Take the tip in the right hand, touch the leaf of gold about half an inch deep on the side op- posite the sewing of the book, both hands must then be moved to the place meant to be gilt. Having laid the edge of the leaf already attached to the tip, upon the work, which is always considered as having the tack, it will be caught and held fast by the gold size, and the tip will be left at li- berty; the book must be slowly drawn away, followed as it moves by the tip which is now used gently to press the gold close to the work, until the whole leaf is on, which must be re- peated until those parts large enough to receive a leaf, are all gilt. This method may be ac- quired in an hour's practice.

For those parts that are too small for the en- tire leaf, it is necessary to use a cushion, upon which about half a book of gold may be blown out, one leaf at a time, each one carefully turned until it lies nearly flat, when, by breathing as near as possible on the centre, it will become smooth and even, and must be cut in strips, with a knife used for the purpose, according to the widths of the different members and mould- ings, and then laid on with the tip. As tiie work advances, or when it is gilt all over, it must be pressed close with a bit of unspun cotton, then brushed over with a dry, soft, hogs'hair brush, one previously used a little in the whiten ing, will best answer the purpose, in order to clear away any loose particles of the gold leaf. If any defective parts appear, those which can- not be mended by pressing upon them the loose gold just brushed off (which may be done with the brush in hand, or a bit of cotton), must be covered in the following manner : — Cut a leaf of gold into small square pieces, proportioned to the defects, and with the camel's hair pencil slightly moistening the tip of it, by putting it to the lip, place a piece on each faulty part, which must be again pressed with the cotton. The work is then finished unless the faulty parts are too dry to receive the gold ; when they must be again gold-sized and

gilt, as before directed. In general boys do not acquire the method of using the gold on the cushion in less than three

montlis, though a person determined to accom- plish it may do so in one week.

Picture frames, and other work in oil-gilding that is 'not to be exposed to the weather, to be vrell done, must be prepared, as far as smoothing, in the same way as work to be gih in burnished gold. When smooth, and after being rubbed with glass-paper, it must be coated twice over with size, rather weaker tl>an that used for whit- ening, that which is stale answers best. The gold size must be laid on as before directed in oil-gilding, and, when the work is gilt, pressed with the cotton, and brushed over. If faults appear, they must be treated thus : — Take a little weak size, as directed in burnish-gilding, coat the work all over when dry, wet each part where a fault appears with clear water, and lay on it a piece of gold, with a camels'hair pencil, as be fore described. This is not to be pressed with the cotton, but gently rubbed with it when com- pletely dry, which it will be in half an hour (as will all the coats that are used for gilding, except oil gold size), when give the work another coat of the weak size, then one of clear size which completes the gilding ; but the effect is conside- rably heightened with a coat of or-moulu, such as is used to finish the matted part of the bur- nished gilding.

To make strong size. — Take a clean saucepan of any size most convenient, fill it nearly with water, when heated as much as the hand can bear, keep putting in cuttings of parchment which best answer the purpose, or glovers' white leather shreds, pressing them down well with the hand, till they are within an inch and a half of the surface of the water ; boil them slowly for one hour and a half, and the strong size will be made ; pass it through a hair sieve into a pan, and set it aside for use, the same parchment or shreds will again yield the same quantity of size, stale size stinks and is unfit for use. Clear size differs only from the preceding in these particu- lars, it must be made in smaller quantities ; the parchment or shreds must be washed in several waters milk warm, till quite clear. It should boil only fifteen minutes ; be passed through a finer sieve, and when reduced care must be taken that the water is perfectly clean.

2b make gold size for burnished gilding. — Take one pound of pipe-clay, put it into an earthen pan full of water, when soaked ; pour off the wati-r and grind it on a stone with a muller, such as is used by house-painters ;

now and then sprinkling it with water as it becomes dry. Care must be taken that no dirt or grease be on the stone or muller, and, as it >s ground, put it into another pan; then take half an ounce of the best black lead, the eighlh of an ounce of mutton suet, pound them tosethor with the muller, and proceed to grind them particularly well, using water as before directed for tlie pipe-cˆlay : when ground, put tliem into a smaller pan ; grind half an ounce of the best red chalk, and mix the black lead, suet, and chalk, well together on the stone, with a pallet knife, and add to them the clay, until these ingredients are thoroughly mixed; when put them into a covered earthen pan to prevent dust or dirt, to be used as wanted.

Ten or twenty pounds may be made at a time. The gold size must be moistened once a month or oftener with clean water to prevent it from getting dry, in which case it would be necessary to grind it again. Care should be taken in se- lecting these ingredients. The best black lead dust, from the saw of the pencil-makers, is most fit for the purpose. In choosing the clay take that which has the least grit : it may be discovered by putting a little into the mouth, the darkest is generally the best, of which the greatest choice is to be had at the pipe-makers. The softest red chalk, such as is used for drawing, must be chosen, though the gold size may be very well made without any, as its principal use is to heighten the color of the gold when burnished.

Prepared pipe-clai/ and yellow stone ochre. — The pipe-clay must be chosen and ground, as directed in making gold size; then laid by for use in a covered earthen pan, and occasionally moistened as the gold size. The stone-ochre must be of the best quality, and prepared in the same manner.

To make or-moulu. — In half a pint of clear water, gently boil two ounces of the best gam- boge powdered fine, for five minutes, strain it through a linen cloth, and put it into a corked bottle. Take one ounce of saffron, half an ounce of turmeric, and one quarter of an ounce of dragon's blood, boil them in one pint of clear water for fifteen minutes, now and then stirring them from the bottom ; strain them also through a linen cloth, and put them into acorked bottle. Put about five or six knobs of starch into a clean half pint earthen pan, make them into a paste, with a teaspoon-full of clean water, using the finger; then add water till the pan is three parts full, boil it for one minute, and it will be clear like clear size : now blow off a scum that will arise from the boiling, and put it immediately into another pan ; add four drops of the gamboge li- quor, two drops of the repass, stir them round, and the or-raoulu is made and fit for use.

The eyes of foliage, 8cc.,in carved work, must be touched with a little of the gamboge liquor, called high-colored or-moulu, unmixed with any thing else.

The or-moulu in general use, though it is by no means the best, is made by dissolving the gam- boge in spirits of wine, instead of water, which will give it the appearance of clear varnish : but when dropped into clear size to be substituted in this case for starch, it will be yellow ; the quan- tities of the ingredients are alike in both cases.

Plaster-fiiiures, vases, busts, &c., are gilt both in burnished gold and oil-gilding, by coating them first with very hot weak size, and after- wards four times over with hot clear size : if any holes appear, they must be evenly filled up with putty, made of strong size and whiting ; the rest of the process is the same as after smoothing in both cases.

To make oil gold-size. — Put as much linseed oil into a bioad earthen vessel as will cover the bottom an inch deep, and add to it as much wa- ter as will occupy f^our or five inches ; let the vessel containing this, be exposed to the weather for three or four weeks, occasionally stirring it

till tlie oil appears of the consistency of treacle ; it must then be separated'from the water, put into a long bottle, or separating funnel used by the chemists, and placed in such a degree of heat as will render it perfectly fl-uid. The clear part should then be poured off, and it will be fit for use. Take any quantity of the best yellow- stone ochre, and a fourth part of white-lead, mix them with the oil on a flag, using a muUer and pallet knife : this mixture is oil gold-size, it must be put into an earthen vessel, and covered with water, to prevent it from skinning. This gold-size is very troublesome to make ; it does not arrive at its highest perfection, until six or seven years old.

The gilding of books and paper has been stated in our article Book-binding, to be a distinct occupation. Generally isinglass size, strong gum-water, or glovers'-size, are employed in this art ; but, as the gum-water and weaker sizes are apt to run beyond the edge, isinglass, melted with the addition of some common proof spirit of wine, and a sixth part of honey or sugar-candy is preferred ; to which must be added a third of bole armeniac well powdered.

The following composition has been also re- commended : — Take bole armeniac and sugar- candy well powdered; mix them with the whites of eggs, beaten to an oily consistence,; and the cement will be fit for use. In applying any of these cements, the paper, in quires or in books, should be well cut and polished on the edges to be gilt ; and well screwed down by a

press ; in this state it is to be brushed over, first with a little of the cement without the sugar -candy or the bole ; and, when that is dry, either with the cement above given, or any other solution of gum or size with the proper proportion of the bole ; after which it may be suffered to dry ; and then water-polished, by rubbing it with a fine linen rag slightly moistened. It is then fit for receiving the gold, provided it be moistened at that time ; and the leaves may be laid on, being cut according to the breadth which they are to cover, and pressed closely down with cotton. When thoroughly dried, it is polished bur- nished.

Japanners' gilding may be performed on al- most any substance, whether metal, wood, leather, or paper ; nor is there any preparation necessary, besides making the surface, on which the size is to be laid, smooth, and perfectly clean. Then spread japanners' sire, mixed with a due proportion of oil of turpentine and vermilion, with a brush over the work, if the whole surface is to be gilt; or draw with it, by means of a pencil, the proper figure desired, avoiding care- fully any other parts; when it is almost dry, so as to be capable, by its clamminess, of receiving the gold, dip a piece of wash-leathei, wrapped round the finger, in the gold powder, and rub it lightly over the sized work ; or spread the pow- der with a soft camels'-hair pencil ; and with a camels'-hair when the work is dry, brush away the loose powder. If leaf-gold is" used, the me- thod of sizing must be the same as for the pow- ders ; but care is necessary in laying on, that the size be in a proper state of dryness.

PART II. OF GILDING BY MEANS OF HEAT.

This is performed both with leaf and with liquid gold ; the former after the same manner in which silver leaf is fixed and burnished by the French platers on brass. See Plate. The metal for this purpose must be previously cleansed and polished : then heated to about the temperature of melted lead, and fcovered with a double layer of gold leaf; when a blood-stone burnisher, applied gently at first and gradually increasing the pressure, will cause the surfaces of gold and copper to touch each other and adhere. Successive layers, to a third or fourtli, are thus laid on and burnished. But this method has been thought tedious, and is subject to the great difficulty of using a sufficient pressure without injuring the evenness of the gilded sur- face. Gold wire, as it is called, is thus made, how- ever, very commonly and successfully. The cop- per bar, before it is committed to the wire-drawer, is plated with gold, by having several leaves successively burnished upon it, and, though then subjected to the strong compression that takes place in wire-drawing, the gold and copper are so perfectly united, as to form, in a manner, on- substance, and extend together.*

Gilding metals with liquid gold is sometimes termed water gilding. We have

already described the best mode of preparing the amalgam. Silver is prepared to be thus gilt by soaking it in warm dilute muriatic acid, so that the surface may be rendered perfectly clean ; it is next washed in clean water, two or three times changed, in order to free it from the whole of the acid ; and being afterwards dried, and made moderately warm, a little gold amalgam, also warm, is evenly spread upon it, and is found immediately to adhere. In applying the amalgam, the operator uses a little knife, or a brush made of brass wire. Giving the work a gentle heat before the fire, he dabs or spreads the amalgam with the brush. The metal is now set over the fire, upon a grate, or in a sort of cage, under which is a pan of char- coal, yielding a heat sufficient for evaporating the mercury; which, rising in fumes, leaves the gold alone adhering to the work. Successive layers of this kind are frequently spread.

When the mercury is so far evaporated that the surface becomes uniformly pale, the metal is rubbed with a scratch-brush composed of fine brass wire, till its surface is made clean and smooth. Then it is covered over with a compo- sition called gilding-wax, and again exposed to the fire till the wax be burnt off. This applica- tion is designed to heighten the color,, and it is repeated till that effect is produced. The wax is a mixture of common bees'wax, red ochre, verdigris, and green vitriol, or alum, and pro motes the perfect dissipation of the mercury. The work must be now covered over, while heated, with a composition, consisting of equal quantities of nitre, green vitriol, sal ammoniac, and verdi- gris, finely powdered, and mixed up into a paste with water or urine. The mixture manifests its effects by smoking, and, if the color of the gilding

be not now sufficiently heightened, a succeeding application rarely fails to complete it.

For the gilding of copper, &c., in button making, see Buttons.

When iron is to be gilt by amalgamation it is generally first coated with copper; which, with all its combinations with zinc, having less affinity with mercury than silver, must not be expected to adhere to the amalgam so perfectly as that metal, nor to afford at last so even a surface.

The difficulties of well gilding iron, or rather steel, by amalgamation are also great on other accounts. — If simple burnishing down be had recourse to, the heat requisite for this purpose will, in many cases, bring the temper of the steel too low : the parts of the steel to be gilded are often, therefore,

pencilled over with nitrate of mercury, by which they are covered with a slightly adhering coating of mercury ; then the amalgam is applied, and the gilding finished in the usual way. The objection to this process is, that a considerable heat is required, though inferior to that requisite for burnishing down, and that, even with all possible care, the gilding is apt to scale off. An improvement on this method is previously to trace the figure of the gilding on the steel with a brush -charged with a strong solution of sulphated copper, which is made to adhere with considerable firmness by means of the burnisher; and thus the gilding is, iu part, performed upon the copper. Another method of gilding upon steel is suggested in the Phil. Mag. xi. p. 144, and seems capable of greatly improving the art. It depends upon the fact, that if sulphuric ether and nitro-muriate of gold are mixed together, the ether will by degrees separate from the acid nearly the whole of the gold, and retain it in solution for some time in nearly a metallic state. Ether, therefore, thus charged with gold, is spread, by means of a pen or fine brush, on the sxuface of highly polished steel ; the ether presently evaporates, leaving the gold behind in close contact with the steel, and the adhesion, as in other cases, is finished by the application of the burnisher. If the expense of the ether is an object, the best oil of turpentine may be used instead.

Dr. Lewis makes the following remarks on gilding by amalgamation : ‘ There are two prin- cipal inconveniences in this business : one, that the workmen are exposed to the fumes of the mercury, and generally, sooner or later, have their health greatly impaired by them ; the other, the loss of the mercury ; for, though part of it >s said to be detained in the cavities made in the chimneys for that purpose, yet the greater part of it is lost. From some trials I have made, it appeared that both these inconveniences, par- ticularly the first and most considerable one, might be, in a good measure, avoided, by means of a furnace of a due construction.’

He suggests, therefore, the communication of a furnace with its chimney under the grate, instead of over the fire : then the ash-pit door, or other apertures beneath the grate, being closed, and the mouth of the furnace left open, the current of air, which otherwise would have entered heneath, enters at the top, and, passing down through the grate to the chimney, carries w ith it

completely both the vapor of the fuel, and the fumes of such matters as are placed upon it.

- *If such a furnace is made of strong forged (not milled) iron plate, it will be sufficiently durable. The upper end of the chimney may reach above a foot and a half higher than the level of the fire ; over this is to be placed a larger tube, leaving an interval of an inch or more all*

round between it and the chimney, aˆid reaching to the height of ten or twelve feet ; the higher the better. The external air, passing up between the chimney and the outer pipe, prevents the latter from being much heated, so that the mercurial fumes will condense against its sides into run-ning quicksilver, which, falling down to the bottom, is there catched in a hollow rim, formed by turning inwards a portion of the lower part, and conveyed by a pipe at one side into a proper receiver.'

For the gilding of china ware, see Porcelain : for gilding on enamel, and glass, Enamelling : for gilding letters and figures in books, Illumi- nating.

Ornaments of brass are varnished in a manner termed gold lacquering, to distinguish them from those that are really gilt. When silver leaves, thus varnished, are put upon leather, it is called gilt leather ; and many picture-frames have no other than this counterfeit gilding, which may be discovered by washing it with rectified spirits of wine; for the spirit will dissolve the varnish, and leave the silver leaf of its own whiteness. For plain picture frames, thick tin-foil may be used instead of silver ; the tin-leaf fixed on with glue is to be burnished, then polished with emery and a fine linen cloth, and afterwards with putty applied in the same manner; being then lac- quered over with the varnish five or six times, it looks like gold. See Lacquering. Inferior or false gildings are also made with thin leaves of copper or brass, called Dutch leaf. In this man- ner are made most of the kinds of what is called gilt paper.

The following account of factitious gilding for chain-bridges, and other works of iron, was com- municated by John Robison, Esq. F.R.S.E. to Dr. Brewster's Edinburgh Philosophical Journal of last year (1826): —

' The Moochees and Nuqquashes of India, who are tlie makers and painters of a variety of ob- jects whose purposes require ability to stand the effects of the weather, use an application in or- namenting their works, wlvich, in appearance, nearly equals gilding, and costs little more than common paint. It appears to me that this ap- plication might be useful in some cases in this country, particularly in chain-bridges, and other works where iron of a smooth surface is exposed to the atmosphere. I therefore use the freedom of troubling you with what I recollect on the subject.

' In preparing the factitious gilding in the small way, a quantity of pure tin is melted, and poured into a joint of bamboo, perhaps a foot ion?, and two or three inches in diameter, close at both ends, except the perforation at which the tin is poured in, which is instantly plugged up. The bamboo is then violently shaken, which, if well managed, soon makes the metal assume »h

form of a very fine gray powder : this being •.ufted, to separate any coarse particles, is mixed up in thin melted glue, and, if I recollect right, is levigated on a stone with a muUer. The re- sult is poured into dishes (commonly cocoa nut- shells) to settle, and the superfluous moisture poured off.

‘ When to be applied, it should be of the con- sistence of thin cream, and is laid on with a soft brush, like ordinary paint. When dry, it appears like a coat of common gray water color. This is gone over with an agate-burnisher, and then forms a bright uniform surface of polished tin ; a coating of white or colored roghun (oil-varnish) is immedi-ately laid over it, according as it may be intended to imitate silvering or gilding.’

GILDAS, surnamed the Wise, a celebrated British monk, born in Wales in 511. Where he was educated is uncertain. Some say he went over to Ireland ; others, that he visited France and Italy. All agree tliat, after his re- turn to England, he became a most assiduous preachen of the gospel. Du Pin says he founded a monastery at Venetia in Britain. Gildas is the only British author of the sixth century whose works are printed. His History of Bri- tain is valuable on account of its antiquity, and as containing the only information we have con- cerning the times of which he wrote ; though his style is inelegant.

GILDO, a general in Mauritania, who was raised by the emperor Theodosius to the chie-f command in Africa. When the empire was divided between Arcadius and Honorius, the two sons of the last-mentioned emperor, he was persuaded to acknowledge the authority of Arca- dius, the master of the east, although his alle- giance was due to Honorius. The Roman senate, upon the revolt, denounced him a public enemy. He was subdued by Stilicho ; and the war which terminated in his discomfiture was celebrated by Claudian in his poem de Bello Gildonico. He was seized and thrown into pri- son, where he saved himself from his impending fate by a voluntary death.

GILEAD, the son of Machir, and grandson of Manasseh. His posterity had their inherit- ance allotted them in tire mountains of Gilead, so named from him.

Gilead, a descendant of the above men- tioned patriarch, and the father of Jephthah.

Gilead, Balm of. See Amyuis.

The mountains of Gilead were part of that ridge which runs from mount Lebanon south- ward, on the east of the Holy Land ; gave their name to the whole country which lies on the east of the sea of Galilee, and included the mountainous region, called in the New Testament, Trachonitis. Jer. (xxii. 6) seems to say, that Gilead begins from mount Libanus. Jacob, at his return from Mesopotamia, came in six days to the mountains of Gilead (Gen. xxxi. 21. Sec.) where this patri- arch, with Laban his father-in-law, raised a heap of stones, in memory of their agreement and covenant, and called it Galeed, i.e. 'an heap of witn-essess,' and which Laban called Jegar saha- dutha. These mountains were covered with trees abounding with gum, called the balm of Gilead, which the Scripture much commends.

(Jer. viii. 21, xlvi. 11, li. 8.) The merchants who bought Joseph came from Gilead, and were car- rying balm into Egypt, Gen. xxxvii. 25.

GILES (John), D. D. & M.D., a native cf St. Albans, who flourished in the thirteenth cen- tury, and was the first Englishman who entered among the Dominicans. He was physician in ordinary to Philip IV. of France, and was pro- fessor of medicine in the ˆuniversities of Paris and Montpelier. In his Latin Tracts he is styled Johaimes iEgidius.

Giles (St.), the tutelar saint of Edinburgh, was a native of Greece, who flourished in the sixth century, and was descended of an illustri- ous family. On the death of his parents he gave all his estate to the poor; and travelled into France, where he retired into a wilderness near the conflux of the Rhone with the sea, and con- tinued there three years. Having obtained the reputation of extraordinary sanctity, various miracles were attributed to him ; and he founded a monastery in Languedoc, known long after by the name of St. Giles's. In the reign of James 11. Mr. Preston of Gorton, whose descendants still possess an estate in the county of Edinburgh, obtained an arm of this saint ; which relic he bequeathed to the church of Edinburgh. In gratitude for this donation, the magistrates granted a charter in favor of Mr. Preston's heirs, by which the nearest heir of the name of Pres- ton was entitled to carry it in all processions. They also obliged themselves to found an altar in the church of St. Giles's, and appoint a chap- lain for celebrating an annual mass for the soul of Mr. Preston ; and likewise, that a tablet containing his arms, and an account of his pious donation, should be put up in the chapel .

GILGAL, in ancient geography, a place be- tween Jericho and Jordan, noted for the first en- campment of the Israelites on this side Jordan, about a mile from Jericho. It sometimes also denotes Galilee. Joshua xii. 23.

GILL, n. «. Sax. fias^cl ; Lat. (barb.) gillo, gello. A liquid measure ; the fourth of a pint.

They measure their block-tin by the gill, which containeth a pint. Carew.

Every bottle must lie rinsed with wine : some, out of mistaken thrift, will rinse a dozen with the same : change the wine at every second bottle : a gill may be enough. Swift.

Gill, n. s. Not improperly, as Dr. Johnson suggests, from gillian, the Old English way of writing Julian or Juliana. The appellation of a woman in ludicrous language.

I can, for I will. Here at Burley o' th' Hill, Give you all your fill. Each Jack with his Gill.

Ben Jonson s Gypsies,

Gill, re. s. i IjaX. chelidonium. The name Gill-house. > of a plant; ground-ivy; malt- liquor medicated with ground-ivy. Gill-house is the place where it is sold.

Thee shall each alehouse, thee each gillhoiuerarinm. And answering ginshops sourer sighs return. Pope.

Gill (John), D.D., a Protestant dissenting minister of the Baptist denomination, was born at Kettering, Nov. 23rd, 1697. He was early sent to a grammar-school in the neighbourhood,

where he very soon surpassed boys much his seniors ; and after he had left school, though his time was daily devoted to the business of his father, yet he so far improved his leisure hours, as to be able, before he was nineteen, to read all the classical authors that fell in his way. On Nov. 1st, 1716, he made a public profession of his faith before the Baptist church at Kettering, and was baptized by Mr. Thomas Wallis. Of this church Mr. Gill had not been long a member before he was called to the ministrv : soon after which, he removed to Higham Ferrers, to pursue his studies under Mr. Davis ; but his stay there was soon interrupted by an invitation to London, to preach to the Baptist church at Horslydown, over which he was ordained pastor in 1719, which office he sustained upwards of fifty-one years. Mr.

Gill had not been long in London, before rabbinical learning, of which he had acquired considerable knowledge, became an object of his pursuit. To facilitate his pro- gress through the intricacies of this labyrinth, he contracted an acquaintance with one of the most learned Je%vish rabbis. He read the Targums, the Talmuds, the Rabbot, their ancient commen- taries, the book Zohat, and whatever else of this kind he was able to procure. Of the Oriental languages he made himself complete master : in short, there was no branch of knowledge that could either enlarge or enrich biblical learning, whicli he did not attempt and attain. In 1748 lie published a Commentary on the New Testa- ment, in 3 vols, folio. This work attracted the attention of the University of Aberdeen ; and procured for him, without either his solicitation or his knowledge, a diploma, creating him D.D. He died at Camberwell in 1771, aged seventy- three. In 1718 the Dr. had married Mrs. Elizabeth Negus ; by whom he had many chil- dren, two of whom only survived him. Mrs. Gill died in 1764. His wˆorks are, 1. A Com- mentary on the Old and New Testament, in 9 vols. fol. 2. A Body of Divinity, in 3 vols. 4to. 3. The Cause of God and Truth, 4 vols. Bvo. 4. A Treatise concerning the Prophecies of the Old Testament, respecting the INIessiah. 5. A Dissertation on the antiquity of the Hebrew Language, Letters, 'owel Points, and Accents. 6. Sermons on the Canticles, folio ; besides a great number of sermons and controversial pieces on different subjects.

GILLS, n.s. Goth. geil,gil, a fissure; Span. ugiilla ; Lat. gula. The apertures at each side of a fish's head ; the flaps which hang below the beak of a fowl; the flesh under the chin.

The turkcycock bath great and swelling ffUli, and the hen hath less. Bacon's Natural H'tstory.

In many there is no paleness at all ; but contrari- wise, redness about the checks and gills, which is by the sending forth of spirits in an appetite to revenge.

Id. The leviathan. Stretched like a promontory, slsrps or swims. And seems a moving land, and at his gills Draws in, and at his trunk spouts out a sea.

Milton. He hath two gill-das ; not behind the gilh, as in most fishes, but before thom. Walton.

Fishes perform respiration under water by the t)it!s.

'Till they, of farther passage quite bereft. Were in the mesh with gills entangled left. King. Like the long bag of flesh hanging down from the gills of the people in Piedmont. Swift.

Gills of Fish. See Zootomy.

GILLES (Peter), a learned and enterprising French author, bora at Albi in 1490. After studying the Latin and Greek languˆes, philo- sopliy, natural history, &c., he travelled through France and Italy. In 1533 he dedicated a work to Francis I., wherein he advised that monarch to send learned men to travel into foreign coun- tries for the improvement of science ; in conse- quence of which the king sent Gilles into the Levant. But having received no remittances from France, during his journey, he was at last obliged to enlist, for subsistence. In the army of Soliman II. In another voyage he was taken by a pirate, and carried into Algiers. By the generosity of Cardinal Armagnac he obtained his liberty; after which he went to his benefactor at Rome, where he died in 1555.

GILLORI, an island on the coast of West Florida, divided from Dauphin island by a very narrow channel. Between Gillori and the main land, on the west side of Mobile River, is a chain of small islands, and oyster-shells, through which IS a passage of four feet, called Passe au Heron.

GI'LLYFLOWER, n. s. Corrupted from Julyflower, or from Fr. girqflee.

In July come gillyflowers of all varieties.

Bacon.

Gillyflowers or rather Julyfiowers, so called from

the month they blow in, may be reduced to these

sorts ; red and white, purple and white, scarlet and

white. Mortimer's Husbandry.

Fair IS the gillyflower of gardens sweet.

Fair is the marygold, for pottage meet.

Gay's Pastorals.

GiLLYi LOWER. See Cheiranthus, and Di-

ANTHUS.

GILOLO, or Gillolo, called also Halama- hera, is the largest of the Spice Islands. In its shape, which is very irregular, it most resembles Celebes, being formed of four peninsulas, enclos- ing three large bays on the east : the interior is occupied by high mountains rising in pea.vS. It abounds in sago and fruit trees, buffaloes, deer, goats, and wild hogs ; and is well inhabited. Towards the south it is said to have nutmeg and clove trees. \Vhen captain Forrest visited it, in 1774, its dominion was divided between the kings of Ternate and Tidor, and consequently under the influence of the Dutch ; at present, however, it seems to be governed by several inde- pendent chiefs. North of Gillolo is the island of Mortay, covered with sago trees, but thinly inhabited. The Moluccas Proper form a chain along the west side of Gillolo. The town of Ossa, on the- south side of the bay of that name, is in E. lomj. 120° 22', and N. lat. 0° 45'. The imports of the island are iron, cutlery, piece goods, and China ware ; the exports spices, edi- ble birds' -nests, tortoise-shell, pearl, seed, and sago.

GILPIN (Bernard), an English divine, wa:', descended from an ancient and honorable family in Westmoreland, and born in 1517. Being

*brought up in the Roman Catholic religion, he, for some time, defended it, and, at Ox- ford, held a disputation with Hooper, afterwards bishop of Worcester, and martyr for the Protes- tant faith; but, after another disputation with Peter Martyr, began seriously to examine the contested points. Presented with the vicar- age of Norton, in Durham, he resigned it, and went abroad to consult eminent professors on both sides ; and, after three years' absence, re- turned a little before the death of Mary I. satis- fied in the doctrines of the Reformation. He was kindly received by his uncle Dr. Tonstall, bishop of Durham ; who soon after gave him the arch- deaconry of Durham, and rectory of Effington. Though the persecution was then at its height, he boldly preached against the vices, errors, and corruptions of the times, especially in the clergy, on which a charge, consisting of thirteen articles, was drawn up against him, and presented in form to the bishop. But Dr. Tonstall dismissed the cause in such a manner as to protect his nephew without endangering himself, and, soon after, presented him to the rich living of Houghton le Spring. He was again accused to the bishop, and again protected ; when his enemies laid their complaint before Dr. Bonner, bishop of London, who immediately gave orders to apprehend him. Upon this, Mr. Gilpin prepared for martrydom ; and ordering his steward to provide him a long garment, that he might make a decent appear- ance at the stake, set out for London. He, how- ever, broke his leg on the journey, which pro- tracted his arrival until the queen's death. Being immediately set at liberty, he returned to Hough- ton, where he was received by his parishioners with the sincerest joy. Upon the deprivation of the popish bishops, he was offered the see ot Carlisle, which he declined ; and, confining his attention to his rectory, discharged all the duties of his function in the most exemplary manner. He was particularly anxious to improve the minds of the younger |>art of his flock ; pressing them to mix religion with their labors, and, amidst the cares of this life, to have a constant eye upon the next. He attended to every thing which might be of service to his parishioners, and was very assiduous in preventing law- suits. His hall is said to have been often thronged with people, who came to him about their differences. His hospitable manner of living was the admiration of the whole country.— He spent in his family every fortnight forty bushels of corn, twenty bushels of malt, and a whole ox ; besides a pro- portionable quantity of other provisions. Stran- gers and travellers found a cheerful reception. AU were welcome that came : and even their beasts had so much care taken of them, that it was said, ' If a horse was turned loose in any part of the country, it would immediately make its way to the rector of Houghtori*s.' Every Sunday, from Michaelmas to Easter, was a pub- lic day with him. During this season he wished to see all his parishioners and their families. For their reception he had three tables well covered : the first for gentlemen, the second for husband- men, and the third" for day-laborers. This piece of hospitality he never omitted, even*

when losses or a scarcity of provisions made its continuance

*rather difficult. Every year he regularly visited the most neglected parishes in Northumberland, Yorkshire, Cheshire, Westmoreland, and Cumberland, preaching in each for two or three days. And wherever he came he visited all the gaols, few in tiie kingdom having then any appointed minister. In the debateable land also, where no man would even travel who could avoid it, Mr. Gilpin never failed to spend some part of every year. The disinterested pains he took among these barbarous people, and the good offices he was always ready to do them, drew from them the warmest and sincerest expressions of gratitude. One instance is related, that shows how greatly he was revered. — By the carelessness of his ser- vants, his horses were one day stolen ; and, the news being quickly propagated, every one ex- pressed the highest indignation at the theft. The thief was rejoicing over his prize, when, by the report of the country, he discovered whose horses he had taken. Terrified at what he had done, he instantly came trembling back, confessed the fact, returned the horses, and declared ' he believed the devil would have seized him directly had he carried them off knowing them to have been Mr. Gilpin's.' Although his income was never more than £400 a year, and out of this he had to support his open house and liberal hospi- tality, yet he founded and endowed a large gram- mar school, to which he also devoted a great part of his personal attention. One day, returning home, he saw in afield several people crowding together; and judging something more than ordinary had happened, he rode up, and found that one of the horses in a team had suddenly dropped down dead. The owner of it declaring how grievous a loss it would be to him, Mr. Gilpin bade him not •be disheartened : ' I'll let you have,' said he, ' that horse of mine,' pointing to his servant's. * Ah ! master,' replied the countryman, ' my pocket will not reach such a beast as that.' ' Come, come,' said Mr. Gilpin, ' take him, take him ; and when*

1 demand my money, then thou shalt pay me.' This excellent divine, who deservedly obtained the glorious titles of the Father of the Poor, and the Apostle of the North, died in 1583, in the sixty-sixth year of his age.

Gilpin (Rev. William), M. A., descended from the above, was born at Carlisle in 1724, He received his education at Queen's College, Oxford, where he took his degree of M. A. in 1748. -Afterwards he kept a grammar-school at Cheam in Surrey ; but at length obtained a pre- bend in the cathedral of Salisbury, and the vicarage of Boldre, in the New Forest, Hamp- shire. Here he died, April 5th 1804. His lite- rary reputation is principally founded oo his Picturesque Tours. His principal works were The Life of Bernard Gilpin, 1751, Bvo. ; The Lives of John Wicliff, &c., 1764, 8vo., which was translated into German; Lectures on the Catechism of the Church of England, 1779,

2 vols. 8vo. ; Remarks on Forest Scenery, 2 vols. 8vo. ; Observations relative to Pictur- esque Beauty, made in 1772, on several parts of England, particularly the mountains and lakes of Cumberland and Westmoreland, 2 vols. 8vo.; Observations relative to Picturesque Beauty, made in 1776, on several parts of Great Britain,

particularly the Highlands of Scotland, 2 vols. 8vo. ; Sermons to a Country Conf:;regation, 2 vols. 8vo. ; and Exposition of the New Tes- tament, &c., 4to. 1790, reprinted in 2 vols. 8vo. Gl'LTHEAD, n. s. Gilt and head. A sea-fish ; a bird.

He blended together the livers of giUheads, the brains of pheasants and peacocks, tongiies of pheni- copters, and the mcks of lampres. HahewUl.

GiLT-UEAD, in ichthyology. See Spar us. GI'MCRACK n. s. Supposed by Skinner to be ludicrously formed from gin, derived from engnie. A slight or trivial mechanism.

For though these gimcrucks were away. However, more reduced and plain. The watch would still a watch remain ; liut if the horal orbit ceases. The whole stands still, or breaks to pieces.

Prior. What's the meaning of all these trangrams and gimcraeks? Jumping over my master's hedges, and running your lines cross his grounds ? Arbuthnot.

GIM'LET, n. s. Fr. gibelet, guimbelet. A borer witli a screw at its point-

The gimlet hath a worm at the end of its bit.

Moxan. GIMMAL, n. s. } According to Skinner and GiMMER, n. s. i Ainsworth from Lat. gcmelr lui. It seems however, says Johnson, to be ra- ther gradually corrupted from geometry or geo- metrical. Some little quaint pieces of machi- nery.

I think by some odd gimmah or device Their arms are set like clocks, still to strike on. Else they could not hold out so as they do.

Shakspeare. The holding together of the parts of matter has so confounded me, that I have been prone to conclude with myself, that the gimmers of the

world hold toge- ther not so much by geometry as some natural magjck. JHore's Divine Dialcxfues. GIMP, n. 5. See Gim. Gimp, in old Eng- lish, is neat, spruce. A kind of silk twist or lace.

GIN, «. .9. Corrupted from engine. A trap ; a snare ; any thng moved with screws, .is an en- gine of torture ; a pump workcii witli rotatory sails. (Contracted from Geneva; a spirit drawn from juniper berries.

This same stcde shal berc you evermore, Withouten harmc, till ye be then you lest (Though that ye slepcn on his back or reste,) And turne again with writhing of a pin. He that it wrought, he coudc many a gin} He waited many a constellation. Or be had dnn this operation.

Chaucer. The Squires Tale.

this false gin

Was n«t made ther ; but it was made before.

Id. The Cluirumes Yeinannes Talc, Typhaeus' joints were stretched on a gin. Siienftr. Wliich two, through treason and deceitful gin, Flath slain sir Mordant. Jil.

So strives the woodcock with the gin ; So doth the coney struggle in the net.

S/iakspeure. Be it by (/inn, by snar's, by subtilty. Id.

A« the day begins. With twenty gins we will the small birds take. And pantinir- make. Sidtici/.

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If those, who have but sense, can shun The engines that have them annoyed ;

Little for me had reason done. If I could not thy gins avoid.

Hen Jonson's Forest. I know thy trains. Though dearly to my cost, thy gitis and toils ; No more on me have power, their forre is nulled.

Milton, He made a planetary gin, Wliich rats would run their own heads in. And come on purpose to be taken. Without the' expence of cheese and bacon.

Hudibras. Keep from flaying, scourge thy skin. And ankle free from iron gin. Id.

The delfs would be so flown with waters, it being impossible to make any adils or soughs to drain them, that no gins or machines would suffice to lay and keep them dry. Ray.

A bituminous plate, alternately yellow and black, formed by water driveling on the outside of the gin pump of Mostyn coalpits. Wood on Fossils.

Gin, in mechanics, a machine for driving piles, fitted with a windlass and winches at each end, where eight or nine men heave, and round which a rope is reeved that goes over the wheel at the top; one end of this rope is fixed to an iron-monkey, that hooks to a beetle of different weights, according to the piles they are to drive, being from eight to thirteen htmdred weight; and when hove up to a cross-piece, near the wheel, it unhooks the monkey, and lets the beetle fall on the upper end of the pile, and forces the same into the ground ; then the monkey's own weight overhauls the windlass, in order for its being hooked again to the beetle.

Gin. See Geneva.

Gin, in geography, a town of China, of th<' third rank, in Petcheli, ten miles south-east of Chun-te.

GINBALA, a district of Central Africa, form- ed into an island by two branches of the Niger, issuing from the lake Dibbie, and re-uniting west of Tombuctoo. It is only known to be in- habited by industrious and commercial negroes.

CJINGEE, a district and fortress of India, in the Carnatic, situated between tlie twelfth and thirteenth degrees of northern latitude, and bounded on the east by the sea. The English had factories here in tiie middle of the seven- teenth century, and it is now comprehended ir. the south division of the Arcot collectorshij.. The fort stands on a stupcMidous rock, and is imj)regnable by any ordinary mode of attack. It is said to have been built by the kings of the Chola dynasty, and was, so early as the year 1442. completely iei)aired and strengthened by the Naik of Taiijorc. It was strengthened by the Mationmiedan kings of Hejapore, the Mali- rattas, and the Moguls successively, but was taken by surprise from the latter, by the French, in the year MM, and capitulated to the English in April, 17G1. Like otiier hill forts of India, it is very unhealthy : the French are said to have lost 1200 Europeans by disease, during the ten years they held it, and duriiitr peace it is only garrisoned by a small number of native trooj)s.

()

GIN

GINGER, ».s. 7 It:i. gingero; Lzfm

GiNGEU-BREAi), M. s. 5;;riH-ek;. A pungent aromatic root; and a kind of farinaceous sweet meat made of dough sweetened with treacle and flavored with ginger.

Gingiber, and grein de Paris, Canell, and sctewale of pris. And icany a spice delitable To txvi wfcan men rise fro table.

Chaucer. Romaunt of the Rose. They fet him, first, the swete win. And made eke in a majclin.

And real spicerie. Of gingerbred that was full fin. And licoris and eke comin. With suger that is trie.

Id. Rime of Sire Thopas. An' I had but one penny in the world, thou shouldst have it to buy gingerbread, Shakspeare.

The root of ginger is of the tuberous kind, knotty, crooked, and irregular •, of a hot, acrid, and pungent tasto, though aromatick, and of a very agreeable smell. The Indians eat both the young shoots of the leaves and the roots themselves. Hill.

Or wafting ginger round the streets to go. And visit alehouse where ye first did grow. Pope. 'Tis a loss you are not here, to partake of three weeks frost, and cat gingerbread in a booth by a fire upon the Thames. Swift.

Her currants there and gooseberries were spread. With the enticing gold oi gingerbread. King's Cook.

The flower consists of five leaves, shaped some- what like those of the iris : these are produced in the head or club, each coming out of a sepai'ate leafy scale. Ihe ovary becomes a triangular fruit, having three cells which contain seeds. Miller.

To master John, the English maid A horn-book gives of gingerbread ; And that the child may learn the better As he can name, he eats the letter. Prior.

Ginger. See Amomum. GINGERAH, a celebrated fortified island on the western coast of India, in the mouth of a river, on the bank of which is situated the town of Dunda Rajepore. It was one of the stations of the fleet commanded by the Siddees or Abys- sinians, who deserted from tire service

of the kings of Bijapoore, to tnat of Aurungzebe, in the year IG61, and stood a siege by the Mahratta chief Sevagee (after he had got possession of the town by stratagem), which lasted with little in- termission for twenty-five yearns.

GIN'GERLY, adv. I know not whence de- rived, says Dr. Johnson; Mr. Thomson, from Swed. gangitre, a smooth pace; an amble. Cau- tiously; nicely.

What is't that you Took up so gingerly 7 Shakspeare. GIN'GIVAL, adj. Lat. gingiva. Belonging to the gums.

Whilst the Italians strive to cut a thread in their pronunciation between D and T, so to sweeten it, they make the occluse appulse, especiallythe gingival, softer than we do, giving a little of perviousness.

Holder's Elements of Speech.

GIN'GLE, V. n., v. a., & n. s. From Saxon amebian ; Belg. tintelen. To utter or make a shrill or ringing noise ; a resounding noise ; af- fectation in the sound of periods.

Full many a deinte hors hadde he in stable ; And when he rode, men mighto his bridel herfi Gingling, in a whistling wind, as clere.

And eke as loude as doth the chapell belle.

Chaucer. Prologue to Cant, Tales.

The foot grows black that was with dirt embrowneti. And in thy pocket gingling halfpence found. Gay.

Once, we confess, beneath the patriot's cloak. From the cracked bag the dropping guinea spoke And gingling down the backstairs, told the crew. Old Calo is as great a rogue as you. Pope's Epistles,

Her infant grand ame's whistle next it grew ; The bells she gingled, and the whistle blew. Pope.

GINGLYMUS, n. s. } Greek yiyyXvuog, a

GiNGLYMOiu, adj. swinge, and eiSof;, the form of. An anatomical word, descriptive of the union of two bones after the manner of a hinge, as the elbow.

The malleus lies along, fixed to the tympanum, and on the other end is joined to the incus by a dou- ble ov ginglymoid joint. Holder.

The ginglymns, or hinge-joint does not, it is mani- fest, admit of a ligament of the same kind with that of the ball and socket-joint, but it is always fortified by the species of ligament of which it does admit.

Paley's Theology,

GI'NNET, n. s. Lat. hinnus ; Gr. yivvoc-' A nag; a mule; a degenerated breed. Hence, ac- cording to some, but we believe, erroneously, a Soanish gennet, improperly written for giimet.

GINORA, in botany, a genus of the mono- gynia order, and dodecandria class of plants : GAL. cleft ixi\fi six parts ; the petals six : caps. unilocular, quadrivalved, colored, and polysper- mous. Species one only ; a myrtle formed shrub of Cuba.

GINSENG, in botany. See Panax.

GIO J A, a small town of Naples, in the pro- vince of Bari, with 1800 inhabitants. Its houses were overturned by the earthquakes of 1783, and half the town is still in ruins. Fourteen miles S.S.W. of Conversano.

GIORGIEV, a town of Walachia, in Euro- pean Turkey, partly on the north side of the Danube, and partly on an island in that river. It covers a large extent of ground, and carries on a brisk trade. It was taken in 1771, in the wa' between the Russians and Turks ; and, on the 2ud June of that year, the Turks received a complete defeat here. In 1810 it was again taken by the Russians. It is forty miles south- west of Bucharest, and 235 north-west of Con- stantinople.*

GIORGI (Augustine Anthony), a learned modern ecclesiastic, was born in 1711 at St. Maur, in the diocese of Rimini, and entered, in 1727, the Augustine order, devoting himself par- ticularly to the study of the oriental languages. In 1746 he was invited by pope Benedict XIV. to fill the theological chair of La Sapienza at Rome ; he also made him librarian del Angelica. The emperor Francis I. repeatedly invited him to settle at Vienna. In 1761 he published Alphabetum Thibetanum, a work containing many valuable dissertations, and the geography, mythology, history, and antiquities of Thibet. His next publication was Fragmentum Evangelii S. lohanni;; Graeco-Copto Thebaicum saeculi quarti, &c. 'kc. His other works consist of Letters, Dissertations on subjects of Oriental Criticism, and Antiquities and Polemical Trea- tises. He died in 1797.

GIORGIO (St.), or St. Geokge, a strong fort and suburb of Mantua, in the department of Mincio. It was taken by the French under

Buonaparte, on the 15th September, 1796, after an obstinate resistance from the Austriaus, who lost 2500 men, and twenty pieces of cannon. On the 15th January, 1797, general Provera penetrated thus far with 6000 men to relieve Mantua, but was forced to surrender next day, with his whole troops, provisions, ammunition, &c.

GIORGIONE, an illustrious Venetian painter, born in 1478. He received his hrst instructions from John Bellino ; but, studying afterwards the works of Leonardo da Vinci, he soon surpassed them both, being the first among the Lombards who found out the effects of contrasting strong)i3;ht and shadows. The most valuable piece of ijiorgione in oil is that of Christ carrying his cross, now in the church of San Rovo in \ˆenice. lie died of the plague, in 1511.

GIOTTO, an ingenious painter, sculptor, and architect of Florence, born in 1276. He was the disciple of Cimabue; but far superior to his master in the air of his heads, the attitude of his figures, and in the tone of his coloring ; though he could not express liveliness in his eyes, tendernsss in the flesh, or strength in the muscles of his naked figures. He was princi- pally admired for his works in mosaic ; the best of which is over the grand entrance of St. Peter's church at Rome. Alberti says, that, in that piece, the expression of fright and amazement of the disciples, at seeing St. Peter walk upon the water, is so excellent, that each of them exhibits some characteristic sign of his terror. Giotto is said to have been the inventor of cru- cifix painting, and the story generally told, but which we should hope too horrible to be true, is the following: —

Giotto, uitending one day to draw a crucifix, persuaded a poor man to suffer himself to be bound to a cross for an hour, at the end of which he was to be released, and receive a con- siderable reward for it; but, instead of this, as soon as he had fastened him, he stabbed him dead, and then fell to drawing. When he had finished his picture, he carried it to the pope, who admired it so much, that he was resolved to place it over the altar of his own cliapel. Giotto told him, as he liked the copy so well, he would show him tiie original. ' What do you mean?' said the pope, ' That I will show your holiness the original, from whence I drew this, if you will absolve me from all punishment.' The pope promised this, which Giotto believing, attended him to the place wliere it was : as soon as they were entered, he drew back a curtain, which hung before the dead man on the cross, and told him what he hail done. The poi)e, troubled at so barbarous an action, retracted his promise, and told Giotto that he should be])ut to an

exemplary death. fHOtto, with seeming resignation, only begged leave to finish the piece before he died, which was granted him, and a guard set upon him to prevent his escape. As soon as the picture was (lelivered into his hands, he took a brush, and, dip|)ing it into a sort of varnish ready for that purpose, daubed the pic- ture all over with it, so that notliiiig of the cru- cifix could be seen. His holiness was so

incensed, that he threatened to put Giotto to the most cruel death, unless he drew another equal to the former ; if so he would not only give him his life, but also an ample reward in money. Giotto, as he had reason, desired this under the pope's signet, that he might not be in'danger of a second repeal. This was granted to him; and taking a wet sponge, he now wiped off" all the varnish he had daubed on the picture, so that the crucifix appeared the same in all respects as it did before. Upon this, the pope remitted his punishment; and tliis crucifix is said long to have formed the original, from which the most famous crucifixes in Europe were drawn. He died in 1336, and the city of Florence honored his memory with a statue of marble over his tomb.

GIOVENAZZO, a town in the province of Bari, on the east coast coast of Naples. It has a castle, four churches, four convents, and 5000 inhabitants; and is a bishop's see, united to tliat of Terlizzi. This town is surrounded by high walls of rustic architecture, behind which rise, in a narrow space, houses and lofty towers with flat tops. Ten miles W. N. W. of Bari.

GI'PSY, ?«. s. (.'orrupted from Egyptian ; see below. A vagabond who pretends to fore- tell futurity, by palmistry or physiognomy. — Johnson.

Laura, to her lady, was but a kitchen wench ; Dido a dowdy ; Cleopatra a (jypsi/ ; Helen and Hero hild- ings and harlots. Shakfjieare. Romeo ami Juliet.

The widow played the gyjjsj/, and so did her confi- dant too, in pretending to believe lier. L'Estrange. In this still labyrinth around her lie

Spells, philters, globes, and spheres of palmesti-y ;

A sigil in his hand the gipsey bears.

And in th; other a prophetic sieve and shears.

Garth.

A frantick gipsey now, tl>e house he haunts. And in wild phrases speaks dissembled wants. Prior.

The butler, though he is sure to lose a knife, a fork, or a spoon every time his fortune is told liiin, shuts himself up in the pantry with du old gipsey for above half an hour. Addison.

I, near yon stile, three saMow gypsies met j Upon my hand they cast a poring look. Bid me beware, and thrice their heads tlicy shook.

Gay.

GIRAFFE. See Cf.rvt;s.

GIRALDI (Lilio Gregorio), an ingenious critic, was born at Ferrara in 1479. He was at Rome when it was plundered by the emperor Charles V.; and having thus lost all he had, and being tormented by the gout, he struggled through life with ill fortune and ill health. He wrote, nevertheless, seventeen works, which wore collected and published at Basil, in 2 vols, folio, in 15f'.0, and at Leyden in 1696. Ca.saubon, Thuanus, and other autho'-s of the first rank, have bestowed the highest eulogies on him.

GiRAi.Di (John Jiaptist Cutio), an Italian poet of the same family with tlie preceding, was born in l.')04. He was secretary to the duke of Fer- rara, and professor of rhetoric at Pavia. He died in 1573. His works, whicli consist chiefly of tragedies, were collected and published at Venice by his son (!elsoGiraldi, in 1583. Some rank him among the best tragic writers Italy has produced.

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GIRARD (Gabriel), an ingenious French ecclesiastic, was a native of Clermont, and born in 1673. The duties of a canoilry, which he possessed, interferingˆ with his studies, he re- signed it, in order to be able to pursue them ; when the duchess de Berri made him her almoner. lie was employed by the French government as Russian and Sclavonian inter- preter to the king, and became a member of the academy in 1744. Girard published a treatise on the principles of the French tongue, in two duodecimo volumes; and another on]'rencli Synonymes, which has gone through several editions. He died in 1748.

GIRARDON (Francis), a celebrated French architect and sculptor, born at Troyes in 1627. Louis XIV., being informed of his talents, sent him to

Rome with a pension of 1000 crowns. At his return into France, he labored for the royal palaces, and the gardens of Versailles and Trianon ; where there are many of his works in bronze and in marble, from the designs of Charles le-Brun. The mausoleum of cardinal de Richelieu, in the Sorhonne, and the equestrian statue of Louis XIV. at the Place de Vendome, where the statue and horse are cast in one piece, are reckoned his best performances. He was professor, rector, and chancellor, of tlie Academy of Painting and Sculpture ; and in- spector-general of all the works done in sculp- ture. He died in 1715.

GI'RASOLE, 7>. s. Fr. girasol. The herb turnsol ; the opal stone.

GIRD, V. a., V n.kn. s.-^ Saxon syp'oan ; Gird'er, n. s. f Goth gyrdu ; Belg.

Gir'dle, n. $. k V. a. ^gardan ; Teut. gur- Gir'dlebelt, n. s. \ ten, gurtel. To

Gia'DLER, n. a. J bind ; surround ;

fasten ; invest; dress ; cover ; encircle ; reproach : an architectural terra for the largest piece of tim- ber in a floor; that which is used to bind or en- circle : a maker of girdles : to smite.

Girt, v. a., part. pass. & n. s. < g^^·^^^ Girth, v. s. & v. a.)

He throweth on his helme of liuge weight ; And girt him with his swerde ; and in his honde His mighty spere, as he wos wont to fcight, He shaketh.

Chaucer. Complaint of Mars and Venus, His here, his berde was like safroun. That to his girdle raught adoun.

Id. Rime of Sire Thopas. And so befell that in the tos they found, Thurgh girt with many a grevous blody wound. Two yongo knightes ligging by and by Bothe in on armes wrought ful richely.

Id. The Knightes Tale. Men of a)l sorts take a pride to gird at me : the brain of this foolish compounded clay, man, is not able to invent any thing that tends to laughter more than I invent, or is invented on me : I am not only witty in myself, but the cause that wit is in other men. Shakspeare. Henry IV. Those sleeping stones. That as a waist do girdle you about.

Shakspeare, Let mn look bark upon thee, O thou wall. That (/irrf/csi in those wolves ! Id. Timon.

There will I make thee beds of rofc.«. With a thousand fragrai.t posies ;

A cap of flowers, and a girdle. Embroidered all with leaves of myrtle.

Shakspeare, Being moved, he will not spare to ˆird the god.

Id. Sweet king ! the bishop hath a kindly gird : For shame, my lord of Winchester, relent. Id. Stoop then, and set your knco against luy foot. And in regurrdon of that duty done, I gird thee with the valiant sword of York, Id.

Lay the gentle babes, girdling one another Within their innocent alabaster arms. Id.

Groat breezes in great circles, such as are under the girdle of the world, do refrigerate. Bacon.

This wondred error growth At which our criticks gird. Drayton.

Or the saddle turned round, or the girths brake ; For low on the ground, woe for his sake. The law is found. Ben Jonwn's Underw(M)ds.

He has the glory of his conscience, when he doth well, to set against the checks 'dud'girds of it when he doth amiss. Goodman.

Many conceive there is somewhat amiss until they put on their girdle. Browne's Vulgar Errours.

On him his mantle, girdle, sword and bow. On hiai his heart and soul he did bestow.

Cowley. Here lies old Hobson, death hath broke his girt ; And here, alas! hath laid him in tlie dirt. Milton. That Nyseian isle. Girt with the river Triton, where old Cham Hid Amaltha, and her florid son Young Bacchus, from his stepdame Rhea's eye.

Id. These, with what skill they had, together sewed. To gird their waist : vain covering, if it hide Their guilt, and dreaded shame. Id. Paradise Lost. The son appeared, Girt with omnipotence. /'/.

Conscience by this means is freed from many fearful girds and twinges which ths atheist feels.

Tillotson. Nor did his eyes less longingly behold The girdlebelt, with nails of burnished gold.

Dryden. Tysiphone there keeps the ward. Girt in her sanguine gown, by night and day. Observant of the souls that pass the downward via.y.

Id. The girders are also to be of the same scantling the summers and ground-plates are of, though the back girder need not be so strong as the

front girder. Muxon's Mech. Exer. No, let us rise at once, gird on our swords. And, at the head of our remaining troops. Attack the foe. Addison's Cato.

He's a lusty jolly fellow that lives well, at least three yards in the girth. Id. Freeholder,

The combatant too late the field declines. When now the sword is girded at his loins. Prior.

These mighty girders which the fabrick bind. These ribs robust and vast in order joined.

Blackmore. The most common way of bandage is by that of the girt, which girt hath a bolster in the middle, anrl the ends aie tacked firmly together. Wiseman.

Cords of the bigness of packthread were fastened to bandages, which the workmen had girt round my neck. Swift.

In the dread ocean, undulating wide Beneath the radiant line that girts the globe.

Thomsun. Oft the long caravan, which in the chill Of dewy dawn would slowly round each heiglit.

That stretches to tlie stony bolt v/hich girdi Asia, where Kaff looks down upon the Kurds.

Bi/ron. A poniard decked her girdle as the sign She was a sultan's bride (thank heaven not mine).

Id.

The Girdle, cingiilus or zona, in antiquity, was a belt or band of leather or wool tied about 3lie reins. It was anciently the custom for bank- rupts and other insolvent debtors to put off and surrender their girdle in open court. The reason was, that our ancestors used to carry all their ne- cessary utensils, as purse, keys, &c., tied to the girdle ; whence the girdle became a symljol of the estate. History relates, that the widow of Philip I., duke of Burgundy, renounced her right of succession by putting off her girdle upon

the duke's tomb. The Romans always wore a girdle to fasten up the tunica when they had oc- casion to do any thing; and this custom was so general that such as went without girdles, and let their gowns hang loose, were reputed idle disso- lute persons.

Girdle, Maiden's or Virgin's. It was the custom among the Greeks and Romans for the husband to untie his bride's girdle. Homer, lib. xi. of his Odyssey, calls the girdle -n-apOsvirjv iˆovt]v, maid's girdle. Festus relates, that it was made of sheep's wool, and adds, that it was tied in the Herculean knot; and that the husband unloosed it as a happy presage of his having as many children as Hercules, who at his death left seventy behind him.

CJiRDLE, in mining, is the name used in Cum- berland, and some other counties, to denote the uncertain strata, or chance beds of stone and dif- ferent substances that are met with in some dis- tricts; which, instead of occupying tlie whole space, of the same or nearly an equal thickness throughout, are only local, preserving, however, constantly the same relative situation to the other strata, wherever they appear. Particular strata in the Britisli series are found to be subject to these chance bods, oi strata, within their mass ; some of which large nodular masses as- sume a conftisedly crystallised structure, and seem to occasion large hills, and even mountainoi's tracts.

GIRE, n. s. IaL gyrus. A circle- described by any thing in motion. See Gyre.

GIRGASHITES, or Grr.i esenes, an ancient people of Canaan, whose habitation was beyond the soa of Tiberias, where we find some relics of their name in the city of Gergesa, upon tlie lake of Tiberias. The Jewish rabbis inform us that, when .Toshua first came into the land of Canaan, the Girgashites reijolved rather to forsake their country than submit to the Hebrews, and ac- cordingly retired into Africa. Nevertheless it is certain that a great number of tliem staid behind, since Joshua, xxiv. 11, informs ns that he sub- dued the Girgashites, and they whom he over- came were certainly on this side Jordan. This name is written Gircjashi, Gen. x. 16, xv. 21 ; in tlie (Jreck of Judith, chap. v. IG, Ttpyt Tniof ; and in Matt. viii. 28, Vnˆ yKTivoc. The (Jada- renes of the New TostamcMit are thought to have boon a remnant of (he ancient Girgashites. See Gadauems.

Girg£, a large town, once the capital, of Up- per Egypt. It is situated about a quarter of a mile from the Nile, and is nearly two miles in compass. The architecture is quite modern and mean. Un ler the government of the Mamelukes a bey appointed by the divan at Cairo resided here, in the capacity of sangiac or governor ; but since the last revolution Siont has succeeded Girge as the capital of Upper Egypt. 215 miles south of Cairo.

GIRGENTI, a town of Sicily, which occu- pies part of the site of the ancient Agrigen- TUM, which see. It stands on the top or hill, the site of the old fort, and has about 12,000 inhabi- tants. Thi.s see was some time since the richest in Sicily, but is miserably neglected, as to all its interests. Among the curiosities belonging to the cathedral is an Etruscan vase of rare size and preservation. There are also some golden pateras of extreme rarity. Girgenti has a harbour, formed by a pier carried out in three sides of an octagon, with a battery at the head : the light-house is erected on the cliffs on shore. The work is strong and neat, but the Sirocco commands it entirely, and drives in great quantities of sand. Ships of burden find it difficult thereibre to get in, but the magazines of corn, which it exports, in the rocks along the shore are spacious. Girgenti is seated on the St. Baise, four miles from the sea, and sixty soutli of Palermo. Long. 13= 24′ E., lat. 37”’ 28′ N.

GIRL, n. s. “J Casaubon derives this word

Girlish, adj. Sfrora koj)jj of the same sig- GiRLisuLY, arfv. 7 nification ; Minsheu from Lat. garnilu. a prattler, or Ital. girella, a wea- thercock. Junius thinks that it comes from Welsh hcrlodes, from which, says he, harlot is very easily deduced. Skinner imagines that the Saxons, who used ceofil for a man, might also have ceojala for a woman, though no such word is now found. Dr. Hickes derives it from the Icelandic kurlinna, a woman. To these collec- tions of Dr. Johnson may be added Mr. ‘Diom- son’s suggestion, that it comes from Goth. Idrla, diminutive oi karla, a woman, feminine of karl, a man or boor. A young woman, or female child.

In dapger hadde he at his o^‘cn gise. The yongc girles of his diociso And knew hir conscil and was of hirdcdc.

Chaucer. Piulogue to t/ij Ciinierburi/ Talct. I will love thee ne’er the less, my girl.

Shuhspeare. A wpathcr-bcaten lover, but once known, Is sport for every girl to pr;ictise on. Donne

The Boolc Anipliiniachus, to field brought gold to be his wrackc, Proudc girlc like, that doth ever bearc her dowrc upon her backe. Cluqnnan.

True Trojan ! whilst this town can girU aflurd And long ns cyder lasts in Hereford, The qirU shall always kiss thee though grown old. And in eternal healths thy u;une be trouled.

Marvill. .\ boy, like thee, would make a kingly line ; But oh ! a girl, liko her, must be divine !

Dry den. It is pleasant to see the boys and girls playing in tlie streets; but it

is ill-favored to see men and women pl.'iying tlicre, that should fill up their liiiic with work and business. Henrij. Zcch, viii. H.

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Each ffirl, when pleased with what is taught.

Will have the teacher in her thought. Swift.

Chloe of every coxcomb jealous Admires how ffirls can walk with fellows ', And full of indiijnation frets That women should be such coquettes. Id.

Tragedy should blush as much to stoop

To the low mimick follies of a farce.

As a grave matron would to dance with yirls.

Rose.

GIRN, V. n. It seems to be a corruption of grin. It is still used in Scotland, and is applied to a crabbed, captious, or peevish person.

GIRONDE, a department of France, contain- ing part of the ci-devant province of Guienne ; bounded on the north-east by the department of the Lower Charente, on the east by those of the Dordogne, and Lot and Garonne, on the south by that of Landes, and on the west by the sea. Bourdeaux is the capital. Gironde extends along both sides of the Garonne. Its western division is in a great measure barren, and has the sea on the one side and the river on the other : the east- ern part is fertile and well cultivated, yielding annually, it is computed, 800,000 hogsheads of wine. The quantity of corn raised is not equal to the consumption. This department contains six arrondissements, viz. those of Blaye, La Re- ole, Lesparre, Libourne, Bazas, and Bourdeaux; the last is the central station of the military, the seat of a high court of justice, the residence of the prefet and bishop, and the centre of all the pub- lic business. Wine and brandy are exported from that city in large quantities. Gironde, al- though the climate is tempered by the vicinity of the sea, is warmer than several provinces in the interior of France, which lie in the same latitude on higher ground.

Gironde, a river of France, which is formed by the union of the Garonne and Dordogne, three miles north of Bourdeaux, and runs through the above department into the Atlantic, after a course of twenty-seven miles N.N.W.

GIRONDISTS, a political party in France, ■who flourished in the first

stage of the revolution : so named from the department of Gironde, of which their leading members were representatives; called also Brissotines, from Brissot, and Fede- ralists from theii wishing for a federal government. See France.

GIRONNE, or Gironny, in heraldry, a coat of arms divided into girons, or triangular figtires, meeting in the centre of the shield, and alternate- ly color and metal.

GIR'ROCK, n. s. Acus major. A kind of fish.

GISBOROUGH, a town of England, in the North Riding of Yorkshire, on the road from Whitby to Durham, four miles from the mouth of the Tees, where is a bay and a harbour for ships. It had formerly an abbey, and a church which, from its ruins, seems to have been equal to the best cathedrals in England. The soil is fertile, and has a constant verdure, adorned with field flowers almost all the year. There are some mines of iron and alum, which were first disco- vered in the reign of king James T., and have been since very much improved. Sir Paul Pin- dar, who first farmed them, paid rents to the king

£12,300, to the earl Musgrave £1640, and to Sir William Penniman £600, and had 800 men by sea and land in constant pay ; yet he was a con- siderable gainer, as there was tlien scarcely any other to be had, and the price was £26 a ton ; but, as there are now several other alum works in this country, the works here have for some years lain neglected,. Market day Monday. Gisborough lies eight miles to the north-east of Stokesley.

GISE, V. a. When the owner feeds his ground with cattle which he takes in to graze.

GI'SLE, among the English Saxons, signi- fies a pledge : thus, Fredgisle is a pledge of peace ; Gislebert an illustrious pledge, like the Greek Homerus.

GISLI'.N (Auger), lord of Busbec, a man il- lustrious on account of his embassies, was born at Commmes in 1522 ; and educated at the uni- versities of Louvain, Paris, Venice, Bologna, and Padua. He was engaged in several important negociations,and particularly was twice sent am- bassador by the king of the Romans to the emperor Soliman. He collected inscriptions, examined natural history, and, in his second journey to Constantinople, carried with him a painter, that he might be able to communicate to the curious the figures of the plants and anin.als that were little known in the west. He wrote a Treatise on the State of the Ottoman Empire, and a Relation of his two Journeys to Tur- key, which are much

esteemed. He died in

15,92.

GISORS, a town of Upper Normandy, in the department of the Eure, having manufactures of woollens, leather, and cottons. Inhabitants 3500. Seventeen miles east of Andelys, and thirty-two north-east of Evreux.

GITH, n. s. Nigella. An herb called also small fennel flower.

GIUDECA, or Zuecca, an island in the La- gunes, about a mile from Venice, consisting properly of six small islands joined together, and containing a number of elegant houses and gar- dens, six churches, and a monastery. Its name is said to be derived from the number of Jews once residing here.

GIVE, V. a. Si,v.n.'\ Sax. ˆipan ; Gr. ye, or

Giv'er, n. s. /•J/c"? prefixed to Goth.

Giv'en, part. J andSwed. J«, Sax.fon,to

possess. — Thomson. To bestow without price or reward ; to communicate ; to yield. This word is used in a great variety of senses. A donor, dis- tributor, &c. The radical idea is transmitting from one person to another, either freely or other- wise : it is frequently used with other words, which fix its definite meaning ; as, away ; back ; forth ; over ; out; up ; into ; &c. : it is used also in reference to locality, as, to give place.

My fadir geuefh you verey breed fro heuene.

Wiclif. Jon. VI. Al thing that the idˆdax gyuetn to me, schal come to ma

Id. He wos an csy man to give penance, Ther as he wiste to han a good pitance j For uto a poure ordre for io give. Is signe that a man is wel yshrive ; For if he gave, — he dorste make avant. He wiste that a man wos repentant ;

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For many a man so hard is of his herte. He may not wepe although him sore smerte j Therfore, in stede of weping and praieres. Men mote give silver to the poure freres.

Chaucer. Prologue to Cant. Tales.

With sHi thy hart, with all thy soule and mind. Thou must Him love, and his beheasls embrace j All other loves, with which the world doth blind Weake fancies, and stirre up affections base. Thou must renounce and utterly displace. Then gwe thy selfe unto Him full and free. That full and freely gave Himselfe to thee.

Spenser's Hymnes.

If they will speak to the purpose, they must ginc over, and stand upon such particulars only as they can shew we have either added or abrogated, otherwise than we ought, in the matter of church polity.

Hooker.

Lessons being free from eome inconveniences, whercunto sermons are more subject, they may in this respect no less take than in others they must give the hand, which betokeneth pre-eminence. Id.

The duty of uniformity throughout all churches, in all manner of indifferent ceremonies, will be very hard, and therefore best to give it over. Id.

Neither hath Christ, through union of both natures, incurred the damage of either, lest, by being botn a man, we should think he hath given over to be God, or that, because he continued God, therefore he cannot be man also. Id.

This opmion abated the fear of death in them which were so resolved , and gave them courage to all adven- tures. Id,

The fathers give it out for a rule, that whatsoever Christ is said in Scripture to have received, the same we ought to apply only to the manhood of Christ,

Id.

Let novelty therefore in this give over endless con- tradictions, and let ancient customs prevail. Id.

Abdemelech, as one weary of the world, gave over all, and betook himself to a solitary life, and became a monk. Knolles.

The Rhodians, seeing their enemies turn their backs, gave a great shout in derision of them. Id.

Huniades, the scourge of the Turks, was dead long before ; so was also

Mathias Rafter whom succeeded others, given all to pleasure a9 eJise. Id. History. Fear him not, Cajsar, he's not dangerous :

He is a noble Roman, and well given. Hhakspeare.

The applause and approbation I give to both your speeches. Id. Troilus and Cressida.

It is given out, that, sleeping iu ray orchard, A serpent stung me. So llic whole ear of Denmark Is, by a forged process of my death, Rankly abused. Id. Hamlet.

Une that gives out himself prince Florizel,

Son of Prolixencs, with his princess. Shakˆeare. Never give her o'er, For scorn at first makes after love the more. Id.

His name is Falstaff : if that man should be lewdly given, he deceives me ; for, Harry, I sec virtue in his looks. Id.

If you shall marry, Yoxx give away this hand, and that is mine ; You give away ht-aven's vows, and those are mine ; You yiv« away myself, which is known mine. Id.

If you did know to wliom I gave the ring. If you did know for wiiom I gave the ring. And would conceive for what I gave the ring, And how unwillingly I left the ring. You would abate the strength of your displeasure.

It hath been given out by an hjpocritical thief, who was tlic first master of my ship, that I carried with

me out of England twenty-two thousand pieces of twenty-two shillings per piece. Raleigh.

The state of human actions is so variable, that to try things oft, and never to give over, doth wonders. Bacon's Natural History.

Some things are harder when they come from the fire, and afterwards give again, and grow soft ; as the crust of bread, bisket, sweetmeats, and salt. Id.

Demetrius, king of Macedon, had a petition offered him divers times by an old woman, and still answered he had no leisure ; whereupon the woman said aloud. Why then give over to be king. Bacon.

Though he was given lo pleasure, yet he .was like- wise desirous of glory. Id. ,Hcnry VII.

Julius Caesar laid asleep Ponipey's preparations, bv a fame that he cunningly gave out how Caesar's own soldiers loved him not. Bacon.

In oranges the ripping of the rind giveth out their smell more. Jd.

Finding ourselves in the midst of the greatest wil- derness of waters, without victual, we gave ourselves for lost men, and prepared for death. Id.

Philip, Alexander's father, gave sentence against a prisoner at a time he was drowsy, and seemed to give small attention. The prisoner, after sentence was pronounced, said, I appeal : the kins, somewhat stirred, said. To whom do you appeal ? The prisoner answered, from Philip, when he gave no ear, to Phi- lip, when he shall give ear. Id. Apophthegms.

The charge was given with so well governed fury, that the left comer oif the Scots battalion wzts enforced to give in. Hayward.

Soon after it was given forth, and believed by many, that the king was dead. Id.

Private respects, with him, gave way to the common good. Carew.

We are the earth ; and they. Like moles within us, heave and cast about : And 'till they foot and clutch their prey. They never cool, much less give out. Herbert.

Only a sw^oet and virtuous soul. Like seasoned timber newer gives ;

But though the whole world turn to coal. Then chiefly lives. H

Who say, I care not, those I give for lost j And to instruct them will ijot qjit the cost. 1dm Up and down he "traverses Lis ground. Then nimbly shifts a thrust, then lends a wound j Now back he gives, then rushes on amain.

Daniel's Civil War, Let us give ourselves wholly up to Christ in heart and desire. Taylor's Rule of Holy Living.

Shall we kindle all this dame Only to put it out again ?

And must we now give o'er, And only end where we begun? In vaiu this mischief we have done.

If we can do no more. DcnJiam,

Virtue given for lost, Dcprcst and overthrown, as seemed ; Like that self-begoiten bird From out her ashy womb now teemed.

Milton's Agoniste. Since no deep within her gulph can hold Immortal vigour, though oppressed and fallen, I give not Heaven for lost. Id. Paruduc Lmt.*

Well we may ;.fford Our givers their own gifts. Id,

So Satan, whom repulse upon repulse .■Met ever, and to shameful silence brought Yet gives not o'er, tliough desperate of success.

MiUon.

GIV

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GIV

By thee how fairly is the giver now Repaid ? But gratitude in thee is lost Long since. Milton's Paradise Regained.

This instance gives the impossibility of an eternal existence in any thing essentially alterable or cor- ruptible. Wa^e.

Where few the numbera, choice is there less hard ; Give us this court and rule without a guard.

Marvell. But worst of all to give her over, 'Till she's as desperate to recover. Hudihras. The cause for which we fought and swore So boldly, shall we now give o'er? Id.

The more he got, the more he shewed that he gave away to his new mistress, when he betrayed his promi- ses to the former. Sidney.

Zelmane, govern and direct me; for I am wholly given over unto thee. Id.

If any be given up to believe lyes, some must be first given up to toll them. Stillingjieet.

He is much given to contemplation, and the viewing of this theatre of the world. More against Atheism.

Unless it is kept in a hot house, it will so ffive again, that it will be little better than raw malt.

Mortimer. Before you carry your large cocks in, open them once, and spread them : hay is apt to give in the cock.

Id. Nature gives us many children and friends, to take them away ; but takes none away to give them us again.

Temple. They who gave themselves to warlike action and enterprises, went immediately to the place of Odin.

Id. Besides, he is too much given to horseplay in his raillery ; and comes to battle like a dictator from the plough. Dryden.

I have some business of importance with her ; but her husband is so horribly giveti to be jealous.

Id. Spanish Fryar. What can I refuse to a man so charitably given ?

Dryden. Scarce had he spoken when the cloud gave way ; The mists flew upwards, and dissolved in day. Id. I have not lived since first I heard the news ; The gift the guilty giver doth accuse. Id.

Ours gives himself for gone ; you've watched your time. He fights this day unarmed, without his rhyme. Id.

A woman had a hen that laid every day an egg ; she fancied that upon a larger allowance this hen might lay twice a day : but the hen grew fat, and gave quite over laying. L' Estrange,

Men are given to this licentious liumour of scoffing at personal blemishes and defects. Id.

The punishment would be kept from being too much, if we gave offus soon as we perceived that it reaches the mind. Locke.

He would give his nuts for a piece of metal, and ex- change his sheep for shells, or wool for a sparkling pebble. Id.

When the Babylonians had given themselves over to all manner of vice, it was time for the Lord, who had set up that empire, to pull it down. Grew.

Give yourselves up to some hours of leisure.

Watts. As we desire to give no ofience ourselves, so neither shall ve take any at the difference of judgment in others. Burnet.

For a man la give his name to Christianity in those days, was to list himself a martyr. South.

As the hinder feet of the horse stuck to the moun- tain, while the body reared up in the air, the poet with

great difficulty kept himself from sliding off his back, in so much that the people gave him for gone.

Addison's Guardian. Theodosius made a private vow never to inquire after Constantia, whom he looked upon as given away to his rival, upon the day on which their marriage was to have been solemnized. Addison.

Our minds naturally (7 jue themselves wp to every di- version which they are much accustomed to ; and we always find that play, when followed with assiduity, engrosses the whole woman. Id.

This is a geography particular to the medalists ; the poets, however, have sometimes ˆkmti in to it, and fur- nish us with very good lights for the explication of it.

Id. on Medals. The abbess, finding that the physicians had given her over, told her that Theodosius was just gone before her, and had sent her his benediction. Addison.

Constantia accused herself for having so tamely ˆ(cen an ear to the proposal. Id. Spectator.

Whence came you here, O friend, and whither

bound ? All gave you lost on far Cyclopean ground.

Garth. I gave his wise proposal way ; Nay, urged him to go on : the shallow fraud Will ruin him. Rome's Ambitious Stepmother.

Have the physicians given up all their hopes ? Cannot they add a few days to a monarch ?

Rowe. Forbear contending louts, tyiue o'er your strains. An oaken staff each merits for his pains. Gay.

Where yet was ever found a mother, Wlio'd give her booby for another ? Id. Fables. Whatsoever we employ in charitable uses, during our lives, is given away from ourselves ; what we be- queath at otir death, is given from others only, as our nearest relations. Atterbury.

Their vices perhaps give back all those advantages which their victories procured. Id,

He has not given Luther fairer play. Id.

He may be brought to give up the clearest evidence.

Id. These people are obliged to demand peace, and give tip to the Romans all their possessions in Sicily.

A rbuthnot. Is any aick ? The man of Ross relieves ; Prescribes, attends, the med'cine makes and gives.

Pope. Constant at church and 'Change ; his gains were sure. His givings rare, save farthings to the poor. Id.

Roth gifts destructive to the givers prove ; Alike both lovers fall by those they love. Id.

This consideration may induce a translator to give in to those general phrases, which have attained a veneration in our language from being used in the Old Testament. Id.

A good poet no sooner communicates his works, but it is imagined he is a vain young creature ˆiren up to the ambition of fame. Id.

Yet this false comfort never giv.'s him o'er. That, whilst he creeps, his vigorous thoughts can soar.

It. Let the first honest discoverer give the word about, that Wood's half-pence have been offered, and caution the poor people not to receive them. Swift.

Madam, I always believed you so stout. That for twenty denials you would not give out. Id. Not one foretells I shall recover ; But all agree lo give me over. Id.

GIVES, n. s. Fetters or shackles for the feet.

GLACIERS.

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GIVET, a strong town in the deparlnisut of the Ardennes, France, the chief place of a canton. It originally consisted of two villages, one on each side of the Meuse, which Louis XIV. caused to be fortified and united, under the direction of M. ˆ'auban. It is now a place of considerable strength, and has the fortress of Charlemont on an adjoining hill. Givet was one of the frontier towns put into the possession of the allies by the treaty of Paris in 1815. Inhabitants 3500. Fif- teen miles north-east of Rocroy, and twenty-four north of Mezieres.

GIULIANO, Sax, or Monte Sa.v Giuliano, the ancient Eryx, a considerable

town in the 'al de Mazzara, Sicily. It stands on the summit of a high hill, and is said to be very healthy. Few vestiges of antiquity remain, but the women are remarked for their clear complexions. The town contains fifteen churches, nine convents, an hos- pital, a Monte di Pieta, and 10,000 inhabitants. It is sometimes called Trapani di iMonte, and the mountain Monte di Trapani. Three miles north- east of Tiapani.

GIULEMO, a mountain of the Cisalpine re- public, in the department of Benaco, and ci- devant Veronese. This mountain, with that of]\Ianiva, and the valley of Sabbia, contain twenty-six parishes and 1 3,000 citizens ; who carry on cloth manufactures, and iron forges and foundries. Cattle are also bred in great num- bers.

GIZEII, a town of Egypt, on the left bank of the Nile, opposite Cairo. It is a considerable place, and was fortified by Ishmael Bey. It has been supposed, but on no solid ground, that the ancient Memphis stood in the place where Gizeh now stands : which is in the immediate neigh- bourhood of the pyramids of Cheops and Ce- phrenes. It is three miles south-west of Cairo, and in 1801 was taken from the French by the British.

GIZ'ZARD, n. .?. Fr. gesier ; Lat. gigeria. It is sometimes called gizzern. The strong raus- culous stomach of a fowl. It is proverbially used for apprehension or conception of mind : as, he frets his gizzard ; he harasses his imagi- nation.

But that which does them greatest harm,

Thfir spiritual gixsards are too warm ;

Which puts the overheated sots

In fevors still. Hudibrat.

Fowls have two vcntriclef, and pick up stones to convoy them into their second ventricle, the gizzerm.

More. They nestle near the throne.

By their high crops and corny gizzards known.

Dri/den.

Satisfaction and restitution lie so cursedly liard upon the gizzards of our publicans, that their blood is not half so dear to them as the treasure in their cof- fers. L'Estrange.

In birds there is no ma<5'.icalion in the mouth; but, in such as are not carnivorous, it is immediately swallowed into the crop, a kind of ante- stomach, where it is moistened by some proper juice from the glandu!' ~ distilling in there, thence transferred into th» gizzard, or musculous stomach. Hoy.

When our fowls are abundantly supplied with meat, they soon 611 their craw : but it does not immediately piusu Uicncc into tljc gizzard ; it always outers in very

small quantities, in proportion to the progress of tri- turation. Paley'a Theolvgt/.

GLA'BRITY, n. s. From Lat. gtuber. Smooth- ness ; baldness.

GLA'CL\L, adj. Gla'ciate, v. n. Glacia'tiox, n. s Gla'cious, adj. Gla'ciers, n. s.

Fr. glacer ; Lat. glacies. Ice ; the art of freezing ; icy or cold; mountains I covered with ice.

Ice is plain upon the surface of water, but round in hail, which is also a glaciaticm, and figured in its guttulous descent from the air.

Broume'a Vidgar Ettouts. Although exhaled and placed in cold conservato- I'es, it will crystallize and shoot into glacioiu bodies.

Id. GLACIERS, a name given to some very ex- tensive fields of ice among the Alps. Mr. arch- deacon Coxe says, that these mountains, in gen- eral, are composed of many parallel chains, the highest of which occiipy the centre, and the others gradually diminish as we recede thence. The central chain appears covered with pointed rocks; all parts of which, that are not absolutely perpendicular, lie hid under perpetual snow and ice. On each side of this ridge are fertile and cultivated valleys, interspersed with numerous villages, and watered by numerous streams. The elevated peaks of the central chain are covered with snow ; but their decliv ities, excepting those that are extremely steep, have all a covering of ice as well as snow ; the intermediate parts be- ing filled with vast fields of ice, terminating in the cultivated valleys. The same phenomena, though on a smaller scale, occur in those chains that are at a distance from tlie principal one : in those which are most remote, no ice, and scarcely any snow, is observed, unless upon some of the most elevated summits ; and the mountains, di- minishing in height and ruggedness, appear covered with verdure, until at last they terminate in small hills and plains. Thus the glaciers may be divided into two sorts; the first occupy- ing the deep valleys in the bosom of the Alps, called Ice Valleys ; the second covering the declivities and sides of

the mountains. These are called by Mr. Coxe the Upper and Lower Glaciers.

The Lower Glaciers are by far the most con- siderable ; some of them extending several leagues in length. They do not communicate with each other, as has been generally supposed, few of them being parallel to the central chain ; but, stretching mostly in a transverse direction, are bordered at the higher extremity by inacces- sible rocks, and at the lower extend into the cul- tivated valleys. The thickness of the ice varies in ditTerent parts. In the glacier de Bois, which extends more than fifteen miles in length, and upwards of three in breadth, M. Saussure found it generally from eighty to 100 feet; but he was credibly informed that in some places it was not less than (500 feet, and even more. These vast masses of ice usually rest on an inclined plane ; where, being pushed forward by their own weight, and but weakly supported by the rugged rocks beneath them, they are intersected by large crevices, and have an appearance of walls, pyramids, Jcc, according to the [josition of tlie

eye in viewing them. In those parts, how- evei, where they lie upon even ground, or such as have only a gentle inclination, the surface of the ice is nearly uniform, the crevices being few and narrow, and the glacier being crossed by travellers- on foot without any diffi- culty. The surface of the ice is rough and gra- nulated, so that people may walk upon it, ex- cepting such places as have a steep descent. It is opaque, full of small bubbles about the size of a pea, very porous, and greatly resembles a mix- ture of snow and water congealed. A vast quan- tity of stones and earth falls down from the rriountains upon the glaciers, and are by thera thrown off on each side according to the descent of the ice. The place on which these rest is more hard and elevated than the rest of the ice, and is very difficult to walk upon ; the earth is likewise laid upon them in such regular heaps, that it appears to have been done by art. This collection of earth and stones is termed by the natives the moraine. Mr. Coxe, who visited the Glacier de Bois, informs us, that the appearance of it at a distance was so tremendous that it seemed impracticable to cross it. Numerous and broad chasms intersected it in every direc- tion ; but, entering upon it, the company found that courage and activity were only required to accomplish the task. They had large nails in their shoes, and spiked sticks , %vhich on this oc- casion were found t-o be particularly serviceable. Having passed the moraine, and descended upon the glacier itself, they found the ice softened by a warm wind which rendered it less slippery than usual. Having walked across it for about a quarter of an hour, they came again to the moraine, along which

they continued their journey for half an hour, and then entered upon the great body of the glacier. ‘ Here,’ says Mr. Coxe, ‘ it was curious to observe the numerous little rills pro- duced by the collection of drˆ-ps occasioned by the thawing of tlie ice on the upper part of the glacier : these little rills hollow out small chan- nels, and, torrent-like, precipitate themselves into the chasms with a violent noise, increasing the body of waters formed by the melting of the interior surface, and finding an outlet under the immense arch of ice in the valley of Chamounie, from which the Averon rushes.’ As our traveller proceeded on his journey, he was surprised by the noise of a large fragment of rock which had detached itself from one of the highest needles, and bounded from one precipice to another with great rapidity; but before it reached the plain it was almost reduced to dust. ‘ Having proceeded about an hour,’ says he, ‘ we were astonished with a view more magnificent tlian imagination can conceive : hitherto the glaciers had scarcely answered my expectations, but now they far sur- passed them. ‘Nature had clad herself in all her terrors. Before us was a valley of ice twenty miles in extent, bounded by a circular glacier of pure unbroken snow, named Takul, which leads directly to the foot of Mount Blanc, and is surrounded by large conical rocks, terminating in sharp points like the towers of an ancient for- tification; to the right rose ? range of magnifi- cent peaks, their intervals fiiled with glaciers ; and, far above the rest, the magnificent summit

of Mont Blanc, his; highest point obscured with clouds. He appeared of such immense magni- tude, that, at his presence, the circumjacent mountains, however gigantic, seemed to shrink before him, and hide their diminished heads. In half an hour we arrived at the moraine, which forms a boundary of the valley, crossed it, and proceeded upon a body of ice about three quar- ters of a mile broad. Here the ice was more even and free from chasms than in the great val- ley. We then passed a second moraine, and beyond that another mass of ice to a third moraine: descending thence we came upon the last ridge of ice, broader considerably than the two former, and full of large chasms : it is separated from the rock only by a very narrow moraine. These moraines contain great quan- tities of crystal.’ They continued to ascend the valley of ice, the scene constantly increasing in magnificence and’ horror: and, having walked about five miles on the ice, they arrived at last at the foot of the eminence named couvercle, where they were obliged to quit the ice. The doing this was extremely dangerous, and at one place very tremendous. It was a bulging smooth rock, xvith a precipice of considerable depth ter- minated by a vast crevice in the ice, which seemed to stop all further progress : a small hol- low in the middle, however, afforded room for one foot ; and, having fixed this, they sprung over to the other side, being helped and di- rected by the guides who went over first. Hav- ing gained the top of the couvercle, they had a view of

three of the glaciers, viz. that of Talefre to the left, I'Echaut in front, and Takul on the right; all uniting in that great one called the Glacier de Bois. The Couvercle itself is a most extraordinary rock, having the appearance of a large irregular building with many sides ; the substance of which is granite. Having reached the top, they were surprised with a thunder- storm, from which they took shelter under an impending rock. The view was exceedingly magnificent ; the glaciers appearing like a rugged expanse of frozen sea bounded by gigantic rocks, and terminated by Mont Blanc. A single rock appeared of a triangular figure covered with Alpine plants ; and which, by reason of its con- trast with the rugged and snowy mountains in the neighbourhood, has obtained the name of the Garden. During this, as well as other excur- sions among the Alps, Mr. Coxe had occasion to observe that the color of the sky was of a much deeper blue than in the lower regions.

The Upper Glaciers may be subdivided into those which cover the summits, and those which extend along the sides of the Alps. Those on the very summit, however, though they have the ap- pearance of ice, are not so in reality, but consist entirely of snow hardened by the extreme cold. M. Saussure found that which covered the top of Mont Blanc to be penetrable, though with dif- ficulty, by a stick ; but below this hard crust was a soft snow without coherence. The sides are covered with a mixture of ice and snow ; by rea- son of the superior power of the summer sun to dissolve the snow, which afterwards congeals into hard ice.

Mr. Coxe agrees with M. Gruner in opinion,

that flie glaciers are produced by the continual dissolution of the snow in summer, and its con- gelation by the succeeding frosts. Hence, on the summits of the mountains, where the sun has very little power, the glacier is soft, and contains no ice : as we descend the mountains, the con- sistence becomes tirmer, because there is a con- siderable mixture of snow-water, the congelation of which augments the hardness ; and in the val- leys the glacier is hardest of all, because the por- tion of water is there much superior to that of the snow. Hence it seems plain, that the glaciers derive their origin from the melting of the snow on the upper parts of the mountains, and the congelation of the water as it advances : and to this cause M. Saussure adds the quantity of snow which often rolls down into the valleys and con- geals along with the water.

Another question concerning the glaciers natu- rally occurs, namely.

Whether they are to be considered as in a state of increase or diminu tion ? Mr. Coxe is of opinion, that they occa- sionally increase and decrease : in proof of which he adduces the following observations. ‘ The borders of the glacier of Montanvert are mostly skirted with trees : towards its base a vast arch of ice rises to nearly 100 feet in height; under which the river Averon rushes with considerable force, and in a large body of water. As we ap- proached the ice, we passed through a wood of firs ; those trees which stand at a little distance from the arch are about eighty feet high, and are undoubtedly of a very great age. Between these and the glacier the trees are of a later growth ; as is evident from their texture and inferior size Others, still smaller, have been overturned and enveloped in the ice : there seems to be a kind of regular gradation in the age of these several trees, from the largest wliich are standing to the smallest that lie prostrate. Hence, our author concludes, that the glacier once extended as far as the row of small furs ; but that, upon its gra- dual dissolution, a number of trees shot up on the spot it had occupied ; since which time the ice has again advanced, and overturned the last grown trees before they had attained to any con- siderable height. This he thinks also contirmed by the following facts : large stones of granite are usually found at a small distance from the ex- tremities of the glacier. ‘ These stones have cer- tainly fallen from the mountains upon the ice ; have been carried on in its progress; and have tumbled into the plain upon the dissolution or sinking of the ice which supported them. These stones, which the natives call moraine, form a kind of border towards the foot of the valley ot ice, and have been pushed forward by the gla- cier in its advances: they extend even to the place occupied by the larger pines.’ In opposi tion to those who maintain that tliere is a con- stant accumulation of ice and snow in the Alpine regions, our author makes the following re- marks : 1. Between the years 177G and 1785 the glacier of Grindelevald had diminished to such a degree, that the spot which its extremity occu- pied ill t!ie former year was at least 400 paces from that occupied by it in the latter. 2. In 1785 the Murailles de Glace, which in 177G he had described as forming the border of the gla- cier of Bossnn, no longer existed ; and young

trees had shot up in the parts which were then covered by the glacier of Montanvert. Still, however, it may be urged, that these changes only take place in the valleys, where the power of the sun is considerable ; and that from thence we cannot form any adequate idea of what passes in the more elevated regions, where in all proba- bility more snow falls than can be dissolved. In support of this opinion, it is alleged that the cold produced by the mass of ice already formed must have augmented it still more; and that, within the memory of the present generation, many places have been covered with ice, which were not so before. To these arguments, however, Mr. Coxe replies, that the causes which di- minish the ice in the upper

regions are no less powerful than the cold which tends to augment it. These are, 1. Rain or sleet; which, falliijg upon the lower glaciers, thaw the ice, increase the rills on its surface, excavate channels, and in many ways tend to diminish its quantity. 2. Evaporation, which takes place even from the surface of the ice itself, acts still more power- fully ; and its action is not confined to any par- ticular season. 3. The falling of the snow and ice ; both that which comes gradually from the clouds, and which descends from the mountains in great masses, called by the natives avalanches. When these last fall down into milder regions, though sometimes they may resist the influence of the sun and form ice valleys, yet they gene- rally dissolve. They are most common in the upper glaciers, though sometimes they descend upon the lower, while the gradual descent of snow from the clouds, which chiefly takes place in the lower, contributes very much to lessen the mass. 4. All the lower glaciers or valleys of ice rest on an inclined plane, are hollow, and undermined by torreats which are constantly flowing from th# upper glaciers, as well as from their own lowermost surface. Their foundation being thus constantly diminishing, the lower gla- ciers are carried imperceptibly forward into the cultivated fields, where an end is necessarily put to their progress by the heat of the sun. Hence we may see the reason of that strange pheno- menon taken notice of by Mr. Coxe, that with one hand he could touch ripe corn, and with the other solid ice. This descent of the glacier is demonstrable from the trees overturned by it, and the moraine always observed at the bottom of the lower glaciers. 5. The heat of the sun is an evident cause of the diminution of the gla- ciers. To this Mr. Coxe adds another cause less generally known, viz. the warm winds which blow by night as well as by day, both in the upper and lower glaciers. ‘ These warm winds,’ says he, ‘ are during summer so common in those parts, that I never crossed a glacier with- out feeling in some particular positions a warmth similar to the air of a hot-bath.’ 6. Another cause is the mean temperature of the earth itself; which, where it is not exposed to the piercing cold of the atmosphere, is found to have a tem- perature always above the freezing point. As the vast thickness of the superincumbent ice, there- fore, is in the present case abundantly sufficient to prevent the access of the atmosphere, it is plain that the lower surface of it must, by being in cnntact with the earth, continually decay,

“With regard to the other argument drawn from the known increase of the ice in some places, Mr. Coxedoes not deny it; but insists that there is no continual increase of the whole, but tliat if it increases in soiTie places it

diminishes in others; and his opinion in this respect was confirmed by thob-e who frequent the mountains. We have seen no better account than Mr. Coxe's of these magnificent phenomena : but for more modern observations of travellers amongst iliem, see Alps ; Blanc, Mont ; and Europe, p. 673, Vol. VIII.

GLA'CIS, n. s. Fr. In fortification, a sloping bank. It is more especially taken for that which r'angeth from the parapet of the covered way to the level on the side of the field.

Glacis, Terrein, or Esplanade, a slope made of earth, and generally covered with sod or grass, which runs from the covert way of a forti- fied place, towards the country. See Fortifica- tion.

GLAD, flf/j. & i-. a. "1 Sax. jlaet); Goth., Glad'den, i;. a. Dan. and Swed. glad;

Glad'der, n. s. Tent, glatte ; from Lat.

Glad'fulness, n. s. littuH, 'Joy{\A ; or, says Glad'ly, adv. ˆMinsheu, a Greek

Glad'ness, n. s. I ayXaoq, c(arus,pulcher.

Glad'some, adj. \ Cheerful ; gay, ex-

Glad'somely, «(/t;. j pressive of delight and Glad'someness, M. S.J pleasure : its com- pounds are nearly obsolete.

Abraham youre fadiv gladide to se my day : and he saygh and joyede. WicUf. Jon. viii.

0 soden wo ! that ever art successour. To worldly bli.s ; sprcinl is with bitternesse The' ende of the joyo of our worldly labour : Wo occupieth the fyn of our gladnesae. Herken this conseil for thy sikernesse. Upon thy ylade day, have in thy minde Ihe unwary wo of harm that cometh behinde.

Chaucer. The Man of Lawes Tale. The turtil dove said : Welcom, welcom, May I Gladsom and light to lovers thˆit ben trewe.

Id. The Court of Love, — Art thou like an asse unto the harpe That heareth soun, whan men the stringes ply ; But in his mind, of that no melodie Maic sinkcn him to gladin ; for that he So dull is in his bcstialitc.

/(/. Troilus and Creseide.

And there liim rests in riotous suflisance Of ail his gladfalness, and kingly

joyance.

Spenser. The highest angels to and fro descend. From highest heaven in gladsome company.

Id. Faerie Queene.

I am glad to see your worship.

Shakspcare. He hath an uncie m Mcsisia will be very much glad of it. Id.

For his particular I'll receive him gladly ; But not one follower. Id. King Lear.

He saw rich nectar-thaws release the rigour Of the' icy Korth ; from frost-bound Atlas' hands

His adamantine fetters fall : green vigour Gladding the Scythian rocks, and Lybian sands.

Crashaw. Then first adorned With their bright luminaries, that set and rose Glad Evening and glad Morn crjwncd the fourth day.

Milton. Glad wc returned up to the coast:i of light. LI.

The wily adder blithe and glad. Id.

Thither they Hasted with glad precipitance. Id.

He glad Of her attention, gained with serpent tongue. His fraudulent temptation thus began. Id.

Her conversation More glad to me thin to a miser money is.

Sidney. It glads me To see so many virtues thus united, To restore justice and dethrone oopression.

Oiway. The gladsome ghosts in circling troops attend. And with unwearied eyes behold their friend.

Drgden. The gaping wound gushed out a crimson flood ; The Trojan, glad with sight of hostile blood. His faulchion drew. Id. JEneid.

If he be my enemy, let him triumph ; if he be uiy friend, he will be ˆZad of my repentance. liryden. Thou gladder of the mount of Cytheron, Have pity, goddess. Id,

By such degrees the spreading gladnets grew In every heart, which fear had fro^e, before :

The standing streets with so much joy they view. That with less grief the perished they deplore. Id.

I would be glad to learn from those who pronounce that the human soul always thinks, how they know it.

Locke. Oh, he was all made up of love and charms 1 Delight of every eye I When he appeared, A secret pleasure gladdened all that saw him.

Addison. Each morn they waked me with a sprightly lay ; Of opening heaven they sung and gladsome day.

Prior. Hark 1 a glad voice the lonely desert cheers : Prepare the way, a God, a God appears 1 Pope. Each drinks the juice that glads the heart of man.

Id. Glad of a quarrel strait I clap the door. Id.

If justice Philips' costive head Some frigid rhymes disburses.

They shall like Persian tales be read, AnJ glad both babes and nurses. Swift.

You are going to set us right ; and 'tis an advan- tage every body will gladly see you engross the glory of. Blount to Pope.

Liberal not lavish is kind nature's hand.

Nor was perfection made for man below, Yet all her schemes with nicest art are planned, Good counteracting ill and gladness woe.

Beattie. A populous solitude of bees and birds. And fairy formed and many-coloured things, Who worship him with notes more sweet than words. And innocently open their glad wings. Fearless and full of life. Byron. Childe Harold.

GLADE, n. s. From jlopan to be hot, or to shine ; whence the Danisli glod, and the obsolete English gleed, a red hot coal. A lawn or open- ing in a wood. — Lucus. It is taken for an ave- nue through a wood, whether open or shaded, and has therefore epithets of opposite meaning.

So flamed his eyen,with rage and rancorous ire ; But far within, as in a hollow glade. Those glurlng lamps were set, that made a dreadful shade. Spenser.

Oft in glimmering bowers and glades He met her, and iu secret shades Of woody Ida's inmost grove Whilst yet there was no fear of Jove. Miltun,

GLADIATORS.

*90.'^*

0 might I here In soliiude live savago, in some glade Obscured, where highest woods, impenetrable To star or sun-light, spread their umbrage broad. And brown as evening Id. Paradise Lost.

For noonday's heat are closer arbours made. And for fresh evening air the opener glade.

Dri/dcn. ily t^e heroes armed shades Glittering through the gloomy glades ; By the youths that died for love. Wandering in the myrtle grove. Restore, restore Eurydico to life '. Oh I take the husband, or restoi-e the wife !

Pope. There interspersed iu lawns and opening glades ; Thin trees arise that shun each other's shades. /(/.

Who uov/, alas ! shall teach my humble vein. That never yet durst peep from covert glade ; But softly h-arnt for fear tn sigh and plain. And vent his griefs to silent myrtle's shade ?

Fletcher's Purple Island. She smiled, arrayed With all the charms of sunshine, stream, and glade. New drest and blooming as a bridal maid. Harte.

GLA'DEN, /i. s. J ¥r.gladiutcur;'L?Ltgla- Gla'deRjK. s. ydius. The first two aiC GLAniA'TOR, n. S.J n general name given to

plants t}iat rise with a broad i)lade like sedge ;

.swordgrass. The latter is a sword-player, or

prize-fighter.

Hero Amphitritc sails through myrtle bowers, There gladiators fight or die iu flowcr.i. Pope.

Glauiaiors, in antiquity, were persons who fought, generally in tlie arena at Ronae, for the entertainment of the people. They were usually slaves, and fought out cf necessity ; though some- times freemen adopted the profession, like our prize-fighters, for a livelihood. The Romans borrowed this cruel diversion from the Asiatics ; some suppose out of policy, the frequent com- bats of gladiators tending to accustom the people to despise

gangers and death.

From the earliest times with which we have any acquaintance in profane history, it had been tlie custom to sacrifice captives, or prisoners of war, to the manes of the great rnen who had died m the engagenient ; thus Achilles, in the Iliad, lib. xxiii., sacrifices twelve young Trojans to the manes of Patroclus ; and in Virgil, lib. xi. ver. 81, yEneas sends captives to Evandcr, to be sacri- ficed at the funeral of his son Pallas. In course of time they came also to sacrifice slaves at the funerals of all persons of condition : this was even esteemed a necessary part of the ceremony ; but, as it would have appeared barbarous to have massacred tliem like beasts, they were appointed to figlit with each other, and endeavoured to save their own lives by killing their adversary. Tliis seemed somewhat less inhuman, because there was a possibility of avoiding death, by an exertion of skill and courage. Tliis occasioned the pro- fession of gladiator to become an art ; hence arose masters of the art, and men learned to fight and exercise it. These masters, whom the Latins called Lanista.', bought young slaves to be trained up to this cruel trade, whom they afterwards sold to svich as had occasion to present the people with so horrible a show. These exhibitions were at first performed near the sepulchie of tlie de-

ceased, or about the funeral pile; but were after- wards removed to the circus and amphitheatres, ^-and became ordinary amusements. The first sliow of gladiators, called munus gladiatorura, was exhibited at Rome, according to Valerius Maximus, by M. and D. Brutus, upon the death of their father, A.U. C. 490. On this occasion there were probably only three pairs of gladiators. In 537, the three sons of M. yUmilius Lepidus the augur, who had been three times consul, en- tertained the people with the cruel pleasure o5 seeing twenty-two gladiators fight in the forum. In 547 Scipio Africanus diverted his army at New Carthage with a show of gladiators ; which he exhibited in honor of feis father and uncle, who had begun the reduction of Spain. In pro- cess of time the Romans became so fond of these bloody entertainments, that not only the heir of any great and rich citizen lately deceased, but all the principal magistrates, presented the people with shows of this nature, to acquire popularity. The tediles, praetors, consuls, and, above all, the candidates for offices, made their court to the people, by entertaining them frequently with these fights; and the priests were sometimes the exhibitors of the barbarous shows. Suetonius mentions the ludi pontificales, August, cap. 44, and Pliny, the ludi sacerdotales, Epist. lib. vii. As for the emperors, to ingratiate themselves with the populace, they humored them with combats of gladiators almost upon all occasions ; and, as these increased, the number of comba- tants increased likewise. Accordingly, Julius Caesar, in his aedileship, diverted the people witli 320 couple. Even Titus Vespasian exhibited a show of gladiators, wild beasts, and representa- tions of sea-fights, which lasted

100 days; and Trajan continued a solemnity of this nature for 123 days; during which time he brought out 1000 pairs of gladiators. Before this time, under the republio, the number of gladiators was so great, that when the conspiracy of Catiline broke out, the senate ordered them to be dispersed into the garrisons and secured, lest they should have joined the disaffected party.

These sports were become so corˆmon, and tlieir consequences in a variety of respects so dangerous, that Cicero preferred a law, that no person should exibit a show of gladiators within two years before he appeared candidate for any office. Julius Ca;sar ordered that only a certain number of men of this profession should be in Home at a time. Augustus decreed that only two sliows of gladiators should be presented iu a year, and never above sixty couple of combatants in a show ; and Tiberius provided, by an order of senate, that no person should iiave the privilege of gratifying the people with such a solemnity, unless he was worth 400,000 sesterces. They were also considerably regulated by Nerva. Claudius restrained them to certain occasions; but he soon after annulled his decree, and private persons began to exhibit them at pleasure as usual. Some carried the brutal satisfaction so far as to have them at their ordinary feasts. And not slaves only, but other persons, would hise themselves to this infamims office. The master of the gladiators made them all first swear that they would fight to death ; and, if they fuilerl,

ihey were put to deatli, either by fire, or swords, clubs, whips, or the like. It was a crime for the wretches to complain when they were wounded, or to ask for death, or seek to avoid it when over- come ; but it was usual for the emperor to grant them life when they gave no signs of fear, but waHed the fatal stroke with courage and intre- pidity. Augustus even decreed that it should always be granted them. From slaves and freed- men the inhuman sport at length spread to peo- ple of rank and condition ; so that Augustus was obliged to issue a public edict that none of the senatorian order should become gladiators ; and soon after he laid the same restraint on the knights : nevertheless, Nero is said to have brought upwards of 400 senators, and 600 Roman knights, upon the arena; though Lipsius takes both these numbers to be falsified, and reduces them to forty senators and sixty knights : yet Domitian, that other monster of cruelty, refined upon Nero, exhibiting combats of women in the night-time. Constantine the Great is said to have first prohibited the combats of gladiators in the east. At least he forbad those who were con- demned to death for their crimes to be employed; there being an order still extant to the praefectus prtetorii, rather

to send them to work in the mines, dated at Berytus, in Phccnicia, the 1st of October 325. Honorius forbad them at Rome on occasion of the death of Telemachus, who, coming out of the east into Rome at the time of one of these spectacles, went down into the arena, and used all his endeavours to prevent the gladia- tors from continuing the sport ; upon which the spectators of that carnage, fired with anger, stoned him to death. The practice was not, however, totally abolished in the west, before Theodoric, king of the Ostrogoths, put a stop to it entirely, A.U. 500.

Some time before the day of combat, the per- son who presented the people with the shows gave them notice thereof by programmas or bills, containing the names of the gladiators, and the marks whereby they were to be distinguished ; for each had his several badge ; which was most commonly a peacock's feather, as appears from the scholiast of Juvenal on the 158th verse of the 3d satire, and Turnebus Advers. lib. ii. cap. 8. They also gave notice how long the shows would last, and how many couples of gladiators there were; and, it appears, from the 52nd verse of the 7th satire of the 2nd book of Horace, that they sometimes made representations of these things in painting, as is practised among us by those who have any thing to show at fairs. The day being come, they began the entertainment by bringing two kinds of weapons; the first were staves or wooden files, called rudes; and the second were effective weapons, as swords, poniards, &c. The first were called arma lusoria, or exercitoria; the second decretoria, as being given by decree or sentence of the praetor, or of him at whose expense the spectacle was exhibited. They began to fence or skirmish with the first, which was to be the prelude to the battle ; and, from these, when well warmed, at the sound of the trumpets they advanced to the second, with which they fought naked. Then they were said vertere arma. The terms of striking were petere

etrepetere; of avoiding a blow, exire; and, when one of the combatants received a remarkable wound, his adversary or the people cried out, habet, or hoc habet. The first part of the en- gagement was called ventilare, praeludere ; and the second, dimicare ad certum, or versis armis pugnare : and some authors think, with much probability, that it is to these two kinds of com- bat that St. Paul alludes iu the passage, 1 Cor. ix. 26, 27. ' I fight, not as one that beateth the air ; but I keep my body under, and bring it into subjection.' If the vanquished surrendered his arms, it was not in the victor's power to grant him life. The people during the time of the re- public, and the prince or people during the time of the empire, were alone empowered to grant it. The reward of the conqueror was a branch of palmtree, and a sum of money, probably collected among the spectators : sometimes they gave him his conge, or dismissed liim by putting one of the wooden files or rudes in his hand ; and some- times tiiey even gave him his freedom, putting the pileus on his head. The sign or indication, whereby the

spectators showed that they granted the favor, was premere pollicem, which M. Da- cier takes to be a clenching of the fingers of both hands between one another, and so holding tlie two thumbs upright close together ; and, when they would have the combat finished, and the vanquished slain, verterunt pollicem, they bent back the thumb ; which we learn from Juvenal, Sat. iii. ver. 36. The gladiaiors challenged or defied each other, by showing the little finger ; and, by extending this, or some other, during the combat, they owned themselves vanquished, and begged mercy from the people : ' \ˆicti ostensam digiti veniam a populo postulabant,' says the old sc holiast on Persius.

There were various kinds of gladiators, dis- tinguished by their weapons, manner, and time of fighting, &c.; as, the andabata?, mentioned under Andabat.e: the catervarii, who always fought in troops or companies, number against number ; or, according to others, who fought promiscuously, without any certain order : the dimachffi, who fought armed with two poniards or swords, or with sword and dagger : the esse- darii, who fought in cars ; the fiscales, or Caesari- ani, who belonged to the emperor's company ; and who, being more robust and dexterous than the rest, were frequently called for ; and therefore named also postulatitii. Several other kinds are mentioned in the ancient authors.

Gladiators', War (bellum Gladiatorium, or Spartacum) called also the servile war, was a war which the Romans sustained about A. U.C. 680. Spartacus, Crinus, and Oenomaus, having escaped with other gladiators to the number of seventy- four, out of the place where they had been kept at Capua, gathered together a body of slaves, put themselves at their head, rendered themselves masters of all Campania, and gained several vic- tories over the Roman prnetors. At length they were defeated in 682, at the extremity of Italy ; having, in vain, attempted to pass over into Sicily. This war proved very formidable to the Romans. Cassius was not able to finish it : Pompey the Great was forced to be sent as general.

Gladiator, the Dying, a most valuable

monument of ancient sculpture, long preserved in the palace of Chigi, but carried to Paris with the Laocoon, &c., in 1796. This gladiator, after having received the mortal stroke, appears par- ticularly careful ut procumbat honeste, ' tljat he might fall honorably. He is seated in a reclin- ing posture on the ground, and seems to have just strength sufficient to support himself on his right arm ; and in his expiring moments he does not

abandon himself to grief and dejection ; but is solicitous to maintain that firmness of aspect and attitude which the gladiators valued theiu- selves on preserving in this last scene of distress. He betrays no tokens of fear by his countenance, nor sheds one tear. ‘ Quis mediocris gladiator ingemuit, quis vultum mutavit unquam ? Quis nou modo stetit, verum etiam decubuit turpiter V says Cicero, in that part of his Tusculan where he is describing the astonishing firmness of those persons. He appears, notwithstanding his re- maining strength, to have but a few moments to live. Thus the ancients knew how to animate marble, and to give it almost every expression of life.

GLADIOLUS, corn-flag, a genus of the mono- gynia order, and triandria class of plants; natural order sixth, ensatse : cor. sexpartite, and ringent ; the stamina ascending and bending upwards. There are fifty-two species, of which the best known is, G. communis, the common gladiolus. It has a round, compressed, tuberous root ; long sword- shaped leaves ; an erect flower-stalk, two or three feet high ; the top garnished with several pretty large flowers of a red or white Color, having each six petals. They appear in May and June, and are succeeded by plenty of seed in August. The plants are very hardy, and will thrive in any soil or situation. They are propagated by offsets from the roots.

GLAIRE, n. s. Sc v. a. Sax. slpeji, amber; Dan. glar, glass ; Fr. glaire ; Lat. glarea. The white of an egg; to smear with the white of an egg ; a kind of halbert.

Unslekked lime, chalk, and gleire of an eg.

Chaucer, The Chanones Yemaun’s Tale,

GLAMORGANSHIRE, a beautiful county of South Wales, received its name from a contrac- tion of the Welsh words Gwald Morgan, or the county of Morgan, and is supposed to have been so called from a prince of this part of the country said to have been killed 800 years before the birth of our Saviour; but some writers derive its name from the word mor, which in Welsh signifies the sea, this being a maritime county. It is bounded on the south and part of the west by the Bristol Channel ; on the north-west by Caermarthenshire ; on the north by Brecknock- shire ; and on the east by Monmouthshire ; ex- tending forty-eight miles in length from east to west, twenty-seven in breadth from north to south, and 116 in circumference.

The air in the southern part of Glamorganshire towards the sea is temperate and healthfiil ; but the northern part,, which is mountainous, is cold and piercing, full of thick woods, extremely barren, and thin of inhabitants ; but the moun- tains serve to feed herds of cattle, and send forth streams which add greatly to the fertility of the

other parts of tlie county. Indeed, between the mountains there are some fertile valleys, which aflTord good pasturage ; for the level parts, being more capable of cultivation, produce remarkably sweet grass, and pretty large crops of corn. The principal rivers are the Rhymney, the Taft', the Ogmore, the Avon, the Neath, and the Tavey. The Lower Tafl" rises in the mountains which separate Glamorganshire from Brecknockshire, and traversing a wild district towards the south soon becomes immersed in the coal and copper works with which the vicinage of Swansea abounds, and attended by parallel canals passes through their sulphureous regions to the biisy town of Swansea, where it falls into the Glamorganshire Bog. Were it not for the prevalence of these works, and the atmosphere tiiey create, the val- ley formed by this river would be pleasant, as the hills which encircle it are bold, and not un- adorned with wood. An arid sterility, however, marks many of the heights near the copper works, disrobing them of their verdure, and con- trasts disagreeably the black soil and aspect of the collieries, combining with them to involve the whole surrounding country in volumes of smoke. The Neath is a much more considerable river than the Tavey, finding its origin in the same range of mountains, but somewhat to the eastward : descending from these, with great rapidity, it forms at last a deep valley, through which it pursues its course southward, inclining a little to the west to Neath, where it meets the tide, and after several curves in the marsh below that town, falls into the centre of the Swansea. The rapid increase of this stream from a cataract to a rivulet, and from a rivulet to a river, as it de- scends from its mountainous source, is much admired. At Pont-Neath-Vaughan it receives several tributary streams, each of which is adorned with highly romantic glens, intermixed with rock and fringed with brush-wood. It then pervades a valley abounding in rich woods and overhang- ing groves, which, as it widens, presents a canal and its attendant works parallel with the course of the river. The lawns, plantations, and fine buildings of the Gnoll appear next, proudly overlooking the numerous forges and collieries of Neath ; a broad marsh succeeds, after which the entrance of the Neath into the fine bay of Glamorgan is graced with the groves encircling the beautiful territory of Briton Ferry, and the more distant summit of the high hill of Margam, co- vered with oaks from its base to its summit. The Avon, the Ogmore, and the Ewenny, are three small rivers pervading the vale of Glamor- gan, and each falling successively into the great bay formed by the coast of that county. Nei- ther of these is attended with any peculiar features, except the collieries and copper-works which encircle the exit of the Avon, a little below the fine park of Margan, and the town of Bridgend, on the Ogmore, which rises in a small lake among tiie mountains, and is soon joined by the I.lanvy. The Ewenny meets these united streams at last, and each river pursues a line but little deviating from the south in its short course. The Taafle boasts the same mountainous origin with the rest of the

Glamorganshire rivers, but is generally larger and more beautiful than the

ethers ; it inclines throughoul to the soutli-east, forming in its passage a great variety of curves. The more inconsiderable rivers of this county are the Elag, the Ilepsey, the Melta, the Traw- gath, the Dulishe, and the Turch.

Glamorganshire has but one mineral spring, 1. e. at Swansea. This has an acid styptic taste like alum, though the predominant salt is a mar- tial vitriol. It turns blue with vinegar, and will not curdle with milk. A gallon of this wˆter yields forty grains of sediment of a brown color, which will ferment with spirit of hartshorn and oil of tartar. At Newton, north-west of the mouth of the Ogtnore, is a very remarkable spring about eighteen feet in circumference, the water of which sinks at high tide nearly to the bottom, and at the ebbing of the sea it rises al- most to the brim. In order to account for this phenomenon, it has been supposed that at high water the air in the veins of the spring, by its being pent up, not being at liberty to circulate, the water is prevented from issuing out ; but when the sea retires from the shore, and frees these natural aqueducts from these obstructions, the water is at liberty to issue through them.

Another curiosity of this county is in a pro- montory near Penrice, the mostwesterly point of Glamorganshire, called Warmshead-point ; it runs about a mile into the sea, and at half-flood the isthmus, which joins it to the main land, is overflown, so that it is rendered a small island. IN ear the extremity of this point is a cleft or cre- vice in the ground, into which if dust or sand be thrown, it will be blown back again into the air ; and if a person applies his ear to the crevice, he will plainly hear a deep noise like the blowing of a large pair of bellows. These phenomena are attributed to the undulatory motion of the sea under the arched and rocky hollow of the promontory, which occasions an alternate inspi- ration and expiration of the air through the cleft.

The roads over the mountains are excessively steep, and strewed with stones of various sizes, detached from the rocks by the winter rains. The lower road from Caerdiff" through the county is good. Thence to Cowbridge and Margan the distance is divided by mile-stones. There is no where perhaps south of the Tweed a greater air of rudeness than among the inhabitants of the Glamorganshire mountains ; being constantly employed in the coal, iron, and copper works, they are almost naked, excessively dirty, and even their long straight hair hanging about their tawny faces. The women outdo the men in hard labor. Their huts are like their stone

fences, confusedly piled up, and locked together without cement or earth.

The various rivers rising in the northern parts of this county, expanding so as to form a middle district tolerably fit for cultivation, are well clotliedwith wood, terminating in the great level or vale of Glamorgan. This tract, extending along the sea-coast to eight or ten miles inland, is rich in corn and pasture, and well stored with treasures of coals, lead, iron, and limestone. The sea-shores are delightful, having a level sand beach and romantic cliff's mostly of marie. Cas- tles are planted thickly along the coast and in Gowerland ; the former to secure the Norman,

the latter the English conquests. Gower is the peniiisulated extremity of the county beyond Swansea. In 1099 Henry Beaumont came into this district against the sons of Caradoc ap Jisstin, and won from them large portions of Iheir ter- ritories. He built the towns of Swansea, Lloug- hor, Llanridian, and Penrice; the last was erected where Rhys the son of Caradoc ap Jestin was slain. In this manner he fortified himself, exer- cising intolerable oppressions.

The inhabitants of this peninsula were pro- bably the same people, whether Flemings oi English, as those who had settled in Pembroke- shire. The language from a very remote period was English, and their communication with the Vvelsh continues reserved and jealous. A strik- ing resemblance exists between Gower and the liundred of Castle]\Iartin in Pembrokeshire, in its peninsular form, its exposure, soil, climate, sea-coasts, and inhabitants. In each of these districts, the soil is chiefly upon the same kind of limestone, similar in quality and fertility, backed to the north by rich veins of coal. The buildings indeed are more neat and clean than those of Castle Martin, which exceeds Gower in the number of gentlemen's seats and well-built churches. There are more orchards and more wood in Gower. Tlie west part of each is nearly destitute of wood. Loughor Bay is greatly in- ferior to Milford Haven, as a harbour, from admitting by a wider entrance a raging sea, es- pecially during the prevalence of south-west winds. In both counties barley-biead is chiefly eaten, though they have wheat of the best quality.

The sea cliffs of both districts are grand, fre- quented by elegugs and some uncommon birds; and the lespective coasts abound with plenty of fish, particularly oysters, lobsters, birt, turbot, and soles. The houses are more generally white- washed in Gower. In Castle Martin there are many mud-built houses ; in Gower none. Tiie women wear whittles in both counties. In Gower most of the lands are held by that kind of copy- hold tenure called Borough English. They are mostly, if not all, freeholders in Castle Martin. This county is stated to contain 422,400 acres of land, of which 305,000 are in a state of cultivation, viz. 43,000 as arable, and 262,000 in

pasturage. It is divided into ten hundreds, viz. Caerphilly, Cowbridge, Danis Powis, Kibbor, Llangewelach, Miskin, Neath, Newcastle, Ogmore, and Swan- sea, comprising 118 parishes, one city (Landaff"), one borough (Cardiff), and four other market- towns (Cowbridge, Neath, Penrice, and Swansea).

The noithern and middle parts of Glamor- ganshire comprise a portion of that great mine- ral tract which begins at Ponty^iool in Mon- mouthshire, and terminates at St. Bride's Bay in Pembrokeshire. The exterior stratum or boun- dary is, as we have said, a bed of limestone, within which are contained all the strata of the other minerals in the following order : — On the north side of a line, drawn from east to west through the middle of the district, all the strata rise gradually to the north, and on ihe south side of the same line they rise to the south till they come to the surface, except at the east end, where they rise to the eastward. In the centre of this

tract the iron and coal mines in tl)e vicinity of Myrthyr-Tydvil are both the richest and most abundant. The whole of the coal is at the depth of 440 feet beneath the surface of the ground, '.vhich is composed of argillaceous strata, with occasional veins of hard rock. The coal is about fifty-two feet deep, the thickntss of the veins varying from twelve inches to nine feet in thick- ness. The iron-stone lies under the stone for about 108 feet, and is separated by argillaceous earth and stone into eighteen different veins, each about four feet ten inches in thickness. VVhen this ore is smelted, it yields iron to the amount of three-tenths of the weight of the ore. The largest and most famous are those near the re- cently built town of Myrthyr-Tydvil, which, within a few years, lias grown up from an obscure village to contain a population of 22,000 ; in 1832 it obtained the privilege of sending a mem- ber to parliament. There are seventeen blast- furnaces near this place, each of wiiich can make from 50 to 100 tons of iron weekly. The most extensive of the works, that of Cyfartha, belong- ing to Messrs. Crawshay and company, produce annually 11,000 tons of pig-iron, and 12,000 tons of bar-iron.

The manufactory of what are called tin plates, is next in importance : the cheapness of iron and coal causing the tin of Cornwall to be sent here, and spread over those iron plates, %vhich are afterwards to be found in all parts of the world. Tims also the copper ore from Corn- wall, from North Wales, and from Ireland, is attracted to Glamorganshire by the cheapness

of coal ; and is smelted in the extensive works of Aberavon, Neath, and Swansea, wlience it is forwarded by water-carriage to the places where it receives its final destination or consumption. There are also some extensive manufactories of earthenware, salt, soap, and woollen cloths in ditlerent parts of the county.

The most considerable export from this county is coals from the ports of Swansea and Neath. At the former, tlie facility of loading vessels is so great, that ships of 300 tons enter witli one tide, and are loaded and enabled to sail some- times the next ; but usually with the next tide but one. About 300,000 tons are exported an- nually. Glamorgan sends five members to par- liament.

GLAMOUR, or Glamer, an oil term of po- pular superstition in Scotland, denoting a kind of magical mist believed to be raised by sorcerers, and wliicii deluded their spectators with visions oi things which had no real existence, altered the appearance of those which ready did exist, &c.

GLANCE, n. s., v. n. &. v. a. } Goth, ylans ;

Glanc'inolv, udv. S Germ, f/lantz,

to glitter; or from To Glott, which see. A sud- den ray of light : to shoot as a ray ; to fly off or strike obliquely ; to view with a quick cast of the eye ; to move nimbly ; to censure by oblique hint) : transiently.

He double blows about him fiercely laid, Tliat glancing tire out of the iron played, As sparkles from the anvil use. When heavy hammers on the wedge are swayed.

Vol. X.

How can'st thou thus, for shame, Titania, Glance at my credit with Hippolita, Knowing I know thy love to Theseus ?

Shakspeare, He has a little galled me, I confess ; But as the jest did glance away from me, 'Tis ten to one it maimed you two outright.

Id. Glancing an eye of pity on his losses. Enough to press a royal merchant down. Id. Some men glance and dart at others, bj' justifying themselves by negatives ; as to say, this I do no:.

Bacon. The aspects which procure love are not gazings, but sudden glances and dartings of the eye. Id,

0' the' sudden up they rise and dance. Then sit again, and sigh and glance ;

Then dance again and kiss. Suckling.

r ; Richard Hawkins hath done something in this kind, but brokingly and glancingly , intending chiefly a discourse of his own voyage. Hakewill,

His offering soon propitious fire from heaven Consumed with nimble glance, and grateful steam. The other's not ; for his was not sincere. Milton. There are of those sort of beauties which last but for a moment ; some particularity of a violent passion, some graceful action, a smile, a glance of an eye, a disdainful look, and a look of gravity. Drydtn.

When through the gloom the glancing lightnings

fiy.

Heavy the rattling thunders roll on high. Rowe.

I have never glanced upon the late designed pro- cession of his holiness and his attendants, notwith- standing it might have afforded matter to many ludi- crous speculations. Addison.

Mighty dulness crowned. Shall take through Grub-street her triumphant round. And her Parnassus glancing o'er at once. Behold a hundred sons, and each a dunce. Pope.

Through Paris' shield the forceful weapon went. His corslet pierces, and his garment rends. And glancing downwards near his flank descends.

Id. He had written verses wherein he glanced at » cer- tain reverend doctor, famous for dulness. Swift.

The ample mind takes a survey of several objects v.ith one glance. Watts on the Mind.

Boldly she looked, like one of high degree j Yet never seemed to cast a glance on me; At which I inly joyed, for truth to say, I felt an unknown awe, and some dismay.

Harte, To trim the ringlets of his scented hair, To aim insidious Love's bewitching ˆ/ance. Or cuU fresh garlands for the gaudy fair. Or wanton loose in the voluptuous dance.

Beattie. Ours to the glance, none saw beside. The smile none else might understand,

The whispered thoughts of hearts allied. The pressure of the thrilling hand. Byron.

Match mc those Hourics, whom ye scarce allow 'I'o taste the gale lest Love should ride the wmd. With Spain's dark-f/Zanciri/ daughters — deign to*

know. There your wise Prophet's Paradise we 6nd, Ilis black-eyed maids of Heaven, angelically kind. Id. Childe Harold.

OL.\ND, w. 5. ˆ Yv. gkmd, glandule ;

(Jland'kus, n. .T. I Lat. glana and glan-

Glan dig'erol'S, adj. \ duUi : Fr. glanduleux ; Glan'dule, n. s. \ lˆi. glandulosus. Lˆsed

Gi.ANDi'LOb'iTY, n. s. j also in composition Glak'uvlols, adj. J with Lat.Jcro. Organs

GLA

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GLA

for secreting fluids in the human body. Hence applied to the secretions themselves when di-s- eased ; that whidi bears acorns or fruit like acorns, from supposed resemblance in shape to a gland.

His horse is possessed with the glanders, and like to niose in the chine.

Slia/ispeare. Taming of the Shrew.

In the upper parts of worms are found certain white and oval ylandulosities. Browne's Vulgar Errours.

Tlie beaver's bags are no testicles, or parts official unto generation, but glandidcnis substances that hold the nature of emunctories. Id.

Nature hath provided several glandules to separate this juice from the blood, and no less than four pair of channels to convey it into the mouth, which are called ductus saiivales. Ray.

The beech is of two sorts, and numbered amongst the glandiferous trees. Mortimer's Husbandry.

All the glands of a human body are reduced to two sorts, viz. conglobate and conglomerate. A conglobate gland ij a little smooth body, wrapt up in a fine skin, by which it is separated from all the other parts, only admitting an artery and nerve to pass in, and giving way to a vein and excretory

canal to come out : of this sort are the glands in the brain, the labial glands, and testes. A conglomerate gland is composed of many little conglobate glands, all tied together, and wrapt up in the common tunicle or membrane.

Quincy. The glands, which o'er the body spread. Fine complicated clues of nervous thxead, Involved and twisted with the' arterial duct. The rapid motion of the blood obstruct.

Blackmore.

Such constitutions must be subject to glandulous tumours, and ruptures of the lymphaticks

Arluthnoi.

The ahscess begun deep in the body of the glands,

Wiseman.

Glands. See Anatomy, Index.

Glanders, a disease in the horse, so termed, probably, from the swelling with which it is usually accompanied, of the sub-maxillary glands. It consists of an altered and vitiated action of the vessels which, in a state of health, secrete the mucus covering the pituitary mem- brane, or that membrane which lines the cavity of the nostrils.

The marks of glanders are a discharge of pu- rulent matter from ulcers situated in one or both nostrils, more often from the left than the right. This discharge soon becomes glairy, thick, and white-of-egg-like : it afterwards shows bloody Streaks, and is foetid. The glands of the jaw of the affected side, called the kernels, swell from an absorption of the virus or poison, and as they exist or do not exist, or as they adhere to the bone or are detached from it, so some prognosis is vainly attempted by farriers, with regard to the disease ; for in some few cases these glands are not at all affected, and in a great many they are not bound down by the affection to the jaw. As there are many diseases which excite a secretion of matter from the nose, and \\\th. is kept up a considerable time; so it is not always easy to detect glanders in its early stages. Strangles and violent colds keep up a discharge from the nos- trils for weeks sometimes. In such cases a cri- terion may be drawn from the existence of ulce- ration within the nose, whenever the disease has

become confirmed. These glanderous chancres are to be seen on opening the nostril a little way up the cavity, sometimes immediately opposed to the

openmgofthe nostril: but a solitary chan- cre should not determine the judgment. The health often continues good, and sometimes the condition also, until hectic takes place from ab- sorption, and the lungs participate, when death soon closes the scene.

The glanders is the opprobrium medicorum, for hitherto no attempts have succeeded in the cure of more than a few cases. By some pecu- liar anomaly in the constitution of the horse, al- though conclusive proofs are not wanting that this and farcy are modifications of one disease, and can each generate the other; yet the one is incurable, while the other is cured every day. When glanders has been cured, the time and labor necessary to accomplish the end has swallowed up the value of the horse ; and has also, in many supposed instances of cure, left the animal liable to future attacks which have occurred. The ex- periments on glanders, pursued at the Veterinary College and by White of Exeter, have thrown great light on the disease itself, its causes, connex- ions, and consequences; but have done little more. From these we are led to conclude that glanders will produce farcy, and that farcy can produce glanders ; that glanders is highly in- fectious, and that such infection may be received by the stomach, or by the skin when it is at all abraded or sore : and it is also probable that it is received by the noses of horses being rubbed against each other. White's experiments go to prove that the air of a glandered stable is not infectious ; but this matter ;s by no means certain, and should not be depended on without a greater body of evidence.

The cure, it has already been stated, is so un- certain that it is hardly worth the attempt ; how- ever, when the extreme value of the horse or the love of experiment leads to it, it may be regarded as fixed by experience, that nothing but a long course of internal remedies, drawn from the mi- neral acids, can effect it. These have all been tried in their endless variety. White recommends the mildest preparations of mercury, as aethiops mineral ; under the conviction that tlie more acrid preparations disturb the powers of the con- stitution so much, as to destroy as effectually as the disease. At the 'eterinary College the sul- phate of copper (blue vitriol) has been long in use- Others have used the sulphates of iron and zinc. Clark recommends the daily administra- tion of a drink or ball, composed of the following ingredients : sulphate of zinc fifteen grains, pow- dered cantharides seven grains, powered allspice fifteen grains ; of which he gives one or two ex- traordinary proofs of utility. All glandered horses in the army are ordered to be shot.

GLANDEVES, a town of Fi-ance, in the de- partment of the Lower Alps, formerly flourish- ing but now almost deserted, on account of the overflowing of the Var.

GLANDORE, a town of Ireland, in Cork, with an excellent harbour, three miles west o Ross, and six west of Galley Head. Between this harbour and Rass, the coast is high and bold with only two small coves : viz. Mellcove ou the

east and Cowcove on the west. Near the har- bour is a castle ; and on tlie upper end a deep and dangerous glen, called the Leap. Long. 8” 56′ W., lat. 31° 22′ N.*

GLANDORP (Matthias), M.D, a learned physician, born in 1395, at Cologne, in which town his father was a surgeon. After taking his degree at Padua, and visiting the principal towns of Italy, he settled at Bremen in 1618, where he practised physic and surgery with success, and was made physician to the republic and ti< the archbishop. He published at Bremen, 1. Spe- culum chirurgorum, in 1619. 2. Methodus rnedendse paronych;OE, in 1623. 3. Tractatus de polypo narium affectu gravissimo, in 1628; and, 4. Gazophylacium polypusium fonticulorum et Setonium reseratum, in 1633 ; whicli were repub- lished, with his life prefixed, at London, in 4to. 1729. lie died young.

GLANDULE Rexales. See Anatomy.

GLANVIL (Joseph), a learned and ingenious, but fanciful and credulous writer in the seven- teenth century, born at Plymouth in .1636, and bred at Oxford. He was a great admirer of Mr. Baxter, and zealous for a commonwealth. After the Restoration, he published The Vanity of Dog- matizing ; was chosen F. R. S. and, taking orders in 1662, was presented to the vicarage of Frome- Sehvood in Somersetshire. In 1662 he published his Lux Orientalis ; in 1665 his Scepsis Scien- tifica; and in 1666 Some philosophical consi- derations touching the being of witches and witch- craft. In 1668 he published Plus ultra ; or, the progress and advancement of knowledge since the days of Aristotle. He likewise published, A seasonable recommendation and defence of rea- son ; and Philosopliia Pia, or A discourse of the religious temper and tendencies of tlie experi- mental philosophy. In 1678 he was made a prebendary of Worcester, and died in 1680.

GLANVILLE (Bartholomew), an English botanical author of the fourteenth century, com- monly called Bartholomffius Anglus. He was a Franciscan friar, descended of the noble family of Suffolk, and flourished in the reisn

of Edward III. He wrote a book on natural history, en- titled De Proprietatibus Rerum ; which was translated into English by John de Trevisa, in 13'.t8.

GLARE, V. n., v. a. & n. s. ˆ Dut. glarcn ;

Gla'iieois, adj. ˆ French glair-cur ;

Glak'iˆg, adj. J Latin glareusus.

To shine with intense splendor : a piercing over- powering look ; any thing transparent, as the white of an egg ; notorious as a glaring crime.

Thou hast no speculation in those eyes. Which thou dost glare with.

Shakspeare. Macbeth.

Look, how pale he glares. Id. Hamlet.

After great light, if you come suddenly into the dark, or, contrariwise, out of the dark into a. glaring lijrht, the eye is dazzled for a time, and the sight con- fused. Bacon.

His glaring eyes with anger's venom swell. And like the brand of foul Alccto flame. Fairfax.

About them round, A lion now he stalks with fiery glare.

Milttm.

One spirit in them ruled, and every eye Glared lightning, and shot forth pernicious tire Among the' accurst, that withered all their strength.

Id. Now friends no more, nor v.-alking hand in hand ; But when they met they made a surly stand. And glared, like angry lions, as they passed. And wished that every look might be tlieir last.

Dryden. The frame of burnished steel that cast a. glare From far, and seemed to thaw the freezing air.

Id. Fables, He is every where above conceits of epigramma- tick wit, and gross hyperboles : he maintains majesty in the midst of plainness ; he shines, but glares not ; and is stately without ambition. Dryden.

The court of Cacus stands revealed to sight ; The cavern glares with new admitted light. Id.

Beholds this man in a false glaring light. Which conquest and success have thrown upon him.

Addison.

I have grieved to see a person of quality gliding by me in her chair at two o'clock in the morning, and looking like a spectre amidst di glare of flambeaux.

Id. Guardian.

The most glaring and notorious passages are none of the finest, or most

correct. Felton on the Classicks.

Here in a grotto, sheltered close from air. And screened in shades from day's detested glare. She sighs for ever. Pope's Rape of the Lock.

When flattery glares, all hate it in a queen. While one there is who charms us with his spleen.

Pope.

Then, nor till tlien, the veil's removed away And all the wouiiua. glares in open day. Id.

Sighs from a breaking heart my voice confound ; With trembling step to join your weeping train, I haste where gleams funereal glare around. And, mixed with shrieks of woe, the knells of deatji resound. Bcattie.

Maidens, like moths, are ever caught by glare. And Mammon makes his way where seraphs might despair. Byron.

CLARIS, or Glarus, a Protestant canton of Switzerland, bounded by those of St. Gall, the Grisons, Uri, and Schweitz, and having a super ficial extent of about 400 square miles. The as- pect of the country is not attractive ; a large pro- portion of the surface being occupied by rocks, inaccessible forests, barren heaths, or lofty mountains : its wealth is in pasture, slieep, goats, and cattle.

The canton properly consists of one great val- ley, and three lateral ones, enclosed by moun- tains on all sides except the north-cast. In the valleys, the climate is warm and pleasant, but the soil is stony throughout, and little adapted to agriculture. The principal river is the Linth, from the banks of which the great valley extends in the form of an amphitheatre of fine meadows terminated by rocks and mountains covered with snow. This gives the country, on entering it from the north, a very picturesque appearance. The principal lakes are those of Wallenstadt and Clonthal. The only mineral production of im- portance is slate ; but rock crystal, marble, gypsum, spar, and diflerent petrifactions, are found in all parts of the country ; and large quantities of cheese are annually exported. JNlerino sheep were lately introduced here, and the quality of the wool has thus been much im-

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proved. The carrying trade between Italy and Germany is also prosecuted with activity, and there is also some trade with Holland, by means of the Rhine. Corn is imported.

The inhabitants manufacture, on a small scale, woollen, linen, and cottons. This canton belong- ed in the middle ages, to the imperial abbey of Seckingen, and was under the protection of Austria till the end of the fourteenth century, ■when it joined the Swiss confederacy. In the seventeenth century the inliabitants sustained some obstinate contests for their religion, which were, however, terminated in 1683, and liberty of conscience recognised by all parties. The present government is democratic ; all males above sixteen years of age having a voice in the general assembly. Glaris was the soane of some hostile operations between the French and Aus- tnans in 1799. It is divided into fifteen small districts. Population 20,000.

GLARUS, the chief town of the above canton of the same name, is situated on a rising ground near the Linth, from the inundations of which it is secured by a thick dam. It is well built, and has a population of about 2500, extensive bleach- fields, and manufactures of cotton. Thirty-two miies east of Lucerne.

GLASGOW, an extensive, commercial, an-d manufacturing city of Lanarkshire in Scotland, pleasantly situated on the north bank of the river Clyde, which is here crossed by three bridges. The observatory, which stands a little to the north-west of the city, is in W. long. 4″ 15′ 51″ and N. lat. 55° 52′ 10.” The greater portion of the city is built upcn a plain on the banks of the river, whence it gradually ascends towards the north till it reaches the rising ground on •which the cathedral stands. Glasgow, with its various suburbs, the barony of Gorbals, Calton, Bridgetown, Brownfield, Anderston, and Fin- nieston, stands on nearly 700 acres of ground ; and when viewed from many points at a distance, has, with its numerous spires, domes, and towers, a very beautiful and interesting appearance.

It is built with great regularity and order, the streets being upon an average sixty feet wide, and laid out, almost universally, at right angles ■with each other. They are well paved with whin- stone, and broad flag-stone, and kept remarkably clean and in good order. The houses are in general lofty, and built of free-stone, with po- lished and ornamented fronts. In the older parts of the town they are divided, as is customary in Scotland, into flats, and some of them contain six stories above the ground ; but of late years numerous new streets and ranges of buildings of great architectural beauty have been erected, the houses of which are on the English plan. The principal street in Glasgow, one of the finest in Europe, and which assumes, at different points, the names of Trongate and Argyle Streets, is in length

about a mile, and in breadth, upon an average, seventy feet. Its chief interest, however, arises from its being the principal scene of that restless spirit of enterprise and in- dustry which has raised Glasgow to the rank of the second city in the empire.

Though the climate is generally healthy, the air is here somewhat moist. The yearly average

of rain which fell during the thirty years pre- vious to 1790 was 29,fg5 inches. The following table shows the quantity of rain which fell from 1810 to 1814, as ascertained at the Macfarlane Observatory.

Year.

1810

1811

1812

1813

1814

Inches.

25-132

27-801 22-81 18-368 19-522

The soil around the city is very various, but is so much improved by an abundant supply of manure as to produce heavy crops of every description. Coal, free-stone, whin-stone, and clay of excellent quality, are to be found in al- most every direction.

The word Glasgow has beer, said to signify, in Gaelic, gray smith ; whence it has been in- ferred that a mechanic of this description had exercised his trade here in very early times. The name is also conjectured to be derived from glass, coed, two words signifying the greenwood; and it is certain there was in ancient times an extensive forest in the neighbourhood of the ca- thedral. Clais-ghee, in Gaelic, means a black or dark ravine, which, if this is the origin, may allude to the dark glen which has been formed by the stream to the east of the cathedral. Other etymologists derive the name from eaglais, a church, and clhu, black ; eaglaisdhu, or eagiaisghu, signifying, on this hypothesis, the black kirk. It is said that the bishopric of Glasgow was founded in 560 by St. Mungo Kentigern, the tu- telar saint of

the city. History has recorded nothing respecting his successors, or the bishopric, for a period of more than 500 years afterwards. Prior to 1100 the .church appears to have been a mean building, chiefly constructed of timber which had gone into decay. In the year 1123 John Achaius, then bishop, finished and deco- rated a considerable proportion of the present cathedral, which was consecrated in the presence of the king, David I., who bestowed on the church the lands of Partick, &c. In 1174 bishop Joseline made additions to the cathedral ; and in 1 180 he procured a charter from William, surnamed the Lion, erecting Glasgow into a royal burgh, and granting liberty to hold a fair for eight days annually. The town appears to have slowly increased, and additions to have been made to the cathedral from time to time by succeeding bishops, until in the beginning of the fifteenth century we find that it contained several streets and received not a little benefit from tlie wealth which the extensive revenues of the bishopric introduced. About this time bishop- Cameron, a very high-minded prelate, made great additions to the episcopal palace, and compelled his prebends, and the other clergy connected with the cathedral, to erect houses, and reside here. In 1450 bishop Turnbull obtained a charter from James II. erecting the town and the patrimonies of the bishopric into a legality ; and he likewise procured a bull from pope Nicholas V. for erecting a university within the city, which he afterwards endowed. The es- tablishment of this seminary of learning tended

considiirably to increase the number of the inha- bitants; and the consequent necessity for addi- tional houses caused the town to spread down the High Street, towards the present cross ; and thence along the Salt-market, the Gallow-gate, and tlie Trongate. Notwithstanding this in- crease of buddings, however, Glasgow at this time held but an inferior rank among the towns of Scotland; for it would appear that, in 1556, when the royal burghs were taxed by the order of queen' Mary, it held only the eleventh place.

In 1652 a great fire broke out which destroyed the greater portion of the Salt-market, Trongate, and High Streets, the houses of which were at that time formed chiefly of wood, and nearly 1000 families were thus ruined. It would appear, however, that in 1695 Glasgow had in some measure recovered from her disasters; for, at the assessment of the burghs that year, she was rated as the second in Scotland in point of wealth. About this period the buildings in the Trongate extended no farther west than the Tron- church. The town continued to increase but very slowly for a considerable period ; and, in- deed, it is not till the union of the two

kingdoms, which, by throwing open the trade to America, gave a vast impulse to the west of Scotland, that we find any important additions made to the city. About the commencement of the last cen- tury several new streets were opened up, an ad- ditional church was erected, and a few street lamps were introduced for the first time. In 1752 the first four-wheeled gentleman's carriage appeared in use. Subsequent to the middle of the last century, however, the increase of Glasgow in wealth, populai-ion, and extent has been rapid and unprecedented. The wealth which began to be acquired in the trade to 'irginia has con- tinued to accumulate and increase by the in- troduction of various manufactures ; and by the cultivation of a commerce which now connects the city with every corner of the civilised world. Since the period to which we have alluded, streets, squares, and public buildings have been yearly added, and are still adding to the splendor of the city. Religious and charitable institutions; associations for the improvement of manufac- tures and commerce; and societies for the dis- semination of science and literature, have been formed on a scale worthy of the wealth and en- terprise of the inhabitants.

In 1712, a few years after the union, the rental of property within the burgh was £7840 2s. 6d. sterling; in 1824-5 it was, as taken from the go-veriunent surveys, £279,600 sterling. The value of heritable property within the burgh, taking it at twenty years purchase of the government rental, which, as it is always below the real rent, may be assumed as a fair criterion, is £5,592,000 sterling. The property tax, when last exacted, which was in Iftl 5, was £82,000 sterling ; of which £24,000 sterling was raised from property, and £58,000 sterling from business. The assessed taxes were formerly aljout £30,000 per annum, but inconse- quence of tlic late reductions tiiey amount only at present to about £20,000. The total amount of stamp duties collected in Glasgow may be es-

timated at considerably above £100,000. In 1781 the revenue arising from the post-office was £4341 ; at present it is usually about £36,000 In 1821 the population was 147,043; the last calculation, made in the year 1832, raises it to

202,426.

Smce the erection of Glasgow into a burgh in 1180 its constitution has undergone many alterations. In 1268, however, it appears that the town was governed by a provost and bailies. From the year 1450, when the town and pa- trimony of the bishops were incorporated down to the Reformation, the bishops, or certain lay lords, in their right nominated the magistrates. In 1633 the parliament declared the burgh to be royal, with a power of electing their magistrates ; yet we find their right afterwards disturbed by Cromwell and the privy council. In 1690 the town was again

declared free by a charter of William and Mary, confirmed by an act of par- liament in the same year, to the effect that the town council should have power to elect their own magistrates. The constitution of the burgh underwent some alterations at the convention of royal burghs in 1801, and is now declared to be as follows : — The affairs of the burgh shall be governed by a provost and three bailies of the merchants' rank and two bailies of the trades' rank ; twelve counsellors of the merchants' and eleven of the trades' rank ; a master of works, who must be of the merchants' rank, and a trea- surer of the merchants' and trades' rank, alter- nately. The dean of guild and a convener of the trades house, are counsellors ex officio during the first year they are in office, after which they must be elected ordinary counsellors. The lord provost and the five bailies are charged with the executive, while the magistrates and council conduct the other affairs of the community. This burgh of itself now returns two representa- tives to parliament. The magistrates and coun- cil of the burghs of Glasgow, Rutherglen, Dum- barton, and Renfrew, formerly elected one mem- ber, but by the provisions of the Reform bill, Glasgow was separated.

The revenue of the burgh of Glasgow arises from various sources, but chiefly from what is called the common good ; which consists of an impost of two-pennies Scots on the Scotch pint of ale or beer sold within the burgh — ladles and multerres which are certain dues on grain, meal, and fruit brought into it — dues from the public washing-house — rents of markets, church seats, houses, mills, and lands— feus of lands, feudal casualties, and ground annuals— fees from bur- gess-entries, &c. &c. The expenditure is in- curred by burgh assessments — criminal prosecu- tions, alimenting criminal prisoners, and ex- pense of the prison — contribution to the police establishment — expense of the ecclesiastical and civil establishment — of the grammar school — rejjairs of heritable property — interest of money, and general improvements. The revenue usually exceeds the expenditure; but, in the ecclesiastical department, it falls considerably short. The following tables show the particulars and total amount of the revenue and expenditure from 1817 to 1824.

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In addition to the revenue of tiie ourgli, the magistrates are entrusted in whole, or in part, with the administration of several other funds, viz. that arising from the navigation of the river Clyde, assessment for the maintenance of the poor, statute labor conversion fund, portage of the bridges, &c.

By the constitution of the burgh, besides the magistrates and council, two other distinct bodies are recognised, the merchants' and trades' houses. The merchants' house consists of all the merchant-burgesses who have paid their re- gular fee to the funds of the house. The dean of guild, by courtesy styled the lord dean of guild, is president of this house. The mem- bers have only the privilege of attending one meeting in the course of the year, and of sharing in the election of twenty-four members of the dean of guild's council. This council consists of the dean of guild, the provost, the three merchant bailies, the collector, and the twenty- four merchants nominated councillors ; and to this body is intrusted the administration of the wiiole funds and affairs of the house throughout the year. The funds arise chiefly

*from rents, fees, ground annuals, interest, entry-money of members and burgesses, donations and mortifi- cations. The trades' house consists of the dea- con-convener, who is president, the late con- vener, the two trades' bailies, the present and late collector, the present and late deacons of the different incorporated trades, and twenty- six assistants nominated from the incorporations. To these members the whole civil and political interests of the house are entrusted. The affairs of finance are placed under the management of the convener, the deacons, and extraordinary members of the house ; these latter are the trades' bailies, collector, and members who have passed the chair, or been at any time in the magistracy. The funds of this body arise from sources similar to those of the merchants' house. Glasgow has the advantage, not only of several local courts of law, where questions of every description, from the most important to the most trifling are decided ; but is visited half yearly by branches of the supreme justiciary and civil jury courts. These courts make their circuits in the months of April and September. In the justiciary court all criminal matters arising in the counties of Lanark, Renfrew, or Dumbarton, considered to be of an aggravated nature, are tried before two presiding judges, and a jury of fifteen persons chosen from the city, and from other portions of the county of Lanark or the adjoining counties of Renfrew and Dumbarton. The judges of this court have likewise a jjower of reviewing all questions be- low the value of twenty-five poiuids brought before them from any of the inferior local courts. The civil jury court is but of recent introduction into Scotland, and has been adopted in imitation of the Lnglish courts. In this court all questions arising out of matters of fact are tried before a presiding judge and twelve jurymen, whose verdict must be unanimous. Issues are prepared previous to the trial in a concise yet comprehensive maimer; and it is *o the truth or falsehood of the statements con-*

tained in these, that the verdict of the jury refers.

The sheriff's court, in which tlie slierifl' and his substitute, who are both lawyers, preside, has jurisdiction in civil as well as criminal matters within the county. A court for ordinary civil procedure is held every Wednesday during the sitting of the supreme court at Edinburgh, and once a fortnight during vacation. In this court the procedure is entirely in writing, and the members of the faculty of procurators are the practitioners before it. Besides this, for all civil matters which require despatch, access may be had to the judges each day, and the proce- dure, in such cases, is summarily despatched, and does not wait for the ordinary court days. In trying criminal matters, which infer capital or corporal punishment or banishment from the county, the sheriff sits with a jury of fifceen persons, though he investigates and punishes the more petty crimes by fine or short imprison- ment without the intervention of a jury. The decisions, both civil and criminal, of the sheriff, like those of all other local judges, are subject to

the review of the court of session or court of justiciary at Edinburgh. The town court, in which one of the magistrates, with the assistance of a legal assessor, presides, meets each Friday during session, and once a fortnight during va- cation for the despatch of business. The powers and the forms of this court are precisely similar to those of the sheriffs, but are limited within tlie liberties of the city. Here the members of the faculty of procurators likewise practice. The magistrates also judge in criminal matters, but, as they limit their right to petty delinquen- cies, they never use the intervention of a jury. The dean of guild's court takes cognizance of all disputes arising between neighbouring pro- prietors of heritable property within the burgh, encroachments on streets, insufhciency of build- ings, and adjustment of weights and measures. The court consists of the dean of guild, who is president, four members from the merchants' liouse, and four from tlie trades' house, who are styled the dean of guild's brethren. They are assisted in their decisions by a legal assessor. The court meets on Thursdays, and the proce- dure is nearly similar to that before the sheriff' and magistrates' court. In the water bailie court, which is open daily, all (jucstions of a civil and cirminal nature connected with mari- time affairs, and occurring within the jurisdic- tion of the court, which extends on the river from the harbour at Glasgow to the Clough light-house, twenty-six miles below the town, are decided. The justices of the peace, as else- where, hold }}etty and quarter sessions in the city, in which all infringements of tiie excise laws, game laws, disputes between master and servant, and questions of county police are in- vestigated and decided. Besides the local courts before enumerated, in which questions of great value and of nice legal import are often tried, courts arc weekly held on separate days by the sheriff, the magistrates, and the justices of the peace, for the investigation and discussion of petty claims, at which the parties attend per- sonally, and a viv;\ voce decision is given by

the presiding judge. In these small debt courts, particularly the sheriff's, which is but of recent origin, a vast number of petty claims are dis- cussed ; and justice is thus quickly, and at a trifling expense, administered among the poorer classes. The taste for litigation among the inha- bitants of this wealthy city, may be in some de- gree estimated from the following statement. Exclusively of the suits carried on in the sheriff's court, justice of the peace court, and police court, 5798 processes were instituted in the magistrates' courts within the royalty, in 1815, viz. ordinary town court, 1658; summary town court, 608 ; criminal cases in the town court, 720; dean of guild court, ninety; maritime court, 109; conscience small-debts court, 1053; convene small-debts court, 1560- Since 1815 there is every

reason to 'believe that litigation has increased, particularly before the sheriff, since the institution of his small-debts court.

It is not to be expected, in an article so limited as the present, that any very minute account of the numerous public buildings of the city can be given ; or that even the names of many of them can be mentioned. The most important, how- ever, are the cathedral, which stands on a rising ground in the north-east division of the city, and is a very magnificent specimen of the early English style of architecture, and is the only perfect specimen but one of the ancient reli- gious edifices, which the misdirected zeal of the Scottish reformers has spared. It is a cross church with remarkably short transepts, having a very beautiful tower and spire at the intersec- tion, and a smaller tower at the north-west end. Much pains have been taken of late years in preserving and repairing it. The greatest inter- nal length of the building from east to west is 319 feet; the breadth sixty-three feet; the height of the nave ninety feet ; and of the choir eighty- five feet. The edifice is supported by 147 pil- lars, and lighted by 157 windows. It at present accommodates two congregations, thus serving for two city parish churches. One of these con- gregations is accommodated in the choir, now called the inner High Church; the western part of the nave, an internal wall having been erected, accommodates the other congregation, and is called the outer High Church. The portion of the nave between the entrance to the choir and the outer High Church is used as a vestibule or place of entrance for both churches. The crypt, certainly the finest in the kingdom, and situated immediately beneath the choir, is used as a bu- rying ground forthe heritors of the barony parish. Besides the cathedral, Glasgow contains ten other parish churches, among which St. An- drew's, St. George's, and St. David's, deserve to be noticed as being ornamental to the city. St. Andrew's was founded in 1739, is a pretty exact copy of St. Martin's in the Fields, Westminster, and is considered the best specimen of the com- posite order in Scotland. St. George's was built in 1807, from designs by Mr. William Stark : the original design, however, was considerably injured by some unfortunate deviations which w ere considered necessary to be made in erecting tlie building. St. David's, erected in 1825, is one of the greatest ornaments the city has re-

cently received : it is in the Gothic style, and from designs by Mr. Rickman of Birmingham. The Catholic chapel, which is in the pointed style, is a very fine structure, and richly decorated both externally and internally. Glasgow and its neighbourhood possess eight chapels connected with the established church, and upwards of thirty belonging to different denominations un- connected with the establishment; besides seve- ral others where the worship is conducted by lay elders. Some of the chapels recently erected, by dissenting congregations, are handsome buildings, and good specimens of the various orders according to wdiich tliey are erected.

The most ancient of the three bridges is situated at the foot of Stockwell Street, and was erected in the year 1345 by William Rae, then bishop of Glasgow. In the year 1777 an addition of ten feet was made to its breadth, by wliich it was strengthened, and the passage was rendered more convenient for carriages. Being tlie great thoroughfare, however, to the city from the south, it was still found too narrow, and was there- fore, in 1820, again widened in a very ingenious manner. The whole former breadth of the bridge is now allotted for carriages, and, the old parapets having been removed, a new series of cast iron arches have been added to each side, on which pavements of stone, for the convenience of foot passengers, are supported. The other stone bridge, at the foot of Jamaica Street, was erected in 1768 from designs by Mr. Milne, and appears to combine strength with simple elegance. It is in contemplation at present to widen it in the same manner as the other bridge has been widened. In 1803 the third bridge, which is of timber, and much admired for the simplicity ot its structure, was thrown across the Clyde at the foot of Saltmarket Street, for the accommodation ' of foot passengers only. This useful structure, notwithstanding that much money and great care have been yearly expended in keeping it i-n re- pair, seems to be now too much decayed to be longer used with safety. The magistrates have, therefore, very wisely closed it as a thoroughfare. In 1814 an act of parliament was obtained for building a bridge near the site of one which fell ere it was completed in 1795 ; and designs were procured from Mr. .John Rennie ; but nothing farther has yet been done with regard to it.

The town-hall buildings are situated at the cross. The basement story forms an arcade with a rusticated front ; the upper part is in the Ionic order, and the hall itself is elegantly fitted up. It contains portraits of the kings and queens of Scotland, and other public characters; the bust of his late majesty, and a statue of the late Mr. Pitt by Flaxman.

The trades'hall buildings, in which the four teen incorporated trades hold their meetings, were erected in 1791, by designs from Mr. Robert Adam^^ The front consists of a centre building and two wings, the former having two stories, supported by a rustic basement. The whole is crowned by a doipe, terminating in a lantern, which has a very fine effect. The mer- chants of Glasgow have, at present, no hall of their own in which to hold their meetings ; their former hall stood in the Bridgegate, but, as nei-

ther its situation nor condition was considered suited to their wealtli and respectability, the building was taken down, and the ground sold some

years ago ; the steeple, however, one of the finest in the city, has been allowed to remain. Many proposals have been made for building a new hall and an exchange, and a committee for the accomplishment of these objects has been in existence for some years, but they have not, as yet, done more than plan.

The jail, court-hall, and public offices, situated at the west end of the green, were erected in 1810, from designs by I\Ir. William Stark. This building is of the Doric order, the portico in front possessing very nearly the proportions of the celebrated Parthenon. The columns are placed on colossal steps ; and there is a recess divided from the portico by a screen of columns like the pronaos of the ancient temple. These buildings are of a quadrangular form, and con- tain halls for the several courts of justice, and ample accommodation for the whole civil and criminal establishments. The entry to the jail is by the west front. This portion contains two court yards, seventj'-four fire rooms, fifty-eight cells, and two apartments for prisoners under sentence of death, so completely cased with iron that it is not necessary to put the criminals in chains. There are also a chapel, a military guard- house, and a dwelling for the governor of the jail. The following tables show the number of persons incarcerated in Glasgow Jail for debt or crime from the year 1815 to the year 1822 inclu- sive:—

Persons incarcerated for debt,

Years.

Persons.

Years-

Persons.

1815 1816 1817 1818

405 458 433 320

1819 1820 1821 1822

779 742 838 832

Persons i

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Persons.

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Persons.

1815 1816 1817 1818

^44

1044 1021 1016

1819 1820 1821 1822

1323 1221 1196 1150

The city and county bridewell recently erected (the old buildings having been found inadequate) is in the Gothic style of architecture. It con- sists of a central compartment and two projecting wings. The former contains the governor's house, offices, and a chapel. The wings, in which the delinquents are kept, is thus under the con- stant inspection of the governor, while the im- portant object of solitary confinement is com- pletely effected.

The university buildings, and the houses for the accommodation of the professors, are situated on the east side of the High Street. The build- inns, and the quadrangles which they circum- scribe, occupy a space equal to 9556 square yards. The centre gate, in the principal front,

is ornamented with a species of demi-rusticated work; the royal arms in basso relievo, gilt, are placed over the gate, and consols, supporting a broad balcony, are formed at each side. The entire of the facade is terminated on the south by the principal's house, and on the north by that occupied by the professor of oriental lan- guages. The eastmost range of buildings, having become unfit for the purposes intended, were taken down in 1811, and a magnificent range, in the Doric order, erected on their site. This new erection contains the common hall, anato- mical theatre, and rooms for the humanity, Greek, logic, chemistry, medical, and mathematical classes. The grounds to the east of the univer- sity, called the college garden, are laid out in walks and shuubbery for the use of the professors and students. The Alacfarlane observatory is situated at the east end of them. At the west end of these grounds, and immediately in front of that part of the college buildings mentioned as having been erected in 1811, stands the edifice provided for the splendid bequest left by the celebrated Dr. William Hunter to the university. The portico, forming the principal front of this building, which contains the Ilunterian Museum, is a very fine specimen of the Roman Doric. The odier fronts of the building exhibit a sim- plicity and

elegance which render many views of it little if at all inferior to the principal front. The interior corresponds, in a remarkable degree, to the beauty of the exterior. It exhibits the same simplicity and the same elegance. The saloon, for paintings, is particularly fine in its form, proportions, and decorations, while, at the same time, it is admirably adapted for exhibiting the collection which it contains.

The royal infirmary, both from its appearance and situation, has a very imposing efi'ect. In form it is somewhat of a parallelogram with pro- jections at each end, having a pediment in the centre, supported by pillars of the Corinthian order ; a spacious dome terminates the building, which consists of four stories. It was constructed to accommodate 150 patients, yet, some years ago, it was found insufficient to admit the nume- rous applicants. A large addition has therefore been made to the building, which, while it does not injure its appearance, adds a third part to the accommodation.

The lunatic asylum is a plain edifice, consist- ing of a central building and four ranges of wards projecting diagonally from it. Its dome and general proportions are considered very beautiful. Hutcheson's hospital, erected in 1803 from de- signs by Mr. David Hamilton, is also a very respectable addition to the buildings devoted to purposes of benevolence in Glasgow. The the- atre is one of the largest and most elegant in the kingdom out of London ; and the assembly rooms are, in design and accommodation, worthy of the •ˆity-

There can be little question that the situa- tion of Glasgow has tended in a high degree to advance her in the scale of commercial cities. Placed on the border of one of the richest coal and mineral fields in the island with which it communicates by a canal, and connected on the one hand with the Atlantic by the Clyde, and on

the other with the North Sea and German Ocean by the Forth and Clyde navigation, its leading advantages are peculiarly great. Previously to 1707 the foreign trade of Glasgow, such as it was, was chiefly confined to .Holland and France. The union of the kingdoms having, however, opened the colonies to the Scotch, the merchants of Glasgow immediately engaged in a trade with Virginia and Maryland The city soon became a mart for tobacco, and the chief me- dium through which the French obtained their supplies. This trade was suspended by the breaking out of the American war, and the mer- chants of Glasgow were obliged to engage their capital in

other pursuits. Until about the year 1775 many attempts had been made without effect to open a connexion with the West Indies. In that year the imports from that quarter into the Clyde were as follows : sugar 4621 hogsheads and 691 tierces; rum 1154 puncheons and 193 hogsheads ; cotton 503 bags.

The increase of trade which has taken place since that period may be appreciated from the following statement of imports, taken from the custom-house books for the year 1815. Exclu- sive of grain, hemp, tallow, &c., from the Baltic through the great canal, sugar 540,198 cwt. 2 qr. 25 lbs.; rum 1,251,092 gallons; cotton wool 6,530,177 lbs. The import duties on these and other articles amounted to £563,058 2s. 6d. They employed 448 sliips, the tonnage of which was 79,219 tons and 4868 men. The exports during the same period to America, the West Indies, and different parts of Europe, amounted to £4,016,181 12s. 2ld. In this traffic were employed 592 ships, 94,350 tonnage, and 6,476 men. Pre- vious to 1718 the commerce of Glasgow was carried on in vessels chartered from the English ports. In that year the first ship built on the banks of the Clyde belonging to the city crossed the Atlantic. At the close of the American war an intercourse was opened with the different states of the American union, and this trade to- gether with that to Canada and Nova Scotia has become both valuable and important to the mer- chants of Glasgow.

In tiie spring of 1816 the first ship which sailed direct from Scotland to the East Indies was despatched to Calcutta by Messrs. James Finlay, and Co. Since then a number of Glasgow merchants have engaged in the trade to India. Twenty-two banks and branches of banks do business in the city, many of them to a con- siderable amount. Einens, lawns, cambrics, and other articles of similar fabric were the staple n,anufacture in Glasgow till 1785, when the in- troduction of fine muslins from yarn spun by mule-jennies, gave to the city a new branch of trade. The progress of the cotton manufacture after its introduction was very rapid, and has come to be of great importance ; the manufac- tures of Glasgow not only supplying their own export merciiants, but having opened extensive connexions with London and other parts of England, and even with the continent. In the year 1818 there were fifty-four mills for spinning cotton, containing 600,000 spindles, belonging to Glasgow, situ tted either in the city or country adjacent. Since then the number has increased li. 737,500 spindles. In the summer of 1825

there were in the city or neighbourliood fifty-four loom factories, of which tliirty were in full operation and twenty partly filled with ma- chinery. The gross number of power looms then working amounted to 7400, producing about 37,000 pieces weekly, or 1,924,000 piece3 containing 48,100,000 yards per annum. The number of hand looms employed by Glasgow

manufacturers was calculated in 1819 at 32,000 but of these only 18,537 were situated in Glas- gow or its neighbourhood, the rest Ijeing in different small towns around the country. In 1802 the manufactures of Bandana handkerchiefs was established by Messrs. Monteith, Bogle, and Co. ; and tliis branch of trade, which has become very important, has hitherto been confined to Glas- gov/. There are at present thirty-eight calico printing establisliments in Glasgow and its vi- cinity, in which Britannias, black and purple shawls of various widths, handkerchiefs of various sizes and patterns, and garments are printed. The excise duties paid on printed goods for the yearending July 1825 was £380,421 Os. lOd. Glasgow possesses twenty-two iron foun- dries, besides several other large establishments for the manufacture of steam engines, and of cotton, flax, and wool, machinery. The manu- facture of steam engines has become very ex- tensive from tlie number employed in manufac- tures and in steam navigation, besides a con- siderable demand from other parts of the kingdom. From a calculation made by M'Cleland, in April 1825, tliere were then employed in connexion with the city 310 steam engines, aggregating 6406 horse power. There are sixteen brass foundries carried on, in one of which the casting of tower or turret bells is executed with great skill and suc- cess. For the dressing, upmaking, and finishing, of cotton goods there are twelve calender houses containing thirty-two calenders worked by steam, and twenty lapping-houses, which are able on a moderate computation to calender 296,000 yards in a day, and to dress 530,000 yards. The Clyde was the first river in Europe on which steam-boats began to sail ; and since their introduction, in 1811, an immense number have been con- structed by Glasgow engineers, some of them at great cost and for "various parts of the world. At present there are upwards of sixty plying on the river belonging to the city. The flour mills belonging to the corporation of bakers are pro- bably the most complete in Britain; there are nineteen pairs of stones moved by water, and six by steam, by which 65,000 quarters of wheat can with ease be annually manufactured into flour. In 1815 90,000 bolls of wheat were manufactured into flouv. The granaries are cal- culated to contain from 30,000 to 35,000 bolls of grain.

The chemical manufactories of Glasgow are deserving of much more particular notice than we can afford to bestow on them. The works of Messrs. Charles Tennant, and Co. are understood to be the largest of the kind in the world, co- vering many acres of ground. About 1000 large carboys of concentrated sulphuric acid are said to be manufactured weekly, besides a corre- sponding quantity of oxymuriate of lime for bleaching, crystals of soda, and soaps. There are besides several oilier similar establishments.

GLASGOW.

though on a smaller scale, which together manu- facture a supply of chemical products, adequate not only to the bleaching and dyeing manufac- tories of Scotland, but capable of supplying the paper manufacturers of London, and many calico printers in Lancashire. The works of Mr. Charles Macintosh are celebrated for cudbear of the finest quality, made from lichens gathered in great quantities in Sardinia, Sweden, and Nor- way : hts crystals and prussiate of potassa are unrivalled for their beauty and purity, and his Prussian blue cannot be excelled. The chemical works of Messrs. TurnbuU and Ramsay are famous for the manufacture of pyroligneous acid of the finest quality, and for superb crystals of bichromate of potassa. used for dyeing the brilliant chrome yellow on calicoes. At a little distance from the city are several large chemical manufactories, particularly those belonging to Mr. Macintosh at Hurlett and at Campsie, where alum and copperas are prepared on a very ex- tensive scale. There is also a similar manufac- tory carried on near Hurlett by Messrs. Wilson. There are also twelve large distilleries in the city and suburbs, besides others on a smaller scale, and several breweries. The coal trade is carried on to a very great extent, and vast quan- tities are exported to the West Indies, and other parts of the world.

There seems to be little doubt that much bene- fit has accrued to Glasgow from the institution of its chamber of commerce and manufactures, the earliest establishment of tiie kind made in the island. It was incorporated by royal charter in 1783. The object of this institution is to keep a watchful eye on whatever may be supposed to affect the commercial interest of Glasgow, or its neighbourhood ; and, at the same time, to serve as the organ of communication between the manufacturing and commercial body of the dis- trict, acting either generally or separately, and the legislature, or any departments of the state. The art of printing was first introduced into Glasgow by George Anderson in 1630. A cen- tury afterwards Robert Foulis, and soon after his brother Andrew, were appointed printers to ihe university. They both possessed consider- able genius, taste, and literary enterjjrise, and are celebrated for printing a series of the classics in a style of beauty and elegance previously un- rivalled in Britain. At present the university printing-office is the largest in Scotland, with the exception of that of king's printer in Edinburgh. The following newspapers are here in present circulation : — The Journal, published every Fri- day ; the Herald, on Monday and Friday; the Courier, and the Chronicle, on Tuesday, Thurs- day, and Saturday; the Free Press, on Wednes- day and Saturday; and the Scots Times, and Saturday Evening Post, every Saturday.

The police establishment is as efficient as any in the kingdom. It consists of a superintendant, collector, treasurer, clerk, and surveyor; three constables,

twenty-eight officers, 100 watchmen, and twelve patrol-men, besides the superintend- ants of lamps, weighing-machines, and fire- engmes. The latter has fifty firemen under him, with a suitable equipment of fire-engines and water-butts. The executive power, and the

administration of all the other affairs, is vested in the magistrates and twenty-four general commis- sioners. The establishment is supported by an assessment on dwelling-houses, shops, or ware- houses, and a sum contributed yearly from the city funds. The receipts for the year ending June, 1825, were £14,069 17s. 7d., the disburse- ments £12,884 2s. 2d.

Among the literary institutions of Glasgow, the university, long so famous, deserves the first notice. It possesses professors of great talent in every branch of human learning. In the year 1819 there were 1264 students attending it. In the Andersonian institution lectures are regu- larly delivered on natural philosophy, chemistry, and mechanics ; other departments, such as anatomy, mathematics, and botany, have occasion- ally been introduced. This institution has two peculiarities ; there is a course of lectures delivered to ladies yearly, and another to mecha- nics. It was the first institution in the world in which scientific instruction at a cheap rate was delivered to the laboring man. The mechanics' institution arose out of a diflerence which occurred in the mechanics' class of the Andersonian insti- tution. The new institution has been incorpo- rated by the magistrates, and is at present ia a very flourishing condition. In it lectures are delivered to about 800 students, on mechanics, chemistry, mathematics, and geography, natural history, popular anatomy, and political economy. In the public grammar-school there are six clas- ses, viz. the rector's, for Latin and Greek ; four others for Latin ; and a commercial class : the school is generally attended by from 500 to 600 students. Glasgow possesses several literary and scientific societies, among which the college library, the literary and commercial, the philo- sophical, the medical, and the dilettanti societies, are the most conspicuous. The royal botanic garden, consisting of nearly six acres and a half of ground, contains 9000 distinct named species of plants, besides 3000 un-named ; the plants in pots amount to 60,000 ; grasses 500 ; the collec- tion of bulbous plants contains upwards of 900 species and varieties. Besides the college library, which is very valuable ; Stirling's public library, containing upwards of 7000 volumes; the Glas- gow public library, which contains 6000 volumes; and the foreign library, the object of which is to form a collection of all valuable works in the modern European languages ; there are a great variety of circulating libraries for the use of the inhabitants. In the year 1819 there were 239 teachers, besides those in the public seminaries already alluded to, who taught privately various branches of education in the city and suburbs ; from this, some estimate may be formed of the extent to which education is sought after. The public institutions, and benefit societies, which are

establisneci m this city for the relief of the necessitous are so numerous, and of so compli- cated a nature, that it is impossible to do more than mention the names of a few of them. The iNlerchants' and Trades' houses, Faculties of Phy- sicians and Surgeons and Procurators, and the fourteen incorporated trades, bestow considerable sums on the poor connected with their respective bodies. Aged and destitute people, and children,

aie supported in the Town's hospital, besides a large number of out-door pensioners, who are relieved weekl/. Hutcheson's hospital, besides educating and clothing poor children, distributes yearly, to 200 individuals, pensions varying from £5 to £25. Large sums are yearly raised by subscription for the support of the Royal Infir- mary, Lunatic Asylum, Magdalen Asylum, Lock Hospital, Humane Society, Dispensary, &c. In addition to these, the general session, the High- land, Buchanan, Graham, Stirlingshire, Dum- friesshire, Ayrshire, &c., societies, and a variety of benevolent and benefit societies, are careful in providing for tiie wants of the poor entitled to apply to them. It has been calculated by M'Cleland, whose general accuracy leaves little doubt as to the correctness of the result, that in the year 1818-19 the sum of £35,711 6s. 7d. was expended by the various public charities, inclu- ding the free schools and public hospitals : that £102,020 19s. 4d. was distributed in private charity; and £2272 lis. od. was raised for the support of the various religious societies : thus making a grand total of £140,004 17s. 8d. ex- pended in charity in the city and suburbs in one year.

In addition to the public markets for the sale of butchers' meat and vegetables, the magistrates liave recently erected a market for the sale of live cattle ; when the whole design is completed, the market will be the most extensive in the king- dom, with the exception of Smithfield, to which however it will be superior in regard to arrange- ment.

Glasgow is well supplied with water from the Clyde, which is brought into the town, and dis- tributed through every street and house in the city. In 1817 a company was incorporated for the purpose of supplying the city with gas-light. Under the direction of their talented and accom- plished engineer Mr. J. B. Neilson, their works have been brought to a state of unrivall-ed per- fection. They have laid down upwards of sixty miles of pipes, of different sizes, for conducting the gas to the various public works, shops, ware- houses, and street lamps, which are now entirely lighted in this manner.

The value of the butchers' meat sold in the Glasgow market during the year 1822 is calcu- lated at £242,800: the tallow, hides, &c., at £61,169 4s. 5d. ; making in all £303,969 4s. 5d.; the value of the bread, baked and sold, in the city and suburbs, at £177,266 10s. 8d.; and of the milk sold during the same period £67,375 7s. Od. The Barony parish of Glasgow was originally part of the parish of Glasgow, but was erected into a separate one in the year 1595. The boundaries of this extensive parish are exceed- ingly irregular ; but it may be shortly described as lying around Glasgow, and encircling it on the east, north, and west sides, both its ex- tremities above and below the city beingbounded on the south by the river Clyde. This parish contains a population of upwards of 50,000 in- habitants, who are included, however, in the enumeration of the inhabitants of Glasgow ; extensive suburbs of the city being, with the exception of the Barony of Gorbals, situated in this parish. The suburb of Calton is situated

in the east part of this parish, and to the east of the city. It contains about 16,000 inhabitants, who are mostly weavers, or employed in the cotton factories. It was erected in 1817 into a burgh of Barony, is governed by its own magis- trates, and possesses an effective police establish- ment. Bridgeton, containing a population of 14,000, extends in a south-east direction from the Calton to the Clyde. The inhabitants are likewise chiefly employed as weavers or cotton spinners. To the west of Glasgow stand the suburbs of Anderston and Finnieston, erected in 1824 into a burgh of Barony, containing a population of 7000 inhabitants, and governed by magis- trates, and a police establishment of its own. These suburbs contain extensive glass-works, potteries, breweries, foundries, and cotton factories. Besides these more important parts the Barony parish contains numerous other villages and public works connected with the city. A considerable portion of it is laid out in villas and country houses by the mer- chants and manufacturers of Glasgow ; and that part of it which is applied to agricultural pur- poses, from being liberally supplied with manure from the city, yields much richer crops than the quality of the soil would lead us to anticipate. In various parts of the parish are numerous coal works and free- stone quarries, which are as valuable to the city as they are profitable to the proprietors. Notwithstanding the extent and population of the parish, and the numerous townships and manufacturing villages which u contains, it possesses only one parish church. There are several chapels however in connexion with the established church, and numerous dissenting chapels and meeting-houses, situated in different parts of the parish. The Barony^ of Gabals, situated on the south side of the river, opposite to the city, contains upwards of 26,000 inhabitants, and is the most extensive and best built of any of the suburbs of Glasgow. The ground on which it stands contains upwards of 400 acres, and originally formed part of the parish of

Govan, from which it was disjoined and erected into a separate parish in 1771. From different parts of it having been begun to be built by different proprietors, they have re- ceived fhe different appellations of Hutcheson-town, Laurieston, 'i'radeston, Kingston, and Maxwellton ; a small portion only, and that the oldest part, receiving the name of Gorbals. 1 he whole, however, constitutes one barony, and is governed by bailies, and possesses a police esta- blisl>ment. The magistrates of Glasgow as superiors of the burgh, appoint the bailies; and the commissioners of police are chosen by the inhabitants. The burgh contains several fine streets and ranges of houses ; the parish church is a beautiful modem structure, erected fronting the Clyde ; and a jail and public ofiices have recently been built on a commodious and elegant plan.

Glasgow Port, a town in Renfrewshire, on the south bank of the Clyde, distant from Glas- gow about twenty, and from Greenock two and a half miles. It is built on the Barony oi" Newark, and owes its origin to thi; corporation of Glasgow establishing a port and building .i

harbour there in 1668. In 1695 il was erected into a parish. The town has a neat appearance, many of the private houses being handsome. In the centre is a rather elegant structure, with a fine spire, appropriated as public offices, read- ing room, jail, &c. There is a parish churcli, and two other places of worship in the town. The harbour is good, and a graving-dock is at- tached, which at the time of its construction was the only one of the kind in Scotland. With the exception of ship-building, sugar-refining, and roj5€-making. Port Glasgow is almost entirely indebted to tlie shipping which frequent

it for the employment of its population, and in the latter respect the proximity of Greenock has of late years operated unfavorably upon it. By the constitution of the town, it is governed bv two bailies and thirteen councillors, one part of which are elected by the corporation of Glasgow, and t!ie other by trustees for the com- munity. By the official returns of the trade of the port for 1826, it appears that 19,498 tons of British shipping, and 1,121 tons of foreign shipping cleared inwards; and 20,610 tons of British, and 1,344 tons of foreign shipping, cleared outwards in that year.

GLASS.

GluASS,n.s.,adj.Scv.a.^ Sax. slsey; Dut.

Glass'-furnace, n.s Glass'-gazing, adj. Glass'-ghinder, n. s. Glass'-uouse, n.

s. Glass'man, n.s. Glass' METAL, n.s. Glass'-vvork, Jl.S. Glass'-wort, n.s. Glas'sy, adj. Glaze, v. a. Gla'zier, n.s

glas ; Fr. glaise ; as Pezon imagines from glas, British, green. In Erse it is called klann, primarily sig- ■ nifying clean, or clear, being so denominated from its transparency. See the article. The several compound J words are applied to

the persons who manufacture glass, or the place wherein the operation is conducted. Glass-wort is a plant, the ashes of which are used in making fitre glass; several kinds of glasses, as hour- glasses, mirrors, telescopes, &c., wine glasses, &:c. : glass-metal is glass in a state of fusion. The two last words are alterations or corniptions of glass and glassier. One whose trade is to make glass windows.

And in an crthen pot how put is al, — And salt y])Ut in, and also pepere Beforn these poudrcs that I speke of here, — And wcl ycovcred with a lampe oigliii? And of inoche other thing which that ther wos ? And of the pottcs and glasses englutins;. That of the aire might passen out no thing ?

Chaucer. Tlie Chnnones Yemannes Tale. And soth to sainc, niy chambrc was Full well dcpaintcd, and with (/las Were al the windowes wcl yglased Ful clere, and nat an hole jcrased, — That to beholde it was grcte joie ; For wholly al the story of Troy Was in ihc glaisinge ywroujiht thus, —

Id. Jioke t\f the Dtwhcs.ie. Whose womb produced the glassy ice ? Who bred The hoary frosts thˆt fall on Winter's head ?

Sandys. He was the mark and glass, copy and book. That fashioned others. Shalisj)eare. lieitrj/ IV.

*1*11 see no more : And yet the eighth appears, who bears a i,lass Which shews me many more. Id. Machelh.*

IMan ! proud man ! Brest in a little brief authority. Most ignorant of what he's most assured His glassy essence, like an angry ape. Plays such fantastick tricks before high heaven. As make the angels wcop.

Id. Meantrejlir Measure.

Methought all his senses were lockt in his eye. As jc-wels in crystal for some prince to buy ; Who tendering their own worth, from whence they

were glasst. Did point out to buy them, along as you past.

Shakspeare. To this last costly treaty, That swallowed so much treasure,

and like a qlass Did break i' the' rinsing. Id. Henry VIII.

Were my wife's liver Infected as her life, she would not live The running of one qlass. Id. IVhiter's Tale. Sorrow's eye, glazed v.'ith brining tears. Divides one thing entire to many objects.

Shakspeare. Get thee glass eyes : And, like a scurvy politician, seem To see the things thou doest not.

Id. King Lear. There is a willow grows aslant a brook. That shows his hoary leaves in the glassy stream.

Shakspeare. A whorson, glassgasing, finical rogue. Id.

The crystalline Venice glass is a mixture, in equal portions, of stones brought from Pavia, and the ashes of a weed called kali, gathered in a desert between Alexandria and Rosetta ; by the Egyptians used first for fuel, and then they crush the ashes into lumps like a stone, and so sell them to the Venetians for their glassworks. Bacon's Natural History.

Let proof be made of the incorporating of copper Or brass with glassmetal. Id. Physical Remains.

In the valley near mount Carmel in Judea there is a sand, which, of all others, hath most affinity with glass ; insomuch as other minerals laid in it turn to a glassy substance. Bacon.

Let there be two delicate cabinets daintily paved, richly lianged, and glazed with crystalline glass.

Id. Essays. No more his rovall self did live, no more his noble Sonne, The golden Mclcager now ihclr glasses all were run.

Chapman. Let princes gather j\Iy dust into a glass, and learn to spend Their hour of stale — that's all they have — for when Thai's out. Time never turns the glass again.

Shirley. Fill up the bowl there, fill it high. Fill all the glasses there ; for why Should eviry creature drink but I, Why, man of morals, tell me why. Cnwley.

While a u»an thinks owe glass more will not make

him drunk, that one glass hath disabled him from well discerning his present condition.

Taylor's Rule of Holy Living. The moon whose orb

Through optick glass the Tuscan artist views.

Milton.

The magnet attracteth the r.hining or glassy powder brought from the Indies, usually employed in writing- dust. Browne.

For the fine glass we use the purest of the finest sand, and the ashes of chali ox glasswort ; and for the coarser or greener sort the ashes of brake or other plants. Id. Vulgar Erroiirs.

Methinks I am partaker of thy passion.

And in thy case do glass mine own debility.

Sidney.

I have observed little grains of silver to lie hid in the small cavities, perhaps glassed over by a vitrifying heat, in crucibles wherein silver has been long kept in fusion. Boyle.

The glassgrinders complain of the trouble they meet •with. Id.

Glass is thought so compact and firm a body, that it is indestructible by art or nature, and is also of so close a texture that the subtlest chymical spirits can- not pervade it. Id.

The first glass may pass for health, the second for good-humour, the third for our friends ; but the fourth is for our enemies. Temple.

He spreads his subtile nets from sight With trinkling glasses, to betray The larks that in the meshes light.

Dryden's Horace.

White, with other strong colours, with which we psiiut that which we intend to glaze, are the life, the spirit, and the lustre of it. Id. Dufresnoy.

Like those who survey the moon by glasses, I tell of a shining world above, but not relate the glories of the place. Dryden.

As when a taper shines in glassy frame, The sparkling crystal burns in

glittering flame, So does that brightest love brighten this lovely dame. Fletcher's Purple Island.

If our dreamer pleases to try whether the glowing heat of a glass-furnace be barely a wandering imagina- tion in a drowsy man's fancy, by putting his hand into it, he may perhaps be awakened into a certainty that it is something more than bare imagination. Locke.

Glass bottles are more fit for this second fining than those of wood. Mortimer's Husbandry.

Showers of grenadoes rain, by sudden burst

Disploding murderous bowels, fragments of steel

And stones, and glass and nitrous grain adust.

Philips. When thy heart

Dilates with fervent joys, and eager soul

Prompts to pursue the sparkling glass, be sure

'Tis time to shun it. Id.

Into rabbets the several panes of glasswork are set, and fastened by the glazier. Moxon's Mech. Ex.

The reason of one man operates on that of another in all true oratory ; wherein, though with other orna- ments he may glaze and brandish the weapons, yet is it sound reason that carries the strike home.

Grew's Cosm. Sac.

I remember to have met with an old Roman Mo- saic, composed of little pieces of clay half vitrified, and prepared at the glasshotuea. Addison.

The dexterous ˆZaajer strong returns the bound. And gingling sashes on the penthouse sound. Gay.

Nature's ethereal, human, anˆel, man. Beast, bird, fish, insect, what no eye can see ; "No glass can reach from infinite to thee. From thee to nothing. Pope.

The proiit of glasses consists only in a smaill present made by the glassman. Swift.

And Vanity with \>nc\et-glass, And impudence with front of brass. Id.

It hath an apetalous flower, wanting the empale, mcnt ; for the stamina, or chives, and the embryoes grow on the extreme part of the leaves ; these embryoes afterward become pods or bladders, which, for the most part, contain one seed. The inhabitants near the sea-coast cut the plants up toward the latter end of Summer; and, having dried them in the sun, they burn them for their ashes, which are used in making of glass and soap. These herbs are by the country people called kelp. From the ashes of these plants is extracted the salt called sal kali, or alkali, by the chymists. Miller.

And then, without the aid of neighbour's art. Performed the carpenter's and glazier's part. Harte.

James I. granted to Sir Robert Mansell an exclusive patent for making glajs, in consideration of his having introduced pit-coal instead of wood.

Campbell's Pol. Survey. Upon my shoulders here I must aver My muse a glass of wealherology. Byron.

A mutual language, clearer than the tome they spake Of his lands tongue, which he would oft forsake For Nature's pages glassed by sunbeams on the lake.

Id.

Glass, in a general sense, may denote any earthy, saline or metallic substance or com- pound, which is reduced by igneous fusion to a hard, uniform, brittle mass, having a consider- able degree of lustre. It breaks with a conchoi- dal fracture, passing into splinters. More par- ticularly it denotes that brittle, factitious, trans- parent substance produced by the vitrification of siliceous earths with salts and metallic oxides.

Some writers have derived the term from glastrum, another name with the Roman writers for vitrum, a plant with whichi the ancient Bri- tons, as they say, painted or dyed their bodies, and which was of a light blue color; others from glesum or glusu?n, the name of amber among the ancient Gauls and Germans, connected with which is our English word glisten, to shine ; the Swedes and Dutch use glas in the same sense as we do. Merret, in his notes on Neri's Treatise on Glass-Making, mentions certain characters or properties of glass, by which it is distinguished from all otlier bodies : of which we may enu- merate these. It is an. artificial concrete of salt and sand or stones ; it is fusible by a strong heat, and when fused is tenacious and coherent ; it does not waste nor consume in the fire ; it is ductile when red-hot, and may be fashioned into any form, but is not malleable; and is capable of being blown into a hollow : it is frangible,

always diaphanous, whether hot or cold ; flexible and elastic : it may be graven, or cut with a diamond, or other hard stones and emery ; it receives any color or dye, and admits of being polished : it is the most pliable thing in the world, and that which best retains the fashion given it.

De Neri traces the art of making glass to the times of the patriarch Job, who ranks it amongst the most valuable of earthy productions, chap, xxviii. 17. But this is mere conjecture; the word n'^I^T translated crystal, from the root 'jf, to

cleanse or purify, admits of various significations, and evidently, from the context, means some pre- cious stone.

It is said that the Egyptians were taught the art of glass-making by Hermes. Among the Greek writers Dr. Falconer contends that Hero- dotus uses the word vaXog, with this signifi- cation ; but this is very dubious ; the historian more probably means the natural crystal, or some transparent natural stone, capable of form- ing the transparent case he is describing. Aris- tophanes, Aristotle, Alexander, Aphrodiscus, Lucretius, and St. John the divine, put it out of all doubt that glass was used in their days. Pliny relates, that it was first discovered acci- dentally in Syria, at the mouth of tlie river Belus, by certain merchants driven thither by a storm; who being obliged to dress tlieir victuals by making a fire on the shore, where there was great plenty of the herb kali ; of the ashes of that plant the salts mixed and incorporated with the sand, or stones fit for vitrification, and thus j)roduced glass ; and that, tliis accident being known, the people of Sidon in the neighbour- hood first attempted to form it artificially, and brought glass into use.

Be this as it may, the first glass-houses men- tioned in history were erected in Tyre, where the only staple of the manufacture was for many ages ; the sand which lay on the shore for about half a mile round the mouth of the Belus being peculiarly adapted to the making of glass; and tlie wide range of the Tyrian commerce af- fording an ample channel for the productions of the furnace.

The first time we hear of glass made among the Romans was in the reign of Tiberius, when Pliny relates tliat an artist had his house demo- lished for making glass malleable, or rather flexible ; though Petronius Arbiter and others assure us, that the emperor ordered the artist to be beheaded for his invention. It is certain that a plate of glass was found at Ilerculaneum,

which was destroyed, A. D. 80 ; and that glass vessels were made at Rome under Nero. T!ie earliest mention made of glass windows is by Lactantius, in the third century.

Before the conquest of Britain by the Romans, glass-houses had been erected in this island, as well as in Gaul, Spain, and Italy. Hence, in many parts of the country, are to be found amu- lets of glass, having a narrow perforation and thick rim, denominated by the remaining Britons gleineu naid-rcedh, or glass adders, and which were probably in former times used as amulets by the druids. See Anguinlm Ovum. It can scarcely be doubted that the Britons were suffi- ciently well versed in the manufacture of glass, to form out of it more useful instruments than glass beads. History indeed assures us, that they manufactured a considerable quantity of glass vessels. These, like their amulets, were green, blue, yellow, or black, and many of them curiously streaked witli other colors. The pro- cess of the manufacture was nearly the same with that of the Gauls or Spaniards. The sand of the shores, being reduced to a sufiicient degree of fineness by art, was mixed with three-fourths of its weight of nitre, and both were melted

together. The metal was then poured into other vessels, where it was left to harden into a mass ; and afterwards replaced in the furnace, where it became transparent in the boiling; ; it was now figured by l)lowing, or modelling in the lath, into such vessels as they wanted .

According to Bede, artificers, skilled in mak- ing glass for windows, were brought over into England in 674, by abbot Benedict, and were employed in glazing the church and monastery of Weremouth. According to others, they were first brought over by Wilfrid, bishop of Wor- cester, about the same time. Till this time the art of making glass for windows was unknown in Britain ; and sash windows did not begin '. to be common before 1180. Italy had them first ; next France, whence they came to Eng- land. Venice, for many years, excelled all Europe in the fineness of its glasses ; in the thirteenth century, the Venetians were the only people that had the secret of making crystal looking-glasses.

The glass manufacture of England was first established in 1557: the finer sort being made at Crutched Friars, London; the fine flint glass, little inferior to that of Venice, in the Savoy. This manufacture appears to have been much improved in 1635, when it was carried on with pit coal instead of wood ; and a monopoly was granted to Sir Robert Mansell, who was allowed to import the fine Venetian flint glasses for drinking. But in the reign of William III. these were made at home with considerable skill.

The first plate glass, for looking glasses and coach windows, was made in 1673 at Lambeth, under the patronage of the duke of Buckingham ; who

introduced it by the means of 'enetian artists, and with amazing success. So that, within the last century and half, the French and English have not only equalled but even excelled the Venetians, and are now no longer supplied from abroad. The French made a considerable im- provement in the art of glass, by the method of casting very large plates, till then unknown. This was imitated in Lancashire in 1773, and is now very flourishing.

Of the vitrification of glass generally. — Pure substances vitrify with difficulty, and the glass which proceeds from them is in general dry and very brittle. But the same substances mixed, enter more easily into fusion. Alumine and lime, although unvitrifiable separately, are easily reduced into glass when mixed together. The alkalies facilitate the fusion and vitrification of all the earthy principles. On account of this property, these salts are employed for forming the base of the composition of glass manufac- tured for our use. Besides the degree of fusi- bility which the alkalies communicate to the earthy substances, they give to the glass which proceeds from their mixture with the earths a pliability which admits of its being wrought, blown, extended, and even hammered while it is warm and soft. The manufactories where glass is made, are called glass-works. The compo- sitions, the working, and the furnaces, vary in the different manufactories, according to the na- ture of the glass made in them: hence the va-

rious denominations of bottle-glass, flint-glass, plate-glass crystal-glass, &c. But, whatever may- be the nature of the glass to be made, there are certain principles essentially dependent upon science which are applicable to all glass-works, and according to which all the operations are di- rected. These general principles have for their object every thing relating to the manufacture of the pots or crucibles, to the composition of the substances, to the construction of the furnace, to the management of the fire, and to the manner of working the glass. We shall glance at each of these subjects in succession.

Of the manufacture of crucibles, or glass pots. — Good crucibles ensure the success of a glass-work. This truth can only be felt by those who have appreciated the loss occasioned by pots which break or melt, the loss of time, and the difficulty of replacing them. Clay forms the basis of glass-house pots. But as the quali- ties of clays are very variable, because they are naturally and constantly mixed in various pro- portions, with lime, silex, iron, and magnesia, which renders them more or less fusible, the clay must be picked before employing it. The qualities of a good clay are as

follow: 1st. It must not vitrify upon an exposure of several days in the hottest place of the furnace. 2nd. It must preserve its form without sinking down, or be- coming soft. 3rd. It must be wrought and moulded easily. 4th. It must undergo the ac- tion of the fire without contracting, or cracking. 5th. Good clay assumes, upon being fired, a very great hardness and compactness.

When we have ascertained all these qualities in the clay, it must be still picked, in order to separate from it every thing foreign or prejudi- cial. To this eff'ect it must be carefully picked;, in order to take out the pyrites and all the small colored veins, which render it fusible: we may content ourselves with raking together the pieces tinged w.th ochre, and separating all the color- ing principle from them. After having taken away every visible impurity, the clay must be diluted and soaked in water; it is afterwards passed through sieves, in order to separate the coarse, weighty, and insoluble bodies from it. Sand, quartz, or mica, do not sensibly injure the qualities of clay, particularly if they are in small quantity: but mixtures of calcareous earths, plaster, pyrites, and metallic oxides, render clay improper for glass-house pots, as it is ma- terial to give to the sides of a crucible such a thickness only as to render it capable of resisting the effects of the substance it contains, and the shocks it receives in the work.

M. Loysel has suggested that we should cal- culate the tenacity of the clay, by forming small sticks of it in the form of parallelopipedons, which he dries at a temperature of 25° of Pi.eau- mur, and one of the extremities of which he re- duces to a diameter of six lines. He fastens this extremity in a cubical cavity ; and at the distance of eighteen lines he suspends, from one of these sticks, the saucer of a pair of scales, in which he places weights until they produce a fracture in the stick. He observed that good clay, employed for crucibles of three feet diameter by three feet six lines thick, did not break, ex-

cept with a weight of 56 oz.; and that of a fur nace of fusion, of eight feet diameter, by a weight of 24 oz. But clay, employed by itself, contracts too much, and it is mixed for forming the composition of pots with the broken pieces of crucibles, ground, and well cleared of all vi- trified matter, or with clay strongly fired. Great care must be taken not to employ sand in form- ing pots, because the alkali employed in making the glass would act upon the sand, dissolve it, and speedily destroy the crucibles. After having prepared the clay well, it is mixed with the ce- ment farmed of ground fragments of crucibles, and a paste is made with it which has such a consistence that a leaden bullet of 4oz. weight may sink into it completely upon falling from a height taken between sixty-six and eighty-three inches. This paste must be dressed with the greatest care in a proper place, and out of the way of all dust, and the mixture of every foreign substance. When

*the paste is thus prepared, either the one or the other of the two following processes may be employed for making the crucible. 1st. In some glass-houses they have a wooden mould, fur- nished in the inside with a strong and well- stretched cloth. Rolls of paste are applied to the interior surface of this cloth, and the frame of the crucible is successively raised, by gradu- ally diminishing its thickness from the bottom to the upper edge. 2nd. In other glass-houses the workman has a round piece of wood, a little broader than the crucible is to be, and he raises with his hand, and without a mould, his crucible upon this kind of foundation. This last method is preferable to the former, because the workman can work his paste at all places, and he leaves no cracks nor crevices in the body of the cruci- ble, and he can join perfectly and uniformly all the parts. This process is particularly necessary in the bottle glass-houses, because this composi- tion corrodes the crucibles more than any other. When the pots are manufactured they are al- lowed to dry in the shade, at a temperature of lO** or 15° of Reaumur's thermometer. Wˆe should equally dread a too strong heat, which might crack the pot; or a too sharp cold, which might freeze it, dampness and currents of air should be also carefully avoided : the apartment which serves as the drying-place should be shut, and very little frequented. When the pots begin to be dry they are enclosed in a close place, where the heat is constantly kept up to 25° or 30° of Reaumur. From this they are brought out to be put in use. For this purpose they are ex- posed by degrees to a heat which produces red- ness, and in this state they may be placed upon their seat in the furnace. Prudence requires that they should not be charged with any compo- sition after they are placed upon the furnace until they have undergone the strongest possible heat for twenty-four hours.*

Of the construction of glass-house furnaces. — The paste intended for making the bricks of a glass-house furnace is prepared by mixing crude with fired clay, or rather with broken pieces of cru- cibles : white infusible quartz, or a very refractory sand, are also employed instead of fired clay. In order to pound the pieces of quartz more com- pletely, they are made red-hot, and then thrown

into water. Tliis operation, as is well-known, renders them pulverulent, without hurting their refractory quality. Bricks are sometimes used which have not been fired ; these are merely dried in the air to such a degree that a leac'en bullet, falling from a height of from twenty-five to forty-five feet, only sinks half its bulk into the brick. The furnace of a glass-house is always erected in the middle of very spacious premises, in order that the

working and the surface of it may be easy. The draught of the furnace is effected by means of four carrents of air, which enter the hall at separate apertures, and unite at right angles at the grate of the fire. The interior form of the furnace is almost always that of a square, c- of a rectangular parallelogram, the broadest sides of which are occupied by tlie pots, which are supported and fixed on trevets or shelves. The interval between these shelves, or trevets, forms the grate upon which the com- bustibles are placed. The fire is fed by aper- tures made in the sides: the pots are charged and emptied by means of openings immediately above them, and which exactly correspond with them, in order that the business may be more easily conducted. The furnace is surmounted or terminated by an arch, which rests upon the two longest sides, and which is full of holes, in order to establish a proper draught, and to give a passage to the flame, which also heats other arches placed before these angles, or above the vault.

Of the substances employed in the composition of gluss. — Silex and the alkalies form the base of glass in all countries : the other ingredients are, properly speaking, only accessary for facili- tating the flux and purifying the glass, or for giving it any peculiar quality. Tiie purest si- lices and alkalies form the clearest glass, and it is this composition v.hich forms the basis of all the operations of glass-houses. But silex and alkali exist no where pure; it is only by trou- blesome, difficult, and expensive processes that we can bring them to tliis degree of purity. Tlicse substances are therefore very generally employed in the state in which nature and com- merce afford Uiem. Attention must be paid, however, among the varieties which these two substances present, to choose such as experience has shown to give constantly the production we are desirous of obtaining. In some delicate works sˆicli as the making of fine crystal or plate-glass, the alkali of commerce is purified, in order to clear it of all foreign bodies. In general, wiiite sand is the purest, but it is also the most refractory; the colored sands fuse much more easily. Ali- cant soda holds the first place among the alkalies of commerce. It is therefore most employed in the delicate operations of the glass works. Sicilian ashes, the salicornia, and sea-wrack, are cmjiloyed in tlie mainifacture of all the common clear glass. Potassa and salt are also well adapted for vitrification : the latter is employed in most of the manufactories of drink ing-glasses and crystal-glass, as it is called. In France the ashes of our fires, melted with sand, is the most general composition of bottle-glass. V\ hen the snnd is very fusible, lixiviated ashes may be em- ployed. I have seeu, says M. C'haptal, most Vet.. X.

excellent bottle-glass formed with lixiviated ashes and river-sand, mixed with equal parts of quartz and rubbish of lava. The salts contained in the alkalies enter into fusion, and swim upon the surface of the metal (as the workmen call it) in the state ef a very fluid liquid, which must be carefully

taken off with a ladle or skimmer before beginning to work the glass. This pre- caution is only necessary when sodas are em- ployed highly charged with marine salt. The glass-works where these kinds of soda were used, made a considerable trade of this salt, which was sold by the name of glass-house salt, when the gabelle or salt-tax rose to such an enormous height in France. Glass-house salt is also known by the name of gall of glass, or sandiver; and when the matter is not well melted, or when all the marine salt is not evaporated, it is found dispersed through the glass in small grains, which injure much the beauty and solidity of the article. When we wisii to purify soda for deli- cate operations, it is dissolved in water, in order to separate by a previous operation every thing that may be insoluble ; it is afterwards evapo- rated, and concentrated to 40° of Baume's ar- eometer, in order to precipitate the foreign salts, which crystallise; the remaining liquor is after- wards concentrated to dryness, and by this means we obtaiu a very pure salt of soda. We may even obtain it in crystals, by stopping the evaporation at the degree of a syrupy consistence. The proportions of the substances which fi)rm the composition of glass vary according to the nature of the sand, the purity of the alkalies, the quality of the glass, and the degree of heat in the furnace. Experience alone must prescribe and determine the most proper composition : the more fusible the sand is, the less alkali it re- quires ; the purer the alkali, the greater is the quantity of sand which is necessary in the com- position. In order to facilitate the fusion of the compounds, and to give the glass more ductility, more weight, and less hardness, oxide of lead is added to the composition, in variable propor- tions, according to the object in view. Minium, or red-lead, is always preferred for this purpose in the manufactories of crystal-ghuss.

The oxide of manganese is also used, by the name of glass-maker's soap, in order to clear the glass of all coloring matter. Its effect must probably be chiefly ascribed to the facility with which it gives up its oxygen, wITich combines with the coloring principles, and destroys them. Too much red-lead makes the glass yellow ; this defect may be corrected by applying a little oxide of cobalt, which, in its turn, will produce a blue color, if in excess. Too much manga- nese gives it a violet color, and forms streaks, or violet-colored ribands, in the thick parts of the glass. This fault may be corrected by throwing a coiidDUStible body into the melted mass. There are circumstances where a tried composition attains a proper degree of fusion with great difficulty; this niay proceed from the draught of the furnace being- interrupted, or when the fire is ill managed ; in this case, borax, or arsenic, must be resorted to for restoring the fusion. The latter substance is held in the bottom of the pots, until it lias evaporated in fumes; it spreads

through the whole mass, agitates it, and hastens the flux of it. Arsenic serves in particular for destroying the green color of glass, besides the advantage it has of facilitating the flux. The glass is colored with the metallic oxides ; cobalt makes blue; manganese, violet; glass of anti- mony, yellow; precipitate of Cassius, purple; chrome, green, 8cc. Various colors may be ob- tained by the mixture of these oxides ; and we may obtain all the shades we desire.

Muriate of soda and sulphate of soda may be employed, and at times with advantage, in glass-making. A casting is readily obtained of very fine glass, having, when about three or four lines in thickness, a very slight green tinge. Its composition is as follows : — decrepitated muriate of soda 100 parts; slaked lime 100; sand 140; clippings of glass, of the same quality, from 50 parts to 200. Sulphate of soda like- wise offers a great economy in its employment. The results are very satisfactory. The glasses made with this salt were of a very fine quality. The following is the composition: — dry sulphate of soda 100 parts; slaked lime 12; powdered charcoal 19; sand 225; broken glass from 50 to 200. These proportions give a rich colored glass, which may be employed with advantage in glass-liouses, where a fine quality is sought after. The following is the second way of operating with sulphate of soda ; the proportions may be as follows : — dry sulphate of soda 100 parts; slaked lime 266; sand 500; broken glass from 50 to 200. According to this pro- cess, it is obviously easy to operate in a regular manner, and to avoid expensive trials in the manufacture. — Annul es de V Industrie Nat'umale.

According to M. Achard, equal parts of lime, magnesia, and silica, melt into a greenish colored glass, hard enough to strike fire with steel. When the magnesia exceeds either of the other two ingredients, the mixture is infusible; when the silica exceeds, the only fusible proportions were, 3 silica, 2 lime, 1 magnesia ; and, when the lime is in excess, the mixture usually melts in a strong heat. With mixtures of lime, alu- mina, and silica, a fusible compound is usually obtained, when the lime predominates. The only refractory proportions were.

Lime ... 2 3 Silica ... 1 1 Alumina ..22

Excess of silica gives a glass or porcelain, but excess of alumina will not furnish a glass.

Wjien, in mixtures of magnesia, silica, and alumina, the first is in excess, no fusion takes place at 150° ; when the second exceeds, a porce- lain may be formed ; and 3 parts of silica, 2 magnesia, and 1 alumina, form a glass.

From Achard's experiments it would appear, that a glass may be produced by exposing to a strong heat equal parts of alumina, silica, lime, and magnesia. Other proportions gave fusible mix- cures, provided the silica was in excess.

M. Westrumb is said to have found, that the salts of potassa and soda, deprived of their water of crystallisation, answer as well as the pure alkali for the manufacture of glass. In order to make an excellent glass, 24 parts of sulphate

of soda aie thoroughly dried, and mixed wifh 8 parts of powdered charcoal, and 16 of good white sand. The mixture must be calcined in the drying oven, until the sulphate is dissipated, and is then put into the pots for fusion. — An~ nales Gen. de Phi/s. de Bruxelles, May 1820.

Of the Jiux of the substances forining the com- position of glass. — The flux of the substances embraces two principal operations ; first the fritte ; second the fusion. If we throw into the crucible the substance which forms the compo- sition, without having prepared it by a previoui strong calcination, the crucibles would be de- stroyed in a short time, in consequence of the water which would be disengaged on the first impression of the fire; the flux would be almost impossible, in consequence of the greater fusi- bility of the alkali, which would come to the surface ; the glass would be colored, and the paste itself would experience a swelling which would drive it over the crucible. In order to obviate all these inconveniences, the substances undergo the fritte, in all the glass-works, be- fore put into the pots to be melted. The fritte is conducted on the substances either se- parately or in their state of mixture and com- position. The second method is preferable, for the reasons above given. The fritte is executed in furnaces made in the glass-house; and which very often communicate with the melting fur- nace, from which they receive the heat by aper- tures made at the base of the great arch, and at the angles. These places are then called fritte arches. The substances are fritted som time, keeping them red-hot, and by this means they often receive a commencement of a pasty fusion, which unites the parts of the composition so as to form one mass. The manufacturers of bottle- glass, already mentioned, give the form of bowls to their composition, in order to roast it more completely. Others throw the composition, when well mixed, upon the bottom of the arch, taking care to strew it very thinly, in order that the calcination may act equally upon all the parts. Previous to putting the composition into the melting-pots, a new activity is given to the fire, and it is stirred three or four hours before charging tliem. The pots are charged at two and even three times ; a fresh quantity of com- position is not added until the first quantity is melted. As soon as th« pot is filled, the fire is carefully kept up, for a longer or shorter time, according to the fusibility of*

the composition and the draught of the furnace. Ten or twelve hours are sufficient to melt the whole composi- tion ; but, although it is well melted, it is not yet 'fit for workinsc. It must be allowed to settle, to clear itself of the numberless bubbles which are dispersed through the paste ; and this effect can only be produced by keeping the composition at a very liquid fusion for some hours. This operation is called fining. When the glass is thus fined down, or rendered fit for working with, the heat of the fire is, allowed gradually to diminish by adding no more coals to it. The vitreous mass then as- sumes a little more consistency, which facilitates the work.

Of uwrking the glass in glass-houses. — The

working' of glass is very simple ; but, notwith- standing this, it requires a great deal of practice, and no one can expect to become a good artist in this branch of the business, if he has not acquired the art early in life. Every thing re- specting the working of the glass may be reduced to the act of blowing or running it. In blowing the glass, an iron tube about five feet long is used ; with this the workman takes out of the pot the quantity of glass necessary for his opera- tion : the air, which he exhales from his lungs through the hollow of the tube into the mass of glass he has taken up, distends it ; lie afterwards gives this mass, while it is distending, the form and dimensions he wishes. Compasses, scissors, and other iron tools, are employed to shape, pare, or dilate the glass. Care is taken to present it to the furnace as soon as it begins to cool ; when again heated, and it begins to melt, it is withdrawn, in order to bestow additional labor upon it. The softness of glass, wiien it is made red-hot, forms such a contrast to its fragility when it is cold, that it would be difficult to conceive how easily it may be kneaded, soldered, and distended, if we did not see it actually done before our eyes. Much has been s:]id of the malleability of glass; researches have been made in order to recover this important art, vviiich it was thought the ancients possessed ; and people have been unwilling to allow that there is no metal more ductile or more malleable than glass, when red-hot ; or that this art, sup- posed to exist among the ancients, is practised among the moderns every day in our glass- houses. Plate-glass is formed by pouring melt- ed glass upon a copper table, the surface of which is very flat, and by passing a level above the melted matter, in order to give the plate a uniform thickness. This operation is very siniilar to that by which metallic tablets are formed, by throwing melted metal upon sand. In order that the glass may be less brittle, it is necessary that it should be cooled very slowly : this last operation is called annealing. In the large manufactories of bottle-glass, the glass is annealed in furnaces made in the

angles of the room where the melting furnace is : these fur- naces are red-hot when the glass is deposited in them, and, as soon as they are filled with the glass articles, the apertures are closed, and the heat allowed to subside of itself. In small glass-houses, the annealing furnace is generally placed upon the melting-furnace, or at one side of it, so as to be heated by the current of flame which escapes from the furnace ; this is nverely, properly speaking, the commencement of a very wide flue, and which insensibly diminishes in width the further it is removed from the fire; so that the glass, deposited at its base, gradually cools as it is drawn towards the extremity. The glass is annealed very imperfectly in this man- ner, because it cools too quickly.

Of the combust ililca civpl(\t/cd in glans-irinkx- — Two kinds of combustibles are used in glass- works ; wood and coals. The employment of the latter is very advantageous, but it colors the glass by producing a fuliginous matter which is deposited u[ion the melted mass, and tinges it of a yellow hue. When we wish to make a clear

or crystal glass, therefore, we must take the pre- caution of covering the pots, to which only one aperture must be left, corresponding with the working hole; this is called working with cover- ed pots. When wood is employed, it must be carefully dried ; the flux in this case is easier, and the work expedited. Elm, beech, and oak, are the three best woods for a melting-furnace. The resinous woods give out too much smoke. It requires an active and intelligent person to manage the fire of a glass-house ; care must be taken neither to choke it with too much fuel, nor to let the heat fall off". It must be fed by renew- ing the fuel in small quantities at a time, and at' short intervals. The w-eight of clear glass to that of water, is : : 23 ; 10. That of argil and alkali ; : 2.5 : 10. That of lime and alkali ; ; 27 ; 10. The metallic oxides add to its gravity.

Such is very mu'^.h the practice in France. We shall now detail the processes adopted in our own country, and describe the materials made use of in the several manufactures. It will have been observed that glass contains, invariably, two essential ingredients, silex, and an alkali ; these are the only things necessary ; these, as we have seen, were the only substances from which glass was made accidentally on the shores of the river Belus; the sand existed on the spot, and the saline substance was the substance in contact with the sand, and made use of as supports to the kettles in which the provisions were to be dressed. The fire, rendered fierce by being ex- posed to the open air, soon united the sand and the saline substances in fusion, and produced that glass which was the object of so fortunate and important a discovery.

Though sand and a saline substance are all that are absolutely necessary in

the manufacture of glass, yet several other substances are likewise made use of for particular purposes, among which may be particularly noticed, lime, in the fornr of chalk, that is, a combination of lime and carbonic acid, or what is chemically deno- minated, a carbonate of lime, borax, the oxides of lead, manganese, arsenic, and nitre. A brief account of these will be necessary to render this article complete : though they are treated of alphabetically under their respective heads.

Silex may be found in almost all parts of the known world ; but of difl"erent kinds, and of various degrees of purity, and such will be se- lected in the manufacture as is adapted to the nature and fineness of the glass required. The siliceous material generally used in this country is sea- sand, which it is well known consists of minute rounded grains of quartz, which are suffi- ciently small to be used without any other pre- paration than that of washing. Sand, well adajUed for the manufacture of glass, is found on the coast of Norfolk, near Lynn, and like- wise on the western shores of the Isle of Wight. Common black gun-flints afl'crd a very pure kind of silex, which before they are used must be heated red-hot, and instantly quenched in cold water. The heat whitens the flints, and the water splits them in every possible direction, after which they may be ground without diffi- culty, in mills constructed for this kind of work. This ground flint is chieflv confined to the manu-

fictures of the potteries, and is but selaoin re- ported to in glass-works. The alkali used in the manufacture of glass is either soda or potash. It is used in the state of a carbonate, though it is evident that the carbonic acid gas is driven off in the process, and the glass is a compound of silex and pure alkali, and not an alkaline car- bonate. The finest flint-glass requires the best pearl-ashes, purified by solution and evaporation ; but inferior glass is made with coarser sub- stances, as barilla, where it is abundant, with common wood-ashes, and with kelp. These alkalies, it is true, are impure ; but this does not prevent their dissolving the silex into a very good and perfect glass, for the very impurities, consisting of neutral salts, lime, and other earths, assist in vitrification. Glass made from these alkalies has always a greenish tinge, owing to the iron contained in them. Lime, in the form of chalk, is used only in small proportions, because if much is used, the glass becomes opaque and milky on cooling, though it was perfectly trans- parent when hot : hence the reason of what is called smoky glass among the glaziers. The proper proportions are, to 100 parts of silex and

alkali, only 6 or 7 of quick-lime can be added. Lime, though mischievous, if used too liberally, has its particular uses when properly pro- portioned; for, besides affording a cheap flux, it renders the glass easier to work, and much less liable to crack by sudden and violent changes of temperature. Borax is the best flux that is known; its high price is the only objection to its more general use ; this prevents it from being used in common glasses, but it is never omitted in the finer kinds of plate glass, and those other articles of manufacture that are required to be clear and free from specks and bubbles. Borax renders all vitrescent compounds into which it enters remarkably thin-blowing, as the phrase is, and therefore peculiarly adapted for being cast in a mould, which is tlie way plate-glass is ma- nufactured. A very small quantity of borax will correct any deficient strength in the alkali. The oxides of lead, of which litharge and minium are the only ones employed in the large way, are of great importance in glass-making. Litharge, of itself, melts into a very dense, clear, yellow, transparent glass, fusible at a low decree of heat; and when melted it acts so powerfully on all kinds of earthen vessels, as to run through the common porous crucibles in a very short time, like liquor through a filter, but vitrifying and corroding the bottom of the crucible in its pas- sage. Litharge, therefore, is not only a most powerful flux to all earthy mixtures, but im- parts to glass the valuable qualities of greater density, and greater power of refracting the rays of light ; of bearing any sudden changes of temperature ; of greater tenacity when red-hot, and therefore easier to be worked. Most of the finer glasses contain a considerable quantity of tliis oxide, particularly the London flint-glass, or that species which is used for most of the pur- poses of the table, for lustres, and ether orna- mental works, which, when cut into various forms, display such beauty and brilliance, as to present a most dazzling appearance, for artificial gems and for most optical purposes. Glassˆ

however, in which there is much lead, has the defect of being extremely soft, so as to be readily scratched and injured by almost every hard body it rubs against. It is likewise so fusible, that thin tubes made of it will bend with ease in the flame, of a candle, and will sink down into a shapeless mass, at a moderate red-heat. This quality is often very useful for chemical pur- poses, but in other cases it is a great defect. If lead is in excess, there is great danger that the glass will be corroded by the contact of acrid liquors.

The black oxide of manganese has been long used in this manufacture : its ancient name was glass soap, which proves that it was used for the purpose of clearing the glass from any accidental foulness of color, which it might otherwise con- tract from the impurity of the alkali or other materials employed. The oxide of manganese is a very powerful flux for earthy matters, which is seen in the result of all attempts to reduce it to a reguline state in the usual way of combining with a saline carbonaceous flux, and

heating in a naked crucible. Not a particle of the oxide is reduced in this way, but the crucible constantly runs down in a heat sufficiently intense for the reduction of the manganese, together with all its contents, into a green flag. The only way known at present of reducing this oxide, is to enclose it without any saline or earthy addition in a cruci- ble lined with charcoal, and apply to it a very intense heat. IManganese, like lead, gives a den- sity to glass, and has, like that metal, a tendency to settle to the bottom of the pots where it accu- mulates, and, being here out of the way of most of the discoloring additions, it yields a purple tinge immediately adhering to the bottom, and partly corrodes the pots, so tliat, when they are worn out and broken up, they are thickly incrusted with a purple vitrescent ilag, easily separable by the hammer.

The white oxide of arsenic is another flux used in this manufacture : this is volatile in the fire in proportion as it approaches the metallic state, and hence it is of great advantage to employ nitre to oxygenate it more highly, and to render it more fixed. Arsenic is a powerful and a cheap flux, but it must be used only in great modera- tion, as taking a longer time to mix intimately with glass, and, allowing it to be perfectly clear, than almost any other additions that can be employed. Glass, in which arsenic is not most intimately combined, has a milky hue, which increases by age ; and when this oxide is in excess, the glass tends to deliquesce, and gradually to become soft, and at length a decomposition will take place. Drinking glasses, and others used for purposes connected with our food, should not be made with this flux, as being one of the most dangerous poisons. As arsenic is entirely vola- tilised, when in contact with any carbonaceous matter, another use has been made of it, which is to disperse the carbon that may remain in the glass pot, owing to any defect in the calcination of the alkali, or any other more latent cause. When this happens small lumps of white arsenic are thrust to the bottom of the glass pots, anu stirred in with the contents, and the fumes of the arsenic, meeting with the existing carbon

diffused through the glass, unites with it, is speedily volatilised, and the glass is left entirely free both from the carbon and the arsenic that was added.

Nitre is used, in glass-making, only in small quantities, and is an accessary ingredient for particular purposes. Nitre is readily decom- posed, giving out a large quantity of oxygen, some nitrous gas, and azote, leaving behind its pure potash. It is of great service in destroying any carbonaceous matter in

the ingredients of glass : it is also useful in fixing arsenic, and in keeping up the tinging powe-r communicated by manganese. The same circumstance, of keeping metallic oxides up to their highest state of oxi- genation, also renders this salt often useful, sometimes indeed essentially necessary, in the preparation of certain colored glasses.

While glass is in fusion, the substances which enter into its composition may be considered as combined with each other, so as to form a homo- geneous mass similar to water, holding in solu- tion a variety of salts. If it be cooled down very gradually, the different tendency of the con- stituents to assume solid forms, at peculiar tem- peratures, will cause them to separate successively in crystals, in the same manner as salts held in solution in water assume the form of crystals, when the liquid is slowly evaporated. But, if the glass be rapidly cooled down to the point of congelation, the constituents have not time to separate in succession, and the glass remains tlie same homogeneous compound as while in a state of fusion ; just as would happen to a saline solu- tion if suddenly exposed to a degree of cold sutHcient to congeal it completely. Hence it should seem that the vitreous quality depends entirely upon the fusibility of the mixture, and the suddenness with wliich it is cooled down to the point of congelation. The solid substance is precisely the same, as to its cliemical compo- sition, as if it were still in a state of fusion ; the sudden abstraction of heat having been the means of fixing the constituents before they had time to assume a new arrangement. All fusible mixtures, as we have seen, of the earths with fixed alkalies, &c., may be made at pleasure to assume the form of glass, or the appearance which characterises stone or porcelain, according to the rate of cooling ; and glass may be deprived of its vitreous form merely by fusing it, and cool- ing it down with sufficient slowness to enable the constituents to separate in succession. Expe- riments have been made on this subject by Rcaumiir and Lewis, who have both pointed out the method of converting different kinds of glass into an 0])aque, white, hard, refractory substance like porcelain. Lewis, however, demonstrated, by a variety of experiments, that it is not every kind of glass that can be converted into porce- lain, lie succeeded only with those that were composed of a variety of constituents, because such glasses alone contain ingredients that be- come solid in succession. Grcoii glass, which is apt to acquire a crystallised form, succeeded tiie iiest vvitli him, and he found that the tempe- rature, which was peculiarly adapted to tlie change, is that in which the glass is softened without being melted. It was the ctiricis ex-

periment of Sir James Ilall on basalt and green- stone that first led to an explanation upon what the vitreous state of substances depends. lie found that glass, consisting of various earthy bodies, loses its vitreous state, and assumes that of a stone, if more than a minute or two elapses while it is cooling down from the complete fusion to the point at which it congeals.

There are, it is well known, different kinds of glass in common use in this country, adapted to various purposes. The finest is plate-glass, of which looking-glasses are manufactured : flint- glass, or, as it is frequently denominated, crystal, is not nmch behind the plate-glass in the excel- lence of its qualities. These are both perfectly transparent and colorless, heavy, and very bril- liant. They are composed of fixed alkali, pure silex, calcined flints, and litharge. The propor- tions, as far as can be obtained, will be given hereafter. Flint-glass contains also much oxide of lead : though it is solid, it does not appear to be absolutely impervious to gaseous bodies, at least when heated nearly to the melting point. Dr. Lewis surrounded a piece of it with charcoal powder, and kept it some time in a heat not quite sufficient to melt it. The lead was revived in drops through the whole substance of the glass. Dr. Priestley ascertained, that glass tubes filled with hydrogen gas, and heated, became quite black, from the revival of the lead. When alka- line hydrosulphurets are kept in glass phials, the inside is coated with a black rust, which is, in fact, the lead separated by the sulphur from the glass.

Crown-glass is made without lead ; it is, there- fore, much lighter than flint-glass. It consists chiefly of fixed alkali, fused with siliceous sand. Bottle-glass is the coarsest and cheapest kind, and in this but little fixed alkali enters into the com- position. It consists of an alkaline earth, com- bined with alumine and silica. In this country it is composed of sand and the refuse of the soap- boiler, which is the lime employed in rend«ering his alkali caustic, and of the earlliy matters with which that alkali was contaminated. Some ot this kind of glass was analysed by M. Vauquelin, and was found to be composed of

Silex ....

Lime ....

Alumine

Oxides of manganese and iro!

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A small portion of potassa was also discerned, but it was too small to admit of being appre- ciated.

Of the different species of glass, the most fusible is flint-glass, and the least fusible bottle- glass. Flint-glass melts at the temperature of 19° Wedgwood ; crown-glass at 30°, and bottle-glass at 47^^. The properties that distinguish pood glass are as follows. It is perfectly transparent, and its hardness very considerable; its specific gravity varies from 2‘3, to 4, accordinj: to the materril; of which it is composed. Wlien cold,

^•30

GLASS.

it is brittle ; but when -at reJ-heat, it is one of the most ductile bodies iinown, and may be drawn into threads nearly invisible to the naked eye. It is almost perfectly elastic, and of course is one of the most sonorous of bodies. Few che- mical agents have any action upon it; but fluoric acid dissolves it with great rapidity.

Although glass is chiefly made of sand, flints, fixed alkalies and metallic oxides, yet there are various other substances which frequently enter into the composition, and which should therefore not be wholly omitted in the description. Pol- verine or Rochetta is one that is procured from the Levant, and is prepared from a plant called kali, which is cut down in the summer, dried in the sun, and burnt in heaps either on the open ground or on iron grates ; the ashes falling into a pit grow into a hard iJia’ss, and are fit for use when purified. K«lp which grows upon our coasts, and the ashes of the fucus vesiculosus furnish a similar salt: to these we may add the barilla of Spain.

To prepare ashes for making glass. — Take ivhat quantity and what sort of wood-ashes you ■will, except those of oak ; have a tub ready with a spigot and faucet towards the bottom, and in this tub put a layer of straw, and fling your ash-es on it ; then pour water upon them and let the ashes soak thoroughly until the water stands above them : let it thus continue over night, then draw out the faucet and receive the lie in another tub, put under

the first for this purpose : if the lie looks troubled, pour it again on the ashes, and let it settle until it is clear and of an amber color. This clarified lie put by, and pour fresh water on the ashes ; let this also stand over night ; then draw it off", and you will have a weak lie, which, instead of water, pour upon fresh ashes ; the remaining ashes are of use in the manuring of land. After you have made a sufficient quantity of lie, pour it into an iron caldron, bricked up like a brewing or washing copper, but let it not be filled above three parts full. On the top of the brickwork place a little barrel with lie ; towards the bottom of which bore a hole, and put a small faucet in, to let the lie run gently into the caldron, in a stream about the roundness of a straw ; but this you must ma- nage according to the quantity of lie, for you ought to mind how much the lie evaporates, and make the lie in the barrel run proportionally to sup- ply that diminution. Care must be taken that the lie do not run over in the first boiling ; but, if you find it will, put some cold lie to it, and slacken the fire, and let all the lie boil gently to a dry salt : when this salt is cold, break it and put it into the calcar, and raise your fire by de- grees until the salt is red-hot, yet so as not to melt it. If you think it calcined enough, take out a piece and let it cool, then break it in two, and if it is thoroughly white, it is Ame enough ; but if there remains a blackness in the middle, it must be put in the calcar oˆain, until it comes out completely white. If you will have it still finer, you must dissolve it again, filtrate it, boil it, and calcine it as before : the oftener this is repeated the more %vill the salt be cleared from the earthy particles, and it may be made as clear as crystal and as white as snow. Of this may

be made the finest glass possible. According to Dr. JNIerret, the be:ˆt ashes in England are burnt from thistles and hop-stalks, after the hops are gathered : and among trees the mulberry is reckoned to afford the best salt. The most thorny and prickly plants are observed to yield better and more salt than others ; also herbs that are bitter, as hops, wormwood, &c. Tobacco stalks, when burnt, produce likewise plenty of salt : and it is observed that fern ashes yield more salt than any other ashes. Dr. Thomson, to whose admirable work on chemistry

To make the glass frit. — Take white silver sand, wash it, and separate all the impurities from it, and let it dry, or rather calcine it. Of this take sixty pounds, and of prepared ashes thirty pounds, mix them well together, then set them in the melting furnace ; the longer it is melting, the clearer will the glass be made. If it stands for two days and two nights, it will be fit to work with, or to tinge with what color you please. Before you work it, add forty pounds of lead and half a pound of manganese to it. Or take ashes, prepared as above, sixty pounds, of prepared silver sand 160 pounds, arsenic four pounds, white lead two pounds, clear dry nitre ten pounds, borax two pounds ; mix all well to: ether, and proceed as has been directed, and you will have a beautiful crystal.

Of glass-bloiving. — Glass-blowing is the art of forming vessels of glass. This term, however, is exclusively applied to those vessels which are blown by the mouth. The operation is exceed- ingly simple : the workman has a tube of iron, the end of which he dips into a pot of melted glass, and thus gathers a small quantity of glass on the end of it ; he then applies the other end of the tube to his mouth, and blows air through it: this air enters into thebodyof the fluid glass, and expands it out into a hollow globe, similar to the soap-bladders blown from a tobacco-pipe. Various methods are used to bring these hollow globes into forms of the different utensils in common domestic use. The first and greatest of the glass-blower's implements is the furnace, which consists of two large domes set one over the other ; the lower one stands over a long grating (on a level with the ground), on which the fuel is placed ; beneath the grate is the ash- pit, and a large arch leading to it conveys air to the furnace. In the sides of the lower dome, as many holes or mouths are made as there are workmen to make use of the furnace, and before each mouth a pot of melted glass is placed. The pots are very large, like crucibles, and will hold from 300 to 400 cwt of liquid gla^s : they

are supported upon three small piers of brick- work, resting on tlie floor of the furnace. The form reverberates the flame from the roof down upon the pots, and they are placed at some dis- tance within the furnace, that the flame may get between the wall and the pots. The upper dome is built upon the other, and its floor made flat by filliftg up, round the roof of the lower dome, with brick-work ; there is a small chimney that opens from the top of the lower dome into the middle of the floor of the upper one, which conveys the smoke away from it, and a flue from the upper dome leads it completely from the furnace. The upper dome is used for annealing the glass, and is exactly similar to a large oven ; it has three mouths, and in diffierent parts a small flight of steps leads up to each. A green-glass furnace is square ; and at each angle it has an arch for annealing or cooling glasses or bottles. The metal is wrought on two opposite sides, and on the other two they have their colors, into which are made linnet holes for the fire to come from the furnace to bake the frit, and to discharge the smoke. Fires are made in the arches to anneal the work, so that the whole process is done in one furnace. These furnaces must not be of brick, but hard sandy stones. In France they build the outside of brick ; and the inner part, to bear the fire, is made of a sort of fuller's earth or tobacco-pipe clay, of which they also make their melting pots. In Britain the pots are usually made of Stourbridge clay. It is ob- served, that the roughest work in this art is the changing the pots when they are worn out or cracked. In this

case the great working hole must be uncovered ; the faulty pot must be taken out with iron hooks and forks, and a new one must be speedily put in its place through the flames (for glass-furnaces are always kept burn- ing) by the hands only. In doing this the man guards himself with a garment made of skins, in t!ie shape of a pantaloon, that covers him all but his eyes, and is thoroughly wetted all over : his eyes are defended by proper shaped glass of a green color.

We now come to describe the smaller imple- ments, which are as follows : — 1. A bench, or stool, with two arms at its ends, which are a little nitlined to the horizon. 2. A pair of shears, or rather pliers, formed of one piece of steel : they have no sharp edges and spring open of them- selves if permitted. 3. A pair of compasses to measure the work, and ascertain when it is brought to the proper size. 4. A pair of com- mon shears for cutting soft glass. 5. A blowing- pipe, which is a wrought-iron tube, three or four feet long, covered with twine at the end by which it is held. We may now explain the use of these tools in the manufacture of some vessel, as a lamp, Sec. The operation is conducted by three workmen. The first takes the blowing-pipe, and after heating it to a red-heat, at the mouth of the furnace, dips it into the pot of melted glass, at the same lime turning it round that it may take up the glass, which has then much the consis- tence of turpentine ; in the quantity of metal he is guided by experience, and must proportion it to the size of the vessel to be blown ; he then brings it from the furnace to the stool, and rolls

the lump of glass upon it to bring it to a round form, after which he blows through the pipe, restmg the glass upon an iron plate behind the stool and rolling it backwards and forwards. The blowing makes the glass hollow, and he has several methods of brmging it to a proper shape to be worked ; by simply blowing, it would as- sume a figure nearly globular; if he wants it any bigger in the equatorial diameter, he lays the pipe on a hook driven into the side of the stool, and turns it lound very quickly ; the centri- fugal force soon enlarges it in the equator. If, on the other hand, he wishes to lengthen its polar diameter he holds the pipe perpendicular, the glass hanging downwards, its weight length- ening it; and to shorten the polar diameter he holds the pipe upright, the glass at the top ; by blowing through the pipe the capacity is in- creased, and the thickness of the glass of the vessel diminished. We now suppose that, by a very dexterous application of the above methods, the workman has brought it to a proper shape ; he now carries it to the mouth of the furnace', and holds it in to get a fresh heat (for by this time it is become too stiff" to work easily), taking care to turn it round slowly, that it may not alter its figure. The vessel in this stage is delivered to the second, or principal workman, the other two being only assistants ; he is seated upon the stool, and lays the blowing-pipe with the glass at its end across its arm, and with his left hand rolls the pipe along

the arms, turning the glass and pipe round at the same time ; in his right hand he holds the pliers, whose blades are rub- bed over with a small piece of bees'wax, and as the glass turns round he presses the blad^bf the shears against it, following it with the shears as it rolls, at the end or side as occasion |requires, until he has brought it to the proper size, which He determines by the compassesi, though not materially altering its figure, the first workman kneeling on the ground, and blowing \,:h his mouth at the end of the pipe when directe.J by liis principal. The third workman now pro- duces a small rod, which is dipped into the meltin.'pot to take up a small piece of metal to serve as cement ; the end of this rod he applies to the centre of the glass just opposite the blow ing pipe, the principal workman directing it by holding its end between his pliers; the rod by the small piece of glass on its end immediately sticks to the glass vessel, and the third workman draws it away, both workmen turning their rods round, but in contrary directions ; this operation forms a short tube on the end. The principal workman then takes the short tube between the blades of a pair of pliers exactly like the others, but which are not covered wit-li bees'wax, the cold of these pliers instantly cracks the glass all round, and a very slight jerk struck upon the rod breaks it off". A hole is now made in the end of the glass, which is enlarged by the pliers while the glass is turned, until the neck is brought to the proper size and length to fit the bras\ cup as before described, and the inferior half of the lamp is brought to its shape and size in the samp manner. In order to form the upper half, the third workman has in the mean time been pre paring a round lump of glass on tlie end of om?

of the rods, which he applies hot to the end of the neck, it being guided by the principal work- man, and it immediately holds tight ; he tlien breaks off the other neck by the cold pliers, and thus separates it from the blowing-pipe. The glass is now heated a thud time, and brought from the furnace" to the principal workman, who enlarges the small orifice at the end by turning it round, and holding the pliers against it until he enlarges it to the right siiape : it is now finished, and the third workman takes it to a stool strewed over with small coals ; he rests the rod upon the edge of the stool, and with a file files the joint at the bottom neck : it soon breaks off and the lamp falls upon the coals, the distance being so very small as to be in no danger of breaking; a boy now puts the end of a long stick into the open mouth of the glass, and thus carries it to the annealing oven, where it remains some hours ; when taken out it must be cooled gradually, and is fit for sale.

About forty-six years ago a Bohemian manu- facturer first attempted to incrust in glass small figures of a grayish clay. The experiments which he made were in but few instances successful, in consequence of the clay not being adapted to adhere properly to the glass. It was, however, from the Bohemian that the idea was caught by some French manufactureri, who, after having expended a considerable sum in the attempt, at length succeeded in incrusting several medal- lions of Buonaparte, which were sold at an enor- mous price. From the extreme difficulty of making these medallions, and their almost inva- riably breaking while under the operation of cutting, very few were finished, and the manu- facture was on the point of being abandoned, when it was fortunately taken up by a French gentleman, who, with a perseverance not less honorable to himself than in its results advan- tageous to the arts, prosecuted a series bf expe- riments, by which, in a few years, he brought the invention to a state of great improvement. The French have never succeeded, however, in introducing it into articles of any size, such as decanters, jugs, or plates ; but have contented themselves with ornamenting smelling-bottles and small trinkets : nor had the invention been applied to heraldry, or any other useful purpose, antecedently to the recent improvements upon the art of this country.

England has always been famed for bringing to perfection, and directing to a useful applica- tion, the crude inventions of other countries. A patent has recently been taken out by Mr. Pel- lat of St. Paul's Church-yard for ornamental in- crustations, called aystallo ceramic, which bids fair to form an era in the art of glass-making. By the improved process ornaments of any description, arms, cyphers, portraits, and land- scapes, of any variety of color, may be intro- duced into the glass, so as to become perfectly imperishable. The substance of which they are composed is less fusible than glass, incapable of generating air, and at the same time susceptible of contraction or expansion, as, in the course of manufacture, the glass becomes hot or cold. It may previously be formed into any device, or figure, by either moulding or modelling ; and

may be painted with metallic colors, which are fixed by exposure to a melting heat. The orna- ments are introduced into the body of the glass while hot, by which means the air is effectually excluded, the composition being actually incoi% porated with the glass. In this way every description of ornamental glass ware may be decorated with embossed white or colored arms or crests. Specimens of these incrustations have been exhibited, not only in decanters and wine- glasses, but in lamps, girandoles, chimney- orna- ments, plates, and smelling-bottles. Busts and statues on a small scale, caryatides to support lamps or clocks, masks, after the antique, have been introduced with admirable effect. The composition used in the patent incrustation, is of a silvery appearance, which has a superb effect when

introduced into richly cut glass. Minia- tures, however, may be enamelled upon it, with- out the colors losing any of their brilliancy ; and thus, instead of being painted on the surface of the crystal, may be embodied in it.

A most important advantage to be derived from this elegant invention respects the preser- vation of inscriptions. Casts of medals and coins present no equal security for perpetuating them. The inscription, when once incrusted in a solid block of crystal, like the fly in amber, will effectually resist for ages the destructive action of the atmosphere.

Of making plate-glass. — The materials of the finest plate-glass are white sand, soda, and lime, to which are added manganese and zatfre, or any other oxide of cobalt for particular coloring pur- poses. The sand is of the finest and whitest kind, and is previously passed through a wire sieve of moderate closeness into water, where it is well stirred and washed till all dirt and impu- rity are got rid of. The sharpest grained sand is preferred, and indeed it is found that the grains of moderate size melt with the alkali sooner than either the very fine dust or the larger fragments. The alkali used is always soda, and there seems good reason to prefer this to potash, as glasses made with soda are found to be softer and to flow thinner when hot, and yet to be equally durable when cold. Besides, the neutral salts with the basis of soda, which constitute the glass-gall in this instance, such as the muriate and sulphate of soda, appear to be dissipated more readily by the fire than the corresponding salts of potash. Lime is of considerable use, and adds much to the fusibility of the other materials, supplying in this respect the use of litharge in the flint glass. Too much lime, however, impairs the color and solidity of the glass. The coloring, or rather discoloring, substances used are azure, or cobalt blue, and manganese. The latter is here in the state in which its effect is that of giving a slight red tinge, which mixes with the blue of the co- balt, and the natural yellow of the other materials ; and if properly proportioned they neutralize each other so that scarcely any tint remains. Besides these ingredients there is always a great quantity of fragments of glass arising from what is spilt iu the casting and the ends cut off in shaping the plates, which are made friable by quenching iu water when hot, and used in this state with the fresh materials. Of the above materials the

Sana, soda, lime, and manganese are first mixed to^^^ether with great care, and are fritted in small furnaces built for this purpose, the heat being gradually raised to a full red-white, and kept at this point with frequent

stirring till the materials undergo no further change, nor give any kind of vapor. The azure and the glass fragments, being already perfectly vitrified, are not added till to- wards the end of the process, which lasts about six hours. The glass-house for this manufacture differs in several particulars from the common houses for blowing glass, being about eighteen feet long and fifteen wide, made of good bricks. They are particularly distinguished from the common furnaces by containing two kinds of crucibles ; the larger ones, called ‘ pots,’ are in the form of an inverted and truncated cone, and in these the glass is melted. The others are smaller, called ‘cuvettes.’ Another essential part of this furnace is the flat table (of which there is one corresponding with each pot) on which the glass is cast. These tables are of copper-plate, about ten feet by six, supported by masonry ; and contiguous to each, on the same level, are flat ovens heated from underneath, upon which the glass when cast and sufficiently cooled may be slid without difficulty from off’ the table, and then annealed. The tops of the flat oven and the table are on a level with the cor- responding opening of the furnace, whence the cuvettes are withdrawn. When the glass is throughly melted, and fine, the cuvette is filled in the following way : the workman takes a copper l.‘ulle about ten inches in diameter, and fixed to an iron handle seven feet long, plunges it into the glass-pot, brings it up full of melted glass and empties it into the cuvette, the ladle being supported at the bottom by a strong iron rest held by two other workmen, lest the red-hot cop- per should bend and give way with the weight of the glass within. The cuvette being filled is suffered to remain in the furnace for some hours, that the bubbles formed by this disturbance of the glass may have entirely disappeared, and the samples taken out from time to time become quite clear and limpid. The door of the furnace is now opened, the cuvette is slid out and pulled upon a low iron cradle, and immediately drawn on to the side of the copper table, where it is hoisted by a tackle and iron chains, and overset upon a table, on which a thick flood of melted glass flows and spreads in every direction to an equal thickness. It is then made quite smooth and uniform at the surface, by passing over it a lieavy hollow roller or cylinder of copper made true and smooth by turning, after it is cast, and weighing about 500 pounds. At the same time, the empty cuvette is returned by the iron cradle to its proper place within the furnace. The number of workmen required for tlie whole pro- cess of casting is at least twenty, each of which has his separate employment. The plate being cast, the inspector examines whether there are any bubbles on any part of the surface, and if found, tiie plate is immediately cut up through them. The plate being now cool is slid by an iron in- strument from the casting table to tlu; contiguous anufTiling oven, previously well healed, and is carefully taken up and ranged within it. I’ath

oven will contain six entire plates, and, when full, all tlie openings are

stopped with clay, and tlie plates alloXved to remain there for ten days or a fortnight, to be thoroughly annealed. When fit to be taken out of the annealing oven they are sent away to receive all the subsequent operations of polishing, silvering, &c.; but first the edges are cut smooth and squared. This is done by a diamond, which is passed along the surface of the glass upon a square ruler in the manner of glaziers, and made to cut into the substance of the glass to a certain depth. The cut is opened by gently knocking with a small hammer on the under side of the glass just beneath, and the piece comes oflT, and the roughnesses are removed by pincers The plate is then finished as far as the glass-house business is concerned. The glass is now to be polished, which is done with sand and water ; the glass being first fastened down to a wooden frame, with plaster of Paris, the operation is performed by means of another glass fastened in a frame, which is made to rub upon the other, wet sand being interspersed between the two. As the surfaces of the plates wear down, the sand is used finer and finer. Emery is next used of two or three degrees of fineness, which brings the glass to an even surface, but it is still perfectly opaque. To render it transpa- rent, colcothar, which is the residue left in the retorts of the aquafortis makers, is applied. The polishing instrument is a block of wood, covered with several folds of cloth and carded wool, so as to make a firm elastic cushion. This block is worked by the hand ; but, to increase the pres- sure of the polisher, the handle i-s lengthened by a wooden spring, bent to a bow three or four feet long, which, at the other extremity, rests against a fixed point to a beam placed above. The plate is now fastened to a table with plaster, covered with colcothar, and the polisher begins his operation by working it backwards and for- wards over the surface of the plate till one side is done; then the other is to be polished in the same manner.

Crown-glass is the name given to the beat window glass, the composition of which varies very considerably : but a good glass of this kind may be made with 200 parts of soda, 300 of fine sand, 33 of lime, and from 250 to 300 of the ground fragments of glass that has already been worked. A small quantity of arsenic is some- times added to facilitate the fusion. Zafre, or the oxide of cobalt, with ground flint, is often used to correct the dingy yellow which the inferior kind of crown-glass naturally acquires. The manu- facture of the common window glass, though made by blowing, is carried on very diflferently from that of the common flint glass articles, as the object is to produce a larger flat and very thin plate, which is afterwards to be cut by the gla- zier's diamond into the required shapes and sizes. It is difficult to convey to the reader a proper and precise idea of the process by mere descrip- tion, but it may be mentioned, that the workman takes a large mass of glass on the hollow iron rod, and by rolling it on an iron plate, and swinging it backwards and forwards, causes it to lengthen

by its own weight into a cylind(;r, which is then rendered hollow by blowing with a force

of breath till ii is brought out to the requisite thickness. The hollow cylinder is then opened by holding it to the fire, which by expanding the air confined within it (the hole of the iron rod being stopped) bursts it at its weakest part; and when still soft it is ripped up through its whole length by iron shears, opened out into a flat surface, and then it is finished by annealing as usual.

Common green bottle glass is another kind, which is made almost entirely of sand, lime, and sometimes clay, alkaline ashes of any kind, ac- cording as cheapness or convenience direct, and more especially of kelp in this country; of barilla, varec, and the other varieties of soda, in France; and of wood ashes in many parts of Germany, and in North America. The following compo- sition has been given as a good and cheap mate- rial for bottle-glass, 100 parts of common sand, 30 of varec (a coarse kind of kelp made on the western coasts of France) 160 of the lixiviated earth of ashes, 30 of fresh wood ash, 80 of brick clay, and about 100 of broken glass. Bottle-glass is ? very hard, well vitrified glass, not very heavy relatively to its bulk, and being fused at a very high degree of heat, and from other circum- stances, it resists the corrosive action of all li- quids much better than flint-glass. Besides be- ing used for wine and beer bottles, it is much employed for very large retorts, subliming vessels, and other processes of chemistry, for which it is admirably adapted, being able to bear as much as a pretty full red-heat, without melting or sink- ing down into a shapeless lump.

Composition for xvhite and crystal-glass. — To make crystal-glass, take of the whitest terso, pounded sma'd, and sifted as fine as flour, 200lbs. ; of the bait of polverine ISOlbs. ; mix them to- gether, and put them into the furnace called the calcar, first heating it. For an hour keep a mo- derate fire, and keep stirring the materials with a proper rake, that they may incorporate and cal- cine together ; increasing tlie fire for five hours ; after which the matter is taken out, being suffici- ently calcined, and is called frit. After this, re- move it immediately from the calcar to a dry place, and cover it up from dust, for three or four mouths. Now, to make the crystal glass, take of the above crystal frit, called also boUito, and set it in the melting pots in the furnace, adding to it a due quantity of manganese ; when the two are fused, cast the flour into fair water, to clear it of the salt called sandiver, which would other- wise make the crystal obscure and

cloudy. This washing must be repeated again and again, till the crystal be fully purged ; or this scum may be taken off by proper ladles. Now set it to boil for four, five, or six days; which being finished, see whe- ther it have manganese enough, and, if it be yet , greenish, add more manganese at discretion, by little and little at a time, taking care not to over dose it, because it will incline it to a black- ish hue. Let it clarify, and become of a shining hue; which done, it is fit to be used, and blown into vessels of any kind. Or, 120 parts of fine sand, 40 of purified pearl-ash, 35 of litharge, 13 of nitre, and a small quantity of black oxide of manganese, make a good g/ass.

Compositions for fint-glass. — Flint glass, as it

is usually called by us, is of the same general kind with that which, in other places, is called crystal-glass. It has this name from its having been originally made with calcined flints, before the use of white sand was understood ; and it has i-etained this name, though there are now no flints used in its composition. This glass diff'ers from the crystal-glass in having lead in its com- position to flux it, and white sand for its body, whereas the fluxes used in the other are salts or arsenic, and the body consists of tarso, white river pebbles, and such kinds of stones. To the lead and white sand a due proportion of nitre is added, and a small quantity of magnesia. The most perfect kind of flint-glass is made by fusing, in a very strong fire, 120 lbs. of white sand, 50 lbs. of red-lead, 40 lbs. of the purest pearl- ash, 20 lbs. of nitre, and 5 oz. of magnesia. Another composition of flint-glass is said to consist of the following : 120 lbs. of white sand, 54 lbs. of the purest pearl-ash, 36 lbs. of red-lead, 12 lbs. of nitre, and 6 oz. of magnesia. To either of tlie above compositions a pound or two of arsenic may be added, to increase the flux of the composition. A still cheaper flint-glass may be made with 120 lbs. of white sand, 35 lbs. of the best pearl-ash, 40 lbs. of red-lead, 13 lbs. of nitre, 6 lbs. of arsenic, and 4 oz. of magnesia ; or, instead of the arsenic, may be substituted 15 lbs. of common salt; but this will make it more brittle than the other. But the cheapest of all the compositions hitherto employed, con- sists of 120 lbs. of white sand, 30 lbs. of red-lead, 20 lbs. of the best pearl-ash, 10 lbs. of nitre, 15 lbs. of common salt, and 6 lbs. of arsenic. Or, 100 parts of sand, 80 to 85 of red-lead, 35 to 40 of pearl-ash, 2 or 3 of nitre, and 1 oz. of man- ganese. The oxide of lead may be reduced in this glass.

Of silvering glass. — Glass when smoothed and polished does not acquire the property of reflect- ing objects till it has been silvered, as it is called, an operation eff'ected by means of an amalgam of tin and quicksilver. The tin-leaf employed must be of the size of the glass, because, when pieces of that metal are united by means of mer- cury, they exhibit the appearance of lines. Tin is one of those metallic substances which become soonest

oxidated by the means of mercury. If there remains a portion of that oxide or calx, of a blackish gray color, on the leaf of tin, it pro- duces a spot or stain in the mirror, and that part cannot reflect objects presented to it : great care, therefore, is taken in silvering glass to remove the calx of tin from the surface of the amalgam? The process is as follows: — The leaf of tin is laid on a very smooth stone table, and, mercury being poured over the metal, it is extended over the surface of it by means of a rubber made of bits of cloth. At the same moment the surface of the leaf of tin becomes covered with blackish oxide, which is removed with the rubber. More mercury is then poured over the tin, where it remains at a level to the thickness of more than a line, without running ofl^. The glass is ap- plied in a horizontal direction to the table at one of its extremities, and being pushed forwards it drives before it the oxide of tin which is at the surface of the amalgam, A number of leaden.

weights, covered with cloth, are then placed on tlie glass which floats on the amalgam, in order to press it down. Without this precaution the glass would exhibit the interstices of the crystals resulting from the amalgam. These crystals have the form of large square laminae irregularly disposed.

To obtain leaves of tin, which are sometimes six or seven feet in length, with a proportionate breadth, they are not rolled but hammered after the manner of gold-beaters. The prepared tin is first cast between two plates of polished iron, or between two smooth stones not of a porous nature, such as thunder-stone. Twelve of these plates are placed over each other; and they are then beaten on a stone mass with heavy hammers, one side of which is plain and the other rounded. The plates joined together are first beaten with the latter : when they become extended the num- ber of the plates is doubled, so that they amount sometimes to eighty or more. They are then smoothed with the flat side of the hammer, and are beaten till they acquire the length of six or seven feet, and the breadth of four or five. The small block of tin from which they are formed is at first ten inches long, six in breadth, and a line and a quarter in thickness. When the leaves are of less extent, and thin, from eighty to 100 of them are smoothed together.

Tin, extracted from the amalgam which has been employed for silvering glass, exhibits a re- markable peculiarity. When fused in an iron pan, its whole surface becomes covered with a multitude of tetrahedral prismatic crystals, two or three lines in length, and a quarter of a line in thickness. The interior of these pieces of tin, when cut with a chisel, have a grayer tint than pure tin, which is as white as silver. The latter crystallises also by

cooling ; but it requires care. When it begins to be fixed, decant the part which is still in fusion, and there will remain at the bottom of the crucible beautiful crystals of a dull white color, which appeared to me to be cubes or parallelopipedons.

Painting on glass. — ˆThe primitive manner of painting on glass was very simple, and, of con- sequence, very easy ; it consisted in the mere arrangement of pieces of glass of different colors, in some sort of symmetry ; and constituted a kind of what we call iMosaic work. Afterwards, when they came to attempt more regular designs, and even to represent figures raised with all their shades, their whole address went no farther than ˆo the drawing the contours of the figures in black, with water colors, and etching the dra- peries after the same manner, on glasses of the color of the object intended to be painted. For the carnations they cliose glass of a bright red ; upon which they designed the principal linea- ments of the face, &c., with black. At last, the taste for this sort of painting being considerably improved, and the art being found applicable to the adorning of the churches, basilicas, &c., they found means of incorporatinij the colors with the glass itsoll", by exposincr them to a proper deirxee of fire, after the colors had been laid on.

Those beautiful works, among the painters in glass, which were made in the glass-house, were of two kinds : in some the color was diffused through the whole body of glass ; in others, which

were the more common, the color was only on one side, scarcely penetrating within the sub- stance ab'ove one-third of a line; though this was, more or less, according to the nature of the color, the yellow being always found to enter the deep- est. These last, though not so strong and beau- tiful as the former, were of more advantage to the workmen ; because, on the same glass, though already colored, they could show other kinds of colors, where there was occasion to embroider draperies, enrich them with foliages, or represent other ornaments of gold, silver, &c. In order to this, they made use of emery : grinding, or wear- ing down the surface of the glass, till such time as they were got through the color to the clear glass : this done, they applied the proper colors on the other side of the glass. By this means the new colors were prevented from running, and mixing among the former, when the glasses came to be exposed to the fire, as will hereafter be shown.

When the intended ornaments were to appear white, or silvered, they contented themselves to bare the gloss of its color with emery, without applying any new color at all ; and it was in this manner that they wrought the lights and hei2;ht- enings on all kinds of colors. The painting with vitreous colors on glass depends entirely on the same principles as painting

in enamel, and the manner of executing it is likewise the same, except that in this, the transparency of the colors being indispensably requisite, no substances can be used to form them but such as vitrify per- fectly : and, therefore, the great object is to find a set of colors which are composed of such sub- stances, as, by the admixture of other bodies, may promote their vitrification and fusit)n ; are capable of being converted into glass ; and melt- ing in that state, with less heat than is sufficient to melt such other kinds of glass as may be chosen for the ground, or body to be painted ; to temper these colors, so as to make them proper to be worked with a pencil, and to burn or reduce them by heat, to a due state of fusion, without injuring or melting the glass which con- stitutes the body painted. The first thing to be done, in order to paint on glass, in the modern way, is to design, and even color, the whole sub- ject on paper. Then they make choice of pieces of glass proper to receive the several parts, and proceed to divide or distribute the design itself, or the paper it is drawn on, into pieces suitable to those of glass ; having always a view that the glasses may join in the contours of the figures, and the folds of the draperies ; that the carnations and other finer parts may not be damaged by the lead wherewith the pieces are to be joined together. The distribution being made, they mark all the glasses, as well as papers, with let- ters or numbers, that they may be known again; which done, applying each part of the design on the class intended for it, they copy or transfer the dciign upon this glass, with the black color, diluted in gum-water, by tracing and following all the lines and strokes as they appear through the glass with the point of a pencil.

When these first strokes are well dried, which happens in about two days, the work Iwing only in black and white, they give it a slight wnsh over with urine, gum arable, and a little black ;

ami this several times repented, according as the shades are desired to be heightened ; with this precaution, never to apply a new wash till tlie former is suilficiently dried. This done, the lights and risings are given, by rubbing off the color in the respective places with a wooden point, or the handle of the pencil.

As to the other colors above-mentioned, they are used with gum-water, much as in painting in miniature, taking care to apply them lightly, for fear of effacing the outlines of the design ; or even, for the greater security, to apply them on the other side, especially yellow, which is very pernicious to other colors by blending therewith.

And here to^, as in pieces of black and white, particular regard must be always had not to lay color on color, or lay on a new lay till such time as the former are well dried. It may be added, that the yellow is the only color that penetrates through the glass, and incorporates therewith by tlie fire ; the rest, and particularly the blue, wliich is very difficult to use, remaining on the surface, or at least entering very little. When the painting of all the pieces is finislied, they are carried to the furnace or oven, to anneal or bake the colors. The furnace here used is small, built of brick, from eighteen to thirty inches square. At six inches from the bottom is an aperture to put in the fuel, and maintain the fire. Over this aperture is a grate, made of three square bars of iron, which traverse the furnace, and divide it into two parts. Two inches above this partition is another little aperture, through which they take out pieces to examine how the operation goes forward. On the grate is placed a sc[uare earthen pan, six or seven inches deep, and five or six inches less every way than the perimeter of the furnace. On one side hereof is a little aperture, through which to make the trials, placed directly opposite to that of the furnaces destined for the same end. In this pan are the pieces of glass to be placed in the following manner: — First, the botiom of the pan is covered with three strata, or layers, of quicklime pulver- ised ; those strata being separated by two others of old broken glass, the design whereof is to secure the painted glass from the too intense heat of the fire. This done, the glasses are laid horizontally on the last, or uppermost layer of lime. The first row of glass they cover over with a layer of the same powder an inch deep ; over this they lay another range of glasses ; and thus alternately till the pan is quite full, taking care that the whole heap always ends with a layer of the lime-powder.

The pan thus prepared, they cover up the fur- nace with tiles on a square table of earthenware, closely luted all round, only having five little apertures, one at each corner, and another in the middle to serve as chimneys.

Things thus disposed, there remains nothing but to give the fire to the work. The fire for the first two hours must be very moderate, and must be increased in proportion as the coction advances for the space often or twelve hours, in which time it is usually completed; At last the fire, which at first was only of charcoal, is to be of dry wood ; so that the tlame covers the whole])an, and even issues out at the chimneys. During tlie last hours they make assays from time to

time by taking out pieces laid for that purpose, through the little aperture of the furnace and pan, to see whether the yellow be perfect, and the other colors in good order. When the an- nealing is thought sufficient, they proceed with great haste to extinguish the fire, which otherwise would soon burn the colors and break the glasses.

Mr. Collins, glass-manufacturer of the Strand, near Temple Bar, has furnished the following observations and receipts on tliis subject; —

‘ Enamel colors and painting on glass,’ says Mr. Collins, ‘differ totally from all others, it being requisite on glass that the colors used should appear transparent, and bear (without blistering in the kiln) to be laid on very thick. In every other style of enamel painting the fluxes must be so compounded as to bring the beauty of the color on the surface, and they do not require to be any thing like the substance compared to those used on glass.

‘ Crown window glass is the best for the pur- pose of enamelling upon, its principal composi- tion or base being silex, which is not only the best substance for receiving colors, but also by far the best as the base for the fluxes. The best fluxes are obtained from finely calcined flints, lead and salts forming the fusing matter; these latter must be carefully used in various propor- tions, as the colors or oxides require.

‘ lieceipts for the colors. — From gold only an; prepared any pink or rose colors, although it has often been asserted that the French have prepared them from iron, which may sometimes answer for an orange- red, but will never produce a pink ; and is very far (even as a red) from being so fixed a color as those made from gold, although it hag been stated to be more so. In fact, a color being well fixed (on the contrary) depends as much upon the properties of the flux being rightly prepared to receive it as on the oxide or coloring matter itself, which experiment only can firmly elucidate.

‘All metals should be as far removed from their metallic state as possible, and when in that state from which it would be the most difficult to restore it, it is best calculated for the purpose, therefore gold precipated by tin is better than that by an alkali, being a much more perfect oxide. Besides that tin is the firmest and best base for receiving and holding the color struck from gold.

‘ In combining the fluxes, so that they shall bear the greatest possible affinity for the oxides, intended, rests the principal art of color-making.

‘ In the solutions of gold and tin it is best to use more of the nitric and as little of the mu- riatic acid as possible, and the larger the pro- portion of metal that can be dissolved in a certain portion of acids the better.

‘ In the solution of gold the beauty of the color rests principally in the precipitate ; to ob- tain the best, use the water as hot as possible ; into about a pint of which drop a little gold (about fifteen or twenty drops), then the tin most carefully, by a drop at a time until it becomes as nearly

as possible the color of port-wine at the edge of the basin ; it will then instantly precipi- tate itself. Wash it several times with very hot water; it must now be mixed with its flux befora it is suffered to dry.

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‘ Rose color should always be made from an oxide that inclines to the pink {as it occasionally differs); the flux should contain scarcely any lead, a small portion of silver is then added, and the whole tiuely ground before dry.

- *I have entered at greater length into tlie pink and rose colors produced from gold than on any odiers, they being by far the most difficult to])roduce, and should never be made but on a liright and clear sun-shiny day, which I am per- suaded has great influence on the preparation, as you never can produce this color good with a damp atmosphere or a cloudy sky.*

- *Blue is made from cobalt ; the best is that prepared by fire, as in Staffordshire, being more -jondensed than that which is prepared by the acids. It is then fused with borax ground fine and washed several times ; when dry, mixed with the flux and melted together.*

‘ Purple is made from an oxide that inclines to the blue, and the flux may contain a much larger portion of lead, &c., as the rose color, only omitting the silver.

‘ Yellows are made from varied proportions of the oxides of antimony and lead. Tin is best omitted and silex used in its place ; the whole to be well melted.

‘ Orange. Prepared as the yellow, only intro- ducing a small quantity of the purple oxide of gold, and melted as yellow.

‘ Brown is made from manganese and anti- mony ground with the flux, and well melted together.

- *Black is best when made from good iron scales and oxide of cobalt, with a little of the darkest possible purple oxides of gold, mixed Aith the flux and melted together.*

‘Green is made from copper oxidated by fire, o.nited witli the flux, and well melted. It is tlien mixed with yellow to produce a grass green, and with white enamel (made by arsenic) to produce a blue-ureen.

‘White, which is seldom used on glass, is made from arsenic mixed with the flux, and when in a state of fusion kept well covered. Tin

is also considered, for some purposes, t’t-n only thing from which a good fixed white can be made, but all that I have yet seen made in this country is very bad. The Venetian white enamel only can be depended on, which latter more par- ticularly applies to enamelling on copper. The hard white enamel is but very little understood in this country. By some its base is stated to be the oxide of tin, but it is very doubtful. This is that substance used as the first ground or coat- ing of the copper-plates for enamel painting, over which a somewhat more transparent and softer enamel (termed flux) is laid, which, melt- ing sooner than the first, is better adapted for receiving the colors. In this style of painting so little can be done before it is necessary to fire the picture, that it frequently requires a dozen fires to complete a painting.

‘ Ruby. That produced by the ancients is what has made the greatest noise, the art of making whicli being considered lost, and for this reason principally admired. But this is an error, as that beautiful color is now made in as great per- fection as ever, and equally well understood. Ruby may be made either from gold or copper. When made from the latter the color is liable to change by various degrees of heat, any thing above a red heat totally dissipating it. That made from gold is perfectly fixed, though not quite so deep a tint ; with this latter, antimony, iron, and silver are used. With the copper red tartar.

- *Painting on glass requires infinitely more care in burning than enamel, both on account of the superior size and brittleness of the sub- stance; it therefore requires many hours an- nealing.*

‘ In the preparing of glass and enamel colors there is great difference ; but the oxides or coloring matters are alike in all, excepting the yellow, which on glass is produced from silver, on enamel from antimony. A fine red is pro- duced on glass by the union of silver and an- timony.’

GLAS (John), M. A., the founder of that sect of Independents commonly distinguished in Scotland by the name of Glassites, and in England by that of Sandemanians. See Inde- pendents. His father was minister of Aberne- thy ; and he was bom at his father’s manse in 1695 lie was educated and obtained the de- gree of M.A. at St. Andrews; and was, when a very young man, ordained minister of Tealing, near Dundee. His doctrines and ministry were remarkable, and drew much attention ; and, even while connected with the establishment, his pe- culiar ideas of the purity of church communion and government, were observable In 1727 he published a work, entitled The Testimony of the King of Martyrs, in which his

Independent principles were fully developed. In that treatise he maintains the inconsistency of any connexion between civil establishments and the church of Christ, which is hot of this world. This publi- cation, with other concurring circumstances, pro- duced a long controversy between Mr. Glas and

the Synod of Angus and Mearns. So far, how- ever, from retracting or trimming in his princi- ples, he still more openly avowed and main- tained them, in a tract published the following year, entitled, A Congregation subject to no Jurisdiction under Heaven. He was deposed in 1728, and immediately afterwards connected himself with a few])oor people who adhered to him ; and, although his adherents have never been numerous, the doctrines which he taught have been generally spread through Britain and many parts of America. He was subjected to great poverty for many years, in supporting a numerous family of thirteen children ; and died at Dundee, in November, 1773, highly valued by his friends, and respected by all who knew him. He published many religious Tracts, which were collected and printed in 4 vols. 8vo., and since reprinted in .'> vols. The leading doctrines in these works, are, 1. The divinity of Christ, and the perfection of his righteousness to justify the ungodly; 2. Purity of Christian com-

muni'on ; 3. Independence of all human au- thority in matters of conscience ; 4. The strictest subjection to civil government and magistracy in civil concerns; and, 5. Unqualified obedience to the commands of Christ and his apostles.

GLASSE (George Henry), a modern classical scholar of some eminence, was educated at Christ Church, Oxford, where he took the degree of M.A. in 1782. His father. Dr. Samuel Glasse, resigned in 1785 the rectory of Han- well, Middlesex, in his favor. He held it till his death in November, 1809. Mr. Glasse at an early period of his life possessed a remarkable facility of writing Greek verses. In 1781 he published a translation of Mason's Caractacus, and in 1788 a translation of the Samson Ago- nistes of Milton into Greek verse. He published likewise Contemplations on the Sacred History, altered from the Works of Bishop Hall, 4 vols. 12mo. ; Louisa, a Narrative of Facts, supposed to throw light on the Mysterious History of the Lady of the Hay-stack, translated from the French; a Volume of Sermons on various sub- iects, &c.

GLASTONBURY, a town of England, in Somersetshire, anciently called Avalonia. It is noted for a famous abbey, some magnificent ruins of which stdl remain. The curious struc- ture called the abbot's kitchen is pretty entire. The monks pretended that it was the residence of Joseph of Arimathea, and of St. Patrick. Ina, king of the West Saxons, erected a church Iiere, A.D. 708, which he and his successors en- riched so much, that the abbot had the title of lord, and sat among the barons in parliament : not even a bishop or prince dur-st set foot on the isle of Avalon, in which the abbey stands, with- out his leave. The revenue was about £40,000 a-year, besides seven parks stocked with deer. In 853 it was ruined by the Danes, but rebuilt by king Edward I. In 1184 both the town and abbey were burnt, and in 1276 suffered much by an earthquake. Richard Witing, the last abbot, who had 100 monks and 400 domestics, was hanged on Torhill, in his pontificals, with two of his monks, for refusing to take the oath of supremacy to Henry VIII. Edgar and many other Saxon kings were buried here. It is said that Henry II., relying on the tradition of several songs, which recorded this to be the burial-place of king Arthur, ordered a search to be made, when a leaden cross was discovered with a Latin inscription in rude Gothic characters, thus trans- lated : 'Here lies the famous king Arthur, buried in the isle of Avalon.' Beneath was found a c-offin hollowed out of the solid rock, wherein were the bones of a human body, supposed to be those of king Arthur; which were then de- posited in the church, and covered with a sump- tuous monument. Every cottage has part of a pillar, a door, or a window of the old building. Here are two parish churches. This town, while under its abbots, was a parliamentary borough, but it lost that and its privilege of a corporation ; the latter of which, however, was restored by queen Anne, who granted it a new charter for a mayor and burgesses. The only manufacture is stockings, but the chief support of the place is the resort of strangers to see the

ruins of the abbey. Glastonbury is five miles S.S. W. of Wells, and 126 wˆst of London.

Glastonbury Tiiorn, n. s. A species of medlar.

This species of thorn produces some bunches of flowers in Winter, and flowers again in the Spring.

3tiUer.

GLATZ, or Kladsko, a country of the Prus- sian States, surrounded by Silesia, Moravia, and Bohemia. It has a territorial extent of 550 square miles, and is one of the most elevated parts of Europe, lying in the midst of the Sudetic range of mountains. The most noted of this province are the Eulengebirge, the Schneeberg, which divides it from Moravia, and the Heu-

scheur. In the interior some beautiful valleys diversify and animate the scenery. ‘ The rivers are the Neiss, the March, and the Erlitz. The pastures are fine, the cattle numerous, and some little corn is exported. This country also con- tains coal, chalk pits, and a number of mineral springs ; together with mines of silver, lead, copper, and iron, but they are wrought on but a small scale. Flax is cultivated commonly, and spinning and weaving are considerable pur- suits. This was formerly a lordship, dependent on the crown of Bohemia, and subject to Austria till 1742, when it was seized by Frederic II., and has ever since been retained by Prussia. It forms an important pass between Bohemia and Silesia, and is included in the government of Reichenbach, in that province. Inhabitants

100,000.

GLATz,the capital of the above district, stands on the Neiss, between two noble hills, one of which is surmounted by an old castle, and the other by a regular modern fortress. The town itself is likewise fortified. The manufactures are leather and carpets. Glatz contains the only Lutheran parish church in the district. It sur- rendered to the Prussians in 1742, was taken by storm by the Austrians in 1759, but restored at the peace of 1763. It surrendered to a body of Wirtemberg and Bavarian troops 26th of July, 1807, and is now the chief town of a circle in the government of Reichenbach, fifty- five miles south by west of Breslau, and ninety- four east of Prague. Inhabitants 6700.

GLATZ ERG EBIRGE, a mountain ridge, forming part of the Sudetic chain, in the ncHrth- east of Bohemia. The main range touches the north of Moravia, and sends off secondary branches to the west, through the south of Bo- hemia, and through the north as far as Saxony.

GLAUBER (John Rodolphus), a celebrated German chemist, who flourished about 1646. He wrote a great number of treatises on chemistry, some of which have been translated into French. All his works have been collected into one vo- lume, entitled, Glauberus Concentratus, which has been translated into English, and was printed at London in folio, in 1 689. Mr. Brande speaks highly of his discoveries. Sulphate of soda was first combined by him, and called Glauber’s salts.

GLAUCHAU, a town and district of the county of Schonburg, Saxony, on the Mulda, Its neighbourhood, though not fertile, abounds in wood and metals, and its cotton manufac-

t'lres are considerable. It is also tlie centre of t!ie public business of the different districts be- lonsring to the court of Schonburg. Inhabitants 4000. It is tifty-three miles west of Dresden, and six north of Zwickau.

GLAUCO'MA, 71. s. Gr. yXavKuna; Tr.glau- co/ne. A fault in the eye, which changes the crys- talline humor into a grayish color, without detriment of sight, and therein differs from what is commonly understood by suffusion.

The glaucoma is no other disease than the cataract,

Sfiarp.

Glaucoma, from yXavKog, sea-green, or sky color, is a disease in the eyes, wherein the crys- talline humor is turned of a bluish or greenish color, and its transparency hereby diminished. To those in whom this disorder is forming, all objects appear as through a cloud or mist ; when entirely formed, the visual rays are all intercepted and nething is seen at all. The glaucoma is usually distinguished from the cataract or suf- fusion, in this, that in the cataract the whiteness appears in the pupil, very near the cornea ; but it shows deeper in the glaucoma. Some late authors, however, maintain the cataract and glaucoma to be the same disease. According to them, the cataract is not a film, or pellicle, formed before the pupil, as had always been imagined; but an inspissation or induration of tlie humor itself, whereby its transparency is prevented ; which brings the cataract to the glaucoma. According to Mr. Sharp, the glau- coma of the ancient Greeks is the present cataract; but M. St. Yves says, it is a cataract accompanied witJi a gutta serena. See Sur-

C'ERY.

GLAUCUS, in ancient mythology, a deity of the sea, who, before his deification, was a fisher- man of Anthedon. Having one day taken a considerable number of fishes, which he laid upon the bank, he perceived that as soon as tliey touched an herb that grew on the shore, they received new strength, and leaped again into the sea ; upon which he was tempted to taste of the herb himself, and instantly leaped into the sea after them, where he was metamor- pliosed into a Triton, and became one of tlie sea gods.

GLAVE, n. s. Tr. glaive ; Welshglaif, a hook. A broad sword ; a falchion.

And whet her tonge as sharpe as swerde or gleve, Chaucer. The Court of Love.

Two hundred Greeks came next in sight well trycd. Not surely armed in

steel or iron strong. But each a (jlave hath pendant by his side. Fairfax.

GLAV'ER, u.n. Sax. jhpan ; Welsh gluve, flattery. It is still retained in Scotland. To flatter ; to wheedle. A low word.

Kingdoms have their distempers, intermissions, and paroxysms, as well as natural bodies ; and a glavering council is as dangerous as a wliecdling priest, or a flattering physician. L'Eslratige,

GLAUX, in botany, a genus of the mo- nogynia order, and pentandria class of plants, natural order seventeenth calycanthema- : cal. monophyilous: cor. none: caps, unilocular, quinqvovalved, and pentaspermous. Species one only ; a sea-coast herb.

GLAZING. The most ancient species of glazing was in lead-work, as our many cathedrals and religious houses, still extant, demonstrate ; and fixing glass in leaden frames is still contin- ued for the same description of buildings.

The business of a glazier, if considered in its most simple operations, consists in fitting all the various kinds of glass manufactured and sold, into sashes previously prepared to receive them. The sashes, as they are now made, have a groove or rebate formed on the back of their cross and vertical bars, adapted to admit the glass : into these rebates the glazier minutely fits the squares, which he beds in a composition called putty. The putty consists of pounded whiting beaten up with linseed oil, and so kneaded and worked to- getlrer as to make a tough and tenacious cement, and is of great durability ; this the glazier colors to suit the sashes he may have in hand. If they are common deal sashes tlie putty is left and used as first manufactured ; but if they are ma- hogany it is colored with ochre till it approaches more nearly that of the sashes.

In glazing windows the color of the glass is that on which the greatest beauty is given to the work ; and to effect this successfully many different manvifactories have been established. The most usual kind of window-glass now found at the glaziers' is called crown glass : it is picked and divided at the manufactory into the several different kinds which are known as firsts, seconds, and thirds, and which particularly denote the qualities of the several kinds of glass, the first being known as best crown, the next in quality second crown, and the last thirds or third crown, the price of each varying according to tlie quality. The glass is in pieces, called tables, of about three feet in diameter each ; and, when selected and picked as above, they are packed in crates, twelve of such tables being put in each crate of best glass, fifteen in the seconds, and eighteen in the thirds. The crates consist of an open fram- ing of unhewn wood, and the glass is packed in

them in straw for security. The glaziers pur- chase such glass by the crate, although the duty on it is collected by the pound. The price of a crate of glass varies as its quality, the best crown being now (since the late additional duty) worth about four guineas per crate, the seconds three, and the thirds two guineas. There are several manufactories for what is called crown glass, but the most esteemed in the market is that which is made at Newcastle and its neighbour- hood.

Green glass is another of these species, and wiiich is greatly in demand for all the purposes in which color is not so particularly sought for. This sort of glass is used in the glazing of the windows of cottages; also for green and hot- houses, to which it is found to answer every pur- pose. It is not more than one-half the cost of the crown glass. The green glass appears to have been the most ancient kind made use of, as most of the vestiges remaining in the old windows approach very nearly in their quality to what is now sold under that designation. The glaziers also prepare the crown glass so as to produce nn opaque effect : it is adapted to prevent the inconvenience of being overlooked. It is tech

nically called ground glass, which is not impro- per, inasmuch as it is rendered opaque by rubbing away the polisli from off its surface ; to do which the glazier tikes care to have the sheets or panes of glass brought to their proper size ; then they are laid down smoothly as well as firm, either on sand or any otlier substance which is adapted to admit of its lying securely. He then rubs it with sand and water, or emery, till the polish is completely removed : it is tiien washed, dried, and stopped into the window for which It was prepared. There was a species of glass, made originally at Venice, which was manufac- tured wholly for this purpose, and is now to be seen in many counting-houses and old buildings. Its general appearance presented an uneven sur- face, appearing as though indented all over with wires, leaving the intervening shapes in the form of lozenges. This glass was very thick and strong, and is of the description known as plate glass. None of it has been imported into England for many years past; in consequence of which grind- ing the crown glass, as above described, has been made use of to answer the same purpose. How- ever, it was lately manufactured and sold in ta- bles at the depot for plate glass lately established in East Smithfield.

The crown glass not admitting of being cut to very large sized squares, and the fashion of mak- ing folding sashes having become general, re- course has been had to obtain tables of sizes adequate to admit of pieces being

*taken out of them adapted to glaze such windows. This was first attempted at a glass-house at Ratcliffe, near London; it failed however, from there not being a demand capable of supporting such a manu- * factory. The Newcastle people are, however, at this time succeeding in producing their tables in size commensurate to answer almost every purpose.*

The most beautiful glass made use of is that sold by the British Plate Glass Company of Al- bion Place, which is manufactured by them at Ravenscroft, in Lancashire. This glass is nearly colorless, and of a sufficient thickness to admit of its being polished to the greatest delicacy. From, this depot looking-glasses may be obtained of surprising dimensions ; and hence it is that most of the plate glass, so much the fashion in our windows, is obtained. This company sell their glass in proportion to its size, the value in- creasing as it increases. At their warehouse are to be seen thousands of different sized plates, every one of which is labelled of its size in inches only, as it is by- inches that such glass is bought and sold.

The glaziers, in glazing windows of plate glass, strike it out to the size required by a fine dia- mond, after which they break'voff the pieces by pincers ; such glass varies in its thickness from one-eighth to as much as a quarter of an inch. Purchasers of glass of this company may almost always be suited in the sizes they may want at the depot in Albion Place, but if the pieces are larger than tlie size required, the loss occasioned by reducing it falls on the buyer, as he must pay for the whole of its admeasurement. But if an order be left to be executed, and time allowed to send to the manufactory at Ravenscroft, llie

glass is sent in sizes exactly corresponding to the order given, and will be charged as such only ; this circumstance is of some importance wlieii large quantities are required, as is not unfre- quently the case at this time, when plate glass is so much in fashion. The company often require three or four months to execute an order of any magnitude. The value of such kind of glass /s very considerable in comparison of the other sorts ; common sized squares for windows amounting from two to three pounds each, and sometimes, in French windows, as higli as five pounds. It is, nevertheless, so much preferred, at this time, that even our shop windows in the leading streets are daily becoming glazed with it.

There are also many other sorts of plate glass in use, among these, that which is called Ger- man sheet is the most esteemed ; its color is beautiful, being the most colorless of any made, but its outside appearance is disagreeablej it be- ing very uneven or wavy. Indeed it resembles, on its outside, a substance which has been subjected to the hammer. The plate glass seen in win- dows, of a red tint, was much in use about twenty years since, and is of German manufacture, and known among the glaziers as

Bohemian plate glass ; its color at first was calculated to strike, but color is no recommendation to glass, and hence it is now almost laid aside.

Glaziers value their work by feet, inches, and parts, and the value of the glass increases as tliat of the size of its squares. Their charges are regulated by the master, and wardens, and court- assistants of the Company of Glaziers, who are generally not unmindful of themselves.

The glass squares of cottages, and church- windows which are glazed in leaden rebates, are technically called quarries. The lead for such windows is cast for the purpose, and purchased by the glaziers in packages by the cwt ; it is cut to the sizes and lengths required, and soldered together at their intersections : the leaden work is of various sizes, in proportion to the strength of the work for which it is wanted ; and is so soft as to be easily bent where the groove is left in it for the glass : one side or cheek of which is pressed down all round, the shape being left in it for the glass by a small tool called a stopping- knife ; the quarry is put into the place so made for it, and, with the same tool, the side of the groove, which had been thus bent down to admit it, is raised up to the quarry, and is afterwards smoothed close to it. These kinds of windows are farther strengthened by vertical and cross bars of iron, to which the leaden ones are se- cured by bands soldered to the latter, and bent and twisted round the former; in cottage win- dows these bars are often of wood, to which the bands are fastened in a similar manner.

Glaziers now cut all their glass out with the diamond, whereas formerly an iron was made use of for that purpose, called a grozing iron. It was an instrument in shape not unlike a key, such as is used for the purpose of opening and shutting locks; and had wards in its sides which were applied to scratch the surface and snap ofT the part required to be separated. The diamond now in general use is ns complete for this pur-

pose as can possibly be wished, as, by merely di'awing it over the glass to be cut, its surface becomes so regularly fractured as to allow, by a small pressure downwards, the piece operated upon to be easily removed. But, to answer this purpose, tlire diamond spark must be left in its natural state as found in the mines, its principal virtue lying in its outward coat. It is ascertain- ed that, when it is cut or polished, it loses all its power in promoting the fracture on the glass. To make the diamond useful to the glazier it is fixed in lead, secured by a ferule of brass, fastened to a handle of ebony or other hard wood ; the whole together not assuming a size larger

than a moderate-sized drawing pencil. The dia- mond, thus described, constitutes the principal working tool of the glazier, and its scarcity ren- ders its value to a journeyman of some little im- portance ; some masters in this business supply their men with this tool, while others require them to find their oivn.

The other tools which they use consist of a rule, commonly of three feet in length, divided into thirty-six parts or inches, and each part or inch again divided into fractions. With this the squares and tables of glass are divided, and cut to the several sizes wanted. A glazier also wants several small straight-edges for the diamond to work against. A straight-edge consists merely of a thin piece of mahogany, or other hard wood, about two inches wide, and one-eighth of an inch in thickness, wrought quite parallel, having its faces right and left splayed off a little to allow of the diamond being drawn more correctly against its edge. They have also stopping-knives for bedding the glass in the wooden rebates of the sashes. With this knife the workman smooths and spreads the putty to secure the glass in the saahes. In repairs of windows for broken squares, which the glazier calls 'stopping in,' or 'squares stopped in,' he makes use of another knife for the purpose of hacking out the old putty, and which is termed the ' hacking-out tool,' and consists literally of no more than an old broken knife ground sharp on its edge, and also at the end where it has been broken off from the rest of the blade. The old putty is cut out of the re- bates by applying the hacking-out tool all round them, by striking it at its thickest or upper edge with a common hammer until the whole of the old putty is removed, which, when done, the re- bate of the sasli is scraped and smoothed all round by the stopping-knife, and the new square of glass is cut into the sash, bedded in putty, and finished. The glazier also requires a pair of com- passes, made in one of their leas with a socket adapted to receive the handle of the diamond ; with the compasses so prepared he draws and cuts out all the shapes of glass required for the glazing of fan-lights, or other circular portions of glass wanted in sashes.

There are in London several tradesmen known only as glass-cutters ; their business embraces the cutting out of the glass only, which they retail in pieces or squares exactly to the size applied for, the parties purchasing undertaking of themselves the business of stopping them in.

The prices of the glaziers are very irregular, when left to themselves to make their own

charges. They adopt those of the Glaziers' Com- pany usually, and it is from these charges that the surveyors regulate theirs (or, as it is generally called, the measure and value); but glazing may be done (with a good profit to the glazier) at fif- teen per cent, less than either, and with glass as

good, and as neatly and well cut in as it is gen- erally by the master who adopts his charges from the Company's list of prices. Good glazing re- quires that all the glass be cut full into the rebates, that is, that the glass fill the void left for it in the sash completely. When the glass is cut too small, or even too large, it is easily broken by the pressure of the air from within, or by the wind from without ; careless glaziers not unfre- quently, when they have cut their glass too small, leave tlie putty projecting from the wood very full all round to hide this defect in their glazing, but no glazier who has any respect for his repu- tation would suffer glass so cut to be sent from out of his premises. The putty in no case should project beyond the line of the wood in the inside, or, more properly, the moulding side of the win- dow ; but should be exactly fair and level with it in every part. Large squares of glass should be firmly bedded in the rebate of the sash, in putty of a moderate consistence in point of tempering, and, when so bedded all round, small sprigs or tacks should be driven into the rebate to further secure it in the sash, and the whole should after- wards be further covered with another lining of putty spread quite smoothly all round the rebate on the outside. Sashes, of whatever description they may be, should always be once painted over, or, as it is called, primed, before they are put into the hands of the glazier.

GLEAM, V. n. & n. s. ˆ Sax. ˆelioma ; Germ. Gleam'ing, «(/;. ˆgliurneti. Sudden shoot

Gleam'y, adj.) of light; lustre; bright-

ness : to dart suddenly, as a flash of lightning; a bright and gentle light.

Tlien was the fair Dodonian tree far seen Upon seven hills to spread his gladsome gleam ;

And conquerors bedecked with his green. Along the banks of the Ausonian stream. Spenaer.

At last a gleam Of dawning light turned thitherward in haste His tr ivelled steps. Milton's Paradise Lott

As I bent down to look just opposite, A shape within the watery gleam appeared. Bending to look on me.

Mine is a gleam of bliss too hot to last ; Watery it shines, and will be soon o'ercast.

J)rx)den.

We ken them from afar ; the setting sun

Plays on their shining arms and burnished helmets.

And covers all the field wMi gleams of fire. Addison.

In the clear azure gleam the flocks are seen.

And floating forests paint the waves with green.

Pope. Nought was seen, and nought was heard, JJut dreadful gleams. Fires that glow. Id. St. Cecilia.

Observant of approaching day. The meek-eyed morn appears, mother of dews. At first faint gleaming in the dappled East.

Thotjison, On each hand the gushing waters play. And down the rough cascade white dashing fall, Or gleam in lengthened vistas through the trees.

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And first a wildly murmuring wind 'gan creep Shrill to ringing ear ; then tapers bright. With instantaneous (//eaw, illumed the vault of night.

Beattie. And this she told with some confusion and Dismay, the usual consequence of dreams Of the unpleasant kind, with none at hand To expound their vain and visionary gleams.

Byron.

GLEAN, V. a. k.n. s.'~% Fr. glaner ; Lat. gra-

Glean'f, u, 71. s. > 7ium ; or more probably,

Glean'ing, 7i.s. 'according to others,

from Lat. glanx, an acorn. To gather ears of

corn after the reapers ; to collect slowly.

They gleaned of them in the highways five thousand men. Judges xx. 45.

She came and gleaned in the field after the reapers.

Ruth ii. There shall be as the shaking of an olive-tree, and as the gleaning of grapes when the vintage is done.

Isaiah. And I come, after, glening here and there ; And am full glad, if I may find an ere Of any godely worde that ye han lefte.

Chaucer. Prol. to the Legende of Good Women. Gather So much as from occasions you may glean. If aught, to us unknown, afflicts him thus.

Shakspeare. That goodness Oi gleaning all the land's wealth into one, Into your own hands, card'nal, by extortion.

Id. Plains, meads, and orchards, all the day he plies ; The gleans of yellow thyme distend his thighs : He spoils the saft'ron. Dryden's Virgil.

But Argivo chiefs, and Agamemnon's train. When his refulgent arms flashed through the shady

plain, Fled from his well-known face with wonted fear; As when his thumlcring sword and pointed spear Drove headlong to their ships, and gleaned the routed rear. Id. ˆneid.

Cheap conquest for his following friends remained ; He reaped the field, and they but only gleaned.

Dryden. In the knowledge of bodies we must be content to glean what we can from paiticular experiments ; since we cannot, from a discovery of their real essences, grasp at a time whole sheaves, and in bundles comprehend the nature and properties of whole species together. Locke.

An ordinary coffee-house gleaner of the city is an arrant statesman. Id.

The precept of not gathering their land clean, but that something should be left to the poor to glean, was a secondary offering to God himself. Nelson.

The orphan and widow are members of the same common family, and have a right to be supported out of the incomes of it, as the poor Jews had to gather the gleanings of the rich man's harvest. Atterbury. For still the world prevailed, and its dread laugh. Which scarce the firm philosopher can scorn. Should his heart own a gleaner in the field.

Thomson. She went, by hard necessity compelled. To glean Palsemon's fields. Id. Autumn.

Gleaning. By the customs of some coun- tries, particularly those of Melun

and Estampes in France, before the revolution, all farmers and others were forbid, either by themselves or ser- vants, to put any cattle into the fields, or pre- vent gleaning in any manner whatever, for

twenty-four hours afler carrying off the corn under penalty of confiscation. But it has been settled in England that there is no common law right to glean ; and in Scotland it is almost for- bidden by the law.

GLEBE, n. s. ~\ Lat. gleha. Turf; soil ; Gle'bous, adj. > ground. The land possessed Gle'by, adj. 3 as part of the revenue of an ecclesiastical benefice : fruitful ; rich.

This, like the moory plots, delights in sedgy bowers ; The grassy garlands loves, and oft attired with flowers Of rank and mellow glebe. Drayton.

The ordinary living or revenue of a parsonage is of three sorts : the one in land, commonly called the glebe ; another in tythe, which is a set part of our goods rendered to God ; the third, in other offerings bestowed upon God and his church by the people.

Spelman. Fertile of corn the glebe, of oil and wine. With herds the pastures thronged, with flocks the hills.

Milton. Mark well the flowering almonds in the wood ; If odorous blooms the bearing branches load. The glebe will answer to the sylvan reign. Great heats will follow, and large crops of grain.

Dryden. Sleeping vegetables lie, 'Till the glad summons of a genial ray Unbinds the glebe, and call them out to day.

Gar/h. A trespass done on a patson's glebe land, which is a freehold, cannot be tried in a spiritual court.

Ayliffe's Parergon. Pernicious flattery ! thy malignant seeds In an ill hour, and by a fatal hand Sadly diffused o'er virtue's gleby land. With rising pride amidst the corn appear. And choke the hopes and harvest of the year.

Prior. Many parishes have not an inch of glebe. Swift.

GLECIIOMA, ground ivy, a genus of the gymnospermia order, and didynamia class of plants ; natural order forty-second, verticillatae. Each pair of the antherse come together in the form of a cross : cal. quinquefid. Species one only. G. hederacea, the common ground ivy. Many virtues were formerly attributed to this plant, which it is now found not to be possessed of. Some, however, it has. The leaves are thrown into the vat with ale to clarify it and give it a flavor. Ale thus prepared is often drunk

as an antiscorbutic. The expressed juice mixed with a little wine, and applied morning and evening, destroys the white specks upon horses' eyes. The plants that grow near it do not flourish. It is said to be hurtful to horses if they eat much of it. Sheep eat it, horses are not fond of it; cows, goats, and swine, refuse it.

GLEDE, n. s. Sax. jli'aajhˆe. A kind of hawk.

Ye shall not eat the glede, the kite, and the vulture.

Deuteronomy,

GLEDITSIA, triple-thorned acacia, or ho- ney-locust; a genus of the dioecia order, and polygamia class of plants ; natural order tliirty- third, lomentaceae . Hermaphrodite cal. qua- drifid : cou. tetrapetalous ; the stamina six, one pestil and legumen. Male cal. triphyllous : cor. tripetalous, with six stamina, Female cal. pen-

taphyllous : cor. pentapetalous ; one pistil and legumen. There are two species, viz.

1. G. inermis, so named because the stem is unarmed, or without thorns. It is a native of South America, and in this country requires to be kept in a stove.

2. G. triacanthos, a native of Virginia and Pennsylvania. It is of an upright growth, and its trunk is guarded by thorns three or four inches long, in a remarkable manner. These thorns have also others coming out of their sides at nearly right angles : their color is red. The branches are smooth, and of a white color ; but are likewise armed with red thorns, that are proportionally smaller; they are of several di- rections, and at the ends of the branches often stand single. The young shoots of the preced- ing summer are perfectly smooth, of a reddish green, and retain their leaves often until the mid- dle of November. The flowers are produced from the sides of the young branches in July. They are a greenish catkin, and make little show; though many are succeeded by pods, that have a wonderful effect ; for these are exceedingly large, more than a foot, sometimes a foot and a half in length, two inr 'les in breadth, and of a nut-brown color when ripe. There is a variety of this species, with fe ver thorns, smaller leaves, and oval pods. It has nearly the resemblance of the other; though the

thorns are not so fre- quent, and the pods smaller, each containing only one seed. These trees are easily propagated by seeds received from America in spring, which keep well in the pods, and are for the most part good. They generally arrive in February ; an"d as soon as possible after, they should be sown in a well-sheltered warm border of light sarudy earth. The seeds should be sown about half an inch deep ; and they will for the most part come up the first spring. If the summer should prove dry, they must be constantly watered ; and, if shade could be afforded them in the heat of the day, they would make stronger plants by au- tumn. Attention to this is peculiarly requisite ; for, as the ends of the branches are often killed, if the young plant has not made some progress, it will be liable to be wholly destroyed by the winter's frost, without protection : and this ren- ders the sowing the seeds in a warm border, under a hed?e, in a well sheltered place, neces- sary ; for these shrubs will endure our winters, even when seedlings, and will require no farther trouble ; nay, though the tops should be nipped, they will shoot out again lower, and will soon overcome it. They should remain two years in the seed-bed before they are planted out in the nursery. The spring is the best time for the work. Their distances should be one foot by two ; the rows should be dug .between every winter; and, being weeded in summer, they may continue with no other particular care, until they are set out to remain. These trees are late in spring before they exhibit their leaves, but keep shooting long in autumn.

GLEE, rj.s. } Sax. jlijje. .Toy; merri-

Glf.f/fi:l,«

signified music played at feasts. It is not now

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mixture of irony and contempt. Cheerful; gay.

Were his nailes poincted never so sharpe. It shulde makcu every wight to dull To here his yle and of his strokes full.

Cfiaucer. Truilus and Cresetde. She marcheth home, and by her takes the night. Whom all the people follow with great glee.

Faerie Qiieene. My lovely Aaron, wherefore look'st thou sad. When every thing doth make a gleeful boast?

Shakspeare. Many wayfarers make themselves glee by vexing the inhabitants ; who again foreslownot to baigne them with perfume. Carew,

Is Blouzelinda dead ? Farewell my glee ! No happiness is now reserved for

me. Gai/.

The poor man then was rich, and lived with glee; Each barley-head untaxt, and day-light free.

Harte. Full well they laughed with counterfeited glee At all his jokes ; for many a joke had he.

Goldsmith.

GLEED, n. s. From Sax. ˆlopan, to glow. A hot glowing coal. A provincial and obsolete word.

He sent hire pinnes, methe and spiced ale,

And wafres piping hot out of the glede.

Chaucer. The Milleres T d. .

And in his hande, meihought I saw him hold Two lirie dartes as the gledes rede ; And angelike his winges sawe I sprede.

Id. Prologue to Legende of Good Women, Fouf gledes han we, which I shall devise,

Avaunting, lying, anger, and covetise.

These four sparkes longen unto elde.

Chaucer. The Reves' Prologm.

GLEEK, n. s. Sax. 31153ˆ. Musick, or mu- sician.

What will you give us ? No money, but the

gleek : I will give you the minstrel. Shakspeare.

To Gleek, v. a. Sax. slijman, is a mimick or a droll. This word is yet used in Scotland to signify spending time idly ; with something of mimicry or drollery.

I can gleek upon occasion. Shakspeare.

I have seen you gleeking or galling at this gentle- man twice or thrice. Id.

GLEEN, V. a. To shine with heat or polish. I know not the original notion of this word, says Dr. Johnson : it may be of the same race with glow or

with gleam. I have not remarked it in any other place.

Those who labour

The sweaty forge, who edge the crooked scytte.

Bend stubborn steel, and harden /ecnin armour.

Acknowledge Vulcan's aid. Prior.

GLEET, n.s.ˆv.a. \ Written by Skinner

Gleet'y, adj. \ glitt, and derived from

Sax. jliban, to run softly. A sanious ooze; a thin ichor running from a sore. Generally used as a medical term.

His thumb being inBamed and swelled, I made a'l incision into it to the bone : this not only bled, but gleeted a few drops. Wisenian.

If the flesh lose its ruddiness, and the matter change to be thin and gleety, you may suspect it cor- ruptintr. Id.

A hard dry eschar, without cither matter or gleet.

Id. SuTgery.

Vapours raised by the sun make clouds, which are carried up and down the atmosphere, 'till they hit against the mountainous places of the globe, and by this concussion are condensed, and so gleet down tlie

caverns of tlicse mountains, whose inner parts, being Lollow, afford them a bason.

Clieyne's Philosophical Principles.

GLEICHEN (Frederick Von), in biography, was born in the year 1714. He was intended and educated for the profession of arms, and spent the early part of his life as an officer in the service of Bayreuth, and was

distinguished by his attention to military discipline. He rose to the rank of lieutenant-colonel, and obtained the favor of the margrave-. In 175G he obtained a dismission from the service with a handsome pension, to which was afterwards added the rank of privy counsellor. He now had leisure to dis- tinguish himself as a philosopher, a naturalist, and a writer. His attention was accidentally excited to microscopical observations ; and, not satisfied witlj the instruments already in exist- ence, he constructed a universal microscope, with which he combined the solar microscope. He died in June 1 783, leaving behind him nu- merous works in natural history, as Observa- tions on the Parts of Fructification in Plants when in bloom, and on the Insects found in them ; History of the Common House Fly ; Treatise on seminal Animal cula and infusion Animals ; Essay towards the History of the Tree-louse of the Elm.

Gleichex, a district of Saxony, adjoining Gotha and Erfurt. It is divided into two parts, the larger of which is the property of various branches of the house of Hohenlohe, and has about 7000 inhabitants ; the other part, contain- ing about 1500 inhabitants, belongs chiefly to Schwartzburg-Sondershausen. ‘ GLEN, n. s. Erse, glean. A valley ; a dale ; a depression between two hills.

From me his madding mind is start.

And wooes the widow’s daughter of the glen.

Spenser.

For wheresoever the shrieking victim hath Poured forth his blood beneath the assassin’s knife. Some hand erects a cross of mouldering lalh ; And grove and glen with thousand such are rife. Throughout this purple land, where law secures not life. Byron’s Childe Harold,

GLENDOWER (Owen), a celebrated Welsh chieftain, was born, as some writers state. May 28th, 1349 ; or, according to others, on the same day in 1354, at Trefgarn, in Pembrokeshire, of Ellen, a lineal descendant from Catherine, daughter and heiress to Llewellyn, last Prince of Wales. His father Gryffyd Vychan sent him to London for education, where he for a time studied for the English bar, but relinquished the legal pro- fession on being appointed scutiger to Richard II. A contemporary bard, Jolo Goch, describes his family mansion in high terms, and his con- test with Reginald lord Grey de Ruthyn respect- ing an estate called Croesau. On the deposition of his royal patron, by Henry IV., his antagonist prevailed; and, being charged with the delivery of a summons from the new king to Owen to attend him on an expedition, he purposely neglected to deliver it, Glendower was in con- sequence outlawed ; when his enemy Grey seized all

his lands, and the parliament utterly neglected his remonstrances. Glendower now forcibly dispossessed Grey of his lands, and,

having raised a large force, caused himself, Se[>. tember 20th, 1400, to be proclaimed prince of Wales, a measure to which he is said to have been incited by some traditionary prophecies of Merlin. In 1402 he made prisoner his old per- secutor the lord Grey, and fixed the price of his ransom at 10,000 marks, with a stipulation of neutrality, which was cemented into amity after- wards, by that nobleman marrying Jane, Owen's third daughter. Owen now defeated the king's forces under Sir Edward Mortimer, and was joined by the Percys, as well as occasionally as- sisted by Charles VI. of France, with whom a treaty of his is still extant, dated 1404, in which he is styled Owenus Dei gratia Princeps Wallia'. He at last caused himself to be formally crowned, at Machynlaeth in Montgomeryshire, as sovereign of Wales. When the rashness of Henry Percy brought on the fatal battle of Shrewsbury before all his Welsh auxiliaries had come up, this prince is said to have been so near as to have reconnoitred the action from the top of a tree, and seeing all was lost, retreated to a marauding warfare. In 1415 Henry condescended to treat with him; but Owen dying on the 20th of Sep- tember, the negociation was continued and rati- fied by his son j\Ieredyd ap Owen, February 24th, 1416. Descendants of his are said to be yet living in the family of Monington, at the place of that name in Herefordshire.

GLEW, n. s. Lat. gluten. A viscous cement made by dissolving the skins of animals in boiling water, and drying the gelly. See Glue.

GLIB, n. s., adj. & v. a. ^ From Gr. Xeioi.-.

Glib'ly, at/y. ^Anything smooth

Gme'ness, n. s. y and slippery ; when

applied to conversation, it implies volubility •

to castrate.

The Irish have from the Scythians mantles and long glibs ; which is a thick curled bush of hair hanging down over their eyes, and monstrously dis guising them. Spenser on Ireland.

I want that glib and oily art To speak and purpose not, since what I well in- tend, I'll do't before I speak. Shaksp. King Lear.

I'll geld them all : fourteen they shall not see. To bring false generations ; they are coheirs. And I had rather glib myself, than they Should not

proiluce fair issue. Shakspeare.

A polished ice-like glibness doth enfold The rock. Chapman's Odyssey

I undertook ;hat office, and the tongues Of all his flattering prophets glibbed with lies To his destruction as I had in change.

Hilton's Paradise Regained. There was never so much glib nonsense put together in well sounding English. Locke.

Liquid bodies have nothing to sustain their parts, nor any thing to- cement them; the parts hc\ng glib, and continually in motion, fall off from one another, which way soever gravity inclines them.

Burnet's Theory. Many who would startle at an oath, whose stomachs as well as consciences recoil at an obscenity, do yet slide glibly into a detraction.

Government of the Tongue. The tongue is the most ready for motion of any member, needs not so much as the flexure of a jomt, and by access of humours acquires a glibness too, the more to facilitate its moving. Jd.

Habakkuk brougLt him a smooth strong rope com- pactly twisted together, with a noose that slipt as glib as a birdcatcher's gin. Arbuthnot.

Be sure he's a fine spoken man ; Do but hear on the clergy how glib his tongue ran.

Swift. Now Curl his shop from rubbish drains ; Three genuine tomes of Swift's remains : And then, to make them pass the glibber. Revised hy Tibbald, More, and Gibber. Id.

GLIDE, u.n.& n. s }^ Sax. jlisan; Dutch, Glider, n. x. J glijden. To flow

smoothly, gently, and silently ; to move regu- larly and swiftly along, as in skating on the ice.

His goode stedehe al bestrode. And forth upon his way he glode. As sparcle out of bronde.

Chaucer. Rime of Sire Thopas. The vapour, which fro the erthc glode,

Maketh the sunne to seme rody and brode.

Id. The Sjuieres Tale. She glade forth as an adder doth.

Gower. Confessio Amanti's. The glaance into my heart did glide ; Hey ho the glider ;

Therewith my soul was sharply gride. Such wounds soon waxen wider. Spenser.

About his neck A green and gilded snake had wreathed itself. Who, with her head nimble in threats, approached The opening of his mouth ; but suddenly. Seeing Orlando, it unlinked itself. And with indented glides did slip away Into a bush. Shakspeare. A's You Like It.

If one of mean affairs May plod it in a week, why may not I Glide thither in a day ? Id. Cymbeline.

Like a clear river thou dost glide. And with thy living stream through the close channel slide. Cowley.

Shoals of fish, with fins and shining scales. Glide uniler tho green wave. Milton,

Just before the confines of the wood. The gliding Letiie leads her silent flood. Drydcn.

Broke by the julliug land on either side. In double streams the briny waters ˆ/ide. Id.

He trembled every limb, and felt a smart As if cold Bteel had glided tiirough his heart.

Id. Fables. Where stray the muses, in what lawn or grove ? In those fair fields where sacred Isis glides. Or else where Cam his winding vales divides.

Pope. Now gliding remote, on the verge of the sky. The moon half-extinguished her crescent displays.

Buattie. Sofas 'twas half a sin to sit upon. So costly were they ; carpets every stitch Of workmanship, so rare they made you wish You could glide o'er them like a golden fish.

Byron.

GLIKE, n. s. Sax. ˆlij. See Gleek. A sneer ; a scofi"; a flout. Not now in use.

Where's the bastard's-braves, and Charles his glikes ? Shakspeare.

GLIM'MEIl, V. n. Sen. s. \ Dan. glimmer ;

Glimpsf, n.)(. S ls. glimbcr;Be\g.

glinimen. To shine faintly ; a weak and Ejentle light, sometimes quick and fl;ishing. — Hence metaphorically, a brief enjoyment; a transitory view; a resemblance.

-if that ye mighten see.

Ye wold not say thise wordes unto me Ye have some glimsing and no parfit sight.

Chaucer. The Merchantes Talc. The west yet glimmers with some streaks of day.

Shakspeare, The truth appears so naked on my side. That any purblind eye may find it out. — And on my side it is so well apparelled So clear, so shining, and so evident. That it will glimmer through a blind man's eye.

Id. No man hath a virtue that he has not a glimpse of.

Id. On the way the baggage post-boy, who had been at court, got a. glimmering who they were. Wotton.

Some God punisheth exemplarily in this world, that we might have a taste or glimpse of his present justice. Hakewill.

For there nq,twilight of the sun's dull ray Glimmers upon the pure and native day. Cowley.

There no dear glimpse of the sun's lovely face Strikes through the solid darkness of the place.

Id. Oft in glimmering bowers and glades He met her. Milton,

O friends ! I hear the tread of nimble feet Hasting this way, and now by glimpse discern Ithuriel, and Zephon, through the shade. Id.

Such vast room in nature. Only to shine, yet scarce to contribute Each orb a glimpse of light, conveyed so far Down to this habitable, which returns Light back to them. Id.

See'st thou yon' dreary plain, forlorn and wild. The seat of desolation, void of light. Save what the glimmering of these livid flames Casts pale and

dreadful ? Id. Paradise Lost.

If I, celestial sire, in aught Have served thy will, or gratified thy thought. One glimpse of glory to my issue give ; Graced for the little time he has to live.

Bryden.

What should I do ! while here I was enchained.

No glimpse of godlike liberty remained. Id.

Thousands of things, which now either wholly escape our apprehensions, or which our short-sighted reason having got some faint glimpse of, we, in the dark, grope after. Locke.

Through these sad shades, this chaos in my soul. Some seeds of light at length began to roll ; The rising motion of an infant ray Shot glimmering through the cloud, and promised day.

Prior. If, while this wearied flesh draws fleeting breath. Not satisfied with life, afraid of death. If haply be thy will that I should know Glimpse of delight, or pause from anxious woe j From now, from instant now, great sire, dispel The clouds that press my soul. Id.

Stones which are conaposed of plates, that are generally plain and parallel, and that are flexible and elastick : talc, catsilver, or glimmer, of which there are three sorts, the yellow or golden, the white or silvery, and the black. Woodward.

The lesser masses that are lodged in sparry and stony bodies, disperscdly, from their shining and glimmering, were an inducement to the writers of fossils to give those bodies the name of mica and glimmer. Id. On Fossils.

The pagan priesthood was always in the druids ; and there was a perceivable glimmering of the Jewish ritrs in it, though 'nuch corrupted. Sit'i/V.

Oft by the winf'fS, extinct the signal lies ; Or smothered in the (jlimm'ring socket dies.

Gay's Trivia. When rosy moTning glimmered o'er the dales. He drove to pasture all the lusty males. Pope.

Long while the silent passion, wanting vent. Made flowing tears her words, and eyes her tongue ; Till faith, experience, hope, assistance lent To shut boih flood-gates up with patience strong ; The streams well ebbed, new hopes some comforts

borrow From firmest truth ; then glimpsed the hopeful morrow; So spring some dawns of joy, so sets the night of sorrow. Fletcher. Purple Island.

And the pale smiles of beauties in the grave. The charms of other days in star-light gleams. Glimmer on high, Byron.

GLINUS, in botany, a genus of the pentagy- nia order, and decandria class of plants ; natural class twenty-second, Caryophyllei : cal. penta- phyllous : cor. none ; the nectarium is composed of bifid bristles : CAP. quinqueangular,quinquelo- cular, quinquevalved, and polyspermous. Species twelve : of the most common is the G. vulgaris, the blue daisy, whicli is common to the south of Europe, and to the Levant.

GLISSON (Francis), a learned English phy- sician of the seventeenth century, who was edu- cated at Cambridge, and made regius professor of the University. In 1634 he was admitted a fellow of the College of Physicians in London. During the civil wars he practised physic at Colchester, and afterwards settled in London. He greatly improved physic by his anatomical dissections. He wrote, 1. De Rachitide, &c.

2. De Lymphaeductis nuper Repertis ; with the Anatomical Prolegomena, et Anatomia Hepatis.

3. De Naturffi Substantia Energftica; seu de A'ia Vit'ce Naturee, ejusque Tribus Primis Facul- tatibus, &c. quarto. 4. Tractatus de 'entriculo et Intestinis, &c. He discovered the capsula communis, or vagina portae.

GLISTEN, i;.. -\ Sax.jlitman; Ger.

Glister, V. n. t gleissen ; Dut. glis-

Glit'ter, r. 7Z. &7i. s. > teren. To shine

Glit'tkrand, part, i brightly ; to exhibit

Glit'terikgly, adv. J lustre. They are

words of similar meaning; glitterand, is an old

participle, used especially by Chaucer and the

old poets ; still retained in Scotland : showy or

spurious.

His crispe here like ringes was yronne. And that was yelwe, and glitered as the sonne. Chaucer. The Kmghtes Tale. His glitterand armour shined far away, Like glauncing light of Phoebus' brightest ray ; From top to toe no place appeared bare. That deadly dint of Steele endanger may.

Spenser. Faerie Queene. Is not from hence the way that leadeth right To that most glorious bouse that glisiereth bright With burning starres. Id.

The wars flame most in Summer, and the helmets glister brightest in the fairest sunshine. Spenser.

'Tis better to be lowly born, And range with humble livers in content. Than to be perked up in a glistering grief. And wear a golden sorrow. Sliakspeare.

All that glisters is not gold. Id.

Steel glosses are more resplendent than the like plates of brass, and so is the glittering of a blade.

Bacon's Physical Remaint.

You were more the eye and talk Of the court to-day, than all Else that glistered in Whitehall. Ben Jotuon. Clad With what permissive glory since his fall .Was left him, or lAse glitter. Milton,

When the sword glitters o'er the judge's head. And fear has coward churchmen silenced. Then is the poet's time, 'tis then he draws. And single fights forsaken virtue's cause. Marvell.

It consisted not of rubies, yet the small pieces of it were of a pleasant reddish colour, and glistered prettily.

Boyle. Before the battle joins, from afar The field yet glitters with the pomp of war.

Dryden's Virgil, A fresher green the smiling leaves display, And glittering, as they tremble, cheer the ilay.

Parnell. Flourish not too much upon the glitter of fortune, for fear there should be too much alloy in it.

Collier on Pride. Scarce had'st thou time to unsheath thy conquering blade ; It did but glitter, and the rebels fled. Granville.

On the one hand set the most glittering temptation to discord, anc' on the other the dismal effects of it.*

Decay of Piety, Take away this measure from our dress and habits, and all is turned into such paint and glitter, and ridiculous ornaments, as are a real shame to the wearer. Law.

The ladies' eyes glistened with pleasure.

Richardson's Pamela, In glittering scenes, o'er her own heart severe; In crowds collected ; and in courts sincere. Young,

Her sky-like arms glittered in golden baams. And brightly seemed to Dame v.ith burning hearts ; The scorching ray with his reflected streams Fire to their flames, but heavenly fire imparts ; Upon his shield a pair of turtles shone ; A lovely pair still coupled, ne'er alone ; Her word, 'though one when two, yet either two or none. Fletcher's Purple Island.

What tho' we quit all glittering pom-p and greatness. The busy, noisy, flattery of courts, We shall enjoy content ; in that alone Is greatness, power, wealth, honour, all summed up. Powel's King of Naples. The Convents' white walls glisten fair on high.

Byron. Childe Harold.

it is a splendid sight to sec

(For one who hath no friend or brother there) Their rival scarfs of mixed embroi;!ery, Their various arms that glitter in the air. Id,

GLISTER, n. s. Properly written clyster, from kXvˆoj. See Clyster. It is written wcong even by Browne.

Xow enters Bush with new state a-irs. His lordship's premier minister ;

And who, in all profound affairs. Is held as needful as his glister. Swift.

Choler is the natural glister, or one excretion whereby nature excludeth another; which, descending daily unto the bowels, cxtimulates those parts, and excites them unto expulsion. Browne,

GLITNEˆS, one of the smaller Shetland Isles, eleven miles north from Lerwick, on the east coast of Shetland. Long. 1° 16′ W., lat. 60° 22′ N.

GLOAT, V. n. This word Dr. Johnson con- ceives to be ignorantly written from gloar (B'^lg.

GLOBES.

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glocren}. To cast side glances as a timorous lover.

Teach every grace to smile in your behalf. And her deluding eyes to gloat for you. Rowe.

GLOBE, n. t. "') Lat. globus, globosus, G LOB x'ted, adj. globulus; Ft. globe, glo-

Globose', adj. hule ; Gr. yijXo^of. It is

Globos'ity, n.s. properly an irregular Glo'bous, adj.)^ round body, and thus Glob'ular, adj. differing from a ball which Glob'ule, n. s. is entirely circular. A

Glob'ulous, adj. term applied to our earth ; Globula'ria, n. J. J to the mechanical body which represents it : the various adjectives are applied to matter which assumes this form, as the red particles of blood ; spheres of quicksilver ; &c.: and to different kinds of plants and flowers, as globe amaranth; globe daisy; globe ranuncu- lus; globe thistle: globularia, a flosculous flower: ako to a fish called globe fish. A body of soldiers drawn into a circle.

The astrologe r who spells the stars, Mistakes his globe, and in her brighter eye Interprets heaven's physiognomy. Cleaveland.

These are the stars. But raise thy thoughts from sense, nor think to find Such figures a are in globes designed. Creech.*

On his right side stood a fair glole of beaten gold, on a pyramis, with a cross upon it ; to which, before he spake, tumiiig a little, he crossed himself.

Milton. History of Moaco.

Regions, to which All thy dominion, Adam, is no more Than what this garden is to all the earth. And all the sea ; from one entire globose Stretched into longitude. Id. Paradise Lost. Then formed the moon Globote, and every magnitude of stars.

3filton. Him round A globe of fiery seraphim inclosed, With bright imblazoning, and horrent arms.

Id. Wide over the plain, and wider far Than all this globose earth in plain outspread ; Such are the courts of God ! Id.

See, the' apish Earth hath lighted many a star. Sparkling in dewy globes. Ftetcfier't Purple Island. The whiteness of such globulous particles proceeds from the air included in the froth. Boyle.

Where God declares his intention to give dominionˆ he meant that he would make a species of creatures that should have dominion over the other species of this terrestrial globe. Locke.

Why the same eclipse of the sun, which is seen to them that live more easterly, when the sun is elevated six degreis above the horizon, should be seen to them that live one degree more westerly, &c., no account can be given, but the globosity of the earth. Ray on the Creation. The youth, whose fortune the vast globe obeyed. Finding his royal enemy betrayed. Wept at hia fall. Stepney.

The brazen instruments of death discharge Horrible flames, and turpid streaming clouds : Large globout irons fly, or dreadful hiss, Singeing the air. Philips.

The figure of the atoms of all visible fluids scemeth to be globular, there being no other figure »o well fitted to the making of fluidity. Grew.

The hailstones have opaque globules of snow in their centre, to intercept the light within the halo. Newton's Opticks.

Blood consists of red globules, swimming in a thin liquor called serum ; the red globules are elas- tick, and will break j the vessels which admit the smaller globule, cannot admit the greater without a disease. Arbuthnot on Aliments.

Where is the world of eight years past? 'Twas there I look for it — 'tis gone, a globe of glass. Byron.

Globe, in geometry. See Sphere.

Globe, in geography and astronomy, is par- ticularly used for an artificial sphere of metal, plaster, paper, or other matter ; on whose convex surface is drawn a map, or representation either of the earth or heavens, with the several circles conceived thereon. See Geography.

Globes are of two kinds, terrestrial and celes- tial ; each of very considerable use, the one in astronomy, and the other in geography, for per- forming many of the operations in these sciences, in an easy obvious

manner, so as to render them intelligible without any knowledge of the mathe- matical grounds of them. The fundamental parts, common to both globes, are an axis, re- presenting that of the world; and a spherical shell, or cover, which makes the body of the globe, on the external surface of which the re- presentation is drawn.

Of the Construction of Globes.

The globes most commonly used are made of plaster and paper. A wooden axis is provided somewhat less than the intended diameter of the globe ; into the extremes of which two iron wires are driven for poles : this axis is to be the beam, or basis of the whole structure. On the axis are applied two spherical or rather hemi- spherical caps, formed on a kind of wooden mould or block. These caps consist of paste- board, or paper, laid in layers, on the mould, to the thickness of a crown-piece ; after which, having stood to dry and embody, making an incision along the middle, the two caps thus parted are slipped oft' the mould. They are next applied on the poles of the axis, as before they were on those of the mould ; and, to fix them, the two edges are sewed together with pack-thread, &c. The rudiments of the globe thus laid, it must be strengthened and made smooth and regular. In order to this, the two poles are hasped in a me- talline semicircle of the size intended ; and a kind of planter, made of wliitening, water, and glue, heated, melted, and incorporated together, is daubed all over the paper surface. In pro- portion as the plaster is applied, the ball is turned round i^i the semicircle, the edge whereof pares off whatever is superfluous and beyond the due dimension, leaving the rest adhering in places that are short of it. After sudi applica- tion of the plaster, the ball stands to dry ; which done, it is put again in the semicircle, and fresh matter applied : thus they continue alternately to apply the composition, and dry it, till the ball every where accurately touches the semicircle, in wliich state it is perfectly smootii, reg\ilar and firm. The ball thus finished, it remains to paste the map or description thereon : in order to this, tlie map is projected in several go es, or gussets,

all of which join accurately on the spherical surface, and cover the whole ball. To direct the application of these gores, lines are drawn by a semicircle on the surface of the ball, dividing it into a number of equal parts corresponding to those of the gores, and subdividing those again answerably to the lines and divisions of the gores. There remains only to color and illuminate the globe ; and to varnish it, the better to resist dust, moisture, &c. The globe itself, thus finished, is hung in a brass meridian,

with an hour circle, quadrant of altitude; and then fitted into a wooden horizon.

The following is the detailed mode of their construction : —

Fis. 1.

From the given diameter of the globe find a right line A B, fig. 1 of the diagram above, equal to tlie circumference of a great circle, and divide it into twelve equal parts. 2. Through the se- veral points of division, 1,2, 3, 4, &:c., with the interval of ten of them, describe arches mutually intersecting each other in D and E : these figures or pieces duly pasted and joined together will make the whole surface of the globe. 3. Divide each part of the right line A B into thirty equal parts, so that the whole line A B, representing the periphery of the equator, may be divided

into 360 degrees. 4. From the poles D and E, fig. 2, with the interval of twenty-three de-' grees and a half describe arches a b ; these will be twelfth parts of the polar circles. 5. After the like manner, from the same poles D and E, with the interval of sixty-six degrees and a half reckoned from the equator, describe arches c d ; these will be twelfth parts of the tropics. 6.Through the degree of the equator e, corre- sponding to the right ascension of any given star, and the poles D and E, draw an arch of a circle ; and, taking in the compasses the complement of the declination from the pole D, describe an arch intersecting it in i ; this point i will be the place of that star. 7. All the stars of a constellation being thus laid down, the figure of the constellation is to be drawn according to Bayer, Hevelius, or Flamstead. 8. Lastly, after the same manner are the decimations and right ascensions of each degree of the ecliptic, dg, to be determined. 9. The surface of the globe thus projected on a plane is to be engraven on copper, to save the trouble of doing this over again for each globe. 10. A ball in the mean time is to be prepared of paper, plaster, Sec, as before directed, and of the intended diameter of the globe ; on this, by means of a semicircle and style, is the equator to be drawn ; and through every thirtieth degree a meridian. The ball thus divided into twelve parts, corresponding to the segments before projected, the latter are to be cut from the printed paper, and pasted on the ball. 11. Nothing now remains but to hang the globe as before in a brazen meridian and wooden horizon ; to which may be added a quadrant of altitude made of brass, and divided in the same manner as the ecliptic and equator. If the de- clinations and right ascensions of the stars be not given, but the longitudes and latitudes in lieu thereof, the surface of the globe is to be projected after the same manner as before; ex- cept that, in this case, D and E, fig. 2, are the poles of the ecliptic, and fh the ecliptic itself; and that the polar circles and tropics, with the equator g d, and parallels thereof, are to be de- termined from their declinations.

M. De La Lande, in his Astronomie, tom. 3, p. 736, suggests the following method : — ‘ To con- struct celestial and terrestrial globes, gores must be engraven, which are a kind of projection, or enclosure of the globe, fig. 3, similar to what is now to be explained. The length P C of the axis of this curve is equal to a quarter of the cir- cumference of the globe ; the intervals of the parallels on the axis PC are all equal, the radii of the circles KDI, which represent the parallels, are equal to the cotangents of the lati- tudes, and the arches of each, as D I, are nearly equal to the number of the degrees of the breadth of tiie gore (which is usually thirty de grees) multiplied by the sine of the latitude : thus, there will be found an intricacy in tracing them ; but the difficulty proceeds from the va- riation found in the trial of the gores when pasting tliem on the globe, and of the quantity that must be taken from the paper, less on the sides than in the middle (because the sides are longer), to apply it exactly to the space that it should cover.

The method used among workmen to delineate

the gores, and which is described by a\I. Bion, (Usage des Globes, torn. 3) and by M. Robert de Vaugendy in vol. vii. of the Encyclopedic, is hardly geometrical, but yet is sufficient in prac- tice. Draw on the paper a line A C, equal to the chord of fifteen degrees, to make the half breadth of the gore ; and a perpendicular P C equal to three times the chord of thirty degrees, to make the half length: for these papers, the dimensions of which will be equal to the chords, become equal to the arcs themselves when they are pasted on the globe. Divide the height C P into nine parts, if the parallels are to be drawn in every ten degrees ; divide also the quadrant B E into nine equal parts, through each division pomt of the quadrant, as G : and through the corresponding point D of the ri^^ht line C P, draw the perpendiculars H G F and D F, the mee’ting of which in F gives one of the points of the curve B E P, which will terminate the cir- cumference of the gore. When a sufficient number of points are thus found, trace the out- line P I B with a curved rule. By this construc- tion are given the gore breadtlis, which are on the globe, in the ratio of the cosines of the lati- tudes ; supposing these breadths taken perpen- dicular to C D, which is not very exact, but it is impossible to prescribe a rigid operation suf- ficient to make a plane which shall cover a curved surface, and that on a right line A B shall make lines PA, P C, P B, equal among them- selves, as they ought to be on the globe. To describe the circle K D I, which is at thirty de- grees from the equator, there must be taken above D a point which shall be distant from it the value of the tangent of sixty degrees, taken out either*

from the tables, or on a circle equal to the circumference of the globe to be traced ; this point will serve as a centre for the parallel D I, which should pass through the point D, for it is supposed equal to that of a cone circum- scribing the globe, and which would touch at the point D. The meridians may be traced to every ten degrees, by dividing each parallel, as K I, into three parts at the points L and I\I, and drawing from the pole P, through all these di- vision points, curves, which represent the inter- mediate meridians between P A and P B (as B R and S T, fig. 4). The ecliptic A Q may be described by means of the known declination from different points of the equator that may be found in a table : for ten degrees, it is 3° 58′ ; for twenty degrees, 7° 50'zzBQ; for thirty de- grees, 11° 29', &c. It is observed-, in general, that the paper on which charts are printed, such as the colombier, shortens itself iˆ part of a line in six inches upon an average, when it is dried after printing ; this inconvenience must there- fore be corrected in the engraving of tlie gores : if, notwithstanding that, the gores are found too short, it must be remedied by taking from the surface of the ball a little of the white with which it is covered ; thereby making the dimen- sions suitable to the gore as it was printed. But what is singular is, that in drawing the gore, moistened with the paste to apply it on the globe, the axis G II lengthens, and the side A K shortens, in such a manner that neither the /engih of the side A C K nor that of the axis

G E H, of the gore, are" exactly equal to the quarter of the circumference of the globe, when compared to the figure on the copper, or to the numbered sides shown in fig. 4. Mr. Bonne having made several experiments on the dimen- sions that gores take, after they had been parted ready to apply to the globe, and particularly with the paper named jesus, that he made use of for a globe of one foot in diameter, found that it was necessary to give to the gores on the copper the dimensions shown in fig. 4. Supposing that the radius of the globe contained 720 parts, the half breadth of the gore is A G rr 188 -ˆj the distance A C for the parallel of ten degrees taken on the right line LM is 12-81, the small deviation from the parallel of ten degrees in the middle of the gore ED is four, the line A B N is right, the radius of the parallel of ten degrees or of the circle C E F is 4083, and so of the others as marked in the figure. The small circular cap, which is placed under II, has its radius 253 instead of 547, which it would have if the sine of twenty degrees had been the radius of it.

Mr. George Adams, late mathematical instru- ment maker to his majesty, made some useful improvements in the construction of globes. His globes, like otiiers, are suspended at their poles in a strong brass circle, and turn therein upon two iron pins, which are the axis. They have besides a thin brass semi-circle, moveable about the poles, with a small, thin, sliding circle upon it. On the terrestrial globe, the thin brass semi- circle is a moveable meridian, and its small sliding circle the visible horizon of any particu- lar

place to which it is set. On the celestial globe, the semi-circle is a moveable circle of declination, and its small annexed circle an arti- ficial sun or planet. Each globe has a brass wire circle, placed at the limits of the twilight,

which, together with the globe, is set in a wooden frame, supported by a neat pillar and claw, with a magnetic needle at its base. On the terres- trial globe the division of the earth into land and water is laid down from the latest disco- veries ; there are also many additional circles, as well as the rhumb-lines, for solving all the ne- cessary geographical and nautical problems. On the celestial globes, all the southern constella- tions, observed at the Cape of Good Hope by M. de la Caille, and all the stars in Mr. Flam- stead's British Catalogue, are accurately laid down and marked with Greek and Roman letters of reference, in imitation of Bayer. Upon each side of the ecliptic are drawn eight parallel circles, at the distance of one degree from each other, including the zodiac ; and these are crossed at right angles with segments of great circles at every fifth degree of the ecliptic, for the more readily noting the place of the moon, or of any planet upon the globe. The author has also inserted, from Ulugh Beigh, printed at Oxford in 1665, the mansions of the Moon of the Arabian Astronomers, so called, because they observed the moon to be in or near one of these every night during her monthly course round the earth, to each of which the Arabian characters are fixed. On the strong brass circle of the terrestrial globe, and about twenty-three degrees and a half on each side of the north pole, the days of each month are laid down according to the sun's declination ; and this brass circle is so contrived, that the globe may be placed with the north and south poles in the plane of the horizon, and with the south pole elevated above it. The equator, on the surface of either globe, serves the purpose of the horary circle, by means of a semi-circular wire placed in the plane of the equator, carrying two indices, one of which is occasionally to be used to point out the time. A farther account of these globes, with the method of using them, will be found in Adams's Treatise on their Construction and Use.

Mr. G. Wright, of London, has simplified the construction of the hoiK- circle. There are engraved on his globes two hour-circles, one at each of the poles; which are divided into a double set of twelve hours, as usual in the common brass ones, except that the hours are figured round both to the right and left. The hour-hand or index is placed in such a manner under the brass meridian, as to be moveable at pleasure to any required part of the hour-circle, and yet remain there fixed during the revolution of the

globe on its axis, and is entirely inde- pendent of the poles of the globe. In this manner, the motion of the globe round its axis carrying the hour-circle, the fixed index serves to point out the time, the same as in the reverse way by other globes. There is ˆn advantage in having the hour-circle figiired both ways, as one hour serves as a complement to XII. for the other, and the time of the sun rising and setting, and vice versa, may be both seen at the same time on the hour-circle. In the problems gene- rally to be performed, the inner circle is the circle of reckoning, and the outer one only the complement.

In the Philofophical Transactions for 1789,

1, Mr. Smeat on has proposed some improve- ments of the celestial globe, especially with re- spect to the quadrant of altitude, for the resolu- tion of problems relating to the azimuth and altitude. The difficulty, he observes, that has occurred in fixing a semi-circle, so as to have a centre in the zenith and nadir points of the globe, at the same time that the meridian is left at liberty to raise the pole to its desired eleva- tion, I suppose, has induced the globe makers to be contented with the strip of thin flexible brass, called the quadrant of altitude ; and it is well known how imperfectly it performs its office. The improvement I have attempted, is in the application of a quadrant of altitude of a more solid construction ; which being affixed to a brass socket of some length, and this ground, and made to tarn upon an up- right steel spindle, fixed in the zenith, steadily directs the quadrant, or rather arc, of altitude to its true azimuth, without being at liberty to deviate from a vertical circle to the right hand or left; by which means the azimuth and altitude are given with the same exactness as the measure of any other of the great cir- cles.

Of the Use of the Globes.

We subjoin the principal problems which ex- emplify the use of these elegant and important scientific instruments.

Sect. I. — Of the use of the Terrestrial Globe.

Prob. I. To rectify the globe. — The globe being set upon a true plane, raise the pole ac- cording to the given latitude ; then fix the quad- rant of altitude in the zenith ; and, if there be any mariner's compass upon the pedestal, let the globe be io placed that the brazen meridian may stand due south and north, according to the two extremities of the needle, allowing for its varia- tion.

Prob. II. To find the longitude and latitude of any place. — Bring the given place to the bra- zen meridian, and the degree it is under is the latitude ;

then observe the degree of the equator under the same meridian, and you will have the longitude.

Prob. III. The longitude and latitude of any place being given, to find that place on the globe.ˆ Bring the degree of longitude to the brazen me ridian ; find upon the same meridian the degree of latitude, whether south or north, and the point exactly under that degree is the place de- sired.

Prob. iV. The latitude of any place being given, to find all those places that have the same latitude. — The globe being rectified (Prob. I.) according to the latitude of the given place, and that place being brought to the brazen meridian, make a mark exactly above the same, and, turn- ing the globe round, all those places passing under the said mark have the same latitude with the given place.

Prob. V. Iwo places being given on the globe, to find the distance between them. — If the places are under the same meridian, that is, have the same longitude, their difference of latitude,

reckoning sixty-nine miles and a half to a degree, ■will give the distance.

If they have the same latitude, but differ in longitude, their distance may be found by their difference of longitude, reckoning the number of miles in a degree of longitude in their common parallel of latitude, according to the table given above.

If they differ both in latitude and longitude, lay the graduated edge of the quadrant of alti- tude over both the places, and the number of degrees intercepted between them will give their distance from each other, reckoning every de- gree to be sixty-nine English miles and a half.

Prob. VI. To find the sun's place in the ecliptic at any time. — The month and day being given, look for the same upon the wooden horizon ; and opposite the day you will find the sign and degree in which the sun is at that time ; which sign and degree being noted in the ecliptic, the same is the sun's place, or nearly, at the time desired.

Prob. VII. The month and day being given, as also the particular time of that day, to find those places ofi the globe to which the sun is in the meridian at that time. — The pole being elevated according to the latitude of the place where you are, bring the said place to the brazen meridian, and setting the index of the horary circle at the hour of the day, in the

given place, or where you are, turn the globe till the index points at the upper figure of XII: which done, fix the globe in that situation, and observe what places are exactly under the upper hemisphere of the brazen meridian ; for those are the places de- sired.

Prob. VIII. To know the length of the day and night in any place of the earth at any time. — Elevate the pole (Prob. I.) according to the latitude of the given place ; find the sun's place in the ecliptic (Prob. VI.) at that time ; which being brought to the east side of the horizon, set the index of the horary circle at noon, or the upper figure of XII ; and, turning the globe till the aforesaid place of the ecliptic touch the western side of the horizon, look upon the horary circle ; and where the index points, reckon the number of hours to the upper figure of XII ; for that is the length of the day ; the comple- ment of which to twenty-four hours is the length of the night.

Prob. IX . To know by the globe what o clock it is in any part of the world at any time, pro- vided you know the hour of the dai/ where you are at the same lime. — Bring the place in which you are to the brazen meridian, the pole being raised (Prob. I.) according to its latitude, and set the index of the horary circle to the hour of the day at that time. Then bring the desired place to the brozen meridian, and the index will point out the hour at that place.

Prob. X. A place being given in the torrid zone, to find the two days of the year in which the sun shall be vertical to the same. — Bring the given place to the brazen meridian, and mark ■what degree of latitude is exactly above it. Move the globe round, and observe the two points of the ecliptic that pass through the said degree of latitude. Find upon the wooden

horizon (or by proper tables of the sun's annual motion) on what days he passes through the aforesaid points of the ecliptic ; for those are the days required, in which the sun is vertical to the given place.

Prob. XI. The month and the day being given, to find by the globe those places of the northern frigid zone, where the sun begins then to shine constantly without setting ; as also those places of the southern frigid zone, where he then begins to be totally absent. — The day given (which must be always one of those either be- tween the vernal equinox and the summer sol- stice, or between the autumnal equinox and the winter solstice), find (Prob. VI.) the sun's place in the ecliptic, and marking the same, bring it to the brazen meridian, and reckon the like num- ber of degrees from the north pole towards the equator, as there is between the equator and the sun's place in the ecliptic, makmg a mark where the reckoning ends. Then turn the globe round, and all the places passing under the said mark are those in which the sun begins to shine con- stantly without setting, upon the

given day. For solution of the latter part of the problem, set off the same distance from the south pole upon the brazen meridian towards the equatoi-, as was in the former case set off from the north ; then marking as before, and turning the globe round, all places passing under the mark are those where the sun begins its total disappearance from the given day.

Prob. XII. A place being given in either of the frigid zones, to find by the globe what number of days the sun constantly shines upon the said place, and what days he is absent, as also the first and last day of his appearance. — Bring the given place to the brazen meridian, and observing its latitude (Prob. II.), elevate the globe accordingly ; count the same number of degrees upon the meridian from each side of the equator, as the place ij distant from the pole; and, making marks where the reckonings end, turn the globe, and carefully observe what two degrees of the ecliptic pass ex- actly under the two points marked oa the meri- dian : first for the northern arch of the circle, namely, that comprehended between the two degrees marked, which, being reduced to time, will trive the number of days that the sun con- stantly shines above the horizon of the given place ; and the opposite arch of the said circle will, in like manner, give the number of days in which he is totally absent, and also will point out which days those are. And in the interval he daily will rise and set.

Prob. XIII. The month and day being given, to find those places on the globe to which the sun, when on the meridian, shall be vertical on that day. — The sun's, place in the ecliptic being found (Prob. VT.), brin'j; the same to the brazen meri- dian, on which make a small mark exactly above the sun's place. Then turn the globe ; and those places which have the sun vertical in the meri- dian, will successively pass under the said mark. Prob. XIV. The month and day being given, to find upon what point of the compass the sun then rises and sets in any place. — Elevate the pole ac- cording to the latitude of the place, and, finding the sun's place in the ecliptic at the given time,

bring the same to the eastern side of the horizon, and it will show the point of the compass upon which he then rises. By turning the globe till his place coincides with the western side of the horizon, you may also see upon that circle the exact point of his setting.

Prob. XV. To know by the globe the kngth of the longest and shortest days and nights in any part of the worW.— Elevate the pole according to the latitude of the given place, and bring the first degree of Cancer, if in the

northern, or Ca- pricon, if in the southern hemisphere, to the eastern side of the horizon. Then, setting the index of the horary circle at noon, turn the globe about till the sign of Cancer touches the western sˆde of the horizon, and observe upon the horary circle the number of hours between the index and the upper figure of XII, reckoning them ac- cording to the motion of the index ; for that is the length of the longest day, the complement of which to twenty-four hours is the extent of the shortest night. The shortest day and longest night are only the reverse of the former.

Prob. XVI. The hour of the day being given at any place, to find those places of the earth where it is either noon or midnight, or any other parti- cular hour, at the same time. — Bring the given place to the brazen meridian, and set the index of the horary circle at the hour of the day in that place. Then turn the globe till the index points at the upper figure of XII, and observe what places are exactly under the upper semicircle of the brazen meridian ; for in them it is mid-day at the time given. Which done, turn the globe till the index points at the lower figure of XII ; and whatever places are then in the lower semi- circle of the meridian, in them it is midnight at the given time. After the same manner we may find those places that have any other particular hour at the time given, by moving the globe till the index points at the hour desired, and obser'- ing the places that are then under the brazen meridian.

Prob. XVII. The day and hour being given, to find b>/ the globe that particular place of the earth to which the sun is vertical at that time. — The sun's place in the ecliptic (Prob. VI.) being found, and brought to the brazen meridian, make a mark above the same ; then (Prob X.) find those places of the earth in whose meridian the sun is at that instant, and bring them to the bra- zen meridian ; which done, observe that part of the earth which falls exactly under the aforesaid mark in the brazen meridian ; for that is the parti- cular place to wliich the sun is vertical at that time.

Prob. XVIII. The day and hour at any place being given, to find all those places where the sun is then rising, or setting, or in the meridian ; con- sequently all tliose places which are enlightened at that time, and those ivhich have twilight, or dark night. — This problem cannot be solved by any globe fitted up in the common way, with the hour-circle fixed upon the brass meridian, unless the sun be on or near either of the tropics on the given day. But by a globe fitted up witji the hour-circle on its surface below the meridian, it may be solved for any day in the year, according to the following method.

Having found the place to which the sun is

vertical at the given hour, if the place be in the northern hemisphere,

elevate the north pole as many degrees above the horizon as are equal to the latitude of that place ; if the place be in the southern hemisphere, elevate the south pole ac- cordingly, and bring the said place to the brazen meridian. Then, all those places which are in the western semicircle of the horizon have the sun rising to them at that time, and those in the eastern semicircle have it setting : to those under the upper semicircle of the brass meridian it is noon ; and to those under the lower semicircle it is midnight. All those places which are above the horizon are enlightened by the sun, and have the sun just as many degrees above them as they themselves are above the horizon ; and this height may be known, by fixing the quadrant of altitude on the brazen meridian over the place to which the sun is vertical ; and then, laying it over any other place, observing what number of degrees on the quadrant are intercepted between the said place and the horizon. In all those places that are eighteen degrees below the western semicircle of the horizon the morning twilight is just begin- ning; in all those places that are eighteen degrees below the eastern semicircle of the hori- zon the evening twilight is ending ; and all those places tiiat are lower than eighteen degrees have dark nignt.

If any place be brought to the upper semicir- cle of the brazen meridian, and the hour-index be set to the upper figure of XII, or noon, and then the globe be turned round eastward on its axis, — when the place comes to the western semicircle of the horizon, the index will show the time of the sun's rising at that place ; and when the same place comes to the eastern semicircle of the horizon the index will show the time of the sun's setting.

To those places which do not go under the horizon, the sun sets not on that day : and, to those which do not come above it, the sun does not rise.

Prob. XIX. The month and day being given, with tlie place of the moon in the zodiac, and her true latitude, to find the exact hour when she will rise and set, together with her southing, or coming to the meridian of the place. — The moon's place in the zodiac may be found by an ordinary almanack ; and her latitude, which is her distance from the ecliptic, by applying the semicircle of position to her place in the zodiac. For the solution of the problem, elevate the pole (Prob. II.) accord- ing to the latitude of the given place ; and the sun's place in the ecliptic at the time being (Prob. VI.) found, and marked, as also the moon's place at the same time, brings the sun's place to the brazen meridian, and set the index of the horary circle at noon ; then turn the globe till the moon's place successively meet with the eastern and western side of the horizon, as also the brazen meridian ; and the index will point at those various times the particular hours of her rising, setting, and southing.

Sect. II. — Directions for using the Ce- lestial Globe.

We shall now proceed to the use of the ce- lestial globe, premising, that as the equato'.

GLOBES.

•25:

ecliptic, tropics, polar circles, horizon, and brazen meridian, are exactly alike on both globes, the former problems concerning the sun are solved in the same way. The method also of rectifying the globe is the same. Observe also that the sun's place for any day of the year stands directly over that day on the horizon of the celestial globe, as on the terrestrial.

Tlie latitude and longitude of the stars, and of all other celestial phenomena, are reckoned dif- ferently from that of places on the earth : for all terrestrial latitudes are reckoned from the equa- tor ; and longitudes from the meridian of some remarkable place; but all astronomers reckon the latitudes of the heavenly bodies from the ecliptic ; and their longitudes from the equinoc- tial colure, in that semicircle of it which cuts the ecliptic at the beginning of Aries ; and thence eastward, quite round ; so that stars between the equinoctial and the northern half of the ecliptic, have north declination and south latitude : those between the equinoctial and the southern half of the ecliptic have south declination and north latitude ; and all between the tropics and poles, have declinations and latitudes of the same de- nomination.

There are six great circles on the celestial globe, which cut the ecliptic perpendicularly, and meet in two opposite points in the polar circles ; which points are each ninety degrees from the ecliptic, and are called its poles. These polar points divide those circles into twelve semicircles, which cut the ecliptic at the begin- ning of the twelve signs. They resemble so many meridians on the terrestrial globe ; and, as all places which lie under any particular me- ridian semicircle on that globe have the same longitude, so all those points of the heaven through which any of the above semicircles are drawn have the same longitude. And, as the greatest latitudes on the earth are at the north and south poles of the earth, so the greatest lati- tudes in the heaven| are at the north and south poles of the ecliptic.

For tlie division of the stars into constella- tions, &c., see Astronomy.

Prob. I. To find th right ascension and decli- nation of the sun or any fixed star. — Bring the sun's {ilace in the ecliptic to the brazen meridian : then that degree in the equinoctial which is cut by the meridian is the sun's right ascension ; and that degree of the meridian which is over the sun's place is his declination. Bring any fixed star to tlie meridian, and its right*

ascension will be cut by the meridian in the equinoctial ; and the degree of the meridian that stands over it is its declination.

So that right ascension and declination, on the celestial globe, are found in the same manner as longitude and latitude on the terrestrial.

pRoii. II. To find the latitude and longitude of any star. — If the given star be on the north side of the ecliptic, place the ninetieth degree of the quadrant of altitude on the north pole of the ecliptic, wiicre the twelve semicircles meet, which divide the ecliptic into the twelve signs ; but if the star be on the south side of the ecliptic, place the ninetieth degree of the cpiadrant on the south pole of the ecliptic. Keeping the

ninetieth degree of the quadrant on the proper pole, turn the quadrant about, until its graduated edge cuts the star ; then the number of degrees in the quadrant between the ecliptic and the star, is its latitude; and the degree of the eclip- tic cut by the quadrant, is the star's longitude, reckoned according to the sign in which the qua- drant then is.

Prob. III. To represent the face of the starry firmament, as seen from any given place of the earth, at any hour of the night. — Rectify the celestial globe for the given latitude, the zenith, and sun's place in every respect, as taught by the sixteenth problem for the terrestrial ; and turn it about, until the index points to the given hour; then the upper hemisphere of the globe will represent the visible half of the heaven for that time ; all tlie stars upon the globe being then in sucli situations as exactly correspond to those in the heaven. And, if the globe be placed duly north and south, every star in the globe will point toward the like star in the heaven : by which means the constellations and remarkable stars may be easily known ; all those stars under the upper part of the brazen meridian, between the south point of the horizon and the north pole, are at their greatest altitude, if the latitude of the place be north ; but if the latitude be south those stars which lie under the upper part ot the meridian, between the north point of the horizon and the south pole, are at their greatest altitude.

Pf.ob. IV. The latitude of the place, and day of the month, being given ; to find the time icheii any knoxon star will rise, or be upon the meridian, or set. — Having rectified the globe, turn it about until the given star comes to the eastern side of the horizon, and the index will show the time of the star's rising ; then turn the globe westward, and, when the star comes to the brazen meridian, the index will show the time of the star's coming to the meridian of your place ; lastly, turn on, until the star comes to the western side of the horizon, and the index will show the time of the star's setting. N. B. In northern latitudes, those stars which are less distant from the north pole than the quantity of its elevation above the north point of the horizon

never set ; and those which are less distant from the south pole than the number of degrees by which it is depressed be- low tlie horizon never rise; and vice versˆ in southern latitudes.

Prob. V. To find at what time of the year a given star will be upon the meridian at a given hour of the night. — Bring tlie given star to the upper semicircle of the brass meridian, and set the index to the given hour ; then turn the globe, until the index points to twelve at noon, and the upper semicircle of the meridian will then cut the sun's place, answering to the day of the year sought ; which day may be easily found against the like place of the sun among the signs on the wooden horizon.

i'Ron. VI. The latitude, [day of the month, and azimuth of any kriown star being given ; to find the hour of the night. — Having rectified the globe for the latitude, zenith, and sun's place, lay the (niadrant of altitude to the given degree t-t azimuth in the iiorizon : then turn the globe on

its axis, until the star comes to the graduated edge of the quadrant ; and when it does, the index will point out the hour of the night.

Prob. VII. The latitude of the place, the day of the month, and altitude of any known star, being given ; to find the hour of the night. — Rec- tify the globe as in the former problem, guess at the hour of the night, and turn the globe until the index points at the supposed hour ; then lay the graduated edge of the quadrant of altitude over the known star ; and, if the degree of the star's height in the quadrant upon the globe answers exactly to the degree of the star's ob- serred altitude in the heaven, you have guessed exactly : but if the star on the globe is higher or lower than it was observed to be in the heaven, turn the globe backwards or forwards, keeping – the edge of the quadrant upon the star, until its centre comes to the observed altitude in the quadrant; and then the index will show the true time of night.

Prob. VIII. An easy method for finding the hour of the night by any two known stars, without knowing either their altitude or azimuth ; and then of finding both their altitude and azimuth, and thereby the true meridian. — Tie one end of a thread to a common musket bullet; and, having rectified the globe as above, hold the other end of the thread in your hand, and carry it slowly round betwixt your eye and the starry heaven, until you find it cuts any two known stars at once. Then, guessing at the hour of the

night, turn the globe until the index points to that time in the hour circle ; which done, lay the graduated edge of the quadrant over any one of these two stars on the globe which the thread cut in the heaven. If the said edge of the quadrant cuts the other star also, you have guessed the time exactly ; but if it does not, turn the globe slowly back- wards or forwards, until the quadrant (kept upon either star) cuts them both through their centres : and then the index will point out the exact time of the night ; the degree of the horizon cut by the quadrant will be the true azimuth of both these stars from the south ; and the stars them- selves will cut their true altitudes in the quad- rant: at which moment, if a common azimuth compass be so set upon a floor or level pave- ment, that these stars in heaven may have die same bearing upon it (allowing for the variation of the needle) as the quadrant of altitude has in the wooden horizon of the globe, a thread extended over the north and south points of that compass •will be direetly in the plane of the meridian; and if a line be drawn upon the floor or pave- ment, along the course of the thread, and an up- right wire be placed in the southmost end of the line, the shadow of the wire will fall upon that line when the sun is on the meridian, and shines upon the pavement.

Prob. IX. To find the place of the moon, or of any planet; and thereby to show the time of its rising, southing, and setting. — Seek in an almanack or Ephemeris the geocentric place of the moon or planet in the ecliptic, for the given day of th: month; and according to its longi- tude and latitude, as shown by the ephemeris, mark the same with chalk upon the globe. Then, having rectified the globe, turn it round 4ts axis

westward ; and as the said mark comes to the eastern side of the horizon, to the brazen me- ridian, and to the western side of the horizon, the index will show at what time the planet rises, comes to the meridian, and sets, in the same manner as it would do for a fixed star.

For an explanation of the harvest moons by a globe, and the equation of time. See Astro- nomy, Index.

Globe Amaranth. See Gomphrena.

Globe Animalcule. See Animalcule.

Globe Daisy. See Sphsˆranthus.

Globe Fish. See Ostracion.

Globe Flower. See Sphˆraxthus.

Globe Ranunculus. See Trollius.

Globe Thistle. See Echinops.

GLOBULARIA, globular blue daisy, a genus of the monogynia order, and tetrandria class of plants : natural order forty-eighth, aggregatae : cal. common imbricated ; proper tubulated inferior ; the upper lip of the florets bipartite, the under one tripartite ; the receptacle paleaceous. There are several species ; but only one is commonly to be met with in our gardens, viz. the

G. vulgaris, or common blue daisy. It has broad thick radical leaves three-parted at the ends, upright stalks from about six to ten or twelve inches high, garnished with spear-shaped leaves, and the top crowned by a globular head of fine blue flowers composed of many florets in one cup. It flowers in June, and makes a good appearance : but thrives best in a moist shady situation. It is propagated by parting the roots in September.

GLOCKNER, one of the highest mountains in Europe, on the confines of Salzburg, the Tyrol, and Carinthia, is computed to be 12,760 feet above the level of the sea. It stands in long. 12° 51′ 40″ E., lat. 47° 4′ 33″ N.

GLOGAU, a large district or principality of Silesia, contiguous to Prussian Poland, and Lu- satia. Its territorial extent is 1826 square miles, and the Oder traverses its whole extent ; which is also watered by the Bober. The soil is clayey ; producing corn and flax, and a small quantity of wine. This principality is now included in the Prussian government of Liegnitz.

Glogau, or Gnoss Glogau, in Silesia, the chief place of the foregoing principality, is well built and strongly fortified. It is situated about a mile from the Oder, and contains an elegant garrison church, erected in 1790, a Lutheran church and school, a synagogue, a Catholic aca- demy, and two hospitals. The cathedral stands on an island formed by the Oder : it was built in 1260. Glogau has cotton and tobacco manu- factures, and some considerable breweries. It was taken by the Prussians and its works greatly strengthened in 1741. In 1807 it surrendered to the forces of Bavaria and Wirtemberg, and was for a considerable time garrisoned by the French troops : the inhabitants amount to 9000, of whom 2000 are said to be Jews. Thirty-four miles east of Sagan, and sixty north-west of Breslau.

Glogau, Little or Upper, is a town of Si- lesia, in the government of Oppeln, inhabitants 2200. Twenty-one miles south of Oppeln, and sixty-seven south-east of Breslau.

GLO

?Lat. glomero, glo- meratio, glomerosus.

GLOM'ERATE, v. a.

GlOMERa'tION, U.S. , ˆ

Glom'erous, adj. j To gather into a ball

or sphere ; a filamentous substance gathered into a ball is said to be glomerated, but discontinu- ous particles are conglobated. Thus in the human body on this principle the glands are divided into conglobate and conglomerate.

The rainbow consistetu of a glomeration of small drops, which cannot fall but from the air that is very low. Bacon.

GLOˆIME, the largest river of Norway, rises in the lake of Stor Scargen, passing by Tonset, and Kongswinger, and falls into the Cattegat at Frederickstadt. It contains several cataracts, the largest of which is at Halsl-and ; and, when swelled by the snows and heavy rain, flows with great vigor and rapidity. In 1702 it burst its banks and devastated a large extent of country. GLOOM, n. s. & v. «.~\ Sax. gloman?, twi- Gloom'ily, adv. t light. Defect of

Gloom'ixess, 71. s. flight; heaviness or Gloom'v, adj. J obscurity : applied to

the mind it is a disposition the reverse of ease and happiness ; a mind tinctured with melan- choly feelings and forebodings of evil ; pros- pects which present but little of light or hope ; i state opposed equally to light or cheerful- ness.

Like to the morns, when first her shyning face Hath to the gloomy world itself bewrayed ; That same wos fayrest Amoret in place Shyning with beauties light, and heavenly virtues grace. Spenser. Faerie Qiieene.

His glist'ring armour made A little glooming light much like a shade.

Spenser. Scarcely had Phcebus in the glooming East Yet harnessed his fiery-footed team. Id.

I shall be your faithful guide Through this gloomy covert wide, And not many furlongs thence Is your father's residence. Milton.

This the seat. That we must change for heaven ? This mournful

gloom. For that celestial light .' Id. Paradise Lost.

These were from without The growing miseries, which Adam saw Already in part, though hid in gloomiest shade. To sorrow abandoned. Id.

Deep in a cavern dwells the drowsy god. Whose gloomy mansion nor the rising sun, Nor setting visits, nor the lightsome noon.

Dry den' t Fables. See, he comes : how gloomily he looks ! Dryden. The gloominess in which sometimes the minds of the best men are involved, very often stands in need of such little incitements to mirth and laughter as arc apt to disperse melancholy. Addison.

Thou inak'st the gloomy face of nature gay, Giv'ot beauty to the sun, and pleasure to the day.

Id. Neglect spreads gloominess upon their humour, and makes them grow sullen and inconversable.

Collier of the Spleen. Now warm in love, now withering in thy bloom. Low in a convent's solitary gloom. Pope,

The surface of the earth is clearer or gloomier. Just as the sun is bright or more overcast. Id

Gloomily retired the spider lives. Thomson.

GLCRIED, adj. ^\ Fr. glorie, glorieux, Glo'rious, adj. I glorijier ; Belg. g/ oor;

Glo'riously, adv. [Lat. gloria, gloriosus, Glorifica'tion, n.s. j g/ori^\o. Glory is Glo'rify, v. a. I something dazzling

Glo'ry, v.n. k, n. s. j and diffused or shed abroad, as radii from a centre; applied figura- tively to language, to acts, to states, especially the heavenly ; as praise, illustrious achieve- ments, exaltation, splendor, See. ; also boastful, ostentatious. The original idea is splendid, daz- zling light. This word in a religious sense sig- nifies adoration and praise, given to God.

If I glorifye my silf, my glorie is naught : my fadir is th&t glorijieth me, whom ye seyen that he is youre God. IViclif. Jon. ix. 1.

Thou shall guide me with thy counsel, and af- terwards receive me into thy glory.

Psalm Ixxiii. 24. Glory to God in the highest. Luke ii. 14.

If God be glorified in him, God shall also glorify him in himself, and shall straitwaj' glorify him.

John xiii. 32. Whom he justified, them he also glorified.

Rom. viii. 30. I shuld have deyd, ye longe time agou : But Jusu Crist, as ye in bookes finde, Wol that his glory last and be in minde ; And for the worship of his moder dere Yet may I sing O Almaloude and clcre.

Chaucer. The Prioresses Tale. No chymist yet the elixir got But glorijies his pregnant pot. If by the way to him befall. Some odoriferous thing, or medicinal.

Donne. In her the richesse of all heavenly grace. In chiefe degree, are heaped up on hye. And all that else this worlds' enclosure bace Hath great or glorious in mortali eye, Adornes the person of her maiestye.

Spenser. Faerie Queene. Whomsoever they find to be most licentious of life, desperate in all parts of disobedience and rebellious disposition, him they set up and glorify. Spenser.

This form and manner oi glorifying God was not at that time first begun ; but received long before, and alledged at that time as an argument for the truth.

Hooker.

They were wont, in the pride of their own proceed- ings, to glory, that whereas Luther did but blow away the roof, and Zuinglius batter but the walls of popish superstition, the last and hardest work of all remained, which was to raze up the very ground and foundatioa of popery. Id.

God is glorified when such his excellency, above all things, is with due admiration acknowledged. Id.

Let them look they glory not in mischief. Nor build their evils on the graves of great men ; For then my guiltless blood must cry against them.

Shakspcare. Two such silver currents, when they join.

Do glorify the banks that bound them in. Id.

Glorious followers, who make themselves as trum- pets of the commendation of those they follow, taint business for want of secrecy. liacon.

And with that word and warning soon was dight. Each soldier longing for near coming glory.

Fairfax,

No place alters the condition of nature : an angel is glorious, though he be upon earth ; and man is but earth though he be above the clouds. Bp. Halt.

GLO

Israel's bright sceptre far less glori) hri ii£S, There have been fewer frieads on earth than kings.

Cuw'.ey. At opening your eyes, enter upon the day with thanksgiving for the preservation of you the last night, with the ijlorification of God for the vrorks of the crea- tion. Taylor. Then enter into giory, and resume His seat at God's right hand, exalted high Above all names in heaven.

Milton's Paradise Lost. Old respect, As I suppose, toward your ouce gloried friend. My son, now captivate, hither hath informed. Your younger feet, while mine cast back with age Came lagging after. Id. Agonistes.

Such did the manna's sacred dew distil White and entire, although congealed and chill Congealed on earth ; but does dissolving run Into the glorys of the' almighty sun. Marvell.

Some to the glory of the Lord Perjured themselves and broke their word.

BtUler. Oh ! she is the pride and glory of the world : Without her all the rest is worthless dross ; Life a base slavery ; empire but a mock ; And love, the soul of all, a bitter curse.

Rochester's Valentinian, The success of those wars was too notable to be un- known to your ears, to which all worthy fame hath glory to come unto. Sidney.

With like judgment glorying when he had happened to do a thing well, as when he had performed some notable mischief. Id.

Think it no glory to swell in tyranny. Id.

The members of the church remaining, being per- fectly sanctified, sliallbo eternally y/oriˆed ; then shall the whole church be truly and perfectly holy.

Pearsort. Treated so ill, chased from your throne. Returning, you adorn the town ; And with a brave revenge do show Their glory went and came with you. Waller.

This is the perfection of every thing, to attain its true and proper end ; and the end of all these gifts and en- dowments, which God hath given us, is to glorify the

giver.

Tillotson.

They inspire with those celestial flames, which shine so gloriously in their works. Dryden.

He is glorious in respect of the brightness and splen- dor of his celestial body, still made more glorious and majestick by the authority which his Father hath com- mitted to him of universal judge. Nelson.

Can we imagine that neither the ambition of princes, or interest, or gain in private persons, or curiosity and the desire of knowledge, or the glory of discoveries, could ever move them in that endless time to try their fortunes upon the sea. Burnet.

It is not a converting but a crowning grace ; such an one as irradiates, and puts a circle of glory about the head of him upon whom it descends. South.

Aristotle says, that should a man underground con- verse with works of art, and be afterwards brought up in the open day, and see the several glories of the heaven and earth, he would pronounce them the works of God. Addison's Spectator.

Thou hast seen mount Atlas,

While storms and tempests thunder on its brow.

And oceans break their billows at its feet.

It stands xmmoved, and glories in its height.

Id. Calo. Let us remember we are Cato's friends,

Ajid act like men who claim that glorioifs title.

This title of Friieholder is what I most lor *in, and what most effectually calls to my uiiad the happiness of that government under which I live.*

Addison's Fredholder. Impartial justice holds hor equal scales, Till stronger virtue does the weight incline ;

If over thee thy gloriuus foe prevails j He now defends the cause that once was thine.

Prior. Take but the humblest lily of the field. And, if our pride will to our reason yield. It must by'sure comparison be shown That in the regal seat great David's son. Arrayed in all his robes and types of power. Shines with less glory than that simple flower. Id. A smile plays with a surprising

agreeableness in the eye, breaks out with the brightest distinction, and sits like a glory upon the countenance.

Collier of the A sped. If others may glory in their birth, why may not we, whose parents were called by God to attend on him at his altar? Atterbury.

Now sleeping flocks on their soft fleeces lie ; The moon, serene in glory, mounts the sky. Pope. From opening skies may streaming glories shine. And saints embrace thee with a love like mine. Id. Glorious ambition ! Peter, swell thy store. And be what Rome's great Didius was before. Id.

Great wits sometimes may gloriously offend. And rise to faults true criticks dare not mend. Id. It is hardly possible for you to beseech and intreat God to make any one happy in the highest enjoyments of his glory to all eternity, and yet be troubled to see him enjoy the much smaller gifts of God, in this short and low state of human life. Law.

If there be nothing no glorious as doing good, if there is nothing that makes us so like to God, then nothing can be so glorious in the use of our money, as to use it all in works of love and goodness. Id.

No one is out of the reach of misfortune ; no one therefore should glory in his prosperity. Clarissa.

On death-beds some in conscious glory lie. Since of the doctor in the mode they die. Young,

Your sexes glory 'tis to shine unknown. Of all applause be fondest tff your own. Id,

Oh Love I O Glory! what are ye? who fly Around us ever rarely to alight ; There's not a meteor in the polar sky Of such traiiscendant and more fleeting flight.

Byron,

GLORIOSA., superb lily, a genus of the mo- nogynia order, and liexandria class of plants ; natural order eleventh, sarmentaceae : cor. hex- apetalous, undulated, and reflected ; the style oblique. There is but one species; a native of Malabar. It has a thick, fleshy, tuberous root, sending forth from its centre declinated round stalks, growing eight or ten feet long, and gar- nished with very long narrow leaves running out into a point, terminated by a long tendril. From the upper part of the stalks proceed large flame- colored drooping flowers, consisting of six widely spreading reflected petals. It flowers in June and July; and is of admirable beauty, whence its name. This plant requires the protection ot a hot-house in this country. The

flower-stalks shoot forth in March or April ; which, being long and trailing, must have tall sticks for their support. The plants are propagated by offsets, which are produced in tolerable plenty, and may be separated anytime after the stalks iecay, or in spring before new ones arise.

GLOSE, V. a. To flatter; to collogue.— I lan- rner. See Gloze.

Fr. glosscr ; Lat.

glossarius ; Gr. •yXwo'-

(7a and ypa0w. These

.words are connected

(with glaze, and sig-

I nify to render the

I outward surface

J shining by friction.

GLOSS, n. s., v.a.Si,v.n.^ Gloss'ary, n. s.

GlOSs'aTEK, 71. s.

Gloss'er, n.s. Gloss' IN ESS, n.s. Glossog'rapher, n. s.

GlOSSOG'raPHY, 71 s.

Gloss'y, adj. In a figurative sense, to give the best appearance by way of comment; used sometimes in a bad sense, and then they imply false, or specious coloring. A commentaiy; embellishment; a dic- tionary wliich explains ant que words: a com- mentator, or one who furnishes expositions, whether specious or otherwise : a smooth polished surface.

I have this day ben at your chirche at messc. And said a sermon, to my simple wit. Not all after the text of holy writ ; For it is hard to you as I suppose ; And therefore wol I teche you, ay the glose, Glosing is a full glorious thing certain ; For letter sletb, so as we clerkes sain.

Chaucer. The Sompnoures Tale, His iron coat all over-grown with rust. Was underneath enveloped with gold. Whose glistering gloss darkened with filthy dust

Spenser. Is this the paradise, in description whereof so much glossing and deceiving eloquence hath been spent ?

Hooker^s Sermons. They never hear sentence, which mentioneth the word or scripture, but forthwith their (//osjes upon it are the word preached, the scripture explained, or delivered unto us in sermons. Hooker.

It is no part of my secret meaning to draw you hereby into hatred, or to set upon the face of this cause any fairer j/oM than the naked truth doth afford.

Id. Preface. You are a sectary, That's the plain truth : your painted gloss discovers. To men that understand you, words and weakness.

Shahspcare. Golden opinions from all sorts of people. Which would be worn now in their newest j/om.

Id. He seems with forged quaint conceit To set a gloss upon his bad intent. Id.

The doubt will be whether it will polish so well ; fo" tied glosses are more resplendent than plates of brass.*

Bacon. There came towards us a person of place ; he had on him a gown with wide sleeves, of a kind of wator- camblct, of an excellent azure color, far more glo'sg than ours. Id.

If then all souls, both good and bad, do teach. With general voice, that souls can never die ;

Tis not man's flattering gloss, but nature's speech. Which, like God's oracles, can never lie. Dovies.

In narchment then, large as the fields, he draws Assura^ ces, l.ig as glotfed civil laws. Donne,

Weeds that the vind did toss Tlio virgins wore : the youths, woven coats, that cast a

faint dim glost. Like that of oil. Chtipman't Iliads,

. Some mutter at certain passages therein, by putting ill glosses upon the text, and taking with the left hand what I offer with the rifjht. Howd,.

The rest entire Shone with a glossy scurf. Md'.on.

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The common gloss Of theologians. Id.

All this, withoiu a gloss or comment. He could unriddle in a moment. HuVtbraa.

Besides, he was a shrewd philosopher. And had read every text and gloss over.

Id. Poor painters oft with silly poets join. To fill the world with strange but vain conceit ;

One brings the stuff, the other stamps the coin. Which breeds nought else but glosses of deceit.

Sid7ieg. Their surfaces haa a smoothness and ˆZo«jfnes» mucli surpassing whatever I had observed in marine or com- mon salt. Boyle.

According to Varro, when dclubrum was applied to a place, it signified such a one, in quo dei simulachrum dedicatum est ; and also in the old glossaries.

Stillingjleel. They give the scandal, and the wise discern ; Their glosses teach an age too apt to learn. Dryden.

His surcoat was a bearskin on his back ; His hair hung long behind, and glossy raven black.

Id. Thou detainest Briseis in thy bands. By priestly glossing on the god's commands. Id.

Do I not reason wholly on your conduct? You have the art to qloss the foulest cause.

Philips. It was the colour of devotion, giving a lustre t» reverence, and a gloss to humility.' South.

The reason why the assertion of a single judge docs not prove the existence of judicial acts, is because his office is to pronounce judgment, and not to become an evidence : but why may not the same be said of two judges? Therefore, in this respect, the glossator's opinion must be false. Ayliffe.

Groves, fields, and meadows, arc at any season plea- sant to look upon ; but never so much as in the opening of the Spring, when they are all new

and fresh, with their first gloss upon them. Addison's Spectator.

Her equals first observed her growing zeal. And laughing glossed, that Abra served so well.

Prior. Explaining the text in shoit glosses , was Accursius's method. Baker on Learning.

I could add another word to the glossary. Baker.

Indentures, covenants, articles, they draw. Large as the fields themselves, and larger far Than civil codes with all their glosses are. Pofie. Ah 1 what avails his glossy varying dyes. His purple crest, and scarlet-circled eyes, 'i'he vivid green liis shining plumes unfold. His painted wings, and breast that Cames with gold ?

Id. To me more dear, congenial to my heart One native charm, than all the gloss of art.

Goldsmith. Thy boastful mirth let jealous rivals spill. Insult thy crest, and glossy pinions sear. And ever in thy dreams the ruthless foe appear.

Beattie.

GLOSSOrETRA, or Glottopetra, from yXuaaa, a tongue, and Trtrpa, a stone, in natural history, a kind of extraneous fossil, somewhat in form uf a serpent's tongue ; frequently found in the island of iMalta and various other parts. The vulgar notion is, that they are the tongues of serpents petrified. Hence their extraordinary virtue in curing the bites of serpents. Tne general opinion of naturalists is, that they are Ihe tf"!th of fisiios, left at land by the waters of tlie deluge, and since petrified. The several sizes

S

t.f the teeth of the same species, and those of the several different species of sharks, afford a vast variety of these fossil substances. Their usual colors are black, bluish, whitish, yellowish, or brown; and in shape they usually approach to a triangular figure. Some are simple, others tii- cuspidate, having a small point on each side of the large one : many of them are quite straiglit ; but they are frequently found crooked, and bent in all directions ; many of them are serrated on their edges, and others plain ; some are undu- lated on their edges, and slightly serrated on these undulations. They

differ also in size as much as in figure ; the larger being four or five inclies long, and the smaller less than a quarter of an inch. They are most usually found in the strata of blue clay, thougli sometimes also in other substances, and are common in the clay- pits of Richmond and other places. They are very frequent also in Germany, but nowhere so plentiful as in the island of Malta. The Ger- mans attribute many virtues to these fossil teeth ; they call them cordials, sudorifics, and alexi- pharmics : and the people of Malta, where they are extremely plentiful, hang them about tlieir childrens' necks to promote dentition. They may possibly be of as much service this way as an anodyne necklace ; and, if suspended m such a manner that the child can get them to its mouth, may, by their hardness and smoothness, be of the same use as a piece of coral.

GLOTTIS, in anatomy, the narrow slit at the upper part of the aspera arteria, which is covered by the epiglottis when we hold our breath and when we swallow. The glottis, by its dilatation and contraction, modulates the voice. See Ana- tomy, Index.

GLOUCESTER, a county in the east pa>t of Virginia, North America, bounded N. N. E. by Middlesex and IMatthews counties, east by Ches- apeak Bay, S. S. W. by York River, and west by King and Queen county. It is fifty-five miles in length, and thirty in breadth.

Gloucester, a county ia New Jersey, bounded north by Burlington county, east by the Atlantic, south .by Cape May, Cumberland, and Salem counties, and north-west by the Delaware. The chief town is Woodbury.

Gloucester, a post and sea-port town, of the county of Essex, .Massachusetts, North America, situated on Cape Ann, at the north extremity of Massachusetts Bay ; sixteen north-east Salem, thirty north- east Boston. It contains a bank, an insurance office, and two public libraries, and is divided into five parishes, in each of which is a congregational meeting house. The harbour is open and accessible for large vessels ; and it is one of the most considerable fishing towns in the state. Besides the harbour, properly so called, there are two small out ports, Squam, and Sandy Bay, at which the bay fishery is carried on with spirit. The shipping belonging to this port, in 1816, amounted to 11,080 tons. The harbour is defended by a battery and citadel. Thatcher's Island, on which are two lights of equal height, lies on south-east side of Gloucester and is joined to the continent by a beach of sand which is rarely overflowed. The greatest part of the town is situated on a peninsula, which was formerly

an island, and it is now united to the main land by a narrow isthmus, on which is built a cause- way.

Gloucester, a town of Providence, county of Rhode Island, eighteen miles N. N. W. of P-ovi- dence. Here are several cotton manufactories : and Chepachet village, which contains a post office and a bank, is in this township.

GLOUCESTERSHIRE. Th-s county seems to have obtained its name from the city of Gloucester, the Colonia Glevum of the Romans, and the Caer Gloew of the ancient Britons, and so called from a prince Gloew, said to have lived at the commenceraent of the Roman period of the British history. Anterior to the Roman in- vasion, the inhabitants of the chief parts of this county, and of Oxfordshire, were distinguished by the appellation of Dobuni, from the British Dwfu, denoting inhabitants of low or vale dis- tricts. On the division of the island into Bri- tannia Prima et Secunda, that part of this county lying south-east of the river Severn was included in the first province ; the other, of course, be- longing to the second division. Subsequently to this, under Constantine, the wliole country in the province was named Flavia Csesariensis. Under the Anglo-Saxon dominion it formed a portion of the kingdom of Mercia; Winchcomb and King's Stanley being the residences of the Anglo-Saxon monarchs.

Gloucestershire extends northward from 51° 28′ to 52″ 12', and from 1° 38 E. to 2° 42′ VV. from London. It is bounded on the north and nortli- east by Worcestershire and Warwickshire, on the east by Oxfordshire, on the south-east by part of Berkshire and ^Vilts]nre, on the south and south- west by Somersetshire and the Bristol Channel, and on the west and north- west by Monmouthshire an-d Herefordshire. Its extreme length is from the parish of Clifford Chambers, near Stratford-upon-Avon, to Clifton, beyond the city of Bristol, in a sovith-west direttion, about seventy statute miles ; and its breadth, from Lechdale, north-westward, to Preston, in the hundred of Botloe, about forty statute miles. Its superficial contents are nearly 1,100,000 acres. The principal divisions of this county are four : called the Kniftsgate, the Seven Hundreds, the Forest, and the Berkeley divisions; twenty-eight hundreds, included in the above divisions, one city, twenty- eight market towns, and 320 parishes. The ecclesiastical division of the county is that of parishes just named. It is, with the exception ofthechapelriesof Icomb and Cow-honyborn, in- cluded in the diocese of Gloucester, which com- prehends one archdeaconry and ten deaneries, and is in the province of Canterbury, and is in- cluded in the western district. Besides these artificial divisions, there are three natural dis- tricts : Cotswold, or Hill, Vale, and Forest.

Speed remarks that the air of this county is pleasant, sweet, and delectable ; and certainly, except on the Cotswold hills, where it is very sharp, it is remarkably healthy, although of vari- ous temperatures. Even during the Avintcr months, it is generally soft and mild in the val- leys. Of the hilly

district, however, it has been remarked by the inhabitants, that eight months in t!ie year are winter, and the other four too

cold forsuminer; but that in the Vale district eight months are summer, and the other four too warm for winter.

*The soil is, in general, extremely fertile, and capable of producing all sorts of corn and fruits. William of Malmsbury, who died in 1142, says that ‘ the ground of this shire throughout yieldelh plenty of com, and bringeth forth abundance of fruit; the one through the natural goodness only of the ground ; the other through the diligent manuring and tillage, in such wise, that it would provoke the laziest persons to take pains.’ This old writer adds that, in his time, ‘ one might see the highways and common lanes clad with apple trees and pear trees, not engrafted by the indus- try of man’s hand, but grovsing naturally of their own accord.’ He also adds, that no county in England was * so thick set with vineyards as this province,’ producing wines but little inferior to the French wines. According to]\Ir. Rudge’s Map of the soil of Gloucestershire, it appears that nearly one-half the soil, extending from near Bristol, north-west to Campden, near the War- wickshire border, is a stone brash on calcareous sand-stone. A second portion, nearly as exten- sive, reaching in the same direction, from the western side of Bristol to Dorrington, also bordering on Warwickshire, is brown clay, generally on a subsoil of blue clay ; but there are in this district various mixed patches of red loamy clay on marl, ferruginous clay, or argil- laceous loam, light loam on compact limestone, red sand or grit, black loamy soil, and peaty earths of various colors. The rest, for the most part, appears to be a mixed loam, on a stratum of broken rock, found chiefly along the Wilt- shire border, and more particularly to the north and north-east of Cirencester.*

The principal rivers are the Severn, Isis or Thames, Upper Avon, and Lower Avon ; but there are others intimately connected with this county, particularly the Wye, the Frome, the Stroud, &c. The Severn, which rises on the east side of the huge mountain of Plyn Limmon, in the south-east part of Montgomeryshire, is deemed the second commercial river in England, and has been navigable time immemorial. It is of sufficient depth for vessels of from l.‘jO to 200 tons buirden, up to the city of Gloucester. The tide flows as far as Tewkesbury, nearly seventy miles from the sea. This county has the honor of containing the source of the prince of English rivers, the Thames. It rises at a place called the Thames’ Head, near the village of Cotes, about two miles south-west of Cirencester.

Of the several navigable canals constructed in this country, the most remarkable are, 1. The Thames and Severn canal, which communicates with the latter river through the Stroud canal, and with the former river at the town of Lechlade. It wa.s begun in 17B3, and finished in ten years. The summit level is 241 feet above the level of the Stroud canal, and 130 feet above the river Tliames at the place of its junction. These rises of level are sunnounted by locks, admirably con- trived and executed ; and in one place it passes under the park of Lord Bathurst, through Sap- perton tunnel, and, after being buried for the distance of two miles and five furlongs, again

emerges near Cirencester. The breadth of the canal is forty-two feet at the top, and thirty feet at the bottom, and it is constructed for barges adapted to the locks on the river Thames, as well as to those of the canal. This work has, how- ever, been more splendid than useful : the ex- pense has exceeded £250,000, and the toi.s are scarcely more than sufficient to defray the current repairs. In fact, it connects two rivers, the navi- gation of both of which is bad ; but especially that of the Thames, and the trade, which once passed through this canal, has been diminished by the opening of the Kennet and Avon, which forms a better medium for the transit of goods from Bristol or Gloucester to London. 2. The Berkley canal, parallel to the river Severn, but which, by avoiding its sinuosities, shortens the navigation twenty miles, was begun i.n 1794. Though an improvement of importance, it lan- guished many years, and is now scarcely com- pleted. 3. The Hereford and Gloucester canal, designed to connect those two cities, passes near Boyce through a tunnel one mile and a quarter in length, between the Severn and Ledbury, to which pl'ice, a distance of seAenteen miles, the rise is 183 feet.

The virtues of the Medicinal Spas, at Chelt- enham, are too well known to need a particular notice here, particularly after the account we have given of them in our article of that na.me. They form the point of the greatest resort of fashionable company in the county.

At Clifton, one of the most healthy and plea- sant villages in the kingdom, and peculiarly dis- tinguished by the immense acclivities of its rocks, is a celebrated medicinal spring called the hot-well, verv anciently known as an efficacious remedy in cases of bodily decay. The water is per- fectly pellucid ; but in the year 1755, at the time of the great earthquake at Lisbon, it became as red as blood, and so turbid that it could not be drank.

Gloucester sends eleven members to parlia- ment, viz. two for tlie county, two for the city of Gloucester, two for Cirencester, two for Tewkesbury, one for Cheltenham, two for Stroud. The Berkeleys, Chesters, Southwells, Moretons, Duttons, and Guises have successively ' represented this county.

Admiral Berkeley wa; returned 1780, 1784, 1790, 17%, 1802,1806, and 1807, till he vacated his seat in favor of his nephew, the eldest son of the late earl Berkeley, respecting whose legitimacy there was such a memorable dispute. Gloucester sent members to parliament as early as the reign of Edward I.*

This county has produced the following emi- nent persons : — Sir Robert Atkyns, a lˆrned judge and able writer. Born 1021. Died 1709. — Sir Robert Atkyns, son of the preceding, wrote the history of this county. Born 1646. Died 1711. — Richard Cluttcrbrock, an extraor- dinary mechanical genius, though blind. Born at Kodborough in 1638. — Richard Coriensis, or Richard of Cirencester. Born in that town. He wrote the History of Roman Britain. Several of his MSS. are in ditferent libraries. He was born in the year 1355. Died 1400. The monk Benedict, who wrote the life of St. Dubricius, lived about the year 1120. Born at the city of Gloucester. — William Cartwright, divine, poet,

and dramatic writer. Bjrn IGll. Died IG44. — Edward Chamberlayne, an English historian. Bom at Odin5,4on, 1616. Died 1703.— Tliomas Coxeter, critic and bibliographer. Born at Lech- iade, 1682. Died 1747.— Uobert of Gloucester, the oldest of our English poets, lived in the time of Henry 11., about "1263. He wrote a Chronicle of Britain, in verse, from the age of Brutus to the reign of Henry III. — Richard Graves, an inge- nious divine and miscellaneous writer, was author of the Spiritual Quixote, and of a much better work, entitled The Invalid, &c. He was a very learned and able man. Born at Micleton, 1715. Died 1804. — William Guise, a learned divine. Born 1653. Died 1683.— Sir Matthew Hale, a learned and pious judge. Born at Aldersley, 1600. Died 1675. — John Ilarmer, a famous Greek professor. Bornat Churclidown, 1595. Died 1670. — This county had also the honor of giving birth to Dr. Edward Jenner, whose discovery of the vaccine inoculation will convey his name to the latest posterity. — Sir Thomas Overbury, sometimes said to have been a Warwickshire gentleman, was born at Bourton- on-the-Ilill, in this county, in 1581 ; and was poisoned in the tower of London, 1613. He wrote several pieces in prose and verse. — John Taylor, the water poet, was born at Gloucester, 1580. Died 1654. — The learned Dr. Joseph Trapp, was born at Cherington, 1672. Died 1747. — And, lastly, this county gave birth to the zealous and labo.'-ious founder of the Calvinistic Methodists, the Rev. George Whitefield. He was born at tlie Bell Inn, Gloucester, 1714,

Died suddenly in America, 1770.

The principal manufactures of the county are those of woollen broad cloths of various sorts, but chiefly superfine, made of Spanish wool ; and of fine narrow goods in the stripe and fancy way, to a very great extent. There are also manufactures of thm stuffs, composed of worsted yarn ; and of carpets, stocking-frame-knitting, rugs, blankets, flax-spinning, felt hats, &c. There are also some pretty extensive brass, wire, and iron manufactories, &c. &c. The articles of agricultural commerce are cheese, bacon, cyder, perry, and grain of all sorts. Salmon are sent in great quantities to London from this county. The city of Glocester is celebrated for the manu- facture of pins, which was introduced in the year 1 626, by the public spirit of an individual named John Tilsby, the inventor. This trade aff"ords employment for the laboring part of the inhabi- tants, but is not carried on so extensively as at the end of the last century ; it is hoped, however, tliat the recent pacification of Europe will be the means of again placing the manufactories in a state of prosperity equal to the most favorable times. Borough-English (whereby lands and estates descend to the youngest son) is observed within the city.

Gloucester, a city of England, the capital of the foregoing county, is situated in the beau- tiful vale of the Severn, on the left bank of that rivei, about thirty miles from the Bristol Channel. The Severn here dividing itself into two branches, forms the island of Alney : it is navigable for barges, and at spring tides for brigs. Glouces- ter is well supplied with water from springs in

the neighbourhood ; and coal is brought down the Severn from Shropshire and Statibrdshire. It is preferred to that of the adjacent collieries for its superior quality ; and a considerable quantity is sent by the new railway to Chelten- ham. Coal is also procured from the forest of Dean, and brought up the river at an easy rate of carriage. The markets are well furnished with corn, meat, poultry, &c. Gloucester is the see of a bishop, and returns its' two members to parliament by 2000 electors. The chief manu- factory at Gloucester is that of pins, which is here the most extensive in the kingdom; and a bell foundry has been established here since A.D. 1500, in a family of the name of Radhall. The city forms, with its towers and spires, an imposing appearance from the surrounding country. It is 106 miles west by south of London.

Gloucester is aˆ large but not a populous place, consisting principally of four spacious streets, meeting each other at right angles, near the centre of the city, which take their names from the situation of the gates which originally stood at the bottom of each ; as East-Gate Street, West-Gate Street, North-Gate Street, and South- Gate Street; besides some back streets

and lanes, chiefly on the west of the city. Where the above four streets meet, a lofty and beautiful cross formerly stood, which was removed in 1750. West-gate is still remaining, though in a ruinous state. The city is well-paved and cleaned ; and contains, besides the cathedral, five parish churches, two grammar-schools, called the College and Crypt schools; a blue-coat school, where twenty poor boys are taught read- ing, writing, and arithmetic, and are afterwards apprenticed to trades ; several places of worship for Dissenters, Quakers, &c. ; a Jews' synagogue"; a county infirmary, erected in 1756; an hospital for the maintenance of fifty-four poor people, with a chaplain, physician, and surgeon ; another hospital and chapel dedicated to St. James, for the maintenance of nineteen poor people ; a ge- neral workhouse, incorporated by act of parlia- ment, for paupers ; two commodious market- houses ; an elegant theatre ; a custom-house ; and a county-gaol, erected after the plan of Mr. Howard, on the site of the ancient castle. A noble shire-hall has lately been erected ; an ele- gant assembly and pump room. Sec. The mineral springs here are chalybeate, and are thought scarcely inferior to Cheltenham.

The corporation consists of a recorder, twelve aldermen, one of whom is annually chosen mayor, town clerk, chamberlain, forty common-councilmen, and twelve incorporated companies of trades.

The cathedral is considered a very magnifi- cent specimen of Gothic architecture. It was begun on the foundation of a monastery, about the year 1047, by Aldred, bishop of Worcester, afterwards archbishop of York. Abbot Ilorton, in 1551, built the north aisle, and the great hall, now used as a library; and succeeding abbots enlarged and beautified the venerable pile, until it was made a catliedral by Henry VIII., when he suppressed the monastery. It is 420 feet in length, and 144 in width. From the centre

rises a majestic tower, 198 feet in height, fur- mounted hy two beautiful perforated pinnacles, twenty-four feet in height. This tower contains a peal of eight bells, the tenor of which weighs 6000 pounds.

The clioir presents a fine specimen of pointed architecture, and is terminated at the east end by perhaps the largest window in England; composed entirely of painted glass. The cano- pies of the stalls exhibit a most beautiful speci- men of the florid Gothic, and are the admiration of all who visit them. Among the monuments in this cathedral, those of Robert

duke of Nor- mandy, and the unhappy Edward II., are most deserving of attention ; the former is of wood, with the effigy of the duke; the latter of alabas- ter. Gloucester was for.nerly surrounded with walls, defended by a castle, built in the reign of William the Conqueror, and part of which was standing in Leland's time. The city had also at one time a mint. It has three large suburbs, and its boundaries are nearly three miles in cir- cumference. The air is deemed salubrious. The annual average of burials, as registered for • en years, bearing only a proportion to the popu- lation of one in thirty-eight.

This town was made a borough by king John, and a corporation by Henry III. Edward I. held a parliament here in 1'272, at which several useful laws were enacted, called the Statutes of Gloucester. Richard II. also held a parliament here; and Richard III., who bore the title of d'lke of Gloucester, gave the city his sword and cap of maintenance, and made it a county of itself, with jurisdiction over the hundreds of Dudston and King's Barton ; but these pri- vileges were taken away by act of parliament, after the Restoration, and the walls razed to tiie ground, because the inhabitants had shut their gates against Charles I. In the city and neigli- bourhoodare manyremainsofabbeys of black and wliite friars, and formerly it had eleven churches. In the suburbs are the remains of Lantony Abbey, founded by the earl of Hereford for the monks who were driven by tiie Welsh from Monmouth. It is now converted into out-buildings belonging to some farms. Markets, Wednesday and Sa- turday.

(jLOV"E,n. .s. &(;.«.](Sax. jlope; Swed.

Glov'er, n. s. Sgli]t"> r)an. ktaffuw, to

divide. Old Minsheu asks, with more humor than judgment, ' q. gift-love?' A cover for the hands : one whose trade is to make and sell gloves.

Hire glove he toke, of wliich he wo ful faine ; And, finally, when it was woxen eve, And al wos wel, he rose and toke his Icve.*

Chaucer. Troiliu and Creseide.]\Iy limbs. Weakened with griof, being now enraged with pricf. Are thrice themselves ; hence therefore, thou nice

crutch ; A sc;ily gauntlet now, with joints of steel. Must ylove this hand. Shaksf

Ooes he not wear a great round beard like a i/Uiver'i paring knife ? Shalupeare.

They flew about like chafF i the' wind ; For haste some left their masks behind. Some could not stay their gloves to find.*

Drai/tnn.

Tlie next he preys on is her palm. That alm'nerof transpiring balm ; So soft, 'tis air but once removed ; Tender as 'twere a jelly gloved. Cleaveland, White gloves were on his hands, and on his head A wreath of laurel. Dryden.

They called for tea and chocolate. And fell into their usual chat. Discoursing with important face On ribbons, fans, and gloves, and lace. Swift.

Glovek (Richard), the author of Leonidas and several other esteemed works, was the son of Ricliard Glover, a Hamburgh merchant in Lon- don, and was born in St. Martin's Lane in > 17r2. He very early manifested his propensity to poetry ; and while at school wrote, amongst other pieces, a poem to the memory of Sir Isaac Newton, prefixed to the view of tliat author's philosophy, published in 4to. in 1728, by Dr. Pemberton. But, though possessed of talents calculated to excel in literature, he devoted his atte;ition to commerce, and commenced a Ham- burgh merchant. One of his earliest friends vsras Matthew Green, the author of some admirable poems, which in 1737, after his death, were col- lected and published by Mr. Glover. In 1737 Mr. Glover married Miss Nunn, with whom he received a handsome fortune ; and published Leonidas, a poem, in 4to., which soon passed through three editions. It was inscribed to Lord Cobham ; and on its first appearance was received with great approbation. Lord Lyttle- ton, in his Common Sense, and in a poem ad- dressed to the author, praised it in the warmest terms; and Dr. Pemberton published, Observ- ations on Poetry, especially epic, occasioned by the late p :)em upon Leonidas, 1738, 12mo., merely to point out its beauties. In 1739 Mr. Glover published London, or the Progress of Commerce, 4to., andaballad entitled Hosier's Ghost. Both these pieces seem to have been written with a view to incite the public to resent the recent conduct of the Spaniards ; and the latter had a very considerable eftect. The political dissen- sions at this period raged with great violence, especially in the metropolis; and, at different meetings of the livery, Mr. Glover was called to the chair, and acquitted himself in a very able manner. His talents for public speaking, his knowledge of political affairs, and his inform- ation concerning trade and commerce, soon af- terwards pointed him out to the merchants of London as a proper person to conduct their ap- plication to parliament on the neglect of their trade. He accepted tlie office ; and gave strik- ing proofs of his oratorical powers. In 1744 the duchess of Marlborough died, and by her will left to Mr. Glover and Mr. Mallet £500 each, to write the History of the Duke of]\Iarl- borough's Life. It is supposed that Mr. Glover very early renounced his sliare of it; and Mal- let, though he continued to talk of performing the task almost as long as he live

of tlie embara?sment in his circumstances, sent him £.500. In 1753 Glover produced at Drury- lane his tragedy of Boadicea ; which was acted nine nights. Mr. Garrick, Mr. Mossop, Mrs. Gibber, and Mrs. Pritchard, were among the performers; and Dr. Pemberton wrote a pam- phlet to recommend it. In 1761 Mr. Glover published Medea, a tragedy, written on the Greek model; but it was not acted until 1767, when it appeared at Drury-lane for Mrs. Yates's benefit. At the accession of his late majesty, having surmounted his difficulties, he was chosen M.P. for Weymouth. In 1770 his poem of Leonidas was republished in 2 vols. 12mo., cor- rected, and extended from nine books to twelve : several new characters being added, and the old ones placed in new situations. The calamities arising, in June 1772, from the failure of the bank of Douglas, Heron, and Co. in Scotland, occasioned Mr. Glover to take a very active part in settling those complicated concerns. In Fe- bruary 1774 he called the annuitants of that house together, at the King's Arms tavern, and laid proposals before them for the security of their demands, with which they were fully satis- fied. He also undertook to manage the interests of the merchants and traders of London con- cerned in the trade of Germany and Holland, and of the dealers in foreign linens, in their ap- plication to parliament in May 1774. Both his speeches on these occasions were published that year. In 1775 he engaged on behalf of the West India merchuits in their application to parliament, examined the witnesses, and summed up the evidence, in his usual masterly manner. This speech was also printed. For his exertions in this service, he was complimented with a service of plate, worth £300. Besides an epic poem of considerable length, he in addition to his writings already named left some tragedies and comedies in MS., and a most estimable cha- racter as a man, a citizen, and an author. He died November 25th, 1785.

GLOUT, V. n. A low word, connected proba- bly with Gloat, which see. To pout; to look sullen. It is still used in Scotland.

She lurks in midst of all her den, and streaks From out a ghastly whirlpool all her necks. Were, glowting round her rock, to fish he falls.

Chapman. Clouting with sullen spight, the fury shock

Her clotted locks, and blasted with each look.

Uartli.

Glˆ Oˆ, v.n.,v. a. k,n.s.\ Saxon glofian ; Glow'wokm, n. s. S Goth, gloa ; Dut.

gloeyen ; Teut. gluen ; Wei. glo ; a Gr. ■xXiaivw, to make warm, Alinsheu. A partial and grateful heat ; a warmth which exists in the human frame after exercise ; figuratively applied to the ardor of friendship in different degrees ; a bright and roseate color; the burning of desire. A small creeping grub with a phosphoric or luminous tail.

The cercles of his eyen in his hed They gloweden betwixcn yelwe and red.

Chaucer. The Knightes Tale, But sithence silence lesseneth not my fire. But told it flames, and hidden it does glow, I will reveal what ye so much desire. Spenhif,

On each side her Stood pretty dimpled boys like smiling Cupids, With divers coloured fans, whose wind did seem To glow the delicate cheeks which they did cool.

Shaksfeare, His goodly eyes. That o'er the files and musters of the war Have glowed like plated Mars, now bend, now turn Their office upon a tawny front. Id.

The pale complexion of true love. And the red glow of scorn and proud disdain.

Id. The glowworm shews the mattin to be near. And 'gins to pale his ineffectual fire. /(/.

A great light drowueth a smaller that it cannot be seen ; as the sun that of a glowworm. Bacon,

Kunigund, wife to the emperor Henry II., to show her innocency, did take seven glowing irons, one after another, in her bare hands, and had thereby no harm. Hakewill.

Nor amidst all these triumphs dost thou scorn The humble glow-worms to adorn. And with those living spangles gild (O greatness without pride), the bushes of the field.

Cowley. With smile that glowed Celestial rosy red, love's proper hue. Milton. Not all parts alike, but all alike informed With radiant light, as glowing iron with fire. Id.

The man, who first upon the ground A glow-worm spy ed, supposing he had found A moving diamond, a breathing stone ; For life it had, and like those

jewels shone; He held it dear, 'till by the springing day Informed, he threw the worthless worm away.

Waller. Clad in a gown that glows with Tyrian rays.

Dryden, A fire which every windy passion blows ; With pride it mounts, and with revenge it glows.

Id. A malicious joy. Whose red and fiery beams cast through your visage A glowing pleasure. Dryden and Lee's Oedipus.

From the mingled strength of shade and light, A new creation rises to my sight ; Such heavenly figures from his pencil flow. So warm with life his blended colours glow. Amidst the soft variety I'm lost. Addison.

Did not his temples glow In the same sultry winds and scorching heats ?

Id. Cato. You strive in vain To hide your thoughts from him, who knew too well The inward glmvings of a heart in love. Id.

Nor would you find it easy to compose The mettled steeds, when from their nostrils flows The scorching fire that in their entrails glows.

Id. Ovid. Forced compliments and formal bows Will shew thee just above neglect ;

The fire with which thy lover glows.

Will settle into cold respect. Prior.

Did Shadrach's zeal my glowing breast inspire

To weary tortures, and rejoice in tire. Id.

The cord slides swiftly through his glowing hfinds.

Gay. Here on a couch extend the Cyprian dame. Let her eye sparkle with the glowing fiame. Id.

A waving glow his bloomy beds display.

Blushing in bright diversities of day. Pope.

So perish all, whose breast ne'er learned to glow

For others' good, or melt ut others' woe. Id.

Fair ideas flow

Strike in the sketch, or in the picture glow. Id,

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Not the fair fruit tnat on yon branches glows, Wtth that ripo red th' autumnal sun bestows. Can move the god. /'/.

Each pleasing Blount shall endless smiles bestow. And fair Belinda's blush for ever glow. Id.

Here clearer stars glow round the frozen pole.

Id. To praise is always hard> When real virtue fires the glowing bard. Lewis. When crept into aged veins. Love slowly burns, and long remams ; It glows, and with a sullen heat. Like fire in logs, it warms us long.

Shudwell. Such as suppose that the great stile might happily be blended with the ornamental, that the simple, grave, and majestic dignity of Raffaelle could unite with the glow and bustle of a Paulo, or Tintoret, are totally mistaken. Reynolds.

Like th' ethereal glowed the green expanse.

Savage. How beautiful she looked ! her conscious heart Glowed in her cheek, and yet she felt no wrong.

Byron. An emerald aigrette with Haidee's hair in't Surmounted as its clasp a glowing crescent. Whose rays shone ever trembling but incessant.

Id. Don Juan. Glow-worm, in zoology. See Lampyris. GLOZE, v.n. & n. s. i Sax. slepan ; Goth. Glozen, n. s. Sglosa; specious; in-

sinuating flattery. To pretend or wheedle. For ye wol faren well at festes, And be worm clothed for the cold. Therefore ye glosen goodes hestes. And bcgile peple yong and old.

Chaucer. The Ptowmannes Tale. For he could well his giczing speaches frame. To such vaine uses, that him best became.

Spenser. Faerie Queene. Now to plain dealing; lay these ptoses by.

Shuksfieare. Which Saliquc land the French unjustly gloxe To be the realm of France. Id.

So glazed the tempter, and his proem tuned. Into the heart of Eve his words made way.

Milton. Man will hearken to his glozing lies. And easily transgress. Id. Paradise Lost.

Precious couches full oft arc sliaked with a fever ; If then a bodily evil in a bodily gloxe be not hidden. Shall such morning dews be an ease to the heat of a lover' fire ? Sidney.*

Nor for a gloxing speech. Fair protestations, specious marks of friendship.

Philips. A false glozing parasite would call hisfoolhardincss valour, and then he may go on boldly, because blindly, and, by mistaking himself for a lion, come to perish like au ass. South.

GLUCHO'^, a town of European Russia, in tlie southern government of Czernigov, and the cliiff place of" a circle. Clay of a particular quality is found in the neighbourhood, and sent to the porcelain manufactories of Moscow and St. Petershurgli. It contains about 7000 inha- bitants, and is sixty miles E. S. E. of Novgorod Sieverskoi.

GLUCINA, from yXiiicaij/a;, to sweeten; a peculiar earth discovered by Vauquclin in the beryl and emerald, and so named from its cha- racteristic property of forming salts of a saccha- rine taste. Its general properties are, 1. It is

white; 2. Insipid; 3. Adhesive to the tongue; 4. Insoluble in water ; and, 5, In ammoniac ; but, 6, Soluble in the fixed alkalies; 7. In the carbonate of ammoniac; and, 8, In almost aU the acids, except the carbonic and phosphoric, and forming salts of a saccharine taste ; 9. Infu- sible ; but, 10, Fusible with borax into a trans- parent glass ; 11. It absorbs one-fourth of its carbonic acid; 12. Decomposes the aluminous salts; and, 13, It is not precipitable by well saturated hydro-sulphurets.

Its specific characters, which are not found united in any of the other known earths, are these: — 1. Its salts are saccharine, and slightly astringent; 2. It is soluble in the carbonate of ammoniac ; 3. It is very soluble in the sulphuric acid by excess; 4. It decomposes the aluminous salts ; 5. It is completely precipitated from its solutions by ammoniac; and, 6, Its affinity for the acids is intermediate between magnesia and alumine. 100 parts of beryl contain sixteen of glucina. M. Vauquelin justly remarks that 'in tiie sciences, a body, a principle, or a property, formerly unknown,

though it may often have been used, or even held in the hands, and referred to other simple species, may, when once dis- covered, be afterwards found in a great variety of situations, and be applied to many useful purposes. Chemistry affords many recent exam- ples of this truth.' Sir II. Davy's researches have rendered it more than probable that glucina is a compound of oxygen, and a peculiar metal- lic substance, which may be called glucinum. By heating it along with potassium, the latter was converted for the most part into potassa; and dark colored particles, having a metallic appearance, were found diffused through the mass, which regained the earthy character by being heated iit the air, and by the action of water. In this last case, hydrogen was slowly disengaged. According to Sir II. Davy, the prime equivalent of glucina would be 3-6 on the oxygen scale, and that of glucinum 2-6. These are very nearly the equivalents of lime and cal- cium. From the composition of the sulphate, Berzelius infers the equivalent to be 3-2, and that of its basis 2-2.

GLUCK (Christopher), a celebrated musician and composer, was born in Bohemia in 1716. After visiting Italy he came to England in 1745, and published three operas, with little success. He then returned to the continent; and in 1764 produced his Orfeo, which became very jˆopular. Tliis was followed by other pieces of equal celebrity and excellence ; and, on going to Paris, he had the iionor of introducing a new style of music in that capital. He died possessed of a large fortune, ai 'ienna, in 1787. He wrote, besides his operas, some able letters on music.

GLUCKSTADT, a well-built town of Den- mark, on the Elbe, in the duchy of Ilolstein. It is near the mouth of that river, at the])oint of its junction with the Ilhu, and has a harbour, which, though incumbered with sand-banks, is mucjj frequented by the Greenland fishery crews. The town is intersected by canals, but fresh wa- ter is scarce. It is the seat of tlie provincial and chief magistiacy of Ilolstein it has als» a maga- zine, arsena j house of correction, workhouse,

and navigation school. The Jews have a syna- gogue, and the Roman Catholics a chapel. The town was founded by Christian II. in 1617, who made it the entrepot of the commerce with Ice- land. It stands so low that the centre outworks can be laid under water. Population 5200. Twenty-eight miles north-west of Hamburgh.

GLUE, 71.S. & u. a. Fr. glu; Lat.

Glue'boiler, n. s. ˆgluten; Wei. gleed.

Glu'er, n. s. Glu'tinous, adj. Glu'tinousness, n. s. Glu'y, Ji. s.

A viscous body com- monly made by boiling the skins of animals to a gelly ;

any viscous or tenacious matter by which bodies are held one to another ; a cement : to join, unite, or cement together : a person whose trade is to make glue, or use it.

Whoso teacheth a fool is as one that glueth a pot- sherd together. Ecclus. xxii. 7. But, sikeriy, wilhouten any fable. The hors of bras, that may not be remued ; It stant as it were to the ground yglued.

Chaucer. The Squieres Tale. I fear thy overthrow More than my body's parting with my soul ; My love and fear glued many friends to thee.

Shakspeare. Henry VI. Water, and all liquors, do hastily receive dry and more terrestrial bodies proportionable ; and dry bodies, on the other side, drink in waters and liquors ; so that, as it was well said by one of the ancients of earthly and watery substances, one is a glue to ano- ther. Bacon's Natural History.

The cause of all vivification is a gentle and pro- portionable heat, working upon a glutinous and yield- ing substance. Bacon.

It is called balsamick mixture, because it is a g!uy spumous matter. Harvey on Cowtwnptions.

Next this marble venomed seat. Smeared with gums of glutinous heat. Milton. Intemperance, sensuality, and fleshly lusts, do de- base men's minds and clog their spirits ; sink us down into sense, and gltie us to those low and inferior things. Tilhtson.

She curbed a groan, that else had come ; iˆnd pausing, viewed the present in the tomb I'hen to the heart adored devoutly ˆ/ued Her lips, and, raising it, her speech renewed.

Dry den. With ghty wax some new foundation lay Of virgin combs. Id.

Those wasps in a honey pot are sensual men plunged in their lusts and pleasures ; and, when they are once glued to them, 'tis a very hard matter to work themselves out. L' Estrange.

The driest and most transparent ˆ/ue is the best.

Moxon. Whatever is the composition of the vapour, let it have but one quality of being very gluy or viscous, and it will mechanicˆally solve all the phenomena of the grotto. Addison.

The parts of all homogeneal hard bodies, which fully touch one another, stick together very strongly ; unil, for explaining liow this may be, some have in- vented hooked atoms, which is begging tlic question ; and others tell us their bodies are glued together by rest; that is, by an occult quality, or rather by no- thing. Newton's Opticks.

To build the earth did chance materials chuse. And through the parts cementing glue ditVuse.

Blackmore. Nourishment too viscid and glutinous to be subdued Ity the vital forcp. Arbuthnot on Aliments.

The liowers of grains, mixed with water, will roalte a sort of glue. Id.

Most wounds, if kept clean, and from the air, the flesh will glue together with its own native balm.

Derham.

There is a resistance in fluids, which may arise from their elasticity, glutinousness, and the friction of their parts. Cheyne.

I hear thee, view thee, gaze o'er all thy charms. And round thy phantom glue my clasping arms.

Pope.

Whose loos er ends are glued with brother earth. Fletcher. Pnr])le Island.

English glue is universally allowed to be the best in Europe, partly from the excellency of the materials, and parti; from the skill of the manufacturers.

Campbell's Pol. Surv.

Glue is differently denominated, according to its preparation, and the various uses it is designed for; as common glue, glove glue, and parchment glue. But the last two are more properly called size. The common, or strong glue, is chiefly used by carpenters, joiners, cabi- net-makers, &c. It is made of skins of animals, as oxen, cows, calves, sheep, &c. Whole skins are rarely used for this purpose, but only the shavings, parings, or scraps of them, or the feet, sinews, &c. That made of whole skins, however, is

undoubtedly the best; as that made of sinews is the very worst.

In making glue of parings, they first steep them two or three days in water : then, washing them vvell out, they boil them to the consistence of a thick jelly, which they pass, while hot, through ozier baskets, to separate the impurities ; and then let it stand some time to purify it fur- ther : when all the filth is settled to the bottom of the vessel, they melt and boil it a second time. They next pour it into flat frames or moulds, whence it is taken out pretty hard and solid, and cut into square pieces or cakes. They afterwards dry it in the wind, in a sort of coarse net ; and at last string it to finish its drying. The glue made of sinews, feet, &c., is managed after the same manner; only with this diff'erence, that they bone and scour the feet, and do not lay them to steep. Of this commodity there is a veˆy great exportation from England ; the English glue being universally allowed to be the best in Eu- rope, partly from the excellency of the materials, and partly from the skill of the manufacturers. Next to this is the Flanders glue. In both countries it is made by the tanners from frag- ments of good skins dried with much care. Irr France it is a separate trade ; and the glue-makers pick up their materials as they can, from the several dealers in skins, and boiling these with cow-heels, make their glue ; which, as they purchase every thing, must render it dear, as well as of an inferior quality. The best glue is that which is made from the skins of the oldest beasts, especially if a bull's hide is used. Glue is con- siderably improved in quality by keeping after it is made : and the surest way to try its goodness is to lay a piece of it to steep three or four days ; and if it swell considerably without melting, and when taken out resume its former dryness, it is excellent. A glue that will hold against fire or water, it is said, may be made thus : — Mix a handful of quick-lime with four ounces of linseed oil; boil thera to a good thickness; tlien spread

it on tin plates in the shade, and it will become exceedingly hard, but may be easily dissolved over a fire as glue, and will effect the business to ad- miration. Neumann observes, tha glue dissolved in a solution of lapis calaminaris, in spirit of nitre, and afterwards inspissated, forms an ex- tremely slippery tenacious mass, which might be of use for entangling flies, caterpillars, and other insects, if it were not too expensive.*

In order to prepare glue for use, set a quart of water on the fire ; then put in about half a pound of good glue, and boil them gently together till the

glue be entirely dissolved, and of a due consistence. When glue is to be used, it must be made thoroughly hot; after which, with a brush dipped in it, besmear the faces of the joints as quickly as possible : then, clapping them together, rub them lengthwise one upon another, two or three times, to settle them close; and let them stand till they are dry and firm. Mr. Boyle gives the following receipt for pre- paring a fine strong glue from isinglass : steep the isinglass for twenty-four hours in common brandy. When the menstruum has opened and mollified the isinglass, they must be gently boiled together, and kept stirring till they appear well mixed ; and till a drop thereof, suffered to cool, turns into a strong jelly. Then strain it, whilst hot, through a clean Unen cloth into a vessel to be kept close stopped. A gentle heat suffices to dissolve this glue into a transparent and almost colorless fluid, but very strong ; so tliat pieces of wood glued together with it will break else- where, rather than in the place where they are joined. See Isinglass.

(JLUM, adj. A low cant word formed by corrupting gloom. Sullen ; stubbornly grave.

Some, when tliey hear a story, look glum, and cry, Wfill, what then ? Guardian.

GLUT, V. a. & n. s. French, engloutir ;

Glut'tox, n. s. ˆ sVel. glwt/i ; Lat.

Glut'ionize, v. «. \ glutio ; Gr. yXvˆw.

Glut'tonous, «(//'. /To swallow; to

Glut'tonously, ok/u. \ gorge; to eat to sa-

GllVtony, 72. s. ticty. One given to

excessive and luxurious feeding; voracity of ap- petite; an obstruction. It appears to compre- hend the ideas of desire, greediness, and satiety. It is applied figuratively to inordinate love of any amusement or pursuit.

*Glotonif is unmesurable appetit to cte or to drinke ; or dies to do in ought to the unmesurable appetit. >» » » * * *

He that is usant to this sinnc of glotonie, he ne may no vice withstond he must be in scrvago of all vices.*

Chaucer. The Peraonet Tale.

When they would smile and fawn upon \m debts. And take down Ih' interest in their glutt'twtis maws.

Shakpeare.

The exceeding luxuriousness of this gluttonous age, whrrcin we press nature with cverweiglity burdens, and, finding her strength Icfpctivo, we lake the work out of her hands, and commit it to the artificial help of strong waters. Kaleigh.

If you pour a glut of water upon a bottle, it re- ceives little of it. lien Jonsoris Ditcoveriet.

The ambassador, making his oration, did so m»g- nify the ki»g aod queen, as was enough to glut the hLiirem. Bacon,

The Chinese eat horseflesh at this day, and some gluttons have used to have catsflesh baked. Id.

Let him but set the one in balance against the other, and he shall find himself miserable, even ia the very glut of his delights. L' Estrange.

Gluttony is the source of all our infirmities, and the fountain of all our diseases. Burton.

The rest bring home in state the happy pair To that last scene of bliss, and leave thiiu there ; All those free joys insatiably to prove, With which rich beauty feasts to glutton love.

Cowleif. Love breaks friendship, whose delights Feed, but not glut our appetites. Denham.

Disgorged foul Their devilish glut, chained thunderbolts and hai' Of iron globes. Milton's Paradise Lost.

So death Shall be deceived his glut ; and with us two Be forced to satisfy his rav'nous maw. Milton.

Their sumptuous (//uˆonies and gorgeous feasts. On citron tables or Atlantick stone. /(/.

With death's carcase glut the grave. Id

Well observe The rule of not too much, by temperance taught In what thou eat'st and drink 'st ; seeking from

thence Due nourishment, no gluttonous delight. /'/

The menstruum, being already glutted, could not act powerfully enough to dissolve it. Boyle.

Well may they fear some miserable end. Whom gluttony and want at once attend.

Dryden. His faithful heart, a bloody sa'riflce. Torn from his breast, to glut the tyrant's eyes.

Id. A sylvan scene, which, rising by degrees. Leads up the eye below, nor gluts the sight With one full prospect. Id,

What way remove His settled hate, and reconcile his love.

That he may look propitious on our toils. And hungry graves no more he glutted with our spoils.

Id. Through Macer's gullet she runs down. While the vile glutton dines alone ; And, void of modesty and thought. She follows Bibo's endless draught. Prior.

i found The fickle ear soon glutted with the sound, Condemned eternal changes to pursue. Tired with the last, and eager of the new. Id. He attributes the ill success of either party to their glutting the market, and retailing too much of a bad commodity at once. Arbttthtiot.

The inhabitants of cold moist countries are gcno- rally more fat than those of warm and dry ; but the most common cause is too great a quantity of food, and too small a quantity of motion ; in plain English, gluttony and laziness. Id.

The water some suppose to pass from the bottom of the sea to the heads of springs, through certain subterranean conduits or channels, until they are by some glut, stopped, or, by other means, arre ted in their passage. Woodward.

Gluttons in murder, wanton to destroy. Their fatal hearts so impiously employ. GrenviUe. A f)lut of study and retirement m the first part of my lite, cast me into this ; and this will throw me again into study and retirement. Pope to Swift.

If a glutton was to say, in excuse of his gluttony, that ho only eats such things as it is lawful to eat, he would make as good an excuse for '.limsulf as the

GLY

greedy, covetous, ambitious tradesmen, that should say, he only deals in lawful business. Law.

That when he now was gorged with crammed down store. And porter wanting room had shut the door. The glutton sighed, that he could gormandize no more. Fietcfier's Purple Island.

There is a morbid sort of Gluttony, called fames canina, i. e. dog-like appetite, which some- times occurs, and renders the person seized with it an object of pity and of cure as in other dis- eases. See BuLiMA. King James I., when a man was presented to him who could eat a whole sheep at one meal, asked, ' What could he do more than another man V and being answered ' He could not do so much,' said * Hang him then ; for it is unfit a man should live that eats as much as twenty men, and cannot do so much as one.' The emperor Clodius Albinus devoured more than a bushel of apples at once. He eat 500 figs to his breakfast, 100 peaches, ten melons, twenty pounds of grapes, 100 gnat-snappers, and 400 oysters. Hardi Canute, the last of the Danish kings in England, was so great a glutton, that a historian calls him Bocca di Porco, ' Swine's- mouth.' His tables were covered four times a day with the most costly viands that either the air, sea, or land, could furnish ; and as he lived he died ; for, revelling at a banquet at Lambeth, he fell down dead. One Phagon, in the reign of Aurelianus, eat at one meal, it is said, a whole boar, 100 loaves of bread, a sheep, and a jiig, and drank above three gallons of wine. Fuller says, tliat Nicholas Wood, of Harrison, in Kent, eat a whole sheep at one meal, raw ; at another, three dozen of pigeons. At Sir Williani Sidley's he eat as much victuals as would have sufficed thirty men. At lord Wotton's he devoured- at one dinner eighty-four rabbits. Mallet, a counsellor at law, in the reign of Charles I., eat at one time a dinner provided in Westminster for thirty men. He lived to near sixty years of age, but, during the seven last years of his life, eat as moderately as other men. Happily in modern times these heroes of the belly are only considered as fit companions for the heroes of the whip, and of l)Ugilism.

GLYCAS. See Glicas.

GLYCINE, knobbed-rooted liquorice-vetch, a genus of the decandria order, and diadelphia class of plants; natural order thirty-second, pa- pilionaceae : cal. bilabiate : cor. carina turning back the vexillum with its point.

1. G. abrus, is a native of Egypt and the Indies. The stalks and roots are

very sweet to the taste. Herman affirms, tliatthe juice obtained from them by decoction is little inferior to liquo- rice, whence its name of wild liquorice in those parts of America where it is native.

2. G. frutescens, the Carolina kidney-bean tree. Ithas shrubby climbing stalks, twininground any support, fifteen or twenty feet high, adorned with pinnated leaves of three pairs of follicles, terminated by an odd one, and from the axillas clusters of large bluish-purple flowers, succeeded by long pods like those of the climbing kidney- bean. It flowers in June and July, but the seeds do not ripen in this country. It is cultivated in t>ur gardens, however, and easily propagated,

either by seeds imported from America, or by layers.

GLYCIRRHIZA, liquorice, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, papilionaceae : cal. bilabiate ; the upper lip tripartite, and the under one entire ; the legume ovate and compressed. There are six species. The chief are,

1. G. echinata, the prickly-podded liquorice, resembling the common sort, only the pods are prickly : and

2. G glabra, the common liquorice, with long, thick, creeping roots, striking several feet deep into the ground; upright, firm, annual herbaceous stalks, three or four feet high, garnished with winged leaves of four or five pairs of oval lobes, terminated by an odd one ; and from tlie axillas erect spikes of pale blue flowers in July, suc- ceeded by short smooth pods. The root is the useful part, which is replete with a sweet bal- samic, pectoral juice, much used in all compo- sitions for coughs, and disorders of the stomach. Both these species are very hardy perennials; but this last is the sort commonly cultivated for use, its roots being fuller of juice, and sweete • than the other. The roots are perennial : but the stalks rise in spring, and decay in autumn. They are propagated by cuttings of the small roots issuing from the sides of the main ones near the earth, divided into lengths of six or ei2;ht inches, eacii having one or more good buds. The proper season for procuring the sets for planting is in open weather, from October to March ; but from the middle of February till the middle of March is rather the best season for planting. An open situation is to be preferred. The soil ought to be a light loose temperature, and three or four feet deep : for the roots of liquorice will arrive at that depth and more, and the longer the roots the more valuable they are. The ground should be trenched three spades deep ; then proceed to plant the sets, by line and dibble, a foot distant in each row : putting them perpendicular into the ground, with the tops about an inch under the surface ; let the rows be a foot or a foot and a half asunder. The London gardeners sow a crop of onions on the same ground the first year;

which might he done without detriment to the liquorice or the onions ; as the liquorice does not rise above ten or twelve inches the first sum- mer; keep the ground clean from weeds by hoe- ing. If there be a crop of onions, use the small hoe, cutting out the onions to four or five inches distant, clearing away such as grow immediately close to the liquorice plants ; and, when the onions are gathered, give tlie ground a tliorough hoeing witli a large hoe, to loosen the surface, and destroy all weeds ; and, in autumn, cut down the decayed stalks of the liquorice, and nothing more is necessary to be done till Febru- ary or March, when it is proper to give a slight digging between the rows. During spring: and summer keep down all weeds by broad hoeing ; and, in autumn, when the stalks are in a decay- ing state, cut them down to the surface of the earth. In three years after planting, tlie roots of the liquorice will be fit to take up. The proper season for this is from the beginning of Novem- ber till February ; for they should neither be

taken up before the stalks are fully decayed, nor deferred till late in spring, otnerwise the roots will be apt to shrivel and diminish in weight. In taking them up, the small side roots are trimmed off, the best divided into lengths for fresh sets, and the main roots tied in bundles for sale. Sell them as soon as possible after they are taken up, before they lose much of their weight. They are sold to the druggists from about 20s. to 40s. per cwt. ; and an acre of ground has produced 3000 and upwards, which have been sold for above £60 ; but the price is commonly m proportion to the goodness of the roots. This plant is cultivated in most countries of Europe, for the sake of its root. British liquorice is preferable to foreign ; this last being general'y mouldy, v.hicii this root is very apt to become, unless kept in a dry place. The powder cf liquorice usually sold is often mingled with flour, and probably too often with substances not quite so wholesome ; the best sort is of a brown- ish-yellow color (the fine pale yellow being generally sophisticated), and of a very rich sweet taste, much more agreeable than that of the fresh root. Liquorice is almost the only sweet that quenches thirst ; whence it was called by the Greeks aSi-ipov. Galen says, that it was employed in this intention in hydropic cases, to prevent the necessity of drinking. Fuller, in his Medi- cina Gymnastica, recommends it as a very use- ful pectoral ; and says it softens acrimonious humors, and is gently detergent. An extract is directed to be made from it in the shops. It is chiefly brought from abroad, though the foreign extract is not equal to such as is made with proper care in Britain.

GLYN, n. s. Irish (ihunn, glyn, plural ; Erse, gleiin, Scott. A hollow between two niointains.

Tliough he could not beat out the Irish, yet he did shut them up within those narrow corners and glyns under the mountain's foot. Spenser.

GMELIN (John George), a celebrated Ger- man botanist and traveller, was born at Tubin- gen in 1709, and took the degree of M. D. at the university there in 1727. He then went to Petersburgh, and was made a membei of the Imperial Academy ; and in 1731 professor of ciiemistry and natural history. He was employed in 1733 in an expedition to explore the bounda- ries of Siberia, and in 1747 visited his native country, lie died of a fever at Petersburgh in May, 1755, leaving a valuable Flora Siberica, seu Historia Plantarum Siberiee, 1747, 1749, 2 vols. 4to., to which two parts were added by his nephew ; and Travels through Siberia, written in German, 4 vols. 8vo.

Gmelix (Samuel Theophilus), nepliew of the above, was born at Tubingen in 1743, where he took the degree of M. D. in 1763. He also was distinguished for iiis acquaintance with natural history, and made professor in the Imperial Academy at l'etersbur};h. The Itussian govern- ment further employed him with professor Gul- denstadt, on an expedition of discovery to tlie provinces on the Caspian, where (imclin was made a prisoner by a Tartar chitf ; who treated him witli so much harshness, that he died in confinement, July, 1774. He published Histo-

ria Fucorum, Petrop. 1768, 4to. ; and an accoiml of his travels appeared in 4 vols. 4to., 1771, 1774, and 1786, the last volume being edited by M. Pallas.

G.MELiN (John Frederick), a third eminent natural philosopher of the same family, was also a native of Tubingen, and studied at that univer- sity, and at Gottingen, where he obtained the professorship of chemistry and natural history. He wrote Onoraatologia Botanica, 9 vols. 8vo. ; Apparatus i\Iedica.rainum, 2 vols. 8vo. ; and other works on chemistry, mineralogy, and natu- ral history; but he is best known as the editor of the Systema Naturae, of Linnaeus, 9 vols. 8vo., Leipsic, 1788. He died at Gottingen in May, 1805. He made some useful discoveries of vege- table and mineral dyeing substances.

GMELINA, in botany, a genus of the angio- spermia order, and didjnamia class of plants; natural order fortieth, personatae : cal. nearly quadridentated : con. campanulated, or bell- shaped ; there are two bipartite, and two simple antherae; the fruit is a plum, with a bilocular kernel.

GNA, or Agno, a river of Italy, in maritnue Austria, which rises in the Vicentine INIountains, runs through the ci-devant \ enetian district of Cologna, dividing it into two nearly equal parts, and, after joining the Bachiglione, falls into the Po.

GNADENHUETTEN, the name of three set- tlements of the Moravians or L^nited Brethren in North America. One is in Pennsylvania, on the south-west coast of Lehighnon ; another on Mus- kingum River ; and another on the Huron, twenty-two miles from lake St. Clair, and twenty- eight north-west of Detroit.

GNAPHALIUM, cudweed, goldylocks, eter- nal or everlasting flower, &c., a genus of the po- lygamia superflua order, and syngenesia class of plants, natural order forty-ninth, compositae : re- ce])tacle naked ; the pappus feathered: cal. im- bricated, with the marginal scales roundish, parched, and colored. There are 146 species; the most remarkable of which are,

1 . G. arboreura, or tree gnaphalium, with a woody stem, branching four or five feet high, narrow sessile leaves, with revolute borders, smooth on their upper side, and roundish bunchei of pale yellow flowers.

2. G. margaritaceum, the pearly-white eternal flower, has creeping, very spreading roots, crown- ed with broad, spear-shaped, white, hoary leaves ; herbaceous, thick, woolly stalks, a foot and a half high, branching outward, garnished with long, acute-pointed, white, woolly leaves, and ter- minated by a corymbose cluster of yellowish flowers, which appear in June and July, and are very ornamental.

3. G. odoratissimum, the sweet-scented eter- nal flower, has shrubby winged stalks, branching- irregularly a yard hiyh, with corymbose clusters of bright yellow flowers, changing to a dark yel- low.

4. G. orientale, the oriental goldylocks, has three varieties, with yellow, gold-colored, and white silvery flowers. They have shrubby stalks, risint: two or three feet high.

5. G. plantaginifolium, has large woolly ia

cal leaves, decumbent running roots, and herba- ceous simple stalks, rising six or eight inches, terminated by a corymbus of white flowers in June,

July, &c.

6. G. stoechas, has a shrubby stalk, dividing into slender branches, three feet long, terminated by corymbose clusters of yellow flowers, appear- ing in May and June.

The second, fifth, and sixth sorts are hardy, and will thrive in any soil or situation. The second and fifth increase exceedingly by their roots; and the sixth is easily propagated by slips. The first, third, and fourth species are somewhat lender ; and therefore should be kept in pots, to be sheltered in a green-house or garden-frame in winter. Others may be planted in tlie full ground, in a dry and warm situation, especially The orientale and its varieties, and likewise the odoratissimum ; for these two species will strue:- gie tolerably through an ordinary winter, and make a pretty appearance during summer. All these are propagated by slips or cuttings of their shoots. The flowers of all these species will re- tain their beauty for years, if carefully gathered in a dry day, soon after they are blown.

GNAR, V. n. -% Sax. snyjijian ; Belg.

Gnarl, r. w. ^^gnarren. To growl; to

Gnari-'ed, adj. J murmur or snarl ; guar, nar, or nurr, is a Staffordshire word for knots of wood. .

lie was short shuldered, brodc a thikke gnarre,

Ther was no (lore that wolde heve of barre.

Chaucer. Prologue to Cant. Tales. AVhen he 'gan to rear his bristles strong,

Aiul felle gnarr, until day's enemy

Did him appease. Speriser.

Thus is the shepherd beaten from thy side. And wolves are ynarling who shall gnaw thee first.

Shakspcare . Gnarling sorrow hath less power to bite

The man that mocks at it, and sets it light.

Id. Richard II. Merciful heav'n I

Thou rather with thy sharp and sulphrous bolt

Split'st the unwedgable and gnarled oak.

Than the soft myrtle. Id. Measure for Measure. The gnarring porter durst not whine for doubt;

Still were the furies wliile their sovereign spoke.

Fairfax.

GNASH, V. a. & v. n. Dutch, Jˆntischen. To grind the teeth, or strike them violently together; figuratively descriptive of rage and passioa He shall gruish with his teeth, and melt away.

Psal. cxii. 10. They gruished upon me with their teeth.

Id. XXXV. 16. There shall be weeping and gnashing of teeth.

3Iatt. viii. Shewe forthe thy doctrine ; be not ought agaste ; I woU the supporte ; loke thou doe no spare Maugre age, although that he frete or gnaste.

Chawer. The Prologue to the Remedie of Love. His great iron teeth he still did grind -And grimly gnash, threatening revenge in vain.

Spenser. They him laid irnashinr; for anguish, and despite and shame, i"o Pnd hiniGelf not matchless. Milton.

The seer, who could not yet his wrath asswage, JJowlrd his green eyes, that sparkled with his rage. And gmiahed his teeth. Vrydcn's Viigit.

-\ Saxon, ˆnaet, f-om

GNAT, n.

Gnatflower, K, s. Jgnaw. A small stinging,

Gna'tsnapper, w. s.Jinsect : used proverbi- ally for any thing very small. A flower, other- wise called the bee flower. A bird so called, because he lives by catching gnats.

Gnat, in zoology. See Culex.

Gnat Flower. See Ophrys.

GNAW, V. a. & V. n.) Saxon, ˆnaˆan; Teut.

Gnawer, n. s. ˆ knaghen ; Goth, ynata

(see Gnat). Dan. giiawe. To eat by degrees ; to corrode ; to bite in aˆony,

or rage ; to wear away.

GN EISS, one of the three most ancient and most abundant rocks of our globe, of which granite and mica-slaie are the other two. These are all destitute of organic remains, and consti- tute tiie foundation on which rocks of all the oth< >r classes are laid. They are composed of quartz, feldspar, and mica, and possess a dis- tinctly crystalline structure. They appear to pass by gradation into each other, and might, perhaps, with more propriety be regarded as modes of the same rock, than as ditferent species. Gneiss received its name from the German miners, who applied it to a decomposed stone forming the sides of certain metallic veins ; but Werner fixed the acceptation at present attached to the word, wuich is that of a schistose or slaty granite, abounding in mica. Granite frequently passes into gneiss by an almost imperceptible grada- tion : where the quantity of feldspar decreases, and the crystalline grains become smaller, if the mica increases in quantity, and is arranged in layer-ˆ, the rock loses the massive structure, and becomes schistose ; — this then is a true gneiss. NVhen the mica becomes very abundant, and the other constituent parts are small in size and quantity, gneiss passes into mica-slate. Horn- blende sometimes takes the place of mica in the composition of gneiss. When this is the case, the rock is called hornblende gneiss, or gneissoid hornblende. Gneiss is a rock much less prolific in disseminated minerals than either of the other jirimary rocks above mentioned. It occasionally, however, contains garnets interspersed through its strata. But the metallic veins and beds of oilier minerals vvhich it presents are very re- markable. Thus gold is found in it in Dauphiny, at the foot of JNIonie Rosa ; silver, cobalt, and antimony near Allemont, and lead and silver at Au\ergne, Freyberg, and in Bohemia. The fimous copper mines at Fahlun, in Sweden, oc- cur in this rock. It contains iron ore in profu- sion also, as in the mines of Scandinavia, at Dannemora, Utoe, and Arendal ; and in the IJnited States of America, upon the borders of lake Champlain ; at Franconia, in New Hamp- shire, and in the northern parts of New Jersey. Gneiss embraces also extensive deposits of white crystalline limestone and of serpentine, the beds of which are frequently so thick as to compose mountain masses. With regard to the distribu- tion of gneiss, it may be remarked that it is the principal rock of very extensive districts. It is the predominating rock of Norway and of all the north of Europe.

GINESNA, Gnesno, Gniesno, a large old town of Russian Poland, once the capital of

Great Poland, and the see of an arclibishop, wlio n'as primate of Poland. It is said to have been t'ae first town built in the kingdom, and was for- nˆerly very considerable. Here are stdl elevea churches, and four reliirious houses and semina- ries. It is, however, very thinly inhabited, and renr.arkable for nothing but its annual horse and rattle fair. Inhabitants 3500, including 1000 Jews. It is 150 miles west of Warsaw, and thirty east by north of Posen.

GNETUM, in botany, a genus of the monadel- pliia order, and raonoecia class of plants. The omentum of the male is a single scale: con. none, and but one filament with a pair of antherns : CM., of the female of the same form : cor. none; the style with the stigma is trifid ; the fruit is a monospermous plum. Species one only ; an East Indian herb.

GNIDIA, in botany, a genus of the monogy- nia order, and octandria class of plants: cat.. funnel-shaped and quadrifid, with four petals in- serted into it: there is one seed somewhat re- sembling a berry. Species sixteen ; all Cape plants.

GNOMES, Gnomt, imaginary beings who, according to the cabbalists, inhabit the inner parts of the earth. They are supposed to be small in stature, and guardians of quarries, mines, &c.

(iNO'MON, n.s. Gr. yi/w/xwj/. The hand ov pin of a dial.

There wore from great amiqiiity sun-dials, by the shadow of a style or gnomon, denoting the hours of the day. Browne.

The gnomon of every dial is supposed to represent the axis of tlie world, and therefore tlie two ends or extremities thorccf must answer directly to the North and South pole. Harris.

Gnomon*. See Dial and Dialling. The word yvojuoiv literally implies something that makes a thing known; as the stile of a dial makes the hour known.

GX().MO\lT:S, n. .V. Gr. yvu>)ioviic;,. A science which makes part of the mathematics: it teaches to find a just proportion of sliadows for the construction of all kmds of sun and moon dials, and for knowing what o'clock it is by means thereof; as also of a snomon or stile, that throws off the s'.iadow for this purpose. — Trcvoux.

(JN(STICS, from yvwfftc, knowledge, ancient Iicrctics, famous from tiie first rise of Christianity,])rincipally in the east. It appears, from several])assages of Scripture, particularly 1 John ii. 18 ; 1

Tim. vi. 20 ; and Col. ii. B; that many persons were infected with the Gnostic heresy in the first century ; thouudi the sect did not render itself conspicuous eitlier for numbers or reputation be- fore the time of Adrian, when some writers erro- neously date its rise. The name was adopted by this sect, on the presumption that tliey were the only persons who had the true knowledge of Christianity. Accordingly they looked on all other Christians as simple, ignorant, and barba- rous persons, who explained and interpreted the sacred vvritings in a low, literal, and unedifyinj: signification.

CJnostics afterwards became a ge- nerical name, comprehending divers sects and parties of heretics who rose in the first centuries,

and who, though they diiTered among themselves as to circumstances, yet all agreed in some common principles. Tliey corrupted the doc- trine of the gospel by a profane mixture of the tenets of the original philosophy, concerning the origin of evil and the creation of the world. Such were the 'alentinian3, Simonians, Carpocratians, Nicolaitans, &c.

Gnostics sometimes also occurs in agood sense in the ancient ecclesiastical writers, particulaiiv Clemens Alexandrinus, who, in the person of his Gnostic, describes the characters and qualities of a perfect Christian. This point he labors in the seventh book of his Stromata, where he shows that none but the Gnostic, or learned per son, has any true religion. In this sense the fa- ther uses Gnostics, in opposition to the heretics of the same name; affirming that tlie true Gnos- tic is grown old in the study of the Holy Scrip- ture; and that he preserves the orthodox doctr.ne of the apostles and of the church; whereas the fiilse Gnostic abandons all the apostolical tra ditions, as imagining himself wiser than the apostles.

Gnostics was sometimes also morepa'ticularly used for the successors of tlie Nicolaitans an<« Carpocratians, in the second century, upon their laying aside the names of the first authors. Such as would be thoroughly acquainted with all their doctrines, reveries, and visions, may consult Ire- naeus, TertuUian, Clemens Alexandrinus, Origen, and St. Epiphanius ; particularly the first of these writers, who relates their sentiments at large, and confutes them. Indeed he dwells more on the \'alentinians than any other sect of Gnostics; but he shows the general principles on which all their mistaken opinions were founded, and the method they followed in explaining Scripture. He ac- cuses them of introducing into religion certain vain and ridiculous genealogies, i. e. a kind of divine processions or emanations, which had no other foundation but in their own wild imagina- tion. The Gnostics confessed that these seons, or emanations, were nowhere ex]jressly delivered in the sacred writings; but insisted that Jesus Christ had intimated them in parables to such as could understand them. They built their theo- logy, not only on the gospels and the epistles of St. Paul, but also on the law of Moses and the prophets. Their persuasion that evil resided in matter, as its centre and source, made them treat tlie body with contempt, discour.oge marriage, and reject ttie doctrine of the resurrection of the l)ody and its re-union with the immortal spirit. Their notion, that

malevolent genii presided in nature, and occasioned diseases and calamities, wars and desolations, induced them to apply themselves to the study of magic, in order to weaken the powers or suspend the influence of their malignant agents. The Gnostics considered Jesus Christ as the Son of God, and inferior to the Father, who came into the world for the res- cue and happiness of miserable mortals, op- pressed by matter and evil beings; but they re- jected our Lord's humanit)-, on the principle that every thing corpoieal is essentially and intrinsi- cally evil ; and therefore the greatest part of them denied the reality of his sufferings. Tliey set a great value on the beginning of the gosDfcl of S(.

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John, where they fancied they saw a great deal of llieir 'cj;ons or emanations, under the terms the Word, the Life, the Light, &c. They divided all nature into three kinds of beings, viz. hylic, or material ; psychic, or animal ; and pneumatic, or spiritual. On the like principle they also distinguished three sorts of men : ma- terial, animal, and spiritual. The first, who were material and incapable of knowledge, inevitably perished, both soul and body; the third, such as the Gnostics themselves pretended to be, were all certainly saved ; the psychic or animal, who were the middle between the other two, were capable either of being saved or damned, according to their good or evil actions. With regard to their moral doctrines and conduct they were much di- vided. The greatest part of this sect adopted very austere rules of life, recommended rigorous abstinence, and prescribed severe bodily morti- fications, with a view of purifying and exalting the mind. However, some maintained that there was no moral difference in human actions; and thus, confounding right with wrong, they gave a loose rein to all the passions, and asserted the innocence of following blindly all their motions, and of living by their tumultuous dictates. They supported their opinions and practice by various authorities ; some referred to fictitious and apo- cryphal writings of Adam, Abraham, Zoroaster, Christ, and his apostles ; others boasted that they had deduced their sentiments from secret doc- trines of Christ, concealed from the vulgar; otliers affirmed that they arrived at superior de- grees of wisdom by an innate vigor of mind ; and others asserted that they were instructed in tliese mysterious pai'ts of theological science by Theudas a disciple of St. Paul, and by Matthias one of the friends of our Lord. The tenets of the ancient Gnostics were revived in Spain in the fourth century, by a sect called the Priscillian- ists. At length the name Gnostic, which origi- nally was glorious, became infamous, by the idle opinions and dissolute lives of

the persons who bore it.

GNOU, or Gnu, in zoology. See Capra.

GO, V. n. pret. 1 went ; I have gone. Sax. ?;an ; Goth, and Swed. ga. This was pro- bably changed to gone, or gcmg, then contracted to go. Went is the preterite of tlie old word wend. The primary idea is progression, or ad- vancement, whether from place to place, or from one degree to another. It is opposed to come.

To walk ; to move step by step. You know that love Will creep in service where it cannot go.

Shakspeare. After some months those muscles became callous ; and, having yielded to the extension, the patient makes shift to go upon it though lamely.

Wiseman's Surgery. To move ; not stand still.

Rise, let us be going. Matt. xxvi. 46.

Bat now I wol again to Custance go.

Chaucer. The Man of Lawes Tale. When all sins are old in us. And ˆ0 upon crutches, covetousness !Does but then lie in her cradle. Decker.

When they asked for thair own He was broke and was gone, Aud his creditors all left to sorrow, MarveU.

Gn, ihen, well worthy of the praise ye seek. And shew the shame ye might conceal at liome.

Cuwpcr. To walk solemnly.

If there be cause for the church to go forth in solemn procession, his whole family have such busi- ness come upon them that no one can be sparfd.

Hooker. To walk leisurely; not run. And must I go to him? — Thou must run to him ; for thou hast staid so long, that going will scarce serve the turn. Shakspeare.

To march or walk a-foot.

I will only go through on my feet. Num. xx. 19, To travel ; to journey. From them I go This uncouth errand sole. Millon.'

To proceed ; to make a progress. Thus others we with defamation wound,

While they stab us ; and so the jest goes round.

Dryden, To remove from place to place. I am in blood Stcpt in so far, that, should I wade no more. Returning were as tedious as go o'er, Shakspeare.

To depart from a place ; to remove from a place : the opposite of to come.

I will let you go, that ye may sacrifice, only yoa shall not 90 very far away. Ex. viii. 28.

And when she had so said she went her way.

John xi. 28, I hope it be not gone to tell my lord That I kiss aught but him. Shakspeare.

At once, good-night : Stand not upon the order of your going, Bui go at once. Shakspeare. ˆfacbelh.

Colchester oysters are put into pits, where the sea goeth and cometh. Bacon's Natural History.

A young tall squire Did from the camp at first before him go. Cowley.

I'hen I concur to let him go for Greece, And wish our Egypt fairly rid of him. Dryden.

Go first the master of thy herds to find, True to his charge, a loyal swain and kind.

Pope. To move or pass in any manner, or to any end.

Put every man his sword by his side, and go in and out from gate to gate throughout the camp.

Ex. xxxii. 27. The mourners go about the streets. Eccles. xii. 5. The sun shall go down over the prophets, and tlie day shall be dark over them. 3/ ac. iii. (J

Though the vicar be bad, or the parson be evil, Go not for thy tytbing thyself to the devil. Tisscr. She may go to bed when she list; all is as she will.

Shakiip';urc . You did wish that I would make her turn ; Sir, she can turn and turn and still go on. Id.

I am glad to see your lordship abroad : I heard say your lordship was sick : I hope your lordship gijirˆ abroad by advice. Id

The sun, which once did shine alone. Hung down his head, and wished for night.

When he beheld twelve suns for one Going about the world, and giving light.

Herbert, This seen the rest at awful distance stood. As if they had been there as servants set.

To stay, or to go on, as he thought good. And not pursue, but wait on his retreat. Dryden. Turn not children going, till you have given tlu'ia ;ill the satisfaction they arc capable of, jˆoca-r.ˆ

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History only acquaints us that his Cept went up the Elbe, he having carrieJ his arms as far as that river.

Arbaihnot. The last advice I give you relates to your beha- ▼iour when you are going to be hanged, which, either for robbing your master, for house-breaking, or going upon the highway, may very probably be your lot. Swift's Directions to the Footman.

Those who come for gold will go off witli pewter and brass, rather than return empty. Swift.

Careless what others of my choice may deem, I long, where Love and Fancy lead, to go And meditate on heaven — enough of earth I know.

Beatiie.

To pass in company with others.

Thou shall again be adorned with thy tabrets, and shall go forth in the dances of them that make merry.

Jer. xxxi. 4.

lie goeth in company with the workers of iniquity, and walketh with wicked men. Job.

Away, arid with thee 90 the worst of woes. That seekest my friendship, and the gods my foes.

Chapman.

Whatever remains in story of Atlas, or his kingdom of old, is so obscured with age or fables, that it may qo along with those of the Atlantick islands.

Temple.

To proceed in any course of life, good or bad.

And the Levites that are gone away far from mo, when Israel went astray, which went astray away from me after their idols, they shall even bear their ini- quity. Ezek. xliv. 10.

To proceed in mental operations.

If I had unwarily too far engaged myself for tiie present publishing it, truly I should have kept it by me till I had oucc again gone over it.

Digby on the Soul. Dedication.

Thus I have gone through the speculative conside- ration of the Divine Providence. Hale.

If we gn over the laws of Christianity, we sliall f:ud that, excepting a few particulars, they enjoin the same things, only they have made our duty more clear and certain. Tillotson.

In their primary qualities we can go but a very little way. Locke.

I go over some parts of this argument again, and enlarge a little more upon them. Id.

They are not able all their life-time to reckon, or regularly go over any moderate series of numbers.

Id.

I hope, hy going overall these particulars, you may receive some tolerable satisfaction about this great subject. South.

To take any road.

1 will go along by the highway j I will neither turn to the right hand, nor to the left. Deut. ii. 27.

Wlio shall bemoan thee ? Or who shall go aside to ask how thou doest ? Jer. xv. 5.

His horses ˆ0 about Almost a mile. Sliakspeare. Macbeth.

I have endeavoured to escape into the ease and freedom of a private scene, where a man may gn his own way and his own pace. Temple.

To march in a hostile or vvarliivc manner.

We be not able to go up against the people ; for they are stronger than we. Numb. xiii. 31.

lift y\i go down after the Philistines by night, :.nd sj)oil them until the morning light. 1 Sum. xiv. 36.

Thou art not able to go against this Philistine to fight with him. Id. xvii. 33.

The remnant of Jacob shall be among the Gentiles as a lion among the beasts of tlie forest j who, 'f he go tˆn1ˆgh, both troadeth down and tearcth in pieces, and none can deliver. Mic. v. 8.

You were advised his flesh was capable Of wounds and scars, and that his forward spirit Would lift where most trade of danger ranged j Yet did you say go forth. Shakspeare. Henry IV.

To change state or opinion for better or worse.

We will not hearken to the king's words to go from our religion. 1 Mac. ii. 22.

The regard of the publick state, in so great a dan- ger, made all those goodly things, which wetit so to wreck, to be lightly accounted of in comparison of their lives and liberty. Knolles.

They look upon men and matters with an evil eye ; and are best pleased when things go backward, which is the worst property of a servant of a prince or state.

Bacon.

All goes to ruin, they themselves contrive To rob the honey, and subvert the hive. Dryden.

Landed men, by their providence and good hus- bandry, accommodating their expences to their in- come, keep themselves from going backwards in the world. Locke.

Cato, we will all go into your opinion. Addison.

To apply one's self.

Seeing himself confronted by so many, like a reso- lute orator, he went not to denial, but to justify his cruel falsehood. Sidney.

Because this atheist goes mechanically to work, he will not offer to affirm that all the parts of the embryon could, according to his explication, be formed at a time. Bentley.

To have recourse to.

Dare any of you, having a matter against another. go to law b?fore the unjust, and not before the saints ?

1 Cor.

To be about to do.

So extraordinary an example, in so degenerating an ago, deserves for the rarity, and, I was going to say, fur tiu" incredibility of it, the attestation of all that knew him, and considered his worth. Locke.

To shift; to pass life not quite well.

Every goldsmith, eager to engross to himself as much as he could, was content to pay high for it, rather than go without. Locke.

Cloaths they must have ; but if they speak for this stuff, or that color, they should be sure to go without it. Id.

To decline ; to tend towards death or ruin. This sense is only in the participles going and gone.

The fourthe partic of this day is gon.

Chaucer. The Man of Lawes Tale. He is far ˆone, and, truly, in my youth,

I suffered much extremity for love.

Very near this. Shakspeare. Hamlet.

Ancient of days', august Athena! where. Where are thy men of might ? thy grand in soul ? Gone, glimmering through the dream of things that

were. First in the race, that led to glory's goal ; Thoy won and passed away. Byron. ChiUle Harold.

To be in jjarty or design

They with the vanquished prince and party go. And leave their temples empty to the foe. Dryden

To escape.

Timotheus himself fell into the hands of Dositheus and Sosipater, whom he besought with much craft to let him go with his life. 2 Mac. xii. 24.

To tend to any act.

There be some women, Silvius, had they marked him In parcels as I did, would have gone near To tall in love with him. Skuksjjeare. As-jiulih

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To be vuterecl.

His disciples personally appeared among them and ascertained the report which had gone abroad coa- cerning a life so full of miracles. Addison.

To be talked of; to be known. It has the greatest town in the islanil that goes under the name of Ano-Caprea, and is in several places covered with a very fruitful soil. Addison.

To pass ; to be received.

Because a fellow of my acquaintance set forth her praises in verse, I will only repeat them, and spare my own tongue, since she goes for a woman.

Sidnei/. And the man went among men for an old man in the days of Saul. 1 Sam. xvii. 12.

A kind imagination makes a bold man have vigour and enterprise in his air and motion : it stamps value upon his face, and tells the people he is to go for so much. Collier.

Clipping should be finally stopped, and the money which remains should ^0 according to its true value.

Locke. To move by mechanism.

This pope is decrepid, and the bell goeth for him.

Bacon, Clocks will go as they are set ; but man. Irregular man's never constant, never certain.

Otway. 'Tis with our judgments as our watches, none Go just alike, yet each believes his own. Pope.

To be in motion from whatever cause. The wayward sisters, hand in hand. Posters of the sea, and land. Thus do go about, about.

Shakspeare. 3facheth. dipt and washed money goes about, when the entire and weighty lies hoarded up. Waller.

To move in any direction.

Shall the shadow go forward ten degrees, or go back ten degrees ? 2 Kings xx. 9.

Doctor, he is a curer of souls, and you a curer of bodies : if you should fight, you go against the hair of your professions. Shakspeare.

To flow ; to pass ; to have a course.

The god I am, whose yellow water flows 4round these fields, and fattens as it goes, Tyber by name. Drgden's ˆneid.

To have any tendency. Athenians, know Against right reason aU your counsels go. This is not fair, nor profitable that. Nor t'other question proper for debate.

Dry den. To be in a state of compact or partnership. 4s a lion was bestriding an ox that he had newly plucked down, a robber passing by cried out to him, half shares ; you should go your snip, says the lion, if you were not so forward to be your own carver.

LˆEstrange. There was a hunting match agreed upon betwixt a a lion, an ass, and a fox, and they were to go equal shares in the booty. Id.

To be regulated by any method ; to proceed upon principles.

Where the multitude beareth sway, laws that shall tend to the preservation of that state must make com- mon smaller offices to go by lot, for fear of strife and divisions likely to arise. Hooker.

The principles I there went on, I see no reason to alter. Locke.

We are to go by another measure. Sprat.

The reasons that they v)ent upon were very spe- cious and probable. Dentley.

To be pregnant.

Great bellied women. That had not half a week to go,

Shakspeartt. The fruit she goes with, I pray that it good time and life may find.

Id. Henri/ VI 11. Of living creatures some are a longer time in the womb, and some shorter : women go commonly nine months, the cow and ewe about six months. Bacon. And now with second hopes she goes. And calls Lucina to her throes . Milton.

Some do go with their young the sixth par of a year, or two over or under, that is, about six or nine weokj : and the whelps of these see not till twelve days.*

Browne. To pass; not to remain.

She began to afilict him, and his strength went from him. Judges xvi. 19.

When our merchants have brought them, if our commodities will not be enough, our money must go to pay for them. Locke.

To pass, or be loosed, not to be retained.

Then he lets me go. And, with head over his shoulder turned. He seemed to find his way without his eyes.

Shakspeare. Let go the hand of that arch heretick. Id.

To be expended.

Scholars are close and frugal of their words, and not willing to let any go for ornament if they will not serve for use. Felton,

To be in order of time or place. We must enquire farther what is the connexion of that sentence with those that go before it, and those which follow it. Watts.

To reach or be extended to any degree. Can another man perceive that I am conscious of any thing, when I perceive it not myself? No man's knowledge here can go beyond his experience.

Locke. To extend to consequences. It is not one master that either directs or

takes notice of these : it goes a great way barely to permit them. L'Estrange.

To reach by effects.

Considering the cheapness, so much money might go farther than a sum ten times greater could do now.

Wilkins.

To extend in meaning.

His amorous expressions go no further than virtue may allow. Diijden's Ovid, Preface.

To spread; to be dispersed ; to reach.

Whoso flesh, torn off by lumps, the ravenous foe In morsels cut, to make it farther go. Tate.

To have influence ; to be of weight ; to be uf value.

I had another reason to decline it, that ever uses to go far with me upon all new inventions or experi- ments : which is. that the best trial of them is by time, and observing whether they live or not.

Temple,

'Tis a rule ihat goes a great way in the government of a sober man's life, not to put any thing to hazard that may be secured by industry, consideration, or circumspection. L'Estrange.

Whatever appears against their prevailing vice yi>n for nothing, being either not applied, or passing fiij libel and slander. Swift.

To be rated one with another ; to be considered with regard to greater or less work.

I think, as the world goes, he was a good sort of man enough. Arbuthnjt,

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To contribute ; to conduce ; to concur ; to be an ingredient.

The medicines which go to the ointments are so strong, that, if they were used inwards, they would kill those that use them. Bacon.

More parts of the greater wheel go to the making one part of their lines. Glanville's Scepsis.*

I give the sex their revenge, by laying together the many vicious characters that prevail in the male world, and shewing the different ingredients that go to the making up of such different humours and constitutions.

Addison.

There goes a great many qualification to the com- plcating this relation : there is no small share of honour and conscience and sufficiency required.*

Collier of Friendship.

Something better and greater than high birth and quality must go toward acquiring those demonstrations of publick esteem and love. Swift to Pope.

To fall out, or terminate ; to succeed.

I will send to thy father, and they shall declare uiito him how things go with thee. Tob. x. 8.

Your strong possession much more than your right. Or else it must go wrong with you and me.

Shakspeare.

Howe'er the business goti, you have made fault I' the boldness of your speech. Id.

In many armies, if the matter should be tried by duel between two champions, the victory shall 170 on the one side ; and yet, if it be tried by the gross, it would go on the other side. Bacon.

It has been the constant observation of all, that if a minister had a cause depending in the court, it was ten to one but it went against him. South.

At the time of the prince's landing, the father, easily foreseeing how things would go, went over, like many others, to the prince. Swift.

Whether the cause goes for me or against me, you must pay me the reward. Watts's Logick.

To be in any state. This sense is impersonal.

He called his name Beriah, because it went evil with his house. 1 Chron. vii. 23.

It shall go ill with him that is left in his tabernacle.

Job XX.

To proceed in train or consequence. How^oe the night, boy ? — The moon is down : I have not heard the clock ; And she goes down at twelve. Shakspeare.*

I had hope.

When violence was ceased, and war on earth,

All would have then gone well. Milton.

Duration in itself is to be considered as going on in one constant, equal, uniform course. Locke.

To go about. To attempt ; to endeavour ; to set one's self to any business. O dear father. It is thy business that I go about. Shakspeare. Which answer exceedingly united the vulgar minds to their. , who concurred only with them as they saw them like to prevail in what they went about.

Clarendon. I lojt him ; but so found, as well I saw Tic could not lose himself, but went about His father's business. Milton.

Some men, from a false persuasion that they cannot reform their lives, and root out their old vicious liabits, never so much as attempt, endeavour, or go about it. South.

Either my book is plainly enough written to be riirhlly understood by those who peruse it with atten- tion and inditVrrency , or else 1 have writ mine so ob- scurely that it is in vain to go about to mend it.

Locke. Vol. X

They never go abaut, as in former times, to hide or palliate their vices ; but expose them freely to view.

Swift. To go aside. To err; to deviate from the right.

If any man's wife go aside, cind commit a trespass against him. Numb. v. 12.

To go between. To interpose ; to moderate between two.

I did 90 betweenihem, as I said ; but more than that he loved her ; for, indeed, he was mad for her.

Shakspeare. To go hi). To pass away unnoticed. Do not you come my tardiness to chide, That lapsed in lime and passion, lets go by The important acting of your dread command ?

Id. Hamlet. So much the more our carver's excellent. Which lets go by some sixteen years, and makes her As she lived now. Id. Winter's Tale.

What's that to us ? The time goes by ; away.

Sluikspeare. To go bi/. To find or get in the conclusion.

In argument with men a woman ever Goes by the worse, whatever be her cause.

L' Estrange. He's sure to go by the worst that contends with an adversary that is too mighty for him. L' Estrange. To go by. To observe as a rule. 'Tis not to be supposed, that by searching one can positively judge of the size and form of a stone ; and indeed the frequency of the fits, and violence of the symptoms, are a better rule to go by.

Sharp's Surgery. To go down. To be swallowed ; to be re- ceived ; not rejected.

Folly will not easily go down in its own natural form with discerning judges. Dryden.

Nothing so ridiculous, nothing so impossible, but it goos down whole with him for truth and earnest.

L'Estrange. If he be hungry, bread will go down. Locke.

Ministers are so wise to leave their proceedings to be accounted for by reasoners at a distance, who ofteu mould them into the systems that do not only go down very well in the coffee house, but are supplies for pamphlets in the present age. Swift.

To go in and out. To do the business of life.

The lord shall preserve thy going out and thy coming in. Psalms.

To go in and out. To be at liberty. He shall go in and out, and find pasture.

John. To go off. To die ; to go out of life ; to de- cease.

I would the friends we miss were safe arrived : Some must go fiff; and yet, by these I see So great a day as this is cheaply bought.

Shakspeare. In this manner he went off, not like a man that departed out of life, but one that returned to his abo

Taller. To go off". To depart from a post. The leaders having charge from you to stand. Will not go uff until ihey hear you speak.

Shakspeare. Henry I V. To go on. To make attack.

Hold Cpthegus, Whoso valour I have turned into his poison, And praised so to daring, as he would Go on upon the gods. Ben Jonson.

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To go on. To proceed.

He found it a great war to keep that peace, but was fain to go on in his story. Sidney,

I have escaped many threats of ill fits by these motions; if they go on, the only poltice I have dealt with is wool from the belly of a fat sheep.

Temple.

He that desires only that the work of God and re- ligion shall go on, is pleased with it, whoever is the instrument, Taylor.

To look upon the snul as going on from strength to strength, to consider that she is to shine for ever with new accessions of glory, and brighten to all eternity, is agreeable. Addison.

Go on cheerfully in the glorious cause you have undertaken. Id.

Copious bleeding is the most effectual remedy in the beginning of the disease : but, when the expecto- ration goes on successful!}', not so proper, because it sometimes suppresseth it. Arbuthnot on Diet.

I have already handled some abuses during the late management, and in convenient time shall go on with the rest. Swift.

When we had found that design impracticable, we should not have gone on in so expensive a management of it. Id.

Many clergymen write in so diminutive a manner, with such frequent blots and interlineations, that they are hardly able to go on without perpetual hesitations, or extraordinary expletives. Id.

I wish you health to go on with that noble work.

Berkley.

To go over. To revolt ; to betake himself to another party.

In the change of religion, men of ordinary un- derstandings don't so much consider the principles as the practice of those to whom they go over.

Addison.

Power, which, according to the old maxim, was used to follow, is now gone over to money. Swift.

To go out. To go upon any expedition.

You need not have pricked me : there are other men fitter to go out than I. Shakspeare. Henry IV.

To go out. To be extinguished. Thinkest thou the fiery fever will go out.

With titles blown from adulation. Id. Henry V.

Spirit of wine burned till it go out of itself, will burn no more. Bacon's Natural History.

The care of a state, or an army, ought to be as con- stant as the chymist's fire, to make any great produc- tion ; and if it^roe out for an hour, perhaps the whole operation fails. Temple.*

The morning, as mistaken, turns about ;

And all her early fires again go out.

Dryden's Aureng.

Let the acquaintance be decently buried, and the fiame rather ^o out than be smothered. Collier,

My blood runs cold, my heart forgets to heave. And life itself goes out at

thy displeasure.

Addison's Cato, And at her felt approach and secret might.

Art after art goes out, and all is night.

Pope's Dunciad.

*To go through. To perform thoroughly; to execute^*

If you can as well go through with the statute laws of that land, I will think you have not lost all your time there. Spenser.

Kings ought not to suffer their counsel to go through with resolution and direction, as if it depended on them, but take the matter back into their own hands. -Bacon.

He much feared the earl of Antrim had not steadi- ness of mind enough to go through with such an under- taking. Clarendon.

Finding Pyrocles every way able to go ihrough w.th that kind of life, he was as desirous for his sake as for his own to enter into it. Sidney.

The amazing difficulty and greatness of his account will rather terrify than inform him, and keep him from setting heartily about such a task, as he despairs ever to go through with it. South's Sermom.

The powers in Germany are borrowing money, in order to go through their part of the expence.

Addison on the War.

To go through. To suffer ; to undergo.

I tell thee that it is absolutely necessary for the common good that thou shouldest go through this operation. Arbuthnot.

To go upon. To take as a principle.

This supposition I have gone upon through those papers. Addison.

The senses of this word are very indistinct : its general notion is motion or progression. It commonly expresses passage from a place, in opposition to come. This is often observable even in figurative expressions. We say, the words that go before and that come after : to day goes away and to-morrow comes.

Go TO, interj. Come, come, take the right course. A scornful exhortation.

Go to, then, O thou far renowned son

Of great .Apollo, shew thy famous might

In medicine. Spenser.

Goto, go to, thou art a foolish fellow ;

Let me be clear of thee.

Shakspeare. Twelfth Night.

My favour is not bought with words like these : Go to ; you'll teach your tongue another tale.

Rowe.

GOA, a city of India, in the province of Be- japoor, the capital of the Portuguese possessions. It at the present time consists of two distinct towns; the Old City about eight miles up the river, now almost deserted from its unhealthy air; and the New Town on the mouth of the river. The former, however, contains the inquisition (as well as many magnificent churches), and the clergy connected with it reside there : exhibit- ing on the whole specimens of European archi- tecture superior to any other part of India, particularly the cathedral, and the church and convent of the Augustines.

At New Goa, which is protected by the forts of the harbour, the viceroy resides. It formerly carried on a considerable trade in arrack, but this has been of late transferred to Batavia, which see. There is still a small trade carried on in betel nuts, cowries, and toys with Africa ; and Goa imports piece goods, sugar, ivory, raw silk, glass and woollens : but its expenses are said far to exceed its revenue. In 1808 there •were 200 churches and chapels in the district, and above 2000 priests. The whole Portuguese territory in the neighbourhood of Goa, including the islands, is about forty miles in length by twenty in breadth.

Goa was taken by the Bhamenee sovereigns of the Deccan from the Hindoo rajahs of Bija- nagur, in the middle of the fifteenth century ; in 1510 it was besieged and taken by the Por- tuguese general Albuquerque, when he made it the capital of the Portuguese possessions in the east, adding to its fortifications. The inhabitants now amount to about 20,000, of whom few are

genuine Portuguese. It is now altogether a very neglected and inferior place. Travelling distance from Poonali 245 miles, from Bombay 292.

GOAD, n. s. & V. a. Sax. ˆaˆD ; Goth, gad ; Wei. got. A pointed instrument, with which oxen are driven forward. To incite; stimulate, or urge on.

Most dangerous Is that temptation, that doth goad as on To sin in loving virtue.

Shahspeare. Mecuvre for Measure, Goaded with most sharp occasions. Which lay nice manners by, I put you to The use of your own virtues. Shahspeare.

Of all that breathes the various progeny. Stung with delight, is goaded on by thee. Dryden. Oft in his hardened liand a goad he bears. Pope. Goaded by ancbition's sting. The hero sunk into the king ' Then he fell — so perish all Who would men by man enthral. Byron.

GOAL, n. s. Fr. gaule. A landmark ; start- ing-post ; hence, figuratively, the end to which any design tends.

Let a post-angel start with thee And thou the goal of earth shall reach as soon as he.

Cowley. And the slope sun his upward beam Shoots against the dusky pole. Pacing toward the other goal. Milton,

Hast thou beheld, when from the goal they start. The youthful charioteers with heaving heart Rush to the race? Dryden s Virgil.

So man, who here seems principal alone. Perhaps acts second to some sphere unknown ; Touches some wheel, or verges to some goal ; Tis but a part we see, and not a whole. Pope.

Onward he flies, nor fixed as yet the goal Where he shall rest him on his pilgrimage.

Byron. C/tilde Harold.

GOALPARAH, a town in the district of Ran- gamutty, Bengal, situated near the frontiers of Assam, on the south bank of the Brahmapootra. The Assamese bring gold, i%ory, lac, wax, and tar hither, for which they

receive, salt, silks, and fine muslins. No European is allowed to pro- ceed beyond this place without a pass. There is a custom-house on the opposite side of the river, at a place called Kangrar. It is 170 miles north by east from Decca.

GOAND, an independent mountainous dis- trict of Hindostan, in the province of Gund- wana, intersected by the Mahanuddy River. It is in fact tributary to Nagpore, but the inhabitants are very uncivilised, and the country not worth entire conquest.

(JOAR, n.s. Welsh, gorer. Any edging sewed upon cloth to strengthen it, or to widen it. A seint she wered, barred all of silk ; A barme-cloth, eke, as white as morwe milk Upon her lendes ful of many tigore.

Chaucer. Tlie Milleres Talc. GOAT, n. s. ˆ Sax. and Scot. jat. A

Goatherd, ruminant animal, that

Goatish, adj. seems a middle species

Goat's'-skin, n.$. ˆbetween deer and sheep. Goat's-milk, I The adjective is used figu-

GoATs'-RUK, I ratively for rankness or

Goats'-thohn. J lust. Goatherd, Sax. 3at and hyp"©, one who herds goats : goats'-nie and

goats'-thorn are herbs : the other compounds are plain.

A vois he hadde as smale as hath a gote.

Chaucer. Prologue to the Canterbury Talcs, Up to the rocke he ran, and thereon flew Like a wyld gole, leaping from hill to hill. And dauncing on the craggy cliffes at will.

Spenser. Faerie Queene, Is not thilk same goatherd proud. That sits on yonder bank.

Whose straying herd themselves doth shroud Among the bushes remk ? Spenser's Pastorals.

An admirable evasion of a whnremaster, man, to lay his goatish disposition on the change of a star. Shahspeare. King Lear. Gall ol goat, and slips of yew. Id. Macbeth.

The first gave the goatherd good contentment, and the marquis and his

servant chased the kid about the stack. Wotton.

We Cyclops care not for your goat-fed Jove, Nor other blest ones j we are better fwre.

Chapinan. You may draw naked boys riding and playing with their paper-jnills upou goais, eagles, or dolphins.

Peacham, The little bear that rocked the mighty Jove, The swan whose borrowed shape concealed his love. Are graced with light ; the nursing gout's repaid With heaven and duty raised the pious maid.

Creech. The last is notorious for its goatish smell, and tufts not unlike the beard of that lecherous animal.

More against Atheism. After the fever and such like accidents are dimi nished, asses and goat's milk may be necessary.*

Wiseman's Surgery. Then filled two goatskins with her hands divine ; With water one, and one with sable wine. Pope.

Goat's rue has the reputation of being a great alexi- pharmick and sudorific : the Italians eat it raw and boiled ; with us it is of no esteem. Hill.

Goat. See Capra.

Goat Island, a flat island of the Eastern Seas, the southernmost of the Bashees. It was so called from the number of goats found on it. Long. 121° 0′ E., lat. 20° 6′ N. Also, a small island among the Philippines, in long. 120° 13′ E., lat. 13° 52′ N.

*Goat Island, Great, a small island on the south coast of Jamaica, in long. 76″ 51′ E., lat. * 17° 53′ N.*

Goat Island, Little, an island about a mile north-west from Great Goat Island.

Goats'-Beard, in botany. See Tragopogon.

G()A'E, Petit, a sea-port town of Ilispa- niola, with a capacious and safe harbour : the environs contain sugar, coffee, indigo, and cotton plantations. Hither the inhabitants of Grand Goave and the neighbourhood send their commo- dities. It is twenty miles W. S. W. of Leogane.

GOB, n. s. "\ Pr. gobc, gober. A

Gobbet, n. s. & v. a. (^ small quantity ; a

Gob'ble, v. a. i mouthful : one that

Gob'bler, 72. s. J swallows in haste ; a

gourmand : to eat greedily. .

He said he hadde a gobbet of the seyl

Thatte Peter had whan that he went

Upon the see till Jesus Crist him hente.

Chaucer. Prologue to Canterbury Tale.*

*The cooks, slicing it into little ˆo66e< *, prick it on a prong of iron, and hang it in a furnace.*

Sandy's Travels,

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GOB

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GOG

f here with she spewed, out of her filthy maw, A flood of poison, horrible and black. Full of great lumps of flesh and gobbets raw.

Spenser. By devilish policy art thou grown great. And, like ambitious Sylla, overgorged With tjobbets of thy mother's bleeding heart.

Shakspeare. Do'st think I have so little wit as to part with such a gob of money. L' Estrange.

The sheep were so keen upon the acorns, that they gobbled up now and then a piece of the coat along with them. Id.

Down comes a kite powdering upon them, and gob- lets up both together. Id. The giant gorged with flesli, and wine, and blood. Lay stretched at length, and snoring in his den, Kekhing rnvf gobbets from his maw, o'ercharged With purple wine and cruddled gore confused.

Additon. Of last year's corn in barn great store ; Fat txixkeys gobbling at the door. Prior.

The time too precious now to waste. And supper ˆo66/ec/ up in haste. Again afresh to cards they run. Swift.

GtJBBI, a district of Western Africa, to the south of Cape Lopez Gonsalvo, extending along the coast to Camraa. The chief trade is in ele- phants' teeth.

GOBBO CoRTONESE (Peter Paul), a cele- brated painter of fruit and landscapes, born at Cortona in 1580. He learned the principles of design from his father ; was afterwards the dis- ciple of Crescentio at Rome, and perfected him- self in his profession by copying after nature, with judgment and accuracy. By his skill m the chiaro-scuro he gave an exact and expressive roundness to his fruits, &c. ; but he chiefly ex- celled in coloring. He died in 1640.

GO-BETWEEN, M.S. Go and between. One that transacts business by running between two parties. Commonly in an ill sense.

Even as you came in to me her assistant, or go- between, parted from me : I say I shall be with her between ten and eleven. Shakapeare,

GOBIN, a town of France, in the department of the Aisne. in the midst of a forest. Inhabitants |l 1750. Here is one of the most celebrated ma- nufactures of mirrors in Europe. Some of the plates cast are eleven feet in length, and from three to four in breadth. Eleven miles west of iˆaon, and twenty-five east of Chauny.

GOBIUS, in ichthyology, a genus of fishes be- longing to the order thoracici. They have two holes between the eyes, seven rays in the mem- brane of the gills, and the belly fins are united in an oval form. There are twenty-five species, principally distinguished by the number of rays in their fins. See Ichthyology.

GO'BLET, n.s. Fr. gobelet. A bowl; or cup, that holds a large draught.

My figured goblets for a dish of wood. Shahspeare. We love not loaded boards, and goblets crowned ; But free from surfeits our repose is found. Dsnham.

Crowa high the goblets with a cheerful draught ; Enjoy the present hour, adjourn the future thought.

Drgden. If not, the goblet pass unquaffed ; It is not drained to banish care :

The cup must hold a deadlier draught

That brings a Lethe for despair. Byron.

GO'BLIN, M. s. ¥r. gobelirie ; which Spenser has once retained ; writing it in tliree syllables. ' This word some derive from the Gibellines, h faction in Italy ; so that elfe and goblin is Guelph and Gibelline, because the children of either party were terrified by their nurses with the name of the other : but it appears that elfe is Welsh, and much older than those factions. Eiliff Uishon are phantoms of the night, and the Germans likewise have long had spirits among them named Goboldi, from which gobeline might be derived.' — Dr. Johnson. An evil spirit; a walking spirit; a frightful phantom. A fairy; an elf.

His son was Elfinel, who overcame The wicked gobbelines in bloody field ;

But Elfant was of most renowned fame. Who of all crystal did Panthea build. Spenser, Go, charge vay gublins that they grind their joints With dry convulsions ; shorten up their sinews With aged cramps. Shahspeare. Tempext

Angels and ministers of grace defend us ! Be thou a spirit of health, or goblin damned. Bring with thee airs from heaven, or blasts from hell ?

Sluikspeare. To whom the goblin, full of wrath, replied, 4rt thou that traytor angel? Milton's Paradise Lost.

Always, whilst he is young, be sure to preserve his ender mind from all impressions and notions of spirits and goblins, or any fearful apprehensions in the dark.

Locke. Mean time the village rouses up the fire While well attested, and as well believed. Heard solemn goes the goblin story round.

Thomson. And goblins all To the damp dungeon shrink, or hoary hall. Or westward with impetuous flight Shoot to the desert realms of their congenial night.

Beattie.

GO-BY, w.s. Delusion; artifice; circum- vention ; over-reach.

Except an apprentice is instructed bow to adulterate and varnish, and give you the go by upon occasion, his master may be charged with neglect.

Collier on Pride.

GO-CART, n. s. Go and cart. A machine in which children are enclosed to

teach them to walk, and which they push forward without danger of falling.

Young children, who are tryed in Go-carts, to keep their steps from sliding. When members knit, and legs grow stronger, Make use of such machine no longer. Prior.

GOCAUK, a large town of Hindostan, in the province of Bejapoor, situated on the acclivity of a hill, and defended on three sides by a brick wall and wet ditch. On the other, the south side, it has the Gutpurba River. The manufac- ture of cotton and silk goods here is extensive. About two miles from this town is a very fine cataract 174 feet high; the breadth of it in the rainy season is 160 yards. This was tlie chief town of a district when taken by Mu92im, thˆ son of Aurungzebe, in 1685; bat it has now \yj buildings of importance.

GOD

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GOD

GOD, n.s. Scv.a. ~) Sax. jos, which like- God'less, n. s. wise signifies good. The

God'like, adj. same word passes

God'liness, n. s. both senses God'ly, adj. & adv.) > accidental

with only variations

the Teuto- The Su-

GoDLiNG, n. s. through all

Godhead, n. s. nic dialects.

GoDWARD, adj. preme Being. An idol ;

GoDLYHEAD, Ti. s. J a false god ; a little divi- nity : a human being canonised ; religious or irreligious persons and acts : goodness and piety : some of these words are obsolete. Figuratively undue attention paid to any subordinate things or beings.

He that sacrificeth unto any god, save unto the Lord only, he shall be utterly destroyed

Exodus xxii. Help, Lord, for the godly man ceaselh, for the faithful fail among the children of men.

Psalm xii. 1. And such trust have we through Christ to Godward.

2 Cor. Whose end is destruction, whose god is their belly.

Phil. iii. Grant that wc may hereafter live a godly, righteous, and sober life. Common Prayer.

In the morwe tide, is most convenable to a man to say his prayers, and for to think on God, and to honour God, and to gev§ almesse to the poure.

Chancer. The Persones Tale. For this, and many more such outrage, I crave your godlyhead to asswage The rancorous vigour of his might. Spenser, Virtue and godliness of life are required at the hands of the minister of God. Hooker.

The apostle St. Paul teacheth, that every one that will live godly in Christ Jesus must suffer persecutioa.

Id. Of these two sorts of men, both godless, the one has utterly no knowledge of God, and the other studies how to persuade themselves that there is no such thing to be known. Id.

I am not Licio, But one that scorns to live in this disguise. For such a one as leaves a gentleman. And makes a god of such a cullion. Shakspeare.

Be content Your low-laid son our godhead will uplift. Id.

Were your godheads to borrow of men, men would forsake the gods. Id. Timon,

As flies to wanton boys are we to the gods. They kill us for their sport. Id. King Lear.

This last old man Loved me above the measure of a father ; Kay, godded nic, indeed. Id. Coriolanw.

These marriages did not beget men, so much as wickedness ; from hence religious husbands both lost their piety, and gained a rebellious and godless gene- ration. Bishop Hall. For nought more god-like in this world is found. Then so resolved a man, that nothing may His resolution alter or confound. When any taske of wortli, he doth assay.

George Withers. That godless crew Rebellious. Milton.

Thus Adam his illustrious g>icst besought. And thus the godlike angel answered niild. Id. At the holy mount Of heaven's high-seated top, the imperial throne Of godliead, fixed for ever firm and sure. The filial power arrived. Id. Paradise Lost,'

The same church is really holy in this world, in relation to all godly persons contained in it, by a real infused sanctity. Pearson.

All the churches of God are united into one by the unity of discipline and government, by virtue whereof the same Christ ruleth in them all. Id.

Strong god of arms, whose iron sceptre sways The freezing Korth, and Hyperborean seas. And Scythian colds, and Thracia's Winter Coast, Where stand thy steeds, and thou art honoured most. Dryden.

Thy puny godlings of inferior race. Whose humble statues are content with brass.

Id. For faults not his, for guilt and crimes Of godless men, and of rebellious times. Him his ungrateful country sent. Their best Cauiillus, into banishment. Id.

Adoring first the genius of the place. The nymphs and native godheads yet unknown.

Id. JEneid. That prince shall be so wise and godlike, as, by established laws of liberty, to secure protection and encouragement to the honest industry of mankind.

Locke. The Supreme Being, whom we call God, is neces- sary, self-existent, eternal, immense, omnipotent, omniscient, and best being ; and therefore also a being who is and ought to be esteemed most sacred or holy. Grew's Cosmologia.

So may thy godhead be confest. So the returning year be blest. Prior,

Ere wit oblique had broke that steady light, Man like his maker, saw that all was night ■ To virtue in the paths of pleasure trod. And owned a father when he owned a God.

Pope. There fixed the dreadful, here the blest abodes ■ Fear made her devils, and weiik hope hix gods.

Id. Blest be the day I' scaped the wrangling crew. From Pyrrho's maze, and Epicurus' sty. And held high converse with the god-like few; Who to the enraptured heart, and ear, and eye. Teach beauty, virtue, truth, and love,

and melodˆ'.

Beat tie. God. See Theology.

God's House, League of, one of the three chief divisions of the Swiss Canton of the Gri- sons. It has eleven jurisdictions, a territorial extent of 1280 square miles, and a population of about 28,000. See Grisons.

GODALMING, a town on the Wye, at a place where it divides into several streams. It is a corporation ; and by its charter the chief ma- gistrate is a warden chosen yearly, with eight assistants. It carries on manufactures of kerseys and stockings; and is famous for liquorice. It has a market on Wednesday. Its name is sup- posed to have been derived from Goda, a pious lady among the Saxons, who founded a religious house here. Tlie town consists of one principal street, running east and west, and several smaller ones. The church is a neat building, with a high and handsome spire ; besides which here are a Quakers' meeting-house, two chapels for other dissenters, a good charity school, and, on the common, an hospital endowed for ten old men. It is four miles south-west from Guild- ford, and thirty-three from London.

GOUAVKRY, Ganga Godavery, a fine river of India, rising on the eastern side of the Bala

Ghaut, about seventy miles to the north-east of Bombay. It traverses nearly the whole of the breadth of the peninsula in a circuitous south- east direction, and is computed to be 800 miles in length. During the rainy season it is often more than a mile and a half in breadth. On reaching llajamundry, in the Northern Circars, it divides into two main branches, one of which falls into the bay of Bengal, a few miles south of the town of Coringa, and the other a little below Narsipore, forming between them the fer- tile island of Nagur. There are several forests of saul and teak timber near the banks of this river, only a small portion of which passes through the British territories. This river, from ts source, is held sacred by the Hindoo inha- bitants of the peninsula. Its Delta contains three small harbours, viz. Yanam, Bunder Ma- lanca, and Narsipore. The harbours of Inge- ram and Coringa are also connected with this river; but none of its branches are navigable for ships of burden.

GoDAVERY Point, a head-land on the south side of the entrance of the

northern branch of the above river ; it is also called Point Gorde- ware. Long. 82° 32′ E., lat. 16° 43′ N.

GG'D-CIIILD, n. s. God and child. A term of spiritual relation; one whose sponsor at bap- tism promised to see him or her educated as a Christian.

GODDARD (Jonathan), M, D., an eminent physician and chemist, and one of the first pro- moters of the Royal Society. He was born about 1617; educated and graduated at Oxford; was elected a fellow of the College of Physi- cians in 1646, and appointed reader of the ana- tomical lecture in 1647. Oliver Cromwell ap- pointed him first physician to the army, a member of the council of state, and warden of Merton College ; but he lost this office on the Restora- tion. He was elected professor of physic in Gresham College, in 165.5. He prepared all his own medicines; and, in 1668, published a trea- tise, recommending that practice to all physicians. He was the inventor of the Guttse Anglicanaˆ. He died of an apoplectic fit in 1674. Bishop Seth Ward says, he was the first Englishman who constructed a telescope.

GO'D-DAUGHTER, n. s. God and daughter. A girl who has had a sponsor in baptism. A term of spiritual relation.

GO'DDESS, n. s. From god. A female di- vinity.

Hear, nature, hear ! dear goddess, hear a father !

Shakspeare. A woman 1 forswore ? but I will prove.

Thou being a goddess, I forswore not thee :

My vow was earthy, thou a heav'nly love. Id.

I long have waited in the temple nigh. Built to the grsLcioas goddess Clemency, But rev'rence thou the power.

Dryden'i Fables. From his seat the goddess born arose. And thus undaunted spoke. Id.

GODFREY (Thomas), mventor of the quad- rant, commonly called Hadley's. It was an im- provement upon Davis's quadrant, aad sub- mitted to the Royal Society, through Mr, Collison, Dr. Hadiey having neglected to lay it before them, and that body sent household fur-

niture, value £200, to the author. Doctor Franklin thus speaks of this eccentric person : " Among the members of our junto was Thomas Godfrey, a self-taught mathematician, great in his way, and afterwards inventor of

what is now called Hadley's quadrant. But he knew little out of his way, and was not a pleasing compa- nion, as like most great mathematicians I have met with, he expected universal precision in every thing said, and was for ever denying or distinguishing upon trifles to the disturbance of all conversation. I continued to board with Godfrey, who lived in part of my house, with his wife and children, 'and had one side of the shop for his glazier's business, though he worked little, being always absorbed in mathematics." He was born in Philadelphia, and died there in

1749.

GODFREY of Bouillon, or Boulogne, prince of Lorrain, was chosen general of the expedition which the Christians undertook for the recovery of the Holy Land, and sold his dukedom to prepare for the war. He took Jerusalem from the Turks in 1099 ; and was made king of it ; but he never would submit to be crowned, alleging that it would be impiety to wear a crown of gold in the city where his Saviour had been crowned with thorns. The sultan of Egypt afterwards sent a terrible army against him ; which he defeated, with the slaughter of about 100,000 of the enemy. He died in 1160.

GO'D-MOTHER, n. s. God and mother. A woman who has undertaken sponsion in bap- tism. A term of spiritual relation.

GODOLPHIN (John), an eminent English civilian, born in the island of Sicily in 1617, and educated at Oxford. In 1642-3, he was created LL. D. ; in 1653 he was appointed one of the judges of the admiralty ; and at the Resto- ration he was made one of the king's advocates. He was esteemed as great a master of divinity as of law ; and published, 1. The Holy Limbeck. 2. The Holy Arbor. 3. A View of the Admiral's Jurisdiction. 4. The Orphan's Legacy. 5. Re- pertorium Canonicum, &c. He died in 1678.

GoDOLPHiN (Sidney), earl of Godolphin, was of the above family, and educated at the same University. He was one of those who voted under Charles II. for the exclusion of the duke of York from the throne, notwithstanding which he was employed by James II., and on the flight of that monarch Godolphin voted for a regency. Under William and Mary he was made a com- missioner of the treasury. During the reign of queen Anne he was at the head of this department; and in 1704 became a knight companion of the garter. In 1706 he was created earl of Godol- phin : but four years afterwards was obliged to retire from office. His death took place in 1712.

GO'D-SHIP, w. s. From god. The rank or character of a god ; deity ; divinity. Discoursing largely on this theme, O'er hills and dales their god-

ships came.

Prior.

GO'D-SON, n. s. God and son. One who has had a sponsor at the font.

What, did my father's godson seek your life ?

He whom my father named ? your Edgar ?

Shakspeare.

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GODWIN (Mary), also known by her maiden name of Woolstonecraft, was born near London in 1759. After keeping a boarding school, and being a companion to a lady on a journey to Lisbon, she had recourse to her pen, and produced some translations from the French ; and an Essay on Female Education. Her principal performance was a \indication of the Rights of Women, a book whose principal tendency is to unsex the sex. She now fell in love with Mr. Fuseli, the painter, a married man ; and not meeting with a return to her passion, went to France, and formed a connexion with one Imlay, an American, who soon abandoned her. She next became attached to Mr. Godwin, whom she afterwards married, and who wrote her life. She died in 1797.

GO'D-WIT, n. s. Sax. j,o'n, good, and pira, an animal. A bird of peculiar delicacy.

GODWIN (Thomas), a learned English au- thor, born in 1517, master of the free-school at Abington in Berkshire ; where he educated many youths, who became eminent in church and state. He was a man of great learning : he wrote liisloriae Romans anthologia, Synopsis antiqui- tatum Hebraicarum, Moses et Aaron, Florile- giura Phrasicon, &c. He died in 1642.

GOD'YELD, adv.) Corrupted from god

Go'dyield, adv. S shield or protect. A terra of thanks. Now not used.

GOELWARAH, a district of the province of Gujerat, Hindostan, situated between 21° and 22^ of N. lat. It is bounded on the east by the gulf of Cambay, and is famous for a breed of large cattle. It was ceded by the*

Mahrattas to tiie British in 1803, in part payment of a subsi- diary force, and is subject to the jurisdiction of Kaira. The chief town is Gogo.

GOEN, a large town of Asiatic Turkey, on the right bank of the Tigris, and 150 miles S.S.E. of Mosul.

GO'ER, n. s. From go. One that goes ; a runner.

GOES or Ter Goes, an old town of the Ne- theriand, in South Beveland, at the east mouth of the Scheldt. It has an ancient and curious monastery; and manufactures of salt, and a good trade in corn and hops. When it was besieged by the insurgents, in the reign of Philip II. of Spain, the Spaniards marched a body of troops seven miles through the water from Bergen-op-Zoom, across a ford which was never before deemed practicable, and has never since, it is said, been attempted. It is ten miles east of Flushing. Population 3,700.

GOETHE (John Wolfang Von), the poet and patriarch of German literature, was born at Frankfort, 28th of August, 1749; and before he was nine years old, was author of a description of twelve pictures representing the history of Joseph. He entered tl>e university of Leipsic at the age of fifteen ; after four years' residence there, he removed to Alsace, where he saw liie fair Gretchen, now immortalized in his Faust and Egmont ; he next visited Werler, where he met another beautiful enchantress, and, in conse- quence, wrote the romance of Wcfther. In 1775 he settled at Weimar, upon the invitation of the Grand Duke, who heaped upon iiim all tlic honour- wh.ch a subject could accept. He

was ennobled, made a privy counsellor, and for a time prime minister. One of Goethe's earliest works was Gortez with the Iron Hand, which was published in 1773; and it is extraordinary that Sir Walter Scott chose the same story for the subject of one of his earliest literary efforts. The Sorrows of Werter attracted the attention of the youth of all Europe ; and Gotz and Werther were imitated by many writers cf that day who courted popularity ; nor was the morbid senti- ment, with which they are imbued, discounte- nanced, until the wit andeloquencf of their author were employed in turning them into ridicule. Perhaps the fame of Goethe will derive more lasting endurance from his " Faust," and " Wil- helm Meister's Apprenticeship," than from his earlier works, although they too are tinctured with mysticism. He was the idol of his country, more than esteemed by his noble patron, and enjoyed an undisputed empire over the literature of his country until his death. The loss of his son materially affected his declining years, and from that event his writings display less of the great master-spirit. Goethe died on the 22d March, 1832, in the 82d year of his age, his remains were conveyed, with the most splendid funeral

pomp, to the grand ducal vault at Weimar, where they were deposited near to those of Schiller.

Gog and Magog, two names generally joined together in Scripture (Ezek. xxxviii. 2, 3, &c. ; xxxix. 1, 2, &c; Kev. xx. 8). Moses speaks of Magog the son of Japhet, but says nothing of Gog (Gen. x. 2 ; C!hron. 1. 5). Gog was prince of Magog, according to Ezekiel ; Magog being the name of the country or people. The gene- rality of the ancients made iVIagog the father of the Scythians and Tartars; and several inter- preters discovered many traces of their name in the provinces of Great Tartary. Others sup- posed that the Persians were the descendants of Magog. Some hare imagined that the Goths were descended from Gog and Magog; and that the wars described by Ezekiel, and undertaken by Gog against the saints, are those which the Goths carried on against the Roman empire, in the fifth century, Bochart has placed Gog in the neighbourhood of Caucasus. He derives the name of this celebrated mountain from the Hebrew Gogchasan, ' the fortress of Gog.' He maintains that Prometheus, said to be chained to Caucasus by Jupiter, is Gog, and no other.

GOGGLES, in surgery, instruments used for curing squinting, or that distortion of the eyes wliich occasions this disorder. They are short conical tubes, composed of ivory stained black, with a thin plate of the same ivory fixed in the tubes near the anterior extremities. Through the centre of tach of these plates is a small cir- cular hole, about the size of the pupil of the eye, for the transmission of the rays of light. These goggles must be continually worn in the day- time, till the muscles of the eye are brought to act reguhirly and unitbrmly, so as to direct the pupil straight forwards; and by these means the cure will probably be sooner or later effected.

GOGGRAll, a river, called also the Sarfew and Deva in different parts of its course, sup- posed by Major Rennell to be the Aguramis of Arnan. It has its source in the mountains of

Thibet, and flows through the provinces of Ke- maon, Oude, and part of Bahar, till at Maniee it joins the Ganges. It is navigable for boats to the foot of the hills, and is held sacred by the Hindoos. On its banks are several large towns. GOGO, a sea-port of Hindostan, in the pro- vince of Gujerat, and the capital of the district ofGoelwarah. Here is a safe roadstead and good refreshing place during the south-west monsoon. Vessels from fifty to

300 tons burden are built ; and a considerable trade is carried on with Bombay. The sailors are very able and adroit. It is an ancient town, which came into possession of the British, with the district, in 1805, and is gradually increasing. Lat. 21° 41′ N., long. 72° 21′ E.

GOHUD, an extensive and mountainous dis- trict of the province of Agra, Hindostan, on the south side of the river Chumbul, and between the twenty-sixth and twenty-seventh degrees of north latitude. It is comparatively fertile ; and abounds with strong positions ; we may instance the celebrated fortress of Gualior. It is governed by a Hindoo prince, but has suffered much from the inroads of the Mahrattas.

GoHUD, the capital, a fortified town, was formerly a village dependent upon Gualior. The present rannah's ancestors were zemindars of this village, and by caste Jauts, ofthe Bamrowly tribe. Prior to the battle of Paniput, in 1762, they had acquired Gualior, but were compelled to yield it to the Mahrattas. The rannah of Gohud now attempted to shake off the Mahratta yoke, but was subdued by Ragoonauth Row in 1766. On a subsequent rupture Gohud was taken by Madhajee Sindia in 1784.

In 1804 a treaty was entered into by the British government with the rannah of Gohud, Kirrut Singh Luckindra, by which he was to be esta- blished in the sovereignty of this and a consi- derable number of adjacent districts ; in consi- deration of which he was to maintain a subsi- diary force of three battalions, and make over the city and fortress of Gualior to the British. Afterwards he agreed to relinquish the country and fort of Gohud, and the other districts gua- ranteed to him by the former treaty, in conse- quence of which the British government granted him the districts of Dhelepoor, Baree, and Rajekerah, in perpetual sovereignty.

GOJAM, a populous province of south- eastern Abyssinia, about eighty miles in length, and forty in breadth. It is flat and full of rich pastures, enclosed by a range of very high moun- tains stretching in a semicircle along the course of the Abyssinian Nile. The cattle are very nu- merous and rather large.

GOIANA, a city of Brasil, in the province of Itamarca, on the shore of the river of the same name, three leagues from its mouth. Long. 35° 16′ W., lat. 70 39′ S.

GoiANA, a river of Brasil, running east, in the province of Rio Grande, and falling into the Atlantic Ocean.

GOIAZ, a province of Brasil, bounded chiefly by Minas Geraes on the east, Matto G rosso on the west, and Para on the north. Its greatest length is

from lat. 6° to 21° S. It possesses several gold mines, and diamonds are found in

some parts, but they are not in general of a pure \vater, though of good size. Cattle, which are bred ou the frontiers, and some cotton, are the other objects of trade. The mules, on their return from Rio de Janeiro, are loaded with iron, salt, prints, baizes, fire-arms, powder and shot, hats, and a variety of artificers' tools. The inhabitants per- sonally take away valuable articles to Rio de Janeiro, and lay out the proceeds in negroes (the first object of commerce), iron, salt, &c. The population of this district is small in com- parison to its extent. According to Mr. Mawe it is a productive country, having numerous rivers well stored with fish, and woods abound- ing with fine birds. Tlie principal town. Villa Boa, is situated in lat. 16° S., about eighty leagues to the west of Paracatu. GO'ING, n.s. From go. The act of walking.

When nobles are their taylors' tutors. No herelicks burnt, but wenches suitors. Then comes the time, who lives to see't. That going shall be used with feet.

Shakspeare. Pregnancy.

The time of death has a far greater latitude than that of our birth ; most women coming, according to their reckoning, within the compass of a fortnight ; that is, the twentieth part of their going.

Grew's Cosmologia Sacra, Departure.

Thy going is not lonely ; with thee goes Thy husband ; him to follow thou art bound.

Milton, GO'LA, n. s. The same with cymatium. In a cornice the gola, or cymatium of the corona, the coping, the modillions or dentelli, make a noble show. Spectator,

GOLCONDA, aj)rovince of Hindostan, now called Hyderbad. It was once the capital of an extensive kingdom under native Hindoo princes, and afterwards a principal division of the Bhamenee sovereignty, upon the fall of which it became the seat of a monarchy under the Cuttub Shahee dynasty. In 1690 it was surrendered, after a siege of seven months, to the Mogul army of Aurengzebe. The deposed sove- reign, Abou Houssun, died in confinement here in 1704.

*GOLD, n. s. "^*

Gold'-beater, n. s. Gold'-bound, adj. Gold'en, adj. Gold'enly, adv. Gold'-

finder. n. s. Gold'-size, n. s. Gold'-hammer, n. s. Gold'ing, n. s.

Gold'nEY, 71. s. GoLD'-PLEASURE, 71. s.

Gold'y-locks, n.s.

Gold'smith, n. s.

Gold'-finch, n.s, tively to express value ; applied to different things from their color resembling gold ; thus gold of pleasure, golden saxifrage, gold-hammer, gold-finch, goldney, goldy-locks, are names of herbs, birds, and fishes ; gold-size is a yellow size ; gold-smith, one who manufactures gold, &c. ; gold-beater, one who beats or foliates

Sax. ˆol-o ; Wei. golud, riches. Either of geel, as Scaliger says, which is in Dut. to shine ; ' or of ano- ther Dutch word, which is gelten, and signifies in Latin valere, in English to be of price or value : hence cometh their ordinary word gel, for money.' — Pea- cham. Used figura-

gold to gild other matter ; a golden age is a happy and prosperous age.

And forth we went.

Devoutly, soft, and esie pace to se, Venus the goddes' image all of golde.

Chaucer. Tlie Court of Love. And, as I me advise The golden-Xoxc, and leden-love they hight. The tone was sad, the toder glad and light.

Id. Ther maist thou see devising of hameis So uncouth and so riche, and wrought so wele Of goldstnithry, of bronding and of stele.

Id. The Knightes Tale. And as I stode and cast aside mine eye, Twas ware of the fairest medlar tree. That ever yet, in all my life I se As full of blossomes as it might be j Therein a gold-Jinch leping pretily. From bough to bough, and as him list, he ete Here and there of buddes and floures swete.

Id. The Floure and the Leafe. Upon her head she wore a crown of gold; To shew that she had powre in things divine. Spenser's Faerie Queene. My brother Jacques he keeps at school, and report speaks goldenly of his profit.

Shakspeare. As You Like It. Thou that so stoutly had resisted me. Give me thy gold, if thou hast any gold ; For I have bought it with an hundred

blows.

Shakspeare. Neither chain nor gold-smith came to me. Id. So sweet a kiss the golden sun gives not To those fresh morning drops upon the rose ; Nor shines the silver moon one half so bright Through the transparent bosom of the deep. Id. Many young gentlemen flock to him every day, «ind fleet the time carelessly, as they did in the golden world. Id.

The king's a baw-cock, and a heart of gold, A lad of life, an imp of fame. Id. Henry V.

Thy air. Thou olher gold-bound brow is like the first.

Shakspeare. Gold hath these natures ; greatness of weight, closeness of parts, fixation, pliaatness or softness, immunity from rust, and the colour or tincture of yellow. Bacon's Natural History.

Of singing birds they have linnets, goldfinches, rud- docks. Canary-birds, blackbirds, thrushes, and divers others. Carew.

The gum of ivy is good to put into your goldsize and other colours. Peacham on Drawing.

Heaven's golden winged herald late he saw To a poor Galilean virgin sent. Crashaw.

The good yeoman wears russet clothes, but makes golden payment, having time in his buttons, but silver in his pocket. Fuller.

Gold begets in brethren hate. Gold in families debate ; Gold does friendship separate ; Gold does civil wars create. These the smallest harms of it ! Gold alas I does love beget. Cowley.

Corrupt with gold thy wives and daughters bring To the black idol for an offering. Marvell.

Our goldbeaters, though, for their own profit sake, "ey are wont to use the finest gold they can get, yet tney scruple not to «mploy coined gold ; and that the mint-masters are wont to alloy with copper or silver, to make the coin more stifi', and less subject to be wasted by attrition. Boyle.

Nine royal knights in equal rank succeed. Each warrior mounted on a fiery steed In golden armour glorious to behold ; The rivets of their arms were nailed with gold.

Dryden. That verse which they commonly call golden, has two substantives

and two adjectives, with a verb be- twixt them to keep the peace. Id. A goldfinch there I saw, with gaudy pride Of painted plumes that hopped from side to side.

Id. We readily say this is gold, and that a silver goblet, only by the different figures and colours represented to the eye by the pencil. Locke.

Golden russeting hath a gold coloured coat under a russet hair, and its flesh of a yellow colour.

Mortimer.

And see the guardicin angels of the good. Reclining soft on many & golden cloud. Rowe.

O cursed lust of gold, when for thy sake The fool throws up his interest in both worlds. First starved in this, then damned in that to come.

Blair's Grave. His empty paunch that he might fill.

He sucked his vittels through a quill ;

Untouched it passed between his grinders,

Or't had been happy for goldfinders. Swift,

The goldsmith or scrivener, who takes all your for- tune to dispose of, when he has beforehand resolved to break the following day, does surely deserve the gallows. Id.

Thence arises that golden rule of dealing with others, as we would have others deal with us. Watts.

The lust of gold succeeds the lust of conquest : The lust of gold unfeeling and remorseless I The last corruption of degenerate man.

Dr. Johnson's Irene,

And forth an host of little warriors march Grasping the diamond lance, and targe of gold.

Beattie, Minstrel, Who is this ? Who truly looketh like a demigod. Blooming and bright, with golden hair, and stature. If not more high than mortal, yet immortal In all that nameless bearing of his limbs. Which he wears as the sun his rays.

Byron. Deformed Transformed.

Gold, in chemistry and metallurgy, is a yellow metal of specific gravity 19‘3. It is found in na- ture only in a metallic state, and most commonly in grains, ramifications, leaves or crystals, rhom- boidal octahedral, or pyramidal. Its- matrix is ge- nerally quartz, sandstone, siliceous schislus, &c. It IS found also in the sands of many rivers, particularly in Africa, Hungary, and France, in minute irregular grains, called gold dust. Na- tive gold is never completely pure ; it is alloyed with silver or copper, and sometimes with iron and tellurium. The largest piece of native gold, that has been hitherto discovered in Europe, was found in the county of VVicklow, in Ireland. Its weight was said to be twenty-two ounces, and the quantity of alloy it contained was very small. Several other pieces, exceeding one ounce, have also been discovered at the same place, in sand, covered with turf, and adjacent to a rivulet. The following is Kirwan’s arrangement of the ores of gold.

Species 1. — Native gold. Its color yellow, more or less dilute, or brownish-red, like Spanish

snuff, malleable and flexible. Found either in compact masses ; or in spangles, inlaying, or dis- seminated; or capillary, arborescent, ramified, in- terwoven, or dentiform ; or crystallised in cubic, pyramidal, prismatic, or tabular forms ; or in grains visibly or invisibly mixed with various other substances. External lustre, 3. Internal 2. Metallic. Fracture, hackly. Hardness 5. Specific gravity exceeds 12, more or less in pro- portion to the quantity of silver or copper with ■which it is commonly alloyed, and the cavities it may contain.

The substances in or on which it is found are either stony, sandy, earthy, or inflammable, or ores of other metallic substances. Of the first, the most common is quartz, siliceous schis- tus, hornslone, sandstone, spar, gypsum, &c., in Hungary, Transylvania, Bohemia, &c. ; or trap, or jasper, felspar, or in clays, as in Bohemia ; or in the sand of various rivers, in different coun- tries, as Hungary, France, Africa, &c. : particu- larly in the yellowish-red, and violet sands. It is so generally interspersed through earths of va- rious kinds, that Bergman thinks it more exten- sively diffused, though in exceedmgly small quan- tities, than any other metal, except iron.

If 100 lbs. of sand contain 24grs. of gold, it is said the separation is worth attention. In Africa 5 lbs. of sand often contain 62 grs. of gold. The heaviest, which is often black or red, yields most. Gold interspersed through

sand, is often separated by mere mechanical means, amply described in the Paris Memoirs for 1718 and 1786; in Born's Letters from Hungary, and in Diedric's Description des Gites des Minerals. Native gold is sometimes invisibly dispersed and disguised, sometimes visibly contained in the form of a brownish-red powder in martial pyrites, as in that in Adelfors in Sweden, and also in Norway, Bohemia, and Siberia. It seems now agreed that it is not really mineralised in these ores. For it is often extracted from them by the mere mechanical means of pounding and wash- ing, or at least from the residuum left after so- lution in the nitrous acid ; its quantity is gene- rally very small, scarcely above 8 grs. in 10,000 of the ore, or 1 oz., or 1ˆ oz. in 1 cwt. of the ore. That of Facebay, in Transylvania, however, con- tains 12'5 per cent, of gold.

Gold is also extracted from a particular sort of argentiferous copper pyrites, called, in Hun- gary, gelf. This is found either massive, or crys- tallised in rhomboids, or other irregular quad- rangular or polygon masses. Its contents in gold and silver are rich, but very unequal : much of the gold may be separated by pounding and washing. MuUer concludes that gold exists in it in a state of dispersion, and not combined nor consequently mineralised.

It often also exists in a greenish-yellow cop- per pyrites, somewhat duller than the common, and containing besides iron, also manganese.

It is found mixed with arsenical pyrites in the valley of Zillar, near Saltzburgh. The quin tal affords only twenty-five grains. It is sepa- rated by washing, and affords a profit of about £400 or £500 per annum.

It is sometimes found in the sulphurated sil- ver ores of Hungary and Saxony, and is sepa-

rated, after the expulsion of the sulphur, bv nitrous acid, as the gold falls to the bottom in the form of black powder.

The most remarkable ores in Europe affording gold, are those of Nagaya, in Transylvania; they, properly speaking, are compounds of several sulphurated ores, among which native gold occurs either in the state of a metallic alloy, or more or less plentifully disseminated, though invisible by the help of microscopes.

(3f these ores there are five sorts, the antimo- nial, the arsenical, the blendose, the mangane- sian, and the sylvanitic. The first and principal is the antimonial. Blatter erze of some, or gold ore of Nagaya. Its color is bluish-gray, or in- termediate between that and the iron gray. It is found in plates of various thickness, adhering to, but separable from each other, or

intersecting each other in various directions, and somewhat flexible. These, some say, are crystallised in hexangular forms, but Ruprecht denies it; be- tween them the white ore presently to be men-» tioned is often found. Lustre 3. Metallic. Transparency 0. Their fracture foliaceous, in- clining sometimes to the granular.

The hardness of the plates is 6. Their spe- cific gravity 8-919. They scrape into flakes like plumbago, and like it stain the fingers. Soluble in acids with efferv.escence. When pul- verised three per cent, of these plates are attrac- tible by the magnet, and twenty-one per cent, solu- ble in nitrous acid. The solution is greenish, the residuum purplish : 100 parts of this ore contain about twelve of silver and gold, the remainder consists of iron, lead, and antimony, all sulphu- rated, and silex ; the proportions are not accu- rately stated in the incomplete and unsatisfac- tory analyses that have as yet appeared.

The color of the arsenical ore is, according to Ruprecht, tin white, according to Muller, yel- lowish white, according to Born, yellowish gray. Its fracture granular or foliated, often striated or fibrous. Its specific gravity, 10678. It is so fusible as not to bear roasting. When pul- verised the magnet attracts nearly five per cent, of it, and nitrous acid dissolves 72, 5 per cent, of it. The color of the solution is light green, and of the residuum blackish-brown. Mild fixed alkalies afford, both with the solutions of this, and of the former ore, a light yellow pre- cipitate. By MuUer's account, it contains about twenty-five per cent, of auriferous silver.

Hence Werner calls it the silver ore of Nagaya. Born tells us it contains antimony, iron, and gold. The matrix of both these ores is a gray- ish quartz, or hornstone and silex mixed with white calx of manganese.

Of the blendose ores, Muller mentions two varieties, the black and the red, or the reddish- brown (this last phosphoresces, when scraped in the dark ; the black does not), whose exter- nal appearances do not probably differ from those of the common blendose ores, besides zinc, iron and sulphur; most of them contain anti- mony also, and some manganese.

The specific gravity of the black, according to Muller, is 5-398; which exceeds the specific gra- vity of mere blend. The nitrous acid dissolves ninety-seven per cent, of it with an hepatic

smell, which common blends yield only when treated with marine or

vitriolic acids. It con- tains -062 per cent, of auriferous silver. The reddish-brown is still poorer, and seems a mix- ture of blend, manganese, lead, and arsenic, with a small proportion of auriferous silver. The red exposed to the blow-pipe gives a purple tinge to borax if nitre be added. The black does the same, even without that addition, a sign that they contain manganese.

The manganesian ore consists of thin laminae, of a gray color, somewhat withered^ inserted in a matrix of whitish manganese. According to Hacquet it is very poor in gold, but baron Born tells us it contains twenty-five per cent, of this metal, and is the richest of all the ores found in that country. Yet it is so light, that it is called cotton ore.

The sylvanitic ore ; Weisses golderz of the Germans ; Aurum Graphicum, of some ; is ac- cording to baron Born of a whitish color, inter- mediate betwixt that of antimony and bismuth. Lustre, 3. It consists of "amorphous plates, whose fracture is granular, like that of steel.

Its fragments prismatic. Its hardness from 4 to 5. Brittle. Its specific gravity, 5'723; its matrix an aggregate of lithomarga and quartz, with pyrites interspersed. Before the blow-pipe it decrepitates and melts like lead. It burns with a lively brownish flame and disagreeable smell, and at last vanishes in a white smoke, leaving only a whitish earth.

According to Wallerius, native gold is found, 1. In solid masses. In Hungary, Transylvania, and Peru. 2. In grains. In the Spanish West Indies. 3. In a vegetable form, like the branches or twigs of plants. 4. In a drusic figure, as if composed of groups or clusters of small parti- cles united together, found in Hungary. 5. Com- posed of thin plates, on thin pellicles covering other bodies, found in Siberia. 6. In a crys- talline form in Hungary. Gold is also found in the form of thick solid pieces. It is in general more frequently imbedded in quartz, and mixed with it than with any other stone ; and the quartz in which the gold is found in the Hunga- rian mines, Mr. Magellan tells us, is of a pecu- liarly mild appearance. Sometimes, i'owever, it is found in limestone, hornblende, &cc. Europe is principally supplied with gold from Chili and Peru in South America. A small , quantity is likewise imported from China and the coast of Africa. The principal gold mines of Europe are those of Hungary, Saltzburg, and Adelfors in Smaland. Some gold is also extracted from the silver mines of Ostersilvarberget, in the pro- vince of Dalarne. Native gold has been found in Lapland, above Tornea, and in Wcstmanland. In Peru it is found mixed with a stony matter not well known, from which it is extracted by amalgamation. Sometimes kernels or lumps of a spongy texture, and very light, are met with, which contain a good quantity of gold dust. Gold is also found separate from any matrix, in lumps of visible grains mixed with sand in the beds of rivers.

Perfectly pure go)d may be obtained, by dis- solving the gold of commerce in nitro-muriatic acid, and precipitating the metal, by adding a

Aveak solution of sulphate of iron. The pre- cipitate, after being well washed and dried, is pure gold. For the methods of analysing the ore or metal, see Assaying, Cupel, Metallurgy, &c.

Pure gold is very soft, tough, ductile, and mal- leable, unaltered by the most powerful furnaces, but volatilised by the intense heat of powerful burning mirrors ; and it has been driven up in fumes by a stream of oxygen urged upon it when red hot. The electric shock converts it into a purple oxide, as may be seen by transmitting that commotion through gold leaf, between two plates of glass ; or by causing the explosive spark of three or more square feet of coated glass to fall upon a gilded surface. A heat of 32° W., or perhaps 1300° F. is required to melt it, which does not happen till after ignition. Its color, when melted, is of a bluish-green ; and the same color is exhibited by light transmitted through gold leaf. But silver, copper, and all the rest of the metals which can be formed into leaves, are perfectly opaque.

*No acid acts readily upon gold but aqua regia and aqueous chlorine. Chromic acid, added to muriatic, enables it to dissolve gold. **

When gold is immersed in aqua regia, an effer- vescence takes place, and the solution tinges ani- , mal matters of a deep purple, and corrodes them. By careful evaporation, fine crystals of a topaz color may be obtained. The gold is precipitated from its solvent by a great number of substances. Lime and magnesia precipitate it in the form of a yellowish powder. Alkalies exhibit the same appearance ; but an excess of alkali redissolves the precipitate. The precipitate of gold, obtained from aqua regia by the addition of a fixed alkali, appears to be a true oxide, and is soluble in the sulphuric, nitric, and muriatic acids ; from whicli, however, it separates by standing, or by evaporation of the acids. Gallic acid precipi- tates gold of a reddish color, very soluble in the nitric acid, to which it communicates a fine blue color.

Ammonia precipitates the solution of gold much more readily than fixed alkalies. This pre- cipitate, which is of a brown, yellow, or orange color, possesses the property of detonating with a considerable noise when gently heated. It is known by the name of fulminating gold. See Powder, Fulminating, When precipitated from this solution by tin, it forms tlie purple precipitate of Cassius, so much used in enamel- ling. This consists of an oxide of gold, mixed with an oxide of tin. Sulphurets precipitate gold from its solvent, the alkali uniting with the acid, and the gold falling down combined with the sulphur ; of which, however, it may be de- prived by

moderate heat.

Tiie solution of gold in sulphuric ether ap- pears to crystallise after a considerable time. Mr. Sivright having allowed a solution of gold in sulphuric ether to stand four days in a vessel, with a cork and a piece of leather tied over it, found that a great part of the liquid had evapo- rated, leaving the gold in the form of a thin plate, which has the usual brightness of pure gold, and resembles the flat pieces of native copper found in Cornwall. There were distinct crystals in one or two parts of tlie plate.

The peroxide of gold thrown down by potash, from a solution of the neutral muriate, consists, according to Berzelius, of 100 gold and twelve oxygen. It is probably a trit-oxide. The pro- toxide of a greenish color is procured by treating with potash water muriate of gold, after heat has expelled the chlorine. It seems to consist of 100 metal | 4 oxygen. The prime equivalent of gold comes out apparently 25.

Most metals unite with gold by fusion. With silver it forms a compound, which is paler in proportion to the quantity of silver added. It is remarkable, that a certain proportion, for example a fifth part, renders it greenish, but occasions hardly any perceptible alteration of ductility, hardness, or mean specific gravity.

A strong heat is necessary to combine platina with gold : it greatly alters the color of the gold, if its weight exceed the forty-seventh part of the mass.

Mercury is strongly disposed to unite with gold, in all proportions, with which it forms an amalgam : this, like other amalgams, is softer the larger the proportion of mercury. It softens and liquifies by heat, and crystallises by cooling. Lead unites with gold, and considerably impairs its ductility, one-fourth of a grain to an ounce rendering it completely brittle. It gives an alloy externally resembling fine pale gold, but which is as brittle as glass, is wholly destitute of metal- lic lastre, and has a fine-grained porcellaneous appearance : its specific gravity a little less than the mean. The very fumes of this metal are nearly as prejudicial to the ductility of gold as those of bismuth.

Copper renders gold less ductile, harder, more fusible, and of a deeper color. This is the usual addition in coin, and other articles used in society. Tin renders it brittle in proportion to its quantity ; but it is a common error of chemical writers to say, that the slightest addition is sufficient for this purpose. When alloyed with tin, however, it will not bear a red heat. With

iron it forms a gray mixture, which obeys the magnet. This metal is very hard, and is said to be much superior to steel for the fabrication of cutting instruments.

With bismuth, in the proportion of thirty- eight grains to the ounce, it yields an alloy of a pale greenish yellow, excessively brittle, and ex- hibiting a fine-grained earthy fracture : its specific gravity somewhat greater than the mean. If standard gold be alloyed with even a quarter of a grain of bismuth in the ounce, the mixture, although in color and texture resembling gold, is yet perfectly brittle.

Arsenic, on account of its volatility, can be combined with gold only in small proportions. ! The alloy, or mixed metal hence produced, is of agray color, coarse granular fracture, and very brittle.

I! Antimony, mixed by fusion with either fine or standard gold in the proportion of not more than i gr. to the ounce (being not more than ˆgja of the whole mass), will give a brittle compound of a close granular fracture, with little metallic lustre : while, with a change quite as extraordinary as in nickel, mixed in the proportion of thirty-eight grains to the ounce, produces an alloy of the

color of fine brass, with a coarse-grained earthy fracture, and very brittle : its specific gravity being somewhat less than the mean. With man- ganese, in its black oxide, gold will combine, and produce an alloy of a reddish gray, capable of receiving a brilliant lustre like steel : the mixed metal is exceedingly hard, and so far possessed of ductility as to be in some measure flattened by the hammer before it breaks.

Zinc greatly injures the ductility of gold, and, when equal in weight, a metal of a fine grain is produced, which is said to be well adapted to form the mirrors of reflecting telescopes, on ac- count of the fine polish it is susceptible of, and its not being subject to tarnish. The alloys of gold with molybdena are not known. It could not be mixed with tungsten, on account of the infusibility of this last substance.

Mr. Hatchett gives the following order of dif- ferent metals, arranged as they diminish the duc- tility of gold : bismuth, lead, antimony, arsenic, zinc, cobalt, manganese, nickel, tin, iron, platina, copper, silver. The first three were nearly equal in effect; and the platina was not quite pure.

For the purposes of coin, Mr. Hatchett con- siders an alloy of equal parts of silver and cop- per as to be preferred, and copper alone as pre- ferable to silver alone.

The limits of the ductility and malleability of gold are not known.

According to Cronstedt, one grain of it may be stretched out so as to cover ninety-eight Swedish ells, equal to 63-66 English yards of silver wire ; but Wallerius as- serts, that a grain of gold may be stretched in 'such a manner as to cover 500 ells of wire. At any rate, the extension is prodigious; for, accor- ding to the least of these calculations, the 1,000,000th part of a grain of gold may be made visible to the naked eye. Nor is its malleability inferior to its ductility. Poyle, quoted by Apligny in his Treatise of Colors, says, that one grain and a half of gold may be beaten into fifty leaves of one inch square, which, if intersected by parallel lines drawn at right angles to each other, and distant only the 100th part of an inch from each other, will produce 25,000,000 of little squares, each very easily discernible to the naked eye.

By the weight and measure of the best wrought gold leaf, it is found that one grain is made to cover 56| square inches; and from the specific gravity of the metal together with this admea- surement, it follows that the leaf itself is jgˆsuu part of an inch thick. This, however, is not the limit of the malleability of gold ; for the gold- beaters find it necessary to add three grains of copper in the ounce to harden the gold, which otherwise would pass round the irregularities of the newest skins, and not over them ; and in using the old skins, which are not so perfect and smooth, they proceed so far as to add twelve grains. From further calculation it appears that sixteen ounces of gold, which would form a cube of about one inch and a quarter, would be sufficient to gild a silver wire equal in length to the circumference of the globe. See Chemistry.

Goldbeater's Skin, n.s. The inteˆtinum rectum of an ox, which goldbeaters lay between the leaves of their metal while they beat it, where-

l)Y the membrane is reduced thin, and made fit to apply to cuts or small fresh wounds, as is now the common practice.

When your gillyflowers blow, if they break the pod, open it with a penknife at each division, as low as the flower has burst it, and bind it about with a narrow slip of goldbeater's skin, which moisten wilh your tongue, and it will stick together. Mortimer.

Golden Fleece, in the ancient mythology, was the skin and fleece of the ram upon which Phryxus and Helle are said to have swum over the sea to Colcliis ; and which, being sacrificed to Jupiter, was hung upon a tree in

the grove of Mars, guarded by two brazen-hoofed bulls, and a monstrous dragon that never slept ; but was taken and carried off by Jason and the Argo- nauts. Some authors have endeavored to show that this fable is an allegorical representation of some real history, particularly of the philoso- pher's stone. Others have explained it by the profit of the wool-trade to Colchis, or the gold which they commonly gathered there with fleeces in the rivers. See Argonauts.

Golden Fleece, Order of the, a military order instituted by Philip the Good, duke of Burgundy, 1427; thus named from a represen- tation of the golden fleece, borne by the knights on their collars, which consisted of flints and steels. The king of Spain, as duke of Burgundy is grand master of the order; the number of knights is fixed to thirty-one. It is said to have been instituted on occasion of an immense profit which that prince made by wool ; though others will have a chemical mystery couched under it, as that famous one of the ancients, which the adepts pretend to be the secret of the elixir vitae, written on the skin of a sheep.

Gold Thread, or spun gold, is a gilt wire, wrapped or flatted over a thread of yellow silk, by twisting it with a wheel and iron bobbins. By means of a curious machinery, a number of threads is thus twisted at once by the turning of a wheel. The principal art consists in so regu- lating the motion, that the several circumvolu- tions of the wire, on each thread, may just touch one another, and form, as it were, one continued covering. At Milan, it is said, they make a sort of flatted wire, gilt only on one side, which is wound upon the thread, so that only the gilt side appears. There is also a gilt copper wire, made m the same manner as the gilt silver, chiefly at Nuremberg. The Chinese, instead of flatted gilt wire, use slips of gilt paper, which they inter- weave in their stuffs, and twist upon silk threads.

GOLDONI, a celebrated dramatic author, born at 'enice in 1707. Having shown an early attachment to dramatic performances his father, Dr. Goldoni, had a small tlieatre erected in his own house, in which, while a mere child, he and his companions amused themselves by acting comedies. Having finished his gramma- tical and rhetorical studies at Venice and Prague, he went to Pˆimini to study philosophy ; but, preferring the theatre to Aristotle, he went off with a company of comedians to Chiozzo. After at- tempting to study the law at Venice, he became secretary to the resident of that state at Milan. In this city he wrote his Venetian Gondolier, the first of his comedies that was acted and printed ; and soon after composed several other

pieces for a Venetian company then at Milan, and whom he accompanied to Genoa, where he married. After visiting Tuscany, Florence, and Pisa, he returned to Venice, and wrote comedies for the theatre of St. Angelo. These

cost him so little trouble, that it is said he wrote sixteen new comedies, besides forty-two other pieces for that theatre, within a year; and many of these, though so rapidly executed, are considered as his best productions. The first edition of his works was published in 10 vols. 8vo, 1753. He wrote afterwards a great number of pieces for the theatre at St. Luke, which were published under the title of The New Comic Theatre. He composed fifty-nine other pieces between 17ˆ and 1761 ; and, on the invitation of duke Philip, visited Parma, from whence he went to Rome. He next went to Paris on the invitation of M. Zenuzzi, the chief actor on the Italian theatre there, with whom he engaged for two years. After this, he was employed as an Italian teacher to the princesses, aunts to the unfortunate Louis XVI. ; for which he received 4000 livres a-year, and a present of 100 louis d'ors in a gold box. In his sixty-second year he wrote a French co- medy, entitled Bourru Bienfaisant, which was acted at Louis XVI. 's marriage; and for which he received 150 louis from the king, besides con- siderable sums from the performers and book- sellers. He died at Paris in 1792, aged eighty- five. As a dramatic author, he is reckoned equal to the best comic poets of modern times ; and in fertility of invention superior to them all. His whole works were printed at Leghorn, in 1788 — 91, in 31 vols. 8vo. He has been styled the Moliere of Italy ; and Voltaire, in a letter to the marquis Albergati, called him the Painter of Nature. His favorite work, generally reckoned his master-piece, was his Terence. His last piece was his Volponi.

A Goldsmith, or Silversmith, is an artist who makes vessels, utensils, and ornaments, in gold and silver. There is a vast variety in the works made, and tools used, by goldsmiths, which we cannot here particularise. Works that have raised figures are cast in a mould, and afterwards carved, or polished and finished ; I)lates or vessels of silver or gold are beat out from thin flat plates ; table and tea-spoons, &c., are beat out from solid ingots, and their mouths struck up with a punch ; tankards, and other vessels of that kind, are formed of plates sol- dered together, and their mouldings are beat, not cast. The business of the goldsmiths for- merly required more labor than it does at pre- sent ; foi they were obliged to hammer the metal from the ingot to the thinness they wanted ; but, since the invention of flatting-mills, the metals are reduced to the thinness required at a small expense. As the goldsmith often has to make his own moulds, he ought to be a good de- signer, and have a taste in sculpture: he also ought to know enough of metallurgy to be able to assay and refine gold and silver, and to mix the exact quantity of alloy. The goldsmiths in London employ different hands under them for the various branches of their trade; such as jewellers, box-makers, toy-makers, turners, gil- ders, burnishers, chasers, refiners, founders, he. Their wares must be assayed by the wardens of

their own company in London, and marked ; and the gold and silver must be of the standard fineness, under a penalty of £lO. Any false metcl may be seized and forfeited to the king. The cities of Edinburgh, York, Exeter, Bristol, &c., have also places appointed for assaying gold and silver plate. Plate sent to the assay-office, •when discovered to be coarser than the standard, is broken and defaced ; and the fees for assaying are limited.

Goldsmith (01iver),wasbornin county Long- ford, in Ireland, in 1731. His father, who possessed a small estate in that county, had nine sons, of whom Oliver was the third. After being in- structed in the classics, he was, with his brother the Rev. Henry Goldsmith, placed in Trinity College, Dublin, about the end of 1749. In tliis seminary he took the degree of B. D. ; but, his brother not being able to obtain preferment, Oliver turned to the study of physic ; and, after attending some courses of anatomy in Dublin, proceeded to Edinburgh in 1751-, where he studied medicine under the professors of that university. His benevolent disposition soon in- volved him in difficulties; and he was obliged precipitately to leave Scotland, in consequence of an engagement to pay a considerable sum for a fellow-student. A few days after, about the beginning of 1754, he arrived in Sunderland, near Newcastle, where he was arrested at the suit of a tailor in Edinburgh, to whom he had given security for his friend. By the good offices of Lachlan Maclane, esq. and Dr. Sleigh, then in college, he was delivered out of the hands of the bailiff; and took his passage on board a Dutch ship to Rotterdam, where, after a short stay, he proceeded to Brussels. He then visited great part of Flanders ; and after passing some time at Strasburg and Louvain, where he took the de- gree of M. B., he accompanied an English gen- tleman to Berne and Geneva. He travelled on "foot during the greatest part of his tour, having left England with very little money. Being ca- pable of sustaining fatigue, and not easily terri- fied at danger, he became enthusiastically fond of visiting different countries. He had some knowledge of French and of music, and played tolerably well on the German flute; whicn, from an amusement, became at times the means of subsistence. His learning procured him an hospitable reception at most of the religious houses ; and his music made him welcome to the peasants of Flanders and other parts of Ger- many. * Whenever I approached,' he used to say, 'a peasant's house towards night-fall, I played one of my most merry tunes ; and that procured me not only a lodging, but subsistence for the next day : but in truth, I must own, when- ever I attempted to entertain persons of a higher rank, they always thought my performance odious, and never made me any return for my endeavours to please them.' On his arrival at Geneva, he was recommended as a travelling tutor to a young man who had been left a con- siderable sum of money by his uncle, a pawn- broker, near Holborn. During Goldsmith's

continuance in Switzerland, he assiduously cul- tivated his poetical talents, of which he gave some proofs while at the college of Edinburgh.

*It was here he sent the first sketch of his delight- ful poem called The Traveller, to his brother the clergyman in Ireland, who lived with an amiable wife on an income of only £40 a-year. From Geneva Mr. Goldsmith and his pupil visited the south of France; where the young man, upon some disagreement with his preceptor, paid him tlie small part of his salary which was due, and embarked at Marseilles for England. Our wan- derer was left once more upon the world at large, and passed through various difficulties in travers- ing the greatest part of France. At length, his curiosity being satisfied, he bent his course towards England, and arrived at Dover the be- ginning of the winter of 1758. When he came to London, his cash did not amount to two livres. Being an entire stranger, his mind was filled with the most gloomy reflections. With difficulty he discovered that part of the town in which his old acquaintance Dr. Sleigh resided. This gen- tleman received him with the warmest affection, and liberally invited him to share his purse till some establishment could be procured for him. Goldsmith, unwilling to be a burden to his friend, eagerly embraced an offer which was made him soon after to assist the late Rev. Dr. Milner in an academy at Peckham ; and ac- quitted himself greatly to the doctor's satis- faction ; but having obtained some reputation, by the criticisms he had written in the Monthly Review, PJr. (Griffith, the proprietor, engaged him in the compilation of it ; and, resolving to pursue the profession of an author, he returned to London, as the mart where abilities of every kind meet distinction and reward. As his finances were not in a good state, he adopted a plan of the strictest economy ; and took lodgings in an obscure court in the Old Bailey, where he wrote several ingenious pieces. The late Mr. New- berry, who gave great encouragement to men of literary abilities, became a patron to him, and introduced him as one of the writers in the Public Ledger, in which his Citizen of the World originally appeared, under the title of Chinese Letters. His fortune now began to improve. The simplicity of his character, the integrity of his heart, and the merit of his productions, made his company very acceptable to a number of re- spectable faniilies ; and he emerged from his shabby apartments in the Old Bailey to the po- liter air of the Temple, where he took handsome chambers, and lived in a genteel style. The publication of his Traveller, and his Vicar of Wakefield, was followed by the performance of his comedy of the Good-natured Man at Covent- Garden theatre, and placed him in the first rank of the poets of the eighteenth century. Among many other persons of distinction who were de- sirous to know him, was the duke of Northum- berland : and a circumstance that attended his introduction to that nobleman shows a striking trait of his character. * I was invited,' said the Doctor., 'by my friend Mr. Percy, to wait upon the duke, in consequence of*

the satisfaction he had received from the perusal of some of my productions. I dressed myself in the best manner I could ; and, after studying some com- pliments I thoupcht necessary on such an occasion, proceeded to Northiimberland-house, and ac-

*quainted the servants that I had particular V.u- siness with his Grace. Tliey showed me into an antichamber ; where, after waiting sometˆsne, a gentleman, very genteely dressed, made his appearance. Taking him for the duke, I deli- vered all the fine things I had composed in order to compliment him on the honor he had done me ; when, to my great astonishment, he told me I had mistaken him for his master, who would see me immediately. At this instant the duke came into the apartment ; and I was so confused on the occasion, that I wanted words barely suf- ficient to express the sense I entertained of the duke's politeness, and went away extremely cha- grined at the blunder I had committed.' Another anecdote exhibits the strict integrity of his cha- racter. Previous to the publication of his De- serted Village, the bookseller had given him a note for 100 guineas for the copy, which the Doctor mentioned a few hours after to one of his friends : who observed, it was a very great sum for so short a performance : ' In truth,' re- plied Goldsmith, ' I think so tooˆ i have not been easy since I received it ; therefore I will go back and return him his note : ' which he absolutely did ; and left it entirely to the book- seller to pay him according to the profits pro- duced by the sale of the piece; which, however, turned out very considerable. During the last rehearsal of his comedy, entitled, She stoops to Conquer, which Mr. Coleman had no opinion would succeed, on the Doctor's objecting to the repetition of one of Tony Lumpkin's speeches, being apprehensive it might injure the play, the manager with great keenness replied, * Psha, my dear Dr. do not be fearful of squibs, when we have been sitting almost these two hours upon a barrel of gunpowder.' The piece, however, was received with uncommon applause by the audience; and the severity of Coleman's obser- vation put an end to he Doctor's friendship for him. Notwithstanding the great success of his pieces, by some of which he cleared £l800 in one year, his circumstances were not in a pros- perous situation ; partly owing to the liberality of his disposition, and partly to a habit of gaming, of the arts of which he knew very little, and thus became the prey of those who took advantage of his simplicity. Before his death he published the prospectus of a Universal Dic- tionary of Arts and Sciences ; and, as his literary friends. Sir Joshua Reynolds, Dr. Johnson, Mr. Heauclerc, Mr. Garrick, and others, had under- taken to*

furnish him with articles upon different subjects, he entertained the most sanguine ex- pectations from it. The undertaking, however, did not meet with that encouragement from the booksellers, which he had imagined it ˆould re- ceive ; and he lamented this circumstance almost to the last hour of his life. He had been for some years afflicted, at different times, with a violent strangury, which contributed to embitter the latter part of his life ; and which, united with the vexations which he suffered upon other occa- sions, brought on a kind of habitual despondency. Tn this unhappy condition he was attacked by a nervous fever, which terminated in his death, on the 4th of April, 1774. His character is justly expressed by Pope : —

In wit a man, simplicity a child. The learned leisure he loved to enjoy was often interrupted by distresses which arose from the liberality of his temper, and which sometimes threw him into loud fits of passion; but this impetuosity was corrected upon reflection ; and his servants have been known upon these occa- sions, purposely to throw themselves in his way, that they might profit by it immediately after ; for he who had t'ne good fortune to be reproved, was certain of being rewarded for it. The uni- versal esteem in which his poems were held, and the repeated pleasure they gave in the perusal, is a striking test of their merit. He was a stud lous and correct observer of nature ; happy in the selection of his images, in the choice of his subjects, and in the harmony of his rersification ; and, though his embarrassed situati.;ˆ prevented him from finally revising many of his productions, his Hermit, his Traveller, and his Deserted Village, claim a place among the most finished pieces in the English language. Besides the works above mentioned, he wrote, 1. History of the Earth and Animated Nature, 6 vols. 8vo. 2. History of England, 4 vols. 8vo. 3. History of Rome, 2 vols. 4. Abridgements of the two last for the use of schools. 5. A view of Experimental Philosophy, 3 vols. 8vo. A posthumous work. 6. Miscellanies, &c.

GOLETTA, or Gouletta, the port of Tunis, being a channel of communication between the lake and sea. It was formerly deep and exten- sive, but is reduced now to a depth nowhere ex- ceeding six feet. It is defended on each side by a well-built castle.

GOLF, a game much practised in Scotland, and said to be peculiar to this country. It has been very ancient ; for there are statutes prohib- iting it as early as 1457, lest it should interfere with the sport of archery. Some derive the name from a Dutch game, called Kolf, in some respects similar, being played with clubs, though in others very different. Golf is commonly played on rugged broken ground, covered with sliort grass, near the sea- shore. A field of this sort is in Scotland called links. The game is generally played in parties of one or two on each side. Each party has an exceedingly

hard ball, somewhat larger than a hen's egg. This they strike with a slender and elastic club, about four feet long, crooked in the head, and having lead run into it to make it heavy. The ball, being struck with this club, will fly to the distance of 200 yards, and the game is gained by the party who puts his ball into the hole with the fewest strokes. But the game does not depend solely upon the striking of the longest ball, but also upon mea- suring the strength of the stroke, and applying it in such directions as to lay the ball in smooth ground, whence it may be easily moved at the next stroke. To encourage this amusement, the city of Edinburgh, A. D. 1744, gave to the com- pany of golfers a silver club, to be played fo: annually i)y the members, the victor to append a gold or silver piece to the prize. Eor their better accommodation, twenty-two of the members sub- scribed .£30 each in 1768 for building a house for their meetings. The spot chosen for this purpose was the south west corner of Leith Imks,

where an area was feued from the magistrates of Edinburgh, and a commodious house and tavern built upon it.

GOLIUS (James), a celebrated professor of Arabic and the mathematics at Leyden, descend- ed from a very honorable family, and born at the Hague in 1596. He studied at Leyden, under Erpenius ; and, having acquired the learned lan- guages, travelled into Asia and Africa. He was esteemed and honored by Muley Zidan, empe- ror of Morocco and the grand signior. He brought home many MSS. to Leyden ; and in 1624 succeeded Erpenius. As he had been an eye-witness of the wretched state of Christianity in the Mahommedan countries, he endeavoured to procure a new edition of the New Testament, in the original language, with a translation into the vulgar Greek, by an Archimandrite; and, as some of these Christians use the Arabic tongue in divine service, he also dispersed among them an Arabic translation of the Confession of the Protestants, with the Catechism and Liturgy. He was likewise appointed interpreter to the states for the Arabic, Turkish, Persian, and other eastern languages. He published, 1. The life of Tamerlane, in Arabic. 2. The history of the Saracens, written by Elmacin. 3. Alferganus's elements of Astronomy, with a new version, and learned commentaries. 4. An excellent Arabic lexicon. 5. A Persian Dictionary. He died in

1667.

GOLL, n. s. Corrupted, as Skinner thinks, from Sax. Jial or |jo1, whence peal'oan, to handle or manage. Hands ; paws ; claws. Used in contempt, and obsolete.

They set haads, and Mopsa put her golden golls among them ; and blind fortune, that saw not the colour of them, gave her the pre-eminence. Sidney,

GOLLEN, or Gella, a strait of the Baltic, between Stralsund and Rugen. On the north it is gradually filling up with sand, but is extend- ing eastward.

GOLNITZ, a town in the palatinate of Zyps, Upper Hungary, where iron abounds. It is fourteen miles south-east of Kapsdorf. Popula- tion 5000.

GOLTZIUS (Henry), a famous engraver and painter, born in 1558, at Mulbreck, in the duchy ofJuliers. He was taught engraving by Theo- dore Van Cuerenhert. He travelled through Germany into Ttaly ; visited Bologna, Florence, Naples, V^enice, and Rome. In this journey he adopted a singular disguise, making his servant pass for his master, while he himself appeared as a servant, kept by the other merely for his skill in painting. Under this disguise he enjoyed life in all its variety. On his return he settled at Haerlem, where he died in 1617, aged fifty-nine. No man ever surpassed, and few have equalled, him in the command of the graver and freedom of execution. He copied the style of Albert Durer, Lucas of Leyden, and other old masters, with aston- ishing exactness. He engraved several of his own designs on wood, in chiaro-scuro. Of his prints, which are very numerous, the follow- ing are the most celebrated : 1. Six large upright plates, styled his master-pieces. These he engraved, to show that he was perfectly capable of imitat- ing the styles of Durer, Lucas, and others,

whose works were then held in higher estimation than his own : for he had adopted a new manner, which he pursued because he thought it su- perior. It is said that, with one of them, the Circumcision, which he smoked to give it the more plausible air of antiquity, he actually deceived some of the first connoisseurs of that age ; by one of whom it was bought for an ori- ginal engraving of Albert Durer. The subjects of these plates are. The Annunciation of the Vir- gin ; Her meeting with Elizabeth ; the Nativity ; the Circumcision; the Adoration of the Wise Men; the Holy Family. 2. The Judgment of Midas ; and, 3, The Venetian Ball (both large plates lengthwise), from Theodore Bernard. 4. The Boy and Dog, a middling sized upright plate, from a design of his own ; an admirable print. 5. The Necromancer, a middling sized upright oval print, in chiaro-scuro. 6. Night in her Chariot, the same.

GoLTZius (Hubert), a learned German, born in Venlo, in Gueldres, in

1526. He travelled through Germany, France, and Italy, to make collections of medals, &c. He was the author of several excellent works, in which he was so accu- rate, that he had them printed at his own house, under his own correction, and even engraved the plates with his own hand. Among these his Imperatorum fere omnium vivse imagines, a J. Caesare ad Carolum V. ex veteribus numismati- bus, is an admirable work. He died at Bruges, in 1583, aged fifty-seven.

GOMBROON, or Bunder Abbas, a cele- brated sea-port of Laristan, in Persia, on a bay of the gulf of Ormus. Its trade was formerly extensive, being the principal port of all the south of Persia. The customs now do not amount to more than 20,000 rupees annually. It is fortified with double walls, and is subject to the imaum of Mascat.

GOMER, in Scripture history, the son of Ja- pheth (Gen. x. 2), and, according to Josephus, father to the people of Galatia. The ancient in- habitants of that country were called Gomares before the Galatians seized possession of it. The Chaldee places Gomer in Africa; Bochart in Phrygia, because Phrygia, in Greek, has the same signification (a coal) as Gomer in Hebrew and Syriac. Others are of opinion that the an- cient Cimbri, or Cimmerians, sprung from Go- mer, and probably from them the Welsh, called Cymri. It is not improbable that Gomer, or the Gomerites, his descendants, peopled likewise Germany and Gaul ; the name German not dif- fering much from Gomerian. Cluvier conjec- turing that the ancient Celtica comprehended Illyria, Germany, Gaul, Spain, and the British Isles, as all these people anciently spoke the same language, farther supposes that Gomer, or his family, peopled the countries in Asia, between the Paropamisusand mount Imaus, and between the confluence of the Oxus and Oby ; whence these people are called Gomares by Ptolemy and Mela.

Gomer, a county of Hungary, between those of Liptau and Borsod, and extending along the rivers Rima and Sajo. The county of Kis-Hont was annexed to it in 1802 ; the two together con- taining anareaof 1610 square miles, and 144,000 inhabitants. Its most remarkable mountains ar>*

the Ochsenberg and Szinetz, connected with the Carpathians. Here are found the best iron, and at Theissholtz the only natural niagnets in Hun- gary. The bread is also celebrated. At Agtelek there is also a curious cavern. The town has about 2000 inhabitants, and is ninety-two miles N.

N. E. of Budah.

GOMERA, one of the most fertile of the Ca- nary Isles, consists properly of a lofty mountain, the upper part of which is in winter covered with snow. It is about twenty miles long, and ten wide, but cultivation is confined to the coast; the centre being a great forest. The capital, of this name, is situated on the east coast, and has a good harbour. Population about 7000. Eighteen miles south-west of Teneriffe. Long. 17° 8′ VV., lat. 28° 6′ N.

GOMPHO'SIS, n. s. Gr. yo/iˆoc, a nail. A particular form of articulation.

Gomphosis is the connexion of a tooth to its socket.

Wiseman.

GOMPHRENA, globe amaranth, eternal or everlasting flower, in botany, a genus of the digynia order, and pentandria class of plants ; natural order fifty-fourth, miscellaneae. cal. colored ; the exterior one triphyllous, or diphyl- lous, with two carinated connivent leaflets ; the nectarium cylindrical, with ten teeth: caps, mo- nospermous. There are ten species ; only one of which is commonly cultivated in our gardens, viz. the

G. globosa. It has an upright stalk branching all around, two or three feet high, garnished with oval, lanceolate, opposite leaves ; and every branch and side-shoot terminated by a close glo- bular head of flowers, composed of numerous, very small starry florets, closely covered with drj' scaly calices placed imbricatim, persistent and beautifully colored purple, white, red, or striped and variegated. The flowers themselves are so small and closely covered with scaly calices, that they scarcely appear. The numerous closely pliced scaly coverings, being of a dry firm con- sistence, colored and glittering, collected into a compact round head, about the size of an ordi- nary cherry, make a fine appearance. They are annual plants, natives of India; and require ar- tificial heat to raise and forward them to a pro- per growth, so that they may flower in perfec- tion, and produce ripe seed. Tliey flower from June to November; and if the flowers are gather- ed when at full growth, and placed out of the sun they will retain their beauty several months.

GOMUT, a navigable river of Bengal, which traverses the district of Tippera from east to west, and falls into the Megna, some miles to the north of Chandpoor. It is navigable at all sea- sons.

GONAVE, an island and town in the bay of Leogane, on the western side of St. Domingo. It is forty miles long, and about nine broad. Pe- tite Gonave is a smaller isle, about two miles f ach way, separated from the south-east corner of this by a channel three miles wide. Forty miles west by north-west

of Port au Prince.

GON DA R, the capital of Abyssinia, seated on the top of a hill of considerable height, and surrounded by a valley of that name. It con- tains about 10,000 families in times of peace. Vox. X.

At the west end of the town is the king's palace , formerly a structure of considerable consequence. See Abyssinia. The hill on which the town is built rises in the middle of the valley, through which run two rivers : one, the Kakha, coming from the mountain of the Sun, flanks all the south of the town ; while the other called the Angrab, falling from the mountain Waggora, encompasses it on the north and north-east : both unite at the bottcm of the hill about a quarter of a mile south of the town. Upon the bank opposite to Gondar, on the other side of the river, is a town of the Mahommedans. These places with the pro- vince around are now in the hands of the Galla.

GONDI (John Francis Paul), cardinal de Retz, was the son of Philip Emanuel de Gondi, count de Joigny, lieutenant-general, &c., and was born in 1G13. From a doctor of the Sorbonne, he first became coadjutor to his uncle John Francis de Gondi, whom he succeeded in 1654 as archbishop of Paris; and was finally made a cardinal. He has drawn his own character in his memoirs with impartiality. From the greatest degree of debauchery, and still languishing under its consequences, he made himself admired as a popular preacher. At the age of twenty- three he was at the head of a conspiracy against the life of cardinal Richelieu ; he precipitated the parliament into cabals, and the people into sedition : and was, says M. 'oltaire, the first bishop who carried on a civil war without the mask of religion. However, he was at last obliged to quit France ; and he lived the life of a vagrant exile for five or six years, till the death of his great enemy cardinal Mazarin, when he returned. After assisting in the conclave at Rome, which chose Clement IX., he retired from the world. A'oltaire says, that in his youth he lived like Catiline, and in his old age like Atticus. He died in 1679. He wrote his me- moirs in his retirement; the best edition of which is that of Amsterdam, 4 vols. 12mo.,

1710.

GO'NDOLA, Ji. s.) Ft. gondole. A boat Go'ndolieI^. i much used in Venice ; a

small boat : the gondolier is the boatman.

He saw did swim Along the shore, as swift as glance of eye, A \\x\e gondelay , bedecked trim With boughs and harbours woven cunningly.

Spenser. In a gondola were seen together Lorenzo and his amorous Jessica. Shakspeare. Merchant of Venice. Your fair daughter. Transported with no worse nor better guard. But with a knave of hire, a gondolier. To the gross clasps of a lascivious Moor.

S/iahpeare. As with gondolas and men, his Good excellence the duke of Venice Sails out, and gives the gulph a ring. Prior.

Nor shall the muse through narrow Venice stray. Where gondolas their painted oars display. Oay.

'Tis sweet to hear At midnight on the blue and moonlight deep.

The song of oar of Adria's gondolier, By distance mellowed, o'er the waters sweep.

GO’ˆE, part, preter. From go. See To Go.

Advanced ; forward in progress.

I have known sfieep cured of the rot, when they have not been far gone with it, only by being put into broomlands. Mortimer.

The Observator is much the brisker of the two ,ˆ and, I think, farther gone of late in lyes and impudence than his Presbyterian brother. Swift.

Ruined; undone.

He must know ‘tis none of your daughter nor my sister ; we are gone else.

Shakspeare. Winter’s Tale. I’ll tell the story of my life. And the particular accidents gone by. Since I came to this isle. Id. Tempest.

Lost ; departed.

When her masters saw that the hope of their gains were gone, they caught Paul and Silas.

Acts xvi. 19. Speech is confined to the living, and imparted to only those that are in presence, and is transient and gone. Holder.

Dead ; departed from life.

I mourn Adonis dead and gone. Oldham.

A dog, that has his nose held in the vapour loses all signs of life ; but carried into the air, or thrown into a lake, recovers, if not quite gone.

Addison on Italy.

GO’NFALON, n.s. } Ital. gonfalon ; French

Go’kfanon. S gonfanon; Islandic,

gunfana from gunn, a battle, and fani, a flag (Lye). An ensign ; a standard.

Ten thousand thousand ensigns high advanced. Standards and gonfalons, 'twixt van and rear. Stream in the air. Milton,

GONONG Api, one of the Banda islands at the north-east end of the harbour of Beema,in the island of Sumbawa, and forming the west side of the entrance of Sapy Straits. It is a volcanic mountain, about 1500 feet in height, terminating in two high peaks ; the soil being astonishingly fertile. It is only separated from Neira by a narrow strait, and has the appearance of an im- mense heap of cinders.

GoNONG Tello, or Tominie Bay, a large bay of the island of Celebes, nearly 180 miles long from east to west, and from fifty to ninety broad. It deeply indents the north-east coast, and abounds in small rocky islands and shoals, particularly towards the south coast. Longitude of the entrance 124° E., lat. 0° 12′ S.

■ *GoNONG Tello, or Goonong Tello, a town of Celebes, situated on a river of the same name, on the south side of the above bay. The Dutch had fojinerly a settlement here, which in 1797 was taken by the English. The inhabitants are Malays, who carry on a considerable trade in the exportation of gold, tortoise-shell, &c. Long. 123° E., lat. 0″ 28′ N.*

GONORRIKE'A, n. s. Gr. yovoc and psio. A morbid running of venereal hurts.

Rauty mummy or stone mummy grows on the tops of high rocks ; they powder and boil it in milk, and then give it to stop gonorrhoeas. Woodward.

GoNORRHCEA, from yovt}, the semen, and pto, to flow ; from a supposition of the ancients, that it was a seminal flux. A genus of disease in the class locales, and order apocenoses of Dr. Cullen's arrangement, who defines it a preter-*

natural flux of fluid from the urethra in males, with or without libidinous desires. Females, however, are subject to the same complaint in some forms. He makes four species, viz.: —

1. Gonorrhoea pura, or benigna; a puriform discharge from tlie urethra, without dysuria, or lascivious inclination, and not following an im- pure connexion.

2. Gonorrhoea impura, maligna, syphilitica, virulenta ; a discharge

resembling pus, from the urethra, with heat of urine, &c., after impure coition, to which often succeeds a discharge of mucus from the urethra, with little or no dysury, called a gleet. Tliis disease is also called fluor albus malignus. Blennorrhagia by Swediaur. In English, a clap, from the old French word clapises, which were public shops, kept and inhabited by single prostitutes, and generally confined to a particular quarter of the town, as is even now the case in several of the great towns in Italy. In Germany the disorder is named tripper, from dripping ; and in French, chaudpisse, from the heat and scalding in making water.

GoNSALVo, Hernandez y Aquilar, de Cordova, called the great captain (el gran capitan), was born at iVIontilla, near Cordova, in 1443, and, when fifteen years of age, served under his father, don Diego, against the Moors of Granada. As a reward of his bravery, Henry IV., king of Castile, intrusted him with the command of a company, with which he spread terror to the very gates of Malaga, and, in 1460, decided the victory of Las Yeguas. The king himself knighted iiim on the field of battle. From 1458 to 1467, he served with distinction against tlie Moors, at the capture of Gibraltar and in the Catalonian war. After the death of Henry, Ferdinand and Isabella having ascended the throne, and the king of Portugal having declared war against them, Gonsalvo contributed not a little to the victory of Toio, in 1476. In the bloody war of Granada he took many places by storm, |and vanquished the boldest floors who dared to meet him in single combat. Granada finally submitted, and, on the entry of the conquerors he was appointed to carry the flag of Castile. Ferdinand then sent liim with 5,600 men to assist his relative, Frederic, king of Naples, against the French. Having secured that tlirone, he re- turned to Spain, where he was engaged in sub- jecting the Moors, in the Alpuxarras, when Louis XII. of France renewed the war against Naples. In 1500, Gonsalvo again set sail with a corps of 4,300 men, ostensibly to assist the Venetians against the Turks. He delivered Zante and Cephalonia from the infidels, and restored them to Venice. He then landed in Sicily, and in- formed the king of Naples that he was come to secure that part of the kingdom which, by virtue of the treaty with Louis XI-L, had fallen to Spain. Frederick, finding himself so closely pressed by two enemies, finally retired with his treasures into an island. The French, under the duke of Nemours, entered Naples, while Gon- salvo secured Calabria, and, according to the articles of the treaty, demanded also Basilicata and Capitanata. To this the French, who con- sidered them as belonging to their part (Abruzzo),

would not consent. The result was a war be- tween France and Spain, which was carried on with a variety of fortune, until Gonsalvo, by the victory near Seminara, in 1502, obtained posses- sion of both Calabrias. In 1503 be gained a still more important victory near Cengnola, in consequence of which Abruzzo and Apulia sub- mitted, and Gonsalvo marched into Naples. He t'hen sat down before Gaeta. As the siege was protracted, he gave up the command to don Pedro Navarro, and advanced to meet the enemy. He defeated the marquis of Mantua ; and, on the Garigliano, with 8,000 men, obtained a complete victory over 30,000 French, the con- sequence of which was the fall of Gaeta. The possession of Naples was now secured. Ferdi- nand bestowed upon him the duchy of Sesa, and appointed him viceroy of Naples, with unlimited powers. His kindness, justice, and magnanimity soon procured him the favor of the people. His prosperity, however, raised up powerful enemies against him, whose insinuations so far prevailed with Ferdinand, that he at first diminished his power, and finally recalled him from his post. Ferdinand even went to Naples himself, and took Gonsalvo with him back to Spain, and made him grand master of the order of St. James. Gonsalvo, dissatisfied with having lost his influ- ence, conspired with the high constable of Castile against the king, whose prudent measures, ho%vever, quelled the insurrection in its very commencement. Gonsalvo retired to his estates in Granada. His differences with the king, who showed the greatest forbearance towards his old hero, continued for a long time. They were at last reconciled, and Gonsalvo was upon the point of again assuming the command of an array, when he died at Granada in 1515.

GONTAULT (Armand de), lord of Biroii, marshal of France, a celebrated general in the sixteenth century, who signalized himself by his valor and conduct in several sieges and battles. He was made grand master of the artillery in 1569. He was liie first who declared for Henry IV. He brought a part of Normandy under his subjection, and dissuaded him from retiring to England or Rochelle. He was killed by a cannon-ball at the siege of Epernay, on the 26lh of July, 1592. He used to carry a pocket- book, in which he wrote down every thing remarkable, which gave rise to a proverb at court, when a person happened to say any thing remarkable, ' You have found that in Biron's pocket-book.'

GOOCHLAND, a county in Virginia, sur- rounded by Louisa, Fluvanna, Henrico, Hanover, and Powhatan counties. It is forty miles long, and fourteen btoad.

Gi)0D,adj.,n.s.,adv.&Li7Uerj.^ Sax. ^o^s,

Good-conui'tioned. Good'- NOW, inteij. Good'liness, n. s. Good'-ly, adj. & adv.

GoOD'lYIIOOU, 71. s.

Good'man, n. X. Goodness, n. s. Goods, Good'y, n. s. Good'y-ship, 1. s.

Goth. Swed (and Belgic, (f/od ; Teut.

ffot. The ad- y jective of

god, deity : supposed

also by some

to be derined J from latin

(/audeo ; Gr. yrjGnv ; Heh.chada. The adjective good, which is the radix whence all the others are derived, stands opposite to evil of every kind, whether physical or moral ; it is indiscriminately applied, with or without other words, as expres- sive of whatever, in person, condition, or pros- pect, appears to be fit, beneficial, pure, whole- some, entire, true, desirable, or gratifying : the modifications are consequently very numerous, but all include the primary meaning ; this is ap- plicable to the dispositions of moral agents or the qualities of inanimate objects. Goody and goedmau are familiar appellations of civility, generally ironical.

Having, either generally, or for any particular end, such physical qualities as are expected or desired. Not bad ; not ill.

God saw every ihing that he Lad made, and behold it was very good. Gen. i. 31.

Pro.per ; fit ; convenient ; right ; not wrong. Amongst a man's peers a man shall be sure of familiarity, and therefore it is good a little to keep state : amongst a man's inferiors one shall be sure of reverence, and therefore it is good a little to be familiar. Bacon.

Conducive to happiness.

It is not good that the man should be alone. Gen. ii. 18. Uncorrupted; undamaged.

He also bartered away plums, that would have rotted in a week, for nuts that would last good for his eating a whole year. Locke,

Wholesome ; salubrious.

A man first builds a country seat. Then finds the walls not good to eat. Prior.

Medicinal; salutary.

The water of Nilus is sweeter than other waters in taste, and it is excellent g(X)d for the stone and hypo- chondriack melancholy. Bucon's Natural History.

Pleasant to the taste.

Eat thou honey, because it is good ; and the honey- comb, which is sweet, Prov. xxiv. 13. Complete ; full.

The Protestant subjects of the abbey make up a good third of its people, Addiionon Italy.

Useful ; valuable.

All quality, that is good for any thing, is originally founded upon merit. Collier on Envy.

Sound ; not false ; not fallacious. He is resolved not to shew how slight the propo- sitions were which Luther let go for oˆood. Atterbnry. Legal; valid ; rightly claimed or held. According to military custom the place was good, and the lieutenant of the colonel's company might well pretend to the next vacant captainship in the same regiment. Motion.

Skilful ; ready ; dextrous.

I make my way where-e'er I see my foe ; But you, my lord, are good at a retreat. Dryden. Happy ; prosperous.

Behold how gixid and how pleasant it is for brethren to dwell together in unity. Psalm cxxxiii. 1.

Honorable.

They cast to get themselves a name, Regardless whether go.xl or evil fame. 3[ilton.

Cheerful ; gay. Joined with any words ex- pressing temper of mind.

They may be of gotnl comfort, and ever go cheer- fully about their own affairs. 2 Alac. \i. 26. Considerable ; not small, though not very great. A good while ago God made choice that the Gen- tiles by my mouth should hear the word. Acts xv. 7.

GOO

Elegant ; decent ; delicate : with breeding.

If the critick has published nothing but rules and observations in criticism, I then consider whether there be a propriety and elegance in his thoughts and words, clearness and delicacy in his remarks, wit and good-breeding in his raillery. Addison's Guardian.

Mankind have been forced to invent a kind of arti- ficial humanity, which is what we express by the word good-breeding. Addison.

Those among them, who return into their several countries, are sure to be followed and imitated as the greatest patterns of wit and good-breeding. Swift.

A moderate knowledge in the little rules of good- breeding, gives a man some assurance, and makes him easy in all companies. Budgell.

Real; serious; not feigned.

Love not in good earnest, nor no farther ia sport neither, than with safety of a pure blush thou mayest in honour come off again. Shakspeare.

Rich ; of credit ; able to fulfil engagements.

Antonio is a good man : my meaning, in saying that he is a good man, is to have you understand me that he is sufficient. Shakspeare.

Having moral qualities, such as are wished ; virtuous; pious; religious; applied both to persons and actions. Not bad ; not evil.

The woman hath wrought a good work upon me.

Matthew. All man's works are on me.

Good or not good, ingraft my merit, those

Shall perfect, and for these my death shall pay.

Milt07t.

What reward Awaits the good, the rest what punishment. Id, The only son of light la a dark age, against example good. Against allurement. Id,

Such follow him, as shall be registered Part good, part bad, of bad the larger scroll. Id,

Grant the bad what happiness they would. One they must want, which is to pass for good.

Pope. Why drew Marseilles' good bishop purer breath. When Nature sickened, and each gale was death?

Id. Such was Roscommon, not more learned than ˆoorf. With manners generous as his noble blood. Id.

No farther intercourse with heaven had he. But left good works to men of low degree. Harte. Kind ; soft ; benevolent.

Glory to God in the highest, and on earth peace and good will towards men. Luke ii. 14.

For a good man some would even dare to die.

Rom. V. 7. Without good nature man is but a better kind of vermin. Bacon.

Here we are loved and there we love. Good nature now and passion strive

Which of the two should be above. And laws unto the other give. Suckling.

'Tis no wonder if that which affords so little glory to God, hath no more good will for men.

Decay of Piety. When you shall see him, sir, to die for pity, 'Twere such a thing, 'twould so deceive the world, 'T would make the people think you were good natured.

Denham, Matters being so turned in her, that where at first liking Ler manners did breed good will, now goodwill became the chief cause of liking her manners.

Sidney. Good sense and good nature are never separated, though the ignorant world has thought otherwise.

Dryden.

Affability, mildness, tenderness, and a word which I wouid fain bring back to its original signification of virtue, I mean good nature, are of daily use. Id.

To teach h«m betimes to love and be good natured to others, is to lay early

the true foundation of an honest man. Locke.

This doctrine of God's good will towards men, this command of men's proportionable good will to one another, is not this the very body and substance, this the very spirit and life of our Savioar's whole insti- tution .' Sprat.

How could you chide the young good natured prince. And drive him from you with so stern an air.

Addison.

It was his greatest pleasure to spread his healing wings over every place, and to make every one sensi- ble of his good will to mankind. Calamy.

'Tis no wonder if that which affords so little glory to God, hath no more good will for men.

Decay of Piety.

Favorable ; loving.

But the men were very good unto us, and we were not hurt. 1 Samuel xxv. 15.

Truly God is good to Israel, even to such as are of a clean heart. Psalms Ixxiii. 1.

You have good remembrance of us always, desiring greatly to see us, as we also to see you.

1 Thessalonians iii. 6.

This idea must necessarily be adequate, being referred to nothing else but itself, nor made by any other original but the good liking and will of him that first made this combination. Locke.

Companionable ; sociable ; merry. Often used ironically.

Though he did not draw the good fellows to him by drinking, yet he eat well. Clarendon.

Not being permitted to eat without drinking, will prevent the custom of having the cup often at his nose ; a dangerous beginning and preparation to good fellowship, Locke.

It was well known, that Sir Roger had been a good fellow, in his youth.

Arbuthnot.

It is sometimes used as an epithet of slight contempt, implying a kind of negative virtue, or bare freedom from ill.

My good man, as far from jealouEy as I am from giving him cause.

Shakspeare. Merry Wives of Windsor.

She had left the good man at home, and brought away her gallant. Addison's Spectator.

In a ludicrous sense.

As for all other good women that love to do but little work, how handsome it is to louse themselves in the sunshine, they that have been but a while in Ire- land can well witness. Spenser.

Hearty ; earnest ; not dubious.

He, that saw the time fit for the delivery he in- tended, called unto us to follow him, which we both, bound by oath, and willing hy good will, obeyed.

Sidney.

The good will of the nation to the present- war has been since but too much experienced by the successes that have attended it. Temple.

Good will, she said, my want of strength supplies^; And diligence shall give what age denies. Dryden.

In good time. Not too fast.

In good time, replies another, you have heard them dispute against a vacuum in the schools. Collier,

In good sooth. Really ; seriously.

What, must I hold a candle to my shames? ^They in themselves, good sooth, are too too light.

Shakspeare,

GOO

Good (to vuike). To keep ; to maintain ; not to gire up ; not to abandon.

There died upon the place all the chieftains, all making good the fight without any ground given.

Bacon's Henry Vlf. He forced them to retire in spite of their. dragoons, which were placed there to make good their retreat.

Clarendon. He without fear a dangerous war pursues ; As honour made him first the danger chuse. So still he makes it good on virtue's score.

Dryden, Since we claim a proper interest above others in the pre-eminent rights of the household of faith, then, to vwke good that claim, we are obliged above others to conform to the proper manners and virtues that belong to this household. Sprat.

Good (to make). To confirm ; to establish. I farther will maintain Upon his bad life to make all this good.

Shakspcare.

To make good this explication of the article, it will

be necessary to prove that the church, which our

Saviour founded, and the apostles gathered, was to

receive a constant and perpetual accession. Pearson.

These propositions I shall endeavour to make good.

Smalridge. Good (to make). To perform.

While she so far extends her grace. She makes but good the promise of her face.

Waller. Good (to make). To supply. Every distinct being has somewhat peculiar to itself, to make good in one circumstance what it wants in another. L' Estrange.

Good, t.s. Tliat which physically contributes to happiness ; benefit ; advantage ; the contrary to evil or misery.

I fear the emperor mean* no good to us.

Shakspeare. Let me play the lion too : I will roar, that I will do any roan's heart good to hear me. Id.

He waved indifferently 'twixt them, doing neither good nor harm. Id. Coriolanus.

Nature in man's heart her laws doth pen, Prescribing truth to wit, and good to will.

Da'-ie.t. The lessening or escaping of evil is to be reckoned under the notion of good : the lessening or loss of good is to be reckoned under the notion of evil.

Wilkins. Love with fear the only God, Merciful over all his works, with good Still overcoming evil. Milton.

God is also in sleep, and dreams advise, Which he hath sent propitious, some gTe&t good Presaging. Id.

He when the wheel of empire whirleth back, And though the world's disjointed axle crack, Sings still of ancient rights and better times, Seeks wretched good, arraigns successful times.

Marvell. This caution will have also this good in it, that it will put them upon conoiderine, and teach them the necessity of examining more than they do. Locke. » Good is what is apt to cause or increase ploastire, or diminish pain in us ; or else to procure or preserve us in the possession of any other good, in absence of any evil. Id.

Refuse to leave thy destined charge too soon. And for the church's good defer thy own. Prior. A thirst after truth, and a desire of good, are principles, which still act with a great and universal force. Hntiirs.

Works may have more wit than dofs them good. As bodies perish through excess of blood. Pope.

Prosperity ; advancement.

If he had emploj-ed

Those excellent gifts of fortune and of nature

Unto the good, not ruin of the state. Ben Jonson. Earnest ; not jest.

The good woman never died after this, 'till she

came to die for good and all. L' Estrange.

Moral qualities, such as are desirable; virtue; righteousness ; piety ; the contrary to wicked- ness.

Depart from evil, and do good.

Psalms xxxiv. 14.

If a man be good, or doth or sayth a thing to goode entente, the backbiter wol turne all that goodnesse up so down to his shrewde entente.

Chaucer. The Personcs Tale.

Not only carnal good from evil does not justify ; but no good, no not a purposed good, can make evil good. Holy day.

O sons, like one of us is Man become. To know both good and evil, since his taste Of that defended fruit ; but let him boast His knowledge oi good lost, and evil got ; Happier had it sufficed him to have known Good by itself, and evil not at all. Milton.

Empty of all good, wherein consists

Woman's domestick honour, and chief praise.

Id.

By good, I question not but good, morally so called bonum honestum, ought, chiefly at least, to be under- stood ; and that the good of profit or pleasure, the bo- num utile, or Jucundum. hardly come into any account here. South.

GOOD (John Mason), a physician, poet, and philological writer, was the son of a dissenting minister, and was born at Epping, in Esse.x, in 1764. He was apprenticed to a surgeon ;t Gos- port, and engaged in practice at Coggeshall, in his native caunty. In 1793, he removed to London, where he carried on busmess for several years as a surgeon and apothecary. In 1810, and the two following years, he delivered phvsio- logical lectures at the Surrey institution, which were afterwards published. llavinsj obtained a diploma from the university of Aberdeen, he commenced physician in 1820, and continued to practice in tliat capacity till his death, January 2, 1827. His principal works are, Memoirs of the Life atid Writings of Dr. Alexander Geddes (1803, JSvo.) ; Translations of Solomon's Song and the Book of Job ; a Trans- lation of Lucretius, on the Nature of Tliins;s. (1805, 2 vols. 4to.); Medical Technology, ˆ1810,8vo,) ; a physiological System of Nosology, (1817, 8vo.); and tiie Study of Medicine, (1822, 4 vols. 8vo.).

GOODALL (Walter), a learned Scottish an- tiquary and philologist, born in 1689. He was many years keeper of the Advocates' Library, wliich gave him an opportunity of examining the oriirinal paper*, and authentic documents, pre- served among the records of that learned facultv, which he did not fail to improve. Being a zea- lotts friend to the exiled royal house of Siuait, he was anxious to rescue the character of Mary, queen of Scots, from the calumnies that had been thrown upon it for nearly two centuries; aii'l accordingly, after much deep investigation.

published a vindication of that princess, which very much attracted the public attention, and exhibits equal proofs of his learning and indus- try in literary researches. He wrote several other pieces, and died at Edinburgh in 1751, in the seventy-second year of his age.

Good Behaviour, in law, a proper carriage and behaviour to the king and the people. A justice of the peace may, at the request of ' another, or where be himself sees cause, demand surety for the good behaviour ; and to that end the jus' ice may issue out his warrant against any persons whatsoever, under the degree of nobility ; but, when it is a nobleman, complaint is to be made in the court of chancery, or king's bench, where such nobleman may be bound to keep the peace. Infants and femes coverts, who ought to find surety by their friends, may be bound over to their good behaviour ; also lunatics, who have sometimes lucid intervals, and all others who break the peace, or are suspected to do ir, by affrays, assaults, battery, wounding, fighting, quarrelling, threatening, &.c. Persons may be likewise bound to good behaviour for a scanda- lous way of living, keeping bawdy-houses, gaming-houses, 5cc. ; and so may common drunkards, whores, cheats, libellers, &c. He who demands surety for the peace, on any vio- lence offered, must 'take an oath before the jus- tice, that he goes in fear of his life, or some bodily harm, &c., and that it is not out of malice, but from a regard to his own safety ._

GooD-coxDiTioNF.n, aclj. Without ill quaiitiea or symptoms. Used both of things and persons, but not elegantly.

No surgeon dilates an abscess of any kind by in- jections, when the pus is ijood-conditioned. Sharp.

Goo'dliness, 7t.s. From goodly. Beauty; grace ; elegance.

The stateliness of houses, the goodliness of trees, when we behold them, delighteth the eye. Hooker.

She sung this song with a voice no less beautiful to his ears, than her goodliness was full of harmony to his eyes. ‘ Sidney.

Coo’vLY, adj. From good. Beautiful ; grace- ful ; fine; splendid. Now little in use.

Rebecca took goodly raiment of her eldest son Esau, and put them upon Jacob. Genesis xxvii. 15.

There was not among the children of Israel a good- lier person than he. 1 Sam. ix. 2. That casilc was most goodly edifyde And plaste for pleasure nigh that forrest syde.

Spenser. Faerie Qtieene, He had not made them any rerompence for their aoodly houses and olive gardens, destroyed in the for- mer wars. Knolles. A goodly city is this Antium. Shakspeare.Coriolanus. Patience and sorrow strove Which should express her goodliest : you have seen Sunshine and rain at once. Her smiles and tears Were like a wetter May. Id. King Lear.

Here from gracious England have I offer Of .gootfZ?/ thousands. Id. Macbeth.

Both younger then they were ; of stature more ; And all their formes, much goodlier than before.

Ckapman. The goodliest man of men since born His sons, the fiirest of her daughters Eve. Milton. A prince of a goodly aspect, and the more goodly by a grave majesty, wherewith his mind did deck his outward graces. Sidney.

Of the fourth Edward was his noble song ; Fierce, goodly, valiant, beautiful and young.

Waller. Not long since walking in the field. My nurse and I we there beheld A goodly fruit, which, tempting me, I wduld have plucked. Id.

How full of ornament is all I view In all its parts 1 and seems as beautiful as new : O goodly ordered work I 0 power divine ! Of thee I am, and what I am is thine ! Dryden,

His eldest born, a goodly youth to view. Excelled the rest in shape and outward shew ; Fair, tall, his limbs, with due proportion joined. But of a heavy, dull, degenerate mind Id.

Bulky ; swelling ; affectedly turgid. Round as a globe, and liquored every chink. Goodly and great he sails behind his link. Dryden. Happy ; desirable ; gay.

England was a peaceable kingdom, and but lately inured to the mild and goodly government of the Confessor, Spenser.

We have many goodly days to see. Shakspeare,

What fruits of fragrance blush on every tree. What goodly prospects o'er the hills expand.

Byron. Goo'dly, adv. Excellently. Obsolete. There Alma, like a virgin queen most bright. Doth flourish in all beauty excellent ;

And to her guests doth bounteous banquet dight. Attempered goodly well for health and for delight.

Spenser. Goo DLYHOOD, 71. s. From goodly. Grace J goodness. Obsolete.

I praie Love of his godlihede To Bialacoil doe gentilnesse For whom I live in soche distresse.

Chaucer. Romaunt of the Rose, But mote thy goodlihoud forgive it me. To meet which of the gods I shall thee name.

Spe7uer. Goo'dman, n. .?. From good and man. A slight appellation of civility ; generally ironical

How now, what's the matter? part

— ˆith you, goodnuin boy, if you plesise. Come, I'll flesh ye. Shakspeare. King Lear.

A rustic term of compliment; gaffer. Nay, hear you, goodman delvcr.

Shakspeare. Hamlet. But see the sun-beams bright to labour warn. And gild the thatch of goodman Hodge's barn. Gay. Old goodman Dobson of the green. Remembers he the trees has seen. Swift.

Goo'dxess, n. s. From good. Desirable qua- lities either moral or physical; kindness; favor. Than cometh magnificence, tliat is to say. When a man doth and performeth gret werkes Oi goodnesse, that he hath begonne, and that Is the end why that men shuld do good werkes : For in the accomplishing of good werkes Lieth the gret guerdon.

Chaucer. The Persones Tale. There is in all things an appetite or desire,

whereby they incline to something which they may be ; all which perfections arc contained under the general name of goodness. Hooker.

There is a general, or natural goodness in creatures, and a more special or moral goodness. Perkins,

All goodness Is poison to thy stomach, — Yes, that goodness

Of gleaning all the land's wealth into one. Into vour own hands, cardinal, by extortion :

GOO

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GOO

The goodness of your intercepted packets

You writ to the pope against the king ; your good- ness.

Since you provoke me, shall be most notorious.

Sltakspeare. There's no goodness in thy face. Id.

All made very particular relations of the strength of the Scots army, the excellent discipline that was observed in it, and the goodness of the men.

Clarendon.

If for any thing he loved greatness, it was because thf^'ein he might exercise his goodness. Sidney.

The goodness of every thing is measured by its end and use, and that's the best thing which serves the best end and purpose. Tillotson.

Nobody can say, that tobacco of the same goodness is risen in respect of itself : one pound of the same goodness will never exchange for a pound and a quar- ter of the same goodness. Locke.

GooD-xow. Interjection.

In good time ; a la bonne heure. A gentle exclamation of intreaty. It is now a low word.

Good-now, sit down, and lell me, he that knows. Why this same watch ? Shakspeare. Hamlet.

A soft exclamation of wonder.

Good-now, Good-now, how your devotions jump ■with mine I Dryden.

Goods, n. s. From good. Moveables in a house. Chaucer seems to use the singular in this sense.

■ 1 in fewe yeres

Have spended upon divers maner freires Ful many a pound, yet fare I never the bet j Certain my good have I almost beset : Farewel my good, for it is al ago.

Chaucer. The Sompnoures Tale. That giv'st to such a guest As my poor selfe, of all thy goods the best.

Chapman, Personal or moveable estate. This hinders nothing the procedures of the civil courts, which respect the temporal punishment upon body and goods. Lesley.

That a writ be sued against you. To forfeit all your goods, lands, tenements. Castles and whatsoever. Shakspeare. Henry VIII. VVares; freight; merchandise. Her majesty, when the goods of our English mer- chants were attached by the duke of Alva, arrested likewise the goods of the low Dutch here in England.

Raleigh's Essays. Salce, that scorned all power and laws of men. Goods with their owners hurrying to their den.

Waller.

GOODWIN Sands, orGoDwiN Sands, famous sand-banks off the coast of Kent, lying between the North and South Foreland. As they run parallel with the coast for three leagues together, at about two leagues and a half distant from it, they add to the security of that capacious road, the Downs : for, wliile the land shelters ships with the wind from south-west to north- west only, these sands break all the force of the sea when tlie wind is at E.S. E. The most danger- ous wind, when blowing hard on the Downs, is the S..S. W. These sands occupy the space that was formerly a large tract of low ground, belong- ing to Godwyn, earl of Kent, father of king Harold II.; and which being afterwards given to the monastery of St. Augustin, at Canterbury, the abbot neglecting to keep in repair the wall

that defended it from the sea, the whole tract was drowned, A. D. 1100, leaving these sands, upon which so many ships have since been wrecked. These sands lie east of the Downs four miles and a half from South

Foreland.

Goo'dy, n. s. Corrupted from good wife. A low terra of civility used to mean persons.

Soft, goody sheep, then said the fox, not so ; Unto the king so rash you may not go. Hubhert.

Swarmed on a rotten stick the bees I spyed. Which erst I saw when goody Dobson died. Gay. Plain goody would no longer down ;

'Twas madam in her grogram gown. Swift.

Goo'dyship, /z. s. From goody. The quality of goody. Ludicrous.

The more shame for her goodyship. To give so near a friend the slip. Hudibras.

GOOLGUNGE, a town of the district of Bundelcund, Hindostan, near which is a pass in the mountains called Goomaghaut. Long. Qb'^ 38 E., lat. 24° 26′ N.

GOOLPUSSERA, a town of the province of Nepaul, Hindostan, on the road between the cities of Patna and Nepaul. Near it is an exten- sive forest of fine saul timber, next in value to the teak. Long. 85° 10′ E., lat. 27° 1′ N.

GOOMAII, a town of Hindostan, in Baliir, situated at the junction of three roads. It for- merly had a fort, which commanded a pass through the mountains leading into Bengal. Long. 85° 20′ E., lat. 24° 24′ N.

GOOMSUR, a town and small district of Hindostan, at the north-west extremity of the Northern Circars, surrounded by a forest of bamboos, through which it is excessively diffi- cult to pass. Long. 84° 55′ E., lat. 19° 53′ N.

GOOMTY, a river of Hindostan, which rises in the mountains of Kemaon, whence it flows in a south-east direction through Oude, and after passing the cities of Lucknow, Sultan- pore, and Joanpore, falls into the Ganges, about fourteen miles below Benares. It is navigable at all times for boats as high as Lucknow.

(iOONDUL, a southern district of the pro- vince of Mysore, India. It possesses the strong fort called Hengul.

GOONEE, a river of Hindostan, province of Sinde, which, rising in the hills of PooUejar, unites with the Loonee, or salt river, and the Indus, and forms

a large island called Majur. Durinsj the rainy season it is navigable for boats from Mondavic to Hyderabad.

GOOR, a range of lofty mountains in Persia, dividing Khorassan from Cabul.

GOORACKPOOR, a district in the province of Oude, Hindostan, situated to the north of the GoKgrah, or Dewah River, between the twenty- sixth and twenty-eighth degrees of northern lati- tude. It was ceded in 1801 by the nabob of Oude to the British ; and abounds with fine timber. Marquis Hastings assigned a portion of it to the Pindaric chiefs. It is situated to the north of Bengal, and well watered by various streams.

GoonACKPOon, the capital of the above dis- trict, is situated on the eastern bank of the Boora Rapty, which is navigable for boats at all seasons. It formerly had a brick citadel, is the residence of the civil establishment of the district, and ha.«

a cantonment for a battalion of native infantry, &c. Long. QS"" 22′ E., lat. 26° 45′ N.

GOOSE, n.s. A Sax. 30r; Be\g. goes ; Goose'berry, n. s. / Erse, gawe, sing, gewry, Goose'cap, ra. s. 's plural ; Welch, g?iyz. A Goose'foot, 71. s. i large water fowl prover- Goose'grass, n. s. J bially noted, we know not why, for foolishness : a foolish person; wild orach, an herb so called : a tailor's smoothing iron. Gooseberry, goose and berry, because eaten with young geese as sauce. A berry and tree. This miller to the toun his daughter send For ale and bred ; and rested hem a goos ; And bond hir hors he should no more go loos.

Chaucer. The Reves Tale. Thou cream-faced lown. Where got'st thou that^oose look?

Shakspeare. Macbeth. Since I pluckt geese, played truant, and whipt top, I knew not what 'twas to be beaten till lately.

Shakspeare. Come in, tailor : here you may roast your goose.

Id. August has upon his arm a basket of all manner of ripe fruits ; as pears, plums, apples, gooseberries,

Peucliam. Birds most easy to be drawn are water-fowl ; as the goose and swan. Peacham on Drawing,

Rather than fail they will decry That which they love most tenderly ; Quarrel with minced-pies, and disparage Their best and dearest friend plum-porridge : Fat pig and goose itself oppose. And blaspheme custard through the nose.

Hudibras, Nor watchful dogs, nor the more wakeful geese. Disturb with nightly noise the sacred peace. Dryden,

Goosegrass, or wild tansy, is a weed that strong clays are very subject to. Mortimer,

Upon a gooseberry bush a snail I found ; For always snails near sweetest fruit abound. Gay. While man exclaims, ‘ See all things for my use’, ‘ See man for mine !’ replies a pampered goose. Pope. ‘ The royal game ol goose,’ as I may say. Where eˆery body has some separate aim. An end to answer, or a plan to lay. Byron.

Gooseberry, in botany. See Ribes.

GoosEFooT See Chenopodium.

Goosegrass. See Galium.

Goose Island, an island of the river St. Law- rence, about twelve miles below Orleans. It is connected with Crane Island by a marsh, and they together about twelve miles long ; and in- habited by about forty families. They produce wlieat, and have fine pasturage.

Goose Island, an island in Christmas Sound, on the south coast of the island of Terra del Fuego, so named by captain Cook.

Goose Island, another small island lying off the south of New Holland.

GORBELLY, n. s. > From Sax. jop, dung,

Gorbellied, adj. J and belly, according to Skinner and Junius. It may perhaps come from Welsh, gor, beyond ; too much ; or, as seems to me more likely, may be contracted from gor- mand, or gorman’s belly, the belly of a glutton. — Dr. Johnson. A big paunch ; a swelling belly. A term of reproach for a fat man.

Hang ye, gorbellied knaves, are you undone ? No, ye fat chuffs, I \ould your store were here.

Shak:-]icnre.

GORCAH, Ghurka. A town and district of northern Hindostan, the original country of the present Nepaul sovereigns, situated between the twenty-eighth and twenty-ninth degrees of north latitude. The Trisoolgunga once separated the territories of the Ghoorkali and Newar (or Ne- paul) princes, the western limit of the Ghoorka district, being marked by the Mursiangdi. This territory, besides a numerous peasantry, contains several Rajpoot families, and some Newars, but, according to Mr. Hamilton, it is principally oc- cupied by the Brahminical and Khetri tribes; and as these constituted the principal strength of Purthi Narrain's government, and continue to form the main support of the present one, they possess considerable authority. Their chiefs are known by the name of thurgurs, from whom are selected the leading conductors of aifairs. Their numbers are thirty-six, the title properly de- scending only to the heads of families, and these thirty-six are subdivided into three other grada- tions. 'The Ghoorkhali reigning family pretend to derive their descent from the Rajpoot princes of Odeypoor, in the same manner as the Sevajee family claimed a similar origin. For a conside- rable period they have existed in the mountain- ous country bordering on the river Gunduck, during which time they have gradually risen into power by successive encroachments on their neighbours. After the conquest of Nepaul by the Ghoorkhalies, in 1768, the seat of govern- ment was transferred to Catmandoo, and the city of Gorcah, having since been much neglected, is greatly decayed.'

Near Gorcah is said to be a very considerable mass of rock crystal.

GORD, 71. s. An instrument of gaming, as appears from Beaumont and Fletcher. — War- burton.

Thy dry bones can reach at nothing now, but gord and ninepins. Beaumont and Fletcher.

Let vultures gripe thy guts ; for gords and Fulham holds. Shakspeare.

GORDIAN Knot, in antiquity, a knot made by K. Gordius, in one of the cords of his yoke, or, as some have it, in the leathers of his chariot harness; which was so very intricately twisted, that it was impossible to discover where it began or ended. The oracle of Apollo having declared, that whoever should untie this knot should be master of all Asia, many attempted it, but with- out success; till at last Alexander the Great, after likewise attempting in vain to untie it, cut it asunder with his sword, and thus either eluded or fulfilled the prediction. See Gordius.

GORDIANUS I. (Mycins Antonius), a Ro- man general, for his virtues

chosen emperor by the army in the reign of Maximinus, A. D. 236. He was descended on the father's side from the Gracchi, and on the mother's from Trajan. He had been twice consul, and was proconsul of Africa when chosen emperor ; but his son being slain by Capellian, the governor of Mauritania, he killed himself in Ids eightieth year. See Rome. He had collected into his library 62,000 books.

Gordianus II. (Msecius Antonius), surnamed Africanus, the son of the preceding, by Annia Orestille, the grand-daughter of the emperor Marcus Antoninus, was made consul by the em-

peror Alexander, and afterwards associated with his father in the empire, but slain in fighting against the partisans of Maximinus, A. D. 237.

GORDIUM, a city of Phrygia Major, where Alexander the Great cut the Gordian knot.

GORDIUS, in fabulous history, a poor hus- bandman who had two yokes of oxen, wherewith he ploughed his land and drew his wain. An eagle sitting a long while upon one of his oxen, he consulted the soothsayers ; a virgin bad him sacrifice to Jupiter in the capacity of king. He married the virgin, who bore to him Midas. The Phrygians, instructed by the oracle to set the first person they met in a wain upon the throne, met Gordius, and made him king. Midas, for this good fortune, dedicated to Jupiter his fa- ther's cart ; and Gordius hung up the knot of tlie yoke in the temple. See Gordian Knot.

Gordius, in zoology, the hair worm, a genus of animals belonging to the class of vermes and order of intestina. There are several species :

G. aquaticus, the water hair-worm, is ten or twelve inches in length, and of about the thick- ness of a horse hair; its skin is smooth and glossy ; its color pale yellowish-white all over, except the head and tail, which are black. The body is rounded, and very slender in proportion to its length : the mouth is small, and placed horizontally ; the jaws are of equal length, and obtuse at their extremities. This species is common in our fresh waters, especially in clay, through which it passes as a fish does through the water.

G. argillaceus, or clay hair-worm , only dif- fers from the preceding in color, being yellowish at the extremities, and in being chiefly found in clay.

G. marinus, the sea hair-worm, is filiform, twisted spirally, and lying flat, about half an inch in length ; of a whitish color, smooth, and scarcely diminishing at the head. It infests her- rings, bleaks, and various other fish.

G. medinensis, the muscular hair-worm, is all over of a pale yellowish color.

(K)UDON (Alexander), M. A., an eminent Scottish antiquary, was secretary to the Society for Encouragement of Learning. He succeeded Dr. Stukely as secretary to the Antiquarian So- ciety, which office he resigned in 1741 to Mr. Joseph Ames. He went to Carolina with go- vernor Glen, where, besides a grant of land, he held several offices, and died a justice of the peace, leaving a handsome estate to his family. He published, 1. Itinerarium Septentrionale, or a Journey through most of the("ounties of Scot- land, in two parts, with sixty-six copper-plates, 1726, folio. 2. Supplement to the Itinerarium, 1732, folio. 3. The Lives of Pope Alexander VI. and his son Caesar Borgia. 4. A complete History of the Ancient Amphitheatres, 1730, 8vo. afterwards enlarged in a second edition, ."i. An Essay towards Explaining theHieroKly- l)liioal figures on the Coffin of the ancient Mum- my belonging to captain William Lethieuller, 1737, folio, with cuts. 6. Twenty-five plates of all the Egyptian Mummies and other Egyptian Antiquities in I'.ngland, 1739, folio.

GoRnoN (hon. George), or lord Georee Gor- don, was born in London, in 17.';o. Ho early

entered into the navy, but quitted it during the American war, in consequence of an altercation with earl Sandwich. He was elected M. P. for Ludgershall, Wilts, in 1774 ; and during several sessions animadverted, with great freedom and humor, on the speeches and proceed mgs of both ministry and opposition. An alarm having been excited by the repeal of certain penal sta- tutes against the Roman Catholics, in 1779, lord George was chosen president of the Protestant association at London; and, on the 2d of June 1780, went to the house of commons, to present their petition against that rescissory act, attended by 60,000 of the petitioners. The dreadful con- sequences of this imprudent measure are related under the article Great Britain. Lord George was imprisoned in the Tower, on the 9th June 1780; and tried for high treason, but acquitted on the 4th February, 1781 ; on which occasion there was a very general illumination in Scot- land, and £485 were subscribed to reimburse him fo. the expenses of his trial. On the 4th of May, 1786, he was excommunicated by the arch- bishop of Canterbury, for not appearing in court as a witness in a cause. In February and June, 1787, he was tried before the court of King's Bench, for publishing libels on the queen of France, the French ambassador, and the empress of Russia ; and also for a seditious pamphlet entitled, A

petition to Lord G. Gordon from the Prisoners in Newgate, praying that he would se- cure their liberties, by preventing them from being sent to Botany Bay; which petition, upon trial, was proved to have been written by himself. Being convicted of these charges, he, on the 25th June, went over to Holland, where he turned Jew, and was circumcised; but, returning to England in August, he was apprehended on the 7th De- cember, at Birmingham; and on the 28th Ja- nuary, 1788, was sentenced to imprisonment for five years, and to continue in jail till he should find bail for his good behaviour,in £10,000. Not being able to find bail at the end of that period to the extent required, this operated as a sentence of imprisonment for life. In July, 1789, he pre- sented a petition to the National Assembly of France, and was visited by several eminent re- volutionists. He died 1st November, 1793, of a fever, attended with delirium, in the forty-third year of his age. As an author, his publications, political and miscellaneous, abounded with hu- mor, and were not destitute of argument; as a public speaker, his language was animated, and his diction classical. Of hi« eccentricities we shall say nothing ; but his conversion from Christianity — from one of the strictest sects of Presbyterian seceders, to ˆJudaism, was so very strange a measure, that (if indeed it was real), it can be accounted for only upon one supposition. Gordon (Thomas), a Scotch author, born at Kirkcudbright, famous for his translations and political writings. He came young to London ; where he supported himself by teaching lan- guages, until he procured employment under the earl of Oxford in queen Anne's time. He first distinguished himself in the defence of Dr. Hoadley in the Bangorian controversy; which recommended him to Mr. Trenchard, in con- junction with whom he wrote the well known

Cato's Letters, upon a variety of important public subjects. These were followed by a pe- riodical paper, under the title of the Independent Whig; which was continued some years after Mr. Trenchard's death, by Gordon alone, against the hierarchy of the church : but with more acrimony than was shown in Cato's Letters. At length Sir Robert Walpole retained him to defend his adnanistration, to which end he wrote several pamphlets. At the time of his death, in 1750, he was first commissioner of the wine licenses, an office wh.ch he had enjoyed many years. He published English translations of Sallust and Tacitus, with additional discourses to each author, which contain much useful matter. Two of his tracts, entitled 1. A Cordial for Low-spirits, in 3 vols ; and, 2, The Pillars of Priestcraft and

Orthodoxy shaken; in 2 vols. 8vo., were published after his death.

GORDONIA, in botany, a genus of the poly- andria order, and monadelphia class of plants : CAL. simple style, five cornered, stigma quinque- fied : CAPS, quinquelocular : seeds two-fold with a leafv wing. Species four, the principal is G. lasianthus. A tall and very straight tree, with a regular pyramidal head. Its leaves are shaped like those of the common bay, but ser- rated. It blossoms in May, June, and July. The flowers grow on foot-stalks about five inches long, are monopetalous, and are succeeded by conic capsules with a divided calyx. The sta- mina are headed with yellow apices. This tree retains its leaves all the year, and grows only in wet places, and usually in water.

GORE, n. s. kˆv.a.l Sax. ojie ; Welsh, Gory, «“. S gor. Effused and con-

gealed blood. The verb signifies to stab, or pierce, especially, as cattle, with a horn. The adjective, used figuratively also as bloody, mur- derous, fatal, is now obsolete.

That all the ground with purple bloud was spent ; And all their armours stayned with bloudie ˆoje.

Speruser. Faerie Queens. A griesly wound. From which fort*! gushed a stream of gore blood

thick. That all her goodly garment stained around. And into a deep sanguine dyed the grassy ground.

Spemer. When two boars with rankling malice met. Their gory sides the fresh wounds fiercely fret. Id. dh, let no noble eye prophane a tear For me, if I be gored with Mowbray’s spear.

Shakspeare, His horrid beard and knotted tresses stood Stiff with his gore, and all his wounds ran blood.

Denham. The bloody fact Will be avenged ; though here thou see him die. Rolling iu dust and gore. Milton’s Paradise Lost.

Some tossed, some gored, some trampling down he

killed. Drydcn.

Another’s crimes the youth unhappy bore. Glutting his father’s eyes with guiltless gore. Id.

He idly butting, feigns His rival gored in every knotty trunk.

Thomson. Spring. The first born man still in his mind he bore. Foully arrayed in guiltless brother's gore. Which for revenge to Heaven, from Earth did loudly roar. Ftelcltcr. Purple Island.

Then plunged ; the rock below received like glass. His body crashed into one gory mass. With scarce a shred to tell of human form. Or fragment for the sea-bird or the worm. Byron.

Gore (Thomas), a writer on heraldry, was born at Alderton in Wiltshire, and educated at Magdalen College, Oxford. He first entered at Lincoln's Inn, but soon after retired to his patri- mony at Alderton. He was appointed, in 1680, high sheriff of Wiltshire, and wrote Loyalty displayed, and Falsehood unmasked, as a defence of bis character in that office. He was the author of A Table showing how to blazon a Coat ten several ways, 1635 ; Series Alphabetica Latino- Anglica, Nomina Genlilitiorum, sive cognomi- num plurimarum familiarum, qua; mullos per annos in Anglia floruere, 1667; Catalogus in certa capita, seu classes, alphabetico ordine concinnatus; plerorumque omnium Authorum tam antiquorum quam recentiorum qui de re Heraldica, Latinfe, Gallice, Ital. Hisp. scripse- runt, Nomenclator Geographicus. He died at Alderton in 1684.

Gore's Island, an island of the North Pacific, so named by captain Cook in 1778. It is about thirty miles in length, consisting of two hills connected by a low neck of land, in Long. 172° 30′ W., lat. 60° 40′ N.

GOREE, an island and town of South Hol- land, being the first land usually made by vessels bound to Rotterdam. The island is ten miles in circumference, and was once called West Voom.

GoREE, a small island, oif the coast of Africa, about a mile from the southern shore of Cape Verd. Its importance is solely derived from its inaccessible situation. The first European power which occupied it was the Dutch, who, in 1617, concluded a treaty of cession with Birar, king of Cape Verd. It was taken in 1663 by the English admiral Holmes, but retaken two years after by De Ruyter. In 1677 a French squadron, commanded by the count d'Estrees forced it to surrender : and by the treaty of Nimeguen it was ceded to France.

Goree is divided into three parts. One con- sists of the rock which forms a naked m?ss of black basalt, rising on all sides to the height of 300 feet. On the summit is a plain 130 fathoms in length and seventy in breadth. The western side is perpendicular fi-om top to bottom, and physically inaccessible ; the eastern and southern sides are very steep, but it cannot be considered quite impossible to scale them. The northern side is the most accessible ; and here a mound has been formed, fifteen feet in width, and

with a proper slope for conveying heavy artillery up to the plain. On the top is fort St. M chael, originally built by the Dutch, and considered by Golheny as having no strength except what it derives from its situation. On a sandy plain, at the foot of the rock, is the town of Goree, supposed to contain about 5000 inhabitants. It is the entrepot for the French trade with the opposite coast of Africa. The third part of the island is the north point, which forms a kind of natural mole 120 fathoms long by th.rty broad ; it is commanded by a fort called St. Francois. Such is the French account of this place.

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GORGE, n. s. & r. «. ^ Fr. gorge, gorge?- ;

Gor'ged, adj. > Ital. gorger, of Lat.

Gor'get, n.s. ygurguHu. The throat;

the food swallowed : to swallow, or fill up the

throat : figuratively to satiate. Gorget is a piece

of armour used to defend the throat.

And all the way, most like a brutish beast. He spewed up Lis gorge, that all did him detest.

Speraer. There were birds also made so finely, that they did not only deceive the sight with their figures, but the hearing with their songs, which the watery instru- ments did make their gorge deliver. Sidney.

And now how abhorred in my imagination it is '. my gorge rises at it. Shakspeare. Hamlet.

Her delicate tenderness will find itself abused, be- gin to heave the gorge, disrelish and abhor the Moor.

Id. Othello. He that makes his generation messes. To gorge his appetite. Id. King Lear.

He with a palsy fumbling on his gorget. Shakes in and out the rivet.

Id. Troilus and Cressida. Being with his presence glutted, ^or^ed, and full.

S/uikspeare. Look up a height, the shrill gorged lark so far Cannot be seen or heard. Id.

See how his gorget peers above his gown. To tell the people in what danger he was.

Ben Jonson. About his neck a threefold gorget, As rough as treble leathern target. Hudibras.

Gorge with my blood, thy barbarous appetite.

Dryden.

He did oftentimes spend the night in the church loone praying, his headpiece, gorget, and gauntlets lying by him. Knotles.

I desire that they will not gorge the lion either with nonsense or obscenity. Addison.

Gorge, in architecture, the narrowest part of tiie Tuscan and Doric capitals, lying between the astragal, above the shaft of the pillar, and the annulets.

Gorge, in fortification, the entrance of the platform of any work. See Fortification.

GOR'GEOUS, adj. ˆ Old Yr.gorgias; Ital.

Gor'ceously, adv. ygioire, of Lat. gaudere.

Gou'geousness, n.s. f Fine; splendid; showy; glittering in various colors ; applied generally to attire or dress.

The cloud-capped towers, the gorgeous palaces. The solemn temples, the great glol)c itself. Yea, all which it inherits, shall dissolve ; And like this insubstintial pageant faded. Leave not a wreck behind. Shakspeare.

O, that deceit should dw«ll In such a gorgeotis palace !

Id. Romeo and Juliet. As full of spirit as the month of May, And gorgeous Ziˆ tho sun at Midsummer.*

Sliahspeare.

He bad them look upon themselves, and upon their rnemios, themselves dreadful, their enemies gorgeous and brave. Huyward.

The duke, one solemn day, gorgeously clad in a suit

all over spread with diamonds, lost one of them of good

value. Wotton.

The gorgeous East, with richest hand ,

Pours on her kinns barbaric pearl and gold.

Milton.

With gorgeous wings, the marks of sovereign swa}'. The two contending princes make their way

Dryden On's shield a tomb, where death had dressed his bed, With curious art, and crowned his loatnsome head With gold, and gems : — his word, move gorgeous when dead. Fletcher's Purple Island.

Gorget, is a kind of breast-plate like a hal^ moon, with the arms of the prince thereon \ worn by the officers of foot. They are either gilt or silver, according to the color of the buttons on the uniforms.

Gorget, or Gorgeret, in surgery, the con- cave or cannulated conductor, used in lithotomy. See Surgery and Lithotomy.

GORGIAS, a celebrated orator of Sicily, born at Leontium, about A. A. C. 417. Ac- cording to Quintilian, he was the first extem- poraneous speaker. But this is not credible; men must have spoken extempore, before they studied speeches. A statue of gold was erected to him at Delphi.

GO'RGON, n.s. Gr. yopyw. A monster with snaky hairs, of which the sight turned the beholders to stone ; any thing ugly or horrid. Gnrgons and hydras, and chymeras dire.

Milton.

Why did'st thou not encounter man for man. And try the virtue of that gorgon face To stare me into stature ? Dryden.

The GcRGoxs, in antiquity and mythology, were three sisters, whose names were Stheno, Euryale, and Medusa ; the latter of whom was mortal, but the two former were subject neither to age nor death. They are described with wings on their shoulders, with serpents round their heads, their hands were of brass, and their teeth of a prodigious size, so that they were objects of terror to mankind. Pausanias says, the Gorgoas were the daughters of Phorbus, or Phorcys; after whose death Medusa, his daughter, reigned over the Libyans dwelling near the lake Trito- nidis. The queen, being fond of

hunting and war, laid the neighbouring coutries quite waste. At last Perseus, having made war on them, and killed the queen, when he came to take a view of the field of battle, he found the queen's corpse so extremely beautiful, that he ordered her head to be cut off, and carried it with him to sliow the Greeks, who could not behold it without asto- nishment. Others represent tliem as a kind of monstrous women, covered with hair, who lived in woods and forests. Others, again, make them animals, resembling wild sheep, whose eyes had a poisonous and fatal influence.

GORGON I A, in natural history, a genus of zoophytes, formerly called ceratophyta, and in English named sea-fans, sea-feathers, and sea- whips. Linnajus and Pallas consider them as of a mixed nature in their growth, between ani- mals and vegetables ; but, Ellis shows them to be true animals of the polype kind, growing up in a branched form resembling a shrub, and in no part vegetable. They differ from the fresh water polype in many of their qualities, and particularly in producing from their own sub- stance a hard and solid support, serving many of tho purposes of the bone i.i other animals.

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The surface of the gorgonia is composed of a kind of scales, so well adapted to each other as to serve for defence from external injuries: and the flesh, or, as some have called it, the bark or cortex, consists of proper muscles and tendons for extending the openings of their cells; for sending forth thence their polype suckers in search of food ; and for drawing them in suddenly, and contracting the sphincter muscles of their starry cells, in order to secure these tender parts from danger; and also of proper secretory ducts, to furnish and deposit the osseous matter that forms the stem and branches as well as the base of the bone. Mr. Ellis affirms, that there are ovaries in these animals, and thinks it very probable that many of them are viviparous. See Zoophytes.

GORITZ, or Gorz, a province of the Aus- trian empire between Germany and Italy, bounded on the north-east and south by the duchy of Carniola, and on the west by the Ve- netian States. In 1817 it was constituted a circle of the new kingdom of lUyria, and contains 974 square miles, with 116,000 inhabitants. On the north side it extends among the Alps, and is bleak, but around the town of Goritz and throughout the south-west it is very warm, and produces vines and the fruits of Italy. This province came into the possession of Austria, so far back as the year 1500, on the decease

of the last of the counts. The county of Gradiska was afterwards annexed to it, and the whole con- sidered a part of Friuli. It was retained by Austria during the different changes of Buona- parte's reign, and received very considerable additions on lUyria being constituted a kingdom in 1817. It is divided into the three districts of Canale, Gradiska, and Goritz.

GoRiTZ, or GoRiziA, a town of the Austrian empire, the capital of the above province, stands on the Isonzo, and is divided into the upper and lower town. The former, situated on a moun- tain and defended by a castle, is an ancient place ; the latter stands on a plain adjacent to the river. Its chief manufactures are of leather and silk. In 1751 an archbishop's see was erected here, but it was suppressed in 1782. In the beginning of 1797, Goritz was taken by the French. The castle and the adjoining eminen- ces command beautiful prospects. Twenty miles N. N. W. of Trieste.

GORLiEUS (Abraham), an eminent anti- quary, born at Antwerp, in 1540. He collected the rings and seals of the ancients, and published an account of a prodigious number of them, in 1601; under this title, Dactyliotheca ; sive Annulorum Sigillarium, quorum apud priscos tam Graecos quam Romanos usus ex ferro, sere, argento, et auro, Promptuarium. This was the first part of the work •. the second was entitled, Variarum Gemmarum, quibus antiquitas in signando uti solita, sculpturae. In 1608 he pub- lished his collection of medals : which, however, if we may believe the Scaligerana, it is not safe always to trust. He resided at Delft, and died there in 1609.

GORLITZ, a town of the Prussian states, in Upper Lusatia. It is a well-built town, standing on the Neisse, and has long been noted for its

woollen and linen manufactures. Here is a great provincial school, and a library containing the archives of the local history. It has likewise a literary society, and a cabinet of natural his- tory. Gorlitz contains six churches, the chief of which has an excellent organ ; a spire of great height, and a chapel cut out of the rock. The town has been frequently injured by fires, and has also suffered from sieges. The battle of Bautzen, 21st of May 1813, ended in the neighbourhood. Population 8500. Fifty miles east of Dresden, and sixty-eight north of Prague.

GOR'MAND, n. s. "^ Fr. gormand ; per- Gor'mandise, v. n. > haps of Lat. voro (goro, GoRMANDi'sER, w. s. 3 as the Gauls would pronounce it), and mando, to wish to eat. But Minsheu says q. gulosc viandere (to eat glutto- nously). A ravenous or luxurious eater: to eat voraciously or greedily.

GOROPIUS (John), M. D., a native of Bra- bant ; author of a work

entitled Origines Antuerpianae, wherein, among other legendary stories, he attempts to prove that the Flemish was the original language spoken by Adam and Eve.

GORREUS (John), M. D., a physician of Paris, in the sixteenth century, who published a translation of Nicander. He was born in 1500. Being a protestant, he suffered much from reli- gious persecution; and, his coach being one day suddenly seized by a party of soldiers, he was attacked with a delirium, and died, in 1572. GORSE, n. s. Sax. sofiy. Furze ; a thick prickly shrub that bears yellow flowers in Winter.

GORSERIA, in botany, a genus of the poly- gamia frustanea order, and syngenesia class of plants ; natural order forty-ninth, compositae. The receptacle is naked ; the pappus woolly ; the florets of the radius ligulated or plane : cal. imbricated with spinous scales.

GO'SHAWK, n. s. Sax. joy, goose, and tˆapco a hawk. A hawk of a large kind.

Like as a goshawk, that in foote doth beare A trembling culver having spide on hight An eagle, that with plumy wings doth sheare The subtile ayre, stouping with all his might The quarrey throwes with fell despight And to the batteil doth herselfe prepare So ran the geauniesse unto the fight.

Spenser. Faerie Queene. Such dread his awful visage on them cast j So seem poor doves at goshawks sight aghast.

Fair/ax. Goshawk. See Falco. GOSHEN, in ancient geography, a district of Egypt, which Joseph procured for his father and brethren. It was the most fruitful part of the country ; and its name seems to be derived from the Hebrew Geshem ; which signifies ' rain ;' Calmet thinks that Goshen, which Joshua x. 41, xi. 16, XV. 51, makes part of the tribe of Judah, is the same land of Goshen which was given to Jacob and his sons by Pharaoh. Gen. xlvi. 26.

Goshen, a post town of Orange county, New York,twenty miles west of West Point, sixty-three north of New York, 112 south by west of Albany.

It is pleasant and flourishing, and contains a court house, a gaol, a bank, and an academy, and has considerable trade. . It is an excellent agricul-

tural town, situated in a fertile tract of country, and includes a part of the Drowned Lands. The courts for the county are held alternately at Go- shen and Newburgh. Three weekly newspapers are published here.

GOSLAR, an old town of Hanover, in Hil- desheim, on the Gosse, and at the foot of the Ramelsberg Mountain famous for its mines. Its houses are mean and crowded ; but a great fire destroyed about 500 in 1780, and their areas have since been laid out in gardens. The most curious building in the town is the Kaiserhaus, where the emperors in former times used to hold their courts, and call the diet together. It is now used as a magazine. The cathedral con- tains an altar of Crothos, one of the 'deities of the ancient Saxons ; it is a brass chest with openings on every side to allow the flames to is'ue upwards and consume the infants laid on it. The inhabkants are chiefly Lutherans, and their chief employment is mining and brewing. Goslar was in former times a free imperial town, but given to Prussia in 1802, and ceded to Han over in 1814. Here gunpowder is supposed to have been invented by a monk of the name of Berthold Schwartz. It is twenty-eight miles •south of Brunswick, and twenty-five south of Wolfenbuttel.

GO'SLING, n.s. From goose. A young goose ; a goose not yet full grown.

A foole sent forth to fetch the goslings home. When they unto a river's brink were come (Through which their passage lay) conceived a feare His dames best brood might have been drowned there.

George Withers.

Why do you go nodding and wagging so like a fool, as if you were hipshot ? says the goose to her gosling.

L' Estrange,

Xature hath instructed even a brood of goslings to stick together, while the kite is hovering over their heads. Swift.

GOSTEL, n. s. ˆ v.n.\ Sax. jo"iier rK'»

GOS'PELLER, 71. J. S OT God's gOod

tidings; Gr. tva-yytXtov ; 'Erse, soskel, skral,suach, happy tidings. The Sax. spellian (whence our word Spell), also signifies to detail. Divinity or theology. To gospel is to fill with sentiments of religion, used in Shakspeare with some degree of irony. Gospeller is a name of the fol- lowers of WicklifTe, who first attempted a refor- mation from popery, given them by the Papists in reproach, from their professing to follow and preach only the

gospel. The histories given by the four evangelists are called the gospel, and it is a term applied to the Christian revelation, generally.

Matheu that was of iudcc as he is set first in order of gospellers, so he wroot first the gospel in iudee, and fro the office of a tolgadcrcr he was clcpid to God. Wiclif. Prologue on Matheu.

This maiden, bright Cecile, as hire iif saith. Was come of Romaines, and of noble kind ;

And from hire cradle, fostred in the faith Of Crist ; and bare his gospel in biro mind.

Chaucer. The Second yonnes Tale. And for to make you hem perceivcn Tbat osen foike thui to decieven.

I wol you saine, withouten drede. What men maie in the Gospel rede Of sainct Mathewe the gospeliere. That saieth as I shall you saia here.

Chaucer. Romaunt of the Roˆ Are you so gospelled To pray for this good man, and for his issue. Whose heavy hand hath bowed you to the grave .

Shakspeare, These gospellers have had their golden days. Have trodden down our holy Roman faith.

Rotoe. Thus may the gospel to the rising sun. Be spread, and flourish where it first begun. Wall. How is a good Christian animated and cheered by a stedfast belief of the promises of the gospel!

Btntley. All the decrees whereof Scripture treateth are condiiionate, receiving Christ as the gospel offers him, as Lord and Saviour ; the former, as well as the lat- ter, being the condition of scripture-election, and the rejecting or not receiving him thus, the condition of the scripture reprobation. Hammond.

The Gospel comprehends the history of the life, actions, death, resurrection, ascension, and doctrine of Jesus Christ, recorded in the writings oi St. Matthew, St. Mark, St. Luke, and St. John ; who are thence called Evangelists. The Christian church never acknowledged any more than these four gospels as canonical. See Bible.

GOSPORT, a town of Hampshire, seventy- nine miles from London. It has a ferry over the raouth of the harbour to Portsmouth, and great trade, especially in time of war. Tra- vellers prefer lodging here, as cheaper and more commodious than at Portsmouth. The mouth ol the harbour is secured by four forts, and a platform of above twenty cannon level with the

water. Gosport has an hospital for sick and wounded sailors, and a free school.

GOS'SAMER, n. s. Low Lat. gos.vpitim. The down of plants ; the long white cobwebs which fly in the air m calm sunny weather, especially about the time of autumn.

As sore wondren som on cause of thonder. On ehbe, and floud, on gossomere and on mist. And on all things, til that the cause is wist.

Chaucer. The Squieres Tale. A lovur may bestride the gassamour, That idles in the wanton Summer air. And yet not fall, so light is vanity. Shakspeare.

Four nimble gnats the horses were. Their harnesses of gossamere.

Drayton's Nymphia. The filmy gossamer now flits no more. Nor halcyons bask on the short sunny shore.

Dry Jen. Gossamer is the name of a fine filmy sub- stance, like cobwebs, which is seen to float in the air in clear days in autumn, and is more ob- servable in stubble fields, and upon furze and other low bushes. This is probably formed by the flying spider, which, in traversing the air for food, shoots out these threads from its arms which are borne down by the dew, &c.

G OSS ELI N (Anthony), regius professor of history and rhetoric in the university of Caen in Normandy, and principal of the College of Du Bois, was author of a Latin history of the ancient Greeks.

GOSSELINI (Julian), an Italian author, born m 1525. At seventeen he was made secretary to Ferdinand de Gonzaga, viceroy of Sicily, and retained that office forty years. He wrote several works in prose and verse ; and died at Milan in 1587. ,

GOS'SIP, n.s. kv.n. } Sax. ˆot), and j-yh ; Gos'siPRED, n. s. i Goth, godsip. Rela-

tion ; alBnity. The primary idea being relation or affinity, the words are variously applied : as to sponsors in baptism ; to tippling companions ; to

merry chattering persons, as women at a ly- ing-in.

And if I have a gossip or a frend, Wilhouten gih, — thou chidest as a fend If that I walke or play unto his hous.

Chaucer. Prologue to the Wif of Bathes Tale. And sometimes lurk I in a gossip's bowl. In very likeness of a roasted crab. And when she drinks, against her lips 1 bob.

Shakspeare. Nor met with fortune, other than at feast. Full warm of blood, of mirth, of gossiping. Id.

Go to a gossip's feast and gaude with me. With all my heart I'll gossip at this feast. Id.

Gostipred or compaternity, by the common law, is a spiritual affinity ; and the juror, that was gossip to either of the parties, might, in former times, have been challenged as not indifferent. Davies.

At the christening of George duke of Clarence who was born in the castle of Dublin, he made hot the earl of Kildare and the earl of Ormond his got tips. Id. On Ireland.

To do the office of a neighbour. And be a gossip at his labour, Hudihras,

'Tis sung in every street, j The common chat of gossips when they meet.

Dryden. The market and exchange must be left to their own ways of talking ; and gossipings not be robbed of their ancient privilege. Locke.

He gives himself up to an idle gossiping conversa- tion. Law. He died when last from pilgrimage I came With oth.&T gossips from Jerusalem. Pope. There are a set of malicious, prating, prudent ˆoi- tipt, both male and female, who murder characters to kill time ; and will rob a young fellow of his good name before he has years to know the value of it.

Sheridan.

GOSSLAR, a large and ancient town of Lower Saxony, in the territory of Brunswick. It is a free imperial city, and it was here that gun-powder was first invented. It is a large place, but the buildings are in the ancient taste. In 1728 St. Stephen's fine church and 280 houses were burnt. It is seated on a mountain near the Gose, and near it are rich mines of iron. The inhabitants are famous for brewing excellent beer. Long. 5° 37′ E., lat. 51° 55′ N.

GOSSYPIUM, cotton, a genus of the poly- andria order, and monad elphia class of plants; natural order thirty-seven, columniferae : cal. double, the exterior trifid : caps, quadrilocular : SEEDS enclosed in cotton wool. There are ten species, all natives of warm climateSc

G. arboreum, the cotton tree, has an upright woody perennial stalk, branching six or eight feet high ; palmated, four or five-lobed smooth leaves, and yellow flowers succeeded by large pods filled with seeds and cotton.

G. Barbadense, the Barbadoes shrubby cotton, has a shrubby stalk, branching four or five feet high, three-lobed smooth leaves, glandulous underneath, and yellow flowers succeeded by oval pods containing seeds and cotton.

G herbaceum, the common herbaceous cotton, has an herbaceous smooth stalk two feet high, branching upwards ; five-lobed smooth leaves, and yellow flowers from the end of the brandies succeeded by roundish capsules full of seeds and cotton.

G. hirsutura, the hairy American cotton, has hairy stalks branching laterally two or three feet high; palmated, three ana five-lobed hairy leaves, and yellow flowers succeeded by large oval pods furnished with seeds and cotton.

The last three species are annual, but the first is perennial both in root and stalk. In warm countries these plants are reared in great quan- tities in fields for the sake of the cotton ; but the herbaceum species is most generally culti- vated. The pods are sometimes as large as middling sized apples, closely filled with the cotton surrounding the seed. When these plants are raised in this country, they must be continually kept in a warm stove, where they will produce seeds and cotton. The American islands produce cotton shrubs of various sizes, which rise and grow up without any culture ; especially in low and marshy grounds. Their produce is of a pale red ; some paler than others ; but so short that it cannot be spun. None of this is brought to Europe, though it might be usefully employed in making hats. The little that is picked up, serves to make mattresses and pillows. The cotton shrubs, that supply our manufactures, require a dry and stony soil, and thrive best in ground that has been tilled. The plant appears more flourishing in fresh lands than in those which are exhausted ; but, while it produces more wood, it bears less fruit. A western exposure is fittest for it. The cul- ture begins in March and April, and continues during the first spring rains. Holes are made at seven or eight feet distance, and a few seeds thrown in. When they are five or six inches high, all the stems are pulled up, except two or three of the strongest. These are cropped twice

before the end of August. This precau- tion is necessary, as the wood bears no fruit till after the second pruning; and, if the shrub was suffered to grow more than four feet high, the crop would not be greater, nor the fruit so easily gathered. The same method is pursued for three years ; for so long the shrub may continue, if it cannot conveniently be renewed oftener with the prospect of an advantage that will com- pensate the trouble. This useful plant will not thrive if great attention is not paid to pluck up the weeds that grow about it. Frequent rains promote its growth ; but they must not be in- cessant. Dry weather is particularly necessary in March and April, which is the time of gather- ing the cotton, to prevent it from being dis- colored and spotted. When gathered in, the seeds must be picked out from the wool with which they are naturally mixed. This is done by a cotton mill ; composed of two rods of hard wood, about eighteen feet long, eighteen lines

in circumference, and fluted two lines deep. They are confined at both ends, so as to leave no more distance between them than is neces- sai-y for the seed to slip through. At one end is a little millstone, which, being put in motion by the foot, turns the rods in contrary directions. They separate the cotton, and throw out the seed contained in it. See Cotton.

GOT, participle of get. See Get.

GOTHA-ELF, a considerable river in the south-west of Sweden, formed by the junction of a number of torrents flowing from the Nor- wegian Alps. Before falling into the lake Wener, it bears the name of Clara-Elf: after flowing out of that lake, near Wenersborg, and about fifty miles from Gottenburg, it forms the famous cataracts of Trolhata. It is now navi- gable, and in its course divides into two branches, both of which fall into the Cattegat, the one passing through Gottenburg, the other a few miles to the north. A great obstacle to the navigation of this river being the cataracts of Trolhata. An association was formed, in 1793, to conduct a canal parallel to its course at the place of the cataracts. They completed tills undertaking in 1800: and in the year 1832, the Swedish government prolonged the line of navigation by the Wetter and other lakes, uniting the German Ocean and the Baltic, through the centre of that kingdom, at an expense of 10,000,000 of rix dollars.

Goth A, Saxe, Duchy of, is a small state of Germany, which comprises a great part of the southern regions of Thuringia, and a por- tion of the

principality of Altenburg. The whole surface is about 1170 square miles. It is bounded by Saxe-Weimar, Prussia, and Schwartzburg. South-west it is hilly and co- vered with forests ; but the other parts are fer- tile, and grain is raised in considerable quanti- ties. Flax and woad are also grown. The rivers are the Leine and the Neisse. Among its mineral products are iron, coal, manganese, and cobalt. Many of the inhabitants are also engaged in manufacturing ticken and woollen cloth.

Saxe-Gotha is altogether independent. The executive power is possessed by the duke and his privy council, but there is a diet composed of the land-holders and deputies from the towns, who meet every fourth year. The religion is Lutheranism, but all persuasions are tolerated. The duke maintains a small armed force ; his contingent to the general army of the con- federation of Germany is 1873 men, and the annual revenue of the state about £150,000. Gotha and Altenburg are the chief towns.

GoTiiA, the capital of the foregoing duchy,

is, according to a recent traveller, ‘ a beautiful

object.’ It is built round a hill of considerable

elevation, and towers above the surrounding

coiintf)’, presenting fine prospects in every

lirortion. The suburbs, which are extensive,

ontain a number of houses in the midst of

«:lcgant gardens, and give a cheerful aspect to

tlir environs. The streets within the city, though

onie of them are steep, are handsome : many of

ne houses are very large, and the whole has the

ppearance of opulence and comfort. Tiie most

prominent object is the Schloss, or ducal palace, in which the reigning duke resides Here is a large and valuable librarj’, with a good collection of curiosities. Among the MSS. are more than 3000 charters and other official documents, with a number of scarce works on coins. Gotha is partly surrounded by rows of stately trees, and the suburbs are orna- mented with fountains. Its manufactures are porcelain, woollen, and cotton, and it partakes in the trade between Leipsic and the south-west of Germany.

Population 12,000.

GOTHARD (St.), one of the highest moun- tains west of Switzerland. From the top, where there is an hospital for travellers and a monas- tery for monks, is one of the most pleasing prospects in the world. It is eight miles from Altorf, and is situated in the canton of Uri, on the confines of the Vallais, the Grisons, and Italy. Its ancient name, according to Ptolemy and Strabo, was Adula. The Rhine, the Reuss, the Rhone, and the Aar rise in it. Considered in its utmost extent, it comprehends, besides St. Gothard, properly so called, the mountains of Crispias, Fourche, Grimsel, and V'ogelsburg. Its top is covered with eternal snow, varying in height from 8000 to 12,000 feet. It has some mines of fine crystals. No fewer than thirty lakes are situated in this range. The Reuss particularly fixes the attention of the traveller, as it runs parallel with the road a great part of the way, and over it is erected that singular arch called the Devil's Bridge, the abutments of which rest on each side on peaks of rock at an immense elevation.

The road across these mountains into Italy is from ten to fifteen feet broad, and not so steep and difficult as might be expected. It is well paved with granite, but in winter the pas- sage is rendered inconvenient by the snow which lies to the depth of twenty or thirty fett, and the winter lasts long. But the carrying trade is still prosecuted actively, and takes place chiefly on sledges, drawn by a couple of oxen. Other carriages have not as yet been used here. There is a subterraneous passage cut through a mass of rock, which was too high to be climbed, and too vast to be removed ; the opening is about twelve feet in height, and as much in width ; in length about 200 ; it is almost dark, the light being admitted only at the ends and at a small crevice. Nothing can exceed tlie con- trast exhibited to the traveller coming from the north, who, after seeing nature in her most frigtful form, and passing this dreary cavern, opens all at once on the vale of Urseren. This gallery is called the Urnerloch or Rochepercee. This tremendous mountain wa."^ passed on the 25th and 26lh of May, 1800, by a division of the French army under general Moncey, con- sisting of 25,000 men.

GOTHLAND, the southern and most fertile division of Sweden, or all the country to the southward of the lake Wener, has the Cattegat, the Sound, and llie Baltic, for its maritime boun- daries. It is mentioned in history both under the general name of Gothland, or by the divi- sions of East, West, and South Gothland ; but none of these are recognised in the recent dis-

tribution of Sweden into provinces, which are much smaller, and consist, in the case of Goth- land, of the provinces of Smaland, Halland, Christianstadt, Culmar, Gottenburg, Skaraborg, Cronoberg, Blekingen, lonKoping, Linkoping, and Malmohuns. It contains 40,000 square miles and 1,500,000 inhabitants. See Sweden.

Gothland, or Gottland (i. e. Swed. good- land), an island eighteen leagues distant from the nearest point of Sweden, and from Windau the nearest point of Courland. It is twenty leagues long and seven at its greatest breadth, forming an elevated plain from 150 to 200 feet above the level of the sea. In some places the shore as- cends gradually, but in others it resembles a wall. It has two hills, Torsberg on the east, and Hoberg on the south. The first is a steep and naked rock, on the summit of which is a hollow plain, 1200 feet in circumference, and always covered with water. The Hoberg is also a steep rock, remarkable for its caverns, one of which, called the bedchamber of the old man of the mountain, resembles a well-proportioned apartment, and is the subject of many popular tales.

This island is composed of calcareous sub- stances, such as marble, breaches, calcareous spath, and earth, distributed in strata, and often mixed with free-stone containing mica. Be- sides the extensive beds of madrepores, &,c., found round it, entroques, anomias, and mytilus, are also met with petrified, as well as fragments of carneolas, agates, and granite. The soil to- wards the north is a compact clay producing forests of pines ; on the south it is a mixture of sand, clay, and earth. The interior has several lakes and rivers; of the latter the principal is the Lummeland, which issues from lake Mor- teba, sinks into the earth, and after having made itself a subterraneous passage twelve feet wide and six high, re-appears as a rapid torrent.

The climate is more temperate than that of the neighbouring coast of Sweden, the walnut-tree producing fruit. The grains are, wheat, barley, rye, and oats, cultivated in farms spread all over the island. Cattle are reared in considerable numbers, particularly sheep, of which the breed has been lately improved by a cross of the Merino. The forests in the north part furnish plank, tar, and potash for exportation, and the quarries, marble, building, and limestone. Po- pulation about 35,000.

There is but one town here and two or three villages. Wisby, the former, is built on a rock on the west coast, and contains 3000 to 4000 inhabitants. It was once a depot of the Hanse league ; and the ruins of several large churches, and other buildings, prove it to have been of more consequence than at present. Its port can only receive a few small vessels. The havens of

Capelshamn on the north and Slitehamn on the east, are more capacious ; particularly the latter, which is one of the best ports of the Baltic, and defended by the fort of Carlsbelt.

Until the thirteenth century, the Gottlanders enjoyed a degree of independence under the protection of Sweden, but their internal dis- putes at last caused their entire submission to that power. The island for a short time, in the

middle of the fourteenth century, fell under the dominion of Denmark, and, towards the end of that century, a horde of pirates occupied its coasts. The Teutonic knights at last attacked and destroyed them, and the island acknowledged the sovereignty of the grand master of the order, who sold it to Sweden for 9000 gold nobles. It was ceded to Sweden from Denmark by the peace of Brcemesbro in

1644.

Gothland forms a government, and has a bishop of its own, together with a small militia for its defence ; it also furnishes a considerable number of seamen to the Swedish fleet. A considerable number of runic stones have been found on this island, but none more ancient than the introduction of Christianity.

GOTHIC Language. Our principal con- nexion with the fragments that remain of this language is in the etymology of our own. This we shall be found to remember in our Lexicon; and for some original remarks on the subject generally, see Grammar, part I. sect. 2.

GOTHOFRED, or Godfrey (Dionysius, or Denis), an eminent lawyer, born of an illustrious family at Paris, in 1549. France being involved in confusion by the leaguers, he accepted of a professor's chair at Geneva, until he was em- ployed by Henry IV. ; but, being afterwards stripped of his employments as a Huguenot, he retired to.,Heidelburg, whence no offers could detach him. The disturbances in the Palatinate obliged him, in 1621, to take refuge in Strasburg, where he died in 1622. He wrote a great number of books ; his principal work is the Corpus Juris Civilis, cum notis.

GoTHOFRED (Theodore, or Theodosius), son of Denis, was born at Geneva in 1580. As soon as he had finished his studies he went to Paris ; where he conformed to the Romish re- ligion, and applied with indefatigable industry to the study of history, (that of France particu- larly), wherein he became very eminent. In 1632, Louis XIII. made him one of his histo- riographers, with a stipend of 3000 livres ; and, in 1636, he was sent to Cologne, to assist at the treaty of peace negociating there, on

the part of France, by the cardinal of Lyons. This treaty being removed to Munster, Gothofred was sent thither, where he drew up memoirs on the sub- ject ; and continued in that city, in the king's service, to his death in 1649. His principal work is his Account of the Ceremonial of the Kings of France.

Gothofred (James), brother of Theodore, was born at Geneva in 1587. Applying him- self to the study of the law, he obtained the professor's chair there, and was made counsellor of the city, and was several times in France, Germany, Piedmcnt, and Switzerland, to nego- ciate the affairs of the republic. He died in 1562; and his chief work is his Codex Theodo- sianus, cum perpetuis commentariis, &c.

Gothofred (Denis), son of Theodore, was born at Paris in 1615. He studied history after his father's example ; became as eminent in that department of knowledge ; and obtained the reversion of his father's place of historiographer royal, from Louis XIII., when he was but twenty-

five years of age. lie published his father's Ceremonial of France ; finished his Memoirs of Phihp de Commines ; and was preparing a History of Charles VIII., when he died in

1681.

GOTHS, a warlike nation, famous in the Ro- man history, who came originally out of Scandi- navia, the name given by the ancients to Sweden, Noi-way, Lapland, and Finmark. According to the most probable accounts, they were the nrst inhabitants of those countries ; and thence sent colonies into the islands of the Baltic, the Cimbrian Chersonesus, and the adjacent places. The time of their first settling in Scandinavia, and or their first peopling the above-mentioned islands and Chersonesus, are equally uncertain ; though the Gothic annals state the latter to have happened in the time of Serug the great-grand- father of Abraham. The first migration of the Goths is said to have been conducted by their king Eric ; in which all the ancient Gothic chronicles, as well as the Danish and Swedish ones, agree. Their second migration is said to have happened many ages after ; when, being overstocked with people, Berig, then king of the Goths, went out with a fleet in quest of new settlemenls. lie landed in the country of the Ulmerugians, now Pomerania, drove out the ancient inhabitants, and divided their lands among his followers. He fell next upon the Vandals, whose country bordered on that of the Ulmerugians, and overcame them ;

but, instead of forcing them to abandon their country, he only made them share their possessions with the Goths. The Goths, who settled in Pomerania and the adjacent parts of Germany, being greatly increased, undertook a third migration in great numbers under Filimer the Great, their fifth prince after leaving Scandi- navia; and, taking their route eastward, entered Scythia, advanced to the Cimmerian Bosphorus, and, driving out the Cimmerians, settled near the Palus jMaeotis. Thence, in process of time, being greatly increased in Scythia, they resolved to seek new settlements ; and accordingly, taking their route eastward, they traversed several coun- tries, and at length returned into Germany. Their leader in this expedition was tlie celebrated Wodei). See Odin and Woden.

At what time Woden reigned in this country, is quite uncertain ; but all historians agree, tliat he went in quest of new settlements with incre- dible numbers of people following him. He first entered Roxolania, comprehending the coun- tries of Prussia, Livonia, and a great part of Aloscovy : thence he went by sea into the north parts of Germany; and, having reduced Saxony and .Jutland, he at last settled in Sweden, where he reigned till his death, and became so famous that his name reached all countries, and he was by the northern nations worshipped as a god. He is said to have brought the Ilunic characters out of Asia, and to have taught the northern nations the art of poetry ; whence he is styled the father of the Scaldi or Scaldri, their poef.s, who descrilied in verse the exjiloits of the great men of their nation, as the bards did among the (Jauls and Britons. The Romans distinguished tlie Goths into two classes ; the Ostrogotlis and Vol. X.

Visigoths. These names they received before they left Scandinavia ; the Visigoths being soft- ened by the Latins from Westerogoths, or tliose who inhabit the western pan of Scandinavia, as the Ostrogoths were those who inhabited the eastern part of that country. Their history aftbrds nothing of importance till the time of their quarrelling with the Romans; wiiich hap- pened in the reign of Cai'acalla. After that period it becomes so closely interwoven wiCi that of the Romans that, for the most remarkable particulars of it, we must refer to the article Rome. After the destruction of the Roman empire, by the He- ruli, the Ostrogoths, under Theodoric, became masters of the greatest part of Italy, having over- come and put to death Odoacer king of the lleruli in 494. They retained their dominion in this country till A. D. 553 ; when they were finally conquered by Narses, Justinian's general : see Italy. The V^isigoths settled in Spain, in the time of Honorius, where tiiey founded a kingdom which continued till the country was subdued by the Saracens. See Spain. The Goths were famous for their hospitality and kindness to strangers, even before tliey em- braced Christianity. Nay, it is said, that from their being eminently good, they were called Goths, by the neighbouring nations ; that name, according to

Grotiijs and most other writers, being derived from the German word goten, which signifies good. They encouraged, says Dio, the study of philosophy above all other barbarous or foreii;n nations, and often chose kings from among their philosophers. Polygamy was not only allowed but countenanced among them; every one being valued or respected ac- cording to the number of his wives. By so many wives they had an incredible number of children, of whom they kept but one at home, sending out the rest in quest of new settlements; and hence those swarms of people wiiich over-ran so many countries. With them adultery was a capital crime, and irremissibly punished with death. Polygamy prevailed among them when they were known to the Romans only by the name of Getes (their most ancient name); as appears from tlie poet Menander, who was him- self of that nation ; and from Horace who greatly commends the chastity of their women. Their laws fell little short of those of the ancient Ro- mans. Their government was monarchical ; their religion was much the same with that of the an- cient Germans or Celtes ; and their dress is de- scribed by AppoUinaris Sidonius in the following words: They are shod, says he, with high shoes made of hair, and reaciiing up to their ankles; their knees, thighs, and legs, are without any covering ; theirgarments of various colors scarce'y reaching to the knee ; their sleeves only cbver the top of their arms; they wear green cassocks with a red border ; their belts hang on their shoulder ; their oars are covered with twisted locks ; they use hooked lances and missile wea- pons.

GOTTENBURG, or GoxHENBURr,, is an im- portant town of Sweden, standing on a marsh interspersed with ridges of rock rising from 100 to .300 feet in height. The town occupies t'ne plain, and one of the ridges on the west sidej

•y which it is divided into upper and lower. The houses are built upon piles. Great harbour runs from east to west, and divides the town into two nearly equal parts ; it consists of well-built houses of three stories high, and is crossed at right angles by two other principal streets. Seve- ral of the streets of Gottenburg are traversed by canals, bordered with trees. The Upper Town, has an imposing appearance, the houses rising one above anotlier in the form of an amphithe- atre ; and the streets being wide and clean, but without any side pavement. The houses are generally built of stone or brick, and are large, having pillars in front, and flat concealed roofs. The fcircumference, exclusive of the suburbs of Ilaga, is about three miles. The public edifices of Gottenburg are the exchange, the extensive buildings belonging to the East India Company, an hospital, and a magnificent

church built since 1812, with stones from Scotland. The only cu- riosities are a few private collections of paint- ings.

The harbour is the best situated for foreign trade of any in Sweden, and is formed by two long chains of rocks. It is about a quarter of a mile in breadth, commodious for vessels of mo- derate size ; and has a fort on a small rocky island at the entrance. Gottenburg ranks next to Stockholm, as a trading town ; the principal manufactures are coarse linen, and woollen stuffs, sail-cloth, ropes, some silk and cotton goods, soap, tobacco, and sugar refining. Its mercantile transactions extend to America and tlie Indies: but a very large connexion is kept up with Scotland. Iron and steel, furnished by the mines of Warmeland, are the principal articles of export ; and after these, linen, timber, tar, train oil, alum, and herrings.

Gottenburg is the seat of the Sv?edish East India Company; and a Greenland whale fishery was set on foot in 1775. The number of vessels belonging to the port is upwards of 250 ; that of vessels of all nations that enter it annually, about 1000. This port flourished greatly during the exclusion of the English from tiie continental ports, when it was a depot of British as well as Baltic goods. It has a large provincial school, a mercantile academy, and an academy of sciences and litera- ture, and the English language is pretty gene- rally spoken. It is the see of a bishop, the seat of a chamber of manufactures, and of various courts of justice.

Charles IX., when duke of Gothland, in 1607 founded a town of this name on the island of llisingen; it was, however, destroyed by the Danes in 1611, and was rebuilt by Gustavus Adolphus in its present position. Few places have suffered more from fire ; two calamities of this kind took place in December 1802 and No- vember 1804 ; by the former, 179 houses and the cathedral were burned down, and the latter consumed upwards of 200 houses, the barracks and several granaries. The fortifications have been lately demolished. The province com- prises the adjacent country, (part of West Goth- land) to the extent of 760 square miles. The town contains about 25,000 inhabitants. Forty miles south of Uddevalla.

GOTTINGEN, a province of the south of

Hanover, bounded by Brunswick, Hildesheim, the Prussian stales, and Hesse-Cassel. It in- cludes several distmct tracts of country, viz. the quarter of Gottingen, the principality of Gru- benhagen, Elbingeroda, Ilohenstein, the baili- wics of Plesse, and Gleichen, with a small por- tion of the Eichsfeld, lately ceded by Prussia. Its superficial extent is 1225 square miles, and its population (chiefly Lutherans) 176,000. The eastern side includes thellartz and the adjoining mountains, and is cold. The Weser forms its boundary on one side, and it is also watered by the Leine and the

Ilhume. This province abounds in flax, tobacco, and fruit, and grows some litde corn : it has extensive pasturages and forest lands, and contains all the mmes of silver, copper, lead, and iron in the kingdom. The country is now divided into bailiwics and juris- dictions, like the rest of Hanover.

Gottingen, the capital of the above province, stands in a valley on a canal branching from the Leine, at the foot of the Haimberg Mountain. The streets are wide and well paved, and lighted at night ; and its situation is healthy. It was formerly fortified ; but the walls are demolished, or laid out in walks, which command a pleasant prospect. Gottingen was, some centuries ago, included in the list of Hanse towns ; but its cliief title to notice arises from its university founded by George II. in 1734. It is on a nobly comprehensive plan, embracing divinity, philosophy, law, and medicine. The number of professors is unlimited, and generally exceeds forty.

A lively modern traveller gives the following picture of this university and some of its most distinguished literati : —

'Gottingen, though not yet 100 years old, has already exhibited more celebrated men, and done more for the progress of knowledge in Germany, than any other similar institution in the country, Meyer, Mosheim, Michaelis, and rieyne, are names not easily eclipsed ; and, in the present day, Blumenbach, Gauss, whom many esteem second only to La Place, Hugo, Hieren, and Sartorius, fully support the pre- eminence of the Georgia Augusta. Europe has placed Blumenbach at the head of her physiolo- gists ; but, with all his profound learning, he is in every thing the reverse of the dull, plodding, cumbersome, solidity, which we have learned to consider as inseparable from a German savant — a most ignorant and unfounded prejudice. Gbthe is the greatest poet, Wolflˆ the greatest philologist, and Blumenbach the greatest natural historian of Germany ; yet it would be difficult to find three more jocular and entertaining men. Blumenbach has not an atom of academical pe- dantry or learned obscurity about him ; his con- versation is a series of shrewd and mirthful re- marks on any thing th.at comes uppermost, and such likewise I have heard it said, is sometimes his lecture. Were it not for the chaos of skulls, skeletons, mummies, and other materials of his art, with which he is surrounded, you would not easily discover, unless you brought him pur- posely on the subject, that he had studied natural history. He sits among all sorts of odd things, which an ordinary person would call lumber

and which even many of those who drive his own science could not make much of; for it is one of Blumenbach's excellencies, that he con- trives to make use of every thing, and to find proofs and illustrations where no other person would think of looking for them. By the side of a drawing which represented some Botocuda Indians, with faces like baboons, cudgelling each other, hung a portrait of the beautiful Agnes of Mansfeld. A South American skull, the lowest degree of human confirmation, grinned at a Grecian skull, which the professor reckons the perfection of crania. Here stood a whole mummy from the Canary Islands, there half a one from the Brasils, with long strings through its nose, and covered with gaudy feathers, like Papageno, in the magic flute. Here is stuck a ne- gro's liead, there lies a Venus, and yonder reclines, ill a corner, a contemplative skeleton, with folded hands. Yet it is only necessary to hear the most passing remarks of the professor, as you stumble after him through this apparent confu- sion, to observe how clearly all that may be learned from it is arranged in his head, in his own scientific combinations. The only thing that presented external order, was a very com- plete collection of skulls, showing the fact, by no means a new one, that there is a gradual progres- sion in the form of the skull, from apes up to the most generally received n^odel of human beauty. ' Do you see these horns V said he, searching among a heap of oddities, and drawing forth three horns, ' they were once worn by a woman. She happened to fall and break her head ; from the wound sprouted this long horn ; it continued to grow for thirty years, and then she cast it; it dropped off; in its place came a second one; but it did not grow so long, and dropped ofi' too. Then this third one all on the same spot; but the poor woman died while the third was grow- ing, and I had it cut oft' from tlie corpse.' They were literally three genuine horns. The last two are short, tiiick, and nearly straight; but the first is about ten inches long, and com- pletely twisted, like the horn of a ram. It is round and rough, of a brownish color, and fully half ail incli in diameter towards the root. All tliree are hollow, at least at the base. The ter- mination is blunt and rounded. Otlier instances of the same tiling have been known, but always in women ; and Blumenbach says it has been ascertained, by chemical analyses, that such horns have a greater affinity, in their composition, with the horns of the rhinoceros, than with those of any other animal.

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•The pre-eminence of Gottingen is equally founded in the teachers and the taught. A Got- tingen chair is the higliest reward to which a Germant savant aspires, and to study at Gottin- gen is the great wish of a German youth. There are good rea-

*the different helps to study — the library, the ob- servatory, the collections of physical instruments, and the hospitals — not as costly, but as useful as possible. It has never adopted the principle of bribing great men by great salaries, a principle naturally acted on in those universities which possess no other recommendation than the fame of the teachers. It has chosen rather to form and organise those means of study which, in the hands of a man of average talent (and such are always to be had) are much more generally and effectively useful, than the predilections of a per- son of more distinguished genius when deprived of this indispensable assistance. The professors themselves do not ascribe the rapidly increasing prosperity of the university so much to the repu- tation of distinguished individuals who have filled so many of its chairs, as to the pains which have been taken to render these means of improvement more perfect than they are to be found united in any sister seminary. * Better show-collections,' said professor Hieron very sensibly, ' may be found elsewhere ; but the great recommendation of ours is, that they have been made for use, not for show ; that the stu- dent finds in them every thing he would wish to see and handle in his science. This is the true reason why the really studious prefer Gottingen, and this will always secure our pre-eminence, independent of the fame of particular teachers ; the latter is a passing and changeable thing, the former is permanent.' Above all, the library is a great at- traction, both to tlie teacher and the learner. It is not only the most complete among the universities, but there are very few royal or public collec- tions in Germany which can rival it in real utility. It is not rich in manuscripts, and many otlier libraries surpass it in typographical rari- ties, and specimens of typographical luxury ; but none contains so great a number of really useful books m any given branch of knowledge. The principle on which they proceed is, to col- lect the solid learning and literature of the world, not the curiosities and splendors of the printing art. If they have twenty pounds to spend, instead of buying some very costly edi- tion of one book, they very wisely buy ordinary editions of four or five. When Ilcyne undertook the charge of the library, in 17G3, it contained 60,000 volumes, lie established the prudent plan of increase, which has been followed out with so much success, and the number is now nearly 200,000. They complain much of the expense of English books. No compulsory measures are taken to fill the shelves, except that the booksellers of Gottingen itself must deliver a copy of every work wliich they publish.' JR?/s- sell's Tour in Germany.*

A new observatory at Gottingen, which was some years since begun under

the direction of the cele- brated J\I. Gauss, is now provided with fixed instruments of high perfection, viz. a meridian circle by llepsold ; and another meridian circle and transit instrument by Reichenbach. These instruments are so perfect, that the two last show, under favorable circumstances, at noon, stars of the fourth or even of the fifth magnitude. A regular course of observations is carried on at the observatory

There are in Gottingen four Lutheran and two Calvinist churches; a Catholic chapel, and some manufactures of linen and woollen. The town has twice been in the possession of the French, viz. from 1757 to 1762, and from 1803 to 1813. A serious difference took place be- tween the students and the inhabitants of the town in October 1818; the government took part with tlie latter, and, though some diminu

tion took place in the number of students, it was by strengthening the strokes, according to the

considered as only temporary. Inhabitants, ex- usual method, but by crossing them with ad-

clusive of students and military, 8500. Twenty- ditional strokes, equally neat, five or six times,

one miles north-east of Cassel, and fifty-one one over another, in the deep shadows. The

E. S. E. of Paderborn. weeds and other parts of the fore ground, in his

GOTTO, a country of Central Africa, to the admirable print of Ceres, are very finely ex- south of the Niger, between Bambarro and Tom- pressed. The seven prints mentioned above, are buctoo. It was formerly divided into

death happeninc; in 1G39. It is remarkahie that, though lost to every other subject, when painting was spoken of he would discourse upon it in a very rational manner. lie engraved seven beautiful prints after the pictures of Elsheimer, which are well known to the curious, and are to be met w'ith in most choice collections. He worked with the graver only, in a very neat style ; and produced a most powerful effect, not

of students and military, 8500. Twenty- ditional strokes, equally neat, five or six times,

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GOTTO, a country of Central Africa, to the admirable print of Ceres, are very finely ex- south of the Niger, between Bambarro and Tom- pressed. The seven prints mentioned above, are buctoo. It was formerly divided into

a number 1. Ceres drinking from a pitcher. An old woman of small states dependent upon Bambarra ; but appears holding a candle at the door of the cot- a chief of the name of Mossee succeeded in tage, and a boy naked standing by her laughing uniting these, and forming them into a general and pointing at the goddess; for which con- confederacy, with which he earned on a success- tempt he was metamorphosed by her into a frog ful war against Bambarra, and Gotto has since The powerful and striking effect of this engaving been an "independent state. The capital is cannot be properly described. This print is called Moosseedoo, from the name of the above- also called the sorcery. 2. The flight into mentioned chief.

GOUANIA, in botany, a genus of the mcnce- cia order, polygamia class of plants : cal. of the hermaphrodite quinquefid : cor. none ; there are five antherae covered with an elastic calyptra or hood : the style trifid ; the fruit inferior to the

Egypt; a night scene, in which the moon and stars are introduced with great success. 3. The angel with Tobit, who is drawing a fish by his side. The back ground is a landscape; the weeds in the fore ground, and the brandies of the trees in front, as well as the foliage and weeds

receptacle of the flower, divisible into three hanging from them, are beautifully expressed.

SEEDS. The make is like the hermaphrodite, 4. The angel with Tobit, crossing a stre_am of

but wanting st gma and germen

only ; a native of St. Domingo.

GOUDA, or Ter Gouw, a town of South

Holland, on the Issel, where that river receives

the Gouw. It has large manufactures of pnrce-

Species one water: the back ground a landscape. 5. Baucis and Philemon entertaining Jupiter and Mercury. 6. A landscape called the Aurora, representing the dawn of day. 7. The beheading of St. John in prison, a very small upright oval print.

lain and tobacco-pipes, and a commodious port which is by far the most scarce

on the Issel, its situation being central for the communication between

Holland, Zealand, and Belgium. Gouda is surrounded with ditches of great depth and width, and can, by means of its sluices, lay the whole surrounding country under

To GOVE, to mow ; to put in a gove, goff, or mow. An old word.

Load safe, carry home, follow time being fair, Goue just in the barn, it is out of despair. Tusser.

GOVEA (Antony), a Latin poet and critic of

water. The most accessible point is on the side the sixteenth century ; author of Latin Epigrams,

of the Issel ; but this is defended by a strong battery. The cliurch of St. John the Baptist is handsome, and is particularly celebrated for its painted glass windows. The market place is of a triangular form, with a handsome town-house, ■built in 1449. Population 12,000. Nine miles north-east of Rotterdam, and twenty-two south of Amsterdam-

G(JUDT (Henry), usually called count Goudt, was born of a noble family at Utrecht, in 1570: and was kniojht of the Palatinate. Being

which have been admired. His editions of Virgil and Terence display great judgment and critical accuracy. He died in 1613.

GOVERN, v.a.kˆv.n.

Gov'ernable, adj.

Gov'ernance, n. s. Govern an'te, n.s. Gov'erness, n. s. Gov'ernment, n. s.

Gov'ERNOR,n. s.

Goveunaille', n.

Fr. gouverver, gouvernante ; Lat. guberno ; all of Gr. Kvj3ipvaw, a (cv/3j/, the head ; Belgic govnerneren ; Span, and ˆor..governan. j Our words are prin-

fond of painting and engraving, he applied him- cipally formed from the French gouverner with self diligently to drawing, and made a great pro- different terminations. The primary idea is su-

ficiency therein. He then went to Rome, where he contracted an intimacy with Adam Elsheimer, studied his style, and made his works models for imitation. Those pictures which Goudt him- self painted were delicately

touched, in color and pencil resembling Elsheimer. On iiis return ro Utrecht, a young woman who was in love with him, and desirous of fixing his affection upon herself, gave him a philter, which terminated in a very melancholy manner, by depriving him of his senses ; and in this dreadful state he dragged

periority either in position or agency, and this is the key to each word, whether referring to com- munities or individuals. It also implies self-ma- nagement as to body or mind ; influence of words on each other with regard to construction ; a pilot, regulator, or manager of ships, &c.; a lady who has the care and superintendance of young ladies of quality.

For the kingdom is the Lord's, and he is the gover- nor among the nations. Ps. xxii. 28.

Behold all the ships, which though they be so great.

on a miserable life to the age of sixty-nine, his and are driven of fierce winds, yet they are turneU

about with a very small helm, whithersoever the go- vernor listelh. Jas. iii. 4.

Jonathan took the governance upon him at that time, and rose up instead of his brother Judas.

1 Mac. ix. 31. Ye han well and convenably taught me, as in gene- ral how I shal goveriie me in he chasing and in the witholding of my conseillours.

Chaucer. The Tale of Mclibew. Aurelian when that the governance Of Rome came into his hondes twey,

He shope upon this quene to do vengeance. And with his legions he toke his way

Toward Zenobie. Id. The Monkes Tale. Beth not bedaffed for your innocence. But taketh on you the governaile.

Id. The Merchantes Tale. Great afBiction that severe governess of the life of man brings upon the soul she seizes on.

More against Atheism. No government can do any act to limit ittelf : the supreme legislative power cannot make itself not to be absolute. Lesley.

During the minority of kings, the election of

bishops, and other affairs of the church, must be left

in the hands of their governours and courtiers. Id.

He likest is to fall into mischance

That is regardless of his governance.'

Spenser, Their god Shot many a dart at me with fierce intent ; But I them warded all with wary government. Id. This inconvenience is more hard to be redressed in the governor than the governed ; as a malady in a ^\ ital part is more incurable than in an external.

Spenser on Ireland. It must be confessed, that of Christ, working as a creator and a governowr of the world by providence, all are partakers. Hooker.

Thy eyes windows fall. Like death, when he shuts up the day of life ; Each part deprived of supple government. Shall stiff and stark, and cold appear, like death.

Shaktpeare. What ! shall king Henry be a pupil still. Under the surly Gloster's governance ? Id.

You needs must learn lord, to amend this fault ; Though sometimes it shows greatness, courage, blood. Yet oftentimes it doth present harsh rage. Defect of manners, want of government. Pride, haughtiness, opinion, and disdain. Id.

To you,, lord governowr. Remains the censure of this hellish villain. Id. To Eltam will I, where the young king is, eing ordained his special governour ; And for his safely there I'll best devise. Id.

The moon, the governess of floods. Pale in her anger, washes all the air. That rheumatick diseases do abound. Id.

Go after her, she's desperate ; govern her. Id,

They that govern most make least noise. You see when they row in a barge, they that do drudgery work, slash, and puff, and sweat ; but he that governs sits quietly at the stern, and scarce is seen to stir.

SiUen, There they shall found Their government, and their great senate chuse Through the twelve tribes, to rule by laws ordained.

Milton. With Boyntou or with Middleton 'twere sweet. But with a parliament abhors to meet, And thinks 'twill ne'er be well within this nation Till iihe governed by a convocation. Marvcll.

Whipping, that's Virtue's governess, Tut'ress of arts and sciences. Hudibras.

He presented himself unto her, falling down upon both his knees, and holding up his hands, as the old governor of Danae is painted, when she suddenly saw the golden shower Sidney.

Safety and equal government are things Which subjects make as happy as their kings.

Waller. Slaves to our passions we become, and then It grows impossible to govern men. Id.

There seem to be but two general kinds of gover)i- ment in the world : the one exercised according to the arbitrary commands and will of some single person ; and the other according to certain orders or laws in- troduced by agreement or custom, and not to be changed without the consent of many. Temple.

By that rule Your wicked atoms may be working now To give bad counsel, that you still xndiy govern.

Dryden. While he survives, in concord and content The commons live, bv no divison rent ; But the great monarch's death dissolves the govern- ment. Id. The great work of a governour is to fashion the carriage, and form the mind ; to settle in his pupil good habits, and the principles of virtue and wisdom.

Locke. The flexjbleness of the former part of a man's age, not yet grown up to be headstrong, makes it more govemuble and safe. Id.

I am at present against war, though i: puts the power into my hands, and though such turbulent and naughty spirits as you are, govern all things in times of peace. Davenant.

The magistrate cannot urge obedience upon such potent grounds as the minister, if so disposed, can urge disobedience : as, for instance, if my governour should command me to do a thing, or I must die, or forfeit my estate ; and the minister steps in and tells me, that I offend God, and ruin my soul, if I obej- that command, 'tis easy to see a greater force in this

persuasion. South.

Every one knows, who has considered the nature oi government, that there must be in each particular form of it an absolute unlimited power. Addison. Listen, children, unto me. And let this your lesson be. In our language evermore Words that govern go before.

Mauger's French Grammar. The chief point, which he is to carry always in his eye, and by which he is to govern all his counsels, de- signs, and actions. Atterbury.

Th?y beget in us a great idea and veneration of the mighty author and governour of such stupcnduous bodies, and excite and elevate our minds to his ado- ration and praise. Bentley.

Where any one person or body of men seize into their hands the power in the last resort, there is pro- perly no longer a government, but what Aristotle and his followers call the abuse or corruption cf one.

Swift. Those governments which curb not evils, cause ; And a rich knave's a libel on our laws. Young.

Another very important branch of self-knowledge is, the knowledge of those governing passions or dis- positions of the mind, which generally form what we call a man's natural temper. Mason.

Government is aV;o used for a post or office, which gives a person the power or right to nile over a city, or a province, either supremely or by fk'putal;i'ii.

Government is likewise used for the city, country, or place to wliich the power of govern- ing is extended.

Government, Civil, was instituted for the preservation and advancement of men's civil in- terests, and for the better security of their lives, liberties, and properties. The use and necessity of government is such, that there never was an age or country without some sort of civil autho- rity': but, as men are seldom unanimous in the means of attaining their ends, so their difference in opinion as to government has produced va- rious forms of it. According to Montesquieu, and most other writers, they may in general be

reduced to three kinds: 1. The republican; 2. The monarchical; 3. Tiie despotic. The iirst is that in which the people in a body, or only a part of the people, have the sovereign power ; the second, where one alone governs, but by fixed established laws; but third, in the despotic go- vernment, one person alone, without law and without rule, directs every thing by his own will and caprice. See Law. On the subject of go- vernment at large, see Montesquieu's Spirit of Laws, 1. 2, c. 1; Locke, ii. 129, &.c. 4to. edit. 1768: Sidney on Government; Sir Thomas Smith de Repub. Ang. and Acherly's Britannic Constitution. As to the Gothic government, its original and faults, &c., see Montesquieu's L'Es- prit des Loix, 1. 11, c. 8. With respect to the feudal policy, how it limited government, see Feudal System.

GOUGE, w.s. Fr. A chisel having a round edge, for the cutting of such wood as is to be rounded or hollowed.

GOUGH (Richard), topographer and anti- quary, was the son of an East India director, and born in Austin Friars, London, in 1735. Edu- cated at home, his mother had printed a transla- tion from the French of a history of the Bible, made by him when he was only eleven years old. At the age of fifteen Gough translated Fleury's works on the Manners of the Israelites. In 1762 he entered at Benet College, Cambridge, and during the time be remained at the university he laid tlie plan of his Anecdotes of British Topo- graphy, it was published in one volume 4to. in 1768, and reprinted with improvements in 2 vols. 1780. He left Cambridge without taking a degree, and engaged in no profession. He was a fellow of the Society of Antiquaries, and in the Archi3eologia, or Transactions of that Society, as well as in the Bibliotheca Topographica Britan- nica, and the Gentleman's Magazine, he publish- ed many communications. He also produced Sepulchral Monuments of Great Britain, 1786, 2 vols, folio ; an enlarged edition of Camden's Britannia, 1789, 3 vols, folio; and one still more augmented in 4 vols. 1806; an Account of the Bedford Missal ; and the History of Pleshey in Essex. He died at Enfield, February 20 1809, and bequeathed to the Bodleian library at Oxford his collection of books and manuscripts, relative to Saxon and Northern literature and to British topography.

GOUJET (Claude Peter), a French writer of some note, was the son of a tailor, and born at Paris in 1697. He was educated by the Jesuits; and on taking orders became a canon of the church of St. Jacques de I'Hopital. His

works are numerous, and display considerable erudition; the principal are — L'Histoire du Col- lege Royal de France, 12mo.; Hist, du Pontificat de Paul v.. in which he is by no means favor- able to the Jesuits ; Les Vies des Saints, 2 vols. 4to. ; Supplement to Moren's Dictionary, dis- playing much industry but little judgment; De I'Etat des Sciences en France, 12mo.;

Bibliothe- que des Auteurs Ecclesiastiques du XVIII Sibcle, 3 vols. 8vo.

GOULART (Simon), a minister of Geneva, born at Senlis in 1543, and one of the most in- defatigable writers of his time. He made consi- derable additions to the ‘ Catalogue of Witnesses of the Truth’ composed by lUyricus ; and ac- quired a great reputation by his works : the prin- cipal of which are, 1. A translation of Seneca. 2. A collection of memorable histories. 3. A translation of St. Cyprian de Lapsis. 4. Se- veral devotional and moral treatises. He died at Geneva in 1628.

GOUNVILLE (John Herauld), a French au- thor, born in 1625, originally only a valet to the duke of Rochefoucault, who advanced him to several high offices. He wrote Memoirs, con- taining important anecdotes of the French minis- ters, from Mazarine to Colbert. He died in 1705, aged eighty.

GOUR, or Gaur, the ancient capital of Ben- gal, is situated in the district of Rajemal, a few miles south of the town of Maulda.

The ruins extend fifteen miles along the old banks of the Ganges, and are from two to three miles in breadth. Several villages stand on a part of its site ; the remainder is covered with thick forests — the resort of tigers, and beasts of prey, or it has become arable land, the soil of which is largely mixed with brick-dust. The principal buildings are a rrosque lined with black marble, elaborately wrought, and two gates of the citadel, which are grand and lofty. ‘The bricks, which are of a most solid texture, are often car- ried away to Moorshedabad, Maulda, and other places.

No part of this site of Gour is nearer to the present bank of the Ganges than four miles and a half, and some parts, which were originally washed by that river, are, according to Mr. Ha- milton, now twelve miles from it. A stream that runs past it communicates with its west side, and is navigable during the rainy season. On the east, and in some places within two miles, it has the Mahanuddy River which communicates with the Ganges, and is always navigable.

‘Gaura, or, as it is commonly called, Bengali, is the language spoken in the provinces of which the ancient city of Gour was the capital. It still prevails in all the provinces of Bengal, excepting some frontier districts, but is spoken with the greatest purity in the eastern parts only. Al- though Gaura be the name of Bengal, yet the Brahmins, who bear that appellation, are not inhabitants of Bengal, but of Hindostan Proper. They reside chiefly in the province of Delhi, while the Brahmins of Bengal are avowed colo- nists from Kanoge. When Mahommed Bukh- tyar Khilligee conquered Bengal, A. D. 1204, he established the tlien ancient city of Gour as the capital of his

dominions. Rajah Lackmanvah, the last Hindoo sovereign whom he expelled,

held his court at Nuddea. In 1535 the emperor Hamayoon, when in pursuit of Shere Khan, the Patan (who afterwards expelled him from liin- dostan), took Gour, then the capital of Bengal. Ferishta says, that the seat of government was af- terwards removed to Taunda, or Taura, a few miles higher up, on account of the unhealthiness of the climate.' Hamilton's East India Gazet- teer.

GOURD, 71. i. > Fr.gouhorde. A plant.

GouRDiNESS, n. s. S The fruit of some species are long, of others round, or bottle-shaped. A bottle, from old Fr. gourt. — Skinner. The large fruit so called is often scooped hollow, for the purpose of containing and carrying wine, and other liquors : from thence any leathern bottle grew to be called by the same name, and so the word is used by Chaucer. Gourdiness, a swel- ling in a horse's leg after a journey.

And wete ye — what ? I have here in lay gourd A draught of win, ye of a ripe grape

To the Manciple he toke the ˆourd again. And of that drinke the coke was wonder fain. And thouked him in swiche wise as he conde.

Chaucer, The Manciples Tale.

But I will haste, and from each bough and brake. Each plant and juiciest gourd, will pluck such choice To entertain our angel guest.

Milton's Paradise Lost.

Gourd seeds abound so much in oil, that a sweet and pleasant one may be drawn from thence by ex- pression ; they are of the four greater coid seeds, and are used in emulsions. HilL

Gourd, in botany. See Cucurbita.

Gourd, Bitter. See Cucumis.

Gourd, Ethiopian Sour. See Adansonia.

Gourd Tree. See Crescentia.

GOURNAY (Mary le Jars de.) a celebrated French lady, was born at Paris in 1566. Losing her father, she was adopted by Montaigne while very young, who called her his daughter of alli- ance. She was well versed in the languages ; and has been styled the ‘ French syren.’ Her style however was stiff, and deformed by ancient phraseology. Her temper also was somewhat acrid ; and she made herself many enemies. She published an edition of the Essays of her foster father, dedicated to cardinal Richelieu. Her own works were published in a quarto volume, under the title of Les Airs, ou les Presens de la iJemoiselle de Gournai. She had a small pen- sion from the French court, and died in 1645.

GOUSSET, a French protestant minister, born at Blois, in 1635. He left France on the revocation of the edict of Nantz, arvd went to Holland, where he became professor of Greek and theology at Groningen. He died there, in 1704. He wrote Commentarii Linguae Hebraicse, and several other works.

GOUT, n. s. -ˆ Fr. goufe; Ital., Span.,

Gout’wort, n. s. > and Port, gotta, gota, from

Gout’y, adj. J Lsit.gntta, a drop, from its

being supposed to originate in humors of the joints. A periodical disease, attended with severe pain ; an old word signifying drops, still used in Scotland ; an affected word (for gout), implying taste ; a herb, so named ; the state of parts, or a constitution predisposed to the disease.

One that’s sick o’ the gaut, had rather Groan so in perplexity, than be cured By the sure physician death.

Shakspeare. Cymbeluxc. I see thee still. And on the blade o’ the dudgeon guuts of olood. Which was not so before. Id. Macbeth.

There dies not above one of a “thousand of the gout, although I believe that more die goutg. Graunt.

Knots upon his gouty joints appear. And chalk is in his crippled fingers found.

Dry den. Thij very reverend lecher, quite wora out With rheumatisms, and crippled with his ˆoai. Forgets wliat he in youthful times has done. And swinges his own vices in his son. Id.

Catalogues serve for a direction to any one that has a, gout for the like studies. Woodward on Fossils.

There are likewise other causes of blood-spitting ; one is the settlement of a gouty matter in the substance of Ihe lungs. Blackmnre.

The gout is a disease which may affect any mem- braneous part, but commonly those which are at the greatest distance from the heart or the brain, where the motion of the fluids is the lowest, the resistance, friction, and stricture of the solid parts tho greatest, and the sensation of pain, by the dilaceration of the nervous fibres, extreme. Arbuthnot on Diet.

Most commonly a gouty constitution is attended with great acuteness of parts, the nervous fibres, both in the brain and the other extremities, being delicate.

Id. Business would have carried my wife to Bath by this time, had she not been seized with a fit of the gout when she was ready to set out; but I hope this will not retard her many days. Warburton.

Gout. See Medicine.

GOWER (John), one of the most ancient English poets, was contemporary with Chaucer, and his intimate friend. He studied the law, and was some time a member of the society of Lin- coln's Inn. Some have asserted tliat he was a judge. In the first year of Henry IV. he became blind, which he laments in one of his Latin poems. He died in 1402; and was buried in St. Mary Overy's, which church he had rebuilt chiefly at his own expense, so that he must have lived in affluent_ circumstances. His tomb was magnificent, an'd' curiously ornamented. It still remains, buthas been repaired in later times. From the collar of SS round the neck of his ef- figies, which lies upon the tomb, it is supposed that he had been knighted. He wrote, 1. Spe- culum Meditantis, in French, in ten books. There were two copies of this in the Bodleian library. 2. Vox Clamantis, in Latin verse, in seven books. Preserved also in the Bodleian li- brary, and in that of All-souls. It is a chronicle of the insurrection of the commons in the reign of Richard II. 3. Confessio Amantis ; printed at Westminster by Caxton, in 1493, London 1532, 1545. It is a sort of poetical system of morality, interspersed with a variety of moral tales. 4. De rege Henrico IV.; printed in Ciiaucer's works. There arelikewise several his- torical tracts, in MS. written by our author, which are to be found in different libraries ; also some short poems printed in Chaucer's works.

Gower's Harbour, a bay on the south-west coast of New Ireland, five miles north of cape St. George. It is by Boug->")viUe called Praslin

oo. j^oug. yi ^o XL,., lai. zo lu i. SOWN, n. s. -N Teut. gowne ; Welsh

[jOwn'ed, a(f;. fgtvn; Ital. gonna; Fr. Sown'man, or igowweWe: all probably 3own's'-man, ra. s. 'from Gr. yovu, genu, the

Bay (Bale de Praslin), and by Dampier St. George's Bay. Long. 1;')0" 40′ E., lat. 4° 50′ S.

Gower's Island, so called by captain Carteret, an island in the eastern seas, called, by Monsieur Surville, Inattendue. It is of a figure resembling an arrow, and is low and covered with wood. Carteret could discover no anchorage. Long. 158" 56′ E., lat. 7° 56′ S.

GOWGATCHY, the name of two towns in Bengal.

GOWHATTY, the capital of Lower Assam, Hindostan, The surroundmg district occupies an extent of hilly country on both banks of the Brahmapootra; and the hills on each side form a spacious amphitheatre, well fortified both by na- ture and by art. In the seventeenth century this place was the western frontier of Assam, all the country on this side being included in Kamroop. Gowhatty was taken byAurungzebe in the year 1663. Long. 91° 46′ E., lat. 26° 10′ N.

GOWN, n. s. -J Teut. gowne ; Welsh

Gov

Gow >

G(knee : because originally a garment only reaching to the knees. An upper or loose garment of male or female ; used in a particular sense for the ordinary outward garment of females and the professional dress of students and the dif- erent faculties : a dress of peace as distinct from war.

The benefices themselves are so mean in Irish counties, that they will not yield any competent maiu- tenance for any honest minister, scarcely to buy him a gutvn. Spenser on Ireland,

A noble crew about them waited round

Of sage and sober peers, all gravely gowned.

Spenser.

If ever T said a loosebodied gown, sew me up in the skirts of it, and beat me to death with a bottom of brown thread j I sf-.id a govm. ˆlakspeare.

They make garments either short, as cloaks, or, as <ˆoit)f?j, lono; to the ground. Abbot.

Girt in his Gabin gown the hero sat. Dryden.

In leni;th of train descends her sweeping gown. And by her graceful walk the queen of love is known.

Id.

He Mars deposed, and arms to gowns made yield ; Successful councils did him soon approve As fit for close intrigues as open field. Id.

In velvet white as snow the troop was gaumed. The seams with sparkling emeralds set around. Id. Let him with pedants

Pore out his life amongst the lazy gownmen.

Rowe.

I despise your new gown, "till I see you dressed in 't- Pope.

Thus will that whole bench, in an age or two, be composed of mean, fawning ˆotowmen, dependants upon the court for a morsel of bread. Swift.

Yet not superior to her sex's cares. The mode ,«he fixes by the gown she wears ; Of silks and china she's the last appeal ; In these great points she loads the common weal.

Young.

If Mr. Onslow will lay aside his privilege, I will lay aside my gown. Home Tooke.

The GowN is an ample sort of garment, worn over the ordinary clothes, hanging down to the feet. It is fashioned differently for ecclesiastics and for laymen. At Rome they gave the name

toga virillis, i. e. the virile gown, to a plain kind of gown which their youth assumed when arrived at puberty. This they particularly denominated prae-texta. See Toga, Pr.itexta, &c. In some universities, physicians wear a scarlet gown. In the Sorbonne, the doctors always are in gowns and caps.

Gown is also taken in the general for civil magistracy, or the profession opposite to that of arms. In this sense it wts that Cicero said, Ce- dant arma togae.

GOW RAN, a borough and post town of Ire- land, in the county of Kilkenny, three miles from Ballinabola castle, eiijht east of Kilkenny, and fifty-two from Dublin. It is governed by a por- trieve, recorder, and town clerk. Here are the ruins of un old church, and the handsome seat of the late lord Clifden. Long. 7° 0′ W., lat. 52° 34′ N.

GOYEN (John Van), painter of landscapes, cattle, and sea pieces, was born at Leyden in 1596 ; and was instructed by Isaac Nicholai, and afterwards by Esaias Vandervelde, the most celebrated landscape painter of his time. Van Goyen soon rose into general esteem ; and his works are more general throughout Europe than the works of any other master, as he pos- sessed an uncommon readiness of hand and free- dom of pencil. It was his practice to sketch the views of villages and towns on the banks of rivers or canals ; of the sea-ports in the low countries ; and sometimes of inland villages, where the scenes around them appeared picturesque. Those he afterwards used as subjects forhis landscapes; enriching them with cattle, boats, and figures in character. He understood perspective, and the chiaro-scuro, which enabled him to give his pic- tures a strong and agreeable effect. He died in 1656, aged sixty. — His best pieces are generally marked with his name and the year; and his fi- nished pictures will be for ever estimable. His pictures frequently have a grayish cast, occasi- oned by his using a color called Haerlem blue, then much approved but now disused, as it is apt to fade into that grayish tint. His best works are valued so hghly in most parts of Europe, that they afford large prices, being ranked with the pictures of Teniers. They are not now easily procured, if undamaged, though his slighter performances are sufficiently common.

GOZZO, a rocky but fertile island of the Mediterranean, to the north-west of Malta, to which it is attached. It is extremely populous; its superficial extent being only thirty-seven square miles, while the inhabitants amount to above 1 3,000. It contains the town of St. Borgo, the fort of Gozzo, and six villages. The fort is said to occupy the site of an ancient town built by the Phoenicians or Greeks ; there, are two smaller ones on the coast. This island was taken by the Turks in 1551, and attacked by them in vain in 1613, and 1709. The channel between it and Malta will admit with safety the largest men of war. The Fungus Melitoeus, well known in the medical world, grows on a rock here. It is also asserted, that veins of gold and silver are to be found ; as are cotton, corn, and all kinds of ve- getables.

Gozzo or Gafda, an island near Candia, the

ancient Clauda, which St. Paul past on his way to Home. To the west is Pulo Gozzo, or little Gozzo, a very small island. Long, 23° 46′ E., lat. 34° 48′ N.

GRAjVF Reynet, the most eastern district in the territory of the Cape of Good Hope, extend- ing from Stellenbosch and Drakenstein to Kaftre l^and, about 250 miles in length and 160 in breadth, and containing a surface of 40,000 square miles. The occupation here is entirely grazing, and the inhabitants have frequent skir- mishes with the neighbouring Kaffers and Bos- jesnians. In the centre of the district is the drosdy or chief town, about 500 miles E. S. E. of Cape Town. See Cape of Good Hope.

Graaf (Regnier de), a celebrated physician, born at Schoonhaven, in Holland, in 1641. He studied physic in Prussia, and was educated at Leyden, where he acquired great honor by pub- lishing a treatise De Succo Pancreatico. He also published three pieces upon the Organs of Generation, on which subject he had a controversy with Swamraerdam. He died in 1673, aged thirty-two ; and his works with his life prefixed were published at Leyden in 1677, in 8vo.

GRABE (John Ernest), a very learned writer in the beginning of the eighteenth century, born at Koningsberg in Prussia. He was educated in the Lutheran religion ; but the readmg of the fathers led him into doubts. He presented to the electorial consistory at Sambia in Prussia a memorial containing his doubts. The elector ordered three eminent divines to answer them. Their answers shook him in his resolution of embracing the Roman Catholic religion; and one of them, Spener, advised h>m to go England. He went; and king William IH. gavp him a pen- sion, which was continued by queen Anne. He was ordamed a priest of the church of England, and honored with the degree of D. D. by the univer- sity of Oxford ; upon which occasion Dr. George Smalridge pronounced two Latin orations, which were afterwards printed. He wrote, 1. Specile- gium S. S. Patrum, ut et Hereticorum, sseculi post Christum natum, Bvo. 2. An edition of the Septuagint, from the Alexandrian MS. in St. James's library. 3. Notes on Justin, &c. ; and other works, which are much and justly es- teemed.

GRAB'BLE, v.n. & v. a. Belg. grabbelen. See Grapple. To grope, feel eagerly with the hands : Dr. Johnson says after Ainsworth 'to lie prostrate on the ground," but supplies uo instance of the use of the word.

My blood chills about my heart at the thought of these rotJ:ucs, witb their bloody hands grabbling in my guts, and pulling out my very entrails.

Arbuthnot's John Bull.

GRACCHUS (Sempronius), the father of Tiberius and Caius. He was proconsul in Spain, subdued the Celtiberians, and rebuilt or repaired Gracchuris.

Gracchus (Tiberius and Caius). Tiberius, being tribune of the Roman people, demanded in their name the execution of the Agrarian law ; by which all persons possessing above 200 acres of land were to be deprived of the surplus, for the benefit of the poor citizens, amongst whom an equal distribution of them was tc be made.

Having carried his plan into execution by violent measures, he fell a victim to his zeal, being assas- sinated, A. A. C. 133. Caius his brother, pursu- ing the same steps, was killed by the consul Opimius, A. A. C. 121. See Rome.

GRACIAS A Digs, a city of Honduras, si- tuated on a river which communicates with the bay of that name. It has two convents ; and is 140 miles east of Guatimala. Long. 90ˆ 6′ W., lat. 14° 30′ N. It is also the name of a point of land on the coast of Costa Rica.

GRACE, n. s. & v. a. Graced, adj.

GraCe'cUP, 71. s.

Grace'ell, adj. Grace'fulness, n.s. Grace'less, adj. Gra'ces, n.s. Gra'cious, adj. Gra'ciously, adv. Gra'ciousness, n.s.

Fr. grace; Belgic. grade ; Erse, graace ; Span, gracia ; Latin gratia, of Greek xajˆtf (Minsheu). Favor; kindness; unmerited goodness ; benevolent

feeling ; agreeable form : applied also to J various expressions or

effects of favor or goodness, as mercy, pardon, privilege : and used emphatically, in a theological sense, for the unmerited favor of God and its con- sequences. To grace is to favor, adorn, or dig- nify : the graces were female goddesses supposed to bestow beauty : gracious is favorable, benig- nant, merciful. The meaning of the other com- pounds appears plain.

For what grace is it if ye aynnen and ben buffeted and suffren ? but if ye doon well and suffres pacientli, this is grace anentis god, for to this thing ye ben cle- pid. Wiclif. 1 Peter 2,

My hosbond had a legend of his wif Eriphile, that for an ouche of gold Uath prively unto the Greeks told M'hir that hire hosbond hidde him in a place. For which be had at Thebes sory grace.

Chaucer. Cant. Tales. Where justice grows, there grows the greater grace. The which doth quench the brand of hellish smart. –

Speruer. Doctrine is much more profitable and gracious by example than by rule. Id,

This graceless man, for furtherance of his guile. Did court the handmaid of my lady dear. Id.

This they study, this they practise, this they grace with a wanton superfluity of wit. Hooker.

It doth grieve me, that things of principal excel- lency should be thus bitten at by men whom God hath endued with graces both of wit and learning, for better purposes. Id.

The grievou abuse which hath been of councils, should rather cause men to study how so gracious a thing may again be reduced to that first perfection.*

Id. He might at his pleasure grace or disgrace whom he would in court. Knolles.

To some kind of men. Their grace serve them but sis enemies.*

Shakspearc. In Ills own grace he doth exalt himself More than in your advancement.

I do not think a braver gentleman. More daring, or more bold is now alive. To grace this latter age with noble deeds. Here come I from our princely general To know your griefs ; to tell you from his grace. That he will give you audience. Id. Henry IV.

Your soldiers use him as the grace 'fore meat, Their talk at table, and their thanks at end.

I^M/iS2)care.

Id.

Id.

GRA

O, mickle is the powerful grace that lies In plants, herbs, stones, and their true qualities.

Id. The king-becoming graces. As justice, verity, temperance, stableness. Devotion, patience, courage, fortitude, I have no relish of them. Id. Macbeth.

Kings are no less unhappy, their issue not being gracious, than they are in losing them when they have approved their virtues. Id. Winter's Tale.

Wbose hap shall be to have her. Will not so graceless be, to be ingrate.

Shakspeare. By their hands this grace of kings must die. If hell and treason hold their promises. Id.

He writes How happily he lives, how well beloved. And daily graced by the emperor. Id.

Our women's names are more gracious than their Rutilia, that is, red head. Camden.

High and mighty king, your grace, and those your nobles here present, may be pleased to bow your ears. Bacon's Henry VII. There is due from the judge to the advocate some commendation and gracing, where causes are well handled. Bacon.

Unblamed Ulysses' house. In ■which I finde receipt so gracious.

Chapman. Who would have looked for tears from Esau ? Or dare trust tears, when he sees them fall from so grace less eyes? Bp. Hall,

The desire of more and more rises by a natural gra- dation to most, and after that to all, L' Estrange.

He received all the graces and degrees, the proctor- ship and the doctorship could be obtained there.

Clare ndon. The graciousTiess and temper of this answer made no impression on them. Id.

Goring, who was now general of the horse, was no more gracious to priuce Rupert than Wilmot had been. Id.

Yet those removed. Such grace shall one just man find in his sight, ihat he relents, not to blot out mankind. Milton Prevenient (yrace descending had removed The stony from their hearts, and made new flesh Regenerate grow instead. Id.

If the highest love in no base person may aspire to grace, then may I hope your beauty will not be with- out pity. Sidney.

He saw this gentleman, one of the properest and best graced men that ever I saw, being of a middle age and a mean stature. Id.

Within the church, in the publick profession and

external communion thereof, are contained persons

truly good and sanctified, and hereafter saved ; and

together with them other persons void of all saving

grace, and hereafter to be damned. Pearson.

Noble pity lield

His hand a while, and to their choice gave space

Which they would prove, his valour or his grace.

Waller. Have I reason or good grace in what I do ?

Temple. His neck, his hands, his shoulders, and his breast. Did next in gracefulness and beauty stand To breathing figures. Dryden'i Ovid.

Rich crowns were on their royal scutcheons placed. With sapphires, diamonds, and with rubies graced.

Dryden. Or each, or all, may win a lady's t/race ; Then either of you knights may well deserve A princess born. Id. Fables.

None of us, who now your grace implore. But held the rank of sovereign queen before.

Dryden. His testimonies he graciously confirmed, that it was the best of all my tragedies. Id.

He heard my vows and graciously decreed My grounds to be restored, my former flocks to feed.

Id. When the guests withdrew. Their courteous host saluting all the crew. Regardless passed her o'er, nor graced with kind adieu. Id.

Set all things in their own peculiar place. And know that order is the greatest grace. Id.

The flower which lasts for little space, A short lived good, and an uncertain grace. Id. To write and speak correctly gives a grace, and gains a favourable attention to what one has to say.

Locke. Common sense and reason could not but tell them, that ihe good and gracioiis God could not be pleased, nor consequently worshipped, with anything barba- rous or cruel. South.

I should therefore esteem it great favour and grace. Would you be so kind as go in my place. Prior.

From now reveal A gracious beam of light ; from now inspire My tongue to sing, my hand to touch the lyre.

Id. The grace-cup served, the cloth away, Jove thought it time to show his play Id.

This forehead, where your verse has said The loves delighted and the graces played. Id.

The graces of his religion prepare him for the most useful dischcirge of every relation in life.

Rogers. AVith secret joy she sees her little race Hang on her breast and her small cottage grace.

Gay. Now deep in Taylor and the book of Martyrs, Now drinking citron with his grace zoid Chartres.

Pope. To theatres, and to rehearsal throng. And all our grace at table is a song. Id.

For modes of faith let graceless zealots fight. His can't be wrong whose life is in the right Id.

By both his parents of descent divine ; Great Jove and Phoebus graced his nobler line.

Id. Though triumphs were to generals only due. Crowns were reserved to grace the soldiers too.

Id. While grace is saying after meat, do you and your brethren take the chairs from behind the company.

Swift. Through nature and through art she ranged. And gracefully her subject changed. Id.

If hearers are amazed from whence Proceeds that fund of wit and sense, Wˆhich, though her modesty would shroud. Breaks like the sun behind a cloud ; While gracefulness its art conceals. And yet through every motion steals. Id.

If her majesty would but graciously be pleased to think a hardship of this nature worthy her royal con- sideration. Id.

Walking is the mode or manner of man, or of a beast ; but walking gracefully implies a manner or mode superadded to that action. Watts'i Logioˆ,

Graceful to sight, and elegant to thought. The great are vanquished, and the wise axe taught

Young. One lilac only, with a statelier (/race. Presumed to claim the oaks and cedar's place j

And, looking round him witli a monarch's care. Spread his exalted boughs to wave in air.

Harte. But now let other themes our care engage. For lo with modest yet majestic grace, To curb imagination's lawless rage And trom within the cherished heart to brace. Philosophy appears. Beattie.

Such was Zulicka — such around her shone

The nameless charms unmarked by her alone —

The light of love — the purity of grace

The mind, the music breathing from her face ;

The heart whose softness harmonised the whole

And oh ! that eye was in itself a soul.

Byron. The Bride of Abydos.

Graces, GRiTi.s:, or Charities, in the hea- taen theology, were fabulous deities, three in number, who attended on Venus. Their names are Aglaia, Thalia, and Euphrosyne ; i. e. shining, flourishing, and gay ; or, according to some au- thors, Pasithea, Euphrosyne, and iEgiale. They were said by some to be the daughters of J itpiter, by Eurynome the daughter of Oceanus ; and by others, of Bacchus and Venus. — Some will have the Graces to have been four ; and make them the same with the Horse, Hours, or rather with the four seasons of the year. A marble in the king of Prussia's cabinet represents the three Graces in the usual manner, with a fourth seated and covered with a large veil, with tlie words underneath. Ad Sorores IIIL But this group we may understand to be the three Graces, and Venus, who was their sister, being daughter of Jupiter by Dione. The Graces are always sup- posed to have hold of each other's hands, and never parted. They were painted naked, to .show tliat the Graces borrow nothing from art, and that they liave no other beauties but those of nature. Yet in the first ages they were not represented naked, as appears from Pausanias (lib. vi. and ix.), who describes their temple and statues. They were of wood, all but their head, feet, and nands, which were white marble. Their robe or gown was gilt ; ont; of them held in her hand a rose, another a dye, and the third a sprig of myrtle.

GRACULA, tTie grakle, in ornithology, a genus belonging to the order of pica;. The bill is convex, cultratcd, and bare at the point; the tongue is not cloven, but is fleshy and sharpish ; it has three toes before and one behind. The most remarkable species are the following : —

G. barita, the boat-tailed grakle, is about the size of a cuckow. The bill is sharp, black, and an inch and a half in length ; the general color of the plumage is black, with a gloss of purple, especially on the upper parts ; the legs and claws are black, the latter hooked. There is a singularity in the folding up of the tail-feathers, which, instead of forming a plain surface at top, sink into a hollow like a deep gutter. It always carries its tail expanded when on the ground, folding it up in the above singular manner only ■when perched or flying. It inhabits Jamaica, and feeds on maize, beetles, and other insects, as well as on the fruit of the banana. It is likewise common in North America. They breed in swamj)s, and migrate in September.

G. cristatella, the Chinese starling, is a little bigger than a blackbird. The bill is yellow or ♦ˆang€ : and the general color of the plumage

blackish, with a tinge of blue; the legs are dul\ yellow. These birds talk and whistle very well, and are common in China, where they are much esteemed ; and the figures of them are seen fre- quently in Chinese paintings. Their food is rice, insects, worms, and such like.

G. quiscula, the purple jack-daw, or Barba- does blackbird, is about the size of a blackbird, and is black, but most beautifully and richly glossed with purple, especially on the head and neck. The female is wholly brown, but deepest on the wings and tail. This species inhabits Ja- maica, Carolina, JNIexico, and other parts of North America. Tiiese birds generally feed on maize, whence they are named maize thieves ; but this is not their only food. In spring, soon after the maize seed is put into the ground, they scratch it up again; and, as soon as the leaf comes out, they take it up with their bills, root and all ; but when it is ripe they do still more damage, for at that time they come by thousands, and are so bold, that if disturbed in one part of a field they only go to another. In New Jersey and Pennsylvania '6d. per dozen was once given for the dead birds, and by means of this premium they were nearly extirpated in 1750; when the persecution of them was abated on account of the great increase of worms which had taken place in tlie meadows, and which in the preceding year had left so little hay in New England as to occasion an importation from other parts. The grakles were therefore again tolerated, as it was observed that they fed on these worms till the maize was ripe. These birds build in trees. 'J'hey pass the winter in swamps, which are nuite overgrown with wood, only appearing in mild weather; and, after the maize is got in, are content to feed on the aquatic tare-grass, and if pressed by hunger, buck-wheat and oats, &c. : they are said also to destroy that pernicious in- sect the bruchus pisi. Their note is pretty agree- able ; but their flesh is not good to eat.

G. religiosa, the smaller grakle, or Indian stare, is about the size of a blackbird, the bill an inch and a half long, and of an orange color. The general color of the plumage is black, glossed . with violet, purple, and green, in difi"erent reflec- tions of light : on the quills is a bar of white : the feathers and legs are orange yellow, and the claws of a pale brown. This species, which is found in several parts of the East Indies, in the Isle of Hainan, and almost every isle beyond the Ganges, is remarkable for whistling, singing, and talking well, much better and more distinct than any of the parrot genus. Its food is of the vege- table kind. Tho.se kept in this climate are ob- served to be very fond of cherries and grapes : if cherries are offered to one, and it does not imme- diately get them, it cries and whines like a child, till it has obtained them. It is very tame and familiar.

GRADE, n.s.

GraDa'TION, 71. S.

Grad'atory, n. s. GRA'niENT, adj. Grad'uai., at/;. & n.s.

GraDI:al'iTY, Jl. S.

Grad'ually, adv. Grad'uate, v. a. &, n.s. Gradi/a'tion, n. s.

ˆ Yr.gruduer ; Lat. gradus, a step, from gradior. The pri- mary meaning is

ˆgentle progression step by step ; and figuratively to ad- vance by degrees ;

J lo dignify with a

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degree in the university ; to mark with degrees as a thermometer ; to raise higher in the scale o"f metals ; to heighten and improve : an acade- mician who has taken his degree; steps from cloisters into the church are called the gradu- atory.

Ther nis no thing in gree superlatif (As saith Senek) above an humble wif.

Chaucer. The Merchantes Tale. Concerning columns and their adjuncts, architects make such a noise, as if the terms of architraves, frizes, and cornices, were enough to graduate a mas- ter of this art. Wotton.

John Tregonˆ-eX, graduated a doctor, and dubbed a knight, did good service.

Carew's Survey of Cornwall. Amongst those gradient automata, that iron spider is especially remarkable, which, being but of an ordi- nary bigness, did creep up and down as if it had been alive. Wilkiris.

Nobler birth Of creatures animate with gradual life. Of growth, sense, reason, all summed up in man.

3Iilton. Of greater repugnancy unto reason is that which he delivers concerning its graduation, that heated in fire, and often extinguished in ovl of mars or iron, the loadstone acquires an ability to extract a nail fastened in a wall. Browne.

This some ascribe unto the mixture of the elements, others to the graduality

of opacity and light. Id.

Not only vitriol is a cause of blackness, but the salts of natural bodies ; and dyers advance and gra- duate their colours with salts. Id. Vulgar Errours.

The tincture was capable to transmute or graduate as much silver as equalled in weight that gold.

Boyle. Before the gradual prostrate they adored. The pavement kissed, and thus the saint implored.

Drgden. The graduation of the parts of the universe is like- wise necessary to the perfection of the whole. Grew.

Men still suppose a gradual natural progress of things ; as that, from great things and persons should grow greater, 'till at length, by many steps and ascents, they come to be at greatest. South.

Human creatur?s are able to bear air of much greater density in diving, and of much less upon the tops of mountains, provided the changes be made gradually. Arbuthnot.

The places were marked where the spirits stood at the severest cold and greatest heat, and according to these observations he graduates his thermometers.

Derham. That there is a gradation I doubt not, upwards, as our senses inform us that there is one downwards. But such a gradation, by which finite approaches nearer and nearer to infinite, is inconceivable.

Bolingbroke. The author of our being weans us gradually from our fondness of life the nearer we approach towards the end of it. Swift.

The best of men have ever loved repose ; They hate to mingle in the filthy fray Where the soul sours, and gradual rancour grows Imbittered more from peevish day to day, Thomson.

All up the craggy cliffs that towered to heaven Green waved the murmuring pines on every side. Save where opening to the beam of even A dale sloped gradual to the valley wide. Beattie. — His manly brow

Consents to death, but conquers agony, And his drooped head sinks gradually low.

Byron. Childe Harold. GRˆCIA, Magka, in ancient geography,

part of the outermost coast of Italy, originally mhabited by Greek-s. See

Italy.

GR/EME, (John), a Scottish poet, born at Carnwath in Lanarkshire, in 1748, whose pos- thumous poems have been much admired. His father was a farmer, and he was taught grammar at Lanark, under Mr. R. Thomson, brother-in- law of the celebrated poet of that name, and his progress was rapid. In 1766 he went to the university of Edinburgh, where he soon surpassed the most industrious. He also acquired con- siderable knowledge in mathematics, natural philosophy, metaphysics, and the belles lettres. In 1769 he gave the first specimens of his poeti- cal genius. In 1770 lie was admitted into the theological class ; but tlie fatal disease, which cut him off, now began to appear in the form of a gradual decline, and soon ended in a deep con- sumption. He died July 26th, 1772. His poems, consisting of fifty elegies and other miscellaneous pieces, were collected and prmted at Edinburgh in 1773, in 8vo.

GR/EVIUS (John George), one of the most learned writers in the seventeenth century. In the twenth-fourth year of his age the elector of Brandenburg made him professor at Duisbourg. In 1658 he was invited to Deventer to succeed his former master Gronovius. In 1661 he was appointed professor of eloquence at Utrecht; and, in 1673, professor of politics and history. He fixed here, and refused several advantageous offers. He had the satisfaction to be sought after by divers princes, and to see several of them come from Germany to study under him. He died in 1703, aged seventy -one. His Thesaurus Atitiquitatum et Historiarum Italiae, &c., and ether works are well known.

GRAFF, n. s. A ditch ; a moat. See Grave.

I'hough the fortifications wore not regular, yet the walls were good, and the graffhroad and deep.

Clarendon.

Graff, or ") Sax. jjirepr; Fr.

Graft, n. s., v. a. & v. n. \greffe, greffer. A

*Grafter, w.s. * small branch in-*

serted into the stock of another tree, and nourished by its sap, but bearing its own fruit ; a young cion : to propagate, by insertion into a body, to which it did not originally belong ; to prac- tise incision : used in a figurative sense with res- pect to the heart, and implying the communi- cation of dispositions which are not natural to it.

And they also, if they bide not still in unbcliof, shall be graffed in ; for God is able to gruff x\cin in again. Romans.

Graft in our hearts the love of thy name.

Common Prayer.

In March is good graffing the skilful do know. So long as the wind in the East do not blow :

From moon being changed, 'till past be the prime, Vqt graffing and cropping is very good time.

Tusser.

We've some old crab-trees here at home, that will not Be grafted to your relish. Shahspeare. Coriolanus. The noble isle doth want her proper limbs ;

Iler royal stock graft with ignoble plants. Id.

God gave unto man all kinds of seeds and graffs of life : as the vegetative life of plants, the sensual oj beasts, the rational of man, and the intellectual oj angels. Raleigh.

To bavc fruit in rreatcr plenty the way is to graft, not only upon young stocks, but upon divers bou£,h3

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of an old tree ; for they will bear great numbers of fruit ; whereas if you graft but upon one stock, the trt.-e can bear but few. Bacon.

It is likely, that as in fruit-trees the graft maketb

a greater fruit, so in trees that bear no fruit it will

make the greater leaves. Id.

With his pruning hook disjoin

Unbearing branches from their head.

And graft more happy iu their stead.

Drj/den. These are the Italian names which fate will join With ours, and

graff upon the Trojan line. Id.

Now let me graff my pears, and prune the vine.

Id. His growth is but a wild and fruitless plant ; I'll cut his barren branches to the stock. And graft you on to bear. Id. Don Sebastian.

'Tis usual now an inmate graff to see With insolence invade a foreign tree.

Id. Virgil. If you cover the top v/ith clay and horse-dung, in the same manner as you do a graff, it will help to heal the sooner. Mart.

May one kind grave unite each hapless name. And graft my love immortal on thy fame. Pope.

Now the cleft rind inserted graffs receives. And yields an offspring more than nature gives.

Id. This rfsolution against any peace with Spain is a new incident grafted upon the original quarrel, by the intrigues of a faction among us. Swift.

GRAFIGNY (Frances), a French lady, au- tlioress of the celebrated Peruvian Letters, which have been translated into all the languages in FAirope. She was born in 1693, and married to tlie duke of Lorrain's chamberlain : after whose death she went to Paris with Mademoiselle De Guise, where her talents were much admired. She died at Paris in 1758, aged sixty-five.

GRAFTING, or Engrafting, in gardening, is the taking a shoot from one tree and inserting it into another, in such a manner, that both may unite close and become one tree. By the ancient writers on husbandry and gardening, this opera- tion is called incision, to distinguish it from inoculation or budding, which they call inserere oculos.

The grafts, or cions, with which the grafting is effected, are young shoots of last summer's growth ; for they must not be more than one year, and such as grow on the outside branches, and robust but moderate shooters ; such also as are firm and well-ripened should always be chosen from healthful trees : observing, that the middle])art of each shoot is always the best graft, cut at the time of grafting to five or six inches in length, or so as to have four or five good buds ; t)Ut should be preserved at full length till grafting time, and then prepared as follows : — They should be cut from the trees in Febr\iary, in mild wea- ther, before the buds begin to swell, or advance much for shooting : in collecting them choose such as have not made lateral or side shoots : cut them off at full length ; and, if they are not to be used as soon as they are collected, lay their lower ends in some

dry earth in a warm border till grafting time ; and, if severe weather should happen, cover them with dry litter.

The season for performincc the operation of grafting is February and March. When per- formed in February, it is generally most success-

ful, e-specially for cherries, plums, and pears; but March is best adapted for apples.

There are different methods of grafting prac- tised ; termed whip-grafting, cleft-grafting, crown- grafting, cheek-grafting, =5ide-grafting, root-graft- ing, and grafting by approach, or inarching: but the firs.t two are most commonly used ; and whip-grafting most of all, as being most expedi- tious and successful. 1. Cheek-grafting. Cut the head of the stock off" horizontally, and pare the top smooth ; then cut one side sloping one and a half or two inches deep, and cut the lower part of the graft sloping the same length, making a sort of shoulder at top of the sloped part. Then place it upon the sloped part of the stock, resting the shoulder upon the crown of it : bind the parts closely together with a string of bass, bringing- it in a neat manner several times round the stock and graft ; then clay the whole over nearly an inch thick on every side, from about half an inch or more below the bottom of the graft, to an inch over the top of the stock, finishing the whole coat of clay in a kind of oval globular form, rather longwise, up and down, closing it effec- tually about the cion, and every part, so as no sun, wind, or wet, may penetrate, to prevent which is the whole intention of claying. Ex-» amine it now and then, to see if it any where cracks or falls off, and, if it does, it must be in- stantly repaired with fresli clay. 2. Cleft-grafting is so called because the stock being large is cleft or slit down the middle for the reception of the graft ; and is performed upon stocks from about one to two inches diameter. First, with a strong knife cut off thg head of the stock; or, if the stock is very large, it may be headed with a saw; and cut one side sloping upwards about an inch and a half to the top; then proceed with a strong knife, or chisel, to cleave the stock at top, cross-way the slope, fixing the knife towards the back of the slope, and strike it with a mallet, so as to cleave the stock about two inches, or long enouoh to admit the graft, keeping it open with the chisel ; this done, prepare tlie cion, cutting it to such length as to leave four or five eyes, the lower part of which being sloped on each side, like a wedge, one and a half or two inches long, making one side to a thin edge, the other much thicker, leaving the rind thereon, which side must be placed outward in the stock ; the cion being thus formed, and the cleft in ilie stock _ being kept open with the chisel, place the graft therein at the back of the stock, the thickest side outward, placing the whole cut part down into the cleft of the stock, making the rind of the stock and graft join exactly; then, removing the grafting chisel, eacli side of the cleft will closely scjueeze the graft so as to

hold it fast ; it is then to be bound with a ligature of bass, and clayed over, as directed above, leaving three or four eyes of the cions uncovered. If it be intended to graft any large stocks or branches by this method, two or more grafts may be inserted in each. In this case the head must be cut off horizontally, making no slope on the side, but smooth the top ; then cleave it quite a-cross, and place a graft on each side, as the stock may be cleft in two places, and insert two grafts in each cleft ; they are thus to be tied and clayed. This method

of grafting may be performed upon the branches of bearing trees, when intended either to renew the wood, or change the sort of fruit. Towards the end of May, or the beginning of June, the junction of the graft and stock in either method will be eftectually formed, and the graft begin to shoot, when the clay may be taken off, and, in a fortnight or three weeks after, the bandages like- wise.

3. Crown-grafting is commonly practised upon such stocks as are too large to cleave, and is often performed upon the large branches of apple and pear trees, &c., that already bear fruit, when it is intended to change the sorts, or renew the tree with fresh-bearing wood. It is termed crown- grafting, because the stock or branch being headed down, several grafts are inserted at top all around betwixt the wood and bark, so as to give it a crown-like appearance. This kind of grafting should not be performed until March, or early in April ; for then the sap being in motion, renders the bark and wood of the stock much easier to be separated for the admission of the graft. The manner of performing it is this : First, cut off the head of the stock or branch, with a saw, horizontally, and pare the top smooth ; then having the grafts, cut one side of each flat, and somewhat sloping, an inch and a half, forming a sort of shoulder at top of the slope to rest upon the crown of the stock; and then raising the rind of the stock with a wedge, so as to admit the cion between that and the wood two inches down, place tiie graft with the flat side next the wood, thrusting it down far enough for the shoulder to rest upon the top of the stock ; and in this manner may be put three, four, five, or more grafts, into one large stock or branch. When the grafts are thus inserted, let the whole be tied tight and well clayed : but leave two or three eyes of each graft uncovered, and raise the clay an inch above tlie top of the stock, so as to throw the wet quickly off, witliout lodging about the grafted parts, which would ruin the whole. Crown-graftmg may also be performed, by mak- ing- several clefts in the crown of the stock, and inserting the grafts round the top of the clefts. The grafts will be pretty well united with the stock, and exhibit a state of growth, by the end of May or

beginning of June, and the clay may then be taken away. The trees grafted by this method succeed extremely well ; but, for the first two or three years, have this inconvenience at- tending them, that they are liable to be blown out of the stock by violent winds ; which must be remedied by tying long sticks to the body of the stock or branch, and tying each graft up to one of the sticks.

4. Root-grafting is performed by whip-grafting cions upon pieces of the root of any tree of the same genus, and planting the root where it is to remain. It will take root, draw nourishment, and feed the graft.

5. Side-grafting is by inserting grafts into the sides of the branches without heading them down ; and may be practised upon trees to fill up any vacancy, or for the purpose of variety, to have several sorts of apples, pears, plums, Sec, upon the same tree. It is performed thus : Fix upon such parts of the branches where wood

is wanted to furnish the head or any part of the tree; there slope off the bark and a little of the wood, and cut the lower end of the grafts to fit the part as nearly as possible; then join them to the branch, and tie them with bass, and clay them over.

6. Whip-grafting is always performed upon small stocks, from about the size of a goose-quill to half an inch, or a little more or less, in diame- ter ; but the nearer the stock and graft approach in size the better. It is called whip-grafting, because the grafts and stocks, being nearly of a size, are sloped on one side, to fit each other, and tied together in the manner of whips. The method is as follows : Cut off the head of the stock at some clear smooth part ; tlien cut one side sloping- upward, about an inch and a half or nearly two inches in length, and make a notch or small slit near the upper part of the slope downwards, about half an inch long, to receive the tongue of the cion ; then prepare llie cicn, cutting it do five or six inches in length, forming the lower end also in a sloping manner, so as exactly to fit the sloped part of the stock, as if cut from the same place, that the rinds of both may join evenly in every part; and make a slit so as to form a sort of tongue to fit the slit made in the slope of the stock ; then place the graft, in- serting the tongue of it into the slit of the stock, applying thn parts as evenly and closely as possi- ble ; and immediately tie the parts together and cover them with clay, as above directed. This sorˆ, of grafting may also be performed, if neces- sary, upon the young shoots of any bearing tree, if intended to alter the sorts of fruits, or have more than one sort on the same tree. By the middle or end of May the grafts will be well united with the stock, as will be evident by the shooting of the graft ; then the clay should be wholly taken away ; but suffer the bass bandage to remain some time longer, until the united parts seem to swell and be too much confined by the

ligature ; then take it wholly off.

7. Grafting by approach, or inarciling, is, when the stocks designed to be grafted, and the tree from which you intend to take the graft, either grow so near, or can be placed so near together, that the branch or graft may be made to approach the stock, without separating it from the tree, ti'l after its union or junction with the stock ; so that the graft being bent to the stock, they approach and form a sort of arch ; whence the names. Being a sure method, it is commonly practised upon such trees as are with difficulty made to succeed by any of the other methods. When intended to propagate any other kind of tree or shrub by this method of grafting, if the tree, &c., is of the hardy kind, and growing in the full ground, a proper quantity of young plants for stocks must be set round it ; and, when grown of a proper height, the work of inarching must be performed ; or if the branch of the tree designed to be grafted from are too high for the stocks, in that case stocks must be planted in pots, and a slight stage must be erected around the tree, of the due height to reach the branches, and the pots containing the stocks must be placed upon the stage. This method of grafting is sometimes performed with the head of the stock cu'

oft', and sometimes with the head left on till the graft is united with the stock; thougli, by pre- viously heading the stock, the work is much easier performed; and, having no top, its whole effort will be directed to the nourishment of the graft. Having tlie stocks properly placed, either planted in the ground or in pots around the tree to be propagated, then make the most convenient branches approach the stock, and mark o.n the body of the branches the parts where they will most easily join to the stock, and in those parts of each branch pare away the bark and part of the wood two or three inches in length, and in the same manner pare the stock in the proper place for the junction of the graft ; then make a slit upwards in the branch, so as to form a sort of tongue, and make a slit downwards in the stock to admit it; let the parts be then joined, slipping the tongue of the graft into the slit of the stock, making the whole join in an exact manner, and tie them closely together with bass, and afterwards cover the whole with a due quan- tity of clay, as in the other methods. After this, let a stout stake be fixed for the support of each graft ; to which let that part of the stock and graft be fastened which is necessary to prevent their being disjoined by the wind. The opera- tion being performed in spring, let them remain in that position about four months, when they will be united, and the graft may then be sepa- rated from the mother tree. In doing this, be careful to perform it with a steady hand, so as not to loosen or break out the graft,

sloping it oif downwards close to the stock ; and if the head of the stock was not cut down at the time of grafting, it must now be done close to the grai't, and the old clay and bandage must also be cleared away, and replaced with new, to remain a few weeks longer. If the grafts are not firmly united widi the stock, in the period above-men- tioned, they must remain another year till autumn, before the grafts are separated from the parent tree. By this kind of grafting may be raised al- most any kind of tree or shrub, which is often done by way of curiosity, to ingraft a fruit-bear- ing branch of a fruit-tree upon any common stock of the same genus, whereby a new tree bearing fruit is raised in a few months. This is sometimes practised upon orange and lemon trees, &c., by grafting bearing branches of a fruit- tree upon any common stocks raised from the kernels of any of the same kind of fruit, or into branches of each other, so as to have oranges, lemons, and citrons, all on the same tree.

Grafting has been practised from the most re- mote antiquity ; but its origin and invention have been differently related by naturalists. Theo- phrastus tells us, that a bird, having swallowed a fruit whole, cast it forth into a cleft or cavity of a rotten tree; where mixing with some of the putrified parts of the wood, and being washed with the rains, it budded, and produced within this tree another tree of a different kind. Pliny says that a countryman, wishing to make a pali- sade in his grounds that it might endure the longer, filled up and strengthened the bottom of the pali- sade by running or wattling it with the trunks of ivy. The effect of this w;is, that the stakes of the palisades, taking root, became engrafted with the

trunks and produced large trees ; which suggested to the husbandman the art of engrafting. The use of grafting is to propagate any curious sorts of fruits; which cannot be done with certainty by any other method : for as all the good fruits have been accidentally obtained from seeds, so the seeds of these, when sown, will many of them degenerate, and produce such fruit as is not worth the cultivatnag; but, when shoots are taken from such trees as produce good fruit, these will never alter from their kind, whatever be their stock. The reason or philosophy of engrafting is some- what obscure ; but the effect is ordmarily attributed to the diversity of the pores or ducts of the grcd't from those of the stock, which change the figure of the particles of the juices in passing through them to the rest of the tree. Mr. Bradley, from some observations of Agricola, suggests, that the stock grafted on is only to be considered as a fund of vegetable matter, which is to be filtered through the cion, and digested, and brought to maturity, as the time of growth in the vessels of the cion directs. A cion, therefore, of one kind, grafted on a tree of another, may be rather said to take root in the tree it is grafted in, than to unite itself with it; for it is visible that the cion preserves its natural purity, though it be fed and nourished by a mere crab ; which is, without doubt, occasioned by the difference of the vessel's in the cion from those of

the stock : so that graft- ing may be justly compared to planting. But the natural juices of the earth, by their secretion and communication in passing through the roots, Afc, before they arrive at the cion, must doubt- less arrive there half elaborated and concocted ; and so disposed for a more easy, plentiful, and])errect assimilation and nutrition ; whence the C!on must necessarily grow and thrive better and faster than if it were put immediately in the ground.

Many have talked of changing of species, or producing mixed fruits, by engrafting one tree on another of the same class ; but, as the graft carries the juices from the stock to the pulp of the fruit, there is little hope of siicceeding in such an expectation by ever so many repeated grafts ; but if, after changing the graft and stock several times, you set the seed of tlie fruit pro- duced on the graft in a good mold, it is possi- ble that a change may happen, and a new mixed plant may be produced. Thus the almond and peach may, by many changes in the grafting-;, and by interrations of the stones of the peaches, and of the shells of the almonds, and by teribra- tions of the stem and the root here and there, alter their nature so much, that the coat or pulp of the almond may approach to the nature of the peach, and die peach may have its kernel en- larged into a kind of almond ; and, on the same principle, the curious gardener may produce many such mixed kinds. I\I. Du llamel has observed that, in grafting trees, there is always found, at the insertion of the graft, a change in the direction of the fibres, and a sort of twisting or turning about of the vessels, which greatly imitates that in the formation of certain glands in animal bodies; and hence he infers thnt a new sort of viscus being thus formed, the fruit may be so far influenced by it, as to be meliorated

on the new branch ; but that no such sudden and essentral changes can be etfected by those means, as many writers on agriculture pretend. He observes, however, that this anatomical observa- tion would not have been sufficient to convince him of the falsity of these relations, had not ex- periment joined to confirm him in this opinion. He tried many grafts on different trees; and, for fear of error, repeated every experiment of conse- quence several times ; but all served only to con- vince him of the truth of what he at first sus- pected. He grafted in the common way tlie peach upon the almond, the plum upon the apri- cot, and the pear upon the apple, the quince, and the white thorn ; one species of plum on other very different species, and upon the peach the apricot, and the almond. All these succeeded alike : the species of the fruit was never altered ; and in those vvliich would not come to fruit, the leaves, the wood, and the flowers, were

all the same with those of the tree whence the graft was taken. Writers on agriculture have also mentioned a very different sort of grafting, namely, the setting of grafts of one tree upon stocks of a different genus; such as the grafting the pear upon the oak, the elm, the maple, or the plum, &c. M. Du Hamel tried a great number of those experiments carefully, and found every one of them unsuccessful ; and the natural con- clusion from this was, that there must be some natural alliance between the stocks and their grafts, otherwise the latter will either never grow at all, or very soon perish.

Notwithstanding the facility with which grafts generally take on good stocks, there are many accidents and uncertainties attending them in their different periods. Some perish immediately; some after appearing healthy for many months, and some even for years. Of these last some die without the stock suffering any thing; others perish together with the stocks. It is certain that the greater part of grafted trees do not live so long as they would have done in their natural stale ; yet this is not an invariable rule : for there are some which evidently live the longer for this practice ; nay, there are instances of grafts which, being placed on stocks naturally of short dura- tion, live longer than when placed on those which are more robust and lasting. In order to the succeeding of a graft, it is plain that there must be a conformity in its vessels and juices with Miose of the stock. The more nearly they agree in this, probably the better they succeed ; and the farther they differ, the worse. If there be .some difference in the solid parts of trees, there are evidently many more in tiie juices. The sap in some trees is white as milk, in others it is red- dish, and in some as clear and limpid as water. In some it is thin and very fluid ; in others thick and viscous. In the taste and smell of these juices there are also no fewer differences : some are sweet, some insipid, some bitter, some acrid, and some fetid ; the quality of the sap thus makes a very great difference in the nature of trees ; but its quantity, and derivation to the parts, is scarcely less observable. Of this we have familiar instances in the willow and the box; one of which will produce longer shoots in one year than the other in twenty. Another difference

yet more striking, and indeed more essential, in regard to the growth of grafts than all these, is the different season of the year at which trees shoot out their leaves, or ripen their flowers. The almond tree is in flower before other trees in general have opened their earliest buds ; and, when other trees are in flower, this is full of leaves, and has its fruit set before the mulberry begins to push out its earliest buttons. The grafts of the almond on the plum, and of the plum on the almond, always grow very vigorously for the first year, and give every appearance of succeeding entirely ; yet they always perish in the second or third year. The almond, grafted upon the plum stock, always pushes out very vigorously at first; but the part of the stock immediately under the graft grows smaller and perishes, the graft

absorbing too much of the juices, and the graft necessarily perishes with it. The decay of the whole generally happens early in the spring, plainly from the different season of the natural shooting of the two trees ; the almond pushing very vigorously, and conse- quently draining the stock of its juices, at a time when, according to its nature, the juices are but in small quantity in it, and the sap does not begin to ascend. The grafts of the plum on the almond are, from tlie same cause, furnished w.th an abun- dance of sap which they have, at that time, no occasion for; and consequently they as certainly perish of repletion, as the other of inanition. The. peach, grafted on the plum, succeeds excellently, and lives longer than it would have done in a natural state ; the reason seems to be, that the peach is a tender tree, shoots with great vivacity, and produces more branches than the root is able to maintain. Thus peach trees are usually full of dead wood ; and often their large branches perish, and sometimes their whole trunk. On this occasion the plum, being a slow-shooting tree, communicates its virtue to the graft; and the peach consequently sends out shoots which are more robust and strong, and are no more in number than the root is able to supply with nourishment, and consequently the tree is the more lasting.

GRAFTON (Richard), an English historian, born at London in the reign of Henry VIII. He published, 1. An Abridgement of the Chro- nicles of England; and, 2. A Chronicle and large History of the Affayres of England and Kings of the same, deduced from the Creation of the World. He died in the reign of queen Eliza- beth.

Grafton, an extensive county of New Hamp- shire, bounded on the east by Maine District, south by Strafford, Hillsborough, and Cheshire counties, west by Vermont, and north by Canada. It is divided into fifty townships, and seventeen locations.

Grafton, or Grafton Island, one of the smallest of the Bashee islands in the East Indian Sea. Long. 139° 0′ W., lat. 21° 4′ N.

GRAHAM (George), clock and watch maker, the most ingenious and accurate artist in his time, was born in 1675 at Kirklington, Cumberland. Besides his universally acknowledged skill in hi- profession, he was a complete mechanic and astronomer; the great mural arch in the obsorva-*

tary at Greenwich was made for Dr. Halley under his immediate inspection, and divided by his oˆvn hand ; and, from this incomparable

origi- nal, the best foreign instruments of the kind are topies. The sector, by which Dr. Bradley first jliscovered two new motions in the fixed stars, rvas of his invention and fabric ; and, when the French academicians were sent to the north to ascertain the figure of the earth, Mr. Graham was thought the fittest person in Europe to sup- ply them with instruments : those who went to the south were not so well furnished. He was for many years a member of the Royal Society, to which he communicated several ingenious and important discoveries. He died in 1751.

Graham (James), marquis of Montrose. See Montrose.

Graham (Sir John), of Abercorn, or Dundaff, one of the patriots who fought along with Wal- lace, against the English invaders under Edward I. He was killed at the battle of Falkirk, in 1298, where the following inscription repeatedly renewed is to be seen on his monument : — Mente manuque potens, et Vallae fidus Achates, Conditur hie Gramus, bello interfectus ab Anglis. XXII. Julii, 1298.

Graham (Sir Richard), lord viscount Pres- ton, eldest son of Sir George Graham of Nether- by, in Cumberland, Bart, was bom in 1648. He was sent ambassador by Charles II to Louis XIV., and was master of the wardrobe and se- cretary of state under James II. But, when the Revolution took place, he was tried and con- demned, on an accusation of attempting the restoration of that prince ; though he obtained a pardon by the queen's intercession. lie spent ♦he remainder of his days in retirement, and published an elegant translation of Boethius on the consolations of philosophy. He died in

1695.

GRAHAM E (James), a modera Scottish poet, was bred to the bar, but afterwards took orders in a curacy in the neighbourhood of Durham, where he died, in 1811, in the prime of life. His chief pieces are. The Sabbath ; The Bards of Scotland ; and British Georgics.

GRAI/E Monies, in ancient geography, the name given by Pliny to that part of the Alps, which lies between France and Italy, and by which they pass out of Italy into the ci-devant province of Provence.

GRAIGEMANACH, a town of Ireland, m Kilkeimy, on the Barrow, over which it has a bridge, twenty miles from the sea. The tide flows up to it.

GRAIL, n.s. From Fr. grelc. Small parti- cles of any kind.

Hereof this gentle knight unwceting was. And, lying down upon the sandy grails, Drank of the stream as clear as crystal glass.

Spenser.

GRAIN, n.s. "^ Fr. grain; Belg. grcicn ; Grain'ed, (idj. Ital., Span., and Port, gra- Grains, n.s. \ no ; hai. granum. A single Grain'y, adj. i-seed ; corn ; a small weight, Gkan'ary, n.s. so called because it is sup- Gran'ate, or posed of equal weight with Gran'ite, n. s.j a grain of corn : the direc- tion of thf fibres of wood ; the direction of con- \oi.. X.

stituent particles of the human body ; a dyed substance: figuratively, temper and disposition. Grains of allowance, something indulged or remitted. Grains, husks of malt. Grains of Paradise, an Indian spice. A storehouse for corn. Granate, or granite, a kind of marble, so called because it is marked with small varie- gations like grains.

For the whole world before thee is as a little grain of the balance. Wii. xi. 22.

Wherefore I sing; and sing I mote certain, In honour of that blissful maiden free.

Til fro my tongue of taken is the grain. And, after that thus saide she to nae :

My litel childe than : wol I fetchen thee. Whan that the grain is fro the tongue ytake : Be not agaste I wol thee not forsake.

Chaucer. The Prioresses Tale. The was eke wexing many a spice As clowe, gilofre, and licorise, Gingiber, and grein de Paris.

Id. Romaunt of the Rose, And in his barne hath, soth to sainu. An hundred mavis of vihcto graine. Id.

Ye, jelousie is love ; And would a bushel of venim excusen. For that a grane of love is on it shove.

Id. Troittts and Creseide. How the red roses 6ush up in her cheeks. And the pure snow with goodly vermil stain. Like crimson dyed in grain. Spenser.

Your minds, preoccupied witii what You rather must do than with what you should do. Made you against the grain to voice him consul.

Shakspeare. Though now this grained face of mine be hid In sap consuming Winter's drizzled snow. Yet hath my night of life some memory. Id.

Knots, by the conflux of meeting sap, Infect the sound pine, and divert his grain Torlive and errant from his course of growth. Id. Look into tlie seeds

of time. And say which grain will grow, and which will not.

Id. Let them pronounce the steep Tarpeian death, Vagabond exile, flaying pent to linger But with a grain a day, I would not buy Their mercy at the price of one fair word. Id.

.4s it ebljs, the seedsman Upon the slime and ooze scatters his grain, And shortly comes to harvest. Id.

Thou exist'st on many tliousand grains That issue out of dust. Id. Measure for Measure. By intelligence And proofs as clear as founts in July, when We see each grain of gravel. Id. Henry VIII.

His reasons are as two grains of wheat hid in two bushels of chaff. Id. Merchant of. Venice.

It is a sincerely pliable ductile temper, that neglects not to make use of any grain of grace. Hammond.

The trial being made betwixt lead and lead, weigh- ing severally seven drachms, in the air ; the ba- lance in the water weighing only four drachms andi forty-one grains, and abatolh of the weight in the air two drachms and nineteen f/raijis : the balance kept the same depth in the wator. Bacon.

The one being tractable and mild, the other stiff and impatient of a superior, they lived but in cunning concord, as brothers glued together, but not united ia grain. Hayward.

Give them grains their fill Husks, draff, to drink and swill. Ben Jonson. Unity is a precious diamond, whose grains ns they double, twice double in ihcir \,;luf . IloltiJay.

Y "

GRA

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GRA

Over his lucid arms k. military vest of purple flowed.

Livelier than Melibsan, or the grain

Of Sarra, worn by kings and heroes old. Milton. Come, pensive nun, devout and pure.

All in a robe of darkest grain,

Flowing with majestic train. fd.

The third, his feet

Shadowed from either heel with feathered mail,

Sky-tinctured grai7i ! Id. Paradise Lost.

Quoth Hudibras, it is in vain,

I see, to argue 'gainst the grain. Hudibras.

His brain

Outweighed his rage but half a grain. Id.

The tooth of a sea-horse, in the midst of the solider parts, contains a curdled grain not te be found in ivory. Browne.

They began at a known body, a barley-corn, the weight thereof is therefore called a grain; which ariseth, being multiplied, to scruples, drachms, ounces, and pounds. Holder.

The beech, the swimming alder, and the plane. Hard box, and linden of a softer grain. Dryden.

Though much against the grain, forced to retire. Buy roots for supper, and provide a fire. Id.

Pales no longer swelled the teeming grain. Nor Phoebus fed his oxen on the plain. Id.

Many of the ears, being six inches long, had sixty grains in them, and none less than forty. Mortimer.

The ungrateful person lives to himself, and subsists by the good nature of others, of which he himself has not the least grain. South.

Alabaster, marble of divers colors, both simple and mixed, the opulites, porphyry, juid the granite.

Woodward.

Stones of a constitution so compact, and a grain so fine, that they bear a fine polish. Id.

Ants, by their labour and industry, contrive that corn will keep as dry in their nests as in our granaries,

Addison.

He, whose very best actions must be seen with grains of allowance, cannot be too mild, mouerate, and forgiving. Id.

There are still great pillars of granite and other fragments of this ancient temple. Addison on Italy.

'Tis a rich soil, I grant you ; but oftener covered with weeds than grain. Collier on Fame.

The smaller the particles of cutting substances are. the smaller will be the scratches by which they con- tinually fret and wear away the glass uitil it be polished ; but be they never so small, they can wear away the glass no otherwise than by grating and scratching it, and breaking the protuberances ; and therefore polish it no otherwise than by breaking its roughness to a very fine grain, so that the scratches aad frettings of the surface become too small to be vi- sible. Newton's Opticks.

I would always give some grains of allowance to the sacred science of theology. Watts on the Mind.

The naked nations cloathe, Ai)d be the' exhaustless granary of a world.

Thomson's Spring.

And freshness breathing from each silver spring, Whose scattered streams irom granite basins burst. Leap into life, and spi,rkling woo your thirst. Byron. There grain, and flower, and fruit.

Gush from the earth until the land runs o'er.

Id. Don Juan.

Grain. See Barley, Corn, Wheat, &c.

Grain, Oily. See Sesamum.

Grain, Scarlet. See Cactus, Coccus, and Quercus.

A Grain Weight of gold bullion is worth two-pence, and of silver only half a farthing.

Grain Coast. See Malaguetta.

Grain (John, Baptist le), counsellor and master of requests to Mary de Medicis queen of France, was born in 1565, and was much es- teemed by Henry IV. He wrote a work en- titled, Decades, containing The History of Henry the Great, and of Louis XIII., from the begin- ning of his reign to the death of the Marshal d'Ancrc in 1617. He vigorously defends the edict that had been granted to the reformed. He died at Paris in 1643.

GRAINGER (James), M.D., a distinguished poet in the last century, was born at Dunse, in Berwickshire, in 1724. His father, who had been reduced by adverse circumstances, still bestowed on him a classical education, and placed him with a surgeon at Edinburgh, where he attended the medical lectures of the university. Entering the army, as a regimental surgeon, he served in Germany under the earl of Stair, till the peace of Aix-la-Chapelle, after which he took his degree of M.D. and settled in London. He is said principally to have supported himself by writing for the press. An Ode to Solitude, pub- lished in Dodsley's collection, first procured him reputation; and, among others, the acquaintance of Shenstone and Dr. Percy. In 1759 he pub- lished his Elegies of TibuUus., which involved hira in a paper war with Dr. SmoUet. He then went to the West Indies as tutor to a young gentle- man, and, during the voyage, formed an attach- ment to a lady, whom he married on his arrival at the island of St. Christopher's, of which her father was governor. Here he again, and very successfully, engaged in medical practice; and produced a West Indian Georgic, or didactic treatise in blank verse, entitled The Sugar Cane, and Brj'an and Percent, a ballad. The former he published in England, in 1764. lie then re- turned to Basseterre, St. Christopher's, where he died of a fever, in 1767.

GRAITNEY. See Gretna.

GRALL.'E, in ornithology, an order of birds analogous to the bruta in the class of mammalia, in the Linnsean system. See Zoology and Or- nithology

GRAM AYE (John Baptist), a historian and poet, born at Antwerp, and provost of Arnheim. He travelled over Germany and Italy, but, in going to Spain, was carried off by African cor- sairs to Algiers. He returned to the Nether- lands, and died at Lubeck. He published, 1. Africae Illustratae, libri X. in 1622; 4to. 2. Diarium Algiriense : 3. Peregrinatio Belgica ; a curious work : 4. Antiquitates Flandrise, folio ; and, 5, Historia Naraurcensis.

GRAME'RCY, interj. Contracted from grant ."ne mercy. An obsolete expression of surprise.

O, which a pitous thing it was to see Hire swouning, and hire humble vols to here ! Grand mercy .' Lord ! God thank it you, quod she That ye han

saved me my children dere.

Chaucer. The Clerkes Tale,

Truly ? Gramercie frende of your gode will.

Id. The Court of Love. Gramercy, sir, said he ; but mote I weet What strange adventure do ye now pursue ? Spenser

Gramercy, lovely Lucius, whac's the news?

Sluikspeare.

GRAMINA, grasses, one of the seven tribes, or natural families, into which all vegetables are distributed by Linnaeus in his Philosophia Bota- nica. They are defined to be plants which have very simple leaves, a jointed stem, a husky calyx termed gluma, and a single seed. This descrip- tion includes the several sorts of corn as well as grasses. In Tournefort they constitute a part of the fifteenth class, termed apetali; and, in Lin- nseus's sexual method, they are mostly contained in the second order of the third class, triandria digynia. This numerous and natural family of the grasses has engaged the attention and re- searches of several eminent botanists; parti- cularly Ray, Monti, Micheli, and Linnaeus. M. Monti, in his Catalogus stirpium agri Bono- niensis, gi-amina ac hujus modi affinia com- plectens, printed at Bononia in 1719, divides the grasses from the disposition of their flowers, as Theophrastus and Ray had done before him, into three sections or orders. These are, 1. Grasses having flowers collected in a spike. 2. Grasses having their flowers collected in a pa- nicle or loose spike. 3. Plants that in their habit

and external appeaiance are allied to the grasses. This class would have been natural if the author had not improperly introduced sweet rush, j uncus, and arrow-headed grass, into the tliird section. Monti enumerates about 306 species of the grasses, which he reduces under Toume- fort's genera; to these he added three new genera. Scheuchzer, in his Aristographia, pub- lished likewise in 1719, divides the grasses, as Monti, from the disposition of their flowers, into the four following sections: 1. Grasses with flowers in a spike, as phalaris, anthoxanthum, and frumentum. 2. Irregular grasses, as schoe- nanthus and cornucopia;. 3. Grasses with flowers growing in a simple panicle or loose spike, as reed and millet. 4. Grasses with flowers growing in a compound panicle, or dif- fused spike, as oats and poa. See Botany.

GRAMI'NEOUS, arf;. h?L.. gramineui. Grassy. Gramineous plants are such as have a long leaf without a footstalk.

GRAMINI'VOROUS, adj. Lat. gramen and voro. Grass-eating; living upon grass.

The ancients were versed chiefly in the dissection of brutes, among which the graminivorous kind have a party-coloured choroides. Sharp's Surgery.

GRAMMAR.

GRAM'MAR, n. s. ˆ Fr. grammaire,

Gram'mar-sciiool, n. s. j grammairien ; Lat.

Guamma'rian, n. 5. [grammaticus ; Gr.

Grammat'ical, adj. j 7pa/x/ia,aletter. The

Grammat'ically, af/p. j science of writing or

Grammat'icaster, n.s.j speaking correctly; the art or person who teaches the relation of words to each other ; the book used for teaching this science ; the place in which the learned lan- guages are taught ; whatever belongs to the rules of grammar : grammaticaster is a low verbal pedant : this word is obsolete.

I can no more expound in this matere •,

I Icme song ; I can but smal grammere.

Chaucer. The Prioresses Tale.

Thou hast most traitorously corrupted the youth of the realm in erecting a grammar-school.

Shakspeare.

To be accurate in the grammar and idioms of the tongues, and then as a rhetorician to make all their graces serve his eloquence. Fell.

The beauty of virtue still being set before their eyes, and that taught them with far more diligent care than grammatical rules. Sidney.

Many disputes the ambiguous nature of letters hath created among the grammarians. Holder.

I shall take the number of consonants, not from the grammatical alphabets of any language, but from the diversity of sounds framed by single articulations with appulse. Id.

Varium ct mutabile semper femina, is the sharpest satire that ever was made on woman ; for the adjec- tives are neuter, and animal must be understood to make them grammar. Drydcn.

They who have called him the torture of gramma- rians, niiˆht also have called him the plague of trans- lators. Id.

They seldom know more than the grammatical con- {trui lion, uniees born with a poetical genius.

Id. Dufresnoy.

We make a countryman dumb, whom we will not allow to speak but by the rules of grammar. Id.

The ordinary way of learning Latin in a grammar- school I cannot encourage. Locke.

Men speaking language, according to the grammar rules of that language, do yet speak improperly of things. Id.

I have not vexed language with the doubts, the remarks, and eternal triflings of the French gramma' ticasters. Rymer.

When a sentence is distinguished into the nouns, the %'erbs, pronouns, adverbs, and other particles of speech which compose it, then it is said to be analysed grammatically. Watts.

As grammar teacheth us to speak properly, so it is the part of rhetorick to instruct how to doit elegantly, by adding beauty to that language that before was naked and grammatically true. Baker.

We are naturally led to begin with the consideration of substantive nouns, which arc the foundation of all grammar, and may be considered as the most anoient part of speech. Blair's Lectures.

The first degree of proficiency is, in painting, what grammar is in literature, a general preparation for whatever species of the art the student may afterwards choose for his more particular application.

Sir /. Reynolds.

Grammar. It is probable that this word had a very narrow import at first,

equivalent perhaps to orthography ; but it was gradually extended so as to comprehend many ideas not originally contemplated ; and, as authors have never been agreed respecting the. number and the nature of those ideas, there is no uniform theory to be found in their writings, nor even a clear and certain definition of the term. In one view Grammar may be considered as a science ; in another view it may be considered as

an art ; or ˆe may distinguish it into universal or philosophic, and particular or idiomatic. Per- haps the simplest and best distinction would be into rational and customary Grammar. Of the foiraer, reason is to be considered as the authority or standard ; of the latter there is no authority or standard but custom, agreeably to the quotation so often adduced from Horace.

Tisus Quern peces arbitrium est, et jus et norma loquendi.

- *The first of these,' says Wilkius in his Essay towards a Real Character, * i e. philosophical, rational, universal Grammar, hath been treated of but by few ; which makes our learned Veru- 1am put it among his Desiderata. I do not knew any more that have purposely written of it, but Scotus in his Grammatica Speculativa, and Caramuel in his Grammatica, and Campa- nuella in his Grammatica Philosophica. (As for Scioppius his Grammar of this title, that doth wholly concern the Latin tongue). Besides which, something hath been occasionally spoken of it by Scaliger, De Causis Linguse Latince; and by Vossius in his Aristarchus.' Subse- quently to the time of Wilkins, Harris wrote his ' Hermes or a Philosophical Enquiry con- cerning Universal Grammar.' This work ac- quired considerable celebrity. Dr. Lowth in the Preface to his Grammar says : ' Those who would enter more deeply into this subject, will find it fully and accurately handled with the greatest acuteness of investigation, perspicuity of explication, and elegance of method, in a treatise entitled Hermes, by James Harris, Esq., the most beautiful and perfect example of Ana- lysis that has been exhibited since the days of Aristotle.'*

Lord Monboddo (in Orig. and Prog, of Lan- guage, vol. i. p. 8) pronounces ' Hermes a work that will be read and admired as long as there is any taste for philosophy and fine writing in Britain.' Mr. Home Tooke admits that '

Her- mes has been received with universal appro- bation both at home and abroad, and has been quoted as undeniable authority on the subject by the learned of all countries. For which, however,' he adds, ' I can easily account, not by supposing that its doctrines gave any more satis- faction to their minds who quoted it than to mine ; but because, as judges shelter their kna- very by precedents, so do scholars their ignorance by authority : and where they cannot reason, it \s safer and less disgraceful to repeat that non- sense at second hand which they would be ashamed to give originally as their own.' ' If others of a more elegant taste for fine writing are able to receive either pleasure or instruction from such philosophical language, as that of Hermes, I shall neither dispute with them nor envy them : but can only deplore the dulness of ray own apprehension, who, notwithstanding the great authors quoted in Mr. Harris's treatise and the great authors who recommend it, cannot help ˆconsidering this ' perfect example of ana- lysis,' as an improved compilation of almost all the errors which Grammarians have been ˆcumulating from the time of Aristotle down

to our present days of technical and learned affectation.'

It must be admitted that]\Ir. Home Tooke is sufficiently severe, or to use his own expression that he speaks ' too sharply for philosophy.' His apology or justification is : ' Neminem libenter nominem, nisi ut laudem ; sed oec peccata reprehenderem, nisi ut aliis prodessem. At the same time, I confess, I should disdain to handle any useful truth daintily, as if I feared lest it should sting me ; and to employ a philo- sophical enquiry as a vehicle for interested or cowardly adulation. My notions of language were formed before I could account etymolo- gically for any one of the words in question, and before I was in the least acquainted with the opinions of others. I addressed myself to an enquiry into their opinions with all the diffidence of conscious ignorance; and, so far from spurn- ing authority, was disposed to admit half an argument from a great name. So that it is not my fault, if I am forced to cany instead of fol- lowing the lantern : but at all events it is better than walking in total darkness. And yet, though I believe I differ from all the accounts which have been hitherto given of language, I am not so much without authority as you may imagine. Mr. Harris himself, and all the Grammarians whom he has, and whom (though using their words) he has not quoted, are my authorities. Their own doubts, their difficulties, their dissa- tisfaction, their contradictions, their obscurity on all these points, are my authorities against them : for their system and their difficulties vanish together.'

*The following is the manner in which Mr. Home Tooke disposes of the once celebrated Hermes. * You mean then by what you have said flatly to contradict Mr. Harris's definition of a conjunction ; which he says is a part of speech devoid of signification itself, but so formed as to help*

sismification, by making two or more significant sentences to be one significant sentence.' I have the less scruple to do that, because Mr. Harris makes no scruple to contradict himself. For he afterˆvards ack now- ledges that some of them have a kind of obscure signification when taken alone ; and appear in grammar, like zoophytes in nature, a kind of middle beings of amphibious character; which, by sharing the attributes of the higher and the lower, conduce to link the whole together.

*' Now I suppose it is impossible to convey a nothing in a more ingenious manner. First, he defines a word to be a sound significant : then he defines conjunctions to be words (i. e. sounds significant) ' devoid of signification.' * After- wards he allows that they have ' a kind of sig- nification.' But this kind of signification is * obscure (i.e. a signification unknown) ; something I suppose (as Chillingworth couples them) like a secret tradition or a silent thunder : for it amounts to the same thing as a signification which does not signify; an obscure or unknown signification being no signification at all. But not contented with these inconsistencies, which to a less learned man would seem sufficient of all conscience, Mr. Harris goes farther, and adds, they are a ' kind of middle beings (he must*

mean between significa m and no signification) sharing the attributes of both' (i. e. of signitica- tion and no signification) and * conduce to link them both together.'

It would have helped us a little, if Mr. Harris iad here told us what that middle state is, be- tween signification and no signification ! what are the attributes of no signification ! and how signification and no signification can be linked together ! Now all this may, for aught I know, De ' read and admired as long as there is any aste for fine writing in Britain.' But with such unlearned and vulgar philosophers, who seek not taste and elegance but truth and common sense in philosophical subjects, I believe it will never pass as a ' perfect example of analysis ;' nor bear away the palm for ' acuteness of investigation and per- spicuity of explication.' For separated from the fine writing (which however I can no where find in the book) this is the conjunction explained by Mr. Harris. A sound significant devoid of signfication, having at the same time a kind of obscure signification ; and yet having neither signification nor no signification ; but a middle something between signification and no signifi- cation, sharing the attributes of signification and no signification ; and linking signification and no signification together.'

It is impossible for logical inconsistency to stand such a cross examination. The only thing felt by the reader is the redundancy and satiety of the confutation. Never was the extinguisher so effectually put upon the reputation of a work as by Home Tooke on the Hermes of Harris. Twenty-two years ago it was a work of great philological celebrity ; but since that time there is hardly a grammarian or philologer of any note •who has ventured to eulogise it. Mr. Harris was unquestionably an elegant scholar ; but on this alone, as the author of Hermes, must his claim to admiration now rest.

As the philological reputation of Mr. Home Tooke has superseded that of Mr. Harris, it will be proper to devote some attention to his cele- brated work, entitled, not very happily, The Di- versions of Purley ; which possesses singular interest, displays much learning, acuteness, and reflection ; but which is disfigured by consider- able blemishes. It is too desultory and miscel- laneous— too political, vituperative, sarcastic, assumptive, and dogmatical. The charm of the work would be destroyed by abridgment; but all that is truly ad rem, or available for any philological purpose, might be comprised within a very small compass.

Not a few of Mr. Home Tooke's positions are specious or imposing rather

than sound and satisfactory. As for example the following : — ‘ This metliod of referring words immediately to God as their framer, is a short cut to escape en- quiry and explanation. It saves the philosopher much trouble ; but leaves mankind in much ignorance, and leads to great error.’ But what ignorance can the S’upposed Divine origin of language perpetuate amon? mankind? or how can it lead to great error? Unless we can ascer- tain the origin of language, we are just where we were as to ignorance or error, wiietlicr we as- su.nae a Divme or a human origin. All attempts

to ascertain the origin of language have hitherto failed : nor is there the shadow of a probability that future attempts will be more successful. We have the following confession from one who has long made language his study, and who was at one time very sanguine that he could ascertain its origin. ‘ On this obscure subject the reader is promised nothing but brevity ; for, after much toilsome enquiry and anxious reflection, the au- thor has no satisfactory opinion to offer. — Some persons have believed that Hebrew was the first language of m.an, and that the Hebrew alphabet came down from heaven. This is a short cut (as Home Tooke terms it) which saves much trouble; for on this hypothesis we have only to believe. Admitting, however, that letters are of human invention, — what is the nature of that invention ? Here we possess no certain data on which to reason ; for we have no authentic his- tory of this important invention. Being wholly destitute of facts, we have nothing better than conjectures on which to form an opinion.’ The author of the Etymologic Interpreter might have added, what was no doubt understood, though not expressed, that it is impossible to find out, from examining language itself, the nature of its origin.

*Another of Mr. Home Tooke’s specious but unsatisfactory positions is, that it is as ‘ improper to speak of a complex idea as it would be to call a constellation a complex star ; and that they are not ideas, but merely terms which are general and abstract :’ and that * what are called the ope- rations of the mind, are merely the operations of language.’ This, which in the view of Mr. Home Tooke is of great magnitude, he attempts to establish by a very doubtful kind of etymo- logy. He does indeed intimate, * that it is an • easy matter, upon Mr. Locke’s own principles, and a physical consideration of the senses and the mind, to prove the impossibility of the com- position of ideas.’ And accordingly also (as he likewise intimates) of abstraction, complexity, generalisation, relation, &c. of ideas. But, easy as such proof was alleged to be, he did not attempt it : nor has he given any evidence of being capable of a successful attempt of this nature. Indeed his expression betrays inconsi- deration : for how can any one who knows what he says, or whereof he affirms, speak of ‘ a phy- sical consideration of the senses and the mind ?’ It is hardly possible to find any thing more fu- tile tlian much of what Mr. Home “Tooke says respecting metaphysics. All*

his etymologies might be as certain as the greater number of them are doubtful, yet every one of his meta- physical deductions or opinions be false T/ut for example, may be the past participle of trow; and truth the third person singular of the indi- cative, yet what is called in our language truth, be some more certain and ‘^si fickle entity than that which any one trou-em or thinketh. But the fact is, that the very etymology in ques« tion is as false as the opinion founded upon i* or attempted to be supported by it. There r, not room, however, here to refute t!ie metaphy. sical theory of Home Tooke in a full and forma, manner ;. but it can hardly require refutation, foi it has little to recommend it but confidence anil

assumption. Mr. Home Tooke’s theory of a northern origin to tlie languages of Europe, and his Gothic etymologies are also very doubtful : but of these more hereafter.

The foregoing may suffice to direct the reader to the great authorities in oui language on the subject of Philosophical Grammar. In our pre- sent article we divide the consideration of gram- mar into four parts. I. Treating of the General Principles of Grammar or Philology. II. Of the Parts of Speech, or Grammatic Distinctions o<' words. III. t)f Prefixes and Affixes. IV. Of Rational Grammar of the English Language

PART I.

THE GENERAL PRINCIPLES OF GRAMMAR

OR PHILOLOGY.

Sect. I. — Of the Derivation or the English Language.

On this subject, to a certain extent at least, there can be but one opinion among competent judges. A great part of the English language is derived from Latin and Greek. Many words have been received directly from these languages ; many have been received through the Italian, the Spanish, the Portuguese, German, Swedish, Danish, and Dutch ; but the far greater propor- tion have come through the medium of the French.

The causes of the direct entrance of learned terms are — the general study of the learned lan- guages ; the facility with which such terms are applied to the various purposes of art, science, and philosophy, &c. (not to mention a very gen- eral disposition in learned men to show their learning) ; the application of Latin to law, phy- sic, surgery, anatomy, botany, &c. ; add

to all which, the consideration that it was long almost the only written language of Europe : — to com- prehend all in one sentence, Latin has for many hundreds of years been the learned language of Europe, and the terms of the learned are con- stantly descending into and becoming part of the common or virnacular language of every peo- ple on the ftce of the earth. It is on this ob- vious principle that we hope to prove that, if not all, nearly all that very part of our language which is most confidently received as Saxon and Gothic is, in fact, neither more nor Ic than a corruption of Greek and Latinˆ

The reason why many Greek and Latin words have been adopted by us, through the medium of the Italian, is sufficiently obvious. Rome, even when her consuls and emperors were no more, was still the seat of empire : an empire of mightier svyay over the minds and habits of lan- guage of the nations than ever was the power of the Caesars. From other causes, too, Italy was the fountain of influence to all parts of Christen- dom; for besides the Catholic religion, with its Roman priesthood and Latin tongue, science, the productions of arts, and the arts themselves, were thence derived. It was Italy, too, that took the lead in vernacular literature : and her poets, novelists, historians, and philo-=nphers, were as much in advance of those of other mo- dern nations as she was in advance of the rest of Europe in arts and manufactures.

It has been intimated that the greatest influx

of Greek and Latin words has been through the channel of the French. The causes of this are, evidently, the geographical proximity of France, and her predominant influence in politics, po- lite literature, and fashion ; which influence has operated powerfully in Europe, and especially in Britain, ever since the reign of Charle- magne.

About the commencement of our vernacular literature there was, indeed, an extraordinary importation of French terms ; and the reason is ubvious ; for, as the French borrowed all from the Italian (which is admitted even by Voltaire), we at that period borrowed nearly all from the French. But the grand cause of the fact in question was the conquest. It is well known that William of Normandy attempted to make French the only language of England ; that it was the only language spoken at court, taught in schools, employed in statutes, legal forms and pleadings, &c. &c.

It has been intimated above that some of the learned words, of which so much of our language consists, were received through the medium of the Spanish. The reason of this was the politi- cal pre-eminence, and consequent predominant influence, which Spain at one time possessed. Thus we have duplicates and triplicates of many words, which we

borrowed by turns from the Italians, French, and Spaniards, as they respectively happened to be in the political ascendant. But there was another cause of tlie influence of the Spanish : it formed a point of contact, or link of connexion, with the arts and sciences of the Saracens : hence the portion of Arabic which is found in the diff'erent languages of Europe ; for knowledge has the power not only of forcing a passage from more enlightened into less en- lightened nations, but also of taking with it the very terms in which it happens to be contained. The fact is, words and thoughts are so mutually adapted that translation is always difficult, and often impossible; so that it is less from choice than necessity that a people, poor in arts and sciences, borrow not only the improvements, but, to a certain extent, the language of their richer, i. e. more intellectual, more literary, and more philosophical neighbours : thus the nations of Europe, during the middle or dark ages, bor- rowed largely from the Saracens and the Greeks; thus the Celts, the Goths, the Sarmatians, and even the Persians, the Arabians, Sec. &c., bor- rowed largely, for many ages, from the Greeks and Romans. These were the Backwoods-men of Grecian influence and the Roman empire : and, if those stationary and unimprovable ani- mals, the naked savages of Indiana, already speak a corrupt English Cor Yankee), it cannot surely be thought incredible that the venerable Gothic fwhose origin, Mr. Home Tooke says, is buried in the deepest antiquity) should prove, after all, with very little if any exception, a corruption of Greek and Latin.

Sect. II. — The Anglo-Saxon and Gothic Origin of the English Language Con- sidered.

It is not without some reluctance that the au- thor approaches this question ; because he has to

controvert tbe opinions of Mr. Home Tooke, for whose memory he entertains the sincerest respect and for whose labors he feels truly grateful. He will not say that he would rather be in the wrong with Hnrne Tooke than in the right with Harris; but he considers the errors of the one far more interesting, and even instructive, than the truths of the other. Many had pretended to write philosophically ; but it was reserved for the au- thor of The Diversions of Purley to be the first, at least in this countr}', to write sensibly on the subject of language. If his celebrated work be big with promises, which never have been, and which, probably, never can be realised; they hare internal evidence of proceeding from sin- cerity. But, with every disposition to admit the merits of tiie above work, it certainly

docs con- tain a considerable portion of unsound opinion, especially in connexion with the author's favor- ite theory of a Northern Origin ; in support of which, ingenious paradox and bold assertion are more conspicuous than careful enquiry and dis- passionate reflection ; and the Gothic derivations are, for the most part, not only mere assumptions, but many of them are such as would have dis- graced Junius or Skinner.

We had once intended to collect in this place all the unsound and absurd etymologies of Home Tooke, and confront them with what we deem true derivations ; but such a task might seem in- vidious. It was the unfortunate theory of the Northern Origin that misled the acute judgment of the author of the Diversions of Purley ; for his Greek and Latin derivations are as remark- ably sound and incontrovertible as many of his Gothic derivations are absurd and false. His Gothic partialities and prejudices, connected as they were with a particular theory and a politi- cal bias, are easily accounted for ; but they are, nevertheless, unworthy of his understanding and inconsistent with the philosophic spirit of free enquiry. He perceived a remarkable similarity, or rather identity, in many Gothic and Anglo Saxon words with Greek and Latin terms. What is the inference deducible from this fact? That the half civilised and illiterate tribes of the north borrowed such words from the highly civilised, ind therefore powerfully influential, Greeks and Romans ; or that they both derived them from a common origin ? No, indeed, but that the Greeks and Romans, those masters and teachers of the world after the extinction of Babylon and Mem- phis, borowed many words (perhaps terms of art and science) from the rude and unlettered tribes of ancient Germany ! Or, as is ingeniously (not to say fancifully) supposed, in bold defiance of all history and all probability, that these rude tribes made successful irruptions into Greece and Italy, and grafted their language on that which already existed in these countries!

But the Herculean argument for the Northern Origin is the darkness of its deep antiquity. We can trace (Mr. Home Tooke avers) the origin of the Latin and the Greek ; but that of the Gothic is involved in darkness and buried in the deep- est antiquity. But is not the origin of all the languagps of all the uncivilised and half-civilised tribes of the earth sufficiently buried in darkness

entitle them to the same honor? Why should

the Anglo-Saxon or Gothic monopolise all this merit ? The Celtic has surely some claims; and, as to words without number, every one capable of using a dictionary may soon satisfy himself not only of striking resemblance, but of absolute identity, with both the Greek and the Latin. Have not the Welsh, for example, Pont and Dant? which are plainly Pons and Dens, or, as in Ital- ian, Pome and Dente. And is it not undeniably certain that the

Romans borrowed all such words from the Welsh, the more ancient people ? — which word people, as well as populus, is, with- out controversy, a corruption of the ^^■elsh Pobl ; for the more cultivated and literary language is uniformly derived from one ruder and less lite- rary. It is amusing enough to find other writers advocating the Celtic origin of the Greek and Latin Languages, with as much zeal, if not with the same talent, as Home Tooke advocated the Gothic origin.

The fact is as well established as any histori- cal fact whatever, that the Goths had not the use of letters before the fourth century ; that they borrowed their letters from tne Greeks and Ro- mans ; that their first attempts at literature were rude translations and imitations of works written in Greek and Latin.

The fair inference seems to be, that as the Go- thic, or, say at once, Saxon literature (and the writings of men in the present age who know not how to spell their own name are as worthy of such a dignified appellation), originated in Greek and Latin, so did a great proportion of the words composing it. Such has always been the case ; for a rude and illiterate people as naturally bor- row words from their civilised and literate neigh- bours SlZ they borrow their improvements and arts and sciences, or as the poor beg from the rich : and the inverse process supposed is as ab- surd as the idea of the rich borrowing food and raiment from the poorest paupers that exist in their neighbourhood or live on tlieir bounty.

The only question, indeed, with unprejudiced enquirers, is likely to be concerning not the reality but the amount of Saxon derivation from the learned languages. This may not be easily ascertained with perfect accuracy; but, from the very nature of the operating causes or influencing circumstances, it must have been very considera- ble : and in reply to all Home Tooke's witti- cisms, about the Goths not waiting for others to come and put words in their mouth, it is suffi- cient to remark, that they w ould naturally adopt in process of time new foreign terms for many of their old vemacular ideas, (for such is the process with all people similarly circumstanced), and that with the multitude of ideas which literature in- troduced among them, they would adopt, to a wide extent, the terms in which they were con- veyed to them, partly from clioice, and partly from necessity. This is the history of all the living languages of the earth ; not merely of such as are most rude, unformed, and imperfect (and what can well partake more of these attributes than the scrap of Gothic contained in Codex Argenteus, or even tlie Saxon of the eighth and ninth centuries ?) but of those which are most improved, and most firmly fixed by authoritative mles, established principles, and admitted stand-

ards. New terms and modes of speech are con- stantly displacing the old. Custom, the sovereign arbiter of language, is as capricious as tyrannical; and * time is the greatest of all innovators.'

The only argument of Mr. Home Tooke in- trinsically deserving refutation, is that which he attempts to erect on the evidence of etymology ; and on this he evidently relies with much confi- dence. He puts the question — When two dif- ferent languages have the same words, how are we to ascertain which of them borrowed from the other ? This is not a very satisfactory mode of putting the question, for two languages might have the same words without either borrowing from the other, as both might have derived them from a common origin. But his manner of replying to the question is still less satisfactory. Etymology is to decide. So far good ; but what kind of etymology ? Here the advocate of the northern origin (to use his own words) takes a short cut which saves much trouble, but leaves us in much ignorance ; for, instead of proofs, he contents himself with assumptions, as if the business were settled by merely asserting that a certain word is a Gothic verb or noun, without even attempting to give us any further informa- tion. As to the instances which he gives of Gothic and Saxon words, whence corresponding Latin and Greek words must have been derived, it is difficult to conceive any reason whatever, save that the former are found in Gothic and Saxon letters and spelling.

There are but few Gothic admirers that can deserve the honor of being noticed in connexion with the author of the Diversions of Purley ; but this seems the proper place for saying a few words about the ntility of Saxon literature, es- pecially as there appears some disposition to exalt it into undue importance. A Saxon pro- fessor in one of our most renowned seats of learning has employed very laudatory strains on the subject ; to one or two of which it will suf- fice to apply the test of criticism, if, indeed, it be fair thus to try the soundness of panegyrical orations.

' The Anglo-Saxon,' the learned professor affirms, ' is one of those ancient languages to which we may successfully refer in our enquiries how language has been constructed.' This is a most comfortable assurance, pregnant with hope and anticipation as the doctrine of Home Tooke ; but, if equally barren of results, it will only tantalize our fond desires.

The sober truth is, that Anglo-Saxon is availa- able for etymologic purposes in studying the English language, but not half so available as German, Swedish, Danish, Dutch, old English, Scottish, Greek, and Latin, The reason is obvious ; such was the illiterateness of even the Saxon literati, that they knew not how to depict to the eye their own barbarous sounds.

Hence the caprices of Saxon orthography, as they are leniently termed by the candid and enlightened author of the Anglo-Saxon history. To have a true idea of these caprices, (more properly rude essays at spelling), we have only to compare them with the literary attempts of our most unlet- tered mechanics or laborers who can barely read and write. Their orthography and composition and that of the Saxons will be found remarkably

similar. This may displease the lovers of Saxon literature, and all lovers are apt to be offended when freedoms are taken with the objects of their affections ; but our apology must be, that we have no wish to offend, and the ruling prin- ciple of our sentimentality is, Rien n' est beau que le vrai.

' The present language of Englishmen,' says the Saxon scholar above alluded to, ' is not that heterogeneous compound which some imagine, compiled from the jarring and corrupted ele- ments of Hebrew, Greek, Latin, French, Spa- nish, and Italian; but (but what? completely Anglo-Saxon in its whole derivation, having none but pure Gothic words in its whole voca- bulary !) completely Anglo-Saxon in its whole idiom and construction.' We may well exclaim fie upon but; for it brings forth a most irrele- vant conclusion. A zealous Frenchman might exclaim, — The present language of Frenchmen is not that corruption of Latin which some imagine, but completely French in its whole idiom and construction : and thus might Spanish and Italian professors reason for the idiomatic antiquity of their language.

Specimens of the present English have been selected for the purpose of showing what a great number of pure Saxon words they contain ; but we think it can be proved that most, if not all, of these very Saxon words are as really Greek and Latin, as those which are admitted to be adopted from these languages. The sole differ- ence is, that the words given as Saxon were adopted at a much earlier and ruder period, and, therefore, are more changed, contracted, and disguised. This is an opinion not hastily adopt- ed (for it was reluctantly admitted, being forced upon the \mderstanding of the author in opposi- tion to his faith in the Northern Origin), but slowly and cautiously formed, after much en- quiry and long deliberation.

If this opinion can be established, if it can be satisfactorily shown that all, or nearly all, the words of the English language are merely Greek and Latin terms, in learning which so much time is spent in youth ; the result will surely be far more important than tracing them up to the darkness of Gothic antiquity, which is as void of pleasing association as of useful instruction.

Sect III. — Verbal Contraction, or Abbre- vrATioN Considered.

Here three general rules may be laid down.

1. The more illiterate any people are, the more do they contract their words ; and the illiterate part of a community always shorten their words more than the educated portion of society. Thus the language of the Franks abounds with more violent contractions of Latin than does that of the Italians, the modern masters and teachers of Europe. The language of the Saxons is characterised by more verbal contraction than the old English in the time of Chaucer, and the English of his period has more of the same character than when cur language first began to be fixed by established rules and uniform polite usage : and thus, also, the language of the vulgar is remarkable for violent contractions . as, gemman, for gentleman ; ant, for are not ; fudge, for fiction ; fib, for fable : to

which may be added such words as the follow- ing, though yet tolerated in familiar or jocular discourse ; cant, shant, icont, for cannot, shall not, will not ; rant, for rodomontade ; rum, for romantic ; chum, for comrade, &c. &c. Had these and all such words descended to us from the venerable antiquity of Saxon literature, they would, in all probability, have possessed, if not dignity, at least respectability ; but, being vulgar upstarts of recent times, they can never rise to the classic title of good expressions, or to the honor of polite usage.

2. Longer words and syllables contract (whilst language is unfixed) into shorter, and tlie longer the word, the greater the contraction. Thus polysyllables become monosyllables, and mouo- syllables frequently shorten into a single letter : as auditus contracted into udito, It.; ou'i, Fr. Ego contracted into % eck, J ick, j ich, + ic, then I, je, Fr. ; io, It. ; i/o, Sp. Ilabeo, contracted into ho, It. ; he, Sp. ; ai, Fr., &c. &c.

Such is the process of every living language on the face of the earth until checked by gram- matic authority, which is late in coming into existence, and not till long after the lawless anarchy of custom has committed strange ety- mologic outrages in mutilating and disfiguring the monuments of classic antiquity. These dis- figurations are the true Gothic origin of the modern languages : and even the Italians, those modern Latins, consider themselves indebted for their language to the Lombards.

The contractions in question are made in every possible manner ; sometimes the beginning and sometimes the termination of words is cut off, and sometimes the middle is thrust out and the two extremes compressed

into the closest possible contact; especially by the French, who, next to the Anglo-Saxons, have been suilty of the greatest etymologic havoc. The following ancient and modem names of places are pre- sented as instances of the process of verbal con- traction above indicated. The oldest form is put first.

Acarnania, now Carnia ; Aciris, Acri ; Adra- num, Aderno ; ˆ‘Enona, Nona ; iEnus, In ; Agrigentum, Gergenti ; Aletium, Lecci ; Alex- andria, Scanderia ; Alexandrium, Scandalia; Aluta, Alth; Ambiana, Amiens; Amisia, Emse; Amisus, Amid; Amphipolis, Emboli; Antipolis, Antibe ; Aqua; Sextia?, Aix ; Arelatum, Aries ; Arsenariaria, Arzen ; Ateste, Este ; • Agusta, Aosta ; Augustodunum, Autun ; Auximum, IJsimo; Barathra, Brata; Borbetomagus, Worms; i)abilonum, Challon; Ca?sar Augusta, Saragossa; Ligeris, Loire ; Mseandrus, Madre ; Matrona, Marne; Metaurus, Marro; Magantiacum, Mentz; Rhodanus, Rhone ; Thessalonica, Salonichi ‘; Garienus, Yar; Eboracum, York; Ca.stellum, Cassel ; Conimbrica, Coimbra ; Damascus, Damas; Forum Julii, Friuli ; Lugdunum, Lyons; Novesium, Neus ; Noviodunum, Noyon; Telo Martius, Toulon; Tridentum, Trent, &c. &c.

These instances, besides answering the imme- diate purpose, serve also to exemplify nearly all the usual alpi)abetical interchanges and transmu- tations. It may be observed, that many names of places whose orthography has been fixed, are

much abbreviated in common speech : as Ciren- cester pronounced sister, &c. From this, as well as from all the foregoing examples, it plain- ly appears not otiy that long words are con- tracted into shorter forms, but that the longer the name, the greater the contraction ; as in all cases the more difficult and unmanageable a word is, the greater is its corruption in process of time. The following instances are taken almost at random.

Eleemosyna, alms ; episcopos, bishop (abispo, Sp.; vescovo. It.; eveque, Fr. ; such are the ca- prices of etymology !) presbyter, priest ; obli- tero, X bluther, blur, blot ; collect, cull ; coil (cueillir, Fr., &c.) ; bull (as Irish bull), blunder, contraction of balena a terra. It., bala;na ad terram, a long-established expression ; seacalf, seal ; despicatus, despite, spite ; succumb, sink ; secure, sure; semino, sow; sluice from seclusus; count, contraction of computo; come, commeo; chair, cathedra; round, rotundus; sedate, sad, &c.

Such instances might be multiplied indefi- nitely. We merely subjoin a few examples of proper names.

Benjamin, Ben; Robertˆ Rob, Bob; Joseph, Joe; Juliana, Jill; Timothy, Tim;

Richard, Rick, Dick; Edward, Ntd ; William, Will, Bill ; Henry, Harry, Hal ; Alexander, Ellick ; Thomas, Tom ; Margaret, Meg, Peg ; Elizabeth, Eliza, Bet, Bess, Betty, Sec. ; Sarah, ,Sally ; Maria, INIary, Molly, Moll, Poll, &c. &c. Some of these contracted forms belong to the lower orders of the vocabulary, like all those called flash or cant terms ; but others have all the dignity of polite usage. What has thus happened to proper names, also happened in former times to common nouns and to all words; and is still their fate in the language of the vulgar, and in the Saxon-like literature of the uneducated members of society.

Sect. IV. — Of Verbal Corri;ptions.

These are in many respect.ˆ identical with ver- bal contraction ; but there are many changes of words from their original form which could not be included under that denomination ; and, thei-‘ re, a few separate remarks may be applied to t\ here.

1. vVords that are new, strange, and unusual (as all foreign terms are when first imported and adapted both to the ear and the mouth) are most liable to be corrupted or changed from their original form. There is an idiom in the sounds and in tlie pronun«iation of every people, as well as in their phraseology ; and they naturally bring the sounds and])ronunciation and words of other languages (when introduced among them) to their own idiom or manner. The French (as the Greeks did before them) do so professedly and systematically ; and all people, however un- intentionally, do so to a considerable extent. Hence the reason why words adopted from other languages are often so much disguised, like foreigners in the costume of the country, that their original features can hardly be recog- nised. Who would suppose, for instance, that OUT yes, yea, ay, are the French ouil There is not a single letter the same. The same thing

would happen to words of recent importation, if we did not, by a sort of fashionable pedantry and servility in borrowing almost peculiar to us, put the new patches of French orthography as (veil as French pronunciation upon the old gar- ment of our language, which was sufficiently motley before ; for no confusion of tongues or mixture of all the dialects of Babylon could well equal it in anomalies.

2. Words that are long and hard or difficult are always liable (before language is fixed by grammars and dictionaries) to be much cor- rupted, or changed from their first form. This has been already indicated.

3. Words much in use, or which frequently pass from mouth to mouth in the hurry of com- mon discourse, are exceedingly liable to be cor- rupted. Ilence, all familiar household words (and that part of our language which has de- scended from Saxon times consists chiefly of such) are usually much more metamorphosed in process of time than the learned oi literary and scientific terms of a people : hence, also, the etymologic difficulty attending the particles of every language.

4. The terminations are the parts of words which are most liable to be corrupted, as is evi- dent from a careful inspection of any given num- ber of terms. The physical reason of this seems to be, that all men, being naturally idle and careless, are usually impatient to get to the end of any thing they have to do or say ; and there- fore hurry the one out of their hands and the other out of their mouth badly finished. The above fact, as well as th it immediately preced- ing it, has been treated o by Home Tooke with all the acuteness and dext rity which he applied so successfully to his subject, when his under- standing was not biassed by theory.

5. There are many verbal corruptions which originated not in carelessness, hurry, or mere mispronunciation, but in deception occasioned by similitude of sound, in new, strange, or fo- reign words, to that of some others well known : thus. Chartreuse, was corrupted into Charter- House ; asparagus, corrupted into sparrow- grass ; reticle, ridicule ; lustrino, It. a shining silk, corrupted into lutestring ; Benzoin, Benja- min ; lanterna, corrupted into lanthorn, as there happened to be horn in the old lantern, &c. &c. Thus did sheer ignorance produce many strange corruptions, as well as an etymology con- temptibly absurd.

6. It is with the ignorant and the uneducated that the grossest verbal corruptions chiefly ori- ginate and abound ; hence they have, for the most part, a radical meanness and vulgarity about them (unless they have descended from Saxon literature, and possess the dignity of Gothic an- tiquity); for they never possessed sufficient merit to rise to any office of distinction or station of respectability. Not to adduce such striking in- stances of gross corruptions, as bamboozle, bother, balderdash, rip or rep (i. e. rep)-obate), demirip, &c. &c. : even such instances as hint, i. e. iriti- mate, get, git, gist (i. e. gesta, i. e. res gesta), &c., are rather low words : and hence the diffi- culty of supporting the familiar or middle style with sufficient dignity : a task to which neither

the genius of Swift nor the taste of Addison was fully equal.

Skct. V. — Of Ellipsis, or Syntactic Abbre- viation.

That which is here indicated has the same re- lation to composition, i. e. to

sentences and members of sentences, as verbal contraction has to single and separate words : the one is the leaving out of letters and syllables ; the other is the omitting of whole words. Both are to be accounted for in the same manner ; both origi- nate in carelessness, or hurry, or the love of ease, natural to all men ; who usually take the shortest cut to the object of their thoughts and affections, and employ elliptic modes of expression, for the same reason that they adopt short-hand and other contractions or abridgments of labor. This is ever their short, direct course, when engaged in good earnest about their wishes and wants, their business and necessities. From various causes, manner, or style, will differ among in- dividuals and among nations : that of one may be exceedingly full and redundant in expression; that of another may be as remarkable for short- ness and abbreviation : some from mental taste and habit are lavish of words, as Cicero ; others are sparing of them, as Sallust. There are over- powering temptations to verbal redundancy and prolixity; as when attorneys and reviewers, or, perchance, encyclopaedists, are paid so much per sheet; and there are temptations to the opposite extreme, as when the writer has to pay for an advertisement ; for his words are likely to be few, even if not well ordered. But all such consi- derations produce iro sensible effect on the lan- guage of a people, which is always tending to abbreviation in all its modes of expression; for there is this difference between the contraction of words and that of expressions : the former may be checked in process of time, the latter never can be checked ; and though there be inconve- niences as well as advantages atten:?ing this elliptic process, it is amenable to ^^o grara- matic law, and, therefore, is always in full ope- ration.

That which is now under consideration was too obvious to escape observation, and there- fore it has been frequently noticed by philolo- gical and metaphysical writers, as, for instance, by the ingenious Tucker: it was familiar, indeed, to mere grammarians ; but Mr. Home Tooke has treated of ellipsis in such a clear, full, and satisfactory manner, that it is unnecessary to en- large on the question in this place, and there- fore, a few illustrations will suffice.

It is difficult (if, indeed, possible) to select a single sentence or expression which is not elliptic. Take such instances as the following, which happen to occur at the moment : A prince of the blood, i. e. blood royal, or royal blood ; a man of color, i. e. dark color; a man of rank, of family, of fortune, &c., i. e. of high rank, of good family, of great fortune, &c. Nor is the ellipsis filled up by thus supplying such omitted terms, for there is hardly a single word, if, indeed, any word, in any single expression, which had not, at one time or other, more words connected with it; which were dropped, because the mean-

inˆ of the expression liaving been once well esta- blished and effectually associated with some of the leading terms, the other could be omitted, and yet the signification retained. For example, in the expression, man of quality — man is a con- traction of human, which requires being, or some equivalent word, if the ellipsis be filled up, to be connected with it : then quality (a con- traction of equality, as qualis is of aequalis) ma- nifestly requires to be connected with other words; for without their assistance, it could not express the meaning which is now suggested or indicated by it. There is, in reality, ellipsis (i. e. something left out) not only in every ex- pression, but in almost every important word ; such as forma, (meaning beauty) i. e. forma ve- nusta; libel, i. e. libellus famosus, &c. Sec. And to each of such words, the synecdoche of the grammarians (that is, a part put for the whole, or, as the word implies, something that is not expressed is implied in or to be taken with that which is expressed) as really belongs, as in those cases where they have applied the term. For ex- ample, famosus requires malus, or some equi- lent term ; or rather, fama, the noun on which the adjective is formed, requires mala; for fama of itself means merely a saying or report : when, therefore, a dyslogistic, i. e. taken in a bad sense, it had originally mala or some equivalent word connected with it.

Not to dwell longer on what is so vei7 obvious, that proof and illustration are alike redundant; this seems the proper place to explain a matter connected with it, not quite so evident, and which, therefore, has been very little considered ; not only by the common class of writers on phi- lology, and logic, and metaphysics, but even by the acute Home Tooke, whose antipathy to such writings as those of Harris and lord Monboddo seems, in some instances, to have obscured his understanding or biassed his judgment. That all words have originally a distinct, separate, independent meaning of their own, is a point which he has labored with as much success as acuteness ; but there is another consideration which, so far as we remember, he has overlooked, or which he has refused to admit, viz. that there is a syntactic as well as verbal meaning ; i. e. there is a meaning effected in composition, which connot exist without it; for no word or number of words can, by any possibility, convey that signification which is conveyed by a sentence, any more than the figures of arithmetic can indi- cate separately what they do by every possible mode of combination. The supposition, indeed, would be as absurd as to believe that a thing can be and not be at the same time. Now, though we cannot say that the meaning of words in composition, or when put together to make a sentence, is independent of that meaning which each of them has separately (as may be

inversely affirmed), yet we can say, and do affirm, that that the one is wholly distinct from the other. .And, if this fact be lost sight of, we are likely to fall into as great errors as in supposing, with Hams, that many words nave no meaning at all till they are put together ; as if composition had a creative power of producing something out of nothing. This is so absurd as hardly to merit

notice ; but, if we do not attend to the distinct meaning produced by the combination of words, we shall be involved in not only etymologic and grammatic, but logical or metaphysical absurdi- ties, such as those which are so plentifully spread over grammars, and dictionaries, and metaphy- sical disquisitions. For instance : the real at- tempt (a very unsuccessful one) of almost the whole of the Herculean labor of Dr. Johnson is to give, not, as it professes, verbal, but syntactic meanings ; and for the same reason that it assigns ten, twenty, or thirty significations to one word, it might have assigned as many hundreds. It is, indeed, as so often pronounced, a great work, but it is not great enough by many thousand de- grees for its real though not professed purpose ; in reference to which it is truly little.

Syntactic, being entirely distinct (though not independent of the verbal as that i" of the syn- tactic) from verbal signification ; it follows that the elliptic process can proceed almost, if not altogether, interminably, without absolutely de- feating (though it may and often does mar) the purpose of language ; so that, in process of time, there is, in every sentence, every member of a sentence, every expression, and almost every word, much more implied than is expressed ; much more indicated than is really signified by the sign employed ; which acts as a prompter rather than reciter or narrator. Mr. Dugald Stewart is not far from the truth when he says, that the office of language is not so much to con- vey ideas as to call up trains of thought in the mind. The only thing about the statement to which we demur, is the term office (as if such were the orignial design and use and formation of language), and the subserviency to a particular theory intended by the remark.

Sect. VI. — The Mutations of Verbal Sig- nification Considered.

That the significations of words, as well as their external form (their spelling and pronunciation), are changed in the course of time, is abundantly manifest. Mr. Home Tooke, indeed, asserts — ' Every word retains always one and the same meaning. Unnoticed abbreviation in construc- tion and difference of position have caused the appearance of fluctuation, and have misled the grammarians of all languages both ancient and modern.'

That a word generally retains one and the same meaning is certainly true ; but that every word always retains one and the same meaning, is a proposition contrary to the most decisive evidence that can be obtained on such a subject. Indeed it would be very unaccountable if all the grammarians of all languages, both ancient and modem, had been misled by mere appearances to believe that words have secondary as well as primary meanings, if no such distinction really exist. But the question admits of being easily settled by obvious and indisputable facts. Syco- j)hant, for instance, originally meant an 'nformer (one who gave information against persons ex- porting figs, the exporting of which was fo- bidden by law at Athens), now it means a flatterer : hea- then originally meant of or belonging to anatiou (like Gentile from Gens) : pagan originally

meant a villager ; but both these terms have long meant an idolater or worshipper of false gods : Caesar, at one time was a proper name (and, perhaps, before that, meant having bushy hair), but it has long meant, as in Germany, Kaiser, and in Russ, Czar, an emperor; which word, emperor, originally meant the commander or general of an army. A hundred such instances might be easily collected. The question here is about a fact; not the manner of accounting for it, or the process by which it was effected ; which is, perhaps, after all, what Mr. Tooke intended ; so that we may have been all the while contend- ing with a phantom, — which, however, it is worth while to put down.

The reasons of all such shiftings and changes of verbal signification are very obvious after a little enquiry and reflection. Indeed, they have already been virtually explained ; and therefore, to avoid repetition, we shall only subjoin a few remarks. As almost every expression (if there be any exception) is elliptical; so, with almost every word (if, here, also any exception exist), there are several ideas associated in the mind of those who employ it, besides the individual idea which it was intended to indicate. The reason of this is too obvious to require any metaphysical abstrusity of theory or of explanation. There is no such entity in either the natural oi moral, physical or metaphysical world, as disconnected individuality. There is not any one single entity, be it an object of our senses, a sensation, an idea, a perception, a notion, or whatever we may choose to call it, which can exist alone or in absolute solitude and separation from com- pany. However, much, therefore, it may be in- tended as the sole or exclusive object of indica- tion by any verbal sign, or by any contrivance whatever, it is after all but one of a flock or group : it

may be the first or largest of the flock ; it may be the most prominent figure in the group ; it may occupy the fore-ground in tlie representation, but it is always accompanied by a number of other enthies. He““p what i Jled the principle of mental associ m, or t ■ asso- ciation of ideas in the mind, so uherally ■ .loso- phised since the days of the philosopner of Malmsbury.

The fact above indicated, i. e. the complex or gregarious nature of ideas, is the origin of many .shiftings or mutations of verbal signification. Here a single illustration is better than a thou- sand sentences. Take an instance already ad- duced. Heathen primarily means of a nation; or, taken substantively, i. e. elliptically, one of a nation ; and, in the plural (ethnicoiˆ as it occurs in the New Testament), i\e nations : but the nations of the earth were all considered, by the Jews, idolaters, or worshippers of false gods : the word for nations was so associated from the first with this idea, as to be, in process of time, iden- tified with and indicative of it only. This Jew- ish idiom (with many other Jewish notions and idioms) accompanied the Christians (who were, at first, nearly all Jews) from Judea into Europe, •where it remains to the present day : and in the use of all such words as Heathen and Gentile, we. Christians and nations as we are, speak after the manner of the Jews. Take another instance

of a similar nature and origin : Pagan primarily nieans a villager, a countryman ; or, as we have it corrupted through the medium of the French organs of speech, a peasant : but the peasants contmued in the religion of their fathers ; and worshipped Pavor and Pallor, and Pan and Priapus, in the old way of their first faith and early associations, long after the inhabitants of Rome and of the large towns had turned from Heathenism to Christianity. Hence, the word for villager or peasant was associated in the minds of the Christians, i. e. the town's people, with the idea of idolater or worshipper of false gods ; and, being thus associated, it was soon identified with and exclusively indicsAi ve of that idea, like the term heathen. A thoujand such illustrations might be given of the same process, of a similar changing or shifting of verbal signi- fication ; so that Home Tooke wrote more con- fidently than advisedly when he asserted, that every word always retains one and the same meaning. It is true, as he supposes, that abbre- viation m construction and change o{ position do cause appearances of fluctuations, where no fluc- tuations really exist; but there are many changes of verbal meaning which cannot thus be ac- counted for, and which are explicable only on the principle of the association of ideas in the human mind, resulting from and answering to the complex nature of things as existing in the uni- verse, and, therefore, as presented to the human senses.

Metonymy, like synecdoche, as handed down fiom antiquity, is mingled with error ; but it has evidently a basis or .substance of truth ; and neither

Quintilian nor Vossius was wide of the mark of correct definition, when it was defined by the first, ‘ The putting of one word for ano- ther,’ and by the last, ‘ A trope, which changes the name of things that are naturally united, but in such a manner as that one is not the essence of the other.’

Sect. VH. — The different kinds of Muta- tion IN Verbal Signification.

These may be summed up in the following particulars: — 1. When the name for a class of beings comes in process of time to indicate a circumstance or peculiarity connected with them : as. Heathen or Pagan, to denote Idolater; Scy- thian, Goth, Turk, Tartar, Vandal, &c., to de- note barbarity and cruelty, or any person remarkable for these qualities : Jew, to indicate any one remarkably false and overreachmg, &c. &c. Here a hundred instances might be given, all agreeing as to genus, but differing as to species.

2. When names, originally descriptive of of- fice, agency, &c., come to be merely obscure titles or empty compliments : as, duke, marquis, count, earl, lord, knight, squire, Mr., Sir, madam, lady, Miss, Sec. &c. All such words may be compared to the Roman emperors, who were great whilst living, but who acquired deification by death.

3. When old names remain, though that to which they were originally applied, and of which they were descriptive, has ceased, or has been superseded by something else : as, papei.

originally the name of an Egyptian flag or leaf: volume, i.e. something rolled up — a scroll; burg, burgh, burrow, was originally a fortifica- tion or fortified place ; province originally signified a conquest, or country gained by suc- cessful war. Words of this description are very numerous.

4. When words, expressive of action or quality, are appropriated to objects as common or proper names. This is the most prolific origin of verbal multiplication or vocabular augmenta- tion ; for thus an indefinite number of nouns are produced by a few verbs and adjectives : thus, ˆac?, feat, fight, fit, &c., are all originally one word ; and thus the names of many animals and natural objects, as well as of metaphysical entities, are resolvable into one adjective, or one verb ; which one adjective or verb is so exceed- ingly diversified in spelling and pronounciation, partly by design and partly from accident, as to seem not one and the same word, but a great multitude of separate and independent words : hence, one of the causes of tautology, inanity, obscurity, and absurdity, so often observable

in the speeches and writings of men.

5. When a word shifts from a primary to a secondary meaning, or, when it passes over to a concomitant idea, or from the cause to the ef- fect, or vice versa. This is essentially the same as 1, only in a more comprehensive form to pre- vent mistake.

6. When a word is employed metaphorically; for the very term metaphor, as also trope, im- ports a changing or turning of the word to ano- ther use than that which it originally had. Many words have lost their literal, and retain only their metaphoric import or use ; many have passed back from their metaphoric to a literal, or more properly to an unmetaphoric, apolica- tion.

Sect. VIII. — Verbal Diversities as to Rank or Respectability.

As the members of a community range in different classes of political rank, so do the words of a language. There are here, also, high and low and middle classes. On these distinc- tions a few remarks will suffice.

1. A large class of the lower orders of words has been already indicated : for those gross ver- bal corruptions which have originated with the ignorant and the uneducated (and which have not descended from Gothic antiquity, when ignorance had the honor of being universal) are radically vulgar, and permanently doomed to hopeless degradation.

2. Many words are low or vulgar for the same reason that old-fashioned garbs are so considered ; for there is a fashion in language as in other things, and, like that of the world, it is ever passing away. New terms and expressions and modes of speech are constantly displacing the old, which linger among the lower classes long after they have been discarded by those who are at the fountain of influence ; and the very cir- cumstance of obsolete words and expressions being found only, or chiefly, among the lower classes in society, stamps their character and seals th«ir fate. Thus the same words, which are

very honoiable in one dialect of a language and part of a country, are very dishonorable in ano- ther ; and this forms one of the most obstinate difficulties which the natives of Scotland have to contend with, in speaking and writing En- glish agreeably to polite usage : for, as the dialect of the North is older by three or four centuries than that of the South, persons accustomed to the old-fashioned dialect are apt to imagine thai they are keeping the very best company when guilty of employing most vulgar and disreputa- ble expressions. This fact accounts not only for the Scotticisms, but for the vulgarisms so often detected in the productions of those beyond

the Tweed, who have written with freedom and energy ; as it accounts also, on the other side, for the artificial stiff'ness and polished feebleness of those Scottish authors who sacrifice all to taste — who dread nothing so much as the im- putation of vulgarity, and who covet nothing so much as the reputation of elegant writing. It wruld be easy to produce instances ; but they might appear invidious.

We have noticed that many words become vulgar in process of time, merely from being old-fashioned ; but old fashions are frequently brought up again ; and there is a sort of senti- mental archaism raging at present among the lovers of the olden literature, who, ever and anon, cite an obsolete phraseology for the very nonce of showing its whilom beauty, too long suffered to wrinkle unadmired in neglected desuetude. If utility could be put in competi- tion with sentimentality, we would address a word of enquiry, or of exhortation, to these admirers of the antique in literature ; but the fit will not last long ; for the sentimental pas- sion is extremely inconstant : and though some words that had become both vulgar and ob- solete, have been thrown up to the very top of fashionable literature, there is some danger of a re-action, and that many of the happiest phrases of Shakspeare will be hackneyed into contemp- tible vulgarity.

3. Many words become vulgar, in efburse of time, in consequence of being associated with gross objects, actions, and ideas ; and the notion of grossness is every day becoming more fasti- dious in a state of progressive refinement. This is one of the most operative causes of mutation in living languages : and it is amusing to ob- serve the variety of attempts that are made to clothe gross entities and vulgar ideas in decent and polite phraseology, and the rapid succession of terms that are first degraded and then dis- carded in the performance of this ungracious duty. Not to present the most obvious, and, therefore, the most disgusting instances, i. e. to our refined notions and sensibilities, take the fol- lowing : guts was, at one time, a very decent term, and fit to appear at the very top of Saxon literature; but it became so very rude, upon long and familiar acquaintance, as to be wholly unbearable in any genteel family, and was turned off for no fault in the world but vulgarity : its place was supplied by helly, which was long considered a very well-bred term, and fit to ap- pear in the very best company. But, having be- come disgustingly vulgar, it has also been turned

out of good society ; and, for the present, stomach and abdomen, two learned foreigners, supj.ly, between them, as well as they can, tbe place of

belly ; but they are only upon trial, and there is no chance whatever that they will long give sa- tisfaction. It is supposed, indeed, that genteel people, finding so much trouble with such at- tendants, will contrive, in future, to do without them altogether. The fact is, that pantomime can be successfully substituted for much of the old vulgar drama of real life. It may be urged, that all this results from false refinement and delicacy, and that things ought to be called by their proper names. But this is a Utopian doctrine wherever there is such an entity as re- finement ; and when the question is about the degree, or the extent, who is to be judge or so- vereign arbiter? The calling of gross things by their proper names is one of the privileges of the dead languages. Many instances similar to the above might be presented.

4. There is a set of low words and phrases which originate in wretched metaphor, or in al- lusions to things of a mean and sordid nature, such as the following : to cram a subject or person down any one's throat, or to saddle him with a heavy expense, or to blink his argument, or to haul him over the coals, or to put him in a cleft- stick. All such expressions can never be ele- vated into lasting dignity, however closely they may be associated with the genius of a Swift or a Butler (just as low-life may be associated with the genius of Hogarth); nay, though they may have the high sanction of parliamentary autho- rity ; and certainly, though not omnipotent, it can produce very extraordinary effects upon the verbal currency of the kingdom.

It is not necessary to indicate the respectable classes of words, which are of course too nume- rous to be easily arranged under distinct denomi- nations. In general those terms and expressions, and modes of speech, which have the highest political, intellectual, literary, and scientific ori- gin, possess the greatest dignity ; for the general tendency is for words to sink from a higher to a lower — not to rise from a lower to a higher rank. Instances of the latter process are, for the most part, those of extraordinary individual merit. Thus, terms which were at first objected to as Scotticisms (such as the verb notice, &c.), and provincialisms, or as ton technical and plebeian for classic composition, have, in course of time, risen to respectability in the language. All such words as are evidently useful, peculiarly conve- nient, distinctive, and descriptive, are sure of adoption, whence soever derived : they are a kind of professional adventurers that are sure to make their way in the world, and to come into general practice.

There is a very large number of words, found in books and dictionaries, which do not properly rank either with the high or the low — the genteel and respectable, or the mean and vulgar order ; and which may be designated the aivkward squad, or pedantic company. They never had any re- conmendation but their learned bulkiness and strangeness ; and

therefore they have been un- successful candidates for admission into general and established usage.

All our words, indeed, are, properly speaking, of learned origin ; and many of them may have been introduced unnecessarily ; but mere pe- dantry has had very little share in their intro- duction. They have, for the most part, been adopted, not from the classic, but from the low and (strange as the association may appear) philosophic Latin ; not directly from the schools, or from mere scholars; but from the professions, and in connexion with the arts and sciences, and institutions, and inventions, and improvements, and business of life. The schools and colleges are, indeed, distant reservoirs of the regular sup plies ; but the cisterns whence they are directly received, the immediate channels of communi- cation, are government, legislation, jurispru- dence, theology, physic, &c. &c. ; or, to include all in two words, the sciences and the arts. The great agents in the formation of our language (as of every language) have been authors (such as ever had any influence — for there are many writings that never had readers) and orators, legislators and lawyers, ministers of state and ministers of religion, physicians and apothe- caries, inventors and improvers in all the sciences and arts which are in any respect con- nected with the wants and wishes of men. These are the influential, the assimilating, the transmuting agents of every people. Hence the obvious reason, as before intimated, why the English language is partly Greek, but chiefly Latin.

Sect. IX. — Vocabular Redundancy and Deficiency. These extremes not only meet in the same lan- guage ; but in proportion as it is remarkable for the one, it is also remarkable for the other. The most defective and least philosophic languages present these attributes so strikingly as to render them obvious to every enquirer. Take, for ex- ample, the Saxon, which is evidently what all languages are in a greater or less degree, remark- able for vocabular redundancy and vocabular deficiency : they have too many and too few words : they have too many of one sort and too few of another : they have a superfluous multi- tude of words of general import, but they are poor and destitute of particular, distinctive, and definitive terms : they will furnish you with a thousand names for one and the same entity (like the wonderful Arabic, to which its admi- rers give the praise of a thousand names for a sword); but there are a thousand entities for which they supply no name.

Both these opposite qualities are evidently great faults — not perfections in language. As to the one, there never, probably, has been but one opinion, and that sufficiently correct ; but con- cerning the other, much error and confusion have prevailed. One will eulogize the copious- ness of a language by exaggerating the number of names which it possesses for one object; ano- ther will affirm, that there are no two words, in any one language,

that are precisely synonymous. The last is one of those positions which are so freely hazarded on all subjects, concerning which men consider themselves fully justified by established usage, in thinking little and say- ing much. The usual boast of verbal copious-

ness is as if a savage were to demonstrate how extraordinary his ^-ealth is by exhibiting a thou- sand bows, kept for his own exclusive use ; or as if a mechanic were to prove the amazing abundance of his tools by exhibiting a thousand hammers.

What is wanted is a sufficient number of apt tools or verbal mstruments for every intellectual purpose. Tried by this test, the English has, perhaps, as little imperfection as any language, ancient or modern ; though it has much useless and cumbrous copiousness of one description of terms, and considerable deficiency of another. It has (like every other language) too many terms of general, and too few of particular im- port : it has too many generic and too few spe- cific and individualic terms : there are a thou- sand names for one logical genus ; but many of the logical species and individuals have no names assigned to them. These two opposite faults (which are mutually proportionate) ars two of the grand imperfections of language; and principal causes of much of the error, deception, misunderstanding, controversy, and other evils which have prevailed, and, probably, will pre- vail to the end of the world : for, if the moral nature of human beings were as good as that of angels, they could not rise to any very high state of perfectibility, without a much less imperfect instrument of verbal intercommunica- tion than they yet possess. We are not very sanguine concerning remedies for any existing evils; but it is something to indicate their causes; the knowledge of which, if not available for any great improvement, is at least likely to remove the mental malady of false theory.

Sect. X. — Of Logical Diversities t Verbal Signification.

It is probable that the author would not have invited attention to the distinctions indicated above, but for a small publication entitled, A Table of the Springs of Human Actions, by the acute Jeremy Bentham.

There can be no doubt that the fact, so dis- tinctly stated in the above publication, was pre- viously as familiar to minds in any considerable degree logical, as was the principle of mental as- sociation before it was so distinctly stated by Mr. Hobbes. Indeed, some remarks of the latter (as, where he distinguishes among different names applied to the same thing,

according as it is liked or misliked) approach so very nearly to the very distinctions employed by I\Ir. Ben- tham, that the author concluded, that the philo- sopher of Westminster had borrowed from the philosopher of Malmsbury.

All words that have any import (for some are as destitute of import as mummies are of life), are obviously distinguishable into passioned and unim passioned, or passionate and dispassionate : the one indicate thoughts, the other sentiments; i. e. the one indicate mere perceptions or acts of the understanding (the dry pure light of reason, as Bacon terms it) : the other indicate thoughts as imbiied with (or, as Bacon terms it, drenched in) the affections: in the one, logical entities are presented, unaccompanied by any judicial decision concerning them, by the affections ; in

the other, they are accompanied by a sentence of approbation or disapprobation : in the one there is no indication of feeling, any more than if the mind were pure abstract intellect, inca- pable of emotion ; in the other there is an ex- pression of feefing, either of like or of dislike, either of pleasure or of displeasure, or (what is the lowest degree of the same thing) either of approbation or disapprobation.

As all words are either impassioned or unim- passioned; so all the former obviously admit of being ranged iu two opposite classes, answering to the opposite states or acts of mind, which are expressed by the terms approbation and disap- probation, affection and disaffection. Hence, after separating all words into impassioned and unimpassioned, Mr. Bentham again divides the first division into eulogistic and dyslogistic, and thence denominates the unimpassioned class neutrologistic.

Perhaps the scientific purpose intended, is as well accomplished by these as by any designa- tives that could be invented. If there be any objection to them, it is, that they are not suffi- ciently popular. Perhaps approbative, disap- probative, and neuter or neutral, would be more obvious distinctions : non-probative might be objectionable. But what is wanted for such purposes is a designative phraseology of fixed and definite import : that which is least popular is most likely to ensure these qualities ; and it is a tribute of respect due to inventors and im- provers not hastily to reject or lightly to alter the terms employed by them.

From the very nature and general habitudes of the human mind ; from the history of man ; from our own observation and experience, it might be inferred that language has much of an impassioned and little of an unimpassioned cha- racter; that it is composed chiefly of eulogistic and dyslogistic, and contains few neutrologistic terms. Human beings as infallibly impress their own likeness upon their mental and moral, as upon

their natural offspring. Hence the obvious similitude of idiomatic peculiarity to national character; or the correspondence which exists between the genius of a language and the genius of a people ; for, according as the one is more or less impassioned (not to advert to other circumstances here), so is the other. But whatever natural, mental, moral, and political diversities may exist in mankind, they all agree in this, that they are more under the dominion of pas- sion and prejudice than the guidance of reason : hence, every language (even the wisest, comparatively considered) has much of the attribute of ab- surdity : and every language f even the most neutro- logistic) has much of a passionate and little of a dispassionate character. Every language, therefore, is very fit for rhetoric (taken in the widest possible import), but very unfit for logic ; is an apt and powerful weapon of passion and prejudice, but a very defective instrument of reason.

It is of some importance to know things as they truly are, whether we can change them or not ; for without that knowledge there is no chance of improvement. There is very little reason to hope for a perfect language ; but in proportion as we understand the nature, and become ao-

quainted with the imperfections, of that which we have, the more are we likely to make a pro- per use of it; and to guawi against the errors and prejudices and other evils which result from its unfitness for logical purposes : the important principle of utility will be more steadily kept in view ; enquiry after truth will be more success- ful ; discussion will be more fair and honorable, and the temper of disputants more candid. He who strives not for rhetorical display or polemic victory ; who aims only at truth in theory and utility in practice ; who wishes not to take any unfair advantage of the understandingof those to whom he speaks or writes, will endeavour to em- ploy neutrologistic phraseology : and he who is determined to prevent, if possible, others from taking an unfair advantage of his understanding, will carefully watch the verbal movements, and will guard against the stratagems and assaults of impassioned language, consisting of eulogistic and dyslogistic terms.

Before leaving this subject, it may be useful to subjoin a few distinct remarks.

1. Out of the most multitudinous vocabulary, very few terms,' comparatively considered, can be selected that are absolutely neutrologistic; i. e. purely intellectual, without any mixture of sentiment and prejudice

and passion. The whole verbal multitude (with the exception of a mere handful of neuters), belonging either to the eulogistic or dyslogistic faction. They may be distinguished by many shades of character as partisans ; but they are all approbative or dis- approbative, respectful or disrespectful, adinira- tive or contemptuous, fond or invidious.

2. The neutrologistic terms of a language are not only very few ; they are liable to be cor- rupted. Take a recent instance : what adjective could well be more neutrologistic than radical was only a few years ago ? But it had the mis- fortune to be adopted by a particulai class of political reformers ; and the consequence has been, that this humble member of the vocabulary is already strongly dyslogistic — deeply imbued with contempt and aversion ; and, to many a mind, it is nearly, if not quite, as odious and exasperating as democrat or revolutionist. In this manner have thousands of words been per- verted from their primitive simplicity of unim- passioned import ; and when once thus corrupted, it is impossible for them to recover their original innocence. There are almost numberless in- stances of dispassionate, becominp- passionate phraseology ; but the instances of a contrary process or transmutation are very rare.

3. Eulogistics and dyslogistics are properly antithetic or rather antipathetic to one another ; but many words are made to perform both parts : thus saint is a gracious eulogistic, as employed by one description of persons ; but a most un- gracious dyslogistic as employed by another : in the one it indicates sincere partiality ; in the other sarcastic bitterness. Any eulogistic may thus be sarcastically converted into a dyslogistic : hence many terms have the two opposite charac- ters at the same time, according to the tempers and opinions of the agents employing them : and hence, also, the radical and permanent change from the one extreme of fixed and universally

received import to tlie other, which words ex- perience in process of time ; for eitiier may be changed into the other ; but in the struggle be- tween what is termed the good and the bad sense of a word, the evil spirit generally prevails : for we have many examples of beautiful approba- tives being changed in course of time into such ugly disapprobatives as to be quite frightful ; but we have few examples of the contrary pro- cess. The reason is obvious : ridicuie, if not the test of truth, is a test which few people are willing to have either their persons or their opinions tried by ; and they as naturally ˆirink from odious charges. When, therefore, dyslo- gistic phraseology is applied to that in which persons are interested or implicated, they feel like a man accused of a horrible offence ; who is willing to change not only his abode, but his very name, rather than encounter the imputation or bear the odium. Such words as despot and tyrant were once very loyal names ; but it would be libel or treason to

apply them now to such persons as they used to designate : pedant and pedagogue were once of very innocent and laud- able import; but the persons so designated became ashamed of their antique name, and consider themselves insulted or persecuted when it is now applied to them : parson and priest were at no great distance of time very respect- able and even honorable names ; but instead of being proud of them, or making a noble stand for their eulogistic dignity against the lewd laity ; the reverend gentlemen, to whom tliey were ap- plied, became ashamed of them, and were willing to assume suth a servile name as minister, or such a clumsy designation as clergyman ; and, if these be fated to become dyslogistic, they also will be discarded.

It was remarked in another place, that the tendency is for the members of the vocabulary to sink, not to rise in the scale of dignity ; as we have numerous instances of polite words and phrases becoming vulgar; but few or no exam- ples of a contrary process. The same holds with the eulogistic and dyslogistic distinctions : we have almost numberless instances of the foriper sinking into the latter, but few instances of the latter rising into the former : and these few in- stances are only found when the persons or par- ties intended to be mortified and disgraced, by a dyslogistic designation or nickname, take kindly to it and glory in it ; for then the malignant in- tention of their enemies is defeated, and a re- action commences in favor of the persecuted. Christian (as well as JVatare«e) was perhaps at«first a nickname; but the persons thus designated took kindly to the invidious distinction, and gloried in it, as well as in that ignominious peculiarity of their religion, the cross. The result was, that both rose in process of time into the highest estimation. Quaker was originally a nickname ; but the Friends, who have always possessed too many respectable qualities to be a degraded caste (for in that case the most honored desig- nation ever invented must have sunk with them), took, if not cordially, at least patiently and meekly to their nickname, and described them- selves as the people commonly called Quakers : the 1 esult is, that Quaker is become an eulogistic,

or, at least, has lost all its dyslogistic import : and it is as respectable in common usage as their own fond Friend, with less quaintness.

All that was intended by these instances wˆas illustration ; which being, it is hoped, fully ac- complished, it is unnecessary to detain the rea- der longer with the subject; but there is one other consideration that deserves to be stated.

It is now sufficiently apparent, perhaps, that, as language has little of a dispassionate and much of a passionate character, so many entities both physical and metaphysical have no neutro- logistic designation : they are never presented to the understanding as mere strangers, whose character is to be discovered by acquaintance — for their name proclaims their character : it is either a badge of honor or a badge of disgrace ; and those wearing it can have no interview with the understanding, absolutely free from all pre- judice or sinister agency ; but are introduced by the high authority of universal consent either as approved or condemned, as good or bad, as amiable or hateful.

The entities that have two distinct sets of names, i. e. eulogistic and dyslogistic, answering to the views and feelings of the persons employ- ing them, are sufficiently numerous (even if no other cause existed) to produce incalculable diversity of opinion, endless controversy, and factious hostility.

PART II.

OF THE PARTS OF SPEECH OR THE GR.4M- MATIC DISTINCTIONS OF WORDS.

The parts of speech are usually said to be nine; but Mr. Tooke, as well as others before iiiiii, reduced them to two. Many of his re- marks respecting them are not only acute but just ; and it will be proper to examine minutely what he has advanced.

Mr. liorne Tooke (as well as Plato and other ancients, and Vossiusand other moderns) resolves all the parts of speech into noun and verb. Thus far he is very explicit and very positive ; but farther he has not proceeded. He affirms, indeed, that the verb is properly a noun ; but he adds, tliˆt it is something more than a noun ; what that something more or verbalising property is, he eitlier could not or would not inform the world.

The opinions of Home Tooke (though hi- therto barren of any very important effects or use- ful results) have met with cordial reception : and all who now write about grammar acknowledge Ins authority. That hardy reasoner, the late Dr. Geddes, expressed the hope of being able to prove at some future period that all verbs were originally nouns. In this opinion the learned doctor was avowedly saying after Mr. Tooke, who also hoped to be able to accomplish extra- ordinary thinL:s at some future period. Numer- ous testimonies in favor of his opinions might be adduced from recent grammatic works. The following is a pretty good synopsis of his prin- cijiles, extracted from a recent grammar.

‘ Every abstract term in language had, origi- nally, a sensible, palpable

meaning, generally a substantive meaning. Adjectives are, originally, either nouns or verbs. Pronouns take their rise from nouns, verbs, and numerals. Articles, or, Vol. X

more properly, definitives, are nothing but pro- nouns used in a particular sense, and for a par- ticular purpose. Interjections are chiefly veros ; some are substantives. Adverbs, for the most part, originate in adjectives ; a few are verbs ara nouns. Conjunctions and prepositions are ge- nerally verbs and nouns.

‘ Nouns constitute, in general, the primitive words in all languages. 'erbs are the tirst-born offspring of nouns. They are nouns employed in a verbal sense ; at least the greatest quantity of words are of this class ; a few, indeed, appear to have started into being at once as verbs, without any transmigTation through a substantive state.’

If ilr. Home Tooke had not entangled him- self with en and th and to as meaning do, and as being necessary verbal adjuncts, it would have been easy to understand what (we should have supposed) he must have intended by verbs being something more than nouns. The following are examples of nouns, employed in a verbal sense, without the assistance of any verbal adjunct; gallant men eˆe the fair — hand them a chair, or seat them on a sofa — backˆ their friends— ˆ/are their enemies — spur their horses — c/«j« their dogs — kennel their hounds — bag their game — table their money — stake their properly — shield their honor, and pistol their enemies. A thousand such instances might be collected (without much trouble) of sensible, palpable, substantive mean- ings, and of nouns employed in a verbal sense : and it is probable that most of those words which now appear in the abstract state of mere verbs, were previously names of physical entitle?.

It is true, that, in all such instances as those presented above, there is ellipsis, i. e. something left out : gallant men back their friends and face their foes; i. e. do back their friends, and do face their foes ; which is the old mode of the sentence, and that which we still adopt when we wish to speak emphatically; and even then there is much more implied than expressed ; there is much verbal ellipsis : but for the same , reason that the meaning remains when so much expres- sion is left out, the same meaning might have been conveyed if the omitted expression had never existed. Children (as also foreigners) when beginninc: to speak our language, can make themselves understood by merely pronouncing nouns. My child, now playing round my table, has just said, ‘Pa, me book.’ The fond father understood her as readily, and as perfectly, as if she had said, ‘ Please, my. papa, will you give to me a book ?’ or, ‘ I’ieasc, my papa, will you take up one of these books from this table, with one of your hands, and then put it

into my hands? for I wish to amuse myself witli handling it and looking at it ; but I am not tall enough to reach it, else I would not be at the trouble of asking you to hand it to me.'

If lanatiasje had the rude origin which Mr. Home Tooke always supposes, it is certainly very improbable that such a metaphysical part of speech as the verb, according to our modern notions of it (i. e. a word which signifies to he, to do, or snfl'tr, &c.), had any distinct, separate, or independent existence. Add to this the fact that a very great number of verbs (as well as of

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all the other parts of speech) are, without doubt or controversy, resolvable into nouns.

Now we believe full justice has been done to Uie statements contained in the Diversions of Purley ; and now, perhaps, many persons would suppose the subject to be satisfactorily disposed of: all words are resolvable into nouns, and nouns are names, and what more would we have ; for, as we cannot proceed ad infinitum, we must stop somewhere ; and where so proper to stop as with the names of things ? This has certainly some show of reason, and is much more satisfac- tory than putting the world on the back of an elephant, and the elephant on the back of a tor- toise, and the tortoise on the back of nothing : it does happen, however, that where the difficulty seems to end with Home Tooke and others, it only begins with the author : not that he hopes for a palpable demonstration as to the origin of language ; but he does think that the noun re- quires to be explained and accounted for as much as any part of speech whatever. Granting that it is resolvable into no other part of speech, what is it to be resolved into ? Tf it be the off- spring of no vocabulary parent, nor the result of any etymologic transmigration, but started into being at once a perfect substantive or full-grown noun; whence, or how did it start into existence ; What is the reason of its imposition or applica- tion? For if (as Mr. Tooke so often affirms) there be nothing arbitrary or unaccountable 2 bout language; if (as he also reiterates) that be a trifling etymology which does not assign the cause or discover the reason for the imposition of any word ; it is doing nothing towards satis- fying our philologic curiosity, to resolve all the parts of speech into the noun, and then tell us that a noun is a name. If said noun be in any respect descriptive (and without this, according to Mr. Tooke, it could be no significant 'part of speech) what is its descriptive property —

how did it acquire its designative power ?

[lere also we shall attempt supplementary ex- plication, that full justice may be done to the claims set up for the noun as being the sole, ori- ginal, and pre-existent part of speech. Tlie po- sition of Mr. Tooke, that there is nothing arbi- trary about language, we consider perfectly sound ; and to assert the contrary is (we con- ceive) manifestly absurd. Even those unmean- ing names with which we, in these modern times, are so familiar, called proper nouns, were originally descriptive of some quality, or expres- sive of some circumstance ; and in the successive re-application of them there is an assignable rea- son for their imposition ; for such names as Robert, John, Alfred, Hunt, Fox, &c., are not employed at random, as we might suppose such new and strange names as those fabricated by Swift ; and even, for the employing of these, there is an assignable reason. Perhaps, indeed, nothing more was ever intended (where the un- derstanding had any share) by affirming the meanings of applications of words to be arbitrary than that, where any one word is employed, some other word might have been used for the same purpose ; or that terms are liable, in process of time, to have their signification changed; or that tfiey may be differently understood, anc' applied

in different ages, and even by different persons of the same age and country : and thus (as fre- quently happens in controversy) one person might affirm, and another might deny, that words are arbitrary signs ; and be all the while disput- ing about nothing.

But there could be no controversy with Mr. Tooke, or with any wlio adopt his opinions, con- cerning the present subject of enquiry. He fre- quently states, as an essential etymologic princi- ple, that there is a reason for the imposition of every word : i. e. that it has a descriptive signi- ficancy, without which, he insists, it has no sig- nificancy whatever. In what, then, does the sig- nificancy of the noun consist? Or, in other words, whence does the noun itself derive its ex- istence? Tliis question seems to admit of an easy and satisfactory answer in reference to a certain class of words, formed by what is called onomatopoeia, or imitation of the sound : such as buzz, hum, grunt, croak, cluck, click, clock, clang, clink, clash, whir, whiz, cuckoo. Many more might be presented ; but these are sufficient as a specimen, which is all that is intended here. If such words be considered nouns, here is a satisfactory origin of the noun (and perhaps, after all, of the whole of language) ; for we have only to suppose the letters that indicate, to the eye, the sounds of which such words consist, contrived (arbitrarily, or conventionally, if you will — for other marks might have been invented and employed), like the signs in the gamut (and tlie one is just as much a philosophic contriv- ance as the other), merely for the purpose of li- terature; i. e. to extend the utility of the spoken by rendering

it also written language. This is certainly the simplest manner of accounting for the origin of language ; tlie simplicity is in such a case, if not a demonstration, at least a strong argument. The 'only reasonable doubt seems to be, whether onomatopaeia could supply a suffi- cient stock or capital to begin the business of language with : all that the author will venture to affirm, is (for he is not confident) that upon the maturest reflection, aided by considerable enquiry, he thinks it neither impossible nor im- probable, that such a small number of words, as seem to originate directly in an imitation of na- tural sounds, should be available for every ver- bal purpose ; and that, in the slow process of ages, they should have multiplied into the mul- titude that now form the largest vocabulary with which we are acquainted.

It has been said above, if such words as hum, buzz, croak, &c., be considered nouns, we have, at once, in onomatopjeia, a satisfactory origin of the noun as the first part of speech, and tliat from which all the other parts are derived : but a question still remains, ought such words to be regarded as primarily nouns or verbs ? They in- dicate not any substantive entities, but sounds; and what are sounds but actions or motions, produced by certain impulses given to the at- mosphere, whose vibratory movement acts upon the tympanum, or beats upon the drum of the ear. With hardly any exceptions, the imi- tative words, considered as nouns, are also verbs ; there are many imitative verbs v/ithout any cor- responding nouns ; and in most of those imitaˆ

tive words, which are both verbs and nouns, the former were evidently prior to the latter : as, click, cluck, clack, before clock and the noun clack, &c., &c. The fact seems to be, that the last is related to the first, as effect to cause ; and that the verbal sense is not only first, in the order of nature, but the proper original signification ; whence the substantive meaning is derived by metonymy, or by mental association, as intimated in a former part of the work.

It is impossible to study either the Greek or Hebrew language (not to mention any other), without perceiving, that if any verbs can be re- solved into nouns, there are also many which cannot be thus disposed of: and though the doc- trine of Home Tooke seems, at first view, very convincing ; the converse of it seems more evi- dent when we prosecute our enquiries : for whatever may have been the origin of language, nouns in general evidently derive their existence either from attributives or from verbs ; and, un- less the testimony of onomatopieia be given in favor of the noim, as the

pre-existent part of speech, we have no hesitation in affirming, that though many verbs and adjectives be derived from nouns ; it is equally true, that all nouns are derived either from attributives or verbs ; i. e. before they were substantives they were either attributives or verbs.

This whole enquiry is more curious than use- ful ; and is important only as it serves to abate groundless confidence, to remove false theory, and to make us better acquainted with the mean- ing of words ; for it matters very little what we call them (or what part of speech was iusl or last), provided we understand them.

It is wittily said by the author of Iludibras, that

All a rhetorician's rules But serve him for to name his tools ; and it may be truly affirmed, that most of the grammatic terms and distinctions serve no use- ful purpose whatever: but, because they had existed in connexion with Greek and Latin, it was thought necessary or proper to transfer them to the English language.

The different sorts of words, or parts of speech, are said to be nine, viz., interjection, article, conjunction, preposition, adverb, adjective, pro- noun, noun, and verb.

Sect. I. — Of the Interjection.

The interjection, or, as it is better termed, the exclamation, is hardly worthy of notice, being merely an expression of sudden and strong emo- tion ; for which purpose almost any verb, noun, adjective, &c., may be employed ; for the only natural exclamations are the vowel sounds, as enunciated by a sudden action of the heart, when strongly excited by surprise, joy, grief, &c. Per- haps these natural, unpremeditated expressions of strong emotion (which are found, with very little diversity, in all languages) ought to be considered as having assisted in originating lan- guage ; or as having supplied materials for its formation.

Sect. II. — Of the Article.

This term is so unmeaning, in its grammatic connexion, that there is some difficulty in ima-

gining how it should have been employed. Grammarians affirm that there are two articles ; the one definite, the other indefinite. T/ie is said to be definite : it properly ranges with this and that, called demonstrative pronouns ; in con- nexion with whi'jh it will be examined : and therefore, for the present, it is dismissed without further notice.

A is said to be the indefinite article, and to become a« before aword beginning with a vowel : the fact, however, is, that an is contracted into a before words beginning with a consonant : and, at no very remote period of our literature, it re- mained unchangeably an before all words. The reason is obvious : an, like ein, Ger. ; un, It., Fr., and Span., is merely ane, now one ; i. e. un-us, Lat. ; and en, Gr. A book is the same as one book ; an ox is the same as one ox, &c., &c. How a numeral adjective can be indefinite is hard to conceive.

No person at all acquainted with English li- terature is likely to make any mistake in the application of an or a ; and therefore directions concerning it are wholly unnecessary. For any purpose of necessity or utility that grammatic designation article can be well spared. .

Some write, ‘ a union,’ &c. ; others, ‘ an union.’ The sole reason of contracting an into a is eu- phony ; and for the same reason that we write a youth, we ought to write or say a union, &c.

Sect. III. — Of the Coxjunctio.. This is another entity which merits very little consideration. Both conjunctive and disjunctive are intelligible terms ; and there are words that migiit be thus designated if it were necessary to apply any designation to them; but conjunctive conjunction is an empty tautology ; disjunctive conjunction is a manifest contradiction. And is a connective term, and so are other terms, not enumerated witli it as conjunctions, entitled to tiie same appellation. Either contracted into or and neither contracted into nor, are disconnective, and so are other words not usually enumerated as disjunctives; but many words, commonly called conjunctions, have as little claim to that designation as to any other which could be ap- plied.

Sect. IV. — Of the Preposition.

This was, in its original application, suffi ciently intelligible and significant ; for it wa-i equivalent to prefix ; and simply indicated, that the wo’-ds which it was employed to designate were frequently prefixed to other words. But, as often hajipens, this was, in process of time, lost sight of; other words besides prefixes were classed under the same designation, and then uinneaning doctrine was communicated ; such as, ‘ Prepositions serve to connect words with one another, and to show the relation between them. They are, for the most part, put before nouns and pronouns!’

Sect. V. — Of the Adverb.

This is truly, as Home Tooke terms it, the

common sink or receptacle for all words tiiiit

grammarians knew not what to do with, or ho'J

to range under the other eight parts of speech

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GRAM LI A R.

What is an adverb ? Lindley Murray shall an- swer : — ‘ An adverb is a part of speech joined to a verb, an adjective, and sometimes to ano- aier adverb, to express some quality or circum- stance respecting it ! ‘

I If any species of insignificance be more ob- jectionable than another, it is that which is os- tentatious of the appearance of learning, and which afiects the forms of science. Better, surely, have no names than have such as mean nothing : better have no distinctions than have those which are absurd.

All the preceding five parts of speech are more worthy of being discarded than explained : the four that follow have a better claim to atten- tion.
Sect. VI. — Of the Adjective or Attribu- tive.

The last term has both meaning and utility ; and when the grammarian says, ‘An adjective is a word added to a substantive to express its quality : as, an industrious man ; a vii’tuous wo- man ; a benevolent mind ; ‘ there is no violence offered to our understanding : we perceive that the attributive word answers to the description given of it ; it indicates some quality, either physical or metaphysical. Thus, in the expres- sions tohite paper — black ink — sluirp knife, &c., physical qualities are indicated ; but — candid temper — acute mind — clear understanding, &.C., may be regarded as indicating metaphysical qualities.

A few remarks may l^e made concerning the fiitributive : —

1. The simplicity of the English attributive. It has no troublesome changes of termination for gender, number, and case, as in Greek and Latin, and in a less degree Italian and French, &c. Such changes may be necessary in Greek and Latin, &c.; but it does not follow that they are excellencies.

2. The English attributive admits of various changes for the purpose of indicating diversity of signification : these will be noticed under I’refixes and Atbxes. It may just be observed here, that the three degrees of comparison, affirmed of the attributive (or adjective), are not unobjectionable: comparative and superlative are intelligible terms ; but no

useful purpose seems answered by the term positive degree. Such an unmeaning distinction, however, is less to be regretted tlian the irregularities in the comparatives and superlatives of some adjectives most frequently in use. Mr. Tooke justly re- marks, that words most frequently used are most corrupted ; and even in Murray's Grammar we find the following sensible remark : — ' In Eng- lish, as in most languages, there are some words of very common use (in which the caprice of custom is apt to get the better of analogy) that are irregular : as good, better, best : bad, worse, worst; little, less, least; much or many, more, most; near, nearer, nearest, or next; late, later, latest, or last; old, older, or elder, oldest or eldest.' Children and foreigners, beginning to speak our language, uniformly say, good, goodcr, goodesl ;bad, hadder, baddest ; little, littler, littlest, he, and as uniformly get laughed at as if they were guilty of some risible blunder; such slaves

of mere custom are luiman liein^s ; so much blind superstition and narrow bigotry have thev in their nature; so arrogantly contemptuous are they towards modes (however rational) that differ from their own established forms ; so foolishly fond and vain are they of their very faults atid failings, tlieir follies a.nd imperfections. Ano- malies are faults in language.

The English language possesses many com- parative excellencies (and Home Tooke could not, surely, mean any thing more, when he spoke of the perfections of language) ; but, in that grand fault anomaly, it is radically corrupt.

Such is the obvious importance or rather necessity of attributives to the significancy of language, that the author long- considered them the first or pre-existent species of words, whence all the others derived their existence : and, certain it is (whatever Home Tooke may have said to the contrary), that language conld not advance many steps widiout employing adjectives, and, perhaps, after all, a few terms of this description, to indicate the more obvious and striking qualities of objects, con- stituted, if not the whole, at least part, of the original invention of language ; for, as Mr. Home Tooke justly remarks, it is the necessary condition of man to have few different ideas (which are quite distinct from the infinite variety of mental movement) ; and for indicating these ideas a very small number of words would be, in the first instance, sufficient ; at least in as far as necessity only for verbal intercommunication was concerned. It deserves also to be remarked, that if many adjectives evidently originate in verbs and substantives, there are many verbs ana substantives that ^s evidently originate in adjectives : and there are many instances in which it would be as difficult, or impossib'e, to trace the one, as it would be to trace the other, to any pre-existent state or character. It must be con- fessed, however, that, though not free from diffi- culty, yet, according to the

preponderance of evidence, adjectives must be considered as ori- ginating in nouns or verbs : i. e. they are either nouns or verbs employed attributively. The ad- jectives derived from verbs are obviously the same as participles ; which will be considered presently : and in the same manner that verbs become participles, are nouns formed into adjec- tives.

Sect. VII. — Of Pronouns.

- *A pronoun,' we are told, ' is a word used in- stead of a noun, to avoid the too frequent repe- tition of the same word.' The name implies as much; and grammarians have thus asserted, per- haps, ever since grammarians existed ; but both the designation and the definition are destitute of foundation. Something like proof seems dedu- cible from what is termed the third personal pro- noun : as, ' the man is happy ; he is benevolent ; he is useful.' But can we be favored with one proof or illustration drawn from any othet pro- noun ? Show a single successful experiment with I, We, Thou, You, &c. Instead of what nouns are these pronouns used to avoid the too frequent repetition of the same word ? Here is a short and easy method of terminating all con- troversy.*

The noun to wliich the pronoun belongs can Uj omitted, and is often omitted ; just as sen- tences may be rendered elliptic in many other respects and iheir meaning be preserved : but it does not follow that the words denominated pro- nouns stand instead of nouns ; any more than it can be truly said that those words which remain in any elliptic or abridged sentence stand instead of the words omitted. We can frequently use he, she, it, ikeu, alone ; i. e. without expressing tlie nouns to which they respectively belong : just as we can frequently use such words as, this, tliat, these, tliose, former, latter, first, last, above, foresaid, ice. (which have all, in fact, as much claim to the title of pronoun, as those words on which it has been conferred), without expressing the nouns to whicli they direct attention ; but if we wish to be emphatic or definite (as in legal writings for example), we express the noun, and do not trust it to be understood. Take the fol- lowing illustration : The grammarians have de- livered many strange opinions : they aforesaid (or the said — or — these) grammarians affirm, that such words as, he, she, it, &c., are pronouns, i.e. that they are used instead of nouns ; but I, the autlior, do testify that the words referred to, are not truly pronouns, but (if they must have a name) connouns; for they and nouns are mutually related, not as principal and substitute, or presi- dent and vice-president, but as fellow-servants ; and, if one of them

be occasionally absent so as to occasion the work of both to be performed by the other, yet the one thus enjoying leave of ab- sence must instantly re-appear, whenever called for, to secure greater definiteness.

The phraseology of the grammarians, such as, (lejinitive, demonstrative, &c., indicate that they were not far from the truth : only what have been termed personal pronouns are as truly demon- strative, as those words are to which the term is applied. Their sole use is to demonstrate, i. e. to direct attention to some object or noun, which is always either expressed or understood : and, for the same reason that the noun is not always expressed but often understood, so is the con- noun also frequently omitted in elliptic modes of expression. If we say in Latin, hie homo, it is equivalent to ccce homo ; in English, behold man ; yon man ; that man ; this man ; tlie man, Ike. : and, if the man be actually in sight (and those words called pronouns snppose the object in view either of the eye or of the mind ; or rather direct the view to an object), ccce homo, or hie homo, yon man, &c., can be dispensed with ; as the business of directing attention to him can be accomplished by pointing with a finirer, or l;y some other visible sign.

Thus, what are called personal pronouns, rela- tive pronouns, demonstrative pronouns, definite article, and some other words not classed under any of these designations, all serve one and the same purpose, i.e. they point to some object or some noun; and, therefore, tl.ey cannot stand in its stead. If it wure necessary to give such words a particular designation, they might be designated demonstrative connouns, or simply demonstratives ; but such unnects.sary terms are more conducive to ignorance than to knowledge :

and tlie word:; in question are properly verbs in what is called the imperative mood.

Pronouns, as they are called, may be con- sidered in reference to number, gender, and c»se. There is, doubtless, some advantage in diversity of termination for the purpose of indi eating singleness and plurality ; yet that this ad- vantage is much less than grammarians suppose, is evident from the little use made of numeral distinction in English connouns. Without any loss of meaning, but with much grammatic con- venience, we have no numeral diversity in our relatives — who, which, what, that, and in what is called our definite article the. What numeral distinctions can appear more necessary than thou and vou ? Yet if thou had not found protection amo'

Any sign of gender is as little necessary as of number : hence, except in the third person sin- gular, no such sign exists. Lindley Murray (whose grammatic celebrity entitles him to some preference as an authority), indeed, tells us, ' The persons speaking and spoken to, being at the same

time the subjects of the discourse, are supposed to be present ; from which, and other circumstances, their sex is commonly known, and needs not to be marked by a distinction of gender in the pronouns : but tiie third person or tiling spoken of being absent, and in many respects unknown, it is necessary that it should be marked by a distinction of gender.' Well then, what becomes of tliis necessity in the third person plural, which contains no sign of distinc- tion in gender? The grammatist could not but perceive his statement to be too hazardous, un- less accompanied by some saving clause; and therefore he subjoins, ' at least, when some par- ticular person or thing is spoken of, that ought to be more distinctly marked : accordingly, the pronoun singular of the third person has the three genders, he, she, it !' There is a useless but embarrassing distinction attempted, if not already effected, between who and which ; as if the former belonged exclusively to persons, and the latter to things and animals devoid of reason. Up to a very recent period there is the sanction of the best usage fov disregard of such petty dis- tinctions, which serve no purpose except to ren- der English composition difficult.

We have seen how little the distinctions of number and gender are necessary : but the dis- tinctions of case (excej)t what is called the geni- tive) are worse than useless; for they cause much embarrassment : were it not for tiiese, and a few other grammatic nuisances, the English language would be the simplest, easiest, and most manage- able ever constructed.

The truth is, we have varieties of terminatior, called cases, for no reason whatever save that they existed in Greek and Latin ; but, though such varieties o/ termination might be necessary or useful in these languages, it does not follow that they are cither necessary or useful in English ; which accomplishes by position the same purpose which the former cficcted l)y case : hence, fortu-

naiely, we liave no accusative case of nouns ; which retain the same unchanged form whether nominatives or objectives. If every purpose of speech be accomplished, without change of ter- mination in nouns, what can render such change necessary or useful in pronouns ? If this, that, these, those, which, what, it, the, &c., be fully competent to the purpose for which they are em- ployed, without any change, what could possibly incapacitate the other words of the same class for performing their office, if they appeared only in a single form ? But it is useless to reason on tlie subject. We have me, thee, him, whom, &c.; merely because the monkish grammatists found me, te, eum, quern, &c., in the Latin language. Nor is it

surprising that, in borrowing so much from it, they should have adopted more than was necessary ; but why should we consecrate their blunders?

We object to all unnecessary intricacies in language ; but we have no objection to any use- ful contrivance : hence what is called the genitive case has been exhibited in connexion with the connouns ; because it is somewhat useful and strictly agreeable to analogy ; for nouns in gene- ral admit of such a change of termination to de- note possession, connexion, or relation, and to • avoid a longer mode of expression : as, ‘ Mr.

Tooke’s work,’ for the work of Mr. Tooke ; ‘ Locke’s Essay,’ for the Essay of Locke. So, if either of these authors has been spoken of, and is therefore supposed to be in view, we might say, he’s work ; he’s Essay. His, its, whose, should evidently, for the sake of analogy, be he’s, it’s, who’s : and, for the same reason, you’s is preferable to your; they’s to their, &c., if cus- tom would permit.

What, then, is this termination called posses- sive or genitive ? It is a contraction of in, also anciently cs ; for what is now put man’s, was for- merly manh, or manea ; and every one is familiar with the use of what is called the apostrophic sign, i. e. the comma put to indicate the omission of a letter. If, then, ‘s be a contraction of is or es, what is is ? It is the sign of the genitive singular, third declension of Latin nouns ; which was adopted by the Saxon writers to answer the same purpose in the native language which they were forming : and there can be no doubt that said is was originally a separate word, answering in meaning or use to of with us : which of, as well as the termination is, is a contraction or fragment of some compound word. Mans is the same in English as hominis in Latin : Man’s condition is the same in significancy as, the condition of man; or the human condition. In the last instance, human is an adjective formed upon homo, anciently humo, by adding an; which an serves the same purpose as the termination is, or our of; i.e. it denotes connexion or relation. Our word man, as noticed in another place, is a contraction of human, and elliptical for human being : hence the reason why the following ex- pressions are all equivalent: Conditio hom.inis, humana conditio ; Man’s condition, the condition of man, the human condition.

There is little or nothing gained by contracting manis or manes; birdis or birdes, into man’s, bird’s, &c. The reason of its adoption was, evi-

dently, to distinguish what is called the genitive or possessive from the plural termination ; for they were both es or is. Wlien, therefore, birdis for example, was contracted into birds plural, the possessive was put bird’s ; and tliis distinc- tion has sufficient utility (at least to the eye, for it is useless in refererice to the ear) to warrant its retention.

It has been observed that the plural was for- merly the same as the possessive or genitive ter- mination. The same is the case in the Latins. The terminations a, i, is, are signs of tiie genitive singular and nominative plural : as Mus;c, means both of a song and songs ; Domini, of a lord and lords ; Sermonis, of a speech and speeches ; only the plural, in the third declension, is generally es ; as, Scrmones, &c. ; but, originally, there was no difference between it and the genitive singu- lar.

Sect. VIII. — The Noun or Substantive.

Here the name may be first considered. The grammarians of the learned languages have, with some show of reason, employed the terms noun substantive and noun adjective; i. e. a name that can stand by itself without any assist- ance ; and a name that requires to be added to, or rested upon, another. There is, as usual, in these terms, a good deal of false theory, con- cerning which we cannot stop to enquire at present. But, though the grammarians of the learned languages have noun substantive and noun adjective, why should their vernacular imi- tators, after treating noun and substantive as synonymous, prefer the latter to the former ? Probably the sole reason was, that the one seem- ed a more respectable looking word than the other. But substantive, besides being apt to suggest the notion of substance, is objectionable for other reasons, as being connected with false theory. Noun, (i. e. nomen, name), is perhaps as intelligible and appropriate a term as can be found for the purpose. It is desirable that names or designations should at least possess the negative merit of not being false guides ; but in general we must proceed much further in our enquiries than they can conduct us. What then is that which we agree to call noun ? How shall we define it? — Hoc opus ! There is nothing so important, in a philosophic view, as correct defi- nition; but, at the same time, there is nothing so difficult. ‘ A noun,’ says the grammatist, ‘ is the name of any thing that exists, or of which we have any notion.’ But if a noun be the name of any thing which exists, how can nothing, or any one of those words which denote non- existence, be a noun? And if the expression, any thing of which we have any notion, mean more than any thing which exists, it means too much to be a correct definition; for all words that have any signification, are names of things (either physical or metaphysical), of which we have a notion : and if it be affirmed that thing denotes a real existence, in distinction from attribute, action, relation, &c., then, also, the definition is not only incorrect, but manifestly false ; for many words are called nouns which de- note no such absolute entity ; and the contrary supposition is not merely a philologic error, but

& cause of much metaphysical absurdity, which meu give and receive as sound ratiocination.

We define a noun to be a grammatic designa- tion, given not only to all those words which are the names of sensible objects, as, man, horse, bird, tree, stone, lake, river, city, &c.; but also to all those words which can be employed in a sentence as if they were names of such objects, as, hunger, reason, virtue, vice, nothing, non- existence, &c. Any of the latter words can be employed exactly as the former in connexion with other words, to form a sentence : as, man is a rational animal : reason is very different from imagination : nothing is preferable to what is evil. Thus any word which can be put toge- ther as the agent or subject, the nom.inative or object of a verb, is entitled to the grammatic designation of noun : and we know not of any othef definition which is admissible as correct.

All words thus designated, may be dis- tinguished into nouns physical, and nouns meta- physical : many of the latter are not names of entities, but of nonentities ; such as, fate, luck, cliarace, &c. : few of these, comparatively, denote absolute existents any way analogous to physical objects : they, for the most part, merely indicate qualities, motions, relations, thoughts, feelings, &c. &c. Many, even of those nouns which may be considered physical, are not properly names of things or absolute existents, but of motions: as current, stream, storm, wind, wave, billow, breath, sound, &c. &c.

*This unsubstantial nature of what are called susbtantives, which ‘ give to airy nothings a lo- cal habitation and a name,’ is certainly a great convenience in language; i. e. to enable men to talk without meaning, and * say an infinite deal about nothing :’ it is wonderfully subservient to effective rhetoric, and deceitful sophistry; but it is very unfavorable to sound reasoning and true philosophy ; it must, therefore, be set down as one of the radical imperfections of language ; and, in guarding against the deception of words, it is particularly necessary to examine their import. Many of them mean nothing ; many are of uncertain import; many, being imbued with error and prejudice, serve only to impose on the understanding.*

The importance of etymology consists in ascertainisig the descriptive or distinctive import of words ; wliicli is not indeed of any great utility as to physical nouns ; for they answer the purpose of designation, even if their significancy be not perceived. The names London, Paris, Thames, Rhone, sun, moon, like Dante, Milton, Sec, answer the purpose of designation com- pletely however ignorant we may be of their • ‘tymology : and it might be even argued (as it has been argued) witii some show of reason, tliat the more of such ignorance exists, the better, as the etymologic meaning might

only tend to deceive, by its erroneous representation ; as, for example, in the designation Pacific Ocean. The case is very different, however, as to meta- physical nouns (and all meta])liysical words, i. e. words employed for metaphysical purposes) ; for every thing depends upon ascertaining their significaney, or their insignificancy ; i. e. whe- ther they mean any thing or nothing; and

whether their meanings present natural or chime- rical ideas to the imagination, and true or false notions to the understanding. If metaphysical nouns be taken as if they were mere designa- tions, like what are called proper names, without any regard to the reason of their imposition, the consequence must be error and deception ; and this, as already intimated, is one of the principal causes of verbal imposture, and metaphysical absurdity, or false and deceitful philosophy ; to which the only eff"ectual counteraction that can be opposed, is sound etymology ; though it will never, perhaps, accomplish all that Home Tooke predicted.

We must also consider case, gender, and number, in reference to nouns. The grammatists seem, in general, half ashamed of the poverty of our language in this particular; and they have endeavoured, with the very best intentions, to enrich it with imaginary cases: and tliey aver it to have, at the very least, three cases, viz. the nominative, possessive, and the objective. Lind- ley Murray, indeed, informs us, that he was long harassed with doubts on the subject. ' The author of this work long doubted the propriety of assigning to English substantives an objective case; but a renewed, critical examination of the subject, an examination to which he was prompted by the extensive and increasing de- mand for the grammar, has produced in his mind a full persuasion, that the nouns of our language are entitled to this comprehensive ob- jective case !'

But, after all, our language is simpler than even its Saxon and Gothic ancestors ; for Eng- li.Sfi nouns have no cliange of termination, com- monly called case; save that wˆiich is called possessive, alias genitive ; as man's for of man, woman's for of woman, &c. ; and many Englisli nouns do not admit even of this change; yet this defect of cases occasions no loss of signifi- cancy, no inconvenience.

The reader must be informed that gender means kind, and that there are three kinds of nouns, viz. ; such as denote males, or ht-aniinals ; such as denote females, or she-animals ; and such as denote neither the one nor the other, having no sexual distinction whatever: more- over, he must be informed, that in tliis instance the English language is richer than several of its neighljours ; for some of them have both masculine and feminine gender, i. e. male and female kinds of nouns, bur no neuter kind. It seerns, also, very necessary to inform him, that there are melaphoric males and females

; figura- tive ladies and gentlemen. ‘ Figuratively in tiie English tongue,’ we are told, ‘ we commonly give the masculine gender to nouns wliicii are conspicuous for the attributes of imparting or communicating, and which are, by nature, strong and efficacious. Those again are made feminine which are conspicuous for the attributes of con- taining or bringing forth ; or which are peculiar- ly beautiful or amiable. Upon these principles, tlie sun is said to be masculine ; and the moon, being the receptacle of the sun’s light, to be feminine. Tiie earth is generally feminine. A ship, a country, a city, &c., are likewise made feminine, loin* receivers or containers. I’ime

i* always masculine, on account of its miglity ilncacv. Virtue is iemiiiine from its beauty, and its being the object of love. J’ortune and the church are generally put in the feminine gender!’ This is the sublime of metaphoric gender, and sexual distinction, and grammatic sentimen- tality ! There is, indeed, something of the whimsical in metaphoric gender and matrimony; for with our old, rude, ancestors, the Saxons, the moon was not the wife, but the husband of the sun.

It must be matter of self-gratulation to the sentimental French, that they are not driven to the necessity of figurative genders; as all their nouns are either masculine or feminine; so that they can appear to talk about ladies and gentle- men when speaking of battles and spectacles, plays and operas, metaphysical entities arad nonentities.

The business of gender is a very serious affair in Greek, Latin, and even in Italian, French, &c. ; but nothing can be more simple in English ; for, except in a few instances, it is left, as it should be, to the meaning of words as indicative of the natures of objects, and not distinguished by different sets of terminations ; which are more troublesome than useful. The grammari- ans, indeed, assert, ‘ nouns, with variable termi- nations, contribute to conciseness and perspicu- ity of expression.’ We have only a sufficient number of them to make us feel our want ; for when we say of a woman, she is a philosopher, an astronomer, a builder, a weaver, we perceive an impropriety in the termination which we cannot avoid ; but we can say, that she is a botanist, a student, a witness, a scholar, an orphan, a companion, because these terminations have not annexed to them the notion of sex.’

If all these assertions were admitted, still the advantage of variable terminations might be de- nied ; for it could be proved, that they produce a preponderance of inconvenience : but though they contribute to conciseness

and perspicuity in such languages as Greek and Latin, in which the personal pronouns are seldom expressed ; thty are not necessary to perspicuity, and would contribute very little to conciseness, in English composition ; and if the question be fairly tried, by a sufficient number of instances, the English will be found equal to any language (however incumbered with inflection) in conciseness and perspicuity.

*What impropriety is there in saying of a fe- male, that she is an astronomer, philosopher, &,c., any more than in saying, she is a botanist, scholar, &c.? The truth is, that having, very unnecessarily, adopted a number of foreign dis- tinctions of gender, we are apt to fancy that they are very necessary, or would be extremely de- sirable to all nouns ; just as a Iktle indulgence is apt to produce a restless longing after useless or hurtful luxuries: so that, insttad of saving, * We have only a sufficient number of variable terminations to make us feel our want ;' we ought rather to say, we have a sufficient number of tliem to produce false notions and fantastic desires ; and it would be much wiser to discard smne we have, than long for more. Such titles ss countess, duchess, empress, princess, &c..*

may remain ; but what utility is there in actfess, arlntress, benefactress, conductress, huntress, patroness, poetess, protectress, tutoress, votaress/ Even tlie eyes and ears (by wiiich grammarians are wont to judge) are surely better pleased with the expressions, she is a clever actor, she is the arbiter, benefactor, conductor, patron, poet, ji.o- tector, &c., than she is a clever actress, she is the arbitress, &c.

To perspicuity, such feminine terminations contribute nothing, because the pronoun she, which accompanies the noun, indicates the femi- nine gender as definitely as it is possible for any termination to indicate the same thing : and as to conciseness ; that, in most cases, is better effected by one termination than by several. Thus, to say, Attend, ye actors, is more concise, than. Attend ye actors and actresses : ye adulter- ers, is more concise than, ye adulterers and adulteresses, &c.

We have much reason for congratulation con- cerning gender in reference to English nouns ; for they have fortunately escaped the trouble- some incumbrance of variable termination ; and, however the grammarians may lament their rude simplicity, there is not much danger that they will ever be changed into the likeness of Greek and Latin substantives.

As to nuwbcr ; the only change of termination in English nouns, besides the affix 's, to denote of, is tliat which is employed to indicate the plural ; or, that more than one is meant. The plural affix has been already explained in treat- ing of pronouns. There can be little doubt that the two terminations of singular and plural im- port have some utility; yet, that it is

much less than we are apt to imagine, is abundantly evi- dent from the number of nouns which we have with only one termination, without experiencing any inconvenience ; as sheep, deer, swine, &c. In these cases, if it be intended to indicata the singular number, or that one is meant, tlie pur- pose is fully accomplished by prefixing a; which, as already shown, is a contraction of mi, i. e. % anc, i. e. one. In such a connexion, v.hat is called (very absurdly) the indefinite article, an- swers a useful purpose ; whereas, in ninety-nine applications out of 100, it is wholly useless ; only, having been always accustomed to this, as to many other insignificant expletives, we should think composition strange and incomplete with- out it. In all such expressions as a book, a house, a horse, a table, Sec, a might very pro- perly be termed the insignificant article ; which was probably the meaning intended by the phrase— indefinite article. The expression a sheep is as definite as two sheep, t/u-ee sheep, several sheep, ?ii(tni/ sheep, the sheep, these sheep, those sheep, &c. So also, when the illiterate say, a shilling, tivo shilling; a foot, tivo foot, &c. ; and we have not the least doubt, that, if all nouns had thus possessed only one termination, the advantage would have been con- siderable, not only as to simplicity and facility (for the distinctions of singular and plural, fre- quently cause an embarrassment), but also sig- nificancy.

A question long perplexed the author, which seems now to admit of an easy answer. Vyhence

GRAMMA R.

34.5

originrited the perpetual reciurence and usele:ˆs application of what is called the indefinite arti- cle not only in English, but also in most, or in all of the modern languages? For if a, an, un (It. Fr. & Sp.) ein (Ger.) be, as they manifestly are, one, (un-us, en,) how, in the name of signi- ficancy, should they be connected with almost every singular noun ? If singular mean one, why commit the tautology in almost every sen- tence of adding the adjective one ?

The sole reason of this fact is, we believe, tliat the practice originated when the distinction of singular and plural did not exist; or, at least, did not generally prevail among nouns ; and when it was as necessary to say a horse, or one horse, as a sheep, or one sheep : the habit of apply- ing the numeral adjective j ane (now one), ein, nn, like many other habits, remained, after the reason on which it was founded had ceased. Many Latin nouns have no distinction of singu- lar and plural in the nominative case, (and their accusative plural is the same as the nominative); and a very great proportion of Saxon nouns have, in spite of Saxon grammatists,

manifestly no distinction of number. Like the nouns sheep, deer, swine, &c., if not restricted, they suggest more than one of a sort or kind to the understanding ; and therefore it was necessary to join to them ane or one,when one was intended to be indicated ; just as it was necessary to employ the numeral adjectives two, three, four, &c., when two, three, four, were to be denoted.

If, however, there were one regular plural affix to English nouns, we might felicitate ouiv selves in the possession of it as an important addition to our grammatic treasure ; but, unfor- tunately, instead of being simple and uniform, it is such a jumble of anomaly as sets all principle and rule at defiance. The principal irregu- larities may be arranged under the following heads.

1. Some nouns have the obsolete plural affix en : as oxen instead of oxes ; men, women, i. e, contraction of manen, womanen; which ought now to be mans, womans; children and brethren have two olisolete affixes, viz. er and en ; each of which is, we believe, for es, adopted from the tliird declension of Latin nouns ; and which we still retain, but generally contract it into s.

2. Nouns ending in o, have the irregularity of sometimes contracting the affix cs, and some- times not ; as folio, folios ; nuncio, nuncios ; punctilio, punctilios; seraglio, seraglios ; cargo, cargoes ; echo, echoes ; hero, heroes ; negro, negroes; manifesto, manifestoes, &c.

This is sucli a petty irregularity, and at the same time so easily remedied, tliat it ought not, surely, to remain : let the e be uniformly dropped, or uniformly retained : tlie former seems the more advisable measure.

3. Most nouns ending in /" or fe, are render- ed plural by changing f or fe into ves ; as, loaf, loaves ; half, halves ; wife, wives : but why should not tliese be loafs, halfs, wifcs, stall's; like griefs, reliefs, reproofs, rufis, &c. ? If gram- matic authority serve only to establish anomaly, it is itself a nuisance; and our \inderstandings luid our practice arc more honored in the breach, tiian in the observance of its tyrannic laws.

4. ' Nouns which have ?/ in the singidar, with no other vowel in tlie same syllable, change it into ies in the plural ; as beauty, beauties ; fly, flies,' 8cc. But why should these not be beautys, flys, dutys, &c. ; like key, keys ; delay, delays, &c. ?

This is one of the evils of having more than one alphabetic sign for one sound ; and it is of recent introduction like many other anomalies.

5. Such irregularities as the following seem to have originated in the Saxon antipatliy to polysyllables, so discernible in many words, which are reduced

to the favorite monosyllable : foot, feet ; goose, geese ; tooth, teeth ; louse, lice; mouse, mice; penny, pence; die, dice. But why not follow analogy, as children and foreigners do in learning our language; and say, foots, gooses, tooths, louses, mouses, pennys, dies, &c.? But how strange and ridiculous such words sound ! exclaim all the dutiful subjects of established usage. But is it not much more ridi- culous to be the slaves of mere custom, however absurd? Only accustom your eyes and ears and mouths for a single month, to the analogies of your own language, in those instances in which the strangest blunders have been conse- crated into grammatic proprieties, and you will be reconciled to them for ever.

It is the custom at present, in adopting words from the learned languages, to preserve tlieir learned plural termination. In this we act more strangely than our neighbours ; for how are mere English scholars to know the meaning and use of foreign terminations? V'hy not make the plural of automaton, automatons ; criterion, criterions; appendix, appendixes; medium, me- diums; memorandum, memorandums ; stratuni, stratums; vortex, vortexes, &c. ? Surely good sense is better than learned pedantry ; and it is manifestly more pedantic than judicious to graft foreign peculiarities on a vernacular language ; or, in naturalising learned strangers, not to make them conform to the manners of the natives.*

Sect. IX. — Of the Vekb.

This is the most difficult of all the grammatic entities. The name verb (verbum) means word ; which latter is merely a corruption of the former. \c have only to suppose, then, tliat this very formidable part of speecli was designated the word, by way of eminence, on account of its vast importance. Nor is it worth while to quarrel with a name, when it does not indicate some egregious error or absurdity. If, then, a verb be a word, what is that word when considered as a part of speech? What is its grammatic character ? Lindley Murray must reply : ' a verb is a word which signifies to dc, to Jo, or to suffer, as, ' I am, I rule. I am ruled.' (Jther grammatists have attempted greater accu- racy of definition : but their attempts have not been sufficiently successful to deserve notice.

It will probalily appear to the reader very extraordinary, that the giammatist should define the verb to be a word ; and instantly exemplify his deliuition by giving, not one word, but two or more words: as, ' 1 am, I rule, I am ruled.' The blunder is easily explaimd. The definition was not made for the English, or, indeed, for

any modern language, but for the Greek and the Latin ; in which it can be strictly exemplified : as, sum, I am ; rego, I rule ; regor, I am ruled : so, also, if we take what is called the infinitive : esse, to be ; regere, to rule ; regi, to be ruled. In all these Latin instances the verb is one word ; but each of the English instances consists of, at least, two words. This is another proof of the absurdity of transferring grammatic definitions, distinctions, and rules, from Greek and Latin to the English language ; which is as truly ridi- culous as it would be to give the history of Greece or Rome, with a few slight changes of names and dates, as a correct history of Eng- land. But how insignificantly diminutive would a vernacular grammar appear without the lucubrations of old Lily, or of Crates Mellotes, done into English ! Hence that mass of absurdity which has been dignified with the name of grammar. Most of it was from its first exist- ence (perhaps in Egypt or Babylon) dark and chaotic ; and all of it as applied to the modern languages, especially to the English (so dissi- milar to Greek and Latin), is as devoid of rea- sonableness and utility as the philosophy of Aristotle. To many persons such statements are redundant ; and for the sake of brevity, as also of intelligibleness, to mere English scho- lars, we adhere as closely as possible to the English language.

The question then is, What is a verb? We deny that there is any such entity as f< verb in the sense of the grammatists : i. e. one, single, separate, uncompounded word, which signifies to be, to do, or to suffer. But it may be replied. Have you not just admitted, that in Latin the definition holds, ' a verb is a word ;' for sum, is one word ; as also rego. True ; but each of these is properly a compound word : i. e. two or more words joined together ; just as if we were to write, Icmi, Irule, lamruled ; or, tohe, torule, toheruled. The movable affix, in the Latin words, is as properly a distinct word as the prefix is in the instances Irule, torule.

Though, then, the definition ‘ a verb is a word which signifies to be, to do, or to suffer,’ does hold as to Latin and Greek ; it is not true, as to any language whatever, that one simple or un- compounded word can signify, to be, to do, or to suffer. The error of the grammarians origi- nated in mistaking syntactic for verbal meaning; i. e. in supposing that one word can convey a meaning which requires two or more words. This error, productive of other errors, originated in ignorance concerning the elliptic or abridged state of language, as found existing among every people ; for nothing was more calculated to deceive theorists, who would naturally suppose that one word performed the office of several ; as if there could be existence without some ex- istent concerning whom the affirmation is made ; or action, apart from an agent.

We have already considered the difficulty at- tending the origin of language, and the origin of some words called verbs : and it would answer

no useful purpose to detain the reader with ano- ther discussion of the same troublesome ques- tion. In all those words called verbs, which are manifestly nouns, there is no difficulty : as,

- *to Iiaml, to face, to back,' &c. ; * I hand, we hand, they hand ;' 'brave men back their friends and face their enemies.' In such instances, all that is necessary is to join two nouns ; or a pro- noun and a noun, or to prefix the preposition to, to convey the notion of agency.*

Mr. Home Tooke (as already noticed) holds, that every verb is properly a noun ; and that it is something more than a noun : he intimates, moreover, that he agrees with the Stoics in con- sidering the infinitive the proper verb, free from all incumbrance of number and person. It is difficult to conjecture what he really intended ; but he seems to have considered the affix of the Greek, Latin, Saxon, &c. (in what is called the infinitive mood), as. well as to, in the English, to be equivalent to do, or act ; as if the expres- sion, to back a friend, to face an enemy, were, do back a friend, do face an enemy. If such were the case then, to, and the Latin affix are, &c., are to be considered as properly the verb ; and the proper enquiry would be, what is the nature of that which is thus connected with a noun to convert it into a verb ? After the fullest enquiry and reflection, we are convinced that the verbal affixes,ˆ to what is called the infinitive mood, in Latin, Greek, Saxon, &c., are the very same as the simple adjective affixes : are is the same word, whether it appear in amure, to love, or cellare, of a cell : en {ein, Gr.) is the same word, whether it appear in J loven, to love, or golden, of gold. In all such cases the affix merely serves to connect the word going before with the word coming after ; or to give notice that the word to which it is attached is to be taken in connexion with some other word for the purpose of conveying a particular meaning. In short, the affix in such cases answers the same purpose as our preposition to ; which also indi- cates that one word is to be taken in connexion with another ; and which, like the forementioned affixes, is doubtless a mere particle or fragment of a compound word.

If, then, the common definition, a verb is a word which signifies to be, to do, and to suffer, be wrong ; what definition is to be received as correct ? But though we point out the falsenes? or absurdness of an old doctrine, it does no follow that we must forthwith supply its place with a new one. It is impossible to put any thing sound and solid in the place of baseless theories ; and the purpose of enquiry is gene- rally answered when they are made to vanish away like dreams when men awake. We have just seen that there is no such thing, in the En- glish language, as a verb ; i. e. a word which signifies to be, to do, or to suffer ; for,"to express existence, possession, relation, agency, &c., two or more words are necessary; and*

whenever one word seems competent to the business (as in Latin, &c.), it is not a simple, but a com- pound word, i. e. two or more words joined together.

'Verbs,' we are told, 'are of three kinds; active, passive, and neuter.' The sole reason why such distinctions were ever applied to the English language, is, that they previously existed in connexion with Latin; but to suppose that the same distinctions will equally suit all Ian-

guages, is as unreasonable as to attempt to make a coat to fit the moon in all her changes. We say nothing at present of the original character of such distinctions ; for if they had been dis- tinguished in their first application by absolute wisdom, they might be perverted into utter folly by being transferred to the English language. The distinctions in question have been discarded by the more sensible grammarians ; who, instead of saying verbs are active, passive, or neuter,

of the verb perform the office of the pronouns in our language,

' In each number,' we are told, ' there are three persons ; as,

Singular. Plural.

First Person, I love ; We love ;

Second Person, Thou lovest ; Ye or You love ;

Third Person, He loves. They love.

' Thus the verb, in some parts of it, varies its Jistinguish them into transitive and intransitive, endings, to express or agree with different per- The only conceivable utility in this distinction sons of the same number. In tlie plural number is, its subserviency to a grammatic rule ; which of the verb there is no variation of ending to says, verbs active or verbs transitive govern the express the different persons ; and the verb, in objective case : as, truth ennobles her ; she com- the three persons plural, is the same as in the forts me, &c. Here ennobles is .considered a first person singular. Yet this scanty provision verb transitive, because the action passes over of terminations is sufficient for all the purposes to the object ; and if that be represented by a of discourse, and no ambiguity arises from it :

pronoun, it must be in what is called the ob- jective or accusative case : but

such instances as, I sit, he lives, they sleep, are denominated in- transitive, because the effect is confined within the subject or nominative of the verb, and does not pass over to any object.

*This distinction, however, might be very well dispensed witii ; for it would answer every pur- pose, to say, when a pronoun is the object of a verb, or that in which the action of a verb ter- minates, It must be in the objective case : as, ‘ I love /ler ;’ ‘ she loves me,’ &c. ; not, ‘ I love she ;’ * she loves I.’*

With all that avidity for multiplicity of dis-

the verb being always attended, either with the noun, expressing the subject acting or acted upon, or with the pronoun representmg it.’

It appears, then, that diversities of termination are not necessary to the English verb, as it is always attended either with a noun or pronoun ; which noun or pronoun answers the purpose ac- complished by termination in Greek and Latin : and for the same reason that the verb is without any variation in connexion with I, We, You, They, it might also have been without any variation in connexion with Thou, lie. She, It : as, I love ; Thou love ; He, She, or It love ; We love, &c. It is evident that the terminations or

tinction which characterises grammatists, there affix est, after Thou, and eth changed into e$, s.

is a distinction which has wholly escaped them ; though it seems of some use, and has long ob- tained the patronage of Hebrew grammar : it may be denominated the verb causative; and all we intend is elucidation. Lai/ is manifestly the causative of lie ; for it is equivalent to, cause or make to lie : thus, also, sit and set ; rise, raise, rouse ; see, show, &c. &c. In this manner

after He, She, or It, answer no necessary or useful purpose ; but occasion much embarrass- ment. Disuse these needless diversities of ter- mination, and you discard at once nearly all the rules of syntax, or render them needless.

Whatever may have been the origin of the affixes est, eth, es — they are, evidently, nuisances in the English language; but perhaps the curi-

a great number of words are employed causa- osity of the reader, respecting their adoption,

tively, to avoid a lengthy mode of expression : as, to run a hare, for, to 7nakc a hare run ; show, for, make to sec, &c. In many instances the same

word is diversified in spelling and pronun- ciation from the original form, when employed causatively : as, shoic, a diversity of see ; raise, rouse of rise; set of sit; lai/ of lie, &c. : and thus many words are resolvable into one word, which do not seem to have any connexion. Many verbs, however, are employed both causa- tively and uncausatively, or, as commonly ex- pressed, both as active and neuter, without any diversity of spelling or pronunciation.

- *To verbs,' we are told, ' belong, number, person, mood, and tense.' This also is affirmed concerning Englisli words for no reason what- ever, except that the same grammatic position had previously existed in connexion with Greek and Latin. * Verbs,' it is said, 'have two num- bers, the singular and tlie plural : as, I love, we love.' Here, asain, the example is at variance with the definition ; for the distinction, as to singular and plural, exists not in the word love, but in the pronouns / and we. In Latin, indeed, •he definition can be exemplified : as, Amo, I love; Amamus, we love. Here are two numbers,*

may call for some explication. We find, in our olden literature, eth connected with all the per- sons and numbers of pronouns {en was also generally employed as an affix, at one time, especially in the plural number of verbs) : as, I loveth, Thou loveth, He lovetli. We lovelh, Ye loveth, They loveth. From this, it is evident that eth could not be either a personal or a nu- meral affix : i. e. whatever it might indicate, if it indicated any thing, it could not denote num- ber or person. After more enquiry and refiection than the (jueˆtion is perhaps worth, considered by itself, the conclusion in the mind of the author was, that tlie affix eth was corrupted from the Latiu affix at, et, or it; or, that it is '/'/(«« ((/otliic), Thiir ((.ierman Thun infin.), i.e. Do affixed instead of being put before the verb, as it is at present, when employed. The last seems the more probable conjecture ; for when Do is employed, the (//yjr disappears ; which is some approach to evidence, that the one was considered equivalent to the other, if not the very same : as, I do love. Thou do love, or dost love : he do, or doth love ; not thou dost lovest, he does loves. Whatever may have been the origin of est, eth, es, contracted into s, tney are

singular and plural ; because the terminations manifestly useless and troublesome appendages

The doctrine of woois- is self-convicted of al)- Burdity : for the grammatists

are obliged to make such a confession as the following : — Though this mood (the imperative) derives its name from its intimation of command, it is used on occa- sions of a very opposite nature, even the humblest supplications of an inferior being to one who is infinitely his superior : as, ‘ Give us this day our daily bread ; and forgive us our trespasses !’ Opinions are divided concerning the exact num- ber and proper definition of moods. Yet, with all the love of complication, an obvious distinc- tion is omitted; for if what is called the infini- tive mood deserve any designation, it ought to be called the impersonal verb ; or the impersonal state of the verb ; but the term impersonal was pre-engaged ; being applied to what is evideniiv the third person of some verbs — or verbs that are used only in the third person.

In reference to Greek and Latin, the tradi- tional doctrine of moods may be tolerated ; be- cause it serves at least the purpose of desig- nating the various terminations of verbs, which must be committed to memory; but, in reference to the English language, it possesses no redeem- ing quality.

*Tense is a corruption of tempus, contracted into time. The grammatic judgments have been wonderfully divided about tense ; which is not surprising when we consider how much the subject has baffled the most metaphysical intel- lects ; and that it extorted the following humble confession from St. Augustine : Quid sit Tem- pus, si nemo qucerat a me, scio ; si quis inter- roget, nescio. Mr. Harris has enumerated no fewer than twelve • tenses ; but more moderate grammarians are content with half the number; not without an apology for insisting on so many. * Tense,’ they tell us, ‘being the distinction of time, might seem to admit only of the present, past, and future ; but to mark it more accu- rately, it is made to consist of six variations, viz. the present, the imperfect, the perfect, the pluperfect, and the first and second future tenses !’ Others, still more moderate, are con- tent with half this number; and insist only on three tenses ; the past, the present, and the future; others refuse to admit that there is a future or present tense ; and some deny the existence of tenses altogether. In all such cases of diverse judgment and doubtful distinc- tion, simplicity is an argument of considerable weight ; so that, if there were no preponderating evidence, we would rather agree with those who hold that there are no tenses, than with those who assert that there are three, six, or twelve : but though the doctrine ‘of tenses has, to some extent, realised itself; and we have, or seem to have, some notions of distinctions as to time, in connexion with verbs ; yet it can be as clearly proved as the nature of the case admits, that ro such distinction really belongs to them ; and that, where such a notion does exist, it is wholly accessory or associated ; not primary — not in- tended to be indicated by any changes which are made upon the word’s called verbs, in any language. The enquiry, indeed, is atterjded with no substantial utility, except as it serves to coniove false theory ; for nothing is*

preferable

to absurd opinions: silence is better than loqua- cious impertinence. Before, liowever, we enter directly on the consideration of tense ; let us first examine those words designated auxiliary or helping verbs, for the right understanding of these will, in a great measure, supersede the ne- cessity of a formal disquisition concerning tense.

With respect to the auxUiary or helping verbs : viz. do, have, shall, will, may, can, letˆ must, he, two affixes must be noticed as being really all the changes of termination that pro- perly and usefully belong to English verbs : viz. ed and ing. The last was, anciently, ante, antˆ and, &c. (for there is great diversity of spelling in the olden literature) and was evidently bor- rowed from the Latin participle : ing seems merely a spelling of the same affix, accommo- dated to the nasal pronunciation that acquired possession of the English language after the conquest. The use of ing is precisely the same as the participle-affix ans, ens, in Latin, and on in Greek ; and has precisely the same use, and is, in fact, the same word as the adjective affix an, en, &.c. ; for all the difference between what is called a participle and what is called an adjec- tive, is, that the one is formed on a verb and the other on a noun ; and this diff'erence is, in many cases, so very slight, that the same word is con- sidered either adjective or participle.

The corresponding, or rather the same affix, in the other languages, is, ande, Swed. ; ende, Ger. ; ant, Fr. ; ante. It. From this view, it plainly appears, that as the Latins borrowed the affix in question from the Greeks, their literary masters ; so the modern nations of Europe borrowed it from the Latins, their literary mas- ters.

The affix ed, at, Swed. ; et, Ger. ; ato. It. ; is evidently the same as that which exists in what is misnamed (for it is active as well as passive) tlie Latin perfect, passive participle. Tiius, dubit-o, dubitat-us, is, with us, doubt, doubted, &c. &c. If, then, the English affix be merely that of the Latin; what is this Latin affix? We can hardly expect absolute certainty in such a matter ; but we believe it is what is called the third person singular of the perfect, with adjec- tive terminations appended. Thus, amat, he loves, amavit, he has loved, amavitus, a, um, contracted into umat-us, a, um. The av is a con- traction of hab-eo : so that amavit is equivalent io, love-have-he, she, or it; amavej-tnit is equivalent to, love-Aat;e-they ; or they-have-love.

Whatever distinctions may be interposed re- specting ' the iˆerfect tense not only referring to what is])ast, but also conveying an allusion to the present time,' every one knows that there is no distinction of meaning, or difference of ap- plication, between what are called the preterite imperfect and the

preterite perfect in Latin. The reason is plain : amabat consists of the three same words as umuvit ; i. e. am, love, hub, have, and at, signifying agent or subject, he, she, or it, as determined by tlie connexion.

For the same reason that the preterites in Latin often appear to indicate pr.st time or per- fected action ; so the English affix ed often ap- pears to indicate the same ; but unfortunately for distinctions, even of the simplest kind, the

definition propounded ;is if the English verb denoted action either terminated or not ter- minated, is not free from objections.

We have no wislx to discard the affix ed ; but it is evidently much less necessary or useful than grammatists would readily admit; for many verbs are destitute of it, such as shut, set, thrust, spread, Sec, without any inconvenience or loss of siynificancy ; and when ungrammatic people omit the affix, or employ what is called the present instead of the imperfect, their meaning IS perfectly intelligible. The truth is, we are very apt to fancy that useless things are necessary, merely because we have been used to them ; and we have not the smallest doubt that, if tile athx in question had never been adopted, our language would have been as significant without, as it now is with, this termination. But if it were regularly affixed, there would be no ob- jection to its existence : the great grammatic evils we have to complain of, are those irregularities which so much abound ; and which serve only to render the verbal appparatus ditRcult and unwieldy.

If we discard all useless parts and irregu- larities, what are called the auxiliary verbs will appear in the following manner :

I do, tliou do, he, she, or it do. We do, you do, tliey do. I doed, thou doed, he, &:c., doed. We doed, you doed, they doed.

To do, doing, doed,

I have, thou have, he, &c., have. We hare, you have, they have. I haved, thou haved, he, &c., haved. We haved, you haved, they haved.

To have, having, haved.

In consequence of haved being contracted into had, we have such extraordinary combina- tions as the following : I have had, I had had ; and not only the former, but the latter of these expressions is set forth in proper

grammatic order, as a necessary and regular tense.

Let and must require no notice in this place. Can and may merely express power : I can go, '3 equivalent to, lam able to go — I have power, permission, liberty, &c., to go. I may resign, is equivalent to, I have power to resign ; and in spite of idle doctrines concerning potentials, the shorter is merely an abridged form of the longer expression. JMuy, when the affix ed is as- sumed, is corrupted into might instead of muycd.

Will, 'ol-o, IS,

I will, tiiou will, he, 8cc., will. We will, you will, they will. I willed, corrupted into would, thou willed, he, &c., willed.

To will, willing, willed.

Shall,

I shall, thou shall, he, &;c., shall; we shall, &c. : I shalled, corrupted into should, &c.

Shall seems most entitled to the designation auxiliary verb, for it does not appear to have much distinct significancy of its own ; but it is, we believe, merely a diversity oiuill; and con- sidering the perplexity caused by it, not only to Scotchmen and foreigners, but even to the English themselves, who often blunder in applying shall and vilt, its existence is no grammatic cause of congratulation.

The preceding verbs have some irregularities;

but they are simplicity itself when compared with the verb be ; in which there is more of wanton anomaly than could well be found within the same compass, if we were to search all the languages of the world. The remark of jNIr. Turner applies equally to the English substan- tive verb : ' The Anglo Saxon substantive verb is compounded of several verbs. We can trace no fewer than five in its different inflections.' Words much in use are most liable to be cor- rupted and rendered irregular. Our ancestors adopted many irregularities, of what is called tlie substantive verb, from their literary neigh- bours : but confusion is worse confounded by their unskilful agency.

Am is plainly tc/xt, Gr. ; sum, Lat. : is, a cor- ruptiouDf esti, est ; was is a corruption of esse ; were is fuere, J'urent, Fr. ; fui-ono, It. ; art and are seem corrupted from \ weorch, to be, be made : thus far we have a jumble of anomaly ; but in what remains we have an entirely different word, and one which might be very easily ren- dered a competent substantive verb, at

once simple aftd regular.

Be, 1 beo and X bio, i. e. fio, i. e. lioo.

The illiterate, particularly the peasantry, for they always adhere more closely to analogy than their grammatic superiors, have this as the sole substantive verb in the following manner : To be, being, beed.

I be, thou be, he, &c., be ; we be, you be, they be : I beed, thou beed, he. Sec, beed ; we beed, you beed, they beed.

Thus, by merely removing those nuisances, es/, etk, es, or s; and by making the regular affix ed supersede the obsolete affix en ; we have such simplicity and regularity, that even a child could not err in employing this familiar, household word. Fortunately be remains unchanged in what are called the future tense, and the sub- junctive and potential moods : as, I shall be, thou shalt be, he shall be, Sec. If I be, if thou be, &c. I may be, he may be, &c.

Having reviewed the grammatic auxiliaries, we may now approach the main body of verbs, which consist of very irregular forces : and, for the conceit of the allusion, we will make train our fugleman.

To train, training, trained.

I train, thou train, he train, we train, &c. : I trained, thou trained, he trained, &c.

This is such simple manceuvring that a child might go through the whole exercise; yet it is all that is either necessary or useful : and to change train from an active to what is called a passive state, all that is necessary is, be put be- fore it, as accompanied with the affix cd. Thus,

I be loved, thou be loved, See.

I beed loved, &:c.

To be loved, being loved : having been loved.

We have no doubt that if cd had never been adopted asaverl)al affix, the business could have been well accomplished without it ; but, having been adopted, it may remain ; only irregularities deserve to be banished.

When the auxiliaries are united with the re-

gular verbs, the junction is effected in the follow- ing manner :

I do train, thou do train, he do train, &c. : I doed train, thou doed train, he doed train, &c.

I have trained, &c. : I haved trained, &c.

I will train, thou will train, he will train, &cc.

I shall train, &c.

I shall have trained, thou shall have trained, he shall or will have trained.

But, if the moods be abandoned, the tenses yet remain.

The truth is, as before intimated, if any notion as to time ever exist in connexion with any verb, it is wholly accessory or associated, and not sig- nified by the verb itself. In general what is called tlie present tense simply indicates action, being, relation, &c. : what are called the past tenses, generally indicate existence, action, relation, &c., as terminated ; which, of course, is closely asso- ciated in the mind with the notion of the past. What is called future tense properly indicates volition. Thus, if I say, I will publish the present work in the month of May : the sentence is equivalent to, I intend to publish in the month of May ; or, I am resolved to publish in the month of May. Here the notion of future is manifestly an associated, not the primary notion. It is true that the word is applied to many ob- jects in which volition does not exist ; as in the following expressions : The moon will rise at eight to-night ; the sun will rise at six to mor- row morning. These are instances of a very numerous class of expressions which are meta- phoric or allusive, rather than strictly and lite- rally proper, though, from havingbeen long used, they appear quite literal.

If the grammatic doctrine of tenses were admit- ted, what is gained by it ? Does it impart any instruction? Does it render Tyro better ac- quainted with language or more master of com- position ? If it does not answer such a purpose, it is evidently worse than useless.

Irregular verbs, like all anomalies, are ex- ceedingly troublesome, especially to learners. Most of them, evidently, ori'zinated in blunder- ing carelessness ; or in that aversion to polysyl- lables which operated so powerfully on our Saxon ancestors. Had grammar-makers endeavoured to remove such irregularities, they would have done some good ; but, instead of such useful ser- vice, their first labor was to consecrate and con- firm all the perversions which ihey found actually existing ; and thus they prevented

our language from righting itself, as it would have done, to a considerable degree, if it had been left wholly to analogy, free from the fetters of arbitrary rules established on anomalous precedents ; for there is a constant effort on the part of children and foreigners, and all the un grammatic, to restore uniformity ; which effort is so well backed by reason, that it would doubtless prevail but for the despotic authority of written grammar.

With the view of inducing influential writers and speakers to set the example of banishing irregularities from the verbs, we will present them in the following distributions : —

First, Verbs that have both a regular and irre- gular form.

Awake

Bend

Bereave

Build

Catch

Chide

Cleave

Clothe

Crow

Dare

Deal

Dig

Dwell

Freeze

Gild

Grave

Gird

Hew

Knit

Load

Mow

Saw

Shape

Shave

Shear

Shine

Show

Shrink

Slay

Sow

Spill

Strive

Strow

t Strew

Swell

Thrive

Wax

Work

Wrins

awaked

f awoke

bended

bereaved

builded

catclied

chided

cleaved

clothed

crowed

dared

dealed

digged

dwelled

free zed

gilded

graved

girded

hewed

knitted

loaded

mowed

sawed

shaped

shaved

sheared

shined

showed

shrinked

slayed

sowed

spilled

strived

strowed

■*f- strewed*

swelled

thrived

waxed

worked

wringed

t awaken t bent f bereft t built t caught t chid f clave t clad ■f crew t durst t dealt t dug t dwelt t froze t gilt t graven t girt t hewn t knit t laden t mown t sawn t shapen t s'.iaven t shorn t shone + shown t shrunk t slew

f spilt t strove f strown

f swollen f throve j waxen f wrought f wrung

t chidden

f frozen

t slain f sown

f striven

t thri

There can be no unwillingness, even in the most dutiful disciples of custom, to discard all tlie above forms with the dagger prefixed ; for most of them

have an olden uncouthness, except to the lovers of antique obsoleteness.

Secondly, verbs that might be restored to ana- logy, or rendered regular withoiit offering much violence to established usage : as.

Beseech beseeched f besought

Bleed bleeded fbled

blooded is still better blowed fblew f blown

Blood Blow- Choose Cleave

choosed cleaved

to split. Cling dinged Creep

f chose -f cleft

f chosen j clove

f cloven

■\ *clung*

creeped f crept

Draw drawed fdrew

Drive drived f drove

Drink drinked fli'^^nk

Feel feeled ffelt

Flee fleed fAed

Fly flyed f flew

One of these duplicates had better be discarded

Fling flinged t Aung

Forsake forsaked fforsook f forsaken

Grow growed fgiew f grown

Hang hanged fhung

f drawn f driven j drunk

flown

GRAM M A 11.

Hear

Keep

l\now

Lav

J.ie

I .eave

Lose

I'ay

Ring

Rise

Say

See

Shake

Shoe

Sing

Sink

Sleep

Slide

Sling

Slink

Smite

Speak

Speed

Spend

Spin

Spit

Spring

Steal

Stick

Sting

Stink

Stride

Strike

String

Swear

Swimj

Swing

Teach

Tear

Tell

Thii:k

Throw

Weave

Weep

Win

Most of these are already familiar to us, as being constantly heard among the ungram- matic members of society, who are the great majority of the whole population ; and, when our mouths and ears have somewhat practised on these analogies, they will not sliy much at such strange regularities as the following : —

Abide abided f abode

Be heed f been

fAm fwas

Bear beared fbare fbore f borne fiborn

Begin beginned t began + begun

Hid bidded + bade + bad f bidden f bid

f bound

fbit fbilten

f broke f broken

t bred

lieared

j heard

- *keeped*

  fkept

  knowed

  f knew

  f known

  ‘ayed

  f laid

  lied

  flay

  f lain

  leaved

  fleft

  losed

  f lost

  payed

  -f paid

  rmged

  frang

  t rung

  rised

  ftose

  f risen

  sayed

  -f said

seed

-f saw • .

fseen

shaked

-f shook

f shaken

shoed

f shod

singed

fsang

f sung

siniced

-|-sunk

sleeped

f slept

slided

-f slid

f slidden

slinged

•f slung

slinked

-f slunk

smited

f smote

t smitten

speaked

-f spoke

f spoken

speeded

-fsped

spended

t spent

spinned

f span

t spun

spitted

-fspat

fspitten

springed

t sprang

: t sprung

stealed

f stole

f stolen

sticked

f stuck

stinged

f stung

stinked

t stank

f stunk

strided

t strode

t strid t

stridden

striked

t|struck

t stricken

stringed

f strung

sweared

-f sware

t swore f

swoin

swimmed fswam

f s%viim

swinged

f swung

teached

t taught

teared

ftore

ftorn

telled

ttold

thinked

f thought

thrcAved

-f threw

f thrown

weaved

■*j- wove*

f woven

weeped

t'wept

winned

f won

Bind binded

Bite bited

Break breaked

Breed breeded

Bring bringed fbrought

Buy buyed thought

Come comed f came

Do deed fdid fdone

Fall failed t fell f fallen

Feed feoded | fed

Fight

Find

Give

Go

Have

Hide

Hold

Lead

Make

Meet

Rend

Ride

Run

Seek

Send

Shoot

Sit

Stand

Take

Tread

Wˆind

Write

fighted

finded

gived

goed

haved

hided

holded

leaded

maked

meeted

Tended

rided

runned

seeked

sended

shooted

sitted

standed

taked

treaded

winded

writed

t fough

f fouiia’

fgave

f went

fhad

fhid

fheld

fled

f made

-fmet

f rent

frode

fran

f sought

fsent

fshot

fsat

t stood

ftook

ftrod

t wound

f wrote

■*361*

t given ■*fgone*

f hidden f holden

frid frun

•j- sitten

f taken -f trodden

-f written

The following have no change of termination ; yet, as already noticed, they answer every pu r- pose of speech as well as those that have the affix ed : having a great affection for simplicity we are rather partial to such unchanged verbs; but as ed has been adopted, and has become the general rule, perhaps it ought to be uniformly affixed : thus, beat, heated ; burst, bursted ; cast, casted ; cost, costed ; cut, cutted ; eat, eated, featen ; hit, hitted ; let, letted ; put, putted ; read, readed ; rid, ridded ; set, setted ; shed, sheded ; shred, shreded ; shut, shutted ; split, spliited ; spread, spreaded; sweat, sweated; thrust, thrusted.

Observe, 1 . That most of the irregular verbs have descended from Saxon times ; when there was a different manner of forming what is called the imperfect besides affixing ed.

2. The termination en, which appears so often in what is called the perfect passive participle, is a relic of a regular affix, now obsolete ; and, for the same reason that it has been wholly dis- continued in what is called the infinitive mood (for we never say or write to loven,&c.), it ought to be entirely disused, except as an immoveable affix ; Z.S, jiuxen, golden, Jiatten, blacken, &c.

Many of the irregularities, exhibited above, are merely contractions or corruptions of the verbs with the regular affix : as, bereft contraction of bereaved; clad of clothed; dealt of dealed; dwelt of dwelled ; gilt of gilded ; spilt of spilled ; cleft of cleaved ; crept of creeped ; felt of feeled ; fled of fleed ; kept of keeped ; left of leaved ; shod of shoed ; slept of sleeped ; wept of weeped ; &c.

*There is still a great tendency to such con- tractions as, smelt for smelted ; learnt for learned, &c. ; but the grammarians have very properly remonstrated against such instances ; and, for the same reason, the author remonstrates against all irregularities, whether more or less modern. In- stead of indulging foolish mirth or contemptu- ous ridicule, when children, foreigners, and illiterate natives follow the guidance of analogy and say, growed, knowed, bloued, seed, &c. ; men ought to be ashamed of their own want of re**

flection — their appreciation of worthless dis- tinctions— their blind

reverence for anomalies, made up of blunders and corruptions — and their slavish submission to the tyranny of an arbitrary kind of grammar, which attempts to prove its le- gitimacy by giving reasons for what reason never dictated.

PART III. PREFIXES AND AFFIXES.

Prefixes are those words which are joined on the left or at the beginning of other words : as, unknown, revisit, &c. : affixes or postfixes are those words which are joined on the right or at the end of other words : as, heed/ess, mind/a/, &c. It is evidently of some importance "that these should be explained ; especially such of tliem as have no separate existence in the English language. Such words are generally particles; i. e. small parts of compound words : and some of them are fragments of sentences. Post, after, (for example), is evidently what is called p. p. of pono, (hence pone, behind), and mustliave been originally connected with other words to express the meaning now indicated by it alone, in some such manner as the following : positum a tergo. Sec.

It is only on this supposition that the actual meaning of many words can be accounted for.

Sect. I. — Of Prefixes.

This term is more definite than preposition ; which last term was originally employed for the "ame purpose as we now employ the former; and in this view there are both meaning and sense ; in any other view there is neither: hence, as al- ready intimated, the unmeaning definition of preposition, as commonly given by the gramma- tists.

The prefixes may be presented in the follow- ing classes : —

1. Greek. — An (both an and un in Gothic), in, and both in and un with us : as, i/ivolunta- ry, Mwwilling; i.e. not voluntary, not willing: so that the prefix an, in, un, has precisely the meaning of we, ?ion (i. e. ne, 7ie), not : it is a negative prefix.

The Greek grammarians have made the same mistake about the above prefix as the English grammarians, concerning what they call the in- definite article. Both say that a becomes an before a word beginning with a vowel ; whereas, an becomes a before a word beginning with a consonant. Observe again, that one of our du- plicates of this prefix, i. e. iin, is derived directly from Greek, through our Gothic ancestors ; the other from the Latin. Hence we prefix vn to Saxon words (themselves corruptions of Greek and Latin) ; and in, the Latin corruption of an, to Latin words : as, involuntary, unwilling. We perceive something of impropriety, or uncoutli-

ness, 1. e. a departure from established usage, if we interchange them: inwiUing, unvulunturi/ ; but the latter being more vernacular, or idio- m:.tic, does better than the former. Of course, as a consistent advocate of simplicity and uni- formity, the author would have one of these du- jilicates of the negative prefix discontinued ; and that which was adopted from the Latin, as being less idiomatic, should be turned off; but to this

there is certainly a great obstacle: for many words compounded of in have been received into our language; as infirm, infallible, &c. ˆ In addition to all the other anomalies, there are many useless diversities of the same word, which have been adopted first directly from the Greek, then from Latin, Italian, French, &c. &c. : thus many forms of the same verb, noun, &c., have been imported from other languages ; and then these have been yet more diversified by the caprices of spelling and pronunciation.

Ana or an, which is the same in German, and with us changed into on. This is a word of fre- quent occurrence; but it is not much used as a prefix.

An is changed into en, changed into in; which we have both as a prefix and a preposition. Of this, also, we have a duplicate, which we bor- rowed from the French ; as, inquire, enquire ; indite, endite; &.c. It would certainly be ad- visable to discard the French and adhere uni- formly to the Latin form of spelling ; as, inchant, fenchant; indict, fendict; ingrave, fengrave, &c.

There can hardly be any reasonable doubt that ana, an, en (with us on, in), and an, a {in, with us un and in negative), are but one and the same word, or fragment of a word; and that the dif- ference of meaning is owing to ellipsis, i. e. dif- ference of composition.

Anti, in front of, directed to, opposed to: it has only the last meaning when a prefix with us: as, anfirtformer, i. e. one who is opposed to reform ; antiabolitionist, one who is opposed to tiie abolition of negro-slavery. Ante (i. e. anti) is equivalent to, in the front, ahead of, before : antediluvian, i. e. before the diluvium, corrupted into deluge; antemeridian, i. e. before the sun be at the meridian — before noon. From ante is avante (It.), (i. e. a- ante) contracted into van.

Apo, ah, contracted into a, and Ger. J aff, X af, oft", of. Both oft' and of are frequently used ; but only the former is employed as an affix, and that but seldom.

-E/c, e.r, ex, contracted into e ; corrupted into X uss, X '1st, aus, Ger., out. Out is not much used as a prefix: ex is much einployed as a pre fix in Greek and Latin, and uiis in Ger. The ge- neral meaning is the same in all the dift'erent languages ; i. e. it is compounded of that of the prefix, and of

that of the other word. Exlcx and outlmv both mean out of, or without law; only the first is a person that is not subject to law; the second is a person that has not the protection of law.

On ex is formed extra, i. e. out of, beyond : extraordinary, beyond ordinary; extrupuroclnal, not comprehended within any parish.

Henii, semi, i. e. half: as, honispliere, i. e. a half sphere; semicircle, a half circle, or the half of a circle. Hemi is a contraction of he/nisa, a contraction of he messe; i. e. the feminine ar- ticle, and messe, media, medium, middle.

Fara, peri, per, kc, per. This, like so many other particles, or verbal fragments much in use, is exceedingly vague. As a Greek prefix, it occurs in but few words adopted into the Englisli language. As a Latin prefix : per means through, completely, much : as, perfect, completely done, finished, complete; perform, to form completely;

to finish, &c. When not employeA,as a prefix, per is equivalent to by : as, per centum — by the hundred.

Fro, pro, pra, corrupted into for, fore. Pr{p, pre, and fore, as prefixes, are exactly equivalent : as, preordain, foreordain ; predict, foretell, Sex;. Pro is generally equivalent to forward, i. e. fore- ward, or forth- as, produce, i. e. to lead for- ward, or bring forth; propel, drive forward, &c. For is prefixed to very few words, and is equiva- lent to p?o in some of its connexions and appli cations.

Huper, or hi/per, super, supra, corrupted into up, upper, uber, and oben Ger. I aber, ober, Heb. over, I bove, boven Dut., i. e. be over, whence above. It is not meant that ober, Heb., X aber, &c., are derived from huper, as super, &c.; but they are all manifestly the same word with the same meaning. Hypercritical, i. e. over critical ; supernatural, above natural, or above the course of nature ; supervisor, overseer, &c. Super 's contracted into sur by the French : surcharge, surfeit, survey, &c.; i, e. overcharge, overdo, overlook, or view all over, &c.

Aber, in the names of towns, means over, like sur, upon, &c. : as, Aberdeen, i. e. over or upon the Don; Abergavenny, i. e. over the Gavenny; Aberistwyth, i. e. over the Istwyth, &c.

Inver, i, e. infra, is just the opposite of aber : as, Inverness, i. e. under the

Ness; Inverury, i. e. under the Ury, &c. Thus we have New- castle-under-Line as well as Newcastle-upon- Tyne, &c.

Hupo, or hypo, changed into sub, whence sub- ter; all which are prefixes : we have few Greek words with the prefix hypo; but we have many Latin words with sub, &c.: as, subscribe, i. e. underwrite, or write under ; sub-tenant, i. e. under-tenant, &c.

Dia, dis, de, through, from, out, apart. The primary use of both dis and de may be termed separative: as, diff'use, to pour out, or asunder; depart, to part from, leave, go ofi": in many words they rather add to the force than to the meaning of words : demonstrate, to show forth (monstro, to show); despoil, to spoil, &c. In many words they are simply negative : discredit, not to credit, &c. In some words de has the sig- nification of down or downwards: as, descend, go 'down; degrade, make to descend to a lower grade, step, or station ; despise, literally, look down upon.

Dis, de, like ex, e, ab, se, are directly oppo- site to ad, con, ob, in. The last may be termed connectives: the first disconnectives. As nega- tives, dis, de, un, are exactly equivalent : dis- cover, uncover (the first is now used only meta- phorically) ; dethrone, unthrone ; demoralise, to render immoral, &c.

Mains, mul, ill, brrd, contracted into mcs, me, Tt., mis: malecontent, mal-content, Fr. ; malfor- mation ; misuse, misadventure, &c. Mi'suser, mˆsaventure, Fr., i. e. not well content, bad for mation, to use ill, a bad adventure : thus, mis- calculate, misadvise, mistake, &c.

The following are Latin prefixes or preposi- tions : ud, corrupted into adit, I dii, now to, and into at; and contracted into a in It. Fr. Sp. and Eng. : as, abed, asleep, ashore, aground, &c.; Vol X.

i. e. in bed, in sleep, on shore, on ground, See In all such expressions as, to go a begging, a fishing, a hunting, &c., a is ad contracted; and the meanmg is, to go to begging, to fishing, &c. Ad and its contraction a, and its diversified forms at, to, have precisely the same meaning.

The last consonant of the prefix is usually changed into the first consonant of the word with which it is joined ; as, adnuncio, annuncio, to announce; assulto, to assault, i. e. leap upon, to attack.

The illiterate classes of the English, particu- larly cockneys, are guilty of using a, i. e. ad, most unreasonably : as, I was a saying, he was a hearing, he is a going.

Circum, -in a circle, round, about.

Circumnavigate, to navigate round, or sail round ; circumambulate, to amble, or walk round, &c.

Inter, i. e. in and ter an adjective affix, within, between, among; interline, to write be- tween lines ; interlope, to leap between, or among; interregnum, interreign, the time be- tween the reign of one king and that of another.

Intro, in or into: introduce (duco, lead), to lead, or bring in, &c.

Intra, within.

Internus, Internalis, internal.

Interior.

Introeo, corrupted, through the Fr., into enter, whence entry, entrance, &c.

Con, with, to : Concurro, concur, run together, unite; confront, to place front to front; con- fluent, flowing together; commingle, to mingle together.

Contra, corrupted into counter ; facing, oppo- site, against : contradict (dico, speak), to speak against, or deny ; counteract, to act in opposi- tion to ; countermand, to order the contrary of what was ordered before, &c.

Contrarius, contrary ; contrarietas, contra- riety.

Ob (epi),y}L'()On, to, before, for. Sec; oblige, oblige .(Ligo, bind), bind to; occur (curro), run to, meet, happen.

Trans, contracted into tra (It.), and corrupted into through (and tris, Fr.), thorough (durch, Ger.): it answers to through, over, beyond : transgress, trespass, to puss over ; ti'unsatlantic, beyond the Atlantic ; translucid, shining through, clear. Tres is employed by the French as we employ very, exceedingly.

Vltra (corrupted into outre, Fr.), beyond, above, high, 8cc.; ultra-royalist, one who has very high notions of royalty, a high tory.

Ulterior, further.

Sine, without, (i. e. sit ne, be not), contracted into se, is strictly a separative or disconnective ; segregate, to separate from the flock ; seligo, selectum, select, to choose out of. This prefix has much the same use as de, dis, di, and un, in.

J{e, again, back : re-enact, en.ict again ; re- state, state again ; rebound, bound back.

In Dutch re is corrupted into her; as, her- plunt, replant ; hcrmaak, remake.

It is unnecessary to explain those words sometimes employed as prefixes, which have a separate existence in the language : such as, with, down, &,c. There is but one Anglo prefix

that appears to require notice, viz. be : as in be- friend, bespeak, belie, &c. This prefix is pos- sibly the verb be; but we rather think it is the preposition 6y (bei/ Ger.), i. e. abu, Goth., i. e. ab.

In some cases this prefix gives a particular meaning to a verb: as, belie, bespew, &c. Some nouns are formed into verbs, in connexion with it, which do not exist as verbs in a simple or separate state — as, befriend, behead, &c. ; but frequently it imparts no meaning : thus, be- calm, to calm; becloud, to cloud, &c.

Arch, i. e. arch-os, chief, is employed as a prefix : arch-priest, a chief-priest ; archbishop, a chief bishop; arch-rogue, a chief or great rogue, &c. ; arch-lieretic, a chief or remarkable heretic.

Sfxt. II. — Of Affixes or Postfixes, i. e.

WORDS ADDED TO THE END OF OTHER WORDS.

Affixes of adjectives may be arranged under the following heads : —

1. Simple adjectives or connectives: an, en, in, on, &c. ; ad, ed, id, &c. ; ate, ite, &c.; a!, el, ile, &c. ; ar, er, ary, &c. ; ic, ick, ig, contracted into y and corrupted into ish (i$ch, Ger. ; esco, It. ; esquc, Fr.) : huma?< from humo, now homo ; golde«, frigid, partia/, singular, customary, do- mestec, | frostfg, now frosty, Spanish, Waspish, picturesque.

All these aflixes, which the modern have in common with the learned languages, might, as already intimated, be called possessive or geni- tive : thus, conditio hominis, humana conditio, man's condition, the condition of man, the human condition, are all equivalent expres- sions.

Observe, such affixes are frequently redun- dant, i. e. two or more are put where one is sufficient: as pliilosophira/ ; etymological; eastern ; western, &c. &c., instead of philo- sophic, &cc.

Concerning the etymology of these affixes, it is, perhaps, idle to off"er a conjecture, as they are mere fragments of words ; id, kc, seems a contraction of eidos (used adjectively), ic or ik, &c., of eikos, like (which word is also employed as an adjective affix) ; and, perhaps, all the rest have a similar derivation ; but we cannot be confident respecting them.

2. Separative or negative affixes of adjectives. We have one of this description, which answers exactly to the negative prefix in or un, viz. less, i- e. I los, i. e. lost, deprived of, without: as, whless, friendless, careless ; without wit, without a friend, without care : the Ger. is los : as gott/os, godless ; grund/os, groundless. Our present form of this affix seems to have origi- nated (like many other modern spellings) in etymologic error ; by supposing it to be the ad- jective less, or comparative of little.

3. Diminutive affixes of adjectives. We have one of this description, viz. isli : as, sweetish, a little sweet : saltish, a little salt : ish, is a cor- ruption of the Greek diminutive isk ; which is io Italian, uccio and uzzo, and in Span. ico.

4. Angmentive adjective affixes : these are X sam, I sum, sajnc, Jul, ous.

I Sam, X sum, now some, is the Latin super- lative affix, ssim-us or sum-us, i. e. summ-us, highest, greatest, most, much, very : troublesowe, lightso/rte, causing much trouble, giving much light. In Ger. this affix is sam ; our present spelling originated in the etymologic error of supposing it to be soine ; which still exists as a separate word, but which has an opposite meaning.

Ful, i. e. full, requires no explanation here. Ous, is the French form of os (like our for or), a Latin augmentive affix : calamitos-us, cula- initous, having or causing much calamity.

These three affixes are equivalent though not always interchangeable ; for it is not customary to put the one for the other at choice. We say troublesome; but troubleful, troublous, seem awkward. The old writers, indeed, took more liberty in this way.

The Latm affix os, is manifestly the same as ox, ax, and seems to be a fragment of maxim-us, greatest, most, much, very.

There are some adjective affixes that cannot be ranged under any of the above designations : as able (i. e. habilis, habile — see habeo), which might be termed potential passive: teacha/)/e, moveable, mutable, mutabije, -Sec. ; i. e. that may be taught, that may be moved. But there are instances in which it is employed as active rather than passive : forcible, conversable, &c., i. e. forceful, that can converse. This use of the affix is not frequent; and, perhaps, it ought to be discontinued.

It is almost unnecessary to mention that our adjective able is the same word ; only it is hardly ever applied as passive : we say, able to see, but not able to be seen.

Alike, like, often contracted into ly (lich, Ger. and gleich, i. e. ge-leich, lyk, Uut.), i. e. aligki- os, perhaps a corruption of eikel-os, aequal-is, equal : gentlemanlike or gentlemanly, friendlike, or friendly, &c.; i.e. like a gentleman, as a friend: this is generally what is termed an adverbial termination : as, boldly, in a bold manner, proudly, in a proud manner, &c.

Home Tooke derives like from the compound gelyk or gleich ; but he does not attempt to in- form us what gleich is derived from.

We may notice the affixes ward and wise here : as in homewai'd, backward, sideivise, long- wise, &c., in the direction of home, in the di- rection of the back, in the direction of the side, in the long direction or manner : ward is a cor- ruption of versus. See ward under vert-o ; wise is for X wayis, X way's, genitive of vvay, i. e. via.

Affixes of nouns are, head also hood, dom, ship, ness, th, ty, tiide, ary, ry, nieiit, men, mony, age, ation, etion, ition, otion, ution and usion, esion, &c., ant, ent, or, er, ist, ism, ling, Un.

As the terminations of words are exceedingly liable to be corrupted, it is hardly possible to arrive at a satisfactory opinion concerning the derivation of many affixes : those of the nouns are particularly difficult.

The affix head, hood {heid, Dut., heit, Ger.), would seem at first sight the noun head : as if X manhead or manhood were head man or great man ; but there is so little obvious connexion between the meaning suggested by this word.

whether taken literally or figuratively, and the use of hood as an affix in many applications, that we have conjectured the last to be either a corruption of had, or, what seems more pro- bable, of tudo. Another form of the same affix in German is od, and in Welsh there is edd and dod. But, whatever be the derivation of hood, it means exactly the same as tudo, ty, &c., i. e. state, condition : widowhood is being a widow ; falsehood is being false, or that which is false.

Dom (thum, Ger.) seems evidently a contrac- tion of domain or dominion :

kingdom, popedom, princedom, dukedom, that which is subject to a king, &c. In such instances the affix is strictly proper ; but, like other words, it was extended to more vacate applications : as wisdom, freedom, &c., i. e. being wise, free ; or the state of being wise, free.

Ship, schaft, Ger., has also occasioned much trouble. We have conjectured it might, as also fiuft, Ger., be a corruption of % hafd, kaupt, Ger., i.e. caput; then we have supposed it might be have ; again, we have thought it might be a corruption oi super ; which, so far as mean- ing is concerned, is the most likely derivation. But, whatever be the derivation, it evidently serves the same purpose as hood, dom, tas, ty, tude, &c. : as lordship, the domain of a lord, the power, authority, dignity, 8cc., of a lord ; worship, \ worthship, i. e. being worthy, or con- sidered worthy, of honor ; whence, as a verb to worship, i. e. to honor; worshipful, honorable, or considered full of worth, very worthy ; court- ship is the business, state, or process of courting.

The preceding affixes are not much employed, and may be regarded as antique terminations; for they are hardly affixed at pleasure in the present time.*

The affix of most general application is ness, nisn, Ger. ; which, as well as ezza, It., and esse, Yt., seems a corruption of essentia, essence. Almost any adjective can be converted into r noun by this affix: round, roundness, ritondo, ritoiidezza, It. ; feeble, feebleness, foible, foi- blesse, Fr. ; noble, nobleness, noblesse, Fr. So also in Ger. finster, dark, finsterniss, darkness.*

Home Tooke seems to have fancied that tlie above termination was the same as ness in the names of places on the sea coast : as Sheerness, Foulness, &c.; but the latter is manifestly nose or nasus ; and it would be difficult to discover any connexion between nose and the affix in question.

The affix th in connexion with nouns is con- sidered by Mr. Tooke the same as the verbal affix eth : we have by turns supposed it might be that, or, perhaps, (he, what is called definite article, or a corruption of ti/. The last is rather our present opinion. But whatever be its deri- vation, its use is the very same as ty, ness, &c. : as, wide, width, wideness ; long, J length, length, longness ; (rue, truth, the same as verity, i. e. veriUis from verus.

The affix ti/, like te, Fr., ta, It., dad, Sp., is a corruption of the Latin affix tas, tat, and Greek tes ; as bounty, bonte, Fr., bonta. It., bondad, Sp., bonitas from bonus, good ; vanity, vanite, Fr., va- nita, It., vanidad, Sp., vanitas from vanus, vain.

There is the same use of tudc, i. e. tudo, Lat. and in the ablative tudine ;

which is adopted by the Italian: magnitude, rnap-nitudine. It., magaitudo, from raagnus, great.

The termination ary, contracted into ry, is properly the Latin adjective affix aris or anas : as actuary, apothecary, &c., i. e. actuarius, from actus; so cavalry, formed on f cavallus, cabal- lus, a horse, a war-horse; rivalry, formed on rival ; pleasantry, on pleasant, &c.

The terminations mcnt, men, viony, are evi- dently the same affix : fragment-urn, a broken part, from | frag-o, to break ; document-um, that which shows, from doc-eo, to show; com- mandment what is commanded, from command; acumen, sharpness, or that which has a point, from acu-o, to point, make sharp; patrimonium, patrimony, what descends from a father (pater), an inheritance, Sec.

This affix is frequently an adverbial termina- tion in Italian, French, and Spanish ; impor- tunamente. It. and Sp., importunement, Fr., importunately, &c.

The termination age, seems in some instances the augmentive accio. It., i. e. ai, Lat. ; as vil- lagio, It., village, the augmentive form of villa ; viaggio. It., voyage of via, a way, a journev; personaggio. It., personage of persona, person ˆ foliage, feuillage, Fr., of feuille, Fr., or foglia, It., folium, a leaf.

In the modern Italian, accio has become a contemptuous augmentive ; but, as it remains in the form of aggio, it is either neutrologistic or eulogistic.

In such instances as the following age is simply a connective or possessive affix ; and seems to be a corruption of ac, ic, ag, or ig, already noticed, under simple adjectives : per- sono-ˆe, vicaraoe, poundage, tonnage, &c. In all such cases, age, as explained under simple connective affixes, merely means of, connected with, belonging to : parsonage house is the house of a parson ; parsonage benefice is the benefice of a parson ; poundage custom, charge, rate. Sec, is equivalent to per pound ; patronage is the power or agency of a patron.

A numerous class of verbal nouns, derived from the Latin, terminate in alien, acion, asion, etion, esion, ition, icion, ision, otion, osion, vtion, usion. In Italian these terminations are atione, acione, &c., being the form of what is called the ablative singular of the Latin. When the modern Latin, i. e. the Italian, discontinued the ancient cases, it retained tliis as the only sin- gular termination, for no other reason, perhaps, than its agreeable sound. V\itli us, the French, and the Spaniards, the final e is dropped : thus, commend, commendation, commendazione. It. ; complete, completion ; compose, composition, composicion, Sp., composizione. It. ; confuse,

confusion, confusione. It.

With few exceptions, the French and the English are the same : the Italian diff"ers from them in having the final e and 2, instead of t : Spanish has generally c instead of t.

*The last-mentioned nouns are formed on what is called the supine. Thus, factum, to make o > * do ; factio, ablative factione, a making or duing « occasum, to fall or happen, oecasio, ablaii.e*

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occasione, a happening; intrusum, to intrude, intrusio, ablative intrusione, an intruding or in- trusion.

It is evident that all such words are of the same nature as our verbal nouns, terminating in ing, i. e. participles put substantively ; auditio is the same as hearing; visio, visione, vision, seeing. There can in general be no necessity, therefore, for explanation to such words, when the verbs have been explained from which they . are derived.

As these verbal nouns follow the spelling of the supine or participle, they occasion some or- thographic embarrassment to mere English scho- lars ; for whose sake it would have been well, per- haps, if one consonant had been adhered to in naturalising such words. There is no difficulty with those verbs and adjectives which we have from the Latin supine or participle : as, commu- nicate, communication ; promote, promotion ; profuse, profusion ; pollute, pollution ; contrite, contrition ; profess, profession. Of those verbs which have d, the nouns have s ; deride, derision ; protrude, protrusion : but those which assume another syllable terminate in ation ; as commen 1, commendation, from commendatum.

Nouns terminating in ant and cnt are Latin participles: as, servant from servo; patent, from pateo, &c. In these, and in nouns generally adopted entire from the Latin, we, as well as our neighbours, have what is in that language called the ablative case.

The termination or changed into er, ar, and in French e.ur, is generally applied to indicate an agent : Creator, he who creates ; lover, one that loves; liar, one that lies ; beggar, one that begs; amator, amateur, Fr. a lover. In Latin, or, like OS, is merely a masculine sign or affix : as amor, love, as well as amator, lover, honor or honos. Tlie French have changed or

into eur, when an agent is indicated, and into our when agency, state, quality, &c., are indicated; and Johnson has followed in this, as in several other instances, the French mode of spelling; as, labour, ho- nour, favour, instead of labor, honor, favor.

The termination ist, adopted from Greek, an- swers exactly to er, i. e. or, from the Latin ; as, reformer or reformist ; etymologer or etymologist ; One of tliese seems more fit and graceful in some connexions than the other : er, having been longer and more generally used, does better in connexion with vernacular words : reformer is better than reformist ; but etymologist seems bet- ter than etpnologer ; geographer again seems more graceful than geographist. Much in all such cases depends on custom ; which ' has mighty sway over our mental and moral habi- tudes.

The adjective affix an, or ian, is employed in connexion with many nouns ending in ic, to form a new noun indicating an agent : as, from music, musician; logic, logician ;. optics, optician; me- taphysics, metaphysician.

The Latin termination ura, in French and English ure, frequently occurs : as creature from create; picture from pictum, pingo to paint.

The Latin termination tia is changed into ice, re, cy: a« mal-us, malitia, malice: frequent,

frequent, frequentia, frequency ; praevalentia, prevalence.

The Greek termination ism, is frequently ap- pended to words which are not of Greek extrac- tion : as, Calvinism, the doctrinal system of Calvin ; Gallicism, a Gallic or French idiom ; vulgarism, a vulgar expression ; truism, an obvi- ous or a trite, true remark.

Many verbal nouns (nouns formed from verbs) terminate iuence, i.e. entia, Lat. ; Z5, providence, contracted into prudence, foreseeing, providing, taking care of; credence, believing; precedence, preceding, &c. All such words answer exactly to our own participles employed as nouns ; as, hearing, seeing, smelling.

We have noticed age as properly an augmen- tive in such words ˆs village, personage, &c. : on {one. It.), oon, is also an augmentive : as, ma- tron, patron, matrona, patronus ; formed on ma- ter, pater ; saloon, salon, Fr., salone. It., a great hall, from sala. It., salle, Fr., corruption of aula, a hall. This Latin affix, which is eulogistic as well as augmentive, seems to be a contraction of bonus : thus, pater-bonus ; mater-bona.

We, like the French, have not any vernacular augmentive affix of nouns : such words as village, salon, &c., were borrowed in the compound state

from the Italians.

Most of the diminutive affixes of nouns are now obsolete, though they yet remain as insepa- rable terminations in many words.

The Latin diminutive affix is uncul contracted into cul, ull, ul, ell, el, &c., and in Italian ello, m Spanish uelo, illo : as particula, particle (from pars, part-is), SiSmaWpurt ; morsiuncula, contrac- ted mto morsel (from raorsus, a bite), a little bite, a snap; bcstiola, corrupted into beetle, a little beast or creature ; sedicula, contracted into sedile (from sedes a seat), corrupted into saddle, settle, stool. Thus a great number of words terminating in / or ˆ are properly diminutives : many of them have been adopted directly from the Latin ; many have been received through the French or Italian.

The above affix, uncul, seems a contraction of uncialis, of an inch, of the magnitude of an inch; which is equivalent to small, little.

The Italian has two other diminutives, viz. etto {ette, Yr.,et, Eng., ito, Sp.) and ino ; which are found in many words : as pocket, diminutive of poke, pouch, poche, Fr. ; ballot, ballotte, Fr., pallotta. It., of ball, balle, Yr., palla, It.; bullet, boulet, Fr., of boule, Fr., another form of balle : kitten, gattino, It., diminutive of cat, gaito, It., French.

The French formerly employed the diminutives at pleasure like the Italians and Spaniards, but they have long disused them ; and this of course is a subject of boasting with Voltaire, in reply to the Italian critics who accused the French of having no diminutives. We had them formerly, says Voltaire ; but they possessed not sufficient dignity for the noble language ˆf the Bourdaloues and Massillons ! !

It will, perhaps, flatter the French to remark that we probably discontinued the use of dimi- nutives, because they set us the example.

Most of the diminutive terminations which we have traceable to the Italian, were derived through tlie French,

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We bave noticed ish, i. e. uccio, It., ico, Sp., tsk, Greek, under adjective affixes . as, in sweet- ish, brackish, saltish, &c. We had it formerly ock, uck (as it still exists in Scotland ; as, bea- stock, contracted into beastij, a little beast), as in hillock, a little hill.

As ish, ock, ico, Sp., uccio, It., &c., seem to be isk, Gr. ; so, perhaps, et, etto, It., is the Greek adjective etton or hettou, a contraction of elat- ion also elasson ; whence, seemmgly, our I lyt, little and less, as also lad, lass.

We have also as diminutive affixes kin, chen, Ger., and lin, ling, kin, Ger. ; as, manikin mdnnchen and manlein, Ger., little man ; lambkin, lammchen, Ger., little lamb; goslin, ganschen, Ger., a little goose ; lordling, contracted into lord- ing, lordchen, Ger., a little or petty lord. Of all the diminutives of nouns, ling is the only one which is not quite obsolete ; and even this is hardly applied ad libitum; and having become like the Italian uccio, uzzo,ecciuolo, exceedingly contemp- tuous, we cannot regret its departure.

Both kin or chen and lin, ling, or lein, are evi- dently contractions of klein, Ger., little.

Affixes of verbs. — Here, to avoid repetition, we do not intend to notice those terminations already treated of, such as est, eth, es, s, ing, ed, and the irregularities of what is called the sub- stantive verb. Tlie affixes now in view are those immoveable terminations which we have in many verbs, viz. en, er, ize, fy, ish : en is the obsolete sign of what is commonly called the infinitive mood, and is manifestly the same as the Greek ein: as philian, + loven, to love; having been once connected with many verbs it was consi- dered a fixture, and therefore remains, though it adds no meaning; as, slacken, to slack, blacken, to black, &c. Here, as in other instances, cus- tom has the effect of making us fancy that en gives meaning or force or dignity ; but if w-e had been more used to slack, black, &c., than to slacken, blacken, the case would have been re- versed. HoweTer, as en causes no inconvenience, it may remain; especially as some words (after we have been so long used to it) would seem ex- ceedingly awkward or unmeaning without it : as enlivin, brighten, frighten.

The verbal termination ize is adopted from Greek : as, baptize, to immerse ; a new verb formed on bapto, to dip or bathe ; liberalize, to render liberal ; temporize, to suit the times {tem- pora): brutalize, to render brutal; demoralize, to render immoral ; authorize, to give authority to. Sec.

The verbal termination er, is (like en in Saxon and German, and ein in Greek) the French, Ita- lian, Spanish and Latin affix of what is com- monly called the infinitive mood : as, batuo, beat, batuere, corrupted into battcre. It., i>uttre, Fr., butir, Sp., batter; sputo, to spit, snout, sputare, sputter, corrupted into spurt, spirt. We have many verbs fonned upon nouns by assuming this affix : as, pester, from pest ; jlutter (and Fr.), from fla- tus, &c.

Where we have duplicates of the same verb as beat (batu-o) and batter

(batuere), the latter form is generally augmeniive : batter, is to beat much or forcibly ; sputter, is to spit much or forcil

The verbal termination ish, is a corrnption of is, the first person present indicative of the same verbs in French : as, flourish, banish, garnish (corrupted into furnish), &c., in Yxer\c\i,.fieuris, bannis, gar- 7iis, &c. The s is now silent in French ; but it was not silent when such words were adopted into the English language ; and, as oui was anci- ently ouis, we have it corrupted into yes.

A verbal affix of very general use is_^, i. e. fio, or rather facio, to make : as, rectify, to make rect-um or right ; beautify, to make beautiful ; brutify, to make a brute, i. e. of a human being. In this, as in so many other cases, there is a less proper application of^^, which tends to produce equivocalness : as, verify, justify, &c., which do not mean to make true, to make just ; but to prove true, to prove just,

PART IV.

RATIONAL GRAMMAR OF THE ENGLISH LANGUAGE.

This is presented chiefly for the sake of contrast to arbitrary grammar ; and, after what has been already written, it is hardly necessary to show how widely different the one is from the other. It must be remarked, that a rational kind of gram- mar of the English language, is a desideratum ; as the present grammatic rules are, in many re- spects, absurd, being calculated to render it not more but less fit for its professed purpose. Hap- pily, though the principle of utility has been little regarded, and though there has been much blind legislation to establish a despotic system of syntactic proprietv, our language is yet one of the simplest and freest in the world ; and, with a very moderate reform, might be wholly disen- cumbered from all gram.matic perplexity and difficulty. And we are surely as competent to simplify and improve our grammar, as to sim- plify and improve our machinery : and we have only to lay aside one of the double forms of the pronouns, or to agree that either form shall be proper in any position ; to substitute be as a re- gular verb for that jumble of anomaly now em- ployed ; to throw away the useless terminations est, eth, es, or s (appended to verbs in connexion with thou and he, k.c.), and to disallow all ano- malies of verbs, nouns, and adjectives.

The only imaginable objection to such gram- matic improvement is, that it would appear stranse : but so is every thing new, however ex- cellent, till we become used to it. Every new fashion seems odd, if not ridiculous, when first introduced ; but it soon appears more excellent than that which it supersedes. We have only to set up an enlightened and useful custom in the

room of the old, inconvenient grammatic usage, and it will immediately begin to acquire the venerable qualities of the approved, established, and ancient form of speech ; and the oldest in- stitutions and customs were once new.

If it be asked. What is the amount of utility in the proposed alteration '. That is considera- ble in every view of the question. It is import- ant to have a sens.ble instead of a senseless kind of grammar ; .one for which satisfactory reasons can be assisned to youths and foreigners. It is of considerable utility to h; ve an easy in«

stead of a difficult kind of syntactic propriety ; for, with the former, the writer or speaker is en- abled to direct his whole consideration to the justness of his thoughts and the meaning of his words; but a complicated syntax distracts his attention ; and, having to accomplish the two operations of good sense and good grammar at one and the same moment, the consequence fre- quently is, that both are badly performed. We sometimes find good sense expressed in bad grammar ; and we often find good grammar gar- nishing bad sense ; nay, even bad composition is often dressed up in good grammar ; and com- position esseritially good often appears in faulty grammar.

We are willing to subscribe to the motto assumed by Lindley Murray, from the lectures of Dr. Blair : ' They who are learning to com- pose and arrange their sentences with accuracy and order, are learning at the same time to think with accuracy and order ; ' as also to another sentence of the same rhetorician : ' The study of arranging and expressing our thoughts with pro- priety, teaches to think as well as to speak accu- rately.' But how are we to understand accuracy and propriety in all such propositions ? If they mean what is commonly called grammatic pro- priety and accuracy, such as saying, thou lovest, instead of thou love ; we ivere, instead of we was, &c. ; there is just as little connexion between such etiquette and learning to think accurately, or to express thought accurately, as there is be- tween learnnig to bow, and learning to reason. Logical accuracy of expression is of the highest importance ; and this is the proper object of rational grammar : but this is so far from being identical with arbitrary grammar, that the one is often at variance with the other..

The reader is now sufficiently aware of the true character of arbitrary grammar. It was not dictated by reason, and therefore cannot be referred to any rational principles. But though we wish to see it discarded by a

general disuse of all anomalies and unmeaning terminations, and changes of verbs and pronouns, yet such reform must be effected (if ever effected) by the influential members of the literary world. All others must be content with established usas;e. They must endeavour to speak and write grammatically, merely to avoid the imputation of ig- norance and illiterateness.

For the use of those who must prudently com- ply with the prescribed etiquette, or established manner, we shall endeavour to present it in as intelligible a form, and in as small a compass, as possible.

Sect. I. — The Customary Grammar of Pro- nouns.

The words called pronouns are, I, me, thou? thee, he, him, she, her, it, we, us, you or ye, they, them, who, whom, which, this, these, that, those.

There can be no mistake respecting the mean- ing of these words, with any persons who have heard them pronounced a few times in the com- mon course of speech : I is perceived to indi- cite the same person as ■ine, thou as thee, he as him, 8cc ; but as these double forms of the same

words had necessarily, in Latin, different uses, the English grammatists thought a similar di- versity proper in tlie English language ; and they have succeeded in making a useless and embarrassing distinction an essential part of grammar. Grammatic propriety, as to the pro- nouns, may be included in the following parti- culars : —

These we will range in two classes —

1 . I, thou, he, she, who, we, they.

2. Me, thee, him, her, whom, us, them

[Ye or you, it, which, that, this, &c., are not included in the above enumeration; because, fortunately, they have but one fprm.]

Those of the first class are called by gramma- rians nominatives, or are said to be in the nomi- native case : those in the second class are called objectives, or are said to be in the objective case ; but we shall, for the sake of intelligibleness, call the one (I, thou, he, she, &c.) the first form ; and the other (me, thee, him, &c.) the second form of the pronoun. There is a peculiar manner of employing the pronouns, for which it is not easy to give any rule perfectly accurate. The nearest approach to accuracy seems this : when any one of the words, commonly called pronouns, is em- ployed to indicate an agent, it is put in the first form ; and when it is employed to indicate an object of some action, it is put in the second form. Thus: 1 love thee; thou lovest me; he loves her; she loves him; they love us; we love them

; the man whom she loves is the per- son who loves her. These are all examples of proper grammar, and when inverted they present instances of improper grammar : Me love thou ; thee lovest I ; him loves she ; her loves he ; them love me ; us love they ; the man who her loves is the person whovi loves she.

Another approximation to accuracy, as a ge- neral rule, might be put thus : — When the pro- noun stands before the verb it is put in the first form ; when it stands after the verb it is put in the second form ; as, I see them, they see us, &c. This is the usual, but not the invariable, order of composition in the English language, and there- fore the above would not hold as a universal rule ; for, in such instances as the following, the second form of the pronounˆ or what is called the objective case, stands before the verb : whom seek ye? he whom ye seek. Herfe, in both cases, ichom is the object of the verb seek, though it stands before it. Nor is the other im- perfect rule less objectionable, viz. when the pronoun denotes an agent, it is in the first form or nominative case, and when it denotes the ob- ject of an action, it is in the second form or objective case ; for, by employing the verb in what is called the passive, instead of the active voice, the grammatic relation of agent and object is wholly changed, as is evident in the following examples : — ˆThou art loved by me ; I am loved by thee ; she is loved by him : not thee art loved by I, &c.

It is impossible to give accurate and adequate rules concerning that which can never be re- duced to rational principles ; for ‘ what reason did net dicta-te, reason can never explain.’

Perhaps the most unobjectionable rule that can be given is the following : — A pronoun is

always in the first form or nominative case, ex- cept first, when it is the object of a verb active or transitive : as, you love him, whom I hate ; he dreads us, but despises them ; we, as well as they, disregard him, but respect her, &c. In these instances the pronouns him, ichom, them, us, are, in the language of grammarians, go- verned by the active verbs {love, hate, dreads, &c.), in the accusative or objective case. Every reader, however little acquainted with the subject before, must now, it is presumed, understand what is meant by the position, Every pronoun is ir the first form or nominative case, except first, when the object of a verb active. But there is a second exception, vir. when a pronoun is preceded by any of those words called pre- positions ; or (to adopt the common grammatic

phraseology), when the pronoun is governed by a preposition.

The words called prepositions are, of, to, from, over, through, above, for, by, in, below, beneath, under, into, at, with, before, after, behind, within, ■without, up, beyond, about, near, down, on, upon, off, against, among, between, &c.

When these words come immediately before any pronoun, it is to be put in the second form, called objective case, or accusative case : as, I went with them, from him to her, Sec, &c. : not, I went with they, from he to she, &c.

The most usual grammatical improprieties, as to the pronouns, consist in putting 7>te for J, him for he, her for she, them for thei/, &c., in the following manner : Who is there ? ille, instead of I. May William and me go to London ? It should be William and I. Them and us went out together ; they and we went out together. Him and her are well matched ; he and she are well matched.

When he or she is applied to objects devoid of sex, respect must be paid to established usage. The sun must be spoken of as he, the moon as she, &c. It is absurd to attempt to assign any rational principle for this custom, which varies among different nations ; for, with the Anglo- Saxons, the sun was spoken of as she and the moon as he. We, in this matter, follow the Latins, who followed the Greeks, who probably followed the Egyptians, who perhaps imitated the Babylonians ; for much of the general agree- ment, or common consent, of nations and lan- guages, is referrible, not to reason, but to custom founded on imitation.

Illiterate persons very frequently employ them instead of these or those : thus, them men were very noisy ; it should be those men were very noisy: hand me them books, — those books, or these books.

There is often a departure from propriety in changing from one person and number to ano- ther : thus, every man knows t/ieir own affairs best; it ought to be, every man knows his own affairs best. Can any one be certain, at their first entrance on life, that thei/ shall be always successful ; it should be his and he.

The grammatists have succeeded in establish- ing a distinction between who and which : the former is to be employed only when speaking of persons : as, the man who came, the woman who came, the men irho are, the buds which are, the

trees which grow,&c. ; not the mamvhich was, &c., the birds who are, Sec. Fortunately that is equally free from change to denote nominative and accusative, and from any particular manner of application. We can say,

the man that was here, the bird that sings, Sec.

Some of the grammatists have endeavoured to interdict the use of ichose (i. e. properly who's), except in connexion with a person, like who and whom: but they have not succeeded. We can say, the bird ivhose leg was hurt, as well as ths man whose leg was hurt.

Persons are apt, without care, to blunder in applying tfiis and these, that and those : as this twelvemonth, instead of these twelvemonths : those or these kind of people, instead of that or this kind of people.

There is hardly any difference between the application of this with its plural these, and that with its plural those. If two objects, or sets of ob- jects, be referred to, this and these are applied to the nearer, in time, place, or reference ; that and those are applied to the more distant : thus, this is a more irksome part of the author's task than that which led him to treat of more intellectual topics : these are the petty, unmeaning, and useless distinc- tions of arbitrary grammar now under considera- tion; but those enquiries, to which, in a former part of this work, he directed the attention of the reader, are of a loftier character.

Sect. II. — The customary Grammar of Verbs. We must exhibit the combinations, or what are called the conjugations of verbs, beginning with that jumble of anomalous incoherence, or of dissimilar parts, commonly designated the substantive or neuter verb to be.

I am.

We

-1

Thou art.

Ye or

you

*He -^*

They

>are.

She f

These

It Vis.

Men

John i

Birds,

J

Man, }

&c.

&c.

The above is denom

mated the present tense.

indicative mood.

I ^

We

^

He f

Ye or

you {

She > was.

They

1

;-were.

*^' *

These

Man, J

Men,

&c.

Birds,

:

Thou wast.

&c.

The above is called, by some, the imperfect tense; by others, the past tense.

The other parts of what is called the substan- tive verb, are, be, being, been ; as, to be ; I shall be ; I being ; I have been.

It is hardly possible for any mistake to happen in these parts, except, perhaps, that children and foreigners would be naturally induced by analogy (unless prevented b}ˆ the force of custom) to say, I have beed, having beed, &c., instead of, I have been, having been.

We have noticed how simple the substantive verb would be, if rendered regular, by discard-

ing ah suca dissimila. pans as, am, is, are, was, were: thus, I be, &c., I beed, &c., I have beed, being, having beed. But established usage pro- hibits such reasonable simplicity and utility.

When directly preceded by let, may, might, can, could, will, ivould, shall, should, be is un- changed ; thus, let me be, let him be ; I may be, he may be ; I might be, he might be ; I can be, I could be ; I will, shall,, would, or should he, &c.

The grammatists have conferred on such com- binations a number of high-sounding, but insig- nificant or absurd designations ; as, imperative mood, potential mood, &c. &c.

When the substantive verb is immediately preceded by if {I gif, i. e. give), though, suppose, grant, and other similar terms, which usually indicate uncertainty or contingency, established usage is so various as to set rules at defiance : thus,

If “) If I ^^> ^^ ^f I ^™ ‘> Though, > If thou be, or if thou art; &c. J If he be, or if he is, &c. If I was, or if I were ; If thou wast, or if thou wert; If he was, or if he were, &c. Present grammatic usage leans more to if I were than if I was, and to if he viere than if he was; but, concerning the distinction between indicative and subjunctive, grammatists are as much divided as custom : and according to the old doggrel couplet,

When doctors disagree. Disciples are free.

The following words, called auxiliary verbs, have no change of termination, except in con- nexion with thou : thus,

I may, thou mayest, he may, we may, you may, they may.

I might, thou mightest, he might, we might, &c.

I can, thou canst, he can, we can, &c.

I will, thou wilt, he will, we will, &c.

I shall, thou shalt, he shall, we shall, &c.

Wilt and shalt are contractions of xvillest, shallest ; as would, should, are of willed, shalled, &c.

In ail the combinations of may, can, &c. (with the exception of what is called the second per- son singular), there is as much grammatic sim- plicity as can be wished ; for there are no useless and embarrassing inflections or changes : thus,

I

He

We &c.

I

He

We You They &c.

may

can

shall

will

could

should

might

may

can

will

shall

could

would

should

^

be.

love.

The verb have, so much used in connexion with other verbs, is, owing to contraction, of a very irregular form : thus,

I have, thou hast (contraction of havest), he hath, or has, contraction of haveth, dr haves, we, ye or you, they, &c., have.

The above is commonly called the present tense.

TT i had (contraction of haved), thou

■y^g > hadsf; he had ; we, you, or they

&c. 3 ^^^-

The above is called, by some, the imperfect, by others, the past tense. There is another combination, or reduplication, of the same word, called pluperfect tense. I

We You They He She It, &c.

To have is called the infinitive mood ; having is called the present participle ; had is called, by some, the past participle ; by others, the perfect participle.

Do is also frequently employed in connexion with other verbs; and in what is called the past tense, J doed, is now contracted into did :

I do, thou dost, he doth, or does ; we, &c., do. I did, thou didst, he did, we did, &c. What is denominated a regular verb is com- bined with nouns and pronouns in the following manner :

i

}

have had: thou hast had.

hath, or has had; we, you or they have had.

■^

> train, or do train.

I

We

You or ye They These Men &c. Thou trainest, or dost train.

” }

trains, or does train.

J

She It

Man &c.

trained, or did train.

trained or did train.

This is commonly called present tense, indi» cative mood.

He f

She I &c. V We You They &c.

Thou trainedst, or didst train. This is commonly called either the imperfect or the past tense, indicative mood.

I have trained, &c. is called the perfect tense. I had trained, &c., is called the pluperfect tense.

I shall or will train, &c., is called the first fu- ture tense.

I shall or will have trained, Sec, is called th" second future tense.*

}

To train is called infinitive mood. Training IS called present participle.

Trained is called past participle, or passive participle. But these designations are as useless, for any practical purpose, as they are unmeaning or absurd.

By connecting the past participle of an active or transitive verb, with the substantive verb, what grammatists term the passive voice is formed : thus,

I am trained. Sec. I was trained, &c. I have been trained, Sec. I had been trained, &c. 1 will or shall be trained, &c. &c. &c. If' I am or be trained, See. I may be trained, &c. &c. &c.

It is wholly unnecessary to exhibit the verbs more fully. The reader will clearly perceive how the various combinations are formed.

All those verbs which do not admit of being combined with the substantive verb are called intransitive or neuter : such as, sit, stand, lie, sleep, &c. We can say, I am trained, loved, watched, &c. ; but we do not say, I am sat, stood, slept, &c.

One grammatic distinction of verbs, therefore, is into active and neuter, or transitive and in- transitive : the former, as already noticed, when acting upon the pronouns, put them in what is called the objective case : thus, I love him, not 1 love he ; he loves me, not he loves J.

A certain number of verbs are called irregular, because they do not assume ed, for what are called the past tense and perfect participle, like, I love, I loved, I have loved. Thus, according to custom, we must not say, I beginned, I have beginned ; but, I began, I have begun.

The following is a list of the irregular verbs: —

1. Those which admit of no change (as I put, I have put) : put, cost, beat (sometimes beaten is employed as the participle ; as, he is beaten), burst, cast, cut, hit, hurt, let, rid, set, shed, shut, split, sweat, read. ■

2. Such as have one anomalous termination : as, abide, abode; sell, sold (corruption of selled) ; beseech, besought ; bind, bound ; bleed, bled ; breed, bred; bring, brought; buy, bought; catch, cauijht; cling, clung; creep, crept; dig, dug; feed, fed ; feel, felt; fight, fought; find, found ; flee, fled ; fling, flung ; get, got ; gild, gilt (also regular); gird, girt (regular); grind, ground; have, had (contraction oihuved) ; hang, hung ; also hang- ed, or regular ; hear, heard (contraction oiheared) ; held, hold ; keep, kept (contraction oikeeped) ; lay, laid (contraction of layed) ; lead, led ; leave, left ; lend, lent ; lose, lost ; make, made ; meet, met ; pay, paid (contraction of payed); say, said (contraction ofsayed) ; seek, sought ; send, sent ; shoe, shod ; shoot, sliot ; shrink, shrunk ; sing, sung ; sink, sunk ; sit, sat; sleep, slept ; sling, slung; slink, slunk ; speed, sped ; spend, spent ; spill, spilt, also spilled ; spin, spun ; stand, stood ; stick, stuck; sting, stung; stink, stunk; string, strung; swing, swung- teach, taught; tell, told (coniraction of telled); think, thought ; weep, wept.

3. Those which have two or more anomalous terminations : as, I begin, I began, I have begun: begin, began, begun; know, knew, known ; rise, rose, risen ; arise, arose, arisen ; blow, blew, blown ; awake, awoke (also awaked), awaken ; Dear (to bring forth), bare, born ; bear f to carry),

bore, borne; begin, began, begun; bid, bade, also bad and bid, bidden, also bid ; break, broke, broken ; choose, chose, chosen ; cleave, clove or cleft, cloven or cleft ; come, came, come ; dare, durst, dared ; do, did, done ; draw, drew, drawn ; drive, drove, driven ; drink, drank, drunk ; eat, ate, eaten ; fall, fell, fallen ; fly, flew, flown ; for- sake, forsook, forsaken ; freeze, froze, frozen ; give, gave, given ; go, went, gone ; grow, grew, grown; knew, know, known; ring, rang, or rung ; run, ran, run ; see, saw, seen ; shake, shook, shaken; slay, slew, slain; slide, slid, slidden; smite, smote, smitten; speak, spoke, spoken ; spit, spat, spit or spitten ; spring, sprang, sprung ; steal, stole, stolen ; stride, strode or strid, stridden ; strive, strove, striven ; swear, swore, sworn ; swim, swam, swum ; take, took, taken; tear, tore, torn; throw, threw, thrown; tread, trod, trodden; wear, wore, worn; weave, wove, woven ; write, wrote, written.

The reader may compare these irregular verbs with the exhibition of them in a former part of the work, where it is proposed to render them regular.

Pronouns and nouns, when combined with verbs, are commonly

distinguished into number and person : thus,

I am, first person singular. Thou art, second person singular. He She

It \ is, third person singular.

Man &c.

*We are, first person plural. Ye or you are, second person plural. They -^*

Me ‘ t ^^^’ third person plural.

&c. J

Thou is obsolete, except in prayer and among the Quakers, and in jocular or contemptuous speech; for, instead of saying thou art, thou mayest, thou lovest, &c., when addressing one person, we say, you are, you may, you love. But in prayer to God we say, thou art, thou mayest, thou wast, thou lovest, &c.

Sect. III. — Directions Concerning the Sub- stantive Verb.

Ungrammatic people are apt to say, I be, thou be, he be, we be, you be, they be ; instead of, I am, thou art, he is, we are, you are, they are.

There is seldom any mistake made by persons who are at all accustomed to grammatic lan- guage except in the third person ; in which the greatest grammatic proficients are apt to blun- der, particularly in extemporaneous speaking, when their sentences are long and intricate; employing is for are and are for is, and teas for were, or were for was.

Grammatic propriety admits of this plain rule.

When one object is spoken of, is for the present, and 7vus for the past, must be employed : when two or more objects are spoken of, are foi the present, and uere for the past, must be era ployed. Thus,

Man is a ratioria.1 creature : he is the natural lord of the lower animals, which are commonly called irrational ; but he is mortal as well as they are, and some of them are longer lived than he is. Plato and Aristotle are two of the most ancient philosophers whose writings are extant ; but neither the one nor the other is to be com- pared with some modern philosophers.

Some persons blunder by using were instead of was: thus, I were at London yesterday, he were in the country last week, for, 1 was in Lon- don yesterday, he was in the country last week. But the most common grammatic error is in employing was instead of were : as, we was there, you was there, they was there, for we were, you were, they ivere.

The following are instances of grammatic in- accuracy : the improper words are put in Italics. Was we wrong? IVas you there? Was they here ? Was the ancients well acquainted with science? Was Plato and Aristotle truly great philosophers ? There is many authors in the present time. There are some kind of writings which is wholly destitute of merit when tried by the test of utility ; which are the true standard of excellence. The mechanism of clocks and watches were wholly unknown a few centuries ago. Folly and vice is often united. There icas TDore equivocators than one.

The substantive verb being of frequent recur- rence, tlie grammatic learner should practise much upon it to acquire a correct habit; keeping this obvious principle steadily in view as to the third person, viz.. When one object is spoken of, is or urns, not are ox were, must be used : when two or more objects are spoken of, are or were, not is or ivas, must be used ; i. e. when the nominative to the verb is singular, is and xcas must be era- ployed ; but when the nominative is plural, are and were must be employed.

The following are examples of false gram- mar : —

The smiles of counterfeit friendship is to be suspected; it should be, are to be suspected. The number of the inhabitants of Great Britain are greatly increased of late years; is greatly increased. Nothing but vain and foolish pur- suits are agreeable to some persons — is agreeable. There is many occasions in life in which silence and reserve is true wisdom ; it should be are. There are many an occasion in life in which si- lence or reserve are true wisdom ; it should be is ; because many an occasion is one entity or a sin- gular nominative ; as, also, silence or reserve ; for every disconnective word {neither, nor, either, or, &c.) has just the opposite effect of a connec- tive word, such as and. The business that re- lated to ecclesiastical meetings, matters, and persons, were to be ordered according to the king's direction, — was. The affairs belonging to the church, was to be ordered by the king, — were. Ill him was happily blended true dignity and af- fability, — %cere. In him were happily blended true dignity with affability, — was. The con- junction and connects two or more singular nouns or pronouns into a plural nominative; but with, besides, as well as, and such words, do not connect two or more singular nouns and

pronouns into a plural nominative. The sup- port of so many of his relations were a heavy tax upon his industry, — xcus. The support of his mother and the expense of his sister was a heavy tax upon his industry, — were. The support of his mother, with the expense of his sister, were a heavy tax on his industry, — teas. What is wisdom and virtue to the sons of folly ? Recon- ciliation was offered on terms as moderate as was consistent with a permanent union. Not one of all these sons of folly are happy. And the fame of his person and of his wonderful ac- tions were diffused abroad. The variety of the productions of genius, like those of art, are with- out limit. To live soberly, righteously, and piously, are required of all men : here, to live (not soberly, righteously, and piously) is the nominative to the verb. To be of a pure and humble mind, to exercise benevolence, to culti- vate piety, is the sure means of becoming peace- ful and happy. Here there are three distinct entities spoken of or enumerated in the nomina- tive to the verb, and, therefore, not is but are should be used.

Sect. IV. — Directions Concerking the

Words called Auxiliaries or Helping

Verbs.

These are, may, might, can, could, will, would, shall, should ; and, fortunately, they have no change of termination except that they assume St in connexion with thou : thus, I may, thou mayst, he may, &c. : will and shall, have, instead of ivillest, shuUest, wilt and shalt.

All, therefore, that the grammatic learner has to remember in using these words is to put st with tfiou:- thus, thou mayst train, thou mightst train, thou canst train, thou couldst train, thou ■wilt train, thou shalt train, thou shouldst train.

Do is frequently employed as an auxiliary, and changes thus : I do, thou doest or dost, he doeth, or doth or does, we, you, they, &c., do ; I did, thou didst, he did, we did, &c. ; I have done, thou hast done, &c.

Here all you have to remember, is to put est or st with thou, and eth or es with he, she, it, or any one object m the third person present: in the past tense did remains unchanged, except that st is added after thou.

Children and foreigners, following analogy, naturally say, I do, we do, &c. ; I doed, he doed, we doed, &c., I have doed, &c. ; instead of which they must learn to say and write, I do, thou dost, he doth or does, &c. ; we did, thou didst, &c. ; I have done, &c.

Have is also, with another verb, considered auxiliary, and is similarly

contracted : thus, I have, we have, you have, they have, thou hast, he hath or has ; I had, thou hadst, he had, we had, Sec.

Here, again, you have only to remember to say or write, thou hast, he hath ot has, thou hadst; in all the other combinations have and had un- dergo no change.

The termination eth or th is now almost obso- lete ; es or s being commonly used : thus, he trains, she loves, it rains; not he trainelh, .sli? loveth, it raineth.

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Sect. V. — Directions concerning Regu- lar Verbs.

These are, fortunately, very simple ; for they have no useless and troublesome changes or ter- minations, except est or st in connexion with thou, and eth, th, es, or s, in connexion with he, she, it, or any one object or singular nominative in the third person, and what is called present tense. The only mistake, therefore, which per- sons are apt to commit, who are at all accus- tomed to grammatic usage, is in not putting est in connexion with thou, and es, or s in connexion with he, she, it, or any singular noun, in the present tense. The second person singular, i. e. thou, is (as already intimated), never used except in prayer, and by the Quakers, and in jocular or contemptuous discourse. The chief attention, therefore, of the grammatic learner should be directed to the third person singular, present tense ; and he has only to keep this explicit rule steadily in view. When the nominative is singu- lar, i. e. when one object is connected with the word called a regular verb, es or s must be affixed ; but when the nominative is plural, i. e. when two or more objects are indicated, es or s must not be affixed. Thus,

John trains the pointers : John and James train the pointers : John or James trains the pointers. William possesses good sense, and loves instruction ; he diligently applies to useful learning ; and his brothers possess much atfection for hira : they, too, love instruction, and appli/ dihgently to learning.

The following are instances of grammatic im- propriety : the improper words (i. e. in having, or in not having esors affixed) are put in Italics.

All joy and tranquillity dwells there : much joy, or at least tranquillity, dwell there. Thought- less and intemperate pleasure usually deteriorate both mind and character : intemperate pleasures usually deteriorates both

mind and character. Ignorance and negligence has produced the effect: ignorance or negligence have produced the effect : ignorance with negligence produce bad consequences : negligence as well as ignor- ance produce bad consequences. Not only his fortune, but his reputation suffer by his miscon- duct. The king and his courtiers has passed by : the king with his courtiers have passed by : the king as well as his courtiers have passed by. Nothing delight me so much as the works of nature. Public and private happiness, national dignity, and all that is most interesting to human beings in this world, depends greatly on the cha- racter of the government.

In all the above instances, the attentive learner will perceive that the words put in Italics are wrong, because es or s is affixed when the nomi- native is plural, or omitted when the nominative is singular. There is some difficulty at first, in ascertaining the nominative, or promptly dis- covering whether it be plural or singular. To this point, therefore, the grammatic student should apply particular attention, until it be- comes quite familiar to him. The following remarks are intended for his assistance : —

1. All nouns and pronouns that are evidently plural, i. e. which indicate two or more objects, must not have c$ or s affixed to the verb with

which they are connected : as they, these, those, men, women, children, houses, &c. : thus, they love us — net they loves us. I'hese are the friends of the poor — not these is the friends of the poor. Men naturally love their children — not loves. People do not consider how much they are improved by adversity — not people does not con- sider how much it is improved by adversity, &c.

2. When two or more singular nouns and pronouns are enumerated or added together, they form a plural nominative to the verb : thus, John and James and William love play : John, James, William, equally love play. Robert and his sister]Mary often walk together in the fields : both he and she prefer the country to the city : they are fond of botany, and seldom return from their walks \ithout some botanic specimens.

In all such cases the pronouns must be in the plural number.

3. Two or more circumstances form a plural nominative : thus, to see the beauties of nature, and to listen to the music of the groves, produce agreeable sensations — not produces. The flashing lightning and the reverberating thunder, natu- rally produce strong emotions, especially in the minds of timid persons. To speak truth, to be diligent in business, punctual to engagements, and honorable in transactions, are important rules of prudential wisdom; and they seldom fail to give respectability to

the character of every one who diligently observes them.

The conjunctive and is the only word that connects two or more nouns, pronouns, or mem- bers of a sentence into a plural nominative : thus, the sun that shines, the rain that descends, and the wind that blows, produce good to man- kind. The conjunction is sometimes omitted : the sun, the rain, the wind, produce good to mankind. Such words as with, as well as, &c., though they seem connective, do not form a plural nominative: thus, the king with his body guard has just passed — not have. The king as well as his attendants has passed by.

All disconnective words, such as neither, nor, either, or, have the opposite effect of and. There is in many people, neither knowledge nor virtue — not are. It is either John or James that delights in music. Beauty, wealth, or fame, is a very precarious possession.

Except when the noun or pronoun coming after the disjunctive is plural, the nominative is always sini;ular : thus, neither adversity nor enemies disturb his equanimity — not disturbs. Neither enemies nor adversity disturbs — not disturb. It is better in such cases, if possible, to put the plural word last ; but, in all such forms of expression, the inconvenience of arbitrary grammar is strikingly obvious.

Concerning nouns which indicate plurality when considered in one view, and unity or indi- viduality when considered in another — there is no uniform grammatic usage. Some authors would write, ‘ My people do not consider ; thei/ have not known me :’ others, my people docs not consider : it has not known me. The multiliide eagerly pursue pleasure as their cliief good. Tlic multitude eagerly pursues pleasure as its chief good. The council tvere divided in their senti- ments. The council teas divided in its senti-

ments. In such cases there is, fortunately, not yet any established etiquette, or despotic autho- rity : the speaker or writer is left to the freedom of his own will; only having once made choice as to plural or singular, there is propriety in keeping to it ; not saying, my people do not con- sider : it has not known me : or, my people does not consider : tliey have not known me, &c.

4. Any noun, pronoun, or member of a sen- tence immediately preceded by a preposition, is never included in the nominative to a verb. This is worthy of attention, as tending to prevent grammatic blunders ; many of which happen from supposing that plural nouns, pronouns, or expressions, are the

nominative, merely because they come before the verb : hence such instances of false grammar as the following . — The number of the signatures are twenty. The number of places amount to twenty. Many a failure in the transactions of business and in human affairs originate in imprudence. John with James and William live in the country. In all these exam- ples, the nominative is singular, and therefore is, not are, should be employed ; and the regular verb should have s affixed, thus : the number of the signatures is twenty : the number of the places amounts to twenty. Many 'a failure in the transactions, &c., originates in imprudence. John, with James and William, lives in the country.

The following are instances of grammatic im- propriety : —

The language should be perspicuous and cor- rect : in proportion as either of these two quali- ties are wanting, the language is imperfect. Every one of the letters bear date after his banishment. Each of his children behave badly. Of the diversities in human character, some is better and some is worse ; none is wholly fault- less. None, i.e. no one, is properly singular, but custom has assigned to it a plural import. Some, like many, when a singular noun is not put after it, is always plural : thus, some one says ; some author says ; many a one has said so ; many an author has said so, &c. But if these adjectives be not connected with a singular noun, they are always considered plural : thus, some say — not says. Many have said so — not has said.

Sect. VI. — Directions concerning the Irregular Verbs.

These have been exhibited ; and the gram- matic learner should either commit them to me- mory or practise much upon them. They differ from the regular verbs only in not having ed af- fixed in what is called the past tense. The following are some of the most frequent ungram- matic uses of the irregular verbs : —

I knowed him long ago ; I have knou-ed him many years — it should be, I kneiv, I have kjioivn. The wind blowed haid last night; the wind has bloiced hard all day — bleic, has blown. John huyed a knife yesterday, and he has buyed a pencil to-day — bought. The horse drawed in the waggon yesterday, and he has drawed in the plough to-day— rfreuj, has drawn. The corn f rowed well in the spring, and has grouxd well ever since — grew, has grown.

It is to be hoped that literary persons of suffi- cient influence will set the example of discarding such anomalous proprieties ; but, in the mean time, the middle and lower classes of the gram- matic world must prudently, perhaps, do homage to established usage.

Sect. VII. — Remarks on the Preposition.”.

When, as already noticed, these come im- mediately before any pronoun which has two forms (called nominative and objective), it must be put in the second form, or objective case : thus, I went with her to them from him : John gave this book to me, and said it was a present to both of us, &c. — not with she, to they, from Ae, &c. There is a very general mistake, as if than and as had the same effect in changing the form of the pronoun : thus, I am older than her; she is wiser than him ; we are not so rich as them ; but it does not follow that they are more happy than us — it should be, than she, than he, as they, than we.

The learner should commit the prepositions to memory, or render them familiar by frequent inspection. There is some diversity in their ap- plication ; for even such as are strictly synony- mous, are not all (according to preponde- rating usage) interchangeable. In the following examples, the first mode of expression is best sanctioned by established usage : —

He found the greatest difficulty in speaking, or of speakmg. His abhorrence of Popery — abhor- rence to Popery. It is a change/or the better — to the better. He was very different then /row what he is now — to what he is now. I differ from you in opinion — I differ with you in opinion. There is no need of it— for it. This” is no diminution of his greatness — to his great- ness. It is derogatory from his authority— ˆa his authority. It is no derogation o/his honor — to his honor. It is consonant to our nature — with our nature.

Such niceties of appropriation may not be wholly disregarded ; but liberty is better than slavish subjection to mere custom.

It is of some importance that the grammatic disciple should learn to disuse useless words and syllables. Upon and on are synonymous ; andˆ as the prefix up is useless, it should be discarded : thus. He came on horseback — not upon horse- back. Along, together, &c., are often uselessly employed before ivith: John went along with. James — better, John went with James. ˆ The ship, together with her cargo, was burned — The ship with her cargo was burned — or. The ship and her cargo were burned.

Wherever prepositions can be omitted, without obscuring the meaning, composition is im- proved by the omission : thus. He went last Monday — is better than, He went on last Mon- day. The rain has been falling a long time — is better than. The rain has been falling/or a long time. He could not forbear expressing his displeasure — is better than, He could not for- bear /?-om expressing his displeasure, &c.

*It is become a kind of rule, that whenever a present participle (i. e. a verb with ing affixed), has the before it, o/' should be placed after : *>! -s, At the hearing of this intelligence — not .'X.t the*

hearing this intelligence. But it would be better to omit both the and of: thus, ' If the cares of Hampden had been directed to the unfolding and guiding his dispositions.' ' Mallet, of the King's Bench, fell under the displeasure of the House of Lords for being privy to the preparing a petition.' It would be better to omit the (which is often as useless in composition as a mummy in a deliberative assembly), and write. If the cares of Hampden had been directed to unfolding and guiding his disposition ; better still — directed to unfold and guide his disposition. Mallet fell under displeasure — for being privy to preparing a petition ; still better — for bemg con- cerned in preparing a petition.

Such clumsy modes of expression might be ■easily avoided ; but the and of are equally use- less in such connexions. A good general rule is, to omit every word not necessary to express the meaning of a sentence ; and to adopt such modes of construction as will enable the com- poser to express his meaning in the fewest words. Swerve jyom the path — is better than, Swerve out of the path — because, in the first sentence, one word (from) performs the office of two words (out of) in the last.

There is always a want of dignity in termi- nating sentences with such msignificant words as prepositions : Whom will you present it to ? He is a poet I am much pleased with — better. To whom will you present it ? He is a poet with whom I am much pleased — or still better, I am much pleased with him as a poet.

Sect. VIII. — Directions concerning

Adjectives.

1. Ungrammatic speakers and writers are apt to use adjectives instead of adverbs : thus, He walks bad — for walks badli/. He is miserable poor — for miserably poor. He acts agreeable to his instructions — for agreeably. He speaks his mind yexyfreeˆfreely. John went direct to the city — directly. James is steady employed — steadily employed .

The rule is, to add ly to the adjective to ex- press the manner of any action or quality: thus, He sleeps soundly — not He sleeps sound. They wait patiently — not patient. They stand peace- ably (contraction of X

peaceablely) — not peaceable. He spoke_/brci6(v (contraction of Xforciblely) — not forcible. He is evidently prejudiced — not evident.

There is an awkwardness in the double affix ly, which is better avoided : He lived soberly and godlily — better piously. He a.cted frieudlily towards me — better kindly.

2. Double comparatives and superlatives should not be employed ; such as, more stronger, more superior, most strongest, &c. More is equivalent to the affix er, and most to est; when, therefore, they are united there is manifest tau- tology.

3. Such adjectives as the following do not admit of comparative or superlative words and affixes, viz. chief, extreme, perfect, right, uni- versal, lk.c.

It is evidently illogical to say chiefcst, ex- tranest, more perfect, most perfect, more right, viost or more wnicerud.

More and most, or the affixes er and est, may be employed at pleasure ; but the general piac- tice is to use the form which is most agreeable to the ear : thus, more friendly, inost friendly, in preference .o— friendlier, friendliest

4. According to the grammatists the compa- rative should be employed in reference to two objects : thus, John and James are of the same age, but James is the stronger of the two — not strongest. This rule, however, is not uniformly observed even by grammatic speakers, and it has some appearance of grammatic pedantry. There is, however, an evident propriety in using only the superlative in reference to three or more ob- jects : Of the three brothers Robert is most learned.

The followhig expressions, are faulty : Of all the nations of Europe our own hzs fewer imper- fections—ˆwesˆ. The '•epresentative form of government is the best of any ; better thus : Of all forms of government the representative form is the best ; or, the representative is the best of all the different forms of government; or simply, (certainly the best mode of expression), the re- presentative is the best foim of government. The simplest and shortest mode of expression is the best of any: the two last words are wholly expletive.

Sect. IX. — Remarks on Composition.

The reader must be aware that good compo- sition and good grammar are not identical ; that the last is, at best, only an accomplishment ; and that the first is of the highest importance. There are two very different senses in which composition may be pronounced good, according as it is viewed in

reference to logic or to rhetoric, i.e. as tried by sense or by taste. Concerning the last there is no wisdom iu disputing ; for it is as arbitrary as fashion. Persons, indeed, who wish to have an agreeable style, will not wholly disregard it ; and they may read with advantage the writings of Blair and other rhetoricians. All who wish to have smooth diction will avoid, as much as possible, harsh words and combinations of words in sentences : all who value elegance of composition will avoid low words, phrases, and metaphors. Persons of rhetorical habitudes delight in eulogistic and dyslogistic phraseology; those of a logical determination prefer neutrolo- gistic expression. It is believed that such per- sons, however different from one another, ma^- consult, with some advantage, a preceding par^ of this work. All we intend here, is to present a few remarks on composition, considered simply as a medium of meaning, or of mental intercom- munication, i. e. as an interpreter of the under- standing, without any reference to taste, con- sidered as a distinct entity from sense.

Swift, we believe, defines good composition — ' right words in right places.' This, with due allowance for the vagueness of epigrammatic brevity, is a tolerable approximation to a good definition ; and .t indicates two important par- ticulars necessary to be kept in view : judicious choice and skilful arrangement of words. The best preparation fer such judicious choice, and skilful arrangement, is intimate acquaintance with etymology and literature.

GRAMMAR.

The properties essential to a perfect sentence, as defined by Blair, are, 'perspicuity, unity, strength, harmony.' The last property is ex- cluded from our present consideration. A judicious composer will not disregard the ear ; but the understanding is the primary object; and he will never sacrifice sense to sound, or meaning to euphony.

*Perspicuity, according to the above rhetorician, is resolvable into purity, propriety, and pre- cision. His remarks on purity and propriety are too vague to merit transcription. * Precision,' he writes, ' signifies retrenching all superfluities, and pruning the expression in such a manner as to exhibit neither more nor less than an exact copy of his idea who uses it.' This does not seem essentially different from his account of strength in composition. 'The first rule which we shall give for promoting the strength of a sentence is, to take from it all redundant words.' ' As sentences should be divested of superfluous words, so, also, should they appear without su- perfluous members.' Much that he advances on strength belongs to harmony. Two or three of his remarks on unity seem worthy of transcrip- tion. ' Unity is an*

indispensable property. The very nature of a sentence implies one proposition to be expressed. It jnay consist indeed of parts ; but these parts must be so intimately knit together as to make the impression upon the mind of one object, not of many. To preserve this, we must observe that, during the course of the sentence, the scene should be changed as little as possible. There is generally, in every sentence, some person or thing which is the governing word. This should be continued so, if possible, from the beginning to the end. Should a man express himself in this manner : After we came to anchor, they put me on shore, where I was saluted by all my friends, who received me with the greatest kindness. Here, though the objects are sufficiently connected, yet, by shifting so often the person — we, they, I, ivho — the sense is nearly lost. The sentence is restored to its 1 roper unity by the following construction : Having come to anchor I was put on shore, where I was saluted by all my friends, and re- ceived by them with the greatest kindness. Another rule is, never to crowd into one sentence things which have so little connexion that they might be divided into two or more sentences. The following is an instance of faulty compo- position : Their march was through an uncul- tivated country, whose savage inhabitants fared hardly, having no other riches than a breed of lean sheep, whose flesh was rank and unsavory, by reason of their continual feeding upon sea- fish. Here the scene is repeatedly changed. The march of the Greeks, the description of the inhabitants, through whose country they passed, the account of their sheep, and the reason of their sheep being disagreeable food, make a jumble of objects slightly related to each other, which the reader cannot, without difficulty, comprehend under one view.'

Definiteness seems the single word most ex- pressive of our notion of good composition ; for indofiniteness is the most predominant fault, and that which, more than any other, defeats the pro-

fessed purpose of language. The great object of every composer should be, to express his meaning so distinctly as to render doubts con- cerning it impossible. Rules never can create excellence, but they may aftbid considerable assistance in acquiring mastery in an art ; and for the benefit of young composers we venture a few directions.

1. Endeavour to express your meaning in as Jew words as possible. — The shortest is (all other things being equal) the best mode of expression. Many a bad sentence is rendered a good one merely by throwing away useless expletives or superfluous words. Such terms as verbality, verbiag.e, verbosity, wordiness, indicate the general sentiment concerning the' present ques- tion, and admonish the composer that his words should be few and well ordered. He will' find this the surest guide — the best assistant in composing well ; whilst it tends, more than any other rule, to relieve him from perplexity, and to render his task easy. ' Feeble writers,' says Blair, '

*employ a multitude of words to make themselves under- stood, as they think, more distinctly ; and they only confound the reader.' * The first rule which we shall give for promoting the strength, [substitute definiteness] of a sentence is, to take from it all redundant words. Whatever can be easily supplied in the mind is better omitted in the expression. It is certainly one of the most useful exercises of correction, in reviewing what we have written, to contract that round-about mode of expression, and to cut off those useless excrescences which are usually found in a first draught.' ' As sentences should be divested of superfluous words, they should also appear with- out superfluous members. In opposition to this is the fault so frequently met with, of the last member of a period being no other than the repetition of the former in a different dress. For example, speaking of beauty, ' the very first discovery of it,' says Mr. Addison, ' strikes the mind with inward joy, and spreads delight through all its faculties.' In this instance scarcely any thing is added by the second mem- ber of the sentence to what was already expressed in the first.'*

The composition of Addison was long consi- dered the ' model of the middle style ;' but it is remarkably surcharged with redundant words . and young composers will find-it a very improv- ing exercise to practise condensation on the loose papers of the Spectator, ' by contracting round-about modes of expression and cutting off use- less excrescences.' Let them try how many superfluous words can be discarded ; or with what brevity of expression the same meaning may be conveyed. Let them try how much better than Addison they can express a meaning or construct a sentence. This emulous mode of studying'the most excellent compositions is far more conducive to improvement than imitation, which tends more to enslave and enfeeble the imitator than to produce original excellence. It should be a rule never to use a word, or mode of expression, merely because it has been em- ployed. Bad sentences escape from the best writers ; and, therefore, instead of relying on doubtful authorities, or following tlie guidance

of precedents, young composers should endea- vour to erect a standard for themselves by ac- quiring a perfect knowledge of language, i. e. by intimate acquaintance with etymology and literature. Many of the worst modes of expres- sion are imitated faults; and, when called in question, persons using them can give no better reason than that they have seen or heard them.

2. Avoid as much as possible insignificant words. — Of all the parts of speech, those com- monly called articles, conjunctions, prepositions, and adverbs, are the least significant. It is a good general rule, tlierefore, to

omit them when- ever the omission does not mar the meaning of composition, or do violence to established usage; and to adopt such modes of expression as render them least necessary.

The same remark applies to pronouns, espe- cially those of the third person, and the relatives and demonstratives. When these are much employed, the usual consequence is indefinite- ness ; for as there are, generally, several preceding entities, the reader has to guess which of them is referred to by it, they, who, which, &c., when such words are frequently interposed. And, though skilful disposition or collocation will tend greatly to secure distinctness, the best general rule is to adopt such modes of construction as render fewest of those words necessary which have any tendency to throw confusion or obscu- rity over composition.

3. Guard against tautology in employing si/no- nymous words. — This is a very common fault. Many writers suppose tliat they are enriching their composition with additional thoughts, wlien they are only encumbering it with synonymous terms ; or that they are expressing their meaning more fully and forcibly, when they are only muf- fling it in verbality. This is so much the general practice — the established usage in composition, that young composers should rather lean to the opposite extreme ; and in the structure of language — all the usual modes of expression are so essen- tially tautologic and verbose, that there is very little danger of pruning verbality too unspar- ingly, and of not leaving sufficient foliage (as advised by Dr. Blair) to shelter and adorn the fruit.

4. Adopt that arrangement of words which presents your meaning most distinctly. The follow- ing remark of Dr. Blair is judicious : ‘ From the nature of our language, a leading rule in the ar- rangement of our sentences is, that the words or members most nearly related, should be placed as near to each other as possible, so as to make their mutual relation clearly appear. This rule is too frequently neglected even by good writers. A few instances will show both its importance and its application.’

*Some of these instances we will, for the sake of brevity, present in our own manner: ‘By greatness,’ says Mr. Addison, * I do not only mean the bulk of any single object, but the large- ness of a whole view.’ Better thus : I mean by greatness, not merely the magnitude of any sin- gle object, but that of a whole view. ‘ Are these designs,’ says lord Bolingbroke, ‘which any man who is born a Briton, in any circum- stances, in any situation, ought to be ashamed*

or afraid to avow?’ Better thus: Should any Briton ever be ashamed or afraid to avow thesa designs : or. Are not these designs worthy tae fearless avowal of every Briton? ‘It is folly to pretend (Sherlock’s Sermons) to arm

ourselves against the accidents of life by heaping up trea- sures, which nothing can protect us against but the good providence of our Heavenly Father.' — It is folly to endeavour, by heaping up riches, to arm ourselves against the accidents of life : for notliing can protect us against them but the good providence of our Heavenly Father. — The reader may compare the above with Blair's Lec- tures.

The following quotations are remarkable in- stances of faulty composition.

' The tide of fortune had set so strongly in fa- vor of the king, immediately after the surrender of Bristol, as would infallibly have reduced hearts less devoted and minds less energetic, than those of many who guided the resistance against him, to despair.' — The tide of fortune, which set so strongly in favor of the king, immediately af- ter the surrender of Bristol, would infallibly have reduced to despair, hearts less devoted and minds less energetic than those which guided the resist- ance against him. ' This hud, for a series of years, had the effect of giving an appearance of peace and tranquillity to Ireland, which had been almost wiiiiout example.' Perhaps all this means nothing more than, This gave to Ireland, for a series of years, an unusual appearance of tran- quillity. ' In unison with these proceedings, on the part of those who supported the public cause and commensurate with the urgency of the case, were the jtreparations made for the protection of the metropolis.' — The preparations made for the protection of the metropolis, were in unison with these proceedings, and commensurate with the urgency of the case. The sentence is still very indifferent: 'on the part of those who supported the public cause,' is mere surplus.

These examples furnish abundant evidence that there is a close connexion between multipli- city of words and faulty arrangement. We have, said, that many a bad sentence is rendered a good one, simply by throwing away useless words. In the following instances the useless parts are marked by italics.

'The king's march against Gloucester was the first decisive evidence that was afforded of the change in public affairs.' 'The defence of the city was conducted with great courage and reso- lution.' ' The events announced were far from being such as he wished them to prove,' — ' which are requisite to the forming a great warlike leader,' — 'devoted himself to the forwardi/jn; the cause of his sovereign:' still belter, devoted him- self to promote the cause of hts sovereign; better still, he devoted himself to the cause of his sove- reign ; for ' whatever can be easily supplied in tlie mind is better omitted in the sentence.' Th" judicious use of ellipsis tends rather to produc'^ explicitness than obscurity, whilst it affects bre vity. We ought to put others to as little trouble as possible in apprehending our meaning;

hence the importance of endeavouring to present it to them both distinctly and concisely. The two grand qualities, therefore, of good composition.

are definiteness and conciseness, or perspicuity and brevity. These excellencies rest not on taste, but on sense ; and every sensible man may, if he chooses, possess them.

A few remarks concerning metaphor may not be wholly without utility. A great part of lan- guage IS, of necessity, metaphoric, and therefore we cannot reasonably interdict figurative expres- sion. Whether a better system of mental inter- communication might not be invented is a fair question for consideration ; but that which we now employ is essentially metaphoric ; and per- haps more logical error, or metaphysical absur- dity, results from mistaking figurative for literal phraseology, than from the injudicious use of metaphors. All, therefore, that can be rea- sonably insisted on, is a judicious use of figura- tive language.

The following suggestions, perhaps, deserve the attention of young composers :

*Never employ metaphor for the sake of meta- phor, i. e. never adopt a figurative except when it evidently expresses your meaning more effec- tually than a literal mode of expression. The converse of this seems the rule adopted by many. They appear never to employ plain unmetapho- ric diction, but when they cannot conveniently avoid it : they are always making an effort to produce effect, or to display their genius : their main object is to surprise or astonish by the no- velty and brilliancy of their imagery. Take the following specimens from a work now oefore us : * Too agitated to still down his bitter and per- turbed spirit to the tranquil pursuit of his art, the stingings of his lacerated and disappointed feel- ings found vent in a medium more adapted to give a rapid and ready expression to powerful*

emotion.' 'The answer of the poet, whose own feelings of misery come at once upon the canvas, is the very epic of melancholy discontentment — • a discontentment engendered by the finest sensi- bility, blasted in its hopes and its efforts for ame lioratmg human sufferings and amending human institutions.' ' But that fatal pre-eminence which the lowly worship and the envious malign, gives only a finer faculty for suffering ; and while it opens the sources of petty vexations, and exalts the poignancy of the greater

racral afflictions, it places its gifted victim at an immeasurable dis- tance from the heartless enjoyments and trifling pleasures of more ordinary humanity.'

These are eloquent specimens of the meta- phoric prolification of the present literature, whose characteristic peculiarities are ambitious display and striking effect.

When the author or the orator is actuated by any rhetorical rage for metaphors, it is not won- derful that they should be strangely obtruded and jumbled and mangled and misapplied ; or, tliat they should frequently answer any purpose save that of being a distinct medium of intercommu- nication between one understanding and another. It would be easy to collect in a short space of time a thousand objectionable examples from the most eloquent and tasteful productions of the current literature; but the young composer should view them not as patterns of excellence or models for imitation, but as beacons to warn him of the danger of venturing eagerly, among metaphors on which so many make shipwreck of reason and common sense. When the imagina- tion is not the servant but the tyrant of the under- standing ; there is some degree of mental derange- ment.

Grammarian was anciently a title of ho- nor, literature, and erudition, being given to per- sons accounted learned in any art or faculty. But it is now often used as a term of reproach, to signify a dry plodding person, employed about words and phrases, but inattentive to the true beauties of expression and delicacy of sen- timent. The ancient grammarians, called also philologers, must not be confounded with the grammatists, whose sole business was to teach children the first elementg of language. Varro, Cicero, Messala, and even Julius Ceesar, thought it no disgrace to be ranked amongst grammarians, who had many privileges granted to them by the Roman emperors.

GRAMMONT (Philibert, count), son of Antony, duke of Grammont, a celebrated wit of Charles II. 's court. He served in the French army under the prince of Conde and Turenne, but, having paid his addresses to a lady who was also a favorite of Louis XIV., he was obliged to retire to England, and was highly distinguished by Charles II. He was indebted for his chief support to his gambling habits, in which he was very successful. He married Miss Elizabeth, daughter of Sir George Hamilton, and died in 1707. His Memoirs were written by his bro- ther-in-law, count Hamilton, who followed the fortunes of James II.

Grammont, or Geersberghe, a town of West Flanders, on the Dender, and divided by that river into the upper and lower towns. Its manufactures are

linen, carpeting, and paper. There is a canal to Alost. Population 6000. Fourteen miles east by south of Oudenarde, and twenty-one W. S. W of Brussels.

GRAMPIAN Hills, a chain of mountains in Scotland, which run from east to west, almost the whole breadth of the kingdom. See Scot- land,

GRAMPOUND, a town of England, in Cornwall, seated on the Valle, over which there is a bridge. The inhabitants have a consider- able manufacture of gloves ; and sent two mem- bers to parliament. It is supposed to be the Voluba of the ancients, as it stands on the same river ; and, on the building of the bridge, the name was changed into Grand-pont. It was made a borough by Edward III., and endowed with several privileges, particularly freedom from toll through all Cornwall, a market on Saturday, and three fairs ; which the burgessers hold of the duchy of Cornwall in fee farm, at the rent of about twelve guineas. Its privileges were confirmed by Henry VIII. ; but it did not send members to parliament till the reign of Edward VI. It is a corporation, and has a mayor, eight magistrates, a recorder, and town clerk. The

mayor is chosen annually the Tuesday before Michaelmas, but no members are now returned, the borough having been disfranchised under the Reform bill, for bribery and corrup. tion.

GRAN, a county and town of Hungary, lying on both sides the Danube. Its extent is about 406 square miles, and wine, corn, and fruits are cultivated ; but the greater part of the country is covered by the mountains of Arpas, which coniain numerous marble quarries. Population of the county 47,000.

Tiie town, also called Esztergom, is a free town of Hungary, and an archbishop's see, at the conflux of the Danube and the Gran. Two new streets have been lately added to it. The Danube is crossed by a bridge, consisting of a large platform fixed across two barges, and fas- tened to other boats at anchor. It is very wide here. The archbishop is primate of Hungary, and possesses various high prerogatives, particu- larly that of crowning the king. The citadel stands on a lofty hill, and the town-house is a good building. Gran has been several times taken by the Thrks. A dreadful fire broke out here in April, 1818, which destroyed 220 houses, the hospital, military chapel, &c. Thirty miles north-west of Buda, and seventy-five south-east of Presburg. Long. 18° 50′ E., lat. 47° 40′ N.

Gran, a river of Upper Hungary, which rises m the palatinate of Gomer,

and flows into the Danube, opposite to the above town.

GRANADA, or Upper Andalusia, is a pro- vince of the south of Spain, about 200 miles in length, and from forty to seventy in breadth, lying east and west on the IMediterranean : on the nortli is a part of Andalusia ; and its south- west extremity approaches Gibraltar. It is sometimes called the kingdom of Granada, and is still governed by the laws of Castile, and divided into the four bishoprics of Granada, Malaga, Almeria, and Guadix. The lofty snow- crowned ridges of the Sierra Nevada, and the Alpuxarras, traverse it, and the temperature varies according to the situation, being cold among the mountains, in the valleys extremely hot and temperate, though with a hot wind on the sea-coast. The Viga (orchard) de Granada, about thirty miles in length and sixteen in breadth, is one of the richest and most delight- ful valleys in the world. It is of great elevation when compared to the level of the sea; but the mountains which surround it rise to a great height above it. The tracts near the Xenil, which are often overflowed from the mountains, are laid out chiefly in rice, following hemp and flax as a crop. C)f the vines, cultivated on the sides of the hills, the wine is but indifferent. Silk is better attended to. On the coast are raised coffee, sugar, and indigo. The other pro- ductions are lemons, oranges, pomegranates, olives, figs, almonds, capers, wax, and honey. Raisins are also a considerable article of export. The mountains are rich in marble, minerals, and ores, and the province has several salt springs.

Granada made a part of the ancient Hatica ;

and was inhabited by the Bastuli, the Sexitani,

&c It was the last Spanish kingdom possessed

iy the Moors, and was not annexed to the crown

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of Castile until 1492, The Moorish features are still to be traced in the present population ; and their monuments are found throughout the province. On their surrender to the Castilians, in 1492, promises were made them of religious liberty ; but in 1500 a persecution commenced which compelled them to quit the kingdom; and, with the great numbers that emigrated, theie also fled the chief sources of public prosperity. The present population is about 700,000. The export trade of the province takes place principally at Malaga. The other towns of importance are the capital, Ronda, Loxa, and Almeria. Martello towers are erected in certain parts of the coast.

Granada, a city in the south of Spain, and capital of the foregoing

province, is situated partly on hills, and partly on level ground, at the extremity of the Vega de Granada. It ex- hibits to the traveller the form of a brilliant half moon, its streets rising above each other, crowned by the Alhambra. See that article. On enter- ing, the streets are found narrow and irregular; the buildings displaying visible marks of dec-ay.

Granada is divided into four quarters, and stands on two distinct hills, the Darro flowing be- tweem them, and falling into the larger stream of the Xenil, outside the walls.

Granada is nearly as large as in the days oi its independence. The cathedral containing an elegant monument to the memory of Philip I and his queen Johanna, and another to Fer dinand and Isabella, has several paintings of Alonzo Cano : the archbishop's palace is also an elegant building, as likewise is the mansion of the captain general of the province. But the grand ornament of Granada is the Al- hambra.

Granada was formerly called Illiberia, and founded, says tradition, by Liberia, great-grand- daughter of Hercules, daughter of Hispan, and wife to Hesperus, a Grecian prince, and brotlier to Atalanta. Others maintain that it was founded by Iberus, grand-son of Tubal, and that it took the name of Granada, or Granata, from Nata, the daughter of Liberia ; the word Gar, in the language of the time, signifying grotto, i. e. the grotto of Nata, because that princess studied astrology and natural history in this country. It is certain that such a per- son as Nata, or Natayde, existed in the first ages "of Granada ; and that, in the place where the Alhambra now stands, there was a temple dedi- cated to Nativala. Granada is said to have been founded A. A. C. 2808. In the time of the Ro- mans it was a municipal colony. A description of (iranada, in Latin, written in 1560, by George Hosnanel, a merchant at Antwerp, who travelled into Spain, is to be found in the work, entitled Civitates Orbis Terrarum, printed at Cologne in 1576; with a good plan of the city of Granada. This city is 125 miles south-west of Murcia, and 183 south of Madrid.

Granada New, once a province of Spanish South America, has now become the western part of the new republic of Colombia, in which, or our article South America, all the interesting features of the present state and history of this province are detailed.

GRANADE. See Grenade

GRANADIER. See Grenadier. GRANADILLOES, or Grenadines, danger- ous islands of the Caribbees, in America, having St. Vincent on the north, and Granada on the south. They were ceded to Britain by the treaty of peace in 1763.

GRANARY. In constructing a granaiy Sir Henry Wotton advises to make it look toward the north, because that quarter is the coolest and most temperate. Mr. Worlidge observes, thst the best granaries are built of brick, with quar- ters of timber wrought in the inside, to which the boards may be nailed, with which the inside of the granary must be lined so close to the bricks, that there may be no room left for vermin. There may be many stories one above another, which should be near each other ; be- cause the shallower the corn lies, it is the better, and more easily turned. The two great cautions to be observed in erecting granaries are, to make them sufficiently strong, and to expose them to the most drying winds.

*The method of managing corn in many parts of England, particularly in Rent, is this :~To separate it from dust and other impurities, after it is threshed, they toss it with shovels from one end to the other of a long and large room ; the lighter substances fall down in the middle of the room, and the corn only is carried from end to end of it. After this they screen the corn, and then, bringing it into the granaries, it is spread about half a foot thick, and turned about twice in a week : once a week they also repeat the screening it. This management they continue about tw'o months ; after which they lay it a foot thick for two months more ; and in this time they turn it once a week, or twice if the season be damp, and now and then screen it again. After about five or six months they raise it to two feet thickness in the heaps, and dien they turn it once or twice in a month, and screen it now and then. After a year they lay it two feet and a half or three feet deep, and turn it once in three weeks or a month, and screen it proportionably. When it has lain two years or more, they turn it once in two mcn*hs, and screen it once a quar+er ; and how long soever it is kept, the oftener the turn- ing and screening is repeated, the better the grain will keep. It is proper to leave an area of a yard wide on every side of the heap of corn, and other empty spaces, into which they turn and toss the corn often. In Kent they make two square holes at each end of the floor, and one round in the middle, by means of which they throw the corn out of the upper into the lower rooms, and so up again, to turn and air it the better. Their screens are made with two partitions, to separate the corn from the dust which falls into . a bag, and when sufficiently full this is thrown away, the pure and good corn remaining be- hind. Corn has by these means been kept in our granaries thirty years: and it is observed, that the longer it is kept the more flour it yields in proportion to the corn, and the purer and whiter the bread is, the superfluous humidity only evaporating in the keeping. At Zurich, in Swit- zerland, they hafVe been said to keep corn*

eighty years, or longer, by these methods. The public granaries at Dantzic are seven, eight, or nine

stories high, having a funnel in the midst of every floor to let down the corn from one to another. I'hey are built so securely, that, though every way surrounded with water, the corn contracts no dampness, and the vessels have the convenience of coming up to the walls for their lading. The Russians preserve their corn in subterranean gra- naries of the figure of a sugar loaf, wide below and narrow at top : the sides are well plastered, and the top covered with stones. They take care to have the corn well dried before it is laid into these storehouses, and often dry it by means of ovens ; the summer dry weather being too short to eflect it sufficiently. At Dantzic the wheat, barley, and rye, of a great part of Poland, are there laid up in parcels of twenty, thirty, or sixty lasts in a chamber, according to the size of the room ; and this they keep ^^turning every day or two, to keep it sweet and fit for shipping. A thunder storm has sometimes been of very terrible consequences to these stores ; all the corn having been found so much altered by one night's thun- der, that though over night it was dry, fit for shipping or keeping, and proper for any use, yet in the morning it was found clammy and sticking. In this case there is no remedy but the turning of all such corn three or four times a day for two months or longer ; in which time it will some- times be recovered, though sometimes not. This eff"ect of thunder and lightning is only observed to take place in such corn as is not a year old, or has not sweated thoroughly in the straw before it was threshed out. The latter inconveniencf is easily prevented by a timely care ; but, as to tne former, all that can be done is carefully to ex- amine all stores of the last year's com after every thunder storm, that if any of it have been so af- fected, it may be cured in time ; for a neglect of turning will utterly destroy it. According to Vitruvius's rules, a granary should always be at the top of a house, and have its openings only to the north or east, that the corn may not be ex- posed to the damp winds from the south and west, which are very destructive to it ; whereas the contrary ones are very necessary and whole- some to it, serving to cool and dry it from all ex- ternal humidity, from whatever cause. There must also be openings in the roof to be set open in dry weather, partly to let in fresh air, and partly to let out the warm effluvia which are often emitted by the corn. The covering of the roofs should always be of tiles, because in the worst seasons, when the other openings cannot be safe, there will always be a considerable inlet for fresh air, and a way out for the vapors by their join- ings, which are never close. If there be any windows to the south, great care must be taken to shut them up in moist weather, and during hot southern winds. There must never be a cellar, or any other damp place under a granarj', nor should it ever be built over stables; for, in either of these cases, the corn will certainly suffer by the vapors, and be made damp in the one case and

ill tasted in the other.

The preservation of grain from the ravages of insects may be best effected by timely and fre- quent screening, and ventilation ; as little or no inconvenience will follow corn lodged dry, but what evidently results from a ne'^lect of tlicse

precautions. For, whether the obvious damage arise from the weevil, the moth, or the beetle, that damage has ceased at the time the vermin make their appearance under either of these species, they being, when in this last state of ex- istence, only propagators of their respective kinds of vermiculi • which, while they continue in that form, do the mischief. In this last, or insect state, they eat little, their principal business being to deposit their eggs, which unerring instinct prompts them to do where large collections of grain furnish food for their successors while in a vermicular state. It is therefore the business of industry to prevent future generations of these ravagers, by destroying the eggs previous to their hatching ; and this is best accomplished by fre- quent screening, and exposure to draughts of wind or fresh air. By frequently stirring the grain, the cohesion of their eggs is broken, and the nidus of those minute worms is des- troyed, which on hatching collect together, and weave numerous nests of a cobweb-like substance for their security. To these nests they attach, by an infinity of small threads, many grains of corn together, first for their protection, and then foi iheir food. When their habitations are bro- ken and separated by the screen, they fall through its sniall interstices, and may be easily removed from the granary with the dust. Those that escape an early screening will be destroyed by subsequent ones, while the grain is but little injured; and the corn will acquire thereby a superior purity. But by inattention to this, and sometimes by receiving grain already infected into the granary, these vermin, particularly the weevil, will soon spread themselves in that state every where upon the surface, and darken the walls by their number. Under such circum- stances hens, with new hatched chickens, if turned on the heap, will traverse, without feeding (or very sparingly so) on the corn, wherever they spread ; as they seem insatiable in the pursuit of these insects. When the numbers are reduced within reach, a hen will fly up against the walls, and brush them down with her wings, while her chickens seize them with the greatest avidity. This being repeated as often as they want food, the whole species will in a day or two be de- stroyed. Of the phaloena, or moth, and the small beetle, they seem equally voracious : on which account they may be deemed the most useful instruments in nature for eradicating these noxious and destructive vermin.

M. Du Hamel and Dr. Hales recommend various contrivances for blowing fresh air through corn laid up in granaries or ships, to preserve it sweet and dry, and to prevent its being devoured by weevils or other insects. This may be done by nailing wooden bars or laths on the floor of the granary about an inch distant from each other, when they are covered with hair-cloth only : or at the distance of two or three inches, when coarse wire-work, or basket-work of osier, is laid imder the hair-cloth, or when an iron plate full of holes is laid upon them. These laths may be laid across other laths, nailed at the distance of fifteen inches, and two or more deep, that there may be a free passage for the air under them. The under laths mvift come about six inches short

of the wall of the granary at one end of them ; on which end a board should be set edgeways, and sloping against the wall : by this disposition a large air-pipe is formed, which, having an open communication with all the interstices between and under the bars, will admit the passage of air below forcibly through a hole at the extremity of it, into all the corn in the granary, that will conse- quently carry oft' the moist exhalations of the corn. The ventilators for supplying fresh air may be fixed against the wall, on the inside or out- side of the granary, or under the floor, or in the ceiling ; but, wherever they are fixed, the handle of the lever that works them must be out of the granary, otherwise the person who works them would be in danger of suffocation, when the corn is fumed with burning brimstone, as is some- times done for destroying weevils. Small moveable ventilators will answer the purpose for ventilating corn in Jarge bins in granaries, and may be easily moved from one bin to another. If the granary or corn ship be very long, the main air-pipe may pass lengthwise along the middle of it, and convey air, on both sides, under the corn. In large granaries, large double ventila- tors, laid on each other, may be fixed at the middle and near the top of the granary, that they may be worked by a wind-mill fixed on the roof of the building, or by a water-mill. The air is to be conveyed from the ventilators through a large trunk or trunks, reaching down through the several floors to the bottom of the granary, with branching trunks to each floor, by means of which the air may be made to pass into a large trunk along the adjoining cross walls : from these trunks several smaller trunks, about four inches wide, are to branch off, at the distance of three or four feet from each other, which are to reach through the whole length of the granary, and their farther ends are to be closed : seams of one- tenth or one-twelfth of an inch are to be left open at the four joinings of the boards, where they are nailed together, that the air may pass through them into the corn. In some of these smaller trunks there may be sliding shutters, to stop the passage of the air through those trunks which are not covered with corn; or to ventilate one part of the granary more briskly than others, as there may be occasion. There must also be wooden

shut- ters, hung on lunges at their upper part, so as to shut close of themselves ; these must be fixed to the openings in the walls of the granary on their outside; by these means they will readily open to give a free passage for the ventilating air, which ascends through the com to pass off", but will instaiUly shut when the ventilation ceases, and thereby prevent any dampness of the ex- ternal air from entering : to prevent this, the ventilation should be made only in the midiUe of dry days, unless the corn, when first put in, is cold and damp. In smaller granaries, where the ventilators must be worked by hand, if these granaries stand on staddles, so as to have their lowest floor at some distance from the ground, the ventilators may be fixed under the lowest floor, between the staddles, so as to he worked by men standing on the ground, without or within the granary. A very commodious and cheap ventilator may be made for small granj 2 IJ '2

nes, by makinsf a ventilator of the door of the granary; which may be easily done by making a circular screen, of the size of a quarter of a circle, behind the door; but for this purpose, the door must open, not inwards but outwards of the granary, so that as it falls back, it may be worked to and fro in the screen ; which must be exactly adapted to it in all parts of the circular side of i!ie screen, as well as at the top and bottom. But there must be a stop at about eight or ten inches from the wall, to prevent the door from falling back farther ; that there may be room for a valve in the screen to supply it with air : which air will be driven in by the door, through a hole made in the wall near the floor, into the main air-trunk, in which there must be another valve over the hole in the wall, to prevent the return of the air.

GRAND, adj.

Grand'am, n. s.

Grand'child, ?i. s.

Grand'daughter, n. s.

Gran'dee, n. s.

Grandevity, n.s. Gran'devous, adj. Gran'deur, n. s. Grand'father, n. s. Gran'dific, adj. Gran'dity, n. s.

GraXd'mOTHER, U.S.

Grand'sire, n. s. Grand'son, n. s. Gran'nam, n.s.

Fr. grand; Ital. grand e ; hai.grandis ; Gr. yepaiog. The pri- mary meaning is ancient, and hence it was extended to greatness in general, ^-particularly in a good sense : ilUustrious ; high in power; a dignity : used to sig- nify ascent or descent of consanguinity, as grandfather, grand- J child. Great age, as

grandevity. High rank, as grandee. External splendor, either in a literal or figurative sense, is called grandeur. Grandific is making great : and grandity is an obsolete word, synonymous with grandeur. Grandam and grannam are con- tractions of grand and dame, and form familiar appellations of grandmother.

I am a daughter, by the mother's side Of her that is grand-mother magnifide Of all the gods, great Earth, great Chaos Child.

Speiuer. Faerie Queene. Thy grandmother Lois, and thy mother Eunice.

2 Tim. i. 5. I meeting him, will tell him that my lady Was fairer than his grandam, and as chaste As may be in the world. Shakspeare.

Thinkest thou, that T will leave my kingly throne. Wherein my grandsire and my father sat ? Id.

Why should a man whose blood is warm within. Sit like his grandsire cut in alabaster ? Id.

One was saying that his grcaX-grandfather and grcuidfatJier , and father, died at sea : said another that heard him, an' I were as you, I would never come at sea. Why, saith he, where did your great- grandfather, and grandfather, and father die t He answered, where but in their beds ? He answered, an' I were as you, I would never come in bed.

Bacon. Augustus Caesar, out of indignation against his daughters and Agrippa his grandchild, would say that ihey were not his seed, but imposthumes broken from him. Id.

God hath planted, that is, made to grow the trees of life and knowledge, plants only proper and be- coming the paradise and garden of so grand a Lord. Raleigh's History.

Our poets excel in grandity and gravity, smooth ness, and property, in quickness and briefness.*

Camden, These hymns may work on future wits, and so May greaX-grandchildren of thy praises grow.' Donne. Fair daughter, and thou son and grandchild both I

MUtm. What cause Moved our grand parents in that happy state. Favoured of heas'en so highly, to fall off From their Creator. Id.

Our grand foD, Satan. Id.

So clomb this first ˆrand thief into God's fold. Id.

He 'scaping, with his gods and reliques fled. And towards the shore his little grandchild led.

Denham. Thy grandsire, and his brother, to whom fame Gave, from two conquered parts o' th' world, their name. Id.

He hoped his majesty did believe that he would never make the least scruple to obey the grandchild of King James. Clarendort.

As pirates all false colours wear T' entrap th' unwary mariner. So women to surprise us spread The borrowed flags of white and red. Display 'em thicker on their cheeks Than their old grandmothers the Picts. Hudibras. We have our forefathers and great grandames all before us as they were in Chaucer's days. Dryden. Thy tigress heart belies thy angel face : Too well thou shewest thy pedigree from stone ; Thy grandame's was the first by Pyrrha thrown.

Id. Almighty Jove augment your wealthy store. Give much to you, and to his grandsons uxove. Id. The women Cryed, one and all, the suppliant should have right. And to the grandame hag adjudged the knight. Id,

Some Houswives teach their teachers how to pray. Some Clarks have shewed themselves as wise as they ; And in their Callings, as discreet have bin. As if they taught their grandames how to spin.

George Withers. As a magistrate or great officer, he locks himself from all approaches by the multiplied formalities of attendance, by the distance of ceremony and grandeur.

South. When a prince or ˆranrfee manifests a liking to such a thing, men generally set about to make themselves considerable for such things. Id.

They had some sharper and some milder differ- ences, which might easily happen in such an inter- view of grandees, both vehement on the parts which they swayed. Wotton,

The wreaths, his grandsire knew to reap By active toil and military sweat. Prior,

Some parts of the Spanish rnonarchy are rather for ornament than strength : they furnish out vice-royal- ties for the grandi.es, and posts of honour for the noble families. Addison.

Oft my kind grannam told me, Tim, take warning.

Gay. A voice has flown To re-enflame a grand design. Young. Grandfathers in private families are not much observed to have great influence on their grandsons, and, I believe, they have much less among princes.

Swift. Our grandchildren will see a few rags hung up in Westminster-tall, which cost an hundred millions, whereof they are paying the arrears, and boast that their grandfathers were rich and great. Id,

So mimick ancient wits at best. As apes our grandsires in their doublets drest.

Pope. Sons, sires, and grandtirei, all will wear the bays. Our wives read Miiton, and our daughters plays.

Id. Blush grandeur blush I proud Courts I withdraw your blaze ; Yo little stars ! hide your diminished rays. Id.

He that negotiates between God and man As God's ambassador, the grand concerns Of judgment and of mercy, should beware Of lightness of his spr- ech. Cowper.

Here dons, grandees, but chiefly dames abound. Skilled in the ogle of a roguish eye, Yet ever well inclined to heal the wound. None through their cold disdain are doomed to die As moon-struck bards complain by Love's sad archery.

Bt/ron.

Grand (Joachim le), a political writer, was born in 1653, at St. Lo, in Normandy. He en- tered into the congregation of the Oratory, which he quitted to become a tutor at Paris ; after which he went to Portugal artH Spain, as secre- tary to the French embassy. He had a contro- versy with

bishop Burnet, respecting the divorce of Henry VIII. and his queen Catherine, on which subject he published three volumes. He died at Paris in 1733. Other works of his, are — 1. A Translation of Lobo's History of Abyssi- nia. 2, De la Succession a la Couronne de France.

Grand (John Baptist le), born at Amiens in 1737, was surnamed d'Aussy, because his father was a native of Auxy-de-Chateau, and educated at Amiens in the college of the Jesuits, of which he became a member, and was appointed pro- fessor of rhetoric at Caen. He was made secre- tary of the military school on the suppression of tne society, and, in 1796, conservator of the manuscripts in the French national library. He died in 1801, and is known by his Fableaux, or Tales of the twelfth and thirteenth Centuries, 5 vols. 8vo. 2. Contes devots. Fables, et Romans anciens, pour servir de suite aux Fabliaux. 8vo. 3. Histoire de la vie privee des Franjais. 4. A Tour to Auvergne, 3 vols. 8vo. 5. Vie d'Apollonius de Tjanes, 2 vols. Bvo. At the time of his death, he was engaged on a History of French Poetry, which he left unfinished.

Grand Isle is an island of New York, in the Niagara, four miles above the Falls. It contains 48,000 acres, and belongs at present to the town of Buffalo.

Also the name of a county in the north-west part of Vermont. Population 4445. It is composed of islands in Lake Champlain ; the largest are North and South Hero.

Grand River is a river of Louisiana, which runs south into the Missouri, 240 miles from the Mississippi. It is navigable for boats about 600 miles. Also a river of Louisiana, which runs south-east into the Arkansaw. It is navigable about 200 miles.

The Grand Travkrse is a string or range of islands in Lake INI icliiuan ; mostly small and rocky. Many of the rocks are of an amazing size, and appear as if they had been fashioned by the hands of artists. On the largest and best stands a 'vdwu of the Ottoways.

GRANDE, a river of Brasil, in the Bahia, which rises in the mountams to the westward of the valley of the Rio Francisco, and, running east, falls into that river in lat. 11° 35′ S.

Grande, a large river of Brasil, in the province of Minas Geraes, rising in the mountains to the westward, and falling, after a Jong course to the north-east, into the Atlantic in lat. 15° 26′ S,

Grande, a river of Zanguebar, Eastern Africa, supposed to be a branch of one great river, from which the Quilimane is also derived. At its mouth are

several alluvial islands. It falls into the Indian Ocean, about lat. 2° S.

Grande, Rio, a large river of Western Africa, falling into the Atlantic, about 200 miles to the south of the Gambia. Its sources are little known, but are supposed to lie in a range of mountains extending inwards from Sierra Leone, and join- ing those of Kong. The kingdom of Foota Jallo lies along its right bank, and its shores are occu- pied by the various tribes of the Balantes, Biafa- ras, Papels, Sec, and by the kingdoms of Ghinala and Biguba. Near the mouth it divides into various branches, forming alluvial islands, which form a portion of the archipelago of the Bissagos. Its whole course is about 500 miles direct.

GRANDIER (Urban), a curate and canon of Loudon in France, whose death has made him famous in the annals of superstition, was born at Bouvere near Sable, in the latter part of the fifteenth century. He seems, as an elo- quent and able preacher, to have been envied by the monks of Loudon, and, being accused of an improper attention to women, was condemned to forfeit his benefices. When an appeal to the parliament of Paris acquitted him, his enemies induced some nuns of Loudon to declare them- selves bewitched by him, and persuaded cardinal Richelieu that he was the autiior of a satire upon his family and person. The issue was, that on the most absurd evidence, Grandier was declared guilty, and ordered to be burnt alive, a sentence which he endured with heroic firmness, on the 18th of April, 1684.

GRANGE, n.s. Yr. grange. A farm ; gene- rally a farm with a house at a distance from neighbours.

For he is wont for timber for to go. And dwellen at the grange a day or two.

Chaucer. The Miller es Tale.

At the moated grange resides this dejected Mariana.

Shakspeare.

One, when he had got the inheritance of an un- lucVy old grange, would needs sell it; and, to draw buyers, proclaimed the virtues of it : nothing ever thrived on it, saith he j the trees were all blasted, the swine died of the measles, the cattle of the mur. rain, and tlie sheep of the rot; nothing was ever reared there, not a duckling nor a goose.

Ben Jonson. The loose unlettered hinds.

When for their teeming flocks and granges full.

In wanton dance they praise the bounteous Pan.

3/i7/on.

If the church was of their own foundation, thrˆ might chuse, the incumbent being once dead, whether lliey would put r.ny other therein ; unless, perhaps the said church had people beloni;,iiig to it; for ihcfl they must still maintain a curate ; and of this sort were their granges and priories. Aˆtijfe..

Grange (Joseph de Chancel de la), a French poet, was born in 1676 in Perigord, and wrote his first comedy at nine years old, and a tragedy at sixteen. The work, however, which made him most known, was a satire, entitled Philippics, against the duke of Orleans. For this he was seized, and ordered to be imprisoned in the isle of St. Margaret, from whence he made his escape to Sardinia, and afterwards to Holland. He died in 1758. His works are in 5 vols. 12mo.

GRANGER (James), an English clergyman, and biographer, was a native of Berkshire, and educated at Christ Church, Oxford ; soon after leaving which, he obtained the vicarage of Ship- lake in Oxfordshire. Having made a collection of portraits of Englishmen, chronologically ar- ranged, he published his Biographical History of England, 1769, 2 vols. 4to., in which the lists of engravings were accompanied by short me- moirs and anecdotes, illustrative of their modes of dress, manners, &c., and the different periods of history concerned. He subsequently produced a supplementary volume; and in 1775 a second edition of the whole work. He died April 15th, 1776, in consequence of an apoplectic fit the preceding day, while administering the sacra- ment. A collection of his correspondence was published by James Peller Malcolm, 8vo., and a continuation of the Biographical History through the reigns of George I. and George II. by the Rev. Mark Noble.

GRANT, from Irish greann, a beard ; in our ancient writers, mustaches or whiskers. The Roman Catholics give us a reason why the cup is refused to the laity. Quia barbati, et prolixos habent granos, dum poculum inter epulas su- munt, prius liquore pilos inficiunt, quam ori in- fundunt.

GRANICUS, a small river near the Helles- pont in Lesser Asia, remarkable for the first victory gained by Alexander the Great over the armies of Darius. Justin and Orosius tell us, that the Persian army consisted of 600,000 foot and 20,000 horse ; Arrian makes the foot amount to

200,000 ; but Diodorus tells us, that there were only 100,000 foot and 10,000 horse. The Macedonian army did not exceed 30,000 foot and 5000 horse. The Persian cavalry lined the banks of the Granicus, in order to oppose Alexander wherever he should attempt a passage ; and the foot were posted behind the cavalry on an easy ascent. Parmenio wanted Alexander to allow his troops some time to re- fresli themselves ; but he replied, that, after having crossed the Hellespont, it would be a disgrace to him and his troops to be stopped by a rivulet. Accordingly a proper place for crossing the river was no sooner found, than he com- manded a strong detachment of horse to enter ; he himself followed with the right wing, which he commanded in person ; the trumpets in the mean time sounding, and loud shouts of joy being heard through the whole army. The Per- sians let fly such showers of arrows against the detachment of Macedonian horse, as caused some confusion ; several of their horses being killed or wounded. As they drew near the bank, ■ a most bloody engagement ensued ; the Mace-

donians attempting to land, and the Persians pushing them back into the river. Alexander, who observed the confusion they were in, took the command of them himself; and landing, in spite of all opposition, obliged the Persian cavalry, after an obstinate resistance, to give ground. However, Spithrobates, governor of Ionia, and son-in-law to Darius, still maintained his ground, and did all that lay in his power to bring them back to the charge. Alexander advanced full gallop to engage him, and both were slightly wounded at the first encounter. Spithrobates having thrown his javelin without effect, ad- vanced sword in hand to meet his antagonist, who ran him through with his pike as he raised his arm to discharge a blow with his scymitar. But Rosaces, brother to Spithrobates, at the same time, gave Alexander such a furious blow on the head with his battle-axe that he beat off his plume, and slightly wounded him through the helmet. As he was ready to repeat the blow, Clitus with one stroke of his scymitar cut off Rosaces's head, and thus in all probability saved the life of his sovereign. The Mace- donians then, animated by the example of their king, attacked the Persians with new vigor, who soon after betook themselves to flight. Alexander immediately charged the enemy's foot with all his forces, who had now passed the river. The Persians, disheartened at the defeat of their cavalry, made no great resistance. The Greek mercenaries retired in good order to a neigh- bouring hill, whence they sent deputies to Alex- ander, desiring leave to march off unmolested. But he, instead of coming to a parley with them, rushed furiously into the middle of this small body ; where his horse was killed under him, and he himself in great danger of being cut in pieces. The Greeks defended themselves with incredible valor for a long time, but were at last almost entirely cut off. In this battle the Per sians are said to have lost 20,000 foot and 2500 horse, and the

Macedonians only fifty-five foot and sixty horse.

GRANITE. See Grain.

Granite, in lithology, a genus of stones of the order of petrse, belonging to the class of saxa. The principal constituent parts of this stone are felt-spar or rhombic quartz, mica, and quartz. These ingredients constitute the hardest sort of granite, and that most anciently known. That into which schoerl enters is more subject to de- composition. They never have any particular texture or regular form, but consist of enormous shapeless masses extremely hard. In the finer granites the quartz is transparent ; in others generally white or gray, violet or brown. The felt-spar is generally the most copious ingredient, and of a white, yellow, red, black, or brown color. The mica is also gray, brown, yellow, green, red, violet, or black; and commonly the least copious. The schoerl is generally black, and abounds in the granites that contain it. Hence the color of the granites depends princi- pally on that of the spar or schoerl. The red eranites consist commonly of white quartz, red felt-spar, and gray mica ; the gray ones of white quartz, gray, or violet felt-spar, and black mica. The black granites commonly contain schoeri

instead of felt-spar ; and the green usually con- tain green quartz. On exposing granite to the flame of a blow-pipe, the component ingredients separate from one another. Mr. Gerhard, hav- ing melted some in a crucible, found the felt- spar run into a transparent glass ; below it the mica lay in form of a black flag, the quartz re- maining unaltered. It melted somewhat better when all the three were powdered and mixed together; though even then the quartz was still discernible by a magiiifying glass. Hence we may explain the reason why grains of a white color are sometimes found in volcanic lavas. The mixture of mica prevents the silex or quartz from splitting or cracking ; and hence its infu- sibility and use in furnace-building. Granites are seldom slaty or laminated. In those of a close texture, the /quartz and schoerl predomi- nate. They take a good polish ; for which rea- son the Egyptians formerly, and the Italians still, work them into large pieces of ornamental architecture, for which they are extremely fit, as not being liable to decay in the air. VVallerius describes eighteen species of granites, besides many others akin to this genus. Those described by Cronstedt are, 1. Loose or friable, which comes from France, and is used at the brass- works for casting that metal in. 2. Hard or

compact, of wliich there are two varieties, red and gray. The former is met with of two kinds; viz. fine-grained, from Swappari in Lapland, or coarse-grained, from the province of Dalarne in Sweden. The gray, with other colors, is met with on the coast round Stockholm and Norland in Sweden. ‘ That granite may be produced,’ says Kirwan, ‘ at this day, from the agglutina- tion of its own sand, we liave an evident proof in the mole constructed in the Oder in the year 1722 ; it is 350 feet in length, fifty-four in height, of that breadth at top, and 144 at bottom ; the walls were made of blocks of granite, fas- tened with iron cramps, the chinks stopped with moss, and the space between the walls filled with granite sand ; this sand, by the oozing of the water impregnated with iron, or other causes, is now at last rendered so hard and compact as to prevent any more water from traversing it, and caiujot be distinguished from natural gra- nite.’ It is for this reason that granite is so much used in the improved roads round about London, which have been what is commonly called Macadamised. See Roads.

GRANITELLO, a genus of stones of the order of petrae, belonging to the class of saxa. There are two species : 1. That composed of dis- tinct particles, found in several of the moun- tainous parts of Sweden. In some of these there is a predominance of quartzose particles, in others of micaceous ; in which last case the stone is slaty, and easily split. 2. That composed of convoluted particles. It is met with of dif- ferent colors, as whitish, gray, greenish, and reddish. Both these kinds of stone are used in building furnaces, on account of the powerful resistance they make to the fire ; but the latter is preferable to the other, on account of its con- taining a little of a refractory clayish substance. It is likewise of great use in mills, where the follow is a coarse sand-stone.

GRANI’VOROUS, adj. LsLtgranumˆmdvoro. Eating grain ; living upon grain.

*Granivorous birds, as a crane, upon the first peck of their bills, can distinguish the qualities of hard bcdie.s, which the sense of men discerns not without masti- cation. Browne. Panick affords a soft demalcent nourishment, both for granivm-oui birds and mankind. Arbuthnot. GRANT, v.a. & n.s.\ From Fr, garantir, Graxt’able, adj. I Junius and Skinner ; Grantee’, «.s. *> perhaps, as Minsheu Grantor’, n. s. i thinks, from Lat. gra Gran’ted, part. J titito, or rather from gratia or gratificor. To admit that which is not yet proved ; to allow ; to yield ; to concede. There are four raeaiiings to this word, to give ; to convey ; to admit ; to bestow something which cannot be claimed by rigiit. A grantor is he by whom any grant is made : a gTanlee he to whom it is made. Grant, a gift; a boon; it has in law a special meaning ; and is ‘ A gift in writing of such a thing as cannot aptly be passed or conveyed by word only ; as rent, reversions,*

services, advowsons in gross, common in gross, tithes, &c., or made by such persons as cannot give but by deed, as the king, and all bodies politic; which differences be often in speech neglected, and then is taken generally for every gift whatsoever, made of any thing by any per- son; and he that granteth it is named the grantor, and he to whom it is made the grantee. A thing is said to be in grant, which cannot be assigned without deed.'

The God of Israel grant thee thy petition that thou hast asked of him. 1 Sam. xviii.

Then hath God also to the gentiles granted repent- ance unlo life. Acts xiii. 18.

Graunt us ladie shene

Eche of us, of thy grace a bone.

Chaucer. House of Fame. Madame I thus say sayid thci, wc be Folke that which he besechen the. That thou graunien us, now, gode fame And let our workes have gode name. Id,

This thing was granted and our other swore With full glad herte.

Id. Prologue to Canterbury Tales. All the land is the queen's, unless there be some graiit of any part thereof, to be shewed from her majesty. Spenser.

They father out of Scripture general rules to be followed in making laws ; and so, in effect, they plainly grant, that wo ourselves may lawfully make laws for the church. Hoolier.

But of this so large a grant, we arc content not to take advantage. Id.

Didst thou not kill tliis king ? — I grant ye. Shakspeare.

Suppose, which yet I grant not, thy desire A moment elder than my rival fire. Can chance of seeing first thy title prove ?

Dry den.

'Th\% grant destroys all you have urged before. Id.

Courtiers jusllc for a grant.

And when they break their friendship plead their

want. Id.

Grant that the fates have firmed, by their decree.

The Trojan race to reign in Italy. Id. JEneid.

To smooth the way for popery in Mary's time, the granteet were confirmed by the pope in the possession of the abbey -lands. Swifl.

GRANT (Sir William), an eminent lawyer, was born at Elchies, in the county of Moray, Scotland, in" the year 1755, and having com- pleted his education at the college of Aberdeen, removed to London, where lie enjoyed the pa- tronage and friendship of his uncle, a respecta- ble merchant. He was entered of the inns of court, and at the regular period admitted to the bar, after which he passed over to Leyden, where he studied the civil law. He next crossed the Atlantic, and, reaching Quebec, acted for some time as attorney general there, during the absence of that law officer. Shortly after his return he was elected to Parliament for the borough of Shaftesbury ; and afterwards in successive parliaments for Windsor and for Banffshire. He was also appointed soli citor-general to queen Charlotte, consort of George III., and afterwards made master of the rolls, and a privy-counsellor. His repu- tation as a lawyer is deservedly high, and there were fewer appeals from his decisions than from those of any of his predecessors. He died at Barton-house, Dawlish, Devonshire, on the 25th of May, 1832, in the 77th yeai of his age.

Grant, in law. To every good grant, it is said, the following things are requisite : 1. That there be a person able to grant. 2. A person capable of the thing granted. 3. That there be a thing grantable. 4. That it be granted in such manner as the law requires. 5. That there be an agreement to, and acceptance of, the thing grant- ed, by him to whom made. And, 6, There ought to be an attornment where needful. — Co. Lit. 73. But grants and conveyances are good without attornment of tenants, notice being given them of the grants, by stat. 4 Anne c. Id, § 9. Grants are taken most strongly against the grantor in favor of the grantee : the grantee himself is to take by the grant immediately, and not a stranger, or any in futuro ; and if a grant be made to a man and his heirs, he may assign at his pleasure, though the word ' assigns' be not expressed. — Lat. 1, Saund. 322. The use of any thing being granted, all is granted necessary to enjoy such use: and in the grant of a thing, what is requi- site for the obtaining thereof is included. — Co. Lit. 55. So that if timber trees are granted, the grantee

may come upon the grantor's ground to cut and carry them away. See Gifts.

Grant of the King. The king's grants are matters of public record : for the king's excel- lency is so high in the law, that no freehold may be given to, nor derived from, him, but by matter of record. To this end a variety of offices are erected, communicating in a regular subordina- tion one with another, through which all the king's grants must pass, and be transcribed and enrolled ; that the same may be inspected by his officers, who will inform him if any thing con- tained therein is improper, or unlawful to be granted. These grants, whether of lands, ho- nors, liberties, franchises, or aught besides, are contained in charters or letters patent; that is open letters, literse patentes : so called because tliey are not sealed up, but exposed to open view, with tlie great seal pendant at the bottom : and are usually directed or addressed by the

king to all his subjects at large. And therein they differ from certain other letters of the king, sealed also with his great seal, but directed to particular persons and for particular purposes : which therefore, not being designed for public inspection, are closed up and sealed on the out- side, and are thereupon called writs-close, literae clausae ; and are recorded in the close-rolls, in the same manner as the others are in the patent rolls. — 2 Comm. 346, c. 21.

Grant (Francis), lord CuUen, an eminent lawyer and judge of Scotland, was born about 1660, and, having entered as an advocate, made a distinguished figure at the Revolution, by op posing the old lawyers, who warmly argued on the inability of the convention of estates to make any disposition of the crown. The abilities he showed in favor of the Revolution recommended him to an extensive practice; in which he ac- quired so much honor, that, when the union between the two kingdoms was in agitation, queen Anne, without application, created him a baronet, with a view of securing his interest in that measure; and soon after made him a lord of session. The same talents that recommended him to this honorable office, were conspicuous in the discharge of it; which he continued for twenty years with the highest reputation ; when, after an illness which lasted but three days, he expired without agony on March 16th, 1726.

Grant (Charles), an eminent and most bene- volent East India proprietor and director, born in Scotland in 1746, was by the death of his fa- ther at the battle of CuUoden left to the care of his uncle, who sent him out to India. Here he soon found patronage in the civil service, and in 1770 returned to Scotland and married. In 1772 he went out to Bengal as a writer, and was shortly after appointed secretary to the board of trade. In this situation he became the patron of various Christian missions, and in

1790, on his return to England, obtained a seat in the East India direction, and in the house of com- mons. He now wrote his important Observa- tions on the State of Society among the As.atic Subjects of Great Britain, which in 1813 the house of commons caused to be printed for the use of its members. Mr. Grant was also one of the commissioners appointed by parliament to superintend the building of new churches; a member of the Society for promoting Christian Knowledge; and a vice-president of the Bible Society. Hisdeath took place October 31st, 1825. GRANTHAM, a borough and market town of Lincolnshire, on the road from London to York. It is supposed to have been a Roman station. It is governed by an alderman and twelve justices of the peace, a recorder, a coro- ner, an escheater, and twelve common-councillors. It has a fine large church with a stone spire, one of the loftiest in England, being 300 feet high ; and which appears to lean to one side. Gran- tham has a good free school, where Sir Isaac Newton received his first education, besides two charity schools. It sends two members to Par- liament, and is seated on the Witham, thirty miles south of Lincoln, and 110 north of London. GRANVILLE (George), lord Lansdowne, was descended from the family of Rollo, the first

duke of Normandy. At eleven years of age ne was sent to Trinity College, Cambridge, and at the age of thirteen admitted M. A., having, be- fore he was twelve, spoken a poetical address of his own composition to the duchess of York, when she visited the University. In 1696 his comedy called the She Gallants was acted at the theatre royal in Lincoln's Inn- fields, as was his tragedy called Heroic Love in 1698. In 1702 he translated into English the second Olynthian of Demosdienes. He was M. P. for the county of Cornwall in 1710; afterwards secretary of war, comptroller of the household, then treasurer, and one of the privy council. In 1711 he was created baron Lansdowne. On the accession of king George I. in 1714 he was removed from his treasurer's place; and in 1715 entered his protest against the bills for attainting lord Bo- lingbroke and the duke of Ormond. He entered into the scheme for raising an insurrection in the west of England ; and was committed to the Tower, where he continued two years. In 1719 he made a speech in the house of lords against the bill to prevent occasional conformity. In 1722 he withdrew to France, and continned abroad nearly ten years. At his return, in 1732, he published a fine edition of his Works in 2 vols, quarto. He died in 1735, leaving no male issue.

Granville, a considerable vpalled sea-port town on the coast of Normandy, in the depart- ment of La Manche. It stands on a peninsular rock, and has two suburbs. It has a consi- derable traffic with the neighbouring island of Jersey; and fisheries all along the coast. It sends out a number of vessels to Newfoundland. Population 5000. Twelve miles north-west of Avranches, and thirteen S.S.W. of Coutances.

Granville, a fertile country of North Caro- lina, in Hillsbury district, bounded on the south- east by Warren county, south by Wake, south- west and west by Orange, and north by Virginia. Williamsborough is the capital.

Granville, a post town of Washington county, New York, near which is a valuable marble quarry. It is twelve miles south-east of Wliitehall, and sixty north-east of Albany. Po- pulation 3717.

GRAN'ULE, n. s. -> ˆ Fr. granukr,

Gran'ulous, at//. I granulation ; Lat

ˆ \i[runu

Gran'ulary, adj.

runum. Small

Gran'ijlate, v. n. & u. a.i compact particles Granula'tion, 71. s. J like grains. To

granulate is to break into small masses or raise in small asperities ; it is also a surgical term,

Browne's Vulijar Krnntrs.

Wiih an excellent mi -.roscopc, where the natrcd eye did see but a green, powder, the assisted eye could discern particular granules, some bhie, and some yellow. Boyle (m Colours.

I have observed, in many birds, the gullet, before- its entrance into the gizzard, to be much dilated, and thick-set, or, as it were, granulated with a" multitude of glandules, each whereof was provided with its ex- cretory vessel. R"!/-

The juice of grapes, inspissated by heat, granulates into suoar. Sprat.

Tents in wounds, by resisting the growth of the little granulations of the flesh, in process of time har- den them, and in that manner produce a dstula.

Sharp's Surgery. Granulation, in chemistry, is an operation by which metallic substances are reduced into small roundish particles, to facilitate their com- bination with other substances. This operation consists only in pouring the melted metal slowly into a vessel filled with water, which is in the mean time to be agitated with a broom. With melted copper, however, which is apt to explode with great violence on the contact of water, some precautions are to be observed. In the brass works at Bristol, copper is granulated, without danger of explosion, by letting it fall in small drops into a large cistern of cold water covered with a brass plate. In the middle of the plate is an aperture in which is secured with Sturbridge clay a small vessel, whose capacity does not ex- ceed a spoonful, perforated with many minute holes through which the copper passes. A stream of cold water passes through the cistern. If allowed to grow hot, the copper will fall to the bottom, and run into flat pieces instead of gra- nulating. Lead or tin may be granulated by pouring them when melted into a box ; tiie in- ternal surface of which is rubbed with powdered chalk, and the box strongly shaken till the grains have become solid. Metals are granu- lated, because their ductility renders them inca- pable of being pounded, and because filing is long and tedious, and might render the metal impure by an admixture of iron from the file. GRAPE, M.S. ˆ Fr. grappc ; Ita

Grape'stoxe, n.s. (ˆWan grappa, graspo ;

Grape'-hyacinth, 71. s. (Belg. krappe ; Teut. Grape'-suot, 7(. s. J truuben. The fruit

of the vine, and the seed contained in the grape ; a flower ; shot of a peculiar kind used in battle. And lliou shall not glean thy vineyard, neither shalt thou gather every grape of thy vineyard ; thou shalt leave them for the poor and stranger.

Lev. xix. 10. For no man, at the firsle stroke, Nc may not fcl adounc an oke — Nor of the reisins huve the wine Till grapes be ripe and wel afinc. <

Chaucer. Romuunt of the Rose. And sometimes flourcs spring as m a niede, Sometimes a vine and grapes white and redo.

/(/, Tlie Frankeleines Tale. Nay in Death's liand the grapetlone proves As strong as thunder is in Jove's. Cowley.

Anacreon, for thy sake I of the grape no mention make ; Ere my Anacreon by thee fell. Cursed plant, I loved tlicc well. Id.

When obedient Nature knows his wil., A fly, Agrapestone, or a hair can kill. Prior,

Here are the vines in early flower descried. Here grapes discoloured on the sunny side. Pope. Within a cable's length their vessels lay Off Ismail, and commenced a cannonade Which was returned with interest I may say. And Dy a fire of musquetry and grape And shells and shot of every size and shape.

Byron.

Grape. See Vitis.

Grape Hyacynth. See Hyacinthus.

Grape Mangrove, Grape Sea-side. Two species of polygonum.

Grape-shot, in artillery, is a combination of small shot, put into a thick canvas bag, and corded strongly together, so as to form a kind of cylinder, whose diameter is equal to that of the ball adapted to the cannon. The number of shot in a grape varies according to the service or size of the guns : in sea-service nine is always the number ; but by land it is increased to any number or size, from an ounce and a quarter in weight to three or four pounds. In sea-service the bottoms and pins are made of iron, whereas those used by land are of wood.

The following statement exhibits the number and sorts of shot contained in the grape, for guns of different species : —

Guns.

42 pounders

32

24

18

12 ; —

4

Species of

Shot in the

Grape.

Number in each.

Number

in each

Box.

4 1b.

3

n-

1

13 oz.

4

4

6

8

10

12

20

20

GRAPHICAL, adj. 3 Greek ypaˆw, to de-

Graph'ically, adv. > scribe. Well delineated : in a picturesque manner.

Write with a needle, or bodkin, or knife, or the like, when the fruit of trees are young; for, as they grow, so the letters will grow more large and graphi-cal. Bacon's Natural History.

The hyena adorata, or civet-cat, is delivered, and graphically desci-ibed by Castellus. Browtie.

GRAPHOMETER, a mathematical instru- ment, otherwise called a semicircle ; the use of which is to observe any angle whose vertex is at the centre of the instrument in any plane (though it is most commonly horizontal, or nearly so), and to find how many degrees it contains.

GRA'PNEL, n.s. ¥r. grapin. A small an- chor belonging to a little vessel. A grappling iron, with which in fight one ship fastens on ano- ther.

In goth the grapenel so full of crokes ; Among the ropes, ran the shering hokes.

Chaucer. Legende of good Women.

Grapnells, or Grapplings, are fitted with four or five flukes or claws, and commonly used to ride a boat or other small vessel.

GRAP'PLE, V. n., v. a. & J Teut. grabbe- Grap'plement. [n.s. S len, grappen ; from Goth, graff, kraff, the hand. — Thomson. Ger. krappeln, to seize. To contend as wrestlers ; to engage in close fight : an iron instrument by which one ship fastens on another.

As two wild boares together grappling go, Chaufing and foming choler each against his fo.

Spenser's Faerie Queene. They catching hold of him, as down he lent. Him backward overthrew, and down him stayed With their rude hands and griesly grapplement.

Spenser. In the grapple I hoarded them ; on the instant they got clear of our ship, so I alone became their prisoner. Shakspeare, Hamlet.

Grapple your minds to sternage of the navy. And leave your England as dead midnight still.

Shakspeare. I'll in my standard bear the arms of York, To grapple with the house of Lancaster. Id.

For Hippagines, vessels for the transporting of horse, we are indebted to the Saliminians ; for grap- pling hooks to Anacharsis. Heylin. They must be also practised in all the locks and gripes of wrestling, as need may often be in fight to tugg, or grapple, and to close. Milton. As when earth's son, Antaeus strove With Jove's Alcides, and, oft foiled, still rose Fresh from his fall, and fiercer ˆraˆiipte joined. Throttled at length in the air, expired and fell..

Id. Living virtue, all atchievements pMt, Meets envy, still to grapple with at

last.

Waller. Sometimes, from fighting squadrons of each fleet. Two grappling iEtnas on the oeean meet. And English fires with Belgian flames contend.

Dry den. Or did his genius Know mine the stronger demon, feared the grapple, And, looking round him, found this nook of fate. To skulk behind my sword. Id. Don Sebastian.

Does he think that he can grapple with divine ven- geance, and endure the everlasting burnings ? South. Antaeus here and stern Alcides strive. And both the grappling statues seem to live.

Addison, Like one who grapples with his enemy And strives to strangle him. Byron.

GRASP, V. a., V. n., & n. s.) Teut. graspen ; Grasp'er, n. s. S Ital. graspare. To

hold ; to seize ; to catch ; to struggle ; figura- tively to encroach or covet. The substantive signifies possession, or the power of seizing.

And hastily retourned into that place age. And fond this blynd seching on hondes and on kne. Grasping all aboute to find, that he had lore.

Chaxwer. The Merchantes Second Tale. See, his face is black, and full of blood ; His hands abroad displayed, as one thzX graspl And tugged for life. Shakspeare. Henry Vi..

I would not be the villain that thou think'st For the whole space that's in the tyrant's grasp, 4nd the rich East to boot. Id. Macbeth.

They looked upon it as their own, and had it even within their grasp. Clarendon.

This grasping of the militia of the kingdom into their own hands, was desired the summer before.

Id. Within the direful ˆrojrp Of savage hunger, or of savage heat.

Milton.

In his right hand Grasping ten thousand thunders, which he sent Before him, such as in their souls infixed Plagues. Milton's Paradiie Lost.

O fool that I am, that thought I could grasp water, and bind the wind. Sydney.

Doom, as they please, my empire not to stand, I'll grasp my sceptre with my dying hand. Dry den. Like a miser 'midst his store. Who grasps and grasps till he can hold no more.

Id. This band and sword hath been acquainted well ; It would have come before into my grasp. To kill the ravisher. Id. Don Sebastian.

The left arm is a little defaced, though any one may see it held something in its grasp formerly.

Addison. Kings, by grasping more than they can hold. First made their subjects, by oppression, bold.

Dennis. So endless and exorbitant are the desires of men, that they will grasp at all, and can form no scheme of perfect happiness with less. Swift.

For what are men who grasp at praise sublime. But bubbles on the rapid stream of time ? Youug. GRASS, n. S.& u. «.^ Sax. jjijei-; Swed.

Grass'-plot, n. s. Grass'y, adj. Gras'siness, n. s. Gra'sier, n. s.

Goth., and Belg. gras ; Teut. grass ; a Greek aypa)ffrtc(aypo(,',a field.) — Minsheu. The com-

Grass'-iiopi'er, 11. s. f mon herbage of the Grass'-pola, n. s. Graze, v. n. & v. Gra'zer, n. s.

Gra'zIFR, 71. s.

field; a level covered with grass. Grasier and grazier, one who feeds cattle. Grass-

hopper, a small insect that hops in the summer. Grass-pola, and grass of Parnassus, plants. Graze, to eat grass ; to touch slightly over a surface ; to feed.

Ye arc grown fat as the heifer at grass, and bellow as bulls. Jer, 1. 11.

■ *j but one within, wel might*

Perceve all tho that yoden, there without.

Into the felde, that wos, on every side. Covered with corn and grass, that, out of doubt, Tho one would seken all the worlde wide. So rich a field could not be espyde.

Chaucer. The Floure and the Leafe. And as I could, this freshe floure I grette, Kncling alwaie — till it unclosed was — Upon the small, and soft, and swete graa That wos with floures swete embrouded.

Id. Prologue to the Legende of Good Women. Land arable, driven, or worn to the proof. With oats yc may sow it, the sooner to grass. More soon to be pasture, to bring it to pass.

Tusser. Ne did he leave the mountains bare unseen. Nor the rank grassy fens delights untryed.

Spenser. And shriU grasshoppers chirped them round ; All which the ayric echo did resound.

Id. Virgil's Gnat. Mark then a bounding valour in our Knglish, That being dead, like to the bulleU grazing. Breaks out into a second course of mischir.f. Killing in relapse of mortality.

Shakspeare. Henry V. Her waggon spokes made of long spinners' legs. The cover of the wings of grasshoypers. Shakspeare. Here on tliis grass-plot, in this ycry place. Come and sport. Id. Tempest.

The greatest of my pride is to see my ewes graze, and my lambs suck. Id. As You Like It.

GVo»e where you will, you shall not house with me.

Shakspeare. Jacob grazed his uncle Laban's sheep. Id.

As every state lay next to the other that was op- pressed, so the fire perpetually grazed. Bacon,

All graziers prefei their cattle from meaner pas- tures to better. Id.

Physicians advise their patients to move into airs which are plain champaigns, but grazing, and not overgrown with heath. Id.

The sewers must be kept so as the water may not stay too long in the spring ; for then the ground con- tinueth the wet, whereby it will never graze to pur- pose that year. Id. O happy man, saith he, that, lo ! I see Grazing his cattle in those pleasant fields. If he but know his good ! Daniel's Civil War. Gentle peace, which fiUeth the husbandman's bams, the grazier's folds, and

the tradesman's shop,

Howel, I was at first as other beasts, that graze The trodden herb of abject thoughts and low.

Milton, Raised of grassy turf Their table was, and mossy seats had round. Id. The beef being young, and only grass-iei, was thin, light, and moist, and not of a substance to en- dure the salt. Temple,

The part of your garden next your house should be a parterre for flowers, or grass-plots bordered for flowers. Id.

Their steeds around. Free from their harness, graze the flowery ground.

Dryden. Leaving in the fields his grazing cows. He sought himself some hospitable house. Id.

The more ignoble throng Attend their stately steps, and slowly graze along.

Id.

This Neptune gave him, when he gave to keep

His scaly flocks that graze the watery deep. Id.

The most in fields, like herded beasts, lie down.

To dews obnoxious, on the grassy floor. Id.

Some graze their land till Christmas, and some longer. Mortimer.

A third sort ol grazing ground is that near the sea, which is commonly very rich land. Id.

They are much valued by our modern planters to adorn their walks and grass-plots.. Id.

His flock daily crops Their verdant dinner from the mossy turf Sufficient : after them the cackling goose. Close grazier, finds wherewith to ease hor want.

Philii)s There silver lakes with verdant shadows crowned. Disperse a grateful chillness all around ; The grasshopper avoids the untainted air. Nor in the midst of summer ventures there. Addison. The women were of such an enormous stature, that we appeared as grasshoppers before them.

Id. Spectator. His confusion increased when he found the alder- man's

father to be a grazier. Id.

When the fresh Spring in all her state is crowned. And high luxurainf grass o'erspreads the ground. The lab'rcr with bending scythe is seen Shaving the surface of the weaving green. Gay.

Tho lambs with wolves shall graze the verdant mead.

Pope. He hath a house and barn in repair, and a field or two to graze his cows, with a garden and orchard.

Sicift, But for a blooming nymph will pass. Just fifteen, coming summer's jr«i«. Id,

GRASSES.

Grass, in botany, is defined to be a plant hav- ing simple leaves, a stem generally jointed and tubular, a husky calyx (called gluma), and the seed single. Hence wheat, oats, barley, &c., are properly grasses ; while clover, and some other similar plants, are not grasses, though so fre- quently called by that name. Of grass the leaves are food for cattle, the small seeds for birds, and the larger grain chiefly for man. And it is ob- servable that nature has so provided that cattle, in grazing, seldom eat the flower intended to produce seed, unless compelled by hunger.

*Grasses, Culmiferous, may be divided into two general classes for the purposes of the farmer, to which it might be of use for him to attend, viz. 1. Those which, like the common annual kinds of corn, run chiefly to seed-stalks ; the leaves gradually decaying as these advance towards per- fection, and becoming totally withered or falling off entirely when the seeds are ripe. Rye-grass belongs to this class in the strictest sense. To it likewise may be assigned the vernal grass, dog's- tail-grass, and fine bent grass. 2. Those whose leaves continue to advance even after the seed- stalks are formed, and retain their verdure and succulence during the whole season, as is the case with the fescue and poa tribes of grasses, whose leaves are as green and succulent when the seeds are ripe, and the flower-stalks fading, as at any other time. 'It is wonderful,' Mr. Stillingfleet remarks, * to see how long mankind has neglected to make a proper advantage of plants of such importance, and which, in almost every country, are the chief food of cattle. The farmer, for want of distinguishing and selecting grasses for seed, fills his pastures either with weeds, or bad or improper grasses ; when, by making a right choice, after some trials, he might be sure of the best grass, and in the greatest abundance that his land would admit. At present, if a farmer wants to lay down his land to grass, what does he do ? He either*

takes his seeds indiscriminately from his own foul hay-rick, or sends to his next neigh- bour for a supply. By these means, besides a certain mixture of all sorts of rubbish, which must necessarily happen, if lie chance to have a large proportion of good seeds, it is not unlikely but that what he intends for dry land may come from moist, where it grew naturally, and the con- trary. This is such a slovenly method of pro- ceeding as, one would think, could not possibly prevail universally ; yet this is the case as to all grasses except the darnel grass, and what is known in some few counties by the name of the Suffolk grass ; and this latter is owin?, I believe, more to the soil than any care of the husband- man. Now, would the farmer be at the pains of separating, once in his life, half a pint or a pint of the diff"erent kinds of grass seeds, and take care to sow them separately, in a very little time he would have wherewithal to stock his farm properly, according to the nature of the soil, and might at the same time spread these seeds sepa- rately over the nation, by supplying the seed- shops. The number of grasses fit for the farmer is, I believe, small ; perhaps half a dozen or half a score are all he need to cultivate ; and how small the trouble would be of such a task, and how great the benefit, must be obvious to every

one at first sight. Would not any one be looked on as wild who should sow wheat, barley, oats, rye, peas, beans, vetches, buck-wheat, turnips, and weeds of all sorts together ? yet how is it much less absurd to do what is equivalent in re- lation to grasses ? Does it not import the farmer to have good hay and grass in plenty ? and will cattle thrive equally on all sorts of food ? We know the contrary. Horses will scarcely eat hay that will do well enough for oxen and cows. Sheep, says Linnaeus, are particularly fond of one sort of grass, and fatten upon it faster tkan any other in Sweden. And may they not do the same in Britain ? How shili we know till we have tried V Tracts relating to JSIatural His- tory/.

1 . Annual meadow grass, poa annua. — ' This grass,' says Mr. Stillingfleet, ' makes the finest turf. It grows every where by way sides, and on rich sound commons. It is called in some parts the Suffolk grass. I have seen whole fields of it in High Suff"olk, without any mixture of other grasses ; and, as some of the best salt butter we have in London comes from that county, it is most likely to be the best grass for the dairy. I iiave seen a whole park in Suffolk covered with this grass ; but whether it aff'ords good venison I cannot tell, having never tasted of any from it. I should rather think not, and that the best pas- ture for sheep is also the best for deer. However this wants trial. I remarked on Malvern Hill something particular in relation to this grass. A walk that was made there, for the convenience of the water-drinkers, in less than a year was co- vered in many places with it, though I could not find one single plant of it besides in any part of the hill. This was no doubt owing to the frequent treading, which above all things makes this grass flourish ; and therefore it is evident that rolling

must be very serviceable to it. It has been objected that this grass is not free from bents, by which word is meant the flowering stems. I answer, that this is most certainly true, and that there is no grass without them. But the flowers and stems do not grow so soon brown as those of other grasses ; and, being much shorter, they do not cover the radical leaves so ,much ; and therefore this grass aff'ords a more agreeable turf without mowing than any other whatever that I know of.' The seeds of this species diop otf before they are dry, and, to ap- pearance, before they are ripe. The utmost care is therefore necessary in gathering the blades, without which very few of the seeds will be saved. It ripens from the middle of April to so late, it is believed, as the end of October ; but mostly dis- appears in the middle of the summer. It grows in any soil and situation, but rather affects the shade.

*2. Bulbous fox-tail gras5,alopecurus bulbosus is recommended by Dr. :'Anderson, in his Essa>; on Agriculture, &c., as promising on some occaˆ sions to afford a valuable pasture 'grass. * Jj seems chiefly,' he observes, 'to delight in j moist soil, and therefore promises to be only fit for a meadow pasture grass.' The quality that first recommended it to his notice vi'as, the un, usual firmness that its matted roots gave to the surface of the ground, naturally soft and moist,*

m which it grew ; which seemed to promise that it might be of use upon such soils, chiefly in preventing them from being much poached by the feet of cattle which might pasture upon them. Mossy soils, especially, are so much hurt

Linnaeus, in his Flora Suecica (art. 95) savg, that the bran of this grass will cure horses trou- bled with botts, if kept from drinking for some hours. Concerning this grass we have the fol- lowing information by]\Ir. Stillingfleet. Mr.

be of use in preventing it deserves to be attend- ed to.

3. Cock's tail, or feather-grass, stipa pennata. See Stipa.

4. Creeping meadow grass, poa compressa, ac-

by poaching that any thing which promises to Dean, a very sensible farmer at Ruscomb, Berk- shire, assured me that a field, always lying under water, of about four acres, was covered with a kind of grass, that maintained five farm horses in good heart from April to the end of harvest, without giving them any other kind of food, and cording to' Dr. Anderson, seems to be the

most that it yielded more than they could eat. He, valuable grass of any of this genus. Its leaves at my desire, brought me some of the grass, which are firm and succulent, of a dark Saxon-green proved to be the flote fescue with a mixture of color, and grow so close upon one another as to the marsh bent ; whether this last contributes form the richest pile of pasture-grass. The flower- much towards furnishing so good pasture for stalks, if suffered to grow, appear in sufficient horses, I cannot say. They both throw out roots quantities; but the growth of these does not at the joints of the stalks, and therefore are likely prevent the growth of the leaves, both advancing to grow to a great length. In the index of du- together during the whole summer; and, when bious plants, at the end of Ray's synopsis, there the stalks fade, the leaves continue as green as is mention made of a grass, under the name of before. Its leaves _are 'much larger and more gramen caninum supinum longissimum, growing abundant than the common meadow-grass, poa not far from Salisbury, twenty-four feet long, trivialis; and therefore it better deserves to be This must by its length be a grass with a creep- cultivated. ■ ing stalk ; and that there is a grass in Wiltshire,

5. Creeping soft grass, holcus lunatus. See growing in watery meadows, so valuable that an IIoLcus. acre of it lets from £lO to £12, I have been in-

6. Crested dog's-tail grass, cynosurus crista- formed by several persons. Tliese circumstances tus. Mr. Stillingfleet imagines this grass to be incline me to think it must be the flote fescue ; proper for parks, from his having known one, but, whatever grass it be, it certainly must deserve where it abounds, that is famous for excellent ve- to be enquired after.'

nison. He recommends it also, from experience, 9. Great meadow grass, TposLTˆXBtensis, seems to as good for sheep ; the best mutton he ever tasted, approach in many respects to the nature of the next to that which comes from hills where the purple fescue ; only that its leaves are broader, purple and sheep's fescue, the fine bent, and the and not near so long; being only about a foot or silver-hair grasses abound, having been from sixteen inches at their greatest length. Like it, sheep fed with it. He adds, that it makes a very it produces few seed-stalks and many leaves, and fine turf upon dry sandy or chalky soils ; but, un- is an abiding plant. It affects chiefly the dry less swept over with the scythe, its flowering stems parts of meadows, though it is to be found on will look brown; which is the case of all grasses most good pastures. It is very retentive of its which are not fed on by a variety of animals, seeds, and may therefore be suffered to remain For that some animals will eat the flowering till the stalks are quite dry. It blossoms in the stems is evident by commons, where scarcely any beginning of June, and its seeds are ripe in July, parts of grasses appear but the radical leaves, 10. Meadoic fox-tail grass, alopecurus pra- This grass is said to be the easiest of the whole tensis. Linnaeus says, this is a proper

grass to group to collect a quantity of seeds from. It sow on grounds that have been drained. Mr. flowers in June, and is ripe in July. Stillingfleet was informed, that the best hay

7. Fine bent grass, agrostis capillaris, is re- which comes to London is from the meadows commended by Mr. Stillingfleet, from his having where this grass abounds. It is scarce in many always found it in great plenty on the best sheep parts of England, particularly Herefordshire, pastures, in the different counties of England that Berkshire, and Norfolk. It miˆht be gathered are remarkable for good mutton. This grass at almost any time of the year from hay ricks, as flowers and ripens its seed the latest of them all. it does not shed its seeds without rubbing, which It seems to be lost the former part of the year, is the case of but few grasses. It is amongst but vegetates luxuriantly towards the autumn, the most grateful of all grasses to cattle. It is It appears to be fond of moist ground. It retains ripe about the end of June.

its seed till full ripe, flowers the latter end of 11. Mountain hair grass, aira flexuosa. See July, and is ripe the latter end of August. The No. 7, and Aira.

same may be said of the mountain and silver-hair 12. New American grass. A new grass from grasses. America, named agrossis cornucopise, was some

8. Flote, or foatmg fescue grass, festuca flu- time ago much advertised and extolled, as pos- itans. See Festuca. It is surprising that the sessing the most wonderful qualities, and the seeds of this plant, which are used as nutritious seeds of it were sold at the enormous rate of £68 food in Sweden, Germany, &c., have hitherto the bushel. But we have not heard that it has been neglected in Britain, as they are so at all answered pxpectation. On the contrary, easily collected and cleansed. There is a clam- Dr. Anderson, in his Bee (vol. i. p. 38) says, miness on the ear of the flote fescue, when the that it has upon trial been found to be good sfˆeds are ripe, that tastes like honey ; and for for nothing. Of the seeds sown, few evei this reason perhaps they are called manna seeds, germinated : but enow of plants made their ap-

pearance, to ascertain that the grass, in respect of quality, is among the poorest of the tribe ; and that it is an annual plant, and altogether unpro- fitable to the farmer.

13. Purple fescue grass, festuca rubra. See Festuca.

14. Ri/e grass, hordeum murinura. Rye grass is properly the secale villosum. Perennial dar- nel, loUium perenne, is also, in some counties of England, improperly called rye grass.

15. Silver-hair grass, aira caryophyllea. See No. 7, and Aira.

16. Sheep's fescue grass, festuca ovina. See Festuca. This is perhaps the most valuable grass of all. It is observed to grow and thrive in lands of all qualities and in all situations, from they dryest up-land pastures to the very moist part of meadows. It does not part with its seeds till some time after they are ripe, and even quite dry. It makes the thickest and closest pile of any of them, and sends up but few flower-stalks in proportion to its leaves It flowers in June, and is ripe in July.

17. Vernal grass, anthoxanthum odoratum, grows very commonly on dry hills, and likewise on sound rich meadow land. It is one of the earliest grasses we have; and from its being found on such kinds of pastures as sheep are fond of, and whence excellent mutton comes, it is most likely to be a good grass for sheep pas- tures. It gives a grateful odor to hay. In one respect it is very easy to gather, ai it sheds its seeds upon the least rubbing. A correspondent of the Bath Society, however, mentions a diffi- culty that occurs in collecting them, owing to its being surrounded with taller grasses at the time of its ripening, and being almost hid amongst them. If it be not carefully watched when nearly ripe, he observes, and gathered within a few days after it comes to maturity, great part of the seed will be lost. The twisted elastic awns, which adhere to the seed, lift them out of their receptacles with the least motion from the wind, even while the straw and ear remain quite erect. It is found mostly in the moist parts of meadows ; very little of it on dry pastures. It flowers about the beginning of May, and is ripe about the middle of June.

Grass of Parnassus, parnassa, Latin. A plant. This plant is called parnassa, from Mount Parnassus, where it was supposed to grow; and, because the cattle feed on it, it obtained the name of grass, though the plant has no resem- blance to the grass kind.

Grass, Orcheston. See Orcheston.

Grass Vetch. See Lathybus and Triti-

f UM.

Grass Walks are made, for the most part, not by sowing grass seeds, but by laying turfs : and indeed the turfs from a fine common or down are much preferable to sown grass : but, if walks or plats are to be made by sowing, the I e t %vay is to procure the seed from those pas- tures where the grass

is naturally fine and clear; or else the trouble of keeping it from spiry or benty grass will be very great, and itwill scarcely ever look handsome. To sow grass walks, the ground must be first dug ; and, when it has been dressed and laid even, it must be carefully raked

over, and all the clods and stones taken off", and then covered over an inch thick with good mould. The seed is to be sown pretty thick, that it may come up close and short ; it must then be raked over again, to cover the seed, that if the weather should be windy, it may not be blown away. Where grass is sown in gardens, either for lawns or walks, there should always be a good quantity of the white trefoil or Dutch clover sown with it ; for this will make a fine turf much sooner than any other sown grass, and will re- tain a better verdure than any other of the grass tribe. To keep grass walks handsome, and in good order, sow in autumn fresh seed over any places that are not well filled, or where the grass is dead : but nothing improves grass so much as mowing and constant rolling. When turf is laid in gardens, it is a general practice to cover the surface of the ground under the turf, either with sand or very poor earth, in order to keep the grass fine, by preventing its growing too rank. This is proper for very rich ground, but not for middling or poor land ; for, when this is practised in such places, the grass will soon wear out and decay in patches. When turf is taken from a common or down, such ought to be chosen as is free from weeds : and, when it is designed to remain for years without renewing, a dressing should be laid upon it every other year, either of very rotten dung, ashes, or, where it can easily be procured, rotten tan ; but these dressings should be laid on early in the winter, tliat the rain may wash them into the ground, otherwise they occasion the grass to burn when the warmth of the summer begins. When grass is thus dressed, and well rolled and mowed, it may be kept very beautiful for many years ; but where it is not dressed, or fed with sheep, it will rarely continue handsome more than eight or ten years.

Grass Wrack. See Zostera.

Grass, a river of the state of New York, North America, which enters the St. Lawrence near St. lieges Island. It has a course of 120 miles through St. Lawrence county.

GRASSE, a well-built town of the depart- ment of the Var, France, standing in a natural amphitheatre surrounded with orangeries, and flower gardens, particularly those devoted to the culture of roses. Vines and olives also add to the attractions of its charming scenery. It is a good trading town in wine, liquors, silk, lea- ther, and soap. Population 12,500. It is nine miles W. N. W. of Antibes, and nineteenW.S.W. of Nice.

GRASSMERE Water, a beautiful lake in Westmoreland, near Ambleside

and Rydal. Its banks are formed into small bays, by bold projecting eminences, some of rock and some of turf.

GRATAROLUS (William), a learned phy- sician of the sixteenth century, born at Bergamo in Italy. lie taught medicine with reputation at Padua; but, having embraced the Protestant religion, he retired to Switzerland, where he was made professor of physic. He died at Basil in 1568, aged fifty-two. He wrote several curious works in Latin; amongst which are, 1. The Manner of Preserving and Improving the Me-

mcry. 2. Of Preserving in Health Travellers, Men of Letters, Magistrates, and Studious Per- sons, &c.

GRATE,i;. a. fcu-n."^ Tt. gratter ; old Fr. Gra'ter, n. s. y grater ; Ital. grattare,

Gra'tingly, adv. j of Lat. rado, to chafe. To rub or wear by attrition; to form a sound by means of grating hard bodies together ; figura- tively to offend the ear by harsh and discordant notes. Grater, a coarse file with which soft bo- dies are pulverised.

The pure fetters on his shinnes grete.

Chaucer. The Knightes Tale. Thereat enraged, soon he 'gan upstart. Grinding his teeth, and grating liis great heart.

Spenser. Thereat the fiend his gnashing teeth did grate.

Id. We are Bot so nice as to cast away a sharp knife, because the edge of it may sometimes grate.

Hooker. Blind oblivion swallowed cities up. And mighty states characterless are grated. To dusty nothing.

Skakspeare. Troilus and Cressida. Wherein have you been galled by the king ? What peer hath been suborned to grate on you. That you should seal this lawless bloody book Of forged rebellion with a seal divine ?

Skakspeare. The grating stock of wrathful iron arms. Id.

I have grated upon my good friends for three re- prieves for you, or else you had looked through the grates. Id.

On a sudden open fly With impetuous recoil, and jarring sound. The infernal doors, and on their hinges grate Harsh thunder, that the lowest

bottom shook Of Erebus. Milton's Paradise Lost.

Just resentment and hard usage coined The unwilling word, and grating as it is. Take it for 'tis thy due. Dryden's Don Sebastian. Paradoxing is of great use ; but the faculty must be so tenderly managed as not to grate upon the truth and reason of things. L'Estrange.

I never heard him make the least complaint, in a case that would have grated sorely on some men's patience, and have filled their lives with discontent.

Locke. This grated harder upon the hearts of men.

South. If the particles of the putty were not made to stick fast in the pitch, they would, by rolling up and down, grate and fret the object metal, and fill it full of little holes. Newton's Opticks.

This habit of writing and discoursing, wherein I unfortunately differ from almost the whole kingdom, and am apt to grate the ear of more than I could wish, was acquired during my apprenticeship in Lon- don. Swift.*

They have been partial in the gospel, culled and chosen out those softer and more gentle dictates which would less grate and disturb them.

Decay of Piety. Tender handed touch a nettle. And it stings you for your pains. Grasp it like a man of mettle. And it soft as silk remains.

So it is with common natures. Treat them gently, they rebel.

But bo rough as nutmeg-ˆrotcr#. And the rogues obey you well. A. Hill,

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Grate, n. s. Ital. grata , Lat. crates. A partition made with bars placed near to one ano- ther, or crossing each other, such as in cloysters or prisons; the range of bars within which fires are made.

And so befell, by aventure or cas.

That thurgh a window ihikke of many a barre

Of yren gret, and square as any epane.

He cast his eyen upon Emilia.

Chaucer. The Knightes Tale.

I have grated upon my good friends for three re- prieves for you, and your couch fellow, Nim : or else you had looked through the grates, like a geminy of haboons. Skakspeare.

Out of a little grate his eyes he cast Upon those bordering hills, and open plain.

Daniel.

A fan has on it a nunnery of lively black-eyed vestals, who are endeavoring to creep out at the grates.

Addison.

My dear is of opinion that an old-fashioned grate consumes coals, but gives no heat. Id. Spectator.

Grates for Fires are composed oi ribs of iron placed at small distances from one another, so that the air may have sufficient access to the fuel, and the accumulation of the ashes, which would choke the fire, may be prevented. Grates seem peculiarly adapted to the use of pit-coal, which requires a greater quantity of air to make it burn more freely than other kinds of fuel. The hearths of the Britons seem to have been fixed in the centre of their halls, as is yet prac- tised in some parts of Scotland, where the fire is nearly in the middle of the house, and the family sit all around it. Their fire-place was perhaps nothing more than a large stone, depressed a little below the level of the ground, and thereby adapted to receive the ashes. About a century ago, it was only the floor of the room, with the addition of a bank of clay. But it was now changed among the gentlemen for a portable fire pan, raised upon low supporters, and fitted with a circular grating of bars. Such were in use among the Gauls in the first century, and among the Welsh in the tenth. See Fire-places.

GRATE'FUL, adj. Grate'fully, adv. Grate'fulness, n. s. Gratifica'tion, n. s. Grat'ify, v. a. Gra'tis, adj. Grat'itude, n.s. Gratu'itous, adj. Gratu'ity, n.s. Geatu'itously, adv. Grat'ilate, v. a. Gratula'tion, n. s.

Fr. gratuit ; Lat. grains, gratificor, gra-

tulor, gratuifus. Gratefulness implies a due sense and esti- mation of favors re- s-ceived : the quality of being acceptable and pleasing. To gratify is to afford indul- gence or pleasure. A gratuitous act is volun- tary as opposed to

Grat'ulatory, adj. J compulsion. A gratuity, a free gift. To grata late is to salute with expressions of joy.

They are the first gratulations wherewith our Lord and Saviour was joyfully received at his entrance into the world, by such us in their hearts, arms, and bow- els embraced him. Hooker. Forbid That our rcnownod Rome, whose gratitude Tow'rtis her deserving chiUlrcn is enrolled. Should now eat up her own ! Skakspeare. The people cry you mock them ; and, of late. When corn was given them gratis, you repined.

They solii themselves, but thou, like a kind fellow, gav'st thyself away gratis, and I thank thee for thee.

Shakspeare. To gratify the good Andronicus, And gratulate his safe return to Rome, The people will accept whom he admires. Id. Whither away so fast ? — No farther than the tower. To gratulate the gentle princes there. Id.

■*Whatsoever is ingrate at first, is made grateful by custom ; but whatsoever is too pleasing at first, grow- eth quickly to satiate. Bacon.*

Yet give thy jealous subjects leave to doubt. Who this thy 'scape from rumour gratulate. No less than if from peril ; and devout. Do beg thy care unto thy after state. Ben Jonson. Blessings beforehand, ties oi gratefulness , The sound of glory ringing in our ears.

Herbert. A man will endure the pain of hunger and thirst, and refuse such meats and drinks as are most grateful to his appetite, if he be persuaded that they will en- danger his health. Wilkins. The debt immense of endless gratitude.

Milton. The earth Gave signs of gratulation, and each hill. Id. He as new waked, tlms gratefully replyed. Id. A grateful mind By owing owes not, but still pays. Id.

Now night her course began, and over Heaven Inducing darkness, grateful truce imposed Her silence on the odious din of war ; Under her cloudy covert both retired, Victor and vanquished. Id. Paradise Lost.

This place is the more grateful to strangers, in res- pect that it being a frontier town, and bordering upon divers nations, many languages are understood here. Browne's Travels. A Laconian knight having sometime served him ■with more gratefulness than good courage defended liim.

Sidney.

The taking of use, though he judged lawful, yet never approved by practice, but lent still gratis both to friends and strangers. Fell.

You steer between the country and the court, "Sot gratify whate'er the great desire, Nor grudging give what publick needs require.

Dryden. Years of service past. From grateful souls exact reward at last. Id. Since nature could behold so dire a crime, 1 gratulate at least my native clime. That such a land, which such a monster bore. So far is distant from our Thracian shore. Id.

Enough remains for household charge beside. His wife and tender children to sustain. And gratefully to feed his dumb deserving train.

Id. Virgil. But pride stood ready to prevent the blow ; For who would die to gratify a foe ? Id. Fables. Kindred are no welcome clients, where relation gives them a title to have advice gratis. L'Estrange.

We mistake the gratuitous blessings of heaven for the fruits of our own industry. Id.

The second motive they had to introduce this gra- tuitous declination of atoms, the same poet gives us.

Ray. A palled appetite is humorous, and must be grati- fied with sauces rather than food. Tatler.

A thousand little impertinences are very gratifying to curiosity, though not improving to the understand- ing. Addisnn.

They are incapable of any design above the present gratijicaiion of their palates. South.

The captive generals to his car are tied j The joyful citizens tumultuous tide Echoing his glory, gratify his pride. Prior,

'Tis not the rural sports alone invite. But all the grateful country breathes delignt ; Here blooming Health exerts her gentle reign. And strings the sinews of th' industrious swain.

Gay, What happiness the rural maid attends In cheerful labour while each day she spends ; She gratefully receives what Heaven has sent. And rich in poverty enjoys content. Id.

I scorned to take my degree at Utrecht or Leyden, though offered it gratis

by those universities.

Arbuthnot. In Cyprus long by men and gods obeyed. The lovers toil she gratefully repaid. Granville. I would know whence came this obliquity of direc- tion, which they gratuitously tack to matter : this is to ascribe will and choice to these particles.

Cheyne's Philosophical Principles. He used every year to present us with his almanack, upon the score of some little gratuity we gave him.

Swift. From loveless youth to unrespected age. No passions gratified except her rage ; So much the fury still out-ran the wit, The pleasure missed her, and the scandal hit.

Pope. Now golden fruits on loaded branches shine. And grateful clusters swell with floods of wine.

Id. At once they gratify their scent and taste. While frequent cups prolong the rich reuast.

Id. They might have pretended to comply with Ulys- ses, and dismissed him with a small gratuity.

Broome on the Odyssey, Study detains the mind by the perpetual occurrence of something new, which may gratefully strike the imagination. Watts,

Suspicious thoughts his pensive mind employ, A sullen gratitude, and clouded joy. Hurts.

The bright tear starting in the impassioned eyes

Of silent gratitude ; the smiling gaze Of gratulation, faltering while he tries

With voice of transport to proclaim thy praise.

Seattle's Judgment of Paris. I saw thee — loved thee — owe thee all — would save. If but to shew how grateful is a slave.

Byron, Corsair,

Gratitude, in ethics, is a virtue disposing the mind to an inward sense and outward ac- knowledgment of benefits received. Examples of ingratitude, Paley observes, check and dis- courage voluntary beneficence ; hence the culti vation of a grateful temper is a consideration of public importance. A second reason for cultivating in ourselves that temper is, That the same principle which is touched with the kind- ness of a human benefactor is

capable of being affected by the divine goodness, and of becom- ing, under the influence of that affection, a source of the purest and most exalted virtue. The love of God is the sublimest gratitude. It is a mis- take, therefore, to imagine, that this virtue is omitted in the Scriptures ; for every precept which commands us ‘ to love God, because he first loved us,’ presupposes the principle of gra- titude, and directs it to its proper object.

GRA

GRATIAN, the son of Valentinian I. by his first wife, was associated in the empire by bis father, at Amiens, in 365, and succeeded him in 367; a prince equally extolled for his eloquence and modesty. He associated Theodosius with him in the empire, and advanced the poet Auso nius to the consulate. He made a great slaughter of the Germans at Strasburg, and hence was surnamed Alemannicus. He was the first em- peror who refused the title of Pontifex INIaximus, on account of its being a Pagan dignity. He was assassinated by Andragathms in 373, in the wenty-fourth year of his age.

Gratiax, a British soldier in the Roman army, who was crowned emperor by the legions in Britain, about A. D. 407, but was murdered by them within four months.

Gratiax, a famous Benedictine monk, in the twelfth century, born at Chiousi. He was em- ployed nearly twenty-four years in composing a work, entitled Decretum, or Concordantia Dis- cordantium Canonum, because he there endea- voured to reconcile the canons which seemed contradictory to each other. This work was published in 1151. Ashe is frequently mistaken, in taking one canon of one council, or one pas- sage of one father, for another, and has often cited false decretals, several authors have endea- voured to correct his faults; and chiefly Anthony Augustine, in his excellent work entitled De Emendatione Gratiani.

GRATINGS, in a ship, are small edges of sawed plank, framed one into another like a lattice or prison grate, lying on the upper deck, between the main-mast and fore-mast, serving for a defence in a close fight, and also for the cool- ness, light, and convenience of the ship's company.

GRATIOLA, hedge hyssop, a genus of the monogynia order, and driandria class of plants ; natural order fortieth, personatae : cor. is irre- gular : there are two barren stamina : caps, is bilocular : cal. seven leaves, with the two exte- rior ones patulous. There are fifteen spe- cies ; the most remarkable of which, the G. officinalis, the common hedge hyssop, grows naturally on the Alps, and other mountainous parts of Europe. It has a thick, fleshy, fibrous creeping root, which propagates very much, when planted in a proper soil and situation. From this arise several upright square stalks, garnished with narrow spear-shaped leaves, placed opposite. The flowers are produced on the side of the stalks at each joint : they are shaped like those of the fox- glove, but are small, and of a pale yellowish color. This herb has an emetic

and purgative virtue ; to answer which intentions, it was formerly used by the common people in England, but was never miich pre- scribed by the physicians, and at last fell totally into disuse. It is the subject of a dissertation by Dr. James Kostrzewski of Warsaw, in Po- land ; who gives some remarkable accounts of its effects in mania and obstinate venereal cases. It was given in powder, of in extract, to the quantity of half a drachm of the first, and a whole drachm of the second, at each dose.

GRATIOSA, a beauriful and fertile island of the Azore cluster, about twenty miles in circum- VoL. X.— Part 2.

ference. The chief town is Santa Cruz, where, however, there is no harbour, but only an open roadstead. Long. 27° 56′ W., lat. 39° 2′ N.

Gratiosa, a small rocky and barren island, situated to the north of Lanzerota, one of the Canaries. Long. 13° 17′ W., lat. 29° 15′ N.

GRATTAN (Henry), a celebrated Irish states- man, was born about 1750, in Dublin, of which city his father was recorder. Having studied at Trinity College, Dublin, and in one of the inns of court, he was called to the bar ; but, being elected into the Irish parliament in 1775, gave himself up to public business, and, by his pow- erful remonstrances, obtained for his country the concessions of 1782, for which he was rewarded by the Irish parliament with a vote of £50,000. In 1790 he was returned for the city of Dublin, principally to oppose the union ; but when it was effected he accepted a seat in the imperial parliament for Malton. He now supported the war policy of the government, but his principal exertions were called forth in advocating the Catholic claims, to which cause indeed he fell a martyr by leaving Ireland in an exhausted statt to bring their petition to England. He died soon after his arrival. May 14th 1820, and was in- erred in Westminster Abbey.

GRATZ, a respectable old town, the capital of one of the five circles of Styria, situated on the Muhr. The ancient part is small, enclosed by a wall and ditch. The citadel stands on a very steep hill on the banks of the river, and the town has been gradually accumulated round it. Since 1787 it has been the see of a bishop, and was the seat of a university from 1585 to 1782 ; but the place of that seminary is now supplied by a lyceum, or academy, and a large school. The houses in general are of stone, and it has twenty-two churches and chapels, including the cathedral, once the parish church. The emperor Ferdinand II., who was a native of Gratz, has a mausoleum here, remarkable for its internal ornamental sculpture. Here is also a library said to contain from 3000 to 4000 MSS., besides the theatre and barracks, which are said to be entitled to attention ; as is also the Johanneum, a m.useum for the antiquities of Styria. Gratz contains

manufactures of hardware, saltpetre, cotton, and silk. The environs are very fertile, the hills being covered with plantations and vineyards, intermingled with villages and de- tached cottages. It is fifty-six miles N. N. E. of Cilley, and 100 south-west of Vienna.

Gratz, one of the circles of the duchy of Styria, comprises the northern part of Lower Styria, lyin j on both sides of the Muhr, and has an area of 2100 square miles. The surface is hilly, but there are few high mountains ; and the valleys are fertile and picturesque, particularly between Gratz and Bmck. The pasturage is the chief agricultural object of attention, and the cattle, milk, butter, and cheese, are in repute. The steep grounds of the hills contain large forests of pine, but the chief riches of this circle, as of Styria in general, arise from its mines, and the manufactures connected with them. It contains a large number of villages. Populatioa

300,000.

GRAUDENTZ, or Grudziadz, a town of West Prussia, at the confluence of the Ossa and Vistula. It conducts manufactures of cloth and extensive breweries, with some trade in corn and toliacco. The inhabitants are chiefly German Lutherans, but the Catholics have a church and a public school. Near this place a strong fort was erected on the bank of the Vistula in 1776, and in 1798 a bridge of boats was laid across that river. It is fourteen miles N. N. E. of Culm, and fifty-five south of Dantzic. Population

6700.

GRAVˆE, n. s. & adj. ‘ˆ Sax. sjisep ; Goth. Grave’-clothes, n. $. grauf, grav ; Belg. and Grave’-stone, n. s. Swed. graf; Fr. grave, Grave’less, adj. gravite ; Latin gravis,

Gkave’ly, adv’. graveolens, gravidas,

Grave’ness, n. s. ygravitas. The place in

Grav’ity, n. s. Gravid’ity, n. s. Grav’itate, v. n. Gravita’tion, n. s. Grave’olent, adj.

which the dead are de- posited; the dress of the dead ; the monu- mental stone : solemn ; serious ; weighty; atro-

cious : tendency to centre of attraction. Gravi- dity is a word used to denote a state of pregnancy. Graveless, without a grave ; unburied. Grave, a final syllable in the names of places, is from the Saxon sJiaep, a grove or cave. — Gibsons Camden.

Sche goith to the graue, to wepe there.

Wiclif. Jon. xi. And he that was dead came forth, bound hand and foot with grave-cloaths. John xi. 44.

The frosty grave and colde must be my bedde. Without ye list your grace and mercy shewe.

Chaucer. The Court of Love. Therefore to ground he ■would him cast no more, Ne him commit to grave terrestrial. But beare him far from hope of comfort usual.

Spenser. Faerie Queene. But of such subtle substance and unsound. That like a ghost he seemed, whose grave-cloaths were unbound. Spenser.

No man could ever have thought this reasonable, that had intended thereby only to punish the injury • committed, eiccording to the gravity of the fact.

Hooker. Now it is the time of night. That the graves, all gaping wide,

Every one lets forth his spright, In the church-way paths to glide.

Shakspeare. There is not a white hair on your face but should have his effect of gravity. Id. Henry IV.

Our youths and wildness shall no whit appear. But all be buried in his gravity. Shakspeare.

Timon, presently prepare thy grave ; Lye where the light foam of the sea may beat Thy ˆrare-sˆOTie daily. Id. Timon.

There's more gold : Do you damn others, and let this damn you : And ditches grave you all I /"•

My brave Egyptians all. By the discandying of this pelletted storm, "Lie graveless. Id Antony and Cleopatra.

Than settled age his sables and bis weeds Importing health and graveness. Shakspeare.

To the more mature, A glass that featured them ; and to the grave, A child that guided dotards. Id. Cymbeline.

We should have else desired Your good advice, which still hath been both grave And prosperous in this day's council. Shakspeare.

For the advocates and council that plead, patience and gravity of hearing is an essential part of justice.

Bacon. The Roman state was of all others the most cele- brated for their virtue, as the gravest of their own writers, and of strangers, do bear them witness.

Grew's Cosmologia. Ah yet, ere I descend to the grave. May I a small house and large garden have .

Cowley. After death I nothing crave. Let me alive my pleasures have. All are stoics in the ˆraue. Id.

Some, therefore, thought those goblins which appeare To haunt old graves and tor„!ˆ<:t>, are soules of such Who to these loathesome places doomed were Because they doted on the flesh too much.

Geo. Withers. Great men sometime, v/'iW gravely undertake To teach how bromes and morter should be made.

Id. To walk upon the graves of our oead masters. Is our own security. Denham'a Sophy.

But yet beware of covmsels when too full ; Number makes long disputes and graveness dull.

Denham . Thou standest Gravely in doubt when to hold them wise.

Milton. Thou wilt not eave me in the loathsome grave.

Id. Upon its crest this mountain grave, A plume of aged trees does wave. Marvell.

Bodies do swim or sink in different liquors, accord- ing to the tenacity or gravity of those liquors which are to support them. Browne.

Accent, in the Greek names and usage, seems to have regarded the tone of the voice, the acute accent raising the voice, in some syllables, to a higher, i. e. more acute pitch or tone, and the grave depressing it lower, and both having some emphasis, i. e. more vigorous pronunciation. Holder.

Even the grave and serious characters are distin- guished by their several sorts of gravity. Drydcn.

They were wont once a year to meet at the graves of the martyrs; there solemnly to recite their suffer- ings and triumphs, to praise their virtues, to bless God for their pious examples, for their holy lives, and their happy deaths. Nelson.

A flood of waters would overwhelm all those frag- ments which the earth broke into, and bury in one common grave all the inhabitants of the earth.

Burnet. The emperors often jested on their rivals or prede- cessors, but their mints still maintained their gravity.

Addison. A girl longs to tell her confidant that she hopes to be married in a little time, and asks her very gravely what she would have her to do. Id. Spectator.

Youth on silent wings is flown ; Graver years come rolling on. Prior.

That quality by which all heavy bodies tend towards the centre, accelerating their motion the nearer they approach towards it, true philosophy has shewn to be unsolvable by any hypothesis, and resolved it into the immediate will of the Creator. Of all bodies, con- sidered within the confines of any fluid, there is a twofold gravity, true and absolute, and vulgar or com- parative ; absol ute rat)«V is the whole force by which any body tends downwards ; but the relative or vulgar is the excess of gravity in one body above the specific gravity of the fluid, whereby it tends downwards more than the ambient fluid doth. Quincy.

Though this increase of density may at great dis-

tances he exceeding slow, yet if the eiastick tone of this tnediam be exceeding great, it may suffice to impel hodies from the denser parts of the medium to- wards the rarer, with all that power which we call gravity. Newton's Optichs.

Those who have nature's steps with care pursued. That matter is with active force endued. That all its parts magnetick power exert. And to each oOitr gravitate, assert. Blackmore.

Women, obstructed, have not always the foremen- tioned symptoms : in those the signs of gravidity and obstructions are hard to be distinguished in the begin- ning. Arbuthnot on Diet.

That subtle matter must be of the same substance with all other matter, and as much as is compre- hended within a particular body must gravitate jointly with that body. Bentley.

To laugh, were want of goodness and of grace ; And to be grave exceeds all power of face. Pope.

When the loose mountain trembles from on high. Shall gravitation cease, if you go by ? Id.

A tomb, indeed, with fewer sculptures graced Than that Mausolus' pious widow placed. Or where, enshrined, the great Darius lay ; But cost on graces is merely thrown away. Id.

That rest they wished for grant them in the grave ; And bless those souls my conduct helped to save.

Id. Catius is ever moral, ever grave.

Thinks who endures a knave is next a knave.

Save just at dinner — then prefers, no doubt,

A rogue with ven'son to a saint without. Id.

Wisdom's above suspecting wiles ; The queen of learning gravely smiles. Swift.

A formal story was very gravely carried to his ex- cellency, by some zealous members. Id.

They have as much reason to pretend to, and as much necessity to aspire after, the highest accomplish- ments of a Christian and solid virtue, as the gravest and wisest among Christian philosophers. Law.

He will tell you, with great gravity, that it is a dangerous thing for a man that has been used to get money, ever to leave it off. Id.

Is't not enough the blockhead scarce can read. But must he wisely look, and gravely plead ?

Young.

There would he dream oi graves and corses pale. Beattie'i Minstrel.

Checked by the scoff of Pride, by Envy's frown. And Poverty's unconquerable bar ; In life's low vale, remote, has pined alone. Then dropt into the grave unpitied, and unknown.

Id.

And there — oh I sweet and sacred be the name ! — Julia — the daughter, the devoted — gave Her youth to Heaven ; her heart, beneath a claim. Nearest to Heaven's, broke o'er a father's ˆracc.

Byrun. Childe Harold.

Grave, u. a. & t;. 71. J Sax. jpapan ; Golli.

Grav'er, n. s. ygraja; Beltj. graaven;

Gra v'iNG, n. s. J Fr. graver, gravcur ; Gr.

yfiaipai. To insculp or carve hgures out of stone, iron, or any hard substance ; to write upon or delineate ; to clean, caulk, and sheath a ship : graver is one who copies pictures upon wood or metal to be impressed on paper ; the style or tool used in graving : graving is carved work.

Thou shall make a plate of pure gold, and grave upon it. Exudiu xxviii. 36.

Skilfu. to work in gold ; also to grate any manner of graving, and to find oat every device which shall bo put to him. 2 Chron. ii. 14.

What profiteth the graven image, that the make, thereof hath ˆracen it. Hebrewa \i. 18.

Go, sell it them that smale seles t/rofe ;

We wol the not. Chaucer. Troitus and Creseide.

Eke some men grave in tre, some in stone wal. As it betide : out sith I have begonne. Mine authour shall I folow as I konne. Id.

And aftir this was graved, alas ' How Ilions castill assailed was. And won, and k3'ng Priamus slain. And Polites his sonne certain, Dispitously of Dan Pyrrhus. Chaucer.

Later vows, oaths, or leagues, can never blot out those former graving! or characters, which by just and lawful oaths were made upon their souls.

King Charles.

Cornice with bossy sculptures ˆracen. Milton.

With all the care wherewith I tried upon it the known ways of softening gravers, I could not soften this. Boyle.

The gravers can, and ought, to imitate the bodies of the colours by the degrees of the lights and shadows : 'tis impossible to give much strength to what they grave, after the works of the schools, without imuacing in some sort the colour of the objects.

Bryden's Dnfresaoy.

If he makes a design to be graved, he is to remem- ber that the gravers dispose not their colours aa the painters do ; and that, by consequence, he must take occasion to find the reason of his design in the natura' shadows of the figures, which he has disposed to cause the effect. Id.

Thy sum of duty let two words contain ;

O ! may they graven in thy heart remain !

Be humble and be just. Prior.

The toilsome hours in different labour slide, •Some work the file, and some the graver guide.

Gay's Fables.

Grave, in grammar, a species of accent oppo- site to acute. The grave accent is expressed thus ('); and shows that the voice is to be de- pressed, and the syllable over which it is placed pronounced in a low deep tone.

Grave, in music, is applied to a sound which is in a low or deep tone. The thicker the chord or string, the more grave the tone or note, and the smaller the acuter. Notes are supposed to be the more grave, in proportion as the vibrations of the chord are less quick.

Grave, a town of North Brabant, in the Netherlands, on the left bank of the Maese : it is fortified, and made a gallant defence against the French in the winter of 1794-5. Population 1600. Nine miles south by west of Nimeguen and eighteen north-east of Bois le Due.

Graver. See Engraving.

G RAVEL, ?<. s. & r. a. } Fr. gravelle, grave-

Grav'elly, arf;. S kux ; Be\g. graved ;

Gothic griv ; Ital. gruvella. Hard sand ; sandy concretions in the kidneys : to pave or cover with gravel ; to stick in the sand : figuratively to puzzle ; to perplex ; to disquiet. A gravelly soil is one in which gravel abounds.

1 sawe a little well.

That had his course, as I could wele beholde.

Under an hill with quicke stremes and cold.

The gravell gold, the water pure os glasse,

The bankes rounde the well environing ;

And soft as velvet was the yonge grassc.

Chaucer. Complaint of the Blacke Knight.

The martiall mayd stayd not him to lament. But forward rode, and kept her steady way

2 C3

GRA

388

GRA

Along the strond ; which as she overwent She saw bestrowed all with rich aray

Of perles and pretious stones of great assay. And all the gravell mixt with golden owre. Whereat she wondered much.

Spenser's Faerie Queene. Proofs as clear as founts in July, when We see each grain of gravel. Shakspeare.

— Nay, you were better speak first, and when you were gravelled for lack of mattei; you might take oc- casion to kiss. I < 1-

There are some natural spring waters that will in- lapidate wood ; so that you shall see one piece of wood, whereof the part above tne water shall conti- nue wood, and the part under the water shall be turned into a. gravelly stone.

Bacon's Natural History. Moss groweth upon alleys, especially such as lie cold, and upon the north, as in divers terrasses ; and again, if they be much trodden, or if they were at the first gravelled. Bacon.

If you live in a consumptive air, make choice of the more open, high, dry, and gravelly part of it.

Harvey on Consumptions.

The disease itself will gravel him to judge of it ; noi can there be any prediction made of it, it is so sharp. Huwel.

What work do our imaginations make with eternity and immensity ? and how are we gravelled by their cutting dilemmas ? Glanville's Scepsis.

So deep and yet so clear, we might behold

The gravel bottom, and that bottom gold. Dryden,

Gravel walks are best for fruit-trees. Mortimer.

The upper garden at Kensington was at first nothing but a gravel pit. Spectator.

Mat, who was here a little gravelled.

Tossed up his nose, and would have cavilled. Prior.

Gravel consists of Hints of all the usual sizes and colours ; of the several sorts of pebbles ; sometimes with a few pyritae, and other mineral bodies, confus- edly intermixed, and common sand. Woodward,

If the stone is brittle it will often crumble, and pass in the form of gravel : if the stone is too big to pass, the best method is to come to a sort of a compo- sition or truce with it. Arbuthnot.

Providence permitted not the earth to spend itself in base gravels and pebbles, instead of quarries of stones. More.

Gravel, in gardening, a congeries of pebbles, which, mixed with a stiff loam, makes lastmg and elegant gravel walks ; an ornament peculiar to our gardens, and which gives them an advantage over those of other nations.

Gravel, in medicine. See Medicine.

Gr/vel Walks. To make these properly, the bottom should be laid with lime rubbish, large flint stones, or any other hard matter, for eight or ten inches

thick, to keep weeds from growing through, and over this the gravel is to be laid six or eight inches thick. This should be laid rounding up in the middle, by which means the larger stones will run off to the sides, and may be raked away ; for the gravel should never be screened before it is laid on. It is an error to lay these walks too round, which not only makes them uneasy to walk "Don, but takes off from their apparent breadth. One inch in five feet is a sufficient rise in the /niddle ; so that a walk of twenty feet wide should be only four inches higher at the middle than at the edges, and so in proportion. As soon as the gravel is

laid, it should be raked, and the large stones thrown back again : then the whole should be rolled both lengthwise and crosswise ; and the person who draws the roller should wear shoes with flat heels, that he may make no holes ; be- cause holes made in a new walk are not easily remedied. The walks should always be rolled three or four times in very hard showers, after which they will bind more firmly than otherwise they could ever be made to do. Gravel, with some loam among it, binds more firmly than the rawer kinds ; and, when gravel is naturally very harsh and sharp, it is proper to add a mixture of loam to it. The best gravel for walks is such as abounds with smooth round pebbles, which, being mixed with a little loam, are bound so firmly together that they are never afterwards injured, either by wet or dry weather These are not so liable to be turned up by the feet in walking, as the more irregularly shaped pebbles and remain much more firmly in their places after- rolling.

GRAVES (Richard), an English divine and poet, was born at Mickleton, in Gloucestershire in 1715. He was a student of Pembroke College, Ox- ford, and afterwards obtained a fellowship of All Souls. In 1750 he was presented to the rectory of Claverton near Bath ; and Mr. Allen, of Prior park, added to it, in 1663, that of Kilmersdon, He died in 1804. His works are, 1 . The Fes- toon, or Epigrams, 12mo, 2. Lucubrations in prose and rhyme. 3. The Spiritual Quixote, a novel, in 3 vols. 4. Columella, or the distressed Anchoret, 2 vols. 5. Euphrosyne, a collection of poems, 2 vols. 6. Eugenius, or the Golden Vale, 2 vols. 7. Recollections of particulars in the life of Shenstone. 8. Plexippus, or the as- piring Plebeian, 2 vols. 9. The Reveries of Solitude. 10. The Coalition, a comedy. 11. Sermons, 8vo. 12. The Farmer's Son, a moral tale. 13. The Invalid, with the Means of enjoy- ing long Life. 14. Senilities. Besides these publications, he translated Marcus Antoninus' Meditations, and other books, from the Greek.

Graves, among the Jews, were generally out of the city, though there are instances of their interring the dead in towns. Frequent' mention is made of graves upon mountains, in highways, in gardens, and private houses ; so that nothing on this head seems to have been determined. The same may be observed with respect to the Greeks. The Thebans had a law that every

person who built a house should provide a burial ground. Men who had distinguished themselves were frequently buried in the public forum. The most general custom was, however, to bury out of the city, chiefly by the highway side. The Romans were forbidden ‘ by the law of the twelve tables to bury or burn the dead in the city ; but some had their sepulchres in Rome, tnough they paid a fine for the indulgence. See Jews.

GRAVESANDE (William James), LL.D. and F.R.S., an eminent mathematician, born of an ancient family at Delft, in Holland, in 1688. He studied the civil law at Leyden, but mathe- matical learning was his favorite amusement. When he had taken his degree, in 1707, he set- tled at the Hague, and practised at the bar, in which situation he cultivated an acquaintance with learned men ; with a society of whom he

published a periodical review, entitled Le Jour- nal Literaire, which was continued without in- terruption from 1713 to 1742, when he died. The most considerable of his works are, 1. A Treatise on Perspective; 2. An Introduction to the Newtonian Philosophy, or A Treatise on the Elements of Physics, conhrmed by Experiments. 3. A Treatise on the Elements of Algebra for the use of Young Students; and, 4. A Course of Logic and Metaphysics. The ministers of the republic consulted him on many occasions, and his skill in calculation was often of service to them; as well as his address in decyphering the secret correspondence of their enemies. In 1715 he was sent to the states to congratulate George I. on his accession ; and, on his return, was ap- pointed professor of mathematics and astronomy at Leyden, where he was the first that taught the Newtonian philosophy. He was intimately acquainted with Sir Isaac Newton.

GRAVESEND, a town of England, in Kent, situated on the banks of the Thames. It is twen- ty-three miles from London, and has a blockhouse mounted with cannon, to command the ships and river, opposite to Tilbury fort in Essex. This town was plundered and burnt by die French and Spaniards in the reign of Richard II., to compensate which, the king vested it and Milton with the sole privilege of carrying passengers by water to London, at 4s. the whole fare, or Id. a-head, which was confirmed by Henry VIII. Coaches ply liere at the landing of people from London, &c., to carry them to Rochester. This town and Milton were incorporated by queen Elizabeth, and granted some peculiar privileges. All outward-bound ships were formerly obliged to anchor in this road till they had been visited by

the custom-house officers ; but those home- ward-bound always passed by without notice, unless to put waiters on board, if they are not supplied before. The town being burnt down in 1727, £5000 was granted by the parliament in 1731, to rebuild its church. In 1624 one Mr. Pinnock gave twenty-one dwelling houses, be- sides one for a master weaver, to employ the poor ; and there is a charity school for twenty- four boys, who are both taught and clothed. The town-house was erected in 1764; and in 1772 an act was passed for paving and lighting the streets. Steam boats start for this town from the tower stairs every morning at eight o'clock, and return the same night.

GRAVINA (John Vincent), an eminent scholar and illustrious lawyer of Italy, born at Roggiano in 1664. He was professor of the canof' law in the college of Sapienzi at Rome ; where he died in 1718. His chief work is Ue ortu et progressu Juris Civilis.

Gravina, a considerable town and bishop's see of Naples, in the province of Raii, contains nine churches, and a population of 8800. Ten miles west of Matera, and twenty-seven south of Trani.

(Jravina's Islands, three islands on the coast of North-West America, from twenty to fifty miles in circumference, separated by narrow channels, covered with innumerable rocky islets. They lie between Clarence's Strait and the canal de Revilla Gigedo, and extend about forty

miles from north-west to south-east. Long. 228° 24′ 10-229″ 5′ E., lat. 54° 52′ to 55° 27′ N.

Gkavity, or Gravitation (for they are most commonly used synonymously), signifies either the force by which bodies are pressed towards the surface of the earth, or the manifest effect of that force ; in which last sense the word has the same signification with weight or heaviness. Concerning gravity in the first sense of the word, or that active power by which all bodies are im- pelled towards the earth, there have been great disputes. Many eminent philosophers, and among the rest Sir Isaac Newton himself, have considered it as the first of all second causes ; an incorporeal or spiritual substance, which never can be perceived any other way than by its ef- fects : a universal property of matter, &c. Others have attempted to explain the plienomena of gravitation by the action of a very subtile ethereal fluid ; and to this explanation Sir Isaac, in the latter part of his life, seems not to have been averse. He has even given a conjecture concerning the matter in which this fluid might occasion these phenomena. But for a full ac- count of the discoveries of this great philosopher concerning the laws of gravitation, tlie conjec- tures made by him and others concerning its cause, the various objections that have been made to its doctrine, and the state of

the dispute at present, see the articles Astronomy, Atmos- phere,Attraction, Earth, Electricity, Fire, Light, Newtonian Philosophy, Repulsion, Plenum, Vacuum, &c.

Gravity, Specific, denotes the weight be- longing to an equal bulk of every diff'erent sub- stance. Thus the exact weight of a cubic inch of gold, compared with a cubic inch of water, tin, lead. Sec, is called its specific gravity.

TABLE OF

SPECIFIC GRAVITIES OF METALS, STOilES, EARTHS, &C.

Metals.

Platinum, purified.

" hammered,

" laminated,

" drawn into

wire. Gold , pure and cast,

" hammered, Mercury, Lead, cast, Silver, pure and cast,

" hammered. Bismuth, CMt, Copper, cast,

" wire. Brass, cast,

" wire, Cobalt and nickel,

cast, Iron, cast, Iron, malleable. Steel, soft,

" hammered, Tin, cast. Zinc, cast. Antimony, ca,st, Molylidrnum,

19.50 20.34 20.34

22.07 19.26 19.36 13.57 11.35

10.47 10.51 9.82 8.79 8.89 8.40 8.54

7.81 7.21 7.79 7.83 7.84 7.30 7.20 4.95 4.74

Sulphate of barytes

4.43

Zircon of Ceylon,

4.41

Stones.

Oriental ruby.

4.28

Brazilian ruby,

3.5.3

Bohemian garnet.

419

Oriental topaz.

4.01

Diamond,

3.50

Crude manganese.

3.53

Flint glass.

2.89

Glass of St. Gobin,

2.49

Fluor spar.

3.18

Parian marble.

2.34

Peruvian emerald,

2.78

Jasper,

2.70

Earths, 8fc.

Carbonate of lime

2.71

Rock crystal.

2.65

Flint

2.59

Sulphate of lime,

2.32

Sulphate of soda,

2.20

Common salt.

2.13

Native sulphur.

2.03

Nitre,

2.00

Alabaster,

1.87

Phosphorus,

1.77

‘690

Plumbago, 1.86

Alum. ” 1.72

Asphaltum, 1.40

Jet 1.24 Coal, from 1.24 to 1.30

Sulphuric acid, 1.34

Nitric acid, 1 ii‘2

Muriatic acid, 1.19

Liquids, Oils, Sfc.

Equal parts by weight of water and alco- hol, .93 Ice .92 Strong alcohol, .82 Sulphuric ether, .74 Naptha, .71 Sea water, 1.03 Oil of Sassafras, 1.09 Linseed oil, .94 Olive oil, .91 White sugar, l.()l

Resins, Gums, S(c.

GRAY.

Gum arable

honey, Pitch, Isinglass, Yellow amber.

and

1.45

1.15 1.11 1.08

egg,

Hen’s

laid. Human blood, Camphor, White wax. Tallow, Pearl,

Sheep’s bone. Ivory, Ox’s horn,

Wood.

Lignum vitae,

Etiony,

Mahogany,

Dry oak,

IJeech,

Ash,

Elm, from

Fir, from

Poplar,

Cork,

fresh

1.09

1.05

.99

.97

.94

2.75

2.22

1.92

1.84

133

1.13

1.06

.93

85

‘84

.80 to 60

.57 to 50

.38

.24

Gases.

Chlorine, Carbonic acid gas Oxygen gas. Atmospheric air, Azote, Hydrogen gas.

.00302 .00164 .09134 .00121 .00098 .00008

GRAUNT (Edward), an eminent English grammarian of the sixteenth century. He was head master of Westminster school, and pub- lished a work entitled Grcecre Linguae Specile- gium, et Institutio Graecae Grammaticse. He died in 1601.

Graunt (John, F.R.S.,) author of a curious and celebrated book, entitled Natural and Po- litical Observations made upon the bills of Mor- tality. He was a haberdasher, but gave up his trade, and all public employments, on account of his religion. He was educated a Puritan; afterwards professed himself a Socinian ; but at last died a Roman Catholic in 1674.

GR.W’Y, H.s, From Sax. ˆjieopa, a pan, and per, fat, i. e. the fat of the pan. The serous juice that runs from flesh at the fire.

GRAY adj. &cn. s. ■\ Sax. ZT^^Z I Teut.ˆrflw ;

Gray’-beard, ra. .s f Dut. graau. A word

Gray’ling, 7J. s. ˆgenerally descriptive of

Gray’ness, ra. s. 3 color, as white with a mixture of black ; the color of ashes; twilight; hoary with age. Gray-beard is a contemptuous term applied to old men. Grayling, a fish.

We most of us are grown ˆraj/-headed in our dear ;naster’s service. Addison s Spectator.

Soon as theˆra2/-eyed morning streaks the skies.

And in the doubtful day the woodcock flies.

Gay.

Her ˆray-haired synods damning books unread.

And Bacon trembling for his brazen head.

Pope.

Afar, a dwarf buffoon stood telling tales To a sedate gray circle of old smokers.

Of secret treasures found in hidden vales, Of wonderful replies from Arab jokers.

Byron. Don Juan.

Gray (Thomas), a celebrated English poet, was born in Cornhill, in 1716. He was edu- cated at Eton, where he contracted a friendship with Horace Walpole, and with Mr. Richard

ˆVest, son of the lord chancellor of Ireland. Mr. West and Mr. Gray were both intended for the bar; but the latter was diverted from that pursuit by an invitation to accompany Mr. ˆ'al- pole in his travels ; which he accepted without any determined nlan for his future life. When he returned, finoing himse'f in narrow circum- stances, yet with a mind not disposed for active employment, he retired to Cambridge, and de- voted himself to study. Soon after his return, his friend West died : and the melancholy im- pressed on him by this event may be traced in his admired Elegy written in a country church- yard, which is thought to have been written at this time. The first impulse of his sorrow for the death of his friend gave birth also to a Sonnet, on the Model of Petrarch ; and to an Apostrophe in Hexameters, with which he in- tended to begin one of his books De Principiis Cogitandi. From the winter of 1742 to his death his residence was at Cambridge ; except between 1759 and 1762 ; when, on the opening of the British Museum, he took lodgings in Southampton-Row, in order to have recourse to the Harleian, and other MSS. About 1747 Mr. Mason, the editor of Mr. Gray's poems, was introduced to him. Mason had written some imitations of Slilton's Juvenile Poems viz. A Monody on the death of Mr. Pope, and two pieces, entitled II Billicoso and II Pacifico, on the peace of Aix-la-Chapelle ; and Mr. Gray revised them. This laid the foundation of an intimacy v/hich continued without interruption till Mr. Gray's death. About 1760 Mr. Gray finally revised his celebrated Elegy written in a country church-yard, and communicated it to his friend Mr. Walpole, and it was shown about for some time in MS. At last the publisher of one of the magazines having obtained a sur- reptitious copy of it. Gray wrote to Walpole, desiring that he would put his own MS. into the hands of Mr. Dodsley, and order him to

print it immediately. This was the most po- pular of all our author's publications. It ran through eleven editions in a very short time ; and was finally translated into Latin by Messrs Ansty and Roberts, and by Mr. Lloyd. From 1759 to 1762, he generally resided in London. In July, 1768, the duke of Grafton wrote him, that his majesty had been pleased to offer to him the professorship of Modern History in the university of Cambridge, then vacant. This place was valuable, the salary being £400 a-year ; and was the more acceptable to Mr. Gray tha it was given him without solicitation.*

He seems early in life to have had an inten- tion of publishing an edition of Strabo ; for his papers contain a great number of notes and geo- graphical disquisitions on that author, particu- larly with respect to that part of Asia which comprehends Persia and India. Another work, on which he bestowed uncommon labor, was the Anthologia. In an interleaved copy of that collection of Greek epigrams, he has transcribed several additional ones, which he selected in his ex- tensive reading ; and has inserted a great number of critical notes and emendations, and subjoined a copious index. But whether he intended this performance for the press or not, is uncertain.

The only work which he undertook with this direct view from the beginning, was A History of English Poetry, upon a plan sketched out by Pope. He has mentioned this himself in an advertisement to those three fine imitations of Norse and Welsh poetry, which he gave the world m the last edition of his poems. But, after he had made some preparations for the exe- cution of this design, being informed that Mr. Warton, of Trinity College, Oxford, was en- gaged in a work of the same kind, he relin- quished the undertaking; and soon after, on that gentleman's desiring a sight of his plan, our author readily sent him a copy of it. Mr. Gray had acquired a great knowledge of Gothic archi- tecture. He had seen and studied in his youth, while abroad, the Roman proportions, both in ancient times, and in the works of Palladio. In his later years he applied himself to consider those stupendous structures of more modern date that adorn our own country ; which, if they have not the same grace, have undoubtedly equal dignity. He endeavoured to trace this mode of building from the time it commenced through its various changes, till it arrived at its perfec- tion in the reign of Henry VIII. and ended in that of Elizabeth. But his favorite study for the last ten years of his life was natural history. The marginal notes which he has left on Lin- naeus and other writers on the vegetable,

animal, and fossile kingdoms, are numerous : but the most considerable are on Hudson's Flora An- glica, and the tenth edition of the Systema Naturae. He died in 1771 ; and an edition of his poems, with memoirs of his life and writings, was published in 4to., in 1775, by Mr. Mason. Gray (Edward Whitaker), F.R.S., an En- glish physician and naturalist, was several years senior secretary to the Royal Society, and keeper of the department of natural history and anti- quities at the British Museum. He was the author of an Account of the Epidemic Catarrh of the year 1782, in the first volume of Dr. Duncan's Medical Commentaries ; Observations on the Manner in which Glass is charged with the Electric Fluid and discharged ; and Observa- tions on the Class of Animals called, by Linnaeus, Amphibia; both published in the Philoso- phical Transactions. Dr. Gray died in January, 1807, aged fifty-nine.

Guay's Harbour, a bay on the west coast of North America, examined by Vancouver. The entrance, about a mile wide, has a bar directly across, after passing which, the channel appears to be uninterrupted, the northern side being deepest. Long. 236° 7′ E., lat. 47° N.

GREASE, n.s. &t;.a. 1 Tt. graisse ; Ital. Greas'iness, a. s. y grassa,grasto ; of Lat.

Greas'y, adj. J crassus. Minsheu.

The soft part of animal fat ; a disease in the legs of horses : oily ; fat ; unctuous : to smear with grease ; and, figuratively, to bribe or corrupt with presents.

Grease, that's sweaten From the murtherer's gibbet, throw Into the flame.

Shakˆpeare. Macbeth. Let's consult together against this yreaty xoight.

S/iuhspeure.

The fragments, scraps, the bits and greasy reliqueg Of her o'ereaten faith. Id.

To take out a spot of greate they use a coal npon brown paper. Bacon' Natural History,*

Even the lewd rabble Governed their roaring throats, and grumbled pity : I could have hugged the greasy rogues ; they pleased me. Otway.

Upon the most of these stones, after they are cut, there appears always, as it were, a kind of greasinesa or unctuositj'. Boyle.

Thou hop-st, with sacrifice of oxen slain. To compass wealth, and bribe the god of gain To give thee flocks and herds, with large encrease ; Fool '. to expect them from a bullock's grease.

Dryderis Juvenal. A girdle, foul with grease, binds his obscene attire.

Dry den. Envy not the store Of the greased advocate that grinds the poor. Id. Buy sheep, and see that they be big-boned, and have a soft, greasy, well curled close wool.

Mortimer Or Sappho at her toilette's greasy task. With Sappho fragrant at an evening mask.

Pope.

GREAT, adj. Sax. jfteat; Dut. groo<; Swed. grot. Large in bulk or number.

All these cities were fenced with high walls, gates, and bars, besides unwalled towns a great many.

DetU. iii. 5. Judas one of the twelve came, and with him & great multitude with swords and staves. Matt. xxvi. Gret was the fesle in Athenes thilke day.

Chaucer. The Knightes Tale. Elemental air diffused In circuit to the uttermost convex Of this great round. Milton.

And God created the great whales. Id.

A dungeon horrible, on all sides round, As one great furnace flamed. Id.

The tallest pine Hewn on Norwegian hills, to be the mast Of some great admiral. Id,

Having any quality in a high degree. There were they in great fear.

Psalm xiv. 5. All sodainly, I was right glad. That ˆrfiir joy, as mote I thrive, I trow had never man alive.

Chaucer. Dreame. Their power vi&% great. Milton.

Great triumph aind rejoicing was in heaven. Id. Charms such as thine, inimitably great. He only could express. Broome.

*Having number or bulk, relative or compa- rative. **

The idea of so much is positive and clear : the idea of greater is so clear,

but it is but a comparative idea.

Locke. Considerable in extent or duration. Thou hast spoken of thy servant's house for a gre(u while to come. 2 Sam, vii. 19.

Important ; weighty. Many Have broke their hacks with laying manors on them, For this great journey. Shahtpeare. Henry VIII. Make sure Her favors to thee, and the great oath take With which the blessed gods assurance make.

Ciiapman.

the muses are in all things free :

Fit subject of their verse all creatures be ;

And there is nothing named so meane, ov great. Whereof they have not liberty to treat.

Geo. Withers. What is low raise and support. That to the height of this great argument I may assert eternal Providence, And vindicate the ways of God to men. Milton.

On some great charge employed He seemed, or fixed in cogitation deep Id.

By experience of this great event. In arms not worse. Id.

After silence then. And summons read, the great consult began. Id. And though this be a great truth, if it be impar- tially considered, yet it is also a great paradox to men of corrupt minds and vicious practices.

Tilloison. Chief; principal.

Hear the king's pleasure, cardinal, who commands you To render np the great seal presently.

Shakspeare. Henry VIII. For, still, one line another draweth on. And line by line great workes at last are done. ,

Geo. Withers, Venerable ; adorable ; awful.

Thou first art wont God's great authentick will. Interpreter, through highest heaven to bring.

MUton. Wonderful; marvellous.

Great things, and full of wonder. Milton.

Of high rank ; of large power.

It is not long since these two eyes beheld A mightie prince, of most renowned race. Whom England high in count of honour held. And greatest ones did sue to gaine his grace ; Of greatest ones he greatest in his place.

Spenser. Faerie Qwone Such men as he be never at heart's ease. Whilst they behold a greater than themselves.

Shakspeare. Worthiest by being good. Far more than great or high. Milton.

Misfortune made the throne her seat. And none could be unhappy but the great.

Rowe. The marble tombs that rise on high. Whose dead in vaulted arches lie ; These, all the poor remains of state. Adorn the rich, or praise the great. Parnell. Of all the great how few ' Are just to heaven, and to their promise true !

Pope. Despise the farce of state. The sober follies of the wise and great. Id, General; extensive in consequence or influ- ence.

Prolifick humour sofl'ning all her globe. Fermented the great mother to conceive.

Milton. Illustrious ; eminent; noble; excellent. O Lord, thou art great, and thy name is great in might. Jer. x. 6ˆ

The great Creator thus replyed. Milton,' The great Son returned Victorious with his saints. Id,

Fair angel, thy desire that tends to know The works of God, thereby to glorify The great work-master, tends to no excess That reaches blame. Id,

The great luminary Aloof the vulgar constellations thick. That from this lordly eye keep distance due. Dispenses light from far. Id.

When Dutch invade sind parliament prepare. How can he engines so convenient spare t Let no taajx touch them, or demand his own. Pain of displeasure of great Clarendon. Marvell. Under this attic cope I move. Like

some great prelate of the grove. Id. Here Cesar graced with both Minervas shone, Cesar, the world's great master, and his own.

Pope Scipio, Great in his triumphs, in retirement great. Id Grand of aspect ; of elevated mien.

Such Dido was ; with such becoming state. Amidst the crowd, she walks serenely great.

Dryden. Magnanimous; generous; high-minded. In her every thing was goodly and stately ; yet so,. that it might seem that great mindedness was but the ancient bearer to the humbleness. Sidney.

Great men have always scorned great recompenses ; Epaminondas saved his Thebes, and died Not leaving even his funeral expenses. Byron,

Opulent; sumptuous; magnificent. Not Babylon, Nor great Alcairo, such magnificence Equalled in all their glories. Milton.

He disdained not to appear at great tables and fes- tival entertainments. Atterbwy. intellectually great ; sublime. This new created world, how good, how fair. Answering his great idea. Milton. Alas ! could she but fully truly know flow her great name is now throughout abhorred ;

How eager all the earth is for the blow Which shall lay bare her bosom to the sword '.

Byron. Swelling; proud.

Solyman perceived that Vienna was not to be won with words, nor the defendants to be discouraged with great looks ; wherefore he began to batter the walls.

Knolles. Familiar ; much acquainted. A low word. Those that would not censure, or speak ill of a man immediately, will talk more boldly of those that are great with them, and thereby wound their honour.

Bacon. Pregnant; teeming.

Their bellies great With swelling vanity, bring forth deceit.

Sandys. His eyes sometimes cvea great with tears.

Sidney. This" fly, for most he stings in heat of day. From cattle great with young keep thou away.

3fay.

It is added in every step of ascending or de- scending consanguinity : as great grandson is the son of my grandson.

I dare not yet affirm for the antiquity of our lan- guage, that our great-great-great grandsires' tongue came out of Persia. Camden.

What we call great great grandfather they called forthafader. Id. Remains.

Their holy-day-cloaths go from father to son, and are seldom worn out till the second or third genera- tion ; so that 'tis common enough to see a country- man in the doublet and breeches of his great grand- father. Addison.

Hard; difficult; grievous. A proverbial ex- pression.

It is no great matter to live lovingly with good-na- tured and meek persons. Taylor's Devotion-

GREAT BRITAIN.

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Great, n. s. [from the adjective]. The whole ; the gross ; the whole in a lump.

To let out thy harvest by great or by day. Let this by experience lead thee the way : By great will deceive thee with lingering it out. By day will dispatch. Tutser's Husbandry.

It were behoveful, for the strength of ihe navy, that no ships should be builded by the great ; for by daily experience they are found to be weak and im- perfect. Raleigh's Essays. He did at length so many slain forget, And lost the tale, and took them by the great.

Dryden. Carpenters build an house by the great, and are agreed for the sum of money.

Moxon's Mechanical Exercises. I set aside one day in a week for lovers, and inter- pret by the great for any gentlewoman who is turned of sixty. Addison.

Grea'tbellied, adj. Great and belly. Preg- nant ; teeming.

Cfreatbellied women That had not half a week to go, like rams In the old time of war, would shake the press.

Shakspeare. A greatbellied woman, walking through the city in tlie day-

time, had her child struck out of her womb, and carried half a furlong from her. Wilkins,

Gre'aten, v. a. From great. To aggran- dize; to enlarge; to magnify. A word little used.

After they sought to greaten themselves in Italy itself, using strangers for the commanders of their ar- mies, the Turks by degrees beat them out of all their goodly countries. Raleigh.

A favourite's business is to please his king, a mi- nister's to greaten and exalt him. Kenyan.

Greathea'rted. ac(/. Great and heart. High- spirited ; undejected.

The carl, as greathearted as he, declared that he neither cared for his friendship, nor feared his hatred.

Clarendon, Gre'atly, adv. From great. In a great degree.

Thy sorrow will I greatly multiply. Milton.

Nobly ; illustriously.

Yet London, empress of the northern clime. By an high fate thou greatly didst expire.

Dryden.

Magnanimously; generously; bravely. Where are these bold intrepid sons of war.

That greatly turn their backs upon the foe.

And to their general send a brave defiance ?

Addis6n.

Gre'atness, n.s. From great.

Largeness of quantity and number.

Comparative quantity.

We can have no positive idea of any space or dura- tion, which is not made up of and commensurate to repeated numbers of feet or yards, or days or years, and whereby we iudge of the greatness of these sort of quantities

Locke.

All absent good does not, according to the greatness It has, or is acknowledged to have, cause pain equal to that greatness, as all pain causes desire equal to it- self ; because the absence oji good is not always a pain, as the presence of pain is. Id.

High degree of any quality.

Zeal in duties, should be proportioned to the great- ness of the reward, and the certainty. Rogers.

High place; dignity; power; influence; empire.

The most servile flattery is lodged most easily in the grossest capacity ; for their ordinary conceit draweth a yielding to greatness, and then have they not wit to discern the right degrees of duty. Sidney.

Farewell, a longing farewell to all my greatness.

Shakspeare. So many As will to greatness dedicate themselves. Id. I beg your greatness not to give the law

In other realms ; but beaten, to withdraw.

Dryden.

Approaching greatness met him with her charms Of power and future state ; He shook her from his arms. Id.

Themistocles raised the Athenians to their ˆreainets at sea, which he thought to be the true and constant interest of that commonwealth. Swift.

Swelling pride ; affected state.

My lord would have you know, that it is not of pride or greatness that he comcth not aboard your ships. Bacon,

Merit; magnanimity; nobleness of mind. Greatness of mind and nobleness their seat

Build in her loveliest. Milton.

Grandeur; state; magnificence.

Greatness with Timon dwells in such a draught. As brings all Brobdignag before your thought.

Pope.

GREAT BRITAIN.

Great Britain. In the article Britain we shall be found to have introduced a general description of this important island, and to have traced its history from the remotest ages with which we are acquainted, to the period of the establishment of the Saxon kingdom of England, under Egbert. The article England pursues the history of that country until the kingdoms of England and Scotland were united under the dominion of one sovereign, James I., and fur- nishes also the general statistical details, a state- ment of the rise and progress of the manufactures, present commerce, government, income, &c. ot Great Britain. We have undertaken in the pre- sent article to complete the history of Great Britain, and to add a few statistical and mis-

cellaneous details necessary for completing our picture of the existing state of the empire.

PART I. HISTORY OF GREAT BRITAIN.

1. Of the reigns of the House of Stmrt to the death of Charles I. — Queen Elizabeth, as we have stated, liad expressly recognised the claim of her 'cousin of Scotland' to succeed to the throne ; and few sovereigns ever assumed the regal authority with more general approbation, or greater hopes of a peaceable and happy reign. These hopes, however, were soon blasted ; and the history of tliis monarch's reign consists of little more than a detail of his disputes with parlia- ment. A minute account of these we cannot

here enter upon ; it would afford but little gra- tification or instruction to our readers; but it is of importance to know their origin, as they were the primary causes of those events which were soon so conspicuous in the history of Great Britain, and which resulted in our ever memora- ble Revolution.

In the semi-barbarous ages, which preceded this period, the human mind, enervated by su- perstition and obscured by ignorance, seems to have resigned all pretensions to liberty, either religious or civil. Unlimited and uncontrolled despotism prevailed every where ; and though in England some gleams of better principles of government, and of the dawn of better times ap- peared, the many examples of arbitrary power exerted by her sovereigns, queen Elizabeth her- self not excepted, show that the English

were very far from being a free people. An incon- testable proof of this, and an evidence how little restraint the people could then lay upon the authority of the sovereign, is, that the proceed- ings of parliament were accounted, even by the members, of so little consequence, that they did not keep any records of 'heni. It was not till the year 1607, four years after the accession of James, that parliamentary journals began to be regularly compiled, on the motion of Sir Edwin Sandys. Neither were the sessions of parlia- ment regular, and little attention was paid to the choice or continuance of the members. In the reign of Elizabeth, and her predecessors, the sessions did not continue above the twelfth part so long as the vacations. It was then usual, after a parliament had been prolonged beyond one session, for the chancellor to exert a dis- cretionary power of issuing new writs to supply the place of any members whom he judged inca- pable of attending ; and, so late as the 23rd of Elizabeth, the commons, of their own accord, without the smallest court influence, and con- trary' to some former votes of their own, con- firmed the chancellor's power in this respect. Nor d id they farther assert their privileges, than to vote, that ' during the sitting of parliament there do not, at any time, any writ go out for the choosing or returning any member without the warrant of the house.'

Towards the end of the sixteenth or beginning of the seventeenth century, a great, but gradual mental revolution took place throughout all Europe. Arts and sciences beginning to flourish, commerce and navigation were greatly extended, and learning of all kinds began to difluse itself. By more enlarged views, the love of freedom began, in Britain especially, to take place in the breasts of most people of education; and this was greatly promoted by an acquaintance with the ancient Greek and Latin historians. A pa- triotic spirit arose, and a desire of circumscrib- ing the excessive prerogatives and arbitrary proceedings of the crown rapidly spread through- out the nation. Nor was this desire unreasonable, or ill-founded. During the last years of queen Elizabeth's reign, the commerce, navigation, and number of seamen in England, had sensibly de- cayed. A remonstrance from the Trinity House in 1602 says, that since 1588, the number of seamen and shipping had decreased about a third part. Every species of domestic industry was

fettered by monopolists ; all foreign trade, except that to France, was brought by exclusive com- panies into the hands of a few rapacious engros- sers ; and all prospect of future improvement in commerce was sacrificed to a little temporary advantage of the sovereign. These companies, arbitrarily erected, had carried their privileges so far, that almost all the trade of England cen- tered in London ; the customs of tliat port alone amounting to £110,000 a-year, while those of all the rest of the kingdom were only £l 7,000 And this trade of London was confined to about 200 citizens, who were easily enabled, by com- bining among themselves, to fix whatever

price they pleased both on the exports and imports of the nation. The country was also burdened with wardships and purveyances. The latter arose from an old prerogative of the crown, by which the officers of the household were era- powered to take, without consent of the owners, provisions for the king's family, and carts and horses for the removal of his baggage, upon paying a stated price for them. The king had also a power of sending any person, without his consent, on whatever message he pleased ; and thus he could easily force any individual to pay him whatever money he chose, rather than be sent out of the country on a disagreeable er- rand. Money extorted from individuals, by this or any other method, was called a benevolence. The rising spirit of patriotism, which claimed a redress of these grievances, the severe government of Elizabeth had confined within very narrow bounds : but when James succeeded, being a foreign prince, less dreaded and less Ijeloved, symptoms of a more free and independent spirit immediately appeared. Happily James neither perceived the alteration, nor had sufficient capacity to check its early advances. He had established in his own mind a speculative system of absolute government, which few of his subjects, and none but traitors and rebels, he thought, would make any scruple to admit ; and consi- dered himself as entitled to equal prerogatives with other European sovereigns. In his person he imagined all legal power to be centered by an hereditary and a divine right ; nay, so fully was he persuaded that he was the absolute pro- prietor of his subjects, that in his speech to the parliament in 1621, he told them, that he 'wished them to have said, that, their privileges were de- rived from the grace and permission of him and his ancestors.' And when the same parliament protested that ' the liberties, franchises, privi- leges, and jurisdictions of parliament, are the an- cient and undoubted birth-right and inheritance of the subjects of England,' he was so enraged, that, sending for the journals of the commons, he, with his own hand, before the council, tore out this protest, and ordered his reasons to be in- serted in the council book. Such were the op- posite dispositions of the prince and parliament, at the commencement of the Scottish line ; dispo- sitions just beginning to exist and to appear in parliament, but thoroughly established, and openly avowed on the part of the king, throughout his whole reign. The consequence was, that during this reign the prerogatives of the crown were violently and openly attacked ; chiefly on the grounds of money and religion. The king's high

notions of the royal perogative made him imagine he had a right to whatever sums he pleased to demand ; and his profusion dissipated in a short time the scanty supplies he could extort from the parliament. With

regard to religion, the na- tion was at this time greatly divided between the rival claims of episcopalianism and puritanism. Though the severities of Elizabeth had almost totally suppressed the Papists, it had been other- wise with the Puritans. So much had they in- creased, by the very means which had diminished the numlier of Catliolics, that no fewer than 750 clergymen of that persuasion signed an address to James on his accession. They hoped that tiie new king, having received his education in Scot- land, and having always professed an attachment to the church established there, would at least abate the rigor of the laws enacted against them, and perhaps advance them to equal favor with their rivals. But in this they vvere mistaken. He had obser^^ed in their Scottish brethren a great inclination towards republicanism, and a zealous attachment to civil liberty. In the capacities both of monarch and theologian, he had experi- enced the little complaisance they were disposed to show him. They controlled his commands ; disputed his tenets ; and to his face, before the whole people, censured his conduct and behavi- our. Though he had been obliged, therefore, while in Scotland, to court their favor, he trea- sured up on that account the stronger resentment against their principles, and was now determined to resist them with the whole weight of his au- thority. Hence he not only rejected their pe- tition, but throughout his whole reign refused to relax in the least the severity of the laws against Protestant nonconformists.

The same feelings which occasioned in James such an aversion to the Puritans, prompted him to favor even the Papists, as being greater friends to despotism. In his youth he had been suspect- ed of a bias towards the religion of the latter ; wlien he ascended the throne of England, it is •certain he often endeavoured to procure some mitigation of the laws against them. But in this he was constantly opposed by the parliament ; and, indeed, the strong inclination shown by James to establish episcopacy in every corner of his dominions, tended much to alienate from him the minds of many of his subjects, especially in Scotland. In May, 1G17, the king set out for that country expressly with the design of establishing episcopacy there. lie did not, however, design to abolish presbytery entirely. He only proposed at first to establish the royal authority above the ecclesiastical, and to intro- duce some ceremonies into the public worship, such as kneeling at the sacrament, private com- munion, and baptism, confirmation, the observ- ance of Christmas, &c. But he as little knew his own countrymen, on these points, as the Eng- lish : every advance towards episcopacy gave the greatest discontent, and these trivial ceremonies were at once rejected as if they inrolvod mortal sins. We cannot on the whole wonder that James should have been desirous of subjugating the rebellious and turbulent spirit of the Scottish clergy ; and, on the other hand, considering the extreme weakness of this monarch's understand-

ing, and that he imagined himself able to manarre not only furious

religionists, but even the most powerful foreign nations, with no other weapon than mere argumentation, we can as little wonder at his want of success. — In short, so far was James from being able to establish his royal au- tliority above the ecclesiastical, that he found himself unable to introduce a single ceremony. He returned therefore with the mortification, not only of seeing his schemes entirely baffled with regard to Scotland, but of having disgusted even the few of that nation over whom religious pre- judice did not prevail ; and who, regarding the ceremonies so much insisted on by the king as trivial and insignificant, considered the national honor sacrificed in this attempt at a servile imi- tation of the worship practised in England. Equally bad success attended James when he at- tempted some opposition to the puritanical in- novations in the latter country. He had observed, in his progress through the kingdom, that a Ju- daical observance of the Sunday gained ground ; and that the people were thus debarred from recreations which contributed, as he thought, to their health and amusement. He now, therefore, issued a proclamation to allow, after divine ser- vice, all kinds of 'lawful games and exercises.' But this his subjects considered as an effort to introduce the utmost profaneness. In 1620 a bill was brought in by the commons for the more strict observance of the Sunday or ' sabbath,' and when one Shepherd opposed this bill, ob- jecting to the appellation sabbath as puritanical, he was expelled the house by the suggestion of Mr. Pym. Such was the situation of religious affairs during this reign.

The first thing of political consequence, which transpired in it, was a conspiracy formed in the year of the king's accession to displace him, and bestow the kingdom on Arabella Stuart. Sir Walter Raleigh was said to have been concerned in this mysterious affair; for which he was tried, condemned without sufficient proof, and, after suff'ering thirteen years imprisonment in the tower, was executed out of complaisance to the Spaniards. Lord Gardenstone remarks, that 'James I. butchered Sir Walter without the form of a trial,' and censures Mr. Hume for attempt- ing to vindicate James. See Raleigh. In 1605 was discovered the famous gun- powder plot, the anniversary of which discovery lias ever since been celebrated. Its origin is thus stated : — On the accession of James great expectations had been formed by the Catholics, that lie would prove favorable to their religion ; but, their hopes, as well as those of the Puritans, were disappoint- ed. James expressed his intention of executing strictly the laws againt them, and of persevering in all the rigorous measures of queen Elizabeth. A plan of revenge was now, therefore, thought of by Robert Catesby, a gentleman of good parts, and of an ancient family. He communicated his mind to Percy, a descendant of the house of Nor- thumberland, when the latter proposed to assas- sinate the king : but this seemed to Catesby a very ina

•were destroyed, the parliament, nobility, and gentry, who were infected with the same heresy, would raise another protestant prince to the throne. To serve any good purpose they must he insisted destroy, at one blow, the king, the royal family, the lords and commons ; and bury all their enemies in a common ruin. This terrible scheme being approved of, it was resolved to effect it by springing a mine under both houses of parliament. Thomas Winter was sent over to Flanders in quest of Fawkes, an officer in the Spanish service. All the conspirators were bound to secrecy by the most solemn oaths, accompanied with the sacra- ment ; and, so completely had superstition effaced every prmciple of humanity from their minds, that not one of them seems to have entertained the smallest compunction for the cruel massacre they intended. Some indeed were startled at the thoughts of destroying a number of Catho lies, who must necessarily be present as specta- tors, or attendants on the king. But Tesmond a Jesuit, and Garnet superior of that order in England, are said to have removed these scruples, by showing that the interests of religion required in this case the sacrifice of the innocent with the guilty. This was in the spring and summer oi- 1604 ; when the conspirators hired a house in Percy's name, adjoining to that in which the parliament was to assemble. Towards the end of that year they began to pierce the wall of the house, in order to get in below that where the parliament was to sit; but found, while in the midst of their task, that a magazine of coals had been kept in a vault immediately under the house ; and that the coals were then selling off, after which the vault would be let. It was there- fore hired by Percy; thirty-six barrels of powder lodged in it ; the whole covered up with faggots and billets ; the doors of the cellar boldly flung open ; and every body admitted as if it con- tained nothing dangerous. Being now, as they thought, assured of success, the conspirators began to plan the remaining part of their enter- prise. The king, the queen, and prince Henry, were expected to be present at the opening of the parliament : and the duke of Albany it was re- solved that Percy should seize or murder. The princess Elizabeth, likewise a child, was kept at lord Harrington's house in Warwickshire ; and some others of the conspirators engaged to as semble their friends on pretence of a hunting match, when they were to seize that princess, and immediately proclaim her queen. The day so long wished for at las; approached ; the dreadful scheme, though communicated to more than twenty persons, had been religiously kept for nearly a year and a half; and nothing could be foreseen which could possibly prevent its success. Ten days before the meeting of parliament, how- ever, lord Monteagle, a Catholic, son to lord Morley, received the following letter, which had been delivered to his servant by an unknown hand : — ' My lord, out of the love I bear to some of your friends, I have a

care for your pre- servation. Therefore I would advise you, as you tender your life, to devise some excuse to shift off your attendance on this parliament. For God and man have determined to punish the wicked-

ness of the times. And think not slightly of this advertisement ; but retire yourself into the country, where you may expect the eveut in safety. For, though there be no appearance of any stir, yet I say, they will receive a terrible blow this parliament ; and yet they shall not see who hurts them. This counsel is not to be con- temned, because it may do you good, and can do you no harm ; for the danger is over as soon as you have burned this letter. And I hope God will give you the grace to make use of it, to whose holy protection I commend you.' Though Monteagle imagined this letter to be only designed to frighten him, he carried it to lord Salisbury, secretary of state; who laid it before the king. James regarded it in a more serious light. He at once concluded that a de- sign was entertained of blowing up the par- liament house with gunpowder, and it was thought advisable to search the vaults below. This, however, was wisely delayed till the day before the meeting of parliament; when the lord chamberlain, observing the great piles of wood and faggots which lay in the vault under the upper house, resolved to make afurther search. About midnight. Sir Thomas Knevit, a justice of peace, arrived with proper attendants ; and, find- ing Fawkes arrived at the door of the vault, he immediately seized him, and, turning over the fag- gots, discovered the gunpowder. Matches and every thing necessary for setting fire to the train were also taken on the person of Fawkes, who, now in despair, expressed the utmost regret, that he had lost the opportunity of firing the powder at once, and of sweetening his own death by that of his enemies. For two or three days he mani- fested the same obstinacy, but, being confined in the tower, and the rack shown to him, his courage failed, and he made a full discovery of the con- spirators. Catesby, Percy, and others of them, however, on hearing that Fawkes was arrested, hurried into Warwickshire; where Sir Everard Digby, imagining that the confederates had suc- ceeded, was already in arms to seize the princess Elizabeth. But the country people raised by the sheriffs soon surrounded the conspirators and their attendants to the number of about eighty; and, though they resolved to sell theic lives as dearly as possible, some of their powder took fire, and disabled them from defending themselves. The people then rushed in upon them. Percy and Catesby were killed with one shot. Digby, Rookwood, Winter, and others, being taken prisoners, were tried, confessed their guilt, and died, together with Garnet, by the hands of the common executioner. The lords Stourton and Mordaunt, two Catholics, were fined, in the sums of £4000, and £lO,000 res- pectively, by the star-chamber ; their absence from parliamenthaving occasioned a suspicion of their being acquainted with the conspiracy : and the earl of Northumberland detained several years a prisoner in the tower ;

because, among other grounds of suspicion, he had admitted Percy into the number of gentlemen pensioners, without his taking the requisite oaths. He also was condemned to pay a fine of £30,000.

In 1612 James appears in his most advanta- geous point of view, namely, as a legislator of

Ireland In this work he proceeded by a steady, regular, and well-concerted plan. He began with abolishing the ancient Irish customs, which sup- plied the place of laws, and which were exceed- ingly barbarous and absurd. By the Brehon laws every crime, however enormous, was pun- ished, not with death, but by a fine. Murder itself was compensated in this way. Every one had a value affixed to him, called his eric ; and whoever was able to pay this, mi2;ht kill him when he pleased. To the slight offences of op- pression, extortion, &c., no penalty was affixed, nor could any redress for them be obtained. By the custom of Gavelkind, upon the death of any person, his land was divided among all the males of the sept or family, both legitimate and illegiti- mate ; and after partition was made, if any of the sept died, his portion was not shared out among his sons, but the chieftain at his discretion made a new partition of the lands. As no man, by this custom, enjoyed a fixed property in land ; to build, cultivate, or improve, was considered as lost labor. Their chieftains were established by election, or rather by force. Their authority was absolute; and, notwithstanding certain lands were assigned to the office, its chief profit re- sulted from exaction and assessments, for which there was no fixed law. After abolishing these customs, and substituting English laws in their place, James took the natives under his protec- tion, declared them free citizens, and proceeded to govern them by a regular administration. A sufficient army was maintained, its discipline in- spected, and its pay transmitted from England. When O'Doghartie raised an insurrection, a re- inforcement was sent over, and the rebellion immediately extinguished. All minds being first quieted by a universal indemnity, circuits were now established, justice administered, and crimes of every kind severely punished. As the Irish had been universally engaged in a rebellion against Elizabeth, a resignation of all the sepa- rate jurisdictions formerly granted them was rigorously exacted ; a resignation of private estates was even required ; and, when they were restored, the projirietors received them under such conditions as might prevent future tyranny and oppression. The whole province of Ulster having fallen to the crown, by the attainder of rebels, a company was established in London for planting new colonies in that fertile country. The land being divided into shares, of which the largest did not exceed 2000 acres :

tenants were brought over from England and Scotland : the Irish were removed from the hills, and settled in the open country ; husbandry and the arts were taught them ; and thus Ulster, from being the most wild and disorderly province in Ireland, soon became the most civilised and best culti- vated.

This year Henry, prince of Wales, died sud- denly on the 6th of November, not without strong suspicions of poison. On opening his body, however, no symptoms of poison appeared ; but his death difl'used a universal grief through- out the nation, as he was reckoned a prince of extraordinary accomplishments. But the marriage of the princess Elizabeth with Frederic elector palatine, which was celebrated February 14th,

161.3, served to dissipate the national grief. This marriage, however, in the event, proved unhappy to the king, as well as to his son-in-law. The elector, trusting to so great an alliance, engaged in enterprises beyond his strength ; and James, not being able, and perhaps not willing, to assist him, lost entirely tlie affections of his people. This particularly appeared in the yeai 1619. At this time the states of Bohemia having taken arms against the emperor jNIatthias, in defence of the Protestant religion, continued their revolt against his successor Ferdinand II., and, beitig alarmed at his preparations against them, made an offer of their crown to the elector palatine, who, stimulated by ambition, at once accepted , the offer, and marched all his forces into Bo- hemia. But his affairs soon drew to an unfortu- nate crisis. Being defeated, in the great and decisive battle of Prague, he fled with his family into Holland ; and Spinola the Spanish general invested and reduced the palatinate, every new conquest of the Catholics being attended with persecutions against the Protestants. At this news the religious zeal of the English was in- flamed to the highest degree. The sufferings of their Protestant brethren, in Germany, excited their sympathy and resentment; and the inactive spirit shown by James was loudly exclaimed against.

Not having been, however, consulted by his son-in-law, James from the very first had denied his title of king of Bohemia, and forbad him to be prayed for in the churches under that appellation. He was also on other accounts extremely averse to come to a rupture with the king of Spain. Thb? eldest daughter of that monarch had been indirectly offered to prince Henry : and even after James, in consequence of his alliance with the Dutch, had marched 4000 men to the assist- ance of the Protestants, the Spanish ambassador, Gondomar, made, in 1618, an offer of the king's second daughter to prince Cliarles. Of this match James had entertained great hopes, not only as a means of relieving his own necessities, but of recovering the palatinate for his son-in- law. But on the 14th November, 1021, the commons framed a remonstrance with him upon these subjects.

They represented, that the enor- mous growth of the Austrian power threatened the liberties of Europe ; that the progress of the Catholic religion in England bred the most melancholy apprehensions, lest it should again acquire an ascendancy ; the indulgence of his majesty towards the professors of that religion having encouraged their insolence; and, above all, that the Spanish match elevated them so far as to hope for an entire toleration, if not a final re-establishment. They therefore entreated his majesty, that he would immediately undertake the defence of the palatinate, and maintain it by force of arms ; that he would turn his sword against Spain, whose armies and treasures were the chief support of the Catholic interest in Europe ; that he would enter into no negocia- tion for the marriage of his son but with a Protestant princess; that the children of popish recusants should be taken from their parents, and committed to the care of Protestant teachers and schoolmasters ; and that the fines and con-

fiscatious to which the Catholics by law were liable, should be levied with the utmost severity. The kiug, who was then at Newmarket, hearing of the intended remonstrance, wrote a letter to the speaker, in which he sharply rebuked the house for debating on matters far above their reach and capacity ; and sinclly forbad them to meddle with any thing that reg irded his govern- ment or deep matters of state, and especially not to touch on his son's marriage with the Spa- nish princess. Upon this the commons framed a new remonstrance, in which they asserted their right of debating on all matters of government, and that they possessed entire freedom of speech in their debates. The king replied, that their remonstrance was more like a denunciation of war, tnan an address of dutiful subjects ; and their pretension to enquire into all state affairs, without exception, was such a plenipotence as none of their predecessors, even during the reigns of the weakest princes, had ever pretended to; that public transactions depended on a complica- tion of views and intelligence, with which they were entirely unacquainted ; that they could not show their wisdom better, as well as duty, than by keeping within their proper sphere ; and that in any business which depended on his preroga- tive, they had no title to interpose with their advice, unless when he pleased to ask it, &c. In return, the commons framed the protestation already mentioned, which the king tore out of their journals, and soon after dissolved the parliament.

The leading members of the house, Sir Edward Coke and Sir Robert Phillips, were now com- mitted to the tower : three others, Selden, Pym, and Mallory, to other prisons ; and some others, as a lighter punishment, were sent on business into Ireland. Sir John Saville, however, a powerful

man in the house of commons, and a zealous opposer of the court, was made the comptroller of the household, a privy counsellor, and soon after a baron. This event is memora- ble, being the first instance of an English king advancing a man on account of his parliamentary interest. But in vain did James, by reiterated proclamations, forbid his subjects to discuss the public affairs and measures. His proclamations served rather to inflame the curiosity of the public. In every company and society the late transactions became the subject of argument and debate.

For five years James continued the dupe of the court of Spain. At last he resolved, if pos- sible, to remove every obstacle to the Spanish alliance. He issued orders for discharging all popish recusants who were imprisoned ; and it was daily apprehended, that he would forbid, for the future, the execution of the penal laws against them : apologising for this conduct, by pretending that it would piocure from foreign princes a toleration for Protestants. At any rate it forwarded, for a while, James's end with regard to the marriage. The earl of Bristol, ambas- sador at the court of Spain, being fully con- vinced of the Spanish sincerity, wrote him word that the Spanish princess was to bring with her a fortune of £500,000 ; and that he considered this match as an infallible prelude to the palatine's

restoration. Nothing was now therefore wanting but a dispensation from Rome ; and the duke of Buckingham, a new favorite at court, persuaded the prmce to undertake a journey to Madrid. They travelled through France in disguise ; and, under the assumed names of John and Thomas Smith, were introduced at the French court, where Charles first saw his future wife Henrietta. On their arrival at Madrid, every body was sur- prised by a step so little usual among princes. The Spanish monarch, however, expressed the utmost gratification at the visit; gave the prince a golden key which opened all his apartments, that he might, without introduction, have access to him at all hours ; ordered his prime minister, Olivarez, never to be covered in his presence ; and proclaimed a general gaol delivery as an ex- pression of the public joy. The infanta, how- ever, was only seen by her lover in public ; and the pope, hearing of Charles's arrival, tacked some new clauses to the dispensation, which it became necessary to transmit to London. The treaty which was made public, chiefly regarded the exercise of the Catholic religion by the infanta; and stipulated that the children of the marriage should be educated by the princess till they were ten years of age. There were also some private articles sworn to by James, which could not have been made public without violent mur- murs. A suspension of the penal laws against the English Catholics was promised, as likewise a repeal of them in parliament, and a toleration for the exercise of that religion in private.

Meanwhile, pope Gregory XV., who granted the dispensation, died; and

Urban VIII. succeed- ed him. Upon this event, the nuncio refused to deliver the dispensation till it should be renewed by Urban. This the pontiff delayed, in hopes that, during the prince's residence in Spain, some method might be found of effecting his conver- sion. But the king of England, as well as the prince, had become impatient at the delay . Charles obtained leave to return; and Philip graced his departure with all the circumstances of civility and respect which had attended his arrival.

Buckingham, however, before their departure from Madrid, is said to have decided the prince's mind against the match. On their arrivab in London, therefore, the former assumed the entire direction of the negociation ; and made it his business to seek pretences for a breach of treaty. At last, after many artifices to delay or prevent the espousals, Bristol received positive orders not to deliver the proxy which had been left in his hands, till security was given for the full restitution of the palatinate. Philip understood this language : but, being determined to throw the whole blame of the rupture on the English, he delivered into Bristol's hand a written pro- mise, by which he bound himself to procure the restoration of the palatinate, either by persuasion or by every other possible means ; and, when he found that this concession gave no satisfaction, he ordered the infanta to lay aside the title of Princess of Wales, which she bore after the arri- val of the dispensation from Rome, and to drop the study of the English language. As he knew that the counsels, which now governed the court of England, would not stop at the breach of the

marriage treaty, he also immediately ordered preparations for war. A more successful match for prince Charles was soon after negociated with Henrietta, daughter of Henry IV. ; the king of France demanding only the same terms that had been offered to the court of Spain. In an article of this treaty of marriage, it was, however, sti- pulated, that the education of the children till the age of thirteen should belong to the prin- cess; a concession which gave ultimately to the house of Stuart that unfortunate bias towards popery, which afterwards proved their ruin.

James, being now deprived of every other hope of relieving his son-in-law but by force of arms, declared war against Spain and the empe- ror, for the recovery of the palatinate : 6000 men were sent over into Holland to assist prince Maurice against those powers ; the people were every where elated at the courage of their king, and were satisfied with any war which was to exterminate the papists. This army was followed by another consisting of 12,000 men, commanded by count Mansfeldt ; and the court of France

promised its assistance. But the English were disappointed in all their views : the troops, being embarked at Dover, upon sailing to Calais, found no orders for their admission. They were obliged, after waiting for some time, to sail to- wards Zealand, where no proper measures were yet consulted for their disembarkation; and, meanwhile, a pestilential disorder crept in among them, of which half the army died. Whe- ther this failure of his most cherished plans had any effect on the king's constitution, is uncer- tain ; but he was soon after seized with a tertian ague, which put an end to his life on the 27th of March, 1626, after having lived fifty-nine years, and reigned over England twenty-two.

James was succeeded by his son Charles I., who was exceedingly popular with his subjects, for breaking off the match with the Spanish prin- cess, and procuring the rupture with the house of Austria. Young and inexperienced, he re- garded these praises as sincere ; and was so impatient, therefore, to assemble the great coun- cil of the nation, that he would gladly, for the sake of despatch, have called together the same parliament which sat under his father. But, being told that such a measure was unusual, he issued writs for summoning a new parliament on the 7th of May ; and it was not without regret that the arrival of tiie princess Henrietta, vvhom he had espoused by proxy, obliged him to delay, by repeated prorogations, their meeting till the ■•Bth of June. Charles inherited his father's great pecuniary necessities, liis high notions of the royal prerogative, and a violent attach- ment to episcopacy. At his accession, believing his subjects to be in perfect friendship with him, he resolved that their bounty should be entirely unasked, and the entire effect of mutual confi- dence. Accordingly, his first speech to the parliament was full of simplicity and cordiality. He lightly mentioned tlie occasion he had for supply. He employed no intrigue to influence the sufTrages of the members. He would not even allow the officers of tlie crown, who had seats in the house, to mention any particular suia

*which he had occasion for ; but trusted entirely to the wisdom and affection of his parliament, * who perfectly well knew his circumstances.' The return made by the commons was by no means suitable to this generous behaviour. They knew that all the money granted by the last par- liament had been spent on military and naval preparations ; and that great anticipations were likewise made of the revenues of the crown. They were not ignorant that Charles was loaded with a debt contracted by his father, who had borrowed money both from foreign princes and from his own subjects. They were sensible that the war was the result of their ovra importunate intreaties, and that they had solemnly engaged to support their sovereign in carrying it on. Nor were they unacquainted with the difficulty of military enterprises directed against the whole house of Austria; against the king of Spain, the richest prince in Europe ; and against the empe- ror*

Ferdinand, hitherto the most fortunate mo- narch of the age. But, to answer all these important ends, they thought proper only to confer on the king a supply of £112,000. When Charles, with great moderation, represented, in the most explicit manner, the necessity there was for a larger supply, urging, among other pleas, that, if he now met with kind and dufifm usage, it would endear him to the use of parlia- ments, and for ever preserve an entire harmony between him and liis people, the commons remained inexorable ; they even refused the ad- dition of il ths to the former supply. Instead of this they renewed their complaints against the growth of popery ; demanding a strict exe- cution of the penal laws against the Catholics ; remonstrated against some late pardons granted to priests ; and attacked Montague, one of the king's chaplains, on account of a book which he had lately composed. Charles gave them a gra- cious and complaisant answer ; but was firmly resolved to abate somewhat of the rigorous laws against that unfortunate party, which his engage- ments with France absolutely required.

No measure could be more disgustful to his subjects than this resolution. The Puritans had continued to gain ground during the whole reign of James, and now formed the majority of the hous of commons; in consequence of which, petitions were presented to the king for replacing such able clergymen as had been silenced for want of conformity to the ceremonies. They also enacted laws for the strict observance of Sunday. In consequence of this behaviour in Charles's first parliament, it was dissolved on the 12th of August, 1623, and a new one called, February 6th, 1626. During this interval, Char'es had been obliged to borrow from his subjects on privy seals ; the advantage of which was but a small compensation for the disgust it occasioned. By means, however, of that supply, and some other expedients, he was enabled to equip his fleet, though with difficulty. It was designed against Spain, but performed nothing worth notice, and its bad success increased the clamors against the court. Charles's second parliament adopted the same views with the for- mer. They, however, voted a supply of throe subsidies (£lG8.0C0\ and f|ths; but the passing

this vote into a law was reserved until the end of the session, that they might have an opportu- nity of forcing the king to make concessions. This harsh conduct was greatly resented by Charles; but he found himself obliged to sub- mit. In the mean time they attacked the duke of Buckingham, who was become generally ob- noxious; and was impeached by the earl of Bristol, on account of his conduct with respect to the Spanish negociation. The earl's impeach- ment, however, was entirely overlooked,

and the commons were able to prove nothing otherwise of any consequence against him. The king, imagining that Buckingham's greatest crime was the having been so much in favor with his sovereign, commanded the house expressly not to meddle with his minister, but to finish, in a few days, the bill they had begun for the subsi- dies ; otherwise they must expect to sit no longer. Suggestions of this kind had a bad effect ; and, when the king proceeded furtlier to throw into prison two members of the house who had managed the impeachment against Bucking- ham, the commons declared that they would pro- ceed no farther till they had satisfaction in their privileges. Charles alleged, as the reason of this measure, certain seditious expressions, which, he said, had, in their accusation of the duke, dropped from these members. Upon enquiry it appeared that no such expressions had been used, and the members were released. Soon after, the house of lords, moved by the example of the commons, claimed liberty for the earl of Arundel, who had been lately confined in the tower, and, after many fruitless evasions, the king was obliged, however ungraciously, to comply. The next attack made by the commons, had it succeeded, would have reduced the king to an absolute dependence on parliament. They were preparing a remonstrance against the levy- ing of tonnage and poundage. This article, toge- ther with the new impositions laid on merchan- dise by James, constituted nearly one-half of the crown revenues; and, after having gained this point, they were to petition, or rather to have commanded the king to remove Buckingham from his presence and councils. The king, however, being alarmed at the yoke they were preparing for him, dissolved this second parlia- ment, June l.'ith, 1626.

Charles, having now made such a breach with his parliament as there was no hope of repair- ing, was obliged to exercise every branch of his prerogative to supply himself with money. A commission was granted to compound with the Catholics, and agree for dispensing with the penal laws. By this expedient the king, indeed, ˆUed his coffers, but gave general disgust. From the nobility he desired assistance ; from the city he required a loan of £100,000. The former contributed slowly : but the latter, after many excuses, gave, at last, a flat denial. To equip a fleet, a distribution, by order of the council, was made to all the maritime towns, and each of them was required, with the assistance of the adjacent counties, to arm so many vessels. London was rated at twenty ships ; and this is the first appearance, in Charles's reign, of ship- money ; a taxation which had once been imposed

by Elizabeth, but which, when carried some steps farther by Charles, produced the most vio- lent discontents. These methods of supply were carried on with some moderation, till news ar- rived of the king of Denmark being totally de- feated by count Tilly the imperial general ; but, supplies having then become more than ever necessary, it was suggested in

council, that the most equal and convenient method of obtaining them was by a general loan from the subject, according as every man was assessed in the rolls of the last subsidy. That precise sum was re- quired which each would have paid, had the vote of four subsidies been passed into a law : care, however, was taken that the sums thus ex- acted were not to be called subsidies but loans. Many throughout England now refused these loans, and some were even active in encouraging their neighbours to insist upon their common rights and privileges. By warrant of the council, these were thrown into prison. Most of them patiently submitted to confinement, or applied by petition to the king, who commonly released them. Five gentlemen, however. Sir Thomas Darnel, Sir John Corbet, Sir Walter Earl, Sir John Haveningham, and Sir Edward Hampden, demanded release, not as a favor from the court, but as their due by the laws of their country. No particular cause was assigned for their commitment. The special command of the king and council was alone pleaded. And it was alleged that, by law, this was not sufficient rea- son for refusing bail or releasement to the prisoners. The question was brought to a solemn trial before the court of king's bench ; and the whole kingdom was attentive to the issue. By the debates on this subject it appeared, that per- sonal liberty had been secured by no less than six different statutes, and by an article in magna charta itself. It appeared, that, in times of tur- bulence and sedition, the kings had infringed these laws ; and of this also many examples were produced. The difficulty then lay to de- termine when such violent measures were neces- sary ; but of that the court pretended to be the supreme judge. As it was legal, therefore, that these five gentlemen should plead the statute, by which they might demand bail, so it was expe- dient in the court to remand them to prison, without determining on the necessity of taking bail for the present. This was a cruel evasion of justice, and, in fact, satisfied neither party. The court insisted that no bail could be taken ; the country exclaimed that the prisoners ought to be set free.

While the king was thus embroiled at home, he rashly engaged in a war with France, a king- dom with which he had but lately formed the most natural alliance. Historians generally agree that this war proceeded from the rivalship of the duke of Buckingham and cardinal Richelieu; both of whom aspired at the affections of the queen of France. However this may be, war was declared against France ; and Charles was taught to hope, that hostilities with that kingdom would be the surest means of procuring tran- quillity at home. The success of this war was proportionable to the wisdom with which it was commenced. Buckingham was appointed com-

mander ; and, being entirely unacquainted both with the sea and land service, he raanag;ed to lose two-thirds of his army, and returned in total discredit both as an admiral and general. The discontents in England now rose to such a height, that there was reason to apprehend an insurrection. Charles vvas also reduced to the greatest distress for want of money. That which he had levied by virtue of his prerogative came in very slowly, and it was dangerous to renew the experiment, on account of the ill-hu- mor of the nation. A third parliament was therefore called, March 17thj 1G28 ; whom Charles told, at the beginning of the session, that ' if they should not do their duties, in con- tributing to the necessities of the state, he must, in discharge of his conscience, use those other means which God had put into his hands, in order to save that which the follies of some par- ticular men might other\vise put in danger.' They began with voting against arbitrary impri- sonments and forced loans; after which five sub- sidies (£280,000) were voted to the king; a sum with which Charles, though much inferior to his wants, declared himself well satisfied. The commons, however, resolved not to pass this vote into a law, before they had obtained from the king a sufficient security, that their liberties sliould be no longer violated. They resolved upon a petition of right, in which they recapitu- lated all the unlawful exertions of the preroga- tive. The chief grievances complained of were forced loans, benevolences, taxes without con- sent of parliament, arbitrary imprisonments, billeting soldiers, and martial law. They pre- tended not to any unusual power or privileges ; nor did they intend to infringe the royal prero- gative, they said, in any respect : they aimed only at securing those rights and privileges derived from their ancestors. But the king now began plainly to aim at nothing less than abso- lute power. This petition he did his utmost to evade, by repeated messages to the house, in which he always offered his royal word, that there should be no more infringements of the liberty of the subject. These messages, how- ever, had no effect on the commons : they knew how insufficient such promises were, witliout further security. The petition, therefore, at last passed both houses, as embodying tlie law of those questions, and nothing was wanting but the royal assent to give it legal force. The king accordingly came to the house of peers, sent for the commons, and, being seated in the chair of state, the petition was read to him. In answer to it, he said, ' The king willeth that right be done according to the laws and customs of the realm, and that the statutes be put into execu- tion ; that his subjects may have no cause to complain of any wrong or oppression contrary to their just rights and liberties, to the preservation whereof he holds himself in conscience as much obliged as of his own prerogative.' This equi- vocal answer was highly resented by the com- mons. They first directed their indignation against a Dr. Manwaring, who had preached a sermon, and at the special command of the king, which was found to contain doctrines subversive of civil liberty. It taught, that though property Vol. X

was commonly lodged in the subject, yet, when? ever any exigency required supply, all property was transferred to the sovereign ; that the con- sent of parliament was not necessary for the im- position of taxes ; and that the divine laws re- quired compliance with every demand, however irregular, which the prince should make upon his subjects. For these doctrines Manwaring was sentenced to be imprisoned during the plea- sure of the house ; to be fined £lOOO to the king : make submission and acknowledgement for his offence ; be suspended three years ; be incapa- ble of holding any ecclesiastical dignity or secu- lar office ; and that his book be called in and burnt. No sooner, however, was the session ended, than ilanwaring received a pardon, and was promoted to a living of considerable value. Some years afterwards he was advanced to the see of St. Asaph. At last, the king, seeing it was impossible to carry his point, yielded to the importunities of])arliament. He came to the house of peers, and pronouncing the usual form of words, ' Let it be law as is desired,' gave full sanction and authority to the petition. The house resounded with acclamations, and the bill for five subsidies was immediately passed.

The commons, however, were not yet satisfied ; they began to attack the duke of Buckingliam, against whom they were implacable ; they also asserted, that the levying of tonnage and pound- age without consent of parliament was a palpable violation of the ancient liberties of the people, and an open infringement of the petition of right so lately granted. The king, to prevent a remonstrance on that subject, suddenly pro- rogued the parliament, June 26th, 1628.

The commons were soon delivered from their enemy Buckingham ; who was murdered on the 2-3d of August following, by one Felton who had formerly served under him. The king did not appear much concerned at his death, but retained an affection for his family. He desired also that Felton might be tortured, in order to extort from him a discovery of his accomplices ; but the judges very properly declared, that, though that practice had been once common, it vvas altogether illegal. In 1629 the contentions between the king and his parliament were re- newed. The great article on which the com- mons broke with their sovereign, and which finally created in him a disgust at all parlia- ments, was their claim with regard to tonnage and poundage. The dispute was, whether this tax could be levied without consent of parlia- ment or not. Charles, supported by multitudes of precedents, maintained that it miglit ; and the parliament, in consequence of their petition of right, asserted that it could not, and were re- solved to support their rights. They began with summoning before them the officers of the custom-house, to give an account by what authority they had seized the goods of those merchants, who had refused to pay the duties The barons of exchequer were questioned with regard to their decrees on that head ; and the sheriff' of London was committed to the Tower for

supporting the officers of the custom-house The goods of RoUes, a merchant, and member of the house, Vp'-wr seized for his refusal to i)»y

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the duties, complaints were made of this violence, as a flagrant breach of privilege. Charles, on the other hand, supported his officers; and the quarrel between him and the commons became every day more virulent. Sir John Elliot framed a remonstrance against tonnage and poundage, which he oftered to the clerk to read ; but it was refused, and he then read it himself. The ques- tion bemg called for, the speaker Sir John Finch said, that he had a command from the king to adjourn, and to put no question ; upon which he rose and left the chair. The whole house was in an uproar ; the speaker was pushed back into the chair, and forcibly held in it, till a short remonstrance was formed, which was instantaneously passed by acclamation. Religious feelings and controversies also min- gled with al! this. Papists and Armenians were declared capital enemies to the common- wealth, and those who levied tonnage and poundage were branded with the same epithet. Even the merchants, who should voluntarily pay these duties, were called betrayers of English liberty, and public enemies. The doors being locked, the gentleman usher of the house of lords, who was sent by the king, could get no admittance till this remonstrance was finished. By the king's order he took the mace from the table, which put an end to their proceedings, and on the 10th of March the parliament was dis- solved, and some of the members imprisoned.

Charles, being now disgusted with parliaments, firmly resolved to call no more; but, finding himself destitute of resources, was obliged to make peace with the two powers with whom he was at war. A treaty was signed with France on the 14th of April, and another with Spain on the 5th of November, 1630. As if, however, resolved on his own ruin, and to lose the small degree of affection towards him which remained among his subjects, Charles now began to make innovations in religion. Archbishop Laud had obtained a prodigious ascendancy over him ; and, by his superstitious attachment to foolish ceremonies, led him into a conduct that proved fatal to himself and to the kingdom. He chose this time, of all others the most inauspicious, for attempting to renew the ceremonies of the fourth and fifth centuries, and so openly were many of the Popish tenets espoused, that not only the Puritans believed the church of England to be relapsing fast into that superstition, but the court of Rome itself entertained hopes of regaining its authority. Laud was actually off"ered, it is said, a cardinal's hat. See

Laud. He exacted the old and superstitious veneration for the sacerdotal character, and implicit submission to the creeds and decrees of synods and councils; and enjoined great pomp and ceremony in wor- ship. Orders were given, that the communion table should be removed from the middle of the area, where it had hitherto stood in all churches except cathedrals, to the east end ; and that it should be railed in, and denominated an altar. All kinds of ornaments, especially pictures, were introduced. The crucifix, too, was not omitted. In return for Charles's favor, Laud and his fol- lowers took care to magnify on every occasion the reˆgal authority, and to treat with the utmost

disdain all puritanical pretensions to civil and religious liberty. In the star chamber and high commission both the church and king found a ready instrument to suppress the rising spirit of liberty. Tonnage and poundage were continued to be levied by royal authority alone. The former arbitrary impositions were still exacted, and new impositions laid upon different kmds of merchandise. The custom-house officers received orders from the council to enter into any house, warehouse, or cellar; to search any trunk or chest ; and to break any bulk whatever, in default of the payment of customs. In order to exer- cise the militia, each county by an edict of the council was assessed in a certain sum for main- taining a muster-master appointed for that service. Compositions were now again openly made with rescusants, and the Popish religion afforded a regular branch of revenue. A com- mission was also granted for compounding with such as possessed crown lands on defective titles ; and on this pretence considerable sums of money were exacted of the people.

While the English were thus driven to the utmost discontent, and almost ready to break out into rebellion, Charles thought proper to attempt the establishment of episcopacy in Scotland. The canons for erecting a new eccle- siastical jurisdiction were promulgated in 1635, and received without much outward opposition ; but when the first reading of the liturgy was attempted in the cathedral church of St. Giles, Edinburgh, in 1637, such a tumult was produced, that it was not thought safe to repeat the expe- riment. A universal combination against the religious innovations began immediately to take place; and to the proclamation of Charles, the nobility, gentry, and ministers, opposed the cele- brated production of the Covenant. This consisted of a renunciation of Popery, formerly signed by James in his youth, and filled with many virulent invectives against that party. A bond of union followed, by which the subscri- bers obliged themselves to resist all religious innovations, and to defend each other against all opposition. It waS subscribed by people of all ranks and conditions. The king now began to be alarmed. He sent the marquis of Hamilton, as commissioner, to treat with the covenanters; and he required that obligation to be renounced and recalled. In answer to this demand the covenanters told him, they would

sooner renounce their baptism ! and invited the commissioner himself to sign it. Hamilton returned to Lou- don ; made another fruitless journey with new concessions to Edinburgh; returned again to London, and was immediately sent back with still greater concessions. The king was now willing to abolish entirely the canons, the liturgy, and the high commission court ; he even resolved to limit extremely the power of the bishops, and was content if on any terms he could retain that order in the church of Scotland. To ensure all these gracious offers, he gave Hamilton au thority to summon first an assembly, and thpn o parliament, where every grievance should be redressed. The offer of an assembly and a par- liament, in which they expected to be entirely masteis, was very willingly embraced by the

covenanters. When they found, however, that Charles's proposal of a new covenant was only meant to weaken and divide them, they received it with the utmost detestation ; and proceeded m their own way to model the assembly. It met at Glasgow in 1638. A firm determination had been entered into of utterly abolishing epis- copacy; and, as a preparative to it, there was laid before the presbytery of Edinburgh, and solemnly read m all the churches of the king- dom, an accusation agamst the bishops, as guilty of heresy, simony, bribery, perjury, cheating, adultery, &c. &c. The bishops sent in a protest, declining the authority of the assembly ; the commissioner too protested against that court, as illegally constituted and elected ; and, in his majesty's name, dissolved it. This measure was foreseen, and little regarded. The court still continued to sit; and all the acts of assembly, from the accession of James VI. to the crown of England, were declared null and invalid. Thus the whole fabric which James and Charles, in a long course of years, had been rearing with much care and policy, fell at once to the ground. The covenant likewise was ordered to be signed by every one, under pain of excommunication.

In 1639 the covenanters prepared in earnest for war. The earl of Arsryle, thougli he long seemed to temporise, at last embraced their party, which the earls of Rothes, Cassilis, Montrose, Lothian, the lords Lindesay, Loudon, Yester, and Balmerino, also joined. Charles, on the other hand, w-as not deficient in his endea- vours to oppose this formidable combination. By a system of rigid economy he had not only paid all the debts contracted in the French and Spanish wars, but had amassed a sum of £'200,000, which he had reserved for any sudden exigency. The queen had great interest with the Catholics ; and she easily persuaded them to give large contributions, as a mark of their duty to the king. Thus a considerably supply was gained,

and the king's fleet iiecame formidable. Having put 5000 land forces on board, he in- trusted it to the marquis of Hamilton, who had orders to sail to the frith of Fortli, while an army was levied of nearly 20,000 foot and 3000 horse ; and put under the command of the earl of Arundel. The earl of Essex, a man of strict honor, and extremely popular, especially among the soldiery, was appointed lieutenant general ; and the earl of Holland was general of the horse. The king himself joined the army, and summoned all the peers of England to attend him. The whole had the appearance of a splen- did court rather than a military armament, and in this array the 'amp arrived at Berwick.

So prudent were the Scottish leaders that they immediately sent very submissive messages to the king, and craved leave to be admitted to a treaty. Charles, as usual, took the worst course. He concluded a sadden pacification, in which it was stipulated that he should withdraw his tleet and army ; that within forty-eight hours the Scots should dismiss their forces ; that the king's forts should be restored to him ; his authority be ac- knowledged ; and a general assembly and par- liament be immediately summoned, to settle all differences. The peace, however, was not of

long duration. Cliarles could not prevail on himself to abandon the cause of episcopacy: the assembly, on the other hand, proceeded with zeal and firmness, and voted it to be unlawful in the church of Scotland. The parliament also, which sat after the assembly, adopted measures which tended to diminish the civil power of the mon- arch ; and, what probably affected Charles still more, they were proceeding to ratify the acts o assembly, when, by the king's orders, Traquaire the commissioner prorogued them. Un account of these proceedings, which might have been easily foreseen, war was recommenced the same year.

No sooner had Charles concluded the peace than he found himself obliged to disband his army, on account of his want of money ; and, as the soldiers had been held together merely by mercenarj' views, it was not possible, without great trouble, expense, and loss of time, to re- assemble them. On the contrary, the covemmt- ers, in dismissing their troops, had been careful to preserve nothing but the appearance of a paci- fication. The soldiers were warned not to think the nation secure from an English invasion ; and the religious zeal which animated all ranks of men made them immediately fly to their stand- ards, as soon as the trumpet was sounded by their spiritual and temporal leaders. When, in 1640, the king drew an army together, finding himself unable to support them, he was obliged to call a parliament, after an intermission of about eleven years, lie pressed them for money, and they insisted on their grievances, till a dissolution ensued. To add to the unpopularity of this mea- sure, the king, notwithstanding his dissolving the parliament, allowed the convocation to sit; a practice of

which, since the Reformation, there had been very few examples. Besides granting to the king a supply from the spirituality, the convocation, jealous of innovations similar to those which had taken place in Scotland, im- posed an oath on the clergy and the graduates in the universities, by which every one swore to maintain the established government of the church, by archbishops, bishops, deans, chapters, &c. These steps were deemed illegal, because not ratified by consmt of parliauient; and the oath, containing an &c. in the middle of it, be- came a subject of general ridicule.

The king, disappointed of parliamentary sub- sidies, was again obliged to have recourse to ex- pedients. He borrowed money from his ministers and courtiers : who subscribed above £300,000 in a few days. Some vain attempts were made towards forcing a loan from the citi- zens ; but £40,000 was extorted from the Span- ish merchants who had bullion in the tower. Coat and conduct money for the soldiery was levied on the counties : an ancient practice, but sup- posed to be abolished by the pet tion of right. All the pepper was bought from the East India Company upon trust ; and sold, at a great diˆ count, for ready money. A scheme was proposed for coining £200,000 or £300,000 of base mo- ney. Such were the extremities to which Charles was reduced. The>e expedients, however, en- abled the king, though with great difficulty, to march his armv to the north, consisting of 19,000

foot and 2000 horse. The earl of Northumber- land was appointed general, and the earl of Straf- ford lieutenant-general. A small fleet was thought sufficient for the purposes of this expedi- tion. The Scots, superior in numbers, now marched to the borders of England ; but still preserved the most submissive language to the king. At Newburn upon Tyne they were op- posed by a detachment of 4500 men under lord Conway, whom they first intreated, with great civility, not to stop them in their march to their gracious sovereign ; then attacked them with great bravery, killed several, and routed the rest. Such a panic seized the whole English army, that the forces at Newcastle fled immediately to Durham, and ultimately into Yorkshire. The Scots, continuing to advance, despatched sub- missive messengers to the king, who was now arrived at York. They even made apologies, full of sorrow and contrition, for their late vic- tory.

Charles was in a very distressed condition; and, to prevent the further advance of the Scots, agreed to a treaty, naming sixteen English no- blemen

to meet with eleven Scots commissioners at Rippon. Strafford, upon whom, during Northumberland's sickness, the command of the army had devolved, advised Charles rather to put all to hazard than to submit to such unworthy terms as the Scottish chiefs urged. He advised him to push forward and attack them. But this salutary advice Charles had not resolution to fol- low. He therefore resolved to call a council of the peers; and, as he foresaw that they would advise him to call a parliament, he told them in his first speech that he had already taken that re- solution. In order to subsist both armies (for the king was obliged to pay his enemies, in order to preserve the northern counties from pillage), Charles wrote to the city, desiring a loan of £200,000 ; and the peers at York, whose autho- rity was now 'much greater than that of their so- vereign, joined in the request. The parliament met November 3d, 1640.

*Never had the house of commons been observed to be so numerous. That they might strike at once a decisive blow against the court, they be- gan the session with the impeachment of the earl of Strafford. He had governed Ireland, first as deputy and then as lord lieutenant, during eight years, with great vigilance, activity, and prudence, but with very little popularity. His deportment was haughty, rigid, and severe ; and the universal discontent of the nation was point- ed against him. He had been a leader of oppo- sition, before he became the favorite of the king; and his former associates, finding that he owed his advancement to the desertion of their cause, represented him as the great apostate of the com- monwealth, whom it behoved them to sacrifice to public justice. * You have left us,' said the famous Pym, ' but we shall not leave you while your head is on your shoulders.' From so for- midable a combination no individual could be expected to escape. Strafford was impeached, condemned, and at last executed, in 1641. It was not without extreme difficulty that the king could be brought to consent to his execution. He came to the house of lords, where be expressed*

his resolution never to employ Strafford again io any public business ; but with regard to the trea- son, for which he was arraignedj he pro. fessed himself unable to discover any proofs q it. The commons on this voted it a breach 0i privilege for the king to take notice of a bi' pending before the house ; and the house of lords were intimidated, by popular violence, into pass- ing it. The same means were employed to force the king's assent. The populace flocked about Whitehall, and accompanied their demand of justice with the loudest clamors and menaces. Reports of conspiracies, insurrections, and inva- sions, were spread abroad. On whatever side the king cast his eyes, he saw no resource nor security. All his servants, consulting their own safety rather than their master's honor, declined interposing with their advice between him and his parliament. The queen, terrified at the ap- pearance of so great danger, pressed Charles, with tears, to satisfy his people in this demand, which it was hoped would finally

content ih&m. Archbishop Juxon alone had the courage to ad- vise him, ii he did not approve of the bill, by no means to consent to it. At last the unfortu nate earl, hearing of the king's irresolution and anxiety, wrote to him a letter, in which he de- sired his own execution in order to give peace to the nation : and Charles granted a commission to four noblemen, in his name, to give the royal assent to the bill. These commissioners he empowered at the same time to give his assent to a bill yet more fatal to himself, viz. : That the present parliament should not be dissolved, pro- rogued, or adjourned, without their own con- sent.

By this last act, Charles rendered the power of his enemies perpetual, as it was already un- controllable. The reason assigned for this ex- traordinary step was, that the commons, from policy, more than necessity, had embraced the expedient of paying the two armies by borrow- ing money from the city. These loans they repaid by taxes levied on the people. At last the citizens, either of themselves, or by sugges- tion, began to mention difficulties with regard to a farther loan. ' We should make no scruple of trusting the parliament,' said they, ' were we certain that the parliament was to continue till our repayment. But, in the present precarious situation of affairs, what security can be given us for our money V To obviate this, the above- mentioned bill was suddenly brought in, and, having passed both houses with great rapidity, was at last brought to the king; who, being op- pressed with grief on account of the unhappy fate of Strafford, did not perceive the pernicious consequence of the bill. All this time the com- mons had ruled in other respects with uncon- trollable sway. Soon after the impeachment of Strafford, Laud was accused of high treason, and committed to custody. To avoid the like fate, lord keeper Finch and secretary Windebank fled, the one into Holland, the other into France. The house now instituted a new species of guilt, termed delinquency : a term first applied to those who had exercised the powers necessary for th, defsnce of the nation during the late military operations. All the magistrates and sheriffs

•who had formerly exacted ship-money, though by the king's express command, were now also declared delinquents, as well as the farmers and officers of the customs who had been employed during so many years in levying tonnage, pound-age, &c. They were afterwards glad to compound for a pardon, by paying £150,000. Every discretionary or arbitrary sentence of the star-chamber and high commission courts under- went a severe scrutiny ; and all those who had concurred in such sentences were voted to be Hable to the penalties of law. No minister of the king, no

member of the council, but found Jiimself exposed by this determination. The judges who had formerly given sentence against the celebrated Hampden, for refusing to pay ship-money, were accused before the peers, and obliged to find security for their appearance. Berkley, a judge of the king's bench, was seized by order of the house, even when sitting in his tribunal. The sanction of the lords and com- n ons, as well as that of the king, was declared •lecessary for the confirmation of ecclesiastical canons. Monopolists and projectors, if of the King's party, were now expelled the house ; but one Mildmay, a notorious monopolist, was allowed to keep his seat, because he was of the popular party. In short, the constitution was completely new-modelled ; and during the first period of the transactions of this remarkable parliament, if we except Straflford's attainder, their merits in other respects so much overbalance their mistakes as to entitle them to ver)' ample praises from all lovers of liberty. Not only were former abuses remedied, and grievances redressed ; great pro- vision for the future was made by excellent laws. And if the means by which they obtained such mighty advantages savoured often of artifice, sometimes of violence, it is to be considered, that revolutions of government cannot be eftected by mere force of argument and reasoning ; and that, factions being once excited, men can neither ˆ0 tirmlr rec'J'it'J ˆˆs tempters of otiiers, nor their own, as to eni'ire themselves against all excesses. The km-jf had promised to pay a visit this summer to his subjects in Scotland, in order to settle their goˆ"ernment; and, though the English parliament was very importunate with him to lay aside the journey, they could not pre- vail with him so much as to delay it. Having failed in this, they appointed a small committee of both houses to attend him, in order, as was pretended, to see the articles of pacification ex- ecuted, but really to act as spies upon the king. Endeavours were even used, before Charles's de- parture, to have a protectorate of the kingdom appointed, with a power to pass laws without having recourse to the royal assent. Abort this time the king communicated to parliament his intention of concludins' the marriaee of the princess Marj' with William prince of Orange, and the houses adjourned from September 9th to October 20th, 1641.

Charles arrived in Scotland August 14th. 1614, with a design to give full satisfaction, if possible, to this restless kingdom. The bench of bishops and lords of articles were at once abolished ; it was ordained that no man should bo created a Scottish peer who did not possess

10,000 merks (above £500) annual rent in the kingdom ; a law for triennial parliaments was likewise enacted ; and it was ordained, that the last act of every parliament should be to appoint the time and place for holding the parliament next ensuing : the king was also deprived of the power, formerly exercised, of issuing proclama- tions which enjoined obedience under the penalty of treason . But the most fatal blow to the

royal authority, and what in a manner dethroned the king, was an article, that no member of the privy council, in whose hands, during the king's absence, the whole administration lay, no otficer of state, nor any of the judges, should be ap- pointed but by advice and approbation of par- liament. Charles even agreed to deprive of their seats four judges who had adhered to his interests; and their place was supplied by others more agreeable to the ruling party. Several of the covenanters were also sworn of the privy council, and all the ministers of state, counsellors, and judges, were, by law, to hold their places during life or good behaviour. The king, while in Scotland, conformed himself to the established church; he bestowed pensions and preferments on Henderson, Gillespy, and other popular preachers; and practised every art to soften, if not to gain, his greatest enemies. But, thougli Charles was thus obliged to heap favors on his enemies and overlook his friends, the former were not satisfied, believing all he did to proceed from artifice and necessity ; while some of the laltei were disgusted, and thought themselves ill re- warded for their past services. Arg}ie and Ha- milton, being seized with an apprehension, rea' or apprehended, that the earl of Crawfurd and others meant to assassinate them, left the parlia- ment suddenly, and retired into the country : but, upon invitation and assurances of safety returned in a few days. This event, which in Scotland had no visible consequence, was com- monly denominated the incident; which, though it had no particular efl'ect in Scotland, was at- tended with very serious consequences in Eng- land. The English parliament insinuated to the people, that the malisnants (so they called the king's party) had laid a plot at once to nmi der them and all the godly in both kingdoms They applied therefore to Essex, whom the king had left general of the south of England ; and ordered a guard to attend them. In the mean time a most dangerous rebellion broke out in Ireland, with circumstances of unparalleled horror and bloodshed. The native-Irish, by the wise conduct of James, had been fully subdued, and proper means taken for securing their de- pendence and subjection ; but their animosity against the English still remained, and only wanted an opportunity to exert itself. This they obtained from the weak condition to which Charles was reduced, and it was made use of in the following manner: — More, a gentleman de- scended from an ancient Irish family, but of narrow fortime, having formed the project of ex- pelling the Enelish, and asserting the indepen- dency of his native country, went secretly from chieftain to chieftain, to rouse up the principles of discontent. He maintained a close corres- pondence with lord Macguire and Sir Phtlim

U'Neale, the most powerful of the old Irish ; and by his persuasions soon engaged not only them, bat the most considerable persons of the nation, in a conspiracy ; in which it was hoped the English of the pale, as they were called, or the English planters, being all Catholics, would afterwards join. Their plan was, that Sir Phe- lim O'Neale, and the other conspirators, should jjroclaim the independence of Ireland on a given day throughout the provinces, and that, on the same day, lord Macguireand Roger More should surprise the castle of Dublin. They fixed on the beginning of winter for the commencement of this revolt; that there might be more diffi- culty in transporting forces from England. Succours to themselves, and supplies of arms, they expected from France, in consequence of a promise made them by cardinal Richelieu; and many Irish officers, who had served in the Spa- nish army, had given assurances of their con- currence, as soon as they saw an insurrection entered upon by their Catholic brethren. News, which every day arrived from England, of the measures of the commons against all papists, stimulated the conspirators to execute their fatal purpose, and assured them of the concurrence of their countrymen. Such a propensity was discovered in all the Irish to revolt, that it was deemed unnecessary as well as dangerous to trust the secret in many hands ; and, though the day appointed drew nigh, no discovery had yet been made to government. The king, indeed, had received information from his ambassadors, that something was in agitation among the Irish in foreign parts ; but, though he gave warning to the administration in Ireland, the intelligence was discredited. The English were awakened from their security only the day before the com- mencement of hostilities. The castle of Dublin, by which the capital was commanded, contained arms for 10,000 men, with thirty-five pieces of cannon, and a proportionable quantity of ammuni- tion. Yet was this important place guarded by no greater force than fifty men. Macguire and More were already in town with a numerous band of their retainers ; others were expected that night; and next morning they were to enter upon what they esteemed the easiest of all enter- prises, the surprisal of the castle. O'ConnoUy, however, an Irish protestant, discovered the con- spiracy. The justices and council fled immedi- ately to the castle, and reinforced the guards : the city was alarmed, and all the Protestants prepared for defence. More escaped, but Macguire was taken ; and INIahon, one of the conspirators, being likewise seized, first discovered to the justices the project of a general insurrection. But thoug-h O'Connolly's discovery saved the castle, Mahon's confession came too late to prevent the insurrec- tion. O'Neale and his confederates had already taken arms in Ulster. The houses, cattle, and goods of the English were first seized. Those

who heard of the commotions in their neigh- bourhood, instead of de-erting their habitations, and assembling together for mutual protection, remained at home in hopes of defending their pro- perty : and thus fell separately into the hands of their enemies. A universal massacre now com- menced, accompaoied wnth circumstances of un-

equalled barbarity. No age, sex, or condition was spared. All connexions were dissolved, and death was often dealt by that hand from which protection was implored and expected. The tortures which wanton cruelty only could devise, the most lingering pains of body, and anguish of mind, could not satiate revenge the most ex- treme, excited without injury, and active without intermission. Such enormities, in short, were committed, that, if not attested by undoubted evidence, they would appear incredible. If any where a number assembled together, and resolv- ed to oppose the assassins, they were disarmed by capitulations and promises of safety, con- firmed by the most solemn oaths. But no sooner had they surrendered than the rebels, with a perfidy equal to their cruelty, made them share the fate of their unhappy countrymen. Others tempted their prisoners, by the fond love of life, to imbrue their hands in the blood of friends, brothers, or parents ; and, having thus rendered them accomplices in their own guilt, gave them that death which they sought to shun by deserv- ing it. Such were the barbarities by which Sir Phelim O'Neale, and the Irish in Ulster signalised their rebellion. More, shocked at the recital of these enormities, flew to O'Neale's camp ; but found that his authority, which was sufficient to excite the Irish to a rebellion, was too feeble to restrain their inhumanity. Soon after, he aban- doned the cause, and retired to Flanders. From Ulster the flames of discord spread over the other three provinces. In all places death and slaugh- ter were common ; though the Irish in the other provinces pretended to act with moderation and humanity. But even here cruel and barbarous was their humanity ! Not content with expel- ling the English from their houses, they often stripped them of their clothes, and turned them out naked and defenceless to all the severities of the season. By some computations, those who perished by these various cruelties amounted to 150,000, or 200,000; but, by the most moderate, they could not have been less than 50,000. The English of the pale at first condemned the insur- rection, and appeared to detest the barbarity with which it was accompanied. By their pro- testations and declarations they engaged the justices to supply them with arms, which they promised to employ in defence of government. But the interests of their intolerant religion were soon found to be more prevalent over them than duty to their country. They chose lord Gormon- stone t-heir leader ; and, joining the Irish, rivalled them in every act of cruelty towards the English Protestants. ' Besides many smaller bodies, dis- persed over the kingdom, the rebels had a main army amounting to 20,000 men, which now threatened Dublin with

immediate siege; and both the English and Irish rebels pretended authority from the king and queen, but especially the latter, for their insurrection. They affirmed that the cause of their taking arms was to vindi- cate the royal prerogative, invaded by the puri- tanical parliament : and Sir Phelim O'Neale, having found a roval patent in the house of lord Caulfield, whom he had murdered, tore off the seal, and affixed it to a commission which he haf" forged.

Charles received intelligence of this insurrec- tion while in Scotland, and immediately ac- quainted the parliament with it. He hoped, as there had all along been such an outcry against Popery, that now, when that religion was ap- pearing in Its blackest colors, the nation would vigorously support him in the suppression of it. But here he found hmiself mistaken. The Scots already considering themselves as a republic, and conceiving hopes from the present distresses of Ireland, resolved to make an advantageous bargain for the succours with which they should supply. Except, therefore, despatching a small body of forces, to support their colonies in Ul- ster, they would go no farther than to send com- missioners to London, in order to treat with the parliament. The king, too, sensible of his utter inability to subdue the Irish rebels, found him- self obliged, in this exigency, to have recourse to the English parliament, and depend on their assistance. He told them that the insurrection was not, in his opinion, the result of any rash enterprise, but of" a formed conspiracy against the crown. To their care and wisdom, there- fore, he said, he committed the conduct and prosecution of the war, which, in a cause so im- portant to national and religious interests, must of necessity be immediately entered upon. But the parliament, now re-assembled, discovered in every vote the same dispositions in which they had separated. Nothing less than a total abo- lition of monarchy seemed resolved upon. This project, however, it had not been in the power of the popular leaders to have executed, had it not been for the ardor of tlie nation for the pres- byterian discipline. By the difficulties and dis- tresses of the crown, the commons, who alone possessed the power of upply, had aggrandised themselves ; and it seemed fortunate for their interests that the Irish rebellion had succeeded, at such a critical juncture, to the pacification in Scotland. The concession of the king, by which he committed to them the care of Ireland, they immediately laid hold of, and interpreted in the most unlimited sense : assuming the sovereignty of that country fully and entirely. While they pretended the utmost zeal against the insurgents, however, they took no steps for their suppres sion, but such as likewise gave them the superi- ority in those commotions, which they foresaw must be soon excited in England. They levied money under

pretence of the Irish expedition, but reserved it for purposes which concerned them more nearly : they took arms from the king's maeazines, but still kept them with a secret intention of making use of them against himself: whiite""?r law they deemed necessary, for aggrandising themselves, they voted, under color of enabling them to recover Irdland ; and, if Charles withheld his royal assent, the refusal was imputed to those pernicious counsels, which at first excited to Popish rebellion, and which still threatened total ruin, as they declared, to the Protestant interest. So strong was the people's attachment to the commons, that no fault was imputed to those pious zealots, whose votes breathed nothing but death and destruction to the Irish rebels. The conduct of the parliament towards the king himself became i:i tiic mean time

exceedingly cruel. It was thought proper to frame a general remonstrance on the state of the kingdom; and accordingly the committee, which at the first meeting of the parliament had been chosen for that purpose, were commanded to finish their undertaking. The king returned from Scotland, November 25th, 1641. He was received in London with the shouts of the popu- lace, and every demonstration of public regard. Sir Richard Gournay, lord mayor, a man of great merit and influence, had promoted these dispositions. But the remonstrance of the com- mons soon awoke him to their bold designs. The bad counsels which he followed were com- plained -of; his concuiience in the Irish rebel lion plainly insinuated ; ' the scheme laid for the introduction of popery and superstition' was inveighed against; and, for a remedy to all these evils, the king was desired to entrust important offices and commands to persons in whom his parliament should have cause to confide. To this remonstrance Charles was oVˆiged to make a civil reply, notwithstanding hisv bjects had transgressed all bounds of respect 3ˆ heir treat ment of him. It would be tedious Jf • point out every invasion of the prerogative, no attempted and carried by the commons. Fin ;"ng them- selves at last likely to be opposed b the peer- age, they openly told the upper iiouse, that ' they themselves were the representatives of the great body of the kingdom, and that the peers were nothing but individuals, who held their seats in a particular capacity ; and, therefore, if their lordships would not consent to acts necessary for the preservation of the people, the commons, together with such of the lords as were more sensible of the danger, must join together, and represent the matter to his majesty.' Every method of alarming the people was now put in practice. The commons aff"ected continual fears of destruction. They excited the people by never ceasing enquiries after conspiracies, reports of insurrections, and feigned intelligence from abroad, against Papists and their adherents Whtn Charles dismissed the guard, which they had ordered during his absence, they complained ; and, upon his promising them a new one, undet the command of the earl of Lindesay, they abso- lutely refused the offer : on

the other hand, they ordered halberts to be brought into the hall wlrere they assembled, and thus armed them- selves acrainst those conspiracies with which they said they were hourly threatened. Several reduced officers, and >oung gentlemen of the inns of court, durin? this time of distress and danger, offered their service to the king. Be tween them and the populace there often passed skirmishes, which ended not without bloodshed. By way of reproach, these gentlemen gave the populace the name of Round-heads, on account of their short cropt hair; while they distin- guished the others by the name of Cavaliers. And thus the nation, which was before sufficiently provided with religious as well as civil causes of quarrel, was also supplied with party names, under which the factions might signalise their mutual hatred. These tumults continued to in- crease about Westminster and Whitehall. Th« cr' continually resounded against bishops and

rotten-hearted lords. The former, especially, oeirig easily distinguishable by their habit ; and being the object of violent hatred to all the sec- iaries, were exposed to the most dangerous insults. The archbishop of York, havnig been abused by the populace, hastily called a meeung of his brethren. By his advice a protestation was drawn up, and addressed to the king and the .lOuse of lords. The bishops there set forth, that though they had an undoubted right to sit and vote in parliament, yet, in coming thither they iiad been menaced, assaulted, and affronted, by the unruly multitude, and could no longer with safety attend their duty in the house, ior this reason they protested against all laws, votes, and resolutions, as null and invalid, which should pass during the time of their forced absence. This protestation, which, though just and legal, was certainly ill-timed, was signed by twelve bishops, and communicated to the king, who hastily approved it. As soon as it was presented to the lords, that house desired a conference ■with the coinzrions, whom they informed of this unexpected 'fl-otestation. The opportunity was seized witl4,oy and triumph. An impeachment of high treason was immediately sent up against the bishoj^, as endeavouring to subvert the fun- damental laws, and to invalidate the authority of the legislature. They were now, therefore, dis- missed from parliament, and committed to custody ; no man in either house venturing to speak a word in their vindication. This was a fatal blow to the royal interest ; but it was soon .o receive a much greater from the imprudence 'jf the king himself. Charles had long sup- pressed his resentment, and strove earnestly to gratify the commons by the greatness of his con- cessions ; but, finding that all this had but increased their demands, he could no longer bow to them. He gave orders to Herbert, the attorney-general, to enter an accusation of high treason, in the liouse of peers, aiainst lord Kim- bolton,

one of the most popular men of his party, together with five commoners, Sir Arthur Hasleng, Hollis, Hampden, Pym, and Strode. The articles were, that they had traitorously en- deavoured to subvert the fundamental laws and government of the kingdom, to deprive the king of his regal power, and to impose on his sub- jects an arbitrary and tyrannical authority ; that they had invited a foreign army to invade the kingdom ; that they had aimed at subverting the very right and being of parliaments ; and actu- ally raised and countenanced turnups against the king. Men bad scarcely leisure to wonder at the precipitancy and imprudence of this impeach- ment, when they were astonished by another measure still more rash and unsupported. A Serjeant at arms, in the king's name, demanded of the house the five members, and was sent back without any positive answer. This was followed by a conduct still more extraordinary. The next day the king himself entered the house of com- mons alone, advancing through the hall, while all the members stood up to receive him. The speaker withdrew from his chair, and the king took possesf-on of it. Having seated himself, and looked lound him for some time, he told the house, that iie was sorry for the occasion that

forced him thither; that he was come in person to seize the members whom he had accused of high treason, seeing they would not deliver them up to his Serjeant at arms. Then addiessing himself to the speaker, he desired to know whether any of tliem were in the house ; but the speaker falling on his knees, replied, that lie had neither eyes to see, nor tongue to sneak, in that place, but as the house was pleased to direct him ; and he asked pardon for being able to give no other answer. The king sat for some time, to see if the accused were present ; but they had escaped a few minutes before his entry. Thus disappointed, perplexed, and not knowing on whom to rely, he next proceeded amidst the invectives of the populace, who continued to cry out, ' Privilege ! privilege '.' to the common coun- cil of the city, and made his complaint to them. The common council ansv/ered his complaints by a contemptuous silence ; and, on his return, one of the populace, more insolent than the rest, cried out, ' To your tents, O Israel !' a watch W'ord among the Jews, when they intended to abandon their princes. The commons assembled the next day, when they professed tb.e greatest alarm : and passed a unanimous vote, that the king had violated their privileges, and that they could not assemble again in the same place, till they should obtain satisfaction. The king had retired to Windsor, and thence he wrote to the parliament, making every concession, and promising every satisfaction in his power. But they were resolved to accept of notliing, unless he would discover his advisers in that illegal measure ; a condition to which, they knew, that, without rendering himself forever contemptible, he could not possibly submit. The commons had already stripped the king of

almost all his privileges; the bishops were fled, the judges were intimidated ; it now only remained, after securing the church and the law, that they should get possession of the sword also. The power of appointing governors and generals, and of levying armies, was still a remaining preroga- tive of the crown. Having therefore first mag- nified their terrors of Popery, which perhaps they actually dreaded, they proceeded to petition that the tower might be put into their hands ; and that Hull, Portsmouth, and the fleet, should be intrusted to persons of their choosing: — requests, the corhplying with which subverted what remained of the constitution ; however, such was the necessity of the times, that they were first contested, and then granted. At last the commons desired to have a militia, raised and governed by siich officers and commanders as they should nominate, under pretence of securing tliem from the Ii'ish Papists, of whom they were under great apprehension. Charles now ventured to put a stop to his concessions. He was then at Dover, attending the queen and the princess of Orange, who thought it prudent to leave the kin^^dom. He replied to the petition, that he had not now leisure to consider a matter of such great importance ; sn'd therefore would defer an answer till his return. But the commons alleged, that the da ■Ter

iheir demands, they would be obliged, both for ins safety, and that of the kingdom, to embody a militia by the authority of both houses. lu their remonstrances to the king, they desired even to be permitted to command the army for an appointed time ; which so exasperated liim, that he exclaimed, ' No, not for an hour.' This answer broke off the treaty ; and both sides resolved to have recourse to arms. Charles, taking the prince of Wales with him, retired to York, where he found the people more loyal, and his cause supported by a more numerous party than he had expected. The queen, who was in Holland, was also making successful levies of men and ammunition, by selling tlie crown jewels. But, before war was openly de- clared, a negociation was carried on, with a design to please the people. The parliament sent the king the conditions on which they were willing to come to an agreement. Their demands were contained in nineteen propositions, and amounted to almost a total surrender of monar- chical authority. They required that no man should remain in the council who was not agree- able to parliament; that no deed of the king's should have validity unless it passed the councd, and was attested under their hand ; and that all the officers of state should be chosen with con- sent of parliament ; that none of the royal family should marry without consent of parliament or council ; that the laws should be executed against Catholics ; that the votes of popish lords should be excluded ; that the reformation of

the liturgy and church government should take place according to the advice of parliament ; that the or- dinance witli regard to the militia should be sub- mitted to; that the justice of parliament should pass upon all delinquents; that a general pardon ■should be granted, with such exceptions as should be advised by parliament; that the forts and cas- tles sliould be disposed of by consent of parlia- ment ; and no peer made but with consent of both houses. War on any terms was esteemed by the king, and all his counsellors, preferable to so igno- minious a peace. Charles accordingly resolved to support his authority by force of arms. ' His towns,', he said, 'were taken from him; his shij)S, his army, and his money : but there still remained to him a good cause, and the hearts of his loyal subjects; which, with God's blessintr, he doubted not, would recover all the rest.' Collecting, therefore, some forces, he advanced southwards, and erected the royal standard at Nottingham.

The king found himself supported in the civil war, which now ensued, by the nobility and principal gentry; who, dreading a total con- fusion of rank, from the fury of the populace, inlisted themselves under the banner of the monarch. The concurrence of the bishops and the church also increased the adherents of the kin'.i; but, it must be added, that the hich monarchical doctrine so much inculcated by the dfrgy, had done him much ill. The majority of the nobility and gentry, who now attended him, iTcathed the spirit of liberty as well as of loyalty : and, in the hopes of his submitting to a limited and le'al government, they were wil- im to sacrifice llifir l.vcs and fortunes. On the

other hand, the city of London, and most of tho great corporations, took part with the parliament ; and adopted with zeal those democratical princi- ples on which these assemblies were founded. The example of the Dutch commonwealth too, where liberty had so happily supported industry, made the commercial part of the nation desirous to see a similar form of government in England. At first every advantage seemed to lie against the royal cause. The king was totally destitute of money. London, and all the sea-ports, except Newcastle, being in the hands of parliament, they were secure of a considerable revenue ; and, the seamen naturally following the disposition of the ports to which they belonged, they had also the entire dominion of the sea. All the maga- zines of arms and ammunition they also seized ; and their fleet intercepted the greatest part of those sent by the queen from Holland.

The king, in order to arm his followers, was obliged to borrow the weapons of the trained bands, under promise of restoring them as soon as peace should be settled ; and the rank and quality of his adherents gave the king some hopes of compensation for all the advantages possessed by his adversaries. More bravery and activity were expected from the nobles and

gen- try, than from the multitude. And as tlie landed gentlemen, at their own expense, levied and armed their tenants, besides their attachment to their masters, greater courage and exertions were to be expected from these rustic troops, than from the vicious and enervated populace of cities. Had the parliamentary forces, however, exerted themselves at first, they might have easily dissipated the small number the king had been able to collect, and which amounted to no more than 800 horse, and 300 foot; whde his enemies were within a few days' march of him with 6000 men. In a short time the parliamen- tary army were ordered to march to Northamp- ton ; and the earl of Essex, who had joined them, found the whole to amount to 15,000. The king's army too was increased from all quarters; but still, having no force capable of coping with the parliamentarians, he thought it prudent to retire to Derby, and thence to Shrewsbury, to countenance the levies which his friends were making in those parts. At Wel- lington, a day's march from Shrewsbury, he caused his orders to be read at the head of every regiment. He here protested solemnly before his whole army, that he would maintain the Protestant religion according to the church of England ; that he would govern according to the known statutes and customs of the kingdom ; and, particularly, that he would observe invio- lably the laws to which he had given his con- sent during this parliament, &c. While Charles lay at Shrewsbury, he received the news of an action, the first which had happened in this contest, and wherein his party was victorious. On the appearance of commotions in England, the princes Rupert and Maurice, sons of the un- fortunate elector-palatine, had offered their services to the kinsj; and the former at that time commanded a body of horse which had been sent to Worcester to watch the motions of Essex, who was marching towards that city. Wo sooner

ˆ nad tlie prince arrived, than he saw some cavalry of the enemy approaching the gates. W ithout delay he briskly attacked them, as they were defiling from a lane, and forming themselves. Colonel Sandys, their commander, was killed, the whole party routed, and pursued above a mUe.

In 1642, October 23d, a general engagement took place at Edgehill, in which, though the royalists were at first victorious, their impetu- osity lost the advantage they had gained ; and 5000 men were found dead on the field of bat- tle. Soon after the king took Banbury and Reading ; and defeated two regiments of the enemy at Brentford, taking 500 prisoners. Thus ended the campaign of 1642 ; in which, though the king had the advantage, yet the parliamentary army had increased to 24,000 men, and was much superior to his : notwithstanding which they offered terms of

peace.

In 1643, the treaty was carried on, but with- out any cessation of hostilities ; and indeed the negociation went no farther than the first demand on each side; for the parliament, finding no pro- bability of coming to an accommodation, sud- denly recalled their commissioners. On the 27th April, Readmsf surrendered to the oarlia- mentary forces under the earl of Essex, who commanded a body of 18,000 men. The earl of Northumberland united in a league for the king the counties of Northumberland, Cumberland, Westmoreland, and the bishopric ; and some time ?.fter engaged other counties in the same associa- tion. He also took possession of York, and dis- lodged the forces of the parliament at Tadcaster, but his victory w'as not decisive. Other advan- tages were also gained by the royalists ; the most important of which was in the battle of Stratton, where the poet Waller, who commanded the parliamentary army, was entirely defeated, and forced to fiy with only a few horse to Bris- tol. This happened on the 13th July; and was followed by the siege of that city, which surren- dered to prince Rupert on the 25th of the same month. Such a tide of success on the part of the royalists had greatly dispirited the opposite party ; and such confusion now prevailed at London, that some proposed to the king to march directly to that city, and thus put an end to the civil disorders at once. This advice, however, was rejected, and it was resolved first to reduce Gloucester, in consequence of which the king would have the whole course of the Severn un- der his command. The siege of that city com- menced August 10 ; but being defended by Alassey, a resolute governor, and well garrisoned, it made a vigorous defence. The consternation in London, however, was as great as if the enemy had been already at their gates ; and, in the midst of the general confusion, a design was formed by Waller of forcing the parliament to accept of some reasonable conditions of peace. This design he imparted to some others; but, a discovery being made of their proceedings, he and two of his coadjutors were condemned to death. Waller, however, escaped with a fine of £10,000. The city of Gloucester in the mean time was re- duced to the utmost extremity ; and the parlia- ment, as their last resource, despatched Essex with an army of 14,000 men, in order to raise the siege. This he accomplished ; and when he

entered, found only one barrel of gunpowder left and other provisions in the same proportion. On his return to London, he was intercepted by the king's army, with whom a desperate battle ensued at Newbury, which lasted till night. Though the victory was left undecided, Essex next morning proceeded on his march, and reached London in safety. The k_^ followed him; and having taken possession of Read- ing after the earl left it, he there established a garrison. During this summer, the earl, now marquis of Newcastle, had raised a considerable force for the king in the north ; and

great hopes of success were entertained from that quarter. There appeared, however, in opposi- tion to him, two men on whom the event of the war finally depended, and who began about this time to be remarked for their valor and military conduct. These were Sir Thomas Fairfax, son to the lord of that name; and Oliver Cromwell. The former gained a considerable advantage over the royalists at Wakefield, and took general Goring prisoner ; the latter obtained a victory at Gainsborough over a party commanded by the gallant Cavendish, who perished in the action. But both these defeats weie more than compen- sated by the total rout of lord Fairfax at Ather- ton Moor, and the dispersion of his army, which happened on the 31st of July. After this victory the marquis of Newcastle sat down before Hull, with an army of 15,000 men; but afterwards thought proper to raise the siege. About the same time, Alanchester, who advanced from the eastern associated counties, having joined Crom- well and young Fairfax, obtained a considerable victory over the royalists at Horn Castle. See Cromwell. The king's party, however, still remained much superior in those parts of Eng- land ; and had it not been for the garrison of Hull, which kept Yorkshire in awe, a conjunc- tion of the northern forces with the army in the south, might have been made.

The battle of Newbury was attended with such loss on both sides, that it put an end to the cam- paign of 1643, by obliging both partiis to retire into winter quarters. The event of the war being now very doubtful, both the king and par- liament began to look for assistance from other nations. The former cast his eyes on Ireland, the latter looked to Scotland. At the commencement of the dissensions, the parliament of England had invited the Scots to interpose their mediation, which they knew would be very little favorable to the king, and which for that reason he had de- clined. Early in the spring of 1643 this ofler of mediation had been renewed, with no better success. The parliament, being now in great dis- tress, sent commissioners to Edinburgh, to treat of a more close confederacy with the Scottish nation. The person they principally trusted to on this occasion was the eloquent and ahle Sir Henry Vane. By his advice was framed at Edinburgh the solemn league and covenant: which exceeded all former protestations and vows taken in both kingdoms, and long maintained its credit and authority. See Covenant.

Great were the rejoicings among the Scots, that they should be the happy instruments of extending their mode of religion, and dissipating th(- profound darkness in which the neighbouring

••ations were involved. Being determined that the sword should carry conviction to all refrac- tory minds, they acceded to the English propo- sals ; and prepared with great vigilance and ac- tivity for military enterprises ; so that, having added to their other forces the troops which they had recalled from Ireland, they w ere ready about the end of the year to enter England, under their old general the earl of Leven, with an army of above 20,000 men. The king, in the interim, concluded a cessation of arms with the Irish rebels, and recalled a considerable part of his army from Ireland. Some Irish Catholics came over with these troops, and joined the royal army, where they continued the same cruelties and disorders to which they had been accustomed. The parliament now voted, therefore, that no quarter in any action should be given them. But prince Rupert, by making some reprisals, soon repressed this inhumanity.

The campaign of 1644 proved at first favor- able to the royal cause, though afterwards quite the reverse. The Irish forces besieged and took the castles of Hawarden, Beeston, Acton, and Deddington House. No place in Cheshire or the neighbourhood now adhered to the parlia- ment, except Nantwich ; and to this place Biron laid siege in the depth of winter. Sir Thomas Fairfax, alarmed at his progress, assembled an army of 4000 men in Yorkshire ; and, having joined Sir William Brereton, attacked the camp of the royalists : — when the swelling of the river by a thaw divided their army. That part exposed to Fairfax, being beat from their post, retired into the church of Acton, where they were all taken prisoners. The other retreated with precipitation ; and thus was dissipated the whole body of forces which had come from Ire- land. This happened on the 25th of January; and, on the 11th of April, colonel Bellasis was totally defeated at Selby in Yorkshire, by Sir Thomas Fairfax, who had returned from Cheshire. Being afterwards joined by lord Leven, the two generals sat down before York ; but, being un- able to invest that city completely, they content- ed themselves with incommoding it by a loose blockade. Hopeton, having assembled a body of 14,000 men, endeavoured to break into Sussex and Kent, but was defeated by Waller at Che- rington. At Newark, however, prince Rupert totally defeated the parliamentary army which besieged that place ; and thus preserved the communication open between the king's northern and southern forces. Manchester on the other hand, having taken Lincoln, had united his army to that of Leven and Fairfax ; and reduced York to the last extremity. At this time prince Rupert, having joined Sir Charles Lucas who commanded Nevfcastle's horse, hastened to its relief with an army of 20,000 men ; when the Scots and parlia- mentary generals raised the siege, and drew up on Marston Moor. The prince, hurried on by his natural impetuosity, gave immediate orders for fighting. The battle it is well known (see Cp.omwkll) was lost, tlie royal army entirely ptislied off the field, and the train of artillery t;iken. Immediately

after this, the marquis of Newcastle left the kinirdom, prince Rupert retired into I-ancashire, York was surrendered n a few days, and Newcastle taken by storm.

On the 27th of October another battle was fought at Newbury, in which the royalists were worsted, but soon after retrieved their honor at Bennington Castle, which finished the campaign of 1644.

In 1645 a negociation was again set on foot, and the commissioners met at Uxbridge on the SOtli of January ; but it was soon found im- possible to come to any agreement. The de- mands of the parliament were exorbitant; and even these their commissioners owned to be no- thing but preliminaries. The king was required to attaint, and except from a general pardon, forty of the most considerable of his English sub- jects, and nineteen of his Scots, together with all the popish recusants who had borne arms for him. It was insisted that forty-eight more, with all the members of either house who had sat in the parliament called by the king at Oxford, and all lawyers and divines who had embraced the king's party, should be rendered incapableof any office, be prohibited from coming within the verge of the court, and forfeit the third of their estates to the parliament. Whoever had borne arms for the king was also to forfeit the tenth of their estates, or, if that did not suffice, the sixth, for the pay- ment of the public debts. It was also demanded that the court of wards should be abolished ; that all the considerable officers of the crown, and all the judges should be appointed by parliament; and that the right of peace and war should not be exercised without their consent. A little be- fore the commencement of this fruitless treaty, the parliament, to show their determined resolu- tion to proceed in the same haughty method in which they had begun, brought archbishop Laud to the block.

While the king's affairs thus went to ruin in England, they seemed to revive a little in Scot- land, through the conduct and valor of the earl of Montrose, a young nobleman newly returned from his travels. He had been introduced to the king, but, not meeting with an agreeable re- ception, had gone over to the covenanters, and . been active in forwarding all their violence. Being commissioned, however, by the Tables, to wait upon king Charles, while the army lay at Berwick, he was so gained by the caresses of that monarch, that he thenceforth devoted him- self entirely, though secretly, to his service. For attempting to form an association in favor ˆ of the royal cause, Montrose was quickly thrown into prison ; but, being again released, he found the king ready to give ear to his counsels, which were of the boldest and most daring kind. The defeat at Marston Moor had left him no hopes of any succours from England ; he was therefore obliged to stipulate with the earl of Antrim, a nobleman of Ireland, for some supply of men from that country. And he himself having used various disguises, and

passed through many dan- gers, arrived in Scotland, where he lay for some time concealed in the borders of the Highlands. The Irish did not erceed 1100 foot, very ill armed. Montrose immediately put himself at their head; and, being joined by 1300 Highlan- ders, attacked lord Elcho, who lay at Perth with 6000 men, utterly defeated him, and killed 2000 of the covenanters. He next marched north- wards, to rouse again the marquis of Huntly

and the Gordons, who had taken arms before, but had been suppressed by the covenanters. For other particulars of his brilliant career, see Montrose.

We need here only add that having prevailed in many battles, which his vigor always rendered as decisive as they were successful, he prepared for marching into the southern provmces, in order to put a total period to the power of the covenanters, and disperse the parliament, which with great pomp and solemnity they had ordered to meet at St. Johnstone's.

Fairfax, or rather Oliver Cromwell under his name, employed himself meanwhile in bringing in a new model into the parliamentary army, and never surely was a more singular army_ esta- blished. To the greatest number of the regi- ments chaplains were not appointed. The officers assumed the spiritual duty, and united it with their military functions. During the in- tervals of action, they occupied themselves in sermons, prayers, and exhortations. Rapturous ecstacies supplied the place of study and re- flection; and, while the zealous devotees poured out their thoughts in unpremeditated harangues, they mistook that eloquence, which to their own surprise, as well as that of others, flowed in upon them, for divine illuminations. ^\ herever they were quartered, they excluded the minister from his pulpit, and conveyed their sentiments to the audience with all the authority that fol- lowed their power, their valor, and their military exploits. Even private soldiers were seized with the same spirit: and an army of devotees pa- raded the country. The parliament also greatly increased their popularity at this time, passing an act called the self-denying ordinance, viz. that no member of their house should hove a command in the army. The royalists ridiculed this fanaticism of the parliamentary armies, without being sensible how much reason they had to dread it. They were at this time equal, if not superior, in numbers to their enemies; but so licentious, that they were become as for- midable to their friends as their foes. The na- tural consequence was, tliat equal numbers of the king's forces, could no longer maintain their ground against those of the parliament. This appeared in the decisive battle of Naseby, June 4th, 1645,

where the forces were nearly equal; but, after an obstinate engagement, Charles was entirely defeated ; 500 of his officers and 4000 private men made prisoners ; all his artillery and ammunition taken, and his infantry totally dispersed; so that no victory could be more complete.

Charles, after this battle, retired first to Here- ibrd, then to Abergavenny ; and remained some i:me in Wales, in the vain hope of raising a body of infantry. Fairfax on the 17th of June retook Leicester. On the 10th of July he raised the sie2;e of Taunton ; and the royalists retired to Lamport, an open town in the county of Somerset. Here they were attacked by Fairfax, and beat from their post, with the loss of 300 killed and 1400 prisoners. This was followed by the loss of Bridgewater. which that commander took three days after ; making the garrison, to the number of 2600 men, prisoners

of war. He then reduced Bath and Sherborne; and, on the lltli of September, Bristol was sur- rendered by prince Rupert, though a few days before he had boasted in a letter to Charles, that he would defend the place for four months. This so enraged the king, that he immediately re- called all the prince's commissions, and sent him a pass to go beyond sea. The Scots in the mean time, having made themselves masters of Carlisle after an obstinate siege, marched south- wards and invested Hereford ; but were obliged to raise the siege on the king's approach : and this was the last glimpse of success that at- tended his arms. Having marched to the relief of Chester, which was anew besieged by the parliamentary forces under colonel Jones, his rear was attacked by Pointz, and an engagement immediately ensued. While the fight was con- tinued with great obstinacy, and victory seemed to incline to the royalists, Jones fell upon them from the other side, and defeated them with the loss of 600 killed and 1000 taken prisoners. The king with the remains of his army fled to New- ark ; and thence to Oxford, where he shut him- self up during the winter. After the surrender of Bristol, Fairfax and Cromwell having divided their forces, the former marched westwards to complete the conquest of Devonshire and Corn wall ; the latter attacked the king's garrisons ea^^i of Bristol. At last news arrived that Montrost himself, after some more successes, was de- feated ; and thus the last hope of the royal party was destroyed. Nothing could be more af- fecting than the situation in which the king now found himself. He resolved to grant the parliament their own terms, and sent them re- peated messages to this purpose, but they did not deign to make him any reply. At last, after reproaching him with the blood spilt during the war, they told him that they were preparing some bills, to which, if he would consent, they would then be able to judge of his pacific inclinations. Fairfaj, in the meantime, was advancing with a victorious army to lay siege to Oxford ; and Charles, rather than submit to be taken captive and led in triumph by his insolent English sub- jects, resolved to give himself up to the

Scots, who had never testified such implacable animo- sity against him, and to confide himself to their loyalty. Passing by various cross-roads, he ar- rived in company with only two persons, Dr. Hudson and Mr. Ashburnham, at the Scots camp before Newark, and discovered himself to lord Leven their general. The reception he met with was such as might be expected from a set of men more influenced by bigotry, than the prin- ciples of honor or humanity. Instead of en- deavouring to alleviate the distresses of their sovereign, they suffered him to be insulted by their clergymen, and immediately sent an ac- count of his arrival to the English parliament. The Scots thought this a proper time for the re- covery of the arrears due tc them by the English. A considerable sum of money was really due to them, and they probably claimed more. At last, after various debates between them and the par- liament, it was agreed, that, upon payment of £400,000, the Scots, to their everlasting disgrace, should deliver up the king to his enemies. The

geneial assembly piously pronounced, that as he refused to take the covenant which was pressed on him, it became not the godly to concern them- selves about his fortune. The king, therefore, being delivered over to the English coraniis- sioners, was conducted under a guard to liol- denhy in the county of Northampton ; his an- cient servants being dismissed, and he liimself debarred from all visits, and communications with his family and friends.

But when the civil war was thus terminated, the oarliament soon found themselves in the same situation to which they had reduced the king. The majority of he house were Presby- terians, but the majority of the army were Inde- pendents. The former, soon after the retreat of the Scots, seeing every enemy reduced, proposed to disband a considerable part of the army, and send the rest over to Ireland. This was by no means relished, and Cromwell took care to heighten the disaffection. Instead of preparing to disband, therefore, the soldiers resolved to petition ; and they began by desiring an indem- nity, ratified by the king, for any illegal actions which they might have committed during the war. The commons voted that this petition tended to introduce mutiny, &c. : and threatened to proceed against the promoters of it as enemies to the state. The army, therefore, began to set up for themselves. In opposition to the parlia- raent at Westminster, a mditary parliament was formed. The principal officers formed a council to represent the body of peers ; the soldiers elected two men out of each company to repre- S'int the commons, and thus was formed the ce- lebrated body of agitators of the army. See Agitators and

Cromwell. The new parliament soon found many grievances to be redressed ; and specified some of the most considerable. Tlie commons were obliged to yield to every request, and the demands of the agitators rose in proportion. The commons accused the army of mutiny and sedition ; the army retorted the charge, and alleged that the king had been de- posed only to make way for their usurpations. Cromwell, in the mean time, who secretly con- ducted all the measures of the army, while he exclaimed against their violence, resolved to seize the king's person. Accordingly a party of 500 horse appeared at Holmby Castle, under the command of one Joyce, originally a tailor, but now a cornet; and by this man was the king conducted to the army, who were hastening to their rendezvous atTriplo Heath near Cambridge. Next day Cromwell arrived among them, where he was received with acclamations of joy, and immediately invested with the supreme com- mand. The commons now saw the design of t'le army ; but it was too late : resistance was become vain : Cromwell advanced with precipitation, and was in a few days at St. Alban's. Even submission was now useless ; the army still rose in their demands, in proportion as these demands were (gratified, till at last they claimed a right of modelling the whole government, and settling the nation. Cromwell began with accusing eleven members of the house, the leaders of the presbyterian party, as guilty of high treason. The commons were willing to protect them; but

the army insisting on their dismission, they vo- luntarily left tilt house. At last the citizens of London, find.ng the constitution totally over- turned, and a military despotism commencing, began to think seriously of repressing the inso- lence of the troops. The common council as- sembled the militia of the city; the works were manned ; and a manifesto published, aggra- vating the hostile intentions of the army. Find- ing that the commons, in compliance with the request of the army, had voted that the city militia should be disbanded, the citizens be- sieged the door of the house, and obliged ihem to reverse that vote. The assembly was, of con- sequence, divided into two parties ; the greater part siding with the citizens; but the minority, with the two speakers at their head, were for encouraging the army. Accordingly the two speakers, with sixty-two of the members, secretly retired from the house, and- threw themselves under the protection of the army, then at Houns- low Heath. They were received with shouts and acclamations ; their integrity was extolled ; and a force of 20.000 men moved forward to rein- state them in the house. In the mean time the party which was left resolved to resist the en- croachments of the army. They chose new speakers, gave orders for enlisting troops, or- dered the trained bands to man the lines ; and the whole city boldly resolved to resist the ap- proaching force. But this resolution only held while the enemy was at a distance : for, when Cromwell "appeared, all was obedience and sub- mission : the gates were opened to him; the eleven impeached members

were expelled ; the mayor, sheriff, and three aldermen, were sent to the tower : several citizens, and officers of the militia, were committed to prison ; the lines about the city levelled to the ground ; and the command of tlie Tower given to Fairfax.

It now only remained to dispose of the king, who remained a prisoner at Hampton Court. The independent army, at the head of whom was Cromwell, on one hand, and the Presbyterians, in the name of both houses, on the other, treated with him separately in private. He had some- times even hopes, that, in these struggles for power, he might have been chosen mediator in the dispute; and he expected that the kingdom at last, being sensible of the miseries of anarchy, would of its own accord be hushed into tran- quillity. At this time he was treated with some marks of distinction; he was permitted to con- verse with his old servants; his chaplains were directed to attend him, and he celebrated divine service in ids own way. But the most exquisite pleasure he enjoyed was in the company of his children, witli whom he had several interviews. The effect of one of these interviews on the stern heart of Cuomwf.ll, we have adverted to in that article. But these instances of respect were of no long continuance. As soon as the army had gained a conplete victory over the house of commons, the king was treated not only with the greatest contumely, but was kept in con- tinual alarms for his personal safety. The con- sequence of this was, that Charles at last re- solved to withdraw from the kingdom. Ac- cordingly, on the IJth of November 1647,

attended only by Si? John Berkeley, Ashbarn- ham, and Leg, he privately left Hampton Court; and Ills escape was not discovered till nearly an hour after ; when those who entered his chamber, found on the table some letters directed to the parliament, to the general, and to the ofRcerwho had attended him. Travelling all night he ar- rived next day at Tichfield, a seat of the earl of Southampton, where he knew he could entrust himself with the countess dowager. Before alighting at this place, he had gone to the sea- coast; and expressed great anxiety that a ship which he looked for had not arrived. The question now was, what measure should be next embraced. In the neighbourhood was the Isle of Wight, of which one Hammond was gover- nor, a man entirely dependent on Cromwell, but the nephew of Dr. Hammond, the king's fa- vorite chaplain, and of good general character. It was too promptly determined to have recourse to him in the present exigence : Ashburnham and Berkely were therefore despatched to the island, with orders not to inform Hammond of the place where the king lay concealed, till they had first obtained his promise not to deliver up his

majesty, but restore him to his liberty, if he could not protect him. The promise would have been but a slender security: yet, even with- out exacting it, Ashburnham imprudently, if not treacherously, brought Hammond to Tich- field ; and the king was obliged to put himself into his hands, and to attend him to Carisbrooke Castle in the Isle of Wight ; where, though he was received with great demonstrations of respect and kindness, he was in reality a prisoner.

Cromwell now found himself upon the point of losing all the fruits of his former schemes, by having his own principles turned against himself. Among the Independents, who in general were averse to ecclesiastical subordination, a set of men grew up, called Levellers, who disallowed all subordination whatsoever, and declared that they would have no other chaplain, king, or cap- tain, but Jesus Christ. So long as this was only directed against his enemies, Cromwell could tolerate and even applaud it; but he did not ap- prove of it when applied to himself. Having intimation that the levellers were to meet, he unexpectedly appeared before them at the head of his red regiment, which had hitherto been deemed invincible. He demanded, in the name of God, what tlrese meetings and murmurings meant. He expostulated with them upon the danger and consequence of their precipitant schemes, and desired them immediately to de- part. Instead of obeying, however, they returned an insolent answer; when, rushing on them in great anger, he laid two of them dead at his feet : several others he caused to be hanged upon the spot, his guards dispersing the rest; and thus dissipated a faction, no otherwise criminal than in having followed his own example. Cromwell's authority soon after became irresistible, in con- sequence of a new and unexpected addition to his successes. The Scots, ashamed of the re- proach of having sold their king, raised an army in his favor, the chief command of which was given to the ;?aH of Hamilton : while Langdale, who professed himself at the head of the more

bigoted party who had taken the cownant, marched at the head of his separate body, and both invaded the north of England. Though these two armies amounted to above 20,000 men, Cromwell hesitated not, at the head of his 8000 hardy veterans, to give them battle. He attacked them one after another ; routed and dispersed them; took Hamilton prisoner; and, following the blow, entered Scotland, the govern- ment of which he settled entirely to his satisfac- tion. See Cromwell. An insurrection in Kent was quelled by Fairfax with the same ease.

During these events, the king, who was kept a prisoner at Carisbrooke Castle, continued to negociate with the parliament, who now saw no other method of destroying the military power, but to bring into conflict again with that of the king. Frequent proposals for accommodation passed

between them ; but the great obstacle which stood in the way was the king's refusal to abolish episcopacy, though he consented to alter the liturgy. However, the treaty was still carried on with vigor, and the parliament for the first time seemed in earnest to conclude their nego- ciations amicably. The army saw through their designs, and began to demand vengeance on the king. The unhappy monarch had been lately sent under confinement to Windsor ; whence he was now conveyed to Hurst Castle in Hampshire. The parliament in the mean time began to issue ordinances for an effectual opposition to certain military encroachments, when they were asto- nished by a message from Cromwtll, that he in- tended paying them a visit next day with his whole army ; and in the mean time ordering them to raise him £40,000 on the city of London. The commons, though destitute of all hopes of prevailing, had still the courage to resist, and to attempt, in the face of the whole army, to finish the treaty they had begun with the king. They had taken into consideration the whole of his concessions ; and, though they had formerly voted them unsatisfactory, they now renewed the con- sultation with great vigor. After a violent de- bate, which lasted three days, it was carried by a majority of 129 against eighty-three, that his concessions were a foundation for the houses to proceed upon in settling the affairs of the nation. This was the last attempt in his favor ; for the next day colonel Pride, at the head of two regi- ments, blockaded the house ; and seizing in the passage forty-one members, of the presbyteriaii party, sent them to a low room belonging to the house, that passed by the denomination of Hell. Above 160 members more were excluded; and none were allowed to enter but the most furious and determined of the Independents, in all not exceeding sixty. This atrocious invasion of parliamentary rights commonly passed by the name of Pride's purge, and the remaining mem- bers were called the Rump. These soon voted, that the transactions of the house a few days before were entirely illegal, and that their ge- neral's conduct was just and necessary. Nothing remained, to complete the wickedness of this Rump parliament, but to murder the king.

In this assembly, therefore, composed of the most obscure citizens, and officers of the array, a committee was appointed to bring iu the

charges against the unhappy monarch ; and, on their report, a vote passed declaring it treason in a king to levy war against his parliament. It was resolved, that a high court of justice should be appointed, to try the king on the charge of this newly invented treason. For form's sake, they desired the concurrence of the few remain- ing lords in the uˆpper house; but there was virtue enough left in that body unanimously to reject the proposal. The

commons, however, were not to be stopped by so small an obstacle. They voted that the concurrence of the house of lords was unnecessary, and that the people were the origin of all just power. To add to their zeal, a woman of Herefordshire, illuminated by prophetical visions, desired admittance, and com- municated a revelation she pretended to have received from heaven. She assured them, that their measures were consecrated from above, and ratined by the sanction of the Holy Ghost ; intel- ligence which gave them, it is said, great comfort. Colonel Harrison, the son of a butcher, was commanded to conduct the king from Hurst Castle to Windsor, and thence to London. Many who saw him on this journey were greatly affected at the change that appeared in his face and person. He had permitted his beard to grow ; his hair was become venerably gray, rather by the pressure of anxiety than the hand of time; while the rest of his apparel bore the marks of misfortune and decay. All the exterior symbols of sovereignty were now withdrawn, and his at- tendants had orders to serve him without cere- mony. He could not, however, be persuaded that his adversaries would bring him to a formal trial ; but he every moment expected to be des- patched by private assassination. From the 6th to the 20th of January was spent in making pre- parations for this extraordinary trial.

The court consisted of 133 persons named by the commons; but of these never above seventy met upon the trial. The members were chiefly composed of the principal officers of the army, most of them of very mean birth, together with some of the lower house, and a few citizens of London. Bradshaw, a lawyer, was chosen pre- sident ; Coke was appointed solicitor for the people of England ; Dorislaus, Steele, and Aske, were named assistants. The court sat in West- minster Hall. When the king was brought for- ward he was conducted by the mace-bearer to a chair placed within the bar. Though long de- tained a prisoner, and now produced as a crimi- nal, he still maintained the dignity of a king. The charges being read by the solicitor, accusing him of having been the cause of all the blood- shed since the commencement of the war, Brad- shaw told him that the court expected his answer, when the king began his defence with declining the authority of the court. He stated, that, hav- ing been engaged in treaty with his two houses of parliament, and having finished almost every article, he expected a different treatment from what he had now received. He perceived, he said, no appearance of an upper house, which was necessary to constitute a just tribunal. He insisted that he was himself the king and foun- tain of law, and consequently could not be tried by laws to which he had never given his assent ;

that, having been intrusted with tlie liberties oi the people, he would not now betray them by re- cognising a power founded in usurpation ; that he was willintj, before a proper tribunal, to enter into the particulars of his defence; but that before them he must decline any apology for his '

innocence, lest he should be considered as the betrayer of, and not a martyr for, the constitu- tion. Bradshaw, in order to support the autho- rity of the court, insisted that they had received their authority from the people, the source of all right. He pressed the king not to decline the authority of a court that was delegated by the commons of England, and interrupted and over- ruled him in his attempts to reply. In this man- ner the king was three times produced before the court, and as often persisted in declining its jurisdiction. The fourth and last time he was brought before this self-created tribunal, as he was proceeding thither, he was insulted by the soldiers and the mob, who cried out, ' Justice ! justice ! Execution ! execution l' but he con- tinued undaunted. His judges having now ex- amined some witnesses, by whom it was proved that the king had appeared in arms against the forces commissioned by parliament, they pro- nounced sentence against him. He seemed very anxious at this time to be admitted to a con- ference with the two houses, and it was supposed that he intended to resign the crown to his son; but the court refused compliance, and considered his request as an artifice to delay justice.

The behaviour of Charles under all these in- stances of low-bred malice was great, firm, and equal. In going through the hall from this exe- crable tribunal, the soldiers and rabble were again instigated to cry out. Justice and exe- cution ! They reviled him witli the most bitter reproaches. Among other insults, one miscreant presumed to spit in the face of his sovereign. He patiently bore their insolence : ' Poor souls,' cried he, they would treat their generals in the same manner for sixpence.' Those of the popu- lace, who still retained the feelings of humanity, expressed their sorrow in sighs and tears. A soldier more compassionate than the rest could not help imploring a blessing on his royal head : when an officer, overhearing him, struck the honest sentinel to the ground before the king : the latter only remarked ' that the punishment seemed to exceed the offence.' At his return to Whitehall, Charles desired permission to see his children, and to be attended in his private devotions by Dr. Juxon, late bishop of London. These requests were granted, and three days al- lowed him to prepare for execution. Every niglit between his sentence and execution, the king slept sound as usual: — the fatal morning being at last arrived, he arose early, and, calling one of his attendants, he bad him employ more than usual care in dressing him, for so great a solemnity. The street before Whitehall was the place destined for his execution. He was led through the banqueting house to the scaffold adjoining to that edifice, attended by his friend and servant, bishop Juxon, a man of the same mild and steady virtues with himself. The scaffold, which was covered with black, was guarded by a reiriment of soldiers under the command of colo-

nel Tomlinson ; and on it were to be seen the block, the axe, and two executioners in masks. The people, in crowds, stood at a distance. Surveying all these preparations with calm compo- sure, the king, as he could not expect to be heard by the people at a distance, now addressed him- self to the few persons who stood around him. He justified his own innocence in the late fatal wars: and observed, that he had not. taken arms till after the parliament had shown him the ex- ample ; and had no other object in his warlike preparations but to preserve that authority entire, which had been transmitted to him by his an- cestors. But, though innocent towards his people, he acknowledged the equity of his execution, in the eyes of his Maker : he owned that he was iustly punished for having consented to the execution of an unjust sentence against the earl of Strafford. He forgave all his enemies; exhorted the people to return to their obedience, and acknowledge his son as his successor ; and sig- nified his attachment to the Protestant reRgion as professed by the church of England. So strong was the impression made by his dying words, on those who could hear him, that colonel Tomlin- son himself, to whose care he had been com- mitted, acknowledged himself a convert. At one blow his head was severed from his body. The assistant executioner then, holding up the head, exclaimed, ‘ This is the head of a traitor.’ Grief, indignation, and astonishment, are said to have been strongly expressed, not only among the spectators, but throughout a great part of the nation, at this unparalleled execution. Each blamed himself either with active disloyalty to the king, or a passive compliance with his destroyers : many of those very pulpits that used to resound with insolence and sedition were now bedewed with tears of unfeigned repentance ; and great numbers expressed their detestation of those dark hypocrites, who, to satisfy their own ambition, involved the whole nation in their guilt. Charles was executed fifty-two minutes after one, P. M. on the 30th of January, 1649, in the forty-ninth year of his age, and twenty-fourth of his reign. He was of a middling stature, robust, and well-proportioned. His visage was pleasant, but melancholy; and it is probable, that the continual troubles in which he was in- volved might have made that impression on his countenance. The king, the moment before he stretched out his neck to the executioner, having said to Juxon, with a very earnest accent, ‘ Re- member,’ great mysteries were supposed to be concealed under that word : and the generals vehemently insisted that the prelate should in- form them of the king’s meaning. Juxon told them, that the king, having frequentl’y charged him to inculcate on his son the forgiveness of his enemies, had taken this opportunity in the last moment of his life, when his commands, he supposed, would be regarded as sacred and in- violable, to reiterate that desire.

2. Of Great Britain under the Common- wealth.— The dissolution of the

monarchy of England soon followed the death of the monarch. When the peers met, on the day appointed in their adjournment, they entered upon business ; and sent ilov/n some votes to the commons, of which the

latter deigned not to take the least notice. On the 6th of February the commons voted, that the house of lords was 'useless and dangerous, and the kingly office unnecessary and burdensome.' They also voted it high treason to acknowledge Charles Stuart, son of the late king, as successor to the throne. A great seal was made ; on one side of which were engraven the arms of England and Ireland, with this inscription, 'The great seal of England.' On the reverse was repre- sented the house of commons sitting, with this motto: ' On the first year of freedom, by God's blessing restored, 1649.' The forms of all pub- lic business were changed from being transacted in the king's name, to that of the keepers of the liberties of England. The court of King's Bench was called the court of Public Bench. The king's statue in the exchange was thrown down; and on the pedestal these words were inscribed : Exit tyrannus, regum ultimus ; ' The tyrant is gone, the last of the kings.' The commons, it is said, intended to bind the princess Elizabeth ap- prentice to a button-maker; thedukeofGloucestei was to be taught some other mechanical employ- ment : but the former soon died of grief, as is .sup- posed, for her father's tragical end ; the latter was sent beyond sea by Cromwell. The commons next proceeded to punish those who had been most remarkable for their attachment to their late sovereign. The duko of Hamilton, lord Capel, and the earl of Holland, were condemned and executed ; the earl of Norwich and Sir John Owen were also condemned, but afterwards par- doned. These proceedings irritated the Scots: their loyalty began to return ; and the insolence of the Independents, with their victories, in- flamed them still more. They determined, there fore, to acknowledge prince Charles for thei. king, but at the same time to abridge his power, by every limitation which they had attempted to impose on his father. Charles, after the death of his father, having passed some time at Paris, and seeing no prospect of assistance from that quarter, was glad to accept of their conditions ; and had the mortification to enter the gate of Edinburgh, while the limbs of his faithful ad- herent, Montrose, were still exposed there. He soon found himself little better than a prisoner, being surrounded and incessantly importuned by the clergy, from whom, and his other tormentorsˆ he at first attempted to escape : but was overtaken and brought back ; when he testified his repen- tance for what he had done. Cromwell, in the mean time, who had been appointed by the par- liament to command the army in Ireland, prose- cuted the war in that kingdom with his usual success. He had to encounter .the royalists, commanded by the duke of Ormond, and the native Irish led on by O'Neal. These he quickly overcame ; and most of the towns, in- timidated by his successes, opened their gates at his approach. He was on the point of

reducing the whole kingdom, when he was recalled by the parliament, as we have seen in his life, to defend England against the Scots ; and fought the cele- brated battles of Dunbar and Worcester.

After the battle of Worcester, Charles entered upon a series of the most romantic adventures. His hair being cut off, the better to disguise his

person, he worked for some days in the habit of a peasant, cutting faggots. He next made an attempt to retire into Wales, under the conduct of one Pendrel, a poor farmer, who was sincerely attached to his cause. In this attempt, however, he was disappointed ; every pass being guarded to prevent his escape. Being obliged to return, he met one colonel Careless, who had escaped the carnage at Worcester. In his company the king was obliged to climb a spreading oak; among the thick branches of which they spent the day together, while they heard the soldiers of the ˆnemy in pursuit of them below. Thence he passed with imminent danger, and through all the varieties of hunger, fatigue, and personal suffer- ing, to the house of colonel Lane, a zealous royalist in Staffordshire. There he deliberated about the means of escaping into France ; and, it being decided that he should endeavour to reach the port of Bristol, he rode thither before this gentleman's sister, on a visit to a Mrs. Nor- ton. During this journey, he every day met with persons whose faces he knew ; and at one time passed through a whole regiment of the enemy's army. On his arrival the butler, being sent to his chamber with refreshments, recol- lected his features ; and, falling on his knees, exclaimed, ' I am rejoiced to see your majesty.' The king was alarmed ; but, strictly enjoining the man to keep the secret from his master, the honest fellow kept his word : and, no ship being found that would sail for France for a month, the king now passed on to the house of colonel Wyndham in Dorsetshire. Pursuing from thence his journey to the sea side, he had once more a very narrow escape. The day had been ap-))ointed for a solemn fast ; and a fanatical weaver, who had been a soldier in the army, was preach- ing against royalty in a chapel fronting the inn where the king had stopped. Charles, to avoid suspicion, was himself among the audience. It happened that a smith, of the same principles with the weaver, had been examining the horses belonging to the passengers, and came to assure the preacher that he knew by'the fashion of the shoes that one of the strangers' horses came from the north. The preacher immediately affirmed that this horse could belong to no other than Charles Stuart, and instantly went with a con- stable to search the inn. But Charles had in the mean time taken the alarm, and left the inn be- fore the constable's arrival. He at last embarked at Shoreham in Sussex ; and, after forty-one days

concealment, arrived safely at Feschamp in Nor- mandy.

Cromvvell in the mean time returned in tri- umph ; and his first care was to depress the Scots, on account of their having withstood the work of the gospel, as he called it. An act was passed for abolishing royalty in Scotland, and annexing that kingdom as a conquered province to the English commonwealth. It was empowered, however, to send some members to the English parliament. Judges were appointed to distribute jubtice ; and the people of that country, now freed from the tyranny of the ecclesiastics, were not much dissatisfied with the new government. All parts of the British dominions being thus reduced under perfect subjection to the parlia-

r.ieiit, he next resolved to chastise the Dutch, ˆvho had given some slight causes of complaint Dr. Dorislaus, who had been one cf the late king's judges, being sent by the parliament as their envoy to Holland, was assassinated by one of the royal party who had taken refuge there. Some time after, Air. Stephen John, their ambas- sador, was insulted by the friends of the prince of Orange. Theie were thought sufficient reasons for a declaration of war against that republic by the commonwealth of England.

The parliament greatly depended at this time on the activity and courage of Blake, their admiral. On the other hand, the Dutch op- posed to him their famous admiral Van Tromp, to whom their republic has never since produced an equal. Many were the engagements between these celebrated admirals. At last the Dutch, who felt great disadvantages by the loss of their trade, and by the total suspension of their fisheries, were willing to treat for peace. The parliament, however, gave them an evasive an- swer. They seem studiously to have kept their navy in exercise as long as they could; judging, that, while the force of the nation was exerted by sea, it would diminish the formidable power of Cromwell by land. But terms were not long kept between them. He persuaded the officers to present a petition for payment of arrears, and redress of grievances ; desiring tlie parliament also to consider how many years they had sat, and what pretensions they had formerly made of their designs to new model the house. Tliey alleged that it was now full time to give place to others ; and however meritorious their actions might have been, yet, the rest of the nation had some right, in their turn, to manifest their patriotism in defence of their country. The house was highly offended : they appointed a committee to prepare an act ordaining that all persons who presented such petitions for the future should be deemed guilty of high treason. To this the officers made a very warm re- monstrance, and the parliament as angrj' a reply. We once more refer to the article Cromwell, for the result of these disputes, and the history of his final exaltation.

At last the Dutch, having been humbled by repeated defeats, were forced to sue for peace. Cromwell obliged them on this occasion to abandon the interest of the king's son, to pay £85,000 as an indemnification for former ex- penses, and to restore, to the English East India Company, a part of those dominions of which they had been dispossessed by the Dutch, during the/ormer reign. The ministry of France also paid the utmost deference to the protector: and he having lent that court a body of 6000 men, to attack the Spanish dominions in the Nether- lands, the French put Dunkirk into his hands as a reward for his attachment. By the heroic ex- ertions of the celebrated admiral Blake, he also humbled Spain; as well as the Algerines and Tunisians. Penn and Vcnables, two other ad- mirals, made an attempt on the island of Ilispaniola; but, failing of this, they steered to Jamaica, which was surrendered to them without a blow.

It is not to be supposed, that a numerous

standing army could be maintained, and so many foreign wars carried on, without incurring extraordinary expenses. The protector therefore called his first and second parliaments, guards being placed at the door of the latter, that none might be admitted but such as produced a war- rant from his council. The principal design of convening this assembly was, that they should offer him the crown. His creatures, therefore, took care to insinuate the confusion that arose in legal proceedings without the name of a king ; that no man was acquainted with the extent or limits of the present magistrate's authority, but those of a king had been well ascertained by the experience of ages. On the motion being at last formally made in the house, it was easily carried, and nothing was wanting but Cromwell's own consent to have his name enrolled among the sovereigns of England, This consent, how- ever, he avoided to give. The conference car- ried on with the members, who made him the offer, seems to argue that he was desirous of being compelled to accept it, but it ended in his total refusal. With all these proffered honors, and all his real despotic power, the situation of Cromwell, we have seen, was far from being enviable. Conspiracies were formed against him, and it was finally taught upon principle, that not only was his death desirable, but his assassination would be meritorious. Cromwell IS said to have read the celebrated pamphlet of colonel Titus, Killing no Murder, and never to have smiled afterwards. At last he was deliver- ed from a life of horror and anxiety by a tertian ague, of which he died September 3rd, 1638, after having usurped the government nine years,

r or other particulars of the life and character of this extraordinary man, see Cromwell.

Oliver Cromwell was nominally succeeded in his office of protector by his son Richard, who immediately called a parliament. To this as- sembly the army presented a remonstrance, desiring some person for their general in whom they could confide. The house voted such meetings and remonstrances unlawful : upon which the officers, surrounding Richard's house, forced him to dissolve the parliament; and soon after he signed an abdication of the government. His younger brother Henry, who had been ap- pointed to the command in Ireland, followed Richard's example, and resigned his commission also witliout striking a blow.

The officers, left at liberty, resolved to restore the Rump parliament, as it was called, consisting of that remnant of the commons which had condemned Charles. They were no sooner rein- stated in their authority, however, than they began to humble the army by cashiering some of the officers, and appointing others on whom they could have more dependence. The officers at last resolved to dissolve the assembly. Lam- bert, one of the generals, drew up a body of troops, in the streets which led to Westminster Hall ; and, when the speaker Lenthall proceeded in his carriage to the house, he ordered the horses to be turned, and very civilly conducted him home. The other members were likewise intercepted ; and the army returned to their quarters to observe a solemn fast, which gene-

rally either preceded or attended their outrages. A committee was then elected, of twenty-three persons, of whom seven were officers. These they pretended to invest with sovereign autho- rity.

But a stronger influence was at work in the north. Upon hearing that the officers had by their own authority dissolved the parliament, general Monk, then in Scotland with 8000 veteran troops, protested against the measure, and resolved to defend the national privileges. As soon as he put his army in motion, he found himself eagerly sought after by all parties ; but so cautious was he of declaring his mind, that, to the very last, it was impossible to know on which side he designed to appear. A remark- able instance of this was, that, when his own brother came to him, with a message from lord Granville in the name of the king, he refused all intercourse with him. On the other hand, hearing that the officers were preparing an army to oppose him. Monk amused them with nego- ciations ; and the people, finding themselves not entirely defenceless, began to declare for a free parliament. The Rump, now also finding them- selves invited to sit by the navy and part of tht army, again ventured to resume their seats, and to thunder votes against the officers, by whom they had been ejected. Without taking any notice of Lambert, they sent orders to the troops to

repair immediately to the garrisons appointed for them. The soldiers obeyed ; and Lambert found himself deserted by his whole army. Monk, in the mean time, proceeded with his troops to London ; the gentry, on his march, flocked round him with addresses, and expres- sing their desire for a new parliament. At St. Albans, within a few miles of the capital, he sent the parliament a message, desiring them to remove such forces as remained in London to country quarters. Some of the regiments wil- lingly obeyed this order ; and such as did not Monk ejected by force : after which he quartered his army in Westminster. The house now voted him thanks for his services : when he desired them to call a free parliament ; which soon led the citizens to refuse submission to the existing government. They resolved to pay no taxes until the members formerly excluded by colonel Pride should be replaced. On this Monk ar- rested eleven of the most obnoxious of the common council ; broke the gates and portcul- lises ; and, having exposed the city to contempt, returned in triumph to Westminster. The next day, however, he made an apology for this conduct, and promised for the future to co- operate with the mayor and common council. The commons were now greatly alarmed. They tried every method to draw off the general from his new alliance. Some of them even promised to invest him with the dignity of supreme ma- gistrate. But Monk was too just, or too wise, to hearken to such wild proposals : he resolved to restore the secluded members, and by their means to bring about a new election. The restoration of the expelled members was easily effected ; and their number was so much supe- rior to that of the Rump, that the chiefs of this last party now thought proper in their turn to

withdraw. The restored members began with repealing all those orders by which they had been expelled. They renewed and enlarged the general's commission; fixed a proper stipend for the support of the fleet and army ; and, having passed these votes, dissolved themselves, and gave orders for the immediate assembling a new parliament. Mean while, Monk new-modelled the army to his purposes. Some offi- cers, by his direction, having presented him with an address, in which they promised to obey implicitly the orders of the ensuing parliament, he ordered it to be signed by all the different regiments ; and this furnished him with a pre- tence for dismissing those by whom it was rejected. In the midst of these transactions, Lambert, who had been arrested, escaped from the Tower, and began to raise forces ; Monk therefore despatched against him colonel Iii- goldsby, with his own regiment ; and, though Lambert had taken possession of Daventry with four troops of horse, the greater part of them joined Ingoldsby ; to whom he himself surren- dered. Monk persisted all this time in his re- serve ; and

referred all the communications of the king to one Morrice, a gentleman of Devon- shire. At last however he disclosed his favor- able intentions towards the exiled monarch to Sir John Granville, who held a commission from him. In consequence of this, the king left the Spanish territories, where he narrowly escaped being detained, and retired to Holland, to wait the issue of his overtures. The new parliament being assembled. Sir Ilarbottle Grimstone, a well-known royalist, was chosen speaker ; and Monk gave directions to Annesly, president of the council, to inform them, that one Sir John Granville, a servant of the king's, had been sent over by his majesty, and was now at the door with a letter to the house. This message was received with the utmost joy. Granville was called in, the letter read, and the king's proposals immediately accepted. He of- fered a general amnesty to al. persons, and with- out any exceptions, but what should be made by parliament. lie promised to indulge scrupulous consciences with liberty in matters of religion ; to leave to the examination of parliament the claims of all such as possessed lands with con- tested titles; to satisfy the army under general Monk with respect to their arrears, and to give the same rank to his officers when they should be enlisted in the king's army; and to confirm all these concessions by act of parliament. In consequence of this agreement between the king and parliament, Montague the English admiral waited on king Charles, to inform him that the i\eet expected his orders at Scheveling. The duke of York immediately went on board, and took the command as lord high admiral. The king embarked, and, landing at Dover, was re- ceived by the general, whom he tenderly em- braced. He entered London in 16G0, on the 29th of ˆlay, which was his birth-day ; and was attended by an innumerable multitude of people, who testified their joy by the loudest accla- mations.

3. Of the Stuart di/nasti/ from the Restoration to the erpiiUion of James II. — Charles II. was

only thirty years of age at tlie Restoration. Being naturally of an engaging disposition, he soon became the favorite of all ranks, and his first measures were calculated to give universal satis- faction. He seemed desirous of losing the memory of past animosities, and of uniting every party in affection for their prince and country. In his council were found the most eminent men of the nation, without regard to former distinc- tions. The presbyterians shared this honor equally with the royalists. Calamy and Baxter, presbyterian clergymen, were even made chap- lains to the king. Admiral Montague was cre- ated earl of Sandwich, and INIonk duke of Albemarle. Morrice, the general's friend, was appointed a secretary of state. The parliament, having been summoned without the king's con- sent, received at first only the title of a conven- tion ; and it was not till after an act passed for that purpose, that they were acknowledged by the former title. Both houses now owned the guilt of the late rebellion, and gratefully

received in their own name, and in that of all his subjects, his majesty's gracious pardon and indemnity. The king, as we have seen, had promised an in- demnity to all criminals, but such as should be excepted by parliament : he now issued a pro- clamation, declaring, that such of the late kmg's judges as did not surrender themselves within fourteen days should receive no pardon. Nine- teen surrendered ; some were taken in their flight ; others escaped beyond sea. The peers seemed inclined to great severity on this occa- sion ; but were restrained by the king, who in the most earnest terms it is said pressed the act of general indemnity. After repeated solici- tations, the act of indemnity passed both houses, with the exception of those who had an imme- diate hand in the king's death. Even Cromwell, Ireton, and Bradshaw, though dead, were con- sidered as proper objects of resentment : their bodies were dug from their graves ; dragged to the place of execution ; and, after hanging some time, buried under the gallows. Of the rest who sat in judgment on the late monarch's trial, some were dead, and some thought worthy of pardon. Ten only, out of eighty, were adjudged to suffer death ; and these were enthusiasts who had all along acted from principle, and who, in the general spirit of rage excited against them, showed a fortitude that would have done honor to any cause. The army was disbanded, that had for so many years governed the nation; at this time prelacy, tithes, and all the ceremonies of the church of England, were restored ; the king at the same time endeavouring to preserve the air of moderation and neutrality. In fact, with regard to religion, Charles in his gayer hours was a professed deist; but in the latter part of his lifˆe he evidently inclined to the Ca- tholic persuasion, and is known to have died a Catholic. On the 13lh of September died the young duke of Gloucester, a prince of great hopes. The king was never so deeply affected by any incident in his life. The princess of Orange, having come to England to partake of the joy attending the restoration of her family, with whom she lived in great friendship, soon after also sickened and died. The queen mother now

paid a visit to her son, and obtained his consent ro the marriage of tlie princess Henrietta with ihe duke of Orleans, brother to the French king.

Parliament having met on the 6th November, and carried on business with the greatest unan- imity and dispatch, was dissolved by the king on the 29th of December, 1660. During the reign of this prince the spirit of the people took a di- rection totally opposite to that of the time of Charles I.

The latter found his subjects anima- ted with a ferocious though ignorant zeal for lib- erty. They knew not what it was to be free, and therefore imagined that liberty must at once result from throwing off the royal authority. They gained their point : the unhappy monarch was dethroned and murdered ; but instead of liberty they found themselves oppressed by greater ty- ranny than ever. Being freed from this by the Restoration, nothing now prevailed but as un- bounded a spirit of submission ; and Charles rendered himself at last almost an absolute mo- narch. A revolution equally great took place with regard to religious matters. During the former reigns a spirit of the most gloomy enthu- siasm had overspread the land, and men imagined the Deity was only to be pleased by their denying themselves every social pleasure. The extreme hypocrisy of Cromwell, and the absurd conduct of many of his associates, showed that this was not religion ; but, in avoiding this error, they ran into one equally dangerous ; and every thing re- ligious or serious was discountenanced. Nothing but riot and dissipation succeeded. The court set the example ; scenes of gallantry and festivity were the order of the day; the horrors of the late war became the subject of ridicule ; the for- mality of the sectaries was displayed on the stage, and even laughed at from the pulpit. In short, the best mode of religion now was to have as little as possible ; and to lay aside not only the enthusiasm of the sectaries, but even the common duties of morality. In the midst of this bound- less licentiousness, the old and faithful adherents of the royal family were left unrewarded; and the act of indemnity was justly said to have been an act of forgiveness to the king's enemies, and of oblivion to his friends. In 16G1 the Scottish and English parliaments seemed to vie with each otiier in their prostrations to the king. In Eng- land monarchy and episcopacy were raised to the greatest splendor. The bishops were permitted to resume their seats in the house of peers; all military authority wasacknowledged to be vested in the king. He was empowered to appoint commissioners for regulating corporations, and expelling such members as had intruded them- selves by violence, or professed principles dan- gerous to the constitution : and an art of unifor- mity was passed, by which it was required, that every clergyman should be re-ordained, if he had not before received episcopal ordination ; that he should declare his assent to every thing contained in the book of Common Prayer, and should take the oath of canonical obedience. In consequence of this law, above 2000 of the

fresbyterian clergy resigned their cures at once, n Scotland the right of the king was asserted in the fullest and most positive terms to be here-

ditary, divine, and indefeasible. His power was extended to the lives and possessions of his subjects, and from his original grant was said to come all that they enjoyed. They voted him an additional revenue of £40,000; and all their former violences were spoken of with the ut- most detestation. This

intoxication of loyalty, however, at last began to wear off. The king's profusion and extravagance in his pleasures, together with his indolence in government, fur- nished opportunities of making very disadvanta- geous comparisons between him and Crom- well. These animosities were heightened by the ejected clergy, especially when they saw Dunkirk, which had been acquired during the usurper's vigorous administration, sold to the French, and that merely to supply the king's extrava- gance. From this time (August 17th 1662) Charles found himself perpetually opposed, and his parliaments granted supplies much more re- luctantly than before. A few months previously the continual exigencies of the kmg had forced him to conclude a marriage with the Infanta of Portugal for the sake of her portion, which was £500,000 in money, together with the fortress of Tangier in Africa, and Bombay in the East Indies. The chancellor Clarendon, the dukes of Ormond and Southampton, urged many reasons against this match, particularly the likelihood of her never having any children; but all their objections could not prevail, and Clarendon, therefore, set himself to promote it. Still, however, the king's necessities were greater than his supplies. He therefore resolved to sacrifice his minister, the great Clarendon, to the resentment of the parlia- ment, to whom he was become obnoxious, in or- der to procure more supplies. On the 12th June, 1663, he sent for the commons to White- hall ; complained of their inattention to him, and acquainted them with a conspiracy to seize the castle of Dublin. Four subsidies were imme- diately granted, and the clergy in convocation followed the example of the commons. On this occasion the earl of Bristol ventured to impeach the chancellor in the house of peers ; but, as he did not support his charge, the affair was dropped for the present. With a view probably of hav- ing the money to be employed for that purpose in his hands, Charles was induced to declare war against the Dutch in 1664.

In this contest the English, under the com- mand of Sir Robert Holmes, expelled the Dutch from Cape Corse Castle on the coast of Africa, and seized on their settlements of Cape Yerd and the Isle of Goree. Sailing thence to America, the admiral possessed himself of Nova Belgia, since called New York ; and which continued subject to Britain, till the American revolution. On the other hand, De Ruyter, the Dutch admi- ral, disposessed the English of all their settle- ments in Guinea except Cape Corse. He after- wards sailed to America, where he attacked Bar- badoes and Long Island, but was repulsed. Soon after, the two most considerable fleets of each nation met ; the one under the duke of York, to the number of 114 sail; the other com- manded by Opdam, admiral of the Dutch nary, of nearly equal force. The engagement began at four in the morning, and both sides fought with

*equal intrepidity. The duke was in the hottest part of the engagement, and behaved with great spirit, while many of his lords and attendants were killed around him. In the heat of the ac- tion the Dutch admiral's ship blew up ; which so discouraged and disheartened the enemy, that they fled towards their own coast, having thirty ships sunk and taken, while the victors lost only one. This success so much excited the jealousy of the neighbouring states, that France and Den- mark immediately resolved to protect the Dutch republic. Admiral De Ruyter, on his return from Guinea, was appointed, at the head of seventy-six sail, to join the duke of Beaufort the French admiral, who it was supposed was then entering the British Channel from Toulon. The duke of Albemarle and prince Rupert now commanded the British fleet, of seventy-four sail. Albemarle detached the prince with twenty ships to oppose the duke of Beaufort; against which piece of rashness Sir George Ays- cue in vain protested. The fleets thus engaging, upon unequal terms, a memorable battle ensued, in which the Dutch admiral Evertzen was killed by a cannon ball, one of their ships was blown up, and three of the English ships taken. The com- batants were parted by darkness. The next day they renewed the battle with incredible fury. Sixteen fresh ships joined the Dutch ; and the English were so shattered, that their fighting ships were reduced to twenty-eight. Upon re- treating towards their own coast the Dutch fol- lowed them ; where another dreadful conflict was beginning, but closed by the darkness of the night. The morning of the third day the Eng- lish continued their retreat, and Albemarle came to the desperate resolution of blowing up his own ship rather than submit to the enemy, when he found himself happily rein- forced by prince Rupert with sixteen ships of the line. By this time it was night ; the next day the fleets came once more to a close combat, which was continued with great violence, till they were parted by a mist. Both sides cla.imed the victory, but the Dutch certainly had the advantage. Another bloody engagement happened soon after, with larger fleets on both sides, commanded by the same ad- mirals. In this the Dutch were vanquished; but they were soon in a condition to face their enemies, by the junction of Beaufort the French admiral. The Dutch fleet now appeared in the Thames, and the whole British nation was thrown into the utmost consternation : a chain had been drawn across the river Medway ; and some fortifications added to the forts along the bank. But all these were unequal to the present force : Sheerness- was soon taken ; the Dutch passed forward and broke the chain, though for- tified by some ships sunk by Albemarle's orders, destroying the shipping in their passage, and ad- vanced, with six men of war and five fire-ships, ;*s far as Upnore Castle, where they burned three men of war. It was now expected that the Dutch might sail up next tide to London bridije, and destroy not only the shipping,*

but even the buildings of the metropolis. The Dutch, how- ever, were unable to eflfect this, from the failure of the French, who had promised them asjistance.

Spreading, therefore, an alarm along the coast, and having insulted Norwich, they returned to their own shores. During these transactions the plague raged in London, and destroyed 1 00,000 of the inhabitants. This calamity was soon followed by another equally dreadful. A fire broke out in a baker's house in Pudding Lane, near the bridge, and spread with such rapidity that no eflTorts could extinguish it, till it laid in ashes the most considerable part of the city ; but not a single life, it is said, was lost. These complicated mis- fortunes did not fail to excite many murmurs among the people : the blame of the fire was laid on the Papists : the Dutch war was ■ exclaimed against as unsuccessful and unnecessary ; .and Charles himself began to be sensible that all the ends for which he had undertaken the war were likely to be entirely frastrated. Instead of being able to lay up money for himself, the supplies of parliament had hitherto been so scanty that he found himself considerably in debt. A treaty, therefore, was set on foot, which was concluded at Breda on the 21st of July, 1667, by which the only advantage gained for the country was, the cession of the colony of New York. It was therefore judged disgraceful, and the blame of it thrown entirely upon the earl of Clarendon. Along with this, he was charged with the sale of Dunkirk ; the bad payment of the seamen; the disgrace by the Dutch fleet ; and his own ambi- tion. His daughter, while yet in Paris, had com- menced an amour with the duke of York ; and, under a solemn promise of marriage,, had ad- mitted him to her bed. Her lover, however, af- terwards married her ; but this act of virtue in the prince was imputed as a crime to Clarendon. Clarendon was soon therefore deprived of the the seals, and impeached ; and thought proper to withdraw into France. Soon after the king formed an alliance with Holland and Sweden, to prevent the French king from completing his conquest of the Netherlands. The king now began to act in a very arbitrary manner, lie had long wished to extend his prerogative, and to be able to furnish himself with whatever sums he might want for his pleasures, and therefore was most likttly to be pleased with those ministers who could flatter both his wishes. These he found in Clifford, Ashley, Buckingham, Arling- ton, and Lauderdale, a junto distinguished by the nam« of the Cabal ; a word formed by th initials of their names. The first effect of their advice was, a secret alliance with France, and a rupture with Holland. Soon after this the duke of York declared himself a Papist; and liberty of conscience was proclaimed to all sectaries, whether dissenters or papists : a proclamation was also issued containing very rigorous orders for the impressment of seamen ; and another full of menaces against those who should speak undu^ tifully of his majesty's measures, &c. These mea- sures, however, gave very great and

just ofl”ence to the people ; but they were especially alarmed at an alliance with France, and justly afraid of the treachery of that court. On the 28th of May, 1672, the English fleet under the duke of York was surprised by the Dutch in Southvvold Bay. About 8 A. I\I. betran a most furious engaqeraent. The gal Ian* Sandwich, who commanded the

English van, drove his ship into the midst of the enemy, beat off the admiral that ventured to at- tack him, sunk another ship that attempted to board him, and three fire-ships that offered to grapple with him. Though his vessel was torn with shot, and out of 1000 men there only re- mained 400, he still continued to fight. At last a fire-ship, more fortunate than the rest, having laid hold of his vessel, her destruction became inevitable, and the earl himself was drowned in attempting to escape. Night parted the combat- ants ; the Dutch retired and were not followed by the English. The loss sustamed by the two maritime powers was nearly equal ; but the French suffered very little, not having entered into the heat of the engagement. It was even supposed that they had orders for this conduct, and to spare their own ships, while the Dutch and English should weaken each other by their mutual exertions. The combined powers were much more successful against the Dutch by land. Loiiis XIV. conquered all before him, crossed the llhine, took the frontier towns of the enemy, and threatened the new republic with a final dissolu- tion. Terms were proposed to them by the conquerors, which would have deprived them of all power of resisting an invasion from France by land. Those of Charles exposed them equally to every invasion by sea. At last the murmurs of the English at seeing this brave and industri- ous people, the supporters of the protestant cause, totally sunk and on the brink of destruc- tion, were too loud not to reach the king. He was obliged to call a parliament, to take the sense of the nation upon his conduct ; and he soon saw how his subjects stood affected. Parliament began business with repressing some of the king’s extraordinary exertions of his prerogative, and establishing uniformity in religious matters. The celebrated Test act was passed : which, besides taking the oaths of allegiance and supremacy, imposed the receiving of the sacrament once a year in the established church, on all persons in place or power. As the dissenters also had seconded the efforts of the commons, against the king’s declaration of indulgence to Roman Catholics, a bill was passed for their ease and relief; which, however, went with dif- ficulty through the house of peers. The Dutch, in the mean time, continued to defend themselves ■with such valor that the commons began to de- spair of success. They therefore resolved that the standing army was a grievance : they next declared that they would grant no more supplies to carry on the

Dutch war, unless it appeared that the enemy were so obstinate as to refuse all reasonable conditions. To cut short these alter- cations, the king resolved to prorogue the parlia- ment; and, with that intention, went to the house of peers, whence he sent tlie usher of the black rod to summons the commons to attend. It happened that the uslier and the speaker met at the door of the house ; but, the speaker being within, some of the members suddenly shut the door, and cried ' To the chair.' Upon which the following motions were carried in a tumultuous manner : — That the alliance with France was a grievance ; that the evil counsellors of the king were a grievance ; that the earl of Lauderdale

was a grievance : and then the house rose in great confusion. The king, finding that he could expect no supply from the commons for carrying on the war, resolved to make a separate peace with the Dutch, on terms which they had pro- posed by the Spanish ambassador. For form's sake he asked the advice of parliament, who concur- ring heartily in his intention, a peace was accord- ingly concluded.

The prepossession which Charles had all along shown for France, and his manifest inclination upon all occasions to attach himself to that court, had given great offence. Other circumstances also co-operated to produce general discontent. The toleration of Catholics, so much wished for by the king; tl)e bigotry of the duke of York, the heir apparent to the crown, and his zeal for the propagation of the Catholic religion ; excited a general and just apprehension that the Protestant religion was in danger. These discontents were increased and fomented by designing men, who, to promote their own interests, did not scruple to advance the grossest falsehoods. In 1678 an account of a plot formed by the Papists, for de- stroying the king and the Protestant religion, was given in by one Kirby a chemist, Dr. Tong,a weak credulous clergyman, and Titus Oates, who had likewise been a clergyman, but was a most abandoned miscreant. The circumstances at- tending this pretended discovery were so perfectly incredible, that it appears amazmg how any per- son of common sense could give ear to them. Nevertheless, so much were the minds of the na- tion in general inflamed against the Catholics, at this time, that it produced the destruction of se- veral individuals of the Romish persuasion, and a imiversal massacre of that sect was appre- hended. The parliament, who ought to have re- pressed these falsehoods, and brought back the people to calm enquiry, were found more credu- lous than even the people themselves. The cry of plot was echoed from one house to the other ; the country party could not slip so favorable an opportunity of managing the "passions of the people ; and the courtiers were afraid of being thought disloyal if they should doubt tlie guilt of those who were accused of designs against the king's person. Danby, the prime minister him- self, persisted in his enquiries, notwithstanding the king's desire to the contrary. Charles

him- self, who was the person that ought to have been most concerned, was the only one who treated it with contempt. Nothing, however, could stop the popular fury ; and for a time the king was obliged to give way to it. During this uproar, the lord treasurer Danby was impeached in the house of commons, by Seymour the speaker. The principal charge against him was, his having ‘ written a letter to Montagu, the English ambas- sador at Paris, directing him to sell the king’s good offices at the treaty of Nimeguen, to the king of France, for a sum of money. Though the charge was just, Danby had tlie happiness to find the king resolved to defend him. Charles assured the parliament, tliat, as he had acted in every thing by his orders, he held him entirely blameless; and, though he would deprive him of all his employments, yet he would positively in- sist on his personal safety. The lords were

obliged to submit; though they continued to impeach him, till Danby was sent to the Tower. These proceedings were carried on by the house of commons that had continued undissolved for above seventeen years.

Charles at last called a new parliament, which, however, proved as unmanageable as the preced- ing. The members, resolved to check the growth of popery by striking at the root of the evil, brought in a bill for the total exclusion of the duke of York from the crown of England and Ireland, which passed the lower house by a ma- jority of seventy-nine ; they next voted the king’s standing army and guards to be illegal ; they proceeded to establish limits to the king’s power of imprisoning delinquents ; and had the great merit of passing’the celebrated statute called the Habeas Corpus Act, which confirms the subject in an absolute security from oppressive power.

During these commotions the duke of York had retired to Brussels ; but an indisposition of the king brought him back to England, to be ready in case of any sinister accident to assert his right to the throne. After prevailing upon his brother to disgrace his natural son the duke of Monmouth, who was now become very po- pular, he himself retired to Scotland, to streng- then his interests in that part of the empire. This secession still more inflamed the country party, who were strongly attached to the duke of Monmouth, and were resolved to support him against the duke of York. ISIobs, peti- tions, pope-bumings, &c., followed, and were employed to keep up the terror of popery, and alarm the court. The parliament had encou- raged various tribes of informers, which increased the number of these miscreants, conspiracies were more numerous ; plot was set up against plot ; and the people were kept suspended in the most dreadful apprehensions.

The nation now came to be distinguished into petitioners and abhorrers, and Whig and Tory were at this time first used as terms of reproach.

Being apprised of the tendency of presbyterian principles to a republican form of government, Charles, like his predecessors, had long endea- voured to introduce episcopacy into Scotland. The rights of patrons had for some years been abolished ; and the power of electing ministers had been vested in the kirk sessions and lay elders : but it had of late been enacted, that all incumbents who had been admitted upon this title should receive a presentation, and be insti- tuted anew by the bishop, under the penalty of deprivation. In consequence of this, 350 pa- rishes were at once declared vacant. New mi- nisters were sought for all over the kingdom, and none, however vicious or ignorant, were rejected. The people, as might have been ex- pected, were displeased to the highest degree; they resolved, however, to give no sign of mu- tiny or sedition, notwithstanding their discon- tent. This submission made it foolishly imagined that they would submit altogether if they were worse treated. In 1661 a severe act was passed in England against conventicles, and this seve- rity was imitated by the Scottish parliament. Miiit.iry force was next let loose. Wherever the people had generally forsaken their churches,

the guards were quartered throughout the coun- tr)', who, without any proof, or legal conviction, demanded fines from the people for being absent from church ; and quartered soldiers on the sup- posed criminals till they received payment. An insurrection being dreaded during the Dutch war, new forces were levied, and entmsted tc the command of Dalziel and Drummond, men of very cruel dispositions. Representations were now made to the king, who promised some redress. But his lenity came too late. In 1668 the people rose in arms. They surprised Turner, the English commander, in Dumfries, and re- solved to have put him to death ; but, finding his orders to be more violent than his execution of them, they spared his life. At Lanark they re- newed the covenant, and published their mani- festo ; professing at the same time their submis- sion to the king. Their force did not exceed 2000 men; and, though the country in general bore them great favor, men's spirits were so sub- dued, that the insurgents could expect no great increase of numbers. Dalziel took the field to oppose them. The number of the covenanters was now reduced to 800, and these no way ca- pable of contending with regular forces. Having advanced near Edinburgh, they attempted to find their way back into the west by the Pentland hills ; but were here attacked by the king's troops, and received the first charge very resolutely ; but this was all the action. Immediately they fell into confusion and fled. About forty were killed on the spot, and 130 taken prisoners. So early as the year 1661, the presbyterians had deputed one Sharp, to lay their grievances before the kins. Instead of this, their deputy abandoned their cause altogether, became their violent enemy,

and as a reward of his treachery was made arcii- bishop of St. Andrew's. After the battle of Pent- land hills, this renegade, as the Scottish histo- rians call him, was the foremost to take vengeance on the unhappy insurgents, whose oppressed state and inoffensive behavior had made them objects of universal compassion. Ten were hanged on one gibbet in Edinburgh ; thirty-five before their own doors : they might all have saved their lives, if they would have renounced the covenant ; but this they absolutely refused. The executions were going on, when the king wrote a letter to the privy council, in which he ordered that such of the prisoners as should simply promise to obey the laws for the future should be set at liberty, and that the incorrigible should be sent to the plantations. This letter was brought to the council by Burnet, but was not immediately delivered by Sharp. It had been customary to put these poor creatures to very severe tortures, to make them confess. By Sharp's delay, one Hugh Maccail had been tor- tured, who would otherwise have escaped ; and so violent were the torments he endured that he expired under them. Yet he seemed to die in an exstacy of joy. His last words were uttered with an accent which struck the by-stande>5 with astonishment. • Farewell,' said he, ' sun, moon, and stars ; farewell world and time; farewell weak frail body ; welcome eternity ; welcome ancels and saints ; welcome Saviour of the world ; and welcome God the judge of all.'

In 1670 an act against conventicles was passed, seemingly with a design of mitigating the former persecutmg laws; though even this was severe enough. By this act, the hearer in a conventicle (that is, in a dissenting meeting, where more than five besides the family were present) was fined 3s. for the first offence, and 10s. for the second ; the preacher £20 for the first offence, and £40 for the second. The person in whose house the conventicle met was fined a like sum with the preacher. One remarkable clause was, that, if any dispute should arise with regard to the interpretation of any part of the act, the judges should always explain the doubt in the sense least favorable to conventicles, it being the intention of parliament entirely to suppress them. As the violent methods used by the king were found ineffectual to obtain the purpose in Scotland, a scheme of comprehension was tried in 1678, by which it was proposed to diminish the authority of the bishops, to abolish their ne- gative voice in the ecclesiastical courts, and to leave them little more than the right of prece- dency among the presbyters : but this too was rejected by the people, who well knew its ten-dency. The next scheme was an indulgence ; by which the most popular of the expelled preachers, without requiring any terms of submission to the established religion, were settled in vacant churches ; and small salaries of

about £20 a-year were offered to the rest, till they should be other- V, ise established : but conventicles multiplied, and the covenanters continually met at them in arms. A renewal of the persecutions now there- fore commenced under the administration of tlie duke of Lauderdale and archbishop Sharp. It was an old law, but seldom put in execution, that a man who was accused of any crime, and did not appear to take his trial, might be inter- communed ; that is, he might be publi-cly out- lawed ; and whoever afterwards, either on ac- count of business, relation, or charity, had the least intercourse with him, was subjected to the same penalties which the law could inflict on the criminal himself. Great numbers of writs of intercommuning were now issued against the covenanters; by which crimes and punishments were vastly multiplied. Application was made to Charles for some redress of these grievances ; but he was too much taken up with his pleasures to take any effectual means of putting a stop to them ; nay, even while he retracted them, he was persuaded to avow and praise tliem in a letter to the privy council. The consequence of all this was, that the covei;anters were at last so much enraged against Sharp, whom they consi- dered as an apostate, and experienced to be an unrelenting persecutor, that on the 3d of May, 1679, he was waylaid and murdered. See Sharp. This gave rise to a persecution still more violent, which at last brought on another insurrection. The covenanters finding themselves obliged to meet in large bodies, and bring arms along with them for their own security, set forth a declara- tion against prelacy, which they published at Rutherglen, a small borough near Glasgow ; and burned in the market place several acts of par- liament, which had established that mode of cnurch government. For this purpose they

chose the 29th of May, the anniversary of th<3 Restoration ; having previously extinguished the bon-iires that had been kindled on that occasion. Count Graham, afterwards viscount Dundee, an active and enterprising officer, attacked at this time a conventicle upon London Hill, but was repulsed with the loss of about thirty men. Tlie covenanters, then finding themselves unwarily engaged in rebellion, were obliged to persevere; and pushed on to Glasgow, which, though re- pulsed at first, they afterwards made themselves masters of. Here they dispossessed the esta- blished clergy, and issued proclamations, in which they declared that they fought against the king's supremacy, against popery and prelacy, and a popish successor. Charles, being now alarmed, despatched against the covenanters a small body of English cavalry under the duke of Monmouth. He joined the Scottish guards, and some regiments of militia levied from the well affected counties ; and with great celerity marched in quest of the insurgents. They had taken post at Bothwell-bridge between Hamilton and Glas- gow ; where there was no access but by the bridge ; and where a small body was able to defend i' against the king's army. The whole army

of the covenanters never exceeded 8000 men, and they had in reality no other generals than their clergy- men. Monmouth attacked the bridge, and the covenanters maintained it, as long as their am- munition lasted. When they sent for more, they received orders to quit their post and retire; and this imprudent measure occasioned an immediate defeat. Monmouth passed the bridge without opposition, and drew up his forces opposite the enemy. His cannon alone put them to the rout; about 700 were killed in the pursuit, and 1200 taken prisoners, who were treated with great hu- manity. Such as promised to live peaceably Under the government were dismissed; and about 300 who refused this condition were shipped for Barbadoes, but unfortunately perished by the way. Two of their clergymen were hanged. Soon after, an act of indemnity was passed : but Lauderdale took care that it should atlbrd little protection to the unhappy covenanters ; for, though orders were given to connive thencefor- ward at all conventicles, he found means undei a variety of pretences to elude the execution of them.

It is now known, that Charles II. had formed a scheme of overturning the established religion, and substituting Popery in its place ; as well as of rendering himself absolute. In this, however, he met with violent opposition from his parlia- ments ; and, as the one of 1679 evfn surpassed their predecessors in this respect, the king dis- solved them and called another in 1680. By this step, however, he gained nothing. They voted the legality of petitioning the king; and fell with extreme violence on the abhorrers, who were seized by their order in all parts of England, and committed to close custody ; the liberty of the subject, which had been so carefully guarded by their own recent law, was every day violated by their arbitrary and capricious imprisonments. But one Stowel of Exeter put a stop to their proceedings : he refused to obey the serjeant at arms, and said he knew no law by which the

house of commons j:fetencled to commit him. The house, finding it equally dangerous to pro- ceed or recede, now voted that Stowel was indis- posed; and a m'onth's time was allowed him for his recovery. The chief point aimed at by this parliament, was to obtain the enactment of the exclusion bill into a law. It passed by a great majority in the commons, but was thrown out by the house of peers ; all the bishops except three votinGj against it. The commons on this, morti- fied at the rejection of their favorite bill, resolv- ed. That, till the exclusion bill was passed, they could not, consistently with the trust reposed in them, grant the king any manner of supply ; and that whoever should hereafter lend, by way of advance, any money upon the branches of the king's revenue, should be responsible to

parlia- ment for his conduct. Charles, therefore, finding that there were no hopes of extorting either money or obedience from them, came to a resolution of once more dissolving the parliament. It was for some time a doubt whether the king would ever call another ; his necessities, how- ever, surmounted all his fears of their violence; and, in 1681, he summoned a new parliament to meet him at Oxford. In this, as in all former parliaments, the popular party predominated; and they trod exactly in the same paths with their predecessors. The same speaker was chosen, and the exclusion bill urged more fiercely than ever. Ernely, one of the king's ministers,]iroposed that the duke should be banished 500 miles from England ; and that on the king's de- cease the next heir should be constituted regent with regal power. Yet even this expedient, which left the duke only the bare title of king, could not obtain the attention of the house. Nothing but a total exclusion would satisfy them. Each party had now for some time reviled and ridiculed each other in pamphlets and libels; and this practice at last was attended with an incident that deserves notice. Fitzharris, an Irish papist, employed a Scotchman, named Everhard, to write a libel against the king and the duke of York. Everhard was actually a spy for the contrary party ; and, supposing this a trick to entrap him, he discovered the whole to Sir William Waller, a justice of the peace. The libel was replete with the utmost rancour and scurrility; and Waller, having carried the intel- ligence to the king, seized Fitzharris, with a copy of it in his pocket. Seeing himself in the hands of a party from whom he expected no mercy, the latter now threw the odium of the libel upon the court, who, he said, were desirous to impute it to the exclusioners, to render them hateful to the people. He also enhanced his services to the coun- try party by a new popish plot, in which he charged the duke of York as a principal accom- plice. The king imprisoned Fitzharris: the commons avowed his cause. They voted that he should be impeached by themselves, to screen him from the ordinary forms of justice : the lords rejected the impeachment ; the commons assert- ed tlieir riglit to prosecute it : a commotion was likely to ensue ; and the king, to break otf the contest, went to tiic house and dissolved the parliament, with a fixed resolution never to call another.

From this moment the king ruled with despotic power. His temper, which had hitherto been easv and merciful, now became cruel and arbitrary; he entertained spies and informers round the throne, and imprisoned all such as he thouoht most daring in their designs. Resolving to humble the presbyterians, he divested them of their employments and places ; and gave their offices to such as approved the doctrine of non- resistance. The clergy began to testify their zeal and their principles by their writings and sermons; but, though among these tlie partizans of the king were the most numerous, those of the opposite faction were the most enterprising. The king openly espoused the cause of the former ; and, placing himself at the

head of a faction, deprived the city of London, which had long headed the popular party, of their charter. Fitzharris was now brought to a trial before a jury, and con- demned and executed. The whole gang of spies, witnesses, informers, and suborners, who had long been encouraged and supported by the leading patriots, finding that the king was entirely master, turned short upon their old employers, and offered their evidence against those who first put them in motion. The king's ministers gave them encouragement ; and in a short time the same injustice and the same cruelties were prac- tised against presbyteiian schemes, that had for- merly been practised against Catholic treasons. But the king's chief resentment was levelled against the earl of Shaftesbury. No sums were spared to seek for evidence, or even to suborn witnesses, against this intriguing and formidable peer. A bill of indictment being presented to the grand jury, witnesses were examined, who swore to such incredible circumstances as must in all ordinary cases have invalidated their testi- mony. Among his papers, indeed, a draught of an association was found, which might have been construed into treason ; but it was not in the •earl's hand writing, nor could it be proved that he had ever communicated this scheme to any body, or signified his approbation of it. The sheriffs, however, had summoned a jury whose principles coincided with those of the earl; and that probably, more than want of proof, procured his safety. The other corporations of England soon began to fear that they should experience the same treatment as that of London, and were successively induced to surrender their charters to the king. Considerable sums were exacted for restoring these charters ; and all the offices of power and profit were left at the disposal of the crown. There was a party, however, in England, that still cherished their former ideas of freedom, and resolved to restore liberty to their country, by dethroning the king who acted in such a des- potic manner. The principal conspirators were IMonmouth, Shaftesbury, Russel, Essex, Howard, Algernon Sidney, and John Hampden, grand- son to the great man of that name. Monmouth engaged in their plans the earl of Macclesfield, lord Brandon, Sir Gilbert Gerard, and other gentlemen in Cheshire. Lord Russel entered intoa correspondence with Sir William Courtney, Sir Francis Knowles, and Sir Francis Drake, who promised to raise the west : and Shaftesbury, with one Ferguson, an Independent clergyman,

and a restless plotter, managed the city, upon which the confederates chiefly relied. These schemes had been laid in 1681 : but the caution of lord Russel, who induced the duke of Mon- mouth to put off the enterprise, saved the kinc;- dom from the horrors of a civil war; while Shaftesbury, after some vain efforts to induce the citizens to revolt, retired in disgust to

Hol- land. The remaining formed a council ; which corresponded with Argyle and the malcontents in Scotland ; but they widely differed in their plans. Monmouth aspired at the crown ; Rus- sel and Hampden proposed to exclude the duke of York from the succession, and redress the grievances of the nation ; while Sidney and Essex were for restoring the republic. Lord Howard was an abandoned man, who, having no principles, sought to embroil the nation, to gra- tify his private interests. Besides these, there was a set of subordinate conspirators, who fre- quently met, and carried on projects quite un- known to Monmouth, and his council. These men undertook the desperate resolution of assas- sinating the king in his way to Newmarket ; Rumbold, one of the party, possessing a farm upon that road, called the Rye-bouse, whence the conspiracy was called the Rye-house plot. But the house in which the king resided at Newmar- ket accidentally took fire, and he was obliged to leave that place eight days sooner than he was expected, a circumstance to which he owed, his safety. Soon after this the conspiracy was dis- covered ; Russel, Sidney, and Walcot, were tried on the charge of being connected with it, con- victed, and executed ; Essex cut his own throat ; Hampden was fined £40,000, and scarcely one es- caped who had been in any manner concerned, except the duke of Monmouth, the most culpa- ble of all. Severe punishments, however, were inflicted on many who treated the duke of York disrespectfully. The famous Titus Gates was fined £100,000 for calling him a popish traitor ; and he was sentenced to be imprisoned till he should pay it. A similar sentence was passed upon Button Colt. Sir Samuel Barnardiston was fined £10,000 for having in some private letters reflected on the government. At last, to please his subjects by an act of popularity, the king married the lady Anne, his niece, to prince George brother to the king of Denmark. This was the last remarkable transaction of this extra- ordinary reign. On February 2d, 1685, about 8 A.M., the king was seized with a fit of apo- plexy ; but, being blooded, he was restored per- fectly to his senses ; and there were great hopes of his recovery. On the fourth day, however, the physicians despaired of his life, and sent for the queen.- He was in his perfect senses when she Arrived. She threw herself on her knees, and asked his pardon for all her offences. He replied that she had offended in nothing ; buttliathehad been guilty of offences against her, and asked her pardon. He spoke with great affection to the duke of York, and gave him excellent coun- sel for his future conduct. He advised him to adhere strictly to the laws, and to support the church of England invariably. The duke seemed anxious to convince him before he died how little he intended to follow his advice. Having re-

moved the bishops and several of the lords whd attended, he sent for Huddleston, a Romish priest, and in the presence of the duke, the earl of Bath, and Trevanniona captain in the guards, Huddleston gave the extreme

unction to the king, and administered to him the sacrament according to the rites of the church of Rome. All this was accomplished in the space of half an hour. The doors were then thrown open. Six prelates, who had before attended the king, were sent for to give him the sacrament. Kenn, bishop of Bath and Wells, read the visitation for the sick ; and, after he said that he repented of his sins, the ab- solution. The king assisted with seeming devo- tion at the service ; but his mouth being distort- ed with fits, and his throat contracted, he could not swallow the elements. He professed, how- ever, his satisfaction in the church of England ; and expired on the 6th February between eleven and twelve o'clock ; having reigned twenty-five years, and lived fifty-five.

*The first act of James H.'s reign was to assem- ble a privy council : where, after some praises bestowed on the memory of his brother, he made professions of his resolution to maintain the es- tablished government both in church and state ; and, as he had heretofore ventured his life in de- fence of the nation, he would still go as far as any man in maintaining all its just rights and privileges. This speech was received with great applause, not only by the council, but by the whole nation. Addresses came from all quar- ters, full of duty, nay of the most servile adula- tion. The address of the Quakers, however, was remarkable for its good sense and simplicity. * We are come,' said they, ' to testify our sorrow for the death of our good friend Charles, and our joy for thy being made our governor. We are told that thou art not of the persuasion of the church of England no more than we ; wherefore we hope that thou wilt grant us the same liberty which thou allowest thyself. Which doing, we wish thee all manner of happiness.' The king, soon showed, that he either was not sincere in his promises, or that he entertained so lofty an idea of his own regal power, that even his utmost sincerity could tend very little to the security of the people. All the customs, and the greater part of the excise, which had been voted to the late king for his life only, were levied by James without a new act of parliament. He went openly to mass with all the ensigns of his dignity ; and even sent one Caryl as his agent to Rome, to make submissions to the pope, and pave the way for the re-admission of England into the bosom of the Catholic church. From the suggestions of these men all his measures were undertaken. One day, when the Spanish ambassador ventured to advise his majesty against putting too much confidence in such kind of people, ' Is it not the custom in Spain,' said James, ' for the king to consult with his con- fessor '.' ' Yes,' answered the ambassador, ' and that is the reason our affairs succeed so ill.' James's first parliament, which was composed mostlyof zealous Tories, was strongly inclined to comply with the measures of the crown. They voted unanimously, that they should settle on the present king, during life, all t!ie revenue enjoyed*

by the late king. For this favor, James assured them that he would secure them in the full en- joyment of their laws ; but, with regard to reli- gion, no answer could be extorted, for that he resolved to alter. In every thing, however, reli- gion excepted, James merited praise. He ap- plied himself to business with unremitting atten- tion. He managed his revenue with the strictest economy. He retrenched superfluous expenses, and showed himself zealous for the glory of the nation. He endeavoured to expel from court the vice which had prevailed so much during the fv.rmer reign, and to restore decency and mora- lity. Presiding daily at the council, and at the boards of admiralty and treasury, he entered into the whole detail of the concerns of the state. But his bigotry for the Romish religion sullied all his good qualities, and rendered him feared for his violence, where he was not despised for his weakness ; and a storm was now seen gathering to disturb his repose. The duke of Monmouth, under the auspices, as it is said, of the prince of Orange, resolved to invade England, from the shores of Holland. He was seconded by the duke of Argyle, who formed the scheme of an insurrection in Scotland; and, while Monmouth attempted a rising in the west, it was resolved that Argyle should also make a descent in the north. The generosity of the prince of Orange, however, did not correspond with the warmth of his professions. The unfortunate duke derived from his own plate and jewels his whole supply for the undertaking ; and the enthusiasm of a rich widow supplied Argyle with £lO,000. Ar- gyle was the first who landed. He appeared in Scotland at the head of 2500 men, and strove to influence the people by various addresses in his favor. But, a formidable body of the king's forces coming against them, his army fell away; and he himself, after being wounded in attempt- ing to escape, was taken prisoner by a peasant. After suffering many indignities, he was tried and publicly executed at Edinburgh.

By this time Monmouth had landed in Dor- setsliire with scarcely 100 followers. His name, however, was so popular, and so great was tlie hatred of the people to James on account of his religion, that in four days he had assembled a body of above 2000 men. They were indeed all of them the lowest of the people, and his decla- rations were suited entirely to their prejudices. He called the king the duke of York ; and deno- minated him a traitor, a tyrant, a murderer, and a popish usurper. He imputed to him the fire of London, and even affirmed that he had poi- .soned the late king. He soon found himself at the head of 6000 men; and was daily obliged to dismiss great numbers for want of arms. The kmg was not a little alarmed at his invasion. Six regiments of Uritisli troops were called over from Holland ; and a body of reuulars, to the number of 13000, were sent, under tlie command of the earl of Feversham and ("hurchill, to check the proujess of the rebels. They took post at Sedgemore, a village near

Bridgewater, anfl were joined by considerable numbers of the country militia. Here Monmouth resolved, by a despe- rate effV)rt, to gain the kingdom or lose his life. He drove the royal infantry from their ground,

and was on the point of gaining a complete vic- tory, when the cowardice of Gray, who com- manded the horse, brought all to rum. This no- bleman fled at the first onset ; and the rebels, being charged in flank, gave way after a contest of three hours. About 300 were killed in the en- gagement, and 1000 in the pursuit. Monmouth fled about twenty miles from the field of battle, till his horse sunk under him. He then alighted ; and, exchanging clothes with a shepherd, fled on foot, attended by a German count who had ac- companied him from Holland. Being quite ex- hausted with hunger and fatigue, they both lay down in a field, and covered themselves with fern. The shepherd being found in Monmouth's clothes by the pursuers, increased the diligence of the search ; and by means of bloodhounds he was detected in this miserable situation, with raw peas in his pocket, on which he had lived for some days. He burst into tears when seized by his enemies ; and petitioned, with the most abject submission, for his life. On his way to London, he wrote a submissive letter to the king, promising discoveries, should he be admitted into his presence. The curiosity of James being excited by the letter, he sent Sheldon, a gentle- man of the bed chamber, to meet Monmcjth. In his conversation with Sheldon, he asked who was in chief confidence with the king ; and being answered that it was Sunderland, iSlonmouth knocked his breast in surprise, and said, ' Why then, as I hope for salvation, he promised to meet me.' He desired Sheldon to inform the king, that several of his accomplices in rebellion were in the confidence of his majesty; and he gave him a particular account of the part which the prince of Orange had acted in this whole affair. Sheldon, on his return from the duke of Monmouth, began to give an account to the king of what he had learned from the unliappy pri- soner. Sunderland, pretending business, came into the room. Sheldon stopped, and signified his desire to speak in private with the king. James told him that he might say any thing be- fore that lord. Sheldon was in great perplexity ; but, being urged, he told all that Monmouth had asserted. Sunderland appeared for some time confused ; at length he said, with a laugh, ' If that is all he can discover to save his life, he will derive little good from his information.' Mon- mouth himself was soon after brought before the king. Sunderland, to save himself, and the other adherents of the prince of Orange, advised the duke, that, as he could assure him of the certainty of a pardon, he ought to deny what he had said in prejudice of his friends, who could serve him on some other more favorable occasion. The credulous duke, swayed by this advice, suppress- ed what he had said to Sheldon, when he was examined by the king. He mentioned nothing of the concern which the prince of Orange had taken in the invasion ; though .lames was already sufficiently informed of

this. D'Avaux, the French minister to the States, had given a circumstantial account of the whole conduct of the prince to Louis XIV., who had ordered it to be privately communicated to the king of England. The minister who had been sent from Holland, to congratulate James on the suppression of Ar-

gyle's rebellion, was in great perturbation when he heard that the king was resolved to see Mon- mouth. ' Though he found that he said nothing of his master,' said James, ' he was never quiet till Monmouth was dead.' The unfortunate duke made various attempts to obtain mercy. He wrote to the queen dowager, and to the queen, as well as to the king himself. When admitted to the royal presence, Monmouth begged his life, with a meanness unsuitable to his rank and preten- sions. But all his entreaties and submissions were of no avail. James told him that he was much affected with his misfortunes, but that his crime was too dangerous in its example to be eft unpunished. In his last moments he be- haved with a magnanimity worthy of his former courage. When he came to the scaffold, he be- haved with decency and even with dignity. He spoke little; made no confession; nor did he accuse any of his friends. Circumstances are said to have attended his death that created a horror among the spectators. The executioner missed his blow, and struck him slightly on the shoulder. Monmouth raised his head from the block, and looked him full in the face, as if re- proaching him for his mistake. He struck him twice again, but with feeble strokes ; and then threw the axe from his hands. The sheriff forced him to renew his attempt ; and the head of the duke was at last severed from his body. Those concerned in this conspiracy were punished with the utmost severity. Immediately after the bat- tle of Sedgemore, Feversham hanged up above twenty prisoners; and was proceeding in his exe- cutions, when the bishop of Bath and Wells in- formed him, tliat these unhappy men were now by law entitled to a trial, and that their execution would be deemed a real murder. Nineteen were put to dealh in the same manner at Bridge- water by colonel Kirk, a man of a savage and bloody disposition. This vile fellow, practised in the arts of slaughter at Tangiers, where he served in garrison, took pleasure in committing instances of wanton barbarity. He ravaged the whole country, without making any distinction r etween friend and foe ; and his regiment, for jheir peculiar barbarity, went under the ironical title of Kirk's lambs. It does not, however, ap- pear, that these cruelties were committed by the direction, or even with the approbation, of James ; any more than the legal slaughters that were committed by judge Jefferies, who was sent down to try the delinquents. The brutality of this man's temper was inflamed by continual in- toxication. No fewer than eighty were executed by his orders at Dorsetshire; and on the whole, at Exeter, Taunton, and Wells, 251 are computed to have fallen by the hand of justice, as it was called ; nor were women exempted from the ge- neral severity, but suffered for harboring their nearest kindred. Jefferies on his return was im- mediately created a peer, and soon after vested with the dignity of chancellor. Injustice to the king, however, it must be owned, that he com- plains, in his Memoirs, with

apparent indignation, of ‘ the strange havock made by Jefferies and Kirk in the west ;’ and that he attributed the un- popularity, which afterwards deprived him of the crown, to tlie violence and barbarity of those

pretended friends of his authority. He even ascribes their severities, in some degree, to a formed design of rendering his government odious to his subjects.

James now began in earnest to endeavour to establish popery. He told the house of com- mons that the militia were found by experience to be of no use ; that it was necessary to aug- ment the standing army ; and that he had em- ployed many Catholic officers, in whose favor he had thought proper to dispense with the test. He found them useful, he said, and he was de- termined to keep them employed. These stretches of power naturally led the lords and commons into some degree of opposition : but they soon acquiesced in the king’s measures, and the parliament was’then dissolved. James’s next step was to secure a Catholic interest in the privy council. Accardingly four Catholic lords were admitted, viz. P^wis, Arundel, Belasis, and Dover. Sunderland, who saw that the only way to gain preferment was by popery, became a con- vert. Rochester, the treasurer, was turned out of his office, because he refused to conform. In Ireland, even the duke of Orraond, who had long supported the royal cause, was displaced as being a protestant; and lord Tyrconnel, a furious Roman Catholic, succeeded him. In his zeal for popery, it is said, that James stooped so low as even to attempt the conversion of the bloody colonel Kirk ; but the daring soldier told him that he was pre-engaged ; for he had promised the king of Morocco, when he was quartered at Tangiers, that, if ever he changed his religion, he would turn Mahommedan. At last the clergy of the church of England began to take the alarm, and commenced an opposition to court measures. The pulpits thundered with their warnings against popery ; more formidable, it was urged, from the support granted it by the king. It was in vain that James attempted to impose silence on these topics ; instead of avoid- ing the controversy, the Protestant preachers pursued it with greater warmth. To effect his designs, the king determined to revive the high commission court, which had formerly given the nation so much disgust, and which had been abolished by act of parliament for ever. An ec- clesiastical commission was issued, by which seven commissioners were invested with a full and unlimited authority over the whole church of England. — The next «tep was to allow a liberty of conscience to all sectaries; he being taught to believe that the truth of the Catholic re- ligion would then, upon a fair trial, gain the vic- tory. In such a case, the same power that granted liberty of conscience might restrain it ; and the Catholic religion alone be allowed to predominate. He therefore issued a declaration of general indulgence, and asserted that non- conformity to the established religion was no longer penal. But in Scotland he ordered the parliament to

grant a toleration only to tlie Catholics, without interceding in the least for the other dissenters, who were mucii more numerous. In Ireland the Protestants were totally expelled from all offices of trust and profit, and Catholics put in their places. These measures sufficiently disgusted every part of th3

British empire ; but, to complete the work, James publicly sent the earl of Castlemain am- bassador extraordinary to Rome, in order to ex- press his obedience to the pope, and reconcile his kingdoms to the holy see. This proceeding vvas too precipitate to be relished even by the pope himself; and the only return he made to this embassy was the sending a nuncio into England. This officer made a public and solemn entry into Windsor; which did not fail •o add to the general discontent; and, because the duke of Somerset refused to attend the cere- mony, he was dismissed from his employment of one of the lords of the bed-chamber. Soon after the Jesuits were permitted to erect colleges in diiferent parts of the kingdom, and to exer- cise the Catholic worship publicly. Father Francis, a Benedictine monk, was recommended by the king to the university of Cambridge for the degree of M.A. The university rejected him on account of his religiOTi ; and presented a petition to the king, beseeching him to recall his mandate. James disregarded their petition, and denied their deputies a hearing ; the vice- chancellor himself was summoned to appear be- fore the high-commission court, and deprived of his office ; yet the university persisted, and father Francis was refused. With the university of Oxford he also now embroiled himself. The place of president of Magdalen College being vacant, the king sent a mandate in favor of one Farmer, a new convert, and a man of bad charac- ter in other respects. The fellows made very submissive applications for recalling his man- date ; but, the election day coming on before they received an answer, they chose Dr. Hough, a man of learning, integrity, and resolution. Tlie king was incensed at their presumption ; an inferior ecclesiastical court was sent down, who, finding Farmer a man of scandalous character, issued a mandate for a new election. The man now recommended by the king was Dr. Parker ; also a man of loose character, but willing to embrace the Catholic religion. The fellows re- fused to comply with this injunction ; which so irritated the king, that he went down to Oxford in person ; ordered them to be brought before him ; and reproached them with their insolence and disobedience; commanding them to choose Parker without delay. Another refusal on their part still more exasperated him ; and, finding them resolute in the defence of their privileges, he ejected all of them, except two, from their benefices, and Parker was put in possession of the college. The college, upon this, was

soon filled with Catholics ; and Charnock, one of the two that remained, was made vice-president. In 1688 a second declaration for liberty of conscience was published, almost in the same terms with the former ; but with this injunction, that all divines should read it after service in their churches. The clergy resolved to disobey this order. Lloyd bishop of St. Asaph, Kenn of Bath and Wells, Turner of Ely, Lake of (Jhichester, White of Peterborough, and Trelaw- ney of Bristol, toi;pther with Sancroft the pri- iiiate, concerted an address, in form of a petition, to the king, which, with the warmest expressions of zeal and submission, stated that they could

not read his declaration consistently with their consciences, or the respect they owed the protes- tant religion. The king received this petition With great marks of surprise and displeasure. He said he did not expect such an address from the church of England, particularly from som.e amongst them ; and persisted in his orders for their obeying his mandate. As the petition was delivered in private, the king summoned the bishops before the council, and there questioned them whether they would acknowledge it. They for some time declined giving an answer ; but, being urged, they at last owned it. On their re- fusal to give bail, an order was immediately drawn up for their commitment to the Tower, and the crown lawyers received directions to prosecute them for a seditious libel. Being con- veyed to the Tower by water, the whole city was in commotion in their favor, and the people ran to the river side in multitudes, craving their blessing; calling upon heaven to protect them, &c. The very soldiers, by whom they were guarded, kneeled down before them, and im- plored their forgiveness.

The 29th of ˆJune, 1688, was fixed for the trial of the bishops; and their return to West- minster was still more splendidly attended than their imprisonment. Twenty-nine peers, a great number of gentlemen, and an immense crowd of people, waited upon them to Westminster-hall. The dispute was learnedly managed by the law- yers on both sides. The jury withdrew into a chamber, where they passed the whole night ; but next morning they returned in court, and pronounced the bishops not guilty. Westminster- hall instantly rang with loud acclamations, which were communicated to tlie whole extent of the city. They even reached the camp at llounslow, where the king was at dinner in lord Fever- sham's tent. James demanding the cause of those rejoicings, and being informed that it was nothing but the soldiers shoutingfor the deliveiy of the bishops ; ' Call you that nothing >.' cried he, ' but so much the worse for them.' Im- mediately after this the king dismissed two of the judges, Powel and Holloway, who had ap- peared to favor the bishops ; and issued orders to prosecute all those clergymen who had not read his declaration. It was found that all had refused it except 200. He also sent a mandate to the new fellows whom he had obtruded on Magdalen College, to elect for president, in the room of Parker, lately deceased, one Gifford, a doctor of

the Sorbonne, and titular bishop of Madura. As the king found the clergy every where averse to his measures, he tried next what he could do with the army. He thought if one regiment should promise implicit obedience, their example would soon induce others to com- ply. He therefore ordered one of the regiments to be drawn up in his presence, and desired that such as were against his late declaration of liberty of conscience should lay down their arms. He was surprised to see the whole battalion ground their arms, except two officers and a few Roman Catholic soldiers. — A circumstance oc- curred about this period, in his family, which would have served, if any thing could at that time, to estublisli him on the tlirone. A few

days before the acquittal of the bishops, the queen was brought to bed of a son, who was baptized by the name of James : but so great was the animosity against him, that a story was propagated that the child was supposititious; and so great was the monarch's pride, that he scorned to take any precautions to refute the calumny. Though James's own enthusiasm bordered on madness, acme of the most wild of his religious projects seem to have been suggested by others. "The earl of Sunderland, whom he chiefly trusted, was a man of abandoned principles, and in- satiable avarice. To such a degree was he mer- cenary, that he became at once the pensioner of the prmce of Orange and of the king of France. The former, who had long fixed his eye on the English throne, watched James's motions, and took every advantage of his errors. He had laid his schemes so extensively, that nothing but the birth of a male heir to the crown of England could possibly prevent him from an almost im- mediate possession of the kingdom. He had the address to render two-thirds of the powers of Europe interested in his success. The treaty of Augsburg, formed to break the power 'of France, could not accomplish its object without the ac- cession of England. The house of Austria, in both its branches, preferred their political views to their zeal for the Romish faith, and promoted the dethronement of James as the only means to humble Louis XIV. Even the pope himself. Innocent XL, \vas gained over to the measures of the prince of Orange by other considerations, as well as through his fixed aversion to France. He explained to his holiness, that the Catholic princes were in the wrong to expect any advan- tage to their faith from James, as his being a de- clared papist rendered his people averse to all his measures. As for himself, should he have the good fortune to mount the throne of England, he might take any step in favor of the Roman Catholics without jealousy : and he promised to procure a toleration for the papists, should the pope, the emperor, and the king of Spain, favor his attempt. This negociation procured the de- sired effect. The pope contributed, with the money of the

church, it is said, to expel a Roman Catholic prince from his throne.

Though the contest with the bishops had com- pleted the king's unpopularity, the crisis of his ruin was brought on by the birth of the prince of Wales. This circumstance increased the fears of his subjects in proportion as it raised his hopes and security. In the reign of a prince to be educated under the prejudices of such a fa- ther, nothing but a continuance of the same unconstitutional measures could be expected. The prince of Orange, seeing the national dis- content now raised to the highest pitch, resolved to take advantage of it. He began by giving Dykevelt, his envoy, instructions to apply in his name to the different religious sects. To the church party he sent assurances of favor and regard ; and protested, that his education in Holland had no way prejudiced him against episcopacy. To the non-conformists he sent exhortations not to be deceived by the insidious caresses of their known enemy, but to wait for a real and sincere protector, &c. In conse-

quence of these insinuations, the prince soon received invitations from the most considerable persons m the kingdom. Admirals Herbert and Russel assured him in person of their own and the national attachment. Lord Dumblane, son to the earl of Danby, being master of a frigate, made several voyages to Holland, and carried from many of the nobility tenders of duty, and even con- siderable sums of money to the prince of Orange. Henry Sidney, brother to Algernon, and uncle to the earl of Sunderland, came over to him with assurances of a universal combination against the king. Soon after the bishop of London, the earls of Danby, Nottingham, Devonshire, Dor- set, and several other lords, gentlemen, and principal citizens, united in their addresses to him, and intreated his speedy descent. The people, though long divided between whig and tory, now joined against their unhappy sove- reign as a common enemy. William there- fore determined to accept their invitations ; and the more readily, as he perceived the malcon- tents had conducted themselves with prudence and secrecy. Having the principal servants of James in pay, he was minutely informed of the most secret actions and even designs of that prince. The prince had a fleet ready to sail, and troops provided for action, before the be- ginning of June, 1688. Louis XIV. was the first who gave James any warning of his danger, and offered to assist him in repellmg it. But he declined this friendly offer, lest it should be said that he had entered into a private treaty with that monarch, to the prejudice of the protestant reli- gion. Being also deceived and betrayed by Sunderland, he had the weakness to believe, that the reports of an invasion were invented to frighten him into a strict connexion with France. He gaViC credit to the repeated assurances of the States, that the armament prepared in their ports was not designed against England. Nay, he even Ijeliev.ed the assertion of the prince himself, whose interest it was to deceive. Sunderland

descanted against the possibility of an invasion, and turned to ridicule all who believed the re- port. Having by the prior consent of James taken possession of all the foreign correspon- dence, "he suppressed every species of intelli- gence that might alarm him. Louis, finding his first offers rejected, next proposed to march down his army to the frontiers of the Dutch provinces, and thus detain their forces at home for their own defence : this proposal, however, met with no better reception than the former. Louis still unwilling to abandoii a friend and an ally, whose interest he regarded as closely con nected with his own, ventured to remonstrate with the Dutch against the preparations they were making to invade England. But the re- public treated this remonstrance as an officious in- terference, and James himself declined his media- tion. The king of England having thus rejected the assistance of his friends, and being left to face the danger alone, was astonished by advice from his minister in Holland, that an invasion was not only projected but avowed. When he first read the letter containing this information, he grew pale, and it dropped from his hand. He saw himself on the brink of destruction, and knew

not to whom to apply for protection. In thi= emergency Louis- wrote, that, to divert the Dutch from the mtended invasion of England, lie \vould lay siege to Maestritcht With a French army of 30,000 men. James communicated this intelli- gence to Sunderland, and he to the prince of Orange. 6000 men were thrown into Alaestricht ; and the design of Louis, as being impracticable, wa« laid aside. On this the latter, disgusted with James, turned his arms towards (Jermauy. James had now no resource but in attempting to retreat from his late precipitate measures. He paid court to the Dutch, and ofl'ered to enter into any alliance with them for their common security. He replaced in all the counties of England the deputy lieutenants and justices, who had been deprived of tlieir commissions. He restored the charters of such corporations as he had withdrawn ; annulled the high commis- sion court; reinstated the expelled president and fellows of Magdalen College ; and was even reduced to caress those bishops, whom he had so lately persecuted and insulted. All these concessions, however, were now too late ; they were regarded as the effects of fear and not of repentance. Indeed, it is said, he very soon gave proofs of his insincerity : for, hearing that the Dutch tleet was dispersed, he recalled those he had made in favor of Magdalen Ccjlege ; and, to show liis attachment to the Romish church, he appointed the pope one of the sponsors at the baptism of the prince of Wales. In the mean time, William set sail from Ilelvoetsluys with a fleet of nearly 500 vessels, and an army of above 14,000 men. Fortune, however, seemed at first unfavorable to his enterprise. He was

driven back by a dreadful storm ; but soon refitted his fleet, and passed over again to England. It was given out that this invasion was designed for the coasts of France ; and many of the English, who saw tne fleet pass along their shores, little suspected the place of its destination. The same wind which brought out the Dutch, detained the English fleet in their harbours, so that the Dutch passed the straits of Dover without molestation ; and, after a voyage of two days, landed at Broxholme in Torbay, on the 5th of November, the anniver- sary of the gun-powder treason. But, though the invitation from the English was very general, the prince for some time had the mortification to find liimself joined by few. For ten days he continued in vain exjiectation of being joined by the malcontents ; but at last, when deliberat- ing about reimbaiking his forces, he was joined by several persons of consequence; and the whole country soon after flocked to his standard. Among the first who joined the prince was ma- jor iJurrington, and the gentry of the counties of Devon and Somerset. Sir Edwatd Seymour made proposals for an association, which was si'jncd by great numbers ; and every day pro- duced instances of that universal combination into which the nation had entered auainst the measures to the king. This was followed by the defection of the army. Lord Colchester, son to the earl of Rivers, first deserted to the piince. Lord Cornbuiy, son of the earl of Clarendon, carried ofi' the greatest part of three legiments of cavalry at once ; and several ofiicers

of distinction informed Feversham, their general, that they could not in honor fight against the prince of Orange. Soon after this, the unhappy monarch found himself deserted by his own im- mediate servants and dependents. Lord Clmrchill had been raised from tlie rank of a page, and had been invested with a high command in the army ; he had been created a peer, and owed his whole fortune to the king's bounty : yet even he de- serted among the rest; and carried with him the duke of Grafton, natural son to the late king, colonel Berkley, and some others. In this universal defection, James, not knowing where to turn, began to think, when it was too late, of requesting assistance from France. He wrote to Leopold emperor of Germany, but in vain ; that monarch only returning for answer, tha4. what he had fore- seen had happened. James had some dependence on his fleet, but they were entirely disaff"ected In a word, his interests were deserted by all, for he had long deserted them himself. He still found his army, however, to Amount to 20,000 men ; and, had he led them immediately to battle, it is possible they might then have fought in his favor ; but James's misfortunes had de- prived him of his natural firmness and resolution. In the extremity of his distress, the prince of Denmark, and Anne his favorite daughter, per- ceiving the desperation of his circumstances, cruelly resolved to take part with the prince of Orange. When the king was informed of this, he was stung with the most bitter

anguish. ‘ God help me,’ cried he, ‘ my own children have forsaken me.’ To add to his distress as a parent, he was accused of being accessary to the death of his own child. Her nurse, and her uncle the earl of Clarendon, affirmed that the papists had murdered the princess; and publicly asked the queen’s servants whither they had conveyed her. It was, however, soon known that she had fled, under the conduct of the bishop of London, to Northampton. On the 30th James sent three noblemen to treat with the prince of Orange. But though the latter knew very well that the king’s commissioners were in his interest, his behaviour showed plainly, that he now thought the time of treating was past. For some time he would not admit them to an audience; and, when he did, would give no satisfactory answer. James now began to be alarmed for his personal safety, and resolved to send the queen and her infant son abroad. On a stormy and rainy day they crossed the river in a boat; and were taken to Gravesend in a coach, under the conduct of the count de Lauzun. A yacht, commanded by captain Gray, which lay there ready for the pur- pose, soon transported them in safety to Calais. The king was now so dispirited and distracted, that he soon resolved to follow them. He threw the great seal into the Thames ; left none witVi any authority to conduct affairs in his absence ; vainly hoping to derive advantage to his af- fairs from anarchy. On the 10th of December, about twelve o’clock at night, he disguised him- self, took a boat at N\ hitehall, and crossed the river. Sir Edward Hales, with anotlier friend, met him at'auxhall with horses. He mounted, and, being conducted throuuih by-ways by a guide, passed in the night-time to the Medway, which he

crossed by Ailesford bridge. At VVoolpeck he look fresh horses, sent thither before by Sheldon, one of his equerries, who was in the secret of his flight, and arrived at 10 o’clock at Emby I’erry near Feversham, where a custom-house hoy, hired by Sir Edward, lay ready to receive them. But the wind blew fresh, and the vessel had no ballast. The master, therefore, easily persuaded the king to permit him to wait for ballast. It being half ebb when they ran on shore, they designed to sail as soon as the vessel should be afloat. But she was now boarded by three fisher boats belonging to Feversham, containing fifty men. They seized the king and his two companions, under pretence of their being papists, that wanted to escape from the kingdom, and returned up Feversham water with the tide : but still the king remained unknown. Sir Edward Hales placed privately fifty guineas in the hands of the captain, as an earnest of more, should he permit them to escape. He promised; but was so far from keeping his word, that he took what money they had, under pre- tence of securing it from the

seamen, and then left them to their fate. The unfortunate fugitives were at length taken in a coach to Feversham, amidst the insults, clamors, and shouts of the sailors. When the king was brought to the inn, a seaman who had served under him knew him, and melted into tears. The other fishermen who had treated him with indignity also now relent- ed ; and, as he gradually became known, the in- habitants of the whole village gathered round him, whilst those of higher rank fled from his presence. On the flight of the king, the confusion he had anticipated ensued in London, and the prince of Orange exercised in his own person all the functions of royalty. He issued a declaration to the disbanded army to re-assemble themselves. He ordered the secretary at war to bring him a list of the king's troops, and commanded lord Churchill to collect the horse guards. The duke of Grafton he sent to take possession, in his name, of Tilbury Fort. The assembly of peers adjourned to the council chamber at Whitehall ; and, to give the appearance of legality to their meeting, chose the marquis of Halifax for their president. While this assembly was sitting, on the 13th December, a poor countryman, who had been engaged by James, brought an open letter from that unfortunate prince to London. It had no superscription, and it was addressed to no one. It described, in one sentence only, his deplorable condition in the hands of a desperate rabble. This messenger of their fallen sovereign had long waited at the council door, without being able to attract the notice of any who passed. The earl of Mulgrave at length, apprised of his business, had the courage to introduce him to the council. He delivered his open letter, and told the situation of the king with tears. The assembly were so much moved, that they sent the earl of Feversham with 200 of the guards to protect him. His instructions were to rescue him from danger, and afterwards to attend him to the sea coast, should he choose to retire abroad. He decided, however, to return to London; when the prince of Orange sent a messenger to

him, desiring him to advance no nearer th<» capital than Rochester. The message missed James by the way, and the king sent Feversham with a letter to the prince, requesting his presence in London to settle the nation. He himself pro- ceeded to that place, and arrived on the 16th of December. Doubting the fidelity of the troops who were quartered at Westminster, he chose to pass through the city to Whitehall. Never prince returning with victory to his capital was received with louder acclamations. The streets were covered with bonfires. The bells were rung, and the air was rent with repeated shouts of gladness. All orders of men crowded to his coach ; and, when he arrived at Whitehall, his apartments were crowded with people who came to express their joy at his return. Tha prince of Orange received the news of that event with a haughty air. His aim from the beginning was to induce him to relinquish the throne. The Dutch guards were ordered to take possession of Whitehall, and to displace the English ; and the king was

soon after desired, by a message which he received in bed at midnight, to leave his palace next morning, and depart for Ham, a seat of the duchess of Lauderdale's. He desired, however, permission to retire to Rochester, a town neai the sea coast, and opposite to France. This was readily granted, it being now perceived that the harsh measures of the prince had taken effect, and that the king meditated an escape to France. King James, surrounded by the Dutch guards, arrived at Rochester on the 19th of December. This restraint put upon his person, and the manner in which he had been forced from Lon- don, raised the indignation of some, and the compassion of many. The English army, both officers and soldiers, began to murmur ; and, had it not been for the timidity of James himself, the nation would, perhaps, have returned to their allegiance. He remained three nights at Roches- ter in the midst of a few faithful friends. The earls of Arran, Dumbarton, Ailesbury, Litchfield; and Middleton were there ; with the gallant lord Dundee, and other, officexs of merit. They argued against his flight with united eff"orts. Several bishops, some peers, and many officers, entreated his stay in some part of England. Message followed message from London. They represented that the opinions of men began tc change, and that events would daily arise in favor of his authority. Dundee added his native ardoi to his advice. ♦ The question, Sir,' said he, ' is. Whether you shall stay in England or fly tc France? Whether you shall trust the returning zeal of your native subjects, or rely on a foreign power? Here you ought to stand. Keep pos- session of a part, and the whole will submit by degrees. Resume the spirit of a king. Summon your subjects to their allegiance. Your army, though disbanded, is not dispersed. Give me your commission, and I will carry your standard through England, and drive before you the Dutch and their prince.' The king replied 'that he believed it might be done : but that it would raise a civil war, and he would not do so much mischief to a nation, that would so soon come to their senses again.' INIiddleton urged

*his s*ay, though in the remotest part of the king- dom. * Your majesty,' said he, ‘ may throw tilings into confusion by your departure ; but it will be but the anarchy of a month : a new government will soon be settled, and you and your family will be ruined.’ These spirited re- monstrances had no etlect upon James. He resolved to quit the kingdom ; and, having com- municated his design to a few of his friends, he passed, at midnight, through the back door of the house where he lodged, and with his son the duke of Berwick, and Biddulph one of his servants, went in a boat to a smack which lay waiting for him without the fort of Sheerness. A hard gale compelled them to bear up toward Leigh, and to anchor on the Essex side*

of the coast, under the lee of the land. When the gale slackened, they passed through seven ships at anchor in the Downs; but, unable to fetch Calais, she bore away for Boulogne, and anchored before Ambleteuse. The king landed at three o'clock in the morning of Tuesday, December 25th; and, taking post, soon joined his queen at St. Ger- mains.

*James having thus abandoned his dominions, the prince of Orange, by the advice of the house of lords, the only remaining branch of the legislature, was desired to summon a parliament ; but, unwil- ling to act upon so imperfect an authority, he con- vened all the members who had sat in the house of commons during any parliament of Charles II. To these were added the mayor, aldermen, and fifty of the common council of London. The prince, thus supported, wrote circular letters to the counties and corporations of England to call a new parliament. The house being met, which was mostly composed of the Whig party, thanks were given to the prince of Orange for the deliverance he had brought them ; after which they proceeded to settle the kingdom. A vote soon passed both houses, that king James II , having endeavoured to subvert the constitution of the kingdom, by breaking the original contract between the king and his people, and having, by the advice of Jesuits, and other wicked per- sons, violated the fundamental laws, and with- drawn himself out of the kingdom, had abdicated the government, and that the throne was thereby vacant. The king being thus deposed, William, after some discussion, was appointed his suc- cessor. Proposals were made for electing a regent. Others were for investing the princess of Orange with regal power, and declaring the young prince supposititious. To each of these propositions William, however, opposed a de- cided negative. * He had been called over,' he said, • to defend the liberties of the British nation, and had happily effected his purpose; he had heard of several schemes proposed for the establishment of their government : and, if they chose a regent, he thoutjht it incumbent upon him to inform them, that he would not be that regent; also that he would not accept of the crown under the princess his wife, though he was convinced of her merits; that therefore, if either of these schemes was adopted, he could give them no assistance m the settlement of the na- tion ; but would return home to his own country, satisfied with his aims to secure the freedom of Vol. X.*

theirs.' Upon this, after a long debate of both houses, a new sovereign was preferred to a regent, by a majority of two voices. It was agreed, that the prince and princess of Orange should reign jointly as king and queen of England ; while the administration of government should be placed in the hands of the prince only. The marquis of Halifax, as speaker of the house of lords, made a solemn tender of the crown to their highnesses, in the name of the peers and commons of England. The prince accepted the ofler ; and that very day, February 13lh, 1689, William and JVIary were

proclaimed king and queen of England.

4. The histort) of Great Britain from the Revolution to the accession of the house of Brunsivick. — Though Mary had a share of the royal title, and her name and effigy were impressed on the coin, she never possessed either the autho- rity of a queen, or the influence of a wife. Her easy temper had long been subdued by the stern severity of a husband who had very few amiable qualities. Being brought up almost under his tuition, and confined in every thing to his orders, she was accustomed to adopt implicitly his political maxims and even his thoughts : she therefore soon ceased to be an object of conse- quence in the eyes of the nation. William III. began his reign with issuing a proclamation for continuing all Protestants that had been in place on the first of the preceding December. On the 17th he formed his privy council, and, to gratify as many as possible of his friends, the several public boards, and even the chancery, were put into commission. The earl of Nottingham who had violently opposed the elevation of William, and the earl of Shrewsbury, who had adhered to his views, were made secretaries of state. The marquis of Halifax, and the earl of Danby, though rivals in policy, were admitted into the cabinet ; the first as lord privy seal, the second as president of the council. His Dutch friends, in the mean time, were not forgotten by the king. Bentinck, his favorite, was made a privy counsel- lor, groom of the stole, and privy purse. Auver- querque was appointed master of the horse ; Zuylstein received the office of master of the robes ; and Schomberg was placed at the head of the ordnance. Though these instances of gratitude were, no doubt, necessary to William, the nation was displeased at them. The king, who had been bred a Calvinist, was also very strongly inclined to favor that sect. Finding, therefore, the clergy of the church of England little inclined to take the oaths to the new government, he began openly to indulge his pre- judices in favor of the dissenters. Having come to the house of lords, to pass some bills, on the 16th March, he made a speech, urging the neces- sity of admitting all Protestants indiscriminately into the public service. He informed them, that he was employed in filling up the vacancies in offices of trust ; and he hoped that they were sen- sible of the necessity of a law, to settle the oaths to be taken by such persons as should be ad- mitted into place. As he doubted not, he said, that they would sufficiently provide against Papists, so he hoped that they would leave room for Uie admission of all Protestants that were able

andwillingto serve. This equitable proposal was rejected with vehemence. Tlie adherents of tiie church complained tliat the ruin which they feared from the Papists, in the preceding reign, was now to be dreaded from the Protestant dissenters. They affirmed that, if the established religion was to be destroyed, it mattered little by whose hands it must fall. A bill, brought in by the ministry for abrogating the former oaths of supremacy and allegiance, was therefore rejected. An attempt to dispense with the sacramental test was also made without success. The court party proposed that any man should be sufficiently qualified for any office, by producing a certificate of his having received the sacrament in any Protestant con- gregation. But this proposition was rejected in the hou.se of lords by a great majority. William repeated his attempts of a comprehension ; but he was ultimately unsuccessful, and, in the coro- nation oath, the church party inserted a clause binding the king to maintain the Protestant religion ' as established by law.' To this clause William is said to have discovered an apparent unwillingness to swear, and his government was, for some time, but in a very tottering condition. Either through want of health, or inclination, the king interfered but little in the affairs of the nation. Ireland was strangely neglected. Halifax and Danby, who had, in a manner, raised the king to the throne, caballed with his enemies. They perceived that the people were beginning to be discontented; and that every thing seemed to indicate another change. Halifax himself declared, that, were James to conform, he could not be kept four months from re-ascending his throne. From these apparent discontents of the nation, the friends and emissaries of James as- sumed more boldness. They tampered with the servants of the crown, and inflamed the army. The former they alarmed with the prospect of a sudden change; the latter they roused into indig- nation by the manifest preference given by Wil- liam to his countrymen the Dutch.

Though the kingdom of Scotland did not at first recognise the authority of William, yet the party of James never attained sufficient strength to be of any effectual service to him in that kingdom. Thirty Scotch peers, and nearly eighty gentlemen, then in London, had waited, in the beginning of January, on the prince of Orange. Without any authority from the regency still subsisting in Edinburgh, they formed themselves into a kind of convention, and the prince of Orange, in a formal manner, asked their advice. He with- drew, and they adjourned to the council chamber at Whitehall. The duke of Hamilton, being chosen president, explained the distracted state of Scotland. He represented that disorders, anarchy, and confusion, prevailed ; and he urged the necessity of placing power somewhere, till a convention of the states should be called to form a lasting and solid settlement. When the heads of their address to the prince of Orange were settled, and ordered to be ingrossed, the earl of Arran unexpectedly arose, and proposed to invite back the king. The meeting,

however, adhered to- the prince of Orange ; and waited on him in a body, requesting him to take the administration into his hards. He thanked tliem for the trust

they had reposed in him, and a convention was ordered to meet at Edinburgh on the 14th of March : in which it was provided that no exceptiion or limitation whatever should be made as to religion, except that the members should be Protestants. A secession, however, was made from this convention, in favor of James. The archbishop of Glasgow, the earl of Balcarras, and the viscount Dundee, were authorised by an instrument signed by tlie late king, at that time in Ireland, to call a convention of the states at Stir- ling. But this measure was defeated, first by the wavering disposition of the marquis of Athol, and afterwards by the delay and folly of the rest of the party. At last Dundee, being alarmed by information of a design formed by the conve- nanters to assassinate him, left Edinburgh at the head of fifty horse. When he passed under the walls of the castle, the duke of Gordon, who held that place, and favored the cause of James, called him to a conference. He scrambled up the precipice, and informed the duke of his de- signs in favor of the late king. He conjured him to hold out the castle, under a certainty of being relieved. The novelty of the sight col- lected multitudes of spectators. The convention was alarmed. The president ordered the doors to be locked, and the keys to be laid upon the table. The drums were beat to alarm the town. A number of ill armed retainers were gathered together in the street by the earl of Leven. Dundee, in the mean time, rode ofl' with his party ; but, when they found themselves secure, the duke of Hamilton adjourned the convention ; which relieved the adherents of James from apprehen- sions for their own safety. Fifty members retired from Edinburgh; and that circumstance procured a unanimity in all the succeeding resolutions of the convention. Soon after this it was deter- mined, in a committee, that James had ' fore- faulted' his right to the throne, which was thereby become vacant. This resolution was approved by the convention, and another was drawn up for raising William and Mary to the vacant throne ; in consequence of which they were proclaimed at Edinburgh on the 11th of April,

1689.

The castle of Edinburgh was still retained for king James, by the duke of Gordon ; but de- spairing of any relief, and pressed by a siege, he surrendered it on the 13lh of June; and the adherents of James, greatly disconcerted at this misfortune, now turned their eyes to the vis- count Dundee. That nobleman, having been in vain urged by the convention to return, they had declared a fugitive, an out-law, and a rebel ; and general Mackay had been sent to Scotland by William, with four regiments of foot, and one of dragoons, to support his interests. Dun- dee, being apprised of

his design to surprise him, retired to the Grampian INIountains with a few horse : thence he marched to Gordon Castle, where he was joined by the earl of Dunfermline with fifty gentlemen. He then passed through the county of Murray to Inverness. He now (8th May) wrote letters, from Badenoch, to the chiefs of all the clans, appointing them to meet at a general rendezvous in Lochaber, on the 18th the same month. In the mean time, passing

suddenly through Athol, he surprised the town of Perth, and, in hopes of gaining to his party the two troops of Scotch dragoons who lay at Dundee, he marched suddenly to that place : but the fidelity of captain Balfour, who com manded them, disappointed his views. Having raised the land-tax as he passed, Dundee returned through Athol and Rannoch to hold the diet of rendezvous at Lochaber. Here he was reinforced by several Highland chieftains, so that his army amounted to 1500 men. With this force he pursued Mackay for four days. Soon after, however, Dundee found himself surrounded with many difficulties. The officers of the Scotch dragoons, who held a secret correspondence with him, wrote him false intelligence, as an excuse for their own fears ; and the natives of the low country, who served in his army, quitted him without leave. At last, he himself fell sick, while INIackay hovered on his rear. A slight skirmish happened, in which the Highlanders prevailed ; but they lost their baggage during the action. Dundee at length arrived at Ruth- ven ; but INIackay, being reinforced with a body of 1200 men, advanced against him, and other regiments had arrived at Perth and Dumblain. The Highlanders now deserted every night by hundreds ; their gallant leader himself was forced to retire to Lochaber, where only 200 of his whole force remained with him; and, to com- plete his misfortunes, he received at the same time news of the surrender of the castle of Edin- burgh.

On the 23rd of June letters arrived from king James, with a promise of immediate succours from Ireland ; upon which Dundee ordered the neighbouring clans to assemble round his stan- dard. But still he had scarcely any thing but the mere bodies of his men with which he could pro- secute the war. The Highlanders were armed only with their own weapons, and he had not more than forty pounds of powder in his whole army. All difficulties,however, were surmounted by the active spirit of the general, for whom the army entertained an enthusiastic zeal. On the 17th July he met the king's forces under general Alackay, near the pass of Killicranky. An en- gagement ensued, in which the Highlanders were victorious : 2000 of Mackay 's men were lost either in the field or in the pursuit ; but the

victory cost the Highlanders dear, for their brave general was mortally wounded. He survived the battle however, and wrote an account of the victory to kingJames : he even imagined his wound was not mortal ; but he died the next morning at Blair. With him ended all the hopes of James in Scotland. Colonel Cannon, who succeeded Dundee in the command, possessed neither his popularity nor his abilities. After some insig- Tiiticant actions, in which the valor of the soldiers «vas more conspicuous than the conduct of their /eader, the Highlanders deserted in distrust; and the war soon after ended favorably for William, without any repulse given to his enemies.

Duiing the troubles, which had terminated in placing William on the throne of England, the two parties in Ireland were kept in a kind of tranquillity by their mutual fears. The Protes- tants were terrified at the prospect of another

massacre ; and the Papists expected every day to be invaded by the joint forces of the English and Dutch. Their terrors, however, were ill founded ; for though Tyrconnel sent several messages to the prince, that he was ready to de- liver up the kingdom to any force that might make a surrender decent, his offers were always rejected. William was persuaded by the mar- quis of Halifax, that, should Ireland yield, no pretence could remain for keeping an army in pay; that then, having no force to compel alle- giance, he might as easily be turned out as he had been brought into the country; that the English nation could never remain long in a state of good humor; and tliat he might perceive they already began to be discontented. These insi- dious arguments induced William to neglect Ire- land until Tyrconnel affected to adhere to James. The whole military force of the kingdom at that time amounted only to 4000 men, and of these only 600 were in Dublin. But an half-armed rabble, rather than an army, was now suddenly raised in various parts of the kingdom. Having no pay from the king, they regarded no disci- pline, and subsisted by depredation. The Pro- testants in the north armed themselves in their own defence; and the city of Londonderry, rely- ing on its situation, and a slight wall, shut its gates against the newly raised army. Protestant parties in the mean time rose every where, de- claring their resolution to unite in self-defence, to preserve the Protestant religion, to continue their dependence on England, and to promote the meeting of a free parliament. To])reserve appearances, William sent general Hamilton, an Irishman and a Roman Catholic, to treat with Tyrconnel ; but, instead of persuading tliat lord to yield to William, this messenger advised him to adhere to James. In the mean time James himself assured the lord deputy that he was ready to sail from Brest with a powerful arma- ment ; and Hamilton, assuming spirit from the hopes of this aid, marched against the northern insurgents. They were routed with consider- able slaughter at Drumore ; and Hilsborough, where

they had fixed their head quarters, was taken without resistance : the city of London- derry, however, resolved to hold out to the last extremity. On the 7th of .“March, 1689, James embarked at Brest. The expedition consisted of fourteen ships of war, six frigates, and three fire-ships : 1200 of his native subjects in tlie pay of France, and 100 French officers. He landed at Kinsale without opposition on the I2th of the montli, and was received with the utmost demonstrations of joy. His first care was to secure, in the fort of Kinsale, the money, arms, and ammunition, which he brought from France ; and put the town in some posture of defence : he then advanced to Cork. Tyrconnel arrived at this place soon after, and brought intelligence of the route at Drumore. The king was so much pleased with his attachment and services, that he created him a duke ; after which he himself advanced towards Dublin. The condition of the multitude, who poured round him under the name of an army, was not calculated however to raise his hopes of success. Most of them were only provided with clubs; some had sticks tipt

■*with iron ; and, even of those who were best armed, scarcely two in 100 had muskets fit for service. Their very numbers distressed their sovereign, and ruined the country. James, in fact, resolved to disband the greatest part of ihem. He reserved only fourteen regiments of horse and dragoons, and thirty-five regiments of foot; the rest he ordered to their respective homes. Being received at Dublin, witli an ap- pearance of universal joy, James proceeded immediately to business. He ordered, by pro- clamation, all Protestants who had abandoned the kingdom to return ; and, in a second pro- clamation, commanded all Papists, except those in his army, to lay up their arms, and put an end to the robberies and depredations which they had committed. He raised the value of the currency by a proclamation ; and sum- moned a parliament to meet on the 7th of May. The Protestant clergy represented their grievances in an address; and the university of Dublin appeared with complaints and congratulations. He assured the first of his absolute protection, and a full redress ; and he promised the latter not only to defend, but even to enlarge their privileges. On the 8lh of April James left Dublin, resolved to lead his army against the insurgents in person. They returned before him, and the king laid siege to Londonderry. The besieged made such a vigorous resistance as has made the place ever since remarkable (see Londonderry) ; but, beiag reduced to the last extremity, they would have been obliged to sur- render, had they not been relieved, on the 28th of July, by seven ships laden with provisions : on*

which the siege was immediately raised.

The distressed situation of James, and his absolute dependence upon France, now drove him into the wildest measures. He resolved to coin pieces of copper, which should be received for silver, and the people received this fictitious coin in hopes of being repaid in a more favor- able state of affairs. A tax of £20,000 a month was granted for thirteen months by the parlia- ment; and in the mean time the king endea- voured to support the former revenue. He opened a trade with France to supply the want of commerce with England. But the French, knowing their own importance, and the necessity of the unfortunate monarch's affairs, claimed and obtained advantages in traffic which oflTended his subjects. To add to the distress of James, Ireland was now invaded by 10,000 men under the command of the duke of Schomberg. They appeared on the 12th of August, 1689, in ninety trpnsports, on the coast of Donaghadee. Next day Schomberg landed without opposition his army, horses, and train of artillery. Having marched to Belfiist, on the 15th, he continued in that place four days to refresh his troops. He then invested Carrickfergus, and threw into it 1000 bombs, which laid the houses in ashes. The garrison, having spent their powder to the last barrel, marched out with all the honors of war. But Schomberg's soldiers broke the capi- tulation. They disarmed and stripped the inha- bitants, without regard to sex or quality ; even women, stark naked, were publicly whipped between die lines ; and all this under pretence

of cruelties of the same kind having been com- mitted by the Papists. Though Schomberg was an experienced general, who had passed a life of eighty years almost continually in the field, he found himself at a loss how to carry on the war in Ireland. He did not consider the dangers that threatened the health of his troops by con fining them too long in one place ; and he kep them in a low moist camp near Dundalk, almost without firing of any kind ; so that the men fell into fevers and fluxes, and died in great num- bers. The enemy were not less afflicted with similar disorders. Both camps remained foi some time in sight of each other ; and at last^ the rainy season approaching, both armies quitted their camps at the same time, and retired into winter quarters. The bad success of the campaign, and the miserable state of the Protes- tants in Ireland, at length induced William tc attempt their relief in person. Accordingly he left London on the 4th of June 1690, and arrived at Carrickfergus on the 14th of that month. Thence he passed to Lisburn, the head quarters of the duke of Schomberg, and reviewed his army at Lough-Britland, consisting of 36,000 men, English, Dutch, German, Danes, and French. Being supplied with every necessary, and in high health and spirits, they seemed abso- lutely certain of victory. The Irish army, having abandoned Ardee at their approach, fell back to the south of the Boyne. On the bank of that river they were joined*

by James, who had marched from Dulilin at the head of his French auxiliaries. The banks of the Boyne were steep ; the south side hilly, and fortified with ditches. The river itself was deep, and it rose very high with the tide. These advantages induced Jame? contrary to the opinion of his officers, to keep possession of this post. His army was inferior to his opponent's in numbers, and discipline, but flight, he thought, would dispirit his troops, and tarnish his own reputation; he therefore re- solved to put the fate of Ireland to the issue; and the celebrated battle of the Boyne (see that article) was fought on the 30th of June. While his troops were yet fighting, he quitted his station ; and, leaving orders to guard the pass at Duleek, made the best of his way to Dublin. He advised the magistrates of that city to make the best terms they could with the victors ; and he him- self set out for Waterford, where he immediately embarked for France. \Mien he first deserted his troops at the Boyne, O'Regan, an old Irish captain, was heard to say, ' That, if the English would exchange generals, the conquered army would fight them over again.' The victory at the Boyne was by no means decisive, however, and the friends of James resolved to continue their opposition to William. Sarsfield, a popular and experienced general, put himself at the head of the army that had been routed at the Boyne, and went farther into the country to defend the banks of the Shannon. James appointed at this time a French ofScer, M. St. Ruth, to a superior command over Sarsfield, which gave the Irish universal discontent. On the other hand, gene- ral Ginkle, who had been appointed to command the English army in the absence of William, advanced towards the Shannon to meet the

*enemy. The only place where it was fordable was at Athlone, a strong walled town built on bo*h sides of the river, and in the hands of Jarres's friends. The English soon made them- selves masters of one side of the river : but the opposite bank, being vigorously defended, was long t'iought impregnable. At length it was resolved in a council of war, that a body of troops should ford the stream in the face of the enemy : who were driven from their works. St. Ru»h .marched his army to their relief, but he came too late; and his own guns were turned agamst tiim : upon v.'hich he instantly marched to Aug'inm, at ten miles distance, where he de- termined to wait the English army. Ginkle did not decline the combat, though he had only 18,000 men, while the Irish were above 25,000 strong. A desperate engagement ensued ; but at last, St. Ruth being killed, his troops gave way on all sides, and retreated to Limerick, where they made a brave and final stand, after having lost nearly 3000 of their best men.*

The siege of Limerick commenced August 25th, 1691 ; and six weeks were spent before the place without any decisive effect. The garrison was well supplied with provisions, and provided with all the means of defence. The winter ap- proaching:, Ginkle had orders to finish the war upon any terms: he therefore offered such con- ditions, as the Irish, had they been victors, could scarcely have refused with prudence. He agreed, that all in arms should receive their pardon : that their estates should be restored, their attain- ders annulled, and their outlawries reversed : th'at none sliould be liable for debts incurred through deeds done in the course of hostilities : that all Roman Catholics should enjoy the same toleration with regard to their religion, as in the reign of Charles II.; that no oaths but that of allegiance should be required of high or low: and that should the troops, or any number of them, choose to retire into any for, ign service, they should be conveyed to the continent at the expense of king William. The lords justices had arrived from Dublin on the 1st of October. They si<:rned the articles together with Ginkle; and thus the Ir.sh Papists put a happy period to a war which threatened their party with absolute ruin. In consequence of this, about 14,000 of thos ' who had fought for king James went over to France, having transports provided by govern- ment for conveying them thither. When they arrived, James thanked them for their loyalty, and told them tliat they should still fight for their old master; and that he had obtained an order from the king of France for their being new clothed, and put into quai'ers of refreshment. In this manner all James's expectations from Ireland were entirely frustrated, and the kingdom submitted quietly to the English government.

In the beginning of 1G02 an action of unex- ampled barbarity disgraced the government of William in Scotland. In consequence of a pacification with the Highlanders, in the pre- ceding August, a proclamation of indemnity had been issued to such insurgents as should take the oaths to the king and queen, on or before the \azt day of December. The chiefs of the few tribes who had been in arms for James com-

plied soon after with the pioclamation : but INIacdonald of Glenco failed in submitting within the limited time ; more, however, from accident than design. In the end of December he came to colonel Hill, who commanded the garrison in Fort William, to take the oaths of allegiance to the government. Hill having furnished Mac- donald with a letter to Sir Colin Campbell, sheriff of the county of Argyle, directed him to repair immediately to Inverary, to make his sub- mission in a legal manner. The way to Inverary lay through almost impassable mountains : the season was extremely rigorous, and the whole country covered with a deep snow. So eager, however, was Macdonald to take the oaths, before the limited time should expire, tiiat, though the road lay within half a mile of his own house, he would not stop to visit his family. After various obstructions he

arrived at Inverary. The time was elapsed, and the sheriff hesitated to receive his submission ; until Macdonald prevailed upon him by his importunities, and even tears. But Sir John Dalrymple, after%vards earl of Stair, king William's secretary of State for Scotland, meanly took advantage of Macdonald 's neglect- ing to take the oaths within the time prescribed ; and procured from the king a warrant of military execution against him and his whole tribe. As a mark of his own eagerness, or to save Dal- rymple, William signed the warrant, both above and below, with his own hand. The secretaiy, in letters expressive of a brutal ferocity of mind, urged the officers who commanded in the High- lands to execute their orders with the utmost rigor. Campbell of Glenlyon, a captain in Argyle's regiment, and two subalterns, were or- dered with 120 men to repair to Glenco on the 1st of February. Campbell, being uncle to young Macdonald's wife, was received by the father with great friendship and hospitality. The men were treated in the houses of his tenants with free quarters and kind entertainment. Till the 13th of the month, the troops lived in good humor and familiarity with the people. The officers on the very night of t!ie massacre passed the evening, and played at cards in ˆMacdonald's house. In tlie night, however, lieutenant Lind- say, with a party of soldiers, called in a friendly manner at the door. He was instantly admitted : when IMacdonald, as he was rising, was shot dead through his back. His wife had already put on her clothes ; but was stripped naked by the soldiers, who tore the rings off her fingers with their teeth. The slaughter was now general. To prevent the pity of the soldiers to their hosts, their quarters had been changed the night before. Neither aˆe nor infirmity was spared. Some women, in defending their ciiildren,were killed; boys, imploring mercy, were shot by officers, on whose knees they hung. In one place nine per- sons, as they sat enjoyin;; themselves at table, were shot dead by the soldiers. At Inveriggen, in Campbell's own quarters, nine mc n were first bound by the soldiers, and then shot at intervals, one by one. Nearly forty persons were massacred by the troops. Several v, ho fled to the moun- tains perished by famine and the inclemency oi the season : those who escaped owed their lives to a tempestuous night. Lieutenant colonel

Hamilton, who had the charge of the execution from Dalrymple, was on his march with 400 men, to guard all the passes from the valley of Glenco; but was obliged to stop by tlie severity of the weather, wliich proved the safety of the rest of the tribe. He entered the valley next day ; laid the houses in ashes ; and carried away all the cattle and spoil, which were divided among the officers and soldiers.

It has been supposed, that it was partly to efface the remembrance of this massacre, and the superficial enquiry which afterwards took place respecting it, above-mentioned, that the king caused his commissioner to declare in the Scots parliament, ‘ That if the members found it would tend to the advancement of trade, that an act should be passed for the encouragement of such as sliould acquire and establish a plan- tation in Africa, America, or any other part of the world where plantations might be lawfully acquired, his majesty was willing to declare he would grant to the subjects of this kingdom, in favor of these plantations, such rights and privileges as he granted, in like cases, to the sub- jects of his other dominions.’ Relying on this, and other flattering promises, the nobility and gentry of Scotland advanced £400,000 towards the establishment of a company for carrying on an East and West India trade; and 1200 vete- rans, who had served in king William’s wars, were sent to effect a settlement on the peninsula of Darien. See that article. But the new settlers were soon abandoned to their fate, though many of them had been covered with wounds in fighting his battles. The disappointment of the people, upon receiving authentic accounts of the ruin of their colony, was great and uni- versal. The whole nation seemed to join in the clamor that was raised against theii new sove- reign.

The reduction of Ireland, and the dispersion of the Highland chieftains who favored his cause, did not entirely exterminate the hopes of James. His chief expectations were now found- ed on a conspiracy among his English adherents, and in the succours promised by the French king. A plot was first formed in Scotland by Sir James Montgomery; a person, who, from being an adherent to William, now turned against him : but the project was ill contrived, and altogether an abortion. To this another succeeded, which seemed to threaten more serious consequences, as it was managed by the Whig party, who were the most formidable in the state. A number of these joined themselves to the Tories, and both made advances to the ad- herents of the late king. They assembled to- gether: and the result of their deliberations was, that the restoration of James was to be effected entirely by foreign forces ; that he should sail for Scotland, and be there joined by 5000 Swedes ; who, because they were of the protes- tant religion, would, it was thought, remove a part of the odium which attended an invasion by foreigners ; it was concerted that assistance should at the same time be sent from France, and that full liberty of conscience should jje proclaimed throughout the kingdom. To save time, it was resolved to send over to France two

trusty persons to consult with the banished monarch ; and lord Preston and Mr. Ashton were appointed for this embassy. Both of them, however, were seized when they least expected it, by order of lord Caermarthen. Both were condemned: Ashton being executed without making any confession;

but lord Preston had not the same resolution. Upon an offer of par don, he discovered a great number of his as- sociates ; among whom were the duke of Or- mond, lord Dartmouth, and lord Clarendon. The French at last became sensible of their bad policy in not having better supported the cause of James, and therefore resolved to make a descent upon England in his favor. In pursu- ance of this scheme, the French king supplied James with an army consisting of a body of French troops, some English and Scots refugees, and the Irish regiments which had been transported into France from Limerick. This army was assembled between Cherbourg and La Hogue, and commanded by king James in person. More than 300 transports were provided for landing it on the opposite coast; and Tourville, the French admiral, at the head of sixty-three ships of the line, was appointed to favor the attempt. His orders were, at all events, to attack the enemy, in case they should oppose him ; so that every thing promised the banished king a change of fortune. These preparations were soon known at the English court, and every precaution taken for a vigorous opposition. The machinations of the banished king's adlierents were discovered to the English ministry. The duke of Marlborough, lord Godolnhin, and even the princess Anne herself, were violently suspected of disaffection; preparations, however, were made with great tranquillity and resolution, to resist tlie growing storm. Admiral Russel was ordered to put to sea with all possible expedi- tion; and he soon appeared with ninety-nine, ships of the line, besides frigates and fire-ships. At the head of this formidable fleet, he set sail for the coast of France ; and near La Hogue discovered the enemy, who prepared to give him battle. The engagement began between the two admirals, with great fury, on Thursday morning, May 19th, 1692; and the rest of the fleet soon followed their example. The battle lasted for ten hours ; but at last victory declared on the side of numbers ; the French fled for Con- quet road, having lost four ships in the first day's action. The pursuit continued for two days; three French ships of the line were de- stroyed the next day; end eighteen more, which had taken refuge in the bay of La Hogue, were burnt by Sir George Rooke. Thus were all the French preparations frustrated ; and so decisive Nvas the blow, that from this time France long relinquished all claims to the sovereignty of the ocean.

This decisive victory over the French fleet also put an end to the hopes of James. No further attempts were made in his favor, except some plots to assassinate king William, which ended only in the destruction of those who formed them. But it was never fairly proved that James countenanced these plots. In 1697 the abbe de Polignac, ambassador from France

*m Poland, informed his court, that thoughts were entertained of electing the late king of Great Britain, king of Poland. Louis XIV. eagerly recommended this honor to James, but he himself steadily refused it. He told them, that ‘ he should ever retain a grateful remembrance of his friends in Poland. But that his acceptance of any other sceptre would amount to an abdi- cation of that which he deemed his right. That therefore he was resolved to remam in his pre- sent forlorn condition, possessing less hopes than ever of being restored, rather than to do the least act of prejudice to his family.’ The same year, at an interview between king William and Louis, the latter proposed that the prince of Wales, James’s son, should succeed to the throne of England, after the death of William. The king with some hesitation agreed to this request. He even engaged to procure the repeal of the act of settlement; and to declare, by another, the prince of Wales successor to the throne. Even this proposal, however, was rejected by the high-minded James. He told the king of France, that, though he could suffer with patience the usurpation of his nephew upon his right, he would never permit his own son to be guilty of the same injustice. He urged, that, should the son reign in his father’s lifetime, that circumstance would amount to a formal renunciation. That the prince of Wales, by succeedmg to the prince of Orange, would yield his sole right which was that of his father, &c. From this time James seems to have re- linquished every hope of his restoration, and to have resigned himself entirely to the austerities of religious enthusiasm, and that melancholy which superstition, as well as his uncommon misfortunes, had impressed on his mind. In the beginning of September, 1701, when he was, according to his daily custom, at public prayers, he fell suddenly into a lethargy ; and, though he recovered his senses soon after, he languished but for a few days, and expired on the 6th of that month. The French king, with great hu- manity, paid him several visits during his sick- cess; and exhibited every symptom of compas- sion, affection, and respect. On the last occasion of this kind he said to the dying James, * I come to acquaint you, Sir, that wlien God shall please to call your majesty from this world, I shall take your family under my protection, and acknowledge your son, as he then will certiiinly be, king of Great Britain and Ireland.’*

Though the defeat of the French fleet at La Hogue had put king William out of all danger from any further attempts from that quarter, he by no means possessed his throne with tranquil- lity. The want of a common enemy produced dissensions among the people, and William began to find as much uneasiness from his par- liament at home as from an enemy in the field. Thi3 uneasiness was not a little heightened by the death of his queen, who was taken off by the small pox on the 28tli December, 1694. For some time he was under a sincere concern for her loss ; but he soon lost all other anxieties in the greatness of his apprehension for the balance of power, and

t'ne fluctuating interests of Europe.

One of his chief motives for accepting the crown had been to engage England more deeply in the concerns of Europe ; and all his policy consisted in forming alliances against France. But many of the English had no such animosity against the French. These, therefore, considered the interest of the nation as sacrificed to foreign connexions ; and complained that the continental war fell most heavily on them. At last William became fatigued with the opposition and bicker- ings of his parliament. He admitted every restraint upon the prerogative in England, upon condi- tion of being properly supplied with the means of humbling France. For the prosecution of the French war, the sums granted were indeed incredible. Now began the operations of the never-terminable national debt. The parliament, not contented with furnishing such sums of money as they were capable of raising by the taxes of the year, mortgaged those taxes; first irregularly and temporarily, then in a more systematic and permanent manner. The war with France con- tinued during the greatest part of this reign ; but at length the treaty of Ryswick, in 1697, put an end to those contentions, in which England had engaged without policy, and came off without advantage. In the general pacification, her interest seemed entirely deserted; and for all the treasures she had sent to the continent, and all the blood which had been shed there, the only equivalent received was an acknowledg- ment of William's title from the king of France. The king, however, being freed from a foreign v/ar, now set himself to strengthen his authority at home. He at first earnestly wished to keep up those forces which had been granted him during the time of danger. The commons however, to hiˆ great mortification, passed a rote, that all soldiers in the English pay, exceeding 7000 men, should be forthwith disbanded ; and that those retained should be natural born sub- jects of England. With this vote the king was so exceedingly displeased, that he is said at one time to have formed a design of abandoning the government. From this, however, his ministers diverted him, and even persuaded him to pass the bill. These altercations continued during the remainder of king William's reign. He considered the commons as a body of men am- bitious of power, and bent upon obstructing all his projects to secure the liberties of Europe : he veered to Whigs and Tories indiscriminately, as interest or the immediate exigence demanded ; and evidently considered England as a place of labor, anxiety, and altercation. When he had any time for relaxation, he retired to Loo in Hol- land, where, among a few friends, he indulged in those festivities which he relished. Here he planned the different successions of the prin- ces of Europe, and labored to undermine the schemes and the power of Louis, his rival in poli- tics and fame. William indeed could scarcely live without being at variance with the French covfrt.

Peace had hardly been concluded with that nation, when he began to think

of resources for carrying on a new war, and for inlisting his English subjects in a continental confede- racy. Several arts were used for inducing the people to second his aims; and the whole

nation seemed at last to join in desiring a new French war. He had been in Holland concert- ing with his allies operations for a new campaign. He had engaged in a negocialion with the prince of Hesse ; who assured him, that, if he would besiege and take Cadiz, the admiral of Castile and several other grandees of Spain would de- clare for the house of Austria. The elector of Hanover had resolved to concur in the same measures ; the king of the Romans, and prince Louis of Baden, undertook to invest Landau, while the emperor promised to send a powerful reinforcement into Italy : but death put a period to these mighty projects. William was naturally of a feeble constitution : and it was by this time almost exhausted. He had endeavoured to repair his health, or at least to conceal its decays, by exercise and riding. On the 2 1st February, 1702, in passing to Hampton Court from Ken- sington, ins horse fell under him ; and he was thrown with such violence, that his collar-bone was fractured. Being nearest the palace at Hampton, the fracture was reduced there ; but in the evening, as he returned to Kensington in a coach, the motion of the carriage disunited the fracture. This proved a fatal miscarriage of the case. For some time he appeared in a fair way of recovery ; but, falling asleep on his couch, he was seized with a shiveiing, which terminated in a fever and diarrhoea. Perceiving his end approaching, the subjects of his former care lay next his heart ; and the fate of Europe seemed to remove the sensations he might feel for his own. The earl of Albermarle arriving from Holland, he conferred v/ith him in private on the posture of affairs abroad. Two days after, having received the sacrament from archbishop Tennison, he expired on Sunday, March 8th ; having lived fifty-two years, and reigned thirteen. — He was in his person of a middle stature, and thin habit. He had an aquiline Roman nose, sparkling eyes, a large forehead, and a grave solemn aspect. He left behind him the cha- racter of a great politician, though he had never been popular ; and of a formidable general though he had seldom been victorious. Cun- ningham, his panegyrist, adds that of sincere piety. He was succeeded by the princess Anne, daughter of James II. and younger sister of his deceased queen Mary II.

Anne ascended the throne in the thirty-eighth year of her age, to the general satisfaction of all pa-ties. William had died at the eve of a war with France ; and the new queen, who generally took the advice of her ministry on every im- portant occasion, was now urged by opposite counsels ; part

of her ministry being inclined to war, and another part to peace. At the head of those who opposed a war with France, was the earl of Rochester, lord lieutenant of Ireland, first cousin to the queen, and the chief of the Tory faction. At the head of the opposite party was the earl, afterwards duke, of IVIarlborough. That of Marlborough preponderated ; the queen resolved to declare war; and communicating her intentions to the house of commons, by whom it was approved, war was accordingly proclaimed. In the declaration that announced hostilities, Louis was charged with having taken

possession of a great part of the Spanish domi- nions ; with designing to invade the liberties of Europe, to obstruct the freedom of navigation and commerce ; and with having offered an un- pardonable insult to the queen and her throne, by acknowledging the title of the pretender. This declaration of war on the part of England was seconded by similar declarations of the Dutch and Germans. Louis XI V^., whose power had been greatly circumscribed by Wil- liam, expected on the death of the latter to enter on a field open for new conquests and fame. At the news of the English monarch's death, he could not suppress his rapture ; the people of Paris, and indeed through the whole kingdom, testified their joy in the most public manner. At seeing, therefore, such a combination against him, the Frencn monarch was filled with indignation ; but his resentment fell chiefly on the Dutch. He declared with great emotion, that as for those gentlemen ped- lars, the Dutch, they should one day repent their insolence and presumption, in declaring war against him whose power they had formerly felt and dreaded. By these threats, however, the affairs of the allies were no way influenced. Marlborough was appointed general of the British forces, and by the Dutch he was chosen generalissimo of the allied army. He had learned ihe first rudiments of war under the famous marshal Turenne, having been a volun- teer in his army ; and by that general his future greatness was prognosticated. The first attempt that Marlborough made, to deviate from the general practice of the army, was to advance the subaltern officers, whose merits had been hitherto neglected. Regardless of seniority, wherever he found abilities, he was sure to pro- mote the possessor ; and thus he had all the upper ranks of commanders, rather remarkable for their skill and talents, than for their age and experience. In his first campaign, in the begin- ning of July 1702, he repaired to the camp at Nimeguen, where he found himself at the hesd of 60,000 men, well provided with all necev saries, and long disciplined by the best officers of the age. He was opposed on the part of France by the duke of Burgundy, a youth of very little experience in the art of war ; but the real acting general was the marshal Boufflers, an officer of courage and activity. Wherever Marlborough, however, advanced, the French were obliged to retire before him, leaving all Spanish Guclderland at his discretion. The duke of Burgundy, thus

finding himself obliged to retreat before the allies, returned to Versailles, leaving BoufBers to command alone. Bouf- flers retired to Brabant ; and Marlborough ended the campaign by taking the city of Liege; in which he found an immense sum of money, and a vast number of prisoners. This good fortune consoled the nation for some unsuccess- ful expeditions at sea. Sir John Munden had permitted a French squadron of fourteen ships to escape him by taking shelter in the harbour of Corunna; for which he was dismissed the service by prince George. An attempt was made upon Cadiz by sea and land, Sir George Rooke commanding the navy, and the duke of

Ormonu the land forces : hut this also miscar- ried. At Vigo, however, the British arms were attended with better success. The duke of Ormond landed with 2500 men, six miles from the city, while, the fleet forcing their way into the harbour, the French fleet that had taken refuge there were burnt by the enemy, to prevent their falling into the hands of the English. Eight ships were thus burnt and run ashore; and ten ships of war were taken, with eleven galleons, and above a million of money in silver. In the West Indies, admiral Benbow had been stationed with ten ships to distress the ene- my's trade. Being informed that Du Casse, the French admiral, was in those seas with a force equal to his own, he resolved to attack him; and soon after discovered the enemy's squadron, near St. JNIartlia, steerino; along the shore. He quickly gave orders to his captains, formed the line of battle, and the engagement began. He found, however, tliat the rest of the fleet had taken some disgust at his conduct; and they permitted him to sustain, almost alone, the whole fire of the enemy. Nevertheless, the en- gagement continued tdl night, and he determined to renew it next morning. But he now had the mortification to perceive, that all the rest of his ships had fallen back, except one, which joined him in urging the pursuit of the enemy. Four days this intrepid seaman, assisted by only one ship, pursued and engaged the enemy, while his cowardly ofncers remained at a distance behind. His last day's battle was more furious than any of the former ; alone, and unsupported by any of the rest, he engaged the whole French squad- ron ; when his leg was shattered by a cannon ball, and he himself died soon after of his wounds. Two of his cowardly associates were shot on their arrival in England ; one died in his passage thitlier; the rest were disgraced.

The next parliament, which was convened by the queen, was highly pleased with the success of the British arms on the continent. The house of commons, composed chiefly of Tories, voted 40,000 seamen, and the same

number of land forces, to act in conjunction with tiiose of tlie allies. Soon after, the queen informed the parliament, that she was pressed by the allies to augment her forces , and ujion this it was re- solved that 10,000 more men should be added to the continental army, but on condition that the Dutch should immediately break off" all commerce with France and Spain ; a condition which was readily complied with. In the be- ginning of April, 170,3, the duke of Marl- borough, assembling the allied army, opened the campaign with the siege of Bonn, the resi- dence of the elector of Cologne. This held out but a short time. He next retook Huy; the gar- rison of which, after a vigorous defence, sur- rendered prisoners of war. Limhurgh was next besieeed, and surrendered in two days, and thus the campaign concluded ; the allies havin-ˆ se- cured the country of Liege and the electorate of Cologne from the designs of the enemy. In the campaign of 1704 the duke of Marlborough informed the Dutch that it was his intention to march to the relief of the empire, which had been for sc-ne time oppressed by the French forces ;

and the states gave him full powers to act as he tiiought proper, with assurances of their assist- ance in all his endeavours. The French kino-, finding Boufflers no longer capable of opposing Marlborough, appomted the marshal de Ville- roy in his place. But Marlborough, who, like Hanibal of old, was remarkable for studying the disposition of his antagonists, having no great fears from ViUeroy, still proceeded to the assist- ance of the empire. Taking with him about 13,000 British troops, he advanced by hasty- marches to the banks of the Danube ; defeated a body of French and Bavarians stationed at Donavert ; then passed the river, and laid under contribution the dukedom of Bavaria which had sided with the enemy. Villeroy, who at first attempted to follow his motions, seemed all at once to have lost sight of the enemy; nor was he apprized of his route till informed of his successes. But, in the mean time, marshal Tallard prepared, by another route, to obstruct 3Iarlborough's retreat with an army of 30,000 men. He was soon after joined by the duke of Bavaria's forces ; so tliat the French army in that part of the continent amounted to 60,000 veterans, commanded by the two best generals then in France. To oppose these, the duke of Marlborough was joined by a body of 30,000 men, under the celebrated prince Eugene. The allied army, with this reinforcement, amounted to about 5'2,000. After various marches, and countermatches, the two armies met at Blenheim. A terrible engagement ensued, in which the French were entirely defeated, and a country of 100 leagues in extent, fell into the hands of the conquerors. See Blenheim.

Soon after finishing the campaign of 1704, the duke of Marlborough repaired to Berlin, where he procured a reinforcement of 8000 Prussians, to serve under prince Eugene in Italy. Then-ie he proceeded to negociate for succours at the courtof Hanover ; and soon after returned to England,

where he was received with every possible demonstration of joy. The arms of Britain, in the mean time, were no less fortunate by sea than by land. Gibraltar vˆas taken by the prince of Hesse and Sir George Rooke : but so little was the value of this conquest then under stood, that it was for some time m debate whether it was a capture worth thanking the admiral for; and at last it was considered as unworthy of public gratitude ! Perhaps it has been since estimated as much above its value, as it was then doubtless estimated below it. Be that as it may, the British fleet, to the number of fifty-three ships of the line, soon after came up wi«h that of France, consisting of fifty- two men of war, com- manded by the count of Thoulouse, off' the coast of Malaga ; and this was the last great naval engagement in which the French for many years ventured to face the British on equal terms. The battle began at 10 A. M. and continued with jrreat fury for six hours ; when the van of the Irench began to give way. The British admiral for two days attempted to renew the engagement; but this was as cautiously declined by the French, who at last disappeared. Both sides claimed the victory, but the consequences decided it in favor of the British. In the mean time, the

Spaniards, alarmed at the taking of Gibraltar, sent the marquis of Villadurias with a large army to reduce it. France also sent a fleet of thirteen ships of the line : but part of them were dispersed by a tempest, and part taken by the British. Nor was the land army more successful. The siege continued for four months ; during which time the prince of Hesse, who commanded the town for the English, gave many proofs of valor. At length the Spaniards, having attempted to scale the rock in vain, and finding no hopes of taking the place, drew off their men, and abandoned the enterprise. While the British were thus victorious by land and sea, a new scene of contention was opened on the side of Spain. Philip V., grandson of Louis XIV., had been placed on the throne of that kingdom, and received with the joyful concurrence of the great- est part of his subjects. He had also been nominated successor to the crown, by the late king of Spain's will. But, in a former treaty among the powers of Europe, Charles, son of the emperor of Germany, was appointed heir to that crown ; and this treaty had been guaranteed by France herself, though she now resolved to reverse that consent in favor of a descendant of the house of Bourbon. Charles was still farther led on to contend for the crown of Spain, by the invitation of the Catalonians, who declared in his favor ; and, with the assistance of the British and Portuguese, promised to arm in his cause. Upon his way to his newly assumed dominion, he landed in England ; where he was received on shore by the dukes of Somerset and Marl-*

borough, who conducted him to Windsor. Here he was kindly received by the queen ; and fur- nished with 200 transports, thirty ships of war, and 9000 men. The earl of Peterborough, a man of romantic bravery, offered to conduct them ; and his single service was rendered equi- valent to armies. The first attempt of this general was on the city of Barcelona, at that time defended by a garrison of 5000 men. The fort Monjuc, situated on a hill that commanded the city, was attacked ; the outworks were taken by storm, and the powder magazine was blown up by a shell ; upon which the fort immediately surrendered, and the city soon after. The con- quest of all Valencia succeeded the taking of Barcelona. Charles became master of Arragon, Carthagena, Grenada, and Madrid. The British general entered the capital in triumph, and there proclaimed Charles III. king of Spain without opposition. To these successes, however, very little regard was paid in Britain. The victories of the duke of Marlborough aione engrossed the public attention. In 1706 he opened the cam- paign with an army of 80,000 men. He was met by the French under 'illeroy near the vil- lage of Ramillies. An engagement ensued, in which the duke gained a victory almost as com- plete as that of Blenheim had been ; and the •whole country of Brabant was the reward of the victors. See Ramillies.

The French troops were now dispirited ; the city of Paris was in confusion ; and Louis XI\ˆ, who had long been flattered with conquest, was now bumbled to such a decrree as almost to ex- cite the compassion of his enemies. He intreated

for peace, but in vain; the allies carried all bo. fore them ; aud his very capital began to dread the approach of the conquerors. But what nei- ther his armies nor his politics could effect, was brought about by a party in England. The dis- sension between the whjgs and tories saved France, now tottering on the brink of ruin. The councils of the queen had hitherto been governed by a whig ministry ; for, though the duke of]\Iarlborough started in the interest of the oppo- site party, he soon joined the whigs, as he found them most sincere in the design of humbling France. The people, however, were in fart be- ginning to change, and a general spirit of toryism to take place. The queen's personal virtues, her successes, her deference for the clergy, and their great veneration for her, began to have a prevail- ing influence over the nation. People of every rank were not ashamed to defend the most serviie tenets, when they tended to flatter the sovereign, or increase her power. They argued in favor of strict hereditary succession, divine right, and non- resistance to the monarch. The Tories, though they joined in vigorous measures against France, were never ardently her enemies: they rather secretly hated the Dutch, as of principles very opposite to their own ; and longed for an oppor- tunity of withdrawing from their friendship. They began to form plans of opposition to the duke of Slarlborough. Him they considered and described as a self-mterested

partisan, who sa- crificed the real advantages of the nation, in protracting a ruinous war, for his own private emolument and glory. They depicted the coun- try as oppressed with an increasing load of taxes, which, by a continuance of the war, must become an intolerable burden. In the mean time, a succession of losses began to dissipate the conquering frenzy that had seized the nation, and to incline them to wish for peace. The earl of Galway, who commanded the army in Spain, was utterly defeated at Almanza, by the duke of Berwick ; and, in consequence of this victory, all Spain, except the province of Catalonia, reverted to the power of Philip V. An attempt was made upon 'Toulon, by the duke of Savoy and prince Eugene by land, and an English fleet by sea ; but to no purpose. The fleet under Sir Cloudesly Shovel, having set sail for England, was driven by a violent storm on the rocks of Scilly. His own ship was lost, and every person on board perished. Three more ships met with the same fate ; while three or four others were saved with the utmost difficulty. In Germany, marshal Villars carried all before him, and was upon the point of restoring the elector of Bavaria. The only hopes of the people lay in the activity and conduct of the duke of Marlborough, who opened the campaign of 1707, about the middle of May ; but even here they were disappointed. The duke declined an engagement ; and, after several marchings and countermarchings, both armies retired into winter quarters about tlie end of October. The French made vigorous prepa- rations for the next campaign; and the duke returned to England, to meet with a reception which he neither expected nor deserved.

The most remarkable transaction, however, of this year, and indeed of this whole reign, was

the union between the two kingdoms of Scotland and England. Though governed by one sove- reign, since the accession of James to the throne of England, yet each nation continued to be ruled by its respective parliament ; and often pursued opposite interests to those of its neigh- bour. A union had been unsuccessfully at- tempted more than once, and had mdeed been ' the cause of bloody wars so long back as the time of Edward I. and III. In all the former proposals on that subject, however, both nations were supposed to remain free and independent; each having its own parliament, and subject only to such taxes, and other commercial regulations, as those parliaments should respectively judge expedient. After the destruction of the Darien colony, king William had endeavoured to allay the national ferment by resuming the atlair of a union, with as much assiduity as his warlike dis- position would allow. The terms proposed were the same v/ith those

formerly held out, viz. a federal union, somewhat like that of the states of Holland. With this view the Scots were pre- vailed on to send twenty commissioners to Lon- don; who, with twenty-three on the part of England, met at Whitehall in October 1702. Here they wers honored with a visit from the queen ; but the treaty was entirely broken off at this time, by the Scottish commissioners in- sisting, that the riglits and privileges of their countrymen trading to Africa and the Indies should be preserved and maintained. It was, however, resumed in 1706, when the commis- sioners again met on the 16th of April. The Scottish commissioners still proposed a federal union ; but the English were determined on an incorporation, which should not afterwards be dissolved by a Scottish parliament. Nothing but this, they said, could settle a perfect and lasting friendship betwixt the two nations. The com- missioners from Scotland, however, resisted this; but the queen, being persuaded to pay two visits in person to the commissioners, exerted herself so vigorously, that a majority was at last gained ; and ail the rest yielded, though with reluctance, exceptmg Lockhart of Carnwarth, who could by no means be persuaded either to sign or seal the treaty. The articles being fully prepared on the 22nd of July, they were presented next day to the queen by the lord keeper, in the name of the English commissioners ; and a sealed copy of the instrument was likewise delivered by the lord chancellor of Scotland. They were most graciously received ; and the queen the same day dictated an order of council, threatening with prosecution such as should be concerned in any discourse or libel, or in laying wagers with regard to tlie union ! The treaty, however, was regarded in Scotland with very different feelings. The terms had been carefully concealed, so tliat nothing transpired, till the whole was at once laid before parliament. The ferment was then so general, that all ranks of people, howev. r divided in other respects, united against this detested treaty. The nol)ility and gentry were exasperated at the annihilation of their parlia- ment, and the consequent loss of their influence and credit. The body of tlic people cried otit, 'hat the independence of liie nation was sacri-

ficed to treachery and corruption. They insisted that the obligation laid on their members to stay in London, attending on the British parliament, would drain the country of its money, mipoverish the members themselves, and subject them to the temptation of being corrupted. Nor was the commercial part of the people better satisfied. The dissolution of the India company, the taxes laid on tlie necessaries of life, the vast number of duties, customs, and restrictions, upon trade, &c., were all matters of complaint. Tiie most violent disputes took place in the parliament. Lord Bel- haven made a most pathetic speech, enumerating the miseries that would attend this treaty ; al- most every article of it was the subject of a pro- test; addresses against it were presented to par liament by the convention of royal boroughs the commissioners of the general assembly,

the company trading to Africa and the Indies, as well as from shires, stewartries, boroughs, towns and parishes, without distinction of whig, tory or presbytery. Nor was the resentment of the people without doors less than that of the mem bers within. A coalition was formed between the presbyterians and cavaliers ; and to such a height did the resentment of the people arrive, that they chose officers, formed themselves into regiments, provided horses and ammunition burnt the articles of union, justified their conduct by a public declaration, and prepared by force to dissolve the parliament. The duke of Queens- berry, the chief promoter of the union, was obliged to move through the capital guarded by double lines of horse and foot.

The articles of the treaty were, however, rati fled by parliament, with some trifling variations, on the 25th of March, 1707; when the duke of Queensberry dissolved that ancient assembly, and Scotland ceased to be a separate kingdom. The queen now informed the English parliament, that the treaty of union, with some additions and alterations, was ratified by an act of the parliament of Scotland : that she had ordered it to be laid before them, and hoped it would meet their ap- probation. She observed, that they had now an opportunity of putting the last hand to a happy union of the two kingdoms : and that she should look upon it as a particular happiness, if this great work, so often attempted before without success, could be brought to perfection in her reign. This important measure was completed on the 1st of May, 1707; and the island took the name of 'The United Kingdom of Great Britain.' The queen again expressed her satisfaction when it received the royal assent. — 'She did not doubt,' she said, 'but the whole business would be remembered and spoke ot hereafter, to the honor of those who had been instrumental in bringing it to such a happy con- clusion. She desired that her subjects of both kingdoms would from henceforward behave with all possible respect and kindness towards one another ; that so it might appear to all the world they had hearts disposed to become one people.' The 1st of May was apj)ointed a day of public thanksgiving ; and congratulatory ad- dresses were sent up from all parts of England, excepting the university of Oxford. The Scots however, were totally silent on the occasion, In

the treaty of union, the English commissioners were not only able statesmen, but, for the most part, well skilled in commercial affairs, which gave them an evident advantage over those of Scotland. Hence they were oveimatched by the former, in the great objects which were to give the turn to nation'^l prosperity; though they were very careful to preserve all their

heritable offices, superiorities, jurisdictions, and other privileges and trappings of the feudal aristocracy.

*In 1708 there was a warm debate in a committee of the house of lords, occasioned by a bill passed by the commons, for rendering the union of the two kingdoms more entire and com- plete ; whereby it was enacted, that, * from the 1st of]\Iay, 1708, there should be but one privy council in the kingdom of Britain.'. Of this affair Mr. Cunningham gives a particular account, and informs us, that he himself had a hand in it, and that he had ' from his youth borne a just hate to the privy council of Scotland.' The argu- ments for the dissolution were its enormous stretches of power and acts of cruelty ; that it could now be of no other use in Scotland, than that the court might thereby govern every thing at pleasure, and procure such members of parlia- ment as they thought proper ; against which both Scots and English ought carefully to guard them- selves. On the other hand, it was argued, that the abuse of the power complained of was no argument for the entire dissolution of the council, though it was for a restriction and limitation of it ; that it was necessary that a privy council should remain in Scotland, out of regard to the ancient customs of the country, and to restrain the rage of the people, which was then ready to break out beyond all bounds. The dissolution, how- ever, was carried by fifty against forty; after which, the nation being deprived of this last fragment of their ancient government, the opposers of the union raised the animosities of the people to a dangerous height ; but the ferment abated, after an ineffectual attempt in favor of the pretender.*

We now return to the duke of Marlborough, who had gone over to Flanders, where he re- solved to push his good fortune. Peace had been offered more than once ; treaties entered upon, and as often frustrated. After the battle of Ramillies, the king of France had employed the elector of Bavaria to write letters in his name to the duke of Marlborough, containing proposals for opening a congress. He offered to resign either Spain and its dominions, or the kingdoms of Naples and Sicily, to Charles of Austria, and to give a barrier to the Dutch in the Netherlands. But these terms were rejected. The two armies once more met, in numbers nearly equal, at Oude- narde. See Oudenarde. In this engagement the electoral prince of Hanover, afterwards George II. of Britain, greatly distinguished him- self, and gained the whole glory of the first attack. His horse was killed under him, and colonel Luschki close by his side. An en- gagement ensued in which the French were de- feated, and Lisle, Ghent, Bruges, arid all the other towns in Flanders soon after fell into the hands of the victors. The campaign ended v.-ith fixing a barrier t3 the Dutch provinces, and it now only remair.ed .o force a way into the provinces

of the enemy. The Freiicli king, being now in a manner reduced to despair,

again sued for peace: but the demands of the allies were so high, thai, he was obliged to prepare for another campaign, in 1709. The first attempt of the allies was on fhe city of Tournay, garrisoned by 12,000 men, and exceedingly strong both by nature and art. After a siege, of twenty-one days, the town capitulated ; and a month afterwards the citadel, which was still stronger than the town. Next followed the bloody battle of Malplaquet ; where the allied army, consisting of 110,000 men, attacked the French consisting of 120,000, strongly posted and fortified in such a manner that they seemed quite inaicessible. See Mal- plaquet. The allied army, however, drove the French from their fortifications : but their victory cost them 20,000 of their best troops. The consequence of this victory was tlˆe surrender of tiie city of Mons, which ended the campaign.

The last campaign of the duke of Marlborough, in 171 1, excelled, perhaps, all his former exploits. He was opposed to marshal Villars', who had commanded the French in the battle of Malpla- quet, and he so contrived his measures, that, by marching and countermarching, he induced the enemy to quit a strong line of entrenchments, without striking a blow. He then took possesssion of the enemy's line. This was followed by the taking of Bouchain, which was the last military- achievement of this great general. By a continu- ance of successive and almost unparalleled victo- ries, he had gained the allies a prodigious extent of country ; had perpetually advanced, and never retreated before his enemies, nor lost an advan- tage he had obtained over them. He more fre- quently gained the enemy's posts without fighting; but, where he was obliged to attack, no fortifica- tions were able to resist him He had never be- sieged a city which he did not take, nor engaged in a battle in which he did not come off vic- torious. Thus the allies had reduced Spanish Guelderland, Limboi>rg, Brabant, Flanders, and Hainault; they were masters of the Scarpe; the capture of Boucliain had opened for them a way into the heart of France, and another campaign might have made them masters of Paris ; but, on the duke's return from this campaign, he was accused of having taken a bribe of £6000 a-year from a contractor, and the queen thought proper to dismiss him from all his employments.

On his removal, the command of the British forces was given to the duke of Ormond. Prince Eugene complained much of the inactivity of tliis general, though he seemed to be unacquainted with his treachery ; while the whole army loaded him with execrations, calling him 'a stupid tool, and a general of straw.' AH this, however, was in vain ; the duke continued to prefer the queen's commands to every other consideration. The disgrace of the duke of jNIarlborough had been owing to the prevalence of the Tory party, who had now ejected the Whig ministry; the conse- quence was, that in spite of all the remonstrances, memorials, &c., of the allies, the British army in Flanders was ordered not to act offensively. The operations of the allies

therefore languished ; a considerable body was cut off at Denain, and the French retook some tcnvns At last, in 1713,

a peace was concluded. In the treaty it was stipulated, that Philip V., now acknowledged king of Spain, should renounce all right to the crown of France; that the duke of Berry, Philip s brother, and after him in succession, should also renounce his right to the crown of Spain, in case he became king of France; and that the duke of Savoy should possess the island of SiCily with the title of king, together with Fenestrelles, and otiier places on the continent. Tlie Dutch had the barrier granted them which they so much desired ; and the house of Austria was taxed to supply the wants of the Hollanders, who were put in possession of the strongest towns of Flan- ders. The fortifications of Dunkirk were de- molished. Spain gave up Gibraltar and the island of Minorca. FVance resigned her pre- tensions to Hudson's Bp.y, Nova Scotia, and Newfoundland ; but was left in possession of Cape-Breton, and the liberty of drying fish upon the shore. Among the articles glorious to the British nation, their setting free the French Pro- testants, confined in ihe prisons and galleys for their religion, was not the least meritorious. For the emperor it was stipulated, that he should possess the kingdom of Naples, the duchy of Milan, and the Spanish Netherlands. The king of Prussia was to have Upper Guelder ; and a time was fixed for the emperor's acceding to these articles, as he had for some time refused to assist at the negociation. This famous treaty was signed at Utrecht on the last day of JMarch,

1713.

The year 1713 was also remarkable for an attempt of the Scottish peers and commons to dissolve the union. During the debates on this subject, the earl of Peterborough endeavoured to prove the impossibility of dissolving the treaty, which he compared to a marriage, that, being once contracted, could not be dissolved by any power on earth. He observed, that though Eng- land, who in the national marriage, must be sup- posed to represent the husband, had in some instances been unkind to the lady, she ought not so speedily to sue for a divorce; and added, when the union was termed a mere political expedient, that it could not have been made more solemnly, unless, like the ten commandments, it had come from heaven. The duke of Argyl declared that, unless it were dissolved, he did not long expect to have either property left in Scotland, or liberty in England. The motion, however, was overruled in the house : but the discontent of the people continued. Whether, indeed, the ministry at this time did not wish to alter the line of

succession, cannot be clearly made out ; but certain it is, that the Whigs firmly believed it, and the Tories but faintly denied the charge. The suspicions of the former became every day stronger, when they saw a total removal of the Whigs from all places of trust and confidence, and their employments bestowed on the professed advocates of an unbroken hereditary succession. The violent dissensions between these two parties, their unbounded licentiousness, cabals, and tu- mults, made the queen's situation a very perplex- ing one; her health visibly declined; and, on the 28th of July 1714, she fell into a lethargic insensibility. "The next day the physicians de-

spaired of her life. All the members of the privy council, without distinction, were now sum- moned from the different parts of the kingdom ; and they began to provide for the security of the constitution. A letter was sent to the elector of Hanover, informing him of the queen's situation, and desiring him to repair to Holland, where he would be attended by a British squadron to con- vey him to England. At the same time they despatched instructions to the earl of Stafford at the Hague, to desire the States General to be ready to perforin the guarantee of the protestant succession. Precautions were also taken to secure the sea-ports and tue tleet. On the 30th of July the queen seemed to be somewhat relieved by the medicines whicli had been given her. She arose from her bed about 8 A. M. and walked a little. She was soon after, however, seized with an apoplectic fit ; and, continuing all night in a state of stupefaction, expired the following morning, a little after seven o'clock, in the fiftieth year of her age, and thirteenth of her reign. This princess seemed rather fitted for the duties of pri- vate life than a public station : being a pattern of conjugal fidelity, a good mother, a warm friend, and an indulgent mistress. To her honor it must be recorded, that during her reign none suffered for high treason.

5. The history of Great Britain from the accession of the house of Hanover to the death of George II. — With the foregoing reign ended the line of the Stuarts : a family equally re- markable for their misfortunes and misconduct. The queen had no sooner resigned her breath than the privy council met, and three instruments were produced by which the elector of Hanover appointed several of his known friends to be added as lords justices to the seven great officers of the kingdom. Orders were also immediately issued for proclaiming CJeorge king of England, Scotland, and Ireland. The regency appointed the earl of Dorset to carry him the intimation of 'is accession to the crown, and to attend him in his journey to England. They sent the general officers, in whom they could confide, to their posts : reinforced the garrison of Portsmouth, and appointed the celebrated Mr. Addison secre- tary of state : but no tumult, no commotion, rose against the accession of the new king. King George I. landed at Greenwich, where he was received by t'le duke of Northumberland, cap- tain of the lifeguards, and the lords of the re- gency. He was fifty-four years old when he ascended the British throne. His mature age, his sagacity and experience, his numerous alli- ances, and the general tranquillity of Europe, all contributed to

estahlisli his interests, and pro- mise him a peaceable and happy reign. Soon after his arrival in England, he was heard to say, ‘ My maxim is, never to abandon my friends, to do justice to all the world, and to fear no man.’ To the qualities of resolution and perseverance, he joined great application to business. He, however, studied the interests of the people lie had ruled, more than those of (Jrcat Britain. When he retired to his bed chamber, after his first landin’, he sent for such of the nobility as had distinguished themselves by their zeal for his succession, and expressed the greatest regard for

the duke of Marlborough, jvst then arrived from the continent. He professed the same friendship for the other leaders of the Whigs ; but the Tories found themselves at once excluded from favor. An instantaneous change was made in all the offices of trust, honor, or advantage. The Hano- verians, as they were called, governed the senate and court, oppressed whom they would, and bound the lower orders of people by severe laws : against this the Tories or Jacobites raised the most terrible outcries ; and, had the pretender been a man of any judgment or abilities, a fair opportunity was now offered him of striking a decisive blow. They affirmed that, under a Whig administration, heresy and impiety were daily gaining ground. The lower orders of the clergy joined in these complaints, and pointed out several tracts published in favor of Arianisra and Socinianism. The ministry, how- ever, not only refused to silence the delinquents, but silenced the clergy themselves, and forbad their future disputations on these topics.

The parliament was now dissolved, and ano- ther called by a very extraordinary proclamation. In this the king complained of the evil designs of men disaffected to his succession; and of their having misrepresented his conduct and principles. He expressed his hopes, that his subjects would send up to parliament the fittest persons to redress the present disorders. He intreated that they would elect such in parti- cular, as had expressed a firm attachment to the protestant succession, when it was in danger. In the election that ensued, uncommon vigor was exerted on both sides ; but by dint of the monied interest that prevailed in corporations, and the activity ofthe ministry, a great majority of Whigs was returned both in England and Scotland. Upon the first meeting of parliament, the most rigorous measures were resolved upon against the late ministry. A committee was appointed to inspect the papers relative to the treaty of Utrecht, and to select such as might afford grounds of accusation againsi the negociators. The earl of Oxford was impeached of high-trea- son, and sent to the Tower. The violence of the house of commons produced equal violence without doors. Tumults became every day more frequent, and served only to increase the severity of the legislature. An act was now passed, de- claring that if any

persons to the number of twelve, unlawfully assembled, should continue together one hour after being required to disperse by a justice of peace or other officer, and after hearing the acts against riots read in public, they should be deemed guilty of felony without bene- fit of clergy. These proceedings excited the indignation of the people, who perceived that the avenues of royal favor were closed to all but a faction. Great discontent arose in Scotland, where, to their other grievances, they joined that of the union, which they were taught to consider as an oppression, and the malcontents of that country found active friends in England. Some of the Tory party, who were attached to the Protes- tant religion, and of moderate principles in go- vernment, begin to associate with the Jacobites, and to wish in earnest for a revolution. Scot- land first reared the standard of revolt. The

earl of Mar, assembling 300 of his vassals in the Highlands, proclaimed James III. at Cas- tleton ; and assumed the title of lieutenant ge- neral of his majesty's forces. To second these attempts, two vessels arrived from France, with arms, ammunition, and officers, together with assurances to the earl, that the pretender him- self would shortly follow. In consequence of this, the earl soon found himself at the head of 10,000 men well armed and provided. He se- cured the pass of Tay at Perth, made himself master of the whole province of Fife and of the sea-coast on that side of the frith of Forth ; and marched thence to Dumblain, as if he had in- tended to cross the Forth at Stirling bridge. But here he was informed, that the duke of Argyle, who on this occasion wasappointed commander in chief of all the forces in North Britain, was ad- vancing against him, and he retreated. Soon after, however, being joined by some of the clans under the earl of Seaforth, and general Gordon, he resolved to face the enemy, and directed his march towards the south. The duke of Argyle resolved to give him battle near Dumblain. In the morning, therefore, he drew up his army, which did not exceed 3500 men, in order of battle ; and, when the earl attempted to surround him, he received on his left wing the centre of the enemy. Though much inferior in strength and numbers, the royal forces seemed for a while victorious, and the earl of Clanronald was killed. But Glengary, who was second in command, un- dertook to inspire his intimidated companions with courage ; and waving his bonnet cried out several times Revenge ! This animated the rebel troops to such a degree, that they followed him to the point of the enemy's bayonets, and got within their guard. A total rout of this wing of the royal army began now to ensue. In the mean time the duke of Argyle, who commanded in person on the right, attacked ihe left of the rebels ; and drove them before him for two miles. Having entirely broken that wing of the enemy, and driven them over the river Allan, he returned to the field of battle; where, to his gieat morti- fication, he found the enemy as decidedly victo- rious, and patiently waiting for the assault. Neither

party, however, cared to begin the attack. In the evening both drew off, and each claimed the victory. All the advantages of a victory, however, belonged to Argyle. He had inter- rupted the progress of the rebels ; and in their circumstances delay was defeat. The earl of Mar, in fact, soon found it so. The castle of Inverness was delivered up by lord Lovat, who had hithesto professed to act in the interest of the pretender ; the marquis of Tullibardine for- sook the earl, in order to defend his own part of the country; and many of the clans, seeing no likelihood of coming to a second engagement, returned at once home.

In the mean time, the cause of the rebels was still more unsuccessfully prosecuted in England. James had undertaken so heedlessly the project, in which the duke of Ormond and lord Boling- broke were engaged, that lord Stair, the English ambassador at Paris, penetrated all his designs, and sent faithful accounts of all his measures to the ministry at home. Upon the first rumor.

therefore, of an insurrection, several lords and gentlemen were imprisoned. But these precau- tions were not able to prevent an attempt of the Jacobites in the western counties. All their preparations, however, were weak and ill conducted; every scheme was betrayed to go- vernment as soon as projected. The university of Oxford was treated with great severity on this occasion. Major general Pepper, with a strong detachment of dragoons, took possession of the city at day break, declaring that he would in- stantly shoot any oT the students, who should presume to appear without the limits of their respective colleges. In the northern counties, the insurrection came to greater maturity. In October, 1715, the earl of Derwentwater and Mr. Forster took the field with a body of horse, and, being joined by some gentlemen from the borders of Scotland, proclaimed James III. Their first attempt was to seize upon Newcastle, m which they had many friends ; but, finding the gates shut, they retired to Hexham. To oppose these, general Carpenter was despatched to the north by government with a body of 000 men. The rebels took the route to Jedburgh, where they hoped to leave Carpenter on one side, and penetrate into England by the western border. This was an effectual method of cutting themselves off from retreat or assistance. A party of Highlanders, who had joined them by this time, at first re fused to accompany them in such a desperate incursion, and one-half of them actually returned to their own country. At Brampton Mr. Fors- ter opened his commission of general, which had been sent him by the earl of Mar, and there pro- claimed James III. They continued their march to Penrith, where the body of the militia that was assembled to oppose them

fled. From Penrith they proceeded by the way of Kendal and Lancaster to Preston, of which they took possession without resistance. But this was the last stage of their ill-advised excursion ; for ge- neral Wills, at the head of 7000 men, came up to attack them ; and from his activity there was no escaping. They now, therefore, began to raise barricadoes about the town, and to put the place in a posture of defence : repulsing the first attacks of the royal army with success. Next day, however, Wills was reinforced by Carpenter, and the town was invested on all sides. In tliis deplorable situation, to which they were reduced by their own rashness, Forster hoped to capitu- late with the general ; and accordingly sent to him colonel Oxburgh, who had been Uiken pri- soner, to propose a surrender. Wills, however, alleged that he would not treat with rebels, and that the only favor they had to expect was to be spared immediate slaughter. These were hard terms, but no bettei could be obtained. They accordingly laid down their arms, and were put under a strong guard. To intimidate their par- tisans, in the neighbourhood, a few of the officers, that liad deserted from the royal army, were shot by order of a court martial : the soldiers wers imprisoned at Chester and Liverpool ; and the noblemen and considerable officers were sent to London, where they were led through the streets pinioned and bound together.

In the mean time Louis XIV., who had always

espoused the interest of the excluded family, was just dead ; and the duke of Orleans, who suc- ceeded in the government of the kingdom, was averse to lending the pretender any assistance. Though Jam«s therefore might, at this period, easily have seen that his affairs were desperate ; yet, with his usual infatuation, he resolved to hazard his person among his friends in Scotland. Passing through France in disguise, and em- barking in a small vessel at Dunkirk, he ar- rived after a voyage of a few days on the coasts of Scotland, with only six gentlemen in his train. At Fetteresso he was met by the earl of Mar, and about thirty noblemen and gentlemen of the first quality ; and here he was solemnly proclaimed. Hence he went to Dundee, where he made a public entry ; and in two days more arrived at Scoon, where he ordered thanksgivings to be offered for his safe arrival; enjoined the ministers to pray for him in their churches ; and, without the smallest share of power, went through the ceremony of a coronation. Scarcely had he concluded this piece of unimportant parade, when he resolved to abandon th" enter- prise. Having made a speech to his grand council, he informed them of his want of money, arms, and ammunition, for undertaking a cam- paign, and therefore deplored that he was obliged to leave them. Then he re-embarked on board a small French ship, that lay in the harbour of Montrose, accompanied with several lords, his adherents, and in five days arrived at Grave- lines.

General Gordon, who was left commander in chief of the forces, now proceeded at their head to Aberdeen, where he secured three vessels to sail northward, which took on board such persons as intended to make their escape to tlie Continent. He then continued his march through the High- lands, and quietly dismissed his forces as he proceeded. With such expedition was this re- treat made, that the duke of Argyle, with all his activity, could never overtake his rear, which consisted of 1000 horse. The rebellion being ended, the law was put in force with all its terrors; and tne prisons of London were crowded with those deluded persons, whom the ministry seemed resolved not to pardon. The commons, in their address to the crown, declared they would prosecute in the most rigorous man- ner the authors of the late rebellion ; and their measures were as vindictive as their resolutions were speedy. The earls of Derwentwater, Niths- dale, Carnwath, and Wintown, the lords Wid- rington, Kenmuir, and Nairne, were impeached ; and, upon pleading guilty, all but lord Wintown received sentence of death. No intreaties could prevail upon the ministry to spare tliese un- happy noblemen. The house of lords even pre sented an address to the throne for mercy, but without effect ; the king only answered, that on this, as on all other occasions, he would act as he thought most consistent with the dignity of the crown and the safety of the people. Orders were accordingly dpspatched for executing lords Derwentwater, Nithsdale, and Kenmuir, imme- diately; the rest were respited. Nithsdale es- caped, his wife mo.st adroitly contriving to sub- stitute her own person for his, the day before his

intended execution. An act of parliament was next passed, for trying the private prisoners in London, and not in Lancashire where they were taken : a step considered by h\wyers as an alteration of the ancient constitution of the kingdom, by which every prisoner should be tried in the place where the offence was committed. In the be- ginning of April, commissioners for trying the rebels met in the court of common pleas, when bills were found against Mr. Forster, Mr. Macintosh, and twenty of their confederates. Torster escaped from Newgate, and reached the Continent in safety; the rest pleaded not gu.lty. After this, Macintosh, and several other pri- soners, also broke out of Newgate. The court proceeded to the trial of those that remained ; four or five were hanged, drawn, and quartered at Tyburn ; twenty-two were executed at Man- c’^ester and Preston, and about 1000 were trans- ported to North America. The rebellion being thus extinguished, the danger of the state was made a pretext for continuing the parliament beyond the term fixed for its dissolution. An act, therefore, was passed, repealing that by which it was to be dissolved every third year, and

extending the term of its duration to seven years. The people might murmur at this en- croachment, but expediency and power united to plead for it at the time, and it has ever since been found inexpedient to think of redress.

Domestic concerns being thus adjusted, the king resolved upon a voyage to the Continent. Charles XII. of Sweden was highly provoked against him for having entered into a confede- racy with the Russians and Danes during his absence at Bender, and for having purchased from the king of Denmark the towns of Bremen and Verden. In consequence of this, Charles maintained a close correspondence with the dis- satisfied subjects of Great Britain ; and a scheme was formed for landing a body of Swedish forces, with the king at their head, to erect the standard of the Pretender in some part of the island. Count Gyllenburg, the Swedish minister in London, was active in the conspiracy ; but, being seized with all his papers, the scheme was rendered abortive. A bill, however, was passed by the commons forbidding all commerce with Sweden ; and George L now entered into a new treaty with the Dutch and the regent of France, by which they agreed mutually to assist each other in case of invasion. But the death of the Swedish monarch, who was soon after killed at the siege of Frederickshall, put an end to all disquietude from that quarter.

Among the many treaties for which this reign was remarkable, one had been concluded, which was called the quadruple alliance. It was agreed between the emperor, France, Holland, and Bri- tain, ihat the emperor should renounce all pre- tensions to the crown of Spain, and exchange Sardinia for Sicily with the duke of Savoy ; and that the succession to the duchies of Tuscany, Parma, and Placentia, should be settled on the queen cf Spain's eldest son, in case the present possessors should die without male issue. This treaty, however, was by no means agreeable to the king of Spain ; and it became consequently prejudicial to the English, as it interrupted their

commerce with that kingdom. A war soon after commenced between Spain and the emperor, who was considered as the principal contriver of the treaty ; and a numerous body of Spanish forces was sent into Italy to support Philip's pretensions in that quarter. The regent of France attempted in vain to dissuade him ; the king of England also offered his mediation in vain; their interpo- sition was considered as partial and unjust. A Spanish war was then resolved on ; and a squad- ron of twenty-two ships was placed under the command of Sir George Byng, and ordered to- sail for Naples. Here he was received with the greatest joy, and informed that the Spaniards, to the amount of 30,000 men, were then just landed in Sicily. On learning this he resolved to sail thither to pursue the Spanish fleet, and coming round Cape Faro perceived two small Spanish vessels; pursuing which, he was led to their companions, whom, before noon, he discovered

in line of battle, amounting to twenty-seven sail. Notwithstanding their superiority in number, the Spaniards attempted to make their escape : but, finding it impossible, they kept up a running- fight; in spite of which, they were all taken ex- cept three. Sir George Byng behaved on this occasion with great prudence and resolution; and the king wrote him a letter with his own hand, approving his conduct. This rupture with Spain was thought to be favorable to the interests of the pretender; as it was hoped, that, by the assistance of cardinal Alberoni, the Spanish minister, a new insurrection might be excited in England. The duke of Ormond was even fixed upon to conduct this expedition ; and he obtained from the Spanish court a fleet of ten ships of war and transports, having on board GOOO regular troops, with arms for 12,000 more. But fortune was still as unfavorable as ever. Having set sail, and proceeded as far as Cape Finisterre, he was encountered by a violent storm, which disabled his fleet, and frustrated the expedition. This, together with the bad success of the Spanisli arms in Sicily and other parts of Europe, induced Philip to wish for a cessation of arms ; and he at last consented to sign the quadruple alliance, by which peace was again restored to Europe.

Tranquillity being thus established, the mi- nistry proceeded to secure the dependency of the Irish parliament on that of England. A Mr. Maurice Annesley had appealed to the British house of peers from a decree made by the Irish peers, and their decree was reversed. The British peers ordered the barons of the ex- chequer in Ireland to put Mr. Annesley in pos- session of the lands he had lost. But, when the barons obeyed this order, the Irish peers passed a vote against them, as having attempted to di- minish the just privileges of the parliament of Ireland; and ordered their lordships to be taken under the custody of the black rod. On the other hand, the house of lords in England re- solved, that the barons of the exchequer in Ire- land had acted with great courage and fidelity ; and addressed the king to signify I 'is approba- tion of their conduct. To complete their tri- umph, a bill was prepared, by which the Irisli house of lords was deprived of all right of final

juiisHiction. Mr. Pitt, on this occasion, said, ll'.at it would only increase the power of the English oeers, who were already but too for- midable. Mr. Hungerford demonstrated, that the Irish lords had always exerted tlieir power of tinally decidincj causes. Notwithstanding all opposition, however, the bill was carried by a great majority, and soon after received the royal assent. This blow was severely felt by the Irish.

The celebrated South Sea scheme commencei in the year 1721. To explain this, as concisely as possible, it must be observed, that, ever since the devolution, government had been obliged to borrow money from different companies of mer- chants ; and, among the rest, from that company which traded to the South Sea. In 1716 the government being indebted to this company about £9,500,000 sterling, at the rate of 6 per cent, interest. Sir Robert Walpole formed a de- sign of lessening the national debt, by giving the several companies the alternative, either of accepting a lower interest, namely, 5 per cent., or of being paid tlie principal. The companies generally chose rather to accept of the diminished interest ; and the South Sea Company, in particular, having augmented their loan to £10,000,000, were contented to receive £300,000 annually as mterest, instead of £600,000, which they formerly received. At this same period one Blount, a scrivener, proposed to the ministry, in the name of the South Sea Company, to buy up all the debts of the different companies, and thus for the South Sea Company to become the sole creditors of the state. The terms offered to government were extremely advantageous. The company was to redeem the debts of the nation out of the hands of the private proprietors, upon whatever terms they could agree on ; and, for the interest of the sum thus redeemed, to be allowed by government 5 per cent, for six years ; after which the interest was to be reduced to 4 per cent., and the debts to be at any time redeemable by parliament. For these purposes a bill passed both houses. But now appeared a part of the scheme pregnant with fraud and ruin. As the directors of the South Sea Company could not of themselves be supposed to possess a capital sufficient to buy up the debts of the nation, they were empowered to raise it by opening a sub- scription to an imaginary scheme for trading in liie South Seas. All the creditors of govern- ment, therefore, were invited to come in, and exchange their securities, viz., the security of government for that of the South Sea Company. The directors' books were no sooner opened for the first subscription, than crowds came to effect this. The delusion was artfully continued and spread. Subscriptions in a few days sold for double the price they had been bought at. The scheme succeeded beyond even the projector's hopes, and the whole nation was infecte I with a spirit of avaricious enterprise. The infatuation still prevailing, the stock rose even to nearly ten times the value of what it was first bought for. After a few months, however, the people awoke from their dream of riches; and found that all the advantages they expected were merely imaginary, while thousands of families were Vol. X.

involved in ruin. Many of the directors, by whose arts the public were taught to expect such great benefits from a traffic to the South Seas, had amassed considerable fortunes by their cre- dulity. It was some consolation, however, to the people, to find the parliament sharing in the general indignation, and resolving to strip those unjust plunderers of their gains.

Orders were given to remove all the directors of the South Sea Company from their seats in parliament, and the places they possessed under government; and the principal delinquents were punished by a forfeiture of all such possessions and estates as they had acquired during the continuance of this popular frenzy. The next care was to redress the sufferers. Several just and useful resolutions were taken by parliament, and a bill was pre- pared for repairing the late sufferings, as far as the inspection of the legislature could extend. Of the profit arising from the South Sea scheme, the sum of £7,000,000 was given back to the original proprietors ; several additions were made to their dividends out of what was pos- sessed by the company in their own right; and the remaining capital stock was divided among the old proprietors at the rate of 33 per cent. In the mean time petitions from all parts of the kingdom were presented to the house demand- ing justice ; and the whole nation seemed exas- perated to the highest degree. Public credit sustained a terrible shock. Some principal members of the ministry were deeply concerned in these fraudulent transactions. The bank was drawn upon faster than it could supply ; and nothing was beard but the ravings of disap- pointment, and the cries of despair. By degrees, however, the effects of this terrible calamity wore off, and matters returned to their former tranquillity.

At this time a new war with Spain com- menced. Admiral Hosier was sent to South America to intercept the Spanish galleons : but the Spaniards, being apprised of his design, re-landed their treasure. The greatest part ot the British fleet sent on that expedition was ren- dered entirely unfit for service. The seamen were cut off in great numbers by the malignity of the climate, and the length of the voyage, while the admiral himself is said to have died of a broken heart. To retaliate these hostilities, the Spaniards undertook the siege of Gibraltar ; but with little success. In this dispute France offered her mediation ; and such a reconciliation as treaties could procure was the consequence ; a temporary peace ensued, both sides only watching an advantageous opportunity to renew hostilities. Soon after the breaking up of the parliament, in 1727, the king resolved to visit his electoral dominions of Hanover. Having ap- pointed a regency, to act in his absence, he embarked for Holland, and m three days arrived at Delden, to all appearances in perfect health. He supped there very heartily, and continued his journey early the next morning; but between eight and nine, ordering his carriage to stop, it was perceived that one of his hands lay motion- less, and every attempt to quicken the circulation proved ineffectual. The king had but just slrencth enough to bid them hasten to Osna- ‘ •: G

burgh, where he languished until eleven o'clock next morning, when he expired in the sixty- eighth year of his age, and thirteenth of his reign. His body was conveyed to Hanover for interment.

On the accession of George II. the two great parties into which the nation had so long been divided again changed their names, and were now called the court and country parties. Throughout this reign there seem to have been two great objects of controversy every session of parliament, viz. the national debt, and the num- ber of forces to be kept in pay. The govern- ment, on the king's accession, owed more than £30,000,000 sterling ; and, though there was a long continuance of profound peace, this sum was constantly increasing. The country party enquired how this could happen, and it was the business of the court to give plausible reasons for the increase. Demands for new supplies were made, either for the purpose of securing friends upon the continent, or guarding the king- dom from internal conspiracies, or of enabling the ministry to act vigorously in conjunction with the powers in alliance abroad. It was in vain alleged, that these expenses were incurred without prescience or necessity ; and that the national debt, by multiplying and increasing taxes, would at last become an intolerable bur- den. These arguments were offered, canvassed, and rejected ; but the court party was constantly victorious : and every demand was granted with cheerfulness and profusion.

In the reign of George II. arose 'the charitable corporation,' a society of men who professed to lend money at legal interest to the poor upon small pledges, and to persons of higher rank, upon proper security. Their capital was at first limited to £30,000, but they after%vards increased it to £600,000. Their funds were, as usual, raised by subscription, and the care of conduct- ing their affairs was intrusted to a proper number of directors. This company having continued for more than twenty years, the cashier, George Robinson, member for Marlow, and the ware- house-keeper, John Thomson, disappeared in one day. £500,000 of capital were found to be sunk or embezzled, by means which the proprie- tors could not discover. They therefore in a petition represented to the house of commons the manner in which they had been defrauded. A secret committee being appointed to examine into this grievance, a most iniquitous scheme was soon discovered, in which Thomson and Robin- son, in concert with some of the directors, had deliberately embezzled the capital of the com- pany. No less than six members were expelled the house of commons, for sordid acts of knavery connected with this business. It was at this time asserted, in the house of lords, that not one shilling of the estates forfeited in the late rebel- lion was ever applied to the service of the public, but became the reward of fraudulence and venality.

This happened in the year 1731 ; in 1732 a scheme was formed by Sir Robert Walpole, for fixing a general excise. He introduced it by recounting the frauds practised by the factors in London, employed in selling the American

tobacco. To prevent these frauds, he proposed, thatj instead of having the customs levied in the usual manner upon tobacco, all hereafter to be imported should be lodged in warehouses ap- pointed for that purpose by the officers of the crown; and should thence be sold, upon paying the duty of Ad. per pound, when the pro- prietor found a purchaser. This proposal raised such a violent ferment, both within doors and without, that the houses of parliament were surrounded by mobs, who intimidated the ministry, and compelled them to drop the design. The miscarriage of the bill was celebrated with public rejoicings in London and Westminster, where the minister was burnt in effigy. On this occasion an attempt was made to repeal the sep- tennial bill. But, notwithstanding the warmth of the opposition, the ministrj' were victorious, and the motion was negatived. However, the country party on this occasion seemed to have gained strength, and it wˆas thought proper to dissolve the parliament. In the new parliament, a convention agreed on by the ministry with Spain, became an object of warm altercation. By this the court of Spain agreed to pay £95,000 to the English, as a satisfaction for all demands; and to discharge the whole in four months from the day of ratification. This, however, was con- sidered as not equivalent to the damages that had been sustained. The minister, on this occasion, was provoked into such unusual vehe- mence, that he branded the opposite party with the appellation of traitors ; and the country party, finding themselves out-numbered and out- voted in every debate, resolved to withdraw. Walpole, being thus left without opposition, took the opportunity of passing some useful laws.

In 1739 a new war commenced with Spain. Ever since the treaty of Utrecht, the Spaniards in America had insulted and distressed the com- merce of Great Britain ; while the British mer- chants on the other hand had endeavoured to carry on an illicit trade in their dominions. As the right of cutting logwood in the bay of Cam- peachy, claimed by the British, gave them fre- quent opportunities of pushing in contraband commodities upon the continent, the Spaniards resolved to put a stop to the evil, by refusing them liberty to cut logwood in that place. The Spanish guarda-costas continued their severities upon the British, and many British subjects were sent to dig in the mines of Potosi. One remonstrance followed another to the court of Madrid ; but the only answers given were pro- mises of enquiry. War, therefore, was now de- clared ; and soon after admiral Vernon, with six ships only, destroyed all the fortifications of Porto Bello, and came away victorious with scarcely the loss of a man. For a war thus suc- cessfully begun supplies were cheerfully granted. Commodore Anson was sent with a squadron of ships to distress tlie enemy in the South Seas, and to co-operate with Vernon across the isthmus of Darien. Through the mismanagement of the ministry, however, these schemes were frustrated. Anson was detained till too late in the season ; he then set out with five

ships of the line, a fri- gate, two storeships, and about 1400 men. Coming into the stormy South Seas at a

wrong season of the year, his fleet was dispersed, and his crew deplorably afflicted with the scurvy ; so that with difficulty he gained the island of Juan Fernandez. Thence sailing along the coast of Chili, he plundered and burnt the town of Paita. He next traversed the Great Pacific Ocean, in hopes of meeting with one of the rich Eralleons that trade from the Philippine Islands to ˆlexico; and, having refreshed his men at the islands of Tinian, set forward for China. Return- ing the same way he came, he at last discovered apd took the galleon, valued at £313,000, toge- ther with other captures to the value of about as much more. By this expedition the public sus- tained the loss of a fine squadron of ships, while a few individuals became possessed of immense fortunes. Another expedition to New Spain ended more unfortunately. It consisted of twenty-nine ships of the line, and almost au equal number of frigates, furnished with all kinds of warlike stores, nearly 15,000 seamen, and as many land forces. The most sanguine hopes of success were entertained ; but the ministry de- tained the fleet, without any visible reason, till the season for action in America was almost over. At last, however, they arrived before the city of Carthagena, and became masters of the strong forts which defended the harbour. But, though by this means they advanced a good deal nearer the town, they found great difficulties before them. It was asserted, that the fleet could not lie near enough to batter the town, and therefore the remaining forts must be attempted by scalade. This dangerous experiment was tried ; when the guides were cut off by the enemy's fire, and the forces mistook their way. Their scaling ladders were too short ; and, at last, after sustaining a dreadful fire for some hours, they retreated, leaving 600 men dead on the spot. The terrors of the climate now began to be more dreadful than those of war. The rainy season commenced, and it was impossible for the troops to continue their encampment. To these calamities was added a dissension between the sea and land commanders, who blamed each other, and at last could be only brought to acree in one mortifying measure, viz. to re-embark the troops, and with- draw them. The miscarriage of this enterprise produced the greatest discontents ; the commerce of Britain was greatly annoyed by the Spanish privateers, who had taken 407 ships, it was said, since the commencement of the war ; while the British fleets seemed to be quite inactive, and to suffer one loss after another, without endeavour- ing to make reprisals. These discontents being visited at once upon Sir Robert Walpole ; a ma- jority of the house of commons was formed acainst him ; he was created earl of Orford, and resigned all his employments.

The new ministry were no sooner in power, however, than they trod in the footsteps of those whom they had so much condemned. The na- tion had now become disgusted with naval ope- rations. The people wished for a renewal of their victories in Flanders, and the king ardently joined in this desire. An army of 16,000 men was therefore embarked for Flanders, to take part in the contest then beginning on the conti- nent. To trace the origin of this, it is necessary

to go back for some years. The emperor Charles VI. dying October ■20th, 1740, the French court had thought this a favorable opportunity for ex- erting its ambition. Regardless of treaties, there- fore, particularly that called the Pragmatic Sanc- tion, by which the late emperor's dominions were settled upon his daughter Maria Theresa, the elector of Bavaria was now crowned emperor. Thus the queen of Hungary was at once stripped of her inheritance, and left for a whole year de- serted by all Europe. At the same time she lost the province of Silesia by an irruption of the young king of Prussia, who renewed his preten- sions to that province, of which his ancestors had been unjustly deprived. France, Saxony, and Bavaria, attacked the rest of her dominions: Bri- tain was the only ally that seemed willing to as- sist her; in which, however, Sardinia, Holland, and Russia, soon after concurred. It must be owned that Britain had no other reason for in- terfering in these disputes, than that the security of the electorate of Hanover depended upon nicely balancing the different interests of the em- pire; and the ministry were wilhng to gratify the king. His majesty informed the parliament, that he had sent a body of British forces into the Netherlands, which he had augmented by 16,000 Hanoverians, to make a diversion upon the do- minions of France, in favor of the queen of Hungary. When the supplies came to be con- sidered, by which this additional number of Hanoverian troops was to receive pay from Bri- tain for defending their own cause, most violent debates ensued ; but the ministry carried their point in parliament. They also effectually re- trieved the queen of Hungary's desperate affairs. The French were driven out of Bohemia, Her general, prince Charles, at the head of a large army, invaded the dominions of Bavaria. Her rival, the nominal emperor, was obliged to fly before her ; and being abandoned by his allies, and stripped even of his hereditary dominions, he retired to Frankfort, where he lived in obscurity. In the mean time, the British and Hanoverian army advanced, in order to effect a junction with that of prince Ciiarles of Lorrain. To prevent this, the French opposed an army of 60,000 men, under the command of the marshal de Noailles, who posted his troops on the east side of that river. The British army was commanded by the earl of Stair, who had been educated under the great prince Eugene ; nevertheless he suff'ered himself to be enclosed by the enemy on every side, near Dettingen. See Df.ttincf.n. In this situation, the whole army, with the king himself, who had by, this

time arrived in the camp, must have been taken, had the French behaved with prudence. Their impetuosity, however, saved our troops. Theypas'^ed a defile, which they ought to have contented themselves with guarding ; and, under the conduct of the duke of Grammonl, theirhorse charged the British foot with creat fury. Beins: received with equal resolution, they were at last oblitred to repass the Mayne with precipitation, and the loss of about oOOO men. But, though the British were victorious in this engagement, the French were not disconcerted by it. They opposed prince Charles, and interrupted his attempts to pass th«

Rhine. In Italy they also gained some advan- tages ; but their chief hopes were placed on an intended invasion of England. From the vio- lence of parliamentary disputes in England, France had been persuaded that the country was ripe for a revolution, and only wanted the pre- sence of the pretender to bring about a change. An invasion was therefore projected. The troops destined for the expedition amounted to 15,000 ; and preparations were made for embarking them at Dunkirk, under the eye of the young preten- der. The duke de Roquefuille, with twenty ships of the line, was to see them safely landed, and the famous count Saxe was to command them afterwards. But the whole project was disconcerted by the appearance of Sir John Nor- ris, who attacked them with a superior fleet. The French fleet was obliged to put back, and a very hard gale of wind damaged their trans- ports beyond redress. The national joy for Sir John Norris's success, however, was soon damp- ed by the miscarriage of admirals Matthews and Lestock ; who, through a misunderstanding be- tween themselves, suflfered a French fleet of thirty-three sail to escape them near Toulon. In the Netherlands the British arms were attended with still worse success. The French had there assembled an army of 120,000 men, commanded by count Saxe, natural son to the late king of Poland. The English were headed by the duke of Cumberland, who had an inferior army, and was very unequal in his knowledge of war to the French general. Count Saxe, therefore, carried all before him. In 1743 he besieged Fribourg, and in the beginning of the campaign, 1744, in- vested the strong city of Tournay. To save this place, if possible, the allies resolved to ha- zard an engagement; and on this ensued the bloody battle of Fontenoy, in which they left on the field of battle nearly 12,000 men, and the French almost an equal number. Tournay, in consequence of this victory, was soon after taken by the French. To balance this bad success, however, admirals Rowley and Warren had re- trieved the honor of the British flag, and made

several rich captures at sea. The fortress of Louisbourg, a place of great consequence to our commerce, surrendered to general Pepperell; while, a short time after, two French East India ships, and a Spanish ship from Peru laden with treasure, put into the harbour, supposing it still their own, and were taken.

During tliis appearance of returning success, Charles Edward, the son of James, the old pre- tender to the British crown, resolved to make an attempt to recover what he called his right. Being furnished with some money from France, he embarked for Scotland, on board a small fri- gate, accompanied by the marquis of Tullibar- dme, Sir Thomas Sheridan, and some others ; and, for the conquest of the whole British em- pire, only brought with him seven officers and arms for 2000 men. Fortune, however, seemed at first not more favorable to this attempt than to the former. His convoy, a ship of sixty guns, was so disabled in an engagement with an English man of war, that it was obliged to re- turn to Brest, while he continued his course to the western parts of Scotland. On the 27th of

July, 1745, he landed on the coast of Lochaber, and was joined by the Highlanders to the num- ber of 1500, before the ministry could be in- duced to credit his arrival. When they could no longer doubt it, they sent Sir John Cope with a small body of forces to oppose his progress. By this time the young adventurer was arrived at Perth, where he performed the ceremony of proclaiming his father king of Great Britain. From thence proceeding towards Edinburgh, with continually increasing forces, he entered the capital without opposition ; but was unable, from want of cannon, to reduce the castle. Here he again proclaimed his father ; and promised to dissolve the union. In the mean time Sir John Cope, being reinforced by two regiments of dragoons, resolved to give the rebels battle. They attacked him near Prestonpans, and in a few minutes put him and his troops to flight, with the loss of 500 men. Charles was now- joined by the earl of Kilmarnock, lord Balme- rino, lords Cromarty, Elcho, Ogilvy, Pitslisjo, and the eldest son of lord Lovat, who with their vassals considerably augmented his army. Lord Lovat himself, so remarkable for his treachery, was an enthusiast in favor of the pretender, but was unwilling to act openly for fear of the mi- nistry. While Charles trifled away his time, however, at Edinburgh, the British ministry were not idle ; they took 6000 Dutch troops into their pay, and despatched them northward under the command of general Wade. The duke of Cumberland soon after arrived from Flanders, and was followed by another detachment of well disciplined dragoons and infantry ; besides these, volunteers offered themselves to the government in every part of the kingdom. At last Charles resolved upon an irruption into England. He entered that country by the western border, and took Carlisle; after which he continued his march southwards, receiving assurances that a considerable body of forces would

be landed on the southern coasts, to make a diversion in his favor. He established his head quarters at Man- chester, where he was joined by about 200 Eng- lish, formed into a regiment under the command of colonel Townley. Thence he pursued his ex- traordinary march to Derby, intending to go by the way of Chester into Wales, where he hoped to be joined by a great number of mal- contents ; but in this he was prevented by the factions of his followers. Being now advanced within 130 miles of London, that capital was in the utmost consternation ; and, had he proceeded with the same expedition he had hitherto used, he might perhaps have made himself master of it. But the young pretender was in fact but the nominal leader of his forces ; his generals, the Highland chiefs, being averse to subordination, and ignorant of command. They were now unanimous in their resolution to return, and Charles was forced to comply. Retreating to- wards Carlisle, therefore, without any loss ; from thence they crossed the rivers Eden and Solway, and entered Scotland. They next marched to Glasgow, which they laid under severe contribu- tions, and, now advancing to Stirling, were joined by lord Lewis Gordon, at the head of some forces which had been assembled in the pretender's

absence. Other clans also came in ; and prince Charles's affairs altogether began to wear a promising aspect. He invested the castle of Stirling, and defeated general Hawle, who commanded a considerable body of forces near Falkirk, with the loss of their tents and artillery. This was the last triumph, how- ever, of the rebel army. The duke of Cumber- land arrived, and took the command of the royal troops at Edinburgh, which amounted to about 14,000 men. With these he advanced to Aberdeen, where he was joined by several of the nobility ; the enemy in the mean time retreating before him. He next advanced to the banks of the Spey, where the rebels might have disputed his passage ; but their contentions with one ano- ther were now risen to such a height, that they could scarcely agree in any thing. At last they resolved to await their pursuers ; when an en- gagement ensued at Culloden, in which they were defeated with great slaughter (See Cul- loden), and a final period was put to all the hopes of the young adventurer. The conquerors behaved with the greatest cruelty, refusing quar- ter to the wounded, the unarmed, and the de- fenceless ; some were slain who had only been spectators of the combat, and the king's soldiers anticipated the base employment of the execu- tioner. The duke immediately after the action ordered thirty-six deserters to be executed : and, after a short space, the whole country round was one dreadful scene of plunder, slaughter, and desolation. Prince Charles, after a variety of surprising adventures and narrow escapes, not- withstanding the highest

rewards were offered to apprehend him, arrived safely in France. Meantime the scaffolds and gibbets were erect- ed for his adherents ; seventeen officers were hanged, drawn, and quartered, at Kennington, in the neighbourhood of London ; nine at Car- lisle, and eleven at York. A few obtained par- dons, and a considerable number were trans- lorted to America. The earls of Kilmarnock and Cromarty, and lord Balmerino, were tried and found guilty of high treason. Cromarty was pardoned : but Kilmarnock and Balmerino were executed ; as was also Mr. lladcliffe, bro- ther to the late earl of Derwentwater, who was sentenced upon a former conviction. Lord Lovat was tried, and suffered some time after.

Immediately after the suppression oftherebel- ion the legislature undertook to establish several regulations respecting Scotland,which were equal ly conducive to the happiness of the people and the tranquillity of the united kingdoms. The High- landers had till this time continued to wear the military dress of their ancestors, and never went without arms. They considered themselves in consequence a body of people distinct from the rest of the nation, and were ready upon the shortest notice to second the insurrections of their chiefs. An act of legislature now com- pelled them to discontinue the national ha- bit : but what contributed still more to their felicity was, the abolition of that hereditary ju- risdiction which their chieftains exerted over them. Soon after the battle of Culloden the duke of Cumberland returned to Flanders, where he resumed the command of an army, to

which he was by no means equal. The French carried every thing before them ; and reduced under their dominion all those strong towi > s which had been taken by the duke of Marlbo- rough, and formed a barrier to the United Pro- vinces. They gained a considerable victory at Roucroux ; which, however, cost them as many men as they destroyed of the enemy ; but these they could easily spare. Another victory, which they obtained at La Feldt, served to depress the allied array still lower. But the taking of Ber- gen-op-Zoom, the strongest fortification of Bra- bant, reduced the Dutch to a state of desperation. These victories of the French in Flanders were, however, counterbalanced by almost equal dis- appointments. In Italy the marshal Belleisle's brother, attempting to penetrate at the head of 34,000 men into Piedmont, was defeated and killed. A fleet was fitted out for the recovery of Cape Breton, but without success. Two others were then fitted out, one to make a de- scent upon the British colonies in America, and the otlier to carry on the operations in tlie East Indies ; but these were attacked by Anson and Warren, and nine of their ships taken. Not long after this, commodore Fox, with six ships of war, took above forty French ships richly laden from St. Domingo ; and, soon after, the French fleet was defeated by admiral Hawke, who took seven ships of the line and several frigates. For a long time Louis XV. had been desirous of a general

tranquillity ; but now the ill success of his admirals at sea, and of his armies in Italy, the frequent bankruptcies of merchants at home, and the election of a stadtholder in Hol- land, who gave spirit to the opposition, contri- buted to make him weary of the war, and to propose terms of accommodation. A congress, therefore, was held at Aix-la-Chapelle, where a treaty of peace was concluded on the follow- ing terms : 1. That all prisoners on each side should be mutually given up, and all conquests restored. 2. That the duchies of Parma, Pla- centia, and Guastalla, should be ceded to Don Philip, iieir apparent to the Spanish crown; after whom these dominions should return to the house of Austria. 3. That the fortifications of Dun- kirk towards the sea should be demolished ; and that the British ship annually sent with slaves to the coast of New Spain should have this privi- lege continued for four years. 4. That the king of Prussia should be confirmed in the possession of Silesia, and that the queen of Hungary should be secured in the possession of her patrimonial dominions. Tlie most mortifying clause to this country was, tliat the king of Great Britain should, immediately after the ratification of the treaty, send two persons of rank to France as hostages, until restitution should be made of Cape Breton and all other British conquests made during the war.

In 1751 died Frederic prince of Wales, of a pleurisy. He was greatly regretted ; for his good nature had rendered him popular; and those wlio opposed administration had grounded their hopes of redress upon his accession to the throne. Some time before this, viz. in 1749, a scheme was entered upon for encouraging those who had been discliarged from t'.ie army or navy to be-

come settlers in Nova Scotia. On account of ihis cold and barren spot, the English and 1 rench renewed the war, which soon after spread with such terrible devastation over every part of tlie globe. The possession of this country was reckoned necessary to defend the English colo- nies to tiie north, and to preserve their superiority in the fisheries in that part of the world. The French, however, who had been long settled in the back parts, resolved to use every method to dispossess the new comers, and urged the Indians to begin hostilities. Another source of dispute also sprung up soon after, in the same part of the world. The French, pretending to have tirst discovered the mouth of the Mississippi, claimed the whole adjacent country towards New Mexico on the east, to the Apalachian Mountains. In order to assert their claims, they dispossessed several English settlers of their homes, and built such forts as would command the country. Negociations, and mutual accusa- tions, first took place between the two

*powers ; at length, in 1736, four operations were undertaken by the British in America at once. Colouel Monkton had orders to drive the French from their encroachments upon the province of Nova Scotia. General Johnson was sent against Crown Point ; general Shirley against Niagara, to secure *he forts on the river ; and general Braddock against Fort du Quesne. In these expeditions, Monkton was successful ; Johnson also was vic- torious, though he failed in taking the fort against which he was sent ; Shirley was thought to have lost the season of operation by delay; r.nd Braddock was defeated and killed. In re- • urn for this ill success, the British made reprisals at sea; so that the French navy was unable to recover itself during the continuance of the war. Once more, at this period, the French re- newed the threat of an invasion. Several bodies of troops were sent down to the coast opposite the British shores ; and were instructed in the manner of embarking and relanding from flat- bottomed boats. The number of men thus trained amounted to 50,000. The British rainis- iry were greatly alarmed. But when they ap- plied to the Dutch for 6000 men, which they were by treaty obliged to furnish in case of an invasion, this supply was refused; the Dutch alleging that their treaty was to send the troops in case of an actual, not a threatened, invasioa. Upon this, 10,000 Hessians and Hanoverians were brought over, which occasioned great dis- content. The ministry were upbraided for such disgraceful condescension, as if the nation was unable to defend itself. The invasion, however, never took place ; but a French army landed in Minorca, and invested the citadel of St. Philip, reckoned the strongest in Europe ; but the gar- rison was weak, and no way fitted to stand a siege. To raise this siege, therefore, admiral Byng was despatched with a squadron of ten men of war. His orders were to relieve iMinorca, or, at any rate, to throw a body of troops into the garrison. On arriving at the island, he con- S'.dered this last too hazardous an undertaking. Soon afterˆ a French fleet appeared nearly equal jn force to his own ; but the admiral resolved to act only upon the defensive. The French ad-*

vanced; a slight engagement ensued with part of the English fleet ; after which the enemy slowly sailed away, and another opportunity never occurred of coming to a close engagement. It was now resolved m a council of war to re- turn to Gibraltar to refit, and that the relief of Mmorca was impracticable. For this conduct Byng was brought home under arrest, tried, and sentenced to be shot. He suffered with the greatest resolution, after delivering a paper filled with protestations of his innocence, and was evi- dently a sacrifice to party. After the conquest of Mmorca, the French declared that they would revenge all injuries they should sustain in their colonies, on the king of Britain's dominions in Germany. Upon this, the court of London, eager to preserve Hanover, entered into a treaty with Russia,' by which it was stipulated, that a body of 50,000 Russians should

be ready to act in the British service, in case Hanover should be invaded. For this the czarina was to receive £100,000 annually, to be paid in advance.

This treaty was opposed by the king of Prussia. He had long considered himself as guardian of the interests of Germany, and was therefore alarmed at a treaty which threatened to deluge the empire with an army of barbarians. Besides, he was already apprised of an agreement between the Austrians and Ptussians, by which the latter were to enter the empire and strip him of his late conquest of Silesia. He therelore declared that he would not suffer any foreign forces to enter the empire either as auxiliaries or prin- cipals. The king of Great Britain now there- fore found himself obliged to drop his Russian connexion, and conclude a treaty with Prus- sia. As both monarchs wished only to pre- vent the invasion of Germany, they soon came to an agreement mutually to assist each other ; and from this alliance a new combination took place among the European powers. Britain op- posed France in America, Asia, and on the ocean. France attacked Hanover; which the king of Prussia undertook to protect, while Britain promised him troops and money to assist his operations. Austria had her eye on the do- minions of Prussia, and drew the elector of Saxony into the same designs. In these views the Austrians were seconded by France, Sweden, and Russia, who had hopes of acquiring a settle- ment in the west of Europe. Thus the king of Prussia launched into the tumult of war, having only Great Britain for his ally, while the most potent states of Europe were his antagonists. The British ministry, in order to procure a diver- sion in his favor, planned an unsuccessful enter- prise against the coast of France. It ended in seizing the little island of Aix, an easy and an useless conquest. By this miscarriage the minis- try were so discouraged that they had thoughts of abandonina; the king of Prussia to his fate ; but success, which had long fled from the British arms, now dawned upon them from the east. For a particular account of the operations alluded to, see HixDOSTAN. Their conquests in the western world, too, were about this time equally splendid. An expedition was set on foot against Cape Breton, vinder general Amherst and admiral Boscawen ; another, under general Abercromby,

against Crown Point and Ticonderago ; and a third, under brigadier general Forbes, against Fort du Quesne. The fortress of Louisburg, wiiich defended the island of Cape Breton, was very strong both by nature and art ; the garrison was numerous, the commander vigilant, and every precaution had been taken to])revent a landing. But the activity of the British sur-

mounted every obstacle ; the place was sur- rendered by capitulation, and its fortifications were demolished. The expedition against Fort du Quesne was equally successful ; but that against Crown Point once more miscarried. General Abercromby attacked the French in their entrenchments, was repulsed with great slaughter, and obliged to retire to his camp at Lake George. But, though in this respect the British arms were unsuccessful, yet, upon the whole, the campaign of 1758 was greatly in their favor. l"he taking of Fort du Quesne served to remove from their colonies the terror of the in- cursions of the Indians ; while it interrupted that correspondence, along a chain of fofts, with which the French had environed the British settlements in America. In 1759 it was also resolved to assault the French in several parts of their empire. General Amherst, with a body of 12,000 men, was commanded to attack Crown Point; General Wolfe was to undertake the siege of Quebec ; while general Prideaux and Sir William Johnson were to attempt a French fort near the cataracts of Niagara. This last ex- pedition was the first that succeeded. The siege was begun with vigor, and promised an easy conquest ; but Prideaux was killed in the trenches by the bursting of a mortar, so that the whole command devolved on general Johnson. A body of French troops attempted to relieve it, but were defeated and dispersed ; soon after which the garrison surrendered prisoners of war. On his arrival at the forts of Crown Point and Ticonderago, general Amherst found them de- serted and destroyed. There now remained, therefore, but one decisive blow to reduce all North America under the British dominions; and this was the taking of Quebec, the capital of Canada. See Quebec This expedition was commanded by admiral Saunders and general NN'olfe. The enterprise was attended with diffi- culties which appeared insurmountable ; but all were overcome by the conduct of Wolfe, and the bravery of his men. He engaged and put to flight the French under Montcalm ; but, to the great regret of the nation, was killed in the ac- tion. The surrender of Quebec was the conse- quence of this victory, which was soon followed l>y the cession of all Canada. The following season, indeed, the French made a vigorous ef- fort to recover the city ; but the resolution of governor Murray, and the appearance of a Bri- tish fleet under the command of lord Colvil, obliged them to abandon the enterprise. The '/'hole province was soon after reduced by gene- ral Amherst, and it has since remained annexed to the British empire. About tiie same time the island of (Juadaloupe was reduced by commo- dore I\Iore and ceneral Hopson.

The British affairs in Germany liad at the be- ginning of the war worn a very uiiAxvorablc as-

pect. The Hanoverians were commanded by the duke of Cumberland, who was greatly out- numbered by the enemy. He was driven beyond the Weser, the passage of which might have been disputed, but the French were

suffered to pass it unmolested. The Hanoverians were driven from one part of the country to another, till at length they made a stand near Hastenbeck, where it was hoped the numbers of the enemy would have the least opportunity of being used to ad- vantage. The Hanoverians, however, left the field to the French, after a faint resistance. Their enemies pursued, and tlie duke retired towards Stade. Here, unable either to escape or advance, he was compelled to sign a capitulation, by which the whole army laid down their arms, and were dispersed into difi'erent quarters of cantonment. By this remarkable capitulation, which was called the capitulation of Closter Seven, Hanover was obliged to submit quietly to the French, who were now determined to turn their arms against the king of Prussia. But soon after both sides began to complain that the treaty was not ob- served. The Hanoverians exclaimed against the rapacity of the French general and the brutality of his soldiers. The French, retorting the charge, accused them of insolence and insurrection ; and, beina: sensible of their own superiority, resolved to bind them strictly to their terms of agreement. The Hanoverians only wished for a pretence to take arms, and a general to head them. Neither was long wanting. The oppressions of the tax- gatherers, whom the French had appointed, were considered as so severe, that the army rose to vindicate the freedom of their country, while Ferdinand, prince of Brunswick, put himself a their head. As soon as this was known in Bri- tain large supplies were granted, both for the service of the king of Prussia and to enable the Hanoverian army to act vigorously in conjunction with him. A small body of British forces was sent over to join prince Ferdinand under the duke of Marlborough. After some inconsider- able successes at Crevelt, the duke of]\Iarlbo- rough dying, tlie command of the British forces devolved on lord George Sackville. A misun- derstanding arose, however, between him and prince Ferdinand, which appeared at the battle of Minden that was shortly after fought. Lord George pretended that he did not understand th< orders sent him by the prince, and of conse quence did not obey them ; and, although tht allies gained the victory, it would have been more decisive had the British commander obeyed his orders. He was soon after recalled, tried by a court-martial, found guilty of disobedience, and declared incapable of serving in any military command. After this victory it was imagined that one reinforcement more, of British troops, would terminate the war in favor of the allies : and this was quickly sent. The British army in Germany was augmented to upwards of 30,000 men : and sanguine hopes of conquest were en- tertained. These hopes, however, were soon seen to be ill founded. The allies were defeated at Corbach ; but retrieved their honor at F.xdorf. A victory at Warbourgh followed shortly after, and another at Ziernberg : but they snffcrod a defeat at Compen ; after which both sides re-

tired into winter quarters. On the 25th of Oc- tober, 1760, king George II. died. He had risen at his usual hour, and observed to his attendants that, as the weather was tine, he would take a walk in the gardens of Kensington, where he then resided. In a few minutes after, being left alone, he was heard to fall down upon the floor ; and, the noise bringing his attendants into the room, he desired, with a faint voice, that the princess Amelia might be sent for ; but, before she could reach the apartment, he expired, in the seventy-seventh year of his age, and thirty-third of his reign. An attempt was made to bleed him, but without effect; and the surgeons afterwards, upon opening him, discovered that the right ventricle of the heart was ruptured, and a great quantity of blood discharged through the aper- ture.

6. Gr-eat Britain under the reign of George III. until the revolt of the American Colonies. — Our late excellent sovereign, George III., as- cended the throne amidst the greatest successes both by sea and land. At this time, indeed, the efforts of Britain, in every quarter of the globe, were truly astonishing. The king of Prussia re- ceived a subsidy; a large body of English forces commanded the extensive peninsula of India; another army of 20,000 men confirmed their conquests in North America ; 3O,000 men were employed in Germany ; and many more •were dispersed in garrisons in different parts of the world : but all this was surpassed by the good fortune of our naval force, which carried command wherever it came, and had totally an- nihilated the French maritime power.

When the young king met his parliament, which was opened November 18th, 1760, he confirmed the hopes of his allies, and gave as- surances of his intentions to prosecute the war with vigor. By this time, however, the people were in some measure weary of conquests in Germany, from which they could never hope for any solid advantage. For some time, however, no change took place in the method of carrying on the war. But in 1761, proposals of peace being made between the belligerent powers, Mr. Stanley was sent to Paris to negociate a peace, and Mr. Bussey to London ; but the French court, hoping to draw Spain into a confederacy, was not sincere in its professions, and the treaty came to nothing. An enterprise was projected at this time against the island of Belle-isle, near the coast of France, which was conducted by commodore Keppel and general Hodgson. See Belle-Isle. The place was taken, with the loss of 1800 men killed and wounded ; and, though it was a conquest of no great moment, the re- joicings on account of it were great. In Ger- many the campaign was unsuccessful on the part of the allies. At first, indeed, they drove the French out of the territory of Hesse, and laid siege to the city of Cassel ; but, being de- feated at Stangerod, they were forced to raise the siege, retire behind the Dymel, and

again abandon Hesse. Here they were followed and attacked by the French ; who, though defeated in that attempt, were with difficulty prevented from making themselves masters of Munster and Brunswick. All ttiis time an appearance of ne-

gociation had been carried on ; until the French, at last, having brought their designs with the court of Spain to an issue, Mr. Bussey delivered to Mr. Pitt a memorial, signifying that, in order to establish the peace on a lasting foundation, the kmg of Spain might be induced to guarantee the treaty : and, to prevent the difterences which then subsisted between Britain and Spain from producing a fresh war in Europe, he proposed that, in this negociation, the three points which had been disputed be- tween the crowns of England and Spain might be finally settled: — 1. The restitution of some captures made upon the Spanish flag; 2. The privilege of the Spanish nation to fish upon the banks of Newfoundland ; 3. The demolition of the English settlements made in the bay of Hon- duras. Mr. Pitt in reply, however, declared that it would be considered as an affront to the dignity of his master, and incompatible with the sincerity of negociation, to make any fartlier mention of such a proposal ; and, being now thoroughly convinced of the sinister designs of Spain, he proposed immediately to declare war against that kingdom. On this proposal being rejected, he resigned : after which he was created earl of Chatham, and had ˆ pension of £3000 per annum settled upon him for three lives.

Soon after this, however, the new administra- tion found it necessary to declare war against Spain. This involved our ally, Portugal ; the French and Spaniards resolving to attack that kingdom, which was then in no capacity to defend itself. Joseph, the Portuguese monarch, was, by the most haughty memorials, commanded to ac- cede to the confederacy against Britain, and threatened with the vengeance of France and Spain in case of refusal. In vain he promised to observe a strict neutrality, and urged the obliga- tions he was under to the king of Britain ; this moderate and reasonable reply only drew on more' haughty and insulting answers. This prince, however, continued to reject their proposals in the most resolute manner ; and concluded his fi- nal declaration by observing that * it would affect him less, though reduced to the last extremity, of which the great Judge is the sole arbiter, to let the last tile of his palace fall, and to see his faith- ful subjects spill the last drop of their blood, than to sacrifice the honor of his crown, and to submit, by such extraordinary means, to become an unheard of example to all pacific powers.' As the design of the courts of France and Spain, in making war with Portugal, was professedly to deprive Great Britain of the military and com- mercial use of the ports of that kingdom, their principal efforts were directed against the two great .ports of Oporto and Lisbon. With this view three inroads were made into that country, one to the north, another more to the south, and the third in

the middle provinces. The first l^ody of troops was commanded by the marquis of Savria ; and entered the north-east angle of Portugal, marching towards Miranda; where, a powder- magazine having been blown up by accident, the Spaniards entered on the 9th of May by the breaches made by the explosion. Thence they marched to Braganza, which surrendered six days after Miranda. Moncorvo was taken in like manner :

every thing was clear before them to tlie banks of the Douro ; and they became masters of almost the whole extensive province of Tralos Montes. Oporto was now considered as lost, and the admiralty prepared transports to carry off the effects of the British merchants. On the banks of the Douro, however, the career of the enemy was stopped. The peasants, animated and guided by some British officers, seized a difficult pass, and drove the enemy back to Mon- corvo. The second body of Spaniards entered the province of Beira, at the villages called 'al de IVJulo and Val de Coelha, and laid siege to Almeida, the strongest and best provided place on the frontiers of Portugal. This place was de- fended with sufficient resolution ; but was obliged to surrender on the 25th of August. The Spa- niards then over-ran the whole territory of Castel Branco, a principal district of Beira, making their way southward to the banks of the Tagus. Dur- ing their whole progress, and indeed during the whole of the campaign, the allied troops of Great Britain and Portugal had nothing that could be called an array in the field. All that could be done was by the defence of passes, and skirmishes. The third Spanish army had assembled on the frontiers of Estremadura, with a design to invade the province of Alentejo. To prevent this, bri- tradier general Burgoyne was despatched to attack an advanced body on the frontiers, in the town of Valenlia de Alcantara. On the 27th of August the town was surprised ; the Spanish general taken, who was intended to command in the invasion, together with one colonel, two captains, and seventeen subaltern officers ; one of the best regiments in the Spanish service was also entirely destroyed. Colonel Lee harassed their subsequent attempts in this directions : un- til, the season being far advanced, immense quantities of rain fell ; the roads were destroyed , and the Spaniards, having seized no advanced posts, where they could maintain themselves, and being unprovided with magazines, every where fell back into Spain.

No less successful were the British arms in America and the East Indies. From the French were taken the islands of Martinico, St. Lucia, St. Vincent, and Granada ; from the Spaniards the strong fortress of Havannah, in Cuba. By the ac- quisition of the first mentioned islands, the British became the sole and undisturbed pos- sessors of all the Carribees ; and that chain

of iimumerable islands which extend from the eastern point of Hispaniola to the continent of Soutli America. The conquest of the Havannah cost a number of brave men, Init more were destroyed by the climate than the enemy. Nine of the enemy's men of war, witli four frigates, were taken here ; three of their capital ships were sunk in the harbour at the beginning of the siege, and two more on the stocks, in great for- wardness, were destroyed. In money and valu- able merchandise, the plunder did not fall short of £3,000,000 sterlinij. To this .success in the western part of the world may be added the cap- ture of the Spanish register-ship, called Ilermione, supposed to be worth £l ,000,000 sterlin?, by the Active and Favorite, kinu's ships. This happened on the 21st of May, 17G2, just as she

was entering one of the ports of Old Spain. In the East Indies an expeditioii was undertaken against the Philippine Islands, which was com- mitted to colonel Draper, who arrived for this purpose at Madras in the end of June 1762. The seventy-ninth regiment was the only regular co-ps that could be spared for this service. Every thing was conducted with the greatest celerity and judgment. The British forces landed on Manilk on the 24th of Sept. ; on the 6th of October the governor surrendered at discretion; and soon after the galleon bound from Manilla to Acapulco, laden with rich merchandise to the value of more than half a million, was taken by the Argo and Panther frigates. By the conquest of Manilla, fourteen considerable islands fell into the hands of the British ; which, from their extent, fertility, and convenience of commerce, furnished the materials of a great kingdom. By this acquisition, also, joined to our former suc- cesses, we secured all the avenues of the Spanish trade, and interrupted all communication be- tween the parts of their vast but unconnected empire. The conquest of the Havannah had cut off in a great measure the intercourse of their wealthy continental colonies with Europe : the reduction of the Philippines excluded them from Asia ; while the plunder taken was far more than sufficient to indemnify the charges of the expedi- tions. All this time the war in Germany had been prosecuted with the utmost vigor; the allies under prince Ferdinand had continued to give the highest proofs of their valor, but no de- cisive advantage could be obtained against the French. It was, therefore, no longer the interest of Britain to continue a destructive war; and the French and Spaniards were desirous of a peace which was at length concluded at Paris on the 10th of February, 1763. The terms granted the enemy were but too favorable. The principal were. That the French king should relinquish all claims to Nova Scotia ; that he should likewise give up all Canada ; and that, for the future, the boundary betwixt the British and French domi- nions in America should be fixed by a line drawn along the middle of the river INIississippi, from its source to the river Ibberville; and thence by a line along the middle of this river, and the lakes Manrepas and Pontchartrain, to the sea. The islands of

St. Pierre, Miejuelon, Martinico, Guadaloupe, Marigalante, Desirade, St. Lucia, and Belle-isle, were restored to France ; Minorca, Granada, and the Grenadines, St. Vin- cent, Dominica, and Tobago, were ceded to Britain. In Africa, the island of Goree was restored to France ; and the river Senegal, with all its forts and dependencies ceded to Great Britain. In the F.ast Indies, all the forts and factories taken from the French were restored. In Europe, the fortifications of Dunkirk were to be destroyed ; and all the countries, fortresses, &c., belonginf^ to the elector of Hanover, the duke of Brunswick, and the count of La Lippe Buckebur^', restored. With regard to Spain, the British fortifications on the Bay of Honduras were to be demolished ; and the Spaniards were to desist from their claim of a right to fish on the Newfoundland bank. The Havannah was re- stored; in consequence of which, Florida, St,

Augustine, and the bay of Pensacola, were ceded to Britain, and the Spaniards were to make peace with Portugal; all other countries not parti- cularly mentioned were to be restored to their respective owners at the beginning of the war.

The conclusion of the war did not by any means tend to heal those domestic divisions, which had arisen on the resignation of Mr. Pitt; on the contrary, it furnished abundant matter of complaint for the discontented party. At the time the treaty was under consideration, how- ever, only some faint attempts were made to op- pose it; but it soon appeared, that, though this opposition had proved so feeble, the spirit of the party was far from being exhausted. The state of affairs at that time indeed greatly favored the views of those who opposed the ministry. A long and expensive war had drained the national treasure, and greatly increased the public debt. Heavy taxes had already been imposed, and it was still as necessary to keep up these, and even to impose new ones, as if the war had not ceased. Thus the bulk of the nation, who imagined that conquest and riches ought to go hand in hand, were easily induced to believe that administra- tion arbitrary and oppressive, which continued to load them with fresh taxes, after such great successes as had attended the British arms. It must be owned, that the new administration were not sufficiently wary in this respect. Among other methods of raising the supplies for 1763, they had thought proper to lay a duty of 4s. per hogshead upon cyder, payable by the maker, and to be collected in the same manner as other ex- cise imposts. The other articles of supply fur- nished also matter of declamation for the members in opposition ; but this inflamed the popular fury to a great degree, and made them readily imbibe as truth whatever was thrown out by the minority.

Besides the usual statements, that it was oppressive, unconstitutional, and injurious to the land-holder and farmer, the smallness of the sum to be raised by it was now urged. This was £aid to indicate, that the supplying the wants of government could not be the sole motive for imposing such a duty. The city of London, therefore, instructed their representatives to oppose the passing of the bill with all possible vigor, and sent in petitions against it to each branch of the legislature ; a measure till that time totally unprecedented : two protests were also entered against it in the house of lords ; in short, all England was thrown into a ferment on the subject. Virulent libels, the audacity of which far exceeded any thing known in former times, now made their appearance: and such was the general intemperance in this respect, that it would be difficult to determine which side paid least regard to any kind of decency or de- corum. In the midst of this general ferment, the earl of Bute unexpectedly resigned his place of first lord of the treasury.

The popular resentment against government was not, however, in the least abated by lord Bute's resignation. His lordship, though with- drawn from the ostensible administration of affairs, was still considered as principal director of the cabinet ; and this opinion gained the more ground, as none of the popular leaders were ad-

mitted, nor any other change made in the con- duct of administration. Not that moderate men could find any reasonable objection to those who filled the great offices of state. Mr. Gren ville, who succeeded the earl of Bute in the treasury, was a man of acknowledged integrity, understanding, and experience. Lord Holland was universally considered as an able statesman, and lord Egremont, the third secretary, though he had not been long in office, conciliated the esteem of all parties. The other departments were filled in a similar manner; yet the discon- tents and public clamors were not diminished. It was still insisted that a secret cabinet of the king's friends, as they were called, controlled every thing : and that, according to the spirit of the constitution, the crown should be directed in the choice of its ministers by motives of national utility, not by private friendship. When minis- ters found themselves recommended to the royal favor, and as it were presented to their places by the esteem of the people, they would be studious, it was said, to deserve and secure themselves ir it ; and that upon these (which were called the principles of wliigs) the government had been honorably conducted since the revolution. The disposition to libel and invective, in the mean time, exceeded all bounds. The peace, the Scots and Scottified administration, afforded such sud jects of abuse to the patriots, real and preteuaed, that ministry resolved at last to make an example of one of them. The paper called the North Briton, in language much superior to any other political work of the time, except Junius's Let- ters, had abused the king, the ministry, and the Scots in an extravagant manner. One particular

paper. No. XL\ˆ, was deemed by those in power to be actionable, and John Wilkes, Esq. M. P. for Aylesbury, was supposed to be the author. A secretary of state's warrant was therefore issued for apprehending the author, publishers, &c., of this performance, but without mentioning Wilkes's name. Three messengers accordingly entered his house on the night of the 29th of April, 1763, with an intention to seize him. He objected, however, to the legality of the warrant, because his name was not mentioned in it, and to the lateness of the hour ; and they thought proper to retire for the night. Next morning he was apprehended with some violence, and taken before the secretaries of state for examination. On the first intimation of Mr. Wilkes's being in custody, application was made for a writ of habeas corpus. In the interim his papers were seized, and, after it was ascertained that the writ was obtained, he was committed to the tower. Here not only his friends, but several noblemen and gentlemen of the first distinction, were denied access; nor was even his own brother allowed to see him. On the 3d of May he was brought before the court of common pleas, where he made a most patriotic speech, setting forth the love he had for his majesty, the bad conduct of ministry, with his own particular grievances ; and that he had been treated ' worse than a Scotch rebel.' His case being argued by several eminent lawyers, he was remanded to the tower for three days ; after which he was ordered to be finally brought up. Next day lord Temple re-

ceived a letter from secretary Egremont, inform- ing him, that the king judged it improper that Mr. Wilkes should continue any longer a colonel of the Buckinghamshire militia; and, soon after, that nobleman was removed from the lord lieu- tenancy of that county. Mr. Wilkes being brought to Westminster Hall, at the time ap- pointed, the judges decided that the warrant of a secretary of state was in no respect superior to that of a common justice of peace ; and, on the whole, that ˆIr. Wilkes's commitment was illegal. It was determined, also, that his privilege as member of parliament had been infringed, and that this could not be forfeited but by treason, felony, or breach of the peace ; none of which was imputed to him ; for a libel, even if it had been proved, had only a tendency to disturb the peace, without any actual breach of it. It was resolved, therefore, to discharge him. Mr. Wilkes had no sooner regained his freedom than he wrote and printed a letter to the earls of Egremont and Halifax, informing them that his house had been robbed, and that the stolen goods he understood were in the pos- session of one or both of their lordships. He erected a printing press in his own house ; from whence the North Briton again made its ap- pearance ; the popular party were elated beyond

measure with their success ; while those who had suffered by general warrants sought redress at law, and commonly obtained damages far beyond their real sufferings. During the whole summer the minds of the people were kept in continual agitation by political pamphlets and libels of various kinds, while the affair of general warrants so engrossed the public attention, that by the time parliament met, November 15th 1763, scarcely any other subject was agitated.

His majesty, in his speech, mentioned the at- tempts that had been made to divide the'people ; and, before the addresses could be made in return, a message was sent to the commons, in- forming tliem of the offence of]\Ir. Wilkes, and of the proceedings taken against him ; the ex- ceptionable paper being laid before the house. After warm debates, the North Briton was de- clared to be a false, scandalous, and seditious libel, tending to excite traiterous insurrections, &c. This was followed by another declaration, that the privilege of parliament does not extend to the writing and publishing of seditious libels, nor ought to obstruct the ordinary course of the laws in the syjeedy and eflfectual prosecution of so heinous and dangerous an offence. This did not, however, pass the commons without a vigo- rous opposition, and seventeen members of the upper house protested against it. The North Briton, No. XL'., being thus condemned, was ordered to be burnt by the common hangman ; but this was not attempted without creat oppo- sition from the mob. The constables, officers, &c., were pelted and insulted in the grossest manner. Mr. Harley, one of the sheriffs, was wounded by a billet tnken from the fire; and the whole civil force driven from the field, while the remains of the paper were carried off in triumph from the flames, and in return a large jack boot as a species of effigy of lord Bute) was burnt

at Temple Bar. Mr. Wjlkes in the mean time commenced an action in the court of common pleas against Robert Wood, Esq., the under secretary of state, for seizing his papers, and Wood was condemned in £lOOO damages and costs. On the other hand the prosecution, with which Wilkes had been threatened, was now carried on with great vigor ; but he having now grossly affronted Samuel iNIartin, Esq., member for Camelford, by his abusive language in the North Briton, he was challenged by that gentle- man, and dangerously wounded in the abdomen. The house of commons delayed their proceed- ings therefore from time to time ; but, beginning at last to suspect that there was some collusion between him and his physician, they enjoined Dr. Heberden, and Mr. Hawkins an eminent surgeon, to attend him, and report upon his case. These gentlemen Mr. Wilkes did not think proper to admit to visit him ; but soon after retired to France. On this the commons, having certified that he had refused to admit the physician and surgeon sent by them, proceeded to expel him from their house, and the lords resolved that he had committed a breach of their

privileges in an obscure and blasphemous pamphlet, in which he had libelled one of the bishops. The event of all was, that, failing to appear to answer the charges against him, he was outlawed. This severity, however, against Mr. Wilkes did not at all extinguish the spirit of the party. A sort of infatuation in favor of licentious and abusive writings seemed to prevail. The common council of London presented their thanks to the city representatives, for their zealous and spirited en- deavours to assert the rights and liberties of the subject, ‘ by their laudable attempt to obtain a seasonable and parliamentary declaration, that a general warrant for apprehending and seizing the authors, printers, and publishers of a seflitious libel, together with their papers, is not warranted by law ;’ and evinced their gratitude to lord chief justice Pratt, for his decision in Wilkes’s affair, by presenting him with the freedom of the city, and desirin? him to sit for his picture to be placed in their Guildhall.

The public business, however, at last gained attention. The practice of franking blank covers, to go free per post to any part of Great Britain or Ireland, had arisen to an incredible height, and greatly prejudiced the revenue. As a re- medy for this the following act was passed, viz. That from the 1st of May 1764 no letters or packets should be exempted from postage, except such as were sent to or from the king ; or such as, not exceeding two ounces in weight, should be signed by a member of either house, the whole of the superscription being in his own handwriting; or such as should be directed to members of parliament, or other persons speci- fied in the act. It was likewise enacted, that printed votes and proceedings in parliament, sent without covers, or in covers open at the sides, and only signed on the outside by a men her, should go free, though sucli packets were liable to be searched ; and, to give the greater force to these reuulations, it was made felony and transportation for seven years to forge a franK

Other plans for augmenting the revenue were that for settling the island of St John, and for the sale of the lately acquired American Islands. The former was proposed by the earl of Egre- mont, who presented a memorial to his majesty, desiring a grant of the whole island, to hold the same in fee of the crown for ever ; specifying the various divisions, government, Sec, but, for rea- sons unknown, the plan was never put in execu- tion. The sale of the conquered lands took place in March 1764. These were Grenada, the Gre- nadines, Dominica, St. Vincent, and Tobago. Sixpence an acre was to be paid as a quit rent for cleared lands ; a penny a foot for ground rent of tenements in towns ; and sixpence an acre for fields ; but no person

was to purchase more than 300 acres in Dominica, or 500 in the other islands. One of the most remarkable transac- tions of this year was the renewal of the charter of the bank, for which the latter paid the sum of £1,100,000 into the exchequer, besides advan- cing £1,000,000 to government upon exchequer bills.

*Another, and, by its consequences, still more momentous aifair, was the consideration of me- thods to raise a revenue from the American colo- nies. This had been formerly proposed to Sir Robert Walpole ; but that prudent minister said * he 'would leave the taxation of the colonies to those who came after him.' Before this lime, indeed, hints had been thrown out, that it was not impossible for the colonists to withdraw their dependence on Great Britain : and some disputes had taken place between the different provinces, which were quieted only by the fear of the French. It was thought proper, therefore, now, when the colonies were not only secured but extended, to make this important experiment. They contained more than 2,000,000 of subjects ; and it was considered by the ministry, as well as the vast majori'ty of the nation at home, both just and necessary to raise a revenu-e from such a nu- merous portion of the people. In an act there- fore, which was now passed for preventing smug- gling, certain duties laid on the American com- merce were ordered to be paid into the hands of government. At this time an illicit trade was carried on betwixt the British and Spanish colo- nies, which seemed to bid defiance to all law and regulation ; and was no less disagreeable to the Spanish than to the British court. In some re- spects, however, the suppression of this was very inconvenient, and even intolerable to the colo- nists ; for, as the balance of trade with Britain was against them, it was impossible they could procure any specie, except by trading with the Spaniards, from whom they were paid for their goods in gold and silver. This, and another act requiring them to pay certain duties in cash, was probably the reason of that excessive resent- ment shown by the Americans to government, and their absolute refusal to submit to the stamp act, which was also passed this year.*

The increase of the revenue being a chief ob- ject of administration at this time, the suppres- sion of smuggling at home, as well as in America, was taken into consideration. Though the great number of cutters and other vessels fitted out by government for this purpose had produced very

salutary effects, the isle of Man, which belonged to the duke of Athol, and was not subject to the custom-house laws, lay so conveniently for the purposes of illicit trade, that the utmost vigilance of government was not sufhcient to suppress it. The event was a treaty betwixt government and the duke, by which the latter, for a sum of money, ceded the sovereignty of the island. This disposition to augment the revenue by all possible methods, served to keep up the general opinion of the oppressive and arbitrary

measures about to be pursued by government ; the opposition of the so-called patriots at home still continued ; and the stamp bills were receiv- ed in America with the utmost indignation. At this time the colonists were indebted to the mer- chants of London alone, £4,000,000 sterling ; and so ready were the latter to give them credit, that some of the American legislatures passed acts against incurring such credit in this country. A petition on the subject was presented to the house of commons ; but, as it denied the parlia- mentary right of taxation, it was not allowed to be read. It was then proposed, on the part of administration, that the agents should join in a petition to the house for their being heard by counsel in behalf of their respective colonies against the tax. The agents, however, not think- ing themselves empowered to present such a pe- tition, the negociation was broken off, and the quarrel proceeded in America as we have re- lated under that article. In other respects, the ministry took such steps as were proper for sup- porting the honor of the nation. Some encroach- ments having been made by the French and Spaniards, such remonstrances were made to their respective courts, that satisfaction was quickly offered. The disposition to tumult and insurrection, however, seems to have been now general. The silk-weavers of Spitaifields being distressed for want of employment, which they supposed to proceed from the clandestine impor- tation of French silks, laid their case before his majesty in 1764, who graciously promised them relief. But a bill, which was supposed favorable to them, being thrown out of parliament, they began to assemble in vast numbers, several dis- orders were committed, and it was not without the assistance of the soldiery, and the utmost vigilance of the magistrates, that riots could be suppressed. The ministers were still attacked in numberless publications, and accused as being merely dependents on the earl of Bute. An ac- cident, however, now produced a considerable revolution at court. This was an illness with which the king was seized in the beginning of the year, which gave rise to a bill for settling the affairs of the kingdom, in case of the crown fall- ing into the hands of a minor. In settling this bill, ministers were said to have behaved with very little respect to the princess dowager of Wales, and industriously to have excluded her from a share of the government.

On this occasion lord Chatham is said to have been solicited again to accept the office which he had formerly filled so much to the satisfaction of the nation, and to have declined it. A new ministry, however, was soon formed, at the re- comendation of the duke of Cumberland. The

duke of Grafton and the honorable Mr. Conway, brother to the earl of

Hertford, were appointed secretaries of state, and the marquis of Rockingham first lord of the treasury. The otfice of lord privy seal was conferred on the duke of Newcas- tle ; other places were filled with men not only of known integrity, but high popularity. Yet even these changes were not able to give satis- faction. The opinion that affairs were still ma- naged by tiie earl of Bute, was industriously kept up by the political writers of the time. In the mean while the discontents, which inflamed the American colonies, continued also to agitate the minds of the people of Great Britain ; nor indeed was it reasonable to expect that they could be satisfied in their present condition; commerce being almost entirely destroyed, manufactures at a stand, and provisions extravagantly dear. The vast sums owing to the British merchants by the Americans also severely affected the trading and manufacturing part of the country. These, amounting to several millions, the colonists ab- solutely refused to pay, until the obnoxious laws should be repealed. Administration were there- fore under the necessity of either instantly en- forcing the stamp act, or of procuring its imme- diate repeal in parliament. The loss of the duke of Cumberland, who died suddenly 31st October 1765, was now severely felt, as he had been ac- customed to assist in the councils of administration, and was highly respected by the nation. At this period, however, it is doubtful if human wisdom could have prevented the consequences which ensued. Administration endeavoured to avoid the two extremes of rushing into a civil war, on the one hand, and of sacrificing the dignity of the crown or nation on the other. They suspended their opmion until they should receive certain in- telligence from the American governors how af- fairs stood in that country ; and their letters on that occasion still do them honor. The opposite party animadverted severely on this conduct. They insisted on having the most coercive methods immediately put in execution for enforcing the laws. Pacific measures, however, at this time prevailed ; the stamp act was repealed ; but at the same time another was passed, declaring the right of parliament not only to tax the colo- nies, but to bind them in all cases whatever.

The repeal of the stamp act occasioned uni- versal joy both in Britain and America, though, as parliament insisted upon their right of taxation which the opposite party denied, matters were still far from any real accommodation. This ill humor of the Americans was soon after augmented by the duties laid upon glass, painters' colors, and tea. In this state of affairs, administration were once more disturbed by the appearance of Mr. Wilkes, who had returned from his exile, and on the dissolution of parliament in 1708, though an outlaw, ho stood candidate foj^ the city of London. He was received by the populace with loud acclamations ; several merchants and peo- ple of property espoused his cause : and a subscription was entered into for the payment of his debts. He failed, however, in his design of re- presenting the city of London, but instantly de- clared

himself a candidate for Middlesex. The tumults and riots which now took place were

innumerable ; and such was the animosity be- twixt the two parties, that a civil war seemed to be threatened. Our limits do not allow of a particular detail of these transactions. It will be sufficient to notice, that, on a legal argument, the outlawry of Mr Wilkes was reversed, and he was condemned for his offences to pay a fine of £1000, and to be imprisoned for twelve months. Being idolized by the people, however, and pow- erfully supported, he was repeatedly chosen member for Middlesex, and as often rejected by the house of commons. The tumults on this oc- casion were not always ended without bloodshed ; and the frequently interposition of the soldiery was construed by the patriots as an indication of a design to establish military authority.

These dissensions did not pass unnoticed by the powers of Europe, particularly the French and Spaniards. Both had applied themselves with assiduity to the increase of their marine ; and many began to prognosticate an attack from one or other, or both of these nations. The Spaniards first showed an inclination to come to a rupture ; the subject in dispute being a settle- ment formed on Falkland Islands, near the south- ern extremity of the American continent. It was not till after lord Anson's voyage, that much attention had been paid to this spot. In the printed account of it, his lordship showed the danger incurred by our navigators through the treachery of the Portuguese in Brasil ; and that it was a matter of the greatest importance to dis- cover some place more to the southward, where ships might be supplied with necessaries for their voyage round Cape Horn. When at the head of the admiralty, he forwarded the scheme of a set- tlement here, and some preparations were made for putting it in execution ; but as it met with opposition at home, and gave offence to the court of Madrid, it was laid aside till 1764, when it was revived by lord Egmont. Commodore By- ron, being then sent out with proper necessaries, took possession of these islands in the name of his majesty, and represented them in a favorable light : while his successor, captain M'Bridp, af- firmed that tlie soil wasutterly incapable of cul- tivation, and the climate intolerable. The islands in question had also about this time attracted the notice of the French; and M. Bougainville, with the assistance of his friends, undertook to form a settlement there at their own risk. The scheme was put in execution at the beginning of 17G4 ; on the east part of the same island on the west side of which commodore Byron had established an English colony. Two years Lfterwards, the French adventurers becoming weary of their co- lony, the Spaniards reimbursed them their ex- penses, took possession of the fort built by the French, and changed the name of the harbour from Port Louis to Port Solidad. It is uncer- tain when the British and Spanish settlers be- came known to each other. But about this

time captain Hunt, commanding the Tamar frigate, charged the commander of a Spanish schooner to depart from that coast, it being the property of his Britannic majesty. On the other hand, and 'o resent this interference as it was thought, a Spanish frigate arrived on the 4lh June 1770, at the English settlement of Port Egmont, and after

ihreatening a siege, took possession of the colony. The English were ordered to depart within a limited time, carrying with tliem what they could. An insult to the British flag, so audaci- ous, seemed to render war inevitable, unless pro- per reparation was made. It was accordinˆ-ly mentioned in the speech from the throne, No- vember 13th, 1770; and immediate satisfaction for the injury was promised to be demanded. The affairs of America were also taken notice of, where grounds of complaint still existed, not- withstanding the cessation of those combinations which had distressed the commerce of Britain These promises, with regard to the affairs ot Falkland Islands, however, were far from giving general satisfaction. The speech was violently attacked by opposition. News had arrived, they said, from Falkland Islands in June, which suffi- ciently demonstrated the designs of Spain ; and Gibraltar and Minorca were left open to the at- tacks of that power, without any preparation being made on our part to resist them. The whole conduct of the ministry was declared to be pusillanimous ; and great disputes arose respect- ing the production of papers and the degree to which they were bound to accjuaint parlia- ment with verbal negociations : it being sus- pected that France had insidiously interfered in this question.

Opposition insisted that they had a right to have an account of verbal negociations as well as others ; and that, if this right was given up, a minister had no more to do, when he wished to promote an insidious measure, than to conduct it by verbal correspondence. The motion, however, was lost by a great majority in both houses. The entire transaction, however, was considered as disgraceful to the British nation : nor were all the arguments that could be used by tlie minis- terial party, aided by the pen of Dr. Samuel 'ohnson, in any degree sufficient to overthrow tlie general opinion. The restitution of the island was thought to be an inadequate recom- pense for the affront that had been offered ; and the objections to it were urged on a motion for an address to return thanks for the communica- tion of the Spanish declaration. This address was not carried without considerable difficulty, and produced a protest from nineteen peers. On the part of Spain, however, every part of the agreement was ostensibly fulfilled ; Port Egmont was restored, and the British once

more took possession of it, though it was in a short time after evacuated, according to a private agree- ment, as was suspected, between ministry and the court of Spain.

The discontents which prevailed at that time throughout the kingdom, were increased by a fire which happened at Portsmouth in 1770, and was by some imputed to our enemies on the continent. The affair of the Middlesex election also was not forgotten ; and, notwithstanding repeated repulses, the city of London presented new petitions on the subject to the throne. In one presented by Mr. Beckford, the lord mayor, they lamented the heavy displeasure under which they seemed to have fallen with his majesty, and renewed a petition, frequently before presented, that parliament might be dissolved. This, how-

*ever, met with a very unfavorable answer; his majesty informed the lord mayor that liis senti- ments on that subject continued unchanged ; and that ‘ he should ill deserve the title of Father of his People, should he suffer himself to be pre- vailed on to make such a use of his prerogative, as he could not but think inconsistent with the interest, and dangerous to the constitution, of the kingdom.’ Mr. Beckford, on this, took the unprecedented resolution of replying to the king; and concluded with telling his majesty, that * whoever had already dared, or should hereafter endeavour, by false insinuations and suggestions, to alienate his majesty’s affections from his loyal subjects in general, and the city of London in particular, was an enemy to bis majesty’s person and family, a violator of the public peace, and a betrayer of our happy constitution as it was established at the glorious revolution.’ This notable schsme for insulting the institutions of the country, in the person of the chief magis- trate, while it obtained Beckford unbounded popularity at the time, has been since claimed and acknowledged as Mr. John Home Tooke’s. A new subject of contention, however, now occurred. The navy was in a bad condition, and the sailors every where avoided the service, i’owards the end of August sixteen ships of the line were ready to put to sea ; but, the legality of press warrants being questioned, the manning of them became a matter of great difficulty : for the new lord mayor. Brass Crosby, Esq., re- fused to back the warrants. Ministers were fur- ther perplexed by the unbounded liberty to which the productions of the press had been carried, and the mode of proceeding against some libellers had produced many complaints respecting the powers of the attorney-general. He had filed informations, and carried on prose- cutions, ex officio, without going through the forms observed in other cases. — This, it was said by the patriotic party, was inconsistent with the nature of a free government. No power can be more dangerous to private liberty, nor to the virtue or principles of him who enjoys it. The attorney acts under a minister, and his sense of duty must be very strong, or his independence very thorougiily secured, if he is at no time tempted to*

swerve from the laws of conscience and equity. A motion was made in the house of commons to bring in a bill for explaining and amending an act of the 4th and 5th of William and Mary to prevent invidious informations, and for the more easy reversal of outlawries in the court of king's bench. This motion was re- jected by a great majority : the ministerial party urging that the power of the attorney-general was the same that ever it had been, and founded on common law. The abuse of power was no argument against tlie legal exercise of it ; it was dangerous to overihrow established customs ; the actions of the attorney-general were cog- nizable by parliament, which control must for ever prevent a licentious exertion of his power, &c. These arguments, however, even with the rejection of the motion, did not put an end to the disputes on this subject. The courts of jus- tice themselves were at this time very unpopular, on account of some late decisions which had

been deemed contrary to law. The judges had assumed a power of determining whether a paper was a libel or not ; and the business of the jury- was confined to the determination of the fact re- garding its publication : thus, it was said, the judges had it in their power to punish a man who had been found guilty of publishing a paper, whether seditious or not. Lord Chatham, in a speech on the Middlesex election, took occasion to mention these abuses ; and was answered by lord Mansfield, who looked upon himself to be particularly pointed at. The former finally moved that a day should be appointed for taking into consideration the conduct of the judges ; in which he was ably seconded by the lord chancellor. A committee of enquiry was accordingly moved for, on December 6th, 1770: bat, after a long debate, was rejected by 184 to seventy-six. Other disputes arose in parliament ou the external relations of the country. A mo- tion was made on the 10th of December 1770, by the duke of Manchester, that an address be presented to his majesty that he would give or- ders for quickening our preparations for defence in the West Indies and in the Mediterranean ; and particularly for securing the posts of Gib- raltar and Minorca. But while the noble mover was descanting on the negligence of ministry, in leaving posts of such importance in a defenceless state, he was interrupted by lord Gower, with a motion for clearing the house. His lordship was answered by the duke of Richmond, who com- plained of the interruption given to the duke of Manchester, as a proceeding both irregular and insidious. This produced a considerable degree of altercation. Several members attempted to speak ; but finding it impossible, and piqued at the behaviour of the minister, eighteen or nine- teen of them left the house in a body. The members of the house of commons then present were not only commanded

to depart, but some of the lords went personally to the bar, and in- sisted on their leaving the house immediately. These members alleged that they attended with a bill, and were there in discharge of their duty; but this availed nothing, and they were peremp- torily ordered to withdraw till their message should be delivered. In the mean time the eighteen lords, who had just left the house of peers, had gone to the lower house, where they were listening to the debates, when the com- moners, who had been ejected from the upper house, arrived full of indignation, and making loud complaints of the affront they had received. The affair terminated in a misunderstanding be- tween the two houses, which continued during the whole session.

After the discussion of the affair of Falkland's Islands, a gross instance of corruption, in the borough of New Shoreham, Sussex, was laid be- fore parliament. Roberts, the officer of the borough, having returned a candidate with only thirty-seven votes, when his opponent had eiglity-seven. It was discovered that a select com- mittee of the members of a club in the town were appointed to sell the borough to the highest bidder ; the committee men never appearing at elections, but giving orders to the rest, and di- recting them how to vote. Tlie motion for an

enquiry being carried unanimously, a bill was brought in to incapacitate eighty-one freemen of this borough, whose names were mentioned, from ever voting at elections : and, for the more effectually preventing bribery and corruption, the attorney-general was ordered to prosecute the committee belonging to the ' Christian club :' the bill for incapacitation did not receive the royal assent, however, till the last day of the ses- sion.

Some members of the house of commons com- plained at this period that their speeches had been misrepresented in the papers, and en- deavoured to put a stop to the practice of print- ing them. It was contrary to the standing order of the house to prmt the speeches of the mem- bers of parliament at all; and a motion for calling two of the principal printers to account was carried by a considerable majority. The printers, however, did not attend the summons of the messenger; and their disobedience was greatly applauded by the popular party. It was now farther moved that they should be taken into custody, by the Serjeant at arms, for con- tempt of the orders of the house ; when this offi- cer complained that, not being able to meet with them at their houses, he had been treated with indignity by their servants; on which a royal proclamation was issued for apprehending Wheble and Thomson, the two obnoxious prm- ters. In the mean time six other printers, who had rendered themselves equally obnoxious on the above account, were ordered to attend the house. Some of these delinquents were repri- manded at the bar ; and one, who did not attend, was ordered to be taken into custody. But Wheble being now apprehended, in consequence of the proclamation, was carried before Mr. Alderman Wilkes,

by whom he was discharged. Thomson was discharged in the same manner. J. JNIiller, one of the six who had refused to at- tend, was taken into custody, from his own house, by the messenger of the commons. On this he sent for a constable, and was carried along with the messenger before the lord mayorˆ and alder- men Wilkes and Oliver, at the mansion house. The lord mayor refused to deliver up the printer and messenger at the request of the Serjeant at arms ; and, after some dispute, the messenger was committed to prison, as he had been accused by Miller of assault and false imprisonment, and the Serjeant had refused to find bail ; however, he was immediately released upon bail being given. By this affront not only the ministerial majority, but many of the popular party in the house of commons, were greatly irritated. The lord mayor was ordered to attend the house next day : when he pleaded that he had acted in no way inconsistent with the duties of his office; as, by an oath which he took when entering upon it, he was bound to preserve the franchises of the city, as recognised by act of parliament. It was then moved that he should be allowed counsel. The motion, however, was over-ruled, it being insisted that no counsel could ever be permitted against the privileges of the house. At last it was resolved that the lord mayor's clerk should attend with the book of minutes ; and he was obliged to expunge out of it the re-

cognizance of Whittam the messenger; this was followed by a resolution that there should be no more proceedings at law in the cas;;; and that the lord mayor and Oliver should be committed to the Tower. Some proposed his expulsion from the house ; others a vote of censure : and, ■when it was proposed to commit him, the ut- most confusion took place, some members de- claring that they would accompany him to the place of confinement, &c. Some days after the commitment, when the lord mayor attended at the house of commons, insults were offered to many of the members, particularly lord North ; who, on this occasion, lost his hat, and narrowly escaped with his life.

Wilkes, on being ordered to attend on this memorable occasion, wrote a letter to the speaker, in which he observed, that no mention had been made of his being a member ; and that if his seat in parliament, to which he had been duly elected, was to be granted him, he would attend and justify his conduct. The ministry, however, declined to encounter this demagogue at this time : and were reduced to the miserable shift of ordering him to attend on the 8th of April, 1771, at the same time that they adjourned the house to the 9th.

Every step taken about this time by adminis- tration seemed calculated to add to the public ill humor. Towards the end of the session a bill was brought in ‘ for enabling certain persons to enclose and embank part of the river Thames, adjoining to Durham yard, Salisbury-street, Cecil-street, and Beaufort-buildings, in the county of Middlesex.’ This bill was opposed, as contrary to the ancient rights and privileges of the city of London ; but was easily carried through both houses, though it produced a pro- test in the upper house; and, a few days before the rising of the session, the city of London petitioned against it. The only other transaction of moment during this session related to the East India company. It was proposed to raise 2000 men in England for the service of the company, the officers to be appointed by the king, and to be paid by the company. But, after much argument, it was rejected as unconstitutional and dangerous to keep an armed force in the king- dom which was not paid by government. The session terminated on the 8th of May, 1771. When the lord mayor and aldermen were re- leased by this event from the tower, they were welcomed by every mark of public congratula- tion. The city was illuminated ; and the mob, as usual, took vengeance on their opponents by breaking their windows. A committee was even appointed to carry on a prosecution against the speaker of the house of commons ; but, as this did not seem likely to afford them any redress, they determined once more to have recourse to . the throne. Accordingly, on the 10th of July, 1771, another petition and remonstrance was presented, the subjects of which were the em- bankments of the Thames, the proceedings against the magistrates, and a speedy dissolution of parliament. But this met with as unfavor- able an answer as before. His majesty said, that he was ready to put an end to the real • grievances of his faithful subjects ; but was

sorry to find that a part of them still renevvea requests, which he had repeatedly refused to comply with.

In the speech from the throne, when the par- liament met, January 2 1st, 1772, his majesty observed, that the performance of the king of Spain’s engagements, and the behaviour of the other European powers, promised a continuance of peace ; and, though the necessity of keeping up a respectable naval force was evident, yet no extraordinary aid for that purpose would be necessary : he concluded with recommending the most vigilant and active attention to the con- cerns of the country, with an assurance of the interposition of the crown to remedy abuses or supply defects. Little dispute was made about the addresses in answer to this speech ; but an ample subject of altercation soon occurred. This was amotion made by administration, intimating the necessity of raising 25,000 seamen for the service of the year ; ‘ it being always necessary,’ they said, ‘ for us to preserve a superiority to the French in the East Indies, which had not been the case since they sent a considerable fleet thither. It was equally

necessary to preserve the present strength of the Wˆest Indies unim- paired ; as the Spaniards knew the importance of our settlements there too well not to make an attack upon them first, if ever a rupture should take place. A declaration of this kind, coming immediately after the assurances of peace that had been given from the throne, was said to be a contradiction ; that the peace establish- ment would be thus augmented till we were overburdened by it, &c. If the assurances of peace from the throne were well founded, the force in the East Indies was already too great ; if, on the contrary, a war was at hand, it would be too small notwithstanding the proposed aug- mentation. Tlie question for the augmentation, however, was carried without a division : after which the subject of subscription to articles of religion came to be discussed. This was, in fact, occasioned by the general tendency to Arianism or Socinianism which had for some time pre- vailed, and had infected the established church in such a manner, that the subscription to her standards was reckoned intolerable by many of the clergy. Meetings had been held by the discontented members, to consider of some mode of relief; and in the beginning of February, 1772, about 250 of them, with several professors of law and physic, joined in a petition to the house of commons, expressing their dissatisfac- tion with the subscription to any human forms, and praying for relief. In this petition they asserted, that they held certain rights and pri- vileges from God alone ; such as the exercise of their own reason and judgment, by which they were instructed and confirmed in their belief of the Christian religion, as contained in the holy scriptures. They accounted it a blessing to live under a government, which maintained the suffi- ciency of the scriptures to instruct in all thines necessary to salvation. Hence they concluded, that they had a right from nature, as well as from the principles of the reformed religion, to judge for themselves, what was or was not con- tained in the scriptures. From this invaluable

privilege, however, they found themselves in a great measure precluded by the laws relative to subscription; by which they were enjoined to acknowledge certain articles and confessions of faith, framed by fallible men, as entirely agree- able to scripture. They prayed, therefore, to be relieved from such impositions, and to be re- stored to their undoubted right of interpreting scripture for themselves, without being bound by any human explanation of it, or being re- quired to acknowledge, by subscription or de- claration, the truth of any fornmlary of religious faith and doctrine whatever, excepting the holy scripture itself. The affair of subscription they looked upon to be not only a grievance to them- selves, but an encroachment on their rights as men, and members of a Protestant

establishment, as well as a great hindrance to the spreading of the Christian religion ; giving occasion for un- believers and Papists to reproach and vilify the clergy, by representing them as guilty of pre- varication, and of accommodating their fa.th to lucrative viev/s. Such of the petitioners, as had been educated with a view to the professions of civil law and physic, said they, could not but think it a great hardship to be obliged, as they all were in one of the universities, even at their first matriculation and admission, though at an age very improper for such important disquisi- tions, to subscribe their assent to a variety of theological tenets, concerning which their private opinions could be of no consequence to tiie public, in order to entitle them to academical degrees in those faculties ; more especially as the course of their studies, and attention to their practice, did not afford them leisure sufficient to examine how far these tenets were consonant to the word of God. This petition was pre- sented by Sir William Meredith, who, along with the other members who favored the cause, en- forced it by many arguments drawn from the principles of toleration. The articles themselves were said to have been composed in haste ; that they contained doctrines highly controvertible ; and that tliis restraint on the consciences of men was of all others the greatest hardship. A majority of both houses of parliament, however, were inimical to the petition, though some who opposed it wished for time to consider it more deliberately. By the rest it was urged, that the matter of the petition was a violent infraction of the laws ; and that, if this was granted, ano- ther would soon follow against the liturgy. The conduct of many of the petitioners, instead of being founded in any regard for religion, it was said, had its origin in hypocrisy and dissolute- ness, and proceeded in many instances from a disbelief of the Trinity, and of the divinity of our Saviour. The complaints of men were to be disregarded, when they wished to profit by the emoluments of the cinirch without subscribing to its laws ; besides, the king was bound by his coronation oath to continue the government of the church without alteration. The rejection of the subscription bill was followed by that of a bill for quieting the possessions of his majesty's siib|(ˆv:ts from dormant claims of the church ; after which the attention of parliament was called to another moa?!»irc of the utmost importance, Vm.. X

introduced by a message from the king. Tliis was the famous royal marriage act, occasioned by the marriage of tlie duke of Cumberland with Mrs. Horton, a widow lady, daughter of lord Irnham, and sister to colonel Luttrel, and that of the duke of Gloucester with the countess dowager of Waldegrave. By the message it was recommended to both houses to take it into their consideration, whether it might not be expedient to supply the defects of the law then in being, and by some new regulations more effectually to prevent the descendants of his late majesty (excepting the issue of the princesses who had married, or might hereafter marry into

foreign families) from marrying without the consent of his present majesty, his heirs, and successors : and a bill was brought in by the ministry, de- claring all sucli marriages, without the consent above mentioned, to be null and void. The de- scendants of his majesty, liowever, if above the age of twenty-five years, miglit marry without the royal consent, provided they gave intimation a year before to the privy council, and no op- position was made to the match by parliament during that interval. This bill met with the most violent and powerful opposition. The principal arguments against it were expressed in two protests from the upper house, and were to the following purpose: — 1. The doctrine that marriages in the royal family are of the highest importance to the state, and that therefore the kings of this realm have ever been trusted with the care thereof, is both absurd and unconstitu- tional : though it would from that period have the force 'of a])arliamentary declaration. The immediate tendency of this was to create as many prerogatives to the crown, as there are matters of importance in the state; and to ex- tend them in a manner as vague and exception- able, as had ever been done in the most despotic periods. 2. The enacting part of the bill had an inconvenient and impolitic extent; namely to all the descendants of George II. In process of time, that description might become very general, and comprehend a great number of people; and it was apprcliended that it would be an intoler- able grievance for the marriages of so many subjects, perhaps dispersed among the various ranks of civil life, to be subject to the restric- tions of this act; especially as the abettors of this doctrine had also maintained, that the care and approbation of the marriage also included the education and custody of the person. This extensive power might in time make many of the first families of the kingdom entirely de- pendent on the crown ; and it was regretted that all endeavours to limit, in some degree, thp ge- nerality of that description, had proved inefi'ec- tual. 3 The time of nonajˆe for the royal family appeared to be improperly extended be- yond the limit of twenty-one years ; a period which the wisdom of the constitution seems with creat wisdom to have assigned to minority. 4. The deferring their marriage to the age of twenty- six mi'jht also be attended with other bad conse- setpicnces, by driving them into a disorderly course of life, which ought to be particularly guarded against in those of such an exalted station. .5. T".e newer given by this bill, to a

prince to marry after the age of twenty-six, is totally defcpted by the proviso, which declares the consent ot parliament to be ultimately ne-

cessary. Thus great ditficulties must be laid on future parliaments, i.s their silence m such a case must imply a disapprobation of the king's refusal; and their concurrence with it might prove a perpetual prohibition from marriage to the party concerned. 6. The right of conferring a discretionary power of prohibiting all mar- riages, appears to be above the reach of any legislature whatever, as being contrary to the inherent rights of human nature ; which, as they are not derived from, or held under, the sanction of any civil laws, cannot be taken away by them in any case whatever. 7. This bill has a na- tural tendency to produce a disputed title to the crown. If those who are affected by it are in power, they will easily procure a repeal of this act, and the confirmation of a marriage made contrary to it ; and if they are not, it will at least be the source of the most dangerous faction that can exist in any country, viz. one attached to the pretender to the crown ; whose claim, he may assert, has been set aside by no other au- thority than that of an act to which the legisla- ture was not competent, as being contrary to the common rights of mankind. 8, The bill pro- vides no security against the improper marriages of princesses married into foreign families and those of their issue ; which may fully as ma- terially affect the interest of this nation, as the marriages of princes residing in the dominions of Great Britain ; and it provides no remedy against the improper marriage of the reigning king, or regent, &c., though evidently the most important of all others to the public. The answer to all these arguments was, that the in- conveniences so much talked of were merely imaginary; and, if the king should make any improper use of his authority, parliament had it either in their power to prevent the effect, or to punish the minister who advised it. The crown, it was said, was dishonored by improper con- nexions, and many of the greatest national cala- mities have proceeded from improper alliances between the royal family and subjects ; and that if, from after experience, we should find any ma- terial grievances ensue from this act, it could as easily be repealed at that time as thrown out now, and on better grounds. It was very rapidly carried through both houses ; in the upper house by ninety to twenty-six; and in the lower by 165 to 115.

Although the late decision, concerning sub- scription to the thirty-nine articles, did not pro- mise much success to any innovations in religious matters, yet the case of dissenting ministers was introduced soon after the discussion of the royal marriage act. A petition was presented by a great body of these people, praying to be relieved from the hardship of subscribing to the articles of a church to which they did not belong, and a bill grounded on the petition was fully debated. It was violently opposed by the opponents of the former bill, though with very little success in the house of commons, where it was carried by a prodigious majority. It was argued that nothing can advance the true interest of religion so much

as toleration ; and, if articles of subscription are necessary, it must only be

for men destitute of principle, avid who would, in compliance with ambition or avarice, as readily subscribe to one set of articles as another. If thus any of the fundamental doctrines of Christianity are im- pugned, there are many laws in existence to correct the impiety. The dissenters have indeed altered some of their original forms and doc- trines, but that only in matters of indifference. It is the effect of learning, leisure, and refine- ment, to give men many opportunities of alter- ing established forms. This has been the case formerly, and always will be. The dissenters have long been virtually exempted from this subscription ; and yet the piety and decency of many of them, particularly in Scotland and Ire- land where no such laws are in l>eing, suffi- ciently show, that men, whose minds are sudfast in the purity of religion, will not be confined nor influenced by laws of human invention. But, though the dissenters enjoy full liberty by con- nivance at present, where is their security against the sudden attacks of malice and envy, which may be backed by the sanction of law ? Every neglect of a law by connivance is an additional proof of the necessity of abrogating that law ; and liberty is but an empty name, where it is enjoyed by an oversight only, as it were, of our superiors. In the house of lords, however, the bill was rejected by a majority of seventy. Here the doctrine of universal toleration was strenuously opposed, as well as the great danger set forth to which the church of England would be exposed, by departing from the laws which guarded its privileges. The dissenters, it was said, had great reason to be satisfied with the favor they enjoyed by connivance ; and the laws were only kept on record as a necessary curb, lest, in the degeneracy of a declining age, reli- gion should be destitute of protection against heresy and blasphemy.

The only other important debates of this ses- sion were respecting an enquiry into the affairs of the East India company, which were now in a very critical situation. These, however, did not come under full consideration till the next ses- sion, which took place November 26th, 1772; and now they occupied the chief attention of parliament. It had been projected, as far back as the year 1767, when they were in a very flou- rishing condition, to bring them under the in- spection of government, that the nation might share the immense wealth supposed to be enjoyed by the company. The design, did not suc- ceed at that time, nor would it probably have been easily brought to bear, had not the affairs of the company become embarrassed. A motion was now made in parliament, by a gentleman un- connected with administration, for a select com- mittee to enquire into the aflairs of the company : but many reasons were uiged against this, par- ticularly that the season was too far advanced for a business of soda importance ; that the cora- tnittee^ being a sectet one, was not accountable for its oondnct; and thai, as the minister would have it in his power to nominate the members of the committee, consderable

partiality might on that account tjte place. The mroiion, however, was

carried without a division ; and the members were chosen by ballot. During the recess, the affairs of the East India company proceeded from bad to worse. The treasury at hume was quite exhausted; while bills to avast amount, drawn on Bengal, were nearly due; which, with their debt to the bank and other public offices, along with the sura to be paid to government, reduced them almost to the brink of bankruptcy. They were therefore reduced to the expedient of borrowing a sum of money from administration : but their application was received with great indifference. The minister desired them to apply to parliament. The reports of the select com- mittee, in the mean time, contrary to the promise of secrecy, were published, and gave the public no favorable opinion of the behaviour of the company's servants. At the next meeting of parliament, the minister moved for another com- mittee, under the title of the committee of secrecy, to consist of thirteen persons, for taking into consideration the state of the company's affairs ; which might thus undergo a full investigation. The members of this new committee were also to be chosen by ballot. It was objected that this mode of secret enquiry, by a small number, was unprecedented and unconstitutional ; that the members would, in effect, be nominated by the minister, and act under his direction; and that a free investigation by parliament was essen- tially different from that by a secret committee. In the latter case, every information that the minister thought proper to conceal would be withheld : at any rate a committee of secrecy is an evident absurdity ; a committee can be no longer secret than during the time it takes up for enquiry. Its proceedings must be laid before the public ; and, in case of unjust accounts, the parliament had no means of being undeceived. These reasonings, however, were of no avail. The committee of secrecy was carried without a divi- sion; and the members, though chosen by ballot, were almost all devoted to administration. The select committee was- likewise revived. In a very short sime after these appointments, a re- port was given in, stating that the company were in great distress for want of money ; and, as this was the case, a bill ought to be brought in for restraining them from sending out supervisors to India, a scheme which they, at tliis time, medi- tated. The minister and his adherents enlarged greatly on the utility of this bill. It was the sin- cere wish of parliament, they said, to render them a great and successful company : but it was absolutely necessary for this purpose not to allow them to engaue in an expensive commission, at a time when their affairs were so much em- barrassed. It was even doubted whether the com- pany, without the sanction of parliamentary authority, had power to appoint a commission of

this kind. On the other hand, the minister's proposal was characterised by opposition as un- constitutional and insidious. Two gentlemen, bclontring to the company, offered to pledge themselves, that the commission of supervision should not be allowed to depart, until, from further reports, a full knowledge of the com- pany's affairs should be acquired. This, how- ever, was instantly rejected, it being said to be

defective in security ; that the East India com- pany would not scruple to make an agreement of tliis kind to-day, and break it to-morrow ; which could only be prevented by an act of par- liament, &c. The company, in fact, used every endeavour to prevent this bill passing into a law. They petitioned ; ?nd some of their servants were examined in the house of commons, in order to show the necessity of supervisors being sent out, who might be qualified to reduce their , aflairs to some order by being on the spot. In spite of all opposition, however, the bill for re- straining the company from sending out any com- mission of supervision was carried by a majority of 153 to twenty-eight. In the house of lords it met with similar success, being carried by twenty-six to six, though the minority entered a protest. The secret committee now gave in their second re- port, containing a statement of the debt, credit, and effects of the company in England; begin- ning with an account of the cash in tlie com- pany's treasury on t'.ie 1st December, 1772, and containing a statement of all their debts and claims. Thus it appeared that the cash, cred't, and effects, of the company amounted to £6,397,299 10i\ 6d., and their debts to the sum of £2,032,306, leaving a balance in their favor of £4,364,993 10s. 6d., without any estimate of the value of their fortifications and buildings abroad. The statement, however, was com- plained of as unfair : and it was said that im- partiality was not to be expected from, men who had it in their power to make what report they pleased for the interest of government : but the administration insisted, that, until proof could be brought that the statement was unfair, the house was bound to adhere to it.

The business was revived, r.fler the holydays, by an application from the company to govern- ment, for a loan of £1,500,000, for four years, at four per cent, interest, with the liberty of repay- ing the same according to their ability; and that the company should not make a dividend of more than six per cent, until the loan should be reduced to £750,000. It was also requested, that the company should be released from the heavy penal interest, incurred by the non-pay- ment of money owing in consequence of the late acts for the indemnity on teas ; and that tiiey should be discharged from the annual jiayment of the £400,000 to the public, for the remainder of the five years specified in the agreement. They farther requested that the accounts of the Duan- nee revenues, of the charges of collection, ex- penses of Bengal, company's accounts of sales, &c., should bo delivered annually to parlia- ment, and that leave might be given to export teas, free of all

duty, to America, and to foreign parts. This request was judged expe- dient to be granted, and resolutions in conform- ity to it were agreed to. The two following motions were also founded upon the report of the secret committee, viz. That, supposing the public should advance a loan to the East India company, it was the opinion of the committee that the dividend should be restrained to six per cent., until the payment of the sum advanced ; and that the company be allowed to divide no more than seven per cent, until their bond del t be

reduced to £1,500,000. These severe restrictions were judged proper by administration for the security of the public, and were such, they said, as every creditor has a right to make before- hand with a person who wishes to borrow money from him. The company, however, replied, that the restrictions were contrary to the proposals they had made, and void of foundation, as being- built on the erroneous reports of the secret com- mittee. The chairman of the company declared, at a general court, that the government had agreed, or would agree, to the proposed dividend, before the participation of profits took place betwixt the government and company ; the first lord of the treasury had told him so, and now wished to deny what he had said. Some time was demanded to consider of these motions ; but, that being denied, the question was put and carried as the ministry proposed.

It was next proposed to deprive the company of their supposed territorial right to the coun- tries they possessed in the East Indies. This had been allowed them in the most explicit manner, as appears by some of the papers which passed between the French and English ministers, du- ring the negociations for the treaty of Paris ; from one of which the following is an extract : — ‘ Respecting those territorial acquisitions which the ‘English East India company have made in Asia, every dispute relative thereto must be set- tled by that company itself, the crown of England having no right to interfere in what is allowed to be the legal and exclusive property of a body corporate, belonging to the English nation.’ This right, however, was now denied. After reading the company’s petition, lord North told the house, that it was the opinion of several great lawyers, that such territorial possessions as the subjects of any state shall acquire by conquest, are virtually the property of the state, and not of those individuals who acquire them. It was his opinion, however, that it would be more bene- ficial to the public, and to the East India com- pany, to let the territorial acquisitions

remain in the possession of the company for a limited time, not exceeding six years, to commence from the agreement betwixt the public and the company. At the same time it was moved, that no partici- pation of profits should take place betwixt the public and the company, until after the repayment of £1,400,000 advanced to the company; and the reduction of the company's bond debt to £1,500,000. That after the payment of the loan advanced to the company, and the reduction of their bond debts to the sum specified, three- fourths of the neat surplus profits of the company at home, above the sum of eight per cent, upon their capital stock, should be paid into the exche- quer for the use of the public, and the remaining fourth be set apart, either for reducing the com- pany's bond debt, or for composing a fund for the dischargmg of any contingent exigencies the company might labor under. These proceedings were exceedingly disagreeable to the company. But the only effect which these remonstrances produced was that it was agreed by government that, as the company had a stock of teas amount- ing to about 17,000,000 of pounds in their ware- houses, they should be allowed to export as

much of it as they thought proper free of duty, and employ the money thence arising for the benefit of their affairs. This concession in favor of the East India company, it is remarkable, proved in the event the loss of the American colonies; nor, indeed, could these arbitrary pro- ceedings with such a considerable body tend to impress the minds of any part of the nation with ideas favorable to the views of administration. In other respects the minister abated nothing of the disposition he had from first to last shown with regard to the company. On the 3rd May, 1773, the following resolutions were proposed by him as the foundation of a bill for establishing certain regulations for the better management of the East India company, as well in India as in Europe. 1. That the court of directors should, in future, be elected for four years ; six members annually, but not to hold their seats longer than four years. 2. That no person should vote at the election of the directors, who had not possessed their stock twelve months. 3. That the stock of qualification should, for the future, be £l000 instead of £500. 4. The mayor's court of Cal- cutta should, for the future, be confined to small mercantile causes, to which its jurisdiction only extended before the territorial acquisitions. 5. That, instead of this court thus taken away, a new one should be established, consisting of a chief justice and three puisne judges. 6. These judges to be appointed by the crown. 7. That a superiority be given to the presidency of Ben- gal over the other presidencies in India. Each of these resolutions was carried by a great ma- jority. The salaries of the judges were fixed at £6000 each, and that of the chief justice at £8000, The governor of the council was to have £25,000 annually, and the members of the council £10,000 each.

By the friends of the company this bill was supposed to have a tendency to

effect a total alteration in its constitution in England, as well as in the administration of all its presidencies in Asia. No delinquency was charged, nor any specific ground of forfeiture of their privileges, they said, assigned ; yet, by this bill, more than 1200 freemen were to be disfranchised and de- prived of any voice in the management of their own property. By cutting off the £500 stock- holders, the proprietary would become more manageable by the crown ; nor was there any security, that the directors would be faithful to the interests of the company, when they were no longer responsible to them for their actions. The proprietors of £500 stock presented a petition, setting forth that, by king William's charter granted to the company, and repeatedly confirmed since that time, in consideration of many large sums repeatedly advanced by the company to the public, they were legally possessed of a right of voting at the election of directors, making of bye laws, or in any other matter relating to the affairs and government of the company ; but, by a clause in this regulating bill, they were deprived of this right, and that under a pretence of pre- venting the pernicious practice of splitting stock by collusive transfers ; for so far were the pro- prietors from giving way to such practices, that, iu the year 1767, they petitioned parliament for

an act, by which the several proprietors entitled to vote should be obliged to hold this qualifi- cation six months, at least, before the exercise of their right, afterwards extending the time to twelve months, rather than the act should fail of its intended effect. This proposed increase of the qualification of the voters, however, could not, in any decree, answer ttie end desired ; for, the splitting of stock being confined to such pro- prietors as held large quantities, they would find It an easy matter to place their stocks in tiie hands of half the number of persons, and thus extend their influence in a great and undue pro- portion : but, if ever government conceived de- signs against the company, they would find it much easier to execute them while the pro- prietors were few and opulent, than when they were numerous, and at the same time indepen- dent, and possessed of moderate fortunes. This petition produced a motion in the house of com- mons, ' That it does not appear that the pro- prietors of £500 stock in the 1'l.ast India com- pany have been guilty of any delinquency in the exercise of their charter rights, according to tiie several acts of parliament made in their behalf.' This, however, being rejected, the regulating bill passed in the house of commons by a majority of more tlian six to one. In the house of lords it passed by seventy-four to seventeen.

All this time enquiries were continued by the select and secret committer- ;

*and a report was presented by general Burgoyne, containing many charges of cruelty and rapacity in the conduct of several gentlemen, concerned in the management of the affairs of the company; par- ticularly with regard to the deposition of Su- rajah Dowlah in 17.56. This was said to have been the origin of all the evils that had hap- pened since that time. He insisted much on the treachery used in bringing about that revo- lution, and particularly the fictitious treaty with Omichund ; exposed the conduct of lord Ciive, wno had caused admiral Watson's name to be affixed to that treaty, which the admiral had re- fused to sign in person, &c. He concluded with moving for the restitution of all the money received in presents, or otherwise, in India, while the receivers acted in a public capacity: * That all acquisitions made under the influence of a military force, or by treaty with foreign powers, do of right belong to the state ; that to appropriate acquisitions obtained by such means is illegal ; and that great sums of money harl been obtained by such means from the sovereign princes in India.'*

The general belief that many of the company's servants had acted in a most infamous manner, was at this time so strong, that the above reso- lutions were carried almost unanimously. Lord Clive defended himself by general protestations of innocence; which, however, gained him but little credit, till he entered into a particular re- futation of the charge against him. General Burgoyne now moved, ' That lord Clive, in con- sequence of the powers vested in him in India, had received at various times presents to the amount of £234,000 sterling, to the dishonor and detriment of the stale ;' but this being rejected, after violent debates, the following was substi-

tuted : ' That lord Clive did, in so doing, abuse the power with which he was entrusted, to the evil example of the servants of the public' This motion, also, being rejected, another was made, ' That lord Clive, when he received the sum above mentioned, did at the same time render great and meritorious services to his country.' Thus the matter was concluded, and the affairs of the company delivered into the hands of ad- ministration, who declared that their regard for its welfare was the sole motive for bringing about this revolution.

In America tlie trifling tax on tea, which had not been repealed, and the allowance given to the East India company to export what quanti- ties they pleased, now threw matters into a fer- ment not to be quelled. The various proceed- ings there, and subsequent war, are elsewhere related. Here it only remains to give an account of the manner in which the legislature and peo- ple of Great Britain were affected by thes:" events. Ever si ice the peace, in 1763, the dis- position shown by government to augment the revenue had produced in the popular party of Great Britain a spirit very similar to that mani- fested by the Americans, though in an inferior degree : so that the

patriots of Britain considered the Americans as oppressed by government, and sutlering in llie same cause with themselves. The destruction of the tea at Boston and other places in America, however, considerably diminished the number of their friends, and made many of those who strll adhered to their cause much less sanguine. The matter was announced to parlia« raent by a special message from the throne. Lord iS'ortii and the other ministers set forth the conduct of the colonists, particularly of the town of Boston, in a most atrocious light ; and con- cluded that government was now perfectly justi- fiable in adopting any measures they might think proper, to inflict punishment on that town. Opposition did not pretend to exculpate, though they still attempted to excuse them, by deriving all the disturbances in that country from the ar- bitrary and absurd measures pursued at home. This charge the minister evaded by drawing the attention of the house to the more important con- sideration, Whether the Americans were now to be dependent, or independent, on Great Britain f The Boston port bill, being tlien brought in, was carried, but not without considerable opposition, both within and without doors. A petition was first presented against it by Mr. Bollan, agent for the council of Massachusett's Bay, urging an act of queen Elizabeth for the security of the liberty of the colonies. This was presented before the bill had actually made its appearance. After it had passed two readings, this gentle- man presented another, desiring to be heard in behalf of the town of Boston, for the council of Massachusett's Bay. This was refused ; because, though Mr. Bollan was agent for the colony, he was not for the corporation of the town of Bos- ton. Another petition followed from the lord mayor, in the name of the natives and inhabi- tants of North America residinir at that time in London. It concluded with these remarkable words, that ' the attachment of America would not survive tlie justice of Britain." As little re-

gard, however, being paid to this a.s to the for- mer petitions, and all proposals for a delay rejected, the bill passed both houses without a division. That this obnoxious bill might not be sent to America without some mitigation, the popular party now proposed to repeal the duty on tea laid on in 1767; but this was also rejected, from a vain expectation that the oppo- sition of the Americans was that of a mere tumultuous mob.

Still greater opposition was made to the Que- bec bill, so that, before it could be carried, the ministers were obliged to drop much of that high and aspiring tone to which they had accus- tomed themselves in talking of American affairs. The minority contended, that here, without any necessity pleaded, or even suggested, an arbi- trary influence was extended by act of

parliament to that province, furnishing a dangerous prece- dent, and an additional instance of the aversion which ministry bore to the rights of the people. The people at large, also, were alarmed at the religious part of the bill ; and thought that the establishment of the Roman Catholic religion there gave it a preferen:;e over the protestant. At the conclusion of the session, the king ex- pressed the greatest satisfaction at what had been done, and hopes of the good effects that would attend the new regulations. The reception they met with in Amekica. is related in its proper place ; in Britain the people seemed to wait the event with indifference, but their bad success with the colonists furnished the minority with new matter of reproach on administration. The parliament in the mean time was dissolved by proclamation, and a very short time allowed for the election of new members. The new parlia- ment met on the 30th of November, 1774; when his majesty acquainted the houses that a most daring spirit of resistance still prevailed in Ame- rica, notwithstanding the most proper means had been taken to prevent the miscliiefs thence arising ; and assured them that they might de- pend on a firm resolution, on his part, to with- stand every attempt to weaken or impair the supreme authority of this legislature over all the dominions of the crown. In answer to the speech, the minority demanded a communica- tion of all the letters, orders, and instructions, relating to American affairs ; but this being over-ruled, and the address carried as a matter of form, American affairs were delayed, in spite of all opposition, till after the holidays. In the question on the address, the majority in favor of administration, was 191 ; the votes being 264 to seventy-three.

7. The American War. — In the beginning of 1775 the minority received a considerable acces- sion of strength by tlie return of lord Chatham to the house of lords, after a long absence. He tes- tified liis disapprobation of the measures which had been pursued with regard to America in the warmest terms ; moved for addressing the king to recal the troops from Boston : and predicted that, if ministers went on in the way they had done for some time, they would make the crown not worth the king's wearing. All his eloquence, however, proved ineffectual ; administration was determined to force the Americans into subjec-

tion, and his motion was rejected by sixty-eight to eighteen. Lord North now presented the papers which had been called for by the mino- rity ; with the exception of particular names, lest they should prove detrimental to individuals. This was complained of, but to no purpose ; and the papers were laid before a committee of the whole house. In the mean time petitions against coercive measures with America had been re- ceived from most of the trading companies of the kingdom ; and a committee was appointed to take them into consideration : but such a delay took place, in regard to these petitions, that the committee to which they were consigned was

humorously called the committee of oblivion. A violent debate arose on the petition of congress to the king, which had been delivered and by him referred to parliament. It was argued by administration, that no petition could be received from the Continental congress, which was no legal body, and it would be admitting their lega- lity to receive a petition from them ; the general assemblies and their agents were the only lawful representatives of the colonies, and none else could be admitted. After an ineffectual struggle of opposition, the petition was finally rejected by 218 to sixty-eight. In the mean time a con- ciliatory plan was prepared by the earl of Chat- ham, which was presented on the 1st of February, 1775. The intent of this bill, he said, was to settle the troubles in America, and to assert at the same time the supreme legislative authority and superintending power of Great Britain over her colonies. This was to be done by their acknowledging the supremacy of the British legislature and the superintending power of par- liament. No taxes were to be levied in Ame- rica but with the free consent of their assemblies. It asserted a right in the crown to keep and station a military force established by law in any part of its dominions ; but declared, that it could not be legally employed to enforce implicit and unlawful submission. A congress might also be held, in order to recognise the supreme sove- reignty of Great Britain over the colonies, jˆnd to settle, at the same time, an annual revenue upon the crown, disposeable by parliament, and applicable to the exigences of the nation. On complying with these conditions, the acts com- plained of by congress were to be suspended, with every other measure pointed out as a grievance, and the constitution of their govern- ments to remain as settled by their charters. This bill was, however, at once deemed inadmis- sible, on account of its alleged partiality to America, and particularly by its empowering the colonies to assemble in congress: a measure which, of all others, was at that time the most offensive. Lord Chatham was by no means defi- cient in arguments in support of his plan : but tliese, supported by all the powers of his elo- quence, proved unsuccessful ; the proposal being rejected by sixty-one to thirty-two. So deter- mined were the majority in this entire rejection, that it was not even permitted to lie upon the table. A petition was next presented to the liouse of commons, by the proprietors of estates in the West India islands, representing their alarm at the association of the Americans, and

♦iˆeir intended stoppage of trade with the British islands; the situation of which, they said, would be very calamitous, if the acts in question were not immediately repealed. Administration re- presented all petitions now as the contrivance of faction ; and said, that, however inconvenient the coercive

measures might be, they ought not to be retarded by the consideration of any tem- porary losses. As it was necessary, however, to let the nation knosv the ultimate resolves of administration respecting America, lord North in a long speech asserted, that the universal fer- mentation, then prevailing in the colonies, pro- ceeded from the arts used to dispose them against the ruling powers in Britain ; and that, notwith- standing all their complaints, the public charges borne by individuals in America were, on the strictest computation, not more than one to fifty when compared to what was paid by individuals in England. Nothing, therefore, but a settled de- termination to quarrel with the parent state could induce the Americans to persist in their disobe- dience to the lawful injunctions laid upon them. For this reason he proposed to the house to send a competent force to America ; and to pass a temporarv' act, suspending all the foreign trade of the different colonies of New England, parti- cularly the Newfoundland fishery, until they should acknowledge the supreme authority of the British legislature. New England, he said, was justly singled out upon this occasion, as being the most guilty of the whole. The ques- tion now was simply. Whether we would at once abandon all claims on the colonies, and instantly give up the advantages arising from our sove- reignty, and the commerce dependent on it ? or. Whether we should resort to the measures in- dispensably necessary to ensure both ? An ad- dress was carried, which, in the ideas of opposi- tion, amounted to an absolute declaration of war.

In the mean time matters went on from bad to worse in New England ; so that it was soon perceived, cither that the friends of government in that colony did not exert themselves, or that they were far from being so numerous as had been imagined. To make their coercive plan the more effectual, therefore, it was judged necessary to extend it, so that every individual of the colony should become sensible of the punishment. This, it was supposed, would be done by a bill for restraining the four provinces of New England from commerce with Great Britain, Ireland, or the British West India islands ; and prohibiting them from carrying on the fishery at Newfoundland. The reasons given for this were in substance the same as those for the others ; and indeed both parties had now so much exhausted their arguments, that very little new matter was left for either. Every step taken by ministry, and every proposal made by them, however, produced a violent debate ; and, thougti they constantly gained the victory, it was not without the mortification of hearing their princi- ples and conduct reprobated in the most oppro- brious manner. In this instance the bill was carried by 261 against eighty-five.

The restraining bill was no sooner carried, than a petition was presented against it, by the

London merchants concerned in the American trade, setting forth the

danger that would accrue to tiie fisheries of Great Britain from such a prohibition. From the evidence brought in sup- port of this petition it appeared, that ten years before the American fisheries had been in such a flourishing state, that the four provinces of New England , alone employed nearly 46,000 ton of shipping, and 6000 seamen; and that the pro- duce of their fisheries in the foreign markets amounted in 1764 to upwards of £320,000. Since that time they had greatly increased ; and what rendered the fisheries particularly valuable was, that all the materials used in them, except- ing only the timber for building the vessels, and the salt for curing the fish, were purchased in Britain, and the nett proceeds of the trade were also remitted thither. It. appeared, also, that it would not be practicable to transfer these fish- eries to Halifax or Quebec. Some other circum- stances were likewise urged as strong reasons against this bill ; particularly the commercial concerns of London with New England (to which city alone the colony stood indebted for nearly £1,000,000), and the bad consequences of it to the people of Nantucket, a barren island, lying off the coast of New England, about fifteeu miles long, and three broad, containing about 6000 inhabitants, almost all Quakers. The natural produce of this island could not maintain twenty families; but the industry of the inhabi- tants was such, that they kept 1 30 vessels con- stantly employed in the whale-fishery, which they carried on in the North Seas, to the coasts of Africa and Brasil, and even as far as the Falk- land Islands, and the shores of Terra Magellan ica. This bill was debated with great animosity in the house of peers, and produced a remark- able protest, in which the measures of govern- ment were spoken of with great severity. ‘ That government (said the protesting peers) which attempts to preserve its authority by destroying the trade of its subjects, and by involving the innocent and guilty in a common ruin, if it acts from a choice of such means, confesses itself unworthy ; if from inability to find any other, admits itself wholly incompetent to the end of its institution.’ They also reprobated in severe terms the assertion, that the Americans wanted spirit to resist, and that Britain would find them an easy conquest.

The final resolution of reducing the colonies by force being now taken, it became necessary to make proper preparations for the purpose ; and in this the conduct of administration was little less censured than in other respects. As the opinion that the Americans were timid and incapable of becoming soldiers, prevailed greatly at that time, a force of 10,000 men was judged sufficient to reduce the province of New England to obedience. This was vehemently opposed by the minority. They insisted that the force was totally inadequate, and only calculated to produce expense to no purpose. The first im- pression, they justly observed, ought to l>e deci- sive, if possible ; and, to render it so, it was necessary to send h a Heet and army as might ensure the confidence of the public, and be cer- tainly capable of

surmounting all obstacles.

Many of the friends of administration were of the same sentiments, and the only reason assigned for acting otherwise was, a hope that the Ame- ricans would, upon more mature consideration, desist from their opposition. That they might the more readily be induced to this submission, lord North's conciliatory proposition was formed. By this it was enacted, that when tlie governor, council, and assembly, of any of the colonies, should propose to make a provision for the com- mon defence, &c., and if such provision should be approved of by the king in parliament, the levymg, or imposing of taxes on that colony should then be forborne, those duties excepted which it might be expedient to impose for the regulation of commerce ; the nett produce of which should be carried to the account of the colony where it was raised. But this proposal, though highly extolled by the friends of adminis- tration, was no less reprobated by the minority than the others had been. It was said to be insidious, and calculated for the purpose of raising a revenue, which was now said to be the object of ministers. There was no essential difference between the present and former modes of taxation. The colonies were as effectually taxed witliout their consent, by requiring them to pay a stated sum, as by laying a number of duties upon them to the same amount. There was besides a capital deficiency in the proposal, viz. that no sum was specified ; so that the Americans were left totally ignorant of what the demands of Britain might be. After a long de- bate, however, the question was carried in favor of administration by 274 to eighty-eight. The like fate attended a petition to the throne from the island of Jamaica. Instead of relaxing any thing of their severity, the ministry now included the southern colonies in the restrictions laid on New England. Still, however, the petitioners were indefatigable in their endeavours to be heard.

The West India merchants and planters seconded their last petition, by a detail of cir- cumstances relating to the British islands in that part of the world. This affair was conducted by Mr. Glover, a gentleman equally celebrated for his literary talents and commercial know- ledge. From his investigations it appeared that, exclusive of the intrinsic worth of the islands, their stock in trade and other property amounted to no less than £60,000,000: the exportation to Britain had of late been nearly 200,000 hogsheads and puncheons of sugar and rum, amounting to no less than £4,000,000 in value ; the direct revenue arising from which was £700,000, be- sir'es that whicli accrued from the collateral branches depending upon it. All this, however, was urged in vain. Conciliatory proposals were also made by Mr. Burke and Mr. Hartley, but they were rejected by great majorities. Govern- ment continued to enact new laws against the Americans ; and their antagonists opposed these in a manner

similar to what has been already related. Other petitions were presented and treated with neglect. The increase of union, and preparatioî̂s for war among the colonists were by the ministerial party treated as the mere com- motions of a headstrong mob ; and by the other as an association of an injured and virtuous

people, who were about to found a mighty em- pire in the west, while Britain was to sink in utter disgrace and contempt by their secession. On this principle, the event of the skirmish at Lexington was magnified by the one into a 'dis- graceful defeat' on the part of the British; and by the other treated with absolute unconcern. Thus, also, the battle at Bunker's Hill, and all the transactions of the year 1775, were unfairly stated by both parties ; and the only consequence ensuing from tliese misrepresentations was, the inflaming to a violent degree the resentment betwixt the two parties ; one of which depressed the Americans to the rank of consummate pol- troons, while the other exalted them almost to that of demigods.

While these alterations continued to agitate the minds of the superior classes of people in Britain, the middle and lower ranks remained in a kind of indifference, or rather were against the proceedings of ministry. This opposition could not indeed influence the councils of the nation, but in other respects it proved very troublesome. The levies were obstructed, and the recruiting service was never known to go on so heavily; numbers of people not only refusing the usual proffers, but even reprobating the cause in which they were solicited to engage. Besides this, several officers of high rank showed a great aver- sion to the service. Lord Effingham, who had distinguished himself by his opposition to minis- terial measures, resigned the command of his regiment, rattier than fight against the cause he had espoused so warmly. His example was fol- lowed by that of several other officers ; and, while this step conferred upon them a consider- able share of populai:ity, it excited in the minds of ministry an equal degree of resentment. Lord Effingham, in particular, received the public thanks of the cities of London and Dub- lin ; both of which showed an extreme aversion to the commencement of hostilities with Ame- rica. The former, after the affair at Lexington, framed a remonstrance and petition, animad- verting in the most severe manner on the minis- try and parliament ; and it was not without the greatest difficulty, that the more moderate party- procured one to be drawn up, under the name of an ' humble petition,' couched in less repre- hensible terms. In the mean time several inconveniences began to be felt in different parts of the nation. The suspension of the sale and purchase of negro slaves in the West Indies and in North America, and the prohibition to export arms and gunpowder, had greatly im- peded the African trade from Bristol and Liver- pool. In consequence of this, a great number of ships whicii formerly sailed from these ports had been laid up, and nearly 3000 sailors belong- ing to Liverpool were dismissed from

service. Their situations soon rendered them riotous; and it was not without the assistance of the mili- tary that they were quelled. These distres- ses, however, made no impression on adminis- tration ; who having once laid it down as a maxim, that the subjection of America was the duty of Great Britain, were, in consistence with their own principles, obliged to overlook every disaster that might happen in the mean

time as a temporary inconvenience. It was with the utmost satisfaction, therefore, that the nation received the news of Mr. Penn's arrival in 1775, with a new petition from the congress to the king. This petition was delivered to lord Dart- mouth on the 1st of September; and in three days it was replied, that no answer would be given to it; a procedure which excited no small surprise, as it was universally allowed that the language of the petition was respectful, and that it expressed the strongest desire for peace and reconciliation. On the other hand, the friends of administration insisted, that the petition offered nothing that could in consistency with the dignity of the British empire be taken notice of. Instead of professing any repentance for their own conduct, the Americans had offered stipulations, and even required concessions on the part of Britain. It was likewise said, that fear had a share in framing the proposals now held out. The colonists were sensible, that, though the first steps taken by Britain had not answered the purpose, much greater efforts would quickly follow ; and that, without being allowed time, it was impossible tiiey could bring their matters to bear. The petition, therefore, might be considered as written with a view to procrastinate matters. It was also plain, that a great majority of the nation approved of the measures of government; for addresses were received from all quarters, recommending in the most explicit manner vigorous exertion against America.

To the violent bickerings at home, some seri- ous commercial misfortunes were now added from abroad. It had been represented as very probable, during the last session of pari lament, that the bill for depriving the people of New England of the benefits of the Newfoundland fishery, would redound greatly to the interest of Great Britain, by throwing into her hands alone the profits which were formerly divided with the colonies. This expectation, however, proved totally void of foundation. The number of ships fitted out that year was scarcely greater than usual. The congress had also prohibited them from being supplied with provisions; so that not only those on board the ships, but even the inhabitants on the island of Newfoundland itself, were in dan- ger of perishing. Many «f the ships were there- fore obliged to go in quest of provisions, in- stead of prosecuting the

business on which they came. On the whole, therefore, the profits of the fishery suffered this year a diminution of nearly £500,000. Along with this, some natural causes co-operated, which, by the more super- stitious, were considered as the effects of divine wrath. A most violent and uncommon storm took place in these latitudes during the fishing season. The sea arose full thirty feet above its ordinary level ; and that with such rapidity, that no time was allowed for avoidins; its fury. Upwards of 700 fishing boats perished, with all the people in them; and some ships foundered with their whole crews.

Ministers had determined on their plan of subjugating America ; and the only difficulty was, how to put it in execution as quickly as possible. For this purpose, application was

made to the petty states of Germany, who had frequently sent auxiliaries to Britain in former cases of exigency. At present, however, tlie scheme met with considerable difficulties. The princes were alarmed at the appearance of losino so many subjects ; while the latter were no less startled at the proposal of being transported across the ocean into a new world, there to be exposed to all the miseries of war. In these plans, therefore, for the most part, the administration were disappointed. All the states of Europe looked upon Britain with an invidious eye, though none so much as Holland and France. A very strong party in Holland contended for the American interest, and pamphlets were daily published at Amsterdam in justification of the colonies. Their case was compared with that of the Netherlands in former times ; and they were exhorted to persevere in their claims. Great Britam they represented as insatiably covetous of wealth and power. Since her suc- cesses in the war of 1775, it was said, she had become intolerable, not only to her neigh- bours, but to the whole world. But, though these powers thus early expressed their hostile disposition towards Britain, it was otherwise with the princes of Hesse and Brunswick ; by whom, and some other German princes of inferior note, a considerable number of troops were supplied. At the same time, as many Brirish forces as possible were drawn from the garrisons of Gibraltar and Minorca, which were supplied in return with men from the electorate of Hanover. In justice to t le ministers, indeed, it must be owned, that they prosecuted the scheme they had undertaken witli all possible vigor; insomuch that the expenses already began to occasion considerable alarm. It had always been supposed, that the British army would be at once victorious ; or at least would remain so far masters of the field, that they could easily command what supplies of provi- sions were necessary. Instead of this, they were now cooped up in such a manner as to be actually in danger of perishing for want. The supplies, therefore, of necessity, were sent from Britain ; and the exertions for their relief were at once magnificent and ruinous. One advant- age, however, was derived from this immense profusion ; the price of every

consumable com- modity was augmented ; that of shipping, parti- cularly, rose one-fourth in the ton; and, though the profits made by contractors and their nume- rous friends were complained of, the benefits which accrued to multitudes employed in the various branches of public business seemed in some measure to make amends for every thing. Misfortune, however, new seemed to attend every scheme in which the ministers engaged. The sailing of the transports was delayed so long, that their voyages were lost. They remained for a long time wind-bound ; and, after leaving port, met with such stormy weather, that they were tossed to and fro in the channel, till most of the live stock they had on board perished. After clearing the coast of England, their pro- gress was retarded by a continuance of bad weather. They were forced by the periodical winds from the coast of America into the ocean.

Some were driven to the West Indies, others were captured by American privateers, and only a very ievf reached the harbour of Boston with their cargoes quite damaged, so that they could be of little or no use.

Notwithstanding, therefore, the immense sup- plies above mentioned, a subscription was set on foot for the relief of the soldiers, as well as of the families of those who died in the service. This was liberal on the whole, though many refused to contribute, from their disapprobation of the cause. All this time the violent party animosities continued, and the desire of peace was gradually extinguished on both sides. Each seemed to be of opinion, that the other would wil- ligly ruin the nation if possible ; a remarkable instance of which was the commitment of Ste- phen Sayre, Esq., banker (one of the sheriffs of the preceeding year), to the tower, for high trea- son. The accusation laid against him was no less than that of having formed a design to seize his majesty as he went to the house of lords : but the scheme itself, and the method in which it was to be executed, appeared so ridiculous, tluit the prisoner was very soon dis- charged ; after which he commenced a process against lord Rochfort for false imprisonment. With respect to the parliamentary proceedings, during this period, we need only say, every mea- sure of administration, right or wrong, was violently opposed. The employment of foreign troops, and admitting them into the fortresses of Gibraltar and Minorca, were severely censured, as contrary to the bill of rights. But admi- nistration contended, that this bill only forbade the introduction of a foreign military power into the kingdom during peace. The force designed for the conquest of America was then declared to be inadequate to the purpose ; but it was re- plied on the part of ministry, that the design was to conciliate not to conquer. The

force (25,000 men) was sufficient to strike terror; and, though this should not instantly be produced, conciliatory offers would still be held out after every blow that was struck.

In the mean time, the Americans, sensible of the dangerous situation in which they stood, exerted themselves to the utmost to dislodge the British troops from Boston. This being at length accomplished, in March 1776, they pro- ceeded to put their towns in the most formidable state of defence ; and actually repulsed Sir Peter Parker, at Charlestown ; but they did not exert equal spirit in the defence of New York; where, besides losing the town, they received such a defeat, as threatened their affairs with total ruin. In this view it appeared to the majority of the people in Britain. The suc- cessful campaign of 1776 was looked upon as so decisive, that the Americans were supposed to be incapable of ever retrieving their affairs. Opposition were embarrassed, and now almost reduced to the single argument of the interfe- rence of foreign powers, which they had often unsuccessfully used before. Besides this, indeed, the obstinacy of the Americans in refusing the offers of lord Howe, even at the moment of their greatest depression, seemed to be a very bad presage. The strength of ministry, however,

now became so decisive, that whatever they proposed was immediately carried. The num- ber of seamen for 1777 was augmented to 45,000, and upwards of £5,000,000 voted for the expenses of the navy. Those of the land service amounted to nearly £3,000,000, besides the extraordinaries of the former year, which amounted to more than £1,200,000. But, how- ever administration might now triumpli, their exultation was but of a short continuance. The misfortune of general Burgoyne, at Saratoga, threw the whole nation into a kind of despair, and reduced the ministry to the greatest per- plexity.

The ministry after this were in no small diffi- culty how to raise a sufficient number of forces to carry on the war ; but they extricated them- selves by a masterly contrivance. This was the encouraging levies for government service by cities and private persons ; and, as the design was kept a profound secret before the Christmas recess, they were not disturbed by the clamors of opposition. The recess was purposely ex- tended, to give time for the scheme to take effect ; and, before parliament met again, it was actually accomplished, so that ministers could once more face their opponents without fear. Another and more weighty consideration, how- ever, now occurred. The European states, in general, had long beheld the grandeur of Britain with an invidious eye. The news of the disaster at Saratoga was therefore joyfully received among them. But, of all the foreign powers, the French, for obvious reasons, were the most active in supporting the Americans. Numbers of the young nobility were eagei to

signalise themselves in the cause of the colonies; and among the rest, the celebrated marquis de la Fayette. Impelled by an enthusiastic ardor in favor of the American cause, he purchased a vessel, loaded her with military stores, and sailed, with several of his friends, to America, to offer his services to congress. He met of course with a most gracious reception, and was invested with a command, in which he lost no opportunity of distinguishins himself. Beside? this nobleman, several other officers of France and Germany entered into the American ser- vice, and by their military talents greatly con- tributed to the exertions which the colonies were enabled to make. The French court also now interested itself in their behalf; and the cele- brated Dr. Franklin negociated a treaty, recog- nising the United States of America. Whatever might have been the motives of the British ministry, however, it is certain, that in defiance of probability, even when joined by the most acrimonious censures of opposition, they con- tinued to pretend ignorance of any hostile inten- tions in the court of France, until that court of its own accord announced them, by a formal notification to the court of St. James's, in March

1778.

An acknowledgement of the independence of America was now by many supposed to be the only rational step that could be taken, particu- larly before they had time to enter into exclusive engagements with France. This of course would lessen their dependence on France, and leave

them at liberty to form such connexions as tliey thought most proper. The ministerial party, however, still msisted on vigorous measures, representing it as spiritless and disgraceful to bend beneath the power of France, and setting forth the resources of Great Britain as sufficient to resist the efforts of all her enemies. The dis- honor of leaving the American loyalists exposed to the resentment of their countrymen was also lu-ged. These were said to be by far the greater number; and it was insisted that their loyalty ought to be rewarded by putting arms into their hands : whatever the danger of the experiment might be, we could not abandon them without exposing our reputation, and losing that cha- racter of fidelity to our engagements for which we had hitherto been so justly respected. Una- nimity in the present case was strongly insisted upon; and when opposition complained of some occult irresistible influence by which the coun- cils of the nation were directed, in despite of every suggestion of reason and argument, the charge was denied in the strongest manner, and ministers disclaimed every motive of their con- duct, excepting that of an internal conviction of its rectitude.

In the midst of these violent altercations, the greatest courage and steadiness were manifested by the deliberate part of the nation. The French once more insulted the country by a threat of invasion ; and orders were issued to draw out and embody the militia, which was then composed of men in every respect as well exercised and disciplined as any regular troops. It was complained, however, that a French squadron of twelve ships of the line had sailed from Toulon without any obstruc- tion, under the command of the count d'Estaing. Great apprehensions were entertained from the evident inferiority of lord Howe's naval force, which might expose him to a total defeat, and the whole fleet of transports to be taken or destroyed by the enemy. But, whatever might have been the probabilities in this case, it is certain that either the fortune or conduct of this commander was such, that no exploit of any great consequence was ever performed by d'Estaing. The operations of the French in America, with the various success of the war, are related under the article America. We have only to notice here, that d'Estaing having failed in his attempt on the British fleet at New York, and in assisting his allies in their attempt on Rhode Island, as well as having by other parts of his conduct greatly disgusted them, sailed for tlie West Indies, where he unsuccess- fully attacked the island of St. Lucia. Being repulsed in this attempt, he sailed to the island of Grenada, which he reduced, treating the van- quished in a very cruel manner, while a body of troops despatched by him also reduced the island of St. 'incent.

The count d'Estaing was now powerfully re- inforced ; so that his fleet consisted of twenty- six sail of the line an

covery of St. Vincent; but, before they could reach that island, intelligence was received of lae descent at Grenada. On this they steerea di- rectly for that island, where they encountered the French fleet without hesitation, notwithstanding the great superiority of the latter. At this time the French squadron amounted to twenty-seven sail of the line and seven frigates ; while that of Britain consisted only of twenty-one ships of the line and one frigate. On the British admirals, Byron and Barrington, endeavouring to bring the enemy to a close engagement, it was studi- ously avoided by d'Estaing ; and such was the dexterity and circumspection with which the lat- ter conducted himself, that it was only by seizing the transient opportunities of the different move- ments, occasioned by the wind and weather, that some of the British ships could be madeto close in with their antagonists. Even then the engagement was carried on upon such unequal terms, that the British ships were terribly shattered. For some time captains Colling^vood, Edwards, and Corn- wallis, stood the fire of tlie whole French fleet. Captain Fanshaw of the ^Monmouth, a sixty-four gun ship, singly threw himself in the way of the enemy's van to stop them ; and several of the British ships forced their way to the very mouth of St. George's Harbour, on the island of Grena- da ; but, finding it in the hands of the

French, an end was put to the engagement : nor did the French try to renew it, though the British ships had suffered so much. The count d'Estaing, having received fresh reinforcements, now set sail for America. The islands of Dominica, St. Vincent, and Grenada, were quite lost to Great Britain ; the first being taken by the mar- quis de Bouille, governor of Alartinico, and the last two by d'Estaing (see these articles); but these successes were balanced by the failure of the French commander in every other enterprise ; by his terrible disaster at the Savannah ; and by the acquisition of St. Lucia, which was taken in 1778 by admiral Barrington and generals Prescot and Meadows. See Lucia, St. In other parts of the West Indian seas, also, the honor of the British arms was very effectually supported. Admiral Hyde Parker, assisted by admiral Row- ley, kept the enemy in continual alarm, and in- tercepted the trade of the French islands in such a manner as greatly distressed them. Three large frigates despatched by d'Estaing, after his failure in America, were taken, and a great part of a convoy seized or destroyed in sight of M. de la Motte Piquet's squadron in the harbour of Port Royal at Martinico, the admiral himself having narrowly escaped. These successes, which hap- pened in 1778, 1779, and beginning of 1780, kept the event of the war pretty much in an equilibrium on the western seas and continent; but in the mean time the most unhappy dissen- sions prevailed through every department of the government at home. Among other charges brought by the opposition, against the ministry, that of npEjlecting the navy had been one of the most considerable ; nor indeed was the charge without foundation. ' The fleet was at this time in a very weak condition, and the valor and ex- perience of the oflficers alone seemed to compen- sate that defect. Tlie chief command was given

to admiral Keppel, who had served with uncom- mon reputation during the last war. Admirals Sir Robert Harland and Sir Hugh Palliser served under him. Arriving at Portsmouth about the end of March, 1778, Keppel exerted himself with so much diligence that, exclusive of those ships which it was found necessary to despatch to the coast of North America under admiral Byron, a fleet of twenty sail of the line was got in complete readiness by the beginning of June, and ten more were in a forward state. At the head of this fleet admiral Keppel sailed from Portsmouth on the 13th of June, to protect the vast number of commercial ships expected from all parts of the world, and at the same time to watch the motion of the French fleet at Brest. On the arrival of the British off" the coast of France two French frigates approached to make observations. These were the Licorne of thirty-two guns, and the Belle Poule of twenty-six. In consequence of a signal to give diase, the Mil- ford frigate overtook the Licorne towards the close of

the day, and requested the French cap- tain to come under the British admiral's stern ; upon his refusal a ship of the line came up and compelled him to come into the fleet. Next morning, the Licorne seeming by her motions to be altering her course, a shot was fired across her way as a signal for keeping it. Hereupon she discharged a broadside and a volley of small arms into the America of sixty-four guns that lay close to her, and immediately struck. The Are- thusa of twenty-six guns, commanded by captain Marshal, with the Alert cutter, was mean while in pursuit of the Belle Poule, also accompanied by a schooner, and the chase was continued till they were both out of sight of the fleet. On his coming up he informed the French captain of his orders to bring him to the admiral. This being refused, the Arethusa fired a shot across the Belle Poule, which she returned with a discharge of her broadside. The engagement, thus begun, continued more than two hours with uncommon warmth and fury. The Belle Poule was greatly superior not only in number but weight of metal ; her guns were all twelve-pounders ; those of the Arethusa only six : Notwithstanding this inferi- ority, she maintained so desperate a fight that the French frigate suffered a much greater loss of men than the British. Captain Fairfax in the Alert, during the engagement between the two frigates, attacked the French schooner, which be- ing of much the same force, the dispute continued two hours with great bravery on both sides, when she struck to the English cutter. The Are- thusa received so much damage that she became almost unmanageable. The Belle Poule, in the mean time, stood into a small bay surrounded with rocks, where she was protected from all at- tacks. Notwithstanding the great superiority on the side of the French, this action was extolled by them as a proof of singular bravery, and the account of it received with as much triumph as if it had been a victory. On the 18th of June, thf day following the engagement with the Belle Poule, another frigate fell in with the British fleet; and was taken by the admiral's orders, on account of the behaviour of the Licorne. The capture of these French frigates produced such

intelligence to the admiral, as proved of the ut- most importance, at tlie same time that it was highly alarming. He was informed that the fleet at Brest consisted of thirty iwo sliips of the line and twelve frigates. This was in every respect a most fortimate discovcy, as he had no more with him than twenty ships of' thˆ Ime and three fri- gates. The superiority of the enemy being such as- neither skill nor courage could oppose in his present circumstances; and, as the consequences of a defeat must have been fatal to this country, he thought himself bound in prudence to return to Portsmouth for a reinforcement. Here he ar- rived on the '27ih of June, and remained there till the ships from the Mediterranean, and the Spanish and Portuguese trade, and the summer fleet from the West Indies, coming home, brought him a supply of seamen, and enabled him to put to sea

again with an addition often ships of the line. But still there was a great deficiency of frigates, owing to the great numbers that were on the American station, and the necessity of man- ning the ships of the line preferably to all others. In the mean time, the preparation at Brest being fully completed, the French fleet put to sea on the 8th of July. It consisted of thirty-two ships of the line, besides a large number of frigates. On the following day the British fleet sailed out of Portsmouth in three divisions; the first com- manded by Sir Robert Harland, the third by Sir Hugh Palliser, and the centre by admiral Kep- pel, accompanied by admiral Campbell, an offi- cer of great courage and merit. The French had been informed that the British fleet was greatly inferior to their own ; and the admiral sailed at first in quest of it. On the 23rd of July they came in sight. But the appearance of the British ships soon convinced the French admiral of his mistake, and he immediately determined to avoid an engagement ; in which he was favored by the approach of night. All that could be done on the part of the British was to form the line of battle, in expectation that the enemy would do the same. During the night the wind changed, however, so favorably for the French as to give them the weather gage ; and thus it remained during the space of four days. Our fleet con- tinued the whole time beating up against the wind, with a resolution to attack thpm ; but the British admiral had the mortification to see his endeavours continually eluded by the vigilance of the enemy. The chase lasted till the 27th of July, when an alteration of wind and weather brought the fleets so near each other that it was no longer in their power to decline an engage- ment. Botii were now on the same tack : had they so remained, the British fleet, on coming up with the French, would have had an opportunity of a fair engagement; but this was a matter quite contrary to the wishes of the French ad- miral. Instead of receiving the British in this position, as soon as he found that an action must ensue, he put his ships on the contrary tack, that, sailing in opposite directions, they might only fire at each other as they passed, the fire of 'he British ships, however was uni- versal, till they came close up to the enemy, and were sure of doing execution. In this manner they all passed close alongside each other m

opposite directions, making a heavy and destruc- tive fire; when, the centre division of the British line having- passed the rearmost ships of the enemy, the first care of the admiral was to effect a renewal of the engagement. Sir Robert Har- land, with some ships of his division, had already taciied, and stood towa ds the French ; but some cf the fleet were dropped to leeward, and repair- ing the damages they had received in the action. As soon as it was practicable, however, the 'ic- tory wore, and steered again upon the

enemy. The other ships not having recovered their sta- tions near enough to support each other on a renewal of action, in order to collect them more readily for that purpose, he made the signal for the line of battle ahead. It was now 3 P. M., but the ships of the British fleet had not suffi- ciently regained their stations to engage. Sir Hugh Palliser, who commanded the rear during the time of action, came of course the last out of it ; and, in consequence of the admiral's signal for the line, was to have led the van in renewing the fig'^t; but his division was upon a contrary tack and was entirely out of the line. Several sig7.a]p for calling them back, and some verbal orders were mistaken, until it was too late to re- commence any operations against the enemy. In the night the French took the determination to put it wholly out of the power of the British fleet to attack them a second time, and retired with all speed towards Brest. The killed and wounded on board the British fleet, in this action, amounted to somewhat more than 500 ; but the French, it has been asserted, lost 3000. The event of the engagement, however, became an object of very severe criticism ; and complaints were made, that, through the bad conduct of the blue division, an opportunity had been lost of gaining a complete victory over the French. This induced Sir Hugh Palliser to apply to ad- miral Keppel for a justification of his conduct ; and, on the rejection of this demand, Sir Hugh published in one of the daily papers a variety of circumstances, reflecting severely on the conduct of the admiral himself The latter now deciared to the admiralty, that unless Sir Hugh Palliser should explain this attack, to his satisfaction, he could not, consistently with his reputation, ever act conjointly with him ; and, the altercation happening just before the meeting of parlia- ment, it was of course noticed when it met.

In the house of peers an enquiry was de- manded into the conduct of the commanders of the fleet on the 27th of July; and in the com- mons it was urged, that, as admiral Keppel had expressed a public refusal to serve in conjunction with Sir Hugh Palliser, the cause of such a de- claration ought to be investigated. Both these commanders being present in the house on this occasion, spoke to the point in question. The issue was, that a motion was made for an ad- dress to the crown to bring Sir Hugh Palliser to trial, for his behaviour in the late engagement with the French fleet. Sir Hugh, however, now astonished the house with the information, that he had already demanded and obtained a court- martial to sit on admiral Keppel. The dissatis- faction that was excited upon this occasion, among the upper classes in the navy, appeared in a

memorial presented to the king by twelve of the oldest and most distinguished admirals, at the head of whom was lord Hawke. The conduct of Sir Hugh Palliser was therein condemned with- out reserve : and, that of the admiralty itself was severely censured, as having established a prece-

dent pregnant with the most ruinous consequences to the naval service of the kincdom. By the measure it had now adopted, that Board had submitted to become the instrument of any indi- vidual, who might be prompted by iniquitous motives to deprive the navy of its best and highest officers. It was a destructive violation, they said, of all order and discipline in the navy, to permit and countenance long concealed, and afterwards precipitately adopted, charges and re criminatory accusations of subordinate officers against their commanders in chief. It was no less improper and scandalous, to suffer men at once in high civil office, and in subordinate command, previous to their making such accu- sations, to attempt to corrupt the judgment of the public, by publishing libels on their officers in a common newspaper. Such was the public sympathy in this affair that no business of con- sequence was agitated in either of the houses of parliament while the trial continued. It began upon the 7th of January 1779, and lasted till the 1 1th of February ; the court, after a long and accurate investigation of every species of evi- dence that could be produced, acquitting admiral Keppel of all the charges that had been brought against him. He was declared to have acted the part of a judicious, brave, and experienced officer; and the accusation was severely con- demned : both houses of parliament voted him their thanks for his eminent services, and the whole nation rejoiced at his triumph.

The conduct of those who presided at the admiralty board was now watched with great jealousy; and a number of facts were cited, to prove that for many years past it had been highly reprehensible. The debates were uncom- monly violent; and a resolution to condemn the measures of the admiralty was lost only by a majority of thirty-four. Administration, however, still kept iheir ground ; lord Howe declared his resolution to relinquish the service while it continued under the direction of its present managers : his resignation was followed by that of Sir Robert Harland, Sir John Lind- say, and several others ; nay, so general was the dislike to tlie service become, that no fewer than twenty captains of the first distinction proposed to go in a body to resign their commissions ; and were prevented only by the great occasion they saw there was for their services. This produced a direct attack upon lord Sandwich, then first lord of the admiralty ; and an enquiry into thf. cause of our want of success in the American war was insisted upon by lord and generaJ Howe, whose conduct had been also much re- flected upon. From the evidence of lord Corn- wallis, and other officers of high rank, it appeared that the forces sent to America were not at any time sufficient to reduce it ; that the Americans were almost universally unfriendly to the P.ritish cause; and that the nature of the country was such, that the conquest of it must be excessively

difficult. It appeared also, that the camp of the Americans on Long Island was so strong, that it could not have been attacked with any proba- bility of success, after their defeat in 1776. In every instance, therefore, general Howe's con- duct was shown to have been most judicious. General Burgoyne next insisted upon an exami- nation of his conduct; which indeed had been so unmercifully censured, that even the ministers began to thuik he ought to be allowed to vindi- cate himself, which he did successfully. It ap- peared, on these investigations, that the Ame- ricans, far from being the contemptible poltroons they had been called, were intrepid and resolute, and fully equal to the defence of their own country.

On the resignation of admiral Keppel, the command of the channel fleet was bestowed on Sir Charles Hardy, a brave and experienced officer, but now much advanced in years. Spain had now joined France and America, in the con- test with Great Britain : and various projects for the internal defence of the country were laid before parliament. The principal of these were the raising of volunteer companies to be added to the regiments of militia belonging to the counties, and augmenting the number of militia. The latter was judged unadvisable, on account of the necessity there would be to send a great number of regular forces out of the kingdom, which would require new supplies of recruits ; and the increase of the militia might prove detrimental to the recruiting service. The spirit and magnanimity displayed on this occasion, however, did the highest honor to the national character, and fully justified the opinion gene- rally entertained of its opulence and valor. All parts of the kingdom seemed actuated by a lau- dable zeal to concur in every measure necessary for its defence ; large sums were subscribed by people of rank and affluence ; and companies were raised, and regiments formed, with such alacrity as quickly banished all apprehensions for the safety of the kingdom. On the other hand, the French, now thinking themselves secure of victory by the accession of Spain to their cause, began to extend their plans of conquest. A squadron was fitted out under the command of the marquis de Vaudreuil, destined to rein- force the fleet commanded by D'Estaing. But, before its proceeding thither, an attack was made on the British settlements on the rivers Senegal and Gambia in Africa. These were easily con- quered ; and, on this occasion, the French quitted their own island of Goree, wliich was very soon after taken possession of by Sir Edward Hughes in his way to the East Indies. These unim- portant and distant conquests, however, being insufficient to produce any great eclat, it was resolved to strike a blow nearer home, by the conquest of Jersey and Guernsey. An attempt was accordingly made; but with so little suc- cess, that not a single man could be disembarked »u the island they intended to conquer. The enterprize, however, proved indirectly of great service to the cause of

America. A fleet of 400 merchantmen and transports were at that time on the point of sailing for New York, under the conduct of admiral Arbuthnot; but that officer,

being informed of the attack on Jersey, thought it his duty to come to the assistance of the island rather than proceed on his voyage. This delay was followed by another, occasioned by bad weather ; so that the fleet, which was laden with warlike stores and necessaries, did not arrive till the end of August, and several important enter- prises projected by Sir Henry Clinton were of course laid aside. The French, in the mean time, determined to make a second attempt on Jersey; but their squadron, being attacked by another under Sir James Wallace, was driven ashore in a small bay on the coast of Nor- mandy. Thither they were pursued by the Bri- tish commander ; who took a large frigate of thirty-four guns, with two rich prizes, and burned two other frigates and several other vessels. Thus disappointed, they next formed a project of invading Great Britain itself; and, their pre- parations for it were so formidable, that they excited considerable alarm. The best troops in the French ser'ice marched down to the coasts of the channel, transports were provided in great numbers; a junction was formed betwixt the French and Spanish fleets, in spite of the endea- vours used on the part of the British to prevent it ; and the allies made their appearance in the British seas with upwards of sixty ships of the line, besides a vast number of frigates and other armed vessels. All this formidable apparatus, however, ended in nothing more than the capture of a single ship, the Ardent of sixty-four guns ; which they took off Plymouth. All ranks, how- ever, were now weary of the American war ; and, even those who had formerly been the most sanguine, in defence of coercive measures, began to be convinced of their inutility.

The enormous expenses already incurred, and still necessary to be incurred, for the carrying on of the war, occasione,d such a general alarm, that it was no longer possible to refuse compliance with some scheme of economy, or at least giving it a patient hearing. The duke of Richmond proposed that the crown should set the example, and moved for an address to this purpose ; but the motion was lost by seventy-seven to thirty- six. The earl of Shelburne next undertook the discussion of the subject; and, in a most elabo- rate speech, compared the expenses of former times with the present. He moved, that the ex- penditure of those vast sums annually sunk in extraordinaries should be brought under some control ; and that to extend the public expenses beyond the sums granted by parliament, was an invasion of its peculiar and exclusive rights. Though this motion and some others of a similar tendency were rejected, the minds of the people were far from being conciliated. The opinion began to be general, that ministers exercised an unconstitutional influence over the representa- tives, and that this influence was very much aug- mented within these few years; and it

was sup- posed by many, that nothing short of a change in the constitution of parliament could remedy the evil complained of. To this purpose the famous York petition was framed in December, 1779; in which it was stated, that, in consequence of the war, the public debt was greatly aug- mented, taxes increased, and trade and maBt| >

factures much affected. The profusion attending the war was complained of; and parliament was requested, previous to tlie raising of any new taxes, to enquire into, and correct ihe abuse of expenditure in the public money ; to reduce ex- orbitant emoluments, abolish sinecure places and unmerited pensions, and apply the produce to the exigencies of the state. This petition was followed by others of a similar kind from twenty- seven of the principal counties and most of the large towns in England. The ministry, however, continued firm and undaunted. Previous to the taking any of the petitions into consideration, they insisted on going through the business of the supply, by determining the ways and means; nor did either the number of English petitions, or an additional one from the island of Jamaica setting forth the extreme danger that island was in, make them alter their resolution. At last, in the beginning of February 1780, a plan was brought forward by Mr. Burke, for securing the independency of parliament, and introducing economy into the various departments of govern- ment. This plan, among other things, proposed the abolition of the offices of treasurer, comp- troller, and coffererof the household ; treasurer of the chamber, master of the househould, the board of green cloth, with several other places under the steward of the household ; and removing the great wardrobe, the jewel office, the robes, board of works, and the civil branch of the board of ordnance. Other reformations were also pro- posed; but though the temper of the times obliged the minister to admit the bills, and even to pretend an approbation of the plan, he meant nothing less than to admit it in its full extent, or indeed in any part, if it could be prevented. When the plan, therefore, which he had approved in general, came to be particularly considered, he was found to be determined against every part of it. The general temper of the people, without doors, however, seemed now to have affected many of the members of parliament, and made them desert their old standard. An econo- mical plan, proposed in the house of lords by the duke of Shelburne, was rejected only by a majority of 101 to fifty-five. This was the strongest opposition that had appeared in that house for many years ; but in the lower house the strength of ministers was still more on»the decline. The first proposition in Mr. Burke's plan was to abolish the office of secretary of state for the colonies ; and tlie utmost efforts of ministry could preserve this office only by a majority of 208 to

201. The board of trade was abolished by 207 to 198; but this was the only defeat sustained by ministry at this time ; all the rest of the plan being rejected, excepting only one clause, by which it was determined that the offices of lieutenant and ensign, &c., belonging to the yeomen of the guards, should not any longer be sold, but given to officers in the army and navy on half pay, and of fifteen years standing in their respective Imes of service. Administration, however, had a still greater defeat to meet with than what they had experienced in the abolition of the board of trade. The 6th of April 1780 was the day appointed for taking into considera- tion the numerous petitions, from half the king-

dom of England. They were introduced by Mr- Dunning; who, in a very elaborate speech, set forth the many attempts that had been made to introduce reformation and economy into the plans of government. These had been defeated by ministerial artifice, or overthrown by mere dint of numbers : he concluded therefore, and moved as a resolution of the house. That the influence of the crown had increased, was in- creasing, and ought to be diminished. This motion being carried, after a long and violent debate, he next moved, that the house of com- mons was as competent to examine into and cor- rect abuses in the expenditure of the civil list, as in any other branch of the public revenue. To this another was added by Mr. Thomas Pitt, that it was the duty of the house to provide an immediate and effectual redress of the abuses complained of in the petitions. The ministry now requested that nothing farther might be done that night : but such was the temper of the house, that both these motions were carried with- out a division ; after which they were read a first and second time, and agreed to without a di- vision.

Ministry had never received such a complete defeat, nor ever had been treated with so much asperity of language. The news of the pro- ceedings of this day were received by the people at large with as much joy as if the most com- plete victory over a foreign enemy had been an- nounced. Opposition, however, though masters of the field at present, did not imagine, they had obtaii ed any permanent victory, and therefore resolved to make the most of the advantages they had gained. It was moved by Mr. Dunning, at the next meeting, that to ascertain the indepen- dence of parliament, and remove all suspicions of its being under undue influence, there should, every seven days after the meeting of parliament, be laid before that house an account of all the sums issued out of the civil list, or any other branch of the revenue, since the last recess, in favour of any of its members. This passed with little difficulty ; but when he moved that the treasurers of the chamber and household, the cofferer, comptroller, and master of the household, with the clerks of the green cloth, and their deputies, should be excluded from having seats in the house, a warm debate ensued ; and the motion was carried only by 215 to 213. This was

the last triumph of the popular party ; their next motion, for the exclusion of revenue officers, being thrown out by 224 against 195. A last effort was made by Mr. Dunning's proposal of an address to the throne against proroguing or dissolving the par- liament, until measures had been taken to pre- vent the improper influence complained of in the petitions. On this occasion the debates were long and violent; but the motion was lost by 254 against 203. Ministry would gladly have screened their friends from the vengeance of op- position : alleging the lateness of the hour, it being then past midnight. The speaker of the house, however, perceiving Mr. Fox about to rise, insisted that the house should remain sitting; and thus tlie deserters from the popular party were condemned to hear their conduct set forth in such terms as perhaps were never applied, on

any other occasion, to members of the British senate. This last victory of administration con- firmed the dissatisfaction and ill opinion which the people had conceived of the majority of their representatives. It was in the height of that ill will which the conduct of parliament had created in the multitude, that those discontents broke out which were so near involving the kingdom in universal desolation.

The hardships, under which individuals pro- fv-ˆssing the Roman Catholic persuasion had labored for many years in England, had lately awakened the consideration of the liberal minded. The mutility and impropriety of persecuting people from whom no danger was apprehended, and who were not suspected of disaffection to the civil constitution of this country, in- duced several persons of rank to undertake the procuring them relief; and the calamities of the times had afforded the English Roman Catholics a very proper occasion to manifest their attachment to government. They pre- sented a most loyal and dutiful address to the king, containing the strongest assurances of af- fection and fidelity to his person and the civil government of this country. ' Our exclusion,' said they, ' from many of the benefits of that constitution, has not diminished our reverence for it. We behold with satisfaction the felicity of our fellow subjects ; and we partake of the general prosperity which results from an institu- tion so full of wisdom. We have patiently sub- mitted to such restrictions and discouragements as the legislature thought expedient. We have thankfully received such relaxations of the rigor of the laws, as the mildness of an enlightened age, and the benignity of the British government, have gradually produced ; and we submissively wait, witliout presuming to suggest either time or measure, for such otiier indulgence as those happy causes cannot fail in their own season to effect.' This address was presented to the king on the 1st of May

1778, and signed by the duke of Norfolk, the earls of Surrey and Shrewsbury, the lords Stourton, Petre, Arundel, Dormer, Teynham, Clifford, and Linton; and by 163 commoners of rank and fortune. The only ob- stacle was, the difficulty of overcoming the pre- judices of the lower classes, who would probably condemn the indulgence shown to the people of a persuasion, which, when powerful, had been extremely intolerant, and which they therefore had been taught to look upon with horror and detestation. About the middle of May Sir George Saville made a motion for the repeal of some penalties enacted against them. He grounded his motion, on the necessity of vindi- cating the honor and asserting the true principles of the Protestant religion, of which the peculiar merit was to admit of no persecution. It ill became the professors of such a religion to be guilty of that intolerance with which they re- proach others. The statutes he meant to repeal were such as gave occasion to deeds that were a disgrace to human nature, by inciting relations to divest themselves of the feelings of humanity, and by encouraging the rapacity of informers. He represented the address above quoted as a full proof of the loyal disposition of the Roman

Catholics, and as an unfeigned testimony of the soundness of their political principles. In order, however, to silence the objections of those who might suspect them of duplicity, a test was pro- posed of so binding and solemn a nature, that no man could be supposed to imagine that any authority could annul its elhcacy.

The pains and penalties of the statutes to be repealed were laid before the house by Mr. Dun- ning. By these statutes t was made felony in a foreign clergyman of the Roman communion, and high treason in one that was a native of this kingdom, to teach the doctrines or perform divine service according to the rites of that church : the estates of persons educated abroad in that persuasion were forfeited to the next Protestant heir ; a son or any other nearest relation, being a Protestant, was empowered to take possession of his own father's, or nearest of kin's estaste, during their lives ; a Roman Catholic was dis- abled from acquiring any legal property by pur- chase. The mildness of the British government did not indeed countenance the practice of the severities enacted by these statutes ; but still the prospect of gain subjected every man of the Roman persuasion to the ill usage of informers ; as on their evidence the magistrates were bound, however unwilling, to carry these cruel laws into execution. In consequence of these representa- tions, the motion made in favor of the Roman Catholics was received without one dissenting voice; and a bill in conformity to its intent was brought in and passed both houses. The test or oath by which they were bound was conceived in the strongest and most expressive terms. The in- dulgence shown the Roman Catholics in England now encouraged those of tiie same persuasion in Scotland to hope for a similar relief. Several

gentlemen of that nation of great rank and char- acter, and who were members of parliament, ex- pressed their warmest wishes that it should be extended to their country ; and declared their intention to bring in a bill for that purpose the following session. The design was approved by the general assembly of the church of Scotland ; who rejected, by a majority of no less than 1000, a remonstrance that had been proposed against it. In consequence of these flattering appearances, a petition was prepared for parliament, in behalf of the Roman Catholics in Scotland.

But these expectations were soon damped. A pamphlet was published against the doctrine and professors of the Popish religion, which repre- sented them as the common foes to mankind and the disturbers of all states. The opposition was at first chiefly conducted by some persons at Edinburgh, who assumed the title of a com- mittee of correspondence for the Protestant interest ; and under that denomination corres- ponded with all those who coincided with their opinions, and who formed a very large propor- tion of the people in Scotland. The persons who made up this committee, however, acted from no mean or mercenary views ; they aimed only at the preservation of the Protestant religion, and the liberties of their country ; both which they conceived were in danger, from die indul- gence of government to individuals of the Roman Catholic persuasion. Actuated by these ideas,

they exerted themselves with so much activity, that the principal gentlemen of the Catholic per- suasion thought it requisite, for their safety, to convey an intimation to the British ministry, that they were desirous to drop the application they had proposed to make. They published also, in the newspapers, the representation they had made to ministry ; hoping thereby to convince the public, that they were sincerely desirous to remove any cause of dissatisfaction on their own account, and to submit to any inconveniency sooner than occasion disturbance. But matters were now gone too far to be conciliated by any means. On the 2d of February, 1779, the populace of Edinburgh attacked and set on fire a house, just built by a Roman Catholic bishop, which was intended to contain a place of worship. They next day gutted another house in Blackfriars' NVynd, that had a popish chapel attached ; after whicii they proceeded to vent their resentment on several individuals of that persuasion, by destroying their property. The next objects of their vengeance were those who had patronised the Roman Catholics. They beset the houses of principal Robertson and Mr. Crosby ; but the friends of both came to their assistance in such numbers,- and so well prepared, that they did not dare to exercise

the violence they had premedi- tated : and this put an end to the attempts of the mob at Edinburgh. But the spirit of dissatis- faction at the indulgence extended to the Roman Catholics remained in great force in England : and a society was formed in London, which took the title of the Protestant Association, of which lord George Gordon, who had been conspicuous in this business in Scotland, was elected presi- dent. It now prepared to act in a decisive manner against the resolutions of the legislature. On the 29th of May, 1780, the associates held a meeting to settle in what manner they should present a petition to the house of commons against the repeal of the penal statutes. A long speech was made on this occasion by their pre- sident, who represented the Romish persuasion as gaining ground rapidly in this country; that the only method of stopping its progress was to go up with a spirited remonstrance to their representatives, and to tell them, in plain and resolute terms, that they were determined to preserve their religious freedom with their lives, .&c. This harangue bein^ received with the loudest applause, he moved that the whole body of the association should meet on the 2d of June, in St. George's Fields, at ten o'clock in the morning, to accompany him to the house of commons on the delivery of the petition. This being assented to, he informed them, that if he found himself attended by fewer than 20,000, he would not present the petition. lie tlien directed them to form themselves into four divisions ; the lirst, second, and third, to consist of those who belonged to the City, Westminster, and Southwark ; the fourth of the Scotch resi- dents in London. They were, by way of distinc- tion, to wear blue cockades in their hats. Three days previous to the presentation of the petition, he gave notice of it to the house, and of the man- ner in which it was to be presented. On the 2d of June, about 50,000 or C0,000 of the po- Voi. X.

*pulace assembled in St. George's Fields. They drew up in four separate divisions, as had been agreed, and proceeded to Westminster, with lord George Gordon at their head. An immense roll of parchment was carried before them, contain- ing the petition. On their arrival they com- pelled several members of both houses to put blue cockades in their hats, and call out * No Popery.' They forced them to take an oath that they would vote for the repeal of the po- pery act, as they styled it, and treated others with great indignity, posting themselves in all the avenues to both houses ; they had even the audacity more than once to endeavour to break open the doors. Several members of the house of lords narrowly escaped with their lives. During these disturbances, lord George Gordon moved for leave to bring up the petition. This was granted ; but, when he proposed it should be taken into immediate consideration, it was stre- nuously opposed by almost the whole house. Enraged at this, he came out several times to the people during the debates, acquainting them how averse the house appeared from granting their petition, and naming particularly those who had spoken*

against it. Several members expos- tulated with him in the warmest terms on this unjustifiable conduct ; and one of his relations, colonel Gordon, threatened to run him through the moment any of the rioters should force their way into the house. After some hours, durirtg which the house could carry on none of its de- liberations with regularity, the members were relieved by the arrival of a party of the guards. Order be.ng restored, the business of the petition was resumed; when lord George Gordon told them it had been signed by nearly 120,000 Bri- tish Protestant subjects. He therefore insisted that the petition should be considered without delay. But the commons continued immovable in their determination. Of 200 members, then present in the house, six only voted for it. In the mean time the mob had dispersed them- selves into various parts of the metropolis, where they demolished two Romish chapels belonging to foreign ministers; and openly vented the most terrible menaces against all people of that persuasion. On the 4th of June they assembled in great numbers in the eastern parts of London ; and attacked the cha- pels and houses of the Roman Catholics, strip- ping them of their contents, whicli they threw into the street, or committed to tlie flames. They re- newed their outrages on the following day, de- stroying several Romish chapels, and demolishing the house of Sir George Saville, in resentment of his having brought into parliament the bill in favor of the Catholics. Next day both houses met as usual ; but, finding that no business could be done, they adjourned to the 19th. During the 6tli and 7th of June, the rioters were absolute masters of the metropolis and its environs. Some of those who had been concerned in the de- molition of the chapels belonging' to foreign ministers, having been seized and sent ˆo New- gate, the mob collected before that prison, and demanded their immediate release. On being refused, they proceeded to throw firebrands and all kinds of combustibles into the keeper's house;

which communicated to the prison ; so that this immense pile was soon in flames. In this scene of confusion the prisoners, amounting to about 300, were all released ; among whom were seve- ral under sentence of death. The mob set fire, in the same manner, to the King's Bench and Fleet prisons, and to a number of houses belong- ing to Roman Catliolics. The terror excited by these incendiaries was such, that most people hung out of their windows pieces of blue silk, the color assumed by the rioters; and chalked on their doors and shutters the words, ' No Popery.' The night of the 7th of June concluded these horrors. No less than thirty-six different confla- grations were counted at the same time. The tank had been

threatened, and was twice assailed; but happily was too well guarded for their at- tempts. In the evening, large bodies of troops arrived from all parts, and came in time to put a stop to the progress of the rioters. The king having, under his sign manual, directed tliat the troops should not scruple to act, they dispersed them every where ; but it was not until the after- noon of the 8th, that the people began to recover from their consternation. During great part of the day, the disorders of the preceding night had created so terrible an alarm, that the shops were almost universally shut. The melancholy effects of misguided zeal were not, however, confined to London. The outrageous disposition of the populace was preparing to act the like horrid scenes in other parts of England. The mob rose in Hull, Bristol, and Bath ; but, through the timely interposition of the magistracy, these places were saved from their fury.

On the subsiding of this violent commotion, lord George Gordon was arrested, and committed close prisoner to the Tower, and on the 19th of June both houses met according to adjournment. The speech from the throne, acquaintmg them with the measures that had been taken in conse- quence of the disturbances, and assuring them of the utmost readiness to concur in whatever could contribute to the safety and maintenance of the laws and liberties of the people, was highly ap- proved ; but the conduct of administration was severely censured, and charged with unpardon- able neglect for not calling forth the civil power, and employing the military in due time. Mi- nistry-excused themselves, from the want of suf- ficient strength to answer all the demands of assistance that were made during the riots, and the absolute impossibility of suppressing them till the arrival of troops from the country. The various petitions were now taken into considera- tion, that had been presented for the repeal of the act which had occasioned the riots ; but the house continued in the same mind. Neverthe- less it was thought proper to yield somewhat to the prejudices of the people, by passing a bill for preventing persons of the Popish persuasion from teaching or educating the children of Pro- testants ; but this was afterwards thrown out by the lords. Nothing could have happened more opportunely for the ministry than these riots ; for such was the terror occasioned by them, that the ardor which had appeared for promoting popular mee ings, and opposing the measures of government, was in a great degree suppressed.

Even the country meetings were represented as having a tendency, like the Protestant associa- tion, to bring on insurrections and rebellions. Many began to consider all popular meetings as extremely dangerous ; and, among the commer- cial and monied people, there was no small number who were so panic struck, that all at- tention to the principles of the constitution was over-ruled by their extreme anxiety for the pre- servation of their property. Indeed the friends of the association did not hesitate to

allege, that the riots had been secretly encouraged by minis- try to produce these consequences.

In the debate in the house of lords on the sub- ject of the riots, the duke of Richmond expressed his hopes, that some of his majesty's ministers would give their lordships assurances, that the measures taken to suppress them were defensi- ble only upon the ground of necessity ; and that what was illegally done, on that ground, would be cured by an act of indemnity. Other obser- vations were thrown out relative to the king's prerogative and military law: upon which lord Mansfield observed, that neither the king's pre- rogative nor military law, had any thing to do with the conduct of government, in their endea- vours to quell the late outrages. All men, of all ranks, descriptions, and denominations, were bound, by tlieir oath of allegiance, to interpose ior the prevention of acts of high treason, or felo- ny, wherever any attempts to perpetrate such crimes were made in their presence ; and were criminal if they did not do it. In the whole of these proceedings, therefore, the military had not acted in their technical capacity as military, but had merely exercised their duty as members of civil society. When a body of men were con- vened, without proceeding to the actual perpe- tration of treasonable or felonious acts, then, by a clause in the riot act, the presence of the civil magistrate was necessary, before the military could interpose ; and for this reason, that, as no acts of felony were committed, they could have no plea in their civil character for interfering with them. But, by the statute law of the coun- try, it became felonious in any combination of men to persevere in that combination, after the riot act had been read by a justice of the peace ; and this being done, then, and not till then, they had a constitutional reason for their interposition; namely, the privilege and duly of hindering the commission of felony, whenever they had it in their power. This being, therefore, the plain voice of the law, his lordship did not see how any prerogative of the king had been exercised, nor how military law had been established. Many persons, however, were alarmed at the dangerous precedent which the late exertions of the military afforded. Among others, Sir George Saville, in an address to his constituents some time afterwards, declared, that he considered them as 'fully, eff"ectually, and absolutely, under the discretion and power of a military force, which was to act without waiting for the authority of the civil magistrates.' A letter writ- ten by lord Amherst to lieutenant colonel Twis- leton, who commanded the troops employed in London for the suppression of the riots, and which was understood to be an order for disarm-

iuq the citizens, was also much canvassed in both houses of parhament.

*We now return lo the operations of the war, winch, notwithstanding the powerful confederacy against Great Britain, seemed to be decidedly in her favor. The Spaniards had begun their mili- tary operations by the siege of Gibraltar, but with very little success (see Gibraltar); and the close of the year 1779 and beginning of 1780 were attended with some considerable naval ad- vantages to Great Britain. On the 18th Decem- ber, 1779, the fleet under the command of Sir Hyde Parker in the West Indies took nine sail of French merchant ships, which, with several others, were under the cotivoy of sojTie ships of war ; and about the same time several other vessels were taken by his squadron. On the 8th January 1780 Sir G. B. Rodney, who had been intrusted with the command of a fleet, one object of the desti- nation of which was the relief of Gibraltar, fell in with twenty-two sail of Spanish sliips, and in a few hours the whole were taken. On the 16th he engaged, near Cape St Vincent, another Spa- nish fleet, of eleven ships of the line, and two frigates, under Don Juan de Langara. The Spa- niards made a gallant defence ; but four of their largest ships were taken, and carried into Gibral- tar : viz. the I^hcenix of eighty guns and 700 men, on board which was the admiral; the Minorca, of seventy guns and 600 men ; the Princessa, of seventy guns and 600 men ; and the Diligente of seventy guns and 600 men. Two other seven- ty gun ships were also taken ; but one of them was driven on shore on the breakers and lost. Four ships of the line escaped, and the two fri- gates ; and in the course of the action the St. Do- mingo, a Spanish ship of seventy guns, and 600 men, was blown up. The five men of war taken were remarkably fine ships. On the 20th March there was an action in the West Indies between some French and English men of war, the former under the command of M. de la Mothe Picquet, and the latter, being part of Sir Peter Parker's squadron, under that of commodore Cornwallis. The engagement was maintained on both sides with great spirit ; but the French at length gave up the contest, and made the best of their way for Cape Francois. Admiral Rodney having ar- rived m the West Indies, and taken upon him tlie command of his majesty's sliips at the Lee- ward Islands, an action was fought between him and the French fleet under the command of count de Guichen, on the 17th of April. The British squadron consisted of twenty ships of tl*e line, besides frigates; and the French fleet of twenty- three ships of the line, and several frigates. The action began a little before one, and continued till about a quarter after four P. M.. Admiral Rodney was on board the Sandwich, a ninety gun ship, which beat three of the French ships out of their line, and entirely broke it. But such was at length the crippled condition of the Sand- wich, and of several other ships, that it was im- possible to pursue the French. The victory was, indeed, claimed on both sides ; but no ship was taken on either ; and the French retired to Gua- daioupe. Admiral Rodney's ship, the*

Sandwich, had suffered so much, that for twenty-four hours she was with difficulty kept above water. Of the

British there were killed in this engagement 120, and 353 were wounded. On the 15th May ano- ther action happened between the same com- manders, but only a few ships were engaged, which soon separated. The fleets met a third time in an indecisive action of the 19th of the same month. In June, admiral Geary, who commanded on this station, took twelve valuable merchant ships bound from Port au Prince to Bourdeaux and other ports of P" ranee: but in August a very important and unexpected capture was made by the Spaniards. Captain Moutray, who had under his command the Raniilies of seventy-four guns and two frigates, with many vessels bound for the East and West Indies un- der convoy, had the misfortune to fall in wit!i the combined fleets of France and Spain, which had sailed from Cadiz the precedmg day. The Ramilies and the two frigates escaped ; but the rest were so completely surrounded, that five East Indiamen were taken, and fifty merchant sliips. Their cargoes were extremely valuable : and it was one of the most complete naval cap- tures ever made. The Spaniards on this occa- sion behaved to their prisoners with great hu- manity ; and made a suitable [return for the generous treatment which their countrymen had experienced from admiral Rodney. As some compensation, the British took about this time Fort Omoa from the Spaniards, where upwards of 3,000,000 of dollars were gained by the victors, and, among other valuable commodities, twenty-five quintals of quicksilver, without which the Spaniards could not extract the precious metals from their ores.

And now arose a formidable confederacy of the northern powers under the title of the Armed Neutrality. Of this confederacy the late Cathe- rine II. of Russia declared herself the head ; and her plan was intimated on the 26th February 1780, in a declaration addressed to the courts of London, Versailles, and Madrid. In this decla- ration it was observed, that, though from the conduct of her imperial majesty, it might have been hoped, that her subjects would have been allowed i)eaceably to enjoy the fruits of their in- dustry, and of the advantages belonging to all neutral nations, experience had proved the con- trary ; her imperial majesty's subjects had been often molested in their navigation, and retarded in their operations, by the ships and privateers of the belligerent powers. Her imperial ma- jesty therefore declared, that she found herself under the necessity of removing those vexations which were offered to the commerce of Russia, as well as to the liberty of commerce in general, by all means compatible with her dignity and the welfare of her subjects : but before she came to any serious measures, and in order to prevent all new misunderstandings, she thought it just and equitable to expose totheeyes of all Europe the principles which she had adopted for her conduct, and which were contained in the fol- lowing

propositions: 1. That neutral ships should enjoy a free navigation, from port to port, and on the coasts of the belligerent powers. 2. That all eff"ects belonging to the subjects of the belligerent powers should be tooned upon as free on board such neutral ships, excepting only such

*goods as were stipulated contraband. 3. Her imperial majesty, for the proper understanding of this, refers to the articles ten and eleven of her treaty of commerce with Great Britain, extend- ing her obligations to all the other belligerent powers. In the treaty made between Great Britain and Russia in 1734, it is said, 'The sub- jects of either party may freely pass, repass, and trade in all countries which now are or hereafter shall be at enmity with the other of the said parties, places actually blocked up or besieged only excepted, provided they do not carry any warlike stores or ammunition to the enemy : as for all other effects, their ships, passengers, and goods, siiall be free and unmolested. Cannons, mortars, or other warlike utensils, in any quan- tity beyond what may he necessary for the ship's provision, and may properly appertain to and be judged necessary for every man of the ship's crew, or for each passenger, shall be deemed ammunition of war ; and, if any such be found, they may seize and confiscate the same according to law ; but neither the vessels, passengers, nor the rest of the good-:, shall be detained for that rea- son, or hindered from pursuing their voyage.' The same enumeration of the goods, stipulated as contraband, was given in the treaty concluded between Great Britain and Russia in 1766. 4. That, in order to determine what characterises a port blocked up, that denomination should not be granted but to such places before which there were actually a number of enemy's ships station- ed near enough so as to make its entry dangerous. 5. That these principles should serve as rules la the judicial proceedings and sentences upon the legality of prizes. This declaration was commu- nicated to the States General, now openly mani- festing hostile intentions to this country, by prince Gallitzin, envoy extraordinary from the empress of Russia ; and she invited them to make a common cause with her, so far as such a union might serve to protect commerce and na- vigation. Similar communications and invita- tions were also made to the courts of Copenha- gen, of Stockholm, and of Lisbon, in order, it was said, that, by the united care of all the neu- tral maritime powers, the navigation of the neu- t-ral trading nations might be established and legalised. The king of France said in reply, * what Ver imperial majesty claimed from the belligerent powers was nothing else than the rules prescribed to the French navy :' while Swe- den*

and Denmark formally acceded to the armed neutrality proposed. The States General did the same towards the dose of the year. It was now resolved, by the powers engaged in this armed neutrality, to make common cause at sea against any of the belligerent powers who should vio- late, with respect to neutral nations, the princi- ples which had been laid down in the memorial sf the empress

The British ministry determined, therefore, to take vengeance on the Dutch, whose in- gratitude and perfidy had become evident ever since the commencement of hostilities with the Americans. On the 25th January, 1781, it was announced to tjie house of commons, that his majesty had been obliged to direct letters of marque and reprisal to be issued against the

States General and their subjects. For the causes and motives of his conduct in this respect, he referred to a public manifesto against that repub- lic, which he had ordered to be laid before the liouse. Lord North on this occasion said that the States, in open violation of treaties, had not only refused to give Great Britain that assistance which those treaties entitled her to claim when attacked by the house of Bourbon, but had also, in direct violation of the law of nations, contri- buted as far as they could to furnish France with warlike stores, and had also at length thought proper to countenance the magistracy of Amster- dam, in the insult which they had offered to this country, by entering into a treaty with the rebel- lious colonies of Great Britain, as free and inde- pendent states. By the treaty of 1678 it was sti- pulated, that, incase Great Britain was attacked by the house of Bourbon, she had a right to take her choice of either calling upon the StatSs General to become parties in the war, and to attack the house of Bourbon within two months, or of re- quiring an aid of 6000 troops, and twenty ships of war. But, though this country had always preserved her faitli with Holland, yet that repub- lic had refused to fulfil the terms of this treaty. Lord North farther observed, that the States General had suffered Paul Jones, a Scotchman, and a pirate, acting without legal authority from any acknowledged government, to bring British ships into their ports, and to refit there, &c. Lord North added, that he lamented the neces- sity of a war with Holland ; but it appeared to him to be an unavoidable measure; and that the oaly means of obtaining an honorable and a just peace, was t- o show ourselves capable of carrying on the war with spirit and vigor. The Dutch island of St. Eustatius was, therefore, on the 3d February 1781, summoned by admiral Rodney and general Vaughan to surrender to the arms of Great Britain ; the immense property on the island was confiscated, and a sale of private ef- fects instituted, with such circumstances of ap- parent rapacity, as became the subject of a warm discussion in parliament.

At this time the Dutch do not appear to have acted with their usual prudence. Notwithstand- ing their provoking conduct towards Britain, they

had made no preparations for war : but by August, 1781, they had equipped a considerable squadron, the command of which was given to rear-admiral Zoutman. On the 5th of that month this squadron fell in with the British fleet, commanded by admiral Parker. The force commanded by the Dutch admiral consisted, ac- cording to their own account, of one ship of seventy-four, one of sixty-eight, one of sixty-four, three of fifty-four, and one of forty-four guns, be- sides frigates ; but the English account repre- sents the Dutch fleet as consisting of eight two- decked ships. No gun was fired on either side till they were within the distance of half musket- shot. The action then began about 8 A.M., and continued for three hours and forty minutes. Both sides fought with equal ardor, and the action terminated indecisively : the Dutch ships of war with their convoy bearing away for the Texel : and the English ships being too much disabled to follow them. A Dutch sevcnty-iuur

gun ship sunk soon after tlie action. In Europe the utmost efforts of France and Spain were able to produce nothing more than the annual parade of a mighty fleet in the channel ; which was answered by the appearance of a British fleet so formidable that the allies never durst attack them. In the East Indies the united powers of the French, and native powers, had been con- quered, and the Dutch settlements had suffered severely. In 1781, however, the British naval power in the West Indies was so greatly sur- passed by that of France and Spain, that great apprehensions were entertained for our posses- sions. An ineffectual attempt on the island of St. Vincent was made by admiral Rodney ; and an indecisive engagement took place, April 28th, 1781, between admiral Hood and the count de Grasse ; the event of which, however, if not ad- vantageous, was certainly honorable to Britain, as the French had a superiority of six ships of the line. The damage done to the British ships having obliged them to retire to Barbadoes to refit, the French took that opportunity to make a descent on the island of Tobago. See Tobago. Admiral Rodney had sent rear-admiral Drake with six sail of the line, three frigates, and some troops, to the assistance of the island ; but they were too late. Besides the inconveniences which the British West India islands suffered in consequence of the war, it was also the misfor- tune of some of them to be involved in domes- tic disputes with their governors. This was par- ticularly the case with Jamaica and Barbadoes ; and it seemed to be a maxim with the British ministry, at tiiis period, to pay little regard to complaints from the subjects of the empire, respecting any abuse of authority. But the great and decisive blow of the American contest, which hapj)ened this year, was the capture of lord Cornwallis with the division of the army under his command. Other events,

indeed, were sufficiently, mortifying. The province of West Florida had been reduced by the Spaniards; Minorca was besieged by them with an apparent impossibility of holding out; and the island of St. Kustatius was re-captured by the French. In short, every circumstance seemed to proclaim the necessity of putting an end to a war so cala- mitous and destructive

■*"arliaraent met 27th of November, 1781. The ministry had received such a signal defeat in 1780 as seemed to prognosticate the ruin of their power. They had indeed afterwards ac- quired a majority, and the terror produced by the riots had assisted the re-establisliment of their authority ; to which the success at Charlestown, and other parts of America, also contributed. But the disasters of 1781 in- volved them in the utmost difficulty and dis- tress. In the speech from the throne, his majesty observed, that the war was still unhap- pily prolonged by that- restless ambition which first excited the enemies of his crown and peo- ple lo comm'ence it, and which still continued to*

maintain in the colonies, and to restore, to his deluded subjects in America, that happy and prosperous condition which they had formerly derived from a due obedience to the laws; but the late misfortune in that quarter called loudly for the firm concurrence and assistance of parlia- ment, to frustrate the designs of their enemies, which were equally prejudicial to the real inte- rests of America, and to those of Great Britain. The address was vehemently opposed by Mr. Fox and Mr. Burke. The latter remarked, that if there could be a greater misfortune than had already been undergone by this kingdom, in the present disgraceful contest, it was hearmg men rise up in the great assembly of the nation, to vindicate such measures. If the ministry and the parliament were not to be taught by experience ; if neither calamities could make them feel, nor the voice of God make them wise, what had this fallen and undone country to hope for? If any thing could tend to deject the people of England, to make them despair of their situation, and re- sign themselves to their fate, it must be to re- ceive information that their ministers, after all that "had been suflfered^, were yet determined to go on with the American war. A battle might be lost, an enterprise might miscarry, an island might be captured, an army might capitulate in the best of causes, and even under a system of vigor and foresight ; because the battle, after all the wisdom and bravery of man, was in the hands of heaven ; and if either, or all of thes^ calamities, had happened in a good cause, and under the auspices of a vigilant administration, a brave people would not despair. But it was not so in the present case. Amidst all their sufferings, and their misfortunes, they saw nothing so distressing as the weakness or wickedness of their ministers. They seemed still determined to go on, without plan, and without foresight, in this war of calamities ; for every thing that happened in it was a ca- lamity, lie considered them all alike, vic- tories and defeats ; towns taken

and towns evacuated ; new generals appointed, and old generals recalled ; they were all alike calamities in his eyes, for they all spurred us on to tliis fatal business. Victories gave us hopes, defeats made us desperate, and both instigated us to go on. They were, therefore, both calamities; and the king's speech was the greatest calamity of all; for the king's speech showed us the disposi- tion of the ministers : and this disposition was not to retreat an inch; but to goon,to plunge us deeper, to make our situation more disgraceful and more unhappy. The address, however, was carried by a majority of 216 to 129. In the house of peers the earl of Shelburne observed, that seven years had now elapsed since blood was first drawn in America; and, from that period to the present, the affairs of Great Ikitain had been continually growing worse. Of nearly 87,000 men sent to America, how few had returned ! What trea- sures had been in vain expended ! What enor- mous debts accumulated ! The most liberal national supplies had been followed by nothing but calamities; and the whole proceedings of the ministry manifested a want of system and of in- telligence. Among other instances of mis-

manacrement, his lordship remarked that, instead of blocking up the French fleets within their own harbours, or immediately intercepting them on their putting out to sea, we had suffered them to sail far upon their expeditions to our distant settlements; and, when they had acquired this great advantage, we slowly followed their power- ful armaments with inconsiderable squadrons, and scarcely ever reached the place of destina- tion till the enterprises of the enemy were ac- complished. As to the farther prosecution of the war with the least prospect of success, it was totally impossible : the nation was too much ex- hausted both of men and money ; recruits were not to be procured for the army ; and, if we had the best first lord of the admiralty, and the ablest board that ever sat, it was impossible to provide for all the distant services of so extensive a war. The reason was obvious. The fine navy that belonged to Great Britain at the conclusion of last war, had been suffered to rot and moulder away; while France and Spain had recruited and repaired their marine during the whole period of the peace. The house at length divided on an amendment of lord Shelburne's, which was rejected by a majority of seventy-five to thirty-one. A short protest against the address was entered by the duke of Richmond, the mar- quis of Rockingham, and earl Fitzwilliam ; in which they declared that tiiey dissented, ' for reasons too often urged in vain for the last seven years, against the ruinous prosecution of the un- just war, carrying on by his majesty's ministers, against the people of North America, and too fatally confirmed by repeated experience, and the late disgraceful loss of a

*second army, to stand in need of a repetition.' Though ministers thus succeeded in carrying the addresses, they did not meet with the same success in their plan of carrying on the war. After the debate on the number of seamen, which was fixed at 100,000, for the ensuing year. Sir James Lowther moved, as a resolution of the house, * That the war carried on with America had been ineffectual for the purposes for which it was undertaken ; and that all farther attempts to reduce that continent by force of arms would be in vain, and must be injurious to this country, by weakening her powers to resist her ancient and confederated ene- mies;' which was very ably supported, though re- jected by a majority of 220 to 179. This, how- ever, was a majority in which the ministry had little reason to exult ; as it was sufficiently ap- parent, from the numbers who voted against them, that the uninfluenced sense of that house was clearly and decisively against any farther prosecution of the American war. Other argu- ments against it were urged in the debate on the army estimates. On the 14th December the secretary of war informed the house, that the whole force of the army, including the militia, required for the service of 1782, would amount to 186,220 men, and for this force the parliament had to provide. The sum required for these troops for pay, clothing, and other articles, amounted to £4,220,000. This military force exceeded that of the last year by 4074 men ; and the expense was consequently greater by £29,067 15s. The increase was occasioned by the greater*

number of troops already sent, or then going, to the East Indies. But the expense of those troop? was to be reimbursed by the East India company. After some farther statements, relative to the military force of the kingdom and its expense, had been made by the secretary at war, colonel Barre rose, and with great vehemence declared, that the estimates of the army, which were laid before that house, were scandalous and evasive. There was a much greater number of non-effec- tive men than were stated in the estimates. In fact, they amounted to a fifth part of the army. The house should also recollect, that the esti- mates lying on the table did not compose the whole of the expenses of the army ; for eitraor- dinaries of several millions were yet to come. Neither were the men under the several descrip- tions given by the secretary at war the whole number of military force employed. Other troops were employed solely at the discretion of the minister, and paid irregularly and unconstitu- tionally, without the assent or knowledge of the legislature ; particularly the provincial corps in America, amounting to 9000 men in actual ser- vice, the statement of which force, though it had been called for from year to year, was never brought into the estimates. Lord George Ger- maine said, that the reason why the provincial corps had not been included in the estimates was, that some share of the public money might be spared, by avoiding to vote an establishment for these troops. They were raised and paid in a manner by

much the most economical for the nation. They were solely under the manage- ment of the commander in chief: and an officer, called the inspector-general of the provincial corps, regularly took care to muster them from time to time. lie also informed the house that the ministry were unanimously of opinion that, considering the present situation of affairs, and the misfortunes of the war, it would not be right to Continue any longer the plan on which it had hitherto been conducted ; and therefore that a fresh army would not be sent to supply the place of that captured at York-town under earl Cornwallis. General Conway declared that he entirely disapproved of a continuance of the American war in any form, as he wished that it might totally cease. He eagerly desired the re- cal of our fleets and armies, and was anxious for an entire and immediate prevention of those calamities which had almost completed the destruction of the empire. He considered an avowal of the independence of America as a severe misfortune, and a debasing stroke against Great Britait ; but of the two evils he would choose the least, and he would submit to the in- dependence of America. In short, he would almost yield to any circumstance whatsoever, rather than persist a day longer in the prosecu- tion of so pernicious a war. Ideas had been started relative to a war of posts, among which New York had been particularly mentioned. But on what military authority did tlie ministry presume to think that New York was tenable ? What gaiTison would be able to maintain it? The diversity of military opinions given on this subject served rather to alarm than to convince. To secure New Ycrk, the possession of Long

Island, which is 100 miles in length, is absolutely necessary ; and it is well known that Sir Henry Clinton, with all his troops, did not consider himself as secure. Notwithstanding these and other arguments, however, the question was carried in favor of ministry by a considerable majority, and the supplies were voted.

Besides the grand question, for and against the continuance of the American war, several other matters of smaller moment were agitated this session ; particularly the affair of St. Eustatius, an enquiry into the state of the navy, and into the causes, generally, of our bad success in the American war. A mo'ion for censuring lord Sandwich was lost only by 236 to 217 ; and so general did the desire of a change of administra- tion now appear, that it excited no small degree of surprise that the present ministers should re- tain their places. Nothing could set in a more striking point of view the detestation in which they were held, than the extreme aversion shown at admitting lord Geori;e Germaine to the dignity of the peerage. On

this occasion his conduct at Minden was again investi- gated ; and when he had taken his seat in the house, under the title of lord viscount Sackville, a protest was entered, signed by nine peers, in which the sentence and the public orders against him were particularly stated ; and in which they declared, that they ‘ could not look upon the raising to the peerage a person so cir- cumstanced, in any other light than as a mea- sure fatal to the interests, as well as to the glory of the crown, and to the dignity of that house ; insulting to the memory of the late sovereign, and likewise to every surviving branch of the illustrious house of Brunswick; repugnant to every principle of military discipline, and di- rectly contrary to the maintenance of the honor of that house, and to that honor which has for ages been the glorious characteristic of the British nation, and which, as far as could depend on tiiem, they found themselves called upon, not more by duty than inclination, . to transmit pure and unsullied to posterity.’ On the 22d of February, a motion was made in the house of commons by general Conway, ‘ That an humble address be presented, earnestly imploring his majesty, that, taking into his royal consideration the many and great calamities which had at- tended the present unfortunate war, and the heavy burdens thereby brought on his loyal and affectionate people, he would be graciously pleased to listen to the humble prayer and advice of his faithful commons, that the war on the con- tinent of North America might no longer be pur- sued for the impracticable purpose of reducing that country to obed ience by force ; and expressing their hope that the earnest desire and dilicent exertion to restore the public tranquillity, of which they had received his majesty’s most gracious as- surances, might, by a happy reconciliation with the revolted colonies, be forwarded and made effectual ; to which great end, his majesty’s faith- ful commons would be ready most cheerfully to give their utmost assistance.’ It was seconded by lord John Cavendish, who remarked, that the American war had been a war of malice and re- sentment, without either dignity in its conduct,

probability in its object, or justice in its origin It was, however, vigorously opposed by adminis- tration, who had still sufficient strength to gain their point, though only by a single vote, the motion being rejected by 194 to 193. The in- creasing strength of opposition now showed that the downfal of ministry was at hand. The de- cision of the last question was considered as a victory gained by the former; and]Mr. Fox in- stantly gave notice that the subject would be resumed in a few days, under another form. It was accordingly revived on the 27th of February ; on which day a petition from the city of London was presented to the house, soliciting the house to interpose in such a manner as should prevent any further prosecution of the American war; after whicli general Conway moved, that it should be resolved, ‘ That it was the opinion of that house, that the fiirther prosecution of offen- sive war on the continent of North America, for the

purpose of reducing the revolted colonies to obedience by force, would be the means of weak- ening the efforts of this country against her European enemies, and tend, under the present circumstances, dangerously to increase the mu- tual enmity so fatal to the interests both of Great Britain and America ; and, by preventing a happy reconciliation with that country, to frus- trate the earnest desire graciously expressed by his majesty to restore the blessings of public tranquillity.' In order to evade coming to any immediate determination on the question, a pro- position was made by Mr. Wallace, the attorney- general, that a truce should be entered into with America ; and that a bill should be prepared tc> enable his majesty's ministers to treat on this ground : and, under the pretence of allowing time for this measure, he moved, ' tliat the present debate should be adjourned for a fortnight,' The house divided upon this motion, when there ap- peared for it 215, and against it 234 ; so that there was a majority of nineteen against the mi- nistry. General Conway's original motion was then put and carried without a division.

He immediately made another for an address to the kinsT, in which the American war was spoken of precisely in the terms made use of in the first motion, and in which his majesty was solicited to put a stop to any further prosecution of offensive war against the colonies. This mo- tion was agreed to ; and it was also resolved, that tlie address should be presented on the 1st of March ; when his majesty returned an answer, in which he declared, that there were no objects nearer to his heart than the case, happiness, and prosperity of his people ; that the house of com- mons might be assured, that, in pursuance of their advice, he should take such measures as should appear to him to be most conducive to the restoration of harmony between Great Bri- tain and her revolted colonies, so esential to the prosperity of both ; and that his efforts should be directed in the most effectual manner, against our I'.uropean enemies, until such a peace could be obtiined as should consist with the interests and permanent welfiirc of his kingdoms. This answer being not thought sufficiently explicit, it was observed by general Conway, in the house of commons, on the 4th of March, that he hoped

he should be supported by the house in his de- sire of securing the nation against the possibility of a doubt, that the American war was not now completely concluded. He therefore moved, 'That an humble address should be presented to his majesty, to return his majesty the thanks of that house for his gracious answer to their last address; that house being convinced, that nothing could, in the present circumstances of this coun- try, so

essentially promote those great objects of his majesty's paternal care for his people, as the measure which his faithful commons had most humbly, but earnestly recommended to his majesty.' Tiiis motion was unanimously agreed to; after which the general moved ' That, after the solemn declaration of the opi- nion of that house, in their humble address presented to his majesty on Friday last, and his majesty's assurance of his gracious intention, that house would consider as enemies to his majesty and this country, all those who should ♦endeavour to frustrate his majesty's paternal care «br the ease and happiness of his people, by ad- vising, or by any means attempting, the farther prosecution of offensive war on the continent of North America, for the purpose of reducing the revolted colonies to obedience by force.' After some debate, the motion was agreed to without a division.

*On the 6th of the month, after a number of papers had been read in the house of peers re- lative to the surrender of earl Cornwallis and the army under his command, the two following motions were made by the duke of Chandos: 1. * That it was the opinion of that house, that the immediate cause of the capture of the army un- der earl Cornwallis, in Virginia, appeared to have been the want of a sufficient naval force to c-over and protect the same.' 2. ' That the not covering and protecting the army under earl Cornwallis in a proper manner was highly blameable in those who advised and planned the expedition.' After some debate, the motionswere rejected, upon a division, by a majority of se- venty-two to thirty-seven. Thus the ministry still kept their ground, and, with the most asto- nishing resolution, combated the powers of op- position.*

The unpopularity of lord North was now far- ther augmented by his proposal of some new taxes, particularly on soap, the carriage of goods, and places of entertainment. On the 15th of]\Iarch, it was moved by Sir John Rous, that 'the nation could have no farther confidence in the ministers who had the conduct of public affairs.' The debate was remarkable for an ar- gument, in the affair of America, perfectly new and unprecedented. Sir James Marriot informed the house, that though it had been frequently pretended, that the inhabitants of the colonies were not represented in the British parliament, yet the fact was otherwise : for they were ac- tually represented. The first colonisation, by national and sovereign authority, he remarked, was the establishment of the colony of X'irginia. The grants and charters made of those lands, and of all the subsequent colonies, were of one tenor, and expressed in the following terms : ' To have and to hold of the king or queen's ma-

jesty, as part and parcel of the manor of Eas! Greenwich, within the county of Kent, redden- dum, a certain rent at our castle of East Green- wich, &c.' So that the inhabitants of America were, in fact, by the nature of their

tenure, re- presented in parliament by the knights of the shire for the county of Kent ! This curious legal discovery, that the American colonies were part and parcel of the manor of East Greenwich, though delivered by the learned judge with all proper gravity and solemnity, yet excited so much merriment in the house, that it was with gseat difficulty, for some time, that the speaker could preserve any kind of order. Lord North endeavoured to vindicate his own administration. He affirmed, that it could not be declared with truth, by that house, that the national calamities originated from the measures of the present admi- nistration. The repeal of the American stamp act, and the passing of the declaratory law, took place before his entrance into office. As a pri- vate member of parliament, he gave his vote in favor of both ; but, as a minister, he was not re- sponsible for either. When he accepted lus post, the times were scarcely less violent than the pre- sent. He approached the helm when others had deserted it ; and, standing there, he had used his utmost efforts to assist his country. That the Ame- rican war was just and requisite, and prosecuted for the purpose of supporting and maintaining the rights of the British legislature, was a posi- tion, for the truth of which he would ever con- tend. As to peace, he not only wished most earnestly for it, but also for the formation of such a ministry as might at once prove welcome to the country, and with unanimous cordiality co-ope- rate for the welfare and the honor of the state. It was not an attachment to the honors and emo- luments of office which had kept him so long in place ; and he should disdain to throw impedi- ments in the way of any honorable and salutary coalition of parties, though for the adjustment of an administration from which he might per- ceive himseJf excluded. The house at length divided upon the question, when there appeared for it 227, and against it 236 ; so that there was a majority of nine in favor of administration. Notwithstanding this seemingly favorable deter- mination, it was so well known that the ministry could not stand their ground, that, four days after, a similar motion to that made by Sir John Kous, was to have been made by the earl of Surrey ; but, when his lordship was about to rise for that purpose, lord North addressed him- self to the speaker, and endeavoured to gain the attention of the house. This occasioned some altercation, many members insisting, that the earl of Surrey ought to be heard first. But lord North observed, that as he understood the motion to be made by the noble earl was similar to that made a few days before, and the object of which was tiie removal of the ministers, he had such infor- mation to communicate to the house, as must, he conceived, render any such motion unneces • sary. He could with authority assure the house, that his majesty had come to a full determination to change his ministers. Indeed, those persons who had for some time conducted the public affairs were no longer his majesty's ministers.

They were not now to be considered as men holding the reins of government, and transacting measures of state, but merely remaining to do their otficial duty, till other ministers were ap- pointed. The sooner these new ministers were appointed, his lordship declared, that, in his opinion, the better it would be for the public business, and the general interests of the nation. He returned thanks to the house for the many in- stances of favor and indulgence which he had received from them during the course of his ad- ministration ; and he declared, that he considered himself as responsible, in all senses of the word, for every circumstance of his ministerial con- duct, and that he should be ready to answer to his country whenever he should be called upon for that purpose.

The earl of Surrey informed the house, that the motion which he intended to have made was designed to declare to the nation, and to all Europe, that the ministry were not dismissed because they wanted to avoid the fatigues of office, but because the parliament had totally withdrawn from them their good opinion and their confidence, and were determined no longer to permit the perpetration of those violent abuses of their trust, to which, with impunity, and to the disgrace and detriment of the state, they had for such a length of time proceeded. His lord- ship, however, in consequence of the declaration of lord North, waived his intended motion; and, after some farther debate, the house adjourned.

Thus an end was put to an administration which had for so long been obnoxious to a great part of the nation, and whose removal contributed very much to allay those dangerous ferments by which eveiy part of the British dominions had been agitated. Peace now became as much the object of ministry as war had been formerly. Before we proceed to any account of the nego- cialions for that desirable event, it is necessary to take notice of those military events which dis- posed the other belligerent powers to an accom- modation. The disaster of lord Cornwallis had produced a sincere desire of being at peace with America : but that could not be accomplished without making peace with France also ; and that power was haughty and elated with success. Minorca had now fallen into the hands of the Spaniards : and though the capture of a few miserable invalids, attended with such extreme difficulty as the Spaniards experienced (see Mi- norca), ought rather to have intimidated them than otherwise, they projected the most impor- tant further conquests . Nothing less than the reduction of the Ikitish West India Islands be- came the object of the allies ; and there was too much reason to suppose that this object was within their reach. In the beginning of 1782 the islands of Nevis and St. Christopher were obliged to

surrender to the French admiral, and the marquis de Bouille. Jamaica was marked out as the next victim ; but an end of ail these aspiring hopes was fast approaching. The advantages Iiitherto gained by the French in their naval engagements with the Britisli Heet, had often proceeded from their keeping at a great distance during the thne of action, and from tiicir good fortune and dexterity in gaining the

wind. At last the French admiral, De Grasse, determined, after an indecisive action on the 9tl' of April 1782, to stand a close engagement with his formidable antagonist Rodney. This took place on the 12th of April, off the islavid of Dominica. The British fleet consisted of thirty- seven ships of the line, and the French of thirty- four. The action commenced at seven o'clock, A. M. and contined with unremitting fury till half past six P.M. It is said that no other sig- nal was made by the admiral but the general one for action, and that for close fight. Sir G. Rod- ney was on board the Formidable, a ship of ninety guns ; and the count De Grasse was on board the Ville de Paris, a ship of 110 guns, which was a present to the French king from the city of Paris. In the course of the action, the Formidable fired nearly eighty broadsides ; and, for three hours, the admiral's ship was involved in so thick a cloud of smoke, that it was almost invisible to the officers and men of the rest of the fleet. The van division of the British fleet was commanded by Sir Samuel Hood, and the rear division by rear-admiral Drake. But the decisive turn on this memorable day was given by a bold manoeuvre of the Formidable, which broke the French line, and threw them into coq- fusion. The first French ship that struck was the Caesar, a seventy-four gun ship, which, at the time, had not a foot of canvas without a shot- hole. Unfortunately, soon after she was taken possession of, she took fire by accident, and blew up. The Glorieux and the Hector, both seventy- four gun ships, were also taken by the British fleet, together with the Ardent of sixty-four guns. It was a very close and hard fought action on both sides, but the French were at length totally defeated. When the Ville de Paris struck, it was almost dark. There were 5,500 troops on board the French fleet, and the havoc among these was very great. Gn the 19th, a squadron, which was detached from the main fleet, under the command of Sir Samuel Hood, captured the Cato and the Jason, two French men of war of sixty-four guns each ; with the Amiable of thir- ty-two guns, and the Ceres of eighteen. About the same time the fleet under admiral Barrington took from the French, off Ushant, the Pegase of seventy-four guns, the Acticnaire uf sixty-four, and ten sail of vessels under their convoy. It was universally allowed, that, in this engage- ment, the French, notwithstanding their defeat, behaved with tlie greatest valor. De Grasse himself did not surrender till 400 of his people were killed, and only himself and two others re- mained without a wound. The captain of the Ca;sar after his ensign staff was shot away, and the ship almost battered to

pieces, caused his colors to be nailed to the mast, and thus con- tinued fighting till he was killed. The vessel, when taken, was a mere wreck. Other French officers behaved in the same manner. The valor of the British requires no encomium : it was evi- dent from their success. The admiral was cre- ated an English peer by the title of baron Rodney, of Rodney Stoke, in the county of Somerset. Sir Samuel Hood was also create 1 baron Hood of Catherington, in the kingdom of Ireland ; and rear-admiral Drake, and capta n

Affleck, were created baronets of Great Britain. The count De Grasse, after his defeat, was re- ceived on board the Barfleur man of war, and landed at Jamaica,, where he was treated with great respect. After contmuing there some time, he was conveyed to England, and accommodated at the Royal Hotel in Pali-Mall. His sword, which he had delivered up to admiral Rodney, •was returned to him by the king. This etiquette enabled him to appear at court, where he was received by their majesties and the royal family in a manner suitable to his rank, and, from the time of his arrival in London to his departure on the 12th of August 1782, was visited by many persons of distinction.

Though the designs of the French against Jamaica were now effecti.ially frustrated, the victory was not followed by those beneficial con- sequences which many expected. None of the British islands which had been taken by the French in the West Indies were recaptured ; some of the ships which were taken by ad- miral Rodney were afterwards lost at sea ; par- ticularly the Ville de Paris, the Glorieux, and the Hector. A British man of war, the Centaur, of seventy-four guns, was also sunk, in lat. 48° 33′ and long. 43° 20', on the 24th September, 1782, in consequence of the disabled state to which it was reduced by violent storms ; and the lives of captain Inglefield the commander, and ten other officers and seamen, were only pre- served by their getting on board a pinnace. The Jamaica homeward bound fleet was also dispersed this year by a hurricane off the banks of Newfoundland, when the Ramillies of seventy-four guns, and several merchantmen, foundered. The British navy also sustained, about this time, a considerable loss at home, by the Royal George, of 100 guns, being overset and sunk at Portsmouth. This melancholy acci- dent, which happened on the 29th August, was occasioned by a partial heel being given to the ship, with a view to cleanse and sweeten her ; but the guns on one side being removed to the other, or at least the greater part of them, and her lower deck ports being not lashed in, the ship thwarted on one side with a squall from the north-west, filled with water, and sunk in the space of three minutes.

Admiral Kempenfelt, a very meritorious officer, other officers, upwards of 400 seamen, and 200 women, besides many children, perished in her. Thus the prosecution of the war seemed to be attended with endless disasters and difficulties.

In the beginning of May an expedition was undertaken, by the French, to the remote and inhospitable regions of Hudson's Bay ; and, though no force existed in that place capable of making any resistance, a seventy-four g-un ship and two thirty-six gun frigates were employed on the service. The loss of the Hudson's Bay com- pany, on this occasion, amounted to £500,000, but the humanity of the French commander was conspicuous, in leaving a sufficient quantity of provisions and stores of all kinds, for the use of the British who had fled at his approach. Another expedition was undertaken by the Spaniards to the Bahama Islands, where a like easy conquest v/as obtained. The island of Providence was

defended only by 360 men, who, being attacked by 5000, could make no resistance. Some set- tlements on the Musquito shore were also taken by the Spaniards; but the Bay men, assisted by their negroes, bravely retook some of them ; and having formed a little army with the Indians in these parts, headed by colonel Despard, they attacked and carried the posts on the Black River, making prisoners of about 800 Spanish troops. The great disaster which befel this powe-r, how- ever, was their failure before Gibraltar, which happened in September, 1782, with such circum- stances of horror and destruction as evinced the absurdity of persisting in the enterprise. See Gibraltar.

All parties to the war were at length desirous to put an end to it. We have already noticed the events which led to the removal of lord North and the other ministers, who, for so long a time, had directed the public measures of this country. His majesty, it was said, expressed, on this occa- sion, considerable agitation of mind ; and the members of opposition would form no coalition with any of the old ministry, except the lord chancellor. On the 27th and 30th of March, 1782, tlie marquis of Rockingham was appointed first lord of the treasury ; lord John Cavendish chancellor of the exchequer ; the earl of Shel- burne and Mr. Fox principal secretaries of state; lord Camden president of the council ; the duke of Richmond master of the ordnance ; the duke of Grafton lord privy sea'l ; admiral Keppel first lord of the admiralty ; general Conway com- mander in chief of all the forces in Great ISritain ; Mr. Thomas Townshend secretary at war ; Mr. Burke paymaster of the forces; and colonel Barre treasurer of the navy. Other offices and honors were likewise conferred on different members of the opposition ; and some were raised to the peerage, particularly admiral Keppel, Sir Fletcher Norton, and Mr. Dunning. The first business, of course, in which the ministry engaged, was the taking such measures as were

proper to effect a general peace. Accordingly, the empress of Russia having offered her mediation to restore peace between Great Britain and Holland, Mr. secretary I'ox wrote a letter to M. Simolin, the Russian minister in London, informing him that his majesty was ready to negociate on the terms and conditions of the peace which was made in 1674; and that, in order to facilitate such a treaty, he was willing to give immediate orders for a suspension of hostilities. But the states of Holland did not appear inclined to a separate peace : negociations for a general peace were now indeed commenced at Paris.

Mr. Granville was invested with full powers to treat with all the parties at war ; and was directed to propose the independency of the thir- teen united provinces of America, in the firsˆ instance. Admiral Digby and general Carleton were also directed to acquaint the American con- gress with the pacific views of the British court, and with the offer that was made to acknowledge the independence of the United States. But, before this work of pacification had made any considerable progress, the new ministry sustained an irreparable loss (July 1782) by the death of the marquis of Rockingham. Even before this

event, considerable apprehensions were enter- tained of their want of union ; but, on the death of that nobleman, the earl of Shelburne, who succeeded him as first lord of the treasury, proved so disagreeable to some of his colleagues, that Mr. Fox, lord John Cavendish, Mr. Burke, and some others, instantly resigned. Others, how- ever, though little attached to the earl, kept their places, and his lordship found means to attach to his interest Mr. Pitt, son of the late earl of Chatham. Though then in an early stage of life, iiiis gentleman had distingiiished himself greatly in parliament, and was now, at the age of twenty-three, prevailed upon to accept the office of chancellor of the excliequer. The seceding members of the cabinet were at great pains to explain their motives to the house for taking this step. These were in general a suspicion that matters would be managed differently from the plan they had proposed while in office, and par- ticularly that the American independence would not be allowed ; but this was positively denied at the time : and with truth, as appeared by the event. No obstruction, however, arose to the general pacification, and as early as 30th Novem- ber, 1782, the articles of a provisional treaty were settled between Britain and America. By these it was stipulated that the people of the United States should continue to enjoy, without moles- tation, the right to take fish of every kind on the grand bank, and on all the other banks of New- foundland ; and that they should likewise exer- cise and continue

that same privilege in the gulf of St. Lawrence, and at every other place in the sea, where the inhabitants used heretofore to fish. They were likewise to have liberty to take fish of every kind on such part of the coast of Newfoundland as British seamen shall resort to ; but not to cure or dry them on that island : to possess the privilege of fishing on the coasts, bays, and creeks of all the other dominions of his Britannic majesty in America; and to cure and dry fish in any of the unsettled bays, har- bours, and creeks of Nova Scotia, Magdalen Islands, and Labrador. But it was agreed that, after such places should be settled, this right could not be legally put in practice, without the consent of the inhabitants and proprietors. It was accorded, that creditors upon either side should meet with no impediment in the prose- cution of their claims : that the congress should earnestly recommend it to the legislatures of the respective states, to provide for the restitution of all estates and properties which had been confis- cated, belonging to real British subjects, and of the estates and properties of persons resident in districts in the possession of his majesty's arms, and who had not borne arms against the United States. It was resolved that persons of any description should have free liberty to go to any part whatsoever of any of the thirteen United States, and remain in it for twelve months unmo- lested in their endeavours to recover such of their estates, rights, and properties as might not have been confiscated ; and it was concerted, that the congress should earnestly reconmicnd to the several states a revision of ail acts or laws re- garding the premises, so as to render them per- fectly consistent, not only with justice and equity,

but with that spirit of conciliation which, on the return of the blessings of peace, should univer- sally prevail. It was understood that no future confiscations should be made, nor prosecutions commenced against any person, or body of men, on account of the part which he or they had taken in the present war ; and that those who might be in confinement on such a charge, at the time of the ratification of the treaty in America, should, together with all prisoners, be immediately set at liberty. The navigation of the river Mississippi, from its source to the ocean, was to remain for ever free and open to the sub- jects of Great Britain and the citizens of the United States. In fine, it was agreed, that if any place or territory belonging to Great Britain, or to the United States, should be conquered by the arms of either before the arrival of the provisional articles in America, it should be restored with- out compensation or difficulty.

In the treaty between.Great Britain and France it was agreed, that Newfoundland siiould remain with England, as before the commencement of the war ; and, to prevent disputes about boun- daries, it was accorded that the French fishery should begin from Cape St. John on the eastern side, and, going round by the north, should have for its boundary Cape Ray on the western side. The islands of St. Pierre and Miquelon, which had

been taken in September, 1778, were ceded in full right to France. The French were to con- tinue to fish in the gulf of St. Lawrence, con- formably to the fifth article of the treaty of Paris. The king of Great Britain was to restore to France the island of St. Lucia, and to cede and guarantee to her that of Tobago. The king of France was to surrender to Great Britain the islands of Grenada and the Grenadines, St. Vin- cent, Dominica, St. Christopher's, Nevis, and Montserrat. The river of Senegal and its depen- dencies, with the forts of St. Louis, Podor, Ga- 1am, Arguin, and Portendic, were to be given to France ; and the island of Goree was to be re- stored to it. Fort James and the river Gambia were guaranteed to his Britannic majesty; and the gum trade was to remain in the same con- dition as before the commencement of hos- tilities. The king of Great Britain was to restore to his most Christian majesty all the establish- ments which belonged to him at the breaking out of the war on the coast of Orixa and in Bengal, with the liberty to surround Chandernagor with a ditch for draining the waters ; and became engaged to secure to the subjects of France in that])art of India, and on the coast of Orixa, Coromandel, and Malabar, a safe, free, and inde- pendent trade, either as private traders, or under the direction of a company. Pondicherry, as well as Karical, was to be rendered back to France ; and ins Britannic majesty was to give, as a dependency round Pondicherry, the two districts of Valanour and Bahour ; and, as a dependency round Karical, the four contiguous Magans. Tiie French were again to enter into the possession of Mahe, and of the comptoir at Sural.

The allies of France and Great Britain were to be invited to accede to the present pacifica- tion • and the term of four months was to be

allowed them, for the purpose of making their decision. In the event of their aversion from peace, no assistance on either side was to be given to them. Great Britain renounced every claim with respect to Dunkirk. Commissioners were to be appointed respectively by the two nations, to enquire into the state of their com- merce, and to concert new arrangements of trade on the footing of nmtual convenience. All con- quests on either side, in any part of the world whatsoever, not mentioned nor alluded to in the present treaty, were to be restored without diffi- culty, and without requiring compensation. It was determined that the king of Great Britain should order the evacuation of the islands of St. Pierre and Miquelon, three months after the

• ratification of the preliminary treaty ; and that, if possible, before the expiration of the same period, he should relinquish all connexion with St.

Lucia in the West Indies, and Goree in Africa. It was stipulated, in like manner, that his Britannic majesty should, at the end of three months after the ratification of the treaty, or sooner, enter into the possession of the islands of Grenada and the Grenadines, St. Vincent, Dominica, St. Christopher's, Nevis, and Mont- serrat. France was to be put into possession of the towns and comptoirs which were to be re- stored to her in the East Indies, and of the terri- tories which were to serve as dependencies round Pondicherry and round Karical, six months after the ratification of the definitive treaty; and, at the termination of the same term, she was to restore the towns and districts which her arms might have taken from the English or their allies in that quarter of the globe. Each crown was respectively to reimburse the sums which had been advanced for the maintenance of their pri- soners by the country where they had been de- tained, according to attested and authentic vouchers. With a view to prevent every dis- pute and complaint, on account of prizes which might be made at sea, after the signing of the preliminary articles, it was mutually settled and understood, that tlie vessels and effects which might be taken in the channel, and in the North Seas, after the space of twelve days, to be com- puted from tlie ratification of the preliminary articles, were to be restored upon each side ; that the term Should be one month from the Channel and the North Seas, as far as the Ca- nary Islands inclusively, whether in the ocean or theMediterranean ; two months from the Canary Islands as far as the equinoctial line or equator ; and lastly, five months without exception in all other parts of the world. These preliminary articles of peace were concluded at Versailles on the 20th January, 1783, between Mr. Fitzherbert, minister plenipotentiary on the part of his 3-iritannic majesty, and the comte de Vergennes, the minister plenipotentiary on the part of the king of France.

At the same time the preliminary articles of peace between Great Britain and Spain were also concluded at Versailles, between Mr. Fitz- herbert and the comte d'Aranda, the minister plenipotentiary for the Spanish monarch. His

.Catholic ma'esty was to keep the island of Minorca ; and was to retain West Florida. East Florida was to be ceded to him by the king of

Great Britain. Eighteen months from the dat of the ratification of the definitive treaty were to be allowed to the subjects of the latter, who had settled in the island of Minorca and in the two Floridas, to sell their estates, to recover their debts, and to transport their persons and effects, without being restrained upon account of their religion, or on any other pretence whatsoever, except that of debts and prosecutions for crimes. His Britannic majesty, was at the same time to have the power to cause all the effects that might belong to him in East Florida, whether artilleiy or others, to be

carried away. The liberty of cuttmg logwood, in a district of which the boun- daries were to be ascertained, without molest- ation, was permitted to Gre.ut Britain. The king of Spain was to restore the islands of Providence, and the Bahamas, without exception, in the con- dition in which they were when they were con- quered by his arms. All other, conquests of territories and countries upon either side, not included in the present articles, were to be mu- tually restored,without difficulty or compensation. The epoch for the restitutions to be made and for the evacuations to take place, the regulations for the release of prisoners and for the cessation of captures, were exactly the same as those which have already been related, as stipulated in the preliminary articles with France.

8. History of Great Britain from the peace of 1783 to the war of 1793. — No sooner were these articles ratified and laid before parlia- ment, than the most vehement declamations against ministry took place. Never had the administration of lord North himself been arraigned with more asperity of language. The ministry defended themselves with great resolution ; but found it impossible to avoid the censure of parliament. An address without any amendment was indeed carried in the house of lords by seventy-two to fifty-nine ; but in the lower house it was lost by 224 to 208. On the 21st of February some resolutions were moved in the house of commons by lord John Caven- dish, of which the most remarkable were, that the concessions made by Britain were greater than its adversaries had a right to expect; and that the house would take the case of the Ame- rican loyalists into consideration. The last motion indeed his lordship consented to waive ; but all the rest were carried against ministry by 207 to 190. These proceedings, however, could make no alteration with regard to the treaty, which had already been ratified by all the con- tending powers,- the Dutch only excepted. Tlie terms offered them were a renewal of the treaty of 1674: which, though the most advantageous they could expect, were positively refused at that time. Afterwards they offered to accept the terms they had formerly refused ; but the com- pliment was then returned, by a refusal on the part of Great Britain. When the preliminary articles were settled with the court of France and Spain, a suspension of arms took place with Holland also ; but, though the definitive arrange- ments with the other powers were finally con- cluded by September, the preliminary articles were only then settled with Holland. The terms were a general restitution of all places taken or\ both sides during the war, excepting the settle-

ment of Neˆapatani in the East Indies, which was to remain in the hands of Britain, unless an equivalent was g;iven on the part of Holland. The

navigation of the eastern seas was to remain free and unmolested to all the British shipping. The other articles concerned only the exchange of prisoners, and such other matters as are com- mon to all treaties.

An end was now put to the most dangerous war in which Britain had been hitherto engaged ; and in which, notwithstanding the powerful combination against her, she still remained in a state of superiority to all her enemies. At that time, and ever since, it has appeared, how much politicians were mistaken, who imagined that the prosperity of Britain depended in a great measure on her colonies : tliough, for a number of years, she had not only been deprived of these colonies, but opposed by them with all their force ; though attacked at the same time by three of the greatest powers m Europe, and looked upon with an invidious eye by all the rest; the injury inflicted on her enemies still greatly exceeded that she had received. Their trade by sea was almost ruined ; and, on com- paring the loss of ships on both sides, the balance in favor of Britain was twenty-eight ships of the line and thirty-seven frigates, carrying in all nearly 2000 guns. Notwithstanding this, however, the state of the nation appears to have been really such, that a much longer continuance of the war would have been impracticable. In the debates, which were kept up with the greatest violence on account of the peace, Mr. Pitt exhi- bited our-situation with great energy and strength of argument. ‘ it was in vain,’ he said, ‘ to boast of the strength of our navy ; we had not more tlian 100 sail of the line : but the fleet of France and Spain amounted to nearly 140 ships of the line. Seventy-two ships of the line were to have acted against Jamaica. Admiral Pigot had only forty-six sail to support it ; and it was a farorite maxim, of many members of the house, that defensive war must terminate in certain ruin. It was not possible that admiral Pigot could have acted offensively against the islands of the enemy ; for lord Rodney, when flushed with vic- tory, did not dare to attack them. Would admiral Pigot have recovered by arms, what the ministers had regained by. negociation : with a superior fleet against him, and in its sight, is it to be conceived that he could have taken Gre- uada, Dominica, St. Christophers, Nevis, and Montserrat ? On the contrary, is it not more than probable that the campaign in the West Indies must have terminated in the loss of Ja- maica ? In the east, it was true that the services of Sir Edward Hughes had been highly extolled ; but he could only be commended for a merely defensive resistance. Victory seemed to be out of the question ; and he had not been able to • prevent the disembarkation of a powerful Euro- pean armamenJ, which had joined itself to Hyder Ally, and threatened the desolation of the Car- natic. See Hindostan. At home, and in our own seas, the fleets of the enemy would have been nearly double to ours. We might have seized the intervals of their cruise, and paraded the channel for a few weeks ; but that parade

would have only served to disgrace us. It was yet the only achievement in

our power; for, to have hazarded an engagement, would have been equivalent to a surrender of the kingdom. Nei- ther, in his opinion, was the state of our army to be considered as formidable'. New levies could not be raised in a depopulated country. We might send upon an offensive scheme 5000 or 6000 men : and what expectation could be ex- cited by a force of this kind .' To have with- drawn troops from America was a critical game. There were no transports in which they might be embarked ; and if it had been possible to embark them, in what miraculous manner were they to be protected against the fleets of the enemy .' As to our finances, they were melan- choly. Let the immense extent of our debts be weighed ; let our resources be considered ; and, let us then ask, what would have been the con- sequence of the protraction of the war? It would have endangererl the bankruptcy of public faith ; and this bankruptcy, it is obvious, if it had come upon us, might have dissolved all the ties of government, and have operated to the general ruin. To accept the peace on the terms already related, or to continue the war, was the only alternative in the power of ministers. Such was the ultimatum of France. At the same time, however, it ought to be remembered, that the peace obtained was better than could have been expected from the lowness of our condition. ^\ e had acknowledged the American independ- ence ; but what was that but an empty form ? We had ceded Florida; but had we not ob- tained the islands of Providence and the Baha mas ? We had granted an extent of fishery on the coast of Newfoundland ; but had we not established an exclusive right to the most valu- able banks? We have restored St. Lucia, and given up Tobago : but had we not regained Granada, Dominica, St. Christophers, Nevis, and Montserrat ? And had we not rescued Ja- maica from inevitable danger ? In Africa we had given up Goree ; but Goree was the grave of our countrymen ; and we had secured Fort James and the river Gambia, the best and the most healthy settlement. In Europe we had relinquished Minorca ; but Minorca is not ten- able in war, and in peace it must be supported at a ruinous expense. We had permitted the reparation of the port of Dunkirk : but Dun- kirk could only be an object when ships of a far inferior draught to the present were in use ; the change in the operations of naval war had taken away its importance. In the East Indies ces- sions had been made ; but let it be remarked that these cessions are inconsiderable in them- selves, and could not be protected by us in the event of hostilities. In fine, it was objected that we had abandoned the unhappy loyalists to their implacable enemies. W hat is this but to impute to congress, by anticipation, a violence which common decency forbids us to expect ? But let it be considered, that the principle of assisting these unfortunate men would not have justified ministeis to have continued the war. And let it be considered, that a continuation of the war would not have procured them any certain in- demnity. The accumulation of our distresses

must have added to theirs. A year or two hence liarder terms of peace might have been forced upon our acceptance. Their fate then must have been desperate indeed 1 But as matters were now situated, there were hopes of mercy and reconciliation.'

Having thus given as full an account, as our limits would allow, of the great national events, to the conclusion of the peace in 1783, we shall now advert to some others, which, though of sufficient importance to deserve notice, could not have been mentioned earlier, without inter- rupting the narrative. Under the article Dock- yard we have given an account of the attempt of Aitken, or John the Painter, on the public works at Portsmouth. This, it seems, was the mere political enthusiasm of a wretched vaga- bond. It appeared, however, that the French court were very well acquainted with many par- ticulars relating to the state of this kingdom, and the movements of our squadrons, which ought to have been kept secret. The sources of this information were first detected in June 1780. One Ratcliff'e, master of a cutter, had been hired by Mr. Rogere, to carry packets to France, for which he was to be paid £20 each time, and to have £lOO besides at a certain period. Apprehending at last, however, that he might incur some danger by continuing thi' employment, he gave information of wliat was going on, to one Mr. Steward, a merchant of Sandwich, by whom his last packet wa? carried to the secretary of state. After being opened and sealed up again, it was returned, and Rat- cliffe was directed to carry it to France as for- merly. At last, by his complaining to Rogere that he had not been paid £100 according to promise, a meeting was procured, in which it appeared that the person who gave intelligence to the enemy, was M. Henry de la Motte, a French gentleman residing in London. On searching his house, in his absence from home, no papers of any consequence were found ; but, on his arrival, he threw some out of his pocket, which led to the apprehension of Henry Lut- terloh, esq ; a German, who then resided at Wickham near Portsmouth. This person made a full discovery of the treasonable correspond- ence with France, while he gave abundant proofs of himself being one of the most depraved and hardened of mankind. His evidence, how- ever, and other strong circumstances, were suffi- cient to convict M. de la Motte, who was accordingly tried and executed for treason. During the whole course of the war, only one other person, David Tyrie, a native of Edin- burgh, was detected in this crime ; and he appears to have been actuated merely by mer- cenary motives.

On the 21st of January, 1763, the house of commons met according to

adjournment, and next day Mr. secretary Townshend, after observ- ing, that it was become necessary to prevent the possibility of any farther doubts being enter- tained respecting the true meaning of the British parliament, in their proceedings of last session towards Ireland, moved, ‘ that leave be given to bring in a bill, for removing and preventing all doubts, which had arisen, or might arise, con-

cerning the exclusive right of the parliament and courts of Ireland in matters of legislation and judicature ; and for preventing any writ of error, or appeal, from any of his majesty’s courts in that kingdom, from being received, heard, and adjudged in any of his majesty’s courts in the kingdom of Great Britain.’ The cause of introducing this bill was as follows : — When the establishment of the legislative and judicial inde- pendence of Ireland was under the consideration of the late ministry, two methods of doing it had been suggested : the one by renouncing what England held to be a right, but was ready to give up : the other by declaring that England, though it had exercised, had never been legally pos- sesssed of this right. The former of thes-e modes, it was said, might give offence to the people of Ireland, who insisted that England had n«ver possessed any such right : and, to the latter mode of renunciation, it was apprehended that the parliament of Great Britain would never con- sent. The measure of a simple repeal of the declaratory act of the 6th of George I. was therefore adopted, as best suited to the spirit of the people of Ireland, and the dignity of the British parliament. After this, the parliament of Ireland proceeded to exercise their legislative Dowers, by enacting laws for regulating their judicial proceedings, and for confining the deci- sions o’’ property to their own courts of law, with power of appeal to the house of lords in Ireland only. Affairs were proceeding in this amicable manner, when a cause that had been removed by writ of error from Ireland to the court of king’s bench in England, long before the repeal had been in agitation, and which the judge by the rules of the court was obliged to determine, was brought to a decision. This unlucky acci- dent was eagerly laid hold on by many in Ire- land, and the jealousy they attempted to spread was improved by the British ministry, who seized the opportunity to show, from this instance, that the measures of their predecessors had not given complete satisfaction, and thus to court the ap- plause of the people of Ireland, by the addi- tional security which the bill now introduced would afford to their rights. The bill accord- ingly passed without any formal opposition; though it was remarked, that as the parliament of Ireland had declared, that no constitutional question did any longer exist between the two kingdoms, it was neither consulting the dignity of the legislature of Great Britain, nor paying any compliment to the discernment of that of Ireland, to declare that doubts might still arise, and to pass an act to prevent them, unasked, and grounded on surmises. Mr. Fox insisted, that the repeal of the 6th of

George I. was an effectual abandonment of the English right of legislation and judicature over Ireland. As such it had been accepted by the Irish government, and had given general satisfaction. He cauti- oned ministers against listening to discontents, that had no existence. It could not be expected, that measures, however good, would give satis- faction to every individual. It was necessary to stop at some point, which should be the ne plus ultra of concession.

We have already noticed how much the terms

of the peace were censured by the resolutions of a majority of the house of commons, passed on the 21st of February, 1783. Though lord North had been some time out of office, the supporters of his administration still formed a very power- ful body in the state; and such influence had he gained while in office, that to the latest period of his life, it is said, he could command forty votes in the house of commons. This formidable power of lord North was now augmented by the party which opposed the war, at the head of Avhich was Mr. Fox : and these parties, though they still pretended to adhere to their former de- cidedly different sentiments, had come to an agree- ment to unite their strength, so as to form a complete majority in parliament, in opposition to the present ministry. No other views possi- bly could have united together men who had so recently opposed each other with the greatest personal virulence. On this famous coalition, as it has been since denominated, the eyes of the public and of the crown were alike fixed with great jealousy ; and had it not been for the cool but firm conduct of his late majesty, during the con- test which now commenced, the consequences would have been fatal to the constitution. The earl of Shelburne resigned his office of first com- missioner of the treasury, and Mr. Pitt declared publicly in tlie house, that he only held his place of cliancellor of the exchequer till a successor should be appointed. The consequence was, that a ministerial interregnum ensued, which continued tdl the beginning of April. During this period, the kingdom remained in a state of no small disorder; and without any responsible government. Tlie court made various attempts to form a new ministry, without completely resigning the government of the nation to the coalition ; but in vain. On the 19th of March, Mr. Coke, member for Norfolk, gave notice, that, if an administration should not be formed on or before the Friday following, he would move an address to the king on the subject. Rumors of an intended arrangement were immediately cir- culated, but the negociations for that purpose being suddenly broken ofi', Mr. Coke made his j)romised motion, ' That an humble address be presented to his majesty, tliat he would conde-

*scend to a compliance with the wishes of the house, by forming an administration entitled to the confidence of his people, and such as may have a tendency to put an end to the unfortu- nate divisions and distractions of the country.' This motion was received with general appro- bation ; though the candidates for power, and particularly the members of the coalition, were openly blamed by several gentlemen. The address was ordered to be presented by such members as were of the privy council. On Wednesday, the 26th, the comptroller of the household reported his majesty's answer, * That it was his earnest desire to do every thing in his power to comply with the wishes of his faithful commons:' and on Monday, the 31st, Mr. lˆitt acquainted the house, that he had that day resigned his office. Bemg asked if any new arrangement was likely soon to take place, he ri'plied that he knew of none, but concluded, from the king's message, that t!ie measure would*

not be unnecessarily delayed. This answer did not satisfy the house, it now appeared, that the care of the public money was left without any responsible minister whatever. Much dif- ference of opinion prevailed with regard to the steps proper to be taken; at last the earl of Surrey proposed, ' That an humble address be presented tc his majesty, to express the grateful sense the house entertains of the gracious mten- tions expressed in his message of the 26th inst. To assure his majesty, it is with a perfect reli- ance on his paternal goodness, and an entire deference to his royal wisdom, that this house again submits to his consideration the urgency, as well as the importance, of the aft'airs which require the immediate appointment of such an administration as his majesty has given them reason to expect. To assure his majesty, that all delays, in a matter of this moment, liave an inevitable tendency to weaken the authority of his government, to which this house is not more bound by duty, than led by inclination, to give an effectual and constitutional support. To represent to his majesty, that the contidence of foreign powers may be weakened by a failure of the ordinary means of a constant communication with them. That the final execution of treaties, with the important and decisive arrangements of a commercial and political nature, in conse- quence of a late revolution ; that a provision for the heavy expenses, and the important services voted ; and the ordinary reduction of the forces, and the expenses of a new establishment ; that the settlement of national credit, seriously affected by the critical state of the East India Company; — that these, with other important concerns, do severally, and much more collec- tively, require an efficient and responsible administration, formed upon princii)les of strength and stability, suited to the state of his majesty's aflTairs, both at home and abroad : and that this house most humbly repeats its appli- cation to his majesty, that he will take ˆ>uch measures towards this object as may betome his most gracious disposition, and quiet the anxiety and

apprehensions of his faithful sub- jects.' His majesty at last yielded, for a time, to what he could not avoid without calling a new parliament ; and, on the 2d of April, a new administration was announced, the following persons composing the cabinet: — The duke of Portland, first lord of the treasury; lord North, and Mr. Fox, secretaries of state ; lord J. Caven- dish, chancellor of the exchequer; lord viscount Keppel. first lord of the admiralty ; lord viscount Stormont, president of the council ; earl of Car- lisle, privy seal ; earl of Hertford, chamberlain, and earl of Dartmouth, steward of the house- hold ; lord viscount Townshend, master of ord- nance ; Mr. llurke, paymaster-general, Mr. C. Townshend, treasurer of the navy ; Mr. Fitz- pat rick, secretary at war; Mr. Wallace, attorney, and Mr. Lee, solicitor-general; and the earl of Nortliington, lord-lieutenant of Ireland.

The first object of importance tliat engaged the attention of parliament, after the change of administration, was the opening a commercial intercourse with the United States of North America. By the prohibitory acts, which had

passed previous to the war, all communication with thai country in the way of trade had been entirely cut oft': and though it was the prevail- ing opinion in parliament that those acts were virtually repealed, by the acknowledgment of the independence of the United States, yet in this new character they became subject to other restrictions, which it was necessary to relax and modify. A bill for this purpose had been intro- duced by the late ministry; but, during the various discussions which it underwent, difficul- ties of so complicated and important a nature had arisen, that it never passed through the committee. In the mean time, no regulations whatever having been stipulated by the treaty of peace, the commercial interests of Britain were suffering very materially. In this emergency, the new ministers thought it most advisable to drop the old bill, and to pass two short ones; the one to repeal all the prohibitory acts, and the other to remove the necessity of requiring docu- ments, and to lodge, for a limited time, a power in the hands of the king and council, to make such other regulations as might be found expe- dient.

On the 16th of April the chancellor of the exchequer brought forward the loan for the cur- rent year, 1783. The sum borrowed was £12,000,000. Eleven hankers, with whom the terms were allotted, had £700,000 each ; the rest was divided among the other bankers, the great trading companies, and the clerks of the public offices. The premium was £l 10s. per cent. ; but, the stocks rising considerably in a few days after, the minister was

censured for the disadvantageous bargain he had made. He vin- dicated himself by saying, that he had only been "ten days in office ; the late ministry had feft the treasury without a shilling, and the public ser- vice admitted of no delay. On the 7th of May Mr. Pitt made his promised motion, respectmg a reform in the parliamentary representation. He introduced it by declaring that ' he never felt more embarrassment or anxiety than at that moment, when, for his country's good, he found himself obliged to lay before the house the im- perfections of that constitution to which every Englishman ought to look up with reverential awe ; a constitution which, while it continued such as it was framed by our ancestors, was tmly called the production of the most consummate wisdom. Raised by it to greatness and glory, England had been at once the envy and the pride of the world. Europe was taught by experience that liberty was the foundation of true greatness ; and that, while England con- timied under a government perfectly free, she never failed to perform exploits that dazzled the neighbouring nations. But a melancholy series of events, which had eclipsed the glory of Britain, exhibited a reverse of fortune, which could be accounted for only on this principle, tliat during the last fifteen years there had been a deviation from the principles of that happy constitution, under which England had so long flourished. It was not for him to touch the venerable fabric ; to see it stand in need of repair was sufficiently melancholy: but the more Se revered it, the more he wished to secure its

duration, the greater he felt the necessity of guarding against its decay. An Englishman who should compare the flourishing state of this country twenty years ago, with the state of humiliation in which she now is, must be con- vinced, that the ruin which he now deplores, having been brought on by slow degrees, and almost imperceptibly, proceeded from something radically wrong in the constitution. Of the existence of a radical error, no one seemed to doubt. The house itself had discovered, that a secret influence was sapping the very foundation of liberty by corruption : the influence of the crown had been felt within those walls, and had often been found strong enough to stifle the sense of duty, and to overrule the propositions made to satisfy the people. The house of com- mons, in former parliaments, had been base enough to feed the influence that enslaved its members ; and thus was at once the parent and the offspring of corruption. This influence had risen to such a height, that men were ashamed any longer to deny its existence ; and the house had at length voted, that it ought to be dimin- ished. Among the various expedients that had been devised to bar the entrance of such influ- ence, he had heard principally of three. One was to extend the right of voting for members to serve in parliament, which was now so confined, to all the inhabitants indiscriminately ; so that every man, without the distinction of freeliolder,

or freeman of a corporation, should have a vole for a person to represent him in parliament : and this mode was thought, by those who patronised it, the only one consistent with true liberty in a free constitution, where every one ought to be governed by those laws only, to which tiiey have actually given their consent, either in person, or by their representative. For his part, he utterly rejected and condemned this mode, which it was impossible for him to adopt, without libelling those renowned forefathers, who had framed the constitution in the fulness of their wisdom, and fashioned it for the government of freemen, not of slaves. The second expedient he had heard of, was to abolish the franchise, which several boroughs now enjoy, of returning members to serve in parliament. These were known by the popular appellation of rotten boroughs, lie confessed there was something very plausible in this idea, but still he was not willing to adopt it. He held these boroughs in the light of deformi- ties, which in some degree disfigured the fabric of the constitution, but which he feared could not be removed without endangering the whole pile. This brought him to the third expedient, which was to add a certain number of members to the house, who should be returned by the counties and the metropolis. The county mem- bers were taken from that class of gentlemen the least liable to the seduction of corrupt influence; the most deeply interested in the liberty and prosperity of the country, and consequently the most likely to pursue" such measures as appear the most salutary to it. This appeared to him the most fit expedient to be adopted, because it had the merit of promising an eff"ectual counterbalance to the weight of the boroughs, without being an innovation on the form of the constitution.

Mr. Pitt added, that he had drawn up three 'resolutions, which he would propose for their consideration : viz. 1. 'That it was the opitiion of the house, that measures were highly necessary to be taken, for the future prevention of bribery and expense at elections.' 2. ' That for the future, when the majority of votes for any bo- rough shall be convicted of gross and notorious corruption, before a select committee of that house, appointed to try the merits of any elec- tions, such borough should be disfranchised : and the minority of voters, not so convicted, should be entitled to vote for the county in which such borough should be situated.' 3. ' That an addition of knights of the shire, and of repre- sentatives of the metropolis, should be added to the state' of the representation.' Mr. Buncombe seconded the motion. Mr. Povvys said, before he consented to make any alteration in the con- stitution of that house, he desired first to have the existence of the evil proved. He ridiculed the extravagant ideas entertained by certain great reformers, and alluded particularly to the duke

of Richmond's scheme, who, he said, disdained to regard the narrow limits of practicability, and insisted upon universal representation. In proof of this, he read a part of the duke's letter to the Yorkshire committee, some passages of their re- solutions, and of those of the Constitutional So- ciety, &c. He, therefore, moˆed the order of the day. Mr. Thomas Pitt supported his honorable friend's motion because it was specific, and less alarming than the many visionary schemes of vain speculatists talked of out of doors. He said the borough influence was not without its merit : it had opposed the influence of the counties, when the knights of the shire at- tempted to carry the influence of the democracy too far, and build an unconstitutional power on the ruins of the monarchy. As to the proposi- tions, he thought the number of additional knights proposed by far too many. If his ho- norable friend would reduce the number to one knight for every county, he would agree to that, as a mean of putting an end to the clamors of the people ; but begged they would be given to understand, that the house would do no more. Lord North denied the existence of the influence complained of, and insisted that he himself af- forded a proof of its non-existence. The Ame- rican war, which had been laid to his charge, had often been called the war of the crown, but very uniustly ; for it was undertaken to maintain the riglits of the parliament and people of Great Britain. For this reason it was popular. If the influence of the crown had produced great ma- jorities within that house, it could not have pro- duced the almost unanimous approbation of the people without doors. But what made the war at last unpopular? Not its want of justice, but want of success. Where was then the influence of tlie crown '! Why did it not avert this blow? Why did it not keep a minister in office in spite of the voice of parliament ? Such an influence could not interfere, for it did not exist. He, therefore, opposed all innovation.

Mr. Fox animadverted with great strength of argument on the reasonings of his colleague. He wished the question had not been so nar-

owed, as the friends of reform were thereby disjoined. But, though he objected to the spe- cific propositions, he would vote against the order of the day, as that went to crush all re- form. It had been said, that the constitution was in theory already quite perfect, though in prac- tice it might appear otherwise. The contrary, paradoxical as it might seem, he would neverthe- less maintain. It was, in his opinion, the most absurd thing on earth in theory, though its prac- tice was consonant to sound sense. What, for instance, could be more absurd, than to say, that there should be three independent and equipo- tent estates, one of whom was the governor and the other two the governed ; and yet that no act of the legislature should be made without the agreement of tliese distinct and jarring powers?

What could be more absurd than to say, that one of the estates should consist of a single person, and that person the governor, and that this single person's voice should be of equal force, with those of the millions he governed .' Yet, absurd as this theory was, nothing absurd appeared in the practice. By the benignity of the prince, and the wisdom of his counsellors, discordant as these principles appeared, there was in the functions of government nothing of disorder. People, therefore, should not discredit theories, as wild oi chimerical, because they concurred not with their own ideas. Were it not for theorists, the constitution, much as it was boasted of, would have had now but little claim to praise. What should we be now, but for our Harringtons, our Sydneys, and our Lockes ? To invigorate the constitution of go- vernment frequently is as requisite as to invi- gorate the body of every individual. We are every hour wasting, and every hour recruiting; so is the constitution. 'To talk of innovations,' added' Mr. Fox, 'as a bug-bear against reform, is what uncandid men have always done in politics as well as in religion. What are the re- forms in the trials of contested elections ? WJiat is the law disqualifying custom-house officers from voting in elections? What is the bill which goes by the name of my honorable friend, Mr. Burke ? What are all these but innovations in the constitution ? — Away with the canting phrase. The single consideration is this : — Is any reform wanting, or not? — I think it is, and therefore concur in the motion' At half past two A.M. the house divided, when tliere appeared, for the order of the day 293 ; against it 149; majority against Mr. Pitt's propositions 144.

About this period a fraudulent transaction of a singular nature, respecting the public money, was brought under the consideration of the house of commons. Messrs Powell and Bembridge, clerks of the pay office, having fallen under sus- picion of gross misbehaviour, were examined before the treasury board, and appearances were so strong against them, that colonel Barre, then paymaster general, dismissed them from their office. Mr. Burke, however, upon his being ap- pointed paymaster, re-instated them. This be- ing considered as reprehensible, lord Newhaven, on the 24th of April, moved in the house of commons for a copy of the minute of the trea. sury board, respecting their examination, whicii

wa3 agreed to. But, on the 2nd of May, his lordship informed the house, that he had heard prosecutions were ordered against them, on which account he moved to have the order dis- charged, that no proceeding might

take place in that house, tending to bias the minds of the public against them before trial. Mr. Burke, on this occasion, defended the restoration of these parties, and said it was entirely his own act, upon which he had asked no advice, being re- sponsible for it to his country ; and that he had so regulated the pay office, that there was no danger of the public money being embezzled. Mr. Martin said, he could not help looking upon the restoration of these gentlemen, as a gross and daring insult to the public. The sub- ject was resumed on the 19th of May; and on the 21st Mr. RoUe begged the paymaster to in- form the house, whether he still intended to keep Messrs Powell and Bembridge in office ? Mr. Burke assured the house, that he had not re- stored them upon slight grounds ; he stated various savings to the public from his plan of reform, which the assiduity, fidelity, and industry of these two gentlemen had enabled him to introduce; and concluded by asking, was it then surprising that he should^be unwilling to lose the assistance of men who had enabled him to make reforms so useful ? However, he would abide by the judgment of the house. Mr. Powell had tender- ed his resignation, he said, and he had accepted it ; Mr. Bembridge had also made frequent offers of resignation : it rested with the house, whether he should accept it. After some further conver- sation, it was understood, that Mr. Burke would accept of his resignation ; but he declared, that he would keep both places vacant for them, in hopes that they would be acquitted. These hopes of Mr. Burke's, however, were disappointed ; Mr. Powell, on the 26th of May, c.it his throat in his bed-chamber : and, on the 18th of July, Mr. Bembridge was brought to trial before lord Mansfield, for embezzling the public money, to the amount of £48,709, when the jury, in fifteen minutes, returned a verdict of guilty. On the 26th of May, in the committee of ways and means, lord J. Cavendish opened the budget. The objects of taxation were bills of exchange ; receipts, wills and legacies, bonds, law proceed- ings, admissions to inns of court, &c. ; stage coaches; turnpike roads and eiiclosures; quack medicines ; carriages ; registers of births, mar- riages, and deatlis ; weights and measures ; and an additional duty on postages ; all of which, after some opposition, particularly to the receipt tax, passed.

On the 3rd of June, 1783, the duke of Rich- mond called the attention of the house of peers to an object, which he conceived might materially affect the administration of public justice, viz. the custody of the Great Seal, and the practice of committing it to the custody of judges, of which an instance then existed. The motion was as follows : — < The putting the seals in com- mission durante beneplacito, and appointing judges commissioners with large salaries and perquisites, to be received by them during the existence of a commission, originating in, and solely dependent on, the will and pleasure of the

crown, tended to invalidate an act of the 13th of William III. for securing

the independency of the judges.' After declaring, that he meant no- thing personal to the present commissioners, he entered largely into the nature of independency of the judges. To secure this great object, two things were necessary, viz. 1. That their offices should be independent of the will of the crown ; and, 2. That their salaries should be ascertained. By the former, their fears were effectually re- moved ; by the latter, only, all temptations from hope could be done away. The act of 13th of William III. was intended to secure both these objects ; and consequently, to give three judges, selected by favor, the great emoluments accru- ing to the holders of the great seal, in addition to their salaries as judges, was in direct oppo- sition to the spirit of that act, placed them im- mediately within the influence of the crown, and consequently tended to diminish their indepen- dence. But the mischief, he said, had not stopped here. Another inconvenience of the same sort had arisen out of it, viz. the commis- sion by which the chief justice of the king's berch sat as speaker of the house of lords. This commission, he knew, was of long date; but still it was a mode of reward dependent on the will and pleasure of the crown, and therefore in opposition to the design of having the salaries of judges fixed. He mentioned another matte" which deserved their consideration ; — the im- propriety of judges sitting at all in that house. He did not wish that the highest honors should not be open to that profession ; but that, while peers sat on the benches as judges, they should abstain from exercising their privilege from voting in the house. So long as they sat there they were necessarily legislators, and almost un- avoidably became politicians ; characters, which, in the opinion of the best writers on civil go- vernment, were utterly inconsistent with that of judge. Another reason, why he thought the lord chancellor, lords commissioners, and lords ci.ief justices, ought not to vote in that house, was that, by so doing, they were obliged to sit in judgment on their own decrees, and thus, as it were, to try themselves. He said, he had often heard it boasted, that lord Hardwicke never had one of his decrees reversed, while he sat on the woolsack. This he had always considered as no compliment to that learned peer, but as a fact that proved too much. Did their lordships think lord Hardwicke so infallible, that, during the great length of time he presided in the court of chancery, he had Tiever given an erroneous judgment? Must they not rather concur with him, that the true reason, why none of his de- crees were reversed, vvas the great influence a lord chancellor of lord Hardwicke's abilities must always possess in that house ? In support of this opinion, he desired their lordships to re- member, that, when Mr. Henley was lord keeper, he had several of his decrees reversed ; but when he was created a peer, and sat there as lord Northington, no more reversals were heard of. In all cases of appeal, it tTas for the most part customary to leave the judgment to the law lords : the impropriety, therefore, of trying cvec again the causes themselves had adjudged, needed,

he thought, no farther argument. The motion being objected to, as throwing a direct censure on the late appointment of commissioners, it was withdrawn, and the following substituted : — 'Tbat a committee be appointed to take into considera- tion the independency of the judges, and such farther regulations as may be proper for secur- ing the same.' But the previous question was moved, and carried without a division.

On the 17th of June Sir Cecil Wray pre- sented a petition to the house of commons from tlie people called Quakers, setting forth, ' that the petitioners met in their annual assembly, having solemnly considered the state of the en- slaved negroes, conceive themselves engaged, in religious duty, to lay the suffering situation of that unhappy people before the house, as a sub- ject loudly calling for the humane interposition of the legislature ; and they regret, that a nation professing tho Christian faith should so far counteract the principles of humanity and jus- tice, as, by cruel treatment of this oppressed race, to fill their minds with prejudices against the mild and beneficent doctrines of the gospel; and that, under the countenance of the laws of this country, many thousands of those our felllow creatures, entitled to the natural rights of man- kind, are held, as private property, in cruel bondage ; and the petitioners being informed that a bill for the regulation of the African trade is now before the house, containing a clause which restrains the officers of the African com- pany from exporting negroes, the petitioners deeply affected with a consideration of the ra- pine, oppression, and bloodshed, attending tliat traffic, humbly request, that the said restriction may be extended to all persons whatsoever,' Sec. Lord North, after paying several just compli- ments to the petitioners for their humanity, ex- pressed his fears that it would be found impos- sible to abolish the slave trade, as it had, in some measure, become necessary to almost every na- tion m Europe : and as it would be next to an impossibility to induce them all to give it up, and renounce it for ever, so he was apprehensive that the wishes of the humane petitioners could not be accomplished. Sir Cecil Wray said, he went heart and hand v?ith the petitioners, and wished something might be done towards abo- lishing a traffic which disgraced humanity. 11 is motion that the petition lie on the table was agreed to-

During the whole of this session, the affairs of the East India company were objects of the un- remitted attention of two committees appointed on that business ; but the unsettled state of the government prevented any effectual measures from being taken in consequence of their re- ports. In the course of their investigations, however, appearances of guilt had been dis- covered

against Sir Thomas Rumbold, a man who, though oriijinally of a low station, had re- turned from India with an immense fortune, and been knighted. A jiublic prosecution had been commenced against liim two years before, and a bill of restraint had passed to prevent him from leaving the kingdom, or alienating his property. On the 2nd of June, 1783, the lord advocate, observed, in the house of commons, that, Sir

Thomas Rumbold having finished his defence, i. was now the duty of the house to take the wr.ole of the evidence into consideration ; but, as the season was far advanced, he moved for a bill to continue the proceedings and the restrain- ing bill against him in their present state, not-withstanding any prorogation or dissolution of parliament. After some conversation, the mo- tion passed, and the bill was brought in and agreed to.

On the same day Mr. Pitt brought in a bill for regulating the public offices ; and said, the purpose of it was to embrace all the objects pointed out in the king's speech at the opening of the session. On the 17th he meed the house to resolve itself into a committee on the bill. Lord John Cavendish opposed the motion, alleging the bill was useless, and that all its objects might be answered without it, as the re- gulations necessary in the offices might be esta- blished by the heads of these offices. Mr. Pitt expressed his surprise at this last assertion, and to convince the house that abuses did exist in several public offices, and that the heads of these offices were not the most fit persons to correct them, he stated the following fiicts : — In the pay office, under the name of gifts, two clerks, whose salary is only £240 each, had received in one year, the one £2000, and the other £2500, and yet this happened in an office where the com- misioners of accounts had been told no fees were taken. In the post office the incidental ex- penses were enormous. The secretary had 2ˆ per cent, commission on packets provided for those taken or destroyed. Under tins head of packets, the nation, this very last war, had paid £120,000, and thus the secretary, whose salary is only £500, made £2500 a-year by this commis- sion. The noble lord in the blue riband, (lord North') had cost the public the last year he pre- sided at that board £ 1340 for stationary ware! He was surprised how such a bill could be run up ; but, when he read the particulars, he was astonished it had not been ten tiroes as much ; for he found in one article a charge of £350 for whip-cord! Above £lO,000 had been laid out on his lordship's house in Downing Street, and something near that sum on the house at Busiiy Park. There were charges of £600 a-year for stationary consumed by the two secretaries of the treasury; and about £l 00 for each of the lords of that board. On x\e whole, Mr. Pitt expected, tiiat, by this bill passing, there would be a saving of .£40,000 a-year to the public. — – LordNorth vindicated himself from these charges; but, on the 19th, the bill was passed, though it was afterwards thrown out by the house of lords. On the 23rd of

June the house was informed, by a message from the king, that £50,000 a-year was to be settled on the prince of Wales out of the civil list ; but tliat £60,000 would be neces- sary as a temporary aid, to equip him at his outset in life. Mr. Fox observed that the pro- posed establishment was certainly far too low ; and that he should undoubtedly, had tlie ad- vising an establislmient remained with him, have proposetl a sum more adequate to the object in view. Such an observation coincided witliwhat had been rumored, that INIr. Fox had suggested

\ splendid establishment for the prince, which liis majesty would not agree to. This sum was accordingly voted by both houses, and' an ad- dress of thanks presented to his majesty. On the same day lord J. Cavendish moved for leave to bring in a bill for the belter regulation of the offices in his majesty's exchequer, which was agreed to ; and on the 4th of July, in the committee on the bill, he proposed, that after the interest of the then auditors, tellers, See. should cease, the salaries of these officers should be fixed and certain. Mr. Fox said, the principle of tl>e bill was not so much to reduce the sa- laries of these officers, as to prevent the emolu- ments arising from them from increasing with the public burdens, and the holders of them from becoming rich in proportion as the public should grow poor. It was estimated, that there would be a saving to the nation from these re- forms of about £17,000 a-year in peace, and £40,000 in war. On the 1st of July, a motion was carried, for adjourning the farther consi- deration of the bill of pains and penalties against Sir T. Rumbold, &c., to the 1st of Octo- ber, by which means the whole proceeding fell to the ground, and was never afterwards re- sumed.

Parliament met on the 11 th of November, 1783, when the two houses were informed, in the speech from the throne, of the treaties of peace being concluded ; and of the necessity of providing for the security of the revenue ; and the East India company's affairs were stated as the reason of their being called together alter so short a recess. Some days passed in discus- sions relative to different parts of the revenue ; and on the 18th of November Mr. Fox moved for leave to bring in ' A bill, for vesting the affairs of the East India Company m the hands of certain commissioners, for the benefit of the public :' and also, * A bill for the better govern- ment of the territorial possessions and depen- dencies in India.' By the former, he proposed to enact, ' That the whole government and ma- nagement of the territorial possessions, revenues, and commerce of the company, together

with all the powers and authorities before vested in the directors, or in the general court of proprietors, should be vested in seven directors, named in the bill; viz. earl Fitz-William, the right honor- able Frederick Montague, lord viscount Lewis- ham, the honorable George Augustus North, Sir Gilbert Elliott, Sir Henry Fletcher, and Robert Gregory, Esq. These directors, or commissioners, were to hold their office for four years, and were not to be removeable by his majesty, without an address of either house of parliament. That, for the sole purpose of ordering and managing the commerce of the said company, nine assistant directors, being proprietors, each of £'2000 capi- tal stock, should be appointed to act under the directors aforesaid. That all vacancies in the office of the directors should be filled by his majesty; and that the vacancies in the office of the assistant directors should be filled by a majority of the proprietors, at an election by open poll. That the assistant directors should be removable by five directors, the cause and reasons for such removal being

entered on their journals, and signed vit *thei: respective names; and tiiat the directors and assistant directors should be removable by his majesty, upon an address of either house of par- liament. The bill tlieu provided certain regula- tions relative to the official proceedings of the directors; and enumerated certain disqualifica- tions which should render any person incapable of being a director, or assistant director. It then proposed to enact, that the directors should, once in every six months, lay before a general court of proprietors an exact state of the mercantile concerns of the company; and that, before the commencement of every session, they should lay the same, with other accounts therein stated, before the commissioners of his majesty's trea- sury, to be by them laid before the parliament. Authority was given to the directors ' to remove, suspend, appoint, or restore, any of the officers in the company's service, either civil or military. It next provided for ' the speedy and effectual trial of all persons charged with any offences committed in India; and for the prevention of all persons so charged, from returning to India before a due examination of the matters charged shall be had ; and required from every director, before whom examination into the subject matter of such charge shall be had, to enter into the journals, and subscribe with his name, the spe- cific reasons on the particular case, for the opi- nion or vote he shall give thereon.' It further provided for ' a speedy decision upon all dif- ferences or doubts, which might arise among the members of their government in India;' and di- rected that, * in case such a decision shall not be had within three months after the account of any such difference or doubt shall be received, the directors shall enter on their journals their reasons for not coming to such a determination.' And, lastly, that the assistant directors should be allowed a clear yearly salary of £500 from the company.' By the second bill (which Mr. Fox introduced on the 26th of November) ' the powers*

granted to the governor-general and council, by the 13th Geo. III., were more fully explained, and strict obedience to the orders of the directors enjoined. The delegation of the powers of the council general, or of any presi- dency, was prohibited ; the revision of all pro- ceedings in special commissions directed ; and the regular communication of all correspondence in India provided for. It forbid the exchange, or the acquisition, or the invasion, of any terri- tory in India", or the forming any alliance for such purposes, or the hiring out any part of the company's forces, by the council general, or any presidency. It prohibited the appointment to any office of any person removed for mis- demeanor ; and the letting out to hire any farm, or other thing, to the servants of any person in the civil service of the company. It abolished all monopolies in India. It declared the accept- ance of all presents to be illegal with certain penalties ; and made such presents recoverable by any person for his own sole benefit. It se- cured an estate of inheritancoito the native land- holders, and provided against the alteration or the increase of rents. It directed, that princes engaged to keep up or pay troops for the service

*of the company, or paying tribute to them, or under their protection, shall not be molested in tl;e enjoyment of their rights. It explained the powers granted by the 13th Geo. III. to the council-general over the other presidencies, in matters of war, peace, and treaties : and disquali- fied the agents of any protected prince, and all persons in the service of the company, from sit- ting in the house of commons during their con- tinuance in such employment, and for a certain time after quitting the saine. It lastly directed, * that all offences against this act may be pro- secuted in the courts in India, or in the court of king's bench,' Such was the substance of these two celebrated bills : but, whatever were their merits as a system of government for India, they were evidently to contemn what had hitherto been considered sacred in Britain : they were to wrest from the hands of those to whom privi- leges had been granted by charter, the powers attached to those privileges, by which the incor- poration had managed their affairs : they were to do more, they were to place these powers, with all the pecuniary advantages connected with them, for four years in the hands of seven indi- viduals nrminated by the present administration, beyond the control of the crown.*

Mr. secretary Fox introduced the first of these bills on the 18th of November, when he showed the necessity of remedying the many abuses that had crept into the government of the East India Company's territories. These had been so se- verely felt, that parliament had instituted en quiries

by which the sources of them might be discovered, and proper remedies applied. Com- mittees had been appointed ; their researches had been pursued with uncommon industry, and their reports contained information so complete, that perhaps the like had never been laid before parliament. The state of the company's finances was truly deplorable : they had last year ap- plied to parliament for leave to borrow £500,000 on bonds ; they had petitioned for £300,000 in exchequer bills, and for the suspension of a demand on them by government for £700,000 due for customs: they owed £11,200,000, and had stock in hand only to the amount of about £3,200,000 which left a debt of £8,000,000, a sum highly alarming, when compared with the capital of the proprietors. Government must, therefore, either step in, or the company must be annihilated. Gentlemen must not be led away with the idea, that the public had no right to take upon themselves to control the govern- ment of the company's settlements. The public had a greater interest in them than the company itself. The whole amount of the dividend to the proprietors was only about £256,000, whereas the nation derived from the customs paid by ihe company about £1,300,000. The people of England had, therefore, a much greater stake in the business than the proprietors. The prospe- rity of the company was so closely connected with that of the state, that the credit of the for- mer could not be injured witliout givinc; a shock to that of the kingdom. If the bills for £2,000.000 should return protested, what would the world say but that the people of Enirland were bank- rupts, el.se they would not have suffered the

bankruptcy of a company, which paid them £1,300,000 a year? He then said it was his in- tention, in the bills moved to be brought in, to authorise the lords of the treasury to consent that the directors shall accept the bills now on their way to England, though the nation woala thus be liable to pay the whole, if the company should not be able to take up the debt. Thus he hoped to save the sinking credit of the com- pany. He ascribed all the misfortunes of the company to their want of control over their servants. Having stated various grievances aris- ing from this, he pointed out the remedies he intended to apply by the bill.

Mr. Fox's motion, strongly seconded by colo- nel North, was opposed by Mr. Pitt ; who, though he admitted the necessity of the interference of parliament in the affairs of the East India Com- pany, said, that the chartered rights of British subjects, confirmed by acts of the British legis- lature, could not be violated but by a breach of the constitution. Necessity was the common plea of tyranny. To reform the abuses of any government, he argued, was there a necessity to annihilate the very existence of it^ Bv annihi- lating the constitution of the East India Com- pany, established on the most sacred bonds of civil government, you shake the fabric of the British constitution to the foundation, destroy the distinctions of property, and establish a despotic power in a limited government. Not to mention the

great increase of that undue in fluence of the crown, which the right honorable gentleman appeared lately so anxious to dimi- nish, the measure threatened danger to liberty, destruction to commerce, and the most alarming consequences to national credit. Governor John- stone treated with his usual asperity the measures that ministry had pursued to distress the East India Company-; though he applauded the principles of justice and humanity that formed the basis of the bill, so far as it respected resti- tution to the native princes of India, and the establishment of the zemindars and poligars in their farnis at the old rents. He concluded with a panegyric on governor Hastings. l\Ir. Fox begged gentlemen to recollect, that the character of Mr. Hastings was not involved in the consi- deration of the bill. The motion being carried without a division, the bill was read a first time on the 20th of November, and appointed to be read the second time on the 2Gth. On the 24th a petition was presented against it from the pro- prietors, and on the 25th another from the directors, praying to be heard by counsel, which were ordered to lie on the table. On the 26th Mr. Fox brought forward his second bill for the regulation of the affairs of the East India Com- pany, which was read, and ordered to be read the second time on the Tuesday following. The arguments urged against the bills were drawn chiefly from two sources: l.The arbitrary de- feazance of the chartered rights of the courts of proprietors and directors, without a justifiable plea of necessity : 2, The dangerous power lodged in the hands of the new commissioners. On both these crounds, the advocates for the bills joined issue with their opponents. To substantiate the grounds of necessity, the sup-

porters of the bills argued, that the phrase char- tered rights was full of affectation and ambiguity : that there were two kinds of charters ; the first when the natural rights of men were confirmed by some public deed, such as the charters of king John and king Henry III. The second formed on principles the very reverse of these, for the purpose of suspending the natural riglits of mankind at large, to confer some exclusive privileges on particular persons. Such were commercial charters; and such charters were therefore, in the strictest sense, voidable, whenever they substantially varied from the purpose of their existence. In conformity to this, parlia- ment had actually passed several acts, all infring- ing on the company's charter. It had been ad- mitted on all sides, that the company, under its present constitution, was totally inadequate to the government of their immense territorial ac- quisitions ; but it was contended that, in the pre- sent measure, the extent of the remedy went in- finitely beyond the extent of the necessity : that the disfranchisement of the members of the com- pany, and

the confiscation of their property, could only be justified by acts of delinquency legally established. To this it was replied, that their property was not confiscated, the bill ex- pressly vesting it in the company, in trust for the sole benefit of the proprietors.

While these bills were thus supported with great ability, Mr. Pitt contended that, by vest- ing the whole patronage of India in the hands of seven directors nominally appointed by par- liament, but really selected by administration, the influence of the crown would be augmented to such an extraordinary degree, that, like an irre- sistible torrert, it might utterly overturn and sweep away the remaining liberties of the coun- try. Mr. Dundas opposed the measure, not be- cause it augmented the power of the crown, but because it increased a ˆxtwer already overgrown : it placed a new and unparalleled influence in the hands of the minister and his coadjutors for four years, which would be independent of the crown and of parliament : it would thus create a fourth estate in the realm, with a power of a most dan- gerous nature, which in the end might annihilate the crown and subvert the constitution. Mr. Fox's motives on this occasion were attacked by the ordinary members of opposition in very pointed language. They said that it was evident nothing short of a perpetual dictatorship would satisfy his inordinate ambition. They allowed that he had many respectable qualities ; but they could on no account see him exalted on the ruins of the constitution. It was alleged that he was ready to sacrifice the king, the parliament, and the people, at the shrine of a party, &c. The chief supporters of the bills were the two secretaries, Mr. Fox, and lord North ; Sir Grey Cooper, and Messrs. Erskine, Burke, Sheridan, Anstruther, and Adam ; against it were Messrs. \V. and T. Pitt, the marquis of Graham, Sir J. Lowther, and Messrs. Dundas, Dempster, Powis, .Tenkinson, and M'Donald. During the progress of the bills the court of directors of the East India Com- pany were heard by council ; and the mayor and common council of the city of London presented a petition praying they might not pass into laws.

Such, however, was the influence of the coali- tion, tliat, on the 28th of November, the votes on the commitment of the first bill were 229 to 120. On the 1st of December, in the committee, the votes for proceeding on the bill stood 217 to 103; on the third the seven directors and nine as- sistants were nominated without opposition ; and on the 8th the bill was passed by a ma- jority of 106; there being 208 for it, and 102 against it.

On the 9th of December Mr. Fox carried the first bill to the house of peers, and on the 11th h was read a first time, when earl Temple, lord Thurlow, and the duke of Richmond, expressed their abhorrence of the measure in the strongest terms. Lord Thurlow descanted on the flou- rishing state of the company's affairs, and pro- nounced a brilliant panegyric on governor Has-

tings. After a short debate on the production of pa}”)ers, the second reading was fixed for the 15th In the mean time, the parliamentary debates on the bills being diffused through the nation, ihey not only created considerable interest in the minds of the public, but seem to have awˆakened the feelings of the sovereign. It was affirmed that, on the 11th of December, the king had signified to lord Temple his complete conviction of the correctness of the views of opposition, and au- thorised him to declare the same to such persons as he should think proper : that a written note was put into his hands, in which his majesty declared, that he should esteem those who should vote for the India bill, not his friends, but his enemies : and that if he (lord Temple) could put this in stronger words, he had full authority to do so. It was also said that a communication had been made to the same purport to several other peers in the house of lords ; therefore, on the 15th of December, counsel being heard against the bill, and soliciting at eleven at night to postpone farther proceedings till next day, the motion for adjournment was carried against the ministry by eighty-seven to seventy-nine. In consequence of what had now taken place, a motion was brought forward in the house of commons on the same day by Mr. Baker: that it is now necessary to declare, that to report any opinion, or other proceeding depending in either house of parliament, with a view to influence the votes of the members, is a high crime and misdemeanour: derogatory to the honor of the crown; a breach of the fundamental privileges of parliament, and subversive of the constitution. The motion was seconded by lord Maitland, but strongly opposed by Mr, Pitt, who urged the impropriety of proceeding on mere unauthenti- cated rumor. With respect to the effects ad- duced as a proof of these reports, they were not conclusive, as it was not unusual for the lords to reject a bill that had been passed by the com- mons, without the least suspicion of undue in- fluence. After a long and warm debate, the house divided, when there appeared for the mo- tion 151, against it eighty. It was then resolved, that, on Monday next, the house should resolve itself into a committee of the whole house, to take into consideration the present state of the nation.

As a change of ministers appeared to be a

measure determined upon by the king, and a ‘dissolution of parliament the immediate and ne- cessary consequence, the majority of the house thought no time was to be lost, in endeavouring to render the attempt as difficult as possible. With this view, immediately after the above re- solutions were agreed to, Mr. Erskine made the following motion, that it is necessary to the most essential interests of this kingdom, and pecu- liarly incumbent on

this house, to pursue with unremitting attention the consideration of a suitable remedy for the abuses, which have pre- vailed in the government of the British domi- nions in the East Indies; and that this house will consider as an enemy to his country, any person who shall presume to advise his majesty to pre- vent, or in any manner interrupt, the discharge of this important duty. Tiie motion was op- posed as factious, as interferins: with the execu- tive part of government, and trenching on the undoubted prerogative of the crown, vˆithout any just cause. It was carried, however, by the same majority, with the former.

On the 16th of December the house of peers beard counsel against the bill, and on the 17th, after a warm debate, it was rejected by a ma- joritj- of ninety-five to seventy-six. On this oc- casion the prince of W ales did not vote. Previ- ous to the division, the reports of the undue influence being again mentioned by the duke of Portland, lord Temple acknowledged, that his duty had led him to solicit an interview with his sovereign on the bill ; that he had then commu- nicated his sentiments very fully to his majesty ; that these were lodged in the breast of his so- vereign ; and what they were would for ever re- main a secret. But though he would not declare affirmatively, what bis advice to his sovereign was, he would tell their lordships negatively what it was not : it was not friendly to the prin- ciple and object of the bill. In doing this he was confident he had acted a dutiful part to his sovereign. On the 18th, at twelve o'clock at night, a messenger delivered to the two secreta- ries his majesty's orders, that they should deliver up the seals of their offices, and send them by the undersecretaries, Messrs. Frazerand Nepean, as a personal interview would be disagreeable to him. The seals were immediately given by the king to lord Temple, who sent letters of dismis- sion next day to the rest of the cabinet council; Mr. Pitt was forthwith appointed first lord of the treasury, and chancellor of the exchequer ; earl Gower president of the council. On the 22nd lord Temple resigned the seals, which were delivered to lord Sydney and the marquis of Caermarthen as secretaries of state. Lord Thurlow was ap- pointed lord high chancellor, the duke of Rut- land lord])rivy seal ; lord viscount Howe first lord of tiie adnuralty ; the duke of Richmond, master of ordnance; W. W. Grenville, esq., and lord Mulgrave paymasters general ; H. Dundas, esq., treasurer of the navy ; earl of Salisbury lord chamberlain ; Lloyd Kenyon, esq., attorney general; R. Pepper Arden, esq., solicitor general; Ilay Cami)bell, esq., lord advocate for Scotland; and R. Dutidas, esq., solicitor.

A formidable majority in the house of com- mons still adhered to the late ministry, and, after

their dismission, made the dissolution of parli. ment, in the public opinion, an event immedi- ately to be expected. The passing of the land- tax bill,*

however, was previously necessary. It had been twice read, and the 20th of December appointed for the third reading. But, as the committee on the state of the nation was to sit on the 22nd, the house, on the 19th, after a short debate, adjourned to the 22nd. On that day, before the speaker left the chair, Mr. W. Gren- ville informed the house, that lord Temple had authorised him to say, that he was ready to meet any charge that should be made against him; and that he had thought fit to resign the seals to prevent all suspicion of his seeking for protec- tion as a minister. In answer to this notification, Mr. Fox said, that, as to the earl's relinquishing an office which he had held but three days, he was doubtless the fittest judge; but as to the facts alluded to, facts of public notoriety, which aflfected the honor of parliament, and the safety of the constitution, he trusted the house would take them into their most serious consideration : though, indeed, the secret nature of them almost precluded the possibility of bringing a personal charge against any one. In tlie committee on the state of the nation, Mr. Erskine proposed that an address should be presented to the king, stating the alarming rep<"rts of an intended dis- solution of parliament; to represent to his ma- jesty the inconveniences and dangers that would attend such a measure, at a moment when the maintenance of public credit, the support of the revenue, and more especially the distressed state of the finances of the East India Company, and the disorders prevailing in their government both at home and abroid, demanded the most imme- diate attention : to beseech his majesty to suffer them to proceed on the important business re- commended to them in his speech from the throne ; and to hearken to the voice of his faith- ful commons, and not to the secret advices of persons who may have private interests of their own, separate from the true interest of his ma- jesty and his people. This address being agreed to was presented to the king, and on Wednesday the 24th of Docenˆber, the speaker read to the house the .iniˆwer, vstiich assured the house tliat it h?.d been the constant object of his ma- jesty lO eruploy his authority to its true and only end — the pood of the people; that he agreed with them in thinking that the support of the public credit and revenue must demand their vigilant care; and that the state of the East Indies was also an object of as much deli- cacy as importance. It concluded, ' I trust you will proceed in these considerations with all convenient speed, after such an adjournment as the present circumstances may seem to require; and I assure you, I shall not interrupt your meeting by any exercise of my prerogative, either of prorogation, or dissolution.' Ob- jections were now made to these concluding words. It was said, that the whole extent of the royal favor amounted to no more than an assurance, that they should meet again ; and in the committee upon the state of the nation, on a motion of lord Beauchamp, the chaiiTnun was directed to move, ' That it is tlic opinion of this

house, that the lords of the treasury ought not to consent that the directors of the East India Company do accept any more bills, unless they shall be able to prove to parliament that they liave sufficient means to provide for the pay- ment of them, after they shall have paid their dividend, and discharged the debt due to govern- ment.’ It was next resolved, on a motion of lord Surrey, that an address be presented to the king, to desire that his majesty would not grant the office of chancellor of the duchy of Lan- caster to any person, otherwise than during pleasure, before the 20th of January, 1784. These motions met with but a feeble oppo- sition. The latter motion was founded on the enquiry that had been instituted, into the estab- lishments of the duchy of Lancaster, for t?:e purpose of determining whether these might not be reduced or abolished. These motions being passed, the house adjourned to the l‘2th of January, 1784.

The expectation of the public was now fixed with great anxiety on the meeting of parliament after the recess. A contest between the execu- tive government and the house of commons was a spectacle that had not been exhibited in Great Britain since the accession of the house of Hanover : and many circumstances concurred to render it peculiarly important and interesting. The matter in dispute concerned the very essence of the constitution, and could not be decided without considerably afi’ecting its bias. In the pretended defence ui the authority of the house of commons were arranged the united abilities of two powerful parties, long exercised by mu- tual contests in all the arts of political warfare. The champion of prerogative was a person not less distinguished by his splendid talents, and the consequent unexampled rapidity of his rise to power, than by the courage and perseverance he had already demonstrated in the cause he now stood forward to support. By the usual effect of ministerial influence upon the house of commons, as well as by the increasing abhor- rence of the designs of the coalition, a sufficient number of members joined the new administra- tion to make their votes nearly equal to those of opposition. In this state of affairs, both houses met on the 12th of January, 1784. As soon as the speaker had taken the chair, Mr. Fox attempted to introduce, previous to any other business, the discussion of certain resolutions drawn up by the opposition ; but was interrupted by the swearing in of new members ; after which Mr. Pitt declaring he had a message to deliver from the king, and wishing to supersede the measures of opposition by the important consi- deration of the Eas^ India Company’s affairs, rose up at the same instant with Mr. Fox. A tumult ensued as to who had the prior right to speak, but it was settled by the speaker in favor of Mr. Fox. He called upon the minister, if he wished to put a stop to such measures as the

committee might think necessary to adopt for their own security, to give ihe house some satis- factory assurance, that no dissolution would take place. With this requisition, Mr. Pitt positively refused to comply, and declared, that ‘ he would

never ompromise, nor bargain away, the royal prerogative in the hou.so of commons.’ The majority, who were now persuaded that the new ministers were only to be withheld by their fears from putting an end to the session, resolved to render euch a step highly dangerous, at least, f not impossible. With this view, as soon as tlie question for the order of the day was carried, on a division of 232 against 193, and the speaker had left the chair, the two following resolutions were moved by Mr. Fox, passed without a divi- sion, and, being reported, w .re agreed to by the house: 1. ‘ That it is the opinion of this com- mittee, that for any person or persons in his majesty’s treasury, or in the exchequer, or in the bank of England, employed in the payment of the public money, to pay, or direct, or cause to be paid, any sum or sums of money, for, or towards, the support of the services voted in this present session of parliament, afte the parliament shall have been prorogued or dissolved, if it be dissolved or prorogued before any act of parlia- ment shall have passed appropriating the sup- plies to such services, will be a high crime and misdemeanor, a daring breach of the public trust, derogatory to thje fundamental privileges of parliament ; and subversive of the constitution of this country.’ 2. ‘ Thai it is the opinion of this committee, that the chairman of the com- mittee be directed to move the house, that the bill for punishing mutiny and desertion, and for the better payment of the army and their quar- ters, be read a second time, on Monday the 23d of February next.’ The immediate dissolution of parliament being thus far rendered imprac- ticable, two other resolutions were moved by the earl of Surrey, vi?. 1 . ‘ That, in the present situation of his majesty’s dominions, it is pecu- liarly necessary that there should be an admi- nistration which has the confidence of this house and the public’ 2. ‘ That the late changes in his majesty’s councils had been immediately preceded by dangerous and universal reports, that the sacred name of the king had been un- constitutionally used to affect the deliberations of parliament ; and that the appointments made were accompanied by circumstances new and extraordinary, and such as do not conciliate or engage the confidence of this house.’ Mr. Dun- das objected to the first resolution, that the name of the king had been, perhaps, accidentally, but certainly very improperly omitted ; and pro- posed an amendment by inserting, instead of the words ‘ this house and the public,’ the following, viz. ‘ the crown, the parliament, and the people.’ This amendment, being merely proposed to point out the factious spirit of the resolution, was re- jected without a dirision. In the debates which now took place upon these resolutions, the most pointed and sarcastic personalities*

were thrown out and retorted from both sides of the house. The coalition was branded as a corrupt confe- deracy of two desperate factions, to seize upon the government ; the India bill was said to have been an experiment made by the late secretarj', to raise himself to a degree of power superior to that of the sovereign. On the other hand, the new administration were described as a coahtion.

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not indeed of parties, hut of the shreds and remnants, the dregs and outcasts, of all parties ; as a body collected for the purpose of fighting the battles of secret and unconsiitutional in- fluence; of trampling on the power and dignity of the house of commons ; of establishing a go- vernment of cabal, intrigue, and favoritism ; and of destroying the very principles of laudable ambition and honorable service in the state. At last, about seven o'clock in the morning of the 13th of January, the committee divided, when the motion was carried by a majority of 142, there being for it 196, against it fifty-four.

On Wednesday, the 14th of January, jNIr. Pitt moved for leave to bring in ' a bill for the better government and management of the affairs of the East India Company.' By this bill com- missioners were to be appointed Ivy his majesty, from the members of his privy council, who were ' authorised and empowered from time to time, to check, superintend, and control, all acts, operations, and concerns, which in any wise re- late to the civil or military government, or re- venues of the territories and possessions of the said united company in the East Indies.' It pro- posed to enact, ' that the said board shall have access to all papers and muniments of the said united company, and shall be furnished with copies thereof, and of all the proceedings of all general and special courts of proprietors, and of the court of directors; and also copies of all despatches which the directors shall receive from any of their servants in the East Indies, im- mediately after the arrival thereof; and also of all letters, orders, and instructions, whatsoever, re- lating to the civil or military government or revenues of the British territorial possessions of the East Indies, proposed to be sent to any of the servants of his majesty, or of the said com- pany in the East Indies : and that the court of directors shall, and are required to, pay due obedience to, and shall be governed and bound by, such orders and directions as they shall, from time to time, receive from the said board, touching the civil or military government and revenue of the territories and possession of the company. And it furtlier proposed to enact, that the said board shall return the copies of the said despatches to the court of directors, with their approbation thereof, or their reasons at large for

disapproving the same, together with instructions in respect thereto ; and the court shall tlieieupon despatch and send the letters, orders, and instructions, so approved or amended, to their servants in India, without farther delay ; and that no letters, orders, or instnictions, until after such previous communication thereof to the said board, shall, at any time, be sent or des- patched by tlie said directors, to the East Indies, on any account or pretence whatever. That in case the said board shall send any orders, which, in the opinion of the said court of directors, shall relate to points not connected with the civil or military government and revenues of tlie said terr tories and possessions in India, it shall be lawful for them to apply by petition to his majesty in council, touching such orders; and the decision of the council iherenii shall be final and couclusive. Tliat the nomination of the

commanders in chief shall be vested in his ma« jesty, and that the said commanders in chief shall always be second in council. It also vested in his majesty the power to remove any governor general, presidents, and members of the councils of any British settlements in India; and pro- posed to enact, that all vacancies in the offices aforesaid shall be supplied by the court of di- rectors, subject to the approbation of his majesty. Lastly, that no order or resolution of any general court of proprietors shall be available to revoke or rescind, or in any respect to afl'ect, any pro- ceeding of the court of directors, after his ma- jesty's pleasure shall have been signified upon the same. The debates on this bill turned chiefly on its merits and demerits, as compared with Mr. Fox's India bill, rejected by the house of lords. Mr. Pitt said that, in his bill, all the rights enjoyed by the company under their char- ter were preserved inviolate, as far as was com- patible with tlie public safety. When, in answer to this, it was shown, that nothing but the shadow of power was preserved to the company, and that, by the negative reserved to the crown in all matters whatsoever, the substance was in effect vested there; he replied that, whatever might be its effect, yet having previously obtained the consent both of the court of proprietors and di- rectors, to all the regulations contained in it, no violation of privileges could be charged, where the surrender was voluntary. 'arious other ar- guments were adduced by both sides ; but at a second reading of the bill, on the 23rd of Janu- ary, the motion for its commitment was rejected by a majority of eight; the votes being for it 214, against it 222.

On the 16th of January, lord Charles Spenser moved, in the committee on the state of {he nation, ' That it has been declared to be the opinion of this house (referring to the resolutions former- ly moved by lord Surrey), that the continuance of the present ministers in trusts of the highest importance and responsibility is contrary to con- stitutional principles, and injurious to the interests of his majesty and the people.' In opposition to this motion it was argued, that the pre- mises, admitting them to be true, did not war-

rant the conclusion ; that the ministry had been constitutionally appointed by the king, whose sole right it was to appoint them, &.c. After a warm debate, the resolution was adopted, by a majority of 205 to 184. On the rejection of the India bill, Mr. Pitt was requested to satisfy the house respecting the measure of a dissolution; and a loud and general call was repeated from every side of the house. At length some harsh personalities obliged him to rise and complain of such treatment, but he concluded with a flat refusal to give any answer on the subject. The house became unusually warm, and Mr. Eden was preparing a resolution, when Mr. Fox moved to adjourn till next day in order to give Mr. Pitt time to consider, whether he had treated the house with that respect which a minister in his peculiar circumstances ought to do. Next day, Saturday, January 24th, the house met again, but the only answer civen by the minister was, 'that he had no intention to advise his majesty to pre- vent that house from meeti.ig on Monday :

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*whereupon the house, upon Mr. Powis's motion, adjourned to that day, ' in the hopes, that before next meeting, some means might be inverted of healing the divisions that threatened the country with anarchy and confusion.' These hopes, However, were disappointed ; notwithstanding a respectable meeting was held on the 26th at the St. Alban's tavern, of about seventy members, who joined in an address to]Mr. Pitt and the duke of Portland, recommending such a mea- sure by a coalition of parties ; ' being persuaded,' they said, ' that the united efforts of those, in whose integrity, abilities, and constitutional principles they had reason to confide, could alone rescue the country from its present distracted state.' Further, to promote such a union of parties, a motion was made by Mr. Grosvenor, on the 2d February, in the house of commons, * That the present critical situation of public affairs required the exertions of a firm, efficient, extended, and united administration, entitled to the confidence of the people, and such as might tend to put an end to the divisions and distrac- tions of this country.' A second resolution, of a less mild tenor, was moved by Mr. Coke, ' That the_ continuance of the present ministers in office was an obstacle to the forming a firm, efficient, extended, and united administration.' This motion occasioned a warm debate, but was at last carried by 223 against 204. Next day, these resolutions, after another long and warm debate, were ordered, by a majority of 211 to J 87, to be laid before his majesty.*

On the 4th of February, t'ne earl of Effingham called the attention of the house of lords to the resolutions passed by the commons, which he

considered as of the utmost importance to the constitution, and therefore moved as follows : — I. ‘ That it is unconstitutional for one branch of the legislature to assume a right of resolving to impede the exercise of a power vested in any body of men by act of parliament.’ And, II. ‘ That it is unconstitutional for either house of parliament to pass any resolution to deprive the crown of its just prerogative.’ The first of these motions occasioned a very warm debate. It was supported by earl Fitzwilliam, earl Fau- conberg, duke of Richmond, lord chancellor, lord Sydney, and lord Gower, and opposed by lord Loughborough, earl of Mansfield, and lord Stormont, who vindicated the resolutions of the house. of commons. Upon a division there ap- peared for it 100, against it fifty-three; majority forty-seven. Lord Effingham’s second resolution, and motion for an address to his majesty on the subject, were then agreed to without a division. Next day. Lord Beauchamp rose in the house of commons, and mentioned a rumor, that another house of parliament had gone so far as to cen- sure the proceedings of that house : whereupon he moved for a committee to inspect the journals of the house of lords ; which being agreed to, the report of the committee was brought forward on the 9th, and a committee appointed to search for precedents. In the mean time, the members of the St. Alban’s meeting, to promote the wished- for coalition, came to the following resolution, which was read in the house of commons on the 11th February, by Mr. Marsham : — ‘That an

administration formed on the total exclusion of the members of either the last or present admi- nistration, would be inadequate to the exigencies of the public affairs.’ This occasioned the lead- ing men on both sides to express their wishes for a union of parties, though such difficulties were thrown in the way by each, as effectually prevented it. Mr. Fox insisted on the actual, or at least virtual resignation, of Mr. Pitt, as an indispensable preliminary step ; and avowed his opinion, that the house had, and ought to have, a negative in the nomination of a minister. Mr. Pitt allowed, that no minister could conti- nue long in office without the confidence of the house, but denied that there were any con- stitutional means to force him to resign, ex- cept by an address to the crown ; and added that there were persons with whom he could not bring himself to act without forfeiting all charac- ter of consistency. This called up lord North, who said, that though he was not disposed to gratify the caprice of an individual, yet he would willingly do any thing for his country, and with- draw his pretensions, if they were an obstacle to a union. This candid declaration of lord North, and a similar one from Mr. Fox, pro- cured them the applauses of both parties; and a measure was soon after suggested and acceded to which promised a speedy union. This was that his majesty, should invite the duke of Port- land to a conference with Mr. Pitt, for the pur- pose of forming a new administration, on fair and equal terms. But, after this message had

been actually sent, the negociation was broke off upon the duke's insisting on a previous expla- nation of the word equal, which Mi. Pitt refused to give till tlicy should meet in conference. About this time ministry were much encouraged to perseverance by the interest which the public at large took in this extraordinary contest: an address to his majesty was voted by the common council of London, thanking him for the re- moval of his late ministers ; approving the resolu- tions passed by the house of lords ; and declaring their determination steadily to support the con- stitutional exercise of prerogative. Similar ad- dresses immediately followed from the merchants and trades of the city of London, and from the city of Norwich : in short, from every corner of the kingdom. The efforts of the coalition, in- deed, made some appearance in the county of Middlesex, in Westminster, and in the great county of York, but they proved fruitless. Still however, they maintained the struggle within doors : on the 16th, the report from the committee of privileges being called for, lord Beauchamp stated, that the lords could not constitutionally interfere with the resolutions of that house ; that by custom and usage, whenever they disapproved of a resolution, and vice versa, a conference of both houses was called ; whereby the house complained of, could satisfy the house com- plaining ; and this was necessary to preserve mutual confidence between the two houses. After quoting the journals, and censuring the resolution of the lords as rash, he moved six re- solutions, viz. 1. ' That this house has not as- sumed any right to suspend the execution of any law. 2. 'That it is constitutional for it to declare

its seri3e of the exercise of any discretionary power vested in any body of n:\en by act of par- liament. 3. That it is its duty, as entrusted with the sole grant of money, to prevent the rash exercise of any power, that may be attended with danger to the public credit. 4. That the resolutions of the 24th December last were con- stitutional, founded on a sense of duty towards the people, and a becoming anxiety for the pre- servation of the revenue, and the support of public credit. 5. That if the house had ne- glected to pass the said resolutions, they would have been highly responsible for the increase of those evils already too severely felt. And, 6, That the house will with moderation, but with decided firmness, maintain inviolably the princi- ples of the constitution ; equally solicitous to preserve their own privileges, and to avoid any encroachments on those of the other two branches of the legislature.' These resolutions, after a warm debate, were carried l)y 186 against 157.

On the 18th February Mr. Pitt being asked, previous to the consideration of

the supply for the ordnance, if he had any thing to communi- cate relative to the Resolutions, informed the house, ‘ That his majesty, after a consideration of all the circumstances of the country, had not thought proper to dismiss his ministers, and that bis ministers had not resigned.’ This brought on a long and violent debate. Mr. Fox said it was the first instance, since the revolution, of a direct denial on the part of the crown to comply with the wishes of the house of commons ; that it was the first time the house had not received a gracious answer from a prince of the house of Brunswick: that an event so new and alarming required on their part a firm but moderate, a pru- dent but effectual, assertion of their privileges : that the power of granting or refusing the supplies, was their constitutional and legal weapon, which he did not wish to see wielded : that to this, if necessary, they were bound to resort ; but to avoid all imputation of rashness, and give minis- ters time for recollection, he would only move to defer the report of the estimates till Friday next. The motion was seconded by lord Surrey : but the mention of refusing the supplies was re- ceived by the friends of ministry as a threat which even the utmost madness of faction, they said, could not seriously design to execute. Th(! very right of such a refusal was questioned . The exercise of this privilege in former times, it was said, was founded on principles which did not now exist. The settled revenues were then sufficient for the ordinary purposes of govern- ment ; and it was only in cases of extraordinary demands, for the prosecution of wars disapproved by parliament, that the right of refusal was ex- ercised; whereas, in our present state, to deny the ordinary annual supplies would be in fact to dijsc!v€ the whole fabric of government. Mr. Pitt did not deny the right of the house to re- fuse the supplies in times of danger from the crown, but the answer he had delivered from his majesty was not a formal answer as to an address ; and he appealed to the judgment of the house whether it afforded a justifiable ground for exer- cising that right. Mr. Fox’s motion was carried, however, by a majority of twelve; ayes 208,

noes 196. Though the supplies were thus post- poned, it was by no means the intention of the majority to carry matters to extremities by re- fusing them ; and the ordnance supply was agreed to on Friday the 20th February. On the same day, INIr. Powys moved an address to the king, expressing ‘ tlie reliance of the house on his royal wisdom, that he would take such mea- sures as might tend to give effect to the wishes of his faithful commons, already presented to his majesty.’ Mr. Eden proposed an amend- ment by inserting after ‘ measures, as’ — the words ‘ by removing such obstacles as this house had declared to stand in the way of forming a firm, extended, efficient, and united administra- tion, such as this house had described to be re- quisite in the present critical and arduous state of public affairs.’ The motion, thus amended, after a long debate, was carried

by 197 against 177; and the address ordered to be presented by the whole house. This was done on the 25th, and on the 27th the speaker reported his ma- jesty's answer ; wherein, after ' assuring them of his earnest desire to put an end to the divi- sions and distractions of the country, he declared, that he could not see that this would be ad- vanced by the dismission of his ministers; that no charge was suggested against them, nor any one of them specifically objected to ; and that numbers of his subjects had expressed their sa- tisfaction on the change of his councils.' — The consideration of his majesty's answer was de- ferred to the 1st of March, when a second address was ordered to be prepared. In this, the house humbly claimed it as their right duty, to advise his majesty touching the exercise of his preroga- tive; and, after stating the substance of their former resolutions, concluded with a repetition of their request, ' that he would be pleased to lay the foundation of a stable government, by the previous removal of his ministers.' After a long and warm debate, this address was agreed to by a majority of 201 to 189. On the 4th of March it was presented to the king by the speaker and a numerous body of the members ; when his majesty returned an answer similar to the former; with the additional remarks that, ' If there were any grounds for the removal of bis ministers, it ought to be equally a reason for not admitting them as part of the extended and aoiled administration : that he had never called in question the right of the commons to offer him their advice on every proper occasion touch- ing the exercise of his prerogative ; and that he will be ready at all times to receive it, and give it the most pttentive consideration.' Mr. Fox moved that his majesty's answer be taken into conside- ration on Monday next, which was agreed to. Next day, March 5th, he moved to postpone the mutiny bill, till after the consideration of the king's answer, on the Bth. The secretary at war was surprised at the proposal of delaying what concerned the public safety ; but the motion was carried by 171 against 162. On the 8th Mr. Fox, after a long speech,vvherein he recapitu latcd every step taken since his dismission, moved. ' That an humble representation be presented to his majesty, to testify the surprise and affliction of this house on receiving the answer which his

majesty's mJTiisteTs have advised to the dutiful and seasonable address of this house, concerning one of the most important acts of his majesty's government.'

This representation was the last successful effort of the coalition, and was carried only by 191 to 190. On this occasion, it would seem, they felt their strength failing them, and that they must ultimately yield ; for on the 10th

of March they allowed the mutiny bill to pass without a division. On the 12th Mr. Sawbridge brought forward a proposition for a parliamentary reform. The state of the representation in England, he said, was very inadequate, and infinitely more so in Scotland, where not above one man in 100 had a vote for a member. He therefore moved for a committee of enquiry on the representation of the people. Mr. alderman Newnham seconded the motion. Sir R. Clayton supported it, and declared himself ready to sacrifice his borough interest. Mr. Dempster avowed himself a friend to it, and said that ' the people of Scotland would be very grateful if one in 100 were allowed to vote ; but in fact not one in 1000 had that privi- lege. Previous to the reign of Charles II. every 40s. freeholder had a vote, in Scotland, as well as in England ; but in that arbitrary reign the right of voting was confined to those who held their lands from the crown, which has been continued ever since.' The motion, though supported by the abilities of both Mr. Pitt and Mr. Fox, was, after a long debate, rejected by 141 to ninety-three. On the 22d the American trade bill was passed ; and on the 23d Mr Pitt was repeatedly asked, by dif- ferent members, if parliament was to be dissolved, but gave no answer. All the supplies had now been voted, to the amount of £10,000,000; but except the land and malt tax bills, no money had been raised or appropriated to specific services. It was insisted, however, that the voting of the supplies would be a sufficient justification of ministry in issuing money. On the other side it was urged that the house having resolved that such issuing of the public money would be 'sub- versive of the constitution,' no plea of necessity ceuld avail, as the emergency would be wilfully created by those who should advise a dissolution. Next day, however, the parliament was pro- rogued, and on the 25th dissolved by proclama- tion. This measure, by terminating a contest in which the principles of the constitution had been much agitated, ultimately established them ; and many of the most distinguished characters in the house of commons and in the kingdom now wished it had been resorted to at the first form- ing of the coalition.

The advantages which ministers generally pos- sess over their opponents upon the dissolution of parliament, received very considerable ad- ditions at this time. The East India Company and their servants were exceedingly industrious ; and the dissenters, a powerful and active body in England, were zealous to show that they con- sidered the members of the late coalition as men who paid no regard to principle. In short, tlie counties, cities, manufacturing towns, and cor- porations, who had so recently given the court pledges of their support, now evidenced the contemptuous light in which they viewed the

adherents to the late turbulent party. Thus upwards of 160 members of the late house ot commons lost their seats ; and of these the far greater part were supporters of the late adminis- tration. But the consequence, however

fatal to them, was perhaps on some accounts a misfor- tune to their country. It was well they gained not the ascendancy : yet few will think of the coalition without regretting its formation. It for a long time ruined the fortunes and destroyed the influence of Mr. Fox. See our memoir of that statesman. On the 18th of May, both houses being assembled, the commons re-elected Mr. Cornwall, the former speaker. Next day his majesty, in his speech from the throne, 'assured them of his satisfaction in meeting them, after recurring in so important a moment to the sense of his people ; and of his reliance, that they were animated by the same sentiments of loyalty and attachment to the constitution which had been so fully manifested throughout the king- dom.' He directed ' their attention to the main- tenance of the public credit, to the support of the revenue, and to the affairs of the East India Company : and, after warning them against adopt- ing any new measure for the regulation of these last, which might affect the constitution, and our dearest interests at home, concluded with ex- pressing his inclination to support and maintain, in their just balance, the rights and privileges of every branch of the legislature.' Before the motion was made for an address, j\Ir. Lee stated to the house, that the high bailiff of Westminster had neglected to make a return to the writ of election, on pretence of not having finished the scrutiny into the legality of the votes, and there- fore moved a resolution declaring it to be ' his duty to return two citizens to serve for the said city.' This motion was seconded by Mr. She- ridan, but, after a long debate, was negatived by a majority of 283 to 136. The address was then moved and read, but the strong expressions it contained, of satisfaction and gratitude to his majesty for having dissolved the late parliament, occasioned a warm debate. As to the sense of the people, it was asked of Mr. Pitt, on what grounds he could pretend, that it had been col- lected in the new election, when he himself had enforced the necessity of a reform, on the very supposition that the people, as the law then stood, had little or nothing to do with them ? An amendment was proposed, by the earl of Surrey, which was seconded by colonel North, but it was rejected by 285 to 114. On the 25th of May Mr. Fox presented a petition from him- self, complaining of an undue return for Westmin- ster; which was objected to by lord Mulgrave; who moved it to be the opinion of the house, that it did not come under the description in Grenville's act, no members having been re- turned , which after a short debate was agreed to without a division. Another petition from Mr. Fox was presented by colonel Fitzpatrick, com- plaining of the high bailiff of Westminster, in making no return, and requesting to be heard by council, which was granted. On the 28th a counter petition from the high bailifT was pre- sented by lord Mahon, praying to be heard in answer to Mr. Fox • which was al?o granted.

GREAT BRITAIN

On the ad of June lord Malion presented a petition from several electors of Westminster, praying that the high bailiff might be allowed to proceed with the scrutmy. This was ordered to be considered with the other petitions. Mr. Corbett, the hign bailiff, being called to the bar on the 7th, stated as one of his reasons for grant- ing the scrutiny, that in a former contested elec- tion there load been only 9200 and odd votes, but that in this instance there were above 12,200 ; whence he supposed there could not be such an increase. On the 8th of June Mr. Ellis moved

- that the high bailiff be forthwith directed to make return of his precept, and of the members chosen in pursuance thereof.' Lord Mulgrave op- posed the motion, and Mr. Fox accused ministry of interfering to deprive the Westminster electors of the exercise of their rights. Mr. Pitt replied to Mr. Fox, denied his charges as calumnious, and vindicated the high bailiff. At half past four, A. M., the motion was rejected by a majority of 19.5 to 117. Lord Mulgrave then moved, 'that the high bailiff of Westminster do proceed in the scrutiny with all possible despatch ;' which, after another warm but short debate, was agreed to. On the 14th of June Mr. Burke made his proposed motion respecting the dissolution of parliament. In his introductory speech, he ex- amined at great length and with much freedom,

- the dangerous principles on which that act of power had been executed and defended ;' but the motion was negatived without a division.

On the 21st of June Mr. Pitt moved several resolutions, as a foundation for the act, since called the Commutation Act. He stated, that the illicit trade of the country had increased to so alarming a height as to endanger the existence of several branches of the revenue, particularly that of tea. The committee on smuggling found, that only 5,500,000 pounds of tea were sold annually by the East India Company ; whereas the annual consumption in Britain was estimated, on good authority, to exceed 12,000,000 ; so that the illicit trade in this article was more than double the legal. To remedy this evil, he proposed to lower the duties to so small an amount, as to make the profit on the illicit trade not adequate to the risk ; and, as this would cause a deficiency in the revenue of £600,000 a- year, to make it up by an additional tax on windows ; which, he showed, would prove a commutation very fa- Torable to the people, and at the same time tend to relieve the East India Company. The bill was passed, after a warm opposition, in both houses.

Mr. Pitt next entered upon the arduous task of regulating the East India Company's affairs. This he proposed to do by three bills. The first was to enable the company to divide eight per cent, interest on their capital. By the dis- solution, the committee on this business had been prevented from making any progress ; and, though it had been resumed as early as possible in this session, yet before any report could be made the house was under the necessity of either autho- rising the company to make a dividend, without any information relative to their finances, or to endanger their credit by refusing its consent. The disgraceful and dangerous consequences of

this dilemma were urged by the late ministers, who proposed as the safest measure to make the dividend only six per cent. It was admitted, on all sides, that the affairs of the company were not in a flourishing condition ; and it was stated as an act of mockery and injustice to the public, that, while the company were applying to parlia ment for a large pecuniary relief, they should yet divide among themselves as much as they had divided in their most flourishing circum- stances. It was replied, that the company's distresses had not arisen solely from their own fault, as they had partaken in the general calamity occasioned by the war. The bill passed in the lower house without a division, and in the upper, after a warm debate, by a majority of twenty-eight to nine.

Mr. Pitt's second bill allowed the company a respite of duties ; enabled them to accept of bills beyond the amount prescribed by former acts ; and established their future dividends. Mr. Pitt's third bill, ' for the better government of the affairs of the East India Company,' though formed upon the same model with the one which he had brought into the last parliament, yet differed con- siderably from it in several points. The powers of the board of control, which, in contrast to the plan of the late ministry, and in compliance with the temper of those times, were kept as subordi- nate as possible, were now greatly enlarged. In urgent cases, which might not admit of delay, and in cases of secrecy, which might not admit of previous communication, they are enabled to transmit their own orders to India, without being subject to the revision of the directors. It also vests in the governor general and council an ab- solute power over the other presidencies in all points relative to transactions with the country powers, and in all applications of the revenues and forces in time of war ; with a power of sus- pension in case of disobedience. The second part of it contains various internal regulations. The clauses relative to the debts of the nabob of Arcot, to the disputes between him and the rajah of Tanjore, and to the relief of dispossessed zemindars, and other native land-holders, were adopted from Mr. Fox's bill, with some exceptions and limitations. 'arious restrictions are also laid upon the patronage of the directors, and retrench- ments ordered in the company's establishments. ˆ The third part

relates to the punishment of Indian delinquents. All British subjects are made amendable to the courts of justice in England, for all acts done in India. The receiving of presents is declared to be extortion ; and disobedience of orders and all corrupt bargains to be misdemeanors and punishable. Governors of settlements are empowered to seize all persons suspected of illicit correspondence, and to send them to England, if necessary. Every servant of the company is required, on his return to England, to deliver in upon oath to the court of ex- chequer, an inventory of his real and personal estates, and a copy of it to the directors for the inspection of the proprietors ; and in case any complaints should be made thereon, by the board of control, the court of directors, or any three proprietors possessing stock conjunctly to the amount of £10,000, the court ot exchequer is

required to examine the person upon oath, and to imprison him till he shall have answered the questions put to him to their satisfaction. Any neglect or concealment is punislied by imprison- ment and forfeiture, and incapacity of ever ser- ving again. Lastly, for the more speedy prose- cution of crimes committed in the East Indies, a new court of justice is erected ; consisting of three judges, appointed by the three courts, four peers, and six members of the house of commons ; the four peers to be taken by lot out of a list of twenty-six ; the six commons out of a list of forty ; and both lists to be chosen by ballot. Liberty is given to the party accused, and to the prosecutor, to challenge a certain number of these. All depositions of witnesses taken in India, and all writings received by the directors, with copies of those sent out by them, shall be received as legal evidence. The judgment of the court is made final, and extends to fine, imprisonment, and declaring the party incapable of ever serving Jhe company. This bill was most strenuously apposed in every stage of its progress through both houses. The extension of the power of the board of control was objected to, as incongruous to the principle, and insufficient for the purposes of the bill. The enlarged powers conferred on the governor general were objected to, as an in- version of tlie order ot government, which re quires tiiat authority exercised at a distance from the controlling power, and subject to almost insu- perable temptations, should be as limited as pos- sible. In the second part, the clauses, it was said, respecting disobedience, the commencing of wars, and the succession to offices by seniority, were rendered nugatory by exceptions and limi- tations. The inefficiency of the clause relative to oppressed native landholders, the ruinous detay in the mode of proceeding for their relief, and the abuses to which it was liable, were strongly objected to : but these clauses were all defended on the necessity of precautions

against events, wherein a discretionary power might be necessary. But the last part of the bill met with the most violent opposition. The obligation to swear to the amount of property, and the powers granted to courts of putting interrogatories, to force persons to criminate themselves, were inquisitorial proceedings unknown to Britons. The minister was, however, supported in referring the bill to a committee of the whole house, by 276 against sixty-one : and, in the discussions which took place in the committee, Mr. Pitt acted in a manner, wh-ch, on after occasions distinguished his mode of conducting the national business. He did not cime forward like the head of a party, with a measure complete in every part, confident of the support of his fol- lowers ; but, while he himself proposed some essential alterations, he also adopted those sug- gested by others, from whatever side of the house they came. Thus, from the observations of Mr. Dempster, Mr. Eden, and lord North, the clause requiring persons returning from India to give an account of their property upon oath, was relinquished by Mr. Pitt ; and there were no fewer than twenty-one new clauses added to the bill in the committee. The whole afterwards suffered very severe animadversions from Mr.

Sheridan and Mr. Fox ; but the bill passed both

houses by very large majorities.

On the 30th of June Mr. Pitt opened the budget, which consisted of new taxes on candles, coals, bricks, hats, horses, linens, cottons, ri- bands, ale and beer licenses, game licenses, paper, hackney coaches, gold and silver plate, lead, postages, and silk, all of which passed with Utile opposition, except the additional duty on coals, which was rejected. These taxes Mr. Pitt calculated to produce £930,000. On the 30th of July Mr. Burke, after a long speech on East India affairs, wherein he mentioned the famine in Oude, the murder of Almas Ali Cawn, a native of rank, who had been, by order of governor Hastings, betrayed, seized, and put to death, without any charge, trial, or condemnation, and the treatment of the princesses of Oude, who had been seized, plundered of their property, and turned into the streets in misery, with a variety of other cruelties practised by the chief servant of the company, moved ‘ that there be laid before the house copies of all papers relative to the seizing and putting to death of Almas Ali Cawn,’ which was seconded by Mr. Sheridan, and agreed to. Mr. Burke next moved ‘ tliat there be laid before the house copies of all papers relative to the money demanded of the princesses of Oude in 1782 ;’ which was seconded by major Scott. He then moved, that there be laid before the house the produce of the sale of the jewels, &c., taken from these princesses; which was objected to by Mr. Pitt, who moved the order of the day, which was carried. On the 2d of August, Mr. Henry Dundas, after a suitable introduction respecting the bravery and loyalty of the Scots

Highlanders, moved for 'leave to bring in a bill to repeal the act, 25th Geo. II., which confiscated certain estates in Scotland, and to empower the crown to restore them to the right heirs, under certain restrictions.' This popular motion met with universal approbation from the whole house. The only opposition the bill re- ceived was in the upper house from lord Thurlow and lord Loughborough ; whose chief objection was founded upon its not extending to the estates forfeited in 1715. On the 3d of August Mr. Dempster moved for leave to bring in a bill for the abolition of the remains of vassalages in Scotland ; which was granted : and on the 20th of August the session was closed with the usual formalities.

The second session of this parliament was opened, January 25th, 1785, by a speech from the throne, wherein his majesty particularly recommended the final adjustment of the com- mercial intercourse between Britain and Ireland, and the further suppression of smuggling. The first business of importance that came before the house was the Westminster election, the contest about which occasioned repeated discussions and divisions. At last, upon a motion of Mr. Alder- man Sawbridge, that the high bailiff be ordered to make a return forthwith, which was agreed to by a majority of 162 to 124, the scrutiny was quashed, and lord Hood and Mr. Fox returned on the 4th of March. On the 16th of February Mr. Francis called the attention of the house to the civil establishment of Bengal, which, he said

had risen from £126,000 (the sum in 1774) to the enormous sum of £927,945 a year (a sum greater than the civil list establishment of Britain), in consequence of the whole power having de- volved on governor Hastmgs. He therefore moved, ' that a statement be laid before the house, of the salaries and emoluments of the officers of revenue in Bengal, in 1776, 1782, and 1783; with a probable estimate of the expenditure from the 30th of April 1784, to the 16th of May 1785. The motion, after some opposition from major Scott and Mr. Pitt, was agreed to.

On the 18th of February, the earl of Carlisle made a motion in the house of lords, respecting the nabob of Arcot's debt. So early as April 1782 Mr. Dundas, in the house of commons, had moved a resolution relative to the suspicious nature of these debts, and their mischievous influence upon the government of the Carnatic. In Mr. Pitt's bill, passed in last session, it was enacted, respecting the origin and justice of these claims, that the court of directors shall ' give such orders to their presidencies and servants abroad, for completing the investigation thereof, as the nature of the case shall

*require ; and for establishing in concert with the said nabob such funds, for the discharge of those debts which shall appear justly due, as shall be consistent with the rights of the said united company, the security of the creditors, and the honor and dig- nity of the said nabob.' The court of directors, in consequence of the trust reposed in them, prepared orders to be sent to their council at Madras, in which, after stating the suspicious circumstance under which many of the debts ap- peared to have been contracted, they direct them, in obedience to the positive injunctions of the act, to proceed to a complete investigation of their nature and origin. These orders, however, were rejected by the board of control, and a new letter drawn up, in which the claims of the creditors were all, with some little limitation, established, and a fund for their discharge as- signed out of the revenues of the Carnatic. These orders were publicly read at a meeting of the nabob's creditors in England ; and, on this ground, the earl of Carlisle moved, * that there be laid before the house copies or extracts of all letters or orders issued by the court of directors, in pursuance of the injunctions in the regulating act.' The dangerous consequences of suffering the board of control to supersede the authority of an act of parliament, and the suspicious cir- cumstances of its clandestinely interfering in an enormous money transaction, the management of which was delegated by the act to other persons, were strongly urged by the noble mover, and by lord riscount Stormont. Lord Loughborough insisted, that, even allowing the board of control not to have been guilty of an arbitrary assump- tion of power, ytt their orders authorise trans- actions of a most corrupt and nefarious nature, highly injurious to the company, and ruinous to the country. I^ords Sydney, VValsingham, and lord chancellor, opposed the motion : and lord Rawdon was afraid the papers called for might convey dangerous information to our enemies. The motion was rejected without a division.*

On the 28th a similar motion was made by

*Mr. Fox in the house of commons, when Mr. Dundas himself opposed it, and defended the board of control, insisting that they are enabled, b\ a clause in the act, to originate orders in cases of urgent necessity, and transmit them to India. He also justified the debts themselves, and cau- tioned the house not to imbibe prejudices against a board of control but newly instituted. Mr. Smith, chairman of the court of directors, ad- mitted that some debts, ordered by the board to be paid, were just, but that others were of a very different complexion. Mr. Burke, in a long and eloquent oration, entered fully into the subject. He contended,' that the board of control had no right to intermeddle in the business ; but, even admitting such right, they were bound to make the same enquiries as the directors. He stated, * that ever since the establishment of the British power in India, Madras and its dependencies, which before tliat time were among the most flourishing territories of Asia, had wasted away and declined so much, that*

in 1779 not a single merchant of eminence was to be found in the whole country. During this period of decay, nearly a million had been drawn from it annually by English gentlemen, on their own private ac- count only. Mean time the nabob had contracted a debt with the company's servants, to the amount of £880,000 ; which, in 1767, was settled at ten per cent interest: 1,000,000 sterling had been lent by British subjects to the merchants of Can- ton, in China, at 24 per cent. In 1777 a second debt of £2,400,000, and a third of £160,000, called the cavalry debt, were settled by the nabob of Arcot at twelve per cent. The whole of these four capitals, amounting to £4,440,000, produced annuities of £623,000 a-year, more than one-half of which stood chargeable on the public revenues of the Carnatic. These annuities, equal to the revenues of a kingdom, were possessed by a few individuals of no consequence, situation, or pro- fesion.']\Ir. Burke then examined the particular grounds of these debts.

Mr. Burke next called the attention of tlie house to the ruined condition of the country; entered into a statement of the internal politics of the Carnatic, and the causes of the war with Hyder Ali; describing its desolate ra- vages, while it raged for eighteen months without intermission, from Madras to Tanjore; and the redoubled horrors of the famine that ensued, insomuch that when the British armies traversed the central provinces for hundreds of miles in all directions, in their whole march they did not see one man, woman, child, or four- footed beast of any description ! And what, added he, would a virtuous, an enlightened mi- nistry do, on the view of such ruins — of such a chasm of desolation as yawned in the midst of those once flourishing countries? — They would have reduced their most necessary establish- ments ; they would have suspended the justest payments ; they would have employed every shilling derived from the productive parts, to re-animate the powers of the unproductive. While performing tiiis fundamental duty to jus- tice and humanity, they would have ordered the corps of fictitious creditors, whose crimes were their claims, to keep an awful distance, to silence

their inauspicious tongues, to hold off their pro- fane unhallowed paws from this holy work; they would have proclaimed with a voice that should make itself heard, that on every country the first creditor is the plough ; that this original indefea- sible claim supersedes every other demand. This is what a wise and virtuous ministry would have done and said. They would thus have laid a solid foundation for future opulence and strength. But, on this grand point of the restoration of the country, there is not one syllable in the corres- pondence of the ministers. They felt nothing for a

land desolated by fire, sword, and famine ; their sympathies took another direction ; they were touched with pity for bribery, so long tormented with a fruitless itching of its palms ; their bowels yearned for usury, that had long irissed its monthly harvest; they felt for pecula- tion, which had been for so many years raking in the dust of an empty treasury ; they vvere melted into compassion for rapine and oppression, lick- ing their dry, parched, unbloody jaws. These were the objects of their solicitude. As to the public debt, he afterwards said, nothing was provided for it, but an eventual surplus to be shared with one class of the private demands after satisfying the two first classes. Never was there a more shameful postponing of a public demand, which, by the practice of all nations, supersedes everj' private claim. By the mode of settling between the nabob and the company, the public and private debts are made to play into each other's hands a game of utter perdition to the unhappy natives. The nabob falls into an arrear to the company. The presidency

*f)resses for payment. The nabob answers * I lave no money.' — ' Good : but the soucars (bankers) will supply you on the mortgage of your territories.' Then steps forward some Paul Benfield, and from his grateful compassion to the nabob, and his filial regard to the com- pany, unlocks the treasures of his virtuous in- dustry; and for twenty-four or thirty-six per cent., on a mortgage of the territorial revenue, becomes security to the company for the nabob's arrear. In consequence of this double game, the whole Carnatic has, at one time or other, been covered with these locusts, the English soucars. Far from painting, Mr. Burke added, he did not reach the fact, nor approach it. This tyrannous exaction brought on servile conceal- ment, and that again called forth tyrannous coercion ; till nothing of humanity was left in the government ; no trace of integrity, spirit, or manliness in the people, who drag out a preca- rious and degraded existence, under such a sys- tem of outrage upon human nature. The motion, however, was rejected by a majority of 194 to ninety-seven.*

On the 22nd February Mr. Pitt moved, that the propositions laid before the Irish parliament by Mr. Orde, for adjusting the intercourse be- tween Britain and Ireland, be read ; after which he remarked on the illiberal treatment of Great Britain to her sister kingdom in former times, and inveighed much against ttiat narrow spirit which tended to exalt or enrich one people of the same empire at the expense of another. After obviating many objections to the proposi-

*tions, he moved a resolution, * That it is highly important, and for the general interest of the British empire, that an intercourse be finally settled between Great Britain and Ireland on equal terms ; and that each country should have a like participation of trade, on Ireland securing that she will pay, in proportion to her growing wealth, such share of the public expense*

as may arise from the surplus of her revenue in time of peace.' Mr. Marshman thought Britain for seven years past had been giving too much. Lord North protested against a full participation of our trade with Ireland. Mr, Dempster ap- proved of the propositions as just, and Mr. Fox spoke chiefly against beginning the business in Ireland.

On the 3rd March, Mr. Pitt brought forward the propositions, which were objected to by Sir ^^^ Cunningham, as hurtful to the landed inter- est of Scotland, and ruinous to the corn trade and farmers. On the 8th a petition from the inhabitants of Glasgow was presented by the lord advocate against them; as well as from Manchester, Liverpool, and several other towns in England. A petition likewise from Man- chester, Warrington, and some other towns in Lancashire, and Cheshire, subscribed by 80,000 persons, was presented by Mr. Stanley, against the late tax on fusti ans, calicoes, &c., which, after examining witnesses on the subject, was repealed. In the course of receiving these various petitions, it was agreed to revive the act of 1689, against receiving any petition not sub- scribed by all the petitioners.

Mr. Pitt, on the 18th of April, once more brought forward the popular subject of a par- liamentary reform. Having formerly pledged himself to exert all his official weight in favor of it, he now employed his utmost abilities in recommending it to the house ; and, after a speech of nearly three hours, moved, ' "That leave he given to bring in a bill to amend the representa- tion of the people of England in parliament.' The plan he now proposed was founded on the same principles with his former one, but differ- ed in several particulars. He proposed to transfer the right of election from thirty-six of such boroughs as had already fallen, or were falling, into decay, to the counties, and to such chief towns and cities as were not represented : that a fund should be provided for giving the owners and holders of such disfranchised boroughs, an appreciated compensation : that the taking of this compensation should be a volun- tary act of the proprietor; and, if not now ac- cepted, the money should be laid out at com- pound interest, until it became an irresistible bait to such proprietors. He also proposed to extend the right of voting for knights of the shire to copy-holders. Mr. Fox approved of the spirit of the motion, but objected to the mode, particularly the purchasing of the boroughs ; though he was not against transferring the right of electing representatives from them to the counties, and chief towns and cities. The prin- cipal arguments in favor of a reform were derived from the present partial and defective represen- tation of the kingdom at large. It was argued, that an active, reforming, and regulating princi-

pie, which kept pace with the alterations in the state, was necessary to preserve the constitution in Its strength and vigor : that, as any part of the constitution decayed, it had always been the wisdom of the legislature to renovate and restore it, by such means as were most likely to answer the end proposed : and that hence had arisen the frequent alterations that had taken place, with regard to representation, both before and at the Revolution. The chief objections to a reform, were, that it was not called for by the people in general ; nor in particular by the unrepresented large towns and cities, which had the best right to claim the benefit of such a measure ; that, if innovations in name of reform were once intro- duced, men's minds differed so much on the subject, that none could know to what extent they might be carried : that what were called rotten boroughs were often represented by gen- tlemen who had the greatest stake in the country ; and consequently were as much interested in its welfare, and that of the constitution, as any other representatives, in whatsoever manner they were chosen, could be ; and, in fine, that while the rights and liberties of the people were secure under the present representation, it was hazardous to make any alteration. The motion, after many extraneous arguments, and much personal ani- mosity on both sides, was negatived by 248, against 174.

Previous to the opening of the budget Mr. Pitt called the attention of the house to the national finances ; of which he gave a very favorable view, from the increase of the revenue both from the old and new taxes. The whole of the public expenditure he estimated at £14,400,000 per annum. He then gave a com- parative statement of the produce of the taxes ending 5th of January and 5th of April 1784, and of those ending at the same periods in 1785. The first of these he stated at £2,585,000 ; the second at £2,198,000; the third at £2,738,000; and the fourth at £3,066,000. From the in- creased produce of the taxes in these quarters, he made various calculations on their probable amount for the whole year : the highest of which he stated at £12,600,000, and the lowest at £12,000,000 per annum. The produce of the taxes, supposing them to continue stationary, would, on the average of the last quarter, amount to £12,264,000. The land and malt tax, £2,500,000, added to this, would make £14,764,000. Hence he expected an overplus of about £1,000,000 annually, which he would purpose to be appropriated as a sinking fund, to be applied to tiie discharge of tlie national debt. As he considered this estimate to be very low, he congratulated the public on the pleasing pros- pect. But, though he wished the house to con- sider the measure now announced, he did not intend to put it in execution till the ensuing year. To afford proper information, however, \ie moved, that the increase of the amount of the taxes, from 1783 to 1784, be laid before the house. His calculations,

however, were much objected to.]Mr. Sheridan doubted if the new taxes would be so productive as Mr. Pitt alleged, and moved tliat there be laid before the house the nett produce of taxes imposed last session, up Vol. X.

to the latest accounts. Mr. Dempster congratu- lated the minister upon his plan of appropriating a sum to liquidate the national debt. But he hoped this would be done so as to place it beyond the reach of any ministry, and exempt from all changes in administration: £1,000,000, he said, with compound interest, would in fifty years, pay off £218,000,000. The aggregate amount of the supplies, voted in 1785, was stated by Mr. Pitt at £9,737,868. The subjects of the new taxes, imposed to raise the sum of £413,000, were male and female serrants, retail shops, post horses, gloves, pawn-brokers, and coach-makers licenses, game certificates, bache- lors, wheel carriages, and attorneys. Of these the tax on maid servants, and the shop tax, were the most unpopular. On the 14th of June almost the whole shop-keepers of London and Westminster unanimously expressed their dis- pleasure at the latter, by shutting the windows of their shops during the whole day, as well as by many satirical inscriptions on the window shutters. The example of London was follow- ed at Bath, Bristol, Norwich, and many other places.

On the 27th of April, the lord advocate intro- duced a bill for diminishing the number and increasing the salaries of the judges of the court of session in Scotland. The former branch of it, being opposed in the committee, on the 3rd of June, by lord Maitland, Mr. Eden, and Sir James Johnston, was withdrawn, and the bill for increasing their salaries was passed by the house. On the 12th of May the Irish propositions were brought under the consideration of the house, and occasioned a number of warm debates from that day to the 30lh, when several amendments, suggested by opposition, were admitted by mi- nistry. On the 31st a committee was appointed to confer with the lords on them, and present to their lordships the twenty resolutions, to which the house had agreed, on the commercial inter- course with Ireland, along with the evidence.

On the 25th of June Mr. Pitt moved an address to his majesty, which after a violent debate was agreed to, and presented on the 29th by the lord chancellor, the speaker of the house of commons, and members of both houses. The address represented, that the two houses had ‘ taken into their most serious consideration the important subject of the commercial intercourse between Britain and Ireland, recommended in his majesty’s speech, and the resolutions of the parliament in Ireland ; and, after a careful inves- tigation of the various questions arising out of the subject, had come to the resolutions now presented, which they trusted would form the basis of an advantageous and permanent settle- ment between the two kingdoms : that they had proceeded on the foundation of the rights of the

parliament of Ireland, but had found it necessary to introduce some modifications, and to add such conditions as appeared necessary in es- tablishing the proposed agreement as just and equitable; and for securing to both countries those advantages, to an equal enjoyment of which they are to be entitled. The address concluded, by expressing their trust, ‘ that in the whole of its progress, reciprocal interests and*

mutual affection will ensure that spirit of union so necessary to the great end in view ;’ and their • confidence, that the final completion of the measure, while it tends to perpetuate harmony and friendship between the two kingdoms, by augmenting their resources, uniting their efforts, and consolidating their strength, will afTord his majesty the surest means of establishing a lasting foundation, in the safety, prosperity, and glory of the empire.’ To this address his majesty re- turned a suitable answer, and on the 2nd of August Mr. Pitt introduced a bill for the com- mercial arrangement, without opposition; after ■which both houses adjourned to the 27th of Oc- tober.

*Years of peace, however favorable to arts, sciences, and human happiness, yet, as they afiford no field for displaying the talent of the hero, so they yield few materials for employing the pen of the historian ; unless when important constitutional questions occur in the senate. The principal transactions of the succeeding seven years, from this period to the commence- ment of the French Revolution, may, therefore, be comprised in little bounds. — Previous to the commencement of the third session of parliament, the French court had issued an edict prohibiting the sale of various English manufactures in that kingdom ; and a similar edict had been publish- ed by the emperor, totally prohibiting the im- portation of any British goods into the Austrian territories. The latter had been excited to this measure by certain articles in a late treaty be- tween the British monarch, as elector of Han- over, and the king of Prussia. To counteract proceedings so prejudicial to the trade of Eng- land, commercial treaties were entered into with the courts of Petersburg and Versailles. Orien- tal politics were also revived by the return of governor Hastings, as well as by petitions from the English inhabitants of India, against several clauses in Mr. Pitt’s act : particularly those which established an inquisition into their for- tunes, and took from them trial by jury. His majesty opened the session on the 24th of Jan- uary 1786, with a speech, informing parliament, * that the disputes, which threatened the tran- quillity of Europe, had been*

brought to an ami- cable conclusion ; that the growing blessings of peace were experienced in the extension of trade, and improvement of the revenue ; and that the resolutions of last session had been communi- cated to the parliament of Ireland, but that no effectual. steps had yet been taken to make any farther progress in that salutary work.' Among the subjects which early jengaged the attention of parliament was a variation from the usual form, introduced into the mutiny bill, to make it in- clude officers upon half pay, and by brevet ; which was objected to in the lower house by colonel Fitzpatrick, and general Burgoyne, but passed by seventy-nine to seventeen. In the upper house it was still more violently opposed by lords Stormont, Loughborough, and Sand- wich; but the amendment was rejected by forty- two to eighteen. The next important object was the plan of fortifications, originally suggested by the duke of Richmond, and now introduced into the house of conimons by Mr. Pitt, who moved

*it as * an essential object for the safety of the state.' The motion was supported by lord viscount Mahon, lord Hood, Sir C. Middleton, captains Berkeley, Bower, and Luttrell, and Messrs. H. Browne and Dundas. It was opposed by Mr. Bastard, Sir W. Lemon, general Burgoyne, lord North, colonel Barre, and Messrs. Walwyn, Marsham, Wyndham, Courtney, Fox, and Sheridan. The latter entered largely into the question, particularly as it might affect the con- stitution. * When we talk,' said he,' of a constitu- tional jealousy of the military power of the crown, what is the object of our suspicion ? what but that it is in the nature of kings to love power, and of armies to obey kings? This is doubtless plain speaking upon a delicate subject, but the question demands it ; and I cannot be suspected of alluding either to the present mo- narch on the throne, or to the army now under his command. But the possible existence of sinister intentions must enter into the mind of every man who admits an argument on the sub- ject. If this were not the case, we deride the wisdom of our ancestors in the provisions of the bill of rights, and mock the salutary reserve, with which we annually entrust the executive magistrate with the defence of the country.' He concluded by advising all sides of the house ' to assist in defeating a measure, which, under pre- tence of securing our coasts, strikes at the root of our great national defence, and at the heart of the constitution itself.' This speech appears to have had great weight with the house ; for the votes upon the division were exactly equal, both the ayes and the noes amounting to 169 ; a circum- stance unparalleled in the annals of parliament; and the speaker acquired no small applause from the country gentlemen, for giving his casting vote against the motion. Mr. Pitt, how- ever, on the 17th of May, revived the question, by moving, ' that an estimate of the expense of such part of the plan of fortifications, as might appear most necessary to be carried into imme- diate execution, be referred to a committee.' The money necessary for completing this moder- ate plan*

he stated at £400,000. But this m.o- tion was received with such marked disapproba- tion by the house that it was withdrawn ; and the sum of only £59,770 voted the 7th of June for completing the new works already begun at Portsmouth and Plymouth.

Another measure of considerable consequence repeatedly engaged the attention of parliament, viz. the amendment and reduction of the militia laws. A bill for this purpose, after repeated debates and divisions, passed both houses. On the 9th March Mr. Marsham introduced a bill to exclude persons holding places in the navy and ordnance from voting at elections, which was opposed by Mr. Pitt, lord Mulgrave, and Messrs. Dundas, Grenville, Pye, Drake, Gas- coyne, Sir E. Deering, and Sir C. Middleton; and supported by Messrs. Fox, Jervoise, Saw- bridge, and Sheridan; but rejected by 117 to forty-one. Though Mr. Pitt opposed this bill, upon the principle that no bad effects were felt from the interference in elections of the persons it was proposed to exclude, yet he supported lord Mahon's bill for regulating elections, which

was drawn up on liberal principles, and ,\vas also supported by the earl of Surrey, Sir J. Mawbey, Sir W. Dolben, Sec. ; but opposed by Messrs. Young, Povvys, and Bastard, as well as by Mr. W. Grenville, who styled it a system of Utopianism and impractibility. It was passed, however, by a majority of ninety-eight to twenty- two, and sent up to the house of lords ; where it was powerfully recommended by earl Stanhope, and supported by the marquis of Caermarthen and earl of Hopeton : so that it passed the second reading by a majority of eleven to four ; but was thrown out at the third, by thirty-eight to fifteen votes.

Mr. Pitt having on the 7th INIarch moved for a committee on the annual national income and expenditure, their report was laid before the house on the 21st, and copies delivered to the members on the 27th. Two days after Mr. Pitt opened his budget, by congratulating parliament on the pleasing prospect which the report afford- ed, after the country had emerged from a most unfortunate war, which had added such an accu- mulation to the national debt, before immense, that surrounding nations expected we should sink under the burden. Instead of this he showed, by various estimates, that our resources were such, that they were not only equal to the extra- ordinary demands without any additional burden upon the people, but could afford £1,000,000 annually to be allotted to a sinking fund, accord- ing to his plan formerly proposed, for reducing the national debt. This sum he proposed to be placed in the hands of commissioners in quar- terly payments, to commence on the 5th July 1786. This million, he showed, by compound interest, would, in twenty-eight years, produce an annual income of £4,000,000. Mr. Fox, among other objections to this plan, said, 'that twenty-eight years was too long a period to look forward for its effect, as ' before that term we might probably have another war ;' and after- wards moved,as an amendment, that if £1,000,000 be in the hands of the commissioners, when a new loan is proposed, they shall take £1,000,000 of the loan, and thus receive the bonus for the public. Mr. Pitt congratulated Mr. Fox upon the liberality of this motion, which was unanim- ously agreed to. A message from tlie king being now delivered to both houses, stating, 'That it had not been found possible to confine the ex- penses of the civil list within the annual sum of £850,000,' Mr. Pitt moved, that 'a sum be granted to defray all incumbrances, and that £900,000 should remain for the annual expen- diture of the civil list;' which, after some debate, wherein the motion was contrasted with Mr. Burke's bill (which had enacted, that no del)t should be incurred on the civil list), was agreed to.

On the 5th of May Mr. Pitt moved, 'to trans- fer a part of the duties on wines from the cus- toms to the excise.' The reason he gave was, that the revenue on foreign wine was inferior by £280,000 to what it was forty years ago. Mr. Dempster recommended the utmost caution in passing bills that affected the liberties of the subject. Mr. Fox oposed the bill on the same ground, as an experiment peculiarly rash. But

though it was also opposed by earl Surrey, and Messrs. Sawbridge, Watson, Courtenay, and Sheridan, it passed by seventy-one to thirty two; and in the house of lords without a division. In June a message was delivered from the king, recommending 'an enquiry into the condition of the woods, forests, &c., belonging to the crown, that they might be made as productive as possi ble.' A bill was accordingly brought in, which contained some clauses that were opposed in both houses, but chiefly in the upper, where they occasioned a division of twenty-eight to eighteen; and where a protest was entered against the act, by the duke of Portland, the earls of Sandwich and Carlisle, Dr. Wilson bishop of Bristol, and lord Loughborough. The commissioners appoint- ed were, SirC. Middleton, colonel Call, and Mr. A. Holdsworth.

Mr. Wilberforce introduced a bill for amend- ing the criminal laws, which was so much ap- proved in the house of commons that it passed without opposition : but, in the house of lords, it was treated with the severest invective by lord Loughborough, who, during the absence of lord Thurlow, took the lead in all proceedings of that assembly ; pleading the cause of experience against innovation, and of liberty against politi- cal encroachment. The bill was therefore re- jected without a division. East India affairs also occupied a good deal of the attention of parlia- ment during this session ; but we have already descanted so largely on these subjects that we shall not here resume them, farther than to men- tion, that Mr. Francis' bill, ' to extirpate,' as he expressed it, 'the principal evils of Mr. Pitt's bill,' was rejected; that Mr. Dundas's bill for amending the same act (which Mr. Burke styled ' a full grown monster of tyranny' in comparison of which Mr. Pitt's bill was only ' an abortion'), by increasing the power of the governor general, was passed ; that an amendment moved upon it by Mr. Sheridan, to divide it into two bills, the one respecting the political, and the other the judicial government, was adopted ; and that, after repeated motions for papers on India affairs, the refusal of some, and production of others, the exhibition of charges against Mr. Hastings, and the examination of various witnesses on the bu- siness, grounds of impeachment were found against him, by a majority of 119 to seventy-nine. About the close of the session a singular occur- rence was mentioned in the house of lords. A bill had been introduced relative to the prize money obtained by tiie capture of St. Eustatius : lord Rodney said, he had lodged the papers of the merchants of that island in the secretary of state's office,

as documents of treason against them ; but, on calling for them in justification of his conduct, he was astonished to find that they had been carried off, and were no where to be found. Mr. Knox was called in proof of this fact. In consecpience of this, the bill was re- jected without a division ; and two causes for £13,000 then depending before the court of ap- peals, at the instance of Messrs. Eindo and In- gram, against lord Rodney and the captors of St. Eustatius, were decided against the captors with full costs, on the 5th July. On the llfh the session was ended. On the 2d August iiis

majesty's life was attempted by a mad woman, named Margaret Nicolson, who, under pretence of presenting a petition, made two tlirusts at liis breast with a knife, both of which fortunately fail- ed. Ills majesty with great temper exclaimed, — • I am not hurt — Take care of the poor woman — Do not hurt her.'

On the 26th September 1786 the treaty of commerce and navigation, between France and Great Britain, was signed at Versailles. This treaty was extremely popular. It was not only very advantageous to England, but seemed to be the fruits of a triumph of liberal sentiments and enlarged views, over ancient prejudices and mer- cantile jealousy. Its general principle was, to permit tl>€ mutual exchange of every species of commodity, except warlike stores. It was re- commended to the sanction of parliament in his majesty's speech, at their meeting on the 24th January 1787. But in the debate on the address, and on the 12th February (the day appointed for taking the treaty into consideration), it was cen- sured by opposition, both as to its commercial and political tendency. Mr. Fox argued at great lenglli ' that France was the inveterate and unal- terable enemy of Britain ; that the incessant object of her ambition was universal monarchy, and from us alone she feared to be traversed in her pursuit.' Mr. Pitt said, ' his mind revolted from the supposition, that any nation could be unal- terably the enemy of another. It had no foun- dation ill history or experience. It was a libel on political society, and supposed the existence of a diabolical malice in our original frame. In a commercial view, this treaty would enrich this nation. It would be advantageous to France, but more so to us, &c. The premier's resolutions, approving of the different articles in the treaty, were all successively carried by large majorities in both houses. He soon after moved to lower the duties on Portugusse, Spanish, and Madeira wines, one-third below those on French

wines, which was agreed to.

On the 26th February he moved several re- solutions on the consolidation of the customs, which were so obviously advantageous, that they were agreed to with very little debate. Mr. Burke, instead of opposing the measure, re- turned thanks to Mr. Pitt as the author of it.

On the 7th May Mr. Dundas opened what he called the budget of India; upon which he moved several resolutions on the state of our re- venues there, which, after some opposition, were passed without a division. On the 26th April Mr. Pitt introduced a bill for farming the tax on post horses, as a remedy for the frauds committed in that branch of revenue. This mode of collec- tion was reprobated as unconstitutional, by op- position ; but, after a warm debate, was carried by 162 to ninety-five. Previous to this decision Mr. Fox moved a repeal of the shop tax : which, after some debate, was rejected by 182 to 147. A bill for amending the laws respecting lotteries was introduced by ministry, and passed the house of commons ; but, having been amended by the lords, was thrown out by the commons ; and a new bill introduced, which passed both houses. Lord Rawdon called the attention of lie house of lords to the convention with Spain,

and moved a resolution disapprovirig of it. He said, that ‘ we certainly might have made a bet- ter bargain, than to yi-eld a tract of land as large as Portugal, which produced cotton, indigo, log- wood, and sugar, for a tract of twelve miles, and the liberty to cut logwood in Honduras Bay. It was an act of ingratitude, too, he said, to delive’- up the inhabitants of Musquito shore to their old implacable enemy. Lord Caermarthen and the duke of Richmond opposed the resolution, which was defended by lord Stormont, but re- jected by fifty-three to seventeen.

Two constitutional questions, respecting the Scottish peerages, were brought before the lords during this session. The first was on a motion by lord viscount Stormont, that the earl of Abercorn and duke of Queensberry, who had been chosen of the number of the sixteen peers, having been created peers of Great Britain, thereby ceased to sit as representatives of the peerage of Scotland.’ This motion was supported by the bishop of Landaff, the earls of Hopeton and Fauconberg ; and opposed by lord INIorton, but passed by fifty-two to thirty-eight. The second question arose from the election of tlis earl of Selkirk and lord Kinnaird, in the room of Queensberry and Abercorn ; wherein the dukes of Queensberry and Gordon had voted contrary to the resolution of 1709. Lord Hopeton therefore moved, on the 18th May, ‘That a copy of that resolution should be transmitted to the lord register of Scotland, as a rule for his future proceeding in elections : which was opposed by the duke of Richmond, lords Thurlow, Morton, and Sydney; but sup- ported by lords Kinnaird,

Stormont, and Caer- marthen ; and carried by fifty-one to thirty-five.

*The question respecting the hardships protes- tanl dissenters labored under by the test act, was introduced by Mr. Beaufort on the 28th March, and urged with great strength of reason- ing. One invincible argument he drew from * the hardship it imposed on conscientious minis- ters of the church of England itself. By the po- sitive precepts of their religion, they were en- joined to warn from the sacred table all blasphe- mers, and persons of a profligate life : yet to these very persons, if they demanded it as a qua- lification, they were compelled by the test act to administer the sacrament. If there were any thing serious in religion, if the doctrines of the church of- England were not a mere mockery of the human understanding, if to talk of peace of mind here, and of eternal consequences hereafter, were not the idle babblings of superstition, no pretext of state policy could justify this enor- mous profanation, this monstrous attempt, as irrational as impious, to strengthen the church of England by debasing the church of Christ.' The motion was supported by Mr. Fox, lord Beau- champ, Sir James Johnston, Sir Harry Hough- ton, and Mr. Smith, but opposed by lord North, Mr. Pitt, and Sir W. Dolben ; and rejected by 178 to 100.*

The English law has long been disgraced by its severity to debtors. Imprisonment for an un- limited period had been the practice since the reign of Charles II. On the 22d May a bill to relieve unfortunate persons of this description was read. the second time in the house of lords.

and supported by the duke of Norfolk; who stated that there were 3000 debtors confined in the different prisons. The bill was supported by lord Kinnaird and the earl of Hopeton ; but the rhetoric of lord Thurlovv led the house to reject it by twenty-three to twelve. Debts of superior importance about this time occupied the attention of the lower house. On the 20th April Mr. alderman Newnham had announced a motion he intended to make, on the 4th of May, for an ad- dress to the king, respecting the prince of Wales's situation ; who, nine months before, had reduced his household, and entered upon a plan of oeco- nomy for the liquidation of his debts. This oc- OLt.non^d several delicate and interesting conver- sations in the house, but, on the day appointed, t!ie intended motion was not made, on account of an interview between the prince and Mr. Dun- das; in consequence of which his majesty sent a message to the house on the 18th, informmg them, that he had ordered £10,000 a year to be paid out of the civil list, in addition to the prince's former allowance. On the Wednesday following the house voted an address to the king, requesting him to order

£160,000 to be paid out; of the civil list, in full, for the prince's debts, and £20,000 more to complete the works at Carlton house.

*On the 15th Slay Mr. Charles Grey moved an enquiry into certain abuses in the post office, and, a committee of enquiry being appointed-, their report confirmed Mr. (Jiey's statement o? abuses : but, after a pretty warm debate on the 28th, the business was got rid of, by a motion of adjournment to that day three months. The only other important business before the house this session was, the impeachment of W. Hastings, Esq. which commenced on the 7th February, when ?»lr Sheridan opened tlie third charge, re- specting his treatment of the begums of Oude, in a speech of five hours and a half long. Convic- tion followed upon his arguments, and from that moment the whole house, except such members as were connected with the governor by friend- .ship or gratitude, persevered in supporting the impeachment. The orator insisted that, ' in plun- dering these aged princesses, Mr. Hastings had no pretence, no excus(!, nothing but his own cor- rupt will, tn plead for his conduct.' He expatiated on * his still more atrocious conduct in instigating a son against his mother, and sacrificing female dignity and distress, to parricide and plunder.' — The treaty of Chunar might challenge all the treaties that ever existed, for containing in the smallest compass the most extensive treachery. Mr. Hastings did not consent to it till he had received a bribe of £100,000 from the nabob.' Of Mr. Hastings's government he drew the fol- lowing picture : ' Alike in the military and poli- 7ical line, we might see auctioneering ambassadors and trading generals: We saw a revolution brought about by an affidavit; an army employ- ed in executing an arrest: a town besieged on a note of hand ; and a prince dethroned for the ba- lance of an account. Thus a government was f-xhil)ited, uniting tlie mock majesty of a bloody sceptre, with the little traffic of a merchant's counting house; wielding a truncheon with one nand, and picking a pocket with the other.'*

Mr. Pitt also expatiated on many aggravating cir- cumstances in Mr. Hastings's conduct. The charge _ was carried by 175 against sixty-eight, On the 2d March Mr. Pelham opened the charge as to the nabob of Furruckabad ; which, after some debate, was carried by 112 to fifty. On the 15th the charge on contracts, &c., was open- ed by Sir James Erskine, which was voted by ninety-six to thirty-seven. On the 2d April Mr. Sheridan again displayed his rhetorical powers, by opening the charge on presents :— ' In review- ing the governor's conduct,' he said, 'he had found it to spring from a wild, irregular, and ec- centric mind. He had been every thing by fits and starts ; now proud and lofty, now mean and insidious; now generous, now griping; now artful, now open; now temporising, now de- cided ; in pride, in passion, in every thing change- able, except in corruption. In corruption alone he had proved uniform, systematic and metho- dical. His revenge was a tempest, a tornado, V)lackening in gusts of

pride the horizon of his dominion, and occasionally carrying all before it. But his corruption was a regular trade v/ind, which always blew from the same point, and on which the circulation of the wealth of India de- pended.' Major Scott and Mr. Barges vindi- cated Mr. Hastings; but the charge was sustain- ed by 165 to fifty-four. On the 19th April tlie charge as to the revenues was opened by Mr. Francis, and sustained by seventy-one votes against fifty-five. The report of the charges was brought up by Mr. Burke, and supported by Mr. Pitt, Mr. Martin, and Sir P. J. Gierke, but opposed by lords Hood and Mulgrave, Mr. N. Smith,]Mr. Wilkes, Major Scott, and Mr. Sum- ner. Mr. N. Smith sfoke at great length in Mr. Hastings's favor ; but the report was approved by 175 against eighty-nine; and the next day Mr. Burke was ordered, ' in tlie name of the house, and of all the commons of Great Britain, to go to the bar of the house of lords, and impeach Mr. Hastings of high crimes and misdemeanors,' Sec, which was- instantly done; and on the 14th May the articles were sent to the house of lords, and an impeachment moved on the sixteenth article, by Mr. Burke. The impeachment was conduct- ed by a number of its most distinguished mem- bers, and enforced with all their eloquence. But Mr. Hastings was supposed to have performed those acts, for which he was impeached, upon the most urgent necessity, and for the safety of the British empire in India. The East India Company, with all its most distinguished servants, exerted their influence in his favor; ministry wavered between his friends and his enemies, till the energy of the latter languished by the lengthening out of the trial. He was acquitted on the 23d April, 1795, and the East India Company not only defrayed the expenses of his trial, bat settled upon him an annuity of £5000 a year.

During the year 1787 the good understanding betwixt Great Britain and France, which had re- sulted from the comincrcial treaty, was interrupt- ed on account of the affairs of Holland. There tiie united anstocratical and democratical parties, supported by the French court, were become highly refractory and turbulent, and had treated

the consort of his serene highness the stadtholder, sister to the king of Prussiaˆ with the greatest in- dignity. His majesty had thought it necessary to explain his intention of counteracting all for- cible interference on the part of France in the internal affairs of Holland, and gave orders for an augmentation of the forces both by sea and land. It had also been thought proper to con- clude a subsidiary treaty with the landgrave of Hesse Cassel. Meanwhile, the rapid success of the Prussian troops under the conduct of the duke of Brunswick at once obtained the repara- tion demanded, and an

*explanation took place between the courts of London and Versailles, by which it was mutually agreed to disarm, and to place their naval establishments on the same footing as in the beginning of this year. During the alarm respecting the affairs of Holland, Mr. Pitt had proposed to the East India directors to send out four regiments of the king's troops at the expense of the company, which they had agreed to ; but, on the alarm subsiding, they re- fused, after the troops were ready to embark. Mr. Pitt, therefore, on the 25th of February, moved a declaratory bill, ' to remove doubts re- specting the power of the commissioners on India affairs.' On the second reading, Mr. Ers- kine reprobated its tendency, and drew a striking contrast between the India bills of Mr. Fox and Mr. Pitt. ' The latter,' he said, * had stolen every thing that the former demanded ; and, while it presented the company with the trap- pings of sovereignty, reduced them to the con- dition of slaves.' The bill, however, aftgr repeated violent debates, passed both houses. A protest was entered against it by fifteen peers, among whom was lord Hay, earl* of Kinnoul. — While the prosecution of Mr. Hastings was going on before the house of lords, an impeachment was moved in the house of commons by Sir Gilbert Elliot, against Sir Elijah Irapey. Of the six charges exhibited against him, the only one dis- cussed before the house was, that for the murder of the rajah Nundcomar, a chief of the Bramins. On the 28th of April Sir Gilbert entered fully on the charge; and showed, that forgery, the pretended crime for which Nundcomar was exe- cuted, was not capital in India ; that the English law had never been promulgated among the Hindoos ; that it did not even extend across the Tweed ; and therefore, it was as absurd and unjust to apply it to a Hindoo, as it would be to try the Great Mogul for bigamy. Mr. Fox said, ' It was not for forgery that Nundcomar was hanged. It was because he made an accusation against Mr. Hastings ; ' — ' If,' said he, ' I were upon oath as a juryman, I would pronounce Sir Elijah guilty of a deliberate murder.' Messrs. Pitt, M'Donald, Arden, and Sir R. Sutton, defended Impey; and Messrs. Burke, Francis, and Sir J. Johnstone supported the impeachment, which, however, was negatived by seventy-three to fifty- five. The second charge, being now before the privy council, was deemed improper to be en- tered on ; a circumstance, which Mr. Burke considered as a collusion between Sir Elijah and the company. The prosecution was therefore postponed for three months, and from the en- quiry no impeachment resulted. A great number*

*of petitions having been presented against the slave trade, in the beginning of the session, Mr. Wilberforce gave notice of his intention to bring in a bill on the subject ; but being prevented by indisposition, Mr. Pitt, on the 9th of May, moved a resolution, * That they would early in the next session take into consideration the state of the slave trade.' Mr. Fox said, that ' the slave trade ought not to be regulated, but de- stroyed, as notoriously hostile*

to justice and hu- manity.' Mr. Pitt's motion was then agreed to, nem. con. The session was closed on the 1 1th of July.

Towards the end of the year a circumstance occurred which alarmed the whole nation. His majesty's health had been precarious for some months, and in November he was afflicted with a severe indisposition, which prevented him from meeting parliament. Symptoms of alienation of mind had appeared ; and, after the examination of the royal physicians, an important question was started in the house of commons concerning the right of supplying the want of royal autho- rity during the incapacity of his majesty. After very considerable debates, resolutions were car- ried in the commons for appointing the prince of Wales regent, with power to execute and administer the royal authority. He was, how- ever, prevented from conferring peerages but oa persons of the royal issue, and those of full age; and from granting offices or pensions, or salaries for life, or in reversion. The real, or personal property of his majesty was secured, and was not to be considered as appertaining to, or under the control of, the prince regent. The care and custody of the king's person was committed to the queen, who had power to remove and ap- point, from time to time, all persons belonging to the different departments of his majesty's household, during the continuance of his indis- position, and no longer; and, for the better enabling her to perform this duty, a council was appointed to advise with her majesty on all matters relative to this trust, who were also empowered to examine upon oath, at such times as they should think fit, the physicians who had attended, respecting the state of his majesty's health. These resolutions being agreed to, after much debate, a committee was appointed to communicate them to her majesty, and his royal highness the prince of Wales. The prince replied to the committee in terms that did honor to his humanity, liberality, and patriotism ; and the queen expressed her satisfaction and pleasure at the measures they had adopted in the present situation of affairs. The bill passed the house of commons on the 12th of February, and was presented to the house of lords on the following day. Here it was discussed on the 17th and 18th, and a few amendments were introduced into it; but before the lords could communicate their concurrence to the commons, a protest by upwards of fifty peers was entered on their jour- nals. Happily, however, these proceedings ter- minated at this juncture. On the 12th of February the king had been declared by hij physicians to be in a state of progressive amend- ment; and on the 17th convalescent; an ad- journment of the house of loids was therefore

proposed on the 19th. On tlie 25th he was pro- nounced free from complaint; and on the 10th of Marcli the lord chancellor addressed both houses of parliament in the name of his majesty, when the usual business commenced. Ou this occasion a general joy was manifested by all ranks of people, and illuminations and other marks of public rejoicings were made over all the kingdom. By his majesty's proclamation the 23d of April was observed as a day of public thanksgiving to Almighty God, for the removal of his late indisposition. The report of the privy council on the slave trade was laid on the table of the house of commons on the 25th of April, and on the 12th of JNlay Mr. Wilberforce opened the discussion in a very forcible speech; but, after a great display of argument on both sides, the subject was deferred till next session. Here it may be observed, that the subject of the slave trade was agitated in several succeeding sessions, and its abolition warmly pressed ; but Mr. WiJberforce's motions were rejected, and the question in a great measure dropped.

In the month of May, 1790, the Spaniards having captured two vessels belonging to Britain, in NooTKA SouKD (see that article), a rupture seemed unavoidable ; but, after vigorous prepa- rations were made on both sides, all differences were settled. Thus was Great Britain happily rescued from the horrors of war in this quarter of the globe, while her Indian possessions, through accident or ambition, were involved in blood. Of all the native princes of India, Tip- poo Saib was the most formidable to the British government, and the most hostile to its authority. The dispute which finally involved the English with him, arose betwixt the Dutch and Tippoo. The former were possessed of two forts, situated between Mysore and Cochin ; to these the latter laid claim, in right of his father. The Dutch, unable to defend themselves, entered into a ne- gociation with the rajah of Travancore, for the purchase of them, considering that by placing these forts in the hands of the rajah, who was the ally of Great Britain, they erected a power- ful barrier against the encroachments of their ambitious neighbour. The bargain was con- cluded, July, 1789. On the 1st of ˆNlarch, 1790, the rajah's troops made an attack upon Tippoo, who had continued quiet within his lines from the 29th of December. An engagement took place, and, war being thus commenced, the British government conceived themselves bound to take an active part. For its result, see Hin- nosTAN. Among the subjects which came before parliament, during this session, a repeal of the test act was again proposed. The motion was brought forward by Mr. Fox, and the sub- ject, though ultimately rejected, was warmly debated ; in the course of which, as well as on a previous question (the vote of supply for the army), Mr. Fox having made some references to the French republicans, as exemplary, Mr. Burke, who considered the French revolution in a very

The new parliament assembled on the 25th of November, 1790, and the

following day his majesty opened the session by a speech from the throne. Among several subjects of no great historical interest, which occupied the present session, a bill for the relief of protesting Catho- lics was passed ; and the trial of Mr. Hastino^s gave rise to a question of considerable constitu- tional importance ; whether impeachments by the commons abate by a dissolution of parlia- ment ! This was determined in the negative. In the end of March, 1791, an armament was voted, on account of the taking of Oczakow by the Russians ; and, a bill havmg been brought in for regulating the government of Quebec, a debate ensued on the 6th of May, when Mr. Burke, after making some sarcastic references to the principles of the French revolution, and the abettors of them, declared that his friendship with Mr. Fox was dissolved by that cursed event.

The session was concluded on the 10th of June; soon after which a series of shameful and violent outrages took place in the town of Bir- mingham. See that article. The transactions of the session of 1792 were even less important than those immediately preceding. In the autumn of 1791 a marriage had been celebrated between the duke of York, his majesty's second son, and a daughter of the king of Prussia, which gave general satisfaction. On the 17th of Feb- ruary Mr. Pitt presented to parliament a copy of the treaty entered into between the British and Prussian monarchs. The dowry of the princess amounted to £l2,000, which was viewed in an inconsiderable light in the wealthy nation of Britain, and parliament readily made a pro- vision of £37,000 per annum for the parties. At this time, also, a statement of the public revenue was brought forward by Mr. Pitt, from Aviiich it appeared that about £400,000 might be applied towards the extinction of taxes, or the discharge of the national debt. An enquiry into the grie- vances complained of by the royal boroughs of Scotland was moved by Mr. Sheridan on the 18th of April, but refused by a considerable ma- jority. In the course of this month a society was instituted in London, for the purpose of obtaining a reform in the representation of the people, which assumed the title of The Friends of the People. At the head of this association were Messrs. Grey, Baker, \Vhithread, Sheridan, I.ambton, and Erskine ; and it was quickly joined by several respectable characters in the commercial and literary world. According to a resolution of the society, Mr. Grey, on the 30th of April, mentioned his intention to the house, of moving next session for a reform in the repre- sentation of the people. A tumultuous debate ensued, and the subject was dropped.

9. From the war (i/"l793 to the peace of Amiens, — The reader will have anticipated our entering upon a most eventful period of the British his- tory ; a period in which our most valuable in- stitutions were threatened with unprecedented dangers. It could not but be obvious, upon the slightest observation, that the French revolution must produce consequences extremely important to F,uro])e ; and particularly to England, from the

connexion which subsisted bftwecn the two

countries. We have already seen two very emi- nent British statesmen, who had been generally of one mind in political mutters, totally divided in their views of th.s event. By one of these the celebrated Reflections on the French Revo- lution had been published in 1790: a work in which the illustrious author, with equal wisdom and eloquence, showed its true spirit, and the direct tendency of those principles which were professed by its authors. But we cannot pre tend to give any idea of the ferment and commo- tion that the French revolution at that time oc- casioned throughout England. The proselytes to its principles spoke and acted as if a sudden blaze of light had illuminated the darkened world ; as if mankind had awakened from a dream, and just opened their eyes, hitherto ob- scured by prejudice and superstition. Con- gratulatory addresses were sent from different societies to the national convention, extolling their new constitution in the highest terms ; the press teemed with publications of the most seditious tendency ; the wholesome principles of our an- cestors were derided as the prejudices of narrow minds ; and nothing but the vain sounds of ‘ liberty, equality, and the rights of man,’ could be heard. These last insidious words were cho- sen as die title of one of the many replies which were made to Mr. Burke’s Reflections ; it was drawn up by Thomas Paine, a man who had formerly been caressed in North America, as the author of a pamphlet entitled Common Sense. This book, now published, contributed very much to poison the minds of the ignorant and profligate : it spread the infection of French prin- ciples among the lower classes ; and the aston- ishing rapidity with which it circulated, together with the successes of the French in tlie Nether- lands, inspired the favorers of French anarchy with uncommon boldness. Parliament was as- sembled on the 13th December, 1792, when his majesty, in a speech from the throne, intimated, that he had judged it necessary to embody a part of the militia, and to assemble his parlia- ment earlier than the time specified. The first measure resorted to, in this diihcult crisis, was the alien bill. In consequence of the disorders which at that time prevailed in France, under its then tyrannical rulers, great numbers of the French nobility and clergy had been obliged to emigrate, and to seek for safety in poverty and in exile. Another description of men had also emigrated from France for the worst of purposes. It was to thwart tlie designs of these men, that a bill establishing regulations respecting aliens arriving in Great Britain was presented to parliament. Mr. Burke gave this bill his most cordial support, as being calculated to keep out of England those murderous atheists, who would pull down the state and church, religion and God, morality and happiness. This bill was

followed by another, brought in by the attorney-general, to prevent the circulation of assignats, bonds, promissory notes, Sec, issued under the authority of France : another bill was passed, about the same period, for restraining the exportation of naval stores, ammunition, &c., and an order of council was issued for preventing the exportation of corn to Franc

*The French having now filled up the measure of their crimes, by embruing their hands in the blood of their sovereign ; having, by repeated decrees, held out encouragement and protection to traitors in every country, and attempted to kindle the flames of rebellion throughout the world ; and having in their last outrage, the opening of the Scheldt, manifested their con- tempt of all the existing treaties of Europe, Great Britain could no longer remain an inactive; spectator of their proceedings. On the 28th of January, 1793, a message was delivered to the house of commons, informing them that his ma- jesty thinks it indispensably necessary to make a further augmentation of his forces by sea, for opposing views of aggrandisement and ambition on the part of France. The question in favor of the address was carried both in the house of lords and commons without a division; though the mar- quis of Lansdovvne and Mr. Fox made several observations against the objects of the war. The French, however, anticipated our intentions, whatever they might have been, by a decree of the convention, formally declaring war against his Britannic majesty and the Stadtholder ; and, while Mr. Pitt remarked the causes of his ma- jesty's message, he read an extract from a letter, addressed by one of the executive council in F" ranee, to all the friends of liberty in the French sea- ports : — * The king of England and his par- liament mean to make war against us. Will the English republicans suffer it ? Already these free men show their discontent, and the repug- nance which they have to bear arms against their brothers the French. Well, we will fly to their succor ; we will make a descent on the island ; we will lodge there 50,000 caps of liberty; we will plant there ˆhe sacred tree, and we will stretch out our arms to our republican brethren : the tyranny of their government will soon be de- stroyed.'*

About this period, from various causes atten- dant on the situation of the continent and the declaration of war with France, a general para- lysis seemed to seize the country, and the num- ber of bankruptcies exceeded all that had ever happened in the most calamitous times. Those who were possessed of property, appeared, at last, as much at a loss where to deposit it as those who experienced pecuniary distress where to look for relief. The interference of government was so- licited by several of the principal traders and mer- chants, to apply a remedy to this state of things ; m consequence of which Mr. Pitt moved that £5,000,000 should bo issued by exchequer bills, under certain restrictions, for the assistance of such persons as can give proper security to the commissioners, for the sums that

may be ad- vanced. The bill, authorising this, passed both houses without a division ; but one-half of the exchequer bills were never applied for. During this session the house of commons, on tiie re- commendation of Sir John Sinclair, voted £3000 per annum for the establishment of a board of agriculture. A bill also passed without oppo- sition, to remove certain incapacities and restric- tions from Catholics in Scotland ; and the in- habitants of the north of Scotland were successful in obtaining, through Mr. Dundas, a repea' of

the duly on coals carried coast-ways. The char- ter of the East India Company being now within a year of expiring, they petitioned for a renewal of It, which was granted, under certain regula- tions, for twenty years. Barracks were this year erected in the neighbourhood of all the principal towns through Britain, that the army might, as much as possible, be kept free from the contagion of popular opinion.

It would exceed our limits to enter into the prosecutions and trials which took place in con- sequence of the boundless liberty taken by many in propagating sedition, and subverting the government. The session of 1794 (met January 21st) was opened by his majesty with the usual formalities; and the address voted by a majority of 118. Various important questions were agi- tated in this parliament. No fewer than three motions were made by difterent members of opposition, for altering the criminal laws of Scotland, and the different treaties that had been entered into with the court of Petersburgh, the landgrave of Hesse Cassel, the kings of Sardinia, Spain, Naples, Prussia, Austria, and Portugal, were all canvassed by opposition, who reprobated the manner of conducting the war.

England, at the commencement of her long contest with France, took into her pay a large body of German troops ; and the duke of York joined the allies, who confided to him the care of the army which in the summer of 1793 besieged Valenciennes. The trenches were opened on the 14th of June, 1793. The inhabitants wished to surrender ; but the violence of the bombard- ment prevented their assembling. Much of the labor of the siege consisted of mines and coun- termines. Some of these having been success- fully sprung by the allies, the town was surren- dered on the 27th of July by capitulation to the duke of York, who took possession of it in the name of the emperor. The siege of Mentz was going on. It suffered much from famine. At last, after an unsuccessful attempt by the French for its relief, it surrendered on the 22nd of July.

At the termination of the siege of Valenciennes it is said that the allied powers were at a loss how to proceed next. Among various plans presented, that of the Britisli ministry was adopted, to divide the grand army, and to attack West Flan- ders, beginning with the siege of Dunkirk. This determination proved ruinous. The French van- quished that army .when divided, which they could not encounter when united. On the 24th of August the duke of York attacked and drove the French outposts into the town, after an ac- tion in which the Austrian general Dalton was killed. But a strong rei)ublican force menaced the covering army of the allies, under general Freytag. He was attacked and totally routed. The siege was raised. The British lost their cannon and baggage, with several thousand men; and the convention, believing that Houchard, their general, could have cut off the duke of York's retreat, tried and executed him for this neglect. Prince Cobourg and general Clairfait besieged Cambiay and Bouchain without suc- cess. Quesnoy was, however, taken by general Clairfait on the 11th of September, which ter-

minated for that campaign the success of the allies in the Netherlands. A part of the French army of the north took a strong position near Maubeuge, where they were blockaded by prince Cobourg; but, upon the 15th and 16th of Octo- ber, he was attacked by the French troops under Jourdan, who had now recovered their vigor. They brought into the field a formidable train of artillery, with many twenty-four pounders. Commissioners from the convention harangued the soldiers, threatened the fearful, and ap- plauded the brave. Crowds of women, throwing off their natural timidity, went through the ranks, distributing spirituous liquors, and carry- ing off the wounded. The attacks were repeated and terrible on both sides; but the Austrians were defeated, and Cobourg retired in the night. The French now menaced maritime Flanders. They took Fumes, and besieged Nieuport. A detachment of British troops were hastily sent to Ostend, and stopped the farther progress of the French. The leading people of Toulon now entered into a negociation, and submitted to lord Hood, under condition that he should pre- serve the town and shipping for Louis XVTI. and assist in restoring the constitution of 1789. The siege of Toulon was commenced by general Cartaux in September. Neapolitan, Spanish, and English troops, were brought by sea to assist in its defence. In November, Cartaux was re- moved to the army jin Italy, and Dugommier succeeded him. General O'Hara arrived with reinforcements from Gibraltar, and took upon him the command of the town under a British commission. On the 30th of November the garrison made a powerful sally to destroy some batteries erecting upon the heights. The allies succeeded in their object; but, elated by the fa- cility of their conquest, rushed forward in pursuit of the flying enemy, and were met by a strong French force that was drawn out to pro- tect the fugitives. O'Hara now came from the city to

bring off his troops; but was wounded and taken prisoner. The total loss of the allies in this affair svas estimated at nearly 1000 men. The French had now mustered in full force around Toulon, and prepared for the attack. It was begun on the 19th of December, and was chiefly directed against Fort Mulgruve, defended by the British. This fort \as protected by an entrenched camp, thirteen pieces of cannon, thirty-six and twenty-four pounders, &c., five mortars, and 3000 troops. 'Sucli was the ardor of assault, that it was carried in an hour, and the whole garrison destroyed or taken. The allies, finding it impossible to defend the place, in the course of the day embarked their troops, after having set on fire the arsenal and ships. A scene of confusion ensued, unparalleled in the history of modern wars. Crowds of people of every rank, age, and sex, hurried on board the ships, to avoid the vengeance of their en- raged countrymen. Some of the inhabitants began to fire upon their late allies; others in despair plunged into the sea, making a vain ef- fort to reach the ships : thirty-one ships of the line were found by the British at Toulon ; thir- teen were left behind; ten were burnt; four had been previously sent to the French ports of

Brest and Rochefort, with 5000 republicans who could not be trusted ; and Great Britain ob- tained by this expedition three ships of the line and five frigates.

At this siege first appeared in command, a lieutenant of artillery, Napoleon Buonaparte, destined to disturb the whole civilised world in his future direction of the resources of France.

On the 1st February, 1794, the chancellor of the exchequer read to the house of commons the decree of an extraordinary commission instituted in France, in consequence of a resolution of the j oint committees of finances, of public and general safety, and subsistence, directing the use of every Dossible expedient to ascertain the property of French subjects in foreign funds ; in order that it might be delivered up to the state, and become public property ; and that, when the transfer was made, it should be paid for in assignats estimated at par. The motion, on this occasion, was brought forward by the solicitor general, and was, in sub- stance, for leave to bring in a bill to prevent the application of debts in the hands of any of his majesty's subjects, to or for the disposal of persons resident in France, under the power of those who now exercise the government of France. The bill passed without opposition. In consequence of the French leaders menacing the country with invasion, an act was passed for the embodying and training of volunteers, by which associations of both infantry and

cavalry were voluntarily formed throughout the country. Though the ferment about the political princi- ples of the French had now considerably sub- sided, there were still many secret espousers and propagators of these principles in the country. On the 12th of May the ministry issued warrants for apprehending Mr. Home Tooke, Mr. Hardy, and Mr. Thelwall ; with several other persons, on a charge of high treason. On the same day Mr. Dundas brought down a message from the king, recommending to the house to consider the books and papers of the London Corresponding Society, which had been seized by his majesty's order, and to pursue such measures as were necessary to prevent their pernicious tendency. The papers were referred to a committee of secrecy, who brought up their report on the 16th of May ; when Mr. Pitt, after an eloquent speech, moved for leave to bring in a bill, empowering his majesty to secure and de- tain all persons suspected of designs against his crown and government. A strenuous opposition was made to the bill, but it passed by a great majority. The trials for high treason comraeuced soon after, and that of Thomas Hardy, which continued eight days, terminated in his acquittal ; Mr. Home Tooke obtained also a verdict in his favor, after six days' investigation ; five days •were occupied upon the trial of Mr. Thelwall, but the issue was alike favorable to him ; and the others were discharged. Some differences happening with America occasioned several motions in the house of commons ; but matters were afterwards happily adjusted ; and the ses- sion terminated on the llth of July.

-Immediately on the rising of parliament several changes took place in administration. The duke of Portland was appointed one of his

majesty's principal secretaries of state, and Mr. Windham secretary at war. Earl Fitzwilliam was nominated president of the council, but was soon after sent to Ireland as lord-lieutenant.

In the Netherlands the emperor took the field at the head of the allied armies. West Flanders was to be protected by a strong body of men ; the main army was to penetrate to Landrecy, and to cut off the Frencli from the interior by covering the country from Maubeuge to the sea. The plan was bold ; but, when attempting to put it in execution, the allies must have been ill- informed of the immense force which the French were collecting. The town of Lisle alone, which is capable of containing a numerous army within its walls, should have seemed an insurmountable objection to the plan. On the 16th of April the Austrian, British, and Dutch armies assembled on the heights above Cateau, and were reviewed by the emperor. On the 17th they advanced in eight columns against the French, drove in their whole posts, and penetrated beyond Landrecy. Tile allied army now amounted to 187,000 men, who were disposed in tlie following manner : — 15,000 Dutch and 15,000 Austrians, under the prince of Orange and

general Latour, formed the siege of Landrecy; 15,000 British and 15,000 Austrians, commanded by the duke of York and general Otto, encamped towards Cambray. The emperor and tli" prince of Saxe-Cobourg, at the head of 60,0(' Austrians, were advanced as far as Guise; 12,000 Hessians and Austrians under general Wurmser were stationed near Douay and Bouchain ; count Kaunitz with 15,000 Austrians defended the Sambre and the quarter near Maubeuge ; and, general Clairfait, with 40,000 Austrians and Hanoverians, protected Flanders from Tournay to the sea ; 60,000 Prus- sians, for whom a subsidy had been paid by Great Britain, were expected in addition to these, but they never arrived. The French now com- menced their operations.

On the morning of the 26th of April they at- tacked the duke of York near Cateau in great force. After a severe conflict they were repulsed, and general Chapuy was taken prisoner. At the same time they attacked the troops under his imperial majesty, but were there also repulsed in a similar manner ; losing in all fifty-seven cannon. On the same day, however, general Pichegru advanced from Lisle, attacked and defeated Clairfait, took thirty-two pieces of can- non ; and in the course of a few days made him- self master of Warwick, Menin, and Courtray. On the 29th of April the garrison of Landrecy surrendered to the allies. When this event was known in the Convention it excited a consider- able degree of alarm. It was, however, the last effectual piece of success enjoyed by the allies during this disastrous campaign. General Clairfait was again completely defeated by Pichegru in a general engagement ; and it was found necessary to send the duke of York to his assiistance. On the 10th the duke of York was attacked nea? Tournay by a body of the enemy, whom he re- pulsed ; but he was unable to join Clairfait, upon whose destruction the French were chiefly bent : for, at the same time that the duke of York was occupied by the attack upon himself.

Pichegru fell upon Clairfait with such irresisti- ble impetuosity, that he was compelled to re- treat in confusion, and a part of his army appears to have fled to the neigbourhood of Bruges. While Pichegru was thus advancing successively in West Flanders, Jourdan ad- vanced in East Flanders from Maubeuge, crossed the Sambre, and forced general Kaunitz to re- treat. On the 18th, however, general Kaunitz succeeded in repulsing the enemy, and they re- crossed the Sambre with considerable loss. The allies now found that no progress could be made in France, while Pichegru was advancing suc- cessfully, and occupying West Flanders in their rear. The emperor, therefore, withdrew the greater part of his army towards Tournay, and

resolved to make a grand effort to cut otT the communication between Courtray and Lisle, to prevent completely the retreat of Pichegru. On the night of the 16th the army moved forwards in five columns for this purpose : Clairfait was directed to cross the Lys, to effect a general junction, and complete the plan; but, in the course of next day, the division under the duke of York was overpowered by numbers, and de- feated. The progress of the rest was stopped, and Clairfait completely defeated. The duke of York escaped being made prisoner only by the swiftness of his horse.

The plan of the allies being thus frustrated, their army withdrew to the neighbourhood of Tournay. Pichegru attempted to retaliate. On the 22nd of May he brought down at day-break his whole force against the allies. The attack was commenced by a heavy fire of artillery, and all the advanced posts were forced. The en- gagement soon became general ; the whole day was spent in a succession of obstinate battles. The French and the allied soldiers fought with equal courage and equal discipline. At nine o'clock P. M. the French at last withdrew from the attack. In this engagement tlie French were unsuccessful in their immediate object; but the weight of their fire, their steady discipline, and their violent obstinacy of attack, raised their military character high in the estimation even of their enemies. Their numbers were immense ; they implicitly obeyed their generals. A com- bination of eff'orts was thus produced, whose operation was not retarded by divided counsels. On the other side, the numbers of the allies were daily declining; their leaders were inde- pendent princes, whose sentiments and interests were often hostile to each other, and their exer- tions were consequently disunited. On the 24th the French again crossed the Sambre, but were driven back with much loss. On the 27th they attempted to besiege Charleroi; but the prince of Orange, on tlie 3rd of June, compelled them to raise the siege. On the 12th a similar attempt was made, and they were again repulsed. In West Flanders, iiowever, Pichegru commenced the siege of Ypres. It was garrisoned by 7000 men ; reinforcements were therefore daily sent from the grand army to Clairfait to relieve it. The bloody contests in which the unfortunate general was daily engaged wilti tlic French were uniformly unsuccessful, and were the means of wasting the armies of tlie allies. Ypres iield out

till the 17th of June, when it capitulated : and such was the discipline of the French army, at this time, that no notice could be obtained, for several days, of that event.

On this the duke of York retreated to Oude- narde ; for Jourdan, after storming the Austrian camp of Betignies, advanced with such strength upon Charleroi in the east, that its immediate fall was feared. As this would have enabled the two French armies to encircle the whole of Flan- ders, the prince of Cobourg advanced to its re- lief. Charleroi surrendered at

discretion on the 25th. The prince of Cobourg advanced on the 26th, to attack in their entrenchments the army that covered the siege near Fleurus ; but, the co- vering army being by this time reinforced by the accession of the besieging army, the allies were repulsed. Jourdan than drew his men out of their entrenchments, and attacked the Austrians. He was three times repulsed, but was at last suc- cessful ; the loss of the vanquished army was prodigious. The French said it amounted to 15,000 men. The allies now retreated in all quarters. Nieuport, Ostend, and Bruges, were taken, and Tournay, Mons, Oudenarde, and Brussels, opened their gates. At this last place the French armies of East and West Flanders united. Landrecy, Valenciennes, Conde, and Quesnoy, were left with garrisons. The allied troops, evacuating Namur, formed a line from Antwerp to Liege to protect the country behind. The French advanced in full force, and attacked general Clairfait, cut to pieces half his troops that remained, and broke the line. The allies retreated. The duke of York was joined by some troops under the earl of Moira; with these and the Dutch troops he retired to near Bergen op Zoom and Breda for the protection of Hol- land. The prince of Cobourg evacuated Liege, crossed the Maese, and placed a garrison in Maestricht. He soon, however, sent back a part of his troops to the neighbourhood of Ton- gres ; for here, to the astonishment of all Europe, the French armies made a voluntary pause in their career of victory, and ceased to pursue their retiring foes. Sluys in Dutch Flanders was the only foreign post that they continued to at- tack, and it surrendered after a siege of twenty- one days. On the Rhine the war was equally successful on the part of the French.

During the course of this summer Corsica was subdued by Great Britain : and the whole of the French VVest India Islands, except a part of Guadaloupe, yielded to the British troops under Sir Charles Grey and Sir John Jervis. On the 1st of June, 1794, the British fleet, under earl Howe, gained a most splendid vic- tory over the French fleet to the west of Ushant. Tlie French committee of safety had purchased, in America, immense quantities of grain and other stores. These were embarked on board 160 sail of merchantmen, convoyed by six sail of the line. Lord Howe sailed to intercept this valuable convoy. The French fleet sailed to protect it. On the morning of the 28th of May the fleets came in sight of each other. Lord Howe had previously despatched six ships c” the line, under admiral Montague, to intercept the l*“rench convoy, while he should engage ana*

detain the grand fleet. The French despatched eight sail to defeat this attempt. In the course of the 29th Lord Howe got to windward of the

French fleet. His force was twenty-five, and theirs was twenty-six sail ˆof the line. The fol- lowing day he bore down upon them and broke their line. The engagement was one of the severest ever fouglit. The French admiral, in less than an hour after the close action com- menced in the centre, crowded off with twelve of his ships. The British fleet was so much disabled, or separated, that several of the French dismantled ships got away under sails raised on the stump of their fore masts. Seven sail of the line, however, remained in possession of the British, and two were sunk. In the mean time admiral Montague fell in with the French con- voy, but it was now guarded by fourteen sail of the line. As he could not encounter such a force he returned home, and it was safely con- veyed into port. Thus, by one of those con- tradictions which often occur in human aflairs, the British fleet was victorious, and yet the French were left masters of the sea, and ob- tained their great object, provisions. As this engagement, however, testified that the British seamen had not lost their ancient superiority on their own element, the nation regarded the vic- tory as a pledge of its independence, and very general rejoicings took place in consequence of it.

Parliament assembled on the 30th December, and his majesty's speech held forth the necessity of persisting in the war ; which, when the address was moved, occasioned very warm de- bates in both houses of parliament. But the debates were still more remarkable upon a mo- tion brought forward by Mr Grey in the house of commons, January 26th, 1795, and by the duke of Bedford in the house of lords on the fol- lowing day, that the existence of the present government of France ought not to be considered as precluding at this time a negociation for peace. Our limits will not permit us to enter upon these debates ; but Mr. Grey's motion was negatived by a majority of 183; nor was the duke of Bedford more successful.

*In the course of the preceding year a treaty of marriage had been negociated between his royal highness the prince of Wales, and the princess Caroline of Brunswick. The nuptials were celebrated on the 8th of April this year, and on the 27th a message from his majesty was delivered to both houses of parliament, relating to the debts of the prince of Wales : it stated the reliance of his majesty on their generosity for enabling him to settle an establishment upon the prince and his august bride, suited to their rank and dignity ; that the benefit of any settlement now made could not efi'ectually be secured to the princ*ˆ till he was relieved from his present incumbrances to a large amount ; but that his majesty did not propose to his parliament any other means of providing for this object, than the application of a part of the income which may be settled on the prince, and tlie appropriation for a certain time of the revenue of the duchy of Cornwall, &c. After considerable difference of opinion on the subject, the annual sum of*

£125,000 was voted by the house of commons as a suitable establishment for the heir apparent to the throne ; but of this, £65,000, with tiie rents of the duchy of Cornwall, amounting to £l 3,000, were set apart for the liquidation of his debts, which, at this time, amounted to £630,000.

Parliament was prorogued on the 27th of June, but was again assembled much earlier than usual, chiefly on account of the unfavorable state of the domestic concerns of the country. At the close of the year 1794, the winter had become so very severe as to enable the French to make an easy conquest of Holland, by which they now held an immense length of sea coast opposite to Britain, while this summer had been so ungenial to Great Britain, that a dearth of provisions began to prevail. The Lon- don Corresponding Society, as if avading them- selves of the discontent which this produced among the populace, had, previous to tiie meet- ing of parliament, held several meetings in tlie open fields, for the avowed purpose of petitioning the king in parliament for peace and parliamen- tary reform, which doubtless contributed to ex- cite the riots that took place. The most daring insults were off"ered to his majesty as he passed along, at the usual hour, to open the session of parliament, by the crowd in St. James's park ; and, in the streets adjoining Westminster Hall, stones and other missiles were thrown, several of which struck the state coach. As his majesty returned from the house the outrages were re- newed, and, after he alighted, tiie coacl) was attacked, and almost demolished. His majesty in his speech, while noticing the situation of continental affairs, seemed to indulge a hope ' that terms of peace might soon be attainable, but, to accelerate this desirable end, it was neces- sary that we should prove our ability to prose- cute the war. The usual address being moved, occasioned some debates on the propriety of the war, but an address to his majesty relative to the outrages committed against his person was pro- posed and agreed to; and on the 4th of Novem- ber copies of his majesty's proclamation, relative to these outrages, were submitted to the house, and ordered to lie upon the table. On the 6th a bill was presented by lord Grenville, pursuant to the notice he had given on the former day, ' for the safety and preservation of his majesty's government against treasonable and seditious practices and attempts ;' and, on the same day, the chancellor of the exchequer, after an eloquent speech, moved, that ' leave be given to bring in a bill for. the more effectually preventing se- ditious meetings and assemblies.' These bills, after a violent opposition, passed both houses of parlianient. During this year, 1795, Great Britain retained her usual superiority by sea. A British squadron, under admiral Elphinston, had taken possession of the Dutch settlement of the Cape of Good Hope, on the 16th of September, 1795. This settlement the Dutch wished much to recover ; and they advanced money to enable the French to fit out a squadron to co-operate with them in an attack upon it. The French

government took the money, but the squadron was never equipped. The Dutch themselves this year sent a squadron of seven ships of war.

under admiral Lucas, to reconquer the Cape; but being no match for the British squadron, and being caught between two fires, without the 150ssibil"ity of escaping, the Dutch fleet, without firing a- gun, was delivered up to the British admiral.

In the month of March, 1796, an attempt was made towards a negociation for peace with France, but in vain. During this session sup- plies were voted to the amount of £37,.588,000, and above £'25,300,000 was borrowed. The g-uards and garrisons were reduced to 59,000 men, and the colonial forces increased to 77,000; sailors and marines were 110,000. But, after an active and successful campaign on the part of the French, several states thought proper to send ambassadors to Paris to open the negoci- ation for peace. A treaty was concluded with Spain and several of the German princes. The attention of Europe was, however, most deeply engaged by the negociations opened by the Eng- lish government. The commencement clearly foreboded what would be the event of these ; the grossest calumnies, concerning the insincerity and even perfidy of the English court, were circulated under the apparent sanction of the directory. After a great deal of discussion, con- cerning the principle of restitution, the two governments at last agreed on that point, and lord Malmesbury delivered two memorials on the principal objects of arrangement. The directory, having read the memorials, sent an extract from the register of their deliberations, requiring lord Malmesbury's signature to the memorials, and also the ultimatum of his demands, in twenty- four hours. He complied with the forms required by the directory, but observed that the peremp- tory demand which they made of an ultimatum shut the door at once to all negociation; and represented, that if the conditions submitted to their consideration were not approved, or were not to be the subject of discussion, if they would propose their own conditions he would submit them to the consideration of his court. Upon this the negociation ended, for the directory, having read the memorials received on the 17th of December, ordered the ministry to write to lord Malmesbury on the I8th, that they could hear no propositions contrary to the constitution, and the laws and treaties by which the republic were engaged ; and likewise enjoining him to leave Paris in twenty- four hours. Sucii was the event of this negociation on the part of the French ; commenced with reluctance, conducted with insincerity, and concluded with insult.

The French, towards the close of 179G, at- tempted an invasion of Ireland ; but the plan was ill concerted. The wholeconductofitwasentrusted to general Hoche, and no second was prepared to occupy his place in case of any accident. The dis- affected faction, with whom the French meant to co-operate, was not warned of their approach, and the fleet was sent towards a quarter of the country where the people were not prepared to receive them. When about to sail it was detained for some time liy a mutiny, which arose in conse- quence of the enlistment of about 1200 galley slaves. The frigate in which general Hoche had embarked was separated from the fleet in a

gale of vv'ind ; so that when the greater part of the fleet arrived at Bantry Bay, on the west coast of Ireland, nobody had ins; ructions how to proceed The troops and their officers wished to land, but the admiral, Bouvet, refiised to allow them. Having remained several days upon the coast, he sailed for France, and arrived at Brest, with a part of the fleet on the 31si of December. General Hoche did not reach Bantry Bay till it was too late, and therefore could not land. The fleet suffered losses in its return.

At the opening of the session, in the end of 1796, his majesty took notice of the invasion which the enemy had projected against Eng- land. Mr. Pitt brought forward the business in the house of commons, and pointed out the means by which he proposed to raise 15,000 men, to be divided between the land and sea service ; to raise a supplementary levy of 60,000 for the militia, and 20,000 cavalry, which, with a few alterations and amendments, were agreed to. But, in mentioning the supplies for the year, which amounted to £27,647,000, and explain- ing the different articles of expenditure, the minister alluded to an expense of a particular nature, which had been incurred during the in- terval of parliament. As it would have been a matter of very great delicacy to have brought forward a public discussion on the propriety of advancing a sum to a foreign court in the critical situation of the country, ministry had granted to the emperor, without a public discussion, the sum of £1,200,000. This transaction was can- vassed soon after, and the opposition reprobated it with the utmost acrimony. While the senate appeared thus the scene of faction, a most daring mutiny broke out in the navy, the pride and glory of the nation. The seamen had addressed several letters to earl Howe, soliciting a redress of grievances, particularly as to provisions, in which It seems they had been imposed upon, both as to quantity and quality ; but, as these letters were anonymous, his lordship paid no attention to them. This apparent neglect pro- duced a general correspondence by letter through the whole fleet ; and on the 14th of April, when the signal was made to prepare for sea, a general revolt ensued ; and, instead of weighing anchor, the seamen of the admiral's ship gave three cheers, which were echoed by the other ships. Delegates were then appointed for each ship, to represent the whole fleet ;

and the cabin of the admiral's ship was fixed upon as the place of their deliberation. Petitions were drawn up and presented to the admirals upon the spot, stating their demand of an increase of wages, and of some regulations for their benefit with respect 4o the ratio of provisions. On the 18th a com- mittee of the admiralty arrived at Portsmouth, who made several propositions to reduce the men to obedience; the lords of the admiralty next conferred with the delegates, who assured their lordships that no arrangement would be considered as final, until it should be sanctioned by king and parliament, and guaranteed by a proclamation for a general pardon. Matters re- mained in this situation till the 23d, when earl Howe returned to his ship, hoisted his flae, and, after a short address to his crew, informed

them that he had brought a redress of all their grievances, and his majesty's pardon for the of- fenders : after some deliberation these offers were accepted, and every man returned to his duty. All disputes seemed now to be settled, but it was quickly circulated among the sailors that government deluded them with vain hopes. The flame of mutiny was rekindled ; and on the 7th of May, when lord Bridport made the signal to weigh anchor, every ship at St. Helens refused to obey. A meeting of the delegates was ordered on board the London ; which vice-admiral Col- poys opposed, and gave orders to the marines to level their pieces at them ; a skirmish ensued, in which five of the seamen were killed. The whole crew of the London now turned their guns towards the stern, and threatened to blow all aft into the water, unless their commanders surren- dered ; which they reluctantly did, and admiral Colpoys and captain Griffiths were confined for several hours. The seamen continued in this mutinous state till the 14th of May, when lord Howe at length arrived from the admiralty with plenary powers to enquire into and settle the matters in dispute; he was also the welcome bearer of an act of parliament, which had been passed on the 9th, granting an additional allow- ance as well as his majesty's proclamation of pardon for all who should immediately return to their duty. Matters being thus adjusted, the sailors appeared satisfied ; the officers were gene- rally reinstated in their commands, the flag of disaffection was struck, and the fleet prepared to put to sea to encounter the enemy. Such, how- ever, is the propensity of the human mind, when gratified in one point, to entertain new desires, that the success of the seamen on this occasion encouraged another part of that heroic body to make farther claims. The sailors at the Nore insisted on a more punctual discharge of arrears, a more equal distribution of prize money, and a general abatement of the severity of discipline. They chose delegates from every ship, one of whom, a seaman

named Richard Parker, being appointed President, assumed the command of the fleet. The flag of admiral Buckner was struck on the 23d of May, and the red flag, the symbol of mutiny, hoisted in its stead ; while they transmitted a statement of their demands to the admiralty. At this alarming height of the mutiny, a deputation of the lords with earl Spencer at their head, proceeded to Sheerness ; but finding the sailors rather rising in insolence and disobedience, than inclined to submission, they departed, after signifying that they need expect no 'concessions whatever, further than what had been already made by the legislature. The mutineers now proceeded to force a compliance with their demands, by oiocking up the Thames, and refusing a free passage up and down the river to the London trade. Two merchant ships were robbed ©f provisions, and some ships of war, that refused to accede to the combination, were fired upon. Ships of neutral nations, however, colliers, and a few small craft, were allowed a passport, signed Richard Parker, pre- sident of the delegates. No hopes of accom- modation appearing, every necessary measure was taken to compel the seamen to return to

their duty. An act of parliament was passed for preventing all intercourse with the mutinous ships; and government ordered all the buoys to be removed from the river Thames and the neighbouring coast. Preparations were also made at Sheerness against an attack from the mutineers, who seemed to meditate the bombard ment of the place ; and, after the rejection of the last attempt at a reconciliation through the me- dium of lord Northesk, measures were taken by lord Keith and Sir C. Grey, to attack the fleet from the works with gun l3oats. Happily, however, the defection of some of the ships, with other strong symptons of disunion, ren- dered the application of force unnecessary ; and on the 10th of June, several ships having pulled down the red flag, the rest followed their ex- ample within a few days, and went under the guns of the fort Admiral Buckner's boat was then sent to the Sandwich, with a picket guard of soldiers, to arrest Parker, who was very peace- ably surrendered to them with about thirty other delegates. They were soon after brought to trial ; several were executed, but the greater part re- mained under sentence till the signal victory of admiral Duncan, in the month of October, when they were pardoned.

In the beginning of this year the public mind was considerably agitated also by another event, which at first threatened to overwhelm in ruin the pecuniary resources and commerce of the country : the Bank of England suspended its payments in specie. Though, doubtless, the large sums of money sent abroad as subsidies to foreign princes by government had diminished the quantity of gold and silver in Great Britain, one powerful cause of this event seems to have been the terror of invasion; this induced the farmers, and other persons at a distance from the metropolis, to withdraw their money from the hands of those bankers with whom it was

deposited ; and from the country bankers the demand for specie soon reached the capital. In this alarming state the ministry found them- selves compelled to interfere, and an order of the privy council was issued on the 26th of Fe- bruary, prohibiting the directors from issuing any cash in payment till the sense of parliament could be taken of that subject. The business was immediately laid before parliament, when the most violent debates ensued ; the opposition, as usual, imputed every evil to the incapacity and wickedness of the ministry, and insisted with great violence that the bank had failed, and that the nation was ruined. But, committees of both houses being appointed to examine the state of the bank's affairs, they reported them to be in a prosperous state, though they each recom- mended a continuance of the late prohibition. Measures were adopted for maintaining the means of circulation, and supporting and maintaining the public and commercial spirit of the king- dom ; and the ferment and alarm which had been raised by this unexpected event was soon allayed. During this year the war on the part of Great Britain was almost exclusively confined to naval operations, in which the skill and acti- vity of her seamen was eminently conspicuous, and invariably crowned with vinmry. "Through

the influence of the French, Spain had been in- duced to declare war against Britain ; and a Spanish fleet of twenty-seven sail of tlie line, while attempting to join a French armament, was attacked by Sir John Jervis with fifteen sail; the issue of which obtained for the English ad- miral the title of Earl St. Vincent, and the thanks of the British parliament. See Jervis. We have, in our memoir of admiral Duncan, given an account of the heroism he displayed in the defeat of the Dutch fleet, and this defeat it was afterwards believed prevented the French from invading this country. But, while the power subordinate to France suffered these disasters by sea, the French armies were gaining fresh triumphs on the continent; and the conse- quences of these left Britain alone in the contest. Both the French and English nations were now, however, anxious for the restoration of peace; and a negociation was entered into at Lisle : but by tliis time a sanguinary party, with the director Barras at their head, prevailed in the French councils, so that they demanded of lord Malmesbury, the British ambassador, as a preli- minary to negociation, the restitution of all his Britannic majesty's conquests. To this it was replied, that peace on such terms would not be thought of; and, after some farther fruitless dis- cussion, his lordship was desired to return home. Having rejected our offers of peace, the enemy resumed the project of an invasion of Britain, and it was generally thought that they seriously intended to make the attempt. Vast prepa- rations were made in all the different sea-ports of France ; a

great numljer of flat-bottomed boats and transports were fitted out; and a for- midable force was assembled near the sea-coast, to which they gave the name of the Army of England. Idle stories were likewise propagated about rafts of an immense size, in which they were to float over to England, and to carry terror to her shores, fn the mean time the British ministry adopted the most prudent and judicious precautions to repel attacks. A bill was passed for enabling his majesty to provide more effec- tually for the defence of the country, and to indemnify such persons as might sustain loss or injury, in consequence of the measures which it might be necessary to take for the general defence of the country, &c. ; likewise to ascertain those who were willing, near their own homes, to co- operate with the existing force of the country, whether as soldiers, pioneers, drivers of waggons, or in any other situations ; circular letters were addressed to the lord-lieulenants of the counties, informing them that any corps of respectable householders would be accepted : in short, every measure was taken which could ensure the public tranquillity, or defeat the attempts of our ene- mies. At no period of our history were there so mucli zeal ami courage displayed by all ranks of the British nation. They united as one man in defence of their constitution. Before the spring the enemy finally abandoned the threat of inva- sion, and directed their fleet to sail for Egypt, accompanied by a great number of transports. This formidable armament was closely pursued by the British under admiral Nelson (see that article), and, though the French troops had ef-

fected a landing before he came up with it, he overtook their fleet in the bay of Abouk ir, and obtained 1st August 1798, the memora victory of the Nile.

In the mean time, while the British ministry watched with a jealous and vigilant eye the de- signs of the enemy abroad, their attention was not diverted from the treasonable attempts of their adherents at home : a conspiracy of a very dangerous nature was discovered ; and JVIr. O'Connor, a young man of family, leagued wit-i several obscure persons, having given just grounds for suspecting his designs, the party was watched, and traced to Margate, from whence they pro- posed to embark for France. After several exa- minations they were finally committed to take their trial for high treason, which took place at Maidstone. Their defence consisted in a simple denial of the facts charged against them ; but Mr. O'Connor brought forward, in his behalt, the most respectable members of the opposition, who gave him an excellent character. Only one of the prisoners, a Mr. O'Coigley, was found guilty, and was shortly after executed ; but, by authority of a warrant from the duke of Port- land, Mr. O'Connor was apprehended immedi- ately after his acquittal, and sent under a guard to Dublin.

Matters there were still more alarming : an extensive and dangerous conspiracy had been formed for erectmg Ireland into an independent republic. See Ireland. About this time, also, the French fitted out an expedition for the invasion of Ireland. Their forces consisted oi one ship of eighty guns, eight frigates, a schooner, and a brig. Being discovered by the squadron under Sir J. B. Warren, after an action of nearly four hours, the La Hoche with three other ships struck to the British. They were full of men and every thing necessary for the establishment of a formidable force in Ireland. Parliament assembled on the 20th of November 1798, when his majesty, in a speech from the throne, noticed particularly the late victory obtained by the fleet under admiral Nelson. Scarcely any single vic- tory ever produced consequences of such im- portance. The grand seignior, who had paid little attention to the invasion of Egypt, now declared war, in the name of all Mussulmans, against the host of infidels which had invaded the land from whence the sacred territory of Mecca is supplied with bread. The powers on the continent of Europe were inspired with fresh vigor : and a coalition was formed between the emperors of Russia and Germany, and the king of Great Britain.

On the Rhine the French were repeatedly de- feated and pursued by the Austrians; general Suvvarrow drove them from all their conquests in Italy. In the mean time Great Britain pre- pared to invade Holland with an army of 40,000 men, consisting of British troops and Russian auxiliaries. The first division, under general Sir Ralph Abercromby, sailed in August, with a fleet commanded by admiral Lord Duncan. Bad weather prevented a landing from being attempt- ed till the 27th. On the morning of that day the troops landed without opposition upon the shore of Helder Point in North Holland, at the entrance

to the Zuyder Zee. They had not been expected in this quarter, and the troops in the neighbour- hood were consequently few. The British, how- ever, had no sooner begun to move forward than they were attacked by a considerable body of infantry, cavalry, and artillery, who bad been hastily assembled from the nearest towns. The Dutch troops maintained the contest with much obstinacy; but they were gradually fatigued by the steady opposition they encountered, and re- tired six miles. In the night they evacuated the fort of Helder, of which the British took posses- sion on the morning of the 28th. A detachment from the British fleet, commanded by vice- admiral Mitchell, now entered the Zuyder Zee, by the strait of the Texel, to attack the Dutch fleet under admiral Story ; who, instead of re- tiring for safety to any of the ports, or to the shallow water with which that

sea abounds, sur- rendered the whole fleet, on the 30th of August, without firing a gun, under pretence tliat his sea- men were mutinous and would not fight. Had the expedition terminated here it might have been regarded as extremely fortunate, and as establishing the power of the British navy with- out a rival. But it was resolved to follow up this first success by an eff'ort on land to restore the authority of the Stadtholder, and the ancient government of the United Provinces. Many circumstances were hostile to this enterprise. The whole army had not been sent at once from Britain. As no more than the first division had arrived, the troops could only rest upon the ground they had gained till reinforcements should be sent. The terror arising from the first ap- pearance of an invading army was thus allowed to pass away, the friends of the Stadtholder were discouraged, while leisure was aff"orded to the enemy to adopt effectual measures of defence. The place where the landing was effected was well chosen for an attack upon the Dutch fleet; but for an invasion, with a view to the restora- tion of the Stadtholder, it was the worst that could have been selected. North Holland, at the extremity of which it was made, is a narrow peninsula, every where intersected by canals and ditches, of about forty miles in length. Here the invaders might be detained, and even suc- cessfully resisted, by a force greatly inferior to their own. This also was the quarter of the country the most unfavorable to the cause of the Stadtholder. The rainy season too was approach- ing, which renders a winter campaign in Holland almost impossible.

Amidst the pressure of the difficulties which surrounded them, the French directory hesitated much about undertaking the defence of Holland ; but the place, and the time of landing the in- vading army, soon determined them. General Brune was sent with troops to support the Dutch general Daendels. General Abercromby, in the mean time, remained upon the defensive at Schager Brug, waiting for reinforcements. His inactivity encouraged the enemy, on the 10th of September, to venture an attack upon his position. They advanced in three columns, two of Dutch, and one of French troops. They were repulsed, however, in all quarters, and retired to Alkmaer. Oi» the 13th the duke of York arrived with ad-

ditional troops, and assumed the chief command. The Russian auxiliaries having also arrived, ol- fensive operations were immediately resolved upon. On the 19th the army advanced. General Abercromby commanded the left, which proceed- ed along the shore of the Zuyder Zee against Hoorne. The centre columns were commanded by generals Dundas and Pultney ; and the right wing, consisting of Russians, was commanded by their own general, D'Herman. By some strange misunderstanding, the Russians ad- vanced to the attack soon after 3 o'clock A. M., which was some hours previous to the movement of the rest of the army. They were successful m their first eff'orts, and obtained possession of the village of Bergen ; but pressing

eagerly forward, and being vmsupported by the other columns, they were nearly surrounded. Their commander was taken prisoner ; and, though the British ca-me in time to protect their retreat, they lost at leasˆt 3000 men. This failure on the right obliged the British commander-in-chief to recal his troops from the whole advanced positions they had gained, though general Abercromby had actually taken Hoorne with its garrison, and although general Pultney 's column had carried by assault the principal position of the Dutch army called Ourds Carspel. The severity of the weather prevented another attack till the 2nd of October, when, after an engagement that lasted from 6 A. M. till 6 P. M., the British army succeeded in driving the united Dutch and French troops from Alkmaer and the villages in its neighbour- hood. The contestwas chiefly conducted amongst the sand hills in the vicinity of the ocean ; and the battle was maintained with such obstinacy, that the fatigue of the troops, with the difficult nature of the country, prevented the British from gaining any great advantage in the pursuit. The retreating army immediately occupied a new position between Baverwyck and Wyck op-zee. The duke of York once more attacked them on the 6th ; and after an obstinate and bloody en-gagement, which was maintained till night, he remained in possession of the field. But this was the last success of the invaders. Finding himself unable to make farther progress, in con- sequence of the increasing numbers of the enemy, the impracticable nature of the country, and the badness of the weather, which durmg the whole of 1799 was unusually severe, the duke of York retired to Schager Brug, and waited for orders from England to return. He was, in the mean time, closely pressed by the united Dutch and French forces, so that his embarkation must have been attended with much hazard. He therefore entered into a convention with the French and Dutch generals; by which it was agreed, that they should no farther molest him in his retreat ; that, in return, he should not injure the country by breaking down any of the dykes which pro- tect it against the sea ; and that Great Britain should restore to France and Holland 8000 pri- soners of war, taken previous to this campaign.

In the view of our domestic concerns every other consideration was at this time absorbed in the question of a legislative union with Ireland. The late rebellion, and the fear that through the machinations and sid of the French, Ireland

might be separated from the British empire, made this object, whicli should have been effected three centuries before, of the utmost moment at the present era. Some preliminary discussion was introduced in a debate in the

English house ot commons on the 23rd of January, 1799; and llie subject was again laid before the house on tiie 31st of the same month, by Mr. Pitt, and approved of by a majority of 145; the measure was discussed in the house of lords, and met with a similar approbation. In the Irish house of commons, however, which was opened on the 22nd, with a speech from the lord-lieutenant, in- directly announcing the measure, the reception it met with was unworthy the dignity of a legis- lative assembly. Instead of that dispassionate consideration which such an important measure deserved, it was opposed with the utmost vio- lence ; and the enemies of the measure endea- voured, by every possible art, to kindle the pas- sions and prejudices of the people of Ireland into a flame. The discussion did not close till noon the following day, when tlie address was carried by a majority of only one. Upon this, ministry desisted from the immediate pressure of the measure, which, however, was soon after effected. See Ireland.

*Meanwhile, the report of a committee of the British house of commons clearly developed the views and intentions of the Irish traitors. On tlie 19th of April the report was taken into con- sideration; and Mr. Pitt moved for a bill to renew and amend the bill passed in the thirty- eightli of George III., for securing and detain- ing persons accused of sedition, &c. The reso- lutions passed, and a bill was brought in by the lord mayor of London, for carrying the latter part of them into eff'ect. Several other measures v/cre adopted, which operated as a restraint upon liberty, but which were justified by the formid- able appearance whicli treason had assumed. The finances of the year 1799 were introduced by a notice given to the house of commons on the 2Gth of November by the chancellor of the ex- chequer, that on that day fortnight he should make a statement of the whole ways and means of the year. The plan which he meant to follow was that of raising a considerable part of the supplies within the year, tiie principle of which had already received the sanction and approba- tion of the house. While the principle remained ilie same, the mode of raising the supply w;is rendered less exceptionable than in the year 1798. '"or this purpose the assessed taxes were repealed, and a general tax was imposed on all the branches of income. No income under £60 was subjected to any contribution, and the scale of modification was extended to ,£200, after which a tentii part of the contributor's income was exacted. The mode of obtaining this con- tribution differed from that pursued in the assessed taxes, as, instead of trebling the amount, t!ie statement of income proceeded from the party himself, which it was in the power of com- missioners appointed for the purpose, and sworn to secrecy, to return, if they tiiought that a false statement was given, or to demand a specification of income. A bill had been brought in during the last session for the redemption of the land- Voi.. *

tax. Its object was, by absorbing a large quan- tity of stock, to raise its

price, and in the end to transfer a large portion of national debt into a landed security. The annual amount of the land- tax was £20,000,000. It was proposed to sell or commute this annuity at twenty years' pur- chase, at three per cent, stock, which the govern- ment was to take ill payment at fifty. The pre- ference was given to the owner of land ; and if within a certain period he should not be able to purchase, a further period was allowed.

VVe have already hinted at the successes of the combined powers on the continent; but in the end of tliis year a misunderstanding took place between the Austrians and Russians, in consequence of which the emperor Paul aban- doned the coalition. About the same time Buonaparte, after being disappointed in his projects on Egypt, particularly by the valor of Sir Sidney Smith (see Acre), and hearing of the reverse of fortune which the French armies had sulfered in Europe, left his army in Egypt ; returned to France ; and, abolishing the direc- tory, obtained tlie appointment of an executive commission of three consuls, of which he himself was the chief, or first consul. To render himself popular in this high station, and to cast the odium of continuing the war upon others, he addressed a letter to the king of Great Britain, on the subject of a general peace ; but the British cabinet conceived that the new French govern- ment could as yet give no security for terms of peace. Lord Grenville accordingly replied to the chief consul's letter ;» informing the French minis- ter, that his majesty, in entering into the contest, ' had no other view than that of maintaining, against all aggression, the rights and happiness of his subjects ; that for these he had contended against an unprovoked attack ; and that for the same objects he was still obliged to contend ; that he looked only to the security of his own dominions and those of his allies, and to the general safety of Europe. Whenever he can judge tliat security can in any measure be ob- tained, as resulting either from the internal situation of that country, from whose internal situation the danger has arisen, or from such other circumstances of whatever nature as may produce tlie same end, his majesty will eagerly embrace the opportunity to concert with his allies the means of immediate and general paci- fication.'

This correspondence occasioned very consi- derable debates in the British parliament ; but ministry had still a great majority, and prepa- rations were made for prosecuting the war. Austria also continued the contest, but Buona- parte was now (1800) at the head of the French army, which quickly retrieved the losses of the preceding campaigns. Suffice it here to say, that after the decisive battle of Marengo, in the mouth of June, Austria was obliged to sue for peace ; while the northern powers, in consequence of Buonaparte's victorious career, seemed eager to court his favor, by forming desi'ns against this country. The emperor Paul, naturally fickle and hasty, formed a close alliance with him ; and in conjunction witli the Danes, Swedes, and Prussians, bcean to renew their former

ments, for establishing a new code of maritime laws, inconsistent with the rights, and hostile to the interests of this country. Towards the end of this year a scarcity of provisions pressed heavily on all ranks of people in Britain. By a long and almost constant series of rainy weather the crop of 1799 was materially injured, and the harvest retarded. The crop of 1800 was nearly as deficient. The people who had now expected relief grew fretful by calamity ; and being per- suaded that the scarcity was not altogether oc- casioned by the failure of the crops, but by artful combinations, a general odium was raised against all who traded in grain or any of the necessaries of life : they were held up to popular oblo- quy as monopolists and forestallers ; the sole authors of the miseries of the people; men for whose crimes it was impossible to devise an adequate punishment. Parliament was sum- moned, chiefly, it is ffrobable, to take this subject into consideration; and by prohibiting the ex- portation of grain, and granting a bounty of importation, &c., the horrors of a famine were at least averted.

The great and important measure of a legisla- tive union with Ireland having been fully settled in the course of the preceding year, the united parliament of Great Britain and Ireland, now called the imperial parliament, assembled on the 2nd of February, 1801 ; but another event now took place, which occasioned considerable agi tation in the minds of the public : this was a schism in the cabinet. Mr. Pitt and his associates had considered it necessary, for completing and giving effect to the measures of tlie Irish union, that the benefit of full freedom should be ex- tended to the Catholics ; but, finding it impossi- ble at present to attain this object, they did not think it consistent with their duty any longer to retain responsible situations in his majesty's councils. They therefore determined to give in their resignation as soon as the state of public business would allow. Their successors were Mr. Addington, lord Hawkesbury, lord Hobart, lord Eldon, earl St. Vincent, &c. The new ar- rangements were, however, retarded by the ill- ness of his majesty, and thus several of tne ministers remained in their situations till all appre- hensions with regard to his recovery were removed.

It was now eight years since Britain had been compelled to take up arms against the invidious and hostile designs of France. During that short period she had been exposed to perils novel in their nature, and menacing in their appear- ance, partly arising from the open and determined hostility of external enemies, and partly from the insidious machinations of intestine

foes. She was now about to be assaulted by a combination of the northern powers, who in contradiction to the whole system of maritime jurisprudence, as acknowledged and practised by the nations of Europe, questioned her right of searching neutral vessels, thereby aiming an indirect blow at the superiority of her naval power. They aflirmed that a belligerent had no right to search vessels escorted by a ship of war, that being deemed a sufficient security that the convoy contained no contraband goods ; they moreover declared, that it was their determined resolution, if Great Britain

refused to agree to their alleged neutral rights, to assert them by force of arms. It was not to be expected that Britain would be awed by the menaces of this hostile combination, and relin- quish a right sanctioned by the practice of all belligerent nations, and founded on the plainest and most unalterable principles of the law of nations. In Russia the subjects of Great Britain were robbed of their property, detained in tedious imprisonment, and subjected to the caprices of a cruel, vindictive, and unreasonable tyrant. Al- though a change had now taken place in the British cabinet, the new ministry, who had always given their most decided and strenuous support to the measures pursued by Mr. Pitt, professed to have the same views, and to act upon the same principles. They repeatedly af- firmed that the dispute with the northern powers was so important to the prosperity and glory of Britain that it could neither be relinquisiied nor compromised ; that, since the combined powers were determined to persist in their unwarrantable pretensions, it became necessary for Britain to assert her rights by force of arms. A formidable fleet was assembled at Yarmouth, which was en- trusted to Sir Hyde Parker, and under him to lord Nelson, and rear-admiral Greaves. They sailed from Yarmouth on the 20th of March, and, forcing the passage of the sound, anchored before Copenhagen on the 30th of the same month. The Danes seemed to have made very formidable dispositions : they had assembled ships of the line, pontoons, galleys, fire-ships, and gun-boats; which were flanked and sup- ported by extensive batteries, some of which mounted from fifty to seventy pieces of cannon. They were attacked by twelve sail of the line and four frigates, commanded by lord Nelson. The battle commenced at ten o'clock on the 2nd of April, and continued with great fury for four hours. The result was the capture or destruction of eighteen sail of Danish ships, including in that number seven sail of the line, together with 3000 men killed and wounded : the killed on the part of Britain were about 230, the wounded 700. This victory struck a terror into the confederates, and was immediately followed by an armistice for fourteen weeks. In the mean time, the em- peror Paul had died suddenly on the 23rd of March, and was succeeded by his son Alexander, who disowiied the confederacy against Britain, and matters were adjusted with Russia in the month of June.

While the British arms were thus acquiring additional lustre before

Copenhagen, th« valor and courage of her land troops were crowned with equal glory in Egypt, which see. Accounts of the final success of our troops in that quarter reached England the day after the preliminary articles of peace had been signed in London, by M. Otto on the part of the French republic, and lord Hawkesbury on that of his Britannic majesty. By these Great Britain agreed to restore all her conquests except the island of Trinidad, and the possessions of Ceylon : the Cape of Good Hope was to be a free port to all the contracting par- ties : the island of Malta was to be restored to the order of St. John of Jerusulem. Egypt was given back to the Ottoman Porte : and Portugal

was to be maintained in its integrity : the ter- ritory of Rome and Naples was to be evacuated by the French : and France was to recognise the republic of the Seven Islands. The tishery of Newfoundland was established on its former footing; and, lastly, the contracting parties were to name the plenipotentiaries to meet at Amiens, for the formation of a definitive treaty. These articles were attacked in both houses of the British parliament, as leaving France in posses- sion of such power as she might renew the war at pleasure. The definitive treaty was, however, ratified in IMarch 1802, and that while the first consul displayed his restless ambition in sending a large armament to St. Domingo, whioh obliged Britain to send a powerful fleet to watch its motions.

10. From the peace of Amiens to the 'Regency. — Though the people of Britain and France now seemed to congratulate each other on the return of peace, the spirit of the French government was manifest, in shutting their ports more closely than during the war; vainly imagining that they would thus curb the British commerce, and dis- regarding the loss which their own merchants sustained. Towards the conclusion of this year the subjugation of Switzerland, by the consular armies of France, attracted general attention ; and, while other nations beheld in silence the outrages of a conqueror whose power they had so recently felt, the unbroken spirit of the Bri- tisii, who had closed the war with the most brilliant achivements, ventured loudly to sym- pathise with the brave Helvetians. Govern- ment remonstrated on the subject with the ruler of France, but, as they did not follow up their remonstrance with hostile measures, it pro- duced no effect; and Switzerland was placed in the hands of the first consul's dependents. About this time, also, another singular instance of the unprincipled ambition of Buonaparte afforded matter for satirical remark. Tlie French nation declared him consul for life, with the power of nominating his successor. Upon these and other parts of his personal and political con-

duct, the general feeling of Britain was expressed by the periodical journals in terms so offensive to his pride as induced him to propose that some restraint should be put on tiie liberty of the British press. He was still more chagrined in a contest of argument and eloquence which he foolishly commenced against the writers of Eng- lish newspapers, through the medium of the French official journal. This was only a pre- lude to a renewal of the more serious warfare. On the 8th of March, 1803, orders were given by the British government for hostile prepara- tions, France, during the peace, had been per- petually aggrandising herself; and arrogated a right to interfere in continental affairs, which she denied to Great Britain ; slie had adopted regulations hostile to our trade; endeavoured to establish spies in the ports of this kinjidom ; and avowed new projects of subjugating Fgypt. The general grounds of war, therefore, for the great object of national independence, had been long prepared ; but a matter of comparative insig- nificance drew them to a point. In the treaty of peace the evacuation of Malta had been sti-

pulated, on tlie fulfilment of certain preliminary conditions ; these conditions were unfulfilled, and the subsequent conduct of France and Spain had rendered their fulfilment impossible. Yet, even in this case, we were called upon to per- form our part of the contract. Had Great Bri- tain submitted to this she might have lengthened a little the period of peace, but her independence would have been for ever forfeited ; for the dis- pute respecting ˆNlalta, like the precedency of an ambassador, or the priority of a title, however trifling it may appear to superficial minds, in- volved the mighty question of our existence as a primary or secondary state. A fruitless nego- ciation of two months only served to aggravate the evil; as it drew from the French consul an insult to the nation in the person of lord Whit- worth, its representative, and boastful threats of invasion. Preparations, on both sides, for some time constituted the only operations of war ; and the enemy, by keeping his fleets in port, afforded us no opportunity of meeting them at sea. One novelty in a rupture of peace, however, occurred : the imprisonment of every British subject, with- out regard to sex or description, who was found in France.

Both iiouses of the British parliament were at this time singularly unanimous in their senti- ments for the vigorous prosecution of the war. Even the principal members of the opposition, with few exceptions, seemed to vie with each other in support of the ministry. Among the preparations for the defence of the country, both ordinary and extraordinary militia were called out ; a new body of troops was raised by ballot, called the army of reserve; and volunteers were raised throughout the island. In the mean time the French ports were closely blockaded, and the island of St. Lucia, Tobago, St. Pierre, and Miquelon, with the settlements of Demerara and Essequibo, were surrendered to the British arms. As the only step of

retaliation which the French could now take they seized the electorate of Hanover, where they displayed the most im- placable vengeance.

. Soon after his majesty's message, on the 8th March, ministers found it expedient to make overtures to Mr. Pitt, inviting his return to office; but they were rejected on the ground, as he al- leged, of their not appearing to come from ' the highest quarter;' similar overtures were made to lords Grenville and Spencer, and with the same result. Some changes after this took place in the cabinet, which had no tendency to strengthen the hands of administration. In the period of suspense, which preceded the declaration of war, tlie precautionary measures adopted were now generally thought inadequate to the occasion ; in fact, in most important branches of the public service, they were lamentably deficient. An en- quiry which had been instituted by lord St. Vin- cent, into the abuses in the naval department, had led to a system of retrenchment, which had been so rigorously enforced, that, on the renewal of hostilities, the royal arsenals were not pro- vided with the quantity of stores necessary for the equipment of the fleet ; and, in the bustle of preparation, many ships were sent to sea which were actually in a course of repair. With respect

also to the military force, the augmentations were limited to the purposes of defensive warfare. On the other hand, a few days after his majesty's message had been delivered to parliament, the French admiral Linois was despatched from Brest for the East Indies with a strong squadron, having 6000 troops on boSird, destmed to strengthen the French colonies in the east, and to reinforce the Dutch garrison at the Cape. Orders were issued by the French government to increase the forces of the republic to 480,000 men. The army of Italy was considerably aug- mented ; and large detachments were forwarded towards Tarentum, and all the strong posts in the kingdom of Naples which lay on the Adriatic. An army had also been ordered into Holland.

In Hanover the native army made dispositions for a brave resistance, though it proved ineffec- tual against so overwhelming a force; and the French troops ultimately took possession of the whole electorate, together with all the artillery, baggage, and ammunition : they thus were enabled to control the navigation of the Elbe and Weser, and to levy considerable contribu- tions, under the shape of loans, on the rich Hanse towns of Hamburg and Bremen.

Other nations soon became involved in the con- test. On tlie 17th of June his majesty an- nounced to parliament, that he had communicated to the Batavian government his disposition to respect their neutrality, provided the French government would do so also, and. would with- draw their troops from the Dutch territory ; but, as this proposal had not been complied with, he had deemed it expedient to recall his minister from the Hague, and to issue letters of marque and reprisal against the Batavian republic. In conformity to another message on the following day, recommending a large additional force to be raised for the defence of the country, ministers proposed to levy an army of reserve, consisting of 50,000 men, whose services during the war should extend to Great Britain, Ireland, and the islands of the Channel. Various objections to the bill were urged in both houses ; but it passed without a division, arid in the course of the ses- sion was followed by another, enabling his majesty to raise a levy en masse of all his sub- jects in case of invasion. The necessity of this latter measure, however, was in part superseded by the renewal of voluntary associations.

On the 23d of July an insurrection broke out in Ireland, which, from its supposed connexion with the projects of the enemy, created consider- able, and, as it appeared afterwards, undue alarm. Its instigators were a band of political enthusiasts, whose director and principal mover was Mr. Robert Emmett, a young man of distinguished talents and brilliant imagination. They had formed the design of establishing an independent Irish republic ; and hoped to accomplish it by striking a decisive blow in the capital, possessing themselves of the seat of government, and pro- claiming a new constitution which they had pre- Dared. An armed mob collected for this purpose, which marched through the principal streets of Dublin, unresisted, on their way to the castle. They, however, soon lost all sense of subordina- tion to their leaders, and meeting a carriage, in

which were lord Kilwarden and his nephew Mr. Wolfe, they dragged them from it, and butchered them on the spot. One circumstance attended this act of atrocity which showed that the in- fatuation of popular fury could not wholly ex- tinguish the instinctive generosity of the Irish. The daughter of the venerable and ill-fated nobleman was likewise in the carriage ; and, to his earnest appeal to their humanity, they re- plied, that they would sacrifice him and his male companion, but they would spare the lady. They then desired the distracted daughter to escape as well as she could, and allowed her to pass through their entire column without injury or interruption. The insurgents were at length dispersed by about 120 soldiers, and the whole insurrection was speedily extinguished. On the communication of this event to parliament, a bill was passed fortryingtherebelsby martial law, and another for suspending the habeas corpus act in Ireland. Several of the leaders of the insurrec- tion, among whom was Emmett, having been ap- prehended, were tried for high treason

in Dublin by a special commission, and underwent the sen- tence of the law.

In consequence of the seizure of Hanover by the French armies, and the interruption of British commerce on the Elbe and Weser, a squadron now blockad'ed the mouths of these rivers ; and another compelled the French finally to abandon the once important colony of St. Domingo. The negro chiefs, on this, issued a proclamation declaring the island independent. See Domingo.

In the East Indies, under the able manage- ment of the marquis W^ellesley, Great Britain triumphed still more decidedly. To counteract any danger from a possible union of the Mah- ratta against the British interest, the marquis Cornwallis, so far back as 1789, had concluded the treaty of Poonah, which was afterwards frus- trated by the ambition and rapacity of Dowlut Rao Scindia, who had succeeded Madhagee Scindia in 1794, and whose conduct tended to favor the designs of France against the British empire in India. In pursuance of the same course of policy, the marquis Wellesley formed an alliance with the peishwa, and with the nizam of the Deccan, against Scindia, Holkar, and the rajah of Berar, supported by the French general Perron. The peishwa, having in 1802 been ex- pelled from his dominions by Holkar, negociated a subsidiary treaty with the English company, which was concluded at Bessein on the last day of the year.

According to a stipulation of this treaty, a plan for the restoration of the peishwa was adopted, and immediately carried into effect. Orders were despatched to general Stuart, com- manding at Hurryhen, directing him to detach from the main body a considerable force, for the purpose of advancing into the Mahratta do- minions. The command of this detachment was confided by lord Clive to major-general Arthur Wellesley, whose extensive local knowledge, and personal influence among the Mahratta chieftains, were peculiarly calculated to ensure success.

Holkar having precipitately retreated at tho

approach of the British, general Wellesley ad- vanced rapidly to I'oonah, which was rc'euiered by Its sovereign on the 13th ol" May. Mean while Scindia and the rajah of Berar were ne- gociating an alliance with Holkar, of which the governor-general happening to obtain certain in- formation, it was resolved to employ the whole military force of the three presidencies, Madras, Bombay, and Bengal, to break a confederacy, rendered

particularly dangerous by the junction of]‘erron, who had obtained the power and in- fluence of a sovereign prince, and, moreover, possessed an army trained up in European dis- cipline. At this critical moment the French ad- miral Liuois, on arriving with a reinforcement of troops before Pondicherrj’, was prevented from forwarding them ; and, on the arrival of intelli- gence of the renewal of hostilities, all those whom he landed were made prisoners of war. While negociations were carrying on with the confederate chieftains, a comprehensive plan of operations was formed by the British, for a com- bined attack on the united armies in the Deccan, on the French establishment in the Douab, and on every assailable point in the vast territories of Scindia and the Berar rajah in Hindostan. When tile period arrived for commencing hostili- ties, general Wellesley, who was opposed to the two latter chieftains, marched against the fortress of Amednughur, which he reduced on the 12th of August, and then advanced to Aurungabad. On the 23d of September he extended the foun- dation of his military renown by a decisive vic- tory at Assaye, over the combined forces of tlie enemy, consisting of more than six times the number of his own army.

In the mean time the Bombay army had been successful in the Cuzzerat, and speedily gained possession of the territories of Scindia in that province. In the months of September and October the town and province of Cuttack were wrested from the rajali of Berar, by a British force under the command of lieutenant-colonel Harcourt. In the north of India, general Lake, at the head of the Bengal army, reduced the strong fortress of Ally Ghur, after compelling to a precipitate retreat the forces commanded by the French general Perron, who from that moment lost his reputation and influence in India, and forfeited tiie confidence which the native powers had reposed in him. Pursuing his successes, the British general advanced towards the city of Delhi, and gave battle to tlie army of Scindia, commanded by Louis Bourguein ; and, after a severe conflict, obtained a complete victory, which prevented the release of the Mogul enij)e- ror Shah Aulum. He then reduced the fort of Agra; and, on the 1st of November, defeated the remainder of Scindia's forces, in which were hf- teen of Perron's regular battalions, at Laswaree. In the mean time general \ ellesley, following up his victory at Assaye, drove the rajah of Berar into his own territories, and encountering him on the 28tli of November, in the plains of Argaum, obtained another splendid victory, which was followed by the capture of Garril Ghur, one of the strongest fortresses in India.

These successes compelled the rajah to sue for])cacc, which was concluded on the 17tii of De- cember. By its conditions he renounced flic

confederacy against the English, ceded the pro- vince of Cuttack, with some other territories, and engaged never to take into his service the subject of any state at war with Great Britain. His example was speedily followed by Scindia, who, entering into similar engagements respect- ing the Shah, and the employment of foreigners, ceded all his forts, territories, and rights in the Douab, and in the distr.cts northward of the do- minions of the rajahs of Jeypoor and Judpoor, together with Baroach in the Guzzerat, and Amednughur in the Deccan. Thus, after a brilliant campaign of five months, this powerful confederacy was dissolved by a treaty which ex- tended and consolidated the dominions of the British, while it annihilated the influence of the French in India.

During this war hostilities broke out in Cey- lon between the British and the king of Kandi, who had refused to give satisfaction for the seizure of some property belonging to the former. The king fled from his capital on the approach of the army sent against it, and his throne was occupied by a new claimant, who purchased his elevation by a grant of territory. The exiled monarch agreed to an arm istice ; and afterwards taking advantage of the absence of the British forces, who had been \vithdrawn in consequence of sick- ness, he invested the fort of Kandi, and, after promising a safe retreat

to the garrison, murdered the new king, and about 170 Europeans. He afterwards invaded the British possessions, and met with a severe repulse ; but he succeeded in re-establishing himself on the throne of Kandi.

*On the meeting of parliament in November, 1803, the topics of the speech from the throne were, the successes in the West Indies, the suppression of the Irish insurrection, and the conclusion of a convention with Sweden, for the adjustment of certain differences arising from an article in *he treaty of 1661 relative to maritime riglits. Referring to the threat of invasion, his majesty declared, that, as he and his brave and loyal people were embarked in one common cause, it was his fixed determination, should occasion arise, to share their exertions and dangers in defence of their constitution, religion, laws, and independence.*

When the usual addresses had been voted, acts were passed for continuing the suspension of the habeas corpus act, and the existence of martial law in Ireland. And, as the probable duration of the war demanded an augmentation of the army, troops were voted to the amount of 129,000 men for Great Britain and Ireland, and 38,600 for the colonies and dependencies, exclusive of India. On this occasion Mr. Wind- ham inveighed wifli great severity against the military system adopted by ministers, and pointed out the inferiority of volunteer associa- tions and bodies of reserve to a regular army of genuine soldiers, disciplined for offensive as well as defensive warfare. In connexion with these military arrangements, a bill was intro- duced on the 1st of February, 1804, for conso- lidating and explaining the existing laws relative to the volunteers. In the course of the debates to which it gave rise, Mr. Pitt proposed that thi description of force should be subjected to stricter discipline and more activf sorvicc, that*

it might be more nearly assimilated with the re- gular army; but his amendments were rejected. On the 14th of February the king was taken suddenly ill while at the queen's palace ; and the public sympathy was deeply excited by an appre- hension of the return of the malady with which he had been formerly afflicted. The attack, however, was so light, that there was no necessary suspen- sion of the royal functions ; and in the course of a montli the symptoms of convalescence were so decided as to afford hopes of a rapid and com- plete restoration to health.

Mr. Pitt now began to institute those enqui- ries into the conduct of ministers, respecting the defence of the country, which resulted in the

dissolution of the Addington administration. On the 13th of March he moved for an enquiry into the administration of the affairs of the navy. He called for the production of an account stat- ing the number of ships and armed vessels in commission at three different periods, 1793, 1801, and 1803, from which he thought the re- sult would be a conviction, that, considering the existing dangers of the country, its naval re- sources were more inadequate at the present than at any former period. The board of admi- ralty had considered gun-boats peculiarly ser- viceable for resisting invasion, yet in the course of a year they had built only twenty-three, while the enemy in the same space of time, had con- structed 1000 ! From the moment that hostilities were renewed, our navy ought to have been in- creasing instead of diminishing. Notwithstand- ing which government had only contracted for the building of two ships of the line in the mer- chant- yards, when it %vas well known, that during a war the building of ships was always nearly suspended in the king's yards, which were then wanted for repairing damages which our ships might sustain in the service. It was also worthy of remark, that in the first year of the late war our naval establishment was increased from 16,000 to 76,000 seamen, whereas, having begun the present war with an establishment of 50,000, we had augmented them in the course of the last year to only 86,000 men.

Mr. Tierney, in resisting this attack, enume- rated the efficient naval force, and asserted that it was adequate to all the purposes both of defence and aggression. Some of his statements, indeed, were controverted by admiral Berkeley, who urged the necessity of immediate enquiry. Mr. Sheridan vindicated the admiralty, and liinted, that lord St. Vincent had rendered him- self obnoxious by his laudable zeal in the cor- rection of abuses, and his hostility to all corrupt and fraudulent practices. In that eulogy Mr. Fox also concurred, though he was disposed to believe that the maritime defence of the coun- try had been neglected. The motion of Mr. Pitt was negatived by the small majority of seventy-one, which indicated that the influence of ministers was on the decline.

This change became more apparent in a divi- sion on Mr. Fox's motion for an improvement in the defensive system of the country, and in that which took place on the following day (April 25th) in a committee on the army of reserve suspension bill, when the ministerial majority was reduced 'o thirty-seven. Mr. Addington

then determined on retiring from administration, when he had adjusted the financial concerns of the year. The supplies were estimated at £36,000,000 for Great Britain alone, and tlie ways and means consisted of certain additions to the war taxes, a loan of £10,000,000, and a vote of credit amounting to £2,500,000. On the 3d of May the thanks of both houses were voted to the civil and military officers of the army on the motion of

ministers, which was the last act of the Addington administration. On the 12 th of May it was announced that Mr. Addington had resigned the office of chancellor of the exchequer, and that Mr. Pitt was nomi- nated his successor.

On the 27th of March, this year (see France), Buonaparte was addressed by his subservient senate with a proposal for him to assume the title of emperor of France ; and this was accord- ingly effected 1st May.

In the new British ministiy, lord Hawkesbury exchanged the foreign for the home department; the seals thus vacated being given to lord Har- rowby. Lord St. Vincent was succeeded in the admiralty by lord Melville; the earl of West- moreland was lord privy seal, and lord Eldon still lord chancellor ; the duke of Portland also continued president of the council; lord Castle- reagh of the India board ; and the earl of Ilard- wicke lord-lieutenant of Ireland. Mr. Canning was treasurer of the navy.

On the 5tli of June the minister produced his plan for raising and supporting an additional permanent military force. Though a real dif- ference of opinion might easily exist on this sub- ject, it was scarcely possible that something of personality should not blend itself with the long protracted discussions on this bill. Mr. Fox and Mr. Windham agreed in the principle, but found much to censure in many of its provisions. It was also assailed by the late ministers, Mr. Yorke and Mr. Addington ; the latter of whom enlarged much on the dangerous policy of main- taining an immense military regular force, and of reducing the militia, the ancient constitutional safeguard of the nation.

The bill was ably defended by Mr. Canning, but chiefly by Mr. Pitt himself, who spoke m some chagrin at the combination formed against him, before he had 'carried into effect any one measure which could be characterised as good or bad. Sincere as he had been in his wishes for an extended administration, such conduct led him to question the possibility of harmony in a cabinet formed of such discordant materials. Mr. Fox, in adverting to this part of Mr. Pitt's speech, said, ' that he believed it to be the opinion of most persons of reflection, that if ever there was a time when it was indispensable that the government should consist of men most respected and distinguished for their ability to serve the country, it was the present moment. Notwithstanding the extraordinary talents of the present minister, it was not to be denied that the country had an inefficient administration. The refusal of certain gentlemen to form a part of that administration, which they could not do without abandoning a principle which, under existing circumstances, seemed to them essential to the public safety, was highly honorable to

their characters. As to himself, he was perhaps less eager than the right honorable gentleman respecting the objects of political ambition ; and age liad diminished his propensities to engage in such a contest :

Le&it albescens animos capillus Letium et rixas cupidos protervse.

The bill at length passed on a division of 265 to 223 voices.

Mr. Wilberforce, having reason to expect a more cordial support from the present than the former minister, again brought forward, at a late period of the session, his almost hopeless motion for the abolition of the slave-trade, which he en- forced with all his accustomed ardor and elo- quence in the cause of humanity. It received the support of both Mr. Pitt and Mr. Fox, and the bill brought in for that purpose passed by a decisive majority of seventy-ftve to forty-nine members. But on its transmission to the upper house, though sixteen years had elapsed since the question was first agitated, it was postponed, on the motion of Lord Hawkesbury, for maturer investigation in the ensuing session.

Two years had scarcely elapsed since the sum of £990,000 had been voted by parliament to make good the deficiencies of the civil list. It now appeared by a statement of the chancellor of the exchequer, in a committee of supply, July 2d, that the arrears again amounted to the sum of £590,000 and upwards. On the present occasion, Mr. Pitt not only moved for a grant equal to the debt, but an annual augmentation of £60,000 ; and also to exonerate the civil list from a variety of charges which it was now first discovered did not properly belong to it ; — all which was voted with singular facility. Exclu- sive of the vast sums granted from time to time for the discharge of arrears, tiie droits of the crown and the admiralty had amounted to many millions, offering, as it were, a perpetual bribe for eternal war. The civil list of Ireland was fixed at £225,000 ; and the revenues of Lancas- ter, of Cornwall, of the crown lands, of the Leeward Island duties, of fines, &c., must be added to the amount.

On the 10th of July lord Castlereagh brought before the house c£ commons tiie financial state of the affairs of the East India Company. He allowed that two years ago he had expressed his firm, conviction, not only that the public would receive a participation of £500,000, but that the company would be able to establish a sinking fund of £2,000,000 for the extinction of their debt ; but all this was in contemplation of the continuance of peace. But the resumption of hostilities had caused a great deficiency,

instead of a great surplus, rendering a loan of £1,200,000 in India a measure of urgent and absolute ne- cessity.

Lord Archibald Hamilton observed, that the house was annually amused witli splendid pro- mises of the extinction of the company's debt, and of the approach of that era when India would contribute to tlie expenses of the empire. On the contrary, the debt was last year£ 18,000,000 and now increased to £10,000,000. Mr. Francis attirmed that the mischief was in a state of pro- gression. Every year had witnessed tlie dete-

rioration of the company's finances. At the renewal of the charter it had been provided, that this country should receive £500,000 annually, which, after the first year, however, was never paid. It had been the uniform practice, for the last twenty-one years, to announce the approach of prosperity, by estimates which subsequent events had not justified. Lord Castlereagh entered into long details to prove, that neither he nor his predecessor, lord Melville, had ever held out any promises which would not have been ful- filled, if it had not been for wars that could not have been foreseen. The resolutions proposed by the minister were carried without a division. On the 3 1st of July parliament was prorogued, the king expressing his confidence, that, in the issue of the present contest, an effectual barrier would be finally raised against the unbounded schemes of aggrandisement and ambition, which threatened every independent nation that yet re- mained on the continent.

Mr. Pitt now bent all his efforts to renew his favorite plan of a coalition against France; and by augmenting the regular army, and re- storing the navy, to afford the allies of Great Britain the surest prospects of support.

It was no easy task to repair the mischief which the late false system of economy had oc- casioned in the naval administration. The de- ficiency may be estimated from the single fact, that the naval stores, which the vigilance of the former admiralty had amassed, were sold at the peace, on the pretext that they were not worth the expense of warehouse room ; and agents from France were the principal purchasers. The difiierent convoys were unprotected ; the com- merce of Great Britain in every sea was exposed to the insults and depredations of the enemy ■ and the means for blockading the hostile ports were reduced to a shattered and mutilated fleet inadequately manned. On the appointment of lord Melville to the admiralty a total change of system took place ; the arsenals were replenished; orders were given for the construction of men of war and frigates in the king's yards, and the practice was revived of contracting for the build- ing of others in the merchant yards ; the pressing urgency for a strong reinforcement to the fleets was supplied by the purchase of East India ships; and the most judicious preparations were made for restoring to each vessel

in the service its full complement of men.

On the arrest and murder of the duke d'Eng- hien, the emperor of Russia caused a strong re- monstrance to be presented to the French go- vernment, and called on the princes of the Ger- man empire to demand satisfaction for the vio- lation of Its neutrality. The French government replied by observing, that the emperor of Germany and the king of Prussia, most concerned in the fate of Germany, had understood that the French government were authorised in arresting, at two leagues from the frontier, French rebels, who l)y their conduct had placed themselves ' out of the protection of the law of nations ;' a phrase which the French emperor did not after- wards forget teaching his enemies. He now fur- ther said, he had no account to render to the emperor of Russia, on a point wh'ich in no wise concerned his interests ; and ho was asked, what

need there could be of empty pretences, if the intentions of his imperial majesty were to form a new coalition ?

The appeal of the emperor of Russia to the diet of Ratisbon, failed to rouse the spirit of the Ger- manic body. The king of Prussia, whose influence in the north of the empire was paramount, evinced no disposition to resist the aggressions of the ruler of France ; and his minister, in con- junction with that of Baden, merely expressed a hope that the first consul would, of himself, give such a full and" satisfactory explanation, respect- ing the seizure of the duke d'Enghien, as might entirely correspond with the views of the em- peror of Russia. The other states, fearful of the renewal of a contest in which they might risk more than they could hope to gain, maintained an inflexible silence.

The king of Great Britain reminded the diet that a yet greater violation of the treaty of Lune- ville, and of the independence of Germany, had been committed by France in her unjustifiable seizure of the electorate of Hanover. The king of Sweden, as duke of Pomerania, expressed in still stronger terms his abhorrence of the con- duct of France, which he considerejl as doubly injurious to liimself, in his quality of a member of the Germanic body, and in his sovereign capacity of guarantee for the treaty of West- phalia.

But the influence of France seemed paramount in Germany : yet it was not so absolute as to leave her at full liberty to direct her whole force against England. In protesting against the out- rage committed against the law of

nations, the emperor of Russia had pressed for the execution of a treaty, of which the objects were — a guaran- tee of the independence of Naples, and an in- demnity to the king of Sardinia; and these de- mands provoked the first consul to remove into Italy some of the battalions destined for the in- vasion of England.

Austria, in the meanwhile, had been employed in repairing the losses which her armies had sus- tained in the late war, and in placing her military establishments on the best possible footing. She had been involved in a dispute with the elector of Bavaria, who, either stimulated by France, or calculating on her support, had oppressed the equestrian order in his newly acquired territories of Franconia. On the appeal of tiiat body, the emperor sent a dignified and energetic remon- strance to the court of Munich, and at the same time assured the complainants of his support. This mark of decision served to convince the government of France that there was a line be- yond which their aggression must not pass, so long as they deemed it expedient to remain at peace with Austria. France therefore expressed her displeasure at the conduct of the elector of Bavaria, and thus the affair terminated.

Spain, destined to be the first of European nations, who should effectively assail the gigantic power of France, now became involved in the contest. By tlie treaty of St. Ildenfonso, signed in 1796, she had agreed to furnish France in time of war with a certain contingent of naval and mi- litary force. Yet this treaty had not been acted upon in the present war ; and in the month of .July, this year, the Spanish governm'^nt gave assurances of

faithful and settled neutrality, and disavowed any orders to arm in their ports. In the following month, however, it was ascertained by the British admiral commanding the squadron ofl' Ferrol, that reinforcements of soldiers and sailors had arrived through Spain for the French fleets at that port, and also at Toulon. On this intelligence Mr. Frere presented two notes to the Spanish minis- ters ; but no answer was received to either of them. Towards the end of September it was discovered that very considerable armaments were preparing in the principal ports of Spain ; that three first-rate ships of the line had been directed to sail from Cadiz; and that orders had been given to arm the packets, as in time of war.

To the enquiries and representations grounded on this intelligence, no satisfactory explanations were given ; and strong measures of precaution were consequently adopted. In particular, the British admiral off Ferrol was instructed to pre- vent any Spanish ships of war from quitting that port, or any additional ships of war from entering it. At the same time orders were issued to all the British admirals and commanders, to exercise a scrupulous and indulgent forbearance towards the Spaniards, and official notice was

given to the court of ˆMadrid of these precautions, with an assurance that Great Britain still felt an earnest desire to maintain a good understanding.

The year 1804 was not signalised by any im- portant naval or military achievements. In the month of January the English settlement at Goree, on tiie coast of Africa, was taken by a small French force under the chevalier Mahee. On the 7th of Blarch captain Dixon, of his Ma- jesty's frigate the Inconstant, with a store-ship and some sloops under his command, arrived off the island, and, suspecting that it had fallen into the hands of the enemy, sent his first lieutenant to ascertain the fact. As that officer neither re- turned nor made the preconcerted signal, the captain commenced hostilities by cutting a ship out of the harbour, and stationing his small force in such a position as to cut off all succours from Senegal. On the following mornine:, as he was pieparing to attack the town, he was agreeably surprised to see the English colors hoisted over the French ; and shortly afterwards received in formation, that the garrison had capitulated to the officer sent on shore. Thus, without a blow being struck, the settlement was recovered, and 300 black and white troops v.-ere captured.

In the Indian seas an affair took place, which afforded a gratifying proof of British spirit and intrepidity. Admiral Linois, who, after his escape from Pondicherry, had plundered the set- tlement of Bencoolen, and committed many depredations on the company's trading vessels in those seas, was encouraged by his uninterrupted successes to cruise near the Straits of Malacca, for the purpose of intercepting the homeward- bound China ships. On the 14th of February a fleet of fifteen company's ships and twelve country ships, under the command of captain Dance, who being senior acted as commodore, came in sight of this hostile squadron, consisting of a line-of-battle ship, three frigates, and a brig. Captain Dance immediately made signal to form a line of battle ip close order. At sunset the

enemy were close up in the rear, and the country ships were then placed by the commodore on the lee-bow, for better protection. On the 15th at day break, the enemy were three miles to wind- ward, Wins to. Both fleets now hoisted their respective colors ; and at one in the afternoon captain Dance, not wishing to wait an attack, and apprehensive that his rear mi'ˆht be cut off, made signal to tack, bear down upon the French line and engage them in succession. In prompt obedience to the orders of tlieir commodore, the company's fleet bore down on the enemy under a press of sail. Admiral Linois then closed his line and opened a fire upon the headmost ships, which reserved theirs for a nearer approach; but, before the first three

could get into action, the enemy's squadron hauled their wind, and stood away to the eastward under all the sail they could set. At two, the commodore made the signal for a general chase, and pursued his dis- mayed antagonist for two hours. He then con- tinued his voyage to England, which he reached in safety with his whole fleet. For his gallant conduct, in having put to flight a French admiral commanding ships of war superior in force and in men, and thus preserving from capture a pro- perty valued at £1,500,000 sterling, he partici- pated with the various commanders and their brave crews the munificent rewards of the East India Company, and received the honor of knight- hood at his majesty's hands.

On the 5th of May the Dutch settlement of Surinam capitulated to a force sent against it from Barbadoes under the command of Sir Charles Green and commodore Hood. Tüe colony, with the ships of war, artillery, stores, &c., was given up to his majesty ; the troops were made prisoners of war ; and the inhabitants, to their great satisfaction, were placed under the protection of the British government.

Several operations were undertaken against the enemy's armaments on the coast of France and Holland, but they were not crowned with much success. On the 16th of May an attempt was made by Sir Sidney Smith, in the Antelope frigate, with some sloops of war, to prevent the junction of tlie flotilla from Flushing with that at Ostend. The failure of success was attributed to the want of gun-boats. Fifty-nine sail of the Flushing division reached their destined port in safety ; and the English force, after the falling of the tide, were obliged to haul off" into deep water, with a loss of about fifty men killed and wounded.

In August an attack was made by captain Owen on the flotilla anchored in the road of Boulogne, but with little success; and those of captain Oliver, made about the same period at Havre, failed of their object, and produced no other result than some damage occasioned by the explosion of shells in the town. But the most mortifying failure to ministers was that of the catamarans as they were called. These were vessels designed to be towed and fastened under the bottoms of the enemy's ˆun-boats by a man ma small rafl : the appearance of about 150 sail of the enemy's flotilla in the outer road of Boulogne seemed to present a favorable o[)|)or- tuiiity for trying them. I'ire-ships of various constructions were to co-operate in the attack :

and the e.xperiment was to be made under the direction of lord Keith, who was to cover the smaller force with his powerful squadron. On the 2d of October his lordship anchored at about about a league and a half from the north to the west of the port, and the requisite prepara- tions were made

for commencing the attack at night. So strongly were the English ministers interested in its success, that Mr Pitt, and several other members of the cabinet, were induced to witness the scene from the elevation of Walmer Castle. At a quarter past nine the first detach- ment of fire-ships was launched under a heavy fire from the advanced force, which was answer- ed by a tremendous one from the hostile batte- ries. The vessels of the flotilla opened a passage for them as thev approached, and so completely avoided them that they passed into the rear of the line without doing any damage. At half- past ten the first explosion-ship blew up, pro- ducing an immense column of fire but no mischief either to the ships or the batteries. A second, a third, and a fourth, succeeded no better ; and at length, when twelve had been exploded, the engagement ceased about four in the morning, and the English smaller vessels drew off" without the loss of a man. No perceptible destruction had been effected except of two brigs and some small craft, wiiicli seemed to be missing in the morning. The French acknowledged a loss of twenty-five men killed and wounded. Thus terminated, to the confusion of the projectors and the dis- appointment of the public, an expedition pre- pared at a greater expense than the merits of the plan, on examination, seems to have war- ranted .

The remonstrances with Spain having failed to rouse the court of Madrid from tlie abject state of vassalage to which it had been reduced by an imbecile and corrupt administration, the British government issued orders for the detention of such Spanish ships of war homeward-bound as contained bullion ortieasure. Pursuant to thes" orders, captain Graham Moore was detached from the channel fleet to cruise off" Cadiz witli the Indefatigable and three other frigates. On the 5t!i of October he fell in with four large Spanish frigates steering for that jtort. At his approach they formed the line of battle a-Iiead, and held on tlieir course without regarding his summons to shorten sail, which he gave on pla- cing each of his ships alongside of theirs. He fired a shot across the fore-poop of the second, which bore a rear-admiral's flag, and this had the desired effect of bringing them to parley. He then sent an officer to inform the admiral that his orders were to detain the squadron — that it was his earnest wish to execute those orders without bloodshed — but that the determination on the part of the Spaniards must be instantly made. An unsatisfactory answer having been returned, a close battle ensued, and in less than ten mi- nutes the admiral's second astern, Las Mercedes, blew up with a tremendous explosion. Tlie other Spanish frigates struck in succession, after a con- siderable loss in killed and wounded.

A most afflicting calamity attended the loss of the Mercedes. A gentleman of rank, who was going to Spain in that ship with his whole family, consisting of his lady, four daughters, and five

sons, had passed with one of the latter on board another frigate before the action commenced, and they had there the horrorof witnessing the dreadful catastrophe which in an instant severed them from their dearest relatives, and deprived them of a fortune which had been saved during twenty- five years of service. The cargoes of the cap- tured vessels were of immense value, consisting of gold and silver bullion and rich merchandise. Although this event did not at first occasion an interruption of the negociations at Madrid, his Catholic majesty declared war against England on the 12th of December; and France had thus at her disposal the fleets of her tributary ally.

In the interim she nad neglected no means of improving and augmenting her own marine. By a convention, concluded on the 20th of October, she obtained from the Ligurian repub- lic, in exchange for some commercial advantages of a very equivocal nature, the services of 6000 men during the war, and the use of the harbours, arsenals, and dock-yards. Thus the port of Genoa was virtually ceded to her, under an en- gagement that the Ligurian republic should, at its own expense, enlarge the basin for the recep- tion of ten sail of the line, whicli were to be immediately constructed.

The rising hostility of Russia and Sweden increased the jealou-sy of France against the influence of England on the continent; and, under the pretext of frustrating a conspiracy, she committed various insults on the rights of neutral states. On the 25th of October Sir George Ilumbold, the English charge d'affaires in the circle of Lower Saxony, was seized at his country- house near Hamburgh by a party of French troops, who had crossed the Elbe for that pur- pose. He was conveyed to Paris, imprisoned in the Temple, and released only on signing a parole not to return to Hamburgh, or reside within a certain distance of the French territories. On the subject of this outrage, an application was in vain made by the British minister to t' e cabinet of Berlin.

In India the peace, which had crowned tlie success of the late glorious campaign, was inter- rupted by the intrigues and aggressions of Jes- wunt Rao Holkar, an adventurer, who having usurped the dominions of bis brother, and re- nounced his allegiance to the peishwa, laid claim to possessions which would have ensured to him an ascendancy in the Mahratta empire. After a fruitless negociation, for the purpose of inducing him to withdraw within his own territories, the governor-general determined to chastise his arro- gance by force of arms. The troops in the

Deccan, under general Wellesley, reduced the fortress of Chandore, and other strong places which he held in that country ; while lord Lake, who was commander-in-chief, by a series of skil- ful and rapid movements, compelled his cavalry and infantry to risk encounters, which ultimately led to his discomfiture. On the 13th of Novem- ber a large body of his infantry, consisting of twenty-four battalions, occupying a strong po- sition near Deeg, supported by a body of irregu- lar cavalry, and by IGO pieces of ordnance, was totally routed by general Frazer, who fell in the

moment of victory. On the 17th, after a rapid and extraordinary march with the reserve of his army, lord Lake surprised the main force of ihf enemy's cavalry, commanded by Holkar in per- son, near the city of Ferruckabad, and obtained a complete victory, capturing the whole of his baggage, and destroying great numbers of his troops, while the chieftain himself escaped with great difficulty from the field. This splendid success would have decided the contest, had not the unexpected defection of the rajah of Bhurl- pore, in violation of a strict alliance with the British, enabled the fugitive to repair his despe- ■ate fortunes. At this period a change took place in the government of India. The marquis •Wellesley had long expressed his desire to return to England, and was now waiting the arrival of his successor, the marquis Cornwallis, who was appointed governor-general on the 24th of December.

In the beginning of the year 1805 arrived in London a letter from the French emperor, ad- dressed personally to his majesty. He professed ' peace' to be his first wish. 'The world,' said he, ' is sufficiently large for our two nations to live in it; and reason is sufficiently powerful to discover means of reconciling them when the wish for reconciliation exists on both sides. I have fulfilled a sacred duty, and trust your majesty will believe in the sincerity of my senti- ments, and my wish to give you every proof of it.' The reply of the English government, dated January 14th, stated that 'there was no object that his majesty had more at heart, than to avail himself of the first opportunity to procure again for his subjects the advantages of a peace, which may not be incompatible with the permanent security and essential interests of his dominions.' ' His majesty is persuaded that this end,' it coo- tinued, ' can only be attained by arrangements, which may at the same time provide for tlie future safety and tranquillity of Europe, and prevent the recurrence of the dangers and cala- mities in which it is involved. Conformably to this sentiment, his majesty feels it is impossible for him to answer more particularly to the over- ture that has been made him, till he has had time to communicate with the powers on the continent, with whom he is engaged in confiden- tial connexions and relations, and particularly the emperor of Russia.'

In the interval which elapsed between the date of the overture and the

answer, Mr. I'itt was engaged in strengthening his administration, by means of a reconciliation with the minister whom he had so lately superseded. On the 12th of January Mr. Addington was created viscount Sidmouth, and appointed president of the coun- cil, on the resignation of the duke of Portland ; lord Mulgrave foreign secretary ; the earl of Buckinghamshire chancellor of the duchy of Lancaster ; and Mr. Vansittart, with other friends of lord Sidmouth, were sworn of the privy council.

The session of parliament commenced on the 15th of January; the speech from the throne informing the two houses of the rupture with Spain, and the rejected overture of the French government.

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Mr. Fox observed, that the speech left them fciitirdy in the dark as to the grounds of his majesty's refusal to negociate; and, after the censures thus passed on the violent and unjust conduct of France, he hoped that no imputation of a similar natur would be found chargeable on our own government. After some discus- sions, the addresses passed without a division.*

Lord Grenville, in the house of peers, repro- bated, in a speech of great ability, the proceed- ings of ministers towards Spain, 'The laws of civilised war,' said his lordship, ' allowed no such act of violence as that which had been committed in assaulting the Spanish ships on the high seas. This had been assimilated to an em- bargo; but was there no difference between delaying merchant vessels, which might be delivered back, and destroying ships navigating the ocean in supposed security? Who can restore the innocent blood that has been spilt? No capture of treasure could wash away the stain thus brought upon our arms.' An amendment to the address, moved by earl Spencer, was negatived by 114 to thirty-six voices; the prince of Wales, through the medium of his proxy given to the earl of Moira, voting in the mine rity.

The supplies for the year amounted to about £44,000,000, of which £20,000,000 were raised by a loan, the subscribers to which received for £100 in money, £l72 in 3 per cent, stock. Another loan of £3,500,000 was negociated for Ireland. A considerable addition was made to the war taxes, and the property tax was raised to 64 per cent. The new taxes imposed in per- petuity were estimated at £1,600,000; and the minister, while in the act of thus heavily adding to the weight of the public burdens, concluded an eloquent speech by congratulating the house on the increasing prosperity of the country.

In the course of this session proceedings were instituted against a member of administration, which for a long time engaged the public atten- tion. In the month of April a charge was exhibited against lord Melville, first lord of the admiralty, founded on the tenth report of the commissioners of naval enquiry. It was brought before the house of commons by Mr. Whitbread, who, after referring to the act in 1785, for regu- lating the department of the treasurer of the navy, of which lord Melville, then occupying that post, was himself the supporter, and which advanced the salary of the place from £2000 to £4000, in lieu of all emoluments which might previously have been derived from the public money in the treasurer's hands, stated three heads of charge bearing upon him. These were : iiis applying the money of the public to other uses than those of the naval department ; his conniving at a system of peculation in an indi- vidual (Mr. Trotter) for whose conduct he was responsible ; and his having been a participator in tliat peculation. He concluded a speech, in which the particular circumstances of the case were laid open, by moving a number of reso- lutions founded upon it.

Mr. Pitt, on this occasion, objected to the method of proceeding now proposed, and thought the best course that could be pursued

would be to refer tlie report to a select com- mittee. On a division of the house, there ap- peared for Mr. Whitbread 's motion 216, against it 216, when the speaker gave his casting vote in its favor. Mr. Whitbread then moved an ad-, dress to the king, requesting him to remove lord Melville from his councils and person for ever ; but, at the desire of Mr-. Pitt, he agreed to post- pone the motion to a future day. When that day arrived the house was informed that lord Melville had resigned his office of first lord of the admiralty, and that Mr. Trotter had been dismissed. The debate then terminated in a unanimous vote, that the resolutions be laid be- fore his majesty by the whole house. It was afterwards announced, that lord Melville's name had been erased from the list of the privy coun- cil ; and ˆIr. Pitt assured the house there was no design of re-instating him.

His lordship now requested to be heard at the bar of the house of commons; and acknow- ledged having appropriated the public money intrusted to him to other public purposes, but solemnly denied having derived any benefit therefrom. He confessed, however, that he had applied the sum of £lO,000 in a way which he could not reveal, consistently with private honor and public duty. When his lordship had with- drawn, Mr. Whitbread moved for his impeach- ment, which was negatived by a majority of 272 to 195 ; and an amendment moved by Mr. Bond, for a criminal prosecution, passed by the small majority of 238 to 229. His lordship's friends, however, soon after finding reason to prefer an impeachment, a motion for that purpose was made by Mr. Leycester,

which, after Mr. Fox's motion for the previous question had been nega- tived, was carried without a division. Mr. Whitbread, accordingly, accompanied by a great number of members, on the 26th of June, im- peached lord Melville, in the name of the com- mons of Great Britain, at the bar of the house of lords.

A singular bill was subsequently passed, to indemnify Alexander Trotter, and all others called upon to give evidence on the trial of lord Melville, from civil actions. The trial itself, however, on account of the lateness of the ses- sion, was postponed to the following year. Lord INIelville was succeeded in the admiralty by Sir Charles Middleton, an officer long expe- rienced in the department, upon whom was conferred the title of lord Barham. But the loss of so able a colleague as lord INIelville caused deep and lasting chagrin to Mr. Pitt, upon wiiom almost the whole weight of business now de- volved ; and his healtli, previously infirm, mani- festly suffered.

A petition from the Roman Catholics of Ireland, to be relieved from the civil disabilities under which they labored, was on the 10th of May introduced into the house of lords by lord fJrenville, and into the commons by Mr. Fox. The principal speakers on each side took a part in the debate, but the result was a rejection of the petition in tiie upper house, by a majority of 178 against forty-nine; and in the commons of 336 against 124. Mr. Pitt having at this time asserted his opinion, that since the union of the

kingdoms he saw none of those dangers from granting the claims of the petitioners, which many seemed to apprehend, and that circum- stances had rendered it impossible for him to bring forward the measure at the time he thought most favorable for it; added, that what those circumstances were it was neither now nor then necessary for him to explain ; but, as lonpj as they should continue to operate, he should feel it a duty, not only not to bring forward, but not to be a party in bringing forward, or in agi- tating this very important question. At present, he must say, that the prevailing sentiment was totally against it ; and he should give a decided negative to the motion.

On the 19th of June a message from the throne was brought to parliament, the object of which was to acquaint the houses, that the communi- cations which had taken place between his majesty and some of the continental powers had not yet been brought to such a point as to enable him to lay the

result before parliament; but that, conceiving it might be of essential im- portance that he should have it in his power to avail himself of any favorable conjuncture for forming such a concert with other powers, as might afford the best means of resisting the inordinate ambition of France, his majesty recommended to parliament to consider of making provision for entering into such engage- ments as the exigency of aff"airs might require. The result of this message was the grant of a sum not exceeding £3,500,000, for that specific pur- pose. On the 12th of July parliament was prorogued by commission.

The public events of this year place it alto- gether among the most interesting in the his- tory of the late war. In France the greatest activity was exerted in preparations for the menaced invasion of England. The flotilla of Boulogne was continually augrnenting, and the troops encamped in its vicinity were accumu- lated to upwards of 100,000 men, perfectly dis- ciplined, and placed under the v;ommand of some of the ablest generals in the French service. Squadrons of French ships, which had hitherto been cautiously kept in port, were now hazarded out to sea, in order to divide the British naval force ; while greater enterprises were projected by the junction of the Spanish and French fleets. On the other hand, adequate means of resist- ance were provided on tiiis side the channel. The coast on the south of England was fortified on the most exposed parts by a range of mar- tello towers, and every effort was made for increasing the forces by sea and land.

One of the first enterprises of the French was an attempt on the island of Dominica, with an armament of five sail of the line and three frigates, having on board 4000 troops. A landing was effected on the 22nd of February, and tlie commander proceeded to Prince Rupert's, where the governor of the island, general Prevost, had posted himself with all the force he could muster. Having been summoned without effect, the French, who had levied a contribution on the in- habitants of Roseau, in the attack upon it set the town on fire, and then rc-embarked on the 27th. The armament then proceeded to St. Christo-

pher's where a landing was made and a cok- tribution exacted. The same was done at the island of Nevis; after which the squadron re- turned to France from an expedition, the success of which was by no means adequate to the equip- ment.

Napoleon set out early in the month of May for Milan, accompanied by his empress, and was received wherever he passed with the highest honors. On the 2Gtli of that month he an- nounced his compliance with the humble request of the states, that he would take upon him the title and authority of king of Italy; and his coronation was performed at Milan with the greatest

pomp and solemnity. During the visit to Italy Napoleon accomplished the annexa- tion of the Ligurian republic to the French empire.

A plan for a new constitution was, in the month of March, presented to the legislative body of the Batavian republic by the state directory, which was accepted by the people ; and M. Schimmel- penninck being elected first pensionary, he opened the session of the states -general on the 15th of May. All the forms of an independent government were preserved ; but the influence of France was apparent in a proclamation soon after issued, by which all commercial intercourse with Great Britain, and the admission, direct or indirect, of all articles of British manufacture, was strictly prohibited.

The negocialions between the courts of Lon- don and Petersburg, which were alluded to in the king's speech at the beginning of the year, terminated in a treaty, signed on the 11th c April, by which the emperor of Russia and tlie king of England reciprocally bound themselves to use the most efficacious means for forming a general league of the states of Europe, for the purpose of putting a stop to the encroachments of the French government, and securing the in- dependence of the different states. Sweden and Austria had entered into the same views; but they declined proceeding to hostilities, till an at- tempt to attain the objects of the alliance by ne- gociation should have proved abortive. A Russian envoy was in consequence deputed to France, who had advanced as far as Berlin on his way, when the intelligence of the annexation of Genoa to France produced his immediate recall. This event determined Austria to become a member of the league ; and a treaty for that purpose was signed by her plenipotentiary at Petersburgh on the 9th of August. At the same time a note was addressed by the Austrian am- bassador at Paris to the French minister for foreign affairs, expressing the desire of his court to concur with those of London and Peters- burg in their endeavours to promote a general pacification. A correspondence followed, of reciprocal professions and accusations, which terminated in having recourse to arms as the only arbiter.

The emperor Napoleon now determined to strike a home blow at his Austrian antagonist before he could be joined by the Russians. Renouncing his project, therefore, of the inva- sion of England, lie broke up the greater part of his camp at Boulogne; and, having augmented

his army in Italy, drew the bulk of i)is force from Holland and Hanover, and proceeded by rapid marches to meet the Austrians on the Danube. Tiie

armies of the latter had passed the Inn into Bavaria early in September, the elector of wh ch had been summoned to join his forces to that of Austria. He withdrew, however, from Munich to VVurtzburg, whilst his troops retreated into Franconia ; and, for this defection, his country was subjected to severe exactions.

The French armies, estimated at 150,000 men, advanced in six divisions, under the command of marshals Bernadotte, Marmont, Davoust, Soult, Ney, and Lannes ; and, having all crossed the Rhine, were joined at the end of the month by Napoleon, who passed the border with his guards at Kehl. On this occasion he addressed them in a proclamation drawn up in his usual vaunting style, in which he told them — ' You are but the van-guard of the great nation; if it be necessary, it will in a moment rise at my voice, to dissolve this new league which British gold and hatred have woven;' and unfortunately these were not vain words. While the details of his campaigns belong to the history of France, their issue was in the highest degree interesting to Great Britain.

By a series of bold manoeuvres and successful actions, Buonaparte, by the middle of October, surrounded general Mack in Ulm with 30,000 men, who remained to him after the loss of several detached portions of his army. Prepa- tions were immediately made for storming Ulm, but a summons was at the same time sent to Mack to capitulate, with which he thought it ne- cessary to comply. On the 20th of October the whole of the Austrian troops in that city surrendered themselves prisoners of war, with all their artillery and magazines. Thus was almost annihilated the force with which the Austrians commenced the campaign.

Napoleon proceeding to Munich, at the head of his main body, drove before him a corps of Austrians and the first column of a Russian force. The French crossed the Inn in the face of these allies, who retreated step by step on the road to Vienna. The alarm in that capital was now extreme : the emperor Francis retired with all his court to Brann, while the greater part of the nobility took refuge in Hungary. On the nth the >uain body of the French army ar- rived at Vienna, which they entered in triumph on the 13th, the advanced guard passing through by the bridge over the Danube without halting. On the 15th Napoleon joined the army which was advancing into Moravia to meet the Rus- sians.

Massena had almost equal success against the archduke Charles in Italy ; while, in the Tyrol, the archduke John was closely pressed by dif- ferent French divisions.

The main army of the allies now consisted of about 50,000 Russians, with the emperor Alex- ander at their head, and 25,000 Austrians, chiefly of

new levies. The French, when joined by the divisions of Bernadotte and Davoust, amounted to between 70,000 and 80,000 men, in the highest state of discipline, and full of confidence from past successes. Near Austerlitz, on the direct

road from Vicrma to Olmutz, was fought, on the 2nd of December, the memorable battle of that name. It was distinguished also as the battle of the three emperors, trom the presence of those of Russia, France, and Austria. Napoleon was his own general-in-chief ; the Russians were commanded by 'general Kutusoff; and the Austrians by prince John of Lichtenstein. The French were decidedly victorious.

It was now stipulated by an armistice, that the Russian army was to evacuate Moravia and Bo- hemia within fifteen days, and Hungary within a month, and to retire by prescribed routes ; also that there should be no extraordinary levy of troops in the Austrian dominions during this period. But to these conditions the emperor Alexander refused to become a party, and he commenced a retreat in his own manner on the 6th of December. The archduke Charles, like- wise, who was advancing on tiie bank of the Danube from Hungary with a powerful force, was greatly mortified, on his arrival at Vienna, to find that he was reduced to a state of in- action.

Prussia maintained at this period a cautious neutrality. A violation of her territory by a march of Napoleon through a part of it, without asking permission, did indeed elicit some marks of resentment, but the capture of Mack's army caused the aflVont to be passpd over. A scheme for the recovery of Hanover by Swedish troops in British pay, and commanded by their sove- reign, in conjunction with English and Russian troops, was also frustrated by the battle of Aus- terlitz.

About this time a convention was signed be- tween France and Prussia, by which Hanover was ceded to the latter, and a definitive treaty between France and Austria was concluded on the 26th of December at Presburg, by which the Venetian territory west of the Atlantic was united to the kingdom of Italy ; and the Greek provinces east of the Gulf were ceded to France. The electors of Bavaria and Wirtemberg were advanced to the dignity of kings. The Tyrol and Burghausen, with the principality of Eich- stadt, were ceded to Bavaria ; and the Brisgau and Ortenau to Wirtemberg and Baden. In return the new electorate of Salzburg was incor- porated with the Austrian empire, and Wurlz- burg assigned in compensation to the archduke Ferdinand.

A treaty of neutrality had been concluded in September between France and Naples ; and the French force under general St. Cyr, previ- ously stationed in the Neapolitan territory, joined the army in Lombardy. A

combined armament of English and Russians, said to have on board 10,000 British and 14,000 Russian troops, dis- embarked soon afterwards in that kingdom, not only without opposition, but apparently widi every degree of encouragement from the mo- narch, who was prevented from openly declaring himself only by the speedy terminatioii of the contest. The emperor Alexander then recalled his forces to Corfu, and the British general, Sir James Craig, withdrew into Sicily.

Napoleon now attempted to realise the haughty menace, that the ocean was no longer to belong

to England. Early in the year a squadron of six sail of the line and two frigates, which had been blockaded for more than two years in Rochefort, had found means to elude the British force stationed oif that port and put to sea. Soon after the sailing of that squadron an ar- mament of far greater magnitude sailed from the harbour of Twilon. This fleet, commanded by admiral ViUeneuve, coi>5isted of eleven sail of the line, and a number of frigates and corvettes, on board of which about 10,000 land forces were embarked. On the 15th of March they quitted the harbour, without being perceived by lord Nelson's squadron, who, preferring active war- fare to a rigorous blockade, was then cruising at some distance, in the hope of inviting the enemy to an open engagement. After touching at Car- thagena, where there were six Spanish ships of the line, but not in a state of readiness for sea, the French admiral proceeded to Cadiz. That port was blockaded by Sir John Orde, witli a British squadron of only five sail of the line, which being too weak to prevent the junction of the enemy, the Toulon fleet was reinforced by that of the Spanish admiral Gravina on the 9th of April, consisting of six ships of the line and a number of frigates. The combined fleets im- mediately stood out to sea, and before night a strong easterly wind carried them out of sight of Cadiz.

Lord Nelson, then cruising in the Mediterra- nean, now commenced his memorable pursuit of them. Under the impression that Egypt was their object, the British admiral directed his course thither : but was here surprised at not being able to obtain any intelligence of an enemy. He retraced his course therefore to Sicily, and continued cruising off that island, in the most anxious expectation, till the middle of April.

The British admiral now became satisfied that the enemy had proceeded for the West Indies, and therefore resolved to direct his pursuit towards that quarter. In the Bay of Lagos, he received certain information of the course

which they had taken ; and, inspired with fresh ardor, he steered with crowding sails for Barbadoes. On his arrival, be received information that they were gone to attack Trinidad. On the following day his lordship sailed for that island, and, suc- cessively visiting all the islands, still found him- self once more disappointed.

The French admiral, having received intelli- gence of the arrival of British fleet in those seas, put into Martinique, and, having watered his ships and refreshed his men, on the 7th of June set sail towards Europe.

Lord Nelson, in the mean time, proceeded to Antigua, where, on his arrival, he found that the combined fleets had a few days before passed that island to the northward. He instantly de- spatched a fast sailing vessel to communicate ad- vice to government, in order that proper mea- sures might be taken to intercept them on their return.

In consequence of this information the fleets were met with off" Ferrol by Sir Robert .Calder, with fifteen sail of the line. The enemy's fleet consisted of not less than twenty sail ; but the British commander did not hesitate a moment in

bringing them to action. On the 22nd of July the encounter took place ; and the unequal con- test terminated with the capture of two Spanish ships of the line, the San Raphael and the Firma, the former of eighty-four, and the latter seventy-four guns.

This result greatly disappointed the public mind, and the disapprobation was so loud and general, that the British admiral returned to Eng- land and demanded a court martial, by which he was reprimanded, not for having betrayed either fear or cowaidice, but for an error in judgment, in not having made the most of the opportunity afforded him of destroying or capturing every ship of the enemy which it was his duty to en- gage. The hostile fleets having reached Ferrol in safety, and there augmented their force to twenty-seven sail of the line, next proceeded to Cadiz, ana entered the port on the 27th of Au- gust.

Lord Nelson on his return from the West Indies proceeded to London, and received an ap- pointment to the command of a fleet of sufficient force to cope with the enemy in any quarter of the world. On the 11th of September he hoisted his flag on board the Victory at Portsmouth, and put to sea on the following day, without waiting for five ships of the line which were preparing to sail with him. Having taken command of the fleet under lord Collingwood, on the coast of Spain, he resumed his former tactics, and, instead of blockading the port of Cadiz, stationed his main force near Cape St. Mary's, establishing a line of frigates to observe and communicate the

movements of the enemy. In the middle of October, on being apprised that a reinforcement of seven sail of the line would speedily join him from England, he detached admiral Louis with six ships of the line on a particular service ; and this bold manoeuvre was performed in so open a manner, that it had the desired eff"ect of inducing the enemy to put to sea.

On the 19th of October admiral ViUeneuve, with thirty-two sail of the line, seven frigates, and eight corvettes, got under weigh, and sailed with a light breeze to the westward. On the morning of Monday, the 21st, about day-break. Cape Trafalgar bearing east by south distant about seven leagues, wind nearly west, the com- bined fleets were discovered six or seven miles to the eastward ; and, lord Nelson having received the expected reinforcement, bore down upon them in two columns, con taining twenty-seven sail of the line. In his instructions he directed the captains to look to their particular line as their rallying point ; but, if the signals should not be clearly understood, no captain could do amiss in placing his ship alongside one of the enemy. The ad- miral himself, who headed the weather column, was to attack the hostile line near the centre, while lord Collingwood, who conducted the leeward column, was to break it, if possible, at a considerable distance from the extreme rear; and thus, it was hoped, the victory would be decided ere the van could be brought to succor the ships engaged. The last signal issued by this great commander, at the moment of going into action, was, 'England expects every man to do his duty.'

Admiral Villeneuve supposed that the English fleet consisted of only twenty-one sail, and he originally intended to attack them with an equal number of vessels, while twelve of his select ships, acting as a body of reserve, were to bear down and double upon the British line after the action had commenced. On perceiving, how- ever, the real force with which he had to contend, he arranged his ships in one line, forming a cres- cent convexing to leeward. The conflict began about noon, when admiral Collingwood, in the Royal Sovereign, gallantly entered into action about the twelfth ship from the enemy's rear, leaving his van unoccupied. The succeeding ships broke through in all parts, astern of their leader, and engaged their antagonists at the muz- zles of their guns. Lord Nelson, on board the Victory, directed his attack on the enemy's line, between the tenth and eleventh ships in the van; but, finding it so close that there was not room to pass, he ordered his ship to be run on board the RedouUtable, opposed to him ; his second, the Temeraire, engaged the next ship in the enemy's line ; and the others singled out their adversaries in succession, according to the order of battle. For the space of four hours the conflict was tre- mendous ;

particularly in that part of the line where the commander-in-chief had commenced the onset. The guns of his ship repeatedly set fire to the Redoubtable, and the British seamen were employed at intervals during the heat of the battle in throwing buckets of water on the spreading flames, which might otherAvise have involved both ships in destruction.

Both the French and Spaniards fought with a degree of bravery and skill highly honorable to their officers and men ; but the attack was irre- Siistible. About three in the afternoon the Spanish admiral, with ten sail of the line, joining the frigates to leeward, bore away for Cadiz. Ten minutes afterwards five of the headmost ships of the enemy's van, under admiral Dumanoir, tacked, and stood to the windward of the British line; the sternmost was taken, but the others escaped. The heroic exertions of the British were rewarded by the capture of nineteen ships of the line, with the commander-in-chief, 'ille- neuve, and two Spanish admirals. The tempes- tuous weather, which came on after the action, rendered it necessary to destroy all the prizes but four, which were carried into Gibraltar. The fugitive ships, under Dumanoir, were captured off Ferrol on the 4th of November, by a squad- ron under the command of Sir Richard Stra- chan.

The loss of the British in the battle of Trafal- gar was estimated at 1587 men, killed and wounded ; but great as the victory was, and in importance and brilliancy it yields to none in the annals of naval warfare, it was purchased at an immense expense to the country. About the middle of the action, as lord Nelson was walking the cjuarter-deck, attentive to its progress, and anxiously expecting its issue, he received a shot in the left breast from a musket ball, which wounded him mortally, and he instantly fell, lie was immediately carried to the cockpit, where he lived about an hour, employing the short space of time now allotted him in uiving

orders, receiving reports, and making enquiries concerning the state of the action. The closing scene of his career was not unworthy of his former exploits. In the hour of death he dis- played the magnanimity that had marked his character and conduct through life. Conscious of his approaching dissolution, he sent for ad- miral Collingwood, the second in command, to whom he communicated the particulars of his situation, and then gave the necessary orders to the officers by whom he was surrounded. On being told that the British flas was triumphant, and that fifteen sail of the line had struck, he ap- peared much consoled. A few moments before his death he said to Captain Hardy, ' I could have wished to live to enjoy this day ; but God's will be done.' ' I\Iy lord,' replied the captain, ' you die in the midst of triumph !' Nelson re- plied, ' God be praised !' and almost instantly expired. Thus fell the hero of the Nile, of Co- penhagen, and of Trafalgar, after a victory which utterly blasted the hopes of Napoleon for the subjugation and ruin of England. His mortal remains were conveyed to

England, and interred in St. Paul's with the highest public honors. Having left no son, the title of earl Nelson, with a permanent revenue annexed, was, by an act of national and enthusiastic gratitude, conferred upon his brother, a private clergyman, all par ties on this occasion vying in their expressions of grief and admiration.

Admiral Collingwood was raised to the peerage with a pension of £2000 per annum. The earl of Northesk was honored with the order of the Bath, and a pension. A liberal subscription was set on foot for the relief of those who suf- fered in the cause of their country ; and hun- dreds of thousands of pounds were readily and cheerfully raised for the relief of the officers, seamen, and marines, who were wounded, and the widows, orphans, and relatives of such as were killed in this memorable action.

In the East Indies the war was continued be- tweeen the East India Company and the rajah of Bhurtpore, aided by Holkar. Early in the year lord Lake made several successive att-acks on the town of Bhurtpore, in all of which he was repulsed with loss. At length Holkar's general, Ameer Khan, having been entirely routed by general Smith, and himself so much reduced that he could give no assistance to his ally, whilst lord Lake was pre- paring for a new attack on Bhurtpore, the rajah offered proposals for peace, which were acceded to on the 10th of April, on the condition of his yielding to the company the fortress of Deeg, and restoring the districts which had been con- ferred upon him after the peace with Sciiidia, together with the payment of a sum of money. In July lord Cornwallis arrived at Madras to take upon him the office of governor-general, to which he had been appointed as successor to the marquis of Wellesley. His lordship, however, was m such a reduced state of health, that he died on the 5th of October, at Gazeepoor, in the province of Benares, in the sixty-seventh year of his ase. British India will always be proud to associate with its happiness, its prosperity, and renown, the u'rateful remembrance of this its higiily venerated chief; and the native powers

will long and sincerely regret a man who so de- servedly possessed their unbounded confidence. As a patriot, a statesman, a warrior, and a man, the character of the marquis Cornwallis shines with distinguished lustre. Peace was signed with Holkar on the 24th of December; and thus a temporary calm was restored to that part of India.

Since the return of Mr. Pitt to office nothing, the great victory of Trafalgar excepted, had relieved the general disaster and disappointment that

attended the measures of the cabinet. At the close of the former session of parliament this distinguished statesman had been compelled, by the visible decline of his health, to relin- quish all active share in public business, and retire to Bath. It has been supposed, that the fatal intelligence of the battle of Austerlitz pro- duced an agitation of spirits which powerfully increased his disorder ; for on returning to his villa at Putney, near London, he breathed his last on the 23rd of January 1806, in the forty- seventh year of his age, having directed the af- fairs of his country for a longer period than any other minister. Under his auspices the maritime supremacy of England was confirmed by a series of most splendid victories; her colonial acqui- sitions were greatly extended ; but her public burdens were also enormously augmented. He labored successfully to preserve his country from the contagion of the revolutionary principles that desolated France ; and exerted himself with equal zeal, but with less success, in resisting the military despotism by which that power threatened to subjugate the continent. As a financier, he displayed great ability in the accumulation of public resources ; but it may be fairly questioned, whether he displayed equal political wisdom in the distribution of them. In forming continental alliances, he relied too implicitly on the influ- ence of money. Those who considered the re- volutionary war as unnecessary regarded him as one of the principal authors of the tremendous evils which that contest brought upon Europe. While others, reflecting on the extensive spread and dangerous tendency of the principles of the French revolution, and on the extreme hazard to which Great Britain was exposed, by standing an indifferent spectator till France had subdued the continent, and increased her marine in pro- portion to her military strength, regard him as the saviour of his country. Every impartial person, indeed, must confess, that he long stood in a situation wholly unprecedented, and difficult beyond example ; and the unprejudiced historian will not deny to Mr. Pitt the praise of being a man of firm purpose, honorable pride, and most dismte- ested principle. If ambition must be allowed to have been a prominent trait in his character, it was the ambition of a great mind. His political views were grand and comprehen- sive ; and, if some of his most favorite plans proved unsuccessful during his life, his successors at last acted upon them perseveringly and won the victory of liberty and civilisation for a prostrate world.

Parliament was opened by commission on the 2l3t of January 1806. In the speech from the throne the recent victory of Trafalgar was

described as an exploit 'beyond all precedent;' and the king, while he deplored the necessity which the emperor of Germany had felt of with- drawing from the contest, was consoled in the prospect of the unshaken adherence of the em- peror of Russia, and expressed his full confi- dence in the inexhausted resources of his dominions. In the debate which ensued,

*upon this address, lord Grenville remarked, that the state of the country imperiously called for in- vestigation; but that circumstances painful to his feelings induced him to postpone the discus- sion. In the commons, lord Henry Petty ac- knowledged his intention of moving an amend- ment to the address ; but, as the attendance of the individual most interested to defend the measures of government was impossible, he should make it the subject of a future motion. The addresses were presented on the 23rd, the day of Mr. Pitt's decease. **

Mr. Lascelles now moved, that the late minis- ter be interred at the public expense, and a mo- nument, with a suitable inscription, erected to the memory of ' that excellent statesman.' Ob- jections were instantly started to the motion thus worded, and it was opposed by many distin- guished members, who avowed their conviction of his integrity and their admiration of his talents. Among these was Mr. Windham, who declared, that he could not concur in styling Mr. Pitt an excellent statesman, and that the motion did not rest on the basis of historical truth. Mr. Fox said that no one was more ready to acknowledge the private, and even in many respects the pub- lic, virtues of Mr. Pitt. His great eloquence, and splendid talents, cast a veil over the system upon which he acted, and concealed its deform- ity. And, however desirous he might be to bury in oblivion former contests, he could not con- sent to confer public honors on his memory, upon the ground of his being an excellent states- man.

Lord Castlereagh pronounced this to be a question of feeling rather than of argument; and he urged that the house would act inconsistently with its own opinion, repeatedly expressed, if it hesitated to recognise the merits of Mr. Pitt. He at the same time confessed, that, had he framed the motion, it would have been couched in much stronger terms. On a division of the house the numbers were 258 to eighty-nine. The sum of £40,000 was subsequently voted for the payment of Mr. Pitt's debts.

The death of this distinguished statesman caused a total change in the ministry. Lord El- don resigned the seals, and the honorable Thomas Erskine was appointed lord chancellor, and con- stituted a peer of the realm by the title of lord Erskine. Lord Grenville, whom the king had sent for and empowered to form a new adminis- tration, including Mr. Fox, who had now been estranged from the royal councils more than twenty years, was appointed first lord of the trea- sury; and lord Henry Petty chancellor of the exchequer. Earl Fitzwilliam president of the council ; Viscount Sidmouth lord privy seal. Mr. Fox was made secretary of state for foreign affairs ; lord Spencer secretary for the home de- partment; and Mr. Wˆindham secretary at war

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Mr. Grey first lord of the admiralty, and Mr. Sheridan treasurer of the navy. Earl Moira master-general of the ordnance, and general Fitz- patrick secretary for the colonies. His grace the Cluke of Bedford was appointed lord-lieutenant of Ireland, and Mr. Elliott principal secretary. Lord EUenborough, lord chief justice of the court of king's bench, was also appointed to a seat in the cabinet. Sir Arthur Pigot and Sir Samuel llomilly were nominated attorney and solicitor- generals.

On the 28th of ˆNlarch the new chancellor of the exchequer brought forward the budget for the year. The amount of the ways and means was £43,618,472, and of the supplies .£43ˆ630,000. The war taxes, amounting to £l i,500,000, were to be increased to £i9,500,000,and a new loan of £18,000,000 was proposed. Mr. Windham brought in a bill for t'nlisting tlie regular army for a term of years in- stead of for life, as heretofore. This regulation, which forms an epoch in the military history of England, met with general approbation. The infantry were to be enlisted for seven years, and the cavalry for ten. Tlie plan, however, did not pass without much debate, in the course of whicli lord Castlereagh affirmed the state of the country to be prosperous and flourishing, and that the present ministers * reposed on a bed of roses.'

Certainly, however, the country did not. On flic 30t]i of January his Prussian majesty signi- fied his intention of taking possession of Hano- ver, agreeably to the late convention with the emperor of France. This was followed by a se- cond proclamation, dated the 28th of March, ordering the Prussian ports to be shut against the vessels of Great Britain. In consequence of these hostile proceedings, Mr. Fox, on the 21st of April, brought down a message from his majesty, informing the house of commons that he had thought it proper to adopt measures of reta- liation, by issuing orders for the blockade of the Elbe, the Weser, and the Ems, and for the cap- tiije of Prussian vessels. We have seen that, from the year 1788 to the death of Mr. Pitt, the subject of the abolitit>n of the slave trade was never lost sight of by Mr. Wilberforce. It was brought from time to time under the notice of [larliament, with various degrees of success; and gradually gained ground : on the 28th of Fehru- ary, 1805, the bill for the abolition was lost in the house of commons, by a majority of only seven voices.

The honor of accomplishing this great object was reserved for Mr. Fox and his colleagues. On the nth of .Tune, 1806, Mr Fox carried a resolution in the house of commons, 'That this house, conceiving the African slave trade to be contrary to the principles of justice, humanity, and sound policy, will, with all practicable expe- dition, take efi'ectual measures for abolishing the

said trade, in such manner and at such period as may be deem.ed most desirable.'

The bill mot with only a feeble opposition. It was strenuously supported by Mr. Wilberforce and all the members of admiriistration, and car- ried by a majority of 11.5 against fifteen. In ti.e course of the debate the solicitor-general

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Stated, from documents before the house, that since the year 179G, that is during the last ten years, upwards of 360,000 of tlie natives of Africa, torn from their country by Europeans, had either been sold into slavery, or had misera- bly perished in their passage to the West Indies. The crimes perpetrated in this traffic had equalled, if they had not exceeded, in horror and enormit, those of the French revolution, and had been constantly repeated during the space of three cen turies.

The trial of lord Melville, on his impeachment by the commons, was a circumstance of consider- able interest in the transactions of the year. It commenced in Westminster Hall on the 29th of April, before the lords, the members of the house of commons being present in a committee of the whole house. The articles of the charge were ten in number, but in substance vvere reducible to three. 1. That, as treasurer of the navy, he had applied divers sums of public money to his private use and profit. 2. That he had permitted his paymaster, Trotter, to take large sums of mo- ney from the bank of England, isjued to it on account of the treasurer of the navy, and place it in his own name svith his private banker. 3. That he had permitted Trotter to apply the mo- ney so abstracted to purposes of private emolu- ment, and had himself derived profit therefrom The trial was conducted with unusual despatch for a proceeding of that nature, the evidence and arguments on both sides being closed on the 17th of May, and sentence pronounced June 12th. The result was, that, by a majority, his lordship was pronounced not guilty upon each of the ten articles ; but on four of them the majority for his acquittal was considerably less than double the numlier of those who gave a contrary judg- ment. The whole number of peers who voted was 135.

An important commercial law was passed dur- ing this session of parliament, namely, for per- mitting the free interchange of grain of every kind between Great Britain and Ireland without either bounty or duty : the good effects of which, to both countries, have since been amply expe- rienced. An act also passed under the title of the American intercourse bill, though not with- out violent opposition, for legalising the trade for lumber and provisions carried on by neutrals to the West India Islands, which in

time of war had generally been found indispensably necessary, though violating the navigation laws. It em- powered the king in council, when such necessity should arise during the present war, to authorise his governors, under such restrictions as should seem fit, to permit this traffic, with the proviso, that neutrals should not import any commodities, staves and lumber excepted, which were not the produce of their own countries, and sliould not export sugar and other products of the islands.

On the 30th of March Joseph Buonaparte was proclaimed king of Naples, and the king and queen of that country retired to Palermo. An iiipffectual attempt on Calabria was made by Sir Sydney Smith in April ; and in July, at the urgent request of the court of Palermo, Sir John Stuart, who commanded the British troops in Sicily, em-

balked a body of about 4800 effective men, in the gulph of Euphemia. General Regnier with his troops being encamped some miles' distance at Maida, Sir John determined upon attacking him before he should be joined by his expected re- inforcements.

The junction, however, had been made on the night before, and the enemy, to the number of about 7000, descended from the heights, and marched into the plain to meet the assailants. After firing for some time both armies rushed on with the bayonet, when the superior firmness of the British soldiers soon decided the contest. As soon as the weapons crossed, the French gave •way, and were pursued with a dreadful slaugh- ter. The consequence of this brilliant action was a general insurrection of the Calabrian peasantry, and the expulsion of the French from the pro- vince.

*Efforts of this kind, however, were inadequate to the promoting of any permanent change; and Sir John Stuart, sensible that he could not long maintain his ground in Calabria, prepared for returning to Sicily. The French, soon after the battle, reduced the fortress of Gaeta; and general Fox, who took the command of the British troops in Sicily, refusing to concur in die hope- less plans of the court of Palermo for recovering Naples, *he new government in that kingdom re- mained undisturbed, except by intestine disor- ders.*

About this time an important present acqui- sition was made by the British arms in South America. After the reduction of the Cape of Good Hope, Sir Home Popham and general Beresford, who had been sent out in the

autumn of 1805 with a force of about 5000 men, judging it expedient to make an attack on some of the Spanish Settlements in South America, embarked a part of the land forces ; and after a tedious passage arrived on the 6th of June at the mouth of the Rio de la Plata. The squadron, after having occupied nine days in proce'^ding about eighty miles, came to anchor olf the point of Quilraay, about twelve miles from Bue- nos Ayres, which the British commanders had resolved to attack in preference to Monte \ ideo.

On the 25th, in the course of the afternoon and night, a landing was effected without oppo- sition ; though a body of the enemy, consisting of about 2000 men, chiefly cavalry, with eight field-pieces, was posted at the village of Redac- tion, on a height about two miles distant from the place where the troops disembarked, and directly in their front. The whole intermediate space, as well as to the right and left, was a swampy flat, where the artillery was of little service. On the British crossing the swamp, the Spaniards opened a fire from their field-pieces, which at first was well directed ; but, part of the English troops having gained the heights, the enemy retired, leaving behind them four field- pieces and a tumbril. Here the army halted for the night; and in the morning, finding the bridge over the Chuelo destroyed, general Beresford determined on forcing the passage of that river. He was now about three miles from Buenos Ayres, and th-e enemy opened an ill-directed fire of cannon and musketry ; the former of which

was soon silenced, though the latter was kapt up more than half an hour, but so as to do very little injury to the British.

About eleven o'clock in the forenoon the greatest part of the English troops, with some of their guns, had got over the river ; and general Beresford, having learned that most of the troops had abandoned the city, sent a summons to the governor, who agreed to a capitulation, of which the principal articles were, security to their religious worship to the persons of the inhabit- ants, and to all private property. The amount of the public treasure taken at Buenos Ayres amounted to 1,291,323 dollars; of vvtiich 1 ,086,203 dollars were embarked on board the Narcissus, and the remaining, viz. 205,115 were left in the treasury.

*Sir Home Popham, in the triumph of the moment, transmitted a circular letter to the chief commercial towns of Great Britain, informing them * that a whole conlinent was laid open to the British trade ;' and the most extravagant specu- lations were accordingly directed to this quarter : but, though so small a force had sufficed to ac- quire, it was wholly inadeqaate to retain this unwieldly conquest ; and in a shoit time Buenos Ayres was recovered by the Spaniards, under the conduct of colonel Linieres, a French*

officer in the South American service ; and our troops, with general Beresford their commander, were made prisoners of war. Sir Home Popham, nevertheless, continued to blockade the entrance of the river ; and, on the arrival of reinforcements from the Cape, made an unsuccessful attempt on Monte Video.

The naval operations of the year were few, but uniformly successful. A French squadron of five sail of the line was encountered, in the month of February, off the coast of St. Domingo, by a superior force under admiral Duckwordi. After a furious action three of them struck their flags, and the other two were driven on shore, and burnt. In the east, the French admiral Linois was captured by Sir John Borlase War- ren, on board the Marengo of eighty guns, with the Belle Poule of forty guns, on his passage back to France, enriched with various plunder. A large convoy from Rochefort was intercepted by Sir Samuel Hood, and four out oi five large frigates were taken, with troops on board destined for the West Indies. A remarkably gallant ex- ploit was also achieved by lord Cochrane, who commanded the Pallas, in cutting out three Spanish vessels under a heavy fire from the pro- tecting batteries of Avillos.

Negociations in the interim were carrying on between the courts of France and England, which for a time afforded a prospect of peace. They originated in Mr. Fox having disclosed to M. Talleyrand a plot for the assassination of the French emperor. In reply an extract was en- closed to the British minister from a speech of the emperor to the legislative body, March 2 : ' I desire,' it is said, 'peace with England. On my part I shall never delay it for a moment : I shall always be ready to conclude it, taking for its basis the treaty of Amiens.'

As this intimation was understood to be in- tended as an opening to negociation, Mr. Fox,

*after a short interval, returned an answer expres- sive of * the cordial disposition of the English government to treat on the general basis of a peace honorable to both countries, and to their allies;' adding, 'that the existing ties between England and Russia were such, that England could not treat, much less conclude, but in con- cert with the emperor Alexander.' M. Talley- rand replied, ' that the emperor Napoleon adopted the general principle laid down by Mr. Fox; but thought there was no necessity for the inter- vention of a foreign and distant power.'*

*It happened that among the English detained in France was a young nobleman, the earl of Yaimouth, in whose discretion and ability Mr. Fox could confide. Being invested with the requisite powers, this nobleman repaired to Paris, in order to open the negociation ; but the difficulty respecting Russia retarded his progress. Other subjects of difference were Hanover and Sicily. No exchange or indemnity for the first could be hearkened to ; and, in his despatch of June 13th, lord Yarmouth informed the English minister of the declaration which M. Talleyrand had at length made, * that, considering the ex- treme stress which was laid on this point, Hanover should make no difficulty. And, with regard to Sicily, M. Talleyrand after a time replied : 'You have it : we do not ask it. Had we the posses- sion, difficulties would be much augmented.' In another conversation, however, M. Talleyrand insinuated, that Russia was inclined to treat separately ; and also mentioned, that the emperor of France had received despatches from his bro- ther and the general officers under his orders, stating, that Naples could not be held without Sicily, and the probability which they saw of gaining possession of that island.*

On tlie 26th of June Mr. Fox, though at this time rapidly declining in health, addressed an excellent despatch to lord Yarmouth, expressing his astonishment at 'he tergiversation of jM. Tal- leyrand. The recognition of the French em- peror, and the other new potentates, he regarded as a full compensation for the restoration of Ha- nover. He transmitted to lord Yarmouth the full powers upon which the French minister had laid so much stress ; but with orders fairly to state to M. Talleyrand, that he had no authority to make use of them until that minister returned to his former ground respecting Sicily. He re- marked, that if D'Oubril, the Russian ambassa- dor, had offered to treat separately, it was only in the way that lord Yarmouth himself treated ; that is, in form, but substantially in concert. Naples and Istria, Mr. Fox admitted, were not to be conclusive against agreeing to provisional articles, subject to the approval of Russia ; or, as he explained liimself, 'that those articles should not have effect ti'l a peace should be con- cluded between France and Russia.' On the 1st of July lord Yarmouth acknowledged his receipt of the full powers with which he was now vested by the British government ; and mentioned his communication of the same to M. Talley- rand, who merely said, 'that change of circum- stances during a negociation, were always valid reasons for a change of terms : that had any confidential overture been made three months

ago, France would have been ""ady to settle tlie question of Naples in the manner most satisfac tory to Great Britain : the same a month later with regard to Holland.' At the close of the conference, lord Yarmouth repeated, ' that it was impossible to proceed with the negociation till every mode of seeking to obtain possession of Sicily was entirely relinquished.' On subse

quently demanding his passports, M. Talleyrand took the opportunity of offering the Hanse towns as an establishment for the king of Naples. But on the 5th of July, being the very next day after the receipt of lord Yarmouth's letter, Mr. Fox peremptorily replied, ' that the abandonment of Sicily was a point which it was impossible for his majesty to concede. The demand of F'rance was inconsistentwith the whole principle on which the negociation rests ; and the proposal of M. Talleyrand is, of itself, quite inadmissible. To the original basis of the iiegociation, therefore, lord Yarmouth was directed to advert ; and, if this was not accepted, to state, in perfectly civil yet decided terms, that he was not at liberty to treat on any other ground, and therefore to desire his passports.' The earl of Yarmouth having strictly complied with his instructions, M. Tal- leyrand now offered a further proposition from the emperor, tendering Dalmatia, Albania, and Kagusa, as an indemnity for Sicily. This, he was assured, would not be accepted; however, the English negociator consented to wait the return of the messenger ; M. Talleyrand adding, ' that, if peace was made, Germany should remain in its present state.' At this critical juncture, the indisposition of Mr. Fox had so alarmingly increased as to render him incapable of attend- ing to business ; and the succeeding despatches, transmitted under the sanction of his name, were fairly acknowledged, at a subsequent period, not to have proceeded from his pen. The elaborate answer of July 18th to lord Yarmouth's last des- patch, most unhappily and unseasonably wavered upon the grand point of Sicily. ' An exchange,' says the writer of that despatch (generally as- cribed to lord Grenville) 'is now offered for Sicily ; and it is in that view, and not in that of an absolute and uncompensated cession, that the question is now to be considered ; and to this the full and free consent of its sovereign is ne- cessary, which is not likely to be obtained by the offer of Dalmatia.' The writer then suggests the addition of Istria, and of a large portion of the Venetian states, including, if possible, the city of Venice : and lord Yarmouth was directed to continue the conferences with M. Talleyrand, to ascertain whether any more practicable shape could be given to the exchange.

While matters were in this state a treaty for a separate peace was concluded between France and Russia : after which lord Lauderdale was united with lord Yaimouth in the negociation ; but, after several formal attempts, found it im- possible to proceed upon any reasonable basis. At this critical moment, on which peace or war seemed to be suspended, Mr. Fox who had been foi some time afflicted with a dropsy, expired on the 13th of September 1806, in the fifty-ninth year of his age ; and thus, in the midst of tu- multuous wars and of uncertain neuociations,

Great Britain was called to mourn the loss of a patriot and a statesman who has had few equals. See our ariicle Fox. Here we need only add, while the subverters of thrones and the spoilers of kingdoms are crowned with triumphant laurels, and congratulated with applauding poeans, it is to the honor of Mr. Fox, that he never gave a vote in the British senate by which one drop of human blood had been spilt, or the treasures of the nation lavished away. He,

'Midst jarring conflicts, stemmed the tide of blood. And to the menaced world a sea-mark stood ; AVhose wisdom bade the broils of nations cease. And taught the world humanity and peace.

On the death of this lamented statesman some new arrangements became necessary among the members of administration. Lord Howick suc- ceeded Mr; Fox in the office of secretary of state for foreign affairs, and Mr. Thomas Grenville succeeded him as first lord of the admiralty. Mr. Tierney became president of the board of control, to which the foiraer gentleman had been appointed, on the nomination of lord Minto to the government of India. Lord Sidmouth was president of the council in the room of earl Fitzwilliam, who retired in ill health ; and the vacant office of privy-seal was assigned to lord Holland. These changes were rather unexpec- tedly followed by a dissolution of parliament.

On the continent of Europe, at this crisis, the subversion and creation of kingdoms were be- come common operations. The territory of the Batavian republic being full of French troops, who garrisoned all the fortified towns, an edict of their emperor was all that was necessary to create a king, and furnish him with a kingdom. On the 9th of June this change in the constitu- tion was notified to their high mightinesses the states-general, by M. Verneul, who, being jus* arrived from Paris, opened the special com- mission which he had received from prince Louis Buonaparte, as king of Holland. On the 24th the new king and queen made their public entrance into the Hague. The revolutions of Germany were equally remarkable. The fatal battle of Austerlitz had crippled the power of Austria, and virtually subverted the Germanic constitution, on the ruins of w'a.ch was now formed the Confederation of the Rhine. See Confederation.

By this confederation the Germanic body was completely dissolved, and a very considerable part of its members ranged themselves under the banners of France. In consequence of this de- fection the emperor Francis II. resigned his high office of emperor of Germany. On the 7th of Aug-ust a proclamation for that purpose was issued at Vienna, in which his imperial majesty the emperor of Austria declared, that, convinced as he was of the

impossibility of being enabled any longer to fulfil the duties of his imperial functions as emperor of Germany, he owed it to his principles to renounce a dignity which was valuable in his eyes only whilst he was able to enjoy the confidence of the electors, princes, and other states of the empire; and that, considering the confederation of the Rhine as having dis- solved the ties that united him to the Germaniq

body, abolished the Germanic constitution, and annulled the office of emperor, he therefore resigned the imperial crown and government, and absolved the electors, princes, and states, the members of the supreme tribunal, the magis- trates, and all others belonging to the empire, from their allegiance to him as chief. Thus was dissolved the German, or as it was styled in diplomatic language the Holy Roman Empire, 1000 years after Charlemagne had received the imperial title from the hands of the pope at Rome.

Prussia, however, still was aetermined on a struggle against the dominant genius of Buona- parte; and seemed at this time to glory in entering the lists alone with him. On the 9th of October appeared a declaration of Frederick William, filled with the most humiliating con- fessions of the lengths to wliich she had gone in subservience to France, and with expressions of resentment on being made its dupe and its vic- tim. It nevertheless allows that 'the possession of Hanover, could it have been obtained under less unhappy circumstances, would have been of invaluable advantage to Prussia. The king therefore conceived, that he reconciled his wishes with his principles when he accepted of the pro- posed exchange only under the condition of delaying the fulfilment of the same till a general peace, with the consent of his Britannic majesty.'

Early in October the duke of Brunswick, to whom was committed the chief command of the army, fixed his head-quarters at Weimar, the army extending along the banks of the Saale. The Saxons served as auxiliaries under prince Hohenloe on the left, and the whole collected force exceeded 100,000 men. The French ad- vanced from Bamberg in three divisions; and after various partial encounters, in one of which prince Louis, brother to the king of Prussia, lost bis life ; the two armies, nearly of equal strength, but very unequally commanded, seemed to assume an attitude of mutual defiance.

The French emperor, by superior manoeuvres, now succeeded in turnmg the left of the P"us- sians, and in cutting off the communication with their magazines : on which he occupied in force the heights of Jena, which had been thought im- practicable for artillery ; and on the eve of the 13th of October the two armies encamped within cannon-shot of each other. The action com- menced two hours after day-break, and quickly became

general, exhibiting for some time reci- procal skill and bravery ; but a fierce assault from the French cavalry and cuirassiers, under general Murat, at once decided the fortune of this memorable day. All attempts to restore order were in vain: universal consternation ensued. Nothing resembling even a regular retreat could be effected ; and, in the flight of the Prussians towards Weimar and Naumburg, mul- titudes were slaughtered, and a still greater number made prisoners. The duke of Bruns- wick himself was mortally wounded, and the entire loss did not fall short of 40,000 men ; while that of the French, if their own account may be credited, was below 5000. Further resistance seemed not to be thought of. Erfurt, Magdeburg, Stettin, Leipsic, and Spandau, sur-

rendered almost on the first summons; and on the 25th of October the marshals Davoust and Augereau entered BerUn.

From Berhn the French emperor issued a de- cree, dated 20th November, 1806, interdicting all commerce and correspondence between the countries under his government and the islands of Great Britain, which he declared to be in a state of blockade; denouncing all English pro- perty as lawful prize ; and all vessels touching at any port in England, or any English colony, were excluded from the harbours of France, or the countries under its control. This was vin- dicated as a measure of retaliation for the flagrant violations of the laws of maritime neutrality by Great Britain ; and, extravagant as the terms of the decree might seem, its effects were severely felt.

After the dreadful defeat of Jena, the king of Prussia had retired to Koningsberg, where he was actively employed in collecting the scattered and feeble remains of his forces. In the mean time the French, under Jerome Buonaparte, made themselves masters of Silesia, and the barrier, which seemed to have wholly separated France and Russia, was now broken down. On this the emperor Alexander resolved to make a grand €ffort to protect his own dominions, as well as to support the throne of Prussia. While marshals Davoust and Lasnes entered Prussian Poland, a large force was collecting in different parts of the Russian empire, and began to move towards the frontier.

The Russians, having crossed the Vistula on the 26th November, met the French advanced posts, which finding themselves unequal to resist, they repassed that river; and two days after, the duke of Berg, with a division of the French army, entered Warsaw. About a month after the forces of these

two great powers came into contact in the battle of Pultusk. The Russian general Benningsen, having taken a position at this

Elace, was attacked by the French on the 26t!i)ecember, led on by marshals Davoust and Lasnes, under the immediate direction of the emperor of France. Davoust, with 10,000 men, fell upon the left wing of the Russians ; at the same time the attack on their right was extremely impetuous, and conducted by Napoleon in per son. The conflict was extremely obstinate, and continued till night. The enemy was certainly repulsed ; but the French and Russian accounts are extremely contradictory. Both sides laid claim to the victory, but neither gained ground. The loss was un-ˆuestionably great ; and, from subsequent circumstances, it appears to have been nearly equal.

On reaching Eylau the Russian commander sent general Marcofl' to take])ossession of the town, and a sanguinary conflict again ensued between his corps and several columns of the enemy. The Russians, after an obstinate contest, made themselves master of the town on the 7th of February, 1807; but the French advanced in such force that they were obliged to retreat. In consequence of this reverse general Benningsen ordered another division to advance, which, inarching in three columns, bore down all oppo- sition, and retook Eylau by assault.

On the following day the action was renc\ (d,

and became general. It would exceed the limits of this summary to follow the official accounts of the operations; but they assert that all the attempts of the French cavalry to break the Rus- sian columns were defeated. ' In vain, says Benningsen, ' did the emperor of France lavisii his last resources ; in vain did he endeavour to excite the courage of his soldiers, and sacrifice so great a part of his army : the braveiy and persevering courage of the Russians withstood all his etibrts, and snatched from him a victory which had long remained doubtful.' At mid- night the Russians remained masters of the field of battle ; but in the morning retreated, and the French took possession of the town of Eylau.

After this the armies of France and Russia remained, for a considerable time, inactive. Warlike operations, however, continued in Swed- ish Pomeiania, where, after a number of actions fought wit'.i various success, the Swedes were at last driven into Stralsund. In the month of April a division of the French army commenced the siege of Dantzic ; and the tiouses of the suburbs were destroyed to the value of 9,000,000 of livres ; the damages occasioned in the city itself, by the cannonade and bombardment, were estimated at 12,000,000. The Russians, notwith- standing their assumed victory at Eylau, could never make an eflort for the

relief of this city ; which, on the 28th of May, surrendered to the French by capitulation.

The fatal day at length arrived which was to decide the mighty contest. That day was the 14th of June, the anniversary of the battle of Marengo. Having put his soldiers in mind of this circumstance, the emperor Napoleon pre- pared for an attack on the Russian position at Friedland. The battle did not commence till half past five in the evening, when marshal Ney and general Marchand advanced, while general Bisson's division supported their left. The Rus- sians attempted to turn marshal Ney with several regiments of cavalry, preceded by a numerous body of Cossacks. But general Latour Mauberg immediately formed his division of dragoons, and, advancing to the right at full gallop, repelled their charge. In the mean while general Victor ordered a battery of thirty pieces of cannon to be placed in the front of his centre ; and general Suiii- mermont having caused it to be moved about 400 paces forward, the Russians sustained a dreadful loss from its fire. The different movements whieli were made to effect a diversion })roved useless. Several columns of the Russian infantry attacked the right of marshal Ney's division, but v, ere charged with the bayonet, and driven into the Alle, in whicii river several thousands found their death. While Ney advanced to the ravine which surrounds the town of Friedland, the Russian imperial guards made an impetuoua attack on his left. This corps was for a momeni shaken ; but general Dupont's division, whicli formed the right of tiie reserve, marched against the guards, and routed them with dreadful slaughter. The Russians then drew several rein- forcements from their centre, and other corps of reserve, to defend I'riedlaml ; but, in defianci; of all their efforts, the town was forced, and its streets covered with dead bodies. At this

moment the centre of the French, commanded by marshal Lasnes, was attacked ; but the Rus- sians could make no impression. This sangui- nary contest was decided chiefly by the bayonet, and the result was the total defeat of the Rus- sians. The carnage that now ensued was dreadful. According to the French bulletins, the Russians left from 15,000 to 18,000 dead on the field, and the number does not appear to be greatly exag- gerated. But it is difficult to give implicit credit to their relations, when they state their own loss at no more than 500 killed, and 6000 wounded. The French took eighty pieces of cannon, a great number of caissons, and several standards.

This sanguinary action was followed by an in- terview between the

emperors of France and Russia and the king of Prussia, on the 7th of July, and a treaty of peace was concluded at Tilsit between France and Russia, and a few days afterwards between France and Prussia. The principal articles were, that a part of the Prussian dominions, especially on the eastern side of the Elbe, should be annexed to the new kingdom of Westphalia. Those parts which had been wrested from Poland, and become subject to Prussia, were ceded to the king of Saxony, under the title of the duchy of Warsaw, with a free communication with Saxony by a military road through the king of Prussia's dominions. The city of Dantzic, with a surrounding territory of two leagues, was restored to independence. The navigation of the Vistula was to be free. Russia acknowledged Joseph Buonaparte and his brother Louis, as kings of Naples and Holland, and Jerome as king of Westphalia. The em- peror of all the Russias also acknowledged the confederation of the Rhine.

The French emperor also agreed to accept the mediation of the emperor of Russia, in order to negociate and conclude a peace with Great Bri- tain, under the condition, however, that this me- diation should be accepted by England within a month after the conclusion of the treaty of Tilsit. By secret articles of this treaty, the ports of Prussia, as well as of Dontzic, were to be shut against the vessels and trade of Great Bri- tain ; and it is not certain whether the emperor of Russia was not Dound by the same condition. By another secret article, Russia had consented to cede Corfu and the Seven Islands as an ap- pendage to France. In the month of August a Russian officer, attended by French commis- sioners, arrived there; and, having convened the senate, opened a despatch from the emperor Alexander, in which his imperial majesty de- clared that he renounced all the rights whicli he possessed in quality of protector of the Seven Islands, and ceded them to his majesty the em- peror of the French and king of Italy. The king of Sweden refused to accede to the treaty of Tilsit.

In December 1806 tlie new parliament was opened, and the great measure of the abolition of the Slave Trade finally acconiplis"ied.

On the 5th of January the papers relative to the late negociation were taken into considera- tion in parliament. The conduct of government was aljiy vindicated by the chiefs of administra- tion in both houses, and addresses voted without

a division. There were individuals, however wlio expressed their dissatisfaction on very op- posite grounds. Mr. Whitbread, in the com- mons, in a masterly speech, declared, tliat war, eternal war, ought not to be waged for Sicily and Dalmatia ; and he moved an amendment, expres- sive of the hope entertained by the house, that his majesty would make every arrarigement, con- sistent with honor, for the restoration of peace.

Lord Yarmouth declared his firm conviction, that the negociation would have been brought to a <"avorable conclusion had it not been for the melancholy event of the death of Mr. I'ox.

On the 20th of February lord Howick inti- mated his intention of preparing some additional and very necessary clauses for insertion in tlie mutiny bill. By the Irish mutiny act, passed in 1793, Catholics were allowed to hohl any rank in the army under that of general on the staff in Ireland, though in Great Britain they were dis- qualified to serve under severe penalties; thus being deemed by law worthy of trust in one part of the United Kingdom, and unworthy in ano- ther. This anomaly it was the object of lord Howick to remedy, by making the provisions of the Irish act general. But on the 5th of March his lordship, in lieu of the proposed clauses, moved to bring in a bill for enabling his majesty to avail himself of the services of all his sub- jects, in his naval and military forces, on their taking the prescribed oath of allegiance ; for to grant this privilege to Catholics and deny it to Protestants, would have been manifestly unjust. It might be thought that a law so salutary and equitable would sufficiently recommend itself by its mere statement ; yet the motion of lord Howick was enforced with all the wisdom and eloquence of an accomplished statesman. Mr. Percival, late attorney-general, immediately rose to resist, what he styled one of the most dan- gerous measures that had ever been submitted to the judgment of the legislature. Our ancient and venerable establishment, he contended, could only be preserved by making a stand against every fresh attempt at innovation, which, if encouraged, would not stop short of abolishing all that the wisdom of our ancestors had thought necessary to enact in defence of our religion. The present question was simply, whether the legislature were prepared to give up the Protes- tant ascendancy in Ireland? This measure was, indeed, but a part of the principle of innovation which was gradually increasing ; and these ap- proaches were far more dangerous than if it were to come forward at once in all its frightful mag- nitude ; and, what might be at first denied by the wisdom of parliament, would be ultimately ex- torted from its weakness. Such was the nature of tlie alarm sounded in parliament ; and the spirit of bigotry instantly awoke from its slumber, and answered to the call. After an animated debate an early day was fixed for the second reading of the bill. This, however, was twice postponed ; and on the 1 8th of March lord Howick gave notice, that the bill was not in- tended, under the present circumstances, to be proceeded upon. These circumstances were of a nature so singular, as to 'require a paiticular elucidation.

On tlie 4th of February, a despatch was re- ceived from the duke of Bedford, lord-lieutenant of Ireland, stating, that a disposition had been manifested by the Irish Catholics to prosecute tlieir claims by petition to parliament. Desirous to prevent an application so unseasonable, and at the same time to assure the Catholics of their favorable disposition, an ans %ver to the despatch of the lord-lieutenant was prepared by ministers, stating their intention relative to the mutiny bill, a copy of which was transmitted to the king, accompanied by a cabmet minute. To this pro- position the king expressed a strong dissent ; and, upon receiving his disapproval, the cabinet, on the 10th of February, made a respectful re- presentation of the grounds of policy and prin- ciple upon which the measure in question was founded. Lord Sidmouth, who was president of the council, had fairly avowed his readiness to concur in the extension of the Irish act, so far as to legalise the services of the Irish Catholic officers in England, and no further. This he had made known to the king on being ques- tioned by him, acknowledging, that there was no alternative but to repeal the Irish act, or make it operative in England. In consequence of this .opinion corroborated by the lord chancellor, who described the measure as merely a corollary from the Irish act, the king replied to the cabinet minute, that, adverting to what had taken place in 1793, he would not prevent his ministers from submitting to the consideration of parliament the proposed clauses in the mutiny bill ; but thought it necessary to declare, that he could not go one step farther ; and trusted that this reluc- tance and concession would secure him from being distressed by any future proposal con- nected with the Catholic question. Under this frail and limited sanction, nevertheless, the ma- jority of the cabinet transmitted a despatch to Ireland, exciting expectations far beyond the letter of the act of 1793, not only by removing the bar to higher military advancement, but ex- tending the provisions of the act to the navy, and imparting the same privileges to English Protes- tant dissenters.

Lord Sidmouth, on being apprised of the im- port of the new clauses introduced into the bill, plainly declared the necessity he should feel of opposing the measure in parliament ; and, in a cabinet council held on the 1st of Marcii, he stated liis conviction, that the extent of it was not understood by the king. Lord Grenville, however, expressing an opposite opinion, it was proposed by lord Ilowick to transmit to his majesty a copy of tlie clauses in question, which was done on the following day, accompanied by a despatch to the lord-lieutenant of the same tenor. These documents were returned without comment; but on the 4th of March the king, having previously conferred with lord Sidmouth, declared to lord llovvick, at an audience held after the levee, his dislike and disapprobation of the measure, without however, in exjiress words, withdrawing the consent which he had already given. The ministers, therefore, still acted

under a delusion, and the obnoxious bill was ordered to be read a second time on the l'2th of March. During this interval lord Sidmouth gave no-

tice of his resolution to resign office, wiih a vievf to oppose the bill. But the king refused to ac- cept his resignation ; and mentioned in strong terms his surprise at the extent of the proposition made in the house of commons, after his decla- ration to lord Ho wink. On the same day lord Grenville was informed by the king, in a manner which could not possibly be mistaken, that to those parts of the bill which went beyond the limits of the act of 1793, he could not be in- duced to give his consent. Lord Sidmouth therefore prudently advised them to modify the bill, in such a manner as to free it from objec- tions evidently insuperable. And lord Grenville, with the concurrence of his colleagues, respect- fully apprised the king of the misconception tliat had prevailed, and their present purpose to mo- dify the measure, so as to confine it precisely within those limits to which his majesty under- stood himself to have consented. This inti- mation was graciously received by tli« king, who gave the strongest assurances of his conviction, that the intentions of the ministers towards hiiu were perfectly honorable. It was thus hoped that the difficulty was got over, and that minis- ters, would be able to proceed with the bill, modified so as to meet the wishes of all parties ; but, most unaccountably, at a subsequent cabinet meeting held on the 13th of March, to wiiich neither the lord chancellor, the lord president, nor the lord chief justice were summoned, a re- sohition was taken to abandon the measure alto- gether. Nor was this the only, or the principal indiscretion. A minute was transmitted to the king, who now conceived that an amicable and final explanation had taken place, announcing the relinquishment of the measure ; but at the same time asserting their right and intention to avow their opinions in parliament respecting their withdrawment of the bill, and in all fu- ture discussions relating to the Catholic ques- tion ; and also to submit for his majesty's decision, from time to time, such advice respect- ing Ireland as thf course of circumstances and the interests of the empire should require.

This superfluous declaration of rights which had never been controverted, excited in the breast of the king the greatest uneasiness. lie began to think that the question was never to be at rest, and that he was to remain perpetually exposed to a recurrence of importunity and anxiety. The royal answer, unadvisedly given, expressed some dissatisfaction at the parliamen- tary avowals which the ministers supposed to be necessary. It declared, that his majesty would never consent to any farther concessions ; and demanded from ministers a positive and written assurance, that he should never again be dis- tressed by a recurrence to tiiis subject. With regard to a demand of this nature, there could be no hesitation ; and it was in dutiful terms represented to the king, that those who were entrusted by him with the administration of the affairs of his exten^ve empire, were bound by by

every obligation to submit, without reserve, the best advice they could frame to meet the exi- gencies of the times; and that the situation of of Ireland constituted t'.ie most formidable part of the present difficulties-

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G R E xV T BRIT A I N,

On the day succeeding this oommunication his majesty, with the most sjracious expressions of his satisfaction in regard to every other part of their conduct, announced his intention of making a change of ministers ; and on the 18th of March lord Hovvick was authorised to notify this inten- tion to parliament. On the 25th of March his majesty's pleasure was signified, that the mem- bers of the present administration should deliver up their seals of office.

Before the end of March a new administra- tion was formed. At the head of the treasury, after an interval of more than twenty years, was for the second time placed the duke of Port- land, now from age and infirmity regarded as a cypher in office, the efficient power residing in]\lr. Percival as chancellor of the exchequer. Lord Eldon resumed the great seal ; the earl of Westmoreland the privy-seal ; the earl of Cam- den was made president of the council ; lord Muigrave was appointed first lord of the admi- ralty; the earl of Chatham master of the ordnance ; lords Castlereagh, Hawkesbury, and Mr. Can- ning, were the secretaries for the war, home, and foreign departments: Mr. Robert Dundas pre- sided at the India board; Mr. George Rose was made treasurer of the navy; Sir James Pulteney secretary at war ; Sir Vicary Gibbs, and Sir Thomas Plumer, attorney and solicitor-generals, and the duke of Richmond succeeded the duke of Bedford in the government of Ireland.

Both houses were at first adjourned to the 8th of April, when lords Grenville and Howick en- tered into ample explanations respecting the causes of the late change in administration ; and Mr. Brand, member for the county of Herts, moved, ' That it was contrary to the first duties of the confidential servants of the crown to re- strain tliemselves, by any pledge, express or im- plied, from offering to the king any advice that the course of circumstances may render neces- sary for the weh'are and security of any part of his extensive empire.' Mr. Percival freely ad- mitted the proposition as true in the abstract, but contended that it must be taken in conjunction with circumstances. Mr. Canning declared, that this was the first instance since tlic time of king Charles I. tliat a sovereign had been judged at the bar of that house. Tlie house at length divi- ded, on the motion of i\Ir. Osborne for the order of the day ; in favor of which the numbers were 258 against 222 voices.

Two days after Mr. Lyttleton moved a resolu- tion in the house of commons, at the close of a short and able speech, 'That this house consider- ing a firm and efficient administration as neces- sary at the present crisis, feels deep regret at the late change in his majesty's councils. But the first division was decisive; and after a vehe- ment debate the order of the day was carried by 244 against 198 voices.

In these contentions the prince of Wales did not appear to take any interest ; since the de- cease of JNIr. Fox, indeed, his communications with the late ministers were believed to be much less frequent and cordial. The marriage of this great personage had, from causes iiiperfectly developed, proved very unhappy ; and an early separation had followed what was at the time

regarded as a forced ar.c reluctant union. The subsequent conduct of the princess was far from being so discreet and guarded as was requisite, under circumstances which required on her part more than ordinary prudence. In consequence of representations made to his royal highness, and by him to the king, a committee of council was appointed to investigate the charges against her, consisting of the law lords, Erskine and EUenborough, with other distinguished peeis. Their report acquitted the princess of serious culpability, though it admitted, as the evidence subjoined but too plainly proved, that her con- duct was liable to the imputation of levity and indiscretion.

On the 27th of April 1807 the parliament was prorogued by commission, and dissolved on the 29th. It was not surprising that, on the general election which succeeded the dissolution of par- liament, the cry of ' no Popery,' and ' the danger of the church,' was made use uf for political pur- poses, and was found capable of inflaming the minds of the multitude.

It will be necessary now to revert back a little in our narrative, for the purpose of noticing some very important military and naval occurrences which took place during the year 1807, and in which England bore a conspicuovfe part.

The emperor of Russia having refused to ratify the treaty of D"Oubril, general Sebastian! was sent to Constantinople with a commission from the French government, to induce the Sublime Porte to declare war against Russia ; in conse- quence of which an edict was issued prohibiting Russian ships of war the passage of the Darda- nelles : when the British squadron, under Sir John Duckworth, received orders to force that passage, which he accomplished, and presented himself in hostile array before Constantinople. On the 20th of February one of the Turkish ministers came on board, professing an earnest desire on the part of the sultan of giving satis- faction ; but the demand of the British admiral was no less than tlie delivery of all

the ships of wai belongmg to the Porte. The negociation continued till the 27th, and this interval was dili- gently employed by tiie Turks, under the direc- tion of French engineers, in erecting batteries on both sides of the long and narrow strait. The English admiral, now finding himself out-man- ceuvred even by Turkish artifice, thought only of retreat ; and weighing anchor on the 1st of March he succeeded in forcing his passage through the straits, though not without incurring the most imminent peril. The castles of Sestos and Aby- dos, saluted him with the fire of vast blocks of marble, one of which, weighing 800 lbs., cut in two the main-mast of the \Vindsor man of war. The only effect produced by this attempt was to confirm the influence of France at the Porte.

But another attempt on th.e Ottoman power was more successful. On the 5t!i of March a force of about 5000 men was sent from IMessina, under the command of general Fraser, of which, on the 16th a part anchored to the westward of Alexandria ; and the troops having taken pos- session of the castle of Aboukir, and the cut be- tween lakes Maadie and Mareotis, Alexandria capitulated on tlie 20th.

GREAT BRITAIN.

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Oil the '27lh general Fraser detached a body oi l.OOO men to take possession ofRosetta; but their commander incautiously marching into the town, without previous examination, the troops receiveJ so brisk a fire from the roofs and win- dows, that, after the loss of 300 killed and wounded, they found it necessary to retreat to Aboukir. Another corps of about 2500, under general Stewart, was now sent to erect batteries against the place ; and, as a succour of Mame- lukes was expected by the British, lieutenant-colonel Macleod was detached to seize a post in order to facilitate their junction. Many days passed in fruitless expectation ; at length a great number of vessels were descried sailing down the Nile, which were not doubted to contain a re- inforcement to the enemy from Cairo. Orders were immediately sent to colonel Macleod to re- turn from his position ; but they were unfortu- nately intercepted, and his detachment was cut oft". General Stewart retreated, fighting all the way, to Alexandria ; and this attempt on Rosetta cost 1000 men in killed, wounded, and missing. A formidable force of the enemy now approach- ing Alexandria, the inhabitants of which were also disaffected, a flag of truce was sent by general Fraser, oftering immediately to quit Egypt with his army on condition that the British prisoners should be liberated, which was readily agreed to, and on the 23d of September the troops sailed for Sicily.

Reinforcements, under the command of gene- ral Sir Samuel Achmuty and

admiral Stirling, having landed in the month of January near Monte Video, the general resolved to make an attempt on that place; and on January the 18ih commenced the siege. The works were found strong, and were ably defended ; but, a practica- ble breach being made on the 2d of February, it was resolved no longer to delay an assault. Tiiis was effected oefore day break on the next morn- ing ; and after a severe action, in wJiichoGO of the assailants were killed or wounded, and more than double that number of the defenders, every thing was carried except the citadel, which soon after surrendered. The general, in his despatches mentions a circumstance highly to the credit of his troops, as well as of their commander, that • early in the morning the town was quiet, and the women were peaceably walking the streets.' The prizes captured here were fifty-seven West Iiidiamen and merchantmen, besides several gun-boats and armed vessels.

About this time the ministry resolved to send out an expedition for the reduction of tiie whole province of Chili. For this purpose a force of 4200 men was placed under the command of briuadier-general Crawford, which sailed in the end of October 1806, accompanied by a naval force under admiral Murray. Intelligence of the re-capture of Buenos Ayres, however, having been received, an order was afterwards despatch- ed for the ex)iedition to change its object, and proceed to the river].,a I'lata.

(Jeneral Whitelocke had in the mean time been ncminated to the suiironio commanti of the forces m South America, and, IfMViiig I'nirland in March, took with him . an additional force of ˆ6•ˆu inen, making the British in tliat quarter

amount to 11,000 rank and file; the object now intended being the reduction of the whole pro- vince of Buenos Ayres.

On the 28th of June the united force, to the number of 1800 men, was landed about thirty miles to the eastward of Buenos Ayres; and, after a fatiguing march, the diff'erent divisions assembled in the suburbs. On the morning of July 5th a general attack was ordered, each corps to enter by the streets opposite to it, and all witii unloaded muskets. The greatest intrepidity was displayed in the attempt to execute this plan, which was so far successful that two strong posts were gained in the town, bu< at the expense of 2500 men in killed, wounded, and prisoners; the riie from the tops of the houses, and every advan- tageous position, upon the exposed and defence- less troops, having been most murderous.

On the following morning general Linieres sent a letter to the English commander, offering to give up all the prisoners taken in this bloody rencounter, and also all those made with general Beresford, if he would desist from any fiirtiier attack, and withdraw the British armament fiOiu

*La Plata; intimating, that such was the exaspe- ration of the populace, he could not answer for the safety of the prisoners if offensive operations were persisted in. Whitelocke, influenced, as he said, by this consideration, and reflecting oa the little advantage to be obtained from the pos session of a country absolutely hostile, agreed to the proposal. On his return home he was tried by a court-martial, whose sentence was, * that he be cashiered, and declared totally unfit and un- worthy to serve his majesty m any military car;;- city whatever.' In balance of these disasters, t!.e Dutch island of Curaˆoa was early m the ytˆ.ir 1807 reduced by a small squadron under the command of captain Brisbane.*

The new parliament assembled on t!ie 22d of June 1807. The address from the throne was viewed in the light of a manifesto against a party in the state, and it therefore was not to be ex- pected that it should pass without animadversion. Accordingly, in the house of lords, lord Fortescue moved an amendment, strongly censuring the measure of the dissolution of parliament, and the reasons which the new ministers had offered for its justification, which upon a division was re- jected by a majority of IGO to sixty-seven. A similar amendment, moved in the house of com- mons by lord Howick, was negatived by 350 to 155; and a subsequent motion of enquiry into the state of the nation was negatived hy 322 to 13G voices. In consequence of the distracted state of Ireland, bills were now moved for by Sir Arthur Wellesley, secretary to the lord-lieute- nant, for the suppression of insurrection in that country, and to prevent the disturbance of the peace. Their necessity was admitted by Mr. Orattan. Lord Castleicagh at this time brought forward in the commons a new military plan, the object of which was to autrment tlie regular army from the militia, and to supply the defi- ciencies accruing to the latter by a supplemen- tary militia. A bill sent up from the lower house, against granting reversions of offices, was, on a division of fifteen peers to nine, ordered to he read a second time tiiat day three months. This,

however, was accompanied by a strong protest. On the 14th of August the parliament was pro- rogued by commission.

In the course of the summer an affair arose, which occasioned a painful misunderstanding be- tween Great Britain and the United States of America. The Chesapeake, American frigate of forty "four guns, being known to have several English deserters on board, representations of the factweie made to the American secretary, to which no satisfactory answer was given. Cap- tain Humphreys, in the Leopard, was therefore ordered to

search the American vessels for de- serters, a liberty which was to be reciprocal. Ha- ving, on the 28th of June, come up with the Chesa- peake, he sent a boat with advice of the infor- mation which he had received concerning the deserters, and of his orders to search the ship. This being refused by commodore Barron, the British commander fired several shots, to which no attention was paid : he then fired a broad- side into the Chesapeake, which she returned by some scattered shot, and, on receiving a se- cond broadside, immediately struck her colors. On examining the American frigate the deserters were found ; but in the rencounter the Chesapeake had six men killed and twenty-one wounded : with the latter she returned to port in a very shattered state, and a proclamation was issued by the president, Mr. Jetferson, prohibiting all intercourse between the American states and the armed vessels of Great Britain. A negociation was now long carried on between the two coun- tries ; but the disputes were revived by circum- stances hereafter to be mentioned.

From the Conclusion of the treaty of Tilsit it became evident, that Denmark could not long maintain her neutrality ; and the British ministry had strong suspicions, or rather positive assur- ance, that a naval force now augmenting in the ports of that country was to be directed against England. In every view of the subjecf it was thought expedient, in order to prevent the Danish fleet from falling into the hands of the French government, to request from the court of Denmark the temporary deposit of the Danish ships of the line in some of the British ports. This proposal was made in a friendly manner, representing the indispensable necessity of the measure, under the relative circumstances of the powers of Europe.

To give weight to the application a naval and military force, under admiral Gambler and lord Cathcart, was sent to the Baltic, with the view of protecting Denmark against the resentment of France in case of an amicable result, or to enforce compliance should her government reject the proposal. But the Danish cabinet refused all terms of accommodation : and all the prepara- tions being completed, on the 1st of September the city was summoned, and the offers renewed which at different times had been made to the crown-prince and the governor. This producing no effect, the bombardment both from the land batteries and the shipping commenced on the following day, and continued till the evening of the 5th, when a proposal for capitulating was made by the 'garrison. On the following day the Danisli navy was agreed to be delivered up

to our force. It consisted of eighteen ships of the line ; one of ninety-six, two of eighty-four, twelve of seventy-four, and three of sixty-four guns ; fifteen frigates, five brigs, and twenty-five gun-boats ; a force which, in the hands of the emperor of the French, might have proved a means of great annoyance to Great B.itain. The capitulation, however, was not ratified by

the crown-prince ; and the Danish government, rejecting every conciliatory proposal, issued a formal declaration of waˆ against England. Notwithstanding, however, these demonstrations of hostility, the occupation of Zealand requiring a greater number of troops than Great Britain could spare from other services, the country was evacuated according to the convention ; and from that period the war with Denmark produced no important events. The peace of Tilsit hav- ing freed the French emperor from all appre- hensions in the north, his armies entered Spain, witli threats of invading Portugal, the autumn of this year, and so far intimidated the court of Lisbon that a decree for shutting the ports of that kingdom against the ships aad commerce of Great Britain was issued •22d of October,

1807.

In consequence of these proceedings his Bri- tannic majesty deemed it expedient to send a squadron to the mouth of the Tagus, to act as circumstances might render necessary : when the appearance of a French army on the frontier of Portugal induced the prince regent to sign an order for the detention of all British subjects, and the sequestration of British property. This decree bears date November 8th, 1807 ; but the event had been foreseen, and most of the British subjects had previously removed their effects. Such measures, however, although the effect of compulsion, placed England and Portugal vir- tually in a state of hostility. Lord Strangford, the British ambassador, demanded his passports ; presented a final remonstrance against the con- duct of the court of Lisbon ; and, proceeding to the squadron of Sir Sidney Smith, a rigorous blockade was established at the mouth of the Tagus. Still the rapacity of the French empe- ror could not be satisfied. He declared, ‘ that the house of Braganza should cease to reign ;’ and the French army had entered Portugal, when lord Strangford, having received fresh in- structions, returned on the 27th of November to Lisbon to renew negociations. The issue was that, after receiving the most positive assurances of protection from the British navy, his royal highness the prince regent came to the reso- lution of removing the royal family and the seat of government to Brasil, and the embarkation was so expeditiously performed, that on the morning of the 29th the Portuguese fleet sailed out of the Tagus, having on board the prince, with the whole of the royal family, together witii a number of persons attached to its for- tunes. , The French troops arrived in tlie vicinity of Lisbon, just in time to gain from the hills a view of the fleet as it dropped down the river. Sir Sidney Smith, with a British squa- dron, accompanied the royal emigrants to llio de Janeiro.

In the commencement of 1808 Austria,

GREAT BRITAIN.

hitbeno the principal ally of Great Britain, hav- ing vainly offered her mediation between Great Britain and France, went over to the ranks of the latter. The month of February of this year was also memorable for the subvei – : m of the temporal power of the pope. The City of Rome was seized by the French, and, together with the ■whole of the ecclesiastical states, incorporated ■with the kingdom of Italy.

The king of Sweden, engaged in a war against Russia, Denmark, and France, magnanimously prepared to repel the dangers with which he was menaced by so powerful a combination. In his efforts he was seconded by the loyalty and zeal of his subjects ; and rarely had any nation af- forded a more striking display of patriotic enthu- siasm. But, as the resources of his kingdom were inadequate to the contest, the British go- vernment granted to his Swedish majesty a subsidy of £100,000 per month, and sent a squadron to the Baltic with 10,000 land forces en board, under general Moore, to co-operate as circumstances should require.

The imbecile court of Spain was at this time fast hastening to that state of internal dissension and degradation, which soon after occasioned the deposition of the royal family. On the 30th of October 1807 an extraordinary decree or mani- festo was issued by the king of Spain, acquaint- ing his subjects that his life and crown had been brought into danger by a conspiracy, of which his son was the author, whom, in consequence, he had caused to be arrested. The foundation of this charge was a clandestine correspondence carried on by the prince of Asturias with the French emperor. Through the interposition of the prince of Peace, Godoy, a reconciliation was effected; the prmce of Asturias having been in- duced to write penitential letters to his father and mother. A treaty was soon afterwards con- cluded between the sovereigns of France and Spain, the object of which was a jiartitiou of the kingdom of Portugal ; but, in return for the portion which was to devolve on the king of Etruria, his kingdom of Tuscany was to be ceded to Napoleon m quality of king of Italy. By a secret convention, Frencli troops were to be admitted into Spain, and others were to be as- sembled at Bayonne, to assist in the conquest of Portugal. Thus a handle was given for placing Spain at tiie disposal of the emperor of France.

The attention of all Europe was at this time turned towards the Peninsula. A perfect har- mony seemed to reign between the French and Spanish cabinets ; and the popular reports of tlie approaching annexation of Portugal and Gib- raltar to Spain, were well calculated to allay the suspicions which the entrance of the French armies must naturally have tended to excite among the people. But it appears that his Catholic majesty

had formed the design of re- moving the seat of government to Mexico. The motives which led to this project are envilojied in mystery ; as are indeed all the affairs of the court of Madrid, from the period of the alleged conspiracy of the prince of Asturias, till the journey of the royal family to Bayonne. It seems, however, that the design of emigrating

beyond the Atlantic had originated with the prince of Peace, whose views in this affair are not fully ascertained.

No sooner had the intended emigration of the royal family been hinted, than the Spanish capital presented a scene of confusion and turbulence ; and the inhabitants of Madrid rushed in crowds to the road near the palace to prevent their departure. At the same time several of the ministers and grandees, who disapproved of the emigration, circulated hand-bills in the sur- rounding country, stating the designs of the court. The night of the 17th of March was a scene of tumult, and on the following day im- mense crowds of people hurried to Aranjuez. The palace of the prince of Peace was forcibly opened, and his brother, Don Diego Godoy, commandant of the life-guards arrested. On the 19th of March issued a royal decree by which Cliarles IV'. abdicated the throne of Spain in favor of his son, the prince of Asturias ; one of the first acts of whose sovereignty vvas the con- fiscation of the estates and property of Godoy, who had been discovered and made prisoner in the place of his concealment. Tliese events, however, were soon succeeded by a counter-revolu- tion. The duke of Berg, with the French army, had entered Madrid, and was in full possessioa of that capital ; when the two kings of Spain, Charles IV'. and Ferdinand VII. formerly prince of Asturias, with the whole of the royal family, and some of the principal grandees, were allured by various pretexts to Bayonne, to meet the French emperor. Ferdinand declared, that the circumstances in which he assumed the reins of government dictated the propriety of the mea- sure. Unfortunately, however, this proved even- tually to be the most imprudent step he could Ir.ive taken. It was followed by terrible com- motions throughout the country, and in Madrid, in particular, the most dreadful disorders pre- vailed. The French were insulted daily; nu- merous assemblies were held by the populace; and every thing indicated a dreadful explosion. At length, on the 2d of ˆlay, a general insurrec- tion took place. The grand duke of Berg, com- mander-in-chief of the French armies in Spain, in coming from the palace, was surrounded by the populace, and, after defending himself for some time, was on the point of falling when he was rescued by his grenadiers. The street of Alcala, and the great square, were crowded with insurgents. The grand duke flew to his post, and a battalion of the French, with some cannon, repaired to the palace. \ ollies of grape-shot, and charges of cavalry, cleared the streets and the sqviare; but, the insurgents continuing to fire from tiie houses, generals Daubrin and Guillot, with their divisions, broke open the doors, and all who were found

in arms were put to the sword. A body of the insurgents, in I'.io mean- wliile, pushed forward to the arsenal, and had already broke iu, when general Lafraen just ar- rived in time to save the arms and ammunition. The loss sustained on each side was variously represented : but there can be no doubt of its having been very considerable. In consequence of these disorders, the grand duke of Berg was

constituted lieutenant general of the kingdom. At last, on the 25th of May, an imperial decree was issued, declaring the throne of Spain vacant by the abdication of the reigning family, and ordering an assembly of notables, consisting of the prelates, grandees, &c., to be held at Ba- yonne, for the purpose of fixing the basis of a new government. This was communicated to the council of Castile, by the duke of Berg ; and a cora'mission was established for secu- larising the lands of the church. A spirit of discontent had long pervaded the kingdom ; but now the public exasperation was indescribable. Except the partisans of France, few Spaniards attended the junta at Bayonne. The consumma- tion of the whole plan, however, proceeded : it was that the French emperor, on the 6th of June, conferred the crown of Spain on his brother, Joseph Buonaparte, who abdicated his kingdom of Naples in favor of the grand-duke of Berg, otherwise Joachim Murat, who had mar- ried the sister of Napoleon. The news of these renunciations was the signal for a general insur- rection in Spain. The patriotic flame burst forth in Astoria ; whence it spread into Gallicia, and into several districts of Leon. An assembly, convened at Oviedo, published a formal decla- ration of war against the French government ; and, having appointed the marquis of Santa Cruz generalissimo of the patriotic army, sent deputies to request the assistance of England. This request was immediately acceded to; and on the 4th of July his majesty issued a procla- mation, declaring that Great Britain was at peace with the Spanish nation. In every quarter of Spain the inhabitants now flew to arms. The council of Seville proclaimed Ferdinand VII. ; and published an appeal to the Spanish nation. Provincial assemblies were formed in most of the principal towns, and depots established in the most suitable situations. In Andalusia above 15,000 regular troops were collected; arms were put into the hands of 60,000 peasants ; and general Castanos was appointed commander-in- chief. The French general Dupont, with about 20,000 men, was at this time sent to se- cure a position at Cordova, whence he might readily move upon Seville, Carthagena, or Cadiz. Moncey, with upwards of 12,000 men, was detached to the provinces of Valentia and Murcia. Le Febre, with about 18,000, was stationed in Arragon, for the purpose of obtain- ing possession of Saragossa, and keeping open the communication with Barcelona : and

the French army in the north-western parts, consist- ing of between 40,000 and 50,000 men, com- manded by marshal Bessieres, who had his principal station at Burgos.

The city of Cadiz was among the first to show its zeal for the patriotic cause. The French squadron, consisting of five ships of the line and one frigate, lying in the harbourˆ was obliged to surrender, on the 14th of June, to the Spanish arms. This was followed by the defeat and almost total destruction of the French army near Almanza. General Moncey, having assaulted the city of Valencia, was repulsed with an almost incredible slaughter. Saragossa vied with Va- Jencia in patriotic enthusiasm. On the 1st of

July, about midnight, the French made a vigorous attack on the latter, but the courageous conduct of the brave general Palafox, who commanded, with the valor of the troops and armed inhabi- tants, completely baffled their efforts. Several succeeding attempts were equally ineff'ectual; and the enemy is said to have lost no fewer than 12,000 men in their various attacks. But the most important transaction took place in the province of Andalusia. The French general Dupont took a strong position on the heights of Andujar, near the banks of the Guadalquiver; when general Castanos, at the head of the An- dalusian patriots immediately advanced upon him; and having received intelligence that a detachment of 8000 French, from the head- quarters at Madrid, was already on its march to Andujar, resolved to attack Dupont before he could receive this reinforcement. An obstinate and bloody action ensued ; but the patriots at length prevailed, and their victory was decisive. The French general, in order to save the remains of his army from total destruction, on the 20th of July surrendered himself and his troops pri- soners of war. The detachment that was on the way to join him was included in the capitula- tion, but with this difference, that they should not be considered as prisoners, but be conveyed by sea to France. This victory was of incalcu- lable importance to the patriotic cause.

While these events were transpiring in the provinces, Joseph Buonaparte was preparing to take possession of his kingdom, and, by a very singular coincidence, made his public entrance into his capital on the 20th of July, the identical day that was signalised by the defeat and sur- render of Dupont. The splendid illusion, how- ever, was not of long duration. ■ After a short stay of seven days, on the 27th of July he began his retreat from Madrid towards France, while the patriots advanced and took possession of the capital. The French now began to retreat from the different provinces towards Vittoria ; and concentrated the remainder of their forces on the banks of the Ebro.

About the middle of August an event took placa which brought to the

patriotic cause a con- sidev-able accession of strength. Several bodies of Spanish troops had been furnished by the court of Madrid as auxiliaries to the French emperor : of these 8000 were stationed in the Danish island of Funen, and 2000 in that of Langeland. A nogociation being entered into between their commatider, the marquis del Romana, and admiral Keats, then commanding a British squadron in the North Seas, in order to effect their liberation, the Spaniards in Funen seized the vessels and small craft, the Danish troops in that island being inadequate to oppose them, and conveyed themselves to Langeland, where their countrymen had seized the battery at the mouth of the harbour. By this excellent manoeuvre 10,000 Spanish troops were rescued from the power of Buonaparte, and conveyed by the British ships to Spain, where they joined their brethren in arms in maintaining the cause of their country.

The patriotic spirit was now communicated to Portugal. A general insurrection took place m

theprovincesofTraslos Monies and Entre Douro e Minho, which rapidly spread throughout the whole kingdom. After some severe contests, the French under general Loison were driven out of Oporto, and nearly cut off in their retreat towards Lisbon. The clergy, and parti- cularly the iTionks of Oporto, distinguished themselves by their courage and patriotism ; and partly by their exhortations, and partly by their example, encouraged the people to take up arms against their invaders, the plunderers of their churches, and the oppressors of their coiintry. The result was, that the French were expelled from Coimbra and several other places, and general Junot was obliged to concentrate liis troops in and about Lisbon. About tlie end of July a force of 14,000 men, under the com- mand of .Sir Arthur Wellesley, was despatched to Portugal : and, having effected a landing, at once commenced operations. The French general Laborde was posted on the heights near Roleia ; and as there was reason to apprehend he might be joined by general Loison, who was then at Rio Major, the British general resolved to at- tack his position. The army advanced from Caldas in three columns, the right being com- posed of the Portuguese, and the two others of British troops, led on by major-generals Fergu- son and Hill, and brigadier-generals Nightingale, Crauford, and Fane. The enemy's positions were formidable, and defended with great bravery and skill ; but the attack made by the Britisii columns proved irresistible. After an obstinate engagement the French were compelled to retire with the loss of a considerable number of men, and three pieces of cannon. The loss of the English was 479 killed, wounded, and miss- ing. Lieutenant-colonel Lake

fell gallantly in the best of the action. In the course of the suc- ceeding night the French generals Loison and Laljorde effected a junction at Torres 'edras and both began their march towards Lisbon. The British army was also reinforced by a body of troops commanded by brigadier-general Ans- truther, being part of a force sent from England under brigadier-general Ackland.

The moment was now approaching which was to decide the fate of the French army in Portu- gal, and of the Russian fleet intheTagus. Junot, on wliom the emperor of France had conferred the title of due d'Abrantes, having collected all his detachments, attacked the British army on the 21st of August, in its strong position at the village of Vimicra. The attack was made in se- veral columns, and with groat impetuosity, till the French were driven back by the bayonet ; and, being at »he same time annoyed on their flank by a cannonade from the artillery placed on the heights, they were obliged, after a severe contest, to retire in confusion. At length the enemy, being every where repulsed, were obliged to retiie with the loss of about 3500 men killed, wounded, and prisoners, thirteen pieces of can- non, and twenty-three tumbrils of ammunition. One French general, Beniere, was taken prisoner, and another, supposed to ˆ be general Thebauld, was found dead on the field of battle. The loss of tiie English, as stated in the returns, was 740

men killed, wout:ded, and missing, in which were included many valuable officers.

On the day after the battle of Vimiera, general Dalrymple landed, and took thechief command of tlie army. On the 30th of August a cessation of hostilies was agreed on, and eight days afterwards a definitive convention signed by the French and British commanders. By this treaty the French were to carry off all their arms, ammunition, ar- tillery, carriages, and horses, with their military chest, and all the plundei acquired by contribu- tions, and to be conveyed to France in British vessels, without any restrictions in regard to fu- ture service. The Portuguese artillery, &c., with the military and naval arsenals, were to be sur- rendered to the British army and navy. No Portuguese was to be molested on account of the part which he had taken with the French in- vaders ; and the British commanders engaged to prevail on the Spaniards to release all the French who were arrested in Spain, and were not bona fide military men. The Russian flˆet in the Tagus, consisting of nine ships of the line and a frigate, surrendered to the British government as a depo- sit, to be given up six months after the conclusion of a peace ; but the officers and seamen, above 5600 in number, were to be immediately carried to Russia.

The reasons assigned by our comm.anders for consenting to this

extraordinary convention were, the apprehended difficulty of obtaining provi- sions, the importance of time, and the means which the enemy had of protracting his defence. These, however, were far from being satisfactory either to the British or Portuguese nation. A court of enquiry was instituted, but on a minute investigation of the case, nothing appeared that had a tendency to criminate any of the generals. It is requisite to observe, that the convention of Cintra probably saved the city of Lisbon.

While the public attention was directed towards the affairs of Portugal and Spain, an abortive effort at negociation was made by the emperor of France. As a basis, it required the exclusion of the supreme government of Spain acting in the name of Ferdinand VII. from the negocia- tion. But his Britannic majesty totally repro- bated this idea, and, when a few notes had passed, the negociation broke off, as might have been expected.

The British army now commenced its march for Spain, under the command of Sir John Moore. Sir David Baird had, on the 13th of October, landed a strong body of troops at (‘o- runna, and, after many delays and innumerable difficulties, on the 19th of November arrived at Astorga. In the mean while the emperor of France personally entered Spain, and the pa- triotic armies under geneiols Bclvidcre, lUake, and Castanos, being successively defeated at Burgos, Espinosa, and Tudela, the French army forced the pass of Somma Siena : on the 2d of December it advanced to Madrid, which it en- tered on the 4tii.

The French emperor having settled the affairs of the capital, hastened to endeavour to cut off the retreat of the English army. He himself departed from INIadrid on the 18ih of December,

with an army of 32,000 infantry, and 8000 ca- valry.

In the mean time, the British general medi- tated a junction with the marquis Romana, with the view of making an attack on the duke of Dalmatia. He therefore marched to Majorga, where he was joined by general Baira with the troops from Corunna. The whole British army, which was now found to consist of 23,000 infantry and upwards of 2000 cavalry, besides some small detachments, advanced to Sahagan. But general Moore v.‘as no sooner arrived at his station than he received intelligence of the movements of the enemy ; and judging it impossible to make an effectual resistance against the formidable force that was coming agamst him, on the 24th of December commenced a precipitate retreat

through Gallicia. Napoleon made forced marches after him as far as Astorga; but, finding that ins prey had eluded his- grasp, he resigned the fur- ther operations into the hands of the dukes of Dalmatia andAbrantes.

The disasters of this retreat of the British army were great : great numbers of men, unable to keep up with the rest, were left on the line of march ; many of their horses were also left be- hind; and nofew.er than 1400 were killed to pre- vent them from falling into the hands .of the enemy. General Anstruther died through ex- cessive fatigue. The valor and perseverance of the troops were never more conspicuous than on this occasion. At length, after fourteen days of precipi- tate and harassing marches, the army reached Corunna on the 11th of January, 1809 ; and had the transports been ready, might have embarked without further loss. But these had been sent to Vigo ; and it was not till the 1 3th that the first division of transports arrived. We have de- scribed the memorable battle that took place on the 16th in our article Corunna.

The expedition to Denmark was the leading topic of debate in both houses, when parliament met 31st of January, 1808. Mr. Ponsonby proposed to take a view of the subject in three distinct relations of Denmark, Russia, and France, and moved for certain documents to be laid before the house, but the motion was nega- tived by 253 votes against 108. It was, how- ever admitted, that there was no evidence of the hostile intention of Denniark towards Great Britain before the aggression ; and all that the ministers of the crown labored to establish on that head was, that it was probable, from past experience, that Denmark would be induced by inclination, or compelled by force, to join the enemy.

Lord Sidmouth moved for an address to the king, praying that the Danish fleet might be kept in such a state as not to preclude the possibility of restoring it, should circumstances occur under which it might be expedient so to do. This was powerfully supported by lord Grenville. It was, however, negatived by 105 votes to fifty-one. The orders in council, which had been issued subsequently to Napoleon's decree of blockade, also occupied the attention of both houses. A great variety of argument with respect to the policy of these measures was employed on each side, during the debates on a bill brought in by

the chancellor of the excheqvier for making these orders valid ; but, on the 25th of March, the bill finally passed both houses. It was ac- companied by a bill for commercial intercourse with America, which was intended to afford time for making arrangements with that country.

At this period of the session lord Folkestone introduced his attack on the marquis Wellesley, respecting his transactions with the nabob of Oude. The marquis was defended in an ela- borate reply by Sir John Anstruther, who had held a high judicial office in India. .ˆ fter a long and interesting debate the previous ques- tion was put on all the resolutions except the last; in lieu of which Sir John Anstruther moved, that ‘ the marquis Wellesley, in his proceedings in the province of Oude, was ac- tuated by an ardent zeal for the public service, and by an anxious desire to provide more effec- tually for the safety and prosperity of the British empire in India.’ This was carried by 180 to twenty-nine voices.

On the 1 1th of April Mr. Percival brought forward his p-roject of finance for the year. The war taxes he” estimated at £20,00(1.000. njid he proposed a loan of £8,000,000 in addition to £4,000,000 already funded of exchequer bills. Additional taxes were also voted to the amount of £300,000. The supplies required were £43,000,000 for England, and £5,500,000 for Ireland. A new financial plan, introduced by him, was that of enabling the holders of three per cent, stock to transfer their stock to the com- missioners for the reduction of the national debt, and to receive equivalent annuities in its stead.

The house of commons, having on the 8th of March gone into a committee on the mutiny bill, the introduction of a bill for establishing a local militia of 200,000 men was also introduced by lord Castlereagh in April, and passed into a law. The men were to be trained for twenty- eight days annually. On the 4th of July parlia- ment was prorogued by commission.

On the continent of Europe during this year (1808) the emperor of France, before he set out for Spain, had an interview with the emperor of Russia, over whose mind he flattered himse’ii: that he had acquired a lasting ascendancy. The meeting took place at Erfurt on the 27th of Sep- tember, each sovereign being accompanied by a numerous and splendid suite. As it was the obvious purpose of Napoleon to place matters upon such footing that he could withdraw his troops from Germany, and employ them in the Peninsula, he rendered the Russian monarch the mediator of a negociation, by which he engaged to evacuate the Prussian territory as soon as the contributions should be paid, which he reduced to one-third of their amount ; and he wrote, with his own hand, an obliging letter to the queen of Prussia. The only other part of Europe in which war-like operations were

car- rying on this year was Sweden.

The Russians in the month of March took possession of Abo, the capital of Finland, and declared its annexation to the Eussian empire; on which the king of Sweden suddenly aban- doned the farther defence of that province, and undertook the invasion of Norway. Sir John

Moore having proceeded to Stockholm to con- cert measures of co-operation with the Swedish troops, and refusing to concur in some of the king's extravagant plans, the monarch's resentment was so much excited that he was obliged to escape in disguise, and brought back his troops amount- ing to 10,000 men, without landing them.

The Russians now directed their force against tlie fortress of Sweaborg, the Gibraltar of the north ; and so feeble was the defence that was made of it, that it induced a suspicion of treach- ery. They also made descents on the islands of Gothland and Aland. An engagement between tlie flotillas of the two powers ended to the dis- advantage of the Swedes. In Finland an armis- tice was concluded on the 27t!i of September, which consigned the greatest part of the pro- vince to the possession of Russia.

The naval occurrences of the year 1808 were not of much importance ; but in such as oc- curred the British ships maintained their usual maritime superiority.

An extraordinary instance of the naval in- feriority of the Turks was shown by an engage- ment in the Archipelago on the 5th of July. The Seahorse Englisli frigate descrying, off the island of Scopelo, a Turkish ship of fifty-two guns, a corvette of twenty-four guns, and a gal- ley, by dint of manceuvering brought the corvette first to action, and in a short time reduced her to a wreck. Slie then engaged in close fight with the large ship, and after an obstinate re- sistance compelled her to strike, with the loss of 360 men killed and wounded, that of the Sea- horse being only five killed and ten wounded.

Mr. Rose, who had been sent to the United States for the purpose of restoring the relations of amity between the two countries, returned without success.

In the month of August this year arrived in England Louis XVIII., nominal king of France, with the queen and the daughter of the late king, married to the duke d'Angouleme; but only acknowledged here under the title of the

count de Lisle. A liberal provision was, never- theless, made for himself and his household ; and in the delightful seclusion of Hartwell, near Aylesbury, he passed almost the only tranquil and peaceful years he had known.

The British parliament was convened on the 19th of January, 1809. The speech adverted to the late overture for peace ; in relation to which his majesty expressed his persuasion, that the two houses would participate in the feelings ex- pressed in his declaration, lie informed them that his engagements with Spain were reduced into the form of a treaty of alliance. The pecu- liar claim of the king of Sweden to his majesty's support was also insisted on ; but the debates on the affairs of Portugal and Spain took the pre- cedence in point of interest. Earls St. 'incent, Grenville, and Moira, reprobated the idea of sending an army to Portugal when Spain was at stake. In the commons, Mr. Ponsonby adopted the same train of reasoning ; but they were ably answered by lords Hawkesbury and Casllereagh, and by Mr. secretary Canning. Lord Hawkesbury declared, lliat the sendmg of a British force to Portugal, in preference to Spain, was a measure

adopted in compliance vvitli the representations of the Spanish juntas. Mr. Canning endeavoured to justify the principles on which his majesty's ministers had acted, by developing the state of Spam at the commencement of the grand insur- rection. ' When the whole Spanish nation,' said he, 'rose unanimously, and witli a concert almost miraculous, the consequence was, t!ie sudden creation of various local authorities, acknowledging no head; jealous, watchful, and extremely suspicious of any attempt on the part of one to obtain ascendancy over the ot'.iers.' The supreme central junta was not erected till the last week in September. To these circum- stances Mr. Canning ascribed the direction of the expedition, and the delay of the advance of the Britisli army.

No inconsiderable portion of the present session was occupied in an extraordinary investigation of the conduct of the duke of York. So early as the 27th of January, colonel VVardle, an officer of mi- litia, asserted the existence of a system of abuses in the military promotions. The substance of the charge was, that an intriguing female, Mary Anne Clarke, who during several years had been a favorite with his royal highness, but then dis- cardel, had carried on a traffic in commissions, not only with the knowledge, but also the par- ticipation of the duke. After various observa- tions had been offered by different members, the chancellor of the exchequer proposed tiiat the enquiry should take place in a committee of the whole house, in which it appeared that the duke's knowledge of her transactions, and participation in her gains, were circumstances, the proof of which depended chiefly on the testimony of Mrs Clarke herself.

On the 23rd of February his royal highness addressed a letter to the

speaker of the house of commons, in which he not only denied all per- sonal participation, but the slightest knowledge of these abuses. 'But,' added his royal higTi- ness, ' if upon such evidence as has been ad- duced against me, the house of commons can think my innocence questionable, I claim of their justice that I shall not be condemned with- out trial, nor be deprived of the benefit and protection which is afforded to every British subject, by those sanctions under which alone evidence is received in the ordinary administra- tion of the law.'

It now became necessary to put an end to the present anomalous proceedings, or to frame regu- lar articles of impeachment. With a view to the first alternative, Mr. Percival on the 17th of March moved a resolution, ' that the house hav- ing examined the evidence, and having found that personal corru])tion, and connivance at cor- ruption, had been imputed to the duke of York, were of opinion that the imputation was wholly unfounded.' This was carried by 278 against 196 voices. His royal highness, however, found it expedient to resign his high office, which was transferred to Sir David Dundas.

During this ferment of the public mind, a charge of corruption was also brought against, lord Castlereagh. While that nobleman pre- sided at the India board he had been compli- mented with the disposal of a writership, and,

desirous of a seat in parliament for a fiiend, he was recommended to a ' trafficking broker,' who pretended to be able to obtain one in exchange. With this man lord Castlereagh imprudently assented to an interview, but the treaty broke off. Lord Castlereagh, in his defence, 'disclaimed being actuated by any corrupt motive, or the exertion of any official influence, though he much regretted that he had inadvertently been led to converse on such a subject with such a man ; and said, that if the house deemed the action, or rather the intention, which was all tliat the accusation amounted to, unparliamentary, he should bow to any censure which he might be thought to deserve.'

A resolution of censure was moved by lord Archibald Hamilton on the 25th of April; but this being an offence that was only contemplated, the chancellor of the exchequer moved the order of the day ; in voting for which, Mr. Can- ning took occasion to remark, 'that he would by no means be understood thereby to pronounce the case submitted to them as uot of very seri- ous importance.' This opinion having apparently more weight

than the vote, the order of the day was negatived, and Mr. Canning himself moved, 'that the house, on considering the whole of the case, saw no necessity for a criminating resolu- tion,' which was carried by a majority of 214 to 167 voices.

Soon after the battle of Corunna the emperor Napoleon set out on his return to France. In the month of March, 1809, orders were issued for the French armies to recross the Rhine. The troops of Austria were assembled under the arcliduke Charles as commander-in-chief. On the side of Italy, the viceroy Eugene Beauharnois collected a numerous army. Early in April, the Aus- trians having passed the Inn near Scharding, the king of Bavaria quitted his capital, and retired to Augsburg. On the 18th Napoleon arrived at Ingolstadt. The first considerable action took place at Ebensberg, where the archduke Louis was surprised, and his division of troops dis- persed or destroyed.

In the mean time the grand army under the archduke Charles took possession of Ratisbon, making the French garrison prisoners of ivar. On the 22nd of April the two armies met at Eckmuhl. The battle commenced at two in the afternoon, and was long and obstinate ; but to- wards evening the Auslrians were driven from their positions, and attempted to take refuge under the walls of Ratisbon, but the city was forced with great slauijliter, and the Aus'rians retreated to the left bank of the Danube. Na- poleon, following the course of that river, ad- vanced to Vienna; into which capital, on the loth of May, he once more entered as conqueror, the emperor Francis having previously retired to Moravia.

In the north of Germany a strong disposition to rise in opposition to the tyranny of France at this time manifested itself, had any rallying point existed. Colonel Schill, an officer late "in the Prussian service, raised the standard of indepen- dence at Luneburg, and was joined by great numbers ; but he was opposed and overpowered by a far superior force under Jerome Buonaparte.

He then retired to Stralsund, in which place he sustained a siege, and was killed in the defence of it. The duke of Brunswick also, whose efforts, combined with those of Schill, and supported by Great Britain, might have been attended with the happiest results, took up arms when the cause was hopeless, and, after some temporary success, was compelled towards the close of August to embark on board a British squadron at the mouth of the Weser.

In Poland, the archduke Ferdmand being resisted by a rery inferior force under prince Poniatowski, nephew to the late king Stanislaus, and whose great qualities made him the object of his country's secret hope and warm

attach- ment, took possession of Warsaw, but was recalled in consequence of the early disasters of the Austrian arms. The Russians, then joining the Poles, occupied nearly the whole of the Austro-Polish provinces ; but the emperor Alex- ander showed no disposition to push the war with vigor.

In Italy, where the archduke John command- ed, the first operations of the Austrians were also successful, and he captured the cities of Padua and Vicenza; but, subsequently to the battle of Eckmuhl, he was also recalled to the defence of Austria. In his retreat the archduke was closely followed by the viceroy, prince Eugene Beau- harnois, who obtained several advantages over him; and on the auspicious anniversary of the battle of Marengo, the two armies coming to a general engagement near Raab in Hungary, the Austrians were totally defeated, and that great bulwark of the kingdom fell into the hands of the enemy.

During an interval of repose, which passed after the indecisive battle of Eslingr, all the de- monstrations of the French seemed to be pointed against that position, which was, in the expec- tation of attack, rendered almost impregnable by redoubts and intrenchments. But, on the night of July 4th, a bridge of vast dimensions was thrown across the river, with almost magical expedition and skill, opposite the left wing of the Austrians stationed at Wagram. Early next morning the whole French army had crossed the river, and appeared in order of battle. Thus surprised and disconcerted, the archduke Charles spent the day in manoeuvreing and altering his dispositions. On the 6th of July, at sunrise, the long expected contest commenced. In his efforts to outflank the enemy, the archduke dangerously weakened his centre, upon which an assault was made with accumulated force. The Austrians, unable to withstand the shock, gave way, though by slow degrees, retreating finally near a league from the ground, leaving the wings exposed to an attack from the dukes of Rivoli and Aner- stadt (Massena and Davoust). The village of Wagram being also forced by the enemy, the Austrians, perceiving the fate of the battle de- cided, fled with precipitation, and were pursued as far as Znaim in Moravia.

Napoleon now received a proposal from the emperor Francis to treat of peace; and a defini- tive treaty was concluded much less unfavorable to Austria than might have been expected. To Bavaria the emperor Francis was obliged to

yield the important territory of Saltzburg, with other districts in the vicinity.

To France were ceded Fiume and Trieste, with the entire line of coast connecting the dominions of France on both sides of the Adriatic. In Poland the king of Saxony obtained, in addition to the provinces constituting the duchy of Warsaw, the Western Gallicia, with the city of Cracow. Another portion of Austrian Poland was assigned to Russia.

After the British army had embarked from Corunna, the French emperor bent all his efforts to the subjugation of Spain. A number of fugitives from the army of Castanos, which was defeated at Tudela on the 23d of November, 1809, had retreated to Saragossa, and, together with its martial citizens and armed peasants from the country, composed a body of 50,000 men, under the command of the renowned Palafox. The siege was conducted by the duke of IMonte- bello, one of the ablest of the French generals. On the 26th of January the French made their grand attack. About noon on the following day the breaches were practicable, and the assailants entered the city. General Lacoste, and a great number of their bravest officers and men, fell in the assault. The determined resolution of the inhabitants, who disputed every inch of ground, and converted every house into a fortress, reduced the French to the necessity of mining and blow- ing up the houses. The Spaniards, on their part, had recourse to counter-mining ; and the effects of this subterraneous war were dreadfully destructive. During these tremendous operations the batteries kept up an incessant fire ; and, by mining and blowing up the houses as they pro- ceeded, the French, on the 17th of Februan,-, at length became masters of the city. No fewer than 20,000 of its brave defenders were at this time buried under its ruins.

A series of disasters now fell on the patriot cause. The French army in Catalonia made three powerful attacks on tliat of the Spaniards under general Picding. In the last of these the Spanish general, after an obstinate conflict, in which he was severely wounded, was, on the 12th of March, driven from his position, and compelled to retire to Tarragona. Soon after general Cuesta was defeated 29th of March, at Medellin, and obliged to retreat to Monasterio. The patriots about this time recovered Vigo ; but their casual advantages were sunk in the long train of disasters, and the French made themselves masters of the centre of Spain.

On the 22d of April Sir Arthur Wellesley once more landed at Lisbon with large rein- forcements. Instantly repairing to Coimbra, he put himself at the head of the allied forces, and advanced against Oporto; at the same time de- taching marshal Beresford to occupy the fords of the Upper Douro. Here marshal Soult, finding himself in danger of being insulated, judged it necessary to retreat into Gallicia. Meanwhile marshal Victor had made himself master of Alcantara; upon which the British commander returned to the south, and 'ictor retired to his former station at Guadiana.

Sir Arthur Wellesley on the 20th of July effected his junction with Cuesta at Oropesa; Vol. X-

but marshal Victor, aware of his danger, had by this time crossed the Tagus. The British and Portuguese army now marched along the banks of the river towards Olalla, and took an advan- tageous position near Talavera de la Reyna. Early on the morning of the 28th the enemy attacked the British in force, making a deinon- stration also on the opposite quarter. The bat- tle continued at intervals during the whole day, and ended in the final repulse of the enemy.

Marshals Ney, Soult, and Mortier, now ad- vanced in great force upon the rear of the allies, and it became necessary for them to retreat to Badajos. On the eastern side of the peninsula, general Blake, after a fruitless attempt to recover Saragossa, was attacked and totally routed by the duke of Albufera (marshal Suchet) on the 19th of June; — and this disaster was followed by a much greater; for the central army, said to consist of 50,000 men, under the marquis Ariezaga, advancing upon Madrid, with the view of passing tlie Tagus at Aranjuez, was en- countered 19th of November, by the French under king Joseph, assisted by the marshals Soult, Mortier, and Victor, at Ocana, near the south bank of that river, when the action ter- minated in a signal victory on the part of the enemy. The vanquished army retreated in con- fusion beyond the mountains. In the month of December the strong and important foitress of Gerona, after a long resistance, surrendered to marshal Augereau.

The king of Sweden persisted in the war with Russia, with what his subjects deemed insensate obstinacy. On the morning of the 13th of March, as he was preparing to leave Stockholm for his country residence, he was suddenly arrested in his own palace. He drew his sword in rage, but was immediately overpowered, and sent a prisoner to the fortress of Drotningholm. The duke of Sudermania issued a proclamation, in quality of administrator, declaring the incapacity and deposition of the king. This resulted in an act of abdication, signed by Gustavus IV., and a decree was passed, that he and his issue, born and not born, were for ever excluded from the throne of Sweden. The duke ascended the throne as Charles XIII., and a treaty of peace followed, 17th of September, with Russia. An accommo- dation between Sweden and France took place in De'.'jmber, in consequence of which the former recovered Pomerania, and the Isle of Ri'ge I.

tri the early part of June Sir John Stewart, commander of the British army in Sicily, under- took an expedition against the kingdom and capital of Naples, and landed with 15.000 British troops, afterwards joined by a body of Sicilians on the coast of Calabria. On the 24th the advanced

division of the fleet anchored off Cape Miseno, and preparations were made for an attack on the Isle of Ischia. ˆ descent being effected, in the face of a formidable chain of batteries, the defences of the enemy were turned, and their principal force retired to the castle, which surrendered on the 30lh. The adjacent garrison of Procida was also summoned, and submitted ; which paved the way for the capture of forty gun-boats in their passage from Gaeta to

Naples. But such a force was now assembled for the defence of Naples, that Sir John Stuart saw no prospect of success in an attempt against that capital. An unsuccessful attempt on the castle of Scylla, which the enemy afterwards aban- doned, blowing up the works, concluded the military operations of the British in this quarter.

An undertakmg of much greater moment occupied the attention of the British ministry during the summer of 1809 : the memorable Walcheren expedition. Towards the end of July an army of 40,000 men was collected under the command of the earl of Chatham, assist- ed by a naval force, under the direction of Sir Richard Strachan. The principal object of the expedition was to gain possession of the islands commanding the entrance of the Scheldt, and the port of Flushing.

The armament iuTested Flushing on the 1st of August. A dreadful cannonade and bom- bardment commenced on the 13th, which on the 15th produced from the commander of the gar- rison, general Monnet, a request for a suspension of arms. This was followed by a surrender, which yielded nearly 6000 men prisoners of war. During the siege of this place, a great number of troops from the Belgic and nearest French provinces were assembled for the defence of Antwerp ; so that an attack upon that important place, and tlie fleet lying under its fortifications, whatever might have been its success at the com- mencement of the enterprise, was now thought too hazardous. The troops likewise were be- coming sickly, and lord Chatham was induced to depart for England on the 14th of September, with the greatest part of his army. The opinions of the ministry relative to the retaining or aban- doning Walcheren itself were in a state of fluc- tuation. In the middle of September a requisition was made for a number of the peasantry of the island to repair and strengthen the fortifications of Flushing ; and, near the end of October, 100 artificers arrived from England with brick and lime. Towards the middle of November, however,

the demolition of the works and basin for shipping was begun ; and on the 23d of December ˆValcheren was completely evacuated by the relics of the British army, one-half of which were either dead, or on the sick list.

Martinique and Cayenne were added to our conquests : and a French fleet of nine sail of the line, lying in the road of Aix, protected by the forts of that island, lord Cochrane, who was acting under the orders of admiral Gambler, proposed to make an attack upon it with a squadron of five ships, frigates, and smaller armed vessels. Standing in with a favorable wind, on the 11th of April, a boom laid across the entrahce was broken through by the leading ship, and the greater part of the French ships slipped their cables, and ran for the shore. On the following day lord Cochrane gave information by telegraph to the admiral, that seven of the enemy's ships were on shore, in a situation which aff'orded an opportunity of destrojnngthem. It being, however, found that the state of the wind rendered it hazardous to enter the roads, in which the water was shallow, with the large ships, admiral Gambler, who had unmoored.

anchored again three miles from the forts, and sent all the small vessels to the attack. Lord Cochrane, leading the way, op<;ned a fire on a ship of fifty-six guns, which struck, and this was followed by three others of the line, which were also forced to strike; all of which were set on fire and destroyed. The other French ships be- ing got into deep water, moved up the Charente, where it was impracticable to molest them ; but it was doubtful whether they could be agam got out to sea.

Lord Colling^vood, who had succeeded Nel- son in the chief command of the ships in the Mediterranean, having proposed to general Stuart an expedition against the islands of Zante, Cephalonia, and others, whilst the French should be occupied with the defence of Naples, a joint force from Messina, Malta, and Corfu, was arranged for this purpose, and on the 1st of October it anchored in the bay of Zante. On the following day a capitulation was agreed on, by which all that group of islands surrendered to the British arms, and the government of the sep- tinsular republic was restored.

On the 23rd of October three French ships of the line and four frigates, with a convoy of about twenty vessels, were descried coming from Tou- lon. Lord CoUingwood directed rear admiral Martin to proceed with a squadron in chase of them; and on the 25th, off" the mouth of the Rhone, two of the French ships of the line were chased on shore, and set on fire by the crews ; while a third, with a frigate, ran on shore at the entrance of the port of Cette, with little chance of being got off". Tlie convoy mostly escaped at the time into the bay of Rosas ; but on the 30th some ships, with the boats of the fleet, under the orders of captain Hallowell, entering into

the bay most gallantly overcame all the resistance made, as well from the vessels as from the castle of Ro- sas and the forts, and captured or destroyed the whole.

Mr. Jefierson having been succeeded, in the office of president of the United States of America, by Mr. Maddison, the embargo, which had been severely felt from its long continuance, was repealed, and an act substituted prohibiting all intercourse with France and England, with a proviso, that, if either nation rescinded its ob- noxious decrees, the prohibition relative to that nation should cease. Mr. Erskine, the English envoy in America, was consequently empowered to promise, that, if the American interdiction of July 1807 were withdrawn, the commerce of America with the French colonies should be placed on the same footing as in times of peace, the British cruisers being allowed to capture all vessels trading contrary to this restriction. But Mr. Erskine ventured also, without proper au- thority, to declare the orders in council rescinded from the 10th of June 1809, on the general en- gagement 'that an envoy extraordinary would be received by the president, with a disposition cor- respondent to that of his Britannic majesty.' The British government, however, refused its ratifica- tion to this agreement.

On the 16th of December Napoleon announced to the senate his intention of divorcing his em- press ; and the archduchess Maria Louisa,

daughter of the emperor Francis, was pointed out as the future empress. This had been ar- ranged at Vienna during the preceding summer, and the marriage was celebrated at Paris in the ensuing month of March, with great pomp and festivity.

In the course of this year several changes had taken place in the English cabinet. Mr. Can- ning did not enter very cordially into the defence of lord Castlereagh on the charge relative to the India writership ; but it was not then known that he had previously applied to the duke of Portland for the removal of that nobleman from the war department, recommending the marquis Wellesley as his successor ; obtainmg a promise from the premier to that effect, though not for its immediate execution.

The melancholy termination of the Walcheren expedition, however, brought this state of mask- ed hostility between these ministers to a crisis. Mr. Canning again urging his suit was surprised to find that no communication had been made to lord Castlereagh by the duke of Portland, and gave in his

resignation. Lord Castlereagh, on the other hand, being now informed of all the circumstances, so highly resented the interference as to make an immediate demand of satisfaction. A duel accordingly took place on the 21st of September, in which Mr. Canning was wounded.

On the SSd of September Mr. Perceval, upon whom (in consequence of the resignation of the premier and the two secretaries) the chief, it may be said the sole, weight of the government now devolved, wrote to earl Grey and lord Grenville stating, ‘ that his majesty had authorised the earl of Liverpool (late lord Hawkesbury), and him- self, to communicate with their lordships for the purpose of forming an extended and combined administration ; and requesting their presence in London.’ Lord Grenville on this repaired to town, in obedience to what he considered to be an intimation of the king’s pleasure; but in his answer to ˆIr. Perceval, dated the 29th of Sep- tember, he peremptorily declined the communi- cation proposed, declaring, ‘ that it could not be considered in any odier liglit than as a dereliction of public principle.’ Earl Grey, writing from his seat in Northumberland, declared ‘ his at- tendance in town unnecessary, unless he had re- ceived the king’s commands to that effect.’ Mr. Perceval now accepted the office of first lord of the treasury : marquis Wellesley, who had su- perseded Mr. Erere in. Spain, was recalled to receive the seals of the foreign department : lord Liverpool succeeded lord Castlereagh as minister at war ; and the honorable Richard Ryder, lord Liverpool in the home department.

The 25th of October of this year, being the fif- tieth celebration of his accession to the throne, was distinguished throughout the united king- dom as a jubilee, and was marked by every dehionstration of loyal attachment and reve- rence.

The parliament of the united kingdom was convened on the 23d of January, 1810, and never did the political atmosphere exhibit a deeper gloom Russia, the only continental power which could singly cope with France, was in

strict alliance with the Frencn emperor. Austria had been once more prostrate at his feet. The resistance of Spain, in the general opinion, had become almost hopeless ; and all the other pow- ers of Europe were in a state of vassalage. Yet under these unfavorable circumstances the speech delivered by the lord chancellor, in his majesty’s name, expressed ‘his just confidence, under di- vine providence, in the wisdom of his parlia- ment, the valor of his forces, and the spirit of his people. His majesty hoped that material advantages would be found to result from the demolition of the docks and arsenals of Flushing. The expulsion of the French from Portugal, and the glorious victory obtained by lord viscount Wellington atTalavera,

had contributed to check the progress of their arms in the peninsula. As- surances had been rece.ved of the friendly dis- position of America; and his majesty had much satisfaction in declaring the flourishing state of the national commerce, and increasing produce of the revenue.'

In parliament the speech of]\Ir. Perceval on the subject of the late overtures to lords Gren- ville and Grey, was particularly modest and con- ciliatory. In adverting to the overture made by the command of the king to lords Grey and Grenville, he protested that he did not wish for the situation which he then occupied. The cir- cumstances of the times required a strong and extended administration ; and he hoped that the application would have been successful. Had he been at liberty to state his proposals, the first would have been to resign the treasury to their disposal.

After a variety of other proceedings, in which the same subjects were indirectly brought under discussion, on the 26th of January lord Porches- ter moved in the house of commons, 'that a com- mittee be appointed to enquire into tlie policy and the conduct of the late expedition to the Scheldt.' This motion was carried by the small majority of 195 to 186; and a committee of tiie whole house was fixed on for the purpose. His lordship afterwards moved for an address to the king for copies of instructions given to the com- manders, and other papers, which was agreed to; and a secret committee was nominated for the inspection of such communications as were deemed improper to be made public.

*Among the papers thus moved for was *A copy of the earl of Chatham's statement of his proceedings, dated October 15th, 1809, and pre- sented to the king February 14th 1810.' "This document appeared, from its contents, to be an appeal to his majesty by the commander of one part of the expedition against the conduct of the commander of another part, and the circum- stance occasioned much delˆate. A motion being made by ˆIr. Whitbread for an address to his majesty, requesting that there might be laid be- fore the house copies of all reports and other pa- pers submitted at any time to his majesty by the earl of Chatham, relative to the late expedition, was carried, on a division, by 178 to 171 votes. The answer returned to the address signified, that the king had received a report from lord Chatham on the 15th of January, which he had kept till February the 10th, when it was returned*

*to the earl in consequence of his desire to make sonme alterations in it : that the report thus al- tered, having been again presented to the king on the 14th, was directed by his majesty to be delivered to the secretary of. state, and no copy of it was kept by the king. Mr. Whitbread, on the 2d of ?*larch, moved .wo resolutions respect- ing this matter : one stating the fact as above mentioned ; the other a strong censure of the same. After a long debate the previous question was moved, but negatived by 221 to 188 voices; and, the first resolution being then carried, Mr. Whitbrtad waived the second, and admitted a modification of it proposed by Mr. Canning. It was then determined that the resolution should be entered on the journals of the house; the consequence of which was that lord Chatham resigned his office of master-general of the ord- nance.*

When the proceedings relative to the Wal- cheren expedition first came before the house Mr. Yorke moved an enforcement of the stand- ing order for the exclujion of strangers, and con- tinued to move it from day to day. Mr. Sheri- dan therefore moved a revision of the standing order, which was vehemently opposed by Mr. Windham, who launched into a furious invective against the reporters. This singular tirade was answered with spirit and tamper by Mr. Stephens, an eminen: civilian, who had himself in his ear- lier days, he acknowledged, been a reporter of the debates.

There was at this time a debating society in London, under the name of the British Forum, the president of which was John Gale Jones. On the 19th of February a placard appeared, in- forming the public that a question had been de- bated at the British Forum, 'Which was the greater outrage on the public feelings Mr. Yorke's enforcement of the standing order of the house of commons for the exclusion of strangers, or Mr. Windham's attack on the Lbevty of the press ? And that it was unanimously decided, that the enforcement of the standinj- order ought to be censured as an insidious and ill-timed attack on the liberties of the press.'

Jones was accordingly cited, on Mr. Yorke's motion, before the honorable house on the 21st of February, when he avowed himself the autlior of the paper, and, notwithstanding an apology, was committed to Newgate.

*On the 12lh of March Sir Francis Burdett, who had not been present at the former pro- ceedings, called the attention of the house to this subject in a speech in which he ventured to deny altogether the power of the house to commit : and on the 24th of March there appeared in Cobbett's Weekly Register a letter, entitled * Sir Francis Burdett to his constituents, denying the power of the house of commons to imprison the people of England.' This publication was brought before the house on the 26th by Mr. Lethbridge,and Sir Francis acknowledginghimselftdbe the author, Mr. Lethbridge on the following day moved that the publication in question was*

a libellous and scandalous paper, reflecting upon the just rights and liberties of the house ; and that Sir Francis Burdett, who suffered this paper to be printed with his name, had been guilty of a violation of

those privileges. These resolutions being agreed to without a division, a motion was made by Sir Robert Salisbury for his commitment to the tower; and an amendment, softening the sen- tence to a reprimand, was rejected by 190 votes to 152. On the 6th of April the warrants for commitment were delivered to the serjeant at arms. That officer, on going to the house of Sir Francis, was informed that he would be ready to receive him the next morning ; which being con- strued by that officer as implying that he would go with him peaceably to the tower, he retired. He however returned, accompanied by a mes- senger, who said that the serjeant had been se- verely reprimanded by the speaker for not hav- ing executed the warrant ; the legality of which Sir Francis now denied. He declared his de- termination not to go unless compelled by actual force.

After a delay occasioned by the speaker's con- sulting the attorney-general respecting his au- thority, the sergeant went on the morning of the 9th of April, attended by a number of police officers, and a detachment of cavalry and infan- try, to convey Sir Francis to the tower. An entrance being forced into his house, he repeated his objections to the warrant, and declared that he would yield only to force. The constables, on this, advanced to seize him, when he was led by his brother and a friend, taking his arms, and conducted to the carriage in waiting, whence he was conveyed to the tower. As the escort re- returned, a numerous mob assembled in East- cheap, and attacked them with stones and brick-bats. At length, the attack becoming serious, some shots were fired, by which two or three lives were lost, and several persons wounded.

On his liberation. Sir Francis Burdett brought actions at law against the speaker of the house of commons for issuing his warrant, against the sergeant-at-arms for executing it, and against the constable of the tower for keeping him in cus- tody, in all which he failed, on the plea of the legality of the warrant. His confinement was not terminated till the prorogation of parliament.

On the 16th of May the chancellor of exchequer brought before the house of commons his annual budget of finance. The supplies voted were stated at £50,500,000 for Great Britain and Ire- land ; and among the ways and means for the former were the war-taxes, estimated at £19,500,000, and a loan of £8,000,000. No new taxes were proposed; and a very favorable report was made of the commerce and general prosperity of the country. The foreign subsidies of the year were £400,000 to Sicily, and £900,000 to Portugal ; and a vote of credit for £3,000,000 was passed to meet

emergencies.

At the beginning of this year the cause of Spanish independence, as far as it depended on the people of Spain, was almost hopeless. The most interesting events of the campaign occurred on the side of Portugal. The great effort of France was to obtain the entire possession of that country. For this purpose it had been de- termined to commence with the reduction of the fortresses of Ciudad Rodrigo and Almeida. As soon, therefore, as the capture of Oviedo and

Astorga had set at liberty a part of the French troops employed to keep in check the Spaniards of the northern provinces, marshal Ney began to invest the former, and it surrendered July 10th. In the mean time marshal Massena arrived from France, to take the command of the army des- tined for the conquest of Portugal, and consist- ing of about 80,000 men.

Almeida was next invested, and the trenches were opened in the middle of August. It was garrisoned by 3000 men, partly English and partly Portuguese, commanded by British offi- cers, and its governor was brigadier-general Cox. The vigor of the defence would probably have long retarded its fall, had not a bomb alighted on the principal magazine, which occasioned a ter- rible and most destructive explosion. Massena now withheld his fire, and sent a flag of truce offering terms of capitulation, which, on the 27th of August, were acceded to. The great contest for the possession of the country was now to commence. During the siege of Ciudad Rodrigo the principal post of the British army was at Guarda, whence the French lines might be descried, but nothing of consequence could be undertaken for its relief. After the surrender of Almeida, lord Wellington concentrated the dif- ferent divisions of the allied army, and began his retreat towards Lisbon. He had formed a defensive plan, to which he steadily adhered. At the same time he put fully into practice the efficacious, though severe policy, of rendering all the country in the line of march entirely inhos- pitable to the French. On the 21st of Septem- ber all the force under Massena was concentrated at 'iseu, where it halted for a time ; during which lord Wellington passed to the right of the Mondego, and occupied with his centre and left wing the Sierra Buzaco, which extends to that river. Massena, on arriving in front of his position on the 26th, resolved upon an attack. The French pushed up the heights with great courage in different parts, and one division reached the summit of the ridˆe : they were, however, met with equal resolution at the point of the bayonet, and were finally repulsed with < great loss, 2000 men being left on the

field. The loss of the English and Portuguese was also con- siderable. Massena now made a circuitous march upon Coimbra ; but lord Wellington an- ticipated his object, and arrived there before him. The place, however, affording no advantages for defence, he continued his retreat to the strong lines of Torres \'edras.

The French emperor was now at the zenith of his glory, and the Seven Provinces of Holland were inseparably annexed to the French empire. The V'alais of Piedmont were also OjUnexed to France, for the purpose of securing the passage of the Alps by the Simplon; and possession was taken of the lianse towns, and of the whole course from the Elbe totiie Ems, — commanded, it was said, by circumstances. The electorate of Hanover was annexed to the kingdom of West- phalia, and its very name was abolished; and to that country, and all the other dependent king- doms, the conscription laws were extended. In France, the chains of despotic power were rivetted by spies, arbitrary imprisonments, a

rigorous police, and restrictions on the liberty of the press.

An event took place this year in Sweden, which may be ranked among the most extraordi- nary occurrences in European history. On the 29th of May the prince of Augustenburg, pre- sumptive heir to the crown of Sweden, died suddenly ; and a diet was assembled in August, 1810, to fill the vacancy. In consequence of a strong letter of recommendation from Napoleon, the king of Sweden proposed marshal Bernadotte as the person on whom he wished the choice to fall; and, on the 1st of November, Bernadotte was installed.

The isles of Bourbon and France, in the Indian Ocean, which had so long been a great annoy- ance to our East India trade, were this year brought under the dominion of Great Britain. Lord Minto, governor-general of India, having laid the plan for their reduction, a body of Europeans and Sepoys, about 1600 of each, sailed from Madras, and, being joined by about 1000 more from the island of Rodriguez, the whole undeˆ the command of lieutenant-colonel Keating, with a fleet of men-of-war and trans- ports, the expedition arrived early in July oft' the island of Bourbon. Dispositions were made for an attack on the principal town, St. Denis, but it was prevented, on the 8th, by an offer to capitulate on honorable terms, which were granted. The other town, St. Paul, was taken possession of on the 10th, and the whole island sulˆitted.

In the month of November a body of troops, consisting of 8,000 or 10,000, from India and the Cape of Good Hope, commanded by major- general Sir John Abercromby, and a fleet under admiral Bertie, took possession of the Mauritius, or Isle of France. The garrison was sent to France, and to be at

their own disposal. This was the most valuable of the remaining French possessions to the eastward of the Cape of Good Hope. Three frigates were afterwards despatched to destroy the French batteries on the coast of Madagascar, which being effected, there was not left to France, at the beginning of the following year, a slip of land in either Indies, nor a ship on the Indian Ocean.

On the 17th of February the Dutch settle- ment of Amboyna, with its dependent islands, was surrendered to a British force from Madras. A party of seamen also, commanded by captain Cole of the Carolina frigate, having on the 8th of August carried a fort upon Banda Neira, the whole island of Banda, the principal of the Spice Islands, with its dependencies, though protected by 700 regular troops and 300 militia, surrendered unconditionally, and afforded a rich prize to the captors.

The differences between the governments of Great Britain and the United States of America still remained unadjusted. On the recall of Mr. Erskine, Mr. Jackson had been sent to succeed him ; but the firm and unyielding tone taken by him, with the disavowal of Mr. Erskine's agree- ment, contributed to render him un-acceptable; and the American resident in London was Instructed to demand his recall. :dr. Galatin, treasurer of tne States, now sent letters to the different collectors

of the customs, announcing the abolition of the restrictions with regard to France, she having revoked her edicts, but declaring that they would he revived in full force with regard to Great]>ritain on the ensuing 2d day of February, should she not in like manner have revoked her decrees. By a second letter he gave his opinion, that, in the case above-mentioned, all British goods arriving subsequently to the 2d of February would be forfeited.

The princess Amelia expired on the 2d of November 1810; and the king's mind received a shock from the illness and death of the princess from which he never recovered. The parliament had been prorogued to the 1st of that month, and a commission prepared by the lord chan- cellor, under an order in council, for a further prorogation to the 29th ; but, as the sign-manual was wanting, the two houses met on the day pr.eviously fixed. Tlie illness and inability of the king to open the session being announced, an adjournment of a fortnight was agreed to ; and the members of both houses were summoned for the 13th. This was followed by a second adjournment to the 29th, and asjain by a third to the 13th day of December. The

physicians, on examination before the lords of council, and afterwards before a committee of both houses, accorded in their firm belief of his majesty's recovery ; grounding this expectation on the general state of his health, and the precedents of 1788, 1801, and 1804. At length Mr. Perceval, adopting the mode of procedure of 1788-9, moved three resolutions, affirming, 1. The in- capacity of the king ; 2. The right of the two houses to provide the means of supplying the defect; 3. The necessity of determining upon the means of giving the royal assent to a bill for that purpose. The opposition, waiving altogether the question respecting the right of the prince of Wales to the regency, merely proposed that the prince be addressed to take upon him the executive duties. This was negatived in the house of peers by 100 to seventy-four, and i-n the commons by 2G9 to 157 voices.

The resolutions moved by Mr. Perceval having been carried by great majorities, that minister apprised the prince, by letter, of the restrictions he meant to propose ; and, in a brief reply, the prince referred to the letter which he addressed to]\Ir. Pitt in 1789. The other members of the royal family also transmitted to Mr. Perceval their protest against the restrictions. Tlie grand division on the question of restrictions was carried, on the 31st of December, in favor of ministers, by 224 to 200 voices. The regency finally passed into an act on the 5th of Februaiy 1811. The restrictions were to remain in force lO the 1st of February 1812. The restoration of the king was provided for by a simple notifica- ion to the privy-council, by the queen and her assistant counsellors, viz. the two archbishops, the lord-chancellor, the lord chief-justice, the master of the rolls, the duke of Montrose, and the earls of Winchelsea and Aylesford.

11. From the Regency to the death of George III- — From the avowed sentiments of the prince, it was generally expected that a total change of

administration would take place; and in a letter to Mr. Percival, announcing his intention of con- tinuing the present ministers in office, he ex- plicitly stated, that duty and affection for his beloved and afflicted parent alone had dictated his decision. So strong, indeed, were the pre-possessions ˆt this period respecting '.he king's i recovery, that the leaders of opposition them- selves were believed to be indifferent to the ac-ceptance of office. The first measure submitted to the regency parliament opened on the 12th of February 1811, respected the Catholic committee of Ireland ; a standing delegation, consisting of ten persons elected from each county, charged with the management of the affairs of that body.

This kind of organisation gave an alarm to go- vernment, and produced a

circular letter from Mr. Wellesley Pole, secretary to the lord-lieu- tenant, requiring the magistrates of Ireland, in pursuance of an act of the thirty-third of the king, to cause to be arrested and committed to prison, unless bail should be given, all persons within his jurisdiction guilty of having been in any way concerned in issuing notices for such election or appointment. On the l&th of February the earl of Moira brouglit the matter before the house of lords ; and asked ministers, whether the measure had been settled by them before Mr. Pole's departure for Ireland ? The earl of Liverpool replied that they knew nothing of the matter until the news arrived, but that it was accompanied with reasons for the procedure which justified it. The subject was introduced in a similar manner into the house of commons by Mr. Ponsonby, when Mr. Perceval made the same assertion. In the mean time Mr. Pole having arrived from Ireland explained in his place in the house of commons the whole transaction. His principal object was to show in what respect the proceedings of the Catholic committee of 1809, which had not been interfered with, differed from those which produced this act of government.

In answer to a question from Mr, Ponsonby, whether the law officers had been consulted on the occasion, he affirmed that the lord-lieutenant had taken the opinions of the lord-chancellor and the attorney and solicitor-general, and that the latter had drawn up the letter issued by him- self. In conclusion, Mr. Ponsonby's motion was netjatived by 133 against forty-eight votes.

The Catholic petition was presented to the house of commons by Mr. Grattan on the 20th of May ; and on the 31st he moved that the same should be read, and also the votes of the house conveying thanks to the armies under lord Wel- lington and general Graham, in which were many Irish Catholics. From these documents he took his ground, to show that there was nothing in the Roman Catholic religion itself which en- couraged disaffection, but that the manner in which the Catholics had been treated by government was the true cause of their discontents. After enlarging with great force an these heads, he con- cluded with moving that the petition be referred to a committee of the whole house. The motion was ably supported by other speakers ; and, on the other hand, it was opposed on the grounds of a supposed inherent principle of intolerance

in the religion of Rome, of the apprehension that the Catliolics would still be rising in their demands, and of danger to the Protestant estab- lishment should their claims be allowed. On a division, there appeared for the

motion eighty- three, against it 146.

Lord Donoughmore introduced the petition into the house of lords on the 18th of June, when he moved for referring it to a committee. But the division on the motion gave, contents sixty-two, non-contents 121.

The Irish Catholics were too zealous and con- fident in their cause to regard their parliamentary defeat as a reason for renouncing their plans ; and the summer was actively employed in meet- ings for the nomination of delegates, several of which were attended by Protestant gentlemen, who regarded Catholic emancipation as a branch of the general liberty of Ireland. On the other hand, government resolved not to submit pas- sively to the violation of its injunctions. An aggregate meeting being held at Dublin, July 9th, for the appointment of delegates to the general committee of Catholics, rtve persons were apprehended by a warrant from the lord chief-justice for a breach of the convention act ; one of whom. Dr. Sheridan, was put upon his trial before the court of king's-bench in Dublin ; but the jury brought in a verdict of not guilty.

In the debates relating to the regency bill, in the house of lords, earl Grey had taken notice of the circumstance of the king's having been suf- fered to perform some of the functions of royalty in 1804; and Mr. Whitbread brought forward in the commons a motion for a committee to examine the lords journals for the evidence of the phy- sicians respecting his majesty's health in 1804, and to report the same to the house. Lord Cas- tlereagh rose in defence of the chancellor, at the same time declaring his readiness to share the responsibility of the transaction referred to. The defence turned upon the unanimous declaration of the physicians as to the king's competency to transact business on February 27th, though none was submitted to him till March 5th. On the 9th it was necessary to obtain his sign-manual to the mutiny act, which could not be deferred witliout danger. In these and other instances the physicians had sanctioned the application to him. Mr. Whitbread, in reply, pledged himself to make out the whole charge, if opportunity were given him of cross-examining the phy- sicians. His motion, however, was negatived by 198 against eighty-one.

The operation of the Berlin and Milan decrees, enforced as they were by the orders in council, had now produced the most fatal consequences to the mercantile interest. The loan for the last year had sustained a ruinous depreciation ; and, the foreign demand for British manufactures being greatly reduced, numerous failures were the inevitable and melancholy result. A select committee was appointed to enquire into the state of commercial credit, who recommended as a temporary expedient an issue of exchequer bills, to the amount of £6,000,000, for the relief of such persons as could give satisfactory secu- rity for repayment.

It has been mentioned that the regent, con-

sidering himself as the possessor of only a restrict- ed and temporary authority, declined taking any part in public transactions, and allowed the ministers whom he found in office to pursue their own plans without interference. Yet one act, which soon followed his accession to power, was certainly regarded as a spontaneous exertion on his part ; this was the re-appointment of the duke of York to the office of commander-in-chief of the army.

Lord Milton, on the 6th June, after various observations relative to this transaction, moved the following resolution : — ‘ That, upon a de- liberate consideration of the recent circumstances under which the duke of York retired from the army in March 1809, it appears to the house that it has been highly improper and indecorous iu the advisers of the Prince Regent to have recom- mended to his royal highness the re-appointment of the duke of York to the office of commander- in-chief.’ The chancellor of the exchequer fully acknowledged the responsibility of ministers for the measure, but contended that, when Sir David Dundas had expressed a wish to retire, they could have no doubt or hesitation as to whom they should recommend to supply the vacancy ; and no vote had passed the house to preclude the duke of York’s restoration. It appears that a considerable change had, by this time, taken place in the minds of the majority of the mem- bers relative to this matter, as the votes against it, on a division, were 296 to forty-seven.

The measure of an interchange of the militias of Great Britain and Ireland was introduced into the house of commons, on the 17th of May, by Mr. secretary Ryder, who moved for a bill to invest the crown with a power to that effect. By a clause of this bill Irish Catholics serving in England were entitled to all the civil, military, and religious exemptions which they possessed in Ireland. This, in fact, was the measure in relation to which the cry of ‘ No popery ‘ had been raised against the late ministers.

Parliament was prorogued on the 24th July, with a speech in the Prince Regent’s name, delivered by commission, in which great satis- faction was expressed with all the measures of the session.

The peninsula of Spain and Portugal still con- tinued the grand theatre on which the contest for the liberties of Europe was maintained. The campaign commenced at a very early part of the year.

On the 25th of February an armament was sent out from Cadiz, under the command of lieutenant-general Sir Thomas Graham, who dis- embarked a body of English, Spaniards, and Portuguese, at Algesiras. The object of the

ex- pedition was to attack the French who weie employed in the siege; and, the landing being effected on the 28th, the allied army arrived, on the morning of the 5th of March, on the ridge of Barossa, about four miles to the southward of tlie river of Santi Petri. Here the French army con- sisted of about 8000 men, formed in two divisions, and in a high state of discipline and equipment. The allied force scarcely amounted to 0000 men, of whom about one-half were English. A battery of ten pieces of cannon, under the direc-

tion of major Duncan, opened on the enemy's centre, and the right of the allies attacked general Rutin's division on the heights ; while lieutenant-colonel Barnard's battalion, and a detachment)i Portuguese, were engaged with the enemy's wraiUeurs. But Laval's division, notwithstanding the havoc made by major Duncan's battery, ad- vanced in imposing masses, and opened a destructive tire of musketry. The left wing of the allies now advanced, keeping up a constant fire; and a most determined charge of the sixty- seventh regiment and the three companys of guards, supported by all the rest of the wing, decided the fate of general Laval's division. The eagle of one of the regiments of light infantry wa-s taken by major Gough.

The right wing of the allies was equally suc- cessful. The French lost, on this occasion, about 3000 in killed, wounded, and prisoners, with one eagle, six pieces of cannon, their ammu- nition waggons, and a number of horses. Gene- ral Bellegarde, chief of the staff, an aide-du-camp of marshal Victor, and several other officers, were killed, and many were wounded and taken prisoners, among whom were the general of division, Rufin, who soon after died. The loss of the allies amounted to about 1240 killed and wounded.

About the same time that the British arms were so successful on the heights of Barossa, marshal Massena commenced his retreat from Sar.tarem, where he had never been able to attack lord Wellington. Scarcity of provisions obliged him to retire. The British general, having the Tagus on his right and Lisbon in his rear, was in a commanding position which ensured ample supplies. Massena was closely followed by lord Wellington, whose van attacked the rear of the French on the 1 1th of March, and gained a considerable advantage. But this suc- cess was more than counterbalanced by the loss of Badajoz, which surrendered on the same day to the duke of Dalmatia.

Lord Wellington now made arrangements for the blockade of Almeida, and

employed the interval of active operations in a visit to the corps under the command of marshal Beresford in Spanish Estremadura, consisting of a united force of British and Portuguese. After repulsing an attack from the French on the 7th of April, near Olivenca, he took a position whence he could invest that place and Badajoz. Olivenca surrendered to the marshal on the 15th; and lord Wellington having had an interview with him, during which they established the blockade of Badajoz, returned to his army.

On the 15th of April the fortress of Olivenca surrendered to the allied arms ; and it was de- termined to lay siege to Badajoz with vigor. But on the 12th May the re-advance of marshal Soult was announced by general Blake, and the three commanders resolved to give battle to the enemy. With this view the siege was raised, and the army took a strong position fronting the banks of the Albuera.

Early on the morning of the 16th of May the French passed the stream, designing to attack the Spaniards under Blake, and to turn the right wing of the allies. After an obstinate resistance

the enemy gained the heights, but, Sir Lowry Cole bringing up the reserve, the enemy were driven from them with great slaughter. Their attack on the village and the bridge in the centre was likewise successfully repelled by baron Alten of the German legion, which, with the division of general Hamilton, defended that post ; and the whole French army, after six hours' fighting, repassed the Albuera with precipitation. Soult is said to have acknowledged, ' that, in the long course of his military service, he had never before witnessed so desperate and sanguinary a contest.' The siege of Badajoz now re-commenced.

Towards the close of September the British troops again took the field, threatening Ciudad Rodrigo ; but, before lord Wellington could complete his preparations, Marmont assembled a vast force, amounting to 60,000 men, with a view of turning the left of his position. His able antagonist, aware of this design, made a timely movement beyond the Coa; on which Marmont withdrew. During these operations general Hill, being joined by a,Spanish force, on the 28th of October, surprised and totally defeated a corps of the French under general Girard, at Arroyo del Molino, the enemy losing 2000 men, with their artillery and baggage.

The principal event of the summer campaign in Spain was the siege and reduction of Tarra- gona. Marshal Suchet marched against this im- portant sea-port of Catalonia about the end of April ; and on the 5th of May he completed the investment of it as far as the sea. A furious as- sault on the 21st, after great slaughter on both sides, put the lower part of the town, which the besiegers had got access to through the capture of an outwork, in

the power of the French. The garrison, however, still held out, till, on the 28th, a practicable breach being made, the assailants rushed in, and almost immediately carried the place. Suchet, who appears not to have been unwilling that a terrible example should be given by its fate for the purpose of intimidation, re- lated, in his account of the transaction, that 4000 persons were put to death in the city, and of 10,000 or 12,000 more, who endeavoured to es- cape over the walls, 1 000 were sabred or drowned, and 10,000 made prisoners. By this conquest, the French became possessed of the whole coast of Catalonia. In the month of September Suchet entered Valencia, and on the 27th took posses- sion of Murviedro. He then opened trenches against its fortress, and made several vain at- tempts to carry it. In the mean time general Blake, collecting all the disposable force in that quarter, occupied the heights above the besieg- ing army, where on the 25th of October he was attacked, and, after a well contested battle, was defeated. On the following day the fortress of Murviedro capitulated. Suchet then advanced to the suburbs of Valencia. On the 26th of November he attacked Blake's protecting army, the cavalry of which being routed, the infantry took shelter in their intrenched camp. Th" was afterwards forced ; on the 25th of Decembet Valencia was invested on every side.

In the beginning of 1811 the Spanish Co'tes issued a proclamation, declaring that they would not recognise any act of Ferdinand VII. while

deprived of his liberty. In April they passed a decree abolishing the torture. Other proceedings of that assembly, tending to the removal of old grievances, were — the admission of plebeians as well as nobles into the military colleges ; the application to the use of the military hospitals of sums destined for the use of religious fraterni- ties ; and the abolition of jurisdictional seigniories and vassalage. The doctrine of the sovereignty of the nation, however, met with opposition from the royal council, which circulated a paper ex- pressly denying it.

Russia continued throughout the year to waste its population and revenues in its war with the Ottoman Porte.

The state of affairs between Great Britain and the United States still remained unadjusted. Early in the year ˆIr. Forster was sent over as envo.y extraordinary and plenipotentiary. But so long as the English government was deter- nined to maintain the fatal orders in council, nothing could be effected. In the month of May an accidental encounter, originating in some point of naval etiquette, occurred between a British and an American

frigate. The two go- vernments equally disavowed intentional hos- tility; but all these things tended to mutual irritation. On the meeting of congress, on the 4th of November, president ?»Iaddison announced the necessity of putting the United States into an armour and attitude demanded by the crisis, and corresponding with the national spirit and expectation.

South America was now involved in all the miseries of civil war. In Mexico several san- guinary engagements during the last and present year terminated in a decided superiority of the royalists. The confederacy of Venezuela placed general jNliranda at the head of their forces, and felt themselves strong enough to meet in congress and issue a declaration of independence, con- ceived in language not less forcible than tliat of the North Americans on their separation from Great Britain. In the viceroyalty of Buenos Ayres, the capital, with the greater part of the province, had adopted the cause of indepen- dence ; while Monte Video held firm to the in- terest of the mother country.

The most splendid naval achievement of this year was the conquest of the Isle of Java, by an armament fitted out from Madras, under the aus- pices of lord Minto. The small island of Ma- dura also submitted ; and thus not a vestige was left of the eastern dominion of the Gallo-Bata- vian empire.

Opposing fleets were now no longer to be found on the ocean ; but, in the absence of the pride and pomp of war, the public attention was arrested by a remarkably gallant action of an English squadron of four frigates, of which cap- tain Iloste was the commodore. It occurred off the north point of the island of Lesina on the coast of Dalmatia, which the enemy had been sent to fortify and garrison. On the 18th of March the English commodore descried a French force of five frigates and six smaller vessels, with 500 troops on board. Confiding in his supe- •lOruy I'ne French commodore bore down in two

divisions to attack the English, who formed in a close line to receive him. The action com- menced by an attempt of the French commander to practise the mancEuvre of breaking the line, in wliich he failed ; and, endeavouring afterwards to round the English van, he was so roughly treated that his ship became unmanageable and ran on the rocks. The action was still main- tained with great fury, till two of the French frigates struck. Two others crowded sail for the port of Lessina, and the small vessels dispersed in all directions. The result of this action, which ranks among the most brilliant achieve- ments of the British navy, was the burning of the ship of the brave French commodore, who was killed in the engagement, and the capture of two others. A fourth, which had struck her colors, took an opportunity of stealing away, and was in vain reclaimed as lawful prize by captain Hoste. The loss of the English amounted to 20O in

killed and wounded.

Tlie close of this year was remarkable for violent storms occasioning great losses at sea of which the British navy partook in full propor- tion. Among the domestic occui rences of the year it may be interesting to mention, that a census of the population of Great Britain was taken this year, exhibiting a result highly favorable to the prosperity of the kingdom. The total of the population returned in 1801 was 10,942,646; that of 1811 was 12,552,144; ex- hibiting an increase of 1,611,882, of which almost every town and district numbered had a share.

The interior tranquillity of England was little disturbed during the greater part of the year, but towards the close of it serious tumults broke out in the districts tf the hosiery manufactory, particularly in the county of Nottingham; occa- sioned by the invention of a wide frame for weaving stockings, and the discharge of many workmen in consequence.

The year on the history of which we are now about to enter will long be distinguished in the annals of Great Britain. The parliament was opened by commission on the 7th of Janu- ary 1812. The council appointed to assist the queen, acknowledged, that in the opinion of all the physicians, his majesty's complete and final recovery was improbable.

At an early period of the session, Mr. Perceval proposed a plan for the arrangement of the royal household, and recommended such an addition to the civd list as might support the separate es- tablishments. The state of Ireland, with reference to the Roman Catholics, was brought early in the session under the discussion of both houses, but al". concession to the Catholic claims was negatived in the house of lords by 162 to seventy-nine; in the commons by 229 to 135.

In a committee of supply, I3th of April, the sum of £554,441 was moved for as the expense of the barrack department for the current year. Among other items in the estimate, which were thought extravagant, particular exception was taken to the charge of £138,000 for a barrack to be built for the second regiment of life guards, in a piece of ground newly taken in under tb*

name of the regent's park, and which was gene- rally understood to be designed for an ornament to the park. In repeated debates, on the subject of the barrack estimates, objections were made to this and some other articles ; and an amend- ment proposed for a reduction of the sum was

rejected by no greater majority than 134 to 112. This public discussion was not without its effect ; for, when the budget was brought for- ward by the new chancellor of the exchequer, it was announced that the treasury had struck off ■ an additional vote of £90,000 for the barrack department, it having been resolved to postpone the execution of the projected barracks at iVlary- ie-bone park, Bristol, and Liverpool.

Early in the year the cabinet sustained a con- siderable loss by the resignation of the marquis of Wellesley. The motives of this step were stated to have been a difference with his col- leagues as to the scale on which the war in Spain and Portugal was to be carried on. He declared, that on certain principles he would be ready to serve with Mr. Percival, but that he would never serve under him : his resignation was accepted on the 19th of February, lord Castlereagh suc- ceeding him in the post of secretary for foreign affairs.

On the 13th of February the prince regent addressed a singular letter to the duke of York, in which he declared, ‘ that, the restrictions of the regency act being about to expire, he must make his arrangements for the future adminis- tration ; his sentiments relative to which he had hitherto withheld, from his earnest desire that the expected motion on the affairs of Ireland might undergo the deliberate discussion of par- liament, unmixed with any other consideration. He could not reflect without pleasure on the events which had distinguished the short period of his restricted regency : and in regard to the war in the Peninsula, I shall,’ said his royal highness, ‘ be most anxious to avoid any mea- sure that can lead my allies to suppose that I mean to depart from the present system ; and I cannot withhold my approbation from those who have honorably distinguished themselves in sup- port of it. I have no predilections to indulge, no resentments to gratify. Having made this communication, I cannot conclude without ex- pressing the gratification I should feel, if some of those persons with whom the early habits of my public life were formed, would strengthen my hands, and constitute a part of my govern- ment. You are authorised to communicate these sentiments to lord Grey, who I have no doubt will communicate them to lord Gren- ville.’

This letter excited no little surprise. It seemed particularly strange, that his royal high- ness could for a moment indulge the expectation that the lords Grey and Grenville, who had re- jected with disdain the far more respectful over- ture of 1809, should now condescend to consti- tute a part of Mr. Perceval’s administration. On the failure of the negociation, which was the result, lord Boringdon, on the 19th of March, moved in the house of lords for an address to the prince regent, beseeching him to form an administration so composed as to unite the con-

fidence and good-will of all classes of his ma- jesty's subjects. In the debate, lord Grey stated the points on which lord Grenville and himself liad declined a union with the present minis- ters. These were principally tlie conduct to be pursued towards the Catholics and towards America.

The existing administration now proceeded unchanged, and without any sympton of want of stability, till it was deprived of its leader by a most tragical incident. On the 11th of May^ as Mr. Perceval was entering the lobby of the house of commons about five in the afternoon, a person of the name of Bellingham fired a pistol at him, the ball of which entered his left breast and pierced his heart. He staggered, fell, and almost instantly expired. Nothing could surpass the consternation excited in both houses by this catastrophe. It was however soon discovered, that the act was merely in revenge of some sup- posed private injury ; and that Bellingham,^ having in a commercial visit to Russia sustained some heavy losses, resolved to make a sacrifice of some conspicuous member of the government which he thought had neglected him. He was tried and executed for the offence ; while the general regard entertained for Mr. Perceval's character as a man, even by those who widely differed from him in political opinions, was tes- tified by an ample provision unanimously voted for his widow and family. The earl of Liver- pool, on whom the post of leader in the cabinet now devolved, was directed by the prince regent to endeavour to acquire an accession of strength by the association of the marquis Wellesley and Mr. Canning. But his negociation for this purpose failed, on the perplexing topic of the measures to be pursued witli regard to the Catholics, and the scale on which the war in the Peninsula was to be carried on. Mr. Stuart Wortley, on the 21st of May, brought a motion before the house of commons for an address to the prince regent, praying him to take such steps as might be the best calculated to form an efficient administration; and an attempt to Set it aside by the order of the day was defeated by 174 to 170. Mr. Wortley next moved, that the address should be presented by such mem- bers as were of the privy council : to his great surprise it was rejected by a majority of two. At length it was agreed upon, that it should be presented by lord Milton and himself. The answer was that his royal highness would take the address into his serious and immediate con- sideration.

The marquis Wellesley, and the earl Moira, now each in vain endeavoured to form a stronger ministry. In the house of lords, on the 3d of June, the former stated ' that the most dreadful personal animosities, and the most terrible difli- culties arising out of questions the most compli- cated and important, interposed obstacles to an arrangement.' These strong expressions he after- wards explained as not referring to the prince regent, but to the earl of Liverpool and his col- leagues, who, however, disdained the impu- tation.

At length on the 9th of June the prince regent appointed the earl of Liverpool first lord of the

treasury, and Mr. Vansittart chancellor of the exchequer. The earl of Harrowby (late Mr. Ryder) became president of the council ; lords Bathurst, Sidmouth, and Castlereagh, were secre- taries of state. Viscount Melville was promoted to the admiralty, in the room of Mr. Yorke, who was gratified with the tellership of the ex- chequer. Lord Eldon continued chancellor, lord Westmoreland privy seal ; and the earl of Moira, no»v honored with the garter, was ap- pointed governor-general of India.

Soon after his accession to office Mr. Vansit- tart brought forward his plan of finance, or rather, as he said, that of his lamented predeces- sor, for the current year. The whole of the sup- ply demanded for the United Kingdom was JG58,000,000. Of this grand aggregate the sum of £15,650,000 was raised by loan for Great Britain ; and for Ireland a separate loan of £4,350,000. Nearly £10,000,000 were funded of exchequer bills ; the war taxes were estimated at £20,400,000; a vote of credit was passed for £3,000,000 ; and the urgent necessities of the East India Company required the sum of £2,500,000. The annual taxes, and consoli- dated fund, furnished the remainder of the sup- ply, and new taxes were imposed to the amount of nearly £2,000,000.

On the 22d of June Mr. Canning moved a resolution, ‘ That this house will, early in the next session, take into consideration the state of the laws respecting the Catholics.’ This was supported by lord Castlereagh, who observed, ‘ that, the obstacles which formerly existed having been removed, the time was now arrived when it was highly proper to take the claims of the Catholics into consideration.’ On this joint recommendation the motion was carried by a decisive majority of 225 to 106 members. On a similar resolution proposed in the upper house, by marquis Wellesley, the previous question was put by the lord chancellor, and carried by 126 to 125 peers.

Towards the close of the session Mr. Brougham, in a very able speech on the subject of the orders in council, moved an address to the prince re- gent, ‘ beseeching him to recall or suspend those orders, and to adopt such measures as might tend to conciliate neutral powers.’ Lord Castle- reagh, after deprecating the attempt to urge the house to ‘ a precipitate decision,’ intimated, that government had in view the adoption of con- ciliatory measures respecting America. The motion of Mr. Brougham was in consequence withdrawn ; and on the 23d of June appeared a proclamation

announcing the suspension of the orders in council of January 1807 and April 1809, as far as regarded American property, from the 1st of August following, on the condi- tion that America should, on the regular notitica- tion of the same, also rescind or suspend its prohibitory decrees. Unhappily this tardy con- cession, like all the former conciliatory measures respecting America for forty years past, came loo late to be of any avail. On the 30th of July the parliament was prorogued by commission ; and on the 29th September it was unexpectedly dissolved.

In Spain, towards the close of the last year, the town of TarifTa in Andalusia, garrisoned by

1000 British infantry, with a detachment of ar- t.llery, and a body of Spaniards, was invested by the French with an array of 10,000 men. A breach being made in the wall, the enemy ad- vanced to the assault on the 31st December, when they were obliged to retreat; and, on January 5th, their columns were seen retiring, having left behind them their ammunition, artil- lery, and stores. This defence was thought to confer great honor on the garrison and its com- nr.ander, who held out with only 1800 men, behind a weak wall, against a marshal of France. Badajoz was reduced to the utmost extremity. The siege of Ciudad Rodrigo was now pressed; and on the 19th an attack was made in five sepa- rate columns, which proved completely success- ful. The garrison, after a desperate conflict, surrendered to the number of 1700 men besides officers, thus placing in the hands of the captors the heavy train and stores of the French army. The British sustained a severe loss m the death of major-general Mackinnon, who fell at the head of his storming party, and the number of killed and wounded, which was not less than 1200. After strengthening the fortifications, lord Wellington moved the greater part of his army to the southward for the support of general Hill, who was blockading Badajoz witli about 12,000 men. On the 6th of April three practicable breaches were made, and a resolution was in- stantly taken to storm the place. The conduct of a false attack was entrusted to lieutenant- general Leith, with instructions to convert it into a real one, should circumstances prove favorable. General Picton in the mean time was to attack the castle by escalade. In an hour and a half he was master of the castle. The light division under Colville, after repeated attempts, was un- able to gain the bastions ; but the false attack under general Leith, and the other operations of the besiegers, entirely succeeded. The French governor ret. red into Fort St. Christoval, and surrendered on the following day. The garrison, which originally amounted to 5000 men, had lost in killed and wounded 1200. The British and Portuguese had 800 killed and 2000 wounded. Marmont, after in vain attempting to surprise Ciudad Rodrigo and Almeida, now penetrated into Portugal as far as Castello Branco, where he no sooner learnt the result of the siege than he commenced a retreat. Soult, who had

reached A'llla Franca, also fell back with equal alacrity, pursued by the British cavalry under Sir Staple- ton Cotton. On the 11th of April the dragoons under major-general Le Marchant charged the rear-guard of the French with impetuosity, and drove them with the utmost confusion into Llerena. Lord Wellington appeared before Salamanca with his main army on the 16th of June, when the French general, leaving a force to defend the fortifications, retired with his troops across the Tormes. He afterwards attempted to relieve the forts, which from their strength had been formed into a depot of stores ; but the British general, by a masterly manoeuvre, compelled him to al)andon them to their fate. Lord Wellington then put his army in motion against Marmont, who retired across the Douro, destroyed the bridges, an

capital ; and a series of skilful movements en- sued on both sides, until the 21st of July, when the allied army was concentrated on the Tormes. On the same day the French crossed the river, and appeared to threaten Ciudad Rodrigo. During the 22d and 23d Marmont practised a variety of evolutions to distract the attention of the British general from his real plan, which was to enclose the allies m their position on a penin- sula formed by the river, and to cut off their re- treat. In aiming to surround the British, he extended and weakened his own line ; and lord Wellington, watching the progress of this error, seized the favorable moment for striking a de- cisive blow.

Major-general Pakenham, with the third di- vision, commenced a furious assault on the flanks of the enemy's left, in which he was sup- ported by brigadier-general Bradford's brigade, by the fourth and fifth divisions, and by the cavalry under Sir Stapleton Cotton in front. Tlie French, though finely posted and supported by cannon, were overthrown. Three entire bat- talions surrendered ; and large quantities of stores, baggage, and ammunition, fell into the hands of the conquerors. Eleven pieces of can- non, two eagles, and six stands of colors were taken ; five generals, three lieutenant-colonels, 130 officers of different ranks, and 7000 soldiers, were made prisoners.

Leaving a force under general Paget, to watch the motions of the enemy, lord Wellington now advanced with the main body of his army to the Spanish capital. King Joseph, who with 20,000 men under his command had reached Segovia, hearing of the defeat of]\Iarmont, hastily re- treated through jNIadrid to Almanza, a position from which he could communicate either with Suchet or Soult. On the 12th of August the al- lied army entered

the capital. Aware that their losses had been aggravated by a want of concert, the commanders of the French forces now co-operated in order to retrieve them. On the 24th of August, Soult relinquished the siege of Cadiz, and began to evacuate Andalusia, for the purpose of uniting his forces with those of king Joseph and Suchet. On the 1st of September lord Wellington quitted Madrid, and advanced to Valladolid, the enemy retiring before him across the Puycerga. He pursued them to Bur- gos, through which city they retired during the night of the 17th, leaving a strong garrison in the castle. Preparations were immediately made for besieging this important place ; but the heavy artillery had not arrived, and the uncer- tain process of sapping and storming failed. On the 21st advices were received, that an army of 70,000 men, under the direction of Soult, Suchet, and the new king, were fast approaching the passes against general Hill, whose force was inadequate to oppose them. This induced lord Wellington to raise the siege of Burgos, to retire towards the Douro, recall his troops from Madrid, and direct general Hill to proceed northward. He moved upon Salamanca, where he hoped to establish himself; but Soult advancing from Madrid, and uniting his forces with Souham, obliged him to continue his retreat. On the 24th of November he fixed his head-quarters at

Freynada, on the Portuguese frontier, after a masterly retreat before an army of 90 000 men, against which he could oppose only 52,000.

The Spanish extraordinary cortes on the 18th of March completed the great work which had so long employed their labors, by the public signature of the constitutional act. Deputies from all parts of the kingdom were present at this ceremony. A commission was appointed to carry the instrument thus signed to the regency ; and on the 20th all the deputies assem- bled in the hall of congress to swear to the constitution ; after which the regency entered the hall, and took the oath of office.

Almost from the commencement of the year 1812 the attention of Europe had been directed towards a new scene, which was opening in the north. The emperor Alexander, indignant at the ruin of the trade of his empire, disdained any longer to submit to the restraints of a system, which, though planned solely for the impoverishment of Great Britain, was highly in- jurious to his subjects. The overthrow of this sys- tem was evidently also the interest of Sweden and Prussia : but the resources of Sweden were in- considerable, and Prussia was in vassalage to France. Russia was the only power that could take the lead in an attempt of that nature, in which, however, she was certain of being sup- ported by Great Britain.

Whatever might be the views of the emperor of France, he began very early in the spring of this year to move numerous bodies of troops into Germany. The Russian monarch, in the mean while, prepared to meet the impending

storm ; and after issuing a declaration of war, put his armies in motion, and by an imperial ukase, dated the 23rd of March 1812, ordered a levy of two men in 500 throughout his extensive dominions. In the mean time great numbers of French troops joined by the contingents of the Rhenish confederation, proceeded towards the Vistula. The French concluded treaties of alliance with Prussia and Austria; the emperoi of Russia concluded also a treaty of peace with the Ottoman Porte, and all matters of dispute were settled between Russia and Great Britain. Such were the preparations for the decisive con- test which was destined to produce events wholly unparalleled in history. On the Bth of May the French emperor, accompanied by his empress Maria Louisa, set out from Paris, and, on the 11th of that moˆth, arrived at Mentz.

On the 29th of May the emperors of France and Austria departed from Dresden: the former towards the Vistula to take the command of his army, the latter returned to Vienna. The king of Prussia, who had attended at the interview, left that city on the following day : the empress of France, after remaining a few days at Dresden, returned to Paris.

On the 6th of June Napoleon passed the Vis- tula, announcing his determination of restoring the kingdom of Poland. He, however, attempted to the last to bring the Russian monarch into his views by negociation : but the latter, ad- hering to his former declaration, made by prince Kurakin, insisted on the evacuation of P'ussia by the French troops.

At two o'clock in the morning of the 22nd of June the emperor Napoleon, accompanied by a general of engineers, inspected the banks of the Niemen. The different corps commanded by the viceroy of Italy, and prince of Eckmuhl, the duke d'Elchingen, the duke de Reggio, the duke of Tarentum, and the prince Poniatowski, made corresponding movements ; and the pon- toon train arrived. The fifth, seventh, and eighth corps, commanded by the king of Westphalia, had proceeded no farther thanNovogorod, about half way between the Vistula and the Niemen ; and the first Austrian corps, under the prince Schwartzenberg, was near Lublin, at an almost equal distance between Lemburg and Warsaw. The duke of Belluno, with the 9th corps and some other troops, remained in reserve.

At this crisis a Polish diet was held at War- .saw under the sanction of the French emperor, ■which, resolving itself nito ' a general confeder- ation of Poland,' published on tlie 1st of July a memorable declaration, announcing that the kingdom of Poland and the Polish nation were re-established, and

appointing a council of state, consisting of eleven members, for the adminis- tration of affairs.

The plan whidr the Russians had formed, and according to which they resolved to conduct the present campaign, was, to resist tlie progress of the invader at all points where a stand could be made without risking a general engagement ; to lay waste the country through which he should penetrate ; to harass him as he advanced, and to cut off his supplies. Napoleon advanced rapidly to ^^'ilna, the capital of Russian Poland, which he entered on the 28th of June; but a livision of the French army under Macdonald received a severe check from general Essen, to whom the defence of Riga was entrusted. Count Witgenstein also defeated marshal Oudinot and the Bavarian general Wrede, at Polotsk, after a conflict of twelve hours.

The emperor of France directed his attention to the main Russian army, which, on the 17th of Aucust, he attacked at Smolensko. After a furious contest the Russians retired from the < ity, which the French, on their entrance, found burning. Napoleon gave vent to his chagrin by exclaiming, — ' Never was a war prosecuted with such ferocity. These people treat their own country as if they were its enemies !'

The Russian army now retired upon Viasma, and this place the I'rench entered on the 30th of August : they did not advance till the 4th of September. The interval of preparation, how- ever, was no longer than was necessary for a con- vict between two armies, each amounting to more than 120,000 men. It commenced on the morning of the 7th of September, by a tremen- dous attack on the Russian left, against which nearly one-half of the French force was directed ; while marshal Ney bore down on the centre, and Beauharnois assailed the right. Kutusoff finding that his left, after a combat of three hours, was giving way, reinforced it with grenadiers and cavalry from the reserve, when a desperate effort was made to recover the lost position, from which the French were at length driven. Beauhamois made repeated efforts to carry tlie village of

Borodino and the redoubts which covered it, but he was ultimately repulsed with great loss. The Russians were then enabled to reinforce their centre, where the battle raged with great fury until night, when the French withdrew at all points, leaving them masters of the field. They estimated their own loss at 40,000 in killed and wounded, and that of the enemy at 60,000.

After this dearly purchased victory Kutusoff found himself unable to make head against the fresh troops which his antagonist was enabled to bring forward. He therefore ordered Moscow to be evacuated, and retired with

his army beyond it. The painful but necessary measure of withdrawing from their homes in Moscow 200,000 human beings of both sexes, and of every age, was carried into effect by count Rostopchin, who placed himself at the head of 40,000 of its inhabitants, and proceeded to join the army. Rostopchin had a villa in the neighbourhood of Moscow, to which he set fire witl) his own hands.

The advanced guard of the French, under Murat and Beauhamois, entered Moscow on the 14th of September, and soon overpowered the small band which had lingered in the Kremlin, the ancient palace of the czars. The deserted city was discovered to be on fire in several places ; and the French soldters, eagerly seeking their long-promised plunder, rather increased than checked the conflagration. Napoleon was waiting at the barrier on the Smolensko road, to receive the homage of the constituted authorities ere he made his triumphal entry. A Polish ge- neral, whom he sent to remind the citizens of their duty, returned with information that there were no authorities, and that Moscow would soon be a heap of ruins. The conqueror entered without parade on the following day, and took up his residence in the Kremlin 'I ventured, into the midst of the tlames,' he said to O'Meara, ' and had my hair and eye-brows singed, and my clothes burned off my back; but it was in vain, as they had destroyed most of the pumps, of which there were above 1000 : out of all these, I believe that we could only find one that was serviceable. Besides, the wretches that had been hired by Rostopchin ran about in every quarter, disseminating fire with their matches, in which they were but too much assisted by the wind. This terrible conflagration ruined every thing. I was prepared for all but this : it was unforeseen ; who would have thought that a na- tion would have set its capital on fire ? '

This event was evidently a severe disappoint- ment to the French emperor, who lingered about this devoted city as if it had still been his inten- tion to retain it. At length, however, the un- shaken resolution of the Russians to persist in their system of making all sacrifices rather than submit; the assemblies of fresh bodies of their troops around Moscow, and the approach of in- clement seasons, reminded him of the necessity of a prompt retreat. Ursed by the clamors of his soldiers, he sent Lauriston with a flag of truce to the Russian head-quarters, announcing his readiness to treat. The answer returned was, that no terms could be entered into while an enemy remained in the Russian ter.i ory.

The roads leading to Moscow were now occu- pied by detached corps, who

cut off the supplies, and dispersed the straggling parties of the French.

Napoleon sent Lauriston a second time to de- mand, that the Russian general would forward a letter to the emperor Alexander. ‘ I will do that,’ replied Kulusoff, ‘ provided the word ˆeace is not expressed in the letter. I would not be a party to such an insult on my sovereign, by forwarding a proposal which he would order to be instantly destroyed. You already know on what terms offers of peace shall be attended to.’ Napoleon soon afterwards announced his inten- tion of leadmg his army into other provinces until the return of spring, when he would ad- vance on St. Petersburg, and erase the name of Russia from the list of European nations. He then indulged his soldiers with an eight days’ pillage of Moscow, and commenced his retreat, leaving a force to blow up the Kremlin. Gene- ral Ilievasky, however, arrived in time to pre- vent the completion of this outrage.

Dividing his forces, Murat and Beauharnois, with 50,000 men, were ordered to attack the grand army of the Russians under Kutusoff ; while the emperor himself, with the remainder, took the route to Minsk. The former met with a severe repulse, and nothing was now thought of but how to quit the country. Scarcely could they hazard a march without a battle. A stand was attempted at Viasnia, but without success ; and the French, dispirited and weary, were driven from their positions with great slaughter. The ensuing night was rendered dreadfully me- morable by a prodigious fall of snow ; and from this period ensued a series of terrible disasters.

*‘ I was a few days too late,’ says Napoleon ; * I had made a calculation of the weather for fifty years before, and the extreme cold had never commenced until about the 20th of December, twenty days later than it began this time. On the march the thermometer sunk eighteen de- grees, and consequently nearly all the horses perished. In one night I lost 30,000. The ar- tillery, of which I had 500 pieces, was in a great measure obliged to be abandoned. Parties, when sent out on duty in advance, abandoning their posts, went to seek the means of warming themselves. They separated in all directions, became helpless, and fell an easy prey to the enemy. Others lay down, fell asleep, and a little blood came from their nostrils, and sleep- ing they died. In this manner thousands perished.’*

Napoleon reached Smolensko on the 9th of November, and remained there until the 15th, when he set out for Krasnoi. Davoust, who followed him, after blowing up the ramparts, was beaten by Milarodavich on the 15th, and es- caped with the loss of 4000 killed and wounded, and 9000 taken prisoners, with seventy pieces of cannon. He also lost the whole of his baggage, three standards, and his baton de marechal. Ney, who left Smolensko with the rear-guard on the day of battle, was surprised by the

victorious Russians, and compelled to fly with a small proportion of his staff, leaving 11,000 of his tioops in the hands of his pursuers. In the

mean time the Russian general Witgenstein ad- vanced from Polotsk, and on the 8th of Novem- ber reached Vitepsk, where he was informed of the retreat of the grand French army. On the 18th he was informed of the flight of the Austrian and Saxon auxiliaries, and of the rapid advance of the Russians. The whole force of the empire was now directly co-operating against the retreat- ing enemy.

To secure his escape, Buonaparte ordered two bridges to be thrown over the Beresina at Studenzi and Vaselova. Scarcely had he passed the river with his guard, at the latter point, when Witgenstein opened a cannonade on the troops who were preparing to follow. They rushed in crowds towards the bridge : it was blown up by Napoleon's order. A shout of despair followed the explosion. Numbers plunged into the stream and disappeared amidst the floating masses of ice ; 5000 lost their lives, and 13,000 were taken prisoners. The artillery, baggage, and ammunition, fell into the hands of the Russians.

Having repaired the bridges the Russian ar- mies advanced, and on the 12lh of December prince Kutusoff established his head-quarters at Wilna. The retreat of the French from the Be- resina to the Niemen was attended with horrors to which no parallel can be found in the annals of the world.

Napoleon did not remain to witness the last scene of the tragedy. He reached Wilna on the 7th of December, and, having appointed Murat to the chief command, departed for Warsaw, accompanied by Caulincourt ; whence he made a rapid journey to Paris. He was the herald of his own discomfiture; and proclaimed with cir- cumstantial precision the results of a campaign which did equal credit to his foresight as a poli- tician, and to his skill as a general. The wars of modern Europe had furnished no instance of so extensive and complete a destruction.

The destruction of the French army was made known to the people of England while engaged in the ferment of an election, and the new parlia- ment assembled, on the 24th of November, 1812, under the happiest auspices. On the 30th the prince regent delivered, for the first time, a speech from the throne, containing a triumphant review of the political and military events of the year. A grant of £100,000 was voted to the duke of Wellington, and £200,000 for the relief of the sufferers in Russia.

After the Christmas recess, the attention of parliament was called to the origin and causes of the war between this country and the United States. After refuting the various charges adduced by the American government

against that of Great Britain, ministers ascribed the origin of the contest to that spirit which had long actuated the councils of the United States, and which had induced them with marked par- tiality to palliate and assist the aggressive ty- ranny of France.

The annual discussion of the Catholic claims commenced on the 25th of February, with a motion by Mr. Grattan for referring them to a committee of the whole house, which was car- ried by 264 votes against 224. On the 30tU of

April Mr. Grattan introduced a bill for the re- moval of the Catholic disabilities, which en- countered little opposition in the first and second reading ; but, on its passage through a com- mittee, Mr. Abbot, the speaker, objected to that clause by which Catholic gentlemen were per- mitted to sit in parliament. The clause was rejected by a majority of 251 against 247, and the bill was abandoned.

On the 5th of May a measure was instituted for extending the provisions of the toleration act, by granting * further relief to persons dif- fering in opinion from the church of England, with respect to certain penˆ.lties imposed by law on those who impugn the doctrine of the Holy Trinity.* The bill introduced for this object by Mr. William Smith was read a third time in the house of lords, on the 30lh of July, when the archbishop of Canterbury, and the bishop of Chester, disclaiming all intention of opposing it, observed, that it had not been called for by any attempt to impede the worship of Unitarians, or inflict penalties upon them.

Lord Castlereagh brought forward, in a com- mittee of the whole house, his plan of regulation, including the prolongation of the East India Company's charter for the further term of twenty years from the 10th of April, 1814. The first resolution moved by this minister secured to the Company all its Indian territories north of the equator, with the exclusive trade to China; leaving the commerce of Ilindostan open to the public on certain conditions, and to certain ports, by license from tlie company. An ecclesiastical establishment was also founded in India, con- sisting of a bishop and three archdeacons ; and a wide scope was given to the zealous efforts of missionaries. The dividends of the company ■were limited to 10| percent., and the number of king's troops to be paid by the company was restricted to 20,000, unless a larger force was required by the directors.

On the subject of finance an important mea- sure was proposed by Mr.

Vansittart on thˆ 3rd of March, in a committee of the whole house. By the original constitution of this fund, the stock purchased by the commissioners was not cancelled, but considered to be their pro- perty ; and the interest was regularly applied by them to the further discharge of the debt. This arrangement, securing an accumulation by com- pound interest, was now abolished ; and the whole stock purchased by the commissioners, which was now stated at £238,000,000, an amount exceeding that of the national deht when the fund was instituted, was to be cancelled, and the interest become disposable for current ser- vices : £867,963 was at the same time proposed to be added to tiie sinking fund. It was also proposed, that, when the new loans should in any year exceed the amount of the sinking fund, a new fund of 2i])er cent, instead of 1 per cent, should be created to provide for that surplus.

The treaty with Sweden was laid before jiar- liament on the 11th of June; from which it ajv peared, that, in the recent convention between Russia and Sweden, the em.peror Alexander had not hesitated, when his own interests were at stake, to engage that Norway, which had been

for ages united in a federal league with Denmark, should be transferred to Sweden in compensa- tion for Finland. To this compact Great Bri- tain also had by the present treaty become a party.

The campaign of this year in Spain com- menced with an attack of Suchet's (13th of April) on the line of the allies; in which, how- ever, he was repulsed. Before the end of May lord Wellington moved in great force by the route of Salamanca towards Madrid, the new king once more evacuating the capital. On the approach of the British, the enemy continued his march towards the Ebro. Tlie allies, by a sadden movement to the left, having crossed that river near its source, found the French encamped in front of the town of Vittoria, under the com- mand of Joseph Buonaparte and marshal Jourdan, Soult having been summoned to the aid of Napoleon. On the 21st of June lord Welling- ton resolved upon attacking them. The battle began with a severe contest for the heights of Arlanzon, on the left of the French. These being at length carried by general Hill, he passed a rivulet which ran through the valley, as did general Picton at the head of another di- vision. Nearly at the same time general Graham on the opposite wing forced his passage over two bridges thrown across the stream; on which, after a severe contest, the whole French army retreated in good order on Vittoria; whence they continued their march toward Pampeluna. A great number of cannon, and stores of all kinds to a vast amount, now fell into the hands of the allies, and the retreat of the French be- came so rapid as not to permit them to carry ofl" their baggage : 151 pieces of cannon, and 415 waggons of ammunition, fell into the hands of the victors.

The centre of the Frenc-h retreating army having still maintained itself on the Spanish side of the frontier, general Hill made an attack upon them with a combined force of British and Portuguese, and obliged them to withdraw into France. Marshal Soult joined the army on the 13th of July. On the 24th he collected his right and left wings, and a part of his centre, at S'. Jean Pied de Port, to the amount of 30,000 or 40,000 men ; and made an attack on an Kn – lish post at Runcevallos, in which he succeeded, and other posts were consequently withdrawn. Various operations of attack and defence were now carried on during some days. The siege of St. Sebastian had, in the mean time, been pro- ceeding under the conduct of Sir Thomas iira- ham ; and an unsuccessful attempt to storm had been made on the 25th of July, which occasioned a severe loss. On the 31st of August another attempt was undertaken by order of lord Wel- lington, which, though attended with peculiar and unseen difticullies, succeeded, at the cost of 2300 in killed and wounded.

On the 7th of October lord Welliiigton entered France, by crossing the Bidassoa at different fords. The strong fortress of Pampeluna, which had been blockaded from the time of tiie battle of Vittoria, was induced to accept of a capitula- tion on the 3 1st. Lord Wellington now put in execution a plan which lie had projected to force

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the centre of the enemy, and establish the allied army in the rear of their right. The attack was made on the 10th of November, and, after a variety of actions which occupied the whole day, the purpose was attained. Tiie French during the nio'ht quitted all their works and posts in front of St. Jean de Leon ; and, being pursued on the next day, retired to an intrenched camp in front of Bayonne. On the 9th of December the river Nive was crossed by a part of the allied army; and on the four following days several desperate attacks were made by the French durmg the completion of this passage, which were finally repelled, and the enemy, after great loss, withdrew to his intrenchments. The British and Portuguese, during these days, lost between 4000 and 5000 in killed, wounded, and missing. The year closed with lord Wellington's obtaining a firm footing on the French territory.

In the north of Europe the Prussians, as allies to the French, had acted cbieily on the coast of the Baltic. On the retreat of marshal Macdonald from that place, the Russian general Witgenstein, advancing along the Niemen, succeeded in cut- ting off from the marshal a body of Prussians of about 15,000 men, under the command of general D'Yorck, who entered

into a convention, by which he agreed to remain neutral.

Witgenstein, pursuing Macdonald, entered Konigsberg on the 6th of January. Elbing, Marienburg, and other towns m that quarter, were deserted by the French and occupied by the Russians. At Konigsberg a regency was estab- lished in the name of the king of Prussia, which issued a proclamation, calling on the people to come forward for the rescue of their prince and country from French bondage ; and a number of young men joined the troops under D'Yorck, who had been declared commander-in-chief of the patriotic army. The king himself in the end of January suddenly removed to Breslau. His purpose was become so manifest, that the vice- roy of Italy, Eugene Beauharnois, then at Berlin, forbade recruiting in that capital.

The emperor of Russia had now put himself at the head of his main army; and on the 22nd a treaty of alliance, off"ensive and defensive, was concluded between Prussia and Russia. The two sovereigns had an interview at Breslau in March, from which city the king of Prussia issued a proclamation to his subjects, touching upon the motives which had induced him to join his arms to those of Russia.

On the 3rd of March the French troops eva- cuated Berlin, which was entered by the Rus- lians on the following day. General Morand, who had occupied Swedish Pomerania with a small body of troops, now followed the French main army, joined by those who had left Ham- burg, which city was entered by the Russian general Tettenborne on the 18th. The king of Saxony had quitted Dresden on the approach of the Russians, a corps of whom took possession of the part of the city on the right bank of the Elbe. A Swedish force advanced to Stralsund; and in April Thorn surrendered to the Russians. Napoleon, with unabated activity and confidence, was at this time busily employed at Paris in mustering all the force of the great dominion of

which he was still master, for a powerful effort. By a senatus consultum, of the 11th of January, 350,000 men were placed at h:s disposal. He caused the empress to be declared regent during his absence, published a flattering expose of the state of the French empire ; and, having thus re- animated the spirits of the nation, he on the 15th of April set out for the army.

The march of the divisions was directed so as to form a junction near Jena and upon the Saale. The allied armies of Russians and Prussians had for some time been concentrating near Leipsic. The French having crossed the Saale, a junction was made of the Russians and Prussians be- tween Leipsic and Altenburg, the sovereign of each being present with his troops. On the 2nd of May a general engagement occurred at Gross Groschen, near the

plain of Lutzen, of which the result, after much slaughter, was, that the allies kept the field. The consequences, how- ever, were, the subsequent advance of the French to the Elbe, which they crossed at Dresden and Meissen. The king of Saxony at this time joined his forces to those of France. The advance of the French divisions, through Silesia towards the Oder, met with no effectual resistance, and on the 1st of June Lauriston entered Breslau

While these things were transacting, Sweden acceded to the league against France. The French emperor was not insensible of the dan- gers that were now accumulating round him. He consequently, through the medium of Austria, transmitted to the emperor Alexander proposals for an armistice, preparatory to a congress to be holden at Prague. The armistice was mutually ratified on the 4th of June, and the negociations at Prague proceeded : and a prolongation of the armistice took place, which carried it to the 10th of August. All Germany in the mean time resounded with preparations for war. The armistice at length terminated; and on the 11th of August count Metternich, the Austrian minister at the congress of Prague, delivered to the French minister a declaration of war on the part of his court. The plan of the allies now was to drive back the French from their forward position on the right bank of the Elbe, and in Lusatia and Silesia, by attacks on their front and flank ; and after various actions they so far succeeded, that on the 26th the ad- vanced guards of the allies encamped on the heights above Dresden. During several months their engineers had been occupied in adding to the fortifications of the place, and Napoleon was within the walls with a force estimated at 1 30,000 men ; it therefore seems to have been an injudicious measure on the part of the allies to make an attempt for carrying it. This, how- ever, was attempted on the 27th, and, though conducted with undaunted valor, was repulsed with a great loss of men. On the following day Napoleon led out his troops, supported by an immense artillery, to the attack of the allies. One of the incidents of the bloody action which ensued was a mortal wound received by the celebrated general Moreau, who had left his retreat in America to join the party whose cause he considered as that of public liberty. At the conclusion of a most severe combat the

Allies retired, followed by a large division of tJie I'leiu:}) army, which received an effecttial check in an action in which general X'andanime was taken prisoner with 10,000 men. The allies now beat back the French, and the crown-prince of Sweden joined in their operations. Silesia and Saxony were entered by the Russians and Prussians ; the Austrians advanced from Bohe- mia ; and at length the French measured back tiieir steps to the Elbe. At tiiis period an im- portant accession was made to the strength of the

allies by a treaty between Austria and Bavaria, HI virtue of which 55,000 Bavarian troops were to act in conjunction with the Austrians. A stronger proof could not be given of the general concurrence of Germany to throw off the yoke of Napoleon.

After various partial encounters and bold ef- forts to surround the French, a most sanguinary engagement took place on the Ibth of October, wliich, after much slaughter, left the opposing armies in nearly the same position they held at its commencement. The 17th passed chiefly in preparation for the great action of the next day, whicli was directed upon the town itself. At its conclusion the French had lost 40,000 men in killed, wounded, and prisoners, with sixty-tive])ieces of cannon. The enˆa'jjement was still ra

The kinjr of Wirtembcrg, imitating the exam-]ile of Bavaria, now renoiinced the confederation of the llhme, and united his troops with those of the allies. But that which was of more con- sequence, and less to be expected, was the revo- lution which at this time took place in Holland. On the 15th of November the people of Amster- dam, as it were by one consent, hoisted the Ornnge colors, and amidst enthusiastic shouts proclaimed the restoration of the ancient govern- ment. A change now unavoidably took place in the Danish councils; and Frederick \ I., as his only resource, concluded a treaty with Great Britain and Sweden. It was signed at Kiel on tiie 14th of" .Tanuary 1814, agreeably to which Swedish Pomerania was ceded in exchange for Norway. England retained possession of the fleet which she had so dearly purchased, and Vol. X.

10,000 Danes joined the army of tiie crown- prince. In the south of Germany the arms of Austria had during this interval been no less successful. In October general Hillier crossed the Alps with an army of 60,000 men ; and Trieste, Fiume, with the whole Dalmatian coast, were reduced, in which the English force in the Adriatic materially assisted.

On the retreat of Napoleon from Leipsic, the French troops left in Dresden under the com- mand of marshal St. Cyr were augmented by fugitives from 'andamme's army, but they were soon reduced to a wretched condition by disease sina Wiiiit. On the 12th of November they sur- rendered as prisoners of war, to the amount of more than 40,000 men. In the same month the French garrisons in Stettin and its forts also capitulated, on the same condition, to the num- ber of 7000 or 8000. An Austrian army enter- ed Switzerland, with a declaration that its neu- trality could not be permitted by the allied powers. At Bern the ancient government of the canton was restored. Geneva was afterwards occupied by the allies ; and the Austrians, ad- vancing to Basle and Schaffhausen, crossed the Rhine, and proceeded to tiie French frontier. They also passed that river at other parts, and spread in Als;ice and Franche-Compte. France was now

completely in a state of invasion.

On his return to Paris Buonaparte caused the senate to pass decrees for levying 300,000 men, and for doubling the public contributions. The unfortunate war between Great Britain and the United States of America in this year was pro- ductive of a variety of events, tliough for the most part on a small scale.

The temper of tlie government of the United States,attlie commencement of the year, render- ed it evident that nothing could jirevent extremi- ties witli Great Britain. The spring passed away in the discussion of various measures of prepara- tion by the congress, in which the war party dis- played a manifest preponderance. An act for an embargo on all the shipping of the United States, for the term of ninety days from its date, passed the congress in the beginning of April, the purpose of which was to expedite the iittinj; out of the American ships of war, and to prevent any more pledges from remaining in the power of an enemy on the commencement of hostilities. Efforts were still made by tlie moderate party to retard a breach ; and on the 29th of May Mr. Randolph brought the matter to a decision, by moving in the house ol representatives a resolu- tion, 'that, under the])resent circumstances, it is inexpedient to resort to a war with (Jrcat Bri- tain.' This was negatived by sixty-two votes against ttiirty -seven.

The result of the subsequent discussions in congress was an act passed on the 18th June declaring the actual existence of war between the United States and Great F?ritain. This determi- nation was carried in the house of representative?, by a majority of seventy-nine against forty-nine.

Their operations against Canada commenced parly in July 1812. General Hull entered the jirovince of Upper Canada above Fort Detroit, and issued a proclamation to the Canadians, in a style of great confidence. lie proceeded against

Fort Maiden, but was foilel in his attempts io invest it; and retired to Detroit. Hull was ihere besieged in his turn, and on the 16th of August entered into a capituhition, by which he surrendered the fort, with 2500 men and thirty- three pieces of ordnance. The plan for the inva- sion of Canada, however, was by no means renounced ; a considerable American force being assembled in the neighbourhood of Niagara, ge- neral

Wadsworth, on October 13tli, made an attack upon the British position of Queenstown. General Ikock, who hastened to its defence, was killed whde cheering on his men, and the posi- tion was for a time taken ; but a reinforcement being brought up, by major-general Sheatie, the Americans were defeated, and general Wadsworth, with 900 men, surrendered himself prisoner on the field.

These disgraces to the Am.erican arms by land were in some degree compensated by their suc- cesses at sea. Their navy consisted of a few fri- gates, of a rate corresponding to the largest Bri- tish, but in size, weight of me al, and number of men, nearly equal to ships of the line. Hence, when encountered by Biitisli frigates, the latter found themselves, as it were, surprised into a con- ilict with antagonists of superior force. The first action of this kind took place on August 19th between the English frigate Guerriere, cap- tain Dacres, and the American frigate Constitu- tion, captain Hull, in which the former, being soon totally disabled by the enemy's very supe- rior fire, was obliged to strike. The injury she had received was so great, that the captors set her nn fire. On October 25th the Macedonian, English frigate, captain Garden, descrying a large frigate under American colors, bore down, and an action ensued which was continued witli great bravery for more tiian two hours ; vvfhen the English ship being reduced to the condition of a perfect wreck, and having incurred a heavy loss of men, to save the rest it was found necessary to 'surrender. Her antagonist proved to be tlie United States, commodore Decatur, ranking as a frigate, with the scantlingof a seventy-four gun ship. In an action between two sloops of war the advantage also was on the American side ; and these events, so unusual to the British navy, though easily to be accounted, for, %vere the source of as nmch mortification to one party, as triumph to the other. Numerous captures made by the American privateers, among the West India islands, gave rise to complaints from the merchants and planters of Jamaica. Such were the principal circumstance of the first year of the American war.

The lakes of Canada now became the most active scene of warfare, and a number of spirited actions took place on the coasts and waters which we cannot detail.

The enterprising spirit of the British navy was displayed, not only in occasional attacks on the towns situate on the American coast, but also in some contests with the enemy's vessels of war. — His majesty's frigate the Shannon, captain Broke, stationed ofl' the port of Boston, had been brought to a state of the most perfect discipline by her commander, who assiduously exercised his men in the use of areat and small arms. On

the 1st of June c;iptain Broke stood close in witii tiie Boston liuht-houso, by

way of a challenge to the United States' frigate the Chesapeake, a fine ship of forty-nine guns, full manned. The American accepted the proflfered combat, and, standing out of the harbour, confidently bore down on his foe. The ships were soon in close contact, when captain Broke, perceiving a favor- able opportunity, gave orders to board the Cliesapeake, himself setting tlie example. The conflict was severe, but short : in two minutes the American's decks were cleared, her colors were hauled down, and the Britisii flag iioisted over them; and she was led away in triumph, in the sight of a number of the inhabitants of Bos- ton, wl'.o witnessed the action, and were expect- ing her victorious return.

As Great Britain was deeply interesled in giving timely and efficient aid to her allies at this great crisis, parliament assembled for the (lespatch of business so early as the 4tli of November, when it was opened by the prince regent in a speech from the throne. Its topics were chiefly the new alliances against the power of France, together with their successes, and tlie war witlr America.

A loan at this early period of £22,000,000, proposed by the chancellor of the exchequer, received the accustomed sanction of the house ; and the foreign subsidies moved by Mr. Vˆansit- tart passed without a dissentient voice.

Blucher, who beside the grand Prussian army had under his command some ilussian and Saxon divisions, commenced the new year 1814 with an invasion of the French empire. General Bistram had led the way, and, having forced the entrenchments near the Lahn, he crossed the Rhine, and took possession of Coblentz. Baron Sacken passed over near Manheim, and count Langeron near Bingen ; and in three days they killed or took prisoners 1500 men. They were received with joy by the people ; and marched to the Moselle, and the Marne, without any for- midable opposition.

The Austrian army, strengthened by Russian, Bavarian, and Wirtemberg divisions, invaded Alsace, under the direction of the prince of Schwartzenberg, and, while he was making ar- rangements to co-operate with Blucher, the em- peror Alexander and king of Prussia crossed the Rhine near Basle, with their respective bodies of reserve.

Napoleon being informed that marshal Mortier had been attacked at Bar-sur-Aube, and com- pelled to retreat, dexterously contrived to con- vert this disaster to his own purpose, by affirming that the French were victorious. On his ap- proach to St. Dizier, which tiie Prussians had seized, he ordered that village to be assaulted ; and, as it was occupied by only a small force, it was retaken without difficulty. This trivial ex- ploit was also extolled in

his usual style.

Other trials of strength and courage quickly, however, followed. On the 1st of February prince Blucher, having received a reinforcement from the prince of Schwartzenberg, advanced with about 75,000 men, and engaged a nearly equal number of the enemy at La Rothiere. That village formed the centre and the key of

the French position : llie right wing was sta- tioned at Dienville, and t!ie left at Chaamenil and Giberie. The prince of ˆVir'eInberg, on this occasion, strenuously contended with marslial V'ictor; drove him from the left, was dislodged in his turn, but recovered and maintained the post. Count Guilay attacked the right, but could not force it before midnight. Sacken's movements were directed against the centre, and with L'reat dilhculty and loss he expelled tlie enemy from La llothibre, which he defended against a personal attempt of the French emperor for its recovery. The Frencli, after a consider- able loss, made a retrograde movement towards Troyes and Arcis.

The Austrian and Prussian arm'es now con- tinued their advance towards Paris, prince Scliwartzenberg])roceed;ng along t'le banks of the Seine,while Bluchcr cliieily guided his course by the Marne. General D'Yorck overtook the rear-guard of Macdonald's army, and gained such an advantage as led to the capture of Chalons. Napoleon having retreated to Nogent, the prince of Wirtemberg took possession of Troyes and Sens.

Alarmed at the progress of Blucher, whose troops were within three marches of the capital. Napoleon resolved to make a bold attempt to save it. He attacked and defeated at Champ- Aubert the division of general Alsufiefi', too distantly situate to be assisted. General Sacken now advanced ; and his division, aided bytliat of Yorck, fouglit with obstinacy at Montmirail, but with doubtful success.

Blucher, when apprised of the advance of Marmont, determined on attacking that general at Etoi;es; recalled by this movement. Napoleon encouraged Marmont to face his adversary at 'auchamp. The battle which ensued on the 14th of February was almost entirely a contest between the Frencli cavalry and the allied in- fantry, and Blucher found a retreat expedient.

Napoleon, elated with his success, now turned Iiis arms with redoubled confidence a

Blucher, now sensible of the danger of a march not sufliciontly connected with tiie Anstrian army, moved from Chalons with 55,000 men, with a view to a more effectual co-operation witli it.

At this juncture (1st of IMarch) a new treaty of alliance antl subsidy was signed at Chau- mont, by lord viscount Castlereaud) > the repre- sentative of F.ngland, with prince Mettemich, count Nesselrode, and baron llardenberg, the ministers of Austria, Russia, and Prussia. Ne- gociations witli Napoleon were opened at Cha- tillon, but his ultimatum was peremptorily rcj ci-ted .

Napoleon now crossed tiie Aisnc, and attacked tlie left winˆ of the allies with such vigor as to make a considerable impression; the con-

sequence was a retreat to Laon. In the front ot that town Blucher concentrated his army, wiiicii considerably exceeded that of the French. Bu- low occupied the town and an adjacent conicai hill. The corps of Winzengerode, Sacken, and Langeron, formed the riˆdu ; and the left posi- tions were defended by Yorck and Kleist. Na- poleon, having failed in an attack on this position, now retired to Soissor.s.

In the south-west of France lord Weiliiiizlou resumed offensive operations by the seizure of Orthes, and the whole British army passed tlie Adour, when tlie citadel of Bayonne was closeiy invested.

On the 12th of ˆlarch t!ie important city of Bourdeaux was occupied by a detachment under the command of marshal Beresford. This event was the result of a counter-revolutionary movement, favored by the mayor and principal inliabitants, who, mounting the white cockade, declared for the Bourbons. The duke d'An- gouleme, nephew to Louis XVL, entered Bour- deaux with the British troops. Lord Wellington t!ien inarching against Soult, the latter proceeded to Tarbes, from which place h.e was driven willi considerable loss.

We left Napoleon making his second advance against Blucher, whose army (3rd of. March) effected a junction with Winzengerode and Bulow at Soissons. On the 9th he repulsed Napoleon, who, after a severe action on tliat and the following day, retreated at all points, with the loss of forty- eight pieces of cannon, and between 5000 and (3000 prisoners. This success induced Schwartianberg again to advance, and the Austrian and French armies now made a desperate struˆole for the possession of Vitry. Napoleon, however, took the road to St. Dizier with his whole army, his plan being, as disco- vered by an intercepted letter, to push between the two allied armies. The discovery of his in- tention? produced an immediate determination of the allied generals to unite tiieir forces, and march to

Paris.

On the 27th of March the grand allied army had its head-quarters at Coulomier. On the following day lihicher passed the Marne at Meaux. On t!ie 2.nh the corps of Marmont and Mortier entered Paris, in which tliere had been previously assembled a body of regular troops, with 30,000 national guards.

Tlie allies were posted with their right towards Montmartre, at;d their left towards the wood of Vincennes, when prince Schvvartzenberg ad- dressed a proclamation to the people of Paris, in which, acquainting them with the presence of the army of the allies before their city, whose object was a sincere and lasting reconciliation with France, he said, 'The attempts hitherto made to put an end to so many calamities have been fruitless, because there exists in the very « power of the government which oppresses you an insurmountable obstacle to peace.'

But the fate of the Frencli emyieror was not to be decided without another struggle. On the 30th of March, ihe French army, under the command of .loseph Buonaparte, assisted by marshals Marmont and .Murtier, took a position on liie heights near I'aris, in a long line, tiie

centre of whicli was protected by several re- doubts, and more than 150 pieces of cannon. An attack was immediately determined on by tlie allies, and it was commenced by the two princes of Wirtemberg. After an obstinate re- sistance the heights were earned : the success of the day, however, was for some time retarded by an accident which delayed the advance of Blu- cher ; but at length the positions gained by the allies, and the losses of the French, induced the latter to send a flag of truce proposing a cessa- tion of hostilities. By the capitulation that fol- lowed, Paris was evacuated on the morning of the 31st of March by the troops of Marmont and Mortier, carrying witli them all their military appurtenances. On the same day the allied sovereigns entered Paris, attended by their guards. The emperor of Russia then issued a declara- tion, expressing the intentions of himself and his colleagues. It affirmed, that they would no more treat with Napoleon Buonaparte, nor with any of his family ; that they respected the in- tegrity of France as it existed under its legiti- mate kings ; and that they would recognise and guarantee the constitution which France should adopt. The senate assembled on the 1st of April, Talleyrand, prince of Benevento,

being appointed president. Their first act was to pass a decree for a provisional government, consisting of five persons, the president himself being at their head. By a second decree it was asserted, that in a constitutional monarchy the monarch exists only in virtue of the constitution or social compact. It then proceeds to prove the viola- tion of that compact by Napoleon Buonaparte in various specified articles ; and pronounced, ‘ that he had forfeited the throne, and that the hereditary right established in his family w-as abolished.’

Napoleon, thus out-manoeuvred both in his military and political capacity, moved his army fromTroyes by the way of Sens; and, arriving at Fromont on the 30t!i, retired in confusion to Fontainbleau, whence, on the 4th of April, he sent a deputation to the senate, offering to sub- mit to its decision. The emperor of Russia afterwards proposed to him to name a place w hich he should choose as a residence for himself and his family, when he nominated Elba, an island lying on the coast of Tuscany. On the 11th of April a treaty was signed between him and the allied powers, by the articles of which he and his spouse]\Iaria Louisa were to retain the imperial title, with the isle of Elba in full sovereignty ; the empress likewise was to be put in possessi-on of the duchies of Parma and Pla- centia, with succession to her son and descen- dants. A pension of 2,000,000 of francs was assigned to Napoleon from the revenues of F” ranee, with the reversion of 1,000,000 to the empress, and 2,500,000 in various proportions to his relatives. To this treaty, however, the British ministry refused its concurrence, farther tlian respected the assignment of Elba to Napo- leon, and of the Italian duchies to INIaria Louisa. The war, however, did not immediately cease. In a contest for the possession of Toulouse much blood was shed : the allies, however, ob- tained it. In a sortie from Bayonne some loss

was also sustained ; but these hostilities at length yielded to an armistice. In Italy, an expedition was undertaken by lord William Bentinck early in the spring, whose object was to annihilate the French influence over the Genoese. With the aid of commodore Rowley he reduced the city of Genoa, and left it at the disposal of those powers which were proceeding to a settlement of the affairs of Europe.

Louis XV'III. now repaired to London, and, having received from the good citizens the most gratifying marks of respect, proceeded to Dover, and on the 24th of April embarked in a royal yacht, convoyed by the duke of Clarence. For his reception in France, see France.

A definitive treaty of peace between France and the allied powers was signed at Paris on the 30th of May 1814. This famous tretUy, in confor- mity to the liberal professions of those powers, was, in respect to France, equitable and hono- rable ; guaranteeing to her the Ijoundaries existing on the 1st of January 1792, with some slight additions of territory on the side of Belgium and Germany, and a considerable portion of Savoy, iticluding Chambery and Annecy. The naviga- tion of the Rhine was declared free; the house of Orange was recognised in its newly assumed sovereign capacity ; and the German states were united in a federal league. Switzerland was destined to remain independent ; but Italy was once more doomed to receive the yoke of despotism. Great Britain restored her conquests to France, with the exception of Tobago, St. Lucia, and the Mauritius. Malta was confirmed to Eng- land ; and France engaged to erect no fortifications in India : she also engaged to co-operate with Great Britain in the abolition of the slave trade. Before the allies reached Paris, the impossi- bility of preserving Spain had prompted Na- poleon to release Ferdmand from captivity ; and, trusting to his authority and influence, that prince quietly entered Spain by a different route from tliat which the resency had recommended, and proceeded to Valencia. Here he issued two de- crees stigmatising the existing cortes as illegally framed and composed ; and, having condemned the new constitution, dissolved the assembly.

The parliament of Great Britain, which, pur- suant to their adjournment, assembled on the 1st of March 1814, aeain adjourned to the 21st of that month ; but the business of the session possessed comparatively little interest.

The war between Great Britain and the United States of America was in this year carried on with an increase of vigor and force, which indi- cated a serious intention of bringing it to a speedy termination ; in fact, tliat intention was first displayed by measures towards a pacific negociation. On the 7th of January the presi- dent communicated to congress copies of letters which had passed between lord Castlereagh and Mr. Munroe, in which the former proposed the appointment of plenipotentiaries to treat on terms of peace, either at London or Gottenburg; which proposal was accepted by the president, who made choice of Gottenburg. Such a step was rendered the more expedient to the Ameri- can government, by the open opposition t» the war manifested in the northern states.*

The military operations on the coasts of the southern American states had hitherto been rather of a harassing and predatory kind, than directed to any important purpose ; but it was now re- solved to strike a blow in this quarter, which might exert an intiuence on the fate of the war. A large naval force under the command of vice- admiral Sir Alexander Cochrane, having on board a strong body of troops commanded by major- general Robert Ross, was in the Chesapeake the beginning of August, waiting for the arrival of the rear-admiral Malcolm with an expedition from Bermuda. On their junction the admiral was informed, by rear-admiral Cockburn, that the American commodore Barney, with the Baltimore dotilla, had taken shelter at the head of the Patuxent. Of this circumstance they determined to take advantage for ascending the river, with the declared purpose of an attack upon Barney, while their real object was the city of Washing- ton, the American capital.

On the 19th and 20th of August, the army being landed at that place, general Ross began his march to Washington; the force of the Americans for its])rotection having been ascer- tained to be such as would justify an attempt to take it by a coup de main. Arriving on the 24th witliin five miles of the capital, he found the Americans, to the number of 8000 or 9000, strongly posted to dispute his advance. An attack, on them was immediately directed ; and It was made with so much impetuosity, that they were in a sliort time wholly dispersed, and the British army reached Wasliington in the evening of the same day. No time was lost in commen- cing tlie work of destruction, whicli was the main l)urpose of the expedition. The public build- ings, &,c. committed to the flames were, the capitol, including the senate-house and house of repre- sentatives, the president's palace, the arsenal, the (lock-yard, treasury, war office, rope-walk, the great bridge across the Potomac, a frigate ready to be launched, and a sloop of war, in the dock- yard. On the following niwht a retreat was commenced, and the army, havmg met with no molestation on its return, was on the 30th reim- barked.

The American president on this issued a pro- clamation, in which he spoke of the devastation at Washington as a measure of extreme and barbarous severity ; and mentioned that the British naval commander on the station had avowed his I)urpose of destroying and laying waste such towns and districts on the coast as should be found assailable, under the pretext of retaliation for the ravages committed in Upper Canada, tliough none such occurred but what had been shown to be unauthorised. He then called upon all officers to be alert and vigilant in providing the means of defence.

The neu'ociations for peace, which had been removed from Gottenburg to Ghent, commenced in August 1814 ; and on the 24th of December a treaty of peace and amity l)etween Great Britain and the United States was siirned, which afterwards received a ratification from both go- vernments. The articles of this treaty chiefly related to the disputes respecting boundaries, for the determination of wliicli it was agreed that

commissioners should reciprocally be appointed Both parties covenanted to continue their eflbrts for tlie abolition of the slave trade. No notice whatever was taken of the circumstances which had occasioned the war.

This year was rendered memorable by a con- course of visitors to the English capital, sur- passing in number and rank a-ny modern ex- ample. In the beginning of June arrived the emperor of Russia, with his sister the duchess of Oldenburg, and the king of Prussia and his two sons, attended by various persons of high distinction. Prince Metternich, prince Czer- nicheff", and generals Blucher, Barclay de Tolly, Platoff the hetman of the cossacks, &c., were among the number. The king of Prussia ap- peared to labor under deep dejection. After a residence of some weeks, in the course of which the sovereigns were magnificently entertained by the city of London, these illustrious guests re- turned to the continent, much gratified. For the circumstances in France leading to the return of Napoleon, see Fuance.

When the allied powers had received certain information of Napoleon's descent, they issued a manifesto, dated the 13th of March, in which they declared, ' that Napoleon Buonaparte, by violating the convention which had established him at Elba, had placed himself out of the pale of civil and social relations ; and, as an enemy and disturber of the tranquillity of the world, had rendered himself liable to public vengeance.' They therefore announced, without reserve, their determination of uniting their efforts to secure Europe against any attempt which might threaten to replinige it into revolutionary disorders.

Nor was this a mere menace. The declaratioii was confirmed by a treaty, dated March 23th, which bound each of the four powers to bring 150,000 men into the field, and not desist from their exertions imtil they should have rendered Napoleon wholly incapable of disturbing the tranquillity of Europe. England was permitted to substitute pecuniary payment for a part of the stipulated force.

The whole of France now seemed to unite in favor of the einperor, who, having mustered his resources (see Fuance), quitted Paris to meet his enemies for the last time ?arly in June.

The close of the last year had left the whole fortified frontier of the Belgic provinces, on the side of France, occupied by strong garrisons, chiefly of Britis"h troops, or of such as were in British pay. From the commencement of the alarm excited by Napoleon's attempt, reinforce- ments had been unremittingly sent from l-'ntr- land, and the duke of Wcllineton had arrived to take the supreme command of llie British and foreiirn troops. In the latter])arl of May the Prussian army, commanded by yirince Blucher, arrived in the Tieighbourhood, and frecjuent con- ferences relative to co-operation wi're held by the two generals. The princiijal French army was at this period posted near Avesnes in Flan- ders, and preparations for defence against inva- sion had been made at Laon and the castle of Guise.

On the 12lh of June Napoleon proceeded to Faon. In strict conformity with his usual plan

of pusliiiig forward at once to the most important I)oint, he resolved on attacking the British and Prussian armies, whilst the Russians and Aus- trians were still remote. At the head of a nu- merous and well-appointed army, composed of the flower of the French regulars, animated with enthusiastic confidence in their leader, at day- liglit of die 15th he made his first attack on tlie Prussian posts on t!ie Sambre. Charleroi being carried, general Ziethen retired upon Meurus, where he was attacked, and sustained consider- able loss. Blucher concentrated the rest of the Prussian army at Sombref ; and the French, con- tmuing their advance on the road to Brussels, drove back a brigade of the Belgian army, ur.der the prince of Weimar, to the position of a firm- honse named Quatre Bras.

Through some defect of intelligence, the duke of Wellington was not informed of tliese events till the evening, when he immediately ordered sucli of his troops as were in readiness to march to the left and support the Prussians. On the 16lh Blucher, wlio way posted on the hei:j;hts between Brie and Sombref, awaited the attack of the French, The battle raged wit!i great fury from three in the afternoon till late in the even- intj, when the Prussians, pressed by superior numbers, and receiving no succor, were forced to retire, leaving behind them sixteen pieces of cannon, and a great number of killed and wounded. Tliey however formed again at a short distance, and were not pursued. Tlreir veteran commander made extraordinary exer- tions, and was brought into imminent personal danger.

Lord Wellington, in the mean time, had di- rected his wiiole army to advance upon Quatre Bras, where t!ie fifth division, under general J^icton,

arrived early in the afternoon of the iGtl), and was followed by the corps under the command of the duke of Brunswick and the con- tingent of Nassau. It was the vvisli of the duke of Wellington to afford assistance to Blucher; but he was himself attacked by a large body of cavalry and infantry, with a powerful artillery, vˆhile his own cavalry had not yet joined. The repeated charges of the French were steadily repulsed, but a considerable loss was incurred, including t'.at of the duke of Brunswick.

Blucher round himself so much weakened by the day's action, that he fell back duxing the niu'iit to W' avre ; and this caused the duke of Wellington to retire, on the morning of the 17th, upon Gemappe, and thence to Waterloo, in order to maintain the communication. The chain of heights occupied by the British army, two miles in front of the village of \V'aterloo, tra- I'ersed tlie high roads leading from Ciiarleroi and Nivelle to Brussels, and uniting at the ham- let of St. Jean in tlie rear of the British position. The results of the battle which followed were so important, and it constitutes in all its details such an example of British military skill and valor, that it merits distinct notice. See our article Waterloo.

The consternation of Napoleon is said to have been extreme. When he saw the rout become n>o apparent to be mistaken, he exclaimed to the persons near him, ' It is uU over; we must now

look to our own safety.' See Fk.4NCE and Na- poleon.

After the victory, the allies came to the deter- mination of treating with the French only under the walls of Paris. On the 23d lord Welling- ■ ton sent a detachment against Cambray, which was taken by escalade without much loˆss; and Louis XV'llL soon after removed from Ghent. The marcli of the allied army was now one con- tinued tr.uinpii.

Blucher met with considerable opposition in establishing himself on the left of the Seine, but he ultimately succeeded ; and Pans being now exposed, on its most vulnerable side, a request came for the cessation of hostilities. _ A conven- tion was concluded on the 3rd of July between prince Blucher and the duke of Wellington on the one part, and Davoust (prince of Eckmuiij) on the other, referrinc merely to military points. By its stipulation, the French army was on the i'oUowing day to commence its march for the Loire, and was in three days completely to eva- cuate Paris; all the posts nround the city, and its barriers, were to be given up; the duty of Paris was to be performed by the national guards and the municipal gendarmerie ; public property was to be respected, with the exception of what related to war; and all individuals continuing in the capital were to enjoy their rights and li- berties, ' without being called to account, either for the situations they may have held, or as to their conduct or political opinions.' This last

clause is worthy of observation, because it was afterwards adduced on the trial of marshal Ney as a promise of a general amnesty.

At Paris the chambers continued, their sittings until they were closed by order of the military ; and on the 8th of .luly Louis X\ III. once more made his entry into the capital under the most gloomy omens. Its military positions were all occupied by the allied troops. For the sequel of the ex-emperor's history, see Napoleon.

Weighed down by mental suffering, and the disorders incident to a tropical climate, he ex- pired at St. Helena on the 5di of May, 182L

After a long and anxious suspense the con- gress held at Vienna made publicly known tl^e conditions on which France was permitted to keep her station in the European community. This, however, was definitively settled at Paris, by a treaty signed November 20th, which stipu- lated that Louis should cede to the allies the important fortresses of Landau, Suar-Louis, Phi- lippeville, and Marienburg, with the duchy of Bouillon. Versoix, and part of the territory of Gex, were yielded to the Helvetic confederacy; the works of Iluninguen were dismantled; and France enc^aged to erect no others within the distance of three leagues from Basle, thus leaving a free passage into the heart of France. Seven- teen of the principal towns on the frontiers of French Flanders, Champag'ne, Lorrain, and Al- sace, among which were C'onde, Valenciennes, (^ambray, &c., the bulwarks of her Flemish and (jermauic frontier, were to be delivered up lo the allies, to be held in trust for five years by an army of occupation, consisting of 150,000 men, to be maintained solely at the expense of France. An assessment was also levied upon l!ie latter of

700,000,000 of francs, to be divided among the allies, and defrayed by modes and at periods speciHfid in a separate convention. Conditions so degrading Marlborough and Eugene had never ottered to impose after ten victorious campaigns. Such, however, was the mode adopted by tlie allies to maintain the imbecile monarch on his inglorious and improvident throne; — such the bitter cup of humiliation to be drained by that country, after so many triumphs over her neigh- bours, enjoyed with so little moderation.

Since the assumption of the regal title by the house of Orange its prudence and moderation had been conspicuous. Subsequent to the battle of Waterloo, in wliich the prince liad displayed all the heroism of his ancient house, a committee had been appointed to draw up a constitution for the

Seventeen Provinces. This was afterwards laid before an extraordinary assembly of the States of the United Netherlands, by whom it was unanimously accepted. In September the ceremonial of the king's inauguration took place at Brussels, with every mark of general satisfaction.

*It is now time that we glance at the domestic concerns of Great Britain during 1815. In the par- liamentary discussions which arose on the royal message of the 22nd of IMay, and its concomitant documents, lord Castlereauh stated, * that Austria, Russia, and Prussia had engaged to furnish contin- gents in the following proportion : — Austria 300,000, Russia 225,000, Prussia 23G.000 men ; and the other states of Germany 150,000. Great Britain and Holland 50',000 each ; and Britain to advance the sum of £5,000,000 in subsidies.' The measures of the ministry were supported by vast majorities in both houses, and the almost unani- mous voice of the nation. Yet there were a few individuals in each house, distinguislied for talent and integrity, who deprecated liiis war- like policy.*

The estimate of expenditure for the present year was of a magnitude exceeding all precedent; the amount being .£80,000,000 for Great Britain, and £10,000,000 more for Ireland.. To meet this astonishing demand, the war taxes were con- tinued to the height. Two successive loans were negociated for £45,500,000, and a vote of credit passed for .£6,000,000. Subsequent to the vic- tory of Waterloo the additional sum of £200,000 was voted to the duke of Wellington ; and, in addition to the parliamentary and royal honors and rewards conferred on the conquerors of Waterloo, a national and truly nol)le subscription of nearly £500,000 was raised for tlie relief of the soldiers disabled by wounds, and the widows of the slain. On presenting the money bills for the royal assent, the speaker of the house of commons addressed the prince regent in terms of the highest exultation. Parliament was prorogued nth July.

After a long recess, the parliament re-assem- bled on tlie 1st of I'Vbruary, 1810. The return of peace, though it brought security in its train, did not diminish the burdens of the nation in liiat decree which was ex])ccted. A large standing army was maintained ; and it was the intc'ition of the ministry to continue the odious i,!x on proj)city, nut altngellicr il its full amouiit,

but with a reduction of five per cent. This ex- cited a general alarm. Notwithstanding the presentation of numerous petitions against the impost, the chancellor of the exchequer ventured to propose its continuance; but the spirit of tlu house revolted from it : and wiien it was ex- ploded, by a majority of thirty-seven votes, the shouts which arose from the unexpected popular triumph resounded over the whole neighbour- hood.

The debates respecting the new settlement of the civil list were warm and acrimonious.

Soon after tlie opening of the session Mr. Brougham moved for the production of a copy of a treaty entered into at Paris, on the 2oth of September, 1815, between tlie sovereigns of Austria, Russia, and Prussia, and which had received the sign-manual of those potentates. By the tenor of this singular document, whicli received the name of ‘ The Holy Alliance,’ be- ing couched in the most devout and solemn lan- guage, the high contracting parties declared their resolution to take for their sole guide, both in tl’.eir domestic administration and foreign re- lations, the precepts of the holy religion of Clirist their Saviour. Politicians were much perplexed to comprehend the meaning of an en- gagement at once so vague and so serious, and the production of it was resisted by lord Cas- tlereagh, though he admitted that tlie prince re- gent had been urged by a joint letter of the three soxeieigns to accede to it, and had in reply expressed his satisfaction with the nature of thri treaty, and given an assurance, tliat the British government would not be one of the least dis- posed to act up to its principles. Subsequent events seem to indicate, tiiat a resolution to sup- port the authority of each other against any re- volutionary movement among theirown subjects, was the true object of this mystical combination. Duriu.; the session a message from the prince rejent announced the approaching marriage, with his consent, of his daughter the princess Char- lotte Augusta, with his serene higliness Leopold (Jcor’.re Prederick, prince of Saxe Coburg-Saal- feld, who had visited England in the train of the confederate sovereiirns. His royal highness ex- pressed his persuasion of the concurrence of the house in enabling him to make such provision on the occasicai, as miuiit correspond with the dignity and honor of the country. It was con- sequently proposed by the chancellor of the exchequer, and unanimously agreed to by the house, that an income of £G0,000 should be settled on the illustrious pair; ot which £lO,000 were to form a sort of jirivy purse for her roval highness, and tlie remainder was to defrav the domestic expenses of the prince of Coburi ; this sum to be settled on them for their joint lives. Sliouldthe]>rince of Coburg die first, the whole was to be continued to her royal hiuhness ; if he should be the survivor, the sum of £50,000 was to be continued to him. The allowance to the])rincess from tiie civil list of £30,000 a-year was to cease.

ˆ From the period of the restoration of king Ferdinand \ U. to the Spanish throne, his reign had been characterised by a series of uncon- trolled bigulry, cruelly, and despotism.

Mr. Brougham, the able and intrepid advocate of freedom, now drew the attention of tlie Bri- tish public to the proceedings in Spain ; and during the session of 1816 brought forward a motion for an address to the prince regent, ‘ humbly intreating him to take into his gracious consideration the sutferings of the late Spanish regency and cortes ; and representing that the alliance at present subsisting between his royal highness and his Catholic majesty affords the most favorable opportunity for interposing the good othces of Great Britain in their behalf, with tlie weight t’aat belongs to her, and to the senti- ments of this house aud of tlie people.’

The distresses of the agricultural interests produced a number of petitions to parliament for relief. One member attributed the pressure to a combinatio!! of causes, but chiefly to the enormity of taxation; another to an overtrading in the bounty of the soil, and a consequent re- duudar.‘je’ of produce : but all were at a loss to devise a promising re-medy. The manufacturers at the same time complained of that want of em-] loymeiit which was occasioned by the general impoverishment of their countrymen. liiots rirose in several counties from the discontent which this state of affairs produced.

Near the close of the year a popular meeting took place in Spa-fields, Islington, and resolu- tions of reform, suggested by Mr. Henry Hunt, were voted by acclamation. An apothecary of the name of Watson also harangiied the rabble in the same neighbourhood ; and the subsequent operations of those who listened, to his oratory excited a temporary alarm in the metropolis. The rioters paraded the streets, carried off fire- arms from the shops of several gunsmiths, marched to the Royal Exchange, where they had a short contest with the lord mayor and some officers of the police ; but they at length dis- persed from the fear of a military attack. These disturbances did not seriously encroach, however, on the general tranquillity of the realm.

In the midst of the tranquillity of Europe, an unexpected war arose on the coast of Africa in the course of this year, which gave occasion for a display of the undaunted valor of the British navy, not less honorable in its pr nciple than splendid and triumphant in its results. The conduct of the Algeriiies, and other barbarians on that coast, had long excited general indigna- tion ; and, as even British vessels were occasion ally attacked by them, lord Exmouth, being ordered by the prince regent to try the effect of temperate expostulation, sailed to Algiers, and submitted to the dey’s consideration, that he should treat the Ionian , Isles as if they were British coloideb ; that he should conclude peace with the kings of Naples and Sardinia ; and that he should abolish Christian slavery in his domi- nions. Promises were givjen on the first two heads, but the other request was considered by the dey too important to be hastily settled. The rulers of Tunis and Tripoli, who were also ad- dressed by the admiral, were more

compliant : they promised that they would not consign pri- soners of war to the miseries or disgrace of sla- very, but would treat them according to the l>:actice of Cinislian nations.

Returning to Algiers, his lordship renewed his remonstrances, but without effect ; and, while he was thus employed, a brutal massacre was perpetrated at Bona upon many coral fishers, acting under the supposed security of the British flag. A fresh squadron, adapted to a bold eu terprise, was therefore put under lord Exmouth's command ; and he was joined by vice-admiral Capellen, of the Netherlands.

The session of parliament was opened, January the 28th, 1817, by the prince regent in person. The speech from the throne stated the anxious desire of government to make every reduction which the safety of the empire and true policy would allow ; the deficiency in the revenue was acknowledged, but ascribed to temporary causes ; continued assurances of amity from foreign])Owers were mentioned ; but the most remark- able passages of this speech are those which re- late to the state of the country as drawn in the late petitions. ' I am too well convinced,' said his royal highness, ' of the loyalty and good sense of the great body of his majesty's subjects, to believe them to be capable of being perverted by the arts which are employed to seduce them.'

On the return of the prince regent from the house of peers an immense crowd had assem- oled in the park, by whom he was received with marked demonstrations of popular resentment ; and on passing Carlton-house the glass of the carriage was broken by a stone; nor was it without some difficulty that he at length reached the palace. This flagrant outraoe being on the same day reported by lord Sidmouth to parlia- ment, the two houses joined in an address suita- ble to the occasion; moreover, £1000 reward was offered, but in vain, for the discovery of the offender.

On the 3d of February a message was brought down from the prince regent to both houses of parliament, announcing that he had ordered pa- pers to be laid before parliament, containing information of certain practices, meetings, and combinations, in the metropolis and in different parts of the kingdom, evidently calculated to endanger the public tranquillity, to alienate the affections of his majesty's subjects from his per- son and government, and to bring into hatred and contempt the whole system of our laws and government. On the motion of ministers these papers were referred by each house to a secret committee of the members. The reports of the two committees were delivered to their respective houses on the 1 8th and 19th of February; and through them some alarming statements were made to the public.

The first result of these proceedings was a motion by lord Sidmouth in the u]3per house, for a suspension of the habeas corpus act until the 1st of July ensuing ; which was carried by a great majority, though not without strong oppo- sition from several eminent noblemen, and a protest signed by eighteen. In the house of commons, lord Castlereagh made a motion to a similar effect ; giving notice at the same time of farthei' measures for the protection of the country against the machinations of the disaffected. These were, — first, the extending of the act of 1?",15, for the security of his majesty's person io

that of his royal highness the prince regent; se- condly, the embodying into one act the provi- sions of the act of 1795, relative lo tumultuous meetings and debating societies, and the provi- sions of the act of the 39th of the king, which declared the illegality of all societies bound together by secret oaths, and of such as extended themselves by fraternised branches over the kingdom ; and, lastly, the making of enactments to punish with the utmost rigor any attempt to gain over soldiers or sailors to act with any as- sociation or set of men, or to withdraw them from their allegiance.

Imputing the distress of the people to misgo- vernment, and the want of reform, a person resident in the couiity of Nottingham, whose name was Bi-andreth, aided by several other manufacturers, strenuously exerted themselves to organise an insurrection in that county ; yet, with all their clamor and persuasion, they could muster only a very small party : and die result was, that these infatuated men only deluded themselves, and precipitated their own ruin.

Mr. Wilberforce embraced an opportunity, be- fore the close of the session, to call the attention of the house of commons to the slave trade, which was still carried on without molestation by the subjects of France, Spain, and more es- pecially Portugal, which had extended its traffic along the whole coast of Africa ; so that the acces- sion of these powers to the eventual abolition was a mere dead letter. He consequently moved an address to the jjrince regent, praying ' that he would be pleased to pursue with unremitted ac- tivity the negociations into which he had already entered on this important subject.' Lord Cas- tlereagh suggested the danger of interfering with pending negociations; but, as the house betrayed no symptoms of alarm on that head, he ac- quiesced in the motion, which passed unani- mously.

Towards the close of the session Mr. Abbot, who had held the office of

speaker in five suc- cessive parliaments with distinguished reputation, intimated his intention of resigning, on account of indisposition ; and was soon afterwards called to the house of lords, by the title of lord Col- chester; an annuity of £4000 being granted to him for his meritorious services. The right honorable Charles Manners Sutton was elected in his place ; and the parliament was prorogued in person by tiie prince regent on the r2th of July.

In the month of August arrived at Ports- mouth, from his embassy to China, lord Am- herst, who had left En:;land in 1816, and arrived off the Chinese coast in the following July. Whatever were the advantages anticipated from this expensive et|ui])ineiit, of which indeed the yirospect, after the total failure of the former embassy by lord Macartney, must have been very faint, they were entirely frustrated by the refusal of lord Ainlu-rst to submit to the degrading ceremonial of prostration now required by the court of Pekin, though dispensed with in the))erson of his predecessor. The emperor, how- ever, in his ‘ imperial mandate to the king of England,’ for such was the language of the court of Pekin, expressed his satisfaction ‘at the dis-

position of profound respect, and due obedience, which were visible in sending this embassy.’ ‘ I therefore,’ says he, ‘ thought proper to take from the articles of tribute a few maps, with some prints and portraits. In return, I ordered to be given to you, O king, a jouee (a string of im- perial beads), two large silk purses, and eight small ones, as a proof of our tender and indul- gent conduct. Your country is too remote from the central and flourishing empire. Besides your ambassador, it would seem, does not know how to practise the rites and ceremonies of the central empire. There will be no occasion here- after for you to send an ambassador from so great a distance, and to give him the trouble of passin=f over mountains, and crossing the ocean. If you do but pour out the heart in dutiful obedience, it is by no means necessary, at any stated time, to come to the celestial presence.’ Such was the haughty language of rebuke in wiiich the emperor of China thought proper to address the king of England, after which, it can hardly be expected that a third erabiissy to China will speedily take place.

The 6th of November this year was rendered fatally memorable by the sudden and melan- choly demise of the princess Charlotte of Wales, presumptive heiress of the crown, immediately after the birth of a still-born infant.

The general regret had not entirely subsided when, on the 28th of January, the British par- liament re-assembled. The prince regent then declared, that it was a soothing consolation to his heart to receive from all descriptions of his Majesty’s subjects the most cordial assurances, both of their just sense

of the loss which they had sustained, and of their sympathy with his parental sorrow ; and that, amidst his own suf- ferings, he had not been unmindful of the effect winch this sad event must have on the interests and future prospects of the kingdom. The affairs of this session were not remarkably interesting. The first bill that was brought forward provided for a repeal of the act which suspended the habeas corpus. As ministers could not deny that some irregularities had been committed in the exercise of the great powers which had been allowed to them, they also demanded from the two houses a bill of indemnity for themselves, and for all who had acted under them.

The subject of education, particularly that of the poor, occasioned some debates in parliament. It was generally believed that shameful abuses and embezzlements had disgraced the characters of many trustees, apjiointed to superintend the application of those funds which were destined to aid the purposes of public instruction. Mr. Brougham therefore proposed, that persons of learning, judgment, and respectability, should be authorised to make a str.ct enquiry into the exe- cution of every trust of this kind. A bill to that eflect received the royal assent.

The diffusion of religious knowledge also occupied the attention of both houses of par- liament. A message was brought down from the prince regent, desiring them to direct their attention ' to the deficiency which had so long existed in the number of places of worship be- longing to the established churchy uhen com-

paved with Uie incrLMsing population of tlie country,' and £1,000,000 sterling was voted for the building of new cliurches. Lord Holland suggested the expediency of drawing a large sum for this purpose from tlie richly endowed church of England ; but this idea was instantly exploded by the higher clergy, although the archbishop of Canterbury and some of his brethren contributed by individual donations to the increase of tiie fund.

A royal message, on the 13th of April, an- nounced the intended marriages of the dukes of Clarence and Cambridge, to the princesses of Saxe Meinungen and Hesse-Cassel ; and, soon after, that of the duke of Kent to the dowager- princess of Saxe Leiningen, sister of prince Leo- pold of Saxe Coburg. The prince regent at the same time expressed 'his reliance on the readi- ness of parliament to make the necessary pro- vision for the same,' which gave rise to a memorable debate. Parliament therefore granted an addition of £i 0,000 to the income of the duke of Clarence, and .£'0000 to

the other dukes. The latter sum was not objected to ; but, no reason being assigned why the house should show any partiality to the duke of Clarence, Mr. n. Sumner moved an amendment, placing him on the same level, which was carried by 193 to 184 voices.

In April tlie princess Elizabeth, third daughter of the king, was married to tlie hereditary prince of Ilesse llomberg; but no application was made to parliament on tliat account.

A treaty, alluded to in the speech from the throne, between England and Spain, relative to the slave trade, was laid before the house by lord Castlereagh. Conformably to the articles of this treaty, Spain, in consideration of the sum of £400,000, to be paid her by England, in com- pensation of the losses which had been or might be sustained by the subjects of his Catholic majesty engaged in that traffic, consented to its abolition on all the coasts of Africa, north of the line, stdl leaving it open to the south ! A con- vention was also concluded with Portugal to the same effect.

On the 4th of November the plenipotentiaries of the courts of Austria, Great Britain, Prussia, and Russia, assembled at Aix-la-Chapelle, where they addressed to the duke of Richelieu, the French minister, the following important docu- ment : — That dieir august masters being called upon, by the twentieth article of the treaty of Paris, to examine, in concert with the king of France, whether the military occupation of a part of the French territory, stipulated by that treaty, ought to cease at the termination of the third year, or be prolonged to that of the fifth ; had recognised, with satisfaction, that the order of things established by the restoration of the legitimate and constitutional monarchy of that country, gave assurance of the consolidation of that state of tranquillity in France necessary to the repose of Europe ; and that in consequence they had commanded the immediate discon- tinuance of such military occupation, — a mea- sure which they regarded as the completement of the peace.

Her majesty queen Charlotte expired at Kevv

palace on the 7th of November, in tlie seventy-fifth year of her age, after a lingering decline, attended with much suffering, which is said to have been sustained with great fortitude. She merited the respect of the nation by Jier conjugal and mater- nal character, by the uniform propriety of her conduct, and by tlie strict decorum which she maintained at court. Her ruling passion in the decline of life was believed to be the accumu- lation of riches ; the political influence which she acquired during the illness of the king, in 1788, she maintained to the last.

The new parliament was convened for the des- patch of business on the 14th of January, 181 9. On the 21st, the speech delivered by the lord chan- cellor, stated that his royal highness was per- suaded that parliament would view with peculiar satisfaction the intimate union which so happily subsisted among the powers who were parties to the late congress of Aix-la-Chapelle. His royal highness had the greatest pleasure in being able to inform the parliament, that the trade, com- merce, and manufactures of the country were in a very flourishing condition ! In adverting to the papers relative to India, which the prince regent had directed to be laid before the two houses, the lords commissioners had the com- mands of his royal highness to inform them, that the operations undertaken against the Pindarees were dictated by the strictest principles of self defence ; and that, in the extended hostilities which followed, the Mahratta princes were in every instance the aggressors.' The addresses in answer to the regent's speech were voted without opposition, and both houses condoled with his royal highness on the death cf his venerable parent. It was now proposed that the duke of York should have the custody of the royal person ; and that he should be remunerated with an annual grant of £lO,000, for the great trouble and extraordinary expense which must unavoidably attend his occasional journeys to Windsor. After warm debaters this allowance was voted; but the Windsor establishment was at the same time reduced.

A topic deeply interesting to the friends of humanity occupied the early attention of the new]iarliament. This was the state of the cri- minal code. On the 9th of February Mr. Wilberforce presented a petition, from the people called Quakers, praying for a revisal of it. A petition was also presented from the corporation of London, complaining of the increase of crimes, and pointins; out the commutation of capital punishment as a remedy. Ministers on the 1st of March proposed to refer the subject to a committee ; and on the following day Sir James Mackintosh rose to make a motion to this effect.

He divided capital felonies into three classes; those on which the punishment of death was always, those on which it was very often, and those on whicli it was never put in force. The first and second divisions he proposed for the present to leave untouched : the last, consisting of no less than 150 different crimes, ought, he conceived, to be expunged entirely from the list, as the relic of barbarous times, and dis- sraceful to the character of a thinking and en-

liaiitenˆ'l people. Lord Casllereaˆh passed iRiiuy complimenU on tlie candid

and moderate spirit in which the honorable and learned gen- Ueman had brouglit forward his motion ; but he l)ersisted in opposing the appointment of a sepa- rate committee. Other members, however, strenu- ously supported the measure, and it was finally carried by a majority of 147 to 128 voices.

]3uring this session of parliament, and the succeeding months, the political horizon of Great Britain wore a clouded aspect. A nume- rous part of the community, chiefly of the ope- rative class of citizens, became clamorous for wliat they termed a radical reform, as the only remedy for grievances that were become intole- rable ; and tlieir tone had risen to such an elevation at the time of the prorogation, that the speecli from the throne noticed, in the language of asperity, the 'attempts which had been made in some of the manufacturing districts, to take advantage of circumstances of local distress to excite a spirit of disailection to the institutions and government of the country.' Meetings took place in various parts, and strong resolutions were voted. At Mancliester, Leeds, Stockport, ^c, multitudes of artisans and manufacturers were convened to listen to speeches from popular orators, and to pass by acclamation resolutions for annual parliaments, universal suffrage, and voting by ballot. In general these assemblages were regularly convoked and dissolved without any tumultuous proceedings, though with minds greatly inflamed by wild declamation against what were called tlie usurpations of the higher orders, and the intolerable suflferings of the poor. It afterwards appeared, that some of the most violent of these harangues were made by spies of government.

On the 16th of August, pursuant to notice given by means of hand-bills and placards, a meeting was held in an o|ien space called St. Peterslield, near a church of tliat name in Man- cliester. During the whole morning large bodies of reformers, arrayed in regular order, continued marching in from the neighbouring towns and villages. Each party or division had its own banner, bearing some short inscription or motto, such as ' no corn laws,' ' universal suflra'je,' ' vote by ballot,' ' liberty or death,' ?cc. &c. Tlie mimbers collected on this occasion were estimated at 50,000 or 60,000. llie chairman of this meeting w;is a Mr. Henry Hunt, a person of more talent than principle. Having ascended tiie jjlatform, he harangued tlie molj, expressing his full contidence in their orderly and peace- able demeanor; nor was any oflcnsive weapon to be seen in the whole assemblage. While lie was engaged in making his speech, a trooj) of the Mancliester yeomanry cavalry suddenly ap- peared at the extremity of tiie field. INIakiiig their way to the hustincjs, the commanding odicer told Hmit he was his jirisoncr ; and imme- diately took him into custody, with several otiicrs who were standing beside him. The yeomanry then betrnn to strike at t!ie banners, charging right and left with their drawn swords, and dash-

ing through all dial obstructed their passage. A (iieadful scene of confusion and terror ensued ; tiuniDers being traniidcd under the fi;ct of the

horses, or cut down, men and women indisci'- minately, by the sabres. The Manchester magis- trates, who viewed this bloody scene from the windov/s of a house at a convenient distance, are said to have read the riot act; but, if they actually did so, die fact was known to very few ; and it is certain that no time was allowed for dispersion, conformably to the requisition of the act. The number of killed and wounded was estimated at between 300 and 400.

Among other places that held meetings for the purpose of jjetitioning the legislature to enquire into the late proceedings at Manchester, a numerous one was convened at York by the high-sheriff', and sanctioned by the presence of earl Fitzwilliam, as well as many other persons of rank and consequence. At this meeting appropriate resolutions were passed, and a peti- tion was voted to the prince regetit, to institute an enquiry; the only effect of which was die dismission of that highly respected nobleman from his lieutenancy. In the reply to the city of London, the regent referred the sufferers ' to tlie tribunals of the country, if any injury had been sustained ;' but the Lancashire grand jury threw out all the bills preferred against those concerned in the outrages and enormities perpe- trated. This was afterwards a topic of great debate in parliament.

It was now announccil that the health of the king, which had liitherio been good for his age, was on the decline; and that decline, proved to be rapid. On the 23d of January, 1820, the public mind received a severe shock by the death of his fourth son, the duke of Kent, wlio expired at Sidmouth, in Devonshire, after a very short illness, much esteemed and lamented, leaving an infant daughter. The regrets excited by the loss of this illustrious prince were speedily absorbed in the gieater interest excited by the tidings from Windsor, which foretold the approaching dissolution of his august father: the])rince regent himself was also seriously indisposed.

On Saturday, the 29th of January, the long and eventful career of the monarch, who had attained his eighty-second year, terminated by a quiet and almost insensible dissolution, about thirty-five minutes past eight in the evening. The duchess of (iloucester, and the princesses Augusta and Sophia, who had been unremiting in their attentions to their venerable jiarent, were at this time in the palace; and the duke of York watched with filial solicitude by the side of his couch. On that prince devolved the \uty of announcing the mournful event to the recent, who on the 31st of January was proclaimed king with the usual solemnities.

The venerable age, the protracted sufferinss, the private and personal

virtues of George lit with his still recent demise, render it botli a dif- ficult and ao invidious task to attempt to sketcli the jiolitical features of his reign with historic fide- lity. It has been said of him on hiˆh authority, and we believe with equal truth, Uiat 'he would never do wrong, except when he mistook wrong for right.' The notions of government originally infused into his mind by the earl of liute, pro- bably diflPered little from those which Charles 1. learned from aichbisho]) Laud, however mudilieJ

in practice by the necessity of circumstances. A distinguished foreigner says, ' The accession of George III. was an actual political revolution in England. Pretenders were no more. The house of Hanover was established. The whigs were dismissed from administration, as trouble- some observers no longer wanted. The govern- ment was again seized by the tories, those friends of power, who have ever since kept it, to the great detriment of public liberty. Yet the king was personally a friend to law and justice, and sincerely wished the welfare and prosperity of the country.'

The reign of George IV., with regard to Europe and the Western world, at least, has been v.holly peaceful. The wars of India are given under Hindostan, or Indian Empire. But under his successor, William IV., the depen- dencies of the empire still continue undisturbed. Several transactions of the present reign are too recent and incomplete to be circumstantially recorde('

Great Britain has been subject to two dynasties and the commonwealth. By the house of Stuart she was taught the tendency of a monarchy to arbitrary power ; by the commonwealth the evils of a democracy, ' the madness of the people !' Her second dynasty has not failed to exhibit both lessons. May the Almighty Guardian of her rights and liberties preserve her mindful of both of them !

PART II.

ftSSCELLANEOUS STAtlSTICS, &c.

Britain, and particularly England, as the seat of the government, are articles under which the most important geographical and statis- tical features of the country have been treated. We find remaining only a few particulars relating to the commerce, navy, geology, state of the arts, colonial dependencies, &c., of Great Britain.

1. Historical Sketch of the Corninerce of Great Britain. — We have

mentioned the early visits of the Phenicians to this country. Csesar, however, found the Britons in that state of barbarity which proves that their commerce could never previously have been more than that which attaches to the very first stage of civilisation, i. e. when tillage and agriculture have begun to supersede the hunter and shepherd state. In the south parts of the island the Britons had arrived at this first stag((Ut in the other parts they still lived by pasture, clothed themselves with the skins of beasts killed in the chase, and dwelt in the temporary huts of the forests and marshes. Their commerce with the Phenicians and Car- thaginians was therefore confined to the barter of tin, lead, and sk ns, for brass trinkets and other trifles. According to Diodorus, the Greeks, after the voyage of Pytheas, also visited the coasts of Britain for the purposes of commerce, and Csesar found some commerce existing be- tween the Britons of Kent and tlie opposite Gauls. Under the imperial government, while the Britons lost their savage independence, they rose in the scale of civilisation, by the adoption of useful arts, and their commerce increased in proportion. The articles exported from Britain to Rome were tin, lead, hides, lime, chalk,

pearls, horses, oxen, dogs, and slaves, for at this early])eriod of our history, the merchants of Bristol dealt in human flesh, purchasing men and women in all parts of the island, and selling them abroad as slaves ; and it is even recorded that they first rendered the women pregnant tt» increase iheir value !

The inroads of the Scots and Picts, on the de- parture of the Romans, threw the Britains back into the state of barbarity from which they had begun to emerge ; nor was the confusion atten- dant on tie Heptarchy much more calculated to elicit improvement; no sooner, however, were the kingdoms united under one sovereign, in the person of Egbert, than commerce and manufac- tures revived in spite of the descenis and ravages of the Danes ; and under the Saxon monarchs London, Exetpr, and Bristol, are recorded as considerable trading cities.

At the end of the ninth century, when the Great Alfred had purged the country of its Danish invaders, a regular system of barter took place With the neighbouring natioi;s, and Atliel- stan, the grandson of Alfred, passed a law re- markable for the age, by which a merchant who had made three foreign voyages on his own ac- count was admitted to the rank of a thane or gentleman. I!,thelred in 979 granted a free trade to a society of German merchants, established in England under the name of Emperor's Men, on condition of paying certain tolls, and presenting the king at Christmas and Easter with two pieces of gray cloth and one of brown, ten pounds of pS'pper, two vessels of vinegar, and five pairs of gloves.

The Conquest again produced an unfavorable revolution in commerce, by

the introduction of the feudal system, which paralysed enterprise by destroying the liberty of the subject, at the same time that it rendered trade ignoble in the privi- leged class. Hence the chief trade of England was engrossed by the Jews, who began to settle in the country about the time of the Conquest, and who, though oppressed in every possible way, amassed vast fortunes by usury. In the year 1100 a number of Flemings, driven from their own country by an irruption of the sea, settled in England and introduced manufactures of wool. At the same period the people of Bris- tol traded to Ireland, but the principal seats of commerce were London and the cinque ports from their proximity to the continent. The ex- ports, at this time, were horses, wool, woollen cloths, leather, corn, lead, and tin. The imports were, linens, fine woollens, silks (for the royal family only), steel, iron, spices, and other pro- ductions of India.

The cinque ports were originally five havens, to which were granted certain privileges, on con- dition of defending the coast from invasion. The origin of these establishments may be traced to the Romans, who, though they possessed a supe- riority of naval force, found it necessary to adojU measures of defence against the Norman pirates, who assumed the titles of Sea Kings of the North, and for this purpose nine stations on the coast opposite Gaul were fortified. The same necessity continuing long after the departure of the Romans, gave rise to the four.dation of the

c:nque ports, which took place in the reign of Edward the Confessor or VViiliara I. To eacli of the chief ports were attached several subordi- nate members, in the following series: — 1. Hastings, witli Seaford, Pevensey, ilidney. Rye, VVinchelsea, Beakesbourne, Bulverheath, and Grange, as members. — 2. Sandwicfi, with Ford- wick, lleculver, Sarre, Walmer, llamsgate, and Deal. — 3. Dove7;wii\ Faversham, St. Margaret, NVoodchurch, Goresend, Knigdown, Bircliington, .Margate, iluigwold, and Folkstone. — 4. liomnfy, With Lydd, Iloraehill, and Ringwold. — 5. Hythe, with VVestmeath. Rye and Winclielsea were afterwards raised to the rank of cinque ports, rtith Tenterden and Excove as members of the former. The principal condition on wiiich the cinque ports held their privileges was, the fur- nisliing a certain number of ships and mariners for military service.

Under i'Mward I. coal mines first began to be worked in England, and so rapid was the pro- gress, that in 1379 a duty of sixpence per ton was levied on the ships employed in the coal trade, to be applied to their protection. At this same period the English traded to Italy, Spain, and [Portugal, as well as to all the countries of tlie north, and in 1381 the principle of the act of

navigation was introduced into the legislation of the kingdom, by a law declarint; tliat ‘ none of the king’s subjects shall carry fortii or bring in merchandise, but only in ships of tlie king’s alle- giance.’ This law, however, seemed to have but little effect in turning the king’s subjects to the])rofession of commerce, and the trade continued to be principally carried on in the ships uf foreigners and by foreign merchants, residing in]‘“ngland and licensed by tl>e kings under differ- ent denominations. Such were tiie (German merchants chartered by Henry III. (1259); the Steelyard Company, a branch of tiie Ilanse As- sociation, whose privileges were confirmed by Edward IV., &c. Indeed, as we have already liad occasion to notice, tlie carrying trade of England was almost entirely en’jfrossed by the lianse Association until the reign of Edward VI., when the Englisli merchants first besan to complain of the monopolies granted to foreii;n- ers, and particularly to the Steelyard Company, ■which in one year exported 50,000 pieces of cloth, while the Ensrlish merchants exported only 1100. Edward, feeling the justice of these com])laints, revoked the privileges of this com- pany ; and though foreiu’ners again received favors from the bigoted Mary, at the instigation of her Spanish husband, they again fell into dis- credit under Elizabeth, from whose reign may be dated the origin of F’nglish commerce, in the just sense of the term.

Tiie Reformation, which was only firmly esta- blisliod by this])rincess, was attended with the most happy consequences on the po]inlation and energies of the nation; for by it 150,000 persons, who had been restrained from marriage, were, if we may use the expression, y)ut into cir- culation ; and 50,000 others, who had been main- tained in idleness by the convents, were obliged to seek a livelihood bv industry.

In this reign were charterc d the African, East- India, Russia, Eastland and Turkey Companies :

and, though such institutions are generally allow- ed to be injurious in an advanced state of com- merce, tliey must also be admitted to be the best nurses of its infancy. The threatened invasion, by the Spanish Armada, gave the first grand im- pulse to the marine of England by the purchase of ships from foreigners, and by the formation of national seamen ; and so rapid was the pro- gress, that, after the destruction of the Armada, a census being taken of the merchant vessels in England, it was found that Norfolk, Suffolk, Essex, Kent, and Sussex, possessed 471 ships, or more tlian half the number in the whole king- dom tliirty years before. Tlie peaceable James I. gave great encouragement to trade and ship- building, and in his reign British colonisation began in America, and opened a new theatre of industry and enterprize. At this period 400 vessels were employed in the coal trade of New- castle.

The merchant vessels of England were, how- ever, still of small burden, and it continued customary to hire large ones from foreigners for distant voyages or extensive transactions. At length, in 1616, an order from the king and council was issued on the petition of the mer- chants of London, prohibiting the export of British commodities in any but British bottoms; and the efiect was such, that the whole nation applied itself to the creation of a merchant marine, at the same time that the ships, being built of a larger size, were capable of long voyages, and the British merchant flag was now first seen in the Mediterranean. So great was the impulse, that from a ship of 100 tons, being a kind of prodigy at the commencement of the reign of James I., a number of ships of 300, 400, and even 500 tons, were now launched from the British docks. In 1615 there were not ten vessels above 100 tons out of London : and, in 1G22, Newcastle had 100 sail, each exceeding that tonna<;e.

During the first part of the reign of Charles I., commerce continued to flourish, when the trade to the west coast of Africa and East Indies re- ceived a great extension, and the whole com- merce of Spain was in the hands of the English, who also sent a great quantity of woollen cloths to Turkey.

Under the commonwealth, the English began to dispute with the Dutch the dominion of the seas, and hence arose the famous Navigation Act, by which it was prohibited to all foreign shi])s to trade to the English colonies, without license; and at the same time the merchandise of Asia, Africa, and America was forbidden to be imported into FLngland, except in British bottoms, or merchandise from any part of I'Airope except in vessels beloni;ing to the coun- try of which the merchandise \vas the produce or manufacture. An additional article added after the Restoration, obliging the master and three-fourths of the crews of vessels sailing under the English flag to be English subjects, completed this great monument of maritime legislation.

Such were the effects of the navigation act, added to the increasing pojmlation of the Ame- rican colonies, and consequent increase of theii

trade, that, between the Restoration and Revolu- tion, the English merchant marine was doubled. While at the same epoch tlie revocation of the edict of Nantz, which ruined the manufactures of France, caused a great and rapid improvement in those of England^ by the influx of the perse- cuted Protestants, who introduced or perfected the man-ufacture of silk, cottop,

linen, hats, jewellery, cutlery, and clock-work, and thereby ireed Rngland from an onerous dependence on France for these objects. The Revolution, by securing liberty, gave a new impulse to every kind of industry; and the union of Scotland, by identifying the interests of the two kingdoms, proved equally 'dvantageous to each, and to the empire in general.

F'rom this epoch commerce continued in a constant progression, unchecked by frequent wars, or even by t'.ie eparation of those colonies, which were once thought to be the grand basis of the commercial fabric, until it reached a height that drew down on us the envy and ani- mosity of all Europe ; and in a great measure caused, while it most essentially aided us to support, those wars whicii have desolated Eu- rope for the last twenty years, and to which the energies of Great Britain at length happily put an end.

2. Historical Sketch of the Progress; of the British Navi/. — Tiie natural defence of Great Dritain is her naval lorce ; is necessary to secure her coasts from invasion as for the protection of her commerce. The history of the progress of the r&FY may be divided into three periods ; the first comprehending the period previous to the reign of Henry VIII ; the second ending with the Restoration ; and the last from that epoch to the present time.

I. Ca;sar only notices particularly the boats of die Britons, formed of withies and covered with skins, in which they crossed the English and Ir'sh channels in summer: it seems probable, however, that they had even at this time vessels of a more stable construction, for he tells us that the Veneti of the opposite coast of Gaid obtained auxiliaries from Britain against the Romans, and that the fleet of the Veneti and Britons, which engaged that of the Romans off the coast of Armorica (Britany), consisted of 230 large and strong ships, which were totally destroyed by the Romans. This defeat sufficiently ac- counts for the Britons being unable to resist the invasion of the Romans next year by sea.

While the Romans remained masters of the island they kept up large fleets to protect the coasts and commerce, and the whole naval force . was commanded by ;in ofricer styled Archiguber- nus Classis Britannicje, or High Admiral of the British fleet. When they abandoned the island they withdrew their ships, and those few which remained to the Britons fell an easy prey to the Frank and Saxon pirates, so that the island was again totally deprived- of its natural defence.

Of the confusion of the heptarchy the naval power of the country partook so lartrely, that it was not unt. the reign of the great Alfred that it again resumed an existence. The first fleet col- lected by this prince consisted only

of five or six ships, with which he attacked and defeated

six Danish pirates: enconr.iged by this success, he increased his fleets to 120 ships, which lie distributed in proper stations round the island, where they were sure to meet the Danes, either in their approach or retreat, and generally were successful. The navy did not again decline under the successors of Alfred ; and Edgar, in particular, kept up a large naval force, divided into three squadrons. Some Englisii historians make the number of vessels amount to 3,000 or 4,000 ; but probably, as Mr. Henry observes, there is here an error of an added cypher.

The successors of Edgar allowed the navy to decline, and t'.ie Danes again ravaged t!ie coasts with impunity. In 1007 a fleet was raised by requisition, on the proprietors of land, of 800 vessels ; but this force being either dis])ersed or destroyed, by the treachery and jealousy of its chiefs, the way was opened for the Danish con- quest. During the period of this dominion, theie being no foreign enemies to resist, both the naval and military force of the kingdom were neglected ; and hence there was no adequate navy to resist the invasion- of William of Nor- mandy, which was made in 3,000 vessels, many of which, however, were doubtless only open boats, for in the short passage across the channel several vessels were lost.

We have noticed the establishment of the cinque ports, and their being obliged to furnisli ships for the public service; this force consisted of fifty-seven ships, each widi twenty-seven men and boys, and the following was the proportion furnished by each : —

Hastings and its members 21

Dover and its members 21

And each of the other three ports and

their membf^rs 5

Tliis long continued to be tl.e only standing navy of England ; and, when necessary to ni- crease it, shins were hired or pressed from the merchants, and armed by the crown.

From the epoch of the Norman Conquest the shipping of England increased both in number and in size ; and the fleet that conveyed Richard I. to the Holy Land is described, by contempo- rary historians, as excelling every thing before seen in the number, magnitude, and beauty of the shijis. it was composed of thirteen of the laro-est class of vessels, named dromones, 150 of the second class, called busste, fifty-three row galleys, and a great number of tenders. In the great battle between the English and French

fleets, in the reign of John and Philip II., the English fleet consisted of 500 ships ; and at this same epoch William of Malmesbury describes the English seamen as 'excelling all others both in the art of navigation and in fighting.' Never- theless the ships of war still continued of very small dimensions, the largest in 1304 carrying only forty men.

It will not then appear extraordinary that Henry III. should require 1000 such vessels for his expedition to Gascony, nor that I'Alward III. should have 700 English vessels, and thirty-eight foreign, at the siege of Calais, the average crews of this fleet being but twenty men. In 1359, when Edward again invaded France with 1100

vessels, it is probable this was the whole sliip- ping of England pressed for the occasion into the king's service.

Henry IV. maintained the dominion of the narrow seas, and chastised the French and Fle- mings, '»ho had presumed to insult the coasts, and interrupt the trade : — under his successors the navy lost nothing of its renown. Henry V. was %'ictorious by sea and land, and seems to be the first prince who had any shiyjs his own pro- perty. In his first invasion of France he had ' two large and beautiful ships, witli purple sails, called the King's Chamber and King's Hall.'

During the disastrous reign of Henry V'l. the nnval and military strengtii of England declined, and the French insulted the coasts, and burned the town of Sandwich. The dominion of the narrow seas was however regained by the great carl of Warwick, who was declared lord high admir.d. Edward 1'. paid grea-t attention to tlie navy; and, in 147.'>, invaded France with a large fleet. Tliis prince had also several ships of his own, which he employed both in war and commerce on his own account.

Henry 'n. patronised the navy, and, though the kingdom enjoyed peace, a fleet wa.s always kept ready to act. The firit ship o" war, in the proper sense of the term, expressly built for the public service, seems to have been in the reign of this prince, and was called tiie ' Harry Grace de IJieu :' sliewas 1000 tons burden, co;

II. The second period of our naval history commences with the reign of Henry VIIL, when the sea service first became a distinct profession, and during which the Admiralty and Navy Boards, and the dock yards of Deptford, Wool- wich, and Portsmouth, were established. This prince also brought shipwrights from Italy to in- struct his subjects in the art of

construction, and t!ic rules ilrawn up by his order, for the civil regulation of the navy, form the basis of its pre- sent government. The ships belonging to the crown, however, still formed but a very insig- nificant portion of the naval force; at the death of Henry the royal tonnage being but 12,000. During the reign of his successor, Edward \T., it continued nearly stationary; the amount being at the death of tiiis prince fifty-three king's ships, of which twenty-eight only were above eighty tons, and the total tonnage 11,000. During the unhappy reign of Mary the fleet declined, and at her deatii consisted of but twenty-seven ves- .sels, and from 0000 to 7000 tons, and 35G5 men. Its expenses at this epoch were estimated at £10,000 per annum.

Elizabeth., soon began to increase the navy, l-.otli by tlie building of ships expressly for it, as well as by encouraging merchants to build large siiips, proper on occasion to serve as ships of war ; slie al^) brouuht foreign ship-builders into the kingdom, filled tiie arsenals with naval stores, cast iron and brass ordnance, manufactured gun-])Owder, and in short acquired tiie title of The Restorer of Naval I'ower, and the Sovereign of the Northern Seas.

The greater part of the naval force, however, still continued to be hired on the spur of the oc- casion from merchants ; and oi the fleet that destroyed the Spanish armada, consisting of 176 ships, 31,985 tons, and 15,000 men, there only belonged to the crown, thirty-four sliips, 12,590 tons, and 6279 men. The largest of these ves- sels was 1100 tons, and mounted jixty or sixty- five guns. At the death of Elizabeth the royal ships were forty-two, the tonnage 17,055, and 8346 men, and the expense of the fleet had in- creased to £30,000 per annum. A contempo- rary writer thus describes her navy in 1577. ' The queen's higlniess hath at this present already made and furnished to the number of one and twenty great ships, wiiich lie for the most part in Gillingham Road. Besides these her grace hath others in hand also. She hath likewise tliree notable galleys, with the siglit whereof, and the rest of the navy royal, it is incredible to say how marvellously her grace is delighted. I add, to the end that all men should understand some- what of the great masses of treasure daily em- ployed upon our navy, how there are few mer- chant ships of tlie firstand second sort, that being apparelled and made ready to sail, are not worthy one thousand pounds at the least, if lliey should presently be sold. What then shall we think of the navy royal,of which some one vessel is worth two of the other, as tl:e shipwrights have often told me.' — Harrison's Description of Britain, 1577.

In the American war Liverpool alone sent more tonnage to sea in privateers, than the whole royal navy of England contained at this memo- rable epoch ; the number of privateers being 120, the tonnage 30,787, guns 1986, and men 8754.

*The defeat of the Spanish armada transferred the sceptre of the sea to the Dutch, for France and England, occupied solely by the humiliation of the House of Austria, considered witliout jea- lousy the maritime superiority of the repuhlic ; and, there being no occupation for a fleet during the peaceable reiiˆn of .Fames I., tlie navy, though it wxs not neglected, was not mucli augmented ; indeed the number of ships decreased, but their size was considerably increased, the fleet at the death of James being composed of d\irty-two or three ships of nearly 20,000 tons. * In my own lime,' says Sir Walter Raleigh, 'the shape of our English ships hath been greatly bettered. It is not long since the striking of the topmast hath been devised. Together with the chain-pump, we have lately added the bonnet and drabbler. To the courses we have devised studding- sails, top-callant-sails, sprit-sails, and top-sails. The weighing of anchors by the capstan is also new.'*

Charles I. paid considerable attention to the navy in the early])art of his reign, particularly in the increase- of size; and in 1637 was launch- ed from Woolwich, the ' Sovereign of the Seas,' the first thrce-tlecker constructed in England ; and in this reign ships were first classed in rates. This ship was 128 feet keel, and forty-eight feet beam ; length over all 232 feet. She had five lan- terns, the big'j;est of which would carry ton people upright; had three flush decks, a forecastle, half deckj quarter deck, and round-house. Her lower

tier had thirty ports for cannon and denni-cannon. Middle tier, tliiity for cnlverins and demi-cul- verins. Third tier, twenty-six for other ordnance. Forecastle, twelve ; and the two half decks had thirteen or fourteen more ports within board for murdering pieces, besides ten pieces of chase ordnance forward, and ten right aft, and many loop-holes in the cabins for musquet shot. She had eleven anchors, one of 4100 lb. She was of the burden of 1 637 tons.

At the breaking out of the Rebellion the navy consisted of forty-two ships of 22,41 1 tons. The civil wars which deluged the kingdom with blood, and brought her misguided monarch to the block, caused a temporary neglect of the navy, and it was also greatly reduced by prince Rupert's car- rying off twenty-five ships in 1G48.

The measures of Cromwell, however, soon re- placed this loss, and in five years his navy was increased to 150 ships, of which more than the tliird were two and three deckers. The Dutch now feeling that to divide the

empire ot the seas was to lose it, opposed their maritime pretensions to those of the English, and continued to dispute this empire during a bloody war, which, though for some time indecisive, terminated in their being obliged to give up the contest, and sue for peace, which was granted on the express condi- tion of their acknowledging tlie superiority of the British flag in the Br.tish Seas. This war greatly added to tlie number of the navy by cap- tures from the enemy, and also improved the skill of the seamen. Hitherto the naval com- manders were chiefly noblemen, but little acqviainted with the profession, and who, content •with the honors of command, left the manage- ment of the vessels to the pilots. During the commonwealth, few nobles were found in the public service, and the ships of war were gene- rally commanded by persons bred in the merchant service, who, however they might fall short in polished education, were expei't seamen. Cromwell raised the pay of seamen from nine- teen to twenty -four shdlings a month ; and at his death the fleet consisted of three first rates of 100, eighty, and seventy guns; five second rates of sixty-six to fifty-two guns; four third rates of fifty-two to forty-four guns ; eight fourth rates of forty to twenty-eight ; ten fifth rates of thirty- four to sixteen ; and nine sixth rates of sixteen to two.— Total 157 ships,4390 guns, and 21,910

men. Tlie annual grant for tlie service of the fleet during the protectorate was £400,000.

The duke cf York, on the Restoration, was ap- pointed to the post of lord high admiral ; and by ins knowledge of naval atl'airs, and his partiality to the service, the marine was considerably im- proved, and increased in efficient force by the greater size of the vessels. On tlie removal of this prince from the naval administration, in 1673, the fleet was again neglected, and the profligate Charles dissipated the money voted for its sup- portonhis pleasures, so that on the duke of York's being again placed at the head of the navy, in 1684, only twenty-two ships were fit for sea, tlie rest being totally out of repair or rotten, and the arsenals emgty of the materials for their refitting. The exertions ol' this prince after his resuming the administration, and also after his accession to the crown, being found incapal)le of restoring the fleet by the ordinary course, he suspended the navy board and created a commission of naval affairs, by whose exertions the fleet was soon restore J ; and from a state of absolute impotency the fleet at the Revolution consisted of 173 ser- viceable vessels of 101,892 tons, 6903 guns, and 42,003 men. The arsenals were at the same time abundantly stored.

William III., in his war with France, found it necessary to increase the fleet of England. A number of line of battle ships were accordingly built, and at the close of the war the navy was composed of 323 ships and vessels, of

which five were three deckers. In 1700 half pay was estab- lished for the classes of commissioned officers.

During the reigns of Anne and George I. the number of vessels decreased ; but they were built of larijer dimensions, and the tonnage considera- bly increased. At the death of the former the ships were 247, and the tonnage 167,219 ; and, at the death of the latter, ships 233, and tonnage

170,862.

The wars with Spain and France, during the reign of George II., necessitated an increased marine ; and, at the accession of the late king, the number of vessels was 412, and the tonnage

321,104.

The following Table will enable the reader to inspect the further progress of the navy, which in modern times has often had to cope with the maritime strengtii of almost al! other civilised nations.

Tabular View of the Progressive Increase of the Royal Navy.

Year.

Ships.

Tons.

Men voted.

Expense ordinary

Wear and Tear.

15-21

16

7,260

1548

53

11,268

7,731

1578

24

10,506

6,570

1603

42

17,055

8,346

30,000

1624

33

19,400

1641

42

22,411

1658

157

57,000

21,910

1675

151

70,587

30,260

1688

173

101,892

42,003

1702

272

159,020

40,000

129,314

1714

247

167,219

10,000

245,700

1727

233

1 70,862

20,000

200,000

1753

291

234,924

10,000

280,206

1760

412

321,104

70,000

432,629

364,000

1783

617

500,781

110,000

1,763,832

5,406,000

*1789**

4.r2

413,667

20,000

1,288,570

1,040,000

1793

498

433,226

45,000

1,056,915

2,304,000

1801

—

135,000

1,371,318

9,450,000

1806

—

120,000

3,026,183

14,113,000

1813

—

145,000

3,021,721

11,534,687

South Coast. |Pentland Skerries, twC Goodwin Sands, twol lights.

floating lights hori- North Ronaldsay Island.

zontal. Gull Streana, floating. Ramsgate Pier. North Foreland.

West Coast. Ilfracomb.

Fatholm Island, Severn Mumbles Head.

Galloper Sand, floating, 'Milford, two lights.

two lights. j Smalls.

Sunk floating light, en- South Stack, Holyhead.

trance of the Thames. Skerries.

- *Nora floating light. East Coast. Harwich, two lights. Orford Ness, two lights. Newarp Sand, floating. Lowestoffit, two lights. Winterionness. Haseborough, two lights.*

    - *In 1789 the peace establishment of ships in commission was two second rates, fifteen third- rates, one fourth-rate, five fifty-giui ships, six two-decked forty-fours, thirty-one frigates of thirty- six to twenty guns, and one sloop, besides cutters.*

In the ordinary estimates of the navy are in- cluded the expenses of the Admiralty, Navy, and Victualling offices, the half-pay, superannuation, and pensions to naval officers, superannuation to civil officers, buildings, repairs and building of ships. In the estimate of the expenses of ships in commission are included wages, wear and tear of ships, victuals, and ordnance.

*3. Light-houses being of the greatest utility, both to commercial and naval enterprise, the coasting trade in particular, have been mul- tiplied on all the coasts of the British islands, and their construction successively improved, until nothing is left to wish for. At first they were coal, or wood fires, entirely exposed to the weather, and consequently very defective. Tow- ers, with ulass casements, were afterwards erected, but the smoke of the fuel soon dimmed the win- dows and rendered them almost useless. At length, in 1763, oil lamps and reflectors were in- troduced, which have been brought to the highest perfection. **

The light-houses and buoys on shoals are ge- nerally under the inspection of the Trinity-House of London, a corporation established in the reign of Henry \TII. by the title of The Master, Warden, and Jurats of the Guild, of the most glorious and undivided Trinity of St. Clement and of Deptford Strond. Tlie Thames river pilots are also within the supervisorship of this corporation. The Dover and Deal pilots form two chartered corporations.

The liˆht houses on the coasts of the British islands are as follows : —

Anglesea.

Point of Air two lights Sea lights, two. i Liver- Lake lights, two S pool. St. Bee's Head. Walney Island revolving light.

West Coast.

Cromer revolving light, Port Patrick, from 1st of

shows a face a minute. Lynn.

Dudgeon, floating. Hunstanton. Spurnhead, two lights.

September to 1st of

May. Cumbray Island, Clyde Pladda Island, Arran. Mull of Kintyre.

Flamborough Head, re- G lash Island, Hebrides, volving light, shows St. Agnes, Scilly.

South Coast. Longships. Lizard, two lights. F.ddystone. /'ortland, tw > lights. Needles, Isle of Wi-rht.

South Coast. Hurst Castle. Owers, floating. Dengeness. South Foreland, liglits.

a face every two mi

nutes. Humber, two lights. Sunderland Pier. Tinmouth revolving

light every minute. Fern Island. Isle of May Inch Keith. Pettycur Har

bour

Tav River, two lights Bell Rock. Kinnaird's Head

}

Caskets, Guernsey. Isle of Man, Point ofAir. Douglas from Au- gust to April. Iri land. Old Head of Kinsale. Waterford. Wickhjw. Frith of| Dublin, Pigeon House

Forth.

Howth Held.

Balligan. Douaghadee. Copland Island, Belfast, |Loophi a I, Shamit)n.

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The following Table of Geographical Positions includes most of the Lights round the coast»

of Great Britain and Ireland.

PlEice.

British Islands. Land's End . . Penzance .... Lizard Point . . . Falmouth, Pendennis Cas- tle

Pljrmouth Dock . . Eddy stone light . . Dartmouth . . . Exmouth .... Portland lights . .

Poole

Dunnose, Isle of Wight Portsmouth . . . Brighton '. . . . Beachyhead . . . Dungeness light . . Dover Castle . . . Deal Castle . . . North Foreland light Greenwich Observatory London, St. Paul's .

Orfordness lights Lowestofft lights . Yarmouth . . . Lynn Regis . . Spurn lights . . Flamborough Head Scarborough . . Whitby . . . Entrance of the Tees Tinmouth light . Fern Island light Berwick . . . St. Abb's Head . May Island, light Edinburgh . . St. Andrews . . Dundee Montrose . New Aberdeen Kinnard's Head . Inverness . . Duncan's Bay Head St. Ives . . , Pad stow

Mort Point . . Lundy Island Bristol .... Mumble's Head light Milford Haven, St. Anne's

lights . . . St. David's Head Cardigan . . . Holy Head Island, West

end . . . Liverpool . . Lancaster . .

Latitude.

Longitude.

North. 50° 4′

50 7

49 58

50 9 !

50 22 I 50 11 I 50 20 I

50 37 50 31 50 42 50 37 50 47 50 49 50 44

50 55

51 8

13

22

28J

31

51 51 51 51

52 5 52 29 52 37

52 46

53 37

54 8 54 18 54 28

54 38

55 1 55 37 55 46

55 55

56 11

55 36

56 41 56 28

56 42

57 9 57 42

57 31

58 40 50 13

50 35

51 11 51 10 51 27 51 34

51 40

51 54

52 7

53 18

53 22

54 2

Wˆest. 5° 41′

5 30 5 11

3 35 3 21

26

12

6

7

0 15E.

0 58

19 24 26 0

5iˆ

1 34E.

1 46 1 43 0 25 0 12

0 2w.

0 24

0 36

1 5 1 1 2 2 2 3 2 2

24 38 0 8 32 12 47 .”.8

2 28 2 9

1

12 8 28 55 13 38 35 57

9 17

42

36vv.

57

44

Place.

British Islands. •Vhitehaven . Mull of Galloway Loch Ryan Mull of Kintyre Cape Wrath . Farout Head . Dunnet Head

English Islands.

Scilly, St. Agnes Light Isle of Man, Douglas . Guernsey, St. Pierre Jersey, St. Aubin . . Casket lights ....

Scottish Islands.

Hebrides, Coll Island .

South Uist ....

Butt of Lewis . . . Orkneys, Pentland, Sker- ries

Mainland, Stromness

Zetland Lerwick

Foul Island ....

T^ambaness ....

Ireland.

Clare

Limerick

Loup Head Shannon Dunmore Head . . . Skellig Rocks . . . Cod's Head, Ken mare

river

Dursey Island . . . Bantry Bay, Sheep's

Head .' . . . . Cape Clear .... Kinsale light ....

Cork

Youghall

Waterford . . . . Carnsore Point . . .

Wˆexford

Wˆicklow light . . .

Dublin

Drogheda

Belfast

Tor Head . . . .

Giant's Causeway

Galway

Broadhaven . . . .

Sligo

Donegal

Loch Swilly entrance . Mullin Head . . . . Londonderry . . . .

Latitude.

North. 54° 33′

54 38

55 6 55 17 58 36 58 37 58 42

49 53 54 9 49 25 49 12 49 44

56 42

57 5

58 29

58 43

59 0

60 9 60 7 60 53

52 51 52 42 52 37 52 13

t)l 52

51 43 51 37

51 51

51 35 51 54

51 43

52 13 52 11 52 22

52 59

53 21

53 44

54 35

55 12 55 15

53 28

54 28 54 22

54 41

55 17 55 24 55 0

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EAT BRITAIN.

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*4. Of the geology of Great Britain. — Since we have sent to press the article Geology, Mr. Brande's * Outlines' have fallen into our hands. He observes that no country furnishes a better selection of geological formations for the atten- tion of the student than our own.*

' A section of the south of England, from the coast of Cornwall, for

instance/ he says, ‘ in the west, to London in the east, will furnish a good exhibition of the phenomena of stratification. It will begin at the Land’s End with primitive rocks ; massive and amorphous. Upon this rest several species of transition rooks, especially slates of different kinds, having various incli- nations ; and these are succeeded by secondary strata, deviating more and more from the vertical, and acquiring the horizontal position ; and ulti- mately we attain the alluvial matter upon which the metropolis stands. It is principally clay, and has once perhaps formed the mud at the bottom of a salt water lake. Tracing this section from the metropolis to the Land’s End,’ he says, in expla- nation of his plate, ‘ the upper section commences with the blue clay of London, and proceeding west- ward through the counties of Berkshire, Hamp- shire,Wiltshire, Dorsetshire, and Devonshire, ter- minates at the Land’s End in Cornwall. The rocks presented in this line are chalk, sandstone, oolite or freestone, lias or argillaceous and mag- nesian limestone, red sandstone, mountain lime stone or secondary marble, slate, greenstone, serpentine, and granite. The latter frequently penetrates the slaty veins, and is itself pervaded by greenstone.’

Proceeding from London northwards towards the Scotch border, the order of stratification is reversed, and, traversing a highly interesiing series of secondary rocks, we arrive in Cumber- land at some of the primitive series This second section (in his plate) commences with the coal strata, and limestone resting upon slate and gra- nite in Cumberland, and thence proceeds towards the metropolis by Yorkshire, Derbyshire, Leices- tershire, Northamptonshire, Bedlbrdshire and Hertfordshire. The passage is here exhibited, from the primary rocks of Cumberland, to the secondary hills of the southern counties. It shows the grit and sandstone containing coal, which lies upon the mountain limestone of Der- byshire, which rock is singularly penetrated by loadstone. In Leicestershire slate and granite again occur, and are succeeded by red sandstone, lias, oolite, sandstone, and chalk, upon which the blue clay of Middlesex is deposited, and of which the valley of the Thames in that county, principally consists. ‘The whole arrangement is such as to include the highest and oldest rocks upon the west side of England, forming a chain extending from the Land’s End in Cornwall, to Cumberland, and thence to the northern ex- tremity of Scotland. So that the length of Great Britain, and its general shape, appear in a con- siderable degree dependent u[)on this chain of mountainous land, and uj)on two lower rilges, which extend in one direction from Devonshire, through Dorsetshire, Hampshire, and Sussex, into Kent ; and, in another, nearly from the same point, to the east of Yorkshire.

- *The western ridge is broken in upon in*

several places by plains and rivers, giving rise to so many chasms in the

great chain.

On the subj'ec. of the secondary or flcEtz for- mations of Werner, Mr. Weaver, a pupil of this great geologist, thus exhibits the confirncation which his theory receives from the geology of Great Britain.

'It follows, from the whole of these premises, that the flcetz formations of Werner strictly com- mence with the old red sand-stone of England : and not, as has been stated, with the new or cal- careous conglomerate. It follows, also, that the charge of confusion in the views of that naturalist is obviated, and that so far from the flcetz forma- tions which came under his consideration having been few in number, they comprehended th whole series, from the old red sandstone up to the chalk, and above the chalk, gravel, sand, clay, wood-coal, and the newest tloetz trap form- ation. His arrangement of formations in Ger- many is, when duly construed, quite in accord- ance with their succession in the British Isles. There is no hiatus. We travel from the primary to the transition, and thence through the whole series of the tloetz: in which last, let it be ob- served, that, though the carboniferous series be less fully displayed, yet other formations are in much greater force in Germany, and afford a greater variety of character than is to be found in the British Isles ; an'd here we may perceive the compensating power of nature.

' I have, therefore, yet to learn that morf modern enquiries have at all invalidated the ge- neral positions of Werner. His grand outlines of the structure of the globe remain unshaken, from the fundamental granite up to the newest flcetz trap. The labors of his followers, and of other geologists pursuing a similar path, have tended more and more to fill up those outlines.

- *The Comparative View of flcetz formations, which I submitted to the public in the Annals of Philosophy, October 1821, is consistent with the main positions of Werner, though, from the mode of considering tliem, there may seem to be some difference : this however is rather apparent than real. It arises from tlie following circum- stances:— 1. In the carboniferous series, pro- ducing the limestone and the coal as distinct formations, while Werner considered them only as members of his first flo-tz sandstone, or rothe todtliegende formation : 2. In like manner, in the gypseous and saliferous series, producing the weissliegende or calcareous conglomerate as a distinct formation; while, by Friesleben and others, it is included in the magnesian limestone formation : 3. As a consequence of the foregoing, in considering the magnesian limestone as be- longing to the second flcetz series : and, 4. From distributing the flcBtz formations into four prin- cipal series, founded, as I conceive, on natural*

distinctions; namely, on their relative position in the order of succession, tiieir mineralogical characters, the organic remains which they re- spectively contain, andthe mutual afl^inities of the formations which constitute each series or group. In this view there is no real incongruity; for, in fact, had the carboniferous limestone appeared in force in the north of Germany, it certainly would have been designated by Werner as the

first floetz limestone ; and this according to the established method of that naturalist, who. in ar- ranging the mineral masses of the globe, was led to distribute the predominant into principal formations, and the incidental into subordinate. Bearing this in mind, the carboniferous lime- yione would have been his first flcetz limestone formation ; and, as a necessary consequence, the magnesian limestone would have become his se- cond floetz limestone. The whole difference, therefore, is a mere question of enumeration.

‘ In conclusion, I nmst observe, that, in awarding the meed of praise due to the services of Werner, French writers appear in general to have been more just than the English. Not a few of the latter seem to forget, or not to consi- der, that, though others might before his time have hit upon the general division of rocks into primary and secondary, yet geology, as a science, had no existence. To Werner belongs, in the first place, the merit of introducing a nicer dis- crimination in the examination of s.mple mine- rals, and of inventing an appropriate language by which they might be described and distin- guished, previous to which mineralogi.cal science was quite in its infancy. And, in the second place, to him also belongs the chief merit, not merely of distinguishing and giving names to rocks, but of accurately marking out both the grand distmctions of primary, transition, and floetz classes, and the various principal forma- tions of which those classes consist. If, then, it be the glory of the Saxon to have laid the broad foundations of the edifice, let that of the Briton and Frank be to complete the structure.’

It has been long doubted whether a genuine crocodile was ever found among the fossil ani- mals of this country. In 1823, however, this question seems to have been set at rest by a spe- cimen discovered in the alum shale near Whitby. We can only copy the following description from the pen of the llev. George Young, in the Edin- burgh Philosophical Journal of 1825,

and refer the reader to the work for further particulars ac- companied by a drawing.

'The length of the animal, following the cur- vature of the spine, is fourteen feet six inches ; but in its entire state it must have been about eighteen feet long : as the snout is considerably mutilated, and a small portion of the tail also was left in the cliff, owing to the difficulty of extracting the vertebras. The mutilated state of the snout has been occasioned by its exposure to the atmosphere ; in consequence of which successive portions of the muzzle must have been detached, and have dropped down on the beach. Fortunately, another specimen of the head of this animal, having the muzzle complete, is also in the Whitby museum ; and it is figured in the drawing, to show the entire length and [form of the head. The dimensions of the latter, com- pared with what we have of the new discovered specimen, show that it has belonged to a speci- men only half its size ; and hence, to make it correspond with the other, it is drawn on a scale twice as large. The entire head measures two feet three inches ; and the imperfect one must, therefore, have been about four feet six inches long; so that, as it now measures only nineteen

inches, it must have lost about a yard of its length. The cranium, towards the upper part, is a foot broad in the larger specimen, and half a foot in the smaller. The orbits of the eyes approach near to each other, and look upwards, as in the recent crocodile. They are much smaller than those of the ichtliyosaurus. Behind them are two very deep fossae, of an oblong form, separated only by a thin septum. Before tliem, at a short distance, are seen the nostrils ; in the position of which the animal differs great- ly from the common crocodile, which has its nostrds near the end of the muzzle. The great length of the snout is another point of difference ; our fossil animal, being, in this respect, more nearly allied to the gavial. The region of the nostrils being injured in the smaller head, they cannot be discerned ; but they are very conspi- cuous in the larger, and in another head of the same animal, in the collection of Thomas Ilind- erwel.l, esq., of Scarborough, published in the Geological Survey of the Yorkshire coast, plate XVT., fig. 2, as the head of an ichthyosaurus. The teeth are small and very numerous, and they are arranged in straight lines, as in the ichthyo- saurus, and not in the bending or curved form, in which those of the recent crocodile are placed.

' The discovery of this valuable relic of a for- mer world, is not only highly interesting of itself,' says Mr. Young, 'but serves to throw light on other discoveries. When the geological survey of the Yorkshire coast was published, I was in- clined to think that no genuine crocodile had been found in our alumshale ; but that the fossil animals, so called, had all been fishes, or marine animals furnished with fins ; except, perhaps, a few very

imperfect specimens. But on com- paring this new discovered animal with the one found by Messrs. Chapman and Wooler, in January, 1758, described and figured in the Philosophical Transactions, vol. i., in the Gentleman's Magazine, vol. xxx., and m the Scar- borough Catalogue, it would appear that both animals have belonged to one family, and pro- bably to one species, as the head and vertebrae (as far as can be ascertained from Woofer's in- correct drawing), seem to correspond, and as the gentlemen who discovered the animal of 1758 assure us that they observed part of an os femo- ris, with other bones belonging to a quadruped. The fossil animal of 1791, found between Staiths and Runswick, as noticed in the Geological Survey, p. 263, appears to have been another crocodile.'

Professor Buckland's description of the cave at Kirkdale, in Yorkshire, supposed to contain bones of numerous hyaenas, is also a recent contribution to the geolooy of Great Britain. The professor considers these as establishing the fact that these animals were once natives of this country. The first thing that is observed on entering the cavern is a sediment of argillaceous and slightly micaceous mud, covering the whole of its bottom to the average depth of about a foot, and concealing the actual floor. Upon advanc- ing some way into the cave, the roof and sides are partially studded and cased over with a coating of stalactite, which descends to the sur-

face of the mud, and forms over it a plate or crust, spreading horizontally over its surface like ice over a surface of water. The thickness and quantity of this crust varied with that on the roof and sides, in some places covering the mud entirely, when the stalactite on the sides was most abundant, and in other places being totally wanting, both in the roof and the surface of the mud. A great part of this crust had been de- stroyed in digging up the mud to extract the bones ; but professor Buckland saw several places where the stalactitic crust was very thick, and formed a continuous bridge across the mud. In some cases insulated stalagmites, have been formed on the surface of the sediments by drops from the roof, but they are commonly not larger

Hyaena .....

Tiger .....

Bear .....

Wolf

Fox ... ...

Weasel

Unknown animal, of the size of the wolf . Elephant .....

Ilhinoceros .....

Hippopotamus .....

Horse .....

Ox, (two species) .....

Three species of deer ....

Rabbit

Water rat .....

JNIouse .....

Raven .....

Pigeon .....

Lark .....

A small species of duck .

Upon first removing the mud the bottom of the cave wa-s strewed all over like a dog-kennel, from end to end, with hundreds of teeth and bones, or rather broken and splintered fragments of the bones of all tlie animals above enume- rated. They were found most abundantly near its mouth ; tho.se of the larger animals, such as the elephant, rhinoceros, &c., occurring as ex- tensively as all the rest, even in the inmost and smallest recesses. With the exception of the hard and solid bones, scarcely a single bone has escaped fracture ; and in some of them marks may be traced, which, on applying one to the other, appear exactly to fit tlie form of the canine teeth of the hyaenas that occur in the cave.

From this comminuted and gnawed condition nf the bones, professor Buckland concludes that tlie cave at Kirkdale had been inhabited during a long succession of years as a den, by hya-nas, who had dragged into its recesses the other ani- mal bodies whose remains are found mixed with their own. This conjecture received a very interesting confirmation from the discovery made by professor Buckland, of many small balls of the solid

calcareous excrement of an animal

than a cow's pap, the name by which the work- men distinguish them.

The bones have been found enclosed ia the stalagmites, formed before the introduction of the mud, but principally in the lov.er part of the sediment. A few perfect bones have been ob- tained, but most of them are broken into small angular fragments and chips, lying separately in the mud, whilst others are wholly or partially invested with stalactite. The action of this mud in preserving the bones from decomposition is very remarkable, and professor Buckland found that almost the whole of their gelatine was pre- served. The following table will show the nature of the bones which have been discovered, and the animals to which they have belonged

Forty fragments of jaw-bones ; several hundred

canine teeth, which must have belonged to

more than 100 individuals. Two large canine teeth, four inches long, and

one under tooth. One tusk, like that of the ursus spelaeus of the

German caves. Many teeth. Many teeth. A few jaws and teeth. Several teeth. Two teeth. Forty or fifty teeth. Six molar teeth, and fragments of its canine and

incisor teeth. Two or three teeth ; coronary bone. Astragalus, phalangal bone, and several teeth. Several teeth; remains of hums. A few teeth and bones. A great number of teeth and bones. A few teeth and bones. Right ulna. Left ulna. Jlight ulna. Right coracoid process of the scapula.

that had fed on bones. This substance was at first sight recognised by the keeper of the mena- gerie at Exeter Change, as resembling, both in form and appearance, the faeces of the Cape hysena which was greedy of bones beyond all other beasts under his care. As tlie bones of the hytenas are as much broken to pieces as those of the other animals, professor Buckland likewise infers, that the carcases even of the hyenas themselves have been eaten by the sur- vivors. The modern hyana is about one-third smaller than the fossil animal.

5. The state of the arts in Great Britain re- quires some further attention than we have as yet bestowed upon the subject.

While the continental nations were cultivating the imitative arts, England was engaged witii those more solid pursuits of science which be- came the basis of her modern fame, and manu- factures. Then arose her Newton, her

Boyle, and her Locke; then were founded her Royal Society and various kindred institutions, all of which have fostered her genius for the application of science to practical life. In no country have equally laborious and persevering etfects been made to abridge labor, produce superior articles

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at the least expense; and turn to the fullest account the productions of the surface, and the most renaote depths of the earth. I'.ven her Davy willingly attaches his fame to the invention of a aj'eti/-lamp for miners.

*Tiiis peculiar bias of the country towards the useful rather than the fine arts has been well illus- trated in a late number of the Edinburgh Review. Speaking of the French periodical * exhibitions' of the products of their industry, this writer ob- serves, ' No body of British manufacturers, we are persuaded, would submit to be actors in such a theatrical pageant. The only exhibition about which an Englishman cares is the diffusion of wealth and comfort in all its shapes ; and he measures it, not by its surface or its brilliancy, but by its depth and its solidity. He does not collect rare specimens into palaces, that princes may gaze at them ; he spreads out his every-day productions over the world, that men may imi- 'ate and enjoy them. The cottages and hamlets of the peasants, the neat mansions of the yeo- manry, the larger habitations of the more wealthy, E,nd all the gradations of dwellings up to the palace of the monarch, are the places where the products of British industry are to be found, not exhibited, but in use ; and where active comfort reigns in every due proportion. To a Frenchman, indeed, exhibition is the limit of ambition ; and the industry of which he can make a parade is that which he will ever most value. Even while we look back — and forward — on the changes of empires and the overthrow of states, the rise of some upon the ruins of others, and the dread and interminable rotations of the wheel of for- tune, we cannot but feel there are characters in- scribed on the hearts of nations which fortune can never wholly eiˆse. What has long been among multitudes has, for the most part, wisely been ; and it is allowing too little to habit, to say, that it is our second nature. It is more commonly the symbol of our first impuJses, and our first feelings ; the expression of an original bias, no matter how or when impressed, but con- tinued to our latest years. Of this kind is the industry of England, together with the habit of reflection, by which it has been matured ; not a result from any of the fortuitous events which chance has brought to liglit, and may again over- whelm in daikness ; but a deep and indestructible proclivity, more long and lasting than her power itself. The splendor of nations may pass away ; their wealth may be swallowed up*

in the vortex of revolutions ; and the strength of to-day may be weakness to-morrow. But their characters are not thus to be effaced, nor their genius to be extinguished. With tlie pov.er of Greece, the characteristic vivacity of her intellect did not perish : and when the martial ardor of Rome, the last of all her virtues which forsook her, had become the dream of past ages, another spirit of glory, more peaceful, though not less ambitious, took possession of her soul ; and the world beheld with admiration, a successive sceptre in her hands. The seat of the useful arts, of those which mankind bless, and by which they are blessed, of those which the heart reveres, and the understanding a)iproves, is Britain : — and should her a-rmies be laid low, — should wars or tempests

sweep her fleets from the ocean, — should even her star of liberty grow dim ; she may yet hold her empire over the mind, and maintain a place among tlie nations, by the united influence of sense, industry, and beneficence.'

But, in the fine arts, those nations who have cultivated them more have allowed Great Bri- tain to have some claims to distinction. Do we include in them the higher departments of litera- ture? Of the present state of English poetry Madame de Stael has said : — ' English poetry, which is fostered neither by irreligion, nor the spirit of faction, nor licentiousness of manners, is still rich and animated, experiencing nothing of that decline which threatens successively the literature of most other countries in Europe. Sensibility and imagination preserve an immor- tal youth of mind. A second age of poetry has arisen in England, because enthusiasm is not there extinct, and because nature, love, and country, always exercise great power there. Cowper lately, and now Rogers, Moore, Thomas Campbell, Walter Scott, lord Byron, in difi'ereiit departments and degrees, are preparing a new age of glory for English poetry ; and, while every thing on the continent is in a state of degra- dation, the eternal fountain of beauty still flows from the land of freedom.' She further remarks, that ' English works on criticism, and in par- ticular most of their treatises on poetry and the imitative arts, are distinguished by greater free- dom, originality, and knowledge of the antique, and bear on these accounts a greater affinity to our own (German) modes of thinking, than those of the French.'

'Of all the works connected with elegant literature, which the English produced during the last century,' says M. Schlegel 'by far the most important are their great historical writings. They have in this department surpassed all the other European nations ; they had at all events the start in point of time ; and have become the standard models both in France and Germany.

*Speaking of painting, and similar topics, * In the commencement of the*

reign cf George I.,' says Horace Walpole, ' the arts of England were sunk almost to the lowest ebb.' Portrait- ure, it is true, had been at this t'me successfully practised by Dobson, Riley, Cooper, Greenhill, Jervas, and Richardson, but by none with any remarkable eminence. It was not, however, to continue always thus : the time at length arrived when the English artists appeared not only de- sirous but capable of raising the character of their country, in this respect, to a level with that of any other nation.

The principal difficulty was to rescue the art from the degrading influence of a vicious taste, to retrace the steps of our predecessors (or rathei to burst the bandages in which they had en- thralled us), and resort at once to the original principle of imitation ; which, when pure and select, is the only sound basis of the art. The first step towards this eformation was the establishment of a school for drawing from the living figure. This had been begun by Sir James Thornliill, in conjunction with Sir God irey Kneller, who, however, one would imagine, from 'lis attcr vorks. had left all consideration

of the value of such a thing far behind. He certainly assisted, however, in laying the foun- dation of a remedy for the evil which he, more than any other man, had occasioned. This school Sir James continued at iiis own house in the Piazza for some years. His death, in 1734, obliged the artists to procure another situation, which was not effected without some difficulty ; for the people at first regarded the study from the naked figure as immoral. Another school was at length formed by Michael Moser, a native of SchafFhausen, and a chaser by profession, and six other artists, principally foreigners, the management resting with Moser. After a while, they were visited by Hogarth and others, and a larger body was formed in consequence, who established themselves in Peter's Court, St. Mar- tin's-lane, in the year 1739. Having acquired some property by combined exhibitions of their works, they solicited a charter of incorporation, and, the scheme being sanctioned by his late majesty, their charter was granted in 1765. But, dissensions arising in the body, a secession of many of its principal members took place, and the result was the establishment of the Royal Academy in 1768, under the more immediate patronage of the king; Sir Joshua Reynolds be- ing nominated its first president.

On the success of Hoˆrarth, Reynolds, and Wilson, several other societies were also formed throughout the kingdom, for the avowed purpose of patronising and cultivating the imitative art.

Richardson, whose tracts ought to be known to every student and amateur of painting, died in 1745, at the advanced age of eighty. He was a bad painter, but his treatises on the art are full of enthusiasm, and of judicious observations on the theory of the art. Of one of these Sir Joshua Reynolds declared, that it had confirmed him in his love of the art, and elevated his ideas of its professors. Richardson contended strenu- ously for the propriety of painting portraits in the costume of their time; thus striking at the absurd system of flowing robes, which had been adopted by Knelier.

This period may be denominated the infancy of English art ; and it is not a little curious, that, at the time when painting was verging towards a state of hopeless decline all over the continent of Europe, it should have revived, and that to no small purpose, in these islands, the inhabitants of which had been frequently taunted by foreigners as unable to execute a fine paint- ing. We shall not dwell on its incipient state of improvement ; indeed, the commendations bestowed on the painters alluded to above regard the principle of imitation rather than the thing imitated, since nothing could possibly be more untasteful or repulsive than the stiff, starch, and unsightly uniform (both male and female) of those days. Rut, the principle of attention to actual representation once established, it soon produced tl>€ fruits of a better taste in the art generally ; and, accordingly, it was not long be- fore the matchless talent of Hogarth beamed forth in unapproachable splendor to gild the onward progress of the muse of painting, and to herald the appearaiice of a kindred genius in the person of Sir Joshua Reynolds.

Sir Joshua was the first president of the Royal Academy ; and on his return from Rome, at a previous part of his life, carried the art (at least as far as regards portrait-painting) to its very highest point of perfection.

What Reynolds did for portrait- painting, his distinguished contemporary, Wilson, did for landscape. He also had studied at Rome, and brought home from thence a refined taste, and a power of execution at once chaste, glowing, and brilliant: while, in the historical department. Sir Joshua's successor, the late lamented Mr. West, without rivalling either of the three great names just mentioned, yet displayed sufficient ability to throw completely into the back ground what had been previously produced by the suc- cessors of Sir James Thornhill, Hayman, Pine, and Whale. Besides West, honorable mention must ever be made of the names of Romney, Opie, Barry, and Fuseli.'

The present state of painting in this country is certainly encouraging to the lover of art. In portrait, besides the highly-gifted president of the academy, Sir Thomas Lawrence, we have several other eminent professors : in landscape, and marme subjects, Turner and Callcott are at the head of a

numerous body of followers. The pencil of Wilkie throws a brilliant lustre over both the humorous and pathetic departments of art ; and in the arduous walk of history (a walk of art which, although it is entitled, when suc- cessfully pursued, to the highest honors, is too often followed without either profit or distuic- tion), there are several names which we might select, whose bearers appear to us qualified to elevate the national reputation far higher than it has ever hitherto been raised. For the truth of these observations, we need only appeal to the annual exhibitions both at Somerset House and at the British Institution.

In sculpture, England, down to the Reforma- tion, kept pace, at least, with her continental neighbours, as the west front of the cathedral of Wells (executed in the reign of Henry III.), Exeter, Litchfield, and Salisbury cathedrals, but more especially Henry VII's. chapel in Westminster Abbey may testify. After this period we became for a tim.e superstitiously afraid of superstition ; and whatever painting or statuary was required for the decoration of houses, tombs, &c., was supplied from abroad. The best existing specimens of this imported skill is found in the statues of raving and me- lancholy madness ai the Nev? Bedlam gates, the bas relief on the pedestal of the London co- lumn, the kings in the Royal Exchange, &c. : Roubilliac executed several of the best monu- ments for Westminster Abbey.

The establishment of the Royal Academy has been the resurrection of this art. Banks, Bacon, and Flaxman need only be named to prove thiˆ; and many of the works of living sculptors may be with advantage compared with the best pro- ductions of the continent.

Before the Reformation there was but one kind of music in Europe worth notice, the plain sacred chant, and the descant built upon it. — That music likewise was applied to one language only, the Latin. Hence the compositions of

Italy," France, Spain, Germany, Flanders, and England, kept pace with each other in style and excellence. All the arts seem to have been the companions of successful commerce, and during the sixteenth century became general in every part of Europe. In this century music was an indispensable part of polite education. There is a collection preserved in MS. called Queen Elizabeth's V'irginal Book. Tallis, profound in musical composition, and Bird his admirable scholar, were two of the authors of this collec- tion.

In the seventeenth century musical wi iters and composers, who acquired fame in England, were, Dr. N. Giles, Thomas Tomkins and his son, El way Bevin, Dr. Orlando Gibbons, William Lawes, Dr. John Wilson, Hilton, Playford, captain Henry Cook, Humphrey, Dr. Blow. Dr. Turner, Dr. Christopher Gibbons, Dr. Benjamin Rogers, and Henry Purcell. About the end of the reign of James I. a music lecture or profes- sorship was founded in the university of Oxford by Dr. William Hychin. In the reign of Charles I. a charter was granted to the musicians of Westminster., incorporating them as the king's musicians, into a body politic, witii powers to prosecute and fine all who, except themselves, should 'attempt to make any benefit or advantage of music in England or Wales.'

About the end of the reign of Charles II. a passion was excited in England for the violin, and for pieces composed for it, in the Italian manner. Prior to 1600 there was little other music except masses and madrigals; but, from that time to the present, dramatic music became the chief object. The year 1710 is distinguished in tne annals of music by the arrival in Britain of George Frederic Handel. See Handel. The fame of this great musician, if not altoge- ther the property, may redeem the musical taste of this country from that utter contempt in which some foreign writers hold it : for here he was cherished and enriched. Since Purcell's time the chief composers for the church in England have been Clark, Dr. Holder, Dr. Creighton, Tucker, Dr. Aldrich, Goldwin, Weldon, Dr. Croft, Dr. Greene, Dr. Boyce, Dr. Nares, Kent, and Stanley, and finer cathedral music is known in no part of the world. On the state of Engraving in England, see that article.

6. Our colonial establishments and dependencies may be thus exhibited : —

In Europe. Guernsey, Gibraltar,

Jersey, Malta,

Isle of Man, Heligoland.

In Asia. India,

Ceylon,

Prince of Wales's Island,

Bencoolen,

Isle of France,

New South Wales, or Botany Bay.

Ik Africa. Cape of Good Hope, Cape Coast,

Sierra Leone, St. Helena

In America Continent. — Canada, Upper ani Lov/er, New Brunswick, Nova Scotia. Islands. — Cape Breton. St. John's, Newfoundland, Bermuda. In the West Indies. Jamaica,

The Leeward Islands, The Windward Islands The Bahamas, The Vˆirgin Islands, On the Continent. — Demerara, Essequibo,

Berbice, Honduras. The territorial extent of our Indian Empire is taken at 350,000 square miles, and the population at 50,000,000. The average of exports from England to India (exclusive of China), in a series of six years, ending 1811, was

On account of the East India Com- pany £1,371,666

• of private merchants

trading to India . . . 453,666

r- of the captains and offi- cers of the company's shipping. 418,333

£•2,243,665

Including the specie exported.

The value of goods imported is increased by the freight, interest of money, expected profit. Sec. ; and, though fluctuating, may be averaged at this period at £3,000,000 sterling; and the seamen employed, at 6000. Since the trade has been laid open to the out-ports, it has been much altered, and has been so fluctuating as at pre- sent to be altogether uncertain in amount. The tonnage of shipping cleared outwards to the East Indies, was, according to the custom-house returns, dated 1st of May, 1818: —

From London

Liverpool

and other ports in Britain . .

1815. 78,431

1,549

1816. 87,866

10,655

1817. 85,172

19,456

£79,980

£98,521

104,628

The China trade still remains exclusively in the East India Company. The annual exports, chiefly in broad cloth, are from £1,000,000 to £1,200,000 : the imports are tea, in vast quan- tities ; nankeens, and s'ilk. This trade employs about 20,000 tons of shipping, and 2000 sea- men.

To Canada, the settlements on Hudson's Bay, Nova Scotia, and New Brunswick, with the islands of Newfoundland, St. John, and Cape Breton, contain a surface of 220,000 square miles, but not above 500,000 inhabitants. Our exports vary from £l ,000,000 to £2,000,000 ster- ling. Our imports from Canada consist of furs and skins. From Nova Scotia and New Bruns- wick we receive timber ; from Newfoundland,

fish, and seal skins. The commerce is considerable between our West India and North American colonies ; fish, flour, and staves, being exchanged in great quantities for rum, coffee, and sugar. The sliipping employed between Great Britain and the North American Colonies, were

Ships.

Tons.

Men.

In 1805 . .

1814 . ,

1815 . .

288 392 672

52,412

81,939

145,448

2,707 4,277 7,241

The imports into Britain from, and exports to the West Indies, in official value, were in the years following : —

Years.

Imports.

Vessels entered Inwards.

Exports.

Ships.

Tons.

1763 1773 1783 1793 1798 1803 1808 1814 1815 1816

2,349,006 2,836,093 2,891,805 4,392,158 5,411,962 6,040,067 8,716,918 8,200,506 8,371,193 7,428,617

614 689 637 614 805 685 701 680

124,239 156,962 163,399 180,950 228,082 212,776 223,246 219,042

1,154,109 1,335,773 1,796,982 2,695,220 5,197,913 2,344,647 5,850,773 6,284,353 6,862,371 4,559,665

But the average size of a West Indiaman,which, in 1783, was only 200 tons (registry), is now fully 320. The revenue arising from West India imports is £5,000,000, annually, of which about £3,000,000 are from sugar; the rest chiefly from rum. The trade of these colonies has been long exposed to great fluctuations.

On the whole it has been calculated, that the authority of Britain extends over nearly two- thirds of the globe, with respect to longitude. There are consequently, various places withm these limits that have noon and midnight at the same moment, and the sun never sinks below the horizon of tlie whole. Stretching also from the sixty-first degree of north latitude to the tliirty-third of south, the four seasons of the year prevail at the same time. '

It appears, in fact,' says a modern writer, ' that at this time the Bri- tish possess more territory, more wealth, greater variety of produce, greater population, superior religion, as much liberty, greater security, more commerce, superior agriculture, and greater re- venues, than ever were possessed by any other nation, ancient or modern.'

(luKAT Island, an island in Bass's Strait, between New Holland and Van Diemen's Land, al)()ut forty miles long, and from fifteen to twenty ill brcudtli. The soil is sliallow, and vegetation low. 'Die siiore is frequented by immense quan- tities of seals and sea-fowl. Long. 148° E., lat. 40° S.

GuKAT Island, an island on the coast of Ire- 'and, in the county of Cork, five miles long, and 'fom one to three broad. It is formed by the

ver Lee in Cork harbour.

GREAVE, n. £. Sax. sricep. A grove. This chorle wos hid there in the greves Ycovired with grasse and ieves.

Chaucer. Romawit of the Rose. Yet -when there haps a honey-fall. We'll lick the sirupt leaves.

And tell the bees that theirs is gall To that upon the greaves. M. Drayton.

GREAVES, ra.s. YxomYr. greves. Armour for the legs ; a sort of boots. It wants the sin- gular number.

He had ˆreatie of brass upon his legs. 1 Sam. xvii. A shield make for him, and a helm, fair greaves, and curets such As may renown thy workmanship, and honour him as much. Chapman's Iliads.*

Greaves (John), an eminent physician and antiquary, was born in 1 602, and educated at Baliol College, Oxford, from which he removed to Merton. He was afterwards chosen professor of geometry, in Gresham College. His ardent thirst of knowledge led him to travel into several parts of Europe. He next undertook a voyage to the east, where, with indefatigable industry, and even at the peril of his life, he collected a considerable number of Arabic, Persic, and Greek MSS. for archbishop Laud. He also collected for that prelate many oriental gems and coins, and took a more accurate survey of the pyramids than any traveller who went before him. On his return from the east he visited several parts of Italy a second time. Soon after he finished his second voyage he was chosen Savilian professor of astronomy at Oxford, for which he was eminently qualified. His books relating to Oriental learning, his Pyramidogra- phia, or a description of the pyramids in Egypt, and his Epochae Celebriores, prove him to have been a man of no small literary attainments. He died in 1652.

GREBNA, a town of European Turkey, in Thessaly, situated at the junction of a number of roads leading from Albania, Livadia, and the north-east of Macedon. It is a place of consi- derable traffic, and the country adjacent is fertile. Fifty miles north by east of Joannina, and fifty- six south-west of Salonica.

GRE'CISM, w. s. Lzi. gracismus. An idiom of the Greek language.

GRECOURT (.lean Baptiste Joseph Villart de), a French ecclesiastic and poet, was born in 1683 at Tours, in which city he obtained the benefice of St. JMartin. But he was found more commonly at Paris, where he had received his education, and associated with most of the leading wits of his day, particularly with the marechal d'Estices. He excelled in epigrams, tales, and sonnets, a collection of which was made and pub- lished, in three octavo volumes, about twenty years after his decease, in 1743.

GREl'^ n. s. Fr. grc, probably from gratia. Good will ; favor ; good graces. Obsolete. For sith a woman wos so patient, Unto a mortal man, wcl, more, we ought Rcceivcn all in gree that God us sent.

Chaucer. The Cterhes Tale. And falling her before on lowly knee.

To hor makes present of his service seen.

Which she accepts with thanks and goodly gree.

Spenser.

GREECE, n. s. Corrupted from degrees. It is written likewise greeze or grice. A fliglit of steps. Obsolete.

Every greece of fortune Is smothered by that below. S/iakspeare.

After the procession, the king himself reu.aining seated in the quire, the lord archbishop, upon the greece of the quire, made a long oration. Bacon.

Greece, in many respects the most deservedly celebrated country in the world, was anciently bounded on the north by Macedonia and the river Strymon; on the west by the Ionian Sea; on the south by the Mediterranean ; on the east by the Egean Sea and Archipelago. It extended from the Strymon, by which it was parted from Thrace, to the promontory ofTanarus, the south- most point of the Peloponnesus, now the Morea,

about 6° 20′ of latitude, or nearly 440 English miles, and in breadth from east to west about 359 miles.

The general names by which the inhabitants of this country were known to the ancients were those of Graioi, or Graicoi, whence the name of Greece is plainly derived. These are thought to come from Grcecus, the father, or (ac- cording to some) the son, of Thessalus, who gave name toThessaly; but some modern critics derive them from Raga, the same with Reu, the son of Peleg, by the transposition of a letter to SJ.'ten the sound. These names were afterwards changed for Achsei or Achivi, and Hellenes ; tlie first, as is supposed, from Achseus, the son of Xuthus, the son of Hellen, and father of Ion; or, according to the fable, the sou of .Tupiter : the other from Hellen, above mentioned, the son of Deucalion, and father of Dorus, from whom came the Dores, afterwards a famous nation among the Greeks. Another name by which the Greeks were known, in some parts of the coun- try, was that of Pelasgi, which the Arcadians, the most ancient people in Greece, deduced from their pretended founder Pelasgus ; who is said to have obtained such footing in Pe- loponnesus, that the whole peninsula from him was called Pelasgia. But tlie most ancient name of all is universally allowed to have been that of lones, which the Greeks themselves derived from Ion, tbe son of Xuthus; or, as the fable has it, of Apollo, by Creusa the daughter of Erechtheus the grandson of Deucalion. Jose- phus, however, affirms, that their original is of much older date ; and that Javan, the son of Japhet, and grandson of Noali, was the first who peopled these countries ; which Bochart has also rendered very probable. It is true, indeed, that among the Greeks themselves, only the Athe- nians and such colonies as sprung from them, were called lones ; but it is also plain beyond exception, that other nations gave this name to all the inhabitants of Greece.

The inhabitants of Greece in the first ages, ac- cording to their own historians, appear to have been perfectly barbarous. They lived indif- ferently on every fruit, herb, or root that came in their wiy ; and lay either in the open fields, or

at best sheltered themselves in dens, caves, and hollow trees : while the country itself remained one uncultivated desert. The first improvement they made, was the exchanging of their old food for the more wholesome acorns, building huts for themselves to sleep in, and covering their bodies with the skins of beasts. For all this, it seems, they were beholden to Pelasgus, above mentioned (supposed by some to be the Peleg of Scripture), and who was highly reverenced by them on that acco-unt. This reformation in their way of life, however, it seems, wrought none in their manners. On tlie contrary, they who had nothing to fight for but a hole to sleep in, began now to envy and rob one another. This, in pro- cess of time, put them under a necessity of join- ing themselves into companies under some head,

that they might either more safely plunder their neighbours, or preserve what they had got. Laws they had none except that of the sword ; so that those only lived in safety who inhabited the most barren and craggy places ; and hence Greece for a long time had no settled inhabi- tants, the weak being always expelled by tbe strong. Their gigantic size and strength, if we may believe Plutarch, added so much to their insolence and cruelty, that they seemed to glory in committing the greatest acts of violence and barbarity on those that unhappily fell into their hands.

The next advance towards civilisation v/as their forming themselves into regular societies to cultivate the lands, and build towns and cities. But their original barbarity and mutual violence prevented them from rmiting as one nation, or even into any considerable community : and hence the great number of states into which Greece was originally divided. The most re- markable of these small principalities mentioned in history are' the following : in Peloponnesus were those of Sicyon, Argos, Corinth, Messenia, Arcadia, and Lacedsemon. In Graecia Pro- pria (that part of Greece which lay without Peloponnesus), were those of Attica, Megaris, Bceotia, Locris, Epicnemidia, Doris, Phocis, Ozolaea, and ^Etolia. In Epirus, were the]Mo- lossi, Amphilochi, Cassiopoei, Dryopes, Chaones, Thesproti, Almeni, and Acarnanes. In Thessaly were those of Thessaliotis, Estiseotis, Pelasgi- otis, Magnesia, and Phthiotis. All these were at one time or other severally governed by kings of their own, though we only find the names of some of them mentioned in the histories of the more con- siderable kingdoms of Sparta, Attica, Thebes, &c. The erection of these kingdoms, however, for some time, did not much alter their manners ; the inhabitants of the new kingdoms plundered and destroyed one another without mercy. At- tica was the only place in any degree free from these incursions, because it was naturally desti- tute of every thing that could invite a plunder- ing enemy ; but those cities fared much worse which were situated on the sea-coasts ; because they were in continual danger of being plun- dered either by sea or land ; for pirates at tliat

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GREECE.

003

time did not less infest all those seas than rob- bers did the land. And this was one main cause why most of the ancient cities of Greece were situated

at some considerable distance from the shore ; but even in these, as all their safety con- sisted in the resistance they could make against an invader, their inhabitants were under a ne- cessity of going constantly armed, and being ever on their guard. Another mischief arising from these continual piracies and robberies was, that they occasioned the far greater part of the lands to lie uncultivated, so that the people only planted and sowed as much as was barely ne- cessary for their support ; and, where there was so great a neglect of agriculture, there could be little room for any discoveries in other useful arts and trades. Hence when other nations, as the Jews, Egyptians, Midianites, Phcenicians, &c. had improved themselves to a very high de- gree, the Greeks seem to have been utter strangers to every useful art. During this period of savage barbarity, the most renowned Grecian heroes as Hercules, Theseus, &:c., performed their exploits ; wliich, however exaggerated by poetic iiction, no doubt had a foundation in truth. Some, indeed, are of opinion, that the Grecian heroes are entirely fictitious beings. Yet, considering the extreme degree of barbarity which at that time prevailed throughout Greece, it seems not improbable, that some persons of extraordinary strength and courage might under- take the cause of the oppressed, and travel about like the more modern knights errant in quest of adventures.

The iirst expedition in which we find the Greeks united, was that against Troy, for the particulars of which, see Thoja and Troy. Their success in this war (which happened about A. A. C. 1184), cost them very dear; vast num- bers of their bravest warriors being slain, and great numbers of the survivors cast away on their return. It is probable, however, that their hav- ing staid for such a long time in Asia, might contribute to civilise the Greeks somewhat sooner than they otherwise would have been ; and ac- cordingly, from this time, we find their history somewhat less obscure. The continual wars, indeed, in which they were engaged among themselves for a long time, prevented them from making any considerable progress in the arts; while they preserved their liberty, and rendered them brave, and skilful in military affairs: at the same time they effectually prevented them from making permanent conquests, and confined them within the bounds of their own country. The states, too, were so equally balanced, that scarcely one of them was able perfectly to sub- due another. The Spartans, however, having with great difficulty reduced the kingdom of Messene, and added its territories to their own, became the leading people in Greece, Their superiority was long disputed by Athens ; but the Peloponnesian war at last determined tliat point in favor of the Spartans, when the city of Athens was taken, and fts walls demolished by Lysander the Spartan general. See Attica and Sparta.

By the battle of I ouctra, the Spartans lost that superiority which thcyˆad maintained for .SOO

years, and which now devolved on the Thebans. After the death of Epaminondas, the celebrated Theban general, however, as no person was found possessed of his abilities, the Thebans were again obliged to yield the superiority to the Spartans. But by this time the Greeks had become acquainted with the luxuries and elegancies of life ; and all the rigor of their original laws could not prevent them from valuing these as highly as other people. This did not indeed abate their valor, but it heightened their mutual animositie#; at the same time that, for the sake of a more easy and comfortable life, they became more disposed to submit to a master. The Per- sians, whose power they had long dreaded, and who were unable to subdue them by force of arms, at last found out, by the advice of Alcihia(es, the proper method of reducing the Grecian power, namely, by assisting them by turns, and supplying one state with money to fight against another, till they should all be so much reduced, that they might become an easy prey. Thus the Greeks were weakened, though the Persians did not reap any benefit from their weakness. Philip of Macedon entered into the same political views ; and partly by intrigue, partly by force, was declared generalissimo of Greece. His suc- cessor, Alexander the Great completed their subjection; and by destroying the city of Thebes, and exterminating its inhabitants, .strucic such a terror throughout Greece, that he was as fully obeyed by all the states as by any of the rest of his subjects.

During the absence of Alexander in Persia the Greeks attempted to shake off the Macedo- nian yoke, but were quelled by his general Anti- pater. The news of Alexander's death was to them a matter of the utmost joy; but their mu- tual animosities prevented them from joining in any solid plan for the recovery of their liberties, and hence they continued to be oppressed by Alexander's successors, or other tyrants, till Aratus, the Achaean, about 268 B. C., formed a design of setting his country free from these oppressors. He persuaded a number of the small republics to enter into a league for their own defence, which was called the Achsean league; and notwithstanding that the republics, taken singly, had very little strength, they not only maintained their independency, but soon became formidable when united. This associa- tion continued to become daily more and more powerful ; but received a severe check from Cleomenes HI. king of Sparta, which obliged them to call in Antigonus to their assistance. This prince overcame Cleomenes at the battle of Scllasia, and afterwards made himself master of Sparta. Thus he became a more formidable enemy than the one he had conquered, and the recovery of the Grecian liberties was incomplete. Soon after this the Greeks began to feel the weight of a jiower more formidable than any which they had yet experienced; namely, that of the Romans. That insidious and haughty republic first intermeddled with the Grecian af- fairs, under pretence of setting them at liberty from the oppresion of Philip VI. of Macedon. This, by a proper union among themselves, tiiey might have accomplished : but they acted as

though they had been infatuated : receiving with the utmost joy the decree ot the Roman consul, who declared them free; without considering, that he who had thus given them liberty, might take it away at his pleasure. This lesson, how- ever, they were soon taught, by the total reduc- tion of their country to a Roman province ; yet this can scarcely be called a misfortune, when we look back to their history, and consider their out- rages upon one another : nor can we sympathise with them for the loss of that liberty which tliey only made use of to fill their country wiih slaughter and blood. After their conquest by the Romans, they made no united effort to re- cover their liberty ; but continued in quiet subjec- tion till the beginning of the fifteenth century. About that time they began to suffer under the tyranny of the Turks, and their sufferings were completed by the taking of Constantinople in 1453. Since that time they have groaned under the yoke of this most despotic government.

Greece, Modern. Of this country, so in- tensely interesting to the scholar, the artist, and tlie antiquary, we have been, as lord Byron observes, ‘ more neglectful than it deserves ;’ ancient recollections and associations have so much influence, as completely to absorb the attention of the traveller, and render him almost unconscious of the present race of mortals, and careless of ihe existing state of Greece.

Yet arc her skies as blue, her crags as wild. Sweet are her groves and verdant are her fields. Her olive ripe as when Minerva smiled. And still his honied wealth Hymettus yields ; There the blythe bee his fragrant fortress builds. The free-born wanderer of her mountain air ; Apollo still her long, long summer gilds. Still in his beam Mendeli’s marbles glare : Art, glory, freedom fail, but nature still is fair. As a proof of the little attention that has been paid to this country and the want of taste and feeling prevalent in some quarters, it has been observed that Pinkerton has devoted only one page of his three huge quarto volumes to the whole of Greece, about six lines to the descrip- tion of Attica, and half a line to inform the reader that Atini, the ancient Athens, is thinly populated.

A general sympathy was manifested from one end of Europe to the other, when, in the year 1820, the first symptoms appeared of a rising of the enslaved Greeks; all civilised nations seemed disposed to aid the oppressed, and to pay back to the descendants some part of what the world owes to their ancestors. If, indeed, this move- ment has not at present produced much of per- mar,ent effect, we may attribute it to the in- sensibility of statesmen, whom the voice of humanity can only move when it accords with their political views : we may observe that the same policy, which in 1813 and 1814 sympa- thised with an oppressed people, and encouraged

them to shake off the yoke, in 1822 doomed them to submit to a prolongation of their cala- mities under pain of being declared rebels. The •wish of certain cabinets to furnish a counter- poise to American liberty, in fact, has paralysed this noble effort of humanity. 'In vain,' as one of her eloquent French advocates observes,

' ravaged and ruined Greece stretched its implor- ing hands towards Europe, and entreated its compassion, in the name of that merciful religion which is common to all Christians; in vain it exhibited to the view of independent nations its degradation and misery; it was abandoned to despair. Posterity will hardly believe that, in an age in which statesmen have made so much parade about peace and order, men, to whom it would have been easy to stop the fury of the Turks, have insulted misfortune by disgracing with the name of rebellion the patriotism of the Greeks, and suffered the barbarians to assuage their thirst of vengeance on a handful of Chris- tians already crushed by their exactions. Can it seem astonishing that the Greeks should sink in a struggle, in which Turks and Christians were leagued against them?' It must be left to time to disclose the issue of this struggle ; in the mean while it is interesting to retrace its past events, to examine this classic soil, on which the ancients exhibited so many sublime examples of patriotism and all the civic virtues, to contemplate the ruins which recal to our minds their civilisa- tion, their arts, their superstitions, and their ex- ploits ; and to gain some tolerably exact idea of the theatre of so many great events, and which is des- tined perhaps to present others not less astonishing.

We shall then give, I. A rapid and general description of the countries inhabited by the Greeks ; then treat of Greece properly so called under the divisions. II. Of Great Greece, or Livadia. III. Of the Peloponnesus or the Morea; and IV. Of the Archipelago, of which our notice must be very slight.

I. The peninsula of Greece juts out into the Mediterranean Sea, like the peninsula of Italy, but extends several degrees farther to the south. It may be assumed to be contained between the parallels of 41° 30′ and 36° 20′ N. lat., and 18° 10′ and 22° E. long., commencing from the head of the gulf of Salonica on the east, and that of Aulona on the west, and reaching to Cape Ma- tapan on the south. It consists properly of two peninsulas, one extending from the northern limits already mentioned to Cape Colonna (the ancient Sunium) in the south, being about 200 miles in length, and 100 in breadth, with an area of about 20,000 square miles, and united to the other, or that of the Morea (the ancient Pe- loponnesus) by the isthmus of Corinth; this peninsula contains a surface rather less than half of the former country. The islands of the Archi- pelago may be about equal in extent to the Morea, stretching more than four degrees farther to the east. The entire district is bounded on the north by the Turkish provinces of

Roumelia and Albania (see Albania); on the west by the Adriatic Sea, which separates it from the south- eastern part of Italy ; on the south by the Mediterranean Sea, and on the east by the Ar- chipelago.

An uninterrupted range of mountains runs down the middle of the greater peninsula, in a parallel line to its eastern and western coasts, varying in elevation from 7000 to 8000 fett in the northern and central part, to those in the south, which are about 700 or 800 : among the former may be reckoned the loftiest ridge oi

Pindus and Parnassus ; and, among the latter, Parnes, Pentelicus and flymettus, in Attica. From tins central chain different ridges branch off towards the coast on either side ; eastward the celebrated Olympus, near the northern part of the gulf of Salonica, rising to tlie height of 6000 feet, forms part of an interior chain, extending through the island of Negropont, consisting of Ossa and Pelion, Ota and Othrys, and mount Delphis the most remarkable of them all. The mountainous countries of Epirus, iEtolia, and Acamania, constituted part of what is now called Albania. In the Morea, near the western coast, is the lofty Cyllenian range, while towards the south rises the Taygetus. These mountains enclose plains of considerable elevation, of which Thessaly, Bceotia, and Arcadia, still maintain their ancient appearance, and are watered by mountain streams and tlie numerous branches of the Peneus and Salym- pria, which, after intersecting the plain of Thes- saly, unite, and flowing through the famous valley of Tempe, discharge themselves into the Gulf of Salonica; while the Alpheus fertilises the verdant plains of Arcadia, Elis, and Achaia. To these may be added a multitude of other streams of less importance, which would not have been noticed in any other country than Greece, where every rivulet has its verse, and as Spon observes, these smaller rivers make more noise, ‘ dans les livres que dans leurs lits.’

There is but one lake of any considerable ex- tent, the Copais, now called Topoglias, which receives the waters of the Cephisa, after they have traversed the plains of Phocis, besides those of a number of other rivers. It is situated near the north-eastern coast of Boeotia, and its in- cessantly increasing waters would long since have inundated the country, and rendered it un- inhabitable, had it not been for the gulf of Ka- tabathron, which, at the foot of a chain of chalk hills, receives the overflowings, and this lake prohal)ly finds a passage under the hills; for the waters spring up abundantly on the opposite side, and form a river, which at a short distance discharges itself into the sea between])lantations of coMon. The

inhabitants call this river Larmi : it may be regarded as the outlet of the Cephisa, which, after crossing the lake, runs about a league under ground. It is uncertain whether the Katabathron be the work of nature alone, or whether art has completed what nature has be- gun ; this subterraneous canal was obstructed in its course, under the reign of Alexander, by eartii(| uakes and the crumbling of the ground ; and there are still visible the extremely deep wells, which were then dug to facilitate the course of the waters. Another operation of this kind will yjerhaps soon become necessary, as the banks of the Cˆopais, continually assailed by the winter torrents, present nothmg but a series of unhe:'lthy marshes. Surrounded by rocks and half-cultivated hills, behind which, on the western side, the mountains of Phocis are seen rising in different shades of coloring, the Copais jncsents one of the finest scenes in Rctotia; in summer the roses almost cover its banks; the river Uercyna, dashing from rock to rorck, falls into this vast basin, foaming over the blocks of

stone which arrest Us progress. Precipitous rocks, covered with wood, rise on either side of the bay, into which the waters of the lake dis- charge themselves on issuing from their subter- raneous abyss. Buzzards and other birds are seen constantly flitting over this liquid plain, while the vultures are ever hovering on the moun- tains which bound it to the west.

The coast of the peninsula, especially in the southern part, is considerably indented with gulfs and bays, several of which afford commo- d ous and sheltered anchorage for vessels, and furnish great facilities for maritime commerce. The principal of these are the gulfs of Salonica, Talanta, Athens, and Napoli on the east ; those of Aulona, Prevesa, Lepanto, and Arcadia on the west; and those of Coron and Kolokythiaon the southern coast ; that of Talanta irs more pro- perly a channel, separating the island of Negro- pont from the mainland, to which it makes so near an approach, that Chalcis, the principal town, almost touches it. Of course there are many capes or headlands, some of them project- ing far into the sea ; the most remarkable of these are capes Lingua, Leucadia or St. Maura, and Konellaon the west; capes Gallo, Matapan, and Maloeato the south ; and capes Sunium or Calona, Manteio, and Phalasia, on the east.

The climate of Greece, according to the lati- tude in which it is placed, and its exposure to the sea, which almost surrounds it, should be similar to that of Italy ; it is, however, in many parts colder in winter, and warmer in summer. In the centre of the country the tops of the mountains are for three parts of the year covered Vvith snow, which in some of their deeper re- cesses may be always discovered. Mount Par- nassus was formerly thought to be impassable on account of its perennial snow, l)ut Dr. Sib- thorp relates that it was perfectly fiee when he crossed it in the month of July. Some plains of considerable elevation are said to be as cold as the west of

England, particularly that of lonnina, about 200 feet above the level of the sea, between the middle range of mountains and the western coast ; in the Morea, further to the south, the elevated plains are still colder, and Tripolitza is said to be sometimes covered with snow to the depth of eighteen inches. At no great distance from Tripolitza, the capital. Dr. Holland found the temperature at six in the morning as low as 16° of Fahrenheit. He adds, 'the degree and continuance of cold were such as I scarcely recollect to have experienced in England, and this in the very centre of Arcadia; but this was in 181 3, a winter remarkable for its severity in every part of Europe. In summer, however, the blooming vales of Arcadia present a continuance of scenery equal to any thing which has been described or imagined in poetic song. Luxuriance and beauty may be pro- nounced to be the general characteristics ; flower- ing valleys, winding streams, and hills shrouded nearly to their summits with wood, are the ob- jects which commonly awaken our admiration. — llaygarth. In the lower regions of Attica the air is more moderate, and the climate more etjnable, the cold being less intense, the heat less oppressive, and the ruin less abundant. In*

Athens the temperature seldom rises above 80° or 90°, and it is very rarely so low as the freezing point; it is therefore generally healthy, while on the contrary, many parts of Livadia, which, in ancient times were the site of populous cities, are become infectious marshes, spreading death among those who are hardy enough to establish themselves in their neighbourhood.

The soil of Greece is generally good ; that of Boeotia especially is very rich, producing wheat, Indian corn, barley, kidney-beans, rice, and sesamum, with a great quantity of cotton ; while us lakes still supply Athens and other parts of the country with eels, waterfowls, and rushes for baskets, mats, and lamp-wicks. Not fewer than eight different sorts of wheat are cul- tivated with great success, and produce in good soils from ten to twelve for one, and in the best from fifteen to eighteen for one, and this mostly in unmanured ground ; barley, millet, and to- bacco are also general throughout Greece. In the plains of Thessaly are extensive groves of mulberry-trees, cultivated principally for the silk-worm, which is there an object of much at- tention ; the trees are carefully cut down, watered, and hoed. The silk of Attica is re- markable for its whiteness ; but that of the Morea, deriving its name probably from the mul- berry, is the most celebrated ; there is also abun- dance of excellent corn, wine, and figs, and the wheat yields thirty-fold, and two crops in a year. The cactus or Indian-fig forms an impenetrable hedge with its thorny coats round the plantations

in many places ; but most of the lands are open. Cotton is produced in most parts of the country, but in the greatest abundance in the plains of Triccala in Thessaly, where not less than 600,000 pounds of the wool are grown annually. The fig-tree is cultivated with much attention and success, and the olive forms the greatest part of the exports and riches of Attica, yet this oil, once so fine and so highly esteemed, is now only used for the manufacture of soap. Their know- ledge of agriculture is not very far advanced, and the simple instruments they use bear every mark of a very ancient origin ; in some parts, as in the isles of the Archipelago, they use the spade instead of the plough, the lands being divided into parcels too small to require the use of the latter instrument. Of the wines of this country, ten diff'erent sorts have been enu- merated by Dr. Sibthorp, but none of them can be called fine except those made on a few of the islands of the Archipelago ; the practice also which generally prevails of mixing with them turpentine, from the species of fir called pinus maritima, in order to prevent them from becom- ing acid, renders the flavor not very agreeable. This fir is one of the most useful trees in Greece, furnishing pitch and tar for all maritime and domestic purposes; of the resinous parts are made candles or torches, the cones are put into the wine casks, the wood serves for tlie carpen- ter, and the bark for tanning. Honey is pro- duced in considerable quantities, and much valued by the Athenians, especially that of Hy- mettus, in Attica, which has been celebrated from time immemorial, ar.d is still so much in esteem, that a present of 1000 pounds

weight of it is annually sent to Constantinop'e. Articles of the first necessity are all manufac- tured in Greece; tanning, dyeing, cotton and silk weaving, and other mechanical arts, are carried on, with tolerable skill in every family: and the Greeks have no need of importing any thing but what contributes to convenience or luxury ; articles of this description they can easily pro- cure by giving in exchange the superfluity of their produce, as grain, oil, wine, fruits, &c. This exchange sometimes affords a very lucrative commerce, but, in order to turn the balance decidedly in favor of the Greeks, agriculture must be carried to a higher state of perfection, so that the quantity of their productions may be increased, and the quality of their goods improved.

To produce these beneficial effects the laborer must be rescued from the iron hand of oppres- sion, and brought under the dominion of just laws ; but the despotism of the Turks has para- lysed every thing in Greece. To live in abject wretchedness, to have no appearance of wealth or comfort in their dwellings, or any thing which may tempt the cupidity of these savage masters, is the only safeguard that the miserable Greeks possess. Owing to this cause, and the unwhole- some state of the atmosphere in some places, arising from the numerous marshes near the coast, the populationof the country is much diminished. The whole of Greece does not perhaps now

con- tain more than 4,000,000 of inhabitants, allow- ing to the

Peninsula in the north . 2,000,000 The Morea and Neˆropont 1,000,000 The islands . . ˆ . . 1,000,000

The Greeks constitute three-fourths of this po- pulation ; the rest are Turks, Mussulmans, Al- banians, Jews, and the mixed descendants of Romans, 'enetians, Neapolitans, and other Eu- ropeans, generally called Franks. The Turks are, however, quite ignorant of the state of the population ; it is, therefore, not surprising that strangers should have but an imperfect know- ledge of it. As of old, the people may be said to be divided into four classes, cultivators of the soil, craftsmen, soldiers, and" priests. In the manners of the Greeks we may observe many defects and vices ; but these are, for the most part, the natural effect of their long and hard bondage, and should make us detest the barbarous despotism which has so long op- pressed a people gifted with every disposition necessary to render them great, happy, and wor- thy of their ancestors. They are indeed natu- rally lively, and this appears in the excessive joy which they manifest in their panegiris or church-festivals, in which they drink and sint? and dance in honor of their patron saint, till they fall into a state of weariness and stupefac- tion. It is said, that a Greek before he enters again into his enslaved village, sometimes takes a week, a month, or a year to rejoice in ; but this is not gaiety ; it is frenzy ; they appear in this like the unfortunate negroes, who pass the whole nioht in dancing, in order to forget the toils of the day. If the men are immoderate in their exhibitions of joy, the women aie so in

their grie; The loss of her liusband terminates for ever the happiness of the widow ; she utters dreadful lamentations, tears her hair, disfigures her countenance, retires from society, neglects the care of her person, and takes no part in social avocations ; she seldom marries again. In well regulated towns this excessive mourning has been rather tempered by the prevalent man- ners, but, in the countiy parts and the islands, it is still inordinate. At their funerals, mourners are hired for the purpose, and the disgusting spectacle is exhibited of a factitious despair, mingled with the most extravagant pauegj'rics on the deceased ; in many places they expose the dead in the churches, where they are visited by the relations and friends, who come to give them the last kiss. A woman is considered as of little value in society, when her husband is dead : in the higher ranks, as among the ancients, the Greek females are sequestered and shut up in their seraglios, from which they never go out without their veils, and that only to visit their female relations, or to frequent the churches. Embroidery, music,

and story-telling are their chief occupations in their retirement, and their minds thus left without culture, would become torpid were it not for their natural vivacity, which discovers itself in the bri.:htness of their eyes, in the flexibility of their agreeable coun- tenances, and in the agility of all their limbs; but these women, wlio in the most simple dress always appear even handsome, disfigure them- selves by the heavy costume in wliich they are muffled up, and the thick paint with which they cover their faces. Frequent bathing, and that languor inseparable from idleness, impair in early life those charms, which begin to disclose themselves at a very tender age, and all the marks of a premature old age appear before they have reached what is commonly considered the prime of life ; among the lower classes, the fatigues of labor generally produce the same ef- fect. With an excessive love for dress, and great fondness of perfumery, the Greek women manifest great negligence in regard to the cleanliness of their apparel, and their dwell ngs are destitute of neatness, though it would be most easy to keep them in order; since all their moveables consist in a few sophas, some presses or chests to contain tlieir clothes, the matrasses which they spread in the evening to sleep on, some stools about two feet high which serve them for tables and chairs, and the brazier near which the women in winter spend the whole day, and which is about the same height : some images com- plete the decoration of their rooms. In the cities and the islands, where more intercourse with the European nations prevails, there is less uniformity and insipidity in the life of the fe- males; they are not excluded from society; gay and affable, they often cliarm the traveller by the most gracious and easy hospitality. 'What stranger,' says a popular French advocate of the Greeks, ' can resist the invitations and offers of hospitality which are frequently addressed to him in a sweet and harmonious language by groups of lively and black-eyed females seated before their houses, and occupied in the labors

of embroidery and spinning, under the fine cli- mate of the Archipelago?' Education furnishes them with scarcely any means of dissipating their weariness ; their husbands either leave them alone while they go to navigate the ocean, or treat them with a lordliness equal to that of the Turks. Among the superstitions to which they are much devoted may be mentioned their using of various charms, their consulting with sor- ceresses, and their reliance on dreams, which in- terest them exceedingly, and by which the young females endeavour to discover what sort of a husband they are likely to have, and whether they are destined to be happy in their future life. Their marriages are celebrated with re- joicings, in which whole villages take a part. The proposals are made in some of the islands by pioxenetes or match-makers ; at church the newly married couple are adorned with crowns; and, on entering the bridegroom's house, the bride is carried over the threshold, as to touch it would be counted a bad omen.

Almonds, walnuts, and other fruits are distributed among the people ; the repast is commonly very abun- dant, and they drink moderately as is customary in Greece, where drunkenness is seldom met with, and their manner of living is generally very simple.

In vain in this country do Helicon and Par- nassus still rear their summits to the clouds, the genius of the fine arts no longer resides there : how indeed could they develop themselves under a government which makes every appearance of riches a signal for fresh exactions '. Neither architecture, nor painting, nor sculpture, is to be found in any perfection ; the churches even are small and mean, and those which are in any respect remarkable in their construction take their date from the times of the latter empire, or of the Italians, or have been composed of the fragments of antiquity ; besides these there are no public edifices, except the monasteries, built without taste, and often without any symmetry. This country, once the richest in the productions of the fine arts,, is now the poorest in the civilised world ; and, to equal other nations, it will be necessary for the Greeks to study the very first principles, since these have fallen into oblivion. IMusic is among them less an art than a means of amusement and diversion ; in their churches the clersy Ct>n;fa'.th£mselves with miserable psalmo- dy, wh.ch ihjy never dream of improving; and, in their social meevings, a bad instrument, some favorite air, and a poor player, are sufficient to excite their eaiety. Tbeir sonc^s sometimes pro- duce emotions of the most movintr kind, but this is hardly to be attributed to their music ; indeed, buried in slavery and poverty, how can the art of harmony inspire any people?

The language of the ancient Greeks has under- gone many alterations in the course of time ; and these, as may be observed, commenced with the decline of the eastern empire. The irruption of the barbarians hastened the corruption of the language, as well as the fall of the empire ; and ages have passed in which this nation had no literature but that of its ancestors. About the twelfth century some taste for learning arose;

the crusades then commenced, which brought the East into relation with the West, the Greeks with the Latins and Saracens ; and though there was a striking distinction between the supple and artful character of the Greeks, and the barbarous rudeness of the Latins, new ideas were inspired into the mind of the nation, and new expressions were introduced into its language. The Italians particularly had great influence over the Romaic, or modern Greek, which was then formed ; poets and prose writers availed themselves

of this new language"; which, though as remote from the ancient Greek as the Italian is from the tongue of ancient Rome, soon became the national idiom. Had not their liturgy, from the earliest times of Christianity, maintained the use of the ancient harmonious language of their ancestors, the Greeks probably would have been much farther distant from its purity; and to this same pre- ventive cause may be attributed the uniformity which prevails in the modern language in all the different districts, how remote soever they may be from the centre of Greece. In some of the islands also, which are very little addicted to trade, more of the words and turns of expression of the ancient Greek are preserved than in the rest of the country. The Albanians, who have been settled in Greece only six centuries, have adopted the language of the Greeks, though they differ from them in other respects, and treat them with great contempt. Independently of words and expressions derived from the European tongues, the ancient Greek grammar has under- gone various alterations ; the accents, which the nice ear of an Athenian distinguished with so much care, have been confounded ; the aspira- tions, though still marked, are no longer pro- nounced ; several vowels and diphthongs, that the ancients distinguished, have now the same sou«d given to them, h, ot, r} et v, being pro- nounced by the Greeks as e ; and this, they pre- tend, is the true pronunciation. With the words of the ancient language the moderns have taken great liberties, lengthening some, shortening others, interpolating or retrenching the vowels or consonants in the middle of words, changing one letter for another ; in fine, confounding their significations, and using the ancient words in new senses. In the grammar, the dual number, peculiar to the ancient Greek, and the oblique cases, are lost; the auxiliaries to have and to will, employed in modern languages" to indicate the past and the future, as well as the use of the personal pronouns in the verbs, are all derived from European sources. It is remarkable, that the mariners and fishermen of the nation have retained more of the ancient words than others ; the names which they give to plants and fishes bear a strong resemblance to those by which Dioscorides, and other naturalists, called them. On the other hand, the most corrupt dialect is used in Attica, where once the most pure and chastened style prevailed. The orthography varies much, and, indeed, has no fixed rules.

We cannot expect any brilliant progress in literature from a people oppressed for so many centuries, who possess no capital, or any great establishments for education; who, until this

century, had not even a single printing presii, and received from Venice and Trieste the only books generally saleable, that is, the formularies of devotion. The Athenians have lost all traces of those dramatic exhibitions of which their an- cestors were so fond. Only three poems have been produced among them before the eighteenth century ; but since that time their poets have multiplied, and their productions have become more

numerous and varied. Songs, in which ail nations delight, are become a favorite amuse- ment with the Greeks. At first they had two kinds of them, viz. erotic, or love songs, and the clephticu tragoudia, that is, songs celebrating the great exploits of some klephtes, a name simply signifying a robber, but by no means dishonor- able in some parts of Greece, where the most respectable people make no scruple of taking to the highway, and subsisting on the booty they have acquired, especially if they have regularly made their offering at the shrine of some saint or madonna. We shall quote two of these klephtic songs in the original, as a specimen of the Romaic generally spoken, with subjoined translations, which will give some idea of the tone that breathes through many of these moun- tain strains.

O TA$OS TOY AHMOr.

' '2vpTt, TTaiSid [iov,'(rTb vtpbv,tlno[i.lva(paT airoipe. Kai ffi) Aaˆ TraaKt] ji avii\iii, KaOov sSu> Kovra fiov Ndl T lipfiard fiov (popiat, va yaai KaTTsravoc' Kai (Ttlg, Traifid fiov, Trdpsre to eptjˆov (nraOi fiov, Upaat.va Ko-ˆirt KXaSid, ffrpwaTs fiov vu icadi}aii>, Kai (pkpTS Tov TTViv ˆiaTiKov va \i IKofMoXoyrjai/ Nd TOV t'lTTw TO. KpijiaTa oaa 'iˆoi Kaˆwfieva' TpicivTa \p6vi' dpfiaTwXoQ, k fi'icoffi txw kXkPttjq' Kai Twpa fi TJpOe ddvaTOQ, Kai 9iXu) v cnraiOdvu). KdixsTi TO Kifioi'pi fiov TrXaTv, iˆjjXoj/ vd -yevy, N« otek' opOug vd voXefiw, Kai SiTrXa vd ycˆtˆw. Ki' aTTO 7-6 fiipoQ TO Ctˆi dˆJjOTf TTapaOvpi, To xˆˆi-ˆovia I'd 'pxˆivrai, Tyv dvoiˆiv vd (p'epovv, Kai T driSovia tov KaXov Mdifv vd fis fiaOaivovv-

THE TOMB OF THE KLEPHTES.

Darkness drew near, and day was fading fast. Like death and life, when Demos spoke his last : — ' Leave me awhile, my children ! — hence, and bring Our draught for evening from the crystal spring ; My brother's son, Lampsakis I come and wear These arms — my arms — henceforth be chieftain here — My comrades, take my now forsaken sword — Cut me green boughs, and let its blade afford Once more a couch to rest its weary lord ! Call me a priest to whom I may confess All my past errors — would the list were less — A Klephtes long '. an Armatolos longer. Terror of Turks — -but now the foe is stronger — 'Tis Death ! prepare my tomb — but broad and high When o'er it sounds the Moslem's battle-cry. Let nie have space to raise my mouldering corse. Appall with death, yet strike with living force ! And leave one crevice — where the rustling wing Of swallows and of nightingales that sing The lovely May, may tell me when 'tis SjJring !'

G R E E C E..

TOT STEPnOY.

K' dv Tu. Ssppkvia rovpKsipav, ra irypav 'Ap/3a- vi-TtQ, 'O Srioyiof ilvai Ciˆvravog, iranactq C'tv \pvct>ati. 'Offov x'ovi'soi'" TO. i3ovva., Tovˆkovq jjh) irpoaKv-

VOVfliV.

Tlafiiv va Xifitpiaˆiiifki'. ottov

rove TovpKovQ, Xojoaig XayKuEia k tprifiiaig t xow tu TraWtjicapia. riapu fit TovpKOVQ, fit Btfpia KoXyVfoa va Zoi'fitv.

STERGHIOS.

Tho' the Turks and Albanians our passes may

holJ. Our Sterjrhios will scorn them, though many and

bold ; And as long as the snows on the mountains shall be. Though we live with the wolves, we will live to be

free. The towns, and the plains, are the home of the slave Where they herd with their Mussulman tyrants — the

brave Have their cities in rocks, clifiFs, and solitudes, so We will dwell adiong beasts — but with infidels —

No!

A little while before the insurrection of the Greeks a printing press was established in the island of Scio ; by this means learning: besan to spread rapidly ; the classic works of ancient Greece were republished ; libraries, colleges, and schools, were established among themselves, and the young Greeks were encouraged to fre- quent the foreign universities. Of all tlie losses suffered by this interesting country, tliat of her universities at Buchorest, Aivali, Scio, Yanina, and Athens, will be long felt; the very seeds of their restoration perished with the 500 Greek students, ' the sacred band,' who fell at the fatal brittle of Drageschan. The Anglo-Ionian uni- versity of Corfu is now the only sanctuary for Greek literature ; and this, perhaps, is destined ere long to shed the beams of learning and virtue over the regions of the Levant.

The character of the Grecian people, as of all f'ther civilised nations, has been strongly in- tlnenced by the principles and practices of its rt.li';:ion. In ancient times, notwithstanding the lights that philosophy afforded, tliey

were com- pletely under the dominion of their priests ; their treasures were lavished at their altars, their lives were often sacrificed in their temples, and the fables of their mythology, and the various festi- vals of their worship, some of them horrid for their cruelty and others abominable for their licen- tiousness, were the themes of their finest works of imaeination. However free they were in the conduct of their civd affairs, they were really slaves in their relicious opinions. \ hen at length the prevalence of Christianity wrought the downfall of this ancient system of su])erstition and imposture, the national spirit transferred to the new worship the ardent imagination, the vi- vacity, and the puerile superstition, that had been derived from the ancients. Miserable con- troversies, and scholastic subtilties, distracted the minds of the people ; a breach took place Vol N.

with the church of Rome ; pagan doctcines rela- tive to magic, the curse pronounced by the priests, and the efficacy of some religious ser- vices, were propagated almost without alteration; but, incredible as it may seem, the doctrine of purgatory, so profitable to the Latins, and which has conferred such immense influence and riches on their clergy, never gained access among the Greeks. The usurpation of temporal power by the clerg)-, which has constituted the disgrace of the Latin church, is unknown to them ; the Greeks are astonished how a bishop of Rome, who, say thev, is no more than a bishop of Alexandria, of Antioch, or of Nice, should dare to usiirp the supremacy over the whole Christian world, and domineer over the clergy and laity. There has always been something of the repub- lican forms of antiquity preserved in the Greek church ; they consider the priestly power as re- sidins chiefly in the patriarchs, metropolitans, archbishops, and bishops ; and say, that the first seven councils have settled every thing that re- lates to doctrine, the decisions of which nothing should, or can, affect. As to discipline, they consider it as the business of the synods, and that the assistance of a pope is altogether unneces- sary. Four patriarchs, elected by the synods, and residing at Constantinople, Antioch, Jerusa- lem, and Alexandria, have nearly the same power, that of Constantinople being merely re- garded as the chief, and exercising some temporal authority in a council of archimandrites, arch- deacons, and other priests and monks, at which he presides ; every bishop among the Greeks de- cides matters in dispute, according to the codes of Justinian and Tlieodosius, and the laws of Basil of Macedonia. But this temporal authority is rather the result of the civil, than the religious state of the people, who, having no other superior authorities than their patriarchs and bishops, would rather refer to these national judges, than to the tribunals of their Turkish oppressors. The manners of the superior Greek cleriy are very simple : as they are mostly taken from the mo- nastic order, their lives partake very much of the uniformity of the cloister; while monachism itself does not, as in the Romish church, exhibit any thing of that pomp, predominant influence, and

cruel authority, which have been displayed by the Jesuits, the Dommicans, and Cistertians, of the West. The Greek monks are all of the order of St. Basil, preserving much of the sim- plicity of their primitive institution; it is in soli- tary places, in the midst of rocks and deserts, that the caloyers take up their abode. It must not, however, be concealed, that the inhabitants of the Greek cloisters are generally very ignorant; being condemned to a contemplative mode of life, they seem as if they imagine

tribution ; tliey frequently sell the furniture of those who do not pay these exactions, and con- tract debts at the cost of the people. The lower clergy, that is to Siˆy the papas, having no pros- pect of advancement, betake themselves to occu- pations of tlie meanest kind, in order to support their families ; for, happily for the ,)opulation of the country, they are not forbidden to marry. They are frequently husbandmen or farmers, who, having learned a few of the formularies and ceremonies of the church, have purchased the priestly office of some accommodating bishop, and, becoming all at once papas, make money of every thing; they sell absolutions, sacraments, exorcisms, relics, &cc. They promote all kinds of superstition ; they have covered all Greece wiih their little chapels, each of wiiich has its officia- ting priest; ignorant and fanatical, and miserably paid, they are often the disgrace of the religion t'ley profess, and pursue trades by no means honorable, in order to ol)tain their subsistence. ' All Greece,' says the Count de Choiseul-Gouf- fier, ' is filled with these monks, scarcely any of whom can read ; but they know ho.w far the in- fluence of religious fear extends over superstitious minds. Every pirate has with him a caloyer, or papas, to absolve him from a crime the very moment he has committed it ; after having mas- sacred the people in the buildings they take by surprise, after havmg plundered and razed them to their foundations, they immediately prostrate themselves at the foot of their minister, when the repeating of a few words reconciles them to the Deity, as they suppose, calms their consciences, and encourages them to the com- mission of new crimes. Numberless ceremonies and superstitions constitute the whole of the re- ligion of the papas and the laity ; and there is not one superstitious opinion or practice of the ancient Greeks which is not pievalent among their descendants in some form or other ; they have even augmented the number. They ac- knowledjˆe the influence of evil crenii eve.'y where ; they have protecting saints aiˆainst every species of misfortune and accident ; they have peopled nature with invisible spirits ; the dead have no rest among them, they appear again in the form of vampires or broucalakas ;

the whole village is thrown into confusion, and they make use of every charm to quiet the restlessness of these phantoms. In no place has sorcery so completely enthroned itself as in Greece ; not only do they believe in it, but they see its effects every where. Dreams are ever furnishing fresh food for superstition; they attribute periodical fevers, and other diseases, to malignant influences, and to envy ; they write the name of the malady on a triangular paper, and stick it on the en trance of the sick man's chamber in order to ob- tain his cure ; they fix the nail of a coffin on the doors of their houses to drive away the appari- tions ; they tremble at the screeching of an owl, or the shaking of a leaf; the osprey spreads alarm in every direction, when its cries inter- rupt the silence of the night ; a whole caravan is -.topped, if a hare cross its path, until some one comes up, who has not seen it, and breaks the charm ; to hear the braying of an ass on a fast day, to meet a papas, or monk, at the rising of

the sun, are portentous omens; lightning is dreaded by the husbandmen, and eclipses aro considered as the precursors of calamities ; in fine, the number five is held as one of the worst, of auguries, so that they believe themselves be- witched if they utter it, or if any one extend to them their hand with the five fingers.

Should another Luther make his appearance in the Eastern church, he would have a multi- tude of these things to reform, and he would render a great service to the people by suppres- sing the useless fasts, which are imposed on them during a great part of the year. The fast on the Epiphany, at the great ceremony of the blessing of the waters, every Wednesday and Friday in honor of the Passion, at the Ascen- sion, and at Christmas ; but it is in Lent espe- cially, that every body, even the sick and women with child, observe a rigorous fast: to see the miserable food, and even polypuses and other marine animals, some of them half putrified, on which they then support themselves, we have the greatest difficulty to conceive how these in- trepid fasters can sustain life. .At the approach of Easter they make themselves amends for this severe abstinence ; on Palm Sunday they deco- rate the churclies with the boughs of odoriferous shrubs; they purchase on the following days absolution from their sins ; on Holy Thursday they partake of the Communion according to the rites of the primitive church, observing this ceremony as a banquet of peace and brotherly love ; Ash Wednesday is a day of entire fasting, and they continue their devotions till late at night ; but on Easter eve all is bustle and pre- paration for the next day's festival ; they clean the house, throw out of the windows the old earthen vessels, which have been used during Lent; the best apparel is taken out of the family chest; the paschal lamb is purchased for the so- lemn repast, and they resume the harp' and the tambourine, which had been laid aside during the fast. The dawn of the Sabbath is hailed by voUies of musketry and cries of joy ; they make presents to their friends of painted

eggs and cakes, the paschal lamb is eaten by the whole family, and copious libations of wine spread everywhere a noisy pleasure, which is kept up during eight days, and often degenerates into extreme licentiousness. In many respects these orgies resemble the Saturnalia of the ancient Greeks.

Baptism among the Greeks is administered by immersion, and they accuse the Latins of having altered this institution by practising sprinkline;. Their communion is a distribution of wheaten bread and wine; to which on particular festivals a lamb is added ; this simple repast seems very much to resemble the agapai of the first Christians. In their churches they have only pictures painted on wood, miserably executed ; in the country of Phidias and Praxi- telfs they have proscribed without pity statues and sacred sculpture, for fear of falling into ido- lalrj', but they have no fear of this kind from exposing to view the wretched images painted by the monks. These paintings pass amon

(lulity of the laity renders very profitable to the clergy; pilgrims repair to those that are most renowned, especially on the festivals, whicii are celebrated near fountains held sacred in the days of republican Greece.

II. Under the name of Great Greece or Li- vadia are comprehended the provinces situated between the sea, on the east, south, and west, and Macedonia and Albania on the north; that is to say Acarnania, ^-Etolia, Phocsi, Bceotia, Tiiessaly, and Attica. There are few remains of the multitude of cities which once filled tins country, and its population is perhaps not more than one-teiitli of wliat it was in ancient times. The mountains on the side of Albania afford a covert for some warlike tribes, whose chief occu- pation is robbing, and who attack one another, when they are not engaged willi the neighbour- ing nations; the presence of the Turks, too, has been sufficient to depopulate these once flourish- ing provinces. The soil still continues fertile, and the traveller is charmed with the luxuriant pasturage of the plains, the thick forests of the mountains, the fruitful fields and plantations of the valleys, the delightful orchards round the towns, the fisheries of the coast, and tlie culti- vation of the silkworm, the vine, and the olive, all flourishing under a climate remarkable for its mildness.

The richest, most prosperous, and best peo- pled, province of ancient Greece is Attica; but it has lost all the advantages, which human genius and industry had conferred upon it; nothing now remains but a serene sky, a fine climate, and a soil suited to every species of culture ; yet badly idled, it

exhibits in some places a naked steril.ty, producing only deue- nerated vegetables. The population had been in 1820 reduced to 25,000 souls, including (jreeks, Turks, and Albanians; among the two latter forei'.rn nations*, the Greeks themselves seem like foreigners ; bowed down under the degrading yoke of these barbarians, the Greek of Attica has none of the airy vivacity of the anceiit Athenian, wlio could bear neither sla- very nor liberty, and in whom the love of glory and a taste for the fine arts incessantly gave l>irth to the most lively emotions. Deprived of their cities, their industry, and their commerce, tlie inhabitants have been reduced to a rustic and pastoral life ; in winter these wandering shepherds descend from the mountains of Thes- saly, to find under a softer climate pasturage for their large flocks of goats and slieep. The former of these animals are more numerous in these provinces than tlie latter, and almost equally serviceable ; of their hair are manufactured sacks and large carpets; their milk, either Ijy itself, or mixed with that of the cow, makes good cheese, and their skins, converted into bottles, serve for the transportation of the wine, oil, and honey, of the province; and, being afterwards tanned, are made into shoes for the people. Five shepherds are counted sufficient for a flock of 1000, and, when the vintage is over, they bring their flocks into the vineyards, to feed on the vine leaves. The people of Attica st 11 excel in the art of dyeing wool and cotlon ; they dye blue with indigo, yellow with Avignon berries, and red with the

chrysoxylon or wood of the rhus-cotinus, which, growing on the mountains in the neighbourhood of Marathon and Pendeli, is gathered by the Albanians, who sell it to the dyers. The country yields great quantities of good madder, and a little cochineal is gathered on mouni Cacha, but not used in dyeing. The wine, anciently much esteemed, is very bitter, weak, and saturated with resin ; the honey of mount Hymettus, once so celebrated, Clarke assures us, has now the effect of a medicine, so that it is dangerous to take much of it. The poor Caloyers, who in- habit this barren mountain, are obliged to de- liver the honey which they gather to the bishop of Athens, to whom the revenues of their convent belong. Wood is in general very scarce in .iVttica, and in some places they have no other fuel tlian brambles ; there are very few juulberry trees, and the quantity of^silk produced is very small ; it is, however, fine and entirely white. Every thmg seems to have degenerated on this classical soil, not through the fault of nature, but of man. The oil, of which they make 20,000 large measures a- year, furnishes occupa- tion during the winter to a great number of workmen ; many of whom themselves possess a house with a little vineyard, some olive plants, and a few hives of bees, on which they subsist, while tailing care of the olive plantations of the oikokuroi, or richer proprietors. The latter also let out little farms, with a cottage and some arable land, to the poor, furnishing them with grain for seed and cattle,

and receiving at the harvest two-thirds of the produce, after a tenth has been reservetl for the voivode or Turkish governor. In the plain of Athens a great quan- tity of barley is cultivated ; it is sown in October or November : in the month of May they drive horses and asseˆ into the fields, tying them to posts, that they may eat the barley; and re- moving the posts when they have sufficiently fed upon and manured the land around them. A plough of the simplest construction is then used in preparing the ground for the sowing of cotton, which immediately commences. Instead of a harrow, they employ a process, which is also evidently d.'rived from the early times of Greece; a laborer standing upright on a plank laid upon the ground, which is drawn by oxen over the furrows in order to close them. The cotton harvest commences in the month of Sep- tember, and when it is finished the barley sowing commences ; so that the earth never rests, but, after a Ions: series of ages, still yields its ffuits without relaxation or abatem-ent. When they thresh their corn, they brins; it out into a court, the floor of which is either paved or made of closely beaten or smooth eardi; in the neigh- bourhoorl of Athens the ground is sufficiently hard without beatin.j; in the midst of this area they fix a post, to which they fasten with a cord one or more horses, making them turn round in a circle; the cord winding round the post, is continually shortening and bringing the horses to the centre; they then make them turn the con- trary way, till the cord is completely unrolled ; the workmen in the mean time are constantly throwing in the corn under the animals' feet. When the grain is winnowed, it is laid up in

heaps, and befov; ihe year 1821 the Turkisli aga used to come and put his seal upon them, and it was unlawful to remove the least portion, until the tithe had been taken. Besides this tithe there was a tax upon vineyards, another upon wine, another on exports, and lastly a karatch or capitation tax : when the harvest is finished in Attica the laborers go with their mares into Boeotia, where the season is later on account of the mountains and lakes.

In Attica the native Greeks have by degrees given place to the Albanians, or intermingled with the foreigners who had possession of the country in the middle ages, such as the Arra- gonese, the French, the 'enetians, and the Ge- noese; it would therefore be very difficult to tind any trace of the ancient Athenians or Eleu- smians. The language and manners of the nation, however, still predominate, and have re- sisted even the barbarous oppression of the Turks.

The Pirseus, formerly the celebrated port of Athens, exhibits few and very imperfect remains of the fine monuments of art with which it was once adorned : it now consists only of a convent, a custom-house, a few wareliouses, and four an- choring places. The commerce of Attica, now furnishes only some fruits, oils, and cotton, for exportation. A plain and a few hills separate it from Athens, the citadel of which first strikes the eye of the traveller on his approach : on the road there are some fragments of tombs ; and traces of the wall, which joined the city to the port, are still visible. In the neighbourhood of the port extends a bank of rocks scarcely ele- vated above the soil, and on putting aside the bushes there is to be seen a line of pits cut in the rocks, and covered with flat stones ; this was the ancient necropolis or burying-place ; these graves are filled with fine mould, at the bottom of which lie the remains of the Athenians or Pirreans of ancient times. Burnt bones of black sheep sacrificed to the dead are also found, as well as paterue and other things connected with the profession of the deceased : one plate of bronze bears the name of a judge, in another tomb there is a mask of baked earth, in another the figure of a philosopher sitting, and in others painted vases, >kc.

Athens is irregularly intersected and sur- rounded by a rampart rudely elevated, and its present gates do not answer to the situations of the ancient ones ; that of the Lions is the most imposing in its appearance. What remains of the ancient monuments is rather to be sought for without the city, the country parts being less subject to change, and in the city the ruins of antiquity serving mostly for the construction of new buildings. Formerly Athens extended all round the Acropolis, which is now isolated and on the outside of the city, which now does not occupy, perhaps, more than a fourth part of its former site. The bazaar or market place occu- pies a large space of ground, formerly perhaps the Ceramicus of the ancients; and a mosque, thought to be founded on the ruins of the Pan- theon, stands in the midst of the square ; another is supposed to be erected on the foundations of the temple of the Uranian ^"enus; and in front

of the Turkish cadi's palace, near the same place, the prison of Athens once stood. In the same neighbourhood are to be found some remains of the portico of the stoics, and the dervises or Turkish monks not long since occupied the tower of the winds, which stands at the end of one of the streets : it is of an octagonal form, and built of marble, and received its name from the cir- cumstance of Andronicus Cyrrhestes, its builder, having represented on the eight sides the figures of the principal winds ; a brazen triton, turning on a pivot, indicated on t!ie top of t!ie building the prevailing wind ; every front also had a sun- dial upon it. Demosthenes's Lantern, an ancient edifice, also of white marble, has become by a strange vicissitude the abode of the capuchins ; not far from this is another ancient monument, called the Lantern of Diogenes, well known by the imitations of

it constructed in some western countries, especially in the park of St. Cloud. The modern edifices and establishments are small and mean in appearance, and, if we except the residences of the foreign consuls, are easily overtopped by the palm trees and olives, and by the minarets of the mosques ; the hospital exhibits nothing but poverty, and, if the visits of travellers in this age had not induced some naturalised foreigners to keep something like inns, the curious visitor would not have been able to find a lodging in the city of Peri- cles.

It would be worth while to take a journey to Athens, if it were only to see the Acropolis. This is the most ancient part of the city, and was at once a fort and a sanctuary, whence they held dominion over the bodies and souls of the inhabitants. A sacred olive, a salt spring, and an old idol, believed to be that of Minerva, gave rise in the time of Pericles to the con- struction of this fine monument of antiquity. Cecrops and Erechteus had their tombs in it. After the burning of the old temple of Minerva and the sacred olive by the Persians, in the seventy-fifth olympiad, Pericles built the magni- ficent Propylaeum and the majestic temple of Parthenon, the ruins of which are still the models for artists ; and this is not wonderful, since Phidias adorned it with his inimitable sculpture. Only the walls, however, the co- lumns, and the caryatides, remain. This fine edifice, it appears, was not quite perfect in symmetry, which may have arisen from the necessity of occupyinof the site of the old tem- ple, which was accounted sacred. The interioi- received scarcely any light from without, but was illuminated by a vast golden chandelier, the masterpiece of Callimachus, which was supplied with oil only once a year, the wick being made of asbestos, and consequently indestructible; this mysterious light shed its flickering beams over the old idol of Minerva, which had its face turned towards the east ; and a figure of Mer- cury, surrounded with myrtle branches, and the sp.cred sernent, the guardian of the temple, came in for a share of the public veneration. Some traces of the Cella are still discovered in three saloons of different sizes ; the largest, towards the east, dedicated to Erechteus, was adorned on the outside with a portico, supported by six

columns of the Ionic order. The smallest formed a little temple, borne by six caryatides, and erected on the site of the sacred olive tree and salt spring, and the other was the temple of Minerva. An ancient inscription proves that the Parthenon was not built till the fourth year of the ninety-second olympiad. The columns, on wliich the fronts of this edifice rest, are seen from afar ; they are of the finest proportion, and executed with that perfection which the Greeks bestowed on their great monuments. The six

caryatides represent Athenian girls assisting at the festivals of Minerva ; above the tunic they have a kind of mantle, and a third part of their garment is thrown over their backs ; part of their hair falls in ringlets over their shoulders and breasts. One of them has disappeared, and another, being carried off by lord Elgin, has been replaced by a pillar of rude masonry. The finest remains of the Parthenon were those admirable bas reliefs which adorned the pedi- ment and metopes, and which also lord Elgin brought into this country, where ihey are ex- hibited in the British JNluseuni. When Spon ” and Wheeler visited Athens, the Parthenon was used as a Greek church, and was still in such good preservation, that its primitive order could be tolerably well ascertained. A portico, elevated upon steps and supported by pillars without bases, completed the tour of the edifice; a sculptured pediment decorated the two fronts ; imder the portico was a frieze, also sculptured ; in fine, the metopes or catouches of the front presented to view those beautiful sculptures which are now in England, with the remains of tlie frieze. The figures of tlie front and of the frieze have been conjectured by some to repre- sent the contest between Minerva and Neptune; and by others Minerva, newly born, at the coun- cil of the Gods ; but they are so mutilated that It is not easy to decide : they are nineteen in number. On the northern angle is represented ihe god of a river, supposed to be the Cephisus, situated on the north of the city ; near him ire «t king and a woman, apparently about to em- hrace one another ; then follows a figure, proba- bly representing Irene, the goddess of peace, on whom Plutus is leaning, and leading on Proser- pine, who is standing with Ceres in a chariot, the horses of which are inimitably sculptured ; they seem to be teaching Minerva and Erechteus to guide the chariot. Jupiter is supposed to be standing near Minerva, with other figures repre- senting the other divinities. On the southern extremity of the pediment is another river god, supposed to be the Ilyssus, to tlie south of Athens. Some of these figures are naked and others clothed, and in the former the more art iias been employed, the less it appears ; we could almost s»ippose they were alive, the fi’j^ure of Ilyssus seems as if it moved ^nd were rising up. The frieze on the peristyle))robably re- presents the processions at the Panatlienapan festivals; at tlie east, under the portico, are twelve fitiures, representine: the principal divini- ties, towards whom the))rocession appears to be moving ; tiiis is followed by sacrifices, heroes, persons carrying baskets of fruits, choirs of citi- zens, chariots and troops of cavalif’rs; wliii” on

the metopes on the outside of the peristyle are seen, in demi relievo, figures of men breaking horses, and contending wiih centaurs. The other monuments of the Acropolis are less important, and the ruins less grand than those of the tem- ple of Minerva. It is founded on a limestone rock, and was once the key of Athens ; it was one of the last places quilted by

the Turks in 1822, and for the first time since its ancient days belongs to the Greeks, and protects, instead of menacing, the inhabitants of the city. At the foot of it is a grotto, supposed to be that of Pan and Apollo, and a circular excavation in the rock indicates the site of the theatre of Bacchus; a naked and smooth])]atform of rock points out tlie famous Pnyx, where the turbulent popu- lace of Athens assembled, to liear their orators discuss the public interests of their country, and sometimes to banish those who had rendered it the greatest services. A small excavation was the site, perhaps, of the tribune from which they iiarangued; not far from this are some anciently hollowed caves, supposed to be the prisons of the formidable Areopagus, but its situation is very doubtful. To the west of the city there are some fine pillars of marble, which once sup- ported the temple of Theseus, built on the same plan as the Parthenon, and as late as the seven- teenth century there remained some of the frieze of the portico, representing in basso relievo the battles of the Centaurs and the Lapithas. It stood on an elevated situation, and was made into a little church by the modern Greeks ; as the Turks have formed a little mosque under the ancient portico of Adrian, where it still exists, and where not long since was to be seen a solitary dervise perched between the majestic columns. On another hill, anciently that of tiie museum, stands the little monument raised to the consiil Antiochus Philopappus. The bed of the Ilyssus, at the foot of this hill, is dry during the greater part of the year ; its waters used to be conveyed to Athens by a subterraneous canal; in this bed rises the fountain of Callirhuc. The academy and other celebrated places have so completely disappeared, that it is very difficult to assign their situations.

Some European travellers have not given a favorable representation of the Greek population at Athens ; it has been long a proverb, ‘ May heaven preserve us from the Jews of Salonica, the Turks of Negropont, and the Greeks of Athens !’ Mixed with the Turks and the Schypetars, this aboriginal race must liave lost all feeding of their national dignity, and the inore so as they settled down into misery and ignorance. It is hoped that the exertions of foreigners, and the events of the present struggle, will have a tendencv to spread information and raise the spirit of the people, and thus lead the Greeks to rally round the manes of their ancestors.

The climate of Athens is generally fine, and the air pure, but the excessive heats sometimes produce epidemic fevers; at the end of the last centui-y the plauue carried off more than one- third of the]iopulation. Ophthalmies are com- mon, but these are rather the effects of their in- tercourse with Egypt, than of any local circu?u- stmces. In spite of the exactions O’f the Turks,

the oil trade of Athens is very considerable ; it has also some manufactories of soap and morocco lea- ther. In the families they fabricate very tine tissues, of cotton and silk, with broad stripes which are much worn by the rich instead of body linen.

The archbishopric of this city is one of the most ancient sees in Christendom, Dionysius the Areopagite having once filled it, and they still jiretend to show his dwelling. Under the Turks t!ie archbishop used to hold every Monday a kind of council with the Christian magistrates of the city, to receive complaints and adjust ditfer- ences ; the heads of families also were accus- tomed to choose every year four archons to watch over the public welfare, and these magistrates sat every day to hear causes, and to prevent them from being carried before the cadi. It is true, that Turkish despotism very much paralysed the influence of this institution, yet the Athenian archons did all in their power to conceal any fault from the knowledge of the voivode,and if he should get information of it, they endeavoured to obtain permission to inflict punishment them- selves, to moderate the fines, and, if possible, hinder the matter from becoming public. There were also attorneys to defend the national, before the Turkish authorities, and each district of the city had its epitropos, a magistrate chosen annu- ally by the citizens, for the assessment of taxes, contributions, and exactions.

From mount Anchesmus, and mount Hymet- tus, situated at a short dih— tance from the city, a most delightful prospect is afforded of the coun- try of Attica. The way to Hymettus lies across the llyssus, and over a plain covered witi myrtles ; among the rocks at the foot of the mountain is situated the poor convent of Siriani. The miserable caloyers boal;t of being possessed of a miraculous fountain, an infallible preven- tive of barrenness and all manner of diseases, at which, as they say, the Holy Spirit came to drink, on the day of Pentecost, in the form of a dove. The silver mines of Laurium, below Hymettus, were exhausted by the ancients, and, to a considerable distance west of Thorica, are perceived empty shafts and masses of scoria. Though the mines were worked in the centre of the range of hills, the smelling seems to have taken place on the coast, probably for the sake of procuring fuel the more easily, which would soon fail in the populous districts of the interior of Attica. The quarries of marble are equally discernible, which the Athenians worked on mount Pentelicus ; a monastery situated on this mountain still bears the name of Fendeli. This is one of the best situated, and most richly endowed monasteries in Greece ; seated on the declivity of the mountain, below the marble quarries, and surrounded by thickets of poplars, laurels, myrtles, pines, olives, and mastich trees, it possesses olive-yards and apiaries of consider- able extent ; it produces honey nearly equal to that of Hymettus, of which it used to send a quantity annually to Constantinople ; it paid no taxes and enjoyed

great privileges.

Below Pentelicus lies the famous plain of Marathon, shut in between two ridges of hills and watered by a little river from mount Par- aassus, which runs through it. Tliis plain opens

on the sea, where it presents a good anchorage for ships; and it was here that the Persians land- ed their vast army destined for the invasion of Greece. Part of it is now a marsh in the midst of which is a hillock, similar to those frequently found in the Troas, containing probably the bones of the heroes who died on this spot in defence of their country ; on opening it nothing was found but a few remains of urns. In a marsh on the coast are still perceived the foun- dations of ancient marble monuments, probably some of those raised to testify the gratitude of the republic. The village of Marathon contains about 200 inhabitants, whose cottages are sur- rounded with gardens full of apricot trees, vines, and olives. The only remnant of antiquity about it is an ancient basin which receives the waters of a neighbouring fountain. The desert m.oun- tains near it are sometimes infested by jackals, wolves, and foxes. A little farther, on the strait of Euripus, are the remains of the temple of Themis, formerly in the ancient port of Rham- nus. This little temple was built of blocks of _ stone, rudely sculptured after the cyclopean manner. In the interior a mutilated statue of the goddess has been found, which is very an- cient, dating its mutilation prol)ably from tlie time of the Persian invasion. Near this temple are the ruins of that of Nemesis, which has this sin- gularity, that the mouldings of the cornice are painted red, and this painting has preserved from decomposition every place it has touched. This temple was of Pentelican marble, and its statue of Parian, a master-piece of Phidias, may perhaps lie buried under the ruins of the building, which seem to have been overthrown by some violent convulsion of nature. The ancient walls of Rhamnus are still visible, espe- cially on the land side, where they are covered by the thick foliage of the mastichs. There is to be observed here the bottom of a marble chair, which might be either a votive oflTering, or the seat of honor for the magistrates of tiie city. On the same coast was situated the an- cient port of Thorica, which served to protect the working of the silver mines ; the remains of a portico of fourteen columns of tlie 13oric order still exist, but the city has disappeared. The modern port of Rafty has probably drawn oft" what remained of its population. On Cape Sunium, now Colonna, where Plato ravished his disciples with his mild eloquence, and which is now uncultivated and desert, are still found some of the pillars of the fine temple of Miner- va, which are of extraordinary length. Here the peasants on digoing the earth, frequently find pieces of the silver-bearing lead.

From Athens a sacred road led to Eleusis, whose mysterious worship attracted the Greeks ; some traces of this place are yet to be discerned, as

well as some ruins of the monuments which bordered it. On the remains of the temple of Apollo, the last columns of which have been carried away by lord Eloin, is situated the convent of Daphne or the I,aurels, with a church, surmounted by a dome that contains some fragments of antiquity. From thence we pass the ruins of the temple of Venus, and near to them the little lakes called Roeti,

wliich separated Attica from Eleusis; then the site of the paved court of the temple of Ceres, said to be the first place where grain was threshed to deposit it in granaries, a mark of the ci- vilisation of the inhabitants, whicli owed its com- mencement to Eleus s. The temple of Eleusis has been so completely destroyed that for a long time it was impossible to recognise its plan; a society of English travellers have, however, dis- covered the propyla;um which served for an en- trance to it, and which appeared to be like those of Athens. In the court, which succeeded to these, they thought they found some traces of the chariots, in which the priests used to cause those tliat were initialed into the mysteries to be rolled along ; to this succeeded a second vesti- bule, at the extremity of which was the front of the temple, supported by twelve columns. The level of the interior appears lower than tliat of the portico, which makes it probable that there was another flooring, below wliich they put in motion the machine with which they used to astonisli and bewilder the initiated. The bust of the colossal statue of Ceres was still lyi'ig on the ground at the end of the last century, and the people of the village, though Christians, attached superstitious ideas to it, pretending that it pro- cured them good harvests : it is now deposited in the university of Cambridge. Antique remains are dispersed through the village of Lefchimo, which occupies the site of Eleusis ; it is inhabited by about forty families of Albanians, who live by agriculture, to which the fertility of the plain in- vites them. The ancient city was built partly on the coast, where there was a port, and partly on the declivity of the hill ; and there are some re- mains of an aqueduct, which supplied it with spring water, and in the neighbourhood some frag- ments of tombs.

Two ancient ways, one passing by Marathon and the other leading directly to Thebes, conduct the traveller from the capital of Attica into Rnpo- tia, crossing the Athenian Cephisus, that rolls ils waters through a country covered with verdure, flowers, and fruit trees. Near this river is the an- cient Coionna, celebrated by the misfortunes of fEdipus and the verses of Sophocles, of which Mr. Smart Hughes gives the following glowing account : — ' All the expressions used by Sophocles to describe the beauties of this enchanting place are still applicable to it : the saffron, the nar- cissus, and

a thousand other flowers mingle their perfumes to embalm the atmosphere ; the young s'idots of those ancient olives on which Jupiter fixed his watchful eye still extend their great brandies, and form an arch impenetrable by the rays of the sun. At the comrsencement of the fine season the thickets lesound with the song of the nightingale ; and in autumn the vines, trained round the cottages and country houses, are loaded with purple grapes : the peaches, and especially the figs, are here of an exquisite fla- vor. At the time when I traversed on foot this delightful country, the golden yellow of the quinces, which loaded the branches, formed an agreeable contrast w ith the deep red of the pome- granates just bursting tlieir shells: across the groves on the one side were seen the Acropolis of /ithens with ils temple < >(Minervn. mount-; Ify-

mettus, Auchesmus, and Pentelicus ; and on the other the undulations of the Corydalean, jEgalean and Parnassian chains. This terrestrial paradise owes its beauty and fertility to the Cephisus, which laves it with its inexhaustible waters, fan- ned by the softest breezes : but the traveller should take heed ; these balmy breezes breathe death, and a night passed within the preci.;cts of the ancient academy may be his last.'

Passing from Eleusis through the defile of Ci- thieron we see near a torrent the walls and tow- ers of an ancient fort, probably that of itneus; a little farther to the north the walls, nine feet thick, and some remains of the towers of liie an- cient city of Eleutheria, called now Gifto Castro, a fort of the Egyptians or Bohemians. Here a great lower of an irregularly polygonal form, on the most elevated spot, commanded the defile. The convent of Meletius also resembles a fort ; It has an iron door, and the walls are thick and pierced with loop-holes, that serve to give liirht to the cells of the monks, of whom there are aliout ten, who in case of attack become soldiers, and defend themselves against robbers. The church within the enclosure is ornamented with pillars of red marble from the ruins of Eleuthe- ria, where once stood a temple dedicated to Bacchus. Situated in the gulf of Athens are two islands, famous in ancient days; one is Salamis, the kingdom of Ajax, celebrated for the greatest struggles between the Greeks and Persians : it is now called Colouri. The whole population is included in two villages inhabited by 500 Schy- petars or Albanians, who cultivate the vine and the olive, and make turpentine. In the fine sea- son they employ themselves in taking, on the coast, the octopodes, with pikes attaclied to poles thirty-six feet long ; they also use the euphorbium soaked and ground, which they put under the stones in the water, to stupify the fishes. The convent of Phanomeri, fortified like a castle ol the middle ages, is situated opposite the coast ot Megara, supporting by its olive-yards about fifty monks, who reside in it. The church is adorned with columns of marble and granite. In the se- venteenth century tiie inhabitants of Colouri left their cabins at the appearance of a strange vessel, and fled to caverns

to shelter themselves from pirates ; there are 100 of these caverns, in one ot which, probably, Euripides composed his trage- dies. Psyttalia, now a mere rock between Sala- mis and the coast of Attica, is the ancient iEsina, once one of the richest and most famous places in Greece, where the first Greek money was coined, and its fine China ware and bronze works were esteemed throughout the country : it was celebrated for its trade, and for a macnihcent temple of Jupiter of which there are some strik- ing remains. The principal front had figures on it, which were discovered in the treflches, and, after being repaired by Thorwaldsen at Rome, were deposited in the museum of antiquities ai IMunich. They represent, as some suppose, war- riors of different nations on each side of a fiuure of M inerva ; on the one side are Patrocles lying on the ground, Ajax protecting him, Teucer the archer, and Ajax the son of Oileus, both on their knees, with a wounded soldier ; and on the othei 1 1 ippolhous, who is attempting to draw the fallen

*Greek towards the Trojans, Hector lighting, Pa- ns and /Eneas botir on their knees, and a wounded Trojan. There is a stiffness, liowever, m the draperies; the same countenance and in- significant expression is observable in all the heroes; and the figure of Minerva, covered from head to feet, resembles an idol cut in wood. The hair of a*il the warriors is arranged in pointed meshes, resembling perukes ; the figures are painted blue and red, and it would seem that tiieir armour was metal. In the same trenches also was found an enormous ivory eye, proba- bly belonging to the colossal statue of Jupiter. The Venetians had a fortress here, which over- looked a town of about 800 houses. In the se- venteenth century the partridges were so nume- rous that the magistrates used to oblige the inhabitants to go in the spring i.o look for theii nests and destroy their eggs- At present this island exports only almonds; but its population, consisting mostly of Albanians, has increased to about 2000.*

Bcpotia, though little visited by travellers, and containing now no considerable city, still presents most charming scenery and a multitude of once celebrated places : it is a country abounding as formerly in grain ; and, should Athens recover its numerous population, would be able again to supply it. Mount Cythasron separates it from Attica; Helicon and Parnassus lift their lofty summits over its western boundaries;. and several other chains covered with pines, mastichs, wild olives, and evergreen oaks, traverse the interior, bordered by plains of rice, cotton, dourah, and wheat, and also some fine pasture ground. The largest of these plains, enclosed between ridges of hdls and feeding flocks of fine black sheep, are watered

by rivulets that flow from the heights around them. The Asopus runs directly to the sea: but the Cephisus falls into the lake Copais, already described. Steep rocks, covered with •wood, border the gulph of Potsomathi, where stands the village of Mertino, in the neighbour- hood of which are the ruins of an ancient city, perhaps that of Laiˆmna, among which there is no public edifice or any monument of sculpture ; the port, however, is yet to be observed. On tiie other side of the Copais we find some remains of the city of Orchomenes, called in the time of Homer the Athens of Boeotia : it stands just above the village of Scripou, which is inhabited by about 400 peasants. Here are to be seen the foundations of the walls of the ancient acropo- lis, well built, though without cement; and the paths, cut in the rock, which led to the city are still visible. The most curious part of the ruins is what Pausanias calls the Treasury of Minyas, of an age, according to Greek authors, before that of Hercules, which they fix 1 350 years be- fore the Christian era. It consists of two walls, on each of which is laid a large block of marble, and the entrance was probably closed by one side of the rock. Some curious inscriptions are found at Orchomenes ; on the pillars of the tem- ple of the Graces is to be seen a long list of mu- sicians, actors, and declaimers ; another inscrip- tion contains a contract, by which the right of pasture was preserved to the inhabitants of the nˆiirhbourhood. A small convent established

here contains several fragments of ancient monu- ments, with inscriptions; and what renders this spot remarkable is, that at Orchomenes Sylla gained a battle which paved the way to his dic- tatorship. Not far distant, the village of Caprana indicates the site of the ancient Chaironea, where are seen on a height some ruins, probably those of the Acropolis, and seats cut in the rock, which mark tlie situation of an ancient theatre. This city was situated at the foot of Helicon, now re- placed by Cranizza, in whicli is an old square tower whose massive construction may be assign- ed to very early times.

Helicon does not present the pleasing or sub- lime aspect we might expect from a mount con- secrated by the poets; it has, however, charming valleys, covered with corn fields and orchards, over which poplars and plane trees rise on all sides. The muses' wood has become solitary ; Hippocrene exists no longer ; it is perhaps dried up ; the Permessus rolls its waters to the Copais without inspiring any Pmdar, or any modern Hesiod ; and the celebrated Thebes, the centre of the confederated cities of this province, is now no more than a small town within the limits of the ancient Cadmeion or citadel ; its poor remains scarcely afford any idea of its former state. It is the see of an archbishop; but it no longer pos- sesses the silk manufactories and dye-houses es- tablished there by the Jews in the middle ages ; nor that of pipes, which existed in the seventeenth century, the materials of which were brought from a quarry of earth peculiar to this

country. The town of Lebadea, now called Livadia, is the chief place in Boeotia; it is situated at the en- trance of a ravine, at the bottom of wliich flows the river Ilercyna. It is the residence of a voi- vode and an archbishop, the centre of a consider- able trade, and presents a more prosperous ap- pearance than the other cities of the country : a castle built on a rock, but now dismantled, pro- tects it. At the foot of the rock they show a cavity, which they say was tbe cave of Trophonius ; but it is not deej), and probably was the sub- terraneous chamber where the image of the god was deposited ; it is in fact only twelve feet square ; in the upper part is discoverable a co- lored border, similar to what is found in other ancient Greek monuments. A grotto on the other side of the mountain, now converted into a Greek chapel, is more likely to have been the famous cave, where they terrified with spectacles and illusions those who came to consult the oracle. The springs of Lethe and Mnemosyne still flow in the same country, and mingle their waters with those of the Hercyna.

The defile of Cythseron is defended by an old fort ; to the northof it stretches the plain watered by the Asopus, where the Greeks obtained the famous victory of Plataa. The foundations of this city are yet visible ; at the foot of Cytha?ron, consisting of thick walls, flanked with towers ; on the probable site of the Acropolis are some broken columns and unformed masses of mason- ry, and, below its walls, a few sarcophagi cut in the rock, but now broken. .A poor village, in- habited by 150 peasants, occupies the situation of this once famous city ; it bears the name of Cocla. Near tiic defile stands also the village of Calivi;-.

la the plain, between Leuctra and Plataea, are two hillocks, under which probably were buried foe Greeks who perished in the sad contest be- tween the Thebans and Spartans. A hamlet of the name of Lefka, consisting only of five houses, is all that remains of Leuctra; but ano- ther called Eremo-Castro, on the heights to the north, contains some ancient inscriptions. On the eastern coast of Bceotia we find Orope occu- pying its aˆncient site ; its name is upon three or four marbles preserved at Scamino, supposed to be the ancient Tanagria. Farther on, at the outlet of the strait of Euripus, an area strewed with rums appears to have been the situation of Anthedon ; near it we discern the remams of the two moles, which in the form of a cresent enclosed the harbour, now abandoned ; we perceive also some vestiges of the city and port of Auiis, where the fleet of the Greeks under the command of Agamemnon anchored ; and of the city of De- iium, where the foundations of a theatre are still visible.

The island of Euboea, now Negropont, extends opposite to Bceotia as far as the coast of Attica, and approaches so near the Boeotian territory, that Chalcis, its principal city, almost touches the continent. The strait of Euripus is scarcely more than a canal ; the ancients threw a bridge over it, probably in the same place as that which now passes from Bceotia into Euboea ; it consists of two arches, below which are some mills, and several towers defend its extremities. This island is crossed through its whole length by mountains, whose tops are entirely bare, and their height diminishes as they approach the coasts. The valleys between them are covered with a soil, in which, under a very soft climate, corn, vines, and olives, flourish in great abundance. The pastur- age of Euboea has been renowned in antiquity, as well as its baths, and its two springs, one of which, it was pretended, whitened the wool of the sheep that drank of it, while the other dyed it black. The ancients reported strange things of this strait and did not even agree among them- selves; some stating the flux and reflux at seven times, and others, as Seneca, at fourteen times in twenty-four hours. A modern observer, father Babin, observed only the common ebbing and flowing of other seas, except on certain days, particularly during the first and last quarters of the moon, when the sea flowed irregnlarly ; du- ring the eleven days of the month, in which the water fluctuates, it changes its motion more than ten times a day, the wheels of the mills on it turning as often in contrary directions. Having stopped an hour and a half at one of these mills, he saw the course of the current change three times. During the rest of the month the sea rises twice a day to the height of one foot.

The modern name, Negropont, was given to this island by the Venetians, wlio held it for a long t-me, and built and fortified the city of Negropont on the site of the ancient Chalcis, where the diet of the confederated cities of the island sat, and where the celebrated copper ma- nufactories flourished. This city is built with narrow and dark streets, and surrounded with ramparts; the suburbs are inhabited by (Greeks and Jews, while the Turks occupy the part with-

in the fortifications. Few ancient cities have left ruins in such good preservation as Eretria ; its limits are marked by well-constructed walls, the citadel, the plans of the houses, and that of the theatre, the proscenium of which is almost the only part standing. The interior of the island is but little known. On approaching it from the isle of Andros, the first objects that strike the eye are the steep and pointed rocks of Cape d'Oro, formerly Caphareus ; the islets and shoals round this cape are still as dangerous as when the Gre- cian fleet was wrecked at the entrance of Aulis, on its return from Troy. 'iolent tempests con- tinually prevail round this promontory, and what aggravates the misfortune, in case of shipwreck, is, that the villages of mount Ocha in the neighbourhood are inhabited by ferocious Alba- nians, who, not content with drawsing away the wrecks of the

vessels, often murder the crews. These Schypetars, at first Christians, iiave become Mahommedans, although they have no religion except a few superstitious opinions; their wives still practise the Christian worship. Their ordi- nary occupation is the care of their flocks; they are called Acrianides or Barmades. The ancient Carystos, out of which the Italians made a mo- dern city, under the name of Castel-Ilosso, still contains 1600 Turkish families and 1400 Greeks. The inhabitants choose their ˆoivode, always from the Turks, because these are most numer- ous ; they also garrison the citadel. Beyond Carystos are seen on the declivity of mount (Jcha, now St. Elie, the quarries, from which the an- cients extracted the beautiful columns of cipolian marble, of which some now adorn the edifices of Rome. Entire pillars are still found here, which, after being cut, have been abandoned in conse- quence of some alteration in the state of Greece. Near the summit of the mountain the marble gives place to gneiss. Walnut trees are seen growing in it, and at this height an English tra- veller discovered the remains of a temple of sin- gular construction, that seems to have been un- known to Pausanias. It was built of |ireat pieces of freestone, on which were laid lar'jˆe flat stones with the entrance narrowed towards the top, like those of the Egyptian temples. The north of the island is less known than the south, being inhabited by a barbarous race, on whom the Turks themselves have not been able to impose their yoke.

Thessaly is separated by natural limits from the rest of Greece ; the sea washes its eastern coast, Olympus closes it in on the north, the chain of Pindus towards the west, mount (Eta on the south, and it is still further enclosed by mounts Pelion and Ossa ; all of them poetic boundaries. Diff"erent ramifications of these mountains run out towards the interior, covered with pastures and separating the charming valleys through which winds the Peneus, descending from mount Pindus and receiving a number of tributary streams, some of which fall in cascades; after passing the delightful valley of Tem])e, this river finds its outlet at thegulf of Thenna. The sun darts its rays on this enclosed basin, and the heat would be intolerable were it not for the refreshing breezes from the mountain chains, which give birth to numerous sprmgs of cooling

water, and shady forests. 'In picturesque views and enchanting landscapes,' says Dodwell, ' it surpasses Italy, and indeed every country in the world ; lively and clear colors heighten the effect of the soft undulations of the distant mountains ; no vapor interposes, as in Italy, between the landscape and the eye of the spectator ; and the limits of the hills, which bound the horizon, are fine and distinct, without that sharpness which offends the

painter.' The plains are covered with fine corn fields, plantations of olives, mul- berry and walnut trees, surrounded with vines, fruittrees, cotton, tobacco, or odoriferous flowers ; while cypresses and majestic plane trees decorate the scene. The declivities of the mountains fur nish excellent wood for building, feed a multi- tude of game, and afford pasture to the Walachian flocks, which regularly descend every autumn, after the fall of snow on the Pmdus, to enjoy during the winter the refreshinsc grass and mild climate of tlie interior. The Walach shepherds go about the middle of November, with the.r families and flocks, to fold in the great valley of the Peneus, and wa.tthe return of the fine season. These nomades, habituated to live in the open air, and clothed in plaids, made of goats' hair, fix their tents, of the same material, under the green oaks, and as much as possible near the rivulets and woods. There is nothing poetic in their manner of living ; they are half savages, with a fierce and martial air : wandering over mountains infested with wolves, and exposed to the depredations of Albanian robbers, they arm themselves to defend their flocks, and we need only to see them muffled up in their capes, and almost immovably fixed to one spot, casting ferocious looks over their sheep, goats, cattle, and horses, while their wives are groaning under the fatiguing labors to which they are doomed, to perceive at once that it is not among them we must expect to find the beau-ideal of rural life. When the rivers of Lower Thessaly overflow their banks, they raise their black tents, to go and seek pasture elsewhere. Sometimes they have the misfortune to lose a great part of their flocks by famine or different disorders. They sell their butter and cheese and wool, pay the capitation tax to the Turks, and, when the snow begins to disappear on mount Pindus, leave the plains, to gain their old abode on the heights. Although of a rough character, approaching to barbarism, this pastoral race has some estimable qualities : they are commended for frankness, which ap- pears to advantage in contrast with the general dissimulation of the Greeks. If we seek in Thes- saly for the descendants of the centaurs, who passed for supernatural beings by subduing the horse, and those unconquerable tribes who amused themselves by fighting with bulls, we shall still find men who justify this illustrious origin, by the efforts they are making to vindicate the liberty of their ancestors. The names of Boukavalas and Blackavas are celebrated in Thessaly; and if it should be objected, that our admiration of their acts of patriotism must be diminished by the recollection, that they are but bandit-chiefs, issuing from a mountain tribe who have well merited the name of Clephta-Choria, or the village of robbers, it may be asked in reply.

Were not many boasted heroes of antiquity of the very same description ?

On the southern side the entrance of Thessaly is most imposing ; the defile of Thermopylae, which crosses the chain of mount G;ˆta ; is the only grand route leading to it from Phocis : there are two mountain tracts which are

not practicable, especially for armies. The passage of Thermopylae has always been important for the defence of Greece, and it has been secured by walls and ramparts against the Gauls, the Romans, the Huns, and the Turks. In the age of patriotism, a chosen band of citizens has formed its chief defence against an invading army. On the right hand of the road is a hill on which a guard-house has been built in modern times, where, it is said, that Leonidas and his brave Spartans were interred. Every place on this sacred spot is interesting; but unfortunately the marshes, which have been formed on the coast, have buried, it is feared, many precious remains of antiquity under their rushes. The defile, however, still remains, and the warm springs which gave it its name ; while of the six rivers described by the ancients only three are to be found : the Boagrius, the Asopus, and the Sperchius. Over the last, through the narrowest part of the defile, is the way to the springs, the principal of which, of a sulphureous quality, but very clear, issues, bubbling out of the foot of a rock, and its passage covers the reeds with a calcareous crust. ISJear their source these waters form rivulets which flow into the sea. The ancients had baths here, and an altar in the neighbourhood to Hercules. Here are to be seen the remains of the fortifications which for- merly defended the pass ; and, near the source of the Asopus, the situation of the ancient Ile- raclea is still visible. The precipitous rocks of the CEta, crowned with planes, oaks, pines, and other trees and shrubs, and furrowed by the torrents which descend from it, render this scene very picturesque.

Issuing from the defile, and passing through fields of rice, tobacco, and cotton, we reach in a few hours the town of Zeitoun, the ancient Sa- mia, which is still overlooked by some ruins of the Acropolis. The exhalations from the marshes and rice grounds render the climate of this place unwholesome, which is evident from the pallid complexion of the inhabitants : they are about 3000 in number, mostly Greeks. Yet Zeitoun occu- pies a high situation, commanding a beautiful prospect ; on the one hand of the sea and the island of Eubcea, and on the other of the pas- sage of Thermopylae, to the foot of the CEta. Zeitoun has a bishopric ; its port is at the vil- lage of Stilidi, perhaps on the site of the ancient Phaleria ; it has also another port, the village of Agia-Marina. There are two ways from this town to the capital of Thessaly ; one by Pharsalia, the other by the coast of the ˆEgean Sea. The village of Eschinos, on the borders of the sea, is near the site of an ancient city, the ruins and acropolis of which are still visible. On a neigh- bouring height are seen some enormous olives that cover, with their thick foliage, the remains of foundations composed of massy stones, of a temple and of a church, which had replaced it ;

time having here put an end to the worsliip both of Pagans and Christians. Passing from thence we enter a charming country, watered by numerous streams, and planted with mul- berry, orange, and fisj-trees. This was Phtio- tis, the kinsˆdom of Achilles. It is not quite certain where Larissa-Cremaste, the capital of this state, was situated ; perhaps its ruins may be found at the foot of a hill between Gradityha and Machala.

On turitins the gulf of Pagasa, Pelion rises to view, covered \;ith groves and gardens : this picturesque amphitheatre extends across the country of Magnesia, terminated by mount Tisea, at the end of a large peninsula. Vines, olives, mulberry, and every kind of fruit trees, adorn the foot of Pelion, fine planes and chest- nut trees cover its declivities, and the villages appear embosomed in forests ; orange, citron, and fig trees fill the gardens of the peasants, who live by the manufacture of silk and oil, by their flocks of sheep and goats, by the game, and the fish on their coasts. The fruits are nei- ther so good, nor so abundant, on the east as on the west of the mountain, arising probably from the greater humidity of the soil, occasioned by the numerous springs which run down it. The Greek peasants in Magnesia manufacture cotton yarn, and make bonnets, hoods, and other garments. The town of Makrinitza, at the commencement of the peninsula, is built of stone, and inhabited by about 1000 Greeks, most of them laborious artizans, who, if they could have communicated their energy to all their countrymen, would long since have rescued Greece from the yoke of the Turks. In the neighbourhood stands the well-built village of ^^olos, or Golos, inhabited by Turks and Greeks, who are very difi'erent in their manners ; the houses are neat and lofty ; the streets are adorned with poplars, walnut-treets, cypresses, and planes, on which are a multitude of birds, mak- ing the air resound with their melodious strains ; and, in fine, those charming pavilions, where the Mussulmans give themselves up to the dolce farniente. The Greeks, though tliey have no pavilions, are not less fond of pleasure, but they are the])leasures of tlie table. At the distance of a league from 'olos is a dismantled fort oc- cupied by the Turks ; and there are many pretty villages scattered over the country, in delightful situations, among wliich are Drakia, Portaria, Saint Laurent, Saint Georges, and Lechonia. Some ruins are discoverable not far from this place, by some said to be those of Demetrias, and by others those of lolkos ; there are still to , be seen a cistern, the old foundations, and the acropolis. Here stands the village of Goritza, where, on festivals, the mass is still celebrated in the open air, after the eastern manner, near a spring which was probaljly held sacred by the ancient Thessalians.

Trickery, at the extremity of Magnesia, is in- habited only by sailors. ()n the eastern coast is the flourishing village of /agora, with about 500 houses, so shaded with chestnut and walnut trees as to resemble a great wood. The wolves here so easily elude pursuit, tliat in winter they come

and hi-wl m t'le inifUl of the village.

Many of the Zagorians emigrate, to go and work in other places, and return to enjoy the fruits of their industry. The principal islands, near the coast of Magnesia, are Skiathos and Scopelos ; the first is fertile, but badly cultivated, abound- ing in vines, fig-trees, and wild olives; it pro- duces also a multitude of goats, whose flesh is highly esteemed, and a great quantity of fish. Skiathos had two cities in ancient times, besides villages ; now there is only one village and a hamlet, and the miserable cabins form a striking contrast witli the richness of the scenery around, in which various trees and aromatic plants, border the rocks of white marble, which are seen in the uncultivated plains. In the church, a stone, bearing an ancient inscription, serves for the base of the communion table ; the papas make their parishioners believe, that it has some- thing mysterious about it, so that learned travellers have had great difticulty in obtaining a copy of die inscription. Scopelos is equally fruitful, but still less peopled ; it furnishes excellent wines, oranges, citrons, olives, and figs, and some silk. Here the bishop of the two islands resides ; there are also some monasteries, a dozen churches, and no Turks : it is independent.

In the way from Magnesia to the capital we find "V'elestin near the site of the ancient Pherae ; Pagasae was its port, on the gulf of tliat name. In the suburbs is still seen the fountain of Hyperia; it forms a little lake of limpid water, bordered with cypresses, poplars, planes, and olives, the verdure of which forms an agreeable contrast with the handsome houses, and the white minarets of the mosques around it. How- ever celebrated it was in the verses of Homer, and other poets, it no longer preserves any of the ruins of its ancient monuments. Near Lake Boebeis, surrounded with its waving hills, are the picturesque ruins of an edifice, which appears to have been a temple ; but the cities of Bcebe and Laceria have disappeared. Armyro is now one of the principal cities in the country ; it is inhabited by Turks : a few ruins prove thai it was inhabited in very early times; but more considerable remains are found at Aias, where there are stones ten feet thick, which are proba- bly of high antiquity. A broad and convenient road leads to Larissa, still the capital of Thes- saly. There are few places which have preserved their pre-eminence during so long a series of ages ; we must not, however, expect to find any remains of antiquity at Larissa: nothing is to be seen but dirty streets ; masses of houses irre- srularly built, but sometimes well grouped and mixed with cypresses and gardens, watered by fountains ; bazaars abounding with victuals, but with very little valuable merchandise; some mosques, surpassing in grandeur those of the other cities of Cirecce ; and a fine modern bridge crossing the Peneus, in the direction of the valley ofTempe. There is, iiowever, one remnant of ancient manners to be observed at Larissa ; it is the use of those old cars mourned on round sol.il pieces of wood instead of wheels, which in the heroic times

were used in the Troad. There are scarcely any (ineks in the town ; they have but one church, but it is the an:hie|.iscopal church, on whicli d(ˆpend ten bishops conipris-

ing, with the archbishop of Larissa, the exarchate of Lower Thessaly, and of all Greece. The Turks have made this place the capital of a pro- vince containing 100 villages, mostly scattered over the ancient plains of Pelasgia; the city, according to Dr. Holland, has 4000 houses, and 20,000 inhabitants, among whom he was sur- prised to find many negroes.

On descending from Larissa, along the course of the Peneus, we cross some delightful plains, once animated with a numerous population, and still embellished by nature, and arrive at the foot of the mountain chains, through which the river winds its course to the Thermaic Gulf. These plains are sometimes excessively hot, and the in- habitants are much troubled with intermitting fevers. Travellers should visit the vale of Tempe in the spring, if they wish to see it with- out danger in all its freshness and beauty of ve- getation. Here Olympus and Ossa, which seem to bound the bourse of the river on the north, present a curtain of verdure along the horizon ; the forests of Olympus are crowned with sum- mits covered with snow, that justify the epithet of snowy given to this mountain by Hesiod ; while the less elevated Ossa has less wood, and is not so much watered by springs. A little village, called Baba, stands below the conflu- ence of the Peneus and the Titaresus, in a circular plain near the entrance of the valley. Domes, minarets, and houses, are grouped together in a most picturesque manner, with vast plane trees, cypresses, and pyramidal pines. Some think that this village stands on the site of the ancient Elatea ; in going to it you coast along a pretty large lake, or more properly a marsh, called Ne- zero, anciently Nessan. On entering the valley of Tempe, you become sensible that the Greek and Latin poets have a little exaggerated its beauties ; there are many superior scenes in Eu- rope and other parts of the world. This defile, however, through which the streams of Thessaly flow into the sea, and which is enclosed by Ossa and Olympus, unites natural beauties of a kind rather striking than agreeable ; — a river, the wa- ters of which, always agitated, are shaded by planes, on the branches of which the wild vine hangs its leafy festoons ; rocks, more or less ele- vated and steep, raising themselves above the banks of the Peneus, in some places at the distance of not more that 200 or 300 feet ; whilst an ancient paved road, sometimes cut in the rock, some- times raised in terraces, and sometimes shut in by the narrow valley, passes along the river, often at a considerable height : such is Tempe. In the middle of the valley there is a cold spring at

the foot of a rock, where travellers generally halt, and near it a dismantled tower. A Latin in- scription on a rock states, that Cassius Longinus fortified this passage, but since the Persian in- vasion the Greeks have abandoned this part of their territory. In the spring of the year some boats navigate the Peneus, with hives, in order to collect the honey on the coasts, and en the sides of the mountains, while others drive their cars also, laden with hives, into the meadows of Pharsalia for the same purpose, which they after- wards leave, to follow the spring in the higher resions of the mountains.

On issuing from the valley of Tempe, we per- ceive the mouth of the Peneus and the bounda- ries of Macedonia. Here is a flourishing city of Magnesia, called Ampelachie ; the inhabitants of which distinguish themselves by the spinning and dyeing of cotton ; and it is thought that the waters of the country contribute to the brilliancy of the colors, which they know how to apply to this sort of thread : those of them who liave travelled in the west for the purposes of trade wear the European costume. There is a Greek school here, founded by the bishop of Salonica, Platomenos Dionysius. The whole population amounts to between 5000 and 6000 souls. The nearest sea-port for the exportation of cotton is Karitza, about six miles distant. Another indus- trious place, of the same country, is the little town of Ilapsiani, which has a Greek school by tlie same founder, and also exports the same articles. Returning to the south of Larissa, we arrived at the ancient Pharsalia through some narrow passages of the mountains. Not far from it was situated, on the Eripeus, the city of Me- litea, which is reduced to a very small popula- tion, as are many others, which once peopled Thessaly. Ascending towards the source of the Peneus, we pass by Triccala, anciently called Tricca, in the middle of llie last century the most considerable city of the province ; but the cruelty of the Turks, and the pestilential exhala- tions from the rivers in the neighbourhood, have destroyed its splendor : it occupies, however, a charming situation in a valley of the Peneus; its Greek churches, its mosques, its old citadel, and houses, intermingled with groves of trees, form with the verdant scenery around a most delight- ful picture. The market is held under the shade of vines, but the houses are surrounded with filth : it contains about 7000 inhabitants.

On the side of Mount Findus, near the village of Kastraki, there are some ruins which are sup- posed to be those of the ancient Gomphi ; and in this mountainous region are to be found the Meteores of Stagous, little monasteries, built on the edges and platforms of precipitous rocks, standing like pyramids in a wild desert. Here, free from the attacks of robbers, and more useless to society than their brethren in the plains, live a number of monks; who will, however, aflbrd the lites of hospitality to any traveller who shall have the courage to suffer himself to be drawn up by a rope and pulley. It is indeed no joke to find one's self suspended at the height of 1.50

feet, by a simple cord, between heaven and earth, at the discretion of these solitary beings, by whom every stranger might justly be suspected. Tliere is nothing particular in these monasteries beside their elevated situation ; the monks seem to have as little occasion tq think as the birds who nest in their rocks ; they have scarcely any books, and trouble themselves little with the history of their aerial dwellings. Under the reign of Ali Pasha, they were compelled to become the gaolers of his state prisoners. For- merly there were twenty of these monasteries, now there are only seven, the most considerable of which are those of Meteoronand Varlaam. They consist of hermitages, chapels, and altars, built on the platforms and in the holes and crevices

of the rocks, and the hermits who inhabit these inaccessible places hare renounced all earthly wealth ; they, however, possess considerable revenues, and pay a rent to their landlord as well as a tribute to the patriarch. At the bottom of these five rocks Stagousoccupies a territory fertile in cotton, mulberries, and corn : the inhabitants manufacture the silk and send it to the depots ill Larissa. The town has a bishop, who is a >uft>af4an of the archbishop of the capital. The river Cachia, flowing through the country and uniting with the Peneus, seems to be the Ion of the ancients.

Leaving vl'tolia, and proceeding along the southern coast of the Corinthian Gulf, we arrive at the bay of Salone, formerly Crissa, which ex periences a regular tide, of which there is little appearance in the whole of the gulf besides. The fine plains of Phocis, watered by the Cephi- sus, are at first concealed by mounlains and rocks ; the country, however, extoads between the bay and the mountains ; and the scenes where the festivals of Delphos were celebrated open to the view. At the entrance of the bay, where yEanthus once stood, is now situated the town of Galaxidi, inhabited by a race of men, almost barbarians, devoted to a sea-faring life, despising every thing that has the appearance of convenience and comfort, livinij on vegetables and fish, and in miserably built houses : their town is situated on a naked and barren rock. It i? thought, that the fear of the cupidity of the 'i'urks has induced tiiese habits of wretchedness, though they possess about fifty buildings. Pass- ing the port .Taniki, and the mouth of the Hyleus, which flows from the plain of Malan- drino, we come to the road of Salone, and the mouth of the ancient Plistus, now called Crissa, as well as the town situated on its banks; the ancient town, together with Cirrha, its port, exists no longer. Crissa contains about 1200 or 1,500 inhabitunts, and is the see of a bishoip. Salone, occupying the site of Amp'ijssiis, is jiiore

considerable : it has about 6000 inhabitants, of whom more than 2000 are Turks. There are in this place some remains of the sepulchres of the ancient Amphissians.

Ascending the Plistus, and crossing the plain of Crissa, we soon reach Delphos; here the ancient hippodrome has disa])peared, as well as all that once rendered this place so famous in Greece, and made it, as it were, the seat of government for the priesthood. The port of Crissa formerly experienced the sanguinary ven- geance of these priests, for h.avinir molested the pilgrims in their way to the shrine : the town was razed, and the inhabitatits exterminated. The curse of Apollo is, how ever, now forgotten, and the plain is overshadowed with olives and mulberry-trees. On approaching Delphos are seen some ancient cryptajcut in the rock ; imder the arches we perceive sarcojihaci, attached to the sides of these caves, with their coverings re- moved and for the most part broken : over every two sarcophagi an arch is formed, as is cus- tomary in Esrypt, in Persia, and even in Italy. Some of the foundations of the walls of Delphos are still visible, and even the remains of an entrance composed of small stones cemented

together; large blocks of stone are dispersed here and there in the neighbourhood, probably intended for the repair of the works. Tiie ancient city stood in a little circular and deep valley, surrounded by the rocks of Parnassus, with its triple peak, and those of mount Cirphis, and almost entirely separated from the rest of Phocis. The place is so small, that it is difficult to con- ceive how a city of any considerable size could be built there : very few fragments of marble have been discovered ; and yet we cannot suppose that much of it is buried in the ground, since there is a very shallow bed of soil to cover the rock in this narrow valley. Some brokea pieces of earthenware are also found covered with a fine black and red varnish. The splendid temple, elevated by its situation over the other edifices, enriched by the ofl'erings of nations and kings, embellislied with the masterpieces of sculpture, and constructed with the greatest magnificence ; that temple, $o protected by public veneration, where different nations deposited their treasures, where the blood of victims incessantly flowed, and where the oracle of the Pythoness frequently decided the fate of empires ; all has disappeared, with the exception of a small part, which has escaped the attention of most travellers, and which Mr. Smart Hughes alone seems to have penetrated. It is a kind of cell, or cave, dark and dirty, where it is difficult to breathe ; on the north wall, formed of large pieces of cut stone, a great many inscriptions are seen ; it was with the greatest trouble that the English tra- veller deciphered the best preserved of thpse in- scriptions, containing the act of cession made to the temple; thus leaving no doubt of the ancient destination of this monument.

*The Castalian fountain is almost the only thing which remains unchanged at Delphos ; it rises, as formerly, at the foot of the peaks of Parnassus ; the water, clear and pleasant to drink, falls from a rock, covered with an overhanjiug yew-tree, into a basin shaded by a fig-tree, and descending by a ravine of the valley to join the Plistus. Spon, after drinking of the fountain, was so inspired that he composed two Greek quatrains on the spot; and Chandler experienced something of the same sensation; but it appears that the charm no longer operates on poets by profession. ' At Castri,' (the pre- sent name of Delphos) says lord Byron, * we drank of the water of a dozen rivulets, some of which were none of the clearest, before we could decide, to our satisfaction, which was the true Castalia; and this even had a detestable taste, proceeding, I suppose, from the fallen snow.' Near the spring some traces have been discovered of the bath of the Pythoness; the descent is by a few steps. The Delphian girls, still very handsome, are seen at the present day drawing water from (his fountain, which is now only applied to the most common uses. Castri lias not more than 100 houses, and those, for tlie most part, miserable cabins with only one room eacli ; the best have only a first floor for the residence of the family, while the ground-floor is divided, as is customary thron-jjiiout tireece, into a stable and a cellar. Poor, and peaceably disposed, the Castriots seldom stray from their*

valley, and' are rarely visited by foreigners ; the Turks, even, forget tliera. They are Arnaouts by their origin ; they mostly speak Greek and Albanian ; and, notwithstanding their poverty, know how to read and write. Silk and oil are their principal productions ; but they cultivate some grain also upon the ancient terraces, con- structed for a very different purpose.

Upon a declivity of mount Parnassus is a little convent, the monks of which, subsisting by the culture of their fields and by alms, have always some bread and clieese, olives and wine, and a chamber without furniture, to offer to travellers. In their convent are seen some fragments of antiquity, such as metopes, altars, and inscrip- tions. Not far distant lie some great blocks of stone, which probably have been cut from Parnas- sus at a very early period ; some think that they are the same as those which, according to Herodo- tus and Diodorus, crushed the army of Xerxes. Parnassus, extending as far as Boeotia, is now called Lyakoura; this barbarous name, however, is not quite modern : anciently one of the moun- tains of this chain was called Lycorea, and one of the most ancient places in the country Lyco- reia. At a village in the mountains, bearing the same name, it is said, there are some antiquities; in winter the snow forces the

inhabitants to leave it, and betake themselves to the neighbouring villages. Parnassus is a diird rate mountain : the snow rests on it only a part of the year ; and it is thought that none but subalpine plants grow on it ; yet a most extensive prospect is en- joyed from its summits, on the one side beyond Euboea, and on the other across the g"ulf of Corinth, as far as the mountains of Pelopon- nesus. The whole of Phocis lies under the feet of the spectator, with the poor villages that occupy the places of the little flourishing re- publics of the Phocenses. There is only the plain watered by the Cephisus, now IMauronero, between Parnassus and the mountains of Thes- saly. Upon a platform of Parnassus is a grotto of 300 feet Ion? by 200 broad, which receives only a feeble light through a narrow and lowˆ entrance ; stalactites hano; from the roof in the form of draperies and chandeliers ; the stalag- mites, that rise from the ground, assume the most sin2:nlar forms ; and the water, dropping from the top of the grotto, renders the floor very slippery. At the end of this cave there is a pas- sage, which perhaps leads to another. An an- cient inscription on the rocks shows that the place was dedicated to the nymphs and the god Pan.

Proceedirtg alonsˆ the eulf of Aspra Spitia, to the ea-t of that of Salone, we arrive at Dystome. The country round it is planted with the Ker- mes oak, which must have been very ancient ; as, according to Greek authors, the town of Ambryssiis was formerly engaged in the culti- vation of this article. This town must have nearly occupied the site on which Dystome now stands From Aspra Spitia, formerly the gulf of Anticyra, hellebore is no longer exported, but a pretty brisk trade is carried on in the productions of Livadia. Near a barren coast is situated the monastery of St. Luke Styrites, built in the Gothic style ; the church, which attracts many pilgrims, is

partly paved with great flags of ancient green stone. Spon found, in the monastery, 150 monks, and in their cellar vessels twenty feet long. In the library there are only a few manuscripts spoiled by the dust. Near St. Luke stood the port of Balis, where they used to fish for purple shells. On this port also is the little port of Kokosi, and two little islands; Didascalo, receiv- ing its name from an ancient school, now in ruins and the abode of wild pigeons, swallows, and immense bats ; and Ambelia, full of rocks, where falcons nest in great numbers. Elatea, the ancient capital of Phocis, is in ruins : and the tomb of Laius, and the temples formerly scattered over it, are now no more. It is still, however, possible to assign the situations of the fortified cities of the Phocenses. Elatea was probably situated at the entrance of the defile, leading from the plain of the Cephisus to Ther- mopylae, where now the hamlet of Turco-Chorio stands. Ascending the Cephisus, from this place, we find the remains of an ancient fort, perhaps Drymasa. Other ruins, at the entrance of a rc"id leading to Delphos, seem to mark the situation of the ancient Charadra; and the village of Agourea is probably on the site of ancient Lilaea. There are also remains of the

foundations of walls and towers in the modern villages of Ladon and \ e-lizza, the latter the Tithorea of the Greeks. Near the village of St. Blaise must be sought the site of Panopeus ; the circuit of the city is marked, and the ruins of the citadel are on a steep rock. Tliere is the appearance of an acropolis near the village of Thavlia, the ancient Daulis probably, pleasantly situated on the Parnassus. On this mountain, and at the foot of the chain, there were eight ancient places, not less fortified by art than by their situation, being founded on precipices and heights very difficult of access ; walls, flanked with round or square towers, fol- low the inequalities on the surface of the rocks, on the declivities and at the foot of which are some towns : forts only, without towns, protected the most important defiles of the country.

The half savase district of A'.tolia presents it- self on passing the mountains of Pindus, whicii leads from the frontiers of Epirus and Macedonia to Thermopylae, and forms the barrier of the north of Thessaly.TheAchelousand the Evenus, descen- ding from the same chain, bound it on its two sides as far as the sea, into which they empty themselves. Upper iEtolia has always been the resort of rob- bers, and left uncultivated ; but lower ˆLtolia, with ˆTiolia the maritime district,was more civilised, and contained some flourishing cities, the names and monuments of which have disappeared, and we can now scarcely recognise a single trace of an- tiquity. Aspropotamos and Fidari are the mo- dern names of the country, and the chain of the Pindus, separating it from Thessaly, is called Agrapha. Foreign people and foreign manners have been imported into this country; and the true descendants of the ancient Greeks are to be found among the poor goatherds, who forsake the soft climate of the plains to take refuge from oppressions among rocks and forests on the Agrapha, buried in snow during a great part of the year. These shepherds have some vivacity, energ}', and, above all, the love of liberty, and

are wo.thy of that improvement which we may hope is awaiting them. The climate of their mountains is not so rough as that of Switzerland ; fine forests, wholesome springs, valleys delight- ful in summer, flocks which furnish them with ever)' necessary of life, and liberty are their in- heritance. They have a bishop residing at (jar- diki, and tliere are some anchorites dispersed over the deserts of tiie mountains. The canton of Carpenitze, near that of Agrapha, is inhabited by Walacks and Mahommedan Albanians ; other Walacks, formerly living peaceably in x- \podotia, of which Cosina was the capital, forsook their establishments, harassed by the despotism of Ali Pasha, preferring a life of freedom on

Mount Aninas.

Cavari, a dreary province of Upper .'Etolia, appears to be composed of rocks separated by precipices, with a few cabins here and there, completely isolated by the snow during several mouths of the year; so that the inhabitants are, during that lime, obliged to live on provisions which they have collected in the tine season, and which are generally very miserable. Chestnuts serve them for bread, and to these they add some salted meat, &c. The chief place is Amourani ; the district contains sixty-three villages, a bishop, and about 12,000 inhabitants, nearly one- fifth of tile whole population of Upper ˆttolia. These miserable creatures are reduced to the most abject .state. They are seen in crowds in the lower regions even as far as Constantinople, and the Ionian Isles, displaying to the Greeks and Turks the wounds and disg'vsting diseases which they have partly provoked oi brought upon them- selves in order to excite compassion. They say that these beggars have medicaments to give themselves the gutta-serena, and to bring out li\ id wounds. Expert in every art of begging, they gain considerable sums, and, though taxed by the Turks on the way, carry home sufficient to live upon till they are able to take new ex- cursions, and even lay up something against old age. Their wives, in die mean time, are bur- dened widi all the labors of the family and the field. These people are supposed to be derived from a tribe of those Bohemians which still infest Albania, and it appears sufficiently probable from their swarthy complexions, their thick and matted hair, their intemperate habits, and wan- dering manner of life. All the advantage they liave over the Ghiftis, or Bohemians, they owe to the influence of Christianity, which they pro- fess, and which preserves them from still greater barbarism. Amourani is surrounded with the rocks of Mount Corox, and contains about 1000 people ; the way to it is very dangerous, leading along frightful))recipices, and over mountains that beasts of burden cannot climb.

In proceeding along Southern ylltolia, towards the sea, we cross the district of 'lochos, bounded on the west by the Acheloiis, and abounding in corn, maize, olive-oil, cotton and currants. Ther- mus and other cities used to embellish this charming country ; now there are only a few villages, the principal of which is Vrachori, in- ba!)ilcd by Mussulmans, Christians, and Jews ; the latter carry on a trade in silk, and the former manufacture morocco leather. A lake at some

*distance, eighteen miles long, occupies the bottom of a basin crowned with woody hills ; it is *he ancient Trichonium, now Souli ; it is divided by a marsh, and its waters flow by two branches into the Acheloiis ; a great causeway, resting on 366 arches, encircles a part of it, a work taking its date from ancient times, when the lake presented to view an active and prosperous population ; now there are only the huts of a few butchers and*

fishermen. There are to be seen in this country the ramparts and gate of Arsinoe ; An- gelo-Castron now stands on its site, built under the later Greek emperors : there is nothing re- markable here, but an ancient monastery bearing the name of Pontocrator, or the ruler of all things. Through a defile of the Aracynthus, infested by banditti, we enter the maritime district of Zigos ; the valley of the Tombs re- minds one by its name of the crimes often com- mitted here, and it is necessary to have a good escort, in order to pass this place without fear: but the precipices with which it is bordered warn travellers of another sort of danger. On the sea shore and at the mouth of the Acheloiis we find a more hospitable country, and softer manners ; the chief employments of the people lie in the fisheries and olive-plantations. Tiie little islands of the Echinades almost join the shore ; but Anatolico, the ancient Pemili, remains separated by a channel ; 300 Turkish and Christian families inhabit it; the climate is unwholesome and dis- eases frequent.

The .Etolian coast presents scarcely anyplace of note, except Missolonghi, or Messologgion, situated on a channel abounding in excellent fish. The inhabitants carry on a little coasting trade, salt fish ; make salt and boutargue ; and ex- port acorn cups for dyeing and tanning. The oak of ˆEtolia suits better for this purpose than that of Peloponnesus. There are about 80O houses in the town, a few small Greek cliurches, and a mosque ; the merchants have some ware- houses and about thirty small vessels. The Greek women here are very fond of gowns of a very striking color, as red, blue and yellow, and wear over them a shawl of a color equally lively. The marshes extend some miles along t!ie coast, so that the vessels cannot approach very near the shore : on the one hand, the sight is offended by these stagnant spots, whicii are tiie resort of a multitude of aquatio birds ; and on the other it is astonished by the vigor of the vegetation around, especially in the ganiens. Cotton, to- bacco, sesamum, and maize are equally thrivuig. The coasts of Carthaga furnish excellent wine ; and near this town there appear some ruins, pro- bably those of ancient Acragas. llippochon, at the mouth of the Avenus, seems to occupy the site of Chalcis. The most considerable ruins, in the neighbourhood of Missolonghi, are those which the (Jreeks call the Castle ot St. Irene; on an oblong hill there are some walls flanked witli square towers, and at the western end the remains of the acropolis still more ancient ; rubbish, intermixed with tiles and earthenware, fill the interior of this ancient city ; and on blie south side is a theatre, some of the seats of w Inch are still visibie. Near the theatre is perceived a square spcce cut in the rock, below the level

of the soi., which seems to have been a granary : near the middle of the town there are some walls of a beautiful construction, but as there is no marble, no sculpture nor any inscriptions, the name of this place is quite unknown.

On the west of the Evenus or Fidari extends another district, answering to the ancient yEtolia Epictetes, called in the Levant the Venetian, It has sixteen miserable villages, and about 1357 Greek and Mahommedan families, and offers nothing remarkable, except the castle of Lepanto, formerly Naupacte, commanding with that of Pat-ras m the Morea, the entrance of the great gulf of Corinth ; it occupies the extremity of the cape once called Antirrhium. Taphius is the highest mountain of this depopulated district. In a grotto, not far from Naupacte, the young Greek girls consult the lot about the choice of a husband, as once they addressed their prayers to Venus. The country on the gulf of Crissa, to the east, inhabited formerly by the Locrians, now forms the province of Malandrino, inhabited by about 6000 people, and infested by robbers, who find a refuge in retreats inaccessible to those wlio pursue them. The village of Malandrion, in a valley watered by the Hyleus, and Galaxidi with its port, are the principal places ; the poverty of the latter port sufficiently proves the stagnation of trade on this coast.

The aspect of the country and the manners of the inhabitants of Acarnania have undergone little change since the days of antiquity. It con- tains, as formerly, only fortified towns, or groups of houses; the little islands and bays are favorable to piracy, as they once were, and the interior still serves for a retreat to bands of robbers, whose ferocity has not diminished since the earliest historical times of Greece : the district of Heromeros, opposite to Ithaca, is a favorite retreat for them. The forests, chiefly consisting of oaks and chestnuts, abound in wild boars and deer; meadows and desert valleys, lakes, rivers and mountains, shaded with pines and cypresses ; and the absence of all traces of the plough, and of the haunts of civilised society, remind us of the im- mense savannahs and heights of South America. A few poor villages widely scattered form the residence of the modern Acarnanians; while some solitary chapels, or monasteries show the religion whicli they profess. Not one flourishing city has assumed the situation of those of the ancient people, the ruins of which have for the most part disappeared ; Metropolis, the ancient capital, and Stratos lying in the east of the country, cannot be discovered with certainty ; but the ford of the Acheloiis is still practicable, except in winter. In the environs of Lepenou, supposed to occupy the site of Stratos, is seen the monastery of Licobiti, the most considerable in Acarnania, containing about twenty monks, and the village of Machala, consisting of seventy houses ; not more than ten families form the population of Medenico, on the declivity of mount ^"ips. Here the ruins of ancient Medeon are visible in several large

blocks of stone, near which is the defile of Porta, by which it communicates with the sea ; in this pass is situated the little monastery of Saint George. The ancient port of Limnea is in the same state of

ruin ; it is now called Loutraki, and has .i custom-house and some warehouses, but attracts scarcely any vessels. There is little more activity in the small port of Candili, at a short distance from which are some ruins, probably of the city of Alyseus. So great has been the decline of this district, that of 224,000, which constituted the former population, there are said to be not more than 8000 remaining, including Agrais and du Valtos, and its depopulation is continuing. The little trade that is carried on by the inhab- itants, is transacted at Dragomestre, but a part of this town, near the sea has fallen into decay ; the remainder is inhabited by about 100 Greek families and some Mahommedans ; the only an- tiquity to be met with is found in the remains of a fort. It is surrounded by deserts, the great forest of Menine, and the monastery of Veder- nico.

On the west, towards the gulf of Previsa, are the ruins of a place very celebrated in Grecian history, or rather in that of Rome — the city of Actium. Here the monuments, both of the vic- tors and the vanquished, have sunk into decay, and we can scarcely recognise the foundations of the temple, the theatre, and the site of the nau- machiae. The city of Nicopolis, built by Augus- tus opposite to Actium, no longer exists, though the principal monuments, and even the houses, are standing, having survived the existence of tlie Roman people. At some distance from Actium is the lake of Bulgaria, surrounded by thick forests, and the monastery of Pleya, almost as wild as the country. Warm and moist vapors rise from the marshes near the sea, and noxious animals, such as serpents, vipers, and trouble- some insects abound. The most considerable place in the west of Acarnania is Vonitza, a town inhabited by 100 Greek families, and the capital of a canton containing 2550 people; it stands m a valley watered by the Kiphalo-Vrysi, and is commanded by a mountain fortified by the Venetians. Dye-stuffs, rice, and maize, are ex- ported from this place to Sainte INIaure. There is a convent near, bearing the fine name of Paradisi, whither pilgrims resort to be cured by the V'irgin of the fevers with which they are afflicted.

The gulf of Ambracia, now Previsa, strait at the entrance, and incumbered with pieces of rock, will not admit large vessels ; it washes the canton of V' onitza, and the whole of Acarnania. A number of creeks and bays indent the shores of this gulf, inhabited by pelicans, cormorants, swans, and other aquatic birds ; crabs and shell- fish of different kinds, as well as dolphins, mul- lets, eels, and a variety of other fish, employ the hands, that under the despotism of the Turks do not find security in agriculture. A north-west wind, called Imbat, blows on this gulf from eleven o'clock till sun-set, and

during this time the fleets carry their shell-fish and other marine productions to the coast of Acarnania; at the close of the dav the sea is calm, and the fisher- men apply themselves to their fishing during tlic night. The island of Sainte Maure or Leuca- dia, once a part of the continent, and separated in fact only by a narrow strait, is now reckoned among the Ionian Isles, under the protection of Enjrland. The neighbourins islets are favorable

for pirates, and the channel itself was much in- fested previous to the arrival of the English; Leucadia, however, has a fortress which com- mands part of. it, but that can be bombarded from the coast of Acarnania. There are still to be seen the remains of a bridge built over the strait by the Turks. For about twelve leagues round Leucadia presents good pasturage, and fields fertile in corn and fruits, such as oranges, citrons, figs, and almonds ; yet the harvests do not furnish much more than half the quantity consumed by about 18,000 people, contained in the capital and about eight or ten villages, the remains of thirty, which once existed. For fur- ther particulars of this island, as well as of Ithaca, Cephalonia, &c., see Ionian Isles.

Beyond the gulf of Arta, and at the foot of the mountains of Albania, two little republics have not long since displayed the heroic valor of their ancestors, or rather that austere courage and in- flexibility of the ancient Spartans, which some- times bordered on ferocity. Parga and Souli have acquired some celebrity in the records of their country. Ancient Epirus, or Lower Albania, is a mountainous but fertile country, supporting a population of Greek origin, but as warlike and energetic as the other Greeks were mild and peaceable. The situation of their villages is such as to induce them to form themselves into in- dependent tribes, and to carry on a warfare against their neighbours, or any troops that might be disposed to subjugate them. They cultivate the soil no farther than is necessary to afford them a supply of miserable food, but they like to possess large flocks ; and, while the life of a shepherd is in other places peaceful, here it is intimately connected with the profession of arms. Privations do not affright them ; they delight in danger;' if their enemy injures them, they live in the hope of taking signal vengeance ; their fiery passions know no moderation, and, if despair seizes them, they are the first to sacrifice every thing that is dear to them. When they lose their liberty, and their native soil, nothing any longer attaches them to life; they are totally unmanned, become incapable of any generous resolution, and brutalise in servitude. We refer here to the Epirots, who practise the Greek worship, and speak the Greek language ; the Armaouts, or in- digenous Albanians, unite the greater

barbarism with the fanaticism of the Mussulmans. From some remains of antiquity it would appear, that the Parginots very early established themselves in this country ; but it has been in modem times, that they occupied and fortified the steep rock on which they lately established themselves, perhaps to shelter themselves from the inroads of other Albanians. Their citadel was on the rugged summit of a precipice, beaten by the waves, and commanding a little territory of unequal level, but well watered and covered with corn, groves of cedars and cypress, and plantations of olive and orange trees. Parga, notwithstanding the weakness of its population, amounting only to 5000 souls, made its inde- pendence to be respected by the Venetians, though it could not hinder them from putting a garrison into its port, which had become im- portant for the protection of the coast of Epirus. Vol.. X.

It remained for tiie ferocious Ali to complete its ruin, and the expatriation of its people, as we shall see in the slight sketch of modern Grecian history, which we intend to present to our rea- ders. Souli, which has sustained a more bloody and obstinate struggle against the same oppres- sor, is composed of several villages situated among the rocks, and surrounded with fields, pasturage, and plantations. A river, which ap- pears to be the Acheron of the ancients, and which falls into the sea near Parga, waters this mountainous territory, a little nearer to the sea than Janina, the capital of Epirus. Its popula- tion is greater than that of Parga ; it was not able, however, to protect it from the forces of Ali Pacha, who attacked it with 12,000 men; but of this barbarous and unwarrantable outrage we shall hereafter speak.

III. The Peloponnesus has received the mo- dern name of the I\Ior.ia, according to some, from its plantations of mulberry trees ; and to others from the epithet of Oraia, the Beautiful, which was given to it by the ancients. Here, as in Great Greece, a few ruins are the only remains of flourishing kingdoms and republics ; and it is surprising even to find these, after the many natural and political revolutions which this pe- n nsula has experienced. Of the 2,000,000 in- habitants once living here in splendor, not more than 300,000 now remain, scattered chiefly in mean villages, and barely subsisting by the pro- duce of their land, their flocks, and other re- sources which nature has provided for them. Almost the whole of the peninsula is surrounded by mountains of a small elevation, barren on their summits, but fertile at their bases. Mount Pholoe, in Arcadia, and the Taigetus in the coun- try of the Spartiots, are distinguished in those chains which stretch to the southern extremities. The Alpheus, the Eurotas, and the Pamisus, which issue from the mountains of the interior, flow through the valleys, the fertility of which has been justly celebrated by the ancients.

The corn harvest here is abundant. The wheat is gathered in the month of

June, and yields ten or twelve per cent. A clayey soil, re- quiring little culture, constitutes the fields des- tined for the growth of corn ; but the defects in their instruments of husbandry necessarily dimi- nish the harvests. The barley of the peninsula is gathered in i\Iay, but is not equal to the wheat, which, notwithstanding the bad cultivation, is exported in great quantities ; and the Ionian la- borers, who come to assist in the harvest of the peninsula, are paid in this commodity, which is scarce in their islands. The bread of the Morea is however bad, on account of their negligence in the grinding and baking.

The soil of the peninsula is not less favorable to the cultivation of vegetables. Instead of those large forests of lemons, oranges, and citrons, which formerly stretched as far as the eye could reach in the environs of the principal towns, we now see only small orchards of them ; and the lemons are small, and rather acrid : the peaches, pomegranates, and almonds, also partake of this flavor, as well as other stone fruits, which they have no idea of improving by graflinu- The figs have a more agreeable taste, especially in the

neighbouihood of Cakmata, owing to the pro- gress of caprificatioii, which is practised ahnost throughout the archipelago. There are two kinds of fig-trees, the wild and the domestic, both of which bear fruit; but that of the latter falls before it is ripe, if precautious be not taken to prevent it. When the wild figs are ripe, which is in the months of June and July, they are gathered and fastened by strings to the domestic fig-trees ; soon afterwards small gnats proceed from the wild figs, and introduce them- selves, by what is called the eye of the fruit, into the still green figs of the domestic tree. This is called caprification, which process gives to the fruit great sweetness. The insect which con- duces to the maturity of the fruit transforms itself into a worm ; to prevent its hatching, the figs are placed in an oven, or kept in jars her- metically closed. The olive-tree seems to belong peculiarly to the Morea, it shoots and multiplies every where, though in a wild state ; and there are still the remains of woods and forests of these trees. Under the government of the Venetians, the Morea furnished an immense quantity of oil, the best of which is now chiefly produced in Corinth, Napoli di Romania, and the district of Maina. Although in other parts the olives are not cultivated with equal care, the harvest is always abundant.

It is different with regard to the silk : mul- berry trees do not fail, or rather

would not fail were they to establish plantations ; but there is a great mortality amongst the silkworms, which the Greeks attribute to sorcerers, instead of their own want of precaution : in the Morea 100 pounds of balls only yield from seven to eight pounds of silk. Neither is the Morea in it3 present state a wine country : vines are abun- dant ; but with the exception of that of Misitra, and St. George in Corinthia, the wine is common, and in order to preserve it they mix it with resin, or even with turpentine, which renders it bitter. The Corinthian grape, which is the sort particularly cultivated by the husbandmen of the Morea, appears to have been transplanted from the isle of Naxos, and to thrive best in a dry and flinty soil which prevails in the penin- sula. The vintage for these grapes is at the end of July and during the whole of the month of August: a very good wine is extracted from them, but, as they yield but little, they are prin- cipally dried for exportation. It is chiefly along the gulf of Corinth, and in the Ionian isles bor- dering on the Morea, that vineyards of this kind are found : they have succeeded to the planta- tions of tobacco, with which the Morea was for- merly filled, and the quantity of Corinthian raisins which is generally exported in time of peace is valued at 6,000,000 or 8,000,000 of pounds. The cotton of the peninsula may vie in fineness and whiteness with that of Salonica and Smyrna : flax grows spontaneously in all parts of the Morea, but hemp fails there.

Argos, Messenia, and Arcadia, are capable of feeding great numbers of cattle, and the pastoral productions would enrich the inhabitants, had not the race of domestic animals greatly dege- nerated; the wool of the sheep also, which is naturally long and silky, would, if treated with

suitable care, equal that of the Merino breed . Navarin and Napoli di Romania exported ereat quantities of it not long since. The butter, though excellent when fresh, will not keep, from a defect in the preparation. They export a quan tity of raw hides, and acorns.

Plains covered with rosemary, thyme, wild thyme, mint, wild fennel, and other aromatic plants, furnish the bees with materials for excel- lent honey and wax ; which, however, the people neglect to purify, and sell it in its coarse state. Many other vegetables wodld grow here in abun- dance, were the inhabitants to bestow more attention on them : it seems even certain, that the sugar-cane would succeed very well in some parts of the Morea.

Planes, carob-trees, cypresses, mastich-trees, kermes-oaks, pines and firs, together with laurels, roses, and myrtles, grow near the towns and in the deserts of the Morea: the large pines furnish excellent wood for building; those of Elis might be employed in the consti'uction of men of war. The resinous wood of the Morea produces much tar, pitch, and turpentine, and slips of it, lighted, supply the place of lamps to the cottagers. They extract a

kind of aromatic oil from the berries of the laurel, which is efficacious in the cure of rheumatism and sprains. Another kind of oil is obtained from the pistachio : and the Moreans have more than once in time of famme mixed the ground root of the arum maculatum with 'their bread. With the rhus cotinus, which the Greeks call chrysoxulon or golden wood, the Moreans dye an orange color : the fruit serves to season their dishes. The agnus castus, which grows on the borders of rivulets, furnishes them with osiers. It may be supposed from the state of agriculture, that farming is at a very low ebb in the Morea ; notwithstanding which they very well understand the conducting of water even to the distance of some leagues, though there is still much improvement required in that as well as in other branches of husbandry. The manufacturing interest is not more flourishing : necessity has taught the Moreans to manufacture many articles, such as cotton, leather, felt, and even in some places they fabricate silks, gauzes, stuffs, Sec. ; but for other merchandise they are dependent on foreign nations. It is to be re- marked however that the Mor«>ans, though but indifferent manufacturers, are excellent mer- chants: they have abolished all the foreign houses in their ports and engrossed the whole of the commerce. ' There is no nation,' says Sero- fani ' which can be compared with the Greeks for avarice, parsimony, cunning, and activity.'

It is a remarkable circumstance, that the isth- mus of Corinth, which anciently served as a link between the Peloponnesus and Great Greece, and contained an opulent city, should have become in 1822, after so many ages of nothingness, a rallying point for the free Greeks and the seat of their government until the city of Minerva shall be in a condition to receive it. In the foundations of the ramparts and bastionS; which surround the acropolis, may be perceived ancient layers of stone of Pelasgian or Cyclopean workmanship. The fountain of Pyrenus issues from the foot of the mountain, on which the

citadel stands ; and, farther on, is the fountain of Lenia ; which pushes from the rock, and swell- ing in a rivulet, after having watered Corinth, empties itself into the gulf of that name. Fragments of the fluted columns of the ancient temple of Minerva are remaining; and other vestiges may still be seen on the declivity of the mountain.

At a short distance from the town there are seven fluted columns standing, which still sup- port a part of their ancient architraves, and which the inhabitants of the country suppose are the remains of the temple of the Sun. Judging by the descriptions of Strabo and Pau- sanias we may also recognise the foundations of the theatre and gymnasium ; but of the famous temple of the Alelanean Venus no traces are to be found, and from the present melancholy aspect of Corinth no one would suppose it to have deserved the name of tlie 'city of pleasures.' Its ancient port of Lechaeum, on the gulf, still con- tains some small buildings and a custom-house ; but this tract of land is become an unwholesome marsh, impregnated with saltpetre. Cenchrea, now llachries, another port of Corinth at the mouth of the Helicon, is almost a desert. Mosques and a few Greek churches, among which the cathedral is distinguished, have suc- ceeded the ancient temples: and since 1821, probably, the ratnarets no longer announce the supremacy of the Mussulman worship in this bulwark of Greece. The archbishopric of Co- rinth boasts of being more ancient than even that of Rome. Besides the churches, a caravan- sera and a post house were the only public esta- blishments here in 1821. With regard to military affairs, Corinth is important for the defence of the Peloponnesus against the attacks of land armies ; though, from its being situated between two gulfs, an army may easily approach and quickly disembark, especially on the side near the isle of .'Egina. Corinth has never been cele- brated for the fertility of its soil ; scarcely any trees are to be seen, except small pines, and cypresses ; only a few of the gardens are adorned with citron and orange trees ; and, after the har- vest, the chalky lands, burnt up by the sun, present the very picture of sterility.

The villages of the isthmus are now comprised under tlie general name of Dervena Choria, and have a population amounting to 10,430 inhabi- tants : Corinth itself contains about 360 houses. Two roads diverge from the town, one, turning towards the east, leads to Megara; the other westward to Sicyone.

On the road to Megara we pass through £x- amili, a village divided into high and low, and inhabited by CJreeks and Albanians : in this place is found an astonishing quantity of ancient coins, which the women wear as orna- ments ; and near the village are the remains of a temple and a theatre, fragments of marble and granite, and pieces of antique pottery. From the number of pines found here, it has been con- jectured that in this place the Isthmian games were celebrated.

The passage of Mount yEneus was not, until lately, free from danger, and Tarious recollections contributed to sadden the traveller. The torrent

of the Massacre, which is to be passed, issues from a ravine shaded with rose laurels, pines, maples, and other trees; it was here that m 1779 a troop of Albanians were murdered. The ascent of Caki-scala leads to the summit of the torrent, which commands a fine view of the neighbouring country and sea.

Towards Megara the coast is guarded by the Scironian rocks. The fertile country around is inhabited by Albanians, who, taking advantage of the partial liberty granted them by the Turks, have secured to themselves a lucrative trade in oil of turpentine, butter, wax, and honey. Me- gara, which was built on three hills, has lost its monuments, owing partly to the decomposition of the stones composing them : the more ancient foundations, which are still to be seen on one of the hills, being of the primitive rock of Mount Gerania, have been more lasting, and appear to be of Cyclopean construction. Megara is only a borough, inhabited by about 1400 Greeks and Albanians, having an episcopal see. The houses are pretty well built, and on the declivity there is a road from this place to Thebes, through the defiles of the Ceralian mountains.

Returning to Corinth, we find a road, which leads along the gulf in a westerly direction to Sicyone, which district is bounded by the rivers Nemeus and Sysais, the most fertile part of the present Corinthia : the Schypetars, who inhabit it, cultivate olives, vines, and cotton, and feed cattle, goats, and poultry ; their wives spin the cotton, and siiow much order and neatness ii' their houses.

The ancient Sicyon is reduced to a borough . its ruins are found near the mouth of the Asopus, where it is easy to recognise the Greek and Roman acropoles ; but the temples, and the wood of the Eumenides, have disappeared. The present village is called V'asilika ; it is situated in a deep ravine, through which runs a spring called by the Greeks the Dropping Fountain, because it is supplied by drops falling from the roof of a cave. Sicyone, peopled by the Dorians, early distinguished itself by its love of peace, and the culture of the fine arts : dancing, music, tragedy, and the art of moulding in brass, were carried to great perfection in this Dorian colony ; even the women possessed cultivated minds : but the assertions of the ancients are the only proofs of the former prosperity of Sicyone. The very small province of Phliasia, remarkable for its wines, is inhabited by Greeks, who are, perhaps, descended from the ancient Dorians, without any mixture of other nations. On a hill near the Asopus are the ruins of a town, v/hich may have been Phlius.

Argos, the kingdom of Agamemnon, has shared the fate of the other states of Greece ; and, in later times, a pacha with two tails governed this formerly independent province. Many historical recollections are awakened

here, by every town, river, and mountain : ruins abound in this pro- vince, partaking rather of the indestructible solidity of the Egyptian monuments, than of the light and graceful character of the Grecian architecture. Some of these ruins probably equal in antiquity the pyramids on the banks of the Nile, and belong to the style called Cyclo-

pean, indieating the gigantic stature and strength of the people wlio raised them. Instead, how- ever, of Cyclops and descendants of the ancients, there are now scarcely any inhabitants in Argos but Schypetars.

Passing tlirough that mountainous district, which is bathed on one side by the gulf of Argos, and on the other by the sea of Saronica, we arrive at Nauplie. At the bottom of the gulf of Argos, now the gulf of Napoli di Romania, we find a town, which under the Venetian government was tlie capital of the INIorea ; the port is still the depot of the productions of the Grecian continent and islands. To this place Samos sends its sponge, Laconia its silks, Mity- lene its excellent oils, and other parts of Greece their wines, acorns, and vermillion : ancient medals of various sorts are also found here. It does not appear that any modern traveller has explored the catacombs, or the sixbterraneous labyrinth, which, according to Strabo, lie be- tween Nauplie and the city of Argos. Tlie acropolis of Nauplie, still bearing the name of the hero Palamedes, is yet visible ; but the most remarkable remains of antiquity here are the ruins of Tyrinthia, at the distance of half a league from the town. The walls of Tyrinthia are mentioned in the Iliad as existing long before the Trojan war; nor have thirty centuries been able to destroy them ; travellers who have ex- amined these masses of stones laid one upon another without cement, think that they may still remain as many more. Amongst other peculi- arities, the use of the ogive is observed here, which proves that this kind of arch is of great antiquity, although it was seldom much employed fill the middle ages.

In going from Tyrinthia to the ancient Argos, the Inachus must be crossed : the bed of this river during a part of the year is dry, but at other times almost the whole plain of Argos is inundated. The ruins of the acropolis are in the same cyclopean style as those of Tyrinthia, at least in the foundations ; for the rest is modern, and composed partly of a collection of more ancient ruins. Many classic writers mention the cyclopean walls of Argos, which, from their great solidity, the inhabitants of Mycenae were not able to demolish. Few remains of the build- ings of this city are to be

found, except the plan of the theatre, south-east of the acropolis : it is cut in a rock, and had apparently two wings, which is not the case with other Grecian theatres. A chapel, situated near this theatre, appears to have taken the place of the Hieron of Venus, in which the inhabitants erected a statue to Tele- silla, a woman distinguished equally for her poetic genius, and her valor, displayed against the Lacedemonians, in their attack upon Argos. On a rock, to the north-east of the ancient cita- del, is a monastery, probably built upon the ruins of the temple of Apollo Diradiotes ; and we are assured, that this rock encloses a cavern, which was formerly used for oracles, of which Argos had several. Modern travellers have dis- covered near the acropolis, on the site of the sanctuary of an ancient temple, a subterraneous passage, which led to the altar, and in which the impostor, who made the oracle speak, probably

hid himself: every word pronounced there is reverberated by the rocks in an astonishing man- ner. How many have been dupes to this cheat, and how many hopes and fears has it excited, while the priests of Argos have laughed at the credulity of the people ! Within the walls of a large church, at die southern extremity of the town, are the fragments of some columns of the Ionic order ; and one of the mosques of Argos is said to be built with the remains of the grotto of Esculapius in Epidaurus.

The province of Argos is inhabited by Schy- petars to the number of 8000 or 10,000, who employ themselves mostly in agriculture, in the fine plains watered by the Inachus ; their houses are very neat, and their women, if not equal to the ancient Argians in beauty, may at least pass for their descendants.

Two leagues further north are the ruins of another celebrated city, Mycena;, which five centuries before the Christian era, was reduced to its present state of dilapidation by the Ar- gians, who were jealous of the glory its inhabi- tants had acquired in an engagement with the Spartans at Thermopylae. An acropolis, sur- rounded by cyclopean walls, rises amidst the unformed ruins. Tiie entrance to the ancient citadel is still plainly seen; and is composed of enormous blocks of stone, upon which are others lying one against another, and forming a kind of rude arch, finished with a stone, on which are cut two lions or panthers standing against a pil- lar; similar to the animal figtires used in modern heraldry. Sculpture of this kind and of this antiquity is surely one of the most curious ob- jects among the ruins of Greece : it is nine feet in height, and more than eleven in width at its base : the gate over which it is placed is men- tioned by Sophocles and Pausanias.

On the outside of the acropolis is a tumulus, something resembling the hypogaca of Egypt; some old steps lead to the entrance gate of this massy

structure. On the top of this entrance, which widens as it advances, is an enormous lintel, composed of a single brsechia stone, twenty-seven feet in length, seventeen in width and about four and a half in thickness, being perhaps one of the largest ever employed in an edifice. In the interior of the building is a room terminating in a point like that in the se- cond pyramid of Egypt, from which we pass into a smaller apartment, where we find over the entrance a kind of ogive like that over ihe citadel. This monument has been called the treasury of Atrea, from a supposition that the ancient Grecian kings wer5 accustomed to deposit their treasures in such buildings : some learned persons, however, believe it to have been a tomb ; and there are others who think that it was a place for mystical worship.

The tombs of /Egisthus and Clytemnestrahave not yet been found. M. de Chateaubriand imagined he had discovered them ; but what he took for Grecian tombs are those of a Mussul- man and his servant, who were murdered there thirty years ago.

A little further to the north, through the woody defile of Treta, we arrive at the ancient city of Nemea, of which the hamlet of Colone, so

named from some columns of a temple of Jupi- ter, is all that remains, and a few solitary trees in the neighbourhood indicate the site of the forest which formerly covered the country : here the celebrated games were solemnised, and the in- habitants still assemble annually on the 15th of August, to celebrate the festival of the ˆ‘irgin, near a ruined church under a very old wild pear-tree.

Following the course of the Nemean river, through the plain of Coutzomati, we enter the canton of St. George, which belongs to Coun- tliia, and is justly celebrated for its vineyards. The lion subdued by Hercules is supposed to have had its den near Nemea. In the way from Argos to Epidaurus we pass near a hill on which are the ruins of Lessa, on the borders of the territory of Argos ; and all along the road are to be seen tombs of great antiquity, composed of rough stone ; tliere is one in the shape of a py- ramid, like the Egyptian tombs.

Cotton, corn, mulberry, and pomegranate trees and myrtles, cover the beautiful plains and val- leys. On the way, and near the sea, are fine woods of olive trees. Epidaurus, the chief city of this province, which now belongs to Corinth, was situated in sight of the isle of iF.gina, and has been succeeded by the maritime town of Epiada. The temple of Esculapius was

situated in a place now called Ligoris, and adorned with myrtles, Indian fig-trees, and other shrubs. The temple of the god of health is no longer stand- ing, but the plan is still visible. The ancient Trezenia and Hermionides form the extremity of a peninsula, and are badly peopled, unculti- vated, and unhealthy. Methone still exists un- der the name of Methana,but it is merely a village like most of the other cities of ancient Greece. At Hermione, now called Thermis, the girls no longer, as in the golden days of Greece, conse- crate their hair to Venus at the time of their marriage ; and the sacred wood is no longer preserved in honor of the Graces. Quantities of the shells used in the manufacture of purple, which formerly rendered this town famous, are still to be seen; but Ilermione is now only known in commerce by the fine sponge found on its coasts. The ancient Calauria, now known by the name of Poros, is inhabited by Albanians. The Cymcria of the ancients, now Saint Pierre, a province which reaches to tlie moun- tains of Laconia and Arcadia, is on the other side of the gulf of Argos. The inhabitants feed a number of sheep on their mountains, part of the wool is exported, and the remainder is manu- factured into felt and carpets ; they likewise make annually .'JOOO quintals of cheese, and 3000 barrels of olive oil ; also some silk and vermillion. Be- fore the insurrection of 1821 they were accustomed to repair to Constantinople, in order to sell but- ter, and, after enriching themselves at the ex- pense of Christians and Mussulmans, they returned to their mountains, and laid out their money in ammunition from the neighbouring islaiuls of Hydra and Spezzia. In the summer the inhabitants of the coast visit these mountains in order to escape the damp and unhealthy va- pors prevalent near the sea at the equinoxes. Tiie town of Saint Pierre seems to have suc-

ceeded the ancient Thyraea ; ana the towns of Prasto and Saint lleontas, which form the see of an archbishop, point out the site of the maritime town of Prasica : since the last century a new town, called Neoprasto has been built at a short distance from the two preceding ones. The temple of Diana appears also to have given place to the chapel of Notre Dame de Carga, where the moun- taineers perform their devotions with the same zeal as their ancestors. The Tzaconic dialect, a kind of gibberish, in which some remains of the ancient Doric have been discovered, is spoken here. A few centuries since, the lan- guage of the Tzaconians, that is of the district comprising the towns of Prasto, Kastanitza, and Satina, was not understood by the other Greeks ; but commerce, by increasing the communication among the different states, is gradually abolish- ing this particular language, aiid, as it has per- haps never been written, no traces of it will probably be left.

Achaia, the northern extremity of the Pelo- ponnesus, is as poor and unfruitful as in ancient times, although it possesses one of the principal

cities of the peninsula, that of Patras, a maritime city built at the foot of Mount Panachaikos. This place has always preserved the impor- tance which it owes to its situation, being with Lepanto the key of the Corinthian Gulf; the walls, of which ruins are still to be seen, formerly reached to the sea, but the present town, falling far short of the ancient in beauty, is situated at the distance of a mile from the coast. In the modern fortress, itself become a ruin, are the remains of the acropolis, where, in a niche, is a mutilated statue appa- rently of Diana ; this goddess being venerated at Patras, on account of the chase in the fo- rests of Panachaikos, now infested with lynxes and other wild animals. Bacchus shared with Diana the homage of the Patracians, and justly, forthe vines here are still magnificent, the foliage very thick, and the grapes of a considerable size. These vines cover a valley crossed by a Roman aqueduct on two rows of arches, which furnishes water to a fountain supplying the citadel. There is another fountain, or rather covered pit, near the ancient port, and the ruins of the church of Saint Andre, erected, as is supposed, on the site of the temple of Ceres. This fountain was ap plied to in the time of Pausanias hy invalids: the present inhabitants, more cautious than tlieir ancestors, draw water here on Saint Andrew's day as a preventive of evil. Saint Andrew is the patron of the Patreans, and these have made vain efi'orts to obtain permission from the Turks, for the rebuilding of his church, which was de- molished by the Albanians in 1770. On the day of his festival, the Greeks crowd to the ruins, worship the sarcophagus, which contained his bones, and devoutly drink the water of the pit consecrated to him ; small wax tapers are lighted each night upon his tomb.

Near the temple of Ceres v.as formerly a sa- cred wood, used as a promenade for the inhabi- tants: it is succeeded by tlie vines of Calamot;- darti, where have been found some relics. The ruins of two piers, and the bases of tN\o towers are all that remain of the port which was an

ciently decorated with temples and statues : its waters are stagnant, and produce fevers. A badly screened bay receives the ships, which load principally with Corinthian raisins, for which production there are magazines near the custom-house, also store-houses for fish and salt provisions. The bazaar of St. George appears to be on the site of the ancient market ; and ac- cording to M. Pongueville, who caused this land to be cleared, the garden of the French consul still contains the Mosaic which served as a pave- ment to the temple of Bacchus Esymnetus. This gentleman thinks that researches in the ba- zaar would bring to light other antiquities.

The present Patras will transmit scarcely any monuments to posterity: streets badly paved, dirty, narrow, and in some places shaded liy roofs of ivy ; houses built on ground dried by the sun, small churches, and mosques, are all that compose a city which passes for one of the first ports of the Levant, and which contains 1 6,000 inhabitants, three parts of whom are Greeks. This town possesses natural advantages whicli, under a free government, might render it one of the first cities in Greece and the Levant: under that of the Turks the safety of the inhabitants was threatened at the gates. So common were assaults in the road which passes through the woods of mount Panachaikos into Arcadia, that it was abandoned and stigmatised by the name of ' the road of murders ; ' it is more safe to go to Arcadia by sea. Besides vines, the neigh- bourhood of Patras is planted with mulberry and fig-trees, myrtles and mastichs : hysop, stocks, and other flowers, enamel the shore. Notwithstanding the beauty of the situation, we rarely find in Patras that hardy and robust race which formerly peopled Achaia : those born in Patras are generally afiiicted with rickets, per- haps owing to the want of cleanliness and proper diet. More negroes are found here than in other Grecian cities ; they generally succeed in obtain- ing their liberty, and establishing themselves, and then become exceedingly arrogant.

In ancient times Patras was the chief place of only a small district, which was increased by the Romans : at present it extends from the Larissus to Meganitas, and comprises ninety-five villages with a population of 10,700 souls. To the south- east of Patras, after crossing the river Melas at Camenitza, are found the ruins of the ancient city of Phares, on which the Christians have built a chapel to St. John. The small village of Cato-Achaia, which contains all the population of this district, abounds in mulberry, almond, and fig trees : rivers, fields of maize, wheat, and cotton, form, together with a forest of oaks, the resources of the modern Phareans. The greatest number of relics in this district are to be seen near the village of Chalanthistra, which some centuries ago had an archbishopric and several churches; and which probably stood on the site of the ancient Tritea : thus this city has fallen twice. In die mountains of Craca stands the richly endowed monastery of St. Michael the archangel, which maintains about ei-ghty monks, and up to the present time is one of the largest convents in Greece.

The ancient ˆ.geum. built on a promontory,

has lost its splendor, and the small town of Tos- titza, which has replaced it, has experienced too many calamities to admit of its attaining to pros- perity: there are some remains of this town and a fountain formerly dedicated to the goddess of health. The inhabitants of this district are ex- posed to earthquakes, a variable climate, and a violent wind, which blows

from Marrichiotis ; and, what is still worse, they are the vassals of some Turkish families, to whom this province was given on the conquest of Achaia. They console themselves, however, by the abundant fishery of their gulf, by the fertility of their soil, and by that resignation which makes us endure an evil that we know cannot be remedied. At the ancient Bura, near Tostitza, Hercules deli- vered oracles in a grotto, which is still seen : it is opposite Delphos, which may be seen on the other side of the gulf of Lepanto. The Greek priests have never been able to impart to the oracle of Bura die reputation which was attachefd to that of Apollo : they pretend that the monks of Negaspelion have deprived them of their tithes. T lie ancient Pellenia, whose barren soil is covered V ith pines which exhale an aromatic odor, is now inhabited by Albanians : they make in their woods pitch and oil of turpentine.

With the name of Arcadia we naturally asso- ciate the idea of the golden age, and the Ar- cadian shepherds. Their country, which occupies the middle of the peninsula, is an elevated plain overlooked by mountains, from which rivers flow in all directions and water the provinces inclining toward the sea : the principal of these are the Alpheus, the Erimanthus, the Eurotas, and the Inachus. Fountains of water gushing from all parts of the plain impart to the air a delightful freshness ; the forests which clothe the sides of the mountains, and which must formerly have been larger and thicker; charming pastures; a soil abundantly fruitful ; mountains sheltering the inhabitants from invasion ; a poverty, which, though not amounting to indigence, served to discourage the greedy conqueror ; liberty, with- out which all other enjoyments are unstable ; and a simple and frugal life undisturbed by violent passions; in these advantages consisted the hap- piness of the ancient Arcadians : they enjoyed that felicity which poor, weak, and free nations seem alone destined to enjoy. But in propor- tion as the population around Arcadia increased, the inhabitants felt the influence of foreign man- ners : their simple worship was loaded with the pomps of superstition ; the priests subdued the spirit of the people ; ambition and jealousy ex- cited civil feuds; proud of their own liberty they filled their country with slaves ; the shep- herds forsook their mountains and shed their blood in the contests of the neighbouring states, indifferent as to which side they took in those quarrels which ended by desolating the once happy Achaia. Under the Turks they preserved a kind of liberty, at least in their mountains, but it was not that of their ancestors. It is a singu- lar circumstance that many of the Arcadian rivers, after having inundated the country and formed lakes, hollow for themselves subterraneous pas- sages, disappear for a considerable distance, and are then found in other parts : when the canals

by which the rivers disappear are obstructed, the neighbouring villages are threatened with deluges similar to those which ruined the towns of the ancient Arcadia.

Butter, cheese, and wool, are the chief articles of exportation : agriculture might have added other riches, had it been encouraged and pro- tected under the reign of the Turks. Sufficient domestic tranquillity, however, remains in the mountains to preserve the primitive beauty of the Arcadians : a tall figure, expressive features, a regular profile, and flaxen hair, even now dis- tinguish the fair sex.

More than 300 villages contain the population of the four cantons of this province, which are named after their chief towns. Tripolitza, which before 1821 was the residence of the pacha, and in some manner the capital of the peninsula, ap- pears to have been built with the ruins of the cities of Tegea and Mantinea, which were situ- ated in the neighbourhood and were formerly rivals in power. The city of Tripolitza is situated in a fertile, and well-cultivated valley, to the east of mount Menalus, now lloino. It is sur- rounded by walls and crowned with a citadel, where, since 1821, the Greek flag waves over a free people. The pacha, enclosed in his se- raglio, paid little attention to embellishing his residence ; and Tripolitza, except in the principal street, which crosses the whole town, presents no other appearancethan that of most Turkish cities. A market, snaded by large plantains, occupies tlie centre of the town ; and four mosques, orna- mented with ancient columns and bas-reliefs, serve for the worship of Mahomet : a caravansera, shut in the evening like a prison, with iron gates and chains, is provided for the reception of tra- vellers. The plain of Arcadia, exposed to the heat of the sun in summer, and covered with snow in winter, with bad water and few trees, presents the most melancholy spectacle in this beautiful country; but its soil, if properly culti- vated, is capable of furnishing pasture for cattle and of producing grain, wool, vermilion, and cheese, sufficient for exportation. About seventy- five villages belong to this canton, wliich has its archbishop residing in the chief town, A few remains, in a place now called Pala;o-Episcopi, point out the site of Tegea, within a league of Tripolitza: some stumps of columns, and frag- ments of capitals, in which are seen the three different orders of architecture, lie on the ground.

Mantinea has been still less spared by time tlian Tegea. A marsh covers the spot where Kpaminondas vanquished the Lacedemonians, and terminated his glorious career; and no tmces remain of the monument erected to his memory ; but the remembrance of the hero still inspires his descendants in their struffirles with their oppressors, and the territory of Mantinea and Te?

ea has been freed by their valor. In the mountainous canton of Leontaris, or Londari, there are not twenty villages: the inh:ibitants leail a pastoral life ; their lands producing grain and ciicese barely sufficient for their own Cf)nsumption. The borough of Londaris, pro- bably on the site of one of the three ancient cities, -bearinfr the name of Lenctra, occupies the ctMilre of a tolcrarbly fertile and healtiiy valley.

Perhaps the finest monument of Arcadia ib tke ruined temple of the Epicurean Apollo, oi» mount Cotyla, near the ancient Phigalia, now Paolizza; it was erected after the famous plague, to Apollo the saviour, under the direction of Jotmus, the Parthenian architect. With tho exception of two only, the thirty columns of the Dorian order, which adorned the portico of the building, were still standing in 1812, and some fragments of bas relief, found amongst the rub- bish, are now in the British Museum. But the most valuable remains found here are twenty- three marble tablets, with figures in bas relief, representing the two combats of the Centaurs and Lapithae, and the Amazons and Greeks.

Caritene is the chief town of a well-peopled district, containing 230 villages, and watered by the river Alpheus and its tributary streams. In this country, under a more liberal government, tobacco, grain, vegetables, fruits, silks, and wines, might be cultivated so as to produce an extensive commerce. Neglected as agriculture is, it yet exports wool and cheese.

All the north of Arcadia is comprised in the canton of Calavista, interesting for its picturesque views and its remains of antiquity. Besides the productions common to the before mentioned districts, it has an abundance of Corinthian grapes, and gum adraganth. In the mountains there are some considerable monasteries. Ca- lavista, the chief town, is of little importance : it is situated in an elevated valley, watered by the Cerynitus, the inundations of which render the ground marshy, and the air unhealthy ; while the neighbourhood of the mountains experiences violent winds and severe cold. Tlie town, in latter times containing 2500 Greeks and 300 Turks, dates its foundation only from the middle ages, though there is on a mountain near ttie city an ancient ruined fortress : this post has long ceased to protect the country, and a range of mountains, some leagues from Calavista, bears the dreadful name of the defile of the massacre, on account of the numerous murders committed there. The icy summit of mount Olenos overlooks this wild country.

The monastery of Mega Spelion, situated three or four leagues to the north of Calavista, is one of the largest in Greece ; in the road to it is the village of Kerpeni, which, enjoying a finer climate than that of Calavista, draws away its inhabitants. On an isolated rock, at some distance from this village, are some ruins, called in the country Old Calavista : they are

probably those of the ancient Cynetha, whose inhabitants had the reputation of being thieves and highway- men ; a character which has been bequeathed to the neighbouring village of Suthera. The mo- nastery of Mega Spelion is half buried in a high rock, and shows on the outside scarcely any thing but its front ; the entrance, which runs through a dark arch, is shut by an iron portcul- lis, having on thetwosid(!sa great number of loop holes. The monks are defended almost entirely by nature from the attacks of their enemies. The Arnaoutes, not being able to get possession of the monastery, once climbed the rock which rises perpendicularly behind the cavern, and rolled down masses of stone; these, however,

fell over the cavern and did no harm to those witliin. The monks allow no one to enter of whom they have any suspicion : when Mr. Dodwell visited the monastery they were ranged on each side of the entrance ; and he afterwards learned that they concealed poniards under their ample robes. There are in Bceotia monas- teries to which the only way of admission is by a b isket, drawn up with a pulley. By such l)recautions as these weak men lead peaceful lives in the midst of barbarous countries. This convent is supposed to be very rich, and has large farms and vineyards of Corinthian grapes ; the monks, however, exercise hospitality to those who come here to worship a rough image of the Virgin, preserved in their chapel, and which they pretend is the work of St. Luke. The small chapel is ornamented with Mosaic work, gilding, images of saints, and lamps of silver and ex- voto ; it receives but a feeble light from without, and the kitchen receives none, being a subter- raneous cave. The library of the convent has been twice burned, and now contains only homilies and legends. Their cellar contains perhaps the largest tuns that monks ever pos- sessed, excepting indeed the German monks, and these are filled with excellent wine, the produce of their own vineyards. The lay brethren direct the domestic affairs. Notwithstanding their good wine, the monks feel the dampness of the cave, and are afflicted with rheumatism. Their usual walk is to the burying- grouiid, situated on an eminence, surrounding a chapel and shaded with cypress.

The convent of Taxiarchi is near the last mentioned, and in the neighbourhood is the cas- cade of the Styx, not far from the village of Vounari. It is a rivulet formed by two springs, which, rising at a short distance from each other, unite and fall into an abyss, where they disap- pear with the waters of another river, which is- sues from a grotto. But not far from here, in the plain, is a clear rivulet, which is most proba- bly fed by the subterraneous reservoir that has engulphed the two springs.

Some ruins, found in a plain watered by the firymanthus, are supposed to be the remains of I'.he ancient Psophis ; and on a neighbouring 'leight are the ruins of an acropolis, which 'night belong to the city of Phegea, whence the Inhabitants went to build Psophis in the plain. No traces remain of the canal which they dug to prevent inundations, but there are still some of the ancient Raos, and of another town near the village of Scoupi.

Elis, the tlieatre of the Olympic games, next engages our attention, but the revolution of time has spared but few traces of the ancient splen- dor of its towns. Elis forms a maritime pro- vince of twenty leagues in extent, watered by the rivers Peneus, Alplieus, ana Meda, and di- vided by mount Pholoe and other mountains from Arcadia. The Alpheus has lost even its poetical name, and is now called the Rouphia; Olympia and Elis are uninhabited, and the modern towns of Gastonni, Pyrgos, and Lala, contain all tlie civilisation of the province. The Schypetars, laborious agriculturists, have esta- blished themselves on the ruins of the magnifictnt

cities of antiquity, for which they care no more than the Turks. The cape Fornese, which is the most prominent part of Elis on the west, received its modern name from a castle now dilapidated. The city of Cyllena is now only a village, under the name of Andravida : some ruins round this place show that there has been a town, and the style of the churches proves that it existed in the middle ages. The Penea of Elis now falls into the sea, near cape Fornese, under the name of the Gastonni River. The town of Gastonni might have remained as a monument of what the Turks could have effected every where if they would ; but already since the revolution it presents the melancholy aspect of a declining city : at the time of M. Pongueville's visit, it contained from 1200 to 1500 inhabitants, with a ghastly com- plexion, living in houses built solely of mud.

Following the course of the Peneus we meet with the ruins of Elis, which the shepherds call the Palaeopole, or ancient city ; the site of the citadel may be recognised, and other remains would, by investigation, most probably be found. The ruins of this city cover the space of half a league ; those of Pylos are less consider- able. Near the cape anciently called Pheia is a monastery bearing the name of the neighbouring village, Ranagia Scophidia : the villagers are scarcely more industrious than the monks. In tlie town of Pyrgos, near the Alpheus, is found the greatest proportion of prosperity and indus- try : this town, regarded as the finest in the Morea, is the chief place of a small canton, in- habited by 1700 Greek families, who, having been less molested by the Turks than those of other parts of the Peloponnesus, are very suc- cessful in their agricultural affairs. Their town, seated on an eminence, is the see of a bishop; on the hill are some ancient sepulchral monu- ments. A few leagues from Pyrgos is the modern village of Miraka, in the neighbourhood of which a few ruins point out the site of Olym- pia,

without showing its magnificence. From the nature of the antiquities which are frequent- ly found, it seems probable that the demolition of Olympia was effected, not so much by the hands of barbarians, or by the slow operation of time, as by one of those earthquakes so frequent in the west of the Peloponnesus. Mr. Dodwell thought he had been fortunate enough to discover the ruins of the temple of Jupiter. He found the stumps of some columns of the Doric order and fluted, which, judging from their diameter, must have surpassed in height those of the Par- thenon and the temple of Olympus at Athens. The famous hippodrome, or area for chariot racing, is still to be seen ; but the present inha- bitants instead of rejoicing, are employed in wresting their country from the hands of barba- rous oppressors. The stade, or foot race-ground, is near the hippodrome, and is being gradually wasted by the waters of the Alpheus. The new monuments, built in this city by the emperor Adrian, have not better resisted the attacks of time tlian those of older date. Near this place are some other ruins, probably those of the ancient Pisa ; the windings of a branch of the Alpheus whose waves are yellowish like those of the Tiber; mountains crowned with the fine verdure

of pines and oaks ; meadows watered with clear rivulets, and shaded with myrtles and other odoriferous shrubs, or adorned with wild roses and other field flowers ; compose a landscape worthy of surrounding a fine city.

The river Erymanthus descends from heights covered with snow, and, rolling its limpid waters through a fine valley, joins the Alpheus, with which it enters the sea. Unfortunately, clouds of musquitos drive the traveller from the enchant- ing borders of the two rivers issuing from Arca- dia. In the village of Agolinitza the inhabitants, in hot weather, sleep in the open air, under little tents well closed, in order to be cool, without being incommoded by the musquitos.

The aspect of the village of Lala offers a sad contrast to the delightful country around it : it is an abode of Schypetar robbers, who are continu- ally at war with the peaceable inhabitants, and amongst themselves: they have not, however, neglected to cultivate the land. Lala is one of the most salubrious spots in the Peloponnesus, which appears from the healthy, robust, and proud air of the Laliots. These rustics would let no Christian stranger approach their village : perhaps the foil of the Turkish power in the peninsula has a little abated their brutal arro- gance. Their aga resides in a mean dwelling, and is always guarded by men completely armed. The Lahots never quit their arms, of which they bear a great number. Like most

barbarous ori- ental nations they roast sheep entire, and tear them to pieces with their hands in order to eat them.

The ancient Triphylia in the south of Elis, and on the gidf of Cyperissa, now contains no remarkable place; nothing remains of the city of Pylos, unless the ruined acropolis, which is seen near the village of Petrye, may have be- longed to it. The country of Lepreum is bar- ren and produces only pines ; and Agio Sederio, where there is a bad caravansera, is the only con- siderable village in this canton.

Messenia was situated to the west of Lacedae- mon, on a vast gulf, now called the gulf of Co- ron. At the bottom of this gulf the Pamisus disembogues, after a short course, during whicli it waters one of the finest valleys in the Pelopon- nesus : oranges, olives, and pomegranates, grow in abundance : the sugar-cane and banana also succeed with a little cultivation. Many large plains are covered with a fine harvest, fertile pastures feed a number of cattle, and fishing su'p plies what more is wanting to the inhabitants. Nothing is wanting to the fine country watered by the Pamisns, but free inhabitants, in order to restore the image of happiness which it must have presented before the invasions of the Spar- tans. Notwithstanding so many ages of op- pression it is still one of the best peopled coun- tries of Greece : it has 350 villages, and more towns and sea-ports than the other provinces of the Peloponnesus. Tiic waters of tlie Pamisus, formerly rioted for their salubrious qualities, now exhale unwholesome effluvia; but the warm and fertile land througli which they flow is well cultivated, and tiie plantations on their banks iihow the value of the soil. Passing by Nisi Ca- lamata and Androussa, and going direct to

Mount Ithome, which M. de Chateaubriand po- etically compares to an azure vase placed in the fields of Messtnia, we arrive at an ancient en- closure of a citadel, which encircles the mountain like a crown: this enclosure is shut with stones five feet in length placed across : the foundations of the tower which flanked the citadel are still remaining, and likewise a door made of only three stones. In the enclosure is a fountain, as in the acropolis of Corinth. The town which this citadel protected was Messenia, of which there are few remains, and the small village of Marromati gathers its harvest on the site of this ancient capital. Mount Ithome is difficult of ascent, from its great ruggedness ; the rocks are covered with mastichs and bushes, and even to the summit the purple flax, the red cressis, and the catananche lutea flourish. At the foot of Ithome are some ruins called the Destroyed Vˆil- lage : it is supposed that the city of Andania occupied this site. iEchalia was situated in the neighbourhood.

The beautiful valley of Stenyclaros is still fer- tile in grain : it contains about thirty villages, the principal of which is Court Chaoux ; they are all

dependent on the grand seignior. The- chief place is Androussa, on the right bank of the Pa- misus : man languishes here, but the vegetation is most rich and the verdure almost constant. Grain, wine, tobacco, figs, olives, &;c., abound ; and the fine pasturage feeds numerous flocks, the wool of which is exported together with silks, cheeses, and goat-skins. The city is surrounded by olive plantations and tombs shaded by cy- presses : it is the see of a bishop, and before 1821 was governed by a Turkish voivode. The canton of Calamata, on the other side of the Pa- misus, is equally delightful, abounding in or- chards and gardens filled with fruits of all sorts, and meadows and fields in excellent cultivation, where a vast quantity of honey is deposited. The town of Calamata, on the ancient Nedon, near the mouth of the Pamisus, consists of 300 houses, interspersed with gardens, resembling the dwell- ings of the Maniots ; they are like towers, having strong walls pierced with loop-holes, on account of the pirates that formerly infested the neigh- bourhood. On a hill behind the town we per- ceive the ruins of a V'enetian fortr-ess. Lately tile inhabitants were accustomed to choose their own magistrates, and collect their tribute, wiiich they sent to the voivode, who commanded a little garrison of Janissaries. It is at once the princi- pal commercial and manufacturing place in the country ; great indolence, however, characterises the inhabitants, and it is the Maniots who labor for them. They weave stuff's something like grograms, barracans, and handkerchiefs, which they sell in the archipelago. Their silk yields commonly for the manufacturing labor 120 per cent, upon the first cost. Silks, oil, tobacco, honey, and goat- skins are the chief exports of Calamata; they were formerly conveyed in French ships, but now Greek vessels arc mostly used. Some antiquities near it, as weli as its name, make it probable, that it stands on the site of the ancient Calame, which name a neighbouring village still bears. It has a bishoj)ric and about ten villages de- pendent on it. In this iitigliboïrliood also must

have stood the city of Pharoe and the wood of Cheerius. A narrow defile leads from Calamata to Misitra, about eight leagues from the Pamisus ; in descending along the western side of the ri- ver towards Cape Gallo, formerly Acritas, there are some remains of ancient baths, built of brick covered with stucco, and a country house of the bey of Coron, defended by towers and encircled by a moat with a draw-bridge.

Coron is a port so situated on the gulf as to have all its houses on the sea shore ; so that it is seen rising by steps on the declivity of a moun- tain crowned by the citadel, the ancient acro- polis. This is closed by a gate in the form of an ogive, which appears to have been built in the times of the

latter empire : the Venetians added some ornaments to it. One of the first houses seen is that belonging to the French con- sul, the terrace of which advances up to the sea. The 800 Turks who lately lived here, and the little security that vessels found in the port, banished almost all the maritime commerce. Coron is the chief place of more than seventy small villages and hamlets, dispersed amongst woods of olive trees, and the well-watered regions around ; containing, however, hardly 4000 souls, it has been so reduced by the vexation of the Ottomans. To withdraw themselves from their despotism, many families have retired to the caves of the mountains, where their flocks and themselves find an asylum, that is seldom molested. Some of these tribes are complete masters of the passes over the mountains.

Near Cape Gallo is the little Island of Vene- tico, formerly Thiganussa; here is a sepulchral grotto, with some sarcophagi ; it is now inha- bited. A little to the right we perceive the islands of Cabrera, Verte, and Sapience, included by the ancients under the name of the jT^nuses : the latter, having a good anchorage, is situated opposite to the continental port of Madon, from which it is separated by a strait. This port, on the site of the ancient Methone, was inhabited before 1821 only by Turks, who had banished the Greeks, and devoted themselves to commerce. They also cultivated the olive, which forms the true riches of Messenia ; woods of these trees, which in some places would be taken for trees of great height, overshadow all the coasts of this province. A fort built on a tongue of land, or rather on a small island, united by a bridge commands the passage be- tween Madon and the island of Sapience. The Turks made this place a market for negroes. Fifty little villages are dependent on this place, which is not more than two leagues distant from another Messenian port, called Navarin. This place has all the appearance of an oriental town ; orange trees shade and refresh the courts of the houses, palm trees elevate themselves among the habitations, groves of these trees, as also of olives and planes, and vines suspended on the arge trees adorn the plain; and, to complete the resemblance, the scarcity of water and great heats dry up the verdure at the commencement of spring, and give the soil the appearance of the scorched lands of Africa or Persia. The character of the people is also oriental ; by their phlegm, their indolence, their carelessness at the

arrival of a stranger, they might be taken for Turks. There is a fountain in the town, probably of antique construction and very solid ; and ano- ther furnished with a reservoir springs up at the entrance of the town, which besides these has no other water than what is brought by means of an ancient aqueduct extending to a considerable distance, but of which only 100 arches are en- tire. From these circumstances, and the descrip- tion of Thucydides, it would seem that this was the site of the ancient Pylos. The town does not contain above 600 Turks, and a Greek suburb of 130 souls; the whole canton, com- prising thirty-six villages, cannot number more

than 1600 individuals. The bad character of the Turks has discouraged Europeans from building in this district, or engaging in the com- merce of tobacco, olive oil, and vermilion. Pro- ceeding across olive plantations by an ancient way, adorned at intervals with fountains, we reach an ancient bridge crossing the Cypa- rissa, and afterwards pass a cistern where the women are to be seen drawing water in red jugs, of an elegant form and painted after the Etrus- can manner. Philathrea, near this cistern, is a little town or village, irregularly built in the midst of a country abounding in fruit trees. The traveller is struck with the singular construction of a church, and the dress of the women is rather remarkable. Red and yellow are the predomi- nating colors, by which it appears probable, that the women have derived their attachment to these two colors from old time, since they recall to our recollection the flammeum of the ancients. They have chemises with large ruffles of these colors intermixed, great veils bordered with red and yellow fringes, and girdles of the same tints.

Following the coast we arrive at the canton of Arcadia, the most southern part of Messenia, and the nearest to Elis ; we may say, also, the most populous. It contains more than 100 villages, and the richest productions ; its revenue amounts to more than 5,500,000 piastres a year. It pro duces a great quantity of grain, fruits, dye-stuffs, tobacco, flax, and silk ; and exports besides these wood for building, cattle and poultry, goat-skins, wool, cheeses, and its vintage is valued at more than 100,000 small barrels. Its population amounts to about 15,000 souls. In the moun- tains there is a race of people regarded as truly indigenous, the natives of Soulina; these have never known the Turkish yoke. Arcadia, a town built on the site of the ancient Cyparissa, was, on the contrary, altogether occupied by the Turks. An acropolis overlooks the town, the position of which on the road from Messenia to Elis is of some importance. Thick forests as that of Cocla, and defiles, affording a retreat for bands of robbers, have to the present time ren- dered travelling very dangerous in this dis- trict.

Crossing the barren summits of Taigetus, and the course of the river Eurotas, running at the foot of the chain now called Basili-Potamos, the Royal River, we arrive at Laconia, the country of the ancient Spartans. It is almost environed by mountains ; but its coasts are very favorable for commerce and communicition with other countries The Eurotas, after traversing the

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interior of the country from north to south, empties itself into the gulf of Kolocliina, along which the continent extends on both sides, ter- minating at the capes Matapan and Malee. The mountains follow the same direction, and branch out towards the same extremities ; so that, with the exception of the north, the sea either washes every side of Laconia, or is at a short distance from it. The present inhabitants know better how to appreciate the advantages of their coast, than the ancient Lacedemonians did : on the east they have first the commercial port of Mo- nembasia, the principal place of a mountainous district, in which the inhabitants chiefly subsist by agriculture and their flocks. The name is a corruption of embasia, that is, in the plain ; the Italians called it Napoli di Malvisia, of which the French made Malvoisie, and the English, Malmsey. It stands upon an island, and has an archbishop, on whom six suff"ragan dioceses are dependent ; he does not assume, as was cus- tomary in the times of the latter empire, the title of panagiosini, or all holiness. On the bay there are some ruins, consisting of walls in blocks of granite, of cyclopean construction, and conse- quently very ancient, some fragments of vaults, excavations, &c. A citadel probably occu- pied this place ; it is thought, it was that of Epidaurus-Limera, and that the neighbourhood was what the ancients called Minoa. Tiie native inhabitants call these ruins Palaeo-Embasia, that is the old Embasia. Other ruins are scattered near the shore, and in the caverns and ancient quarries, by which the rocks are excavated ; some families of shepherds have fixed their residence among them, to shelter themselves from pirates and robbers. Some of these subterraneous abodes are very difficult of access ; others have their entrance half open, and a little door leads to the interior, whither the flocks retire with the shepherds during the night, and in times of dan- ger. Sometimes enormous dogs are the guar- dians of these troglodytes, whom you may see in the morning in their cotton coats, bound by a leathern girdle, as shepherds are represented on ancient monuments, conducting their flocks over the mountains. Tliose who live in the lofty re- gions, where the air is inclement, muffle them- selves up, as the Walaok sheplierds of Mount Pindus do. Some of the shepherds on the coast often change their abode, establishing themselves in the first cavern they meet with, and having often no other water than what drips through the rock. The canton of Monembasie is said to contain fifty- four boroughs and villages ; it ex- tends to the south as far as Cape Malee, but there is no remarkable place in it ; hills covered with evergreen oaks, and wild olives, follow the di- rection of the coast.

Adjoining the above district is that of Mistra, the ancient Sparta. It is the valley of Eurotas, bordered by two chains of mountains and ca- pable of the finest cultivation, while the moun- tains aff'ord food for mMnerous flocks. Silk is here an article of considerable export, especi- ally to France. The olives on the banks of the Eurotas yield 20,000 barrels of oil in a year;

grain is produced efjual to the consum])tion of the country, as well as a great quantity of honey

and wax, vermilion and gall-nuts. It consists of more than 100 villages, with an archbishop and five suff'ragans. Mistra, or Maestra, is at present a town of about 7000 souls. The houses, built of wood, are of one story, and the streets are not paved. Tiiere is a church, an hospital, and even a synagogue. Some think it stands on the site of ancient Sparta, but others that this is to be found at Pala;o-Chori, or old town, where there is nothing to be seen but a cottage surrounded by trees, with a few ruins. The archbishop bears, it is true, the title of arch- bisliop of Lacedaemon, and this town has still its ephori, but it is very doubtful indeed if Sparta was situated here. It is most astonishing, that a republic which filled the world with its renown should have left no trace by which the precise seat of its government can be ascertained. The want of great cities almost gives to Laconia that rustic appearance whicli it had in the earliest times. A miserable village, Slavochori, is said to occupy the situation of the city of Amyclea, the temple of which was counted one of tlie most beautiful in the Peloponnesus. Some basso re- lievos, that are found suspended in the little church of the village, appear to have come from the ancient temple; they represent articles of a woman's toilet, such as jewels, paint boxes, combs, slippers, &c., supposed to be votive ta- blets presented by the women. The little dis- trict of Bardouria, on the left of the Eurotas, is inhabited by Ezerite Albanians from Macedonia, who have founded there a little republic or anarchy, as some other Schypetars have done in the district of Lala. It is the see of a bishop, and the inhabitants subsist by the cultivation of olive plantations, when they are not at war, or making predatory excursions. From this place as far as Cape Malee we may suppose ourselves in the ancient republic of Lacedemon. Not (ong since, travellers ran the risk of being plun- dered if they ventured thither, and scarcely ever did a foreign vessel show itself on the inhos- pitable coast east of the gulf of Kolochina.

Disembarking on the western coast we enter the province of Maina or the Magne, the country of those celebrated Mainiotes who form a distinct nation in the midst of Greece, and, what is more, a mighty and formidable people. It consists of an assemblage of petty cliiefs, who have their vas- sals, live intrenched in their strong forts, contend witli the power that would oppress them, and make little wars among themselves, when they have no enemies without to fear ; tliey are more- over barbarous, brave, daring, and even hospita- ble, when a stranger furnished witli recommen- dations places himself in their hands, or pur- chases their protection and assistance. These chiefs or captains live in isolated towers in the midst of their lands, built in a very massive style, having only one low and narrow door, and no windows on the ground floor, which is in fact only a cellar ;

the only ojienings in the lower parts being loop-holes made for the defence of the building; the family live in the upper story as in an observatory, with only small windows fur- nislied with iron bars. Sometimes, within the precincts of the walls, a court extends round this little fort. We abridge the description criven of

One of these fastnesses by Mr. Morritt, who tra- velled through the country under the protection of the captains. 'The house of this captain,' says Mr. Morritt, 'consisted of two stone towers, very much like those on the borders of England and Scotland, with a range of offices and lodg- ings for the servants, stables and coach houses built on the sides of a court by a door in an ar- cade flanked with bastions. An armed man came to meet us, and spoke to our guide, who had conducted us from Myla. He went in again and told the chief, who ran to the door to receive us, accompanied by a numerous suit, all surprised at the appearance of the English strangers.. We were received with great kindness, and led to a commodious room in the principal apartment of the tower, inhabited by the chief himself, the other being the residence of his niece, who bore the title of capitaness. Zanetachi Xoutouphari was a man of a respectable figure, about fifty-six years old ; he had a wife and four daughters, two of them under age, occupying the flo'.r below ours. The old chief had dined early, ;jut, according to the rites of hospitality peculiar to this country, he sat down near us to partake our repast; his wife and daughters waiting on us with much etiquette for some time notwithstand- ing our remonstrances, and afterwards retiring, leaving an old servant to attend us. In the evening feather beds and mattresses were brought and spread on the floor ; then sheets and pillows bordered and made of broad bands of muslin and silk of various colors, all the manufacture of the females. As the Greeks always lie in their under clothes, this sort of bed is not found incon- venient. The next day being Easter Sunday, we had an opportunity of witnessing and par- taking in the general rejoicings that took place not only in the castle but in the villages round. In every house, at this season, a lamb is killed, and every one gives himself up to joy. We dined with our host and his family at half past eleven in the morning, and afterwards had a solemn audience with his niece Helen in her own apart- ments. She was, in fact, mistress of the castle and of the surrounding district, which she re- ceived in inheritance from her father. She was a young widow, still handsome, and with much grace and dignity in her manners ; she was as- sisted only by her sister, and some females richly dressed. When we entered she was sitting alone; after inviting us to sit down, she made her sister take a seat near her, and ordered her suit to serve up coffee and refreshments. The women were all very beautiful, and

this is com- monly the case with the females of many of the Mainiote villages ; their beauty is of a most deli- cate kind, diat we should not expect from their mannerof living : united with the fine physiognomy of the Italians and Sicilians, the Mainiotes join a smooth skin, a fine complexion, and clear chest- nut colored hair, which would seem peculiar to odder climates. The men also are well propor- tioned, of a middle stature, and of a rather slen- der constitution, but muscular. The Capitaness wore a robe of blue cachemere, broidered with gold, fastened by a girdle, and a corset of crim- son velvet broidered in the same manner; over this vesture she had a Polones° robe of deep

green velvet, with laige open sleeves, and loaded with a rich embroidery. Her head-dress con- sisted of a green velvet cap, covered with gold and arranged in the form of a crown, to which was attached a white veil worked with gold, whicii passed over her bosom, then under her arms, and fell down her back. Her uncle was dressed in pantaloons of a bright blue color, a tight vest with open sleeves, broidered with white and gold, a red and gold girdle containing his pistols and poniard, gaiters ofblue cloth broidered with gold, plates of silver protecting the joints of the thighs, and lastly a doliman of black velvet with sleeves bound with fur. When he went out, he threw over his shoulders a rich mantle of cloth blue outside and red within, with gold borders in the front and along the sleeves. His turban was green and gold, and his gray hair hung below this head dress. — The costume of the inferior classes resembles this, only the quality is diffe- rent and they have no ornaments.

The Mainiotes are trained to arms from their childhood, especially shooting in which the women sometimes take part ; the warlike spirit of the men communicates itself to the other sex, so that women have more than once been seen fighting with the same bravery, and displaying the same daring, and even tlie same cruelty, as their husbands and their brothers. They enjoy more liberty and kinder treatment than the Greek women of other provinces ; they are not shut up as in other places, and this may be one reason of their fidelity, which the fear of the terrible ven- geance with which the Mainiotes punish adultery may also tend to preserve. In default of male issue, the daughters inherit the patrimony and the seignories or captainships ; in the villages they are devoted to rustic labor, and bear fatigue, without seeming to feel it. The Mainiotes profess the Greek religion, but make it consist merely in acts of devotion and superstition ; they have a multitude of little churches, to which they do not fail to repair, after having committed acts of robbery and violence. The chapels in the mountains are all dedicated to St. Elias; and the rocks on the coast have many excavations, inha- bited by hermits. They believe in charms and amulets, and adore a multitude of saints, but all this does not soften their natural barbarity. When attacked on land they take refuge in the mountains, widi

every pass of which they are acquainted, and from thence harass and destroy their enemy in detail. In the bays and creeks they have a great number of long Ijoats, capable of containing from twelve to twenty men, with which they venture out into the open sea, when they have any hope of a booty. In these bays they watch for their prey like the wild beast in his den, and woe to the imprudent traveller who in unquiet times ventures into these countries without a sufficient protection. The bravery of independent mountaineers is generally mixed with frankness and honesty ; but among the Mainiotes this does not seem to exist. According to M. PonguevilJe's description they are treacher- ous, cowardly, ferocious, greedy, and fanatical. We would hope, however, that this character does not apply to all the Mai'nioteswithoutdistinction. It is true that for many ages the pirates of Maiˆne

have been the scourge of Greece, and that the Algerine corsairs have not been worse : they car- ried away Turks to sell them to Christians, and Christians to sell them to Turks Families who inhabit the neighbourhood of the Magne, or the Magne itself, find it very difficult to keep beautiful children : no one was sure even of his neighbour. La Guilletiere relates the history of two Mainiote pirates who had often committed depredations together, but at last disputed as to the division of some booty. Animated with resentment Theo- dore carried away the wife of his old neighbour and associate Anapliottis, and took her to the ves- sel of a Maltese corsair, stationed in the road between Maina and Vitulo, in order to sell her. The Maltese, after having looked at the woman, refused to give him the price he asked, telling him that he had bought two hours before for half the sum a much more beautiful woman, and in order that the Mainiote might judge for himself he sent for her. What were the surprise and rage of Theodore when he saw his own wife, wiiom his neighbour Anapliottis had already sold : he was less anxious to recover his own wife than to sell his enemy's, and therefore yield- ed his prey at the price which the Maltese chose to give him. In the mean time Anapliottis, hear- ing that his wife had been taken to the corsair, came in an armed shallop : Theodore instead of cutting his throat joined witli him in forcing the Maltese. to restore their wives: the two rascals were then reconciled and continued their occu- pation together.

The Magne contains about ten captainships, not including tlie mountains of Cape Matapan, inhabited by a people iiitherto unconquered, the Cacovouniotes. They are brigands by choice and by necessity ; in the bays, near which tlieir cabins and hamlets are built, they watch till some shipwrecked vessel is driven by the tem- pests on their shores. Wo to the

men that are cast on these barbarous coasts ! they are pillaged, and even massacred, without mercy, by these ferocious mountaineers, who rejoice in their mis- fortunes. They are, however, very strict in ob- serving their fasts ; and believe, that they would be much more culpable in eating meat on a fast day, than in putting to death an unfortunate tra- veller ! At Maratlionisi, a port on the gulf of Ko- lakyna, resides the bach-bagon of the Mainiotes ; this is the chief place in the Magne ; it is only a small town, divided into narrow streets, and built at the foot of a mountain near the sea. The market-place, which is in front of the church, is the only paved place ; the houses are built partly of wood and partly of brick, of one story in height. The captain resides on a height near the town ; and a few arms and straw mats form his whole furniture. There are some gardens, and the sides of the mountains are sliaded with pines and chestnut trees; but the Mainiotes are better soldiers than husbandmen : with the excep- tion of fish, wiiich their coasts supply in abun- dance, they draw all their provisions from the islands. The port of Marathonisi is large, but not one of the safest. Near the coast there are some antiquities of lioman construction, which the Greeks call Paltofiolis. The ancient Gythium must have stood somewhere to the north of the

present city. A rivulet of salt-water issues from the rocks, which perhaps might have been the ancient fountain of iEsculapius. The ruins of some baths are still visible, and some fragments of marble have been sometimes dug out of the earth. Coutouphari, the residence of another captain, is a village built among mountains covered with oaks ; Platza and Scardamoula have also their captains ; that of Platza has his tower near the rocks of Pephiios, on which a town of that name formerly stood ; the thick walls of this tower, and the barrels of gunpowder ranged on the platform, put his residence into a respectable state of defence. In these captain- ships, the people are so little accustomed to see strangers, that they run from afar, when a Euro- pean, under the protection of their chiefs, passes through their villages. Scardamoula, the capital of Androvistas, is only a little village, with three or four towers, inhabited by chiefs. On a rock near, which has been rent by an earthquake, are some vestiges of the ancient acropolis of the city of Cardamila, and the remains of some sepulchres cut in the rock below. At the village of Armyros, to which vessels retire during the winter, there is a plentiful spring, which turns several mills, and which, tliey say, swells as often as the wind is in the north, and subsides when it is in the opposite quarter ; they suppose that it has a communica- tion with some cavern on the coast, where the waters are agitated by the wind. 'itulo, the ancient iEtilus, is built on the sea shore, on some rocks, bordering a deep and narrow bay, called Chiniova. It contains about 3000 or 4000 in- habitants, who are pirates ; they have a bishop, and a few papas. Below the modern houses are found some of the foundations of that ancient city

mentioned by Homer, and of which Pau- sanias describes the monuments ; among others the temple of Serapis. Leuctra is only a mean village ; and at Cape Gros there are some ruins wliich indicate the situation of the ancient Coenapolis.

The manners of the Mainiotes are very similar in all these districts ; they have the same warlike character, and manifest the same hospitality towards those who put themselves under their protection. We will add a few words on the customs practised by them at marriages and funerals. A Mainiote never sees a young woman in private before his marriage-; these people do not understand jesting upon matters of this kind. A chief told an English traveller, that a German musician, who had been in the country, took a fancy one day to make a declaration of love to one of their females, when she drew out a pistol and shot him dead on the spot. A young man, who was betrothed to a damsel, but too impa- tient to wait for the wedding day, to speak to her whom he loved, took the opportunity of her going out of her house, to attempt to converse a moment with her. The young woman was near a rock, and, conceiving herself dishonored by this attempted conversation before marriage, she preferred flying from her lover, and casting her- self headlong from the precipice; and the young man threw himself after her. The marriage is celebrated with discharges of musquetry, and groat festivals; dried fruits are thrown out of the

window to the passengers ; and, after eight days, the married couple return to the church, and the young husband receives his wife's dowry. The bridegroom's dress consists of a garment, made of a brilliant colored stuff, with broidered seams, red drawers, with a tuft of silk, and very wide pantaloons. The women, like the men, wear no stockings ; they cover themselves with a fringed veil, a silk cap, a robe without sleeves, and a scarlet tunic with very wide sleeves. On the death of a Mainiote, the corpse is exposed in the liouse with the face uncovered, the women utter lamentable cries, and accompany it, as well as Vi\e inf n, to its last home. As no fire is lighted :n tite house of the deceased, the relations an i fiiejids bring their food ready prepared, and eat It with the afflicted family; but, strict to their rules of subordination, the men never suffer the women to approach the table, till they are satis- fied. Except in families of the first rank, the women hold a very low station among them, and are burdened with the most laborious avo- cations, both in the house and in the field. They have often, however, fought, as if they had been equals with the men, and not their slaves. Their common costume consists of a cotton petticoat, with a broad red or white border, an under waistcoat, and a little red cap,

with a handker- chief rolled round it. The rich females adorn themselves with rings of gold and silver.

IV. The third and last grand division of Greece is the Archipelago, consisting of a number of islands, included between the thirty-fifth and forty-first degree of north latitude, and the twentieth and twenty-sixth degree of east longi- tude ; lying scattered over the sea between the two Greek peninsulas on the one side, and the coast of Natolia or Asia Minor on the other. On this part our present limits will not permit us to say much ; nor is it very necessary since some of these islands have been already described under their respective articles, and others will occupy a place in the succeeding pages of th;s work. We can only, therefore, specify the prin- cipal islands, remarking their situation and their most striking peculiarities, referring our readers for a more detailed account to the articles above mentioned. There are about sixty of these islands, some of them very mountainous and rocky, others almost flat and covered with a good soil ; some well peopled and rich through indus- try or the gifts of nature, others sterile and almost deserted. Fruitfulness, however, is the general characteristic of the Archipelago ; and it appears like a vast garden intersected by canals, or a labyrinth of verdant islands scattered over an immense lake of a light bluish color. Some of them have been overwhelmed by volcanic fires ; but vegetation, far from being annihilated, only makes its way with greater vigor through cinders and pumice stones. The heat, which would otherwise be insupportable, is tempered by delightful breezes, and the inhabitants of the Archipelago scarcely know what winter means ; not one mountain penetrates so far into the higher regions as to become the depository of perpetual snow ; a constant spring prevails, un- interrupted either by the excessive heats of sum- mer, or by floods and hurricanes. Olive and

mulberry trees, vines, grain, fruits, and cotton, abound in every island, and little labor and care are necessary to obtain a harvest more than equal to the consumption. The sea also furnishes abundance of fish, and offers to the inhabitants of these islands mojt important advantages in regard to navigation. By crossing the Mediter- ranean they can reach the continents of Europe, Asia, and Africa, and would become factors to all the commercial states of these three parts of the world, if they did but unite with their natu- ral vivacity of mind, and habitual seafaring life, a genius for extensive speculations ; or if liberty had completed their civilisation and enabled them to enter into a community of views and enterprises with the maritime .rations of Europe. Formerly every island had its king; the Greeks of the Peloponnesus and of Great Greece sub- dued the greater part of these islands ; but, since the fall of the Greek empire, the Archipelago has always enjoyed some degree of liberty : the Venetians, the Genoese, and other European powers have made some conquests in it; and the Turks have

taken possession of all the islands ; but it would cost them too much to attend to the government of each individual island, and, despots as they are, they have been obliged to leave to some of them a kind of liberty and in- dependence, which has eminently favored the development of the natural genius of the Greeks. There exists in the Archipelago so great a variety of temperature, of appearances, of soil, of man- ners, and of customs, that itwould be very difficult to give a general view of them, and every island seems to need a particular description.

Nearest to the Peloponnesus is Hydra, pre- senting the pleasing spectacle of a vigorous po- pulation, creating riches for itself from a narrow and barren territory, and having a considerable degree of naval power and enterprise. It has several little islands surrounding it, among which is Spezzia, having, next to Hydra, the most powerful navy in the Archipelago. At the entrance of the Archipelago, south of the gulf of Colochina, is Cerigo, formerly Cythera, the famous island of Venus, having a rocky soil, and exposed to the rays of a burning sun. There are here some ancient remains, but in so dilapidated a state, that it is difficult to ascertain for what purpose they were designed. 'The little island of Cerigotto, about fifteen miles distant from Cerigo, to the south-east, is useful to it on account of the pastures it afibrds for its flocks ; it has but one house, that of the keeper, whose family forms the whole population. Milo, anciently Melos, situated at a greater dis- tance to the north-east, with its surrounding little islands, especially Antimilo, Policandro, or Pho- lyandros, and Sicinos or Sikino, bears the marks of volcanic fires, consisting of rocks of black lava, and a light and porous soil of the quality of pumice stone. It was formerly celebrated for its medicinal baths, which are now situated between the town of Milo and its port. Pro- ceeding again to the south-east, we find Thera or Santorin, the Callisto, or fair island of the ancients ; it has now, however, lost its character, and is become one of the least beautiful in the Archipelago. It is, as it were, on a volcanic

foundation, and is very subject to terrible con- vulsions ; yet it is the best peopled island in the Archipelago. These convulsions and eruptions have at different times given birth to several new 'islands in the neighbourhood, as Hiera or Kam- meni, Micri Kammeni, &c. At some distance to the north of Milo is Thermia, anciently Cythnos, celebrated in antiquity for its fine pas- turage. The splendor of its two cities is still attested by the fragments of white marble that are yet to be seen. It has two convents and sixteen churches. To the south of Thermia lie Serpho or Seriphos, and Syphnos or Syphanto, where Perseus is fabled to have turned the men into stones. The

former has a dry soil, but it con- ceals mines of iron and loadstone,which have never been worked to this moment ; the soil of the latter is more fertile, and it is rich in mines of gold, silver, iron, lead, and loadstone, as well as in a few quarries of marble. Cimolis or Argen- tiere is a barren and volcanic island, producing only a little barley, wine, oil, and cotton ; provi- sions are very scarce. The most useful produc- tion is a kind of talc, proceeding from the decomposition of the red porphyry, used in scouring wool, and exported to every part of the Levant. Paros and Antiparos lie between Siphanto and Naxos ; they are rich in quarries of beautiful statuary marble. The latter is rendered remarkable for its fine grotto. To the north-east of Paros is the little island of Icaria, now Nicaria, the poorest island in the Archipe- lago, though formerly very flourishing, and having a fine temple of Diana. Naxie, anciently Naxos, once the seat of the worship of Bacchus, is the queen of the Cyclades ; it is celebrated for the production of enormous grapes, as large as damascenes. It abounds also in grain, fruits, olives, aromatic plants, and has game in great plenty : it is in every respect a beautiful country.

To the north of Paros is situated the island of Delos, famous in ancient times for the feasts of Apollo, frequented by all the Greeks. It has now become a wild desert, producing hardly any trees but mastichs, which grow among the ruins of ancient monuments. A narrow strait lies between Delos and llhenea, which is much more fertile and of greater extent; but the inhabitants of Mycone use it only as a place of pasturage for heir flocks. Syra, another of the Cyclades, is on the west of Delos ; it answers pretty nearly to the description given of it by Homer, though its fertility does not equal what it enjoyed in those times. The inhabitants live in the same simple manner as formerly, and are still blessed with that longevity which Homer ascribes to them. There are but few ruins of the ancient city of Syros, and those but of little importance. To the north-west is situated the little island of Gyaros, now called Joura, whence, according to Pliny, the rats drove out the inhabitants, and which was a place of exile under the Roman emperors. To the east of Naxie lies the island of Amoruo, wnere formerly knowledtre and industry flou- rished, and which furnished the fJreek women with fine and brilliantly colored tissues for their dress, but all that once embellished it is destroyed, aod its manufactures have left no traces behind

them. Nothing but the advantages of nature re- main. Northward of Thermia is situated the little island of Ceas, now called Zea ; it still enjoys a fine climate, and has excellent pasturage, but its monuments are fallen into ruins. Another of the Cyclades is Tine, or the ancient Tenos, lying north-east of Syra ; it presents at first sig ht only barren rocks to the view of the traveller, but on the sides of the hills and in the plains the finest cultivation prevails, the soil being rendered very rich by the streams of two

rivers which water it ; but unfortunately this fertility is dearly purchased by the prevalence of diseases among the inhabitants, arising from the marshes around them. Opposite to Tine, to the south-east, is the island of Mycone, which is rocky and un- fruitful, and very much in want of water ; so that the inhabitants, not finding resources in the soil, devote themselves to seafaring pursuits. Not far from Euboea, or Negropont, is situated the well watered and fertile island of Andros, containing about thirty villages, and carrying on a consider- able export trade to the continent of Greece. 'ery far to the north, in the fortieth degree of latitude, we meet with the island of Lemnos, of which 'ulcan was, in ancient times, the tutelary god : it still bears on its surface the marks of volcanic eruptions, though the site of the volcano, in which Vulcan was fabled to have worked, is now matter of dispute among the learned. At some leagues distance to the west are three capes, forming the extremities of so many peninsulas, and being part of Macedonia ; the most easterly of these is the famous Mount Athos, or the Holy Mountain, called by the Greeks Hagionoros ; the principal seat of Greek monachism. It is alto- gether peopled by monks and hermits, who de- vote themselves to mortifications and abstinence of the most severe description. This country is visited by devotees from all parts of Greece. The summit of Mount Athos is discerned from a great distance, though it is by no means one of the highest mountains in Greece, being only 4278 feet above the level of the sea. A great, variety of plants grow on its surface and fill the interstices of the rocks, and little gardens full of olives, vines, and different sorts of fruit-trees, adorn the neighbourhood of the hermitages. Sainte Laure is the principal of these monas- teries, containing, it is said, with its dependent convents or hermitages, not less than 600 monks. Proceeding again eastward we fall in withSamo- traki, anciently Samothrace, a colony of the Thracians. It is a very fertile spot, abounding in fine forests and charming valleys, supplying grain more than sufficient for the consumption of the islanders, and pasturage for their goats, from the milk of which they make excellent cheeses. To the south of Samotraki is situated the island of Imbra, on which the sea has made great in- roads; wheat is its principal production, and the chief article of exportation. Still farther to the soutii lies the famous island of Metelin, anciently Lesbos, where the Turks have more power than in any other place in the Archipelago, and consequently the ancient monuments, which are numerous, are crumbling to dust, the inhabi- tants disappear, and vegetation itself seems to fail. Scio, anciently Chios, lies still farther to

the south; it was, before tlie year 1822, well cultivated and fruitful, and its population indus- trious, lively, and contented, had, by their inter- course

with other nations, gained an easiness of manners that rivalled the most polished nations ; at that period it was devastated by the Turks, and the unfortunate inhabitants either cruelly slaughtered or dispersed. Its women are remarkable for their beauty, their natural gaiety, and the liberty which they enjoy, and which, according to the report of travellers, does not diminish from the virtue of their character. The monks were almost as powerful as the Turks, being lords over not fewer than thirty- two villages, nearly half the population of the island. To the west of Cape Nicolo is situated the little rocky island of Psyra, now Ipsara; the greater proportion of the population consists of mariners. Still smaller, and to the west, is the rocky and elevated island of Anti-Ipsara, serving as a shelter for the port of Ipsara. To the north- west of these is the island of Skiro, or Scyros, forming the extremity of the Cyclades, and con- tai-ning only 300 Greek families, with scarcely a decent house within its limits. Its port, called Saint Georges, is dependent on the monastery of Saint Laure, on Mount Athos. Near the Ionian coast lies the island of Samos, once one of the richest and most brilliant in Greece, now covered with marshes, with only a few ruins to mark the situation of its ancient temples and palaces. The chain of mountains, which crosses it, is composed almost entirely of marble, and its natural resources are still so extensive, and so various, that the inhabitants would find abun- dant and profitable employment, if there existed among them any spirit of industry and enter- prise. To the south-west of Samos is situated the little island of Patmos, the coasts of which are surrounded by rocks of black porphyry. On an elevated mountain is shown a grotto, where the banished apostle John is said to have written the Apocalypse ; at the top is a monastery with about fifty monks.

A number of little islands are scattered about on the sea to the east of Patmos, bearing the names of Nacri, Lipso, Agathonisi, Fermaco, &c., and on the southern side are those of Capra,Caprone, Calanc, and Lero. The charm- ing island of Cos lies to the south-east, the native country of Hippocrates and Apelles. There is a number of ruins lying on the site of the ancient city of Cos, and the vast plane tree is still standing, which is said to have for- merly covered forty shops with its shade. The island is yet subject to the Turks. Still farther to the south-east is the larger island of Rhodes, which has lost the importance it has at different periods assumed, but the inhabitants still retain their love for the sea. Two-thirds of its popu- lation are Turks, and there are about 1000 Jews. Its ancient cities have almost entirely disap- peared, and but few remains of its ancient monuments are to be seen. Every thing in Rhodes used formerly to be gigantic, and its celebrated colossus, even without believing the fable of its lees reaching from one pier to the other of the harbour, must have been an asto- nishing monument, and well worthy of being

accounted one of the seven wonders of the world. In the neighbourhood are

several small islands; particularly that of Castel Rosso, fa- mous for its good port ; and Symes celebrated for its sponge fisliery. At an equal distance from Syria and Caramania is the large island of Cyprus, now called Cypre or Chypre, which after having been successively gorerned by the PhcEnicians, the Greeks, the Romans, and Vene- tians, fell into the hands of the Turks in 1572. The land is dry, and the climate unwholesome; the plague, the despotism of the Turks, the barbarity of pirates, every thing conspires to the ruin of the Cypriots, and, without some remarkable change occurs, they will soon be extirpated. The wine of Cyprus is still very fine, and the island produces excellent wheat, its bread is indeed the best in the east. South of the Archipelago lies the extensive island of Candia, anciently Crete, being nearly 200 miles long. Of all its formerly splendid cities only a few ruins are visible, its picturesque landscapes are now deserts, and the dominion of a foreign nation has extinguished the genius of the people, who are now so dimi- nished in numbers as to be scarcely able to cul- tivate one-fourth part of the soil. Leprosy is here so common, that most of the inhabitants are infected with it, and many are obliged to separate themselves from the society of their friends. We shall mention but one more island, that of Tenedos, near the coast of the Troad, from which it received its celebrity, and, as long as Troy flourished, it shared its prosperity. It is now remarkable for its vineyards, and its situation is important as overlooking the entrance of the Dardanelles. It has but few trees, and little verdure. The Troad, a large country on the continent of Asia Minor, was in early times much connected with Greece. It is opposite to Tenedos, and contains many vestiges of its ancient splendor; but we must refer our read- ers for a full account of it, to its appropriate article.

History. — Since the year A. C. 146, when Greece became a Roman province, under the name of Achaia, the history of this country has been more or less mixed and identified with that of its successive conquerors. Though the splendor of Constantinople, during the time of its prosperity, might have reflected some lustre upon Greece, yet it gained scarcely any thing under the miserable emperors, who filled the throne, of which they were not worthy, for a long time previous to its fall, and who were most of them hurled from it by the hand of violence. The Latins, the enemies of the Greek emperors, seized on the Morea, and laid it waste ; the Sicilians and the Normans afterwards made themselves masters of part of the same penin- sula ; a marquis of Montserrat succeeded to the government of its ancient republics, and an ob- scure gentleman of French origin, Guy de la Roche, became duke of Athens, while the Mes- senians and Arcadians were condemned to become the serfs of a lord, who was not even acquainted with their language. The crusades, which commenced in the eleventh century, for a length of time afl'ected Greece, particularly in some of its islands, on which several ot the

leaders in those mad enterprises settled ; but it was not at all probable, that the semi-barbarous customs of the feudal system, which they brought with them, would confer any real benefit upon the people, or re-kindle the torch of science, which was nearly extinguished. The same re- marks will hold good with regard to the knights templars, ‘ and the knights of St. John, who about the same time exercised an influence over some parts of this country ; the blind devotees themselves of a senseless and degrading super- stition, they were not likely to improve the man- ners, or advance the real prosperity of those whom they governed ; and these falsely called Christian heroes of the middle ages only prepared the way for the more desolating and despotic sway of the Turks.

Under the barbarous yoke of the Mussulman power, Greece has continued with very short intermissions, until in modern times it has begun to assert its claims to independence, and to com- mence that struggle for liberty which, whatever may bo its termination, entitles it to the sympa- thy of every real friend of man. Towards the end of the seventeenth century the Venetians invaded the country, took Athens, and extended their power over a great part of the continent and some of the islands ; but, republicans as they were, they treated in the most despotic manner the serfs of the Morea : still, as they wished to rea- lise some advantage from their conquest, they encouraged the people to cultivate agriculture. It is to them that they owe the numerous plan- tations of olives, the remains of which are still found in the woods : some historians assure us, they contived to manasre this country so well, that they realised a revenue of .300,000 crowns ; they rebuilt several ancient fortresses, and were very anxious to keep a conquest which they judged necessary to secure their dominion in the Archipelago. But Venice experienced changes in her turn ; she lost one possession after ano- ther, and at last, at the beginning of the eigh- teenth century, the Morea was wrested from her after the loss of Candia.

Again the Turks became masters of the penin- sula, made the inhabitants feel the weight of their iron sceptre, and imposed the karatch, or capitation tax, as a price at which they consented to spare the lives of the vanquished. The inter- ference of Christian powers, however, especially of Russia in the year 1770, only tended to in- crease the miseries and aggravate the bondage of the unhappy Greeks. Peter the Great had, there is no doubt, laid the foundation of a plan for as • sisting them, and driving their oppressors out of Europe ; and the empress Catherine, following up the views of her great predecessor, sent a fleet of twenty sail of the line, towards the close of the year 1769, which took possession of seve- ral

islands, attacked the Turkish fleet, and finally succeeded in destroying it. Tiie call to the Greeks on this occasion to arm themselves, and shake off" the yoke, was instantly obeyed, and an insurrec- tion took place throu<;hout the Morea, and in many of the islands of the Archipelago. The Russian fleet, however, was re-called, and the poor Greeks abandoned to their fate. The Al- l)anians ravaged the country in coniunction with Vol. .X

the Turks, who carried off" a great multitude of the inhabitants into slavery. It is confidently stated by Eton, in his Survey, that a deliberate proposal was made in the divan, to exterminate all the Christians in the Morea, innocent or guilty, of whatever sex or age, and that this blood- thirsty design was only stopped by the observation, that in case of a general massacre the Ottoman Porte would lose the benefit of the karatch or capitation tax, which they paid. The Albanians conducted themselves with so much cruelty, that at length the Turks were obliged to reduce them to a state of peace by force of arms. The brave Lambro, a native of Thebes, who had the courage to keep the sea against the power of the Turkish fleet, was proscribed, and compelled to wander from one country to another, as a miserable exile. Notwithstanding the diminution of tlie population, and the increased distress which prevailed in the Morea, the karatch was estimated in 1780 at 56,670 notes from three te eleven piastres each for the whole peninsula, with the exception of the Magne ; and this large sum did not exempt them from the payment of the tenths, the customs, the taxes on wine, as well as the dues attached to the ancient feudal lands. ' The rise of Ali Pacha,' says Mr. Bla- quiere, ' not long after the peace of Kaimardgi, rendered the situation of the Greeks more hope- less than ever; the enterprising and ferocious spirit of this chief had enabled him to extinguish the last remains of Christian freedom in Epirus, and his vicinity to the]\Iorea gave him the power at all times of pouring in any number of those barbarous hordes, to whom it had recently been given up : and, in order to render sucii an ope- ration still more easy, all the approaches and passes were occupied by Albanians devoted to his interests.'

Notwithstanding the persecutions which fol- lowed the fruitless struggle of the Greeks, in 1770, the spirit of the people was not yet broken, nor their anxiety to shake off" the insupportable yoke, under which they groaned, at all dimi- nished. For a while, however, they applied themselves to trade, and to the acquisition of useful knowledge, judging this tlie best mode of ultimately securing the object of their wishes. The French revolution, which took place in 1789, was very favorable to their interests in this re- spect, bˆ tiringing them into relation with the more civilised western nations, and opening a wider field for their commercial speculations. No people ever manifested so much enthusiasm in the pursuit of knowledge as the Greeks have done for thirty years past, and a wonderful change has been the

consequence. ‘ It is worthy of record,’ adds Mr. Blaquiere, ‘ that not more than half a century has elapsed since there was but one possessor of a map among the Fananot Greeks, who from their residence in the capital, and admission to the highest political employ- ments, might have been considered much more enlightened than the rest of their countrymen. Yet, before the recent explosion, there was scarcely an individual iuMiis class, who had not experienced the benefit of a liberal education, while many were distinguished for their varied and extensive erudition ; even the young ladies

of the Fanar joined the study of Homer and Thucydides to that of modern languages and music. There have been numerous examples, ‘ botli at Constantinople and in other places, of youths denying themselv,es the necessaries of life, that they might be able to attend the schools.’

In general the Turks did not oppose any im- pediments to this ardor, or to the progress of knowledge that was making such rapid advances ; though individual mstances of arbitrary conduct were sometimes too frequent. It is said, for in- stance, that the Turkish commandant of Dara, a village in the Morea, happening to pass the school, while pupils were taking their lessons, had the didascalos or master dragged out and bastinadoed, and it was then dangerous to com- plain. The most flourishing Greek academy, was that at Scio, attended by several hundreds of students, and furnished with books, chemical apparatus, and astronomical instruments. The colleges of Joannina, Athens, Bucharest, Aivali, and Cydonia, were also eminent ; but they have been destroyed in the political struggle.

Close to the eastern shore of the Peloponnesus lie the islands or rather barren rocks of Hydra and Spezzia, and near Scio is situated that of Ipsara. Furnished by nature with commodious havens, these islands afforded a refuge to some Albanian families, who were driven out of their own country by tyranny and want, and who, settling on them, built villages, and applied themselves to fishing. By degrees a coasting trade was opened to them, an’d their commerce extended, till they were at length able to pur- chase the right of governing themselves, paying a tribute, and annually furnishing the Porte with a number of sailors. Thus, at liberty to pur- chase the dictates of their own active minds, they became some of the most hardy and skilful seamen of Europe, the number and size of theii’ vessels increased, and they were soon the car- riers of the productions of

Russia and Asia to different ports in the Mediterranean. As they were much exposed on these voyages, especially to the attacks of the Barbaiy pirates, it was necessary to have their vessels armed, and the transition was easy to the formation of a fleet for warlike purposes. Their wealth increased, and these islanders soon had little to wish for; but they felt the political debasement of their countrymen, and in the recent struggle they have more than once boldly attacked and put to flight the Turkish squadrons.

At the time of the expedition of the French into Egypt, the Greeks, strongly excited by the events of the war, which was thus approaching them, waited for them as liberators, with the firm resolution of going to meet them and conquer- ing their liberty; but again their hopes were disappointed, and the succours they expected frrˆva France were removed to a distance. The brave Rhigas, at once a poet and a warrior, and the author of the famous national air in imita- tion of the Marseillois, which is to this day the war song of the Greek troops, perished at Bel- grade by the hands of the oppressors of his country; but his blood, and that of other less celebrated chiefs, have only served to inflame the ration instead of discouraging it. Having

waited in vain, in the midst of the great events, which in several respects have changed the whole face of Europe in this century, " the Greeks, taking counsel only of their despair, and indig- nant at living always as Helots on the ruins of Sparta and of Athens, when nations but of yes- terday were recovering their rights and recog- nising their social relations, rose against their despotic and criiel masters, perhaps with greater boldness than prudence.

The first decided movement in these later times took place in the year 1800, when the Ser- vians, provoked by the cruelty of their oppressors the Turks, made a general insurrection, which was headed by their famous chief Czerni George, who had served as a serjeant in the Austrian service, and afterwards became a bandit chief. He was possessed of much energy of character and bravery ; but he was extremely despotic, and is said to have murdered his father, and caused one of his brothers to be hanged. Under him the Servians obtained several victories. He blockaded Belgrade ; and, one of the gates being surrendered to him, he made his entry into the city and slaughtered all the Turks that were found ill it. At this time the affairs of the Porte were in great disorder ; it had but just termi- nated its war with France, and the eflforts, by which it had been endeavouring to reduce Pas- savend Oglou, pacha of Widden, had failed and ended in disgrace. At home the Janissaries were ever dissatisfied, and Roumelia was in a state of disturbance. The divan, however, ex- erted themselves to quell the Servians, and tliey were aided by the Bosnians, in consequence of which many sanguinary combats took place. Relying,however, on the promises of the

Russians, and receiving pecuniary succors from Ipsilanti, the hospodar of Walachia, the insurgents con- tinued the contest, taking refuge in the heights when their enemies were too powerfu. for them, and, when these were obliged to retire into win- ter-quarters, issuing from their fastnesses and marking their progress through the surrounding country, by spreading devastation in every di- rection. In the mean time Russia openly de- clared against the Porte in 1807, and carried on the war until the year 1812, when the treaty of Bucharest was negociated ; and though some efforts were made to obtain a concession in favor of their Servian allies, yet one difficulty after another being stated by the Porte, a peace was at length concluded, as before, upon such terms as left the insurgents to their fate. The Turks in the summer of 1813 sent Chourshid Pacha with nearly 100,000 men, who over-ran the- country, meeting with scarcely any resistance, and signalised his triumphs by treacnerously executing many, and among the rest a number of persons who had returned to their homes, under a false promise of an amnesty. It was not long, however, before the Servians took up arms again, and obtained some advantages over their enemies, and the Porte, at length wearied out, sent a Greek bishop to conduct the negociation. By the treaty then made, it was agreed, that Mi- losh, brother-in-law to Czerni George, a native, should be their prince, that the sum of £100,000 should be paid yearly to the Turks, whose garri-

sons in the fortresses of the Danube were to be limited, and that the prince should maintain a few national forces, for the regulation of the internal policy; stipulations decidedly evincing the real weakness of the Porte.

The period that intervened between 1815 and 1820 was apparently tranquil: the Ottoman affairs seemed prosperous ; the sultan, Mahmoud, by his vigorous measures, maintained peace with his neighbours, quelled the spirit of the mutinous Janissaries, suppressed several revolts in the eastern part of the empire, drove the Wechabites from Mecca, and gave more weight to the impe- rial firmans, than they had heretofore possessed. But, under this appearance of tranquillity, all those projects were forming which have pro- duced the recent concussions. The Greeks soon became more open in their plots against their oppressors, and entertained some considerable hopes from the probable arrangements of the congress at "ieniia : but tha congress closed without effecting any result favorable to the li- berties of Greece. This, however, did not damp the ardor of its friends, nor induce them to abandon the plans they had projected. About this time was formed the celebrated association of the Iletaeria, the true object of which was the emancipation of Greece, though this design was*

concealed under the show of distributing books and extending the benefits of education. Almost all the Greeks in Europe, and men of great note, repaired to St. Petersburgh where its head-quar- ters were fixed, under pretence of commerce and other business, but really to obtain by means of count Capodistrias, their countryman, some im- mediate or early support from Russia ; and, though he told them that at present nothing could be attempted openly in their behalf, he dis- played much interest in their affairs, and gene- rally dismissed them with a present from the emperor. In the mean time Czerni George, who was then residing at Kiow, and count Galati, a native of Corfu, who was a relation of the Rus- sian secretary, having no hope of immediate aid from abroad, in tlie year 1817 resolved upon a plan to begin the revolution, relying on their own resources for success. Tiie former was suddenly to make his appearance in Servia, and thus creating a diversion of the Turks to that quarter, to afford Galati, Colotroni, and other j)atriots an op|)ortimity of making an effort in the south. lie set out in disguise on this errand, and had reached h's destination in safety, when he was treacherously assassinated by his relative and .'trmer friend Milosh, and his head sent to Con- stantinople. This event stopped, for the present, the progress of their scheme, and Galati retired to Hucharest, where he died soon afterwards, and the completion of his mission devolved upon otlicr agents.

The degree of independence enjoyed by Servia, was a source of distjuietudc to the sultan and the divan, and thoy seemed determined, if possible, to violate it. The fortified posts on the Danube were repaired, and well stocked with provisions and ammunition ; their garrisons, notwithstand ing the treaty of 1 8 1 5, were increased, and fresl; troops called in from all sides, profess- edly to relieve their comrades ; b-it none letiim-

ed. An attempt was ;dso made to put Milosn out of the way, but he was too Wcˆry to be taken in tliri snare ; lie sent deputies to Constantinople, and was taking measures for defending himself, when the attention of ˆthe Turks was called off from him by the insurrection, which broke out in the south.

It appears that the Hetffirists had not intended to commence their operations before 182.5, leav- ing sufficient time for the arrangements they had to make ; but the rupture between Ali Pacha and the Porte, and the civil war that ensued, render- ed it expedient to proceed to tlie execution of their design much earlier. The Albanian tyrant had, until this period, kept the Greeks in awe ; but, the moment an attack upon himself seemed ine- vitable, he called upon tliem to arm in his defence; the Porte did the same, and some of his best troops forsook him on this occasion ; he found opponents also in the peasants of Mount Pindus ; and the Souliotes, his old enemies, were brought to the continent to act against him. The Porte,

however, did not fulfil its promises to those who lent it their assistance, and the Greeks, in the disappointments they experienced, forgot the despotic acts of their former tyrant. Ali learned all these circumstances with great pleasure, and availed himself of them. By means of his money and his intrigue he soon brought over the chiefs who had deserted him, and even gained the Souliotes to his party by surrendering to them their strong holds, with all the treasi'res and ammunition contained in them ; so that Souliotes, mountaineers, and Klephtai were all soon engaged in harassing the Turks, and cutting off tkeir communications. These again drew off the flower of their armed force from Livadia and the Peloponnesus, and left the field open in those quarters for the effortsof the friends of free-, dom. A subscription immediately commenced, and a commander-in-chief was appointed ; the choice of the Iletserists fellon Alexandei Ipsilanti, the son of a former governor of Walachia, who retired and died at Kiow ; he had been in the Russian service, and was at that time aid-de- camp to the emperor. Prince Cantacuzene, another Russian general, of Greek extraction, also volunteered, though of higher rank, to serve under the generalissimo; and Michael Suggo, hospodar of Moldavia, engaged to join them on their reaching Yassy. A conspiracy was organ- ised in the capital, and it was thought that on the news of the revolt the Servians would unite with the Greeks.

Some of the chiefs of the Arnauts or Albanians had been treated with, that they might furnish a body of forces to act under Ipsilanti ; but while the latter was making his arrangements, and about to give the signal, anotlier individual ap- peared, influenced by private and inlere.«ted motives, to raise the standard in NN'alacliia. This was an adventurer named Theodore X'ladi- miresco, who had differed with the Boyanis or nobles of his country, on account of some claims he pretended to have for money spent in tljc state service : but the divan would not jud re the affair, till the new prince had arrived. He therefore entered the field against them, at the head of 300 well-armed men. The d;van ro-

solved to call upon the pacha of the Danube for assistance ; but the entrance of these troops was opposed by the Russian consul ; and. the Boyards upon this formed a body of Amaut horse, Servians, Walachians and others, under the conduct of the aga, Nicolas Vacarisco. He had scarcely, hovyever, proceeded a day's journey, when it was intimated to him by the troops, that he need not go farther, as it would be both useless

and dan- gerous. Meetings of the divan were held daily, and more urgent representations made of the ne- cessity of calling in the Turks, as Vladimiresco was rapidly approaching. In this situation of affairs, some news from the north gave the finish- ing stroke to the weak government of the divan. 'ladimiresco was not connected with the Iletae- rists; his only object was to enforce his private claims, and immediately on his arrival he put foith a declaration, which soon brought Ipsilanti to Yassy at the head of 200 men. Surprised at this sudden appearance, the Moldavians were about to resist, but their minds were quieted by prince Suzzo, who publicly testified his participation of Ipsilanti's measures, and withdrew his allegi- ance from the Porte. On the 7th of March 1821 prince Alexander addressed a spirited proclama- tion to his countrymen, calling upon them to shake off the Turkish yoke, to follow the standard of the cross, and in conjunction with him to attempt the liberation of Greece. The Hataerists worˆ a vniform entirely black, in token of mourning for their country, and a phoenix rising from its ashes was described on their banners, as a symbol of that regeneration they hoped to achieve.

Tidings of these things soon reached Bucha- jest, and excited great consternation ; the hopes of the divan appeared to rest on Brancovano, the Boyard, who possessed most influence in the country ; but in the midst of this anxiety he de- parted one morning early with his family and effects for Transylvania. The Russian and Aus- trian consuls also left the town, and, to increase the confusion and distress, \Madimiresco's troops fell upon the fugitives, and plundered and ill- treated them without distinction ; the women even, some of them of high rank and beauty, wpie insulted. That chief himself took posses- sion of the city, and gave a loose to his disor- derly forces to commit various excesses ; he seemed, indeed, bent on making war on his own account, and nothing but the influence of Douka, his lieutenant, who had entered into Ipsilanti's views, made him agree to the proposal of acting in conjunction against the common enemy. This was not the only mortification that the prince experienced; he had expected the co-operation of Russia, and the reception he had met with in Moldavia in a great measure was to be attributed to the expectations of this succour ; but in the midst of these expectations, and while the Russian ambassador was daily insulted in the capital, the emperor published a manifesto, treating the Greek leader as a rebel and incendiary. This turned the whole tide of public opinion, and re- duced the patriots to a state of mingled despair and rage. Prince Suzzo ceased to have any in- fluence in Moldavia, and was obliged to leave the province : the plot laid in the capital was discovered and frustrated ; the Servians made

no effort, but a Greek emissary, who was sent among them, was discovered and hung by the Turks. The state of his own army too was most discouraging to Ipsilanti ; he wished to bring it into a state of discipline,

and to arm it in the European manner; but the envy and intrigues of his lieutenants defeated his intentions, and the soldiers were completely unmanageable. There was only one corps on which he could place any reliance, a body of Greeks, who had been brought up in Europe, consisting mostly of students and merchants' clerks, on whom, on account of their patriotism, he conferred the title of the Sacred Band, and who justly me- rited the distinction. In the beginning of April the Turks took the field, and, after a few skir- mishes, captured Galatz, the Greek garrison of which place, after making a brave but ineffectual resistance, were partly cut to pieces, and partly obliged to seek refuge in flight. The Turks car- rying fire and sword wherever they came, and sparing neither age nor sex, entered Bucharest on the 10th, without meeting with any resist- ance. Women and children were indiscrimi- nately butchered in this neighbourhood. In one monastery alone 300 women and children were put to death ; and the Turkish soldiers are said by M. Blacquiere to have hung numbers of the latter by the feet on trees, along the public roads Vladimiresco, whose motives were altogether selfish, and who was envious of Ipsilanti's having the chief command, was tampered with by the Turks, and promised the dignity of hospodar, if he would give up his associates ; he therefore refused to assist the prince, who wished to risk a battle in defence of Bucharest. The city was conse- quently abandoned, and a retreat to Tergousto commenced : here, havine arrested the traitor, the prince had him tried, and on his being condemned he was immediately executed, and his troops united to those who served under Ipsilanti. This, however, did not put a stop to the disaffection and treason that prevailed among the officers. On the 17th of June a bat- tle took place between Ipsilanti's forces and a Turkish division that had advanced against him ; for a long time the contest was obstinately main- tained, but treachery was at work ; the infamous Karavia fled with bis Arnaut cavalry, and in his way threw the corps of Nicolas Ipsilanti, the prince's brother, into such disorder, that not all his efforts could rally his men. The troops were upon tliis seized with a panic, and, notwithstand- ing all that Alexander could do, re-crossed the Oltau, and abandoned the sacred band to the enemy. These, imbued with the spirit of their ancestors at Thermopylae, preferred a glorious death to flight or dishonor, and thus nearly 400 Greek youths perished amidst slaughtered heaps of their enemies, who fell around them The hope- less Ipsilanti now proceeded to Trieste to join his brother in the Morea ; but the Austrian cabinet arrested him, and shut him up in the castle of Mongatz in Hungary. After this the provinces submitted ; but two chiefs, of whom the brave Giorgaki was one, betook themselves to a con- vent on the Pruth, where they made a desperate resistance. One of them died on his way to Constantinople, the other was beheaded. Thp

neroic Aiiastasius, with liis small body of 500 men, continued to ke’ˆp his position near the iiver for three days, untd half his soldiers were cut oft’; he then, \vith his brave companions, plunged into the river, and was received by the Russians on the other side. Not fewer diun 4000 ‘J’urks perished on this occasion.

Tiie news of the revolt in Moldavia produced in Constantinople the usual measures. All who were in any degree related to, or connected with, iherevolters were immediately massacred; and it has been confidently said, that the divan resolved on the complete destruction of the Greek people ; orders were sent to the provinces to disarm all of them, and the consequence was, that massacres took place at Salonica, Adriano- ple, Smyrna, Aivali, Rhodes, Cyprus, Candia, and in every place where any plunder was to be obtained.

Before this revolt the secret of the Hetaerisls had been confided to a few ecclesiastics, some of the primates, or municipal magistrates, and a select number of the klephtai in the Morea. A set of emissaries had arisen, called apostles by iheirernployersjwho went every where, spreading reports, that the sultan had determined to trans- port all the Greeks into Asia ; that prince Alex- ander, aided by Russia, was marching with a large force to Constantinople, &c., the people greedily receiving their information, and enga- ging at once in the enterprise. The inhabitants of Sedena, a large village in the north of Arca- dia, first took the field. The Turks, however, had taken the alarm and proceeded to Tripolitza to in- vite the Greek bishops and primates to a confer- ence, detaining in confinement those who were so incautious as to venture into their power. A few were tiius ensnared ; but the attempt to make the people deliver up their arm? was less suc- cessful; the governor of Patras, meeting with a decided refusal from the Christian inhabitants of tliat place, fired upon the town from the castle, and easily took possession of it ; but the next day Germanos, the archbishop, made a descent from the mountains with nearly 4000 peasants, and obliged him to take refuge again in the citadel. A rising immediately took place through every part of the peninsula, while the .standard of independence was unfurled by the people of Hydra, Spezzia, and Ipsara, who willi their numerous vessels began to cruise against the Turkish traders with the utmost celerity. Many richly laden vessels were taken by th(;m at first; but, when the news of the revolt was spread, no merciiantman would venture out into the Mediterranean. Samos and other islands declared themselves free, and Lesbos, Rhodes, and Scio were kept in awe only by the Ottoman garrisons. _ In Cypnis the introduction of 10,000 Syrians prevented the rising of the people, and 10,000 Christians perished here without any attempt to revolt.

The Turks, astonished and aflTriijhted, now betook themselves to their fortified places. The agas of Oalavrita and Calamata were compelled to surrender ; in Klis, the Mussulmans at (jas- touni and Lala had sharp contests with tiic Greeks ; those in the latter place gave them much trouble, and nothing but the appearance

of count Metaxa, with a few pieces of cannon, could overcome them, and one of the best con- tested battles of the whole 'war took place on this spot. The Laliots were forced to retire from their town, which tliey set on fire, with the loss of 300 men. Skirmishes occurred conti- nually, and, both by the one party and the other, a number of towns and villages were b orned, and of those that remain the greater part have been much injured four or five different times. The citadel of Patras at this time had nearly been taken by the Greeks, but was relieved by Yusuff, paclia of Negropont, who afterwards also raised the siege of Lala.

About this time appeared, to aid the cause of the Christians, that hardy mountain race the Mainiotes. The whole peninsula by the middle of May, with the exception of a few fortresses, was in the hands of the Greeks, and a new government was established consisting of archons and bishops. In the mean time the seraskie- Chourshid Pacha, who was blockading Ali Pacha in the citadel of Joannina, and cutting off" his communication witii the Souliotes, dismissed what forces he could spare mto Greece : 2000 Albanian cavalry, with his kiayah or lieutenant at their head, landed at Patras, raised the block- ade of the acropolis, burnt Argos, and proceeded to Tripolitza, where he took the command, and began to make plundering excursions. In one of these excursions, Nicetas, or Nikitas, the bravest and most magnanimous of the Greek commanders, with only fifty soldiers, fell in with nearly 3000 Turks, and three pieces of cannon ; he kept up such a spirited fire, that he repulsed the enemy with great loss. Ali Bey, the second in command, was killed by a musquet ball.

On the 6th of June the Greeks, commanded by Colocotroni, assisted by Anagnostoras and tlie bey of Maina, were attacked by the kiayah. The infidels were so confident of victory, thai they celebrated it beforehand by Albanian dances ; but on the rocky and uneven ground on which they had to act, they were soon thrown into confusion, and the vigorous attack of the Mainiotes in iiank, completed the rout; 200 ol them, at least, were slain. After this the Turks did not take the field again, and the Greeks liad only to watch the fortresses. Taking up their head quarters before Tripolitza, they laid siege to Modon, Coron, and Malvasia ; Navarin was invested by 2000 Peloponnesians and a band of lonians ; and a body of Achaians, with allies from Cephalonia and Zante, blockaded l^atras. The Argolidan militia blocked up Napoli di Romania, and the Corinthians and Sicyonians besieged the Acrocorinthos. The vessels of Hydra and Spezzia

cruised along the coast to prevent communication, and Bibolina, the heroine of Spezzia, took charge of blocking up Napoli, with seven armed ships, her own j)roperty, and fitted out at her expense.

The insurrection in the northern provinces continued to gain ground. In Acarnania and Elis tiiore were very few Turkish troops, and in Phocis, Attica, and Bceotia, the peasants assembled, but nothing very worthy of notice occurred. Omer Vrioni, a celebrated Albanian chief, marched to At!-.cns with 700 horse ; here a few Turks were

shut up, in great straits for provisions, and the Ilydriots had landed a body of men with some ship-guns at the Pirsaus. Hearing, however, of Omer's approach, the Hydriots sailed away, and the Athenians took refuge in the mountains. In Macedonia the Greeks had, in the first instance, been rather successful, and had advanced as far as Salonica; but they pursued no settled plan. Being routed in a few skirmishes, they were seized with a panic, and fled to the treble penin- sula of Cassandra, Torone, and Athos. The Greek inhabitants, too, of Mount Pelion, were excited to take up arms, but they were soon overpowered by the Turks.

At sea the Greeks were greatly superior, keep- ing the Turkish ports and islands of the /Egean m complete blockade. Two Turkish ships of the line, however, and some vessels of smaller size, left the Hellespont about the end of May, and proceeded to Lesbos. The Greek fleet met with one of them of seventy-four guns, which ran into the gulf of Adramiti ; when the Greeks sent in two tire-slups, chained together, while the Mussulmans stood still on the deck, thinking they meant to board them, and mistak- ing some figures they had dressed up for men. In a few minutes the Turkish vessel was in flames ; and though the captain cut his cables, and let her drive to the shore, the crew took to the sea to save themselves, but were opposed in tlieir attempts to land ; so that hardly one out of 800 escaped. The other part of the squadron now made for the Dardanelles with all possible haste. Early in June Demetrius Ipsilanti reached the island of Hydra. He bore a commission from his brother, appointing him commander-in-chief of all the Greek forces, and was accompanied by Cantacuzene and others. He was received with every demonstration of joy. Proceeding to the Morea, he assumed, at Tnpolitza, the command of the army. As soon, however, as the disastrous termination of the campaign in the north was divulged, the ardor of his troops cooled, and the ephors, or primates, were deaf to all his propo- sitions. Candiotti soon left the Morea, suspected of having appropriated part of the subscription money he had received. Affendouli

also, another partizan of Russia, went to Crete, and obtained the command of the independent forces ; but he was soon considered as an impostor, and very nearly lost his life. Ipsilanti's wish was to or- ganise a general and central government for all Greece; and to put the army into a state of dis- cipline. In these plans he met with m>nch oppo- sition ; the captains and ephors uniting to oppose him. The events, too, that attended the sur- render of the two strong fortresses of Malvasia and Navarin in tlie month of Augiist gave him still greater disgust. The garrisons of both these places were reduced to a state of starvation, being obliged to eat their slippers ; and, in the case of the former, to feed on human flesh, eating their prisoners, and even their own children. The one surrendered to Cantacuzene, and the other to Tipaldo, the Cephalonian, on the faith of being transported in Greek vessels to the coast of Na- tolia.; while, however, these treaties were pend- ing, the ncAvs arrived of the murder of the patriarch, and of the (5reek clergy, at Adrianople.

and excited the troops to a pitch of fury ; a con- siderable number of the garrisons were therefore sacrificed, and it was with great difficulty, that the generals interposed to save any of them. Ipsilanti, indignant at these disorders, published a proclamation, severely reprehending them ; and resigning the command, retired to Leondari, until the alarmed priniates and captains sent a deputation to his retreat, and prevailed on him to return.

All eyes were fixed on Tripolitza, which was now in a state of close blockade, and its fall daily expected. The usual population was about 15,000 souls ; it is alˆo computed, that the garrison, with all the Albanians of the Kia- yah, amounted to 8000 men ; there could not, therefore, have been fewer than 20,000 persons within the walls ; yet they allowed themselves to be blockaded by 5000 undisciplined and ill- armed Greeks without artillery or cavalry. While the Turkish horse were in a state for service, the Greeks did not attempt any thing in the plain ; but their forage soon failed, and the only food they could get was vine leaves. Provisions were become very scarce ; and the Greeks had cut the pipes, and thus intercepted the supply of water. Ipsilanti, however, was impatient and felt anxious to begin a regular siege ; but he had neither pro- per ordnance nor engineers. Seme cannon and mortars had inded been brought from Malvasia and Navarin, and were entrusted to the care of an Italian adventurer, but in the first essay he burst a mortar, and was dismissed. Things were in this state, when prince Mavracordato arrived, bringing with him some French and Italian officers. About the same time arrived Mr. Gor- don of Cairness, who, sympathising with the condition of the Greeks, loaded a vessel with cannon, arms, and ammunition, and raised a few followers on whom he could rely. Ipsi- lanti now resumed his design of disciplining his troops ; and Mr. Gordon, who had been an officer in the late wars, assisted in forming companies. In the beginning of October the

Turks began to make propositions for a capitulation, and the treaty was proceeding, on the 5th, when an accidental circumstance rendered it of no avail, and hastened the catastrophe. Some Greek soldiers, having approached one of the gates, began to converse, and, as usual, to barter fruit with the sentinels. The Ttirks imprudently assisted them in mounting the wall, but no sooner had they gained the top than they threw down the infidels, opened the gate, and displayed the standard of the cross above it : immediately the Christians rushed from all quarters to the assault, and the disorder became general. The Turks im- mediately opened a brisk fire of cannon and small-shot ; but the gates were carried ; the walls scaled ; and a desperate struggle was kept up in the streets and houses. Before the end of the day the contest was over, and the citadel, which held out till the next evening, surrendered at discretion. About 6000 Turks, it is said, perished, some thousands were made prisoners, and num- bers fled to the mountains.

While these transactions were occurring at Tripolitza, four pachas proceeded in the month cf August from the frontier'; of Thessaly and

Macedonia to Zeitouni, with the design of forc- ing the straits of Thermopylae, and in conjunc- tion with the Ottoman troops, at Thebes and Athens, relieving the besieged fortresses in the Morea. Odysseus was stationed on a height abore the defiles at a place called Fontana. They sent a body of 300 horse to reconnoitrsi his position, but this detachment was cut to pieces. The next day they attacked him with their whole force ; at first the Greeks gave way, but a brave chief, named Gouraz, made a stand, and rallied the fugitives. They returned to the charge, and the infidels were routed with the loss of 1200 men. One of the ˆiachas was slain, and vast quantities of baggage and ammunition taken. This was on the 31st of August, and was a victory of immense importance to the cause. About the same time the bishop of Carystus raised an insurrection in Euboea, and endea- voured to intercept the communication between Athens and that island.

The grand Ottoman fleet left the Dardanelles on the 14th of August; it consisted of thirty sail ; four of them of the line, and one three- decked vessel. After an unsuccessful attempt on Samos, the commander, Kara Ali, the capitani b-y, steered his course northward, the Greeks with 109 vessels pursuing him, but only attempting to separate his fleet, at- tacking it with fire ships. The Turks, how- ever, took care to avoid these machines, and kept m a close body, always sailing. After this Kara Ali proceeded to Peloponnesus, exciting a general consternation. From Modon the ca|ntana

proceeded to Patras, where 3000 Achaians and lonians blockaded the place on the land side, and several light vessels cut off the supplies by sea. The latter, on the appear- ance of the fleet, fled, and either took shelter at Galaxidi, or ran aground in the shallows of Messolonghi, where they were burned by the Turkish boats. Having arrived in the roads, Kara Ali discharged his artillery upon the camp of the Greeks, and the garrison made a sally at the same time; one post resisted, but the re- mainder of the besiegers fled to the mountauis, leaving the few guns they had in the power of the Turks. This event led Ipsilanti to abandon Tripolitza, for the purpose of renewing the blockade and obviating the consequences of this defeat. On the 30th of September, at day break, having learned that the forces of the sultan had landed at Vostizza, he marched to meet them, and, approaching the coast, took his sta- tion on an eminence. On the 1st of October, at noon, the fleet steered to the north-cast, and in the evening arrived off" Galixidi, a commercial town on the bay of Cyrrha, near the entrance, and immediately summoned it to surrender. The Galaxidiotes answered the summons by firing on the boat that brought it. Immediately the at- tack commenced, and the place was battered for two hours, till night came on, and at day-break for two hours more, when a cloud of flame and black smoke announced but too plainly tlie issue. The inhabitants had fled to Salona in the mountains, after destroying their batteries and vessels. The wind changing to the east, the Turkish fleet new proceeded towards Patras.

Demetrius advanced, .summoning the garrison of the acropolis at Corinth on his way, and warn ing them by the fate of Tripolitza ; having stopped a day o-ˆ two at A.rgos, and visited Napoli, he reached Tripolitza on the 15th. The appearance of the town was most wretched; the Mainiotes had carried every thing off", and the prince was assailed oii all sides by com- plaints about the unequal distribution of the booty.

An assembly was now called to meet at Argos for the purpose of organising a government, and the prince repaired thither to attend it; while deputies in the mean time arrived from diflˆerent parts to demand succours from the administra- tion of the peninsula, and to report what was ' doing in their aistricts. In Macedonip the monks of Mount Athos/ provoked by the violent proceedings of the Turks, were driven into re- volt. The pacha of Salonica had summoned them to receive a Turkish garrison, and, without waiting for a reply, seized a number of servants who cultivated their lands, and had them pub- licly executed. The monks, upon this, impri- soned tlie Turkish governor, and opened a communication with the forces at Potidea and Torone. The Turks sent expeditions twice against Cassandra, and were as often repulsed ; in tlie latter attack the Christians sallied out and took nine pieces of heavy artillery. Being dis- tressed for provisions they applied to tlie Pelo- ponnesians for assistance ; but, the new pacha of Salonica coming up with an overpowering force, Cassandra was taken by storm on

the 12th of November, and its garrison put to the sword. Mount Athos capitulated soon after.

About the middle of October a deputation from Mount Olympus arrived at Tripolitza, bringing information that 7000 Macedonians were ready to rise there, and requesting caimon, gun-powder, and ofticers. Two mortars were sent to them, but they were no sooner landed, than the Turks seized them; the insurrection, however, took place, and has ever since con- tinued. In the Peloponnesus nothing vigorous was eflected except at Patras and Napoli. After the capitana bey had supplied the fortress on the coast, and added to his own fleet the squadron that had actea against Ali Pacha, he prepared to return to the Dardanelles. On this the siege of Patras was renewed ; towards the end of the month it was carried by assault, and the garrison again retired into the citadel ; but, on the 15th of November, Ytisuff' Pacha, who had retired into the castle of the IMorea, came up with 400 horse and foot, unperceived by the Greeks, entered the gates, and commenced an attack. The garrison of the citadel sallied out at the same time, and the Christians were routed. Mavrocordatoand Caradja witli difficulty reached a boat, which conveyed them to Messolonghi ; their cannon, baggage, and 1500 muskets were taken

Ijisilanti wished at this time to hasten the siege of Napoli, and colonel vouticr, a French oflRcer, Iiad been making preparations, hut they were greatly deficient in means for attacking so strong a place. A report was spread, that it was on the pt'int of capitulating, and not less than

12,000 peasants were attract&d to staYe its spoils. Scaling ladders were provided, and on the 15th of December at night, arrangements having been made, the attack was commenced, but the as- sailants were completely driven back. After this failure, prince Demetrius went to Argos, and held frequent meetings of deputies, until Mavrocordato arrived, when Ipsilanti's visitors immediately diminished, and a rivalship was evident between these leaders. Ipsilanti, there- fore, despairing of carrying his plans into effect, directed his attention to the war, and soon after went to Corinth with Kiamel Bey, by whose in- fluence it was hoped the surrender of that place would be hastened ; while, in order to carry on the siege of Napoli without interruption, it was determined that the congress should be removed to Epidaurus.

The assemblage of a congress has been regard- ed as a new and important era in the Greek Re- volution ; the anxiety of the nation for the or- ganising

of a government was evident from the eagerness with which the people elected the de- puties. By the middle of December not less than sixty had arrived, including ecclesiastics, land-owners, merchants, and civilians, most of whom had been liberally educated. They first named a commission to draw up a political code ; the rest were occupied in examining the general state of the nation, and laying plans for the next campaign. On the 27th of January, 1822, the independence of the country was proclaimed, and its code published amidst the joyful accla- mations of the deputies, the array, and the people. The government was for the present, styled ‘ provisional,’ while the promulgation of the con- stitution was accompanied with an address, ex- hibiting the reasons for shaking off the Turkish yoke. Five members of the congress were nomi- nated a? an executive, and prince Mavrocordato was appointed president. Ministers were ap- pointed for the different departments of war, finance, public instruction, the interior,and police; and a commission named of three individuals to superintend the naval affairs.

In the mean time the siege of Corinth was vi- gorously pushed ; but so impregnable was this fortress, that every effort was made to induce the garrison, consisting of not more than 600 men, to surrender. For this purpose Kimail Bey, who had fled from Corinth, leaving his family there, was brought from Tripolitza, in the hope that he might use his influence with the garrison. He, however, proved treacherous, and thwarted the design. A new turn was then given to the operations before Corinth by the arrival of Pa- nowria, a popular chief of Sulona, who persuaded the Albanian portion of the garrison to capitulate. On their leaving the place, the Turks declared themselves willing to surrender, and it was stipu- lated that they should lay down their arms, and be transported by the Greeks to the coast of Asia Minor; but, before the last of these conditions could be fulfilled, the peasants, who had suffered much from the oppressions of Kiamil Bey, burst into the place and wreaked their vengeance on manyof them. The new government sigTialised their liberality by a decree for the abolition of slavery, as well as the sale of any Turkish prisoners, who

might fall into tlieir hands, prohibiting it unde the severest penalties ; they also passed another edict fur a compensation fur military services, and a provision for the widows and orphans of tliosewiio should fall m battle; and a third regu- laiing the internal administration of the provinces. The organisation of the army was also com- menced ; a corps called the first regiment of the line was formed and officered from the volun- teers of different nations, and, as there were more of them than were requisite for this service, a second was formed of the remainder, which took the name of Philhellenes. Patras was block- aded again by 3000 men, and a smaller body under the French colonel V’outier was sent to Athens, to reduce the acropolis ; the forces before Napoli were augmented, and Modon and*

Coron closely invested by the armed peasantry around.

An event, the most terrific and atrocious that history has ever recorded, marked the commence-, ment of the second campaign : the destruction of Scio, and its miserable inhabitants. The Sciots had taken no part in the movement of 1821. In the beginning of May, in that year, a small squadron of Ipsariots appearing off the coast furnished the aga with a pretext for his oppressions, and he began by seizing forty of the elders and bishops ; who were immured as hostages for the good conduct of the people.

‘ On the 23d of April,’ says Mr. Blaquiere, ‘ a fleet of fifty sail, including five of the line, anchor- ed in the bay, and immediately began to bombard the town, while several thousand troops were landed under the guns of the citadel, which also opened a heavy fire on the Greeks. It was in vain for the islanders to make any resistance : de- serted by the Samians, most of whom embarked and sailed away when the Turkish fleet hove in sight, they were easily overpowered, and obliged to fly. From this moment, until the last direful act, Scio, lately so great an object of admiration to strangers, presented one continued scene of horror and dismay. Having massacred every soul, whether men, women, or children, whom they found in the town, the Turks first plunder- ed and then set fire to it, and watched the flames until not a house was left, except those of the foreign consuls. Three days had, however, been suffered to pass, before the infidels ventured to penetrate into the interior of the island, and even then their excesses were confined to the low grounds. While some were occupied in plun- dering the villas of rich merchants, and others setting fire to the villages, the air was rent with the mingled groans of men, women, and children, who were falling under the swords and daggers of the infidels. The only exception made during the massacre was in favor of young women and boys, who were preserved to be afterwards sold as slaves. Many of the former, whose husbands had been butchered, were running to and fro frantic, with torn garments and dishevelled hair, pressing their trembling infants to their breasts, and seeking death as a relief from the still greater calamities that awaited them.

‘Above 40,000 of both sexes had already either fallen victims to the sword, or been select- ed for sale in the bazaars, when it occurred to the pacha, that no time should be lost iu persuad-

ing those who had fled to the more inaccessible parts of the island to lay

down their arms and submit. It being impossible to efifect this by force, they had recourse to a favorite expedient with Mussulmans ; that of proclaiming an am- nesty. In order that no doubt should he enter- tained of their sincerity, the foreign consuls, luore particularly those of England, France, and Austria, were called upon to gTiarantee the pro- mises of the Turks : tliey accordingly went fortii, and mvited the unfortunate peasantry to give up •heir arms and return Notwithstanding their long experience of Turkish perfidy, tlie solemn pledge given by the consuls at length prevailed, and many thousands, who might have success- fully resisted until succours arrived, were sacri- liced : for no sooner did they descend from the heights, and give up their arms, than the infidels, totally unmindful of the proffered pardon, put them to death without mercy. The number of persons of every age and sex who became the victims of this perfidious act was estimated at

7000.

' After havhig devoted ten days to the work of slaughter, it was natural to suppose that the monsters who directed this frightful tragedy would have been in some degree satiated by the blood of so many innocent victims ; but it was when the excesses had begun to diminish, on the jiait of the soldiery, that fresh scenes of horror were exhibited on board the fieet, and in the citadel. In addition to the women and children embarked for the purpose of being conveyed to the markets of Constantinople and Smyrna, se- veral hundreds of the natives were also seized, and, among these, all tlie gardeners of the island, wiio were supposed to know where the treasures of their employers had been concealed. There were no less than 500 of the persons thus col- lected hung on board the different ships; when these executions commenced, they served as a signal to the commandant of the citadel, who immediately followed the example, by suspend- ing the whole of the hostages, to the number of seventy-six, on gibbets erected for the occa.sion. With respect to the numbers who were either killed or consigned to slavery, during the three weeks that followed the arrival of the capitan pacha, there is no exaggeration in placing the former at 25,000 souls. It has been ascertained lliat above 30,000 women and children were condemned to slavery, while the fate of those who esca])ed was scarcely less calamitous. Though many contrived to get off in open boats, or such other vessels as they could procure, thousands, who were unal)le to do so, wandered about the mountains, or concealed themselves in caves, without food or clothing for many days after the massacre had begun to subside on the plains. Among those who had availed themselves of the pretended amnesty, many families took refuge in the houses of the consuls, who were indeed bound by every tie of honor, and human- \ty, to afford them protection. It has, however, been asserted, upon authority which cannot well be doubted, that the wretched beings thus saved from Mussulman vengeance, were obliged to pay large ransoms before they could leave the

island. Nay more, numbers of those who escaped the

massacre, affirm, that it was extremely difficult to obtain even temporary protection under the Christian flags, without first gratifying the ava- ricious demands of those who conceived this ap- palling event a legitimate object of mercantile speculation.'

At the commencement of the campaign Colo- cotroni with 300 men was despatched to Patras, where a part of the Turkish fleet had landed a great body of men in the latter end of February. On his approach the Turks went to meet him with almost all their force. Colocotroni, not considering himself strong enough for them, re- treated to the mountains; but suddenly stopped, addressed his men, and wheeling about advanced towards the enemy. Upon this the Turks, struck with a panic, thinking he had received notice of a reinforcement, turned their backs and were pursued by the Greeks up to the walls of the town ; 500 of them were slain in less than two hours, and Colocotroni blockaded the place. The Ottoman fleet was pursued by the Greeks under Mianli and Tombasi, and the admiral's frigate nearly fell into the hands of the Greeks. Marco Bozzaris and Rango gained many advan- tages in Epirus, and took Arta, tiie key of Albania; but, owing to the treachery of Tairabos, it was abandoned. Odysseus and his companions endeavoured to check the enemy in Livadia and Negropont ; but the disaster of the Greeks at Cassandra so much strengthened them, that they advanced again and threw some reinforcements into Athens.

The fall of Ali Pacha had now so much in- creased the resources of Choursid, that he con- certed measures, which would have been the destruction of the Greek cause, had they been skilfully executed. Mavrocordato, in order to frustrate them, laid a plan to undertake an expe- dition into Epirus, draw off the Turks from the Morea, relieve the Souliotes, and carry the war into the heart of Albania. He communicated his plan to the executive, and it was determined to place 5000 men at the disposal of the president, who was to lead the expedition in person. The only forces, however, which could be mustered, were the corps of the Philhellenes, and the first regiment of the line, neither of them complete, with 700 men commanded by general Norman and Kiriakouli, to relieve the Souliotes. He ar- rived at Patras on the 12th of June; but Colo- cotroni here opposed many difficulties to any of his troops being detached, and he was obliged to leave without the expected assistance. Ac- cordingly he sailed to Messolonghi with only a few hundred men. A large force of the enemy was in the mean time collected at Larissa and Zetonni ; Colocotroni suddenly left the blockade of Patras and proceeded with all his army to Tripolitza, leaving an opportunity for the Turkish garrison either to enter the Morea, or cross the Lepanto. Consternation prevailed in the Pelo- ponnesus; Corinth was abandoned and re-occu- pied by the enemy, not

without the suspicion oi treachery.

The situation of Ipsilanti was at this time very critical, he had no money or provisions, and hardly 1300 men to oppose to 30,000 ; he there- fore, in order to stop the enemy's progress, tlnew

himself into the citadel of Argos, while Coloco- troni took up the strong position of Lerno on the west of the gulf. The first body of the Turks, consisting of 7000 cavalry and 4000 foot, halted near Argos, and part of it proceeded to Napoli ; soon after Marchmout Pacha arrived with 10,000 more. The Pacha, however, entered Napoli, and continued several days inactive; when, threatened with the extremities of famine and drought, he gave orders for the return to Corinth, and his army set out in the greatest disorder. Colocotroni attacked and destroyed 5000 of them in a few hours ; the advanced guard was attacked in the defies by the Mainiotes under Nikitas, and 1200 perished in the first onset. These successes happened between the 4th and 7th of August. On the 18th the Pacha attempted to draw the Greeks into an ambuscade, but they got into his rear and he was defeated with great loss ; the next, day, determining to regain the position they had lost, the Turks again attacked under Iladji Ali, who was slain in the engage- ment, and nearly 2000 of his men were lost, as well as a large quantity of baggage and several hundred horses. The Greeks, however, had no means of following up their successes.

Ipsilanti advanced to Napoli to assist in its reduction, while the troops left under the com- mand of Coliopulo, not being supplied with rations or pay, became so weary of the service that the greater part withdrew, leaving Coloco- troni's eldest son, with 200 or 300 men to con- tinue the blockade of Corinth. So«on after this Colocotroni, at the passes near the isthmus, stopped the Turks who wished to bring succours to Napoli ; and they being driven to the greatest extremity of famine, and the Palamida or citadel having been surprised, the garrison had no alter- native left them but to surrender. The Greeks took possession of this important place on the llth of January. The Turkish commanders, on the surrender of Napoli, determined to proceed to Patras, which the Greeks had lately neglected blockading. Setting out in the middle of January, they had reached Akrata near Vostitza, when a detachment from Messolonghi stopped one of the passes, and shortly after another body blocked up the other ; so that the Turks were reduced to the greatest straits, feeding upon horses, the herbs on the rocks, their saddles, and at last one another. For nearly three weeks longer the place held out, when Odysseus arriving, and on one of the beys being

acquainted with him, a nego- ciation was commenced, by which the garrison obtained permission to embark, and the beys were sent prisoners to Napoli. The number of the enemy that perished on this occasion without firing a shot amounted, it is said, to 2000. Thus ended the second campaign in the Morea, costing the Turks not fewer than 25,000 men in the Pe- loponnesus alone.

The operations in Epirus, though on a smaller scale, were little less interesting. Mavrocor- dato put his forces in motion, and first making a feint, as if he wished to reach Salona, re- turned on the village of Therasova and entered Messolonghi on the 17th of October, where greater difficulties than ever awaited him. Here he was besieged by the Turks, until the 9th

of November, when the blockading squadron was chased away by six vessels bearing the Greek flag; and on the 14th Mavromichalis arrived with the long expected succours ; a sortie was then made. But it was of little avail, and the garrison was so much weaTiened, that Omer Vrioni determined to attack the place. Accor- dingly on the morning of Christmas-day, at five o'clock, 800 men approached the walls with scaling ladders unperceived, and had even fixed some, but they were instantly cut down; the conflict that followed was desperate and sanguinary, and the Turks were obliged to retire with the loss of 1200 men and nine pieces of colors. The rising now became general through the country, and the retreat of the enemv was intercepted in all quarters ; so that of the whole force brought into the country, only three months before, not half escaped. Mavrocordato arrived in the Peloponnesus in the early part of April 1823, after an absence of ten months.

The national congress met at Astros, a small town in Argos, on the 10th of April, 1823, in a garden under the shade of orange trees ; nearly 300 deputies were occupied in the debates, which began at sun-rise. The following oath was taken at the first meeting by each member : — ' I swear, in the name of God and my country, to act with a pure and unshaken patriotism, to promote a sincere union, and abjure every thought of personal interest in all the discussions which shall take place in this second national congress.' Having settled a number of import- ant points, its labors ended on the 30th. The third meeting of the congress was deferred for two years ; and the executive and legislative body was transferred to Tripolitza, where mea- sures were immediately taken for opening the third campaign.

The enemy was not idle as the summer ad- vanced ; a fleet of seventeen frigates, and sixty smaller vessels, was sent with stores to supply the remaining fortresses in Negropont, Candia,, and the Morea ; and, after

accomplishing this ob- ject, the capitan pacha arrived at Patras about the middle of June. YusuflT pacha led on a large body to Thermopylae, and Mustapha con- ducted another to the pass of Neopatra, near Zeitouni, the former especially laying waste the whole country, and committing all manner of ex- cesses. Odysseus in the mean time arrived from Athens, and Nikitas from Tripolitza, and a sort of guerrilla warfare was commenced, which so harassed the Turks undei YusufT that they re- treated in the greatest disorder. Mustapha was attacked, and forced to take refuge in Negropont at Carystos, where he was closely blockaded. Marco Botzaris, who commanded the Greeks at Crionero, fell on the Turks, and either killed or captured two-thirds of their number. The same brave leader undertook a forced march against Mustapha, who had 14,000 men, while he had only 2000. On assigning each man's parˆ at midnight on the 19th, his last words were, ' If you lose sight of me during the combat, seek me in the pacha's tent.' On his arrival at the centre, he sounded his bugle, as agreed upon, and the enemy, panic-struck, fled in all direc- tions In the midst of the attack, which was

now general, he was twice wounded, and at last carried off from the field expiring; the struggle, however, was maintained till day-light, when the Greeks were victorious on all points, and the loss of the enemy was not less than 3000. One of the first acts of the capitan pacha, on his arrival with his fleet, had been to declare Messolonghi, and every other Greek port in a state of block- ade. The entrance of a few Greek gun-boats, however, was suflficient to set the capitan pacha at defiance ; having remained inactive for above three months, and lost nearly a third of his crews by epidemics, he at length made the best of his way to the Archipelago.

At the commencement of the year 1824 pro- clamation was issued by the president and senate of the United States of the Ionian Islands, de- claring their neutrality, and their firm resolution not to take any part in the contest; also pro- hibiting any foreigner, who should do so, from residing in the Islands. Among the Greeks dis- sentions still prevailed, every faction following its own plans, and seeking to advance its own influence. INIavrocordato, Colocotroni, and Ipsilanti, headed different factions, among the members of which there was neither una- nimity of counsel, nor uniformity in action.

The Turkish fleet sailed on the 23d of April. The Greek senate summoned Colocotroni to sur- render himself, and to deliver up Napoli and Tripolitza, but he refused ; the troops that were investing Patras quarrelled about the

division of some of their booty, and were withdrawn; in the mean time the Turks sailed from Lepanto with fourteen ships, and blockaded Messolonghi. In order to encourage the Greeks a loan of £800,000 was contracted for in London. About this period Ipsartawas threatened by the Turkish fleet, which was now at Mitylene. The island of Caso was attacked on the 8th of June by an Egyptian squadron, and after an obstinate re- sistance was taken on the 9th ; 400 died with arms in their hands, the rest took refuge in the mountains, leaving behijid most of the women and cliiidren, who fell a prey to the Turks. On the 3d of July the capitan pacha again attacked Ipsara, having previously gained over tiie Schy- petars, who garrisoned the principal forts. The first victims that fell by the swords of the inva- ders were the treacherous Schypetars.

The triumph of the Turks, however, was but short ; the Ipsariots sent most of their wives and •children to- Syra. One of the forts was garri- soned by sixty men, and surrounded by mines. A Greek named Maroaki, finding himself unable to keep the place hoisted a flag, with the words, ‘ liberty or death,’ and blew up the fort destroying 1200 Turks. The Ipsariots then returned upon the Turks, and took seventy gun-boats.

In Tliessaly several Mussulman corps were attacked in the month of June, and defeated by the Greeks.

The long delay in paying the loan in London at tins time tlin.‘atcned (Jreecc with a total want of funds ; the government, however, found means to fit out two fleets; the first drove away the Epyi)tian squadron, recaptured Casa, and de- stroyed the Turkish troo|)s in the island ; the ntlicr, by the ijrilliant success it obtained, repaired thr loiluno of Ipsara.

While ths Egyptian fleet was cruising between Moeri and Rhodes, the capitan pacha was pre- paring for a descent on Samos, where there was a small Greek squadron under the command of Georgius Tactouri. He made two attacks with- out success; and on the 16th of August ap- proached with all his force ; but the Turks were thrown into disorder by the Hydriots and Spez- ziots, and the troops collected on the opposite hills of Asia Minor witnessed the entire discom- fiture of their fleet.

The Greek cause now continued to prosper. Daily successes were obtained in the west, over the remains of Dervish Pacha’s army. Athens was in a good state of defence, the garrison continually making sallies against the Turks, who were besieging them : and though new levies were made by the Turks, the commanders complained, that the recruits were continually leaving the service.

Partial actions took place on the 5th and 9th of September, between the

Turkisn and Greek fleets, and on the lOtli an action ensued between the Greeks and the united fleets of Turkey and Egypt, when the former burned a frigate, a cor- vette, and two brigs, and took sixteen trans- ports. After this another action took place at Patmos, in which the Greeks burned two frigates and four brigs, and took prisoner Ismael Gibral- tar, the Tripolitan commander, and the brother- in-law of the pacha of Egypt. The Turks of- fered 200,000 piastres for his ransom, but Miaoulis demanded eight frigates, and whatever Gibraltar had under his command. The com- bined fleets were pursued to the Dardanelles.

On the 18th of April, this year, lord Byron died at Messolonghi, of an inflammatory fever, after having zealously devoted himself to the cause of the Greeks from the time he first landed in August, 1823, up to the period of his death We have not referred to these exertions in the preceding narrative, having given a very full ac- count of them under the article Bvron, which see. But one of the great topics of his lord- ship's anxiety, the divisions among the Greek leaders, has continued to this day deeply to in- jure their cause.

Instead of spending the winter, now drawing on, in preparations for the approaching campaign, they seemed almost wholly taken up with their in- ternal dissentions. The people of the Morea broke out into an open insurrection, at the head of which were Colocotroni and his sons, Niketas, and others. They attempted the capture of Napoli ; after some bloodshed, however, by the end of the year, the rebellion was ((uelled.

The porte, on the other hand, was very active in its preparations, and the troops of Mahomet Ali, pacha of Egypt, were directed to land in great force upon the Morea : and it now became evident, that the neighbourhood of Navarino was destined to be the seat of war ; tJie Greek troops were drawn oft' from Patras, to march southward; while Conduriottis, the commander- in-chief, and prince Mavrocordato, were pro- paring to set oft' with fresh troops, Ibrahim received reinforcements from Candia, which made his force 15,000 strong, and a battery was immediately erected against Nco-Castro, or Na- varino. Conduriottis had assembled about 6(00

men at Cremidi, about the middle of April ; but on the 19th Ibrahim attacked and routed all the troops which he had been able to collect.

On the first of Way the Egyptian fleet, from sixty-five to seventy sail, left the port of Suda, where it had been watched by a Greek squadron under

Miaoulis. On the 8th Miaoulis's squadron, amounting to twenty-two vessels, was near Yante ; the Egyptian fleet, forty-six in number, being off" Sphacteria, and Tsammados's eight ves- sels inside the harbour. In about an hour from 2000 to 3000 troops effected a debarkation from the Egyptian fleet, on the island. The garrison of Old Navarino capitulated on the 10th, and the garrison of Navarino, on the 23d, marched out, leaving water for four days and bread for ten.

After the surrender of Sphacteria, a great part of the Egyptian fleet was followed by Miaoulis into the harbour of Modon, and more than half of it destroyed by fire-ships.

A body of Greeks was now defeated by part of Ibrahim's army at Mount Aghiaon, which overlooks the town of Arcadia, anciently Cypa- ressus, and he himself took possession of Cala- mata. He then proceeded into the interior, and, having met with a loss in the mountains from the division under Colocotroni (restored to com- mand by the Greek government), he took up his position on the 20th at Tripolitza, which was half in ruins, and soon after made his appear- ance before Napoli di Romania. Having made several attacks without success, and failing in his design of surprising the town, he retreated. The Turks, also, about this time made a descent from Epirus and Thessaly,upon the shores of the Corinthian Gulf, and seized Salona, while Red- schid Pacha appeared before Messolonghi.

In the end of May the Turkish admiral left the Dardanelles, and on the 1st of June was en- countered by the Hydriote Sakhturi, who, by means of his fire-ships, destroyed three men of war and some transports. Soon after the capitan pacha entered Suda, and joined the Egyptian fleet from Navarino, at the expense of three fire- ships. The Greek fleet was dispersed by a tem- pest, and, having no fire-ships, they retired to Hydra, while the Turkish admiral landed a rein- forcement of 5000 men at Navarino, and went to Messolonghi with seven frigates and many smaller vessels. The siege was now vigorously pressed; theLagunewas penetrated on the 21st of July, and Anatolico, an island to the north, surrendered to the Turks. The supply of water was now cut off, batteries had been erected near the main works of the place, the ramparts had been i-njured, and part of the ditches filled up ; at length a general attack was ordered on the 1st of August, and the town assailed in four places at once. The Turks were every where repulsed. On the 3d, the Greek fleet, consisting of twenty-five brigs, attacked and destroyed two small ships of war and all the boats in the La- gune, relieved Messolonghi, and obliged the enemy's fleet to retire. On the 20th the fleet of the Greeks, about thirty sail, commanded by Miaoulis, engaged the Turks between Zante, Cephalonia, and Chiarenza, and an action en-

sued, which lasted with little intermission for two days and nights, when,

the wind blowing hard from the eastward, the Greeks were obliged to retire. On the 29th another naval action took place, and skirmishes on the two next days, when at length, on the 2d of December, the Greeks forced the enemy to take shelter in the Gulf. On the 10th of August preceding, the Greeks had attempted, but without success, to burn the Turkish fleet in the port of Alexandria.

During the year 1826 the affairs of the Greeks began to wear a much more discouraging aspect. After a lengthened blockade, in which every eflfort was made by the Greeks to defend it, and every privation endured, the important fortress of Alessolonghi was, towards the autumn of this year, taken by assault and sacked by ihe Turks.

One of the most disastrous events of the year 1827, was the capture of Athens by the Turks, under Kiutaki, when the Greeks lost 700 men in the field of battle, and 240 were taken prisoners. The lengthened and sanguinary conflicts, which equally disgraced the moral character of the op- pressors and the oppressed, were viewed with dis- gust by the great European powers, who never- theless, observed, for a considerable time, a strict neutrality between the combatants. At length humanity claimed the recognition of Christian princes, and England, France, and Russia, find- ing the determined resolution of the Greeks to release themselves from Mahomedan rule, con- sented to interfere. A treaty was concluded for this purpose, July 6th, 1827, at London, and count Capo dTstria, a Russian subject, was chosen president of the provisional government. On the 16th of August, the ambassadors of the three powers presented to the Porte the treaty of pacification, but the Reis Effendi rejected the intervention of these high powers, and continued hostile operations. On the 20th of October, 1827, a combined fleet, of English under admiral Codrington, Russian under Count Heyden, and French under admiral Rigny, totally annihilated the Turkish fleet in the bay of Navarino, and laid a secure and solid foundation of Grecian liberty. From this period, negotiation succeeded to bloodshed, and Greece, in thirteen depart- ments, continued under the conduct of the cau- tious count Capo dTstria, until the 9th of October, 1831, when that prudent, politic, and able states, man fell by the hand of an assassin . By the protocol of March, 1829, Greece was declared free, and left to its domestic legislature, subject to a tribute of a million and a half of piastres, payable annually to the sublime Porte. It was also decided that the future form of government should be mo- narchical, and the throne hereditary in the family of a Christian prince, the first election to be made by the three great powers, England, France, and Russia, but no member of the reigning families of the electing monarchs to be eligible. In conformity with the conditions of this agreement, prince Otho of Bavaria, a minor, was chosen king of Greece, and in 1834, that interesting and ancient country, under his government, is in the enjoyment of repose, although not of com-

mercial prosperity.

GREE'DY, adj. ~i Sax. 3 tE'bis ; Gothic ther in appetite or desire ; eager : it is a word Gree'dikess, ?j. s. >f/radaff ; Belgic grelig. which simply expresses a strong and vehement Cjiee'dily, ac/v. j Ravenous; voracious, ei- desire of posscs-iou.

GREEK CHURCH.

65-3

If thou wert the wolf, thy greediness would afflict thee. Shakspeare. Timon.

Greedy to koow, as is the mind of man, Their cause of death, swift to the fire she ran.

Fairfax. He made the greedy ravens to be Eiias's caterers, and bring him food. King Charles.

Ho swallowed it as greedily As parched earth drinks rain. Denham,

I with the same greediness did seek. As water when I thirst, to swallow Greek. Id. Greedily she engorge^ without restraint. Milton. Stern looked the fiend, as frustrate of his will. Not half sufficed, and greedy yet to kill. Dryden,*

While the reaper fills his greedy hands. And binds the golden sheaves in brittle bands.

Id. Even deadly plants, and herbs of poisonous juice, Wjld hunger seeks : and, to prolong our breath. We greedily devour our certain death. Id,

How fearful would he be of all greedy and unjus" ways of raising their fortune ! Law.

Greek Church is that part of the church which is established in Greece, Russia, and va- rious parts of Turkey. It s so called, in con tradistinction from the Latin or Romish church; also the Eastern church, in distinction from the Western. The Romanists call the Greek church the Greek schism ; because the Greeks do not allow the autliority of the pope, but depend wholly, as to matters of religion, on their own patriarchs. They have treated them as schisma- tics ever since the revolt, as they call it, of the patriarch Photius.

The Greek church may be considered under two main divisions, i. e. that which maintains religious communion with the patriarch of Con-

stant'nople, and that which is established under its own synod, bishops, and rulers, in Russia.

The Georgians and Mingrelians also adopt the doctrines and ceremonies of the Greek church ; but are independent of all jurisdiction of the Constantinopolitan prelate.

That part of the Greek church connected with the patriarch of Constantinople, is divided, as in the early ages of Christianity, into four large districts or provinces ; Constantinople, Alexan- dria, Antioch, and Jerusalem ; over every one of which a bishop presides, who has also the title of patriarch, and whom the inferior bishops and monastic orders imanimously respect as their common father. This prelate has the privilege of nominating other patriarchs, though that dig- nity still continues elective, and of approving the election that is made ; nor is any thing of moment undertaken or transacted in the church without his express permission, or his special order. Indeed, in the present decayed state of the Greek churches, whose revenues are small, and whose former opulence is almost annihilated, their spiritual rulers enjoy little more than the splendid title of patriarchs.

The spiritual jurisdiction and dominion of the patriarch of Constantinople are very ex- tensive, comprehending a considerable part of Greece, the Grecian Isles, Walachia, Moldavia, and several of the European and Asiatic pro- vinces that are subject to the Turks. The patri- arch of Alexandria resides generally at Cairo, and exercises his spiritual authority in Egypt,

Nubia, Lybia, and a part of Arabia. Damascus is the principal residence of the patriarch of \ntioch, whose jurisdiction extends to Mesopo- tamia, Syria, Cilicia, and other provinces. In Syria there are three bishops who claim the title and dignity of patriarch of Antioch. The first is the bishop of the Melchites, a name given to the Christians in Syria who follow the doctrine, institutions, and worship of the Greek church : the second is the spiritual guide of the Syrian Monophysites ; and the third is the chief of the Maronites, who hold communion with the church of Rome.

The patriarch of Jerusalem comprehends, within the bounds of his pontificate, Palestine, Arabia, the country beyond Jordan, Cana in (Jalilee, and mount Sion.

The episcopal dominions of these tlicee patri- archs are indeed extremely poor and incon- siderable ; for the Monophysites have long since assumed the patriarchal seats of Alexandria and Antioch, and have deprived the Greek churches of the gr<ˆtest part of their members in all those places

where they gained an ascendant. And as Jerusalem is the resort of Christians of every sect, who have their respective bishops and rulers, the jurisdiction of the Grecian patriarch is consequently confined there within narrow limits.

The right of electing the patriarch of Con- stantinople is vested in the twelve bishops who reside nearest that famous capital ; but the right of confirming his election, and of enabling the new chosen patriarch to exercise his spiritual functions, belongs only to the Turkish emperor. But this institution is subject to the grossest perversion and abuse by the corruption and avarice of the reigning ministers. The power of this patriarch among a people dispirited by op- pression, and sunk into the grossest superstition by extreme ignorance, must be, and actually is, very considerable and extensive. Besides, his own prerogatives are numerous ; for he not only convenes councils by his own authority; but by the special permission of the emperor, he ad- ministers justice and takes cognizance of civil causes among the members of his communion. His influence is maintained on tlie one hand by the authority of the Porte, and on the other by his right of excommunicating the disobedient members of the Greek church. The revenue of this patriarch is drawn particularly from »he churches that are subject to his iuris- diction ; and its produce varies according to circumstances.

The Greek church acknowledges as the rule of its faith, the Holy Scriptures, and the decrees of the first seven general councils; but no private person has a right to explain, for him- self or others, either the declarations of Scrip- ture, or the decisions of these councils ; the patriarch and his brethren being the only pe .sons who are authorised to consult these oracles, and to declare their meaning. The Nicene and the Athanasian creeds are allowed by them, and they hold the doctrine of the Trinity, but with this qualification, that the Holy Ghost i)ro- ceeds from the Father only, and not from the Father and the Son. The invocation of saints is

alike received in the Greek and Roman commu- nion. The Greek church admits the use of pictures to instruct the ignorant, and to assist the devotion of others by those sensible repre- sentations. In the Greek church there are seven mysteries, or sacraments, as they are called in the Latin church, viz. baptism, the chrism, or baptismal unction, the eucharist, confession, or- dination, marriage, and the holy oil or extreme unction. As to baptism, they practise the trine immersion. Chrism is called the unction with ointment, and extreme unction is called the consecration with holy oil.

The chrism is a mystery peculiar to the Greek communion, and holds the place of confirmation in the Roman. It immediately follows the immersion at baptism, when the priest anoints the person baptised on the principal parts of the body with an oint- ment, consecrated with many curious circum- stances for that purpose by a bishop ; this cere- mony is always used at the reception of a proselyte from any other church. Children immediately after baptism may receive the com- munion. Predestination is a dogma of the Greek church, and a very prevailing opinion among the people of Russia. The Greek church admits prayers and services for the dead as an ancient and. pious custom, and even prayers for the remission of their sins; but it disallows the doctrine of purgatory, and determines nothing dogmatically concerning the state and condition of departed souls. It also pays a regard to the relics of saints and martyrs of which too super- stitious a use is made. Supererogation, indul- gencies, and dispensations are utterly disallowed in this church; nor does it affect, like the Latin, the character of infallibility.

The best modern summary of its doctrines and pratices is that published by Platon, late metropolitan of Moscow ; and which Mr. Pin- kerton some years ago translated. We shall avail ourselves of his labors; and particularly of his description of that most important part of this church, the Greek church of Russia.

On the introduction of Christianity into Russia, the first dignitaries of the church were the metropolitans, who were chosen by the grand princes and the bishops, and ordained by the patriarch of Constantinople. Hence the patri- archs, not unfrequently, without consulting either the Russian princes or clergy, sent them metro- politans and bishops of their own choosing, though the grand princes generally opposed such an infringement on their prerogative, and often sent them back again to Constantinople ; and even some of the grand princes, in place of ap- plying to the patriarch, commanded the Russian bishops to ordain their own metropolitans. But, in general, the person chosen to be metropolitan of all Russia, went to Constantinople for ordi- nation ; and this usage continued till the taking of that city in 1453 by the Turks, when a final stop was put to the free communication which had so long subsisted between the patriarchs and the Russian church. On this account, Tzar The- odore loanovitch, in 1588, appointed his own patriarch in the Russian church ; in which ap- pointment the four patriarchs of the east having acquiesced, Jeremias, the patriarch of Constan-

tinople, came into Russia, and ordained Job, the metropolitan of Moscow, patriarch of all Russia, conferring upon him equal authority and powers with the eastern patriarchs. This office lasted till the beginning of the eighteenth century, when the disturbances which had taken place in the

preceding reigns between the princes and the patriarchs, induced Peter the Great to abo- lish this office, in order the better to carry into effect his plans of reformation, both in church and stat^.*

When Peter the Great ascended the throne, the power of the patriarch was almost equal to that of the tzar, after whom he took the first seat, and had a chief voice in all the affairs of the empire, both civil and religious. Without his blessing, neither war was undertaken, nor peace concluded. From these peculiar privi- leges, and the influence he possessed over the clergy and people, an influence which was often- times augmented by his own extensive domains and family connexions, it not unfrequently hap- pened that the patriarch opposed his voice to that of the tzar and nobles, in national aff"airs of importance, for no other reason but because he had not been previously consulted. On tjiis ac- count, Peter, on the death of the last patriarch, Adrian, in 1700, abolished the patriarchal office, and appointed an exarch, or vicegerent of the Holy See, with limited powers, who could do nothing without the consent of the other bishops, and was obliged to refer all affairs of moment to the decision of the tzar himself.

The person appointed to the exarchy was Stephen, metropolitan of Rezan, under whose presidency the schools of the clergy were much improved, the priests and monks more strictly looked after, and arrangements made for that further reformation in the government of the church which soon followed.

In 1721 Peter abolished the exarchy also, and, in place of it, instituted the Holy Legisla- tive Synod, and furnished it with instructions, for the government of spiritual afi'airs, under his own particular cognizance. This spiritual coun- cil was at first to consist of twelve members, chosen from amongst the Archirfes, Archiman- drites, and Protoirfes ; but the number is now indefinite, and the choice and appointment of its members depend entirely on the will of the so- vereign.

At the head cf the Holy Legislative Synod there is always a laijman, denominated the Ober Procurator, who is considered as sitting there on the part of the crown, and has a negative on all its resolutions till laid before the emperor.

The Rus-ian clergy are divided into regular and secular. The former are all monks, and the latter are the parochial clergy. The superior clergy are divided into metropolitans, arch- bishops, and bishops, who are indiscriminately styled Archir^s ; but the title of metropolitan or bishop is merely personal, and not properly at- tached to the see ; and, though there is some difference among the superior clergy in denomi- nation, rank, and dress, yet it scarcely ever hap- pens that one archirfe is subordinate to

another.

Before the time of Peter the Great the bi- shops were absolute in their own dioceses ; and

though, at consecration, they took a general oath to walk in the spirit of their office, according to the Holy Scriptures and councils of the fathers, yet Peter found it necessary, in 1716, to make their duties and obligations more clear ˆnd spe- cific, as the moral conduct of many of them was highly unworthy their sacred office, and others were remiss in the performance of their spiritual duties.

Promotion to the rank of bishop depends en- tirely on the will of the sovereign. \V hen a va- cancy takes place in a diocese, the holy legisla- tive synod presents to his imperial majesty two or three candidates from among the eldest of the archimandrites, or chiefs of monasteries, out of whom he selects one, and orders him to be or- dained an archire ; though he is not restricted in his choice to any of the candidates brought forward by the holy synod. Thus, the metro- politans, archbishops, and bishops, compose the highest class of the Russian clergy ; of whom the greater part in the present day are men of learn- ing, and many of them possessed of distinguished abilities, whose theological writings, especially of late years, have done honor to their profession and country ; but, unfortunately for their literary reputation, they write in a language which is un- known to the other nations of Europe.

After the archirˆs, the next in order of dig- nity are those who in Russia are called tschornoe duhovenstvo, or the black clergy, to which class belong the archimandrites, or chiefs of monaste- ries, from amongst whom the bishops are always chosen ; the hegurains, chiefs of small convents, of which they have the direction ; ieromonachs, and ierodiacons, who perform divine service in the monasteries ; and last of all the monks.

All the black clergy, and also the archirbs, ac- cording to the regulations of the Greek church, are obliged to lead rigid and recluse lives ; are forbidden animal food ; and are not permitted to marry, after entering into this order. They com- pose the regular clergy, and consider themselves as superior to the secular priests, in respect both of rank and learning ; for the whole powers and dignities of the Russian church are exclusively vested in them.

The secular priests are called beloe duhoven- stvo, or the white clergy, and consist of protoires, or, as they were formerly called, protopopes, priests,

and deacons, together with the readers and sacristans. According to the statement pub- lished by the Holy Synod in 1805, the number of protoirbs,])riests, and deacons, in actual em- ploy was 44,487 ; and of readers and sacristans, 54,239 ; in all 98,726.

The protoirbs, priests, and deacons, must all have been educated in the spiritual schools, and raust be married before they can be ordained to these offices ; but are restricted from marrying widows. The death of their wives, however, does not now prevent them, as formerly, from officiating as priests, though they are not al- lowed to marry a second time. But they are at liberty to enter into the order of the black clergy, by becominsc monks ; and thus the way is open before them to the first dignities of the Russian church. Those, again, who desire to marry a second time, must first resign their office in the

priesthood, and are for ever excluded from that order.

The duties of a secular priest in Russia are peculiarly laborious. The service of the church which raust regularly be performed three times a day, and which, from its excessive length, is evidently of monastic origin, and only adapted for such as are entirely withdrawn from the world, together with the numerous and complicated ce- remonies attending the administration of bap- tism, marriage, burial of the dead, visiting of the sick, &c., occupy the greater part of his time, and leave him but little leisure for study. To this cause,'in part, must probably be attributed that want of zeal and activity in advancing the true interests of religion and morality, which, in general, forms such a conspicuous feature in the character of the Russian clergy. Perhaps their being, as it were, a distinct tribe, tends also greatly to produce this general characteristic ; for, since the time of Peter the Great, who, in order to reform the irregularities which then existed among the clergy, ordered them all to be registered, and obliged them to send their sons to the spiritual schools, to receive a suitable education for the ministry, none have been ad- mitted to the offices of secular piiests, but the sons of the clergy. Hence, many thousands of these men have entered into the priestly order, not from choice, but from necessity. It is but justice, however, to add, that many of the secu- lar priests are learned and worthy characters, who diligently perform the duties of their office, and spend their days in promoting the spiritual interests of the flocks committed to their charge. Nor is it unworthy of remark, that the Russians of all ranks are in general void of that perse- cuting rancor against other religious persuasions, which is so characteristic of Roman Catholics : and, though they adhere strictly to the doctrines and ceremonies of their own church, yet not only the laity, but even the clergy, are far from think- ing that there is no salvation without her pale. In most of the churches now, both in towns and villages, a sermon is preached every Sunday, and on the chief holidays.

Some of these dis- courses, which are delivered in diffierent parts of the empire, for sound reasoning and clear views of the leading doctrines of the gospel, might have done honor to a British clergyman In some of the churclies, may also be heard a homily read by the priest from a printed book, a practice which is not unfrequent in the country, particu- larly in large congregations, where the duties of a priest leave him but little time for study.

Among the peculiar privileges of the clergy, may be mentioned their complete exemption from all civil taxes. Tliey are also exempted from corporal punishment, even in the case of com- mitting capital crimes : and, according to an ukaz of 1801, they are permitted to hold lands. The greater part of their support is derived from the free-will ofi'erings of their parishioners, and their revenues are comparatively small. With the view of adding to their respectability, and exciting them to diligence in their sacred calling, the emperor Paul began to bestow upon the su- jierior clergy the orders of knighthood; and. in 1797, he appointed golden crosses to be made

for the secular priests, to be worn suspended from tbeir necks, together with mitres like those of the archimandrites, and other marks of distinc- tion in dress. These he bestowed on such of them as distinguished themselves in their holy calling.

This emperor, also, in order that the country clergy might have more time to attend to their spiritual duties, commanded that their fields should be cultivated by the peasants belonging to their respective parishes ; a regulation, how- ever, which has since been laid aside.

The whole Russian empire is divided into thirty-six dioceses or eparchies, which, in extent, are nearly the same with the divisions of the empire into provinces, or governments. Ii; these there are 483 cathedrals, and 26,598 churches, which are, in general, magnificent buildings. Formerly many of them were of wood, but now they are mostly built of brick ; and comparatively few of the wooden churches remain. A foreigner, in particular, is forcibly struck with the elegance of these fine edifices, raising their gilded spires amidst the humble izbas, or huts of the peasantry. Some of the churches are large square buildings, but the most of them are built in the form of a cross. In general, they have five domes, with crosses, which, in monasteries and cathedrals, and even in some parish churches, are gilded, and have a splendid appearance. Adjoining to the church, or near

to it, there is always a steeple or belfry, commonly of great height, provided with large bells ; and, like the churches, overloaded with decorations.

The church is divided into three parts ; first, the sanctum sanctorum, called the altar, and into which females are not permitted to enter. In the middle of the altar stands the holy table, upon which a golden or silver cross, and a richly ornamented copy of the Gospels, are always laid. This part of the church is the east end, so that the congregation always worship with their faces towards the rising sun.

The altar is separated from the nave or body of the church, by a screen, upon which pictures of our Saviour, the Virgin, the Apostles, and Saints, are always painted. This screen is called the ikonostas, in the middle of which are the royal doors, which are opened at different times in the course of the service. Upon a platform before the ikonostas, raised several steps, the readers and singers stand behind a low rail, to separate them from the congregation; and, in the middle, before the royal doors most of the service is performed.

The second division is the nave or body of the church, which properly may be styled the inner court, where the congregation stand ; for there are no seats in the Russian churches, neither do the congregation make any use of books. In some of the new churches in Petersburg and Moscow there are pulpits erected to elevate the speaker ; but they are unknown in the churches in other parts cf the empire, in which the preacher, while delivering his discourse, usually stands before the royal doors, behind a moveable desk.

The third division is called the trapeza, which

is the west end of the church, and may properly be denominated the outer court. This part is usually as large as the inner court, where the congregation assembles ; but, on holidays, both these divisions are generally filled with the wor- shippers.

The inner walls and domes of the churches are covered with scriptural paintings, which in general represent the most interesting scenes of our Saviour's history. The ikonostas is always richly gilded and ornamented, and the pictures of the saints adorned with gold and silver, pearls, and precious stones.

The service of the church is contained in upwards of twenty volumes folio, all in the Slavonian language, which, though the ancient language of the country, is not well understood by the greater part of the modern Russians. Twelve of these volumes, one for every month, contain the particular services and hymns for the festivals of the saints, who are so numerous in the Greek kalendar, that there are more of them than there are days in the year. These twelve volumes are called the Minoeon. The Octoechos compose two volumes, and are divi- ded into eight voices or tones, each of which contains hymns for the days of one week, that are mixed in the service according to the sub- jects to which the days of the week are appro- priated. Thus, Sunday to the resurrection ; Monday to the angels; Tuesday to .John the Baptist; Wednesday to the Virgin; Thursday to the apostles; Friday to the passion of Christ; and Saturday to the saints and martyrs. To these two there is a supplementary volume, con- taining hymns, to supply the deficiency in the Minoeon. The Psalter and the Hours take up another volume. The Book of Psalms is di- vided into twenty parts, one of which is read at a service ; so that the whole is read through in the course of a week. The Book of Prayer contains the ordinary daily prayers and ectinias for the priest and deacon, in the vespers, matins, and communion service. The Fast Triods are two volumes, which contain particular services for the great fast before Easter, and for the days of Pentecost, when the hymns in the Octoechos are discontinued. The four Gospels com.pose another volume, a portion of which is read at every service. The Book of Offices contains the rites of baptism, marriage, burial service, &c. And, lastly, the Book of Regulation, which con- tains directions how to use the rest

The lives of the saints are contained in several folio volumes, which are not now read in churches, but are sometimes read in monasteries, at the matins or morning service.

The Russians make no use of a complete copy of the Bible in their churches

; they have only extracts from the Old Testament and the Epistles, interspersed throughout the Minoeon and Octo- echos ; and even many of the clergy in the country do not possess an entire copy of the Scriptures. Both in monasteries and parish churches the service is performed three times a day. It begins in the evening of the preceding day, as among the Jews; the vespers at sunset; the matins between four and five in the morning; and the liturgy or communion service between

nine and ten. The greater part of tlie service consists ot" psalms and hymns, which, according to the regulation, ought to be sung, but are now mostly read. Tiie length of the service, also, has given rise to the unintelligible manner in which most of it is now performed ; for the priests and readers, in order to get the more quickly through it, have fallen into the practice of repeatmg and readmg the hymns and prayers so quickly, and in such a tone of voice, as renders the greater part of them impossible lo be understtiod by the congregation. The Gos- pel, however, is always read slowly, and in a distinct and audible voice; so that it is mucli more intelligible, from being thus read, than many other parts of the service.

Our limits forbid us to extract several able passages from Platon's ' Orthodox Doctrine,' which we had marked with that view. We can only take the following : —

Of the death of Christ, he says, ' The death of Christ is the true sacrihce. A sacrifice, because Christ ofi'erpd up himself upon the altar of tlie cross, as an innocent lamb, slain by the justice of God, and consumed by the fire of love, with which he burned for the salvation of mankind ; and his being thus consumed was a spectacle no less wonderful in itself, than acceptable to God, the Fatlier.

' Christ was also the true sacrifice ; for all the other sacrifices were nothing, but a kind of types or images of this ; and it alone was capable of satisfying divine justice, meriting for us God's mercy, cleansing us from our sins, and of re- storing us to our original state of blessedness. The word of God bears testimony to this; ' But Christ being come an high priest of good thingj to come, by a greater and more perfect taber- nacle, not made with hands, that is to say, not of this building; neither by the blood of goats and calves, but by his own blood, he entered in once into the holy place, having obtained eternal redemption for us. For if the blood of bulls and of goats, and the ashes of an heifer, sprinkling the unclean, sanctifieth to the purifying of the flesh ; how much more shall the blood of Christ, who,

through the eternal Spirit, offered himself without spot to God, purge your conscience from dead works, to serve the living God !' Heb. ix.

11, 12, 13, 14.

*' This sacrifice put an end to the sacrifices of Aaron or of the Old Testament, and Christ be- came the only and eternal priest. The only priest, because another sacrifice is impossible ; the eternal priest, for, according to the words of the apostle, * He continueth ever, 'hath an un- changeable priesthood ; wherefore he is able also to save them to the uttermost that come unto God by him, seeing he ever liveth to make intercession for them.' Ueb. vii. 24, 25.*

- *This great high priest is called of God a priest not after the order of Aaron, but after the order of Melchisedec. lleb. v. 10. Now in this there is a great mystery; in which every one must be astonished to behold revealed three of God's ex- cellencies, mercy, justice, and infinite wisdom. Mercy so great, that the only begotten Son of God, of the same essence with the Father, was delivered up unt; death for us the enemies o£ Vo:.. X.*

*God. Can there be a greater display of mercy ? Justice so holy and inviolable, tliat, without a complete satisfaction, it could not clear us of guilt. Infinite wisdom, that devised sucii a won- derful plan, not only to satisfy justice, but to pour upon us the vvhole fountain of goodness. O the depth of the riches both of the wisdom and knowledge of God ! This most exalted mystery is to the Jews a stumbling block, and to the Greeks foolishness ; but to us, wiio are thereby saved, it is the power of God and the wisdom of God : and we, with Paul, will declare, * God forbid that we should glory, save in the cross of our Lord Jesus Christ;' Gal. vi. 14.*

' Of faith ill Christ. — ' Verily, Christ died for all.' 2 Cor. v. 15. And there is no one so great a sinner whom his grace alone is not able to save. But, in order that tiiis grace may become effectual in us, faith is requisite, that is, we must heartily receive Jesus Christ as our Saviour, and without doubting rest assured, that only through him we can be made partakers of the mercy of God. Without the infinite merits of Ciirist all our attempts are in vain, and man can never be saved. This is clearly taught every where in the word of God, John iii. 15; ' For God so loved the world that he gave his only begotten Son, tliat whosoever believeth in him should not perish, but have everlasting life;' and verse 18, 'He that believeth on him is notcondeinnecl,but he that believeth not is condemned already.' When we consider faith as essential to salvation, it is to be understood, that we mean faith un- feigned, sincere, and living, that is, ' faith which worketh by love,' Gal. v. 6.

‘ Of the true church. — From the beginning of the world to the present time, and to the very end of time, the church has been, and will be, always one and the same. One, because there is for ever one faith, one foundation of faith, and one head of die church, Christ ; one way of sal- vation, and one hope for all. Thus it is written to the Fphesians, ‘ One body and one spirit, even as ye are called in one hope of your calling ; one Lord, one faith.’ “Chan. iv. 4. Hence this church only cuts off’ all those who either do not receive the word of God, or mix their own im proper opinions with it ; therefore, the society of such people is not a church, but an assembly holding heterodox ‘opinions, which is governed by the spirit of division, and not by the Spirit of God. Even at tiie present time, to the off’ence of Christians, we behold three chief sects or parties In Christianity : Papists, Lutherans, and Cal- vinists. They are mutually in opposition to one another. Popery, exclusive of its being filled with the most pernicious superstitions, and the edicts of Popes, in contradiction to the word of God, blindly holds the tenet in regard to the proceeding of the Holy (Jliost above mentioned, and explains it in opposition to the clear testimony of Holy Scripture. It has also taken away from the common peojile the cup in the communion, and the reading of the Holy Scriptures. It has further devised some sort of a purgatory fire, has appropriated to itself a power unknown in the gospel, and undertakes to convert gainsayers by fire and sword.

‘The Lutherans and Calvinists dissented not

long ago from popery under Luther and Calvin, whom passion, more than any thing else, ex- cited to this novelty. They, in avoiding popish superstitions and superfluities, threw away, to- gether with them, the holy apostolical traditions of the first churches. Notwithstanding they held the same opinion with the Romanists in regard to the proceeding of the Holy Ghost. But ex- clusive of this, they teach, what is contrary to scripture, respecting the mystery of the com- munion and the other mysteries. The Lutherans, moreover, attach to the body of Christ omni- presence, which is an attribute peculiar to God alone, and the Calvinists draw upon men’s ac- tions an inevitable kind of predestination. But our Greeko-Russian church proves its genuine- ness by incontestable evidences; for, from the very time of the apostles to the present day, it has preserved inviolate the faith preached by them, and the ancient traditions of the fi-rst churches. Greece

*was converted to the faith by the apostle Paul himself, and the truth which she received from him she preserved inviolate throughout all the succeeding ages ; and, if there happened to be sometimes heretical and per- nicious doctrines taught, yet they were always condemned in the general and particular councils. * With this faitli, thus preserved in all its purity, it pleased God at last to enlighten Russia. And as in Greece, so in Russia, there never has taken place any change in the faith; such, for instance, as took place among the Papists in tlie time of Luther ; yet, amongst those who hold to our church, there may exist a certain kind of super- stition and abuse; but our church does not jus- tify such improprieties ; she rather mourns over them, reproves and corrects them. And the er- roneous opinions of a. few, founded on ignorance of the trutii, can never, in justice, be imputed to the whole church. Hence, it is evident, that our orthodox church is not only the true church, but that it is one and the same from the very foun- dation of the world. From the very foundation of the world, I say ; because it agrees with the Greek church, and the Greek church never de- parted from the primitive apostolical church. Again, the apostolical church was not different in the essence of faith from the Old Testament church ; and the Old Testament church was founded upon the saving truth, which, with sted- fast faith, was held both before and after the fl.ood by the holy patriarchs, even from the very foundation of the world. Hence the evangelical orthodox faith of our church refers for its foun- dation to the very beginning of the world, and shall remain, as the Holy Ghost hath assured us, to the end of time.'*

There are many passages in this treatise which would do honor to any protestant writer, and which prove this branch of the Greek Church to be possessed of much ' sound doctrine.'

The Greek Language, as preserved in the writings of the celebrated authors of antiquity. Homer, Hesiod, Demosthenes, Aristotle, Plato, Xenophon, Sec, has a great variety of terms and expressions, suitable to the genius and occasions of a polite and learned people, who had a taste for arts and sciences. In it, proper names are sicrnificant, which is the reason that the modern

languages borrow so many terms from it ; and that wlien any new invention, instrument, or machine, is discovered, recourse is generally hacJ to the Greek for a name. See Lakguage.

Greek Orders, in architecture, are the Do- ric, Ionic, and Corinthian ; in contradistinction from the two Latin orders, the Tuscan and Com- posite. See Architecture.

GREEN, adj. n. s. Ik, v. a.\ Saxon ˆpene ;

Green’-broom, n. s.

GrEEN’-CLOTH, 71. s.

Green’-eyed, arf;. Green’-finch, n. s. Green’-gage, n. s. Greex’-iiguse, n. s. Green’ish, adj. Green’ly, adv.

GrEEn’nESS, 71. s.

Green’-sickxess, n s. Green’-sward, n. s. Green’sword, n. s. Green’-weed, n. s.

GREEN’-WOOD, 71. s.

pho’s xXwportpjj TTOiaf,

Germ, grivn ; Dut. groen. Having a color formed com- monly by com- pounding blue and yellow ; of the co- y\ox of the leaves of trees or herbs. Fi- guratively, pale ; sickly : from whence we call the maid’s disease the green- sickness, or chloro- sis. Like it is Sap- Flourishing; fresh ; un-

decayed ; not dry ; half-roasted ; unripe, accord- ing to the subjects to which it is applied as an epithet; a green color; a grassy plain; shrub ; a quantity of foliage. Green-finch, a kind of bird. Green-gage, a species of plum. Green-house, a house in wˆiich tender plants are sheltered from inclement weather. Green-sward, the turf on which grass grows. Green- vvood, a term applied to the woods as they appear in spring or summer. Green-cloth, a board or court of justice held in the counting- house of the king’s household, for the taking cog- nizance of all matters of government and justice within the king’s court-royal ; and for correcting all the servants that shall offend.

I sawe the lauror Daphne closed under rinde ; With the greene laurer ; and the wholsome pine ; The Mirre also, that wepeth ever of kinde ; The Cedres hie, as upright as a line ; The filbert, eke, that lowe doeth encline Hire bowes greene unto the yerth adoun, adoun. Unto hire knight, called Demophoon.

Chaucer. Complaint of the Blacke Knight. With goodly ˆreeni’s/i locks, all loose, untyed. As each had been a bride. Spenser.

If a spark of error have thus far prevailed faning even where the wood wˆ.ˆ green, and farthest off from any inclination unto furious attempts ; must not the peril thereof be greater in men, whose minds are of themselves as dry ff;wel, apt beforehand unto tu- mults ? Hooker’s Dedication. Was the hope drunk Wherein you drest yourself? Hath it slept since ? And wakes it

now to look zo green and pale At what it did so freely ? Shakspeare. Macbeth. There's never any of these demure boys come to any proof : they fall into a kind of male green sick- ness. Idi- Henry IV. You'll find a difference Between the promise of his greenei' days, And these he masters now. Id. Henry V. My sallad days, When I was green in judgment, cold in blood !

Shakspeare. Kate, I cannot look greenly, nor gasp out my elo- quence ; nor have I cunning in protestation.

Id.

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The t!r>or Is open, Sir, there lies your way. You may be jogging while your boots are green.

Shakspeare . Griefs are green ; And all thy friends, which thou must make thy

friends. Have but their stings and teeth newly taken out.

Id. In a vault. Where bloody Tybalt, yet but ˆreen in earth. Lies festering in his blood.

Id. Romeo and Juliet. This is the prettiest low-born lass that ever Ran on the greensward. Id. Winter's Tale.

Doubtful thoughts, and rash-embraced despair, .4nd shuddering fear, and gTeeneyed'Jeˆ.\o\l•iy.

Shakspeare. Her mother hath intended That, quaint in green, she shall be loose enrobed.

Id. For this down trodden equity, we tread In warlike march tliese ˆreenj before your town. Id.

Of fragility the cause is an impotency to be ex- tended, and therefore stone is more fragil than metal, and so dry wood is tnore fragil than green. Bacon.

For the greenclofh law, take it in the largest sense, I have no opinion of it. Id. Advice to Villiers.

The general colour of plants is green, which is a colour that no flower is of : there is a greenish prim- rose, but it is pale and scarce a green. Bacon.

A man that studieth revenge keepeth his own wounds green, which otherwise would heal and do well. Id. Essays.

Among wild herbs under the greenwood shade.

Fairfax, Being an olive tree Which lite he felled ; and being ˆreene, must be Made lighter for his manage. Chapman.

In a meadow, though the meer grass and greenness delights, yet the variety of flowers doth heighten and beautify. Ben Junson.

My reason, which discourses on what it finds in my phantasy, can consider greenness by itself, or mellow- ness, or sweetaess, or coldness, singly and alone by itself. Iˆ!)ˆy on Bodies.*

O'er the smooth enamelled green. Where no print of step hath been. Follow me as I sing. Milton.

Whose primitive tradition reaches As far as Adam's first green breeches. Butler. About it grew such sort of trees, as either excellency of fruit, stateliness of growth, continual greenness, or poetical fancies have made at any time famous.

Sidney. This prince, while yet the errors in his nature were excused by the greenness of his you'.h, which look all the fault upon itself, loved a private man's wife. Id.

If you but consider a piece of green wood burning in a chimney, you will readily discern, in the dis- banded parts of it, the four elements. Boyle. WilhˆreeTW and flowers recruit their empty hives. And seek fresh forage to sustain their lives. Dryden. Every brow with cheerful green is crowned ; The feasts are doubled, and the bowls go round.

Id. The fragrant ˆreen» I seek, my brows to bind. Id. It happened on a Summer's holiday. That to the greenwood shade he took his way ; For Cymon shunned the church. Id.

I might dilate on the temper of the people, the power, arts, and interest of the contrary party, but those are invidioas topicks, too green in our remem- brance. Id. O charming youth, in the first opening page ; So many graces in so green an age. Id.

But with your presence cheered, they cease ti> mourn. And walks were

itesher green at your return. Id. After break their fast On greensward ground, a cool and grateful taste.

Id. If I have any where said a green old age, I have Virgil's authority ; sed cruda deo viridisque senectus.

Id. The young -Emilia, fairer fo be seen Than the fair lily on the flowery green. Id.

The green do often heat the ripe, and the ripe, so heated, give fire to the green.

Mortimer's Husbandry. If you would fat green geese, shut them up when they are about a mouth old. Id.

The chaffinch, greenfinch, dormouse, and other small birds, are injurious to some fruits. Mortimer.

If the season prove exceeding piercing, which you may know by the freezing of a moistened cloth set in \oxiv greenhouse, kindle some charcoal. Evelyn.

Stubble geese at Jlichaelmas are seen Upon the spit, next May produces green. King. Take the picture of a man in the greenness and vi- vacity of his youth, and in the latter date and de- clension of his drooping years, and you will scarce know it to belong to the same person. Sjufh.

Sometimes our road led us into several hollow apartments among the rocks and mountains, that look like so many natural greenhouses, as being alwavs shaded with a great variety of trees and shrubs that never lose their verdure. Addison.

A kitchen-garden is a more pleasant sight than the finest orangery or artiticial greenhouse. Spectator.

Till the ˆreen-sickness and love's force betrayed To death's remorseless arms the unhappy maid.

Garth. Cinnabar, illuminated by this beam, appears of the same red colour as in day-light ; and if at the lens you intercept the ˆreen making and blue making rays, its redness will become more full and lively.

Newton s Opticks. Of this order the green of all vegetables seems to be, partly by reason of the intenseness of their co- lours, and partly because, when they wither, some of them turn to a greenish yellow. Newton.

Sour eructations, and a craving appetite, especiallj' of terrestrial and absorbent substances, arc the case of girls in the greensickness. Arbuthnot.

Groves for evergreen. Pope.

In shallow soils all is gravel within a few inches ; and sometimes in low ground a thin greensward, and sloughy underneath ; which \atsl turns all into boj.

Swtft. Under this head we may rank those words which signify different ideas, by a sort of an unaccountable far-fetched analogy, ordistant resemblance, that fancy has introduced between one thing and another ; as when we say the meat is green, when it is half roasted. Watts's Logick.

Let us but consider the two colours of yellow and blue ; if they are mingled together in any considerable proportion, they make a green. Id.

Great Spring before Greened all the year ; and fruits and blossoms

blushed In social sweetness on the self-same bough.

Thomson. But see the fading many-coloured woods Shade deep'ning ovtr shade, the country round luibrown ; crowded umbrage dusk and dun. Of every hue, from wan declining (;reen To sooty dark. Id. Seasons. — Autumn,

Thus is Nature's vesture wrought To instruct our wandering thought ;

Thus she dresses ˆret-n and gay

To disperse our cares away. Di/er,

From silent mountains, straight, with startling sound. Torrents are hurled ; green hills emerge ; and lo. The trees with foliage, clilfs with liowers are crowned. Beattie's Minstrel.

Green (John), an English prelate, born in 1706, at Beverly, in Yorkshire, was admitted a sisar of St. John's College, Cambridge, oi which he became a fellow. In 1744 he was appointed chaplain to the duke of Somerset, who

gave hira the living of Borough-green, near Newmarket. In 1748 he was elected regius professor of divi- Mity; and two years after master of Benedict College, Cambridge. Hebecame, in 1756, dean of Lincoln, and afterwards bishop of that see. In 1771 he obtained the deanery of St. Paul's. He died in 1779. He was one of the writers of the Athenian Letters ; oesides which he pub- lished a tract on Enthusiasm, and some sermons, &c.

Green (Matthew), a poet, of whom little is known, except that he was brought up among the dissenters of London, and had a situation in the custom-house. He died in 1737. His poem, entitled The Spleen, is an ingenious piece, and was printed, with others of this au- thor, in Dodsley's collection.

Green (William), an English divine, fellow of Clare Hall, Cambridge, and rector of Hard- ingham, in Norfolk, died in 1794. His works are — 1. The Song of Deborah, reduced to me- tre; with a Translation and Commentary, 4to. 2. A Translation of the Prayer of Habakkuk, the Prayer of Moses, and the 139th psalm, with a Commentary, 4to. 3. A new translation of the Psalms, with notes, 8vo. 4. A new Translation of Isaiah, from the seventh to the fifty-third chapter, with notes, 4to. 5. Poetical parts of the Old Testamentˆ translated from the Hebrew, with notes, 4to.

Green, a county of Kentucky, in the United States. Greensburgh is the chief town. Popu- lation in 1815, 6735.

Green, a county of the United States, in the state of Ohio. It has Clinton county on the south, Fayette and Maddison counties on the east, and Champaign and Montgomery counties on the west, and is about twenty-four miles square. The valleys are wide, rich, and produc- tive ; the more elevated grounds are generally of a second quality. It is watered by the Little Miami, Mud River, Caesar's and Massie's Creeks, and several other inconsiderable streams. Zenia is the chief town. Population in 1815, 8000

Green, a river of Kentucky, United States, which has its source in Lincoln county, and, pursuing a western course, enters the Ohio 200 miles below Louisville, and fifty miles above the mouth of Cumberland River. It is 200 yards wide at its mouth, and is navigable for boats nearly 200 miles. In summer it may be forded at 150 miles above its confluence with the Ohio ; but in winter it is frequently swelled, by sudden and violent floods.

Green Bay, a bay on the west side of Lake Michigan, about ninety miles in length, but vary- ing in breadth from fifteen miles to thirty. Tlie

channel by whicli it communicates with Lake Michigan is of sufiicient depth for a vessel of sixty tons, and of])roportionate width. Long. 87° 58′ W.,

lat. 45° N.

Green Briar County, a large and fertile county in Virginia, surrounded by Bath, Ran- dolph, Harrison, Kanhaway, Botetourt, and Montgomery counties. The chief town is Lewisburg. Population in 1816, 5 914.

Green-Clotii, Board of, is composed of the lord steward and ofliicers under him, who sit daily. This court has power to maintain the peace of the verge, or jurisdiction of the court- royal; which iˆevery way about 200 yards from the last gate of the palace where his majesty resides. It takes its name from a green cloth spread over the board where they sit. Without a warrant first obtained from this court, none of the king's servants can be arrested for debt.

Green-Clot9, Clerks of the, were two of- ficers of the board of green cloth, who appointed the diet of the king and his household ; and kept all records, legers, and papers relating thereto ; made up bills, parcels, and debentures for salaries, and provisions and necessaries for the oflicers of the buttery, pantry, cellar, &c. They also waited upon foreign princes when en- tertained by his majesty. But this was abolished in 1782.

Green Earth. Color generally celandine- green. Massive, and in globular and amygda- loidal shaped pieces, sometimes hollow, or as incrusting agate balls. Fracture earthy. Opaque. Rather greasy. Adheres slightly to the tongue. Sp. gr. 2'6. Before tlie blow-pipe it is converted into a black vesicular slag. Its constituents are, silica 53, oxide of iron 28, magnesia 2, potash 10, water 6. It is a frequent mineral in the amygdaloid of Scotland, England, Ireland, Ice- land, and the Faroe Islands. It occurs in Saxony, near 'erona, the Tyrol, and Hungary. It is the mountain-green of artists in water- colors.

.4 Green-Housf, or Conservatory, is a house in a garden, contrived for sheltering and pre- serving the most curious and tender exotic plants, which in our climate will not bear to be exposed to the open air, especially during the winter season. These are generally large and beautifu-1 structures, equally ornamental and useful. Their length must be proportioned to the number o plants intended to be preserved in them, ana cannot therefore be reduced to rule: but their depth should never be greater than their height in the clear ; which, in small or middling houses, maybe sixteen or eighteen feet, but in large ones from twenty to twenty-four feet ; and the length of the windows should reach from about one foot and a half above the pavement, and within the same distance of the ceiling, which will admit of a cornice round the building over the heads of the windows. Their breadth cannot be in pro- portion to their length; for if in the largest buildings they are more than seven or seven and a half feet broad, they will be extremely

incon- venient. The piers between the windows must be as narrow as may be to support the building ; for which reason they should either be of stone or of hard burnt bricks. If the piers are made

ot stone, they should be tliirty inches wide in front, and sloped off behind to about eighteen inches, by which means there will be no corners to take oif tlie rays of the sun. If they are of brick, they will require to be at least three feet in front, but they should be in the same manner sloped off behind. Over the greenhouse may be rooms for drying- and preserving seeds, roots, fi.c., and behind it a place for tools and other purposes ; and both those behind, and the rooms above, will be of great use in keeping off the frosts, so that the wall between them need not be of more than two bricks and a half in tiiick- ness. The floor of the greenhouse, which should be laid either with Bremen squares, Purbeck stone, or flat tiles, must be raised two feet above the surface of the adjoining ground, or, if the situation be damp, at least three feet ; and if the whole is arched with low brick arches under the floor, they will be of great service in preventing damps ; and under the floor, about two feet from the front, it will be advisable to make a flue of ten inches wide and two feet deep ; this should be carried the wiiole length of the house, and then returned back along the hinder part, and there be carried up into funnels adjoining to the tool-house, by which the smoke may be carried off. The fire-place may be contrived at one end of the house, and the door at which the fuel is put in, as also the ash-grate, may be contrived to open into the tool-house, and, the fuel being laid in the same place, the whole will be out of sight. Bradley advises, that the front of green- houses, in the colder parts of England, be built in a sweep or semicircle, so that one part or other of it may receive the sun's rays all day. The use of fires must, however, be very sparing in this place ; and not one winter in three or four will require them in any part ; only when the weather is very severe, and the frost cannot well be kept out any other way, this expedient may save a wliole house of plants. Withinside of the win- dows, in front of the greenhouse, there should be good strong shutters, made with hinges to fold back close to the piers, that they may not ob- struct the rays of the sun. The back part of the house should be either laid over with stucco or plastered with mortar, and whitewashed, in order to prevent the frosty air from penetrating througii the walls. When the greenhouse is wainscotted, the walls should be plastered with lime and hair behind the wainscot to keep out the cold ; and the wainscot, as well as the ceiling, and every part within the house, should

be painted white, to reflect the sun's r.iys. There must be a num- ber of tressels with forms of wood upon them, to support the pots of plants ; the tallest to be placed hindmost, tiie lowest within four feet of the windows; and the rows of plants should rise gradually, so that the heads of the secoiul row should be entirely above the first; and behind them there should be a space of at least five feet for the convenience of watering the plants, and for a free circulation of the air. The wings may be made capable of a greater warmth also by more flues, and rnay be made to contain a hot- bed of tanner's bark, for raising many of the tender plants, natives of warm climates. Whilst the front of the greenhouse is exactly south, one

of the wings may be made to face the south-east and the other the south-west. By this disposition the heat of the sun is reflected from one part oi the building to the other all day, and the front of the main greenhouse is guarded from the cold winds. These two wings may be so contrived as to maintain plants of diflerent degrees of hardi- ness, which may be easily effected by the situa- tion and extent of the fire-place, and the manner of conducting the flues : the wing facing the south-east is evidently most proper for the warm- est stove ; this may be divided in the middle by a partitiiui of glass, with glass doors opening from one division to the other. In each of these there should be a fire-place, with flues carried up against the back wall, through which the smoke should be made to pass as many times the length of the house as the height will admit of the number of flues; for the longer the smoke is in passing, the more heat will be given to the house with a less quantity of fuel. The ■ other wing, facing the south-west, should be di- vided and furnished with flues in the same man- ner ; and thus different degrees of heat may be obtained, according to the seasons and the par- ticular sorts of plants that are to be preserved. If there are no shades behind these wings, the walls should not be less than three bricks thick ; and the back part having sloping roofs, which are covered with tiles or slates, should be lined with reeds, &c., under the covering. The sloping glasses of these houses should be made to slide and take off', so that they may be drawn down more or less in warm weather to admit air to the plants ; and the upright glasses in front may be so contrived as that every ot^er may open as doors upon hinges, and the alternate glasses may be divided into two. The upper part of each should be so contrived as to be drawn down like sashes, so that either of them may be used to admit air, in a greater or less quantity as there may be occasion. As to the management of the plants, Mortimer recommends opening the mould about liiem from time to time, and sprink- ling a little fresh mould in them, and a little warm dung on that ; as also to water them when the leaves begin to wither and curl, and not ofteiier, which would make them fade and be sickly ; and to take off such leaves as wither and grow dry.

Green IsLANn, an island on the west coast of North America, in Prince

William's Sound, about twenty-four miles in circumference, and is surrounded with islets. Long. 213° 7′ E., lat. 60° 18′ N.

Green Mountains, a range of mountains extending N.N.E. to S.S.W. North America, and dividing the waters wlˆch flow easterly into Connecticut River, from those which flow westerly into Lake Champlain, Lake George, and Hudson's River. The land generally rises to its height at from twenty to thirty miles distance from the rivers. The growth upon these moun- tains is hemlock, pine, spruce, and other ever- greens ; hence they have always a green appear- ance, and on this account have obtamed their name. In some pjtrts snow lies till May, and sometimes till June. The chain extends through Massachusetts and Connecticut, and terminates

in New Haven. Kellingtoii Peak, the highest of these mountains, is about 3454 feet above the level of the ocean.

Green River, a river of Nevif Brunswick, which runs into the St. John. Long. 67° 58′ W., lat. 47° 20′ N. — Also a river of Canada, which runs into the St. Lawrence, 115 miles below Quebec.

GREENE (Dr. Maurice), a celebrated musi- cal composer. He was brought up in the choir of St. Paul's, and was afterwards bound apprentice to Brind, the organist of that ca- thedral. He was early noticed as an elegant organ player and composer for the church, and obtained tlie place of organist of St. Dunstan in the West, before he was twenty years of age. In 1717, on the death of Daniel Purcell, he was likewise elected organist of St. Andrew's, Hol- born ; but the next year, his master Brind dying, Greene was appointed his successor by the dean and chapter of St. Paul's ; upon which event, he quitted both the places he had previously ob- tained. In 1726, on the death of Dr. Croft, he was appointed organist and composer to the Chapel Royal ; and on the death of Eccles, 1735, master of his majesty's band. In 1730 he obtained the degree of doctor in music at Cambridge, and was appointed public music professor in the same university, in the room of Dr. Tudway. During the last years of his life he began to collect the services and anthems of our old church composers, from the single parts used in the several cathedrals of the kingdom, in order to correct and publish them in score; a plan which he did not live to accomplish ; but, bequeathing his papers to Dr. Boyce, it was afterwards executed in a very splendid and am- ple manner. Dr. Greene died in 1755, and was succeeded, as composer to the Chapel Royal and master of his majesty's band, by his pupil Dr. Boyce.

Greene, a county of the state of New York, on the west side of the Hudson. It was erected from Albany county in 1801, and is bounded on the north by Schoharie and Albany counties, east by the Hudson, south by Ulster county, and on the west by Delaware county. Its form is irregular, but the area is estimated to be equal to 508 square miles. Population in 1B16, 19,566. The cliief town is Catskill.

Greene, a county of the United States, in East Tennessee. Greenville is the chief town. Population 9713.

GREENEVILLE, a town of the state of Tennessee, in Greene county, situated on Nola- chucky river, seventy-five miles east of Knoxville.
GREENFIELD, a post town, the capital of Franklin county, Massachusetts, North America, on the west bank of the Connecticut ; twenty miles south of Bratlleborough ; twenty-one north of Northampton ; ninety-five W. N. W. of Bos- Ion ; 406 west. It is situated in a pleasant and Fertile tract of country, and contains a court- house, a jail, a printing-office, a cotton manufac- tory, an oil-mill, and three religious societies, two congregational, and one episcopal. It is situated about one mile and a half from the river; is very pleasant, handsomely built, and flourishing, and has considerable trade. A weekly newspaper is published here.

GREENLAND, an extensive country of the Western hemisphere, having the Polar Seas, or some unknown regions, for its northern boundary ; the Icy Sea, and the straight which separates it from Iceland, on the east; and Baffin's Bay on the west : south, and south-east, it is washed by the Atlantic Ocean. It has been conjectured to be insular, — to consist of a cluster of islands, &c., but these are mere surmises : the only known part of the coast is Cape F'arewell, and a portion of West Greenland, extending to about 76° of N. lat. The eastern coast has been totally inaccessible in modern times. Hudson saw it in 73°. In 1788 a Danish ship is said to have seen this coast 2° 30′ E. of Cape F'arewell ; and it is also said to be seen, in clear weather, from the mountains of Iceland, in lat. 65°. The Dutch whalers, it appears, used formerly to visit this ■coast, between the lat. of 70° and 76°, and gave it the name of Galeliamsques, or Hamken's Lund. In lat. 70° they found a deep indenta- tion twenty-five leagues broad, which they con- cluded to be a strait, communicating with thai of Davis, from meeting the same species of whales, some individuals of which they occasion- ally took with the harpoons of the western Greenlanders in them.

The knowledge of the western coast, however, proves that no strait exists between Cape Fare- well and the 72°. Des Pages, who supposed himself to be within a short distance of the coast of Galehamsques, in lat. 74° 20', estimates its longitude on that parallel at 15° 10′ W., and says, that the Dutch placed it in 1 8° 14', on the parallel of 72°. Combining these data

with the reports of the missionaries, that the west coast is inhabited to the lat. of 76°, we may rationally conclude that both the east and west coasts ex- lend to this parallel.

Greenland, according to the Chronicles, was discovered in 982. The favorable account given of it by the first visitors caused the Icelanders and Norwegians to send a colony hither in 986. In 1000 these colonists were converted to Chris- tianity; and until 1418 they had a regular suc- cession of bishops from Denmark. The colony was divided into two cantons, named East and West; in the former were the two towns of Garda and Hrattalid, twelve churches, and two convents ; and in the latter four churches, and 100 farms in cultivation. The plague, which, at the commencement of the fifteenth century, ravaged all Europe, and depopulated the north in particular, carried off the majority oc the in- habitants of Greenland; and in 1418 an un- known fleet arrived, and, attacking the weakened colonists, destroyed every thing by fire and sword. The division of the ancient Scandinavian colony in Greenland into East and West has given rise to a great geographical error. It being conceived that the eastern canton occupied the coast oppo- site to Iceland, while it is satisfactorily proved by the routes of the voyagers from Norway and Ice- land that this canton occupied the most southerly part of the west coast ; and, indeed, it is here alone that, for a few weeks in summer, a brilliant ver- dure justifies the name of Greenland given to this country by the Icelanders. The sites of tlie two ancient colonies have been discovered by the missionaries, wiio have found the ruins of

seven churches on the south-west coast, and, after passing a space without any such vestiges, they are again met with a little to the north of Cape Desolation.

From the year 1418 to 1576 Greenland seems to have vanished from observation. In the latter year its south extremity was visited by Frobisher, who named it West Friezeland ; and, having picked up some black stones which proved to be the marcasite of gold, Elizabeth gave the country the name of Meta Incognita (unknown limit), and determined on forming a colony here, for which purpose Frobisher was sent out on his third voyage, but the ,loss of the ships, with the materials for buildin^, frustrated this plan; and Greenland was again neglected until 1720, when Egede, a Dane, inspired by religious zeal, determined to visit it, and seek for the remains of the ancient colonies. Being followed by otlier missionaries, witli their fami- lies, several establishments were formed on the west coast, and many of the

Pagan natives con- verted. In 1765 the Moravian brethren began to form settlements on the same coast.

Greenland forms an assemblage of rocky mountains, whose summits are crowned with eternal snow and ice. The most elevated on the west coast rises in three peaks, called Deer's Horns, that are seen forty leagues. The moun- tains are composed of granite, argillaceous stone, and a colored stone, of which tlie natives make their lamps, boilers, and other utensils. The signs cf metals have been observed, and asbestos is met with in the mountains. A new mineral named cryolite has also been found here.

The summer, towards the south, commences at the end of May, and lasts till the beginning of September. This season would be agreeable did not the thick fogs obscure the atmosphere and weaken the power of the sun. At the ap- proach of winter storms are often violent, but during the greatest cold, which is in February and March, it is usually calm. Thunder and rain are uncommon. The Aurora Borealis is frequent and very bright. The tides in ihe bays are said to rise sometimes eighteen feet. In the isle of Onastok, in lat. 60°, is a constant boiling spring.

The soil is clay mixed with sand. To the north the only vegetation is mosses ; but to the south are found small juniper, willows, and birches two or three yards high, together with various berry- bearing bushes, wild ang-elica, sorrel, tansey, rosemary, scurvy-grass, and other antiscorbutic plants, and some grasses. On the south the missionaries have endeavoured to raise •wheat, but the plant, after forming a stalk of some hei,iht, always dries up and dies : they have, however, r,ucceeded better with cabbages, turnips, and radishes.

The coasts are indented with gulfs, filled with islands, and well stocked with fish, particularly cod, hallibut, and herrings. The rocks are the resorts of several species of seals, and of innumer- able aquatic birds, amongst which is the eitler cluck. The rivers are in general small, and as well as the springs freeze in winter, and many of them dry up in summer. Thoy aflonl salmon and Cray fish. Tlie principal fuel is the drift

wood, brought to the shores by the currents. The sea-water deposited in the crevices of the rocks is formed into salt by natural evaporation. The quadrupeds are white bears, white and gray foxes, white hares, wolves, and dogs, used by the na- tives to draw their sledges, as well as occasionally for food ; rein-deer are also tolerably plentiful, but the Greenlanders do not take the pains to domesticate them.

The Greenlanders are evidently the same race as the Esquimaux of the neighbouring continent. Their number is very inconsiderable, being greatly

reduced by the small-pox introduced from Copenhagen in 1772. The missionaries calculate under 1000 tlie fixed Greenlanders in their establishments, and Crantz estimates the wandering tribes ai 7000 souls. In 1805 the Europeans were 6000.

Greenland is politically divided into two in- spectorships, named North and South, separated by the strait of Ilomelpoot, in lat. 68ˆ. In the southern inspectorship are seven establishments of the missionaries and three of Moravians, viz. Julian's Harbour, Gl'ˆ ; Frederick's Harbour, 62° 30'; Fiskenhoset, 63° 30'; Good Haven 64° 10'; Sukertoppen 65° 40′ ; Kigurtursok, and Hol- steinborg, 67° 10'. TheMoravian are New Hern- haut, near Good Haven, Lechtenfels, 63°, and Lichtenau, five leagues north-east of Cape Fare- well.

In the northern inspectorship the mission- aries' establishments are eleven ; one on each of the islands of Prince Royal and Crown Prince, Egedesminde, 68° 20′ ; Jacob's Haven, 68° 40'; Christian's Haven 68° 50′ ; Clans Haven, Good Haven 69° 10', in the isle of Disco ; Fortune Bay, eight miles farther north, Ilutter's Bank, 70° 10'; Umanak, 71°; Upperuavik, 72° 30'.

The Greenlanders are a migratory people, and often transfer their abodes, in the winter season, from one place to another. They build their houses generally at the mouths of friths, or on the shores of small islands. The following is a list of places inhabited by them from 1810 to 1813, supplied to the Edinburgh Philosophical Journal by Sir Charles Giesecke of Dublin.

I. Ji'LiANAS-HAAis district. — In the south of Greenland, that is in 60°, or the most southern district of Julianus-haab, round Cape Farewell are inhabited : —

1. AUuk (that is the soles), two small islands presenting the shape of the soles of the foot.

2. Kippingajak, an island to the south of Alluk.

3. Pysursoak, a small bay to the north of Staatenhuck.

4. Nettingiak, on the continent, eastward from Cape Farewell.

5. Ncnnortflik (that is Bear-land), an island eastward from Cape I'arewell.

6. Tessermint, a large frith to the north of Cape Farewell, formerly inliabited by the old Norwegians. At the mouth of this frith there are several Greenland houses, sixty-four miles south from the colony of Julianas-haab, in 60°.

7. Kognamint, to the south of Julianas-haab, on the continent.

8. Innersutalik, an island forty miles south- ward from Julianas-haab.

9. Agluitsock, on tie continent, thirty miles southward from the colony.

10. Sardlok, an island sixteen miles southward from the colony.

11. Omenalik, twelve miles to the south of the colony.

12. Upernaviarsuk, sixteen miles tovyards the east of the colony.

13. Itiblik, twenty miles towards the east of the colony. At the colony of Julianas-haab, only natives are employed in the service of the trade, who live in Greenland houses. Between 61'^ and 62° are inhabited.

14. Ikertongoak, an island eight miles towards the west, at the mouth of the frith called Kakor- tok.

1.5. Narksak, in the vicinity of the continental ice, twenty miles northward from the colony.

16. Krimatuluitsanik, an island forty miles northward from Julianas-haab.

17. Okaitsermint and Kikerteitsiak, forty-four miles from the colony. Here ends the district called Julianas-haab. It is inhabited by 1762 natives, viz. 754 males and 1008 females.

II. (18.) Fkedericks-haab district extends from the Nunarsoi Island to the Ice-blink, about 20′ to the north of Fredericks-haab. Of the southern part of the district are inhabited: —

19. Torn^^ntrsuk, an island thirty-two miles to the south of the colony.

20. Kangarsuk, a cape of the continent of Greenland .

21. Narksalik, twenty-eight miles southward from the colony : and,

22. Sioramint, eight miles to the north of the colony. The population of this district compre- hends 552 natives, viz 234 males and 318 fe- males.

III. FisKER-NiER District extends from 62° 52′ to 63° 30'.

23. The inhabitants of the district Fiskernoer have their houses at the settlement of the Mo- ravian Brethren, called Lichtenfeld. Their number is 280, viz. 112 males and 168 females.

IV. GoDT-HAAB. The district of the colony Godt-haab begins at 63° 30', and reaches to 64° 52'. The following places are inhabited : —

24. Kariaet, eight miles southward from the colony.

25. New-Sterrn-IIut, a Moravian settlement, situated between the friths of Ameraglik and Baals River.

26. Godt-haab, the Danish colony in Baals River, and

27. Sarlok, to the north-east of Baals River. • — The population of this district amounts to 489 natives, viz. 186 belonging to the Danish mission and 303 belonging to the Moravian mission. The former consists of eighty-one males and 105 females, the latter of 123 males and 180 females.

V. SuKKER-TOP. The district of Sukker-top (sugar loaf) begins at 64° 52′ and ends at 66° 17'. In this district the following places are inhabited liy natives. Towards the south of the colony: —

*28. Nappasok, an island situated forty miles southward from the co*lony.*

29. The colony Sukker-top itself, called Ma- netsok by the natives ; and

• 30. Akpamiut, sixteen miles northward from

the colony. The population of this district ig 304 ; viz. 143 males and 161 females.

VI. HoLSTEiNSBURG District is the last in South Greenland.

31. The district of Holsteinsburg begins at 66° 16′ and ends with 67° 45'. The natives, being employed in the whale fishery, have all their winter-houses round the colony. The number of the inhabitants of this district is 196, viz. eighty-seven males and 109 females. Thus the whole population of South Greenland, the limits of which are fixed to the Strom Frith in 68°, comprehends a number of 3583 souls.

North Greenland commences in lat. 67° 43', and comprehends the following districts :

1 . Egedes-mindes district, ex- tending from . . .67° 43′ to 68°

2. Christianshaab district. . 68° 68° 10′

3. Jacobshavn district . . 68° 69° 40′

4. Rittenbenks district . . 69° 40′ 71°

5. Omenaks district . .71° 72° 8′

6. Upernaviks district . . 72° 8′ 76″ 30′

The population of North Greenland is not en- tirely ascertained, but it does not exceed the number of 3000 souls. The country from 67° to 69° is uninhabited. The first district of North (Greenland is that of the colony Egedes-minde. The natives belonging to this and the other dis- tricts situated round Disko-Bay, or lish-Bay, have their houses at the colonies, for the sake of the whale-fishery. TheGreenlandersof Omenak district are the only natives of the whole coast who live during winter in the interior of that ex- tensive frith, having their supply in catching the seals, by means of nets which are set under the ice.

The most northern district is that of Upernavik ; it begins at 72°, and reaches to the remotest north ; but it is only inhabited to the 73°. South- wards from Upernavik is situated Kangersoietsiak, an island inhabited by natives. At Upernavik four or five Greenland families have their abode. At Tessiursak, an island m 74° 15', eighty miles northward from Upernavik, one family termi- nates the population of this forlorn country.

GREENOCK, a town in the lower ward of Renfrewshire, and the principal sea-port of Scotland, is situated in long. 0° 18′ 58″ W., lat. 55° 57′ 2″ N. Seated on the south bank of the Frith of Clyde ; it has in front a noble bay, anciently called the bay of St. Lawrence, the- river expanding here to the breadth of more than five miles. The advance of Greenock to its pre- sent commercial importance, from an obscure fishing village, has been steadily progressive, yet rapid. In 1757, at which period the population was under 4000, it was erected into a burgh of barony by Sir John Schaw, who at the same time conferred upon the feuars and burgesses the power of electing their own magistrates, a privilege rarely possessed in Scotland.

Though a modern town, Greenock is irregu- larly built, and the streets in the lower part of it very narrow. The principal line, however, which extends about a mile from east to west, is tolerably spacious and well-built, and at the west end of the town the streets are judiciously laid out, and the houses handsome. Near the

eastern extremity is a square, containing a spa- cious parish church, with a spire 146 feet in height. In the same square is an elegant read- ing room, and still further eastward are placed the Exchange Buildings, containing another pub- lic reading room, assembly rooms, &c. ; and on the opposite side of the street is the Tontine, an extensive hotel for the accommodation of tra- vellers.

In 1826 James Watt, Esq., of Soho, son of the celebrated improver of the steam-engine, to whom Greenock had the distinguished honor of giving birth, bestowed a sum of £2000, to be ex- pended in the erection of a suitable hall for a public library, the site of which was judiciously laid in the vicinity of die public buildings just mentioned; and in this edifice is to be placed a full-length marble statue of the late Mr. Watt, from the chisel of Chantry. In 1817-18 an ex- tensive edifice was erected by government, at an expense of £33,000, for the accommodation of the customs and excise departments : it is finely placed, close upon the river, and being a hand- some structure, with a spacious front, and elegant portico, of the Grecian Doric order, is a very attractive object in approaching the harbour.

The chief foreign trade of Greenock is carried on with the West Indies, North and South America, the East Indies, and the Mediterranean. The principal imports are sugar, rum, coffee, cotton, timber, ashes, grain, &cc. An extensive coasting trade is also carried on ; much of the agricultural produce of Ireland is brought hither, and the herring fishery, originally its only trade, is still an important branch; the number of barrels cured in the ten years preceding the 5th of April, 1826, according to the official reports, giving an average of 1 8,608 barrels annually.

In the year 1825 the duties of customs col- lected at this port amounted to £414,447 2s. 7d., and, notwithstanding the commercial depression of the following year, the sum of £395,774 2s. 5d. was collected in that which terminated on the 5th of .lanuary, 1827. From the 5th of .lanu- ary, 1826, till the period just mentioned, 54,037 tons of' British shipping cleared inwards at this port, and 2380 Foreign ditto ; 58,519 tons Bri- tish, outwards, and 2260 foreign ditto; 39,299 tons of shipping cleared inwards, and 71,931 outwards,, in the coasting trade. The registered shipping of the port, at this date, amounted to 26,534 tons. The harbours, which have been enlarged from time to time, are spacious and conim-.dious, and capable of admitting vessels of great burden. There are two praviuix-docks, one of them very extensive, constructed at an expense of £30,000 ; and, upon the whole works for the accommodation. of sliippina, upwards of £120,000 have been expended. The revenues of the town and harbours exceed £lO,000 annually. The business of ship-carpentry is extensively carried on here, there being four Imildincr-yards, which employ a creat number of men, and annu- ally launcii some of the finest vessels of wiiicii

the mercantile marine can boast. Since 1812, when on the Clyde tiie first successful exjieri- ment was made of applying steam to the pur- poses of navitration, the building of steam-boats has given no inconsiderable employment to the

ship-carpenters. It was from this port that the first vessels which navigated the open sea be- tween Holyhead and Dublin were fitted out, and subsequently those which run between the Clyde and Mersey ; and, at a more recent date, the largest and most splendidly equipped steam- vessel in the world, the United Kingdom, was built and finished here, at an e.xpense little short of £40,000.

In 1827, beside those steam-packets, many of them of large dimensions and power, which conveyed goods and passengers, or the latter exclusively, to and from this port and Liverpool, Dublin, Belfast, Derry, and the Western and Northern Highlands, a number plied within the range of Greenock and Glasgow only, making an aggregate number of about sixty vessels of this description alone. By this means an incal- culable number of persons are annually con- veyed in every direction ; and places previous to the introduction of steam-vessels deemed remote, and comparatively inaccessible, are now brought into communication by a voyage of a few hours, with ease, safety, and certamty.

In local manufactures Greenock has not held so prominent a rank as in commerce ; still it contains many works on a respectable scale of magnitude. Its sugar refineries, five in number, in all of which the process is carried on by steam, are extensively employed ; it possesses two large works for the manufacture of steam- engines, and other machinery ; a flint-glass work, the products of which are much esteemed ; a bottle-work, breweries, distilleries, a pottery, rope-works, chain cable, and duck manufac- tories. Hat-making is also pretty extensively carried on ; and, to the enterprise of two gentle- men in this place, the British public are indebted for the manufacture of straw-plat, in imitation of that imported from and known by the name of Leghorn, which they in a short period brought to SO' much perfection as to rival in every re- spect the foreign commodity. But in 1825, a period in which so many absurd projects, amongst some of unquestionable utility, found ready patrons, a scheme was first set in motion, of a novel description certainly, but calculated at no distant day to render Greenock as con- spicuous in a manufacturing as a commercial point of view. It was shortly this: to take the advantage of the natural facilities which were presented by a chain of hills that extend several miles to the westward of Greenock, and by means of these to lead a considerable stream, known by the name of the Shaw's Water, along a high level to the immediate vicinity of the town, from the heights behind, which it might descend in successive, falls, for the purpose of working machinery

employed in the various manufactures, by a le>is expensive agent than steam. A joint stock company was accordingly formed, and in- corfiorated by act of parliament with a capital of £30,000, and the execution of the plan con- fided in Mr. Robert Thoin, of the Rothesay cotton works, who may be said to be the inven- tor of artificial water-power, having successfully carried into practice the same plan, though o

The necessary works were comiuenced, bj

embanking the lower extremity of the valley through which the Shaw's Water flowed, to the height of fifty-six feet, by which a reservoir covering 315 acres of ground, and capable of containing 250,000,000 cubical feet of water, was formed. Less reservoirs were also made, increasing the quantity to 300,000,000, and the whole was computed to be adequate to the entire consumption, for four months, of a stream whose power should be equal to that of 100 horses ; for other four months of the year the current natural supply was calculated to meet the demand ; and the floods of the winter months were estimated not merely to do so, but likewise to replenish the exhausted reservoirs. In the execution, this leading part of the plan proved eminently successful, the supply of water being most abundant. From the reservoir the aqueduct was formed by cutting an embankment along the cliain of hills already noticed : mclu- ding the numerous curvatures, it measures nearly seven miles in length, and where it first branches off" into two distinct streams, each possessing a moving power of fifty horses, with a thirty feet fall, it holds an elevation of 512ˆ feet above the level of the Clyde. Thus a power is supplied, which, by successively acting on machmery placed at given distances, yields an equivalent to the power of 8234 horses, working eight hours per diem ; and as the value of a horse's power, where steam is employed, is estimated at £30 per annum, these works in their present state give an equivalent power of the value of £l 17,930 yearly ; yet the entire undertaking did not cost more than £20,000, and at an incon- siderable expense this prodigious power is capable of being doubled in amount. Many ingenious yet simple contrivances are resorted to for regulating the supply of water, which cannot be here pointed out : they are all self-acting, and contrived to work with admirable precision. This novel undertaking was completed early in the summer of 1827. But for the convulsion of 1826 in the mercantile world, the means thus afforded of obtaining a moving power, which is let by the Shaw's Water Company at about one- eighth the expense of that derived from steam, would have induced many manufactories to be set down here; and there cannot be a doubt that in a few years this will be the

case. Grain-mills have already been erected on one of the sites, and several manufactories new to the district, but for which it is peculiarly eligible by the pos- session of this economical power, and the prox- imity of an extensive shipping port, will be successively established. Nor can there be any question, that, where similar local facilities can be found, the plans of Mr. Thom will be speedily embraced, as their importance and successful operation become known, to the exclusion of the far more expensive agency of steam. The popu- lation of Greenock, by the census taken in 1811, was then 19,042; in 1821, 22,594; and in 1832 was calculated at 25,571 souls. The town is divided into three parishes ; and besides three established churclies, and two chapels ot ease, possesses dissenting chapels of various denominations; an episcopal, and a Roman Catholic chapel. There are several excellent

charitable institutions in the town. There are two local banking companies, both of which issue notes, but no branch establishments in town. A newspaper is published in it twice a week. Fairs are held twice a year, in Jidy and November. It is distant from Glasgow about 23 miles west : sends one member to Parliament.

GREENVILLE, a post town of North Caro- lina, the capital of Pitt country ; twenty-three miles from Washington, fifty-three south west of Edenton, 444 of Philadelphia. Long 2° 19′ W. of that city, lat. 35° 35′ N.

GREENWICH, a Borough town of Kent, pleasantly situated on the banks of the Thames five miles east of London. It had formerly a royal palace, built by Humphry duke of Glou- cester, enlarged by Henry VII. and completed by Henry VIII. The latter often chose this town for his place of residence ; as did also the queens Mary and Elizabeth, who were both bom in it. Duke Humphry began a tower on the top of the steep hill in the park which was finished by Henry VII. but afterwards demolished, and a royal observatory erected in its place by Charles II. furnished with mathematical instruments for astronomical observations, and a deep dry well for observing the stars in the day-time. The palace having fallen into decay, king Charles II. pulled it down and began another, of which he lived to see the first wing magnificently finished. But king William III. in 1694, granted it, with nine acres of ground, to be converted into a royal hospital for old and disabled seamen, the widows and children of those who lost their lives in the service, and for the encouragement of navigation. The wing, which cost king Cliarles £35,000, is now the first wing of the hospital towards London. Tiie front to the Thames consists of two ranges of stone buildings, with the ranger's house in the centre of tlie area, but detached from any part of the hospital. These buildings correspond with each other, and have their tops crowned with strong balustrades. The buildings which face the area correspond with them, though in a finer and more elegant style ; and have

domes at their ends, which are 120 feet high, supported on coupled columns. Under one of these is the hall, which is finely painted by Sir James Thornhill, and contains many royal portraits ; and under the other the chapel. A fire broke out in the hospital on the 2d of January 1779, and totally consumed the dome at the south-east quarter of the build- ing, with the chapel, which was the most elegant in the world, the great dining-hall, and eight wards, containing the lodgings of nearly 600 pen- sioners. The dome was rebuilt about 1785. On the sides of the gate which opens to these build- ings from the park, are placed a large terrestrial and celestial globe, in which the stars are gilt ; and in the centre of the area is a statue of George II. About 3000 old disabled seamen are main- tained in this hospital. Besides private bene- factions, to the amount of nearly £60,000 tlie British parliament, in 1732, settled upon it the earl of Derwentwater's estate, to the value of £6000 per annum. As well as the seamen and widows above mentioned, about 100 boys, the sons of seamen, are bred up for the service of the royal navy ; but there are no out-pensioners as

at Chelsea. The park is well stocked with deer, and affords as much variety, in proportion to its size, as any in the kingdom ; but tlie views from the observatory and the one-tree hill are beautiful beyond imaginatiun, particularly the" former. The projection of these hills is so bold, tliat one does not look down upon a gradually falling slope or fiat enclosures, but at once upon the tops of branching trees, which grow in knots and clumps out of deep hollows and dells. The cattle which feed on the lawns, which appear in breaks among them, seem movmg in a region of fairy-land. This is the foreground of the land- scape : a little farther, the eye falls on that noble structure, the hospital, in the midst of an amphi- theatre of wood, then the two readies of the river make that beautiful serpentine which forms the Isle of Dogs, and present the floating treasures of the Thames. To the left appears a fine tract of country leading to the capital, which there Snishes the prospect. The parish churcli of Greenwich, rebuilt by the commissioners for erecting the fifty new churches, is a very hand- some structure, dedicated to St. Alphage, arch- bishop of Canterbury, who is said to have been slain by the Danes in 1012, on the spot where the church now stands. There is a college at the end of the town, fronting the Thames, for the maintenance of twenty decayed old house- keepers, twelve out of Greenwich, and eight alternately chosen from Snottisham and Castle-Rising in Norfolk. This is called the duke of Norfolk's college, though it was founded and endowed in 1613 by Henry earl of Nor- thampton, the duke

of Norfolk's brother, and by him committed to the care of tlie Mercers' Com- pany. To this college belongs a chapel, in which the earl's body is laid ; which, as well as his monument, was removed liither several years ago from the chapel of Dover Castle. The pen- sioners, besides meat, drink, and lodgings, are allowed 18c/. a week, wivh a gown every year, linen once in two years, and hats once ih four. In 1560 Mr. Lambard, author of tlie Perambu- lation of Kent, also built an hospital, called Queen Elizabeth's College, said to be the first erected by an English Protestant. There are likewise two charity schools in this parish. Tiie Thames is here very broad, and the channel deep ; and at very hiu;h tides the water is salt. This is the chief harbour for the king's yachts. A market nn Wednesday and Saturday was insti- tuted in 1737, the direction and profits of which belong to tlie governors of the hospital : this place semis two members to Parliament. J"nglish astronomers reckon tlieir longitude from Greeii- wicli.

GuF.ENwicH, a post town of Fairfield county, on Long Island Sound, in the south-west corner of the slate; fourteen miles W. S. W. of Nor- walk, forty-five W.S.W. of New-Haven, west

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GRr.r.Nwicii, a post town of Washington county, New York, eight miles west of Salem, thirty-seven north, of Allnuiy, 391 west. It contains two houses of public worship, one for congregationalists, and one for baptists ; an academy, a distillery, and extensive cotton and woollen manufactories.

GREET, V. a. & v. n. \ Sax.jpetan; Belg. Greet' EH, n. s. ˆgreetan; Lnt. g- utor .

Gree'ting, n. s. j To address in any

manner, but especially with kindness, compli- ments, or congratulations ; to meet.

When ,411a saw his wif, faire he hire grette ; And wept, that it wos routhe for to see ; For at the firste look he on hire sette. He knew wel veraily that it wos she.

Chaucer. The Man of Lawes Tale. His lady, seeing all that channel from far, Approacht in haste to greet his victorie. Spenser.

My noble partner Yoxxgreet with present grace, and great prediction ; To me you speak not. Shahpeare. Macbeth.

The king's a-bed. And sent great largess to your officers ; This diamond he greets your wife withal. By the name of most kind hostess. Id.

Now Thomas Mowbray, do I turn to thee. And mark my greeting well j for what I speak. My body shall make good. Id, Richard II.

I from him Give you all greetings, that a king, as friend. Can send his brother. Id. Winter's Tale.

My lord, the mayor of London comes to greet you. — God bless your grace with health and happy days. Shakspeare.

Your haste Is now urged on you.

We will ˆreei the time. Id. King Lear.

There greet in silence, as the dead are wont. And sleep in peace. Shakspeare.

I think if men, which in these places live. Durst look in themselves, and themselves retrieve. They would like strangers ˆrcet themselves. Donne. Now the herald lark Left his ground net, high towering to descry The morn's approach, and greet her with his song.

MiltUH.

Once had the early matrons run To greet her of a lovely son. id.

The sea's our own, and now all nations greet. With bending sails, each vessel of our fleet. Waller.

Thus pale they meet, their eyes with fury burn ; None greets ; for none the greeting will return ; But in dumb surliness, each armed with care. His foe profest, as brother of the war. Dryden.

I would gladly go. To greet my. Pallas with such news below. Id, Such was that face on which I dwelt with joy. Ere Greece assembled stemm'd the tides to Troy. But parting then for that detested shore. Our eyes, unhappy I never greeted more. Pope.

With annual joy the redd'ning shoots to greet.

Or see the stretching branches long to meet. Id.

Thus as the stream and ocean greet.

With waves that madden as they meet —

Thus join the bands from mutual wrong.

And fate and fury drive along. Byron.

GREEZE, 7i. s. Otherwise written greece. See Greece, or Grieze, or Grice; from de- urees. A fliglit of steps ; a step.

GRE'GAL, adj.) Lat.grej. Belonging

Gkegar'ioi s, «f/;. 5to a flock; going in flock or herds like she ■\ i r partridges.

No birds of prey are ;/' c urious.

Ra;i on the Creation.

GREGORIAN Calendar, that which siiows the new and full moon, with the tune of Easter and the moveable feasts depending thereon, by means of epacu thsposea iiiiou).h the several

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months of the Gregorian year. See Chronology and Kalendar.

Gregorian Style, or new style, the style now used, which succeeded the Julian Style, in Britain in 1732.

Greg rian Year. See Chronology.

GREG, an island in the province of Quarnaro, three miles long, and half a mile broad. The natives deal chiefly in sheep, of which there are 2500 on the island.

GREGOHY, the name of fifteen popes of Rome. See Italy. Of these we shall here only mention three of the most eminent, viz.

Gregory 1. surnamed the Great, pope of Rome, was born at Rome, of a patrician family, A. D. 544. He discovered such abilities in the exercise of the senatorial employments, that the emperor Justin the younger appointed him pre- fect of Rome. Pope Pelagius II. sent him nuncio to Constantinople, to demand succours against the Lombards. When he thought of en- joying a solitary life he was elected pope by the clergy, the senate, and the people of Rome, A. D. 590. Besides his learning and diligence in in- stmcting the church, both by writing and preach- ing, he by his talents procured the acknowledg- ment of several princes of his temporal as well as spiritual

right over their kingdoms. He undertook the conversion of the English, and sent over some monks of his order, under the direction of Augustin their abbot. With respect to the chastity of churchmen, he was very rigid ; and he likewise exerted himself against such as were found guilty of calumny. He, however, flattered and favored the emperor Phocas, while his hands were yet reeking with the blood of Mauritius, and of his three children, who had been butchered in his sight. He is accused of destroying the noble monuments of ancient Roman magniticence, that those who visited the city might not attend more to the triumphal arches than to religion ; and he burnt a multitude of the works of the ancients, among which were several manuscripts of Livy, lest the attention to heathen literature should supersede the monkish and ecclesiastical studies of the age. He died in 605. His Dialogues, principally an account of Roman Catholic miracles, and three of his Letters to Phocas, are extant.

Gregorv XIII. was a native of Bologna, and succeeded Pius V. in 1572. He was the most deeply versed in the canon and civil law of any in his time. He ornamented Rome with many fine buildings and several fountains. He cor- rected Gratian's Decretals, and wrote learned notes on them. But his chief merit lies in his alteration of the Kalendar, which was effected under his orders by Lewis Lilio, a Roman phy- sician. See Chronology. A short time before he died he received ambassadors from Japan, acknowledgincj the authority of the holy see. He died in 1585, aged eighty-three.

Gregory XV. was also a native of Bologna, and descended of an ancient family. His name was Alexander Ludovisio. He was elected pope in 1621, and was author of several works, par- ticularly one entitled Epistola ad Regem Persa- rum, Schali Abbas ; published cum notis Hegal- soni, in 1627, 8vo.

Gregory (Theodore), surnamed Thaumaturgus on account of his miracles, was the scholar of Origen ; and was elected bishop of Neocaesarea, his birth-place, about A. D. 240, during his ab- sence. He assisted at the council of Antioch in 255, against Paulus Samosatenus; and died in 270. He had the satisfaction of leaving only seventeen idolaters in his diocese, where there were but seventeen Christians wdren he was or- dained. Of his works there are still extant, A Gratulatory Oration to Origen : a Cunonical Epistle; and some other pieces.

Gregory, bishop of Nyssa, one of the fathers of the church, and author of the Nicene creed, was born in Cappadocia, about A. D. 331. He was chosen bishop of Nyssa in 372, and banished by the emperor Valens for adhering to the council of Nice. He was afterwards, however, employed by the bishops in several important affairs, and died in 396. He wrote. Commen- taries on the Scriptures ; Sermons on the Myste- ries ; Moral

Discourses ; Dogmatical Treatises ; Panegyrics on the Saints; Letters on Church Discipline ; and other works. His style is very- allegorical.

Gregory (George Florentius), bishop of Tours, one of the most illustrious bishops and writers of the sixth century, was descended from a noble family in Auvergne. He was educated by his uncle Gallus, bishop of Clermont; and distinguished himself so much by his learning, that in 573 he was chosen bishop of Tours. He afterwards went to Rome to visit the tombs of the apostles, where he contracted a friendship with Gregory the Great, and died in 595. He was extremely credulous with regard to miracles. He wrote, 1. The History of France; 2. The Lives of the Saints ; and other works. The best edition is that published by F. Rumart, in

1699.

Gregory, surnamed Nazianzen, from Nazian- zum, a town of Cappadocia, of which his father was bishop, was born, A. D. 324, at Azianzum, a village near it, and was one of the most illus- trious ornaments of the Greek church in the fourth century. He was made bishop of Con- stantinople in 379 ; but finding his election con- tested by Timotheus, archbishop of Alexandria, he voluntarily resigned his dignity about 382, in the general council of Constantinople. His works are extant, in 2 vols., printed at Paris in 1609. His style is said to be equal to that of the most celebrated orators of ancient Greece.

Gregory (David), F.R.S., Savilian professor of astronomy at Oxford. He was born at Aber- deen in 166 1, and received the earlier parts of his education in that city. He completed his studies at Edinburgh ; and, in the twenty-third year of his age, was elected professor of mathematics in the university of that city; and published, in the same year, Exercitatio Geometrica de Dimensione Figiararum, sive Specimen Method! Generalis Dimetiendi Quasvis Figuras, Edinburgh; 1684. 4to. He saw very early the excellence of tb .: Newtonian philosophy; and had the merii tf being the first who introduced it into the schools by his public lectures at Edinburgi:. ‘ He had,’ says Mr. Whiston, ‘ already caused several of his scholars to keep acts, as we call them, upor-

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several branches of the Newtonian philoso,i!iy ; whilst we at Cambridge, poor wretclies, were ignominiousLy studying the hetiticus liyputliesis of the Cartesians.' In 1691, on trie reoori of Dr. Bernard's intention of resigning; the S.ivilian professorship of astronomy at Oxford, David Gregory went to London ; and being patronised by Sir Isaac Newton, and warmly befriended by j\Ir. Flamstead, he obtained the vacant professor- ship, for which Dr. Halley was a competitor. This rivalship, liowever, mstead of animosity, laid the foundation of friendship between these emi- nent men ; and Halley soon after became the colleague of Gregory, by obtaining the professor- ship of geometry in the same university. Soon after his arrival in London, Mr. Gregory had been elected F. R.S. ; and, previously to his elec- tion into the Savilian professorship, liad the degree of M. D. conferred on him by the uni- versity of Oxford. In 1693 he published in the Philosophical Transactions a resolution of the Florentine problem de Testudine Veliformi qua- dribili ; and he continued to communicate to the public, from time to time, many ingenious mathe- matical papers by the same channel. In 1695 he printed at Oxford Catoptricae et Dioptricae Sphsericse Elementa; a work which contains the substance of some of his public lectures at Edinburgh. This valuable treatise was repub- lished first with additions by Dr. William Brown, with the recommendation of, Mr. Jones and Dr. Desaguliers; and afterwards by the latter, with an appendix containing an account of the Gre- gorian and Newtonian telescopes, together witli Mr. Iladley's tables for the construction of both these instruments. In 1702 our author pub- lished at Oxford, Astronomis Physicce et Geom- etrica Elementa ; a work which is accounted his master-piece. It is founded on the Newtonian doctrines, and was esteemed by Sir Isaac Newton himself as a most excellent explanation and de- fence of his philosophy. In 1703 he published a folio edition of Euclid in Greek and Latin. Dr. Gregory engaged, soon after, with his colleague Halley, in the publication of ApoUonius's Conies, hut he had not proceeded far in this undertaking before he died, in the fort)-ninlh year of his age, at Maidenhead in Berkshire. To tiie genius and abilities of David Gregory, the most celebrated mathematicians of the age. Sir Isaac Newton, Dr. Halley, and Dr. Keill, have given am- ple testimonies. Besides those works pub- lished in his lifetime, he left in MS. A Short Treatise of the Nature and Arithmetic of Loga- rithms, which is printed at the end of Dr. Keill's translation of Commandine's Euclid ; and a Treatise of Practical Geometry, which was after- wards translated, and publ.shed in 1745, by Mr Maclaurin.

Gregory (James), F. R.S. , one of the most eminent mathematicians of the seventeenth century, was born at Aberdeen in 1638. He received his education in the languages at Aber- deen, and went through the usual course of academical studies in the Marischal College. At the age of

twenty-four he published his treatise, entitled Optica Promota, sen abdita ladiorum refle'xoruin et refractorum mysteria geometrice enucleata; cui subnectitur appendix subtilissi-

raorum Astroiiomice Problematon Resolutionem Exhibens; London, 1633; in whicli work he tirsi published an account of an invention of his own, and one of the most valuable of modern discoveries, viz. the reflecting telescope. This discovery attracted the attention of the mathe- maticians, who were soon convinced of its great importance to the sciences of optics and astro- nomy. The manner of placing the two specula upon the same axis appearing to Sir Isaac New- ton to be attended with the disadvantage of losing the central rays of the larger speculum, he propose : an improvement on the instrusient, by giving an oblique position to the smaller speculum, and placing the eye-glass in the s.de of the tube. But the Newtonian construction of that instrumpnt has been long abandoned for the original or Gregorian, which is now univer- sally employed where the instrument is of a moderate s ze ; though Herschel preferred the Newtonian form for the construction of those immense telescopes, which he so successfully employed in observing the heavens. The uni- versit) of Padua being then in high reputation for mathematical studies, James (iregory went thither soon after the publication of his tirs: work ; and fixing his residence there for some years, he published in 1667 \ era Circuli et Hyperboles quadratura : in which he propounded another discovery of his own, the invention of an in- finitely converging series for the areas of the circle and hyperbole. To this treatise, when re- published in 1668, he added a new work, entitled Geometriae pars universalis, inserviens quanti- tatum curvarum transmutationi et mensurae; in which he is allowed to have shown, for the first time, a method for the transmutation of curves. These works attracted tlie notice and the cor- respondence of the greatest mathematicians of the age, among whom were Newton, Huygens, and \Valiis ; and their author, being soon after chosen F.K.S. of London, contributed to enrich the Philosophical Transactions by many valuable papers. Tiirough this cliannel he commenced a controversy with Huygens, occasioned by his treatise on the quadratures of the circle and hyperbole, to which that able mathematician had starttd some objections. In 1668 Mr. Gregory published at London his Exercitationes Geoine- tricae, which contributed still to extend his re- putation. About this time he was elected pro- fessor of mathematics in the university of St. Andrews; an office which he held for six years. In 1674 he was called to fill the mathematical chair in the university of Edinburgh. This place he had held for little more than a year, when, in October, 1675, being employed in showing the satellites of Jupiter through a telescope to some of his pupils, he was suddenly seized with total blindness, and died a few days after, at the early age of thirty-seven. He was a man of an acute and penetrating genius.

Grfoory (John), M.D., professor of medicine in the university of Edinburgh, was born at Aberdeen, in 1724. Losing his father, in the seventh year of his age, the care of his educ.'- tior devolved on his grandfather. Principal Chalmers, and on his elder brother. Dr. James Gregory, who, upon the resignation of his father a

short time before his death, had been appointed to succeed him in the professorship of medicine in King's College. The rudiments of his clas- sical education he received at the grammar school of Aberdeen ; and, under the eye of his grand- father, he completed, in King's College, his studies in the Latin and Greek languages, and in the sciences of ethics, mathematics, and natural philosophy. His master in philosophy and in mathematics was Mr. Thomas Gordon, professor of philosophy in King's College. In 1742 Mr. Gregory went to Edinburgh, where the school of medicine was then rising to that celebrity which has since so remarkably distinguished it. The Medical Society of Edinburgh, instituted for the free discussion of all questions relative to medicine and philosophy, had begun to meet in 1737. Of this society Mr. Gregory was a member in 1742, at the time when Dr. Mark Akenside, his fellow student and intimate com- panion, was a member of the same institution. In 1745 our author went to Leyden, and attended the lectures of those celebrated professors Gau- bius, Albinus, and Van Royen. While at this place he had the honor of receiving from the King's College of Aberdeen, an unsolicited de- gree of M.D. and soon after, on his return from Holland, was elected professor of philosophy in that university. In this capacity he read lectures in 1747, 1748, and 1749, on mathematics, and on experimental and moral philosophy. In the end of 1749, however, he resigned his professor- ship of philosophy, his views being turned chiefly to the practice of physic. Previously, however, to his settling as a physician at Aberdeen, he went for a few months to the continent. Some time after his return to Scotland, Dr. Gregory married, in 1752, Elizabeth, daughter of William lord Forbes, and with her he received a hand- some addition to his fortune. Of her character it is enough to say, that her husband, in his work, entitled A Father's Legacy to his Daugh- ters, declares, that, 'while he endeavours to point out what they should be, he draws but a very faint and imperfect picture of what their mother was.' The field of medical practice at Aberdeen being at that time in a great measure pre-occupied by his elder brother. Dr. James Grcijory, and others, our author went to London in 1754, and in the same year was chosen F.R.S. In this city his professional talents would doubt- less have procured him a very extensive prac- tice ; but the death of his brother. Dr. James Gregory, in November, 1755, occasioning a va- cancy in King's College, Aberdeen, which he was solicited

to fill, he returned to his native country in 1756. Here our author remained till the end of 1764, when he changed his place of residence for Edinburgh, where, in 1766, on the resignation of Dr. Rutherford, he succeeded as professor of the practice of physic ; and was appointed first physician to his majesty for Scotland, on the death of Dr. Whytt. On his first establishment in the university of Edin- burgh, Dr. Gregory gave lectures on the prac- tice of physic, in 1767, 1768, and 1769. After- wards, by an arrangement with Dr. CuUen, professor of the theory of physic, these two eminent men gave alternate courses of the theory

and the practice. The ./niy lectures which he committed fully to writing, were those intro- ductory discourses which he read at the begin- ning of his annual course, and which are published under the title of Lectures on the Duties and Qualifications of a Physician. These lectures were first published in 1770, and after- wards in an enlarged and more perfect form in 1772; when he also published Elements of the Practice of Physic, for the use of Students ; a work intended solely for his own pupils, and to be used by himself as a text-book to be com- mented upon in his course of lectures. Dr. Gregory, soon after the death of his wife, and, as he himself says, ‘ for the amusement of his solitary hours,’ employed himself in the composition of a tract, entitled A Father’s Legacy to his Daughters ; which was published after the author’s death by his eldest son. These letters were evidently written under the impres- sion of an early death, which Dr. Gregory had reason to apprehend from a constitution subject to the gout, which had begun to appear at ir- reg-ular intervals even from his eighteenth year. His mother, from whom he inherited that disease, died suddenly in 1770, while sitting at table. In the beginning of 1773, in conversation with his son. Dr. James Gregory, the latter remarking, that having for the three preceding years had no return of a fit, he might expect a pretty severe attack at that season ; he received th€ observa- tion with some degree of vexation, as he felt himself then in his usual state of health. The prediction, however, was too true; for having gone to bed on the 9th of February, 1773, with no apparent disorder, he was found dead in the morning. His death had been instantaneous, and probably in his sleep ; for there was not the smallest discomposure of limb or of feature, — a perfect Euthanasia.

Gregory (George), an English clergyman and general writer, was descended from a Scottish family, but born in Ireland, where his father was prebendary of Ferns. He was at twelve years old removed to Liverpool, and is said to have spent some years in a counting-house at that port. He, however, studied at Edinburgh, where he applied himself chiefly to mathematicis and philosophy, and, having taken orders, obtained a curacy at Liverpool in 1778. In 1782 he be- came curate of Cripplegate, London, but re- signed his office in 1 785 on being elected morning preacher : he also officiated at the asylum. At this time he made himself known by the

pub- lication of a volume of Historical Essays. This was followed in 1789 by a Translation of bishop Lowth's Lectures on the Sacred Poetry of the Hebrews; after which appeared the Life of Chatterton, reprinted in the Biographia Bri- tannica ; Church History, 2 vols. 8vo. ; a new translation of Telemachus ; and the Economy of Nature, 3 vols. 8vo. In 1804, through the interest of lord Sidmouth, he was presented to the living of Westham in Essex, having pre- viously obtained a small prebend in St. Paul's, which he resigned, on being preferred to the rectory of Stapleford in Hertfordshire. In his retirement at Westham he superintended the publication of a Dictionary of Arts and Sciences,

2 vc!5 4to. His last undertaking was, preparing for the press Letters on Literature and Taste, published after his death, which took pUice at Westham, March 12th, 1808, in the fifty-fourth year of his age.

Gregory (James), M.D. F.R.S., professor of physic in the university of Edinburgh, was born at Aberdeen in 1753. He was the author of various works on scientific subjects, and con- nected with his profession, and among them A dissertation De Morbis Coeii Mutatione Me- dendis, 8vo. 1774; Conspectus Medicinae Theo- reticae, 1780, 2 vols. 8vo., which went through four editions; Philosophical and Literary Essays, 1792, 2 vols. 8 vo ; Memorial presented to the Managers of the Royal Infirmary of Edinburgh, 4to., 1800; Cujlen's First Lines of the Practice of Physic, with Notes, 2 vols. Bvo. This latter work went through seven erlitions. He also published a paper in the Transactions of the Royal Society of Edinburgh, on the Theory of the Moods of Verbs. Dr. Gregory died April 2nd, 1821.

Gregory, Cape, a high rocky bluff", on the north-west coast of North America, nearly per- pendicular. Captain Vancouver places this cape ill lat. 43" 23′ N., long. 235° 50′ E. ; cap- tain Cook in lat. 43° 30′ N., long. 235° 57′ E.

GREIFSWALDE, a fortified town in Prus- sian Pomerania, on the liick, and having a har- bour at the influx of the river into the Baltic. Here are manufactures of tobacco and salt; also some maritime trade. Population 3800. The town is the seat of a university, founded as far back as 145(5, but Icmg fallen into decay: some new buildings were erected in 1750, but the number of students continues very small. The library belonging to it contains a number of MSS. on the history of Pomerania. Fifteen miles south-east of Stralsund.

GREIG (Samuel Carlowitz), an eminent naval officer in the Russian service, born at Inver- keitliing in Fifeshire. While in the navy of Great Britain, he distinguished himself at the defeat of Conflans by admiral Havvke, the taking of the Havannah,and several other engagements in that successful war. After the peace of 1 763 lie entered into the Russian service ; and fliere, at th-e battle of Chio, contributed principally, by his advice and exertions, to the destruction of the whole Turkish fleet. Sensible of his great professional merit, her imperial majesty promoted him, though a foreigner, to the chief command of the Russian navy, which he raised to a degree of respectauility and importance it never before had attained In reward of his great services, the empress bestowed on him many honorable marks of distinction, and an estate in Livonia, which his family now enjoy. In the last war between the Russians and Turks, vvhicii last were joined by the Swedes, he, in the Baltic, defeated llie Swedish fleet; and had not a |)art of his squadron, through cowardice, re- fused to come into action, he proljably had cap- tured or sunk the whole of them. Soon after this he was seized with a fever, and died at Revel, on the 2Gth of October, 17K8.

(jRE'MIAL,^/;. L-dt grmiium. Pertaining to the lap.

GRENADA, one of the Caribbee islands, the last of the Windward Caribbees, lies thirty leagues north of New Andalusia, on the con- tinent. According to some, it is twenty-four leagues in compass ; according to others only twenty-two. It is twenty-eight miles long, and in some places fifteen broad. The chief port, formerly called Louis, now St. George's, stands on the west side of the island, in the middle of a large bay, with a sandy bottom. It is said tiiat 1000 barks, from 300 to 400 tons, may ride secure from storms; and that 100 ships, of 1000 tons each, may be moored in the harbour. A large round basin, which is parted from it by a bank of sand, would contain a considerable number of ships, if tiie bank were cut through. The island abounds with game, fish, and very fine timber. A lake on a high mountain, about the middle of the island, supplies it with streams of fresh water. Several bays and harbours lie round the island, some of which might be for- tified to great advantage ; so that it is very con- venient for shipping, not being subject to hur- ricanes. The soil is capable of producing tobacco, sugar, indigo, peas, and millet. On the west side it is a rich black mould, or a sub- stratum of yellow clay. To the south the land is in general poor, and of a reddish hue, and the same extends over a considerable part of the interior country. On the whole, however, it ap- pears to be fertile in a high degree, and by the variety, as well as excellence of its returns, seems adapted to every tropical production. Indigo, sugar, tobacco, cofl'ee, cocoa, and cotton, thr.ve well in it. The rivers abound in eels, trout, and various other fisli. In the woods are found in great numbers partridges, pigeons, thrushes, parrots, &c. Grenada contains about 80,000 acres of land ; but the quantity actually cultivated has never exceeded

50,000. It is divided into six parishes, St. George, St. David, St. Andrew', St. Patrick, St. Mark.'^and St. .lohn, and its chief dependency, Cariacou, forms a seventh parish. The other towns of Grenada, besides St. Georges, are, probably speaking, in- considerable villages or hamlets, which are gene- rally situated at the bays and shipping places in the several out-parishes.

In 1638 M. Poincy, a Frenchman, attempted to make a settlement in Grenada ; but was driven off" by the Caribbeans, who resorted to this island in greater numbers than to the neigh- bouring ones. In 1650 M. Parquet, governor of Martinico, carried over from that island 200 men, furnished with presents to reconcile the savages, and with arms to subdue them in case ihey should prove intractable. The savages are said to have been frightened into submission by the number of the Frenchmen : but, according to some French writers, the cliief not only welcomed the new-comers, but, in consideration of some knives, hatchets, scissars, and other toys, yielded to Parquet the sovereignty of the island, reserv- ing to themselves their own habitations. The abbe Raynal informs us, that these first French colonists, imagining they had purchased the island by these trifles, assumed the sovereignty, and soon acted as tyrants. The Caribs, unable to contend with them by force, took their usua.

method of murdering all those whom they found in a defenceless state. This produced a war ; and the French settlers, having received a rein- forcement of 300 men from Martinico, forced the savages to retire to a mountain ; whence, after exhausting all their arrows, they rolled down great logs of wood on their enemies. Here they were joined by other 'savages from the neighbouring islands, and again attacked the French, but were defeated anew; and were at last driven to such desperation, that forty of them, who had escaped from the slaughter, jumped from a precipice into the sea, where they all perished, rather than fall into the hands of their enemies. From thence the rock was called le Morne des Sauteurs, or 'the hill of the leapers ;' which name it still retains. The French then destroyed the habitations and all the pro- visions of the savages ; but, fresh supplies of Caribbeans arriving, the war was renewed with great vigor, and great numbers of the French were killed. Upon this they resolved totally to exterminate the natives; and, having accordmgly attacked the savages unawares, they inhumanly put to death the women and children, as well as the men; burning all their boats and canoes, to cut off all communication between the few survivors and the neighbouring islands. Notwith- standing all these barbarous precautions, how- ever, the Caribbeeans proved the

irreconcilable enemies of the French ; and their frequent in- surrections at last obliged Parquet to sell all his property in the island to the Count de Cerrillac in 1657. The new proprietor, who purchased Parquet's property for 30,000 crowns, sent thi- ther a person of brutal manners to govern the island. He behaved with such insupportable tyranny, that most of the colonists retired to Martinico; and the few who remained con- demned him to death after a formal trial. In the whole court of justice that tried this mis- creant, there was only one man (called Arch- angeli) who could write. A farrier was the person who impeached : and he, instead of the signatures, sealed with a horse-shoe ; and Arch- angeli, who performed the office of clerk, wrote round it these words in French, ' Mark of M. de la Brie, counsel for the court.' It was ap- prehended that the court of France would not ratif) a sentence passed with such unusual for- malities: and therefore most of the judges of the governor's crimes, and witnesses of his execution, disappeared. Only those remained whose obscurity screened them from the pursuit of the laws. By an estimate, taken in 1700, there were at Grenada no more than 251 white people, fifty-three free savages or mulattoes, and 525 slaves. The useful animals were reduced to sixty-four horses and 569 horned cattle. The whole culture consisted of three plantations of sugar J nd fifty-two of indigo. The island had been sold in 1664 to the French West India Company for 100,000 livres. This unfavorable state of affairs was changed in 1714, owing to the flourishing condition of Martinico. The richest ships from that island were sent to the Spanish coasts, and in their way touched at Gre- nada to take in refreshments. The privateering traders, who undertook this navigation, taught

the people of that island the value of their soil, which only required cultivation. Some traders furnished the inhabitants with slaves and uten- sils to erect sugar plantations. An open account was established between the two colonies. Gre- nada was clearing its debts gradually by its rich produce, and the balance was on the point 'of being closed, when the war in 1744 interrupted the communication between the two islands, and stopped the progress of the sugar plantations. This loss was supplied by the culture of coffee, which was pursued during the hostilities with activity and eagerness. The peace of 1748 revived all the labors, and opened all the former sources of wealth. In 1753 the population of Grenada consisted of 1262 white people, 175 free negroes, and 11,991 slaves. The cattle amounted to 2968 horses and mules, 2456 horned cattle, 3278 sheep, 902 goats, and 331 hogs. The cultivation rose to eighty-tliree sugar plantations, 2,725,600 coffee-trees, 150,300 cocoa-trees, and 800 cotton plants. The provi- sions consisted of 5,740,450 trenches of cassado, 933,596 banana trees, and 143 squares of pota- toes and yams. The colony made a rapid pro- gress, in proportion to the excellence of its soil ; but in 1762 the island was taken by the British. Atˆhis time one of the mountains at the side of St.

George's harbour was strongly fortified, and might have made a good defence, but surren- dered without firing a gun ; and by the treaty concluded in 1763 the island was ceded to Bri- tain. On this cession, and the management of the colony after that event, the abbe Raynal has the following remarks. ' This long train of evils,' the ambition and mismanagement of his countrymen, ' has thrown Grenada into the hands of the English, who are in possession of this conquest by the treaty of 1763. England has not made a fortunate beginning. In the first enthusiasm raised by an acquisition, of which the highest opinion had been previously formed, every one was eager to purchase estates there. They sold for much more than their real value. This caprice, by expelling old colonists who were inured to the climate, has sent about £1,553,000 out of the mother country. This imprudence has been followed by another. The new proprietors, misled, no doubt, by national pride, have substituted new methods to those of their predecessors. They have attempted to alter the mode of living among their slaves. The negroes, who from their very ignorance are more attached to their customs than other men, have revolted. It hath been found necessary to send out troops, and to shed blood. The whole colony was filled with suspicions. The masters, who had laid themselves under a necessity of using violent methods, were afraid of being burnt or massacred in their own plantations. The labors have declined, or been totally in- terrupted. Tranquillity has at length been restored. The number of slaves have been in- creased as far as 40,000, and the produce has been raised to the treble of what it was under the French government. The plantations will still be improved by the neighbourhood of a dozen of islands, called the Grenadilloes, that are dependent on the colony.' In 1779 the

conquest of this island was accomplished by D'Estaign the French admiral. Immediately- after his conquest of St. Lucia, being reinforced by a squadron under M. de la Motte, he set sail for Grenada, with a fleet of twenty-six sail of the line, and twelve frigates, having on board 10,000 land forces. Here he arrived on the 2d of July ; and landed 3000 troops, chiefly Irish, being part of the brigade composed of natives of Ireland in the service of France. These were conducted by count Dillon, who disposed them in such a manner as to surround the hill that commands George's Town, together with the fort and harbour. To oppose these, lord M'Cartney, the governor, had only about 150 regulars, and 300 or 400 armed inhabitants : but, though all resistance was evidently vain, he determined nevertheless to make an honorable and gallant defence. The preparations he made were such as induced D'Estaign himself to be piesent at the attack

; and, even with his vast superiority of force, the first attack on the entrenchments proved unsuccessful. The second continued two hours ; when the garrison were obliged to yield to the immense disparity of numbers who assaulted them, after Iiaving killed or wounded 300 of their antagonists. Having thus made themselves masters of the intrenchments on the hill, the French turned the cannon of them to- wards the fort which lay under it ; on which the governor demanded a capitulation. The terms, however, were so extraordinary and un- precedented, that both the governor and inha- bitants agreed in rejecting them ; and determined rather to surrender without any conditions, than upon those which appeared so extravagant. On this occasion D'Estaign is said to have behaved in a very haughty and severe manner ; indulging his soldiers also in the most unwarrantable liber- ties, and in which they would have proceeded much farther, had tliey not been restrained by the Irish troops in the French service. In the mean time admiral Byron, who had been con- voying the homeward bound West India fleet, hastened to St. Vincent, in hopes of recovering it; but being informed, by the way, that a de- scent had been made at Grenada, he changed his course, hoping that lord M'Cartney would be able to hold out till his arrival. On the 6th of July he came in sight of the French fleet ; and, without regarding D'Estaign's superiority of six ships of the line and as many frigates, deter- mined if possible to force him to a close en- gagement. The French commander, however, was not so confident of his own prowess as to run the risk ot an encounter of this kind ; and, having already achieved his conquest, had no other view than to preserve it. His designs were facilitated by the good condition of his fleet ; which, being more lately come out of port than that of the British, sailed faster, so that he was thus enabled to keep at what distance he pleased. The engagement began about eight in the morn- ing, when admiral Barrington, with his own and two other ships, got up to the van of the enemy, which they attackcil with the greatest spirit. As tlie other ships of his division, how- ever, were not able to get up to his assistance, these three ships were necessarily obliged to 'oi. .

encounter a vast superiority, and of consequence suffered exceedingly. The battle was carried on from beginning to end in the same unequal manner ; nor were the British commanders, with their utmost eff"orts, able to bring the French to a close engagement. Thus captains Colling- wood, Edwards, and Cornwallis, stood the fire of the whole French fleet for some time. Cap- tain Fanshaw of the Monmouth, a sixty-four gun ship, threw himself singly in the way of the enemy's van ; and admiral Rowley and captain Butchard fought at the same disadvantage ; so that, finding it impossible to continue the en- gagement with any probability of success, a general cessation of firing took place about noon. It recommenced in the same manner about 3 P. M., and lasted, with different inter- ruptions, till evening. During this

action some of the British ships had forced their way into St. George's harbour, not imagining that the enemy were already in possession of "the island. They were soon undeceived, however, by per- ceiving the French colors fl}'ing ashore, and the guns and batteries firing at them. This disco- very put an end to the design which had brought on the engagement ; and as it was now high time to think of providing for the safety of the British transports, which were in danger from the num- ber of the enemy's frigates, the engagement was finally discontinued. During this action some of admiral Byron's ships had suff'ered extremely. The Lion of sixty-four guns, captain Cornwallis, was found incapable of rejoining the fleet, which were plying to windward ; and was there- fore oliliged to bear away alone before the wind. Two other ships lay far astern in a very dis- tressed situation ; but no attempt was made to take them, nor did the French admiral show the least inclination to renew the engagement. Gre- nada was restored to Great Britain by the peace in 1783. George's Town, or St. George's, is the residence of the governor, and the governor, general Matthew, made a present to the citizens of a clock and bells in 1790. The garrison then consisted of artillery, two regiments of Euro- peans, and one of blacks. As there are several small islands subject to the laws enacted in Gre- nada, they each elect a person to represent them in the general assembly, which is always held in St. George's. As none of the Grenadines have a harbour fit for large vessels, the produce of them is conveyed in small vessels to St. George's, whence it is exported to tlie different plr..ces of Europe, Africa, America, &,c. Although by the peace of 1763, all the French inhabitants who inclined to remain in the island became invested with the privileges of British subjects, and although tiiese privileges were confirmed in 1768, yet the treatment which they experienced from the British settlers, proved so extremely oppressive, that they at last broke out into a for- midable insurrection. On the 2d of March, 179,5, the old French inhabitants, being joined by the mulattoes under Fedon, seized the towns of Grenvilleand Gouyave, plundered the former, murdered eleven of the English inhabitants, and took the rest prisoners. On the 5tli, 130 troops were sent against the rebels, but were obliged to retreat. The most tarharous massacres now

look place on bol'a sides ; and general Lindsey, findin;,' himself unable to qnell the insurrection, put an end to his own life. On the 16th of April general Nichols, arriving from Martinico, assumed the command, and

various engagements took place, wherein sometimes the insurgents and sometimes the British had the advantage. In this distracted state the island continued till December 179o, when the French landed a body of troops, who joined the rebels, and reduced great part of the island ; but on the 10th of July 1796 the French commandant, Jossey, surren- dered all the French posts by capitulation to the British under general Abercrombie ; and Fedon and his associates escaped into the woods, after having murdered all their prisoners. The Bri- tish obtained complete possession on the lOtli of June; Grenada is 123ˆ miles south-west of Bar- badoes, and seventy-one north-west of Tobago. Long. 61° 40′ W., lat. 12° 0′ N.

GRENADE,' ra. s. "ˆ Fr. grenadier; Latin Grenadier,' ygranatum. A globe or

Grena'do. j ball of iron, or other me-

tal, which, being filled with gun-powder, is set on fire by means of a fusee. Grenadier is a fool soldier, of whom tiiere was one company formerly in every regiment: such men being em- ployed to throw grenades.

Yet to express a Scottish enterprize. Not all those mouth grenados can suffice.

Cleaveland. You may as well try to quench a flaming grenudo with a shell of fair water, as hope to succeed. Watts.

Peace allays the shepherd's fear Of wearing cap of grenadier. Gay's Pastoral.*

Grenade, or Granado, is a kind of small bomb or shell, of the same diameter as a four- pound bullet ; it weighs about two pounds, being charged with four or five ounces of powder, and is thrown by the hand, whence they are most generally styled hand-grenades. They have a touch-hole in the same manner as a shell, and a fusee of the same composition. The fusee is fired with a match, and the grenades being thrown the powder becomes inflamed, and the shell in- stantly bursts into splinters, that kill or maim whomsoever they may reach. They were invent- ed about 1594. The author of tlie Military Dic- tionary has the following remark on the use of grenades : ' Grenades have imaccountably sunk into disuse, but we are persuaded there is nothing more proper than to have grenades to throw among the enemy who have jumped into the ditch. During the siege of Cassel, under count de la Lippe, in the campaign of 1762, a young engineer undertook to carry one of the outworks with a much smaller detachment than one which had been repulsed, and succeeded with ease from the use of grenades ; which is a proof that they should not be neglected, either in the

attack or defence of posts.'

Grenadier, Granadier, a foot soldier armed with firelock, bayonet, and in some ser- vices with a hanger ; grenadiers carry, besides their arms, a cartridge box that will hold thirty- six rounds. They are clothed differently from the rest of the battalion they belong to, by wear- ing a high cap, fronted with a plate of brass, on whieh the king's arms is generally represented.

&c., and a piece of fringed or tufted cloth upon their shoulders, called a wing : in some armies they have more pay than a common soldier. They are always the tallest and stoutest men, cons'^quently the first upon all attacks. Every battalion of foot has generally a company of grenadiers belonging to it, which takes the right of the battalion.

GRENADILLOES, or Grenadines. See Granadilloes. These islands are from three to eight leagues each in circumference, but are said to be all destitute of water, except the island Cariacou, wherein one spring has been discover- ed by digging, which is kept locked up by the proprietor. The capital of that island is Hilsbo- rough, which has a churcn. See Grenada.

GRENAILLE, a name given by the French writers to a preparation of copper, which the Chinese use as a red color in some of their finest China, particularly for that color which is called oil-red, or red in oil.

GRENOBLE, a large, populous, and ancient town of France, in the department of Isere, and ci-devant province of Dauphiny, anciently Accu- siorum Colonia. It contains a great number of handsome structures, particularly churches, and ci-devant convents. It is seated on the Isere, over which there are two bridges leading into a single street, of great length, and having the ap- pearance of a suburb. Grenoble, though not a fine town, has several spacious squares. It is surrounded with ramparts, and entered by draw- bridges ; its population is about 23,000. Among the public buildings that attract the attention of travellers is the ancient Hotel de Lesdiguieres, now the town-house : the court house ; and the cathedral, a heavy edifice in the Gothic style. On an eminence, near the middle of the town, stand the ruins of a once strong citadel, called the Bastile. From the sum- mit is enjoyed a delightful view as far as Mont Blanc, a distance of thirty leagues. Outside of the town are two hospitals, one for the military, another, on a larger scale, for the poor in general. The literary and scientific institu- tions are a small university, a provincial school, an academy of arts and sciences established in 1796, societies of medicine and agriculture, the schools of surgery and midwifery, and the artil- lery school. To these institutions belong a library of 60,000 volumes, a museum, a botanical garden, a cabinet of natural history, and a small cabinet of antiquities.

The principal manufactures are of gloves, cot- ton articles, and different kinds of liqueurs. Its glove manufactures have long been celebrated, and employ nearly one-fourth of the population. It has likewise manufactures of hemp. Its com- merce is favored by the Isere, which is naviga- ble to a considerable distance above the town, and is made to convey quantities of timber, hemp, flax, linen, leather, iron, and marble. Grenoble is likewise the staple for the cheese made near Sassenage, a village in the neighbourhood. It was formerly the seat of the governor and parlia- ment of Dauphiny, and is now the residence of tlie prefect of die departmen of one of the high- er, and of several smaller courts of justice. It is likewise the head-quarters of a military division, and the see of a bishop. The climate here is

very variable, anJ affected by the exhalations trom the neighbouring marshes. This was the tirst place of note that opened its gates to Napo- leon on his return from Elba ; he entered it 8th March 1815. Twenty-seven miles south of Chamberry.

GRENOUILLES, Les, a cluster of rocks in the West Indian Ocean, about thirty-six miles south-east from Point Morand, in the island of Jamaica.

GRESHAM (Sir Thomas), an opulent mer- chant in London, descended from an ancient fa- mily of Norfolk. He was born in 1319. His father was king's agent at Antwerp, and Sir Tho- mas, being appointed to the same office in 1551, removed to that city with his family. This em- ployment was suspended, on the accession of queen Mary, but was restored to him again. Queen Elizabeth knighted him, and made him her agent in foreign parts. About this tim.e he built a large mansion-house on the west side of Bishopsgate Street,since named Gresham College, He now proposed to build a house or exchange for the merchants to meet in, instead of walking in the open street; and offered, if the citizens would provide a proper piece of ground, to build the exchange at his own expense ; which being accepted, he fulfilled his promise after the plan of the exchange at Antwerp. On the '29th of January 1570, when the new edifice was opened, the queen came and dined with the founder; and caused a herald with a trumpet to proclaim it by the name of the Royal Exchange. In pursuance also of a promise to endow a college for the pro- fession of tiie seven liberal sciences, he made a testamentary disposition of his house in London for that purpose. See College. He left several other benefactions, and died in 1579.

He was a great friend and patron of the celebrated mar- tyrologist, John Fox. He was well acquainted with the ancient and several modern languages; and had a very comprehensive knowledge of foreign and domestic commerce. He transacted' queen Elizabeth's mercantile affairs so constantly that he was called the royal merchant; and his house was sometimes appointed for the reception of foreign princes upon their first arrival in London.

Gresham College. See College.

GRESSIR, or Gressec, a town on the north- east coast of Java, and formerly the capital of a kingdom. It has comparatively few European inhabitants, but the native population and the Chinese are numerous. The latter have a temple reared by their own priests. Tlie saltpetre works are very extensive ; but the want of good water, and the general unhealthiness of the place, may be considered as the causes of its decline. Long. 112° 50′ E., lat. 7° 9′ S.

GREVILLE (Fulke), lord Brook, a poet and miscellaneous writer, born in 1554, and descend- ed from the noble families of Beauchamps of Powick and VVilloughby de Brook. In com- pany with his cousin Sir Philip Sidney, he began his education at a school in Shrewsbury : thence he went to Oxford, and afterwards to Cambridge. He next visited foreign courts, and, on his return to England, was introduced to queen Elizabeth by his uncle Robert Greville ; and by means of

Sir Henry Sidney, lord president of Wales, was nominated to some lucrative employments in that principality. He continued a constant attendant at court, and a favorite with the queen to the end of her reign ; during which he obtained the office of treasurer of marine causes, a grant of the manor of Wedgnock, and the honor of knight- hood. In her reign he was several times elected M. P. for Warwickshire, and his name often ap- pears in committees. On the accession of king James I. he was installed knight of the Bath; and soon after obtained a grant of the ruinous castle of Warwick, which he repaired at a con- siderable expense. In 1614 he was made under treasurer, chancellor of the exchequer, one of the privy council, and gentleman of the bed chamber; and in 1620 he was raised to the dignity of baron. He was also privy-counsellor to king Charles I., in the beginning of whose reign he founded a history lecture in Cambridge. Hav- ing thus attained the age of seventy-four, through a life of continued prosperity, universally ad mired as a gentleman and a scholar, he fell by the hands of an assassm, one of his own domestics, who immediately stabbed himself with the same weapon with which he had murdered his master. This fellow's name was Haywood; and the cause is said to have been a severe reprimand, for his presumption in upbraiding his master for

not providing for him after his death. He had been witness to lord Brook's will, and knew the contents. Lord Brook was buried with great pomp in St. Mary's church at Warwick, in his own vault, over which he had erected a monu- ment of black and white marble, ordering at his death the following inscription to be engraved upon his tomb : ' Fulke Greville, servant to queen Elizabeth, counsellor to king James, and friend to Sir Philip Sidney. Tropha-um Peccati.' He wrote several works in verse and prose, among which are two tragedies, Alaham and Mustapha. A Treatise of Human Learning, &c., in verse, folio. The life of Sir Philip Sidney. An Inquisition upon Fame and Honor, in eighty- six stanzas. Cecilia, a collection of 109 songs. His Remains, consisting of political and philoso- phical poems.

GREUT, n. s. A kind of fossile body.

A sort of tin ore, with its yreut ; that is, a ccwige- rics of crystals, or sparks of spar, of the bignsss of baysalt, and of a browu shining colour immersed therein. Grew's Museum.

GREW. The preterite of Grow, which see. The pleasing task he fails not to renew ;

Soft and more soft at every touch it grew.

Dry den.

GREW (Nehcmiah), a learned English writer, of the seventeenth century, who had considerable practice as a physician in London, and succeeded Mr. Oldenburgh in the office of secretary to the Royal Society. In tiiis capacity, pursuant to an order of council, he drew up a catalogue of the natural and artificial rarities belonging to the so- ciety, under the title of Musaum regalis Societa- tis, &c., 1681. lie also wrote besides several pieces in the Philosophical Transactions, 1. The Comparative Anatomy of the Stomach and Entrails, folio. 2. The Anatomy of Plants, folio. 3. Tracta- tus de sali£ Cathartici natura et usu. 4. Cosmologia

Sacra, or a Discourse of the Universe as it is the Creature and Kingdom of God, folio. He died suddenly in 1721.

GREWIA, in botany, a genus of the polyan- dria order, and gynandria class of plants : natural order thirty-seventh, columniferaa : gal. penta-

phyllous ; petals five, each with a nectariferous scale at the base ; berry quadrilocular. Eleven species : the chief are,

1. G. Africans, with oval spear-shaped ser- rated leaves, a native of Senegal in Africa, whence its seeds were brought by Mr. Adanson. In this country it rises with a shrubby stalk five or six feet high, sending out many lateral branches, with a brown hairy bark, and garnished witli spear-shaped serrated leaves; but the plants do not flower m Britain. This species is tender, and must be kept constantly in a warm bark stove. In summer it requires a large share of the free air, and should have water three or four times a week in warm weather; but in winter they must be sparingly watered The negroes of Senegal highly value a decoction of the bark, and use it as a never-failing remedy against venereal complaints.

2. G. occidentalis, with oval crenated leaves. It is a native of the Cape of Good Hope, and grows to the height of ten or twelve feet. The stem and branches greatly resemble those of the small leaved elm, the bark being smooth, and of the same color with that when young. The leaves are also very like those of the elm, and fall off in autumn. The flowers are produced singly along the young branches from the wings of the leaves, and are of a bright purple color. This species, though a native of a warm climate, will bear tlie open air in this country; only requiring to be sheltered in a green-house during winter. It may be propagated by cuttings, or layer.s, planted in pots filled with soft loamy earth.

GREY, adj. Fr. gris. More properly writ- ten gray. See Gray.

This ancient ruffian, Sir, whose life I spared at suit of his grey beard. Shakspeare. King Lear.

Our green youth copies what grey sinners act. When venerable age commends the fact. Dryden,

Grey (Lady Jane), a most illustrious and un- fortunate lady, descended of the blood royal of England by both parents, was the eldest daughter of Henry Grey, marquis of Dorset, and Frances, the daughter of Charles Brandon, lord Suffolk, by Mary, the dowager of Louis XII. king of France, who was the youngest daughter of Henry VII. king of England. She was born in 1537, at Broadgate, her father's seat, in Leicestershire. She discovered an early propensity to all kinds of literature ; and having considerable genius, improved under the tuition of Mr. Aylmer, after-wards bishop of London, she made a surprising progress in the languages, arts, and sciences. She understood various branches of philosophy, and could express herself in Latin and Greek. Sir Thomas Chaloner (Strype's Memorials, vol. iii. p. 93), says, that she was well versed in Hebrew,

Chakiee, Arabic, French, and Italian. He adds, that ‘ she played well on instrumental music, writ a curious hand, and was excellent at the needle.’ In 1553 the dukes of Suffolk and Nor- thumberland, who were now, after the fall of

Somerset, arrived at the height of power, began, on the decline of king Edward’s health, to think how to prevent any reverse of fortune upon his death. No other remedy was judged sufficient but a change in the succession of the crown, and transferring it into their own families, by render- ing Lady Jane queen. Those excellent and amiable qualities, which had rendered her dear to all who had the happiness to know her, joined to her near affinity to the kmg, subjected her to become th chief tool of ambition not her own. With this view she was married to lord Guildford Dudley, fourth son of the duke of Nor- thumberland, without discovering to her the real design of the match ; which was celebrated with great pomp in the end of May ; and was so much to the king’s satisfaction that he contributed largely to the expense of it. Edward VI. died in July following; and Lady Jane, with infinite reluctance, overpowered by the solicitations of her ambitious friends, allowed herself to be pro- claimed queen of England, on the strength of a deed extorted from that prince by her father-in- law, the duke of Northumberland, which set aside the succession of queen Mary, queen Eli- zabeth, and Mary queen of Scots. Her regal pageantry continued but a few days. Queen Mary’s hereditary right prevailed ; and the unfor- tunate Lady Jane Grey and her husband were committed to the tower, and on the 13th of No- vember arraigned and found guilty of high trea- son. On the 12th of February following they were both beheaded on Tower-hill. Her mag- nanimity m this dreadful scene was astonishing. Immediately before her execution, she addressed herself to the weeping multitude with composure and coherency. Feckenham, Mary’s chaplain, visited her in the Tower, and tried to convert her to the Catholic faith, but found her by far his superior in argument. Her writings are, 1. Four Latin Epistles ; three to BuUenger, aad one to her sister lady Catharine. The last was written the night before her execution, in a blank leaf of a Greek Testament: a circumstance which seems to have led Dr. Watkins, in his Biographical DicLionary, to say it was written ‘ in the Greek language.’ These letters are printed in a work entitled Epistols Helveticae Reformatoribus, vel ad eos scriptae, &c., Tiguri, 1742, 8vo. 2. Her Conference with Feckenham. Ballard. 3. A letter to Dr. Harding, her father’s chaplain. Printed in the Phoenix, vol. ii. p. 28. 4. A Prayer for her own use during her confinement. In Fox’s Acts and Monuments. 5. Four Latin verses ; written in prison with a pin. They are as follows : —*

Non aliena putes, homini quae obtingere possunt : Sors hodierna mihi, eras erit ilia tibi.

Jane Dudley, To mortals' common fate thy miad resign.

My lot to-day to-morrow may be thine !

Deo juvanle, nil nocet livor malus : Et non juvante, nil juvat labor gravis.

Post tenebras spero lucem. Freely rendered thus :

Harmless all malice if our God be nigh.

Fruitless all pains, if he his help deny ;

Patient I pass these gloomy hours away

And wait the morning of eternal day.

6. Her speech on the Scaffold. It began thus : ' My Lords, and you, good Christian people, who come to see me die, I am under a law, ai:d by that law, as a never-erring judge, I am con- demned to die ; not for any thing I have offended the queen's majesty; for I will wash my hands guiltless thereof, and deliver to my God a soul as pure from such trespass as innocence from injustice ; but only for that I consented to the thing I was forced unto, constraint making tlie law believe I did that which I never understood,' &c. HoUingshed, Sir Richard Baker, Bale, and Fox, tell us that she wrote several other things, but do not mention where they are to be found.

Grey (Richard), D. D., a learned English divine, bom in 1693, and educated at Oxford, where he took the degree of M. A. in 1719. He obtained the rectories of Kimcote in Leicester- shire, and Hinton in Northamptonshire, with other benefices. He published many sermons and religious tracts; besides the following: — Memoria Technia, or a New Method of Artifi- cial Memory ; of which the first edition was printed in 1730, and a fourth in 1756 ; A System of English Ecclesiastcal Law, 8vo. 1741 ; The Miserable and Distracted State of Religion in England, upon the Do\vnfall of the Church Estab- lished, 8vo., 1736; A New and Easy Method of Learning Hebrew without Points, 1738; His- toria Josephi, et Paradigmata Verborum, 1739 ; Liber Jobi, 1742; Answer to Warburton's Re- marks, 1744; Nova Methodus Hebraice dis- cendi, &c., 1751; and A Translation of Mr. H. Browne's poem, De Animi Immortalitate. He was

married; and died February 28th, 1771, aged seventy-eight, leaving several daughters.

Grey (Zacharj'), LL. D., an English divine, born in 1687. He studied and graduated at Cambridge. He was vicar of St. Giles's and St. Peter's in Cambridge, and was author of about thirty different works ; particularly. An Answer to Neale's History of the Puritans ; 3 vols. Bvo. His edition of Hudibras, 1744, was satirised by War- burton and Henry Fielding. He died in 1766, ased seventy-nine. ˆGRE'YHOUND, n.s. Sax. sjiishuns. A tall fleet dog that chases in sight.

Greihoundes he hadde as swift as foul of flight.

Cliaucer. Prologue to Canterbury Talef.

First may a lT\isly greyhound transform himself into a ty.;

So, on the Downs we see, near Wilton fair,

A hastened hare from greedy greyhiiund.i go. Id. The impatient (jreyhaund , slipt trom far.

Bounds o'er the glebe to catch the fearful hare.

Dry den.

Greyhound. See Canis and Doo. Among a litter of greyhound's pup[)ies, the best are al- ways those which are lightest. These will make the nimblest dogs as they grow up. The quali- ties of a good greyhound are well expressed in the following lines. According to them be is t3 have

A TIead like .-< snake Neck like a drake. Back like a beam, Side like a brcaru, Tail like a rat, Foot like a caˆ

In breeding these dogs, the bitch is principally to be regarded ; for it is found by experience, that the best dog and a bad bitch will not get so good puppies, as an indifferent dog with a good bitch. The dog and bitch should be as nearly as possible of the same age; and, for breeding per- fect dogs, they should not he more than four years old. An old bitch may be used with a young dog, but the puppies of a young bitch and an old dog will never be good for any thing, the general food for a greyhound is chippings or raspings of bread, with soft bones and gristles ; and those chippings ought always to be soaked in beef or mutton broth. The proper exercise is coursing him three times a-week, and reward- ing him with blood; which will animate him in the highest degree, and encourage him to prosecute his game. But the hare, also, should always have fair play. She should have

the law, as it is called ; that is, have leave to run about twelve score yards before the dog is slipped at her, that he may have some difficulty in the course, and not pick up the game too easily. If he kills the hare he must never be suffered to tear her; but she must be taken from him, his mouth cleaned of the wool, and the liver av.d lights given him by way of encouragement. Tlien he is to be led home, and his feet washed with butter and beer, and about an hour after he is to be fed. When the dog is to be taken out to course, he should have nothing in the mornii.g but a toast and butter, and then he is to be kennelled till taken out to the field. The kennelling these dogs is of great use, always givins; them spirit and nimbleness when they are let loose. The best way of managing a fine greyhound is never to let him stir out of the kennel, except wlien feeding, walking, or coursing.

GREYWACKE, a mountain formation, con- sisting of two similar rocks, which alternate with and pass into each other, called greywacke, and greywacke-slate. The first possesses the characters of the formation. It is a rock composed of pieces of quartz, felspar, and slate, cemented by a clay-slate basis. These pieces vary in size from a hen's egg to little grains. When the tex- ture becomes exceedingly fine-

GREZZANA, or Grezzano, a town of the Veronese, in Maritime Austria, according to the division of that province between the emperor and the Cisalpine republic, made by the treaty of Campo iormio, m 1797; but by the conquest of the 'eronese, by the French and Cisalpines under general Brune in December, 1800, an

which connects two hills together. Its arch is fifty Veronese feet broad, and no fewer than 114 feet high.

GRIAS, in botany, a genus of the monogynia order, and polyandria class of plants ; cor. te- Irapetalous : gal. quadrifid ; the stigma sessile and cruciform : the fruit is a plum with an eight-fiirrowed kernel. There is but one species, viz. G. cauliflora, the anchovy pear, a native of Jamaica. The leaves are nearly oval, and about three feet long. It has a straight stem, upon the upper part of which come forth the flowers. The fruit is large, and contains a stone with eight furrows. These fruits are eaten by the inhabitants.

GRIBALDUS (Matthew), a learned civilian of Padua, who left Italy in the

sixteenth cen- tury, in order to make a public profession of the Protestant religion. After having been for some time professor of the civil law at Tubingen, he was obliged to leave it, having imbibed some doubts respecting the doctrine of the Trinity : but he was seized at Berne, where he would have met with very severe treatment, had he not renounced his opinions. He however relapsed again, and would certainly have been put to death, had he not died of the pla9::ue in 1664. He wrote De IMethodo ac Ratione Studendi in Jure Civili ; and several other works which are held in general estimation.

GRIBNER (Michael Henry), a learned ci- vilian of Germany, born at Leipsic in 1682. After writing some time in the Journal of Leip- sic, he was made professor of law at Wittem- berg: whence he passed to Dresden, and was at last recalled to Leipsic to succeed M. Mencke. He died in 1734. Besides several academical dissertations, he wrote 1. Principia Processus Judiciarii; 2. Principia Juris Prudentiae Natu- ralis, a small work much esteemed ; 3. Opuscula Juris Publici et Privati.

GRICE, n. s. Dan. and Swed. gris. A step or greeze ; a little pig. — Gouldman.

No, not a grice ; This a step to love.

Shakspeare. Twelfth Night.

To GRIDE, V. n. Ital. gridare. To cut : to make way by cutting. A word elegant, but not in use.

His poignant spear he thrust with puissant sway. That through his thigh the mortal steel did gride.

Spenser.

So sore The griding sword, with discontinuous wound. Passed through him. Milton's Paradise Lost.

GRI'DELIN, adj. Fr. gris de I'm. A color mixed of white and red.

The ladies dressed in rich symars were seen Of Florence satin, flowered with white and green. And for a shade betwixt the bloomy gridelin.

Dryden.

GRI'DIRON, n. s. Isl. grind, a grate, and iron. A portable grate on which meat is laid to be broiled upon the fire.

He had added two bars to the gridiron.

ii'pectator.

GRIEF, 71. s. Griev'ance, n. 5. Grieve, v. a. &cv.n Griev'ikgly, adv. Griev'ous, adj. Griev'ously, adv. Griev'ousness, n. s.ˆ

') Fr. grever ; Italian, I grave; Flem. griever ; I Welsh griff ; Lat. gra- ˆvis. Sorrow and regret for something past ; pain or disease; in- jury ; a harm ; what-

ever lies as a weight upon the heart. The verb signifies to afflict; to injure or make sorrowful: when applied to faults, the word grievous is ex- pressive of atrocity ; it also sometimes implies discontent ; to be in pain ; to mourn ; to sor- row, as for the death of friends. It has some- times at and sometimes for before the cause of grief; perhaps at is proper before our misfor- tunes, andyi)?- before our faults.

It repented the Lord that he had made man on the earth, and it grieved him at his heart. Gen. vi.

They fled from the swords, from the drawn sword, and from the bent bow, and from the griewutness of war. Is. xxi. 15.

For he doth not afflict willingly, nor grieve the children of men. Luke iii. 33.

Forty years long was I grieved with this generation.

Psalnu. She was to blame me to love ; The whiche now doeth me sore grieve.

Chaticer, Romaunt of trie Rose, The aire of the place so attempre was. That ner was ther grevaunce of hot ne cold

There was, eke, every wholesome spice and gras ; Ne no man maie there waxen sike ne old.

Id. The Assemble of Fovles. And evermore, distrained with sicknesse. Beside all this he was full grevouslie.

Id. Complaint of the Blacke Knight. Wide was the wound, and a large lukewarm flood. Red as the rose, thence gushed grievously. Spenser.

Next him went Griefe and Fury, maicht yfere ; Grief all in sable sorrowfully clad, Downe hanging his dull head with heavy chere. Yet inly being more then seeming sad.

Id. Faerie Queene. I see how a number of souls are, for want of right information, oftentimes ˆreuotwZt/ vexed. Hooker.

To the flesh, as the apostle himself granteth, all affliction is naturally grievous. Id.

Crying sins I call those which are so heinous, and in their kind so grievous, that they hasten God's judg- ment, and call down for speedy vengeance upon the sinner. Perkins,

When one man kills another, thinking that he killeth a w.ld beast ; if the same man remembereth afterwards what he hath done, and is not grieved for the fact, in this case he hath sinned ; because his not grieving is offensive unto God, though the fact were merely besides his will. ”ˆ•

Grittus perceiving how grievously the matter was taken, with the danger he was in, began to doubt.

Knolles. He cannot come, my lord : he's grievous sick.

Shakspeare. Be factious for redress of all these griefs. And I will set this foot of mine as far As who goes farthest. ”•

The king hath sent to know The nature of your griefs, and whereupon You conjure from the breast of civil peace Such bold hostility ? Id. Henry IV.

Do not you grieve at this. •”•.

Grievingly, I think. The peace between the French and us not values The cost that did conclude it. Id. Henry VIII.

I will instruct my sorrows to be pmud ; T 01 grief is proud, and rudkes his owner stout.

Sha/upeare. It was a grievous fault. And grietimsly hath Caesar answered it. Id.

At thy appearance Grief itself is said To shake his wings and rouse his head.

Cowley. It grieves me when I see \ hat fate Does on the best of mankind

wait. Id.

He durst not disobej', but sent grievoits complaints to the parliament of the usage he wjis forced to sub- mit to. Clarendon.

How didst thou grieve then, Adam, to behold The end of all thy offspring end so sad. Milton.

Balms for the grieved we draw and pastes We mould as baits for curious tastes. 3Iarvell.

What magic could me thus confine Within another's grief to pine ? Id,

With equal miud what happens let us bear ; Nor joy nor grieve too much for things beyond our

care. Vryden.

Houses built in plains are apt to be grieroiisli/ an- noyed with mire and dirt. Ray on the Creation.

Wringing of the hands, knocking of the breast, are but the ceremonies of sorrow, the pomp and ostenta- tion of an etTeminate grief, which speak not so much the greatness of the misery as the smallness of the mind. Suulh.

The mother was so much afflicted at the loss of a fine boy, who was her only son, that she died for grief of it. Addison.

Grieved at the thought, he vowed his whole endea- vour Should be to close those breaches. Rowe.

Love, Hope, and Joy, fair Pleasure's smiling traiu ; Hate, Fear, and Grief, the family of Pain. Pope.

What remedy can be found against grievances, but to bring religion into countenance, and encourage those who, from Lope of future reward, and dread of future punishment, will be moved to justice and inte- grity 7 Swift.

To own a great but grievous truth, though they quicken and sharpen the invention, they corrupt the temper. IVattt.

Y';t leave me not ; I would allay that grief.

Which else might thy young virtue overpower; And in thy converse I shall tind relief

When the dark shades of melancholy lower.

Beattie. Ah, how shall I pursue My theme! To heart-consuming ˆrif/' resigned,

Here on his recent grave I tix my view. And pour my bitter tears. Ye flowery Uys adieu !

Id.

Grief. The influence of this passion on tlie body is very great. Its effects resemble in seve- ral instances tliose of fear, with, however, some variations, owing perhaps to its being in general of longer duration. Grief dimitiishes the bodily strength in general, and particularly the force of the heart and circulation; as appear by the fre- quent sighs and deep respirations which attend it, which seem to be necessary exertions, in order to promote the])assage of tlie blood tliroucrli tlie lungs. It diminishes])erspir,ition, nbslructs tlio menstrual disiiiarge, produces pakness of tlie skin, and edematous complaints, and scirrhus of the glandular parts. It aggravates the scurvy, and the malignity of putrid and contagious

suddenly, and in a great degree, it causes a pal- pitation of the heart, and renders the pulse ir- regular. Blindness, gangrene, and sudden death, have followed the excess of this sensation. Its effects of changing the color of the hair are well known. Opiates, in small doses, are good cor- dials in this case.

GRIELUM, in botany, a genus of the penta- gynia order, belonging to the decandria class of plants : cal. quinquefid : there are five petals : the filaments persisting : and five raonosper- mous seed-cases. Species one only ; an Ethio- pian shrub.

GRIERSON (Constantia), a native of Ire- land, was born of poor parents, and died at the age of twenty-seven, in 1733. She was an ex- cellent Greek and Latin scholar ; and studied history, divinity, philosophy, and mathematics. She proved her skill in Latin by the dedication of the Dublin edition of Tacitus to lord Carteret, and by that of Terence to his son ; to whom she also addressed a Greek epigram. She wrote many elegant English poems, several of which were inserted by Mrs. Barber among her own. When lord Carteret was lord-lieutenant of Ire- land, he obtained a patent for Mr. Grierson to be the king's printer ; and, to reward the uncom- mon merit of his wife, caused her life to be in- cluded in it.

GRIESBACH (John James), a celebrated German divine and critic, was born at Buzbacli in Hesse Darmstadt, where his father was a Lu- theran minister. He studied at the universities of Frankfort, Tubingen, Halle, and Leipsic ; and finally became professor of theology at Halle. In 1774 he

published an edition of the Histo- rical Books of the Christian Scriptures, 2 vols 8vo., with a copious collection of various readings. The remaining books of the New Testament were subsequently given to the world in the same manner ; and an improved edition of tlie whole work, under the patronage of the late duke of Grafton, in 4 vols. 4to. reprinted in 2 vols. 8vo. both in German and English. Griesbach was also the author of Symbolse Critical ad supplen- das et corrigendas variarum Novi Testamenti Lectionum, 1785 — 1793, 2 vols. 8vo., and many other valuable biblical works. He removed from Halle to Jena, where he became professor of theoloa:y, rector of the university, and privy counsellor for ecclesiastical affairs to the duke of Saxe Weimar. He died here in March ISl'J, aged sixty-seven.

GRI'FUN, n.s.) This should rather be

Griffon. ji written gri^/(>H, or ^ri/phon ;

g'yp^, ypv^; but it is generally written ^rt//(»H. — Dr. .fohnson. A fableil animal, said to be gene- rated between the lion and eagle, and to have the head and paws of the lion, and the wings of the eagle.

That one did plete on the Pope's side A Griffon of a grimmc stature.

Chaucir. The Plowman's Talc.

Of all bearing among those winged creatures, the griffin is the most ancient. Peacham on Blazoning.

Aristeus, a poet of Procnnesus, adirmcd, that near tlic one- eyed nations griffins defended the mine. of gold. Browrv:.*

Griffon, Gryfuus, was supposed by the an- cients to have four legs, wings, and a beak ; the upper part representing an eagle, and the lower a lion ; and to watch over gold mines, hidden treasures, &c. This imaginary animal was con- secrated to the sun ; and the ancient painters represented the chariot of the sun as drawn by griffons. M. Spanheim observes the same of those of Jupiter and Nemesis. The griffon is commonly seen on ancient arms ; and is borne in coat armour. Guillim blazons it rampant; alleging that any very fierce animal may be blazoned as well as the lion. Sylvester, Mor- gan, and others, use the terms segreant instead of rampant. The

griffon is also an ornament of architecture in constant use among the Greeks, and was copied from them, with the other elegan- cies of architectural enrichments, by the Romans. See Sphinx.

The Griffon, in Scripture, is that species of the eagle called in Latin ossifraga, the osprey ; and D13, of the verb D13, paras, to break. See Falco.

GRIG, n. s. Bavarian kricke, a little duck. It seems originally to have signified any thing below the natural size ; a small eel ; also a merry creature : supposed from Greek ; Lat. gracuhts Jestivus.

Hard is her heart as flint or stone. She laughs to see me pale ;

And merry as a grig is grown, And brisk as bottle-ale. Swift.

GRILL, V. n. ~% Fr. grille; qu. Lat. crati- Grillade', n. s. ˆcula. To broil on a grate Gril'ly, v. a. J or gridiron : and hence fi- guratively, to harass, tcaze, or ridicule a man. Whilf; we wrangle here and jar, We are griUied all at Temple-bar. Hudibras. GRIM, arlj. ˆ Sax. gpimma; Goth.

Grimace', «. s. I grem ; Swedish grym. Grime, n. s. & v. «. sThese words signify a Grim'ly, orfu. i countenance of terror;

Grim'ness, n. s. J any thing hideous or frightful ; ugly or ill-looking. Grimace is a distortion of countenance, either from affecta- tion or insolence. Grime is dirt deeply insi- nuated. Grimness, a countenance of horror.

Some saide he looked grim, and wolde fighte. He hath a sparth of twenty pound of wighte.

Chaucer. The Knightes Tale. He loketh as it were a grim leown. And on his toos he rometh up and doun ; Him deigned not to set his feet to ground.

Chaucer. The Nonnes Preestes Tale. The innocent prey in haste he does forsake. Which quit from death, yet quakes in every limb. With change of fear to see the lion look so grim.

Spenser. The augurs Say they know not ; they cannot tell ; look grimly. And dare not speak their knowledge. Shakspearc.

Swart, like my shoe, but her face nothing so clean kept ; for why ? She sweats : a man may go over shoes in the grime of it. Id.

Grim visaged war hath smoothed his wrinkled

front. Id.

Venus was like her mother ; for her father is but grim. Id.

My face I'll grime with filth, Blanket my loins, elf eU my hair m knots. Id.

Their dear causes

Would to the bleeding and the grim alarm

Excite the mortified man. Id. Macbeth,

Thou hast a grim appearance, and thy face

Bears a command in't. Id. Coriolanus.

We've landed in ill time : the skies look grimly.

And threaten present blusters. Shakspeare.

Grim Saturn yet remains. Bound in those gloomy caves with adamantine chains.

Drayton. Straight stood up to him Divine Ulysses ; who, with lookes exceeding grave

and grim. This better check gave. Chapman.

He that dares to die. May laugh at the grim face of law, and scorn The cruel wrinkle of a tyrant brow.

Denham's Snphy. What if the breath that kindled those grim fires. Awaked, should blow them into seven-fold rage ?

Milton, Expert to turn the sway Of battle, open when and where to close The ridges of grim war. Id. Paradise Lost.

He had not spared to show his piques. Against the' haranguer's politicks. With smart remarks of leering faces. And annotations of grimaces ! Hudibras.

The favourable opinion and good word of men comes oftentimes at a very easy rate ; and by a few demure looks and affected whims, set off with some odd devotional postureG and grimaces, and such other little arts of dissimulation, cunning men will do won- ders. South's Sermons. So Pluto, seized of Proserpine, conveyed To hell's tremendous gloom th' affrighted maid ; There grimly smiled, pleased with the beauteous

prize. Nor envied Jove his sunshine and his skies.

Addison, Their swarthy hosts would darken all our plains. Doubling the native horrour of the war. And making death more grim. Id. Cato

The French nation is addicted to grimace.

Id. Spectator. Col low is the word by which they denote black grime of burnt coals or wood. Woodward on Fossils, Vice in a vizard, to avoid grimace. Allows all freedom, but to see the face

Granville,

Thus to their hopeless eyes the night was shown

And grimly darkled o'er their faces pale.

And the dim desolate deep. Byron.

Achilles 'self was not more grim and gory

Than thousands of this new and polished nation.

Whose names want nothing but — pronunciation.

Id.

GRIMALDI (Francis), an eminent painter, also called Bolognese, was born at Bologna in 1606, where he became a disciple of Annibal Caracci, and proved an honor to that illustrious master. From the school of Annibal he went to complete his studies at Rome, and improved himself daily, until his superior talents recom- mended him to Innocent X., who afforded him immediate opportunities of exerting his genius in his palace at Monte Cavallo, and in the Vati- can. His merit soon engaged the attention of the public, and increased the number of his friends ; among whom were prince Pamphilio, and the principal nobility of Rome. His repu- tation reached cardinal Mazarine at Paris, wha sent for him, settled a large pension on him, and

employed him for three years in embellishing his palace and the Louvre, by the order of Louis Xi.ll. The troubles of the stale, and the clamors raised

against the cardinal, whose party he warmly espoused, placed him in so much danger, that his friend? advised him to retire among the Jesuits. H«; did so, and painted a decoration for the exposition of the sacrament during the holy days, according to the custom of Rome. This piece was much admired at Paris, and the king commanded him to paint such another for his chapel at the Louvre. Grimaldi after that returned to Rome, and found his patron Innocent X. dead ; but his successors Alexander VIL and Clement IX. honored him equally with their friendship, and found him variety of employ- ment. The following instance of his benevo- lence may serve to characterise Grimaldi. A Sicilian gentleman, who had retired from Messina with his daughter during the troubles of that country, was reduced to the misery of wanting bread. As Grimaldi lived near him, he was soon informed of it; and in the dusk of the evening, knocking at the Sicilian's door, without making himself known, tossed in money, and retired. The thing happening more than once, raised the Sicilian's curiosity to know his bene- factor. Discovering him at last, by hiding himself behind the door, he fell down on his knees to thank the hand that had relieved him. Grimaldi remained confused, offered him his house, and continued his friend till his death. lie died of a dropsy at Rome in 1680, and left a considerable fortune among six children. The genius of Grimaldi directed him chiefly to landscape. His coloring is strong ; his touch light and deli- cate ; his situations are uncommonly pleasing ; and the leaves of his trees are admirable. Some- times, indeed, his coloring appears rather too green ; but those landscapes which he painted in the manner of the Caracci, may serve as models for all those who admire the style of that school ; and he designed his figures in elegant taste. The pictures of this master are very rare, especially those of his best time ; and, when they are to be purchased, they obtain large prices. Of his children, the youngest, nanred Alexander, proved a good painter, m the same style and taste with his father, though far inferior to him : some of tlie pictures of Alexander, however, are cither artfully or injudiciously ascribed to Francis.

GRIMA'LKIN, n. s. Fr. pris, gray, and mal- km, or little Moll, says Dr. Johnson ; (gray, and Teut. mal, of Lat. macula, a spot. — Mr. Thom- son.) Gray little woman ; the name of an old cat.

Gritnalkin, to domestick vermin sworn An everlasting foe. with watchful eye Lies nightly l)rooding o'er a chinky gap, Protendi«g her fell clawn, to thoughtless mice Sure ruin. Philips.

GRIMM (Frederick Melchior), baron de, counsellor of state of the Russian empire, was born in 1723 at Ratisbon, of humble parents, who bestowed on him however a superior educa- tion. His taste for literature manifested itself in a tia;j;edy, which he wrote in his youth. He went early in life to Paris as governor to tlie

children of the count de Schomberg, and vras appointed reader to the duke of Saxe Gotha. At this period he became acquainted with Rousseau, Diderot, d'Alembert, d'Holbach, Sec. The count de Friese at last made him his secretary, with lucrative appointments. He publislied in 1753 a pamphlet entitled Le petit Prophet de Bech- mischbrode, in defence of the Itilian opera. On the death of his patron, de Friese, he was nominated principal secretary to the duke of Orleans; soon after which we find him employed, in conjunction with Diderot, in transmitting to the duke of Saxe Gotha an account of the wri- tings, friendships, quarrels, &c., of the authors of the day. In 1776 he became envoy from the duke of Saxe Gotha to the French court, and was honored with the title of baron, and several orders. On the revolution breakuig out, he retired to the court of Gotha. In 1795 the em- press of Rus?ia appointed him her plenipoten- tiary to the states of Lower Saxony ; and lie was confirmed in that post by her successor Paul, but ill-health obliged him to relinquish it, and return to Gotha, where he died December 19th, 1807. His principal work was published in different portions, under the following titles : — Correspondance Literaire, Philosophique, et Critique, addressee a un Souverain d'Allemagne, depuis 1770, jusqu 'en 1782, par le Baron de Grimm et par Diderot, Paris, 1812, 5 vols. 8vo.; Correspondance Literaire, &c. en 1775, 1776, 1782, — 1790. Troisieme et dern. part. 1813, 5vols.8vo.; and Correspondance Literaire, &c. depuis 1753 jusqu'en 1760. Prem. part. 6 vols. 8vo. A selection from this voluminous collec- tion was published in 2 vols. 8vo. in French and English.

Grimm, or Grimma, a town of Upper Sax- ony, in the circle of Leipsic. It has a castle, three churches, and a college. Its chief trade is in linens, flannels, thread, beer, and wood. It is fifteen miles E.S.E. of Leipsic, and forty-two W.N.W. of Dresden.

GRIMOARD (count de), a French diploma- tist and general, was descended from the family of pope Urban V. Louis X I'l. entrusted him with a negociation in Holland ; aiwl on his return he formed the plans, offensive and defensive, of the campaign of 1792. The fall of the king interiupted his career, and he retired to private life, in which he wrote Essai Theorique et Pra- tique sur les Batailles, 1775, 4to.; Traite sur la constitution des Troupes legcres, et sur leur emploi a la Guerre, 1782, 8vo. ; Recherches sur la force de I'armee Fran^aise, Sec, 1806, 8vo; Tableau Historique de la (Juerrc de la Revolu- tion de France, 1808, in conjunction with gene- ral Servan, of which work only three volumes were published, when Buonaparte suppressed it. He died in 1815.

GRIMSBY, a sea-port town of Lincoln- shire, 168 miles from London,, and one of the most ancient corporations in England. It was a mayoralty in the reign of king John, and returned two members to parliament ; it now sends

but one. The right of election is in the resident free burgesses paying scot and lot. Ail the sons of freemen born in the town are entitled to their freedom, as well as

every person marrying a freeman's daughter or widow. It had anciently three convents and a castle. It is governed by a mayor, high steward, recorder, twelve aldermen, twelve conimon- council-men, two bailiffs, two coroners, and a town-clerk. It has several streets of good houses, and a handsome church. Its harbour was for- merly choked up, but a fine dock has been con- structed, and the harbour deepened and improved, and the road before it is a good station for ships that wait for a wind to get out to sea. Its chief trade is in coals and salt to the Baltic, which are brought by the Humber.

GRIN, V. n. & n. s., l Sax. jjiennian ;

Grix'ner, n. s. \T>ut.grinnen,grin-

Grin'ningly, adv. j den, undoubtedly

of the same origin with to grind, as we now say, to grind the teeth ; Fr. grincer. — Johnson. To fix the teeth as in wrath, or anguish, or mirth. And grinning for dispitous rage ; Her nose ysnorted up for tene Ful hidous was she for to sene.

Chaucer. Romaunt of the Rose. What valour were it when a cur doth grin, For one to trust his hand between his teeth. When he might spurn him with his foot away.

Shakspcare. I like not such grinning honour as Sir Walter hath : give me life, which if I can save, so; if not, honour comes unlooked for, and there's an end.

Id. Henry IV. Death, death! oh, amiable, lovely death ! Come grin on me, and I will think thou smilest.

Shakspeare. I asked which way was the wind. For I thought in some talk we must enter,

' Why, Sir (she answered and grinned). Have you just sent your wits for a

venture ? ‘ Sir John Suckling ft was no unpleasant entertainment to me to see the various methods with which they have attacked me ; some with piteous moans and outcries, others grinning, and only showing their teeth. Stillingjieet. He laughs at liim : in’s face too. — O you mistake him ; ‘twas an humble grin. The fawning joy of courtiers and of dogs.

Dryden. A lion’s hide he wears ; About his shoulders hangs the shaggy skin ; The teeth of gaping jaws severely ˆrin. Id.

They neither could defend, nor can pursue ; l&xxX. grinned their teeth, and cast a helpless view. Id.

The muscles were so drawn together on each side of his face, that he shewed twenty teeth at a grin..

Addison. The frightful’st ˆrn’nner. Be the winner. Id. Spectator.

Madness we fancy, gave an ill-timed birth To grinning laughter, and to frantick mirth.

Prior. What lords are those saluting wi.th a grin ? One is jusl out, and one is lately in. Young.

Fools grin on fools, and Stoicklike support. Without one sigh, the pleasures of a court. Id.

Care, to our coffin adds a nail no doubt, 4nd every grin, so merry, draws one out.

Dr. Walcot. Grin, n. s. Sax. sjiyn, ˆyjiene. A snare ; a trap.

The grin shall take him by the heel, and the robber shall prevail against him. Job, xviii. 9.

Like a bride that hastcncth to his gryn. Not knowing the perilc. Chancer.

GRIND, V. a. 8c V. n.~\ Preter. I ground ;

Grind’er, n. s. (part. pass, ground.

Grin’dlestone, re. s. iˆ Saxon gjim’&an je-

Grind’stone, n. s. J ˆpunˆoen. To reduce to powder by friction ; to sharpen any instru- ment by rubbing on something hard; and figu- ratively to harass or oppress. Grinder is one that works in a mill ; also the name of the dou- ble teeth. A grind -stone is that stone on which knives, &c., are sharpened.

To grind our corn and carry it hame agein ; 1 pray you spede us. Chaucer. The Reves Tate. Whoso first cometh to the mill firste grint.

Id. Prologue to the Wif of Bathes Tale. But in hclle, hir sight shall be full of darknesse and of smoke ; and her eyen full of teres, and hir her- ing full of waimenting and grinting of teeth.

Id. The Persones Tale. He the raging lioness confounds. The roaring lion with his javelin wounds Scatters their whelps, their grinders breaks ; so they With the old hunters starve for want of prey.

Sandys, His heart a solid rock, to fear unknown. And harder than thp grinder's nether stone. Id. So up he let him rise ; who with grim look. And countenance stern, upstanding, 'gan to grind His grated teeth for great disdain. Spenser.

He that will have a cake out of the wheat, must needs tarry the grinding.

Shakspeare. Troilus and Cressida. Some merchants and tradesmen, under colour of furnishing the colony with necessaries, may not grind them so as shall always keep them in poverty.

Bacon's Advice to Villiers. The teeth are in men of three kinds ; sharp as the foreteeth ; broad as the back-teeth, which we call the molar-teeth, or grinders ; and pointed teeth or canine, which are between both. Bacon.

Harsh sounds, as of a saw, when it is sharpened, and grinding of one stone against another, make a shivering or horror in the body, and set the teeth on edge. Id. Natural History.

Such a li.ght and metalled dance Saw you never yet in France ; And by the lead-men for the nonce. That turn round like grindlestones.

Ben Jonson. Meeting with Time, slack thing, said I, Thy sithe is dull, whet it, for shame :

No marvel. Sir, he did reply. If it at length deserve some blame ; But where one man would have me grind it. Twenty to one too sharp do find it. Herbert. Fettered they send thee Into the common prison, there to grind Among the slaves and asses.

Milton's Agonistet. One, who at the sight of supper, opened wide His jaws before, and whetted grinders tryed.

Dryden. Both he brought ; He mouthed them, and betwixt his grinders caught.

Id. Not knowing 'twas my labour, I complain Of sudden shootings, and oi grinding pain. My throes come thicker, and my cries iacreas'd.

Id. Against a stump his tusk the monster grinds. And in the sharpened edge new vigour finds. Id.

The jaw-teeth or grinders, in Latin vnolares, ere made flat and bioad a-top, and withal somewhat un-

even and rugged, that, by their knobs and little cavi- ties, they may the better retain, grind, and commiK the aliments. Ray on the Creation.

Smiths that make hingeii brighten them, yet seldom file them ; but grind them on a arindstone till bright.

Moxon. Now exhort Thy hinds to exercise the pointed steel On the hard rock, and give a whealy form To the expected grinder. Philips.

Shrinking sinews start. And smeary foam works o'er my grinding jaws.

Rowe. Another way the Spaniards have taken to grind the Neapolitans, and yet to take off the odium from themselves. Addison.

That the stomach in animals grinds the substances which it receives, is evident, from the dissection of animals which have swallowed metals, which have been found polished on the side next the stomach. Arbuthnot on Aliments. Nature is at a great deal of labour to transmute ve- getables into animal substances ; therefore herb-eat- ing animals, which do not ruminate, have strong grinders, and chew much. Arbuthnot.

What relation or affinity is there between a minute body and cogitation, any more than the greatest ? Is a small drop of rain any wiser than the ocean ? Or do we grind inanimate corn into living and rational meal ? Bentley's Sermotis.

Grinding is also used for rubbing or wear- ing oft' the irregular parts of the surface of a body, and reducing it to the destined figure, whether that be flat, concave, or the like. The grinding and polishing of glass is a considerable art; for which see Glass-making; and for grinding of optical glasses, see Optics.

Grinding, in cutlery, the operation of sharp- ening edge-tools. This operation, as usually pmctised, is attended with no small incon- venience, from the production of heat by friction. The heat produced is so great, that hard tools are often softened and spoiled by the steel becoming ignited during the grinding. To pre- vent this effect, the grind-stone is partly im- mersed in a trough of water; but in this case the rotation of the stone must be moderate, and the work, of course, slow, else the water will be thrown off by the centrifugal force. When 'he water is applied from above by a cock, the quan- tity is too small to counteract the heat, and pre- serve the necessary low temperature. It has even been found, that the edge or point of a hard tool ground under water will be softened, if it be not held so as to meet the stream, sparks being often produced even under water. To remedy this inconvenience, Mr. Nicholson made the following experiments: — lie procured a Newcastle grind-stone of a fine grit, ten inches in diameter, and a mahogany block, to be used with emery on it; both mounted on an axis, to be applied between the centres of a strong lathe. Both were of the same diameter, and turned truly cylindrical. The face of the mahogany block was grooved obliquely in opposite direc- tions, to afford a lodgment for the emery : the face of the stone was smooth, and a trough with water was placed below it. The wooden cylm- der was faced with oil and emery. The tool to be ground was a file, from wliich it was intend c-d to unind off all iho teeth. The vrlocilv ˆf llic

rotation produced by the lathe was so great as to turn the apparatus about five revolutions in a second. Yet the stone operated but slowly, and the trough was quickly exhausted ; so that the workman was obliged to slacken the velocity on account of the heat. The emery cylinder cut rather faster. But, although the friction was made to operate successively and by frequent changes on the whole surface of the file, it soon became too hot to be held ; and, wlien a cloth was used to defend the workman's hand, the work not only went on awkwardly, but the heat increased to such a degree, that the oil was de- composed, and emitted an empyreumatic smell. The stone was then allowed to dry, and the file tried upon its face. It almost instantly became blue, and very soon after red-iiot. Both the cylinders were then covered witii tallow, by holding the end of a candle to each while turn- ing round, and emery was sprinkled on the wooden one. The file was then applied to the grind-stone while in rapid motion. At first tiie friction was hardly observable, but very soon afterwards, the zone of tallow pressed by the file became melted, and the stone cut very rapidly. Yet the file was for a long time hardly heated at all ; and, when at last it began to feel warm, its temperature was instantly lowered by removing it to another zone of the cylinder. The same effects were produced on the wooden cylinder. This is easily explained upon tlie modern theory of heat. When oil was used on the wooden cylinder, the heat produced by tlie friction was employed in raising

the temperature of the file and the oil ; but when tallow was used, instead of the oil, the greatest part of the heat was ex- hausted in melting this substance. From the increased capacity of the tallow when fused, the heat was absorbed and became latent, instead of raising the te nperature : and when the melted tallow began to grow hot, together with the file, the temperature was easily reduced by employing the heat on another zone of tallow. Mr. Nichol- son used these two cylinders in a considerable quantity of work with great satisfaction. This discoverv bids fair to be of great utility.

GRINSTED, East, a market town of Sus sex, twenty-nine miles from London, seated on a hill near the borders of Surrey. It has a handsome church, which was rebuilt after hav- ing been burnt down in 1683. On the 12th of November, 1785, the beautiful tower, having fallen to decay, fell down, and partly lighting on the church, very considerably damaged it. An hospital in the reign of king James I., for thirty- one poor people of this town, was built and endowed with £330 a year. It was a borougii by prescription, governed by a warden and two gentlemen-assistants ; and sent burgesses to jiarliament ever since the first of Edward II., who were elected by about thirty-five burgage- holders : it had a charter for a monthly market from Henry V'll. This privilege, however, was withdrawn by the reform bill, in the year 1832. Its market is on Thursday. At the east end of tiie town is a large handsome building, in the form of a square, called Sack- ville College, founded by Sackville, duko of Dorset, about the year 1616, for twenty-four

aged persons of both sexes, where each has a comfortable room, and a yearly allowance of £8. GRIP, n. s. A small ditch. — Aimworth. GRIPE, v.a.,v.n.,k.n.s.-\ Saxon jjiipan; Gri'per, w. s. (^ Gothic greipan ;

Gri'pingly, adv. I Dut.grt/;)f«,-Scot.

Gri'ple, ?j. s. J gripp. To grasp;

to hold hard ; to catch ; to press, or squeeze ; a seizure of the hand or paw. Gripes, a name given to the colic or pain in the bowels : hence, figuratively, oppression or affliction. A griper is an extortioner ; a usurer. Griple is a griping or covetous miser.

If I male gripe a richfi man, I shall so puUe him, if I can, That he shall in a

few stoundes Lese all his niarkes and his poundcs.

Chaucer. Romaunt of the Rose. A wonderous way it for this lady wrought. From lion's claws to pluck the griped prey. Spenser. Therefore still on high He over him did hold his cruel claws. Threatening with greedy gripe to do him dy. [d.

rhey put a barren rceptre in my gripe. Thence to be wrenched with an unlineal hand.

Sliakspeare. Should I Slaver with lips, as commonˆas the stairs That mount the Capitol ; ˆo'ln gripes with hands Made hardy with hourly falsehood as with labour.

Id. He gave me his hand. And, with a feeble gripe, says, dear, my lord. Command my servii-e. Id. Henry V.

I take my cause Out of the gripes of cruel men, and give it To a most noble judge, the king my master.

Shakspeare. You took occasion to be quickly woo'd. To gripe the general sway into your hands. Id. He that speaks doth gripe the hearer's wrist. Whilst he that hears makes fearful action With wrinkled brows. Id. King John.

Clysters help, lest the medicine stop in the guts, and work gripingly. Bacon's Natural History.

Others pretend zeal, and yet are professed usurp(!rs, gripers, monsters of men, and harpies. Burton.

It is mean revenue, by being scattered, in the worst of times growing upon him, when others that had great ones, by griping, made them less, and grew stark beggars. Fell.

Adam, at the news Heart-struck with chilling gripe of sorrow stood. That all his sensts bound ! Milton's Paradise Lost.

Canst thou bear cold and hunger ? Can these limbs. Framed for the tender offices of love. Endure the bitter gripes of smarting poverty ? Otway. Thus full of counsel to the den she went. Griped all the way, and longing for a vent.

Dryden. I fell ; and with my weight the helm constrained Was drawn along, which yet my gripe retaintd.

*Id. JEneid. Fired with this thought, at once he strained the breast •, *Tis true, the hardened breast resists the gripe. And the cold lips return a kiss unripe. Dryden.*

And first the dame came rushing through the wood ; And next the famished hounds that sought their food, And griped her flanks, and oft essayed their jaws in blood. Id. Fabler.

He seized the shining bough with griping hold. And rent away with ease the lingering gold.

Dryden.

Many people would, with reason, prefer the grijnng of an hungry belly to those dishes which are a feas: to others. Locke.

Manna, by the bulk, figure, texture, and motion of

its parts, has a power to produce the sensations of

sickness, and sometimes of acute pains or gripings in

ws. Id.

In saucy state the griping broker sits.

And laughs at honest and at trudging wits.

Gay. In the jaundice the choler is wanting ; and the icterical have a great sourness and gripes, with windi- ness. Floyer.

Unlucky Welted ! thy unfeeling master. The more thou ticklest, gripes his hand the faster.

Pope. GRISA'MBER, n. s. Used by Milton for ambergrise.

Beast of chase, or fowl of game. In pastry built, or from the spit, or boiled, Griramber steamed. Milton's Paradise Regained.

GRISE, n. s. See Greece, as it should be written. A step, or scale of steps.

Let me speak like ourself ; and lay a sentence. Which as a grise or step, may help these lovers Into your favour. Shakspeare. Othello.

GRISGRIS, a superstition greatly in vogue among the negroes in the interior parts of Africa. The grisgris, according to Le Maire, are certain Arabic characters, mixed with magical figures drawn by the Marabuts or priests

upon paper. Labat affirms, that they are nothing else than scraps of the Alcoran in Arabic ; but the words are probably of the Mandingo language, though the characters are an attempt to imitate the iˆrabic. The poorest negro never goes to war without his grisgris, as a charm against wounds; and, if it proves ineffectual, the priest transfers the blame on the immorality of his conduct. These priests invent grisgris against all kinds of dangers, and in favor of all desires and appe- tites ; by virtue of which the possessors may obtain or avoid whatever they like or dislike. No priests in the world are more honored and revered by the people than these impostors are by the negroes ; nor are any people in the world more impoverished by tlieir priests than these negroes are, a grisgris being frequently sold at three slaves and four or five oxen. The grisgris intended for the head is made in the form of a cross, reaching from the foreliead to tlie neck behind, and from ear to ear ; nor are the arms and shoulders neglected. Sometimes they are planted in their bonnets in the form of horns ; at other times they are made like serpents, lizards, or some other animals, out of a kind of pasteboard, &c.

GRI'SKIN, n. s. Irish grlsgin, roast meat. The vertebriE of a hog broiled.

GRISLEA, in botany, a genus of the mono- gynia order, and octandria class of plants- natural order seventeenth, calycanthemse : cal. quadrifid ; and there are four petals, one from each incisure of it. The filaments are very long, ascending or runnin;; upwards : caps, glo- bose, superior, unilocular, and polyspermous. Species two ; one an East Indian shrub with a fine red flower; the other, G. secnnda, a South American tree, with leaves like tiie bay-tree,

GRT'SLY, arf;. Sax. jpiflu. Dreadful ; hor- rible ; hideous; frightful; terrible.

Emong all this — to romblen gan the heven ; The thonder rored with a. grisly Steven.

Chaucer. Legende of Good Women. All peinted was the wall, in length and brede. Like to the estres of that grisly place That hight the gret temple of Mars in Trace.

Id. The Knightes Tale. Full black and griesly did his face appeare, Besmeared with smoke that nigh his eye sight blent ; With rugged beard, and hoarie shagged heare The which he never wont to combe or comely

sheare.

Spenser, His grisly locks, long growen and unbound, Disordered hung about his shoulders round. Id.

Where I was wont to seek the honey beo, The grimly toadstool grown there might I see. Id.

My grisly countenance made others fly ; None durst come near, for fear of sudden death.

Shakspeare. Henry VI. Back stepped those two fair angels half amazed. So sudden to behold the grinly king ; Yet thus, unmoved with fear, accost him soon.

Milton, For that damned magician, let him he girt- With all the grisly legions that troop Under the sooty Dag of Acheron. Id.

The beauteous form of fight Is changed, and war appears a grisly sight.

Dryden, In vision thou shalt see his grisly face. The king of terrors raging in thy race.

Id. Innocence, Thus die grisly spectre spoke again. Dryden. Close by each other laid, they pressed the ground. Their manly bosoms pierced with many a grisly wound.

Id. So rushes on his foe the grisly bear.

Addison, Lo ! in the vale of years beneath

A grisly troop are seen, The painful family of Death

More hideous than their queen. Gray.

ORISONS, The, the largest canton in Switzer- land, is bounded by Upper Austria,'enetianLom- bardy, and the small cantons of Ticino, Uri, Glarus, and St. Gall. It comprehends sixty principal and lateral valleys, and has, in all, a superficial extent of 2500 square miles. Its population, classed according to their language, has been thus estimated : —

Those who speak German . . 26,000

Italian . . 10,000

Romanish or the an- cient Rhaetian language . 37,000

Total

73,000

It is still divided into three leagues, viz. the Grison or Gray League, the League of the house of God, and the ten Jurisdictions; which united formed one republic. The two first lie toward the south, and the third towards the north. The inhabitants are said to have been named (Jri- sons, from the gray coats they wore in former times. This country, lying among the Alps, is very mountainous, yielding good pasture for the cattle, sheep, and goats, with some rye and barley : in the valleys there is plenty of grain, pi-lse, fruits, and wine. It abounds also with

hogs and wild fowl ; but there is a scarcity of fish and salt, and their horses are mostly pur- chased of foreigners. The principal rivers are the Rhine, the Inn, and the Adda. It has also several lakes, most of which lie on the tops of the hills. The culture of potatoes was intro- duced here so lately as 1772, and has been car- ried to a considerable extent. Some parts are covered with valuable timber. The valley of the Engadin exports large quantities to Tyrol by the Inn ; and the northern districts have opened a trade in that article with Holland, through the medium of the Rhine. This country is also rich in minerals : there are no manufactures however except a few cotton works at Coire. Their exports are cattle, wood, and minerals. From Suabia and the Tyrol they import corn; salt from the Tyrol and Bavaria; and from different parts of Switzerland, linen, and English and French cloths.

This country was anciently a part of Rhaetia. After the extinction of the Roman empire in the west, it was some time subject to its own dukes, or those of Swabia. Then the bishop of Coire, and other petty princes, dependent on the emperors of Germany, became masters of great part of it : at last, by the extinction of some, purchase, voluntary grants, and force, it got rid of all its lords, and was erected into three distinct republics. This country, as well as the whole of Switzerland, suffered much during the late wars, having been repeatedly and succes- sively overrun by the French and Austrians. In 1797 these republics were acknowledged by France, and in the following year 'the Grisons with its dependencies was formed into one of the Swiss cantons. The leagues are divided into communes.

GRISSAUNT (William), an eminent English physician, astronomer, and mathematician of the fourteenth century. Being, from the ignorance and superstition of the times, suspected of magic, he retired to France, gave up mathe- matics, and applied solely to medicine. His son was elected pope, and took the name of Urban \,

GRIST, n. s. Sax. spij-t. A corruption of grindst. Com; supply; provision: 'Grist to the mill' — is profit or gain.

Get grist to the mill to have plenty in store. Lost miller lack water. Tusser's Husbandry,

The compulation of degrees, in all matrimonial causrs, is wont to be made according to the rules of that law, because it brings grist to the mill. Ayliffe, A mighty trade this lusty miller drove ; Much grist from Cambridge to his lot did fall. And all the corn they used at scholar's hall.

Miller of Trotnp. Matter, as wise logicians say. Cannot without a form subsist ;

And form, say I, as well as they. Must fail, if matter brings no grist. Swift, GRI'STLE, n.. ˆ Saxon jpij-tle; Teuton. Giii'sTi.v, flf//. S crocstel, A cartilage; a part of the body next in hardness to the bone.*

Xo living creatures, that have shells very hard, as oysters, crabs, lobsters, and especially the tortoise, have bo:.cs within them, but only little gristles.

Bacon's Natural Ilslori^,

.it lail they spit out pieces of their lungs ; it may be small gristly hits, that are eaten off from the lung- pipes. Harvey.

She has made the back-bone of several vertebrae, 23 being more fit to bend, more tough, and less in danger of breaking, than if they were all one intire boue without these gristly junctures. More.

Fins are made of gristly spokes, or r;»ys connected uy membranes ; so that they may be contracted or extended lite women's fans. Ray.

Lest the asperity or hardness of cartilages should hurt the 'ssophagus or gullet, which is tender and of a skinny substance, or hinder the swallowing of our meat, therefore the annulary gristles of the windpipe arc not made round, or intire circles ; but, where the gullet touches the windpipe, there, to fill up the circle, is only a soft membrane, which may easily give way to the dilatation of the gullet. Id.

They have a louder and stronger note than other birds of the same bigness,

which have only a griitly windpipe.

Each pipe distinguished by its gristly rings.

To cherish life aerial pasture brings. Blackmore.

GRIT, n.$. ˆ Saxon sjntra, jjieot.

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In fuller's-earth he could find no sand by the mi- croscope, nor any gritliness. Mortimer's Husbandry. The sturdy pear-tree here Will rise luxuriant, and with toughest root Pierce the obstructing ˆrif and restive marl.

Philips.

Silesian hole, crackling a little betwixt the teeth, yet without the least particle of grit, feels as smooth

as sˆoap.

Grew.

I could not discern the unevenness of the surface of the powder, nor the little shadows let fall from the gritty particles thereof. Newton.

Grit, Argillaceous, a genus of argillaceous earths. Its texture is more or less porous, equable, and rough to the touch. It does not give fire with steel, nor effervesce with acids. When fresh broken, and breathed upon, it ex- hales an earthy smell. Kirwan mentions two kinds ; one from HoUington near Utoxeter, of a yellowish or whitish gray, and about the specific gravity of 2288. Another, from Knepersly in Staffordshire, is of the specific gravity of 2568 ; and so unfusible as to be used for fire stones. Ac- cording to Fabroni, the grit-stone is of greater or less hardness, mostly of a gray, and some- times of a yellowish color, composed of a sili- ceous and micaceous sand, but rarely of a sparry kind; with greater or smaller particles closely compacted by an argillaceous cement It gives some sparks with steel, is indissoluble for the most part in acids, and vitrifiable in a strong fire. It is used for millstones and whetstones; and sometimes for filtering stones and for building.

GRI'ZELIN, adj. More properly gridelin See Gridelin.

The Burgundy, which is a grizelin or pale red, of ttU others, is surest to ripen in our climate. Temple.

GRIZ'ZLE, n.s.ˆ Tv. gris, grisaille. A

Griz'zled, (idj. N mixture of white and black;

Griz'zly, adj. J a gray color. To the boy Caesar, send this grigxled head.

Shakspearf.

His beard was grizzled ? It was as I have seen it in his life. Id. Hamlet. O thou dissembling cub 1 what wilt thou be. When time hath sowed a grizzle on thy face ?

Shak

His hair just gristzled. As in a green old age.

Dryden and Lee's (Edipus. Thoi& grizzled \oc.s, which nature did provide In plenteous growth their asses' ears to hide.

Dryden, GROAN, V. n. &c n.s.~\ Sax. ˆjianan ; Belg. Groan'ful, adj ygronen, kreun. To

Gkoan'ing, n. s. J breathe with a hoarse

noise as in pain or agony : any hoarse deep me- lancholy sound. A groaning is an expression used by the common people to signify an ac- couchement.

Men groan from out of the city, and the soul of the wounded crieth out. Job xxiv. 12.

Repenting and groaning for anguish of spirit.

Wisdom V. 3. Thei spared not, but smote incessauntlie ; To satisfie hir malice thei were busie ; Thei spit in his face, thei smote here and there. He groned full sore and swete many a tere.

Chaucer. Lament of Mary Magdeleine. Adown he kest it with so puissant wrest. That back again it did aloft rebound. And gave against his mother earth a gfoanftd sound

Spenser, Such sheets of fire, such bursts of horrid thunder. Such groans of roaring wind and rain, I never Remember to have heard. Shakspeare. King Lear. Many an heir Of these fair edifices, for my wars. Have I heard groan

and drop.

Id. Coriolahus. Alas, poor country. Where sighs and groans, and shrieks that rend the

air. Are made, not marked I Id. Macbeth.

So shall the world go on. To good malignant, to bad men benign. Under her own weight ˆronnm/;.

Milton's Paradise Lost, Thus when without noise unknown

I have lived out all my span, I shall die without a groan.

An old honest countryman. Marvell.

I led to slaughter, and to slaughter leave ; And even from hence thsir dying qroans receive.

Dryden. Nothing can so peculiarly gratify the noble dispo- sitions of humanity, as for one man to see another so much himself as to sigh his griefs and groan his pains.

South. The woods recede around the naked seat. The Sylvans groan — no matter — for the fleet. Pope. On the blazing pile his parent lay. Or a loved brother groaned his life away.

Pope's Odyssey. Hence aching bosoms wear a visage gay. And stifled groans frequent the ball and play. Young. To each his sufferings ; all are men

Condemned alike to groaˆi ; The tender, for another's pain ;

The unfeeling, for his own. Gray

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GROAT, 71. s. Belg. groot (i. e. great) ; Ital. i,')'()sso. A piece valued at four-pence ; a pro- X erbial name for a small sum. Groats, oats that have the hulls taken off. — Ainsworth.

And yeve that Covent four-and-twenty grotea; And yeve that frere a peny, and let him go.

Chaucer. The Sompnoures Tale. I shall quiten erery grot.

Id. Prologue to the Freres Tale. My mother was wont To call them woollen vassals, things created To buy and sell with groats.

Shakspeare. Coriolanus. I dare lay a groat, A tertian ague is at least your lot.

Dryden's Fables. Imagine a person of quality to marry a woman much his inferior, and without a groat to her fortune.

Swift. To build, to plant, whatever you intend. To rear the column, or the arch to bend. To swell the terrace, or to sink the groat. In all let Nature never be forgot. Pope.

GRO'CER, n.s. ˆ This should be written

Gro'cery, n. s. S grosser, from gross, a large quantity ; a grocer originally being one who dealt by wholesale ; or from grossus a fig, which their present state seems to favor. — Johnson. Minsheu says ' from Fr. grassier, ex gros, mag- num.' Grocers' ware, such as tea, sugar, raisins, spice.

His troops being now in a country where they were not expected, met with many cart loads of wine, grocery, and tobacco. Clarendon,

A grocer is a msm who buys and sells tea, sugar, and plums, and spices, for gain.

Watts'it Logick.

But still the offspring of your brain shall prove The grocer's care, and brave the rage of Jove.

Garth.

GROCYN (William), a learned English di- vine, of the fifteenth century, born in Bristol, in 1442. He held a disputation at Oxford before king Richard III., who rewarded him liberally. In 1485 he was made a prebendary of Lincoln. In 1488 he travelled into Italy, and studied Greek under Politian and Demetrius Chalcon- dylas. Upon his return he taught it, and intro- duced the pronunciation of those masters into England. He was the friend and patron of Erasmus. lie died at Maidstone, in 1522, of the palsy, aged eighty. His works are menti- oned by Bayle. His Latin Epistle to Aldus Manutius is prefixed to Linacre's translation of Proclus de SphxrSl. Venice, 1494.

GRODN, a town, province, and govern- ment of Russian Poland, on the right bank of llie Niemen : the town stands partly on a hill surrounded by several eminences. It consists of a mixture of wooden huts, and of houses once the residence of noblemen, but now in ruins. The population is about 5000, of whom the Jews form about 1500. In 1673 the Polish diet resolved that a third part of its meetings should be held at Grodno ; but this rule was never strictly observed. It was the retreat of Stanislaus, during the troubles of 1795, and the place where he made a final abdication of his crown. Grodno has an academy, and in the neighbourhood are marufactures of silk, linen,

and fire-arms, established m 1776. It is 140 miles north-east of Warsaw, and 140 south-east of Konigsberg.

The government of Grodno forming oart of Lithuania, and adjacent to the governments of Wilna, Minsk, and Volgnsk, is fully 11,000 square miles in extent: population about 620,000. The surface is level, and much of it covered with wood : the rest is partly a light sandy soil, and partly marshy, but in general fertile. Agri- culture is in a backward state ; yet some corn is exported, and forms, together with the export of cattle, the only source of subsistence to the inhabitants : the little trade that is carried on is in the hands of Jews. This country is divided into eight circles, and lies between 51° 36′ and 54° 19′ of N. lat. It was formerly called the government of Slonim.

GRO'GERAM, n. s. ˆ Fr. gros, grain; low

Gro'gram, n. s. S Latin grossogranus. —

Gro'gran, n. s. y Ainsworth. Stufl' woven

with large woof and a rough pile.

Certes they're neatly clothed : I of this mind am. Your only wearing is y onr grogera7n. Donne,

Natolia affords great store of chamelots and gro- grams. Sandys.

Some men will say this habit of John's was neither of camel's skin nor any coarse texture of its hair, but rather some finer weave of camelot, grogram, or the like. Browne,

The natural sweetness and innocence of her be- haviour shot me through and through, ?nd did more execution upon me in grogram than the greatest beauty in town had ever done in brocade. Addison.

The' imperial flower, his neck with pearl attires ; , The lily high her silver grogram rears , The pansy her wrought velvet garment bears ; The red-rose, scarlet, and the provence, damask wears. Fletcher's Purple Island, Plain goody would no longer down ; 'Twas madam in her grogram gown. Swift.

GROIN, n.s. Of uncertain derivation. — John- son. Minsheu says a Belg. groni. The part next above the thigh.

Antipleus, a sonne of Priam, threw His lance at Ajax through the preassc, which went

by him, and flow On Leucus, wise Ulysses' friend : His groine it smvte.

Chapman. The fatal dart arrives. And through the border of his buckler drives ; Passed through and pierced his groin ; the deadly

wound Cast from his chariot, rolled him on the ground.

Drydcn.

Groin, among builders, is the angular curve made by the intersection of two semi-cylinders or arches : and is either regular or irregular. A regular groin is when the intersecting arches, whether semi-circular or semi-elliptical, are of the same diameters and height. An irregular groin is where one of the arches is semi-circular, and the other semi-elliptical.

GRONINGEN, a province and town at the north-east extremity of the Netherlands, bounded by the German Ocean on the north, by Hanover on the east, and by tlie Dutch provinces of Drenthe and Friesland on the south and west. Its superficial extent is about 770 square miles, and its population 146,000. The surface lies so

low, that the whole province is intersected by a multitude of canals and wet ditches, for the purpose of carrying off the water, and pro- tected by dykes against inundations. In se- veral parts there are swamps, and the soil is in general marshy. The wealth of the province is in its pastures, but com is raised ; and wood abounds in the south. In the towns there are manufactures of linen and woollen. The other sources of support are the fisheries along the coast, and some foreign trade. The province is divided into the three nearly equal districts of Groningen, Appingadam, and

Winschoten ; nei- ther of the latter towns has 3000 inhabitants ; and Delfzyl, a small sea-port, nas not above 1000.

The town of Groningen is walled, and situated on the rivers Hunse and Fivel. It is of a circular form, and the houses in general are well built, and the streets regular. It has three public squares, and some handsome public buildings ; in particular the prince's palace, the provincial assembly-house, the arsenal, and the custom-house. The Gothic church of St. Martin has a tower of great height. The university, founded in 1614, is endowed with the revenues of several monasteries, and consists of five faculties, with nineteen profes- sors. There are here likewise academies for drawing, navigation, and agriculture ; an esta- blishment for the deaf and dumb, &c. The trade is much promoted by the Hunse being navigable for large vessels up to the town. The chief trade is in agricultural produce, the linen and woollen manufactures, and quills. 100 miles north-east of Amsterdam. Population 26,500.

GRONOVIA, in botany, a genus of the mo- nogynia order, and pentandria class of plants : natural order thirty-fourth, cucurbitaceae : petals five; stamina five, inserted into a campanulated CAL.; the berry is dry, monospermous, and in- ferior. Species one : a Vera Cruz plant.

GRONOVIUS (John Frederic), a learned critic, born at Hamburgh in 1613. Having tra- velled tlirough Germany, Italy, and France, he was made professor of polite learning at Deven- ter, and afterwards at Leyden, where he died in 1671. He published, 1. Diatribe in Statii, &c. 2 De Sestertiis. 3, Correct editions of Seneca, Statins, Livy, Pliny's Natural History, Tacitus, Aulus Gellius, Phadrus, &c., with notes ; and other works.

Gronovhis (James), son of the preceding, was educated at Leyden. He then went over to England, where he visited the universities, con- sulted the curious MSS., and formed an acquaint- ance with several learned men. He was chosen by the grand duke to be professor at Pisa, with a considerable salary, but returned into Hol- land, after he had resided two years in Tuscany, and consulted the JNISS. in the Medicean library. In 1679 he was invited by the curators of the University of Leyden to a professorship; and his inaugural dissertation was so highly approved of, that the curators added 400 florins to his stipend, and continued it to his death in 1716. His prin- cipal works are. The treasure of Greek antiqui- ties, in 13 vols, folio; and a great number of dissertations, and editions of ancient authors. He w? s compared to Schioppus for the virulence rf his style ; and the severity with which he

treated other great men who differed from him exposed him to just censure.

GROOM, 71. s. Belg.g?07H. A boy; a waiter; a servant; a young man ; a man newly married.

Renneu and crie, os thou werd wode. On -iEolus, the god of windes, To blow out of alle kindes So loude, that he should ydrenche Lorde and ladie, and yrome and wenche. Of all the Trojanes nacion.

Chaucer. The House of Fatnc. Then called she a groom, that forth him led Into a goodly lodge. Spenser.

Think then, my soul I that death is but a groom. Which brings a taper to the outward room. Donne.

From Egypt's kings ambassadours they come ; Them many a squire attends, and many a groom.

Fairfax. I presume for to intreat this groom. And silly maid, from danger to redeem. Id. In the time of Edward VI. lived Stornhold, whom King Henry his father had made groom of his cham- ber, for turning of certain of David's psalms into verse. Peacham.

Would'st thou be touched By the presuming hands of saucy grooms ?

Dryden. Amid the fold he rages, nor the sheep Their shepherds, nor the grooms their bulls can keep.

Id. By this the brides are waked, their grooms are dressed ; All Rhodes is summoned to the nuptial feast. Id.

There many a groom, the busy cook attends. In under offices. Fletcher's Purple Island.

be grooms, and win the plate

Where once your nobler fathers won a crown.

Coiitper.

Groom is also applied to several superior offi cers belonging to the king's household, as groom of the chamber, groom of the stole. See Stole and Wardrobe.

GROOVE, 71. $. kv. a. Goth, grauf; Sax. 3fiapan ; to dig or engrave. A deep cavern or hollow in mines ; a channel cut with a tool : to cut any thing hollow.

He might, to avoid idleness, work in a. groove or mine-pit thereabouts,

which at that time was little esteeemed. Boyle.

The screw-plate is a kind of steel well tempered, with several holes in it, each less than other ; and ia those holes are threads grooved inwards, which groove fit the respective taps that belong to them.*

Moxon's Mechanical Exercises.

Of the box every joint was well grooved. Swift.

Groove, among miners, is the shaft or pit sunk into the earth sometimes in the vein, and some- times not.

Groove, among joiners, the channel made by their plough in the edge of a moulding, style, or rail, to put their pannels in, in wainscotting.

GROPE,t;.ra.&T;.a. > Sax. jjiopan. To feel

Gro'per, n. s. S or search after any thing

where one cannot see : one who searches in the dark.

We grope for the wall like the blind, and we grope as if we had no eyes. Isaiah lix. 10.

Thise curates ben so neglignnt and slow

To gropen tendrely a conscience.

Chaucer. The Sompnoures Tale. She gropeth alway forther with her hond

And fond the bed. Id. The Revet Talc.

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TTiey meet with darkness in t)ic clearest light; And grope at noon, as if involved with night. Sandys. In youth before I wexed old. The blind boy, Venus' bal.v. For want of cunning made me bold In bitter hyve to grope for honny.

Spenser. Poems.]\Iy sea-gro's-n scarf about me, in the dark Groped I, to find out them. Skakspeare. Hamlet. How vigilant to grope men's thoughts, and to pick out somewhat whereof they might complain.

Hayward, They have left our endeavours to grope them out by twilight, and by darkness almost to discover that, whose existence is evinced by light. Browne.

A boy was groping for eels, and laid his hand upon a snake. L'Estrange.

This, no doubt, is better for men than that they should iu the dark grope after knowledge ; as St. Paul tells us all nations did after God. Locke.

He heard us in our course. And with his outstretched arms around him groped.

A ddiion. O truth divine ! enlightened by tliy ray, I grope and guess no more, but see my way.

A riuihnot. But Strephon, cautious, never meant The bottom of the pan to grope. Swift.

GROSE (Francis), Esq. F. A. S., an eminent English antiquary, was born in 1731, and was left an independent fortune ; but had not a dis- position to preserve it. lie wrote, 1 . The Anti- quities of England and Walc:, in 8 vols. 4to. and Svo., which he began in 1773, an 1 completed in 1787; containing 589 views, besides forty plans, &c. 2. The Antiquities of Scotland, 2 vols. 4to. and 8vo., containing 100 views witli a map. 3. Tlie Antiquities of Ireland, 2 vols. 4to. and 8vo. 4. A Treatise on Ancient Armour and Weapons, 4to., 1735, with a supplement in 1789. 5. A Classical Dictionary of the 'ulgarTon:;ue, 8vo., 1785. 6. Military Antiquities, 2 vols. 4to., 1786—88. 7. The History of Dover Castle, 4to., 1786. 8. A Provincial Glossary, with a Col- lection of Local Proverbs and Popular Supersti- tions, 8vo., 1788. 9. A Guide to Health, Beauty, Honor, and Riches, 8vo. 10. Rules for Draw- ing Caricatures, 8vo., 1788. 11. The Olio: a collection of Essays, 8vo. In summer, 1789, he set out on a tour in Scotland, and began to com- municate his observations in folio numbers, with four plates each, in 1790. Before he had com- pleted this work, he went to Dublin, with tlie intention of executing a similar work, with views and descriptions of the antiquities of Ire- land, executed in the same elegant manner with those of Great Britain ; but being seized with an apoplectic fit, at the house of Mr. Hone in Dub- lin, he died on the 12th of May, 1791, aged about sixty. He had great skill in drawing, which peculiarly qualified him for executing the works in which he engaged : and, being of an agreeable, humorous, and communicative dispno- Sition, he was much esteemed in the extensive circle of his friends. He visited almost (very part of the three kincrdoms. He married a lady at Canterbury, by whom he had several children ; of whom captain Daniel Grose, after serving several campaigns in America, wa.<: appointed deputy governor of the settlement

of Botany Bay, in 1790. \oi.. X.

GROSS, adj. & ?!. s. ˆ Swed. and Teut. groi;! •

Groˆs'ly, adv. ˆFr. grus ; Ital. grusso ,

GR0Ss'NE5S,n.s. 3 Lat. crassus ; baro. Lat. grossus. Thick; bulky; enormous; unrefined; inelegant; stupid; impure: gross, the substan- tive, signifies the main body ; the whole as op- posed to parts : the number of twelve dozen ; the chief part ; the main mass.

Wise men, that be over-fat and fleshy, go to sojourn abroad at the tenr.perate diet of some sober man ; an;! so, by little and little, eat away the grossness that is in them. Ascham.

They can say thai in doctrine, in discipline, in prayers, and in sacraments, the church of Rome hath very foul and gross corruptions. Hooker.

So far hath the natural understanding, even of sundry whole nations, been darkened, that they liave not discerned, no, not gross iniquity to be sin. Id.

He ripely considered how gross a thing it were for fnen of his quality, wise and grave men, to live with such a multitude, and to be tenants at will under them. Id.

Such kind of ceremonies as have been so grossly and shamefully abused iu the church of Rome, where they remain, arc scandalous. Id.

Cejtain general inducements are used to make saleable your cause in gross. Id.

He hath ribbons of all the colours in the rainbow ; they come to him by the gross. Shakspeare.

I cannot instantly raise up the gross Of full three thousand ducats. Id,

Treason and murder ever kept together.

As two yoke devils sworn to others' purpose ;

Working so grossly in a natural cause.

- *That admiration did not whoop at them. Id,*

And thine eyes See it so grossly shown in thy behaviour. That in their kind they speak it. Id,

What! are we cuckolds ere wc have deserved it ? — Speak not so grossly. Id. Merchant of Venice.

To all sense 'tis gross You love my son : invention is ashamed. Against the proclamation of thy passion. To say thou dost not. Shakspeare.

Examples gross as earth txhort me. Id,

The crows and choughs, that wing the midway air. Shew scarce so gross as beetles. Id, King Lear,

The purpose is perspicuous even as substance. Whose grossness little characters sum up.

Shakspeare. And I will purge that mortal grossness so.

That thou shalt like an airy spirit go. Id,

I was three or four times in the thought they were not fairies ; and yet the guiltiness of my mind drove the grossness of the foppery into a received belief that they were fairies. Id.

'I'he cause of the epilepsy from the stomach is the grossness of the vapours which rise and enter into tho cells of the brain. liacon.

Comets, out of question, have likewise power and effect over ihe grois and mass of things. Id.

The articulate sounds are more confused, thou"'h the gross of the sound be greater.

Id. Natural History.

It is manifest, that when the eye standeth in the £ncr medium, and the object is in the grot er, things shew greater; but coniraiiwise, when the eye is placed iu the grosser medium, and the object in the finer. Id.

This was my error, this my gross mistake.

Myself a dcmi votary to make. Cowley.

Belial came last, than whom a spirit more lewd Fell not from heaven, or more gross to love Vice for iticlf. Milton's I'aradise Lost,

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Then all this earthly grossness quit ; Attired with stars we shall for ever sit, Triumphing over death. Milton.

GROSS-BEEREN, battle of, August 23rd, 1813. August 17th, 1813, the armistice having expired, the war between the allies and Napoleon commenced anew, and the emperor of France desired to hurl liis bolts, at the same time, into the camps at Breslau, Prague and Berlin. Tliey recoiled upon himself on the Katzbach, at Culm and Gross-Beeren. Berlinˆ was protected by the militia and tlie northern army, commanded by Bernadotte, then crown prince of Sweden, and consisting of the third and fourth Prussian divisions, the Russian corps under Woronzow, Winzingerode and Czernitschef, and about 22,000 Swedes. The French army, reinforced by the forces of Wurtemburg, Bavaria, Darm- stadt, and Saxony, was formed into four divi- sions, led by Oudinot (the general-in-chief), Victor, Regnier, and Bertrand, and was together with the cavalry, under Arrighi, from 80,000 to 90,000 strong. Its destination was the capture of Berlin, and it was supported by general Girard, with the garrison of Magdeburg ; but the crown- prince performed, in detail, the same operations against this body as the allies against the main body of the enemy. His army formed a curve from Buchholtz, the extremity of the left wing, through Mittenwalde, Klein-Beeren, Heiners- dorf, Blankenfeld, Ruhlsdorf, to Belitz and Treuenbriezen, the extreme right wing from which the Russian line inclined inwards towards Juterbock ; while the Prussians in the centre were advanced to Trebbin. The Prussian gene- rals Hirschfeld and Puttlitz observed Magde- burg beyond Brandenburg. On both wings the light troops were dispersed as far as Wittenberg, Guben and Baruth. On the 22d, the enemy en- tered the curve — Reigner in the centre, Bertrand on the right, and Oudinot on the left wmg. They attacked the Prussians at Trebbin, who gave wav. On the 23d, Bertrand fell upon general Tauenzien at Blankenfeld, but %fas repulsed. Reigner forced his way to Gross-Beeren, the key-stone of the arch, about ten miles from Berlin. Here he was unexpectedly attacked by the brave Bulow. At the same time, Borstell surrounded the right wing of the enemy. The Prussians fought wiih great courage, in sight of their capi- tal. A mounted Saxon battery having been outflanked and taken, they

advanced to a charge. The discharge of fire-arms being rendered impossible by the rain, the soldiers feught with the butt-ends of their muskets and with bayonets. Gross-Beeren was taken by storm ; the Saxon and the second French division were driven from the field, and the cavalry of the duke of Padua routed. Oudinot now brought up the three divisions of reserve, which were attacked by the Russians and Swedes as they deployed from the wood. Cardell, colonel of the Swedish forces, supported by an attack of cavalry, took the enemy's artillery. Oudinot now abandoned the struggle, and retreated to Wittenburg and Torgau on the Elbe. He lost thirty cannons and more than 2000 prisoners. The Prussians gained possession of Juterbock, and, on the 28th, of Luckau. A pyramid of cast iron has been erected on the spot by Frederic William III.

But she dares never boast the present hotrr. So gross the cheat, it is beyond her power. Young. GROSSTESTE (Claude), a French protes- tant divine, who came to London on the revo- cation of the edict of Nantes. He was minister of the Savoy. He wrote a treatise on the Inspi- ration of the Sacred Books, and several sermons. He died in 1713. GROSSULLARIA. See Ribes. GROT, 71. s. I Ft. grotte; Ital. grotta ; Gr. G rot'to, n. s. S (cpuxrof. A cave ; a cavern for coolness and pleasure.

Their careless chiefs to the cool grottos run. The bowers of kings, to shade them from the sun.

Dryden. In the remotest wood and lonely grot. Certain to meet that worst of evils, thought.

Prior. This was found at the entry of the grotto in the Peak. Woodward.

Awful see the Egerian grot. Pope.

No crowded in a grotto's gloom. All hope extinct they wait their doom.

Beattie.

And the stained glass which lighted this iah grot

Tinted each ray. Byron.

GROTE'SQUE, adj. Ft. grotesque; Ital. grottesco ; 'S > ˆ2iT. grutesque. Distorted of figure ; unnatural; wildly formed.

The champaign head Of a steep wilderness, whose hairy sides With thicket overgrown, grotesque and wild. Access denyed. Milton's Paradise Lost.

There is yet a lower sort of poetry and painting, which is out of nature ; for

a farce is that in poetry ■which grotesque is in a picture : the persons and ac- tions of a farce are all unnatural, and the manners false, that is, inconsisting with the characters of mankind : grotesque painting is the just resemblance of this. Dryden.

An hideous figure of their foes they drew. Nor lines, nor looks, nor shades, nor colours true. And this grotesque design exposed to publick view.

Id. Palladian walls, Venetian doors,- Grotesque roofs, and stucco floors. Pope.

Grotesque, in sculpture and painting, some- thing, whimsical, extravagant, and monstrous; consisting either of things that are merely ima- ginary, or so distorted as to raise surprise and ridicule. The word owes its derivation from figures of this kind, being anciently much used to adorn the grottos wherein the tombs of emi- nent persons were enclosed.

GROTIUS (Hugo), or more properly Hugh de Groot, was born at Delft in 1583. He made so rapid a progress in his studies, that at fifteen he had attained great knowledge in philosophy, divinity, and civil law ; and a yet greater profi- ciency in polite literature, as appears by the commentary he had made at that age on Marlia- nus Capella. In 1598 he accompanied the Dutch ambassador into France, and was honored with several marks of esteem by Henry IV. He took his degree of L.L.D. in that kingdom; and, at his return to his native country, pleaded at tlie bar before he was seventeen years of age. He was not twenty-four when he was appointed attorney-general. In 1613 he settled at Rotterdam, and was nominated syndic of that city ; but did not accept of the office, till a promise was made

him that he should not be removed from it. This prudent precaution he took, foreseeing, that the Arminian controversy, which had already given rise to many factions in the state, would occasion revolutions in the chief cities. The same year he was sent to England, on account of the divi- sions that reigned between the traders of tlie two nations, on the right of fishing in the northern seas ; but he could obtain no satisfaction. He was afterwards sent to England, to persuade the king and the principal divmes to favor the Armi- n.ans; and he had several conferences with king James I. on that subject. On his return to Holland his attachment to Barnevelt involved iiira in great trouble ; for he was seized, and sentenced, in 1619, to perpetual imprisonment, and to forfeit all his goods and chattels. But

after having been treated with great rigor for above a year and a half in his confinement, he was delivered by the advice and artifice of his wife, who having observed that his keepers, who had often fatigued themselves with searcl)ing and examining a great trunk of foul linen, which used to -be washed at Gorkum, now let it pass without opening it, advised him to bore holes in it to prevent his being stifled, and then to get into it. He complied with this advice, and was carried to a friend's house in Gorkum ; where dressing himself like a mason, and taking a rule and trowel, he passed through the market-place, and stepping into a boat went toValvetin Brabant. Here he made himself known to some Arminians, and hired a carriage to Antwerp. At first there was a design of prosecuting his wife, who staid in the prison ; and some judges were of opinion that she ought to be kept there in her husband's stead ; however she was released by a plurality of voices, and universally applauded for her behaviour. He now retired into France, where he met with a gracious reception from tliat court, and Louis XHI. settled a pension upon him. Having resided there eleven years, he re- turned to Holland, on his receiving an invitation from Frederic Henry prince of Orange ; but, his enemies renewing their persecution, he went to Hamburgh ; where, in 1634, queen Christina of Sweden made him her counsellor and sent him ambassador into France. After having dis- charged the duties of this office above eleven years, he returned to give an account to queen Christina of his embassy, and in his journey visited Amsterdam. He was introduced to the queen at Stockholm; and there begged that she would grant him a dismissal, that he might return to Holland. This he obtained with diffi- culty. As he was returning, tlie ship in which he embarked was cast away on the coast of Po- merania ; and, being sick, he continued his journey by land ; but he was forced to stop at Rostock, where he died on the 28th of August, J 645. llis body was carried to Delft, to be in- terred in the sepulchre of his ancestors. Not- withstanding the embassies in which he was em- ployed, he composed a great number of works ; ♦he principal of which are, 1. De Jure Belli et Pacis, which is esteemed a master-piece. 2. A Treatise on the Truth of the Christian Religion. 3. Commentaries on the Holy Scriptures. 4. The History and Annals of Holland ; and a great number of letters, all written in Latin

Grotius (VVilliam), brother to Hugh, was an eminent lawyer, and wrote several books on ju- risprudence. He died in 1662.

GROTON, a township of Connecticut in New London county, bounded on the west by the Thames, and on the south by Fisher's Island. It contains two parishes, and had 3946 citizens in 1795. It comprehends Fort Griswold, which defends the harbour of New London.

GR0T0N,a town in the above township, oppo- site to New London city. It was burned by general Arnold, on the 6th of September, 1781, and

suffered loss to the amount of £23,217.

Grot'io, or Grotta, in natural history, a large deep cavern or den in a mountain or rock. El- den Hole, Okey Hole, Peake's Hole, and Pool's Hole, are famous among the natural caverns or grottos of England. See these articles. In grottos are frequently found crystals of the rock, stalactites, and other natural conglacia- tions, and those of an amazing beauty. See Antiparos. At Foligno in Italy is another grotto, consisting of pillars and orders of architec- ture of marble, with their ornaments, &c., scarcely inferior to those of art.

Grotto is also used for a little artificial edi- fice made in a garden, in imitation of a natural grotto. The outsides of these grottos are usually adorned with rustic architecture, and their inside with shell-work, fossils, &c., finished likewise with jets d'eau or fountains, &c. A cement for artificial grottos maybe made thus : — Take two parts of white rosin, melt it clear, and add to it four parts of bees' wax ; wlKjn melted togetlier, add two or three parts of the powder of the stone you design to cement, or so much as will give the cement the color of the stone; to this add one part of the flower of sulphur : incorporate all together over a gentle fire, and afterwards knead them with your hands in warm water. With this cement the stones, shells, Jcc, after being well dried before the fire, may be cemented. Artificial red coral branches, for the embellishment of grottos, may be made in the following manner : — Take clear rosin, dissolve it in a brass-pan ; to every ounc^ of which add two drams of the finest vermilion : when you have stirred them well together, and have chosen your twigs and branches, peeled and dried, take a pencil and paint the branches all over, whilst the composition is warm ; afterwards shape them in imitation of natural coral. This done, hold the branches over a gentle coal fire, till all is smooth and even as if polished. In the same manner white coral may be prepared with white-lead, and black coral with lamp-black. A grotto may be built with little expense, of glass, cinders, pebbles, pieces of large flint, shells, moss, stones, counterfeit coral, pieces of chalk, &c., all bound or cemented together with the above-described cement.

GROVE, n. s. From grave. Sax. jjiapan. A w^lk covered by trees meeting above.

Aud in the grove, at lime and place ysette. This Arcite and this Palamon ben mctte.

Chaucer, The Knightes Tale.

Colin ! to heare thy rymcs and roundelayes.

Which thou vfcrt wont on wasteful hilles to sing,

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I more delight thenlarke in summer dayes.

Whose eccho made the neighbour ˆrorw to ring. Spemer. The Shepheard't Calendar.

I looked toward Birnam, and anon methought The wood began to move : Within this three mile may you see it coming ; I say, a moving grove. Shakspeare, Macbeth.

Fortunate fields, and grove, and flowery vales ;*

Thrice happy isles ! Milton.

She left the flowery field, and waving ˆroue.

Blackmore, Banished from courts and love. Abandoned truth seeks shelter in the grove.

Granville. Gro7 > e nods at grove, each alley has a brother,

And half the platform just reflects the other.

Pope. Can fierce passions vex his breast. While every gale is peace, and every grove Is melody ? Thomson'g Spring.

Sweet were your shades, O ye primeval groves'. Whose boughs to man his food and shelter lent ;

Pure in his pleasures, happy in his loves. His eye still smiling, and his heart content.

Beattie.

Grove, in gardening, a small wood of trees. Groves are not only great ornanaenls to gardens, but also afford great relief against the violent heats of the sun, affording shade to walk under in the hottest parts of the day, when the other parts of the garden are useless; so that every garden is

defective which has not shade. Groves are of two sorts, viz. either open or close. Open groves are such as have large sl'.ady trees, which stand at such distances as that liieir branches approach so near each other as to prevent the rays of the sun from penetrating through them. Close groves have frequently large trees standing in them ; but the ground under these is filled with shrubs of underwood : so that the walks which are in them are private, and screened from winds ; by which means they are rendered agreeable for walking at those times when the air is either too hot or too cold in other parts of the garden. These are often contrived so as to bound the open groves, and frequently to hide the walls or other enclosures of the garden : and when they are properly laid out, with dry walks winding through them, and on the sides of these sweet-smelling shrubs and flowers irregu- larly planted, they have a charming effect. Groves have been in all ages held in great ve- neration. The proseuchae, and high places of the Jews, whither they resorted for the purposes of devotion, were probably situated iti groves. See Joshua xxiv. 26. The proseuchag in Alex- andria, mentioned by Philo, had groves about them, because ne complains that the Alexandri- ans, in a tumult against the Jews, cut down the trees of their proseuchae. The ancient Romans had a sort of groves near several of their temples, which were consecrated to some god, and called luci,by antiphrasis, a non lucendo, as being shady and dark. The veneration which the ancient Druids had for groves is well known.

Grove (Henry), a learned and ingenious pres- byterian divine, born at Taunton in Somerset- shire in 1683. Having obtained a classical education, he v>ent through a course of acade mical learning under the P>-ev. Mr. Wan en of

Taunton. He then removed to London, and studied under the Rev. Mr. Rowe, to whom he was nearly related. Here he contracted a friend- ship with Dr. Watts, which continued till his death; and, after two years, returned into the country, and began to preach with great reputa- tion. Soon after beginning to preach, he mar- ried; and, on the death of Mr. Warren, suc- ceeded him in the academy at Taunton; where he preached for eighteen years to two small con- gregations in the neighbourhood. In 1708 he published a piece entitled the Regulation of Di- versions, drawn up for the use of his pupils. He next wrote several papers printed in the Specta- tor, viz. Numbers 588, 601, 626, 635. The last was republished, by the direction of Dr. Gibson, bishop of London, in the Evidences of the Christian Religion, by Addison. In 1725, Mr. James, his partner in the academy, dying, he suc- ceeded him in his pastoral charge at Fulwood, near Taunton ; and in this situation Mr. Grove continued till his death, which happened in 1738. Besides the above pieces, he wrote — An Essay towards a Demonstration of the Soul's Immortality; An Essay on the Terms of Chris- tian Communion; The Evidence of our Saviour's Resurrection Considered ;

Some Thoughts con- cerning the Proof of a Future State from Reason ; A Discourse concerning the Nature and Design of the Lord's Supper; Wisdom the first spring of Action in the Deity; A Discourse on Saving Faith ; Miscellanies in prose and verse ; and many Sermons, &c. After his decease his posthumous works were published by subscrip- tion, in 4 vols. 8vo., with the names of nearly 700 subscribers.

GROVEL, V. n. \ Goth, grufta ; Isl. grufde, Grov'eling, adj. \ flat on the face. ' It may perhaps come by gradual corruption from ground fell,' says Johnson ; but this seems a curious guess. To lie prone ; to creep low on the ground ; to be mean or without dignity.

The steel-head passage wrought, And through his shoulder pierced ; wherewith to

ground He groveling fell, all gored in his gushing wound.

Spenser. What see'st thou there? king Henry's diadem, Inchased with all the honours of the world ! If so, gaze on, and grovel on thy face, Until thy head be circled with the same.

Shakspeare. Oke roast and beech, and Cornell fruit they eate. Groveling like swine on earth, in fowlest sort.

Chapman. Now they lie Groveling and prostrate on yon lake of fire. Milton. Upon thy belly groveling thou shalt go. Id. Let us then conclude that all painters ought to re- quire this part of excellence : not to do it, is to want courage, and not dare to shew themselves : 'tis to creep and grovel on the ground. Dryden.

1 must disclaim whate'er he can express ; His groveling sense will shew my passion less. Id. Several thoughts may be natural which are low and groveling. Additon's Spectator.

Wilt thou debase the heart which God refined ' No ; let thy heaven-taught soul to heaven aspire To fancy, freedom, harmony resigned ; Ambitious groveling crew for ever left behind.

Beattie.

GROUND, n. s. Sax. jjiunb , Belg. grand : Daa. grondt; Teut. grand. The earth consi- dered as superficially extended, and therefore related to tillage, travel, habitation, or almost any action. The main mass of terrene matter is never called the ground. We never distinguish the terraqueous globe into ground and water, but into earth, or land, and water ; again, we never say under earth, but under ground.

Israel shall go on dry ground through the sea. Exod. xiv. 16. She touched him with her harp, and raised him from the ground ; The shaken strings melodiously resound. Cowley, Man to till tha ground None was, and from the earth a dewy mist Went up, and watered all the ground. Milton,

From the other hill To their fixed station, all in bright array. The cherubim descended, on the (/round Gliding meteorous. Id.

A black bituminous gurge Boils up from under ground. Id.

Hyde stamps, and straight upon the ground the swarms Of current myrmidons appear in arms. Marvell.

And yet so nimbly he would bound. As if'he scorned to touch the ground. Hudihras.

The earth as distinguished from air and water. And, as my blessed hap And gode aventure was, right sone I founde A tabernacle reised from the grounde Where Venus sat and Cupide by her side.

Chaucer. The Court of Love, I have made man and beast upon the ground.

Jeremiah. There was a dew upon all the ground.

Judges vi. 40. They summed their wings, and soaring the' air sublime. With clang despised the ground. Milton.

Too late young Turnus the delusion found ; Far on the sea, still making from the ground.

Dryden. Milton's strong pinion, now not heaven can bound. Now serpent-like in prose he sweeps the ground.

Pope. Land ; country.

The water breaks its bounds. And overflows the level gr

Gay. Region ; territoiy.

On heavenly ground they stood, and from the shore They viewed the vast

immeasurable abyss. Milton.

With these came they, who from the bordering flood Of old Euphrates to the brook thit parts Egypt from Syrian ground, had general names Of Baalim and Ashtaroth. Id. Paradise Lost.

Estate ; possession.

Uneasy still within these narrow bounds. Thy next design is on thy neighbour's grounds: His crop invites, to full perfection grown ; Thy own seems thin, because it is thy own.

Dryden, Land occupied.

The sea o'orflowed my ground. And my best Flanders mare was drowned.

Mihon.

Tlie floor or level of the place. Wherefore should I smite thee to the ground ?

2 Sam. ii. 22. Dagon was fallen on his face to the ground.

1 Sam, V, 4. A multitude sit on the ground.

Matt, XV. 35. Some part of the month of June, tha water of this lake descends under ground, through many great holes at the bottom. Browne.

Dregs ; lees ; faeces ; that which settles at the bottom of liquors.

Set by them cyder, verjuice, sour drink, or grounds.

Mortimer. Some insist upon having had particular success in stopping gangrenes, from the use of the grounds of strong beer, mixed up with bread or oatmeal.

Sharp's Surgery. The first stratum of paint upon which the figures are after \vards painted.

We see the limner to begin with a rude draught, and the painter to lay his grounds with darksome colours. Hakewill.

When solid bodies, sensible to the feeling and dark, are placed on light and transparent grounds, as, for example, the heavens, the clouds and waters, and every other thing which is in motion, and void of dif- ferent objects ; they should be more rough, and more distinguishable, than that with which they are en- compassed. Dryden's Dufresnoy.

The fundamental substance ; that by which the additional or accidental parts are supported.

O'er his head A well-wrought heaven of silk and gold was spread Azure the ground, the sun in gold shone bright.

Cowley. Indeed it was but just that the finest lines in na- ture should be drawn upon the most durable ground.

Pope. Then wrought into the soul, let virtues shine. The ground eternal as the work divine. Young.

The plain song ; the tune on which descants are raised.

Get a prayer-book in your hand. And stand between two churchmen, good my lord j For on that ground I'll build a holy desc:int.

S!taks] > eare. First hint ; first traces of an invention ; that which gives occasion to the rest.

Though jealousy of state the' invention found. Yet love refined upon the former ground; That way the tyrant had reserved to fly. Pursuing hate, now served to bring two lovers nigh.

Dryden.

The first principles of knowledge.

The concords will easily be known, if the fore- grounds be thoroughly beaten in.

Preface to Accidence.

Here statesmen, or of them they which can read. May of their occupation find the grounds. Donne,

The grounds are already laid whereby that is un- questionably resolved ; for having granted that God gives sufficient grace, yet when he co-operates most etTectually, he doth it not irresistibly. Hammond.

After evenin;; repasts, 'till bed-lime, their thoughts will be best taken up in the easy grounds of religion, and the stor)- of scripture. X'iL'on.

The fundamental cause ; the true reason ; original principle.

And al the grounde of this his woful chauncp.

Chaucer. Complaint of the Blacke Knight.

The nsc and benefit of good laws all that live \nidcr them may enjoy with delight and comfort, albeit the

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grovndt and first original cvises from whence they have sprang be uaknown. Hooker.

It is not easy ta imagine how any such tradition could arise so early, and spread so universally, if there were not a real ground for it. Wilkins.

Nor did either of them ever think fit to make any particuljtr relation of the grounds of their pro- ceedings, or the causes of their misadventures.

Clarendon, Thou could'st not have discerned. Fraud in the serpent, speaking as he spake. No ground of enmity between us known.

Milton. In the solution of the Sabbatizer's objection, my method shall be, to examine, in the first place, the main grounds and principles upon which he buildeth.

White. He desired the steward to tell him particularly the ground and event of this accident. Sidney.

Sound judgment is the ground of writing well.

Roscommon. If it be natural, ought we not to conclude that there is some ground and reason for these fears, and that nature hath not planted them in us to no purpose.

Tillotson. Thus it appears, that suits at law are not sinful in themselves, but may lawfully be used, if there is no unlawfulness in the ground and way of management.

Kettlewell. Love once given from her, and placed in you. Would leave no ground I ever would be true.

Dryden. The miraculous increase of the professors of Chris- tianity was without any visible grmmds and cause, and contrary to all human probability and appearance.

Atterbury. Upon that prince's death, although the grounds of our quarrel with France had received no manner of addition, yet this lord thought fit to alter his senti- ments. Swift. The field or place of action. Here was thy end decreed, when these men rose ; And even with theirs this act thy death did bring. Or hastened at the least upon this ground. Daniel.

The space occupied by an army as they fight, advance, or retire.

At length the left wing of the Arcadians began to lose ground, Sidney.

Heartless they fought, and quitted soon their ground, While ours with easy victory were crowned.

Dryden,

He has lost ground at the latter end of the day, by pursuing his point too far, like the prince of Conde at the battle of Seneffe. Dryden's Fables. Preface.

The intervening space between the flyer and pursuer.

Evening mist. Risen from a river, o'er the marish glides. And gathers ground fast at the labourer's heels. Homeward returning. Milton's Paradise Lost.

Superiors think it a detraction from their merit to see another get ground lyion them, and overtake them in the pursuits of glory, Addison's Spectator

Even whilst we speak our conqueror comes on. And gathers ground upon us every moment.

Addison.

The state in which one is with respect to op- ponents or competitors.

Had'st thou swayed as kings should do_. Giving no grouiid unto the house of Vorfc, They never then had sprung.

Shakspeare. Henry VI.

If they get ground and 'vantage of the king. Then join you with them like a rib of strcl. To make them stronger. Jd. Henry IV.

Whatever ground we may have gotten upon our enemies we have gotten none upon our vices, the worst enemies of the two ; but are even subtlueii and led captive by the one, while we triumph so gloriously over the others. Id.

State of progress or recession.

I have kuown so many great examples of this cure, and heard of its being so familiar in Austria, that I wonder it has gained no more ground in other places.

Temple.

The squirrel is perpetually turning the wheel in her cage : she runs apace, and wearies herself with her continual motion, and gets no ground. Dryden.

The foil to set a thing off.

Like bright metal on a sullen ground.

My reformation glittering o'er my fault.

Shall shew more goodly, and attract more eyes.

Than that which hath no foil to set it off.

Shakspeare.

To fix on the ground.

To found, as upon cause, reason, or principle.

Wisdom groundeth her laws upon an infallible rule of comparison. Hooker.

The church of England, walking in the good and old way of the orthodoxical primitive fathers, ground- eth the religious observation of the Lord's day, and of other Christian holidays, upon the natural equity, and not upon the letter of the fourth commandment.

White.

It may serve us to ground conjectures more ap- proaching to the truth than we have hitherto met with. Boyle,

If your own actions on your will you ground.

Mine shall hereafter know no other bound.

Dryden,

Some eminent spirit having signalized his valour, becomes to have influence on the people, to grow their leader in warlike expeditions ; and this is

grounded upon the principles of nature and common reason, which, where prudence and courage are required, ra- ther incite us to fly to a single person than a multi- tude. Swift.

To settle in first principles or rudiments of knowledge.

Being rooted and grounded in love.

Eph. iii. 17. Ground, the preterite and part. pass, of grind. Now dull and rugged ere 'tis ground And polished, looks a diamond. Hudibrai.

Ground is much used in composition for that which is next the ground, or near the ground.

Ground-Ash, n.s. A sapling of ash taken from the ground ; not a branch cut from a tree.

A lance of tough ground-ash the Trojan threw. Rough in the rind, and knotted as it grew.

Dryden. .ˆneid. Some cut th young ashes ofiF about an inch above the ground, which causes them to make very large straight shoots, which they call ground-ash,*

Mortimer's Husbandry.

Ground-Bait, n. s. From ground and bait. A bait made of barley or malt boiled ; which, being thrown into the place where you design to angle, sinks to the bottom, and draws the fisˆ to it.

Take the depth of the place where you mean aflcˆ to cast yonr ground-bait, and to fish.

Walton's Angkr.

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Ground-Floor, ??. s. Ground and floor. The lower story oi a house.

Ground-Ivy, n. s. Lat. hedera terrestris. Alehoof, or tunhoof.

Alehoof or ˆroM«rf-tU3/is, in my opinion, of the most excellent use and virtue of any plants among us.

Temple.

Ground-Oak, n.s. Ground and oak.

If the planting of oaks were more in use for un- derwoods, it would spoil the cooper's trade for the making of hoops, either of hasel or ash \ because one hoop made of the young shoots of a ground-oak, would outlast six of the best ash. Mortimer.

Ground-Pine, n. s. Lat. chamapitˆs. A plant.

The whole plant has a very singular smell, resem- bling that of resin ; whence its name ground-pine. Jt grows on dry and barren hills, and in some places on the ditch banks by road sides. Hill.

Ground-Plate, n. s. In architecture. The outermost pieces of timber lying on or near the ground, and framed into one another with mor- tises and tennons. In these also are mortises made to receive the tennons of the joists, the summer and girders; and sometimes the trimmers for the stair-case and chimney-way, and the binding joist. — Harris.

In the orthographical schemr.s there should be a true delineation, if it be a timber building, of the several sizes of the ground-plates, breast summers, and beams. Mortimer.

Ground-Plot, «. s. The ground on which any building is placed.

Wretched Gynecia, where canst thou find any small ground-plot {oT hope to dwell upon? Sidney.

A ground-plot square five hives of bees contains ; Emblems of industry and virtuous gains. Harte.

Ground-Rent, n.s. Rent paid for the privi- lege of building on another man's ground.

A foot in front, and thirty-ihri;p five-sevenths deep, would bring in a ground-rent of five pounds.

Arbuthnot on Coins.

The site was neither granted him, nor given; 'Twas nature's, and the ground-rent due to heaven.

Harte.

Ground-Room, n.s. A room on the level with the ground.

I beseeched him hereafter to meditate in aground- room; for that otherwise it would be impossible for an artist of any other kind to live near him. Tatler.

These words

(compounds from

ground) signify

ˆfirmness either in

principles or sub-

I stance, and are op-

J posed to whatever

GROUND'EDLY, adv.' Ground'less, adj.

GROUNo'LESbLY, odv. GrOUNd'lESSNESS, 71. s.

Guound'linc, n. s.

Ground'ly, adv.

(Jround'work, n.s. is fictitious, causeless, or superficial. A ground- ling is a fisli wliicli keeps at the bottom of the water, and hence a name applied to the vulgar. A groundwork is the first part of an undertak- ing; the foundation ; the outline; the first prin- ciple of a science; or the original reason of a thing.

A man, groundly learned already, m.iy take much profit b'rasclf, in using by epitome to draw other men's "Oiks, 'jr his own memory sake, into shorter room.

Aivluim.

The groundicork thereof is nevenlicless true and certain, however they through ignorance disguise the same, or through vanity. Spenser. State of Ireland.

It offends me to the soul, to hear a robusteous perriwig-pated fellow tear a passion to tatters, to very rags, to split the ears of the groundUnqs.

Skakspeare. Hamlet.

The main skill and groundwork will be to temper them such lectures and explanations, upon evfrv' opportunity, as may lead and draw them in willing obedience. Milton.

He hath given the first hint of speaking ground- edly, and to the purpose upon this subject. Glanuille.

Divers persons have produced the like by spirit of vitriol, or juice of lemons ; but have yroundlessly ascribed the effect to some peculiar quality of those two liquors. Boyle on Colours.

He durst not cite the words either of my book or sermons, lest the readers should have discovered the notorious falsehood dcaA groundlessness nl)\& calumny.

Tillotson. A way there is in heaven's expanded plaiu.

Which, when the skies are clear, is seen below.

And mortals by the name of milky know ;

The groundwork is of stars. DryderCt Fables.

The moral is the first business of the poet, as being the groundwork of his instruction. Dryden.

But when vain doubt and groundless fear

Do that dear foolish bosom tear. Prior.

We have great reason to look upon the high pre- tensions which the Roman church makes to miracles as groundless, and to reject her vain and fabulous ac- counts of them. Atterbury.

The party who distinguish themselves by their zeal for the present establishment, should be careful to discover such a reverence for religion, as may shew how groundless that reproach is which is cast upon them, of being averse to our national worship.

Freeholder.

GRO'UNDSEL, n. s. Sax. ˆfiund and yiU; the basis, perhaps from Lat. sella. The timber or raised pavement next the ground.

The window-frame hath every one of its lights rah- betted on its outside about half an inch into the fraino • and all these rabbets, but that on the groundsel, are grooved square ; but the rabbet on the groiuidscl is levelled

downwards, that rain or snow may the freelicr fall off. iVoxun.

Gko'undsel, n. s. Lat. senccio. A plant.

GROU P, n. s. & V. a. Fr. groupc ; \i:i. grap- pa, a bunch or knot. See Grape. A crowd ; a cluster ; a hurdle ; a number tlironged together.

lu a picture, besides the principal figures which compose it, and are placed in the midst of it, there are less groups or knots of figures disposed at proper distances, which are parts of the piece, and seem to carry on the same design in a more inferior manctcr. Dryden's Dufresnoy.

The difiiculty lies in drawing and disposing, or, as the painters term it, in grouping such a multitude of different objects, preserving still the justice and con- formity of stile and colouring. Prior.

I cannot doubt but the poet had here in view the

picture of Zctus, in the famous group of figures which

represents the two brothers binding Dircc to the horns

of a mad bull. Addison,

You should try your graving tools

On this odious group of fools. Swi/t.

Such were the sounds that thrilled the rocks along. And unto ears as rugged seemed a song! In scattered groupes upon the golden sand They game — carouse — converse — or whet the briind.

Jiyron. Corsair.

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G/ioups, The, a name given by captain Cook to several islands in the South Pacific Ocean, in 1 769 ; and extending from north-west by north, to south-east by south, about nine leagues. The two largest are separated from each other by a channel about half a mile broad, and surroundc-i by small islands, to which they are joined by reefs. These islands are supposed to have been first discovered by Roggewein. The southern- most lies in long. 142° 42′ W., lat. 18° 12′ S.

GROUPUS,a handsome sea-port on the coast of Brasil, South America. It has a fine and ca- pacious harbour, with good anchorage. The climate is good; and the soil yields 100 fold for ■whatever is planted in it. It is particularly noted for its delicious fruits. Lat. 26° 26′ S.

GROUSE, n. s. Lat. ericeus. A kind of fowl ; a heath-cock.

The 'squires in scorn will fly the house

For better game, and look for grouse. Swift,

Grouse, or Growse. See Tetaro.

GROUT, n. s. Sax. jf^ur. In Scotland they call it groats. Coarse meal or pollard ; that which purges off; a kind of wild apple.

Sweet honey some condense, some purge iheffrout ; The rest, in cells apart, the liquid nectar shout.

Drt/den.

King Hardicanute, 'midst Danes and Saxons stout. Caroused in nut-brown ale, and dined on grout: Which dish its pristine honour still retains. When each prince is crowned in splendour reigns.

King,

GROUTHEAD, or Greathead (Robert), a learned bishop of Lincoln, born at Stow in Lin- colnshire, or Stradbrook in Suffolk, in the end of the twelfth century. His parents were so poor, that when a boy he was obliged to do the mean- est offices, and even to beg his bread; till the mayor of Lincoln, struck with his appearance, took him into his family, and put him to school. Here his ardent love of learning soon appeared, and procured him many patrons, who enabled him to prosecute his studies, first at Cambridge, afterwards at Oxford, and at last at Paris. In these three famous seats of learning he spent many years in the most indefatigable pursuit of knowledge, and became one of t!ie most univer- sal scholars of the age. He was master not only of the French and Latin, but also of the Greek and Hebrew languages, a very rare accomplish- ment in those times. Roger Bacon, who was intimately acquainted with him, says tliat he spent much of his time for almost forty years in the study of geometry, astronomy, optics, and other branches of mathematical learning, in all ■which he very much excelled. Theology was liis favorite study, in which he read lectures at Oxford with great applause. In the mean time he obtained several preferments in the church, and was at length elected and consecrated bishop of Lincoln, A. D. 1235. In this station he soon became

celebrated for the purity of his manners, the popularity of his preaching, the vigor of his discipline, and the boldness with which he re- proved the vices, and opposed the arbitrary man- dates of the court of Rome ; of this last we shall give one example. Pope Innocent IV. had granted to one of his own nephews, named Fre- derick, who was but a child, a provision to the

*first canon's place in the church of Lincoln thaf should become vacant ; and sent a bull to the archbishop of Canterbury, and Innocent, then papal legate in England, commanding them to see the provision made effectual ; which they transmitted to the bishop of Lincoln. But that brave and virtuous prelate boldly refused to obey this unreasonable mandate, and sent an answer to the papal bull, containing a severe reproach against his holiness for abusing his power : ' If we except,' said he, 'the sins of Lucifer and Antichrist, there neither is nor can be a greater crime, nor any thing more contrary to the doc- trine of the gospel, or more odious and abomi- nable in the sight of Jesus Christ, than to ruin and destroy the souls of men, by depriving them of the spiritual aid and ministry of their pastors. This crime is committed by those who command the benefices intended for the support of able pastors, to be bestowed on those who are incapa- ble of performing the duties of the pastoral office. It is impossible, therefore, that the holy apostolic see, which received its authority from the Lord Jesus Christ, for edification, and not for destruction, can be guilty of such a crime, or any thing approaching to such a crime, so hate- ful to God, and so hurtful to men. For this would be a most manifest corruption and abme of its authority, which would forfeit all its glory, and plunge it into the pains of hell.' Upon reading this letter, his holiness became frantic with rage, and threatened to make the bishop an object of terror and astonishment to the whole world. * How dare,' said he, ' this old, deaf, doating fool, disobey my commands? Is not his master the king of England my subject? Can- not he cast him into prison, and crush him in a moment ?' But the cardinals induced the pope to think more calmly, and to take no notice of this letter. The bishop did not long survive this noble stand against the gross corruptions and tyranny of the church of Rome. He fell sick at his castle of Bugden that same year; and, sen- sible that his death was drawing near, he called his clergy into his apartment, and made a long discourse to them, to prove that the reigning pope Innocent IV. was Antichrist. With this exertion, his strength was so much exhausted, that he expired soon after, October 9th, 1253. A contemporary historian says, ' He was a free and bold reprimander of the pope and the king; an admonisher of the prelates ; a corrector of the monks; an instructor of the clergy ; a supporter of the studious ; a censurer of the incontinent ; a scourge and terror to the court of Rome ; a diligent searcher of the scriptures ; and a frp- quent preacher to the people. At his table he was hospitable, polite, and cheerful. In the church he was contrite, devout, and solemn; and in performing all the*

duties of his office he was venerable, active, and indefatigable.' The illustrious Roger Bacon has given this honor- able testimony in his favor : — ' Robert Grouthead, bishop of Lincoln, and his friend friar Adam de Marisco, are the two most learned men in the world, and excel all the rest of mankind both in divine and human knowledge.' This excellent prelate was a very voluminous writer, and com- posed a prodigious number of treatises on a

gre^t. variety of subjects in philosopliy and divinity, a catalogue of which is given by Bayle. GRC)\V, V. n. preter. grew, part. paxx. 'j:rown. Sax. jjiopan ; Belg. groyen ; Goth, groa ; Swed. gro. The general idea given by this word is procession or passage from one state to another. It is always change, but not always increase; for a thing may grow less, as well as grow greater. To vegetate ; to have vegetable motion ; to in- crease by vegetation.

He causeth the grass to grow for the cattle, and her!) for the service of man. Psalm civ. 14.

It is not the groiving of fruit that nourish man ; but it is thy word which preserveth them. Wisd. xvi. 26. To be produced by vegetation.

And the tliird apple of the thre. Which groweth lowest on the tree, ' Who it beres, ne may not faile That to his plesaunce may availe.

Chaucer's Dreame. A bag .hA. groweth in the fields, at the first is hard like a tennis-ball, and white, and a^fler groweth of a mushroom-colour, and full of light dust.

Bacon's Natural History. In thi? country groweth abundance of that wood, which since is brought into Europe to die red colours.

Abbot. But say, where grows the tree ? from hence how far ?

Milton. In colder regions men compose Poison with art ; but here it grows. yValler, Those towers of oak o'er fertile plains might go, And visit mountains where they once -did grow. Id. To shoot m any particular form.

Children, Like tender osiers, take the bow ; And, as they first are fashioned, always ^irojc.

Dryden's Juvenal. To increase in stature.

The poor man had nothing, save one little ewe-lamb, which he had bought and reared up ; and it grew up together with him and with his children.

2 Sanx. xii. 3. I long with all my heart to see the prince ; I hope he is much grown since last I saw him.

Shakspeare. Richard III.

To come to manhood from infancy ; commonly followed by up.

To mischief trained, e'en from his mother's womb. Grown old in fraud, though yet in manhood's bloom. Adopting arts, by which gay villains rise. And reach the heights which honest men despise.

Churchill. Oft am I by the women told. Poor Anacreon ! thou ˆrou'e«(old. Cowley. Now the prince ˆroioe/A up fast to be a man, and is of a sweet and excellent disposition.

*Bacon's Advice to Villiers. The miin thing to be considered, in every action of * child, is how it will become him when he is bigger, «nd whither it will lead him when he is grown up.*

Locke. We are brought into the world children, ignorant and impotent ; and ve grow up in vanity and folly.

yVake. But who can view the ripened rose, nor seek To wear it ? who can curiously behold

The smoollinrss and the sheca of beauty's cheek, Kor feel the heart can never all grow old.

Byron. C'hilde Harold.

To issue, as plants from a soil, or as branches from the main trunk.

*They will seem not struck into him, but growing out *f hun. Dryden's jEneid, Dedication.*

To increase in bulk ; to become greater, or more numerous.

Bones, after fuil growth, continue at a stay : as for nails, they grow continually.

Bacon's Natural History. Then their numbers swell. And grow upon us. Denham.

Divisions grow upon us, by neglect of practick duties : as every age degenerated from primitive piety, they advanced in nice enquiries. Decay of Piety,

To improve ; to make progress.

Grow in grace, and in the knowledge of our Lord and Saviour Josus Christ. 2 Pet. in. 18.

He then dispensed his best of legacies, his blessings ; most passionately exhorting the young growing hopes of the family. Fell.

As he grew forward in years he was trained up to learning, unfler one Pronapides, who taught the Pelas- gick letter, invented by Linus. Pope.

To advance to any state.

They doubted whereunto this would grow.

Acts V. 24. Nature, as \t grows again towards earth. Is fashioned for the journey dull and heavy.

Shakspeare. The king, by this time, •vtz.% grown to such an height of reputation for cunning and policy, that every acci- dent and event that went well was laid and imputed to his foresight. Bacon.

But when to ripened manhood he shall grow. The greedy sailor shall the seas forego. Dryden.

To come by degrees ; to reach any slate gradually.

After they grew to rest upon number, rather compe- tent than vast, they ˆretc to advantages of place, cun- ning diversions, and the like ; and they grew mora skilful in the ordering of their battles.

Bacon's Essays. The royal evil so malignant grows, Notliing the dire contagion can oppose.

Marvell. Verse, or the other harmony of prose, I have so long studied and practised, that they z.Te grown into a habit, and become familiar to me. Dryden.

The trespasses of people are grown up to heaven, and their sins are got beyond all restraints of law and authority. Rogers,

To come forward ; to gather ground.

Some seeing the end of their government nigh, and troublous practice growing up, which may work trouble to the next governour, will not attempt redress.

Spenser on Ireland.

It was now the beginning of October, and Winter began to grow fast on : great rain, with terrible thun- der and lightning, and mighty tempests, then fell abundantly. Knollet.

To be changed from one state to another ; to become either better or worse ; to turn. A good man's fortune may grow out at hceJs.

Shakspeare. Scipio Nasica feared lest, if the dread of that enemy were taken away, the Koinaus would grow cither to idleness or civil dissension. Abbot.

Tell me of liberty, the story's fine. Until you all grow consuls in your wine.

Sfarvcll. Hence, hence, and to some barbaroui climate fly. Which only brutes in human form does yield. And vadin grows wild in nature's common field.

D-yden. The nymph grew pale, and in a mortal fright, Spent with the labour of so long a flight. Id,

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Patient of rommanJ

In time he grew ; and growing used to hand.

He waited at his master's board for food. Id.

We may trade and be busy, and gruw poor by it, inless we regulate our expences. Locke.

Delos, by being reckoned a sacred place, grew to be a free port, where nations warring traded, as in a neu. tral country. Arhuthnot.

As with cold lips I kissed the sacred veil. The shrines all trembled, and the lamps grew pale.

Po])e.

You will grow a thing contemptible, unless you can supply the loss of beauty with more durable qualities.

Swift.

Some for renown, on scraps of learning doat, And think they grow immortal as they quote. Young. By degrees the vain, deluded elf.

Grew out of humour with his former self. Harts.

To proceed as from a cause or reason.

Take heed now that ye fail not to do this : why should damage grow to the hurt of the king ?

Ez. iv. 22.

What will grow out of such etrours, as masked under the cloak of divine authority, impossible it is that ever the wit of man should imagine, 'till time have brought forth the fruits of them. Hooker.

Shall we set light by that custom of reading, from whence so precious a benefit hath grown 1 Id.

Hence grows that necessary distinction of the saints on earth and the saints in heaven ; the first belonging to the militant, the second to the triumphant church.

Pearson.

The want of trade in Ireland proceeds from the want of people ; and this is not grown from any ill qualities of the climate or air, but chiefly from so many wars. Temple.

To accrue ; to be forthcoming.

Even just the sum that I do owe to you.

Is growing to me by Antipholis. Shakspeare.

To adhere ; to stick together.

Honour and policy, like unsevered friends,

I' the' war do grove together. Id. Coriolanus.

The frog's mouth grows up, and he continues so for at least six months without eating. Walton.

In burnings and scaldings the fingers would many times grow together ; the chin would grow to the breast, and the arms to the sides, were they not hindered. Wisejnart's Surgery.

To swell: a sea term.

Mariners are used to the tumbling and rolling of ships from side to side, when the sea is never so little mown. Raleigh.

GROWN, adj. } Advanced in growth :

Growth, n. s. S covered or filled by the growth of any thing.

I went by the field of the slothful, and by th-e vine- yard of the man void of understanding ; and lo, it was all grown over with thorns, and nettles had covered the face thereof. Proverbs.

Arrived at full growth or stature.

I saw lately a pair of China shoes, which I was told were for a grown woman, that would scarce have been big enough for one of our little girls. Locke.

Vegetation ; vegetable life ; increase of vegeta- tion.

Deep in the palace of long growth there stood A laurel's trunk of venerable wood.

Dryden's jˆEneid,

Those tree that have the slowest growth, are, for that reason, of the longest continuance. Atterbury.*

Product ; production ; thing produced ; act of producing.

Fo:biddi.ig every bleak unkindly fog To touch the prosperous growth of this tall wood.

Milton.

The trade of a country arises from the native ˆrou)

I had thought, for the honour of our nation, that the knight's tale was of English growth, and Chaucer's own. Dry den.

Our little world, the image of the great. Of her own growth hath all that na'.ure craves, And all that's rare, as tribute from the waves. Waller.

Increase in number, bulk, or frequency. What I have tried, or thought, or heard upon this subject, may go a great way in preventing the growth of this disease, where it is but new. Temple.

Increase of stature; advance to maturity. They say my son of York Has almost overtaken him in his growth.

Shakspeare. The stag, now conscious of his fatal growth. To some dark covert his retreat had made.

Denliam. Though an animal arrives at its full growth at a certain age, perhaps it never comes to its full bulk 'till the last period of life. Arhuthnot on Aliments.

If parents should be daily calling upon God in a solemn, deliberate manner, altering and extending their intercessions, as the state and growth of their children required, such devotion would have a mighty influence upon the rest of their lives. Law.

Improvement ; advancement. It grieved David's religious mind to consider the growth of his own estate and dignity, the ififairs of re- ligion continuing still in the former manner.

Hooker.

GROWER, n.s. From grow. An increaser.

It will grow to a great bigness, being the quickest grower of any kind of elm. Mortimer.

To GROWL, V. n. Flem. grollen. To snarl or murmur like an angry cur : to murmur ; to grumble.

Othello, neighbours — how he would roar about a foolish handkerchief ! and then he Would growl so man- fully. Gay. They roam amid the fury of their heart.

And growl their horrid loves. Thomson's Spring.

Dogs in this country are of the size of common ma«- tifis, and by nature never bark, but growl when they are provoked. Ellis.

GRO'VVTHEAD, n.s.J La.t. capita. From

Gro'wtnol, n. s. S gross or greathead.

A kind of fish.— Ainsworth. An idle lazy fellow. Obsolete.

Though sleeping one hour refresheth his song. Yet trust not Hob growthead for sleeping too long.

Tusscr.

GRUB, t;. a. &n.s. ˆ Goth, graban, preter.

Grub'ble, v.n. S gfˆb, to dig. To dig up; root out of the ground ; eradicate. A grub is a small worm that eats holes in bodies; a dwarf: to grubble, to feel in the dark.

There is a difi'erence between a grub and a butterfly, and yet your butterfly was a grub. Shakspeare.

John Romane, a short clownish grub, would bear the whole carcase of an ox, yet never tugged with him. Carew.

Thou hast a colour ; Now let me rowl and grubble thee : Blind men say white feels smooth, and black feels

rough : Thou hast a ragged skin ; I do not like thee.

JJrydcn.

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Ne'.T creatures rise, A moving mass at first, and short of thighs ; 'Till shooting out with legs, and imped with wings. The grubs proceed to bees with pointed stings. Id.

Forest land, From whence the suily ploughman grubs the wood.

Id. A foolish heir caused all the bushes and hedges about his vineyard to be grubbed up. L' Estrange.

The grubbing up of woods and trees may be very needful, upon the account of their unthrifiiness.

Mortimer, The grub, Oft unobserved, invades the vital core ; Pernicious

tenant! and her secret cave Enlarges hourly, preying on the pulp Ceaseless. Philips.

As for the thick woods, which not only Virgil but Homer mentions, they are most of them grubbed up, since the promontory has been cultivated and in- habited. Addison on Italy.

Grub, in zoology, is the English name of the hexapode worms, produced from the eggs of beetles, &c., and which at length are transformed into winged insects of the same species with their parents. See Ep.uca.

GRUBENHAGEN, a principality of the kingdom of Hanover. It is fertile, but the greater part is mountainous, and, besides feed- ing a great number of sheep and black cattle, abounds with mines of silver, copper, lead, iron, sulphur, calamine, and zinc; quarries of marble, slates, limestones, alabaster, and jasper of dif- ferent kinds. It has also some mines of gold, but these are not rich. The forests abound with oak, beech, firs, elms, &c. The inhabitants are Lutherans, and carry on linen manufactures. Eimbeck is the capital. Population about

60,000.

GRU'BSTREET, n. s. The name of a street, near Moorfields, London, much inhabited at one time by writers of small histories, dictionaries, and temporary poems ; whence any mean pro- duction is called Grubstreet.

*Xai'p l^aKT) ftsT di^Xa, fier' dkyia niicpa ' AoTcaaiisiQ rkov ncag ifcavo/ iai. The first part, though calculated only for the me- ridian of Grubstreet, *vas yet taken notice of by the better sort. Arbuthrwt,*

I'd sooner ballads write, and Grubstreet lays.

Gay. GRUCIUS (Nicolas), a French author of the sixteenth century, born at Rouen. He is said to have been the first who lectured on Aristotle in Greek. He wrote several works: the chief of which are, 1. A Treatise De Comitiis Romano- rum: 2. Tracts against Sigonius : and A Trans- lation of Castanedo's History of the Indies. He died at Rochelle, in 1572.

GRUDGE, t;.«.,v. 71. &7i. s."^ Sax. jcwjiaec, Gritdg'ingly, adv. >fromFr.^n/ger,

GuuTCH, V. H. & n. s. 3 according to

Skinner, to grind or eat. In this sense we say of one who resents any thing secretly he chews it. Grngnacfi, in Welsh, is to murmur ; to grumble. Grunigh, in Scotland, denotes a grumbling morose countenance. To envy ;

re- pine; to give unwillingly ; to murmur: an old quarrel ; malevolence ; sullenness ; anger ; re- morse ; reluctance

Grudge not one against another, brethren, lest ye be condemned. James v. 9.

He gan to grutch, and blamen it a lete.

Chaucer. Prologue to the Reves 2'ale. For where a lover thinking promote, Envie wil gnUche, repining at his wele.

Id. The Court of Lone. The poor at the enclosure doth grutch.

Because of abuses that fall. Lest some men should have but too much. And some again nothing at all.

Tusser's Husbandry. They knew the force of that dreadful curse, where-unto idolatry maketh subject; nor is there cause why the guilty sustaining the same should grudge or com- plain of injustice. Hooker. 'Tis not in thee To grudge my pleasures, to cut off my train.

Shakspeare, Two households, both alike in dignity. From ancient grudge break to new mutiny. Where civil blood makes civil hands unclean. Id.

Let me go in to see the generals : There is some grudge between 'em ; 'tis not meet They be alone. Id. Julius Caesar,

Many times they go with as great grudging to tervb in his majesty's ships, as if it were to be slaves in the gallies. Raleigh.

Those to whom you have With grudge preferred me. Ben Jonson. But what we're born for wˆe must bear. Our frail condition it is such.

That what to all may happen here. If 't chance to me I must not grutch. Id.

In it he melted leaden bullets To shoot at foes, and sometimes pullets ; To whom he bore so fell a grutch. He ne'er gave quarter to' any such. Hudibras. What means this banishing me from your counsels 7 Do you love your sorrow so well, as to grudge me pjirt of it ? Sidney.

Many countries about her were full of wars, which, for old grudges to Corinth, were thought still would conclude there. Id.

He struggles into birth, and cries for aid; Then helpless in his mother's lap is laid : He creeps, he walks ; and, issuing into man. Grudges their life from whence his own begsm.

Dryden. These clamours with disdain he heard. Much grudged the praise, but mire the robbed reward. Id,

My Dolabclla, Hast thou not still some grudgings of thy fever?

Id. You steer betwixt the country and the court, Nor gratify whate'er the great desire, N'or grudging give what publick needs require.

Id. Fables. E'en in the most sincere advice he gave. He had a grudging still to be a knave. Id.

Let me at least a funeral marriage crave. Nor grudge my cold embraces in the grave. Id,

Like harpies they could scent a plenteous board ; Then to be sure they never failed their lord : The rest was form, and bare attendance paid ; Then drank and eat, and grudgingly obeyed. Id.

Do not, as some men, run upon the tilt, and taste of the sediments of a grudging uncommunicative dis- position. Addison. Spectator.

They h&ve grudged those contributions, which have set our country at the head of all the governments of Europe. AdJtson.

Deep festered hate : A grudge in both, time out of mind, begun. And mutually bequeathed from sire to son.

Tale. We do not grudge or repine at our portion, but are Contented with those circumstances which the provi- dence of God hath made to be our lot. Nelson.

Let us consider the inexhausted treasures of the ocean ; and though some have grudged the great share that it takes of the surface of the earth, yet we shall propose this too, as a conspicuous mark and charac- ter of the wisdom of God. Bentley.

I have often heard the Presbyterians say they did not grudge us our employments. Swift.

The god of wit, to shew his grudge, Clapt ass's ears upon the judge. Id.

GRUEL, n. s. Fr. gruau, gruelle. Food made by boiling oatmeal in water ; any kind of mixture made by boiling ingredients in water. Finger of birth-

strangled babe. Ditch-delivered by a drab ; Make the gruel thick and slab.

Shakspeare. Macbeth. Was ever Tartar fierce or cruel Upon the strength of water gruel ? Prior, Gruel made of grain, broths, malt drink not much hopped, posset-drinks, and in general whatever relax- eth. Arbuihnot.

But keen Xantippe scorning borrowed flame. Can vent her thunders and her lightnings play O'er cooling gruel and composing tea. Young.

GRUFF, adj. ˆ Belg. groff; Swed. grof. Gruff'ly, adu. > Sour of aspect; harsh of Gruff'ness, 71. s. J manners ; rugged ; rough. Hoarse as applied to sounds.

The form of Mars high on a chariot stood. All sheathed in arms, und gruffiy looked the god.

Dryden. The appellation of honour was such an one the gruff, such an one the stocky. Addison.

*Around the fiend, in hideous order, sat Foul bawling infamy and bold debate, Grt*ˆ discontent through ignorance misled.*

Garth.

GRUM, adj. Grum'blf., v. n.

GRtrM'BLfR. n !

-\ Gothic grum, anger, / Swed. grumla, io trouble. To ir.urmur with discon Grum'bling, n. s. i tent; to growl; to make Grcm'ly, adv. J a deep hoarse noise as tti"under ; to mutter.

A bridegroom A grumbling groom, and that the o-irl shall find.

Shakspeare. Than grumhlest and railest every hour on Achilles, and thou art as full of envy at his greatness as Cer- berus is at Proserpina's beauty. Id. I have served Without or grudge or grumblings. Id. The' accurst Philistian stands on the' other side. Grumbling aloud, and smiles 'twixt rage and pride.

Cowley The lion, though he sees the toils are set. Yet pinched with raging hunger, scours away ; Hunts in the face of danger all the day ; At night, with sullen pleasure, grumbles o'er his prey.

Dryden. Providence has allotted man a competency : all beyond it is superfluous ; and there will be grumbling without end, if wc reckon that we want this, because we have it not. L' Estrange.

Suitors, all but one, will depart grumbling, because they miss of what they think their due. South.

GRUME, ?t. s. ˆ Fr. grumeau ; Lat.

Gru'mous, ad']. 'grum us. A thick viscid

Gru'mousn ESS, n. s.ˆ consistence of a fluid;

as the white of an egg, or clotted like cold blood.

■ *— Quinci/.*

GRUNBERG, a considerable manufacturing town of Silesia, the chief place of a district in the principality of Glogau. The inhabitants are employed chiefly iA manufacturing cloth. The environs of the town are fertile, and partly under the culture of the vine. Fullers' earth is also found here. Twenty miles north of Sagau, and thirty north-west of Gross Glogau. Population

8000.

Gruner, Charles Justus von, born Feb. 28th, 1777, studied in Halle and Gbttingen. In 1803, he received an office under the Prussian government. When the French entered Posen, Gruner was making a collection for the widow of Palm, the bookseller, who was shot by the French for having published a pamphlet against them. Gruner was therefore denounced to mar- shal Davoust as a suspicious person ; upon which he went himself to Davoust with the list of sub- scribers, and the marshal subscribed a large sum. Afterwards, feeling unsafe, he fled to Tilsit. He was then appointed the president of the police in Berlin, at that time a very dangerous and deli- cate situation. In 1811, he was indirectly obliged, by the French, to give up his office. In 1 812, he went to Bohemia (whether sentby govern- ment or not is not known), and, supported by Russia and England, established connexions throughout Germany for the overthrow of Napo- leon's dominntion. The plan was to begin with the burning of the French magazines, when their troops were far advanced in Russia ; but the vigilance of the French rendered this plan abortive,and the Prussian government was obliged to demand his arrest of the Austrian government. He remained in confinement a year, when the Russian government delivered him from his prison. During the war against the French, he was appointed governor of the Rhenish provinces, where he was very active. The emperor of Russia conferred on him the order of St. Anne of ihe first class. After Napoleon's second fall, he was made Prussian director of the police for Paris and the environs, in which capacity he counteracted, with great decision and dexterity, the cunning of Fouche, who employed every

means to retain the works of art which had been collected in Paris. After the peace, the king of Prussia made him a noble, and appointed him minister to the Swiss republics. He died Feb. 8th, 1820. Gruner has written several valuable works on subjects connected with politics and tlie police.

GRUNSEL, n.s. More usually groundsil unless Milton intended to preserve the Saxon SriunD, says Dr. Johnson. The groundsel ; the lower part of the building.

GRUNT, V. n. & w. s. -j Lat. grunnio ; Goth, fand Swed. runte,

ˆboar. To murmur like ˆahog; a young pig.

Gruntle, v. n. Grunter, n. s, Gruntling, n. s.

And ni-igh, and bark, and grunt, and roar, and burn. Like horse, hound, hog, bear, fire, at every turn.

Shdhˆpearc.

G 11 Y L L U S.

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Cased all in loathsome mire : no word ; Gryll could but grunt. Fletclier'i Purple Island.

The sophist's rope of cobweb he shall twine. Mope o'er the schoolman's peevishness ; or mourn And delve for life in Mammon's dirty mine. Sneak with the scoandrel fox, or grunt with glutton swine. Beattie.

GRUTER (James), a learned pliilologer, and one of the most laborious writers of his time, was born at Antwerp in 1560. When a child, his father and mother, being persecuted for the Pro- testant religion by the duchess of Parma, carried him into England. He imbibed the elements of learning from his mother, who was one of the most learned women of the age, and besides French, Italian, and Englisˆh, was a complete mistress of La'in, and well skilled in Greek. He studied at Cambridge, afterwards atLeyden, and at last applied himself wholly to polite literature. After travelling much he became professor in the University of Heidelburgh ; near which city he died in 1627. He wrote many works; the prin- cipal are, 1. A large collection of Ancient In- scriptions. 2. Thesaurus Criti^us. 3. Deliciae Poetarum Gallorum, Italorum, et Belgaruin, &c. GRUTLIN, a plain of Switzerland, near the lake of the Four Cantons, in the canton of Uri, famous for being the scene of the association of the three first cantons, in defence of their liberty, A. D. 1307.

GRUYERES, Gruyers, or Gruyires, atown, and formerly county and bailiwic of Switzerland, in the canton of Friburg, famous for cheese ; which is exported to a considerable amount to France, Germany, and Italy. A dangerous in- surrection broke out here in 1781, which threat- ened the destruction of the city of Friburg, before it was quelled by the assistance of troops from Berne. It lies fifteen miles south of Fri- burg. Long. 7° 23′ E., lat. 46° 35′ N.

GRYLLUS, the son of Xenophon, who slew the celebrated Theban general Epaminondas, and was also killed himself at the battle of Man- tinea, A. A. C. 363. Xenophon, who was sacri- ficing when he heard of his death, instantly threw off his garland, but, upon being farther in- formed that his son had slain the enemy.'s gene- ral, immediately replaced it.

Gryllus, in entomology, a genus of insects, belonging to the order of hemiptera, compre- hending the crickets, locusts, and grasshoppers. The general characters are these : tiie head is inflected, armed with jaws, and furnished with palpi : the antenna filiform ; the wings are de- flected towards and wrapped round the sides of the body ; the under ones are folded up, so as to be concealed under the elytra ; the thorax is flat and marginated. All the feet are arrced with two nails; and the hind ones are formed for leaping. Under our article Entomology we have in some measure described the habits of this destructive genus of insects, and their depre- dations on particular occasions. We shall here, therefore, only enumerate- the different species, with an account of some of their haunts, habits, &c.

G. campestris, the field cricket, and the do- mestic cricket, are varieties of the same spe- cies, differing only in color and habits; the

latter being paler colored, and having more of a yellow cast, and the former more of a brown. The antennae are as slender as a thread, and nearly equal to the body in length. The head is large, and round, with two large eyes, and three smaller ones of a light yellow color, placed higher on the edge of the depression, from the centre of which originate the antenn« ; the thorax is broad and short. In the males the elytra are longer than the body, veined, as it were rumpled on the upper part, crossed one over the other, and en- folding part of the abdomen, with a projecting angle on the sides ; they have also at their base a pale-colored band. In the females the elytrt; leave one-third of the abdomen uncovered, and scarcely cross each other ; and they are all over of one color, veined and not rumpled : nor do they wrap round so much of the abdomen un- derneath. The female, moreover, carries at the extremity of its body a hard spine, almost as long as the abdomen, thicker at the end, com- posed of two sheaths, which encompass two la- minae : this implement serves the insect to sink and deposit its eggs in the ground. Both the male and female have two pointed

soft appen- dices at the extremity of the abdomen. Their hinder feet are much larger and longer than the rest, and serve them for leaping. They are very shy and cautious, and, feeling a person's footsteps as he advances, they stop short in the midst of their song, and retire backwaTd nimbly into their burrows, where they lurk till all suspicion of danger is over.

G. domesticus, the domestic or hearth cricket, does not require to be sought after for examina- tion : it resides altogether within our dwellings, intruding itself upon our notice, whether we wish for it or not.

G. gryllotalpa, the mole cricket, is of a very unpleasant form. Its head, in proportion to the size of its body, is small and oblong, with four long thick palpi, and two long antennae as slender as threads. Behind the antennae are situated the eyes, and between those two eyes are seen three stemmata or less eyes, amount- ing to five in all, set in one line transversely The thorax forms a kind of cuirass, oblong, almost cylindrical, which appears as it were velvtty. The elytra, which are short, reach but to the middle of the abdomen, are crossed one over the other, and have large black or brown nervous fibres. The wings terminate in a point, longer not only than the elytra, but even than the abdomen. This latter is soft, and ends in two points or appendices of some length. But the chief singularity of this insect is in its fore feet, which are very large and flat, with broad legs, ending outwardly in four large ser- rated claws, and inwardly in two only; between which claws the tarsus is situated. The whole animal is of a brown dusky color. It haunts moist meadows, and frequents the sides of ponds and banks of streams, performing all its func- tions in a swampy wet soil. With a pair of fore-feet, curiously adapted to the purpose, it burrows and works under ground like the mole, raising a ridge as it proceeds, but seldom throw- ing up hillocks. As mole crickets often infest gardens by the sides of canals, they are un-

welcome guests to the gardener, raising up ridges in their subterraneous progress, and ren- deiing the walks unsightly. If they take to the kitchen quarters, they occasion great damage among the plants and roots, by destroying whole beds of cabbages, young legumes and flowers. When dug out, they seem very slow and helpless, and make no use of their wings by day ; but at night they come abroad, and make long excur- sions. In fine v.eather about the middle of April, at the close of day, they begin to solace themselves with a low, dull, jarring note, con- tinued for a long time without interruption, and not unlike the chattering of the fern owl, or goat- sucker, but more inward. About the begin- ning of]May they lay their eggs,

as Mr. White informs us, who was once an eye-witness : for a gardener, at a house where he was on a visit, happening to be mowing on the 6th of that month, by the side of a canal, his scythe struck too deep, pared off a large piece of turf, and laid open to view a curious scene of domestic economy. There were many caverns and wind- ing passages leading to a kind of chamber neatly smoothed and rounded, and about the size of a moderate snuff-box. Within this secret nursery were deposited near 100 eggs of a dirty yellow color, and enveloped in a tough skin, but too lately excluded to contain any rudiments of young, being full of a viscous substance. The eggs lay but shallow, and within the influence of the suii, just under a little heap of fresh mowed mould, like that which is raised by ants. When mole crickets fly, they move ' cursu wndoso,' rising and falling in curves, like the other species mentioned before. In different parts of this kinudom people call them Fen- crickets, churr-worms and evechurrs, all very apposite names.

G. locustae (the grylli of Fabricius), or locusts unarmed at the tail. This family is distmguished by having the tail purple : their antenrae are filiform or cyHndrical, and half shorter than the abdomen ; they have three stemmata, and three joints to the tarsi. According to the observation of the abbe Pouet, those which have their abdo- men furnished with the tube or dart, above men- tioned, lay their eggs in a stifi' sort of earth which that instrument perforates. During the operation the dart opens ; and, being hollow and grooved on each side within, the egg slides down along the grooves, and is deposited in tite hole. Of those which have the tails simple, i. e. which have no dart, some have long wings, and some very short. The long winged sort lay their eggs on tlie bare ground, and have no use for a per- forating instrument ; but they cover them with a glutinous substance, which fixes them to the soil, and prevents their being injured either by wind or wetness. Those, again, which have short wings, deposit their eggs in the sand ; and, to make the holes for this purpose, they have the power of elongating and retracting their abdo- minal rings, and can turn their body as on a pivot ; in which operation long wings would have been a material impediment. The annals of most warm countries are filled with accounts of the devastations produced by locusts,

•which sometimes appear in clouds of vj:st extent.

G. tettigonise, grasshoppers, or locusts armed at the tail. The females of this family are dis~ tinguished by a tubular dart at the extremity < >. their abdomen : in both sexes the antennce are setaceous, and longer than the abdomen; and the tarsi composed of four articulations. They leap by the help of their hinder legs, which are strong and much longer than the fore ones. Their walk is heavy, but they fly tolerably well. Their females deposit their eggs in the ground, by means of the appendices which they carry in

their tail, which consist of two laminae, and penetrate the ground. They lay a great numner of eggs at a time; and those eggs, united in a thin membrane, form a kind of group. The little larva; that spring from them are wholly like the perfect insects, excepting in size, and their having neither wings nor elytra, but only a kind of knobs, four in number, which contain both, but undisplayed. The unfolding of them only takes place at time of the metamorphosis, w hen the insect has attained its full growth. In these insects, when examined internally, besides the gullet, we discover a small stomach; and, behind that, a very large one, wrinkled and fur- rowed within side. Lower down there is still a third ; so that it is thought, and with some pro- bability, that all the animals of this genus chew the cud, as_ they so much resemble ruminant animals in their internal conformation.

G. verrucivorus, the wart-eating grasshopper, has green wings, spotted with brown, and is caught by the common people in Sweden to destroy warts, which they are said to do by biting off the excrescence and discharging a corrosive liquor on the wound.

GRYN-1-.US (Simon), a learned German, tlie son of a peasant of Suabia, born at 'eringe;i, in IlohenzoUern, in 1493. He was Greek professor at Vienna, and afterwards at Heidelberg, in 1523. Being a Protestant he was exposed to much persecution, and in 1531 took refuge iii England ; where he was recei^ ed with groat kindness by Sir Thomas More, to whom Eras- mus had recommended him. He was the first who published the Almagest of PtoleiTy in Greek. He also published a Greek Euclid, and Plato's works, with some commentaries of Pro- clus. He ditd at Basil in 1541.

GRYPHITES, in natural history, or crow's- stone, an oblong fossil shell, very narrow at the head, and becoming gradually wider to the ex- tremity, where it ends in a circular limb ; the head or beak of this is very hooked or bent in- ward. They are frequently found in our gravel or clay pits in many counties. There are three or four distinct species ; some extremely round and convex on the back, others less so ; and the plates of wlucli they are composed are in some smaller and thinner, in others thicker and larger, in specimens of the same bigness.

GRYPHIUS (Sebastian), a celebrated printer of Lyons in France, was born in Suabia near Augsburg, in 1494. He restored the art of print- ing at Lyons, which was before exceedingly corrupted ; and the books jirinted by him

are still valued by connoisseurs. He printed many books in Hebrew, Greek, and Latin, with new and very beautiful types ; and his editions are no les'- accurate than elegant. Thus a cer- tain epigrammatist has observed, that Robert Stephens was a very good corrector, ˆColinaeus a very good printer, but that Gryphius was both an able printer and corrector. He died in 1556, in his sixty-third year ; and his business was carried on with reputation by his son Anthony Gryphius. One of the most beautiful books of Sebastian Gryphius is a Latin bible : it was printed in 1550, with the largest types that had then been seen, in 2 vols, folio.

GRYPHUS. See Griffon.

GUADAGNI (Gaetono), in biography, a na- tive of Vicenza, one of the most celebrated opera singers of the last century, and also greatly ad- mired for his dignity, grace, and intelligence, as an actor. He first came into England with a company of burletta singers, brought hither by Croza, an adventurous impresario, in 1748. The music he sung was the most simple imaginable ; a few notes with frequent pauses, and opportuni- ties of being liberated from the composer and the band, were all he wanted. And, in these seemingly extemporaneous effusions, he proved the in he- rent power of melody totally divorced from har- mony, and unassisted even by unisonous accompa- niment. Surprised at such gˆ-eat effects, from causes apparently small, musical critics frequently tried to analyse the pleasure he communicated to the au- dience, and found it chiefly arose from his artful manner of diminishing the tones of his voice, like the dying notes of the / Eolian harp. Most other singers captivate by a swell, or messa di voce ; but Guadagni, after beginning a note or passage witli all the force he could safely exert, fined it off to a thread, and gave it all the effect of extreme distance, though neither his voice nor execution contributed much to charm or excite admiration. He finally quitted England in the summer of 1771 ; in 1772 he performed at 'e- rona, and afterwards accompanied the electress dowager of Saxony to Munich, where he conti- nued till 1776, when he appeared on the stage, for the last time, at Venice. After which he set- tled at Padua in the service of Sant' Antonio, where he lost his sight in 1786, by a paralytic stroke, and soon after his life.

GUADALAVIAR, a river of Spain, which rises on the confines of Arragon and New Cas- tile, and running by Turvel, in Arragon, crosses the kingdom of Valencia, passes the town of that name, and soon after falls into the Mediter- ranean Sea a little below Valencia.

GUADALAXARA, a province and town of Spain, in New Castile ; the town is seated on the Herares, and contains nine churches, fourteen convents,

and about 10,000 inhabitants. Here is a palace of the duke del Infuntado, and a ca- thedral church of some eminence ; also a large manufacture of cloth, carried on by the public autliorilies. It is fifty-six miles north-east of Madrid.

The province contains a territorial extent of 1050 square miles, and 122,000 inhabitants. It is very elevated land, intersected by mountains, and traversed by the Tagus and oihor streams.

The pasturage of sheep is the principal agricul- tural object. It is divided into three partidas and three tierras.

GuADALAXARA, a province or intendancy of Mexico, part of the former kingdom of New Gallicia, almost twice the extent of Portugal. It is bounded on the north by the intendancies ot Sonora and Durango, on the east by the inten- dancies of Zucatecas and Guanaxuato, on the south by the province of Valladolid, and on the west, for a length of 369 miles, by the Pacific Ocean. Its greatest breadth is 300 miles, and its greatest length (from south to nortli) 350 mdes. It is crossed from east to west by the Rio de San- tiago, which communicates with the lake of Chapala. All the eastern part of this province is the Table Land, and western declivity of the Cordilleras of Anahuac. The maritime regions, which stretch towards the great bay of Bayonne, are covered with forests, and abound in ship- building wood. But the climate is considered unhealthy. The interior is much better in this respect.

The "olcan de Colima of this province is the most western of the volcanoes of New Spain. The province contains two cities, six towns, and 322 villages. The most celebrated mines are at Arientos de Oburra, Bolanos, Hostiotipaquillo, Copala, and Guichichila. The population in 1803 was 630,500. The extent of surface 9612 square leagues.

GuADALAXARA, an episcopal city of Mexico, capital of the above intendancy, is both large and handsome, containing eight squares, many con- vents, and two colleges for education. It was built anno 1531, and is situated in a delightful and fertile plain, watered with several streams and fountains. It boasts a handsome aqueduct, and spacious gardens, replenished with excellent fruits. Here is a manufactory of cigars, and the natives make a sort of jars of a fine scented earth, in much request. Guadalaxara is about 280 miles north-west of Mexico, and contains 19,500 inhabitants.

GUADALOUPE, one of the Caribbee or Leeward Islands, lying about mid- way between Antigua and Martinico. It is forty-five miles long, thirty-eight broad, and, being of an irregu- lar figure, is about 240 miles in

circumference. It is divided into two parts by a small arm of the sea, which is not above six miles long, and from fifteen to forty fathoms broad. This canal, named the Salt River, is navigable, but ouly carries vessels of fifty tons burden. That part of the island which gives its name to the whole is, towards the centre, full of craggy- rocks, where tlie cold is so intense, that nothing will grow upon them but fern and some useless shrubs covered with moss. On the top of these rocks a mountain called la Souffriere,or the Brimstone Mountain, rises to an immense height. It ex- hales, through various openings, a thick black smoke, intermixed with sparks that are visible by night. From all these hills flow numberless springs, which fertilise the plains below, and moderate the burning heat of the climate by a refreshing stream, so celebrated, that the galleons whicli formerly used to touch at the Windward Islands, had orders to renew their provision with

♦his pure and salubrious water. Such is \hat part of the island properly called Guadaloupe. That which is commonly called Grande Terre has not been so much favored by nature. It is indeed less rugged, but it wants springs and rivers. The soil is not so fertile nor the climate so wholesome. No European nation had taken possession of this island when 550 Frenchmen arrived there from Dieppe on the 28th of June, 1635. Their provisions were so ill-chosen, that they were spoiled in the passage, and were all exhausted in two months. St. Christopher's re- fused to spare them any : and their first attempts in husbandry could not as yet afford any thing. No resource was left but from the savages ; but the superfluities of a people, who cultivate little, and never laid up stores, could not be great. The new-comers came to a resolution to plunder them; and hostilities commenced on the 16th of January, 1636. The Caribs, not thinking themselves m a condition openly to resist an enemy, who had so much the advantage from the superiority of their arms, destroyed their own provisions and plantations, and retired to Grande Terre, and the neighbouring islands. Trom thence the most desperate came over to Guada- loupe, and, concealing themselves in the forests, they attacked with their poisoned arrows all the Frenchmen who were hunting or fishing. Dur- ing night, they burned the houses and destroyed the plantations. A dreadful famine was the con- sequence. The colonists were reduced to graze in the fields, and even to dig up dead bodies for their subsistence. At last the government of Aubert brought about a peace with the savages at the end of 1640. The remembrance of the hardships they had suffered proved a powerful incitement to cultivate all articles of immediate necessity ; and afterwards induced an attention to those of luxury consumed in the mother country. Such as had escaped the calamities they had drawn upon

themselves, were soon joined by some colonists from St. Christopher's, and from Europe. But still the prosperity of Guadaloupe was impeded by obstacles arising from its situation. The facility with which the pirates from the neighbouring islands could carry off their cattle, their slaves, and their crops, dis- tressed them greatly. Intestine broils, arising from jealousies of authority, often disturbed the quiet of the planters. And the adventurers, who went over to the Windward Islands, disdaining a land that was fitter for agriculture than for naval expeditions, were easily drawn to Marti- nico by its convenient roads. In 1700 the num- ber of inhabitants amounted only to 3825 white people, 325 savages, free negroes, and mulattoes; and 6725 slaves. There were only sixty small plantations of sugar, and sixty-six of indigo, cocoa, and cotton. But at the end of 1755 the colony was peopled with 9643 whites, and 41,140 slaves. Such was the state of Guada- loupe when it was conquered by the British, in April 1759. It was restored to France by the peace of 1763. By the survey in 1767, this island, including those of Deseada, St. Bartho- lomew, Marigalante, and Saints, contained 11,863 white people ; 752 free blacks and mu- lattoes; 72,761 slaves ; in all 85,376 souls. The

number of cattle was 5060 horses, 4854 mules, 111 asses, 17,378 horned cattle, 14,895 sheep and goats, and 2669 hogs ; the number of plan- tations was 1983. The sugar works employed 414 mills. The annual produce of Guadaloupe and the adjacent islands was estimated many years ago at 46,000,000lbs. of sugar, 21,000,000 of coffee, 320,000 of cotton, and 8000 of cocoa; besides logwood, ginger, rum, skins, &c. This island was again taken by the British in April 1 794 ; retaken by the French, under Victor Hughes, in 1795; and, lastly, by the British in February, 1810. In 1812, according to a return to the house of commons, it contained, 12,747 whites, 94,328 slaves, and 7764 free blacks. Its exports in 1810 were —

12,700,437 lbs. of brown and other sugars.

1,334,387 gallons of liquor.

2,661,726 lbs. coffee.

•

112,208 do. cotton.

2,162 do. cacao.

In 1811.

8,216,249 lbs. of brown and other sugars 1,380,816 gallons of liquor. 1,6Q1,686 lbs. coffee. 219,009 do. cotton. 963 do. cacao.

Long, from 43° 24′ to 44° 15′ W. of Ferro, lit. from 15° 55′ to 16° 37′ N.

GUADALQUIVER, one of the most famous rivers of Spain, rises in Andalusia, near the con- fines of Granada, and running quite through Andalusia, by the towns of Baiza, Atidaxar, Cor- dova, Seville, falls at last into the Bay of Cadiz.

GUADIANA, the ancient Anas, a large liver of Spain, which rises in New Castile, and, pass- ing across the high mountains, falls down to the lakes called Ojos of Guadiana; from whence it runs to Calatrava, Medelin, Mersda, and Bada- joz, in Estremadura of Spain ; and, after having traversed Alentejo in Portugal, separates Algarve from Andalusia, and falls into the bay of Cadiz, between Castro Marino and Agramonte.

GUADIX, a town of Spain, in Granada, with a bishop's see It was taken from the Moors in 1253, who afterwards retook it, but the Spaniards again got possession of it in 1489. It is situated between the Sierra Nevada and the Alpuxaras Mountains, so that, from the elevation and the consequent cold, the inhabitants are precluded from cultivating olives and oranges. The coun- try is adapted, however, to pasture, corn, and various fruits. The town has five churches and seven convent?, with 8300 inhabitants. Here are a few manufactures of hemp and flax, also of silk. Twenty-eight miles E. N. E. of Grenada.

GUAIACUM, n. s. A physical wood.

Guaiacˆm is attenuant and aperient. It is excel- lent in many chronick cases, and was once famous for curing the venereal disease, ■which it still does singly in ■warmer climates, but with us wc find it in- sufficient. We have a resin of it, improperly called

Hill

gum guaiacum, «»t.

GuAiACUM, in botany, lignum vitae, or pock- wood ; a genus of the

monogynia order, and de- candriaciass of plants; natural order fourteenth,

gruinales ; cal. quinquefid and unequal; the petals five, and inserted into the calyx : caps. angulated, and trilocular or quinquelocular.

1. G. Afrum, with many blunt-pointed leaves, is a native of the Cape of Good Hope. The plants retain their leaves all the year, but haˆ e never yet flowered in this country. This species is to be propagated by layers, and will live all the winter in a good green-house.

2. G. oiBcinale, the common lignum vitae used in medicine, is a native of the West India Islands, and the warmer parts of America. There it becomes a large tree, having a hard, brittle, brownish bark, not very thick. The wood is firm, solid, ponderous, very resinous, of a blackish yellow color in the middle, and of a hot aro- matic taste. The smaller branches have an ash- colored bark, and are garnished with leaves divided by pairs of a bright green color. The flowers are produced in clusters at the end of the branches, and are composed of oval concave petals of a fine blue color. This species can only be propagated by seeds, which must be procured from the countries where it generally grows. They must be sown fresh in pots, and plunged into a good hot-bed, where they will come up in six or eight weeks. While young they may be kept in a hot-bed of tan bark under a frame during summer; but in autumn they must be removed into the bark stove, where they should constantly remain. The wood of this species is of great use both in medicine and in the mecha- nical arts. It is so compact and heavy as to sink in water. The outer part is often of a pale yel- lowish color ; but the heart is blacker, or of a deep brown. Sometimes it is marbled with different colois. It is so hard as to break the tools used in felling it ; and is therefore seldom used as fire wood, but is of great use to the sugar planters for making wheels and cogs to the mills. It is also often made into bowls, mortars, and other uten- sils. It is brought over to Britain in large pieces of 4 cwt. or 5 cwt. each ; and, from its hardness and beauty, is in great demand for various arti- cles ot turnery ware. The wood, gum, bark, fruit, and even the flowers of this tree, possess medi- cinal virtues ; but only the first three, particularly the wood and resin, are now in general use in Europe. The wood has little or no smell, except when heated, or while rasping, and then a slight aromatic one is perceived. When chewed it impresses a mild acrimony, biting the palate and fauces. Its pungency resides in its resinous matter, which it gives out in some degree to water by boiling, but spirit extracts it wholly. Of the bark there are two kinds; one smooth, the other unequal on the surface : they are both weaker than the

wood; though, in a recent state, they are strongly cathartic. The gum, or resin, is obtained by wounding the bark in different parts of the tree, or by what has been called jagging. It exudes copiously from the wounds, though gradually ; and when a quantity is found accumulated upon the several wounded trees, hardened by exposure to the sun, it is gathered and packed in small kegs for exportation. This substance is of a friable texture, of a deep green- ish color, and sometimes of a reddish hue ; it ha? a pungent acrid taste, but little or no smell unless

heated. It differs from resins in its habitudes with nitric acid, as Mr. Ilatcbett first showed. Its spe- cific gravity is 1-229. It is transparent, and breaks with a resinous fracture. Its odor is not disagree- able, but when a very little of its powder, mixed with water, is swallowed, it excites a very un- pleasani burning sensation in the fauces and stomach. Heat fuses it, with the exhalation of a somewhat fragrant smell.

Water dissolves a certain portion of it, ac- quiring a brownish tinge, and sweetish taste. The soluble matter is left when the water is eva- porated. It constitutes nine per cent, of the whole, and resembles what some chemists call extractive. Guaiacum is very soluble in alcohol. This solution, which 13 brown colored, is decom- posed by water. Aqueous chlorine throws down a pale blue precipitate from it. Guaiacum dis- solves readily in alkaline lies, and in sulphuric acid ; and in the nitric with effervescence. From the solution in the last liquid, oxalic acid may be procured by evaporation, but no artificial tannin can be obtained, as from the action of nitric acid on the other resins.

The tree also yields a spontaneous exudation from the bark, which is called the native gum, and is brought to us in small irregular pieces of a bright semipellucid appearance ; it differs from the former in being much purer. In the choice of the wood, that which is the freshest, most ponderous, and darkest colored, is the best; the largest pieces are to be preferred ; and the best method is to rasp them as wanted, for the finer parts are apt to exhale when the raspings or chips are kept. In choosing the resin prefer those pieces which have slips of the bark adhering to them, and that easily separate therefrom by a quick blow. The resin is sometimes mixed with the gum of the manchineal tree ; but this is easily detected by dissolving a little in spirit of wine or rum. The true gum imparts a whitish or milky tinge, but the manchineal gives a greenish cast. Mijuch advises a few drops of spirit, nitri dulc. to be added to the spirituous solution, and then to be diluted with water, by which the gum will be precipitated in a blue powder ; but the adulteration will appear floating in white striae, ■Sec. Guaiacum was first introduced into Europe as a remedy for the venereal disease in 1508. It

was attended with great success in slight aflt?c- tions, but failed where the disease ˆas deep rooted ; and was at length superseded by mer- cury, to which it now only serves occasionally as an adjuvant in the decoctum lignorum, of which guaiacum is the chief ingredient. It is esteemed a warm stimulating medicine; strength- ening the stomach and other viscera, and re- markably promoting the urinary and cuticular discharges ; hence, in cutaneous defedations, and other disorders proceeding from obstructions of the excretory glands, and whore sluggish serous humors abound, it is useful ; rheumatic and other pains have often been relieved by it. It is also laxative. The watery extract, kept in the shops, proves considerably weaker than that made willi spirit. This last extract is of the same quality with the native resin, and differs from that brought to us only in being purer. The gum or extracts are given from a few grains to a scruple

or half a drachm, which last dose proves for the most part considerably purgative. The officinal preparations of guaiacum are an extract of the wood, a solution of the gum in rectified spirit of wine, a solution of volatile spirit, and an empy- reumatic oil distilled from the wood. The resin dissolved in rum, or combined with water, by mucilage or the yolk of an egg, or in form of the volatile tincture or elixir, is employed in gout and chronic rheumatism. The tincture or elixir has been given to the extent of half an ounce twice a day, and is sometimes usefully combined with laudanum.

3. G. sanctum, with many pairs of obtuse lobes, has many small lobes placed along the mid rib by pairs of a darker green color than those of the foregoing sort. The flowers are produced in loose bunches towards the end of the branches, and are of a fine blue color, with petals fringed on the edges. This species is also a native of the West India Islands, where it is called bastard lignum vitse. It may be propa- gated like the last.

GUAILAS, or Huah.as, a province of Peru, South America, bounded north-east and east by the province of Conchucos, south-east and south by that of Caxatambo, and west by that of Santa. It is forty-five miles long from north to south, and sixteen wide. In the middle the tempera- ture is mild, and at either side cold, especially towards the east or mountainous part. It is watered by several streamlets. These, being connected, form the Santa

Fe. This province is fertile in wheat and other grain : the whole year round there are crops of wheat, and they are putting the grain into the ground at one place, while it is ripe and ready to cut at another. It is the same with the various fruits. The province contains mines of silver, alum, and copper, and some gold.

GUAIRA, a town of South America, in the government of the Caraccas, and province of Venezuela, founded in 1588. It has a port, and is defended by a castle. Here a heavy surge generally rolls in from the ocean, which contri- butes greatly to augment its inconveniences, and the sand, being raised from the bottom, is car- ried along by the current, and deposited upon the anchors, so that in about a month's time it be- comes impossible to hoist them. The worm also, which is common in all the ports of this part of South America, and which, in the course of a few months, eats into the ships' bottoms, so as to render them unfit for use, is peculiarly fatal here. The town of Guaira is defended by bat- teries, and so surrounded with mountains, that there is no visible horizon but that formed by the sea to the south ; and the inhabitants frequently receive injury from the falling stones. The situ- ation of the place accounts also for the intense heat : the thermometer of Reaumur constantly rising to 25° and 28°. The whole place was laid in ruins by an earthquake, 26th March 1812, which only lasted two minutes. The rocks and mountains were rent asunder, and hundreds of the inhabi- tants were seen mixed with the heaps of rubbish, and imploring assistance from their fellow citi- zens, who were all the while prostrating them- selves before images. Guaira was attacked by

the English, without success, in 1739, and 1743, It is seven miles north of the city of Caracqas, and contains 6000 inhabitants. Long. 67"^ 2′ W., lat. 10° 48′ N.

GUALIOR, or Gualeor, a celebrated fortress of Hindostan, in the province of Agra. By the nearest route it is upwards of 800 miles from Calcutta. In the ancient division of the empire it is classed in the Soubah of Agra, and is often mentioned in history. In the year 1008, and during the two following centuries, it was thrice reduced by famine. It must, in all ages, have been deemed a military post of consequence, both from its situation in respect to the capital, and from the peculiarity of its site. It stands on the principal road from Agra to Malwa, Guzerat, and the Deccan ; near the place where it enters the hilly tract which advances from Bundelcund Malwa, and Agimere, along the banks of the Jumnah. Its palace was used as a state prison as early as 1317, and continued to be such until the downfal of the empire. Gualeor then ap- pears to have fallen to the lot of a rajah of the Jat tribe ; who assumed the government of the district in which it is situated, under the title of rana of Gohud. Since that period it has changed masters more than once ; the Mahrattas having sometimes possessed it, and

*at other times the r ana : but the means of transfer were always either famine or treachery. Gualeor was in the possession of Madajee Scindia, a Mahratta chief, in 1779, when the Bengal government undertook to siege it for the rana of Gohud. Captain Scott, then Persian interpreter to major Popham, in a letter to his brother, major John Scott, thus describes the fort and the occasion of its cap- ture : — * The fortress of Gualeor stands on avast rock of about four miles in length, but narrow, and of unequal breadth, and nearly flat at the top. The sides are so steep as to appear almost per- pendicular in every part; for, where it was not naturally so, it had been scraped away ; and the height from the plain below is from 200 to 300 feet. The rampart conforms to the edge of the precipice all round ; and the only entrance to it is by steps running up the side of the rock, de- fended on the side next the country by a wall and bastions, and farther guarded by seven stone gateways, at certain distances from each other. "The area within is full of noble buildings, reser- voirs of water, wells, and cultivated lands ; so that it is really a little district of itself. At the north- west foot of the mountain is the town, pretty large, and well built ; the houses all of stone. To have besieged tliis place would be vain, for nothing but a surprise or blockade could have carried it. A tribe of banditti from the dis- trict of the rana had been accustomed to rob about this town, and once in the dead of night had climbed up the rock and got into the fort. This intelligence they had communicated to the rana, who often thought of availing himself of it, but was fearful of undertaking an enterprise of such moment with his own troops. At length he informed major Popham of it ; who sent a party of the robbers to conduct some of his own spies to the spot.' They accordingly climbed up in the night of the 3d of August, found the guards asleep, and thus, meeting with little re-*

sistance, in iho space of two hours this impor- tant and astonishing fortress was completely reduced, with the loss of only one man killed, and twenty wounded. On the side of the enemy Bapojee, the governor, was killed, and most of the principal officers wounded. Thus fell, on the 4th of August 1780, the strongest fortress in Hindostan, garrisoned by a chosen body of 1200 men ; and which, before the capture of it by the British, was pronounced impregnable. In 1783 Madajee Scindia besieged this fortress, then possessed by the rana of Gohud, with an army of 70,000 men, and effected the reduction by the treachery of one of the rana's officers, who formed the plan of admission of a party of Scin- dia's troops : these were immediately supported by another party, who attacked an opposite quarter,

and got admission also. It was retaken by the British in 1805, but afterwards ceded to the Mahrattas. Long. 78° 26′ E., lat. 26° 14′ N.

GUAM, or GuAHAN, the largest of the La- drone Islands. It is about 120 miles in circum- ference ; and has a town built in the European style, with a regular fort and church. The air is excellent, the water good, and the garden stuffs and fruits, the flocks of buffaloes, goats, hogs, and all kinds of poultry innumerable. When first discovered by Magellan in 1521, with the other eight principal islands that lie north of it, they were all crowded with inhabitants, but afforded no refreshment to navigators, except fisn, bananas, cocoa-nuts, and bread fruit; and €ven these could not be procured but by force, amidst the showers of arrows and lances of the natives. The Spaniards carried thither from America the first stock of cattle, fowls, plants, seeds, fruits, and garden stuffs, which are all now found in such abundance. See Ladrone. Guam alone contained at this time upon its coasts more than 20,000 people. These fierce islanders, after having long defended, by cruel wars, the right of living like wild beasts, being at last obliged to yield to the Spanish arms, took the resolution of administering potions to their women to procure abortions. This desperate resolution was persisted in with so much obsti- nacy in the nine Ladrone islands, that their population, which at the time of the discovery consisted of more than 60,000 souls, (lid not lately exceed 900. About fifty years ago the remains of the original natives were collected and established in the island of Guam. The principal town and settlement, Agana, is situated about twelve miles north-east of the landing place, on the shore, at the foot of some hills, in a beautiful well-wa

which are either rivulets or torrents, abound in excellent fish : turtle grow here as large as in the island of Ascension, but are not eaten either by the Indians or Spaniards. Tiie crops cultivated are rice, maize, indigo, cotton, cocoa, and sugar- canes. The maize is of astonishing fertility. The gardens are stored with mangoes and pine- apples. The former is one of the finest fruits imaginable. Horses have been brought to Guam from Manilla, and asses and mules from Aca- pulco. The land rises gradually from the shore towards the centre by a gentle acclivity, but is not very mountainous. The indigenous inhabi- tants are such as they were described by Magel- lan; of short stature, rather ugly, black, and in general dirty, though much in the water. The women are handsome, well made, and of a red- dish color. Both sexes have long hair. They have become gentle, honest, and hospitable. The men drink freely of the wine of the cocoa-nut. They are fond of music, dancing, and cock- fighting.

GUAMA, a large river of the province of Para, Brasil, which enters an arm of the Ama- zons at the town of Para. There is a river of the same name to the north of Lima.

GUAMACHUCO, a province of Peru, bound- ed east by the province of Caxamarquilla, north- east by that of Chochapoyas, north by Caxa- marca, north-west and west by Truxillo, and south by Conchucos. It is thirty leagues long, and ten wide, and for the most part cold ; but is fruitful in maize, wheat, barley, &c. Here are also all sorts of cattle, particularly sheep, from the wool of which cloth is manufactured. Popu- lation 11,000. The capital is of the same name.

GUAMALIES, or Huamalies, a province of Peru, bounded north by the province of Pataz, east by the Andes, south-east by the province of Guanuco, south by that of Tarnia, south-west by Caxatambo, and north- west by Conchucos. It is an extensive valley about 250 miles long from north to south, and from forty to ninety broad, through which runs the Amazon, rising about eighteen miles beyond its southern boundary. Towards the south the temperature is cold ; but to tlie north the heat is intense. Several mines of quicksilver have been discovered in this province.

GUAMANGA, or Huamanga, a province and town of Peru, bounded north and north-east by the province of Guanta, south by that of Vilcas Huaman, and west by that of Castro- Vireina. It is high, and of cold temperature ; yet it abounds in pasture and wheat. There are also some rich silver mines, which are, how- ever, overflowed. The town was founded by Pizarro in an extensive and beautiful plain, watered by a river rising in the mountains. Its buildings are all of stone, and have gardens and orchards annexed. The public places and squares are magnificent, and the entrances are adorned with rows of trees. There is a university and a seminary enjoying a good revenue. Besides its present name, it has also the name of San Juan de la Victoria, in memory of the retreat of Manco, the inca, after he had well nigh conquered the Spaniards ; also that of San Juan de la Frontera; but its most common name is Gua-

manga. Ib8 miles south-east of Lima, and 176 north-west from Cuzco.

GUANARE, a town of the Caraccas, in the province of Varinas, situated on a river of the same name. The streets are straight and wide, and the houses neat. There is an hospital, with a moderate revenue, and a large handsome parish church. It owes a part of its splendor to pos- sessing an image of our lady of Comorato, to whose shrine numerous pilgrimages are made.

Guanare has, towards th west, the most fertile lands, possessing immense herds of oxen and mules. They were formerly in the habit of raising tobacco of a very good quality. Population 12,300: 193 miles S.S.W. of Caraccas, and sixty-four miles south-east of Truxillo. Long. 66° 35′ 15″ W., lat. 8° 14′ N. The river runs into the Apure.*

GUANAXUATO, one of the intendancies of Mexico, wholly situated on the ridge of the Cordillera of Anahuac. Its capital, founded in 1554, is of the same name, and stands 6836 feet above the level of the sea. The ports and mines of the neighbourhood contain 70,000 in- habitants. The length of the intendancy, from the lake of Chapala to the north-east of San Felipe, is fifty-two leagues; and its breadth from the Villa de Leon to Celaya thirty-one leagues. The most elevated point of this mountainous country was found, by Humboldt, to be 9235 feet above the level of the sea. The cultivation of this fine province is almost wholly to be ascribed to the Europeans, who arrived there in the fifteenth century. The mines are very pro- ductive. From 1796 to 1803 they yielded nearly 40,000,000 of dollars, or £5,000,000 sterling annually. Humboldt estimates the sur- fece of this province at 911 square leagues, and the population at 517,300 persons.

GUANCABELICA, or Guancavelica, a town of Peru, the capital of the province of An- garaez. It is situated in a broken glen, formed by the Andes, and is so elevated, that the tem- perature is extremely cold, and the weather always changing. The mountains in the vicinity are rich in gold and silver ores. But it is chiefly remarkable for a mine of quicksilver. This mine yielded an immense produce; but, not being worked in a proper and regular manner, the pit fell in ; and they are compelled now to dig in places less abundant in ore.

GUANO is a yellowish-brown eartny substance of a peculiar kind, without taste and of a smell resembling that of Castoreum. This substance, which for centuries has been used by the Peru- vians as a manure, is the production of some neighbouring rocky islands in the South Sea, from whence large quantities are annually brought to the continent of America. The guano, says M. Humboldt, is found not only in the Chiche Islands, near Piseo, but it exists also on the parts of the coast, and its isles situated more to the south, at Ilo, Iza, and Arica.

The su-ata in which the guano is disposed are from fifty to sixty feet in thickness, and they are worked in the same manner as the iron ochre mines. It is an excellent manure for the Indian com or maize ; but, if too much of it be applied, the root is b; .-nt and destroyed by it.

When exposed to the fire, the brownish-yellow color of the guano is

converted into black; it gives out white fumes, and the smell of empy- reumatic ammonia. Water dissolves part of it, becomes thereby of a reddish color, and acquires an acid taste. Potassa dissolves much more of it than water ; the solution is of a deep brown color, and is produced under an abundant de- velopment of ammouia. The result of the che- mical analysis made by Fourcroy and Vauquelin is, that the principal constituent part is concrete uric acid.

*Klaproth obtained nearly the same results as the French chemists ; his experiments prove that the essential component parts of the guano, ex- clusive of the admixed sand, are ammoniacal uric acid, phosphate of lime, oxalate of lime, and a residuum of animal colla, or similar animal inflammable component part. The oxalic acid, however, Klaproth supposes not to be an original constituent part of the guano, but the product of a long continued action of the at- mospheric oxygen of the uric acid ; an opinion founded on his own experience respecting the easy conversion of uric into oxalic acid, by the application of nitric and oxygenated muriatic acid. The proportion of the constituent parts is as follows : — ammoniacal uric acid 16 ; phos- phate of lime 10 ; oxalate of lime 1 2*75 ; silica 4 ; muriate of soda 0-50 ; sandy admixture 28 ; water, inflammable animal remains, and loss,*

28-75.

GUANTA, a province of Peru, bounded north and north-west by the province of Xauxa, north-east and east by the Andes, south and south-west by the provinces of Anganaes, Gua- manga, and Castro Vireyna ; on the south-east it touches upon the provinces of Anduhnailas and Vilcas- huaman. It extands in length sixty leagues from north-west to south-east, and is forty leagues broad ; consisting chiefly of high lands and hot valleys, which yield fruits of all kinds, sugar, and cocoa. Population 10,000. Its capital is of the same name. The gold, silver, copper, and lead mines, which abound in this country, are neglected, the pits not being sunk to a sufficient depth. Some of the ores yield from nine to ten marks, and others twenty- two marks of silver of eight ounces in every 50 cwt. Fifty-three miles west from Gua- manga, and 140 south-east from Lima. Long. 74ˆ 51′ W., lat. 12° 56′ S.

GUANUCO, or Huanuco, a town and pro- vince of Peru, bounded north and east by the desert, south-east and south by the province of Tarma, and west by the south part of the pro- vince of Guamalies. The town stands in the royal road of the incas ; and every where are to be seen the ruins of some of their superb edifices. Long. 75° 36′ W., lat. 10° 6′ S.

GUAPORE, a large river of Brasil, which, according to Mr. Mawe, has its

rise in the pro- vince of Matto Grosso, in lat. 14° 42′ S. Sixty miles north-east of Villa Bella; and, running north 360 miles, flows into the Arinos, and their conjunct streams form the great river Tapayos.

GUARANTEE, n. s. } Fr. garant, garan-

GuARANTY, n. s. S tir. A power who un- dertakes to see stipulations oerformed.

God, the great guarantee for the peace of man- kiud, where laws cannot secure it, may think it the concern of his providence. South.

A prince distinguished by being a patron of Pro- testants, and guarantee of the Westphalian treaty.

Addison on the War. An oath is a promise made to God, and God is our superior, superior to kings. And he is also the gua- rantee and avenger of all breach of faith and injustice.

Lenley. CUARAPICHE, a river of South America, in Cumana, which rises in the eastern declivity of mount Brigantin, and running in a winding course through mountains and unknown countries, enters the gulf of Paria, between the point cf Pariaand the mout-h of the Orinoco, in lat. 10° 8′ N. It receives the waters of numerous and considerable streams.

GUARD', V. a., v. n. & n. s.ˆ Ital. guardia ; Guard'age, n. i. Fr. garder, from

Guard'er, n. s. I our word ward,

Guard'ian, n. s. & adj. ˆthe iv being Guard'xanship, n. s. changed by the

Guard'less, arf;'. French into g;

Guard'ship, n. s. J as Galles for

Wales. See Ward. To watch over and pro- tect; to defend; to preserve; to provide against objections; to adorn ; to be in a state of caution. A guard is a limited number of men whose bu- siness it is to watch by way of prevention ; a part of the hilt of a sword. Guardage is a state of wardship. Guardian is one that has the care of an orphan ; a repository or

storehouse. Guard- ship is a king's ship to guard the coast.

The guard bare them, and brought them back into the guard chjjmber. 1 Kings xiv, 28.

Give him a livery More guarded than his fellows.

Shakspeare. See a fellow In a long motley, guarded with yellow. Id. Where is Duncan's body? — Carried to Colmeskill, The sacred storehouse of his predecessors. And gttardian of their bones. Id.

I am sorry for her, as I have just cause, being her uncle and her gttardian.

Id. Much Ado About Nothing. I gave you all, Made you my guardians, my depositaries ; But kept a reservation to be followed With such a number. Id. King Lear.

The great alleraiinn which he made in the state ecclesiastical, caused hira to stand upon his guard at liome. Davies.

And since love ne'er will from me flee, A mistress moderately fair. And good as guardian angels are.

Only beloved, and loving me! Cowley.

They missed courts, guards, a gay and numerous train, Our judges, like our laws, were rude and plain. Id. Up into heaven, from paradise, in haste The' angclick guards ascended, mute, and sad For man. Milton's Paradise Lost.

Thatof four seas dominion, and of all thcirˆtrar(iinˆ, Ko token should appear but a poor copper farthing.

Marvell. Naked the graces guarded you from all Dangers abroad, and now your thunder shall.

Waller.

So on the guardless herd, their keeper slain, Rushes a tyger in the Libyan plain. Id.

With lifted hands, and gazing eyes. His guards behold him soaring through the skies.

Dryden. Your power you never use, but for defence. To guard your own or other's innocence. Id.

Fixed on defence, the Trojans are not slow To guard their shore from an

expected foe. Id. Now he stood collected and prepared. For malice and revenge had put him on his guard.

Id.

My charming patroness protects me unseen, like my

guardian angel ; and shuns my gratitude like a fairy,

who is bountiful by stealth, and conceals the giver

when she bestows the gift, [d.

Temerity puts a man off his guard.

L'Estrange. It is wisdom to keep ourselves upon a guard.

Id. The curate stretched hi's patent for the cure of souls, to a kind of tutelary guardianship over goods and chattels. fd.

He must be trusted to his own conduct, since there cannot always be a guard upon him, except what you put into his own mind by good principles. Locke,

Others are cooped in close by the strict guards of those whose interest it is to keep them ignorant. Id.

One would take care to guard one's self against this particular imperfection, because it is that which our nature very strongly inclines us to. Addison.

The port of Genoa is very ill guarded against the storms. Id. on Italy.

A rich land, guardless and undefended, must needs have been a double incitement. South.

Hocus, with two other of the guardians, thought it their duty to take care of the interest of the three girls. Arbuthnot,

Thus shall mankind his ˆuarifian care engage. The promised father of the future age. Pope.

Mean while Minerva, in her guardian care. Shoots from the starry vaults through fields of aii.

Id. They, usurping arbitrary power, had their guard and spies, after the practice of tyrants. Swift.*

Theseus was the first who established the popular state in Athens, assigning to himself the guardianship of the laws, and chief commands in war. Id.

How blessed am I, by such a man led ! Under whose wise and careful guardship I now despise fatigue and hardship. Id,

To guard against such mistakes, it is necessary ta acquaint ourselves a little with words. Wattt.

Unless corruption first deject the pride And guardian vigour of the freeborn soul. All crude attempts of violence are in vain.

Thomson. Man's caution often into danger turns. And his guard falling crushes him to death.

Young's Night T/coughis, If, ye powers divine ! Ye mark the movements of this nether world. And bring them to account, crush, crush those vipers. Who, singled out by a community To guard their rights, shall for a gnash of air Or paltry office sell 'cm to the foe.

Miller's Mahomet. The lost in all things differing from the other.

Fall from an hill, and close together go. Embracing as they run •, each with his brother Guarded with double trenches sure they flow.

Fletcher's Purple Island. The guards mechanically f< niicd in ranks. Playing ut biat of drum thci m.irtial pranks,

Shouldering and standing as if struck to stone,

^"iiile condescending majesty looks on. Cowper.

A gordly sinecure no doubt! but made More easy by the absence of all men

Except his majesty, who with her aid. And guards, and bolts, and now and then

A slight example, just to cast a shade

Along the rest, contrived to keep his den

Of beauties, cool as an Italian convent.

Where all the passions have alas but one vent.

Byron. Secure in guarded coldness, he had mixed

Again in fancied safety with his kind.

And deemed his spirit now so firmly fixed

And shnathed with an invulnerable mind.

That if no joy, no sorrow lurked behind.

Byron. Childe Harold.

Guard, in the military art, is a duty performed by a body of men, to secure an army or place from being surprised by an enemy. In garrison the guards are relieved every day : hence every soldier mounts guard once every day in time of peace, and much oftener in time of war. See Honors.

Guard, Advanced, or van-guard. See Ad- vance-guard.

Artillery Guard is a detachment from the army to secure the artillery when in the field. Their corps de garde is in the front of the park of artillery, and their sentries are dispersed round the same. This is generally a forty-eight hours guard ; and upon a march this guard marches in the front and rear of artillery, and must be sure to leave nothing behind. If a gui) or waggon breaks down, the officer that commands the guard is to leave a sufficient number of men to assist the gunners and matrosses in raising it.

jlrtillery quarter Guard is frequently a non- commissioned officer's guard from the royal regi- ment of artillery, whose corps de garde is always in the front of their encampment.

Baggage Guard is always an officer's guard, who has the care of the baggage on a march. The waggons should be numbered by companies, and follow one another regularly, vigilance and attention in the passage of hollow wajs, woods, and thickets, must be strictly observed by thi? guard.

Forage Guard, a detachment sent out to se- cure the foragers, and who are posted at all places, where either the enemy's party may come to disturb the foragers, or where they may spread too near the enemy, so as to be in danger of being taken. It consists both of horse and foot, who must remain on their posts till the foragers are all come oif the ground.

Grand Guard, three or four squadrons of horse, commanded by a field

officer, posted at about a mile or a mile and a half from the camp, on the right and left wings, towards the enemy, for the better security of the camp.

Main Guard is that from which all other guards are detached. Those who are mounting guard assemble at their respective captain's quarters, and march from thence to the parade in good order ; where, after the whole guard is drawn up, the small guards are detached to their respective posts : then the subalterns throw lots for their guards, who are all under the command of the captain of the main guard. This guard

mounts in garrison at different hours, according to the pleasure of the governor.

Piquet G UARD, a number of horse and foot, always in readiness in case of an alarm : the horses are generally saddled, and the riders booted. The foot draw up at the head of the battalion, frequently at the beating of the tat- too ; but afterwards return to their tents, where they hold themselves in readiness to march. This guard is to resist in case of an attack, until the army get ready.

Quarter Guard is a small guard commanded by a subaltern officer, posted in the front of each battalion, 222 feet before the front of the regiment.

Rear Guard, that part of the army which brings up the rear on a march, generally com- posed of all the old grand guards of the camp. The rear-guard of a party is often eight or ten horse, about 500 paces behind. Hence the ad- vance-guard, going out upon a party, form the rear-guard in their retreat. Rear-guard is also a corporal's guard placed in the rear of a regiment, to keep good order.

Standard Guard, a small guard under a cor- poral, out of each regiment of horse, who mount on foot in the front of each regiment, at the dis- tance of twenty feet from the streets, opposite the main street.

Trench Guard only mounts in the time of a siege, and sometimes consists of three, four, or six battalions, according to the importance of the siege. This guard must oppose the besieged when they sally out, protect the workmen, &c.

Guards also imply the troops kept to guard the king's person,and consist both of horse andfoot.

Foot Guards are regiments of foot appointed for the guard of his majesty and his palace. There are three regiments of them, numerically titled. They weie raised in 1660; and tlie com- mand of the first given to colonel Russel, that of the second to general Monk, and the third to the earl of Linlithgow.

The second is always called the Coldstream, from a place named Coldstream, a small market town in Berwickshire, where the men were first raised. This regiment in point of standing is older than the first, having been raised sooner, and commanded by general Monk, from whom it originally was called Monk's regiment or corps ; and in compliment to whom it was made one of the three royal regiments by Charles

Horse-g) enadier Guards were divided into two troops, called the first and second troops of horse-grenadier guards. The first troop was raised in the year 1693, and the command given to lieutenant-general Cholmondeley : the second in 1702 and the command given to lord Forbes. This corps was reduced in 1788, and the officers, &c., were allowed to retire upon full pay.

Horse Guards, in Britain, are gentlemen chosen for their bravery, to be entrusted with the guard of the king's person ; and were formerly divided into four troops named numerically. But the four troops are now turned into two regiments of life-guards. Although the life- guards generally do duty about the metro- polis, it must be recollected, that they were not raised for that specific purpose only

They are enlisted for general service, like the men of the line or foot-guards, and no stipulation of any sort is made with them.

With respect to rank, in addition to what has already' been said on that subject, it is necessary to state, that the majors in the life-guards rank as lieutenant-colonels, and, by his majesty's order, they can only exchange with lieutenant-colonels. The lieutenant-colonels rank as full colonels, and cannot exchange with any one under that rank. For the like reason that rank would not be ob- tained by an exchange ; a major of the life-guards cannot exchange with a major in the line, nor a lieutenant-colonel with one of the same rank. This cgrps distinguished itself at the memorable battle of Waterloo in 1815. They are now made cuirassiers.

Yeomen of the Guard were first raised by Henry VII. in 1485. They were a kind of pom- pous foot-guards to the king's person ; and are generally called the Beef-Eaters. They were anciently 250 men of the first rank under gentry ; and of larger stature than ordinary, each being required to be six feet high. At present there are but 100 in constant duty, and seventy more not on duty; and when any one of the 100 dies his place is supplied out of

the seventy. They go dressed after the manner of king Henry Vm.'s time. Their first commander or captain was the earl of Oxford, and their pay is 2s. 6d. per day.

The Scots Guards, a celebrated band, which once formed the first company of the ancient gardes du corps of France.

Guard, in fencing and the broad sword exer- cise. See Fencing and Sword Exercise.

Guard-boat, a boat appointed to row the rounds amongst the ships of war which are laid up in any harbour, &c., to observe that their officers keep a good looking-out, calling to the guard-boat as she passes, and not suffering her crew to come on board without having previ- ously communicated the watch-word of the night.

Guardian, in law, signifies one who has the custody and education of such persons as have not sufficient discretion to take care of themselves and their own aff"airs, as children and ideots. The guardian's business is to take the profits of the minor's lands to his use, and to account for the same ; to sell all moveables within a reason- able time, and to convert them into land or money, unless the minor is near of age, and may want such things himself ; and to pay interest for the money in his hands, that might have been so placed out ; in which case it will be presumed that the guardian made use of it himself. He is to sustain the lands of the heir, without making destruction of any thing thereon, and to keep them safely for him : if he commits waste on the lands, it is a forfeiture of the guardianship ; 3 Edward I. And where persons, as guardians, hold over any land, without the consent of the person wlio is next entitled, they shall be adjudged trespassers, and shall be accountable : 6 Ann. cap. xviii.

Guardian of the Cinque Ports. See Warden and Cinque Ports.

Guardian of the Spiritualities, he to whom the spiritual jurisdiction of any diocese is

committed, during the vacancy of the see. He may be either guardian in law, or jure magis- tratus, as the archbishop is of any diocese within his province ; or guardian by delegation, as he whom the archbishop or vicar general doth for the time depute.

GUARDIARA, a river of Spain which rises in New Castile, runs through the provinces of La Mancha and Estremadura ; then enters Por- tugal a few miles west of Badajoz, and, after running through the province of Alentejo, falls into the Atlantic between Ayamonte and Castro- marin.

A Guard-Ship is a vessel of war appointed to superintend the marine in a harbour or river, and to see that the ships which are not commis- sioned have their proper watchward kept duly, by sending her guard-boats around them every night. She is also to receive seamen who are impressed in the time of war.

GUAREA, in botany, a genus of the raono- gynia order, and octandria class of plants : cal. quadrifid : the petals four; the nectarium cylin- dric, having the antherae in its mouth : caps. quadrilocular and quadrivalvular : seeds solitary. Species one only, a West Indian tree with j- strong musky odor.

GUARINI (Guarino), a native of Verona, de- scended of an illustrious family, celebrated as having been the first who taught Greek after the restoration of letters. He had acquired their language at Constantinople. He died in 1460.

Guarini (John Baptist), a celebrated Italian poet, grandson to the preceding, born at Ferrara, in 1537. He was secretary to Alphonso duke of Ferrara, who entrusted him with several import- ant commissions. After the death of that prince he was successively secretary to Vincent de Gonzaga,ˆ to Ferdinand de Medicis, grand duke of Tuscany, and to Francis Maria de Feltri duke of Urbino. He was well acquainted with polite literature ; and acquired lasting reputation by his Italian poems, especially by his Pastor Fido. the most auiuired ol all nis works, and of which there have been, at different limes, almost innu- merable editions and translations. He died in the year 1612.

GUATLMAI^\, the largest of the five states of central America. It extended on the narrow part of the continent of America, from the pro- vinces of Uaraca and Vera Cruz, in JMexicu, southward to Veragua, on the isthmus of Darien, and includes various districts but little known. According to another division of this country, the following are the provinces ofwhich it is composed, namely,. Tabasco, Chiapa, Guatimala, Yucatan, Honduras, Nicaragua, and 'era Paz. Guati- mala is extremely fertile, and well peopled, and so much the better cultivated, as the soil, con- vulsed with volcanoes, contains almost no metal- lic mines. Its general appearance is fertile in the extreme ; and it produces abundantly corn, cochineal, honey, wax, cotton, tlie sugar-cane, indigo, maize, pimento, and chocolate. The farming districts produce cattle and sheep. Tlie whole country is mountainous; but oftheparticu- larridges little is known. On the western shcre, from Oaxaca and Veragua, the country is dread- fully subject to the most tremendous earthquakes,

which have at times involved whole cities in ruins, and exterminated complete tribes. No levver than twenty volcanoes are known to exist liere which are in constant activity. The western coast is in general, as in most other parts of America, the healthiest. In some parts the tem- perature is exceedingly hot and moist. The rains last from April to September, when violent storms are frequent.

GuATiMALA Proper, a province of the above government, extends about 130 leagues along the coast of the Pacific Ocean, and is in some places from thirty to forty in breadth. It is bounded on the north-east by Vera Paz and Chiapa, on the east by Honduras, on the south- west by the Pacific Ocean, on the south-east by Nicaragua, and on the north and west by Oaxaca. The country is for the most part mountainous, and covered with forests of fine wood. The valleys are fertile, and produce the most delicate fruits. It also abounds in corn, cattle, indigo, and cochineal.

GuATiMALA, Santiago de, the capital of the above province, was founded in 1524. At first it was founded on the declivity of a mountain, at whose summit was a volcano, in a valley of three miles in breadth, and was then called St Jago. It contained about 7000 families: in tliis situation the unfortunate city was, in the year 1751, over- whelmed by an earthquake, and by the matter from the volcano. Another and a more tremen- dous convulsion again destroyed this place in 1775, the greater part of tlie inhabitants being buried in the ruins. The city was again rebuilt on the spot where it now stands, which is twenty- five miles to the south of the old town. It is a magnificent place. Population 19,000.

GUAVA, in botany. See Psidium.

GUAYAQUIL, is the largest and most import- ant district of Quito, Colombia: it begins at Cape Passado, 21′ S. of the equinoctial line, and, stretching south, includes the island of Puna; being terminated by Piura in Peru, and mostly a continued plain. The river Guayaquil is not only the largest but the most important of all the streams in the jurisdiction. It rises in the Andes, and, pursuing a serpentine course, flows into the Pacific in the Bay of Puna. The torrents, which flow in all directions from the mountains, con- tribute to swell this river, and it inundates the country to a great extent. Its mouth is about tiiree miles wide at Isla Verde ; and at Guaya- quil still broader. The distance on it from this city to the custom-house of Babahoyo is twenty- four leagues and a half, and it is navigable four leagues further. The tides reach as far as the custom-house in summer, but in winter the cur- rent is so strong, that the tides are often imper- ceptible. The mouth of the river is so full of shifting sands, that the passage

of large vessels is rendered very dangerous. Its banks are decorated with country-seats, and cottages inhabited by fishermen. The other large rivers are those called Yaguache, Baba, and Daule, along the banks of wliich most of the Indians have formed their habitations.

During the winter months this district is in- fested by insects and vermin, and is subject to dreadful storms and inundations, which oblige

the farmers to send their cattle to the Andes. In the rainy season, fevers, dysenteries, diarrhoeas, the black vomit or yellow fever, and other disorders, are common, and carry off great numbers of people. At this period, also, snakes, scorpions, vipers, and scolopendras, find their way into the houses, and are sometimes even found in the beds. The boba, a serpent of immense size, is also common. These, with swarms of musqjui-toes, and other venomous insects, render the towns very unpleasant during this season ; and alligators, of an enormous size, cause the rivers and flooded places to be very dangerous. The inundations spread to such an extent, in some parts, that Babahoyo, one of the departments, is converted into a large lake, and the villages, which are always on heights, can be approached only with boats. These floods add, however, very greatly to the fertility of the country, as the cacao plantations and meadows thrive exceedingly when the water subsides. In the summer, the heat being moderated by the sea and land breezes, the number and activity of all these creatures is much decreased ; and this season, which is the coldest, renovates the inhabitants, who have been rendered listless and indolent by the suffocating heat which prevails during the rains.

Guayaquil grows cacao, tobacco, wax, cotton, timber for naval and architectural purposes, sugar, maiie, and plantains ; and rears great quantities of cattle. The quantity of cacao gathered annually in Guayaquil, for exportation and home consumption, amounts to 50,000 loads, at £81 tiie load. The rivers furnish fish in great plenty, but the city is scantily supplied, owing to the putridity which so soon takes place in transporting fresh fish. The coasts abound with lobsters, oysters, and most kinds of salt-water fish. All the rivers in the vicinity of Guayaquil abound with large alligators, some of which are five yards in length. They destroy vast quantities of tlie fish, and are usually seen basking on the marshy shores, or employed in catching their food : they feed also on flies, musquitoes, &c., which they catch by keeping their huge mouths open until filled with these insects, which soon happens in a country where the air swarms with them. Calves and colts in the meadows, as well as dogs and other small animals, often fall a prey to these amphibious creatures, who approach the pastures in which they feed in the night, and carry them off. Many of the small rivers on the coasts of Spanish America are said to contract a musky smell and taste, from the vast numbers of alligators with which they

abound ; and it is even asserted that seamen are aware of the pre- sence of these animals, by the peculiar white color of the water which they frequent, but, nevertheless, do not refrain from supplying their ships with that article from such streams, as it has never been discovered that the change in taste, smell, and color, imparts any noxious, quality to the fluid.

Guayaquil exports the produce of its depart- ments to Peru, Panama, and Quito, receiving European goods from Tierra Firme ; from New Spain and Guatimala, naphtha, tar, cordage, and indigo. In the annual domestic and foreign

trade of Guayaquil, the exportations, of which ti;e principal article is cacao, are valued in good seasons at £l 19,170, whilst the importations in a like period arise to £260,000 sterling.

Guayaquil is divided into seven departments, Puerto Viejo, Punta de Santa Elena, the island of Puna, Yaguache, Babahoyo, Baba, and Daule, The capital of the whole district is Guayaquil, a city of considerable importance at the bottom of the gulf of Guayaquil, and at the mouth of the river of the same name, in 2″ 12′ S. lat., and 79° 6′ W. long. In 1693 great additions were made to it, on the other side of a branch of the river, which now divides the city into two parts, known by the names of the Nesv and Old towns, communicating with each other by a long bridge. The houses are constructed mostly of wood or whitened earth. It has suffered re- peatedly by conflagration, and was reduced to ashes in 1764; since which the government have forbid the inhabitants to tha.tch their houses with straw. The streets of the New Town are straight, •wide, and well paved. Arcades run along before all the houses, so that the people can walk pro- tected from the rain and sun. It is now one of the handsomest towns of South America. It has a handsome church, college, convents, and an hospital. There is also a treasury and revenue office, for the receipt of the Indian capitation tax, the duties on imports and exports, and other taxes. The number of inhabitants is 10,000. The women are proverbially handsome, which causes many Europeans to marry and settle here. Guayaquil was named a royal dock-yard in 1767, and the abundance of excellent timber produced in its neighbourhood renders it very fit for this purpose. The balsam tree, and several others, yield excellent knees, and are celebrated for resisting worms and rot. Notwithstanding these advantages, the building of vessels is neg- lected, and the river and coasting trade is carried on in

balsas, which receive the cargoes of the vessels arriving from Europe, Lima, or Panama. These balsas or rafts are peculiar to the coast of ilie provinces of Cundinamarca. They are made of tive, seven, or nine trunks of an exceedingly light tree called balsa; and are made larger or smaller, according as they are wanted for fishing, for the coasting trade, or for the rivers. The city is defended by three forts ; two on the borders of the river, and the other inland.

GUBEN, a handsome town of the Prussian States in Lower Lusatia, seated on the Neisse, and seventy miles north-east of Dresden, It has a manufacture of cloth, and a good trade in flax and linen. Inhabitants about 6000.

GUBERNA'TION, h. s. Latin gubernatio. Government; superintendency ; superior direc- tion.

Perhaps there is little or nothing in the govern- ment of the kingdoms of nature and grace, but what is transacted by the man Jesus, inhabited by the di- vine power and wisdom, and employed as a medium or conscious instrument of this extensive guhenuitwn.

Watts. GU'D(iEON, 71. s. Fr goujon. A small fish found in brooks and rivers, easily caught, and therefore made a proverbial name for a man easily cheated ; a bait or allurement.

But fish not with this melancholy bait. For this fool's gudgeon, this opinion.

Shak. < ˆearc. This he did to draw you in, like so many gudgeons, to swallow his false arguments. Swift.

'Tis true, no turbols dignify my boards ; But gudgeons, flounders, what my Thames affords.

Pope. Gudgeon, in ichthylogy, a species of cyprinus. See Cyprinus. These fish, though small, are of a pleasant taste, very little inferior to smelt. They spawn twice in summer; and their feed- ing is much like the barbels in streams and on gravel, slighting all kinds of flies : but they are easily taken with a small red worm, fishing near the ground ; and, being a leather-mouthed fish, will not easily get off the hook when struck. They may be fished for with float, the hook lying on the ground ; or by hand, with a run- ning line on the ground, without cork or float. But, although the small red worm is the best bait for these fish, yet wasps, gentles, and cadbaitsdo very well. They may also be fished for with two or three hooks at once, and afford pleasant sport, where they rise any thing large. When- angling for them, stir up the sand or gravel with a long pole; this will make them gather faster to that place, and bite faster and more eagerly.

GUELDERLAND, a province of the Nether- lands, bounded on its respective frontier lines by Overyssel, Westphalia, North Brabant, Holland, and Utrecht. Its extent is about 2020 square miles ; its population 243,000. The surface is level, but not so flat as part of the Netherlands. The soil is in some parts heavy and turfy, in others light, and, on the whole, not very fertile. The province is watered by the Rhine, the Waal, the Yssel, the Leek, and the Maese, and several large canals. The principal productions are buck-wheat, potatoes, fruit, tobacco, and hops ; The pasturage is very good. The inhabitants are employed chiefly in agriculture, but also in manufactures ; linen being made in this province, also paper and leather. Guelderland is the seat of many old Dutch families, who are uncon- nected with trade.

The chief branch of commerce is the transit of goods from the coast to the interior of Germany. The duties are nominally only 3 per cent, ad valorem, but considerably exceed this limit on wine and other articles, of which the bulk is large in proportion to the value. The greater part of the inhabitants are Protestants. The province sends six members to the states-general, and in point of jurisdiction is under the high court at the Hague. The provincial states con- sist of ninety members. Guelderland is divided into four districts, viz. Arnheim, with 74,000 inhabitants ; Nimeguen, with 49,000 ; Zutphen, with 79,000; and Thiel, with 46,200. These, however, do not comprise the whole extent of the ancient duchy of Gueldres. After the decla- ration of independence, made by the maritime provinces of the Netherlands, three of the quar- ters, viz. Nimeguen, Zutphen, and Arnheim (constituting Lower Gueldres), joined the league of Utrecht in 1379, and formed the Dutch pro- vince of Guelderland. The fourth (of Rure- monde), then called Upper Gueldres, remained

subject to Spain until the peace of Utrecht, when it was made over to the king of Prussia. Part of it was afterwards ceded by Prussia to the United Provinces, and the whole in 1795 to France. This lasted till 1814, when the whole once more changed masters : a part of Upper Gueldres is included in the Prussian province of the Rhine ; but the greater part belongs to the Netherlands, and is included in the province r.ow described.

GUELDERS, or Gelders, a small town of the Prussian states, in the goverment of Cleves : it was the chief town of Prussian Guelderland, and originally gave name to the whole province. It now has only 1550

inhabitants, who are em- ployed in manufactures. The castle, one of the strongest fortresses in the Netherlands, was demolished in 1764. Twenty miles S. S.E. of Cleves, and thirty N. N.W. of Dusseldorff.

GUELPH, the surname of the royal family of Great Britain.

GuELPHS, or GuELFS, a celebrated faction in Italy, antagonists of the Gibelins. The Guelphs and Gibelins kept Germany and Italy in per- petual agitation during the greater part of three centuries. The former supported the pretensions of the popes, the latter those of the emperor. Their rise is referred by some to the time of Corrad III., A. D. 1139; by others to that of Frederic I.; and by others to that of his suc- cessor Frederic II., A. D. 1240, upon his being excommunicated by pope Gregory IX. But the most probable opinion is that of Maimbourg, who says, that the two factions arose from a quarrel between two ancient and illustrious houses on the confines of Germany, viz. the Henries of Gibel- ling, and the Guelphs of Adorf. The name Guelph is said to have been formed from Welfe, or Welfo, on the following occasion : — The em- peror Conrad III. having taken the duchy of Bavaria from Welfe VI., brother of Henry, duke of Bavaria, Welfe, assisted by the king of Sicily, made war on Conrad, and thus gave birth to the faction of the Guelfs. Others derive the name from the German Wolf, on account of the grie- vous evils committed by that cruel faction : others deduce the denominati(m from that of a German called Guelfe, who lived at Pistoye; adding, that his brother, named Gibel, gave his name to the Gibelins. It is said by some, that the Gibelins, when driven out of Italy long after the year 1229, at which period the contest be- tween them and the Guelphs ran very high, and settled at Amsterdam, were the inventors of the mercantile practice of re-change, or re-exchange, on bills of exchange, on account of the damages and charges they were put to, and the interest of the money of their bills protested, which had been given to them for the effects they had been obliged to leave behind them.

GUEMENE'E, a neat town of Brittany, situ- ated in the department of the Loire Inferieure. Nine miles north of Blain. Population 3600.

GUERANDE, a large town of Brittany, in the department of the Loire Inferieure, between the mouth of the Vilaine and the Loire. It contains 7200 inhabitants, and has extensive manufac- tures of salt. Thirty-six miles west of Nantes, and thirteen south of Roche Berrˆard.

GUE'RDON, ».s. ¥t. guerdon, gardon. A reward ; a recompense, in a good and bad sense. A word now no longer in use.

The sixte thing that shuld move a man to contri- tion is the hope of three thinges, — that is to say, forgevenesse of sinne ; and the yeft of grace for to

do wel ; and the gloree of heven with whiche God shal guerdon man for his good dedes.

Chaucer. The Personet Tale. I love as well as ye ;

And lenger have served hire in my degre j

And if she should have loved for long lo»‘yng.

To me, alone, had be the guerdonyng.

Id. Assemble of Foulet. But Love, alas 1 quite him so ill fcis wage.

With cruel daunger, plainly at the laste

That with the dethe guerdonleste he paste.

Id. Complaint of the Blacke Knight. But to the virgin comes, who all this while

Amazed stands herself so mocked to see. By him who has xhs guerdon of his guile.

For so misfeigning her true knight to be. Spenser.

Fame is the spur that the clear spirit doth raise To scorn delights, and live laborious days ; Bat the fair guerdon when we hope to find. And think to burst out into sudden blaze. Comes the blind fury with the abhorred sheers. And slits the thin-spun life. Milton.

Fame is tho thirst of youth, — but I am not

So young as to regard men’s frown or smile

As loss or giierdon of a glorious lot ;

I stood and stand alone, remembered or forgot.

Byron.

GUERICHE, or Guericke (Otho), a native of Prussia, the most celebrated mathematician of his time, was born in 1602. He is said to have been the inventor of the air-pump; and was author of several works in natural philoso- phy, the chief of which is his Experimenta Mag- deburgica. He died in 1686.

GUERNSEY, one of the most considerable of a group of islands on the

French coast, once a dependency of the duchy of Normandy, and the only remains of the ancient sovereignty of England over France. They are situated in the gulf of St. Malo, from three to six leagues from the French coast.

Guernsey, the largest, (the Sarnia of Anto- ninus), is thirteen miles long and eight broad. On the south and south-west the shores are high, precipitous, and broken by deep ravines. On the north and east they are low, indented by bays separated by rocky head-lands, and lined with sunken rocks, which with the strength of the currents are a strong natural defence to the island.

The climate is humid, and the winters stormy. The face of the island is diversified by moderate hills, and watered by numerous streams, serving to turn mills and fertilising the valleys, every inch of which is cultivated with the greatest care, affording the pleasing appearance of in- dustry and its attendant comfort, which is conspicuous in the neat seats of the gentry sur- rounded by orchards and gardens, and the clean habitations of the peasantry.

The chief produce of the island is com and apples, and the principal manufacture that of worsted jackets, caps, and stockings, of the first of which there is a great consumption by sea- men. Guernsey sends vessels to the Newfound-

land fishery, and in war fits out many priva- teers ; in peace smuggling with the coast of England is an organised business, the objects being French brandies and lace, &c. Some emery stoire is also exported, there being a rock of this substance on the island. ,

*The Norman feudal laws are still in use in these islands, but meliorated by time, which has worn down their oppression ; they are collected in a book called * le grand Costumier.' The king's writs from Westminster cannot be exe- cuted in these islands, and consequently they offer an asylum for insolvent debtors ; neither are they bound by any act of the British legis- lature unless specifically named, nor can these acts be put in force until sanctioned by the civil government of the islands. The Norman French is the language most generally spoken, a-nd many Norman customs are observed. An appeal lies from the courts of the island to the king in coun- cil. The population is about 15,000. St. Pierre is the chief town ; which see.*

Among the marine productions found on the shores are the sea aure, delicate shell-fish, the sea mouse, aphrodita aculeator, and the sea anemone.

Among the curiosities of the coast is La Cave Mahie, on a level with the sea near Prevolet Point on the south ; from an entrance of nine feet wide and six high, it expands to fifty feet in height and breadth and 200 feet in length, ending in granite points. The base of the island is entirely of this substance, and several of its heights consist of conical ascents of this grand substratum, raised apparently by a power acting vertically.

GUESS,u.a.&n.s. ˆ Germ, gissen; Goth.

Guess'er, n. s. ˆgiesa; ls. gixka ; Swed.

GuESs'iNGLY, arfu. J gisso. Any thing put to- gether without design ; to judge without certain principles ; to conjecture either on probabilities or by accident. A guesser is one who judges without certain knowledge.

Ye sawe the lettir that she wrote I getse, Naie, never yet iwis, quod Troilus.

Chaucer. Troilus and Creseide. Incapable and shallow innocents '. You cannot gueis who caused your father's death.

Shakspeare. Let not your ears despise my tongue for ever. Which shall possess them with the heaviest sound That ever yet they heard. — Hum I I guess at it. Id. Macbeth.

The enemy's in view •, draw up your powers : flard is the guess of their true strength and forces.

Shakspeare. I have a letter guessinglg set down. Id.

He that, by reason of his swift motions, can inform himself of all places and preparations, should he not very ohca guess rightly of things to come, where God pkaseth not to give impediment? Raleigh's History. Longer I durst not stay, but soon I guessed Ye were the two she meant ; with that I sprung Into swift flight, till I had found you here ; But further know I not. Milton's Comus-

Quoth she, there are no bargains driven, \o marriages, clapped up in lu- avcn j And that's the reason, as some guess. There is no lieavcn in marriages. Hudihras.

His nuesse was usually as near to prophecy as any man's. Fdl.

One mi.y guess by Plato's writings, that his meaning, as to the inferiour deities, was, that they who would have them might, and they who would not might let them alone ; but that himself had a right opinion-con- cerning the true God. StilUngfleet.

There issue swarming bands Of ambushed men, whom, by their arms and dress. To be Taxcallan enemies I guess. Dryden.

A poet must confess His art's like physick, but a happy gtiess. Id. It is a wrong way of proceeding to venture a greater good for a less, upon uncertain guesses, before a due examination, Locke.

We may make some guess at the distinction of things, into those that are according to, above, and contrary to reason. Id.

If Xerxes was able to call every common soldier by his name in his army, it may be guessed he got not this wonderful ability by learning bis lessons by heart.

Id. This problem yet, this offspring of a guess. Let us for once a child of truth confess. Prior. It is the opinion of divers good guessers, that the last fit will not be more violent than advantageous.

Pope. If fortune should please but to take such a crotchet. To thee I apply, great Smedley's successor,

To give thee lawn sleeves, a mitre and rochet. Whom wouldst thou resemble ? I leave thee a guesser.

Swift. The same author ventures to guess at the particular fate which would attend the Roman government.

Id. Nor can imagination guess ; How that ungrateful charming maid My purest passion has betrayed. Id.

No man is blest by accident, nr guess. True wisdom is the price of happiness. Young. You guess each circumstance of Edwin's birth.

Beat tie's Minstrel. ' There is a tide in the affairs of men.

Which, taken at the flood' — you know the rest. And most of us have found it now and then ;

At least we think so, though but few have guessed The moment. Byron.

GUEST, 77. s. -^ Sax. sej-c, jir^;

Guest'kite,7z.s. ˆ Welsh givcst ; Swed.

GuEsi'-CHAMBER,7i.s. ˆ aiid Tcut. gast ; Goth. gied. One entertained at the house or table of another ; a stranger : guestrite, offices due to a guest : guest-chamber, a chamber of entertain- ment.

Where is the guestchamher , where I shall eat the passovcr with my disciples? Mark xiv. 14.

They all murmured, saying, that he was gone to be giu'st with a man that is a sinner. Luke xix. 7.

Whilom, ther was dwelling in Oxenforde, A riche gnof, that gestes held to horde.

Chaucer. The Milleres Tale. No wonder is though that she be astoned To see so gret a gest come in that place ; She never wasi to none swiche gestes woned. For which she loked with ful pale face.

Id. TJiC Clerkes T.fl,'. Methinks a father Is, at the nuptial of his son, a guest 'I'liat best becomes the table. Shtibtpi'arc.

Those happiest smiles That playod on her ripe lip, seemed not to know What guests were in her eyes; which parted thence As pearls from diamonds dropt. Id.

Ulysses so dear A gift esteemed it, that he would not beare In his black fleete that guest-rite to the war.

Chapman.

0 desarts, desarts ! how fit a guest am I for you, since my heart can people you with wild ravenous beasts, which in you are wanting ? Sidney.

Tell my royal guest

1 add to his commands my own request. Dryden. But here the Mother of the Maids drew near

With ' Ladies it is time to go to rest ;

I'm puzzled what to do with you, my dear,'

She added to Juanna, their new guest. Byron.

GUETTARDA, in botany, a genus of the heptandria order, and monoecia class of plants : natural order thirty-eighth, tricoccae : male cal. cylindrical : cor. cleft into seven parts, and fun- nel-shaped : FEMALE CAL. Cylindrical : coR. cleft into seven parts ; one pistil, and the fruit a dry plum. Species four; natives of the West Indies.

GUG'GLE, V. n. Ital. gorgoliare. To sound as water running with intermissions out of a narrow-mouthed vessel.

GUIANA, an extensive country of South America, bounded on the east and north-east by the Atlantic Ocean and the Oronoco ; on the south by the Amazon ; and on the west by Gre- nada and New Andalusia, in Terra Firma, from which it is separated on the west and north by the Oronoco. It extends above 1200 miles in length, from north-east to south-west ; i. e. from the mouth of the Oronoco to that of the Ama- zon, and from 300 to 600 in breadth. The Portuguese, French, and Dutch, all formed set- tlements along the coast. Dutch Guiana, as we have stated in our article America, South, is now wholly ceded to Great Britain.

Guiana, French, occupies 160 leagues of coast from the Maroni on the north to the Cara- pona on the south ; this latter, which falls into

the Amazon in 6° 30′ N. lat., being agreed oa as the limit by France and Portugal in 1801. The French first established themselves on this coast in 1625, and gave it the name of equinoc- tial France; but in 1654 they again abandoned their only establishment at Cayenne, and the Dutch sought to fix themselves on it, but the French, returning in 1664, drove them out, and, though the island was again taken by the Dutch in 1676 they were obliged to restore it the fol- lowing year.

In 1809 the colony was captured by the Eng- lish and Portuguese forces combined, but it was restored to France by the peace of 1814.

The whole coast of French Guiana is lined by drowned mangrove islands and mud banks, which bar the mouths of the numerous rivers, and the navigation of which is also generally im- peded by ledges of rock. The rains which pre- vail from January to July, form stagnant ponds and marshes, that render the climate exceedingly unhealthy. The currents are very strong and irregular along this coast. The colony has never been of any considerable advantage to France, as will appear from the following statements of its population and exports.

Population of the colony, exclusive of Cay- enne Island.

1775.

1788.

1798.

Whites

Free people of color

Slaves

1,300 8,000

1,307

394

10,748

1,800

9,300

12,449

In 1772 Cayenne Island contained only ninety white families, 125 caribbs, and 1500 slaves. The exports of the colony were : —

Sugar.

Coffee.

Cacao.

Cotton.

Rocou.

Wood.

Hides.

1775. 1788.

quint.

840

20

quint .

900

159

quint.

1000

210

quint.

1000

925

quint.

6000

Indig

quint.

1400 0 50

No.

350

The only place worthy of mention, north of Cayenne, is Sinamari, a miserable post contain- ing in 1798 only fifteen or sixteen huts, the re- mains of a settlement founded in 1763. Cayenne Island lies in the mouth of the Oyak River, forming two branches. The northernmost, named Cayenne River, has but thirteen feet soft mud ; the southern branch is called the Mahun. The island is sixteen leagues in circuit, and is ex- tremely unhealthy ; for, the interior being lower than the shores, the rain water stagnates and forms putrid marshes. The town is built on the north-west point of the island, and is a wretched place, the streets steep and narrow, and paved with sharp stones.

Among the numerous islands off Cayenne, the only ones deserving mention are the Two Con- stables, or Gunners, barren conical rocks whitened with birds' dung. The Malingre Islands, three leagues south-east of Cayenne, are almost inaccessible ; on one of them is an hospi-

tal for lepers, this malady being very common a Cayenne.*

South of Cayenne the principal rivers are the Approuak, which has twelve feet depth at its en- trance ; the Oyapok, which empties itself west of Cape Orange ; the Cassipour, Coanwine, &c.

Guiana, Portuguese, occupies the left bank Df the Amazons. See Amazons.

The two principal mouths are here separated by the swampy alluvion island Caviana ; besides which, many similar islands are formed by its mud.

The only places in Portuguese Guiana, of which any thing is known, are the little fort of Macapa, and the fortified village of Paru, both on the Amazons.

GUICCIARDINI (Francis), a celebrated his- torian, born at Florence in 1482. He professed the civil law with reputation, and was employed in several embassies. Leo X. gave him the go- vernment of Modena and Reggio, and Clement

VII., that of Romagna and Bologna. Guicci- ardini was also lieutenant-general of the pope's army, and distinguished himself by his bravery on several occasions ; but, Paul III. having taken from him the government of Bologna, he retired to Florence, where he was made counsellor of state, and was of great service to the house of Medicis. He at length retired into the country to write his history of Italy, which he composed in Italian, and which extends from 1194 to 1532. This history is greatly esteemed, and was con- tinued by John Baptist Adriani, his friend. He died in 1540.

GuicciARDiNi (Lewis), nephew of the pre- ceding, wrote a history of the Low Countries and Memoirs of the Affairs of Europe, from 1530 to 1560. He wrote with great spirit against the persecution of the duke d'Alva, for which he im- prisoned him. He died in 1583.

GUIDE, w.s. &i;.a.>v FT.guide;li!i].guidu;

Gui'dage, n. s. Gui'dance, n.s. Guide'less adj. Gui'der, n. s.

Span, and Port, guia ; ■ ab niJ, to lead a troop army. — Minsheu. ' To direct, lead, influ-

ence, or govern ; to regulate and superintend. A guide is one who directs the way or conduct of another : guidage, an old word which signi- fies the reward given to a guide : guideless, hav- ing no superintendent or governor.

Aud for to maken you the more mery I wol my selven gladly with you ride. Right at my cwen cost, and be your gide.

Chaucer. Prologue to Cant. Tales. Calliope, thou sister wise and sly! And thou Minerva guide me with thy grace. That language rude my matter not deface.

Id. The Court of Love. Thry charge me with neglecting the guidance of •wiser men. Spenser.

Who ihc guide of nature, but only the God of na- ture? lu liim we live, move, and are. Those things which nature is said to do, are by divine art per- formed, using nature as an instrument : nor is there any such knowledge divine in nature herself working, but in the guide of nature's work. Honker.

Our guider come ! to the Roman camp conduct us.

Shakspeare. Can knowledge have no bound, but must advance So far to make us wish for ignorance ? And rather in the dark to grope our way. Than, led by a false guide, to err by day ? Denham.

They have all the same pastoral guides appointed, authorised, sanctified, and set apart by the appoint- ment of God, by the direction of the Spirit, to direct and lead the people, of God in the same way of eternal salvation. Pearson.

While yet but young his father djed. And left him to an happy guide. Waller.

Upon these, or such like secular maxims, when nothing but the interest of this world guides men, they many times conclude that the slightest wrongs are not to be put up. Kettlewelt.

There fierce winds o'er dusky valleys blow. Whose every puff bears empty shades away, Which guideless in those dark dominions stray.

Dryden. The' ambitious Swede, like restless billows tost, Though in his life he blood and ruin breathed, To his novr guideless kingdom peace bequeathed. Id. Some truths are not by reason to be tried, But we have sure experience for our guide. Id.

That person, that being provoked by excessive pain, thrust his dagger into his body, aud thereby, instead of reaching his vitals, opened an iroposthume, the unknown cause of all his pain, and so stabbed himself into perfect health and ease, surely had great reason to acknowledge chance for his chirurgcon, and Provi- dence for the guider of his hand. South.

Whosoever has a faithful friend to guide him in the dark passages of life, may carry his eyes in anolher man's head, and yet see never the worse. Id.

Particular application must be left to Christian prudence, under the guidance of God's Holy Spirit, who knows our necessity before we ask, and our ig- norance in asking. Rogers.

As to those who lived under the guidance of reason alone, without the assistance of supernatural light, it is highly probable that miracles, or a message from the dead, would persuade them. Atterbury.

A prince ought not to be under the guidance or in- fluence of cither faction, because he declines from his office of presiding over the whole, to be the head of a party. Swift.

Women neglect that which St. Paul assigns them as their proper business, the guiding of the house.

Decay of Piety. The new light served to guide them to their neigh- bours' coffers. Id. This to the young — but thy experienced age Wants not the guidance of a former sage. Sewell,

How empty learning, and how vain is art. But as it mends the life and guides the heart

Young, Once more upon the waters! yet once more. And the waves bound beneath me as a steed That knows his rider. Welcome to their roar. Swift be their guidance whereso'er they lead.

Byron. Childe Harold. GUIDI (Alexander), an eminent Italian poet, born at Pavia in 1650. At Rome he attracted the notice of queen Christina, of Sweden, who retained him at her court; he also obtauied a considerable benefice from Pope Innocent XI. and a pension from the duke of Parma. For an important political service he rendered the state of Milan, with

prince Eugene, he was enrolled among the nobles and decurions of tliat town; he died in 1712. His exterior form was unfavorable ; he was short and crooked, his head was large, and he was blind of his right eye. His works were published at 'erona in 1726.

GUIDO Aretin. See Auetin. GuiDO P..EM. See Resi. TAc GUIDON is a flag borne by the king's lifa- guard, broad at one extreme, and almost pointed at the other, and divided into two. It is the ensign or flag of a troop of horse guards.

Guidon, the officer who bears the guidon, is that in the horse-guards which the ensign is in the foot; and takes place next below tlie cornet.

GUIDONS, guidones, or schola guidonum, were a company of priests established by Charle- magne, at Rome, to conduct and guide pilgrims to Jerusalem, to visit tiie holy places : tliey were also to assist tliem in case they fell sick, and to perform the last offices to them in case they died. GUIENNE, a province in the south-west of France, to the north of Gascony, and separated from it by the river Garonne : the other principal rivers are the Dordogne, the L:)t, the Yarn, and

Aveyron. The modern division of this exten- sive district is into the five departments of the Gironde, the Lot and Garonne ; the Dordogne, the Lot, and the Aveyron. The soil is various, being in many places sandy, in others fertile, but in general well adapted to the culture of the vine ; and the collective population is about 1,900,000. In the fourteenth century this part of France was long the scene of war between the French and English, under Edward III. and the Black Prince.

GUJERAT, or Gujrat, a large province of Hindostan, chiefly situated between the twenty- first and twenty-fourth degrees of northern lativ tude. It is bounded on the north by the province of Ajmeer, on the east by Malvvah and Khan- deish, on the south by Aurungabad and the sea, and on the west by a sandy desert, the gulf of Cutch, and the sea; and has been computed to be 320 miles long, by about 180 broad. Parts of this country are fertile in cotton, tobacco, indigo, gum, and sugar; but other portions are very barren. This province is intersected by the Puddar, the Myhic, the Nerbudda, the Taptee, and other rivers, which, being navigable from the sea to a considerable distance, afford much faci- lity both to trade and piracy.

On the north-west, along the bank of the Puddar or Bunass, there is a

fenny tract, in which they breed excellent horses and camels, and the cattle are superior to those of any other part of India. Some of their bullocks, which are in general white, with large humps, are six- teen hands high, and will trot in a carriage as fast as good horses. Agriculture is impeded in many places by a want of water, the peasants being obliged to dig wells 100 feet deep; and their crops and flocks being frequently carried off" by robbers. The cultivators of the soil are the lower classes of Hindoos, called Coolies, Bheels, and Grassias; the Rajpoot, or military tribe, form a second class ; Brahmins the third ; Jains the fourth ; Mahommedans and their de- scendants a fifth ; genuine Mahommedans and their descendants a sixth; and Parsees (fire worshippers) a seventh ; all of whom, except the last, are subdivided into innumerable sects. The one most deserving of notice is that called Angrea, whose profession is to convey money, jewels, bills of exchange, &c., from one part of the country to the other. They have been fre- quently known to die in defence of the property confided to them. In this province they have hospitals for old or deceased animals.

The Gujeraty language nearly resembles the old Hindy, and is written in the Dewanagari character ; but in the large towns a mixed lan- guage is generally spoken. Infanticide and self-immolation were till lately very common. It was in Gujerat that the Parsees, or followers of the Magi, were first received by a Hindoo chief, possessor of the town and district of Seyjan, who granted them his protection, on condition of their changing their mode of dress, and laying aside their arms. They are now numerous, and a very inoff'ensive and industrious race, fol- lowing the religion of Zoroaster. They have a great aversion to extinguish a fire, and boast that they still possess the sacred flame brought by their ancestors from Persia, nearly 1200 years ago.

The ancient capital of the province was Ne- herwalla or Puttun (the city). Its present ca- pital is Ahmedabad ; but it possesses also the following towns or cities, viz. Surat, Broach, Cambay, Gogo, and Champaneer. Before the discovery of the Cape of Good Hope, there were few co.untries in the world that carried on a more extensive commerce, or that exhibited a greater progress in the arts.

This country was first subjected by the Mus- sulman arms, A. D. 1022, when Mahmoud, sultan of Ghizne, on his way to plunder the temple of Somnath, took the capital, and, the Rajpoot prince Byram Deo having fled, Mahmoud placed a Brahmin on the throne. The Rajpoots, however, soon recovered their authority; and, in the year 1 1 79, one of them, named Bim Deo, defeated the Mahommedans with great slaugh- ter. It was again overrun by Cuttub, the Afghan king of Delhi, in 1202; and a third time in 1297, by the troops of Alia I., who brought away with him Cumladi, the beautiful wife of the rajah, who became his spouse.

In 1390 the emperor Mohammed the IVth. appointed one of his father's slaves, by birth a Bramin, to the government of Gujerat, who, upon the death of the emperor in the year 1396, assumed the royal dignity and title of Muzuffer Shah. His family retained possession of Gujerat for nearly a century and a half. His grandson, sultan Ahmed, founded the city of Ahmedabad. In the year 1535 the emperor Homayon in- vaded Gujerat, and possessed himself of all its principal holds; but, when he was obliged to abandon his throne, a nephew of the last sultan got possession of the province; and it continued to be ruled by that dynasty in a very divided state, till the year 1572, when, the emperor Akbar having advanced against it. Sultan Muzuff'er sur- rendered himself and kingdom into the imperial hands. From that period Gujerat again became one of the provinces of the empire, and so con- tinued till tlie death of Aurungzebe. It was shortly after that event invaded by the Mahrattas. Surat and some other towns were, however, de- fended by their governors, who retained their allegiance to the court of Delhi. During the war of 1780 the British got possession of a portion of it ; and at present the best parts of it belong to them, to the Guicowar, and to the Peshwa. The British territory consists of a considerable tract on both sides of the gulf of Cambay, and includes the populous cities of Surat, Broach, Cambay, Kaira, and Gogo. The sea coast between the gulf of Cambay and Cutch is occupied by different independent chiefs. The northern and western borders are also possessed by a number of barbarous plun- derers.

GUILANDINA, the nickar tree, a genus of the monogynia order, decandria class of plants ; natural order thirty-third, lomentacese : cal. monophyllous and salver-shaped ; the petals, inserted into the neck of the calyx, nearly equal ; the seed-vessel a legumen. There are, species

1. G. bonduca, the yellow nickar.

2. G. bonducella, the gray nickar. These are climbing plants, natives of the West Indies, where they rise to twelve or fourteen feet : the

flowers come out at the wings of the stalks ; and are composed of five concave yellow petals. They are succeeded by pods about three inches long and two broad, closely armed with slender spines, opening with two valves, each enclosing two hard s€eds, about the size of pistol bullets, of a yellowish color.

3. G. moringa, the morunga nickar, is a na- tive of Ceylon, and some places on the Malabar coast. It rises to twenty-five or thirty feet, having flowers produced in loose bunches from the sides of the branches, and composed of an unequal number of petals. These plants, being natives of warm climates, require to be kept through the winter in a stove in this country. They are propagated by seeds; but those of the bonduca are so hard, that unless they are soaked some days in water before they are put into the ground, or placed under the pots in the tan-bed to soften their covers, they will remain for years without vegetating. The roots of the moringa are scraped when young, and used by the inha- bitants of Ceylon and Malabar as those of horse- radish are in Europe. The wood dyes a beautiful blue color. It is the lignum nephriticum, or nephritic wood of the dispensatories ; and is brought over in large, compact, ponderous pieces, without knots, of a whitish or pale yellow color on the outside, and dark-colored or reddish within : the bark is usually rejected. This wood imparts to water or rectified spirit a deep tinc- ture; appearing, when placed between the eye and the light, of a golden color; in other situa- tions blue : pieces of another wood are some- times mixed with it, which give only a yellow color to water. It has scarcely any smell, and very little taste. It has been recommended in difficulty of urine, nephritic complaints, and all disorders of the kidneys and urinary passages.

GUILD, 71. s. Sax. jil-o; Goih, gield; Belg. and Swed. gild ; Teut. gilde. A society ; a cor- poration; a fraternity or company, combined together by orders and laws made among them- selves. Hence the common word gild or guild- hall proceeds, being a fraternity or commonalty of men gathered into one combination, support- ing their common charge by mutual contribution : and Belg. gild is also a contribution.

Wei semed cche of hem a fayre burgeis. To sitten in a gild hallo on a deis. Everich, for the wisdom that he can, Was shapelich for to ben an alderman.

Chaucer. Pruluyue to Cant, Tales, Towards three or four o'clock Look for the news that the guild hall affords.

Shaksj}eare. Richard III, [n woollen cloth it appears, by those ancient guilds tliat were settled in England for this manufacture, that this kingdom greatly flourished in that art.

Hale's Origin of Mankind, As when ihc long-cared milky mothers wait At some sick miser's triple-bolted gate. For their defrauded absent foals they make A moan so loud, that all the guild awake. Pope, Guild, Dean of. Every royal borough in Scotland had a dean of guild, who was the next magistrate below the bailie, lie judged of con- troversies among men

concerning trade ; dis- putes between inhabitants touching buildings, lights, water-courses, and other nuisances ; called

courts, at which his brethren of the guild were bound to attend ; managed the common stock of the guild ; and amerced and collected fines.

GUILDFORD, or Guldeford, a borough town of Surrey, on the Wye, near the ruins of an old castle. In the Saxon times it was a royal villa, where many of the Anglo-Saxon kings used to pass their festivals. It is a corporation consisting of a mayor, recorder, aldermen, &c. ; and has sent two members to parliament ever since parliaments commenced. The great road from London to Chichester and Portsmouth lies through this town ; and the assizes are held here. Here were formerly two monasteries, the remains of one of which afford accommodation for the judges during the assizes ; and part is con- verted into a boarding-school. The structure is Gothic. Its manufactory formerly was cloth, of which there are still some small remains. Here is a school founded by king Edward VL ; an almshouse endowed with lands, worth £300 a-year J and two charity schools for thirty boys and twenty girls. There are three fine churches. There is a fine circular course for horse races near the town, which begin when the Newmarket races are ended. King William III. founded a plate of 100 guineas to be run for here every May, and used to honor the race with his pre- sence ; there are also three subscription plates run for, exclusive of private matches ; these are often very brilliantly attended, and the town is crowded with the numerous visitants. The an- cient cockpit is now converted to a butter and poultry market. The Wye is made navigable to the town, and by it a great quantity of timber is carried to London, not only from this neigh- bourhood, but from Sussex and Hampshire woods, thirty miles off". Guildford is thirty miles south-west of London.

Guild-Hall, or Gild-Hall, the great court of judicature for London. In it are kept the mayor's court, the sheriff"'s court, the court o hustings, court of conscience, court of common council, chamberlain's court, &c. Here also the judges sit upon nisi prius, &c. See London.

GUILE, n. s. ~\ Old Fr. guille, gillc ;

GviLE'FVL,adj. tlie same with wile.

GuiLE'FULLY,«f/i;. ! Dcccit; cunning; trea-

Guile'fulness, 7/. s. f chery ; secretly mis-

Guile'less, adj. \ chievous, or artful ; in-

Gui'ler, n. s. J sidious: guileless im-

plies the opposite of such characteristics, or simply honest ; open; sincere.

Of all this worldc is emperour Gile, my father, the trcchour.

Chaucer, Romaunt of the Rose, The strong the feble ovorgothe ; But I, that were my simple clothe, Robbe bothe the robbed and robbours, And gile the giled and gilours. Id.

A gilour shal himself begiled be.

Id. The Reves Tale. But he was wary wise in all his way.

And well perceived his deceitful sleight ; Nc suffered lust his safety to betray ;

So goodly did beguile the guiler of the prey

Sjˆenser

With fawning words he courted her awhile. And looking luvely, and oft sighing sure.

GUI

720

GUI

Her constant heart did court with divers guile ;

But words and looks, and sighs she did abhor. Id.

The way not to be inveigled by them that are so guileful through skill, is thoroughly to be instructed in that which maketh skilful against ˆuiZe. Hooker.

I trained thy brethren to that guileful hole. Where the dead corps of Bassianus lay.

*Shakspeare. Without expence at all. By Quileful fair words, peace may be obtained. ‘ * Id. Henry VI.*

When I have most need to employ a friend, Deep, hollow, treacherous, and full oi guile. Be he to me ‘. This do I beg of heaven. When I am cold in zeal to you or yours.

Shakspeare. We may, with more successful hope, resolve To wage by force

or guile eternal war. Milton.

Nor thou his malice and false guile contemn : Subtle he needs must be who could seduce Angels. Id- Paradise Lost.

He saw his guileful act By Eve, though all unweeting, seconded Upon her husband. Id.

To whom the tempteT guilefully replied. Milton. The guileful phantom now forsook the shrowd. And flew sublime, and vanished in a cloud.

Dryden's jEneid.

GUILLIM (John), of Welsh extraction, was born in Herefordshire, about 1565-. Having completed his education at Brazen Nose College, Oxford, he became a member of the College of Arms in London ; and was made rouge croix pursuivant, in which post he died in 1621. He published, in 1610, a celebrated work, entitled the Display of Heraldry, in folio, which has gone through many editions.

GUILLOTINE, an engine of decapitation, decreed by the French National Assembly to be the sole punishment of persons condemned to death, on the 20th of March, 1792 ; so named from Dr. Guillot, a member of the assembly, who proposed it as an instrument of mercy, by giving the criminal a more expeditious death than any other means can afford. Its effect, it must be allowed, is instantaneous. This ma- chine consists of two upright posts, ten feet high, joined at the top by an horizontal piece of tim- ber. At four feel from the bottom is a cross bar, on which the neck of the criminal is laid, over ■which there falls a similar bar, shaped like the front board of our pillory. On the inner faces of the frame are grooves, along which the ex- treme edges of an axe slide up and down. This axe is heavily laden with lead, and is so con- trived that the oblique edge falls upon the neck in a diagonal direction, so as to sever the cul- prit's head from his body by a sliding cut. The upright side of the axe is wholly included in the groove which guides it, by means of a cord and pulley, up to a catch or pin, with which a sepa- rate cord is connected. The criminal is pre- pared for his fate by the executioner, who, having first cut off his hair, ties him in a standing pos- ture to a board, which he afterwards inclines, so as to lay the body horizontally with the face downwards, and with the head advanced over a basket placed for its reception. The string being pulled by the executioner, the axe descends, and the head is severed in an instant. Louis XVI.,

his queen and aunt, and multitudes of persons of both sexes, and of all ranks, who were attached to the royal cause in France, suffered death in

this way.

This machine is not, however, a new inven- tion, but only an improvement on an instrument used in Scotland and at Halifax, and called the maiden. The cloths, at the first erection of the woollen manufactures, having been often stolen in the night, a law was made, by which tlie ma- gistrates of Halifax were empowered to execute all offenders, if they were taken in the fact, or owned it, or if the stolen cloth was found upon them, provided the crime was committed, and the criminal apprehended, within the liberties of the forest of Hardwick. Those found guilty were thus executed : an axe was drawn by a pulley to the top of a wooden engine, and fastened by a pin, which being pulled out, the axe fell down in an instant. If they had stolen an ox, horse, or any other beast, it was led with them to the scaffold, and there fastened by a cord to the pin, that held up the axe ; and when the signal was given by the jurors, who were the first burghers within the several towns of the forest, the beast was driven away, and the pin plucked out, upon which the axe fell, and beheaded the criminal.

‘ This instrument,’ says Mr. Pennant, ‘ wae very freely used during the reign of Elizabeth : the records before that time were lost : twenty- five suffered in her reign, and at least twelve from 1623 to 1650; after which I believe the privilege was no more exerted. This machine of death is now destroyed ; but I saw one of the same kind in a room under the parliament-house at Edinburgh, where it was introduced by the regent Morton, who took a model of it as he passed through Halifax, and at length suffered by it himself. It is in form of a painter’s easel, and about ten feet high : at four feet from the bottom is a cross bar, on which the felon lays his head, which is kept down by another placed above. In the inner edges of the frame are grooves ; in these is placed a sharp axe, with a vast weight of lead, supported at the very sum- mit with a peg ; to that peg is fastened a cord, which the executioner cutting, the axe falls, and decapitates the culprit.’

GUILT, 71. s.’ ˆ Sax. 3ylt, originally

Guil’tily, adv. I signifying the fine or

Guil’tiness, n. s. | mulct paid for an of-

Guilt’less, adj.

GuiLT’LESSLY,«(fu. GuILt’lESSNESS, 7J.S.

Guil’ty, adj.

)> fence ; offence

afterward tlie itself. Goth, and Swed. glide. See Guild. The contrary

to innocence, as wickedness ; crime; a state of corruption and sin ; chargeable with misconduct : guiltless is innocent; blameless; free from guilt. We are verily guilty concerning our brother, in that we saw the anguish of his soul when he besought us, and we would not hear. Gen. xlii. 21.

Then shall the man be guiltless from iniquity, and this woman shall bear her iniquity. Numbers v. 31. And although that his Ire hir gilt accused ; Yet, in his Reson, he hem both excused.

Chaucer. The Knightes Tale, A Breton book, written with Evangilcs, Was fet, and on this book he swore anon She giltif yv&s, Id. The Man of Lawes Tale

And aske mercy, and gilteleise'^ what nede? And if that I complaine what life I lede, You recketh not ; that know I out of drede.

Id. Annelida, and False Arcit(. I am in this commanded to deliver The noble duke of Clarence to your hands : I will not reason what is meant hereby. Because I will be guilthm of the meaning.

Shakspeare. Many worthy and chaste dames thus, 411 ^ui/^Ze«, meet reproach. Id. Othello.*

Close pent up guills Rive your concealing continents, and ask These dreadful summoners grace. Shalupeare. Is there not a ballad of the king and the heirgar ?— The world was guilty ni such a ballad some three ages since. Id. Love's Labour Lost-

Marked you not How that the guilty kindred of the queen Looked pale, when they did hear of Clarence death?

Sliaktpeare. The last was I that felt thy tyranny : O, in the battle think on Buckingham, And die in teriour of thy guiltiness. Id.

I should be guiltier than my guiltiitess. Id.

Bloody and guilty ; guiltily awake. And in a bloody battle end thy days : Think on lord Hastings, and despair, and die.

Id. Richard III. It was neither ^wZ of crime, nor reason of state, that could*

quench the envy that was upon the king for this execution. Bacon's Henry VII.

Tliou, who doest all thou wishest at thy will. And never wiliest aught but what is right. Preserve this guiltless blood they seek to spill ; Thine be my kingdom. Fairfax.

I would not have had any hand in his death, of whose guiltlessness I was better assured than any man living could be. Iˆng Charles.

The guilty serpents, and ohscenor beasts, Creep conscious to their secret rests : Nature to thee does reverence pay, III omens and ill sights removes out of thy way.

Cowley. The guillLss damsel, flying tlie mad pursuit Of her enraged slepdame Guendolond, Commended her fair innocence to the flood. That staid her flight with his cross-flowing course.

Milton's Comus. A good number, trusting to their number more than to their valour, and valuing money higher than equity, felt thai guiltlessness is not always with ease oppressed.

Sidney. He thought his flight rather to proceed of a fearful gHiltmc'S than of an humble faithfulness. Id.

Guiltless of greatness, thus he always prayed. Nor knew nor wished he that those vows he made On his own head should be at last repaid. Dryden.

'I'he tciˆming earth yet guiltless of the plough. And, unprovoked, did fruitful stores allow. Id.

With mortal hatred I pursued his life. Nor he, nor you, were guilty of the strife j Nor I, but as I loved ; yet all combined. Your beauty and my impotence of mind. Id.

Farewell the stones And threshold, guilty oi my midnight moans. Id. No penance can dissolve our guilty fame. Nor tears, that wash out sin, can wash out shame.

Prior. , like a dog, could bite as well as whine, And first complained whene'er the guilt was mine.

Pope. Thou knowest how guiltless first I met ihy flame. When love approached mc under fricndsliip's name.

Id. Vol.. X.

When these two are taken away, the possibility of guilt, and the possibility of innocence, what restraint can the belief of the creed lay upon any man ?

Hammond on Fundamentals. All the tumult of a guilty world. Tost by ungenerous passion, sinks away.

Thomson. A pert prim prater of the northern race, Ouilt in his heart, and famine in his face.

Churchill. GUINEA, n. s. From Guinea, a country in Africa abounding with gold. A gold coin valued at one and twenty shillings.

By the word gold I must be understood to design a particular piece of matter ; that is, the lastˆMJTjea that was coined. Locke.

Ladies, whtse love is constant as the wind : Cits, who prefer a guinea to mankind. Young.

Guinea, a large tract of country on the west coast of the continent of Africa, which some geo- graphers have extended to all the country be- tween the Gambia and Benguela, dividing it into Upper and Lower ; while others confine it to the coast between the Mesurado and Cross River. We take a middle course, indicated by similarity of climate and seasons, and consider Guinea as comprised between the Gambia and Cape Lopez Gonsaivez.

Our navigators give the name of Wmdward Coast to the space between the Rio Grande and Cape Palmas, because the winds are generally from the north, and consequently it lies to windward relative to the gulf of Guinea.

That from the Mesurado to Cape Palmas is named the Grain Coast, from a species of pepper called by the natives manigatta, and by Euro- peans the grain of Paradise.

The Ivory or Tooth Coast extends from Cape Palmas to the river Frisco or Lagos, and derives its name from the quantity of elephants' teeth procured on it, these animals it is thought being particularly attracted to this part of the coast by its abundance of suEjar canes, of which they are extremely fond. This extent of coast is free from danger, and may be sailed along within a league –

The Quaqua Coast, from the river Frisco to Assinee. This extent is more usually included in the Ivory Coast.

The Gold Coast, according to different writers, commences at Assinee, at Cape ApoUoiiia, and at Cape Three Points, and generally is terminated at

the river 'olta. It has its name from the quan- tity of gold-dust brought by the negroes for sale, and wliich they collect in the sands of tiie brooks and torrents.

The Slave Coast extends from the Volta to Cross River. It is sometimes subdivided into Dahomey, or Whidali, from the 'olta to Porto Nova ; Benin from the latter river to that of Formosa, and Ouary to Cross River. See J)a-

HOMF.V.

Tlie coast from Cross River to Cape Lopez lias no general appellation, but is marked by the names of its negro tribes, Biaffra and Calbouga, and Kalabar and Gabon, from the rivers of these names.

On the we.it coast of Africa, washed by the Atlantic from the strait of Gibraltar to the Sene- gal, there is no river of any consequence, anu

not a single port. The coast of Guinea has, it is true, a great number of rivers, but most of them are barred and inaccessible to ships, and the ports formed by the islands that line it are few and inconvenient. Beyond this region the great extent to the Cape of Good Hope has but two or three rivers, and an equal number of ports. All the rivers of Africa, within the tropics, are subject to periodical inundations, caused by the heavy rains, when the sun is vertical in the equatorial region The banks of most of the rivers of Guinea are either marshy and covered with impenetrable mangrove, or close forests, and in few instances afford any dry elevated grounds; there are, however, spots on the banks of the Sierra Leone, which offer a picturesque and varied mountainous scenery. The whole west coast of Africa is beaten by a violent surf, and infested by sharks, while the rivers abound in equally voracious alligatois, and the fresh water swamps with the hippopotamus.

The climate of the west coast of Africa, from the latitude of 20° N. to the equator, is in general extremely destructive to Europeans, though some spots are found more salubrious than others. The rainy season commences throughout this tract in May, lasts till October, and is at its height in June and July, with al- most constant thunder and lightning. The ex- halations from the marshes, formed by the over- flowing of the rivers, from the rank vegetation on their banks, and from the vegetable and ani- mal corruption which covers the ground, produce mortal dysenteries and inflammatory

fevers. During the dry season, from November to May, the climate is less unhealthy, the atmosphere being then clear, and the heat tempered by sea breezes. In Senegambia the greatest heat is in July, when the thermometer rises in the open air to 120° or even 130°, and in the night never falls below 100°. The winds during the wet reason on this coast blow constantly from the north with strong southerly currents, by means of which ves«-eb run from the Senegal to Goree in twenty-four hours, while it requires ten or fifteen days to beat back. During the dry season the thermometer varies in the day between 88° and 68°, and during the night, when there are heavy dews, falls to 60°.

The coast between the Gambia and Cape A'erga, a distance of 250 miles, is formed by a chain of low and fertile islands separated from the main, and from each other, by narrow but deep straits. Beyond Cape Verga these low islands are succeeded by an elevated coast, which increases in height till south of Sierra Leone it presents alpine peaks apparently of volcanic origin. On this extent of coast the rains commence the same time as to the north, but are not so intense nor the climate so insalu- brious : the extremes of the thermometer through- out the year are 63° and 93°, from May to August. North-west winds are most prevalent, and south- west in September and October. In November, December, and January, north-east winds pre- vail, vith fogs, and the thermometer descends the lov. est. In February,]\Iarch, and April, land ar i sea breezes are pretty regular, the latter from the south-west in the evening. On this

coast between June and October tornadoes are frequent, and chiefly come from between the east and south-east ; they blow with all the violence of a hurricane, but seldom longer than an hour or two, and their approach is denoted by black heavy clouds, rising in the south-east an hour before their arrival. Other writers say these storms are announced by a small white cloud, but this captain Beaver positively contradicts from the experience of seventy of them; of which sixty-three came from between east and south-east, two at E. N. E., three at north-east, and two at north-west. The word tornado is Portu- guese, and signifies a whirlwind.

Betw.een Sierra Leone and Cape Palmas the prevailing winds are from north-west and N.N.W., but after passing this cape they blow throughout the gulf of Guinea from south-west toS. S.W. The general current sets to the south-east to Cape Palmas, round which it curves to the E. N.E into the gulf. On the equator, in the gulf of Guinea, the current sets at times strong to the west, chiefly in June, July, and August, and particularly at the new and full moon. — Horsburgh's Ind. Direct. We are inclined to attribute this westerly current to the great quan- tity of fresh water emptied into the eastern port of the gulf during these rainy months.

The Grain, Ivory, and Gold Coasts are low and thickly wooded ; but inland, at a short dis- tance, the country is pleasantly diversified with hills and plains extremely fertile, and with abun- dance of good waˆer, an article that is both scarce and bad near the shore. The seasons are similar to those already noticed, but the heat is greater on the Gold Coast than even in Sene- gambia, the thermometer rising in the open air to 134°. On the whole coast of Guinea, from the Gambia to Cape Lopez, a singular wind, called the harraattan, blows from the interior of Africa, occasionally in December, January, and February. It has no regular period of duration, sometimes continuing only a few hours, at others for several days ; it is cold, and always attended with a dense dry fog, through which the sun at noon appears of a pale red. The extreme dry- ness of this wind withers the leaves of vegetables. At some seasons it is considered malignant, pro- bably after wet weather, when it is loaded with marsh miasma ; at others it arrests the progress of epidemic diseases. From the whitish powder which seems to compose the fog, and which sub- sides on the earth, it has been supposed that this wind blows from some volcano in the unexplored interior of Africa. On the coast of Sierra Leone it blows from the E. S. E., on the Gold Coast from north-east, and towards Cape Lopez from N. N. E.

The Slave Coast, between the rivers Volta and Formosa, is low and in general thinly wooded ; it is lined by a chain of lagoons, sepa- rated from the sea by a narrow border of land, called by the French La Pre, the meadow, and which are formed by the overflowing of the rivers. From the Formosa to the Camerons the coast is intersected by the mouths of numerous rivers, by some supposed to be branches of the Niger, which still conceals its embouchure from the re- searches of geographers. These rivers carry out

great quantities of mud, which elevate the bottom of the sea, and it seems probable that the pro- jecting land of Cape Formosa, which sepa- rates the gulf of Benin and Biafra, is entirely formed of alluvion. A considerable number of elephants frequent this part of the coast ; but their tusks are said to be of an inferior ivory. The fresh water swamps are also frequented by the hippopotamus. Between the rivers Came- rons and S. Benito, the coast is mountainous, and in the tract called the high land of Ambozes some of the peaks are thought to equal that of Teneriffe in elevation.

After crossing the equator the wet season is from September to November, the rains prevail- ing at each side of the equator in the respective summer solstice ; they are also retarded in going to the south, commencing at

Loango in Decem- ber and lasting till March. After passing Loango there is strictly speaking no wet season.

A brief sketch of the general character of the tribes inhabiting this coast will not be uninte- resting.

From the Gambia to the Cassamanpa occur the Feloops, a tribe of idolaters, who are de- scribed as melancholy and revengeful, but also honest and grateful. The succeeding tribes on the coast are the Bagnons, on the banks of the St. Domingo, who are said to be peaceful culti- vators ; the Papels and Balontes occupy the coast of St. Domingo and the Courbali, and are painted as ferocious and inhospitable. The Pa- pels worship trees, ox horns, and all sorts of visible objects. When their king dies a new one is elected in a singular maimer ; the corpse of the deceased monarch is placed on a bier, en- circled by the chief nobles, and being tossed up in the air, the noble on whom it falls in its de- scent is thereby duly elected.

The Biafers occupy the right bank of the Rio Grande : they are somewhat civilised and ad- dicted to commerce. Between the Rio Grande and Nunez is the tribe of Naloes, whose lands are well cultivated and produce indigo and cotton, but with whom it is necessary to be guarded. The Bissagos Islands are inhabited by different tribes of idolaters, generally ferocious and trea- cherous, adorning their huts with the scalps of their enemies ; and, in the island of Bissao, the favorite wives of the king are sacrificed on his death and burnt with his corpse.

The negroes of the Grain Coast are said to be jealous of strangers, and are little known. The Ivory Coast to Cape La Hou is also occupied by an unfriendly and warlike tribe, described as an- thropophagi, whence the Portuguese give them the name of malos gentes. East of Cape La Hou are the Quaquas, or boas gentes, who, like the Hindoos, are divided into casts, the son always following the profession of the father.

The coast between the Volta and Benin is subject to the king of Dahomey, which see.

The negroes of Benin are nearly as barbarous as the Dahomeys. Their king, who can bring 100,000 fighting men to the field, is worshipped as a demi-wod, is supposed to live without food, and, when he appears to die, is thought, liko the Grand Lama, to revive under another human form. Here human victims are sacrificed to the

evil principle ; and, in their feasts, the king and nobles dip their coral necklaces in the blood of the victims, and pray to the gods, that they may never be deprived of this mark of pre-eminence.

The tribes between Benin and Loango are little known A second tribe of Biafers inha- bit the banks of the Formosa, and are said to sacrifice their children to the devil. To them succeed the Calhongas, occupying the country through which run the Rio del Rey and San Be- nito : they are painted as the least civilised of the negro nations, going naked, and selling their children and relations as slaves.

The Comma and Gobhi succeed the Calbon- gas, and extend to Cape Lopez : they resemble their soutliern neighbours of Loango.

Under this vague and general denomination we have thus sketched the great features and ge- neral appearance of this coast. Ashaxtee, Sierra Leone, and other places of particular importance, will be treated of in their respective places of the alphabet.

For the progress of modern discovery in this neighbourhood, see the lattCT part of the article Africa.

GUI'NEA-DROPPER, n. s. Guinea and drop. One who cheats by dropping guineas.

Who now the guineadropper's bait regards. Tricked by the sharper's dice, or juggler's cards.

Gay.

GUI'NEA-HEN, n. s. A fowl, supposed to be of Guinea.

Guinea-Hen. See Numida. GUI'NEA-PEPPER, «. s. Lut. capsieum. A plant.

Guinea-Pepper. See Capsicum. GUI'NEA-PIG, n. s. A small animal with a pig's snout, brought, it is believed, from Africa. GuiNEA-PiG. See Cavia. Guinea-Wheat. See Zea. Guinea-W^orms. See Dracunculi. GUISE, U.S. The same with wise, Fr. guise; Sax. pipa; the p or vj being changed, as is com- mon, into g. See Guile. Manner; external demeanor ; practice ; custom ; fashion, either in conduct or attire.

.\nd, as the guise was in his countree, Ful highe upon a char of gold stood he.

Chaucer. The Knightes Tale. Yet had nature taught her after her guise To know her foe, and dread him evermore.

Wyatt. His own sire, and master of his guise. Did often tremble at his horrid view. Spenser. Lo you ! here she comes : this is her very guise ; and, upon my life, fast asleep : observe her, stand close. Shakspeare. Macbeth.

Thus women know, and thus they use the guise, T' enchant the valiant and beguile the wise.

Fairfax. I have drunke wine past my usual guise ; Strong wine commands the foo c, and moves the wise.

Chapman. This would not be slept ; Old guile must be kept. Ben Jonaon.

The pomp of kings they should confess At (heir crownings to be less Than a lover's humblest guise When at his ii:i:.u\ss' feet he lies. Cowley.

They stand a horrid front Of dreadful length, and dazzling arms, in guise Of warriorn old, with ordered spear and shield. Awaiting what command their mighty chief Had to impose. Milton's Paradise Lost.

Back, shepherds, back : Here be without duck or nod. Other trippings to be trod. Of lighter toes and such court guise As Mercury did first devise. Milton.

When I was very jouna;, nothing was so much talked of as rickets among children, and consumptions among young people : after these the spleen came in play, and then the scurvy, which was the general complaint, and both were thought to appear in many various guises. Temple.

The swain replied, it never was our guise To !iliB;ht the poor, or aught humane despise.

Pope, The Hugonots were engaged in a civil war, by the specious pretences of some, who, under the guise of religion, sacrificed so many thousands to their own ambition. Swift.

Their external shapes are notoriously accommodated to that law or guise of life that nature has designed them. More.

Thus hid in arms she seemed a goodly knight. And fit for any warlike exercise : But when she list lay down her armour bright. And back resume her peaceful maiden's ˆimw? ; The fairest Maid she was that ever yet Prisoned her locks within a golden net. Or let them waving hang, with roses fair beset.*

Fletcher's Purple Island. And answered like a statesman, or a prophet, In such guise that she could make nothing of it.

Byron.

GUISE (Henry), duke of. See Lorrain.

GUITA'R, n. s. Fr. guitarre ; Ital. ghitara. A stringed instrument of music.

And as wel coud he play on a giterre.

Chaucer. The Milleres Tale. allads and eggs, and lighter fare. Tune the Italian spark's guitar. Prior.

And there are songs and quavers, roaring, hum- ming. Guitars, and every other sort of strumming. Byron.

Guitar, a stringed instrument, in which the strings are fastened to a bridge fixed to the lower part of the belly, and supported by a nut at the end of the neck. The strings are governed by pegs or metal pins at the back of the neck. The instrument had at first but four strings, which have since been increased to five double strings, of which the first three are tuned unisons, and the fourth and fifth octaves to each other. Some- times the fifth string has no octave lest it should overpower the rest ; and the first string is so often false that it is frequently played single. This in- strument is tuned and played so many different ways, that it must be strung according to the pitch and tuning. There are two ways of per- forming on this instrument, either by sweeping or pinching the strings. The most extensive, and the most susceptible of execution, is the pinching of the strings. The arpeggios are more harmonious, because all the strings are in vibra- tion ; but they must be touched very lightly and delicateJy with the right hand, and with firm- ness, and correct position of the left hand, to produce a good effect. The strings are pinched or thrummed between the rose and the bridge ;

but the arpeggios ought to be made between the rose and the last fret of the neck, that is, about the middle of the strings, to avoid the harshness resulting from the playing too near the bridge, where the strings are more stubborn and unma- nageable than towards the middle.

GULCH, n. s. > From Lat.gw/o. — Skinner.

Gul'chin, n. s. 5 a little glutton.

GULDENSTAEDT (John Anthony), M. D., was born at Riga, April 26th, 1745, and in 1763 was admitted into the medical college of Ber- lin. He completed his studies at Frankfort upon the Oder, where, m 1767, he received his degree. Being invited to Petersburgh, in 1768, he was created adjunct, and in 1770 member of the Imperial Academy, and professor of

natural his- tory. In June, 1761, he set out upon his travels, and was absent seven years. From Moscow, where he continued till March 1769, he passed to Voronetz, Tzantzin, Astracan, and Killar, near Persia. In 1770 he examined tlie districts watered by the Terek, Sunsha, and Alksai, in the east extremity of Caucasus ; and in 1771 penetrated into Ossetia, in the highest part of the same mountain ; where he collected vocabula- ries of the languages spoken in those regions. Having visited Cabarda, and the north of Cauca- sus, he proceeded to Georgia, and was admitted to prince Heraclius, who was encamped ten miles from Tefflis, and whom he followed in spring to Koketia, and explored the south dis- tricts inhabited by the Turcoman Tartars in the company of a Georgian magnate, whom he had cured of a dangerous disorder. In July he passed into Imeretia ; penetrated into the middle chain of mount Caucasus, visited the confines of Mingrelia, Middle Georgia, and Eastern and Lower Imeretia ; and after escaping many immi- nent dangers, returned to Kislar on the 18th of November, where he passed the winter, collect- ing various information concerning the neighbour- ing Tartar tribes of Caucasus, particularly the Lesgees. In the following summer he journeyed to Cabardo Major, continued his course to mount Beshton, the highest point of the first ridge of the Caucasus, inspecting the mines of Madshar, and went to Tcherkash upon the Don. Thence he made expeditions to Azof and Taganrog, and thence along the new limits to the Dnieper; he finished this year's route at Kre- mentshuk, in New Russia. In the following spring, he was proceeding to Crim Tartary ; but, receiving an order of recal, he returned through the Ukraine to Moscow and St. Petersburg, where he arrived in March 1775. Unon his re- turn he began to arrange bis papers ; but, before he could finish them for the press, was seized with a violent fever, which carried him off in March 1781. A list of his writings is given in Coxe's Travels.

GULES, o^;. Fr. gueu/es. Perhaps {rom gouUt, the throat. Red ; a barbarous term of heraldry.

Follow thy drum ; With man's blood paint the ground : gules, gvles ; Religious canons, civil laws are cruel ; Then what should war be ? Sluikspeare. Timtm.

He whose sable arms. Black as his purpose, did the knight resemble. When he laid couched in the ominous hor.se.

Hath now his dread and black complexion smeared

With heraldry more dismal ; head to foot.

Now he is total gules. Skakspeare,

His seven-fold targe a field oi gtdes did stain; In -which two swords he bore : his word, ‘ Divide and reign.’ Fletcher’s Purple Island.

GuLE OF August, the day of St. Peter ad vincula, which is celebrated on the 1st of August. It is called the gule of August from gula, a throat, because one Quirinus, a tribune, having a daughter diseased in her throat, went to pope Alexander, the sixth from St. Peter, and desired of him to see the chains that St. Peter was chained with under Nero ; which request being granted, she, on kissing the chains, was cured of her disease ; whereupon the pope instituted this feast in honor of St. Peter. Hence the day was called also that of St. Peter ad vincula.

Gu LES, a corruption of the French word gueules, which in heraldry signifies red, is represented in engraving by perpendicular lines. See dia- gram. This color is by the ge- nerality of the English heralds ranked before azure. But the ci-devant French heralds pre- ferred azure.

GULF, 71. s.) Fr. golfe ; Ital. golfo ; Gr. Gulf’y, adj. ii (coiXos; Goth, gialfur. A deep, concave, receptacle for water; a bay; an un- fathomable abyss ; a whirlpool or eddy : figura- tively applied to any thing insatiable, as woe, or despair ; — thus hell is termed a fiery gulf.

Thence turning back, in silence soft they stole, And brought the heavy corse with easy pace To yawning gulph of deep Avemus’ hole.

Spenser. The Venetian admiral withdrew himself farther off Arom the islaud Corfu, into the gulf oi\he Adriatick.

Knollea. 1 know thou’d’st rather Follow thine enemy in a tiery gidph. Than flatter him in a bower. Shahspeare.

Scull of dragon, tooth of wolf. Witches mummy ; maw and gulf Of the ravening salt sea shark ; Root of lirmlock, digged i’ the’ dark. Id.

England his approaches makes as fierce As waters to the sucking of a gvlf. Id.

Rivers arise ; whether thou be the son Of utmost Tweed, or Ouse, or gulfy Don.

Milton. This is the ˆt/// through which Virgil's Alecto shoots herself into hell : the fall of waters, the woods that encompass it, are all in the description. Addison.

The sea could not be much narrower than it is, without a great loss to the world ; and must we now have an ocean of mere fiats and shallows, to the utter ruin of navigation, for fear our heads should turn giddy at the imagination of gaping abysses and un- fathomable gulfs ? Bentley. At their native realms the Greeks arrived. All who the war of ten long years survived. And scaped the perils of the gulfy main. Pope,

High o'er a gulfy sea the Pharian isle Fronts the deep roar of disemboguing Nile. Id. What dreadful pleasure I there to stand sublime. Like shipwrecked mariner oa desert coast. And view the' enormous waste of vapour, tost In billows, lengthening to the liorizon round. Now scooped la gulfs, witli mountains now embossed. Bcattie's Minstiel.

A Gulf, in geography, is a capacious bay between two promontories, sometimes taking the name of a sea, when very extensive ; but parti- cularly when it only communicates with the sea by a strait. Such are the Euxine or Black Sea, called the gulf of Constantinople ; the Adriatic Sea, or the gulf of Venice ; the gulf of Lyons, near France, and the gulf of Sierra, near Bar- bary All these are in the Mediterranean. There are the gulfs of Mexico, St. Lawrence, and Ca- lifornia, in North America; tne gulf of Persia, or the Red Sea, between Persia and Arabia; the gulf of Bengal in India; and the gtilts of Cochin-China and Kamtschatka, near those countries.

Gulf Stream. See Florida, Bay of.

GULL, V. a. k, n. s. ~\ Fr. guiller; Goth.

Gull'-catcher, 71. s. ˆ goe/a, gueela; Teut.

Gul'ler, 71. .

Gul'lert, n. s. J trick, or deceive. Gull

is the name of a sea-bird : a stupid animal ; one easily cheated : guller, an impostor, or knave : guUery a cheat : gull-catcher, one who catches silly people.

Being fed by us you used us so. As that ungentle gull, the cuckow bird, Useth the sparrow. Shakspeare. Henry IV.

Why have you suffered me to be imprisoned. Kept in a dark house, visited

by the priest. And made the most notorious geek and gull That e'er invention played on. Id. Twelfth Night. I should think this a gull, but that the white bearded fellow speaks it.

Id. Much Ado about Nothing If I do not gull him into a nay word, and make him a common recreation, do not think I have wit enough to lie straight in my bed. Shakspeare

Here comes my noble gull-catcher. Id.

Yet love these sorceries did remove, and move Thee to gull thinti own mother for my love.

Donne. That paltry story is untrue. And forged to cheat such gulls as you.

Hudibrcu. He would have gulled him with a trick. But Mart was too too politick. Id.

For this advantage age from youth has won, As not to be out-ridden, though out-run ; By fortune he was now to Venus trincd. And with stern Mars in Capricorn was joined : Of him disposing in his own abode. He soothed the goddess, while he gulled the god.

Dryden. The Roman people were grossly gulled twice or thrice over, and as often enslaved in one century, and under the same pretence of reformation. Id.

By their designing leaders taught. The vulgar, gulled into rebellion, armed. Id.

They are not to be gulled twice with the same trick.

L'Eslrange. Either they have these excellencies they are praised for, or they have not ; if they have not, 'tis an appa- rent cheat and gull. Government of the Tongue.

The eagle soars alone : the gull and crow Flock o'er their carrion, just as mortals do. Byron.

Gull, in ornithology. See Larus.

GUL'LET, n.s. •% Fr. goulet; Lat. gula;

GuLOs'iTY, ti. s. > Dut. gulpen. Tiie passage

Gulp, v. a. & n. s. J through which the food parses, called by anatomists oesophagus : a small stream, or lake. Gulosity is greedines.s, or

gluttony ; gulp, to swallow eagerly, or suck down without intermission.

Out of the hardy bones, kaocken they The mary ; for they caugten nought away That may go through the gullet soft and sote.

Chaucer. The Pardoneres Tale. England his approaches makes as fierce As waters to the sucking of a gulf. Shakspeare. The Euxine sea and the Mediterranean, small gul- lets, if compared with the ocean. Heylyn. It might be his doom One day to sing

With gullet in string. Denham.

Many have the gullet or feeding channel which have no lungs or windpipes ; as fishes which have gills, whereby the heart is refrigerated ; for such thereof as have lungs and respiration are not without wizzon, as whalos and cetaceous animals.

• Browne's Vulgar Erroura. As oft as he can catch a. gulp of air. And peep above the seas, he names the fair.

Dryden. He loosens the fish, gtdp* it down, and as soon as ever the morsel was gone wipes his mouth.

L'Estrange. I see the double flaggon charge their hand ; See them puff off the froth, and gulp amain. While with dry tongue I lick my lips in vain.

Gay. The liquor in the stomach is a compound of that which is separated from its inward coat, the spittle which is swallowed, and the liquor which distils from the gullet. Arbuthnot.

In deep suspirations we take more large gulps of air to cool our heart, overcharged with love and sor- row. More. ' Give me the oyster, then — 'tis well'— He opens it, and at one sup. Gulps the contested trifle up. And smiling gives to each a shell. Somerville.

To Gul'ly, v. n. Corrupted from gurgle. To nm with noise.

Gu'llyhole, n. s. From gully and hole. The hole where the gutters empty themselves in the subterraneous sewer.

"LdX. gummi ; Gr. KOfini. A vegetable substance, • differing from a resin,

in being more viscid and less friable, and gene- aqueous raenstruums. — Dut. gumme. The fleshy covering that invests and contains the teeth. To close or smear with gum : gummy and gummous are applied to whatsoever consists, is productive of, or overgrown with, gum.

That for to speken of gomme, herbe or tre, Comparaison may none imaked be.

Chaucer. Prologue to Legende of Good Women. The babe that milks me, I'd pluck my nipple from his boneless gums.

Shakspeare. One whose eyes. Albeit unused lo the melting mood. Drop tears as fast as the Arabian trees Their medicinal gum. Id. Othello.

From the utmost end of the head branches there issueth out a. gummy iuice, which hangeth downward like a cord. Raleigh.

He ripens spices, fruit, and precious gum, Which flora remotest regions hither come. Waller.

GUM, n. s. & V. a.

Gum'miness, n.s,

Gum'mosity, n. s.

Gum'mous, adj.

Gum'my, adj. rally dissolving in Quincy. Sax. Eoma ;

The clouds Tine the slant lightening ; whose thwart Same drivea

down, Kindles the qummy bark of fir and pine. Milton.

Nor all the gummy stores Arabia yields.

Dryden. How each arising alder now appears.

And o'er the Po distils heT gummy tears. Id.

The yawning youth, scarce half i wake, essays His lazy limbs and dozy head to raise ; Then rubs his gummy eyes, and scrubs his pate. Id. Her maiden train.

Who bore the vests that holy rites require.

Incense, and odorous gums, and covered fire. Id.

Observations concerning English amber, and rela- tions about the amber of Prussia, prove that amber is not a gummnus or resinous substance drawn out of trees by the sun's heat, but a natural fossil.

Woodward.

Sugar and honey make windy liquors, and the elas- tick fermenting particles are detained by their innate gummosity. Flayer.

The tendons are involved with great gummiriess and collection of matter. Wiseman's Surgery.

The eyelids are apt to be gummed together wirfi a viscuous humour. Id,

She untwists a wire, and from her gums

A set of teeth completely comes. Swift.

Flowers whose wild odours breathe but agonies. And trees whose gums are poison. Byrcm.

Gum is the mucilage of vegetables, and is of no particular smell or taste. It becomes viscous and tenacious when moistened with water ; totally dissolves in water into a liquid, more or less glutinous in proportion to the quantity of the gum; not dissolving in vinous spirits or in oils; burninji: in the fire to a black coal, without melt- ing or catching flame; suffering no dissipation in the heat of boiling water. The true gums are gum arabic, gum tragacanth, gum senega, the gum of cherry and plum trees, and such like. All others have more or less of resin in them. See Chemistey. For more particular descrip- tions of the gums, and also of the gum-resins, see Chemistry, Index.

Gum Elastic is treated of under the title of Caoutchouc both in the article Chemistry and in its alphabetical place. Guaiacum is also separately noticed in the body of the work.

Gum, in gardening, a kind of gangrene inci- dent to fruit-trees of the stone kind, arising from a corruption of the sap, which, by its viscidity, not being able to make its way through the fibres of the tree, is, by the protrusion of other juice, made to extravasate and ooze out upon the bark. When the distemper surrounds the branch, it admits of no remedy; but when only on one part of a bough, it should be taken off to the quick, and some cow dung clapped on the wound, covered over with a linen cloth, and tied down. M. Quintinie directs to cut off the morbid branch, two or three inches below the part affected.

Gum Arabic is the produce of a species oi Mimosa. Its chief use in medicine is from its glutinous quality, which serves to incrassate and obtund thin acrid humors, and thus is useful in coughs, alvine fluxes, hoarsenesses, gripes, &c. In a dysuria the true gum arabic is more cooling than the other simple gums. One ounce of gum arabic renders a pint of water consi- derably glutinous : four ounces give it a thick

syrupy consistence: but for mucilage, one part ECum to two parts water is required ; and for some purposes an equal proportion will be ne- :essary. Hasselquist relates an iirstance of the extraordinary nutritive virtues of this gum, which happened to an Abyssinian caravan, whose provisions were consumed, "when they had still two months to travel. ' They were then obliged to search for something among their merchandise wherewith they might support nature ; and found nothing moie proper than gum arabic, of which they had carried a consi- derable quantity along with them. This served to support above 1000 persons for two months ; and the caravan at last arrived at Cairo without any great loss of people either by hunger or diseases.'

GUMiNIA, a sort of venereal excrescence on the periosteum of the bones.

GUMBINNEN, a modern government of East Prussia, comprising Prussian Lithuania, and bounded by Russia, the kingdom of Poland, and the government of Konigsberg. Its superficial extent is 6150 square miles, with 350,000 inha- bitants, of whom the majority are Lutherans; next to them are the Calvinists; and last the Catholics. Prussian Lithuania is the most fer- tile part of East Prussia; but manufactures are nearly unknown. In 1710 it was almost depopulated by the plague ; and two years after fhe king of Prussia admitted into the country several thousand emigrants from Switzerland, France, the Palatinate, and Franconia. In 1731, and 1734, more than 20,000 Saltzburghers came liitlier. These settlers cleared the superfluous woods, drained the marshes, and cultivated the land with much success. The native Lithuanians are now but few in number. During the seven years' war this province suffered severely from the Russians, but the government granted funds for its relief. Prussian Lithuania was formerly divided into the circles of Insterburg, Oletzko, and Schesten. Since the erection of the go- vernment of Gumbinnen, smaller divisions have been adopted; it contains nine circles, viz. Gumbinnen, Oletzko, Johannisburg, INIemel, Stalluponen, Tilsit, Niederungen, Angerburg, and Rhein.

Gumbinnen, a town of East Prussia, on the Pissa, and the chief place of the new govern- ment above described. It is regularly and neatly built; the chief object of commerce is corn, though the manufactures of woollen, linen, and leather, are not inconsiderable • it is exposed to hazard from land floods. The inhabitants are chiefly protestants, and service is performed both in the German and Lithuaniai.i languages. Popu- lation 5300. Sixty-five miles east of Konigsberg. Glˆ MS, in anatomy, the hard fleshy substance in either jaw, through wliich the teeth spring from the jaw-bone. See Anatomy. The gums are apt to become spongy, and to separate from the teeth ; but the cause is often a stony kind of crust, formed tlierein, which, when separated, the gums soon return to their former state, espe- cially if rubbed with a mixture of the infusion of roses four parts, and the tincture oi" inyrrh one. The scurvy is another disorder which sometimes affects the gums, when not manifest in any other part.

GUN, n. s. Gun'nel, n. s. Gun'ner, n. s. Gun'nery, n.s.

Gun'-POWDER, 71. s.

ˆ

Of this word there is no satisfactory ety- mology, Dr. Johnson says. Mr. Lye ob- serves, that gun in

*tie; but when guns came into use we iiad no commerce with Iceland. * May not gun come by gradual*

Gun'-shot, n. s. & adj.)-Iceland signifies bat- Gun'-smith, Jl. s. Gun'-stick, n. s.

Gun'-SIOCK, 71. s. Gun'-STONE, 11. s.

Gun'-wale, n.s. coTTuption from canne, ganne, gunnef Canne is the original of cannon.' Mr. Tiiomson refers to the Scot, gyn, or gin (engine). The general name for fire-arms ; the instrument from which shot is discharged by fire. Gunnel, corrupted from gun-wale. Gunner (cannonier) he whose employment is to manage the artillery in a ship. Gunnery, the science of artillery; the art of managing cannon. Gun- powder, the powder put into guns to be fired. It ';onsists of about fifteen parts of nitre, three parts of sulphur, and two of charcoal : the proportions are not exactly kept. Gun-shot, made by the shot of a gun : the reach or range of a gun ; the space to which a shot can be thrown. Gun-smith, a man whose trade is to make guns. Gun-stick, the rammer, or stick, with which the charge is driven into a gun. Gunstock, the wood to which the barrel of the gun is fixed. Gun-stone, the shot of cannon. They used formerly to shoot stones from artillery. Gun-wale, or gunnel, of a sliip, that piece of timber which

reaches on either side of the ship from the half- deck to the fore-castle, being tlie uppermost bend which finishes the upper works of the hull in that part, and wherein they put the stanchions which support the waste tree; this is called the gun- wale, whether there be guns in the ship or not ; also the lowei part of any port, where ordnanc are, is termed the gun-wale. — Harris.

The knyght with his meyne went to se the wallt And the wards of ihe town as to a knyht befall ; Devising, en tentifflick, the strcLgthes al about ; And appointed to his sone the perel and the douc For shot of arblost and of bowe, and eke for shot of

gonne Unto the wardes of the town, and how it might be wonne. Chaticer. The Pardonere and Tapstere. And eke within the castel were ; Springoldes, gonnes, bowes, and archers.

Id. Romaunt of the Rose. With grisly sounc, out goeth the grete gonne.

Id. Legcnde of Good Women. The emperor, smiling, said that never emperor was yet slain with a gun. Knolles's History.

Tell the pleasant prince, this meek of his Hath turned his l)all lo gunstunes, and his soul Shall stand sorocharf^ed for the wasteful vengeance That shall fly with them. Shakspeare. Henry V.

The nimble gunner With lynstock now the devilish cannon touches. And down goes all before him. Id.

These dread curses, like the sun 'gainst glass, Or like an overcharged gun, recoil And turn upon thyself. Id. Henry VI.

They slew the principal gunners, and carried away their artillery. Hiywaui.

Such as do build their faith upon The holy text of pike and gun ■ Dtride all ronlrovcrsics by Infallible artillery. Hudihrtu.

'28

GUNPOWDER.

Gun-powder consisteth of three iogredienis, salt- petre, small-coal, and brimstone.

Browne's Vulgar Errours.

Those who are come over to the royal party are supposed to be out of gun-shot. Dryden.

It is of particular esteem with the gun-smiths for stocks. Mortimer.

The timber is used for bows, pullies, screws, mills, and gun-stocks. Id. Husbandry.

Burning hy gun-powder frequently happen:? at sea.

Wiseman.

The symptoms I have translated to gun-shot wounds.

Id. Even a gun-stick flying into fame. Stuart.

For health and idleness to passion's flame Are soil and gu7z-powder ; and some good lessons Are also learnt from Ceres and from Bacchus Without whom Venus will not long attack us. Byron.

A Gun is a weapon of offence, which forcibly discharges a ball, or other hard and solid matter, through a cylindric tube, by means of inflamed gun-powder. See Gun-powder. The word gun now includes most species of fire-arms ; pistols and mortars being almost the only ones excepted from this denomination. They are di- vided into great and small guns : the former includ- ing all that we also call Cannon, Ordnance, or Artillery; the latter including Muskets, I^arabines, Musquetoons, Blunderbusses, Fowling-pieces, &c. See these articles, parti- cularly Artillery and Ordnance.

GUN DELIA, in botany, a genus of the po- lygamia segregata order, and syngenesia class of plants ; natural order forty-ninth, compositae : CAL. none: florets tubular and hermaphrodite: the receptacle bristly, with scarcely any pappus. Species one only; an American plant.

GUNDWANAH, or Goandwanah, an ex- tensive province of Hindostan, stretching from 19° to 25° of N. lat. On the north it is bounded by Allahabad and Bahar, and on the south by Orissa and the river Godavery. To the east it has parts of Orissa, Bengal, and Bahar, and to the west Malwah, Berar, and Allaha- bad. Its length may be estimated at 400 miles, by about 180 in breadth. It is divided into four districts, Gurrah-Mundela, Choteesgur, Nagpore, and Chandah. Its principal towns are Nagpore, Gurrah, Ruttunpore, Deogur, Ryepore, Sumb- hulpore, and Bustar. The greater part of the province is mountainous, woody, poor and un- healthy, but it possesses diamond mines. The more fertile portions belong to the Nagpore Mah- rattas, the remainder to various chiefs of the Goands, who, although professing the Hindoo religion, eat animal food, and are in a very unci- vilised state. The IVIahrattas exact from them a moderate tribute. A considerable portion of it is now included in Malwah.

A Gunner is an officer appointed to fire the guns, either by sea or land. In the Tower of London, and other garrisons, as well as in the field, this officer carries a field staff, and a large powder-horn in a string over his left shoulder. He marches by the guns ; and, when there is any apprehension of danger, his field-staff is armed with a match. His business is to lay the gun, to pass, and to help to load and traverse her.

GUNNERA, in botany, a genus of the dian- dria order, and gynandria class of plant?;. T!ie

am.entum consists of uniflorous scales; there is neither calyx nor corolla ; the gerraen is bi~ dented, with two styles and one seed. Species three : one a native of the Cape, the other two from South America.

Gunnery is the art of charging, directing, and exploding fire-arms, as cannons, mortars, muskets, &c., to the best advantage. This art depends greatly on having the guns and shot of a proper size and figure, and well adapted to each other. See Ordnance. As both the theory and practice of gunnery are intimately connected with the subject of Projectiles, we shall refer the reader to tha.t article : under which not only the practical part of gunnery, but whatever relates to the action of gun-powder, the velocity it communicates to bullets, the re- sistance which the atmosphere opposes to their motion, and the curves they describe, will be fully treated of.

Gunpowder is a composition of saltpetre, sulphur, and charcoal, mixed together, and usually granulated ; which easily takes fire, and when fired, expands with great vehemence, by its elastic force. To this powder we owe all tlie action and effect of guns, ordnance, &c., so that the modern military art in a great measure de- pends on it.

The invention of gun-powder is usually as- scribed to one Bartholdus Schwartz, a German monk, who discovered it about the year 1320; it is said to have been first used in war by the Venetians against the Genoese in the year 1380. Thevel says its inventor was one Constantine Anelzen, a monk of Friburg. Peter Mexia says it was first used by Alphonsus XL, king of Cas- tile, in the year 1242. Ducange adds, that there is mention made of this powder in the registers of the chambers of accounts of France, so early as the year 1338 ; and our countryman friar Bacon expressly mentions the composition in his treatise Ue Nullitate Magiae, published at Oxford in the year 1216. Some indeed are of opinion, that the Arabians or the latter Greeks were the first inventors of gun-powder about the middle ages of our era ; because its Arabic name is said to be expressive of its explosive quality. Considerable improvements have lately been made in the composition of gun-powder by the Chinese.

The method of making gun-powder recom- mendea by colonel James is: — take saltpetre, snlphur, and charcoal ; reduce these to a fine powder, and continue to beat them for some time in a stone mortar with a wooden pestle, wetting the mixture occasionally with water, so as to form the whole into a uniform paste, which is after- wards reduced to grains, by passing it through a sieve ; and in this form, being carefully dried, it becomes the common gun-powder. For greater quantities mills are used, by means of which more work may be performed in one day than a man can do in 100.

This destructive powder is composed of seventy-five parts nitre, nine sulphur, and six- teen of charcoal in the 100.

To refine the saltpetre. — Put into a copper, or any other vessel, 100 cwt. of rough nitre, witli about fourteen gallons of clean water, and let it boil crentlv for half an hour, and as it boils t.ike

off the scum ; then stir it about in the copper, and before it settles, put it into your filtering bags, which must be hung on a rack, with glazed earthen pans under them, in which sticks must be laid across for the crystals to adhere to : it must stand in the pans for two or three days to shoot : then take out the crystals and let them dry. The water that remains in the pans must be boiled again for an hour, and strained into the pans as before, and the saltpetre will be quite clear and transparent; if not, it wants more refining; to effect which, proceed as usual, till it is well cleansed of all its earthy parts.

To pulverise the saltpetre, take a copper kettle whose bottom must be spherical, and put into it fourteen pounds of refined saltpetre, with two quarts or five pints of clean water ; then put the kettle on a slow fire : and when the saltpetre is dissolved, if any impurities arise, skim them off; and keep constantly stirring it with two large spattles till all the water exhales ; and when done enough it will appear like white sand, and as fine as flour; but, if it should boil too fast, take the kettle off the fire, and set it on some wet sand, by which means the nitre will be pre- vented from sticking to the kettle. When you have pulverised a quantity of saltpetre, be care- ful to keep it in a dry place.

As we have not noticed the method of making charcoal in quantities, under that head, we may here subjoin a few remarks on that important constituent of gunpowder. Common charcoal contains only sixty-four parts of diamond, or pure carbon, and thirty-six of oxygen in every 100. The

charcoal of commerce is usually prepared from young wood, which is piled up near the place where it is cut, in conical heaps covered with earth, and burnt with the least pos- sible access of air. When the fire is supposed to have penetrated to the centre of the thickest pieces, it is extinguished by entirely closing the vents. When charcoal is wanted very pure, the product of this mode of preparing it will not suffice ; for the manufactory of the best gun- powder, it is distilled in iron cylinders ; chemists prepare it in small quantities, in a crucible covered with sand, and, after they have thus pre- pared it, they pound it, and wash away the salts it contains by muriatic acid ; the acid is removed by the plentiful use of water, and afterwards the charcoal is exposed to a low red heat. Pure charcoal is perfectly tasteless, and insoluble in water.

Mr. Marshall furnishes us with a very minute account of liie manufacture of charcoal. The wood having been selected, and the site or hearth being determined upon, the turf is pared off, and the sods laid on one side. The wood, about ten cords, is then laid in a ring, somewhat wider than the intended hearth ; beginning on the outer circumference of the ring, with the smallest of the round wood : laying the larger pieces of top wood, and the cloven roots or but-ends, towards the hearth.

With these last, some of them nearly as large as bushel blocks, they begin to make their pile ; leaving a sort of chimney in the middle (a ver- tical aperture from a foot to eighteen inches wide) ; and, round this core of blocks, set up the

top wood, which has previously been cut at the time of cording, in a smooth and equable man- ner joining the pieces, or rather fitting them in, as close to each other as possible : placing the convex side of the logs outward ; and thus form- ing the pile in the shape of an inverted bowl, nearly semi-globular. The pile being formed, it is tiled with sods ; which are pointed, to keep in the heat the better, by filling up the seams with fine pulverised mould.

The chimney is now filled with short pieces of dry wood : near the top a live coal is put; over this one layer more of dry pieces ; and, upon these, a close cap of seed is placed ; neverthe- less, this one coal, not larger than the first, and excluded from the open air, is suflicient to set the pile on fire. As the pieces in tlie chimney burn away, they are replaced with fresh ones : thus feedmg the fire with fresh fuel. Close- paled hurdles are placed on the windward side of the heap, to prevent the fire from acting par- tially.

When the fire begins to show itself at the out- ward skirts of the bottom of tiie pile, it is known that the coal is fully burnt (or rather that the wood is sufficiently cliarred), which it will be, in a pile of ten cords, and in dry

weather, in seven or eight days. The fire, during the whole time, is carefully kept from breaking out, by throwing mould or ashes upon the weak parts ; so that, though the fire passes through every part of the wood, little or none of the matter of fire es- capes.

It is a curious fact, that, notwithstanding the intense heat, no part of the tree is entirely con- sumed ; for it is found that even the moss comes out as entire as when it went in ; the only ap- parent change is in its being rendered friable, and of a black color. Wood that is charred shrinks considerably during the process of char- ring ; but there is no visible derangement of parts. (Jne of the smaller pieces, which is not broken in the drawing, appears as entire when it comes out, as when it went into the pile. The brittleness after charring, however, shows that the texture of the wood is altered, by the action of the fire.

As soon as the fire disappears, on the outside of the heap, the workmen begin to 'draw the coal :' an operation which is done by running a peel between the coal and the hearth ; raising up the coal in such a manner as to let the mould and ashes of the sods fall tiirough between the pieces upon the more inward parts still full of fire. If this make its appearance in any par- ticular spot, a peel full of ashes is immediately thrown against it.

Having got sufficiently near to the fire, the coals raised by the peel are raked off, with long- toothed iron rakes : the teeth about a foot long and standing about six inches apart : the handle and head of wood, except a plate of iron on the back, with which the small coal is gathered to- gether. No sieve, nor any rake with finer teeth than the above, is used. The coal being light is readily brought to the surface of the ashes and dirt; and, when there, is easily collected (though with a kind of slight) with the back of the rake. The sido thus drawn, being roimded up and sc-

cured with ashes, another, the coolest part, is drawn in the same manner, till the whole packet is taken from the kiln.

*Charcoal newly prepared, absorbs moisture with avidity ; it also absorbs oxygen and other gases, which are condensed in its pores in quan- tity many times exceeding its own bulk, and are given out unaltered. Fresh charcoal allowed to cool without exposure to air, and the gas then admitted, will absorb in the following proportion : one part of charcoal will absorb 2*25 times its bulk of atmospheric air immediately, and 75 more in four or five hours ; of oxygen gas about 1-8 immediately, and slowly 1*

*more : of nitrogen gas 1”65 immediately: of nitric oxide 8”5 very slowly: of hydrogen gas about 1*9 immediately : carbonic acid gas 14-3 immediately. The greater part of these gases are expelled by a heat below 212°, and a portion even by immersing the char- coal in water. These absorptions aTe promoted by a low temperature ; but, at an elevated tempe- rature, charcoal has such an affinity for oxygen, that it will abstract it from almost all its combi- nations. Hence its utility in reviving metals. Fossil coal, and all kinds of bitumen, contain a large quantity of carbon : it is also contained in oils, resins, sugar, and animal substances.*

Charcoal is one of the most unchangeable substances ; if the access of air be prevented, the most intense heats have no other effect than that just mentioned of hardening it, and render- ing its color a deeper black. Insoljable in water, !ind incapable of putrefaction, it undergoes no change by mere exposure or age ; and stakes and other materials of wood which have been charred, or superficially converted into charcoal, have been preserved from decay for tliousands of years ; the ancients availed themselves of this mode of preparing stakes which were to be driven into the ground for foundations and other purposes.

*Gun-powder, says major James, for some time after the invention of artillery, was of a couipo- sition much weaker than what we now use, or that ancient one mentioned by Marcus Gifecus : but this, it is presumed, was owing to the weak- ness of their first pieces, rather than to their ignorance of a better mixture ; for the first pieces of artillery were of a very clumsy, incon- venient make, being usually framed of several pieces of iron bars, fitted together lengthways, and then hooped together with iron rings ; and as they were first employed in throwing stone shot of a prodigious weight, in imitation of the ancient machines, to which they succeeded, they were of an enormous bore. When Mahomet II. besieged Constantinople, in the year 1453, he battered the walls with stone bullets, and his pieces were some of them of the caliber of 12001b. but they could not be fired more than four times in the twenty-four hours, and sometimes they burst by the first discharge. And Guicciardin, in the first book of his history, informs us, that so large a portion of time between the different chargings and dischargings of one of *hose pieces, that the besieged had sufficient time to repair at their leisure the breaches made in their walls by the shock of such enormous stones. But as mathe- matical knowledge increased in Europe, that of*

mechanics gradually advanced, and enabled ar- tists, by making brass cannon of a much smaller bore for iron bullets, and a much greater charge of strong powder in proportion to their calibres, to produce a very material and important change in the construction and fabric of those original pieces. Accordingly this historian, in the same book of his history, informs

us, that about 114 years after the first use made of those unwieldly pieces by the Venetians, in the war which they carried on against the Genoese in the year 1380, the French were able to procure for the invasion of Italy a great number of brass cannon mounted on carriages drawn by horses ; and that these pieces could always keep pace with the army.

Gun-powder was not at first grained, but in the form of fine meal, such as it was reduced to by grinding the materials together; and it is doubtful whether the first graining of it was intended to increase its strength, or only to render it more convenient for the filling it into small charges, and the loading of small arms, to which alone it was applied for many years, whilst meal powder was still made use of in cannon. But at last the additional strength, which the grained powder was found to acquire from the free passage of the fire between the grains, occasioned the meal-powder to be entirely laid aside. The coal for making gun-powder is either that of willow or hazle ; but the lightest kind of willow is found to be the best, well charred in the usual manner, and reduced to powder. Corned powder was in use in Germany as early as the year 1568; but it was first generally used in England in the reign of Charles I.

It has been recommended by a French writer to preserve gun-powder at sea by means of boxes wliich should be lined with sheets of lead. M. De Gentien, a naval officer, tried the experiment by lodging a quantity of gun-powder, and parch- ment cartridges, in a quartei" of the ship which was sheathed in this manner. After they had been stowed for a considerable time the gun- powder and cartridges were found to have suf- fered little from the moisture ; whilst the same quantity, when lodged in wooden cases, became nearly half rotted.

The proof of gun-powder, by the board of ordnance, is thus effected : — They first take out of the several barrels of gun-powder a measure full, of about the size of a thimble, which is spread upon a sheet of fine writing paper, and then fired : if the inflammation be very rapid, the smoke rises perpendicular, and if the paper be neither burnt nor spotted, it is then judged to be good powder. Then two drams of the same powder are exactly weighed, and put into an eprouvette ; which, if it raises a weight of 24 lbs. to the height of three inches and a half, is re- ceived into the king's magazine as proof.

Several instruments have been invented to try the strength of gun-powder ; but they have ge- nerally been complained of as inaccurate. Count Rumford, in the Philosophical Trans, vol. 71. gives an account of a method of trying the strength of it, to which the reader can also refer : but the simple method of the board of ordnance seems to answer every purpose. The following are stated to be the proportions of the different

ingredients for making gunpowder, by different powers in Europe : —

1

Saltpetre . Sulphur . . Charcoal .

a c

c

c

a >

5

“o

Oh

3

‘en

3

lbs.

75 10 15

lbs.

75

15i

lbs.

75

9

16

lbs.

80

8

12

lbs.

76 12 12

lbs.

70

lU 18i

Pounds .

100

100

100

100

100

100

Gunpowder, in law. By stat. 12, Car. II. c. 4. the exportation of gunpowder was allowed if the price did not exceed £5 per barrel.— By 59 Geo. III. c. 73, this restriction as to price is re- pealed : but power is reserved to the crown to prohibit the exportation at any time. — And see as to Ireland, stat. 49 Geo. III. c. 76.

To obtain an exclusive patent for the sole making or importation of gunpowder or arms, or to hinder others from importing them, incurs the penalties of praemunire by stat. 16 Car. I. c. 21. 1. Jac. II. c. 8. See stat. 46 Geo. III. c. 121. By 12 Geo. III., c. 61, all former acts relative to the making, keeping, and carrying, of gunpowder, are repealed ; and by this act it is provided, that no person shall make gunpowder but in the regular manufactories, established at the time of making tlie statute, or licensed by

the sessions pursuant to the provisions in sect. 13, &c., on forfeiture of the gunpowder, and 2s. per pound.

The chief provisions are as follow : — Pestle- mills not to be used, on the like penalty. Only 40lbs. of powder to be made at one time under one pair of stones ; except Battle-powder, a fine fowling powder so called, made at Battle and elsewhere in Sussex. Not more than 40 cwt. to be dried at one time in one stove. Only the quantity absolutely necessary for immediate use to be kept in or near the place of making, except in brick or stone magazines, fifty yards at least from the mill. All gunpowder-makers to have a brick or stone magazine near the Thames below Blackwall, to keep the gunpowder when made, on penalty of £25 per month ; and £5 a day for not removing it when made, with all possible dilioence. No dealer is to keep more than 200lhs of powder, nor any person not a dealer more than 50lbs., in the cities of London and Westminster, or within three miles thereof; or within two miles of the king's palaces or ma'j;a- zincs, or half a mile of any parish clmrch ; on pain of forfeiture and 2.s-. per pound ; except in licensed mills ; or to the amount of 300lbs. for the use of collieries within 200 yards of tliem. Not more than twenty-five barrels to be carried in any land carriage, nor more than 200 barrels by water (unle!s going beyond sea or coastwise); each barrel to contain not more than lOOlbs. Various means are directed for the safe convey ance in both cases, and to prevent all danger and delay, sect. 18 — 22. Outward-bound ships TO take in, and homeward-bound to discharge

their gunpowder at or below Blackwall; and be searched by the officers of the Trinity-house. General exceptions are made as to his majesty's mills, storehouses, and magazines; and as to powder sent with the army or militia; and ex- ported or carried coast-wise below Blackwall.

Erecting powder-mills, or keeping magazines near a town, is a nuisance at common-law, pu- nishable by indictment or information ; but by 46 Geo. III., c. 121, the importation into Great Britain of gunpowder, arms, &c., manufactured in Ireland, is permitted, notwithstanding the stat. 1 Jac. II. c. 8.

GUNTER (Edmund), M. A. and B. D , a ce- lebrated mathematician, born in Hertfordshire in 1581. He studied at Westminster and Ox- ford, where he graduated in 1606 and 1615. Being eminent for his knowledge in the mathe- matics, he was, in 1613, chosen professor of astronomy in Gresham College, where he distin- guished himself by his lectures and writings. He invented several useful instniments which bear his name ; and published Canon Triangu- lorum, and a work on the Sector, Cross-staff, &c. He died at Gresham College, in 1626.

Gunter's Quadrant. See Quadrant.

Gunter's Scale, called by navigators simply the gunter, is a large plain scale, generally two feet long, and about an inch and a half broad, with artificial lines delineated on it, of great use in solving questions in trigonometry, navigation, &c.

GUNTOOR, a district of Ilindostan, on the western side of the bay of Bengal, called the Northern Circars. It is also called Moortizna- gur, and lies immediately north of the Carnatic, and south of the river Kistnah. This district was the Jagier of Bassalut Jung, the brother of the nizam, when the British took possession of the other Circars in 1766, on which account he was allowed to retain it during his life. He died in 1782, but the nizam did not give it over for more than six years. It is about forty miles in length, but a low flat country, calculated for growing rice. Its principal sea-port is Moota- pilly, and its chief towns are Condavir and Gun- toor. Under the present system of management, it has been united to Palnaud, and is governed by a British judge, collector, &c.

Guntoor, the capital of the above district, and station of the civil establishment, possesses a small fort. Long. 80° 30′ E., Jat. 16° 20 N.

Gunwale of a siiip, a piece of timber reach- ing from the half-deck to the forecastle, on either side of the ship. It is the uppermost band, and finishes llie upper works of the hull in that part, and in it are inserted the stanchions which supjiorl the waistrees.

CiURGE, n. s. Lat. gurges. Whirlpool; gulf.

Marching from Eden he shall rinti

The plain wherein a black bituminous ˆun/e

Boils out from under ground.

Milton's Paradise Lost.

GU'RGION, n. s. The coarser part of the meal, sifted from the bran.

GU'RGLE, v.n. Ital. gor()io//are. See Guggle. To fall or gush with noise, as water from a hollle.

GU'RNAPvD, n. s. l Fr. goumal. A kind

Gi"rnet. S of sea-fish.

GURNARD {trigla, Lin.) TptyXa, which the Romans called mztllus, does not belong to this genus, though it was included in it by Artedi. These fish, which are marine, all afford excellent food. They have a scaly body, of a uniform shape, compressed laterally, and attenu- ated towards the tail. The head is broader than the body, and slopes towards the snout, where it is armed with spines ; the upper jaw is divided, and extends beyond the lower. The eyes are near the top of the head, large and pro- minent, particularly the upper margin of the orbits. The dorsal fins are unequal, the first short, high and aculeate; the second long, sloping and radiate. The ventral and pectoral are uncommonly large, and from their base hang three loose and slender appendages. Many of the species utter a peculiar noise when taken ; many of the species are provided with pectoral fins, sufficiently large to enable them to spring out of the water. One of the species has been denominated the lyre fish, on account of it;? bifurcated rostrum, which bears a faint resem- blance to that instrument.

GURRUMCONDAH, a district of Hindos- tan, in the Carnatic, situated between the thir- teenth and fourteenth degrees of northern latitude, and seventy-eighth and seventy-ninth of eastern longitude. It is mountainous, and was some years ago ceded by the Nizam to the British. It is included in the coUectorship of Cuddapah. Gurrumcondah, the capital, is de- fended by a strong-built fort, but has been often taken and retaken by the Mahrattas, the My- soreans, and the Nizams. By the latter it was ceded to the British in the year 1800.

GUSH, i;. n. & n. s. Dutch, gostelen ; Gothic, geysa, to pour forth. To tlow, or rush with vio- lence ; an emission of fluid in a large quantity on a sudden.

GUST, ra.s. ^ Yr.goust; Ital. gusto;

Gust'able, adj. I Isl. guster ; Lat. gustus. Gusta'tion, adj. [Sense of taste ; height of Gust'ful, adj. ! sensual enjoyment; turn of Gus'to, n. s. I fancy ; a violent blast of Gus'ty, adj. j wind, — written by Spenser for jousts and tournaments. Gustable and gus- tation signify the quality of taste, or act of tasting. Gusto a relish; gusty weather, is stormy ; tempestuous.

For jolly knight he seemed, and fair did sit. As one for knightly ffusts and fierce encounters fit.

SpcTiser, She led calm Henry, though he were a king. As doth a sail, filled with a fretting gust. Command an argosie to stem the waves. Shakspeare.

You may as well forbid the mountain pines To wag their high tops, and to make a noise. When the are fretted with the gusts of heaven.

Id. To kill, I grant, is sin's extremes! gust ; But, in defence, by mercy 'tis made just. Id.

Once upon a raw and gusty day. The troubled Tyber chafing with his shores.

Id. Julius CcBsar. Presently come forth swarms and ■volleys of libels, vhich are thtguits of liberty of speech restrained.

Bacon's Henry VII,

This position informs us of a vulgar errour, terming the gall bitter ; whereas there is nothing gustable sweeter. Harvey.

As when fierce northern blasts from the Alps de scend. From his firm roots with struggling gusts to rend An aged sturdy oak. Denham.

They, fondly thinking to allay Their appetite with gust, instead of fruit Chewed bitter ashes, which the offended taste With spattering noise rejected. Milton.

The gullet and conveying parts partake of the nerves of gustation, or appertaining unto sapor.

BroiBne. Whether his valour they so much admire. Or that for cowardice they all retire. As heaven in storms they call in gusts of state. On Monk and parliament yet both do hate.

Marvell. We have lost, in a great measure, the gust and relish of true happiness. Tillotson.

Part stay for passage, 'till a gust of wind Ships o'er their forces in a shining sheet. Dryden, Where love is duty on the female side. On theirs mere sensual gust, and sought with surly pride. Id. Fables.

My sight, and smell, and hearing were employed. And all three senses in full gust enjoyed. Dryden.

The principal part of painting is to find what nature has made most proper to this art, and a choice of it may be made according to the qust and manner of the ancients. Id.

In reading what I have writt'in, let them bring no particular gusto along with them. Id.

Old age shall do the work of taking away both the gust and comfort of them. L' Estrange.

Pardon a weak distempered soul, that swells With sudden gusts, and sinks as soon in calms. The sport of peissions. Addison's Cato.

Pleasant gustos gratify the appetite of the luxurious.

Derham. Destroy all creatures for thy sport or gust. Yet cry, if man's unhappy, God's uijust. Pope. What he defaults from some dry insipid sin, is but to make up for some other more gustful.

Decay of Piety.

GUSTAVIA, in botany, a genus of the poly- andria order, and monadelphia class of plants : CAL. none ; the petals are very numerous ; the berry multilocular : seeds appendaged. Spe- cies two ; fine tall trees of Surinam and Guiana.

GUSTAVUS I. king of Sweden, son of Eric Vasa, duke of Gripsholm. Christian II. king of Denmark, having made himself master of Swe- den, confined Gustarus at Copenhagen ; but he, making his escape, wandered long in the forests, till, the cruelties of the tyrant having occasioned a revolution, he was first declared governor of Sweden, and then, in 1513, elected king. He introduced Lutheranism into his dominions, and died in 1560. See Sweden.

GusTAvus Adolphus, the Great, king of Sweden, was born at Stockholm in 1594, and succeeded his father Charles IX. in 1611. He espoused the cause of the Protestants in Ger- many, who were oppressed by Ferdinand I. He was a great warrior, and gained many vic- tories (see Sweden), but was killed in the battle of Lutzen, where his troops got the victory, and defeated two of the emperor's armies, in Novem- ber, 1632.

GusTAVus III. See Sweden.

GUSTROW, a walled town of Meckleiiburg- Schwerin, in the principality of Wenden, situ- ated on the Nebel. It has six gates, a castle, and about 6000 inhabitants. Here are several breweries and brandy distilleries : sixteen miles south of Rostock, and twenty-nine east of Wismar.

GUT, n. s. k, v.a. -\ Germ, kutteln ;

Gut'tle, v. a. 8c v.n. (ˆGo\h. guid ; Scot.

Gut'tler, n. s. i kete. A long

Guz'zLE, V. n., V. a. & n.s. ' membranous ca- nal reaching from the stomach to the anus, called intestines ; the stomach ; figuratively used for gluttony : to gut is to eviscerate ; to draw ; to plunder of its contents : a guttler one who feeds luxuriously ; a greedy eater or gormandiser. Guzzle has principal reference to greediness in drinking ; to swallow with immode- rate gust.

God for his manace him so sore smote.

With invisible wound, ay incurable.

That, in his gutte$, carfe it so and bote.

That his peines weren importable ;

And certainly the wreche was resonable,

For many a mannes guttet did he peine.

Chaucer. The Monkes Tale.

This lord wears his wit in his belly, and his guts in his head. Shakspeare. Troilus and Cressida.

A viol should have a lay of wire-strings below, close to the belly, and then the strings of guts mounted upon a bridge, that by this means the upper strings stricken should make the lower resound.

Bacon's Natural History.

The fishermen save the most part of their fish : some are ˆuˆed, splitted, powdered, and dried.

Carew's Cornwall. Apicius, thou did'st on thy guts bestow

Full ninety millions ; yet, when this was spent,

Ten millions still remained to thee ; which thou.

Fearing to suffer thirst and famishment.

In poisoned potion drankest.

Hakewill on Providence. And crammed them 'till their guts did ake. With cawdle, custard, and plum-cake. Hudibrat.

Well seasoned bowls the gossip's spirits raise. Who while she guzzles chats the doctor's praise.

Roscommon. In Nero's arbitrary time.

When virtue was a guilt, and wealth a crime,

A troop of cut-throat guards were sent to seize

The rich men's goods, and gut their palaces.

Dryden.

With false weights their servants' guts they cheat. And pinch their own to cover the deceit. Id,

His jolly brother, opposite in sense,

Laughs at bis thrift ; and, lavish of expence,

Quaffs, crams, and guttles in his own defence. Id.

They fell to lapping and guzzling, till they burst themselves. L' Estrange.

The fool spit in his porridge, to try if they'd hiss : they did not hiss, and so he guttled them up, and scalded his chops. Id.

Tom Brown, of facetious memory, having gutted a proper name of its vowels, used it as freely as he pleased. Addison.

The intestines or guts may be inflamed by any acrid or poisonous substance taken inwardly.

Arbuthnot on Diet.

GUTHALUS, or Guttalus, in ancient geo- graphy, is thought to be the Viardusof Ptolemy; now called the Oder.

GUTHRIE (William), was born in 1620, at Pitforthy, in Angus. Ho was educated at St.

Andrews for the Scotch kirk, and in 1644 was placed as minister in the

parish of Finwick, but after holding his preferment twenty years, was ejected as a nonconforpaist. He wrote the Christian's great Interest, still held in esteem. His death took place in 166o.

Another William Guthrie, who has been confounded with the above, was born at Breichen, in the same county, in 1701, or 1708; and, after passing througli a course of study at Aber- deen, quitted his native country in consequence of a love affair, and commenced author in London. Here he published a History of Eng- land, in 3 vols, folio ; A Translation of Quinti- lian, in 2 vols. 8vo. ; as also one of some of Cicero's works. The Friends, a novel, 2 vols. ; and Remarks on English Tragedy, Bvo. The Geographical Grammar, which goes under his name, is said to have been compiled by Knox, a bookseller in the Strand. A History of Scot- land in 10 vols. ; a History of the Peerage, 4to.; and a Universal History, in 13 vols., are also ascribed to him. Mr. Guthrie finally obtain- ed a pension, and a commission of the peace for Middlesex. He died in 1770.

GUTTA, n. s. a Latin term for drop.

GUTT. >E. See Architecture.

GuTT^; Anglicans, English drops, a chemi- cal preparation esteemed of great virtue against vapors and lethargic affections, and purchased at £5000 by king Charles II. from the inventor, Dr. Goddard. It is a spirit drawn by the retort from raw silk, and rectified with an essential oil.

GuTTA Rosacea, in medicine, a red or pimpled face; a distemper, which, though not always owing to hard drinking, is most incident to tipplers.

GuTTA Serena, a disease in which the pa- tient, without any apparent fault in the eye, is deprived of sight. See Medicine.

GUTTATED, adj. } Latin gutta, guttula.

Gut'tulous, adj. S Besprinkled with drops, or in the form of a drop.

Ice is plain upon the surface of the water, but round in hail, which is also a glaciation, and figured in its guttulous descent from the air.

Broume's Vulgar Errourt.

GUTTENBURG, or Guttemburg (John), one of the reputed inventors of the art of print- ing, was born at Mentz, in 1400, of wealthy parents. In 1427 he was at Strasburgh, as a merchant; but returned to Mentz in 1430, and, between that time and 1439, appears to have made some trials of printing with .metal or other types. In 1446 he entered into partnership with Fust,

the result of which was the publica- tion of the celebrated Bible of 637 leaves, the first considerable specimen of printing with metal types. John Guttenberg died in 1467. GU'TTER, 11. s. & w. a. ˆ Lat. guttur, gut- Gut'tural, «

Gut'turalness, n. s. j for water; a longitu- dinal hollow : the verb signifies to drain or cut in hollows. Guttural is descriptive of sounds pro- nounced with the throat.

Be as be maie ; for ernest or for game. He shall awake, and rise, and go his waie Out at this ˆu ˆcr, erthat it be daie.

Chaucer. Legends of Code }Yomcn,

GUY

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GYM

My cheeks are guttered with my fretting tears.

Sandi/s.

Tempests themselves, high seas, and howling winds. The guttered rocks, and congregated sands, Iraitors ensteeped to clog the guiltless keel. As having sense of beauty, do omit Their mortal natures, letting safe go hy The divine Desdemona. Shakspcare. Othello.

The Hebrews have assigned which letters are labial, which dental, and which guttural. Bacon.

In attempting to pronounce the nasals, and some of the vowels spiritally, the throat is brought to labour, and makes that which we call a guttural pronunciation.

Holder.

First in a place, by nature close, they build A narrow flooring, guttered, walled, and tiled.

Dry den. These gutter tiles are in length ten inches and a half. Mo.ron.

Rocks rise one above another, and have deep gutters worn in the sides of them by torrents of rain.

Addison on Italy.

GUTTY, in heraldry, a term used when any thing is charged or sprinkled with drops. In blazoning, the color of the drops is to be named.

GUTWORT, n.s. Gut and wort. An herb.

GUY, n. s. From guide. A rope used to lift any thing into the ship.

Guy, in ships, is a large slack rope, extend- ing from the head of the main-mast to the head of the fore-mast, and having two or three large blocks fastened to the middle of it, to sustain the tackle used to hoist in and out the cargo of a merchant ship.

Guy (Thomas), an eminent bookseller, son of a coal-dealer in Southwark. He commenced business about 1668 with a stock of £250. The English bibles being tlien very badly printed, Mr. Guy contracted with the university of Ox- ford for their privilege of printing them, and carried on a great trade in them for many years. Thus he began to accumulate money, and being a single man, and very penurious, he daily increased his store. The bulk of his fortune, however, was acquired by purchasing seamen's tickets during queen Anne's wars, and South Sea stock, in 1720. It is said that at one time he was about to marry his maid-servant, and that it was only her extravagance in one instance induced him to alter his intentions. The girl looking on the paviors at work, near his door, remarked a broken place that they had not repaired ; when they told her that Mr. Guy had directed them not to go so far. ' Well,' she said, 'do you mend it, and tell him I bade you.' But she had presumed too much on her influence over her careful lover, with whom a few extra- ordinary shillings expense turned the scale against her; he renounced his matrimonial scheme, and commenced a builder of hospitals. He was seventy-six years of age when he formed the design of building the hospital which bears his name, ana lived to see it roofed in; dying in 1724. The charge of erecting this vast pile amounted to £18,793, and he left £219,499 to endow it. He also erected an alms-house with a library at Tamworth in Staffordshire, for which he was representative in parliament, for fourteen

poor men and women; and left £l25 a-year for their pensions.

GUYON (J. M. de la Mothe.) See Mothe.

GUYTON MoRVEAU. See Morveau.

GUZ, an Indian measure, equal to one yard Entrlish.

GUZMAN (Dominic de), founder of the Dominican order of monks, was born at Calaroga in Old Castile, 1170. He preached against the Albigenses, when pope Innocent III. made a crusade against that unhappy people : and

was inquisitor in Languedoc, where he founded his order, which was confirmed by the Lateran council in 1215. He died at Bologna in 1221, and was canonised. See Dominicans.

GYBE, ?j. s. & V. a. See Gibe. The vulgar yield an open ear.

And common courtiers love to gyhe and fleer.

Spenser.

Ready in gybes, quick answered, saucy, and as quarrellous as the weazel. Shakspeare. CymbeUne.

GYBING, the act of shifting any boom sail from one side of the mast to the other. By a boom sail is meant any sail whose bottom i-s extended by a boom, the fore-end of which is hooked to its respective mast; so as to swing occasionally on either side of the vessel, describ- ing an arch, of which the mast will be the centre. As the wind or the course changes, it becomes necessary to change the position of the, boom, with its sail, which is accordingly shifted to the other side of the vessel, as a door turns upon its hinges. The boom is pushed out by the effort of the wind upon the sail, and is restrained in a proper situation by a strong tackle commu- nicating with the vessel's stern, called the sheets It is also confined on the fore part by the guy.

GYERGYO, or Szent Miklos, a market- town of Transylvania, the chief place of the dis- trict of Esik. The Armenians, who form the chief part of the population, carry on some manufactures of ornamental works of leather. Long. 25° 36′ E., lat. 46° 39′ N.

GYGES, a Lydian, to whom Candaules, king of the country, showed his wife naked. See Lydia. According to Plato, Gyges descended into a chasm of the earth, where he found a brazen horse, whose sides he opened, and saw- within the body the carcase of a man, from whosu finger he took a brazen ring. This ring, when he put it on his finger, rendered him invisible ; and by means of it he introduced himself to the queen, murdered her husband, married her, and usurped the crown of Lydia !

GYMNASIARCHA, in antiquity, the director of the gymnasium. He had two deputies under him ; the Xystarcha, and the Gymnastes.

GYMNAS'TICALLY,rtc/i;.-ˆ Fr. gymniqne,

Gymnas'tic, adj. ˆgymnastique ; Ot .

Gym'nic, adj. f yvfiviKOQ, yvˆi-

vaffTiKog. Pertaining to athletic exercise ; con- sisting of leaping, wrestling, running, throwing the dart, or quoit : athletically made

The country hath his rcrr ations, the city his several gymnicks and exercises, may-games, feasts, wakes and merry meetings to solace themselves.

Burton's Anatomy of Melancholy.

Have they not sword-players and every sort Of gymnic artists, wrestlers, riders, runners?

Milton.

GYMNASTICS.

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Such as witli agility and vigor arc not gymnastically composed, nor actively use those parts. Browne,

The Cretans wisely forbid their servants gymnasticks as well as arms ; and yet your modern footmen exer- ci-se themselves daily, whilst their enervated lords are softly lolling in their chariots. Arbvthnot.

Gymnastics. From yvfivoQ, naked, because the ancient exercises of this kind were per- formed naked ; a modern name for certain exer- cises ancient and modern, which have been thus distinguished. The ancient gymnasium was little more than a school for warriors, those exer- cises only being encouraged, the advantages of which were seen in the field : hence boxing and the pancratium fell into disrepute, solely because the corpulence they encouraged was injurious to the military character. Thus Plutarch says, ' It would take three shields to cover a pugilist ; ' and Cato enquires, ' Of what service can a man be to his country who is nothing but belly?' The modern gymnasium has no such pretensions : in it the arts of war are not cultivated ; but the manly exercise of the limbs, the consequent vi- gar of the muscles, and the health and robustness necessarily ensuing, are its main objects. This article, therefore, naturally divides itself into, I. The History of Gymnastics, ancient and mo- dern. II. The more particular description of modern Gymnastic exercises.

PART I. HISTORY OF GYMNASTICS. With regard to the history of gymnastic exer- cises, their origin, it is evident, must be nearly coeval with the first congregation of men into societies. At that time, when agility and strength were the principal requisites of a warrior, when leaping, hurling the javelin, racing, wrestling, &c., were exercises which alone would fit

men for the field, enable them to repel the attacks of their neighbours, or in turn to become themselves the aggressors ; when the defence of their own property, or the seizure of that of others, was the employment of a principal part of their lives, the gymnastic art would undoubtedly occupy a prominent place in the education of youth. Ac- cordingly we find, the elders of those primitive governments soon instituted periodical games ; they gave prizes and honors to the conquerors, and excited in every])ossible way the emulation of the young men, till the Olympic games, ori- ginally the periodical race of four brethren, in process of time became tiie occupation of days, the data by which time was reckoned, and tha cause of war between celebrated cities and even entire nations. Almost all the early writers no- tice the ancient games of the gymnasium, and among the first are those celebrated at the funeral of Patroclus, as recorded by Homer in the twenty-third book of the Iliad. Even then the art wanted but little of perfection, for we find that the Greeks had not only the simple foot- race, and the manly wrestling-match, but also the chariot-race, the cnmlntts of the cestus, and of the sword, hurling tlx; discus and the javelin, and exercisin

ing to Plato, one Herodicus, a little prior to Hippocrates, was the first who intioduced them into physic; and his successors, convinced of their usefulness, continued the practice. Hip- pocrates has given instances of it, where he treats of exercise in general, and of the particu- lar effectsof walking, with regard to health; also of the diff'erent sorts of races on foot or horse back; leaping, wrestling, the exercise of the suspended ball, chironomy, unctions, frictions, rolling in the sand, &c. But, as physicians did not adopt all the gymnastic exercises in their practice, they were divided between them and the masters of martial and athletic exercises, who kept schools, the number of which greatly increased in Greece ; and gymnasia, places appro- priated solely to these exercises, soon made their appearance m the principal cities. Laceda;mon was the first place where they were built, and three soon after were erected at Athens. Ac cording to Vitruvius, the gymnasia were a knot of buildings united, sufficiently capacious to hold many thousands of people at once ; and having room for philosophers, and tlie professors of the sciences, to read their lectures ; and wrest- lers, dancers, and others, to exercise at the same time. They consisted of twelve parts, viz. 1. The exterior porticos, where the philosophers, rhetoricians, mathematicians, and physicians, read public lectures, and where they also dis- puted and rehearsed their performances. 2. The ephebium, where the youth assembled very early, to exercise in private without any spectators. 3. The coryceum, apodyterion, or gymnastsrion, a kind of wardrobe, where they were stripped, either to bathe or exercise. 4. The elieothesium, alipterion, or unctuarium, appointed for the unc- tions, which either preceded or followed the use of the bath,

wrestling, pancratia, &c. 5. The conisterium or conistra, in which they co- vered themselves with sand or dust, to dry up tlie oil or sweat. 6. The palaestra, properly so called, where they practised wrestling, the pu- gillate, pancratia, and other exercises. 7. The sphceristerium or tenniscourt, reserved for exer- cises wherein they used balls. 8. Large un- paved alleys, which comprehended the space between the porticos and the walls wherewith the edifice was surrounded. 9. The xysti or porticos for the wrestlers in winter or bad wea- ther. 10. Other xysti or open alleys, for fine weather, some of which were quite open, and others planted with trees. 11. The baths, con- sisting of several diflerent apartments. 12. The stadium, a large space of a semicircular form, covered with sand, and surrounded with seats for the spectators.

The principal gymnastic exercises of the an- cients were five in number. They began with the foot-race (dpofiog), which was the most an- cient and in the greatest esteem, as it enabled the warrior to make a sudden assault or a quick retreat; and Homer, therefore, constantly entitles his hero Achilles ' iroSag wkvc, swilt of foot.' David also, in his eulogy on Saul and Jonathan, exclaims, 'They were swifter than eagles, they were stronger than lions.' The victorious racer gave his name to the Olympiad. Sometimes they ran in armour, and were then called oTrXiToSpd/jot.

— AXfjia, or the exercise of leaping, ranked se- cond, and was generally performed with oval weights of lead, having holes in them through which the leapers put their finders, and by these they poised and assisted forward their bodies. The proficiency of some of these was very great : Pausanias assures us, that Phaulus of Crotona leaped fifty-two feet. — The hurling of the disctis {ciaKog), a quoit of stone, brass, or iron, was among the most ancient of these sports. It was thrown under the hand as the quoit is now in England, and the object was to hurl it further than another could do.

The wrestling of the ancients {iraXrj) required equal strength and agility. They never encoun- tered till all their joints had been fomented and suppled with oil to prevent strains, and to elude the grasp of their antagonists. After having anointed their whole bodies, they rolled them- selves in sand to prevent excessive perspiration, and were then considered ready to enter the lists. The victory was adjudged to him who had given his antagonist three falls. Hvyfiax'ia, or the exercise of fcojmg, was the last both in order and in estimation. As well as a certain fleshiness of arm, and stoutness, if not corpulence of body, to in- crease the force of their own blows and to lessen the injury of their antagonist's, a certain regimen was requisite, regular

sleep, rest, and provisions,which but ill prepared the combatants for the privations of war. In this exercise also the victory was never decided till one of the parties fairly yielded, either by holding up a finger, or demanding quarter. This, however, seemed so contrary to the obsti- nate character of Grecian valor, that one of the parties was generally slain ; and the laws of Sparta absolutely prohibited her citizens from ever engaging in it, as a Spartan was ' taught to disdain saving his life by yielding to his oppo- nent, and the life of a Greek was not to be sacri- ficed to the amusement of an hour.'

At first they used never to box but with naked fists and arms, afterwards they covered the wrists and hands with leather thongs, and at length fought with their arms and fists perfectly cased in leather, loaded with plummets of lead. These tremendous gloves were called Caestus, and the following description of those of Eryx, the bro- ther of Acestes, king of Sicily, sufficiently proves the direful nature of the combat: —

In medium geminos immani pondere ciestus Projccit ; quihus acer Eryx in praelia snetus Ferre nianuni, duroque intendcre brachia tergo. Obstupuere aniiiii •, tantorum ingentia septem Terga bourn plumbo insuto ferroque rigebant.

JEneid lib. v. 1. 401.

-He threw

Two ponderous gauntlets down in open view. Gauntlets, which Eryx wont in tight to wield. And sheath his hands with in the listed field. With fear and wonder seized, the crowd beholds The gloves of death, with seven distinguished folds Of tough bull-hides : the space within is spread With iron, or with loads of heavy lead. Dryden.

The Pancratium also (Gr. Trayicpanov) is worthy of notice. It was a contest in which both wrestling and boxing were united, and the combatants often tlirew themselves upon the

ground, and continued the fight by biting, scratching, pinching, kicking, or any other method of annoying their antagonists. This was continued till one of them yielded ; and it often happened that he who in wrestling would have conquered, was, in the Pancratium, compelled to give in. In the time of Homer all these exer- cises were performed in drawers, which, indeed, were not laid aside before the thirty-second Olympiad. One Orseppus, a wrestler, is saiJ to have been the first who introduced the practice of contending naked : for, having been worsted by his drawers entangling him, he threw them aside, and the rest afterwards imitated him.

From the Greeks the Romans derived these exercises, and improved them to the highest de- gree of magnificence. But the declension of the empire involved the ruin of the arts, and, among others, that of gymnastics. The attempts to re- vive and improve them, at the close of the last century, it is now our business to notice.

Germany was the first country that attempted the revival of these ancient and manly sports. At Schnepphenthal, near Gotha, Salzman first framed a course of gymnastics, which was im- proved and arranged by Gutsmuth, who pub- lished the firsfmodern treatise on the subject in 1793. In Denmark the government, intent on a plan of public education, issued an order that a piece of ground should be allotted to every pub- lic school for the practice of these exercises; and, in 1804, no less than sixteen of these establish- ments were formed in that kingdom. In 1810 a gymnasium was erected at Berlin by the Prus- sian government, and placed under the direction of M. Jahn, by whose exertions several similar institutions have been formed in various parts of Prussia and Germany. In fact, no large academy is now considered perfect in those countries which does not include a course of gymnastics in its system. In 1817 appeared Gutsmuth 's com- plete System of Gymnastic Exercises, to which, in the course of the article, we shall find it ne- cessary to refer.

Early in the spring of 1826 a meeting was lield in London at the Mechanics' Theatre, Southampton Buildings, Dr. Gilchrist in the chair, to consider of the practicability of estab- lishing a London Gymnastic Society. Professor Voelker of Germany came forward and offered to give liis instructions gratuitously, and another gentleman present advanced the money for the erection of the apparatus. A society was soon formed, and they purchased a piece of ground on thˆ higher part of Spa Fields, near Penton- ville. From its elevation it is dry, and capacious enough to accommodate about 300 gymnasts. These are arranged in classes according to their size and capacity ; and the various poles, &c., are constructed of different sizes accordingly. At the ringing of a bell each class changes the exercise in which it has been previously engaged, and begins a new one, according to a plan pre- scribed by the director. The success of the un- dertaking has, we think, exceeded even the ex- pectation of the most sanguine of the projectors. In about two months they numbered 700 pupils ; and it was soon seen that similar places might be erected with advantage in various parts of the

suburbs of London. Similar societies have been formed at Hackney, Betlinal

Green, Knights- bridge, 6cc.

PART II. DESCRIPTION OF THE MODERN GYMNASTIC EXERCISES.

The ancient and modern gymnastics must not be confounded. The present professors of the art entitle it 'a revival of the ancient exercises of the Greeks ;' but he who should visit Pentonville with the hope of watching the striving of the dusty wrestler, the combat of the Pancratium, or the hurling of the discus, will indeed be dis- appointed. He will see but little in the 'leaping stand,' or the 'climbing scaffold,' of the London gymnasia to remind him of the Grecian academy or the Roman amphitheatre. Tiie ancient g)'moastics fitted men for the field, and for 'he fatigues of war — the moderns profess only to improve the constitution ; to enable men to en- counter without injury the close air of the counting house or the drawing room ; to endure without trouble the fatigues of a city life. To strengthen all the muscles of the body being their object, the exercises are necessarily of different kinds. The principal ones are six in number : we commence with the most simple and uatuTal.

Running. A.S it is evidently necessary to the performance of several of the other exercises, the young gym- nast must particularly endeavour to acquire a swift and easy method of running. The most common fault is the taking too short and swift steps, which soon fatigue, and the progress is not so great in proportion as when the steps are longer though less quickly performed. It is also more difficult to breathe in time with such steps, and the runner consequently sooner loses his wind. About 350 or 400 feet is the best length for a course ; though for very young or weak pupils 250 may be found sufficient, and when a party first begin this exercise, they should start in the military 'double-quick time.' This will prevent strains, either from the violence of start- ing or the sudden exertion of the race, for which the body might be unprepared. Indeed sufficient attention has never been paid to swift running in time, and consequently a line can scarcely be at all kept by persons when running with only a moderate degree of swiftness.

Le.vpino. Leaping is the best bodily exercise for the lower members, and therefore occupies a very promi- nent place in all modern gymnastics. In order, however, to practise this with ease, initiatory ex- ercises are often necessary. We frequently meet with persons of considerable muscular strength, who, from their habits of life, are so sluggish and unwieldy that they know not how to exert it. The ploughman, who with ordinary fatigue would guide the plough all day through the hardest furrows, would be unable probably to leap a ditch to save his life. These preliminary exercises are hopping, and striking the lower part of the back with the feet and the knees agains. the bre?st. In hopping care should be Vol. X.*

taken to make tlie steps short and quick, keeping the arms crossed and the head erect. After these exercises have in some degree brought the mus- cles of the thigh into play, and rendered the knee-joints sufficiently flexible, the pupil may begin leaping. Of leaps there are several dif- ferent kinds, viz. the long leap with or without a run, the high leap with or without a run, the deep leap, or the same leaps with a pole, all of which are very differently pei formed.

1. The long leap without a run is an excellent exercise, particularly for the muscles of the feet, calves, and thighs. It is performed merely by the elastic power of the feet, assisted by a swing- ing of the hands. The long ieaps are best per- formed over a ditch about a foot deep, and increasing in breadth froni oae end to the other thus : —

taking care that the margin of one side, A, be composed of loose sand to the extent of about two feet and a half, in order that a slip in de- scending may not strain the feet of the leaper. The broadest end of the ditch need not exceed twenty feet, and the breadth should diminish gradually to about four and a half. Continued jumping from one end to another of a long piece of ground is also recommended as an ex- cellent preparatory exercise.

2. The tiigh leap without a run. — In order to practise the high leaps it is necessary to construct a leaping stand, which is generally made in the following manner: — Two upright posts, a aud 6 in the diagram, are fixed in the ground at the distance of about twelve feet from each other, and having holes drilled in them at every inch for the insertion of the pegs c, c, over which a cord is kept extended by the two weights fastened to its extremities : —

The leap over the cord must always be made from the side of the stand, opposite to which the string is laid, in order that it may give way if struck by the feet. This stand therefore allows of leaping from one side only, and even then the weight often occasions the string to entangle the leaper, although his feet carry it off the pegs. A better stand may be made (if the leapers are not very numerous) with poles that shut up in three joints, one within the other, similar to some fishing-rods. These being drawn out to any required length, and supported in their position by means of small pegs, a thin light caue in place of the string is laid along the top of the two poles, which are slightly grooved to receive it. See plate II. Gymnastics, fig. 2.

This will be found to fly off with the slightest touch, and never to embarrass the pupil : a cir- cumstance worthy of consideration, as a fall when leaping to the height of eight or ten feet often produces serious injury. This stand may alˆo be used with equal safety from either side ; but the poles cannot be set so far asunder as in the ether, it being difficult to procure a thin cane that is straight above five feet in length. In order to learn the high leap without a run, the pupil is directed to place himself at about the distance of four feet from the stand, and having excited the elastic power of his feet by a pre- liminary leap of about three feet, he springs over the cane. The two leaps should be made very light, and follow one another instantane- ously, that the force of the first spring be not lost. It is better for young pupils to begin this with the cane no higher than the knees ; but many persons will spring over a cord at the height of the pit of the stomach.

3. The deep leap is a spring from one side of a ditch to the other, which is considerably lower, or indeed from any high place to a low one, and is best performed with the assistance of the hands. By contriving to throw himself partly on his hands, and let the weight of his descent thus gradually pass over to the feet, the gymnast will soon be enabled to leap from a height, that to an unpractised eye would appear dangerous. By continual practise on the ladder of the climbing-stand (see plate I. Gymnastics), for instance, he will in time be enabled to leap with comparative ease from a two pair of stairs win- dow, and thus have a considerable advantage in case of fire over the idle or the sedentary man, to whom a leap from the first floor would be often fatal. For exercise this leap is often per- formed without the assistance of the hands, and great care must then be taken to fall on the ball of the toes, instead of the heels, as otherwise a very considerable shock may be given to the body. Dropping also from a height is often connected with this exercise, and great care must then be taken to keep the knees slack, and the body rather forward in the descent. These exercises must on no account be performed after a meal, as the shock on a full stomach may sometimes occasion hernia.

4. The long leap with a run is to lˆe practised over the ditch shown above, and the run should never exceed twenty-five feet. The steps should be small, and increase in rapidity as they ap-

proach the leaping-plaoe ; long steps are to be particularly avoided, as they considerably diminish the force of the run. As it is evident that the spring can be finally made with only one foot, and most persons leap best with the right, some little practise is required to enable the leaper to so far measure the distance with his eye, as to bring that foot forward to leap with. When descending, the feet should be kept close together, the knees slack, and the chest well thrown forward, and on arriving at the ground a light spring

should be again made to lessen the shock of the fall ; though if the opposite margin be formed of loose sand. to the depth of about three feet, as before recommended, no shock can be felt. Many young leapers, however, by throwing the feet too forward, fall backward on coming to the ground, or by separating the legs give to one of them alone the whole weight of the descent, and thereby are apt to receive some unpleasant strains. But, of all the faults of young beginners, the most common is that of endeavouring to hurl themselves along without leaping to a sufficient height : they thus come quickly to the ground, and generally fall on their faces by the strength of their own leap. A person who can leap three or four times the length of his body, may be said to be a good leaper, though he will remain as a gymnast far behind Phaulus of Crotona, who leaped fifty- two feet at the Olympic games.

5. The high leap with a run may be performed either by bending the legs under the body as close as possible, immediately on leaving the ground; or by throwing the left leg over the cane, and drawing the right sharply up to the bottom of the back ; or by throwing them together, either to the right or left side, to prevent their catching against the obstacle over which you leap The run, &c., is the same as in the preceding exercise ; and many leapers will in this manner clear a wall considerably above their own height. At Greenwich this exercise is combined with a game of carrying off a ring on the top of a sword while in the act of leaping, and this accustoms the pupils to spring with great precision and coolness.*

6. The long leap with a pole. — We are now come to leaping with a pole, which has been said to be ‘ vaulting, in which the leaper, instead of supporting himself by an intervening object, carries with him a pole, which he places in what- ever spot he chooses.’ This is, liowever, by no means correct; the support given by a wall, bar, or other fixed object over which you have to move, and on which the hands must be moved, bears but little resemblance to a moveable pole which swings with your body, and on which you in a manner hang. The pole should be from about six feet to ten, or even thirteen, feet long, and about two inches thick at the bottom, tapering to about an inch at the top : ash is the best wood, as fir, though more easily procured straight, is more liable to crack. This pole i3 held with the right hand about the height of the head, and the left a little higher than the hips. The run is the same as before, but the leap m.ust be made with the left foot. The leaper then swings round to the right of the pole, making a turn, so that his body faces, on his reaching the opposite

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‘a

bank of the ditch, the side from which he set out. The body should be kept near the pole, and the swing must be carefully given, lest, by pulling the pole in a direction lateral to the ditch, you should fall sideways into the ditch. The spring and the fixing of the pole must be made at the same moment, as otherwise the swing is not so strongly made ;”*and, in proportion as he becomes more expert, the leaper may advance his hands higher up the pole, and thereby have a more powerful swing. The feet should be stretched out as far as possible to reach the opposite bank, and if this should be lower than the one from which tiie leap is taken, the hands should be slid down the pole while in the act of leaping. This exercise is very common in Lincoln- shire, Cambridgeshire, and the other fen counties which abound with dykes ; but it is there com- mon to throw the body strongly against the pole, and, letting it pass between the legs, to ride over, as it were, upon it.

7. The high leap mth a pole greatly resembles the preceding one, except that, the sweep being smaller, the hands must be more raised, and the legs quickly turned, to prevent their coming in contact with the cord. The left hand should grasp the pole at the same distance from the bottom that the cord is from the ground. The pole is not always fixed at the same distance in front of the stand, but further, in proportion to the height of the leap. The swinging upward is principally effected by the force of the spring as connected with the quick motion occasioned by the run, which, being suddenly checked by the fixing of the pole, changes its horizontal direction to one of a slanting ascent, and thus carries the body of the leaper over the cord or cane. At the same time the leaper must observe to fix the pole right before him, and not, either to the right or left, as otherwise the force of the run will throw him from the pole. The best criterion of a good leap is, tiiat the pupil descend in an equal balance to the ground, that is to say, he is not compelled to run backward to keep himself from falling, which is too often the case. The descent should take place on the balls of the toes, and the knees should be slackened to prevent any shock.

Vaulting, or the art of leaping over an object ■with the assistance of the hands, requires next to he attended to. — Tiiis is performed by placing the hands on the wall, bar, or gate, over or upon which you vault, and at the same time giving a spring; swinging yourself round, and descending with your face towards the object. The leaning of the hands not only gives direction to, but con- siderably assists the swing, and thereby augments the muscular power of the arms, shoulders, &c., as well as of the legs. In order that this exercise may be practised with ease and safety, wooden horses, whose sides and backs are commonly stuffed with wool, and covered with leather, are to be erected in the gymnasium. 1. The pu]iil places himself in front of the horse, makes one preparatory leap, and then, fixing b<:)tli hands on it and springing up, throws his right leg over: the body is then suspended by the support of the hands, and descends gradually to the riding po- sition. In order to dismount, the rider swings himself on his hands, first forward and then

backward, and then, closing his feet, throws them both over to the ground. A person may soon learn to mount a horse of any size in this manner.

Vaulting over the horse ought to be frequently practised, as it is applicable in so many instances. With a short run a person may soon learn to throw himself over the height of his chest, and, by shifting the hands, over a very broad table. \ aultiug on, in a standing position, is performed with a short run; the pupil then places his hands at a little distance from one another on tlie object, and, at the same time, leaping up, draws his knees forcibly towards his breast, so that the feet come up between the hands ; the gym- nast then, quitting the horse with his hands, stands upright. If he wish to seat himself side- ways on the horse, he need only, instead of standing, continue to throw forward his feet, and he will be able to seat himself on the saddle ; or, should he still continue his leap, he will go over the horse straight forward.

Swinging on the B.\r. — This, though an ex- ercise not so directly applicable to the accidents of active liie as leaping, vaulting, or climbing, greatly augments the muscular power of the body, and must never be omitted in the gymna- sium. Bars should therefore be erected simdar to those shown in Plate III. Gymnastics, and if possible they should be under cover from the rain and the sun. In order to construct these stands, erect two strong posts (a and b, fig. 4), about six feet high and eighteen feet asunder, and on the top of them fix a thick transverse beam, rounded at the top to give a more easy grasp to the hand. Then fix three upright posts c, c, c, about five feet in height, and on them, in conjunction with the post b, fasten two other transverse poles d, d, at the distance of about three feet from one another. You will then have the single bar A, and the double bars B, as re- presented in the plate. The exercises on these bars are so various

that we cannot be expected to describe them in detail. On the dov.ble bars the principal ones are performed, either by rais- ing the body on the two hands as the pupil is represented doing, B, Plate III., or by swinging along them, or lowering and raising himself by degrees, by the strengUi of his arms only. On the single bar the most difficult is the seizing the bai with both the hands on the same side and raising the body by pulling upward, the feet being meanwhile closed and hanging down. This exercise is very fatiguing, and, though many persons will go through it nine or ten times successively, twenty times will tire the strongest man. Hanging by the arms and legs, or by the arms or legs alone, and swinging in different ways round the bar, are the other exer- cises on this bar. They should, indeed, never be neglected, as they greatly facilitate the gym- nast's progress in the following exercise.

Climiung. — The uses and advantages of this art are too evident to need any particularisation. In order to practise it in all its varieties, differ- ent kinds of stands or scaffolds have been recom- mended. The best is recommended in a work entitled Instructions in all kinds of Gymnastic Exercises, by a Military Officer. Plate I. repre- sents this stand, with all its appurtenances. It

is formed of two strong posts fixed firmly in the ground, about twenty feet high and about forty from each other. Over these is fastened the strong beam AB, to which arc f^istened the ropes, poles, &c. The mast a is also fixed in tlie ground, and to it two ladders h, b, are attached. To the great cross beam, A B, are fastened two poles d, e, two thick ropes _/, g, and a rope lad- der h. The standing place, i, is useful as a rest- ing place, and to accustom the nerves to look down Without fear from a considerable height. The first thing for pupils to attend to in climb- ing is to be able to ascend and descend the lad- der quickly, without fear, and carrying up with them some burden. When they can easily do this they may begin to ascend and descend the inside of tiie ladder; this also being accom- plished, let them endeavour to descend it with their hands only. The last exercise on the lad- der is to ascend it with the hands, the feet mean while hanging loose; this indeed requires consi- derable exertion, for the whole weight of the body mustj not only be supported but raised by one arm only, while the other catches at the second step above the head. Climbing the rope ladder is mucli more difficult than is generally supposed, for, the bottom of the ladder hanging loose, a person unaccustomed to it receives no support from

his feet, but rather trouble as they fly from under him and give his arms very strong jerks. By degrees, however, he learns to keep his feet stretched out, and thus to avail himself of their assistance. The gymnast may now begin to climb the upright pole ; this is done by alter- nately holding on and raising the arms and legs, and requires nothing but a tight hold by the legs and a strong pull with the arms. On the slant pole it is more diflScult, as the weight of the body depends more on the arms. Climbing the mast is still more difficult, as it cannot be grasped by the hands, and therefore the climber must lay fast hold of his left arm with his right hand, and his right arm with his left. The other methods of climbing the ropes, &c., are better learned by practice and actual inspection than any instruc- tions, however detailed. See Plate I, Gym- nastics.

Wrestling is sometimes included in the gymnastic exercises, but to this it is our inten- tion to give a separate article. See Wrust-

LINO.

GYMNOPYRIS, in natural history, a name given by Dr. Hill to pyritse of a simple internal structure not covered with a crust. See Pyrites. Of these there are only two species: 1. A green variously shaped kind. 2. A botryoid kind. The first is the most common of all the pyritw, and appears under a great diversity of shapes. It is very hard and heavy, readily gives fire with steel, but will not at all ferment with aquafortis. The second is very elegant, its usual color is an agreeable pale green ; but what most dis- tinguishes it is, that its surface is always beau- tifully elevated into tubercles of various sizes, resembling a cluster of grapes.

GYMNOSPE'RMOUS, adj. yvfivog and avkpfia. Having the seeds naked.

GYMNOSOPHISTS, Greek, Vvuvoao^i^nQ, i.e. a naked philosopher A set of Indian phi-

losophers, famous in antiquity, so called from their going naked. There were some of these sages in Africa ; but the most celebrated of them were in India. They believed the immortality and transmigration of the soul : they placed the chief happiness of man in a contempt of the goods of fortune and the pleasures of sense, and gloried in having given faithful and disinterested counsels to princes and magistrates. It is said that when they became old and infirm, they threw themselves into a pile of burning wood, in order to prevent the miseries of an advanced age. One of them, named Calamus, thus burnt himself in the presence of Alexander the Great. Apuleius describes the gymnosophists thus : — 'They are all devoted to the study of wisdom, both the elder masters and the younger pupils ; and what to me appears the most amiable thing in their character is, that they have

an aversion to idleness and indolence ; accordingly, as soon as the table is spread, before the food be brought, the youths are all called together from their several places and offices, and the masters ex- amine them what good they have done since the sun-rise : here oj-ie relates something he has dis- covered by meditation; another has learned something by demonstration; and those who have nothing to allege why they should dine, are turned out to work fasting.' The great leader of the gymnosophists, according to Jerome, was one Buddas, or Butta, who is ranked by Suidas among the Brahmins. He makes Buddas the preceptor of Manes the Persian, the founder of the gymnosophists.

The African gymnosophists dwelt upon a mountain in Ethiopia, near the Nile, without either house or cell. They did not form them- selves into societies, but each had his private recess, where he studied and performed his devotions by himself. If any person had killed another by accident, he applied to these sages for absolution, and submitted to whatever pen- ances they enjoined. They lived solely upon the fruits of the earth. Lucan ascribes to these gymnosophists several discoveries in astronomy. The Indian gymnosophists dwelt in the woods, where they lived upon the wild products of the earth, and never drank wine nor married. Some of them practised physic, and travelled from one place to another ; these were particu- larly famous for their remedies against barren- ness. Some of them, likewise, pretended to practise magic, and to foretel future events.
GYMNOSPERMIA. See Botany. GYMNOTUS, in ichthyology, a genus of fishes belonging to the order of apodes They have two tentacula at the upper lip: the eyes are covered with the common skin; there are five rays in the membrane of the gills ; the body is compressed, and carinated on the belly with a fin. There are nine species, the most remark- able of which is the G. electricus, or electric eel, called by the French anguille tremblante. This fish is a native of the warmer regions of Africa and America, where it inhabits the larger rivers, and is particularly found in those of Surinam. In Africa it is said chiefly to occur in the branches of the river Senegal. It is a fish bearing a general resemblance to a large eel, though somewhat

thicker in proportion, and of a much darker color. It is usually seen in the length of three or four feet.

A very accurate description of this fish was given by Dr. Garden in the Philosophical Trans- actions of 1773, who had three of them in his possession.

‘ To catch the gymnoti with nets,’ says Hum- boldt, ‘ is very difficult, on account of the extreme Agility of the fish, which bury themselves in the mud like serpents. We would not employ the barbasco, that is to say, tlie roots of the piscidi? erythrina and jacquinia armillaris, because, whej thrown into the pool, they intoxicate or benum these animals. These would have enfeebled the gymnoti ; the Indians therefore told us, that they would fish with horses. We found it diffi- cult to form an idea of this extraordinary manner of fishing; but we soon saw our guides return from the savannah, which they had been scouring for wild horses and mules. They brought about thirty with them, which they forced to enter the pool. The extraordinary noise caused by the horses’ hoofs makes the fish issue from the mud, and excites them to combat. These yellowish and livid eels, resembling large aquatic serpents, swim on the surface of the water, and crowd under the bellies of the horses and mules. A contest between animals of so different an or- ganisation furnishes a very striking spectacle. The Indians, provided with harpoons and long slender reeds, surround the pool closely ; and some climb upon the trees, the branches of which extend horizontally over the surface of the water. By their wild cries, and the length of their reeds, they prevent the horses from running away, and reaching the bank of the pool. The eels, stunned by the noise, defend themselves by the repeated discharge of their electric batteries. During a long time they seem to prove victorious. Several horses sink beneath the violence of the invisible strokes which they receive from all sides in or- gans the most essential to life ; and, stunned by the force and frequency of the shocks, disappear under the water. Others, pantinjj, with mane erect, and haggard eyes, expressing anguish, raise themselves, and endeavour to flee from the storm by which they are overtaken. They are driven back by the Indians into the middle of the water ; hut a small number succeed in elud- ing the active vigilance of the fishermen. These regain the shore, stumbling at every step, and stretch themselves on the sand, exhausted with fatigue, and their limbs benumbed by the elec- tric shocks of the gymnoti.

< We obtained five large eels, the greater part of which were but slightly wounded. The tempera- ture of the waters in which the gymnoti habitually live, is about 86° of Fahrenheit, and their electric force, it is said, diminishes in colder waters. The gymnotus is the largest of electrical fishes. I mea- sured some that were from five feet to five feet three inches long ; and the Indians assert, that they have seen them still longer. We found that a fish of three feet ten inches long weighed 12 lbs. The transverse diameter of the body was three inches five lines. The gymnoti of Cano de Hera are of a fine olive-green color. The under part of the head is yellow, mingled with red. Two rows of

small yellow spots are placed symmetrically along the back, from the head to the end of the tail. Every spot contains an excretory aperture In

consequence, the skin of the animal is con- stantly covered with a mucous matter, which, as A'olta has proved, conducts electricity twenty or thirty times better than pure water. It is in ge neral somewiiat remarkable, that no electrical fish, yet discovered in the different parts of the world, is covered with scales. It would be te- merity to expose ourselves to the first shock of a very large and strongly irritated gymnotus. 1- by chance you receive a stroke before the fish is wounded, or wearied by a long pursuit, the pain and numbness are so violent, that it is impossible to describe the nature of the feeling they excite. I do not remember having ever received from the discharge of a Leyden jar a more dreadful shock than that which I experienced by impru- dently placing both my feet on a gymnotus just taken out of the water. I was affected the rest of the day with a violent pain in the knees, and in almost every joint.

- *When Mr. Bonpland held it by the head, or by the middle of the body, while I held it by the tail, and, standing on the moist ground, did not take each other's hand, one of us received shocks, when the other did not feel. It depends upon the gymnotus to act toward the point where it finds itself the most strongly irritated. The discharge is then made at one point only, and not at the neighbouring points. If two persons touch the belly of the fish with their fingers, at an inch distance, and press it simultaneously, some- times one, sometimes the other, will receive the shock. In the same manner, when one insulated person holds the tail, and another pinches the gills, or pectoral fin, it is often the first only by whom the shock is received. It did not appear to us, that these differences could be attributed to the dryness or dampness of our hands, or to their unequal conducting power. The gymnotus seemed to direct its strokes sometimes from the whole surface of its body, sometimes from one point only.*

' On cutting a very vigorous fish through the middle of the body, the fore part alone gave me shocks. The shocks are equally strong, in whatever part of the body the fish is touched ; it is most disposed, however, to dart them forth when the pectoral fin, the electrical organ, the lips, the eyes, or the gills are pinched. Sometimes the animal struggles violently witii a person holding it by the tail, without communi- cating the least shock. Nor did I feel any when I made a slight incision near the pectoral fin of the fish, and galvanised the wound by the sim- ple contact of two pieces of zinc and silver. The gymnotus bent itself convulsively, and raised its head out of the water, as if terrified by a sensa- tion altogether new ; but I felt no vibration in the hands which held the two metals. The most violent muscular movements are not always ac- companied by electric discharges. The action of the fish on the organs of man is transniitted and intercepted by tho same bodies that trans- mit and inteicept the electrical current of a con- ductor

charged by a Leyden vial, or \olta's pile. In employing very delicate electrometers in a

thousand ways, insulatin-g them on a plate of glass, and leceiving very strong shocks, wiiich passed through the electrometer, I could never discover any phenomenon of attraction or repul- sion The same observation was made I y JVIr. Fahlberg at Stockholm. This piiilosopher, how- ever, has seen an electric spark, as Watsh and Ingenhousz had done before him at London, by placing the gjmnotus in the air, and interrupting the conducting chair by two gold leaves pasted upon glass, and a line distant from each other. JNo person, on the contrary, has ever perceived a spark issue from the body of the fish itself. We have irritated it for a long time during the night, at Calabozo, in perfect darkness, without d bserv- ing any luminous appearance.'

GYNiEGEUM, in antiquity, the apartment of women, a separate room in the inner part of the house, where they employed themselves in spinning, weaving, and needle-work.

GY'NEGOCRAGY, n. s. Gr. ywaiKOKpaTta; Fr. gynecocratie. Petticoat government; female power.

GYNˆˆCOCRATUMENI, from vj/i;,, woman, and KoarHfiivoQ, vanquished, an ancient people of Sarmatia Europaea, inhabiting the east banks of the Tanais, near its inHux into thePalus Maeotis ; thus called because they were under the dominion of women. F. Hardouin, in his notes on Pliny, says, they were thus called, be- cause, after a battle which they lost against the Amazons on the banks of the Thermodoon, they were obliged to become the husbands of the Amazons. See Amazons.

GYNANDRIA, from yipˆjj, a woman, a»/?;p, a man. The twentieth class in the sexual system, consisting of plants with hermaphrodite flowers, in which the stamina are placed upon the style, or a pillar-shaped receptacle, resembling a style, which rises in the middle of the flower, and bears both the stamina and pointal. See Botany.

GYONGYOS, a large well-built town of Hungarj% situated on the side of a mountain. The inhabitants, about 8000, manufacture wool- len and leather, and trade in wine and cheese, also to a great amount in alum brought from the works of Parad, a small town at seven miles distance. Twenty-one miles W. S.W. of Erlau.

GYPSIES, or Eoyptians, an outlandish tribe of vagabonds, called Bohemians in France, and Gittanos in Spain ; who, disguising themselves in uncouth habits, smearing their faces and bodies, and speaking a canting language, wander up and down, under pretence of telling fortunes, curing diseases, &c., abuse the people, trick them out of their money, and steal all they can come at. They are a strange kind of commonwealth of wandering impostors and jugglers, who made their first appearance in Germany about the beginning of the sixteenth century. Munster, ivho is followed and relied upon by Spelman, "i:xes the time of their appearance to 1417 ; but, as he owns that the first whom he ever saw were in 1529, it is probably an error of the press for 1517; especially as, when sultan Sehm con- quered Egypt in 1517, several of the natives refused to submit to the TurHsh yoke, and revolted umler one Zinganeus ; whence the Turks called them Zinganees; but, being at

length surrounded and banished, they agreed to disperse in small parties all over the world, where their supposed skill in the black art gave them a universal reception in that age of superstition and credulity. In a very few years they gained such a raumber of idle prose- lytes (who imitated their language and com- plexion), that they became troublesome, and even formidable, to most of the states of Eu- rope. Hence they were expelled from France in 1560, and from Spain in 1591. And the government of England took the alarm much earlier; for in 1530 they are described by stat. 22 Hen. VIII. c. 10, as 'an outlandish people calling themselves Egyptians, using no craft nor feat of merchandise, who have come into this realm, and gone from shire to shire and place to place, in great companies, and used great, sub- tle, and crafty means to deceive the people; bearing them in hand that they by palmistry could tell men's and women's fortunes; and so many times by craft and subtlety have deceived the people of their money, and also have com- mitted many heinous felonies and robberies.' Wherefore they are directed to avoid the realm and not to return under pain of imprisonment and forfeiture of their goods and chattels ; and, upon their trials for any felony which they may have committed, they shall not be entitled to a jury de medietate linguee. And aftersvards it is enacted, by stat. 1 &: 2 Ph. 8c Mary c. 4, and 5 Eliz. c. 20, that, if any such persons shall be im- ported into the kingdom, the importer shall for- feit £40. And if the Egyptians themselves remain one month in the kingdom, or if any person being fourteen years old, whether natural born subject or stranger, who has been seen or found in the fellowship of such Egyptians, or who has disguised him or herself like them, shall remain in the same one month at one or se- veral times, it is felony without benefit of clergy. Sir M. Hale says, that, at one Suff'olk assizes, no fewer than thirteen persons were executed upon these statutes a few years before the Restoration. But, to the honor of humanity, there are no instances more modern than this of

carrying these laws into practice ; and the last sanguinary act is itself now repealed by 23 Geo. III., c. 54.

*In Scotland they oem to have enjoyed some share of indulgence ; for a writ of privy seal, dated 1594, supports John Faw, lord and earl of Little Egypt, in the execution of justice on his company and folk, conformably to the laws of Egypt, and in punishing certain persons there named, who rebelled against him, left him, rob bed him, and refused to return home with him.. James's subjects are commanded to assist in ap- prehending them, and 'in assisting Faw and his adherents to return home. There is a like writ in his favor from Mary queen of Scots, in 1553 ; and in 1554 he obtained a pardon for the murder of Ninian Small. So that it appears he had staid long in Scotland, and from him this stro'ding people received the name of Faw's gang, which they still retain. **

It is incredible how this banditti have spread over the earth. They wander about in Asia and Atrica and most of the European nations. Spain

IS supposed by Mr. Twiss to contain 40,000, by others 60,000, and by some 120,000. But in September and October, 1800, they were almost totally extirpated by the plagrue. They abound in Italy, and are scattered through France, Ger- many, Denmark, Sweden and Russia. For nearly four centuries they have wandered through tlie world ; and in every region, and among every people, whether barbarous or civilised, they have continued unchanged. Their origin has been generally believed to be from Egypt. Thomasius, Salmon, and Sig. Griselini, have en- deavoured to prove it. J\I. Grellman, however, traces it from Hindustan, and the cause of their emigration from the bloody wars of Tiraur Beg in India, in 1408—9.

GYPSUM, selenite, or plaster-stone. The properties of gypsum, according to Cronstedt, are, 1. It is looser and more friable than calcare- ous earth. 2. It does not effervesce with acids, or at most in a very slight degree. 3, It falls into powder in the fire very readily. 4. When burnt, without being made red-hot, its powder readily concretes with water into a mass which soon hardens ; but without any sensible heat be- ing excited in the operation. 5. It is nearly as difficult of fusion as limestone ; and shows almost the same effects upon other bodies with limestone, though sulphuric acid seems to promote the vitri- fication, ˆlagellan, however, says that most of the gypsa, particularly the fibrous, melt in the fire pretty easily by themselves. 6.

When melted with borax it puffs and bubbles very much, and for a long time during the fusion. Magellan says, when a small quantity of gypsum is melted with borax the glass becomes colorless and transparent ; but some sorts of sparry gypsa, melted with borax, yield a fine yellow transpa- rent glass, resembling the topaz; but, if too much of the gypsum is used in proportion to the borax, the glass becomes opaque. 7. N\ hen burnt with any inflammable matter, it emits a sulphureous smell, and may thus be decora- pounded, as well as by either of the fixed alka- line salts : in this last method there ought to be five or six times as much salt as gypsum. 8. The residuum shows some signs of iron. The species are, 1. Friable gypseous earth, white, found in Saxony. 2. Indurated gypsum, of a solid texture, or alabaster, the particles of which are not visible. This is sometimes found unsa- turated with vitriolic acid. It is easily cut, and takes a dull polish. It is of several kinds. Fa- broni tells us, that various fine alabasters are met with in Italy : twenty-four quarries of them, each of a different color, being worked out at Volterra. 3. Gypsum of a scaly texture, or common plan- ter of Paris. See Plastek. 4. Fibrous gypsum, or plaster-stone, has two varieties, viz. vvitli coarse or with fine fibres. It is white. 5. Sele- nites, or spar-like gypsum, by some also called glacies manae, and confounded with the clear and transparent mica. It is of two kinds : clear and transparent, or yellowish and opaque ; and abounds every where. 6. Crystallised gypsum, or gypseous drusen. This is found composed of wedge-shaped,. and sometimes of capillary crys- tals; sometimes white and sometimes yellowish. 7. Stalactitical gypsum is of many different forms and colors. In large pieces it comiuonly

varies between while and yellow, and likewise m its transparency. It is used as alabaster in se- veral works. England abounds with gypseous substances. There are plenty in Derby, Notting- ham, and Somerset shires, so fine as to take a polish like alabaster. A very fine semipellucid alabaster is found in Derbyshire. Fine fibrous ‘ talcs are also found in many other places. Very fine gypseous drusen is found in Sheppey Isle, and some exceedingly beautiful, large, and clear as crj’stal, in the salt-works at Nantwich in Cheshire. The selenites rhomboidalis abounds in England, particularly in Shotoverhill, in Ox- ford, though rare in other counties. Sheppey affords spar-like gypsa, of a fibrous nature, and accreting like the radiations of a star on the septaria, and thence called stella septarii. GYRA’TION, n.s.~\ Lat. iryrMS, gyro; Fr. Gyre, n.s. (girer. The act of turn-

Gyrt.d, adj. ling any thing about:

Gyre’ful, adj. J gyre is a circle described by any thing moving in an orbit : gyreful is changeable.

But, evermore this is the manere. To reve a wight that moste is to him dere

To preve in that thy gierful violence Thus am I lost, thee helpeth no defence.

Chaucer. Troilxu and Cresxide. Does the wild haggard tower into the sky. And to the south by thy direction fly ? Or eagle in her gyres the clouds embrace ?

Sandi/s. Ne thenceforth his approved skill to ward. Or strike, or hurlen round in warlike gyre.

Remembered he ; ne cared for his safe guard. But rudely raged. Speuser.

Hamlet with his doublet all unbraced. No hat upon his head his stockings loose tngartered, and down gyred to his ankle.

Sfiakspeare. Which from their proper orbs not go Whether they gyre swift or slow. Drayt. Eel. 2. Quick and more quick he spins in giddy gyres. Then falls, and in much foam his soul expires.

Dryderk GYRINUS, in zoology, a genus of insects of the coleoptera order. The antennae are cylin- drical, stiff, and shorter than the head : the eyes are four, two on the upper, and two on the under part of the head. See Entomology. G. natator, the common water flea, is one-third of an inch long; of a bright black color; the feet yellow, flat, and large. It runs with great cele- rity in circles on the surface of the water, and is very difficult to catch.

G YRON, in heraldry, an ordinary oftwo straight lines, issuing from divers parts of the esutcheon, and meeting in the Fesse point. ,

GYVES, 7/.S. (Welsh, gevi/n. Fetters; Gyve, v. a. S chains for the legs : to fetter, shackle, or ensnare.

The poor prisoners, boldly starling up, break off their cliaius and gyves. hnuUes.

With as iilllc a web as this, will I ensnare as great a fly as Cassio. Ay, smile upon her, do. I will gyre thee in thine own courtship. ShaLtpeare.

The villains march wide betwixt the legs, as if they liad gyvei on. Id.

And, knowing this, should I yet stay. Like such as blow away their lives. And never will redeem a day, Kuumoured of their golden gyici 1 Ben Jontoit

H

H.

H is in English, as in other lanˆages, a note of aspiration,' sounded only by a strong emis- sion of the breath, without any conformation of the organs of speech, and is therefore by many grammarians accounted no letter. The h in English is scarcely ever mute at the beginning of a word, or where it immediately precedes a vowel; as house, behaviour; where it is followed by a consonant it has no sound, according to the present pronunciation ; but anciently it made the syllable guttural.

'The strong emission of the breath, however,' as Mr. Todd observes, ' is usually withheld from heir, herb, hostler, honest, honor, humor, and by some from humble.'

It is pronounced by a strong expiration of the breath between the lips, closing, as it were, by a gentle motion of the lower jaw to the upper, and the tongue nearly approaching the palate. It seems to be agreed, that our H, which is the same with that of the Romans, derived its figure from the Hebrew n. The Phoenicians, and most ancient Greeks and Romans, used the same figure with our H, which in the series of all these alphabets keeps its primitive place, being the eighth letter ; though the 9 afterwards occu- pied its place in the Greek alphabet, and its form was changed to X ; while its former figure, H, was used for the seventh letter. Eta, or long e. But in the beginning this H was only used for an aspiration, wherefore they wrote HEPOAO instead of tjoojcov, HOAOI instead of oˆw, HEKA- TON, instead of iKarov, centum; from whence it comes, that the II formerly denoted 100. il was also joined with weak consonants instead of an aspiration ; they 'using to write THEOS instead of Qeoc, and the like.

Anciently the h was put for ch ; thus Chlo- dovaus was formed Hludovicus, as it is read on all the coins of the ninth and tenth centuries ; and it was on this account that they wrote Hludovicus with an h. In course of time, the sound of the h being much weakened, or en- tirely suppressed, tlie h was dropt, and the word was written Ludovicus. In like manner we read Hlotai? e, Hlovis, kc. H subjoined to c some- times gives it the sound of sli, as in Charlotte ; but more frequently that of tsh, as in charity, chitchat, church. Sec. ; and not seldom that of k, as in character, Achilles, &c. ; though the latter and all other Greek proper names ought rather to have the guttural sound, agreeably to their original pronunciation. H subjoined to pand t, also alters the sound of these letters ; giving the former the sound o(f, as in philosophi/, &c. and the latter that of the Greek 9, as in theology, truth,

Sec. ; and in some English words, as the, that, these, &c., a still harder sound. As an abbreviation, 11 was used by the ancients to de- note homo, htrres, liora, &c. Thus H. B. stood for hceres honorum , and H. S. corruptly for LLS. sesterce; and HA. for Hadrianus. As a nu- meral, H denotes 200 ; and with a dash over it, H, 200,000.

HA, interj. Lat. ha. An expression of won- der, surprise, or alarm; a sudden question; an expression of laughter : it is used with redupbl- cation.

He saith among the trumpets, ha, ha, and he smeli- eth the battle afar off. Job, xxxix. 25.

And out at the dores sterten they anon ;

And saw the fox toward the wode is gon,

And bare upon his bark the cok away.

They crieden out, harow and wala wa !

A ha the fox and after him they ran.

Chancer. The Nimnes Precstes Tale.

You shall look fairer ere I give or hazard : What says the golden chest ? ha ! let nie see.

Shakspeare.

Ha, ha, 'tis what so long I wished and vowed ; Our plots and delusions Have wrought such confusions. That the monarch's a slave to the crown. Dryden.

Ha ! what art thou ! thou horrid headless trunk . It is my Hastings ! Rowe's Jane Shore.

HAAK, n. s. A fish.

HAARLEM. See Harlem.

HABAKKUK, jSipDH, Heb. i.e. a wrestler? one of the twelve minor prophets, whose pro- phecies are taken into the canon of the Old Testament. There is no precise time mentioned in Scripture when he lived; but, from his pre- dicting the destruction of Jerusalem by the Chaldeans, it is evident that he prophesied be- fore Zedekiah, probably about the time of JNIa- nasseh. He is reported to have been the author of several prophecies which are not extant: but all that are indisputably his are contained in

three chapters.

Habeas Corpus is the great remedy in English law in cases of false imprisonment. See Imprisonment.

HABERDA'SHER, n. s. According to Min- sheu from Germ, habtihr dass, have you this; the expression of a shopkeeper offering his wares to sale. Mr. Thomson says, from Teut. haabver- tauscher, from haab, have. One who sells small wares; a pedlar.

Because these cunning men are like haberdashera of small wares, it is not amiss to set forth their shop.

Bacon,

A haberdasher, who was the oracle of the coffee- house, declared his opinion. Addison.

HABERE Facias Possessionem. A judicial writ that lies where one hath recovered a term for years in action of ejectione firmae, to put him into possession ; and one may have a new writ, if a former be not well executed. If the sheriff deliver possession of more than is contained in the writ of habere facias possessionem, an action on the case will lie against him, or an assize for the lands. The sheriff cannot return upon this writ that another is tenant of the land by right, but must execute the writ, for that will not come in issue between the demandant and him.

Habere Facias Seisinam. A writ directed to the sheriff, to give seisin of a freehold estate recovered in the king's courts, by ejectione finnne, or other action. The sheriff may raise

the posse comitatus in his assistance, to execute these writs ; and may break open the doors to deliver possession and seisin thereof; but he ought to signify the cause of his coming, and request that the doors may be opened. This writ also issues sometimes out of the records of a fine, to give the cognisee seisin of the land whereof the fine is levied. There is also a writ called habere facias seisinam, ubi rex habuit annum, diem, et vastum ; for the delivery of lands to the lord of the fee, after the king hath had the year, day, and waste in the lands of a person convicted of felony.

HABER'GEON, n. s. Fr. haubergeon; low Lat. Iialbergium. Armour to cover tiie neck and breast; breast-plate; neck-piece; gorget. And over that an habergeon For perciag of liis herte.

Chaucer. Rime of Sire Thopas. With him ther wenten knightes many on ; — • Some wol ben armed in an habergeon. And in a brest plate and in a gipon.

Id. The Knightes Talc. — She resolved, unweeting to her syre, Advent'rous knighthood on herselfe to don ; And counseld with her nourse hnr maides attyrc To turnfi into a massy habergeon ; And bade her all thinges put in readiness anon.

Spenser. Faerie Queenc. And halbert some, and some a habergion ; So every one in arms was quickly dight. Fairfax. Then put on all thy gorgeous arms, thy helmet And brigandine of brass, thy broad habergeon.

Milton. Samson Agonist es. The shot let fly, and grazing Upon his shoulder, in the passing. Lodged in Magnano's brass habergeon.

Hudibras.

Habergeon, Habergetum. From Fr. Iiaut, high, and berg, armour, was a coat of mail ; an ancient piece of defensive armour, in form of a coat, descending from the neck to the middle, and formed of little iron rings or meshes, linked into each other.

IIABERT, a French family of talent of the se- venteenth century : Germain Habert was abbot of Notre Dame de Cerisi, and one of the first mem- bers of the French Academy, lie died in 16.53, leaving several poems, the best of which is en- titled Metamorphose des Yeux d'Iris, changes en Astres, 1639, 8vo. He also wrote the J.ife of Cardinal de BeruUe, 1646, 4to, and paraphrased some of the Psalms. — Philip Habert, his bro- ther, killed at the siege of Emmerich, in 1637, M'as also one of the first members of the Aca- demy, and wrote The Temple of Death, a poem. There was also a celebrated doctor of the Sor- bonne, Isaac Habert, who distinguished himself by several controversial works on Gnice, in con- futation of Jansenius, and by iiis Latin poetry. lie was bishop of V'abres in 164,5, and died in 1668. — Lewis Habert, another French ecclesias- tic of note, and a doctor of the Sorbonne, was born in 1637, and died in 1718. He was author of a Complete Body of Divinity, in Latin, 7 vols. 12mo, 1700.

HABICOT (Nicholas), a celebrated French surgeon, born at Bonny, in Gatinois, who ac- quired great reputation by his skill, and by his writings. He wroi? a Treatise on the Plague,

and several other curious works

1624.

HABILTMENT, n. s. -] Habil'itate,d.o. &«(//".

HaBIl'iTATION, 71. s. HaBIl'iTY, 71. s.

Habit, ti. s. & v. a. Hab'itable, adj. Hab'itableness, n. s.

Hab'iTANCE, 71. s.

Hab'itant, n. s. Habita'tion, n. s.

Hab'iTATOR, 71. s.

•

Habit'ual, adj. Habit'ually, adv. Habit'ltate, v. a Hab'jtude, «

He died in

French, habiliment, habilitcr, habilite, ha- bitable, habiteur, ha- bitude ; Lat. habitus, habitabili^ habitatio, hubitudo. A habit is the state of having, J > or being, and appli- cable to appearance, as dress, clothes, gar- ments, which are habiliments; to mind, as qualifications ; fa- culty or ability ac- J quired by frequently

doing the same thing, as habitude : to the capa^ city of being dwelt in, as habitable : a habita- tion is a place of abode ; habitator is an inhabi- tant of such dwelling : habitual is customary ; established by repetition ; used both in a good and evil sense.

And eke remembre thine habilitee May not compare with hire ; this wel thou wot,

Chaucer. The Court uf Love. And, eke, in eche of the pinacles Weren sondrie habitacles. In whiche stodcn, all withouten Full (the castle all abouten) Of all maner of minstrales And jestours, that tellen tales.

Id. House of Fame, He was out cast of mannes compagnie ; With asses was his habitation.

Chaucer. The Monltes Tale, In many places nightingales. And alpes, and finches, and wodewalcs. That in hir sweto song deliten In thilke places as thei habiten.

Id. Romaunt of the Rose. Where art thou, man, if man at all thou art. That here in desart hast thine habilance.

And these rich lieaps of wealth do'st hide apart From the world's eye, and from her right usance?

Spenser's Faerie Queene, He the fairest Una found. Strange lady, in so strange habiliment. Teaching the satyres. /rf.

Wisdom, to the end she might save many, built her house of that nature which is common unto all ; she made not this or that man her habitation, but dwelt in us. Hooker.

My riches are these poor habiliments. Of which if you should here disfuruish me, Vou take the sum and substance that I have.

Shaltsjjcare. I shifted Into a madman's rags, t' assume a semblance 'I'lio

very dogs disdained; and in this habit Met I my father. Id. King Lear.

If you have any justice, any pity ; If ye be any thing but churchmen's habits.

Shaksfieare. Ho hath a better bad hnbit of frowning than ilie count Palatine. Id.

Present yourself and your fair princess Before Leontes :

She shall be habited as it becomes The partner of your bed. Id. Wintcr't Tale.

HAB

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HAB

The thint^s are but habilitations towards arms ; aud what is habilitatiun, without intention and act ?

Bacon. Divers persons in the house of commons were at- tainted, and thereliy not legal, nor habilitate to serve in parliament, being disabled in the highest degree.

Id. By means of our solitary situation, we know well most part of the habitable world, and are ourselves unknown. Id.

The torrid zone is now found habitable.

Cowley. That was her torrid and inflaming time ; This is her habitable tropique clime. Donne.

Palaces, For want of habitation and repair. Dissolve to heaps of ruins, Denham.

Having called to his memory Sir George Villiers, and the clothes he used to wear, in which at that, time he seemed to be habited, he thought him to be that person. Clarendon.

Amplitude almost immense, with stars Numerous, and every star perhaps a world Of destined habitation. Milton.

God oft descends to visit men Unseen, and through their habitations walks To mark their doings. Id.

Sin, there in power before Once actual ; now in body, and to dwell Habitual habitant. Id.

Hell at last Yawning received them whole, and on them closed. Hell their fit habitation fraught with fire Unquenchable, the house of woe and pain. Id.

Not to earth are those bright luminaries Officious ; but to the earth's habitant. Id.

The will of God is like a streight unalterable rule > but ihe various comportments of the creature, either thwarting this rule, or holding conformity to it, oc- casion several habitudes of this rule unto it. Hale.

The sun's presence is more continued unto the northern inhabitants ; and the longest day in Cancer is longer unto us than that in Capricorn unto the southern habitators. Browne.

We cannot conclude this complexion of nations from the vicinity or habitude they hold unto the sun.

Id. The cutting of the Equinoctial line decides that controversy of the habitablenest of the torrid zone.

More. Men are first corrupted by bad counsel and com- pany, and next they habituate themselves to their vicious practices. Tillotson.

Both the poets being dressed in the same English habit, story compared with story, judgment may be made betwixt them. Dryden.-

The scenes are old, the habits are the same We wore last year. Id.

It is impossible to gain an exact habitude, without an infinite number of acts and perpetual practice.

Id. Look round the habitable world, how few Know their own good, or knowing it pursue. Id. No civil broils have since his death arose. But faction now by huljit does obey ;

And wars have that respect for his repose, A.S winds for halcyons when they breed at sea. Id.

Mankind is willing to continue in a pleasing error, strengthened by a long habitude. Id.

They habited tiiemselves like those rural deities, and imitated them in their rustick dances. Id.

By length of time The scurf is worn away of each committed crime : No speck is left of their habitual stains ; But the pure ether of the soul vcrnains. Id.

“fis impossible to become an able artist, without making your art habitual to you. Id.

His knowledge in the noblest useful arts.

Was such dead authors could not give ;

But habitudes with those who live. Id.

To write well, one must have frequent habitudes with the best company. Id.

Those ancient problems of the spherical roundness of the earth, tlie being of antipodes, and of the habi- tableness of the torrid zone, are abundantly demon- strated. Ray.

As by the objective part of perfect happiness we understand that which is best and last, and to which all other things are to be referred ; so by the formal part must be understood the best and last habitude of man toward that best object. Norris.

It results from the very nature of things, as they stand in such a certain habitude, or relation to one another. So^^th.

Art is properly an habitual knowledge of certain rules and maxims. Id.

The last fatal step is, by frequent repetition of the sinful act, to continue and persist in it, ‘till at length it settles into a fixed confirmed habit of sin ; which, being that which the apostle calls the finishing of sin, ends certainly in death ; death not only as to merit, but also as to actual infliction. Id.

Habitual evils change not on a sudden

But many days must pass and many sorrows.

Rowe’s Ulysses.

There are among the statues several of Venus, in different habits. Addiion on Italy.

Thy ear, inured to charitable sounds.

And pitying love, must feel the hateful wounds

Of jest obscene, and vulgar ribaldry.

The ill-bred question, and the loud reply.

Brought by long habitude from bad to worse.

Must hear the frequent oath, the direful curse.

Prior.

Rocks and mountains, which in the first ages were high and craggy, and consequently then inconvenient for habitation, were by continual deterration brought to a lower pitch. Woodward.

Internal graces and qualities of mind sanctify our natures, and render us habitually holy, Atterbury

The force of education is so great, that we may mould the minds and manners of the young into what shape we please, and give the impressions of such habits, as shall ever afterwards remain. Id.

Such as live in a rarer air are habituated to the ex- ercise of a greater muscular strength. Arbuthnot. Powers celestial to each other's view

Stand still confest, though distant far they lie.

Or habitants of earth, or sea, or sky. Pope.

The clergy should content themselves with wearing gowns and other habiliments of Irish drapery. Swift. In all the habitudes of life. The friend, the itistress, and the wife. Variety we still pursue. Id.

The clergy are the only set of men who wear a dis- tinct habit from others. Id.

HABINGTON (William), an English poet and historian, was the son of Thomas llabing- ton, esq. He was born in 1605, at Hendlip, in Worcestershire ; and educated at St. Omer's. He died in 1654, and left several MSS. in the hands of his son. His printed works are, 1. Poems under the title of Castura. 2. The Queen of Arragon, a tragi-comedy. 3. Observations upon History. 4. the History of Edward IV. king of England, written in a very florid style, and pub- lished at the desire of Charles I.

Habit is particularly used for the uniform garments of the religious, conformable to the rule and order whereof they make profession : as the habit of St. Benedict, of St. Augustine, &c. In this sense we say absolutely, such a person has taken the habit; meaning he has en- tered upon a noviciate in a certain order. So he is said to quit the habit, when he renounces the order. See Vow. The habits of the several religious are not supposed to have been calcu- lated for singularity or novelty : the founders of the orders, who were at first inhabitants of de- serts and solitudes, gave their monks the habits usual among the country people. Accordingly the primitive habits of St. Anthony, St. Hi- larion, St. Benedict, &c., are described by the ancient writers as consisting chiefly of sheep skins, the common dress of the peasants of that time. The orders established in and about cities and inhabited places took the habit worn by other ecclesiastics at the time of their institu- tion. What makes them differ so much from each other, as well as from the ecclesiastical habit of the present times, is, that they have always kept invariably to the same form ; whereas the ecclesiastics and laics have been changing their mode on every occasion.

HA'BNAB, adv. Hap ne hap, or nap ; as would nould, or ne would : will, nill, or ne will ; that is, let it happen or not. At random ; at the mercy of chance ; without any rule or certainty of effect.

He circles draws and squares. With cyphers, astral characters ; Then looks 'em o'er to understand 'em. Although set down habnab at random.

Hudibras.

HACHA, a town, province, and river of Gra- nada, South America. The province was for- merly of considerable extent, but is now much reduced, being only eight leagues in length from north to south, and four wide east and west. It has the Atlantic Ocean on the north, and Lake Maracaibo on the east. The river, which runs from south to north, was once famous for its pearl fisheries. It enters the Atlantic Ocean in lat. 11° 31′ 30″ N., and at the mouth stands the town of this name.

HACK, V. a. Sax. ˆaccan ; Dut./iacken ; Fr. hacher, from Sax. acaj-e an axe. To cut into small pieces ; to chop ; to cut slightly with frc quent blows ; to mangle with unskilful blows. It bears commonly some notion of contempt or malignity ; to speak with hesitation. It nedeth not you more to tellen , (To maken you to long to dwellcn) Of these iikr yates floriˆhynges ; Ne of coinpaccs, ne karvynges ; Ne the hachyng in masonries. As corbettes and imageries.

Chaucer. Home of Fame. What a slave art thou, to Imck thy sword as thou hast done, and say it was in fight ? S/iaks/>eare.

Richard the Second here was hacked lo death. Id. I'll fight 'till from my bones my flesh be httckt. Id. Disarm them, and let (hem question ; let them keep their limlis whole, and hiek our English. Id.

One flourishing branch of his mo

He put oa that armour, whereof there was no one piece wanting, though hackt in some places, bewraying some fight not long since passed. Sidney.

Burn me, hack me, hew me into pieces.

Dry den. Nqt the hcLckt helmet, nor the dusty field. But purple vests, and flowery garlands please.

Addison. But fate with butchers placed thy priestly stall. Meek modern faith to murder, hack, and mawl.

Pope. Dost not thou know the fate of soldiers ? They're but ambition's tools, to cut a way To her unlawful ends ; and when they're worn. Hacked, hewn with constant service, thown aside To rust in peace and rot in hospitals.

Southern's Loyal Brothers.

Hack, V. w. ^ Welsh, /tacA:«ai;

Hackney, n. j. & v. a. >Teut. hacheneye ; Fr.

Hacquetox, 71. s. yhaquenee; old Fr.

hfiquat. To hackney; to become common; to prostitute : hackney, a hired horse ; a prostitute ; a hireling ; any thing let out for hire : hacqueton, a piece of armour.

His Imkeney, which that was al pomeleegris. So swatte that it was wonder for to see ; It seemed as he had priked miles three.

Chaucer. The Chanunes Yemannes. He didde, next his white lere. Of cloth of lake fin aud clere, Abreche and eke a sherte ; Aud next his sherte, an haketon.

Id. The Rime of Sire Thopas. You may see the very fashion of the Irish horseman in his long hose, riding shoes of costly cordwain, his hacqueton, and his habergeon. Spenser.

He is long hackneyed in the ways of men.

Shakspeare. Light and lewed persons were as easily suborned to make an affidavit for money, as post-horses and hackneys are taken to hire. Bacon.

These notions young students in physick derive from their hackney authors. . Harvey.

Hackberry, a hoop ash (celtis crasifolia) a western tree found in the basin of the Ohio, and beyond the Mississippi, and occurring sometimes on the eastern slope of the Alleghanies, espe- cially in the basins of the Susquehanna and Potomac, in America. It grows to a great heightjbut the thickness of the trunk is not propor- tional. The leaves, which are not unlike tiiose of vhe mulberry, are larger than in the other species of nettle-tree, ovate and acuminate; the small white flowers are succeeded by one-seeded berries, of a black color, and resembling peas in size and shape. The wood, on account of it.s aptitude to decay, is little used, but is said to make verv fine charcoal.

HACKET (John), bishop of Litchfield and Coventry, was born in 1592. In 1623 he was made chaplain to James L and prebendary of Lincoln, and obtained several other promotions, but lost them during the commotions of 1645. He then lived retired at Cheam until the Resto- ration, when he recovered his preferments. In 1661 Charles II. made him bishop of Litchfield and Coventry. Finding the cathedral almost battered to the ground, he in eight years finished a church superior lo llie former, towards wiiicb ne himself contributed £20,000. He also laid

out £1000 on a prebendal house. He died in 1670. He published, before he entered into orders, a comedy entitled Loyola, which was twice acted before kinˆ James I. After his death was published A Century of his Sermons on several remarkable Subjects, and The«Life of Archbishop Williams, both in folio.

HACK'LE, n. t. k,v.a.ˆ Probably from Hag'gle, v. a. & V. re. >Fr. hacher, or from Hag'gler, n. s. J hack, to cut. Hac-

kle is raw silk, or any flimsy substance : to hackle, to dress flax : haggle, to cut, chop, or mangle: haggler, one that cuts; and, figuratively, one that is tedious in making a bargain : these are corruptions from hackle.

Suffolk first died, and York all haggled o'er. Comes to him where in gore he lay insteeped.

Shaksjieare.

Take the hackle of a cock or capon's neck, or a plover's top : take off one side of the feather, and then take the hackle silk, gold or silver thread, and make these fast at the bent of the hook. Waltun.

Hackney, in geography, is the name of a very extensive and thickly populated parish, in the vicinity of London, in the hundred of Os- sulton, Middlesex. It comprises several ham- lets, amongst which are Upper and Lower Clap- ton on the north, Dalston, Shacklewell, and Kingsland on the west, and Homerton on the east. The old parish church of St. John's, of which but the tower now remains, was a fine Gothic edifice, built in the reign of Edward IL The new one, a fine modern structure on a larger scale, was begun in 1792, agreeably to an act of parliament ; but the steeple was not erected till 1814, and, being found too light and weak to bear the fine peal of bells belonging to the church, the old tower was left standing, and in it the bells are now rung. In Wells- street is a new and handsome chapel of ease, erected on a piece of ground given by the Rev. Mr. Norris, after the design of Mr. J. Savage. Brooke House, now a receptacle for lunaticsˆ was formerly the seat of the noble family whose name it bears; St. John's palace, an ancient house in Wells-street, now let out in small tene- ments, is believed to have been the residence of the prior of the order of St. John of Jerusalem ; and south of Lea-bridge, in this parish, are the Temple mills, once the property of the knights templars, but now used as lead and corn mills, and to raise water for the supp'y of Clapton and Homerton. At the bottom of Hackney marsh, through which runs the river Lea, have been discovered some remains of an ancient and ex- tensive stone causeway, which appears, from the coins found here, to have been one of the Roman highways through the island. The vicarage is valued at £20, and the rectory valued at £26 is a sinecure. '

Hackney Coaches are said to derive their name from many of the Londoners, in the seven- teenth century, residing at Hackney, and, in con- sequence, often hiring coaches and horses : in time, therefore, hired coaches in general became so called. — These first began regular' y to ply under this name in London in 1625, when they were only twenty in number; and in IGˆˆo they vverc

so much increased, that king Charles I. issued out an order of council to restrain them. In 1637 he allowed fifty hackney coachmen, each of whom might keep twelve horses. In 1652 their number was limited to 200 ; and in 165-4 it was extended do 300. In 1661 400 were licensed, at £5 each

annually. In 1694 700 were allowed, and taxed by the 5 & G of \V. & M. at £4 a- year each. By 9 Anne, c. 23, 800 coaches were allowed in London and Westminster; but by 8 Geo. III., cap. 24, the number was increased to 1000, which are licensed by commissioners, and pay a duty of 5i. per week. They have been more lately increased to 1200. Hackney coachmen refusing to go at, or exacting more than, their limited hire, are subject to a forfeit of from lOi. to £3, which the commissioners have power to determine. Every hackney coach must have check strings, and every coachman plying without them incurs' a penalty of 5s. The drivers must give way to persons of quality and gentlemen's coaches, under the penalty of £5. The duty arising from licenses to hackney coaches and chairs, in London, forms a branch of the king's perpetual revenue, governed by commissioners, and is a public benefit ; as the expense of it is not felt, and its regulations have established a competent jurisdiction, whereby a very refractory race of men are kept in order. As tables of hackney coach fares and regulations may be had at every respectable stationer's it will be needless to give any further account of them.

HACQUET (Balthasar), an eminent natura- list, was born at Conquet, in Brittany, in 1740. He left France while young for Austria, and be- came professor of surgery at the Lyceum of Lay- bach, in Carniola, and perpetual secretary of the Imperial Society of Agriculture and the Arts. In 1788 the emperor of Germany made him pro- fessor of natural history at the University of Lemberg, and member of the council of mines at Vienna. He died in 1815. Besides Travels in the Alps and Carpathian Mountains, and a number of memoirs in periodical works, he was the author of Oryctographia Carniolica, or, the Physical Geography of Carniola, Istria, and parts of the neigfibouring countries, Leipsic, 1778—1789, 4 vols. 4to.

HAD. The pret. and part. pass, of Have, which see. I hud better, you had better, &c., means the same as, it ivould be better for me or you ; or it would be more eligible ; it is always used potentially, not indicatively : nor is have ever used to that import. We say likewise, it had been better or loorse.

For, certes our Lord Jesu Crist hath spared ms so beuignely in our follies ; that if he ne had pitee on mannes soule, a sory song might we alia sing.

Chaucer. The Persones Tale, I had rather be a country servant maid.

Than a great queen with this condition.

Shakspeare. Had we not better leave this Utica,

To arm Numidia in our cause ? Addison's Cato.

HADDINGTON, an ancient borough in a parish of the same name in East Lothian which joins with Jedburgh, Dunbar, Lauder, and North Berwick, in sending a member to parliament. It consists of four streets, which intersect each

other nearly at right angles. It is governed by a provost, three bailies, dean of guild, treasurer, twt;Ive councillors, and seven deacons. It was the birth-place of J. Knox, the celebrated re- former. Before the Reformation it had an abbey, now in rums, founded in 1178 by Ada, mother of king Malcolm IV., and William I. of Scotland. It has a manufacture of coarse woollens, two fairs, and a weekly market, the greatest in Scot- land for grain. It is seventeen miles east of Edinburgh.

HAD'DOCK, n.j. Yv. hadot. A sea fis-h of the cod kind, but small.

The coast is plentifully stored with pilchards, herrings, and haddocks. Carcw.

Haddock. See Gadtis.

HADDON (Dr. Walter) was born in 1516. He distinguished himself by writing a fine Latin style, which he acquired by a constant study of Cicero. He was a strenuous promoter of the Re- formation under Edward VI., and succeeded bishop Gardiner in the mastership of Trinity Hall, Cambridge. He concealed himself in .Mary's reign ; but actjuired the favor of queen Elizabeth, who sent him one of the three agents to Bruges in 1566, to restore commerce between England and the Netherlands. He was also engaged with Sir John Cheke in drawing up in Latin The Code of Ecclesiastical Law, published in 1571 by the learned John Fox, under the title of Re- formation legura Ecclesiasticarum ; his other works are published under the title of Lucubra- tions. He died in 1572.

HADELN, a fertile district of Hanover, at the mouth of the Elbe, forming a part of the pro- vince of Bremen. It has on its confines the Elbe, and the territory of Hamburgh, and has an area of about 126 square miles. Population 16,000.

HADERSLEBEN, a district of Danish Sles- wick, 680 square miles in extent, and contain- ing 35,000 inhabitants. The number of parishes is sixty.

Hadersleben, a tovm of the above district, situated on a bay of the Little

Belt. Population 3200. It has a harbour for small vessels, and some trade ; but the principal means of its sup- port is the passage to Funen. Twenty-four miles east of Ribe

HADES, sometimes signifies the invisible regions of the dead, sometimes the place of the damned, and sometimes the grave. In Greek autiiors it signifies the regions of the dead. See Hell.

HADLEY, a town of Suffolk, seated on the Preston. It has a handsome church, a chapel of ease, and a Presbyterian meeting-house. Large quantities of yarn are spun for the Norwich manufacture. On the top of the steeple, which affords a fine view of Essex, there is an iron pot originally placed there as a beacon.

HADRAMAl T, a province of Arabia, occu- pying tile southern coast upon tlie Indian Ocean, from Yemen to Onimon. Many of the hilly districts are fertile, and this, alon'.: witli the])rovince of Yemen, formed the Arabia Felix of the ancients. Since trade has flowed in other directions, Iladramaut has fallen into a state of great decline. It continues, however, to export

frankincense, gum-arabic, dragon's blood, myrrh, and aloes (from Socotora). It has also a few manufactures of coarse cloths, carpets, and the knives called Jambea. The maritime trade is chiefly carried on by foreigners, tne Arabs of Mascat. Both the coast and the interior are divided into a number of independent states.

H/EMAGOGOS, among physicians, a com- pound medicine, consisting of fetid and aromatic simples, mixed with black hellebore, and pre- scribed in order to promote the menstrua and haEmorrhoidal fluxes ; as also to bring away the lochia.

H.EMANTHUS, the blood-flower, a genus of the monogynia order, and hexandria class of plants: nat. order ninth, spathacear. Involu- crura hexaphyllous and multiflorous: cor. sex- partite superior : berry trilocular. Species four- teen ; the principal are,

H. coccineus, witii plain tongue-shaped leaves, rises about a foot high, with a stalk supporting a cluster of bright red tubulous flowers. It has a large bulbous root, from which in autumn come out two broad flat leaves of a fleshy consistence, shaped like a tongue, which turn backward on each side, and spread on the ground, so that they ha\e a strange appearance all the winter In the spring these decay; so that from May to the beginning of August they are destitute of leaves. The flowers are produced in the autumn, just before the leaves come out.

H. puniceus, with large spear-shaped waved leaves, grows about a foot

high, and has flow- ers of a yellowish red color. These are suceed- ed by berries, which are of a beautiful red color when ripe. This species should be constantly kept in a dry stove. These plants are natives of the Cape of Good Hope, and do not propagate very fast in Europe, their roots seldom putting forth ntany off-sets. The best method of manag- ing them is to have a bed of good earth in a bricked pit, where they may be covered with glasses, and in hard frost with mats and straw. The earth in the frame should be two feet deep, and the frame should rise two feet above the sur- face, to allow height for the flower-stems to grow. The roots should be planted nine or ten inches asunder ; and in winter, if they are protected from frost, and not suffered to have too much wet, but in mild weather exposed to the air, they will flower every year, and the flowers will be much stronger than with any other man- agemenL

H.EMATEMESIS, in medicine, from ai/xa, blood, and ifiioj, I vomit, signifies a vomiting of blood. The causes of haematemesis have been the subject of much speculation. The time of life in which it principally occurs, and the circumstance of being peculiar to the ft- male sex, induced phy- sicians to imagine that it was intimately con- nected with the menstrual flux, the suppression of which has generally been considered as the sole cause of the disease ; it has been said to be a ha;morrhage vicarious of the menses. Dr. Cul- len, after stating that a plethora in the vessels o' the stomach, where there is a general plethoric state of the habit, although it might be supposed to give rise to hxmatemesis, is in fact not found

by experience to do so ; and that such a ple- thoric state of the system is probably induced by the suppression of the menses; is at length com- pelled to admit that some particular circum- stances of the stomach itself must be supposed to exist which ' determine an afflux of blood lo that organ, and may therefore occur without any considerable or dangerous plethora prevailing in the system.' The peculiar circum.stances, in this instance, he supposes to be the connexion and consent which we know to subsist between the uterus and- the whole of the alimentary canal, and especially that principal part of it, the stomach.

The usual practice adopted for the cure of hcematemesis consists in the use of refrigerant, or cooling medicines, as they have been called, such as tile neutral salts ; to which some have added the use of spermaceti and oleaginous mat- ters. If the disease, notwithstanding the exhibi- tion of these medicines, continued for sometime, then powerful astringents and sedatives, such as alum, the tincture of muriated iron, digitalis, &c., were

resorted to, with the occasional interposition of a gentle laxative, such as the castor oil.

The experience of Dr. James Hamilton, in the Royal Infirmary at Edinburgh, led him to con- nect haematemesis with a constipated state of the alimentary canal, and therefore to attempt the cure of the disease by the exhibition of cathar- tics. After having adopted this mode of treat- ment during a period of ten years. Dr. Hamilton thus states his opinion of its efficacy. ‘ I have followed the practice, which this case suggested, in the instances of the ailment which I have since met with ; and my success has been so uniform, that I now lay it down as a certain position, that the proper exhibition of purgative medicines affords sure and effectual means of removing hjematemesis.’ The medicines which Dr. Hamil- ton employed with this view were various ; com- binations of calomel and jalap, aloetic pills, neutral salts, &c., occasionally aided by the use of injections.

Whether we may suppose the leaded bowels to impede the hepatic and abdominal circulation, and thus to occasion a venous plethora in the stomach and intestines; or whether the languid circulation in these parts, and the slow action of the bowels, may be alike the consequence of the general languor of the system ; or whetlier any other hypothesis be resorted to, the value of the practical fact is neither dimniished nor aug- mented.

Having discussed the ordinary form of haemate- mesis at some length, we have only a few words to add relative to some other modifications of the disease, which depend upon more serious disorder of the stomach itself, of other organs, or of the system at large. Success in the cure of these varieties of bloody vomiting is doubtful in the extreme, and very difficult to be attained ; for the constitution itself is undermined in these cases, by acute disease, or by previous irregulari- ties and intemperance, in addition to the local mischief.

The organic derangements of the stomach, which are accompanied by vomiting of blood, are those arising from wounds or other mechani-

cal injury to its structure, which in general are speedily fatal. These are included in the second species of Sauvages Haematemesis traumatica; to which may be added the ninth, or H. chole- rica, as far as regards its origin from corrosive poison swallowed ; and the fourth, or H. ab liy- rudine, in which the internal coat of the stomach has been wounded by a leech, swallowed in drinking ditch water. In cancer and scirrhus of the stomach, a blackish matter, resembling the grounds of coffee, is commonly ejected by vomiting; but, as this is not in a fluid state, it can scarcely be denominated haematemesis.

Morbid enlargements of the neighbouring vis- cera, the spleen, pancreas, and liver, aneurism of the aorta, and compression of that artery, have all been assigned as occasional causes of haemate- mesis. In the records of physic, Dr. CuUen ob- serves, there are many instances of vomitings of blood, which were accompanied with a tumefied spleen, which had compressed the vas breve, and thereby prevented the return of venous blood from the stomach. It is also possible that an obstruction of the liver, resisting the free motion of the blood in the vena porta, may sometimes interrupt the free return of the venous blood from the vessels of the stomach, and thereby oc- casion a vomiting of blood ; but the instances of this are neither so frequent, nor so clearly ex- plained, as those of the former case. In the morbus niger of authors, and the malaena of Sau- vages, the black and grumous blood is sometimes thrown out by vomiting, as well as discharged downwards, and is considered as originating in a venous plethora in the intestinal canal, connected with obstructed viscera. This forms the twelfth species of Sauvages, or H. atra.

*There are two or three conditions of the con- stitution in which haematemesis is liable to occur, and in which it is to be deemed a hopeless symp- tom. The first of these is the last stage of acute fevers, in which spontaneous haemorrhage takes place from different parts of the body, and is usually considered as the most decided symptom of the malignancy and putrescency of the disease. In typhus, scarlet-fever, small-pox, &c., this sort of haemorrhage occasionally closes the scene. Hence the aphorism of Hippocratus, * qui san- guinem vomunt, si quidem sine febre, salutare ; si vero cum febre, malum.' The other constitu- tional condition is that which is found in scurvy, and in the purpura haemorrhagica, haemorrhaea petechialis, or purples, as the disease has been variously denominated. In the highest degree of these maladies, blood flows from every part of the body, internal and external, where the cuti- cle or investing membrane is delicate and thin, and haemorrhage from the stomach is one form of the discharge.*

H/EMATOCELE, in surgerj', denotes a swell- ing of the scrotum, or of the spermatic cord, caused by blood. The term is derived from the Greek ai/xa, blood, and kjjXjj, a tumor.

HiEMATYTES, the blood-stone, a hard mi- neral substance, red, black, or purple, but the powder of which is always red. It is found in masses, spherical, semi-spherical, pyramidal, or cellular, i. e. like a honeycomb. It contains a large quantity of iron : 40 lbs. of this metal have

been extracted from a quintal of stone ; but tlie iron is of such a bad quality, that tliis ore is not commonly smelted. The great hardness of haematites renders it fit for burnishing metals.

HrEMATOPUS, the sea pye, in ornithology, a genus belonging to the order of grallae. The beak is compressed, witlxan equal wedge-shaped point; the nostrils are linear; and the feet hAve liiree toes without nails. There is but one species, VIZ. the

II. ostralegus, or oyster-catcher, a native of Europe and America. It feeds upon shell-fish near the sea-shore, particularly oysters and lim- pets. On observing an oyster, whicli gapes wide enough tor she insertion of its bill, it thrusts it in and takeˆ out the inhabitant : it will also force the limpets from their adhesion to the rocks with sufficient ease. It also feeds on marine insects and worms. With us these birds are often seen in considerable flocks in winter: in summer they are met with only in pairs, thougli chiefiy near the sea or salt rivers. The females lay four or five eggs, on the bare ground, on the sliore, above high-water mark ; they are of a greenish gray, blotched with black. The young are said to be hatched in about three weeks. These birds are pretty wild when in flocks; yet they are easily tamed, if taken young.

H/EMATOXYLON, or ILtMATOXYLVM, log- wood, or Campeachy wood ; a genus of the mo- nogynia order, and decandria class of plants, natural order thirty-third, lomentaceae : cal. quinquepartite : petals five : caps, lanceolated, unilocular, and bivalved : the valves navicular, or keeled like a boat. Of this genus there is only one species, viz.

11. Campechianum. It grows naturally in the bay of Campeachy at Honduras, and other parts of the Spanish West Indies, where it rises from sixteen to twenty-four feet high. The stems are generally crooked, and seldom thicker than a man's thigh. The branches, which come out on each side, are crooked, irregular, and armed with strong thorns, garnished with winged leaves, composed of three pairs of obscure lobes indent- ed at the top. The flov.ers come in a racemus from the wings of the leaves, standing erect, and are of a pale yellowish color, with a purple im- palement. They are succeeded by flat oblong pods, each containing two or three kidney seeds. The trees are cut up into. billets or junks, the bark and white sap of which are chipped off", and the red part, or heart, is sent to England for sale. See Logwood.

Il.'EIVIORRIIAGIA, or IIaˆmoriiuage; from 'aifta, blood, and ptfyvvfii, to burst forth; in medicine, a flux of blood at any part of the body ; arising

either from a rupture of the ves- sels, when too full or too much pressed ; or from an erosion of them, when the blood is too sharp and corrosive Ilaemorrhagia, among the ancient Greeks, was only used for a flux of blood at the nose ; but the moderns extend tlic name to any flux of blood, whether by the nose, mouth, lungs, stomach, intestines, matrix, or any otlier part.

H/I-'.MORRIIOIDAL. an appellation given by anatomists to the arteries and veins going to the intestinum rectum.

HAEMORRHOIDS, or piles, an issue of

blood from the haemorrhoidal vessels. See Medicine and Surgery.

H.EˆIUS, in ancient geography,, a vast ridge, running from Illyricum towards the Euxine, so high as to aff"ord a prospect both of the Euxine and Adriatic Seas.

HAEN (Anthony De), M. D., an eminent German physician of the eighteenth century. He was privy counsellor and physician to the empress ilary-Theresa, queen of Hungary and Bohemia. He was author of many works, of which the principal are his Ratio Medendi, in 17 vols. 8vo., and a Treatise on JNlagic. He died in 1776.

H.ERETICO CoMBURENDO, a writ which anciently lay against a heretic, who, having once been convicted of heresy by his bishop, and having abjured it, afterwards falling into it again, or into some other, was thereupon com- mitted to the secular power. It is thought by some to be as ancient as the common law itself; however, the conviction of heresy by the com- mon law was not in any petty ecclesiastical court, but before the archbishop in a provincial synod, and the delinquent was delivered up to the king to do with him as he pleased : so thai the crown bad a control over the spiritual power. But by 2 Hen. IV., cap. 15, the diocesan aloneˆ without the intervention of a synod, might con- vict of heretical tenets ; and unless the convict abjured his opinions, or if after abjuration he relapsed, the sheriff was bound ex otheio, if re- quired by the bishop, to commit the unhappy victim to the flames, without waiting for the consent of the crown. Tiiis writ was actually executed on two Anabaptists in the 7th of Eliza- beth, and on two Arians in the 9th of James I. Sir Edward Coke was of opinion that this writ did not lie in his time ; but it is now taken away by Stat. 29 Car. II. cap. 9. But this statute does not take away or abridge the jurisdiction of Protestant archbishops or bishops, or any other judges of any ecclesiastical courts, in cases of atheism, blasphemy, heresy, or schism, and other damnable doctrines and opinions; but they may prove and punish the same according to his majesty's ecclesiastical laws, by

*excommunica- tion, deprivation, degradation, and other ecclesi- * astical censures not extending to death, in such sort, and no other, as they might have done be- fore the making of this act. See Heresy.*

HAERLEM. See Harlem.

Haerlem Meer, a large lake of the Batavian republic, in the department of Amstel, between Haerlem, Amsterdam, and Leyden ; navigable by boats.

Haf, an extensive bay or gulf of Pomerania, formed by the Oder, and separated from the Baltic by the islands of Usedom and Wallin. It is divided into the Great and Little Haf. Its length is thirty-six miles, and its breadth varies from one to nine miles. This is a common name on this coast for a gulf or bay.

1IAPE2 (Khodja Schemseddin Mohammed), a popular Persian poet, flourished in the four- teenth century, and chiefly resided at Schiraz. His poetry consists of odes, mingling conviviality with love and sentiment. lie declined the invi- tation of the sultan Ahmed to visit Bagdad.

**Tvvo affectionate friends,' he said, 'two glasses of old wine, a tranqu;! indolence, a book, and a shady grove, are blessings which I would not sacrifice for all the happiness of this world or the next.' He died at Schiraz, where a monu- ment was erected for him, which was overturned by an earthquake in October, 1825. The date of his death has been d iffereutly stated ; but it may be fixed in 1389. Sir William Jones gave the pub- lic two of his odes in an English dress, which are extremely beautiful. We may also notice Noti's Select Odes of Hafez, translated into English verse, with the original text, 1787, 4to. ; and Hindley's Persian Lyrics, from the Divan — I — Hafez, with Paraphrases in verse and prose,' 1800, 4to.*

HAFT, 11. s. k v.a. Sax. jiaept ; Dutch, heft ; from to have, or hold. A handle ; that part of any instrument that is taken into the hand. To haft is to set in a handle as the blade of a knife. The knyf I know wel iknowe :

That wele I wool there is noon like to seek al Cristen

londes For three prcciouse stoneys been within the haft Perfitlick ycouchit, and sotillick by craft Endendit in the haft and that right coriously A saphir and a salidone, and a rich ruby.

Chaucer. The Merchantes Second Tale.

This brandished dagger I'll bury to the haft in her fair breast. Dryden. These extremities of the joints are the hafts and handles of the members. Id. Dufresnoy.

A needle is a simple body, being only made of steel ; but a sword is a compound, because its haft or handle is made of materials different from the blade.

Waits.

HAG, n. 5. & V. a. Hag'gard, adj.

Saxon, fiseˆerrˆ, a goblin ; Dut. heckle, a Hag'gard, n. s. & adj. V witch ; Ger. hager. A Hag'gardly, adv. i witch ; fury ; enchant- Hag'gish, flrf/". ˆress; or an ugly old

woman : haggard signifies wild ; irreclaimable ; thin; deformed with passion; lean; rugged ; or, perhaps, ugly. A haggard is any thing untame- able ; a species of hawk : to hag is to torment, or harass with terror.

Does the wild haggard tower into the sky. And to the south by thy direction fly ? Sandys.

As haggard hawk, presuming to contend With hardy fowl above his able might.

His weary pounces all in vain doth spend. To truss the prey too heavy for his flight.

Faerie Que«ne. I will be married to a wealthy widow. Ere three days pass, - which has as long loved me As I have loved this proud disdainful haggard.

Shaksppare. Out of my door, you witch ! you hag, you baggage, you polecat, you runnion ! Id.

She's too disdainful ; I know her spirits arc as coy and wild. As haggard as the rock. Id.

But on us both did haggish age steal on And wore us out of act. Id.

Thus spoke the impatient prince, and made a pause : His foul hags raised their heads, and clapt their hands ;

And all the power of hell, in full applause. Flourished their snakes, and tost their flaming brands. Crashaw.*

That makes them in the dark see visions. And hag themselves with apparitions. Hudibras. I enlarge my discourse to the observations of the aires, the brancher, the ramish hawk, and the haggard. ˆ Walton.

I spied a withered hag, with age grown double. Picking dry sticks, and mumbling to herself.

Olway's Orphan. Such affectations may become the young ; But thou, old hag, of threescore years and three. Is shewing of thy parts in Greek for thee ? Dryden.

For her the rich Arabia sweats her gum ; And precious oils from distant Indies come. How haggardly soe'er she looks at home. Id,

Fearful besides of what in fight had passed. His hands and haggard eyes to heaven he cast. Id.

A hagged carrion of a wolf, and a jolly sort of dog, with good flesh upon's back, fell into company together. L'Estrange.

How are superstitious men hagged out of their wits with the fancy of omens, tales, and visions. Id.

Where are the conscious loiks, the face now pale. Now flushing red, the downcast hagard eyes. Or fixt on earth, or slowly raised ! Smith.

Beneath the gloomy covers of an yew. In a dark grot, the baleful haggard lay. Breathing black vengeance, and infecting da_'

' Garth.] HAGAR, Heb. ˆ3n, i. e. a stranger, a native of Egypt, the servant of Sarah, concubine of Abraham, mother of Ishmael, and ancestor of the Arabians. Her history, and the repeated divine interpositions for the preservation of her and her son, are recorded in Gen. xvi. and xxi. HAGARENES, or Hagarites, a branch or tribe of tlie descendants of Ishmael, so named from his mother. Some make the name synony- mous with Ishmaelites, Arabians, and Saracens; but Asaph, in Psalm Ixxxiii, ver. 6, mentions them as distinct from the other Ishmaelites. They dwelt in Arabia Felix, according to Pliny. Strabo joins them with the Nabathteans, and Chaylotaeans, whose habitation was rather in Arabia Deserta. Others think their capital was Petra, or Agra, and, if so, they dwelt in Arabia Petraea. The Reubenites, in the days of Saul, made war with the Hagarites, and became mas- ters of their country east of Gilead. This there- fore was the true country of the Hagarenes. In the reign of Jeroboam II. 44,760 Israelites de- feated them, and took 100,000 prisoners, with immense booty (1 Chron. v. 10, 19—21). When Trajan came into Arabia he besieged the capital of the Hagarenes, but could not take it. The Hagarenes valued

themselves upon their wisdom. See Baruch, iii. 23.

HAGEDORN (Frederick De), a celebrated German poet, born at Hamburg, where his father was resident for Frederick IV. king of Denmark, in 1708. He finished his studies at Jena; and, in 1728, published a number of poetical pieces in Germany, which were well re- ceived. He afterwards came to England, and. at his return, was made secretary to the English Hamburgh Company. In 1738 he published his Fables and Tales, the first German collection of the kind. He afterwards published Moral Poems, Epigrams, and five books of Songs;

which of all his poetical pieces are most ei- teemed. He died in 1754.

HAGGAI, Heb. 'JH, i. e. pleasant, the tenth of the minor prophets, was born, in all proba- bility, at Babylon, A. M. 3457, whence he re- turned with Zerubbabel. By command from God (Ezra v. 1, 2, &c.) he exhorted the Jews, after their return from the captivity, to finish the rebuilding of the temple, which they had inter- mitted for fourteen years. To encourage them, he assured them that the glory of this latter house should be greater than the glory of the former; which was accordingly fulfilled, when Christ honored it with his presence ; for, with respect to the building, the latter was nothing in comparison of the former. The Jews say that he died in the last year of the reign of Darius, at the same time with the prophets Zechariah and Malachi. Epiphanius says, he was buried at Jerusalem with the priests. The Greeks keep his festival on the 16th of December, and the Latins on the 4th of July.

HA'GGESS n.s. From hog or hack. A mass of meat, generally pork, chopped, and en- closed in a membrane. In Scotland it is com- monly made in a sheep's maw of the entrails of the same animal, cut small,.with suet and spices.

HAGIOGRAPHA, from 'oyioc, holy, and ypaipui, to write. Those books of scripture called by the Jews Cetubim. The name is very ancient, St. Jerome making mention of it. The Jews divide the sacred writings into three classes : — 1. The law, or the five books of Moses; 2. The Prophets, which they call Neviim; and the Cetubim, C301i'^3, called by the Greeks, &c. Hagiographa ; comprehending the book of Psalms, Proverbs, Job, Daniel, Ezra, Nehemiah, Chronicles, Canticles, Ruth, Lamentations, Ec- clesiastes, and Esther. Kimchi, Maimonides, and Elias Levita, call these books the NV

ritings, by way of eminence.

HAGUE, a town of South Holland, in the department of Delft. In Latin it is called Haga Comitis; in French, I^ Haye ; in Dutch, der Haag, or 'S. Graavenhage, i. e. the Earl's Grove, from the wood near which it is built, and in which the earls of Holland had a country house. It is one of the most considerable towns in the Netherlands, pleasantly situated, and exceed- ingly beautiful. It stands in a dry soil, higher than the surrounding country ; the air is tole- rably pure, and the environs and approaches superior to those of most towns in Holland. From the sea the access is by a long and beau- tiful avenue, nearly two miles in length ; on the land side the approach is by a road leading from the soilth-east, on which there is a pleasant prospect of the Hague and the woods to the north of the town.

The principal streets arc straight, wide, and handsome, paved with a light-colored brick, and containing canals, trees, and neat bridges. The largest is the \ oorhout, and contains numerous elegant edifices ; but the most attractive part is the public square, called the V'yverburg, of an oblong form, with a beautiful walk, and an ave- nue of trees on one side, while the other is bordered by a large basin of water. The old palace is an enormous pile of building, present- VOL. X.

ing specimens of almost all species of architec ture : it contains a number of valuable paintings; and was once the meeting place of the states- general. The mansion of the family of Bentinck, that of prince Maurice, and the new palace begun by William III., are all worth attention. The number of churches is fourteen ; "and there are several charitable institutions.

In the environs of the Hague are a number of villas; but their principal ornament is the palace of the Orange family, a mile to the north of the town. The wood, principally composed of stately oaks, two English miles in length, and three quarters of a mile in breadth, is full of labyrinths and elegant garden ground. The house has nothing princely, except some public rooms, and a gallery of paintings. At a distance of about a mile and a half in a south-east direc- tion is the castle of Ryswyc, which gave name to the well-known treaty of 1697.

The Hague being deprived of the residence of the seat of government, on the invasion of the French in 1795, did not recover the disadvantage until several years after the re-instatement of the Orange family in 1813. Its inhabitants took an early and active part in the insurrection against the French in the latter part of that year, after the battle of Leipsic ; and the prince of Orange arrived here from England on the 30th of No- vember. The Hague was along with Brussels, the alternate residence of the king of the Nether- lands, and legislature. A manufacture of porce- lain, and the

printing of French books, are the chief branches of industry. It never was a place of trade. The population was computed in 1817 at 42,000. It is twelve miles north-west of Rot- terdam, and thirty-two south-west of Amsterdam. Long. 4° 23′ E., lat. 52° 4′ N.

Hague (Charles), Mus. Doct., was born at Tadcaster, Yorkshire, in 1769. At ten years old he was sent to Cambridge, where his brother then resided, for the purpose of instruction, and became the pupil of Manini, and the elder Hel- lendaal. la. 1785 he came to London, where he had the benefit of Saloman's and Dr. Cooke's instructions. In 1799, having taken the degree of music-bachelor four years previously, he succeeded Dr. Randall in the professorship of music at Cambridge. He set to music the ode for the installation of his royal highness the duke of Gloucester as chancellor of the university. His other compositions are, By the Waters of Babylon, an anthem, and a great variety of glees, &c., remarkable for the purity of their harmony. Dr. Hague died June 18th, 1821.

HAGUENAU, a considerable town of France, in Alsace, anciently an imperial town. It was taken by the French in 1673; the imperialists retook it in 1702; after which it was several times taken and retaken by both parties ; but at last the French obtained possession of it in 170& It is divided by the Motter into two parts, and is seated in the Forest of Haguenau, fifteen mil'-j north of Strasburg, and 255 east of Paris. Neat it the French ir; December, 1793, defeated the allied army, and took 500 prisoners, with sixteen pieces of cannon. It has manufactures of tobacco, madder, and earthenware. About 400 acres of the town was burnt to the ground by

accident in 1800, Population 7000. Twenty- one miles north of Strasburg.

IIAH, interj. An expression of sudden effort. Her coats tucked up, and all her motions just. She stamps, and then cries hah ! at every thrust.

Drydcn. HAHN (Simon Frederick), a celebrated Ger- man historian. At ten years of age he was not only far advanced in the Latin, but understood several living languages. At fourteen he de- livered a speech on the origin of the cloister at Bergen, Iiis birth-place, vvhich was printed ; and in 1708 lie published a Continuation of Meibo- mius's Chronicle of Bergen. After having for several years given public lectures at Halle, he became, at the age of twenty-four, professor of history at Helmstadt; and was at length

coun- sellor, historiographer, and librarian, to George I. He died in 1729, aged thirty-seven. Besides several other works, he wrote, 1. The History of the Empire, vol. I. ; 2. CoUectio Monuraen- torum 'eterum et Recentium Ineditorum, 2 vo's. 8vo.

llAlh, interj. Si, V. a. ^ Saxon, heel, health; Hale, arf;. 5 hail, therefore, is the

same as salve of the Latins, or vyiaivs of the Greeks, health be to you. — Johnson. A term of salutation now used only in poetry ; health be to you. It is used likewise to things inanimate. To hail is to salute, or welcome ; to approach with reverence ; to call to : hale, healthy; sound. Anon, as I hem overtoke, I said : Heile, frendes ! whither purpose ye to wend.

Chaucer. Court of Love. My seely sheep like well below. For they heen hale enough I trow. And liken their abode. Spenser,

Hail, kail, brave friend I Say to the king the knowledge of the broil. Shaks]), Her sick head is bound aliout with clouds : It does not look as it would have a hail, Or health wished in it, as on other morns.

Bert Jonson. Hail active Nature's watchful life and health ! Her joy, her ornament, and wealth '. Hail to thy husband Heat and thee ! Thou the world's beauteous bride, the lusty bride- groom he 1 Cowley. The angel hail Bestowed, the holy salutation used Long after to blest Mary, second Eve. Milton.

Farewell, happy fields. Where joy for over dwells ! hail horrors ! hail Infernal world ! and thou profoundest hell Receive thy new possessor I Id.

All hail, he cried, thy country's grace and love ! Once first of men below, now first of birds above.

Dry den.

Thrice call upon my name, thrice beat your breast.

And hail me thrice to everlasting rest. Id.

A galley drawing near unto the shore was hailed by a Turk, accompanied with a troop of horsemen. Knolles.

Hail to the sun ! from whose returning light The cheerful soldier's arms new lustre take. Rowe.

Some of these wise partizans concluded the govern- ment had hired two or

three hundred hale men, to be pinioned, if not executed, as the pretended captives.

Addison. His stomach too begins to fail ; Last year we thought him strong and hale. But now he's quite another thing : I wish he may hold out 'till Spring. Swifl.

Hail, n.s. & r. ra. ~\ Sax. hajel. Drops Cff Hail'shot, K. s. f rain frozen in their fali Hail'-stone, n. s. |ing: hail-shot are smail- Hail'y, a(f;. J shot scattered like hail;

hail-stone, a simple particle or ball of hail : haily showers consist partially or entirely of hail.

My people siiall dwell in a peaceful habitatioti when it shall hail, coming down on the forest.

Isa. xxxii. 19. You are no surer, no. Than is the coal of fire upon the ice. Or hail-stone in the sun. Shakspeare.

The master of the artillery did visit them sharply with murdering hail-shot, from the pieces mounted towards the top of the hill. Hayward.

Thunder mixed with hail. Hail mixed with fire, must rend the' Egyptian sky,

Milton. The sulphurous hail Shot after us in storm, o'erblown hath laid The fiery surge that from the precipice Of Heaven received us falling. Id. Paradise Lost. Hard hail-stones lie not thicker on the plain. Nor shaken oaks such showers of acorns rain.

Dryden. From whose dark womb a rattling tempest pours. Which the cold North congeals to haily showers.

Prpe

Hail, in natural history, a meteor generally defined frozen rain, but difl'ering from it in that the hailstones are not formed of single pieces of ice, but of many little spherules agglutinated together. Neither are these spherules all of the same consistence; some being hard and solid like perfect ice ; others soft, and mostly like snow hardened by a severe frost. Sometimes the hailstone has a kind of core of this soft mat- ter ; but more frequently the core is solid and hard, while the outside is formed of a softer matter. Hailstones are of various figures; some round, others pyramidal, crenated, angular, thin, and flat, and some stellated, with six radii like the small crystals of snow. Natural historians record various instances of

surprising showers of hail, ir which the hailstones were cf extraordi- nary magnitude. Mezeray, speaking of the war of Louis XII. in Italy in 1510, relates, that there was for some time a horrible darkness, thicker than that of night; after which the clouds broke into thunder and lightning, and there fell a shower of hailstones, or rather (as he calls them) pebble stones, which destroyed all the fish, birds, and beasts, of the country. It was attended with a strong smell of sulphur; and the stones were of a bluish color, some of them weighing 100 lbs Hist, de France, tom. II. p. 339. At Lisle in Flanders, in 1686, hailstones fell of a very large size ; some of which contained in the middle a dark brown nnatter, which, thrown on the fire, gave a very great report. Philosophical Transactions, No. 203. Dr. Halley and others relate, that in Cheshire, Lancashire, &c., April 29th, 1697, a thick black cloud, coming from Caernarvonshire, disposed the vapors to congeal in such a manner, that for about the breadth of two miles, which was the limit of the cloud, in its progress for sixty miles, it did inconceivable damage ; not only killing all sorts of fowls, and other small animals, but splitting trees, knocking down horses and men. and even ploughing up

t!ie earth ; so that the liailstones buried them- selves under ground an inch or an inch and a iialf deep. The hailstones, many of which weighed live ounces, and some half a pound, being five or six inches about, were of various figures : some round, others half round ; some smooth, others embossed and crenated ; the icy substance of them was very transparent and hard,])ut ti'iere was a sno%\y kernel in the middle of them. In Hertfordshire, May 4th, 1697, after a severe storm of thunder and liglitning, a shower of hail succeeded, which far exceeded the former : some persons were killed by it, their bodies beaten all black and blue ; vast oaks were split, and fields of rye cut down as with a scythe. The stones measured from ten to thirteen or fourteen inches about. Their figures were various, some oval, others picked, some flat. Philosophical Transactions, No. 229. Hail, so far as has been diico\ered, never produces any beneficial effect. Kain and dew invigorate and give life to the whole vegetable tribe ; frost, by expanding the water contained in the earth, pulverises and ren- ders the soil fertile; snow covers and preserves the tender vegetables from being destroyed by too severe a frost. But hail does none of these. In winter it lies not sufficiently close to cover vegetables from the nipping frosts ; and in spring and summer it not only has a chilling and blasting effect, but often does great damage to the more tender plants by the weight of the

stones. In great hail storms the damage done in this manner is prodigious. Hail is one of the natural phenomena for which it is difficult to account in any satisfactory manner. It is cer- tain that, on the tops of mountains, hailstones, as well as drops of rain, are very small, and con- tinually increase in bulk, till they reach the lower grounds. It would seem, therefore, that during their passage through the air they attract the congealed vapor, which increases them in size. But here we are at a loss how they come to be solid hard bodies, and not always soft, and composed of many small stars like snow. The flakes of snow, no doubt, increase in size as they descend, as well as the drops of rain or hail- stones ; but why should the one be in soft crys- tals, and the other in large hard lumps, seemg both are produced from congealed vapor ? Some modern philosophers ascribe the formation of hail to electricity. Signior Beccaria supposes hail to be formed in the higher regions of the air, where the cold is intense, and where the electric matter is very copious. In these cir- cumstances, a great number of particles of water are brought near together, where they are frozen, and in their descent collect other particles, so that the density of the substance of the hailstone jp-ows less and less from the centre ; this being formed first in the higher regions, and the sur- face being collected in the lower. Drops of rain and hail agree in this, tJiat the more intense the electricity that forms them, the larger they are. Motion is known to promote freezing, and so the rapid motion of the electrified clouds may produce that effect.. A more intense electricity also, he thinks, unites the particles of hail more closely than the more moderate electricity does il.jse of snow. In like manner we see thunder

clouds more dense than those that merely bring rain ; and the drops of rain are larger in propor- tion, though they fall not from so great a height.

HAILBRON, a strong town of Germany in Wirtemberg, famous for its baths ; seated on the Neckar, five miles north-east of Stutgard. Long. 9° 25′ E., lat. 49° 19′ N.

HAILES, Lord. See Dalrymple. HAIˆLAM (Bernard de Girard), lord of, a celebrated French historian. Aftei iiaving made some figure in the literary world, Charles IX. made him historiographer of France, in 1571. His history of France extends from Pharamond to the death of Charles VII., and is the first com- plete history of that kingdom composed in the French tongue. He was honored by Henry III. with several marks of favor. He died at Pans in 1610.

HAINAN, one of the most considerable islands of Asia, subject to China,' and belonging to the province of Quang-ton. It has on the north the province of Quang-si ; on the south the channel between the bank Paracel and the east coast of Cochin China ; on the west the same kingdom and part of Tong-king ; and on the east the Chinese Sea. Its extent from east to

west is between sixty and seventy leagues, and from north to south forty-five ; and about 480 miles in circumference. Kaun-tcheou-fou is the capital. Hainan lies near San-cian, between 18″ and 20° N. lat.

HAINAVLT, an inland province of the Ne- therlands, boundecjl on one side by the French frontier, and on the other sides by Flanders, South Brabant, and the province of Namur. It has a superficial exent of 1700 square miles, beautiful undulating plains, and a fruitful soil : it is watered by the Scheldt, the Sambre, and the Haine. To the east it is woody; but corn and valuable pastures are found every where. The mineral productions are iron, lead, and marble, and coal in large quantities. The manufactures are woollens, cottons, linen, lace, glass, iron and earthenware. Enghein, Senefte, Sieinkirk, Fleurus, Malplaquet, Fontenoy, and other scenes of celebrated conflicts, are all in this province. The chief towns, Tournay, Mons, and Charleroi, give name to the three districts of the province, which sends eight deputies to the representative assembly of the Netherlands. In former ages this was called the county of Hainault, and, in its most extensive sense, comprised a consider- able part of what is now the French departments of the North and of the Ardennes ; a country •still sometimes called I'rench Hainault. The treaty of 1814 gave the Netherlands this pro- vince, as it had been formerly held by Austria; but that of 1815 added to it the cantons of Beaumont, Merbe. le Chateau, and Dour, for- merly belonging to French Hainault. The population of the whole province is 473,000. ILMR, w. s. "] Saxon haep. One of

HAiuBRAiNEn, adj. the common teguments Hair'brfadth, n.s. of the body, found upon HAiu'cLoni, n. .?. [all the parts of the body, except the soles of the

Hair'-lace, n.s. Hair'less, udj.

HaIR'iNESS, U.S.

IIair'v, udj.

feet and palms of the hands. The compounds J have varieties of uiean- 3 C 2

756′

HAIR.

ing, most of which are obvious, except hair- brained, which should rather be written hare- brained, and which means inconstant, unsettled, wild .as ahare. Wild ; irregular; unsteady. Hair- breadth, hair and breadth, a very small dis- tance ; the diameter of a hair. A miraculous escape is called a

hairbreadth escape. Haircloth is stuff made of hair very rough, which is worn for purposes of mortification or self-denial Hairlace, hair and lace. The fillet with which women tie up their hair. Hairless, hairiness, and hairy, are descriptive of the state of being covered with hair or deprived of it.

Seven hundred chosen men left-handed could sling stones at an hairbreadth, and not miss.

Judges xx. 16. And every child ware, of laves grene A fresh chaplet upon his hairex bright.

Chaucer. The Floure and the Leafe, Hire bright here kembed was, untressed all.

Id. The Knighte's Tale. Ne she wos gaie, freshe, ne jolife, But semed to be full ententife To gode werkes and to faire : And therto she had on an haire.

Id, Romaunt of the Rose. Naughty lady. These hairs which thou do'st ravish from my chin. Will quicken and accuse thee. Shakspeare.

Much is breeding ; Which, like the courser's hair, hath yet but life. And not a serpent's poison. Id.

I spoke of most disastrous chances. Of moving accidents by flood and field ; Of hairbreadth 'scapes in the imminent deadly breach.

Id. He is a curer of souls, and you a curer of bodies : if you should fight you go against the hair of your pro- fession. Id. If thou takest more Or less than just a pound ; if the scale turn But in the estimation of a hair. Thou diest. Id.

She his hairy temples then had rounded With coronet of flowers. ~ Id.

White beards have armed their thin and hairless scalps Against thy majesty. Id.

Let's leave this town j for they are hairbrained slaves. And hunger will enforce them be more eager. Id. The custom of their ancestors they slight And change their shirts of hair for robes of gold.

Bancroft's fall of Mortimer. Some worms are commonly resembled to a woman's hairlace or fillet, thence called taenise. Harvey.

A hair 'twixt south and south-west sidf , He could distinguish and divide On either which he would dispute Confute, change hands, and still confute.

Htidibras, He judges to a hair of little indecencies, and knows better than any man what is not to be written.

*Dryden. Storms have shed From vines the hairy honours of their head. Id. Shall the difference of hair only, on the skin, be a mark of a different internal constitution between a changeling and a drill ? * Locke.*

It is composed of reeds and parts of plants woven together, like a piece of haircloth. Grew.

Far up the stream the twisted hair he throws. Which down the murm'ring current gently flows.

Gay's Rural Sports.

If Molly happens to be careless. And but neglects to warm her hairlace, She gets a cold as sure as death. Stvifi

Her brow was overhung with coins of gold. That sparkled o'er the auburn of her hair. Her clustering hair whose longer locks were rolled In braids behind, and though her stature were Even of the highest for a female mould, They nearly reached her heel. Byron. Don Juan.

Hair consists of small filaments issuing out of the pores of the skins of animals ; and serving most of them as a covering. See Ana- tomy. Hair grows longest on the head, chin, and breast; in the arm-pits, and about the piivitieri. Hairs ordinarily appear round or cylindrical ; but the microscope also discovers triangular and square ones; which diversity O' figure arises from that of the pores, to which the hairs always accommodate their form. Thrir length depends on the quantity of the proper humor to feed them, and their color on the quality of that humor : whence, at different stages of life, the color usually differs. Their extremities split into two or three branches, especially when kept dry, or suffered to grow too long; so that what appears only a single hair to the naked eye, seems a brush to the microscope. The hair of a mouse, viewed by Mr. Derhara with a microscope, seemed to be one single transparent tube, with a pith made up of fibrous substances, running in dark lines, in some hairs transversely, in others spirally. The darker medullary lines, he observes, were small fibres convolved, and lying closer together than in the other parts of the hair. They run from tlie bottom to the top of the hair; and, he imagines, may serve to make a gentle evacuation of some humor out of the body. Hence the hair of hairy animals may not only serve as a fence agamst cold,&c., but as an organ of insen- sible perspiration, &c. Citizen Mongˆ has made some curious observations on hair and wool. The surfaces of these bodies, he says, are not smooth ; they seem to be formed rather of small laminae

placed over each other, in a slanting direction from the root towards the point, like the scales of fish ; or of zones placed one upon another, as in the horns of animals. When a hair is laid hold of by the root in one hand and drawn between the fingers of the other, from the root towards thjg point, scarce ,any friction or resistance is perceived, and no noise is heard ; but if, grasping it by the pointy it be passed in the same manner between the fingers of the other hand, /rom the point towards the root, a resistance is lelt, a tremulous motion is evident to the touch, and a noise may be distinctly heard. It is obvious, therefore, that the texture of the surface of hair is not the same from the root towards the pomt, as it is from the point towards the root. These observations are equally applicable to the filaments of wool. The sur- face of these bodies is therefore formed of rigid laminae, laid upon each other like tiles, from the root to the point. And it is this structure which is the principal cause of the disposition to felting, which the hair of animals generally possesses.

The ancients held the hair a sort of excre-

niont, fed only with excremeatilious matters, and no proper part of a livins body. They supposed it generated of the fuliginous parts of the blood exhaled by the heat of the body to the surface, and there condensed in passing through the pores. Their chief reasons Nvere, that the hair being cut will grow again, even in extreme old age, and when life is very low : that in liectic and consumptive people, where the rest of the body is contmually emaciating, the hair thrives ; nay, that it will even grow again in dead carcases. Tiiey added that hair does not feed and grow like the other parts, by introsus- ception, i. e. by a juice circulating within it; but, like the nails, by juxtaposition. But the moderns are agreed, that every hair properly and truly lives, and receives nutriment to rill it like the other parts ; which they prove hence, that the roots do not turn gray in aged peisons sooner than the extremities, but the whole changes color at once ; which shows that there is a direct com- munication, aiid that all the parts are affected alike. In strict propriety, however, it must be allowed, that the life and growth of hairs is of a different kind from that of the rest of the body ; and is not immediately derived therefrom, or reciprocated therewith. They derive their food from some juices in the body, but not from the nutritious juices of the body ; whence they may live, though the body be starved. Wulferus, in the Philosophical Collections, gives an account of a woman buried at iS'oriraberg, whose grave being opened forty-three years after her death, hair was found issuing forth plentifully through the clefts of the coffin. The cover being re- moved, the whole corpse appeared in its perfect shape ; but,

from the crown of the head to the sole of the foot, covered over with thick set hair, long and curled. The sexton going to handle the upper part of the head with his fingers, the w hole fell at once, leaving nothing ia his hand but a handful of hair: there was neither skull nor any other bone left; yet the hair was solid and strong.

By the Jews hair was worn naturally long, just as it grew ; but the priests had theirs cut every fortnight, while waiting at the temple : they used scissars only. The Nazarites, while their vow continued, were forbidden to touch their heads with a razor. See Nazarene. The falling off of' the hair, or a change of its color, was regarded amongst the Hebrews as a sign of the leprosy. Black hair was esteemed by them as the most beautiful. Absalom's hair was cut once a year, and is said to have weighed 200 shekels, or 31 ozs. The law of God gives no particular ordinances with respect to the hair. The hair of both Jewish and Grecian women engaged a principal share of their attention, and the Roman ladies seem to have been no less curious with respect to theirs. They generally wore it long, and dressed it in various ways, ornamenting it with gold, silver, pearls, &c. On the contrary, the men amongst the Greeks and Romans, and amongst the later Jews, wore their hair short, as may be collected from books, medals, statues, &c. This formed a principal distinction in diess betwixt the sexes. This obsenation illustrates a passage in St. Paul's

epistle to the Corinthians (1 Cor. ix. 4 — 6), where he forbids the Corinthian women, when praying by divine inspiration, to have their hair dishevelled ; because this made them resemble the heathen priestesses, when actuated by the pretended influence of their gods. Amongst the Greeks, both sexes, a few days before mar- riage, cut off and consecrated their hair as an offering to their favorite deities. It was also customary among them to hang the hair of the dead on the doors of their houses previous to interment. They likewise tore, cut off, and sometimes shaved their hair, when mourning for their deceased friends, which they laid upon the corpse or threw into the pile, to be consumed together with the body. The ancients imagined that no person could die till the topmost hair was cut off; and this act they supposed was performed by the invisible hand of death, or Iris, or some other messenger of the gods. Thu« Virgil describing the death of Dido, lib. iv says.

Nam quia nee fato, merita nee morte peribat ; Sed misera ante diem, subitoq ; accensa furore; Nondum illi fiavum Proscipini vertice crinem Abstulerat, Stygioq ; caput daranaverat Oreo. Ergo Iris croceis per caelum roscida pennis, Mille trahens varios adverse Sole colores, Devolat, et supra caput astilit : Hune ego Diti Sacrum jussa fero, teque isto corpore solvo. Sic ait, et dcxtra crinem secat : omnis et una Dilapsus calor, atque in veatos vita recessit.

Whatever was the fashion, with respect to fhe hair, in the Grecian states, slaves were forbidden to imitate the freemen. Their hair was al- ways cut in a particular manner, called 0pt5 avcpanodtic, which they no longer retained after they procured their freedom. Both the Greeks and Romans wore false hair. The ancient Gauls esteemed it an honor to have long hair; hence the appellation Gallia Comata. Julius Caesar, on subduing the Gauls, made them cut off their hair, as a token of submission. In imitation of this, such as afterwards quitted the world, to live in cloisters, had their heads shaven, to show that they bid adieu to all earthly ornaments, and made a vow of perpetual subjec- tion to their superiors. The ancient Britons were proud of the length and beauty of their hair, and were at much pains in dressing it. Some of them carried tins to an extravagant height. A young warrior vf\o was taken prisoner, and con- demned to be beheaded, requested that no slave might be permitted to touch his hair, which was re- markably long and beautiful, and that it might not be stained with his blood. Not content witii the na- tural color of their hair, which was commonly fair or yellow, they used washes to render it still brighter. One of these was a composition of lime, the ashes of certain vegetables, and tallow. They used various arts also to make the hair of their heads grow thick and long ; which last was considered as a mark of dignity and noble birth. Boadicea, queen ot the Iceni, is described by])io with very long hair, flowing over her shoul- ders, and reaching dovvn below the middle of her back. The Britons shaved their beards, all but their upper lipj; the hair of which they, as well as the Gauls, allowed to grow to a very in-

convenient length. In after times, the Anglo- Saxons and Danes, also considered fine hair as one of their greatest ornaments, and were at great pains in dressing it. Young ladies before their marriage wore their hair uncovered and cintied, flowing in ringlets over their shoulders ; but as soon as they were married they cut it shorter, tied it up, and put on a head- dress. To have the hair entirely cut off was so great a dis- grace, that it was a punishment inflicted on women guilty of adultery. The Danish sol- diers who were quartered upon the English, in the reigns of Edgar and of Ethelred II , were particularly attentive to the dressing of their hair ; which they combed at least once every day, and thereby captivated the affections of the English ladies. Gregory of Tours assures us, that, in the royal family of France, it was long the peculiar mark and privilege of kings and princes of the blood to wear long hair, dressed and curled : all others wore it polled, or cut round, in sign of inferiority. Some say that there were different cuts for all the different qualities and conditions, from the prince who wore it at full length, to the slave or villain who was quite cropt. To

cut ofl' the hair of a prince under the first race of French kings, was to declare hi m excluded from the right of succeeding to the crown. In the eighth century, people of quality had their children's hair cut the first time by persons they had a par- ticular esteem for ; who hence were reputed a sort of spiritual parents or godfathers. And, long before this, Constantine sent the pope the hair of his son Ueraclius, as a token that he de- .sired him to be his adoptive father.

Pope Anicetus is said to have been the first who forbade the clergy to wear long hair : but the prohibition is of an older date in the churches of the east; and the letter, wherein that decree is written, is much later than that pope. The cle- rical tonsure is related, by Isidorus liispalensis, as of apostolical institution. Long hair was anciently held so odious, that there is a canon still extant, of 1096, importing, that such as wore lono- hair should be excluded coming into church while living, and not be prayed for when dead. Luitprand made a furious declamation against the emperor Phocas, for wearing long hair. The French historians have been very exact in describing the hair of their kings. Charlemagne wore it very short ; his sons shorter ; Charles II. had none at all. Under Hugh Capet it began to appear again ; but the priests excom- municated all who let their hair grow. Peter Lombard expostulated so warmly with Charles VI. that 'le cut off his hair : and his successors for some generations wore it very short. A pro- fessor of Utrecht, in 1650, wrote expressly on the question, Whether it be lawful for men to wear long hair ? and concluded for the negative. Another divine, named Reves, who had written for the affirmative, replied to him. The clergy both secular and regular were obliged to shave the crowns of their heads, and keep their hair short, which distinguished them from the laity; and several canons were made against their conceal- ing their tonsure, or allowing their hair to grow lone. The shape of this clerical tonsure was the subject of long and violent debates between the

English clergy on the one hand, and those of the Scots and Picts on the other ; that of the former being circular, and that of the latter only semi- circular. Some, who pretended to superior sanctity, inveighed with great bitterness against the long hair of the laity ; and labored to per- suade them to cut it short, in imitation of the clergy. Thus St. Wulstan, bishop of Wor- cester, declaimed with great vehemence against luxury of all kinds, but chiefly against long hair as most criminal and most universal. ' When any of those vain people who were proud of their long hair,' says William of Malmsbury, ' bowed their heads before him to receive his blessing, before he gave it, he cut a lock of their hair with "a little knife, which he carried about with him for that purpose ; and commanded them by way of penance of their sins, to cut all the rest of their hair in the same manner. If any of them re- fused to comply with this command, he de- nounced the most dreadful judgments upon them, reproached them for their effeminacy, and

foretold, that, as they imitated women ni the length of their hair, they would imitate them in tlieir cowardice when their country was invaded ; which was accomplished at the landing of the Normans.' Anselm, archbishop of Canterbury, went so far as to pronounce the then terrible sen- tence of excommunication against all who wore long hair, for which pious zeal he is very much commended. Serlo, a Norman bishop, acquired great honor by a sermon which he preached be- fore Henry I., in 1104, against long and curled hair, with which the king and all his courtiers were so much affected, that they consented to resign their flowing ringlets, of which they had been so vain. The prudent prelate gave them no time to change their minds, but immediately pulled a pair of shears out of his sleeve, and performed the operation with his own hand. Another incident happened about twenty-five years after, which gave a temporary check to the prevailing fondness for long hair.

Though the external surface of the body is the natural place for hairs, we have many well-attested instances of their being found also on the internal surface. Amatus Lusitanus mentions a person who had hair upon his tongue. Pbny and Vale- rius Maximus say, that the heart of Aristomenes the Messenian was hairy. Caelius Rhodiginus relates the same of Ilermogenes ihe rhetorician; and Plutarch, of Leonidas, king of Sparta. There have been, ho^^ever, various and indispu table observations of hairs found in the kidneys, and voided by urine. Hippocrates says, that the gjlandular parts are the most subject to hair ; but bundles of hair have been found in the muscular parts of beef, and in parts of the human body equally firm. Hair has been often found in ab- scesses and imposthumations. But, of all the in- ternal parts, there is none so much subject to an unnatural growth of hair as the ovaries of fe- males. Cardan relates, that he found hair in the blood of a Spaniard ; Slonatius in that of a gen- tlewoman of Cracovia; and Schultetus declares, from his own observation, that those people, who are afflicted with the plica polonica, have very often hair in their blood.

Hair makes a verv considerable article in com-

Tnerce, especially since perukes have been worn. The hair of the growth of Britain, and other northern countries, is valued much beyond that of Italy, Spain, the south parts of France, &c. The goodness of hair consists in its being well fed, and neither too coarse nor too slender. Its length should be about twenty-five inches ; the more it falls short of this the less value it bears. There is no certain price for hair. It is sold at from 5j. to £5 per oz.,

according to its quality. Hair is also used in various other arts and manufactures. The hair of beavers, hares, conies, Sec, is the principal substance of which hats are made. Spread on the ground, and left to putrefy on corn-lands, hair, like all other animal substances, proves good manure.

The scarcity of gray and white hair has made the dealers fall upon methods of reducing other colors to this. This is done by spreading the hair to bleach on the grass like linen, after first washing it out in a lixivious water. This lie, with the force of the sun and air, brings the hair to so perfect a whiteness, that the most expe- rienced person may be deceived ; there being scarcely any way of detecting the artifice, but by boiling and drying it, which leaves the hair of the color of a dead walnut-tree leaf. There is also a method of dyeing hair with bismuth, which renders such white hair as borders too much upon the yellow of a bright silver color: boiling is the proof of this too, the bismuth not being able to stand it. Hair may also be changed from a red, gray, or other disagreeable color, to a brown or deep black, by a solution of silver. The liquors sold under the name of hair waters, are at bottom only solutions of silver in aqua- fortis, largely diluted with water, with the addi- tion perhaps of other ingredients which contribute nothing to their efficacy. The solution should be fully saturated with the silver, that there may be no more acid in it tlian is necessary for holding the metal dissolved; and, besides di- lution with water, a little spirit of wine may be added for the further dulcification of the acid. It must be observed, that for diluting the solu- tion, distilled water, or pure rain water, must be used; the common spring waters turning it milky, and precipitating a part of the dissolved silver. If the liquor touches the skin, it has the same effect on it as on the hair, changing the part moistened with it to an indelible black. Hair may also be dyed of any color in the same manner as wool. Hair whick does not curl or buckle naturally, is brought to it by boiling and baking it — thus : After having picked and sorted the hair, and disposed it in parcels according to its lengths, they roll them up and tie them tight down upon little cylindrical instruments, either of wood or earthenware, a quarter of an inch thick, and hollowed a little in the middle, called pipes ; in which state they are put in a pot over the fire, there to boil for about two hours. W hen taken out they lot them dry ; and when dried they spread them on a sheet of brown paper, cover them with another, and, making a crust round them of common j > aste, set them in an oven till the crust is about three- fourths baked. The end by which a hair grew to llie head is called tlie head of the hair ; and

the other, with which they begin to give the buckle, the point. Formerly the peruke-makers made no difference between the ends, but curled or wove them by either indifferently ; but this made them unable to give a fine buckle ; hair woven by the point never taking a righf curl. Foreigners own

themselves obliged to the Eng- lish for this discovery, which was first carried abroad by a British peruke-maker.

Hair of Plants, or down, a general term expressive of all the hairy and glandular ap- pearances on the surface of plants, to which they are supposed to serve the double purpose of defensive weapons and vessels of secretion. These hairs are minute threads of greater or less length and solidity ; some of them visible to the naked eye ; whilst others are rendered visible only by the help of glasses. Examined by a microscope, almost all the parts of plants, par- ticularly the young stalks or stems, appear co- vered with hairs. These appear under various forms; in the leguminous plants they are gene- rally cylindric ; in the mallow tribe, terminated in a point ; in agrimony, shaped like a fish-hook ; in nettles, awl-shaped and jointed; and in some compound flowers, with hollow or funnel-shaped florets, they terminate in two crooked points. Probable as some experiments have rendered it, that the hairs on the surfixce of plants contribute to some original secretion, their principal use seems to be, to preserve the parts in which they are lodged from the bad effects of violent fric- tions, from winds, from extremes of heat and cold, and such like external injuries.]\I. Guet- tard, who established a botanical method, from the form, situation, and other circumstances of the hairy and glandular appearances on the sur- face of plants, has demonstrated, that these ap- pearances are generally constant and uniform in all the plants of the same genus. The same uni- formity seems to characterise all the different genera of the same natural order. The different sorts of hair which form the down upon the sur- face of plants, were imperfectly set down by Grew in 1682, and by Malpiglii in 1G86. M. Guettard was the first who examined the subject both as a botanist and a philosopher. His ob- servations were published in 1747.

HA.IYPOOK, a fertile district of Ilindostan, in the province of Bahar, on the eastern side of the Ganges, and between 25° and 26° of N. lat. It is well cultivated, and produces opium, salt- petre, and a good breed of horses. It is now included in the collectorship of Sarrun.

Hajypoor, the capital of the above district, is situated on the north-east bank of the Ganges, at its confluence with the (ninduck. This town was founded 1350, by Uias Hajy, the .second in- dependent Mahommedan king of Bengal, who caused it to be fortified ; and it was for a long time the residence of the governor of the dis- trict. In the year 1574 it was taken by the troops of Akbar, after a gallant resistance ; since which period the fortifications have been ne- glected ; but the town continues to flourish.

H.VKE, 7i. s. (Goth, hackle. The stock-

Hakot, 71. s. S fish or poor-jack.

Hake, isi the English name of a fish common in the British sea, called by some zoologisU

merlucius and lucius naarinus. These fish were used of old dried and salted. Hence the pro- verb in Kent, As dry as a hake. See Gadus.

HAKEWILL (George), a learned English divine, the son of a merchant in Exeter, where he was born in 1579. He was educated at Ox- ford, became fellovy of Exeter College, and was Afterwards elected rector of it. He was appoint- ed chaplain to prince Charles, archdeacon of Surrey, and rector of Heanton ; but was never promoted higher, on account of his zealous op- position to prince Charles's marriage with the infanta of Spain, for which he was imprisoned in 1621. His chief work is. An Apology or Decla- ration of the Power and Providence of God in the Government of the World, folio, 1639. He died at Heanton in 1649.

Hakewill (William), elder brother to George, was educated at Exeter College ; whence he re- moved to Lincoln's Inn, and became eminent in the law. He was a puritan, and had great inte- rest with the republican party during the civil war. He wrote several tracts : particularly, The Liberty of the Subject against the pretended Power of Impositions ; 1641, 4to.

HAKLUYT (Richard), a naval historian, sup- posed to have been born in London about 1533, and descended of a respectable family in Here- fordshire. He was educated at Westminster, and in 1570 removed to Oxford ; where he ap- plied to the study of cosmography, and read public lectures in that science. Sir Edward Stafford being sent ambassador to France, in 1 583, Mr, Hakluyt was one of his attendants. He was at this time M. A., and professor of divinity. In 1585 he was made prebendary of Bristol, during his residence at Paris. In searching the French libraries, he found a valuable history of Florida, which he published at his own expense, in French, and soon after revised and republished Peter Martyr De Orbe Novo. After five years resi- dence in France he returned to England. In 1589 he published his Collection of Voyages, in one vol. folio, which, in 1598, was republished in three. In 1605 he was made prebendary of Westminster, which, with the rectory of Wethe- ringset, was the summit of his preferment. He died in 1616. He was a faithful historian. His works, besides those above mentioned, are, 1 . A Collection of Voyages and

Discoveries, a small volume. 2. The Discoveries of the World, from the Original to the year 1555, written in the Portugal tongue by Antony Galvano ; corrected, much amended, and translated into English, by Richard Hakluyt. 3. Virginia richly valued by the Des(;ription of the Main Land of Florida, her next Neighbour, &c., written by a Portugal gen- tleman of Elvas, and translated by Richard Hak- luyt. Besides these, he left several MSS. which were printed in Purchas's collection.

HAL, in local names, is derived like a/ from the Sax. J^ealle, i. e. a hall, a palace. In Gothic alh signities a temple, or any other famous building.

HAL'BERD, n. s. ? Fr. halebarde, halehar-

Halberdier, n. s. 5 rfier ; Dutch, fiallebarde, from harde an axe, and hale a court, halberds being the common weapons of guards. A battle- axe fixed to a long pole. Halberdier one who is armed with a halberd.

Advance thy halberd higher than my breast.

Shakspeare, Our halberds did shut up his passage. Id.

The duchess appointed him a guard of thirty hah berdeers, in a livery of murrey and blue, to attend his person. Bacon.

The king had only his halberdeers, and fewer of them than used to go with him. Clarendon.

Four knaves in garbs succinct, a trusty band. Caps on their heads, and halberds in their hand. Draw forth to combat on the velvet plain. Pope.

Halberds, or Halberts, are a kind of spears, carried by the sergeants of foot and dragoons. The shaft is about five feet long, and made of ash or other wood. The head is armed with a steel point, not unlike the point of a two-edged sword. Besides this sharp point, which is in a line with the shaft, there is also a small cross bar of steel. This weapon is useful in determining the ground between the ranks, and adjusting the files of a battalion. It was anciently a common weapon in the army, where there were compa- nies of halberdiers.

HALBERSTADT, a principality of Prussia, in the government of Magdeburg, having a ter- ritorial extent of about 580 square miles, and a population of 120,000. It is intersected by the Hartz Mountains and several rivers, as the Aller, the Bude, and the Halzemme, but the latter are only of secondary size. It is fertile in flax and pas- turage. The independent bishopric of this name was formed in 1814, and secularised by the treaty of Westphalia by which it was given to Prussia.

*Halberstadt, a city of Prussia, capital of the foregoing province, is situated in the great road from Brunswick to Leipsic. It is of good size and great antiquity : containing above 13,000 inhabitants. It had formerly, besides the cathe- dral, three collegiate chapters : which have been suppressed. The Catholics have still, however, tliree churches and two monasteries ; the Luthe- rians five churches. The principal buildings, besides the cathedral, are the Jewish synagogue; the ancient palace, now converted into a town-house ; and the excise office. There are also a cathedral school, with a library ; a cabinet of natural history ; a seminary for school-masters ; and a scliool for midwifery ; worth notice. In 1784 a literary society was established here, from which several publications have emanated. Heio are several small manufactures of woollen, linen leather, gloves, paper, wax, and cobalt. A re markable diet of the German empire was held here in 1] 34. Twenty-eight *rniles south-wesi of Magdeburg, and sixty-two south-east of Han- over.*

HALCYON, n.s. & adj. Latin halci/o. A bird, of which it is said that she breeds in the sea, and that there is always a calm during her incubation : hence the adjective figuratively sig- nifies placid, quiet, still, peaceful.

Such smiling rogues, as these, sooth every passion. Bring oil to tire, snow to their colder moods ; Renege, affirm, and turn, their halcyon beaks With every gale and vary of their masters.

Shakspeare.

When great Augustus made war's tempest cease, His halcyon days brought Corth the arts of peace.

Denhum

Amidst our arms as quiet you shall be. As halcyons brooding en a Winter sea. Dryden.

No man can expect eternal serenity and halcyon days from so incompetent and partial a cause, as the constant course of the sun in the equinoctial circle.

Bentley.

Halcyon. See Alcedo.

Halcyon Days, in antiquity, a name given to seven days before, and as many after the win- ter solstice ; when the halcyon, invited by the calmness of the weather, laid her eggs in nests built in the rocks, close by the brink of the sea. About this time the sea is generally calm, and hence the phrase became proverbial.

HALDANE (John), a very eccentric genius of the eighteenth century, born in Edinburgh about the end of the seventeenth. He was one of the old Covenanters, commonly called Came- ronians, and adhered to their prmciples, both re- ligious and political, in their most rigid form ; of which he gave evidence by publishing various pamphlets in support of them. Of these the most remarkable was entitled The Active Testi- mony of the true Presbyterians of Scotland, against the late unjust invasion by Charles pre- tended prince of \Vales, and William pretended duke of Cumberland, &c., published at Edin- burgh, ill 174G, 8vo. He died about 1770.

HALDE (John Baptist Du), a learned French Jesuit, born at Paris in 1674. He was well versed in Asiatic geograpliy, and compiled a work entitled Grand Description de la Chine and de la Tartarie, from original memoirs of the Je- suitical missionaries, in 4 vols, folio. He was also concerned in a collection of letters begun by father Gobien, called Des Lettres Edifiantes, in 18 vols. ; and published some Latin poems and orations. He died in 1743.

HALE, V. a. > Dut. halen ; Fr. haler. To

Haler, n. s. S drag by force, or pull violently: he who pulls and hales.

Give diligence that thou mayest be delivered from him, lest he hale thee to tlio judge. Luke.

He by the neck hath haled, in pieces cut.

And set me as a mark on evary butt. Sandys.

Fly to your Iiouse ;

The plebeians have -rot your fellow tribune.

And hale him up and down. Shakspeare.

j\Iy third conifort, Starred most unluckily, is from my breast HtJed out to luuidcr. Id.

Thither by harpy- footed furies haled. At certain revolutions, all the

damned Are brought. Milton.

Tliis sinistrous gravity is drawn that way by the preat artery, which then subsidctli, and haleth the heart unto it. Broione.

Who would not be disgusted with any recreation, in Itself indifl'erent, if he shoul.i with blows be haled to it when he had no mind. Lucke.

In all the tumults of Rome, though the people pro- ceeded sometimes to pull and hale one another about, yet no blood was drawn 'till tiie time of the Gracchi.

Swift.

Half, (Sir iMatthew), lord chief justice of the king's l)ench in the reign of Charles H., was the son of Hobert Hale, esq., a barrister of Lincoln's Inn, and was born in 1609. He was educated at Oxford, where he made a considerable pro- gress in learn uig ; and, apjilying to tlie study of tJie law, entered into Lincoln' Inn. Noy, the*

attorney general, and Mr. Selden, look muc!i notice of him. During the civil wars, he was employed in his practice by the king's party ; and was appointed by the parliament one of the commissioners to treat with the king. After the death of king Charles he was appointed with se- veral others to consider of the lleforraation of the law. In 1653 he was by writ made sergeant at law, and soon after appointed one of the justices of the common pleas. Upon the death of Oliver Cromwell, he refused to accept of the new com- mission offered him by Richard his successor, and was returned forGloucestershirein the parlia- ment which called home Charles II. Soon after hie was made lord chief baron of the exchequer ; but declined the honor of knighthood, till lord chancellor Hyde, sending for him upon business when the king was at his house, said, 'There is your majesty's modest chief baron ; upon which he was unexpectedly knighted. He was one of the principal judges that sat in Clifford's Inn, in order to adjust the differences between landlord and tenant, after the fire of London, in winch he behaved to the satisfaction of all parties concern- ed. In his post of chief baron he acted within- flexible integrity. He dismissed a duke, who wished to state to him a cause he was to bring before him, with an intimation that he never re- ceived ex parte or private evidence. The duke complained of his rudeness to the king, who told him he verily believed he would have used him no better had he gone to solicit him in his own cause. In one of his circuits, a gentleman who had a trial at the assises sent him a buck for his table. When judge Hale therefore heard his name, he asked ' if he was not the person who had sent him the venison?' and, finding he was, told him, ' that he could not suffer the trial to go on till he had paid him for his

buck.' In 1671 he was advanced to be lord chief justice of the king's bench; but about four years after this promotion, his health declining, he resigned his post in February 1675-6, and died in Decem- ber following. This excellent man, who was an ornament to the bench and to iiis country, wrote, 1 . An Essay on the Gravitation and Non- gravitation of Fluid Bodies. 2. Observations touching the Torricellian Experiment. 3. Con- templations, Moral and Divine. 4. The Life of Pomponius Atticus, with political and moral Reflections 5. Observations on tlie Principles of natural Motion. 6. The primitive Origination of Mankind. He also left a great number of MSS. in Latin and English, upon various sub- jects ; among which are, his Pleas of the Crown, since published by Mr. Emlyn in 2 vols, folio ; and his Original Institution, Power, and Jurisdic- tion, of Parliaments.

HALI'.S (John), an English theologian, was born at Batli in 1584, and educated at Corpus Christi College, Oxford, where he took tiio de- gree of B. D. In 1605 he was elected a fellow of Merton College, through the influence of the warden, Sir Henry Saville, whom he assisted in preparing for the press his edition of St. Chry- sostom. In 1612 he was appointed professor of Greek at Oxford, and in 1613 was made a fellow of Eton. In 1618 he went to tlie Ha<;ue, as chaplain to the English ambassador, Sir Dud

ley Carleton, and attended the synod of Dort, of the proceedings of which he wrote an able account. These debates occasioned his- conver- sion from Calvinism to Arminianism. In 1 639 he was made a canon of Windsor, but held the office only till the beginning of the civil war. He afterwards remained for some time in seclu- sion, and, having in 1645 been deprived of his fellowship, was obliged to sell his library to ob- tain the means of subsistence. This latter cir- cumstance however is not reconcilable with the fact of his having made considerable bequests in his will. He published nothing of importance during his life; but a collection of his writings appeared in 1659, entitled Golden Remains of the ever-memorable Mr. John Hales, of Eton College, 4to.

Hales, Lord. See Dalrymple.

Hales (Stephen), D.D. and F.R.S., a cele- brated divine and philosopher, born in 1677. In 1696 he was entered at Benet College, Cam- bridge; admitted a fellow in 1703, and became B. D. in 1711. He soon discovered a genius for natural philosophy. Botany was his first study, which he often

prosecuted among Gogmagog hills, along with Dr. Stukely. He likewise studied astronomy, chemistry, and anatomy ; and invented a curious method of obtaining a repre- sentation of the lungs in lead. Having made himself acquainted with the Newtonian system, he contrived a machine for showing the pheno- mena on much the same principles with that of the orrery, afterwards made by Mr. Rowley. About 1710 he was presented to the perpetual ■cure of Teddington, near Twickenham ; after- wards to the living of Porlock, in Somersetshire, which he exchanged for that of Faringdon, in Hampshire. On the 13th of March, 1718, he ■was elected F. R.S.; and on the 5th of March, 1719, he published an account of some experi- ments he had made on the effect of the sun's warmth in raising the sap in trees, which pro- cured him the thanks of the society. On the 14th of June, 1 725, he exhibited a treatise on the same subject, whicli, being highly applauded by the society, he enlarged and improved ; and in April, 1727, published it under the title of Vegetable Statics. This work he dedicated to the prince of Wales, afterwards king George II. ; and he was the same year chosen one of the council of the Royal Society. A second edition of this work was published in 1731 ; in the preface to which he promised a sequel, which he published in 1733, under the title of Statical Essays, &c. In 1732 lie was appointed one of the trustees for establishing a new colony in Georgia. On the 5th of July, 1733, the University of Oxford made him D.D., although he had been educated at Cambridge. In 1734 he published, anony- mously, A friendly Admonition to the Drinkers of Brandy and other spirituous Liquors ; and a Sermon preached at St. Bride's before the rest of the trustees for establishing the colony in Georgia. In 1739 he printed Philosophical Experiments on Sea-water, Corn, Flesh, and other Substances, 8vo. dedicated to the lords of the admiralty. In 1739 he also exhibited to the society an account of some experiments towards the discovery of medicines for dissolving the

stone in the kidneys and bladder, and preserving meat in long voyages ; for which he recived Sir Godfrey Copley's gold medal. In 1740 he pub- lished some account of Experiments and Observa- tions on Mrs. Stephens's Medicines for dissolving the Stone, in which their dissolvent power is en- quired into and demonstrated. In 1741 he read before the society an account of a verUilator, for conveying fresh air into mines, hospitals, prisons, and the close parts af ships. In 1743 he read before the society a description of a method of conveying liquors into the abdomen during the operation of Tapping; afterwards printed in their Transactions. In 1745 he published some Experiments and Observations on Tar-water, which he had been induced to make by the pub- lication of a work called Siris, in which Dr. Berkley, bishop of Cloyne, had recommended tar-water as a universal medicine. In 1746 he communicated to the Royal Society a proposal for bringing small passable stones soon, and with ease, out of the bladder. In

the Gentleman's Magazine for July, 1747, he published an Ac- count of a very considerable Improvement of a Back-heaver, by which it became capable of clearing corn of the very small grain, seeds, blacks, smut-balls, &c., to such perfection as to make it fit for seed-corn. In 1748 he commu- nicated to the society a proposal for checking the progress of fires ; with two memoirs, one on ventilators, and the other on some experiments in electricity. All these papers were printed in the Royal Society's Transactions. In 1749 his ventilators were fixed in the Savoy prison ; and the benefit was so great, that though from eighty to 100 in a year often died of the gaol distemper before, yet, from 1749 to 1752 inclusive, only four persons died, and, of those four, one died of the small-pox, and another of intempe- rance. In 1750 he published some considera- tions on the causes of earthquakes ; occasioned by the shocks felt that year in London; and ex- hibited an examination of the strength of several purging waters, especially that of Jessop's well. Both these are printed in the Philosophical Transactions. He had now been several years honored with the friendship of Frederick prince of Wales : who frequently visited him at Ted- dington. Upon that prince's deatli in 1750 he was appointed almoner to the princess dowager. In 1752 he was chosen by the colle'_ˆe of phy- sicians to preach the sermon called Cvowne's Lecture : Dr. W. Crowne having left a legacy for a sermon to be annually preached on ' the wisdom and goodness of God displayed in the formation of man.' Dr. Hales's text was in Job xii. 12. In 1753 Dr. Hales was elected a mem- ber of the Academy of Sciences at Paris. This year he published in the Gentleman's Magazine Farther Considerations about the best Method of drawing the Foul Air out of the Sick Rooms of occasional Army Hospitals and Private Houses in Town; with many other curious particulars on the Use of Vˆentilators : also aDescription of a Sea Gauge, which he invented to measure unfathom- abledeptlis. This paper he had drawn up about 1732 or 1733 for the late Colin Campbell, esq., who employed the ingenious Mr. Hawksbee to make the machine it describes, which nis tried

in various depths, and answered with great ex- actness, but was at last lost near Bermuda. In 1754 he communicated to the society some ex- periments for keeping water and fish sweet with lime-water ; an account of which was published in the Philosophical Transactions. He conti- nued to enrich their memoirs with many useful articles from this time till his death, particularly a method of forwardmg the distillation of fresh from salt water, by blowing showers of fresh air up through the latter during the operation. Being

nominated by king George II. a canon of Wind- sor, he engaged the princess to request his ma- jesty to recal his nomination. He died at Ted- dington, 1761, aged eighty-four; and the prin- cess of Wales erected a monument to his memory in Westminster Abbey.

HALESIA, in botany, a genus of the mono- gynia order, and dodecandria class of plants : natural order eighteenth, bicornes : cal. quadri- dentated, superior: cor. quadrifid : the nut quadrangular and dispermous.

HALF, 71. s. & adv. Half'blood, n. s. Half'blooded, adj. Half'cap, n.s. Half'exdeal, n. s. Half'faced, adj. Half'hatched, adj. Halk'heaud, adj. Half'moox, n. s. IIalf'penny, n. s. IIalf'pike, n. s. Haef'pixt, n.s.

IIaLf'sCHOLAR, U.S.

IIalf'seas-over, Half'sighted, adj. IIalf'spiieue, n. s. IIai.f'strained, adj. IIalf'sword, n. s. Half'way, adj. 5c adv. Half'wit, n.s. IIalf'witted, adj.

'j PI. halves. Saxon healp. Half srgnifies an exact moiety, one part of two, an equal part ; it is used fre- quently in composi- tion, to signify imper- fection, as hair- blooded ; half-heard ; half-scholar; half- witted, &c. : half penny is a coin of which two make a penny. Half-pint, a measure which is the fourth part of a quart. Half-seas-over is a fa- miliar phrase to de- scribe a person half drunk. When added J to any word denoting personal qualities, it generally notes contempt: the other compounds are too obvious to require a minute explanation. This word in some in- stances has a plural signification when a number is divided. Hi^lfendeal, Sax. half and tijel.

An half a.crc of land. 1 Sam. xiv. 14.

'-n Monday next, at quarter night

S'mll fall a rain, and that so wild and wood Tha. half so gret was never Noes Sood.*

Chaucer. The MiUeres Tale. I crouche thee from elves and from wighies There with tin; nif;htspil said he, anon, rightcs On foure halves of the house aboute, An<\ on the thrcswold of the dore withoute. Id.

*Yeve us a bushel whete, or malt, or reye, A gnddes kiclul, or a trippe of chese, Or elles what you list, we may not chese ; A goddos hulfpennii, or a masse pcny. Or yeve us of your braun^*

Chaucer. The Sompnoures Tale.

Proud incroarhing tyranny Burns with revenging tire, whose hopeful

colours Advance a half-faced sun, striving to shine.

Shakspeare.

With certain half caps and cold moving nods, Thc) I'rote me into silence. Id,

This same half-faced fellow. Shadow ; give me this man : he presents no mark to the enemy : the foeman may with as great aim level at the edge of a penknife.

Id. Bardolph stole a lute-case, bore it twelve leagues, and sold it for three halfpence. Id.

I thank you ; and sure, dear friend, my thanks are too dear of a halfpenny. Id.

The let alone lies not in vour "ood will. — Nor in thine, lord.

— Half-blooded fellow, yes. Id,

There shall be in Englana seven lialfpenny loaves sold for a penny. Id.

Many might go to heaven with Aa//"the labour they ge to hell, if they would venture their industry the right way. Ben Jonsun

Well chosen friendship, the most noble Of virtues, all our joys makes double. And into halves divides our trouble. Denliam.

See how in warlike muster they appear. In rhombs and wedges, and half-moons and winˆs.

illUon. Or what but riches is there known. Which man can solely call his own ; In which no creature goes his half. Unless it be to squint and laugh ? Hudibras. Had the land selected of the best. Half had come hence, and let the world provide the rest. Drydan.

I am half -seas o'er to death ; And, since I must die once, I would be loth To make a double work of what's Aa//" finished.

Id. I go with love and fortune, two blind guides. To lead my way ; half loth, and half consentina;.

Id. No mortal tongue can AaZ/'tho beauty tell ; For none but hands divine could work so well.

Id. He cheats for halfpence, and he doffs his coat To save a farthing in a

ferry-boat. Id.

Which shall be heir of the two male twins, who, by the dissection of the mother, were laid open to the world ? Whether a sister by the half-blood shiU in- herit before a brother's daughter by the whole blood ?

Locke. Of our manufacture foreign markets took off oao half, and the other Italf were consumed amongst our- selves. Id,

The various ways of paying the salute with the lialf-pike, Tatler,

The council is made up half o\it of the noble fami- lies, and half OMl of the pleV>eian. Addison.

Half the misery of life might be extinguished, would men alleviate the general curse by mutual com- passion. Id. Her beauty in thy softer half Buried and lost, she ought to grieve. Prior. Here, thick as hailstones pour. Turnips, and half-hatched eggs, a mingled shower, Amoni; the r.ibble rain. Gay.

Natural was it for a prince, who had proposed to himself the empire of the world, not to neglect the sea, the half oi his dominions. Arbuthnot

Not added years on years my task could close , Back to thy native islands inightest thou sail. And leave half-lieard the melancholy tale. Pope,

One half-pint bottle serves them both to dine j And is at once 'heir vinegar and wine. Id,

Never admit this pernicious coin, no, not so muc)> a« one single halfpenny. Swifl.

You will wonder how Wood could get his majesty's broad seal for so great a sum of bad money, and tliat the nobility here could not obtain (lie same favor, and make our own halfpence as wc used to do. Id,

HAL

764

HAL

We have many half-scholars now a-days, and there is much confusion and consistency in the notions and opinions of some persons. Watli,

HALiyETOS. See Falco. HALI-BEIGH, first dragoman, or interpreter at the grand seignior's court in the seventeenth ceniury, was born of Christian

parents in Poland ; but, having been taken by the Tartars vsfhen a boy, they sold him to the Turks, who brought him up in their religion in the seraglio. His original name was Bobowski. He learned many languages, and Sir Paul Ricaut owns he was inciebted to him for several things, which he relates in his Present Stat-e of the Ottoman Em- pire. He held a great correspondence with the English, and intended to return into the Chris- tian church, but died in 1675, before he could accomplish his design. Dr. Hyde published his book Of the Liturgy of the Turks, their Pilgrim- ages to Mecca, &c., at Oxford, 1691. He trans- lated the catechism of the church of England, and the Bible, into the Turkish language. The MS. is lodged in the library of Leyden. He wrote likewise a Turkish grammar and diction- ary.

HA'LIBUT, 71. s. A sort of fish. HALICARNASSUS, in ancient geography, a principal town of Caria, built by the Argives, and situated between two bays, the Ceramicus and Jasius. It was anciently called Zephyra, and was the royal residence of Mausolus.

HA'LIDOM, ji. s. pahj 'oom, holy judgment, or pal 13 and dame, for lady. Our blessed lady. In this sense it should be halidam. By my halidom, quoth he. Ye a great master are in your degrpe. Hubherd. HALIFAX, a very ancient, populous, and flouiisliing mai^kettov/n and borough of England, in the West Riding of Yorkshire, famous for tlie clothier trade. The parish contains above 30,0C()))eople, and is above thirty miles in circum- ference. Besides the established church at Hali- fax, and sixteen meeting-houses, it has twelve chapels, two of which are parochial. The prin- cipal articles now manufactured, in and about Halifax, are shalloons, plain Russels, lastings and amens, serges, moreens, tammies, wildbores, calamancoes, &c. For the convenience of the manufacturers, there has been erected an elegant edifice called the Piece Hall ; it is in the form of an oblong square, occupying a space of 10,000 square yards, having 315 distinct rooms for the lodgment of goods, which are open for sales once a week. The weavers of the surrounding district bring their goods undressed to this market. The inhabitants here and in the neighbouring towns are so entirely employed in these manufactures, that agriculture is little minded. Most of their provisions are brought from the North and East Ridings, and from Lancashire, Cheshire, Not- tinghamshire, and Warwickshire. The markets ire much crowded. The houses are of stone, but irregularly built. Halifax lies 16 miles ."5. W . of Leeds, 42 S.W. of York, and 197| N. N. W. ot London. It sends two members to Parliament. Halifax, a county of the province of Nova Scotia, containing Halifax, the capitnl, tiietown- sliips of Londondony, Truro, Onslow, Colclies- ter, Lawrence, Suiillianijilon, Canso, and Tm-

mouth. It has numerous bays and rivers, which render it accessible from

the sea.

The town of Halifax is situated on the was side of a spacious bay or harbour called Chebuc too, where 1000 of the largest ships might rids with safety. It is 236 feet above the level of th(sea ; and is laid out in oblong squares, all thi streets being at right angles. The town anc suburbs are about two miles in length, anc about a quarter of a mile in breadth. At the north extremity is the king's naval yard, supplied with stores of every kind. The harbour is open at all seasons of the year. Halifax is entrenched with forts of timber. The country around the town is barren; but the imports of Great Britaii alone, into the port, amounted in I81O ti £600,000. It is forty miles south-west fron Truro, eighty-four east from Annapolis on the bay of Fundy, and 157 south-east from St. Ann in New Brunswick. Population 8000. Somt accounts state it much higher. Long. 63° 35′ 45″ W., lat. 44° 44′ N.

Halifax, a county of Virginia, United States, bordering on the state of North Carolina. It is about forty-two miles long, and thirty-nine broad.

Halifax, one of the middle districts of North Carolina, bounded on the north by the state of Virginia, east by Edenton district, west by Hills-borough, and south by Newbern. It is divided into seven counties, namely, Northampton, Hali- fax, Martin, Edgecomb, Warren, Franklin, and Nash.

Halifax, a county of North Carolina, in the above district, bounded north by Northampton, south by Edgecomb, east by Bertie, and west by Warren.

Halifax, the chief town of the above county, is situated on the west bank of the Roanoke, and regularly laid out. Seventy-five miles north- east from Fayetteville, and 255 west by south from Philadelphia.

HA'LIMASS, n. s. palij and mass. The feast of All-souls.

She came adorned hither like sweet May ;

Sent back like halimass, or shortest day.

Shakspeare,

HALIOTIS, the ear-shell, a genus of insects belonging to the order of vermes testacias. This is an animal of the snail kind, with an open shell resembling an ear. There are seven species, distinguished by the figure of their shells.

HA'LITUOUS, (uij. Lat. halitus. Vaporous ; fumous. ,

We speak of the atmosphere as of a peculiar thin and haliiuoui liquor,

much lighter than spirit of wine.

Bof/le.

HALL, 71. s. Sax. pal; Dut. tialle. A court of justice ; a manor-house; so called because in it were held courts for the tenants. The public room of a corporation : the vestibule, or first large room in a mansion.

For why ? me thouten by Sainct Gile That all wos stone of bevile Bothc the castell and the toure. And eke the, hall and every houre.

Chftucer. House of Fume And she the moste serviceable of all.

Hath evtry tha:nbev avraif>d, and his luill.

Id. The Claker, TaU.

HAL

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HAL

Min is the ruin uf the highe lui'.les The falling of the toures and of the whiles Upon the minour or the carpf ntfr.

Id. The Knighles Tale. fhat light we see is burning in my luill.

Shakgpeare. Courtesy is sooner found in lowly sheds With smoky rafters, than in taps'try halls And courts of princes. Milton.

With expedition on the beadle call. To summon all the company to the hall. Garth. Captain Sentry, my master's nephew, has taken Dosˆession of the hall house, and the whole estate.

Addison. O lost too soon in yonder house or hall. Pope.

And thus they wandered forth and hand in hand.

Over the shining pebbles and the shells. Glided along the smooth and hardened sand.

And in the worn and wild receptacles Worked by the storms, yet worked as it were

planned. In hollow halls, with sparry roofs and cells. They turned to rest. Byron. Don Juan.

Hall (John), an English surgeon, who flou- rished in the reign of queen Elizabeth, at Maid- stone in Kent. He was bom in 1529, and pub- lished, 1. A Compendium of Anatomy ; and, 2., A Collection of Hymns, with musical notes, in 1565: besides several tracts on medicine and surgery.

*Hall (John), a poet of distinguished learning, born in Durham, in 1627, and educated at Cam- bridge In 1646, when he was but nineteen years of age, he published his Horae 'acivoe, or Essays ; and the same year appeared liis Poems. He translated from the Greek, Hierocles upon the golden verses of Pythagoras ; to which is pre- fixed an account of tl)e translator and his works, by John Davies of K idwelly. He also translated Longinus, and died i*i 1656, aged twenty-nine.*

Hall (Joseph), an eminent English prelate, bom at Ashby de la Zouch, in 1574, and edu- cated at Cambridge. He became professor of rhetoric in that university, and was made rector of Halsted, prebendary of Wolverhampton, dean of Worcester, bishop of Exeter, and lastly of Norwich. His works testify his zeal against popery, and are much esteemed. In July 1616 he attended lord Doncaster into France, and upon his return was appointed by king James one of the divines who should attend him into Scotland. In 1618 he was sent to the synod of Dort, and appointed to preach a Latin sermon before that Assembly. Being obliged to return before the synod broke up, on account of his health, he was by the states presented with a gold medal. Hewrote, 1. Miscellaneous Epistles; 2. Mundus alter et idem; 3. A Just Censure of Travellers ; 4. The Christian Seneca ; 5. Satires, in SIX books ; 6. A Century of Meditations ; and many other works, which, besides the satires, make 5 vols. He died in 1656.

Hall, in architecture. 'itruvius mentions three kinds of halls ; the tetrastyle, with four columns supporting the platform or ceiling; the Corinthian, with columns all round let into the wall, and vaulted over; and the Egyptian, which had a peristyle of insulated Corinthian columns, bearing a second order with a ceiling. The hall ir- properly the finest as well as first member of

ai apartment : and in the houses of ministers < >• state, magistrates, &c., is the place where they despatch business, and give audience. In very magnificent buildings, where the hall is larger and loftier than ordinary, and placed in the mid- dle of the house, it is called a saloon. The length of a hall should be at least twice and a quarter its breadth; and in great buildings, three times its breadth. The height may be two-thirds of the breadth ; and, if made with an arched ceiling, it will be much handsomer, and less lia- ble to accidents by fire. In this case, its height is found by dividing its breadth ipto six parts, five of which will be the height from the floor to ■.he under side of the key of the arch.

Hall, or Suaeian Hall, a fortified town of Wirtemberg, the capital of the circle of the Jaxt, is beautifully situated on the Kocher. The town-house, the academy, and the church of St. Michael, are worthy of notice. It has two sub- urbs ; and 5500 inhabitants, chiefly Lutherans, who derive their chief means of support from the brine springs, which produce annually from 70,000 to 80,000 cwt. of salt. Here was con- cluded, in 1610, a famous convention or union of the Protestant princes of the empire. Four- teen miles east of Lowenstein, and thirty north- east of Stutgard. Long. 9° 50′ E., lat. 49° 6 N.

Hall in lNNTHAL,atown of the Tyrol, having a celebrated mint; but still more remarkable for its salt works, which produce annually above 270,000 cwt of salt. Tlie salt, found in mines about four miles off", is dissolved in large pits ; and the process of evaporation takes place in the town. Nine miles north-east of Inspruck, and forty-eiˆht north of Rrixen.

H.\LLAND, a mountainous province of Sweden, in South Gothland, bounded by West Gothland, Smaland, Scania, and the Cattegat. Its superficial extent is about 1465 square miles, and its population 73,600. It is covered by large woods of oak and birch.

HALLE, a large town of Prussia, in Saxony, government of Merseburg, standing on both sides of the Saale, over which it has five bridges. It is an irregular square, having several suburbs ; of which two, Glaucha and Neumarkt, are, strictly speaking, separate towns. The popula- tion, including these, amounts to 25,000. Here a military academy of ancient date was converted by the elector of Saxony, in 1690, into a univer- sity, which has always maintained a high reputa- tion. In the Glaucha is the orphan hospital, and Canstein's establishment for printing, erected in 1712 : this is said to have produced since that time nearly 1,000,000 of New Testaments, and 2,000,000 of Bibles. Here are two public libraries. Among the minor establishments are a cabinet of natural history and mechanics, and an apothecaries' hall. Halle has given birth to a great number of men of eminence, as Hoff'mann, Unze, Michaelis, Nemeier, and Handel. It contains several buildings which, if not splendid, are remarkable — such as the red tower, which rises to a height of 260 feet, the church of St. Ulrick, and the hotel de ville, which contains the hospital. Of its castle only one wing now re- mains, used as a Calvinist church. Tlie Luther-

ans have here seven parish churches, and the Jews a synagogue. The ; inhabitants have manufactures of woollens, stockings, silk, leather, buttons,

hardware, &.C.; but the principal is that of starch. In a valley between the town and the Saale is a celebrated salt spring, whose annual produce is 4000 tons : on the other side of the river is another, wrought by the gyvernraent, which produces nearly 12,000 tons more. Pit- coal is found in the neighbourhood.

Halle, three days after the battle of Jena, was the scene of an obstinate conflict between tlie Prussians and French. Twenty-two miles south-east of Eisleben, twenty-two south-west of Dessau, and fifty-six south by east of Magde- burg.

H ALLEIN, ii town in the duchy of Salzburg, on the Salze, belonging to Austria. It has manufac- tures of needles and cotton ; and the salt works, which are carried on on account of the govern- ment, are of great importance : the quantity yearly sold being from 1-3,000 to 15,000 tons, worth about £120,000 sterling, of which tlie half is said to be clear profit. The salt is found in masses in the interior of a mountain called Duruberg, about four miles from the town.

HALLELUJAH, w. s. Heb. n'l'^bn, praise ye the Lord. A song of thanksgiving. Then shall thy saints

Unfained hallelttjahs to Thee sing.

Hymns of high praise. MiJton.

Singing those devout hymns and heavenly anthems, in which the church militant seems ambitious to emu- late the triumphant, and echo back the solemn praises and hallelujahs of the celestial choirs. Boyle.

Hallelujah, or Allf.lujah, is a term of rejoicing, first introduced from the Jewish into the Christian church, by St. Jerome. It occurs in several of the Psalms, particularly from Ps. cxlv. to cl. For a considerable time it was only used once a year iti the Latin church, viz. at Easter; but in the Greek church it was much more frequent. St. Jerome mentions its being sung at the interments of the dead, which still continues in that church, and on some occasions in Lent. Gregory the Great appointed it to be sung all the year round in the Latin church, which raised some complaints against him ; as introducing the ceremonies of the Greek church into the Roman. But he excused himself by as- serting that it had been the ancient usage of Rome, and introduced under pope Damasus.

HALLER (Albert Van), an eminent physi- cian, born at Bern on the 16th of October, 1708. He very early showed a great genius for litera- ture ; and his progress in his studies was rapid almost beyond belief. When other children were beginning only to read he was studying Bayle and Moreri;

and at nine he was able to translate Greek, and beginning to study Hebrew. His education was interrupted by the death of his father, when he was in his thirteenth year. After this he was sent to the public school at Bern, where he was not only distinguished for his knowledge in Greek and Latin, but also for his poetical genius. His poetical essays, pub- lished in the German language, were read and admired throughout the empire. In his sixteenth

year he began to study medicine at Tubmgen, under Duvernoy and Camerarius; and continued there for two years, when the great reputation of Boerhaave drew him to Leyden. Ruysch was also still alive, and Albinus was rising into fame. Animated by such examples, he spent all tlie day and great part of the night in the most in- tense study ; and the proficiency whicli he made gained him the univefsal eiteem both of his teachers and fellow students. From Holland, in 1727, he came to England, where he was honored with the friendship of Douglas, Chesel- den, and Sir Hans, Sloane, P. R. S. He next went .to France; where, under Winslow and Le Dran, he had new opportunities of prosecuting the study of anatomy. But his zeal was greater than popular prejudice, even in the enlightened city of Paris, could tolerate. An information being lodged against him for dissecting dead bodies, he was obliged to miake a precipitate re- treat to Basil, where he became pupil to the ce- lebrated Bernouilli. Thus improved by the most distinguished teachers of that period, and endued with uncommon natural abilities, he returned to Bern in his twenty-sixth year, where he stood candidate first for the office of physician to an hospital, and afterwards for a professor- ship. But he was disappointed in both ; and it was even with difficulty that he obtained the ap- pointment of keeper of a public library at Bern. This, though by no means suited to his great abilities, afibrded him an opportunity for that extensive reading by which he has been so justly distinguished. The neglect of his merit neither diminished his ardor for medical pursuits, nor detracted from his reputation at home or abroad. Soon after he was nominated a professor in the university of Gottingen, by king George II. The duties of this important office he discharged, with honor to himself and advantage to the public, for seventeen years. Nor was it long necessary for him, in this arduous undertaking, to labor alone. The example of the preceptor was fol- lowed by his pupils. Zinn, Zim.merman, Cal- dani, and many others, labored to prosecute and to perfect the discoveries of their great master. Nor were the labors of Dr. Haller, during his re- sidence at Gottingen, confined to one depart- ment of science. To him the Anatomical The- atre, the School of Midwifery, the Chirurgical Society, and Royal Academy of Sciences at Got- tingen, owe their origin. Such distinguished merit could not fail to meet with a suitable re- ward. King George II. not only honored him with every mark of attention himself, but pro- cured him letters of nobility from the emperor. On the death of

Dillenius he had an offer of the professorship of botany at Oxford ; the states of Holland invited him to the chair of the younger Albinus, and the king of Prussia was anxious that he should be the successor of Maupertuis at Berlin. Marshal Keith wrote to him in the name of his sovereign, offering him the chancellorship of the. university of Halle. Count Orlow invited him to Russia, in the name of the empress, ofi'er- in■', Sweden conferred on him an unso licitea nonor, by raising him to the rank of knight of ttie polar star; and the emperor of Germany

honored him with a personal visit. He continued, however, at Gottingen, anxious to extend the rising fame of that medical school. But, after seventeen years esidence, an ill state of health rendering him less fit for the important office which he held, he obtained permission from the regency of Hanover to return to Bern. His fellow citi zens were now as sensible as others of his supe- rior merit. A pension was settled upon him for life, and he was elected into the most important offices in the state. He was the first president, as well as the great promoter, of the CEconomical Society at Bern ; and may be considered as the founder of the Orphan Hospital there. He con- tinued to write tdl within a few days of his death, which happened in his seventieth year, on the 12th of December, 1777. • His Elementa Physiologiae and Bibliotheca Medicina; afford undeniable proofs of his penetrating genius and solid judgment. But he was not more distin- guished as a philosopher than beloved as a man ; and not more eminent for his improvement in every department of medical science, than for his piety to God, and benevolence to mankind.

HALLERIA, in botany, African fiy-honey- suckle, a genus of the angiospermia order, and didynamia class of plants; natural order fortieth, personatae : cal. trifid : coR. quadrifid; the fila- ments longer than the corolla; the berry inferior and bilocular. Species two only ; natives of the Cape.

HALLEY (Dr. Edmund), an eminent astro- nomer, was the only son of a soap-boiler in London, and was born in 1656. He first studied the languages and sciences, but at length de- voted himself entirely to astronomy. In 1676 he went to the island of St. Helena to complete the catalogue of fixed stars, by the addition of those which lie near the south pole ; and having delineated a planisphere, on which he laid them all down in their exact places, he returned to England in 1678. In 1680 he took a tour through Europe, accompanied by the celebrated Mr. Nelson. Between Calais and Paris he ob- tained a view of the famous comet in its return

from the sun. He had in November before seen it in its descent ; and now hastened to complete his observations upon it from the royal observa- tory of France His design in this part of his tour was to settle a correspondence between the royal astronomers of (ireenwich and Paris; and to improve himself under the great Cassini. He went thence to Italy, where he spent great part ‘)f 1081 ; but he soon after returned to England. In 1683 he published his Theory of the Varia- tioH of the Magnetical Comjiass ; in which he supposes the globe to be a great magnet, with four magnetical poles, or points of attraction ; but aftwr- wards, thinking that this theory was liable to great exceptions, he procured an application to be made to king William, who appointed him commander of the Paramour Pink, with orders to seek by observations the discovery of the rule of variations, and to lay down the longitudes and latitudes of his majesty’s settlements in America. He set out on this attempt on the 24th of November 1698 ; but having crossed the line his rpen grew sickly; and, his lieutenanj; mutinying, he returned home in June 1699.

Having had the lieutenant tried and cashiered, he sailed a second time in September following, with the same ship and another of less bulk, of which he had also the command. He now traversed the vast Atlantic from one hemisphere to the other as far as the ice would permit him : and having made observations at St. Helena, Brasil, Cape V’erd, Barbadoes, the Madeiras, the Canaries, the coast of Barbary, and many other latitudes, arrived in September 1700; and published a general chart, in 1701, showing at one view the variation of the compass in all those places. Captain Halley had been at home little more than half a year, when he was sent by the king, to observe the course of the tides, with the longitude and latitude of the principal head-lands in the British channel ; whicli having executed, with his usual accuracy, he published a iarge map of the channel. Soon after the em- peror of Germany resolving to make a conve- nient harbour for shipping in the Adriatic, cap- tain Halley was sent by queen Anne to view the two ports on the coast of Dalmatia. He em- barked on the 22nd of November 1702 ; passed over to Holland ; and, going through Germany to Vienne, he proceeded to Istria ; but the Dutch opposing the design it was laid aside. The emperor made him a present of a rich dia- mond ring from his finger, and honored him with a letter of recommendation, written with his own hand, to queen Anne. Soon after his •eturn, he was sent again on the same business ; when passing through Hanover, he supped with the electoral prince, afterwards king George I., and his sister the queen of Prussia. On his arrival at Vienne, he was the same evening presented to the emperor, > who sent his chief engineer to attend him to Istria, where they repaired and added new fortifications to those ot Trieste. Mr. Halley returned to England in 1V03; was made professor of geometry in the university of Oxford, and received the degree

of LL.D. He was scarcely settled at Oxford, when he began to translate into Latin, from the Arabic, Apol- lonius De Sectione Ilationis; and to restore Apollo- nius's books De Sectione Spatii, from the account given of them by Pappius ; and he published the whole work in 1706. Afterwards he had a share in preparing for the press Apollonius's Conies, and ventured to supply the whole eighth book, the original of which is lost. He likewise added Serenus on the section of the cylinder and cone, printed from the original Greek, with a Latin translation, and published the whole in folio. In 1713 he was made secretary of the Royal So- ciety ; in 1720 king's astronomer at the royal observatory at Greenwich; and, in 1729, a member of the Academy of Sciences at Paris. He died at Greenwich in 1742. His principal works are, 1. Catalogus Stellarum Australium. 2. Tabulie Astronomies. 3. An Abridgment of the Astronomy of Comets, &c.

HALLIARDS, corrupted from haul and yard, the ropes or tackles usually employed to hoist or lower any sail upon its respective mast or stay See J EARS.

HALLIFAX (Samuel), a learned English bishop, born at C'hesterfield, in 1730, and edu- cated at Cambridge, where he was regius profes-

sor of civil law. In 1781 he v.as made bishop of Gloucester, and 1789 bishop of St. Asaph. He published an Analysis of Civil Law, and Sermons on the Prophecies. He died in 1790, aged sixty.

HALLOO, interj., v. a., & v. n. The original of this word is controverted ; some imagine it corrupted from a lid, to him ! others from allons, let us go ! and Skinner from haler, to draw. — Johnson. A word of encouragement when dogs are let loose on their game. Fr. huler des chiens. To cry aloud, either in contempt or by way of cheering and encouragement ; to cry after dogs, or hounds; to chase with shouts. If I fly, Marcius, Halloo me like a hare. Shakspeare.

When we have found the king, he that first lights on him. Halloo the other. Id. King Lear.

A cry more tuneable Was never hallooed to, nor cheered with horn.

Shakspeare. Country folks hallooed and hooted after me, as the arrantest coward that ever shewed his shoulders to his enemy. Sidney/.

Some popular chief. More noisy than the rest, but cries halloo, And, in a trice, the bellowing herd come out.

Drydeu. If, whilst a boy. Jack ran from school, ˆ Fond of his hunting-horn and pole. Though gout and age his speed detain. Old John halloos his hounds again. Prior.

To HA'LLOW, V. a. Sax. {ˆalˆian, jˆaliˆ, holy. To consecrate ; to make holy ; to reverence as holy, thus we say ' hallowed be thy name.'

When we sanctify or hallow churches, it is only to testify that we make them places of publick resort ; that wc invest God himself with them, and that we sever them from common uses. Hooker.

*It cannot be endured to hear a man profess that he putteth fire to his neighbour's house, but yet so hal- loweth the same with prayer, that he hopeth it shall not bum. '**•*

Is't Cade that I've slain, that monstrous traitor Sword, I will hallow thee for this thy deed. And hang thee o'er my tomb, when I am dead.

Shakspeare. My prayers Are not words duly hallowed, nor my wishes More worth than vanities ; yet prayers and wishes Are all I can return. Id. Henry VIII.

God, from work Now resting, blessed and hallowedxhe seventh day. As resting on that day from all his works. But not in silence holy kept. Milton.

Then banished faith shall once again return. And vestal fires in hallowed temples burn.

Dry den.

No satyr lurks within this hallowed ground ; But nymphs and heroines, kings and gods abound.

Gratmlle. But, swain forsworn ! whoe'er thou art. This hallowed spot forbear ; Remember Colin's dreadful fate. And fear to meet him there.

Tickel. Colin and Ltwy.

The Sabbath comes, a day of blessed rest; What hallows it upon this Christian shore ? Lo ! it is sacred to a solemn feast.

Byron. Childe Harold.

HALLUCINA'TION, n. s. Lat. halluc.inatio. Error; blunder; mistake; folly.

A wasting of flesh, without cause, is frequently termed a bewitched disease ; but questionless a mere hallucination of the vulgar. Harvey.

This must have been the hallucination of the tran- scriber, who probably mistook the dash of the I for a T. A ddison.

HALM, n. s. Sax. jjealm. Straw : pro- nounced Hawm ; which see.

HALMOTE, or Halimote, is the same with Court Baron, the word implying a meeting of the tenants of the same hall or manor. The name is still retained at Luston, and other places in Herefordshire. See Court.

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VOL. XI.

HALO TO INDULGENCE.

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Sic oportet ad librum, presertim miscellanei generis, legendum accedere lectorem, nt solct ad convivium conviva civihs. Convivator annititur omnibus eatisfacere ; et tamen si quid apponitur, quod hujus ant illius palato non respondeat, et hie et ille urbane dissimulant, et alia fercula probant, ne quid contristent coimvatorem.

Eraimttt—

A reader should sit down to a book, especially of the miscellaneous kind, as a vrell-behaVed visitor does to a banquet. The master of the feast exerts himself to satisfy his guests ; but if, after all his care and pains, something should appear on the table that does not suit this or that person's taste, they politely pass it over without notice, and commend other dishes, that they may nol distress a kind host. Translation.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOL1TANA,

ASSISTED BY EMINENT PROFESSIONAL AND OTHF.R GENTLEMEN.

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THE

LONDON ENCYCLOPEDIA.

HA’LO, n.s, A red circle round the sun or moon.

If the hail be a little flatted, the light transmitted may grow so strong, at a little less distance than” that of twenty-six degrees, as to form a halo about the sun or moon ; which halo, as often as the hailstones are duly figured, may be coloured. Newton.

I saw by reflection, in a vessel of stagnated water, three halos, crowns or rings of colours about the sun, ike three little rainbows, concentrick to his body.

Id.

HALO, or Corona, in optics, is a luminous Circle surrounding the sun, moon, planets, or fixed stars. Sometimes these circles are white, and sometimes colored like the rainbow. Sometimes one only is visible, and sometimes several concentric halos appear at the same time. Those which have been seen about Sirius and Jupiter were never more than 3°, 4°, or 5° in diameter ; those which surround the moon are, also, sometimes no more than 3° or 5° ; but these, as well as those which surround the sun, are of very different magnitudes, *viz.* of 12°0’, 22° 35’, 30° 0’, 38° 0’, 41° 2’, 45° 0’, 46° 24’, 47° 0’, and 90°, or even larger than this. Their diameters also sometimes vary during the time of observation, and the breadths both of the colored and white circles are very different, viz of 2°, 4°, or 7°. Their colors are more diluted than those of the rainbow ; and they are in a different order, according to their size. Mr. Huygens observed red .next the sun, and a pale blue outwards. Sometimes they are red on the inside and white on the outside. M. Weidler observed one that was yellow on the inside and white on the outside. In France one was observed, in 1683, the middle of which was white ; after which followed a border of red, next to it was blue, then green, and the outermost circle was a bright red. In 1728 one was seen of a pale red outwardly, then followed yellow, and then green, terminated by a white. In Holland, M.

Muschenbroeck says, fifty may be seen in the daytime, al-most every year; but they are difficult to be observed, except the eye be so situated, that not the body of the sun, but only the neighbouring parts of the heavens, can be seen. Mr. Middleton says, that this phenomenon is very frequent in North America ; for that there is generally one or two about the sun every week, and as many about the moon every month. Halos round the sun are very frequent in Russia. M. ˆEpinus says, that from the 23d of April, 1758, to the 20th of September, he himself had observed P”> fewer than twenty-six, and that he has sometimes s>. n twice as many in the same space of time.

Similar, in some respects, to the halo, was the remarkable appearance which M. Bouguer describes, as observed on the top of Mount Pichinca, in the Cordilleras. When the sun was just ris-ing behind them, so as to appear white, each of VOL. XL— PAST I,

them saw his own shadow projected upon it, and no other. The distance was such that all the parts of the shadow were easily distinguishable, as the arms, the leg, and the head; but what surprised them most was, that the head was adorned with a kind of glory, consisting of three or four small concentric crowns, of a very lively color, each exhibiting all the varieties of the primary rainbow, and having the circle of red on the outside. The intervals between these chcles continued equal, though the diameters of them all were constantly changing. The last of them was very faint; and at a considerable distance was another great white circle, which surrounded the whole. As near as M. Bouguer could com pute, the diameter of the first of these circles was about 5§°, that of the second 11°, that of the third 17°, and so on ; but the diameter of the white circle was about 76°. This phenomenon never appeared but in a cloud consisting of frozen particles, and never in drops of rain like the rainbow. When the sun was not in the horizon, only part of the white circle was visible, as M. Bouguer frequently observed afterwards. Similar to this curious appearance was one seen by Dr. M’Fait in Scotland ; who observed a rainbow round his shadow in the mist, when he was upon an eminence above it. In this situation the whole country round seemed buried un-der a vast deluge, and nothing but the tops of distant hills appeared here and there above the flood. In those upper regions, the air, he says, is at that time very pure and agreeable. At another time he observed a double range of co-lors round his shadow. The colors of the outermost range were broad and very distinct, and every where about two feet distant from the

shadow. Then there was a darkish interval, and after that another narrower range of colors, closely surrounding the shadow, which was very much contracted. He thinks that these ranges of colors are caused by the inflection of the rays of light, the same that occasioned the riug of light which surrounds the shadow of all bo-dies, observed by M-. Maraldi, and this author. Halos may be produced by placing a lighted candle* in the midst of steam in cold weather. If glass windows be breathed upon, and the flame of a candle be placed some feet from it, while the spectator is also at the distance of some feet from another part of a window, the flame will be surrounded with a colored halo. And if a candle be placed behind a glass receiver, when air is admitted into the vacuum within it, at a certain degree of density, the vapor with which it is loaded will make a colored halo round the flame. This was observed by Otto Guericke. In December 1756 M. Muschenbroeck observed, that, when the glass windows of his room were covered with a thin plate of ice on the inside, the moon appearing through it was surrounded witn

a large and variously colored halo ; and, opening the window, he found that it arose entirely from that thin plate of ice, for none was seen except through it. Dr. Kotelnihow, having, like Dr. Halley, made very accurate observations to determine the number of possible rainbows, considers the colored halo, which appears about a candle, as the same thing with one of those bows which is formed near the body of the sun, but which is not visible on account of his excessive splendor. See OPTICS.

Descartes observes,. that the halo never appears when it rains; from which he concludes that this phenomenon is occasioned by the refraction of light in the round particles of ice, which are then floating in the atmosphere ; and, though these particles are flat when they fall to the ground, he thought they must be protuberant in the middle before their descent; and according to this protuberancy he imagined that the diameter of the halo would vary. — In treating of meteors, Gassendi supposed, that a halo is of the same nature with the rainbow, the rays of light being in both cases twice refracted and once reflected within each drop of rain or vapor, and that all the difference there is

between them arises from their different situation with respect to the observer. For whereas, when the sun is behind the spectator, and consequently the rainbow before him, his eye is in the centre of the circle ; when he views the halo, with his face towards the sun, his eye is in the circumference of the circle ; so that, according to the known principles of geometry, the angle under which the object appears, in this case, must be just half of what it is in the other.

M. Dechales endeavours to show that the generation of the halo is similar to that of the rainbow. If, says he, a sphere of glass or crystal, full of water, be placed in the beams of the sun, there will not only be two circles of colored light on the side next the sun, and which constitute the two rainbows ; but there will also be another on the part opposite to the sun, the rays belonging to which afterwards diverge, and form a colored circle, such as will be visible, if the light that is transmitted through the globe be received on a piece of white paper. The reason why the colors of the halo are more dilute than those of the rainbow, he says, is owing principally to their being formed not in large drops of rain, but in very small vapor ; for, if the drops of water were Wge, the cloud would be so thick, that the rays of the sun could not be regularly transmitted Jirough them ; and, on the other hand, he ob- »»erved, that when the rainbow is formed by very thin vapors, the colors hardly appear. As for those circles of colors which are sometimes seen round candles, it was his opinion that they arc owing to nothing but moisture on the eye of the observer ; for that he could never produce this appearance by means of vapor only, if he wiped his eyes carefully; and he had observed that such circles are visible to some persons and not to others, and to the same persons at one time and not another.

The most considerable and generally received theory, respecting halos, is that of Huygens, published in the English Philosophical Transactions.

See Lowthorp's Abridgment, Vol. II., p. 189. Sir Isaac Newton mentions it with respect. This article contains the heads of a discourse which he afterwards composed, but never quite finished ; and which has been translated, with some additions, by Dr. Smith, from whom the following account is chiefly extracted. Mr. Huygens was first led to think particularly upon this subject, by the appearance of five suns at Warsaw, in 1658 ; after which, he says, he hit upon the true cause of halos and mock suns. If we can conceive any kind of bodies in the atmosphere, which, according to the known laws of optics, will, either

by reflection or refraction, produce the appearance in question, when nothing else can be found that will do it, we must acquiesce in the hypothesis, and suppose such bodies to exist, even though we cannot give a satisfactory account of their generation. Two such bodies are assumed by M. Huygens ; one of them a round ball, opaque in the centre, but covered with a transparent shell ; and the other is a cylinder, of a similar composition. By the help of the for-mer he endeavours to account for halos, and by the latter for those appearances which are called mock suns. Those bodies which M. Huygens requires, in order to explain these phenome are not, however, a mere assumption ; for so e such, though of a larger size than his purpos quires, have been actually found, consisting, of snow within and ice without. They are particularly mentioned by Descartes. The balls with the opaque kernel, which he supposed to have been the cause of them, he imagines not to exceed the size of a turnip-seed.

M. Marriotte accounts for the formation of the small coronas by the transmission of light through aqueous vapors, where it suffers two refractions without any intermediate reflection. He shows that light which comes to the eye, after being refracted in this manner, will be chiefly that which falls upon the drop nearly perpendicular ; because more rays falling upon any given quantity of surface in that situation, fewer of them are reflected with small degrees of obliquity, and they are not so much scattered after refraction. The red will always be outermost in these halos, as consisting of rays which suffer the least refraction. And whereas he had seen, when the clouds were driven briskly by the wind, halos round the moon, varying frequently in their diameter, being sometimes of 2°, sometimes of 3°, and sometimes of 4° ; sometimes also colored, sometimes only white, and sometimes disappearing entirely ; he concluded that all these variations arose from the different thickness of the clouds, through which sometimes more and sometimes less light was transmitted. He supposed, also, that the light which formed them might sometimes be reflected, and at other times refracted. As to those coronas which consist of two orders of colors, he imagined that they were produced by small pieces of snow, which, when they begin to dissolve, form figures which are a little convex towards their extremities. Sometimes, also, the snow will be melted in different shapes ; and, in this case, the colors of several halos will be intermixed anc» confused ; and such, he says, he had sometimes observed round the sun. M. Marriotte then

proceeds to explain the larger halos, *viz.* those that are about 45° in diameter, and for this purpose he lias recourse to equiangular prisms of ice, in a certain position with respect to the sun; and he takes pains to trace the progress of the rays of light for this purpose ; but this hypothesis is very improbable. In some cases he thought that these large coronas were caused by hailstones, of a pyramidal figure; because, after two or three of them had been seen about the sun, there fell the same day several such pyramidal hailstones. M. Marriotte explains parhelia by the help of the same suppositions. See PARHELION.

M. Muschenbroeck concludes his account of coronas with observing, that some density of vapor, or some thickness of the plates of ice, divides the light in its transmission through the small globules of water, or their interstices, into its separate colors : but what that density was, or what was the size of the particles which composed the vapor, he could not determine.

Sir Isaac Newton considered the larger and I'-'S variable appearances of this kind as produced according to the common laws of refract; :i, but that the less and more variable appear- . 'Ses depend upon the same cause with the colors of thin plates. He concludes his expli-t ion of the rainbow with the following obser-vˆtion on halos and parhelia : — ' The light which comes through drops of rain by two refractions, without any reflexion, ought to appear the strongest at the distance of about 26° from the sun, and to decay gradually both ways as the distance from him increases. And the same is to be understood of light transmitted through spherical hailstones : and if the hail be a little flatted, as it often is, the transmitted light may be so strong, at a little less distance than that of 26°, as to form a halo about the sun or moon ; which halo, as often as the hailstones are duly figured, may be colored, and then it must be red within by the least refrangible rays, and blue without by the most refrangible ones ; especially if the hailstones have opaque globules of snow in their centres to intercept the light within the halo, as Mr. Huygens has observed, and made the inside of it more distinctly defined than it would otherwise be. For such hailstones, though spherical, by terminating the light by the snow, may make a halo red within, and colorless without, and darker within the red than without, as halos use to be. For, of those rays which pass close by the snow, the red-making ones will be the least refracted, and so come to the eye in the straightest lines.' Some farther thoughts of Sir Isaac Newton's on halos are subjoined to the account of his experiments on the colors of thick plates of glass which he

conceived to be similar to those which are exhibited by thin ones : — ‘ As light reflected by a lens quicksilvered on the back side makes the rings of the colors above described, so it ought to make the like rings in passing through a drop of water. At the first reflexion of the rays within the drop, some colors ought to be transmitted, as in the case of a lens, and others to be reflected back to the eye. For instance, if the diameter of a small drop or globule of water be about the

s&jth part of an inch, so that a red-making ray, in passing through the middle of this globule, has 250 fits of easy transmission within the globule, and ail the red-making rays, which are at a certain distance from this middle ray round about it, have 249 fits within the globules, and all the like rays at a certain farther distance round about it have 248 fits, and all those at a certain farther distance 247 fits, and so on, these concentric circles of rays, after their transmission, falling on a white paper, will make concentric rings of red upon the paper ; supposing the light which passes through one single globule strong enough to be sensible, and in like manner the rays of other colors will make rings of other colors. Suppose now that in a fair day the sun should shine through a thin cloud of such globules of water or hail, and that the globules are all of the same siz°, the sun seen through this cloud ought to appear surrounded with the like concentric rings of colors, and the diameter of the first ring of red should be 7° 15’, that of the second 10° 15’, that of the third 12° 33’, and, according as the globules of water are bigger or less, the ring should be less or bigger.’ This curious theory our author informs us was confirmed by an observation which he made in 1692. He saw by reflexion, in a vessel of stagnating water, three halos, crowns, or rings of colors about the sun, like three little rainbows concentric to his body. The colors of the first or innermost, were blue next the sun, red without, and white in the middle, between the blue and red ; those of the second crown were purple and blue within, pale red without, and green in the middle ; and those of the third were pale blue within, and pale red without. These crowns enclosed one another immediately, so that their colors proceeded in this continual order from the sun outward ; blue, white, red ; purple, blue, green, pale yellow, and red ; pale blue, pale red. The diameter of the second crown, mea sured from the middle of the yellow and red on one side of the sun to the middle of the same color on the other side, was 9° 33’, or there-abouts. The diameters of the first and third he had not time to measure ; but that of the first seemed to be about 5° or 6°, and that of the third about 1 2°. The like crowns appear sometimes about the moon : for in the beginning of the year 1664, on February 19th, at night, he saw two

such crowns about her. The diameter of the first, or innermost, was about 3°, and that of the second about 5° 3Cf. Next about the moon was a circle of white ; and next about that the inner crown, which was of a bluish green within, next the white, and of a yellow and red without; and next about these colors were blue and green on the inside of the outer crown, and red on the outside of it. At the same time there appeared a halo at the distance of about 22° 35’ from the centre of the moon. It was elliptical ; and its long diameter was perpendicular to the horizon, verging below farthest from the moon. He was told that the moon has sometimes three or more concentric crowns or colors encompassing one another next about her body. The more equal the globules of water or ice are to one another, the more crowns of colors will appear, and the

colors will be the more lively. The halo, at the distance of 22° 30’ from the moon, is of another sort. By its being oval, and more remote from the moon below than above, he concludes that it was made by refraction in some kind of hail or snow floating in the air in an horizontal posture, the refracting angle being about 50° or 60°. Dr. Smith, however, makes it sufficiently evident, that the reason why this halo appeared oval, and more remote from the moon towards the horizon, is a deception of sight, and the same with that which makes the moon appear larger in the horizon.

HALORAGUS, in botany, a genus of the te-tragynia order and octandria class of plants : CAL. quadrifid above ; there are four petals ; a dry plum, and a quadrilocular nut.

HALS’ENING, adj.~) Germ, hals ; Scotch, UALSE, n. s. shass, the neck. Sound—

HAL’SER, n. s. j ing harshly ; inharmonious in the throat or tongue. Not in use. Hal-ser, from Sax. balj-neck, and -jeel a rope. It is now in marine pronunciation corrupted to hawser. A rope less than a cable.

The crueltee of thee, Quene Medea ! Thy litel children hanging by the hals, For thy Jason that wos of love so fals.

Chaucer. Prologue to the Man of Lowe’s Tale. A beechen mast then in the hollow base They hoisted, and with well-wreathed halsers hoise Their white sails. Chapman.

This hastening horny name hath, as Cornuto in Italy, opened a gap to the scoffs of many. Carew.

No halsers need to bind these vessels here, Nor bearded anchors ; for no storms they fear.

Dryden.

HALSTEAD, a market town of Essex, seated on a rising ground, on the Coin, forty-seven miles north-east of London. It has an old church, the steeple of which was once burnt down by lightning, but rebuilt at the expense of Robert Fiske, esq. The town consists of moae than 1000 houses. The inhabitants manufacture bays, ca-limancoes, &c. There is a free school for forty boys, and a very antique bridewell. Its market on Friday is noted for corn. HALT, v. n., adj. & n. s. } Sax. bealt, lame ; HALTER, n. s. \ bealtan, to limp.

To limp, or falter in walking ; one who is disabled ; a cripple ; to stop suddenly as soldiers in a march ; to doubt or hesitate ; to be undecided ; to fail or falter ; in a rel igious sense, to backslide from former steadfastness.

How long halt ye between two opinions ?

1 Kings.

All my familiars watched for my halting, saying, Peradventure he will bf enticed, and we shall prevail against him. Jeremiah.

Bring in hither the poor, the maimed, the halt, and the blind. Luke.

For false Fortune hath played a game At chesse with me, alas the while ! The trayteresse, false and full of gyle— That al behoteth and nothing halfe, She goth upright and yet she hallt.

Chaucer. The Boke of lie Duchesse. Here’s a paper written in his hand ; A halting sonnet of his own pure brain, Fashioned to Beatrice. Shafatpeare.

And will she yet debase her eyes On me, that halt and am mis-shapen thus 1 Id.

HAL

Without any halt they marched between the two armies. Clarendon.

He might have made a halt ‘till his foot and artillery came up to him. Id.

The heavenly bands Down from a sky of jasper lighted now In Paradise, and on a hill made halt. Milton. Scouts each coast light armed scour

Each quarter to descry the distant foe,

Where lodged, or whither fled, or if for fight

In Motion, or in halt. Milton,

Thus inborn broils the factions would engage, Or wars of exiled heirs, or foreign rage, Till halting vengeance overtook our age. Dryden.

I was forced to halt in this perpendicular march.

Addison.

Spenser himself affects the obsolete, And Sidney’s verse halts ill on Roman feet.

Poj > e

The man who pauses on the paths of treason Halts on a quicksand, the first step ingulphs him.

Hill’, Henry V.

HALTER, n. s. & v. a. Sax. pealj-rrie, from balj-, the neck. A rope to hang malefactors ; to bind with a cord ; to catch in a noose.

Whom neither halter binds nor burthens charge.

Sandyi.

He’s fled, my lord, and all his powers do yield ; And humbly thus, with halters on their necks, Expect your highness’ doom of life or death.

Shakspeare.

They were to die by the sword if they stooJ upon defence, and by the halter if they yielded ; wherefore they made choice to die rather as soldiers than, as dogs. Hayward.

Were I a drowsy judge, whose dismal note Disgorgeth halter, as a juggler's throat Doth ribbands. Cleaveland.

He gets renown, who, to the lialter near, But narrowly escapes and buys it dear. Dryden.

He might have employed his time in the frivolous delights of catching moles and haltering frogs.

A tterbury.

HALTER-CAST is an excoriation of the pas tern, occasioned by the halter's being entangled about a horse's foot, upon his endeavouring to rub his neck with his hinder feet. For the cure, anoint the place, morning and evening, with equal quantities of linseed oil and brandy, well mixed.

HALTERISTJE, in antiquity, a kind of players at discus. Some take the discus to have been a leaden weight or ball, which the vaulters bore in their hands, to secure and keep themselves the more steady in their leaping. Others say the halter was a lump of lead or stone, with a hole or handle fixed to it, by which it might be carried. Hier. Mercurialis, in his treatise De Arte Gymnastica, 1. ii. c. 12, distinguishes two kinds of halteristae ; for, though there was but one halter, there were two ways of applying it. The one was to throw or pitch it ; the other only to hold it out at arm's end, and in this posture to give themselves divers motions, swinging the hand backwards and forwards, according to the engraven figures thereof given us by Mercurialis. The halter was of a cylindrical figure, smaller in the middle, where it was held by one diameter, than at the two ends. It was above a foot Ions, and there was one for each hand : it was either of iron, stone, or lead. Galen, De Tuend. Vale-HAM

tud. lib. i. v. and vi., speaks of this exercise, and shows of what use it is in purging the body of peccant humors, making it equivalent both to purgation and phlebotomy.

HALVE, v. a. 1 Dan. halv. See HALF.

HALVES, interj. }To divide equally: halves is an expression by which any one lays claim to an equal share. See HALF.

Have you not seen how the divided dam Runs to the summons of her hungry lamb ? But, when the twin cries halves, she quits the first.

Cleaveland.

HALYMOTE properly signifies a holy or ecclesiastical court. There is a halymote held in London, before the lord mayor and sheriffs, for regulating the bakers. It was anciently held on Sunday before St. Thomas's day, and hence called the haly mote, or holy court.

riALYS, in ancient geography, the noblest river of the Hither Asia, through which it has a long course, was the boundary of Croesus's kingdom on the east. Running down from the foot of Mount Taurus, through Cataonia and Cappa- <locia, it divided almost the whole of the Lower Asia, from the sea of Cyprus down to the Euxine, according to Herodotus ; who seems to extend its course too far. According to Strabo, who was a Cappadocian, it had its springs in Great Cappadocia. It separated Paphlagonia from Cappadocia, and received its name, airo rov aXoc, from salt, because its waters were of a salt taste, from the soil over which they flowed. It is famous for the defeat of Croesus, king of Lydia, who was misled by this ambiguous response of the oracle: Xpowoc A\vv SiafiaQ p-tyaXriv aˆrfv £ia\vfftt ; i. e. If Croesus passes over the Halys he shall destroy a great empire. That empire proved to be his own. See CECESUS.

HAM, n. s. ~\ Saxon, ham; Dutch,

HAM'BLE, v. n. i hamme; Lat. humus.

HAM'ATED, adj. VThe hip, or hinder

H AM'STRUNG, n. s. or i part of the thigh; the

HAM'STRING, v. a. J thigh of a hog salted:

any thing hooked; set with hooks. Hamble,

formerly hamebe, and hamstring to cut the sinews

of the back part of the thigh ; the tendon of the

liam.

And, thereto hath she laid her faith to borrow ; Algote o foote is tunneled, of thy sorowe.

Chaucer. Troilus and Creseitle. A player, whose conceit Lies in his hamstring, doth think it rich To hear the wooden dialogue, and sound Twixt his stretched footing and the scaffoldage.

Shakspeare.

Hamstringed behind, unhappy Gyges died ; Then Phalaris is added to his side. Dryden.

Who has not learned, fresh sturgeon and ham eye Are no rewards for want and infamy? Pope.

On the hinder side it is guarded with the two hamstrings. Wiseman.

The ham was much relaxed ; but there was some contraction remaining. Id.

Along this hall, and up and down, some squatted

Upon their hams were occupied at chess ; Others in monosyllable talk chatted,

And some seemed much in love with their own

dress. Byron. Don Juan.

II \M, in commerce, &c. Westphalia hams are prepared by salting them with saltpetre,

pressing them in a press eight or ten days, then steeping them in juniper water, and drying then» by the smoke of juniper wood. A ham may be salted in imitation of those of Westphalia, by sprinkling a ham of young pork with salt for one day, to fetch out the blooxl ; then wiping it dry, and rubbing it with a mixture of 1 Ib. of brown sugar, i Ib. of saltpetre, ˆ pint of bay salt, and 3 pints of common salt, well stirred in an iron pan over the fire, till moderately hot ; let it lie tliree weeks in this salting, turn it often, then dry it, and hang it up. ‘ Smoked hams,’ says Dr. Willich, are a very strong food, which is not easily digested. If eaten in proper time, and in small quantities, they may be a cordial to some vigorous stomachs, especially in the morning, as a substitute for the pernicious hot and buttered rolls ; but boiling renders their digestion still more difficult.

HAM, Heb. QH, i. e. crafty. The youngest son of Noah, and father of Cush, Mizraim, Phut, and Canaan ; each of whom possessed the countries peopled by them. Ham, it is believed, had all Africa for his inheritance, and peopled it with his posterity. He himself, it is thought, dwelt in Egypt ; but M. Basnage is of opinion, that neither

Ham nor Mizraim ever were in Egypt, but that their posterity settled in this country, and called it by the name of their ancestor. lie also doubts of his having been worshipped as a god, by the name of Jupiter Hammon. Be that as it may, Africa is called the Land of Ham ir Psalm Ixxviii. 51, cv. 23, cvi. 22. In Plutarch Egypt is called Cheraia ; and there are traces oi the name of Ham or Cham in Psochemmis, and Psitta-entmmis, which are cantons of Egypt. See EGYPT.

HAMAD AN, or AMADAN, a city of Irak, Persia, standing on or near the site of the anciei t Ecbatana. It was taken and destroyed by Timui, and ever since has been only a secondary place. It contains, however, still 10,000 meanly built houses, and about 40,000 inhabitants. The wall which surrounded it was not long since destroyed. Hamadan is famous for its manufacture of leather, and is a considerable mart of commerce between Ispahan and Bagdad, and between the latter place and Tehraun.

HAMADRYADES, from a{ia, together, and Spvf, an oak, a kind of inferior deities revered Among the ancient heathens, and believed to preside over woods and forests, and to be enclosed under the bark of oaks. They were supposed ta live and die with the trees they were attached to, as is observed by Servius on Virgil, Eclog. x. v. 62, after Mnesimachus, the scholiast of Apollonius, &c., who mentions other traditions relating to them. The poets often confound the Hamadryads with the Naiads, Napaea;, and rural nymphs in general. Festus calls them Querque-tulanae, as being sprung from oaks. Pherenicius, in Athenaeus, lib. iii. calls the vine, fig-tree, and other fruit trees, hamadryades. This idea among the ancients, of intellectual beings annexed to trees, accounts for their worship of trees. Livy speaks of an ambassador addressing himself to an old oak, as to an intelligent person and a divinity. — Lib. iii. § 25.

11AMA1I, a town of Asiatic Turkey, in Syria,

situated on the river Orontes, By some travellers it is corruptly called Araarl and Amant. Some mistake it for the ancient Apamea, now called Afamiyah, but that town is a day’s journey t’rom Hamah ; and Dr. Pococke supposes Hatnah to be the ancient Epiphania; whilst Theodoret, and other good geographers, maintain it to be Emesset in

Syria. Hamah is seated among hills, and has a castle on one of them. It has always been a considerable place, and in the thirteenth and fourteenth centuries had princes of its own. Among these Ismael Abulfeda, prince of Hamah, from the year 1342, to 1345, was famous for his skill in geography. It s very large, and, being seated on the ascent of a hill," makes a fine appearance ; but, like other towns under the Turkish government, is going *o decay. Many of the houses are half ruined ; sut those which are still standing, as well as the mosques and castle, have their walls built of black and white stones, disposed so as to form various figures. Tne river Assi, the ancient Orontes, runs by the castle, and fills the ditches round it, which are cut very deep into the rock ; it passes through the town from south to north, and, in its course, turns eighteen great wheels, called saki, which raise great quantities of water to a considerable height, and throw it into canals supported by arches, which run into the gardens. There are some pretty good market-places in Hamah. Linen is manufactured there, and sent to Tripoli to be exported into Europe. The sheiks of the town enjoy a high consideration. They inhabit a splendid palace, and have the title of emir. It is at present the only market for the Arabs, who roam over the extensive desert which intervenes between it and Tadmor, and who are under a sort of tacit agreement not to plunder the caravans coming to the city. Sixty-two miles S. S. W. of Aleppo. Long.' 36° 15' E., lat. 35° 15' N.

HAMAMELIS, witch hazel, a genus of the digynia order, and tetrandria class of plants. The involucrum is triphyllous, the proper calyx tetraphyllous ; there are four petals ; the nut horned and bilocular. There is but one species, a native of Virginia. It has a shrubby or woody stem, branching three or four feet high ; oval, indented, alternate leaves, resembling those of com-mon hazel ; and flowers growing in clusters from the joints of the young branches, but not succeeded by seeds in this country. It is hardy, and is admitted as a variety in our gardens. Its flowers are remarkable for appearing in November and December, when the leaves are fallen. It may be propagated either by seeds or layers. HAMAMET, a considerable sea-port on the east coast of Tunis, in a bay or gulf of the Mediterranean of this name. Dr. Shaw derives its name from Haman, wild pigeons, with which the country abounds. It contains some antiquities from the neighbouring ruins of the Civitas Siagi-tana, and is thirty miles south of Tunis.

HAMATH, in ancient geography, a kingdom of Syria. Toi, one of its monarchs, cultivated the friendship of David. 2 Sara. viii. 9.

HAMATH, the capital of the above kingdom, was seated on the

Orontes. ‘ The entering into Haroath,’ spoken of Josh. xiii. 5., Judges lii.

3, 2 Kings xiv. 25, and 2 Chron. v,“i. 8, is th* narrow pass leading from the land of Canaan through the valley between Libanus and Antili-bauus. This entrance is set down as the north boundary of Canaan, in opposition to its southern limits, the Nile. Joshua (xix. 35) assigned Hamath to the tribe of Naphtali. It was taken by the kings of Judah, and retaken from the Syrians by Jeroboam II. 2 Kings xiv. 28. The kings of Assyria at last took it, and transplanted the inhabitants; into Samaria. 2 Kings xvii. 24, and xviii. 34, &c. It is the same with HAMAH. See that article.

HAMAXOBIANS, HAMAXOBII, or HAMAXU-BIT.E. From apaZa, a chariot, and /3u>c, life. A people who had no houses, but lived in carriages. They were an ancient people of Sarnia-tia Europsea, inhabiting the southern part of Muscovy, and instead of houses had a sort of tents made of leather, fixed on carriages to be ready for travelling. Some say they inhabited the countries now called Bessarabia, Moldavia, Wallachia, and part of Transylvania.

HAMBURGH, one of the most important commercial cities in Europe, is situated at the confluence of the little rivers, Alster and Bille, with the Elbe, and about eighteen leagues from the sea. It is built in the Gothic style ; the streets narrow and crooked ; and it has many canals, crossed by eighty-one bridges. It is surrounded by a wall, on the top of which two carriages can drive abreast, and has six gates. The French, while in possession of it, constructed many other works : its population is about 120,000, and the territory about 15,000 more.

In the new town many of the houses are neatly built, and some streets elegant, particularly on the Alster, where the Jungfernsteig, planted with trees, is a fashionable promenade. Hamburgh has several suburbs : on its east side, between the Elbe and Alster, stands that of St. George, surrounded by a regular wall, and forming a separate parish. On the west is the Hamburger Berg, separated from Altona only by a wall. Here, adjacent to the Elbe, are the large oil works belonging to the Greenland fisheries, and at some distance two hospitals and a workhouse. On the north side of Hamburgh, along the Alster, is a new suburb, containing a number of elegant buildings.

Outside of the town the Alster forms a large basin ; and within the town another of less extent, called the Binnen Alster, which serves as a

harbour. An arm of the Elbe also forms two ports, one on the east for boats, and another on the west, called the Niederbaum, for ships. The depth of this harbour is twenty feet ; but on account of a sand-bank opposite to the village of Blankenese, nine miles below Hamburgh, vessels that draw more than fourteen feet of water must discharge part of their cargo, except at spring tides, when the depth on the bank is eighteen feet. The hour of high water at new and full moon is six o'clock, Besides the Alster, a small river, called the Bill, flows by the east side of the city.

There are in Hamburgh five large and eleven small churches; that of St. Michael, a modern edifice, and that of St. Peter, are remarkable for

their elegant spires; St. Nicholas for its fine chimes. The exchange hall is a new building, fitted up with great elegance, and containing a hall for the display of works of art, and a reading-room on a large scale. The other public buildings are not constructed in very good taste. The principal are the old exchange, the hospitals, and an obelisk in honor of professor Busch.

In former times brewing was a chief employment here; but it has long given place to other occupations. In the beginning of this century the refining of sugar employed more than 300 houses, and is still a considerable pursuit. The printing of cotton, linen, and handkerchiefs, is next in importance; then, perhaps, the dye-works, and machinery for twisting tobacco. Other manufactures, on a comparatively small scale, are those of jewellery, whalebone, soap, wax, whale-oil, silk stuffs, gold and silver lace, needles, cards, sailcloth, and particularly stockings. For many years Hamburgh has been gradually exchanging its manufacturing for a mercantile character. Its transactions partly consist in agency, but more in the purchase and sale for account of its merchants. They buy the commodities of Great Britain, France, Spain, Portugal, the Netherlands, the West Indies, the United States of America; and supply all the countries lying along the Elbe, different districts on the Rhine and the Lower Maine, and a part of the Prussian and Austrian dominions. They also buy up the products of these countries, linen, thread, &c. The trade in timber is also of great importance, especially during a maritime war. The other articles of trade comprise flax, hemp, potash, tar, tobacco, dye-stuffs, wax,

honey, hides, wool, woollen yarn, smoked and salt meat, mineral products, iron wares ; in short, all the products of the north-east of Germany.

The following list of vessels which arrived at Hamburgh, in 1817, will show the prominence of our trade with this city : —

From Britain .... 589 the Baltic ... 239

the Netherlands . .178

Denmark ... .112 Portugal . ... 92 the Mediterranean . . 85 France .... 73 Sweden .... 47 the United States . . 37 the West Indies . . 30

Archangel .... 22 Greenland ... .13 the East Indies . . 6

the Weser, East Friesland, and all other ports . .117

Total

1640

Its commerce has since considerably increasd. The coasting trade with Bremen, Embden, and Amsterdam, is carried on by flat-bottomed vessels ; a class of shipping of great convenience in time of war, as, from their keeping in the shallow water between the line of sandy islands and the continent, armed vessels can with difficulty approach them. They belong chiefly to the inhabitants of East Friesland, Ditmarsch, and

Heligoland. The transit trade, or conveyance of goods by the Elbe, for account of foreign merchants, has hitherto been inconsiderable, but has been increased since 1816 by the heavy duties imposed by the Dutch government on merchandise forwarded into Germany by the Rhine ; and by the regulations which have freed the Upper Elbe from a number of vexatious tolls.

The bank here was founded in 161 9, to afford a permanent and uniform currency ; it has never issued notes, and very seldom makes a

cash payment; a merchant, depositing cash or bullion, receives credit for the amount in the books; this he makes use of, not by withdrawing the money, but by transferring it by draft or cheque to others, who again make similar transfers. Bank money having a permanent value, while coin was liable to degradation, the former soon rose in rela'tive price, and often bears an agio, or premium of 25 per cent. The denominations of money in Hamburgh are not simple. Accounts are kept in marks, schillings, and pfennings lubs, thus : —

12 pfennings z= 1 schilling. 16 schillings — 1 mark. 3 marks :n 1 dollar.

A mark is somewhat more than eighteen pence sterling ; but the exchange with London is computed in Flemish money, of which £13 6s. Qd. are equal to 100 marks; the computation is thirty-two shs. Flemish, and upwards, for a pound sterling. With Amsterdam and Paris the computation of exchange is by marks, schillings, and pfennings; and the bill transactions are reckoned more important than those of any other place in Germany.

The established religion is the Lutheran, but complete toleration is granted: Catholics and Calvinists go to the chapels of the envoys from Catholic or Calvinist countries. The manners of the citizens much resemble those of Holland. The favorite taste, in respect to amusement, is music; and, before 1807, the higher class of merchants lived not only with hospitality, but luxury. This city has been at different times the residence of literary characters of the first eminence; and its charitable institutions are numerous. The revenue of the orphan-house is estimated at £6000 sterling ; there is an hospital for receiving poor travellers that fall sick; and, in the well known lombard, or place of deposit for pawned articles, the town lends money at an interest of 6 per cent, on every kind of goods or merchandise. If the goods are not reclaimed, within a certain time, they are sold for their full value, and the excess over the money lent is returned to the owners. At the town library, containing, it is said, 100,000 volumes, is published the Hamburger Correspondenten, a newspaper of great circulation.

The constitution of the government is an aristocracy, checked by the citizens at large. The aristocratic part comprises the senate, to the number of twenty-eiaht voting members, who receive an annual salary, and constitute the executive ; they have no hereditary right or distinction, but they have the privilege of electing

their own members. Such elections, however, are almost always in concurrence with the popular wish. The burgesses, or citizens, act by delegation in various ways ; by a commission ef fifteen, called the council of elders; by the council of sixty; and by an assembly of 180. These bodies are each entitled to confer with the senate on questions of importance. The senate alone can propose a law ; jts adoption or rejection rests with the representatives of the citizens. To be a citizen, in a legislative sense, it is requisite to be of the Lutheran faith, and to possess permanent property within the walls to the value of 1000 rixdollars (£240), or 2000 without the walls; but, within the territory, the right of citizenship, for mercantile purposes, is of easy acquisition, particularly to our countrymen. The whole of this constitution was framed by a commission appointed by the emperor of Germany in 1712, previous to which the government of Hamburgh had been a source of frequent strife between the senate and citizens.

The city revenue exceeds £150,000, arising chiefly from customs and assessed taxes. These defray the public salaries, and the pay of the military, who are in number 2000. An annual expense of £ 15,000 is incurred on account of the river, in buoys, lighthouses, and in keeping it «lear of mud ; and is raised by a toll on the shipping. The territory of Hamburgh hardly exceeds 133 square miles. It consists of a small district lying around the city, of the town and bailiwic of Cuxhaven, at the mouth of the Elbe, and some villages in the duchy of Holstein. Hamburgh is connected with Frankfort, Lubeck, and Bremen, in some commercial regulations ; and they all retain the old name of Hanse Towns.

In 833 Louis the Pious erected Hamburgh into a bishopric, and afterwards into an archbishopric. Adolphus III. duke of Saxony, among other privileges, granted it the right of fishing in the Elbe, eight miles above and below l the city. It was declared a free imperial city in 1618. The kings of Denmark, when they succeeded to the counts of Holstein, claimed the sovereignty of this place, and often compelled the citizens to pay large sums to purchase the confirmation of their liberties. The year 1768 was remarkable for a renunciation of this claim, and for a full confirmation of Hamburgh in her rights as an independent city. Her trade and population now continued to increase : the French revolution for some time augmented them; and when, after 17.96, Germany felt the shock of invasion, Hamburgh was secure under the protection of Prussia. It thus preserved its independence amid all the partitions of territory until, at the end of 1806, a large French garrison was stationed here, and Buonaparte seized a part of

the public funds. In 1810 it was incorporated into the French empire, as the capital of the department of the Mouths of the Elbe. The decrees of Bqonaparte, prohibitory of commerce, continued with immense loss to this city from 1808 until the spring of 1813, when the hope of support from the troops of the allies led to a memorable, but premature effort (18th of March) against the French. Hamburgh was re-occupied jjy the latter on the 30th of May, when a con-HAM

tribution of nearly £2,000,000 sterling was imposed on it, and orders given to defend it at whatever sacrifice against the allies. This led to great distress, to the destruction of the houses on the ramparts, the seizure of a great deal of merchandise, and finally of the bank funds. At last it was evacuated, May 1814, and part of the bank funds have been restored by the Bourbons. •The congress of Vienna accorded to Hamburgh a vote in the Germanic diet, in conjunction with Frankfort, Lubeck, and Bremen. It is thirty-nine miles S. S.W. of Lubeck, eighty-four north of Hanover, and 448 north-east of London.

HAME, n. s. Sax. j>ama. The collar by which a horse draws in a waggon.

HAMEL. See HAMLET.

HAMEL (John Baptiste Du), a learned French philosopher of the seventeenth century. At eighteen he wrote a treatise, in which he explained in a very simple manner Theodosius's three books of Spherics ; to which he added a tract upon trigonometry, designed as an introduction to astronomy. He next published his Astronomia Physica. In 1666 M. Colbert proposed to Louis XIV. a scheme for establishing a royal academy of sciences ; and appointed Du Hamel secretary. He was also regius professor of philosophy, and published a great number of books. He died at Paris in 1706, aged eighty-three. He wrote Latin with purity and elegance.

HAMELN, a town and fortress of Hanover, situated at the conflux of the Weser and Hamel. Here is a large sluice on the Weser, erected in 1734, by George II. It contains 5000 inhabitants, and carries on an active trade in tobacco, hats, and woollens. The churches and other public buildings are large for so small a place. On the other side of the river is a very strong fortification, called Fort George, considered of great importance for the possession of Hanover. It was garrisoned by the Prussians in 1806. Twenty-two miles south-east of Minden, and twenty-five south-west of Hanover.

HAM ELLA, in botany, a genus of the monogynia order, and pentandria class of plants. The corolla is quinquefid ; the berry quinquelocular, inferior, polyspermous.

HAMESECKEN, or HAMESOKEN. Burglary, or nocturnal housebreaking, was, by the ancient English law, called Hamesecken, as it still is in Scotland.

IIAMILCAR, the father of Hannibal. See AMILCAR and CARTHAGE.

HAMILTON (George), earl of Orkney, a brave warrior, was the fifth son of William earl of Selkirk. Being made colonel in 1689 — 90, he distinguished himself by his bravery at the battle of the Boyne ; and soon after at those of Ahrim, Steinkirk, and Landen, and at the sieges of Athlone, Limerick, and Namur. His eminent services in Ireland and Flanders, recommended him so highly to king William III. that, in 1696, he created him earl of Orkney ; and his lady, the sister of Edward viscount Villiers, afterwards earl of Jersey, had a grant made to her, under the great seal of Ireland, of almost all the private estates of the late king James. Upon tdo accession of queen Anne, he was promoted !» the rank of major-general in 1702, and in 17iV.

to that of lieutenant-general, and was likewise made K. T. He afterwards served under the duke of Marlborough, and contributed by his bravery and conduct to the glorious victories of Blenheim and Malplaquet. In 1710 he was sworn of the privy-council, and made general of the foot in Flanders. In 1712 he was made colonel of the royal regiment of Fusiliers, and served in Flanders under the duke of Ormond. In 1714 he was appointed gentleman extraordinary of the bed-chamber to king George I., and afterwards governor of Virginia. At length he was appointed governor of Edinburgh castle, lord-lieutenant of Clydesdale, and field-marshal. He died at his house in Albemarle Street, in

HAMILTON (John), the twenty-fourth bishop of St. Andrew's, to which he was translated from Dunkeld, was the natural son of James, the first earl of Arran ; and one of queen Mary's privy council, and a steady adherent to her interest, lie baptised her son ; and was made lord privy seal, and lord treasurer. By the regent earl of Murray, he was declared a traitor, and obliged to seek shelter among his friends. Being in the castle of Dumbarton, when it was taken, he was carried to Stirling, where on April 1st, 1570, he was hanged on a tree. The following sarcastic lines were written upon it : —

Vive diu, felix arbor, semperque vireto Frondibus, ut nobis talia poma feras.

HAMILTON (William), of Bangour, a celebrated Scots poet, the friend and poetical correspondent of Allan Ramsay, was born at Bangour, in Linlithgowshire, in the beginning of the eighteenth century, and was for some time a lieutenant m the royal navy. Lieutenant Hamilton lived many years at Gilbertfield in Lanarkshire, and afterwards at Latrick, where he died 24th of May, 1751. His works were printed at Edinburgh, in 12mo., in 1760.

HAMILTON (William Gerard), an orator of the last century, who, on account of the extraordinary impression produced by the first and almost the only speech he ever delivered in the house of commons, obtained the name of Single-speech Hamilton. His father was a barrister of Lincoln's Inn, where he was born in 1729. He was sent to Winchester, whence he removed to Oriel College, Oxford ; and then studied at Lincoln's Inn, but never was called to the bar. In 1754 he obtained a seat in parliament, and subsequently was made one of the lords of trade. On the appointment of lord Halifax to the viceroyalty of Ireland, Hamilton went thither as his secretary, and was accompanied by the celebrated Edmund Burke-In the Irish parliament he supported the reputation he l.ad previously gained ; and for many years held the office of Irish chancellor of the exchequer. He relinquished that post in 1784, awd spent the latter part of his life in retirement. His death took place in 1796. A posthumous publication of his works, including a tract, entitled, Parliamentary Logic ; Speeches, &c., appeared in 1808. The letters of Junius have been attributed to him.

HAMILTON (Elizabeth), a modern library ladv,

and a native of Ireland, was born at Belfast 25th of July, 1758. She was brought up under the care of her uncle, who resided near Stirling in Scotland, and produced Cottagers of Glenbur-nie ; Letters of a Hindoo Rajah, 2 vois. 8vo. ; The Life of Agrippina, 3 vols. 8vo. ; and Memoirs of Modern . Philosophers ; works which, under the form of novels, are replete with good sense and information. Her other writings are, Hints for Public Schools; Popular Essays, 2 vols. 8vo. ; Rules of the Annuity Fund, &c. ; Exercises in Religious Knowledge, 12mo. ; Letters on the Formation of the Religious and Moral Principle, 2 vols. ; and, On the Elementary Principles of Education. Miss Benger, after her decease, printed a selection from Miss Hamilton's correspondence, with an account of her life and habits. Her death took place at Harrowgate, in Yorkshire, 23d of July, 1816.

HAMILTON, a town in a parish of the same name, seated on the Clyde, in the middle of a very agreeable plain, on the east side of a large park nearly seven miles in circumference, enclosed with a high wall, full of deer and other game, belonging to the duke of Hamilton. The original name of this place was Cadzow, or Cadyow, a barony granted to an ancestor of the noble owner, on the following occasion : — In the time of Edward II. lived Sir Gilbert de Hamilton, or Hampton, an Englishman of rank ; who happening at court to speak in praise of Robert Bruce, received an insult from John de Spenser, chamberlain to the king, whom he fought and slew. Dreading the resentment of that potent family, he fled to the Scottish monarch ; who established him at the place possessed by the duke of Hamilton. In after times the name changed from Cadzow to Hamilton; and in 1445 the lands were erected into a lordship, and the then owner Sir James sat in parliament as lord Hamilton. He founded a collegiate church at Hamilton in 1451 ; and the town was made a burgh of barony in 1456. Weaving is the chief manufacture. Hamilton-palace is at the end of the town ; a large pile, with two deep wings at right angles with the centre : the gallery is of great extent, and furnished with most excellent paintings. Hamilton is eleven miles south-east of Glasgow, and thirteen N. N. W. of Lanark.

HAMILTON, a county in the south-west corner of the state of Ohio, United States, bounded south by the Ohio River, east by Clermont county, north by Butler county, and west by Indiana. It is thirty miles long, by twenty broad. It is watered by the Ohio, Whitewater, and Great and Little Miami. Its surface is hilly and uneven near the large streams; in other parts it is level, or undulating. The valleys are well cultivated. The chief town is Cincinnati. Population, in 1815, 18,700.

HAMILTON, a district of Tennessee, United States, containing the counties of Knox, Jefferson, Blount, Sevier, and Grainger.

HAMILTON, a town of the county of Fuller, state of Ohio, United States. It is pleasantly situated on the east bank of the Miami, and contains a post-office, and a printing-office, from which issues a weekly newspaper.

HAMILTON, a township and village of the

United States, '.:. Maddison county, New York. Tne townsnip was erected in 1801, and in 1810 its inhabitants amounted to 2,220. The village is situated on the main branch of the Chenango.

HAMILTON, Anthony, count ; a poet, courtier, and man of letters in the 17th century. He was descended from a younger branch of the family of the dukes of Hamilton, in Scotland, but was born in Ireland about 1646. His parents were Catholics and royalists, in consequence of which they removed to France after the death of Charles I., and young Hamilton became domici-liated in that country. He, however, made frequent visits to England, in the reign of Charles II. His sister was married to count Grammont. It is said that the count, after having paid his addresses to the lady, and been accepted, changed his mind, and set off for the continent. Her brother followed him, and, overtaking him at Dover, asked him if he had not forgotten something to be done previously to his leaving England. " O, yes," replied Grammont, " I forgot to marry your sister ;" and he immediately returned and fulfilled his engagement. When James II. was obliged to contend for his crown in Ireland, he gave count Hamilton a regiment of infantry, and made him governor of Limerick ; but on the ruin of the royal cause, he accompanied James to France, where he passed the rest of his life. His wit and talents secured him admission into the first circles, where he was generally esteemed for his agreeable manners and amiable disposition. He died at St. Germain, in 1720. Count Hamilton is chiefly known as an author by his Memoirs of Count Grammont, a lively and spirited production, exhibiting a free, and, in the general outline, a faithful delineation of the voluptuous court of Charles II. The count's other works are Poems and Fairy Tales, which, as well as the Memoirs, are in French, and display elegance of style and fertility of invention.

HAMLET, n. #. From Saxon, ham, a village; with the diminutive termination.

Within the self-same lordship, parish, or hamlet, lands have divers degrees of value. Bacon.

Sometimes with secure delight The upland hamlets will invite. Millvn,

He pitched upon the plain

His mighty camp, and, when the day returned, The country wasted and the hamlets burned. Dryden.

HAMLET, a prince of Denmark, whose history has been rendered interesting, by being the subject of one of the noblest tragedies of Shakspeare. Adjoining to a royal palace, which stands about half a mile from Cronburg in Elsi-neur, is a garden, which, Mr. Coxe informs us, is called Hamlet's Garden, and is said to be the spot where his father was murdered. The house is of modern date, and is situated at the foot of a sandy ridge near the sea. The garden occupies the side of the hill, and is laid out in terraces rising above each other. The original history, from which the poet derived the principal incidents of his play, is founded upon facts, but so deeply buried in remote antiquity that it is difficult to discriminate truth from fable. Saxo Grammaticus, who flourished in the twelfth century, is the earliest historian of Denmark who relates the adventures of Hamlet. His account is much a'itt red by Belleforest, a French author,

a translation of whose romance was published under the title of The Hystorye of Hamblet, from which Shakspeare is supposed to have formed the groundwork of his play.

HAM'MER, n. $. & v. n.-* Saxon, hameri ;

HAM'MERER, n. s. . > Danish, hammer.

HAM'MERHARD, n. s. J The instrument, consisting of a long handle and heavy head, with which any thing is forged or driven. Figuratively any thing destructive or powerful : to beat ; to forge ; to contrive by dint of intellectual labor ; to work ; or to be busy ; in these senses

generally spoken contemptuously : sometimes to be greatly agitated.

-Lamekes sone Tubal,

That found out firste the arte of song ; For as his brother's hamers ronge Upon his anvclt up and downe, Therof, he toke the firste sowne.

Chaucer. Boke of the Duchesse. The armureres also With file and hammer pricking to and fro.

Id. The Knightes Tale. His bones the hammered steel in strength surpass.

Sandys.

Nor needest thou much importune me to that, Whereon this month I have been hammering.

Shakspeare.

I have been studying how to compare This prison where I live unto the world j And, for because the world is populous, And here is not a creature but myself, I cannot do it ; yet I'll hammer on't. Id.

A HAMMER has an iron head, fixed cross-wise upon a handle of wood. There are several sorts of hammers used by blacksmiths; as, 1. the hand-hammer, which is of such weight that it may be wielded with one hand at the anvil. 2. The up-hand sledge hammer, used with both hands, and seldom lifted above the head. 3. The about-sledge hammer, which is the biggest of all, and held by both hands at the farthest end of the handle ; and being swung at arm's length over the head, is made to fall upon the work with as heavy a blow as possible. The smallest hammer used by smiths is called a rivetting hammer, but is seldom used at the forge unless upon small work. These and a great variety of other hammers of different sizes are used by goldsmiths and jewellers. Watchmakers, saddlers, carpenters, and joiners, have likewise hammers accommodated to their several purposes.

HAMMERMEN, in the royal boroughs of Scotland, the name of an incorporation, which comprehends most of those artizans who make use of hammers; such as goldsmiths, jewellers, watchmakers, coppersmiths, braziers, blacksmiths, tin-plate-workers, cutlers, gun-

smiths, founders, saddlers, See. In Edinburgh, however, the goldsmiths, by the set of the burgh, form a distinct incorporation, which ranks second in order, next to the surgeons ; while the other artizans above mentioned form the fifth incorporation, under the title of hammer-men.

HAMMOCK, n s. Sax. haraaca. A swinging bed.

Prince Maurice of Nassau, who had been accustomed to hammocks, used them all his life. Temple.

HAMMOCKS, or HAMACS, are suspended between two trees, posts, hooks, or the like, and are much used throughout the West Indies, as well as on board of ships. The Indians hang their hammocks to trees, to secure themselves from wild beasts and insects. It consists of a large strong coverlet or sheet of coarse cotton, about six feet square ; on two opposite sides are loops of the same stuff, through which a string is run, and thereof other loops are formed, all of which are tied together with a cord ; and thus the whole is fastened to two neighbouring trees in the field, or two hooks in houses. This kind of couch serves at the same time for bed, quilts, sheets, pillow, &c. The hammock used on board of ships is made of a piece of canvas, six feet long, and three wide, drawn together at the ends. There are usually from fourteen to twenty inches in breadth allowed between decks for every hammock in a ship of war ; but this space must in some measure depend on the number of the crew, &c. In time of battle the hammocks and bedding are firmly corded and fixed in the nettings on the quarter deck, to preserve the men from the fire of the enemy.

HAMMOND (Henry), D.D.,one of the most learned English divines in the seventeenth century, was born in 1605. He studied at Oxford, and in 1629 entered into holy orders. In 1633 he was made rector of Penshurst in Kent ; in 1643 archdeacon of Chichester; and in 1645 a canon of Christ Church, Oxford, and chaplain to king Charles I. He was also chosen public orator of the university. In 1647 he attended he king in his confinement at Wooburn, Caves-ham, Hampton-Court, and the Isle of Wight. On his return to Oxford he was chosen sub-dean ; and continued there till the parliament visitors ejected and imprisoned him. During this confinement he began his Annotations on the New Testament. On the 4th of April 1660 he was seized by a fit of the stone, of which he died on the 25th of that month, aged fifty-five.

He wrote many other works, which have been published together in 4 vols. folio.

HAMMOND (Anthony), esq., an ingenious English poet, descended from a good family of Somersham-Place in Huntingdonshire, was born in 1668. After a liberal education at St. John's College, Cambridge, he was chosen M.P. for Truro, and soon distinguished himself as a speaker. He became a commissioner of the royal navy, which place he quitted in 1712. He published a Miscellany of Poems by the most eminent hands ; in -which he himself had a considerable share. He - wrote the life of his friend Walter Moyle, esq., prefixed to his works ; and died about 1726.

HAMOAZE, a creek in the British Channel, which forms a harbour for the royal navy, capable of containing 100 vessels, in three tiers, at from thirteen to fifteen fathoms water. It is the west branch of the Tamar, which falls into Plymouth Sounds.

HAMPDEN (John) esq., of Hampden, a celebrated patriot, descended of an ancient family in Buckinghamshire, was born at London in 1594. He was cousin german to Oliver Cromwell, and in 1 601) was sent to Magdalen College, Oxford,

whence he went to the inns of court, where he made a considerable progress in the law. He was elected a member of the parliament which sat at Westminster, February 5th, 1626 ; and served in all the succeeding parliaments in the reign of Charles I. In 1636 he became universally known, by his refusal to pay ship-money, as being an illegal tax; upon which he was prosecuted ; and his conduct throughout this transaction gained him great celebrity. On January the 3rd, 1644, the king ordered articles of high treason and other misdemeanors to be prepared against lord Kimbolton, Mr. Hampden, and four other members of the House of Commons., .and went to that house to seize them : but they had retired. Mr. Hampden afterwards made a speech to the house to clear himself of the charge laid against him. In the beginning of the civil war he commanded a regiment of foot, and was of great service to the parliament at the battle of Edge-hill. He received a mor-tal wound in the shoulder in an engagement with prince Rupert, on the 18th of June 1643, at Chalgravefield in Oxfordshire; and died on the 24th. Of this celebrated patriot Clarendon says, he was an enemy not to be wished where he might

have been made a friend, and as much to be apprehended where he was so, as any man could deserve to be* And, therefore, his death was no IPSS pleasing to the one party, than it was condoled by the other. In a word, what was said of Cinna might well be applied to him ; — ‘ He had a head to contrive, and a tongue to persuade, and a hand to execute any mischief!’

HA’MPER, n.s. Contracted, according to Minsheu, from hand pannier; but hanaperium appears to have been a word long in use, whence hanapar, hampar. Johnson. A large basket for carriage.

What powder’d wigs ! what flames and darts ! What hampers full of bleeding hearts ! Swift.

HAMPER, v. a. The original of this word, m its present meaning, is uncertain : Junius observes that hamplyns in Teutonic is a quarrel : others imagine that hamper or hanapar, being the treasury to which fines are paid, to hamper, which is ccmmonly applied to the law, means originally to fine. To shackle, entangle, ensnare, or inveigle, as with chains or nets ; figuratively to perplex, complicate, or embarrass by troubles, or to catch with allurements.

And if the priest w<x hies refuse,

I am full redy him to accuse,

And him punish and hamper so

That he his churche shal forgo.

Chaucer. Romauni of the Rose. She’ll hamper thee, and dandle thee like a baby.

Shaltfpeare.

O loose this frame, this knot of man untie ! That my free soul may use her wing,

Which now is pinioned with mortality, As an entangled, hampered thing. Herbert.

We shall find such engines to assail, And hamper thee, as thou shall come offeree. Milton.

And when they are hampered by the laws, Release the lab’rers for the cause. Hvdibrus

Wear under vizard-masks their talents,

And mother wits before their gallants ;

Until they're hampered in the noose,

Too fast to dream of breaking loose. Id.

HAMPSHIRE.

You want to lead

My reason blindfold like a hampered lion, Checked of his noble vigour. Otway.

They hamper and entangle our souls, and hinder their flight upwards. Tillotton.

What was it but a lion hampered in a net !

L' 'Estrange.

Engendering heats, these one by one unbind, Stretched their small tubes, and hampered nerves un-wind. Rlackmore.

HAMPSHIRE, a maritime and most picturesque county of England, situate on the southern extremity of the coast of the kingdom. It is bounded on the north by Berkshire ; on the east by Sussex and Surrey ; on the south by the English Channel and the Sound, which separate it from that part of the county comprised within the Isle of Wight ; and on the west by Dorset-shire and Wiltshire. It extends in length, from north to squth, about fifty-five miles ; in breadth, from east to west, about forty : its circumference is about 150 miles. Its superficial contents are calculated, from Faden's large map of the county, at 94,000 acres. Exclusive of the ISLE of WIGHT, of which an account will be found under its own name, Hampshire contained, in 1831, 38,887 inhabited houses, and 314,960 inhabitants. It is divided into thirty-nine hundreds and liberties, containing, according to Mr. Driver's Agricultural Survey, 253 parishes; and, according to Mr.

Vancouver's Agricultural Survey, 356 parishes, precincts, hamlets, &c. This latter author says, the hundreds are fifty-two. There is one city, Winchester, twenty market-towns, and about 1000 villages. The whole county, including the isles of Wight, Jersey, Guernsey, Sark, and Alderney, is comprehended within the diocese of Winchester, and is included in the western circuit. The town of Southampton is a county of itself, and is the county town, though the quarter sessions are held at the city of Winchester.

Before the Roman invasion this county belonged to the Regni, a tribe of ancient Britons, and the Belgse, who emigrated from Germany and settled here. They are said to have been the first of the inhabitants who submitted to the Roman yoke. Prior to these Belgic invaders, who drove out the aborigines, little or nothing is known of its history. The Segontiaci inhabited the northern extremity of the county, and the adjoining parts of Berkshire, bordering on the river Ken-net. The Romans included this district in the province named Britannia Prima. Under the Saxon domination, it formed the central portion of the kingdom of the West Saxons. The original name o/ the county was Gwent, or Y Went, a term descriptive of its open downs. The Saxons changed its name to Hantunscyre, whence comes its present name of Hants or Hampshire.

Fuller, in his quaint manner, says, ; most pure and piercing [is] the air of this shire;' and Speed remarks that the ' air is temperate, though somewhat thicke, by reason of the seas and the many rivers that thorow the shire doe fall.' The air is certainly, for the most part, pure and healthy, especially on the downs, which cross the county from east to west; and it has been observed, thˆt even the vapors in the low ground nearest the

sea are not so pernicious as in other counties. — The surface of the county is beautifully varied with gently rising hills and fruitful valleys, adorned with numerous seats and villages, and interspersed with extensive woodlands. The soils are extremely numerous, but by far the greatest portion tending to chalk. According to Mr. Vancouver's map of the soil and substrata of this county, it appears that the district embracing the woodlands and the wastes of Bag-shot, on the Berkshire and Surrey borders, consists of clay, sand, gravel, and peat. The district occupying the entire centre of the county, and extending east and west from the borders of Sus-sex and Surrey into Wiltshire, is a strong flinty loam and hazel-colored mould on chalk, occasionally veined with gravel, with more or less peat in the valleys. There is,

however, a small third district on the eastern border, next the counties of Sussex and Surrey, including Wool-mer and Alice Holt Forests, consisting of marl, sand, gravelly loam, clay, and peat ; the latter being found chiefly upon the wastes. Light sand and gravelly loams, intermixed with clay and brick-earth on substrata of argillaceous and calcareous marl, are found in the district of the New Forest, in which, as also in the forest of Bere and Waltham Chase, there is much peat and turf moor on the heath and low grounds. This district has been very ably described by Percival Lewis, esq., F.A. S., in his Historical Enquiries concerning Forests and Forest Laws, with Topographical Remarks upon the Ancient and Modern State of the New Forest, which Mr. Lewis says contains about 92,365 acres, giving as his authority the Fifth Report of the Commissioners of the Land Revenue, founded on the actual survey which took place under their sanction in 1780. The quantity of forest lands in 1809 amounted to 63,845 acres and 2 perches, of which 1192 acres 3 roods and 33 perches were enclosed. The fifth district consists of the chalk of Portsdown and the islands of Portsea and Haling; a strong, flinty, and a tender hazel-colored loam prevailing in the islands and low grounds.

The principal rivers are the Avon, the Teste, and the Itchin. The Avon rises in Wiltshire, and enters this county near Fordingbridge, whence it passes through Ringwood, after which it unites with the river Stone in the harbour of Christchurch. The Teste rises in the north part of the county, and, running southward, forms several islands at Stockbridge ; thence it passes through Romsey, and enters the Southampton inlet at Redbridge. The Itchin, also called the Abra, has its source at Chilton Candover, near Alresford, whence it pursues a southwardly course through the city of Winchester; thence again southwardly, to its junction with the Southampton Water. This river was made navigable from Southampton to Winchester as early as the reign of William the Conqueror. The bathing and other places of general resort on the shores of this county, during the summer season, are Christchurch, Muddiford, Lymington, and Southampton ; with Yarmouth, Cowes, Hithe, Brading, and Shanklin, in the Isle of Wight. — The principal canals are the Basingstoke, the

Redbndge, the Andover, the Winchester, and the Southampton. — Com and hops are among the chief of the agricultural produce of this county. Fuller reckoned in his time honey, wax, and hogs, among its produce. Its sheep and hogs have attained considerable repute : for the lai'.er it is proverbially famous ; and this breed is of the largest kind, the farmers encouraging it as the most profitable.

New Forest was at one time exceedingly well stocked with red deer, and there are several still bred in it. The number which this forest was capable of supplying, in the year 1789, was seventy-nine brace and a half ; a return which is said to have exceeded any former one which had been made for the preceding forty years. The annual supply, says Mr. Lewis, required by the lord Warden (under whose immediate superintendance they are placed) is sixty-four brace, twenty-three of which ought to be given to his majesty and the Cofferer's Office. Besides these sixty-four brace, several are annually killed by the proprietors of the purlieus, whose right so to do is not, in all instances, confined to the purlieu itself. The timber of this forest has been long rapidly declining, and that, says Mr. Lewis, to an alarming extent. In the year 1608 there were 123,927 trees fit for the navy; making 197,405 loads, besides 118,072 loads of dotard and decayed trees. In 1783 there were 12,447 trees fit -for the navy, and 596 decayed oaks ; making altogether 20,830 loads of timber. The average annual supply to the navy for the last twenty years, up to the year 1811, has been about 885 loads of oak, and 270 of beech. From 3000 to 4000 beech trees are annually marked and cut by the officers of this forest, as assignments of fuel as they are commonly called. The mineralogy of this county presents but few materials to the geologist. There is a little iron-stone, and considerable quantities of potters' clay in various parts, besides some stone for building and other purposes.

This county sends sixteen members to parliament, exclusive of the Isle of Wight : *viz.* four for the county ; two for Winchester ; two for Southampton; one for Christchurch ; two for Portsmouth ; one for Petersfield ; two for Lymington ; Whitechurch, disfranchised ; and two for Andover. The parliamentary patronage of this county, before the enactment of the reform bill, was influenced by the treasury. Among its eminent natives may be mentioned Dr. Tho-mas Bilson, a learned prelate ; born at Winchester, 1536; died 1616. Dr. W. Coward, a physician, who wrote on materialism ; born at Winchester, about 1657; died about 1725. William Curtis, the botanist ; born at Alton, about 1746; died 1799. Jonas Hanway; born at Portsmouth, 1712; died 1786. Giles Jacob, author of the Law Dictionary ; born at

Romsey, 1690; died 1744. William Lily, the grammarian; born at Odiham, about 1466; died 1522. Dr. Robert Lowth, the learned grammarian and prelate; born at Winchester, 1710; died 1787. Sir William Petty, a learned and ingenious projector and writer; born at Romsey, 1623; died 1687. Thomas Sternhold, who assisted Hopkins in turning the Psalms into metre; died

1549. William Warham an eminent prelate and statesman; born at Okeley; died 1532. Thomas Warton, biographer, antiquary, and poet; born at Basingstoke, 1728; died 1790. Also at the same place his brother, Dr. Joseph Warton, a learned divine, critic, and poet ; born about 1722 ; died 1800. Dr. Isaac Watts, the divine and poet ; born at Southampton, 1674 ; died 1741.' William of Wykeham, a learned prelate, statesman, and architect; born 1324; died 1404. Rev. Dr. Edward Young, the poet; born at Upham, 1681; died 1707. The city of Winchester is a bishop's see, and gives the title of marquis to the Poulet family. There are no manufactures of consequence in this county. The few there are consist chiefly of shalloons and coarse woollens. Malt is made in pretty large quantities at Andover.

HAMPSHIRE, an extensive county of Massachusetts, United States ; bounded north by the states of New Hampshire and Vermont, south by the state of Connecticut, east by Worcester county, and west by Berkshire. Its principal towns lie on both sides of Connecticut River. These are Springfield the chief town, West Springfield, Northampton, Haddley, Hatfield, Deerfield, and Northfield. It is generally fertile and produces the necessaries of life, and some of its luxuries, in great plenty. It contains fifty-four townships.

HAMPSHIRE, a county of Virginia, bounded north and north-west by the Potomack River, which divides it from the state of Maryland. It is about sixty miles long and fifty broad. It is well watered by the Potomack. Iron ore and coals have been discovered here. The chief town is Romney.

HAMPSHIRE, NEW, one of the United States of North America, bounded north by Lower Canada, east by Maine, south by Massachusetts, and west by Vermont, from which it is separated by Connecticut River. It is 160 miles long, and from nineteen to ninety broad ; containing 9491 square miles. Pop. in 1790, 141,885 ; in 1800, 183,858; in 1810, 214,460; in 1830, 269,533. Number of militia, in 1817, amounted to 25,794.

The counties, number of towns, population, and Chief Towns, are exhibited in the following Table.

Counties.

Towns.

Populat. Chief Towns.

f Charlestown

Cheshire

35

27,016 <Keene

(Walpole

Coos

25

8,390 Lancaster

Grafton

35

oo fiQ1 5 Haverhill 38,691 { p,ymouth

Hillsborough

40

37 762 $ Amherst 37,762 £ Hopkinton

. (Portsmouth

Rockingham

45

44 > 452{ Exeter

Merrimach

34,619 Concord

5 Dover

Strafford

32

Gilmanton (.Rochester

Sullivan

—

19,637 Ntwport

212

269,533

HAMPSHIRE.

The seat of governmen. is Concord; but Portsmouth is much me laigest town, and the only sea-port. There are eleven banks in this state.

There is a college at Hanover, and academies are established at Atkinson, Chesterfield, Deerfield, Exeter, Gilmanton, Hampton, Haverhill, Lancaster, Londonderry, Newmarket, New Ipswich, Plainfield, Portsmouth, and Salisbury. Some of these academies, particularly those at Exeter and Plainfield, are liberally endowed. Public schools are supported throughout the state, and afford to all the inhabitants the means of common education.

The following statement respecting the several denominations of Christians was made in the year 1817; Congregationalists, 103 ministers; Baptists, fifty-three churches; Friends, eighteen meetings ; Methodists, six ministers ; Presbyterians, three ministers ; Episcopalians, three ministers ; Universalists, three ministers ; Shakers, two societies. The whole number of houses of public worship, in 1817, was 261.

The climate of New Hampshire is subject to the extremes of heat and cold, but the air is generally pure and salubrious. Morning and evening fires become necessary from about the middle of September. Cattle are housed from the beginning of November ; and in the course of this month the earth and rivers generally be-come thoroughly frozen and covered with snow. The open country is generally cleared of snow in April, but in the woods it very often lies in the northern parts of the state till May.

The whole extent of sea coast in this state, from the southern boundary to the mouth of the Piscataqua harbour, is eighteen miles. The shore is generally a sandy beach, and bordering upon it are salt marshes, intersected by creeks. There are several coves, convenient for fishing vessels, but the entrance of the Piscataqua is the only harbour for ships. For twenty or thirty miles from the sea the country is either level, or variegated by small hills and valleys. Then commences a country the surface of which is greatly diversified by hills, valleys, and several elevated mountains, among which are the White Mounˆ trins, accounted the highest in the United States. The other most

considerable summits are Moose-hillock, Monadnock, Kearsarge, Sunapee, Ossipee, &c. Some of the most remarkable natural objects of curiosity are the cave in Chester, the rock in Durham, Bellows Falls in Walpole, and particularly the Notch of the White Mountains.

Five of the largest rivers in New England rise either wholly or in part in this state. These are the Connecticut, Merrymack, Androscoggin, Saco, and Piscataqua. The other most considerable rivers are the Upper and Lower Ammo-noosuc, Sugar River, Ashuelot, Contoocook, Margallaway, and Nashua. The principal lakes are Winnipiseogee,Umbagog, Ossipee, Sunapee, Squam, and Newfound lakes.

There is a great variety of soil in this state ; a considerable proportion is fertile, and it is generally better adapted to grazing than tillage. The interval lands on the large rivers are es teemed the most valuable. These produce va-

rious kinds of grain in great abundance. But the uplands, of an uneven surface, and of a rocky, warm, moist soil, are accounted the best for grazing. The principal articles of produce are beef, pork, mutton, butter, cheese, wheat, rye, Indian corn, oats, barley, pulse, and flax. The number of neat cattle, in 1812, was calculated at 211,534 ; horses 32,161 ; sheep 364,892. Apples are abundant, and no good husbandman thinks his farm complete without an orchard. Other kinds of fruit are not expensively cultivated.

The manufactures of New Hampshire have of late greatly increased. There are now upwards of thirty cotton and woollen manufactories, and nine or ten paper mills. There is a glass manufactory company in Keene, incorporated in 1814; and there are establishments for the manufacture of iron in Franconia. There are also several furnaces for casting iron, hollow ware, &c. Among the towns where the most considerable manufacturing establishments are situated, are Exeter, Peterborough, Franconia, Pembroke, New Ipswich, Keene, Dover, &c. The principal articles of export are lumber, fish, beef, pork, horses, neat cattle, sheep, flax seed, pot and pearl ashes. The total amount of the exports from Portsmouth, in 1798, was 723/241 dollars; and in 1816, 140,293 dollars.

The executive power is vested in a governor and a council of five members. The legislature is composed of a senate of twelve members, and a house of representatives. Every town containing 150 ratable

polls is entitled to send one representative, and one for every additional 300 polls. All the above officers are elected annually by the people, on the second Tuesday in March. The legislature meets annually on the first Wednesday in June. New Hampshire sends six re presentatives to congress.

New Hampshire was discovered in 1614 by captain Smith ; and the first settlements, consisting of fishermen and planters, were established in 1623. In consequence of a disunion among the settlers, they renounced the right of self-government, and placed themselves under the state of Massachusetts. About the year 1680, however, it was again established into a royal government, which was dissolved by the provincial convention of 1775. Its present constitution was adopted in 1784.

HAMPTON, a town of Middlesex, on the Thames, twelve miles W. S. W. of London, and two from Richmond and Kingston. It is chiefly famous for its royal palace, called Hampton Court, built by Cardinal Wolsey, who furnished it richly, and had 280 silk beds here for strangers. The buildings, gardens, and two parks, to which William III. made considerable additions, are about four miles in circumference, and watered on three sides by the Thames. The grand facade along the Thames extends 328 feet ; the portico, colonnade, and grand entrance, are executed in a magnificent style of architecture. On a pediment in the front of the palace is a bas-relief of the triumph of Hercules over Envy, opposite to which is a large oval bason. At the entrance of the grand walk are two marble vases •jf exquisite workmanship, one of them ty

Gibber, father of the poet, and the other by a t of its popuiation ig aiso descended from

foreigner, they having been executed as a trial of talvinists, who emigrated from France, under

skill; the one has abas-relief of the triumphs Louis XIV. A canal goes from the Maine to

of Bacchus, and the other of Amphitnte and the lhe walls of the town> for the convenience of

Nereids. In the parterres are four brass statues trade> A large proportion of the inhabitants are

of a Gladiator, Apollo, Diana, and Saturn. On employed in manufacturing watches, jewellery,

the south side of the palace is the Privy-Garden, camblets, and hats ; but the largest manufacture

which was sunk ten fret to open a view to the is that of silk wood, iron, corn, and flour,

Thames, having a fountain in the centre, lhe are also articies of traffic. Wilhelmsbad, in the

palace consists of three quadrangles; the first neighbourhood, has a well known mineral spring

and second are gothic ; but in the last is a most and public buildings ; this place is also the seat

beautiful colonnade of the Ionic order, in which of tne suprerne court for tne district, and is the

are the royal apartments

residence of the elector's deputy, generally the

HAMPTON, a town of the United States, the heir apparent. In 1792, Hanau was attacked, capital of Elizabeth county, Virginia. It is but not occupied, by the French : but it was situated at the head of a bay which runs up entered by them in 1796, in 1797, and after-north from

the head of James's river, called wards in 1805. In the end of October 1813, Hampton road, five miles north-west from Point an Austrian and Bavarian corps opposed here Comfort. Corn and leather are imported from the grand army of the French in their retreat this place to a considerable extent. It is eleven from Leipsic, and a sanguinary conflict took miles north from Norfolk, sixty E.S. E. from place, in which the Bavarians were defeated. Richmond, and 180 west by south from Phila-Inhabitants 12,000, thirteen miles east of Frank-delphia.

fort on the Maine, thirty S. S. E. of Wetzlar,

HAMPTON, a town of Rockingham county, New and twenty-seven east of Mentz. Long. 8° 69' Hampshire, United States, on the sea coast, E., lat. 50° 9' N.

HANAU-LICHTENBERG, a principality belonging formerly to a younger branch of the counts of Hanau. It is chiefly in Alsace, but a part of it on the German side of the Rhine. It is now shared between France, Baden, and Hesse-Darmstadt. The population of the whole is calculated at rather more than 80,000.

HA'NCES, or HAUNCHES, in architecture, the ends of elliptical arches ; and these are the arches of smaller circles than the scheme, or middle part of the arch.

The sweep of the arch will not contain above fourteen inches, and perhaps you must cement pieces to many of the courses in the hance, to make them long enough to contain fourteen inches. Moxon.

HANCOCK, county of Maine, United States, bounded north by Penobscot county, east by Washington county, south by the Atlantic, and west by Lincoln and Kennebeck counties. The chief town is Castine. It is well watered by the Penobscot and Union rivers.

HAND, n. s. Sax. ˆanˆ, Jjonˆ, and in all the Teutonic dialects. The palm with the fingers ; the member with which we hold or use any instrument.

And on a wall this king his eyen cast,

And saw an hand, armies, that wrote ful fast j

For fere of whiche he quoke, and siked sore.

This hand, that Balthasar so sore agast,

Wrote mane, techel, phares, and no more.

Chaucer. The Monhes Tale. The nectarine and curious peach Into my hands themselves do reach. Zfarvell.

They laid hands upon him, and bound him hand and foot. Knolles's History of the Turks.

That wonderful instrument the hand, was it made to be idle 1 Berkeley.

They hand in hand, with wandering steps and slow. Through Eden took their solitary way. Milton,

Each at the head

Levelled his deadly aim ; their fatal hands

No second stroke intend. Id'.

Measure of four inches; a measure used ii. the matches of horses ; a palm.

eighteen miles S. W. of Portsmouth, Pop. 1,103. Here are two meeting-houses and an academy.

HAN'APER, n. s. Low Lat. hanaperium. A treasury ; an exchequer. The clerk of the hanaper receives the fees due to the king for the seal of chartprs and patents.

The HANAPER, or HAMPER, is an office in Chancery, under the direction of a master, his deputy and clerks, comptroller, &c., answering, in some measure, to the nscus among the Ro-mans. The clerk or warden of the hanaper receives also all money due for commissions and writs ; and attends the keeper of the seal daily in term time, and at all time of sealing ; and takes into his custody all sealed charters, patents, &c., which he receives into bags, but anciently, it is supposed into hampers, which gave name to the office.

HANAU, or HANAU MUNZENBUHG, a rich tract of country in the electorate of Hesse-Cas- sel, extending east and west along the north

bank of the Maine, and deriving its name from the town of Hanau, its capital. Its extent is about 470 square miles, and its population 74,000; the prevailing religion is Calvinism. Here are several extensive forests and mines of silver, copper, salt, and cobalt. This territory was formerly a separate government, under the counts of Hanau; but that family becoming extinct in 1736, it has since formed part of the dominions of Hesse-Cassel.

HANAU, a large town of Hesse-Cassel, situated on the Kinzig, not far from its junction with the Maine. It is divided into the old and new town, each of which is distinctly governed. The former is ill built, but contains a magnificent castle, and a good classical school. The new town is much larger and more regular, and has a large square, in which is the council-house, and a public well in each corner. The Houses in this part are mostly in the Dutch style, having been built by Walloon and Flemish emigrants of the seventeenth century. A

II AN . 16

Side, right or left.

For the other side of the court-gate on this hand, and that hand, were hangings of fifteen cubits.

Exod. xxxviii. 15.

Part ; quarter; siJd.

It is allowed on all hands, that the people of England are more corrupt in their morals than any other nation this day under the sun. Swift.

Ready payment with respect to the receiver.

Of which offer the bassa accepted, receiving in hand one year’s tribute. Knolles’t History.

These two must make our duty very easy ; a considerable reward in hand, and the assurance of a iar greater recompence hereafter. Tillotson.

Ready payment with regard to the payer.

Let not the wages of any man tarry with thee, but give it him out of htmd. Tob. iv. 14.

Rate : price.

Time is the measure of business ; money of wares : business is bought at a dear hand, where there is small dispatch. Bacon.

Terms ; conditions ; rate.

With simplicity admire and accept the mystery ; but at no hand by pride, ignorance, interest, or va-nity wrest it to ignoble senses.

Taylor's Worthy Communicant

It is either an ill sign or an ill effect, and therefore at no hand consistent with humility. Taylor.

Act ; deed ; external action.

Thou sawest the contradiction between my heart and hand. King Charles.

I venerate the man whose heart is warm, Whose hands are pure, whose doctrine, and whose

life

Coincident, exhibit lucid proof That he is honest in the sacred cause. Cowper.

Labor ; act of the hand.

Alnashar was a very idle fellow, that never would set his hand to any business during his father's life.

Addison.

I rather suspect my own judgment than I can believe a fault to be in that poem, which lay so long under Virgil's correction, and bad his last hand put to it. Id.

Performance.

Where are these porters.

These lazy knaves ? Ye have made a fine hand ! fellows, There's a trim rabble let in. Shakspeare.

Power of performance.

He had a great mind to try his hand at a Spectator, and would fain have one of his writing in my works.

Addison.

A friend of mine has a very fine hand on the violin.

Id.

Attempt; undertaking.

Out of them you dare take in Jumd to lay open the original of such a nation. Spenser on Ireland.

Manner of gathering or taking.

As her majesty hath received great profit, so may she, by a moderate hand, from time to time reap the »‘ke. Bacon.

Workmanship ; power or act of manufacturing or making.

An intelligent being, coming out of the hands of infinite perfection, with an aversion or even indifforency to be reunited with its author, the source of its utmost felicity, is such a shock and deformity in the beautiful analogy of things, as is not consistent with finite wis-dom and perfection. Cheyne.

HAN

I will hear it

With all the tender sufferance of a friend, As calmly as the wounded patieut bears The artist’s hand that ministers his cure. Otway. Manner of acting or performing.

The master saw the madness rise ; His glowing cheeks, his ardent eyes ; And while he heaven and earth defyed, Changed his hand, and checked his pride.

Dryden.

Agency ; part in action.

God must have set a more than ordinary esteem upon that which David was not thought fit to have a hand in. South.

The act of giving or presenting. Let Tamar dress the meat in my sight, that I may eat it at her luind. 2 Sam. xiii. 5.

To-night the poet's advocate I stand, And he deserves the favour at my hand.

Addison.

Act of receiving any thing ready to one's hand, when it only waits to be taken.

His power reaches no farther than to compound and divide the materials that are made to his hand ; but can do nothing towards the making or destroying one atom of what is already in being. Locke.

Many, whose greatness and fortune were not made to their hands, had sufficient qualifications and opportunities of rising to these high posts. Addison. Care ; necessity of managing Jupiter had a farm a long time upon his hands, for want of a tenant to come up to his price.

L' Estrange.

When a statesman wants a day's defence, Or envy holds a whole week's war with sense, Or simple pride for flattery makes demands, May dunce by dunce be whistled off my hands.

Pope.

Discharge of duty.

Let it therefore be required, on both parts, at the hands of the clergy, to be in meanness of estate like the apostles : and at the hands of the laity, to be as they who lived under the apostles. Hooker.

Reach ; nearness : as, at hand, within reach, near, approaching.

Your husband is at hand, I hear his trumpet.

Shakspeare.

Cousins, I hope the days are near at hand, That chambers will be safe. Id.

He is at luind, and Pindarus is come To do you salutation. Id.

The sight of his mind was like some sights of eyes ; rather strong at hand than to carry afar off. Bacon.

Any light thing that moveth, when we find no wind, sheweth a wind at hand. Id.

A very great sound near hand hath strnckcn many deaf. Id.

It is not probable that any body should effect that at a distance, which, nearer hand, it cannot perform.

Browne.

When mineral or metal is to be generated, nature needs not to have at hand salt, sulphur, and mercury

Boyle.

Manual management.

Nor swords at luind, nor hissing darts afar, Are doomed t' avenge the tedious bloody war.

Dryden. State of being in preparation.

Where is our usual manager of mirth ? What revels are in hand ? Is there no play, To ease the anguish of a torturing hour ?

Shakspeare,

HAN 17

State of being in present agitation. I looked upon her with a soldier's eye ;

That liked, but had a rougher task in hand

Than to drive liking to the name of war.

Shakspeare.

It is indifferent to the matter at hand which way {he learned shall determine of it. Locke.

Cards held at a game.

There was never a hand drawn, that did double the rest of the habitable world, before this. Bacon.

That which is used in opposition to another.

He would dispute, Confute, change hands, and still confute.

Hudibras.

Scheme of action.

Consult of your own ways, and think which hand Is best to take. Ben Jonson.

They who thought they could never be secure, ex-cept the king were fiist at their mercy, were willing to change the hand in carrying on the war.

Clarendon.

Advantage ; gain ; superiority.

The French king, supposing to make his hand by those rude ravages in England, broke off his treaty of peace, and proclaimed hostility. Hayward.

Competition ; contest ;

She in beauty, education, blood, Holds hand with any princess in the world.

Shakspeare.

Transmission ; conveyance ; agency of conveyance.

The salutation by the hand of me Paul.

Col. v. 18.

Possession; power.

Sacraments serve as the moral instruments of God to that purpose ; the use whereof is in our hands, the effect in his. Hooker.

And though you war, like petty wrangling states, You're in my hand ; and, when I bid you cease, You shall be crushed together into peace. Dryden.

Between the landlord and tenant there must be a quarter of the revenue of the land constantly in their hands. Locke.

It is fruitless pains to learn a language, -which one may guess by his temper he will wholly neglect, as soon as an approach to manhood, setting him free from a governor, shall put him into the hands of his own inclination. Locke.

Vectigales Agri were lands taken from the enemy, and distributed amongst the soldiers, or left in the hands of the proprietors under the condition of certain duties. Arbuthnot.

Pressure of the bridle.

Hollow men, like horses, hot at hand, Make gallant show and promise of their mettle.

Shakspeare.

Method of government ; discipline ; restraint.

Menelaus bare an heavy hand over the citizens, Laving a malicious mind against his countrymen.

2 Mac. v. 23.

He kept a strict hand on his nobility, and chose rather to advance clergymen and lawyers.. Bacon.

However a strict hand is to be kept upon all desires of fancy, yet in recreation fancy must be permitted to sj/eak. Locke.

Influence; management.

Flattery, the dangerous nurse of vice, Got hand upon his youth, to pleasures bent.

Daniel.

That which performs the office of a hand in pointing.

The body, though it moves, yet not changing per-ceivable distance with other bodies, as fast as the VOL. XI.

ideas of our own minds do naturally follow one another, the thing seems to stand still ; as is evident in the hands of clocks and shadows of sun-dials. Locke.

Agent ; person employed ; a manager.

The wisest prince, if he can save himself and his people from ruin, under the worst administration, what may not his subjects hope for when he changeth hands, and maketh use of the best ? Swift.

Giver and receiver.

This tradition is more likely to be a notion bred in the mind of man, than transmitted from hand to hand through all generations. Tillotson.

An act ; a workman ; a soldier

Your wrongs are known : impose but your com-

• mands, This hour shall bring yon twenty thousand hands,

Dryden.

Demetrius appointed the painter guards, pleased that he could preserve that luind from the barbarity and insolence of soldiers. Dryden.

A dictionary containing a natural history requires too many hands, as well as too much time, ever to be hoped for. Locke.

Catch or reach without choice. The men of Israel smote as well the men of every city as the beast, and all that came to hand.

Judges.

A sweaty reaper from his tillage brought First fruits, the green ear, and the yellow sheaf, Uncalled as came to hand. Milton.

Form or cast of writing.

Solyman shewed him his own letters intercepted, asking him if he knew not that hand, if he knew not that seal ? Knollet.

Here is the' indictment of the good lord Hastings, Which in a set hand fairly is engrossed ; Eleven hours I've spent to write it over. Shakspeare.

Being discovered, by their knowledge of Mr. Cow-ley's hand, I happily escaped. Denham. If my debtors do not keep their day.

Deny their hands, .and then refuse to pay,

I must attend. Dryden.

The way to teach to write is to get a plate graved with the characters of such hand you like. Locke.

Whether men write court or Roman hand, or any other, there is something peculiar in every one's writing. Cockhirn.

Constantia saw that the hand writing agreed with the contents of the letter. Addison.

They were wrote on both sides, and in a small hand.

Arbuthnot.

I present these thoughts in an ill hand; but scholars are bad penmen, we seldom regard the mechanick part of writing. Feltun.

Handover head. Negligently; rashly; without seeing what one does.

So many strokes of the alarm bell of fear and awaking to other nations, and the facility of the titles, which hand over head have served their turn, dot,h ring the peal so much the louder. Bacon.

A country fellow got an unlucky tumble from a tree : Thus 'tis, says a passenger, when people will be doing things hand over head, without either fear Of wit. L'Estrange.

Hand to hand. Close fight.

In single opposition, hand to hand,

He did confound the best part of an hour.

Shakspeare.

He issues, ere the fight, his dread command, That slings afar, and poniards hand to hand, Be banished from the field. Dryden.

c

HAN

Hand in hand. In union ; conjointly.

Had the sea been Marlborough's element, the war had been bestowed there, to the advantage of the country, which would then have gone hand in hand v. ith his own. Smft.

Hand in hand. Fit ; pai.

As fair and as good, a kind of hand in hand comparison, had been something too fair and too good for any lady in Brittany. Shakspeare.

Hand to mouth. As want requires.

I can get bread from hand to mouth, and make even at the year's end. L'Estrange.

To bear in hand. To keep in expectation ; to elude.

A rascally yea forsooth knave, to bear in hand, and then stand upon security. Shahspeare.

To be hand and glove. To be intimate and familiar ; to suit one another.

HAND, v. a. From the noun.

To give or transmit with the hand.

Judas was not far off, not only because he dipped in the same dish, but because he was so near that our Saviour could hand the sop unto him. Brown.

I have been shewn a written prophecy that is handed among them with great secrecy. Addison.

To guide or lead by the hand.

Angels did hand her up, who next God dwell.

Donne.

By safe and insensible degress he will pass from a boy to a man, which is the most hazardous step in life : this therefore should be carefully watched, and a young man with great diligence handed over it.

Locke.

To seize; to lay hands on.

Let him, that makes hut trifles of his eyes, First hand me : on mine' own accord, 111 off.

Shakspeare,

To manage; to move with the hand.

Tis then that with delight I rove, Upon the boundles* depth of love : I bless my chains, I hand my oar, Nor think on all I left on shore. Prior.

To transmit in succession, with dmvn ; to deliver from one to another.

I know of no other way of securing these monuments, and making them numerous enough to be handed down to future ages. Addison.

They had not only a tradition of it in general, but even of several the most remarkable particular accidents of it likewise, which they handed downwards to the succeeding ages. Woodward.

Arts and sciences consist of scattered theorems and practices, which are handed about amongst the masters, and only revealed to the lilii artis, 'till some great genius appears, who collects these disjointed propositions, and reduces them into a regular system.

Arbuthnot.

One would think a story so fit for age to talk of, and infancy to hear, were incapable of being handed down to us. Pope.

HAND is much used in composition for that which is manageable by the hand, as a handsaw; or borne in the hand, as a handbarrow, &c.

HAND, a member of the human body, at the extremity of the arm. See

ANATOMY. The mechanism of the hand is excellently fitted for the various uses and occasions we have for it, and the great number of arts and manufactures in which it is to be employed. It consists of a compages of nerves, and little bones joined into

each other, which give it a great degree of strength, and at the same time an unusual flexibility, to enable it to handle adjacent bodies, lay hold of them, and grasp them, in order either to draw them towards us or thrust them off. Anaxagoras is said to have maintained, that man owes all his wisdom, knowledge, and superiority over other animals, to the use of his hands. The right hand was the place of honor and respect. Amongst the Greeks and Romans it was customary for inferiors to walk on the left hand of superiors, that the right hand might be ready to afford protection and defence to their left side, which, on account of the awkwardness of the left hand, was more exposed to danger.

HAND, in falconry, is used for the foot of the hawk. To have a clean, strong, slender, glutinous hand, well clawed, are good qualities of a hawk or falcon.

HAND, in the manege, is also used for the fore foot of a horse : also for a division of the horse into two parts, with respect to the rider's hand. The fore hand includes the head, neck, and fore quarters ; the hind hand is all the rest of the horse.

HANDS are borne in coat armour, dexter and sinister, that is, right and left ; expanded or open ; and after other manners. A bloody hand in the centre of the escutcheon is the badge of a baronet of Great Britain.

• HANDA, Celt. Aonda, i. e. the isle of one color, an inhabited island of Scotland, on the coast of Sutherland, one mile square. It has a large tremendous rock on the north, from eighty to 100 fathoms high, much frequented by sea-fowls.

HANDBARROW, n. s. A frame on which any thing is carried by the hands of two men, without wheeling on the ground.

A handbarrow, wheelbarrow, shovel, and spade.

Tusser.

Set the board whereon the hive standeth on a handbarrow, and carry

them to the place you intend.

Mortimer.

HAND-BASKET, n. s. A portable basket.

You must have woollen yarn to tie grafts with, and a small hand-basket to carry them in. Mortimer.

HAND-BELL, n. s. A bell rung by the hand.

The strength of the percussion, is the principal cause of the loudness or softness of sounds ; as in ringing of a hand-bell harder or softer. Bacon.

HAND-BREADTH, n. s. A space equal to the breadth of the hand ; a palm.

A border of an hand-breadth round about. Exodus.

Off goth the skinue, an hondbrede al aboute

Chaucer. The Milleres Tale.

The eastern people determined their hand-breadth by the breadth of barley-corns, six making a digit, and twenty-four a hand's-breadth. Arbuthnot.

HAND'ED, adj. ~\ From hand. Having

HAND'ER, n. s. /the use of either hand;

HAND'ILY, adv. V with hands joined : hander,

HAND'INESS, n. s. i one who transmits from

HAND'Y, n. s. J party to party : handily, with skill or dexterity : handiness, skill ; readiness : handy, performed with the hand ; dexterous ; skilful ; convenient ; or near.

They were but few, yet they would easily overthrow the great numbers of them, if ever they came to handy blows. Knolles.

HANDEL.

Into their inmott bower

Handed they went. Milton.

Both parties now were drawn so close,

Almost to come to handy blows. Hudibras.

Many are right handed, whose livers are weakly constituted ; and many use the left, in whom that part is strongest. Browne.

They would assume, with wondrous art, Themselves to be the whole who are but part, Of that vast frame the church ; yet grant they were The handert down, caa they from thence infer A right t' interpret ? Or would they alone, Who brought the present, claim it for their own ?

Dryden.

She stript the stalks of all their leaves ; the best Sne culled, and them with handy care she drest. Id.

The servants wash the platter, scour the plate ; And each is handy in his way. Id.

HANDEL (George Frederick), an eminent master and composer of music, born at Halle, in Upper Saxony, on the 24th of February, 1684. His father was a physician in that city, and was upwards of sixty years of age when he was born. During his infancy young Handel amused himself with musical instruments, and made considerable progress in the science before he was seven years of age. His propensity for music at last became so strong that his father, who designed him for the law, forbade him to touch an instrument. Handel, however, privately conveyed a small clavichord to a room in the uppermost part of the house, to which he constantly stole when the family were asleep; and thus made such advances in his art as enabled him to play on the harpsichord. He was first noticed by the duke of Saxe Weissenfels on the following occasion. His father went to see another son, by a former wife, who was valet de chambre to the duke, and young Handel, being then in his seventh year, accompanied him. While he was in the duke's court it was impossible to keep him from

harpsichords j *nd he sometimes went into the organ loft at chu.ch, and played after service was over. On one of these occasions the duke, happening to go out later than usual, found something so uncommon in his manner of playing, that he enquired for him, and was so much taken with the musical genius he exhibited that he persuaded his father to let him follow his inclinations. On his return to Halle, Handel was placed under Zackaw, the organist of the cathedral, and was even then able to supply his mas-ter's place in his absence. At nine years of age he began to compose church services for voices and instruments, and continued to compose one every week for three years. At fourteen he far excelled his master, and was sent to Berlin. The opera was then encouraged by Frederick I. king of Prussia, and under the direction of Buononcini, Attilio, and other eminent Italian masters. Buononcini, being of a haughty disposition, treated Handel with contempt; but Attilio behaved to him with kindness, and he profited much by his instructions. His abilities soon recommended him to the king, who frequently made him presents. After this he went to Hamburgh, where the opera was little inferior to that of Berlin. Soon after his arrival his father died ; and, his mother being left in narrow circumstances, he thought it necessary to procure some

scholars, and to accept a place in the orchestra. At this time the first harpsichord in Hamburgh was played by one Keser, who also excelled in composition; but he, having involved himself in debt, was obliged to abscond. Upon this vacancy, the person who had been used to play the second harpsichord claimed the first by right of succession ; but was opposed by Handel, who founded his claim solely upon his abilities. After much dispute it was decided in favor of Handel ; but his antagonist, as they were coming out of the orchestra, made a push at Handel's breast with a sword, which must undoubtedly have killed him, had there not fortunately been a mu-sic-book in the bosom of his coat. Handel, though yet but in his fifteenth year, became composer to the house : and the success of Almeria, his first opera, was so great, that it ran thirty nights without interruption. Within less than a year after this he set two others, called Florinda and Norene, which were received with equal applause. During his stay here, which was about four or five years, he also composed a considerable number of sonatas, which are now lost. His talents now procured him the acquaintance of many persons of note, particularly the prince of Tuscany, brother to John Gaston de Medicis, the grand duke. This prince pressed him to go with him to Italy ; but this offer Handel declined, being resolved not to give up his independence for any advantage that could be offered him. In his nineteenth year Handel took a journey to that

country, where he was received with the greatest kindness by the prince of Tuscany, ,‘as well as by the grand duke ; and notwithstanding the difference between the style of the Italian music and the German, to which Handel had hitherto been accustomed, he set an opera called Roderigo, which pleased the grand duke so well that he was rewarded with 100 sequins and a service of plate. After staying about a year in Florence he went to Venice, where he is said to have been first discovered at a masquerade, by his exquisite performance on the harpsichord. Here he composed his opera called Agrippina, which was performed twenty-seven nights successively, with the highest applause. From Ve-nice he proceeded to Rome, where he became acquainted with cardinal Ottoboni and many other dignitaries, by whom he was frequently attacked on account of his religion ; but Handel declared he would live and die in the.religion in which he had been educated. He now composed an oratorio called Resurrectione, and 150 cantatas, besides some sonatas and other music. Ottoboni contrived to have a trial of skill between him and Dominici Scarlatti. When they came to the organ Scarlatti himself yielded the superiority to Handel. From Rome Handel went to Naples ; after which he paid a second visit to Florence : and at last, having spent six years in Italy, set out for his native country. In his way thither he was introduced at the court of Hanover by baron Kilmanseck ; when the elector (afterwards king George I.) offered him a pension of 1500 crowns a year, as an inducement for him to continue. This offer he declined, on account of his having promised to visit the court of the elector palatine. The elector, being mnde

acquainted with this objection, generously ordered him to be told, that his acceptance of the pension should not restrain him from his promise, but that he should be at full liberty to be absent a year or more if he chose it. Soon after the place of master of the chapel was bestowed upon Handel ; and having visited his mother, who was now aged and blind, and his old master Zackaw, and staid some time at the

court of the elector palatine, he set out for England, where he arrived in 1710. Operas were then a new entertainment here, and Handel set a drama called, Rinaldo, which was performed with uncommon success. Having staid a year in this country he returned to Hanover; but, in 1712, again came over to England ; and, the peace of Utrecht being concluded a few months afterward, he composed a grand Te Deum and Jubilate on the occasion. He now found the nobility very desirous that he should resume the direction of the opera house in the Hay Market ; and queen Anne having added her authority to their solicitations, and conferred on him a pension of £200 a year, he remained in Britain till the death-of the queen and the accession of king George I. ; who added a pension of £200 a year to that bestowed by queen Anne ; and this was soon after increased to £400, on his being appointed to teach the young princesses music.

In 1715 Handel composed his opera of Ama-dige; but from that time to 1720 he composed only Teseo and Pastor Fido. About this time a project was formed by the nobility for erecting a kind of academy at the Hay Market, to secure to themselves a constant supply of operas composed by Handel, and performed under his direction. No less than £50,000 were subscribed for this scheme, and it was proposed to continue the undertaking for fourteen years. Handel went over to Dresden, to engage singers, and returned with Senesino and Duristami. Buononcini and Attilio had still a strong party, but not equal to that of Handel ; and therefore in 1720 he obtained leave to perform his opera of Radamisto. The house was so crowded that many fainted ; and £2 were offered by some for a seat in the gallery. The contention, however, still ran very high between Handel's party and that of the two Italian masters. It was on this occasion that dean Swift wrote the following epigram : —

Some say that signior Buononcini Compared to Handel 's a mere ninny : Others do swear that to him Handel Is hardly fit to hold the candle. Strange that such high contests should be Twixt Tweedle-dnm and Tweedle-dee !

At last it was determined that the rivals should be jointly employed in an opera, in which each should take a distinct act, and he who by the general suffrage was allowed to have given the best proof of his ability should be put in possession of the house. This opera was called Muzio Scaevola, and Handel set the last act. It is said that Handel's superiority was owned even in the overture; but, when the act was performed, there remained no pretence for doubt. The academy was now firmly sstablished, and Handel conducted it for nine years with great success ;

but about that time an irreconcileable enmity took place between him and Senesino ; whom Handel resolved to dismiss, and the nobility resolved not to permit him. The haughtiness of Handel's temper would not allow him to yield, and the affair ended in the dissolution of the academy. tHis audience dwindled away, and the offended nobility raised a subscription against him, to carry on operas in the play-house in Lincoln's Inn Fields. Against this opposition Handel bore up four years : three in partnership with Heidegger, and one by himself: but, though his own musical powers were superior to those of his antagonists, the astonishing voice of Fari-nelli, whom the opposite party had engaged, determined the victory against him. At last Handel, having spent all he was worth in a fruitless opposition, desisted ; but was deranged for some time after, and his right arm was rendered useless by a stroke of the palsy. In this deplorable situation he was sent to the baths of Aix-la-Chapelle; from which he received relief. Returning to England, in 1736, his Alexander's Feast was performed with applause at Covent Garden. The success and splendor of the Hay Market was by this time so much reduced by mismanagement, that lord Middlesex undertook the direction of it himself, and applied to Handel for composition. He accordingly composed his operas called Faramondo and Alessandro Severo, for which, in 1737, he received £1000. In 1738 he had £1500 from a single benefit, and nothing seemed wanting to retrieve his affairs, except such concessions on his part as his opponents had a right to expect. These, however, he could not be prevailed upon to make ; and refused to enter into any engagements upon subscription. After having tried a few more operas at Covent Garden, without success, he introduced that species of music called oratorios, which he thought better suited to the gravity of an English audience. This was by some thought a profanation, and the oratorios at first met with little success ; so that in 1741 Handel again quitted England, and went to Dublin. His Messiah here brought ' him into universal favor. In nine months he had brought his affairs into order; and on his return to England, in 1742, found the public more favorably disposed towards his oratorios. His Messiah became a great favorite; and Handel, with a generous humanity, determined to perform it annually for the benefit of the Foundling Hospital. In 1743 he had a return of his paralytic disorder; and in 1751 became quite blind. This last affliction sunk him into the deepest despondency ; and, finding it impossible to manage his oratorios alone, he was assisted by Mr. Smith, with whose aid they were continued till within eight days of his death. During the lat-ter part of his life his mind was often disordered, yet at times it appears

to have resumed its full vigor, and he composed several songs, choruses, &c. From October, 1758, his health declined very fast. On the 6th of April, 1759, his last oratorio was performed, at which he was present, and he died on the 14th. On the 20th he was buried in Westminster Abbey. His musical powers are best expressed by Arbuthnot's reply to Pope, who seriously asked his opinion of him

as a musician ; ' Conceive,' said he, ' the highest you can of his abilities, and they are much beyond any thing you can conceive.'

HAND'FAST, M. s. Hand and fast. Hold; custody. Obsolete.

Thou shake stond by the post, As thou were honde-fast.

Chaucer. The Cukes Tale.

If that shepherd be not in handfast, let him fly.

Shakspeare.

HANDFASTING, an ancient custom which formerly took place in various parts of Scotland every year. At a stated time it was the custom for the unmarried persons of both sexes to choose a companion with whom they were to live till that time next year. If they were pleased with each other at that time, then they continued together for life ; if not, they separated, and were free to make another choice as at first. The fruit of their connexion, if there were any, was always attached to the disaffected person. A priest, whom they named Book i' bosom, because he earned in his oosom a Bible or a register of the marriages, came from time to time to confirm the marriages. This immoral custom is well illustrated by Sir Walter Scott in the Monastery.

HANDFUL, n. s. As much as the hand can grasp, or contain; sometimes expressive of length, or distance, rather than quantity; also a small quantity by comparison.

Being in possession of the town, they had their handful to defend themselves from firing. Raleigh.

Take one vessel of silver and another of wood, each full of water, and knap the tongs together about an handful from the bottom, and the

sound will be more resounding from the vessel of silver than that of wood. Bacon,

He could not, with such a handful of men, and without cannon, propose reasonably to fight a battle.

Clarendon.

The peaceful scabbard where it dwelt, The rancour of its edge had felt ; For of the lower end two handful It had devoured, it was so manful. Hudibras

I saw a country gentleman at the side of Rosamond's pond, pulling a handful of oats out of his pocket, and gathering the ducks about him. Addison.

HA'ND-GALLOP, n. x. A slow and easy gallop, in which the hand presses the bridle to hinder increase of speed.

Ovid, with all his sweetness, has as little variety of numbers and sounds as he : he is always upon a hand-gallop, and his verse runs upon carpet ground.

Dryden.

HAND-GUN, n. s. A gun wielded by the hand.

Guns have names given them, some from serpents or ravenous birds, as culverines or colubrines ; others in other respects, as cannons, demicannons, hand-guns, and muskets. Camd.cn.

HANDICRAFT, n. s. J Manual occupa—

HAND'ICRAFTSMAN, n. s. S tion : a man who lives by manual labor.

O miserable age ! virtue is not regarded in handicraftsmen. Shakspeare.

He has simply the best wit of any handicraftsman in Athens. Id.

The principal bulk of the vulgar natives are tillers of the ground, free servants, and handicraftsmen; as smiths, masons, and carpenters. Bacon.

The covenants thou shalt teach by candle-light, When puffing smiths, aud every painful trade Of handicrafts, in peaceful beds are laid. Dryden.

Particular members of convents have excellent mechanical geniuses, and divert themselves with painting, sculpture, architecture, gardening, and several kinds of handicrafts. Addison.

The prophancness and ignorance of handicraftsmen, small-traders, servants, and the like, are to a degree very hard to be imagined greater. Swift.

It is the landed man that maintains the merchant and shop-keeper, and handicraftsmen. Id.

The nurseries for children, of ordinary gentlemen and handicraftsmen are managed after the same man-ner. Gullioer's Travels.

HAN'DIWORK,n.s. Handy and work. Work of the hand ; product of labor ; manufacture.

The heavens declare the glory of God, and the firmament sheweth his handiwork. Psalms.

As proper men as ever trod upon neat's-leather have gone upon my handiwork. Shakspeare.

In general they are not repugnant unto the natural will of God, which wisheth to the works of his own hands, in that they are his own handiwork, all happiness ; although, penhaps, for some special cause in our own particular, a contrary determination havo seemed more convenient. Hooker.

He parted with the greatest blessing of human nature for the handiwork of a taylor. L'Estrange.

HA'NDKERCHIEF, n. s. Hand and kerchief. A piece of silk or linen used to wipe the face, or cover the neck.

He was torn to pieces with a bear : this avouches the shepherd's son, who has not only his innocence, but a handkerchief and rings of his,

that Paulina knows. Shakspeare.

She found her sitting in a chair, in one hand holding a letter, in the other her handkerchief, which had lately drunk up the tears of her eyes. Sidney.

Confederate in the cheat, they draw the throng, And cambric handkerchiefs reward the song. Gay.

The Romans did not make use of handkerchiefs, but of the lacinia or border of the garment, to wipe their face. Arbuthnot.

HAN'DLE, v. a. & n. s. Belg. handden ; Swe. fiandla; Dan. handle. To touch, or feel, with the hand : to manage ; to make familiar with : figuratively, to treat ; to mention in writing or conversation ; to deal with, or practise upon : handle, that part by which any thing is held ; and hence, figuratively, that of which use is made.

They that handle the law know me not.

Jerem. ii. 8.

Leaving to the author the exact handling of every particular, and labouring to follow the rules of abridgment. 2 Mac.

He left nothing fitting for the purpose Untouched, or slightly handled in discourse.

Shakspeare.

Her eyes, he» »ir, her cheek, her gait, her voice,

Thou handiest in thy discourse. Id.

That fellow handles his bow like a crow-keeper.

Id.

Pray you, my lord, give me leave to question ; you shall see how I'll handle her. Id.

Talbot, my life, my joy, again returned ! How wert thou handled, being prisoner? Id.

No hand of blood and bone Can gripe the sacred handle of our sceptre, Unless he do profane, steal, or usurp. Id*

HAN 2$

Fortune turneth the handle of the bottfc, which is easy to be taken hold of; and after the belly, which is hard t> grasp.

Of a number of other like instances we shall speak more, when we handle the communication of sounds.

Id.

There is nothing but hath a double handle, or at least we have two hands to apprehend it. Taylor.

By Guidas Ubaldus, in his treatise, for the explication of this instrument, the subtilties of it are largely and excellently handled. Wilkina'a Deedalw.

They were well enough pleased to be rid of an enemy that had handled them so ill. Clarendon.

A carpenter that had got the iron work of an axe, beeeed only so much wood as would make a handle to it. L'Estrange.

An incurable shyness is the general vice of the Irish horses, and is hardly ever seen in Flanders, because the hardness of the winters forces the breeders there to house and handle their colts six months every year. Temple.

Of bone the handles of my knives are made, Yet no ill taste from thence affects the blade, Or what I carve ; nor is there ever left Any unsavory haut-goust from the haft. Dryden.

A beam there was, on which a beechen pail Hung by the handle on a driven nail. Id.

The bodies which we daily handle make us perceive, that, whilst they remain between them, they hinder the approach of the part of our hands that press them.

Locke.

They overturned him in all his interests by the sure but fatal handle of his own good nature. South.

In an argument, handled thus briefly, every thing cannot be said.

Atterbury.

HAND'LESS, adj. Hand and less. Without a hand.

Speak, my Lavinia, what accursed hand Hath made thee handless ? Shakspeare.

His mangled myrmidons,

Noseless, handless, hackt, and dipt, come to him, Crying on Hector. Id.

HAND'MAID, n. s. A maid that waits at hand. Those of my family their master slight, Grown despicable in my handmaid's sight. Sandyi.

Brave Burgundy, undoubted hope of France ! Stay, let thy humble handmaid speak to thee.

Shakspeare.

I will never set politicks against ethicks, especially for that true ethicks are hut as a handmaid to divinity and religion. Bacon.

She gave the knight great thanks in little speech, And said she would his handmaid poor remain.

Fairfax.

Heaven's youngest teamed star Hath fixed her polished car, Her sleeping Lord with handmaid lamp attending.

Milton. Love led them on; and faith, who knew them

best

Thy handmaids, clad them o'er with purple beams And azure wings, that up they flew so drest, And speak the truth of thee on glorious themes Before the judge. Id.

By viewing nature, nature's handmaid, Art, Makes mighty things from small beginnings great ; Thus fishes first to shipping did impart, Their tail the rudder, and their head the prow.

Dryden.

Since he had placed his heart upon wisdom, health, wealth, victory, and honour, should always wait on her as her handmaids. Addison.

Then Criticism the Muse's handmaid proved, To dress her charms and make her more beloved.

Pope.

And her head drooped as when the lily lies O'ercharged with rain : her summoned handmaids bore Their lady to her couch with gushing eyes.

Byron. Don Juan.

HAND'MILL, n. s. Hand and mill. A mill moved by the hand.

Oft the drudging ass is driven with toil ;

Returning late, and loaden home with gain

Of bartered pitch, and handmilla for the grain.

Dryden.

HANDS off. A vulgar phrase for keep off; forbear.

They cut a stag into parts ; but, as they were entering upon the dividend, hands off says the lion.

L' Estrange.

HAND'SAILS, n. s. Sails managed by the hand.

The seamen will neither stand to their handsails, nor suffer the pilot to steer. Templa.

HAND'SAW, n. s. A saw manageable by the hand.

My buckler cut through and through, and my sword hacked like a handsaw. Shakspeare.

To perform this work, it is necessary to be provided with a strong knife and a small handsaw. Mortimer.

HANDSEL, n. s. & v. a. Dutch, hansel, a first gift. The first act of using any thing ; the first act of sale. It is now not used, except in the dialect of trade.

The apostles term it the pledge of our inheritance, and the handsel or earnest of that which is to come.

Huulter.

Thou art joy's handsel; heaven lies flat in thee,

Subject to every mounter's bended knee. Herbert.

In timorous deer he handsels his young paws, And leaves the rugged bear for firmer claws. Cowlej. I'd show you

How easy 'tis to die, by my example,

And handsel fate before you. Dryden.

HA'NDSOME, adj. &v.a.\ Gothic, liaml—

HAND'SOMELY, adv. > sum ; Dut. hand—

HAND'SOMENESS, ». s. j sae.m, ready,

dexterous. These words denote a species of

corporeal beauty, and is a general assemblage

of whatever is agreeable in person or figure :

in manner, it signifies dignity; grace; elegance;

in act, convenience ; liberality; generosity.

A carpenter, after he hath sawn down a tree, hath wrought it handsomely, and made a vessel thereof.

Wisdom.

Under it he may cleanly convey any fit pillage that cometh handsomely in his way. Spenser.

For a thief it is so handsome, as it may seem it was first invented for him. I<1.

For handsomeness' sake, it were good you hang the upper glass upon a nail. Bacon.

Him all repute

For his device in handsominy a suit ; To judge of lace he hath the best conceit. Dtinne. In cloths, cheap handsomeness doth bear the bell.

Herbert.

Accompanying her mourning garments with a doleful countenance, yet neither forgetting handsomeness in her mourniug garments, nor sweetness in her doh-ful countenance. Sidney.

When the kind nymph, changing her faultless

shake, Becomes unhandsome, handsomely to ‘scape.

Waller.

HAN

Persons of the fairer sex like that handsomeness for which they find themselves to be the most liked.

Boyle.

A great man entered by force into a peasant’s house, and, finding his wife very handsome, turned the good mau out of his dwelling. Addison.

I am finding out a convenient place for an alms-house, which I intend to endow very handsomely for a dozen superannuated husbandmen. Id.

That easiness and handsome address in writing is hardest to be attained by persons bred in, a meaner way. Felton.

HAND’- VICE, n. s. Hand and vice. A vice to hold small work in. — Moxon.

HAND'-WRITING, n. s. Hand and writing. A cast or form of writing peculiar to each hand.

That you beat me at the mart, I have your hand to

show ; If the skin were parchment, and the blows you gave

me ink, Your own handwriting would tell you what I think.

Shakspeare.

To no other cause than the wise providence of God can be referred the diversity of handwritings.

Cockburn.

HA'NDY-DANDY, n. s. A play in which children change hands and places.

See how yond justice rails upon ycnd simple thief! Hark in thine ear : change places ; and, handy-dandy, which is the justice, which is the thief ? Shakspeare,

Neither cross and pile, nor ducks and drakes, are quite so ancient as handy-dandy.

Arbuthnot and Pope.

HANG, v. a. Preter. and part. pass, hanged or hung, anciently hong. Sax. jjangan. All the northern dialects have this word. To suspend ; to fasten in such a manner as to be sustained, not below, but above.

Strangely visited people he cures ;

Hanging a golden stamp about their necks ;

Put on with holy prayers. Shakspeare.

His great army is utterly ruined, he himself slain in. it, and his head and right hand cut off, and hung up before Jerusalem. South.

To place without any solid support. Thou all things hast of nothing made, That hungest the solid earth in fleeting air, Veined with clear springs, which ambient seas repair.

Sandy/i.

To choke and kill by suspending by the neck, so as that the ligature intercepts the breath and circulation.

But, trewely, by day it may not be, Men wolden say, that we were theeves strong, And for our owen tresoun don us hong.

Chaucer. The Pardoneres Tale. No painter no close up the piece and see This crowd of traitors hanged in effigy. Marvell.

Thieves at home must hang ; but he that puts Into his overgorged and bloated purse The wealth of Indian provinces escapes. Cotvper.

He hath commission from thy wife and me To hang Cordelia in the prison. Shakspeare.

Hanging supposes human soul and reason This animal's below committing treason ; Shall he be hanged, who never could rebel ? That's a preferment for Achitophel. Dry (ten.

To display ; to show aloft.

This unlutky mole misled several coxcombs ; and, •ike the flanging out of false colours, made some of

them converse with Rosalinda in what they thought the spirit of her party. Addison.

To let fall below the proper situation ; to deˆ cline.

There is a wicked man that hangeth down his head sadly • but inwardly he is full of deceit.

Ecclus. xix. 26.

The beauties of this place should mourn ; The immortal fruits and flowers at my return Should hang their withered head ; for sure my breast Is now more poisonous. Dryden.

The rose is fragrant, but it fades in time j The violet sweet, but quickly past the prime ; While lilies hang their heads, and soon decay ; And whiter snow in minutes melts away. Id.

The cheerful birds no longer sing ; Each drops his head, and hangs his wing.

Prior.

To fix in such a manner as in some directions to be moveable.

The gates and the chambers they renewed, and hanged doors upon them. 1 Mac. iv. 57.

To cover -or charge by any thing suspended. Hung be the heavens with black, yield day to night '.

Shaksveare.

The pavement ever foul with human gore ; Heads and their mangled members hung the door.

Dryden.

To furnish with ornaments or draperies fastened to the wall.

Musick is better in chambers wainscotted than hanged. Bacon.

If e'er ray pious father for my sake Did grateful offerings on thy altars make, Or I increased them with my sylvan toils, And hang thy holy roofs with savage spoils, Give me to scatter these. Dryden.

Sir Roger has hung several parts of his house with the trophies of his labours. Addison.

Thus o'er the dying lamp the unsteady flame, Hangs quivering on the point, leaps off by fits And falls again as loth to quit its hold. •.

HANG, v. n.

To be suspended ; to be supported above, not below.

Over it a fair portcullis hung,

Which to the gate directly did incline,

With comely compass and compacture strong.

Spenser.

To depend ; to fall loosely on the lower part ; to dangle.

Upon her shoulders wings she wears,

Like hanging sleeves, lined through with ears.

Hudibras.

If gaming does an aged sire entice, Then my young master swiftly learns the vice, And shakes in hanging sleeves the little box and dice.

Dryden.

To bend forward.

By hanging is only meant a posture of bending forward to strike the enemy. Addison.

To float ; to play.

And fall these sayings fro-n that gentle tongue, Where civil speech and soft persuasion hung ? Prior.

To be supported by something raised above the ground.

Whatever is placed on the head may be said to hang ; as we call hanging gardens such as arc planted on the top of the house. Addison.

To rest upon by embracing.

She hung about my neck, and kiss on kiss

She vied. Shakspeare.

HAN 24

To hover ; to impend.

He hath a heavenly gift of prophecy ; And sundry blessings hang about his throne, That speak him full of grace. Shakspeure,

To be loosely joined.

Whither go you ?

— To see your wife : is she at home ? — Ay, and as idle as she can hang together.

Shakspeare. To drag; to be incommodiously joined.

In my Lucia’s absence Life hangs upon me, and becomes a burden.

Addison.

To be compact or united : with together. In the common cause we are all of a piece ; we Jiana together. Dryden.

To adhere, unwelcomely or incommodiously. To rest ; to reside.

Sleep shall neither night nor day, Hang upon his pent-house lid. Shakspeare.

To be in suspense ; to be in a state of uncertainty.

To be delayed ; to linger.

A noble stroke he lifted high,

Which hung not, but so swift with tempest fell

On the proud crest of Satan. Milton;

To be dependent on.

To be fixed or suspended with attention.

To have a steep declivity.

Sussex marl shews itself on the middle of the sides of hanging grounds. Mortimer.

To be executed by the halter.

To decline ; to tend down.

HANGARANG, a pergunnah north of the true Himalaya, bounded on the south, by the district of Kunawur, and subject to the principality of Bussaher. The villages here are all perfectly Tartar, and exhibit a striking difference in appearance and language to those of Kunawur ; the appearance of this pergunnah is strange and melancholy; mountains bare of forest, but covered above with a little snow of a rounded form, with gentle declivities, but broken towards the Sutuleje into abrupt and precipitous abysses, bare of vegetation. Although now subject to Bussaher, this tract must have formerly been part of Lahdack. The separation of Bussaher from Hangarang is decided and strongly marked, whereas, from the latter to Lahdack there is no difference perceptible. Hangarang produces wheat, barley, ooa, papar, and turnips, but no rice, not even the kind peculiar to high and dry situations. There is but one harvest season ; the trees, such as apricots,

willows, dogroses, gooseberry, currants, and whins, are all stunted, and only to be found near villages, and in the beds of streams. In 1819, the pergunnah contained nine villages, the revenue of which was 900 rupees per annum, and the inhabitants carried on a small trade with Lahdack and Gor-tope, from which last they bring salt and wool. They manufacture a coarse sort of blanket stuff, but ponies and mules compose a great proportion of their wealth. The pergunnah at present is poor, naked, and barren, and is principally valuable as a channel of communication with the Lahdakies and other Tartar tribes.

HAN

HANG'ER, n. s.ˆ\ Derivatives of hang. Hanger

HANG'ER-ON, f is that by which any thing

HANG'ING, n. s. £ bangs in a depending po—

HANG'MAN, n. s. J sition ; a short broad sword. Hanger-on, a dependent; one who eats and drinks without payment. Hanging, drapery hung against the walls by way of ornament ; foreboding death by the halter. Hangman, a public executioner; a term of reproach.

Beforen his triumphe walketh she,

With gilte chaines on hire necke honging.

Chaucer. The Monkes Tale.

One cried, God bless us ! and Amen ! the other ; As they had seen me with these hangman's hands : Listening their fear, I could not say Amen, When they did say God bless us. Shakspeare.

A storm, or robbery, call it what you will, Shook down my mellow hangingi, nay, my leaves, And left me bare to weather. Id.

Surely, sir, a good favour you have ; but that you have a hanging look. Id.

Like rich hangings in an homely house, So was his will in his old feeble body. Id.

Who makes that noise there ? who are you ? — Your friend, sir, the

hangman : you must be so good, sir, to rise, and be put to death. Id.

Men do not stand

In so ill case, that God hath with his hand Signed kings blank charters to kill whom they ha'c ; Nor are they vicars, but hangmen to fate. Donne.

Being informed that his breakfast was ready, he drew towards the door, where the hangings were held up. Clarendon.

If the wife or children were absent, their rooms were supplied by the umbra, or fiangers-on. Browne.

This monster sat like a hangman upon a pair of gallows ; in his right hand he was painted holding a crown of laurel, and in his left hand a purse of money. Sidney.

Her eyes with scalding rheum were galled and red, Cold palsy shook her head, her hands seemed

withered,

And on her crooked shoulders she had wrapped The tattered remnants of an old striped hanging, Which served to keep her carcase from the cold.

Olway's Orphan.

Now purple hangings cloath the palace walls, And sumptuous feasts are made in splendid halls.

Dryden.

Lucas Van Leyden has infected all Europe with-his designs for tapestry, which, by the ignorant, are called ancient hangings. Id.

What ./Ethiops lips he has !

How full a snout, and what a hanging face ! Id.

They all excused themselves save two, which two he reckoned his friends, and all the rest hangers-on.

L'Estranffe.

I never new a critick, who made it his business to lash the faults of

other writers, that was not guilty of greater himself j as the hangman is generally a wocse malefactor than the criminal that suffers by his hand.

Addison. Rome oft has heard a cross haranguing,

With prompting priests behind the hanging.

Prior.

He is a perpetual hanger-on, yet nobody knows how to be without him. Swift.

HANGER (George), or colonel Hanger, lord Coleraine, was destined for the army, and a commission was procured for him at an early period of life. He served in America during the war of independence, but was never after-

wards able to obtain a higher rank than that of major of the British legion of cavalry. In 1789 lie published An Address to the Army, in reply to strictures by Roderic Mackenzie, on Tarle-ton's History of the Campaigns of 1780 and 1781, 8vo. He was a very eccentric but amusing companion. On the death of his elder brother he succeeded, in 1814, to his title, which, however, he refused to assume ; and •when addressed by it he was not at all pleased. He died at his house near the Regent's park iti 1824, aged seventy-three, leaving a considerable number of publications, the most interesting and amusing of which is his Life, Adventures, and Opinions, 1801, 2 vols. 8vo. In one of his books he introduced a portrait of himself suspended a la lanterne.

HANG-TCHEOU-FOU, the metropolis of the province of Tche-Kiang, in China. It is, according to the Chinese, the paradise of the earth ; and

may be considered as one of the richest, best situated, and largest cities of the em-pire. It is twelve miles in circumference, exclusive of its suburbs ; and the number of its inhabitants amounts to more than 1,000,000. It is computed that there are 10,000 workmen within its walls employed in manufacturing silk. A small lake, called Si-hou, washes the bottom of its walls on the west side ; its water is pure, and its banks are covered with flowers. Halls and open galleries, supported by pillars, and paved with large flag-stones, are erected on piles upon its banks for the convenience of walking; causeways, cased with cut stone, intersect the lake in different directions; and the openings which are left in them at intervals, for the passage of boats, are covered by handsome bridges. In the middle of the lake are two islands, in which a temple and several pleasure-houses have been built. The emperor has a small palace in the neighbourhood. The city has a garrison of 3000 Chinese, under the command of the viceroy; and 3000 Tartars, commanded by a general of the same nation. It has under its jurisdiction seven cities of the second and third class.

HANIFAH, or HANFA (Aba), surnamed Al Nooma, the most celebrated doctor of the orthodox Mussulmans. He was the son of Thabet, and was born at Coufah in the eightieth year of the Hegira. He founded the sect of the Hanifites, which continues to be the most popular of the four principal sects among the Mussulmans. Like other teachers of new opinions, he suffered persecution during his life, being imprisoned at Bagdad till he died, by the :aliph Almansor, for refusing to subscribe to the doctrine of absolute predestination. But his opinions were afterwards brought into such credit by Abou Joseph, a sovereign judge under the caliph Hadi, tliat to be a Hanifite was reckoned synonymous with being a good Mussulman ; and about 335 years after his death, which happened in the 150th year of the Hegira, Schaw Melick built a magnificent monument to his memory, and a college, which he appropriated solely to the professors of Aba Hanifah's doctrines. The most eminent of his successors were Achmed Ben Alt, Al Giaffas, and Al Razzi. A mosque in the temple of Mecca is - appropriated to them.

HANK, n.s. Isl. Goth. Dan. and Swed. hank, a chain or coil of rope ; a skein of thread ; a tye : a check ; an influence. A low word.

Do we think we have the hank that some gallants have on their trusting merchants, that, upon peril of losing all former scores, he must still go on to supply?

Decay of Piety.

HA’NKER, v. n. Dut. hunkeren. To long importunately ; to have an incessant wish : it has commonly after before the thing desired. It is scarcely used but in familiar language.

And now the saints began their reign, For which they had yearned so long in vain, And felt such bowel hankerings, To see an empire all of kings. Hudibras.

Among women and children, care is to be taken that they get not a hankering after these juggling astrologers and fortune-tellers, L ‘Estrange.

The shepherd would be a merchant, and the merchant hankers after something else. Id.

The wife is an old coquette, that is always hankering after the diversions of the town. Addistm.

The republick that fell under the subjection of the duke of Florence, still retains many hankerings after its ancient liberty. Addison.

Do’st thou not hanker after a greater liberty in some things ? If not, there’s no better sign of a good resolution. Calamy.

HANKIUS (Martin), professor of history at Breslau, in the seventeenth century, was born in 1633. He was author of several works of erudition ; the most celebrated of which is his treatise De Romanorum rerum Scriptoribus. He died in 1709, aged seventy-six.

HANMER (Jonathan), M. A., a learned English divine, born at Barnstaple about 1605, and educated at Cambridge. He was minister of Bishop’s Tawton, and lecturer of Barnstaple; but ejected for nonconformity in 1662. He wrote A View of Ecclesiastical Antiquity, and a Discourse on Confirmation. He died in

1687.

HANMER (Sir Thomas), an eminent English author and statesman, born in 1676, and educated at Westminster and Oxford. He was early elected M. P. for Suffolk, and in 1713 was chosen speaker, an office which he discharged with great impartiality. He published a superb edition of Shakspeare, in 6 vols. 4to., at Oxford, in 1744, with elegant engravings by Gravelot. He died at Suffolk, April the 5th

HANNA, a fertile province of Moravia, circle of Olmutz, inhabited by a tribe of Sclavonians called Hannaks. Their agriculture is superior to that of their race in general, and they have considerable herds of cattle and poultry. Hanna is about 400 square miles in extent.

HANNIBAL, the son of Hamilcar, the Carthaginian general, has been already noticed under the articles AMILCAR and CARTHAGE.; with whose history .indeed his life is so blended that we need only to take it up after his leaving that country. Having lost a sea-fight with the Rhodians, through the cowardice of Apollonius, one of the admirals of Antiochus the Great, be fled into Crete, to avoid falling into the hands of the Romans. On his arrival in this island he took sanctuary among the Gortynii; but as he

Lad brought great treasure along with him, and knew the avarice of the Cretans, he secured his riches by the following stratagem : — He filled several vessels with melted lead, just covering them over with gold and silver. These he deposited in the temple of Diana, in presence of the Gortynii, with whom, he said, he trusted all his treasure. Justin tells us, that he left this with them as a security for his good behaviour, and lived for some time very quietly in these parts. He took care, however, to conceal his riches in hollow statues of brass, which he left exposed as things of little value. At last he retired to the court of Prusias king of Bithynia, where he found means to unite several of the neighbouring states with that prince into a confederacy against Eumenes king of Pergamus, an ally of the Romans ; and during the subsequent war several times defeated Eumenes, more through the force of his own genius than the valor of his troops. The Romans, hearing of these important services, despatched T. Quinctius Flaminius as an ambassador to Prusias, in order to procure his destruction. At his first audience he complained of the protection given to that famous general, representing him ‘ as the most inveterate and implacable

enemy the Romans ever had ; as one who had ruined both his own country and Antiochus, by drawing them into a destructive war with Rome.' Prusias, to ingratiate himself with the Romans, immediately sent a party of soldiers to surround Hannibal's house. The Carthaginian had contrived seven secret passages from his house, to evade the machinations of his enemies. But, guards being posted at all these, he could not fly. Perceiving, therefore, no possibility of escaping, he had recourse to poison, which he had long reserved for such a melancholy occasion. Then taking it in his hand, « Let us, said he, deliver the Romans from the disquietude with which they have long been tortured, since they have not patience to wait for an old man's death. Flaminius will not acquire any glory by a victory gained over a betrayed and defenceless person. This single day will be a lasting testimony of the degeneracy of the Romans. Their ancestors gave Pyrrhus intelligence of a design to poison him, that he might guard against the impending danger, even when he was at the head of a powerful army in Italy; but they have deputed a person of consular dignity to excite Prusias impiously to murder one who has taken refuge in his dominions, in violation of the laws of hospitality.' Then, having denounced dreadful imprecations against Prusias, he drank the poison, and expired at the age of seventy years. Cornelius Nepos says, that he put an end to his life by a subtile poison which he kept in a ring. Rollin has contrasted his character with that of Scipio Africanus. He enumerates the qualities which make a complete general; and, having then

given a summary of what historians have related of both commanders, is inclined to give the preference to Hannibal. ' There are, however, he says, two difficulties which hinder him from deciding ; one drawn from the characters of the generals whom Hannibal vanquished ; the other from the errors he committed.' These have been answered by Mr. Hooke, who has taken some pains to vindicate Hannibal's character, by fully and fairly comparing it with that of Scipio Africanus, and other Roman commanders.

HANNIBALIANUS (Flavins Claudius), ne-phew of Constantine the Great, was by him appointed king of Pontus, Cappadocia, and Armenia Minor ; but was murdered by Constantius II. A. D. 338.

HANNO, a general of the Carthaginians, entered the ocean through the Straits of Gibraltar, and discovered several countries. He would have continued his navigation, had he not been in want of provisions. He wrote an account of his voyage, which Sigismund Gelenius

published in Greek at Basil, in 1533. He lived, according to Pliny, when the affairs of the Carthaginians were in the most flourishing condition.

HANOVER, formerly an electorate, but now a kingdom of Germany, is of a compact rectangular figure ; bounded by the Elbe on the north-east, the German Ocean on the north-west, Dutch Friesland and Prussian Westphalia on the south-west, and the kingdom of Saxony on the south-east. It stretches from 50° 18’ to 53° 54’ N. lat., and from 6° 58’ to 11° 56’ E. long. It is about 150 English miles from south-east to north-west, and 100 from north-east to south-west, and comprises a surface of 14,000 square miles, with a population of 1,303,000; which gives about ninety inhabitants to each square mile.

The original state was the dudhy of Brunswick, to which Lune”burg was afterwards added; when its princes took the title of dukes of Brunswick Luneburg. The district of Hoya was subjoined in 1543, and that of Diepholtz in 1585. The principality of Hildersheim was obtained partly in the sixteenth century, and partly in 1815. Osnaburg was annexed in 1648; Verden in 1715, and the duchy of Bre-men in 1719. Bentheim was acquired in 1753; East Friesland, Lingen, the lordship of Meppen, and part of the Lordship of Rheina, were all added to the former territory, in 1815. At this period Hanover ceded to Prussia a small district north of the Elbe ; and to the grand duchy of Oldenburg, another tract on the western frontier. The dukedom of Brunswick Luneburg was raised to the electorate of Hanover, in 1 692 , and to the kingdom of the same name, by the Congress of Vienna, in 1815. It now consists of the following eleven provinces, which, with the chief towns and population, are thus exhibited in Ein Beschreibung des Konigreichs Hanover, 18.7.

Provinces.

Sq. Miles, English.

Population.

Chief Towns.

Inhabitants.

1. Archbishopric of Bremen, dukedom •of Verden, and Land Hadeln . . 2. Dukedom of Luneburg …. 3. Counties of Hoya and Diepholtz . 4. Principality of Kalenburg, and county of Spiegelberg …. 5. Bishopric of Hildesheim …. 6. Principalities of Gottingen and Gru-

2669 4261 1424

1046 .685

1171

191,160 245,967 105,120

138,306 128,938

178,929

Verden . . Luneburg . Hoya . .

Hanover Hildesheira

Gottingen .

3,500 10,000 1,700

25,000 11,000

9,000

7. Bishopric of Osnaburg ….

925 132

126,037 20 143

Osnaburg .

7,000 2 000

9. Circle of Meppen and Emsbuhren. 10 County of Bentheim …..

766 360

29,541 24,364

Meppen Bentheim .

1,600 11 000

11. Principality of East Friesland . .

1117

125,610

Emden . .

12,000

These provinces comprehend 107 bailiwics of very various dimensions and population.

The sea-coast of Hanover, particularly towards the mouth of the Elbe, is fertile but flat, and preserved by broad dykes and ditches similar to those of Holland. Here, indeed, is no elevation that can be called mountainous. But southward the celebrated Hartz range extends from the territories of Goshar to the frontier. It is covered with wood, and amply enriched with minerals. The silver mines were discovered so early as 968, and are supposed to have been the first opened in Europe. Iron, copper, lead, zinc, vitriol, and sulphur, are wrought to a great extent. The whole rests upon a bed of granite, which shoots up through the highest of the mountains. Of these, the Brocken, or Blocksberg, consisting entirely of granite, rises to the height of 3500 feet above the sea : a number of huge masses, near its summit, have given rise to a conjecture that it had lost part of its height in consequence of some violent convulsion. The iron mines yield a revenue to the government (i. e. one tenth of the produce), amounting to £115,000 per annum.

The admirer of the majesty of nature will find ample gratification in the scenery of the Hartz ; the want of corn fields being compensated by the beauty and extent of the forests, by the bold and picturesque form of the rocks, and the immensity of the view from the top of the Blocksberg. Tradition makes this mountain the resort of all the witches of the north ; and the Spectre of Brocken, though a phenomenon perfectly natural, is calculated to strike the ignorant peasant with terror, and even to excite surprise in the philosopher. See HARTZ.

Hanover is watered by the Elbe, the Weser (flowing through the heart of the country), the Ilmenau, the Oste, the Ocker, the Leine, the Hunta, and the Ems. It has some small fresh water lakes, as the Dummersee, in Diepholtz, about twelve miles in circuit; the Steinhuder-meer, in the province of Kalenburg, about four miles long and two broad ; and the Dollart, at the mouth of the Ems (rather an estuary than a lake), twelve miles across. Its canals are all of short course. The Bremen Canal, designed to unite the Ilamme, the Oste, and the Schwinge, is scarcely completed ; nor the Treckschuit Canal,

intended to connect Witmund with Aurich. The Pappenburg Canal is only navigable from the Ems.

Its climate greatly resembles that of the eastern shores of England, but in the south the cold is severe on the mountains, and the country ill adapted to corn. In the valleys both the soil and the climate are more

favorable, and all kinds of grain arrive at maturity.

Agriculture is in a very backward state in Hanover; the feudal tenures having as yet been an insuperable bar to improvement.

The chief vegetable productions are grain of all kinds, which she exports; peas, potatoes, flax, hemp, tobacco and madder ; wood, which is largely used for fuel, as well as for architectural purposes ; pitch, and tar. The rotation of crops usually followed is first a fallow, on which the land is cultivated for potatoes, peas, or flax ; then winter corn, either rye or wheat, but chiefly the former, and to them succeeds summer corn, either barley or oats. The increase of grain is not estimated to exceed four for one of the quantity sown. The breeding and fattening of cattle is confined to particular portions. By the latest enumeration, but before some of the last additions of territory, there were 224,500 horses ; 675,926 head of horned cattle ; 1,540,794 sheep and lambs; 15,728 goats and kids : 176,974 swine; and 1498 asses and mules. The heath land, especially in the province of Luneburg, is largely used foi rearing bees. The hives are transported in waggons, at the commencement of the spring, to the more southern countries, where the flowers bloom early, and are afterwards brought back when the heath flowers are fit for them. Large numbers of geese are also kept by the bauers on the moist situations, and their flesh is salted for winter consumption. These two sources of wax, honey, and feathers, yield the principal disposable produce of some provinces.

The manufactures of Hanover are numerous, but of inconsiderable size; few except linen, linen yarn, and domestic utensils, affording a surplus beyond the consumption. Hauselein-wand, or household linen is made in almost every family: a seˆoi.-‘ sort, called lowentlei-nen, is also common ; the finer linens are only made in some of the cities to a small extent,

and almost wholly consumed by the richer families. Sailcloth and hempen linen is made in East Friesland and the duchy of Bremen, and is chiefly exported. Spinning is, indeed, the constant employ of

females in the villages during the long winter nights. Stockings, whether of linen, cotton, or worsted, are usually made at home; and, in some parts, much oil is made from linseed. Pottery and paper is made in many parts. In the cities, woollen cloths, silk and cotton goods, hosiery, hats, soap, and leather, are also manufactured. The principal branches of trade that employ capital are the breweries of Hanover, Embeck, and Goslar, and the corn distilleries of the different cities.

Embden, the chief port of Hanover, has a small export trade in hops, rape-seed, oil-cake, fruit, hams, &c. ; and, in fruitful years, some corn is exported. The imports consist of tea, coffee, sugar, indigo, tobacco, wine, and superior manufactured articles. The great roads to the fairs of Leipsic and Frankfort, passing through Hanover, create a pretty large commission trade, and give employment to many barges, waggons, horses, and men. On the whole, the exports and imports are said to nearly balance, and the amount to be about £500,000 sterling. This is also about the amount of the national revenue : and the hereditary estates of the king yield another £500,000. The imposts consist of a land-tax, post, carriage, and horse duties ; duties on the products of the mines and forests, on salt, coals, turf, mills, and fisheries. Part of the public revenue supports the schools and the university of'Gottingen, but the far greater part is devoted to military purposes ; Hanover having ten garrison towns, and a force of about 20,000 regular troops. Every soldier may demand his discharge and a pension after twenty years' service : the number of these pensioners is at present considerable; but they are liable to do militia duty. Manufacturing establishments connected with the army are, one of small arms at Hertzberg ; one of gunpowder at Hersen, near Hameln ; and a cannon foundry in Hanover. The only naval force of Hanover is a brig of war, moored off the city of Stade, to enforce the tolls which all merchant vessels passing up the Elbe are bound to pay, and which amounts to about £5000 sterling annually. The public debt was contracted chiefly in the war of 1756; it never was considerable ; and, the sovereign having discharged his part of the capital, the residue due by the states does not exceed £2,000,000. The whole executive government is in the king ; and the aristocracy has immense weight ; but a legislative assembly of 102 deputies is obtaining an increase of power and consideration. The king is of age at eighteen ; during a minority the states of the kingdom are guardians ; and the succession is only in the male line. Should this fail in the present family, that of the duke of Brunswick will succeed. At the diet of the empire Hano ver now occupies the fifth rank, and has four votes in the general assembly.

The legai system is very complicated, being a compound of the old Roman law, the constitution of the empire, and all kinds of provincial customs. Many inferior judges and magistrates

are appointed by the proprietors of estates ; and some of those nominated by the king are rather by his prerogative as owner of some estates than as the monarch. Some of these jurisdictions have the power of life and death, but the latter is rarely inflicted. A court of appeal at Zell has extensive power, and it is intended to increase its authority. Its decisions are highly esteemed for their equity.

In Hanover there is an equal establishment tof Lutherans, Catholics, and Reformed ; the smaller sects of Menonites, Hernhuthers, and others, enjoying full protection. The Lutherans amount to about 1,050,000; the Catholics to 160,000; the Reformed to 90,000 ; the remainder comprise Jews and the smaller Christian sects. The Lutheran church is regulated by superintendents in. Hanover, Stade, Osnabriich, Hildesheim, Au-rich, and Hohnstein. The Catholics have bishops at Osnabriich, Hildesheim, and Regersburg ; and the provinces of Meppen and Eimsbuhren are under the spiritual jurisdiction of the Prussian bishop of Minister. In some of the consistories the Lutherans and Reformed are united. Schools are established in every village ; others, somewhat more comprehensive, are provided in the small towns ; and in the more populous places are academies, or high-schools, for the education of those farther advanced. There are also seminaries at Hanover and Luneburg for educating the children of rank of both sexes, from eight to fifteen years of age. One of these, called the Georgianum, has a provision on a liberal footing for forty boys, who are educated either for a military or a civil profession. The schools of a higher order are well organised ; and the university of Gottingen is universally esteemed in Europe. See GOTTINGEN.

Hanover has the Leipsigen and the Convention standards of money. The public accounts .are kept in the latter. The gold coin called Georgs d'or is five rix dollars eight groschen in convention money ; or, in Leipsigen money, four rix dollars sixteen groschen. The other gold coin, the gold-gulden, is two rix dollars six groscheti in convention, two dollars two groschen in Leipsigen money.

The long measure is the rood of eight ells, of two feet ; the foot being twelve inches. Six Hanoverian are equal to five Brabant ells. Land is measured by hufen and morgens. The hufe is thirty morgens, the morgen 120 ruthen, equal to 24-844 Paris feet. The morgen by which

woodland is measured contains 160 ruthen. The liquid measure is the eimen, of 3-136 cubic inches, or the anker of 1-960 cubic inches. The latter makes sixteen stiibchens, or thirty-two kannen — sixty-four quartiere, or 128 nosel. The weights in common use are ships-pounds, lies-pounds, hundreds, and customary pounds. The ships-pound is equal to twenty lies-pounds ; the hundred is 110 lies-pounds. The lies-pound is divided into two marks, the mark into eight ounces, the ounce into two loths, the loth into four quentins. The local weights and measures vary.

In respect to manners, the Hanoverians are said to possess all the frankness and simplicity of their ancestors ; and the higher classes speak

a very pure idiom of the Teutonic language. In the towns, and particularly in the capital, a successful imitation of English habits is observed ; but the nobility have too strong prejudices of birth to tolerate much of this. In some places, the descendants of the Wendsor Vandals preserved for a long time the use of the Sclavonic language. The only order of knighthood is the Guelphic, instituted by his present majesty in

The elector of Hanover is descended from the ancient family of the Guelphs, dukes and electors of Bavaria, one of whom, Henry the ‘ Lion, in 1140, married Maude, eldest daughter • of king Henry II. of England. Their son William succeeded to Brunswick Lune’burg, and his son Otho was created duke thereof. The dominions descended in a direct line to Ernest, who divided them upon his death, in 1546, into two branches, that of Brunswick Luneburg Wolfenbuttel, and Brunswick Lune’burg Zell. The possessor of the latter, Ernest Augustus, was head of the college of German princes, and married Sophia, daughter of Frederick elector Palatine and king of Bohemia, by Elizabeth, daughter of James I. king of Great Britain. Sophia being the next protestant heir to the house of Stuart, the parliament fixed the crown upon her on queen Anne’s demise ; and George Lewis, her eldest son, became king of Great Britain in consequence ; since which the electors of Hanover have rilled the British throne. Hanover has been of course involved in the wars of Great Britain, and in that of 1756 her territory was all along the scene of operations. This war cost her nearly 80,000 men, or a tenth of her population : but her troops acquired high repute.

During the first war with revolutionary France, the neutrality of Hanover was maintained ; but in 1801 that country was taken possession of by Prussia; and in 1803 the first act of Buonaparte was to overrun it, and carry off the public property. In 1806 Hanover was ceded by the French to the Prussians ; but, on war breaking out between these nations, the electorate was again occupied by Buonaparte. Part of it was then annexed to the kingdom of Westphalia, and at the end of 1810 Buonaparte declared the country along the coast annexed to France. On the expulsion of the French from Germany, in October 1813, the whole electorate was restored; but the title, in 1815, was changed for that of king of Hanover.

HANOVER, the capital of the foregoing kingdom, and of the principality of Calenberg, is situated in a sandy district on the Leine, a navigable river which joins the Weser. It is in the form of a half-moon, separated by the river into two parts, called the Old and New Town. The general appearance is imposing : the towns, formerly surrounded with walls and ditches, having the ramparts levelled, and laid out into an esplanade and streets, where a very elegant monument has been erected to Leibnitz. Outside of the walls is the Gartengemeinde, consisting of a mixture of houses and gardens. On entering the streets,

the town has an antiquated aspect, particularly what is called the

Old Town. The materials for building are generally brick, with wooden frame-work. Some houses have the bricks used for the doors and windows only. Inscriptions, denoting the date of building, and containing passages from the Psalms, which formerly appeared on the houses, are now for the most part erased, and improvements are going on with great spirit. The population, which in 1011 was only 21,000, is now nearly 30,000. The New Town, which stands on the right side of the river, is built in good style; and the houses in the new street, called George Strass, facing the rampart, are separated from it by iron chains, suspended on stone pillars.

The elector's palace is a large edifice of late erection, having been destroyed by fire, and rebuilt in 1791. It is receiving improvements, and will be rendered an elegant modern edifice. The public library, founded by Leibnitz, is also a good building, containing a fine collection of books. There are five Lutheran churches ; the Calvinists and Catholics have each their chapels ; and the Jews a synagogue. The charitable institutions are an orphan-house, two hospitals, and two poor-houses. For education there is a gymnasium, a female school of industry, and several elementary schools. The Georgianum is a school erected in 1796, for the education of forty sons of Hanoverian nobles, admitted at the age of ten, and paying a small sum on their entrance ; after which their education is gratuitous. The other objects of curiosity are the mews, the church of the castle, the gardens of the baroness Deken and of count Walmoden, the wood of Ellenztied, and the Lutheran burial-ground ; but, above all, Herrenhausen, a country mansion of the royal family, at some distance from the town. The approach is by a long avenue of lime trees, and the building, though by no means elegant, is respectable, and the grounds laid out with perfect uniformity; the water-works are good, and the garden contains a very superior botanical collection.

HANOVER, a county of Virginia, United States, bounded north-east by Spottsylvania, Caroline, and King William counties, east by New Kent, south by Henrico, south-west by Goochland county, and west by Louisa county ; distant from Washington 103 miles. Population 15,082.

HANOVEK, a post town of Grafton county, New Hampshire, United States, on the east side of the Connecticut ; fifty-three north-west of Concord, 102 W. N. W. of Portsmouth, and 115 north-west of Boston :

from Washington 495. Population 2135. Dartmouth College is situated in the south-west part of this township, about half a mile east of the river, on a beautiful plain, where there is a handsome village with two congregational meeting-houses ; and a handsome bridge across the river, connecting the town with Norwich. Dartmouth College was founded by Dr. Eleazer Wheelock, and chartered , by royal grant in 1769. The funds, which were originally created by charitable individuals, have been increased by grants from the legislatures of New Hampshire and Vermont; and afford, at present, an increasing annual income of about 1600 dollars.

HANOVER, or M'Allister's Town, a post town in York county, Pennsylvania, between Cadorus Creek and a branch of the Little Conewago. It is seven miles north of the Maryland line, eighteen miles south-west of York, and 106 west by south of Philadelphia.

HANOVER, NEW, an island in the Pacific, seen by Carteret in 1767, and said by him to be about thirty miles in length. It presents a flat surface to the north-west, and has a chain of high central mountains extending towards the south-east. The passage between this and New Ireland is full of reefs and islets. The south-west part is situated in long. 148° 27' E., lat. 2° 49' S.

HAN RIOT, or HENRIT (Francis), one of the bloody revolutionary leaders of France under the despotism of Robespierre. He was born about 1761 at Nanterre; and, after having been a me-nial servant and a custom-house officer, in which situations he is said to have behaved with dishonesty, he became a police spy. Attaching himself to the jacobins, he first distinguished himself in directing the massacres which took place in the prisons of Paris September 2nd, 1792; and, continuing his cruel career, was appointed commander of the national guards. Supported by Murat, on the 2nd of June, 1793, he surrounded the Convention with an armed force, and obliged the members to return, and pass decrees of accusation against the Girondists. He acted on all occasions as a faithful partizan of Robespierre, whom, when accused, he in vain endeavoured to support, and was arrested and

suffered with his chief by the well-merited axe of the guillotine, July 29th, 1794. He displayed on the scaffold a fearlessness worthy of a better cause.

HANS. See HANSE.

HANSBACH, a town of Bohemia, in the cir-cle of Leitmeritz, with manufactures of paper, cotton, &c. Twelve miles north of Kamnitz.

HANSE, an ancient name for a society or company of merchants ; particularly that of certain cities in Germany, &c., hence called Hanse Towns. The word is Teutonic ; and signifies alliance, confederacy, or association. Some derive it from the German words am-see, that is on the sea ; as the first Hanse Towns were all situated on the sea-coast : whence they are said to have been first called am-zee-stenen, i. e. cities on the sea ; and afterwards, by abbreviation, hansee, and hanse. The Hanse Towns, or the Hanseatic Society, were several maritime cities of Germany, who entered into a league for the mutual protection of their commerce. Bremen and Amsterdam were the first two that formed it ; whose trade received such advantage by their fitting out two men of war in each to convoy their ships, that more cities continually entered into the league : even kings and princes made treaties with them, and were often glad of their assistance and protection; by which means they grew so powerful, both by sea and land, that they raised armies as well as navies, enjoyed countries in sovereignty, and made peace or war, though always in defence of their trade, as if they had been a united state or commonwealth. — At this time also many cities, though they had no great interest in trade, or intercourse with the ocean, came into their alliance for the preservation of

their liberties; so that, in 1200, we fiid no less than seventy-two cities in the list of he Hanse Towns ; particularly Bremen, Amsterdam, Antwerp, Rotterdam, Dort, Bruges, Ostend, Dunkirk, Middleburgh, Calais, Rouen, Rochelle, Bor-deaux, St. Malo, Bayonne, Bilboa, Lisbon, Seville, Cadiz, Carthagena, Barcelona, Marseilles, Leghorn, Naples, Messina, London, Lubec, Rostock, Stralsund, Stetin, Wismar, Konigsberg, Dantzic, Elbing, and Marienburg. The alliance was now so powerful, that their ships of war were often hired by other princes to assist them against their enemies. They not only awed, but often defeated, all that opposed their commerce ; and, particularly in 1358, they took such revenge of the Danish fleet in the Sound, for having interrupted their commerce, that Waldemar III. king of Denmark, for

the sake of peace, gave them up all Schonen for sixteen years ; by which they commanded the passage of the Sound in their own right. — In 1428 they made war on Erick IX. king of Denmark with 250 sail, carrying on board 12,000 men. These so ravaged the coast of Jutland, that the king was glad to make peace with them. Many privileges were bestowed upon the Hanse Towns by Louis XL, Charles VIII., Louis XII., and Francis I. kings of France; as well as by the emperor Charles V., who had various loans of money from them ; and by king Henry III., who also incorporated them into a trading body, in acknowledgment for money which they advanced to him, as well as for the services they did him by their naval force in

These towns exercised a jurisdiction among themselves ; for which purpose they were divided into four colleges or provinces, distinguished by the names of their four principal cities, *viz.* Lubec, Cologne, Brunswick, and Dantzic, wherein were held their courts of judicature. jThey had a common stock or treasury at Lubec, and power to call an assembly as often as necessary. They kept warehouses for the sale of their merchandise in London, Bruges, Antwerp, Bergen in Norway, Revel in Livonia, and Novogorod in Muscovy ; which were exported to most parts of Europe, in English, Dutch, and Flemish bottoms. One of their principal magazines was at London, where a society of German merchants was formed, called the Steel-yard Company. To this company great privileges were granted by Edward I., but revoked by act of parliament in 1552, in the reign of Edward VI., on a complaint of the English merchants that this company had so engrossed the cloth trade, that in 1551 they had exported 50,000 pieces, while all the English together had shipped off but 1100. Queen Mary I., who ascended the throne the year following, having resolved to marry Philip the emperor's son, suspended the execution of the act for three years : but after that term, whether by reason of some new statute, or in pursuance of that of king Edward, the privileges of the company were no longer regarded, and all efforts of the Hansˆ Towns to recover this loss were in vain. Another accident that happened to their mortification was while queen Elizabeth was at war with the Spaniards. Sir Francis Drake happening to meet sixty ships in the Tagus, loaded with corn,

belonging to the Hanse Towns, took out all the corn as contraband goods which they were forbid to carry by their original patent. The Hanse Towns having complained of this to the diet of the empire, the queen sent an ambassador thither to declare her reasons. The king of Poland likewise interested himself in the affair, because the city of Dantzic was under his protection. At last, though the queen strove

hard to preserve the commerce of the English in Germany, the emperor excluded the English company of merchant adventurers, who had considerable factories at Stade, Embden, Bremen, Hamburg, and Elbing, from all trade in the empire. In short, the Hanse Towns, in Germany in particular, were not only in so flourishing, but in so formidable a state, from the fourteenth to the sixteenth centuries, that they gave umbrage to all the neighbouring princes, who threatened a strong confederacy against them ; and, as the first step towards it, commanded all the cities within their dominion or jurisdiction to withdraw from the Hanse, or union. This immediately separated all the cities of England, France, and Italy, from them. The Towns, on the other hand, prudently put themselves under the protection of the empire; and, as the cities just now mentioned had withdrawn from them, so they withdrew from several more, and made a decree among themselves, that none should be admitted into their society but such as stood within the limits of the German empire, or were dependent thereon ; except Dantzic, which continued a member, though it only had been summoned formerly to the imperial diet. By these means they maintained their confederacy for the protection of their trade, as it was begun, without being any more envied by their neighbours. Hereby likewise they were reduced to Lubec, Bremen, Hamburgh, and Dantzic ; in the first of which they kept their register, and held assemblies once in three years at least. Their proceedings now became insignificant: Lubec, Hamburgh, and Bremen, continued cities of the German em-pire ; but in 1810 they were seized by Buonaparte to effect what he called the continental system.

On the overthrow of his power, in 1814, these towns were restored to liberty, and admitted as members of the Germanic diet; and, under the name of Hanse Towns, they maintain a kind of commercial treaty with each other, and have recently erected a court of appeal at Lubec.

HA’NT, for has not, or have not. 1 That roguish leer of your’s makes a pretty woman’s heart ake : you ha’nt that simper about the mouth for nothing. Addison.

HANTCHONG, a first rate city of China in the south of the fertile province of Chen-si but surrounded by forests. Its chief articles of trade are cinnabar, musk, wax, and honey. It stands in long. 106° 44’ E., and lat. 32° 59’ N.

HANTS, a county of Nova Scotia, containing the townships of Falmouth, Newport, and Windsor. It is about twenty miles square and partly unsettled, but well watered throughout.

HANWAY (Jonas), was born at Portsmouth in Hampshire, on the 12th of August 1712. His father, Mr. Thomas Hanway, was an officer in the naval service. At the age of seventeen he

was sent to Lisbon, and was bound apprentice to a merchant in that city in June 1729. His early life was marked with that attention to business, and love of regularity, which afterwards distinguished his character. On the expiration of his apprenticeship he entered into business at Lisbon as a merchant, but not long after returned to London. He afterwards connected himself as a partner in Mr. Dingley's house in St. Petersburgh ; where he arrived on the 10th of June 1 743. The trade of the English over the Caspian Sea into Persia at this period had been entrusted to the care of Mr. Elton, who had injudiciously engaged in the service of Nadir Shah, to build ships on the Caspian after the European manner. This had alarmed the merchants in the Russian trade, who resolved to send one of their body into Persia. On this occasion Mr. Han-way offered his service, which was accepted. He set out on the 10th of September ; and after experiencing various dangers in that kingdom, during twelve months, returned to St. Petersburgl/, January 1st, 1745, without being able to establish the intended trade by the Caspian ; partly through the jealousy of the Russian court on account of Elton's connexions with the Persians, and partly by the Persian revolutions. He now settled at St. Petersburgh ; where he remained five years, and interested himself greatly in the concerns of the merchants who had engaged in the Caspian trade : but, having a desire to see his native country, he left St. Petersburgh on the 9th of July 1750. In 1753 he published An Historical Account of the British Trade over the Caspian Sea ; with a Journal of Trarels from London through Russia into Persia ; and back again through Russia, Germany, and Holland : to which are added, the Revolutions of Persia during the present century, with the particular. History of the great Usurper Nadir Kouli : 4 vols. 4to. In 1754 he published A Letter to Mr. John Spranger, on his excellent Proposal for Paving, Cleansing, and Lighting the Streets of Westminster, &c. 8vo. A few years afterwards many of Mr. Hanway's ideas, thrown out in this pamphlet, were adopted. In 1756 he printed A Journal of Eight Days' Journey from Portsmouth to Kingston upon Thames, with an Essay on Tea ; which was reprinted in 2 vols. 8vo., in 1757. At this juncture, Great Britain being on the eve of a war with France, he published Thoughts on the Duty of a good Citizen with Regard to War and Invasion, in a Letter from a Citizen to his Friend, 8vo. About the same time several gentlemen formed a plan, which was matured and perfected by Mr. Hanway, for providing the navy with sailors, by

furnishing poor children with necessaries to equip them for the service of their country. Mr. Hanway published three pamphlets on this subject, and the treasurer of the society, accompanied by Mr. Hanway, hav-ing waited on the king, the society received £1000 from his majesty, £400 from the prince of Wales, and £200 from the princess dowager. This excellent institution was the favorite object of Mr. Hanway's care, and continued to flourish under his auspices. In 1758 he became an advocate for the Magdalen Charity, and published A Letter to Robert Dmgley, esq., being a propo-HAN

sai lor the Relief and Employment of friendless Girls and repenting Prostitutes, 4to. He also printed some other tracts on the same subject In 1759 he wrote Reasons for an Augmentation of at least Twelve Thousand Mariners, to be employed in the Merchants' Service and Coasting Trade, in thirty-three Letters to Charles Gray, esq., of Colchester, 4to.

The many useful and public-spirited plans, which Mr. Hanway had promoted, had now rendered his character popular; while his disinterestedness, and the sincerity of his intentions, were conspicuous to all. Five principal citizens of London waited on lord Bute, then prime minister, and requested that some notice might be taken of a man who, at the expense of his own private fortune, and by the most unremittir.gr application, had rendered such meritorious services to his country. Accordingly he was, in July 1762, appointed one of the commissioners for victualling the navy ; a post which he held above twenty-one years. The next act of public beneficence, in which he engaged, was the collection of money for the sufferers by the fire at Montreal, in Quebec, in May, 1765, when a fourth part of the city was consumed. On this occasion Mr. Hanway, in conjunction with two other gentlemen, collected £8415. In 1766 a dreadful fire broke out in Bridge Town in Barbadoes, which consumed property to the amount of nearly £100,000. A subscription was opened, in which Mr. Hanway was a principal actor, and £14,886 were collected, and transmitted to the unfortunate sufferers. At subsequent periods he continued to

interest himself in various other plans for relieving the distresses of different classes of the community, and particularly those of young chimney sweepers, In 1774 he enlarged a former publication, under the title of Virtue in Humble Life : containing reflections on the reciprocal duties of the Wealthy and Indigent, the Master and the Servant, 2 vols. 8vo. In 1783, finding his health decline, he resigned his office at the victualling board, and immediately received a grant of his whole salary, as a pension for life. This favor he owed to the esteem which his majesty, to whom he was personally known, entertained for him. He now promoted a subscription for the relief of the many black poor who wandered about the metropolis ; and the lords of the treasury seconded the design, by directing £14 a head to be issued to the committee, to enable them to send the blacks to such places abroad as might be fixed on. After encountering many obstacles, about 300 negroes were sent, properly accommodated with necessaries, to Africa. In summer 1786 Mr. Hanway's health declined visibly. He had long felt the approach of a disorder in the bladder, which, increasing by degrees, caused a stranguary; and at length, on the 5th of September 1786, put a period to a life spent almost entirely in the service of his fellow creatures. On the 1 3th he was interred in the family vault at Hanwell, where a superb monument is erected to his memory. Mr. Hanway is said to have been the first man in Britain who carried an umbrella.

HANYANG, a city of China, of the first

rank, at the conflux of the river Han and Yantse Long. 113° 44' E., lat. 63° 19' N.

HAP, n. s. & v. n.~) Goth, and Teut. kappe ; HAPHAZ'ARD, n.s. I Welsh anhup. Whatever HAP'LY, adj. I falls out by chance whe—

HAP'LESS, adj. [ther good or evil ; to light HAP'PEN, v. a. f upon unexpectedly : hap-HAP'PILY, adv. \ less unfortunate or un-HAP'PINESS, n.s. lucky: happily and hap-HAP'PY, adj. J piness have reference to a state of felicity ; pleasure ; prosperity ; fortuitous elegance: applied to address it implies readiness.

Say not I have sinned, and what harm hath happened unto me, Ecclus. v. 4.

Bring forth your strong reasons, and shew us what shall happen. Isaiah.

And able for to helpen all a shire

In any case that might fallen or happe.

Chaucer. Prologue to Cant. Tales. And flapped that alone as he wos borne,

He saw a maiden walking him beforne.

Id. The Wif of Bathes Tale. Whether art it were, or heedless hap, As through the flowering forest rash she fled, In her rude hairs sweet flowers themselves did lap, And flourishing fresh leaves and blossoms did enwrap.

Spenier.

It will be too late to gather ships or soldiers, which may need to be presently employed, and whose want may hap to hazard a kingdom. Spenser.

Happiness is that estate whereby we attain, so far as possibly may be attained, the full possession of that which simply for itself is to be desired, and con-taineth in it after an eminent sort the contentation of our desires, the highest degree of all our perfection.

Hooker.

The former of these is the most sure and infallible way: but so hard that all shun it, and had rather walk as men do in the dark by hop-hazard, than tread so long and intricate mazes for knowledge sake. Id.

To have ejected whatsoever that church doth make account of, without any other crime than that it ha'!» been the hap thereof to be used by the church of Rome, and not to be commanded in the word of God, might haply have pleased some few men, who, having begun such a course themselves, must be giad to see their example followed. Id.

Things casual do vary, and that which a man doth but chance to think well of cannot still have the like hap. Id.

Solyman commended them for their valour in their evil hope, more than the victory of others got by good fortune. Knoliet.

Hapless JEgeon, whom the fates have marked To bear the extremity of dire mishap !

Shakfpeare.

This love of theirs myself have often seen, Haply when they have judged me fast asleep.

Id.

I come to wive it wealthily in Padua : If wealthily, then happily in Padua. Id.

Am I happy in thy news ?

— If to have done the thing you gave in charge Beget your happiness, be happy then ; For it is done. Id.

Run you to the citadel,

And tell my lord and lady what hath happ'd.

Id

In destructions by deluge, the remnant which hnf. to be reserved are ignorant people. Bacon.

HAP S3

Nor feared she among ihe bands to stray Of armed men '. for often had she seen

The tragick end of many a bloody fray : Her life had full of haps and hazards been.

Fairfax.

Happy the man, who his whole time doth bound Within the' enclosure of his little ground. Cotvley.

Oh ! happiness of sweet retired content, To be at once secure and innocent. DenJiam. Certain graces and happinesses, peculiar to every language, give life and energy to the words. Id.'

Leviathan, which God of all his works Created hugest, that swim the ocean stream, Him haply slumbering on the Norway foam, The pilot of some fma.ll night-foundered skiff Deeming some island oft, as seamen tell, Who fixed anchor in his scaly rind, Moors by his aide. Milton.

Truth and peace, and love, shall ever shine About the supreme throne

Of him, to whose happy making sight alone, Our heavenly guided soul shall climb. Id.

To warn

Us, haply too secure, of our discharge From penalty, because from death released Some days. Id.

I have happened on some other accounts relating to mortalities. Graunt.

And when he happened to break off I' th' middle of his speech, or cough, H' had hard words ready to show why And tell what rules he did it by. Hudibras. Curst be good haps, and curst be they that build Their hopes on haps, and do not make despair For all these certain blows the surest shield. Sidney.

At other end Uran did Strephon lead Her happy making hand. Id.

Preferred by conquest, happily o'erthrown, Falling they rise to be with us made one. Waller. Chymists have been more happy in finding experiments than the cause of them. Boyle.

If it so fall out that thou art miserable for ever, thou hast no reason to be surprised, as if some unexpected thing bad happened to thee. Tillotfon.

Philosopher* differ toout the chief good or liap-piness of man. Temple.

Yet in this agony Lis fancy wrought, And fear supply'd him with this happy thought.

Dryden.

Neither is it so trivial an undertaking to make a tragedy end happily; for 'tis more difficult to save than kill. Id.

Here hapless Icarus had found his part, Had not the father's grief restrained his art. Id. We live at hap-hazurd, and without any insight into causes and effects. L' Estrange.

A fox had the hap to fall into the walk of a lion.

Id.

The various and contrary choices that men make in the world, argue that the same thing is not good to every man alike : this variety of pursuits shews, that every one does not place his Jtappiness in the same thing. Locke.

We take our principles at hap-haxard upon trust, tnd then believe a whole system, upon a presumption fiat they are true. Id.

Happy the man who void of care and strife, In silken or in leathern purse retains A splendid shilling. Philips's Splendid Shilling.

Did his hapless passion equal mine, I would refuse the bliss. Smith.

Then haply yet your breast remains untouched, Though that seems strange. Rome.

VOL. XI.

HAR

Though the presence of imaginary good cannot make us happy, the absence of it may make us miserable. Addison.

Formed by thy converse, happily to steer From grave to gay, from lively to severe.

Pope.

Some beauties yet no precepts can declare : For there's a happiness as well as care. Id.

Formed by some rule that guides but not constrains, And finished more through happiness than pains. Id.

One gentleman is happy at a reply, and another excels in a rejoinder. Swift.

Let us now see what conclusions may be found for instruction of any other state, that may haply labour under the like circumstances. Id.

The voice of the Eternal said Be free, And this divine prerogative to thee Does virtue, happiness, and heaven convey.

Beattie.

Thou winged and cloud-cleaving minister. Whose happy flight is Highest unto heaven, Well may’st thou swoop so near me — I should be Thy prey, and gorge thine eaglets.

Byron. Manfred.

And of the happiest moments which were wrought Within the web of my existence, some From thee, fair Venice ! have their colours caught.

Id. Childe Harold.

HAPAE, or HABEI, a cluster of low fertile islets among the Friendly Islands. They are four or more in number, about six or seven miles in length, and from two to three in breadth, joined together by reefs. They lie about long. 185° 36’ to 185° 45’ E., lat. 49° 39’ to 19° 53’ S.

HAPSAL, a sea-port of Russia, in Esthonia, on the coast of the Baltic, five miles south-west of Revel, opposite Dago Isle.

HAPSBURG, an ancient castle of the Helvetic republic, in the canton of Bern, seated near Schintnach, on a hill, upon the right bank of the Aar, three miles above Brack. It was the cradle of the house of Austria, having been built by count Vernor bishop of Strasburgh, in the eleventh century, and by him given to his brother Radbad, whose son Vernor first took the title of count Hapsburg, which his descendants continued to bear till the elevation of Rodolph I. to the imperial throne. It was then given as a fief to the lords of Waldeck, but fell under the dominion of the Bernois in 1415, when they conquered Argow. It is now in ruins: five miles north of Lenzburg.

HAQUE, in old statutes, a little hand-gun, prohibited to be used for destruction of game, &c., by 33 Hen. VIII. cap. 5, and 2 and 3 Edw. VI. cap. 14. There is also the demi-haque, or half-haque, within the said acts.

HA’QUETON, n. s. Fr. haqueton. A coat of mail.

And next his short an haketon.

Chaucer. The Rime of Sire Thopas. HARAN, CHARRAN, or CHARRJE, a city of Mesopotamia, celebrated for having been the place whither Abraham retreated, after he left Ur (Gen. xi. 31, 32.); where Terah his father died, and was buried ; whither Jacob retired, when he fled from Esau (Id. xxvii. 45, xxviii. 10, &c.) ; and where Crassus the Roman

general was defeated and killed by the Parthians. It was situD

tted between the Euphrates and the Chebar, at a good distance from their junction.

HARANGUE', n. s., v. n. & v. a. ? French,

HARANG'UER, n.s. S harangue.

The original of the French word is questioned : Menage thinks it a corruption of hearing, English ; Junius imagines it to be disco urs au rang, to a circle, which the Ital. arringo seems to favor. Perhaps it may be from orare, or orationare, orationer, oraner, aranger, haranguer. — Johnson. A speech; a popular oration ; to make a speech ; to address by an oration, as he ' harangued the troops.' Haranguer, a public speaker, generally used in a contemptuous sense.

Gray-headed men, and grave, with warriors mixed, Assemble, and harangues are. heard, but soon In factious opposition. Milton.

Nothing can better improve political school-boys than the art of making plausible or implausible harangues, against the very opinion for tvhich they resolve to determine. Swift.

Many preachers neglect method in their harangues.

Watts.

HARASS, v.a. & n. s. Fr. harasser, from harasse, a heavy buckler. — Du Cange. To weary; to fatigue; to tire with labor and uneasiness: harass, waste ; a disturbance.

These troops came to the army but the day before, harassed with a long and wearisome march. Bacon.

The men of Judah, to prevent The harass of their land, beset me round.

Milton.

Our walls are thinly manned, our best men slain ; The rest, an heartless number, spent with watching, And harassed out with duty. Dryden.

Nature oppressed, and harassed out with care, Sinks down to rest. Addison.

HAR’BTNGER, n. s. ˆ Fr. herberge ;

HARBOUR, n. s., v. n. & v.a. \ Dutch, herberg,

HAR’BOURAGE, n. s. [herberger; Ital.

HAR’BOURER, n. s. falbergo. One

HAR’BOURLESS, adj. \ who goes be—

HAR’BROUGH, n.s.) fore to provide

lodgings ; a forerunner. Harbour, a lodging ;

a port ; a haven for shipping ; an asylum or

shelter : to sojourn ; to entertain ; to shelter or

protect. Harbourless, without shelter ; wanting

a harbour. The general and primary idea is a

place of rest and security.

The fame anon thurgout the town is born, How Alia king shal come on pilgrimage, By herberaeours that wenten him oeforn.

Chaucer. The Man of Lawes Tale.

— — . Now Lordinges, trewely

Ye ben to me welcome right hertily, For by my trouthe, if that I shal not lie, I saw not this yere swiche a compagnie At ones in this herbervce, as is now.

Id. Prologue to the Canterbury Tales. Shortly, I woll lierberowe me, There I hope best to hulstred be.

Id. Romaunt of the Rose. Let in us, your king, whose laboured spirits, Forewearied in this action of swift speed, Crave harbourage within your city walls.

Shakspeare.

Three of your argosies

Are richly come to harbour suddenly. Id. This night let's harbour here in York. Id.

HAR

They are sent by me,

That they should harbour where their lord would be.

Id.

Make all our trumpets speak, give them all breath, Those clamorous harbingers of blood and death. Id.

I'll be myself the harbinger, and make joyful The hearing of my wife with your approach. Id. My lady bids me tell you, that though she harbonrs you as her uncle, she's nothing allied to your disorders. Id.

Knaves I know, which in this plainness Harbour more craft, and more corrupter ends, Than twenty silky ducking observants. Id.

Underneath this stone doth lie As much beauty as could die, Which in life did harbour give To more virtue than doth live.

Ben Jonson.

Sin, and her shadow death, and misery, Death's harbinger. Milton.

And now of love they treat, 'till th' evening star, Love's harbinger, appeared. Id.

Before him a great prophet, to proclaim His coming, is sent harbinger, who all Invites. Id.

Come fair Repentance, daughter of the skies ! Soft harbinger of soon returning virtue ! The weeping messenger of grace from Heaven.

Brown's Atheist an.

Harbour yourself this night in this castle : this country is very dangerous for numbering thieves to trust a sleeping life among them. Sidney.

Southwards they bent their flight, And harboured in a hollow rock at night : Next morn they rose, and set up every sail ; The wind was fair, but blew a mackrel gale.

Dryden.

For harbour at a thousand doors they knocked ; Not one of all the thousand but was locked. Id.

As Ormond's harbinger to you they run ; For Venus is the promise of the Sun. Id.

Let me be grateful ; but let far from me Be fawning cringe, and false dissembling look, And servile flattery, that harbours oft In courts and gilded roofs. Philips.

They leave the mouths of Po, That all the borders of the town o'erflow ; And, spreading round in one continued lake, A spacious hospitable harbour make. Addison.

Doubly cursed Be all those easy fools who give it harbour.

Rowe.

Let not your gentle breast harbour one thought Of outrage from the king. Id.

Dear solitary groves where peace does dwell, Sweet harbours of pure love and innocence !

Rochester's Valentinian.

We owe this old house the same kind of gratitude that we do to an old friend who harbours us in his declining condition, nay even in his last extremities.

Pope.

How people, so greatly warmed with a sense of liberty, should be capable of harbouring such weak superstition ; and that so much bravery and so much folly can inhabit the same breasts. Id.

How guilt once harboured in the conscious breast Intimidates the brave, degrades the great.

Dr. Johnson.

HARBINGER, in the king's household, an officer who has four yeomen under him, that ride a day's journey before the court when it travels, to provide lodgings, &c.

HAR BOROUGH, or MARKET HARBOROUGH, a town of Leicestershire on the road to Deibv

near the source of the We] land. The road enters the town by a ford in the fiver, but there is a bridge of six arches, adjoining the ford, for the use of carriages when the floods render the water impassable or unsafe : at other times this bridge is only used by horse and foot passengers. It is a great thoroughfare, and was famous, in Cam-den's time, for its fairs, where the best horses and colts are still sold. They are held April 29th, and October 19th. It has also a considerable manufacture of tammies, lastings, &c. The market is on Tuesday. The earl of Harborough built a neat market-house at his own expense here some years ago. Here is a chapel, which is a curacy, in the patronage of Christ Church College, .Oxford, and is estimated at somewhat more than £100 a-year; it is dedicated to St. Dionysius, the Areopagite. There are also three meeting-houses in Harborough for Independents, Quakers, and Methodists. Many Roman antiquities have been found here. On the east of the town are traces of an encampment, which is considered as Roman : and the head quarters of king Charles I.'s army seem to have been in this place previous to the memorable battle of Naseby ; Cromwell's letter to the speaker of the house of commons, giving an account of the battle, is dated here. It is eighty-three miles north-west of London, and fifteen south-east of Leicester.

HARBOUR ISLAND, one of the smallest of the Bahama Islands, situated to the north of Eleuthera. Here is situated the parish church belonging to Eleuthera; and it has been long settled by a race who live chiefly upon fish. Their town contains about 600 whites, and 300

blacks, and is beautifully situated on the south side of the island in front of the harbour, which ˆcan only be entered at each end by vessels of small draught.

HARBOUR ISLAND, a small island of the United States, in Pamlico Sound, near the coast of North Carolina. Long. 76° 32’ W., lat. 34° 50’ N.

HARBOURO, a small island in the English Channel, near the coast of France. Long. 1° 59’ W., lat. 48° 39’ N.

HARBURG, a town in the duchy of Lune”- burg, Hanover, on the Elbe opposite to Hamburgh. It is the medium of intercourse between Hamburgh and the west country. An important article of traffic is bilberries, which are shipped here annually to the value of between £3000 and £4000 sterling, chiefly to Bourdeaux, to color the wines. Population 3650. Seven miles south of Hamburgh, and twenty-two north-west of Luneberg. Long. 9° 56’ E., lat. 53° 28’ N.

HARD, adj. Sax. bearte; Dut. hard; Teut. hard. Firm ; resisting penetration or separation ; not soft ; not easy to be pierced or broken.

Repose you there, while I to the hard house, More hard than is the stone whereof ‘tis raised j Which even but now, demanding after you, Denied me to come in . Shakipeare.

Difficult ; not easy to the intellect.

The hard causes they brought unto Moses ; but every small matter they judged themselves. Exodut.

When hard words, jealousies, and fears, Set folks together by the ears. Hudibras

Some diseases, when they are easy to be cured, are hard to be known. Sidney.

Tis hard to say, if Clymene were moved More by his prayer, whom she so dearly loved, Or more ‘with fury fired. Dryden.

As for the hard words which I was obliged to use, they are either terms of art, or such as I substituted in place of others that were too low. Arbuthnot.

Difficult of accomplishment; full of difficulties.

Is any thing too hard for the Lord 1 Generis.

He now discerned he was wholly to be on the defensive, and that was like to be a very hard part too.

Clarendon. Possess

As lords a spacious world, to our native heaven Little inferior, by my adventure Itard With peril great achieved. Milton,

Long is the way

And hard, that out of hell leads up to light ; Our prison strong. Id.

The love and pious duty which you pay Have passed the perils of so hard a way.

Dryden.

Nervous and tendinous parts have worse symptoms, and are harder of cure, than fleshy ones. Wiseman.

Painful ; distressful : laborious action or suffering.

Rachael travailed, and she had hard labour.

Gene-fit.

Worcester's horse came but to-day ; And now their pride and mettle is asleep, Their courage with hard labour tame and dull, That not a horse is half of himself. Shakspeare. Continual hard duty, with little fighting, lessened and diminished his army. Clarendon.

When Sebastian weeps, his tears Come harder than his blood. Dryden.

A man obliged to hard labour is not reduced to the necessity of having twice as much victuals as one un-der no necessity to work. Cheyne.

Cruel ; oppressive ; rigorous : as, a hard heart.

The bargain of Julius III. may be accounted a very hard one. Browne's Vulgar Errouri.

Whom scarce my sheep, and scarce my painful "\

plough, f

The needful aids of human life allow ; 1

So wretched is thy son, so hard a mother them. 3

Dryden.

If you thought that hard upon you, we would not refuse you half your time. Id.

Live thou to mourn the love's unhappy fate, To bear my mangled body from the foe, Or buy it back, and funeral rites bestow ; Or if hard fortune shall those dues deny, Thou canst at least an empty tomb supply. Id.

A loss of one-third of their estates will be a very hard case upon a great number of people. Locke.

No people live with more ease and prosperity than the subjects of little commonwealths ; as, on the contrary, there are none who suffer more under the grievances of a Jiard government than the subjects of little principalities. Addison.

To find a bill that may bring punishment upon the innocent, will appear very hard. Swift.

Sour ; rough ; severe.

What, have you given him any hard words of late t

Shakspeare.

Rough ungovernable passions hurry men on to say or do very hard or offensive things. Atterbury.

D2

HAR

Unfavorable; unkind. As thou lovest me, do him not that wrong,

To bear a hard opinion of his truth. Shakspeare.

Absalom and Achitophel be thinks is a little hard on his fanatick patrons. Dryden.

Some hard rumours have been transmitted from t'other side the water, and rumours of the severest kind. Swift.

Insensible; inflexible.

If I by chance succeed

In what I write, and that's a chance indeed,

Know I am not so stupid or so hard,

Not to feel praise, or fame's deserved reward.

Dryden.

Unhappy ; vexatious.

It is a very hard quality upon our soil or climate, that so excellent a fruit, which prospers among all 1 our neighbours, will not grow here. Temple.

Vehement ; keen ; severe : as, a hard winter ; hard weather.

Full hard it is with flesh-hook, or with oulcs To ben yclawed. Chaucer. The Sompnoures Tale.

Unreasonable; unjust.

It is a little hard, that, in an affair of the last consequence to the very being of the clergy, this whole reverend body should be the sole persons not consulted. Swift.

It is the hardest case in the world, that Steele should take up the reports of his faction, and put them off as additional fears. Id.

Forced ; not easily granted.

If we allow the first couple, at the end of one hundred years, to have left ten pair of breeders, which is no hard supposition ; there would arise from these, in fifteen hundred years, a greater number than the earth was capable of. Burnet.

Powerful ; forcible.

The stag was too hard for the horse, and the horse flies for succour to the man that's too hard for him, and rides the one to death, and outright kills the other. L'Estrange.

Let them consider the vexation they are treasuring up for themselves, by struggling with a power which will be always too hard for them. Addison.

A disputant, when he finds that his adversary is too hard for him, with slyness turns the discourse.

Waits.

Shall our pale withered hands, be still stretched

out,

Trembling, at once, with eagerness and age ? With av'rice and convulsions grasping hard ? Grasping at air, for what has earth beside ?

Young's Night TJiaughtt.

Austere ; rough, as liquids, la making of vinegar, set vessels of wine over against the noon sun, which calleth out the more oily spirits, and leaveth the spirit more sour and hard.

Bacon. Harsh ; stiff; constrained.

Get thee glass eyes ; And like a scurvy politician seem To see the things thou dost not — how, now, now,

now : Pull off my boots : — harder ; harder ; so.

Shakspeare. King Lear.

Others, scrupulously tied to the practice of the ancients, make their figures harder than even the marble itself-Dryden.

His direction is hard, his figures too bold, and his tropes, particularly

bis metaphors, insufferably strained .

Id.

Not plentiful ; not prosperous There are bonfires decreed ; and, if the times had not been hard, my billet should have burnt too.

Dryden. Avaricious ; faultily sparing.

These thanks I pray you :

And know that when Sebastian weeps, his tears Come harder than his blood. Dryden,

HARD, adv. Hardo, very old German.

Close ; near ; often with by.

Abimelech went hard unto the door of the tower, to burn it with fire. Jvdget.

The Philistines followed hard upon Saul.

2 Samuel.

A little lowly hermitage it was, Down in a dale hard by a forest's side,

Far from resort of people that did pass In travel to and fro. Spenier.

Scarce had he said, when hard at hand they spie That quicksand nigh, with water covered. Id.

Hard by was a house of pleasure, built for a sum. mer retiring place. Sidney.

They doubted a while what it should be, 'till it was cast up even hard before them ; at which time they fully saw it was a man. Id.

When these marshal the way, hard at hand comes thejmaster and main exercise. Shakspeare.

Hard by a cottage chimney smokes, From betwixt two aged oaks. Milton.

Diligently ; laboriously ; incessantly ; vehemently ; earnestly ;

importunately.

Geneura rose in his defence, And prayed so hard for mercy from the prince, That to his queen the king the offender gave.

Dryden.

An ant works as hard as a man who should carry a heavy load every day four leagues. Addison.

Whoever my unknown correspondent be, he presses hard for an answer, and is earnest in that point.

Atterbury.

Uneasily; vexatiously.

When a man's servant shall play the cur with him, look you it goes hard. Shakspeare.

Distressfully ; so as to raise difficulties.

The question is hard set, and we have reason to doubt. Browne.

A stag that was hard set by the huntsmen, betook himself to a stall for sanctuary. L' Estrange.

Fast ; nimbly ; vehemently.

The wolves scampered away as hard as they could drive. L'Estranrje.

With difficulty ; in a manner requiring labor.

Solid bodies foreshow rain, as boxes and pegs of wood when they draw and wind hard. Bacon.

Tempestuously ; boisterously.

When the north wind blows hard, and it rains sadly, none but fools sit down in it and cry ; wise people defend themselves against it. Taylor.

HARDANGERFIORD, an extensive arm of the sea, which runs inland on the west coast of Norway, about ninety-eight miles in a north-east direction. It is between 59° 28' and 60° 25' of N. lat.

HA'RDBOUND, adj. Hard and bound. Costive.

Just writes to make his barrenness appear, And strains from hardbound brains eight lines a year.

Pope.

HARDEN, v. n. &v.a. $ From hard. To HAR'DEXER, n. s. J grow hard ; to make

hard ; to confirm in wickedness; to stupify ; to

make firm or constant.

HAR

He stiffened his neck, and hardened his heart from turning unto the Lord. 2 Chronicles.

Then should I have comfort ? yea, I would harden myself in sorrow. Job.

But exhort one another daily, lest any of you be hardened through the deceitfulness of sin. Hebrews.

They speken of sondy harding of metall And speken of medecines therwithall, And how and when it should yharded be, Which is unknown algates unto me.

Chaucer. The Squires Tale. '

The powder of loadstone and flint, by the addition of whites of eggs and gum-dragon, made into paste, will in a few days harden to the hardness of a stone.

Bacon.

Even Lust, the master of a hardened face, Blushes if thou be'st in the place ; To Darkness' curtains he retires ; In sympathising Night he rolls his smoky fires.

Cowley.

Avoid the politic, the factious fool, The busy buzzing, talking hardened knave.

Otway.

He that hardeneth his heart, and sets God and his judgments at defiance, and receives not the impressions of his word or rod, shall fall into mischief ; his presumption will be his ruin ; and whatever sin he falls into, it is owing to the hardness of his heart.

Henry. Prov. xxviii. 14.

Religion sets before us not the example of a stupid Stoick, who had by obstinate principles hardened himself against all sense of pain ; but an example of a man like ourselves, that had a tender sense of the least suffering, and yet patiently endured the greatest.

Tillotson.

Sure he, who first the passage tried, In hardened oak his heart did hide, And ribs of iron armed his side. Dryden. One raises the soul, and hardens it to virtue ; the other softens it again, and bends it into vice. Id.

It is a melancholy consideration, (hat there should be several among us so hardened and deluded as to think an oath a proper subject for a jest. Addison.

Years have not yet hardened me, and I have an addition of weight oa my spirits since we lost him.

Swift to Pope.

Hi EDEN, a county of Kentucky, on the Ohio ; distant from Washington 6G2 miles. Population 7581. The chief town is Elizabeth Town.

HARDENING, the giving a greater degree of hardness to bodies than they had before. There are several ways of hardening iron ana steel, as by hammering them, quenching them in cold water, &c. See CASE-HARDENING, STEEL, and CUTLERY.

HARDERWICK, or HARDERWYCK, a town of the Netherlands, in Dutch Guelderland, on the Zuyder Zee. It was only a village till 1229, when Otho surrounded it with walls. It was afterwards one of the Hanse Towns : in 1503 it was mostly burnt down, but was soon after rebuilt with seven gates. In 1511 it was taken by Charles duke of Guelders; in 1552 by the troops of Charles V. ; and in 1572 by the confederates. It has a university founded in 1618, converted in 1808

into an Athenaeum or academy with eight professors : and the church of St. Martin is much admired. The trade is in corn, timber, and herrings. It is nineteen miles west of Deventer, twenty-five north-east of Utrecht, and forty east of Amsterdam.

HARD’FAVORED,a$0 Compounds ol

hard : the primary meaning is applied to whatever makes resistance to exter-j nal impressions. — I Their meanings Vare mostly obvious. Hard-favored is coarse or harsh of countenance ; hardhead the manner of fighting, in which the combat-J ants dash heads to-

HARD’HANDED, adj.

HARD’HEAD, n. s.

HARD’HEARTED, adj.

HARD’HEARTEDNESS, n.s.

HARD’IHEAD, n. s.

HARD’IHOOD, n. s.

HARD’IMENT, n. s.

HARD’INESS, n. s.

HARD’LABORED, adj.

HARD’MOUTHED, adj.

HARD’SHIP, n. s.

HARD’WARE, n. s.

HARD’WAREMAN, n. s.

HARD’Y, adj.

gether. Hardihood, hardiment, courage ; bravery. Hardiness, hardship and fatigue ; courage. Hard-labored, diligently wrought. Hardship, injury; oppression. Hardware, manufacture of metal. Hardy, bold ; strong ; confident, in a good and bad sense.

And to the tre she goeth, aful gode pace, For love made her so hardy in this case.

Chaucer. Legende of Good Women. Then sawe I beautie with a nice atire, And youth, all full of game and jolitee ; Pole hardinesse, flatterie, and desire, Messagerie, and Mede, and other thre, Hir names shall not here be tolde for me.

Id. The Assemble of Foules. The which his mother seeing, gan to feare Least his too haughty hardiness might reare Some hard mishap in hazard of his life.

Spenser. Faerie Queetie.

That stroke the hardy squire did sore displease. Id. But full of fire and greedy hardiment, The youthful knight could not for ought be staid.

Spenser.

Enflamed with fury and fierce hardyhead, He seemed in heart to harbour thoughts unkind , And nourish bloody vengeance in his bitter mind.

Id.

They are valiant and hardy ; great endurers of cold, hunger, and ail hardiness. Id. ‘

On the gentle Se.vern’s sedgy bank, In single opposition, hand to band, He did confound the best part of an hour, In changing hardiment with great Glendower.

Shakspeare.

If we, with thrice such powers left at home, Cannot defend our own doors from the dog, Let us be worried ; and our nation lose The name of hardiness and policy. Id.

When the blast of war blows in your ears, Stiffen the sinews, summon up the blood , Disguise fair Nature with hardfavoured looks, Then lend the eye a terrible aspect. Id.

Hardhearted Clifford, take me from the world ; My soul to heaven. Id.

Hardhanded men that work in Athens here, Which never laboured in their minds ‘till now.

ftf.

Perkin had gathered together a power of all nations, neither in number, nor in the hardiness and courage of their persons contemptible. Bacon.

Try the imagination of some in cock-fights, to make one cock more hardii. and the other more cowardly.

Id.

Zeal was the spring whence flowed her hardiment.

Fairfar.

HAR

Boldly assault the necromancer’s hall, Where if he be, with dauntless hardihood.

Milton.

When Vulcan came into the world , he was so hardfavoured that both his parents frowned on him.

Drydcn.

Tis time my hardmouthed coursers to controul, Apt to run riot, and transgress the goal. Id.

But who can youth, let loose to vice, restrain ? When once the hardmouthed horse has got the rein, He’s past thy power to stop. Id.

I have been at hardhead with your butting citizens ; I have routed your herd, I have dispersed them.

Id.

Recite

The feats of Amazons, the fatal fight Betwixt the hardy queen and hero knight. Id. Can you be so hardhearted to destroy My ripening hopes, that are so near to joy ? Id. Hardheartedness and cruelty is not only an inhuman vice, but worse than brutal. L' Estrange.

The brother a very lovely youth, and the sister hardfavoured. Id.

He has the courage of a rational creature, and such an hardiness we should endeavour by custom and use to bring children to. Locke.

Who is there hardy enough to contend with the reproach which is prepared for those, who dare venture to dissent from the received opinions of their country ?

Id.

You could not undergo the toils of war, Nor bear the hardships that your leaders bore.

Addison.

Criminal as you are, you avenge yourself against the /tardiness of one that should tell you of it.

Addison.

Is a man confident of his present strength? An unwholesome blast may shake in pieces his hardy fabrick. South.

How black and base a vice ingratitude is, may be seen in those vices which it is always in combination with, pride and hardheartedness, or want of compassion. Id.

In journeys or at home, in war or peace, By hardships many, many fall by ease. Prior.

Could thirst of vengeance, and desire of fame, Excite the female breast with martial flame ? And shall not love's diviner power inspire More hardy virtue, and more generous fire ? Id.

John Bull, otherwise a good-natured man, was very hardhearted to his sister Peg. Arbutknot.

How cheerfully the hawkers cry A satire, and the gentry buy ! While my hardlaboured poem pines, Unsold upon the printer's lines. Swift.

They are ripe for a peace, to enjoy what we have conquered for them ;

and so are we, to recover the effects of their hardships upon us. Id.

Hardheartedness is an essential in the character of a libertine. Clarissa.

HARDINGE (Nicholas), an English lawyer, chiefly distinguished for the cultivation of the belles lettres. He studied at Eton and Cambridge ; after which he kept terms at the Middle Temple and was called to the bar. In 1731 he obtained the office of clerk to the house of commons ; in 1 752 he was made joint secretary of the treasury ; and was twice elected M. P. for the borough of Eye. He died aged fifty-seven in 1758. His works consist of some English poetry, and a vo-lume of Latin poems.

HARDIKGE (George), son of the preceding, born in 1744. After finishing his studies at

Eton, he went to Trinity College, Cambridge ; wherehis tutor was Dr. Watson, afterwards bishop of Llandaff. In 1769 he was created, by mandate, master of arts ; and called to the bar the same year. The interest of his mother's brother, lord Camden, procured him the rank of serjeant-at-law; and he was subsequently appointed solicitor-general to her majesty. In 1787 he was made a Welsh judge, and in 1789 the queen's attorney-general. He died in the execution of his judicial duties, at Presteign, in Radnorshire, April 26th, 1816. He was a man of wit and humor, as well as great good sense and knowledge of the world. His speeches in parliament and in the courts have been published ; as well as several contributions to miscellaneous literature, including three sermons. These have been also collected and printed, with his letters, and an account of his life by Mr. John Nichols.

HARDING (Thomas), D. D., was born in Devonshire in 1512. He was educated at Winchester; chosen fellow of New College, Ox-ford, in 1556; and appointed professor of He-brew by king Henry VIII., whose half-reforming principles he adopted. On the accession of Ed-ward VI. he became a complete protestant ; but, on that of the Bloody Mary, he saw his error, recanted, and became a confirmed Papist ; whereupon he was made prebendary of Winchester, and treasurer of the cathedral of Salisbury. Being deprived of his preferments, on the accession of queen Elizabeth, he went to Louvaine, where he began his famous controversy with bishop Jewel, against whom he wrote seven tracts in

favor of Popery, between 1555 and 1567. He died in 1570. His works show him to have been a man of learning and abilities..

HARDION (James), an ingenious French author, and member of the Academy of Inscriptions, born at Tours, in 1686. He published a Universal History in 18 vols., and a Treatise on French Poetry and Rhetoric. He died in 1766.

HARDLY, adv. From hard.

With difficulty ; not easily.

Touching things which generally are received, al though in themselves they be most certain, yet, because men presume them granted of all, we are hard-liest able to bring such proof of their certainty as may satisfy gainsayers, when suddenly and besides expectation they require the same at our hands.

Hooker.

There are but a few, and they endued with great ripeness of wit and judgment, free from all such affairs as might trouble their meditations, instructed in the sharpest and subtlest points of learning ; who have, and that very hardly, been able to find out hut only the immortality of the soul. Id.

God hath delivered a law as sharp as the two-edged sword, piercing the very closest and most unsearchable corners of the” heart, which the law of nature can hardly, human laws by no means, possibly reach unto.

Id

There are in living creatures parts that nourish and repair easily, and parts that nourish and repair hardly.

Bacon.

The barks of those trees are more close and soft than those of oaks and ashes, whereby the moss can the hardlier issue out. id.

HARDNESS.

The father, mother, daughter they invite ; Hardly the dame was drawn to this repast.

Dryden.

Recovering hardly what he lost before, His right endears it much, his purchase more. Id.

False confidence is easily taken up, and hardly laid down. South.

Scarcely ; scantily ; not lightly ; with no likelihood.

The fish that once was caught, new bait will hardly bite. Faerie Queene. -

They are worn, lord consul, so That we shall hardly in our ages see Their banners wave again. Shakspeare.

Hardly shall you find any one so bad, but he desires the credit of being thought good. South.

Almost not ; barely.

The wandering breath was on the wing to part, Weak was the pulse, and hardly heaved the heart.

Dryden.

There is hardly a gentleman in the nation who hath not a near alliance with some of that body. Swift.

Grudgingly ; as an injury. If I unwittingly

Have aught committed that is hardly borne

By any in this presence, I desire

To reconcile me. Shakspeare.

Severely ; unfavourably.

If there are some reasons inducing you to think hardly of our laws, are those reasons demonstrative, are they necessary, or mere possibilities only? Hooker.

Rigorously ; oppressively.

Many men believed that he was hardly dealt with.

Clarendon.

They are now in prison, and treated hardly enough ; for there are fifteen dead within twojyearS. Addison.

They have begun to say, and to fetch instances where he has in many things been hardly used.

Swift.

Unwelcomely; harshly.

Such information comes very hardly and harshly to a grown man ; and, however softened, goes but ill down. Locke.

Not softly ; not tenderly ; not delicately.

Heaven was her canopy ; bare earth her bed ; So hardly lodged. Dryden.

HA'RDNESS, n. s. From hard.

Durity ; power of resistance in bodies.

Hardiness is a firm cohesion of the parts of matter that makes up masses of a sensible bulk, so that the whole does not easily change its figure. Locke.

From the various combinations of these corpuscles happen all the varieties of the bodies formed out of them in colour, taste, smell, hardness, and specifick gravity. Woodward.

Difficulty to be understood. This label on my bosom Is so from sense in hardness, that I can Make no collection of it. Shakspeare.

Difficulty to be accomplished.

It was time now or never to sharpen my intention to pierce through the hardness of this enterprize.

Sidney.

Concerning the duty itself, the hardness thereof is not such as needeth much art. Hooker.

Scarcity ; penury.

The tenants poor, th e hardness of the times,

Are all excuses for a servant's crimes. Swift.

Obduracy; profligateness.

Every commission of sin introduces unto the soul a certain degree of liardness, and an aptness to continue iu '.hat sin. South.

Coarseness; harshness of look .

By their virtuous behaviour they compensate the hardness of their favour, and by the pulchritude of their souls make up what is wanting in the beauty of their bodies. Ray.

Keenness ; vehemence of weather or seasons.

If the hardness of the winter should spoil them, neither the loss of seed nor labour will be much.

Mortimer.

Cruelty of temper; savageness; harshness; barbarity.

We will ask,

That if we fail in our request, the blame May hang upon our hardness. Shakspeare. They quicken sloth, perplexities unty,

Make roughness smooth, and hardness mollify.

Denham.

Stiffness ; harshness.

Sculptors are obliged to follow the manners of the painters, and to make many ample folds, which are insufferable hardnesses, and more like a rock than a natural garment. Dryden.

Faulty parsimony ; stinginess.

HARDNESS, in bodies, is a property directly opposite to fluidity, by which they resist the impression of any other substance, sometimes in

an extreme degree. As fluidity has been found to consist in the motion of the particles of a body upon one another, in consequence of a certain action of the universal fluid, or elementary fire, among them ; we must conclude that hardness consists in the absence of this action, or a deficiency of what is called latent heat. This is confirmed by observing, that there is an intermediate state betwixt hardness and fluidity, in which bodies will yield to a certain force, though they still make a considerable resistance. This is principally observed in the metals, and is the foundation of their ductility. It appears, in-deed, that this last property, as well as fluidity, is entirely dependent on a certain quantity of la-tent heat absorbed, or otherwise acting within the substance itself; for all the metals are rendered hard by hammering, and soft by being put again into the fire and kept there for some time. The former operation renders them hot as well as hard ; probably, as Dr. Black observes, because the particles of metal are thus forced nearer one another, and those of fire squeezed out from among them. By keeping them for some time in the fire, that element insinuates it-self again among the particles, and arranges them in the same manner as before, so that the ductility returns. By a second hammering this property is again destroyed, returning on a repetition of the heating, or annealing, as it is called; and so on, as often as we please. Hardness appears to diminish the cohesion of bodies in some degree, though their fragility does by no means keep pace with their hardness. Thus, glass is very hard and very brittle ; but flint, though still harder than glass, is much less brittle. Among the metals, however, these two properties seem to be more connected, though even here the connexion is by no means complete. Steel, the hardest of all the metals, is indeed the most brittle; but lead, the softest, is not the most duc-tile. Neither is hardness connected with the specific gravity of bodies ; for a diamond, th” hardest substance in nature, is little more than

half the weight of the lightest metal. As little is it connected with the coldness, electrical properties, or any other quality with which we are acquainted; so that, though the principle above laid down may be accepted as a general foundation for our enquiries, a great number of particulars remain yet to be discovered before we can offer any satisfactory explanation. All bodies become harder by cold ; but this is not the only means of their doing so, for some become hard by heat as well as cold.

Mr. Quist and others have constructed tables of the hardness of different substances. The method pursued in constructing these tables was, by observing the order in which they were able to cut or make any impression upon one another. The following table, extracted from M. Magellan's edition of Cronstedt's Mineralogy, was taken from Dr. Quist, Sir T. Bergman, and Mr. Kirwan. The first column shows the hardness, and die second the specific gravity.

Diamond from Ormus . 20 — 3-7

Pink diamond … . 19 — 3-4

Bluish diamond … 19 — 3-3

Yellowish diamond . . 19 — 3-3

Cubic diamond … 18 — 3‘2

Ruby …… 17 — 4-2

Pale ruby from Brasil . 16 — 3-5

Ruby spinell … 13 — 3-4

Deep blue sapphire • . 16 — 3-8

Ditto paler ….. 17 — 3-8

Topaz …… 15 — • 4-2

Whitish ditto … . 14 — 3-5

Bohemian ditto . . , 11 — 2-8

Emerald ….. 12 — 2-8

Garnet …… 12 — 4-4

Agate …… 12 — 2-6

Onyx …… 12 — 2-6

Sardonyx ….. 12 — 2-6

Occidental amethyst . . 11 — 2-7

Crystal …… It — 2-6

Cornelian ….. 11 — 2-7

Green jasper … . 11 — 2-7

Reddish yellow ditto . . 9 — 2*6

Schoerl …… 10 — 3-6

Tourmaline … . 10 — 3‘0

Quartz ….. 10 — 2‘7

Opal …… 10—2-6

Chrysolite ….. 10 — 3-7

Zeolite …… 8-ˆ2-1

Fluor …… 7 — 3-5

Calcareous spar … 6 — 2-7

Gypsum . . „ . . 5 — 2-3

Chalk …… 3 — 2-7

HA’RDOCK, n. s. burdock.

I suppose the same with

Why he was met even now, Crowned with rank fumiter and farrow-weeds, With Jiardocks, hemlock, nettles, cuckoo-flowers.

Shaltspeare.

HARDOUIN (John), a learned French Jesuit in the eighteenth century, remarkable for the paradoxes he advanced in his writings; in particular, That all the works of the ancient profane writers, except Cicero's works, Virgil's Georgics, Horace's Satires and Epistles, and Pliny's Natural History, are mere forgeries. He died at

Paris in, 1729, aged eighty-three. His principa. works are, 1. An edition of Pliny's Natural History, with notes, which is much esteemed ; 2. An edition of the Councils, which made much noise; 3. Chronology Restored by Medals, 4 to.; 4. A Commentary on the New Testament, folio; in which he pretends that our Saviour and his apostles preached in Latin, &c.

HARDS, n. s. The refuse or coarser part of flax.

HARDT (Herman von Der), a philological writer of Germany, was born in 1660 at Melle, Westphalia, where his father was director of the mint. He studied at Jena and Leipsic, and attached himself chiefly to oriental languages. The duke of Brunswick made him his librarian ; and, in 1690, he was chosen professor of the Oriental languages in the university of Helmstadt ; to which he induced the duke to present his library. In 1709, becoming rector of the gymnasium of Marienburg, he employed every moment he could spare in preparing for the press those works which have established his fame. Among these are, Autographia Lutheri aliorumque celebrium virorum ab anno 1517, ad ami. 1546, Reformationis /Etatem et Historiam egregie Illustrantia, 3 vols. 8vo. ; Magnum Concilium Constantiense de universal! Ecclesiae Reformatione, unione, et fide, 1697, 3 vols. folio, 1700—1742, 6 vols. folio, undertaken by order of the duke of Brunswick ; Memorabilia Bibliothecffi novse Rodolphiae; Historia Litteraria Reformationis, 1717, 5 vols. folio; Tomus Pri-mus in Jobum, Historiam populi Israelis in Assyriaco exilio, Samaria Eversa et Regno ex-tincto Illustrans, Helmstadt, 1728, folio; the remainder of this work was never published. He died in 1746, leaving in MS. a History of the Reformation.

HARDUNHULLY, a town of the Mysore, south of India. It was taken by the rajah from a neighbouring petty prince, in the year 1614. Long. 77° 2' E., lat. 11° 50' N.

HARDY, a county of the north part of Virginia, bounded north-east by

Hampshire county, east by Shenandoah county, south-west by Pendleton and Randolph counties, and north-west by Maryland. Population 6525. Chief town, Moore-field.

HARE and HERE, differing in pronunciation only, signify both an army and a lord. So Ha-rold is a general of an army ; Hareman, a chief man in the army ; Herwin, a victorious army ; which are much like Stratocles, Polemarchus, and Hagesistratus, among the Greeks.

HARE, n. s. & v. n. ~\ Saxon, bana ; Erse.

HARE'BELL, n. s. karh ; Dan. and S wed.

HARE'BRAINED, adj. hare, from ear, 01 hear.

HARF.'FOOT, n.s. ˆMr. Thomson suggests.

HAUE'LIP, n. s. A small quadruped,

HARE'SEAR, n. s. j with long ears and short

HAR'IER, n. s. J tail, that moves by leaps,

remarkable for timidity, vigilance, and fecundity r the common game of hunters ; also a constellation. The verb signifies to frighten or hurry •with terror. Harebell, a blue flower. Harebrained, volatile ; unsettled ; wild. Harefoot, a bird ; an herb. Harelip, a deficiency in the upper lip, constituting a disease, so called from.

its resemblance to the lip of the hare. Haresear, a plant. Harrier, a dog for hunting hares.

Thou shalt not lack

The flower that's like thy face, pale primrose ; nor The azured harebell, like thy veins.

Shakspeare. Cymbeline. Dismayed not this

Our captains Macbeth and Banquo ?

— As sparrows, eagles ; or the hare, the lion.

Shakspeare.

The blots of nature's hand Shall not in their issue stand ;

Never mole, harelip, nor fear, Shall upon their children be. Id.

That hairbrained wild fellow begins to play the fool, when others are weary of it. . Bacon.

The hare appears, whom active rays supply A nimble force, and hardly wings deny.

Creech.

We view in the open champaign a brace of swift greyhounds, coursing a good stout and well-breathed hare-More.

HAREM (Arabic sana, the sanctuary), is used by Mussulmans to signify the women's apartments, which are forbidden to every man except the husband. It corresponds in a great degree to thegynoeceum of the Greeks ; the term seraglio, often used by Europeans for Harem, is a corruption of serai, that is, palace. The ladies are attended by female slaves, and guarded by black eunuchs, the chief of the latter is called kislar-aga. There are two Harems, one occupied by the wives of the former Sultan, and those who have lost the favor of the present ; the other, by the favorite wives of the reigning prince.

HARE, in zoology. See LEPUS. The hare is a beast of venery, but peculiarly so termed in its second year. There are reckoned four sorts of them, from the places of their abode : *viz.* the mountain, the field, the marsh, and the wandering hares. The mountain hares are the swiftest ; the field hares are not so nimble ; those of the marshes are the slowest: but the wandering hares are the most dangerous to follow; for they are cunning in the ways and mazes of the fields, and, knowing the nearest ways, run up the hills and rocks, to the confusion of the dogs, and the discouragement of the hunters. Hares and rabbits are very mischievotis to nurseries and new planted orchards, by

peeling off the barks of the young trees : to prevent which, some bind ropes about the trees up to such a height as they are able to reach ; some daub them with tar ; but, though this keeps off the hares, it is itself mischievous to the trees ; but this hurtful property of it is in some degree taken off by mixing any kind of fat or grease with it, and incorporating them well over the fire. This mixture is to be rubbed over the lower part of the trees in November, and will preserve them till that time next year, without any danger from these animals. It is only in winter, when other food is scarce, that these creatures feed on the barks of trees. Those who have the care of warrens have an odd way of fattening hares, *viz.* stopping up their ears with wax, and rendering them deaf. The hare is so timorous, that she continually listens after every noise, and will run a long way on the least suspicion of danger; so that she always eats in terror, and runs herself out of flesh continually. These are both prevented by her feed ing in a safe place, withou* apprehension.

HARE, JAVA. See CAVIA. HARE, PATACONIAN. See CAVIA. HARE (Dr. Francis), an English bishop, educated at Eton, and a member of King's College, Cambridge ; where he had the tuition of the marquis of Blandford, only son of the illustrious duke of Marlborough, who appointed him chaplain-general to the army. He afterwards obtained the deanery of Worcester, and thence was promoted to the bishopric of Chichester, which he held with the deanery of St. Paul's to his death, in 1740. He was dismissed from being chaplain to George I. in 1718, from party prejudices. About the end of queen Anne's reign he published a remarkable pamphlet, entitled The Difficulties and Discouragements which attend the study of the Scriptures in the Way of Private Judgment. He published many pieces against bishop Hoadly, in the Bangorian Controversy ; and other learned works, which were collected after his death, and published in 4 vols., 8vo. 2. An edition of Terence, with Notes, in 4to. 3. The Book of Psalms in the Hebrew, put into the Original Poetical Metre, 4to. In this last work he pretends to have discovered the Hebrew metre, which was supposed to be irretrievably lost. But his hypothesis, though defended by some, has been confuted by Dr. Lowth in his Metrics Hareanae Brevis Confutatio, annexed to his lectures De Sacra Poesi Hebraeorum.

HARE ISLAND, a low island of Lower Canada, in the middle of the channel of the St. Lawrence, nearly eight miles in length, by the average breadth of about half a mile. It extends in a direction nearly parallel to the shores of the river. The soil is good, but uncultivated ; and at each extremity are long and dangerous flats. It is 103 miles below Quebec.

HARFLEUR, a town of Normandy, in the department of the Lower Seine, on the Lezarda. It has some inferior manufactures, and was anciently a place of importance ; but its harbour is now filled up. Harfleur was taken by the English in 1415 and 1440. Population 800 It is five miles east of Havre, and forty-nine west of Rouen.

HARFORD, a county of Maryland, United States, bounded north by York county in Pennsylvania, and east by Susquehannah River and Chesapeake Bay. It is watered by Bush River and Deer Creek. Harford is the chief town. Population 21,258.

HARIDI, a serpent formerly worshipped at Achmim in Upper Egypt. ‘ Upwards of a century ago,’ says Mr. Savary, ‘ a religious Turk called Scheilk Haridi died here. He passed for a saint among the Mahommedans ; who raised a monument to him, covered with a cupola, at the foot of the mountain. The people flocked from all parts to offer up their prayers to him. One of their priests, profiting by their credulity, persuaded them that God had made the soul of Scheilk Haridi pass into the body of a serpent. Many of these are found in the Thebais, which are harmless ; and he had taught one to obey

his voice. He appeared with his serpent, dazzled the vulgar by his surprising tricks, and pretended to cure all disorders. Some lucky instances of success, .due to nature alone, and sometimes to the imagination of the patients, gave him great celebrity. He soon confined his serpent Haridi to the tomb, producing him only to oblige princes and persons capable of giving him a handsome recompense. The successors of this priest, brought up in the same principles, found no difficulty in giving sanction to so profitable a fraud. They added to the general persuasion of his virtue that of his immortality. They had the boldness even to make a public proof of it. The serpent was cut in pieces in presence of the emir, and placed for two hours under a vase.

At the instant of lifting up the vase, the priests, no doubt, had the address to substitute one exactly resembling it. A miracle was proclaimed, and the immortal Haridi acquired a fresh degree of consideration. This knavery procures them great advantages. The people flock from all quarters to pray at this tomb ; and if the serpent crawls out from under the stone, and approaches the suppliant, it is a sign that his malady will be cured. No human reasoning would persuade these ignorant and credulous Egyptians that they are the dupes of a few impostors : they believe in the serpent Haridi as firmly as in the prophet.'

HARJEDELAN, a province of Sweden in Nordland, about 100 miles long, and from forty to fifty broad; abounding in pastures, cattle, woods, mines, lakes, rivers, and fish.

HARIERS, or HARRIERS, are endowed with an admirable gift of smelling, and are very bold in the pursuit of game. See CANIS and DOG.

HARIORPOOR, or Udiarpur, a town belonging to independent zemindars, in the province of Orissa, fifty miles south-west from Midnapoor. It is in lat. 21° 52' N., long. 86° 52' E.

HARIOT, or HERIOT, in law, a due belonging to a lord at the death of his tenant, consisting of the best beast, either horse, or cow, or ox, which he had at the time of his death ; and in some manors the best goods, piece of plate, &c., are called hariots.

HARISCHON (Aaron), a learned rabbi, and Karaite, in the fifteenth century; who wrote a Hebrew grammar, printed at Constantinople, in 1581 : probably the same with Aaron, the Caraite, a Jewish physician at Constantinople, who, about 1294, wrote a commentary on the Pentateuch, printed at Jena, in folio in 1710, and of which there is au original MS. copy in the National Library at Paris.

HARK, interj. & v. n. Originally the imperative of the verb hark, which signifies to listen, and is a contraction of hearken.

What harmony is this ? My good friends, hark !

Shukspeare.

Pricking up his ears, to hark If he could hear too in the dark.

Hudibras.

The butcher saw him upon the gallop with a piece of flesh, and called out, Hark ye, friend, you may make the best of your purchase. L'Estrange.

Hark! methinks the roar that late pursued me, Sinks like the murmurs of a falling wind. Rowe.

Not closest coverts can t toiett tne game : Hark ! the dog opens ; take thy certain aim,

Gay's Rural Sporlt. Hark how loud the woods Invite you forth ! Thomson.

The cottage curs at early pilgrim bark ; Crowned with her pail the tripping milk-maid sings, The whistling ploughman stalks afield, and hark ! Down the rough slope the ponderous waggon rings.

Beuttie

Hark ! forth from the abyss a voice proceeds, A long low distant murmur of dread sound, Such as arises when a nation bleeds With some deep and immedicable wound.

Byron. Childe Harold.

HARL, n. s. The filaments of flax ; any filamentous substance.

The general sort are wicker-hives, made of privet, willow, or harl, daubed with cow-dung. Mortimer.

HARLE, the bark of flax, which, when separated from the useless woody part, called the boon, by proper dressing, becomes itself the useful commodity well known by the name of flax.

HARLEIAN COLLECTION, a most valuable collection of useful and curious MSS. begun near the end of the last century, by R. Harley of Brampton Bryan, esq., afterwards earl of Oxford, and conducted upon the plan of the great Sir Robert Cotton. In August, 1705, he published his first considerable collection; and in less than ten years he had collected together nearly 2500 rare and curious MSS. Soon after this the celebrated Dr. George Hicks, Mr. Anstis, garter king at arms, bishop Nicholson, and many other eminent antiquaries, not only offered him their assistance in procuring MSS. but presented him with several that were very valuable. Being thus encouraged to

perseverance by his success, he kept many persons employed in purchasing MSS. for him abroad, giving them written instructions for their conduct. By these means the MS. library was, in 1721, increased to nearly 6000 books, 14,000 original charters, and 500 rolls. His son Edward, earl of Oxford, still farther enlarged the collection ; so that when he died, June 16th, 1741, it consisted of 8000 vols several of them containing distinct and independent treatises, besides many loose papers, which have been since sorted and bound up in volumes ; and above 40,000 original rolls, charters, letters patent, grants, and other deeds and instruments of great antiquity. The principal design of making this collection was the establishment of a MS. English historical library, and the rescuing from destruction such national records as had eluded the diligence of preceding collectors : but lord Oxford's plan was more extensive; for his collection abounds also with curious MSS. in every science. This collection is now in the British Museum.

HARLEM ISLE, a small island lying off the north-west coast of Ceylon, about four miles in circumference. Lat. 9° 41' N., long. 79° 54' E. This island belongs to the district of Jaffnapa-tam, and affords excellent feed for horses.

HARL'EQUIN, n. s. This name is said to have been given by Francis of France to a busy buffoon, in ridicule of his enemy Charles le Quint. Menage derives it more probably from

a famous comedian that frequented Mr. Harley's house, whom his friends called Harlequino, little Harley. — Trev. A buffoon who plays tricks to divert the populace ; a jack-pudding ; a zani.

The joy of a king for a victory must not be like that of a harlequin upon a letter from his mistress.

Dryden.

The man in graver tragick known, Though his best part long since was done,

Still on the stage desires to tarry ; And he who played the harlequin, After the jest still loads the scene,

Unwilling to retire, though weary. Prior.

HARLEQUIN, a buffoon, dressed in party-co” lored clothes ; answering much the same pur” pose as a merry andrew on mountebank stages* &c. Harlequin is a standing character in mo-dern pantomime entertainments.

HARLES (Theophilus Christopher), an eminent German scholar and critic, was a native of Culmbach, inSuabia. In 1764 he was appointed adjunct of the faculty of philosophy at Erlangen, and the next year obtained the chair of Greek and Oriental literature in the gymnasium of Cobourg. He returned in 1770 to Erlangen, with the title of director of the philological seminary, librarian, and professor of rhetoric and poetry. His first publication was De Praeconum apud Grsecos officio, 1764; followed by his dissertations, De Pedantismo Philologico, Cobourg, 1765; andDe Galantismo Esthetico et Philologico, 1 768. He also wrote the lives of various philologers in Latin, of which the second edition was published at Bremen, 1770, 1772. He edited, besides editions of several of the Greek and Roman classics, a Greek and Latin poetical Anthology, and introductions to the history of Greek and Latin Literature. But the most important of his labors is the second edition of the Bibliotheca Grseca of Fabricius, published at Hamburgh, 1790 — 1809, 12 vols. 4to. His death took place November 2d, 1814, at the age of seventy-six.

HARLEY (Robert), earl of Oxford and Mortimer, was the eldest son of Sir Edward Harley, and born in 1661. At the Revolution Sir Ed-ward and his son raised a troop of horse at their own expense ; and, after the accession of king William and queen Mary, he obtained a seat in parliament. His promotions were rapid : in 1702 he was chosen speaker of the house of commons; in 1704 he was sworn of queen Anne’s privy council, and made secretary of state; in 1706 he was one of the commissioners for the treaty of Union; and in 1710 was appointed a commissioner of the treasury, and chancellor of the exchequer. A daring attempt was made on his life, March 8th, 1711, by the marquis of Guiscard, a French papist ; who, when under examination before a committee of the privy council, stabbed him

with a penknife. Of this wound, however, he soon recovered ; and was the same year created earl of Oxford, and lord high treasurer, which office he resigned just before the queen's death. In 1715 he was impeached of high treason, and committed to the Tower ; but was cleared by trial, and died on the 21st of May, 1724. He was not only an

encourager of literature, but the greatest collector in his time of curious books and MSS.

HARLINGEN, a sea-port town of the Netherlands, in Friesland. It stands on the coast of the Zuyder Zee, at the mouth of a large canal, and was only a hamlet till 1 234, when it was destroyed by the sea ; and, being afterwards rebuilt, became a considerable town. In 1543 and 1579 it was enlarged by William prince of Orange. It is now well fortified, and naturally strong, as the adjacent country can easily be laid under water. The city is square ; and the streets are handsome, straight, and clean, with canals in the middle. But, though the harbour is good, vessels of great burden cannot get into it until they are lightened. The manufactures are salt, bricks, tiles, canvas, and paper ; a considerable trade is also carried on in all sorts of linen cloth, and the adjacent country yields abundance of corn and pasturage. Population 7349. The town lies fifteen miles west of Lewarden, and is the seat of the naval administration of the province. HAR'LOT, n. s. \ Welsh, herlodes, a girl. HAR'LOTRY, n. s. S Others for horelet, a little whore. Others from the name of the mother of William the Conqueror. Harlot is used in Chaucer for a low male drudge. So far Johnson : but the word hire clearly supplies the etymology both of this word and whore ; to both of which the Goth, hor ; Dan. hare, answers. A whore ; a strumpet. This word was, as Dr. . Johnson says, formerly given to men as well as women. Herlod, in Welsh, is said to signify simply a young man, and herlodes a young woman : with us it seems always to have been a disgraceful appellation : harlotry, fornication; a name of contempt.

He was a gentil harlot and a kinde, A better felow shulde a man not find.

Chaucer. Prologue to the Cant. Tales. He was a jangler, and a goliardeis, And that was most of sinne and harlotries. 13.

Thine be this might ; I graunt it the ; My King of Harlotes shall thou be.

Id. Romawnt of the Rose. A peevish self-willed harlotry, That no persuasion can do good upon.

Shakspzare.

Away, my disposition, and possess me with Some harlot's spirit. Id.

They help thee by such aids as geese and harlots.

Ben Jonson.

In very dark nights sometimes you may find him With a harlot got up on my crupper behind him.

Marvell.

The barbarous harlots crowd the publick place ; Go, fools, and purchase an unclean embrace.

Dryden. Nor shall,

From Rome's tribunal, thy harangues prevail 'Gainst harlotry, while thou art clad so thin. Id.

HARLOTS were tolerated amongst the Jews, Greeks, and Romans. Fornication indeed was prohibited among the Jews, under several severe penalties ; but these they explained as extending only to women of their own nation ; hence the word strange woman is often used to signify a harlot. At Athens also the prostitutes were mostly foreigners ; and such as debauched an Athenian female were liable to a penalty. Co-

rinth was a remarkable nursery of harlots, and gave birth to the noted

Lais. Their accomplishments were often great, in all the polite and elegant parts of female education, *viz.* philosophy, dancing, singing, rhetoric, &c. Aspasir, the mistress of Pericles, was admired by Socrates for her learning. The more accomplished frequently amassed great fortunes. Phryne offered to rebuild the walls of Thebes, when destroyed by Alexander, on condition that they would perpetuate her memory and profession by an inscription. At Rome they were obliged to fix a bill over their doors, indicating their character and profession. It was also customary for them to change their names, after they had signified to the praetor their intention of leading such a dissolute life. Women whose grandfather, father, or husband, had been a Roman knight, were forbidden by the laws to make a public profession of lewdness.

HARM, n. s. & v. a. ~\ Sax. anm ; Goth. HAKM'FUL, adj. I Swed.Dan. andTeut.

HARM'FULLY, adv. \ harm. Injury; crime; HARM'FULNESS, n. s. ^- wickedness; mischief; HARM'LESS, adj. detriment; hurt: to

HARMLESSLY, adv. hurt, or do injury. HARM'LESSNESS, n. s. J The adjectives and adverbs imply the presence or absence of whatever is noxious, criminal, or injurious.

Ye wounded me, yc made me wo bestad ; Of grace, redresse my mortal grefe, as ye Of all my harm the very causer be.

Chaucer. The Court of Love. And, therto, I saw ner yet, a lesse Harmful than she was in doing : I say not that she n' hadde knowyng What harme ywas ; or elles, she Had coulde no gode, so thinketh me.

Id. The Boke of the Duchesse. A scholar is better occupied in playing or sleeping, than spending his time not only vainly, but harmfully in such kind of exercise. Ascham,

His dearly loved squire His spear of heben-wood behind him bare,

Whose harmful head, thrice heated in the fire, Had riven many a breast with pike-head square.

Spenser.

Touching ceremonies harmless in themselves, and hurtful only in respect of number, was it amiss to de-cree that those things that were least needful, and newliest come, should be the first that were taken away ? Hooker.

She, like harmless lightning, throws her eye On him, her brothers, me, her master ; hitting Each object with a joy. Shakspeare.

We, ignorant of ourselves,

Beg often our own harm*, which the wise Powers Deny us for our good. Id.

What sense had I of her stolen hours of lust ? I saw't not, thought it not, it harmed not me. Id. The shipwright will be careful to gain by bis labour, or at least to save himself harmless, and therefore suit his work slightly, according to a slight price.

Raleigh.

The earth brought forth fruit and food for man, without any mixture of Juirmful quality. Id.

When, through tasteless flat humility, In dough-baked men some harmlessness we see, 'Tis but his phlegm that's virtuous and not he.

Donne.

Let no man fear that harmful creature less, because he sees the apostle sufc from that poison. Hall.

How are we happy still in fear of harm ? But harm precedes not sin. Milton.

He spent that day free from worldly trouble, harmlessly, and in a recreation that became a churchman.

Walton.

Passions ne'er could grow To harm another, or impeach your rest.

Waller.

For flax and oats will burn the tender field, And sleepy poppies harmful harvests yield.

Dryden.

After their young are hatched, they brood them under their wings, lest the cold, and sometimes the heat, should harm them. Ray.

Secure and free they pass their harmless hours, Gay as the birds that revel in the grove And sing the morning up. Tote's Loyal Genera) Compare the harmlessness, the credulity, the tenderness, the modesty, and the ingenuous pliableness to virtuous counsels, which is in youth untainted, with the mischievousne&'j, the slyness, the craft, the impudence, the falsehood, and the confirmed obstinacy in an aged long-practised sinner. South.

They should be suffered to write on : it would keep them out of harm's way, and prevent them froro evil courses. Swift.

And the loud hunters' shout ; O'er a weak harmless flying creature all Mixed in mad tumult and discordant joy.

Thomson.

Bullets batter the walls which stand inflexible, but fall harmlessly into wood or feathers.

Decay of Piety.

Thus Harold deemed, as on that lady's eye He looked and met its beam without a thought, Save admiration glancing harmless by.

Byron. Childe Harold.

HARMATTAN, a remarkable periodical wind which blows from the interior parts of Africa towards the Atlantic Ocean. It is described in the Philosophical Transactions as an easterly wind prevailing on that part of the coast of Africa which lies between Cape Verd in lat. 15° N., and Cape Lopez in lat. 1° S., during December, January, and February.

' This wind is by the French and Portuguese, who frequent the Gold coast, called simply the north-east wind, the quarter from which it blows. The English adopt the Fantee word harmattan. It comes on indiscriminately at any hour of the day, at any time of the tide, or at any period of the moon, and continues sometimes only a day or two, sometimes five or six days, and it has been known to last fifteen or sixteen. There are generally three or four returns of it every season. It blows with a moderate force, not quite so strong as the sea-breeze (which blows every day during the fair season from the west, W. S.W., and south-west) ; but somewhat stronger than the land wind at night from the north and N. N.W. A fog is one of the peculiarities which always accompanies the harmattan. Extreme dryness makes another extraordinary property of this wind. No dew falls during its continuance, nor is there the least appearance of moisture in the

atmosphere. Vegetables of every kind are very much injured ; all tender plants, and most of the productions of the garden, are destroyed ; the grass withers, and becomes dry like hay; the vigorous evergreens likewise feel its pernicious influence; the branches of the

lemon, orange, and lime-trees droop ; the leaves become flaccid, wither, and, if the harmattan continues to blow for ten or twelve days, are so parched as to be easily rubbed to dust between the fingers : the fruit of these trees, deprived of its nourishment, and stinted in its growth, becomes yellow and dry, without acquiring half its usual size. “The parching effects of this wind are likewise evident on the external parts of the body. The eyes, nostrils, lips, and palate, are rendered dry and uneasy, and drink is often reˆ- quired, not so much to quench thirst, as to re-move a painful aridity in the fauces. The lips and nose become sore, and even chapped ; and, though the air be cool, yet there is a troublesome sensation of prickling heat on the skin. If the harmattan continues four or five days, the scarf-ikin peels off, first from the hands and face, and afterwards from the other parts of the body, if it continues a day or two longer. Those laboring under fluxes and intermitting fevers, however, generally recover in a harmattan. It stops the progress of epidemics : the small pox, remittent fe-vers, &c., not only disappear, but those laboring under these diseases when an harmattan comes on, are almost certain of a speedy recovery.’

HARMER (Thomas), an oriental scholar and biblical critic, was a native of Norwich, where he was born in 1715. He received his education at a private academy in London, but his progress in the languages of the east was considerable, which is evinced in his annotations on Solomon’s Song. But his best work is Observations on divers parts of Scripture, illustrated by the accounts of Travellers in the East, 4 vols. 8vo. ; a treatise which has gone through several editions. He died in 1788, minister of a dissenting congregation at Wattesfield, Suffolk.

HARMODIUS, the friend of Aristogiton, who delivered his country from the tyranny of the Pisistratidffi. See ARISTOGITON, and ATTICA.

The Athenians, to reward the patriotism of these illustrious citizens, made a law, that no person (according to some), or, as others with more probability affirm, no slave, should ever after be named Aristogiton or Harmodius.

HARMONIA, or HERMIONE, in fabulous history, the wife of Cadmus, both of whom were turned into serpents. See CADMUS. Though many ancient authors make Harmonia a princess of divine origin, the daughter of Mars and Venus, Athenaeus, quoting Euhemerus, tells us, that she was only a player on the flute, in the service of the prince of Zidon, previous to her departure with Cadmus. This circumstance renders it probable, that, as Cadmus brought letters into Greece, his wife brought music thither.

HARMONICA. This word, when originally appropriated by Dr. Franklin to that peculiar form or mode of musical glasses which he himself, after a number of happy experiments, first contrived, was written armonica. It is derived from the Greek word aˆovia. The Dr., in his letter to F. Beccaria, has given a mi-nute and elegant account of the harmonica. ‘ You have doubtless heard,’ says he, ‘ the sweet tone that is drawn from a drinking glass, by pressing a wet finger round its brim. One Mr. Puckeridge, a gentleman from Ireland, was the

first who thought of playing tunes formed of these tones. He collected a number of glasses of different sizes ; fixed them near each other on a table ; and tuned them, by putting into them water more or less as each note required. The tones were brought out by pressing his fingers round their brims. He was unfortunately burnt here, with his instrument, in a fire which consumed the house he lived in. Mr. E. De-laval, a most ingenious member of our Royal Society, made one in imitation of it with a better choice and form of glasses, which was the first I saw or heard. Being charmed with the sweetness of its tones, and the music he produced from it, I wished to see the glasses disposed in a more convenient form, and brought together in a narrower compass, so as to admit of a greater number of tones, and all within reach of hand to a person sitting before the instrument ; which I accomplished after various intermediate trials, and less commodious forms, both of glasses and construction, in the following manner : — The glasses are blown as near as possible in the form of hemispheres, having each an open neck or socket in the middle. The thickness of the glass near the .brim is about the tenth of an inch, or hardly quite so much, but thicker as it comes Hearer the neck ; which in the largest glasses is about an inch deep, and an inch and a half wide within ;

these dimensions lessening as the glasses themselves diminish in size, except that the neck of the smallest ought not to be shorter than half an inch. The largest glass is nine inches diameter, and the smallest three inches. Between these are twenty-three different sizes, differing from each other a quarter of an inch in diameter. To make a single instrument, there should be at least six glasses blown of each size ; and out of this number one may probably pick thirty-seven glasses (which are different for three octaves with all the semitones) that will be each either the note one wants, or a little sharper than that note, and all fitting so well into each other as to 'taper pretty regularly from the largest to the smallest. It is true there are not thirty-seven sizes ; but it often happens that two of the same size differ a note or half a note in tone, by reason of a difference in thickness, and these may be placed in the other without sensibly hurting the regularity of the taper, form. The glasses being chosen, and every one marked with a diamond the note you intend it for, they are to be tuned by diminishing fhe thickness of those that are too sharp. This is done by grinding them round from the neck towards the brim, the breadth of one or two inches as may be required ; often trying the glass by a well tuned harpsichord, comparing the note drawn from the glass by your finger with the note you want, as sounded by that string of the harpsichord. When you come near Che matter, be careful to wipe the glass clean and dry before each trial, because the tone is something flatter when the glass is wet, than it will be when drying; — and, grinding a very little between each trial, you will thereby tune to great exactness. The more care is necessary in this, because if you go below your required tone there is no sharpening it again but by grinding somewhat off the brim, which will

afterwards require polishing, and thus increase the trouble. The glasses being thus tuned, you are to be provided with a case for them, and a spindle on which they are to be fixed. My case is about three feet long, eleven inches every way wide within at the biggest end, and five inches at the smallest end ; for it tapers all the way to adapt it better to the conical figure of the set of glasses. This case opens in the

middle of its height, and the upper part turns up by hinges fixed behind. The spindle is of hard iron, lies horizontally from end to end of the box within, exactly in the middle, and is made to turn on brass gudgeons at each end. It is round, an inch in diameter at the thickest end, and tapering to a quarter of an inch at the smallest. — A square shank comes from its thickest end through the box, on which shank a wheel is fixed by a screw. This wheel serves as a fly to make the motion equable, when the spindle, with the glasses, is turned by the foot like a spinning wheel. My wheel is of mahogany, eighteen inches diameter, and pretty thick, so as to conceal near its circumference about twenty-five pounds of lead. — An ivory pin is fixed in the face of this wheel, about four inches from the axis. Over the neck of this pin is put the loop of the string, that comes iip from the moveable step to give it motion. The case stands on a neat frame with four legs. To fix the glasses on a spindle, a cork is first to be fitted in each neck pretty tight, and projecting a little without the neck, that the neck of one may not touch the inside of another when put together, for that would make a jarring. These corks are to be perforated with holes of different diameters, so as to suit that part of the spindle on which they are to be fixed. When a glass is put on, by holding it stiffly between both hands, while another turns the spindle, it may be gradually brought to its place. But care must be taken that the hole be not too small, lest in forcing it up the neck should split ; nor too large, lest the glass, not being firmly fixed, should turn or move on the spindle, so as to touch or jar against its neighbouring glass. The glasses thus are placed one in another; the largest on the biggest end of the spindle, which is to the left hand : the neck of this glass is towards the wheel ; and the next goes into it in the same position, only about an inch of its brim appearing beyond the brim of the first ; thus proceeding, every glass when fixed shows about an inch of its brim (or three quarters of an inch, or half an inch, as they grow smaller) beyond the brim of the glass that contains it ; and it is from these exposed parts of each glass that the tone is drawn, by laying a finger on one of them as the spindle and glasses turn round. My largest glass is G, a little be-low the reach of a common voice, and my highest G, including three complete octaves. — To distinguish the glasses more readily to the eye., I have painted the apparent parts of the glasses withinside, every semitone white, and the other notes of the octave with the seven prismatic colors ; *viz.* C, red ; D, orange ; E, yellow ; F, green; G, blue; A, indigo; B, purple ; and C, red again ; — so that the glasses of the same color (the white excepted) are always octaves to each

other. This instrument is played upon by sitting before the middle of

the set of glasses, as before the keys of a harpsichord, turning them with the foot, and wetting them now and then with a sponge and clean water. The fingers should be first a little soaked in water, and quite free from all greasiness; a little fine chalk is sometimes useful, to make them catch the glass and bring out the tone more readily. Both hands are used, by which means different parts are played together. — Observe, that the tones are best drawn out when the glasses turn from the ends of the fingers, and not when they turn to them. The advantages of this instrument are, that its tones are incomparably sweet beyond those of any other; that they may be swelled and softened at pleasure by stronger or weaker pressures of the finger, and continued to any length ; and that the instrument, being once well tuned, never again wants tuning.' Some have proposed to use cork instead of the finger, but this substitute does not seem capable of producing the same mellowness and equality of tone with the finger. Alum water is also thought preferable to chalk. From what has already been said, it will easily be perceived, that this instrument requires to be tuned with the nicest degree of delicacy which the laws of temperament will possibly admit. The same rules, however, which are observed in tuning a harpsichord, will be equally effectual in tuning the harmonica ; with this only difference, that greater delicacy in adjusting the chords should, if practicable, be attempted. Dr. Edmund Cullen, of Dublin, made what he considered an improvement on this instrument ; but it is objected by connoisseurs, that a full bass cannot be executed upon it; and that the complete bass, practicable on the harmonica, is greatly preferable to the chords with which the Dr. proposes to grace each emphatic note, and with which, they allege, he deludes instead of satisfying the ear.'

HARMON'ICAL, adj. ˆ Fr. harmonique ; HARMON'IC, adj. 1 Greek, ap/ zovucof.

HARMO'NIOUS, adj. \ Originally from Gr.

HARMO'NIOUSLY, adv. ˆapw, to fit or suit, HARMO'NIOUSNESS, ra. s. ; and signifies a state HAR'MONISE, v. a. \ of fitness, suita—

HAR'MONY, n. s. J bility, or agreement ; applied to sounds and to minds, and in both implies adaptation: in music, the adaptation of different modulated sounds to each other ; in mind, cooperation of thought, sentiment, or affection: symmetrical; proportionate. Harmonise, to adjust equally.

On every bough, the birdes herd I syng With voice of Angell in hir harmonies

Chaucer. The Assemblie of Fotilet. For al my chambre gan to ringe ; Through singing of hir harmony, For instrument nor melody Wos no where herde yet, halfe so swete, Nor of accorde halfe so mete.

Id. Bake of the Duchesse.

The pleasures of the eye and ear are but the effects of equality, good proportion, or correspondence ; so that equality and correspondence are the causes of harmony. Bacon.

Harmonical sounds, and discordant sounds, are both active and positive ; the blackness and darkness are, indeed, but privaties. Id

After every three whole notes, nature requireth, for all harmonical use, one half note to be interposed.

Id.

All the wide-extended sky, And all the harmonious worlds on high, And Virgil's sacred work shall dye. Cowley.

The harmony of things, As well as that of sounds, from discord springs.

Denham.

In us both one soul, Harmony to behold in wedded pair ! More grateful than harmonious sounds to the' ear.

Milton.

I no sooner in my heart divined, My heart, which by a secret harmony Still moves with thine, joined in connexion sweet !

Id.

The sound

Symphonious, of ten thousand harps that tuned 4ngelic harmonies. Id.

Thoughts that voluntary move harmonious numbers.

Id.

Each sort a consort in that lovely place, And virgin trebles wed the manly base From whence the progeny of numbers new Into harmonious colonies withdrew. Afarvell. If we look upon the world as a musical instrument, well -tuned, and harmoniously struck, we ought not to worship the instrument, but him that makes the mu-sick. StiUingfleet.

Love first invented verse, and formed the rhime, The motion measured, harmonised the chime.

Dryden.

HARMONY OF THE SPHERES; a hypothesis of Pythagoras and his school, according to which the motions of the heavenly bodies produced a music imperceptible by the ears of mortals. He supposed these motions to conform to certain fixed laws, which could be expressed in numbers, corresponding to the numbers which give the harmony of sounds. The immortal Kepler, in his Harmonices Mundi, endeavors to apply the Pythagorean ideas on numbers and musical intervals to astronomy, and in this work, as also in his Prodromus, sets forth eternal laws respecting the distances of the planets, which were not fully appreciated, until Newton, a long time after, showed their importance and connexion. It is in the Harmonices Mundi, proemium to the 5th book, De Motibus Planetarum, that Kepler, in his enthusiasm, pronounces these bold words concerning his discovery : ” Eighteen months ago, I saw the first ray of light ; three months since I saw the day ; a few days ago, I saw the sun himself, of most admirable beauty. Nothing can restrain me ; I yield to the sacred frenzy. I dare ingenuously to confess, that I have stolen the golden vessels of the Egyptians (alluding to the ideas of Ptolemy on the same subject), and will build of them a tabernacle to my God. If you pardon me, I rejoice ; if you reproach me, I can endure it ; the die is thrown. I write a book to be read ; whether by the present or fu-ture ages, it matters not. It can wait for a reader a century, if God himself waited six thousand years for an observer of his works.” To understand this enthusiasm fully, we must recollect the erroneous ideas with which the world had teemed from the time of Ptolemy.

HARMONY. The sense which the Greeks gave to this word, in their music, is not easy to be determined. In the ancient treatises that are extant harmony appears to be that department whose object is the agreeable succession of sounds, merely considered as high or low ; in opposition to the two others called rhythmica and metrica, which have their principle in time and measure. This leaves our ideas concerning that aptitude of sound vague and undetermined ; nor can we fix them without studying for that purpose all the rules of the art ; and, even after we have done so, it will be very difficult to distinguish harmony from melody, unless we add to the last the ideas of rhythmus and measure ; without which, in reality, no melody can have a distinguishing character: whereas harmony is characterised by its own nature, independent of all other quantities except the chords or intervals which compose it. It appears by a passage of Nicomachus, and by others, that they likewise gave the name of harmony to the chord of an octave, and to concerts of voices and instruments, which performed in the distance of an octave one from the other, and which is more commonly called antiphone. Harmony, according to the moderns, is a succession of chords agreeable to the laws of modulation. For a long time this harmony had no other principle but such rules as were almost arbitrary, or solely founded on the approbation of a practised ear, whieh decided concerning the agreeable or disagreeable succession of chords, and whose determinations were at last reduced to calculation. But F. Mersenne and M. Saveur having found that every sound, however simple in appeararfce, was always accompanied with other sounds less sensible, which constitute with itself a perfect chord-major; with this experiment M. Rameau set out, and upon it formed the basis of his harmonic system, which he extended to many volumes. Signior Tartini, taking his route from an experiment which is more delicate, yet not less certain, reached conclusions similar to those of Rameau, by pursuing a path whose direction seems quite opposite. According to M. Rameau, the treble is generated by the bass ; Signior Tartini makes the bass result from the treble. One deduces harmony from melody, and the other supposes the contrary. To determine from which of the two schools the best performances are likely to proceed, no more is necessary than to investigate the end of the composer, and discover whether the air is made for the accompaniments, or the accompaniments for the air. At the word system, in Rousseau's Musical Dictionary, is given a delineation of that published by Signior Tartini. Here he continues to speak of M. Rameau, whom he has followed through this whole work, as the artist of greatest authority in the country where he writes. In reality, when this author took it in his head to dignify with the title of demonstration the reasonings upon

which he established his theory, every one turned the arrogant pretence into ridicule. The Academy of Sciences loudly disapproved a title so ill founded, and so gratuitously assumed ; and M. Estive, of the Royal Society at Montpelier, has shown him, ‘ that, even to begin with this proposi-HAR 43

tion, tliat according to the law of nature sounds «re represented by their octaves, and that the octaves may be substituted for them, there was not any one thing demonstrated or even firmly established, in his pretended demonstration.’ But without quoting hi? arguments, which are too long for insertion, we readily gnu*, that the sys-tem of harmony by M. Rameau is neither demonstrated, nor capable of demonstration. But it will not follow, that any man of invention can so easily and so quickly subvert those aptitudes and analogies on which the system is founded. Every hypothesis is admitted to possess a degree of probability proportioned to the number of phenomena for which it offers a satisfactory solution. The first experiment of M. Ilaraeau is, that every sonorous body, together with its principal sound and its octave, gives likewise its twelfth and seventeenth major above ; which being approximated as much as possible, even to the chords immediately represented by them, return to the third, fifth, and octave, or, in other words, produce perfect harmony. This is what nature, when solicited, spontaneously gives ; this is what the human ear, unprepared and uncultivated, imbibes with ineffable avidity and pleasure. We do not contend for the truth of M. Rameau’s second experiment. Nor is it necessary we should. The first, expanded and carried into all its consequences, resolves the phenomena of harmony in a manner sufficient to establish its authenticity and influence. The difficulties for which it affords no solution are too few and trivial either to merit the regard of an artist, or a philosopher, as M.D’Alembert, in his Elements, has clearly shown. Rousseau and his opponent are agreed in this, that the harmonics conspire to form one predominant sound ; and are not to be detected but by the nicest organs, applied with the deepest attention. It is equally obvious, that, in an artificial harmony, by a proper management of this wise institution of nature, dissonances themselves may be either entirely concealed or considerably softened. So that, since by nature sonorous bodies in actual vibration are predisposed to exhibit perfect harmony, and since the human ear is fabricated in such a manner as to perceive it, the harmonical chaos of M. Rousseau has in fact no existence. Nor does it avail him to pretend, that, before the harmonics can be extinguished, sonorous bodies must be impelled with a force which alters the chords, and destroys the purity of the harmony ; for this position is equally false both in theory and practice : in theory,

because an impulse, however forcible, must proportionally operate on all the parts of any sonorous body, so far as it extends ; in practice, because the human ear actually perceives the harmony to be pure. What effects his various manoauvres upon the organ may have, we leave to such as have leisure and curiosity enough to try the experiments ; but it is apprehended, that, when tried, their results will leave the system of Rameau, particularly as remodelled by D'Alembert, in its full force. Of all the whims and paradoxes maintained by this philosopher, none is more extravagant than his assertion, that every chord, except the simple unison, is displeasing to the human ear ; nay,

that we are only reconciled to octaves themselves, by being inured to hear them from our infancy. Strange, that nature should have fixed this invariable proportion between male and female voices, whilst at the same time she inspired the hearers with such violent prepossessions against it, as were invincible but by long and confirmed habit. See Music, &c.

HARMONY, DIRECT, is that in which the bass is fundamental, and in which the upper parts preserve among themselves, and with that fundamental bass, the natural and original order which ought to subsist in each of the chords that compose this harmony,

HARMONY, INVERTED, is that in which the fundamental or generating sound is placed in some of the upper parts, and when some other sound of the chord is transferred to the bass beneath the others.

HARMONY, a village of the United States, in the county of Gibson Indiana; famous as a re-cent property of the eccentric but benevolent Mr. Owen. It is seated on the Wabash, and is so called from being settled by a sect called the Harmonists, who held their property in common, and sold it to Mr. Owen. They had a very extensive establishment here for tne manufacture of wool, and their Merino cloth was said not to be surpassed by any in the United States. The establishment is now broken up.

HARMOSTA, or HARMOSTES, Greek 'Ap/ircijc from apjtow, to adapt. In antiquity, a magistrate among the Spartans, whereof there were several, whose business was to look to the building of citadels, and

repairing the forts and fortifications.

HARMOSYNIANS, ap/ioerwvoi, in antiquity, magistrates among the Spartans, who, after the death of Lycurgus, were appointed to enforce the observance of that law which required married women to wear veils in the streets; whereby, they were distinguished from single females, who were allowed to go abroad with their faces uncovered.

HARMOTOME, or CROSS-STONE ; the name of a substance curious in mineralogy, on account of the cruciform figure of its crystals, and the peculiarity of its composition. It sometimes occurs in right rectangular prisms terminated by four rhombic planes, corresponding to the solid angles of the prisms ; but more frequently in twin-crystals formed by the intersection of two flattened prisms at right angles to each other, and in such a manner that a common axis and acumination is formed. The crystals yield to cleavage parallel to the planes and both diagonals of a right rectangular prism, which is their primary form. Its prevailing colour is white ; it is translucent or semitransparent, with a somewhat pearly lustre, and hard enough to scratch glass. Specific gravity 2’ 392. It consists of silex 49-00, alumine 16-00, barytes 18-00, and water 15”00. It chiefly occurs in metalliferous veins, as at Andreasberg, in the Hartz, and at Strontian in Scotland. It has also been found in amygdaloid at Oberstein.

HARNESS, n. s. & v. a. Fr. harnois ; supposed from Runick iern or hiern; Welsh and Erse hiairn, iron. Mr. Thomson says, from

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HAR

Goth, her, an army. Armour; defensive furniture of war; somewhat antiquated. The traces of draught-horses, particularly of carnages of pleasure : to dress in armour ; or to fix horses in their traces.

HARNESS comprehends the whole equipage and accoutrements of a cavalier heavily armed ; as casque, cuirass, &c. Some derive the word from the Greek apva£ig, a lamb's skin, because they anciently covered themselves therewith. Du Cange observes, that the word harnesium is used in the corrupt Latin in the same sense, and that it comes from the High Dutch harness or harnisch. Others derive it from the Italian arnese ; others from the Celtic harnes, a cuirass.

HARO, HAROL, or HAROU, or Clamour de Haro, in the Norman customs, was a cry or formula of invoking the assistance of justice against the violence of some offender, who, upon hearing the word haro was obliged to desist, on pain of being severely punished for his outrage, and to go with the party before the judge. The word is commonly derived from ha and roul, as being supposed an invocation of the sovereign power, to assist the weak against the strong ; from Raoul first duke of Normandy, who, about A. D. 912, rendered himself venerable by his strict justice : so that they called on him even after his death when they suffered any oppression. Some derive it from Harold king of Denmark, who in 826 was made grand conservator of justice at Mentz. Others from the Danish aa, rau, q. d. help me ; a cry raised by the Normans in flying from a king of Denmark, named Roux, who made himself duke of Normandy. The haro had anciently such vast power, that a poor man cf Caen, named Asselin, in virtue of it, arrested the corpse of William the Conqueror, in the middle of the funeral procession, till his son Henry paid the value of the land whereon the chapel was built in which he was interred.

HAROLD I. and III. See ENGLAND.

HAROMZEK, a province of Transylvania, at the south-east corner of the country of the Szeklers, adjoining to European Turkey. The Carpathian Mountains are its barrier on this side. It is divided into tlie upper and lower circles, containing seven districts, and is intersected by various steep mountains, but has valleys along the banks of the Alt and the Teketengy, beautifully fertile. Its extent is about 800 square

miles; and there are 4080 families who pay taxes. The inhabitants cultivate flax, and manufacture linen.

HAROUN, or AARON AL RASH ID, a celebrated caliph of the Saracens, was the second son of the caliph Mahadi. He succeeded his elder brother, Hadi, in the caliphate A. D. 786, and was the most potent prince of his race, ruling over territories extending from Egypt to Korasan. He obtained the name of Al Rashid, or the Just, but his claim to the title must be regarded with considerable allowance for Eastern notions of despotic justice. One of his noblest qualities was his love of learning and science. He caused many Greek and Latin authors to be translated and dispersed throughout •iis empire, and made his subjects acquainted with the Iliad and the Odyssey. He eight times

invaded the Greek empire, and, on the refusal of the emperor Nicephorus, in 802, to pay tribute, addressed to him a singularly arrogant epistle, and followed it up by an irruption into Greece, which terminated in the defeat of Nicephorus, who was obliged to pay an augmented tribute, and agree not to rebuild Heraclea and the other pillaged and dilapidated frontier towns. Dur-ing these transactions, the ruin of the family of the Barmecides exemplified the despotic rigor of Haroun's character. Yahia, the head of it, had superintended his education ; and of his four sons, the eldest was a successful general; the second, the caliph's prime vizier, Giaffer ; and the third and fourth in dignified stations. The generosity, munificence, and affability of the Barmecides, rendered them the delight of all ranks of people ; and Giaffer was so much in his master's graces, that the caliph, in order to enjoy his company in the presence of his sister Abassa, to whom he was equally attached, formed a marriage between the princess and vizier, but with the capricious restriction of their forbearing the privileges of such an union. Passion broke through this unjust prohibition, and the caliph, in his revenge, publicly executed Giaffer, and confiscated the property of the whole family. Haroun attained the summit of worldly power and prosperity, and the French historians mention a splendid embassy which he sent to Charlemagne, which, among other presents, brought a magnificent tent, a water-clock, an elephant, and the keys of the holy sepulchre at Jerusalem, implying a permission for European pilgrims to visit it. Haroun was seized with a mor-tal distemper while on the point of marching to put down a rebellion in the provinces beyond the Oxus; and retiring to T(>'is in Korasan, expired in the 47th year of his age, and 23d of his reign. The popular fame of this caliph is evinced by the Arabian Night's Entertainments, in which Ha-roun, his wife Zobeide, his vizier Giaffer,

and his chief eunuch Mesrour, are frequent and conspicuous characters.

man dialects, Romanvsq ; lyra pluudat tibiˆ Bar-baras harpa. Ven. Fort. An instrument commonly struck with the finger ; a constellation ; one who plays on the harp : to touch any passion ; to dwell on a subject.

I heard the voice of harpers harping with their harps. Revelations.

There herde I playing on an harpe That ysounded bothe well and sharpe, Kym Orpheus, full craftely An on this side fast by, Ysatte the harper Orion, And Gaeiedes Chirion, And other harpers many one, And the British Gaskirion ; And small harpers with hir glees Satte under hem in divers sees.

Chaucer's House of Fame, Gracious duke,

Harp not on that, nor do not banish reason For inequality ; but let your reason serve To make the truth appear.

Shakspeare, Measure for Measure.

E

You harp a little too much upon one string.

Collier. I'm the god of the harp : stop my fairest : — in

vain}

,ˆbr the harv, nor the harper, could fetch her again.

Tickell.

The HARP is of a triangular figure, and held upright between the legs

of the performer. The harp was the favorite musical instrument of the Britons and other northern nations in the middle ages; as is evident from their laws, and various passages in their history. By the laws of Wales, a harp was one of the three things that were necessary to constitute a gentleman, or a freeman : and none could pretend to that character who naa aot one of these favorite instruments, or could not play upon it. To prevent slaves from -pretending to be gentlemen, it was expressly forbidden to teach, or to permit, them to play upon the harp ; and none but the king, the king's musicians, and gentlemen, were allowed to have harps in their possession. A gentleman's harp was not liable to be seized for debt ; because the want of it would have degraded him from his rank, and reduced him to that of a slave. The harp was in no less estimation and universal use among the Saxons and Danes. Those who played upon this instrument were declared gentlemen by law ; their persons were esteemed inviolable, and secured from injuries by very severe penalties ; they were readily admitted into the highest company, and treated with distinguished marks of respect wherever they appeared. King David is usually painted with a harp, but we have no testimony in all antiquity that the Hebrew harp, which they called chinnor, was any thing like ours. On a Hebrew medal of Simon Maccabaeus we see two sorts of musical instruments; but they are both very different from our harp, and consist of only three or four strings. All authors agree, that our harp is very different from the lyra, cithara, or barbiton, used among the Romans. Fortunatus, lib. vii. carm. 8. Romanusque lyra plaudat tibi, Barbarus harpa, mentions it as an instrument of the barbarians.

HARPS, ANCIENT : — Fig. 1, plate HARPS, is a well authenticated representation of an Irish harp or lyre. There is also preserved a triangular harp, taken from an ancient painting in the museum of the king of Naples in which it is placed on the shoulder of a little dancing Cupid, who supports the instrument with his left hand, and plays upon it with his right. The trigonum is mentioned by Athenseus, lib. iv., and by Julius Pollux, lib. iv. cap. 9. According to Athenaeus, Sophocles calls it a Phrygian instrument ; and one of his dipnosophists tells us that a certain musician, named Alexander Alexandrinus, was such an admirable performer upon it, and had given such proofs of his abilities at Rome, that he made the inhabitants nifaoˆamtv, ' musically mad.' Fig. 3 represents the Greek harp. Dr. Burney has preserved a figure of the Theban harp, according to a drawing made from. an ancient painting in one of the sepulchral grottos of the first kings of Thebes, and communicated by Mr. Bruce to Dr. Burney. The performer is clad in a habit made like a shirt, such as tlje women still wear in

Abyssinia, and the men in Nubia. It reaches down to his ancles ; his-feet are without sandals, and bare ; his neck and arms are also bare ; his loose white sleeves are gathered above his elbows ; and his head is closely shaved. His left hand seems employed in the upper part of the instrument, among the notes in alto, as if in an arpeg-gio ; while, stooping forwards, he seems with his right hand to be beginning with the lowest string and promising to ascend with the most rapid execution : this action, so obviously represented by an indifferent artist, shows that it was a common one in his time; or, in other words, that great hands were then frequent, and consequently that music was well understood and diligently followed.

HARP, THE BELL, a musical instrument of the string kind, thus called from the players on it swinging it about, as a bell on its basis. It is about thiee feet long; its strings, which are of no determinate number, are of brass or steel wire, fixed at one end, and stretched across the sound-board by screws fixed at the other. It takes in four octaves, according to the number of the strings, which are struck only with the thumbs, the right hand playing the treble, and the left hand the bass : and, in order to draw the sound the clearer, the thumbs are armed with a little wire pin. See Plate HARPS, fig. 14.

HARP, THE IRISH, represents the harp of Brian Boiromh, king of Ireland, slain in battle with the Danes, A. D. 1014, at Clontarf. His son Donagh having murdered his brother Teig, A. D. 1023, and being deposed by his nephew, retired to Rome, and carried with him the crown, harp, and other regalia of his father, which he presented to the pope in order to obtair. absolution. Adrian IV. alleged this as one of his principal titles to this kingdom, in his bull transferring it to Henry II. These regalia were kept in the Vatican till the pope sent the harp to Henry VIII. with the title of Defender of the Faith ; but kept the crown, which was of massive gold. Henry gave the harp to the first earl of Clanricard ; in whose family it remained till the beginning of the eighteenth century, when it came by a lady of the De Burgh family into that of M'Mahon of Cknagh in the county of Clare, after whose death it

Kassed into the possession of commissioner I'Namara of Limerick. In 1782 it was presented to the right honorable William Conyng-ham, who deposited it in Trinity College library. It is thirty-two inches high, and of extraordinary good workmanship; the sounding board is of oak, the arms of red sallow ; the extremity of the uppermost arm in part is capped with silver, extremely well wrought and chiseled. It contains a large crystal set in silver, and under it was another stone now lost. The buttons or ornamental knobs at the sides of this arm are of silver.

On the front arm are the arms, chased in silver, of the O'Brien family, the bloody hand supported by lions. On the sides of the from arm, within two circles, are two Irish wolf dogs cut in the wood. The holes of the sounding board, where the strings entered, are neatly ornamented with escutcheons of brass carved and gilt ; the larger sounding holes have been ornaH A ft P E.

mented, probaoly with silver, 'as they have been the object of theft. This harp has twenty-eight keys, and as many string holes, consequently there were as many strings. The foot-piece or rest is broken off, and the parts round which it was joined are very rotten. The whole bears evidence of an expert artist.

HARP, THE WELSH, or the TRIPLE HARP, has ninety-seven strings or chords in three rows, extending from C in the tenor cliff to double G in alt, which make five octaves : the middle row is for the semitones, and the two outside rows are perfect unisons. On the bass side, which is played with the right hand, there are thirty-six strings ; on the treble side, twenty-six ; and in the middle row, thirty-five strings. There are two rows of pins or screws on the right side, serving to keep the strings tight in their holes, which are fastened at the other end to three rows of pins on the upper side. The harp, within the last sixty years, has been in some degree improved by the addition of eight strings to the unison, *viz.* from E to double F in alt. This instrument is struck with the finger and thumb of both hands. Its music is much like that of the spinet, all its strings going from semitone to semitone ; whence some call it an inverted spinet. It is capable of a much greater degree of perfection than the lute.

HARPAGINES, ApTraytQ, in antiquity, were hooks of iron, hanging on the top of a pole, wnich, being secured with chains to the masts of ships, and then let down with great velocity into the enemy's vessels, caught them up into the air. By way of defence against these machines, they covered their ships with hides, which broke and Wunted the force of the iron. The harpagines were invented by Anacharsis the Scythian philosopher.

HARPAGIUS, the preserver of Cyrus, according to Herodotus, and afterwards one of his generals, who subdued Asia Minor. See PERSIA.

HARPALUS, a Greek astronomer, who flourished about A. A. C. 480, corrected the cycle of eight years invented by Cleostratus ; and proposed a new one of nine years, in which he imagined the sun and moon returned to the same point. But Harpalus's cycle was afterwards altered by Melon, who added ten full years to it. See CHRONOLOGY.

HARPALYCE, in fabulous history, the daughter of Lycurgus king of Thrace, and queen of ilie Amazons, who by her valor set her father at liberty, after he had been taken prisoner by the Getes.

HARPASA, a town of Caria, on the Har-pasus, famous for an immense rocking stone, which was moveable by the finger, but could not be displaced by any force.

HARPATH, a river of the United States, in Tennessee, which runs into the Cumberland, fourteen miles south-east of Clarksville.

HARPE (Jean Francois de la) was born at Paris on the 20th of November, 1739-He lost his father, who was captain of artillery, when he was very young, and was left in a state of extreme poverty. By some accident he was introduced to M. Asselin, principal of the college of Har-

court, who, hearing him recite some French verses with an elegance and taste superior to his years, received him amongst his pupils, and shortly after obtained a pension for him. The patronage of his benevolent friend was happily bestowed, and no care was omitted in the completion of his studies. La Harpe commenced his public career in letters by poems called Heroides, which were then much in vogue. The Epistle of Barnevelt to Traman his friend, by Dorat ; and that of a monk of La Trappe to the Abbe de Ranee, by La Harpe, were very popular. These trifles were but the prelude to nobler success. To a young man who had destined him* self to a literary life, two paths were open, — the honors of the academy and those of the theatre* A prize obtained at the French academy, or a successful drama, would remove the first difficulties, admit him into the higher circles, -and procure him elevated protectors. La Harpe almost in the same moment attempted both, and his first efforts in each were successful. In the Eulogy on Fenelon the writer seems to be clothed with the mantle of that illustrious prelate, to speak worthily of his talents and virtues. To the intrinsic merit of this eulogy, one of the finest composed by La Harpe, was joined the extraneous and accidental interest of being proscribed by the minister, and the work was from that but the more

eagerly sought for. The true chef d'o3uvre of M. de la Harpe, however, in these compositions, is the Eulogy on Racine, a subject entirely his own choice. There is nothing to censure in it but an excess of severity in speaking of the great Corneille. The year 1775 was celebrated in our author's l.fe, he having obtained in it both the prize of eloquence and that of poetry. The subject of the oration was an Eulogy on Catinat. It was difficult that an orator, absolutely a stranger to the military art, should succeed in depicting the exploits of one of the greatest generals. M. de la Harpe had also, as a competitor, a man of merit, protected at court, not unsuccessful in letters, and who had made tactics a particular study. The orator was not moved by any of these obstacles. The academy sometimes proposed particular questions, and in 1767 the prize for the following was gaine I by La Harpe — ' Of the Miseries of War, and the Advantages of Peace.' This discourse was marked by the purity and elegance of its diction. So many triumphs opened at length the doors of the academy to our author, and he succeeded to Colardeau.

Not to interrupt the history of our author's academic success, we have forborne till now to speak of his tragedies. Long before he had obtained so many honors, he had made himself known by a tragedy entitled Warwick, which was represented before he was twenty-four years of age, and gave proofs of distinguished talents. His other pieces, though written with much art, and finely conceived, are far from having that original and bold color belonging to the former. Coriolanus is a character consonant to our author's feelings; and Philoctetes offered to him another of the same kind. The other tragedies ofM. de la Harpe are inferior to those we have noticed ; yet they are r£ad with pleasure, being written in

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an elegant style, and possessing that sweetness which results from a due observance of the rules of composition.

We now quit the poetical productions of M. de la Harpe, to consider another great feature of his literary character. ' Let us suppose him stripped,' says M. Gaillard, ' of his other works, his tragedies, his poetry of various kinds, his academical discourses ; let him no longer be deemed a poet or orator; let us now view alone the critic : — How great will the space be, how splendid the fame he will yet enjoy in

literature ! How has he graced and ennobled that function of journalist, which so many before and after him have degraded F The correspondence of M. de la Harpe with the grand duke of Russia gives a just and animated picture of the authors who flourished at the period of the correspondence. It abounds with curious details respecting their works, talents, and manners ; and contains a variety of anecdotes of literature, and of the arts and sciences. We are now come to the work which places the seal on the literary reputation of M. de la Harpe, his Cours de Littera-ture, Aucienne et Moderne, which justly entitles him, in the beginning of the nineteenth century, to the honorable apellation of the French Quintilian.

After the first crash of the revolutionary earthquake had overturned the ancient monarchy of France, and thrown up in its stead but the tyranny of Robespierre, M. de la Harpe attempted to expose to his deluded countrymen the miserable state to which they were reduced. His efforts were, however, unsuccessful : but they procured for himself a dungeon. He had, however, the happiness to be forgotten in his confinement, from which he was liberated shortly after the 9th Thermidor. He reappeared at the Lyceum, where it was observed that misfortune had added new energy to his eloquence ; and it was in the midst of a numerous audience that he boldly and ingenuously renounced his errors ! A new storm arose, and M. de la Harpe was driven to seek an asylum in a spot impenetrable to all but a faithful friendship. He was deprived of exercise; and the effect on his health was perceptible when he again appeared in public. His health henceforth sensibly declined, and he expired Novem-oer, An 1 1 . On the evening preceding his death M. Fontanes called to see him : he was listening to the prayers for the sick ; and, as soon as they were concluded, he stretched forth his hand to M. Fontanes, and said, ‘ I am grateful to divine mercy for having left me sufficient recollection to feel how consoling these prayers are to the dying.’

HARPE, in mythology, a crooked sword wherewith Mercury cut off Argus’s head, and Perseus that of Medusa.

HARP’ING-IRON,n.s.} IFr. harponeur ;

HARPOON’, n. s. ?Lat. harpago. A

HARPOON’ER, n. s. 5 bearded dart, with

which whales are struck and caught : one who throws the harpoon. See FISHERY.

HARPINGS, n. s. the fore parts of the wales which encompass the bow of a ship, and are fastened to the stem, being thicker than the after part of the wales, in order to strengthen the ship

in this place, where she sustains the greatest shock of resistance in plunging into the sea, or dividing it, under a great pressure of sail.

HARPOCRATES, in mythology, the son of Isis and Osiris ; an Egyptian deity, represented with his fingers applied to his mouth, denoting that he is the god of silence. His statue was fixed in the entrance of most of the Egyptian temples, and he was commonly exhibited under the figure of a young man naked, crowned %vith an Egyptian mitre, holding in one hand a cor-nucopia, and in the other the flower of lotus, and sometimes bearing a quiver.

HARPOCRATION (Valerius), a celebrated ancient rhetorician of Alexandria, who wrote an excellent Lexicon of the ten orators of Greece. Aldus first published this lexicon in Greek at Venice in 1603. Many learned men have labored upon it ; but the best edition was given by James Gronovius at Leyden in 1696.

HARPONULLY, or HAJIPONHELLY, a district of South Hindostan, bounded on the north by the Toombuddra River, and situated in about the fifteenth degree of north latitude. It is not so hilly as adjacent districts, but there are some strong positions, the principal of which is Oochi-nadroog. The villages are numerous and well populated.

In 1774 this territory was conquered by Hyder, and added to his dominions. In 1786 Tippoo completely subdued it, and sent the rajah prisoner to Seringapatam ; on the fall of which the heir took possession of Harponully, which is now tributary to the East India Company. The rights of the Nizam to this district were ceded to the Company in 1800. It has since much improved, and now forms part of the Bellary collectorship under the Madras presidency.

HARPONULLY, the capital of the above district, is 170 miles north by west from Seringapatam.

The HARPOON, or HARPING IRON, is a spear or javelin used to strike the whales in the Greenland fishery. It is furnished with a long staff,

having at one end a broad and flat triangular head, sharpened at both edges, so as to penetrate the whale with facility : to the head of this weapon is fastened a long cord, called the whale line, which lies carefully coiled in the boat, in such a manner as to run out without being interrupted or entangled. See WHALE-FISHERY. The gun harpoon is a kind of fire-arm for discharging harpoons at whales, and thereby killing them more easily and expeditiously than formerly, when the harpoons were thrown by the hand. In the Transactions of the Society for Encouraging Arts for 1786, we have an account of the first fish struck in this manner in 1784. The gun was of the blunderbuss construction, loaded with four common tobacco pipes full of glazed powder ; the fish was shot at the distance of ten fathoms, the harpoon going into her back up to the ring ; and she was killed in about an hour. In 1785 three whales were killed in this manner; four in 1786, and three in 1787. In the Philosophical Transactions for 1789 we have accounts of a number of whales killeo. in this manner. The instrument appears to be

extremely useful in calm weather, as the whale, though a timorous creature, will frequently allow a boat to approach it within twenty, fifteen, or even ten fathoms, all of which distances are within reach of the gun harpoon, though not within reach of that thrown by the hand. It is now however seldom used ; the continual damp of the northern regions often preventing the powder from firing, and the Greenlanders hating all innovations on their ancient customs.

HARPY, n. s. Lat. harpyia. The harpies were a kind of birds which had the faces of wo-men, and foul long claws ; very filthy creatures : figuratively, a ravenous wretch ; an extortioner.

When fell Oppression in his harpy fangs, From Want’s weak grasp the last sad morsel bears,

Can ye allay the heart-wrung parent’s pangs, Whose famished child craves help with fruitless tears ?

Seattle.

HARPYI/E, the Harpies (APHYIAI), in mythology, were a rapacious impure sort of monsters, with wings and ears like bears, bodies like vultures, faces like women, and feet and hands hocked like the talons of birds of prey. The ancients believed the harpies to be genii or

demons. Some make them the daughters of Oceanus and Terra; whence Servius says, that they inhabited an island, half on land, and half in water. Valerius Flaccus makes them the daughters of Typhon. There were three harpies, Ae'llo, Ocypete, and Celoeno, which last Homer calls Podarge. Hesiod in his Theogony, rer. 267, only reckons two, Ae'llo and Ocypete, and makes them the daughters of Thaumas and Electra, affirming that they had wings, and went with the rapidity of the wind. Pherecydes relates, that the Boreades expelled them from the jEgean and Sicilian Seas, and pursued them as far as the islands which he calls Plotae, and Homer Calynae ; since called Strophades. Vossius (De Idolo, lib. iii. cap. 99, p. 63), thinks that the ancients, by the harpies, could mean nothing else but the winds; and that it was on this account they were made daughters of Electra, the daughter of Oceanus. Such is the opinion of the scholiasts of Apollonius, Hesiod, and Eustathius. Mr. Bryant supposes that they were priests in Bithynia, who, on account of their repeated acts of violence and cruelty, were driven out of the country; their temple was called Arpi, and the environs Arpiai, and he observes that Harpya, Afnrvia, was of old the name of a place.

HAR'QUEBUSS, n. t.) Ital. archibuso. A

HARQUEBUSSIER', n. s. > hand-gun : one armed with a harquebuss.

Twenty thousand nimble harquebusders were ranged in length, and but five in a rank. Knolles.

A HARQITEBUSS is of the length of a musket, usually cocked with a wheel. It carries a ball weighing 1£ O-L. There was also a larger sort, called the great harquebuss, used for the defence of strong places, which carried a ball of about 3£ ozs. They are now little used except in some old castles and garrisons.

HARRADI. See HARADI.

HARRIDAN, n. s. Corrupted from hari-delle, a worn-out worthless horse. A decayed strumpet.

She just endured the winter she began, And in four months a battered harridan.

Swift.

HARRINGTON (James), an eminent English writer in the seventeenth century. He was bora at Upton and educated at Oxford; and, after travelling for some years on the continent, he was admitted one of the privy chamber extraordinary to Charles I. Though democratic in his principles, he served the king with grea* fidelity, and found means to attend him on the scaffold, when he received a token of his majesty's affection. After the death of king Charles, he wrote his Oceana; a kind of political romance, in imitation of Plato's Commonwealth, which he dedicated to Oliver Cromwell. It is said, that when Oliver perused it, he declared that ' the gentleman had written very well, but must not think to cheat him out of his power and authority ; for that what he had won by the sword, he would not suffer himself to be scribbled out of.' This work was attacked by several writers, against whom he defended it. Besides writing to promote republican principles, he instituted a nightly club in the New Palace-Yard, Westminster ; which was called the Rota, and continued till the secluded members of parliament were restored by general Monk. In 1661 he was committed to the Tower for treasonable practices, but the charge was never verified. He was conveyed to St. Nicholas's Island, and thence to Plymouth, where he fell into frenzy, owing, it is said, to having drunk great quantities of guaiacum. Having obtained his liberty by means of the earl of Bath, he was carried to London and died in 1677. He published several other works, which were first collected by Toland, in 1 vol. folio, in 1700; but a more complete edition was published in 1737, by the Rev. Dr. Birch.

HARRINGTON (Sir John), an ingenious English poet, the son of John Harrington, esq., who was committed to the Tower by queen Mary, for holding a correspondence with her sister Elizabeth ; who, when she came to the crown, stood sponsor to this son, and afterwards knighted him. Before he was thirty, he published a translation of Ariosto's Orlando Furioso. A collection of his works has been printed, entitled Nugae Antiquae. He was created a knight of the Bath by James I., and in 1603 a baron, by the title of lord Harrington. He attended the princess Elizabeth, after her marriage with the elector palatine, to Heidelburg, in April, 1613, and died at Worms, August the 24th, 1613, aged fifty-one.

HARRIOT (Thomas), an eminent algebraist, born at Oxford in 1560, where he took the de-gree of B. A. in 1579. Being distinguished for his mathematical learning, he was recommended to Sir Walter Raleigh, who, in 1585, sent him with the colony, under Sir Richard Grenville, to Virginia. After having remained there about a year, he published a topographical description of it. About 1588 he was introduced by his patron, Sir Walter Raleigh, to Henry earl of Northumberland, who

allowed him a pension of £120 per annum. He spent many years in Sion College ; where he died in July 1621, of a can-

cef in his lip, and was buried in the church of Si. Christopher, where a handsome monument was erected to his memory. He was one of the first mathematicians of the age in which he lived, and will always be remembered as the inventor of the present improved method of algebraical calculation ; which was adopted by Des Cartes, and for a considerable time imposed upon the French nation as his own invention ; but the theft was at last detected by Dr. Wallis, in his History of Algebra, where our autiior's invention is accurately specified. His works are, 1. A biief and true Report of the New found Land of Virginia ; of the commodities there found, and to be raised, &c. 2. Artis analyticae praxis ad zequationes algebraicas nova expˆdita, et generali methodo resolvendas, e posihumis Thomae Harrioti, &.c. 3. Ephemeris Chyrometrica; MS. in the library of Sion College. He left several other MSS., which were inspected by Dr. Zach, astronomer to the duke of Saxe Gotha, in 1 784, at Petworth, in Sussex, the seat of the earl of Evremont, a descendant of Henry earl of Northumberland. Dr. Zach published an account of them in the Astronomical Ephemeris for 1788 : from which it appears that Harriot had made great discoveries in astronomy ; particularly that he had observed the spots in the sun so early as December the 8th, 1610; which was eighteen months earlier than Galileo's first published observations respecting them ; and that he had also discovered the satellites of Jupiter, and made drawings of their positions, and calculations of their revolutions, in January 1610j the same month when Galileo discovered them. Dr. Zach adds, that Harriot's observations of the comet of 1607 are still of use. The following was the inscription upon his monument: —

Siste, Viator, leviter preme. Jacet hie juxta quod mortale fuit

C. V.

THOMˆE HARRIOTI.

Hie fuit doctissimus ille Harriotua

De Syon ad flumen Thamesin,

Patria et Educaticne

Oxoniensis.

Qui omnes scientias call nit, et in omnibus excelluit;

MathrmaticU, Philosophicis, Theologicis.

Veritatis Indagator Studiosissimus.

Dei Triniunius cultor piissimus.

Sexagcnarius aut eo circiter

Monalitati valedixit, non Vitae,

An. Christi MDCXXI. 2. Julij.

HARRIS (William), a protestant dissenting minister of eminent abilities, who resided at Honiton, in Devonshire. On September the 20th, 1765, the degree of D.D. was unanimously conferred on him by the university of Glasgow. He published an Historical and Critical Account of the Lives of James I., Charles I., and Oliver Cromwell, in 5 vols. 8vo. after the manner of Bayle. He was preparing a similar account of James II. He also wrote the life of Hugh Peters ; besides many fugitive pieces occasionally, for the public prints, in support of liberty and virtue. Dr. Harris died at Honiton, February the 4th, 1770.

HARRIS (John), as the first compiler of a dic-

tionary of arts and sciences, in this country, certainly deserves notice in an encyclopedia. He was born about the year 1670, and received his education at St. John's College, in the university of Cambridge, where he took the degree of B. A. in 1687, and that of M. A. in 1691. Having taken orders in the church, he obtained considerable preferments. He was first instituted into the rectory of Barming, which he resigned for St. Mildred, Bread Street, London ; he held also the

perpetual curacy of Stroud, near Rochester, in Kent, and he was prebendary of Rochester cathedral. He was a fellow, secretary, and vice-president to the Royal Society. In 1698 he preached the course of Boyle's Lectures, which was published ; and in the next year he took the degree of D. D. Dr. Harris also published several single sermons; and a Collection of Voyages and Travels, with a num-ber of Engravings ; a Treatise on the Theory of the Earth, in 1697; a Treatise on Algebra, in 1702; a translation of Pardie's Geometry into English, a seventh edition of which in 12mo. was printed in 1734; Astronomical Dialogues, the third edition of which appeared in 1795 ; but the work for which he was most eminently distinguished was his Lexicon Techni-cum, or A Universal Dictionary of Arts and Sciences, in 2 vols. folio, published in 1708 ; from which originated all the other dictionaries of science and cyclopaedias that have since appeared. He died September the 7th, 1719, leaving unfinished the History of Kent, which was published in folio very soon after his death.

HARRIS (James), a writer on philology, was born at Salisbury in 1709, and was nephew to Shaftesbury the author of the Characteristics. Having entered as a gentleman commoner of Wadham College, Oxford, at the age of sixteen, he afterwards became a probationer at Lincoln's Inn. On the death of his father, at the age of twenty-three, he came into possession of an independent fortune, and retired to his native place to dedicate his time to literature. In 1744 he published a volume containing Essays on Art, on Music and Painting, and on Happiness; a prelude to his Hermes, or a Philosophical Enquiry concerning Universal Grammar, displaying much ingenuity, and an extensive acquaintance with the Greek writers, both poets and philosophers ; but his ignorance of the northern dialects is very conspicuous. See our article GRAMMAR. In 1761 he was chosen M. P. for the borough of Christ Church ; and next year was appointed one of the lords of the admiralty, which office he exchanged in 1763 for that of a lord of the treasury. He returned to the ministry in 1765 ; but was made secretary and comptroller to the queen in 1774. His philological Enquiries was a posthumous work. He died in 1780.

HARRIS (Gael Na Heradh, or Hardubb, i. e. the heights), a peninsula and parish of Scotland, in Invernesshire, forty-eight miles long, and from six to twenty-four broad ; consisting of seven large inhabited islands, *viz.* Berneray, Pabby, Calligray and Ensay, on the south ; and Taransay, Scalpay and Scarp on the north ; besides the peninsula, and above thirty smaller

isles uninhabited. Of these islands some produce eood crops of oats, barley, and potatoes, and alf of them pasture ; but the soil in general is poor, and the greater part not arable. The population in 1793, stated by the Rev. John M'Leod, in his report to Sir J. Sinclair, was 2536. The number of sheep (which range un-heeded through the mountains and commons), was about 11,000; that of goats 250; of horses 1000; of black cattle 2460; and of deer 800. All these animals are small in size; but the beef and mutton are delicious, and the wool is extremely fine. About 350 persons are employed in making from 400 to 500 tons of kelp annually. The population has rapidly increased of late.

HARRIS, the peninsula of the Hebrides in the above parish, forming with Lewis one of the Western Islands of Scotland. See LEWIS. Harris is twenty miles long and ten broad. Upon the east side it is mostly rock ; but on the west there are some tolerable farms, and the number of people amounts to 2000. It has Lewis on the north, and North Uist on the south, from which it is separated by the sound. Harris abounds on the east side in excellent bays, and its shores on both sides form one continued fishery.

HARRIS, SOUND OF, a navigable channel, between a peninsula of the Hebrides bearing the same name and North Uist, nine miles broad, and nine long. It is the only passage, between the Butt of Lewis and Barra, for vessels of burden passing to and from the west side of Long Island. It requires a skilful pilot, being greatly encumbered with rocks and islands. The fish on this coast are more numerous, and of larger dimensions, than those of the opposite continent; on which account two royal fishing stations were begun in the reign of Charles I., one in Loch Maddie and the other in the Sound of Harris. A phenomenon is remarked by the Rev. Mr. M'Leod, in the tides of this Sound: — ' From the autumnal to the vernal equinox, the current in neap tides passes all day from east to west, and all night in the contrary direction. Immediately after the vernal equinox it changes this course, going all day from west to east, and the contrary at night. In spring tides the current corresponds nearly to the com-mon course.'

HARRISBURGH, the present metropolis of Pennsylvania, United States, in Dauphin county, is on the north-east bank of the Susquehanna ; sixteen miles east of Carlisle, thirty-six W.N.W. of Lancaster, ninety-eight west of Philadelphia. It contains a court-house, a jail, two market houses, a bank, and three houses of public worship ; one for Lutherans, one for Presbyterians, and one for German Presbyterians. It is very pleasantly situated, regularly laid out, a great part of the houses are handsomely built of brick, and the town makes a very fine appearance. Two wings of a state house have been erected on a delightful elevation at a little distance from the river. Here is a very elegant covered bridge • cross the Susquehanna.

HARRISON (John), one of the regicide judges who sat upon the trial of king Charles I.,

and one of the ten who were executed for that act, after the Restoration. See ENGLAND. He was the son of a butcher, and had been raised to the rank of colonel, and afterwards of general, in the army of the parliament. Dr. Goldsmith gives the following account of his behaviour at his trial and execution : — ‘General Harrison, who was first brought to his trial, pleaded his cause with that undaunted firmness which he had showj through life. What he had done, he said, was from the impulse of the Spirit of God. He would not, for any benefit to himself, hurt a hair of the poorest man or woman upor earth ; and during the usurpation of Cromwell, when ail acknowledged his right, or bowed down to his power, he had boldly upbraided the usurper to his face; and all the terrors of imprisonment, and allurements of ambition, had not been able to bend him to a compliance to that deceitful ty-rant. Harrison’s death was marked with the same admirable constancy which he showed at his trial. — Some circumstances of scandalous barbarity attended the execution. Harrison’s entrails were torn out and thrown into the fire, before he expired. His head was fixed on the sledge that drew Coke and Peters to the place of execution, with the face turned towards them.’

HARRISON (John), the inventor of the celebrated time-keeper for ascertaining the longitude at sea ; and also of the compound, or, as it is commonly called, the gridiron pendulum ; was born at Foulby, near Pontefract, in Yorkshire, in 1693. The vigor of his natural abilities, if not strengthened by want of education, which confined his attention to few objects, at least amply compensated for it ; as appeared from the astonishing progress he made in that branch of mechanics to which he devoted himself. His father was a carpenter, and

occasionally surveyed land, and repaired clocks and watches. In 1700 he removed to Barrow, in Lincolnshire ; where the son eagerly improved every incident from which he might collect information ; frequently employing great part of his nights in writing or drawing: and he always acknowledged his obligations to a clergyman who lent him a MS. copy of professor Saunderson's Lectures; which he carefully transcribed, with all the diagrams. In 1726 he had constructed two clocks, mostly of wood, in which he applied the escapement and compound pendulum of his own invention : these surpassed every thing then made, scarcely erring a second in a month. In 1728 he came up to London with the drawings of a machine for determining the longitude at sea, in expectation of being enabled to execute one by the Board of Longitude. Upon application to Dr. Halley he referred him to Mr. George Graham; who advised him to make his machine before he applied to the board. He returned home to perform this task ; and in 1735 came to London with his first machine, with which he was sent to Lisbon the next year, for trial. In this short voyage he corrected the dead reckoning about a degree and a half; which success procured him both public and private encouragement. About 1739 he completed his second machine, of a construction much more simple than the former, and which

answered much better : this, though not sent to sea, recommended him still more to patronage. His third machine, in 1749, was still less complicated than the second, and superior in accuracy, erring only three or four seconds in a week. This he conceived to be the ne plus ultra of his attempts ; but, in an endeavour to improve pocket watches, the principles he applied surpassed his expectations so much as to encourage him to make his fourth time-keeper, which is in the form of a pocket watch, about six inches in diameter. With this time-keeper his son made two voyages ; the one to Jamaica, and the other to Barbadoes : in both which experiments it corrected the longitude within the nearest limits required by the act of the 12th of queen Anne ; and the inventor therefore, at different times, though not without great trouble, received the proposed reward of £20,000. These four machines were given up to the board of longitude. The three former were now of no use, as all their advantages were comprehended in the last ; they were worthy, however, of being carefully preserved as mechanical curiosities, in which might be

traced the gradations of ingenuity executed with the most delicate workmanship. They are kept in the royal observatory at Greenwich. The fourth machine, emphatically called the time-keeper, was copied by the ingenious Mr. Kendal ; and that duplicate, during a three years' circumnavigation of the globe in the southern hemisphere by captain Cook, answered as well as the original. The latter part of Mr. Harrison's life was employed in making a fifth improved time-keeper on the same principles with the preceding one ; which at the end of a ten weeks' trial, in 1772, at the king's private observatory at Richmond, erred only four seconds and a half. With-in a few years of his death he had frequent fits of the gout, a disorder that never attacked him before his seventy-seventh year : he died at his house in Red Lion Square in 1776, aged eighty-three. His recluse manner of life, in the unremitted pursuit of his favorite object, was not calculated to qualify him as a man of the world ; and the many discouragements he encountered, in soliciting the legal reward of his labors, still less disposed him to accommodate himself to the humors of mankind. In conversing on his profession he was clear, distinct, and modest ; but found a difficulty in explaining his meaning by writing ; in which he adhered to a peculiar and uncouth phraseology. This was evident in his Description concerning such Mechanism as will afford a nice or true Mensuration of Time, &c., 8vo., 1775; in which he obstinately refused to accept of any assistance whatever. This work contains also an account of his new musical scale, or mechanical division of the octave, according to the proportion which the radius and diameter of a circle have respectively to the circumference. He had in his youth been the leader of a distinguished band of church singers ; had a very delicate ear for music ; and his experiments on sound, with a most curious monochord of his own improvement, are reported to have been no less accurate than those in which he was engaged for the mensuration of time. See CLOCK-MAKING.

HARRISON (William), a writer much patronised by the literati of his time. He was fellow of New College, Oxford; and was some time tutor to the duke of Queensberry's son. Dr. Swift, by his interest with Mr. St. John, obtained for him the employment of secretary to lord Raby, ambassador at the Hague, and afterwards earl of Strafford. A letter of his, dated Utrecht, December 16th 1712, is printed in the dean's works. Mr. Harrison did not long enjoy his rising fortune. He was sent to London with the Barrier treaty, and died February 14th, 1712-13. Dr. Swift laments his loss in his Journal to Stella. Mr. Tickel mentions him with respect in his Prospect of Peace ; and Dr. Young, in the close of an epistle to lord Lansdowne, bewails his loss. Dr. Birch, who has

given a curious note on Harrison's Letter to Swift, has confounded him with Thomas Harrison, M. A., of Queen's College. In Nichols's select Collection are some pleasing specimens of his poetry ; which, with Woodstock Park, in Dodsley's Collection, and an Ode to the Duke of Marlborough 1707, in Duncombe's Horace, are all the poetical writings that are known of this young man ; who figured both as a humorist and a politician in the fifth volume of the Tatler, of which (under the patronage ofBolingbroke, Henley, and Swift) he was professedly the editor.

HARRISON, a county of the state of Ohio, United States, bounded on the south by Belmont, east by Jefferson, north by Columbia and Stark, and west by Tuscarawa. Its surface is hilly, and abounds with coal mines, freestone, limestone, and a fine white soft tenacious clay. It is watered by the Stillwater, and other branches of the Tuscarawa, and by the creeks running into the Ohio.

HARRISON, a county of the United States, in Kentucky. Cyntheana is the chief town.

HARRISON, a county of the state of Indiana, in the United States, bounded east by Clark county, south by the Ohio, west by the new county of Perry, and north by Washington.

HARRISON, a county of the United States, in the western part of Virginia, bounded north by Ohio county, north-east by Monongalia, south by Greenbriar, and south-west by Kenhaway. It is about 120 miles in length, and eighty in breadth. The chief town is Clarksburg.

HARRISON (Thomas), an eminent English architect, born at Richmond in Yorkshire, in the year 1744; died on the 29th of March, 1829. At an early age he exhibited a taste for drawing, which recommended him to the patronage of lord Dundas, and with his introduction repaired to Rome, about the year 1769; in that capital he pursued his studies with energy and success, and made some designs for the embellishment of the square of Santa Maria del Popolo; for which he was presented with two medals, one in gold, the other in silver, and admitted a member of the academy of St. Luke, by grace especial. From Rome he visited various parts of Italy, and returned by way of France to his native country, in 1776. Here he was soon afterwards engaged in constructing a noble bridge of five arches, over the Lune at Lancaster, the first level bridge ever built in England ; he was subsequently em-

ployed in the extensive alterations at Lancaster Castle ; designed the columns of Lord Hill, at Shrewsbury, and of the Marquis of Anglesea, at Holyhead, Broon Hall, Fifeshire, several works in Russia ; and was author of the much-admired Propylaea of the county hall in Chester, which would have been sufficient to establish a high reputation ; but the honourable ambition of Mr. Harrison did not rest satisfied here, and he terminated his useful life, by giving to his approving: countrymen the design of the Chester Dee Bridge, the largest stone arch in Europe, possessing a span of 200 feet.

HARROGATE, or HARROWGATE, a village in the West Riding of Yorkshire, in the parish of Knaresborough, remarkable for three medicinal springs, all different in their qualities, notwithstanding their vicinity: *viz.* 1. The Tewet Water, or Sweet Spa, a vitriolic spring of a sort of milky taste, discovered by Mr. Slingsby in 1638. 2. The Sulphur Spring, useful in dropsical, scorbutic, and gouty cases. It rises in the town, and is received in four basins under four different buildings : at one it is drunk ; at the others used for hot or cold baths. It is perfectly clear, and very salt ; but the taste and smell resemble those of a mixture of rotten eggs, sulphur, and sea-water. Bathing is the most general mode of using it. It is the strongest sulphur-water in Great Britain ; and does not lose the sulphureous smell even when exposed to almost a boiling heat. In distilling it, when three pints had been taken off" from a gallon of it, the last was as strong as the first. It is discutient and attenuating, and a warm bath of it is of great benefit in pains, strains, and lameness ; dissolving hard swellings, curing old ulcers and scrofulous complaints, and cleansing the stomach and bowels. 3. St. Mungo's Well, is so called from St. Mungo or St. Kentigern, a Scotch saint. See KENTIGERN. Harrogate lies three miles west of Knaresborough, and 208 north of London.

HAR'ROW, n.s.,v. a. & }Fr. charrue,hercer;

HAR'ROWER, n.s. [interj. ˆGerman, harcke, a

HAR'RY, v. a. J rake. A frame of

timbers crossing each other, and set with teeth, drawn over sowed

ground to break the clods, and throw the earth over the seed. The verb is often used in a figurative sense to pillage ; strip ; lay waste ; to invade ; to disturb, or put in commotion, as with a dreadful tale. Harrow, the interjection, is an exclamation of distress, and now out of use. Harry, in Scotland, signifies to rob ; plunder ; or oppress ; as, one harried a nest ; that is, he took the young away : as also, he harried me out of house and home ; that is, he robbed me of my goods, and turned me out of doors.

As the king did excel in good commonwealth laws, so he had in secret a design to make use of them, at well for collecting of treasure as for correcting of manners ; and so meaning thereby to harrow his peo-ple, did accumulate them the rather. Bacon.

Amazed I stood, harrowed with grief and care.

Milton.

The land with daily care Is exercised, and with an iron war Of rakes and harrows. Dryden.

Two small harrmvs that clap on each side of the ridge, harrow it right up and down. Mortimer.

Imagine you behold me bound and scourged, My aged muscles harrowed up with whips ; Or hear me groaning on the rending rack. Rowt.

HARROW ON THE HILL, a town of Middlesex, with a church and lofty spire, seated on the top of the highest hill in the county, ten miles VV. N.W. of London. It is noted for a free school, founded in the reign of queen Elizabeth.

HARSH, adj. 1 Germ, hervische. — Skin-HARSH'LY, adv. /ner. Rough or rugged; HARSH'NESS, n. s. J grating to the ear; discordant: figuratively, severe ; crabbed; morose : violence, as opposed to gentleness,

My wife is in a wayward mood to-day , I tell you, 'twould sound harshly in her ears.

Shahspeare,

Get from him why he puts on this confusion, Grating so harshly all his

days of quiet With turbulent and dangerous lunacy. Id.

A name unmusical to Volscian ears, And harsh in sound to thine. Id.

Take an apple and roll it upon a table hard : the rolling doth soften and sweeten the fruit, which is nothing but the smooth distribution of the spirits intc the parts ; for the unequal distribution of the spirits maketh the harshness. Bacon.

He was a wise man and an eloquent ; but in his nature harsh and haughty. Id.

Harshness and ruggedness of bodies is unpleasant to the touch. Id.

Bear patiently the harsh words of thy enemies, as knowing that the anger of an enemy admonishes us of our duty. Taylor.

Our nature here is not unlike our wine ; Some sorts, when old, continue brisk and fine : So age's gravity may seem severe, But nothing harsh or bitter ought t' appear.

Denham.

Till like ripe fruit thou drop Into thy mother's lap ; or be with ease Gathered, not harshly plucked. Milton.

Black feels as if you were feeling needles points, or some harsh sand ; and red feels very smooth.

Boyle.

Neither can the natural harshness of the French, or the perpetual ill accent, be ˆver refined into perfect harmony like the Italian. Dryden.

Cannot I admire the height of Milton's invention, and the strength of his expressions, without defending his antiquated words, and the perpetual harshness of their sound ? Id.

Age might, what nature never gives the young, Have taught the smoothness of thy native tongue ; But satire needs not that, and wit will shine Through the harsh cadence of a rugged line. Id.

The unnecessary consonants made their spelling tedious, and their pronunciation harsh. Id.

Thy lord commands thee now With a harsh voice, and supercilious brow, To servile duties. Id.

With eloquence innate his tongue was armed ; Though harsh the precept, yet the preacher charmed.

Id.

The rings of iron that on the doors were hung, Sent out a jarring sound, and harshly rung. Id.

Thy tender hefted nature shall not give Thee o'er to harshness : her eyes are fierce, but thine Do comfort and not burn. Id.

Sweet, bitter, sour, harsh, and salt, are all the epithets we have to denominate that numberless variety of relishes. Lockt.

HAR '

I would rather he was a man of a rough temper, that would treat me harshly, than "f an effeminate naturei . Addison.

No harsh reflection let remembrance raise ; Forbear to mention what thou can'st not praise.

Prior.

Tho' Fortune yield the captive ne'er despair, But seek the constable's considerate ear ; He will reverse the watchman's harsh decree, Moved by the rhetoric of a silver fee. Gay.

A certain quickness of apprehension inclined him to kindle into the first motions of anger ; but, for a long time before he died, no one heard an intempe-rate3 or harsh word proceed from him. Atterbury.

'Tis not enough no harshness gives offence ; The sound must seem an echo to the sense. Pope. The same defect of heat which gives a fierceness to our natures, may contribute to that roughness of our language, which bears some analogy to the harsh fruit of colder coi'Dtries. Swift.

Whose delegated cruelty surpasses The worst acts of one energetic master, However harsh and hard in his own bearing.

Byron.

Sax. beopt. A he-deer • the male of the

. roe. Hartshorn, the name of a drug; an

1 herb. The others are

HART, n.s.

HARTS'IIORN, n. 3.

HART'ROYAL, n. s.

HARTS'TONGUE, n. s.

HART'WORT, n.s. plants.

And to the launde he rideth him full right,

Ther wos the hart y wont to have his flight ; —

And over a brook and soforth on his way

And this duk wol have a couxs at him or twey

With houudes, swiche as him lust to commaunde. Chaucer. The Knightes Tale. That instant was I turned into a hart,

And my desires, like fell and cruel hounds,

E'er since pursue me. Shakspeare.

The deer

And fearful harts do wander every where Amidst the dogs. May's Virgil.

Hartstongue is propagated by parting the roots, and also by seed. Mortimer.

Ramose concretions of the volatile salts are observable upon the glass of the receiver, whilst the spirits of vipers and hartshorn are drawn. Woodward.

Hartshorn is a drug that comes into use many ways, and under many forms. What is used here are the whole horns of the common male deer, which fall off every year. This species is the fallow-deer; but

some tell us, that the medicinal hartshorn should be that of the true hart or stag. The salt of hartshorn is a great sndorifick, and the spirit has all the virtues of volatile alkalies : it is used to bring people out of faintings by its pungeucy, holding it under the nose, and pouring down some drops of it in water. Hill.

HART, a stag, or male deer, in the sixth year. See CERVUS.

HARTS, HORNS OF, the horns of the male deer. The scrapings or raspings of these are medicinal, and used in decoctions, ptisans, &c. The horns of harts yield by distillation a very penetrating volatile spirit called volatile alkali ; which is also procured in equal perfection from the horns, bones, &c., of other animals. See ALKALI, CHEMISTRY, and HARTSHORN.

HARTE (Walter), an English poet and di-vine, the son of a nonjuring clergyman. He was born about 1697, and received his education at Marlborough, whence he was removed to St. Mary's Hall, Oxford, where he took his degree

of M. A. in 1720. In 1727 he published a vo-lume of poems, dedicated to the earl of Peterborough. In the same year he also published his Essay on Satire ; and in 1735 an Essay on Rea son, in which he was assisted by Pope. He subsequently became vice-principal of St. Mary's Hall ; and was recommended by lord Lyttleton to the earl of Chesterfield, as a travelling and private preceptor to his natural son, with whom he made the tour of Europe, from 1746 to 1750. On his return the last nobleman procured him a canonry of Windsor. In 1759 he published his History of Gustavus Adolphus. His last work was a collection of poems entitled The Amaranth, which appeared in 1763. He died in 1774, at St. Austle in Cornwall, of which place he was vicar. Besides the above works, Mr.'Harte was author of Essays on Husbandry.

HARTFORD, a county in the north part ot Connecticut, United States. Population 44,733

HARTFORD, a city, the metropolis of Connecticut, in a county of the same name, United States, on the west bank of Connecticut River, fifty miles above its mouth; fourteen miles north of Middletown, thirty-four N.N.E. ot Newhaven, forty-two north-west of New London, sixty-eight west of Providence, ninety-four south-east of Albany, 100 W.S.W.of

Boston, and 338 of Washington. Population 3955 ; and including the township 6003. It is pleasantly situated, at the head of a sloop navigation, and contains a state-house, two market-houses, two banks, two insurance offices, a state arsenal, an academy, a Mbrary of 2500 volumes, and four houses of public worship ; two for Congregationalists, one for Episcopalians, and one for Baptists. The state-house is a handsome edifice, built of brick and stone. One of the congregational meeting-houses is very large and elegant. A small stream, called Little River, divides the town into two parts, which are connected by a bridge. The city is a generally well built, and makes a handsome appearance. It is regularly laid out, the streets intersecting each other at right angles. It is situated in a pleasant and fertile tract of country, and is considerable both for its trade and manufactures.

Hartford contains three distilleries, a cotton manufactory, a woollen manufactory, and ten printing offices, from four of which are issued weekly newspapers. It has also extensive manufactures of coaches, saddlery, and brass work. The public offices of the state are kept here. The elections and spring sessions of the legislature are held at Hartford, and the autumn sessions at New-Haven. — Within the township there is a parish, called West Hartford, with another congregational meeting-house, three miles from the city.

On the loth of April, 1817, an institution, styled the ‘ Connecticut Asylum, for the education of the Deaf and Dumb, was opened in this city with twenty-one pupils. The number of pupils in May, 1818, was forty-one; under the instruction of a principal and four assistants. The success of this benevolent institution has hitherto been highly gratifying to the friends of humanity, and the improvement of the pupils has equalled the most sanguine expectations of

their friends. Each person applying for admission must not be under

nine, or over thirty years of age ; and no pupil is received for a less term than two years. The whole annual charge to each pupil, for board, washing, fuel, instruction, stationary, &c., is 200 dollars.

The asylum is under the management of ten directors, chosen annually, together with the directors for life. A president, and eight vice-presidents, who are also, ex officiis, directors, are chosen annually. The payment of 100 dollars constitutes a person a director for life, and of 200 dollars, a vice-president for life. The an-nual meeting of the society is held at Hartford on the first Saturday after the second Thursday in May. A house situated about half a mile west of the city has been recently purchased for the accommodation of the institution.

HARTFORD, EAST, a post-town of Hartford county, on the east side of the Connecticut, opposite Hartford, with which it is connected by an elegant bridge. Population 3240. A small river which flows through this town, into Connecticut, affords many fine mill seats. Here are five paper mills, several saw mills and fulling mills, two large establishments for the manufacture of powder, one manufactory of snuff, one cotton manufactory, two glass houses, and three houses of public worship ; two for Congregationalists, and one for Methodists.

HARTFORD, a post-town of Washington county, New York, fifty-four miles N.N.E. of Albany. Population 2389. It is a wealthy town, and contains three houses of public worship; two for Baptists, and one for Congregationalists.

HARTLEPOOL, a sea-port town in Durham, seated on a promontory, and almost encompassed by the sea. It is an ancient corporation, governed by a mayor and aldermen, with other subordinate officers. In the reign of Edward III. it furnished five ships to the navy. It depends chiefly on the fishing trade ; and its harbour is much frequented by colliers passing to and from Newcastle. It is twelve miles north of Stockton, and 258 west of London.

HARTLEY (David), an English physician, and metaphysical writer, was the son of a clergyman of Armley, near Leeds in Yorkshire, where he was born in 1 705. At fifteen he “was sent to Jesus College, Cambridge, of which he became a fellow ; and was intended for the clerical profession, but, having doubts of the truth of the thirty-nine articles, he engaged in the study of medicine, and commenced practice as a physician at Newark in Nottinghamshire. Hence he removed to Bury in Suffolk, and subsequently to London. When Mrs. Stephens professed to have found out a specific for the stone, Dr. Hartley

contributed greatly towards her obtaining the grant of £5000 from parliament for her discovery ; and published Observations made on ten Persons, who have taken the Medicament of Mrs. Stephens, 8vo. He himself, after having taken as much of it as contained 200 Ibs. weight of soap is said to have fallen a sacrifice to the disease for which it was recommended. Dr. Hartley spent the latter part of his life at Bath, and died there August 28th, 1757. His reputation as a philosopher depends on his work entitled Observations

on Man, his Frame, his Duty, and his Expectations, in two parts, 1749, 2 vols. 8vo. His doctrine of association has been published by Dr. Priestley in a detached form, under the title of the Theory of the Human Mind, 8vo. ; and the second part of the Observations, relating to morals and religion, has been commented on by Pistonus, a German divine, whose remarks are included in the edition of Dr. Hartley's book published in 4to. 1791, and in 3 vols. 8vo.

HARTLEY (David), M. P., was a son of the foregoing. His opposition to the war with the American colonies led to his being appointed one of the plenipotentiaries to treat with Dr. Franklin for peace ; and some of his letters on that occasion are published in the correspondence of that statesman. In the house of common* Hartley was one of the first promoters of the abolition of the slave trade. His scientific knowledge was also exhibited in many useful inventions, and particularly in a method of guarding buildings from fire. He died at Bath, December 4 9th, 1813, aged eighty-four.

HARTMANN (John Adolphus), a learned divine and historian, born at Muuster in 1680. After being a Jesuit for several years, he became a Calvinist at Cassel, in 1715; and soon after was made professor of philosophy and poetry, and in 1722 professor of history and eloquence, at Marpurg, where he died in 1744. The most esteemed of his works are — 1. The State of the Sciences at Hesse; in German. 2. Historia Hassiaca, 3 vols. 3. Praecepta Eloquentiae Rationalis, &c.

HARTSHORN, CALCINED, or coal of hartshorn, a very white earth, procured by calcining the horns of harts in a long continued and strong fire. This earth is employed in medicine as an absorbent ; and, when levigated, is the basis of Sydenham's white decoction, which is commonly prescribed in dysenteries.

HARTSHORN JELLY is nutritive and strengthening, and is sometimes given in diarrhoeas ; but a decoction of burnt hartshorn in water is

more frequently used for this purpose, and is called hartshorn drink.

HARTSHORN PLANTAIN. See PLANTAGO. HARTSHORN, SALT and SPIRIT OF. See AL-KALI, and CHEMISTRY.

HARTSOEKER (Nicholas), a Dutch philosopher, born at Gouda, in 1656. He received a liberal education from his father, who was a minister among the Remonstrants, and became so eminent in natural philosophy and mathematics, that Peter the Great invited him to Moscow; but he declined the honor. He became professor of philosophy at Heidelburg, and mathematician to the elector palatine. He wrote a course of Natural Philosophy, in 4to., with some other works; and died in 1725.

HARTY, ISLE OF, a small island on the south-eastern extremity of the Isle of Sheppy, from which it is divided by a narrow channel, almost filled up. It is separated from Kent by the Swale, and is entirely pasture land, maintaining about 4000 sheep.

HARTZ, or HARZ, a mountain tract in the interior of Germany and south of Hanover, extending from the territory of Goslar to Harz-

gerode, io Anhalt. It is about seventy miles in length, and twenty in breadth, and is a part of the region called Sylva Hercynia by the ancients. Forests, consisting of one-third of hard and two-thirds of soft timber, cover its surface : but of late years, great ravages have been committed among the resinous trees, by a coleopterous in-sect, which multiplies with amazing rapidity. The mines of the Hartz are still more valuable. See HANOVER. Its green, blue, and white vitriol are found in veins generally imbedded in grey-wade or clay-slate, of which the greater number of the rocks are composed. The population of this district is about 50,000; differently characterised in their manners by a primitive simplicity, and early marriages. Their children are beautifully fair, and soon able to assist their parents. Particular spots are under corn culture; but pasture and very good hay are the chief agricultural produce. The inhabitants are chiefly employed as miners.

Their favorite enjoyment is in music ; and their itinerant bards and minstrels are numerous. The Hartz is ex-empt both from taxes and from military service ; but a tenth of the produce of the mines belongs to government. Those of iron are the most productive, and yield a revenue of about £115,000 sterling, made good by ‘Undertakers of the mines. The workmen are divided into companies, and commonly wear a sort of uniform of black and red ; part of their wages are paid in kind. Gold and silver are coined here.

The district abounds in natural curiosities, of which the most interesting are the Scharzfeld and Baumann caverns ; the former remarkable for its fossile bones, the latter for its stalactites, its harmonic column emitting a pleasant sound when struck by the drops of water that fall from the roof, and its extent consisting of fourteen successive vaults. Here the Man of the Mountains is seen either morning or evening, when the spectator at the top of the mountain happens to be placed in a right line between the sun and a cloud hovering in the atmosphere at a small distance, and is merely the magnified image of the spectator reflected from the cloud as from a mirror.

HA’RVEST, n. s. -\ Sax. ruenFr* ; Bel.

HAR’VEST-HOME, n. s. / herfst, contraction of

HAR’VEST-LORD, n. *. s ek erf-oogst, says Min—

HARVESTER, n. s. I sheu; ab erf hereditas

HAR’VESTMAN, n. s. Jet oogst, Augusti

mensis. Mr. Thomson thinks from Sax. seajt,

a year, and vest, vegetable food. The season of

reaping and gathering corn ; the song which the

reapers sing at the feast made at the gathering in

of the harvest. Harvest-lord, the head reaper.

Harvester and harvestman, one who works at

the harvest. Harvest is used figuratively for the

opportunity of gathering treasure ; the product

of labor.

Grant harveit-lcrd more by a penny or two, To call on his fellows the better to do. Tuner.

As it ebbs, the seedsman Upon the slime and ooze scatters his grain, And shortly comes to harvest. Shakspeare.

His wife I will nse as the key of the cockoldy rogue's coffer ; and there's my harvest-home.

Id. Merry Wives of Windsor.

From Ireland came I with my strength, And reap the harvest which that rascal sowed.

Shakspeare.

Like to a harvestman that's tasked to mow Or all, or lose his hire. Id.

Anon, his fruitfull showres, and pleasing dewes, Cominixt with cheerfull rayes, he sendeth downe ;

And then the barren-earth her crop rcnewes, Which with harvests, hills, and vallies crowne.

G. Wither*.

When the father is too fondly kind. Such seed he sows, such harvest shall he find.

Dryden

At harvest-home, and on the shearing-day, When he should thanks to Pan and Pales pay.

Id.

Your hay it is mowed, and your corn is reaped j Your barns will be full, and your hovels heaped ; Come, my boys, come, Come, my boys, come,

And merrily roar out harvest-home. Id.

With harvest work he in worse than in spring.

L’Estrange.

• — Attempered suns arise

Sweet-beamed, and shedding oft through lucid clouds A pleasing calm, while broad and brown below, Extensive harvests hang the heavy head.

Thomson’s Autumn.

HARVEST FLY, m zoology, a large four-winged fly of the cicada kind, very common in Italy, and erroneously supposed to be the grasshopper. See CICADA.

HARVESTING, in agriculture, the act of cutting down and securing different sorts of crops. There are various modes of effecting this kind of business : indeed peculiarities are found attached to almost every different county in the manner of executing it. But, in whatever mode the work of harvesting is managed, it is clear that, as bad weather must greatly affect the profits of the cultivator, especially where wheat-crops are concerned, it is proper that the farmer should be constantly on his guard to have a sufficient number of hands at work, in order that the most may be made of the fine season ; for, without this, much loss must be sustained, and the title of afternoon farmer will be applied to him.

With regard to the cutting of crops, it is necessary to observe, that most sorts of grain, ex-cept that of barley, should be cut or reaped before they become over-ripe. But, where barley is cut in an unripe condition, it is apt to shrivel. It is, however, a practice with some farmers to leave the corn standing such a length of time, that it is ripe enough to cut and carry, as they term it, or until the sheaves are capable of being carted home, on being bound up. This method can, however, only be pursued where the crops are quite clean and free from weeds.

In the Report of East Lothian, in Scotland, it is stated, that the harvesting with winter-sown wheat is sometimes earlier than for other kinds of grain, only excepting Dutch oats. Spring-wheat is later, and, unless in favourable seasons, is cut with other grains. It is, however, suggested, that there seems to be some diversity of opinion among the farmers of this district, concerning the marks of ripeness in wheat, or the exact degrees of it that are requisite to constitute a perfect sample : some assert that cutting quick or early is the surest mode of having the grain

perfect; but others, on the contrary, are of opinion that it should be dead ripe ; or, in other words, that the circulation in the straw, as well as the corn, should be over before it is cut down. It is probable that the truth is to be tbund in the middle between these extremes.

It is advised that such wheat as is much infested with weeds should be cut three or even four days earlier than is usual, in order that the weeds may have time to wither before the corn becomes too ripe ; for, if it should not be cut before the grains are fully ripe, it will be liable to sustain considerable injury by shedding, loss of color, and damage from rain, while it continues exposed for the purpose of the weeds being rendered dry. A single shower, or even a day's gentle rain, while it lies in swath, is, indeed, thought by some to be rather beneficial to the grain, by causing it to feel dry and slippery in the hand, and thresh out the better ; but every possible care should at the same time be taken to guard against its being wetted too much in the field. When however, through any unavoidable accident, it is laid up in too moist a condition, though it may not take any great harm in the mow, it will sweat and adhere together after being laid in a heap, when threshed out, and have a perfectly white appearance from mouldiness, as if dredged over with flour. As corn, in this state, is not capable of being kept, it should constantly be sent to the market, and disposed of as soon as possible.

It is the practice in most parts of the kingdom to cut the rye and wheat crops with the sickle or reaping-hook, a tool which would appear to have been employed for the purpose from the most early periods of the art of husbandry. But, in some cases, this tool is employed in a toothed state, while in others it has simply a cutting edge. The work is commonly done equally well which ever is made use of for the purpose. The business of reaping is performed differently, in respect to height and other circumstances, according as the custom of the district may prevail. It is usual in some of the midland counties, and in many of those on the south-east coast, to cut the wheat crops at the height of twelve or fifteen, and sometimes

eighteen inches from the ground ; the handfuls, as they are reaped, being laid on bands formed from some of the reeds of the crop twisted or knotted together near to the ear part. These different parcels, being bound up into what are termed sheaves, are either suffered to lie upon the stubble for a few days previously to their being carried, or they are set up on their bottoms in double rows, the head of the one sheaf inclining against that of the other opposite to it, so as to form a sort of irregular triangle if the base be included. But in some other cases the sheaves are set up into a kind of stool without being hooded. In most of these cases, as soon as the crop is carted off the land, the stubble is mown by means of a scythe, and, after being raked into large heaps, is conreyed away to the farm-yard, where it is used, either for thatching; buildings, and corn and hay ricks, or as litter for the stock.

In almost the whole of the southern parts of the country, the crops of both oats and barley,

as well as of peas and beans, are mown by means of a stiff sort of scythe, and either repeatedly turned over in the swaths, or formed into small cocks, in which states they continue until they are ready for being conveyed to the barns or stack-yards. As soon as they are in this condition, the carts or waggons are set to work, and the whole of the hands that can be spared employed in raking the ground after them. In short, the business is managed pretty nearly in the same manner as that in which hay-making is performed The mowing and harvesting grain in swath or in cocks, if practices that can in any climate or situation be admitted as beneficial, can only, it is imagined, be considered so where the harvests are early, and where the climate is extremely mild, favorable, and steady. This being the case, it is not probable that such methods can ever become generally established in this country. For it is believed, that the benefits de-ived from harvesting the above different sorts of crops in the sheaf are extremely numerous, in comparison to those of the practices that have been just noticed.

It has been suggested, by an old writer, that it is material in hilly districts not to bind the grips of wheat into sheaves, at too early a period in th course of the day, as in such situations they have taken such a damp by having lain upon the surface of the ground, that though the straw and chaffy ears may appear dry as soon as the dew is first diwipated, and the sun has shone a few hours upon them, there will still remain an in-ward dampness in the straw and grain, which will be injurious in the stack or mow. The afternoon should of course

be chosen for the pur pose of gripping and binding the grain intt sheaves in such places, the work being finished before the approach of night. It is best, how ever, to lay the bands in the morning, as they will then twist better and be less brittle than after the sun has shone some time on the corn. They should always be made strong and well twisted together, in order that they may contain the con? without giving way. But though the modes ad vised above may be practised with propriety iu some instances, and for some kinds of corn, they should not be much employed for wheat crops, as it is found that the less they are ex posed to wet and heat the better. On this principle, the practice of covering the shocks of wheat, with cloths and mats, is in use in some places in the county of Kent, as between Sandwich and Dorer. The mats are found the best, and are the most commonly employed By this mˆans it is supposed that the sample of the grain is so much improved, that the bakers at Dover give a decided preference to such as is treated in this manner. The expense of mats for this use is about sevenpence each, which, if properly taken care of, will last many years.

In places where the harvests are late and rainy, the preservation of grain crops is mostly arduous and difficult. Consequently, other methods besides those commonly employed, and which have been already detailed, are had recourse to occasionally, such as what are termed gaiting and hutting. These modes are, however, only practised in such cases ;•$ where, from the precarious sTntp of the weather, the crops would be in great

danger of being spoiled, without some unusual exertion. These methods are made use of in several of the more northern counties of England, as well as in some parts more towards the north in Scotland, and do not appear bad methods of harvesting grain crops in late unfavorable seasons. The work is executed in this manner : the sheaf, instead of being bound tight towards the butt-end, as is commonly the case, is tied slackly, and the band moved up until it reach some of the ears. The binder then sets the sheaf in a rather forcible manner on its

bottom, so as to give it a sort of base to stand upon. And, where the corn is gaited by those who are experienced in the business, the bands are constantly pushed down the middle of the sheaves, after they have been set on end, and the bottoms spread out, the middles being left hollow, and care taken to form small openings towards the south, by which contrivance the air as well as the sun have the greatest possible influence in preserving the crops, and rendering them fit for being carried and stacked up. In cases where grain crops are cut in a wet state, as not unfrequently happens towards the end of a late harvest, this is in all probability the best plan that can possibly be devised for preventing the threatening mischief. The mode of hutting in the field, in ojrder to save grain in bad harvest seasons, is also a practice often had recourse to with success, in the north-western parts of Scotland, especially when put up in a tolerable state of dryness. The huts are made upon the field immediately after the crops are reaped, and bound up into sheaves. They are, in general, only formed of such a size, that a man is capable of building them in standing upon the ground ; and consist in common of from twelve to twenty stooks, in proportion as the straw is more or less bulky. If these huts be properly formed, and a sheaf or two carefully spread over their tops, somewhat in the umbrella method, scarcely any weather, however bad, or of whatever continuance, will affect the grain in any material degree. Upon taking one of these huts down, after it had stood five or six weeks, or probably longer, under the most severe rains that had happened during any harvest for a great length of time, it was found that, except a few of the top-sheaves, the whole was in a surprising state of preservation. And this was the more remarkable, as the crops in some of the adjacent fields where this precaution had been neglected, though carefully stocked and hooded, were grown and matted together in such a way that every stook formed a united mass, not only of vegetable, but vegetating matters. In places where the harvests occur at a late period, where the weather is unfavorable, and where the approach of winter is apprehended, the practice of hutting grain in the field may be safely advised as a beneficial plan : and where the weather continues long rainy, and there is reason to apprehend the springing of the grain in the ear, or that heavy falls of snow may take place, as occasionally happen, the most proper method is to reap and gait as expeditiously as possible.

With regard to the business of carrying the crops from the fields, notwithstanding there is much diversity in the size, shape, and construc-

tion of the carts and waggons that are employed for the purpose, as well as in the strength of the teams by which they are drawn, there is but little variation in the general mode of conducting the work. The grain crops, in whatever mode they may be harvested, are put upon the carriages by persons stationed in the fields expressly for the purpose, and on being drawn to the rick-yard are forked by the carters to the stacks. See AGRICULTURE.

It has been lately suggested, that, where the number of teams is sufficient, in carting the wheat crops, three waggons should be employed somewhat in this manner, one of them loading in the field, one unloading, and one upon the road going in different directions. For this, five or six horses are quite sufficient, with two men to pitch, the same number to load, one to drive, and two to manage the business of unloading; in the whole seven, which make great despatch. But the use of single horse carts is far superior, whatever the number of horses employed in the work may be. Let each of these be in a well formed cart, and a great deal more ground will be cleared than can be effected by the waggons.

In instances where the grain crops are harvested from the swaths, a number of persons are employed in the business of stacking, an operation which is conducted in the same way as for hay ; but, wherf the grain is bound up into sheaves, one person only is necessary in forming the stack, unless where it is of more than ordinary dimensions ; in which case the assistance of a boy is commonly required, who receives the sheaves from the carter, and hands them to the man who is employed in building the stack.

HARVEY (William), M. D., an eminent English physician of the seventeenth century, took his degree of M. D. at Cambridge ; was afterwards admitted into the college of physicians in Lon-don, and was appointed lecturer of anatomy and chirurgery in that college. In these lectures he opened his discovery relating to the circulation of the blood ; which, after a variety of experiments, he communicated to the world in his Exercitatio Anatomica de motu Cordis et Sanguinis. He was physician to king James I. and to king Charles I., and adhered to the royal cause. In 1651 he published his Exevcitationes de genera-tione Animalium, a very curious work. His papers were destroyed during the civil wars. In 1654 he was chosen president of the college of physicians in his absence ; but, as he could not discharge the duties of that office, he desired them to choose Dr. Pringle. As he had no children, he settled his paternal estate upon the college. In 1653 he built a library and a mu-seum ; and in 1656 he brought the deeds of his estate and presented them to the college. He was then present at

the first feast, instituted by himself, together with a commemoration speech in Latin, to be spoken on the 18th of October, annually, in honor of the benefactors to the college : and he appointed a handsome stipend for the orator, and also for the keeper of the library and museum, which are still called by his name. He died in 1657. This great physician had the happiness, in his lifetime, to find the clamors of ignorance, envy, and prejudice against his doc-HAR

trine totally silenced, and to see it universally established.

HARVEY (Gideon), M. D., an English physician, born in Surrey. He studied at Leyden, and was admitted fellow of Exeter College, in 1655. He was physician to Charles II. during his exile, and to the English army in Flanders. After the Restoration he was made physician of the Tower. He wrote several works on medicine ; but of no importance. He died about

HARVEY'S ISLE, a low island of the Pacific, or rather three or four small islands, united together by rocks and often covered by the sea ; the whole being about twenty miles in circumference, and discovered by captain Cook in 1773. Long. 158° 54' W., lat. 19° 18' S.

HARVIE (Alexander), a native of Scotland, who merits to be commemorated in a Dictionary of Arts, for having, at the imminent risk of his life, first introduced the inkle manufacture into Great Britain. He went over to Holland about 1 732, and in spite of the care which the Dutch took to conceal their methods of manufacturing, brought over from Harlem two of their inkle looms, and one of their workmen ; by whose assistance he established the first inkle manufactory ai Glasgow, which was afterwards copied at Manchester, &c.

HARUSA ISLAND, the third in size of five large islands between Bergen and Drontheim, on the coast of Norway, to the northward of Broad Sound. It has a high hill in the middle.

HARUSPICES, or ARUSPICES. See ARUSPICES.

HARUSPICY, the art of foretelling future events by attending to various appearances of the victims offered for the purpose. 1 . It was an ill omen if the victim needed to be dragged to the altar, if it broke its rope, fled away, avoided the stroke, struggled much after it, made a great bellowing, was long a-dying, or bled but little.

2. Presages were drawn from inspecting the noble parts, as the heart, lungs, spleen, and especially the liver. If all these were sound, if the top of the liver was large and well made, and if its fibres were strong, it presaged well.

3. They were also drawn from the manner in which the fire consumed the victim. If the flame brightened immed lately, was pure and clear, rose out till the victim was consumed, these were happy signs. 4. The smoke also was considered, whether it whirled about in curls, or spread itself to the right or the left, or gave a smell different from the common one of broiled meat. 5. It was a lucky omen if the incense they burned melted all at once, and gave a most agreeable smell. See DIVINATION.

HARUTSH, an eastern range of mountains in Fezzan, North Africa,

bordering on the Libyan Desert. Horneman was told that it extended seven days' journey from north to south, and five from east to west. It appears to be composed of basalt -and limestone. The former predominates in the Black Harutsh, the most easterly part of the chain, and appears to have been the Mons Ater of the ancients. Horneman passed range after range, through narrow valleys, or rather ravines, often steep, and obstructed by loose stones; but it was no where of great altitude.

On the western side occurs the White Haratsh, consisting of that species of limestone which is distinguished by the multitude of its shells and marine petrifactions. The district consists of a vast plain, interspersed with mounds, or isolated hills. The stones covering the surface, and even the rocks which rise above it, have the appearance of being glazed. Mr. Horneman was informed of black mountains on the road leading southwards to Bornou, whence the people of Fezzan got their iron.

HARWICH, Sax. harewic, a haven, an ancient sea-port, borough, and market town, of Essex, eleven miles and a half east from Manningtree, and seventy-two E. N. E. from London ; where the rivers Stour and Orwell (both navigable twelve miles above the town) unite and form a large bay, falling afterwards into the German Ocean, by a strait nearly three miles wide, at high water. The east side of the bay is defended by Landguard-fort in Essex, standing on a point of land which, at high water, has the appearance of an island. The fortifications were here first erected by James I. Harwich was also fortified on the land side; but the works were destroyed in the reign of Charles I. and a battery erected, instead of them, by the water. The harbour, which is independent of the bay, is safe, convenient, and of great extent, being capable of receiving the largest ships of war.

The church, which is a neat building, was formerly a chapel of ease to that of Dover-court, two miles distant. The town, in general, is well built, and consists of three good principal streets, where are a town-hall, a gaol, a free-school, and a custom-house. The town is walled in, and the streets paved with a kind of clay from the neighbourhood, which soon becomes hard as stone. Here is a good dockyard, furnished with storehouses and other conveniences, in which third rate, and other large ships are built, and two hot and two cold salt-water baths, of elegant structure, with commodious dressing rooms. The buildings stand in a large reservoir, containing many hundred tons of water, renewed every tide; from this the baths are continually supplied with

pure running sea-water, in a manner exactly resembling a natural spring. Here are also vapor baths, and a machine to throw the sea-water, either hot or cold, on any part of the body. The town was made a free borough in the reign ot Edward II. The corporation consist* of a mayor, eight aldermen, twenty-four burgesses, a recorder, &c. It sends two members to parliament, the mayor being the returning officer, who has also the power to hold admiralty courts. It has a neat, clean, commodious, and enclosed market place, well supplied wiih all kinds of provisions, and particularly with fish. Several fish machines run from Harwich, in a very expeditious manner, to supply the London market. High water, at the full and change of the moon, at half past eleven o'clock. Fairs, 1st of May and 18th of October, for three days each. The post-office packets sail hence, and return twice a week to and from Holland and Germany. Upwards of 3000 tons of shipping are employed in the North-Sea fishery, besides other vessels engaged in the London and coasting trade. Two lighthouses

have been erected on the Harwich side of the harbour, to facilitate the entrance by night.

HARWOOD, (Edward), D. D., a learned dissenting clergyman, born in Lancashire, in 1729. He was pastor of a congregation at Bristol, whence he was obliged, partly on account of gross immorality, and partly because of his zeal in the Arian controversy, to remove to London ; where he taught the classics. He published a Translation of the New Testament ; a view of the various editions of the Greek and Roman classics ; and many other books and pamphlets. He died at London of a paralytic complaint, which had confined him to the house for fourteen years, and deprived him of the use of his left side, January 14th, 1794, aged sixty-five.

HARWOOD, a small but neat town in the North Riding of Yorkshire, with a costly stone bridge of eleven arches over the Wherfe, which runs in a bed of stone, and is as clear as rock water. Near it are the ruins of an ancient castle, built soon after the conquest ; and which was a neat strong building in Camden's time. It had a variety of masters ; one of whom, in the reign of king John, obtained a grant for a market and fair here. In the reign of Edward III. it was valued at 400 marks a year. This castle was ruined in the civil wars ; before which it covered nearly an acre of ground. In the church are some ancient monuments, particularly that of lord chief justice Gascoigne.

HASE (James and Theodore), two learned German writers of the eighteenth century, brethren, and authors of Dissertations, and other classical works. Theodore was professor of Hebrew at Bremen, and died in 1731, aged forty-nine. James died in 1723.

HASH, v. a. Fr. hacher. To mince; to chop small and mingle.

He raised his arm

Above his head, and rained a storm Of blows so terrible and thick, As if he meant to hash her quick. Huilibras.

What have they to complain of but too great variety, though some of the dishes be not served in the exactest order, and politeness ; but hashed up in haste ? Garth.

HASK, n. s. Teut. hals (collum).— Minsheu. Probably from its shape ; a case made of rushes or flags. Obsolete.

Phoebus, weary of his yearly task, Established hash his steeds in lowly lay, AnJ taken up his inn in fishes hash. Spenser.

HASLEMERE, a post and market town of Surrey, on the edge of the county next Hampshire, forty-two miles from London. It is an ancient place, and was once destroyed by the Danes. It was a borough by prescription, and had sent two members to parliament, since the reign of Edward IV. chosen by a bailiff, and burgage-teeners, about sixty in number,under the influence of the marquis of Lonsdale. It is said to have had seven parish churches formerly, though now but one. It was disfranchised in 1832.

HASLINGDEN, a market town in the county of Lancaster, on the river Swinnel, and on the road from Bury to Blackburn. It has a canal navigation to Manchester on the one hand, and to Leeds and Liverpool on the other. Here are flourishing woollen and cotton manufactures. The

houses are built of stone ; and, besides a neat church, there are two chapels for dissenters. Population upwards of 5000. Market on Wednesday. Seventeen miles north of Manchester, and 203 north-west

of London.

HASP, n. s. & v. n. Sax. baepj-; Isl. hassa is to hold. In some provinces it is yet called hapse. A clasp folded over a staple, and fastened on with a padlock ; to shut with a hasp.

And to the chambre dore he gan him dresse,

His knave wos a strong carl for the nones, And by the haxpe he haf it of, at ones • Into the floor the dore fell anon.

Chaucer. The Miller es Tale.

Have doors to open and shut at pleasure with hatpt to them. Mortimer.

HASSAN PACHA, an African of modern times, who became grand vizier of Turkey. He served when young in the Algerine navy, and, being taken by the Spaniards, was sent prisoner to Naples. Having obtained his liberty he entered into the service of the grand seignor, and was at the battle of Tscheme fought against the Russians. He was soon after appointed capitan pacha, or high admiral ; in which post he maintained himself some years. He vanquished the Egyptian insurgents ; re-established order and tranquillity at Smyrna, in 1775 ; took Gaza, Jaffa, and Acre; and beheaded the famous Daher, sheik of the latter city, who had for years rebelled against the Ottoman empire. Hassan returned to Constantinople loaded with treasures and with high renown : but, the beys having again revolted, he returned to Egypt in 1786, and gained a signal victory over the rebels. In 1788 war was renewed between the Turks and Russians, and the chief command of the forces by sea and land was entrusted to the capitan pacha. But the season was unfavorable for operations, and bloody battles were fought without any decisive advantage. Okzakow was at length taken by the Russians, and this misfortune occasioned the dismissal of our commander : he was sent to Ismail with the rank of a pacha of three tails. Defeat stil, attending the Ottoman arms he was recalled and made grand vizier in 1 789 : but he was worn out, and died in March, 1790, at the age of eighty-seven.

HASSELQUIST (Frederick), M. D. an eminent Swedish naturalist, born at Tournalla, in East Gothland, in 1722, and educated at Upsal, under the great Linne. By the advice of that eminent botanist, with the assistance of the University of Upsal, who granted him a salary for the purpose, he set out upon a voyage to Palestine, in summer 1749, with the view of investigat-ing the natural history of that country, and

thereby illustrating eastern philology, and elucidating many passages in the Old Testament. In this enterprise he also received much pecuniary aid, by private subscriptions. By the interest of counsellor Lagerstroem he obtained a free passage, in a Swedish East Indiaman, to Smyrna; where he arrived in December 1749, and was most hospitably received by M. A. Rydel, the Swedish consul. In January, 1750, he set out for Egypt, and spent nine months at Cairo whence he transmitted to Linnaeus some specimen's of his discoveries, which were published

with great approbation. A collection of 10,000 dollars was then made to enable him to continue his travels and researches. In spring, 1751, he passed through Jaffa to Jerusalem, Jericho, &c., returning through Rhodes and Scio, to Smyrna. Thus he completed the object of his mission, but unfortunately fell a sacrifice to the heat of the climate, which, in his travels through Arabia, had affected his lungs so severely, that he died at Smyrna, February 9th, 1752, aged thirty. The Turks, with their usual rapacity, having seized his collections, were prevented from selling them by the Swedish consul, who wrote home an account of his death and circumstances ; whereupon queen LouisaUlrica generously sent 14,000 dollars to redeem them ; and the whole collection, consisting of numerous antiques, shells, birds, insects, serpents, Arabian MSS. &c., arrived in good preservation at Stockholm, and was lodged in the cabinets at Ulrichsdale, and Drottningholm ; duplicates of many of them being also sent to Linne at Upsal, who published an account of his deceased friend's voyage and observations.

HASSELQUISTIA, in botany, a genus of the digynia order, and pentandria class of plants : natural order forty-fifth, umbellatae. The fruits are quite smooth; the seeds of the radius oval, plane, marginated, and convex in the middle ; those iu the disk

hemispherical and urceolated, or bladder-shaped.

HASSER, ASEER, or ASOOTAHMA, a hilly district in the province of Khandeish, Mahratta territories, between 21° and 22° N. lat. The country contains many strong positions,on which the chiefs have erected fortifications. The land is fertile, and tolerably well watered by the Tuptee and Poornah ; the chief towns are Boorhanpore, Hasser or Aseer, and Chandah.

HASSER, properly ASEERGHUR, a town and fortress of Ilindostan, once the capital of Khandeish. In the year 1803 it surrendered, after a slight resistance, to a division of the Madras army under colonel Stephenson. The town, which stands at the foot of a mountain, is extensive ; but, on the removal of the seat of government to Boorhanpore, it fell into decay. It was restored to the Mahrattas, at the conclusion of peace. Long. 76° 21' E., lat. 21° 32' N.

HA'SSOCK, n. s. German haseck. — Skinner. A thick mat on which men kneel at church. In Scotland it is applied to any thing made of rushes or privet, on which a person may sit.

He found his parishioners very irregular ; and in order to make them kneel, and join in the responses, he gave every one of them a hassock and common prayer-book. Addison.

HAST, the second person singular of have.

HASTATI, in the Roman armies were veteran spearmen who wore a complete suit of armour, and carried a convex buckler of four feet six inches in length, and two feet and a half in breadth. The hastati likewise wore a sword, which they carried at their right thigh, and which was called the Spanish sword. This weapon was calculated both to cut and thrust, the blade being very broad, thick, and pointed. They had each, moreover, two pikes, a brass helmet, and VOL. XI.

half boots. One of the pikes was thick, and the other of a middling size. See BATTLE.

HASTE, n. s., v. n. & v. a.ˆ\ French, haste, HASTEN, v. n. & v. a. } haster ; Dutch,

HAS'TENER, n. s. I haerte, hasten;

HAS'TILY, adv. {Goth, haust, hast.

HAS’TINESS, n. s, ? The primary idea

HAS’TINGS, n. s. is rapidity;

HAS’TY, adj. 1 speed ; precipi—

HASTY-PUDDING, n. s. j tation ; passion ; vehemence : to move eagerly ; to urge, or drive on apace. Hastings, peas that come early. Hasty-pudding, a pudding made of milk and flour boiled together, and stirred quickly to prevent burning to the sides of the vessel.

I said in my haste all men are liars. Psalms. They were troubled and hasted away. Id. Seest thou a man that is hasty in his words ? there is more hope of a fool than of him. Proverbs.

He that is slow to wrath is of great understanding; but he that is hasty of spirit exalteth folly. Id.

Be not rash with thy mouth, and let not thine heart be hasty to utter any thing before God. Eccles. v. 2.

Beauty shall be a fading flower, and as the hasty fruit before the Summer. Isaiah.

I have not hastened from being a pastor to follow thee. Jeremiah.

All those things are passed away like a shadow, and as a post that hasted by. Wisdom.

In alle haste come to me ; he saide.

Chaucer. The Nonnes Preestes Tale. The second condition of veray confession is that it be hastily don, for, certes, if a man hadde a dedly wound, ever the longer that he taried to warishe himself, the more wold it corrupt and hasten him to his deth, and also the wound wold be the werse for to hele. Id. The Persones Tale.

Thus as she her recomforted, she spyde Where far away one, all in armour bright, With hasty gallop towards her did ryde.

Spenser. Faerie Queene. A voice that called loud and clear, Come hither, hither, O come hastily ! Id. Is this the counsel that we two have shared , The sisters vows, the hours that we have spent, When we have chid the hasty footed time For parting us ? Shakspecre.

Let it be so hasted, that supper be ready at the farthest by five of the clock. Id.

Tis Cinna, I do know him by his gait ; He is a friend. Cinna, where haste you so ?

Id.

There is most just cause to fear, lest our hastiness to embrace a thing of so perilous consequence, should cause posterity to feel those evils. Hooker.

Spare him, death !

But O, thou wilt not, can’st not spare ! Haste hath never time to hear. Crashaw. Hasting to pay his tribute to the sea, Like mortal life to meet eternity. Denham.

The sun

Declined was hasting now with prone career To th’ ocean isles, and in th’ ascending scale Of heaven the stars that usher evening rose.

Milton.

A fellow being out of breath, or seeming to be for haste, with humble hastiness told Basilius. Sidney.

If your grace incline that we should live, You must not, sir, too hastily forgive. Waller Our lines reformed, and not composed iu haste, Polished like marble, would like marble last ;

HAS <

But as the present, so the last age writ ,

In both we find like negligence and wit. Id.

The tarns of his verse, his breakings, his propriety, his numbers, and his gravity, I have as far imitated as the paverty of our language, and the hastiness of my performance, would allow. Dry den.

The wretched father running to their aid With pious haste, but vain, they next invade.

Id.

The next to danger, hot pursued by fate, Half clothed, half naked,

hastily retire. Id. These rites performed, the prince, without delay, Haste* to the nether world, his destined way. Id.

Sure haity-pudding is thy chiefest dish, With bullock's liver, or some stinking fish.

Dorset.

The large white and green baitings are not to be set till the cold i* over. Mortimer.

Soon as the sun awakes, the sprightly court Leave their repose, and hasten to the sport.

Prior.

To distant Sparta, and the spacious waste Of sandy Pyle, the royal youth shall haste.

Pope,

divided into two parishes. It had formerly a priory, and was a barony in the Huntingdon family. Hastings is remarkable for a battle fought in its neighbourhood, between Harold II. king of England, and William duke of Normandy, on the 15th of October 1066, in which the former was defeated and killed ; and by his death William became king of England. The town has of late received a new impulse as a watering place ; and from the beauty of the situation, the mildness of the air, and the excellence of the beach, it rivals many of the others on the southern coast. On approaching the town, by the London road, a beautiful and extensive prospect opens of the town and ocean, and the distant coast and hills. The environs also abound with picturesque scenery. A walk, called the Marine Parade, has been formed on the west, and close by it stand the bathing machines on a fine sandy beach, sloping genlly to the sea. Convenient warm baths have been established, a library furnished with newspapers, &c., a billiard-room ;

Without considering consequences, we hastily en-and an assembly held twice a-week. The town

itself is well paved, and consists of two parallel streets running north and south, and divided by a rivulet called the Bourne. The public buildings are, two very ancient churches ; the town-hall, built in 1700, with the market place under

gaged in a war which hath cost us sixty millions

Swift.

On — on he hastened — and he drew My gaze of wonder as he flew.

Byron. The Giaour.

HASTED (Edward), a modern historian of it; the custom-house, which employs twelve

Kent, was the only son of Edward Hasted, esq., riding officers; two excellent free schools; and

of Hawley, descended from the noble family of a barrack for foot soldiers. The remains of an

Clifford. He was born in 1732, and possessed ancient castle are to be seen on a rocky cliff to

at one time a competent landed property. But the west of the town, and still farther on those of

he fell into difficulties and litigation in regard to a priory of black canons. Two miles from the

it, and lived obscurely for some time in the town is the stone on which William is said to

neighbourhood of London. A few years before have dined when he landed here, and still called

his death he removed to the hospital at Corsham, the Conqueror’s stone. Hastings sends two

Wilts, to the mastership of which he had been members to parliament. Markets on Wednesday

presented by the earl jf Radnor ; and soon after and Saturday. It is thirty-six miles south-east

recovered his estates by a decree in Chancery, of Tunb ridge, and sixty-four south-east of Lon—

His History of Kent, 4 vols. folio, employed his don. attention for upwards of forty years. He died

14th of January 1812.

HASTINGS (Warren), esq., was born in 1732 at the village of Churchill, in Oxfordshire, where

HASTING PEAR, a name given by the gar-his father was a clergyman. He was educated at deners to a species of pear, called also by some Westminster, and went in 1750 to Bengal, as a the green chisel pear. This is a moderately large writer in the East India Company's service. He pear, and is longish towards the pedicle; its returned to England in 1765 with a moderate skin is thin, and of a whitish green; the pulp is fortune. In 176S he received the appointment melting, and of a sugary flavor. It ripens in of second in council at Madras ; and was re-July. See PYRUS. moved in 1771 to Bengal, to the presidency of

HASTINGS, a town of Sussex, and one of the which he was raised in 1772. The following-cinque ports. It was formerly obliged to find year he was appointed governor-general of India, twenty-one ships, within forty days after the In 1778, the commission by which he held his king's summons, well furnished and armed for office expiring, it was renewed first for a single service, and to maintain the crews a fortnight at year, and in 1781 for ten years longer: lord its own charge. It is said to have been named North, who had endeavoured to remove him in

from Hastings, a famous Danish pirate. In king Athelstan's reign it had a mint. It had charters

1776, thinking it afterwards desirable to retain him in that post. During the celebrated coalition be-

from Edward the Confessor, William I. and II., tween Mr. Fox and lord North, the censures of

Henry II., Richard I., Henry III., Edward I., the ministerial party were cast on Mr. Hastings,

and Charles II., exempting it from toll, and em-for his conduct in his government, and especially

powering it to hold courts of judicature on life for his treatment of the native princes of India,

and death. It has about 1,200 handsome houses, Mr. Hastings returned from his government in

and 10,097 inhabitants ; but frequent storms have 1786 to meet an impeachment. After proceed—

rendered the harbour indifferent, though a vast ings protracted through a period of nine years

sum of money has been laid out upon it. Hast-he was acquitted, and retired, with the wreck of

ings has sent members to parliament ever since his fortune and an annuity from the Company,

Edward III. About 1377 this town was burnt to Daylesford in Worcestershire. He was made

by the French ; and, after it was rebuilt, it was a member of the privy council ; but devoted the

HATS.

evening of his life to literary pursuits, and died 22nd of August, 1818. He published various Speeches and Papers on Indian Affairs, and a volume of poetry.

HASTINGS, Francis, Marquis of, earl of Rawdon, &c., the son of baron Rawdon, earl of Morea, born in Ireland, 7th of December, 1754, educated at Oxford, and entered the army in 1771. lie embarked for America in 1773, and was present at the battle of Bunker's Hill. In 1778, he was appointed lieutenant-general of the British army, in America, and commanded a corps in South Carolina, where he successfully opposed general Gates ; and at the battle of Camden, 16th of August, 1780, he commanded one wing of the army under lord Cornwallis. He afterwards defeated general Greene, but his ambitious career was checked by the surrender of lord Cornwallis. On his voyage home he was captured and taken to Brest ; but being immediately set at liberty, returned to England, where he was made aid-de-camp to the king, and created an English peer. He was a distinguished member in the parliaments of both countries. In 1794, he took the command of 10,000 men destined to relieve the duke of York in Holland, and in 1797, an attempt was made to place him at the head of an administration. Finding that he could not act with the ministry of 1812, he accepted the governor-generalship of India, in which high trust he twice received the thanks of the'East India Company, and of both houses of Parliament. In 1822, he was succeeded in India by Lord Amherst, and in the year 1824 was made governor of Malta, where he resided till near the period of his death, which occurred on board the Revenge man of war, in Baize bay, near Naples, on the 28th of November,

1825.

HATS. This important article of modern com merce and personal convenience is of recent adoption in Europe. Hats are said to have been first used by men at the beginning of the fifteenth century. But the hatters have a tradition among them, that while St. Clement, the fourth bishop of Rome, was fleeing from his persecutors, his feet became blistered, and, to afford him relief, he was induced to put wool between his sandals and the soles of his feet. On continuing his journey, the wool, by the perspiration, motion, and pressure of the feet, assumed a uniformly compact substance, which has since been denominated felt. When he afterwards settled at Rome, it is said he improved the discovery ; and from this circumstance has been dated .ne origin of felting. Hatters in Ireland, and several Catholic countries, still hold their festival on St. Clement's day. Hats, however, are first spoken of in history at the period when Charles VII. made his triumphant entry into Rouen, in the year 1449. In process of time the clergy also assumed this part of the habit of the laity, but it was looked on as a great abuse, and several regulations were published, forbidding any priest, or religious person, to appear abroad in a hat without coronets, and enjoining them to keep to the use cf chaperoons, made~of black cloth, with decent coronets ; if they were poor,

they were at least to have coronets fastened to their hats; and this upon penalty of suspension and excommunication. The use of hats, indeed, is said to have been of longer standing among the ecclesiastics of Brittany, by 200 years, and especially among the canons; but these were, in fact, a kind of caps ; whence arose the square caps worn in colleges, &c. By the statute of 13 Eliz. every person above the age of seven years, and under a certain degree, was obliged on Sundays and holidays to wear a woollen cap, made in England, and finished by some of the fraternity of cappers, under the penalty of 3s. 4d. for every day's neglect. This statute was repealed 39 Eliz. From Stow's Chronicle we learn, that about the beginning of Henry VIII. began the making of Spanish felts in England, by Spaniards and Dutchmen. In the second year of James I. the felt-makers of London obtained a corporation, and hired a hall near Christ Church, the king granting them various privileges and liberties for their support.

Hats are at present made in different countries on the continent, and

in America ; but, except in France and our own country, they have not been much attended to as an article of commerce. From France they were exported in large quantities, to England, Spain, Italy, and Germany; the quantity now made there is inconsiderable ; England has, in its turn, become the grand mart for the manufacture ; and hence the article is exported to different parts of the continent, America, and various other parts of the globe.

Felt hal'tnuking ccnsJsts in a method of working up wool or hair into a species of cloth, independently of either spinning or weaving ; and giving it a convenient form, with a degree of stiffening sufficient to preserve its figure, and to answer the purposes of wearing. The mechanism of felting is curious and interesting ; it depends on the conformation of all animal hairs and wool, which disposes them to unite with each other in such a manner as to produce a firm and compact substance.

On examining hairs, or filaments of wool, with the naked eye, or even by a low magnifying power of the microscope, they appear perfectly smooth and even. Their surface, notwithstanding, is by no means smooth; but composed of lamellae, covering each other from the root to the point, in a manner resembling that by which the scales of a fish cover the animal from the head downwards. This disposition of the lamellae on the surface of hairs is discoverable by holding a hair with one hand, and drawing it between two fingers of the other, in the different directions from the root to the point, and from the point to the root. In the former case no sensible friction takes place, nor is any roughness discoverable ; in the latter we discover a very sensible resistance, which is most readily discerned by moistening the fingers. The following experiment is still more decisive. By holding a hair between the forefinger and thumb, and rubbing it in the longitudinal direction, a progressive motion takes place, and this motion is invariably towards the root, or with the root of the hair foremost. For example : if the hair be held in a perpendicular direction with the

root upwards, by rubbing the finger and thumb together, it will be found to assume a motion by which the extremity of the hair, pointing

upwards, will rise still higher ; but if the hair is turned, so that the extremity farthest from the root be placed upwards, its rising motion is discontinued, and it immediately recedes downwards.

This conformation of the surface of hairs and wool, which appear to be composed of hard lamellae or asperities, placed over each other like tiles from the root to the point, lays the foundation of felting. In a layer of the material, by the operation it undergoes, the hairs are brought into close contact by their progressive and uniform motion towards the root ; and, meeting in various directions, they become twisted together, the lamellte of the different hairs fixing themselves to others directed in a contrary way, at the same time preserving the whole in a close and compact substance.

The materials in general use are, lambs' wool, rabbits' and hares' fur, beaver, seal wool, monkey stuff, or neuter wool, camels' hair, goats' hair, or estridge, silk, and cotton. Moles' fur, and otter wool, are likewise sometimes made use of. The foreign lambs' wool generally used is the Italian, Spanish, and Peruvian, or Vicuna wool, commonly known among hatters by the name of red wool. Our native wools are of various qualities : those in most esteem are the Herefordshire, or Ross wool, Southdown, Wye-side, Wiltshire, Somerset, and Hampshire. There is likewise wool sheared from Spanish lambs bred in England, known by the name of merino. . Cod-wool is the wool plucked from lambs who die in the birth ; long cod-wool is that plucked from lambs who die in early life. The best fur is from the backs of the different animals, and it decreases in value as it approaches the belly. Rabbits' fur, including the backs, and the best part of the sides mixed together, is known in the market oy the name of best stuff; the fur from the bellies and worst part of the sides, seconds ; that from odd bits of skins, &c., clippings; and the fur taken from rabbit-skins, when they are out of season, is denominated quarter-wool. The fur from unseasoned hare-skins is called stage hare-wool : with this is mixed also the inferior fur from seasoned skins. The best fur from the beaver is ruffing ; the next in value cheek-nap- ping; and the inferior sorts are black-wooms, brown-wooms, white-wooms, brown-stage, and white-stage. Old-coat is taken from the beaver-skins that have been worn by the savages ; but little of this article is now imported.

The wools are washed and carded, and, when very long, cut to a moderate length with a chop-ping knife, or hatchet, on a wooden block. White Russia, best-stuff, and hares' wool, and the most inferior stuffs, as clippings, tail-wool, &c., are improved by the operation of carroting. For this purpose a layer of the stuff is placed in a box, or any suitable vessel not of metal, and sprinkled over with a mixture of

about one part nitrous, or nitrous and sulphuric acid, and six parts water by means of a brush. A second layer is then placed in the vessel, which is again sprinkled with the acid mixture ; this is repeated

till it is full. To prevent the liquor running down into the bottom of the vessel, without equally wetting all the stuff, its position is frequently changed in the course of the day ; it is then kept in the digesting heat of a stove all night. By this treatment the stuffs acquire a ruddy or reddish-yellow color, like the inner' part of a carrot, from which it derives its name.

In felting any of these materials together, the first object of the workman is to obtain the most complete separation of the fibres, and to dispose a layer of them in every possible direction with regard to each other; this is effected by means of bowing. For this purpose a platform of wood, about four feet wide, is erected against the wall of a convenient shop, and divided by side partitions about the same width from each other, into distinct portions, for the convenience of different workmen, called hurdles, eacb of which is enlightened by a small window. To each hurdle is suspended a bow by means of a small cord fixed to the ceiling, or any other convenient place, consisting of a pole about seven feet long, generally made of deal-wood, to which are fixed two bridges of hard wood, the upper one nearest the window called the cock, and the lower one the breech. To the upper part of the pole, above the cock, is fastened a cat-gut line, or bow-string, of considerable length, and twisted round the pole, leaving only sufficient to bring over the cock and breech, and to fasten to the lower part of the pole ; thus, when the string breaks, it is partly untwisted from the upper end of the bow, and the necessity of a new one is prevented. To preserve the wood from wearing, by the action of the bow-string, a strip of horse-skin, or vel-lum, is fastened to the edge of eacli bridge ; and near the cord, by which the bow is suspended, is fastened a small strap to place the hand in, which enables the workman to hold it with firmness. The bow-pin is a small stick with a knob at each end for plucking the bow-string.

As the process of making is a little different in different kinds of hats, we shall first describe that of wool hats or cordies. A quantity of carded wool, of one or more sorts, sufficient for one hat, generally about seven or eight ounces, is laid on the hurdle towards the left. The workman then holding the bow horizontally in his left hand, under the strap, and the bow-pin in his right, j>lacing the bow-string near the right hand edge of the material, gives it a pluck with the pin. The

string immediately flies back nearer to the pole than its situation was when at rest, strikes into the wool, and, instantaneously returning to its original position, scatters a part before it to a distance proportioned to the force with which it was pulled. By repeated strokes the whole is thus worked, observing, after each stroke, to raise the string, by giving the bow a turn with the left hand. This breaking over, as it is termed, is repeated several times, more or less, in proportion to the difficulty with which the hairs are disunited ; when all the fibres are completely separated, the material is again placed towards the left hand side of the hurdle, and the workman proceeds, with more order

than before, to scatter the wool to the right hand, so as to form a thin regular layer ; which he effects by duly proportioning the force of his strokes, and the position of the bow. When about one-third part is thus bowed, it is formed by the hands into an oval figure, ending in acute angles at the extremities. This portion of the material, thus formed, is called a batt.

The batt is hardened by a slight pressure with the hands for a short time, so as to connect it together sufficiently to bear careful handling. Another batt is then formed of the same dimensions ; and, with the remaining third part, two smaller batts are formed, which are separately united to the primary ones by a little pressure. This gives each of them a more uniform consistence than would be obtained by forming single batts only. It was formerly common to form six batts for each hat, but few are now willing to de-vote sufficient labor for the purpose. It is necessary to remark, that the batts are bowed thicker in that part which is designed to form the band of the intended hat ; and, to give them a finish, the edges are torn round even by the right hand, while the pressure of the left prevents their being torn in too far.

It now remains to connect the parts together in some convenient form, and to proceed in the operation of felting For this purpose, a wet cloth is folded so as to form a triangle, and laid on one of the batts. The extremities of the batts, with a small portion of the upper part, is then folded over the cloth, and the edges meeting over each other form a

conical cap. This cap ‘is laid on the second batt with the joining downwards, which being also folded up in the same manner, their places of junction will be diame-trically opposite each other. This is laid on a second wet cloth, which is closely folded over the whole, so as to preserve the triangular figure ; it is then ready for basoning. The bason is a circular piece of iron, exactly the same as those commonly used in Wales for baking over the fire, called backstones. This is laid over a hole in a plank, underneath which is a small grating fitted to the plank for this purpose. The prepared cap is then laid on the warm iron, and the process of felting carried on by folding, pressing, and sprinkling it continually with water. The corners being folded over a little, the base is first turned up towards the tip ; and in this state it is worked a short time by pressing with the hands, moving them backwards and forwards, and shifting them about in various directions. Each side is then folded over towards the other alternately, the tip part towards the base; and, in general, it may be folded in any or every direction, repeating the pressure and working of the wool, and sprinkling it successively after every fold. By this pressure, and working the wool in various directions, the points of contact are multiplied ; and the agitation given to each hair causing a progressive, motion towards the root, and a coalition with each other, it soon acquires some degree of firmness and contracts in ts dimensions.

On taking off the cloth, and opening the hood or cap, it will be found that the edges, or original folds, will not have that even and uniform

appearance with the rest of the surface, but small ridges will be formed by a small part of the sides felting together at the outward edges,, which will be considerable if care has not been taken in the first place to fold the batt closely over the inlayer. It is found necessary, therefore, to alter the ‘position of the original edges, by turning round the cap, to extend them a little with the finger so as to produce a uniform surface, and with the hood in this position to continue the basoning as before. It is afterwards turned inside outwards, and the same operation continued. The workman afterwards opens the hood, holds it up to the light and looks through it from the inside to discover any parts that may be unusually thin ; and on any of these parts, which are deficient, a little wool is added from that which was torn off the edges of the batt; and by working that particular part on the bason it is made to unite. When this is done, the process of basoning is completed, which generally takes from about twenty minutes to half an hour.

The hood now consists of a soft spongy kind of stuff, and its texture is loose and imperfect. To produce a more intimate cohesion of the hairs with each other, and obtain the requisite degree of consistence, it must undergo a kind of fulling, and a more effectual mechanical operation. For this purpose, the hats are first boiled in an iron boiler, in a mixture of about one part urine to six parts soft water, from six to eight hours. To prevent their touching the boiler, they are enclosed in a cloth ; a basket, or, more generally, a lining of straw is placed round the sides, and at the bottom of the boiler. The felting is completed by working or planking at a water bath.

For the convenience of any particular number of workmen, an apparatus, called a battery, is generally made use of for this part of the process, consisting of a proportionate number of wooden planks, joined together in the form of the frustum of a pyramid, supported by stone or brick-work, and meeting at the bottom in a kettle, under which is a fire-place. The number of planks is most commonly from five to seven ; and, according to the number made use of, it is called a five, six, or seven-room battery, Sec. Each plank is from two to three feet broad at the upper edge, and about two feet deep. The kettle is generally of cast-iron or lead, and kept full of soft water, as nearly boiling as the nature of the operation will admit. To facilitate the felting, it is found necessary to add some softening material to the bath : for this purpose, some spermaceti, a marrow-bone, or shreds of wash-leather, have been thrown in ; but oatmeal is at present almost universally used ; about a table-spoonful is thrown into the kettle, and occasionally repeated as freshwater is added, or as it may be found necessary. The more greasy substances will answer for the purpose of planking, but it prevents the hats from taking a good dye ; leather-shreds answer very well, but are not always so easy of access as oatmeal.

The operation commences by dipping the article in the bath, and gently rolling it in various directions, observing a degree of regularity, as

in basoning or its receiving more work in some parts than others will soon give it an irregular and shapeless appearance. It is necessary to be careful at first to turn the hood inside outwards, and to shift the position of its sides frequently to prevent their felting together, of which, in the subsequent stages of the process, there will be no danger. By working a short time in this way, the article will be found to have acquired a considerably firmer texture, and to have contracted very rapidly in its dimensions. The workman then applies leathern gloves, or flat pieces of stout leather, to the palms of his hands, to secure them in some degree from the heat of the water, and continues to dip it much oftener, and to roll it much harder than before, as it requires more labor, in this degree of felting, to obtain the firmness and consistence. In the first gentle rolling, an impulse, nearly equal, was given to the hairs in every direction, and hence it so readily contracted in its dimensions at the same time that it acquired a degree of firmness in substance. In rolling it harder the pressure is more particularly on the flat surface of the felt, and this acquires a more compact texture, without an equal contraction in the size. It is however necessary to prevent any contraction in size when it is sufficiently shrunk, and yet worked to any degree of consistency. For this purpose a small roller of wood, called a walking-pin, is made use of: over this the edges of the felt are turned, and the whole is rolled in various directions with the walking-pin enclosed by the surrounding felt ; at the same time continuing to dip it often in the bath. This completes the working at plank ; and on the labor thus given its service in wearing will principally depend.

The intended hat, after the preceding operation, still possesses the conical figure first given it, consisting of a soft flexible felt, capable, with a moderate degree of force,' of being extended in every direction. The next thing to be done is to give it the required form. For this purpose the edge of the hood is turned up about one and a half or two inches : the point is then indented with the fingers, and the hood turned over, so as to produce a second inner fold about the same depth. From three to five folds are thus formed, and the whole has the appearance of a flat piece, consisting of a number of concentric circles, or wave-like undulations. This is laid upon the plank, and the workman, keeping it wet with clean warm water, extends the central point with the fingers of his right hand at the same time pressing it down with his left, and turning it round on the plank, till a flat portion is formed equal to the intended crown of the hat. The flat part is then placed in a block, and the remainder pulled down with the hands round its sides and a string tied tight round ; it is forced down to the bottom of the block with a wooden or copper stamper, which

forms the band. The brim will now have a curling inclination towards the crown, but is soon flattened by wetting and extending the edges. The water is afterwards pressed out of the hat with the blunt edge of the stamper, and the nap is raised by carding it in any direction with a small wired instrument called a raising card. The hat is then taken off the

block and placed in a stove to dry, when it is ready for the subsequent operations of dyeing, stiffening, and finishing. These instructions for blocking refer particularly to the common round hat now generally worn ; but from the nature of the felt it will be seen that any form may easily be given it by the skill of the workman, with a corresponding block.

The above account comprises the general principles of hat-making, and is the foundation of every variety in the art. Common wool hats, or plain cordies, are of one uniform contexture throughout; but ingenuity has contrived a method of making the most of the materials employed, by placing the best side outwards. This is done by laying on the body of the hat, when partly felted, a finer and more valuable material, in the same direction it has when on the back of the animal. For the purpose of covering wool hats, the articles made use of are cod-wool and camel's hair: the former of which, after washing and carding, is boiled about an hour and a half in one part urine to about twelve or fourteen parts of water. The hats covered in this manner are bowed, basoned, and boiled in the usual manner, the common materials being used only in less quantity, proportioned to the addition intended to be made. A thin layer of the prepared cod-wool, with or without the addition of hair, is then bowed for each side of the triangular hood so as just to meet at the edges; and anothei piece to go all round on the inside to the depth of the intended brim. The pieces are laid on the principal stuff or body of the hat, and worked on by basoning in the manner already described : the hairs assuming a motion towards the root, uniformly fix themselves in that direction, leaving the extremities outward which ccnstitute the required nap. After this addition of the nap, the planking takes place as before.

For obtaining a variety of cordies, of different value, they are partially as well as wholly covered with different proportions of napping, and on bodies of wool more or less valuable. Next to the plain hats succeed the tips : these have only a nap sufficient to cover the crown and reach a short way down the sides. To save the trouble of basoning the nap on this kind of hats, it is only laid on with the hands, the hood

turned so that the nap may be inside, and a layer of some proper flexible substance, commonly long horsehair, placed between the sides to prevent its uniting : in this manner it is taken immediately to the plank. The second class is tips and naps; these, as well as a cod-wool tip, have a nap of the same on the underside of the brim. And, lastly, succeed the covers. A good cover takes about two ounces of cod-wool, and a hair cover about half an ounce of hair in addition to the cod-wool ; these are commonly bowed together ; and the former is scarcely ever used for a nap without the addition of the latter.

Stuff hats appear to have been originally made throughout of beaver ; the instructions given in the old accounts of hat-making is, to mix three parts of old coat with two parts of castor ; but hats made in this way would be much higher in price than any now in general use. The beaver at present is scarcely ever used except in the

outward nap, and the body of the hat is composed of various inferior stuffs in any proportion; commonly with the addition of a little Spanish or vicuna wool, and sometimes a small quantity of silk is added. A patent was granted Mr. James Burn, of Alnwick, Northumberland, for making superfine hats, which, contrary to general modern practice, appear to have been of one uniform consistence. The composition consists of three ounces and a “half of moles’ fur, two ounces and a half of beaver, and a quarter of ‘an ounce of Aleppo wool ; ‘ and, in order to subdue the obstinate nature of the mole fur,’ says Mr. Burn, ‘ so that it may incorporate with other furs usually made into hats, I use a little aqua regia; but, as that process destroys the elastic quality of the fur, I correct it by a little sweet or Florence oil, which sheathes the pungent points of the aqua regia.’

Stuffs possess, in general, a greater tendency to felting than wool, and in consequence some small difference is observed in the manufacture. As the fibres are more easily separable, a slighter bow, with a finer bow-string, is used than that made use of in wool. When the stuffs are bowed in the usual way, the batts are formed and gently pressed down with a piece of osier work, called a gathering basket, consisting of

open straight bars only interwoven sufficiently to connect it together, and preserve it in form ; it is from eighteen to twenty inches square. This is constantly kept on the hurdle, for the purpose of shifting the stuff as well as for forming the batts. Sometimes one or two of these baskets are placed under the stuff to separate any impurities that may pass through. To obtain this end more effectually, in the metropolis and several places in the north of England, a fine movable wire frame is placed on the hurdle on which the stuff is broken over, which is again removed, and the impurities swept off the hurdle for forming the batts.

These have their first degree of compactness given them by laying on a hardening skin of smooth leather, or sailcloth ; and gently pressing with the hands, which are at the same time slightly moved backwards and forwards, to cause the entangling of the fibres. The cap is formed in the same manner as wool hats, only the inlayer for stuff is a piece of wetted paper instead of cloth. When folded up in a wet cloth, it is worked on the hurdle in the same manner that other hats are on the bason, but without any heat except what is imparted by the hands or any subsequent sprinkling. After being thus basoned, without any boiling, they are immediately taken to the battery to undergo the operation of planking. In consequence of the superior smoothness of furs over wool, any softening material in the kettle is unnecessary : but it is indispensable that some substitute be made use of which will have an effect equivalent to boiling in the former case. For this purpose, wine lees were formerly in general use, but this has given place to sulphuric acid, which, from the smallness of the quantity made use of, is cheaper, and more easily obtained. About a wine-glassful of the acid is added to the kettle of water ; in pouring in which great care is necessary to prevent its sprinkling over the operator : it is afterwards added in small quantities as it is found necessary. Into this bath the hat is first dipped, and then suffered to lie on the plank till cold again. This is called soaking, which is unnecessary in hats that are previously boiled.

It appears that the acid in caroting, boiling, and working at the plank must act as a chemical agent on the substance of the hairs, but in what way it does so is not understood : practical hatters seldom give themselves the trouble to think on the subject. M. Chaussier conjectures that it may produce, either by softening or swelling the hairs, a certain alteration which is necessary to bring about the cohesion of the different fibres. It is said that acid of any kind, by taking out the greasy substances on each pile of hair, allows the roughness on the surface of each to operate with their full effect, and thus facilitates the mechanical action of felting. The action of felting

being promoted, however, by greasy substances, renders this last solution a little doubtful. Perhaps some kind of mucilaginous substance may be on the surface of the hairs, as conjectured by Mr. Nicholson, which is disengaged by the action of the acid.

Plated hats are an article of modern date : they are said to have been invented in the north of England within the last fifty years ; and Lancashire and Cheshire are at present the principal seat of their manufacture. These are a middle class between cordies and stuffs, designed as a substitute for the latter at a more reasonable expense. To effect this purpose the different kinds of stuff are plated on wool bodies. But, in consequence of the looser texture and thicker substance of this kind of felt, a nap of much finer materials could not be laid on in the usual man-ner so as to appear to advantage : it is found requisite therefore to have recourse to another expedient. The wool body, after it is boiled in about one part urine to three parts water, and has been worked sufficiently to complete the felting, is laid over a hair-cloth on the plank : the nap is then laid on the surface, sprinkled with a brush, and patted down. A layer of old stuff, or stuff which has its properties of felting destroyed, and carded cotton, or either of these separately, is bowed and laid on in the same manner, commonly mixed with a small portion of napping; and sometimes another layer is added. It is then slightly rolled a short time in the hair-cloth ; but as the nap, by the process of rolling, would soon be lost by penetrating too deeply into the felt, it is discontinued, and the nap is fixed on by the operation of shaking and patting with the stopping-brush. The workman dips the article in the bath, and holding it by one of its edges between the forefinger and the thumb of each hand, strikes it down on the hair-cloth, at the same time depressing his hands in such a manner that the most distant edge may have an inclination given it to turn upwards, and thus after striking upon the cloth it is immediately raised off. This shaking is continued by repeated strokes in quick succession, frequently changing its position, and continuing the dipping, and patting it frequently with the brush. By this process the hairs are just fixed in by the roots,

without sinking too deeply, and a long flowing nap is obtained. The cotton and old stuff dur-ing the operation, sticking on the body of the hat by means of the hot liquor, preserve the nap from flying off; at the same time, by enabling it to hold a greater body of the fluid, the work is facilitated, and the nap is also preserved from the continued action of the brush. When the nap is completely fastened, which will be in about half an hour, the cotton and old stuff are loosened by striking with a flat stick, and continuing the shaking. In a short time they will appear in a loose flake over the surface, which is taken off with the fingers whilst the nap remains fixed by the roots in the substance of the felt : the cotton and old stuff are dried and preserved for future use. In plating, as the bodies are first boiled, and as the nap laid on is of a soft, smooth, n.ature, nothing is made use of in the kettle but clean water. Best stuff, hares' wool, neuter wool, seal wool, or a mixture of any of the stuffs, are made use of according to the intended quality. Neuter wool has a short, neat appearance as a nap ; seal-wool naps are much esteemed, and wear remarkably well : for the best plates, some beaver is added to the other stuffs made use of.

It has lately become a practice to unite the common method of napping with that of plating in stuff hats, which have the name of shake-offs given them. After a slight nap is first rolled on, a second, and principal nap, is shaken on in the same manner as in plated hats. A shorter fur may in this manner be applied to advantage, or one of the usual length will produce a more showy nap.

Hats have been worn of various colors, but those most in use at present are black, drab, and white. The white hats, which are only intended for ladies and children, have a nap of rabbits' fur, selected from the white skins. Drab hats are also made of stuffs of the natural color, assorted for that purpose. In dyeing black, the articles now in general use are logwood, of which Campeachy was the best, copperas, and verdigris. French verdigris is far superior to the English. For dyeing common cordie hats, the general proportions for twelve dozen are about twenty-four pounds of logwood, seven of copperas, and a quarter of a pound of verdi- .gris. The logwood is chipped, and left in the boiler to soak the preceding night ; part of the copperas and verdigris is then added and boiled with the logwood. The hats are each fastened on a block with a string tied round the band and boiled in the liquor, sometimes turning those nearest the surface, and placing a weight upon them to keep them under the liquor. After boiling about an .hour they are taken out and exposed to the air, while a fresh quantity is boiled in the kettle the same time as before. This boiling and airing is repeated several times according to the strength of the dye, the perfection required, or the nature of the materials to be dyed,

as experience has shown that the action of the atmospheric air, or the oxygen it contains, very much contributes to improve the dye ; the remainder of the copperas and verdigris is added in a decreased proportion to each suit.

Common hats that are easily dyed have now generally two suits only; best hats from three to four. On account of the high price of verdigris, sulphate of copper or blue vitriol is frequently made use of in dyeing common hats in a larger proportion, or a mixture of about equal parts of each. But those dyed with verdigris only have the brightest appearance after finishing. After dyeing, the hats are well washed in clean water.

After hats are dried, the next operation they undergo is that of stiffening. For the com-mon purposes of stiffening, glue and vinegar dregs, beer grounds, or dregs from the distilleries are the articles made use of. The hat, for this purpose, is put into the crown of another large one, called the stiffening-hat, which is only felted and blocked, and has its crown slit open to admit the hat to be stiffened, of any depth the more readily. These are placed in the hole of a plank on which the brims are supported. The dregs are then first applied warm, with a brush similar to a large painting-brush, on the inside of the crown only ; this is done by holding the brush in the right-hand, while the left-hand, holding the brim of the stiffening-hat, continually turns it round, that the enclosed may be uniformly covered with the dregs. The dregs are made use of as they are the cheapest mucilage, and gi ve a degree of firmness to the hat, at the same time preventing the glue from penetrating through to the surface. After this is dry, the glue is applied to the crown in the same manner, which is made in the proportion of about one pound of glue to three pints of water. After it is laid on with the brush, it is well rubbed round with the hand ; for which purpose it is found expedient to employ a second person in the business, who receives the hat of the first person as fast as the glue is laid on with the brush. It was remarked that, in the first formation of the hat, the part designed for the band was laid thicker than any other; as this part has the most wear — as the wet is most likely to penetrate here — and as the general firmness of the hat depends on the strength of the band, it is likewise necessary to attend particularly to this part in the stiffening.

In stiffening a quantity of hats, the crowns only are thus attended to in the first place. In common hats, the grounds are frequently mixed with the glue, and laid on at the same time. The brims are next stiffened

with a common soft brush, and glue only, which is applied to the underside. This is well worked into the body of the felt with the hand, and the hats are placed in a stove to dry. When dry, the nap on the underside of the brim will be glued down to the felt ; this is removed from the surface by scouring it with a brush and a quantity of warm soap-suds, which are pressed out of the nap by the blunt edge of a wooden or copper stamper. Ladies' light hats, and some of the children's fancies, are stiffened with the application of starch, or common flour paste only.

In France the composition of gum arabic, common gum of that country, and Flanders' glue, are employed for the purpose of stiffening. The brittleness of gum arabic has been found an

inconvenience, and a substitute has been sought for in some simple preparation from their indigenous plants. M. Chaussier observes, that mucilage is found in great quantity in many plants ; it may easily be extracted by boiling ; and a factitious gum, which is both supple and tenacious, may be formed by evaporation. These considerations led him to recommend, for the purpose of stiffening, a solution of glue in a strong and mucilaginous decoction of linseed. This preparation has been long used in the manufactory of the Cote d'or ; and is both more economical, and more conducive to the beauty of the work. Since that time, M. Margeron having communicated to him some observations respecting the mucilage which may be extracted from the leaves of the horse-chestnut tree, and having ascertained how great a quantity of mucilaginous and glutinous matter these leaves furnish, especially when the foliation is in full vigor, a solution of glue, in a strong decoction of them, has been used with great success. Perhaps this mucilage from the leaves of the horse-chestnut might be worthy the attention of the English hat-maker.

As glue is subject to the action of moisture, hats, stiffened with that material alone, are not perfectly water-proof. Several expedients have been devised to obviate this inconvenience : one of the methods, perhaps, most generally known, is that of balling. A ball is formed by

melting about three parts resin, four parts bees-wax, and two parts mutton suet. This is frequently rubbed over the inside part of the hat while planking, particularly over that part which is to form the band. After balling, the hats are stiffened with glue in the usual manner.

In 1 802 Messrs. Ovey and ‘Jepsin, of London, obtained a patent for a method of water-proof stiffening. This was done by preparing a double hat ; the under one was made of coarse materials, stiffened, and covered with a cement made of one pound and three quarters of flour, three quarts of water, one ounce of alum, and two ounces of resin; the latter was finely pulverised, and added while the rest was boiling; stirring it together until dissolved. The under part of the finer outside casing was also covered with the same, and then placed over the other, and united together by pressing with a cool iron. Water-proof stiffening, particularly for best hats, has lately been much attended to, and various are the methods employed by different manufacturers ; but nothing appears to have so completely answered the purpose, and, at the same time to have been so advantageous in wear- ‘ng, as that of stiffening with a solution of caoutchouc, or gum elastic. The exact method of the process is, at present, confined to a few hands, and industriously concealed from publicity.

The dry hat, after stiffening, is very rigid, and of an irre’ˆular figure ; preparatory to finishing, therefore, it is fresh blocked. For this purpose it is necessary to soften the glue, which is done by the operation of steam. A hot iron is placed within a circular wooden frame, on which a wet cloth is thrown ; the crown of the hat is then laid over the rising steam, whilst the brim rests

on the frame ; and thus it is soon rendered sufficiently soft to receive the impression of a block of the intended size and shape. By the use of a hot iron, generally from twenty to twenty-five pounds in weight, a small card, brushes, &c., with the addition of water, the nap has the requisite direction given it, and receives its smoothness, and polish. Minute directions here are unnecessary; the judgment of the workman must be his principal director. It may not be useless to remark, that in watering the hats, which is done by a soft wetting brush for that purpose, the giving them plenty of water, and quickly passing a pretty hot iron over them, gives the glue a firmness and smartness, in which it will be deficient by more cautious wetting and more dilatory operations. If a little glue is accidentally drawn through the hat, by the heat of the iron, a wetted brush is laid on the iron a little to heat it sufficiently; and by the application of the warm, moist brush, and

carding, it is soon extracted. Instead of water, oil was formerly used in finishing all descriptions of hats, and, for the coarsest sort of wool-hats, the practice has prevailed till very lately. > The instrument generally made use of for cutting the brims of round hats is merely a small worn-out card. At the outer edge a num-ber of notches is cut for the purpose of inserting the point of a knife. The inner edge of the card, and the handle, is placed close to the crown of the hat, while on the block ; and by placing the point of a knife in the proper notch, and drawing it round with the card, still keeping it close to the crown, the brim is evenly cut to any required dimensions. The hat is put in shape by curling the edges with the iron over a small rope for that purpose, stretching the hat out in an oval form by placing a screw or common stick across, and forming the brim with the hands while it is warm. The coarse hairs are picked out of the fine hats with a pair of steel pickers, and then given to be lined and bound ; after which it receives the last finish, and is ready for the wearer.

Some years ago Mr. Hance, of Tooley Street Southwark, obtained a patent for a method of rendering beaver and other hats water-proof, which is thus described : — He takes a thin shell made of wool, hair, and fine beaver, to form the crown of the hat, and another shell, or plate, of the same materials for the brim. These parts are to be dyed black, and finished without glue or other stiffening, in order that they may not be injured by the rain, which, in other beaver hats, after being exposed to a heavy shower, draws out the glue and sticks down the nap, and makes it appear old and greasy. The shell may be made in one piece only, in the shape of the hat, blocked deep enough to admit of the brim being cut from the crown ; the under side of the shell and the inside of the crown must then be made water-proof, by first laying on a coat of size or thin paste, strong enough to bear a coat of copal varnish, and, when thoroughly dry, anothei coat of boiled linseed oil. When dry, the crown must be put on a block, and a willow or cotton body or shape, woven on purpose, put into the inside of the crown and cemented in it. When dry, it

must be finished with a hot iron, and the crown is done. The brim must, in like manner, be cemented to a substance or body made with willow, or other fit material, sufficiently thick to make the inside of the brim. The brim and body are now to be pressed together, after which the under side of the brim may be covered with another shell of beaver or silk shag. The crown and brim are now to be sewed together: the edge of the brim must be oiled and varnished with copal-varnish and boiled linseed oil, to prevent any rain getting in. The cement used for sticking the parts together may be made with one pound of gum Senegal, one pound of starch, one pound of glue, and one ounce of bees'-wax, to be boiled in a quart of water. Hats made in this way, require only to be wiped dry after they have been exposed to the heaviest rain.

Hats are likewise made, for women's wear, of chips, straw, or cane, by platting, and sewing the plats together, beginning with the centre of the crown, and working round till the whole is finished. Hats, for the same purpose, are also woven, and made of horsehair, silk, and other substances. See FELT, WOOL, SKIN, GUM, COPAL, &c.

HATCH, v. a., v. n. & «. s. i Saxon, oecan ; HATCH'WAY, n. s. I Germ, hecken, as

Skinner thinks, from Sax. heghen, eghen, CEJ, egg. To produce young from eggs by incubation : to form, contrive, or bring to perfection ; to disclose (from hacher, to cut) ; to shade lines in drawing : hatch, a brood excluded from the egg ; a discovery, a preparation, from Sax. haeca ; But. hecke, a bolt. A half door ; a door with opening over it : perhaps from hacher, to cut, as a hatch is part of a door cut in two : also, in the plural, the doors or openings by which they descend from one deck or floor of a ship to another: hatches also signify flood-gates.

Which thing they very well knew, and I doubt not will easily confess, who live both to their great toil, and grief, where the blasphemies of Arians are renewed by them ; who, to hatch their heresy, have chosen those churches as fittest nests where Athanasius's creed is not heard. Hooker.

There she's hid ; The mariners all under hatches stowed.

Shakspeare.

Such as Agamemnon and the hand of Greece Should hold up high in brass ‘. and such again As venerable Nestor, hatched in silver, Should with a bond of air, strong as the axle-tree 1 On which heaven rides, knit all the Grecian ears To his experienced tongue. Id,

Something about, a little from the right, In at the window, or else o’er the hatch. Id.

Something’s in his soul, O’er which his melancholy sits on brood : And, I do doubt, the hatch and the disclose Will be some danger. Id. Hamlet.

To the king’s ship, invisible as thou art, There shall thou find the mariners asleep Under the hatches. Id. Tempest.

He was a man harmless and faithful, and one who never hatched any hopes prejudicial to the king, but always intended his safety and honour. Hayward. Who first shall wound, through others arms, his

blood appearing fresh, Shall win this sword, silvered and hatckt. Chapman.

He kindly spreads his spacious wing, And hatches plenty for the ensuing Spring.

Denham.

The tepid caves, and fens and shores, Their brood as numerous hatch from th’ eggs, that

soon

Bursting with kindly rapture, forth disclosed Their callow young. Milton.

He observed circumstances in eggs, whilst they were hatching, which varied. Boyle.

Those tender hairs, and those hatching strokes of the pencil, which make a kind of minced meat in painting, arc never able to deceive the sight.

Dryden.

So. seas, impelled by winds with added power, Assault the sides, and

o’er the hatches tower. Id.

A ship was fastened to the shore ; The plank was ready laid for safe ascent, i

For shelter there the trembling shadow bent, And skipped, and skulked, and under hatches went. 3

Id.

He assures us how this fatherhood continued its course, ‘till the captivity in Egypt, and then the poor fatherhood was under hatches. Locke.

When they have laid such a number of eggs as they can conveniently cover and hatch, they give over, and begin to sit. Ray.

Others hatch their eggs, and tend the birth, ‘till it is able to shift for itself. Addison.

HATCH, or HATCHWAY, a square or oblong opening in the deck of a ship, of which there are several, forming the passages from one deck to another, and into the hold or lower apartments.

HATCHEL, v. a. & v. n.) Germ, hachelen.

HATCH’ELLER, n. s. j» See HACKLE. To

beat flax, so as to separate the fibrous from the brittle part: the instrument with which it is done, and the person who performs the operation.

The asbestos, mentioned by Kircher in his description of China, put into water, moulders like clay, and is a fibrous small excrescence, like hairs growing upon the stones ; and for the hatchelling, spinning, and weaving it, he refers to his Mundus Subterraneus.

Woodward.

HATCHET, n. s. > Fr. hache, Iiachetie ;

HAT’CHET-FACE, n. s. 5 Lat. ascia. A small axe. Hatchet-face, an ugly face, such perhaps as might be hewn out of a block by a hatchet ; it is sometimes also used for a thin, sharp phy-siognomy.

His harmful hatchet he hent in his hand,

And to the field he speedcth. Spenser.

Ye shall have a hempen caudle then, and the help

of a hatchet. Shakspeare. Henry VI.

Nails, hammers, hatchets sharp, and halters strong.

Crashato.

Tyrrheus, the foster-father of the beast, Then clenched a hatchet in his horny fist.

Dryden.

An ape his ovrn dear image will embrace : An ugly beau adores a hatchet-face. Id. .

The hatchet is to hew the irregularities of stuff.

Moxon.

Our countryman presented him with a curious hatchet, and, asking him whether it had a good edge, tried it upon the donor. Addison.

HATCH'MENT, n. s. Corrupted from achievement. See ACHIEVEMENT. Armorial escutcheon placed over a door at a funeral.

His means of death, his obscure funeral, No trophy, sword, nor hatchment o'er his bones, No noble rites nor formal ostentation, Cry to be heard. Shakspeare.

HATE, v.a. & n. s. ˆ Sax.)ml>ian; Goth. HATE'FUL, adj. \ hata; Swed. hat. To

HATE'FULLY, adv. [detest; to abhor; to HATE'FULNESS, n.s. j abominate. These HA'TER, n. s. \ words are all expres—

HA'TRED, n. s. J sive of a feeling contrary to love, and implying abhorrence, detestation, malignity, ill-will. Hateful is applicable either to the object or agent.

Those old inhabitants of thy holy land tbou hatest for doing most

odious works. Wisdom xii. 4. -

You are, I think, assured I love you not.

— Your majesty hath no just cause to hate me.

Shakspeare. My name's Macbeth.

— The devil himself could not pronounce a title More hateful to mine ear. Id.

Whilst he stood up and spoke, He was my master, and I wore my life To spend upon his haters. Id.

Do all men kill the thing they do not love ?

— Hates any man the thing he would not kill ?

— Every offence is not a hate at first. Id.

I wish I had a cause to seek him there, To oppose his hatred fully. Id.

I of her understood of that most noble constancy, which whosoever loves not, shows himself to be a hater of virtue, and unworthy to live in the society of mankind. Sidney.

All their hearts stood hatefully appald Long since. Chapman.

What owe I to his commands Who hates me, and hath hither thrust me down, To sit in hateful office here confined, Inhabitant of heaven, and heavenly born ?

Milton.

I hear the tread Of hateful steps ; I must be viewless now. Id.

The only righteous in a world perverse And therefore hated. Id. Paradise Lost.

An enemy to God, and a hater of all good.

Browne.

Palamon, compelled No more to try the fortune of the field ;

And, worse than death, to view with hateful eyes His rival's conquest. Dryden.

Hate to Mezentius, armed five hundred more. Id.

But whatsoever our jarring fortunes prove, Though our lords hate, methinks we two may love.

Id.

Hatreds are often begotten from slight and almost innocent occasions, and quarrels propagated in the world. Locke.

Hatred is the thought of the pain which any thing present or absent is apt to produce in us. Id.

Hatred is the passion of defiance, and there is a kind of aversation and hostility included in its very essence ; but then, if there could have been hatred in the world when there was scarce any thing odious, it wou.d have acted within the compass of its proper object. South.

They never wanted so much knowledge as to in-form and convince them of tne unlawfulness of a man's being a murderer, an Jiater of God, and a covenant-breaker. Id.

Hatred has in it the guilt of murder, and lust the guilt of adultery. Sherlock.

Retain no malice nor hatred against any : be ready to do them all the kindness you are able. Wake.

3 HAT

But Umbriel, hateful gnome ! forbears not so ; He breaks tbe phial whence the sorrows flow. Pope.

She is a Presbyterian of the most rank and viru-lent kind, and consequently has an inveterate hatred to the church. Swift.

Nausicaa teaches, that the afflicted are not always the objects of divine hate.

Broome's Notes on the Odystey.

Why dost thou shun the salt ? that sacred pledge, Which, once partaken, blunts the sabre's edge, Makes even contending tribes in peace unite, And hated hosts seem brethren to the sight.

Byron. Corsair.

HATFIELD, or BISHOP'S HATFIELD, a market town of Hertfordshire, nineteen miles and a half north of London. It was called Bishop's Hatfield > because it belonged to the Bishop of Ely. Theodore, archbishop of Canterbury, held a synod in it, A.D. 681, against the Eutychian heresy. 1 1 had once a royal palace,wherein prince William, son of Edward III., was born, and whence Ed-ward VI. and queen Elizabeth were conducted to the throne. King James I. exchanged the manor with Sir Robert Cecil, afterwards lord Salisbury, for Theobalds; and the lordship still remains in that noble family, who have a fine seat here. The rectory is reckoned worth £800 a-year. Here are two charity schools, and a market on Thursdays, with fairs in April and October. Hatfield is seven miles W.S.W. of Hertford.

HATFIELD BROAD OAK, HATFIELD REGIS, or KING'S HATFIELD, a town of Essex, seated on a branch of the Lea, twenty-nine miles N. N. E. of London ; so called from its tenure by king William the Conqueror and his successors, and from a broad oak growing in the town. The church is an ancient Gothic structure, having a curious monument and cross-legged effigy to the memory of Robert Vere, the first earl of Oxford, lord high chamberlain of England. A priory of black canons was founded here by his ancestors. It formerly had a market on Saturday. It lies eight miles south-west of Dunmow.

HATHAZ, a town of Hungary, in the county of Szabolcs, belonging to the tribe of Haiduks, and containing 4000 inhabitants, chiefly Calvinists. Eleven miles north of Debreczin.

HATHERLEIGH, a town of Devonshire, near the conflux of the Towridge and Ock. It has a considerable woollen manufacture, and markets on Tuesday and Friday. It is twenty-eight miles W. N. W. of Exeter, and 201 west of London.

HATTEMISTS, in ecclesiastical history, a modern Dutch sect, so called from Pontian Van Hattem, a minister in Zealand, towards the close of the seventeenth century, who, being addicted to the sentiments of Spinoza, was degraded from his pastoral office. The Verschorists and Hat-temists resemble each other in their religious systems, though they never formed one communion. The founders of these sects deduced from the doctrine of absolute decrees a system of uncontrollable necessity; they denied the difference between moral good and evil, and the corruption of human nature : whence they concluded, that mankind were under no obligation to correct their manners, improve their minds, oi

obey the divine laws ; that the whole of religion consisted not in acting, but in suffering; and that all the precepts of Jesus Christ are reducible to this one, that we bear with cheerfulness and patience the events that happen to us through the divine will, and make it our constant and only study to maintain a permanent tranquillity of mind. Thus far they agreed ; but the Hat-temists farther affirmed, that Christ made no expiation for the sins of men by his death, but had only suggested to us by his mediation, that there was nothing in us that could offend the Deity ; this, they say, was Christ's manner of justifying his servants, and presenting them blameless before the tribunal of God. It was one of their distinguishing tenets, that God does not punish men for their sins, but by their sins. These two sects, says Mosheim, still subsist, though they no longer bear the names of their founders.

HA'TTER, v. a. Perhaps corrupted from batter. To harass; to weary; to wear out with fatigue.

He's hattered out with penance. Dryden.

HATTERAS CAPE, one of the most dangerous and most remarkable capes on the coast of the United States, North America : it is the salient point of the sand-bank that encloses Pamlico Sound, North Carolina, in N. lat. 35° 15'. Off the cape is a cluster of shoals, at the distance of five leagues, with channels within them. In bad weather the combined forces of the gulf stream, and the winds, produce the most tremendous breakers on these shoals; but in fair weather they may be sailed over by vessels of eight or nine feet. Their seaward, or exterior edge, goes off perpendicularly from ten fathoms to no soundings, and by a comparison of the old and modern charts they seem to have greatly decreased. A little north of Cape Hatteras, with the wind off shore, a boat may land and procure fresh water by

digging a foot or two deep in the sand of the beach.

HATTIA ISLE, alow island of Bengal, formed by the mud of the great rivers Brahmapootra and Ganges, at their junction with the ocean in Ben-gal Bay. In length it is about fourteen miles, by ten the average breadth. At spring tides, during the rains, it is nearly submerged. Salt of an excellent quality is manufactured here for the company.

HAVANNAH, a city of the West Indies, the capital of the Island of Cuba, is situated on the north coast, at the mouth of the Lagida. Its port is capable of containing 1000 ships in perfect shelter; the depth generally six fathoms. The entrance is by a passage one mile and a half long, and very narrow, and three large ships have been sunk in it to render it more difficult. It is defended by the Morro Castle on the" east, and by the fort of Punta on the west. The Morro is situated on an elevation that renders it impossible to cannonade it from shipping ; it consists of two bastions towards the sea, and two towards the land, with a covered way and deep ditch cut in the rock, and can bring many guns to bear on the entrance of the harbour. Punta fort is situated on a low point, and forms a square, with casemates, and a ditch cut in the rock. The other fortifications are numerous and

formidable. The city is on the west side ol the port. When old Spain preserved the command of her colonies, the annual fleet sailed from the Havannah in September, and, besides merchandise, it usually conveyed 30,000,000 of piastres in coin. A packet sailed from Corunna to the Havannah and Porto Rico every month. The city contains eleven churches, two hospitals, a dockyard, lazaretto, and numerous public buildings ; an aqueduct supplies the shipping with water, and turns the saw-mills in the dockyard. The houses, which are elegant, are mostly of stone. There are several convents ; and the great square is a fine ornament to the place. The churches are magnificently ornamented with gold and silver lamps, images, &c. The manners of the inhabitants are said to be polished, and they have societies for the encouragement of the arts and sciences. The importance of this city and harbour has caused it to be repeatedly attacked. In 1536 it was taken by a French pirate, but ransomed for 700 dollars ; it was again taken by the English, and by the French, and by the Buccaneers ; but the most memorable attack was that by the British in 1762. Admiral Sir George Pococke and lord Albemarle conducted a fleet and troops to the Havannah; and after a determined resistance of two months and eight days, on the 1 4th of August, the Moro Castle and place surrendered, as well as a district of 180 miles to the west of the town.

The victors captured nine sail of the line ; three more were sunk by the Spaniards ; two on the stocks were burnt ; and a great many merchant vessels completed the spoil. The merchandise and specie found in the place was supposed to amount in value to £3,000,000 sterling. This city was restored to Spain at the peace of 1763; since which the government has been often employed in increasing its strength and resources. The trade is computed to amount, by importations (the exportations being chiefly in sugar, wax, and coffee), to £20,000,000 of piastres. Population 25,000.

HAU'BERK, n. s. Old Fr. hauberg. A coat of mail ; a breastplate.

and at the last

The statue of Mars began his Jiaulerke ring ;

And with that soun he heard a murmuring

Full low and dim, that sayde thus Victorie,

For which he yaf to Mars honour and glorie.

Chaucer. The Knightei Tale. And over that a fin hauberk Was all ywrought of jewes work, Ful strong it wos of plate.

Id. The Rime of Sire Thopai. Him on the hauberk struck the princess sore, 'That quite disparted all the linked frame,

And pierced to the skin. Faerie Queene.

Hauberks and helms are hewed with many a wound ; The mighty maces with such haste descend, They break the bones, and make the solid armour bend. Dryrlen.

HAVE, v. a. in the piesent I have, thou hast, he hath; we, ye. they have ; pret. and part. pass. had. Sax. pabban ; Fr. avoir; Ital. avcre ; Goth. haban ; Dut. hebben. In the Maeso-Goth. we have haba and hnbaith ; whose progress a ago, aha, ha, havu, says Mr. Thomson, was easily traced to the Latin habeo.

HAV

Not to be without.

I have brought him before you, that after examination had, I might haw something to write.

Acts xxv. 26.

To carry ; to wear.

Upon the mast they saw a young man, who sat as on horseback, having nothing upon him. Sidney.

To make use of.

I have no Levite to my priest. Judges.

To possess.

He that gathered much had nothing over, and he that gathered little had no lack. Exod. xvi. 18.

He that his hand wol put in this mitaine, He shal have multiplying of his graine.

Chaucer. The Pardoneres Tale.

To obtain ; to enjoy ; to possess.

Now, O Father, glorify me with thine own self, with the glory which I had with thee before the world was. John xvii. 5.

To take ; to receive.

A secret happiness in Petroriius is called curiosa felicitas, and which I suppose he had from the feliciter audere of Horace. Dryden.

To be in any state ; to be attended with or united to as accident or concomitant.

Have I need of madmen, that ye have brought this fellow ? 1 Sam. xxi. 15.

To put ; to take.

That done, go and cart it, and have it away.

Timer.

To procure ; to find.

I would have any one name to me that tongue, that one can speak as he should do, by the rules of grammar. Locke. Not to neglect ; not to omit.

Have mercie on our woe and our distresse Some drope of pitee thurgh thy gentillesse Upon us wretched wimmen let now falle.

Chaucer. The Knightes Tale.

I cannot speak, if my heart be not ready to burst. — Well, sweet Jack, have a care of thyself.

Shakspeare.

Your plea is good ; but still I say beware : Laws are explained by men j so have a care.

Pope.

To hold ; to regard. Of the maid servants shall I be had in honour.

2 Sam. The proud have had me greatly in derision.

Psalms.

To maintain ; to hold opinion. Sometimes they will have them to be natural heat, ivhjereas some of them are crude and cold ; and sometimes they will have them to be qualities of the tangible parts, whereas they are things by themselves.

Bacon. To contain.

You have of these pedlars that have more in them than you think, sister. Shakspeare.

1 will never trust a man again for keeping his sword clean ; nor believe he can have every thing in him by wearing his apparel neatly. Id.

To require; to claim.

What would these madmen have 1 . ‘ • First they would bribe us without pence, Deceive us without common sense,

And without power enslave. Dryden.

To be a husband or wife to another. If I had been married to him, for all he was in wo-man’s apparel, I would not have had him. Shakspeare.

To be engaged, as in a task or employment.

If we maintain things that are established, we have to strive with a number of heavy prejudices, deeply rooted in the hearts of men. Hooker.

The Spaniard’s captain never hath to meddle with his soldiers’ pay. Spenser on Ireland.

Of the evils which hindered the peace and good ordering of that land, the inconvenience of the laws was the first which you had in hand. Spenser.

Kings have to deal with their neighbours, their wives, their children, their prelates or clergy, their nobles, their merchants., and their commons. Bacon.

To. wish; to desire; in a lax sense.

I had rather be a door-keeper in the house of my God, than to dwell in the tents of wickedness.

Psalms.

I would have no man discouraged with that kind of life or series of actions, in which the choice of others, or his own necessities may have engaged him.

Addison.

To buy.

If these trifles were rated only by art and artful-ness, we should have them much cheaper. Collier.

It is most used in English, as in other European languages, as an auxiliary verb to make the tenses ; have, hast, and hath, or has, the pre-terperfect ; and had, and hadst, the preterpluper-fect.

If there had been words enow between them to have expressed provocation, they had gone together by the ears. Congreve.

I have heard one of the greatest geniuses this age has produced, who had been trained up in all the po-lite studies of antiquity, assure me, upon his being obliged to search into records, that he at last took an incredible pleasure in it. Addison.

I have not here considered custom as it makes things easy, but as it renders them delightful ; and, though others have made the same reflections, it is possible they may not have drawn those uses from it.

Id.

That admirable precept which Pythagoras is said to hav given to his disciples, and which that philosopher must have drawn from the observation I have enlarged upon. Id.

The gods have placed labour before virtue. Id.

This observation we have made on man. Id.

Evil spirits have contracted in the body habits of lust and sensuality, malice, and revenge. Id.

Their torments have already taken root in them. Id. \

That excellent author has shown how every particular custom and habit of virtue will, in its own na-ture, produce the heaven, or a state of happiness, in him who shall hereafter practise it. Id.

Have at, or with, is an expression denoting resolution to make some attempt. They seem to be imperative expressions ; have this at you ; let this reach you ; or take this ; have with you ; take this with you ; but this will riot explain have at it, or have at him, which must be considered as more elliptical ; as, we will have a trial at it, or at him.

He that will caper with me for a thousand marks, let him lend me the money, and have at him.

Shakspeare.

I can hear my part j ‘tis my occupation : have at it with you. _ I&*

I never was out at a mad frolick, though this is the maddest I ever un i.Ttook ; have with you lady mine ; I take you at your word. Dryden.

HAVEL, a navigable river of the north of Germany, which rises in the duchy of Mecklenburg, near Klatzeberg, joins the Spree near Spandau, passes by Old and New Brandenburg, and falls into the Elbe below Havelberg. It flows through a number of lakes, and often overflows its banks.

HA'VEN, n. s. l Fr. havre ; Dut. haven. HA'VENER, n.s] A port ; harbour ; a station for ships ; the overseer of a port ; and figuratively a shelter or asylum.

Hardy he wos and wise, I undertake : With many a tempest hadde his herd beshake, He knew wel alle the havens as they were, Fro Gotland to the Cape de Finistere, And every creke in Bretagne and in Spain : His barge ycleped wos the Magdelaine.

Chaucer. Prologue to Canterbury Talet.

Order for sea is given : They have put forth the haven.

Shakspeare.

All places that the eye of heaven visits, Are to a wise man ports and happy havens. Id. After an hour and a half sailing, we entered into a good haven, being the port of a fair city. Bacon.

These earls and dukes appointed their special officers, as receiver, havener, and customer. Carew.

The queen beheld, as soon as day appeared, The navy under sail, the haven cleared. Denham. Love was threatened and promised to him, and his cousin, as both the tempest and haven of their best years. Sidney.

We may be shipwrecked by her breath : Love, favoured once with that sweet gale, Doubles his haste, and fills his sail, Till he arrives, where she must prove The haven, or the rock of love. Waller.

HA'VER, n. $. From have. Possessor; holder.

Valour is the chiefest virtue, and Most dignifies the haver. Shakspeare.

HA'VER is a common word in the northern countries for oats ; as, haver bread for oaten bread; perhaps properly aven, from Latin avena.

When you would anneal, take a blue stone, such as they make haver or oat cakes upon, and lay it upon the cross bars of iron. Peacham.

HAVERCAMP (Sigibert), a celebrated Dutch scholar and critic, professor of history, eloquence, and Greek, at Leyden. He was the author of some esteemed works on medals ; and published elegant editions of several Greek and Latin authors. He died at Leyden, in 1742, aged fifty-eight.

HAVERFORDWEST, a neat, well-built, and populous town of South Wales, in Pembroke-shire, on the side of the hill, which forms a part of the west bank of the Dongledye, 252 miles from London. It is an incorporated town and county of itself, governed by a mayor, sheriff, town-clerk, two bailiffs, and other officers The mayor is admiral, coroner, escheater, and clerk of the markets. The people enjoy a good trade. The town enjoys several privileges, and has its own courts : and the county assizes are held in it. It has four churches, a commodious quay for ships of burden, a custom-house, and a fine stone bridge over the Dongledye, with a good free-school, a charity school, and an aims-house.

It was formerly fortified with a rampart and castle, now demolished.

HAVERHILL, a post town of Massachusetts, in Essex county, on the north side of the Merrimack ; over which is an elegant bridge with three arches, connecting it with Bradford, 650 feet long, and thirty-four broad. It contained 2408 inhabitants in 1795 ; and lies thirty-two miles north by west of Boston, and 380 from Philadelphia. Long. 3° 58' E. of that city, lat. 42° 46' N.

HAVERHILL, a town of New Hampshire, capital of Grafton county, on the east side of the Connecticut, opposite Newbury, thirty-two miles above Dartmouth College, and 496 north-east of Philadelphia. Long. 3° 5' E., of that city, lat. 44° 6' N.

HAVERHILL, a post town of Grafton county, New Hampshire, on the Connecticut, opposite Newbury, with which it is connected by a

bridge ; twenty-seven miles north of Dartmouth College, thirty-one N. N. W. of Plymouth, 119 north-west of Portsmouth, and 522 from Washington. In the south-west part of the town there are a court house, gaol, academy, and a congregational meeting-house : it is a place of considerable business. The courts for the county are held alternately here and at Plymouth.

HAVERHILL, a post town of Essex county, Massachusetts, at the head of a navigation on the north side of the Merrimack, eighteen miles from its mouth, opposite Bradford ; fifteen miles W. S. W. of Newburyport, eighteen S. S. W. of Exeter, nineteen N. N. W. of Salem, thirty north of Boston. It is a pleasant, handsome, and flourishing town, and contains a bank, two cotton and woollen manufactories, two printing offices, from one of which a weekly paper is issued, a public library, and four houses of pub-lic worship, three for Congregationalists, and one for Baptists. The compact part of the town is built on the declivity of a hill, in two streets, the principal of which runs parallel with the river. A number of the houses are elegant ; and it has considerable manufactures of leather, hats, plated ware, and shoes. Considerable ship-building business is done here. The river is navigable for vessels of 100 tons. Here is an elegant bridge across the Merrimack connecting Haverhill with Bradford, with three arches of 180 feet each, supported by three handsome stone piers, forty feet square.

HAVERILL, a town of England, partly in Essex, and partly in Suffolk. It has a considerable manufactory of checks, cottons, and fustians. It is twenty miles south-east of Cambridge, and fifty-nine N. N. E. of London.

HAUGHT, adj. ~\ Fr. haut, hautaine, HAUGHT'ILY, adv. f from Lat. altus. High; HAUGHT'IXESS, n. s. I lofty; proud; imperi-HAUGHT'Y, adj.) ous ; insolent ; bold ; generally descriptive of carriage or behaviour.

There is no lady so hauteine Duchesse, countesse, ne chastelaine, That I n'olde holde her ungodely For to refuse him utterly.

Chaucer. Romaunt of the Rote.

HAU

His courage haught.

Desired of foreign foemen to he known, And fax abroud for strange adventures sought.

Spenser.

Who now shall give me words and sound Equal unto this haughty enterprize ?

Or who shall lend me wings, with which from

ground My lowly verse may loftily arise ? Faerie Queene.

The proud insulting queen, With Clifford and the haught Northumberland, Have wrought the easy melting king, like wax.

Shakspeare.

No lord of thine, thou haught insulting man; Nor no man's lord. **• •

His wife being a woman of a haughty and imperious nature, and of a wit superior to his, quickly resented the disrespect she received from him. Clarendon.

Before the cloudy van On the rough edge of battle ere it joined, Satan with vast and haughty strides advanced. Came towering armed in adamant and gold.

Milton.

I shall sing of battles, blood and rage, And haughty souls, that, moved with mutual hate, In fighting fields pursued and found their fate.

Dry den.

Her heavenly form too haughtily she prized ; His person hated, and

his gifts despised. Id.

By the head we make known our supplications, our threatnings, our mildness, our haughtiness, our love, and our hatred. Id.

Our vanquished wills that pleasing force obey ; Her goodness takes our liberty away. And haughty Britain yields to arbitrary sway.

Prior.

When mannakins with haughty step advance And grasp the shield, and couch the ouivering lance.

Eeattie.

The crag is won — no more is seen His Christian crest and haughty mien.

Byron. The Giaour.

Still one great clime in full and free defiance Yet rears her crest ; unconquered and sublime, Above the far Atlantic ! — She has taught Her Esau brethren, that the haughty flag, The floating fence of Albin's feeble crag, May strike to those whose red right hands have bought Rights cheaply earned with blood. Byron.

HA'VING, n. s. From have. Possession; estate ; fortune.

My having is not much ; I'll make division of my present with you ; Hold, there's half my coft'er. Shakspeare.

The act or state of possessing. Of the one side was alledged the having a picture, which the other wanted ; of the other side, the first striking the ihield. Sidney.

Thou art not for the fashion of these times, Where none will sweat but for promotion ; And having that, do choak their service up, Even with the having.

Shakspeare. As You Like It. Behaviour ; regularity. This is still retained in the Scottish dialect. It may possibly be the meaning here.

The gentleman is of no having : he kept company •with the wild prince and Poins : he is of too high a region : he knoweth too much. Shakxpeare.

HA'VIOUR, n. s. For behaviour Conduct; manners. Not used.

Their ill haviour garres men missay Both of their doctrines and their fay.

Spentm.

HAUKSBEE (F.), an English electrician of the last century, who first observed that a glass tube closed at one end and rendered electric by friction attracted from a certain distance metallic leaves, and again forcibly repelled them. He made many other experiments, the details of which are published in the Transactions of the Royal Society, and collected his discoveries in his Physico-mechanical Experiments, on various subjects, touching light and electricity, producible on the attraction of bodies : with an explanation of all the apparatus used in the experiments; London, 1709, 4to. republished in 1719, and translated into Italian and French. He also wrote Proposals for a Course of Chemical Experiments, London, 1731, 4to. ; and An Essay for introducing a Portable Laboratory, 1731, 8vo. The time of his, death is unknown. See ELECTRICITY.

HAUL, v. a. &n. s. Fr. fiakr. To pull; to draw ; to drag by violence. A word which, applied to things, implies violence ; and to persons, awkwardness or rudeness. This word is liberally exemplified in hale ; etymology is regarded in hale, and pronunciation in haul.

Thy Dol, and Helen of thy noble thoughts, Is in base durance and contagious prison, Hauled thither by mechanick dirty hands.

Shahipeare.

The youth with songs and rhimes, Some dance, some haul the rope. Dertham.

Some the wheels prepare, And fasten to the horses feet; With cables haul along the' unwieldy beast.

Dryden.

Thither they bent, and hauled their ships to land ; The crooked keel divides the yellow sand. Pope.

In his grandeur he naturally chuses to haul up others after him whose accomplishments most resemble his own. Swift.

Romp-loving miss Is hauled about in gallantry robust.

Thomson. The leap, the slap, the haul. Id.

To HAUL, among seamen, implies to pull a single rope, without the assistance of blocks or other mechanical powers. When a rope is otherwise pulled, as by the application of tackles, or the connexion with ˆblocks, &c., the term is changed into bowsing.

To HAUL THE WIND is to direct the ship's course nearer to that point of the compass from which the wind arises. Thus, supposing a ship to sail south-west with the wind northerly, and some particular occasion requires to haul the wind more westward ; to perform this operation, it is necessary to arrange the sails more obliquely with her keel ; to brace the yards more forward, by slackening the starboard and pulling in the larboard braces, and to haul the lower sheets further aft; and, finally, to put the helm a-port, i. e. over to the larboard side of the vessel. As soon as her head is turned directly to the westward, and her sails are trimmed accordingly, she is said to have hauled the wind four points ; that is to say, from south-west to west. She may still go two points nearer to the direction of

the wind, by disposing her sails according to their greatest obliquity, or, in the sea phrase, by trimming all sharp ; and in this situation she is said to be close hauled, as sailing W. N. W.

HAUM, HAME, or HALM, n. s. Sax. healm ; Dut. and Dan. halm. Straw.

In champion countrie a pleasure they take To mow up their Itaume for to brew and to bake : The haume is the straw of the wheat or the rie, Which once being reaped, they mow by and by.

Tusser.

Having stripped off the haum or binds from the poles, as you pick the hops, stack them up.

Mortimer.

HAUNCH, n. s. Fr. hanche ; Dut. hancke ;" Ital. anca. The thigh; the hind hip; the rear; the hind part.

Hail, groom ! didst thou not see a bleeding hind, Whose right haunch earst my stedfast arrow strake?

Spenser.

Thou art a summer bird. Which ever in the haunch of Winter sings The lifting up of day. Shahspeare.

To make a man able to teach his horse to stop and turn quick, and to rest on his haunches, is of use to a gentleman both in peace and war. Locke.

The HAUNCHES OF A HORSE are too long, if when standing in the stable he limps, with his hind legs farther back than he ought; and when the top of his tail is not in a perpendicular line

Foul spirits /taunt my resting place, And ghastly visions break my sleep by night.

Fairfax.

The ancient Grecians were an ingenious people, of whom the vulgar sort, such as were haunters of theatres, took pleasure in the conceits of Aristophanes.

Wotton on Education. Earth now Secured like to heaven, a seat where gods might

dwell,

Or wander with delight, and love to haunt Her sacred shades. Milton.

A man who for his hospitality is so much haunted, that no news stir but come to his ears. Sidney.

Now we being brought known unto her, after once we were acquainted, and acquainted we were sooner than ourselves expected,

she continually almost haunted us. Id.

She this dangerous forest haunts And in sad accents utters her complaints.

Waller.

O goddess, haunter of the woodland green, Queen of the nether skies ! Dryden.

We set toils, nets, gins, snares, and traps, for beasts and birds in their own haunts and walks.

L'Estrange.

To me pertains not, she replies, To know or care where Cupid flies ; What are his haunts, or which his way, Where be would dwell, or whither stray. Prior. The haunt you have got about t.e courts will one

to the tip of his hocks, as it always is in horses day or another bring your family to beggary.

whose haunches are of a just length. Some horses, though they have too long haunches, yet commonly walk well : such are good to climb hills, but are not at all sure upon a descent ; for they cannot ply their hams, and never gallop slowly, but always nearly upon a full speed. The art of riding has not a more necessary les-son than that of putting a horse upon his haunches ; which is called coupling him well, or putting-him well together, or compact. A horse that cannot bend or lower his haunches, throws himself too much upon his shoulder, and lies heavy upon the bridle.

HAUNT, v. a., v. n. & n. s. 3 Fr, hauler. To

HAUNTER, n. s. 3 frequent or be

much about any place or person, always

used in a bad sense: a practice or habit; a

place in which one is frequently found, for

Id.

Arbuihnot.

A scene where, if a god should cast his sight, A god might gaze and wonder with delight ! Joy touched the messenger of heaven ; he stayed, Entranced, and all the blissful haunts surveyed.

Pope.

Celestial Venus haunts Idalia’s groves ;

Diana Cynthus, Ceres Hybla loves.

All these the woes of Oedipus have known,

You fates, you furies, and your haunted town.

Id.

Oh, could I see my country seat ! There leaning near a gentle brook, Sleep, or peruse some ancient book ; And there in sweet oblivion drown Those cares that haunt the court and town.

Swift.

Through glades and glooms the mingled measure stole,

bad purposes or deeds; an unwelcome visitor : °/ °‘e/ some A««rfCd stream with fond delay,

it is especially used with reference to spectres and apparitions.

A good wif was there of beside Bathe ; But she was som del defe, and that was scathe. Of cloth making she had swiche an haunt, She passed hem of Ipres, and of Gaunt.

Chaucer. Prologue to Canterbury Tales. That other marchandise, — that men hatmten with fraude, and trecherie, and deceit, with lesinges and false othes, — is right cursed.

Id. The Persones Tale. There now he lives in everlasting ioy With many of the gods in company, Which thether haunt, and with the winged boy, Sporting himselfe in safe felicity.

Spenser. Faerie Qweene.

I’ve charged thee not to haunt about my doors : In honest plainness thou hast heard me say, My daughter’s not for thee. Shakspeare. Othello.

Where they most breed and haunt I have observed The air is delicate. Id. Macbeth.

Round an holy calm diffusing,

Love of peace and lonely musing

In hollow murmurs died away. Collins’ Odes.

Or when the setting Moon in crimson dyed Hung o’er the dark and melancholy deep, To haunted stream remote from man he hied, Where fays of yore their revels wont to keep.

Beattie,

Ye, to whom the tops

Of mountains inaccessible are haunts, And earth’s and ocean’s caves familiar things — I call upon ye by the written charm which gives rtc power upon you — Rise ! appear ‘.

Byron. Manfred.

HAV’OCK, n. s., inter j. & v. a. Welsh, hafog; from Goth, havega, to destroy. Devastation, waste, and ruin : to lay waste or destroy. Havock, the interjection, is an old word of encouragement to slaughter.

Saul made haccck of the church.

Ads viii. 3.

Having been never used to have any thing of their own, they make no spare of any thing, but havock and confusion of all they meet with. Spenser.

Whatsoever they leave, the soldier spoileth and fiavocketh ; so that, between both, nothing is left.

Id. Why stand these royal fronts amazed thus ?

Cry, HavOck, kings ! Shakspeare.

Ate by his side,

Cries, Havock ! and lets loose the dogs of war. Id.

See, with what heat these dogs of hell advance. To waste and havock yonder world, which I S> fair and good created ! Milton.

The Rabbins, to express the great Jutvock which has been made of the Jews, tell us, that there were such torrents of holy blood shed, as carried rocks of. a hundred yards in circumference above three miles into the sea. Addison.

Ye gods ! what havock does ambition make

Among your works ‘ Id. Cato.

If it had either air or fuel, it must make a greater iuwock than any history mentions. Cheyne.

HAVRE DE GRACE, a commercial sea-port of France, is seated on the right bank of the Seine, one league from Cape La Heve. It is built on an acclivity between two hills ; and is surrounded by high walls, with ditches and a citadel. Its harbour dries at low water : it has twelve feet in common tides, and twenty-five in high springs. It has also the singular advantage that the tide does not begin to fall until three hours after high water ; the cause of which seems to be, that the current of the Seine, crossing the harbour’s mouth with great force at the beginning of the ebb, confines the water in the harbour. It has 20,000 inhabitants, and is a maritime prefecture. The favorable situation of Havre, communicating with Paris by the Seine, renders it

extremely commercial. Before the late war it had a considerable West India trade, and a number of vessels in the Greenland and Newfoundland fisheries. The passage from Southampton to Havre being much frequented, the latter is often the first French town that meets the eye of an Englishman ; and, though not inferior to most places of its size, is confined and dirty in appearance. The streets are narrow, and formed of high wooden-framed houses : there are no public buildings of importance. As Normandy is a corn country there is a frequent export of that article, particularly to the southern provinces of France. The merchandise taken back by foreigners from Havre consists in colonial produce, woollen and linen, corn, cyder, and fruits. Havre is much frequented by French coasters from the west and south. The manufactures, which are on a small scale, are sailcloth, cordage, tobacco, lace, and earthenware. That of tobacco is of old standing. Here are also several building docks, and a sugar re-finery. Havre was put into a state of defence in the reign of Francis I. ; but its fortifications weie brought to their present perfection under Buonaparte. To his government it likewise owes several improvements in the harbour and docks, and the erection of two lighthouses, on a perpendicular cliff about a league from the town. It was bombarded by the British in 1759, 1794, and 1795. It is forty-five miles west of Rouen, and 112 north-west of Paris. VOL. XI.

HAU RIANT, in heraldry, a term peculiar to fishes; signifying their standing upright, as if refreshing themselves by sucking in the air. See HERALDRY.

HAURUCA ISLE, one of the Amboyna Isles, a small island in the eastern seas, about twenty-five miles in circumference. Long. 128° 40’ E. lat. 3° 40’ S.

HAUSRUCKVIERTEL, *i.e.* the Quarter of Hausrude, a circle of Upper Austria, bounded by the Danube, the circle of the Traun, and Bavaria. It was formerly of more than double its present extent of about 733 square miles ; for, after the disastrous campaign of 1809, the western part was ceded to Bavaria. This district is named after the Hausruck, a mountain and great forest within its circuit. The most remarkable circumstance here is a subterraneous bed of wood, impregnated witli bituminous matter. Wood deposited in the shafts of the mines becomes speedily impregnated with bitumen. In the summer of 1817, part of the mountain having fallen in, its place was occupied by a lake : ten cottages on the verge of the mountain were destroyed, but no lives lost. Population 109,000. The capital is Lintz.

HA'UTBOY, n. s. Fr. oboe, or haut and bois. A wind instrument.

I told John of Gaunt he beat his own name ; for you might have trussed him and all his apparel into an eel-skin : the case of a treble hautboy was a mansion for him. Shakspeare.

Now give the hautboys breath j he comes, he comes.

Dryden.

The HAUTBOY is shaped much like the lute ; only it spreads and widens towards the bottom, and is sounded through a reed. The treble is two feet long ; the tenor goes a fifth lower when blown open : it has only eight holes ; but the bass, which is five feet long, has eleven. The name is French, haut bois, q. d. high wood ; and is given to this instrument because the tone of it is higher than that of the violin.

HAUTBOY STRAWBERRY. See FRAGARIA and STRAWBERRY.

HAUTE FEUILLE (John), an ingenious mechanic, born at Orleans in 1647. Though he was an ecclesiastic, and enjoyed several benefices, he applied almost his whole life to mechanics, in which he made a great progress. He had a particular taste for clock-work, and made several discoveries in it that were of singular use. He found out the secret of moderating the vibration of the balance by means of a small steel spring, which has since been made use of. This discovery he laid before the members of the Academy of Sciences, in 1674 ; and these watches are called pendulum watches, not that they have real pendulums, but because they nearly approach to the justness of pendulums. M. Huygens perfected this happy invention ; but having declared himself the inventor, and obtained from Louis XIV. a patent for making watches with spiral springs, the abbe Feuille opposed the registering this privilege, and published a piece on the subject against M. Huygens. He wrote a great number of other pieces, most of whic'n are small pamphlets consisting of a few pages, but very curious ; as, 1 . The Perpetual Pendulum ; 4to.

G

HAW

2. New Inventions; 4to. 3. The Art of Breathing under Water, and the Means of preserving a Flame shut up in a small Place. 4. Reflections on Machines for raising Water. 5. On the different Sentiments of Malebranche and Regis, relating to the appearance of the Moon when seen in the Horizon. 6. Tb.9 Magnetic Balance. 7. A Placet to the King on the Longitude. 8. Letter on the Secret of the Longitude. 9. A New System on the Flux and Reflux of the Sea. 10. The Means of making sensible Experiments that prove the Motion of the Earth ; and many other pieces. He died in 1724.

HAUY (Rene Just, abbe), a French natural philosopher, eminent for his discoveries in crys-tallography, was the eldest son of a weaver in the town of St. Just, in the department of Oise, where he was born February 28th, 1743. He was brought up as a chorister in a church of the fauxbourg St. Antoine at Paris, and made considerable proficiency in music; but, being removed to the college of cardinal Lemoine, he contracted an acquaintance with the herbalist L'Hommond, and applied himself to the study of botany, and attended Daubenton's Lectures on mineralogy. The accidental fall of a specimen of calcareous spath, crystallised into prisms, led him to find in some of the fragments the form of the crystal rhomboides of the Iceland spath ; and from this circumstance the whole of his theory respecting crystals, the means of admeasuring them, &c., is said to have taken its origin. Admitted a member of the Academy of Sciences, in 1783, he continued his researches in mineralogy until the Revolution; when, refusing to take the oath to the new ecclesiastical authorities, he was displaced. But he soon after was made commissary of weights and measures, and succeeded Daubenton as lecturer on his favorite science of mineralogy. A favorite with Napo-eon, he now became professor of mineralogy at the Museum of Natural History, and of the faculty of sciences, at the academy of Paris. He died June 3d, 1822. His chief works are Essai sur la Theorie et la Structure des Cristaux, 1784; Traite de Mineralogie, 1801, 4 vols. 8vo. ; Traite" e"lementaire de Physique, 1803, 2 vols. 8vo. ; Tableau comparatif des resultats de la Cristallographie, 1809; Traite dps Carac-teres Physiques des Pierres Precieuses, 1817; Traite" de Cristallographie, 1822, 2 vols. 8vo., with an atlas. He also published papers in the Journal des Mines, periodical works.

HAW, n.s. Sax. baˆ; Goth, hag, haiga. The btrry and seed of the hawthorn. An excrescence in the eye. Sax. ba;$a; Dan. haw, a garden. A small piece of ground adjoining to a house. In Scotland they call it haugh.

The seed of the bramble with kernel and haw.

Tusser. Store of haws and hips portend cold Winters.

Bacon's Natural History,

Upon the haw at Plymouth is cut out in the ground the portraiture of two men, with clubs in their hands, whom they term Gog and Magog. Carew.

His quarrel to the hedge was, that his thorns and his brambles did not bring forth raisins, rather than haws and blackberries. L' Estrange.

HAW, v. n. Perhaps corrupted from hawk or

hack To speak slowly with frequent inter mission and hesitation.

Tis a great way ; but yet, after a little humming and hawing upon't, he agreed to undertake the job.

L'Estrange.

HAWEIS (Thomas), an English Calvinistic divine, was born at Truro in Cornwall, in 1734. He was brought up an apothecary, but went to Christ Church College, Cambridge, and took the degree of B.A. : on taking orders he became assistant to Mr. Madan at the Lock Hospital, and obtained, on his recommendation, the living of Aldwinkle in Northamptonshire, on the condition that he should at a certain time resign it. This he however refused to perform, and much controversy ensued, until a compromise was effected by the interference of the countess of Huntingdon. Mr. Haweis was entrusted with the care of the chapels and seminary for students in divinity, founded by that lady ; and late in life took the degree of M. D. He died in February 1820. His chief works are a volume of Sermons ; A Commentary on the Bible, 2 vols. folio ; History of the Church, 3 vols. 8vo. ; Life of the Rev. William Romaine, 8vo. ; State of Evangelical Religion throughout the World, 8vo.

HAWES (William), M.D., founder of the Royal Humane Society, was

born at Islington, November 28th, 1736, and educated at St. Paul's school. Brought up to the profession of an apothecary, he practised in the Strand until 1780, when he took his diploma as a physician; and, in 1773, became popular by his exertions in the establishment of the Humane Society, to the benefit of which he dedicated the whole of his after life. In the first instance he paid the rewards for the recovery of drowning persons out of his own pocket ; but was at length, by the assistance of Dr. Cogan, enabled to form the society. This benevolent physician died at Islington 5th of December, 1808. He wrote an Account of Dr. Goldsmith's last Illness (attributing his death to an improper administra tion of James's powders) ; An Address on Pre mature Death and Premature Interment; An Examination of the Rev. John Wesley's Primitive Physic ; An Address to the Legislature on the importance of the Humane Society ; An Address to the King and Parliament of Great Britain, with Observations on the general Bills of Mortality ; and Transactions of the Royal Hu-mane Society, from 1774 to 1784, dedicated by permission to the King.

HAWICK, a town in a parish of the same name in Roxburghshire, erected into a burgh of barony at a very early period, though its most ancient charters are lost. Queen Mary renewed its privileges, by a charter dated 1545. It is governed by two bailies, fifteen merchants, and fourteen trades' councillors. Its chief manufactures are carpets, serges, table-covers, rugs nar-row cloths, tapes, twists, hose, &c., and winnow-ing machines. Hawick is seated at the conflux of the Tiviot and the Slitbridge ; and lies fifteen miles south-west of Kelso.

HAWK, n. s. & v. n.~\ Sax. bapoc ; Welsh, HAW'KED, adj. (ˆhabeg, koch ; Lat. ac—

HAW'KER, n. s. i cipiter ; Germ. hock.

HAW'KWEED, n. s.) This word has a variety

of significations, as, a. bird of prey, anciently used in sport to catch birds : to fly hawks ; to fly at or attack on the wing. Hawked, formed

like a hawk's bill. Hawk, as derived from hoch, is to force up phlegm from the throat with a noise, from hock : to sell by proclaiming in the streets; and a hawker is one thus employed. Hawkweed is a plant. Of the birds there are several kinds, as goshawk, sparrowhawk, &c.

Gret was the sorwe for that haukes harme, That Canace and all hire women made.

C/umcer. The Squieres Tale.

There was the tirant with his fethers don And grene, I mene the goshauke, that doth pine To birdes, for his outrayious ravine.

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* ; the bardie sperhauke, eke

The quales foe. Id. The Assemble of Foules.

And in their tops the soring hauke did towre

Sitting like king of fowles in maiesty and powre. Spenser. Faerie Queene.

Come, sit, sit, and a song. — Shall we clap into't roundly, without hawking or spitting, or saying we are hoarse, which are the only prologues to a bad voice 1 Shakspeare.

Ride unto St. Alban's,

Whereas the king and queen do mean to hawk.

Id.

Do'st thou love hawking ? Thou hast hawks will

soar Above the morning lark. Id.

A faulcon tow'ring in her pride of place, Was by a mousing owl hawked at and killed. Id.

A long-winged hawk, when he is first whisteled off the fist, mounts aloft, and for his pleasure fetcheth many a circuit in the ayr, still soaring higher and higher, till he be come to his full pitch, and in the end, when the game is sprung, comes down amain, and stoops upon the sudden.

Burton's Anatomy of Melancholy.

Hawking comes near to hunting, the one ia the ayre as the other on the earth, a sport as much affected as the other, by some preferred. Id.

It can be no more disgrace to a great lord to draw a fair picture, than to cut his hawk's meat.

Peacham.

Blood, cast out of the throat or windpipe, is spit out with a hawking or small cough ; that out of the gums is spit out without hawking, coughing, or vomiting. Harvey.

Flat noses seem comely unto the Moor, an aquiline or hawked one unto the Persian, a large and prominent nose unto the Roman. Browne. Whether upward to the moon they go,

Or dream the Winter out in caves below,

Or hawk at flies elsewhere, concerns us not to know.

Dryden.

One followed study and knowledge, and another hawking and hunting. Locke.

He that hawks at larks and sparrows has no less sport, though a much less considerable quarry, than he that flies at nobler game. Id.

A falc'ner Henry is, when Emma hawks ;

With her of tarsels and of lures he talks. Prior.

She complained of a stinking tough phlegm which she hawked up in the mornings. Wiseman.

To grace this honoured day the queen proclaims, By herald hawkers high, heroick games : She summons all her sons ; an endless band Pours forth, and leaves unpeopled half the land.

Pope.

I saw my labours, which had cost me so much thought, bawled about by common hawkers, which I

once intended for the consideration of the greatest person. Swift.

His works were hawked in every street; But seldom rose above a sheet. Id.

Whence borne on liquid wing The sounding culver shoots ; or where the hawk, High in the beetling cliffs, his eyry builds.

Thornton.

HAWKE (Edward), lord Hawke, a brave British admiral, was the son of an eminent barrister, and entered into the navy at an early age. In 1734 he obtained the command of a man of war, and distinguished himself by his bravery in the famous engagement in 1744, wherein the British fleet was commanded by Matthews, Les-tock, and Rowley. See ENGLAND. In 1747 he was made rear-admiral of the White, when he defeated a large French fleet, and captured five ships of the line ; on which he was created a knight of the Bath. In 1759 he defeated admiral Conflans off Belleisle, and was rewarded with a pension of £2000 a-year. In 1765 he was appointed vice-admiral of Great Britain, and first lord of the admiralty. In 1 776 he was created a British peer, and died in 1781.

HAWKERS were anciently persons who went from place to place buying and selling brass, pewter, and other merchandise, which ought to be uttered in open market. In this sense the word is mentioned, 25 Hen. \ III., cap. 6., and 33, cap. 4. The appellation seems to have arisen from their uncertain wandering, like those who, with hawks, seek their game where they can find it. The term is now used as synonymous with pedlar; a person who travels about the country selling wares. Every hawker must take out an annual license, for which he must pay £4 ; and if he travels with a horse, ass, or mule, for every one of them £8. If he travels without a license, or contrary to it, he forfeits for every offence, to the informer, and the poor of the parish where discovered, £10. The acts relating to hawkers do not extend to makers of goods or their agents ; or to those who sell goods in fairs or markets ; to the sellers of fish, fruit, or other victuals ; nor to the venders of newspapers. But hawkers shall not, by virtue of such license, sell or offer to sale any tea or spirituous liquors, though with a permit, under the penalty of hav-ing the same seized, and imprisonment and prosecution of the offender.

HAWKESWORTH (John), LL.D. a celebrated English writer, born in 171 5, and brought up to the profession of a watchmaker. He was a member of the Rev. Mr. Bradbury’s church, from which he was

expelled for irregularity. He afterwards devoted himself to literature, and became an author of considerable eminence. In the early part of his life his cii cumstances were rather confined. He resided some time at Bromley, in Kent, where his wife kept a boarding school. He afterwards became known to a lady who had great property and interest in the East India Company, and through her means was chosen a director of that body. His Adventurer is his principal work, and its merits procured him the degree of LL. D. through archbishop Herring. When the design of com piling a narrative of the discoveries in the South

Seas was on foot, he was recommended as a proper person to be employed on the occasion : but the performance did not answer the public expectation. Works of taste and elegance, where imagination and the passions were to be affected, were his province ; not works of dry, cold, accurate narrative. However, he executed his task, and received for it the enormous sum of £6000. He died in 1773, some say of high living, others, of chagrin from the ill reception of his Narrative. On a handsome marble monument at Bromley, m Kent, is the following inscription, the latter part of which is taken from the last number of The Adventurer : —

To the memory of JOHN HAWEESWORTH, LL.D.

Who died the 16th of November

MDCCLXXIH, aged 58 years.

That he lived ornamental and useful

To society, in an eminent degree,

Was among the boasted felicities

Of the present age ;

That he labored for the benefit of society,

Let his own pathetic admonitions

Record and realise.

‘ The hour is hasting, in which whatever praise or censure I have acquired will be remembered with equal indifference. Time, who is impatient to date my last paper, will shortly moulder the hand which is now writing it in the dust, and still the breast that now throbs at the reflection. But let not this be read as something that relates only to another ; for a few years only can divide the eye that is new reading from the hand that has written.’

HAWKING. See FALCONRY.

HAWKINS (Sir John), a brave English admiral under queen Elizabeth, born in Devonshire. He was rear-admiral of the fleet which she sent against the Spanish Armada, and had a great share in that glorious victory. He was afterwards made treasurer of the navy. But his memory is disgraced by his having been the first European who carried off slaves from the coast of Africa, and introduced that inhuman traffic into the West Indies. Queen Elizabeth herself, while she honored his bravery by knighthood, threatened him with the divine vengeance for this practice. He died in the West Indies in

1595.

HAWKINS (Sir John), a celebrated author, and a lineal descendant of the admiral, was born in London, March 30th, 1719. He was the youngest son of Mr. Hawkins, a house-carpenter and builder in London, and was bred to the law. Though deeply engaged in that study, in his younger years, and afterwards in the practice, he found leisure to exercise his genius by writing essays on various subjects, for the Gentleman's Magazine, Universal Spectator, and Westminster Journal ; some of which attracted the attention of the public. He formed an early intimacy with Dr. Johnson, which continued through life. About 1741 he became' a member of two Musical Societies, and in 1742 published six Cantatas, the poetry of five of which was written by himself, and the music composed by his friend Mr. Stanley These having succeeded beyond expectation, he published other six soon after, which proved the means of making his fortune, by introducing him to the acquaintance of Peter Storer, esq., of Highgate, whose youngest daughter Sidney he married in 1753, and with her received a handsome fortune, as well as a very large addition to it, on the death of her brother in 1759. Having early entertained a fondness for angling, he now gave up business, and purchased a house at Twickenham, on the Thames, where he could e,njoy his favorite amusement. In 1760 he published a new edition of Walton's Complete Angler, in 8vo. with notes; to which he prefixed a Life of Walton. In 1761 he was appointed a justice of the peace for Middlesex. In 1763 he published in 8vo. Observations on the State of the Highways, and on the laws for amending and keeping them in repair : to which he subjoined the draught of a bill, which was afterwards passed into a law. In 1764 he distinguished himself by opposing an enormous claim of the city of London, which, in a bill presented to Parliament, had proposed to subject the county of Middlesex to two-thirds of the expense of rebuilding the jail of Newgate, estimated at £40,000. Mr. Hawkins drew a petition against the bill with such success, that it was withdrawn by the city members. In 1765 he was elected chairman of the quarter session. In 1768 and 1769, during the riots at Brentford and Moor-fields, he acted with so much spirit, activity, and propriety, that, in 1772, his majesty conferred on him the honor of knighthood. In 1773, and 1778, he enriched Dr. Johnson's and Mr. Stevens's edition of Shakspeare with those notes which bear his name. In 1776 he published his General History of the Science and Practice of Music ; in 5 vols. 4to., dedicated to the king, and which he presented to him personally, at Buckingham House. The collecting of the materials for this work had cost him sixteen years labor. In 1784 he met with one of

the severest losses a literary man can sustain, by the destruction of his valuable library, containing many rare books, by fire. In 1787 he published the Life and Works of Dr. Johnson, in 11 vols. 8vo. dedicated to the king. He died at Westminster of an apoplexy, on the 21st of May 1789 : leaving the character of an active magistrate, an affectionate husband and parent, a firm friend, and a sincere Christian.

HAWKINS, a county of East Tennessee, United States. Rogersville is the chief town.

HAWKIN'S ISLAND, an island off the west coast of North America, in Prince William's Sound, about twenty miles long, and from one to four miles wide. Long. 214° 10' to 214° 38' E., lat. 60° 28' to 60° 40' N.

HAWKWEED. See CREPIS and HIERACIUM.

IIAWKWOOD (Sir John), a famous English general, was the son of a tanner at Sible Hedding-ham in Essex, where he was born in the reign of Edward III. He was bound apprentice to a tailor in London ; but, being pressed into the army, was sent abroad, where he signalised himself as a soldier in France and Italy, and particularly at Pisa and Florence. He commanded with great ability and success in the army of Galeacio duke of Milan ; and was in such high

esteem with Barnabas, bis brother, that he gave him Domitia his natural daughter in marriage, with an ample fortune. He died at Florence, ftill of years and military fame, in 1394.

HAWLBOWLING, a small island in Cork harbour, Ireland, nearly opposite to the town of Cove, on which there is a small fort; and which, during the late war, was fixed upon as a naval depot.

HAWSE, or HAUSE, implies the situation of the cables before the ship's stem, when she is moored with two anchors out from forward, *viz.* one on the starboard and the other on the larboard bow. Hence it is usual to say, she has a clear hawse, or a foul hawse. It also denotes any small distance a-head of a ship, or between her head and the anchor employed to ride her, as, He has anchored in our hawse, The brig fell athwart our hawse, &c. A ship is said to ride with a clear hawse when the cables are directed to their anchors, without lying athwart the stem ; or crossing, or being twisted round each other by the ship's winding about, according to the change of the wind, tide, or current. A foul hawse, on the contrary, implies that the cables lie across the stem, or bear upon each other, so as to be rubbed and chafed by the motion of the vessel. The hawse accordingly is foul, by hav-ing either a cross, an elbow, or a round turn. If the larboard cable, lying across the stem, points out on the starboard side, while the starboard cable at the same time grows out on the larboard side, there is a cross on the hawse. If, after this, the ship, without returningto her former position, continues to wind about the same way, so as to perform an entire revolution, each of the cables will be twisted round the other, and then directed out from the opposite bow, forming what is call-ed a round turn. An elbow is produced when the ship stops in the middle of that revolution, after having had a cross : or, in other words, if she rides with her head northward with a clear hawse, and afterwards turns quite round, so as to direct her head northward again, she will have an elbow.

HAWSE-PIECES, the foremost timbers of a ship, whose lower ends rest on the knuckle timber, or the foremost of the cant timbers. They are generally parallel to the stem, having their upper ends sometimes terminated by the lower part of the beak-head , and otherwise by the top of the bow, particularly in small ships and mer-chantmen.

HAWSER, n.s. a large rope which holds the middle degree between the cable and tow-line, in any ship whereto it belongs, being a size smaller than the former, and as much larger than the latter.

HAWTHORN, n. s.) Sax. |neg Sorm. A

HAW'THORN-FLY, n. s.) species of medlar ; the thorn that bears haws ; the white-thorn. Hawthorn-fly, an insect.

Some in her hondes baren boughes shene,

Some of laurer, and some of okes bene,

Some of hawthorne, and some of wodebind,

And many mo which I have not in mind.

Chaucer. The Floure and the Leafe.

There is a man haunts the forest, that abuses our young plants with “arving Rosalind on their barks ;

HAWTHORN, or WHITE THORN (cratagus oxyacantha); a small, spiny European tree, rising sometimes to the height of twenty to twenty-five feet, much admired for the beauty of its foliage, and forming excellent hedges. The leaves are smooth, shining, more or less deeply lobed, and of a very beautiful green color ; the flowers are white, sometimes with a reddish tinge disposed in corymbs, and possess an agreeable perfume ; the fruit, when mature, is of a bright red color. The species of crattegus are about thirty in number, all shrubs or small trees, spiny, with alternate simple or lobed leaves, and bearing fruit resembling, in miniature, that of the apple, to which plant they are closely allied, being distinguished chiefly by their osseous seeds, and are arranged with it under the same natural family rosacett. One half of the species are natives of the United States, many of them ornamental, and equally adapted to the formation of hedges with the European.

HAY, n. s. “i Sax. hiej, hi; ; French,

HAY-MAKER, n. *. fhaie, a hedge; Dutch, HAY-COCK, n. s. * hey. Grass dried to fod-der cattle in winter. Hay-maker, one employed in the process of making hay. Hay, as derived from haie, signifies a net which encloses the haunt of an animal. To dance the hay, is to dance in a ring, probably from dancing round a hay-cock.

This king of kinges was proud and elat ; He wend that God that sit in majestee

Ne might him nat bereve of his estat : But sodenly he lost his dignitee, And like a best him seemed for to be, And ete hay as an oxe.

Chaucer. The Monkes Tale.

I will play on the tabor to the worthies And let them dance the hay.
Id.

Make hay while the sun shines.

Camden's Remains.

We have heats of dungs, and of hays and herbs laid up moist. Bacon.

This maids think on the hearth they see, } When fires well nigh consumed be, There dancing hays by two and three, 3

Just as your fancy casts them. Drayton.

The gum and gl'.stening,

Looks just as if that day

Snails there had crawled the hay. Suckling. One while a scorching indignation burnes The flowers and blossomes of our hopes away ;

Which into scarsitie our plentie turnes, And changeth unmowne-grasse to parched hay.

G. Withers.

Or if the earlier season lead To the tanned hay-cock in the mead. Mikon. By some hay-cock ; or some shady thorn, He bids his beads both even song and morn.

Dry den,

Coneys are destroyed by hays, curs, spaniels, 01 tumblers, bred up for that purpo.se. Mortimer.

The best manure for meadows is the bottom of hag mows and hay stacks. Id—

Some turners turn long and slender sprigs of ivory, as small as an hay stalk. Moxon.

As to the return of his health and vigour, were you here, you might enquire of his \aynakers.

?.«j-j to Sicif!.

HAY

Hay and oats, in the management of a groom will make ale. Swift.

HAY. The time of mowing grass for hay must be regulated according to its growth and ripeness; nothing being more prejudicial to the crop than mowing it too soon ; because the sap is not then fully come out of the root, and, when made into hay, the grass shrinks away to nothing. It must not, however, be let stand too long till it have shed its seeds. When the tops of the grass look brown, and begin to bend down, and the red honeysuckle flowers begin to wither, it is ripe for mowing.

A HAY for taking rabbits, hares, &c., is made from fifteen to twenty fathoms in length, and in depth a fathom. As rabbits often straggle abroad about mid-day for fresh grass, when they are gone forth to any remote brakes or thickets, pitch two or three of these hays about their burrows, and lie close there; but, if there are not hays enough to enclose all their burrows, some may be stopped up with stones, &c. Then set out with the dog to hunt up and down at a good distance, and draw on by degrees to the man who lies close by the hay, who may take them as they bolt into it.

HAY (William), esq., an English writer, born >U Glenburne, in Sussex, about 1700, and educated at Headley. In 1730 he published a poem, called Mount Caburn, dedicated to the duchess of Newcastle. In 1734, when lord Hard-wicke was created a peer, he was chosen to succeed him as M. P. for Seaford, which he continued to represent during his life. He defended the measures of Sir Robert Walpole, and was supposed to be the author of a ministerial pamphlet, entitled A Letter to a freeholder on the late Reduction of the Land-tax to one Shilling in the Pound; printed in 1731. In 1735 he published Remarks on the Laws relative to the Poor, with Proposals for their better Relief and Employment ; and brought in two bills for that purpose, but without effect. In May 1738 he was appointed a commissioner of the Victualling office. In 1753 appearedhis Religio Philosophi; or the Principles of Morality and Christianity, illustrated from a View of the Universe, and of Man’s Situation in it. This was followed, in 1754, by

his Essay on Deformity; in which he rallies his own imperfections with much liveliness and good humor. ‘ Bodily deformity,’ says he, ‘ is very rare. Among 558 gentlemen, in the house of commons, I am the only one that is so. Thanks to my worthy constituents, who never objected to my person, and I hope never to give them cause to object to my behaviour.’ In 1754 he also translated Hawkins Browne De Immortalitate Animi. In 1755 he translated and modernised some Epigrams of Martial. A little time before, he had been appointed keeper of the Records in the Tower ; and it is said that his attention and assiduity during the few months he held that office were eminently serviceable to his successors. He died January 19th, 1755.

HAY, in geography, a town of South Wales, in Brecknockshire, seated near the confluence of the rivers Wye and Dulas. It was a town of note in the time of the Romans ; being fortified with a castle and wall, which were ruined in the

rebellion of Owen Glendower. It is at present a considerable town ; and has a large market foi corn aid cattle.

HAYDN (Joseph), a celebrated musical composer, born in Lower Austria, in 1733. His father was a wheel-wright, and placed in such circumstances that he could neither give his son an education suited to a liberal profession, nor procure for him instruction in that art for which he manifested an early and an ardent predilection. He was accustomed to sing to his father’s harp the simple tunes which, without any knowledge of music, his father played; and he acquired a little acquaintance with different instruments under the tuition of a schoolmaster, his relation. From this school he was taken to Vienna, to sing in the choir of the imperial cha-pel. Reuter, who was maestro de capello of the cathedral, was here sensible of his merits and foresaw his fame. At the age when his voice began to change, Haydn was dismissed from the choir ; after which, during a long course of years, he endured all the rigor of adverse fortune, finding it very difficult to earn even a bare subsistence. He lodged in the sixth story ; his garret had neither door nor casement ; his breatli congealed on his bed-clothes ; and the water which he fetched from the fountain for his toilette in the morning, was frequently changed into ice before he could re-ascend to the exalted regions of his abode. Haydn gave lessons, and performed at orchestras and musical parties ; but his indigence kept him secluded from society : an old worm-eaten harpsichord was his sole source of happiness. Consoling himself with this companion of his misfortunes, he courageously continued to

compose ; and his ardent genius prevented him from sinking into a state of torpid despair. At last he had the good fortune to have as his pupil a Miss Mortini, a relation of Metastasio ; and at her house he obtained his board gratis during three years. Afterwards he removed to one of the suburbs. About that time he engaged himself as director of the choir of the Charitable Brothers, in the Leopoldstadt, at a salary of sixty florins per annum. He was obliged, on Sundays and holidays, to be at their church by eight o'clock in the morning ; at ten he played the organ in the chapel of count Haugwitz, and at eleven he sung in the choir of the cathedral of St. Stephen. Thousands would have sunk under such hardships. He came to England in 1791, and returned to Germany in 1796. During his stay he composed many pieces, and met with those rewards and that admiration which he so highly merited. — Haydn never was in Italy. If he had enjoyed that advantage, there can be no doubt that, with his excellent ideas of singing and harmony, he would have acquired great reputation as a composer of operas. He, however, spoke Italian with considerable facility, and acknowledged that he owed much to an Italian musician of the name of Porpora, with whom he became acquainted at the house of a lady in Meinersdorf. Haydn served about three months in the capacity of a valet, solely for the purpose of improving himself by his instructions. Porpora was teaching the lady to sing, and Haydn accompanied her on the harpsichord ; during the intervals

between the lessons, he submitted his compositions to the correction of his master. Thus was formed the composer, whose sublime notes resound in all the orchestras of Europe ; and who continued his labors with increasing applause and glory during half a century, to the time of his death in 1S09. His principal works, besides innumerable symphonies, are, The Creation and the Seasons.

HAYE'S ISLAND, a small island near the southern point of Hudson's

Bay, formed by the rivers Nelson and Hayes, which, after running togther for some time, separate into two arms. Near the entrance of them into the sea stands York Fort, called by the French De Bourbon.

HAYLEY (William), a poet and biographical writer, was born November 9, 1745, at Chichester, of which cathedral his grandfather had been dean. He received his education at the school of Kingston-upon-Thames, and at Eton, whence he removed to Trinity College, Cambridge. On leaving the University he retired to his paternal estate of Eartham, in Sussex, where he resided till the loss of a natural son, about 1800, so afflicted him that he removed to Felpham in that county, where he died November 12, 1820. His principal publications are, 1. An Essay on Painting. 2. An Essay on History. 3. An Essay on Epic Poetry. 4. The Triumphs of Temper. An edition of these, with other pieces and plays, was printed in 6 vols. 8vo. His prose works are, An Essay on Old Maids, 3 vols., and the Lives of Milton, Cowper, and Romney the Painter. He was the author of various elegant quartos, and quartos have been devoted to his personal history : but he will be chiefly known to posterity as the biographer of Cowper ; whose character, after all, he but very imperfectly understood.

HAYNES (Hopton), a learned Unitarian, born in 1672. In 1696 he was employed in the mint, in which he rose to the office of king's assay-master. In the year 1748, becoming infirm, he was allowed to retire. He was also principal talley-writer at the exchequer for forty years ; and died in 1749, at the age of seventy-seven. He wrote The Scripture Account of the Attributes and Worship of God, and of the Character and Offices of Jesus Christ, of which a second edition was printed by the Rev. Theophilus Lindsay in 1790.

HAYNES (Samuel), son of the above, was educated at King's College, Cambridge, where he took his degree of D. D. 1748. He was tutor to the earl of Salisbury, by whom he was presented to the livings of Hatfield and Clothel ; he was also a canon of Windsor, and published a collection of state papers, relating to affairs in the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, from 1542 to 1570, transcribed from the Cecil MSS. Dr. Haynes died in 1752.

HAYTER (John), M. A., was educated at Eton and King's College, Cambridge,where he obtained the degree of B.A. in 1778, and that of M. A. in 1788, between which dates he was presented to the living of Hepworth in Suffolk. His present majesty, then prince of Wales, offering to be at the expense of unrolling and decyphering the Greek MSS. in the ruins of Herculaneum, Mr.

Hayter was appointed to superintend the experiment, and in consequence took up his abode at Palermo. He returned in 1810, and the MSS. were presented to the University of Oxford ; but the result disappointed the public. He soon after died of an apoplectic shock in France. He published Observations on the Herculauensia, 4to.

HAYWARD, one who keeps the common herd or cattle of a town. He is appointed by the lord's court; his office is to see that the cattle neither break nor crop the hedges of enclosed grounds,

HAYWARD (Sir John), an eminent English historian and biographer of the seventeenth century, educated in the University of Cambridge, where he took the degree of LL.D. In 1610 he was appointed historiographer of a college then at Chelsea; and, in 1619, was knighted. He wrote, 1. The lives of the three Norman kings of England, William I. and II., and Henry I. 2. The first part of the life and reign of king Henry IV. 3. The life and reign of king Edward VI.; and several theological works. He died in 1627. HAZAEL, Heb. ˆSTH i. e. seeing God., an officer belonging to Benhadad, king of Syria, who, as is generally supposed from the common rendering of 2 Kings viii. 15, caused that prince to be put to death, and reigned in his stead. Some, however, have thought that the thick cloth was spread over the face of Benhadad by himself or by his order to allay the violence of the fever. Hazael defeated Joram, Jehu, and Jehoahaz, kings of Israel ; and, after his death, was succeed ed by Benhadad his son, A. A. C, 889.

HAZ'ARD, n. s , v. a. & ") French, hazard, HAZ'ARDABLE, adj. [v n. \ hazarder, hazar-HAZ'ARDER, n. s. [deux; Ital. and

HAZ'ARDRY, n. $. ' Sp. azar ; Runic,

HAZ'ARDOUS, adj. haski. ' Hazard,'

HAZARDOUSLY, adv. j ' says Crabb,

* comes from the oriental zar and tzar, signifying any thing bearing an impression, particularly the die used in chance games, which is called by the Italians zara, and by the Spaniards azarJ Hazard is when, in contingent events, the inclination is to the unfavorable side, and thus it is opposed to chance. The figurative meanings are, accident; danger ; risk ; to try your chance; to venture. Hazardry is temerity ; precipitation ; rash adventure ; all derived from, and founded on, the literal meaning applied to dice

Now wol I you defenden hasardrie Hasard is veray moder of lesinges, And of deceite, and cursed forswering.es

It is repreve and contrary of honour, For to ben hold a common hasardour, And ever the higher he is of estat, The more he is holden desolat.

Chaucer. The Pardoneres Tale.

-Live, and allegiance owe

To him that gives thee life and liberty, And henceforth by this daies ensample trow, That hasty wroth and heedlesse hazardry, Doe breed repentance late and lasting infamy.

Spenser's Faerie Queene.

HAZ

More wise they weend to make of love delight Then life to hazard for faire ladies looke. ™

of aˆmlrcy, eternal thanks, for that he hath delivered his law unto the world ; a law wherein so many things

HAZ

Here observe that 12 is out to 9, 7, and 5; 11 is out to 9, 8, 6, and 5 ; and ames-ace and deuce ace, are out to all mains whatever.

HAZE, tt. «., v.n.&v.a. ? Sax.bar-ne; Goth.

HA'ZY, adj.

hasa, hoar-frost.

s a

are laid open, as a light which otherwise would have Fog or mist . dark ; dull : to haze is to confuse ; been buried in darkness, not without the hazard, or hence IQ frignten Or alarm.

i l *ll uuiicu* ** «•**« . .

rather not with the hazard, but with the certain loss of thousands of souls, most undoubtedly now saved.

Hooker.

They might, by persisting in the extremity of that opinion, hazard greatly their own estates, and so weaken that part which their places now give. Id.

I have set my life upon a cast, And I will stand the hazard of the die.

Shakspeare.

I will upon all hazards well believe Thou art my friend, that knowest my tongue so well.

Id.

I pray you tarry ; pause a day or two Before you hazard; for, in chusing wrong, I lose your company.

It was not in his power to adventure upon his own fortune, or hearing a public charge to hazard himself against a man of private condition. Hot/ward.

An hazardable determination it is, unto fluctuating and indifferent effects, to affix a positive type or period. Browne.

She from her fellow-provinces would go, Rather than hazard to have you her foe.

Waller.

Grant that our Itazardow attempt prove vain. We feel the worst, secured from greater pain.

Dryden.

The hazard I have run to see you here, should inform you that I love not at a common late. Id.

Where the mind does not perceive connection, there men's opinions are not the product of judgment, but the effects of chance and hazard, of a mind floating at all adventures, without choice and without direction.

Locke.

The wise and active conquer difficulties By daring to attempt them : sloth and folly Shiver and shrink at sight of toil and hazard, And make the impossibility they fear. Rotee. Men are led on from one stage of life to another in a condition of the utmost hazard, and y.et without the least apprehension of their danger. Rogers.

By dealing indifferently mercies to all, you may hazard your own share. Sherlock.

The duke, playing at hazard, held in a great many hands together, and drew a huge heap of gold.

Swift.

Reason ! the hoary dotard's dull directress, That loses all because she hazards nothing.

Dr. Johnson's Irene.

HAZARD, in gaming. See GAMING.

HAZARD, is properly so called, as it speedily enriches a man or ruins him. It is played only with two dice without tables ; and as many may play as can stand round the largest round table. Two things are chiefly to be observed, *viz.* main and chance ; the latter belonging to the caster, and the former, or main, to the other gamesters. There can be no main thrown above 9, or under 5 ; so that 5, 6, 7, 8, and 9, are the only mains. Chances and nicks are from 4, to 10; thus 4 is a chance to 9, 5 to 8, 6 to 7, 7 to 6, 8 to 5 ; and 9 and 10 a chance to 5, 6, 7, and 8 : in short, 4, 5, 6, 7, 8, 9, and 10, are chances to any main, if any of these nick it not. Now nicks are either vfhen the chance is the same

with the main, as 5 and5; orthelike; orGand 12, 7andl2,8and 12.

Our clearest day here is misty and hazy ; we see not far, and what we do see is in a bad light.

Burnet's Theory.

Oft engendered by the hazy North, Myriads on myriads, insect armies waft.

Ttiomson.

HAZEBROUK, a large town of French Flanders, twenty-seven miles west by north of Lille. Its streets are straight, and its houses in general well built : its population about 6600. It is the capital of an arrondissement ; and has a brisk trade in thread, linen, and fruits the produce of the surrounding country.

HA'ZEL, adj. 3 Sax. p«rel; Lat. corylus. HA'ZELLY, adj. \ Nut tree. Light brown, of the color of hazel; hence used figuratively to describe color.

Kate, like the hazel twig, Is straight and slender ; and as brown in hue As hazel nuts, and sweeter than the kernels.

Shakspeare.

Her chariot is an empty hazel nut. Id. Why sit we not beneath the grateful shade, Which hazels, intermixed with elms, have made?

Dryden.

Uplands consist either of sand, gravel, chalk, rock, or stone, hazelly loam, clay, or black mould.

Mortimer.

Chuse a warm dry soil, that has a good depth of light hazel mould. • Id.

There are some from the size of a hazel nut to that of a man's fist. Woodward.

Where flows the murmuring brook, inviting dreams ; Where bordering Juizel overhangs the streams, Whose rolling current winding round

and round, With frequent falls makes all the woods resound.

Gay.

The nuts grow in clusters, and are closely joined together at the bottom, each being covered with an outward husk or cup, which opens at the top, and when the fruit is ripe it falls out. The species are Aa«ei-nut, cobnut, and filbert. The red and white filberts are mostly esteemed for their fruit. Miller.

The flowering thorn, self-taught to wind The hazel's stubborn stem entwined, And bramble twigs were wreathed around. And rough furze crept along the ground.

Beattie.

HAZEL, or HAZLE, in botany. See CORYLUS. The kernels of the fruit have a mild, farinaceous, oily taste, agreeable to most palates. Squirrels and mice are fond of them, as well as some birds. A kind of chocolate has been prepared from them ; and there are instances of their having been formed into bread. The oil expressed from them is little inferior to the oil of almonds; and is used by painters and by chemists for receiving and retaining odors. The charcoal made of the wood is used by painters in drawing. Evelyn tells us that no plant is more proper for thickening of copses than the hazel, for which he directs the following expeditious method. Take a pole of hazel twenty or thirty feet in length, the head a little lopped into the ground, giving it a chop near the ground to make it succumb ; this

fastened to the earth with a hook or two, and covered with some fresh mould at a competent depth, will produce a great number of suckers, and thicken and furnish a copse speedily. The fruit, leaves, and catkins of this tree ane very commonly found in peat mosses, and in the alluvial accumulations in the bottoms of valleys, having but little fall, and on the-flat shores of lakes. In the alluvial flats in the valleys of Derbyshire, &c., hazel-nuts, &c., are very com-mon in layers, between the silt and gravel. Woodward, in his Catalogue of Fossils, mentions nuts being found in Milnclose mine, which doubtless fell or were washed into opens from the surface; and on the whole it seems clear, that all these belong to the class of peat fossils, and are preserved in the most modern of gthe earthy deposits or accumulations.

HAZEL EARTH, or HAZLEY EARTH, a kind of red loam, which is said to be an excellent mixture with other sorts of earth ; uniting what is too loose, co'oling what is too hot, and gently retaining the moisture.

HAZEL, WITCH. See HAMAMELIS, and UL-MUS.

HAZEL DIVINING RODS. We have glanced at this subject more than once. See BAGVETTE DIVINATOIRE, and DIVINING RODS. The fact is, that, in compiling both the foregoing articles, we obscurely recollected having seen a narrative on the subject, which we are at last able to present to our readers. It is from a note in the Quarterly Review. ' The narrative has been lately communicated to us,' says the writer, * by a friend residing in Norfolk, and puts the subject in the clearest point of view. We shall simply state that the parties, whose names are well known to many of our readers, are utterly incapable either of deceiving others, or of being deceived themselves.

'January 21st, 1818. — It is just fifty years since lady N's attention was first called to Jthis subject ; she was then sixteen years old, and was on a visit with her family at a chateau in Provence, the owner of which wanted to find a spring to supply his house, and for that purpose had sent for a peasant, who could do so with a twig. The English party ridiculed the idea, but still agreed to accompany the man, who, after walking some way, pronounced that he had arrived at the object of his search, and they accordingly dug and found him correct. —He was quite an uneducated man, and could give no account of the faculty in him, or of the means which he employed, but many others, he said, could do the same.

' The English party now tried for themselves, but all in vain, till it came to the turn of lady N., when, to her amazement and alarm, she found that the same faculty was in her as in the peasant, and, on her return to England, she often exerted it, though in studious concealment. She was afraid lest she should be ridiculed, or should, perhaps, get the name of a witch, and in either case she thought that she should certainly never get a husband !

' Of late years her scruples began to wear away; and when Dr. Hutton published Ozanam's Researches, in 1803, where the effect of the

divining rod is treated as absurd (vol. iv. p. 260-7), she wrote a long letter to him, signed X. Y. Z., stating the facts which she knew. The P answered it, begging further information ; lady N. wrote again, and he, in his second letter, requested the name of his correspondent : that lady N. also gave.

‘ A few years afterwards she went, at Dr. Hut-ton’s particular request, to see him at Woolwich, and she then showed him the experiment, and discovered a spring in a field which he had lately bought near the New College, then building. This same field he has since sold to the college, and for a larger price in consequence of the spring.

‘ Lady N. this morning shewed the experiment to lord G., Mr. S., and me, in the park at W. She took a thin forked hazel twig, about sixteen inches long, and held it by the end, the joint pointing downwards. When she came to a place where water was under the ground, the twig immediately bent, and the motion was more or less rapid as she approached or withdrew from the spring. When just over it, the twig turned so quick as to snap, breaking near her fingers, which by pressing it were indented, and heated, and almost blistered; a degree of agitation was also visible in her face. When she first made the experiment, she says, this agitation was great : and to this hour she cannot wholly divest herself of it, though it gradually decreases. She repeated the trial several times in different parts of the park, and her statements were always accurate. Among those persons in England who have the same faculty, she says, she never knew it so strong in any as in Sir C. H. and Miss F. It is extraordinary that no effect is produced at a well or ditch, or where earth does not interpose between the twig and the water. Th e exercise of the faculty is independent of any volition.’

‘ So far our narrator, in whom, we repeat, the most implicit confidence may be placed. The faculty so inherent in certain persons is evidently the same with that of the Spanish Zahories, though the latter do not employ the hazel twig.’

HAZLITT, William, the son of a dissenting minister, was originally an artist. A few pictures, executed by him in his youth, are said to display genius. His writings show thought, dis-figured by paradox and dogmatism. He died September 15th, 1830, the day on which his last work, Conversations of James Northcote, appeared. He had, for years, contributed to the periodical journals, and had published an Essay on the Principles of Human Action ; the Round Table, a series of Essays, written in conjunction with Leigh Hunt; the Eloquence of the British Senate from the time of Charles I. with Notes (2 vols. 8vo.) ;

Characters of Shakspeare's Plays; a View of the English Stage, containing a series of Dramatic Criticism ; Lectures on the English Poets ; Political Essays, with Sketches of Public Characters ; Lectures on the English Comic Writers; Table Talk; a Let-tertoW. Gifford ; an English Grammar, &c. Two or three years before his death, he published a life of Napoleon Bonaparte (4 vols. 8vo. 1828 et seq.) He was also one of the writers in the

HEA

Supplement to the Encyclopaedia Brittanica. The editor of the London Literary Gazette, in noticing his death, says, "Though differing widely from him in most of his opinions, we must allow that he produced much which did credit to his abilities. It was his asperities which rendered his performances generally un-palatable to us, and the dislike was not removed by an officious and affected style. Yet there were bright parts, and of these alone we would now cherish the remembrance, as of a clever but unamiable man, who was, as he himself tells us, ' at feud with the world,' and who consequently treated the world with ill will, if not malice, which the world requited with something of resentment and scorn."

HEAD, n. s. Sax. heapo'D, heap's ; Belgic, houed; old English heved, whence, by contraction, head. The part of the animal that contains the brain, or the organ of sensation and seat of thought.

But now a litel while I wol bewaile This Pompeius, this noble governour

Of Rome, which that fled at this bataille. I say on of his men, a false traitour,

His hed of smote, to winnen him favour Of Julius, and him the hed be brought :

Alas Pompeie ! of the orient conquerour, That Fortune unto swiche a fin thee brought. Chaucer. The Monket Tale. Vein-healing verven, and head-purging dill.

Spenser.

Person as exposed to any danger or penalty. What he gets more of her than sharp words, let it lie on my iiead. Shakspeare.

Who of all ages to succeed, but feeling The evil on him brought by me, will curse My head.1 ill fare our ancestor impure.

Milton. Head and ears. The whole person.

In gingling rhimes well fortified and strong, He fights intrenched o'er head and ears in song.

Granvillti.

Denomination of any animals. The tax upon pasturage was raised according to a certain rate per head upon cattle. Arbutluwt,

Chief; principal person; one to whom the rest are subordinate; leader; commander.

Your head I him appoint ; And by myself have sworn, to him shall bow •All knees in heaven, and shall confess him Lord.

Milton.

Place of honor; the first place. Notwithstanding all the justices had taken their places upon the bench, they made room for the old knight at the head of them.

Addison.

Place of command.

An army of fourscore thousand troops, with the duke of Marlborough at the head of them, could do nothing. Addison on the War.

Countenance ; presence.

Ere to-morrow's sun shall shew his head. Dryden. With Cain go wander through the shades of night, And never shew thy head by day or light.

Shakspeare.

Understanding ; faculties of the mind : commonly in a ludicrous sense.

The wenches laid their heads together.

L'Estrange.

Oh, says Reynard, never trouble your head, but leave that to wo. 1,1.

When ia ordinary discourse we say a man has a fine head, we express ourselves metaphorically, and speak in relation to his understanding ; and when we say of a woman, she has a fine head, we speak only in relation to her commode.

Addison.

Face ; front ; fore part.

The gathering crowd pursues ; The ravishers turn head, the fight renews.

Dry den.

Resistance ; hostile opposition. Sometime hath Henry Bolingbroke made head against my power. Shakspeare.

Two valiant gentlemen making head against them, seconded by half a dozen more, made forty run away.

Raleigh.

Spontaneous resolution.

The bordering wars in this kingdom were made altogether by voluntaries, upon their own head, without any pay or commission from the state. Davies.

State of a deer’s horns, by which his age is known.

The buck is called the fifth year a buck of the first head. Shakspeare.

Individual. It is used in numbers or computation.

If there be six millions of people, then there are about four acres for every head. Graunt.

The top of any thing bigger than the rest.

As high

As his proud head is raised towards the sky, So low towards hell his roots descend.

Denham. The fore part of any thing, as of a ship.

His galleys moor; Their heads are turned to sea, their sterns to shore.

Dryden.

By galleys with brazen heads, she might transport over Indus at once three hundred thousand soldiers.

Raleigh.

That which rises on the top. Let it stand in a tub four or five days before it be put into the cask, stirring it twice a-day, and beating down the head or yeast into it. Mortimer.

The blade of an axe.

A man fetcheth a stroke with the axe to cut down the tree, and the head slippeth from the helve.

Deut. xix. 5. Upper part of a bed.

Israel bowed upon the bed's head. Gen. xlvii. 31. The brain.

As eastern priests in giddy circles run, And turn their heads to imitate the sun.

Pope.

Dress of the head.

Ladies think they gain a point when they have teazed their husbands to buy them a lared lifad or a fine petticoat. Sicift.

Principal topic of discourse.

These heads are of a mixed order, and we propose only such as belong to the natural world.

Burnet's Theory.

Source of a stream.

The current by Gaza is but a small stream, rising between it and the

Red Sea, whose head from Gaza is little more than twenty English miles.

Raleigh's History.

Crisis ; pitch.

The indisposition which has long hung upon me, is at last grown to such a head, that it must quickly make an end of me, or of itself. Addison.

Power ; influence ; force ; strength ; dominion.

Within her breast though calm, her breast though

pure,

Motherly cares and fears got head, and raised Some troubled thoughts. Milton.

Body ; conflux.

A mighty and a fearful head they are, As ever offered foul play in a state.

Shakspeare.

Let all this wicked crew gather Their forces to one head.

Ben Jomon. Power ; armed force. My lord, my lord, the French have gathered head.

Shakspeare. Liberty in running a horse.

He gave his able horse the head, And bounding forward struck his agile heels Against the panting sides of his poor jade Up to the rowel head, Shakspeare.

License ; freedom from restraint; a metaphor from horsemanship.

God will not admit of the passionate man's apology, that he has so long given his unruly passions their head, that he cannot now govern or controul them. South.

It is very properly applied to roots.

How turnips hide their swelling heads below, And how the closing coleworts upwards grow.

Gay.

Head and shoulders. By force ; violently. They bring in every figure of speech, head and shoulders, by main force, in spite of nature and their subject. Felton.

HEAD ; the part of the animal body which contains the brain and the higher organs of sense. In many animals, it is connected with the trunk by the neck, and is more or less movable ; in some animals, however, it is immovable, and is merely a prolongation of the trunk. The head in animals is more distinct in proportion as the brain is more fully developed as the cen-tre of the nervous system. It is entirely wanting in the lowest classes of animals, which therefore, from the intestinal worms downward, form a third class, in the system of Latreille, under the name of acephala (headless animals), while those provided with heads are divided into two classes, the vertebral animals, having distinct and proper heads, and the cephalidia, having small and less distinctly formed heads. In this part the mouth (q. v.), as the opening of the oesophagus, is always situated. In the second class of animals, in which the head is less distinct, that part of the body which is provided with the mouth may be called the head end. In the vertebral animals (mammalia, birds, reptiles, and fish) the head has a bony basis (cartilaginous only in the cartilaginous fishes). In fishes the bones of the head are not united with each other ; and the formation of the separate bones is various. In cartilaginous fishes, the head is more or less oblong and angular ; in osseous fishes, it is less flattened, and composed of a considerable number of bones connected in various ways ; in all fishes the cavity of the brain is very small and oblong. Equally various is the formation of the head in the different classes of reptiles. In general, the head is composed of few bones, and

more rounded in proportion ac the bruin is more fully developed. In birds,

the bones of the head are more closely formed into one whole, constituting a skull more or less round, which contains the brain, and to the fore part of ‘which the beak is attached. But the head is most perfect in the mammalia, and resembles the human head more nearly as the ani-mal approaches more nearly to man. In general, the human head may be considered as the standard, which may be traced, with gradual deviations, through the different classes, until it entirely ceases in the lower orders of animals. Nowhere is its proper office, to serve for the reception of the nervous system, so distinct as in the human head ; the cavity of the skull containing the principal organ of sensitive life — the brain ; as the great cavities of the trunk contain the chest, the organs of irritable life (the heart and lungs), and the abdominal cavity, the organs of the reproductive life (the organs of digestion and generation). The superiority of the head over the other two parts just mentioned, appears also from the circumstances, that whilst it is pre-eminently the seat of the nervous system, it also contains organs essential for functions of the irritable and reproductive system ; as the inspiration and expiration of the air are effected through the nostrils and mouth, and the entrance of food into the abdominal cavity, as well as the preparation of it for digestion, by mastification and the production of saliva, is effected by the mouth; and these organs appear more prominent, in the heads of animals, as their sensitive system sinks lower in the scale. It must not be forgotten that the head also contains the tongue, a» organ, not only important in respect to nourishment, but also communicating the desires and thoughts, until it becomes in man the organ of oral intercourse, of language, and of the finest music — singing. The human head, and, more or less, the head of other animals, is divided into two chief parts, the skuU (see Skulf)and the face(q.v-). The importance of the head as the noblest part of the animal system, has occasioned it to be used metaphorically, in all languages, to denote that which is chief. (See Ear, Eye.)

HEAD, adj. & v. a. “] Chief, principal, whe-HEAD’ER, n. s. ther applied to persons

HEAD’INESS, n. s. I or things ; to lead, in-HEAD’LESS, adj. ˆ-fluence, or direct ; to HEAD’LONG, adj. i behead ; to fit any thing HEAD’Y, adj. \ with a head ; to lop

HEAD'STRONG, adj. J the branches off trees. Header, one whose office it is to head pins or nails, &c. ; the first brick of the angle. Headi-ness, haste ; rashness ; stubbornness. Headless, without a head ; without a chief; ignorant ; obstinate ; careless ; inconsiderate. Headlong, precipitate ; steep ; rash. Headstrong, violent ; ungovernable ; resolute ; one that will not be restrained. Heady, apt to affect the head ; vertiginous ; violent ; impetuous.

If any rashly blame such his choice of old and un-wonted words, him may I more justly blame and condemn, either of witless headmess in judging1, or "of headless hardiness in condemning. Spenser.

If you head and hang all that offend that way but for ten years together, you'll be glad to give out a commission for more heads. Shakspeare.

I am advised what I say : Neither disturbed with the effect of wine, Nor, heady rash, provoked with raging ire ; Albeit my wrongs might make one wiser mad. Id.

I'll forbear.

And am fallen out with my more heady will. To take the indisposed and sickly fit For the sound man. •***•

I'll look no more,

Lest my brain turn, and the deficient sight Topple down headlong. *"•

Never can reformation in a flood With such a heady current scowering faults ; Nor ever hydra-Aeaded wilfulness So soon did lose his seat. W —

Were I man, a duke, and next of blood, I would remove these tedious stumbling-blocks, And smooth my way upon their headless necks.

Id.

They rested not until they had made the empire stand headless about seventeen years. Raleigh.

Wives, the readiest helps To betray heady husbands, rob the easy.

Ben Jonson.

On the cold earth lies the unregarded king, A headless carcase, and a nameless thing.

Denham,

He liked the advice, and then soon it essayed, And presents crowd headlong to give good example,

So the bribes overlaid her that Rome once betrayed, The tribes ne'er contributed so to the temple.

Manell.

The senate, which should headstrong princes stay, Let loose the reins and gave the realm away ; With lavish hands they constant tributes give, And annual stipends for their guilt receive. Id.

It suddenly fell from an excess of favour, which many examples having taught them, never stopt his race, 'till it came to a headlong overthrow. Sidney.

If the header of one side of the wall is toothed as much as the stretcher on the outside, it would be a stronger toothing, and the joints of the headers of one side would be in the middle of the headers of the course they lie upon of the other side. JUoxon.

I was entertained with a sort of wine which was very heady, but otherwise seemed to be sack. Boyle.

Those only are regarded who are true to their party ; and all the talent required is to be hot, to be heady, to be violent on one side or the other.

Temple.

Abas, who seemed our friend, is either fled, Or, what we fear, our enemies does head.

Dry den.

Some ask for envy'd power, which publick hate Pursues, and hurries headlong to their fate, Down go the titles. Id.

Of cornel-wood a spear upright, Headed with piercing steel, and polished bright.

Id.

Prickly stubs, instead of trees, are found ; Headless the most, and hideous to behold. Id.

Since hearty beef and mutton will not do, Here's julep-dance, ptisan of song and show : Give you strong sense, the liquor is too heady ; You're come to farce, that's ass's milk, already.

Id.

You must disbrancn them, leaving only the summit entire : it may be necessary to head them too.'

Mortimer.

Nor is what has been said of princes less true of all other governours, from him that heads an army to him that is master of a family, or of one single servant. Suuth.

To give Ahab such warning as might infallibly have prevented his destruction, was esteemed by him evil ; and to push him on headlong into it, because hi. was fond of it, was accounted good. Id.

If in good days, like these, the headstrong herd Grow madly wanton and repine, it is Because the ruins of power are held too slack And reverend authority of late Has worn a face of mercy more than justice.

Howe's Jane Shore.

Men, naturally warm and heady, are transported with the greatest flush of good-nature. Addisoti.

This lord had-headed his appointed bands In firm allegiance to his king's commands.

Prior.

So when dread Jove the son of Phoebus hurled, Scared with dark

thunder, to the nether world, The headstrong coursers tore the silver reins, And the sun's beamy ruin gilds the plains. Gay.

Flow, Welsted ! flow, like thine inspirer beer ; Heady, not strong; and foaming, though not full.

Pope.

Headlong from thence the glowing fury springs, And o'er the Theban palace spreads her wings. Id.

And Haidee met the morning face to face ; Her own was freshest, though a feverish flush

Had dyed it with the headlong blood whose race From heart to cheek is curbed into a blush.

Byron. Don Juan.

HEAD OF A SHIP, an ornamental figure erected on the continuation of a ship's stem, as being expressive of her name, and emblematical of war, navigation, commerce, &c. Head is also used in a more enlarged sense, to signify the whole front or forepart of a ship, including me bows on each side ; the head therefore opens the column of water through which the ship passes when advancing. Hence we say, head-sails, head-sea, headway, &c. See NAVIGATION, and SHIP-BUILDING.

HE'ADACH, n. s. Head and ach. Pain in the head.

From the cruel headach, Riches do not preserve. Sidney.

Nothing more exposes to headachs, colds, catarrhs, and coughs, than keeping the head warm. Locke.

In the headach he orders the opening of the vein of the forehead. Arbuthnot.

At some dear idle time,

Nor plagued with headachs, or the want of rhyme.

Pope.

HEAD'BAND, n. s. A fillet for the head ; a topknot ; the band at each end of a book.

The Lord will take away the bonnets, and the headbands. Isaiah.

HEAD’BOROUGH.n.s. Head and borough. A constable; a subordinate constable.

Here lies John Dod, •

Father or mother, sister or brother, he never knew

none ;

A headborough and a constable, a man of fame, The first of his Louse, and last of his name.

Cam Jen.

This none are able to break thorough, Until they’re freed by head of borough.

Hudibras.

HEAD’DRESS, n. s. The covering for a woman’s head : any thing prominent on the head; resembling ahead-dress.

Among birds the males very soon appear in a most beautiful headdress, whether it be a crest, a comb, a

tuft of feathers, or a natural little plume, erected like a kind of pinnacle on the very top of the head.

AdJison.

There is not so variable a thing in nature as a lady’s headdress: I have known it rise and fall. Id.

If ere with airy horns I planted heads, Or discomoosed the headdress

of a prudeˆ

Pope.

The HEAD DRESS, amongst the ancient Jew-ish, Grecian, and Roman ladies, as among ourselves, was various, according to the times, and the fluctuations of fashion. It principally consisted of their hair differently dressed. It was usually divided before, with a bodkin, into two equal parts ; sometimes it was covered with a net, or put into a kind of purse, or tied behind in the form of a knot, or bound back and plaited with ribands. It was washed with great care ; essence and perfumes were applied to it, and gold dust sometimes made use of as powder. Pearls and jewels made a part of their ornaments ; and pendants were worn in the ears. To cover the defect of hair, perukes were made use of by the gentlemen at Rome. Otho had a covering of false hair.

HEAD'GARGLE, n. s. Head and gargle. A disease in cattle.

For the headgargle give powder of fenugreek.

Mortimer.

HEAD'LAND, n. s. A promontory ; a cape ; ground under the hedges.

Now down with the grass upon headlands about, That groweth in shadow so rank and so stout.

Tusser.

An heroick play ought to be an imitation of an heroick poem, and consequently love and valour ought to be the subject of it : both these Sir William Dave-nant began to shadow ; but it was so as discoverers draw their maps with headlands and promontories.

Dryden.

HEADLEY (Henry), B. A., an ingenious young poet, born at Norwich in 1765, and educated under Dr. Parr. He studied at Trinity College, Oxford, where -he took his degree. He published a volume of poems ; several pieces in the Olla Podrida ; and a curious work entitled Select Beauties of Ancient English Poetry, with remarks ; in 2 vols. 8vo. He died at Norwich in 1788, aged twenty-three.

HEAD-MOULD-SHOT, in medicine, is a disease wherein the sutures are so closely locked together, as to compress the internal parts, the

meninges, or even the brain. It is supposed to ddmit of no cure from medicine, unless room could be given by manual operation or a divulsion of the sutures. It is the opposite of the horseshoe head.

HEAD'PIECE, n. s. Head and piece. Ar-mourfor thehead; helmet; understanding; force of mind.

'Tis done by some severals Of headpiece exraordinary, lower messes Perchance are to this business purblind.

Shahipeare.

Eumenes had the best headpiece of all Alexander's captains. Prideaux.

I pulled off my headpiece, and humbly entreated her pardon, or knowledge why she was cruel.

Sidney.

The word is given ; with eager speed they lace The shining headpiece, and the shield embrace.

Dryden.

This champion will not come into the field, before his great blunderbuss can be got ready, his old rusty breastplate scoured, and his cracked headpiece mended. Swift.

A reason for this fiction of the one-eyed Cyclopsˆ, •was their wearing a headpiece, or martial vizor, that had but one sight. Broome.

HEAD'QUARTERS, n. s. Head and quarters. The place of general rendezvous, or lodgment for soldiers. This is properly two words".

The horse made their escape to Winchester, the headquarters. Clarendon

Those spirits, posted upon the out-guards, immediately scour off to the brain, which is the headquarters, or office of intelligence, and there they make their report. Collier.

HEAD'SHIP, n. s. From head. .Dignity; authority ; chief place.

HEAD'SMAN, n. s. Head and man. Executioner ; one that cuts off heads.

Rods broke on our associates' bleeding backs.

And headsmen lab'ring 'till they blunt their ax ?

Dryden.

HEAD'STALL, H. s. Head and stall. Part of the bridle that covers the head.

His horse, with a half-checked bit, and a head-stall of sheep's leather, which, being restrained to keep him from stumbling, hath been often burst, and now repaired with knots. Shakspeare.

HEAD'STONE, n. s. Head and stone. The first or capital stone.

The stone, which the builders refused, is become

the headstone.

HEAL, v. a. & v. n. HEAL'ER, n. s. HEAL'ING, adj. HEALTH, n. s. HEALTH'FUL, adj. HEALTH'FULLY, adv.

Psa. cxviii. 24.

Sax. paelan, from peel ; Golh. halgan ; Belg. heelen ; Teut. heilent To cure a person : to restore { from hurt or sick-

HEALTH'FULNESS, n'. s. (ness ; the person or

HEALTH I'LY, adv. HEALTHINESS, n. s. HEALTH'SOME, adj. HEALTH'Y, adj. HEALTH'LESS, adj.

the means by which it is done ; a cure : mild, gentle, assua-sive. Health, free-j dom from pain or

sickness as to the body ; as to the mind, welfare ; purity; goodness;

salvation: also a wish for happiness, used in drinking : healthful, wholesome ; salutary : healthless, weak ; sickly ; infirm ; that which is not conducive to health.

Our father is in good health, he is yet alive.

Genesis.

My God, my God, why hast thou forsaken me, and art so far from my health, and from the words of my complaint? Psalms.

I will not be an healer. Isaiah.

Thou hast no healing medicines.

Jer. xxx. 13.

I will restore health, and heal thee of thy wounds.

Jer. xxx.

‘ ther n’is erthe, water, fire, ne aire,

Ne creature that of hem maked is, That may me hele or don comfort in this.

Chaucer. The Knightes Tale. For now is Palamon in alle wele, Living in blisse, in richesse, s-nd in hele. Id.

HEA

To us surgiens apperteineth, that we do to every wight the best that we can ; wher as we ben witholden, and to our patient that we do no damage, wherfore it happeth many a time and ofte, that whan twey men han, everirh, wounded other o same surgien helcth hem both.

Chaucer. Tale of Melibeus.

Shall I not then be stifled in the vault, To whose foul mouth no healthsome air breathes in, And there be strangled ere my Romeo«comes T

Shaktpeare.

May be he is not well ; Infirmity doth still neglect all office, Whereto our health is bound. Id.

Those wounds heal that men do give themselves.

Id.

Come, love and health to all ; I drink to the' general joy of the whole table. H.

Such an exploit have I in hand, Had you an healthful ear to hear it. Id.

Many good and Ixalthful airs do appear by habitation and proofs, that differ not in smell from other airs. Bacon.

The best preservative to keep the mind in health, is the faithful admonition of a friend. Id.

He asked leave to begin two healths : the first was to the king's mistress, and the second to his wife.

Howel.

Nothing in Nature's sober found But an eternal health goes round. Cowley.

He that spends his time in sports, is like him whose garment is all made of fringes, and his meat nothing bin sauces ; they are healthless, chargeable, and useless.

Taylor.

While they pervert pure nature's healthful rules To loathsome sickness ; worthily since they God's image did not reverence in themselves.

Milton.

Our healthful food the stomach labours thug, At first embracing what it strait doth crush.

Dryden.

For peace at home, and for the public wealth, I mean to crown a bowl to Caesar's health. Id.

Gardening or husbandry, and working in wood, are fit and healthy recreations for a man of study or business. Locke.

Adam knew no disease, so long as temperance from the forbidden fruit secured him : Nature was his physician, and innocence and abstinence would have kept him healthful to immortality. South.

The husbandman returns from the field, and from manuring his ground, strong and healthy, because innocent and laborious. Id.

Who would not believe that our Saviour healed the sick, and raised the dead, when it was published by those who themselves often did the same mirr.cles?

Addison.

To the winds the inhabitants of Geneva ascribe the healthfulness of their air ; for as the Alps surround them on all sides, there would be a constant stagna-tion of vapours, did not the north wind put them in motion. Id. on Italy.

Health is the faculty of performing all actions proper to a human body, in the most perfect manner.

Quincy.

Air and exercise contribute to make the animal healthy. Arbuthnot.

After separation of the eschar, I deterged and healed. Wiseman.

A fontanel had been made in the same leg, which he forced to heal up, by reason of the pain. Id.

Temperance, industry, and apublick spirit, running through the whole body of the people in Holland hath preserved an infant commonwealth, of a sickly '•onstitution, through so many dangers, as a much

more healthy one could never have without those advantages.

against Swift.

Physicians, by just observations, grow up to an honourable degree of skill in the art of healing.

Watts.

Here the great masters of the healing art, These mighty mock-defrauders of the tomb, Spite of their juleps and catholicons, Resign to fate ! Blair't Grave.

From labour health, from health contentment

springs, Contentment opes the source of every joy. Beattie.

And so all ye, who would be in the right 7n health and purse, begin your day to date From day-break. Byron. Don Juan.

HEALFANG, HEALSFANG, or HALSFANG, [from halp, neck, and pangen, to contain, Sax.] in the ancient English customs, signifies collis-trigium, or the punishment of the pillojy : Paena scilicet qua alicui collum stringatur. Healfang is also taken for a pecuniary punishment or mulct, to commute for standing in the pillory ; and is to be paid either to the king or the chief lord. Qui falsum testimonium dedit, reddat regi vel terra domino healfang.

HEALTH. See MEDICINE.

HEALTH OF MARINERS, METHODS OF PRESERVING THE. See SEAMEN.

HEAM, in beasts, the same as the after-birth in women. Thyme, pennyroyal, winter savory, and common hore-hound, boiled in white wine, and given to a mare, are esteemed good to expel the heam. Dittany, applied in a pessaiy, expels the heam, as well as the dead foal; so also do fennel, hops, savin, angelica, &c.

HEAP, n. s. & v.a.ˆt Sax. peap; Dut. and

HEAP'ER, n. s. > Scot, hoop ; Swed. hop.

HEAP'Y, adj. j The primary idea is accumulation ; a crowd ; a throng ; a cluster : to throw together; to lay up or hoard ; to add : any thing lying on heaps.

Though the wicked heap up silver as the dust, and raiment as the clay ; the just shall put it on, and the innocent shall divide the silver. Job xxvii. 16.

Heap on wood, kindle the fire. Exek. xxiv. 10.

The dead were fallen down by heaps, one upon another. Wisd. xviii. 23.

And if that Love aught let his bridel go, Al that now loveth, asonder should lepe — And lost were al that Love halt now to kept.

Chaucer. Troilus and Crenide. For those of old,

And the late dignities leaped up to them, We rest your hermits. Shahspeare.

The way to lay the city flat, And bury all which yet distinctly ranges, In heaps and piles of ruin. Id.

A cruel tyranny ; a heap of vassals and slaves, no freemen, no inheritance, no stirp or ancient families. • Bacun.

How great the credit was, wherein that oracle was preserved, may be gathered from the vast riches which were there heaped up from the offerings of all the Grecian nations. Temple.

They who will make profession of painting, must heap up treasures out of their reading, and there will find many wonderful means of raising themselves above others. Dryden.

An universal cry resounds aloud ; The sailors run in heaps, a helpless crowd. Id.

Huge heaps of slain around the body rise. Id.

At her feet were laid

The sceptres of the earth, exposed on heaps, To chuse where she would reign. Id.

Venice in its first beginnings had only a few heaps of earth for its dominions. Addison on Italy.

To exult

Even o'er an enemy oppressed, and heap Affliction on the afflicted, is the mark And the mean triumph of a dastard soul.

Id. Cato.

Where a dim gleam the paly lanthorn throws O'er the mid pavement, keapy rubbish grows. Gay.

Scarce his head

Raised o'er the heapy wreath, the branching elk Lies slumbering sullen in the white abyss.

Thomson,

HEAR, v. a. & v. n. } Sax. £yjian, beajicman ; HEAR'ER, n. s. Goth, fieyra ; Teut. hoe—

HEAR'ING, n. s. [ran; Belg. hooran. The HEARK'EN, v. n. [difference between hear HEARK'EXERˆ.S. | and hearken: to hear is HEAR'SAY, n. s.) simply the act of the ear ; to hearken, an act of the ear and mind, implying effort voluntarily made. Hear has the following meanings : — To enjoy the sense by which sounds are distinguished ; to listen ; to be told ; to perceive ; give audience ; to obey ; to attend favorably ; to try ; to attend ; to acknowledge a title : hearer, one who attends discourses orally delivered ; one of an audience : hearken, to listen eagerly or curiously ; to attend : hearsay, ru-mor ; report.

Hearken unto me, thou son of Zippor. Numbers. Hear the causes and judge righteously.

Deut. i. 16.

In our hearing the king charged thee, beware that none touch Absalom. 2 Sam. xviii. 12.

A scorner heareth not rebuke. Proverbs.

Hear the word at my mouth, and give them warning from me. Ezek. iii. 17.

I was bowed dowr. at the hearing of it j I was dis-mayed at the seeing of it. Hosea.

They think they shall be heard for their much speaking. Matthew.

I have heard by many of this man. Acts, ix. 13. Agrippa and Bernice entered into the place of hearing. Acts

He sent for Paul, and heard him concerning the faith in Christ. Id. xxiv. 24.

To-day if ye will hear his voice, harden not your hearts. Hebrews.

But only for the fece thus she cried, And wept, that it wos pitee for to here.

Chaucer. The Knightes Tale. Ful swetely herde he confession, And plesant was his absolution.

Id. Prologue to the Canterbury Tales. Now let us ride and herkeneth what I say, And with that word we riden forth our way ; And he began with a right mery chere, His tale anon, and saide as ye shul here.

Id.

While that this king sit thus in his nobley, Herking his ministralles hir thinges pley, Beforne him at his bord delisiously In at the halle dore, al sodenly, Ther came a knight upon a stede of bros.

Id. The Squieres Tale.

St. John and St. Matthew, which have recorded these sermons, heard them j and being hearers, did think themselves as well respected as the Pharisees.

Hooker.

Words, be they never so few, are too many, when they benefit not the hearer. Id

If we profess, as Peter did, that we love the Lord, and profess it in the hearing of men ; charity is prone to hear all things, and therefore charitable men are likely to think we do so. Id.

He affirmed, by Jieanay, that some giants saved themselves upon the mountain Baris in Armenia.

Raleigh's History. The hearers will shed tears, And say, Alas ! it was a piteous deed !

Shahspeare.

Tell thou the lamentable fall of me, And send the hearers weeping to their beds. Id. The youngest daughter, whom you hearken for, Her father keeps from excess of suitors. Id.

He hearkens after prophecies and dreams. Id.

They do me too much injury, That ever said I hearken for your death. If it were so, I might have let alone The' insulting hand of Douglas over you. Id. The French ambassador upon that instant Craved audience ; and the hour, I think, is come To give him a hearing. Id.

You have been talked of since your travels much, And that in Hamlet's hearing, for a quality Wherein they say you shine. Id. Hamlet.

Bees are called with sound upon brass, and therefore they have hearing. Bacon's Nat. Hist. Plays in themselves have neither hopes nor fears ; Their fate is only in their hearers' ears. Ben Jonson.

Since 'tis your command, what you so well Are pleased to hear, I cannot grieve to tell.

Denham.

Or nearest thou rather pure ethereal stream, Whose fountain who shall tell ? Milton.

So spake our mother Eve, and Adam heard, Well pleased, but answered not. Id.

Great laughter was in heaven, And looking down, to see the hubbub strange, And hear the din. Milton.

On earth

Who against faith or conscience can be heard Infallible ? Id.

And so was she dulled withal, that we could come so near as to hear her speeches, and yet she not perceive the hearers of her lamentation. Sidney.

For prey these shepherds two he took, Whose metal stiff he knew he could not bend With hearsay pictures, or a window look. Id.

The readers are the jury to decide according the merits of the cause, or to bring it to another hearing before some other court. Dryden.

The gaping three-mouthed dog forgets to snarl ; The furies Itearken, and their snakes uncurl. Id.

Louder and yet more loud, I hear the alarms Of human cries : I mount the terrass, thence the town survey,

hat tl hear <

And sure he heard me, but be would not hear.

Id.

The fox had the good luck to be within hearing.

L' Estrange.

This, of eldest parents, leaves us more in the dark, who, by divine institution, has a right to civil power, than those who never heard any thing at all of heir or descent. Locke.

Those who put passion in the place of reason, neither use their own, nor hearken to other people's rea-son, any farther than it suits their humour. Id.

I must beg the forbearance of censure, till I have been heard out in the sequel of this discourse. Id.

HEA

Hear of such a crime As tragic poets, since the birth of time, Ne'er feigned. Tate's Juvenal.

Those of different principles may be betrayed to give you a fair hearing, said to know what you have to say for yourself. Adduon.

All the little scramblers after fame fall upon him,

HEA

king at arms. At the first chapter held in 1786 fie was knighted. At the age of eighty-four Sir Isaac went to Brussels, where he invested the king of the Netherlands with the order of the garter ; and thence to Vienna, to perform the same ceremony to the emperor of Austria. The last public service in which he engaged was that of

publish every blot in his life, and depend upon hear- £ttending the funeral of his ˆ majestv> with

whom he had been a great favorite. Sir Isaac died at the heralds' college, April 29th 1822, with the infant of the

say to defame him

Hearest thou submissive, but a lowly birth ?

Prior.

Sound is nothing but a certain modulation of the external air, which, being gathered by the external air, beats, as is supposed, upon the membrana tym-pani, which moves the fonr little bones in the tympanum : in like manner, as it is beat by the external air, these little bones move the internal air which is in the tympanum and vestibulum ; which internal air

prncess Brunswick

having seen, with the infant of

Charlotte, six generations of the

family. He was buried in St. George's Chapel

at Windsor.

HEARNE (Thomas), a learned antiquary, and classical editor, was born at White Waltham Berkshire, where his father was parish clerk and

makes an impression upon the auditory nerve in the school.master about 1678> After acquiring a

labyrinth and cochlea, according as it is moved by the little bones in the tympanum : so that, according to the various reflections of the external air, the internal air makes various impressions upon the auditory nerve, the immediate organ of hearing ; and these different impressions represent different sounds.

Quincy.

He who makes much necessary, will want much ; and, wearied with the difficulty of the attainment, will hearken after any expedient that offers to shorten his way to it. Rogers.

Vice heard his fame, she read his bill, Convinced of his inferior skill She sought his booth, and from the crowd Defyed the man of art aloud. Gay'* Fables. The goddess heard. Pope:

There's not a blessing individuals find, But some way leans and hearkens to the kind. Id.

Her hearers had no share In all she spoke, except to stare. Swift.

Hear it not ye stars, And thou pale moon ! turn paler at the sound.

Young.

All Nature fades extinct ; and she alone Heard, felt, and seen possesses every thought Fills every sense, and pants in every vein.

Thomson.

And her voice was the warble of a bird, So soft, so sweet, so delicately

clear,

That finer, simpler music ne'er was heard : The sort of sound we echo with a tear,

Without knowing why — an overpowering tone Whence melody descends as from a throne.

Byron.

HEARD signifies a keeper, and is sometimes

knowledge of Latin and Greek, he was taken into the house of a Mr. Cherry, of Shottes-brooke, with whom the celebrated Henry Dodwell then resided, to whose instructions Hearne appears to have been indebted. He was sent in 1 696 to Edmund Hall, Oxford, where he was employed by Dr. Mill and Dr. Grabe in the collation of MSS., and obtained his degrees in arts: in 1701 he was made assistant to Dr. Hudson, the keeper of the Bodleian library, when he greatly improved Hyde's catalogue of that literary collection. In 1712 he was appointed second librarian; and in 1715 archity-pographer and esquire beadle of the civil law ; but he soon resigned these offices, through scrupling to take the oath of allegiance to George I. He however continued to reside at Edmund Hall, where he died June 10th 1735. His labors were almost exclusively those of an editor, in which character he merits the praise of accuracy and fidjelity. He published editions of Livy, Justin, and Eutropius ; but his publications chiefly consist of the monastic and other ancient chronicles of our history. Among the rarest is the Acts of the Apostles in Greek and Latin, from a MS. in the Bodleian library.

HEARNE (Thomas), was born in 1744, at Binkworth, in Wiltshire, and learned the art of engraving from the ingenious Woollet ; but did not afterwards follow that profession ; being engaged by Sir Ralph Payne, governor of t-he Leeward Islands, to go out with him as a draughtsman. On his return to Enland he

initial ; as heard-heart a glorious keeper : some-applied to the study of Gothic architecture and

times final, as cyneheard, a royal keeper. — Gib-son's Camden. It is now written herd ; as cow-herd, a cow-keeper ; Saxon byr-^.

HEARD (Sir Isaac), the late venerable garter principal king at arms, was born at Ottery St. Mary in Devonshire, December 10th, 1730. He entered early in life into the naval service, and had a narrow escape for his life on the coast of Africa, by falling overboard with the main-mast of the ship; but was saved by the exertions of a companion, Kingsmill, who afterwards became an admiral. In 1759, being only a midshipman, he was appointed by the favor of the earl of Effingham the acting earl marshal, blue mantle pursuivant of arms. In 1761 he was made Lancaster herald ; in 1774 Norroy; in 1780 Cla-rencieux, by patent : and in 1784 garter principal

landscape ; and, in conjunction with Mr. Byrne, undertook the Antiquities of Great Britain, for which he made the whole of the drawings. He seldom attempted bold scenery, but for truth and chasteness of coloring has seldom been surpassed. He was a member of the Society of Antiquaries : and the leader of all that is excellent in modern landscape painting in water colors. He died April 13th, 1818.

HEARSE, or HERSE, n. s. Barb. Lat. hersia ; or Goth, hirda, to environ, or enclose. A carriage in which the dead are conveyed to the grave; a temporary monument set over a grave.

To add to your laments

Wherewith you now bedew king Henry's hearse, I must inform you of a dismal sight. Shakupeare.

Underneath this marble herse Lies the subject of all verse. Ben Joiuon.

And as they Nature's cradle decked, Will in green age her hearse expect. Marvell.

HEART, n.s. Sax. beojit; Swed. hoard; Teut. hertz. The muscle which by its contraction and dilatation propels the blood through the course of circulation, and is therefore considered as the source of vital motion. It is supposed in popular language to be the seat sometimes of courage, sometimes of affection, sometimes of honesty or baseness. The chief part ; the vital part ; the vigorous or efficacious part ; the inner part of any thing. Person ; character ; used with respect to courage or kindness. Seat of love ; affection ; inclination ; memory : though South seems to distinguish. Good-will; ardor of zeal. To take to heart any thing is to be zealous or solicitous or ardent about it. Anxiety ; concern ; secret recesses of the mind ; disposition. The heart is considered as the seat of tenderness : a hard heart therefore is cruelty. To find in the heart, to be not wholly averse. Secret meaning or intention ; conscience ; strength ; vigor ; efficacy; the utmost degree of feeling; life. For my heart seems sometimes to signify, if life were at stake ; and sometimes for tenderness. This word is much used in composition with other words to which it gives the idea of cordiality, or extreme of feeling ; as in the following examples.

Joab perceived that the king's heart was towards Absalom. 2 Sum.

Michal saw king David leaping and dancing before the Lord, and she despised him in her heart.

Id. vi. 16.

• — What pretty man is this

That rometh here ? now, truly, drinke ne mete Nede I not have, mine herte for joye doth bete Him to beholde, so is he godely freshe ; It seemeth, for love, his herte is tendre and neshe.

Chaucer. The Court of Love.

Wide was the wound ; and a large lukewarm flood, Red as the rose, thence gushed grievously,

That when the painim spyed the streaming blood, Gave him great heait and hope of victory.

Spenser. Faerie Queene.

There did other like unhappy accidents happen out of England, which

gave heart and good opportunity to them to regain their old possessions.

Spenser.

Every man's heart and conscience doth in good or evil, even secretly committed, and known to none but itself, either like or disallow itself. Hooker.

If he take not their causes to heart, how should tliere be but in them frozen coldness, when his affections seem benumbed, from whom theirs should take fire? id.

This gay charm,

Like a right gipsy, hath, at fast and loose, Beguiled me to the very heart of loss.

Sliakspeare.

Set your heart at rest ;

The fairy land buys not the child of me. Id. Thou wouldest have left thy dearest heart blood

there,

Rather than made that savage duke thine heir, And disinherited thine only son. Id.

I thank you for my venison, master Shallow. — Master Page, much good do it your good heart.

Id. VOL. XI.

Snakes in my heart blood warmed, that sting my

heart. /-f.

Our battle is more full of names than yours, ' Our men more perfect in the use of arms, Our armour all as strong, our cause the best ; Then reason wills our hearts should be as good.

Id.

I will on with my speech in your praise, And then shew you the heart of my message.

Id,

I bid the rascal knock upon your gate. And could not get him for my heart to do it.

Id.

I gave it to a youth, A prating boy, that begged it as a fee : I could not /or my heart deny it him. Id.

The king's a bawcock, and a heart of gold. A lad of life, an imp of fame. Id.

Hey, my hearts ; cheerly my hearts. Id.

What says my heart of elder ? Ha! is he dead ?

Id.

I've seen thee stern, and thou hast oft beheld .Heart-hardening spectacles. Id.

Whatsoever was attained to, concerning God and his working in nature, the same was d slivered over by heart and tradition from wise men to a posterity equally zealous. Raleigh.

Try whether leaves of trees, swept together, with some chalk and dung mixed, to give them more heart, would not make a good compost. Bacon.

If he would take the business to heart, and deal in it effectually, it would succeed well. Id.

Barley being steeped in water, and turned upon a dry floor, will sprout half an inch ; and if it be let alone, much more, until the heart be out. Id.

The king's forces are employed in appeasing disorders more near the heart of the kingdom.

Hayward.

Means how to feel, and learn each other's heart, By the' abbot's skill of Westminster is found.

Daniel.

The lady marchioness of Hertford engaged her husband to take this business to heart. Clarendon.

Amongst those who took it most to heart, Sir John Stawell was the chief. Id.

Having left that city well provided, and in good heart, his majesty removed with his little army to Bewdley. Id.

Eve, recovering heart, replyed. Milton.

Nor set thy heart, Thus over-fond, on that which is not thine. Id.

Profoundly skilled in the black art, As English Merlin for his heart. Hudibras: He with providence and courage so passed ovei all, that the mother took such spiteful grief at it, that her heart brake withal, and she died. Sidney.

For my breaking the laws of friendship with you, I could find in my heart to ask you pardon for it, but that your now handling of me gives me reason to confirm my former dealing. Id.

If it please you to make his fortune known, I will after take heart again to go on with his falsehood.

Id.

Doing all things with so pretty a grace, that it seemed ignorance could not make him do amiss, because he had a heart to do well. *(*.

Every moment

I'm from thy sight, the heart within my bosom Moans like a tender infant in its cradle, Whose nurse had left it.

Otway. Venice Preserved.

Generally the inside or heart of trees is harder than the outward parts. In > yle.

A friend makes me a feast, and sets all before me, but I set ray heart upon one dish alone, and if that happen to be thrown down, I scorn all the rest.

Temple.

The expelled nations take heart, and when they fly from one country invade another. Id.

Then mixing powerful herbs with magick art, She changed his form who could not change his heart.

Dryden.

What did I not, her stubborn heart to gain ? But all my vows were answered with disdain. Id.

That the spent earth may gather heart again, And, bettered by cessation, bear the grain. Id.

Here in the heart of all the town I'll stay, And timely succour where it wants convey. Id. We all set our hearts at rest, since whatever comes from above is for the beat. L' Estrange.

Tis well to be tender ; but to set the heart too much upon any thing is what we cannot justify. Id.

Finding that it did them no hurt, they took heart upon't, went up to't, and viewed it. Id.

Would you have him open his heart to you, and ask your advice, you must be-in to do so with him first. Locke.

We call the committing of a thing to memory the getting it by heart ; for it is the memory that must transmit it to the heart ; and it is in vain to expect that the heart should keep its hold of any truth, when the memory has let it go. South.

Every prudent and honest man would join himself to that side which had the good of their country most at heart. Additon.

Such iron heartt we are, and such The base barbarity of human kind. Rows.

Learned men have been now a long time searching after the happy

country from which our first parents were exiled : if they can find it, with all my heart.

Woodward.

Ah . what avails it me the flocks to keep, Who lost my heart while I preserved my sheep !

Pope.

Shall I in London act this idle part ‘ Composing songs for fools to get by heart. Id. Men, some to pleasure, some to business take ; But every woman is, at heart, a rake. Id.

Prest with Aearf-corroding grief and years, To the gay court a rural shed prefers. Id.

I would not be sorry to find the Presbyterians mistaken in this point, which they have most at heart.

Swift.

What I have most at heart is, that some method should be thought on for ascertaining and fixing our language. Id.

Care must be taken not to plow ground out of heart, because if ‘tis in heart, it may be improved by marl again. Mortimer.

A fonder parent Nature never knew, And as his age increased his fondness grew. A parent’s love ne’er better was bestowed ; The pious daughter in her heart o’erflowed.

Young. Force of Religion. Not kings alone,

Each villager has his ambition too ; No sultan prouder than his fettered slave ; Slaves build their little Babylons of straw, Echo the proud Assyrian in their hearts, And cry—’ Behold the wonders of my might.’

Id. Night Thought!.

But these thou must renounce, if lust of wealth E’er win its way to thy corrupted heart ; For ah ‘. it poisons like a scorpion’s dart. Beattie.

O cruel ! will no pang of pity pierce That heart by lust of lucre seared to stone ? Id.

The heart is like the sky, a part of heaven.

But changes night and day too, like the sky ; Now o'er it clouds and thunder must be driven,

And darkness and destruction as on high • But when it hath been scorched, and pierced, ana riven,

Its storms expire in water-drops ; the eye Pours forth at last the heart' s-bluod turned to tears.

Which make the English climate of our years. Byron. Don Juan.

HEART. See ANATOMY, Index. Physiologists and anatomists have from time to time attempted to make estimates of the force of the blood in the heart and arteries ; but have differed as widely from each other, as they have from the truth, for want of sufficient data. This set the ingenious Dr. Hales upon making proper experiments, to ascertain the force of the blood in the veins and arteries of several animals. If, according to Dr. Keil's estimate, the left ventricle of a man's heart throws out in each systole an ounce or 1-638 cubic inches of blood, and the area of the orifice of the aorta be ~0'4187, then, dividing the former by this, the quotient 3'9 is the length of the cylinder of blood which is formed in passing through the aorta in each systole of the ventricle; and, in the seventy-five pulses of a minute, a cylinder of 292'5 inches in length will pass : this is at the rate of 1462 feet in an hour. But, the systole of the heart being performed in one-third of this time, the velocity of the blood in that instant will be thrice as much, *viz.* at the rate of 4386 feet in an hour, or seventy-three feet in a minute. And if the ventricle throws out one ounce in a pulse, then, in the seventy-five pulses of a minute, the quantity of blood will be equal to 4-4 Ibs. 11 oz. ; and in thirty-four minutes a quantity equal to a middle-sized man, *viz.* 158 Ibs. will pass through the heart. But if, with Dr. Harvey and Dr. Lower, we suppose 2 oz. of blood, that is 3*276 cubic inches, to be thrown out at each systole of the ventricle, then the velocity of the blood in entering the orifice of the aorta will be double the former, *viz.* at the rate of 146 feet in a minute, and a quantity of blood equal to the weight of a man's body will pass in half the time, *viz.* seventeen minutes. If we suppose, what is probable, that the blood will rise 7 + £ feet high in a tube fixed to the carotid artery of a man, and that the inward area of the left ventricle of his heart is

equal to fifteen square inches, these, multiplied into 7Xs feet, give 1 350 cubic inches of blood, which presses on that ventricle, when it first begins to contract a weight equal to 15-5 Ibs. What Dr. Hales thus calculated from supposition, with regard to mankind, he actually experimented upon horses, dogs, fallow-does, &c., by fixing tubes in orifices opened in their veins and arteries ; by observing the several heights to which the blood rose in these tubes as they lay on the ground ; and by measuring the capacities of the ventricles of the heart and orifices of the arteries. And, that the reader may the more readily compare the said estimates together, he has given a table of them, ranged in the following order.

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HEART-ACH, n. s.

HEART’-BREAK, n. s.

HEART’-BREAKER, n. s.

HEART’-BREAKING, adj., n. s.

HEART’-BURNED, adj.

HEART’-BURNING, n. s.

HEART’-RENDING, adj.

HEART’-ROBBING, adj.

HEART’-SICK, adj.

HEART’-SORE, adj.

HEART’-STRUCK, adj.

HEART’-ˆWELLING, adj.

HEART’-WOUNDED, adj.

HEART’-WOUNDING, adj.

HEART’-DEAR, adj.

HEART’-EASE, n.s.

HEART’-EASING, adj.

HEART’-FELT, adj.

HEART’-QUELLING, adj.

HEART’-STRING, n. s.

HEART’-WHOLE, adj.

HEART’S’-EASE, n.s.

HEART’-PEASE, n. s.

fection ; heart-robbing, ecstatic to a degree depriving of thought; heart-string, ligaments or nerves supposed to sustain the heart, properly the vessels by which it is suspended; heart-whole, affections yet unfixed, or vitals yet unim-paired ; the other words are too obvious to require specific illustration. Heart-breaker is an obsolete word or cant term for a woman’s curls, supposed to break the heart of all her lovers ; heart’s-ease, the name of a flower ; heart-pease, a plant.

Compounds of heart with

other words, for the most part expressing their own pecu-Irar meanings, and implying various degrees of suffering or pleasure, sorrow

,-or discontent. Heartburn, pain at the stomach arising from acidity, and figuratively secret discontent or enmity : heart-dear, sincerely beloved; heart-quelling, conj quering the af-

Those piteous plaints and sorrowful sad time, Which late you poured forth, as ye did sit Beside the silver springs of Helicone, Making your musick of heart-breaking mone.

Spenser.

Wherever he that godly knight may find, His only heart-sore and his only foe.

Id. Faerie Queene.

Drawn into arms, and proof of mortal fight, Through proud ambition and heart-swelling hate.

Spenser.

Sweet as thy virtue, as thyself sweet art ; For when on me thou shinedst, late in sadness, A melting pleasauce ran through every part, And me revived with heart-robbing gladness. Id.

And let fair Venus, that is queen of love, With her heart-quelling son, upon you smile. Id.

He was by Jove deprived Of life himself, and heart-strings of an eagle rived.

Id.

Better a little chiding than a great deal of heart' break. Shakspeare.

Who is with him ?

— None but the fool who labours to outjest His heart-struck injuries. Id.

What infinite heart-ease must kings neglect, That private men enjoy ! Id.

Good Romeo, hide thyself. — "Not I, unless the breach of heart-sick groans Mist-like, infold me from the search of eyes.

Id.

To die — to sleep —

Xo more ; and, by a sleep, to say the end, The heart-ach, and the thousand natural shocks That tiesh is heir to. Id. Hamlet.

How tartly that gentleman looks ! I never can see him but I am heart-burned an hour after.

Shakspeare.

How, out of tune on the strings ? —Not so ; but yet so false, that he grieves my very heart-strings.

Cupid hath clapt him o’ th’ shoulder, but I II warrant him heart-whole.

The time was, father, that you broke your word,

When you were more endeared to it than now ;

HEARTED, adj. HEART’EN, v. a. HEARTI’LT, adv. HEARTI’NESS, n. s.

HEART’LESSLY, adv. HEART’LESSN ESS, n.s. HEART’Y, adj.

Derived from heart. Hearted, an epithet which derives its force from the words with >which it is joined, implying intensity of feeling, as lion-hearted ; hardhearted : hearten,

HEARTY-HALE, adj. J to encourage, animate, or renovate : heartily, cordially; fully ; sincerely;

When your own Percy, when my heart-dear Harry, < Jffj ™J>™

H innk to see his father eagerly : heartless implies defect in these quali-Threw many a northward look to see ins tamer 0 / _«_. /•.«_

Bring up his powers ; but he did long in vain !

ties, as spiritless ; cowardly ; without feeling ; Id. dejected : hearty, undissembled ; zealous ; healthy ;

Hearty-hale, good

What greater heart-breaking and confusion can strong; vigorous; durable, there be to one, than to have all his secret faults laid for the heart ; an old word, open, and the sentence of condemnation passed upon

Hakewill.

him?

If we be heart-sick, or afflicted with an uncertain soul, then we are true desirers of relief and mercy.

Taylor.

If thou thinkest thou shalt perish, I cannot blame thee to be sad ‘till thy heart-strings crack. Id.

That grates my heart-ttrings ; what should discontent him 1 Except he thinks I live too long. Denham.

He added not ; for Adam, at the news Heart-struck, with chilling gripe of sorrow stood, That all his senses bound ! Milton.

But come, thou goddess, fair and free, In heav’n ycleped Euphrosyne,

And by men heart-easing mirth. Id.

Like Samson’s heart-breakers, it grew In time to make a nation rue. Hudibras.

Heart rending news, and dreadful to those few Who her resemble, and her steps pursue ; That death should licence have to rage among The fair, the wise, the virtuous, and the young !

Waller.

You have not seen me yet, and therefore I am confident you are heart-whole. Dryden.

Heart’s-ease is a sort of violet that blows all Sum-mer, and often in Winter : it sows itself. Mortimer.

Fine clean chalk is one of the most noble absorbents, and powerfully corrects and subdues the acrid humours in the stomach : this property renders it very serviceable in the cardialgia, or heart-burning.

Woodward.

There's the fatal wound

That tears my heart-strings ; but he shall be found, My arms shall hold him. Gramille.

What nothing earthly gives, or can destroy, The soul's calm sunshine, and the heart-felt joy, Is virtue's prize. Pope.

Mean time the queen, without reflection due, Heart-wounded, to the bed of state withdrew. Id. In great changes, when right of inheritance is broke, ther will remain much heart-burning and discontent among the meaner people. Swift.

' Nay, Sire '.' quod he, ' but swiche thing as I can With hertly wille, for I wol not rebelle Agein your lust, a tale wol I telle. Have me excused if I speke amis : My wille is good ; and lo, my tale is this.'

Chaucer. The Squierea Tale. ' Avoy,' quod she ; ' fy on you herteles ! Alas,' quod she, ' for, by that God above, Now han ye lost myn herte and all my love ; I cannot love a coward, by my faith.'

Id. The Nonnei Preestes Tale. Vein-healing verven, and head-purging dill, Sound savory, and basil hearty hale. Spenser.

I joyed oft to chase the trembling pricket, Or hunt the heartless hare 'till she were tame. Id. Then hopeless, heartless, 'gan the cunning thief, Persuade us die, to stint all further strife.

Faerie Queene.

My royal father, cheer these noble lords, And hearten those that fight in your defence : Unsheath your sword, good father ; cry, St. George.

Shakspeare.

What, art thou drawn among these heartless hinds ? Turn thee, Benvolio ; look upon thy death. Id.

I bear no malice for my death ;

But those that sought it, I could wish more Christians ; Be what they will, I heartily forgive them. Id.

This entertainment may a free face put on : derive a liberty from heartiness, and well become the agent.

Id.

This rare man, Tydides, would prepare ; That he might conquer, heartened him. Chapman.

Oak, and the like true hearty timber, being strong in all positions, may be better trusted in cross and transverse works.t1-Wotton.

The ground one year at rest ; forget not then With richest dung to hearten it again. May's Virgil. Thousands besides stood mute and heartless there, Men valiant all ; nor was I used to fear. Cowley.

The anger of an enemy represents our faults, or admonishes us of our duty, with more heartiness than the kindness of a friend. Taylor.

They did not bring that hearty inclination to peace,

HEART-BURN, in medicine, is more usually which they hoped they would have done called cardialgia. In surfeits, or upon swallow- Clarendon.

ing without due mastication, or when by any Palladius blaming those that were slow, heartening accident the saliva is vitiated, too scanty, or not them that were forward, but especially with his own intimately mixed with the food, the fermentation becomes tumultuous, the stomach swells with air, and this extraordinary commotion, being attended with an unusual heat, brings on the uneasiness called the heart-burn: which is remedied by whatever promotes a greater secretion whil of saliva, or helps *o mix it with our aliment. The testaceous powders, as oyster-shells, chalk, &c., are the usual remedies for the heart-burn.

example leading them, made an impression into the nadron. Sidney.

The peasants were accustomed to payments, and ew heartless as they grew poor. Temple.

Heartless they fought, and quitted soon their ground, ours with easy victory were crowned.

Dryden.

But the kind hosts their entertainment grace With hearty welcome and an open face j

HEAT.

lih

In all they did, you might discern with ease,

A willing mind, and a desire to please. Id.

Thus heartened well, and fleshed upon his prey, The youth may prove a man another day. Id.

As for my eating heartily of the food, know that anxiety has hindered my eating ‘till this moment.

Addison.

If to be sad is to be wise, I do most heartily despise Whatever Socrates has said, Or Tully writ, or Wanley read. Prior. He ne’er like bullies coward hearted,

Attacks in publick to be parted. Gay.

Where his judgment led him to oppose men on a publick account, he would do it vigorously and heartily; yet the opposition ended there. Atterbury.

Whose laughs are hearty, though his jests are

coarse, And loves you best of all things but his horse. Pope.

Every man may pretend to any employment, provided he has been loud and frequent in declaring himself hearty for the government. Swift.

HEARTH, n. s. Sax. beonS; Swed. hard; Teut. herd. The pavement of a room on which a fire is made ; the ground under the chimney. Hooped out of Rome : now this extremity

Hath brought me to this hearth. Shakspcare.

Cricket, to Windsor chimneys shalt thou leap. Where thou findest fires unraked, and hearths un—

swept, There pinch the maids as blue as bilberry. Id,

Good luck befriend thee, son ; for at thy birth The fairy ladies danced upon the hearth. Milton.

The vanquished fires withdraw from every place j Or, full with feeding, sink into a sleep : Each household genius shews again its face, And from the hearths the little lares creep. Dryden.

HEAT, n. s. & v. a.) Sax. bear, beet ; Dan. HEAT'ER, n. s. \ heete. The sensation caused by the approach or touch of fire; the cause of this sensation; hot weather; state of any body under the action of fire ; a violent action unintermitted ; a course at a race ; pimples in the face ; agitation ; vehemence of action ; passion ; faction ; ardor : to warm, either literally or figuratively ; to agitate the blood and spirits with action : heater, an iron made hot, and put into a box-iron, to smooth linen.

He commanded that they should heat the furnace one seven times more than it was wont to be heated.

Van. in. 19.

Nowe hole as fire, nowe cold as ashes ded ; Nowe hote for colde, now colde for hete again; Now cold as yse ; and now, as coles red, For hete I brenne. And thus betwixen twaine, I possed am and al forcaste in paine, — So that my hete, full plainly as I fele, Of grevous colde is caused every dele !

Chaucer, Complaint of the Blacke Knight. The sword which is made fiery doth not only cut by reason of the sharpness which simply it hath, but also burns by means of that heat which it hath from fire. Hooker.

The friend hath lost his friend ; And the best quarrels, in the heat, are curst By those that feel their sharpness. Shakspeare. They are in a most warlike preparation, and hope to come upon them in the heat of

their division. Id.

Thou art going to Lord Timon's feast. — Ay, to see aaeat fill knaves, and wine heat fools.

Id.

After they came down into the valley, and foimd the intolerable heats there, and knew no means of lighter apparel, they were forced to go naked.

Bacon.

Where now he flings about his burning heat As in a furnace some ambitious fire Whose vent is stopt. Ben Jonson.

The cold and heat Winter and Summer shows ; Autumn by fruits, and Spring by flowers he knows.

Cowley.

Virtue's a faint green-sickness to brave souls, Dastards their hearts, their active heat controls.

Marvell.

They, seing what forces were in the city with them, issued against the tyrant while they were in this heat> before practices might be used to dissever them.

Sidney.

Mark well the flowering almonds in the wood ; The glebe will answer to the sylvan reign ; Great heats will follow, and large crops of grain.

Dryden.

Feigned zeal, you saw, set out the speedier pace j But the last heat, plain dealing won the race. Id.

A noble emulation heats your breast, And your own fame now robs you of your rest. Id.

The continual agitations of the spirits must needs be a weakening of any constitution, especially in age : and many causes are required for

refreshment betwixt the heats. Id.

% What can more gratify the Phrygian foe Than those distempered heats ? Id.

I'll stake my fortune with him at a heat, And give him not the leisure to forget. Id.

When he was well heated the younger champion could not stand before him ; and we find the elder contended not for the gift, but for the honour,

Id.

Heat is a very brisk agitation of the insensible parts of the object, which produces in us that sensation from whence we denominate the object hot ; so what in our sensation is heat, in the object is nothing but motion. Locke.

Hops lying undried heats them, and changes their colour. Mortimer.

The heats smiths take of their iron are a blood-red heat, a white flame heat, and a sparkling or welding heat. Moxon.

They the turned lines on golden anvils beat, Which look as if they struck them at a heat.

Tate.

It might have pleased in the heat and hurry of his rage, but must have displeased in cool sedate reflection.

South.

Plead it to her

With all the strength and heat of eloquence Fraternal love and friendship can inspire.

Addison's Cato.

We have spilt no blood but in the heat of the battle, or the chase. Atterbury.

Whatever increaseth the density of the blood, even without increasing its celerity, heats, because a denser body is hotter than a rarer. Arbuthnot.

One playing at hazard, drew a huge heap of gold j but in the heat of play never observed a sharper, who swept it into his hat. Swift.

The word heat is used to signify the sensation we have when we are near the fire, as well as the cause of that sensation, which is in the fire itself : and thence we conclude, that there is a sort of heat in the fire resembling our own sensation. Watts.

Yet could I seat me by this ivied stone Till I had bodied forth the heated mind, Forms from the floating wreck which ruin leaves behind. Byron's Childe Harold.

HEAT.

HEAT, in physiology, is a term that has been used both for the peculiar sensation felt on the approach of bodies in a state of combustion, and for the cause of that sensation : in which last sense it is synomymous with fire. In the for-mer sense it is opposed to cold, la modern science the term fire has been abandoned ; but the term heat is generally taken for the supposed natural agent that produces the sensation we call by this name ; for a great second cause, therefore, of some of the most important operations of nature, or as synonymous with the term caloric.

The great question among philosophers of modern times has been whether this is to be regarded as a distinct subtile fluid, or entity ; or whether it is a property of matter universally diffused, and operating in a vibratory or intestine motion of its particles. Tbe latter is the opinion of Sir Humphry Davy on this intricate poiRt ; and, as he has many claims to our attention on such a subject, we shall here transcribe his views respecting it. ' Calorific repulsion/ he says, ' has been accounted for, by supposing a subtile fluid capable of combining with 'bodies, and of separating their parts from each other, which has been named the matter of heat, or caloric.

' Many of the phenomena admit of a happy explanation on this idea, such as the cold produced during the conversion of solids into fluids or gases, and the increase of temperature connected with the

condensation of gases and fluids.' In the former case we say the matter of heat is absorbed or combined, in the latter it is extruded or disengaged from combination. ' But there are other facts which are not so easily reconciled to the opinion. Such are the production of heat by friction and percussion ; and some of the chemical changes which have been just referred to.' These are, the violent heat produced in the explosion of gunpowder, where a large quantity of aeriform matter is disengaged ; and the fire which appears in the decomposition of the euchlorine gas, or protoxide of chlorine, though the resulting gases occupy a greater volume.

' When the temperature of bodies is raised by friction, there seems to be no diminution of their capacities, using the word in its common sense ; and in many chemical changes, connected with an increase of temperature, there appears to be likewise an increase of capacity. A piece of iron made red-hot, by hammering, cannot be strongly heated a second time by the same means, unless it has beeri previously introduced into a fire. This fact has been explained by supposing that the fluid of heat has been pressed out of it, by the percussion, which is recovered in the fire ; but this is a very rude mechanical idea : the arrangements of its parts are altered by hammering in this way, and it is rendered brittle. By a moderate degree of friction, as would ap-pear from Rumford's experiments, the same piece of metal may be kept hot for any length ol time ; so that if heat be pressed out, the quantity must be inexhaustible. When any body is copied, it occupies a smaller volume than before ; it is evident, therefore, that its parts must have approached to each other: when the body is

expanded by heat, it is equally evident that it* parts must have separated from each other. The immediate cause of the phenomena of heat, then, is motion, and the laws of its communication are precisely the same as the laws of the communication of motion.

Since all matter may be made to fill a smaller volume, by cooling, it is evident that the particles of matter must have space between them ; and since every body can communicate the power of expansion to a body of a lower temperature, that is, can give an expansive motion to its particles, it is a probable inference that its own particles are possessed of motion ; but, as there is no change in the position of its parts as long as its temperature is uniform, the motion, if it exist, must be a vibratory or undulatory motion, or a motion of the particles round their axes, or a motion of particles round each other.

‘ It seems possible to account for all the phenomena of heat, if it be supposed that in solids the particles are in a constant state of vibratory motion, the particles of the hottest bodies moving with the greatest velocity, and through the greatest space ; that in liquids and elastic fluids, besides the vibratory. motion, which must be conceived greatest in the last, the particles have a motion round their own axes, with different velocities, the particles of elastic fluids moving with the greatest quickness ; and that in ethereal substances, the particles move round their own axes, and separate from each other, penetrating in right lines through space. Temperature may be conceived to depend upon the velocities of the vibrations ; increase of capacity, on the motion being performed in greater space ; and the diminution of temperature, during the conversion of solids into fluids or gases, may be explained on the idea of the loss of vibratory motion, in consequence of the revolution of particles round their axes, at the moment when the body becomes liquid or aeriform ; or from the loss of rapidity of vibration, in consequence of the motion of the particles through greater space.

‘ If a specific fluid of heat be admitted, it must be supposed liable to most of the affections which the particles of common matter are assumed to possess, to account for the phenomena ; such as losing its motion when combining with bodies, producing motion when transmitted from one body to another, and gaining projectile motion when passing into free space ; so that many hypotheses must be adopted to account for its agency, which renders this view of the subject less simple than the other. Very delicate experiments have been made, which show that bodies, when heated, do not increase in weight. This, as far as it goes, is an evidence against a subtile elastic fluid producing the calorific expansion ; but it cannot be considered as decisive, on account of the imperfection of our instruments. A cubical inch of inflammable air requires a good balance to ascertain that it has any sensible weight, and a substance bearing the same relation to this, that this bears to platinum, could not perhaps be weighed by any method in our possession.’

Sir William Herschel, and Sir H. Englefield on the other hand, have been supposed to

establish the materiality of caloric : or at least to have made it appear coexistent with light. Herschel found that when similar thermometers were placed in the different parts of the solar beam, decomposed by the prism into the primitive colors, they indicated different temperatures. He estimates the power of heating in the red rays to be to that of the green rays as fifty-five to twenty-six, and to that of the violet rays as fifty-five to sixteen. And in a space beyond the red rays, where there is no visible light, the increase of temperature is greatest of all. Thus a thermometer in the full red ray rose 7° Fahr. in ten minutes; beyond the confines of the colored beam entirely, it rose in an equal time 9°. His experiments were repeated by Sir H. Englefield.

Mr. Berard, however, came to a conclusion - somewhat different. To render his experiments more certain, and their effects more sensible, this philosopher availed himself of the heliostat, an instrument by which the sunbeam can be steadily directed to one spot during the whole of its diurnal period. He decomposed by a prism the sunbeam, reflected from the mirror of the heliostat, and placed a sensible thermometer in each of the seven colored rays. The calorific faculty was found to increase progressively from" the violet to the red portion of the spectrum, in which the maximum heat existed, and not be-yond it, in the unilluminated space. The greatest rise in the thermometer took place while its bulb was still entirely covered by the last red rays ; and it was observed progressively to sink as the bulb entered into the dark. Finally, on placing the bulb quite out of the visible spectrum, where Herschel fixed the maximum of heat, the elevation of its temperature above the ambient air was found, by M. Berard, to be only one-fifth of what it was in the extreme red ray. He afterwards made similar experiments on the double spectrum produced by Island crystal, and also on polarised light, and he found in both cases that the calorific principle accompanied the luminous molecules ; and that, in the positions where light ceased to be reflected, heat also disappeared.

Newton has shown that the different refran-gibility of the rays of light may be explained by supposing them composed of particles differing in size, the largest being at the red, and the smallest at the violet extremity of the spectrum. The same great man has put the query, Whether light and common matter are not convertible into each other? and, adopting the idea that the phenomena of sensible heat depend upon vibrations of the particles of bodies, supposes that a

certain intensity of vibrations may send off particles into free space ; and that particles in rapid motion in right lines, in losing their own motion, may communicate a vibratory motion to the particles of terrestrial bodies. In this way we can readily conceive how the red rays should im-pinge most forcibly, and therefore excite the greatest degree of heat. This controversy on the nature of heat is, therefore, far from being settled. There is little room, as Dr. Ure has observed, for being dogmatic on either side. But, if the essence of this most important cause be

hid in mystery, we are well acquainted with many of its properties and effects. We shall, in this paper, chiefly attend to them as displayed — I. In the distribution of heat. II. In the general sympathies of heat with the different forms of matter.

PART I. OF THE DISTRIBUTION OF HEAT.

Newton, in his Opuscula, suggests a law respecting the communication of heat which has long served as a basis for the calculation of philosophers. He assumes, a priori, that a heated body exposed to a constant cooling cause, such as the uniform action of a current of air, ought to lose at each instant a quantity of heat proportional to the excess of its temperature above that of the ambient air ; and that consequently its losses of heat, in equal and successive portions of time, ought to form a decreasing geometrical progression. Martin, in his Essays on Heat, pointed out, however, long ago the inaccuracy of this law, and Erxleben proved, by very accurate observations, that the deviation of the supposed law increases more and more as we consider greater differences of temperatures : he concludes that we should fall into very great errors if we extended the law much beyond the temperature at which it has been verified. Yet Mr. Leslie since, in his Researches on Heat, has made this law the basis of several determinations ; and Messrs. Dulong and Petit have investigated the true law in a masterly manner.

They employed in this research mercurial the*- mometers, whose bulbs were from 0-8 of anjnch to 2‘6 ; the latter containing about three pounds of mercury. They found, by preliminary trials, that the ratio of cooling was not affected by the size of the bulb, and that it held also in comparisons of mercury, with water, with absolute alcohol, and with sulphuric acid, through a range of temperature from 60° to 30° of the centigrade scale ; so that the ratio of the velocity of cooling between 60° and 50°, and 40° and 30°, was sensibly the same.

On cooling water in a tin plate, and in a glass sphere, they found the law of cooling to be more rapid in the for-mer, at temperatures under the boiling point ; but, by a very remarkable casualty, the contrary effect takes place in bodies heated to high temperatures, when the law of cooling in tin plates becomes least rapid. Hence, generally, that which cools by a most rapid law at the lower part of the scale, becomes the least rapid at high temperatures. Mr. Leslie, says these gentlemen, obtained such inaccurate results respecting this question, because he did not make experiments on the cooling of bodies raised to high temperatures. They terminate their preliminary researches by experiments on the cooling of water in three tin-plate vessels of the same capacity, the first of which was a sphere, the second and third cylinders ; from which we learn that the law of cooling is not affected by the difference of shape.

The researches on cooling in a vacuum were made with an exhausted balloon ; and a compensation was calculated for the minute quantity of residuary gas. The following series was ob-

tained when the balloon was surrounded with ice. The degrees are centigrade.

Excess of the therm, above the balloon.	Corresponding velocities of cooling.
240	10-69
220	8-81

200

7-40

180

6-10

160

4-89

140

3-88

120

3-02

100

2-30

80

1-74

The first column contains the excesses of temperature above the walls of the balloon ; that is to say, the temperatures themselves, since the balloon was at 0°. The second column contains the corresponding velocities of cooling, calculated and corrected. These velocities are the numbers of degrees that the thermometer would sink in a minute. The first series shows clearly the inaccuracy of the geometrical law of Richmann ; for, according to that law, the velocity of cooling at 200° should be double of that at 100°; whereas we find it as 7-4 to 2‘3, or more than triple ; and in like manner, when we compare the loss of heat at 240° and at 80°, we find the first about six times greater that the last ; while, according to the law of Richmann, it ought to be merely triple. From the above, and some analogous experiments, the following law has been deduced : when a body cools in vacuo, surrounded by a medium whose temperature is constant, the velocity of cooling for excess of temperature, in arithmetical progression, increases as the terms of a geometrical progression, diminished by a certain quanty. Or, expressed in algebraic language, the following

equation contains the law of cooling in vacuo :

6 t V — m. a (a — 1).

0 is the temperature of the substance surrounding the vacuum ; and t that of the heated body above the former. The ratio a of this progression is easily found for the thermometer, whose cooling is recorded above ; for when 0 augments by 20°, t remaining the same, the velocity of cooling is then multiplied by 1-165, which number is the mean of all the ratios experimentally determined. We have then

20

a := V 1-165 = 1-0077.

It only remains, in order to verify the accuracy of this law, to compare it with the different series contained in the table inserted above. In that case, in which the surrounding medium was 0°, it is necessary to make

m — 2-037, for m — ,-— lor ~

and

n is an

Excesses of temp, or values of t.

Values of V observed.

Values of V calculated.

10-69

10-68

220

8-81

8-89

200

7-40

7-34

180

6-10

6-03

160

4-89

4-87

140

3-88

3-89

120

3-02

3-05

100

2-30

2-33

80

•

intermediate number ; we have then V ~

t 2 037 (a — 1).

The laws of cooling in vacuo being known, nothing is more simple than to separate from the total cooling of a body surrounded with air, or with any other gas, the portion of the effect due to the contact of the fluid. For this, it is obviously sufficient to subtract from the real velocities of cooling, those velocities which would take place if the body, caeteris pari-bus, were placed in vacuo. This subtrac-tion may be easily accomplished now that we have a formula, which represents this velocity with great precision, and for all possible cases.

From numerous experimental comparisons the following law was deduced : the velocity of cooling a body, owing to the sole contact of a gas, depends for the same excess of temperature on the density and temperature of the fluid ; but this dependence is such, that the velocity of cooling remains the same, if the density and the temperature of the gas change in such a way that the elasticity remains constant.

The influence of the nature of the surface of bodies, in the distribution of heat, was first accurately examined by Mr. Leslie. This branch of the subject is usually called the radiation of caloric. To measure the amount of this influence, with precision, he contrived a peculiar instrument, called a differential thermometer. It consists of a glass tube, bent into the form of the letter U, terminated at each end with a bulb The bore, is about the size of that of large trner-mometers, and the bulbs have a diameter of one-third of an inch and upwards. Before hermetically closing the instrument a small portion of sulphuric acid, tinged with carmine, is introduced. The adjustment of this liquid, so as to make it stand at the top of one of the stems, immediately below the bulb, requires dexterity in the operator. To this stem a scale divided into 100 parts is attached, and the instrument is then fixed upright by a little cement on a wooden sole. If the finger, or any body warmer than the ambient air, be applied to one of these bulbs, the air within will be heated, and will of course expand, and, issuing in part from the bulb, depress before it the tinged liquor. The amount of this

depression observed upon the scale will denote the difference of temperature of the two balls. But if the instrument be merely carried, without touching either ball, from a warmer to a cooler, or from a cooler to a warmer air, or me-dium of any kind, it will not be affected; because the equality of contraction or expansion,

in the enclosed air of both bulbs, will maintain the equilibrium of the liquid in the stem. Being thus independent of the fluctuations of the surrounding medium, it is well adapted to measure the calorific emanations of different surfaces, successively converged, by a concave reflector, upon one of its bulbs.

Dr. Howard has described, in the sixteenth number of the Journal of Science, a differential thermometer of his contrivance, which he conceives to possess some advantages. Its form is au imitation of Mr. Leslie's; but it contains meiely tinged alcohol, or ether; the air being expelled by ebullition previous to the hermetical closure of the instrument. The vapor of ether, or of spirit in vacuo, affords, he finds, a test of superior delicacy to air. He makes the two legs of different lengths ; since it is in some cases very convenient to have the one bulb standing quite aloof from the other.

In Mr. Leslie's, when they are on the same level, their distance asunder varies from one-third of an inch to an inch or upwards, according to the size of the instrument. The general length of the legs of the syphon is about five or six inches. His reflecting mirrors, of about fourteen inches diameter, consisted of planished tin-plate, hammered into a parabolical form by the guidance of a curvilinear gauge. A hollow tin vessel, six inches cube, was the usual source of calorific emanation in his experiments. He coated one of its sides with lamp-black, another with paper, a third with glass, and a fourth was left bare. Having then filled it with hot water, and set it in the line of the axis and four or six feet in front of one of the mirrors, in whose focus the bulb of a differential thermometer stood, he noted the depression of the colored liquid produced on presenting the different sides of the tube towards the mirror in succession. The following table

gives a general view of the results, with these, and other coatings : —

Lamp black .

Water by estimate

Writing paper

Resin .

Sealing-wax .

Crown glass .

China ink

Ice . .’’’’.”.

Red lead

Plumbago

Isinglass

Tarnished lead

Mercury

Clean lead .

Iron polished

Tin plate

Gold, silver, copper

100 100 +

98

96

95

90

88

85

80

75

75

45

20 +

19

15

12

12

Similar results were obtained by Leslie and Rutnford in a simpler form.

Coating the bulb of his thermometer with ”.ifferent substances, Mr. Leslie ingeniously dis-rovered the power of different substances to tit sorb heat; and he found this to follow the same order as the radiating or projecting quality. The same film of s Iver leaf which obstructs the egress of heat from a body to those surrounding

it, prevents it from receiving their calorific emanations in return. On this principle we can understand how a metallic mirror, placed before » fire, should scorch substances in its focus, whiU itself remains cold ; and, on the other hand, how a mirror of darkened, or even of silvered glass, should become intolerably hot to the touch while it throws little heat before it. From this absorbent faculty it comes that a thin pane of -glass intercepts almost the whole heat of a blazing fire, while the light is scarcely diminished across it. By degrees indeed itself, becoming heated, constitutes a new focus of emanation ; but still the energy of the fire is greatly interrupted. Hence also we see why the

thinnest sheet of bright tin-foil is a perfect fire-screen ; so impervious indeed to heat that, with a masque coated with it, our face may encounter without inconvenience the blaze of a glass-house furnace.

Since absorption of heat goes hand in hand with radiation, we perceive that the inverse of absorption, that is reflection, must be possessed in inverse powers by the different substances composing the list. Thus bright metals reflect most heat, and so on upwards in succession. Mr. Leslie is anxious to prove that elastic fluids, by their pulsatory undulations, are the media of fhe projection or radiation of heat; and that therefore liquids, as well as a perfect vacuum, should obstruct the operation of this faculty. But the laws of the cooling of bodies in vacuo, experimentally established by MM. Dulong and Petit, are fatal to Mr. Leslie's hypothesis, which indeed was not tenable against the numerous objections which had previously assailed it. The following beautiful experiment of Sir H. Davy seems alone to settle the question. He had an apparatus made by which platina wire could be heated in any elastic medium or in vacuo ; and by which the effects of radiation could be distinctly exhibited by two mirrors, the heat being excited by a Vol-taic battery. In several experiments, in which the same powers were employed to produce the ignition, it was found that the temperature of a thermometer rose nearly three times as much in the focus of radiation, when the air in the receiver was exhausted to -fa , as when it was in its natural state of condensation. The cooling power, by contact of the rarefied air, was much less than that of the air in its common state, for the glow of the platina was more intense in the first case than in the last ; and this circumstance perhaps renders the experiment not altogether decisive ; but the results seem favorable to the idea that the terrestrial radiation of heat is no* dependent upon any motions or affections of the atmosphere. The plane of the two mirrors was placed parallel to the horizon, the ignited body being in the focus of the upper, and the thermometer in that of the under mirror. It is evident that a diminished density of the elastic medium, amounting to ˆ , should, on Mr. Leslie's views, have occasioned a greatly diminished temperature in the inferior focus, and not a threefold increase, as happened. The experiments with scieens of glass, paper, &c., which Mr. Leslie adduced in support of his undulatory hypothesis, have been since confronted with the experiments on screens of Dr Delaroche, who, by varying them, ob-106

tained results incompatible with Mr. Leslie's views.

The constancy or steadiness of the temperature of a body will consist in the equality of the quantities of radiating caloric which it emits and receives in an equal time ; and the equality of temperature between several bodies which influence one another, by their mutual radiation, will consist in the perfect compensation of the momentary interchanges effected among one and all. Such is the ingenious principle of a moveable equilibrium, proposed by professor Prevost : a principle, whose application, directed with discretion and combined with the properties peculiar to different surfaces, explains all the phenomena which we observe in tfie distribution of radiating caloric. Thus, when we put a ball of snow in the focus of one concave "mirror, and a thermometer in that of an opposite mirror placed at some distance, we perceive the temperature instantly to fall, as if there were a real radiation of frigorific particles, according to the ancient notion. The true explanation is derived from the abstraction of that return of heat which the thermoscope mirror had previously derived from the one now influenced by the snow, and now participating in its inferior radiating tension. Thus, also, a black body placed in the focus of one mirror would diminish the light in the focus of the other; and, as Sir H. Davy happily remarks, the eye is, to the rays producing light, a measure, similar to that which the ther mometer is to rays producing heat.

This interchange of heat is finely exemplified in the relation which subsists between any por tion of the sky and the temperature of the subja cent surface of the earth. In the year 1788 Mr. Six of Canterbury mentioned, in a paper transmitted to the Royal Society, that on clear and dewy nights he always found the mercury lower in a thermometer laid upon the ground, in a meadow in his neighbourhood, than it was in a similar thermometer suspended in the air six feet above the former : and that upon one night the difference amounted to 5° of Fahrenheit's scale. And Dr. Wells, in autumn 1811, on laying a thermometer upon grass wet with dew, and suspending a second in the air two feet above the surface, found, in an hour afterwards, that the former stood 8° lower than the latter. He at first regarded this coldness of the surface to be the effect of the evaporation of the moisture; but subsequent observations and experiments convinced him that the cold was not the effect, but the cause of deposition of dew. Under a cloud-less sky the earth projects its heat, without re-turn, into empty space ; but a canopy of cloud is a concave mirror, which restores the equilibrium by counter-radiation. See DEW

On this principle Dr. Wollaston suggested the construction of an instrument, which professoi Leslie has called an aethrioscope, whose function it is to denote the clearness and coolness of the sky. It consists of a polished metallic cup, of an oblong spheroidal shape, very like a silver porter-cup, standing upright, with the bulb of a differential thermometer placed in its axis, and the stem lying parallel to the stalk of the cup. The other ball is gilt, and turned outwards and

upwards, so as to rest against the side of the ves-sel. The best form of the cup is an ellipsoid, whose eccentricity is equal to half the transverse axis, and the focus consequently placed at the third part of the whole height of the cavity ; while the diameter of the thermoscope ball should be nearly the third part of the orifice of the cup. A lid of the same thin metal, unpolished, is fitted to the mouth of the cup, and removed only when an observation is to be made. The scale attached to the stem of the thermo-scooe may extend to sixty or seventy millesimal degrees above the zero, and about fifteen degrees below it. This instrument, exposed to the open air in clear weather, will at all times, both dur-ing the day and the night, ‘ indicate an impression of cold shot downward from the higher regions/ in the figurative language of Mr. Leslie. Yet the effect varies exceedingly. It is greatest while the sky has the pure azure hue ; it diminishes fast as the atmosphere becomes loaded with spreading clouds ; and it is almost extinguished when low fogs settle on the surface. The liquid in the stem falls and rises with every passing cloud. Dr. Howard’s modification of the thermoscope would answer well here.

The diffusion of heat, among the particles of fluids themselves, depends upon their specific gravity and specific heat conjunctly, and thereFore must vary for each particular substance. The mobility of the particles in a fluid, and their reciprocal independence on one another, permit them to change their places whenever they are expanded or contracted by alternations of temperature ; and hence the immediate and inevitable effect of communicating heat to the under stratum of a fluid mass, or of abstracting it from the upper stratum, is to determine a series of intestine movements. The colder particles, by their superior density, descend in a perpetual current, and force upwards those rarefied by the heat. When, however, the \ipper stratum primarily acquires an elevated temperature, it seems to have little power of imparting heat to the subjacent strata of fluid particles. Water may be kept long in ebullition at the surface of a vessel, while the bottom remains ice cold, provided we take measures to prevent the heat passing downwards through the sides of the vessel itself. Count

Rumford became so strongly persuaded of the impossibility of communicating heat down wards, through fluid particles, that he regarded them as utterly destitute of the faculty of transmitting that power from one to another, and capable of acquiring heat only in individual rotation, and directly from a foreign source. The proposition thus absolutely announced is absurd, for we know that by intermixture, and many other modes, fluid particles impart heat to each other ; and experiments have been instituted, which prove the actual descent of heat through fluids by communication from one stratum to another. But unquestionably this communication is amazingly difficult and slow. We are hence led to conceive, that it is an actual contact of particles which in the solid condition facilitates the transmission of heat so speedily from point to point through their mass. This contact of certain poles in the molecules is perfectly consistent

with void spaces, in which these molecules may slide over each other in every direction ; by which movements or condensations heat may be excited. The fluid condition reverts or averts the touching and cohering poles, whence mobility results. This statement may be viewed either as a representation of facts, or an hypothesis to aid conception.

The transmission of heat through solids was made the subject of some popular experiments by Dr. Ingenhousz. He took a number of metallic rods of the same length and thickness, and, having coated one of the ends of them for a few inches with bees' wax, he plunged their other ends into a heated liquid. The heat travelle'd onwards among the matter of each rod, and soon became manifest by the softening of the wax. The following is the order in which the wax melted; and according to that experiment, therefore, the order of conducting power relative to heat • —

1. Silver.

2. Gold.

Platinum, ~\

Iron, f much inferior to

Steel, f the others.

Lead,

f J

1 In my repetition of the experiment, I found,' says Dr. lire, ' silver by much the best conductor, next copper, then brass, iron, tin, much the same, then cast iron, next zinc, and, last of all, lead. Dense stones follow metals in conducting power, then bricks, pottery, and, at a long interval, glass. A rod of this singular body may be held in the fingers for a long time, at a distance of an inch from where it is ignited and fused by the blow-pipe. It is owing to the inferior conducting power of stone, pottery, glass, and cast-iron, that the sudden application of heat so readily cracks them. The part acted on by the caloric expands, while the adjacent parts, retaining their pristine form and volume, do not accommodate themselves to the change ; whence a fissure must necessarily ensue. Woods and bones are better conductors than glass ; but the progress of heat in them, at elevated temperatures, may be aided by the vaporisation of their juices. Charcoal and sawdust rank very low in conducting power. Hence the former is admirably fitted for arresting the dispersion of heat in metal furnaces. If the sides of these be formed of double plates, with an interval between them of an inch filled with pounded charcoal, an intense heat may exist within, while the outside is scarcely affected. Morveau has rated the conducting power of charcoal to that of fine sand as two to three, a difference much too small. Spongy organic substances, silk, wool, cotton, &c., are still worse conductors than any of the above substances ; and the finer the fibres, the less conducting power they possess. The theory of clothing depends on this principle. The heat generated by the animal powers is accumulated round the body by the imperfect conductors of which clothing is composed.'

To discover the exact law of the distribution of heat in solids we may take a prismatic bar of

iron, three feet long, and with a drill form three cavities in one of its sides, at ten, twenty, and thirty inches from its end, each cavity capable of receiving a little mercury, and the small bulb of a delicate thermometer. Cut a hole fitting exactly the prismatic bar, in the middle of a sheet of tin plate, which is then to be fixed to the bar, to screen it and the thermometers from the focus of heat. Immerse the extremity of the bar obliquely into oil or mercury heated to any known degree, and place the thermometers in their cavities surrounded with a little mercury. Or the bar may be kept horizontal, if an inch or two at its end be incurvated, at right angles to its length. Call the thermometers A, B, C. Were there no dissipation of the heat, each thermometer would continue to mount till it attained the temperature of the source of heat. But, in actual experiments, projection and aerial currents modify that result, making the thermometers rise more slowly, and preventing them from ever reaching the temperature of the end of the bar. Their state becomes indeed stationary whenever the excess of temperature, each instant communicated by the preceding section of the bar, merely compensates what they lose by the contact of the succeeding section of the bar, and the other outlets of heat. The three thermometers now indicate three steady temperatures, but in diminishing progression. In forming an equation from the experimental results, M. Laplace has shown, that the difficulties of the calculation can be removed only by admitting, that a determinate point is influenced not only by those points which touch it, but by others at a small distance before and behind it. Then the laws of homogeneity, to which differentials are subject, are re-established, and all the rules of the differential calculus are observed. Now, in order that the calorific influence may thus extend to a distance in the interior of the bar, there must operate through the very substance of the solid elements a true radiation, analogous to that observed in air, but whose sensible influence is bounded to distances incomparably smaller. This result is in no respect improbable. In fact, Newton has taught us that all bodies, even the most opaque, become transparent when rendered sufficiently thin ; and the most exact researches on radiating caloric prove, that it does not emanate solely from the external surface ofbodies,but also from material particles situated within this surface, becoming no doubt insensible at a very slight depth, which probably varies in the same body with its temperature.

MM. Biot, Fourier, and Poisson, three of the most eminent mathematicians and philosophers of the age, have distinguished themselves in this abstruse investigation. The following is the formula

of M. Biot, when one end of the bar is maintained at a constant temperature, and the other is so remote as to make the influence of the source insensible. Let y represent, in degrees of the thermometer, the temperature of the air by which the bar is surrounded ; let the temperature of the focus be y + Y ; then the integral becomes, log. y = log. Y — -^ ~».

x is the distance from the hot end of the bar, a and b are two co-efficients, supposed constant for the whole length of the bar, which serve to accommodate the formula to every possible case, and which must be assigned in each case, agreeably to two observations. M is the modulus of the ordinary logarithmic tables, or the number 2-302585. M. Biot presents several tables of observations, in which sometimes eight, and sometimes fourteen thermometers, were applied all at once to successive points of the bar ; and then he computes by the above formula what ought to be the temperature of these successive points, having given the temperature of the source ; and vice versa, what should be the temperature of the source, from the indications of the thermometers. A perfect accordance is shown to exist between fact and theory. Whence we may regard the view opened up by the latter, as a true representation of the condition of the bar. With regard to the application of this theorem, to discover, for example, the temperature of a furnace, by thrusting the end of a thermoscopic iron bar into it, we must regret its insufficiency. M. Biot himself, after showing its exact coincidence at all temperatures, up to that of melting lead, declares that it ought not to apply at high heats. But we see no difficulty in making a very useful instrument of this kind by experiment, to give very valuable pyrometrical indications. The end of the bar which is to be exposed to the heat, being coated with fire-clay, or sheathed wtth platinum, should be inserted a few inches into the flame, and drops of oil being pjit into three successive cavities of the bar, we should measure the temperatures of the oil, when they have become stationary, and note the time elapsed to produce this effect. A pyroscope of this kind could not fail to give useful information to the practical chemist, as well as to the manufacturers of glass, pottery,

steel, &c.

We shall insert here, from Dr. Ure, tabular views of the specific heats determined by the recent researches of the French chemists. MM. Petit and Dulong remark, that, ‘ the attempts hitherto made to discover some laws in the specific heats of bodies have been entirely unsuccessful. We shall not be surprised at this, if we attend to the great inaccuracy of some of the measurements; for if we except those of Lavoisier and Laplace (unfortunately very few), and those by Laroche and Berard for elastic fluids, we are forced to admit, that the greatest part of the others are extremely inaccurate, as our own experiments have informed us, and as might indeed be concluded from the great discordance in the results obtained for the same bodies by different experimenters.’ From this censure we must ex-cept the recent results of MM. Clement and Desormes on gases, which may be regarded as entitled to equal confidence with those of Berard and Delaroche.

TABLE I. — Of the Specific Heats of Gases, by MM. BERARD and DELAROCHE.

Equal volumes.

Eqaal weights.

!’

_r

gravity.

Air

roooo

i-oooo

i-oooo.

Hydrogen … Carbonic acid . .

0-9033 1-2583

12-3401 0-8280

0-0732 1-5106

Oxygen …. Azote ….

0-9765

i-oooo

0-8848 1-0318

1-1036 0-9691

Oxide of azote .

1-3503

0-8878

1-5209

Olefiant gas . . Carbonic acid . .

T5530

1-0340

1-5763 1-0805

0-9885 0-9569

To reduce the above numbers to the standard of water, three different methods were employed ; from which the three numbers, 0-2498, 0-2697, and 0-2813, were obtained for atmospheric air. The experimenters have taken 0-2669 as the mean, to which all the above results are referred, as follows : —

TABLE II.

Water

1-0000

Air

0-2669

Hydrogen gas . . Carbonic acid . . Oxygen …. Azote

3-2936 0-2210 0-2361 0-2754

Oxide of azote . . Olefiant gas … Carbonic oxide . . Aqueous vapor . .

0-2369 0-4207 0-2884 0-8470

The following are the results given by MM. Clement and Desormes. for equal volumes at temperatures from 0° to 60° centigrade, or 32° to

140° Fahrenheit.

TABLE III.

Inches Barom.

Clement & Desormes.

Delaroche & Berard.

Atmospheric air at

39-6

1-215

1-2396

Ditto

29-84

1-000

1-0000

Ditto

14-92

0-693

Ditto

7-44

0-540

Ditto

3-74

0-368

Do. charged with)

29-84

1-000

ether … J

Azote ….

29-84

1-000

1-0000

Oxygen ….

29-84

1-000

0-974

Hydrogen ; . .

29-84

0-664

0-9033

Carbonic acid . .

29-84

1-500

1 2583

The relative specific heat of air to water is, by MM. Clement and Desormes, 0-250 to 1-000, or exactly one-fourth. The last table, which is extracted from the Journal de Physique, gives the specific heat of oxygen by Delaroche and Berard, a little different from their own number, Table I. from the Annales de Chimie, vol. 85. The most remarkable result given by MM; Cle-

ment and Desormes regards carbonic acid, which, being reduced to

the standard of weights, gives a specific heat compared to air of about 0-987 to 1-000, -while oxygen is only 0-9000. The former tables of Crawford and Dalton give the specific neat of oxygen 2-65, and of carbonic acid 0-586, compared to air 1-000. And, upon these very erroneous numbers, they reared their hypothetical fabric of latent heat, combustion, and the animal temperature.

We see from the experiments on air, at different densities, that its specific heat diminishes in a much slower rate than its specific gravity. When air is expanded to a quadruple volume, its specific heat becomes 0-540, and, when expanded to eight times the volume, its specific heat is 0-368. The densities in the geometrical progression 1, £, £, J, correspond nearly to the specific heats in the arithmetical series 5, 4, 3, 2. Hence also the specific heat of atmospherical air, and of probably all gases, considered in the ratio of its weight or mass, diminishes as the density increases. On the principle of the increase of specific heat, relative to its mass, has been explained the long observed phenomenon of the intense cold which prevails on the tops of mountains, and generally in the upper regions of the atmosphere ; and also that of the prodigious evolution of heat, when air is forcibly condensed. According to M. Gay Lus-sac, a condensation of volume, amounting to four-fifths, is sufficient to ignite tinder. If a syringe of glass be used, a vivid flash of light is seen to accompany the condensation.

TABLE IV. — Of Specific Heats of some Solids determined by DULOXG and PETIT.

Specific

Weight of

Product

heats, that

the atoms,

of these

of water

oxygen be—

two numbeing 100.

ing 1.

bers.

Bismuth . .

0-0288

13-300

0-3830

Lead …

0-0293

12-950

0-3794

Gold …

0-0298

12-430

0-3704

Platinum

0-0314

11-160

0-3740

Tin …

0-0514

7-350

0-3779

Silver …

0-0557

6-750

0-3759

Zinc …

0-0927

4-030

0-3736

Tellurium

0-0912

4-030

0-3675

Copper . .

0-0949

3-957

0-3755

Nickel . .

0-1035

3-690

0-3819

Iron …

0-1100

3-392

0-3731

Cobalt . .

0-1498

2-460

0-3685

Sulphur . .

0-1880

2-011

0-3780

The above products, which express the capacities of the different atoms, approach so near equality, that the slight differences must be owing to slight errors, either in the measurement of the capacities, or in the chemical analyses, especially if we consider, that, in certain cases, these errors, derived from these two sources, may be on the same side, and consequently be found multiplied in the result. Each atom of these simple bodies seems, therefore, as \vas formerly stated, to have the same capacity for heat. The question may here be asked, Whether a

body, in cooling a certain thermometric range at a high temperature, gives out the same quantity of heat that it does in cooling through the same range at a lower temperature ? No means seem better adapted for solving this problem, than to measure the refrigeration produced, by the same weights of ice, on uniform weights of water, at different temperatures. Mr. Dalton found in this way, that ‘ 176-5° expresses the number of degrees of temperature, such as are found between 200° and 212° of the old or common scale, entering into ice of 32° to convert it into water of 32° ; 150° of the same scale, between 12-2° and 130°, suffice for the same effect; and between 45° and 50°, 128° are adequate to the conversion of the same ice into water. These three resulting numbers (128, 1ˆ0, 176-5), are nearly as 5, 6, 7. Hence it follows, that as much heat is necessary to raise water 5° in the lower part of the old scale, as is required to raise it 7° in the higher, and 6° in the middle.’ See his New System of Chemical Philosophy, vol. i. p. 53.

‘ Mr. Dalton, however,’ says Dr. Ure, ‘ instead of adopting the obvious conclusion, that the capacity of water for heat is greater at lower than it is at higher temperatures, and that therefore a smaller number of degrees at the former should melt as much ice as a great number at the latter, ascribes the deviation denoted by these numbers, 5, 6, and 7, to the gross errors of the ordinary thermometric graduation, which he considers so excessive, as not only to equal, but greatly to overbalance the really increased specific heat or capacity of water ; which, viewed in itself, he conceives would have exhibited opposite experimental results. That our old, and, according to his notions, obsolete thermometric scale, has no such prodigious deviation from truth, is, I believe, now fully admitted by chemical philosophers ; and therefore the only legitimate inference from these very experiments of Mr. Dalton is the decreasing capacity of water, with the increase of its temperature. It deserves to be remarked, that my experiments on the relative times of cooling a globe of glass, successively filled with water, oil of vitriol, common oil, and oil of turpentine, give exactly the same results as Mr. Dalton had derived from mixtures of two ounces of ice with sixty of water, at different temperatures. This concurrence is the more satisfactory, since, when my paper on the specific heats of the above bodies, published in the Annals of Philosophy for October 1817, was written, I had no recollection of Mr. Dalton’s experiments.’

TABLE V.— Of Capacities for Heat.

Mean capacity between 0° and 100°

Mean capacity between 0° and 3000°.

Mercury . . 0-0330 Zinc … 0-0927 Antimony . . 0-0507 Silver … 0-0557 Copper … 0-0949 Platinum . . 0-0355 Glass …0-1770

0-0350 0-1015 0-0549 0-0611 0-1013 0-0355 0-1900

no

HEAT.

The capacity of iron was determined at the four following intervals : —

From 0° to 100°, the capacity is 0*1098 0 to 200 0-1150

0 to 300 0-1218

0 to 350 0-1255

< If we estimate,' continues Dr. Ure, * the temperatures, as some philosophers have proposed, by the ratios of the quantities of heat which the same body gives out in cooling to a determinate temperature, in order that this calculation be exact, it would be necessary that the body in cooling, for example, from 300° to 0°, should give out three times as much heat as in cooling from 100° to 0°. But it will give out more than three times as much, because the capacities are increasing. We should therefore find too high a temperature. We exhibit in the following table the temperatures that would be deduced by employing the different metals contained in the preceding table. We must suppose that they have been all placed in the same liquid bath at 300°, measured by an air thermometer. Iron …. 332-2° Mercury … 318-2 Zinc …. 328-5 Antimony … 324-8

Silver Copper . Platinum Glass .

329-3 320-0 317-9 322-1

PART II.

OP THE GENERAL SYMPATHIES OF HEAT WITH THE DIFFERENT FORMS OF MATTER.

The effects of heat are either transient and physical, or permanent and chemical, inducing a durable change in the constitution of bodies. The latter effect we have already treated of in our article COMBUSTION. The first is to be discussed here; and divides itself into the two heads, of changes in the volume of bodies while they retain their form, and

changes in the state of bodies.

1. The successive increments of volume which bodies receive with successive increments of temperature, have been the subjects of innumerable researches. The expansion of fluids is so much greater than that of solids, by the same

elevation of their temperature, that it becomes an easy task to ascertain within certain limits the augmentation of volume which liquids and gases suffer through a moderate thermometric range. We have only to enclose them in a glass vessel of a proper form, and expose it to heat. But to determine their expansion with final accuracy, and free the results from the errors arising from the unequable expansion of the recipient, is a problem of no small difficulty. It seems, however, after many vain attempts by preceding experimenters, to have been finally solved by MM. Dulong and Petit. The expansion of solids had been previously measured with considerable accuracy by several philosophers, particularly by Smeaton, Roy, Ramsden, and Troughton, in this country, and Lavoisier and Laplace in France. The method devised by general Roy, and executed by him in conjunction with Ramsden, deserves the preference. The metallic or other rod, the subject of experiment, was placed horizontally in a rectangular trough of water, which could be conveniently heated. At any aliquot distance on the rod, two micrometer microscopes were attached at right angles, so that each being adjusted at first to two immoveable points, exrerior to the heating apparatus, when the rod was elongated by heat, the displacement of the microscopes could be determined to a very minute quantity, to the twenty or thirty thousandth of an inch, by the micrometrical mechanism.

Dr. Ure, in the years 1812 and 1813, made, he tells us, many experiments with a micrometrical apparatus of a peculiar construction, for measuring the dilatation of solids. ‘ I was particularly perplexed,’ he says, * with the rods of zinc, which, after innumerable trials, I finally found to elongate permanently by being alternately heated and cooled. It would seem that the plates composing this metal, in sliding over each other by the expansive force of heat, present such an adhesive friction as to prevent their en-tire retraction. It would be desirable to know the limit of this effect, and to see what other metals are subject to the same change. I hope to be able, ere long, to finish these pyrometrical researches.’ The doctor then gives us the following copious tables of dilatations, compiled from the best

experiments : —

TABLE I. — Linear Dilatation of Solids by Heat.

Dimensions which a bar takes at 212°, whose length at 32° is VOOOOOO.

Dilatation

Glass tube,

Smeaton,

1-00083333

in Vulgar Fractions.

Do.

Roy,

1-00077615

Do.

Deluc’s mean,

1-00082800

i

TTTB

Do.

Dulong and Petit,

1-00086130

1

TTJB

Do.

Lavoisier and Laplace,

1-00081166

I

THI5

Plate glass,

Do. do.

1-000890890

1

im

Do. crown glass,

Do. do.

1-00087572

i

irn

Do. do.

Do. do.

1-00089760

i

TOS5

Do. do.

Do. do.

1-00091751

Do. rod,

Roy

1-00080787

Deal,

Roy, as glass,

Platina,

Borda,

1-00085655

Do.

Dulong and Petit,

1-00088420

mi

Do.

Troughton,

1-00099180

Do. and glass,

Berthoud,

1-00110000

Palladium,

Wollaston,

1-00100000

TABLE I. — Linear Dilatation of Solids by Heat. — Continued

111

Dimensions which a bar takes at 212°, whose length at 32° is 1-000000.

Dilatation

Antimony,

Smeaton,

1-00108300

in Vulgar Fractions.

Cast iron prism,

Roy,

1-00110940

Cast iron,

Lavoisier, by Dr. Young,

1*00111111

Steel,

Troughton,

1-00118990

Steel rod,

Roy,

1-00114470

Blistered steel,

Phil. Trans. 1795, 428,

1-00112500

Do.

Siaeaton,

1-00115000

Steel not tempered,

Lavoisier and Laplace,

1-00107875

S5T

Do. do. do.

Do. do.

1-00107956

525

Do. tempered yellow,

Do. do.

1-00136900

Do. do. do.

Do. - do.

1-00138600

Do. do. do. at a higher heat,

Do. do.

1-00123956

857

Steel,

Troughton,

1-001 18980

Hard steel,

Smeaton,

1-00122500

Annealed steel,

Muschenbroeit,

1-00122000

Tempered steel.

Do. • ..•:'.

1-00137000

Iron,

Borda,

1-00115600

Do.

Smeaton,

1-00125800

Soft iron forged,

Lavoisier and Laplace,

1-00122045

Round iron, wire-drawn,

Do. do.

1-90123504

Iron wire,

Troughton,

1-00144010

Iron,

Dulong and Petit,

1-00118203

i

515

Bismuth,

Smeaton,

1-00139200

Annealed gold,

Muschenbroek,

1-00146000

Gold,

Ellicot, by comparison,

1-00150000

Do. procured by parting,

Lavoisier and Laplace,

1-00146606

M

Do. Paris standard, unannealed,

Do. do.

M0155155

i

ins

Do. do. annealed,

Do. do.

1-00151361

i

Bsi

Copper,

Muschenbroek,

1-0019100

Do

Lavoisier and Laplace,

1-00172244

SST

Do.

Do. do.

1-00171222

i

351

Do.

Troughton,

1-00191880

Do.

Dulong and Petit,

1-00171821

1

383

Brass,

Borda,

1-00178300

Do.

Lavoisier and Laplace,

1-00186671

Do.

Do. do.

1-04188971

Brass scale, supposed from Hamburg,

Roy,

1-00185540

Cast brass,

Smeaton,

1-00187500

English plate-brass, in rod,

Roy,

1-00189280

Do. do. in a trough form,

Do.

1-00189490

Brass,

Troughton,

1-00191880

Brass wire,

Smeaton,

1-00193000

Brass,

Muschenbroek,

1-00216000

Copper 8, tin 1,

Smeaton,

1-00181700

Silver,

Herbert,

1-00189000

Do.

Ellicot, by comparison,

1-0021000

Do.

Muschenbroek,

1-00212000

Do, of cupel, Do. Paris standard,

Lavoisier and Laplace, Do. do.

1-00190974 1-00190868

1

JH

1 351

Silver,

Troughton,

1-0020826

Brass 16, tin 1,

Smeaton,

1-00190800

Speculum metal,

Do.

1-00193300

Spelter solder; brass 2, zinc 1,

Do.

1-00205800 •

Malacca tin,

Lavoisier and Laplace,

1-00193765

i 5TC

Tin from Falmouth,

Do. do.

1-00217298

I

5jj

Fine pewter,

Smeaton,

1-00228300

Grain tin,

Do.

1-00248300

Tin,

Muschenbroek,

1-00284000

Soft solder ; lead 2, tin 1,

Smeaton,

1-00250800

Zinc 8, tin 1, a little hammered,

Do

1-00269200

Lead,

Lavoisier and Laplace,

1-00284836

1

3ST

Do.

Smeaton,

1-00286700

Zinc,

Do.

1-00294200

Zinc, hammered out \ inch per foot,

Do.

1-00301100

Glass, from 32° to 212°,

Dulong and Petit

1-00086130

1

TIT

Do. from 212°, to 392°,

Do. do.

1 00091827

I

TUS5

Do. from 392°, to 572°,

Do. do.

1-000101114

1

557

_The last two measurements by an air thermometer.

I

TABLE II.— Dilatation of the volume of Liquids by being heated from 32° to 212°.

0-020000

A

Do. Lord Charles Cavendish ….

0-018870

B

Do. Deluc

0-018000

SB

0-017000

J,

0-01851

7

Do. Lavoisier and Laplace

0-01810

si

53 il

Do. Haellstrcem

0-0181800

33

0-0180180

_1

Do. do. from 211°, to 392° .

0-0184331

35 30

Sl‘33

Do. do. from 392°, to 572° ….

0-0188700

1

35

Do. do in glass, from 32°, to 212°

0-015432

1

B|S

Do. do. do. from 212°, to 392° .

0-015680

53-TS

Do. do. do. from 392°, to 572° .

0-0158280

1

83 13

Water, Kirwan, from 39°, its maximum density .

004332

13ft

Muriatic acid (sp. gr. 1-137) Dalton,

0-0600

1

n

Nitric acid (sp. gr. 1-40), do.

0-1100

i

5

Sulphuric acid (sp. gr. 1‘85), do.

0-0600

1

7

Alcohol, do-

0-1100

5

Water, do-

0-0460

1

M

Water saturated with common salt, do.

0-0500

i

35

Sulphuric ether, do.

00700

1

V

Fixed oils, do.

O’OSOO

T5-3

Oil of turpentine, do.

0-0700

1

TI

The quantities given by Mr. Dalton are probably too

great, as is certainly the case with mercury ; his experiments being perhaps modified by his hypothetical

notions.

Water saturated with common salt, Robison

0-05198

1

19

Dr. Young, in his valuable Catalogue Raison-ne”e, Natural Philosophy, vol. ii. p. 391, gives the following table of the expansions of water, constructed from a collation of experiments by Gilpin, Kirwan, and

Achard. He says that the degrees of Fahrenheit's thermometer, reckoning either way from 39°, being called f, the expansion of water is nearly expressed by 22/s (1 — •002/) in 10 millionths; and the diminution of the sp. gr. by -0000022/2 — -00000000472/3. This equation, as well as the table, is very important for the reduction of specific gravities of bodies, taken by weighing them in water.

Sp. grav.

Dimin. of sp.gr.

Expansion.

102

0-99246 Kirwan

0-00754

0-00760

122

0-98757

0-01243

0-01258

0-98872 Deluc

0-01128

142

0 98199 K.

0-01801

0-01833

162

0-97583

0-02417

0-02481

167

0-97480 Deluc

0-02520

182

0-96900 K.

0-03100

0-03198

202

0-96145

0-03855

0-04005

212

0-95848

0-04152

0-04333

Sp. grav.

Dimin. of sp. gr.

Expansion.

30°

0-99980

0-00020

32

0-99988

0-00012

34

0-99994

0-OOOOd

39

1-00000

o-ooooo

‘

44

0-99994

0-00006

48

0-99982

0-00018

49

0-99978

0-00022

54

0-99951

0-00049

59

0-99914

0-00086

60

0-99906

0-00094

64

0-99867

0-00133

69

0-99812

0-00188

74

0-99749

0-00251

(77°)

79 (82) 90 100

0-99701 Achard 0-99680 Gilpin 0-99612 Kirwan 0-99511 Gilpin 0-993J3

0-00320 0-00388 0-00489 0-00687

0-00299 0-00321 0-00389 0-00491 0-00692

M. Gay Lussac has lately endeavoured to discover some law which should correspond with the rate of dilatation of different liquids by heat. For this purpose, instead of comparing the dilatations of different liquids, above or below a temperature uniform for all, he set out from a point variable with regard to temperature, but uniform as to the cohesion of the particles of the bodies; namely, from the point at which each liquid boils under a given pressure. Among those which he examined, he found two which dilate equally from that point, *viz.* alcohol and sulphuret of carbon, of which the former boils at 173-14°, the latter at 115-9°, Fahrenheit. The other liquids did not present, in this respect, the same resemblance. Another analogy of the above two liquids is, that the same volume of each gives, at its boiling point, under the same atmospheric pressure, the same volume of vapor ; or, in other words, that the densities of their vapors are to each other as those of the liquids at their respective boiling temperatures. The following table shows the results of this distinguished chemist :—•

TABLE of the Contractions of 1000 parts in volume, by cooling.

Water.

Alcohol.

Sulphuret of Carb.

Ether.

Contract by expt.

Ditto calculated.

Contract by expt.

Ditto

calculated.

Contract by expt.

Ditto

calculated.

Contract by expt.

Ditto calculated.

Boiling,

0-00

0-00

0-00

0-00

0-00

0-00

0-00

o-oo

— 5°

3-34

3-35

5-55

5-56

6-14

6-07

8-15

8-16

— 10

661

6-65

11-43

11-24

12-01

12-08

16-17

16-01

— 15

10-50

9-89

17-51

17-00

17-98

17-99

24-16

23-60

— 20

13-15

13-03

24-34

23-41

23-80

23-80

31-83

30-92

— 25

16-06

16-06

29-15

28-60

29-65

29-50

39-14

38-08

— 30

18-85

18-95

34-74

34-37

35-06

35-05

46-42

45-04

— 35

21-52

21-67

40-28

40-05

40-48

40-43

52-06

51-86

— 40

24-10

24-20

45-68

45-66

45-77

45-67

58-77

58-77

— 45

26-50

26-52

50-85

51-11

51-08

50-70

65-48

65-20

— 50

28-56

28-61

56-02

56-37

56-28

55-52

72-01

71-79

— 55

30-60

30-43

61-01

61-43

61-14

60-12

78-38

78-36

— 60

32-42

31-96

65-96

66-23

66-21

64-48

— 65

34-02

•33-19

10-74

70-75

— 70

35-47

34-09

75-48

74-93

— 75

36-70

34-63

80-11

78-75

i

,

1

Their respective boiling points are : Water .... 100° Cent. = 212° F.
Alcohol 78-41 173

Sulphuret of carb. . 46-60 126

Sulphuric ether . 35-66 96

The experiments were made in thermometer vessels hermetically sealed.

Alcohol, at 78-41° cent., produces 488-3 its volume of vapor.

Sulphuret of carbon, at 46-60° cent., produces 491*1 its volume of vapor.

Ether, at 35-66° cent., produces 285‘9 its volume of vapor.

Water, at 100-00° cent., produces 1633-1 its volume of vapor.

Mr. Dalton has the merit of having first proved that the expansions of all aeriform bodies, when insulated from liquids, are uniform by the same increase of temperature; a fact of great importance to practical chemistry, which was fully verified by the independent and equally original researches of M. Gay Lussac on the subject, with a more refined and exact apparatus. The latter philosopher demonstrated that 100 in volume at 32° Fahrenheit, or 0° cent., became 1-375 at 212° Fahrenheit, or 100° cent. Hence the increment of bulk for each degree Fahrenheit is "-jˆf — 0-002083 =. ˆg; and for the centigrade scale it is 2ˆ — 0-00375 — ˆ. To reduce any volume of gas, therefore, to the bulk it would occupy at any standard temperature, we must multiply the thermometric difference in degrees of Fahrenheit by 0-002083, or ˆ, subtracting the product from the given volume, if the gas be heated above, but adding it, if the gas be cooled below, the standard temperature. Thus twenty-five cubic inches at 120° Farenheit will at 60° occupy a volume of 21| ; for ˆ x 60 — |& — J; and f =3J, which, taken from 25, leaves 21g. A table of reduction will be found under GAS. Sulphuric ether . When the table is expressed decimally, indeed, Liquid ammonia to six or seven figures, it becomes more trouble-Nitric acid, sp. gr. VOL. XI.

some to apply than the above iiue. Vapors, when heated out of contact of their respective liquids, obey the same law as gases ; a discovery due to M. Gay Lussac.

2. Of the change of state produced in bodies by caloric. — The three forms of matter, the solid, liquid, and gaseous, seem immediately referrible to the power of heat, modifying, balancing, or subduing cohesive attraction. The system of the world presents magnificent effects of attraction dependent on figure. Such are the phenomena of nutation and the precession of the equinoxes, produced by the attractions of the sun and moon on the flattened spheroid of the earth. These sublime phenomena would not have existed had the earth been a sphere : they are connected with its oblateness and rotation, in a manner which may be mathematically deduced, and subjected to calculation. The investigation shows, that this part of the attraction dependent on figure decreases more rapidly than the principal force. The latter diminishes as the square of the distance ; the part dependent on figure diminishes as the cube of the distance. Thus also, in the attractions which hold the parts of bodies united, we ought to ex-pect an analogous difference to occur. Hence the force of crystallisation may be subdued, be fore the principal attractive force is overcome . When the particles are brought to this distance, they will

be indifferent to all the positions which they can assume round their centre of gravity ; this will constitute the liquid condition. We must now content ourselves with stating the results as much as possible in a tabular form.

TABLE of the Concreting or Congealing Temperatures of various Liquids by FAHRENHEIT'S Scale.

. *5* • — *46*° . — 46 . 1-424 — 45-5

HEAT.

Sulphuric acid, sp. gr. . 1-6415 —

45

Mercury . —

39

Nitric acid, sp. gr… 1-407' —

30-1

Sulphuric acid

26

Nitric acid . ‘. • 1-3880 —

18-1

Do. Do… 1-2583 —

17-7

Do. Do. . • 1-3290 —

2-4

Brandy . —

7*0

Sulphuric acid . . •’ 1*8376 -f-Pure prussic acid Common salt 25 -f-water 75

1-

4 to 5

4

Do. 22-2 + do. 77-8

7-2

Sal ammoniac 20 -f-do. 80

8.

C. salt 20 + do. 80

9*5

Do. 16-1 -I-do. 83-9

13-5

Oil of turpentine , - ;•’,»** > * >

14.

Strong wines ….

20.

Rochelle salt 50 + water 50

21.

C. salt 10 + do. 90

21-5

Oil of bergamot

23

Blood ….

25

C. salt 6-25 -f-water 93-75

25-5

Epsom salts 41-6 + do. 58-4

25-5

Nitre 12-5 + do. 87‘5

26

C. salt 4-16 + do. 95-84

27-5

Copperas 41*6 + do. 58‘4

28

28

Sul. of zinc. 53-3 + water 46*7

28-6

Milk

30

Water ….

32

Olive oil . • . •

36

Sulphur and phosphorus, equal parts

40

Sulphuric acid, sp. gr. 1-741

42

Do. Do. 1-780

46

Oil of anise … .

50

Concentrated acetic acid . .

50

Tallow, Dr. Thomson

92

Phosphorus . . … ……

108

Stearin from hog’s lard . .

109

Spermaceti ….

112

Tallow, Nicholson . . ˆ -..

127

Margaric acid … . .

134

Potassium … .

136*4

Yellow wax … .

142

Do. Do. . / .

149

White wax .. , . ,. ..«.’,

155

Sodium

194

Sulphur, Dr. Thomson …

218

Do. Dr. Hope

234

Tin … ‘ .. .

442

Bismuth . . :;“s .. ..’

476

Lead …

612

Zinc, by Sir II. Davy . .

680

Do. Brogniart . .

698

Antimony … . , . .

809?

The solidifying temperature of the bodies above tallow, in the table, is usually called their freezing or congealing point ; and of tallow, and the bodies below it, the fusing or melting point. Now, though these temperatures be stated, opposite to some of the articles, to fractions of a thermometric degree, it must be observed, that various circumstances modify the concreting point of the liquids, through several degrees ; but the liquefying points of the same bodies, when once solidified, are uniform and fixed to the preceding temperatures.

Witer, all crystallisable solutions, and the

three rnetals, cast-iron, bismuth, and antimony expand considerably in volume, at the instant of solidification. The greatest obstacles cannot resist the exertion of this expansive force. Thus, glass bottles, trunks of trees, iron and lead pipes, even mountain rocks, are burst by the dilatation of the water in their cavities, when it is converted into ice. In the same way our pavements are raised in winter. Major Williams of Que-bec burst bombs, which were filled with water and plugged up, by exposing them to a freezing cold. The beneficial operation of this cause is exemplified in the comminution or loosening the texture of dense clay soils, by the winter's frost, whereby the delicate fibres of plants can easily penetrate them.

There is an important circumstance occurs in the preceding experiments on the sudden congelation of a body kept liquid below its usual congealing temperature, to which we must now advert. The mass, at the moment its crystallisation commences, rises in temperature to the term marked in the preceding table, whatever number of degrees it may have previously sunk below it. Suppose a globe of water suspended in an atmosphere at 21° Fahrenheit; the liquid will cool and remain stationary at this temperature, till vibration of the vessel, or contact of a spicula of ice, determines its concretion, wnen it instantly becomes 11° hotter than the surrounding medium. We owe the explanation of this fact, and its extension to many analogous chemical phenomena, to the sagacity of Dr. Black. His truly philosophical mind was particularly struck by the slowness with which a mass of ice liquefies when placed in a genial atmosphere. A lump of ice at 22° freely suspended in a room heated at 50°, which will rise to 32° in five minutes, will take 14 times 5, or seventy minutes to melt into water, whose temperature will be only 32°. Dr. Black suspended in an apart- . ment two glass globules of the

same size alongside of each other, one of which was filled with ice at 32°, the other with water at 33°. In half an hour the water had risen to 40° ; but it took ten hours and a half to liquefy the ice, and heat the resulting water to 40°. Both these experiments concur, therefore, in showing that the fu-sion of ice is accompanied with the expenditure of 140° of calorific energy, which have no effect on the thermometer. For the first experiment tells us that 10° of heat entered the ice in the space of five minutes, and yet fourteen times that period passed in its liquefaction. The second experiment shows that 7° of heat entered the globes in half an hour; but twenty-one half hours were required for the fusion of the ice, and for heating of its water to 40°. If from the product of 7 into 21 — 147, we subtract the 7° which the water was above 33°, we have 140° as before. But the most simple and decisive experiment is td mingle a pound of ice in small fragments with a pound of water at 172°. Its liquefaction is instantly accomplished, but the temperature of the mixture is only 32°. Therefore, 140° of heat seem to have disappeared. Had we mixed a pound of ice-cold water with n pound of water at 172°, the resulting temperature would have been 102°, proving that the 70°

which had left the hotter portion, were manifestly transferred to that which was cooler. The converse of the preceding experiments may also be demonstrated ; for on suspending a flask of water, at 35° for example, in an atmosphere at 20°, if it cool to 32° in three minutes, it will take 140 minutes to be converted into ice of 32° ; because the heat, emanating at the rate of 1° per minute, it will require that time for 140° to escape. The latter experiment, however, from the inferior conducting power of ice, and the uncertainty when all is frozen, is not susceptible of the” precision which the one immediately preceding admits. The tenth of 140 is obviously. 14 ; and hence we may infer, that when a certain quantity of water, cooled to 22°, or 10° below 32°, is suddenly caused to congeal, l-14th of the weight will become solid. We thus understand how the thaw which supervenes after an intense frost, should so slowly melt the wreaths of snow and beds of ice, a phenomenon observable in these latitudes from the origin of time, but

whose explanation was reserved for Dr. Black. Indeed, had the transition of water from its solid into its liquid state not been accompanied by this great change in its relation to heat, every thaw would have occasioned a frightful inundation, and a single night's frost would have solidified our rivers and lakes. Neither animal nor vegetable life could have subsisted under such sudden and violent transitions.

Drs. Irvine, father and son, to both of whom the science of heat is deeply indebted, investigated the proportion of caloric disengaged by several other bodies in their passage from the liquid to the solid state, and obtained the following results: —

Caloric of liquidity.

Do. referred to the specific heat of water.

Sulphur

143-68

27-14

Spermaceti

145-

Lead

1625-6

Bees' wax

175-

Zinc

493—

48-3

Tin

500—

33-

Bismuth

550—

23-25

The quantities in the second column are the degrees by which the temperatures of each of the bodies, in its solid state, would have been raised by the heat disengaged during its concretion. An exception must be made for wax and spermaceti ; which are supposed to be in the fluid state, when indicating the above elevation.

Dr. Black supposed that the new relation to heat which solids acquire by liquefaction was derived from the absorption, and intimate combination, of a portion of that fluid, which, thus employing all its repulsive energies in subduing the stubborn force of cohesion, ceased to have any thermometric tension, or to be perceptible to our senses.

He termed this supposed quantity of caloric, their latent heat; a term very convenient and proper, while we regard it simply

as expressing the relation which the calorific agent bears to the same body in its fluid and solid states. To the presence of a certain portion of latent or combined heat in solids, Dr. Black ascribed their peculiar degrees of softness, toughness, malleability. Thus we know that the condensation of a metal by the hammer, or under the die, never fails to render it brittle, while, at the same time, heat is disengaged. Berthollett subjected equal pieces of copper and silver to repeated strokes of a fly press. The elevation of their temperature, which was considerable by the first blow, diminished greatly at each succeeding one, and became insensible whenever the condensation of volume ceased. The copper suffered greatest condensation, and evolved most heat. Here the analogy of a sponge, yielding its water to pressure, has been employed to illustrate the materiality of heat supposed deducible from these experiments. But the phenomenon may be referred to the intestine actions between the ultimate particles which must accompany the violent dislocation of their attracting poles. The cohesiveness of the metal is greatly impaired.

The equilibrium between the attractive and repulsive forces, which constitutes the liquid condition of bodies, is totally subverted by a definite elevation of temperature, when the external compressing forces do not vary. The transition from the liquid state into that of elastic fluidity, is usually accompanied with certain explosive movements, termed ebullition. The peculiar temperature at which different liquids undergo this change is therefore called their boiling point ; and the resulting elastic fluid is termed a vapor, to distinguish it from a gas, a substance permanently elastic, and not condensable as vapors are, by moderate degrees of refrigeration. It is evident that when the attractive forces, however feeble in a liquid, are supplanted by strong repulsive powers, the distances between the particles must be greatly enlarged. Thus a cubic inch of water at 40° becomes a cubic inch and l-25th on the verge of 212°, and at 212° it is converted into 1694 cubic inches of steam. Trje existence of this steam indicates a balance between its elastic force and the pressure of the atmosphere. If the latter be increased beyond its average quantity, by natural or artificial means, then the elasticity of the steam will be partially overcome, and a portion of it will return to the liquid condition And conversely, if the pressure of the air be less than its mean quantity, liquids will assume elastic fluidity by a less intensity of calorific repulsion, or at a lower thermometric tension Professor Robison

performed a set of ingenious experiments, which appear to prove, that when the atmospheric prsssure is wholly withdrawn, that is, in vacuo, liquids become elastic fluids 124° below their usual boiling points. Hence, water in vacuo will boil and distil over at 212° — 124 — 88° Fahrenheit. This principle was long ago employed by the celebrated Watt, in his researches on the steam-engine, and has been recently applied in a very ingenious way by Mr. Tritton in his patent still (Phil. Mag. vol. 51),

and Mr. Barry, in his evaporator for vegetable extracts (Med. Chir. Trans, vol. 10).

On the same principle of the boiling varying with the atmospheric pressure, the Rev. Mr. Wollaston has constructed his beautiful thermometric barometer for measuring heights. He finds that a difference of 1° in the boiling point of water is occasioned by a difference of 0-589 of an inch on the barometer. This corresponds to nearly 520 feet of difference of elevation. By using the judicious directions which he has given, the elevation of a place may thus be rigorously determined, and with -great convenience. The whole apparatus weighing twenty ounces, packs in a cylindrical tin case, two inches diameter, and ten inches long.

When a vessel containing water is placed over a flame, a hissing sound or simmering is soon perceived. This is ascribed to the vibrations occasioned by the successive vaporisation and condensation of the particles in immediate contact with the bottom of the vessel. The sound becomes louder as the liquid is heated, and terminates in ebullition. The temperature becomes now of a sudden stationary when the vessel is open, however rapidly it rose before, and whatever force of fire be applied. Dr. Black set a tin cup full of water at 50°, on a red hot iron plate. In four minutes it reached the boiling point, and in twenty minutes it was all boiled off. From 50° to 212°, the elevation is 162°; which interval, divided by 4, gives 40° of heat, which entered

the tin cup per minute. Hence twenty minutes, or 5 X 4 multiplied into 40£ — 81Q, will represent the quantity of heat that passed into the boiling water to convert it into a vapor. But the temperature of this is still only 212°. Hence, according to Black, these 810° have been expended solely in giving elastic tension, or, according to Irvine, in supplying the vastly increased capacity of the aeriform state ; and therefore they may be denominated latent heat, being insensible to the thermometer. The more exact experiments of Mr. Matt have shown, that whatever period be assigned for the heating of amass of water from 50° to 212°, six times this period is requisite with a uniform heat for its total vaporisation. But 6 X 162° n: 972 = the latent heat of steam ; a result which accords with Dr. Ure's experiments made in a different way. Every attentive operator must have observed the greater explosive violence and apparent difficulty of the ebullition of water exposed to a similar heat in glass, than in metallic vessels. M. Gay Lussac has studied this subject with his characteristic sagacity. He discovered that water boiling in a glass vessel has a temperature of 214-2°, and in a tin vessel contiguous to it, of only 212°. A few particles of pounded glass thrown into the former vessel, reduced the thermometer plunged in it to 212 6, and ir;>n filings to 212°. When the flame is withdrawn forˆa few seconds from under a glass vessel of boiling waier, the ebullition will recommence on throwing in a pinch of iron filings.

The following is a tabular view of the boiling points by Fahrenheit's scale of the most important liquids, under a mean barometrical pressure of thirty inches :—

Boiling points.

Ether, sp. gr. 0-7365 at 48° G. Lussac . 100° Carburet of sulphur …do 113

Alcohol, sp. gr. 0-813 . . lire. 173-5 Nitric acid . 1-500 . . Dalton. 210

Water 212

Saturated sol. of Glaub. salt, Biot. 213£

Do. do. sugar of lead do. 21 5|

Do… sea salt . . do. 224J Muriate of lime 1 + water 2 . Ure. 230 Do. . 35-5 + do. 64-5 . do 235 Do. . 40-5 -j-do. 59-5 . do. 240 Muriatic acid 1-094 . . Dalton. 232

Do… 1-127 . . do. 222

Do… 1-047 . . do. 222

Nitric acid 145 . .. do. 240

Do…1-42 . . do. 248

Do…1-40 . . do. 247

Do… 1-35 . . do. 242

Do… 1-30 . . do. 236

Do… 1-16 . . do. 220

Rectified petroleum . . Ure. 306 Oil of turpentine . . do. 316

Sulphuric acid, sp. gr. 1-30 + Dalton. 240 Do… . 1-408 do. 260

Do. … 1-520 do. 290

Do. … 1-650 do. 350

Do. … 1-670 do. 360

Do. . : . 1-699 do. 374

Do. … 1-730 do. 391

Do. … 1-780 do. 435

Do. … 1-810 do. 473

Do… 1-819 do. 487

Do. … 1-827 do. 501

Do. … 1-833 do. 515

Do… . 1-842 do. 545

Do… . 1-847 do. 575

Do… . 1-848 do. 590

Do… . 1-849 do. 605

Do. … 1-850 do. 620

Do… . 1-848 Ure. 600

Phosphorus 554

Sulphur 570

Linseed oil -… , . 640

Mercury (Dulong, 662°) …656

These liquids emit vapors, which, at their respective boiling points, balance a pressure of the atmosphere equivalent to thirty vertical inches of mercury. But at inferior temperatures they yield vapors of inferior elastic power.

Mr. W. Creighton of Soho communicated, in March 1819, to the Philosophical Magazine, the following ingenious formula for aqueous vapor. Let the degrees of Fahrenheit x 85 =. D, and the corresponding force of steam in inches of mercury — 0-09 =. I. Then log. D — 2-22679 X 6 = log. I.

EXAMPLE. 212° + 85 — 297 log. ± = 2‘47276

— 2-22679 constant

number.

0-24579

X 6

Log. 1-47582 = 29-91 = I

-1-0-09

Inches 30-00 D.

II E A T.

He then gives a satisfactory tabular view of the near correspondences between the results of his formula, and by experiments. See STEAM.

M. Gay Lussac, by determining experimentally the volume of vapor which a given volume of liquid can produce at 212°, has happily solved the very difficult problem of the specific gravity of vapors. He took a spherule of thin glass, with a short capillary stem; and of a known weight. He filled it with the peculiar liquid, hermetically sealed the orifice, and weighed it. Deducting from its whole weight the known weight of the spherule, he knew the weight, and from its specific gravity the bulk of the liquid. He filled a tall graduated glass receiver, capable of holding about three pints, with mercury, inverted it in a basin, and let up the spherule. The receiver was now

surrounded by a bottomless cylinder, which rested at its lower edge in the mercury of the basin. The interval between the two cylinders was filled with water. Heat was applied by means of a convenient bath, tiO the water and the included mercury assumed the temperature of 212°. The expansible liquid had ere this burst the spherule, expanded into vapor, and depressed the mercury. The height of the quicksilver column in the graduated cylinder above the level of the basin, being observed, it was easy to calculate the volume of the incumbent vapor. The quantity of liquid used was always so small, that the whole of it was converted into vapor.

The following exhibits the specific gravities as determined by the above method : —

Spec. Gr. Air at

Boiling point,

‘212°,— 1.

Fahrenheit.

Vapor of water ….

0-62349

212°

Hydroprussic acid

0-94760

79-7

Absolute alcohol . .

1-6050

173

Sulphuric ether . .

2-5860

96

Hydriodic ether . .

5-4749

148

Oil of turpentine

50130

316

Carburet of sulphur .

2-6447

116

Muriatic ether . ,

2-2190 Thenard 52

The above specific gravities are estimated under a barometric pressure of 29‘92 inches.

It appears, that a volume of water at 40° forms 1694 volumes of steam at 212°. The subsequent increase of the volume of steam, and of other vapors, out of the contact of their respective liquids, we formerly stated to be in the ratio of the expansion of gases, forming an addition to their volume of three-eighths for every 180° Fahrenheit. We can now infer, both from this expansion of one measure into 1694, and from the table of the elastic forces of steam, the explosive violence of this agent at still higher temperatures, and the danger to be apprehended from the introduction of water into the close moulds in which melted metal is to be poured. Hence, also, the formidable accidents which have happened, from a litttle water falling into heated oils. The little glass spherules, called candle bombs, exhibit the force of steam in a very striking manner ; but the risk of particles of glass being driven into the eye, should cause their employment to be confined to prudent experimenters. Mr. Watt estimated the volumes of steam resulting from a volume of water at 1800; and in round numbers at 1728; numbers differing little from the above determination of M. Gay Lussac. Desagulier’s estimate of 14,000 was

therefore extravagant.

It has been already mentioned, that the caloric of fluidity in steam surpasses that of an equal weight of boiling water by about 972°. This quantity, or the latent heat of steam, as it is called, is most conveniently determined, by transmitting a certain weight of it into a given weight of water, at a known temperature, and, from the observed elevation of temperature in

the liquid, deducing the heat evolved during condensation. Dr. Black, Mr. Watt, Lavoisier, count Rumford, Clement, and Desormes, as well as Dr. Ure hare published observations on the subject.

‘ Aqueous vapor of an elastic force balancing the atmospheric pressure,’ says Dr. Ure, ‘ has a specific gravity compared to air, by the accurate experiments of M. Gay Lussac, of 10 to 16. For facility of comparison, let us call the steam of water unity, or 1-00; then the specific grarity of the vapor of pure ether is 4-00, while the specific gravity of the vapor of absolute alcohol is 2-60. But the vapor of ether, whose boiling point is not 100°, but 112°, like the above ether, contains some alcohol ; hence we must accordingly diminish a little the specific gravity num-ber of its vapor. It will then become, instead of 4-00, 3-55. Alcohol of 0-825 specific gravity contains much water; specific gravity of its vapor 2-30. That of water, as before unity, 1-00. The interstitial spaces in these vapors will therefore be inversely as these numbers, or jJs for ether, 5ˆ for alcohol, -fa for water. Hence, gis of latent heat, existing in ethereal vapor, will occupy a proportional space, be equally condensed, or possess the same tension with 3ˆ5 in alcoholic, and TJg in aqueous vapor. A small modification will no doubt be introduced by the difference of the thermometric tensions, or sensible heats, under the same elastic force. Com-mon steam, for example, may be considered as deriving its total elastic energy from the latent heat multiplied into the specific gravity -f-the thermometric tension.

« Hence : the elastic force of the vapors of water, ether, and alcohol, are as follows : —

HEAT.

E — 970 X I'OO -4-212° = 1182 E — 302 X 3-55 + 112° = 1184
Eal = r 440 X 2-30 + 175°— 1185

Three equations, which yield, according to my general proposition, equal quantities. When the elastic forces of vapors are doubled, or when they sustain a double pressure, their interstices are proportionably diminished. We may consider them now as in the condition of vapors possessed of greater specific gravities. Hence the second portion of heat introduced to give double the elastic force, need not be equal to the first, in order to produce the double tension.

' This view accords with the experiments of Mr. Watt, alluded to in the beginning of the memoir. He found that the latent heat of steam is less when it is produced under a greater pressure, or in -a more dense state ; and greater when it is produced under a less pressure, or in a less dense state. Berthollet thinks this fact so unaccountable, that he has been willing to discard it altogether. Whether the view I have just opened, of the relation subsisting between the elastic force, density, and latent heat of different vapors, harmonise with chemical phenomena in general, I leave others to determine. It certainly agrees with that unaccountable fact. Whatever be the fate of the general law now respectfully offered, the statement of Mr. Watt may he implicitly received under the sanction of his acknowledged sagacity and candor.' lire's Researches on Heat, pp. 54 & 55.

M.Clement inserted a pipe, connected with a steam boiler capable of bearing high pressure, into a given quantity of water at a certain temperature, contained in a bucket. He now turned the stop-cock on the pipe, and allowed a certain quantity of steam, at 212° Fahrenheit, to enter. He then poted the increase of temperature which the water had received. He repeated the experiment; only the steam in the boiler and that which issued through the pipe had been heated till its elasticity was double of that at 212°. As soon as the water in the bucket indicated, by its increase of volume, that the same quantity of steam had been condensed as in the first experiment, he shut the stop-cock and measured the temperature of the bucket. He found ,it to be the same as before. A third experiment with steam having an elastic force equal to three atmospheres, was next subjected to examination ; and he found the same result. Hence he inferred, that equal weights of steam, incumbent over water, at whatsoever temperature, contain the same quantity of heat ; or, in popular language, that the total heat of steam is a constant quantity : for, in proportion as the sensible heat augments, the latent or specific heat diminishes. On this proposition he has founded a luminous theory of steam engines, which, we hope, he will soon present to the world in his promised Traite" de Chaleur.

As it is the vastly greater relation to heat which steam possesses above water that makes the boiling point of that liquid so perfectly stationary in open vessels, over the strongest fires, we may imagine that other vapors, which have a

smaller latent heat, may not be capable, by their formation, of keeping the ebullition of their respective liquids at a uniform temperature. This variation of the boiling point has been observed actually to happen with oil of turpentine, petroleum, and sulphuric acid. When these liquids are heated briskly in apothecaries' phials, they rise 20° or 30° above the ordinary point at which they boil in hemispherical capsules. Hence, also, their vapors, being generated with little heat, are apt to rise with explosive violence. Oil of turpentine varies, moreover, in its boiling point, according to its freshness and limpidity. It is needless therefore to raise an argument on a couple of degrees of difference. But, in Dr. Murray's, and in all our other chemical systems, published prior to 1817, 560° was assigned as the boiling point of this volatile oil. Mr. Dalton's must be excepted, for he says, ' several authors have it, that oil of turpentine boils at 560° '

Mr. Darwin has explained the production of snow on the tops of the highest mountains, by the precipitation of vapor from the rarefied ai»r which ascends from plains and valleys. ' The Andes,' says Sir H. Davy, ' placed almost under the line, rise in the midst of burning sands; about the middle height is a pleasant and mild climate ; the summits are covered with unchanging snows ; and these ranges of temperature are always distinct : the hot winds from below, if they ascend, become cooled in consequence of expansion ; and the cold air, if by any force of the blast it is driven downwards, is condensed, and rendered warmer as it descends.'

Evaporation and rarefaction, the grand means employed by nature to temper the excessive heats of the torrid zone, operate very powerfully among mountains and seas. But the level sands are devoured by unmitigated heat. In milder climates, the fervors of the solstitial sun are assuaged by the vapors copiously raised from every river and field, while the wintry cold is moderated by the condensation of atmospheric vapors in the form of snow. The equilibrium of ani-mal temperature is maintained by the copious discharge of vapor from the lungs and the skin. The suppression of this exhalation is a common cause of many formidable diseases. Among these, fever takes the lead. The ardor of the body, in this case of suppressed perspiration, sometimes exceeds the standard of health by six or seven degrees. The

direct and natural means of allaying this morbid temperature were first systematically enjoined by Dr. Currie of Liverpool. He showed that the dashing or affusion of cold water on the skin of a fever patient, has most sanatory effects when the heat is steadily about 98°, and when there is no sensation of dullness, and no moisture on the surface. Topical refrigeration is elegantly procured, by applying a piece of muslin or tissue paper to any part of the skin, and moistening it with ether, carburet of sulphur, or alcohol. By pouring a succession of drops of ether on the surface of a thin glass tube containing water, a cylinder of ice may be formed at Midsummer. See METEUKOLOGY.

The most convenient plan which the chemist can employ, to free a gas from vapor, is to pass

it slowly through a long tortuous tube wrapped in porous paper wetted with ether. On the other hand, when he wishes to expose his vessels to a regulated heat, he causes hot vapor to be condensed on their cold surface. The heat, thus disengaged from the vapor, passes into the ves-sel, and speedily raises it to a temperature which he can adjust with the nicest precision. A vapor bath ought therefore to be provided for every laboratory.

But the most splendid trophy erected to the science of caloric, is the steam-engine of Watt. This illustrious philosopher, from a mistake of his friend Dr. Robison, has been hitherto deprived of a part of his claims to the admiration and gratitude of mankind. The fundamental researches on the constitution of steam, which formed the solid basis of his gigantic superstructure, though they coincided perfectly with Dr. Black's results, were not drawn from them. In some conversations with Dr. Ure, a short period before his death, Mr. Watt described the simple, but decisive experiments, by which he discovered the latent heat of steam. His means and his leisure not then permitting an expensive and complex apparatus, he used apothecaries' phials. With these he ascertained the two main facts, first, that a cubic inch of water would form about a cubic foot of ordinary steam, or 1728 inches ; and that the condensation of that quantity of steam would

heat six cubic inches of water from the atmospheric temperature to the boiling point. Hence he saw that six times the difference of temperature, or fully 900° of heat, had been employed in giving elasticity to steam ; which must be all abstracted before a complete vacuum could be procured under the piston of the steam-engine. These practical determinations he afterwards found to agree pretty nearly with the observations of Dr. Black. Though Mr. Watt was then known to the Dr. he was not on those terms of intimacy with him which he afterwards came to be, nor was he a member of his class.

Mr. Watt's three capital improvements, which seem to have nearly exhausted the resources of science and art, were the following: 1. The separate condensing chest, immersed in a body of cold water, and connected merely by a slender pipe with the great cylinder, in which the impelling piston moved. On opening a valve or stop-cock of communication, the elastic steam, which had floated the ponderous piston, rushed into the distant chest with magical velocity, leaving an almost perfect vacuum in the cylinder, into which the piston was forced by atmospheric pressure. What had appeared impossible to all previous engineers was thus accomplished. A vacuum was formed without cooling the cylinder itself. Thus it remained boiling hot, ready the next instant to receive and maintain the elastic steam. 2. His second grand improvement consisted in closing the cylinder at top, making the piston-rod slide through a stuffing box in the lid, and causing the steam to give the impulsive pressure, instead of the atmosphere. Henceforth the waste of heat was greatly diminished. 3. The final improvement was the double impulse, whereby the power of his engines, which was before so great, was in a moment more than doubled. The counter-weight required in the single-stroke engine, to depress the pump-end of the working beam, was now laid aside. He thus freed the machine from a dead weight or drag of many hundred pounds, which had hung upon it from its birth, about seventy years before. See STEAM ENGINE.

The application of steam to heat apartments is another valuable fruit of these studies. Safety, cleanliness, and comfort, thus combine in giving a genial warmth for every purpose of private accommodation, or public manufacture. It has been ascertained that one cubic foot of boiler will heat about 2000 feet of space in a cotton mill, whose average heat is from 70° to 80° Fahr. And if we allow twenty-five cubic feet of a boiler for a horse's power, in a steam-engine supplied by it, such a boiler would be adequate to the warming of 50,000 cubic feet of space. It has been also ascertained, that one square foot of surface of steam pipe is adequate to the warming of 200 cubic feet of space. This quantity is adapted to a well finished ordinary brick or

stone building. The safety valve on the boiler should be loaded with two pounds and a half for an area of a square inch, as is the rule for Mr. Watt's engines. Cast iron pipes are preferable to all others, for the diffusion of heat. Freedom of expansion must be allowed, which in cast iron may be taken at about a tenth of an inch for every ten feet in length. The pipes should be distributed within a few inches of the floor.

Steam is now used extensively for drying muslins and calicoes. Large cylinders are filled with it, which, diffusing in the apartment a temperature of 100° or 130°, rapidly dry the susˆ pended cloth. Occasionally the cloth is made to glide in a serpentine manner closely round a series of steam cylinders, arranged in parallel rows. It is thus safely and thoroughly dried in the course of a minute. Experience has shown that bright dyed yarns like scarlet, dried in a common stove heat of 128°, have their color darkened, and acquire a harsh feel ; while similar hanks, laid on a steam pipe heated up to 16-5° retain the shade and lustre they possessed in the wetted state. The people who work in steam drying-rooms are healthy ; those who were formerly employed in the stove-heated apartments became soon sickly and emaciated. These injurious effects must be ascribed to the action of cast iron, at a high temperature, on the atmosphere. The heating by steam of large quantities of water or other liquids, either for baths or manufactures, may be effected in two ways : that is, the steam pipe may be plunged with an open end into the water cistern ; or the steam maybe diffused around the liquid in the interval between the wooden vessel and an interior metallic case. The second mode is of universal ap-plicability. Since a gallon of water in t'ne form of steam will heat six gallons at 50°, up to the boiling point, or 162° ; one gallon of the former will be adequate to heat eighteen gallons of the latter up to 100°, making a liberal allowance for waste in the conducting pipe. But see our article STEAM, and COTTON MANUFACTURE,

HEATH, n. s. ˆ Lat. erica; Teut. and

HEATU’-COCK, n. s. j Belgic lieide ; a Greek

HEATH’-PEASELING, ! cuOot, to bum. Minsheu.

HEATU’-POUT, n.s. [Heath, an evergreen

HEATH’-ROSE, n. s. I shrub of low stature ; a

HEATH’Y, adj. J place overgrown with

heath ; a place covered with shrubs : heathcock,

a fowl that frequents heaths : heath-peaseling, a

species of vetch : heath-pout, a bird : heath-rose,

a plant.

Say, from whence

You owe this strange intelligence ? or why, Upon this blasted heath you stop our way With such prophetick greeting ? Shakspeare. Some woods of oranges, and heaths of rosemary, will smell a great way into the sea. Bacon.

Cornwall hath quail, rail, partridge, pheasant, heathcock, and powte. Carew’t Survey,

Health and long life have been found rather on the peak of Derbyshire, and the heat ha of Staffordshire, than fertile soils. Temple.

Not heath-pout, or the rarer bird Which Phasis or Ionia yields,

More pleasing morsels would afford Than the fat olives of my fields. Dryden.

In Kent they cut up the heath in May, bum it, and spread the ashes. Mortimer’* Husbandry.

This sort of land they order the same way with the heathy land. Id.

Oft with bolder wing they soaring dare The purple heath. Thomson.

HEATH (Benjamin), L.L.D., an eminent lawyer, town clerk of Exeter, and author of several learned works, was educated at Oxford, where

he took his degree in civil law, 31st of March 1762. He wrote, l.An Essay towards a demonstrative Proof of the Divine Existence, Unity, and Attributes ; to which is premised, A short Defence of the Argument commonly called a priori, 1740. 2. Notae sive Lectiones, ad opera Tragicorum Graecorum veterum, j'Eschyli, &c. 1752, 4to., a work which places the author's learning and critical skill in a very conspicuous light. 3. The Case of the County of Devon with respect to the Consequences of the New Excise Duty on Cyder and Perry. Published by the direction of a Committee appointed at a General Meeting of that County to superintend the Application for the Repeal of that Duty, 1763,4to. 4. A Revisal of Shakspeare's Text, wherein the alterations introduced into it by the more modern editors and critics are particularly considered: 8vo. 1765.

HEATH (James), an English historian, born in 1629 at London; where his father, who was the king's cutler, lived. He was educated at Westminster school, and became a student of Christ Church, Oxford, in 1646. In 1648 he was ejected by the parliamentary visitors for his adherence to the royal cause ;• and then marrying, was obliged to write books and correct the press to maintain his family. He died of a consumption and dropsy at London in August 1664, and left several children. His chief works were, 1. A brief Chronicle of the late Intestine War in the three kingdoms of England, Scotland, and Ireland, &c., 1661, 8vo.; afterwards enlarged, and completed from 1637 to 1663, in 4 parts, 1663, in 8vo. To this was again added a continuation from 1663 to 1675, by John Philips,

nephew to Milton, J676, folio. 2. Flagellum : or The Life and Death, Birth and Burial, of Oliver Cromwell, 1663. The third edition came out with additions in 1665, 8vo. 3. A New Book of Loyal English Martyrs and Confessors, who have endured the Pains and Terrors of Death, Arraignment, &c., for the Maintenance of the just and legal Government of these Kingdoms both in Church and State, 1663, 12mo. Heath, who perhaps had nothing but pamphlets and newspapers to compile from, frequently relates facts that throw light upon the history of those times, which Clarendon, though he drew every thing from the most authentic records, has omitted.

HEATHCOTE (Ralph), D.D., a learned English divine of considerable abilities, born in 1721. He was educated and graduated at Cambridge. He wrote, 1. A Treatise against the Hutchinsonians ; 2. A Sketch of Lord Bolingbroke's Philosophy ; 3. Sylva, or the Wood : and several other pieces.

HEATHEN, n. s. & atlj.-\ Teut. heyden ;

HEA'THENISH, adj. fSwed. and Dan.

HEA'THENISHLY, adv. theden; of Greek

HEA'THENISM, n. s. J tPviieoc, t9vo£. The

Gentiles; nations as yet unacquainted with Christianity : paganism : wild, savage, rapacious, cruel, untaught.

Deliver us from the heathen, that we may give thanks to thy holy name. 1 Chron. xvi. 35.

Under an hethen castel at the last,

(Of -which the name in my text I not find)

Custance and eke her child the see up cast.

Almighty -God, that saved all mankind,

Have on Custance and on hire child some mind.

That fallen is in hethen hond eftsone

In point to spill, as I shall tell you sone

Chaucer. The Man of Lames Tale.

The Moors diJ tread under their heathenish feet whatever little they found yet there standing.

Spenser.

When the apostles of our Lord and Saviour were ordained to alter the laws of heathenish religion/ chosen they were, St. Paul excepted ; the rest un-schooled altogether, and unlettered men. Hooker.

[f the opinions of others whom we think well of, he a ground of assent, men have reason to be heathens in Japan, Mahometans in Turkey, papists in Spain, and protestants in England. Locke.

In a paper of morality, I consider how I may recommend the particular virtues I treat of, by the precepts or examples of the ancient heathens.

A ddison.

That execrable Cromwell made a heathenish or ra-ther inhuman edict against the episcopal clergy, that they should neither preach, pray in publick, baptize, marry, bury, nor teach schools. South.

HEATHENS. See MYSTERIES, MYTHOLOGY, and POLYTHEISM.

HEATHFIELD, Lord. See ELIOTT.

HEATH-PEAS. See OROBUS.

HEATOTOTL, in ornithology, the name of an American bird, described by Nieremberg, and called also avis venti. It is remarkable for a very large ind round crest of whitish feathers on its head Its breast is of a brownish-gray ; its belly white, and its feet yellow; its tail is round when expanded, and is variegated with black and white ; its back and wings are black,-

HEAVE, v. a., v. «., & n,s. I Pret. heaved, HEAVE'-OFFERING, n. s. $ anciently hove; part, heaved, or hoven ; Sax. heavian ; Ger. ktben, from the absolute particle ha, signifying high, which is the radical meaning of the word ; and thus to heave is to lift, carry, raise, cause to swell, to force up from the breast, to exalt, to. pe.ff or elate, to pant, to labor, to keck, to feel a tendency to vomit; heave, an exertion, lift, struggle, &c. ; heave-offering, an offering amongst the Jews.

Ye shall offer a cake of the first of your dough for an heave-offering, as ye do the heave-offering of the threshing floor. Numbers.

There nas no dore, that he nolde heve of barre Or broke it at a renning with his hede

Cliaucer. Prologue to Canterbury Tales, So daunted, when the giant saw the knight, His heavy hand he heaved up on high, And him to dust thought to have battered quite.

Spenser.

Now we bear the king Tow'rd Calais : grant him there ; and there being

seen,

Heave him away upon your winged thoughts Athwart the sea. Shakspeare.

I cannot heave

My heart into my mouth. Id.

There's matter in these sighs ; these profound

heaves

You must translate ; 'tis fit we understand them.

Id.

Made she no verbal quest ?

Yes, once or twice she heaved the name of father Pantingly forth, as if it prest her heart. Id.

The wretched animal heaved forth such groans ; That their discharge did stretch his leathern coat Almost to bursting. Id. As You Like It.

'Tis such as you,

That creep like shadows by him, and do sigh At each his needless hearings ; such as you Nourish the cause of his awaking. Id.

Poor shadow-painted queen '. *One heaved on high, to be hurled down below.

Id.

The Scots, heaved up into high hope of victory, took the English for foolish birds fallen into their net, forsook their hill, and marched into the plain.

Hayward. So stretched out huge in length the arch fiend

lay,

Chained on the burning lake ; nor ever thence Had risen, or heaved his head, but that the will And high permission of all-ruling heaven Left him at large. Milton.

But, after n,any strains and heaves, He got up to his sadille eaves. Hudibras.

Thou hast made my curdled blood run back, My heart heave up, my hair to rise in bristles.

Dryden.

The wand'ring breath was on the wing to part; Weak was the pulse, and hardly heaved the heart.

Id.

The holy priests gaze on her when she smiles. And with heaved hands, forgetting gravity, Thf-y bless her wanton eyes. Id.

None could guess whether the next heave of the earthquake would settle them on the first foundation, or swallow them. Id.

The groans of ghosts that cleave the earth with

pain,

heave it up : thry pant and stick half way.

Id.

He died in fight ;

Fought next my person, as in consort fought. Save when he heaved his shield in my defence, And on his naked side received my wound. Id. He heaves for breath, which, from his lungs sup*

plied, And fetched from far, distends his lab'ring side.

Id.

No object affects my imagination so much as the sea or ocean : I cannot soe the heaving of this prodigious bulk of waters, even in a calm, without a very pleasing astonishment. Additon.

Why dost thou frown upon me ? My blood runs cold, my heart forgets to heave, And life itself goes out at thy displeasure.

Id. Cato. Frequent for breath his panting bosom heaves. Prior.

The heaving tide la widened circles beats on either side. Gay.

The glittering finny swarms, That heave our friths and crowd upon our shores.

Thomson.

The church of England had struggled and heaved at a reformation ever since Wickliff's days.

Atterbury.

And souls immortal must for ever heave At something great ; the glitter, or the gold, The praise of mortals, or the praise of Heaven.

Young.

Awaking with a start

The waters heave around me, and on high The winds lift up their voices.

Byron. Childe Harold.

Thou glorious mirror, where the Almighty's form Glasses itself in tempests ; in all time, Calm or convulsed — in breeze, or gale, or storm, Icing the pole, or in the torrid clime Dark heaving, boundless, eodless, and sublime — The image of Eternity. Id,

HEAVEN, n.s. ~} Sax,)>eoFon,

HEAV'ENLY, arfj. &fl«fo. which seems to be HEAV'EN-WARD, adv. \ derived from beopo, HEAV'EN-BEGOT, adj. [the places over head. HEA v' EN-BORN, adj. (See HEAVE. Heaven HEAV'EN-BRED, adj. is a word especially

HEAV'EN-BUILT, adj. \ connectedwithChris-HEAV'EN-UIRECTED. J tianity; the residence of the Almighty ; in all its derivations properly

applied only to moral and spiritual subjects ; whilst celestial, as derived from calum, is descriptive of the visible firmament, and applicable to many subjects illustrated in the heathen mythology, where heavenly would be evidently improper : it has, however, been used by authors without this distinction to denote the sky, the pagan gods, or whatever is high and exalted : the compounds are sufficiently obvious in their meanings.

Certes heven is yeveu to hem that will labour, and not to idel folk. Chaucer. The Persanes Tale.

the heavenly armitage

Which on a rock so high ystonds, In strange se— out from all londs — That, to makcn the pilgrimage, Is called a long perilous viage.

Id. Dreame.

Such were the goddesses which ye did see : But that fourth mayed, which there amidst them

traced,

Who can aread what creature mote she be ; Whether a creature, or a goddesse graced With heavenly gifts from heaven first enraced.

Spenser. Faerie Queene,

It is a knell,

That summon* thee to heaven, or to hell.

Shahtpearc. Macbeth. O, for a mu»e of fire, that would ascend The

brightest heaven of invention. Shakspeare. Much is the force of heaven-bred poesy. Id.

A station like the herald Mercury, New lighted on a A«acen-kissing hill. Id.

Now heaven help him ! Id.

Take physick, pomp } Expose thyself to feel what wretches feel, That thou may'st shake the superflux to them, And show the heavens more just. Id.

They can judge as fitly of his worth, As I can of those mysteries which heaven Will not have earth to know. Id.

The words are taken more properly for the air and ether than for the heavens. Raleigh's History.

Thus they in heaven, above the starry sphere, Their happy hours in joy and hymning spent.

Milton. The will

And high permission of all-ruling heaven Left him at large. Id*

Truth and peace and love shall ever shine About the supreme throne Of him, t'whose happy-making sight alone, Our heavenly guided soul shall climb. Id.

These, the late J/eacen-banished host, left desert utmost hell. Id.

All ˆet left of that revolted rout, Heave*, fallen, in station stood, or just array, Sublime with expectation. Id.

Who would such men heaven's messengers believe, Who from the sacred pulpit dare deceive ? Marvell.

As the love of heaven makes one heavenly, the love of virtue virtuous, so doth the love of the world make one become worldly. Sidney.

The prophets were taught to know the will of God, and thereby instmct the people, and enabled to prophesy, as a testimony of their being sent by heaven.

Temple.

Some fires may fall from heaven. Id.

Priesthood, that makes a merchandise of heaven ! Priesthood, that sells even to their prayers and blessings, And force us to pay for our own cos nage !

Dryden..

Thy race in time to come Shall spread the conquests of imperial Rome ; Rome, whose ascending towers shall heaven invade, Involving earth and ocean in her shade. Id.

Heavens ! what a spring was in his arm, to throw ! How high he held his shield, and rose at every blow.

Id.

If I am heaven-begot, assert your son By some sure sign. Id.

Adoring first the genius of the place, Then earth, the mother of the heavenly race. Id.

If once a fever fires his sulphurous blood, In every fit he feels the hand of God, And heaven-born flame. Id. Juvenal.

This act, with shouts heaven high, the friendly

baud Applaud. Id.

Not Maro's muse, who sung the mighty man ; Nor Pindar's heavenly lyre, nor Horace when a swan.

Id. TAMERLANE. The world! — 'twould be too little

for thy pride ! Thou would'st scale heaven.

BA.IAZET. I would : — Aw;iy ' my soul Disdains thy conference. Rome's Tumerlane.

I prostrate lay,

By various doubts impelled, or to obev,

Or to object; at length, my mournful look,

Heavenward erect, determined, thus I spoke.

Prior.

Last night (I vow to Heaven ‘tis true) Bounce from the fire a coffin flew. Gay.

O sacred weapon ; left for truth’s defence ; To all but heaven-directed hands denied : The muse may give it, but the gods must guide.

Pope. His arms had wrought the destined fall

Of sacred Troy, and razed her heaven-built wall.

Id.

Oh ! heaven-bora sisters ! source of art ! Who charm the sense, or mend the heart ; Who led fair Virtue’s train along, Moral truth, and mystick song ! Id.

Who taught that heaven-directed spire to rise ? Id. In these deep solitudes and awful cells,

Where heavenly pensive Contemplation dwells,

And ever-musing Melancholy reigns,

What means this tumult in a vestal’s veins ? Id.

Heaven gives us friends to bless the present scene ; Resumes them, to prepare us for the next. Young.

When Juno’s charms the prize of beauty claim, Shall aught in earth, shall aught in heaven contend ?

Beattie.

All heaven and earth are still — though not in sleep, But breathless, as we grow when feeling most ; And silent, as we stand in thoughts too deep : — All heaven and earth are still : From the high host Of stars, to the lulled lake and mountain-coast, All is concentered in a life intense.

Byron. Childe Harold.

HEAVEN, among Christian divines and philosophers, is considered as a place in which’ the omnipresent Deity affords a nearer and more immediate view of himself, and a more sensible manifestation of his glory, than in the other parts of the universe. This is often called the

empyrean heaven, from that splendor with which it is supposed to be invested ; and of this place the inspired writers give us the most noble and magnificent descriptions.

HEAVEN, among Pagans, was considered as the residence only of the celestial gods, into which no mortals were admitted after death, unless they were deified. As for the souls of good men, they were consigned to the Elysian fields. See ELYSIUM.

HEAVEN, in astronomy, called also the rethereal and starry heaven, is that immense region wherein the stars, planets, and comets, are disposed. See ASTRONOMY. This is what Moses calls the firmament, speaking of it as the work of the second day's creation ; at least it is thus the word JTpT is usually rendered by his interpreters, though somewhat improperly, arising from the ancient notion of the heavens being firm or solid. But the word properly signifies no more than expanse or extension ; a term very well adapted by the sacred historian to the impression which the heavens make on our senses; whence, in other parts of Scripture, the heaven is compared to a curtain, or a tent stretched out to dwell in. The LXX first added to this idea of expansion that of firm or solid ; rendering it by Ttpewjua, according to the philosophy of those times ; in which they have been very injudiciously followed by the modern translators. Des Cartes,

Kircher, &c., demonstrated this heaven not to be solid but fluid ; but they still supposed it full, or perfectly dense, without any vacuity, and cantoned out into many vortices. But others have overturned, not only the solidity, but the supposed plenitude of the heavens. Sir Isaac Newton has abundantly shown the heavens void of almost all resistance, and, consequently, of al-most all matter : this he proves from the phenomena of the celestial bodies ; from the planets persisting in their motions without any sensible diminution of their velocity ; and the comets freely passing in all directions towards all parts of the heavens. Heaven, taken in a general sense, for the whole expanse between our earth ' and the remotest regions of the fixed stars, may be divided into two very unequal parts, according to the

matter found therein ; *viz.* the atmosphere, or aerial heaven,, possessed by air ; and the scthereal heaven, possessed by a thin, unresisting medium, called aether. Heaven is also used, in astronomy, for an orb, or circular region, of the sethereal heaven. The ancient astronomers supposed as many different heavens as they observed motions therein. These they supposed all to be solid, as thinking they could not otherwise sustain the bodies fixed in them ; and spherical, that being the most proper form for motion. Thus they had seven heavens for the seven planets ; *viz.* the heavens of the Moon, Mercury, Venus, the Sun, Mars, Jupiter, and Saturn. The eighth was for the fixed stars, which they called the firmament. Ptolemy adds a ninth heaven, which he called the primum mobile. Two crystalline heavens were added by king Al-phonsus X., &c., to account for some irregularities in the motions of the other heavens : and, lastly, an empyrean heaven was drawn over the whole, for the residence of the Deity; which made the number twelve. But others admitted many more heavens, according as their different views and hypotheses required. Eudoxus supposed twenty-three, Callippus thirty, Regiomon-tanus thirty-three, Aristotle forty-seven, and Fra-castor no less than seventy. The astronomers, however, did not much concern themselves whether the heavens they thus allowed of were real or not ; provided they served a purpose in accounting for any of the celestial motions, and agreed with the phenomena.

HEAVILY, adv. “) Sax. beapij ; Teut. hcvig.

HEAVINESS, n.s. >The primary idea is

HEAV’Y, ad/.&rtrfu. 3 weight, and is opposed to whatever is light, airy, cheerful ; as depressed ; dull ; drowsy ; oppressive ; burdensome ; sluggish; indigestible; rich in soil when applied to lands; heavy, adverb for heavily.

Heaviness in the heart of man maketh it stoop ; but a good word maketh it glad. Prov. xii. 25.

Ye greatly rejoice ; though now for a season yc are in heaviness, through manifold temptations.

1 Pet. i. 6.

Menclaus bore an heavy band over the citizens, having a malicious mind. 2 Mae. v. 23.

Nature, the vicaire of the almightie Lorde, That hote and colde ; hcvie, light ; moiste, and drie, Hath knit, by even number of accorde, — In

csie voice, began to spcke and saie.

Chaucer. The Assemblcc of Fuules.

And every comfort possible in this case They don to hire, with all hir besinesse, Al for to make hire leve hire hevinesse.

Id. The Frankeleines Tale.

Doughter, stint thin hevinesse.

Among the goddes bighe it is affermed, And by eterne word written and conformed, Thou shalt be wedded unto on of tho, That ban for thee so mochel care and wo ; But unto which of hem I may not tell.

Id. The Knightes Tale.

We are, at the hearing of some, more inclined unto sorrow and heaviness; of some more mollified and softened in mind. Hooker.

I would not be accounted so base minded, or heavy headed, that I will confess that any of them is for valour, power, or fortune, better than myself.

Knolles.

Let not your ears despise my tongue for ever, Which shall possess them with the heaviest sound That ever yet they heard. Shakspeare. Macbeth.

If the cause be not good, the king himself hath a heavy reckoning to make. Id. Henry V.

Pray for this good man, and for his issue, Whose heavy hand hath bowed you to the grave, And beggared yours for ever. Shakspeare.

Our strength is all gone into heaviness, That makes the weight. Id.

But let thy spiders that suck up thy venom, And heavy gaited toads lie in their way. Id.

Chartres, at the levee,

Tells with a sneer the tyding heavy. Swift. A work was to be done, a heavy writer to be encouraged, and accordingly many thousand copies

were bespoke. Jrf.

When alone, your time will not be heavy upon your hands for want of some trifling amusement. Id.

But, hark ! — that heavy sound breaks in once more. As if the clouds its echo would repeat ; And nearer, nearer, deadlier than before ! Arm ! arm ! it is — it is — the cannon's opening roar.

Byron. Childe Harold.

HEB'DOMAD, n. s. ˆ Lat. hebdomas. A HEEDOM'ADAL, adj. Vspace of seven days; HEBDOM'ADARY, adj. jweekly. As for hebdomadal periods, or weeks, in regard of their sabbaths, they were observed by the Hebrews.

Brottme.

Computing by the medical month, the first hebdomad, or septenary, consists of six days, seventeen hours and a half. Id.

HEBDOMADARY, HEBDOMADARIUS, or HEB-DOMADIUS, from Gr. iˆSoftas, seven ; a member of a chapter or convent, whose week it is to officiate in the choir, to rehearse the anthems ind prayers, and to perform the usual functions which the superiors perform at solemn feasts, and other extraordinary occasions. He generally collates to the benefices which become vacant during his week. In cathedrals, the hebdoma-dary was a canon or prebendary, who had the peculiar care of the choir, and the inspection of the officers for his week. In monasteries, he waits at table for a week, or other stated period ; directs and assists the cook, &c.

HEBDOMAGENES, from iirra, seven, and ytvvnaie, birth, a title of Apollo, so named from his being born on the seventh day of the month ; whence the seventh days were held sacred to him. See HEBDOHE.

HEBDOME, Gr. f|8<to/xac, the seventh day, a solemnity of the ancient Greeks, in hono-of

Apollo, in which the Athenians sung hymns to his praise, and carried in their hands branches of laurel. It was observed on the seventh day of every lunar month.

HEBE, in ancient mythology, a goddess, the idea of whom, among the Romans, seems to have been that of eterral youth, or immortality of bliss. She is fabled to have been a daughter of Jupiter and Juno. According to some, she was the daughter of Juno only, who conceived her after eating lettuces. She was fair, and al-ways in the bloom of youth, being the goddess of youth, and made by her mother cup-bearer to the gods. She was dismissed from her office by Jupiter, because she fell down in an indecent posture as she was pouring nectar to the gods at a grand festival ; and Ganymede, his favorite, appointed cup-bearer in her place. She was employed by Juno to prepare her chariot, and to harness her peacocks. When Hercules was raised to the rank of a demi-god, he was reconciled to Juno by marrying Hebe, by whom he had two sons, Alexiares and Anicetus. As Hebe had the power of restoring gods and men to the vigor of youth, she, at the request of her husband, performed that kind office to his friend lolaus. She was worshipped at Sicyon under the name of Dia, and at Rome under that of Juventas.

HEBENSTREIT (John Ernest), M. D., a learned physician, born at Leipsic in 1702. He wrote Carmen de \isu Partium, and several other works ; and died in 1756, aged fifty-four. His brother, John Christian Hebenslreit, was an eminent Hebraist.

HEBENSTRETIA, in botany, a genus of the angiospermia order, and didynamia class of plants ; natural order forty-eight, aggregate : CAL. emarginated, and divided below : COR. uni-labiate ; the lip rising upwards, and quadrifid : CAPS, dispermous; the stamina inserted into the margin of the limb of the corolla. Species eight, all natives of the Cape of Good Hope. The two best known in this country are H. dentata, hav-ing a striped white flower, and H. aurea, golden-flowered hebenstretia, with a rich yellow flower, peculiarly fragrant in an evening.

HEBER, the son Salah, great-grand-son of Shem, and father of Peleg,

from whom, according to Josephus, Eusebius, Jerome, Bede, and most of the interpreters of the sacred writings, the Hebrews derived their name ; but Huet has attempted to prove that the Hebrews took their name from the word Heber, which signifies be-yond, because they came from beyond the Euphrates. Heber lived 464 years, and is supposed to have been born A. A. C. 2281.

HEBER, Reginald, D.D., bishop of Calcutta, was born April 21, 1783, atMalpas, in Cheshire, and in 1800 was sent to Brazen-nose college, Oxford. In 1802 he obtained a university prize for a copy of Latin hexameters ; and the following year he greatly distinguished himself by another prize poem — Palestine, in English. He was elected to a fellowship in All Souls' college, and, soon after, travelled in Germany, Russia, and the Crimea, and made observations, from which many curious extracts \verepublished in the travels of doctor E. L). Clarke. Having re-

turned home he published an English ppem, entitled Europe, Lines on the present War, (1809) About the same time he was presented to thi family living of Hodnet, and he married Amelia, daughter of the reverend W. Shipley, dean of St. Asaph. For several years subsequently he devoted himself, with great assiduity, to his duties as a parochial priest In 1822 appeared his life of Jeremy Taylor, with a review of his writings. On the death of bishop Middleton he was offered the see of Calcutta, which he accepted, and, June 16, 1823, embarked for the East Indies. On Ascension day, 1824, bishop Heber held his first visitation, in the cathedral of Calcutta; and he subsequently made progresses through various parts of his very extensive diocese, consecrating churches, and taking the appropriate steps for extending the knowledge of Christianity among the Hindoos. Having taken a journey in the discharge of his episcopal duty, he arrived at Tirutchinopoli, April 1, 1826 ; and on the next day, while bathing, he was seized with an apoplectic fit, which terminated his existence. Since the death of this prelate, has been published a Narrative of a Journey through the Upper Provinces of India, from Calcutta to Bombay. (2 vols., 4to. ; new edition, 3 vols., 8vo.) His widow has also published his biography, (2 vols., 4to., London,

1030.)

HEBERDEN (William), a learned physician, was born in London in the

year 1710. Having received his early education in his native city, he was entered of St. John's College, Cambridge, in 1 724 ; and after a residence of six years, he was elected a fellow. From this time he devoted himself to the study of medicine, partly at Cambridge, and partly in the metropolis. After he had taken the degree of M. D. he settled at Cambridge, where he practised his profession during ten years, and gave lectures on the materia medica annually to the students in the uni. versity. While he resided here, we believe, he printed a little tract, entitled Avnflj/piaica, An Essay on Mithridatium and Theriaca, 1745. Tins tract contained a history of these medicaments, and an exposure of the absurdity of employing such a medley of discordant simples. In 1748 Dr. Heberden removed to London, to the general regret of the university and town of Cambridge, where his professional skill and suavity of manners had obtained for him a high esteem. He had already been elected a fellow of the College of Physicians, and was shortly after admitted into the Royal Society. He soon rose to a considerable professional reputation, and enjoyed a large share of medical practice in the metropolis. To Dr. Heberden's suggestion the public is indebted for the publication of the Medical Transactions of the College of Physicians, the first volume of which appeared in 1768, and two others subsequently, in 1772 and 1785. Among the useful communications contained in these volumes, the papers of Dr. Heberden himself are most prominent in number and value. His account of a fatal disorder of the chest, which he denominated angina pectoris, first called the attention of physicians to it, as an idiopathic disease; and the numerous cases of it

which have since been promulgated, evince its Frequency and importance. Dr. Heberden communicated some other papers to tlie Royal Society, which were printed in its Transactions. For several years he enjoyed the rewards of a virtuous and temperate life in a healthy and peaceful old age, cheered by domestic enjoyments, and scientific and literary pursuits. He died calmly in 1801, after completing the ninetieth year of his age, and was buried in the parish church of Windsor.

HEBERT (James Rene.), a chief of one of the revolutionary factions of France, was born at Alencon, in the department of the Orne, about 1755; and supported himself, previously to the revolution, as a cheque-taker at the theatre des Varietes. He was dismissed, it is said, for dis-nonesty ; after which he lived with a physician, whom he robbed. In 1789 he commenced political demagogue, and attracted notice by a journal entitled Le Pere Duchesne, which abused the court and the monarchy. On the 10th of August, 1792, he became one of the members of the municipality of Paris ; and was soon after nominated deputy of the national agent of the commune : it was then that, connecting himself intimately with Chaumette and Pache, he employed all his influence in forwarding a project to establish the authority of the commune on the ruins of the national representation. The Hebertists now rejected the advances of the Orleans party, and separated from the Cordeliers, of whom they had hitherto formed a part. The Girondists, who were at that period contending against the Mountain party, had credit enough to procure the arrest of Hebert, May 24th, 1793. He was defended by Murat in the convention ; the deputies of all the sections spoke in his favor at the bar on the 25th ; and, on the 27th, after a tempestuous session, he was again restored to liberty. Prompted by revenge, he now assisted with all his power in the proscription of the Brissotins. Their downfall hastened his own. Danton and Robespierre suspended their mutual jealousies to accomplish his destruction ; and Hebert, with the greater part of his associates, was arrested, and condemned to death, March 24th, 1794. Besides his journal, he was the author of other political pieces of a similar description : he was the author of some of the basest calumnies on the unfortunate queen of France.

HEB’ETATE, v. a. } Fr. hebeter ; Lat. hereto.

HEBETA’TION, n. s. >To dull; to blunt, or

HEB’ ETUDE, n. s. J stupify : obtuseness; stupidity.

The pestilent seminaries, according to their gross-ness or subtilty, activity or hebetude, cause more or less truculent plagues. Harvey.

The eye, especially if hebetated, might cause the same perception. Id.

Beef may confer a robustness on the limbs of my son, but will hebetate and clog his intellectuals.

Arbuthnot and Pope.

HE’BRAISM, n. s.ˆ Fr. hebraisme ; Lat. HE’BRAIST, n.s. fhebraismus. A

Hebrew HEBRIC'IAN, n. s. J idiom, and the appellations of persons skilled in the Hebrew language.

The words are more properly taken for the air or ether than the heavens, as the best Hebricians understand them. Raleigh.

The nature of the Hebrew verse, as the meanest Hebrician knoweth, consists of uneven feet.

Peacham.

Milton has infused a great many Latinisms, as well as Graecisms, and sometimes Hebraisms, into his poem. Spectator.

HEBREW BIBLE. See BIBLE.

HEBREW CHARACTERS. There are two kinds of Hebrew characters ; the ancient or square, and the modern or Rabbinical characters.

HEBREW CHARACTER, ANCIENT, or the SQUARE HEBREW, takes this last denomination from the figure of its characters, which stand more square, and have their angles more exact • than the other. This character is used in the text of Holy Scripture, and the principal and most important writings of the Jews. When both this and the rabbinical character are used, in the same work, the former is for the text, or the fundamental part; and the latter for the accessory part, as the gloss, notes, commentaries, &c. The best and most beautiful characters of this kind are those copied from the characters in the Spanish MSS.; next, those from the Italian MSS.; then those from the French; and, lastly, those of the Germans, whose characters are much the same, with respect to the other genuine square Hebrew characters, that the Gothic or Dutch characters are with respect to the Roman. Several authors contend that the square character is not the real ancient Hebrew character, written from the beginning of the language to the time of the Babylonish captivity ; but that it is the Assyrian, or Chaldee character, which the Jews assumed, and accustomed themselves to, during the captivity, and retained afterwards. They say that the Jews, during their captivity, had quite disused their ancient character ; so that Ezra found it necessary to have the sacred books transcribed into the Chaldean square character. These authors add, that what we call the Samaritan character, is the genuine ancient Hebrew. Of this opinion are Scaliger, Bochart, Casaubon, Vossius, Grotius, Walton, Capellus, &c., and, among the ancients, Jerome and Eusebius. On this side it is urged, that the present characters are called

Assyrian by the ancient Jewish writers of the Talmud, and therefore must have been brought from Assyria ; but to this argument it is replied, that there were two sorts of characters anciently in use, *viz.* the sacred or present square character, and the profane or civil, which we call Samaritan ; and that the sacred is called Assyrian, because it first began in Assyria to come into common use. It is farther alleged, that the Chaldee letters, which the Jews now use, were unknown to the ancient Jews before the captivity, from Dan. i. 4. It is also inferred from 2 Kings xvii. 28, where it is said that a Jewish priest was sent to teach the Samaritans the worship of Jehovah ; on which occasion he must have taught them the law ; and yet no mention is made of his teaching them the language or character, that the law was then written in, the character which the Samaritans used. But the chief argument is taken from some ancient Jew-126

ish shekels, with a legend on one side, The shekel of Israel, and on the other Jerusalem, the holy, both in Samaritan characters. These shekels, it is said, must have been coined before the division of the two kingdoms of Judah and Israel, or at least before the Assyrian captivity, because the Samaritans never afterwards reckoned Jerusalem holy. On the other side, or for the primitive antiquity of the square character, are the two Buxtorfs, Leusden, Calovius, Hottinger, Spanheim, Lightfoot, &c. They urge, from Matthew v. 18, that jod is really the least of the consonants in the present Hebrew, whereas it is one of the largest characters in the Samaritan alphabet: but Walton replies, that, if our Saviour here speaks of the least letter of the alphabet, we can only infer, that the Chaldee character was used in our Saviour's time, which is not denied by those who maintain the Samaritan to be the original. They also allege, that the Jews were too obstinate and superstitious to allow their sacred character to be altered ; but, if this was done under the direction and authority of Ezra, the argument will be much invalidated. Farther, they say that Ezra could not alter the ancient character, because it was impossible to make the alterations in all their copies. This argument, however, is contradicted by facts ; since the old English black letter is actually changed for the Roman. They say, likewise, that Ezra was not disposed to profane the sacred writings with a heathen character; but this supposes that Ezra was so superstitious as to imagine that there was some peculiar sanctity in the shape of the letters. Moreover, the

advocates for this opinion appeal to ancient coins found in Judea, with a legend in the Chaldee or Assyrian character. But the genuineness of these coins is suspected. The learned Jesuit Souciet maintains, with great address, that the ancient Hebrew character is that found on the medals of Simon, and others, commonly called Samaritan medals ; but which, he asserts, were really He-brew medals, struck by the Jews, and not the Samaritans. Buxtorf endeavours to reconcile these two opinions, by producing a variety of passages, from the rabbies, to prove that both these characters were anciently used ; the present square character being that in which the tables of the law, and the copy deposited in the ark, were written ; and the other character being used in the copies of the law which were written for private and common use, and in civil affairs in general ; and that, after the captivity, Ezra enjoined the former to be used by the Jews on all occasions, leaving the latter to the Samaritans and apostates. But it can hardly be allowed by any who consider the difference between the Chaldee and Samaritan characters, with respect to convenience and beauty, that they were ever -sed at the same time. After all, it is of no great moment which of these, or whether either of 'Jiem, were the original characters ; since it appears, that no change of the words has arisen from the manner of writing them, because the Samaritan and Jewish Pentateuch almost always agree after so many ages. It is most probable that the form of these characters has varied in different periods ; this appears from the testimony of Montfaucon, in his Hexapla Origenis, vol. i. p. 22, &c., and is implied in Dr. Kennicot's making the characters in which MSS. are written one test of their age.

HEBREW CHARACTER, MODERN, or the rabbinical Hebrew, is a good neat character, formed of the square Hebrew, by rounding it, and retrenching most of the angles or corners of the letters, to make it the more easy and flowing. The letters used by the Germans are very different from the rabbinical characters used every where else, though all formed alike from the square character, but the German in a more slovenly manner than the rest. The rabbies frequently make use either of their own, or the square Hebrew character, to write the modern languages in. There are even books in the vul-gar tongues printed in Hebrew characters ; instances whereof are seen in the late French king's library. See Plate ALPHABET.

HEBREW LANGUAGE, RABBINICAL, or the modern Hebrew, is the language used by the rabbies in their writings. The basis or body hereof is the Hebrew and Chaldee, with divers alterations in the words of these two languages, the meanings of which they have considerably enlarged and extended. Abundance of phrases they have borrowed from the Arabic : the rest is chiefly composed of words and

expressions from the Greek ; some from the Latin ; and others from the other modern tongues ; particularly that spoken in the place where each rabbi lived or wrote. The rabbinical Hebrew must be allowed to be a very copious language. M. Simon, in his Hist. Crit. du Vieux Testam. liv. iii. ch. 27, observes, that there is scarcely any art or science but the rabbies have treated thereof in it. They have translated most of the ancient philosophers, mathematicians, astronomers, and physicians ; and have written themselves on most subjects ; they do not want even orators and poets.

HEBREWS, or EPISTLE TO THE HEBREWS, a canonical book of the New Testament. Though St. Paul did not affix his name to this epistle, the -concurrent testimony of the best authors ancient and modern afford such evidence of his being the author of it, that the objections to the contrary are of little or no weight. The Hebrews, to whom this epistle was written, were the believing Jews of Palestine ; and its design was to convince them, and by their means all the Jewish converts wheresoever dispersed, of the insufficiency and abolition of the ceremonial and ritual law.

HEBRIDES, &KVQS., or Western Islands, the general name of two archipelagos of islands, lying to the north-west of Scotland, and situated between 55° and 59° N. lat. : they are supposed to be about 300 in number, and to contain 50,000 inhabitants. Not above thirty of them, however, are of any consequence. We shall commenoe our notice with those nearest the main, going from south to north.

Elsa-or Ailsa is a perpendicular rock of great height two miles in circuit, with only one landing place at a little beach on the north-east. It pastures some goats, abounds in rabbits, and is the resort of Soland geese, whose young and feathers, as well as the rabbit skins, pay the £33, at which it is rented from the earl of Cassilis. On the north-east side is a square tower of three vaulted stories.

Ghia, two miles from the west coast of Kin-tyre, is six miles long and one broad, with 500 inhabitants ; it produces barley, oats, and flax,

and in 1772 afforded a rent of £600.

Cara, south of Ghia, is three miles in circuit, and inhabited by a single family.

Ilay, one of the most fertile of the islands, is twenty-eight miles long and sixteeen broad. On the north it forms the deep Loch Indal, a good harbour; it contains mines of lead and other minerals, and has several lakes. The population is 7000, and in 1772 it afforded a rent of £2300. Bowmore, the chief place, is on Lech Indal, and is a good village with a fair and market.

Jura is separated from Ila by Ila Sound, one mile broad. The island is ten leagues long and one or two broad, forming two peninsulas ; it is one of the most rocky and rugged of the Hebrides, rising near the south end in several conical summits, called the Paps of Jura, the highest of which, named Ben-an-oir, or the Golden Mountain, has 3000 feet elevation. Red deer are still found in the mountains, and abundance of grouse and moor game. There are two good harbours on the east side, but the whole business of the island employs only a few open boats. The population is 1200.

Colonsay, a rocky island three leagues long and two broad, has 500 inhabitants. Oransay is separated from Colonsay by a channel dry at low water ; it is three miles long, and the population is 300. These islands have great numbers of rabbits, but no hares.

Scarba is separated from Jura by the strait of Corryvreken, noted for its whirlpool. The island is three miles long, very rugged, and mountainous.

Long Island and Balnanaigh are small islands, composed entirely of slate. Suyl is separated from the main land of Argyle by a channel so narrow, that a bridge of a single arch has been thrown across it.

Easdale is an entire rock of slate, from which 5,000,000 of slates are exported to England, Nor-way, and Canada.

Kerrera, a mile from the main land of Lorn, is four miles long and two broad ; it has two good harbours.

Mull is separated from the peninsula of Mor-vern, in Argyle, by a strait one mile and a half broad. It is eight leagues long and five broad, rugged and mountainous, but with good pasture and some corn land ; it has 6000 inhabitants, and is the joint property of the duke of Argyle and the M'Leans. Tobermoray, the chief place, is a village on

the north-east with a good haven, where a fishing station has been founded.

Ulva is a small island in Loch Tua, on the west of Mull, the property of the family of M'Quarrie. Inch Kenneth, in the same loch, is a little fertile island, with the vestiges of a chapel.

Icolumkill, lona or Hii, one of the most fertile and romantic of the Scottish islands, is two miles and a half long and one broad, with 150 inhabitants in two or three hamlets, who export some cattle and grain ; it is the property of the duke of Argyle, and is celebrated for having afforded an asylum to St. Columba and other holy men, after the introduction of Christianity. The

ancient cathedral of St. Mary is a beautiful structure, and contains the ashes of some Scottish, Irish, and Norwegian kings, as well as the tomb of St. Columba, and many inscriptions relative to the religious ceremonies of the primitive British Christians.

Staffa, one mile long and half a mile broad, is an immense pile of basaltic columns arranged in natural colonades, and exceeding in magnificence any thing of the kind in any other part of the world. The cave of Fingal is a natural cavern, 371 feet long, fifty-three broad, and 117 high, supported by pillars of this substance. A single family inhabit this island. See STAFFA.

The Threshanish are three islands between Mull and Coll.

Coll is four leagues long and one broad ; it is a great rock thinly covered with soil, producing a quantity of kelp, which is exported chiefly to Ireland. It has not a single tree, and several tracts of land formerly cultivated are now rendered barren by the sand blown from the shores. The streams are numerous, and it has forty-eight lakes, abounding in trout. It has a lead mine, not worked ; has no foxes, which are met with on the other islands, but abundance of rabbits ; contains 1000 inhabitants, and is the property of the duke of Argyle and M'Lean, and with Tirey forms a parish. Locheeru on the east is a good harbour.

Tirey is four leagues long and one broad : is generally level and fertile, and has quarries of a fine rose-colored marble. It has no haven for any thing else but boats ; has twenty-four lakes, and is said to be unhealthy. It rears cattle, horses and sheep, and exports 250 tons of kelp ; a regular ferry boat crosses between this island and Coll, and

between the latter and Mull.

Lismore Island, before the entrance of Loch Linne, is a vast mass of limestone, but covered with a good soil. Tradition says it was anciently a deer forest, and very large deer and ox horns are found in the soil. It was also the ancient residence of the bishops of Argyle; it has 1000 inhabitants.

Rum is three leagues long and two broad ; has not above 200 inhabitants, who rear cattle and sheep ; it has several rivulets, in which are sal-mon. Loch Serefort on the east is a good harbour.

Egg, four miles long and two broad, is hilly and generally rocky.

Muck, two or three miles long and one broad, is low, with a good soil; butjwithout port, except for boats.

Cannay, three miles long and one broad, is only worthy of notice for a hill, near which the magnetic needle takes a reversed direction, whence it is called Compass Hill. It has a good haven, formed by the little isiand Sanday, on the north-east. Basaltic columns are seen on its shores, and it has a remarkable loadstone rock.

Sky, the largest of the islands near the main, is fifteen leagues long and from two to six broad; the strait between it and the main is only a quarter of a mile broad in one place, and is the usua. track of ships bound to and from Norway. The whole island is composed of rocky mountains, and the coasts are so indented that every mi'.e

presents a harbour. The climate is cold and damp; the rivers abound with salmon, and the sea lochs with sea fish. In 1750 the population was estimated at 15,000, but in 1772 was reduced to 1200, chiefly by emigration to America. Strath, the principal place of the island, is on the south-east. Dunvegan Castle, at the head of Loch Follart, on the north, is the residence of M'Leod, who has the title of laird of Sky.

Of the great number of rocky islets round Sky, one only is noticed by travellers : it is named Bord Cruin, or the Round Table, and is the easternmost of several islets off the point of Slate, the south-west of Sky ; it is 500 yards in circuit, with perpendicular sides, leaving but one landing place, from which the ascent to the top is by a spiral path that admits but one person. In the middle of the platform on the summit is a well of fresh water.

Rasay, between Sky and the main, is four leagues long and one broad ; though generally rocky, it produces pasture and corn, and has some plane, ash, and fir trees ; the highest point is named by the people Dunlan, and by seamen Rasay's Cap. The island has lime and freestone ; it is considered the most humid of the chain, having near 300 rainy days in the year.

Rona, north of Rasay, three miles long and one broad, though very stony has some pasture.

The little island Flodda-hwn, on the north side of Sky, is remarkable for the annual periodical arrival of flocks of plovers from Sky in September, and their return in April.

The western Scottish islands, the Habudes of the ancients, lie in a semicircle from south-west to north-east, and are separated by narrow straits filled with rocks, having the appearance of originally forming one land. The physical construction of this chain is worthy of notice; towards the west they are all flat, while they ascend towards the east, and at last form a precipitous ridge. This conformation exposes them to the whole force of the western winds and waves from the Atlantic, and the encroachment of the sea on this side is very observable. The rocks are primary, and their structure different from that of the continental islands or main land, all of which dip towards the east. The climate of these islands is divided into a wet and dry season, the former commencing in September and lasting till May : the summers are hot. The vegetables that the climate permits to be successfully cultivated are flax, hemp, potatoes, and barley. The sheep and black cattle are small, but numerous. The channel between this chain and the main land is called the Minsh.

The southern cluster is called Bishop's Islands ; the other principal ones in succession are Water-say, three miles long.

Barray, eight miles long and two broad, is intersected by several sea lochs ; it is barren and mountainous.

South Uist is thirty miles long and two to three broad ; it has several sea lochs, affording good anchorage, and rears numbers of horses, cattle, and sheep.

Benbicula, ten miles in circuit, is only deserving notice for the ruins of a nunnery.

North Uist, five leagues long and three broad,

is hilly on the east and fit for pasture only : on the west it is level, and produces corn ten to twenty fold. Loch Momoddy on the east is a great rendezvous of fishing boats, 400 vessels having loaded here in a season. There are several other inlets for vessels on the east side, but the west is inaccessible.

Berneeiary, a little island between North Uist and Harris, has a fresh lake, frequented by innumerable sea birds ; it is inhabited, as are those of Pabbay, Calligray, and Eusay.

Harris is a peninsula joined to the island of Lewis by an isthmus a quarter of a mile broad ; it belongs to the family of M'Leod, who reside on it, and have constructed a basin and quay for shipping at Loch Lodwell on the east. This island, including Lewis, is mountainous and rocky, except the west coast, which is bordered by a strip of level ground.

Taransay, Scalpay, and Scarp, are three small inhabited islands west of Harris. On the east point of Scalpay is a lighthouse, and near its west side two good harbours.

The Aire of Lewis, a peninsula on the east coast, and on the same coast is Stornaway, at the head of a loch, the only town of the Hebrides, with 2000 inhabitants : its houses are of stone slated, and it has a church and custom-house. The Butt of Lewis, or Cape Orby, is the north point of the island.

The detached islands belonging to the Hebrides are St, Kilda or Hirta, a solitary rock fifteen leagues off Lewis. It is about three leagues ir circuit, rising to a mountain named Congara, 5400 feet above the sea ; its shores are so rocky that there is but one landing place on the east, and this only practicable in fair weather ; it is inhabited by about twenty-seven families in a ham-let on the east, who cultivate eighty acres of land, raise cattle, and take sea birds.

Soa is a high steep rock, a mile in circuit, half a mile from the west side of Kilda.

The Flannan Islands, or Seven Hunters, are five leagues west of Galleyhead, in Lewis.

Barra and Rona are two high, rocky, and bar-ren islets twenty leagues north of the Butt of Lewis, from which they are visible in clear weather. Rona, the northern, is two miles in circuit, and surrounded by rocks.

In the most northerly isles, the sun, at the summer solstice, is not above an hour under the horizon at midnight, and not longer above it at mid-day in the depth of winter. The soil of the Hebrides varies also in different isles, and in different parts of the same island. Lead mines have been discovered in some of these islands, but not worked to much advantage ; others have been found to contain quarries of marble, limestone, and freestone ; nor are they destitute of iron, talc, crystals, and many curious pebbles, some of which emulate the Brasilian topaz. With respect to vegetables, over and above the plentiful harvests of corn that the natives earn from agriculture, and the pot-herbs and roots that are planted in gardens for the sustenance of the people, these islands produce spontaneously a variety of plants and simples, used by the islanders in the cure of their diseases ; but there is hardly a shrub or tree to be seen, except in a

vˆry few spots, where some gentlemen have endeavoured to rear them witii much more trouble than success. The animals, both of the land and sea, domestic and wild, quadrupeds, fowls, and fishes, found in and about these islands, are of the same species, size, and configuration, with those of the Orkneys.

Mr. Pennant has given a full history of these islands from their supposed visitation by Py-theas. If we may credit our Saxon historians, they appear to have been early under the dominion of the Picts. The first invasion of the Danes does not seem to be easily ascertained. It

appears that they ravaged Ireland, and the. isle Rathry, as early as the year 735. In the following century their expeditions became more frequent. Harold Harfager, or the light-haired, pursued hither, in 875, several petty princes, whom he had expelled out of Norway. He seems to have made a rapid conquest : put to death the chief of the pirates, and made an indiscriminate slaughter of their followers. Soon after his return the islanders repossessed their ancient seats : and, in order to repress their insults, he sent Ketil, the flat-nosed, with a fleet and some forces for that purpose. This chief soon reduced them to terms, and sent back the fleet to Harold ; openly declared himself the independent prince of the Hebrides ; and caused them to acknowledge him as such, by the payment of tribute. Ketil remained, during life, master of the islands ; and his subjects appear to have been a set of warlike freebooters. After the death of Ketil a kingdom was in aftertimes composed out of them, which, from the residence of the little monarch in the Isle of Man, was styled that of Man. The islands became tributary to that of Norway for a considerable time, and princes were sent thence to go-vern; but at length they again shook off the yoke. From the chronicles of the kings of Man we learn, that they had then a succession of princes. In 1093 Donald Bane, king of Scotland, called in the assistance of Magnus, the baiefooted, king of Norway, and bribed him with the promise of all the islands. Magnus accepted the terms ; but at the same time boasted that he did not come to invade the territories of others, but only to resume the ancient rights of Norway. His conquests were rapid and complete ; for, besides the islands, by an ingenious fraud, he added Cantyre to his dominions. The Hebrides continued governed by a prince dependent, on Norway. These viceroys were sometimes Norwegians, sometimes natives of the isles. In 1097 we find, that Magnus deputed a nobleman of the name of Ingemund ; in after times we learn, that natives were appointed to that high office. Thus were the Hebrides governed, from the conquest by Magnus, till the year 1263, when Acho, or Haquin, king of Norway, by an unfortunate invasion of Scotland, terminating in his defeat at Larcrs, so weakened the powers of his kingdom, that his successor Magnus IV. was content to make a cession of the islands to Alexander III. ; but not without stipulating for the payment of a large sum, and of a tribute of 100 marks for ever, which bore the name of the annual of Norway.

The islands still remained governed bv powerful chieftains, who were the scourges of the kingdom. Encouraged by their distance from the

seat of royalty, and the turbulence of the times, they exercised a regal power, and often assumed the title ; but are more generally known in history by the style of the lords of the isles, or the earls of Ross ; and sometimes by that of the Great M'Donald. Historians are silent about their proceedings, from the retreat of the Danes, in 1263, till that of 1533, when John, lord of the isles, withdrew his allegiance. In the beginning of the next century his successors were so independent, that Henry IV. entered into a formal alliance with the brothers Donald and John. This encouraged them to commit fresh hostilities against their natural prince. Donald, under a pretence of a claim to the earldom of Ross, invaded and made a conquest of that county ; but, penetrating as far as the shire of Aberdeen, after a fierce but undecisive battle with the royal party, thought proper to retire, and in a little time to swear allegiance to his monarch, James I. of Scotland. But he was permitted to retain the county of Ross, and as-sume the title of earl. His successor, Alexander, at the head of 10,000 men, attacked and burnt Inverness; at length, terrified with the preparations made against him, he fell at the royal feet, and obtained pardon as to life, but was committed to strict confinement. His kinsman and deputy, Donald Balloch, resenting the imprisonment of his chieftain, excited another rebellion, and destroyed the country with fire and sword : but on his flight was taken and put to death by an Irish chieftain, with whom he sought protection.

In the reign of James II., in 1461, Donald another petty tyrant, an earl of Ross, and lord of the isles, renewed the claim of independency; surprised the castle of Inverness ; forced his way as far as Athol ; and obliged the earl and countess, with the principal inhabitants, to seek refuge in the church of St. Bridget, in hope of finding security from his cruelty by the sanctity of the place ; but the barbarian and his followers set fire to the church, put the ecclesiastics to the sword, and, with a great booty, carried the earl and the countess prisoners to his castle of Claig, in the island of Hay. In a second expedition, immediately following the first, he suffered the penalty of his impiety : a tempest overtook him, and overwhelmed most of his associates; and he, escaping to Inverness, perished by the hands of an Irish harper : his surviving followers returned to Hay, conveyed the earl and countess of Atbol to the sanctuary they had violated, and expiated their crime by restoring the plunder, and making large donations to the shrine of the offended saint. John, successor to the last earl of Ross, entered into alliance with Edward IV., and sent ambassadors to the court of England, where Edward empowered the bishop of Durham and earl of Winchester to conclude a treaty with him, another Donald Balloch, and h's son and heir, John. They agreed to serve the

king with all their power, and so became his subjects : the earl was to have 100 marks sterling for life in

time of peace, and £200 in time of war; and these island allies, in case of the conquest of Scotland, were to have confirmed to them all the possessions north of the Scottish sea ; and, in case of a truce with the Scottish monarch, they were to be included in it. But about the year 1476 Edward, from a change of politics, courted the alliance of James III. and dropt his new allies. James, being determined to sub-due this rebellious race, sent against them a powerful army under the earl of Athol. Ross was terrified into submission; obtained his par-don; but was deprived of his earldom, which by act of parliament was then declared unalienably annexed to the crown ; at the same time the king restored to him Knapdale and Cantyre, which the earl had resigned ; and 'invested him anew with the lordship of the isles, to hold them of the king by service and relief. Thus the great power of the lords of the isles was broken ; yet, for a considerable time after, the petty chieftains were continually breaking out into small rebellions, or harassed, each other in private wars ; and tyranny seems, but to have been multiplied. James V.' found it necessary to make the voyage of the isles in person in 1536, seized and brought away with him several of the most considerable leaders, and obliged them to find security for their own good behaviour and that of their vassals. The troubles that succeeded the death of James occasioned a neglect of these insulated parts of the Scottish dominions, and left them in a state of anarchy. In 1614 the M 'Donalds made a formidable insurrection, oppugning the royal grant of Cantyre to the earl of Argyle and his relations. The petty chieftains continued in a sort of rebellion ; and the sword of the greater, as usual in weak governments, was employed against them. The encouragement and protection given by them to pirates employed the power of the Campbells during the reign of James VI. and the beginning of that of Charles I. But the turbulent spirit of the old times continued even to the present age. The heads of clans were, by the

divisions, and a false policy that predominated in Scotland during the reign of William III., flattered with an unreal importance : instead of being treated as bad subjects, they were courted as desirable allies : instead of feeling the hand of power, money was allowed to bribe them into the loyalty of the times. They would have accepted the subsidies, notwithstanding they detested the prince that offered them. They were taught to believe themselves of a consequence, that afterwards turned to their destruction. At last two rebellions gave the legislature a late experience of the folly of permitting the feudal system to exist in any part of its dominions ; and the act of 1748, for abolishing heritable jurisdictions, at once deprived the chieftains of all power of injuring the public by their commotions.

The people inhabiting these islands are of the same race with those who live in the Highlands of Scotland ; speak the same language, wear the same habit, and observe the same customs. See HIGHLANDERS.

The commodities which may be deemed the

staples of this country are black cattle, sheep, and fish, which they sell to their fellow-subjects of Scotland. Part of the wool they work up into knit stockings, coarse cloth, and that variegated stuff called tartan. They likewise salt mutton in the hide, and export it in boats or barklings to different parts of the mainland. Cod, ling, mackarel, whitings, haddocks, and soles, are here caught in abundance, together with a small red cod, remarkably voracious, of a very delicate flavour : there are likewise two kinds of white fish, which seem to be peculiar to this coast, known by the names of lithe and eea, esteemed good eating. But the greatest treasure the ocean pours forth is the prodigious quantity of herrings. See HERRING and FISHERY.

HEBRIDES, NEW, a cluster of islands in the Pacific Ocean, so named by captain Cook. The northern islands of this archipelago were first discovered by the navigator Quiros, in 1606, who supposed them to be a part of a southern continent. They were next visited by M. de Bougainville in 1768, who, landing on the island of Lepers, discovered that the land was not connected, but composed of islands, which he called the Great Cyclades. Captain Cook explored the whole cluster, and, besides ascertaining the extent and situation of these islands, added the knowledge of several others. They extend 375 miles, from N. N. W to S. S. E. The natives are civil and hospitable; of a slender make, and dark color, and have mostly frizzled hair. The productions are cocoa-nuts, bread-fivit, plantains, sugar-canes, yams, &c. The most

northern part of this archipelago was called by M. de Bougainville the Peak of the Etoile. The whole cluster consists of the following islands ; some of which have received names from the different European navigators, others retain the names which they bear among the natives : *viz.* Tierradel Espiritu Santo,Mallicollo, St. Bartholomew, Isle of Lepers, Aurora, Whit-suntide, Ambrym, Immer, Apee, Three Hills, Sandwich, Montagu, Hinchinbrook, Shepherd, Erromanga, Erronan, Anattom, and Tanna. They are situated between 166° 40’ and 170° 21’ E. long., and between 14° 25’ and 20° 4 S. lat.

HEBRON, in ancient geography, a city seated in the hilly country of the tribe of Judah to the south. Its more ancient name was Kirjath-arba, or Cariath-arba. In antiquity it vied with the more ancient cities of Egypt, being seven years prior to Zoan. Josephus makes it not only older than Tanis, but even than Memphis. It stood to the west of the lake Asphaltites, and was for some time the royal residence of David. After the captivity it fell into the hands of the Edomites, as did all the south country of Judea. It fis now called Habroun. The Arabs call it El-kalil, i. e. the well-beloved ; the epithet they usually apply to Abraham, whose sepulchral grotto they pretend to show. It is seated at the foot of an eminence, on which are some wretched ruins of an ancient castle. The adjacent country is a sort of oblong hollow, five or six leagues in length, varied by rocky hillocks, groves of fir trees, stunted oaks, and a few plantations of vines and olive trees. These vineyards are no..

cultivated with a view to make wine, the inhabitants being so zealous Mahommedans as not to permit any Christians to live among them : they are only of use to procure dried raisins, which are badly prepared, though the grapes are excellent. The peasants cultivate cotton, which is spun by their wives, and sold at Jerusalem and Gaza. They have also some soap manufactories, the kali for which is sold by

the Bedouins ; and a very ancient glass-house, the only one in Syria, wherein they make a great quantity of colored rings, bracelets for the wrists, legs, and arms, with various other trinkets, which are sent to Constantinople.

HEBRON, a township of New York, United States, in Washington county. Population 2436. — There is also a township of this name in Tol-land county, Connecticut; and another in Cumberland county, Maine. It is also the name or a Moravian settlement in Pennsylvania.

HEBRUS, in ancient geography, the largest river of Thrace, rising from Mount Scombrus, running in two channels to Philippopolis, where they unite. It runs by two mouths into the .ZEgean Sea, north of Samothrace. It was supposed to roll its waters upon golden sands. The head of Orpheus was thrown into it, after it had been cut off by the Ciconian women.

HEBRUS, a city of Thrace, on the above river.

HEBTICH, or HEBITCH, a town of Germany, in the ci-devant county of Sponheim, annexed to the French republic by the treaty of Luneville in 1801, and included in the department of the Rhine and Moselle ; two miles south-east of Taarbach.

HEBUD7E, HEBUDES, or MKUDIE., in ancient geography, islands on the west of Scotland. The ancients differed greatly as to their situation, number, and names ; said in general to lie on the north of Ireland, and west of Scotland. They are now called the Western Islands, and Hebrides ; which last is a modern name, supposed to be a corruption of Hebudes. By Beda they are called Mevaniae, an appellation ecually obscure. See HEBRIDES.

HECATE, in mythology, a name of Diana. She was called Luna in heaven, Diana on earth, and Hecate or Proserpine in hell ; whence her name of Diva triformis, tergemina, triceps. She was supposed to preside over enchantments. She was generally represented like a woman, with the head of a horse, a dog, or a boar ; and sometimes she appeared with three different bodies, and three faces, with one neck. Dogs, lambs, and honey were generally offered to her, especially in ways and cross roads, whence she obtained the name of Trivia. Her power was extended over heaven, earth, sea, and hell ; and to her kings and nations supposed themselves indebted for their prosperity.

HECATE, in fabulous histoiy, a queen of Tau-rica Chersonesus, daughter of Perses and Aste-ria, who poisoned her father ; by some

confounded with Hecate, the sister of Apollo.

HECATESIA, £/car«<ria, in antiquity, an an-nual solemnity observed by the Stratonicensians, in honor of Hecate. The Athenians likewise had a public entertainment cr supper every new

moon, in honor of this goddess. The supper was provided at the charge of the rich ; and was no sooner brought to the accustomed place but the poor carried all off, giving out that Hecate had devoured it. For the rest of the ceremonies observed on this occasion, see Pott. Arch. Grsec.

HE'CATOMB, n. s. Fr. hecatombe ; £Karo>/3ij A sacrifice of a hundred cattle.

In rich men's homes I bid kill seme beasts, but no hecatombs ; None starve, none surfeit so. Donne.

One of these three is a whole hecatomb, And therefore only one of them shall die .

Dry den.

Her triumphant sons in war succeed, And slaughtered hecatombs around 'em bleed.

Addison.

A HECATOMB, in antiquity, was a sacrifice of 100 beasts of the same kind, at 100 altars, and by 100 priests or sacrificers. The Greek word, £Karo/t/3jj, properly signifies a magnificent sacrifice. Others derive it from the Greek IKO.TOV, a hundred, and fiovg, a bullock ; others from ticaTov and Trove, afoot; on which principle they hold, that the hecatomb might consist of only twenty-five four-footed beasts; and that it did not matter what kind of beasts were chosen for victims, provided there were but 100 feet. Pythagoras is said to have sacrificed a hecatomb to the Muses of 100 oxen, in gratitude for discovering the demonstration of the forty-seventh problem of Euclid. Strabo relates, that there were 100 cities in Laconia, and that each city used to sacrifice a bullock every year for the common safety of the country ; whence the institution of hecatombs. Others refer the origin of hecatombs to a plague, wherewith the 100 cities of Peloponnesus were afflicted ; for the removal whereof, they jointly contributed to offer so splendid a sacrifice. Julius Capitolinus relates, that for a hecatomb

they erected altars of turf, and on these sacrificed 100 sheep, and 100 hogs. He adds, that when the emperors offered sacrifices of this kind, they sacrificed 100 lions, 100 eagles, and 100 other wild animals.

HECATOMBˆEON, tKaroˆaiwr, in chronology, the first month of the Athenian year. It consisted of thirty days, and began on the first new moon after the summer solstice ; answering to the latter part of June and beginning of July. The Boeotians called it Hippodromus, and the Macedonians Lous. The word is derived from the Greek traro/tjSq, a hecatomb, because of the great number of hecatombs sacrificed in it.

HECATOMPOLIS, a surname of Crete, from its 100 cities. The territory of Laconia also had anciently this name for the same reason.

HECATOMPYLOS, in ancient geography, the metropolis of Parthia, and royal residence of Arsaces, situated at the springs of the Araxes. Thebes in Egypt had also the same mame from its 100 gates.

HECHT (Christian), a learned divine, born at Essen, in East Friesland, in 1606. He wrote 1 . Commentatio Philologica : critica exegetica, &c. 2. Antique Hebrseorum inter Judseos in Polonia. He died in 1748, aged fifty-two.

„ HECLA, or HEKLA, a volcanic mountain of Iceland, and one of the most celebrated in the world. See ICELAND. It was visited in 1772 by Dr. Van Troil, a Swedish gentleman, along with Mr., afterwards Sir Joseph, Banks ; and subsequently, in 1810, by Sir George M'Kenzie. The latter intelligent traveller thus gives us its chief features and history : —

‘ After the fatigue we had undergone in our excursion towards the Torfa Jokul, in search of obsidianum, we did not expect to find ourselves sufficiently refreshed to attempt ascending Mount Hecla on the following day; but, as we had been long in the constant habit of

enduring daily hardships, we rose at an early hour on the 3d of August, quite alert ; and, on seeing the whole of the mountain free from clouds, we were soon ready to finish our labors by ascending Hecla, and attaining the summit of a mountain whose - fanxe has spread to every quarter of the world. At ten o'clock we were ready ; and, Brandtson having collected our horses, we mounted them, and began our expedition under circumstances as favorable as we could wish. We rode through sand and lava about three miles, when the surface became too rugged and steep for horses. Our guide proposed leaving the poor animals standing till we returned ; but, though they would not have stirred from the spot, we sent them back, not choosing that such valuable and steady servants should remain a whole day without food. We now proceeded a considerable way along the edge of a stream of lava, and then crossed it where it was not very broadband gained the foot of the south end of the mountain. From this place we saw several mounts and hollows, from which the streams of lava below appeared to have flowed. While we had to pass over rugged lava, we experienced no great difficulty in advancing ; but when we arrived at the steepest part of the mountain, which was covered with loose slags, we sometimes lost at one step, by their yielding, a space that had been gained by several. In some places we saw collections of black sand, which, had there been any wind, might have proved extremely troublesome. The ascent now became very steep, but the roughness of the surface greatly assisted us.

'Before we had reached the first summit, clouds surrounded us, and prevented our seeing farther than a few yards. Placing implicit confidence in our guide, we proceeded ; and, having attained what we thought was the nearest of the three summits, we sat down to refresh ourselves, when Brandtson told us that he had never been higher up the mountain. The clouds occasionally dividing, we saw that we had not yet reached the southern summit. After having passed a num-ber of fissures, by leaping across some and stepping along masses of slags that lay over others, we at last got to the top of the first peak. The clouds now became so thick that we began to despair of being able to proceed any farther. Indeed it was dangerous even to move; for the peak consists of a very narrow ridge of slags, not more than two feet broad, having a precipice on each side many hundred feet high. One of these precipices forms the side of a vast hollow, which seems to have been one of the craters. At

length the sky cleared a little, and enabled us to discover a ridge below that seemed to connect the peak we were on with the middle

one. We lost no time in availing ourselves of this opportunity, and, by balancing ourselves like rope-dancers, we succeeded in passing along a ridge of slags so narrow that there was hardly room for our feet. After a short but very steep ascenl we gained the highest point of this celebrated mountain.

‘ We now found that our usual good fortune had not yet forsaken us ; for we had scarcely be-gun to ascend the middle peak when the sky became clear, and we had a full view of the surrounding country. Towards the north it is low, except where a Jokul here and there towers into the regions of perpetual snow. Several large lakes appeared in different places, and among them the Fiske Vatn was the most conspicuous. In this direction we saw nearly two-thirds across the island. The Blaefell and the Lange Jokul s stretched themselves in the distance to a great extent, ptesenting the appearance of enormous masses of snow heaped up on the plains. The Skaptar Jokul, whence the great eruption that took place in the year 1783 broke fortn, bounded the view towards the north-east. It is a large, extensive, and lofty mountain, and appeared to be covered with snow to the very base. On the side next to us, though at a distance of about forty miles, we plainly discerned a black conical hill, which very probably may be one of the craters that were formed during the eruption. The Torfa, Tinfialla, and Eyafialla Jokuls, limit the view of the eastern part of th e country. Towards the south the great plain we had passed through seemed as if stretched under our feet, and was bounded by the sea. The same valley was terminated towards the west by a range of curiously peaked mountains, those in the neighbourhood of Thingvalla, and to the north and west of the Geysers.

‘ The middle peak of Hecla forms one side of a hollow, which contains a large mass of snow at the bottom, and is evidently another crater. The whole summit of the mountain is a ridge of slags ; and the hollows on each side appear to have been so many different vents from which the eruptions have from time to time issued. WTe saw no indications that lava had flowed from the upper part of the mountain ; but our examination, from the frequent recurrence of fog, was unavoidably, confined. After we had satisfied ourselves, in surveying the surrounding country, we began to collect specimens of the slags, and perceived some of them to be warm. On removing some from the surface we found those below were too hot to be handled ; and, on placing a thermometer amongst them, it rose to 144°. The vapor of water ascended from several parts of the peak. It had been remarked to us, by many of the inhabitants, that there was less snow on Hecla at this time than had been observed for many years. We supposed, therefore, that the heat now noticed might be the re-commencement

of activity in the volcano, rather than the remaining effects of the last eruption, which took place in the year 1766.

‘ The crater, of which the highest peak forms

a part, does not much exceed 100 feet in depth. The bottom is filled by a large mass of snow, in which various caverns had been formed by its partial melting. In these the snow had become Solid and transparent, reflecting a bluish tinge ; and their whole appearance was extremely beautiful, reminding us of the description of magic palaces in eastern tales. At the foot of the mountain the thermometer at half past nine o’clock stood at 59°. At eleven it was 55°, and at four, on the top, at 39°. Our descent was greatly retarded by thick fog ; and we found it much more hazardous than the ascent. We missed our way, and were under the necessity of crossing the lava we had passed in our way up, at a place where it had spread to a much greater breadth, and, from the rapidity of the slope along which it had flowed, had become frightfully rugged.

‘ Mount Hecla has acquired a degree of distinction, among volcanoes, to which it does not seem to be entitled. It is far behind iEtna.and Vesuvius, both in the frequency and magnitude of its eruptions. We could not distinguish more than four streams of lava; three of which have descended on the south, and one on the north side ; but there may be some streams on the east side, which we did not see. The early eruptions of this mountain do not seem to have been regularly recorded. Olafson and Paulson say, that, after careful research, they found that the number of eruptions amounted to twenty-two ; and none are recorded as having happened before the year 1004. There were eruptions in the years 1137,

1222, 1300,13-11, 1362,1389, 1538,1619,1636,

and 1693. Flames appeared in the neighbourhood in 1728. In 1554 there were eruptions from the mountains to the eastward; and in 1754 flames burst out to the westward. From the mountain itself no eruption took place between the years 1693 and 1766, an interval of seventy-three years ; and, during this last period of activity, no lava was thrown out. The following year flames broke out afresh, and the mountain was not perfectly quiet in the year 1768 : since that time it

has remained inactive. We had no opportunity of measuring the height of Mount Hecla ; but we have been informed by Sir J. Stanley that the elevation which resulted from his observations was 4300 feet, and this, from different circumstances, we believe to be correct.

‘ The whole tract between Hecla and Krabla is a desert quite impassable and unknown ; and there is still subsisting a ridiculous notion that it is inhabited by a tribe of robbers. Did such people really exist, and did they know the dread which they inspire, they might easily procure more comfortable quarters.’ See ICELAND.

HECQUET (Philip), a French physician of considerable eminence, and author of several works on medicine. But, being a great advocate for the use of warm water and copious bleeding, in many diseases, his practice was ridiculed by M. Le Sage, in his ingenious satirical novel of Gil Bias; wherein he is caricatured under the character of Dr. Sangrado. He died in 1737.

IIE’CTIC, n.s. & adj. > Fr. hectique ; from

HE’CTICAL, adj. 5 Gr. Ifa . Habitual ;

constitutional : a fever so called ; morbid heat. See MEDICINE.

Like the hectick in my blood he rages, And thou must care me. Shaktpeare. Hamlet. A hectick fever hath got hold

Of the whole substance, not to be controuled.

Donne.

No hectick student scares the gentle maid. Taylor.

Can this be death ? there’s bloom upon her cheek ; But I see it is no living hue, But a strange hectic — like unnatural red Which Autumn paints upon the perished leaf.

Byron’s Manfred.

HEC’TOR, n. s., v. a. & v. n. From the name of Hector, the great Homeric warrior. A bully; a blustering, turbulent, pervicacious, noisy fel-low. The verbs signify to domineer or bully ; to treat with insolence; to threaten.

They have attacked me, some with piteous moans and outcries, others grinning and only shewing their teeth, others ranting and hectoring, others scolding and reviling. Stillingfleet.

The weak low spirit Fortune makes her slave ; But she's a drudge, when hectored by the brave.

Dryden.

Those usurping hectors, who pretend to honour without religion, think the charge of a lye a blot not to be washed out but by blood. South.

One would think the hectoring, the storming, the sullen, and all the different species of the angry should be cured. Spectator.

They reckon they must part with honour together with their opinion, if they suffer themselves to be hectored out of it. Government of the Tongue.

We'll take one cooling cup of nectar, And drink to this celestial hector. Prior.

An honest man, when he came home at night, found another fellow domineering in his family, hectoring his servants, and calling for supper.

Arbuthnot's History of John Bull. Don Carlos made her chief director, That she might o'er the servants hector. Swiff.

HECTOR, the son of Priam and Hecuba, and the father of Astyanax, celebrated for the valor with which he defended the city of Troy against the Greeks. He was killed by Achilles, who dragged his body, fastened to his chariot, thrice round the walls of Troy, and afterwards restored it to Priam for a large ransom. See TROY.

HECUBA, in fabulous history, the wife of Priam, the last king of Troy, and the mother of nineteen of his fifty-three children. She was the daughter of Dymas, according to Homer, or of Cisseus, according to Virgil. When with child of Paris she dreamea that she brought forth a firebrand. See PARIS. After the destruction of Troy she was carried captive by Ulysses, and in a fit of insanity for her misfortune threw herself into the Hellespont ; whereupon she was fabled to have been turned into a bitch.

HEDERA, ivy, in botany, a genus of the monoEfynia order, and pentandria class of plants ; natural order forty-sixth, hederacea?.

There are five oblong petals : the berry is penta-spermous, girt by the calyx.

H dionysias, or poet's-ivy, a species that grows in many of the islands of the Archipelago ; so named by Caspar Bauhine and Tournefort,

because the ancients made crowns of it for adorning the brows of their poets. It is called dionysias, because they also made use of it in their public feasts, in honor of Bacchus. The berries are of a fine gold color, whence it has been termed by others chrysocarpos.

H. helix, or common ivy, grows naturally in many parts of Britain ; arid, where it meets with any support, will rise to a great height, sending out roots on every side, which strike mto the joints of walls or the bark of trees. If there is no support, they trail on the ground, and take root all their length, so that' they closely cover the surface, and are difficult to eradicate. While these stalks are fixed to any support, or trail upon the ground, they are slender and flexible ; but when they have reached to the top of their support, they shorten and become woody, forming themselves into large bushy heads ; and their leaves are larger, more of an oval shape, and not divided into lobes like the lower leaves, so that it has quite a different appearance. There are two varieties of this species, one with silver-striped leaves, the other with yellowish leaves on the tops of the branches ; and these are sometimes admitted into gardens. They are easily propagated, and thrive in any soil. The roots are used by leather-cutters to whet their knives upon. Apricots and peaches covered with ivy, bear fruit plentifully in February. The leaves have a nauseous taste ; Haller says, they are given to children in Germany, as a specific for the atrophy. The people of England apply them to issues; and an ointment made from them is in great esteem among our Scots Highlanders as a ready cure for burns. The berries have a little acidity. When fully ripe, a dose of

them has been recommended in the plague. In warm climates, a resinous juice exudes from the stalks, which is said to be a powerful resolvent and discutient, and an excellent ingredient in plasters and ointments adapted for these purposes. Horses and sheep eat the plant ; goats and cows refuse it.

H. quinquefolia, the Virginian creeper, is a native of all the northern parts of America. It was first brought to Europe from Canada ; and has been long cultivated in the British gardens, chiefly to plant against walls or buildings to cover them: which these plants will do in a short time ; for they will shoot almost twenty feet in one year, and will mount up to the top of the highest building : but, as the leaves fall off in autumn, the plants make but an indifferent appearance in winter, and therefore are proper only for such situations as will not admit of better plants ; for this will thrive in the midst of cities, and is not injured by smoke or the closeness of the air. It may be propagated by cuttings ; which, if planted in autumn iu a shady border, will take root, and by the following autumn will be fit to plant in those places where they are to remain.

HEDERACE.&, from hedera, ivy. The forty-sixth order in Linnaus's fragments of a natural method. See BOTANY.

HEDERICH, or HEDERICVS (Benjamin), a learned lexicographer, born at Ham in Misnia, in 1675. He published a valuable Greek and

Latin lexicon, and an edition of Empedocles de Sphaera. He died in 1748.

HEDGE, n. $. & v. a. > Sax. Jjeˆe ; Belg. HEDG'ER, n. $. 5 haag, hug. A fence

made round grounds with prickly bushes, or woven twigs ; to enclose ; to obstruct ; to encircle for defence; sometimes improperly written for edge ; to shift ; to hide the head. Hedge, prefixed to any word, notes something mean, vile, of the lowest class : perhaps from a hedge, or hedge-born man, a man without any known place of birth.

I will hedge up thy way with thorns.

Husea ii. 6. Hedge thy possession about with thoras.

Eccles.

And after that, within a litel throw, The wind began so sturdily to blow, That down goth all the flowres, everichone So that, in all the mede there left not one, Save such as succoured were, among the loves Fro every storme that mighte hem assaile, Growing under the hegges and thick greves.

Chaucer. The FUntre and the Leafc. I myself sometimes, hiding mine honour in my necessity, am fain to shuffle, to hedge, and to lurch.

Shakspeare.

England, hedged in with the main, That water-walled bulwark, still secure And confident from foreign purposes. Id.

There's such divinity doth hedge a king, That treason can but peep to what it would. Id. Those alleys must be hedged at both ends, to keep out the wind. Bacon.

The hedge, green satin pinked and cut, arrays The heliotrope to cloth of gold aspires ; In hundred-coloured silks the tulip plays ; The' imperial flower, his neck with pearl attires.

Fletcher't Purple Island. The laboured ox

In his loose traces from the furrow came, And tie swinked hedger at his supper sat.

Milton.

When I was hasty, thou delay'dst me longer : I pr'thee, let me hedge one moment more Into thy promise ; for thy life preserved.

Dryden.

It must not be paid and exported in ready money ; so says our law ; but that is a law to hedge in the cuckow, and serves for no purpose : for if we export not goods, for which our merchants have money due to them, how can it be paid by bills of exchange.

Locke.

He would be laughed at, that should go about to make a fine dancer out of a country hedger at past fifty. . IdIt is a good wood for fire, if kept dry ; and is very nseful for stakes in hedges. Mortimer.

The gardens unfold variety of colours to the eye, every morning, and the hedget breath is beyond all perfume. p°PeA person, who, by his

style and literature, seems to have been the corrector of a hedge-press in Little Britain, proceeded gradually to an author. Swift.

The clergy do much better than a little hedge, con-temutible, illiterate vicar can be presumed to do.

Id.

When you are sent on an errand, be sure te hedge in some business of your own. Id.

Through the verdant maze Of sweet-briar liedges, I pursue my walk.

Thomson.

HEDGES.

Among the crooked lanes, on every hedge, The glow-worm lights his gem ; and through the

dark, A moving radiance twinkles.

Thornton'* Seasons. Summer.

HEDGES, in agriculture, are either planted te make fences round enclosures, or to divide the several parts of a garden. When they are designed as outward fences, they are planted either with hawthorn, crabs, or black-thorn ; but ihose hedges which are planted in gardens, either to surround wilderness quarters, or to screen the other parts of a garden from sight, are planted according to the fancy of the owner. Some prefer evergreens, in which case the holly is best ; next the yew, then the laurel, laurustinus, phyllyrea, &c. Others prefer the beech, the hornbeam, and the elm.

Before planting the hedge in the open field, it is proper to consider the nature of the land, what sort of plants will thrive best in it ; "and what is the soil whence they are to be taken. The sets ought to be about the thickness of one's little finger, and cut within about four or five inches of the ground ; th.ey ought to be fresh taken up, straight, smooth, and

well-rooted. Those plants that are raised in the nursery are to be preferred. In planting outside hedges the turf is to be laid with the grassy side downwards, on that side of the ditch on which the bank is designed to be made ; and some of the best mould should be laid upon it to bed the quick, which is set upon it at a foot asunder. When the first row of hawthorn or quick is set, it must be covered with mould ; and, when the bank is a foot high, another row of sets may be laid against the spaces of the former, and covered like the others. The bank is then to be topped with the bottom of the ditch, and a dry or dead hedge laid, to shade and defend the under plantation. Stakes should then be driven into the loose earth, so low as to reach the firm ground : these are to be placed at about two feet and a half distance : to render the_hedge yet stronger, edder it, that is, bind the top of the stakes with small long poles, and, when the eddering is finished, drive the stakes anew. The quick must be kept constantly weeded, and secured from being cropped by cattle ; and in February it will be proper to cut it within an inch of the ground, which will cause it to strike root afresh, and help it much in the growth. The crab is frequently planted for hedges. Plants raised from the kernels of the small wild crabs are to be preferred to those raised from the kernels of all sorts of apples without distinction ; because the plants of the true small crab never shoot so strong as those of the apples, and may therefore be better kept within the proper compass of a hedge. The black thorn, or sloe, is often planted for hedges. The best method is to raise the plant from the stones of the fruit, which should be sown about the middle of January, if the weather permit, in the place where the hedge is intended. See AGRICULTURE.

With respect to the age at which hedge-plants ought to be used, it is very common, especially where young hedges are made with thorns, to plant them of one, two, or three years old, el-

dom exceeding this last age. Plants of this description, says Mr. Loudon, however, are long in a state of infancy, and require great nursing and the most complete protection to bring them to perfection, and are liable to be either much hurt or totally destroyed by many accidents that would produce little or no effect upon older and stronger plants. Much time might be saved in the rearing of hedges, and the fences be much more perfect and useful, if older plants were employed for that purpose. Three years old is certainly the youngest that should be planted, and, if they are six or seven years old, so much the better : the prevailing idea that plants of that age will not thrive, if transplanted, is totally unfounded.

Hedges for ornament in gardens are sometimes planted with evergreens, in which case the holly is preferable to any other; next to this most people prefer the yew ; but the dead color of its leaves renders those hedges less agreeable. . The laurel is one of the most beautiful evergreens ; but the shoots are so luxuriant that it is difficult to keep it in any tolerable shape ; and, as the leaves are large, to prevent the disagreeable appearance given them by their being cut through with the shears, it will be best to prune them with a knife, cutting the shoots just down to a leaf. The laurustinus is a very fine plant for this purpose; but the same objection may be made to this as to the laurel; this, therefore, ought only to be pruned with a knife in April, when the flowers are going off; but the new shoots of the same spring must by no means be shortened. The small-leaved and rough-leaved laurustinus are the best plants for this purpose. The true phillyrea is the next best plant for hedges, which may be led up to the height of ten or twelve feet ; and if they are kept narrow at the top, that there may not be too much width for the snow to lodge upon them, they will be close and thick, and make a fine appearance. The ilex, or evergreen oak, is also planted for hedges, and is a fit plant for those designed to grow very tall. The deciduous plants usually planted to form hedges in gardens are, the hornbeam, which may be kept neat with less trouble than most other plants ; t'.ie beech, which has the same good qualities as the hornbeam : but the gradual falling of its leaves in winter causes a continual litter. The small-leaved English elm is a proper tree for tall hedges, but these should not be planted closer than eight or ten feet. The lime-tree has also been recommended for the same purpose ; but, after they have stood same years, they grow very thin at bottom, and their leaves frequently turn of a black disagreeable color. Many of the flowering shrubs have also been planted in hedges, such as roses, honeysuckles, sweet briar, &c. ; but these are difficult to train; and, if they are cut to bring them within compass, their flowers, which are their greatest beauty, will be entirely destroyed.

From the first year of planting, till the hedge has risen to the height o_f five or six feet, the main stems ought to be left untouched, and the pruning confined solely to the side branches, leaving those next the root pretty long, and gradually tapering towards the top; this pruning

of the side branches will make them send out many new shoots from their extremities ; while the main stems, by being left untouched, continue their growth upward, when they may have their extremities cut off with perfect safety. When a hedge has attained the wished-for height, all that is requisite afterwards is cutting the .«ides regular with a hedge-bill, preserving it pretty broad at bottom, and drawing it gradually to a point at top ; a hedge of this form is pleasant to the eye, is well calculated to stand the weather, and becomes every year stronger and thicker.

It sometimes happens, says Dr. Anderson, that a hedge may have been long neglected, and be in general in a healthy state, but full of gaps and openings, or so thin and straggling as to form but a very imperfect sort of fence. On these occasions, it is in vain to hope to fill up the gaps by planting young quicks; for these would always be outgrown, choked, and starved, by the old plants ; noi could it be recovered by cutting clear over by the roots, as the gaps would still continue where they formerly were. The only methods that I know of rendering this a fence are, either to mend up the gaps with dead wood, or to plash the hedge; which last operation is always the most eligible where the gaps are not too large to admit of being cured by this means. The operation I here call plashing, may be de-nned, a wattling made of living wood. To form this, some stems are first selected, to be left as stakes at proper distances, the tops of which are all cut over at the height of four feet from the root. The straggling side branches of the other part of the hedge are also lopped away. Several of the remaining plants are then cut over,, close by the ground, at convenient distances ; and the remaining plants are cut perhaps half through, so as to permit them to be bent to one side. They are then bent down almost to a horizontal position, and interwoven with the upright stakes, so as to retain them in that position. Care ought to be taken, that these be laid very low at those places where there were formerly gaps ; which ought to be farther strengthened by some dead stakes or truncheons of willows, which will frequently take root in this case, and continue to live. And sometimes a plant of eglantine will he able to overcome the difficulties it meets with, strike root, and grow up so as to strengthen the hedge in a most effectual manner. The operator begins at one end of the field, and proceeds regularly forward, bending all the stems in one direction, so that the points rise above the roots of the others, till the whole wattling is completed to the sair* height as the uprights. An expert operator will perform this work with much greater expedition,

than one who has not seen it done could easily imagine. And as all the diagonal wattlings continue to live and send out shoots from many parts of their stems, and, as the upright shoots that rise from the stumps of those plants that have been cut over quickly rush up th rough the whole hedge, these serve to unite the whole into one entire mass, that forms a strong, durable, and beautiful fence. This is the best method of recovering an old neglected hedge that has as yet come to my knowledge.

In some cases it happens, that the young shoots of a hedge are killed every winter; in which case it soon becomes dead and unsightly, and can never rise to any considerable height. A remedy for this disease may therefore be wished for. Young hedges are observed to be chiefly affected with this disorder; and it is almost always occasioned by an injudicious management of the hedge, by means of which it has been forced to send out too great a number of shoots in summer, and is thus rendered so weakly as to be unable to resist the severe weather in winter. It often happens that the owner of a young hedge, with a view to render it very thick and close, cuts it over with the shears a few inches above the ground the first winter after planting : in consequence of which, many small shoots spring out from each of the stems that has been cut over; each of which, being afterwards cut over in the same manner, sends forth a still greater number of shoots, which are smaller and smaller in proportion to their number. If the soil in which the hedge has been planted is poor, in consequence of this management, the branches, after a few years, become so numerous, that the hedge is unable to send out any shoots at all, and the utmost exertion of the vegetative powers enables it only to put forth leaves. These leaves are renewed in a sickly state for some years, and at last cease to grow at all — the branches become covered with fog, and the hedge perishes entirely. But if the soil be very rich, notwithstanding this great multiplication of the stems, the roots will still have sufficient vigor to force out a great many small shoots, which advance to a great length, but never attain a proportional thickness. And, as the vigor of the hedge makes them continue to vegetate very late in the autumn, the frosts come on before the tops of these dangling shoots have attained any degree of woody firmness, so that they are almost entirely killed by it : the whole hedge becomes covered with these long dead shoots, which are always disagreeable to look at, and usually indicate the approaching end of the hedge. The causes of the disorder being thus explained, it will readily occur, that the radical cure is amputation ; which, by giving an opportunity to begin with training the hedge anew, gives also an opportunity of

avoiding the errors that occasioned it. In this case care ought to be taken to cut the plants as close to the ground as possible, as there the stems will be less numerous than at any greater height. And particular attention ought to be had to allow very few shoots to arise from the stems that have been cut over, and to guard carefully against shortening them. But as the roots, in the case here supposed, will be very strong, the shoots that are allowed to spring from the stems will be very vigorous, and there will be some danger of their ‘continuing to grow later in the season than they ought in safety to do ; in which case, some part of the top of the shoot may perhaps be killed the first winter, which ought, if possible, to be prevented. This can only be effectually done by giving a check to the vegetation in autumn, so as to allow the young shoots to harden in the poinis before the winter approaches. If any of the

leaves or branches of a tree are cut away while it is in the state of vegetation, the whole plant feels the loss, and it suffers a temporary check in its growth in proportion to the loss that it thus sustains. To check, therefore, the vigorous vegetation at the end of autumn, it will be prudent to choose the beginning of September for the time of lopping off all the supernumerary branches from the young hedge, and for clipping off the side branches that have sprung out from it; which will, in general, be sufficient to give it such a check in its growth, at that season, as will prevent any of the shoots from advancing afterwards. If the hedge is extremely vigorous, a few buds may be allowed to grow upon the large sturr.ps in the spring; with a view to be cut off at this season, which wili tend to stop the vegetation of the hedge still -nore effectually. By this mode of management the hedge may be preserved entire through the first winter. And, as the shoots become less vigorous every successive season, there will be less difficulty in preserving them at any future period. It will always be proper, however, to trim the sides of a very vigorous hedge for some

years while it is young, about the same season of the year, which will tend powerfully to prevent this malady. But when the hedge has advanced to any considerable height, it will be equally proper to clip it during any of the winter months, before Can-dlemas.

HEDGE-BORN, adj. Hedge and born. Of no known birth ; meanly born.

HEDGE-CHEEPER, n. s. Hedge and creep. One that skulks under hedges for bad purposes.

HEDGEHOG, (erinaceous, Lin.) These quadrupeds are distinguished by having the body covered with spines instead of hair. The skin of the back is provided with muscles, which enable the animal to roll itself up in the form of a ball. The tail is very short, and the feet furnished with five toes. There ap-pear to be but two species well ascertained ; the third, given by Desmarest, being founded on a short description by Seba, which may possibly belong to an animal of another genus. The best known is the common hedgehog (E. Europaus), a native of most of the temperate parts of Europe and Asia. This species has a long nose, the nostrils bordered on each side by a loose flap ; the ears are short, rounded, naked, and dusky ; the upper part of the face, sides, and rump covered with strong coarse hair, of a yellowish ash colour, the back with sharp strong spines, of a whitish tint, with a bar of black through their middle. They are usually about ten inches long, the tail about one. Their usual residence is in small thickets, and they feed on fallen fruits, roots, and insects ; they are also fond of flesh, either raw or roasted. Pallas remarks, that they can eat hundreds of cantharides without suffering from them, whilst a single one of these acrid insects will cause the most horrible torments in dogs or cats. It has been asserted that they mount fruit-trees, and come down with apples, pears, Sec., stuck upon their bristles. This is equally false with the imputation that .they suck cows, and injure their ud-ders. Mr. White observes, that the manner _in which they eat the roots of the plantain is very curious. With their upper mandible, which is much longer than the lower, they bore under the plant, and gnaw off the root upwards, leaving the tuft of leaves untouched. The hedgehog defends himself from the attacks of other animals by rolling himself up, and thus exposing no part of his body that is not furnished with a defence of spines. It may be rendered domestic to a certain degree, and has been employed in Europe to destroy cockroaches, which it pursues with avidity. • In the winter the hedgehog wraps itself up in a warm nest, composed of moss, dried hay, and leaves, and remains torpid till the return of spring. The female produces four or five young at a birth, which soon become covered with prickles. These animals are sometimes used as food, and are said to be very delicate. The skin was

formerly used for the purpose of napping cloths. The long-eared hedgehog (E. auritus) is smaller than the common, and is distinguished by the great size of its ears; in its manners it is said to be similar to that species. The female produces twice each year, having six or seven young at a birth. This species inhabits from the northern part of the Caspian sea to Egypt.

HEDGE-HYSSOP, n. s. Hedge and hys-sop. A species of willowwort; yratiola.

HEDGE-NOTE, n. s. Hedge and note. A word of contempt for low writing.

HEDGE-PIG, n. s. Hedge and pig. A young hedgehog.

HEDGE-ROW, n.‘ts. Hedge and row. The series of trees or bushes planted for enclosures. HEDGING-BILL, n. s. Hedge and bill. A cutting-hook used in making hedges. Comes master Dametas with a hedging-bill in his hand, chafing and swearing. Sydney.

HEDSJAS, one of the great divisions of modern Arabia, extends in one vast plain, along the Red Sea from Mount Sinai to the frontier of Yemen.

HEDWIG (John), in biography, a botanist particularly celebrated for his discoveries relative to the fructification of mosses, and for a new and very ingenious generic distribution of them, the result of those discoveries, was born October 8, 1730, at Cronstadt, in Transylvania, where his father filled a respectable station in the magistracy. He studied for four years at the public school of his native town. On the death of his father in 1747, though he inherited but a very slender patrimony, he was enabled to go for further improvement to the university of Presburg in Hungary, where he remained two years, and then proceeded to Zittau in Upper Lusatia, In 1 759 he took his degree of doctor of physrc at Leipsic, on which occasion he published a thesis on the use of emetics in acute fevers, and was induced to establish himself at Chemnitz. The first and greatest fruit of Hedwig’s labors was the determination of the male and female flowers of mosses ; the parts of which had been made out by Micheli, at least in a great measure, and even the true office of each sug-HED

eested ; but the theory of the whole was first ciearly detailed, as it was subsequently illustrated on every possible occasion, by Hedwig. Our author is recorded to have first beheld the bladder-like anther of the Linnsean Bryum pul-vinatum, discharging its pollen, on the 17th of January 1770. He was alreadj satisfied that what Linnaeus, misled by Dillenius against his own previous opinion, had taken for anthers, were in fact the capsules of mosses, and produced real seed. A history of his discoveries was published in a German periodical work at Leipsic, in 1779. In 1782 appeared his valuable Fundamentum Historiae Naturalis Muscorura Frondosorum, a handsome Latin quarto, in two parts, with twenty colored microscopical plates. Hedwig lost his first wife in 1776; and, after marrying again ne in 1781 removed to Leipsic; and the following year the work above mentioned was there published, on which his fame as an original physiologist snd botanist most securely rests. The same subject is happily followed up in his Theoria Generationis et Fructi-ficationis Plantarum Cryptoga Micarum Linnaei, published at Petersburgh in 1784. The literary fame of Hedwig, and his medical practice, were now every day increasing ; he was made physician to the town-guards, and professor of physic and of botany at Leipsic. He lived to witness the general applause which his labors received, notwithstanding some attacks made on his theories of impregnation by Gaertner, Necker, and others. But he was not exempt from domestic afflictions. Of seven children brought him by his second wife six had died in their infancy ; and the only remaining one, a favorite daughter, was taken from him at the age of sixteen, by a consumption. His grief, locked up in his own breast, could not be dissipated even by the scientific pursuits to which he wisely resorted for the occupation of his thoughts. His health declined ; a succession of feverish attacks impaired his constitution ; and he died of a typhus, after nine days' confinement, on the 17th of February 1799, aged sixty-eight.

HEDYPNOIS, from qSvc, sweet, and irvto, to smell, is recorded by Pliny as a name sometimes given to the wild endive or succory. Class and order, syngenesia polygamia aequalis. Natural order, compositae semiflosculosze, Linn, cicho-racec, Juss. Essential character; receptacle naked : CAL. with scales at the base ; seed-crown of the disk double; the outermost obsolete, of many bristles : the inner of five chaffy scales : of the radius single, membranous and toothed. Species five ; all natives of the south of Europe.

HEDYSARUM, French honeysuckle, a ge-nus of the decandria order, and diadelphia class of plants ; natural order thirty-second, papilionaceae. The carina of the corolla is transversely obtuse ; the seed-vessel a legumen with monospermous joints. There are above 120 species of this plant, of which the most remarkable are,

H. coronarium, the common biennial French honeysuckle, with large deeply striking biennial roots ; upright, hollow, smooth, very branchy stalks, three or four feet high, garnished with pinnated leaves ; and from between the leaves proceed long spikes of beautiful red flowers, succeeded by jointed seed-pods. It is easily raised

from seed in any of the common borders, and is very ornamental.

H. gyrans, or sensitive hedysarum, a native of the East Indies, where it is called burrum chun-dali. It arrives at the height of four feet, and in autumn produces bunches of yellow flowers. The root is annual or biennial. It is a trifolious plant, and the lateral leaves are smaller than those at the end, and all day long they are in constant motion without any external impulse. They move up and down and circularly. This last motion is performed by the twisting of the foot-stalks ; and, while the one leaf is rising, its associate is generally descending. The motion downwards is quicker and more irregular than the motion upwards, which is steady and uniform. These motions are observable for twenty-four hours in the leaves of a branch which is lopped off from the shrub, if kept in water. If from any obstacle the motion is retarded, upon the removal of that obstacle it is resumed with a greater degree of velocity. This species requires the common culture of fender exotics.

Sax. beban; Swe-had ; Belg. hoede ; Goth, hugad, from hug, the mind. — VThomson. Attention and caution with reference to danger, especially as to morals : but, in a

HEED, v. a. & n. s.

HEED’FUL, adj.

HEED’FULLY, adv.

HEED’FULNESS, n. s.

HEED’ILY, adv.

HEED’INESS, n. s.

HEED’LESS, adj.

HEED’LESSLY, adv.

HEED’LESSNESS, n. s. looser sense, regard ; respect ; caution ; vigilance; care; observation: heedless is the opposite of all these.

Thou tokest noon hede, whils it shoon hoot ; Thcrfor wynter the nygheth, asay by thy cote.

Chaucer. The Merchantes Second Tale. Take heed ; have open eye ; for thieves do foot by

night ;

Take heed ere Summer comes, or cuckoo birds affright.

Shakspeare. Merry Wives of Windtor

Give him heedful note ; For I mine eyes will rivet to his face ; And, alter, we will both our judgments join, In censure of his seeming. Id. Hamlet.

Either wise bearing or ignorant carriage is caught as men catch diseases, one of another ; therefore, let men take heed of their company. Shakspeare.

I am commanded

To tell the passion of my sovereign’s heart ; Where fame, late ent’ring at his heedful ears, Hath placed thy beauty’s image and thy virtue.

Id.

To him one of the other twins was bound, Whilst I had been like heedful of the other.

Id

lie did unseal them ; and the first he viewed, He did it with a serious mind ; a heed Was in his countenance. Id.

Speech must come by hearing and learning ; and birds give more heed, and mark words more thau beasts.' Bacon.

With wanton heed and giddy cunning, The melting voice through mazes running.

Milton

The heedless lover does not know Whose eyes they are that wound him so. Waller. We should take heed of the neglect or contempt of his worship. TillottoK.

Heedless of verse, and hopeless of the crown, Scarce half a wit, and more than half a clown.

Dryden.

With pleasure Argns the musician heeds ; But wonders much at those new vocal reeds. Id. It is a way of calling a man a fool, when no heed js given to what he says. L' Estrange.

Take heed that, in their tender years, ideas, thai have no natural cohesion, come not to be united in their heads. Locke.

In the little harms they suffer from knocks and falls, they should not be pitied, but bid do so agaiu ; which is a better way to cure their heedlesmess. Id.

He will no more have clear ideas of all the operations of his mind, than he will have of all the particular ideas of any landscape or clock, who will not turn his eyes to it, and with attention heed all the parts of it. Id.

Some ideas, which have more than once offered themselves to the senses, have yet been little taken notice of ; the mind being either heedless, as in child-dren, or otherwise employed, as in men. Id.

Thou must take heed, my Portius ? The world has all its eyes on Cato's son.

Addison.

Surprises are often fatal to heedless unguarded innocence. Sherlock.

Whilst ye discharge the duties of matrimony, ye heedlessly slide into sin. Arbuthnot and Pope.

Thou heedful of advice, secure proceed ; My praise the precept is, be thine the deed.

Pope.

Let the learner maintain an honourable opinion of his instructor, and needfully listen to his instructions, as one willing to be led. Watts.

The tempest caught them on the tender walk, Heedless how far, and where hs mazes strayed, While with each other blest, creative love Still bade eternal Eden smile around.

Thomson. Summer.

HEEL, n. s., v. n. & v. a. “) Sax. hele ; Dan. HEEL'ER, n. s. > heel ; Belg. hiel ;

HEEL'PIECE, n. s. & v, a.j Goth, hala, the tail of an animal. A part of the foot ; the whole foot ; feet as employed in flight : to pursue as an enemy ; to follow close as a dependent ; to fetter or shackle : the back part of a stocking : heeler, a cock that strikes well with his heels : heel-piece, a piece fixed on the hinder part of the shoe, to supply what is worn away. To be at the heels is to pursue ; to lay by the heels, to confine or overcome ; to be out at heels, to be worn out or useless. Heel, to lean on one side, as the ship heels ; to dance ; to arm a cock for fighting.

In lasty leas at liberty I walk; And of these news I feel nor weal nor woe, Save that a clog doth hang yet at my heel.

Wyatt

Sir, when comes your book forth? Upon the heels of my presentment.

Shakspeare.

But is there no sequel at the heels of this Mother's admiration? Id. Hamlet.

A good man's fortune may grow out at heels:

Id.

Through proud London he came sighing on, After the admired fleets of Bolinˆbroke. Id.

If the king blame me for't, I'll lay ye all By the heds, and suddenly ; and on your heads Clap round fines for neglect. Id.

I cannot sing, 'Nor heel the high lavolt, nor sweeten talk. Id.

The Spaniards fled on towards the north to sc'tk their fortunes, being still chased by the English navy at their heels, until they were fain to give them over for want of powder. Bacon.

The stag recals his strength, his speed, His winged heels, and then his armed head, With these t' avoid, with that his fate to meet j But fear prevails, and bids him trust his feet.

Denham.

Could we break our way

By force, and at our heels all hell should rise With blacKest insurrection, to confound Heaven's purest light. Milton.

One half of man, his mind Is sui juris, unconnned.

And cannot be laid by the heels. Hudibras.

Nothing is commoner, in times of danger, than for men to leave their masters to bears and tygers, and shew them a fair pair of heels for't. L' Estrange.

At the other side is a kind of heel or knob, to break clots with. Mortimer's Husbandry.

I began to smoke that they were a parcel of mum-mies ; and wondered that none of the Middlesex justices took care to lay some of them by

the heels.

Addison.

Pegasus appeared hanging off the side of a rock, with a fountain running from his heel. Id.

Some blamed Mrs. Bull for new heel-piecing her shoes. Arbuthnot.

If the luxated bone be distorted backward, it lieth over the heel bone. Wiseman's Surgery.

At his heels,

Close at his heels, a demagogue ascends, And with a dex'trous jerk soon twists him down, And wins them, but to lose them in his turn.

Cowper.

Their culverins and so forth, would find way Through our friends armour there, with greater ease Than the adulterer's arrow through his heel Which Thetis had forgotten to baptize In Styx. Byron. The Deformed Transformed.

HEFT, n. s. 'From heave ; for HAFT, a handle, which see. Heaving; effort.

May be in the cup

A spider steeped, and one may drink ; depart, And yet partake no venom ; for his knowledge Is not infected : but if one present The abhorred ingredient to his eye, make known How he hath drunk, he cracks his gorge, his side* With violent hefts. Shakspeare. Winter's Tale. His oily side devours both blade and heft.

Waller.

HE'GIRA, n. s. Arabic. A term in chronology, signifying the epocha, or account of time, used by the Arabians and Turks, who begin their computation from the day that Mahomet was forced to make his escape from the city of Mec-ca, which happened on Friday, July 16th, A.D. 622, under the reign of the emperor Heraclius . HEGIRA, from PPOn flight of, 13H to fly; is the epocha from which the Mahommedans reckon time. To render this epocha more creditable, the Mahommedans affect to use the word hegira in a peculiar sense for an act of religion, whereby a man forsakes his country, and gives

way to the violence of persecutors and enemies of the faith : they add, that the Corashites, being then the strongest party in the city, obliged their prophet to fly, as not being able to endure his abolishing of idolatry. This flight was not the first of Mahomet's, but it was the most famous. It

Happened in the fourteenth year from his assuming the characte-of jrophet and apostle, and promulgating hi new religion. The orientals do not agree with ..s as to the time of the hegira. Among the Mahommedans, Amasi fixes it to A. D. 630, and from the death of Moses 2347 ; and Ben Cassem to A. M. 5804 : according to the Greek computation among the Christians, Said Ebn Batrick refers the hegira to A. D. 614, and A.M. 6113. Khondemir relates, that it was Omar, the second caliph, that first established the hegira as au epocha, and appointed the years to be numbered from it : at the time he made this decree, there were already seven years elapsed. This establishment was made in imitation of the Christians, who, in those times, reckoned their years from the persecution of Dioclesian. But there is another hegira, and that earlier too, though of less eminence. Mahomet, in the fourteenth year of his mission, was obliged to relinquish Medina; the Corashites had all along opposed him very vigorously, as an innovator and disturber-of the public peace; and many of his disciples, not enduring to be reputed followers of an impostor, desired leave of him to abandon the city, for fear of being obliged to renounce their religion. This retreat makes the first hegira. These two hegiras the Mahommedans, in their language, call hegiratan. The years of the hegira consist only of 354 days. To reduce these years to the Julian kalendar, L e. to find what Julian year a giv=n year of the hegira answers to, reduce the year of the hegira given into days, by multiplying by 354, divide the product by 365, and from the quotient subtract the intercalations, i. e. as many days as there are four years in the quotient ; and lastly, to the remainder add 622.

HEIDEGGER (John Henry), professor of divinity at Zurich, was born in 1633. He published 1. Exercitationes Selectae de Historia sacra

Patriarcharum, 2 vols. 4to. 2. De Ratione Studiorum Opuscula Aurea, 12mo. 3. Tumulus Tridentin? Concilii, 4to. 4. Historia Papatus, 4to.

HEIDEGGER (John James), a native of Zurich, in Switzerland, who long figured in England as Arbiter Elegantiarum, or manager of the public amusements. He was the son of a clergyman, and married, but left his country in consequence of an intrigue. In 1708, when he was nearly fifty years old, he came to England on a negociation from the Swiss at Zurich; but, failing in his embassy, he entered as a private soldier in the guards for protection. By his sprightly conversation, and insinuating address, he soon worked himself into the good graces of people of fashion , who called him the Swiss count. He procured a subscription, with which, in 1709, he was enabled to furnish out the opera of Thomyris, •which was written in English, and performed at the queen's theatre in the Haymarket. The music, however, was Italian ; that is to say, airs selected from sundry of the foreign operas by Buononcini, Scarlatti, Steffani, Gasparini, and Albinoni. Heidegger, by this performance, gained 500 guineas. The judicious remarks he made ou several defects in the conduct of our operas in general, and the hints he threw out for improving the entertainments of the royal theatre, soon established his character as a good critic. Appeals were made to his judgment; and some very magnificent and elegant decorations, introduced upon the stage in consequence of his advice, gave such satisfaction to George II., who was fond of operas, that, upon being informed to whose genius he was indebted for these improvements, he patronised him, and Heidegger soon obtained the chief management of the opera-house in the Haymarket. He then set about improving another species of diversion not less agreeable to the king, *viz.* the masquerades, and over these he always presided at the king's theatre. He was likewise appointed master of the revels. The nobility now favored him so much, that all splendid and elegant entertainments given upon particular occasions, and all private assemblies by subscription, were submitted to his direction. From the emolu-ments of these employments he gained a considerable income, amounting, in some years, to £5000, which he spent with much liberality, particularly in the maintenance of a luxurious table ; so that it may be said he raised an income, but never a fortune. At the same time his charities ought not to pass unnoticed, which were frequent and ample. After a successful masquerade he has given away several hundred pounds at a time. ' You know poor objects of distress better than I do,' he would frequently say to a particular acquaintance, ' be so kind as to give away this money for me.' An amusing story is told respecting his conduct at the duke of Montagu's on one occasion. The facetious duke gave an entertainment to several of the nobility and

gentry, when Heidegger was invited, and, in a few hours after dinner, so completely intoxicated, that he was carried out of the room, and laid insensible upon a bed. A Miss Salmon was now introduced, who took a mould from his face in plaster of Paris. From this a mask was made, and a few days before the next masquerade (at which the king promised to be present, with the countess of Yarmouth), the duke made application to Heidegger's valet de chambre, to know what suit of clothes he was likely to wear; and then, procuring a similar dress, and a person of the same stature, he gavt him his instructions. On the evening of the masquerade, as soon as his majesty was seated, Heidegger as usual ordered the music to play ' God save the King;' but his back was no sooner turned, than the false Heidegger ordered them to strike up ' Over the water to Charley.' The whole company, and all the courtiers, not in the plot, were thun-derstruck. Heidegger flew to the music-gallery, swore, stamped, and raved, accusing the musicians of drunkenness. The king and the countess laughed so immoderately that they hazarded a discovery. While Heidegger staid in the gallery ' God save the king' was the tune ; but when, after setting matters to rights, he retired to one of the dancing-rooms, to observe if decorum was kept by the company, the counterfeit stepping forwards, and placing himself upon the floor of the theatre, just in front of the music-gallery, called out in a most audible voice, imitating Heidegger, rated them for blockheads — had he not just told them to play ' Over the

water to Charley ? ‘ A pause ensued ; the musicians who knew his character, in their turn, thought him either drunk or mad ; but as he continued his vociferation, ‘ Charley’ was played again. At this repetition of the supposed affront, some of the officers of the guards, who always attended upon these occasions, were for ascending the gallery, and kicking the musicians out; but the late duke of Cumberland, who could hardly contain himself, interposed. The ‘company were thrown into great confusion. ‘Shame ! Shame !’ resounded from all parts ; and Heidegger once more flew in a violent rage to that part of the theatre facing the gallery. Here the duke of iMontagu, artfully addressing himself to him, told him, ‘the king was in a violent passion ; that his best way was to go instantly and make an apology, for certainly the musicians were mad, and afterwards to discharge them.’ Almost at the same instant he ordered the false Heidegger to do the same. The scene now became truly comic in the circle before the king. Heidegger had no sooner made an humble apology for the insolence of his musicians, but the false Heidegger advanced, and, in a plaintive tone, cried out, Indeed, sire, it is not my fault, ‘ but that devil in my likeness.’ Poor Heidegger turned round, stared, staggered, grew pale, and could not utter a word. The duke then humanely whispered in his ear the sum of his plot, and the counterfeit was ordered to take off his mask. Here ended the frolic ; but Heidegger swore he would never attend any public amusement, if that witch the wax-work woman did not break the mould, and melt down the mask before his face. Heidegger was of so peculiar a visage, we may add, that he made a bet with lord Chesterfield, that he could not produce an uglier man throughout the metropolis, and won the wager. He died in 1749 at the advanced age of ninety years.

HEIDELBERG, a populous but ill built city of Germany, once the capital of the Lower Palatinate, but now belonging to Baden. It has a celebrated university, founded in 1386, and stands in a pleasant rich country, famous for the best Rhenish wine. It has, however, undergone many calamities. It was entirely burnt down in 1278, and 1288. In 1622 it was plundered by the Bavarians, and the rich library was transported partly to Vienna, and party to the Vatican. After this it enjoyed peace till 1689, when, the Protestant electoral house becoming extinct, a bloody war ensued, in which not only the castle was ruined, and the town burnt, but the tombs and bodies of the electors were shamefully violated and pillaged. This happened in 1693; and the people of the Palatinate were obliged to abandon their dwellings, and take refuge in foreign countries. The great tun, said to hole} 600 hhds., was broken to pieces in 1693 by the French, but

repaired at great expense in 1729. The public buildings worth notice are the town-house, the three hospitals, several churches, and the university. The old fortress, Treutzkaiser, or Sternschanze, is also remarkable. The ancient electoral palace stands on a hill near the town, and is a fine ruin : its principal gate is ornamented with statues of the ancient electors and counts-palatine, as large as the life. The kc-ep

and outer wall of the platform are entire; and a beautiful semicircular walk runs through an adjoining plantation. From the interior of this edifice there is a subterraneous passage to the great square in the town.

The foundation of a new library was laid her? by the celebrated Gravius ; and it had been gradually carried to 30,000 volumes, when, in 1815, the books and MSS. carried to Rome were restored. A liberal grant is now made to the university annually, and its reputation is increasing : a botanical garden has been lately attached to it. Besides the university there is an academy, and various other public and private schools. Several literary journals are published here, where also are held the periodical meetings of the Baden Protestant church. The manufactures, on a small scale, embrace woollens and cottons, silk stockings, tapestry, and paper. The environs are extremely beautiful. The town stands on the Neckar, over which is a stone bridge 790 feet in length : fourteen miles north-east of Spire, and ten S.S. E. of Manheim.

HEI'FER, n. s. Sax. Jjeapoj-e. A young cow.

Who finds the heifer dead and bleeding fresh, And sees fast by a butcher with an axe, But will suspect 'twas he that made the slaughter ?

Shakspeare.

A heifer will put up her nose, and snuff in the air against the rain. Bacon.

For her the flocks refuse the verdant food,

Nor thirsty heifer seek the gliding flood. Pope.

HEIGH Ho, interj. An expression of slight languor and uneasiness. It is used by Dryden, contrarily to custom, as a voice of exultation.

Heigh ho! an’t be not four by the day, I’ll be hanged. Shnkspvare.

We’ll toss off our ale ‘till we cannot stand, And heigh ho for the honour of Old England.

Dryden.

HEIGHT, n. s. I From HIGH, which see. HEIGHT’EN,U. a. iThe simple idea of elevation used in a variety of ways ; as, altitude ; degrees of latitude ; summit ; rank ; dignity ; the utmost degree, or exertion ; state of excellence ; improvement by decorations or colors : to aggravate, or increase, or ameliorate.

Round wos the shape, in manere of a compas Ful of degrees, the flight of sixty pas.

Chaucer. The Knightes Tale.

Come on, sir; I shall now put jou to the height of your breeding. Shakspeare.

By him that raised me to this careful height, From that contented hap which I enjoyed. Id. There is in Ticinium a church that is in length on«> hundred feet, in breadth twenty, and in height near fifty. Bacon,

Putrefaction doth not rise to its height at once.

IS.

Abroad I’ll study thee, As he removes far off, that great heights takes.

Donne.

Guinea lieth to the North sea, in the same height as Peru to the South. Abbott.

Ten kings had from the Norman conqueror reigned, \Vhen England to her greatest height attained, Of power, dominion, glory, wealth, and state.

Daniel.

HEI

Into what pit thou sees!, From what height fallen. Milton.

Did not she

Of Timna first betray me, and reveal The secret, wrested from me in the height Of nuptial love professed ? Id.

Hide me from the face

Of God, whom to behold was then my Ittiyht Of happiness ! Id.

All beauty when at such a height Is so already consecrate. Maroett.

As in a room, contrived for state, the height of the roof should bear a proportion to the area ; so in the heightening! of poetry, the strength and vehemence of figures should be suited to the occasion. Dryden.

From Alpine heights the father first descends ; His daughter's husband in the plain attends.

Id. JEneid.

An amphitheatre appeared, Raised in degrees, to sixty paces reared : That when a man was placed in one degree, Height was allowed for him above to see.

Dryden.

An amphitheatre's amazing height Here fills the eye with terror and delight.

Addition.

ocial duties are carried to greater heights, and enforced with stronger motives, by the principles of our religion. Id.

Foreign states used their endeavours to heighten our confusions, and plunge us into all the evils of a civil war. Id.

Despair is the height of madness. Sher'.ock.

Every man of learning need not enter into their difficulties, nor climb the heights to which some others have arrived. Wattf.

Her robe along the gale profusely streamed,

Light leaned the sceptre on her bending arm ; And round her brow a starry circlet gleamed,

Height'ning the pride of each commanding charm.

Beattie.

It is the hush of night, and all between Thy margin and the mountains, dusk, yet clear, Mellowed and mingling, yet distinctly seen, Save darkened Jura, whose capt heights appear Precipitously steep. Byron. Childe Harold.

HEILBRONN, a town of Wirtemberg, on the Neckar, containing three churches, a well-en- dowed academy, and public baths. Its name signifies ' The Spring of Health,' derived from a fountain in the neighbourhood, once used medicinally, and which still supplies the town with water. •" It formerly had a commandery of the Teutonic order, and was the chief place of one of their provinces. The culture of the neighbouring vineyards, and the conveyance of goods by the Neckar, are the chief employment of the inhabitants. The only manufacturing establishment worth notice is an ingenious machine for the preparation of plaster of Paris. In 1810 Heilbronn became the capital of the department of the Lower Neckar. Twenty-five miles north of Stutgard.

HEINECCIUS (John Gottieb), a celebrated civilian of the eighteenth century, born at Eisen-berg, in Altenburg, in 1681. After having studied at Goslar and Leipsic he became professor of philosophy at Halle in 1710; and in 1721 he was made professor of civil law, with the title of counsellor of the court. His great reputation induced the states of Friesland to invite him to Franeker in 1724 ; but in 1727

the king of Prussia prevailed on him to accept of a professorship of law at Frankfort on the Oder, where he distinguished himself till 1733. Becoming again professor at Halle, he remained there till his death in 1741, though invited to Marpurg, Denmark, and Holland. He wrote many works, all of them much esteemed. The principal are, 1.

Antiquitatum Romanarura Jurisprudentiam Illustrantiurn Syntagma. This excellent abridgment gave rise to his reputation in foreign countries. 2. Elementa Juris Civilis. 3. Fundamenta Styli Cultioris. 4. Elementa Philosophise Rationalis et Moralis. 5. Historia Juris Civilis Romani ac Germanici. 6. Elementa Juris Naturae et Gentium, &c.

HEINECKEN, or HEINETKEN (Christian), an extraordinary child born at Lubeck in 1721. He spoke his maternal tongue fluently at ten months. At one year old he knew the principal events of the pentateuch ; in two months more he was master of the entire history of the Old and New Testaments ; at two years and a half he answered the principal questions in geography, and in ancient and modern history; and he spoke Latin and French with great facility before his fourth year. His constitution was so delicate, that he was not weaned till a few months before his death. M. Martini of Lubeck published a pamphlet in 1730, in which he endeavoured to give natural reasons for the extraordinary capacity of this child, who died in his fifth year.

HEIN'OUS, adj. \ Fr. haineux, from kaine, HEIN'OUSNESS, n.s. >hate; or from the Teu-HEIN'OUSLY, adv. J tonic hoon, shame. Atrocious ; wicked in a high degree : atrociousness ; wickedness ; criminality ; daring offence.

To abrogate or innovate the gospel of Christ, if men or angels should attempt, it were most heinous and accursed sacrilege. Hooker.

This is the man should do. the bloody deed : The image of a wicked heinous fault Lives in his eye. Shakspeare.

As it is a most heinous, so it is a most dangerous impiety to despise him that can destroy us.

Tiliotson.

He who can treat offences provoking God, as jests and trifles, must have little sense of the heinousnets of them. Rogers.

HEINSIUS (Daniel), professor of politics and history at Leyden, and librarian to the university, was born at Ghent in 1580. He became a pu-pil of Joseph Scaliger at Leyden, and was greatly indebted to him for the eminence to which he attained in literature. He distinguished himself as a critic by his labors on many classical au thors ; and was highly honored at home and abroad. Gustavus Adolphus gave him a place among his counsellors of state ; the republic of Venice made him a knight of the order of St. Mark; and pope Urban VIII. invited him to come, as he expressed it, 'to rescue Rome from barbarism.' He died in

1666, leaving several works both in poetry and prose. This great critic was lamentably attached to his bottle : his pupils, finding the door of the lecture-room closed one day, and suspecting the reason, are said to have written on it ‘ Heinsius non legit hodie, propter hester-nam crapulam :’ and one night, returning at a

late hour towards his own house, in a zigzag direction, he had, we are told, sufficient command over his faculties to compose the following Latin verses : —

Sta pes, sta bone pes, Aut hi lapides Mihi lectus erunt.

Steady ! my feet — good feet be staid, Or else these stones will be my bed.

HEINSIUS (Nicholas), the son of Daniel, was born at Leyden ; and became as great a Latin poet as his father, and a greater critic. His poems have been several times printed, but the best edition is that of Amsterdam in 1666. He gave editions of several of the classics, with notes ; his Claudium is dedicated in a Latin po-em to queen Christina of Sweden, and his Ovid toThuanus. He died in 1681.

HEIR, n. s. & v. a.ˆ\ Fr. herltier; Lat. hares. HEIR’ESS,W.S. /One that inherits any HEIR’LESS, adj. V thing after the death of HEIR’SHIP, n. s. I its possessor ; applied to HEIR’-LOOM, n. s. J males and females; as, heir ; heiress : heirless, without an heir : heirship, the privilege of an heir. Heirloom, from Sax. heir, and ˆtloma, goods. Any furniture or moveable decreed to descend by inheritance, and therefore inseparable from the freehold.

Being heirs together of the grace of life.

1 Pet. iii. 7.

He was of knighthode and of fredome flour ; Fortune him maked the heir of hir honour.

Chaucer. The Monkes Tale.

God made marriage in Paradis, in the estate of in-nocencie.to multiplie mankinde to the service of God, and therefore is the breking thereof the more grevou? ; of which breking, come false heires, oft time that wrongfully occupien folkes heritages.

Id. The Persones Tale. I still think of

The wrong I did myself ; which was so much, That heirless it hath made my kingdom.

Shakspzare. What lady is that?

The heir of Alanson, Rosaline her name. Id. That I'll give my voice on Richard's side, To bar my master's heirs in true descent, God knows, I will not do it. Id.

An heiress she, while yet alive •, All that was her's to him did give. Waller. His son in blooming youth was snatched by fate, One only daughter heired the royal state. Dryden.

ˆEneas, though he married the heiress of the crown, yet claimed no title to it during the life of his father-in-law. Id.

An heir signifies the eldest, who is, by the laws of England, to have all his father's land. Locke.

A layman appoints an heir or an executor in his will, to build an hospital within a year, under pain of being deprived of his heirship. Ayliffe's Par.

Sunk is the hero, and his glory lost, A nd I his heir in misery alone. Pope.

The lieirs to titles and large estates have a weakness in their eyes, and a tenderness in their constitution.

Swift.

Achilles' sceptre was of wood, Transmitted to the hero's line ; Thence through a long descent of kings Came an heirloom, as Homer sings. Id.

The young extravagant heir had got a new steward, and was resolved to look iuto his estate.

Strift. What race of chiefs and heroes did she bear :

What daughter of her beauties was the heir.

Byron. Childe Harold.

HEIR, in law, signifies the person who succeeds another by descent to lands, tenements, and hereditaments, being an estate of inheritance, or an estate in fee ; because nothing passes by right of inheritance but in fee. See CONSANGUINITY, DESCENT, INHERITANCE, SUCCESSION, and LAW. If land be given to a man for ever, or to him and his assigns for ever, this vests in him but an estate for lite. This very great nicety about the insertion of the word heirs in all feoffments and grants, in order to vest a fee, is plainly a relic of the feudal strictness, by which it was required that the form of the donation should be punctually pursued ; or that, as Craig expresses it, in the words of Baldus, donationes sint stricti juris, ne quis plus donasse praesumatur quam in donatione expresserit. And therefore, as the personal abilities of the donee were originally supposed to be the only inducements to the gift, the do-nee's estate in the land extended only to his own person, and subsisted no longer than his life; unless the donor, by an express provision in the grant, gave it a longer continuance, and extended it also to his heirs. But this rule is now softened by many exceptions. For, 1. It does not extend to devises by will ; in which, as they were introduced at the time when the feudal rigor was apace wearing out, a more liberal construction is allowed ; and therefore, by a devise to a man for ever, or to one and his assigns for ever, or to one in fee-simple, the devisee has an estate of inheritance ; for the intention of the devisor is sufficiently plain from the words of perpetuity annexed, though he has omitted the legal words of inheritance. But if the devise be to a man and his assigns, without annexing words of perpetuity, there the devisee shall take only an estate for life ; for it does not appear that the devisor intended any more. 2. Neither does this rule ex-tend to fines or recoveries, considered as a species of conveyance ; for thereby an estate in fee passes by act and operation of law without the word heirs; as it does also, for particular reasons, by certain other methods of conveyance which have relation to a former grant or estate, in which the word heirs was expressed. 3. In creations of nobility by writ, the peer so created has an inheritance in his title, without expressing the word heirs ; for they are implied in the creation, unless it be otherwise specially provided : but in creations by patent, which are stricti juris,

the word heirs must be inserted, otherwise there is no inheritance. 4. In grants of land to sole corporations and their successors, the word successor supplies the place of heirs ; for, as heirs take from the ancestor, so does the successor from the predecessor. Nay, in a grant to a bishop or other sole spiritual corporation, in frank almoign, the words frank almoign supply the place of successors (as the word successors supplies the place of heirs) ex vi termini ; and, in all these cases, a fee-simple vests in such sole corporation. But, in a grant of lands to a cor-144

poration aggregate, tlie word successors is not necessary, though usually inserted : for, although such simple grant be strictly only an estate for life, yet, as that corporation never dies, such estate for life is perpetual, or equivalent to a fee-simple, and therefore the law allows it to be oue. Lastly, in the case of the king, a fee-simple will vest in him, without the word heirs or successors in the grant ; partly from prerogative royal, and partly from a reason similar to the last, because the king, in judgment of the law, never dies. But the general rule is, that the word heirs is necessary to create an estate of inheritance.

HEIR APPARENT is a person so called in the lifetime of his ancestor, at whose death he is heir at law.

HEIR PRESUMPTIVE is one who, if the ancestor should die immediately, would, in the present circumstances of things, be his heir ; but whose right of inheritance may be defeated by some nearer heir being born.

HEIRLOOM comprehends divers implements, as tables, presses, cupboards, bedsteads, furnaces, wainscot, and such like ; which in some countries have belonged to a house for certain descents, and are never inventoried after the decease of the owner, as chattels are, but accrue by custom, not by common law, to the heir with the house itself. The ancient jewels of the crown are held to be heirlooms, and are not devisable by will, but descend to the next successor.

HEISTER (Laurence), a celebrated physician, surgeon, and anatomist, who also rendered himself conspicuous among botanists by his opposition to the system and principles of Linnaeus, at a time when they were making the greatest progress in the general .estimation, was

born at Frankfort on the Maine, in 1683. He was educated at several German universities, and in the year 1706 spent some time in the study of anatomy and surgery at Amsterdam under Ruysch, then so famous for his dissections and anatomical preparations. In the following year he went to serve as a surgeon in the Dutch camp in Brabant ; devoting the subsequent winter to further improvement, under Boerhaave and his eminent colleagues, who at that time attracted students from all parts to the university of Ley-den, where Heister took his degree. Returning afterwards to the camp, he was, in 1709, appointed physician general to the Dutch military hospital. The experience he thus acquired raised him to a distinguished rank in the theory and practice of surgery. In 1710 he became professor of anatomy and surgery at Altorf, in the little canton of Uri, and rendered himself celebrated by his lectures and writings. Ten years afterwards a more advantageous situation offered itself to him at Heltnstadt, where he became physician to the duke of Brunswick, with the title of Aulic counsellor, as well as professor of medicine, and afterwards of surgery and botany, i.i that university. Here he continued till his death, which happened in 1758, at the age of seventy-five. In August, 1741, our author came forward as the professed adversary of Linnaeus, in the inaugural dissertation of one of his pupils

named Goeckel, entitled Meditationes et Ani-madversiones in Novum Sy'stema Botanicurn sexuale Linnaei. Another dissertation of Heister's, published in October 1741, De Nomiuum Plantarum Mutatione utili ac noxia, is a more diffuse and elaborate attack on the nomenclature of the great Swedish teacher, whom however he terms ' a most diligent and most valuable botanist.' In 1748 he published a Systema Plantarum Generale ex Fructificatione, cui annectuntur re-gulge ejusdem, de Nominibus Plantarum, a Ce-leb. Linmei longe diversse.

HEISTERIA, in botany, a genus of the monogynia order, and decandria class of plants; natural order twelfth, holoraceae : CAL. quinquefid, the petals five : the fruit is a plum on a very large colored calyx. Species three ; natives of different tropical countries.

HEITERSHEIM, a town of Baden, on the borders of the Black Forest, long the residence of the grand prior of the order of St. John in Germany, who had a seat and a vote in the imperial diet. To this town, and its seven dependent villages, he added other possessions on the left bank of the Rhine : in 1806 the grand pri-ory was suppressed. It is ten miles south of Brisac, and twenty N.N. E of Bale.

HELDER, or HELDEK POINT, a town and fort of North Holland, opposite the Texel, seated on a cape on the coast of the Zuyder Zee, about twenty-four miles from Alkmaer. It was taken by the British, under the duke of York, August 30th, 1799, after a battle wherein about 1000 of the Dutch and 540 of the British were killed or wounded. It has a strong fort to defend the road of Mars Diep. Population about 2500. Near this place also Van Tromp fell in a naval action fought in 1653.

HELE (Thomas), a dramatic author of the eighteenth century, born in Gloucestershire in 1740. He acquired so complete a knowledge of the French language that he wrote it with all the ease and elegance of a native. After serving in the army during the German war, till the peace of 1763, he went to Italy, and thence to Paris; where he settled, and wrote comedies for the theatre which have been much admired. He died in 1780.

HELEN, or HELENA, in fabulous history, the daughter of Tyndarus, or, according to the po-ets, of Jupiter and Leda, was married to Menelaus king of Sparta, but was stolen from him by Theseus, A. A. C 1235. She was restored soon after ; but carried off again by Paris, which occasioned the famous Trojan war. See PARIS and TROY.

HELENA (St.), the wife of the emperor Constantius Chlorus, and mother of Constantine the Great, was a native of South Britain ; but authors differ as to the rank she held when the emperor married her. Dr. Watkins, in his Biographical Dictionary, makes her of ‘ obscure birth ;’ but Dr. Anderson, in his Royal Genealogies, says that she was the daughter of king Coilus II. In her eightieth year she went to the Holy Land, where, the Roman Catholics say, she discovered the holy cross. She died soon after, about A. D. 321.

HELENA (St.), an island of the South Atlantic Ocean, discovered by the Portuguese commander, J. Nova Gallega, on the festival of St. Helena, in 1501. It is a mass of detached rock in the midst of the ocean, being about 1200 miles from the nearest point of land, in 16° 5’

S. lat., and 5° 50’ W. long.

The Portuguese stocked it with goats, fowl, fruit, and stores, forthe refreshment of their ships bound to India ; but soon neglected it, and at the close of the sixteenth century the Dutch obtained it with scarcely any resistance on the part of its discoverers. Afterwards, establishing a colony at the Cape of Good Hope, they also abandoned the island, and the East India Company settled on it in the same year, 1651 ; ten years after they obtained the possession of it by a charter from king Charles II. They now took pains in stocking and improving it; and the island, it is said, received a considerable supply of inhabitants in consequence of the fire of London. The Dutch, indeed, recovered it again in 1665, but, in less than twelve months, the English regained the possession. No fortifications seem to have been constructed here either by the Portuguese or Dutch. The first fort was a triangular redoubt, erected in 1665, called Fort James, in compliment to the duke of York, afterwards king James II. The appellation of James’s Valley is derived from this fort, and that of Chapel Valley from the Portuguese chapel, the ruins of which were visible when the island was first settled by the English. The Dutch, recovered it again, but it was retaken by Sir Richard Munden, and, upon his arrival in England, the possession and government of it were again assigned by the king to the East India Company, and a charter was granted December 16th, 1673, constituting them lords proprietors of the island, with the rights and powers of sovereignty.

Thus it remained until in 1815 it was selected as the final abode of the deposed emperor Napoleon. It was in consequence ceded at this time to government ; an act of parliament regulating the intercourse of ships with the island was passed; and a governor appointed having special charge of this important state prisoner, who died here the 5th of May, 1821. See NAPOLEON.

St. Helena is about ten miles and a half long, and six and three quarters broad, or about twenty-eight miles in circuit. It rises abruptly from the sea, in vast masses varying from 600 to nearly 3000 feet in height : the whole coast being a perpendicular wall of solid rock, with four strongly fortified openings. The whole island, indeed, is but the summit of a mountain, and probably of volcanic origin. On entering the interior, however, the bleak appearance vanishes; verdant and beautiful small valleys occupy the interstices between the hills; and a plain, wholly free from large stones, extends about 1500 acres in an elevated part of the island. Here almost any grain or fruit will flourish. There is also another plain of about 200 acres, on a lower level ; but the soil is impregnated with saline matter, and marine plants are its

chief productions. Diana's Peak, the loftiest summit of the VOL. XI

island, is about 2700 feet in height. In the south-west part there is another conspicuous conical hill called the High Knoll, but it is of inferior elevation. The shores present various rugged points and numerous caverns into which the sea breaks.

Its climate, from the elevation of the island, is mild, but moist, and remarkably uniform ; so that at Plantation House, Fahrenheit's thermometer varies in the course of the year only from about61° to 73°; at Longwood, which is still more elevated, it is generally 5° lower ; while at James Town, it is about as much higher. Storms or hurricanes are rarely known : the trade winds blow steadily, but seldom to exceed a fresh breeze. The sky is, however, often enveloped in clouds. The quantity of rain that fell, in an average of four years, was 33-38 inches. Iron ore is said to be found in some parts of the island, and there are some appearances of gold and copper ore. Lime is plentiful and excellent. When first discovered St. Helena was covered with forests, but few traces of them now remain. Indeed the island is remarkably destitute of trees.

The scarcity of water is the principal impediment to the extension of agriculture, but this might probably be remedied by the planting timber on the hills. The oak of Europe has been introduced with success, and it is probable the teak of India would also succeed. Furze, the seeds of which were brought by the English, is tolerably abundant, and supplies the only fuel . The shrub called palma Christi seems indigenous to the island and can scarcely be rooted out; it has been supposed that it might be be made useful in the formation of hedges.

As a landing can only be effected on the lee side of the island, every accessible spot on that side is protected by fortifications, and the strictest military discipline has long been enforced throughout the island.

It possesses but one town on the north-west side, in James's Valley, which is entered from the shore by an arched gateway that leads into a parade of about 100 feet square. On the left is the government-house, or castle as it is sometimes called, ai;d the principal guard-room. A handsome church is in front of this edifice, and a theatre on the right. The most respectable street extends from this part of the town, and contains about thirty houses. Two others branch from the upper part to the east and west ; containing shops, well stored with

European, and In-dian goods. The principal inhabitants have houses and plantations in the interior. Ships anchor in the road opposite the town. English families to the amount of 300 or 400 are often found here ; the whole population being about 2000, one-half of whom, perhaps, are soldiers or slaves.

The annual expenses of the island to the East India Company, before the cession, amounted to from £40,000 to £50,000. The only revenue was in the quit rent and rent of lands leased, which amounted to £1000 a year, and the profit on the monopoly o£ arrack, which commonly produced £10,000. In 1809 the island contained 1811 sheep, and 2887 goats. The value of provisions furnished to ships amounted in 1789, to £6569; in 1809, to £6346. The quan—

tity supplied at the latter period must have been little more than a third of that at the former, the prices of all the articles of produce having in that time nearly tripled. Beef and pork had risen from 6d. to Is. ‘id. ; a sheep from £l Is. to £2 or £3 ; fowls from Is. 6d. to 7s. 6d. On the shore of St. Helena there is produced a considerable quantity of the marine plant called sal-sola, which yields fine barilla.

Round the island are a number of small rocky islets surrounding it, the principal of which are called Egg, Speery, and George Islands. The rocks, as in most of the African Islands, consist in a great measure of basalt, of which there are excellent quarries.

HELENIUM, bastard sunflower, a genus of the polygamia superflua order, and syngenesia class of plants, natural order forty-ninth, composite. The receptacle is naked in the middle : under the radius paleaceous : the pappus consists of five short awns : CAL. is simple

and multipartite : the florets of the radius semitrifid. The principal species are, H. autumnale, with spear-shaped narrow leaves : and, H. latifolium, with pointed, spear-shaped, sawed leaves. Both are natives of North America, where they grow wild in great plenty. They rise to the height of seven or eight feet in good ground. The roots, when large, send up a great number of stalks, which branch toward the top ; the upper part of the stalk sustains one yellow flower, shaped like the sunflower, but much smaller, having long rays, which are jagged pretty deep into four or five segments. These plants may be propagated by seeds, or by parting their roots ; the latter is generally practised in this country. The best season to transplant and part the old roots is in October, when their leaves are past, or in the beginning of March, just before they begin to shoot. They delight in a soil rather moist than dry, provided it is not too strong, or does not hold the wet in winter. See SYNGENESIA.

HELEN'S (St.), a village, and road or bay in the Isle of Wight, on the northern coast. It is a place of rendezvous for the navy, and of great traffic in time of war. At the mouth of the bay is a cluster of rocks called the Mixen.

HELEN'S (St.), one of the Scilly Islands, about a mile north of Fresco, and containing the remains of one of the oldest churches in Britain. It comprises 100 acres of good soil, but is uninhabited.

HELENUS, a celebrated soothsayer, son of Priam and Hecuba. He was greatly respected by the Trojans. When Deiphobus was given in marriage to Helen, in preference to himself, he retired to mount Ida, where Ulysses took him prisoner by the advice of Calchas. The Greeks, by threats and promises, induced him to reveal the secrets of the Trojans ; and either the fear of death, or gratification of resentment, led him to disclose to the enemies of his country, that Troy could not be taken whilst it was in possession of the Palladium, nor before Philoctetes came from his retreat at Lemnos and assisted in the siege. After the ruin of his country, he fell to the share of Pyrrhus the son of Achilles, and saved his life by warning him to avoid a dangerous tempest, which proved fatal

to all those who set sail This endeared him to Pyrrhus; from whom he received Andromache, the widow of his brother Hector, by whom lie had a son called Cestrinus. He was the only one of Priam's sons who survived the ruin of his country. After the death of 1'yrrhus he reigned over part of Epirus, which he called Chaonia, in memory of his

brother Chaon, whom he had inadvertently killed. Helenus received ˆneas as he sailed towards Italy, and foretold him some of the calamities which attended his fleet.

HELEPOLIS, in the ancient art of war, a machine for battering down the walls of a place, the invention of which is ascribed to Demetrius Po-liorcetes. Diodorus Siculus says, that each side of the Helepolis was 405 cubits in breadth, and ninety in height; that it had nine stages, and was carried on four strong solid wheels eight cubits in diameter; that it was armed with large battering rams, and had two roofs capable of supporting them ; that in the lower stages there were different sorts of engines for casting stones; and in the middle they had large catapultas for discharging arrows, and smaller ones in those above, with a number of expert men for working these machines.

HELI'ACAL, adj.) Fr. heliaque ; from IjXiof.

HE'LIACALLY, adv.] Emerging from the lustre of the sun, or falling into it.

Had they ascribed the heat of the season to this star, they would not have computed from its heliacal ascent. Browne.

From the rising of this star, not cosmically, that is, with the sun, but heliacally, that is, its emersion from the rays of the sun, the ancients computed their cani-cular days. Id.

He is tempestuous in the Summer, when he rises heliacally ; and rainy in the Winter, when he rises achronically. Dryden.

HELIACAL, in astronomy, is applied to the rising and setting of the stars. A star is said to rise heliacally, when, after having been in con junction with the sun, and on that account invisible, it comes to be at such a distance from him as to be seen in the morning before sunrising ; the sun, by his apparent motion, receding from the star towards the east. The heliacal setting is when the sun approaches so near a star as to hide it with his beams, which prevent the fainter light of the star from being perceived ; so that the terms apparition and occulation would be more proper than rising and setting.

HELIADES, in mythology, the daughters A' Apollo and Clymene, who were so afflicted with the death of their brother Phaeton, that the gods, in compassion, transformed them into poplars on the banks of the Eridanus. Their names were Phaetusa, Lampetia, and Phoebe. See PHAETON.

HELIANTHUS,the great sunflower, a genus of the polygamia frustanea order, and syngenesia class of plants : natural order forty-ninth, compositae. Receptacle ‘is paleaceous and plane: pappus diphyllous : CAL. imbricated : the scales standing a little out at the tops. There are twenty-one species, most of which are now com-mon in our gardens, though all of them are natives of America. They are all very hardy, and prosper in almost any soil or situation. They

may be propagated either by seeds or by parting their roots.

HELIAST./E, or HELIASTES, in antiquity, the judges of the court Heliasa. They were so called, according to Ulpian, from ‘oXi£w, to assemble in a great number ; or, according to others, from f/Xiog, the sun, because they held their assemblies in an open place, and from sunrise to sun-set. They composed the most numerous and important of the Athenian tribunals. Their province was to explain obscure laws, and to give authority to those which had been violated. The Thesmothetae convoked the assembly of the Heliastae, which sometimes amounted to 1000, sometimes to 1500 judges. Mr. Blanchard is of opinion, that, to make this number, the Thesmothetae sometimes summoned those of each tribe who had last quitted the public offices which they had exercised in another court. The assemblies of the Heliastae were not frequent, as they would have interrupted the jurisdiction of the stated tribunals and the’ common course of affairs. The Thesmothetae paid to each member of this assembly, for his attendance, three oboli. Hence Aristophanes terms them the brothers of the triobulus. They were fined if they came too late, and, if the orators had begun to speak, they were not admitted. They were paid out of the public treasury, and their pay was called misthos heliasticus. The assembly met at first, according to Aristophanes, at the rising of the sun. If the judges were obliged to meet under cover, on account of frost and snow, they had a fire; but no ancient author informs us of the place where these assemblies were held. We only learn, that there was a double enclosure around the assembly, that it might not be disturbed. The first was a kind of arbor work, separated by doors, over which were painted in red the first ten or twelve letters of the Greek alphabet, which directed the entrance of the officers who composed the tribunal, each of them entering under the letter which distinguished his tribe. The beadles, to whom they showed the wands which had been sent them by the Thesmothetas, examined the mark, to see if it was authentic, and then introduced them. The second enclosure, which was twenty feet from the former, was a rope or cord ; that the people who stood round the first

enclosure, and were desirous to see what passed within the second, might not be prevented from gratifying their curiosity at a proper distance. Thus the attention of the judges was not interrupted by the concourse of the multitude, many of whom were heated by views of interest or of party. To each member were given two pieces of copper ; one of which was perforated. Sea shells were at first in use. The king was present at the assembly, at whose command it had been summoned. The Thesmothetae read the names of those who were to compose it, and each man took his place as he was called. The Thesmothetae were then sent for, whose function it was to observe prodigies and to superintend the sacrifices ; and, if they gave their sanction, the deliberations were begun. The Exegetae were often corrupted by those who were interested in the debates of the assembly, and even excited tumults. Of all the monument* extant, relating to the Heliastae, the

most curious is the oath which those judges took before the Thesmothetae : Demosthenes preserved it in his oration against Timocrates, who, having been bribed by those who had been intrusted with the effects taken on board a vessel of Naucratis, and refusing to give an account of them, had a law passed, by which an enlargement was granted to prisoners for public debts on giving bail. Demosthenes, in making his oration against that law, ordered the oath of the Heliastae to be read aloud, as a perpetual auxiliary to his arguments. This oath we quote, as it shows how important a tribunal that of the Heliastae was: — ‘Iwill judge accord ing to the laws and decrees of the people of Athens, and of the senate of 500. I will never give my vote for the establishment of a tyrant, nor of an oligarchy. Nor will I ever give my approbation to any opinion prejudicial to the liberty or to the union of the people of Athens. I will not second those persons who may propose a reduction of private debts, or a distribution of the lands or houses of the Athenians. I will not recal exiles, nor endeavour to procure a pardon for those who shall be condemned to die ; nor will I force those to retire whom the laws and the suffrages of the people shall permit to remain in their country. I will not give my vote to any candidate for a public function, who gives not an account of his conduct in the office which he has previously filled ; nor will I presume to solicit any trust from the commonwealth without subjecting my-self to this condition, which I intend as obligatory to

the nine archons, to the chief of religious matters, to those who are ballotted on the same day with the nine archons, to the herald, the ambassador, and the other officers of their court. I will not suffer the same man to hold the same office twice, or to hold two offices in the same year. I will not accept any present, either my-self or by another, either directly or indirectly, as a member of the Heliastic assembly. I solemnly declare that I am thirty years old. I will be equally attentive and impartial to the accuser and the accused ; I will give my sentence rigorously according to evidence. Thus I swear, by Jupiter, by Neptune, and by Ceres, to act. And if I violate any of my engagements, I imprecate from these deities ruin on myself and my family; and I intreat them to grant me every kind of prosperity, if*I am faithful to my oath.' Here we have one of the motives of the meeting of this assembly. Aristotle informs us of another ; which was by the public authority deputed to them, to elect a magistrate in the room of one dead. It is surprising, that Pausanias, who enters so often into details, gives us no particular account of this assembly. All that he says of it is, that the most numerous of the Athenian assemblies was called Helisea. Diogenes Laertius, in his life of Solon, says, that it was before one of these Heliastic assemblies, that Pisistratus presented himself, covered with wounds and contusions, to excite the indignation of the people against his pretended enemies. As to the manner in which the judges gave their suffrages, there was a sort of vessel covered with an osier mat, in which were placed two urns, the one of copper, the

other of wood. In the lid of these urns was an oblong hole, large at the top, and narrower downwards. The suffrages which condemned the accused person were thrown into the wooden urn, called kyrios. That of copper, named akyros, received those which absolved him. Aristotle observes that Solon, whose aim was to make his people happy, and

who found an aristocracy established by the election of the nine archons annual officers, whose power was almost absolute, tempered their sovereignty, by instituting the privilege of appealing from them to the people, who were to be assembled by lot to give their suffrages ; after having taken the oath of the Heliastae, in a place near the Panathe-naeum, where Hissus had, in former days, calmed a sedition of the people, and bound them to unanimity by an oath. It has likewise been remarked, that Apollo was not invoked in the oath of the Heliastse, as in the oaths of the other judges. As all who took the oath of the Heliastae, engaged not to be corrupted by solicitation or money, those who violated tins part of their oath were condemned to pay a severe fine.

HELICAL, adv. Fr. helice; from $&. Spiral; with many circumvolutions.

The screw is a kind of wedge multiplied or continued by a helical revolution about a cylinder, receiving its motion not from any stroke, but from a vectis at one end of it. Wilkins.

HELICON, in ancient geography, a mountain in the neighbourhood of Parnassus and Cy-theron, sacred to Apollo and the Muses. It is situated in Livadia, and now called Zagura or Zaguya. It was one of the most fertile and woody mountains in Greece. On it the fruit of the adrachnus, a species of the arbutus, or strawberry tree, was uncommonly sweet ; and the inhabitants affirmed, that the plants and roots were all friendly to man, and that even the serpents had their poison weakened by the innoxious qualities of their food. Its north side was near Parnassus, where it touched on Phocis ; and resembled that mountain in loftiness, extent, and magnitude. Here was the shady grove of the Muses and their images ; with statues of Apollo and Bacchus, of Linus and Orpheus, and other illustrious poets. Among the tripods, in the second century, was that consecrated by Hesiod. Oh the left hand towards the grove was the fountain Aganippe ; and about twenty stadia, or two miles and a half, higher up, the violet-colored Hippocrene. Round the grove were houses. A festival was celebrated there by the Thespians with games called musea. The valleys of Helicon are described by Wheeler as green and flowery in the spring ;• and enlivened by pleasing cascades and streams, and by fountains and wells of clear water. The Boeotian cities in general, two or three excepted, were reduced to inconsiderable villages in the time of Strabo. The grove of the Muses was plundered under Constantine the Great. The Heliconian goddesses were afterwards consumed in a fire at Constantinople, to which city they had been removed. See GREECE.

HELICON I A, in botany, a genus of the monogynia order, and

pentandria class of plants.

The spatha is universal and partial ; there is no calyx : COR. has three petals, and the nectarium two leaves : CAPS, is three-grained.

HELICTERES, the screw-tree : a genus of the decandria order, and gynandria class of plants ; natural order thirty-seventh, columniferae : CAL. monophyllous and oblique ; petals five ; and the nectarium consists of five petal-like leaflets; CAPS, intorted or twisted inwards. There are ten species, all natives of warm climates. They are shrubby plants, rising from five to fourteen feet in height, adorned with flowers of a yellow color. They are propagated by seeds; but are tender, and in this country must be kept in a stove during the winter.

HELIER (St.), the capital of the island of Jersey, in the bay of St. Aubin, where it has a harbour, and a stone pier, having the sea on the south-west and hills on the north. Another large hill projects over the town, and has a pleasant walk, and an extensive prospect. It is defended by Elizabeth Castle, a strong fortress on a rock in the bay, about a mile from the town. The streets are wide and well paved. The inhabitants are about 6500. In the market-place is a statue of George II. in bronze, gilt. St. Helier, within the last twenty years, has been greatly improved: it profited largely by the late war. When properly lighted it will vie with most of the market-towns in England. It contains within itself nearly one-third of the population, and within its port nearly the whole trade of the island. A workhouse and a public hospital have been established here for the use of the whole island; and in 1815 a new prison was completed in the vicinity of the sea-shore. Elizabeth Castle is a strong fortress, on a rocky island in St. Aubin’s Bay, about a mile from St. Helier, of which it defends the entrance ; and another fortification has recently been constructed on a high hill which overhangs the town : it will contain from 2000 to 3000 men. It has also a small theatre and a public library. Three gazettes are published here weekly in French, and one in English. Packets sail three times a week to Weymouth. See JERSEY. Long. 2° 13’ W., lat. 49° 13’ N.

HELIGOLAND (Holy Island), a group of islands nearly equidistant, or twelve leagues, from the mouths of the Elbe, Weser, and Eyder ; formerly belonging to Denmark, but now to Great Britain, which took possession of it from the former power in the war of 1807. The action of the waves has reduced the principal island to a great rock, from two to three miles in circuit rising in the centre to a. round elevation, the

ascent to which is by 150 steps. What little soil it possesses is sand and clay : the shores rise perpendicularly, and the island is surrounded by reefs and banks, the remains of its ancient territory. It has long been diminishing in this way. The elevated part is sometimes called the Cliff, and the other the Low Land. At a short distance is the Doun, or Douns, a distinct island, but ever varying its form. To the east is a road where ships may find forty-eight feet of water. The inhabitants of Heligoland, who amount to upwards of 2000, are descended from the ancient Frieslanders, whose language and manners they

preserve ; subsisting principally by fishing and pilotage. On the north end of the island is a lighthouse, and on the south a haven for boats.

Heligoland was in former ages the residence of a chief of the Sicambri, or North Frieslanders, and the seat of worship of the Saxon deity Phoseta. During the late war it was a considerable depot for British merchandise, which-was smuggled into the continent.

HELIOCARPUS, in botany, a genus of the digynia order, and dodecandria class of plants : natural order thirty-seventh, columnifera; : CAL. tetraphyllousj the petals four; the styles simple; CAPS, bilocular, compressed, and radiated lengthwise on each side.

HELIOCE'NTRIC, adj. Fr. heliocentrique ; r/Xiof and iclvrpov.

The Iteliocentrick place of a planet is said to be such as it would appear to us from the sun, if our eye were fixed in its centre. Harris.

HELIOCOMETES, a phenomenon some- *imes observed about sun-setting ; being a large luminous tail or column of light proceeding from the body of the sun, and dragging after it, like the tail of a comet, whence the name.

HE'LIOID PARABOLA, or the parabolic spi-ral, in mathematics, is a curve which arises from the supposition of the axis of the common Apol-ionian parabola being bent round into the pe-riphery of a circle, and is a line then passing through the extremities of the ordinates, which do now converge towards the centre of the said circle.

HELIODORUS, bishop of Tricca, in Thessaly, and the father of romance writing, was born at Emmessa, in Pho3nicia, in the end of the fourth century. In his youth he wrote a romance in ten books, the first work of its kind, entitled ˆ.thiopics, relating the amours of Theagenes and Chariclea. He was deposed by a synod because he would not consent to suppress it. It has been repeatedly printed in Greek and Latin, particularly at Basil, in 1553. Professor Robison gives the following high character of this work, in his Proofs of a Conspiracy, p. 266. 1 I think,' says he, ' that the first piece, in which woman is pictured as a respectable character, is the oldest novel that I am acquainted with, written by a Christian bishop, Heliodorus; I mean the adventures of Theagenes and Chariclea.' Heliodorus was also a good Latin poet. He flourished under Theodosius I. and Arcadius.

HELIOGABALUS (M. Aurelius Antoninus), one of the many monsters who reigned in Rome. See ROME. He was murdered, after a short and detestable reign of four years, A. D. 222. He took the name of Heliogabalus from having been a priest of Apollo, in Phoenicia.

HELIOMETER, from jjXioc, the sun, and ptTptw, to measure, an instrument called also astrometer, invented by M. Bouguer in 1747, for measuring with particular exactness the diameters of the stars, and especially those of the sun and moon. This instrument is a kind of telescope, consisting of two object glasses of equal focal distance, placed the one by the side of the other, so that the same eye glass serves for both. The tube is of a conic form, larger at the upper end, which receives the two object glasses,

than at the lower, which is furnished with an, eye-glass and micrometer. By the construction of this instrument two distinct images of an ob-ject are formed in the focus of the eye-glass, whose distance, depending on that of the two object glasses from one another, may be measured with greal accuracy ; nor is it necessary that the whole disc of the sun or moon come within the field of view ; since, if the images of only a small part of the disc be formed by each object-glass, the whole diameter may be easily computed by their position with respect to one another ; for, if the object be large, the images will approach,

or perhaps lie even over one another ; and, the ob-ject-glasses being moveable, the two images may always be brought to touch one another, and the diameter may be computed from the known distance of the centres of the two glasses. Besides, as this instrument has a common micrometer in the focus of the eye-glass, when the two images of the sun or moon are made in part to cover one another, that part which is common to both the images may be measured with great exactness, as being viewed upon a ground that is only one-half less luminous than itself; whereas, in general, the heavenly bodies are viewed upon a dark ground, and on that account are imagined to be larger than they really are. By a small addition to this instrument, provided it be of a moderate length, M. Bouguer thought it very possible to measure angles of three or four degrees, which is of particular consequence in tak-ing the distance of stars from the moon. With this instrument M. Bouguer, by repeated observation, found, that the sun's vertical diameter, though somewhat diminished by the astronomical refraction, is longer than the horizontal diameter ; and, in ascertaining this phenomenon, he also found, that the upper and lower edges of the sun's disc are not so equally defined as the other parts; on this account his image appears somewhat extended in the vertical direction. This is owing to the decomposition of light, which is known to consist of rays differently refrangible in its passage through our atmosphere. Thus the blue and violet rays, which proceed from the upper part of the disc at the same time with those of other colors, are somewhat more refracted than the others, and therefore seem to us to have proceeded from a higher point ; whereas, on the contrary, the red rays proceeding from the lower edge of the disc, being less refracted than the others, seem to proceed from a lower point ; so that the vertical diameter is extended, or appears longer, than the horizontal diameter. Mr. Servington Savery discovered a similar method of improving the micrometer, which was communicated to the Royal Society in 1743. See MICROMETER.

HELIOPOLIS, a city of Egypt, so called by Herodotus and Dioclorus Siculus ; by Moses On, and by. Jeremiah Bethshemesh. It is one of the most ancient cities of the world of which any vestiges can now be traced. It lay south-east of the Delta, and east of Memphis ; and was long famous for its temple of the sun. The most enlightened philosophers of Greece and Rome were attracted to this celebrated seat of learning It was here that Herodotus became acquainted

•with the sciences and mysteries of Egypt. Plato was here taught philosophy, and about thirty years before Christ its ruins were visited and described by Strabo. In this city was erected a temple to the sun, where a particular part was appropriated for the feeding of the sacred ox, which was here worshipped under the name of Mnevis. There was also another splendid tem-ple, with avenues of sphinxes and superb obelisks, before the principal entrance. Out of the four obelisks, which were erected here by Sochis, two were carried to Rome; one was destroyed by the Arabs, and the fourth still remains. The obelisk, or pillar of On, which is now the only piece of antiquity that marks the site of Heliopolis, is about sixty-eight feet high, and six feet and a half wide on each side. According to Dr. Clarke, who has given a very correct engraving of it, it is one entire mass of reddish granite. Each of its four sides exhibits the same characters, and in the same order. Those which face the south have been the least affected by the decomposition of the substance of which they are hewn ; and it is from the southern side that Dr. Clarke's engraving is taken. For a particular account of this obelisk, and the hieroglyphics which it contains, the reader is referred to Dr. Clarke's Travels in Egypt. — Near this city the French, under general Kleber, completely defeated the Turks under the grand vizier, and killed 8000 men, on the 18th of March, 1800, after the breach of the treaty of El-Arisch.

HELIOPOLIS, a city of Ccelesyria, near the springs of the Orontes; so called from the worship of the sun; now named Balbec. See BALBEC.

HE'LIOSCOPE, n. s. Fr. helioscope ; jj\ioc and (TKoirew. A sort of telescope fitted so as to look on the body of the sun, without offence to the eyes. See HELIOMETER.

HE'LIOTROPE, n. s. Fr. heliotrope ; %\iog and rptiru; Lat. heliotropium. A plant that turns towards the sun; but more particularly the turnsol, or sunflower.

Tis an observation of flatterers, that they are like the heliotrope j they open only towards the sun, but shut and contract themselves at night, and in cloudy weather. Government of the Tongue.

HELIOTROPE, among the ancients, an instrument or machine for showing when the sun arrived at the tropics and the equinoctial line.

This name was also used for a sun-dial.

HELIOTROPE, in lithology, a precious stone, of a green color, streaked with red veins. Pliny says it is thus called, because, when cast into a vessel of water, the sun's rays falling thereon seem to be of a blood color ; and that, when out of the water, it gives a faint reflection of the figure of the sun ; and is proper to observe eclipses of the sun as a helioscope. The heliotrope is also called the oriental jasper, on account of its ruddy spots. It is found in the East Indies, as also in Ethiopia, Germany, Bohemia, &c. According to Brandes and Firnhaber it contains, silica 96'55, oxide of iron 1-25, alumina 0-83, water 1-05, — 99-58. It is found in rocks belonging to the secondary trap formation. The finest heliotrope comes from Bucharia and Siberia. A variety is found in the

island of Rume in Scotland. It is cut into seals and snuff-boxes. The Siberian wants the red spots.

HELIOTROPIUM, turnsol, a genus of the polygynia order, and pentandria class of plants : natural order forty-first, asperifoliae : COR. salver-shaped and quinquefid, with smaller dents interjected alternately ; the throat closed up by small arches formed in the corolla itself. There are many species, all natives of warm countries. Only one, *viz.* H. tricoccum, grows in Europe, and is a native of France, Spain, and Italy.

HEMISPHERICAL, adj. Helix and sphere.

The helispherical line is the rhomb line in navigation, and is so called because on the globe it winds round the pole spirally, and still comes nearer and nearer to it, but cannot terminate in it. Harris.

HE'LIX, n. s. Fr. helice; Gr. eXi£. Part of a spiral line : a circumvolution.

Find the true inclination of the screw, together with the quantity of water which every helix does contain. Wilkint.

HELIX, in anatomy, is the whole circuit or extent of the auricle or border of the ear outwards ; whence the inner protuberance surrounded thereby, and answering thereto, is called antihelix. See ANATOMY.

HELIX, in architecture. Some authors make a difference between the

helix and the spiral. A stair-case, according to Daviler, is in a helix, or is helical, when the stairs or steps wind round a cylindrical newel; whereas the spiral winds round a cone, and is continually approaching nearer and nearer its axis. The word is also applied to the caulicules, or little volutes under the flowers of the Corinthian capital ; called also urillae.

HELIX, in zoology, the snail, a genus in the class of vermes, and order of testacea. The shell consists of one spiral, brittle, and almost diaphanous valve ; and the aperture is narrow. There are numerous species, principally distinguished by the figure of their shells. They are of various sizes, from that of a small apple to less than a grain of corn. Some of them live on land, frequenting woods and gardens, or inhabiting clefts of rocks and dry sand-banks. Others are aquatic, inhabiting ponds, deep rivers, and the ocean. The principal species are,

1. H. hortensis, the garden snail, is in form like the pomatia, but less, and not umbilicated, clouded, or mottled with brown. It abounds with a viscid slimy juice, which it readily gives out by boiling in milk or water, so as to render them thick and glutinous. The decoctions in milk are apparently very nutritious and demul-cent, and have been recommended in a thin acrimonious state of the humors, in consumptive cases, and emaciations. The eyes of snails are lodged in their horns, one at the end of each horn, which they can retract at pleasure. The manner of examining these eyes, which are four in number, is this : when the horns are out, cut off nimbly the extremity of one of them ; and, placing it before the microscope, you may discover the black spot at the end to be really a semiglobular eye. The dissection of this animal is very curious ; for the microscope not only discovers the heart beating just acainst the

round hole near the neck, which seems the place of respiration, but also the liver, spleen, stomach, and intestines, with the veins, arteries, mouth, and teeth, are plainly observable. The guts of this creature are green, from its eating herbs, and are branched all over with fine

capillary white veins : the mouth is like a hare's or rabbit's, with four or six needle teeth, resembling those of leeches, and of a substance like horn. Snails are all hermaphrodites, having both sexes united in each individual. They lay their eggs with great care in the earth, and the young ones are hatched with shells completely formed. Cutting off a snail's head, a little stone appears, which is supposed to be a great diuretic, and good in all nephritic disorders. Immediately under this stone the heart is seen beating ; and the auricles are evidently distinguishable, are membraneous, and of a white color ; as are also the vessels which proceed from them. Snails discharge their excrements at a hole in their neck ; they also breathe by this hole, and their parts of generation are situated very near it. Snails are said to couple three times at the distance of about fifteen days, which lasts ten or twelve hours. At the end of about eighteen days they bring forth their eggs by the aperture of their neck. The snail is a small animal ; it is not free from the plague of supporting other smaller animals on its body ; and as in other animals we find these secondary ones either living on their surface, as lice, &c., or in the intestines, as worms, it is very remarkable that this creature infests the snail in both these manners ; being found sometimes on the surface of its body, and sometimes within its intestines. There is a part of the common garden snail, and of other of the like kinds, commonly called the collar. This surrounds the neck of the snail, and is considerably thick, and is the only part that is visible when the animal is retired quietly into its shell. In this state of the animal these insects which infest it are usually seen in considerable numbers marching about very nimbly on this part ; besides, the snail, every time it has occasion to open its anus, gives them a place by which to enter into its intestines, and they often seize the opportunity. Snails are great destroyers of fruit in gardens, especially the better sorts of wall-fruit. Lime and ashes sprinkled on the ground where they most resort will drive them away, and destroy the young brood of them : it is a common practice to pull off the fruit they have bitten ; but this should never be done, for they will eat no other till they have wholly eaten up this if it be left for them.

2. H. janthina, with a violet-colored shell. This is remarkable for the extreme thinness of texture, which breaks with the least pressure, and seems therefore entirely calculated to keep the open sea, or at least to shun rocky shores. It inhabits the seas of Europe, especially the Mediterranean; those of Asia and Africa; and also the ocean. The living animal, when touched, exudes a juice which stains the hands of a violet color. Dr. Hawkesworth, in his account of Cook's voyage, mistakes this shell for that which yielded the purpura of the ancients.

But

whoever looks into Pliny cannot entertain the idea, that the thin shell aforementioned could be the same with it. They had several shells which yielded the purple dye ; but these were all rock shells (see BUCCINUM, and MUREX), very different both in figure and hardness from the little helix janthina; which is not calculated for the neighbourhood of rocks.

3. H. pomatia, the exotic snail, with five spires, most remarkably ventricose, and fasciated with a lighter and deeper brown, is a native ot France, where it inhabits the woods ; but has been naturalised in England, where it inhabits the woods of the southern counties. It was introduced, as it is said, by Sir Kenelm Digby, whether for medical purposes, or as food, is uncertain : tradition says, that to cure his beloved wife of a decline, was the object. They are quite confined to our southern counties. An attempt was made to bring them into Northamptonshire, but they could not live there. They are used as food in several parts of Europe during Lent ; and are preserved in an escarga-toire, or a large place boarded in, with a floor covered half a foot deep with herbs, in which the snails nestle and fatten. They were also a favorite dish with the Romans, who had their cochlearia, a nursery similar to the above. Ful-vius Hirpinus was the first inventor of this luxury, a little before the civil wars between Caesar and Pompey. The snails were fed with sodden wine and bran. Its name is derived not from any thing relating to an orchard, but from irwpa, an operculum, it having a very strong one. This seems to be the species described by Pliny, lib. viii. c. 39, which he says was scarce ; that it covered itself with the opercle, and lodged under ground ; and that they were at first found only about the Maritime Alps, and more lately near Velitrae.

HELL, n. s. Sax. bele ; Teut. helle, signifying originally the grave ; as some think, from Goth, hyla; Sax. belan, to cover, or conceal. The place of the devil and wicked spirits ; the separate state, or invisible world; temporal death ; the place at a running play to which those who are caught are carried; the place where the taylor throws his shreds ; the infernal powers. By old writers it is a word used in composition.

I will go down to my son mourning to hell.

Genesis.

The pains of hell came about me ; the snares of death overtook me. Psa. xviii. 4.

He descended into hell. Apostle's Creed. Men shuld, eke, rembre hem of the shame That is to come at the day of dome, to hem that ben Not penitent in this present lif ; for all the creatures

In heven, and in erthe, and in helle, shul See apertly all that they hidden in this world.

Chtnver. The Penones Tale. For it is a knell That summons thee to heaven, or to hell.

Shakspeare.

If a man were a porter of hell gates, he should have old turning the key. Id. Macbeth.

Hell's black tyrant trembled to behold The glorious light he forfeited of old. Cou-lry.

HEL

Let none admire

That riches grow in hell; that soil may best Deserve the precious bane. Milton.

In Covent-garden did a taylor dwell, Who might deserve a place in his own hell.

King's Cookery.

This trusty squire, he had as well As the bold Trojan knight seen hell ; Not with a counterfeited pass Of golden bough, but true gold lace.

Hudibrai.

O dire ambition ! what infernal power Unchained thee from thy native depth of hell, To stalk the earth with thy destructive train Murder and Lust! to waste domestic peace, \nd every heart-felt joy. Browne.

Then couples three be straight allotted there j They of both ends the middle two do fly ;

The two that in mid-place, hell called were, Must strive with waiting foot and watching eye,

To catch of them, and them to hell to bear, That they, as well as they, hell may supply.

Sidney.

But some his royal service (fools !) disdain ; So down were flung : — (oft bliss is double pain) In heaven, they scorned to serve, so now in hell they reign. Fletclier's Purple Island.

by a power,

Deeper than all yet urged, a tyrant-spell, Which had its birth-place in a star condemned, The burning wreck of a demolished world, A wandering hell in the eternal space ; By the strong curse which is upon my soul, The thought which is within me and around me, I do compel ye to my will.

Byron. Childe Harold.

HELL. The hell of the ancient heathens was divided into two mansions; the one called ELYSIUM, on the right hand, pleasant and delightful, appointed for the souls of good men ; the other called TARTARUS, on the left, a region of misery and torment, appointed for the wicked; The latter only was hell, in the present restrained sense of the word. (See these articles). The philosophers were of opinion, that the infernal regions were at an equal distance from all the parts of the earth ; nevertheless it was the opinion of some, that there were certain passages which led thither, as the river Lethe near the Syrtes, and the Acherusian cave in Epirus. At Hermione it was thought that there was a very short way to hell ; for which reason the people of that country never put the fare into the mouths of the dead to pay their passage. The Jews placed hell in the centre of the earth, and believed it to be situated under waters and mountains. According to them, there are three passages leading to it : the first is in the wilderness, and by that

Korah, Dathan, and Abiram, descended into hell ; the second in the sea, because Jonah, who was thrown into the sea, cried to God out of the belly of hell ; the third is in Jerusalem, because it is said the fire of the Lord is in Zion, and his furnace is in Jerusalem. They likewise maintained seven degrees of pain in hell, because they find this place called by seven different names in scripture. Though they believed that infidels, and persons eminently wick-ed, will continue for ever in hell ; yet they held, that every Jew who is not infected with some heresy, and has not acted contrary to

the points mentioned by the rabbies, will not be punished therein for any other crimes above a year at most.

The Mahommedans believe the eternity of rewards and punishments in another life. In the Koran it is said that hell has seven gates ; the first for the Mussulmans, the second for the Christians, the third for the Jews, the fourth for the Sabians, the fifth for the Magians, the sixth for the Pagans, and the seventh for hypocrites of all religions. The locality of hell, and the reality of its fire, began first to be controverted by Origen. That father, interpreting the Scripture account metaphorically, makes hell to consist, not in external punishments, but in a consciousness or sense of guilt, and a remembrance of past pleasures. Among the moderns, Mr. Whiston advanced a new hypothesis. The comets, he thinks, are so many hells appointed in their orbits alternately to carry the damned into the confines of the sun, there to be scorched by its violent heat, and then to return with them be-yond the orb of Saturn, to starve them in those cold and dismal regions. Another modern au-thor supposes the sun to be the local hell. See THEOLOGY.

HELL, VALLEY OF, a valley of Suabia, in the Black Forest, through which, for many leagues, there is scarcely room for fifty men to marcli in front, the mountains rise so high on each side. Through this formidable defile, though defended by numerous bodies of Austrian troops, general Moreau, in 1798, forced a passage with his army, through a hostile country of 300 miles in extent : and daily gave battle to the Austrians, while flushed with victory; and even took several thousands of them prisoners, with many of their colors and cannons, during his desperate but masterly retreat, which many think has not been equalled since the days of Xenophon.

HELL'-BLACK, adj. "} Compounds now

HELL’-BRED, adj. HELL’-BROTH, n. s. HELL’-DOOMED, adj. HELL’-GOVERNED, adj. HELL’-HATED, adj. HELL’-HAUNTED, adj. HELL’-HOUND, n. s. HELL’-KITE, n. s. HEL’LISH, adj. HEL’LISHLY, adv. HEL’LISHNESS, n. s. HELL’WARD, adv.

rarely used ; their meaning is for the most part obvious : hell-broth, a composition boiled up for infernal purposes : hell - haunted, frequented by the devil : hellhound, a dog or agent of hell : hell-kite, a kite of the infernal breed : hellish,

any thing having the qualities of hell ; infernal ; diabolical ; wicked : hellward, towards hell. The term hell prefixed to any word notes detestation .

Heart cannot think what courage and what cries, With foul enfouldered smoak and flashing fire, The hell-bred beast threw forth into the skies.

Spenser.

Adder’s fork, and blind worm’s sting, Lizard’s leg, and owlet’s wing ; For a charm of powerful trouble, Like a hell-broth boil and bubble.

Shakspeare. Macbeth.

Did you say all ? What all ? Oh, hell-kite! all? What, all my pretty chickens, and their dam, At one fell swoop ? Id,

Earth gape open wide and eat him quick, As thou dost swallow up this good king's blood, Which his hell-governed arm hath butchered.

Shakspeare.

The sea, with such a storm as his bare head In hell-black night endured, would have boiled up, And quenched the stelled fires. Id. Kmg Lear.

Back do I toss these treasons to thy head, With the hellhated lie o'erwhelm thy heart.

Shakspeare.

From forth the kennel of thy womb hath crept

A hellhound that doth hunt us all to death. Id.

And reckonest thou thyself with spirits of heaven,

Hell-doomed ! and breathest defiance here and scorn,

Where I reigned king ? Milton.

Victory and triumph to the Son of God, Now entering his great duel, not of arms, But to vanquish by wisdom hellish wiles. Id.

I called

My hellhounds to lick up the draff, and filth, Which man's polluting sin with taint had shed On what was pure. Id.

O thou celestial or infernal spirit of love, or what other heavenly or hellish title thou list to have, for effects of both I find in myself, have compassion of me. Sidney.

Now the hellhounds with superior speed Had reached the dame, and, fastening on her side, The ground with issuing streams of purple dyed.

Dryden.

Fierce Osmond closed me in the bleeding bark, And bid me stand exposed to the bleak winds, Bound to the fate of this hell-haunted grove. Id.

No benefits shall ever allay that diabolical rancour that ferments in some hellish breasts, but that it will foam out at its foul mouth in

slander. South.

Be next thy care the sable sheep to place Full o'er the pit, and hellward turn their face.

Pope.

HELL GATE, a strait near the west end of Long Island Sound, opposite to Harlem, in York Island, and about eight miles north-east of New York city, remarkable for its whirlpools, and a bed of rocks which extend quite across it. There is a sufficient depth of water for any vessel ; but the passage of large ships can only be accomplished with the most skilful pilots.

HELLANICUS of Mitylene, a celebrated Greek historian, born before Herodotus, flourished about A. A. C. 480. He wrote a history of the ancient kings and founders of cities, but it has not come down to us.

HELLAS, in ancient geograpny, an appellation comprising, according to the ancient Greeks and Romans, Achaia and Peloponnesus, but afterwards restrained to Achaia. It was bounded on the west by the Achelous, on the north by mounts Othrys and Octa, on the east by the ,/Egean Sea, and on the south by the Saronic and Corinthian Bays, and by the Isthmus which joins it to Peloponnesus. It was called Hellas from HelLen the son of Deucalion ; and it is now call-ed Livadia.

HELLE, in fabulous history, a daughter of Athamas, king of Thebes, by Nephele. She fled from her father's house with her brother Phryxus, to avoid the cruelty of her stepmother Ino. According to some, she was carried through the air on a ram with a golden fleece, which her mother had received from Neptune, and in her passage became giddy, and fell into that part of the sea which from her received the name of

Hellespont. Others say that she was carried on a cloud, or rather upon a ship, from which she fell into the sea and was drowned. See PHRYXUS.

HEL'LEBORE, n. s. Lat. helleborus. Christmas flower.

HELLEBORE, BASTARD. See SERAPIAS.

HELLEBORE, BLACK. See HELLEBORUS.

HEL'LEBORE, WHITE, n s. Lat. veratrum. A plant. See VERATRUM.

There are great doubts whether any of its species be the true hellebore of the ancients. Miller.

HELLEBORUS, HELLEBORE, a genus of the polygynia order, and pentandria ckss of plants : natural order twenty-sixth, multisiliquae. CAL. none : petals five or more : the nectaria are bilabiated and tubular : CAPS, polyspermous, and a little erect. The most remarkable species is the

H. niger, black hellebore, or Christmas rose. It has roots composed of many thick fleshy spreading fibres, crowned by a large cluster of lobed leaves, consisting each -of seven or eight obtuse fleshy lobes, united to one foot-stalk ; and between the leaves several thick fleshy flower-stalks three or four inches high, surmounted by large beautiful white flowers of five roundish pe-tals, and numerous filaments, appearing in win-ter, about or soon after Christmas. It may be propagated either by seeds or parting the roots. It prospers in open borders, or may be planted in pots to move when in bloom, in order to adorn any particular place ; but it always flowers fairest and most abundantly in the front of a warm sunny border. The plants may be removed, and the roots divided for propagation, in September, October, or November ; but the sooner in autumn it is done, the stronger will the plants flosver at their proper season. The root was anciently used as a cathartic. The taste is acrid and bitter. Its acrimony is fel* on the tip of the tongue, and then spreads itself immediately to the middle, without being much perceived in the intermediate part. On chewing the root for a few minutes, the tongue seems benumbed, and affected with a kind of paralytic stupor, as when burnt by eating any thing too hot. The fibres are more acrimonious than the head of the root from whence they issue. Black hellebore root, taken from fifteen to thirty grains, proves a strong cathartic ; and, as such, has been celebrated for the cure of maniacal and other disorders proceeding from what the ancients called the atra bilis ; in which cases, medicines of this kind are doubtless occasionally of use, though they are by no means possessed of any specific power. It does not however appear that our black hellebore acts with so much violence as that of the ancients ; whence many have supposed it to be a different species of plant : and indeed the descriptions which the ancients have left us of their hellebore do not agree with those of any of the sorts usually taken notice of by modern botanists. Vauquelin ascribes its acrimony to a peculiar oil, which he separated from the infusion in alcohol, by distilling off the latter. It is very poisonous. Orfila says, on the contrary, that the poisonous quality of hellebore root resides in a principle soluble in water ;

that the powdered root is more certainly fatal, when applied to a wound, than when swallowed ; that the white hellebore is more active than the black ; and that the alkaline extract, which forms a part of the tonic pills of Bacher, is also rery powerful. Vomiting is the only antidote.

H. niger orientalis is a species discovered in the eastern countries, which Tournefort distinguishes thus : amplissirno folio, caule praealto, flore purpurescente, and he supposes it to be the true ancient hellebore, from its growing in plenty about mount Olympus, and in the island of An-ticyra, celebrated of old for the production of this antimaniacal drug : he relates, that a scruple of this sort, given for a dose, occasioned convulsions.

HELLEN, the son of Deucalion, who is said to have given the name of Hellenus to the Greeks AA.C. 1521.

HEL'LENISM, n. s. 'EXX»/vt<T/i6c. A Greek idiom.

HELLENISM is only used when speaking of the authors who, writing in a different language, express themselves in a phraseology peculiar to the Greek.

HELLENISTIC LANGUAGE, that used by the Grecian Jews who lived in Egypt and other parts where the Greek tongue prevailed. In this language it is said the Septuagint was written, and also the books of the New Testament; and that it was thus denominated to show that it was Greek filled with Hebraisms and Syriacisms.

HELLENISTS, HELLENISTS, a term occurring in the Greek text of the New Testament, and which in the English version is rendered Grecians. The critics are divided as to the signification of the word.

CEcumenjus, in his Scholia on Acts vi. 1, observes, that it is not to be understood as signifying those of the religion of the Greeks, but those who spoke Greek, ms tXXi/viTi ˆ0£y?a/i£V8c. The authors of the Vulgate version, indeed, render it like ours, Graeci ; but Messieurs Du Port Royal more accurately Juifs Grecs, Greek or Grecian Jews ; the Jews who spoke Greek being here treated of, and hereby distinguished from the Jews called Hebrews, that is, who spoke the Hebrew tongue of that time. These Hellenists, or Grecian Jews, were those who lived in Egypt and other parts where the Greek tongue prevailed. It is to them we owe the Greek version of the Old Testament commonly called the Septuagint, or that of the LXX. Salmasius and Vossius, however, are of a different opinion, with regard to the Hellenists. The latter will only have them to be those who adhered to the Grecian interests. Scaliger is represented, in the Scaligerana, as asserting the Hellenists to be the Jews who lived in Greece and other places, and who read the Greek Bible m their synagogues, and used the Greek language in sacris ; and thus they were opposed to the Hebrew Jews, who performed their public worship in the Hebrew tongue. In this sense St. Paul speaks of himself as a Hebrew of the Hebrews (Phil. iii. 5.), i. e. a Hebrew both by na-tion and language. The Hellenists are thus properly distinguished from the Hellenes or Greeks, mentioned John xii. 20, who were Greeks by birth and nation, and yet proselytes to the Jewish religion.

HELLENODICˆE, ‘ ‘EXXijvo&cai, in antiquity the directors of the Olympian games. At first there was only one, afterwards the number increased to two and three, and at length to nine. They assembled in a place called ‘EXX»jvo£i*atov, in the Elean forum, where they were obliged to reside ten months before the celebration of the games, to take care that such as offered themselves to contend, performed their Trpoyv/ivaff/iara, Or preparatory exercises ; and to be instructed in all the laws of the games by certain men called i>o/xo0vXa*£c> i-e-keepers of the laws. To prevent all unjust practices, they were obliged to take an oath, that they would act impartially, would take no bribes, nor discover the reason for which they disliked or approved of any of the contenders. At the solemnity they sat naked, having before them the victorial crown till the exercises were finished, and then it was presented to whomsoever they adjudged it. Nevertheless, there lay an appeal from the hellenodicae to the Olympian senate.

HELLESPONT, a narrow strait between Asia and Europe, near the Propontis, so named from Helle. It is celebrated for the love and death of Leander, and for the bridge of boats which Xerxes built over it

when he invaded Greece. It is now called the Dardanelles. It is about thirty-three miles long, and in the broadest parts the Asiatic coast is about one mile and a half distant from the European, and only half a mile in the narrowest, according to modern investigation.

HELM,ra. s.&v.a. “) Helm denotes defence:

HELM’ED, adj. >as, Eadhelm happy de—

HEL’MET, n.s. j fence; Sighelm victorious

defence; Berthelm eminent defence; like Amyn—

tas and Boetius among the Greeks. — Gibson’s

Camden. A covering for the head in war; a

helmet ; the part of a coat of arms that bears the

crest ; the upper part of the retort ; the rudder of

a vessel ; the station of government ; a steersman ;

to helm, to steer, guide, or conduct.

Of which every-first on a short truncheon His lordes helmet bore so richly dight, That the worst of hem was worth the ransoune Of any king.

Chaucer. The Floure and the Leafy. What so I spake, I ment it nought but wele, By Mars the god that helmed is of stele.

Id. Troilns and Craeide.

More might be added of helms, crests, mantles, and supporters. Camden’s Remains.

The very stream of his life, and the business he hath helmed, must give him a better proclamation.

Shakipeare.

France spreads his banners in our noiseless land! With plumed helm the slayer begins his threats.

Id.

I saw him down ; thrice up again, and fighting ; From helmet to the spur all bleeding o'er. Id.

You slander

The helms o' the state, who care for you like father*, When you curse them as enemies. Id.

They did not leave the helm in storms ; And such they are make happy states.

Ben Jonson.

More in prosperity is reason tost Than ships in storms, their helms and anchors lost.

Dcnhain.

TT p

The helmed cherubim

Are seen in glittering ranks with wings displayed.

Milton.

With them arose

A forest huge of spears, and thronging helms Appeared, and serried shields in thick array Of depth immeasurable. Id.

The vulgar chemists themselves pretend to be able, by repeated cohobations, and other fit operations, to make the distilled parts of a concrete bring its own caput mortuum over the helm. Boyle.

Seven darts are thrown at once, and some rebound From his bright shield, some on his helmet sound.

Dryden.

Mnestheus lays hard load upon his helm. Id.

Fair occasion shews the springing gale, And interest guides the helm, and honour swells the

sail Prior.

I may be wrong in the means ; but that is no objection against the design : let those at the helm contrive it better. Swift.

Where my wrecked desponding thought From wave to wave of fancied misery At random drove, her helm of reason lost.

Young's Night Thoughts. Sense is our helmet, wit is but a plume, The plume exposes, 'tis our helmet saves. Id,

The HELM, in nautical affairs, is along and flat piece of timber, or an assemblage of several pieces, suspended along the hind part of a ship's stern-post, where it turns upon hinges to the right or left, serving to direct the course of the vessel, as the tail of a fish guides the body. The helm is usually composed of three parts, *viz.* the rudder, the tiller, and the wheel, except in small vessels, where the wheel is unnecessary. As to the form of the rudder, it becomes gradually broader in proportion to its distance from the top, or to its depth under the water. The back, or inner part of it, which joins to the stern-post, is diminished into the form of a wedge throughout its whole length, so as that the rudder may be more easily turned from one side to the other, where it makes an obtuse angle with the keel. It is supported upon hinges; of which those that are bolted round the stern-post to the after extremity of the ship, are called googings, and are furnished with a large hole in the after-part of the stern-post. The other parts of the hinges, which are bolted to the back of the rudder, are called pintles, being strong cylindrical pins, which enter into the googings, and rest upon them. The length and thickness of the rudder is nearly equal to that of the stern-post. The rudder is turned upon its hinges by means of a long bar of timber, called the tiller, which is fixed horizontally in its upper end within the vessel. The movements of the tiller to the right and left, accordingly, direct the efforts of the rudder to 'the government of the ship's course as she advances ; which, in the sea language, is called steering. The operations of the tiller are guided and assisted by a sort of tackle, communicating with the ship's side, called the tiller-rope, which is usually composed of untarred rope-jarns, for the purpose of traversing more readily through the blocks or pulleys.

To facilitate the management of the helm, the tiller-iope, in all large vessels, is wound about a wheel, which acts upon it with the powers of a ciane or windlass. The rope employed in this

service being conveyed from the fore-end of the tiller to a single block on each side of the ship, is farther communicated to the wheel, by two blocks suspended near the mizen-mast, and two holes immediately above, leading up to the wheel, which is fixed upon an axis on the quarter-deck, almost perpendicularly over the fore-end of the tiller. Five turns of the tiller-rope are usually wound about the barrel of the wheel; and, when the helm is amidship, the middle turn is nailed to the top of the barrel, with a mark by which the helmsman readily discovers the situation of the helm, as the wheel turns it from the starboard to the larboard side. The spokes of the wheel generally reach about eight inches beyond the rim or circumference, serving as handles to the person who steers the vessel. As the effect of a lever increases in proportion to the length of its arm, it is evident that the power of the helmsman to turn the wheel will be increased according to the length of the spokes beyond the circumference of the barrel. When the helm, instead of lying in a right Hue with the keel, is turned to one side or the other, it receives an immediate shock from the water, which glides along the ship's bottom in running aft, and this fluid pushes it towards the opposite side, whilst it is retained in this position : so that the stern, to which the rudder is confined, receives the same impression, and accordingly turns about whilst the head of the ship passes in the opposite direction. It must be observed, that the current of water falls upon the rudder obliquely, and only strikes it with that part of its motion which acts according to the sine of incidence, pushing it with a force which not only depends on the velocity of the ship's course, by which this current of water is produced, but also upon the extent of the sine of incidence. This force is by consequence composed of the square of the velocity with which the ship advances, and the square of the sine of incidence, which will necessarily be greater or smaller according to circumstances ; so that if the vessel runs three or four times more swiftly, the absolute shock of the water upon the rudder will be nine or sixteen times stronger under the same incidence : and if the incidence is increased, it will yet be augmented in a greater proportion, because the square of the sine of incidence is more enlarged. This impression, or power of the helm, is always very feeble, when compared with the weight of the vessel ; but, as it operates with the force of a long lever, its efforts to turn the

ship are extremely advantageous. For the helm being applied to a great distance from the centre of gravity, or from the point about which the vessel turns horizontally, if the direction of the impression of the water upon the rudder be prolonged, it is evident that it will pass widely distant from the centre of gravity : thus the absolute effort of the water is very powerful. It is not therefore surprising, that this machine impresses the ship with a considerable circular movement ; and even much farther whilst she sails with rapidity, because the effect of the helm always keeps pace with the velocity with which the vessel advances. Amongst the several angles that the rudder makes with the keel, there is always one position more

favorable than any of the others, as it more readily produces the desired effect of turning the ship, in order to change her course.

Geometricians have determined the most advantageous angle made by the helm with the line prolonged from the keel, and fixed it at 54° 44', presuming that the ship is as narrow at her floating line, or at the line described by the surface of the water round her bottom, as at the keel. But as this supposition is absolutely false, inasmuch as all vessels augment their breadth from the keel upward to the extreme breadth, where the floating-line or the highest water-line is terminated; it follows, that this angle is too large by a certain number of degrees. For the rudder is impressed by the water, at the height of the floating-line, more directly than at the keel, because the fluid exactly follows the horizontal outlines of the bottom ; so that a particular position of the helm might be supposed necessary for each different incidence which it encounters from the keel upwards. But, as a middle position may be between all these points, it will be sufficient to consider the angle formed by the sides of the ship, and her axis, or the middle line of her length, at the surface of the water, in order to determine afterwards the mean point, and the mean angle of incidence. It is evident that the angle 54° 44' is too open, and very unfavorable to the ship's headway, because the water acts upon the rudder there with too great a sine of incidence, as being equal to that of the angle which it makes with the

line prolonged from the keel below : but above, the shock of the water is almost perpendicular to the rudder, because of the breadth of the bottom, as we have already remarked; If then the rudder is only opposed to the fluid, by making an angle of 45° with the line prolonged from the keel, the impression, by becoming weaker, will be less opposed to the ship's headway ; and the direction of the absolute effort of the water upon the helm, drawing nearer to the lateral perpendicular, will be placed more advantageously, for the reasons above mentioned. On the other hand, experience daily testifies, that a ship steers well when the rudder makes the angle equal to 35° only. It has been already remarked, that the effect of moving the wheel to govern the helm increases in proportion to the length of the spokes ; and so great is the power of the wheel, that, if the helmsman employs a force upon its spokes equivalent to thirty pounds, it will produce an ef-fect of ninety or 120 Ibs. upon the tiller. On the contrary, the action of the water is collected into the middle of the breadth of the rudder, which is very narrow in comparison with the length of the tiller ; so the effort of the water is very little removed from the fulcrum upon which it turns ; whereas the tiller forms the arm of a lever ten or fifteen times longer, which also increases the power of the helmsman in the same proportion that the tiller bears to the lever upon which the impulse of the water is directed. This force then is by consequence ten or fifteen times stronger; and the effort of 30 Ibs , which at first gave the helmsman a power equal to 90 Ibs. or 120 Ibs. becomes accumulated to one of 900 Ibs. or 1800 Ibs. upon the rudder. This disadvantage

then arises from the shortness of the lever upon which the action of the water is impressed, and the great comparative length of the tiller, or lever, by which the rudder is governed ; together with the additional power of the wheel that directs the movements of the tiller, and still farther accumulates the power of the helmsman over it. Such a demonstration ought to remove the surprise with which the prodigious effect of the helm is sometimes considered, from an inattention to its mechanism : for we need only to observe the pressure of the water, which acts at a great distance from the centre of gravity, about which the ship is supposed to turn, and we shall easily perceive the difference there is between the effort of the water against the helmsman, and the effect of the same impulse against the vessel. With regard to the person who steers, the water acts only with the arm of a very short lever : on the contrary, with regard to the ship, the force of the water acts upon a very long lever, which renders the action of the rudder extremely powerful in turning the vessel ; so that,

in a large ship, the rudder receives a shock from the water of 2700 Ibs. or 2800 Ibs., which is frequently the case when she sails at the rate of three or four leagues by the hour ; and this force, being applied perhaps 100 or 110 feet distant from the centre of gravity, will operate upon the ship to turn her about, with 270,000 Ibs. or 308,000 Ibs. ; whilst, in the latter case, the helmsman acts with an effort which exceeds not 30 Ibs. upon the spokes of the wheel. From what has been said, it is plain that the more a ship increases her velocity, with regard to the sea, the more powerful will be the effect of the rudder ; because it acts against the water with a force which increases as the square of the swiftness of the fluid, whether the ship advances or retreats. See NAVIGATION.

The HELMET was anciently worn by horsemen both in war and in tournaments. It covered both the head and face, only leaving an aperture in the front secured by bars, which was called the visor. See ARMOUR. In achievements it is placed above the escutcheon for the principal ornament, and is the true mark of chivalry and nobility. Helmets vary according to the different degrees of those who bear them. They are also used as a bearing in coats of arms. See HERALDRY.

HELMI'NTHIC, adj. From 'iXˆivQoˆ. Relating to worms.

HELMINTHOLITHUS, in natural history, a name given by Linnaeus to petrified bodies resembling worms.

HELMONT (John Baptist Van), a celebrated Flemish gentleman, born at Brussels in 1577. He acquired such skill in natural philosophy, physic, and chemistry, that he was accounted a magician, and thrown into the inquisition : but, having with difficulty justified himself, as soon as he was released he retired to Holland ; where he died in 1644. He published 1. De Magnetica Corporum Curatione. 2. Febrium Doctrina Inaudita. 3. Ortus Medicinaa. 4. Paradoxa de aquis Spadanis : and other works, printed together in 1 vol. folio.

HELOISE, or ELOISA, the mistress and afterwards the wife of Abelard. famous for her Latin

letters to him, after they had retired from the world. She died abbess of Paraclete in 1163. See ABELARD.

HELONIAS, in botany, a genus of the trigy-nia order and hexandria class of plants ; natural order tenth, coronariae : COR. hexapetalous : CAL. none : CAPS, trilocnlar.

HELOS, in ancient geography, a maritime town of Laconia, between Trinasus and Acrise, in the district of Helotea. In Pausanias's time it was in ruins. The people, being subdued by the Lacedaemonians, were all reduced to a state of the most abject slavery. Hence the term itXwrfVHv, in Harpocration, for being in a state of slavery ; and hence also the Lacedaemonians called the slaves of all nations whatever helotes. Heloticus is the epithet.

HELOTVE, HELOTES, or HELOTS, called also Helei and Heleatae by Stephanus, and Ilotse by Livy, the inhabitants of Helos and the slaves of the Spartans. See HELOS. The Spartans were forbidden the exercise of any mean or mechanical employment, and therefore the whole care of supplying the city with necessaries devolved upon the Helots. These Helots farmed the lands of the Spartans ; and, in order to attach them to the service of their masters by the allurement of gain, they only paid a fixed rent, inferior to the produce, and which it would be disgraceful in any proprieter of land to advance. They were also skilful in mechanics : in time of war they served as sailors on board the fleet ; and in the army every oplites, or heavy armed soldier, was accompanied by one or more of them.

HELP, v. a., v. n. & n. s,~] Preter. helped, or HELP'ER, n. s. I holp ; part, helped,

HELP'FUL, adj. [orholpen. Saxon

HELP'LESS, adj. f jselpan ; Goth, hil—

HELP'LESSLY, adv. \pan; Gr. o<pt\ta.

HELP'LESSNESS, n. s. J The idea of communicating to the advantage of another is com-mon to all these words : as to assist, support, relieve, prevent, avoid ; to promote or forward ; to supply to, or

furnish with, and to present at table : it is used with other words expressive of its particular meaning, as to help up, help out, help over, help off: help is aid, assistance, remedy : a helper is the agent : helpful, use-ful, wholesome, salutary: helpless, wanting power or aid ; irremediable.

But who shal helpen me nowe to complaine, Or who shal nowe my life gie or lede ?

0 Niche ! let nowe thy teres rayne

Into my penne, and helpe me eke in need.

Chaucer. Complaint of the Blacke Knight. Mariage is a ful gret sacrament ; He which that hath no wif I hold him shent ; He liveth helples, and all desolat : (I speke ef folke in secular estat), And herkeneth why ; I say not this for nought, That woman is for mannes helpe ywrought.

Id. The Merchantes Tale.

1 know how to deceive myself withouten help, And how the lion chastised is, by beating of the

whelp. Earl of Surrey.

Such helpless harms it's better hidden keep, Than rip up grief, where it may not avail. Spenser.

Muleasses, despairing to recover the city, hardly escaped his enemies' hands by the good help of his ancle. Knolles.

Heaven

Hath brought me up to be your daughter's dower.

As it hath f;itcd her to be my motive,

And helper to a husband. Shakspeate

Let's fight with, gentle words,

Till time lend friends, and friends their helpful swords. Id.

Sir, how comes it you

Have holp to make this rescue ? Id.

Cease to lament for that thou can’st not help ; And study help for that which thou lamentest. Id.

Love doth to her eyes repair, To help him of his blindness. Id.

A skilful chymist can as well, by separation o/ visible elements, draw helpful medicines out of poi-son, as poison out of the most healthful herbs.

Raleigh.

If you make the earth narrower at the bottom than at the top, in fashion of a sugarloaf reversed, it will help the experiment. Bacon.

Coral is in use as an help to the teeth of children.

Id.

Discreet followers and servants help much to reputation. Id.

Let us work as valiant men behoves ; For boldest hearts good fortune helpeth out.

Fairfax.

It is impossible for that man to despair who remembers that his helper is omnipotent.

Taylor’s Rule of Holy Living.

Though these contrivances increase the power, yet they proportionably protract the time j that which by snch helps one man may do in a hundred days, may be done by the immediate strength of a hundred men in one day. Wilkins.

Compassion, the mother of Tears, is not always a mere idle spectator, but an helper oftentimes of evils.

More.

There is no lielp for it, but he must be taught accordingly to comply with the faulty way of writing.

Holder on Speech.

‘ A man reads his prayers out of a book, as a means to help his understanding and direct his expressions.

Stillingjieet.

Bennet’s grave look was a pretence, And Danby’s matchless impudence Helped to support the knave. Dryden.

One dire shot

Close by the board the prince’s main-mast bore ; All three now helpless by each other lie. Id.

This he conceives not hard to bring about, If all of you should join to help him out. Id.

Those closing skies may still continue bright ; But who can help it, if you make it night. Id. She, betwixt her modesty and pride, Her wishes, which she could not help, would hide.

Id.

He orders all the succours which they bring ; The helpful and the good about him run, And form an army. Id.

Naked he lies and ready to expire, Helpless of all that human wants require. Id. The man that is now with Tiresias, can help him to his oxen again. L’Ettrange.

It is a high point of ill nature to make sport with any man’s imperfections that he cannot help. Id.

Having never learned any laudable manual art, they have recourse to those foolish or ill ways in use, to help off their time. Locke.

He may be beholden to experience and acquired notions, where he thinks he has not the least help from them. Id.

Help and ease them, but by no means bemoan them. Id.

Wherever they are at a stand, help them prcsentlj over the difficulty without any rebuke. Id,

Another help St. Paul himself affords us towards the attaining the true meaning contained in his epistles. Id.

Virtue is a friend and an help to nature ; but it is vice and luxury that destroys it, and the diseases of intemperance are the natural product of the sins of intemperance. South.

The God of learning and of light, Would want a God himself to help him out.

Swift.

I live in the corner of a vast unfurnished house : my family consists of a steward, a groom, a helper in the stable, a footman, and an olJ maid. • Id.

Those few who reside among us, only because they cannot help it. *(*.

Some, wanting the talent to write, made it their care that the actors should help out where the muses failed. Rymer.

A generous present helps to persuade as well as an agreeable person. Garth.

So great is the stupidity of some of those, that they may have no sense of the help administered to them.

Smalridge.

What I offer is so far from doing any diskindness to the cause these gentlemen are engaged in, that it does them a real service, and helps them out with the main thing whereat they stuck. Woodward.

Let our enemies rage and persecute the poor and the helpless; but let it be our glory to be pure and peaceable. Rogers.

He cannot help believing, that such things he saw and heard. Atterbury.

In that dread moment, how the frantic soul Raves round the walls of her clay tenement, Runs to each avenue and shrieks for help, But shrieks in vain. Blair's Grave.

In plenty starving, tantalized in state, And complaisantly helped to all I hate ; Treated, caressed, and tired, I take my leave.

Pope.

I cannot help remarking the resemblance betwixt him and our author in qualities, fame, and fortune.

Id.

How shall I then your helpless fame defend ? Twill then be infamy to seem your friend. Id.

At evening to the setting sun he turns A mournful eye, and down his dying heart Sinks helpless. Thomson's Seasons.

If they take offence when we give none, it is a thing we cannot help, and therefore the whole blame must lie upon them. Sanders.

I mean the man who, when the distant poor Need help, denies them nothing but his name.

Cowper's Task.

And he had learned to love, — I know not why, For this, in such as him, seems strange of mood, — The helpless looks of blooming infancy, Even in its earliest nurture. Byron. Childe Harold.

HELSINGFORS, a town and naval station in the south of Finland, at the mouth of the Wanna. It has a very good harbour, and 3200 inhabitants ; who carry on a trade in corn, fish, logs, and deals : the latter articles being exported sometimes to the Mediterranean. It is defended by .several forts, the principal of which is Svveaborg. It was built by Gustavus I., but burnt down in 1741 by the Russians : who, however, now have much encouraged it. It is 104 miles S.S. E. of Abo.

IIELSINGIA, or HELSINGLAND, a province of Sweden, bounded on the north by Jempter-

land and Medal pad ia, on the eastbytheBothnian Gulf, on the south by Gestricia, and on the south-west and west by Dalecarlia. It is full of

mountains and forests. The principal towns are Hudwicksvald, Alta, and Dilsbo. The rivers and lakes abound with fish. Its chief trade is in wood, flax, linen, iron, butter, tar, tallow, See. It is 120 miles long, and ninety broad.

HELSTON, a populous borough of Cornwall, seated on the Cober, near its influx into the sea. It is one of those appointed for the coinage of tin, and the place of assembly for the west division of the shire. By a grant of Edward III. it has a market on Monday, and eight fairs. It had formerly a priory and a castle, and sent members to parliament in the reign of Edward L; but was not incorporated till the 27th of queen Elizabeth, who appointed a mayor, four aldermen, and twenty-four assistants. It was re-incorporated August 16th 1774, and now sends one member to parliament. It has a large market-house, a guildhall, and four streets in the form of a cross, with a channel of water running through each. The steeple of the church, with its spire, is ninety feet high, and a sea-mark. King John exempted Helston from pay-ing toll any where but in London ; and the citizens from being irapleaded any where except in their own borough. It is twelve miles east of Penzance, and 274 W. S.W. of London. In the neighbourhood was formerly one of those curiosities called rocking-stones, which was thrown down by the governor of Pendennis Castle un-der Oliver Cromwell. Near the town is a curious heap of stones, piled loosely up, in the form of a circle, called Earth Castle, used anciently as a fortification.

HELTER-SKELTER, adv. From Saxon beolpcen. r-ceabo, as Skinner fancies, the darkness of hell ; hell, says he, being a place of confusion ; in a hurry; without order; tumultuously.

Sir John, I am thy Pistol, and thy friend ;

And helter-skelter have I rode to England,

And tidings do I bring. Shakspeare.

He had no sooner turned his back but they were at it helter-skelter, throwing books at one another’s heads. L’Estrange.

HELVE, n. s & v. a. Sax. belpe, the handle of an axe : to fit with a handle.

The slipping of an axe from the helne, whereby another is slain, was the work of God himself.

Raleigh’s History.

HELVETIA, or CIVITAS HELVETIA, in ancient geography, the country of the Helvetii, which was divided into four pagi or cantons, situated to the south and west of the Rhine, by which they were divided from the Germans ; and extending towards Gaul, from which they were separated by Mount Jura on the west, and by the Rhodanus and Lacus Lemanus on the south, and therefore called a Gallic nation. It was formerly a part of Celtic Gaul, but by Augustus assigned to Gallia Belgica. The modern name is Switzerland.

HELVETIC REPUBLIC. See SWITZERLAND

HELVETII, a people of Gallia Belgica, near the country of the Allobroges and the Provincia Romana ; famed for bravery. See GALLIA.

HELVETIUS (Adrian), an eminent physician, born in Holland in 1656. After having studied physic at Leyden he went to Paris, where he acquired great reputation in his profession by discovering a cure for the dysentery, then prevalent. Louis XIV. gave him 1000 louis d'ors for publishing his method ; made him inspector-general of the hospitals in Flanders, physician to the duke of Orleans, 8cc. He died at Paris in 1721, aged sixty-five. He wrote a treatise on the most common diseases, and their remedies (the best edition is that of 1724, in 2 vols. 8vo.) and other works.

HELVETIUS (John Claude), son of the preceding, was born in 1685. He was first physician to the queen ; inspector-general of the military hospitals ; a member of the Academy of Sciences at Paris, of the Royal Society in London, and of the Academies of Prussia, Florence, and Bologne. He was author of 1. Idee Generate de 1'economie animate, 1722, 8vo. 2. Principia Physico-Medica, in tyronum medicinae gratiam conscripta, 2 vols. 8vo. He died in 1755, aged seventy.

HELVETIUS (Claude Adrian), son of the preceding, was born at Paris in 1715, and in 1758 published a celebrated book De L'Esprit. Voltaire calls him ' a true philosopher ;' but his book was stigmatised by the authors of the Journal de Trevoux, and suppressed by the government, on account of its atheistical principles. Upon this he came over to England in 1 764, and went afterwards to Berlin, where he was well received by Frederick II. He wrote also 1. Le Bonheur, a poem in six cantos ; 2. Of Man, a philosophical work ; and, 3, The Child of Na-ture improved by Chance, an indecent romance. He died at Paris in 1771.

HELVICUS (Christopher), D. D., professor of divinity, Greek, and the oriental tongues, in the university of Gessen, was born near Frankfort in 1581, educated at Marpurg, and died in 1617. He published several Latin poems, lexicons, and grammars of different languages. The Hebrew language was so familiar to him that he spoke it as fluently as his mother tongue. His Chronological Tables have been greatly esteemed.

HELVII, an ancient people of Gallia Narbo-nensis, who possessed the country since called the Vivarais. Caesar calls them Helvii ; Pliny Helui. Their chief city was Alba, now Albi, or as others think Viviers.

HELVOETSLUYS, a sea-port town of Holland, in the department of Delft, island of Voorn. It has a handsome quay ; is well fortified, and esteemed the safest harbour in the country. The largest men of war may come up to the middle of the town, and the English packet boats frequent it. In January, 1 795, it surrendered to the French, under Pichegru. It is twelve miles west of Dort, and fifteen south-west of Rotterdam.

HEM, n. s., interj., v. a., & v. n. Sax. bem ; Dut. hemmen; Lat. hem! The edge or border of a garment ; and the verb signifies to border, or edge ; to enclose ; confine, and then used with a particle : hem, the interjection, the noise uttered by violent expiration of the breath.

All the skirt about

Was hemed with golden fringe. Faerie Queene. Along the shear of silver streaming Thames, Whose rushy bank, the which his river hums.

Spenser. 1 would try if I could cry hem, and have him.

Shahspeare.

What lets us then the great Jerusalem With valiant squadrons round about to hem ?

Fairfax.

Why, Neptune, hast thou made us stand alone, Divided from the world for this, say they ; Hemmed in to be a spoil to tyranny, Leaving affliction hence no way to fly ? Daniel. So of either side, stretching itself in a narrow length, was it hemmed in by woody hills, as if indeed nature had meant therein to make a place for beholders. Sidney.

He loves to clear his pipes in good air, and is not a little pleased with any one who takes notice of the strength which he still exerts in his morning hems.

Addison.

Howlers must be made of even cloth, white and gentle, without hem, seam, or thread hanging by.

Wiseman.

I hurry me in haste away, And find his honour in a pound, Hemmed by a triple circle round, Chequered with ribbons, blue and green. Pope.

Pronounce a text

Cry hem ; and, reading what they never wrote. Cow per' s Task

Oh ! dearest father, in this agony O» pleasure an/1 -*(. oain — even, while I kiss Thy garment's hem with transport, can it be That doubt should mingle with my filial joys ?

Byron. Don Juan.

HEMATIN, the coloring principle of logwood, the hematoxylon campechianum of botanists. On the watery extract of logwood, digest alcohol for a day, filter the solution, evaporate, add a little water, evaporate gently again, and then leave the liquid at rest. Hematin is deposited in small crystals, which, after washing with alcohol, are brilliant, and of a red dish-white color. Their taste is bitter, acrid, and slightly astringent Hematin forms an orange-red solution with boiling water, becoming yellow as it cools, but recovering, with increase of heat, its former hue. Excess of alkali converts it first to purple, then to

violet, and lastly to brown : in which state the hematim seems to be decomposed. Metallic oxides nnite with hematin, forming a blue-colored compound. Gelatin throws down reddish flocculi. Peroxide of tin, and acid, merely redden it.

HEMELAR (John), an eminent antiquarian, and canon of Antwerp, in the seventeenth century, born at the Hague. He wrote a work entitled, Expositio Numismatum imperatorum Romanorum a Julio Caesare ad Heraclium ; which is very scarce, though it has had several editions. He died in 1640.

HEMEROBAPTISTS, a sect among the ancient Jews, thus called from their washing and bathing daily in all seasons ; and performing this custom with the greatest solemnity, as a religious rite necessary to salvation. Epiphanius says, they denied the resurrection in common with the Sadducees, and entertained some other opinions of theirs. See SABIANS.

HEMEROBIUS, in zoology, a genus of insects of the neuroptera order; the characters of which are these : The mouth is furnished with two teeth; the palpi are four, the wings are deflected, but not plaited; and the antennae a.re bristly, and longer than the breast. There are fifteen species, principally distinguished by their colors. They are named heroerobii from the shortness of their lives, which, however, continue several days. In the state of larva they are great devourers of plant-lice, for which it has had the name of the lion of the plant-lice. They are also cannibals, and devour each other after their transformation. The eggs are born on small gummy pedicles, spun by the insects from their abdomen. These eggs are deposited upon leaves, and set in the form of bunches. They have been taken for parasitic plants. In fifteen or sixteen days the larva attains to its full growth. With its spinning-wheel, at its tail, it makes itself a small, round, white, silky cod, of a

close texture. In summer, at the end of three weeks, the hemerobius issues forth with its wings; but, when the cod has not been spun till autumn, the chrysalis remains in it the whole winter, and does not undergo its final metamorphosis till the next spring. The flight of this insect is heavy: some species have an excrementitious smell. One is named the water hemerobius, because it lives mostly at the water side.

HEMEROCALLIS, day-lily, or lily asphodel : a genus of the monogynia order, and hexandria class of plants; natural order tenth, coronariae: COR. campanulated, tube cylindrical ; the stamina declining downwards.

H. flava, the yellow day-lily, has strong fibrous roots, sending up large hollow keel-shaped leaves, two feet long, upright, leafless, firm stalks, two feet high ; dividing at top into several foot-stalks, each terminated by one large liliaceous yellow flower of an agreeable odor.

H. fulva, the reddish or copper-colored day-lily, has roots composed of strong fleshy fibres and large oblong tubes; radical, keel-shaped, hollow, pointed leaves, a yard long, reflected at top ; with leafless stalks three or four feet high, and large copper-colored liliaceous flowers. These have large stamina, charged with a kind of brown-colored farina; which, on being touched or smelled to, is discharged in great plenty all over the hands and face. Both these species are hardy, and may be easily propagated by parting their roots.

HEMERODROMI, from jj^tpo, day, and Ipopoc, course, &c., among the ancients, were guards appointed for the security of cities and other places. They went out of the city every morning, as soon as the gates were opened, and kept all day patrolling round the place ; sometimes also making excursions farther into the country, to see that there were no enemies lying in wait to surprise them. Hemerodromi were also a sort of couriers, who only travelled one day, and delivered their despatches to a fresh man, who run his day, and so on to the end of the journey. The Greeks had also these sorts of couriers, which they derived from the Persians, who first used them, as appears from Herodotus.

HEMEROTROPIIIS, from nptpa, a day, and i, food, in antiquity, a measure of capacity, the same with the choenix ; so called from its containing one day’s food.

HEMI, from rjpiavf, half, a word used in the composition of various terms, signifying the same with semi or demi, half.

HEM'ICYCLE, n. s. Gr. iˆWVoc. A half round.

HEMICYCLE, of »/ju<rwc, half, and KVK\OS, circle, is particularly applied, in architecture, to vaults in the cradle form; and arches or sweeps of vaults, constituting a perfect semicircle. To construct an arch of hewn stone, they divide the hemicycle into so many voissoirs ; taking care to make them an uneven number, and that there be no joint in the middle, where the key-stone should be.

HEMIMERIS, in botany, a genus of the angiospermia order, and didynamia class of plants : CAPS, bilocular, with one of the cells more gibbous than the other: COR. is wheel-shaped ; with one division greater, and inverse heart-shaped ; the interstice of the divisions nectar-bearing.

The HEMINA, in Roman antiquity, was a liquid measure, which, according to Arbuthnot, was equal to half a wine-pint English measure ; its contents being 2-818 solid inches.

HEMIOBOLON, a weight often mentioned by the ancient writers in medicine, signifying the half of the obolus, or the twelfth part of a dram, i. e. five grains.

HEMIONITES, from hemionus, a mule, in botany, mule's fern ; a genus of the natural order of filices, belonging to the cryptogamia class of plants. The fructifications, are in lines decussating or crossing each other.

HEMIPTERA, from rjfiiavˆ half, and irTtpov, wing, in the Linnasan system, the second order of insects, comprehending twelve genera, *viz.* the blatta, mantis, gryllus, fulgora, cicada, notonecta, nepa, cimex, aphis, chermes, coccus, and thrips ; and a great number of species. See ENTOMOLOGY and ZOOLOGY.

HEMISPHERE, n. s. -) Fr. hemisphere ; Gr.

HEMISPHERIC, adj. > ripurfytdiQiov. The

HEMISPHERICAL, adj. j half of a globe when it is supposed to be cut through its centre in the plane of one of its greatest circles.

Night with his mantel, that is derke and rude, Gan oversprede the hemisperie about.

Chaucer. The Marchantes Tale.

The suu is more powerful in the northern hemisphere, and in the apogeum ; for therein his motion is slower. Browne.

Night and her ugly subjects thou dost fright, And sleep the lazy owl of night, Ashamed and fearful to appear,

They screen their horrid shapes with the black hemisphere. Cowley.

That place is earth, the seat of man : that light His day, which elst. as the' other hemisphere, Night would invade. Milton.

A hill

Of Paradise, the highest from whose top The hemisphere of earth, in clearest ken Stretched out to the' amplest reach of prospect lay.

Id.

HEM

1G1

HEM

The thin film of water swells above the surface of the water it swims on, and commonly constitutes hemispherical bodies with it. Boyle. In open prospect nothing bounds our eye,

Until the earth seems joined unto the sky ;

So in this hemisphere our utmost view

Is only bounded by our king and you. Dtyden.

A pyrites, placed in the cavity of another of an he-misphcrick figure, in much the same manner as an acorn in its cup. Woodward.

HEMISPHERE, in astronomy, is particularly used for cne half of the

mundane sphere. The equator divides the sphere into two equal parts, called the northern and southern hemispheres. The horizon also divides the sphere into two parts, called the upper and the lower hemispheres. Hemisphere is also used for a map, or projection of half the terrestrial globe, or half the celestial sphere, on a plane. Hemispheres are frequently called planispheres.

HEMISTICH, n. s. Fr. fiemistiche ; jj/tt-r/xiov. Haifa verse.

He broke off in the hemiitick, or midst of the verse ; but seized, as it were, with a divine fury, he made up the latter part of the hemistich. Dry den.

HEMISTICH denotes also averse not completed. Of this there are frequent examples in Virgil's ,*£neid ; but whether they were left unfinished by design or not, is disputed : such are,

Ferro accinta vocat. JEn. II. v. 614.

And

Italiam non sponte sequor. JEn. IV. 361. In common English verses, a short pause is required at the end of each hemistich or half verse.

HEM'LOCK, n. ». Sax. bemloc. An herb. He was met even now.

Crowned with rank fumiter and furrow-weeds,

With hardocks, hemlock. Shakspeare. King Lear. And I ha' been plucking (plants among)

Hemlock, henbane, adder's tongue,

Nightshade, moon-wort, libbard's-bane,

And twice by the dogs was like to be ta'en.

Ben Jonson.

We cannot with certainty affirm, that no man can be nourished by wood or stones, or that all men will be poisoned by hemlock. Locke.

Be air, thou hemlock drinker.

Byron. The Deformed Transformed.

HEMLOCK. See CICUTA and COXIUM.

HEMLOCK DROP-WORT. See OENAKTHE.

HEMLOCK LAKE, a lake in the state of New York, United States, in Ontario county, about five miles long, north and south, and one mile wide. It empties its waters northward, joining with Honeoy Creek.

HEMLOCK, LESSER. See ˆETHUSA.

HEMLOCK, WATER. See CICUTA.

HEMMINGFORD (Walter de), an English historian of the fourteenth century. He was an ecclesiastic in Gisborough Abbey, in Yorkshire, and wrote an English Chronicle, which comprehends the period between 1066 and 1308. He died in 1347.

HEMODES, in ancient geography, seven islands of Denmark, now called Zealand, Fu-nen, Langlandt, Muen, Falster, Lalandt, and Femeren.

VOL. XI.

IIEM'ORRIIAGE, n. s. > Fr. hcmorragie , HEM'ORRHAGY, n. s. 3 Gr. cupoppajia. A violent flux of blood.

Great hemorrhagy succeeds the separation.

Ray.

Twenty days fasting will not diminish its quantity so much as one great hemorrhage. Arbuthnot.

HEM'ORRHOIDS, n. s. > Fr. hemorrhoids; HEMORRHOID'AL, adj. 5 Greek aipoppiStc. The piles ; the emrods.

Besides there are hemorrhages from the nose and hemorrhoidal veins, and fluxes of rheum. Ray.

Embost upon the field a battle stood Of leeches, spouting hemorrhoidal blood.

Garth. I got the hemorrhoids. Swift.

HEMORRHOIDAL. See HJEMORRHOIDAL. HEMORRHOIDS. See MEDICINE. HEMP, A. s. f Sax. baonep; Dan. hamp ; HEMP'EN, adj. j Dut. humpe. A fibrous plant of which coarse linen and ropes are made.

It hath digitated leaves opposite to one another; the flowers have no visible petals ; it is male and female in different plants. Its bark is useful for cordage and cloth. — Miller.

In foul reproach of knighthood's fair decree, About his neck a hempen rope he wears.

Spenser. Faerie Queenc. Behold Upon the hempen tackle ship-boys climbing.

Shakspeare.

Let gallows go for dog ; let man go free. And let not hemp his windpipe suffocate. Id.

Ye shall have a hempen caudle then, and the help of a hatchet. Id.

Hemp and flax are commodities that deserve encouragement, both for their usefulness and profit.

Mortimer.

I twitched his dangling garter from his knee ; He wist not when the hempen string I drew. Guy.

HEMP. See CANNABIS. It docs not appear that the ancients were acquainted with the use of hemp, in respect of the thread it affords. Pliny, who speaks of the plant in his Natural History, lib. xx. cap. 23, says not a word of this; but extols the virtues of its stem, leaves, and root. In effect, what some writers on the Ro-man antiquities remark, *viz.* that the hemp necessary for the use of war was all stored up in two cities of the western empire, *viz.* at Ravenna and X7ienne, under the direction of two procurators, called procuratores linincii, must be understood of linum or flax.

The use of hemp is so extensive and important, that vast quantities of it are annually imported into this and other kingdoms, from those countries where it grows in greatest plenty, of which Russia is one. Sir John Sinclair informs us, that in 1785, the quantity exported from St. Petersburg in British ships was as follows : —

Clean hemp . . 1,038,791 poods.

Outshot … 37,382

Half-clean * … . 18,374

Hemp-eodile … 19,251

1,113,798

Allowing sixty-three poods to a ton, the above quantity will amount to 17,695 tons ; and, supposing it to take five acres to produce a ton of

hemp, the whole quantity of ground requisite to this purpose would amount to 88,475 acres. The annual import of hemp to Britain and Ireland in 1799 was estimated at 121,213 tons, which, at an average of £40 per ton, amounts to £4,848,520. This circumstance will enable the reader to form some idea of the distress into which so many laboring manufacturers were thrown in 1800, by the edicts of Paul I. prohibiting the exportation of Russian produce to any part of this kingdom.

The important uses of hemp, and the superiority of that produced in Britain toother kinds, have rendered the culture of it an object of attention to government. Accordingly, in 1787, a bounty of 3d. per stone was allowed on all the hemp raised in England ; and, probably with a view to encourage the growth of English hemp, duties have been laid on that which comes from abroad.

HEMP, CHINESE, a newly discovered species of cannabis, of which an account is given in the Philosophical Transactions, vol. Ixxii. p. 46. In that paper, Mr. Fitzgerald, vice-president of the Society for Encouraging Arts, mentions his-having received the seeds from the late Mr. El-liot ; which being sown, according to his directions, produced plants fourteen feet high, and nearly seven inches in circumference. These being pulled in November, and steeped for a

fortnight in water, were placed against a southern wall to dry. After this the hemp was found to separate easily from the woody part ; and so great was the produce, that thirty-two plants yielded 3£lbs. In consequence of this success, Mr. Fitzgerald applied to the directors of the India Company to procure some of the seeds from China; which being obtained, the society were furnished, in 1785, with some of the seeds, which were distributed to several of the members. Two of the species, tried by the duke of Northumberland, rose to the height of fourteen feet seven inches, and would even have risen higher had they not been hurt by a high wind. The result of Dr. Hinton's experiments is related under the article Cannabis. See CANNABIS SATURA. In Italy hemp is generally cultivated, though the Bolognese only can pretend to any superiority in the management of it. It is there sown upon the best lands, which are rich strong loams ; and on which they are at all possible pains to procure a fine friable surface. For manure they use dung, pieces of rotten cloth, feathers, and horns brought from Dalmatia. The plant, however, may be cultivated upon ground of every kind ; the poorer land producing that which is finer in quality, though in smaller quantity ; whereas strong and rich land produces a great quantity, but coarser. It does not exhaust the land on which it grows, like flax. A Sussex manufacturer, who writes on this subject in the Annals of Agriculture, informs us, that it may be raised for many years successively on the same ground, provided it be well manured. An acre requires from nine to twelve pecks, according to the nature of the soil : the latter being the most usual, though a variation in the quality of the soil makes an alteration both in the quantity and quality of the hemp.

An acre produces on an average thirty-six or thirty-eight stone. The season for sowing it extends from the 25th of March to the 15th of June. The seed ought always to be sown thin, not exceeding two bushels to an acre ; and with a drill plough still less will answer. The male and female being distinct plants, of which the latter only produces seed, regard must be had to this circumstance. In Sussex the male and fe-male are pulled together about thirteen weeks after the sowing, but in the fens are often separated. This last method is recommended by the abbe" Brulle, who directs that little paths should be made lengthwise through the field, abou« seven feet distant, to allow a passage for the per-son who pulls up the male hemp, from among the females, which require to stand more than a month after, to ripen the seeds. The male hemp, or, as it is commonly but improperly called, the female hemp, is known to be ripe by the fading of the flowers, the falling of the farina fecundans, and some of the

stalks turning yellow. After the whole of this kind is pulled, it must be manufactured, and ought to be worked if possible while green; the hemp thus produced being much finer than that which is previously dried. The male hemp, however, is always in smaller quantity than the female; and, therefore, where the crop is large, it will be impossible to work the whole as fast as it is pulled or cut. It is known to be ripe by the stems becoming pale ; but it must be remembered that hemp of any kind will be much less injured by pulling the plants before they are ripe than by letting them stand too long. The female hemp, being stripped of its leaves, &c., will soon be dry for storing by the heat of the atmosphere, though sometimes it may be necessary to use artificial means ; but, where these are used, the utmost care must be taken, the hemp when dry being exceedingly inflammable. The stored or dried hemp must be steeped and treated in every other respect as if it had been green ; whence it is evident that this operation ought never to be used but in cases of necessity. It is likewise impossible to make hemp which has been dried previous to its being steeped, so white as that which has been worked green. With regard to the perfecting of hemp-seed for a subsequent season, it would seem pro-per to set apart a piece of ground for this purpose ; for M. Almen, from forty plants raised in the common way, had only l£lb. of seed, though the plants from which it was taken might be deemed fine ; whereas, from a single plant which grew by itself, he had 7ilbs. Some are of opinion, that, by putting the clusters which contain the hemp-seed to heat and sweat, the quality is improved : as many of those seeds which would otherwise wither and die may thus arrive at perfection. But this seems problema-tical, as there are no experiments which show that seeds, when separated from the vegetable producing them, have any power of meliorating themselves.

After hemp is pulled, it must be taken in large handfuls, cutting off the roots (though this is not absolutely necessary), the leaves, seeds, and lateral branches being dressed off with a wooden sword or ripple. It is then to be made

up into bundles of twelve handfuls each, in or-cfer to be steeped, like flax, in water. This, or something similar, is absolutely necessary, in order to separate the bark, which is properly the hemp, from the reed or woody part. In Suffolk, this operation is called water-retting; but sometimes it is merely exposed to the air, turning the hemp frequently during the time it is exposed. This is called dew-retting ; but the former method is universally deemed preferable. Such hemp as is designed for seed is seldom wa-ter-retted, though, in the opinion of the manufacturer already quoted, it would be better if it were so. Dew-retted hemp is generally stacked and covered during the winter ; in January and February it is spread upon meadow land, and whitens with the frost and snow ; though it is always much inferior to the other, and proper for coarser yarns only. The length of time required for steeping hemp is various, and a complete knowledge of it can only be attained by practice. In Suffolk it is usual to continue the immersion four, five, or six days ; standing water is preferred, and the same water will steep hemp three times during the season, but the first has always the best color. The abbe Brulle prefers clear and running water, especially if overhung with trees. The bundles are to be laid cross-wise upon each other, taking particular notice of the manner in which they lie when put in, that they may be taken out without difficulty. His time of steeping is from six to eleven days; and it is much better to let it remain too long in the water than too short a time. The slenderest hemp requires the most soaking. The operation is known to be finished by the reed separating easily from the bark. The next operation is to separate the bark from the reed or woody part ; and this may be done two ways, *viz.* either pulling out the reed from every stalk with the hand, or drying and breaking it like flax. The abbe" Brulle is very particular in his directions for this last operation, which he calls reeding, and which may be performed either in a trough un-der water, or upon a table. The whole, however, may be reduced to the following, *viz.* pressing down the bundles either in the trough or on a table by proper weights, to keep the hemp steady on the middle and top end. Then beginning at the upper part of the bundle, pull out the reeds one by one. The rind which remains will press closely upon the remaining unreeded hemp, and keep it more steady ; so that two, four, or even six stalks, may be taken at a time. The weight is then to be removed from the top, and all the pieces of reed which remain there, having been broken off in the former operation, are to be taken out. Lastly, the middle weight is to be taken off, and any small pieces which remain taken out. If the reeding is performed on a table, the bundle must be weeded frequently, though slightly ; a continual dropping of water would perhaps be the best method. The hemp must next be freed from the mucilaginous mat-ter

with which it abounds. This is done by pouring water through it, squeezing out the liquid after every effusion, but taking care not to let the threads twist or entangle each other, which they will be very apt to do. The abbe" is of opinion,

that soft soap should be dissolved in the last water, in the proportion of 1 oz. to 3lbs. of dry hemp, as it contributes much to soften and render the hemp easy to dress. Hemp is broken by machinery, after being steeped, in a manner similar to flax ; but the instruments used for this purpose in Suffolk are all worked by the hand. That which breaks in the operation is called shorts, and is about half the value of the long hemp. The best water-retted hemp sells for about 8s. 6d. per stone ; the other kind from one to two shillings lower. Beating is the next operation, which formerly was performed entirely by hand (see BEATING), but now in most places by a water-mill, which raises three heavy beaters that fall upon it alternately ; the hemp being turned all the while by a boy to receive the strokes equally. The finer it is required to make the tow, the more beating is necessary. It is then dressed or combed by drawing it through heckles formed like the combs of wool manufacturers, only fixed. Sometimes it is divided into two or three sorts of tow, and sometimes the whole is worked together into one sort ; the prices varying from 6d. to Is. Gd. per pound.

The usual height of the plant when growing is from five to six feet. In Catalonia they generally rise to seven ; but in Alsace they are sometimes twelve feet high, and three inches in circumference.

Only the coarser kinds of hemp are employed in making cordage, the better sorts being used for linen, which, though it can never be made so fine as that from flax, is yet incomparably stronger, and equally susceptible of bleaching both in the old and new way. Cloths made of hemp have also this property, that their color improves by wearing, while that of linen decays. The English hemp is much superior in strength to that which grows in any other country. Next to it is the Russian, from which sacking is usually made, as it is sometimes also from the offal of the English kind, but none of the Suffolk hemp is ever made into cordage on account of its fineness. A considerable quantity of Russia sheeting is imported into England merely on account of its strength, and is much coarser at the price than any other foreign linen. Hemp is also said to possess a property as a plant which renders it almost invaluable; *viz.* that of driving away al-most all insects that feed upon other vegetables. Hence, in some places of the continent, they secure their crops from these mischievous ver-min,

by sowing a belt of hemp round their gardens, or any particular which they wish to preserve.

HEMP AGRIMONY. See EUPATORIUM.

HEMP AGRIMONY, BASTARD. See AGERA-TUM.

HEMP AGRIMONY, NAKED HEADED. See VER-BESINA.

HEMP, BASTARD. See DATISCA.

HEMPSTEAD, apost town of Queen's county, New York, on the south side of Long Island ; twenty-two miles E.S. E. from New York. Population 5804. Hempstead Plains, an elevated tract of wild savannah, fifteen miles ong and five broad, are chiefly in this township. These plains are naturally bare of trees ; but r>roduce

death and some grass, and afford pasture for numerous flocks of sheep and herds of cattle. Hempstead Hill is 319 feet high.

HEMS, a city of Syria (the ancient Emesa), on the borders of the desert. Under the Roman empire this was a considerable town, and the birth-place of Heliogabalus. Its walls are about three miles in circumference ; and it has often changed masters. The present town stands in a plain, watered by a small river. Its ill-arranged and ill-built houses occupy about a fourth only of the space within the walls. To the south is a large ruined castle. About a furlong to the west is a piece of Roman architecture, partly Doric and partly Ionic, called the sepulchre of Caius Caesar, and Pococke supposes the designation to be just : or at least that it was a monument erected to his honor. 120 miles south of Aleppo, and eighty-five north of Damascus. Long. 37° 20' E., lat. 34° 25' N.

HEMSKERCK (Egbert), THE OLD, a celebrated Flemish painter of drolls and conversations, of whom, though his works are much esteemed, we have no information as to the time in which he flourished, or the school in which he was taught.

HEMSKERCK (Egbert), THE YOUNG, was the disciple of Peter Grebber, but imitated the man-ner of Brower and of the elder Hemskerck. He was born at Haerlem in 1645, but settled at London, where for a long time his works were exceedingly esteemed, though now much sunk in their value. He died in 1704.

HEMSKERCK, or HEMSKIRK (Martin), an eminent Dutch painter born at Hemskirk in 1498, and educated at Rome. He settled at Haerlem, where he died in 1574, aged seventy-six.

HEMSTERHUIS, or HEMSTERHUSIUS (Tiberius), a learned critic born at Groningen, in 1685. In 1704 he was appointed professor of mathematics and philosophy at Amsterdam ; in i717 professor of Greek and history at Franeker; and in 1740 he filled the same offices at Leyden. He published 1. The last three books of Julius Pollux's Onomasticon, in 1706: 2. Colloquies, &c., of Lucian; 3. Aristophanes's Plutus; and other learned works.

HEN, n. s. ~} Sax. and Dut. penne ;

HENDRIVER, n.s. Germ, han, a cock. The HEN-HARM, n. s. female of a house cock, HEN-HARRIER, n. s. I or any other land fowl : HEN-HEARTED, adj. ' hendriver, a kind of HEN-PECKED, adj. hawk : hen-harm, hen-HEN-ROOST, n. s. harrier, a kind of kite HEN-COOP, n. s. j so called from destroying chickens : hen-hearted, cowardly ; dastardly : hen-pecked, governed by the wife : hen-roost, the place where poultry rest.

This gentil cok had in his governance Seven hennes, for to don all his plesance, Which were his sisters and his paratnoures, And wonder like to him as of coloures Of which the fairest hewed in the throte, Was cleped faire Damoselle Pertelote.

Chaucer. The Nonnes Preestes Tale, The peacock, pneasant, and goldfinch cocks have glorious colours ; the hens have not. Bacon.

The hendriver I forbear to name. Walton.

A stepdame too I have, a cursed she.

Who rules my hen-pecked sire, and orders me.

Drydeit.

Many a poor devil stands to a whipping post for the pi'fering of a silver spoon, or the robbing of a hen-roost. L'Estrange.

Whilst the hen bird is covering bet eggs, the male generally takes his stand upon a neighbouring bough within her hearing, and by that means diverts her with his songs during the whole time of her sitting.

Addison.

If a man prosecute gypsies with severity, his hen-roust is sure to pay for it. Id.

The neighbours reported that he was hen-pecked, which was impossible, by such a mild-spirited woman as his wife. Arbutluwt.

They oft have sallied out to pillage

The hen-roosts of some peaceful village. Tickell.

Her house is frequented by a company of rogues, whom she encourageth to rob his hen-roosts. Swift.

O'er the trackless waste The heath hen flutters. Thomson.

At half-past eight o'clock, booms, hen-coops, spars, And all things, for a chance, had been cast loose, That still could keep afloat the struggling tars, For yet they strove, although of no great use.

Byron. Don Juan.

HEN. See PHASIANUS.

HEN, GUINEA. See NUMIDA.

HEN AND CHICKENS ISLES, a cluster of small islands in the South Pacific, near the coast of New Zealand. One of them terminates in two high peaks. Long. 180° 1' W., lat. 35° 53' S. Also a group of small islands in the Eastern Seas ; in long. 118° 3' E., lat. 5° 30' S. ,

HENARES, a river of Spain, which rises near Siguenca, and runs into the Xarama, ten miles above Toledo.

RENAULT (Charles John Francis), son of John Remi Henault, lord of

Moussy, was born at Paris in 1685. Claude de Lisle, father of the celebrated geographer, taught him geography and history. On quitting college Henault entered the oratory, which he left two years after, and his father bought for him the lieutenance des chasses, and the government of Corbeil. At M. Villeroi's he formed connexions with many of the nobility, and associated with the wits till the dispute between Rousseau and De la Motte disgusted him. In 1707, he gained the prize of eloquence at the French Academy; and another next year at the Academy des Jeux Floraux. In 1713 he brought a tragedy on the stage under the disguised name of Fuselier. As he was known to the public only by some slighter pieces, Cornelia the Vestal met with no great success. In his old age Mr. Horace Walpole being at Paris in 1768, and having formed a friendship with him, obtained the MS. of this piece, and had it printed. In 1715 M. Henault, under a borrowed name, brought out a second tragedy, entitled Marius, which was well received and printed. He had been admitted counsellor in parliament in 1706, and in 1710 president of the first chamber of inquests. These important places, which he determined to fill in a proper manner, engaged him in the most solid studies. He made himself master of the Roman law, and the French ordonnances, customs, &c. M. de Morville, procureur general oi the great council, being appointed ambassador to the Hague in

1718, engaged M. Renault to accompany him. On the death of Card du Bois, in 1723, he succeeded him at the French Academy. Cardinal Fleury recommended him to succeed himself as director, and he pronounced the eloge of M. de Malezieux. History was M. Renault's favorite study. In 1744 he published an Essay on Chronology, tne success of which exceeded his expectations. He improved it, and it not only passed through nine editions, but was translated into English, Italian, German, and even Chinese. He next determined to reduce into the form of a regular drama one of the periods of French history, *viz.*

the reign of Francis II. It accordingly went through five editions ; the harmony of dates and facts is exactly observed in it, and the passions interested without offence to historic truth. In 1755 he was chosen an honorary member of the Academy of Belles Lettres, being previously a member of the academies of Nanci, Berl:r, and Stockholm. The queen appointed him superintendant of her house. He composed three comedies : La Petite Maison, La Jaloux de Soi meme, and Le Reveil d'Epimemde. The subject of the last was the Cretan philosopher who is pretended to have slept twenty-seven years. Epimenides is introduced, supposing that he had slept but one night, and astonished at the change in the age of all around him ; he mistakes his mistress for her mother ; but, discovering his mistake, offers to marry her, which she refuses, though he still continues to love her. The queen was particularly r leased with this piece, and on the place of superintendant becoming vacant, by the death of M. Bernard de Conbert, she bestowed it on Henault, and consented that he should divide the profits with his predecessor's widow. On the queen's death he held the same place under the dauphiness. He made several journeys to the waters of Plom-bieres : in one of these he visited the deposed king Stanislaus at Luneville; and in another accompanied his friend the marquis de Pauliny ambassador to Switzerland. He died December 24th 1771, in his eighty-sixth year.

HENAULT, or HENAUT (John D'), a French poet of the seventeenth century, the son of a baker in Paris. Being patronised by the superintendant, Fouquet, he was appointed receiver of the taxes at Forez. He wrote a satirical poem on Colbert, and several other pieces of merit; printed at Paris, under the title of Oeuvres Diverses in 12mo. 1670; but his conduct was irregular, and his principles atheistical. He travelled into England, and went to Holland, on purpose to visit Spinoza, who, however, did not much esteem him ; considering him as one of those fashionable sceptics with which every country abounds who adopt new opinions in religion not from rational conviction, but from a profligate spirit. He translated three books of Lucretius, but, falling sick, burnt them, the fear of death having put his atheistical principles to flight; and, having now become a convert, he proposed to his confessor, as a proof of his penitence, to take the sacrament with a halter about his neck. He died in 1682.

HENBANE, n. s. Lat. hyoscyamus; a plant. It is very often found growing upon the

sides of hanks and old dunghills. This is a very poisonous plant. —

Miller.

That to which old Socrates was cursed, Or henbane juice, to swell ‘em ‘till they burst.

Dryden

HENBANE. See HYOSCIAMUS. HE’N-BIT, n. t. Alsine foliis hederaceis ; a plant.

In a scarcity in Silesia a rumour was spread of its raining milletseed ; but it was found to be only the sieds of the ivy-leaved speedwell, or small henbit.

Derham’s Phyiico-Theology. HENCE, adv. or interj. Sax. J>eonan ; probably of Goth, hen, here ; hennes, old English.

From this place to another.

Discharge my followers ; let them hence away. From Richard’s night to Bolingbroke’s fair day.

Shakspeare,

The Almighty hath not built Here for his envy ; will not drive us hence.

Milton.

A sullen prudence drew thee hence From noise, fraud, and impertinence.

Roicommon.

Away ; to a distance. A word of command . Be not found here ; hence with your little ones.

Shaksjieare. Hence with denial vain, and coy excuse.

Milton. At a distance ; in other places. Not in use.

Why should I then be false, since it is true That I must die here, and live hence by truth.

Shaksyeare.

All members of our cause, both here and hence, That are insinewed to

this action. Id.

From this time ; in the future.

He who can reason well to-day about one sort of matters, cannot at all reason to-day about others, though perhaps a year hence he may. Locke.

Let not posterity a thousand years hence look for truth in the voluminous annals of pedants.

Arbufhnot.

For this reason ; in consequence of this.

‘Tis hence you lord it o’er your servile senates ; How low the slaves will stoop to gorge their lusts, When aptly baited. Brooke’s Giutavus Vasa.

Hence perhaps it is, that Solomon calls the fear of the Lord the beginning of wisdom. Tiilotion.

From this cause ; from this ground.

By too strong a projectile motion the aliment tends to putrefaction : hence may be deduced the force of exercise in helping digestion.

Arbtithnot on Alimenli.

From this source ; from this original ; from this store.

My Flora was my sun : for as One sun, so but one Flora was ; All other faces borrowed hence Their light and grace, as stars do thence.

Suckling.

From hence is a vicious expression, which crept into use, even among good authors, as the original force of the word hence was gradually forgotten. Hence signifies from this.

An ancient author prophesied/rwn hence, Behold on Latian shores a foreign prince ‘.

Dryden.

HENCE, v. a. From the adverb. To send off; to despatch to a distance. Obsolete.

Go, bawling cur . thy hungry maw go fill On yon foul flock, belonging not to me ; With that his dog he henced, his flock he cursed .

Sidney.

HENCEFORTH, adv. Sax. penonpori«- From this time forward.

But henneiforth I wol my processe hold To speke of aventures, and of batailles, That yet was never herd so gret mervailles.

Chaucer. The Squierei Tale. Thanes and kinsmen, Henceforth -\>e earls. Shakspeare. Macbeth.

Never henceforth shall I joy again ; Never, oh never, shall I see more joy. Id.

Happier thou may'st be, worthier can'st not be j Taste this, and be henceforth among the gods, Thyself a goddess. Milton

I never from thy side henceforth will stray, Till day droop. Id

If we treat gallant soldiers in this sort, Who then henceforth to our defence will come ?

Dryden.

HENCEFOR'WARD, adv. Hence and forward. From this time to all futurity.

Henceforward will I bear Upon my target three fair shining suns.

Shakspeare.

Pardon, I beseech you ;

Henceforward I am ever ruled by you. Id.

The royal academy will admit henceforward only such who are endued with good qualities. Dryden.

HENCH'MAN, n. s. Sax. pync, a servant, and man — Skinner; penˆj-r, a horse, and man — Spelman. A page ; an attendant.

And every knight had, after him riding, Three henchmen, still upon him awaiting.

Chaucer. The Floure and the Leafe. Why should Titania cross her Oberon. I do but beg a little changeling boy, To be my henchman. Shakspeare.

Three henchmen were for ev'ry knight assigned, All in rich livery clad, and of a kind. Dryden.

HEND, v. a. Sax. penman, from kendo, low Lat. which seems borrowed from hand or hond, Teutonic. To seize ; to lay hold upon ; to crowd or surround.

For er the bishop hent hem with his crook, « They weren in the arched ekens book.

Chaucer. The Freres Talc. The generous and gravest citizens Have hent the gates, and very near upon The duke is entering. Shakspeare.

With that the sergeants hent the young man stout And bound him likewise in a worthless chain.

Fairfax.

HENDEC'AGON, n. s. Gr. iVoiica and A figure of eleven sides or angles.

HENDERSON (John), an eminent English actor, bora in London March 8th, 1746. "His mother having put into his hands a volume of Shakspeare, when very young, he became enamoured with the stage; and, in 1768, applied to Mr. Garrick, but met with no encouragement till 1770, when Garrick gave him a letter to Palmer, manager of the theatre at Bath, where he first exhibited, with uncommon applause, in the character of Hamlet, October 6th, 1772. In the course of that and the four subsequent seasons he represented Richard III., and other principal characters, with increasing reputation. All this lime, however, Garrick and For*e refused to

admit him on the London theatre. But m 177' Coleman, having purchased Foote's patent, engaged him, and he was well repaid by the pub-lic ; for in the first thirty-four nights no less than £4500 was drawn. The Haymarket was crowded every night even during the heat of summer, and Coleman, as an acknowledgment, gave Henderson a free benefit, which produced a large sum. In winter he was engaged by Mr. Sheridan at £10 a-week for two years at Drury Lane. In 1778 and 1779 he went to Ireland, and was introduced to most of the literati there. On the 13th of January, 1779, he married. He was now as much courted by the managers as he had formerly been slighted; but his drama drew fast to a close. His last performance was in the character of Horatius, in the Roman Father, November 3rd, 1785. He was soon after seized with a fever, which carried him off on the 25th of that month. He was interred in Westminster Abbey. He left a few poems which are esteemed.

HENDERSON, a town and county of the United States, in Kentucky, bounded north by the Ohio ; east by Green and Muddy rivers, which separate it from Ohio and Mecklenburg counties ; west by Tradewater River, which divides it from Li-vingstone county ; and south by Christian county. The staple product is tobacco : but coffee is also raised. The town is seventy-five miles below Louisville.

HENEAGO, or HENEAGUAS ISLANDS, two of the most southern of the Bahamas. They are separated from each other by a passage of about five miles, and the navigation near them is very dangerous. The largest, called Great Heneagua, is of very considerable magnitude. Little Heneagua is not inhabited, and lies about twenty-eight miles W. S. W. from Pequeno, the most westerly of the Caycos Islands, and about seven miles north by east from the north-east point of the Great Heneagua. The latter island is forty-five miles in length, and nineteen wide at its greatest breadth. There are extensive salt ponds here, but the interior has scarcely ever been explored. The most westerly extremity is called Middle or Devil's Point; there is an anchorage to the south, in Fisher's Bay (between Devil's Point and the south-west point), and also to the north of it, in Ocean Blight, towards the north-west point. From this latter point a dangerous reef runs to the east about a mile from the shore, for many leagues.

HENED PENNY, in old writers, a customary payment of money instead of hens at Christmas. It is mentioned in a charter of king Edward III. Mon. Ang. torn. ii. p. 327. Du Cange .s ot opinion it may be hen-penny, gallinagium, or a composition for eggs; but Cowel thinks it is

misprinted hened-penny for heved-penny, or head-penny.

HENERY, or HUNDRY, an island ten miles south of Bombay, on the coast of Hindostan, and 1200 yards distant from the mainland. It is not more than 600 yards in circumference, and can only be approached on the north side ; but it is thickly inhabited and fortified. In 1790 it was in possession of a Mahratta chief named liogojee Augria, and was the rendezvous of pirates. Of

late it has been a free government, but is still a Mahratta possession.

IIENETI, an ancient people of Illyria, mentioned by Herodotus, whose marriage laws were similar to those of the ancient Babylonians. Livy says, that they came originally from Paph-ragonia, mixed with a number of Trojans, under Antenor, and having settled on the coast of the Adriatic Gulf, were afterwards called Veneti.

HENGTCHEOU, a city of the first rank in China, in the province of Houquang, on the river Heng. It has a considerable manufacture of paper, and there are said to be silver mines in the neighbourhood. Long. 112° E., lat. 26° 36’ N.

HENLEY (Anthony), Esq. of Grange, in Hants, the son of Sir Robert Henley, was born about the middle of the seventeenth century, and educated at Oxford, where he distinguished himself by his proficiency in the classics, and his poetical talents. Being a zealous whig, he was chosen M. P. for Andover in 1698, and in several successive parliaments for other boroughs. Inheriting a fortune of £3000 a year, which was increased by the addition of £30,000 obtained with his wife, Mary Bertie, sister to the countess of Pawlett, he was very generous to contemporary authors, many of whom dedicated their works to him. He wrote many anonymous pieces, besides the opera of

Alexander, and several papers in the Tatler and Medley. He died in 1712.

HENLEY (John), M. A., commonly called orator Henley, a very singular character, was born at Melton Mowbray, Leicestershire, in 1691. His father, the Rev. Simon Henley, and his maternal grandfather, John Dowel, M. A., were both vicars of that parish. Having passed his exercises at Cambridge, and obtained the degree of B. A., he returned to his native place, where he was desired by the trustees to take the direction of the school, which he soon raised to a flourishing condition. Here he began his Universal Grammar ; and wrote his poem Esther, which was well received. He was ordained a deacon by Dr. Wake, then bishop of Lincoln ; and having taken his degree .of M. A. was admitted to priest's orders by Dr. Gibson. After preaching many occasional sermons, he went to London, recommended by above thirty letters from the most considerable men in the country, both of the clergy and laity. He there published translations of Pliny's Epistles, of several works of Abbe Ver-tot, of Montfaucon's Italian Travels in folio; and many original lucubrations. His most generous patron was the earl of Macclesfield, who gave him a benefice in the country, the value of which to a resident would have been above £800 a-year; he had likewise a lecture in the city; and was as popular as any other preacher, ex-cept the celebrated George Whitefield. He soon however gave up his benefice and lecture, believing the public would he a more hospitable protector of learning and science, than some of the higher ranks in his own order. He declaimed several years against persons of the highest rank, and occasionally, says Warburton, did Pope that honor. The poet retaliated as follows : —

* Imbrowned with native bronze, lo Henley stands. Tuning his voice and balancing his hands. How fluent nonsense trickles from his tongue ! How sweet the periods, neither said nor sung '. Still break the benches, Henley ! with thy strain, While Rennet, Hare, and Gibson preach in vain, O great restorer of the good old stage. Preacher at once and zany of thy age !'

Instead of tickets this extraordinary person struck medals, which he dispersed among his subscribers : a star rising to the meridian, with this motto, Ad summa; and below, Invenianc viam aut faciam. Each auditor paid Is. He was author of a weekly paper, called The Hyp Doctor, for which he had £100 a year. In his advertisements and lectures he often introduced satirical and humorous remarks on the

public transactions of the times. He died on the 14th of October, 1756.

HENLEY HOUSE, a station of New South Wales, belonging to the Hudson's Bay Company. It is on the north bank of Albany River, 150 miles south-west from Albany fort, and 110 north-west by west from Brunswick House.

HENLEY-UPON-THAMES, a market town of Oxfordshire, seven miles S. S. E. from Mar-low, and thirty-five west from London. It is a place of great antiquity, though but few relics of its ancient condition are now to be discovered, as most cf the houses are modern buildings, and the streets are wide, paved, and well lighted. A handsome stone bridge has been erected over the Thames. The church is an ancient building, having a handsome lofty tower, said to have been erected by Cardinal Wolsey, with a peal of eight bells. Here are three free schools, and many other charitable institutions. The principal trade is in corn, flour, malt, and beech-wood, which is sent to the metropolis by water. This town was formerly a borough, and sent members to parliament. It is now a corporate town, governed by a high steward, recorder, mayor, ten aldermen, and sixteen burgesses. The mar-ket on Thursday is always abundantly supplied with malt and grain.

HENLEY-IN-ARDEN, a market-town of Warwickshire, seven miles and a half N. N. W. from Stratford-on-Avon, and 101 from London. The town was burnt down about the time of the battle of Evesham. It is named from its situation in the ancient forest of Arden, and stands near the little river Arrow. The cherch, or chapel of ease, is a neat bnilding. Market on Tuesday.

HENLOPEN, CAPE, in North America, a cape on the south-west side of the entrance of Delaware Bay, opposite to Cape May. The two capes are eighteen miles apart. Cape Henlopen is in W. long. 75° 26', N. lat. 38° 50', and has a stone lighthouse, 1 15 feet high : its foundation is nearly as much above the level of the sea. The lantern, seven or eight feet square, has eight lamps, and may be seen in the night ten league? off. The light shortly after its erection attracted so many birds that 110 of different kinds were found dead at the top of the building one morning, and a wild duck in particular flew agains' it with such force as to penetrate through both the wire which guards the lamps and the glass

IIENNEBERG, a tract of land in Saxony, situated to the north of the principality of Wurzburg. It has a superficial extent of 850 square miles, and about 196,000 inhabitants.

HENNIKER (Sir Frederick), an English baronet, descended of a noble family, was the eldest son of general Sir Brydges Trecothic Henniker, of Newton Hall, Essex, and born November the 1st, 1793. He received his education at Eton, and St. John's College, Cambridge, succeeding his father in his title and estates in 1816. He travelled, on quitting the university, through France, Italy, Egypt, Nubia and Palestine, from which latter country he narrowly escaped with his life, from the hands of banditti, being in fact, ' wounded and left half dead* between Jerusalem and Jericho. He published in 1822 an amusing journal, entitled Notes during a Visit to Egypt, Jerusalem, &c., and died at his chambers in the Albany, after a short illness, August 6th 1825.

HENNINGES (Jerome), a Saxon genealogist, native of Luneberg, who studied under Melancthon. He applied with zeal to historical and antiquarian researches, and produced as the result of his studies Genealogiae Familiarum Saxpnicarum, Hamburgh, 1596, folio. He died in 1597. After his decease appeared a compilation entitled Theatrum Genealogicum, omnium JEtatum et Monarchiarum Familias complectens, Magdebursh, 4 vols. folio.

HENNUYER (John), a celebrated French Roman Catholic bishop, who saved the lives of all the Protestants in his diocese of Lisieux, during the massacre of St. Bartholomew's dayˆ in spite of the inhuman order of Charles IX. He died in 1577, universally beloved and regretted.

HENRICIANS, in ecclesiastical history, a sect so called from Henry its founder, who, though a monk and a hermit, undertook to re-form the vices of the clergy. For this purpose he left Lausanne in Switzerland, and, after visiting different places, at length settled at Thou-louse in 1147, where he exercised his ministerial function; till being opposed by Bernarl, abbot of Clairval, and condemned by pope Eu genius III. at a council assembled at Rheims, he was committed to a close prison in 1148, where he died. lie rejected the baptism of infants; severely censured the corrupt manners of the clergy, and treated the festivals and ceremonies of the church with contempt.

IIENRICO, a county of Virginia, United States ; about thirty miles long and seven broad. It is bounded by Hanover, Charles city, and Goochland counties, and James's River. A number of coal mines have been opened here, and worked to considerable profit. Coals are found 200 feet above the level of the river, and three or four feet below the surface of the ground. The chief town is Richmond. Population 12,000, including 5000 slaves.

HENRIQUELLE, a remarkable salt lake in the island of St. Domingo, about twenty-two leagues in circuit. It is inhabited by very large lizards, alligators, and land tortoises. The water is -deep,, clear, and bitler, having a disagreeable smell. Near the middle is an island

about two leagues long, and a league wide, in which is a spring of fresh water, stocked with cabritoes, and thence called Cabrito Island. It is eleven miles east from Port au Prince.

HENRY. Of the numerous emperors and princes of this name we can only afford room for one or two, who cannot be so well comprised in any of our general historical sketches.

HENRY IV. emperor of Germany, styled the Great, was born in 1050, and succeeded his father Henry III. in 1056, under the tutelage of his mother Agnes. In 1063 he assumed the reins of government ; but soon after quarrelled with pope Gregory II., whom at one time he deposed for having presumed to judge his sove-. reign ; but at another, dreading the effects of the papal anathemas, he had the weakness to submit to the most humiliating personal solicitations and penances to obtain absolution ; which impolitic measure increased the power of the pope, and alienated the affections of his own subjects. Thus circumstanced, he re-assumed the hero, but too late ; marched with an army to Rome, expelled Gregory, deposed him, and set up another pope. Gregory died soon after; but Urban II. and Paschal II. successively excited his ambitious sons, Conrad and Henry, to rebel against him, and the latter, being crowned emperor in 1106, had the momtious inhumanity to arrest his father, and to deprive him, not only of all his dignities, but even of the necessaries of life! The unfortunate Henry IV. was reduced to such extremities (after having fought sixty-two battles in defence of the German empire), that he solicited the bishop of Spire to grant him an underchaunter's place in his cathedral, but was refused ! He died the same year at Liege, aged fifty-five, a martyr to the ignorance and superstition of the age, and to his own blind confidence in favorites and mistresses. See GER-MANY.

HENRY VIII. king of England. See ENGLAND.

HENRY, prince of Wales, eldest son of king James VI. of Scotland, by his queen Anne, sister of the queen of Denmark, one of the most accomplished princes of the age in which he lived, was born on the 19th of February, 1594. His birth was announced by embassies to many foreign powers, with invitations to be present at the ceremony of his baptism, which was thus delayed for a considerable time. All these ambassadors were cordially received, and others appointed in return, except by the court of France. Henry IV., then king of France, neither made any present, nor appointed an ambassador. The young prince was committed to the care of the earl of Mar, who was assisted in this important charge by Annabella, countess dowager of Mar, daughter of William Murray of Tullibardine, paternal ancestor of the duke of Athol. In his sixth year he was committed to the care of Mr. Adam Newton, a Scotsman, eminently skilled in most branches of literature. Under his tutorage the prince soon made great progress in the Latin language, as well as in other branches of knowledge ; insomuch that, before he had completed his sixth year, his father wrote for his use the treatise entitled

Basilikon Doron, thought to be the best of all his works. In his seventh year prince Henry began his correspondence with foreign powers. At this early period he also began to add to his literary accomplishments some of the martial kind, such as riding, the exercise of the bow and pike, the use of fire arms, &c., as well as singing, dancing, &c. On his ninth birth-day he sent a letter in Latin to the king, informing -him that he had read over Terence's Hecyra, the third book of Phredrus's Fables, and two books of Cicero's Epistles ; and that now he thought himself capable of performing something in the commendatory kind of epistles. His accomplishments were soon spoken of in foreign countries ; and these, along with the general suspicion that James favored the Catholic party, probably induced pope Clement VIII. to propose, that, if James would entrust him with the education of the young prince, he would advance such sums of money as would

effectually establish him on the throne of England. This happened a little before the death of Elizabeth ; but James, notwithstanding his ambition to possess the crown of .England, of which he was not yet altogether certain, withstood the temptation. On the death of queen Elizabeth James left Scotland in such haste that he had no time to take a personal leave of his son, and therefore did so by letter, which was answered by the prince in Latin. In July 1603 prince Henry was invested with the order of the garter. Being obliged to leave London, on account of the plague, he retired to Oatlands, a royal palace near Weybridge in Surrey, where a separate household was appointed for him and his sister Elizabeth. In his tenth year he applied himself to naval and military affairs. In 1606 the prince waited on his uncle Frederick III. king of Denmark, who had come to England on a visit to king James ; and %vho was so much pleased with his company, that he presented him at parting with his vice-admiral and best ship of war, and a rapier and hanger, valued at 2000 marks. In July, 1607, the Dutch ambassadors came recommended to prince Henry by the States. He had a great regard for his grand aunt lady Arabella Stewart, sister of Henry lord Darnley ; and there is still extant a letter from her, acknowledging some kindness he had bestowed on a kinsman at her recommendation : and he particularly patronised Joseph Hall, afterwards bishop of Exeter. The courage, intrepidity, and martial turn of this prince, were manifest from his infancy. In August, 1607, he visited the royal navy at Woolwich, and repeatedly went to the dockyards at Woolwich, Chatham, &c. Among his papers a list of the royal navy was found after his death, with an account of all the expenses of fitting out, manning, &c., which must now be accounted a valuable addition to the naval history of those times. His passion for naval affairs naturally led him to a desire of making geographical discoveries ; of which two instances are recorded. One was in 1607, when he received from Mr. Tindal his gunner, who had been employed by the Virginia Company, a draught of James's River in that country, with ? letter dated 2id June the same year. The

other was in 1612, when he emp'uyed Mr. Thomas Button, an eminent mariner, to ga in quest of a north-west passage, but who did not return till after prince Henry's death. His martial disposition was displayed on occasion of his being invested in the principality of Wales, and duchy of Cornwall, June 4th, 1610 ; when, at the tournaments given, according to the romantic taste of the times, he gave and received thirty-two pushes of the lance, performing hi> part to the admiration of all who saw him, being then not sixteen years of age. In 1611 a proposal was made for a double marriage betwixt the

prince of Wales and the eldest princess of Savoy, and between the prince of Savoy and lady Elizabeth ; but these overtures were very coolly received by the nation. In his nineteenth year his constitution underwent a remarkable change ; he began to appear pale and thin, and forebodings of a dangerous malady appeared, but were totally neglected, even after he began to be seized at intervals withjainting fits. Notwithstanding these alarming symptoms, he continued his usual employments. On the 1st of November he was blooded, the impropriety of which was manifest by the thin and dissolved state of the blood which was taken away. He expired on the 6th of November, 1612, at the age of eighteen years, eight months, and seventeen days. On opening his body, the lungs were found black, spotted, and full of corrupt matter. His funeral was not solemnised till the 7th of December. His early death concurring with the public apprehensions of the papists, and the ill opinion which the nation then had of the court, gave rise to suspicions of its being hastened by poison, which were heightened by the very little concern shown by some persons in great stations. With these notions his mother the queen was peculiarly impressed, according to Dr.Welwood ; who informs us, that, when he fell into his lasl illness, the queen sent to Sir Walter Raleigh for his cordial, which she herself had taken some time before in a fever. Raleigh sent it, with a letter to the queen, wherein he expressed a tender concern for the prince ; and, boasting of his medicine, said ‘ that it would certainly cure him or any other of a fever, except in case of poison.’ As the prince took this medicine, and died, notwithstanding its virtues, the queen, in the agony of her grief, showed Raleigh’s letter; and laid so much weight on the expression about poison, that as long as she lived she could never be persuaded but that the prince had died by that means. It is sufficient however to oppose to all such suggestions the unanimous opinion of the physicians who attended the prince, and opened his body after his death ; from which, as Dr. Welwood observes, there can be no inference drawn that he was poisoned. To this may be added the authority of Sir Charles Cornwallis.

HENRY (Philip), a pious and learned non-conformist minister, was the son of Mr. Joha Henry, pase to James, duke of York, and was. born at Whitehall in 1631. He was admitted into Westminster school at twelve years of age ; became the favorite of Dr. Busby, and was employed by him, with some others, in collecting materials for the Greek grammar he afterwards,

published. Thence he removed to Christ Church, Oxford; where, having obtained the degree of M.A., he was taken into the family of judge Puleston, at Emeral in Flintshire, as tutor to his sons, and to preach at Worthenbury. He soon after married the only daughter of Mr. Daniel Matthews of Broad-oak, near Whit-church, by whom he became possessed of a competent esfcite. On the Restoration, he refused to conform, was ejected, and retired with his family to Broad-oak ; where he lived about twenty-eight years.

HENRY (Matthew), an eminent dissenting minister, the son of the above, was born in 1662. He continued under his father's care till he was eighteen years of age ; in which time he became well skilled in the learned languages, especially in the Hebrew, which his father had rendered familiar to him from his childhood. He was afterwards entered in Gray's Inn for the study of the law. But at length, resolving to devote his life to divinity, in 1686 he retired into the country, and was chosen pastor of a congregation at Chester, where he lived about twenty-five years, greatly esteemed and beloved by his people. He had several calls to London, which he constantly declined ; but was at last prevailed upon to accept a unanimous invitation from a congregation at Hackney. He wrote, 1. Expositions of the Bible, in 5 vols. folio. 2. Directions for Daily Communion with God. 3. A Method for Prayer. 4. Four Discourses against Vice and Immorality. 5. The Communicant's Companion. 6. Family Hymns. 7. A Scriptural Catechism; and, 8. A Discourse concerning the Nature of Schism. He died of an apoplexy at Nantwich in 1714 ; and was interred at Trinity church in Chester.

HENRY, or BLIND HARRY, or HENRY THE MINSTREL, an ancient Scottish author, distinguished by no particular surname, but well known as the composer of an historical poem reciting the achievements of Sir William Wallace. This poem continued for several centuries to be in great repute ; but afterwards sunk into neglect, until 1790, when it was again released from its obscurity by a very neat and correct edition published at Perth, under the inspection and patronage of the earl of Buchan. It is difficult to ascertain the precise time in which this poet lived, or when he wrote his history, as the two authors who mention him , speak somewhat differently. Dempster, who wrote in the beginning of the seventeenth century, says that he lived in 1361 : but Major, who was born in 1446, says that he

composed his book during the time of his infancy, which we must therefore suppose to have been a few years posterior to 1446; for, if it had been composed that very year, the circumstance would probably have been mentioned.

HENRY (Robert), D. D., author of a History of Great Britain, was born 18th of February, 1718; educated at St. Ninians and Stirling; afterwards completed his education at the university of Edinburgh, and was some time master of the grammar-school of Annan. He was licensed 27th March, 1746, and was the first licenciate of the presbytery of Annan after its

erection. In November, 1748, he was ordained a minister of a dissenting congregation at Carlisle ; and on the 1 3th of August, 1 760, was called to another at Berwick-upon-Tweed, where, in 1763, he married. He was removed to the new Gray Friars' church, Edinburgh, in November, 1768, by the influence of provost Laurie, who had married Mrs. Henry's sister ; and in November, 1776, to the Old" Church, where he continued till his death. In 1770 the degree of D. D. was conferred on him by the university of Edinburgh, and in 1774 he was unanimously elected moderator of the general assembly, and is the only person on record who obtained that honor the first time he was a member. While he was in Berwick he published a scheme for raising a fund for thfe widows and orphans of Protestant dissenting ministers in the north of England. By his activity he overcame many difficulties, and had the pleasure of seeing the scheme commence in 1762. Dr. Henry published the first five volumes of his history at his own risk. But it certainly required more than a common share of literary courage to attempt, on so large a scale, a subject so intricate and extensive as the history of Britain, from the invasion of Julius Csesar. That Dr. Henry neither overrated his powers nor his industry was proved by the success and reputation of his work. The first volume of his history, in 4to., was published in 1771, the second in 1774, the third in 1777, the fourth in 1781, and the fifth (which brings down the history to the accession of Henry VII.) in 1785. He did not profess to study the ornaments of language; but his arrangement is uniformly regular and natural, and his style simple and perspicuous. He believed that the time which might be spent in polishing a sentence was more usefully employed in ascertaining a fact: and as a book of facts and solid information, supported by authentic documents, his history will stand a comparison with any other of the same period. His profits upon the whole amounted to about £3300 ; a striking proof of the merit of the work. In its progress

it also proved the means of introducing Dr. Henry to more extensive patronage, and in particular to that of the earl of Mansfield. That venerable nobleman thought the merit of Dr. Henry's history so considerable, that, without solicitation, after the publication of the fourth volume, he applied personally to his majesty, to bestow on the author some mark of his royal favor. In consequence of this Dr. Henry was informed, by a letter from lord Stormont,of his majesty's intention to confer on him an annual pension for life of £100, 'considering his distinguished talents and great literary merit, and the importance of the very useful and laborious work in which he was so successfully engaged, as titles to his royal countenance and favor.' The warrant was issued on the 28th of May, 1781 ; and his right to the pension commenced from the 5th of April preceding, and continued till his death. From the earl of Mansfield lie received many other testimonies of esteem, which he was often heard to mention with the most affectionate gratitude. The 8vo. edition of his history,

published in 1788, was inscribed to his lordship. The 4 to. edition had been dedicated to the king. From the year 1785 his bodily strength was sensibly impaired. Notwithstanding this he persisted steadily in preparing his sixth volume, which brings down the history to the accession of Edward VI., and left it in the hands of his executors almost completed. Scarcely any thing remained unfinished but -the two short chapters on arts and manners; and even for these he left materials and authorities so distinctly collected, that there was no great difficulty in supplying what was wanting. This volume was published in 1792 ; and met with the same favorable reception from the public which had been given to the former volumes. Till the summer of 1790 he was able to pursue his studies, though not without interruptions. But he then lost his health entirely; and, with a constitution quite worn out, died on the 24th of November, in the seventy-third year of his age. He was buried in the church-yard of Polmont.

HENRY OF HUNTINGDON, an English historian of the twelfth century, canon of Lincoln, and afterwards archdeacon of Huntingdon. He wrote, 1. A history of England, which ends with the year 1154 ; 2. A continuation of that ofBede; 3. Chronological tables of the kings of England ; 4. A small treatise on the contempt of the world ; 5. Several books of epigrams and love ferses ; and, 6. A poem on herbs ; all in Latin.

HENRY OF SUSA, a famous civilian and canonist of the thirteenth century, who acquired such reputation that he was called the source and splendor of the law. He was archbishop of Embrun about 1258, and cardinal bishop of Ostia in 1262. He wrote A Summary of the Canon and Civil Law ; and A Commentary on the Book of the Decretals, composed by order of Alexander IV.

HENRY, a mountainous county of Virginia, bounded on the north by Franklin, south and south-east by Patrick, south-west by Orison, and west and north-west by Montgomery counties. It is forty miles long, and fifteen broad.

HENRY, CAPE, the south cape of Virginia, at the entrance of Chesapeake Bay. Long. 76° 16’ W., lat. 37° 0’ N.

HENSHALL (Samuel), an ingenious Saxon scholar of modern times. He was educated at Oxford, where he became a fellow of Brazen-nose. In 1798 he published a quarto volume, entitled Specimens and Parts of aTopographical, Commercial, Civil, and Nautical History of South Britain. He was also the author of The Saxon and English Languages, illustrative of each other, the impractibility of acquiring an accurate knowledge of Saxon literature through the medium of Latin phraseology, exemplified in the errors of Hickes, Wilkins, Gibson, and other scholars ; and a new mode suggested of radically studying the Saxon and English languages, 4to. ; Actual Survey of South Britain, by the Commissioners of William the Conqueror, completed in 1086; faithfully translated, with an Introduction, Notes, and Illustrations of S. Henshall and John Wilkinson, 4to. 1799; The Etymological Organic llcasonc- • with one Sheet

of the Gothic Gospel of St. Matthew ; and another of the Saxon Durham Book, in Ro-man Characters ; and a literal English Version, 1807. Both the latter works were imperfect ; the author, who was rector of St. Mary, Stratford-le-Bow, Essex, having died soon after the publication of the first number of his Organic Reasoner in 1807.

HENTING; in agriculture, a term used by the farmers for a particular method of sowing before the plough ; the corn, being cast in a straight line just where the plough is to come, is by this means presently ploughed in. By this way of sowing they save a great deal of seed and

other charges, a dexterous boy being as capable of sowing this way out of his hat as the most skilful seedsman.. Henting is also a term used by the ploughmen, and others, to signify the two furrows that are turned from one another at the bot torn, in the ploughing of a ridge. The worˆ beems to be a corruption of ending, becaus these furrows made an end of plowing the ridges The tops of the ridges they call verrings.

HEPAR SULPHURIS, alkaline sulphur, o liver of sulphur, a combination of alkali and sulphur. By the fume arising on the decomposition of hepar sulphuris by an acid, Sir T. Bergman found a method of imitating the hot or sulphureous mineral waters, to as great perfection as the cold ones are now imitated by fixed air. The process consists simply in adding the vitriolic acid to hepar sulphuris, and impregnating water with the peculiar species of air that arises from this mixture, in the same manner as when water is impregnated with the fixed air arising from the mixture of that on any other acid with chalk. The hepatic air, as Bergman calls it, is very readily absorbed by water; to which it gives the smell, taste, and all the other sensible qualities of the sulphureous waters. A Swedish cantharus of distilled water, containing twelve Swedish inches and a-half, will ab-sorb about sixty cubic inches of this hepatic air ; and, on dropping into it the nitrous acid, it will appear, that a real sulphur is contained, in a state of perfect solution, in this water, to the quantity of eight grains. When any particular sulphureous water is to be imitated, we scarcely need to observe, that the saline, or other contents peculiar to it, are to be added to the artificial hepatic water. Instead of the liver of sulphur, the operator may use a mixture of three parts of filings of iron, and two parts of sulphur melted together. It may perhaps be thought that water thus prepared does not differ from that in which a portion of the hepar sulphuris has been dissolved ; but it appears evidently to differ from it in this material circumstance, thai in the solution of hepar sulphuris, the sulphuris held in solution by the water, by means of the alkali combined with it : whereas, in Bergman's process, it does not appear probable that the hepar sulphuris rises substantially in the form of air; for, in that case, its presence in the hepatis water might be detected by the weakest of the acids (even the mephitic) which would precipitate the sulphur from it. Nor can it be supposed that any portion or constituent part of the alkali itself, except a part of its remaining fixed air,

can come over. The water, therefore, must owe *s impregnation to the sulphur, raised, in some peculiar manner, into the state of an elastic vapor ; permanent when the experiment is made in quicksilver ; but condensable in water, and rendered soluble in that fluid.

HEPATICAL,ˆ.) Lat. hepaticus ; Fr.

HEPAT'IC, adj. $ hepatique, from ijTrap.

Belonging to the liver.

If the evacuated blood be florid, it is stomach blood ; if red and copious, it is hepatick. Harvey.

The cystick gall is thick, and intensely bitter ; the kepatick gall is more fluid, and not so bitter.

ArbuthruSt on Aliments.

HEPATIC, or hepatic air, a permanently elastic fluid, of a very disagreeable odor, obtained in plenty from combinations of sulphur with earths, alkalies, metals, &c., and sometimes from combinations of alkalies with substances which do not appear to contain any sulphur. See CHEMISTRY. Its specific gravity is to that of common air as 10,000 to 9038. The nature of this fluid has been particularly examined by Kirwan, of whose experiments an account is given in the seventy-sixth volume of the Philosophical Transactions. From the results, that gentleman concludes, that hepatic air consists merely of rarefied sulphur. Some have supposed that it consists of liver of sulphur itself volatilised ; but this Kirwan denies, for the following reasons : 1. It is evidently, though weakly, acid ; redden-ing litmus, and precipitating acetous baro-sele- nite, though none of the other solutions of earths do so. 2. It may be extracted from materials which either contain no alkali at all, or next to none ; as iron, sugar, oil, charcoal, &c. 3. It is not decomposed by marine or fixed air ; by which, nevertheless, liver of sulphur may be decomposed. Kirwan

says, he was formerly of opinion that sulphur was held in solution in hepatic air, either by means of vitriolic or marine air : but neither of these is essential to the constitution of hepatic air as such, since it is producible from materials that contain neither of these acids ; and from whatever substance it is obtained, it always affords the same character, *viz.* that of the vitriolic acid exceedingly weakened, such an acid as we may suppose sulphur itself to be. This substance indeed, even in its concrete state, manifests the properties of an acid, by uniting with alkalies, calcareous and ponderous earths, as well as with most metals, which a very weak acid might be supposed to do. See CHEMISTRY.

HEPATITIS, in medicine, inflammation of the liver. See MEDICINE.

HEPATOSCOPIA, from j,7rap, liver, and VKOTTIU), I consider, in antiquity, a species of divination, wherein predictions were made by inspecting the livers of animals. The word was also used for divination by entrails.

HEPBURN (James Bonaventura), a celebrated Scottish author, of the sixteenth century, born at Oldhamstocks, in East Lothian, 1573. His father, Thomas Hepburn, who was rector of that parish, and was a convert of the celebrated John Knox, bred him up a Protestant; notwithstanding which, he had hardly completed his academical education at St. Andrews, when, either from persuasion or views of interest, he

became a Roman Catholic, and travelled into France and Italy. After this .t-set out on a more extensive peregrination through Turkey, Persia, Syria, Palestine, Egypt, Ethiopia, and most other countries of note in the East. Upon his return to Europe he entered into a convent of Minims, an order of Franciscans, at Avignon, and afterwards removed to the monastery of the Holy Trinity at Rome. Pope Paul V., hearing of his great acquisitions in oriental learning, drew him from this retirement, by appointing him keeper of the oriental books and MSS. in the Vatican ; in which office he continued six years. He afterwards went to Venice to translate some Hebrew, Syriac, and Chaldaic writings; and died in that city in 1620 or 1621. His works are very numerous. The most important R-P, 1. A Hebrew and Chaldaic Dictionary, and an Arabic grammar; printed at Rome, in 1 vol. 4to., 1 591 . 2. A Translation of the Psalms from the Hebrew into Latin with a Commentary : 3. A» Abridged Chronicle of the Affairs of the Romans: 4. A Collection of all the Synonymous words in the Bible : 5. A

Treatise on Mystical Numbers ; from the Hebrew of Eben Ezra : 6. Sepher Jetzira, or the Book of the Creation ; said to have been written by the patriarch Abraham: 7. The Book of Enoch: all translated, with many similar works, into Latin. His merit, however, as a linguist, is unquestionable.

HEPH.&STIA, in antiquity, an Athenian festival in honor of Vulcan, the chief ceremony of which was a race with torches. The antagonists were three young men, one of whom, by lot, took a lighted torch in his hand, and began his course ; if the torch was extinguished before he finished the race, he delivered it to the second, and he, in like manner, to the third : the victory was his who first carried the torch lighted to the . end of the race; and to this successive delivering of the torch we find many allusions in ancient writers.

HEPHTHEMIMERIS, of nrra, seven, 1ˆ1-ouif, half, and juepoe, part, in the Greek and Latin poetry, a sort of verses consisting of three feet and a syllable ; that is, of seven half-feet ; called also trimetri catalectici. Such are most of the verses in Anacreon.

\tytiv

Be KaS

Arp«

dttv, &c.

HEPHTHEMIMERIS, or HEPHTHEMIMERES, is also a csesura after the third foot ; that is, on the seventh half foot. It is a rule that this syllable, though it be short in itself, must be made long on account of the caesura, or to make it an heph-themimeris. As in that verse of Virgil

Et furiis agitatus amor, et conscia virtus HEPS, n. s. Hawthorn berries : commonly written hips.

swete as is the bramble flour,

That bereth the red hepe.

Chaucer. The Rime of Sire Thopat. In hard Winters there is observed great plenty of heps and haws, which preserve the small birds from starving. Bacon.

HEPS, or HIPS. See ROSA. HEP TREE. See ROSA. HEPTACAP'SULAR, adj. Gr. evia and capsula. Having seven cavities or cells.

HEPTACHORD, in ancient poetry, signified verses that were sung or played on seven chords, i. e. on seven different notes. In this sense it was applied to the lyre when it had but seven strings. One of the intervals is also called an heptachord, as containing the same number of degrees between the extremes.

HEPTAGON, 7i. s.) Fr. heptagone ; Gr.

HEPTAG'ONAL. $?7rra and ywvt'a. A

figure with seven sides or angles.

HEPTAGYNIA, from ttcra, seven, and yvvrt, a female, an order of plants consisting of such as have seven styles. See BOTANY.

HEPTANDRI A, in botany, from t-nva, seven, and avnp, a man, the seventh class in Linnaeus's sexual method, consisting of plants with hermaphrodite flowers, which have seven stamina or male organs. See BOTANY.

HEPTARCHY, n. s. Fr. heptarchie ; Gr. tiTTa and apxv-A. sevenfold government.

In the Saxon heptarchy I find little noted of arms, albeit the Gernmos, of whom they descended, used shields. Camden.

England began not to be a people, when Alfred reduced it into a monarchy ; for the materials thereof were extant before, namely, under the heptarchy.

Hole's Origin of Mankind. The next returning planetary hour

Of Mars, who shared the heptarchy of power,

His steps bold Arcite to the temple bent. Dry den.

HEPTARCHY signifies a government composed of seven persons, or a country governed by seven persons, or divided into seven kingdoms.

HEPTARCHY, THE SAXON, included all England, which was cantoned out into seven independent kingdoms, peopled and governed by different clans and colonies, *viz.* those of Kent, the South Saxons, West Saxons, East Saxons, Northumberland, the East Angles, and Mercia. The heptarchy was formed gradually from A. D. 455, when first the kingdom of Kent was erected, and Hengist assumed the title of king of Kent immediately after the battle of Eglesford ; and it terminated in 827 or 828, when Egbert reunited them into one, turned the heptarchy into a monarchy, and assumed the title of king of England. See ENGLAND.

HERjjpron. } In Sax. beria, j?eji, stood for

HERS, S their, or of them, which at length became the female possessive. Belonging to a female ; of a she ; of a woman : her is the oblique case of she ; and hers is used when it refers to a substantive going before.

— — ˆ— Nature held on hire bond A formell egle, of shape the gentillest That ever she among hire workes fonde, The most benigne, and eke the godeliest; In hire was every vertue at his rest, So far for the, that Nature hireself had blisse To loke on hire, and oft hire becke to kisse.

Chaucer. The Assemblie of Foulet. About his neck

A green and gilded snake had wreathed itself, Who with her head, nimble in threats, approached The opening of his mouth.

Shakspeare. As You Like It.

England is so idly kinged, Her sceptre so fantastically borne, That fears attend her not. Id. Henry.

This pride of hcrt, Upon advice, hath drawn my love from her.

Shakspeare.

Still new favourites she chose, ‘Till up in arms my passion rose, And cast away her yoke. Cowloy.

One month, three days, and half an hour, Judith htld the sovereign power ;

Wonderous beautiful her face j But so weak and small her wit, That she to govern were unfit,

And so Susanna took her place. Id.

She cannot seem deformed to me, And I would have her seem to others so. Id. The moon arose clad o’er in light, With thousand stars attending on her train ; With her they rise, with her they set again. Id.

Thine own unworthiness, Will still that thou art mine, not hers, confess.

Id.

. The pleasing sight he often does prolong ; Her mast erect, tough cordage, timber strong ; Her moving shape, all these he doth survey, And all admires, but most his easy prey.

Marvell.

Some secret charm did all her acts attend, And what his fortune wanted, hen could mend.

Dry den.

Her daughter, tempered with a milder ray, Like summer clouds all silvery, smooth, and fair, Till slowly charged with thunder they display Terror to earth, and tempest to the air, Had held till now tier soft and milky way ; But, overwrought with passion and despair, The fire burst forth from her Numidian veins, Even as the simoom sweeps the blasted plains.

Byron. Don Juan.

HERACLEA, an ancient city and sea-port of Romania, Northern

Greece, on a promontory of .the gulf of Salonica, near Mount Olympus. The town at present standing on this site is called Peatamona, twenty-four miles north-east of Lanisa, and forty -three S. S. W. of Salonica.

HERACLEONITES, a sect of heretics, the followers of Heracleon, who refined upon the Gnostic system, and maintained that the world was not the immediate production of the son of God, but that he was only the occasional cause of its being created by the Demiurgus. The Heracleonites denied the authority of the Old Testament, maintained that they were mere ran-dom sounds in the air; and that St. John the Baptist was the only true voice that directed to the Messiah.

HERACLEUM, madness, a genus of the digynia order, and pentandria class of plants ; natural order forty-fifth, umbellatae. The fruit is elliptical, emarginated, compressed, and striated, with a thin border : COR. diffbrm, inflexed, and emarginated ; the involucrum dropping off. There are thirteen species, of which the most remarkable is — H. spondylium, the cow parsnip. It is common in many parts of Britain, and other northern parts of Europe and Asia. Gmelin, in his Flora Siberica, p. 214, tells us, that the inhabitants of Kamtschatka, about the beginning of July, collect the foot-stalks of the radical leaves of this plant, and, after peeling off the rind, dry them separately in the sun, and then, tying them in bundles, dry them carefully in the shade : in a short time afterwards these dried

staiks are covered over with a yellow saccharine efflorescence, tasting like liquorice ; and in this state they are eaten as a great delicacy. The Russians not only eat the stalks thus prepared, but procure from them a very intoxicating spirit. They first ferment them in water with the greater bilberries (vaccinium uliginosum), and then distil the liquor to what degree of strength they please ; which, Gmelin says, is more

agreeable to the taste than spirits made from corn. This may therefore prove a good succedaneum for whiskey, and lessen the consumption of barley. Swine and rabbits are very fond of this plant. In Norfolk it is called hogweed.

HERACLID./E, the descendants of Heicules, greatly celebrated in ancient history. Hercules at his death left to his son Hyllus all the rights and demands which he had upon Peloponnesus, and ordered him to marry lole, the daughter of Eurytus, as soon as he came of age. The posterity of Hercules were not more kindly treated by Eurystheus than their father had been, and they were obliged to retire for protection to the court of Ceyx, king of Trachinia. Eurystheus pursued them thither, and Ceyx, afraid of his resentment, begged the Heraclidae to depart from his dominions. From Trachinia they came to Athens, where king Theseus, who had accompanied their father in some of his expeditions, received them with great humanity, and assisted them against Eurystheus. Eurystheus was killed by Hyllus himself; his children perished with him, and all the cities of Peloponnesus became the undisputed property of the Heraclidse. Their triumph, however, was short; their numbers were lessened by a pestilence ; and the oracle informed them that they had taken possession of Peloponnesus before the gods permitted their return. Upon this they abandoned Peloponnesus, and came to settle in Attica, where Hyllus married lole. Soon after he consulted the oracle, anxious to recover the Peloponnesus ; and the ambiguity of the answer determined him to make a second attempt. He challenged to single combat Atreus, the successor of Eurystheus on the throne of Mycena ; and it was mutually agreed that the undisturbed possession of Peloponnesus should be ceded to the victor. Echemus accepted the challenge for Atreus ; Hyllus was killed, and the Heraclidae departed from Peloponnesus a second time, about twenty years be-fore the Trojan war. Cleodaeus, the son of Hyllus, made a third attempt, and was equally unsuccessful; and his son Aristomachus some time after met with the same unfavorable reception, and perished in the field of battle. Aris-todemus, Temenus, and Chresphontes, the three sons of Aristomachus, encouraged by the more express word of an oracle, and desirous to revenge the death of their progenitors, assembled a numerous force, and with a fleet invaded all Peloponnesus. Their expedition was attended with much success ; and, after some decisive battles, they became masters of all the peninsula. The recovery of Peloponnesus by the Ilera clidae forms an interesting epoch in ancient history, which is universally believed to have happened eighty years after the Trojan war, or A. A. C. 1190. This conquest was totally achieved about 120 years after the first attempt of Hyllus, who was

killed about twenty years before the Trojan war. As it occasioned many changes and revolutions in the affairs of Greece, the return of the Heraclidee is the epocha of the beginning of profane history : all the time that preceded it is reputed fabulous. Accordingly Ephorus, Cumanus, Callisthenes, and Theopom-pus, begin their histories from this era.

HERACLIDES, a Greek philosopher of Pontus, the disciple of Speusippus, and after— wards of Aristotle, flourished about A. A. C. 336. His vanity prompted him to desire one of his friends to put a serpent into his bed just as he was dead, in order to raise a belief that he was ascended to the heavens among the gods ; but the cheat was discovered. All his works are tost.

HERACLITUS, a famous Ephesian philoso pher, who flourished about the sixty-ninth Olym piad, in the time of Darius Hystaspis. He is said to have continually bewailed and wept for the wicked lives of men ; contrary to Democritus, who made the follies of mankind a subject of laughter. He retired to the temple of Diana, and played at dice with the boys there ; saying to the Ephesians who gathered round him, ‘ Worst of men, what do you wonder at ? Is it not better to do thus than to govern you?’ Darius invited him to come and live with him, but he refused. At last, out of hatred to mankind, he retired to the mountains, where he contracted a dropsy, by living on herbs, which killed him at sixty years of age. His writings gained him great reputation. Laertius mentions a Treatise upon Nature, divided into three books, one concerning the universe : the second on politics : the third on theology. This book he deposited in the temple of Diana ; and it is said that he affected to write obscurely, lest it should be read by the vulgar, and become contemptible. The fundamental doctrine of his philosophy was, that fire is the principle of all things.

HERACLIUS, an emperor of the east, a renowned warrior, who dethroned and succeeded Phocas in 610. At this time the empire was at war with Chosroes II., king of Persia. Heraclius proposed terms of peace, but the haughty Persian refused it, unless he would renounce Christianity. Heraclius thereupon mustered his forces, and, after repeated victories, obliged him to beg for that peace he had refused. He was, however, not so successful in his wars with the Saracens. He died in 641, aged sixty-six.

HERACLIUS CONSTANTINE, son of the above, succeeded him in conjunction with his brother Heracleonas ; but reigned only a few months, being poisoned by his stepmother Martina, in

641.

H ERALDRY.

H ER’ALD, n.j.&v.a.) Fr. herault ; Teut. HER’ALDRY, n. s. \ herald; Swed. and

Dan. herald. An officer whose occupation it is to record genealogies, arrange armorial ensigns, regulate funerals, and, anciently, to carry messages between princes, and proclaim war and peace ; a precursor ; forerunner ; a harbinger ; a proclaimer or publisher : heraldry, the art or office of a herald; a science ; registry of genealogies ; blazonry : the verb is now out of use.

And after hern, came a grete company Of heraudes and pursevauntes eke, Arrayed in clothes of white velvete. Chaucer.

We are sent from our royal master, Only to herald thee into his sight, Not pay thee. Shaktpeare.

After my death I wish no other herald, No other speaker of my living actions, But such an honest chronicler as Griffith. Id. It was the lark, the herald of the morn. Id. Metals may blazon common beauties ; she Makes pearls and planets humble heraldry.

Cleaveland .

Embassador of peace, if peace you chuse ; Or herald of a war, if you refuse. Dryden.

Grant her, besides, of noble blood that ran In ancient veins, ere heraldry began. Id.

Pluck the others, but still remember Their Herald out of dim December — The morning star of all the flowers, The pledge of day - light’s lengthened hours ; Nor midst the roses e’er forget The virgin, virgin violet. Byron.

HERALD, says Verstegan, is a term derived from the Saxon word

Herehault, and by abbreviation heralt, which in that language signifies the champion of an army ; and, growing to be a name of office, it was given to him who, in the army, had the special charge to denounce war, to challenge to battle and combat, to proclaim peace, and to execute martial messages. But the duty of the modern heralds is to marshal, arrange, and conduct all royal processions, ceremonies at coronations, royal marriages, creations of dukes, marquesses, earls, viscounts, barons, baronets, and installations of knights ; embassies, funeral processions, declarations of war, proclamations of peace, &c.; to record and blazon the arms of the nobility and gentry ; and to regulate any abuses therein through the British dominions, under the authority of the earl-marshal, to whom they are subservient. The office of the Windsor, Chester, Richmond, Somerset, York, and Lancaster, heralds, is to be assistants to the kings of arms, in the different branches of their office : and they are superior to each other, according to creation. Heralds were anciently held in very considerable estimation ; and were created by the king, who, pouring wine from a golden cup on their head, gave them their heraldical name : but this is now done by the earl-marshal. They could not arrive at the dignity of herald without having been seven years pursuivant ; nor quit the office of herald, but to be made king of arms. Richard III. was the first sovereign who formed them, in this kingdom, into a college in 1485, though they had been previously incorporated in 1419, by Henry V.: considerable privileges were afterwards granted them by Edward VI. and Philip and Mary.

HERALDRY is a science which teaches how to blazon, or explain in proper terms, all that belongs to armorial bearings ; and how to marshal, or dispose in order, various arms upon a coat or shield. It also teaches whatever relates to the marshalling of solemn cavalcades, processions, and other public ceremonies at coronations, installations, creations of peers, royal nuptials, christenings of princes, funerals, &c.

Armorial Ensigns are hereditary marks of honor, made up of fixed and determined colors and figures, sometimes bestowed by sovereign princes, as a reward for military valor, or eminent public services; they serve also to denote the descent and alliance of the bearer, or to distinguish states, cities, societies, &c., civil, ecclesiastical, and military.

Sir John Feme supposes that arms were derived from the Egyptian hieroglyphics; and, strange as the supposition is, heraldry was, in a limited sense, a hieroglyphical language. Sir William Dugdale states that arms, as marks of honor, were first used by great commanders in war, to distinguish their persons to their friends and followers : and

Nisbet, hi his System, observes that signs and devices of honor have been made use of in the earliest ages of the world, and by all nations, however simple and illiterate, to distinguish the noble from the inferior. It is also related by Homer, Virgil, and Ovid, that their heroes had divers figures on their shields, whereby their persons were distinctly known. It is certain that in all ages symbolical signs have been adopted, to denote the bravery and courage either of a chief or nation, to render the bearers more terrible to their enemies, and even to distinguish themselves or families, as names do individuals. The famous Cornelius Agrippa, in his treatise concerning the Vanity of Sciences, has collected many instances of these marks of distinction, anciently borne by kingdoms and states that were in any degree civilised : but the art of heraldry, as it is observed by Sir George Mackenzie, must be referred to the times of the emperors Charlemagne and Frederick Barbarossa, since it originated and increased under the Feudal System. As to hereditary arms of families, Camden, Sir Henry Spelman, and other eminent heralds and antiquaries, agree that they did not begin till towards the end of the eleventh century : and Maillot assigns them to the year 1230; be-fore which time, though the same device might be used by the son, it was almost continually varied from the bearing of the father. According to Menestrier, a French author of considerable importance, Henry 1'Oiseleur (or the Fowler), who was raised to the imperial throne of the West in 920, by regulating tournaments in Germany, gave rise to the establishment of family arms, or hereditary marks of honor; which perhaps are more ancient with the Germans than with any

other nation. This .ast author also asserts that with tournaments coats of arms first originated ; ' being, then a sort of livery, made up of several lists, fillets, or narrow pieces of stuff of various colors, whence came the fess, the bend, the pale. &c., indicating the manner in which those bands were originally worn : these being the most ancient charges of family arms, since those who had never been at tournaments wore no such marks of distinction. The adventurers who in-listed in the crusades also assumed several new figures, formerly

unknown in armorial ensigns ; such as allerions, bezants, escallop-shells, martlets, &c., but more particularly crosses of different colors and shapes : and the introduction of armorial bearings into England is referred to the second crusade, in 1147. About 1189 the arms were usually depicted upon a small escutcheon, and worn at the belt; and Richard I. is the earliest instance of their being borne upon an ordinary shield, though they are found on seals in the seventh and eighth centuries. From these notices, then, it will be concluded that heraldry, like most human inventions, was introduced and established gradually ; and that, after having been rude and unsettled for many ages, it was at last methodised, perfected, and fixed by the crusades and tournaments.

These marks of honor are called Arms, from their being principally and first worn by military men, at war and tournaments, who had them engraved, embossed, or depicted on shields, targets, banners, or other martial instruments. They are also called coats of arms, from the custom of their being formerly wrought upon the coats worn over armour, and as robes of ceremony, like the heralds' tabards of the present time.

Arms are distinguished by different names, to denote the causes of their bearing: such as, Arms of Dominion, of Pretension, of Concession, of Community, of Patronage, of Family, of Alliance, and of Succession.

Arms of Dominion, or Sovereignty, are those which emperors, kings, and sovereign states, constantly bear ; being, as it were, annexed to the territories, kingdoms, and provinces, which they possess. Thus the three lions are the arms of England, the fleurs-de-lis those of France, &c.

Arms of Pretension are those of such kingdoms, provinces, or territories, to which a prince or lord has some claim, and which he adds to his own, although they be possessed by a foreign prince or other lord. Thus the kings of England quartered the arms of France with their own, ever since Edward III. laid claim to the kingdom of France in 1330, — on account of his being son to Isabella, sister to Charles IV. or the Fair, who died without issue, — till the union with Ireland in 1801 ; when the ensigns of that country were inserted in the third quarter of the Royal Arms, the coat of France omitted, and the other bearings re-marshalled.

Arms of Concession, or augmentation of honor, are either entire arms, or else one or more figures, given by princes as a reward for some

great service. Thus Robert Bruce, king of Scotland, allowed the ancestor of the earl of Wintoun to bear, in his coat-armour, a crown supported by

a sword, to show that he, and the clan Seaton, of which he was the head, supported his. tottering crown. The late queen Anne granted to Sir Cloudesry Shovel, rear admiral of Great Britain, a chevron between two fleurs-de-lis in chief, and a crescent in base, to denote three great victories he had gained : two over the French, and one over the Turks. Numerous similar augmentations of honor were granted to the naval and military heroes of Britain in the last war with France.

Arms of Community are those of bishoprics, cities, universities, academies, societies, companies, and other bodies-corporate.

Arms of Patronage are such as governors of provinces, lords of manors, patrons of benefices, &c., add to their family arms, as a token of their superiority, rights, a'nd jurisdiction. These arms have introduced into heraldry castles, gates, wheels, ploughs, rakes, harrows, &c.

Arms of Family, or paternal arms, are those that belong to one particular family, distinguishing it from others, and which no other person has a right to assume.

Arms of Alliance are those which families or private persons are entitled to add to their own, to denote the alliances they have contracted by marriage. This sort of arms is either impaled, or borne on an escutcheon of pretence, by those who have married heiresses.

Arms of Succession are such as are taken up by those who inherit certain estates, manors, &c., either by will, entail, or donation, and which they sometimes either impale or quarter with their own arms.

There is also a sort of arms which heralds call Assumptive, being such as are taken ap by caprice, and assumed without legal title. It will now be proper to consider the essential and integral parts of arms, which consist of the escutcheon; the tinctures; the charges; and the exterior ornaments.

OF THE SHIELD OR ESCUTCHEON.

The shield or escutcheon is the field or ground whereon are represented the figures which make up a coat of arms. These marks of

distinction appear to have been placed on shields soon after, or perhaps at the same time, that they were placed on banners, standards, flags, and coat-armour ; and, wherever they may be fixed , they are still delineated on a plane, or superficies, whose form resembles a shield.

Shields, or Escutcheons, have been, and still arc, of different forms, according to different times and nations. Some ancient shields were shaped almost like a horseshoe, and others triangular, somewhat rounded at the bottom ; which kind the inhabitants of Mesopotamia, or Diarbeck, are said to have made use of, and to have derived it from the Trojans. Sometimes the shield was heptagonal, or seven-sided : and the first of the shape is said to have been used by the famous triumvir Mark Antony. The oldest heraldical •escutcheons are called the Norman or heater shield, and resemble a Gothic arch reversed ; the form of which became broader in the fourteenth and fifteenth centuries. Those of knights-banner- ets were square, like a banner; and the modern

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LINES

forty per fale

DIVISIONS

forty per Fesse

-Dancette -Dovetail

AAAAAA/WVWWWV

Cross

Btnd Sinister

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B D E

escutcheons partake of various forms, though the shields of the Italians, particularly of ecclesiastics, are generally oval. See the various examples in HERALDRY, plate I. The escutcheons of maids, widows, and such as are born ladies, and are married to private gentlemen, are however in the form of a lozenge or diamond; which is supposed to refer to the spindle, as emblematical of female virginity. Sir George M'Kenzie mentions one Muriel, countess of Strathern, who carried her arms in a lozenge in the year 1284, which ia a proof of the antiquity of the practice.

Armorists distinguish several parts or points in escutcheons, in order to determine exactly the position of the bearings they are charged with ; which may be expressed by the annexed figure : —

A — the dexter chief. ˆ

B— the precise middle chief.

C — the sinister chief.

D — the honor point.

E — the fess point.

F — the nombril point.

G — the dexter base.

H — the precise middle base.

I — the sinister base.

The knowledge of these points is of great importance, since they are occupied by several bearings of different kinds. The dexter side of the escutcheon is opposite to the left hand, and the sinister side to the right hand of the person that looks upon it: but in heraldry the dexter implies the right hand, and the sinister the left ; because the bearer is always supposed to be behind his own shield,

OF TINCTURES, FURS, LINES, AND DIFFERENCES.

By tinctures is meant that variable hue of arras which is common both to shields and their bearings. According to the ancient French heralds, there are but seven tinctures in armory ; of which two are metals, and the other five colors.

The ordinary colors expressed.

By tinctures for Commoners.

By precious stones for Peers.

By planets for princes, kings, and emperors.

Yellow White Red Blue Purple Black Green

Or

Argent Gules Azure Purpure Sable Vert

Topaz Pearl Ruby Sapphire Amethyst Diamond Emerald

Sol Luna Mars Jupiter Mercury Saturn Venus

The English writers on heraldry also mention two other colors, or compounds, *viz.*

Orange, j , { Tenne,

Crimson, < termed 1 Sanguine. But these two are rarely to be found in British bearings.

These tinctures are represented in engravings and drawings by dots and lines, the invention of which is attributed by some authors to the fourteenth century, and by others to F. Petra Santa in the seventeenth. Their form may be seen by referring to the article COLOR, and the names of the several heraldical tinctures in this

Dictionary, and is briefly described as follows. Or is expressed by dots : Argent requires no mark, and is therefore plain : Azure is shown by horizontal lines : Gules, by perpendicular lines: Vert, by diagonal lines from the dexter chief to the sinister base point : Purpure, by diagonal lines from the sinister chief to the dexter base point : Sable, by perpendicular and horizontal lines crossing each other. Tenne, by diagonal lines from the sinister chief to the dexter base point, traversed by horizontal lines. Sanguine, by lines crossing each other diagonally from dexter to sinister, and from sinister to dexter. When theje lines are not employed, the colors are expressed by the initial letters, either of the heraldical names, or the Latin words for them.

Furs represent the hairy skin of certain animals, prepared for the doublings or linings of robes and garments of state ; and, as shields were anciently covered with furred skins, they are therefore used in heraldry, not only for the linings of mantles, and other ornaments of shields, but also in armorial ensigns themselves. The principal Furs are called Ermine and Vaire, of which the following variations are now in use.

1. Ermine : which is a field argent, ptwdered with Wack spots, the tails terminating in three hairs.

2. Ermines : or counter ermine, wherein the field is sable, and the powdering white.

3. Erminois : in which the field is Or, and the powdering sable.

4. Vaire, which is expressed by white and blue skins, cut into the forms of small shields, ranged in rows opposite to each other, the base of the white ones being always joined to that of the blue in the line beneath. Vaire is usually of six rows, but if there be more or fewer the num-ber ought to be stated ; and, if the colors be different from those

above mentioned, they must likewise be expressed.

5. Pean; the field of which is sable, and the powdering Or. The French heralds use no such term, but call all furs or doublings des pannes, or ptnnes; which term has possibly given rise to the above expression.

6. Potent, as when the field is filled with the heads of crutches, or potents, counter-placed. Vaire and Potent may be of any two colors.

The use of heraldical tinctures took its rise from the several colors adopted by warriors whilst they were in the army, as it is proved by F. Petra Santa; and because it was the custom to embroider gold and silver on silk, or silk on cloths of gold and silver, the heralds appointed that, in imitation of the clothes so embroidered, color should never be used upon color, nor metal upon metal.

Escutcheons are either of a single tincture, or of more than one. In those that are of one only, — that is when some metal, color, or fur, is spread all over the surface or field, — such a tincture is said to be predominant : but in those which are parted into more than one, as most are, the field is divided by lines, which receive various names according to their several forms. These partition lines may be either straight or curved. Straight lines are carried evenly through the esN

cutcheon,and consist of four kinds: perpendicular, horizontal, diagonal dexter, and diagonal sinister. Curved lines are those which are carried unevenly through the escutcheon, with rising; and falling. French armorists reckon eleven different sorts of them ; Guillim admits of seven only ; the figures and names of which are to be seen in plate I. of HERALDRY. The principal reason for lines being thus used in heraldry is to difference bearings which would be otherwise the same ; for an escutcheon charged with a chief engrailed differs from one charged with a chief wavy, as much as if the one bore a cross and the other a saltier. As these lines are intended to divide the field, if the division consist of two equal parts made by the perpendicular line, it is called parted per pale ; by the horizontal line, parted per fess ; by

the diagonal dexter, parted per bend ; and by the diagonal sinister, parted per bend sinister : examples of which will be found in plate I. of the illustrations to this article, and the wood-cuts attached to the heraldical terms throughout the work.

If a field be divided into four equal parts, by any of these lines, it is said to be Quartered ; which may be done two ways, *viz.* Quartered or parted per cross : which is made by a perpendicular and horizontal line, crossing each other at the centre of the field, and dividing it into four equal parts called quarters. Quartered or parted per saltier : which is made by two diagonal lines, dexter and sinister, crossing in the centre of the field, and likewise dividing it into four equal parts.

The escutcheon is also sometimes divided into a greater number of parts, in order to place upon it the arms of the several families to which one is allied ; in which case it is called a genealogical achievement. These divisions may consist of six, eight, twelve, and sixteen quarters (as the royal arms), and sometimes of twenty, thirty-two, sixty-four, and upwards, even to some hundreds ; there having been examples of such divisions frequently exhibited at pompous funerals. Sir William Dugdale, however, very justly objects to so many arms being placed together on one shield or banner, on account of the difficulty of discerning one coat of arms from another.

Armorists have invented many differences or characteristic marks, whereby bearers of a similar armorial ensign may be distinguished from each other, and their relation to the principal of the family demonstrated : and, according to Guillim, these differences are to be considered either as ancient or modern. Those which he calls ancient differences consist in Bordures; which are bearings passing all round, and parallel to the boundary of the escutcheon, in form of a border, and always containing a fifth part of the field in breadth. Bordures were anciently used for the distinguishing not only of one nation or tribe from another, but also to denote a diversity oetween particular persons descended of one family and even from the same parents. This distinction, however, was not expressly signified by invariable marks ; nor were bordures always appropriated to denote the different degrees of consanguinity : for, as Sir Henry Spelman observes, ‘ ancient heralds, being fond of perspicuous differences, often inverted the paternal tincture, or sometimes inserted another charge to the escutcheon, such as bends, crosslets, cantons, or the like ; which irregularity has, 1 suppose, induced modern armorists to invent and make use of oihers.’

Bordures are of several different forms and tinctures, being once

generally used as a difference between families of the same name; and sometimes as marks of illegitimacy. A bordure should never be of metal placed upon metal, and is seldom of color upon color, but rather of the tincture which the principal bearing or charge is of. There are some peculiarities of position and charge proper to the bordure: as that it gives place to the chief, the canton, the quarter, and the line of impalement ; since it passes round the shield till it touches any of those divisions, and then disappears, though it surmounts all others. When it is parted into a single line of square divisions of two colors, it is called a bordure gobonee, or tomponee ; if there be two lines it becomes counter-compome ; and, if there be three, it is cheque,; which rule is also to be observed in chiefs, bends, fesses, and chevrons. When a bordure is vaire of one line, it is blazoned pur/led; when of two c ounter-purfled ; and vaire only when of three. The charging of a bordure with lions, &c., is expressed by the term Enurnee of lioncels ; with bezants, Bezanlce or Entoyer of bezants ; with birds, Enaleron of martlets, fyc. ; and with Vegetables, Verdoy oj t-efo'ds, &c.

The modern differences which the English have adopted, not only for the distinguishing of sons issued out of one family, but also to denote the different and subordinate degrees in each house from the original ancestors, are nine ; *viz.* For the heir or first son, the Label. Second son, the Crescent. Third son, the Mullet. Fourth son, the Martlet. Fifth son, the Annulet. Sixth son, the Fleur-de-lis. Seventh son, the Rose. ' Eighth son, the Cross-moline. Ninth son, the Double Quarter-foil. See HERALDRY, plate III By these differences, the six sons of Thomas Beauchamp, the fifteenth earl of Warwick, who died in the thirty-fourth year of king Edward III. are distinguished in an old window of the church of St. Mary at Warwick; so that, although they are called modern differences, their usage with the English is ancient. But, of all these marks of distinction, the label only is affixed to arms belonging to any of the royal family ; which, however, is differenced by distinct charges peculiar to each wearer. Thus the prince of Wales has a label Luna. The duke of York has a label Luna, charged with a cross Mars Upon the middle point. The duke of Clarence has a label Luna, charged with a cross Mars, between two anchors Jupiter. The duke of Gloucester has a label of five points Luna, the middle one charged with a fleur-de-lis Jupiter ; the other four with a cross Mars. These differences are also borne upon both the supporters.

Daughters, excepting those of the blood-royal, have no other mark of difference in their coats of arms than the form of the escutcheon ; therefore they are permitted to bear the arms of theii

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father, as the eldest son does after his father’s decease. The reason is by Guillim said to be, that when they are married they lose their surname, and receive that of their husbands.

OF CHARGES.

Whatever is contained in the field, whether it occu-py the whole or only a part of it, is called a charge. AH charges are distinguished by the names of honorable ordinaries, sub-ordinaries, and common charges.

Honorable Ordinaries, the principal charges in heraldry, are made of lines only, which, according to their disposition and form, receive different names.

Sub-Ordinaries are ancient heraldical figures, frequently used in coats of arms, and which are distinguished by terms appropriated to each of them.

Common Charges are composed of natural, artificial, and even chimerical things; such as planets, animals, vegetables, instruments, &c.

The most judicious armorists admit of only nine honorable ordinaries, *viz.* The Chief; the Pale ; the Bend ; the Bend Sinister ; the Fess ; the Bar; the Chevron: the Cross; and the Saltire. Of these only six have diminutives.

The Chief is expressed by one horizontal line, which must be noticed in the blazon if it be any other than straight. It is drawn parallel to the upper part of the escutcheon, and contains in depth the third part of the field. Its diminutive is a fillet, the content of which is not to exceed one-fourth of the chief, and is placed in the lowest part thereof. This ordinary is subject to be charged with variety of figures ; and may be indented, wavy, nebule, &c.

The Pale consists of two parallel perpendicular lines drawn from the top to the base of the escutcheon, and contains the third middle part of the field. Its diminutives are, the pallet, which is the half of the pale ; and the endorse, which is the fourth part of a pale. This ordinary may receive any charge, though in strict heraldry its diminutives cannot; and Leigh considers that the endorse should not be borne, excepting to accompany the pale in pairs, as cottises do the bend, &c. : Sir John Feme, however, is of a different opinion.

The Bend is an ordinary formed by two parallel diagonal lines, drawn from the dexter chief to the sinister base : and contains the fifth part of the field in breadth, if uncharged ; but, if charged, then the third. Its diminutives are, the bendlet, which is the half of a bend : the cost or cottise, when two of them accompany a bend, which is the fourth part of a bend ; and the riband, the moiety of a cost, or the eighth part of a field. •

The Bend sinister is of the same breadth as the bend, but drawn the contrary way : this is subdivided into a scarpe, which is the half of the bend, and into a baton, which is the fourth part of the bend ; but this does not extend itself to tbe extremities of the field, the figure being cut off short at both ends.

The Fess is an ordinary produced by two parallel lines drawn horizontally across the cen-tre of the field, and contains in breadth the same

proportions as the bend. Some English authois state that it has no diminutive, and that the bar is a distinct ordinary of itself.

The Bar, according to their definition, is formed of two parallel lines, and contains but the fifth part of the field : which is not the only thing wherein it differs from the fess; for there may be more than one in an escutcheon, placed in different parts thereof, whereas the fess is limited to the centre-point; in which the French armorists differ. The

bar has two diminutives ; the closet, which contains the half of the bar ; and the barrulet, which is the half of the closet. When the shield contains a number of bars of alternate metal and color, and of an even number, it is called barry of so many pieces, expressing the number.

The Chevron, which resembles two rafters for supporting the roof of a house, takes up the same proportions as the bend ; and is formed of four parallel lines springing from the opposite lower sides of the escutcheon, and meeting in an acute angle rather below the chief. Its diminutives are, the chevronel, which contains the half of a chevron ; and the couple-close, which is the half of a chevronel. Leigh observes that this last diminutive is never borne but in pairs, or with a chevron between two of them.

The Cross is an ordinary formed by the meeting of two perpendicular with two horizontal parallel lines in the fess point, where they make four right angles; the lines are not drawn throughout, but discontinued the breadth of the ordinary, which takes up only the fifth part of the field when not charged : but, if charged, then the third. It :s borne as well engrailed, indented, &c , as plain.

There is a very great variety of crosses used in heraldry. Guillim has mentioned thirty-nine different sorts ; De la Columbiere seventy-two ; Leigh forty-six ; and Upton declares that he can-not ascertain all the various crosses borne in arms, since they are almost innumerable.

The Saltire, which is formed by the bend and bend sinister crossing each other in acute angles, as the intersecting of the pale and fess forms the cross, contains the fifth part of the field; but, if charged, then the third. In Scotland, this ordinary is frequently called a St. Andrew's cross. It may, like the others, be borne engrailed, wavy, &c., as also between charges, or charged with any other bearing.

The other heraldical figures, called subordina-ries, or simple ordinaries only, which, by reason of their ancient use in arms, are also of honorable bearing, are the following : —

The Gyron is a triangular figure formed by two lines, one drawn diagonally from one of the four angles to the centre of the shield, and the other either horizontally or perpendicularly, from one of the sides of the shield, meeting the first line at the centre of the field.

The term Gyronny is used, when the field is divided into six, eight, ten, or twelve gyrons; but a French authority would have the true gyronny to consist of eight pieces only.

The Quarter, or Franc-Quarter, is a square figure, which occupies the upper dexter quarter of the shield. It is but rarely carried as a

charge, though F. Silvester Petra Santa has preserved a few instances of its use.

The Canton is a square part of the escutcheon, somewhat less than the quarter, or about the third part of the chief. It is said to represent the banner that was given to ancient knights-bannerets, and, generally speaking, possesses the dexter-chief point of the shield ; but should it occupy the sinister corner, which is but seldom, it must be blazoned as a canton sinister. It is sometimes considered as one of the nine honorable ordinaries; and it is frequently added to the arms of military men charged with an augmentation of honor.

The Pairle is a figure formed by the conjunction of the upper half of the saltire with the under half of the pale. This combination also forms what is denominated a Cross Pall.

The Fret is a figure representing two small laths in saltire, with a mascle in the centre inter-laced.

Frette is said when the field or bearings are covered with a fret of six, eight, or more pieces. The word frette may be used without addition, when it is of eight pieces, carried to the extent of the shield ; but, if there be less than that number, they must be specified.

The Pile, which consists of two lines, termi nating in a point, is formed like a wedge, and is borne engrailed, wavy, &c., on its edges. It issues in general from the chief, and extends towards the base; though there are some piles borne in bend, and issuing from other parts of the field.

, The Orle is an ordinary composed of two lines going round the shield, the same as the bordure, but its breadth is only one-half of the latter, and it is placed at some distance from the edges of the shield.

The Inescutckeon is a little escutcheon borne within the shield ; which, according to Guillim, is to be so called only when it is borne

singly in the fess point or centre. It is said to be formed but of three lines, and consequently is shaped like the fifth shield delineated in the upper part of plate I.

The Tressure is an ordinary commonly supposed to be the half of the breadth of an orle, and is generally borne flory and counter-flory, as it is also very often double, and, sometimes, treble. The double tressure makes part of the arms of Scotland, as marshalled in the royal achievement, and was granted to the Scottish kings by Charlemagne, emperor and king of France, when he entered into a league with Achaius, king of Scotland.

The Flanche is formed by an arched line or semicircle, drawn from the chief to the base on the same side, and is almost always borne double. Leigh observes that on two such flanches two different coats may be bonie.

The Flasque resembles the flanche, excepting that the circular line does not approach near the centre of the field, being a chord rather than a semicircle. Gibbon supposes that these two ordinaries are one, and written flank, according to the German pronunciation ; alleging that the other names are but a corruption: but Leigh and Guillim make them two distinct and subordinate ordinaries.

The Voider is by Guillim considered as a subordinate ordinary, and is not unlike the flasque, but occupies still less of the field. It is really a diminution of the flanche.

Such are the prominent heraldical charges which part, surround, and occupy the principal points of the shield ; in addition to which may be mentioned some of the numerous smaller figures peculiar to this science, and in most general use in English armorial ensigns ; of all which it may be remarked, that they will be found delineated under their several names in this dictionary. These figures are either of a round, or a rectangular, form ; the first being collectively termed Roundles or Round-lets, which differ in name according to their tincture : though foreign heralds entitle them only Bezants when they are of gold, and Tor-teauxes when they are of any color, expressing it in the blazon. In English heraldry they are nine in number, and, when the Roundle is of Or, it is called a Bezant, from an ancient gold coin struck at Byzantium, or Constantinople : when of argent, it is termed a Plate, or flat piece of silver coin : when azure, a Hurts, from the blue hurtle-berry ; when gules, a Tor-teaux, or red round wastell-cake :

when vert, a Pomme, or apple : when sable, an Ogress, or Pellet, representing a ball or flint-stone for can-non : when Purpuve, a Golpe, or wound : when Tenne, an Orange : and when sanguine, a Guze, or eyeball : these figures are all globular, excepting the Bezant and Plate, which are flat pieces of coin. When any of the above occur in an armorial ensign, and counterchanged of different colors, they no longer retain their specific names, but are blazoned Roundles, because their peculiar characteristics are blended and lost. — Another circular figure is denominated a Fountain, which is a flat round, divided barry-wavy of six pieces Argent and Azure ; and is supposed to represent a basin or spring with the ancient general emblem of water. For all these charges, see the lower part of plate I. — With these figures may also be mentioned the Annulet, or ring, — see the upper part of plate III., — of which the form is well known, and which is to be found in numerous armorial ensigns throughout all the European states.

In this class of curved figures may likewise be included those called Guttes, or drops, which are round beneath, rise waving and tapering at the sides, and terminate in a point above like a flame. They are also known by various names according to their tinctures; being called Guttes d'Or, if of gold ; Guttes d'Eau, or of water, if white, Guttes de Sang, or of blood, if red ; Guttes des Larmes, or of tears, if blue; Guttes ff Olive, or drops of Olive-oil, if green ; and Guttes de Poix, or of pitch, if black. They are most commonly used for scattering over shields and charges ; and anciently in silver for powdering over palls, achievements, &c., at ceremonious funerals, representing tears.

The principal heraldical charges formed ot rectangular lines are the following : —

The Billet an equilateral figure twice as long as it is broad. Some heralds imagine that it represents a brick for building ; but others more properly consider 'it as a delineation of folded paper or a letter.

M.JERAI.BRY,,

DISTINCTIONS OF HOUSES .

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bim, Tritons, Mermaids, Centaurs, Unicorns, surrounded by strawberry-leaves, and closed by Griffins, Dragons, Wiverns, Cockatrices, Phe-four, six, or eight arches, supporting a mound, nixes, and Sphinxes. These, like the foregoing surmounted by a cross.

charges, are subject to various positions and dispositions, which, from the principles already laid down, will be plainly understood.

To these figures may be added the Man-tiger, or Manticora, an imaginary creature, supposed to have the body of a tiger with a man's head

The Grand Signior bears over his arms a tur-ban, enriched with pearls and diamonds, under two coronets, the first of which is made of pyramidical points bearing large pearls, and the uppermost is surmounted with crescents.

The Pope appropriates to himself a tiara, or

and goat horns; also those which have a real high cap of cloth of gold, from which hang two existence, but are said to be endowed with extra-pendants embroidered and fringed at the ends, vagant and imaginary qualities, as the salamander, semie of crosses pattee of gold. -This cap is enclosed by three marquess's coronets ; and has on its top a mound of gold, whereon is a cross of the same, which cross is sometimes represented by engravers and painters pometted, recrossed, The ornaments, surmounting or surrounding flory, or plain. It appears, from very good escutcheons, were introduced to denote the birth, authority, that Boniface VIII., who was elected dignity, or office, of the persons to whom the in 1295, was the first who encompassed his cap

beaver, cameleon, &c.

EXTERNAL ORNAMENTS OF ESCUTCHEONS.

arms appertain ; and they are borne both by the laity and clergy. Those most in use are Crowns, Coronets, Mitres, Helmets, Mantlings, Chapeaux, Wreaths, Crests, Scrolls, and Supporters.

The most ancient crowns were only diadems,

with a coronet; Benedict XII., in 1335, added a second to it; and John XXIIL, in 141 J, a third ; with a view to indicate by them that the pope is the sovereign priest, the supreme judge, and the sole legislator of Christians.

The coronet of the Prince of Wales, or eldest

bands, or fillets ; afterwards they were composed son of the king of Great Britain, was anciently of leaves or branches, and ihen flowers were a circle of gold set round with four crosses-pat added to them. With the Greeks, the crowns ‘ given to those who won the prize at the Isthmian games were of pine; at the Olympic spoils of laurel; and at the Nemean exercises of smallage.

Examples of some of the more ancient crowns

tee, and as many fleurs-de-lis alternately ; but, since the Restoration, it has been closed with one arch only, adorned with pearls, surmounted of a mound and cross, and bordered with ermine like the king’s. Besides the coronet,

are frequently met with in modern achievements, his royal highness has another distinguishing

as the mural crown, formed of battlements; the mark of honor, peculiar to himself, being a

naval or rostral crown, of the stems and sterns of plume of three ostrich feathers, enclosed within

ships; the castiense or vallary crown, of camp a coronet of the ancient princes of Wales. Un—

pallisadoes; ihe civic crown, of oak leaves ; the der it, in a scroll, is the motto, ‘ Ich dien,’ which,

radiated crown, and the celestial crown, com-in the German or old Saxon language, signifies, I

posed of rays and stars, which are principally serve. This device was at first taken by Edward

Prince of Wales, commonly called the Black Prince, after the famous battle of Cressy, in 1346; where, having vanquished John, king of

found upon monuments, or at funerals. Others of the ancient crowns are still borne as crests.

Modern crowns are used only as ornaments,

which emperors, kings, and independent princes Bohemia, with his own hand, he took from his wear upon their heads in great solemnities, to head such a plume, and set upon his own. denote their sovereign authority. These are The coronet of all the princes, immediate sons some of the most common in heraldry, and are and brothers of the kings of Great Britain, is

as follow < —

The crown of the Kings of Great Britain, see

a circle of gold, bordered with ermine, &c., surmounted with four fleurs-de-lis, and as many

HERALDRY plate V., is a circle of gold, bordered crosses-pattee alternately. The particular form of •with pearls and precious stones, on which are such coronets as are appropriated to princes of

set four large fleurs-de-lis, and four crosses pattee alternately : from these rise as many arches adorned with pearls, which close under a mound, surmounted by a cross like those beneath. Sand-ford, in his Genealogical History, remarks that Edward IV. is the first king of England who in his seal, or on his coin, is crowned with an •arched diadem. It appears, however, to have been used by Henry VI.

The crowns of Spain and Portugal are a ducal coronet, from which rise eight arches supporting a mound, ensigned with a plain cross. Those of Denmark and Sweden consist of eight arches, rising from a marquess's coronet, which conjoin at tne top under a mound ensigned with a cross bottone.

The crowns of most other kings in Europe are circles of gold, adorned

with precious stones,

the blood-royal was described and established by a grant of the 13th year of Charles II.

The coronet of the princesses of Great Britain is a circle of gold, bordered with ermine, and composed of crosses-pattee, fleurs-de-lis, and strawberry leaves alternately.

A duke's coronet is a circle of embossed gold bordered with ermine, and set round with eight large strawberry-leaves. It is surmounted by a cap of crimson velvet with a tuft and tassel of gold.

A marquess's coronet is a circle of embossed gold bordered with ermine, set round with four strawberry leaves, and as many pearls on low pyramidical points, of equal height, placed alternately, with a cap and tassel as before.

An earl's coronet is a circle of embossed gold, bordered with ermine, with eight high pyramidi-

cal points, on the tops of which are as many large pearls, placed alternately with as many strawberry leaves, on lower points : having a cap and tassel as before.

A viscount's coronet is a circle of plain gold bordered with ermine, with sixteen large pearls set close together on the rim ; the cap and tassel as before.

The coronet of a Baron, which was first granted by James II. in 1684, is formed with six pearls set at equal distances on a gold circle, bordered witli ermine, four of which only are seen on engravings, with the crimson velvet cap and gold tassel, as before.

The eldest sons of peers, above the degree of a baron, bear their

father's arms and supporters differenced with a label, and use the coronet appertaining to their father's second title ; and all the younger sons bear their arms with proper differences, but without coronets.

The archbishops and bishops of England and Ireland surmount their armorial ensigns with a mitre ; which is a round cap of gold pointed and cleft at the top, from which hang two blue pendants fringed with gold ; with this difference, that the bishop's mitre is surrounded only with an embossed fillet of gold ; whereas the archbishop's issues out of a ducal coronet.

The Helmet was formerly worn as a defensive weapon, to cover the head and face; but is now placed over a coat of arms as its chief ornament, being the proper mark of gentility. There are several sorts, distinguished by the matter they are made of, by their form, and by their position. Concerning their material it should be noticed that the helmets of sovereigns were of burnished gold damasked ; those of princes and lords, of silver; the bars, breast-piece, and ornaments of gold ; those of knights, of steel adorned with silver; and those of private gentlemen, of polished steel only.

For their form: those of the king and the royal family, and noblemen of Great Britain, are full-faced and grated, the number of bars serving to distinguish the quality of the bearer ; that is to say, the helmet appropriated to dukes and marquesses is different from that of the king, by having a bar exactly in the middle, and two on each side, making but five bars in all ; whereas the king's helmet has six. See plate V. The other grated helmet has four bars only, is placed sideways, and is common to all degrees of peerage under a marquess. The full-faced helmet open, without bars, denotes baronets and knights ; and the close helmet, placed sideways, is for all esquires and gentlemen. Instances of the various coronets, helmets, &c., used in English heraldry may be referred to in the illustrations to this article, plates IV. V.

Mantlings are pieces of cloth or leather, cut into flowers and leaves, which are at present used as ornaments to escutcheons, though they were anciently the coverings of helmets, to preserve them from the weather, and prevent their too much dazzling the eyes in battle. Guillim observes, however, that their shape must have undergone a great alteration since they have been out of use, and that, therefore, they might

more properly be termed flourishings than mantlings. The French heralds state that these mantlings were originally only short coverings, which commanders wore over their helmets ; and that, from wearing them in battle, they were generally brought back in a ragged state, from the many cuts th«y had received ; and, therefore, the more hacked they were, the more honorable they were accounted. Sometimes skins of beasts, as lions, bears, &c., were thus borne, to make the bearer look more terrible ; which was the origin of doubling of mantlings with furs. For a specimen of modern mantlings, sec-plate V.

A Chapeau is an ancient hat, or cap of dignity, worn by dukes, being generally of scarlet velvet on the outside, lined and turned up with fur. In modern heraldry they are frequently to be met with above a helmet, instead of a wreath, under the crests both of noblemen and gentlemen, though formerly they were seldom to be found, as of right appertaining to private families; but, by the grants of several heralds, these caps, together with ducal coronets, are now frequently to be met with in families who yet rank not above the degree of gentlemen.

The Wreath is a kind of a roll, made of two pieces of silk of different colors twisted together, which the ancient knights wore as a headdress when habited for tournaments : the colors of the silk being always taken from the principal mt?tal and color contained in the bearer's coat of arms. It is stijl accounted one of the lesser ornaments of escutcheons, and is placed between the helmet and the crest. In the time of Henry I., and long after, no man who was under the degree of a knight had his crest set on a wreath; but this ornament is now universally used.

The Crest is the highest part of the ornaments of an armorial ensign. It is called crest from the Latin word cresta, signifying the tuft which many birds have upon their heads, as the peacock, pheasant, &c., in allusion to the place on which it is fixed. Crests were formerly great marks of honor, because they were worn only by heroes of great valor, or by such as were advanced to some superior military command, that they might be the better distinguished in an engagement, and thereby rally their men if dispersed ; but they are at present considered as an ordinary part of the armour. The crest is frequently derived either from the supporters, or the principal charge of the escutcheon. Thus the crest of-the royal achievement of Great Britain is a lion of England crowned.

The Scroll is the ornament placed sometimes above the crest, but most commonly below the shield and supporters. It represents a riband, or

vellum scroll, containing a motto or short sentence, alluding to the crest, to the bearings, or to the bearer's name, as in the two following instances. The motto of the Earl of Cholmon-deley is, Cassis tutissima virtus, i. e. Virtue i« the safest helmet; referring to the helmet in the arms. The motto of Lord Fortescue is, Forte scutum salus ducum, A strong shield is the safety of commanders; alluding to the name of that ancient family. Sometimes it has reference to

neither, but expresses something divine or heroic; as that of the Earl of Scarborough, Murus arcus comcientia sana, A good conscience is a wall of brass. Others have a more private meaning; as that of the royal achievement, Dieu et man droit, God and my right ; introduced by Edward III. in 1340, when he assumed the arms and title of king of France, and began to prosecute his claim, which occasioned long and bloody wars, fatal, by turns, to both kingdoms. Mottos, though hereditary in the families that first adopted them, have been changed on some particular occasions, and others appropriated in their stead, instances of which are frequently met with in the genealogical history. Sometimes there are two mottos, as in the royal arms of Scotland ; where the one, In defence, is placed in a scroll above the crest ; and the other, Nemo me impune lacessit, 'in a scroll under the shield and supporters. In a few instances a third motto is added, as in the royal arms of Great Britain, where the garter, with its motto, Honi soit qui mal y pense, surrounds the shield.

Supporters are figures standing on the motto-scroll, and placed at the sides of the escutcheon; and are so called because they seem to support or hold up the shield. The origin of supporters, by Menestrier, is traced to the ancient tournaments, wherein the knights caused their shields to be carried by servants or pages in the disguise of lions, bears, griffons, blackamoors, &c., who also held and guarded the escutcheons, which the knights were obliged to expose to public view for some time before the lists were opened. Sir George Mackenzie, however, says, ' That the first origin and use of them was from the custom which ever was, and is, of leading such as are invested with

any great honor to the prince who confers it : thus, when any man is created a duke, marquess, or knight of the garter, or any other order, he is supported by, and led to the prince betwixt, two of the same quality, and sc receives from him the symbols of that honor ; and, in remembrance of that solemnity, his arms are thereafter supported by any two creatures he chooses.' Supporters have formerly been taken from such animals or birds as are borne in the shields, and sometimes they have been chosen as bearing some allusion to the names of those whose arms they are made to support. The supporters of the arms of Great Britain, since the accession of king James I. to the thione, are a lion rampant guardant, crowned or > on the dexter side ; and a unicorn argent, crowned, armed, unguled, maned, and gorged with an antique crown, to which a chain is aifixed, all or, on the sinister. Bearing armorial ensigns with supporters, according to the heraldical rules of England, is the privilege of Peers, Knights of the principal national orders, to whom they are granted on their creaticc if they should be under the degree of barons; and, lastly, of such baronets or knights as the king chooses to bestow this honor upon. In Scotland, however, all the chiefs of clans or names claim supporters ; also the baronets. But by act of parliament, 10th September, 1672, none are allowed to use

either arms or supporters, without the lord Lyon's authority, under a penalty and confiscation of all moveables whereon such arms are put.

RULES OF BLAZON.

The rules for blazoning, established by the ancient examples and laws of heraldry in England, are the following : —

1. The first, and most general, is to express heraldic distinctions in proper terms, so as not to omit any thing which ought to be specified, and at the same time to be clear and concise without tautology : especially avoiding to repeat the words of, or, and, with.

2. Begin with the tincture of the field, and then proceed to the principal charges which possess the most honorable place in the shield, such as a fess, chevron, &c., always naming that charge first, which lies next and immediately upon the field.

3. After naming the tincture of the field, the honorable ordinaries, or other principal figures, specify their characteristic charges, and afterwards their metal or color.

4. When an honorable ordinary, or some one figure, is placed upon another, whether it be a fess, chevron, cross, &c., it is always to be named after the ordinary or figure over which it is placed, with one of these expressions, surmounted by, sur tout, or over all.

5. In blazoning such ordinaries as are plain, the simple mention of them is sufficient ; but, if an ordinary should be made of any of the curved lines mentioned above, its form must be specified, t£at is, whether it be engrailed, waved, &c.

6. When a principal figure possesses the cen-tre of the field, its position is not to be expressed ; or (which amounts to the same thing), when a bearing is named, without specifying the point where it is placed, then it is understcod to possess the middle of the shield.

7. The number of the points of mullets or stars must be specified when more than five; and also, if a mullet or any other charge be pierced, it must be mentioned as such, to distinguish it from what is plain.

8. When a ray of the sun, or other single figure, is borne in any other part of the escutcheon than the centre, the point it issues from must be named.

9. The natural color of trees, plants, animals, men, the heavenly bodies, artificial objects, &c., is no otherwise to be expressed in blazoning by than the word proper ; but, if they differ from their natural color, it must be expressed in the description.

10. When three figures are in a field, and their position is not mentioned in the blazoning, they are always understood to be placed two above and one below.

11. When there are many figures of the same species borne in a coat of arms, their number must be observed as they stand, and distinctly expressed.

There are other positions called irregular; as, for example, when three figures, which are natu-

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HERALDRY.

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rally placed two and one, are disposed one and two, &c. It must also be observed, that when the field is strewed with the same figures, this

is expressed by the word semee ; but, if the figures strewed on the field be entire, it must be denoted by the terms sans nontbre ; whereas, if part of them be cutoff at the extremities of the escutcheon, the word semee is then to be adopted.

OF MARSHALLING ARMORIAL ENSIGNS.

By marshalling of arms is to be understood the art of disposing several in one escutcheon, and of distributing their contingent ornaments in proper places. Various causes may occasion arms to be thus conjoined, which Guillim comprises under the two heads of manifest and obscure. Manifest causes are such as betoken marriages, or a sovereign's gift, granted either through the special favor of the prince, or for some eminent services. Concerning marriages it is to be observed,

1 . When the coats of arms of married persons descended of different families are to be put together in one escutcheon, the fields of their respective arms are conjoined pale-ways, and blazoned impaled, baron and femme, first coat, &c. In which case the baron's arms are always to be placed on the dexter side, and the femme's arms on the sinister side.

2. If a widower marry again, his late and present wife's arms are, according to Leigh, ' to be both placed on the sinister side, in the escucheon, with his own, and parted per fess. The first wife's coat shall stand on the chief, and the second on the base ; or he may set them both in pale with his own, the first wife's coat next to himself, and nis second outermost. If he should marry a third time, then the first two matches shall stand on the chief, and the third shall have the whole base. And, if he take a fourth wife, she must participate one-half of the base with the third wife, and so will they seem to be so many coats quartered.' But these forms of impaling are meant of hereditary coats, whereby the husband stands in expectation of having the hereditary possessions of his wife united to his patrimony. If a man marry a widow, he adopts her maiden arms only.

3. In the arms of females joined to the paternal coat of the baron, the proper differences by which they were borne by their fathers must be inserted.

4. If a coat of arms having a bordure be impaled with another, as by marriage, then the bordure must be wholly omitted in the side of the arms next the centre line. See before, page 178.

5. The person who marries an heiress, instead of impaling his arms with those of his wife, is to bear them in an escucheon placed in the centre of his shield, and which, on account of its showing forth his pretension to her estate, is called an escutcheon of pretence, and is blazoned sw tout, or over all. But the children are to bear the hereditary coat of arms of their father and mother quarterly, denoting: a fixed inheritance, and so transmit them to posterity. The first and fourth quarters generally contain the father's arms, and the second and third the mother's ;

unless the heirs should derive not only their estate, but also their title and dignity, from their mother.

6. If a maiden, or dowager, lady of quality marry a commoner, or a nobleman inferior to her rank, their coats of arms may be set beside each other in two separate escutcheons, upon one mantle or drapery, and the lady's arms decorated according to her title.

7. Archbishops and bishops impale their arms differently from the forementioned coats, in giving the place of honor, that is, the dexter side, to the arras of their dignity. Prelates thus bear their arms parted per pale, to denote their being joined to their peculiar see in a sort of spiritual marriage.

With respect to such armorial ensigns as the sovereign thinks fit to augment a coat of arms with, they may be marshalled various ways, as may be seen by the arms of the Duke of Rut-land and many others. Instances of all the above various methods of marshalling armorial ensigns will be found engraved on HERALDRY, plate III. The species of marshalling called obscure arises from some particular circumstances not evident, though still capable of a satisfactory explanation.

ORDERS OF KNIGHTHOOD, &c.

To the augmentations above mentioned may be added,

1; The baronet's mark of distinction, or the arms of the province of Ulster in Ireland, granted and made hereditary in the male line by king James I., who erected this dignity on the 22d of May, 1611, in the seventh year of his reign, in order to propagate a plantation in the foremen- tioned province. This mark is — Argent, a sinister hand couped at the wrist, and erected gules ; which may be borne either in a canton, or in an escutcheon, as will best suit the charges of the arms.

2. The ancient badge of the most noble Order of the Garter, instituted by King Edward III., 1349, in the twenty-seventh year of his reign. This is a deep blue garter, surrounding the arms of such knights, and inscribed with the motto — Honi soit qul mal y pense.

The arms of those who are knights of the Or-ders of the Bath, of the Thistle, or of St. Patrick, are marshalled in the same manner, differenced only by the color and motto of the riband of the order to which they belong. Thus the motto Quis separabit, 1783, on the light blue riband of the Order, surrounds the escutcheon of a knight of St. Patrick. Nemo me impune lacesset, on a green riband, distinguishes a knight of the Thistle ; and Triajuncta in uno, on red, a knight of the Bath. None of these Orders of knighthood are herelitary ; but the honors of a Baronet of Ulster, and of a Baronet of Nova Scotia (created by patent in 1602), descend to the heirs male.

For representations of the badges of the several Orders of knighthood, see plate V.

OF FUNERAL ESCUTCHEONS.

We shall conclude this treatise by describing the several funeral escutcheons usually called

hatchments ; by which may be known, after any person's decease, what rank he or she held when living ; and, if it be the hatchment of a gentleman, whether he were a bachelor, married man, or widower, with the like distinctions for gentlewomen.

The hatchment is a painting of the family armorial ensigns, usually annexed to the fronts of houses, when any of the nobility or gentry die. 1. The arms, if the deceased be a private gentleman, are parted per pale with those of his wife. The ground without the escutcheon being black denotes the man to be dead ; and the ground on the sinister side being white signifies that the wife is living. See HERALDRY, plate III.

When a married gentlewoman dies first, the hatchment is distinguished by a contrary color to the former ; that is, the arms on the sinister side have the ground without the escutcheon black ; whereas those on the dexter side, for her surviving husband, are upon a white ground: the hatchment of a gentlewoman is, morever, differenced by a cherub over the arms instead of a crest.

When a bachelor dies, his arms may be depicted single or quartered, with a crest over them, but never impaled, as the first two are, and all the ground without the escutcheon is also black.

When a maid dies, her arms, which are placed in a lozenge, may be single or quartered, as those of a bachelor ; but, instead of a crest, they should have a cherub over them, and all the ground without the escutcheon is also black.

When a widower dies, his arms are represented impaled with those of his deceased wife, having a crest, and sometimes a helmet and mantling, over them, and all the ground without the escutcheon black.

When a widow dies, her arms are also represented impaled with those of her deceased husband, but enclosed in a lozenge, and, instead of a crest, a cherub is placed over them ; all the ground without the escutcheon is also black.

If a widower or bachelor should happen to be the last of the family, a mort-head is generally annexed to each hatchment, to denote that death has conquered all.

The same rules are observed with respect to the escutcheons placed on the hearse and horses used in ceremonious funerals, excepting that they are not surmounted with any crest, as in the foregoing examples of hatchments, but are always plain. It is proper, however, to ensign those of peers with coronets, and those of a maiden lady with a knot of ribands.

In Scotland a funeral escutcheon not only shews forth the arms and condition of the defunct, but is also a proof of the gentility of his descent; and such persons, for whom this species of escutcheon can be made out, are legally entitled to the character of gentlemen of blood, which is the highest species of gentility. The English hatchment, above described, exhibits no more than a right to a coat of arms, which may be acquired by purchase, and is only a preparatory step towards establishing gentility in a family.

It having been already observed that part of the office of a herald consists in arranging the various ranks of nobility, &c., in public ceremonials, the present article will be appropriately concluded by the following Table of Precedence which is adopted by them : —

The King. Prince of Wales.

King's Sons.

King's Grandsons.

King's Brothers.

King's Uncles.

King's Nephews.

Husbands of the King's Daughters

Archbishop of Canterbury, Lord-Primate of Eng.and :

Lord High Chancellor, Lord Keeper, being a Baroc.

Archbishop of York, Primate of England.

Lord High Treasurer, if a Baron.

Lord President of the Privy Council, if a Barou

Lord Privy Seal, if a Baron.

Lord High Constable. Lord Great Chamberlain.

Earl Marshal. Lord High Admiral.

Lord Steward of His Majesty's Household. Lord Chamberlain of His Majesty's Household.

Dukes, according to their Patents.

Eldest Sons of Dukes of the Blood Royal.

Marquesses, according to their patents.

Dukes' eldest sons. Earls, according to their patents. Younger Sons of Dukes of the Blood Royal-Marquesses' eldest sons.

Dukes' younger sons. Viscounts, according to their patents.

Earls' eldest sons. Marquesses' younger sons.

Bishops of London, Durham, Winchester, and 'ill other bishops, according to their seniority of consecration.

Secretary of State, being a Baron.

Commissioners of the Great Seal.

Barons, according to their patents.

Speaker of the House of Commons

Treasurer, Comptroller, and Vice-Chamberlain of the

Household.

Secretary of State, being under the degree of a Baron.

Viscounts' eldest sons.

Earls' younger sons.

Barons' eldest sons.

Knights of the Garter.

Privy Councillors.

Chancellor of the Exchequer.

Chancellor of the Duchy of Lancaster.

Lord Chief-Justice of the King's Bench.

Master of the Rolls. Lord Chief-Justice of the Common Pleas.

Lord Chief Baron of the Exchequer. Judges and Barons of the degree of the coif of the

said court, according to seniority. Knights Bannerets made by the King himself in

person.

Viscounts' younger sons. Barons' younger sons.

Baronets. Knights Bannerets not made by the King himself ic

person.

Knights of the Thistle. Knights of the Bath, Grand Crosses.

Civil Knights of the Bath. Knights Commanders of the Bath.

Knights Bachelors. Kldest sons of the youngest sons of Peers.

HERALDRY.

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Baronets' eldest sons. Eldest sons of Knights of the Garter.

Bannerets' eldest sons. Eldest sons of Knights of the Thistle and Bath.

Knights' eldest sons. Baronets' younger sons.

Serjeants at Law. Doctors, Deans, and Chancellors.

Masters in Chancery.

Companions of the Bath.

Esquires of the King's body.

Gentlemen of the Privy Chamber.

Esquires of Knights of the Bath.

Esquires by Creation.

Esquires by Office or Commission.

Younger sons of Knights of the Garter.

Younger sons of Bannerets.

Younger sons of Knights of the Bath.

Younger sons of Knights Bachelors.

Gentlemen bearing arms. Clergymen, not Dignitaries.

Barristers at Law.

Officers in the Army and Mavy, not esquires by

Commission.

Citizens.

HERALDS, COLLEGE OF, or HERALDS' OFFICE, a corporation founded by a charter of king Richard III., who granted to it several privileges, as to be free from subsidies, lolls, offices, &c. The members had a second charter from king Henry VI. ; and a house built near Doctors' Commons, by the earl of Derby, in the reign of king Henry VII., was given them by the duke of Norfolk, in the reign of queen Mary I., which house is now rebuilt. The college is subordinate to the earl-marshal of England ; and the members of it are assistants to him in the court of chivalry, formerly held in the common hall of the college, where they sat in their rich tabards of the royal arms.

HERALDUS (Desiderius), or Didier Herault, a counsellor of the parliament of Paris, of uncommon learning. His Adversaria appeared in 1599; which, however, if the Scaligerana may be credited, he repented having published. His notes on Tertullian's Apology, on Minutius Fe-lix, and on Arnobius, have been esteemed. He also wrote notes on Martial's Epigrams. Under the name of David Leidhresserus, he wrote a political dissertation on the independence of kings, some time after the death of Henry IV. He had a controversy with Salmasius, De jure Attico ac Romano ; but did not live to finish what he had written on that subject. W hat he had done, however, was printed in 1650. He died in June 1649.

HERALDUS, or HERAULT, son to Desiderius, was a minister in Normandy, when he was called to the service of the Walloon church of London under Charles I. He wrote a work entitled Pacifique Royal en deuil, in which he condemned the execution of king Charles I. It is quoted by Dai lie. He was so zealous a royalist that he was forced to fly to France, to escape the fury of the republicans. He returned to England after the Restoration, and resumed his ministry in the

Walloon church at London : some time after which he obtained a canonry in the cathedral of Canterbury, which he enjoyed till his death.

HERAT, the ancient Aria, a city of Persia, in the province of Khorassan, is on the high road from Persia to Hindostan, and on the west frontier of Afghaunistaun. It has been taken by all the great conquerors of the east, from Alexander to Nadir Shah. At the beginning of the sixteenth century it was at the height cf its modern splendor, and the residence of Aboul Ghazy, the fourth in descent from Timour. It is now the head of a viceroyalty of Cabul. In 1783 Mr. Forster describes it as very commercial, and having an excellent manufacture of carpets. Good horses are bred in the vicinity, and its revenues have been reckoned at 4,000,000 rupees.

HERAULT, DEPARTMENT OF (in France), is oart of the former province of Languedoc, and

derives its name from the river Herault, which traverses it from north to south in its way to the Mediterranean Sea. The chief place of this prefecture is Montpelier : it is divided into four arrondissements, or subprefectures, *viz.* Montpelier 111,656 inhabitants, Beziers 11 7,279, Lodeve 52,893, and St. Pons 42,298, making a total of 324,126 souls. It contains thirty-six justiciaries of the peace, or cantons, and 333 communes, spread over an area of 951 square miles, and yields a territorial revenue of 2 1 ,580,000 francs. It is the ninth military division of the kingdom; has a royal court and bishopric at Montpelier, consists of three electoral circles, and sends five members to the chamber of deputies. It is bounded on the north and east by the department of the Gard, on the south-east by the Mediterranean, on the south-west by the department of Aude, and on the north-west by those of Aveyron and Farn.

The surface of this maritime department is much diversified ; it is intersected by mountains and valleys, plains and forests ; the soil is generally dry and barren, and with difficulty produces' corn ; but, to make amends, it yields abundance of excellent wines, especially Muscadel and Frontigniac, a great number of plants suitable for medicine, dyeing, and perfumery, and a vast quantity of fruits of every kind. The country is covered with olive, almond, and fig-trees ; the gardens are filled with orange trees, citrons, and pomegranates, which present at all seasons a constant succession of flowers and fruits. There are also some fine forests of oaks, which furnish wood for ship-

building and cooper-age ; the pastures are abundant and always green, and its artificial meadows have been very much increased. One branch of the Cevennes crosses this department in a direction nearly parallel with the coast ; in some places the old craters of volcanoes are discernible, and \ve perceive some masses of basalt, lava, and other volcanic stones. The heights present nothing, so to speak, but uncultivated rocks, where, however, there are some green oaks, box trees, thyme, and lavender.

The pools or lakes of Thau, Frontignan, Mag-nelone, Perault, and Manguio, which extend over a great space, and communicate with each other by several canals, occupy a considerable part of the coast of this department. They abound in fish of every kind ; and produce annually about 23,700 quintals of white fish, 7550 of eels, 45,000 of shell fish, and 15,000 ducks and other aquatic birds, yielding in the whole 560,000 francs, three-fifths of which arise from the pools worked for the advantage of the state. • ‘

The soil is generally rich, and is cultivated with horses; but its products are insufficient for the population, since a large portion of the country consists of forests of oak, beech, chestnut, pine, box trees, and green oaks, and another large portion is full of vineyards. The average produce of a hectar of arable land, is 27 francs 17 centimes. It yields little corn; but more than 2,000,000 of hectolites of wine are made every year, of which three-fourths are distilled and exported ; it produces also a great quantity of fruit, a number of artificial meadows, almonds, nuts, olives, figs, oranges, citrons, capers, melons (in the open field), cam phire, kali, woad, and pastel. Numbers of cattle and sheep are reared in this country, and great quantities of silkworms; there is also an extensive pilchard fishery, and quarries of marble of different colors ; alabaster, limestones, brown freestone, potters’ ciay, fossil cinders, aluminous earths, &c. There are

establishments for mineral waters at Avene, at Balaruc, and la Malou.

In this department are manufactured cloths for soldiers' dresses, which are exported to Spain and the Levant, woollen and cotton counterpanes, swansdowns, silk and grogram caps, staves, casks, cork, paper, mineral acids, dry and mixed verdigris, Spanish nut oil, soap, fine liqueurs, scented waters, perfumery, grape syrup, and confectionary. There are also brandy distilleries ; refining houses for sugar ; silk, cotton, and woollen spinning factories ; steel manufactories ; glass-houses for window glass and bottles ; considerable tan-houses, salt-pits, &c. An extensive commerce is carried on in corn, muscadel, and other wines, brandy, spirits, oil, dry and preserved fruits, plants, soap, spices, drugs, verdigris, chemical productions, skins, leather, and cattle. It is a great market for salt, and carries on an import and export trade with almost every port in Europe, America, and the Indies.

The principal rivers which water the country are the Herault and the Lez, which are both navigable, the Ergue, the Mosson, the Salaison, the Orb, the Libron, and the Cesse ; the canal in the south, which joins the Mediterranean and the Atlantic, the canal of Grave which communicates with the lakes and the sea by means of the Lez, the canal of Roubine or Lunel, and that of Montpelier. It is traversed by the great roads from Nismes and Perpignan.

HERAULT, a river which takes its rise in the Cevennes, at the foot of the lofty mountains of Aigaoual, and Lespiron, near the village of Valleraugue, in the circle of Vigan, department of the Gard. It passes hy V alleraugue, near Ganges, to St. Bauzil, St. Etienne, St. Guilhem-le-De- , sert near Aniane and Gignac, to Pezenas and

Bessan, and (alls into the Mediterranean at the port of Agde, where it forms a channel. Its whole course is about eighty-four miles. As far as St. Guilhem, this river flows through a deep trench of calcareous rock ; it is navigable from Bessau to its mouth. Its principal tributary streams are the Ergue, the Dombic, and the Peine.

HERAULT. See HER ALDUS

HERB, n. s.

FT. herbe ; Lat. herba ;

HERBA’CEOUS, adj.

Genn.herberg. The gene—

HER’BAGE, n. s.

ric name of plants : herHER’BAL, n. s.

baceous, feeding on vege—

HER’BALIST, n. s.’

tables: herbage, pasture,

HER’BAR, n. s.

or the right of pasture :

HER’BARIST, n. s.

herbal, a book containing

HER’BELET, n. s.

names and descriptions

HERBES’CENT, adj. f of plants: herbalist, a m?r

HER’BID, adj.

skilled in the knowled”.

HEK’BORIST, n. s.

of herbs: herbar, synony—

HER’BOROUGH,n. *.

mous with a plant: herHER’BOUS, adj.

barist, one skilled in

HER’BULENT, adj.

herbs : heebelet, a small

HERB’- WOMAN, n.s.

herb: herbescent, grow

HER'BY, adj.

ing into herbs : herborough, a temporary residence, a harbour: herb-ous, herbulent, abounding with herbs : herbwoman, a woman that sells herbs : herby, having the nature of herbs.

Now cannot Canace but herba delve Out of the ground ; and naaken salves newe Of herbes precious and fine of hewe.

Chaucer. The Squieres Tale.

and in her band

The herb she toke well avisand

The lefe, the sede, the stalke, the floure ;

And said it had a gode savour

And was no common herb to find.

Chaucer't Dree me. The Priores, as woman taught of gentil blood and

hend,

Assented to hir counsel j and forth gone they wend, Passing forth softly into the herbery, For many a. herb grewe for sewe (salve) and surgery. Chaucer. The Pardonere and Tapesterc.

The roof hereof was arched over head, And decked with flowers and herbart daintily.

Spenser. Faerie Queene. In such a night

Medea gathered the enchanted herbt That did renew old jEsou. Shakspenre.

These herldeti, which we upon you strow. Id. No substance but earth, and the procedures if earth, as tile and stone, yieldeth any moss or herby substance. Bacon.

We leave the description of plants to herbal* and other like books of natural history. Id.

The German lord, when he went out of Newgate into the cart, took

order to have his arms set up in his last herborough. Ben Jonson,

Unhappy, from whom still concealed does lie Of herbs and roots the harmless luxury. Ctnclcy.

There is a sort of stubborn weeds Which if the earth but once, it ever breeds, No wholesome herb can near them thrive. No useful plant can keep alive. Id,

With sweet smelling herbt Espoused Eve decked first her nuptial bed.

Milton.

As for the medicinal uses of plants, the large her' bait are ample testimonies thereof More-

HER

Such a plant will not be found in the herbal of na-ture. Browne.

Herbalist* have distinguished them, naming that the male whose leaves are lighter, and fruit rounder.

Id.

Ginger is the root of neither tree nor trunk ; but an herbaceous plant, resembling the water flower-de- luce. Id.

Herbarists have exercised a commendable curiosity in subdividing plants of the same denomination. -

Boyle.

Rocks lie covered with eternal snow ; Thin herbage in the plains, and fruitless fields. '

Dry den.”

Herbs are those plants whose stalks are soft, and have nothing woody in them ; as grass and hemlock.

Locke.

He was too much swayed by the opinions then current amongst herbaristt, that different colours, or multiplicity of leaves in the flower, were sufficient to constitute a specifick difference. Ray.

A curious herbarist has a plant, whose flower perishes in about an hour. Id. At the time the deluge came, the earth was loaded with herbage, and thronged with animals.

Woodward.

I was like to be pulled to pieces by brewer, butcher, and baker, even my herbwoman dunned me as I went along. Arbuthnot.

As to the fuci, their seed hath been discovered and shewed me first by an ingenious htrbari.it.

Derham.

Their teeth are fitted to their food ; the rapacious to catching, holding, and tearing their prey ; the herbaceous to gathering and comminution of vegetables.

Id.

If the leaves are of chief use to us, then we call them herbs ; as sage and mint. Watts’ s Logick.

Our herbals are sufficiently stored with plants.

Baker. One cultivated spot there was that spread

Its flowery bosom to the noon-day beam, Where many a rose-bud rears its blushing head, And herbs for food with future plenty teem.

Beattie.

Of herbs and cordials they produced their store, But she defied all they could employ, Like one life could not hold nor death destroy.

Byron. Don Juan.

HERB, in botany, is used by Linnaeus to denominate that portion of every vegetable which arises from the root, and is terminated by the fructification. It comprehends, 1. The trunk, stalk, or stem. 2. The leaves. 3. Those mi-nute external parts called by him the fulcra, or supports, of plants. 4. The buds, or, as he also terms them, the winter quarters of the future vegetable. See BOTANY.

HERBACEOUS PLANTS are those which have succulent stems or stalks that lie down to the ground every year. Of herbaceous plants those are annual which perish stem and root every year ; biennial, which subsist by the roots two “ears; perennial, which are perpetuated by their roots for a series of years, a new stem being produced every spring.

HERBAGE, in law, signifies the pasture provided by nature for the food of cattle ; also the liberty to feed cattle in the forest, or in another person’s ground.

HERBELOT (Bartholomew d’), a French writer, eminent for his oriental learning, born at

Paris in 1625. He travelled several times tato Italy, where he obtained the esteem of some of the most learned men of the age. Ferdinand II., grand duke of Tuscany, gave him many marks of his favor: a library being exposed to sale at Florence, the duke desired him to examine the MSS. in the oriental languages, to select the best of them, and to mark the price; which being done, that generous prince purchased them, and made him a present of them. Colbert, being at length informed of Herbelot’s merit, recalled him to Paris, and obtained a pension for him of 1500 livres : he afterwards became secretary and interpreter of the oriental languages, and royal professor of the Syriac tongue. He died at Paris in 1695. His principal work is entitled Bibliotheque Orientale, which he first wrote in Arabic and afterwards translated into French. It is greatly esteemed.

HERBERT (Edward), lord Herbert of Cherbury in Shropshire, an eminent English writer, born in 1581, and educated at Oxford. H«» travelled through Europe ; and at his return was made knight of the Bath. James I. sent him ambassador to Louis XIII. in behalf of the protestants, who were besieged in several cities of France. He continued several years in this station. In 1625 he was created a baron by the title of lord Herbert of Castle Island ; and, in 1631, by that of lord Herbert of Cherbury in Shropshire. On the breaking out of the civil wars he adhered to the parliament; and in 1644 obtained a

pension, on account of his having been plundered by the king's forces. He wrote a History of the Life and Reign of Henry VIII. which was greatly admired ; a treatise De Veritate ; and several other works. He died at Lon-don in 1648. 'Lord Herbert,' says Mr. Granger, stands in the first rank of the public ministers, historians, and philosophers of his age. It is hard to say whether his person, his understanding, or his courage, was the most extraordinary ; as the fair, the learned, and the brave, held him in equal admiration. But the same man was wise and capricious ; redressed wrongs, and quarrelled for punctilios; hated bigotry in religion, and was himself a bigot in philosophy-'

Lord Herbert, in fact, was the advocate of a Natural Religion, an attention to which he conceived might supersede the uses of Revelation. He mentions an incident in connexion with the publication of his most celebrated work, which should not escape the modern impugners of miracles : — Being in his chamber, he says, doubtful as to the propriety of publishing his oook, on one fair day in summer, his casement opening to the south, the sun shining clear, and no wind stirring, 'I took my book De Ventate in my hand, and, kneeling devoutly on my knees, said these words : ' O thou eternal God, author of the light which now shines upon me, and giver of all inward illuminations, I do beseech thee of thy infinite goodness to pardon a greater request than a sinner ought to make : I am not satisfied enough whether I shall publish this book De Veritate ; If it be for thy glory, I beseech thee give me some sign from heaven, if not I shall suppress it.' I had no sooner spoke these worua

but a loud, though yet gentle noise came from the heavens (for it was like nothing on earth), which did so comfort and cheer me, that I took my petition as granted, and that I had the sign demanded.' Of the truth of this narrative he makes the most solemn assertions, and there is no reason to doubt that he fully believed it.

HERBERT (George), an English poet and di-vine, brother to Edward, was born in 1593, and educated at Cambridge. In 1619 he was chosen public orator of that university, and afterwards obtained a sinecure from the king. In 1626 he was appointed prebendary of Leighton Broms-wold, in the diocese of Lincoln, and in 1630 rec-tor of Bemerton, near Sarum. The great lord Bacon had such an opinion of his judgment, that he would not suffer his works to be printed before they had passed his examination. He wrote a volume of devout poems, called The Temple, and a prose work, entitled The priests to the Temple, or The Country Parson, &c. He died about 1635.

HERBERT (Mary), countess of Pembroke, sis-ter of the famous Sir Philip Sidney, and wife of Henry earl of Pembroke. She was not only a lover of the Muses, but a great encourager of polite literature. Her brother dedicated his Arcadia to her. She translated a dramatic piece from the French, entitled Antonius, a tragedy. She also turned the Psalms of David into English metre; but it is doubtful whether these works were ever printed. She died in 1621. The following well known epitaph was written on her by Ben Jonson : —

Underneath this sable hearse Lies the subject of all verse, Sidney's sister, Pembroke's mother : Death ! ere them hast killed another, Fair, and good, and learn'd as she, Time shall throw a dart on thee.

HERBERT (William), a modern bibliographical writer, was a native of Hertfordshire, and was educated at Hitchin. He carried on trade for some years as a hosier, in London ; and subsequently went out to the East Indies as a purser's clerk. Here he employed his time in making charts and plans of the coasts and harbours, for which he obtained a handsome acknowledgment from the East India Company on his return. He then commenced business as a map and print seller, in which he was so successful as to be enabled to purchase an estate at Cheshunt. He now reprinted Sir Robert Atkyns's History of Gloucestershire : but his chief literary labor was an edition of Ames's Typographical Antiquities ; or Account of the Origin and Progress of Printing in Great Britain and Ireland, considerably augmented, 1785 — 1790, 3 vols. 4to. He died at Cheshunt in 1795, aged seventy-six.

HERBINIUS (John), a native of Birschen in Silesia, bom in 1632. He wrote a work entitled De Statu Ecclesiarum Augustanae Confessionis in Polonia; 4to., 1670: and several curious tracts on cataracts and waterfalls, also in Latin. He died in 1676, aged forty-four.

HERBORN, a town of Germany, on the Dill, in the duchy of Nassau. Here is a celebrated high school, founded in 1584, which has the

privileges of a university ; and an academy having four teachers. Population 2400. Three miles S. S. E. of Dillenburg.

HERBST (John Frederick William), a Ger-man entomologist, was born November 1st 1743, at Petershagen, in the principality of Minden; After having been for some years a teacher at Berlin he obtained the situation of almoner to a Prussian regiment; and, his talents becoming known, he was appointed preacher in several churches of Berlin. He is, however, principally known as a naturalist ; was director of the society of Friends of Natural History at Berlin ; of the Royal Academy of Bavaria at Burghausen ; and of the Economical Society of Potsdam. His death took place November 5th 1807. He was the author of treatises on the natural history of crustaceous animals, insects, worms, scarabaei, butterflies, and apterous insects; all which works were published collectively at Berlin, 1785 — 1804, under the title of a Natural System of all the known Insects, indigenous and exotic, with plates. Collections of his sermons have also been published.

HERCULANEUM, an ancient city of Cam-pania in Italy, which together with Pompeii wa destroyed by an eruption of Vesuvius in the first year of the emperor Titus, or the seventy-ninth of the Christian era, and lately rendered famous on account of the curious monuments of antiquity discovered in its ruins : of these we purpose giving a detailed account under the article POMPEII AND HERCULANEUM.

The epocha of the foundation of Herculaneum is unknown. Dionysius Halicarnassensis conjectures that it may be referred to sixty years before the war of Troy, or about A. A. C. 1242; and therefore that it lasted about 1300 years. The thickness of the heap of lava, by which the city was overwhelmed, has been much increased by fiery streams vomited since that catastrophe ; and now forms a mass twenty-four feet deep of dark gray stone, which is easily broken to pieces. The precise situation of this subterraneous city was not known till 1713, when it was acciden tally discovered by some laborers, who, in digging a well, struck upon a statue on the benches of the theatre. Many others were afterwards dug out, and sent to France by the prince of Elbceuf. But little progress was made in the excavations till Charles, infant of Spain, ascended the Neapolitan throne, by whose unwearied efforts and liberality a very considerable part of Herculaneum was explored. A large portion of these relics is deposited in a muse-um at Porteci, and in the royal palace at Naples. Of these the most valuable are doubtless the MSS., which are all however calcined, and a number of them, when exposed to the air, sunk to

dust. Among the 1800 preserved, it has long been expected that some of the missing classics may be found. Those first examined were Greek ; but a portion of them have been found to be in Latin. A plan for unrolling these MSS. was first invented by a Neapolitan monk ; and his present majesty, when prince of Wales, undertook to defray the expense of this proceeding, and sent out Mr. Hayter, an English clergyman to superintend

the \ork. But in 1806 the occupation of Naples by the French stopped his labors, the fruits of which were presented by the prince regent to the university of Oxford : no distinct account of them has as yet been given to the public. See POMPEII.

HERCULES, in fabulous history, a renowned hero, who after death was ranked among the gods, and received divine honors. According to the ancients, there were many persons of this name. Diodorus mentions three, Cicero six, and some Greek authors enumerate forty-three, either because several persons thought to do themselves honor by assuming this name, or, perhaps, because Hercules was not a proper name, but an appellative, derived, as Le Clerc conjectures, from the Phoenician word Harokel, merchant; and this learned author alleges, that the name was formerly given to the famous traders who migrated for the discovery of new countries, and for planting colonies there, and who frequently signalised themselves by clearing them of the wild beasts, &c. Of all these, one generally called the Theban Hercules is the most celebrated ; and to him the actions of the others have been attr.buted. He is reported to have been the son of Jupiter by Alcmena (wife to Amphitryon, king of Argos), whom Jupiter enjoyed in the shape of her husband, while he was absent. Amphitryon, having soon after accidentally killed his uncle and father-in-law Electryon, was obliged to fly to Thebes, where Hercules was born. The jealousy of Juno prompting her to destroy the infant, she sent two serpents to kill him in the cradle, but young Hercules strangled them both. He was early instructed in the liberal arts : Castor, the son of Tyndarus, taught him to fight ; Eurytus, to ohoot ;

Autolycus to drive a chariot ; Linus to play on the lyre; and Eumolpus to sing; while the instructions of Chiron, the centaur, rendered him the most valiant and accomplished hero of the age. In his eighteenth year he delivered the neighbourhood of Mount Cithaeron from a huge lion, which preyed on the flocks of Amphitryon, and laid waste the adjacent country. He went to the court of Thespius, king of Thespes, who shared in the general calamity, by whom he was hospitably entertained for fifty days ; during which time, or as some say even in one night, he debauched the king's fifty daughters. He next delivered his country from the tribute of 100 oxen, annually paid to Erginus. Such public services became universally known ; and Creon, king of Thebes, rewarded his patriotic deeds by giving him his daughter in marriage, and entrusting him with the government. Eurystheus, the son of Amphitryon, having succeeded his father, became jealous of Hercules ; and, lest he should deprive him of his crown, left no means untried to get rid of him. On this, Hercules consulted the oracle ; but, being answered that it was the pleasure of the gods that he should serve Eurystheus twelve years, he fell into a deep melancholy, which at last ended .n a furious madness; during which, among other desperate actions, he put away his wife Megara, and murdered all the children he had by her. As an expiation of this crime, the king

imposed upon him twelve labors, surpassing the power of all other mortals to accomplish, which, nevertheless, our hero performed with, ease, the favors of the gods having indeed completely armed him. He had received a coat of armour and helmet from Minerva, a sword from Mercury, a horse from Neptune, a shield from Jupiter, a bow and arrows from Apollo, and from Vulcan a golden cuirass and brazen buskin, with a celebrated club of brass. His first labor was the killing of a lion in Nemaea, a wood of Achaia ; whose hide was proof against any weapon, so that he was forced to seize him by the throat and strangle him. He carried the dead beast on his shoulders to Mycenae, and ever after clothed himself with the skin. Eurystheus was so astonished at the sight of the beast, and at the courage of Hercules, that he ordered him never to enter the gates of the city when he returned from his expeditions, but to wait for his orders without the walls. He even got a brazen vessel made, into which he retired whenever Hercules returned. The second labor was to destroy the Lernaan hydra, which had seven heads according to Apollodorus, fifty according to Simonides, and 100 according to Diodorus. This monster he first attacked with his arrows ; but soon after, by means of his heavy club, he destroyed the heads of his enemy. This, however, was productive of no advantage ; for as soon as one head was beaten to pieces by the

club, two sprang up ; and the labor of Hercules would have remained unfinished, had not he commanded his friend lolaus to burn with a hot iron the root of the head which he had crushed to pieces. This succeeded ; and Hercules became victorious, opened -the belly of the monster, and dipped his arrows in the gall, to render the wounds they should give incurable. He was -ordered in his third labor to bring alive and unhurt into the presence of Eurystheus a stag, famous for its incredible swiftness, its golden horns, and brazen feet. This celebrated .animal frequented the neighbourhood of CEnoe ; and Hercules was employed for a whole year in pursuing it ; at last he caught it in a trap, when tired. The fourth labor was to bring alive to Eurystheus a wild boar which ravaged the neighbourhood of Erymanthus. In this expedition he destroyed 'the centaurs, arnd caught the boar by closely pursuing him through the deep snow. Eurystheus was so frightened at the sight of the boar, that, according to Diodorus,'he hid himself in his brazen vessel for some days. In his fifth labor Hercules was ordered to cleanse the stables of Augeas, where 3000 oxen had been confined for many years. For his sixth labor he was ordered to kill the carnivorous birds which ravaged the country near the lake Stymphalus in Arcadia. In his seventh labor he caught alive, in the Pele-ponnesus, a prodigious wild bull, which laid waste the island of Crete. In his eighth labor he was employed in obtaining the mares of Diomedes, king of Thrace, which fed upon hu-man flesh. He killed Diomedes, and gave him to be eaten by his mares, which he brought to Eurystheus, who sent them to Mouni, Olympus, where they were devoured by wild beasts ;

though some say they were, consecrated to Jupiter, and that a breed of them still existed in the age of Alexander the Great. For his ninth labor, he was commanded to obtain the girdle of the queen of the Amazons. In his tenth labor he killed the monster Geryon, king of Gades, and brought to Argos his numerous flocks, which fed upon human flesh. This was-in Iberia or Spain ; in the furthest parts of which he erected his two pillars as the utmost lirilits of the then known world. These ten labors he achieved in about eight years. In this last expedition he likewise killed 'Antaeus, a monstrous giant, who, when weary with wrestling or labor, was immediately refreshed by touching his mother the Earth. Hercules overcame him in wrestling,, and slew him ; and after him the tyrant Busiris, king of

Egypt, who used to sacrifice all strangers upon his altars ; but was-slain by Hercules, with all his attendants. His eleventh labor was the carrying away the Hesperian golden apples kept by a dragon. See HESPERIDES. The twelfth and last, and most dangerous of his labors, was to bring up to the earth the three-headed dog Cerberus. Descending into hell by a cave on mount Taeuarus, he was permitted by Pluto to carry away his friends Theseus and Pirithous, who were condemned to punishment in hell, and Cerberus also was granted to his prayers, provided he made use of no arms to drag him away. Hercules carried him back to hell after he had brought him before Eurystheus. Many other exploits were performed by Hercules. He accompanied the Argonauts to Colchis before he delivered himself up to Eurystheus. He assisted the gods in their wars against the giants, and it was through him that Jupiter obtained the victory. He conquered Laomedon, and pillaged Troy* When lole, the daughter of Eurytus king of (Echalia, of whom he was deep-ly enamoured, was refused to his entreaties, he fell into a second fit of insanity, and murdered Iphitus, the only one of the sons of Eurytus who favored his addresses to lole. He was afterwards purified of the murder, and his insanity ceased ; but he was visited by a disorder which obliged him to apply to the oracle of Delphi for relief. The coldness with which the Pythia received him irritated him, and he resolved to plunder Apollo's temple, and carry away the sa-cred tripod. Apollo opposed him, and a severe conflict was begun, which nothing but the interference of Jupiter could have settled. He was upon this told by the oracle that he must be sold as a slave, and remain three years in the most abject servitude to recover from his disorder. He complied, and Mercury, by order of Jupiter, conducted him to Omphale, queen of Lydia, to whom he was sold as a slave. Here he cleared all the country from robbers ; and Omphale, astonished at the greatness of his exploits, married him. Hercules had Agelaus and Lamon by Omphale, from whom Croesus kinˆ of Lydia was descended. He became also enamoured of one of Omphale's female servants, by whom he had Alcffius. After he had completed the years of his slavery, he returned to Peloponnesus, where he restored to the throne of Sparta Tyn-darua, who had been expelled by Hippocoon. He became one of Dejanira's suitors, and, after overcoming all his rivals, married her. He was obliged to leave his father-in-law's kingdom Calydon, because he had inadvertently killed a man with a blow of his fist ; and on tins account he was not present at the hunting of the Calydonian boar. From Calydon he retired to the court of Ceyx king of Tracbina, who received him and his wife with great marks of friendship, and purified him of the murder which he h;ul committed at Calydon. He next made war against Eurytus, who had refused him his daughter lole, and killed

him with three of his sons, lole. fell into his hands, and accompanied him to mount CEta, where he intended to offer a solemn sacrifice to Jupiter. As he had not then the shirt and tunic in which he sacrificed, he sent Lichas to Trachin to Dejanira, to provide him a proper dress. Dejanita had some time before been attempted by the Centaur Nessus, as he was ferrying her over the river Evenus ; and Hercules, beholding it from the shore, had mortally wounded him with one of his poisoned arrows. Nes-sus finding himself dying, advised her to mix some oil with the blood which flowed from his wound, and to anoint her husband's shirt with it, pretending ihat it ,would infallibly secure him from loving any other woman ; and she, apprized of his inconstancy, had actually prepared the poisoned ointment accordingly. Lichas, coming to her for the garments, acquainted her with his having brought away lole ; upon which she anointed his shirt with the fatal xsixture. This had no sooner touched his body than he felt the poison diffused through his veins ;' the violent pain of which made him disband his army, and return to Trachin. His torment increasing, he sent to consult the oracle for a cure ; and was answered, that he should cause himself to be conveyed to mount (Eta, and there rear up a pile of wood, and leave the rest to Jupiter. Having obeyed the oracle, and his pains becoming intolerable, he dressed himself in his martial habit, flung himself upon the pile, and desired the by-standers to set fire to it; or, as others say, his son Philoctetes, who, having performed his fa-ther's command, had his bow and arrows given him as a reward. At the same time Jupiter sent a flash of lightning, which consumed both the pile and the hero ; lolaus, coming to take up his bones, found nothing but ashes ; from which it was concluded, that he was gone to heaven, and admitted among the gods. His friends raised an altar where the burning pile had stood ; and Mencetius the son of Actor sacrificed a bull, a wild boar, and a goat ; and enjoined the people of Opus to observe these ceremonies annually. His worship soon became as universal as his fame ; and Juno, forgetting her resentment, gave him her daughter Hebe in marriage. Hercules has many surnames, from the places where his worship was established, and from the labors he had achieved. His temples were numerous and magnificent, and his divinity revered. No dogs or flies entered his temple at Rome : and that of Gades, according to Strabo, was always forbidden to women and pigs. The Phoenicians offered quails on his altars; and, as he was

supposed to preside over dreams, the sick and infirm were sent to sleep in his temples, that they might receive in their dreams the agreeable presages of their approaching recovery. The white poplar was particularly dedicated to his service. None even of the twelve great gods of antiquity have so many ancient monuments as Hercules. The famous statue of Hercules, in ihe Farnese palace at Rome, is well known to the connoisseurs. It represents him resting after the last of his twelve labors above recited, leaning on his club, and holding the apples of the Hesperides in his hand. In this statue, as in all the other figures of him, he is formed, by the breadth of his shoulders, the spaciousness of his chest, the largeness of his size, and firmness of his muscles, to express strength and a capacity of enduring great fatigue, which constituted the chief idea of virtue among the ancient heathens. His other attributes are his lion's skin, his club, and his bow. Hercules is represented by the ancients as an exemplar of virtue : however, the Hercules bibax, or drunken Hercules, is no uncommon figure ; and his amours are described both by the poets and artists. Thus the Cupids are made to take away his club, and he is exhibited in the posture of bending under a little boy ; . by which is meant, that 'he who conquered all difficulties was a slave to love. His children were as numerous as the labors and difficulties which he underwent; and indeed they became so powerful soon after his death, that they alone had the courage to invade Peloponnesus. See HERACLID.E. The apotheosis of Hercules, or the establishment of his altars in the principal cities of Greece, is fixed by Thrasybulus twenty-nine years before the taking of Troy. Hercules has been honored by the Greeks by the name of Musagetes, the conductor of the Muses ; and t at Rome by that of Hercules Musarum. He is represented on medals with a lyre in his hand ; and the reverse is marked with the figure of the nine Muses, with their proper symbols.

HERCULES, in astronomy, a constellation of the northern hemisphere. See ASTRONOMY.

HERCULES'S PILLARS, in ancient geography, two lofty mountains, one situated on the most southern extremity of Spain, and the other on the opposite part of Africa. They were called ABYLA and CALPE (see those

articles) ; were reckoned the boundaries of the labors of Hercules ; and were fabled to have been joined together till they were severed by that hero, and a communication opened between the Mediterranean and Atlantic.

HERCYNA, a river of Boeotia, issuing from a rock in two streams, near the town of Livadia. One from its muddy appearance was called by the ancients by the name of Lethe or Oblivion ; the other Mnemosyne, or Memory, being a small limpid stream.

HERCYNIA SILVA, the Hercynia.n Forest, in ancient geography, the largest of forests. Its breadth was a journey of nine days. From the limits of the Helvetii, Nemetes, and Rauraci, it extended along the Danube to the borders of The Daci and Anartes, a length of sixty days' journey, according to Caesar, who appears to have been well acquainted with its true breadth, as it VOL. XI.

occupied all Lower Germany. It may therefore be considered as covering the whole of Germany; and most of the other forests may be considered as parts of it, though distinguished by particular names ; consequently the Hartz, in the duchy of Brunswick, which gave name to the whole, was one of its parts. By the Greeks it was called Orcynius, a name common to all the forests in Germany ; and Hercynius by the Romans ; both from the German Hartz.

HERD, n. s., v. a. &v. n.ˆ\ Saxon fjeonˆ;

HERD'GROOM, n. $.. { Goth./jm?;Swed.

HERD'MAN, n. s. fherde; originally

HERDS'MAN, n. s. J signifying a guard

or keeper, then the flock or thing guarded. A number of beasts together ; a word peculiarly applicable to black cattle : a company of men, in contempt or detestation ; anciently a keeper of cattle, as goatherd : herd, to run in companies ; to associate; to throw or put into a herd. The other words signify persons employed in keeping and tending herds ; or the owners thereof.

Almighty Lord ! o Jesu Crist! quod he, Sower of chast conseil ! hierde of us alle !

Chaucer. The Second Nonnes Tale. 'Ther n'as baillif, ne herde, ne other hine, That he ne knew his sleight and his covine.

Id. Prologue to the Cant. Tale*. And many a floite, and litlyng home, And pipes made of greene come, As have these little herdegromes That kepen bestes in the bromes.

Id. The House of Fame. But who shall judge the wager won or lost ? That shall yonder herdgroom, and none other.

Spenser.

And you, enchantment, Worthy enough a fterdsman, if e'er thou These rural latches to his entrance open, I will devise a cruel death for thee.

Shakspeare.

Note a wild and wanton herd, Or race of youthful and unhand led colts, Fetching mad bounds. Id.

The rest,

However great we are, honest and valiant, Are herded with the vulgar.

Ren Jonson's Catiline. Scarce themselves know how to hold A sheephook, or have learned ought else the least That to the faithful herdman's art belongs.

Milton.

There oft the Indian herdsman, shunning heat, Shelters in cool and tends his pasturing herds At loop-holes cut through thickest shade. Id.

A herdsman rich, of much account was he, In whom no evil did reign, or good appear.

Sidney.

So stands a Thracian herdsman with his spear Full in the gap, and hopes the hunted bear.

Dryden.

The herdsmen, round The chearful fire, provoke his health in goblets

crowned. Id.

Survey the world, and where one Cato shines, Count a degenerate herd of Catilines. Id.

Weak women should, in danger, herd like deer.

Id

I do not remember where ever God delivered his oracles by the multitude, or nature truth by the herd.

Locke.

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When their herdsmen could not agree, they parted by consent.

Run to towns, to herd with knaves and fools, And undistinguished pass among the crowd.

Walth.

It is the nature of indigency. like common danger, to endear men to one another, and make them fterd together, like fellow sailors in a storm. Norrit.

There find a herd of heifers, wandering o'er The neighbouring hill, and drive them to the shore.

Addison.

Ill herd among his friends, and seem One of the number. Id. Cato.

I disdained to mingle with A herd, though to be leader — and of wolves, The lion is alone, and so am I. Byron.

HERDER (John Godfrey), a German Lutheran divine, and moral philosopher, was a Prussian by birth, and obtained the office of Ecclesiastical superintendant-general of the duchy of Saxe Weimar. He was also first preacher to the court, and vice-president of the consistory. He distinguished himself by his writings on the belles lettres ; but his works relative to Ethics and Intellectual Philosophy attracted most notice. The following are the titles of some of his works, Lays of Love, the oldest and most beautiful specimens of

Oriental Poetry, with twenty-four ancient lays of the Minnesingers, Leipsic, 1778, 8vo.; Scattered Leaves, Gotha, 1791-1796, 6 vols, 12mo. ; Letters on the Improvement of Human Nature, Riga, 1793-1796, 8 vols. 8vo. ; Intellect and Experience ; a Meta-ciiticistn on the Criticism of Pure Reason, i. e. the Philosophy of Kant, 1799, 2 vols. 8vo. ; Popular Songs; Poems; Terpsichore, 3 vols. 8vo. ; a treatise on the Origin of Language. But the work by which Herder is principally known in England is the Outlines of a Philosophy of the History of Man ; of which a translation was published ia London in 1800. He died in 1803 ; and a collection of his writings has since appeared in 26 vols. 8vo. HERE, adv. } Sax. J>ert ; Teut.

HERE'ABOUT, adv. hier; Lat. hie. In

HEREAF'TER, adv. & n. s. this place ; in the HEREAT*, adv. present state. Here

HEREBY', adv. is often opposed to

HEREIN', adv. those in one place

HEREIN'TO, adv. as distinguished

HEREOF', adv. "from another ; it

HEREON', adv. is used in making

HEREOUT', adv. an offer. Here—

HERETO', adv. abouts implies vi—

HERE'TOFORE, adv. cinity ; hereafter,

HERE'UNTO, adv. futurity : hereat,

HEREWITH', adv. J hereby, the occasion or subject by which any effort is produced : the meaning of the other words is obvious; all the compounds excepting hereafter are obsolete ; heretofore is formerly ; anciently. If any of you wol of devotion. Offren, and han min absolution, Cometh forth anon, and kneleth here adoun, And makely recieveth my pardoun.

Chaucer. The Pardonere's Tale, Yon, fair sir, be not herewith dismaid, But constant keep the way in which ye stand.

Spenser.

A bird all white, well feathered on each wing, Here out up to the throne of God did fly. Id.

One man coming to the tribune, to receive his r.o-na'ive, with a garland in his hand, the tribune offended hereof, demanded what this singularity could mean? Hooker.

In what estate the fathers rested, which were dead before, it is not hereby either one way or other determined. Id.

How highly soever it may please them with word.* of truth to extol sermons, they shall not herein offend us. Id.

Because the point about which we strive is the quality of our laws, our first entrance hereinto can-not better be made than with consideration of the nature of law in general. Id.

Good-night ; mine eyes do itch ; Doth that bode weeping? — Tis neither here uor there.

Shaktpeare. Othello.

We are come to see thee fight, to see thee foigne, to see thee traverse, to see thee here, to see thee there.

Id.

How worthy he is, I will leave to appear hereafter, rather than story him in his own hearing.

Id.

Before they here approach, Old Siward, with ten thousand warlike men, All ready at a point, was setting forth. Id.

Hereof comes it that prince Harry is valiant.

Id. My best endeavours shall be done herein. Id.

Bid them farewel, Cordelia, though unkind ; Thou losest here, a better where to find. Id.

I would have in the heath some thickets made only of sweet-briar and honeysuckle, and some wild vine amongst; and the ground set with violets; for these are sweet, and prosper in the shade ; and these to be

in the heath here and there, not in order.

Bacon,

You shall be happy here, and more happy hereafter. Id.

Herewith the castle of Hame was suddenly surprised by the Scots. Hayward. Then this, then that man's aid, they crave, implore ; Post here for help, seek there their followers.

Daniel.

How wretched does Prometheus' state appear, While he his second mis'ry suffers here! Cowley. To-day is ours, we have it here. Id.

Here's to thee, Dick. Id.

I, upon my frontiers here, Keep residence. Milton.

Here nature first begins

Her farthest verge. Id.

The grand-child, with twelve sons increased, departs

From Canaan, to a land hereafter called Egypt. Id.

Hereby the Moors are not excluded by beauty, there being in this description no consideration of colours.

Browne.

If we should strictly insist hereon, the possibility might fall into question. Id. Vulgar Errors.

I have long desired to know you heretofore, with honouring your virtue, though I love not your person

Sidney.

Hereafter he from war shall come, And bring his Trojans peace. Dryden.

Then here's for earnest

Tis finished. Id.

Here, here it lies ; a lump of lead by day. Id. He that rides post

through a country may be able to give some loose description of here a mountain and there a plain, here a morass and there a river, woodland in one part, and savanas in another. Locke.

HEREDITARY RIGHT.

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Your city, after the dreadful fire, was rebuilt, not presently, by raising continued streets ; but at first here a house, and there a house, to which others by degrees were joined. Sprat's Sermons.

Since truths, absolutely necessary to salvation, are so clearly revealed that we cannot err in them, unless we be notoriously wanting to ourselves, herein the fault of the judgment is resolved into a precedent default in the will. South.

So near is the connection between the civil state and religious, that heretofore you will find the government and the priesthood united in the same person.

Id.

Tis the divinity that stirs within us ; Tis Heaven itself that points out an hereafter, And intimates eternity to man. Addison's Cato. I saw hereabouts nothing remarkable, except Augustus's bridge. Id. on Italy.

I still shall wait Some new hereafter, and a future state. Prior.

However, friend, here's to the king, one cries ; To him who was the king, the friend replies. Id.

If there be an hereafter, And that there is conscience uninfluenced, And suffered to speak out, tells every man, Then must it be an awful thing to die, More horrid yet to die by one's own hand.

Blair.

We now can form no more

Long schemes of life, as heretofore. Swift.

The acquisition of truth is of infinite concernment : hereby we become acquainted with the nature of things.

Watts.

Here on the sharp spear mad with mortal pangs The bird transfixed in bloody vortex whirls, Yet fierce in death the threat'ning talon curls.

Beattie.

HERED'ITABLEjWj.") Fr. hereditaire ;

HEREDITAMENT, n. s. Lat. hares, hare—

HERED'ITARY, adj. \ dium. Whatever

HEREDITARILY, adv. [may be occupied as

HER'ITABLE, adv. an inheritance :hereHER'ITAGE, n. s. J ditament, a law term

denoting inheritance: hereditary, that which

descends by right of inheritance ; a birthright :

heritable, whatever may be inherited : heritage,

an inheritance or estate : in divinity, the people

of God

O Lord, save thy people, and bless thine heritage. Common Prayer.

To thee and thine, hereditary ever Remain this ample third of our fair kingdom.

Shakipeare. These old fellows Have their ingratitude in them hereditary. Id.

He shall ascend

The throne hereditary, and bound his reign With earth's wide bounds, his glory with the heavens.

Milton.

By the canon law this son shall be legitimate and heritable, according to the laws of England. Hale.

Thus while the mute creation downward bend Their sight, and to their earthly mother tend, Man looks aloft, and with erected eyes Beholds his own hereditary skies. Drydens Ovid.

When heroic verse his youth shall raise, And form it to hereditary praise. Id. Virgil.

Adam being neither a monarch, nor his imaginary monarchy Jtereditable, the power which is now in the world is not that which was Adam's. Locke.

He considers that his proper home and heritage is in another world, and therefore regards the events of

this with the indifference of a guest that tarries but a day. Rogers.

Here is another, who thinks one of the greatest glories of his father was to have distinguished and loved you, and who loves you hereditarily. Pope.

HEREDITARY DISEASES. The opinion that certain diseases, such as scrophula, gout, Sec, are hereditary, has been held by physicians ever since the days of Hippocrates, and indeed seems to be confirmed by the experience of mankind in all ages and countries. Dr. Brown, in his Elem. Med., affirms, that, ' A taint, transmitted from parents to their offspring, and celebrated under the appellation of hereditary, is a mere tale, or there is nothing in the fundamental part of this (the Brunonian) doctrine. The sons of the rich, who succeed to their father's estate, succeed also to his gout : Those who are excluded from the estate, escape the disease also, unless they bring it on by their own conduct. Though Peter's father may have been affected with the gout, it does not follow that Peter must be affected ; because, by a proper way of life, that is, by adapting his excitement to his stamina, he may have learned to evade his father's disease. If the same person, who, from his own fault and improper management, has fallen into the disease afterwards by a contrary management, and by taking good care of himself prevents and removes the disease, as it has been lately discovered, what then is become of the hereditary taint?' — Such is Dr. Brown's reasoning against the existence of hereditary diseases ; but the fallacy of such arguments need scarcely be pointed out. To say, that because, by the use of medicines, or, what is in fact the same thing, by a strict regimen, a person may avoid a certain disease, he therefore inherits no taint or liability to such diseases, is indeed a bold

assertion. The observations of every day afford fresh proof that the diseases of the father but too generally descend, with some modification, to the children, either in the shape of weakness, or illness, or, as is more frequently the case, of liability to the same.

HEREDITARY HONORS have been long esteemed useful in a well-governed state, as tending to excite a laudable ardor and generous emulation in acts of virtue and heroism. We shall only quote a judicious sentiment delivered by Dr. WTatson, bishop of Llandaff, in the house of lords, upon a question respecting the Scotch peerage, in February 1787 : — ‘ Whatever may be said of ancestry no man despises it, but he who has none to value himself upon; and no man will make it his pride, but he who has nothing better.’

HEREDITARY RIGHT, in the British constitution. The grand fundamental maxim upon which the jus coronae, or right of succession to the throne of Britain depends, Sir William Blackstone takes to be this : — That the crown is, by common law and constitutional custom, hereditary ; and this in a manner peculiar to itself: but that the right of inheritance may, from time to time, be changed or limited by act of parliament ; under which, limitations the crown still continues, hereditary. l.The crown is in general hereditary, or descendible to the next heir, on the death of the last king. All regal governments must be either, hereditary or elective •

and as there is no instance wherein the crown of England has ever been asserted to be elective, except by the regicides, on occasion of the trial of king Charles I., it must of consequence be hereditary. Yet, in thus asserting an hereditary right, a jure divino title to the throne is by no means intended. Such a title may be allowed to have subsisted under the theocratic establishments of the children of Israel in Palestine; but it never yet subsisted in any other country ; save only so far as kingdoms, like other human fabrics, are subjected to the general and ordinary dispensations of Providence. Nor indeed have a jure

divino and an hereditary right any necessary connexion with each other; as some have very weakly imagined. The hereditary right, which the laws of Britain acknowledge, owes its origin to the founders of our constitution, and to them only. This has been acquiesced in by general consent, and ripened by degrees into common law ; the very same title that every private man has to his own estate. Lands are not naturally descendible, more than thrones : but the law has, for the benefit and peace of the public, established hereditary succession in the one as •well as the other. It must be owned, an elective monarchy seems to be the most obvious, and best suited of any to the national principles of government, and the freedom of.human nature; and accordingly we find from history, that, in the infancy and first rudiments of almost every state, the leader, chief magistrate, or prince, has usually been elective ; ana if the individuals who compose that state could always continue true to first principles, uninfluenced by passion or prejudice, unassailed by corruption, and un-awed by violence, elective succession were as much to be desired in a kingdom as in other inferior communities. The best, the wisest, and *he bravest man, would then be sure of receiving . that crown which his endowments merited ; and the sense of an unbiased majority would be dutifully acquiesced in by the few who were of different opinions. But history and observation inform us, that elections of every kind are too often brought about by influence, partiality, and artifice ; and, even where the case is otherwise, these practices will be often suspected, and as constantly charged upon the successful, by a disappointed minority. This is an evil to which all societies are liable ; as well those of a private and domestic kind, as the great community of the public, which regulates and includes the rest. But in the former there is this advantage, that such suspicions, if false, proceed no farther than jealousies and murmurs, which time will effectually suppress : justice may be remedied by legal means, by an appeal to those tribunals to which every member of society has virtually engaged to submit. Whereas, in the great and independent society, which every nation composes, there is no superior to resort to but the law of nature ; no method to redress the infringements of that law, but the actual exertion of force. As, therefore, between two nations, complaining of mutual injuries, the quarrel can only be decided by the law of arms ; so in one and the same na-tion, when the fundamental principles of their common union are supposed to be invaded, and

more especially when the appointment of their chief magistrate is alleged to be unduly made, the only appeal that can be made is to the sword, and the only process by which the appeal can be carried on is

that of a civil and intestine war. An hereditary succession to the crown is therefore now established, in this and most other countries, to prevent that periodical bloodshed and misery which the history of ancient imperial Rome, and the modern experience of Poland, show us to be the consequence of elective kingdoms. But, 2dly, as to the particular mode of inheritance. It in general corresponds with the feudal path of descents, chalked out by the com-mon law in the succession to landed estates ; yet with one Or two material exceptions. Like them, the crown will descend lineally to the issue of the reigning monarch ; as it did from king John to Richard II. through a regular pedigree of six lineal generations : as in them the preference of males to females, and the right of primogeniture among the males, are strictly adhered to. Thus Edward V. succeeded to the crown, in preference to Richardˆ his younger brother, and Elizabeth his elder sister. Like them, on failure of the male line, it descends to the issue female ; according to the ancient British custom remarked by Tacitus, solent faeminarum ductu bellare, et sexum in imperils pon discernere. Thus Mary succeeded to Edward VI ; and the line of Margaret queen of Scots, the daughter of Henry VII. succeeded on failure of the line of Henry VIII. his son. But among the females, the crown descends by right of primogeniture to the eldest daughter only and her issue ; and not, as in common inheritances, to all the daughters at once ; the evident necessity of a sole succession to the throne hav'ing occasioned the royal law of descents to depart from the common law in this respect: and therefore queen Mary, on the death of her brother, succeeded to the crown alone, and not in partnership with her sister Elizabeth. Again, the doctrine of representation prevails in the descent of the crown, as it does in other inheritances ; whereby the lineal descendants of any person deceased stand in the same place as their ancestor, if living, would have done. Thus Richard II. succeeded his grandfather Edward III. in right of his father the Black Prince, to the exclusion of all his uncles, his grandfather's younger children. Lastly, on failure of li-neal descendants, the crown goes to the next collateral relations of the late king ; provided they are lineally descended from the blood royal, that is, from that royal stock which originally acquired the crown. Thus Henry I. succeeded to William II. ; John to Richard I. ; and James I.to Elizabeth ; being all derived from the Conqueror, who was then the only regal stock. But herein there is no objection (as in the case of common descents) to the succession of a brother, an uncle, or other collateral relation, of the half-blood ; that is, where the relationship proceeds not from the same couple of ancestors (which constitutes a kinsman of the whole blood), but from a single ancestor only ; as when two persons are derived from the same father and not from the same mother, or vice versa : provided

only, that the one ancestor, from whom both are descended, be ihax from whose veins the blood-HEREFORDSHIRE.

royal Is communicated to each. Thus Mary I. inherited to Edward VI., and Elizabeth inherited to Mary ; all born of the same father, king Henry VIII., but all by different mothers. See CONSANGUINITY. 3. The doctrine of hereditary right does by no means imply an indefeasible right to the throne. No man will assert this, who has considered our laws, constitution, and history, without prejudice, and with any degree of attention. It is unquestionably in the power of the supreme legislative authority of this kingdom, the king and both houses of parliament, to defeat this hereditary right ; and, by particular entails, limitations, and provisions, to exclude the immediate heir, and vest the inheritance in any one else. And this is so extremely reasonable, that without such a power, lodged somewhere, our polity would be very defective. For, let us barely suppose that the heir apparent should be a lunatic, an ideot, or otherwise incapable of reigning; how miserable would the condition of the nation be, if he were also incapable of being set aside ! It is therefore necessary that this power should be lodged somewhere ; and yet the inheritance and regal dignity would be very precarious indeed, if this power were expressly and avowedly lodged' in the hands of the subject only, to be exerted whenever prejudice, caprice, or discontent, should happen to take the lead. Consequently it can no where be so properly lodged as in the two houses of parliament, by and with the consent of the reigning king ; who, it is not to be supposed, will agree to any thing prejudicial to the rights of his own descendants. And therefore, in the king, lords, and commons, in parliament assembled, our laws have expressly lodged it. 4. But fourthly, however the crown may be limited or transferred, it still retains its descendible quality, and becomes hereditary in the wearer of it. And hence, in our law, the king is said never to die in his political capacity ; though, in common with other men, he is subject to mortality in his natural : because immediately upon the natural death of Henry, William, or George, the king survives in his successor. For the right of the crown vests, eo instanti, upon his heir ; either the haeres na-tus, if the course of descent remains unimpeached, or the hseres factus, if the inheritance be under any particular settlement. So that there can be no interregnum ; but, as Sir Matthew Hale observes, the right of sovereignty is fully invested

in the successor by the very descent of the crown. And therefore, however acquired, it becomes in him absolutely hereditary, unless by the rules of the limitation it is otherwise ordered and determined : in the same manner as landed estates are, by the law, hereditary or descendible to the heirs of the owner ; but still there exists a power, by which the property of those lands may be transferred to another person. If this transfer be made simply and absolutely, the lands will be hereditary in the new owner, and descend to his heir at law : but if the transfer be clogged with any limitations, conditions, or entails, the lands must descend in that channel, so limited and prescribed, and no other. See SUCCESSION. HEREFORDSHIRE, a county of England,

whose name is derived from its chief place Hereford i. e. the Army's ford, from its being a strong frontier station of the Saxon and English forces toward Wales. At the period of the Roman invasion Herefordshire was inhabited by the Si-lures, who also occupied the adjacent counties of Radnor, Monmouth, and Glamorgan, together with that part of Gloucestershire which lies westward from the Severn. In the British language this district was called indifferently by the names of Esslwg Gwent, and Ercinna, words implying an open country of downs, abounding with prospects : hence its inhabitants were denominated Gwyr Esyllwg, Gwr Esyllyr, &c., and, from their derivatives, Syllyrwys.

This county is bounded on the north by Shropshire, on the north-east and east by Worcestershire, on the south-east by Gloucestershire, on the south-west by Monmouthshire, on the west by Brecknockshire, and on the north-west by Radnorshire. Its form is nearly an ellipsis ; but some detached parishes are situated beyond the general outline : of these, Farlow is surrounded by Shropshire; Rochford is included in the county of Worcester; and Lytton Hill in that of Radnor : a considerable tract of land called Futhog, with a few acres on the Devandin Hill, is insulated by Monmouthshire. Its greatest extent, from Ludford on the north to the opposite border near Monmouth on the south, is thirty-eight miles. Its greatest width, from Clifford on the west to Cradley t»n the east, is thirty-five miles. It includes about 80,000 acres, and is divided into eleven hundreds, containing 221 parishes, one city, and six market-towns.

The general aspect of Herefordshire is extremely beautiful : its surface being finely diversified, and broken by swelling heights. From these elevations the prospects are extremely fine ; but peculiarly so from the Malvern Hills on the east, and the Hatterell, or Black Mountain, on the

west. The fertility of the soil is great ; and the county is clothed in almost perpetual verdure. The courses of the rivers and brooks may be traced from any of the adjacent eminences by the rich lines of wood which skirt their margins : much valuable timber is also scattered over the county in hedge-rows, as well as on the sides and summits of the knolls and higher elevations. Every part seems uniformly productive ; except, perhaps, on the northern and western outskirts. The general character of the soil is a mixture of marie and clay, containing a large proportion of calcareous earth. The substance is mostly limestone of different qualities; in some parts, particularly near Snodhill Castle, assuming the properties of marble, and becoming beautifully variegated with red and white veins. Towards the western borders the soil is cold, and retentive of moisture, but still argillaceous, with a base of soft crumbling stone, which decomposes on exposure to the atmosphere ; or of nodules of impure limestone. The eastern side of the county is principally a stiff clay, of great tenacity and strength, and in many places of a red color; a great proportion of the hundred of Wormelow, on the south, is a light sand. Deep beds of

gravel are occasionally met with in the vicinity of Hereford ; and the sub-soil of several of the hills is of siliceous grit. Fullers'-earth is sometimes dug near Stoke; and red and yellow ochres, with tobacco-pipe-clay, are found in small quantities in different parts of the county. Iron ore has been met with in the parts bordering on Gloucestershire : but none has been dug of late years, though from the considerable quantities that have been discovered imperfectly smelted, and from the remains of hand-blomaries that have also been found, it has been thought that some iron works were established here as early as the Roman times.

Herefordshire is particularly famous as a cyder county; yet this, though a favorite object of its husbandry, is by no means the only one : cattle, «heep, swine, corn, hops, &c., have equally strong claims on the attention of the farmer. Plantations of fruit trees are found in every as-pect, and in ‘ soil of every quality, and under every culture.’

The most approved site is that which is open to the south-east, and sheltered in other points, but particularly in the opposite direction; for though Virgil and the other Roman poets celebrated the west wind as the most genial in Italy, and Philips, in his Poem on Cyder, recommended the same aspect,

- the west, whose gentle wanntn Discloses well the earth's all-teeming womb, Invigorating tender seeds ; whose breath Nurtures the orange and the citron groves, Hesperian fruits, and wafts their odors sweet Wide through the air, and distant shores perfumes,

it is an unquestionable fact, that the westerlywinds, and therefore a westerly exposure, are particularly unfavorable to the fruit trees of Herefordshire : they are more cold, as blowing over a considerable tract of the Welsh mountains, which are often covered with snow even late in the spring ; and they are more unkind, because from that point proceeds a much more than equal proportion of those fogs and blue mists which Dr. Beale calls ' the disgusts of the Black Mountain.' This maybe properly termed a woodland county; many species of trees growing up spontaneously, and becoming strong and vigorous in a very short period. The oak, elm, poplar, and willow, are particularly flourishing, but are seldom suffered to attain full maturity, unless on the estates of the nobility and most eminent landed proprietors. Coppice-wood is extremely abundant, the sides and summits of many of the hills and upland grounds being covered with extensive plantations. The ash coppices are very valuable and numerous : those of the alder are also plentiful in low and marshy situations; the former are regulated under a general system, and are cut about once in eight, ten, or twelve years, according to the uses for which the wood is designed. The principal part of the county is enclosed ; and as most of the enclosures are bounded by hedge-rows, it has a very sylvan and woody appearance.

The principal rivers and streams of this county are the Wye, the Lugg, the Munnow, the Ar-row, the Frome, the Team, and i\f Leddon.

The Wye has been often celebrated for the extremely picturesque and diversified scenery which adorns its meandering channel. Rising near the summit of the Plinlimmon Hills, in Montgomeryshire, it flows between the counties of Brecknock and Radnor, and afterwards enters Herefordshire near Clifford, the reputed birth-place of the iH-fated fair Rosamond. Winding to the east, above Clifford Castle, it glides beautifully between orchards, meadows, and corn-fields, till it reaches

the abrupt and commanding eminence of Mawbech Hill : thence, darting suddenly through the bold arches of Bredwardine bridge, it flows on to Hereford, through a more level but still extremely pleasant country. From Hereford to Ross, its features occasionally assume greater boldness; though more frequently their aspect is placid: but at the latter town, wholly emerging from its late state of apparent repose, it resumes the brightness and rapidity of its primitive character, as it forms the admired curve which the church-yard of Ross commands. The celebrated spire of Ross church, peeping over a noble row of elms, here fronts the ruined Castle of Wilton, beneath the arches of whose bridge the Wye flows through a charming succession of meadows, encircling at last the lofty and well-wooded hill crowned with the majestic fragments of Goodrich Castle, and opposed by the waving eminences of the Forest of Dean. The mighty pile or peninsula of Symond's Rock succeeds, round which the river flows in a circuit of seven miles; though the opposite points of the isthmus are only one mile asunder. Shortly afterwards the Wye -quits the county, and enters Monmouthshire at the New Wear.

This river is navigable to Hereford in barges of from eighteen to forty tons ; but either a large or a small supply of 'water is equally fatal to the navigation. The latter is experienced during the greater part of every dry summer, when shoals barely covered with the stream occur very frequently : in winter, heavy rains, or snow dissolving on the river's banks, within the county, have the effect of gradually adding a few inches to the depth ; but when these rush into its channel, from the mountains of Brecknock and Radnorshire, they occasion an almost instantaneous overflow, and give it a force which defies all the ordinary means of resistance and control. By this impetuosity considerable quantities of land are frequently removed from their situations on one side or the other, and new channels are thus formed in various places : to this impetuosity is also to be ascribed the want of a sufficient num-ber of bridges to render the communication safe and easy between different parts of the county. In the whole extent of the Wye through Herefordshire there was only one bridge (at Hereford) till the year 1597. An act of parliament was then obtained for erecting a second at W'il-ton ; and since that time two more have been added ; the one at Bredwardine, by an act passed in the year 1762 ; and the other at Witney, by an act passed in 1780. That at Bredwardine, which is built of brick, after sustaining some damage by the great flood of 1795, has continued to resist the impetuosity of the river ; but

that of Witney has been already twice destroyed, and was again renewed on stone piers in the year 1802. The principal fish taken in the Wye is the salmon, which is found in it at all times, but only in perfection between the months of December and August. They were formerly more abundant than at present; so much so indeed, that, in the indentures of apprenticeship at Hereford, it was once a clause that the apprentice should not be compelled to live on them more frequently than two days in a week. Their passage up the river is now, however, so much obstructed by iron works, that unless the water is swelled far above its usual height, they cannot advance.

The river Lugg has its origin in Radnorshire, but enters Herefordshire on the north-west side, near Stapleton Castle : thence, flowing in a south-east direction, it receives the Pinsley near Leominster ; and afterwards, inclining to the south, is increased by the waters of the Arrow and the Frome. Soon after its junction with the latter river it falls into the Wye, near the pleasant village of Mordisford. The district of country through which this river flows is fine and fertile, but far less abundant in beautiful scenery than fhe Wye ; though Drayton has characterised the Lugg as ‘ more lovlie.’ Like the Wye, however, it is subject to sudden overflows, and is frequently swelled by partial rains, which give it great rapidity and force to its junction with that river. These circumstances have operated to prevent its being rendered navigable, though two acts of parliament have been passed for that purpose. The Munnow rises on the Herefordshire side of the Hatterell mountains, and flowing south-eastward is joined near Longtown by the Escle and Olchron rivulets, which have their springs also near the sources of the Mun-now : thence flowing southward, through a pleasant and sequestered vale, it is joined near Alterynnis by the Hothny; after which it turns to the north-east towards Pontrilas, and near that place is increased by the united streams of the Dove and the Werme, which also rise in this county; the former at Dorston (Dore’s town), and the latter at Alansmoore. Again, turning to the south-east, it forms the boundary between Herefordshire and Monmouthshire, till it quits the county at Llanrothal, and flowing towards Monmouth is received by the river Wye immediately below that town. The Team or Teme enters this county from the confines of Radnorshire and

Shropshire, a short distance north-west from Brampton Bryan, and flowing eastward runs into Shropshire, near Ludlow : thence bending to the south it again enters Herefordshire, but soon leaves it for Worcestershire ; where, having made a considerable circuit, it once more flows on the borders of this county, of which it becomes the boundary for a mile or two above and below Whiteborn ; after which it discharges itself into the Severn, between Malvern Chace and Woodbury Hill in Worcestershire. In the muscle-shells of this river pearls have occasionally been found. The Leedon, or Leddon, rises above Bosbury on the east side of the county, and running to the south gives name to the town of Ledbury; thence

flowing into Gloucestershire it unites with the Severn. The Arrow enters Herefordshire from Radnorshire, and flowing to the east falls into the Lugg below Leominster. The Frome rises near Wolfrelow above Bromyard, and taking a south course is joined by the Lowden near Stretton Grandison ; when turning to the south-west it unites with the Lugg above Mordisford. The inland navigation of Herefordshire is very imperfect; though -scarcely any county possessing neither iron-works nor any principal manufacture can have greater occasion for its aids. Some medicinal springs have been noticed as rising on the side of the Malvern Hills, and known among the peasantry by the customary name of Holy-wells. Several petrifying springs are also met with in the neighbourhood of Moc-cas, Fownhope, Llanrothal, Wormesley, &c., and other hilly parts of the county where the soil is calcareous. Near Richard's Castle a small spring has obtained the name of Bone-well, from the circumstance jof its frequently emitting, when disturbed, small bones resembling vertebrae and other bones of the frog.

Herefordshire returns seven members to pai-liament, viz : three for the county, two for the city of Hereford, and two for Leominster: Weoblv was disfranchised in 1832.

Robert Devereux, the celebrated earl of Essex, was born at Netherwood in this county in 1567. — He was beheaded in 1601. — Captain James Cornwall, an excellent naval commander, was born at Bredwardine Castle, and was killed off Toulon, a chain shot depriving him of both his legs, on February 27th, 1743. — He has a noble monument in Westminster Abbey, thirty-six feet high. — David Garrick, the British Roscius, was born at Hereford in 1716, and died in 1779. — Nor must we omit to notice, among the eminent persons of this county, the famous Eleanor Gwynn, the celebrated courtezan in

the reign of Charles II. — She died in 1687. — It has been alsc said that John Kyrle, Pope's Man of Ross, was born at Ross, and died in the year 1724, aged ninety. With an income of £500 per annum he was a blessing to the whole county. — Hereford is a bishop's see, and gives the title of viscoui.t to the Devereux family. — Besides the making of cyder, which is very extensive, this county manufactures coarse woollen cloth, hats, and gloves.

HEREFORD, the capital of the above county, is situated on a gentle eminence from the river Wye, on the northern bank of which it stands near the centre of the county. This town was a strong station for the Saxon and English forces. By some it is supposed to have been built on the site of Ariconium, an ancient town mentioned by Antoninus, which was destroyed by an earthquake. A church was builf here early in the ninth century by king Melfred, the Mercian, in memory of Ethelbert, king of the East Angles, murdered by king Offa's queen at Marden, in this neighbourhood. Soon after it became a cathedral and a bishop's see : the cathedral was rebuilt by bishop Athelstan between 1012 and 1056. At the Norman conquest it was in ruins; the Welsh having, in the reign of Edward tlve Confessor, destroyed the cathedral, sackfd the city, and carried off the bishop. The jireser.

cathedral was begun by the second Norman bishop, Robert de Losin, on the model of the church of Aix-la-Chapelle, and completed by his successor. In 1786 its large western tower fell down, but it has since been tastefully rebuilt. Here were formerly six other churches, but at present there are only four, two being destroyed in the civil wars, *viz.* All-Saints', St. Peter's, St. John the Baptist's, and St. Nicholas ; and several meeting-houses .for the dissenters. Formerly there was an hospital of the knights of St. John of Jerusalem at Hereford, together with three other hospitals, a college of gray-friars, and a house of black-friars : on the site of the latter a well-endowed hospital was

founded in 1614, with a neat chapel. It has a remarkably ancient stone pulpit. Here is also a good free grammar-school, endowed with scholarships and exhibitions at each of the universities, the master and also th,e assistant of which are elected by the dean and chapter of the cathedral. The Wye is navigable for barges of considerable bur-den, which bring up coals and other articles, and carry back cider, timber, bark, and corn. A »rojected Gloucester and Hereford canal is expected to be speedily finished, by which the trade of the town will be greatly augmented. In general it is well built^ and the streets are -wide and clean. The manufactures are gloves, hats, and flannels, but only to a small extent. The county-gaol and shire-hall are respectable edifices; and the former is excellently regulated. The old town-hall is a curious wooden fabric. We may also notice here the guildhall, an infirmary, a lunatic asylum, a public library, and a savings' bank. In Broad Street stands a small, but neat theatre. Over the river Wye there is a stone bridge of six arches, built about the end of the fifteenth century. The city is governed by a mayor, escheator, called usually the late mayor, six aldermen, a common council, recorder, 8cc. It returns two members to parliament, elected by the freemen (in number about 1250), and the mayor is the returning officer. The ramparts and site of the castle, now called Castle-Green, form an agreeable promenade. A triennial music meeting is held here of the three choirs of Worcester, Hereford, and Gloucester, for the performance of oratorios, &c., for the benefit of the widows and orphans of the clergy. They are generally assisted by some of the principal performers from London, Bath, and Oxford. The chief beverage is cider. The city, standing on a gravelly soil, is accounted very healthy, and gives the title of viscount to the family of Devereux. Markets for the sale of poultry, butter, fish, &c., were erected in 1810. The market-days are Wednesday and Saturday, for poultry, butter, &c. ; Friday for live stock, and St. An-drew's-day for cattle and horses. Fairs, first Tuesday after February 2d, Wednesday in Easter-week, July 1st, and October 20th. It is thirteen miles south of Leominster, fourteen N. N. W. of Ross, and 135 W. N. W. of London.

HEREMrTICAL,fl#.-v Fr. hermite, her-HER'MIT, n.s. I ?nitage; Gr. £p7;/iO£.

HEP.'MITAGE, n. s. > A solitary, or ancho—

HER'MITESS, n. s. i ret, who retires from

HERMITI'CAL, adj.) the world for con-

templation and devotion; a beadsman, one bound to pray for another : hermitage, the residence of a hermit : hermitess, a female recluse : heremitical and hermitical, solitary ; contempla tive ; suitable, or belonging to, a hermit Tyll at last word cam onto the Emperour That Fawnus was without wyfe, and seld was jo—

counde,

But mournyng for Agea that he was to ybounde, And lyved as an hermyte, soule and destitute Wythout consolacioune, pensyff of and mute.

Chaucer. The Merchantes Second Tale. ‘ Yea ; than ;’ quod I, ‘ what done these preestes

here,

Nonnes, and hermites, freres, and all tho That sit in white, m russet and in grene ?’

Chaucer. The Court of Love. By what painful way they pass, Forth to an hill, that was both steep and high j

On top whereof a sacred chapel was, 4nd eke a little Jiermitaye thereby.

Faerie Queene. For those of old,

And the late dignities heaped up to them, We rest your hermit. Shafupeare.

A withered hermit, fivescore winters worn, Might shake off fifty looking in her eye. Id.

Go with speed

To some forlorn and naked hermitage, Remote from all the pleasures of the world. Id. You lay this command upon me, to give you my poor advice for your carriage in so eminent a place ; I humbly return you mine opinion, such as an hermit rather than a courtier can render. Bacon.

And may at last my weary age Find out the peaceful hermitage, The hairy gown and mossy cell, Where I may sit and rightly spell Of every star that heaven doth shew, And every herb that sips the dew. Milton. About two leagues from Fribourg we went to see a hermitage ; it lies

in the prettiest solitude imaginable, among woods and rocks. Addison on Italy.

He had been duke of Savoy, and, after a very glorious reign, took on him the habit of a hermit, and retired into this solitary spot. Id.

You describe so well your heremitical state of life, that none of the ancient anchorites could go beyond you for a cave in a rock. Pope.

HER'ESY, n. s. -\ Fr. keresie ; Lat. htrre-HERE'SIARCH, n. S. I sis; Gr. aipeffic, aipecrif, HER'ETIC, n.s. * > and apx°C: from cuptw, HERET'ICAL, adj. I to choose. Choice ; HEEET'ICALLY, adv.J party chosen, or adhered to ; sect : hence, party or opinion adhered to unreasonably or obstinately ; faction ; terms generally applied by the Romish church to all who differ from her doctrines. Heresiarch is the principal leader or propagator of heresy : heretical is generally used in a bad sense ; and sometimes by way o"f contempt, or in jest. See Dr. Campbell's Preliminary Dissertations to his Four Gospels, Diss. ix. for an able account of the meaning of aiptsiQ in the Greek New Testament.

How exclude they us from being any part of the church of Christ under the colour of heresy, when they cannot but grant it possible even for him to be, as touching his own personal persuasion, heretical, who, in their opinion, not only is of the church, but holdeth the chiefest place of authority over the same ?

Hooker.

HERESY.

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I rather will suspect the sun with cold

Than thee with wantonness ; thy honour stands,

In him that was of late an heretick,

As firm as faith. Sliakspeare.

These things would be prevented, if no known heretick >r schismatick he suffered to go into those countries. . Bacon.

As for speculative heresiet, they work mightily upon men's wits ; yet do not produce great alterations in states. Id.

No Itereticks desire to spread Their wild opinions like these Epicures. Davies.

Let the truth of that religion I profess he represented to her judgment, not in the odious disguises of levity, schism, heresy, novelty, cruelty, and disloyalty.

King Charles.

The pope declared him not only an heretick, but an herenarch. StiUingfleet.

Bellarmm owns, that he has quoted a heretick instead of a father. Baker on Learning.

When a Papist uses the word hereticks, he generally means Protestants ; when a Protestant uses the word, he means any persons wilfully and contentiously obstinate in fundamental crrours. Watts.

Constantinople was in an uproar, upon an ignorant jealousy that those words had some heretical meaning.

Decay of Piety.

HERESY, in law, consists in a denial of some of the essential doctrines of Christianity, publicly and obstinately avowed; being denned, ' sententia rerum divinarum huraano sensu ex-cogitata, palam docta et pertinaciter defensa.' And here it must be acknowledged, that particular modes of belief or unbelief, not tending to overturn Christianity, or to sap the foundations of morality, are by no means the object of coer-cion by the civil magistrate. What, doctrines shall therefore be adjudged heresy was left by our old constitution to the determination of the ecclesiastical judge; who had herein a most arbitrary latitude allowed him. For the general definition of a heretic given by Lyndewode extends to the smallest deviations from the doctrines of the holy church : ' haereticus est qui dubitat de fide catholica, et qui negligit servare ea, quae Romana ecclesia statuit, seu servare decreverat.' Or, as the statute 2 Hen. IV. c. 15 expresses it in English, ' teachers of erroneous opinions, contrary to the faith and blessed determinations of the holy church.' Very contrary this to the

usage of the first general councils, which denned all heretical doctrines with the utmost precision and exactness. And what ought to have alleviated the punishment, the uncertainty of the crime, seems to have enhanced it in those days of blind zeal and pious cruelty. The sanctimonious hypocrisy of the canonists, indeed, went at first no farther than enjoining penance, excommunication, and ecclesiastical deprivation, for heresy : but afterwards they proceeded boldly to imprisonment by the ordinary, and confiscation of goods in pios usus. But in the mean time they had prevailed upon the weakness of bigoted princes to make the civil power subservient to their purposes, by making heresy not only a temporal, but even a capital offence : the Romish ecclesiastics determining, without appeal, whatever they pleased to be heresy, and shifting off to trie secular arm the odium and drudgery of executions ; with which they pretended to be too tender and delicate to intermeddle. Nay, they

affected to intercede, on behalf of the convicted heretic, ut citra mortis periculum sententiae circa eum moderetur ; well knowing that at the same time they were delivering the unhappy victim to certain death. See ACT OF FAITH. Hence the capital punishments inflicted on the ancient Do-natists and Manichaeans by the emperors Theodosius and Justinian ; hence also the constitution of the emperor Frederic, mentioned by Lyndewode, adjudging all persons without distinction to be burnt with fire, who were convicted of heresy by the ecclesiastical judge. The same emperor, in another constitution, ordained, that if any temporal lord, when admonished by the church, should neglect to clear his territories of heretics within a year, it should be lawful for good catholics to seize and occupy the lands, and utterly to exterminate the heretical possessors. And upon this foundation was built that arbitrary power so long claimed, and so fatally exerted by the pope, of disposing even of the kingdoms of refractory princes to more dutiful sons of the church. The immediate event of this constitution serves to illustrate at once the gratitude of the holy see, and the just punishment of the royal bigot ; for, upon the authority of this very constitution, the pope afterwards expelled this very emperor Frederic from his kingdom of Sicily, and gave it to Charles of Anjou. Christianity being thus deformed by the daemon of persecution upon the continent, our own island could not escape its scourge. Accordingly we find a writ de hseretico comburendo, i. e. of burning the heretic. But the king might pardon the convict by issuing no process against him; the writ de haeretico comburendo being not a writ of course, but issuing only by the special direction of the king in council. In the reign of Henry IV., when the eyes of the Christian

world began to open, and the seeds of the Protestant religion (under the opprobrious name of Lollardy) took root in this kingdom ; the clergy, taking advantage from the king's dubious title to demand an increase of their own power, obtained an act of parliament, which sharpened the edge o.f persecution to its utmost keenness. By stat. 2 Hen. V., c. 7., Lollardy was also made a temporal offence, and indictable in the king's courts, which did not thereby gain an exclusive, but only a concurrent, jurisdiction with the bishop's consistory. Afterwards, when the reformation began to advance, the power of the ecclesiastics was somewhat moderated ; for, though what heresy is was not then precisely defined, yet we are told in some points what it is not; thp statute 25 Henry VIII., c. 14, declaring that offences against the see of Rome are not heresy ; and the ordinary being thereby restrained from proceeding in any case upon mere suspicion; *i.e.* unless the party be accused by two credible witnesses, or an indictment of heresy be first previously found in the king's courts of common law. And yet the spirit of persecution was not abated, but only diverted into a lay channe'. For in six years afterwards, by stat. 31 Hen VIII. c. 14, the bloody law of the six articles was made ; which were ' determined and resolved by the most godly study, pain, and travail of his majesty ; for which his

most humble and obedient subjects, the lords spiritual and temporal, and the commons, In parliament assembled, did render and give unto his highness their most high and hearty thanks P The same statute established a mixed jurisdiction of clergy and laity for the 'trial and conviction of heretics ; Henry being equally intent on destroying the supremacy of the bishops of Rome, and establishing all their other corruptions of the Christian religion. Without recapitulating the various repeals and revivals of these sanguinary laws, in the two succeeding reigns, we proceed to the reign of queen Elizabeth ; when the reformation was finally established. By stat. 2 Eliz. c. 1, all former

statutes relating to heresy are repealed, which leaves the jurisdiction of heresy as it stood at common law ; *viz.* as to the infliction of common censures, in the ecclesiastical courts ; and in case of burning the heretic, in the provincial synod only. Sir Matthew Hale is indeed of a different opinion, and holds that such power resided in the diocesan also ; though he agrees, that in either case the writ de ha;retico comburendo was not demandable of common right, but grantable, or otherwise, merely at the king's discretion. But the principal point now gained was, that by this statute a boundary is for the first time set to what shall be accounted heresy; nothing for the future being to be so determined, but only such tenets as have been heretofore so declared, 1. By the words of the canonical scriptures; 2. By the first four general councils, or such others as have only used the words of the holy scriptures ; or 3. Which shall hereafter be so declared by the parliament, with the assent of the clergy in convocation. Thus was heresy reduced to a greater certainty than before ; though it might not have been the worse to have denned it in terms still more precise and particular : as a man continued still liable to be burnt for what perhaps he did not understand to be heresy, till the ecclesiastical judge so interpreted the words of the canonical scriptures. For the writ de hseretico comburendo remained still in force, till it was totally abolished, and heresy again subjected only to ecclesiastical correction, pro salute animae, by stat. 29 Car. II. c. 9 : when, in one and the same reign, our lands were delivered from the slavery of military tenures ; our bodies from arbitrary imprisonment by the habeas corpus act ; and our minds from the tyranny of superstitious bigotry, by demolishing this last badge of persecution in the English law.

HERETOCH, among the Anglo-Saxons, signified the same with dux or duke, denoting the commander of an army. It appears, from Ed-ward the Confessor's laws, that the military force of this kingdom was in the hands of the here-tochs, who were constituted through every province and county in the kingdom, being selected out of the principal nobility, and such as were most remarkable as sapientes, fideles, etanimosi. Their duty was to lead and regulate the English armies, with a very unlimited power; on which account they were elected by the people in their folk-mote or full assembly, in the same manner as sheriffs.

HERFORD, or HERVORDEN, an old fortified town of Prussian Westphalia, in the county of Ravensberg, at the confluence of the Werra and the Aa. It is divided into the Old and New Town, and a

suburb called Radewig ; and contains a considerable manufactory of cotton thread, and of linen. Here were formerly an abbey and a convent, secularised in 1804 ; also a commandery of the order of St. John. Inhabitants 6000. Eleven miles E. N. E. of Ravensberg.

HERGEST'S ISLANDS, a group of islands in the South Pacific, discovered by lieutenant Hergest in the Dsedalus, in the year 1792. They consist of Riou's, Trevenen's, Sir Henry Mar-tin's, and Robert's Isles, and extend from lat. 7° 53' to -9° 14' S., and from long. 219° 47' to 220° 21' E.

HERGEST'S ROCKS, two rocky islets in the Pacific Ocean, also discovered by lieutenant Hergest in the year 1792. Long. 219° 42' E., lat. 7° 38' S.

HERJEDALEN, a district in the north of Sweden, included in Gefleborgstoen, and bounded on the north by Jemptland, and on the west by Nor-way. It forms a large wooded valley extending between 62° and 63° of N. lat., watered by the Ljunga and Ljusna, and flanked by lofty mountains There is but little corn land, though it seems capable of a more extended cultivation. On the other hand, it abounds in cattle, game, and fish ; and the inhabitants carry on a good trade in cheese. Territorial extent 3600 square miles. Population about 4000.

HE'RIOT, n. s. Sax. }>enesih>. A fine paid to the lord at the death of a landholder, commonly the best thing in the landholder's possession.

Though thott censume but to renew, Yet love, as lord, doth claim a heriot due.

Cleaveland.

This he detains from the ivy, for he should be the true possessory lord thereof ; but the olive dispenseth with his conscience to pass it over with a compliment and a heriot every year. HoweL

I took him up, as your heriot, with intention to have made the best of him, and then have brought tb« whole produce of him in a purse to you. J)ryden.

HERIOT, in law, is a customary tribute of goods and chattels, payable to the lord of the see on the decease of the owner of the land. See TE-NURE. It is of two sorts, *viz.* Heriot custom, where heriots have been paid time out of mind by custom, after the death of a tenant for life. In some places there is a customary composition in money, as ten or twenty shillings in lieu of a heriot, by which the lord and tenant are

both bound, if it be an indisputably ancient custom : but a new composition of this sort will not bind the representatives of either party. Heriot service, when a tenant holds by such service to pay heriot at the time of his death ; which service is expressed in the deed of feoffment. For this latter the lord shall distrain ; and for the other he shall seize and not distrain. If the lord purchase part of the tenantry, neriot service is extinguished ; but it is not so of heriot custom.

HERIOT (George), jeweller to king James VI. and Charles I., the founder of the elegant hospital

at Edinburgh which bears his name, was born in the parish of Gladsmuir, in East Lothian. His ancestors were proprietors of the small village of Trabrowne, and their names appear on the roll of the Scotch parliament. Mr. Creech says, he furnished jewels to prince Charles, afterwards king Charles I., when he went to the court of Spain in 1623. ‘These jewels were never paid for by James ; but, when Charles I. came to the throne, the debt to Heriot was allowed to his trustees, in part of their purchase of the barony of Broughton, then crown lands in the neighbourhood of Edinburgh. These lands are now a part of the foundation of the hospital. Mr. Heriot died in 1627. Tradition reports, that he acquired his fortune by purchasing for a trifle a large quantity of yellow sand, with which a shipmaster, who traded to Africa, had loaded his vessel by way of ballast, from the coast of Guinea, without knowing its value ; but in which Heriot soon discerned a considerable proportion of gold dust, which he afterwards extracted.

HERIOT’S HOSPITAL. See EDINBURGH.

HERISA, or HEUISHAW, an ancient town of Switzerland, in the canton of Appenzel, on the Bulbach. It was the first town of the can-ton that

embraced Christianity. The manufactures of linen, cotton, and muslin, chiefly em-ploy 6000 inhabitants. It is twenty-seven miles south-west of St. Gall, and ten north-west of Appenzel.

HERISSON, in fortification, a beam armed with a great number of iron spikes with their points outwards, and supported by a pivot, on which it turns. These serve as a barrier to block up any passage, and are frequently placed before the gates, and more especially the wicket doors of a town or fortress, to secure those passages which must be often opened and shut.

HERITIER (Nicholas 1'), a French poet of the seventeenth century, who was historiographer of France, and treasurer to the guards. He wrote two tragedies, entitled Hercule Furieux, and Clovis. He died in 1680.

HERITIER (Mary Jane 1' de Villandon), a French poetess, daugher of the above, was born in 1664. She was a member of the academies of the Jeux Floraux, and the Ricovrati at Padua. She wrote, 1. Translation of Ovid's Epistles; 2. La Tour Tenebreuse, an English Tale ; 3. Les Caprices du Destin, a novel ; and 4, L'A-vare puni, a tale in poetry.

HKIUTIER (Charles Louis 1' de Brutelle), an eminent French botanist, one of the most distinguished students and promoters of the Linnaean principles and accuracy in his own country, was born of an opulent mercantile family, at Paris in 1746. In 1772 he was appointed superintendant of the waters and forests of the Generalite of Paris; and, his active mind being turned to fulfil the dvties of his office, he began to apply to botany, with a particular view to the knowledge of forest trees. He soon extended his enquiries ; studied the works of Linnaeus ; and became one. of the most zealous disciples of the illustrious Ssvede. He died in 1800 at Paris.

HERITIERA, in botany, so named in honor of the able French botanist, Charles Louis 1'IIe-ritier de Brutelle. Essential character; MALE

CAL. five toothed ; COR. none ; filament colum-nar ; anthers, from five to ten, below the top ; FEMALE CAL. five toothed ; COR. none; germens five, sessile, with five pairs of barren anthers between them ; drupas five, dry, of one cell ; SEEDS solitary. Species one only ; a native of Ceylon, and cultivated in Kew gardens under the name of the looking-glass plant.

HERKIMER, a county of New York, United States, erected from Montgomery county in 1791, but, by successive subdivisions, now restricted to a smaller area. Its present form is an irregular oblong, embracing the Mohawk River, which crosses the southern part. Its geographical cen-tre lies about eighty-five miles on a right line north-west from Albany. It is bounded north by St. Lawrence county, east by Montgomery county and a small angle of Otsego county, south by Otsego county, and west by Oneida and Lewis counties; its greatest length north and south is eighty-five miles ; its greatest width sixteen miles. The area is 1106 square miles, or 717,840 acres. Situated between 42° 49' and 44° T N. lat, and 0° 44' and 1° 15' W. long, from Ntw York. This county has a large proportion of hilly land, and as great a diversity of soil as any in the state. The southern part furnishes some of the small sources of the Susquehanna.

HERKLA, a town on the east coast of Tunis, Africa, the Adrumetum of earlier times, the Jus-tiniana of the middle ages, and the Heraclea of the Lower empire. It was built on a promontory, and appears to have been about a mile in circuit; but the ruins did not appear to Dr. Shaw so extensive as he expected.

HERMˆA, in antiquity, ancient Greek festivals in honor of Mercury. One of these was celebrated by the Pheneatae in Arcadia ; a second by the Cyllenians in Elis ; and a third by the Tanagreans, where Mercury was represented with a ram upon his shoulder, because he was said to have walked through the city in that posture in time of a plague, and to have cured the sick ; in memory of which it was customary, at this festival, for one of the most beautiful youths in the city to walk round the walls with a ram upon his shoulder. A fourth festival was observed in Crete, when it was usual for the servants to sit down at the table while their masters waited ; a custom which was also observed at the Roman Saturnalia.

HERMAN (Paul), a famous botanist in the seventeenth century, born at Hall, in Saxony. He practised physic in the isle of Ceylon, and was afterwards professor of botany at Leyden, where he died 'in 1695. He wrote 1. A Catalogue of the Plants in the Public Garden at Ley-den ; 2. Cynosura Materiee Medicae ; 3. Florae Lugduno-Batavtc flores : 4. Paiadisus Batavus ; and, 5, Musseum Zeylanicum.

HERMANN (James), a learned mathematician of the academy at Berlin, and a member of the academy of sciences at Paris, was born a1 Basil in 1678. He was a great traveller, and for six years was professor of mathematics at Padua. He afterwards went to Russia, being invitad thither by Peter the Great, in 1724. On his return to Basil he was

made professor of morality ana

natural law ; and died there in 1733. He wrote several mathematical works.

HERMANNIA, in botany, a genus of the pentandria order and monadelphia class of plants; natural order thirty-Seventh, columniferae; CAPS, quinquelocular ; the petals at the base are semitubulated and oblique. There are twenty-two species.

1. H. alnifolia, has a shrubby stalk and branches growing irregularly four or five feet high, with pale yellow flowers in short spikes from the sides and ends of the branches, appearing in April or May.

2. H. althaeifolia, has a shrubby stalk, and soft woolly branches, growing two feet high, with numerous yellow flowers in short spikes growing at the end of the branches, and making their appearance in July.

3. H. grossularifolia.has a shrubby stalk and spreading branches, growing three or four feet high, with bright yellow flowers coming out in great numbers at the ends of all the shoots and branches in April or May.

4. H. hyssopifolia has a shrubby upright stalk, branching out laterally six or seven feet high, with pale yellow flowers in clusters from the sides of the branches, appearing in May and June.

5. H. lavendulifolia has a shrubby stalk and slender branches, very bushy, about a foot and a half high, small spear-shaped, obtuse and hairy leaves, with clusters of small yellow flowers along the sides of the branches continuing from June to Autumn. All these plants are natives of Africa, and therefore must be kept in a greenhouse during

the winter in this country. They are propagated by cuttings of their young shoots, which may be planted in pots of rich earth from April to July.

HERMANNSTADT, or Szeben, the ancient Cibinium, or Hermanopolis, is a large fortified town of Transylvania, of which it was formerly the capital, and stands on the river Szeben, in a beautiful plain. It is not considered healthy : and its streets and general accommodations are inferior to most towns of Europe of the same size. As the chief town of the Saxon settlers in Transylvania, it is the place of their archives, and the seat of a Protestant university. It has also a convent and three monasteries, one of which belongs to the Greek monks of St. Basil. The principal square contains a fine statue and fountain. The orphan hospital, the barracks outside of the town, the theatre, and the residence of baron Bruckenthal, are also worth no-tice. The last contains a good library, and a valuable collection of pictures, antiquities, and natural history. Its chief manufacture is soap and candles. Thirty miles south-east of Weis-senbunj, and 392 south-east of Vienna.

HERMANT (Godfrey), a learned doctor of the Sorbonne, born at Beauvais in 1617. He wrote many works; the principal of which are, 1. The Lives of St. Athanasius, St. Basil, St. Gregory Nazianzen, St. Chrysostom, and St. Ambrose. 2. four pieces in defence of the rights of the university of Paris against the Jesuits. 3. A French Translation of St. Chrysostom's Treatise of Providence, and Basil's

Ascetics. 4. Extracts from the Councils; published after his death, under the title of Clavis discipline Ecclesiastics. He died suddenly at Paris, in 1690.

HERMAPH'RODITE, n. s.) Fr. herma-HERMAPHRODIT'ICAL, adj. Aphrodite, from ijC and aQpociTtj. An animal uniting two sexes.

Man and wife make but one right Canonical hermaphrodite. Cleaveland.

There may be equivocal seeds and hermaphroditical principles, that contain the radicality of different forms. Browne.

The chosen knight

And free companion of the gallant Bourbon, Late Constable of France ; and now tc be Lord of the city which hath been Earth's lord Under its

emperors, and changing sex, Not sceptre, an hermaphrodite of empire — Lady of the Old World.

Byron. Deformed Transformed. A HERMAPHRODITE is generally understood to signify a human creature possessed of both sexes, or who has the parts of generation both of male and female. The term, however, is applied also to other animals, and even to plants. The word is a compound of Ep/njf, Mercury, and AQpodirt), Venus ; q. d. a mixture of Mercury and Venus, i. e. of male and female. By Mr. Hunter, hermaphrodites are divided into natural and unnatural, or monstrous. The first belongs to the more simple orders of animals, of which there is a much greater number than of the more perfect. The unnatural takes place in every tribe of animals having distinct sexes, but is more common in some than in others. The human species, he imagines, has the fewest, never having seen them in that species, nor in dogs ; but in the horse, sheep, and black cattle, they are very frequent. From Mr. Hunter's account, however, it does not appear that such a creature as a perfect hermaphrodite has ever existed. All the hermaphrodites which he had the opportunity of seeing had the appearance of females, and were generally thought such. In the horse they are very frequent. In most species of animals, the production of hermaphrodites appears to be the effect of chance ; but in the black cattle it seems to be an established principle of their propagation. It is a well-known fact, and, as far as has yet been discovered, appears to be universal, that when a cow brings forth two calves, one of them a bull, and the other a cow to appearance, the cow is unfit for propagation, but the bull-calf becomes a very proper bull. The cows are known not to breed ; they do not even show the least inclination for the bull, nor does the bull ever take the least notice of them. Among the country-people in England, this kind of calf is called a free-martin ; and this singularity is just as well known among the farmers as either cow or bull." When they are preserved, it is for the purposes of an ox or spayed heifer, *viz.* to yoke with the oxen, or fatten for the table. They are much larger than either the bull or the cow, and the horns grow longer and bigger, being very similar to those of an ox. » The bellow of a free-martin is similar to that of an ox, and the meat is similar to that of the ox or spayed heifer, viz much finer in the fibre than either the bull or cow;

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and they are more susceptible of growing fat with good food. By some they are supposed to exceed the ox and heifer in delicacy of taste, and bear a higher price at market. The Romans, who called bull taurus, spoke also of taurae, in the feminine gender, different from vaccas or cows. Stephens observes, that it was thought they meant by this word barren cows, which obtained this name because they did not conceive any more than bulls. He quotes a passage from Columella : ‘ And, like the taura, which occupy the place of fertile cows, should be rejected or sent away.’ He likewise quotes Varro, De re Rustica : ‘ The cow which is barren is called taura.’ Among the reptile tribe, such as worms, snails, leeches, &c., hermaphrodites are very frequent. In the Memoirs of the French Academy, we have an account of this very extraordinary kind of hermaphrodites, which not only have both sexes, but do the office of both at the same time. Such are earth-worms, round-tailed worms found in the intestines of men and horses, land snails, and those of fresh waters, and all the sorts of leeches. And, as all these are reptiles, and without bones, M. Poupart concludes it probable, that all other insects which have these two characters are also hermaphrodites. The method of coupling practised in this class of hermaphrodites, may be illustrated in the instance of earth-worms. These creep, two by two, out of holes proper to receive them, where they dispose their bodies in such a manner as that the head of the one is turned to the tail of the other. Being thus stretched lengthwise, a little conical button or papilla is thrust forth by each, and received into an aperture of the other. Among the insects of the soft or boneless kind, there are great numbers which are so far from being hermaphrodites, that they are of no sex at all. Of this kind are all the caterpillars, maggots, and worms, produced of the eggs of flies of ail kinds : but the reason of this is plain; these are not animals in a perfect state, but disguises under which animals lurk. In the collection of insects belonging to professor Germar are the following hermaphrodite butterflies: 1. Papilio atalanta. The left side male, the right side female ; the left pair of wings K smaller, and more deeply notched than the right : the left antenna shorter than the right. 2. Papilio antiopa; the right side male, and left side female. The right antenna much shorter than the left. 3. Papilio phoebe ; left side male : left antenna shorter than the right ; and the left pair of wings smaller,

but the color and margin same as the right pair : hinder part of the body same as in male. 4. Sphinx euphor-biae ; leftside male, and smaller than the right or female side : the distribution of the color is remarkable ; the whole under side of the body is divided by a line, in the direction of its length ; the male side is covered with a green powder, while the female side has a white antenna, rosered brfast, and the abdomen marked with white denticulations. 5. Sphinx galli ; left side male; the right antenna and the right pair of wings longer than those of the male side ; but there is no difference of color in the delineation of the two parts.

HERMAPHRODITE FLOWERS, in botany, are

so called by the sexualists on account of their containing both the anthera and stigma, the organs of geneiation, within the same calyx and petals. Of this kind are the flowers of all the classes in Linnaeus's sexual method, except the classes moncecia and dicecia; in the former of which, male and female flowers are produced on the same root ; in the latter, on distinct plants from the same seed. In the class polygamia, there are always hermaphrodite flowers mixed with male or female, or both, either on the same or distinct roots. In the plantain tree the flowers are all hermaphrodite; in some, however, the anthera, or male organ, in others the stigma or female organ, proves abortive. The flowers in the former class are styled female hermaphrodites ; in the latter, male hermaphrodites. Hermaphrodites are thus as frequent in the vegetable kingdom as they are rare in the animal one. See BOTANY.

HERMAPHRODITUS, in the pagan mythology, the son of Hermes, or Mercury, and Aphrodite, or Venus. Being educated on Mount Ida by the Naiades, Salmacis, one of these nymphs, fell desperately in love with him; but he refusing to gratify her passion, she watched him one day, while he was bathing in a fountain inCaria, and leaping into it, seized him, entwined herself about him, and by her prayers, obtained of the gods to have his body and hers united into one. Whereupon Hermaphroditus, finding himself thus metamorphosed, prayed his celestial parents, that in future every man who should bathe in that fountain should possess both sexes, which, according to Ovid, was also granted. Some explain the fable, that Hermaphroditus •was represented as the son of Mercury and Ve-nus, to exhibit the union between eloquence or commerce, whereof Mercury was god, with pleasure, whereof Venus was the deity.

HERMAS, an ecclesiastical author of the first century ; and, according to Origen, Eusebius, and Jerome, the same whom St. Paul salutes in the end of his first epistle to the Romans. He wrote a book in Greek some time before Domitian's persecution, A. D. 95, entitled The Pastor, from his representing an angel speaking to him in it under the form of a shepherd. The Greek text is lost, but a very ancient Latin version of it is extant. Some of the fathers have considered this book as canonical. The best edition of it is that of 1698, where it is to be found among the other apostolical fathers, illustrated with the notes and corrections of Cotelerius and Le Clerc. With these it was translated into English by archbishop Wake, the best edition of which is that of 1710.

HERMAS, in botany, a genus of the monoBcia order, belonging to the polygamia class of plants. The umbel in the hermaphrodite is terminal; there is a universal involucrum and partial ones. The rays of the small umbels are lobed; the central one flower-bearing ; there are five petals, and five barren stamina ; the seeds are two-fold and suborbicular. In the male the lateral um-bels have universal and partial involucra ; the small umbels are many-flowered ; there are five petals, and five fertile stamina.

IIL11MELIN (Samuel Gustavus, baron), a

scientific Swedish nobleman, was a native of Stockholm, in which metropolis he was born in 1744. Having travelled over a great part of the European continent, he was entrusted with the conduct of a mission to the United States of America. On his return in 1784 he visited England ; after which more than fifteen years of his life were devoted to his Swedish atlas. Through his exertions also, and principally at his own expense, great improvements were introduced among the mining establishments of Bothnia. After fifty-four years

spent in important active services, he retired from public life in 1815, retaining his salary, with an additional pension of 1000 rix dollars. Besides a variety of tracts printed among the transactions of the Academy of Stockholm, the following treatises were published by him separately :— A Mineralogical Description of Lapland and Westro-Bothnia, with tables of the population and industry of the latter province; Mineralogical Charts of the Southern Provinces of Sweden; On the Melting and Casting of Copper Minerals ; On the use of Stones found in the Swedish Quarries ; and an Essay on the Resources of the Swedish Provinces. M. Hermelin closed his long and useful life on the 4th of May, 1820.

HERMES, Gr. EPMHS, from Epjtijvevc, an interpreter. The Greek name of the god Mercury. See MERCURY.

HERMES, surnamed Trismegistus, i. e. thrice greatest, an Egyptian or Phoenician priest and philosopher, and according to some a king ; which triple office, they say, was the reason of this surname ; though Suidas alleges, it was given him because he taught the doctrine of the Trinity. It is more probable, however, that he was so named on account of his great learning ; for he is said to have written thirty-six books on divinity and philosophy, and six on physic. Clemens Alexandrinus has given a catalogue of his works ; but none of them are extant, except a piece entitled Poemander, which is reckoned spurious. He taught the Egyptians chemistry, the art of land-measuring, the cultivation of the olive, the division of time into hours, and the use of hieroglyphics. He is supposed to have flourished under Ninus or Osiris, about A. M. 2076.

HERMES, or HERMA, among antiquaries, a sort of Square or cubical figure of the god Mercury, usually made of marble, though sometimes of brass or other materials, without arms or legs, and planted by the Greeks and Romans in their cross-ways. Servius gives us the origin thereof, in his comment on the eighth book of the JEneid. ‘ Some shepherds,’ says he, ‘ having one day caught Mercury asleep on a mountain, cut off his hands ; from which he, as well as the mountain where the action was done, became denominated Cyllenius, from icvXXoe, maimed ; and thence certain statues without arms are denominated Hermeses or Hermae.’ But this etymology of the epithet of Cyllenius contradicts most of the other ancient authors ; who derive it from Mercury’s birth-place, Cyllene, a city of Elis, or the mountain Cyllene, which had been so named before him. Suidas gives a moral explication of this custom of making statues of Mercury without arms. ‘ The Hermeses,’ says he,

‘ were statues of stone placed at the vestibules or porches of the doors and temples at Athens ; for this reason, that, as Mercury was held the god of speech and of truth, square and cubical statues were peculiarly proper ; having this, in common with truth, that on what side soever they are viewed, they always appear the same. Athens abounded more than any other place in Hermeses : there were abundance of very tignal ones in various parts of the city, and they were indeed among the principal ornaments of the place. They were also placed in the high roads and cross-ways, because Mercury, who was the courier of the gods, presided over the highways ; whence he Jhad his surnames of Trivius and Viacus.

HERMET’ICAL, adj.ˆ French, hermetique, HERMET’IC, adj. > from Hermes, or Mer—

HERMET’ICALLY, adv. j cury, the imagined inventor of chemistry. Chemical.

The tube was closed at one end with diachylon, instead of an termetical seal. Boyle.

An hcrmetical seal, or to seal any thing hermetically, is to heat the neck of a glass ‘till it is just ready to melt, and then with a pair of hot pincers to twist it close together. Quincy.

He suffered those things to putrefy in hermetically sealed glasses, and vessels close covered with paper, and not only so, but in vessels covered with fine lawn, so as to admit the air, and keep out the insects : no living thing was ever produced there. Bentley.

HERMETICAL ART, a name given to chemistry, on a supposition that Hermes Trismegistus was the inventor of the art, or that he excelled therein. See ALCHEMY.

HERMETICAL SEAL, a manner of closing glass vessels, for chemical operations, so very accurately, that nothing can exhale, not even the most subtile spirits. It is performed by heating the neck of the vessel in the flame of a lamp till it be ready to melt, and then with a pair of pincers twisting it close together. This chemists call putting on Hermes’s seal.

HERMHARPOCRATES, or HERMARPO-CRATES, in antiquity, a deity, or figure of a deity, composed of Mercury and Harpocrates, the god of silence. M. Spon gives a hermharpocrates in his Rech. Cur. de 1’

Antiquite, having wings on his feet like Mercury, and laying his finger on his mouth like Harpocrates. It has been suggested that this combination was intended to show that silence is sometimes eloquent.

HERMIANI, or HERMIATITˆE, a sect of heretics in the second century, thus called from their leader Hermias, and ulso denominated Seleuciani. One of their distinguishing tenets was, that God is corporeal ; another, that Jesus Christ did not ascend into heaven with his body, but left it in the sun.

HERMIAS, a heretic of the second century, the founder of the above sect, born in Galatia. He maintained that the deity is material, the world eternal, and that the human soul is composed of fire and spirit.

HERMILLY (Vaquette d'), a French historian, born at Amiens in 1707. He wrote the history of Majorca and Minorca, and translated Feijoo's Critical Theatre, and Ferara's History of Spain.

HERMIONE, iu fabulous history, the daughter of Menelaus and Helen, who was betrothed to her cousin Orestes, but afterwards married to Pyrrhus, whom Orestes therefore killed in the temple of Apollo, and recovered Hermione.

HERMIONE, in ancient geography, a considerable city of Argolis. It was in ruins, except a few temples, in the time of Pausanias; who says, that the new city was at the distance of four stadia from the promontory on which the temple of Neptune stood.

HERMIT is derived from the Greek tpjjjuoc, a desert, and therefore should rather be written eremite, Paul, surnamed the Hermit, is usually reckoned the first hermit ; though St. Jerome, at the beginning of the Life of that saint, says it is not known who was the first. Some

think John the Baptist, others Elias ; others make St. Anthony the founder of the eremetical life ; but others say, that he only rekindled and heightened the fervor thereof, and that his disciples owned St. Paul of Thebes for the first that practised it. The persecutions of Decius and Valerian are supposed to have been the occasion. Several of the ancient hermits, though they lived in deserts, had numbers of religious accompanying them. There are also various orders and congregations of religious distinguished by the title of hermits ; as, hermits of St. Augustine, of St. John Baptist, of St. Jerome, of St. Paul, &c.

HERMITAGE is also applied to any religious cell, built and endowed in a recluse place, and annexed to some large abbey, of which the superior was called a hermit.

HERMITAGE, in geography, a hill of France on the side of the Rhone, opposite Tournon, fa-mous for its vineyards, and the production of the red and white hermitage wine : on the top is the ancient chapel which gave name to the hill.

HE’RMODACTYL, n. s. Gr. Ipˆc and

Hermodactyl is a root of a determinate and regular figure, and represents the common figure of a heart cut in two, from half an inch to an inch in length. This drug was first brought into medicinal use by the Arabians, and comes from Egypt and Syria, where the people use them, while fresh, as a vomit or purge j aud have a way of roasting them for food, which they eat in order to make themselves fat. The dried roots are a gentle purge, now little used. Hill.

HERMODACTYLS are brought from Turkey, and are of a white color, compact, yet easily cut or powdered, of a viscous whitish taste, with a light degree of acrimony. They were of great repute among the ancients as a cathartic; but those now sold in the shops have very little purgative virtue. Neumann declares he never found them to have any effect. The hermodactyl is the root of the colchicum variegatum, according to some ; others suppose it to be that of the iris tuberosa.

HERMODORUS, a philosopher of Ephesus, who, coming to Rome, advised the making of the laws called the Twelve Tables ; on which account a statue was erected to his memory.

HERMOGENES, the first and most celebrated architect of antiquity, was, according to Vitruvius, born at Alanbada, a city in Caria. He built

a temple of Diana at Magnesia: another of Bacchus at Tros. He wrote a book on architecture, which is lost.

HERMOGENES, of Tarsus, an ancient orator, who was in every respect a prodigy. At seventeen years of age he published his System of Rhetoric, and at twenty his Philosophic Ideas ; but at twenty-five totally lost his memory. His body being opened after his death, his heart was found of an extraordinary size, and hairy all over. He died about A. A. C. 168. His works were published by Aldus in 1509.

HERMOGENES, a heretic of the second century, born in Africa. He held matter to be the first principle ; and, regarding it as the fountain of all evil, he maintained that the world, and every thing contained in it, as well as the souls of men and other spirits, were formed by the Deity from an uncreated and eternal mass of corrupt matter.

HERMOGENIANS, a sect of ancient heretics, so denominated from their leader Hermo-genes. Their opinions were warmly opposed by Tertullian. They were divided into several branches under their respective chieftains, *viz.* Hermians, Seleucians, Materiari, &c.

HERMON, or AERMON, in ancient geography, a mountain of the Amorites, called Sanior by the Phoenicians, and Sanir or Senir by the Amorites, on the east of Jordan. It is also called Sion by Moses, but must not be confounded with the Sion of Jerusalem. By the Sidonians it was called Scirion ; in the Vulgate it is called Sarion. Joshua informs us that it was the dominion of Og, king of Bashan ; which must be understood of its south side. It is never particularly mentioned by profane writers, being comprised under Libanus, or Antilibanus, with which it is joined on the east. It is also called Hermonim, plurally, Psalm xlii. 6, because it was extensive, and contained several mountains.

HERMUND,orHELMUND, a river of Afghaunistaun, the Etymander of Arian. It rises to the west of Cabul, and, running to the south-west, is joined by the Urghundab, and empties itself, after a course of 360 miles, into the sea of Zerra, or Aria Pales. It is in general fordable, but, in winter, is very deep and broad. There was formerly an embankment, called the Bundi Rus-tem, across this stream ; from which, perhaps, it was said to lose itself in the sands.

HERMUS, in ancient geography, a river of Ionia ; which, rising near

Dorylaeum, a town of Phrygia, in a mountain sacred to Cybele, touched Mysia, and ran through the Regio Combusta, then through the plains of Smyrna down to the sea, carrying along with it the waters of the Pac-tolus, Hyllus, and other rivers. It was said, by Virgil and other poets, to roll down gold.

HERN, n. s. Contracted from HERON ; which see.

Birds that are most easy to be drawn are the mal-lard, swan, hern, and bittern. Peacham. The towering hawk, let future poets sing,

Who terror bears upon his soaring wing ;

Let them on high the frighted hern survey,

And lofty numbers paint their airy fray. Gay.

HERNANDEZ (Francis), a naturalist and physician, who was sent out by Philip II., king of Spain, to make observations on, and to de-

scribe, the natural productions of Spanish America. His pecuniary allowance for this purpose appears to have been ample ; and he spared no expense to make himself acquainted with such objects as he was in search of. He wrote an account of their nature and properties, but it does not appear that he lived to superintend the publication of his labors; for in 1651 the result of his enquiries was edited at Rome, under the care of the Lyncaean Academy, established in that city ; the papers of Hernandez having been purchased by Frederic Cesi, a young nobleman who founded, and was perpetual president of the Lyncsei. This work had originally been published in the Spanish language at Mexico, under the name and care of Francis Ximenes but the Roman edition, in small folio, came out in Latin, having the following title, ‘ Nova Plantarum, Animalium et Mineralium Mexicanorum Historia, a Francisco Hernandez, Medico in Indiis Praestantissimo, primum Compilata.’ The original drawings of this work were procured by Hernandez, who payed the immense sum of 60,000 ducats for them ;

they had been drawn at the time when Joseph a Costa was in America; but the numerous wood-cuts which accompany this volume are by no means equal to what might have been expected from the account we have of the drawings ; and this called forth an observation of regret from Linnaeus, that the work did not answer the trouble and expense which had been bestowed upon it. It must, however, be remarked, that no blame should attach to the memory of Hernandez, but to his editors on this account. What became of him is not recorded, but his drawings were consumed by a fire in the Escurial. Among the figures are some curious animals ; but the plants compose the chief bulk of the work. Some of his representations are so extraordinary that their truth have been doubted ; for intance, his mac-palxochiquahvitl, the form of which is so strange that some error was reasonably expected. His accuracy, however, has lately been verified even in this instance. The plant, whose large united stamens exactly resemble a bird's foot, is of the malvaceous order, and is recently figured in a splendid French work. A specimen of this plant is preserved in spirits at Sir Joseph Banks's. Hernandez does not appear to have published any other works on natural history ; but this will entitle him to our gratitude, for having first unfolded to European botanists the treasures of that then little known quarter of the world. The Mexican names are always given, and his medical observations are general and good. A history of the church of Mexico has been ascribed to our author, but without certainty.

HERNANDRIA, Jack-in-a-box tree : a genus of the trandria order, and moncecia class of plants ; natural order thirty-eighth, tricoccae : MALE CAL. tripartite .' COR. tripetalous : FEMALE CAL. truncated, quite entire : COR hexapetalous ; the plum hollow, and open at the mouth or upper part, with a loose kernel. 1. H. ovigera, grows many feet high, garnished with large oval leaves, not peltated ; and monoecious flowers, succeeded by swollen fruit, open at the end, and * uut within. 2. H. sonora, or common Jack-

in-a-box, is a native of both the Indies. It grows twenty or thirty feet high, and is garnished with broad peltated leaves, and monoecious flowers, succeeded by a large swollen hollow fruit, formed of the calyx, having a hole or opening at the end, and a hard nut within. The wind blowing into the cavity of this fruit makes a very whistling and rattling noise, whence the name. Both these species, being tender exotics, must be planted in pots of rich earth, and always kept in a hothouse ; in which, notwith standing all the care that can be taken, they seldom flower, and never grow beyond the height of common

shrubs, though in the places where they are natives they arrive at the height of trees. They are propagated by seeds procured from the West Indies.

HE'RNIA, n, s. Latin. Any kind of rupture, diversified by the name of the part affected.

A hernia would certainly succeed. Wiseman.

HERNIA, in medicine, from Greek tproc, a branch, is the name by which surgical writers distinguish the disease more commonly and vulgarly called a rupture, from a false idea that the case is attended with a laceration of the peritonaeum. Sir Astley Cooper defines it as 'a preternatural tumor occasioned by some of the viscera of the abdomen being displaced out of that cavity.' The places in which these swellings most frequently make their appearance are the groin, the navel, the labia pudendi, and the upper and fore part of the thigh ; they occur at every point of the anterior part of the abdomen, and there are several less common instances in which hernial tumors present themselves at the foramen ovale in the perinaeum, in the vagina at the eschiatic notch.

If the situation of such tumors be various, the viscera which produce them are still more so ; instances having occurred of the stomach, uterus, liver, spleen, and bladder, being found tc form their contents. But a part of the intestinal canal, or a portion of the omentum, are from experience known to be the most frequent cause of their formation. From these circumstances of situation and contents, all the different appellations are derived by which herniae are distinguished. Thus they are termed inguinal, scrotal, femoral, umbilical, and ventral ; from their appearing in the groin, scrotum, thigh, navel, or belly. When the tumor is confined to the groin, the hernia is said to be incomplete, and is termed bubonocele; but, when the swelling reaches down to the bottom of the scrotum, the rupture is then supposed to be complete, and the disease obtains the name of scrotal rupture, or oscheocele.

Of these disorders, the inguinal hernia is by much the most frequent ; next to that is the femoral. The umbilical is seldom observed in men, or even in women who have not borne children. The causes which tend to the production of hernia in its more usual form are these : 1. The containing parts of the abdomen are elastic and compressible ; whatever, therefore, tends to produce a diminution of capacity, in the cavity of the abdomen, must occasion a proportional degree fof risk of some of the contained parts being pushed from their natural

situations. Violent coughing, crying, laughter, or great bo-dily exertion, are attended with more o* less

contraction of the abdominal muscles, and particularly of the diaphragm ; and, as the contraction of these muscles must always diminish the abdominal cavity, these causes therefore are frequently productive of hernia. 2. Falls, inconsequence of the derangement they produce in the abdominal viscera, from the sudden and violent shock with which they are often attended, are often the immediate causes of hernia. 3. Persons of a preternatural laxity of frame are very liable to hernia. The containing parts of the abdomen, from the want of a sufficient tone and firmness, are unable in such people to resist on all occasions the weight of the different viscera; and they are therefore more particularly exposed to disarders of this kind on the slightest application of any of the causes already mentioned.

In whatever situation a protrusion of any portion of the intestines occurs, except in the hernia congenita, as all the vrscera are contained within the peritonaeum, a portion of that membrane, it is evident, must be carried down together with the parts protruded ; and, in every such instance, it is this portion of the peritonaeum which goes down along with the gut that is termed the hernial sac. The size of this sac is various in different subjects, and in different stages of the same disorder. On the first appearance of the disease it is commonly of no very considerable size, as such swellings seldom acquire any great bulk at once ; but, by repeated descents of the bowels, it comes to be pushed lower and lower, till in some instances its bulk becomes very considerable indeed ; and when, in this advanced period of the disorder, the sac happens to be laid open, it is found to contain either large quantities of omentum or intestine, and frequently large portions of each. As the peritonaeum has this property, in common with many other parts of the body, of thickening according to the degree of any gradual extension applied to it, so in many instances the thickness and firmness of the hernial sac are often very enormous.

All the bad symptoms which are found to oc-cur in hernia?, proceed, as may be readily supposed, either from obstruction to the passage of the faeces when the intestinal canal forms the tu-mor, or from a stoppage of circulation occasioned by stricture on the prolapsed parts ;

so that the attending symptoms, it is evident, will be always more or less hazardous according to the nature of the parts so protruded. Thus, when the omentum alone forms the substance of hernial swellings, as that organ does not appear to be so immediately necessary as many of the other viscera, such tumors are not so frequently productive of bad consequences ; at least they are seldom in any degree so hazardous as when a part of the alimentary canal is either protruded by itself or along with the omentum.

Although this, however, is in general the case, yet it sometimes happens, that even an omental rupture is productive of no small degree of dan-ger. When a stricture so complete upon il occurs as to occasion a stoppage of circulation in the protruded part, mortification with all its bad consequences must be the certain event : and the connexion between the omentum, stomach, and other viscera, is such, that a sudden VOL. XI.

descent of any consideraore portion of the for-mer, sometimes brings on vomiting, hickup, and other troublesome symptoms ; and, lastly, though a rupture containing omentum only might not of itself produce any thing bad ; yet, as the passage through which the omentum has slipped must ot necessity continue open so long as that viscus remains protruded, and as that circumstance alone must, so long as it continues, render it .more easy for a portion of intestine likewise to get down, this of itself is a sufficient reason for entitling even thisspec.es of hernia to the serious attention of practitioners.

But whatever the contents of such swellings may be, as their remaining in some instances for a considerable length of time without being productive of any bad symptoms must proceed entirely from the circulation continuing to go freely on, notwithstanding the derangement of parts ; so, whenever a stricture occurs up the protruded viscera, sufficient to produce either a stoppage of the circulation or of the faecal contents of the alimentary canal, when a portion of intestine forms the disease, the following in general are the symptoms which accrue : —

An elastic colorless swelling is observed at the part affected ; a slight pain is felt, not only in the swelling itself, but, if part of the alimentary canal is down, a universal uneasiness is perceived over the whole abdomen; and this pain is always rendered worse by coughing, sneezing, or any violent exertion. The patient complains of nausea ; frequent fetching ; can get no discharge by stool ; becomes hot and

restless ; and the pulse is commonly quick and hard. When the swelling is formed entirely by a portion of intestine, if no faeces be contained in it, it has a smooth, equal surface, and is easily compressible, but instantly returns to its former size on its pressure being removed ; but, in ruptures of long standing, where hard faeces have collected in the protruded bowels, considerable inequalities are detected. When again the tumor is composed both of intestine and omentum, its appearance is always unequal, it feels soft and somewhat like dough, and of course is not so elastic as when part of the intestinal tube only is down ; for although, like the other, it is compressible, it does not so readily regain its former dimensions on the pressure being taken off.

These symptoms can never happen from the presence of omentum only ; for although stricture produced on a portion of omentum, even when no part of the intestinal tube is down, does now and then occasion a good deal of distress, such as pain in the part, sickness, vomiting, and twitching pains through the whole belly ; yet no obstruction ever occurs from this, and of course none of the symptoms ever prove so alarming as when any part of the gut is affected. If these symptoms we have described, as being produced by a strangulated bowel, are not now obviated by a removal of the stricture which produced them, the nausea and retching terminate in frequent vomitings, first of a bilious, and afterwards of a more fetid matter ; the belly becomee tense ; the pain turns more violent; a distressive convulsive hickup comes on ; the fever, which before was not apparently of much consequenc

now becomes very formidable ; and a total want of rest, with a very disagreeable state of anxiety, continues through the whole course of the complaint. These symptoms having gone on with violence for some time, the patient is at last commonly relieved in a sudden from all manner of pain ; and then he flatters himself that all dan-ger is over. But instead of that, the pulse, from having been hard and frequent, become? languid and interrupted ; cold sweats break out

over the whole body ; but especially on the extremities ; the eyes acquire a kind of languor ; the tense-ness of the abdomen subsides, and the swelling of the part affected disappears; the teguments covering the parts, which before were either of a natural appearance or had somewhat of a reddish inflamed cast, now acquire a livid hue, and a windy crepitous feel is distinguishable all over the course of the swelling. If the protruded parts have not of themselves gone entirely up, their return is now in general easily effected by a small degree of pressure, and the patient then discharges freely by stool; but the cold sweats increasing, the hickup turns more violent, and death itself is at last ushered in by its usual forerunners, subsultus tendinum, and other convulsive twitchings.

These are the ordinary symptoms of what is termed a strangulated or incarcerated gut-hernia; that is, when the parts protruded become so affected by stricture as to produce pain ; and do not either return to their natural situations on the patient's getting into a horizontal posture, or cannot even be immediately replaced by the hands of a practitioner. In whatever situation a strangulated hernia occurs, the only rational method of cure, it is evident, must consist in the removal of that stricture which prevents the re-turn of the protruded parts. It is that stricture which ought to be considered as the cause of all the mischief ; and, unless it be removed, nothing effectual can be done for the relief of the patient.

As soon as the assistance of a practitioner is desired for the removal of symptoms in cases of hernia, the first circumstance requiring his attention is the placing of his patient in such a posture as will most probably favor the return of the protruded parts. Placing the patient's feet over the shoulders of another person, while his body is allowed to hang downwards, has on some occasions answered when other means have failed. The surgeon should at the same time endeavour to assist the return of the bowels, by means of gentle pressure with his hands and fingers. In the inguinal or scrotal hernia, this pressure should be made obliquely upwards and outwards, to correspond with the opening in the external oblique muscle ; in the femoral hernia it ought to be made directly upwards; in the umbilical and ventral hernia, directly backwards. — The swelling should be grasped with one hand at the bottom, while with the fingers of the other hand an atlempt is made to push gently the contents of the tumor into their place, always observing that the parts last protruded be first reduced. This operation is by authors termed the taxis.

When the means now mentioned have failed,

no remedy affords more relief than blood-letting* The quantity to be drawn ought chiefly to ba determined by the strength of the patient. There is scarcely any disease, however, where such large quantities of blood can with propriety be taken from weak people. Bleeding, till the patient is in a state of deliquium animi, is frequently known to produce a more effectual relaxation of the muscles than can be done by any other means. On that account it is sometimes advised in cases of hernia, and the practice is now and then attended with advantage.

If, however, all these endeavours prove ineffectual ; if the swelling is not reduced, but still presents an inflamed tense surface ; if the fever still continues and even becomes worse, the operation of dividing the parts producing the stricture can alone save the life of the patient. To determine the exact time at which to proceed to an operation has been considered as one of the nicest points in surgery. In general, when every attempt has failed, and no repetition of the for-mer remedies is likely to succeed, the surgeon ought certainly to proceed to the operation. A few hours, even when assistance has been early applied, is perhaps all the time which ought ever to be consumed in trials of this nature. But however necessary this operation may be when a patient's life is in danger, as it is always attended with some degree of hazard, it ought never to be practised where symptoms of strangulation do not exist.

In that kind of hernia called chronic, the circulation of the part forming the hernia, as well as the peristaltic motion of such parts of the alimentary canal as have been protruded, go freely and regularly on. There are many instances of large hernias falling down even to the bottom of the scrotum, and continuing there for many years, without producing any interruption to the usual discharge by stool. All that can be done here is to prevent any accumulation of faeces in the intestine, by prescribing a proper diet, and the occasional use of gentle laxatives ; and obviating any inconvenience which might arise .from the weight of the tumor, by the application of a proper truss or suspensory bandage ; to warn them of the risk to which they are constantly liable, and to caution them against violent exercise, particularly leaping, and every sudden exertion. The truss ought to be fitted exactly to the part for which it is intended; for, without the utmost nicety in this respect, it must always do more harm than good : for the sole purpose of a bandage, in cases of hernia, is to prevent effectually the falling down of such parts as have been newly replaced. If therefore the pad or bolster of the bandage does not bear properly against the opening upon which it is placed, a portion of gut may slip

out, and be materially injured by the pressure of the pad.

The circumstances to be attended to in performing the operation for hernia, in general, are these. A table of convenient size and heighc being placed in a proper light, the patient must be so laid on it as to relax the diseased parts as much as possible, and then secured by proper assistance. To lessen the contents of the abdomen as much as possible, the bladder ought to be

emptied previous to the operation. An incision is to be made with a common round-edged scalpel through the skin and part of the cellular substance, long enough to allow the stricture to be fully exposed. The rest of the cellular substance is then to be divided with the greatest attention. That part of the muscle forming the stricture or ring must next be laid distinctly in view. A small portion of the protruding sac must also be exposed : after which the directory is to be passed between the ring and the sac. A straight probe-pointed scalpel is now to be introduced into the groove of the directory, and by it the ring is to be dilated till the point of the finger can be introduced. The finger is here considered as the safest director; for, it being insinuated into the aperture in the tendon immediately above the protruded parts, the point of the knife is easily introduced upon it ; and, by keeping the end of the finger always a little before the knife, the opening may be enlarged to any necessary extent without risk of wodnding any of the contiguous parts.

By the ease with which the finger is introduced, the operator will be enabled to judge when the ring is sufficiently dilated ; and, if the strangulation was entirely in the ring, it will now be evident that every obstacle to the reduction must be removed, and of consequence that the prolapsed parts may be returned with little difficulty. If the patient be young, or if the disease has continued a considerable time, such a degree of inflammation frequently ensues in the neck of the sac as co produce thickening and straitness ; so that, after the sac and its contents have been entirely freed from the stricture of the ring, the intestines cannot be reduced. We judge this to be the case when, after

the stricture of the ring has been removed, the parts prolapsed do not expand into their natural size, and farther, when they make resistance when we attempt to return them. In this case the neck of the sac must be opened with the utmost caution, to avoid wounding the parts within it.

If the herniary sac, under the straitened place of its neck, be thin and transparent, and there is little or no reason to suspect an adhesion of the bowels to the sac, the best method, as Dr. Monro, in his publication on the Bursae Mucosae, observes, will be to make a small hole in the sac below the stricture, and then to introduce a small furrowed probe, and to cut cautiously upon it. But if the sac be thick and dark colored, and there is likewise a suspicion that the bowels may adhere to it, the easiest and safest manner will be to make the hole in the peritonaeum above the stricture ; then to introduce a common probe, bent -near its point into a semicircle, with its point directed downwards through the strictures, into the sac ; and upon the point of it to make, with great caution, another small hole ; after which we may either cut upon the probe, or introduce a furrowed probe, and divide the neck of the sac.

After this, the bowels are to be returned by pressure upon the sac, without opening it farther; and the sides of the wound in the skin are to be brought together, and kept so by means of slips of adhesive plaster, though stitches made at the

distance of a finger's breadth from each other will exclude the air, and prevent the return of the bowels more effectually. Over these are to be laid several folds of charpie, and the whole is to be secured by a bandage adapted to the nature of the part.

When the hernia is-of long standing, and when there is reason to think adhesions have taken place between the sac and bowels, or that mortification has already begun, or that some filaments run across the sac and prevent the reduction, or that there is water in the sac, or that the gut is in danger of being entangled from a part of the omentum being down, a different method of operating becomes necessary.

The patient is to be placed as already directed. The operator is to grasp the tumor with the one hand, so as to make the skin tense on the fore part of it, while with the scalpel in the other he divides the skin from one end of the tumor to the other. The cellular substance is by gentle strokes to be divided, till not only the ring, but the whole

length of the sac, is laid bare. An opening is now, in the most cautious manner, to be made into the sac by slight scratches, to avoid hurting any of its contents. In making this perforation, which is considered as the nicest part of the operation, considerable assistance is obtained from the use of the small directory, upon the point of which the fibres of the sac are to be successively raised and divided till an opening is made. The opening is to be enlarged till it admit the fore finger of the left hand, which serves as a directory for conducting the straight probe-pointed scalpel with which the sac is to be divided through its whole length. The sac being laid fully open, the parts contained in it ought to be examined with the nicest attention, to discover whether they are all sound or not ; and if, upon any attentive inspection-, it is found that they are not evidently in a gangrenous state, even although they seem considerably inflamed, they should be immediately returned into the abdomen. When adhesions take place between different parts of the protruded gut, the greatest caution is necessary in separating them. When the bowels cannot be reduced with ease, the ring is to be dilated by the blunt-pointed scalpel in the manner already directed. But in case gangrene or mortification is already begun all these parts must be cut away, as the return of such into the cavity of the abdomen must be generally attended with the worst consequences. We now come to notice.

THE HERNIA INGUINALIS OR BUBONOCELE.

This species of hernia is formed by a protrusion of some of the abdominal bowels through the rings of the external oblique muscles. It is known by the general symptoms of hernia already enumerated, and by a soft and somewhat elastic swelling, beginning in the groin, and Descending by degrees into the scrotum in men, and into the labia pudendi in women. When the hernia contains omentum only, the swelling is both more soft, compressible, and more unequal than when the gut alone ‘is down ; the scrotum becomes more oblong than in the intestinal hernia ; and, when the quantity of om’er turn

is large, it is also much more weighty than a gut rupture of the same size ; but frequently the tumor is composed of both gut and omentum, and then the distinguishing symptoms of each can never be so clearly marked.

Bubonocele may be confounded with certain other diseases ; but may be distinguished by the following marks which are present in these disorders, while the symptoms of hernia are absent : from venereal bubo, by the presence of that incompressible hardness with which all such swellings are at first attended, and by the fluidity of matter which in the suppurative state is always observable : from' hernia humeralis, or swelling of the testes, by the absence of the hardened and enlarged state of the testis and epidydimus, and likewise of the pain, the tumor of the testicle being remarkably heavy in proportion to the bulk, the spermatic process being commonly free from the swelling. In the hernia humeralis, also, the intestines are unobstructed, and the general symptoms of hernia are wanting. From the hydrocele of the tunica vaginalis testis, by the tumor generally feeling more smooth to the touch than in hernia, by the swelling here beginning in the under part of the scrotum and ascending, by the spermatic cord being always free and distinct, and by a fluctuation being evident. From hydrocele of the spermatic cord, sometimes with much difficulty, and therefore it requires here particular attention. In every case of tumor in the testes where the most perfect certainty is not obtained, and when it is necessary to have recourse to an operation, the surgeon ought to proceed as in a case of real hernia.

The treatment of bubonecele is the same with that already advised in the treatment of hernia in general, oniy making allowance for the situation of the disease. In attempting the reduction by means of the hand, the pressure should be obliquely upwards and outwards, corresponding with the ring of the abdominal muscle. In performing the operation, the patient should be laid on a table, with his head and body almost horizontal, whilst at the same time his buttocks are somewhat elevated* by pillows placed beneath them. The legs hanging over the edge of the table ought to be separated, so as to admit the operator between them ; and should in that situation be firmly secured by an assistant on each side, who should take care to keep the thighs so far raised as to relax all the abdominal muscles. The parts being previously shaved, an incision must be made with a common round-edged scalpel through the skin and part of the cellular substance, beginning at least an inch above the superior end of the tumor, and continuing it down to between two and three inches belc v the ring. Although, in by much the greatest proportion of hernial swellings, the spermatic vessels lie behind the protruded parts, yet on

some occasions they have been found on the anterior part of the tumor; so that in order to avoid the risk.of wounding them, as soon as the skin is divided, the remainder of the operation should be performed in the most cautious man-ner, care being taken to avoid every large blood-vessel which makes its appearance. The ring

must now he laid distinctly in view; a sn.-ail portion of the protruding sac must also be exposed ; after which the directory is to be introduced between the ring and the sac, placing the point of the instrument obliquely upwards and outwards. A blunt-pointed bistoury is now to be introduced into the groove of the directory, and by it the ring is to be dilated till the point of the finger can be introduced. The directory is now to be laid aside, and the finger used in place of it through the rest of the operation. After the operation is finished the dressings are to be applied, and the whole secured by a T bandage, or suspensory bag, properly stuffed with soft lint.

OF HERNIA COXGENITA.

The testes in the foetus are, till near the time of delivery, lodged in the cavity of the abdomen. When they descend into the scrotum, they push before them a portion of the peritonaeum, which afterwards forms the vaginal coat. The passages by which they descend are soon shut up ; but sometimes a portion of some of the abdominal viscera, passing down, forms that species of hernia to which new born infants are liable, termed by Haller the hernia congenita. The testicle and protruded intestine being here in contact with one another, the tunica vaginalis testis forms the hernial sac. A hernia congenita may be distinguished in an adult by the bowels pushing down between the sac and the fore part and sides of the testicle, so as often in a great measure to conceal it ; whereas, in the common hernia, every part of the testicle can be felt distinctly ; and it is of material use to make the distinction, because in whatever manner we operate in hernia congenita, unless we take the utmost care to exclude the air, there will be a more violent inflammation and greater distress than in common cases, because the testicle will partake of the inflammation. In the treatment of ruptures, of the congenital kind, little difference occurs from the management of the common scrotal hernia; only a truss ought never to be applied to infants, unless the testicle can be felt in the scrotum, after the contents of the hernia have been reduced ; as it would entirely prevent the descent of the testicle, which yet remains in the abdomen.

OF HERNIA CRURALIS, OR FEMORAL HERNIA.

The seat of this species jof hernia is upon the upper and fore part of the thigh ; the protruded bowels passing out at the same opening through which the large blood-vessels of the thigh are transmitted from the abdomen, and of consequence under that part of the tendon at *the under end of the abdomen known by the name of Poupart's or Fallopius's ligament. Sometimes the bowels which protrude are situated immediately over the femoral vessels, sometimes on the outside of these, but more frequently they lie upon their inner side. The disease is more frequent in women than in men, on account of the width of the female pelvis, and of consequence the length and laxity of the ligament. The femoral hernia is more in danger of being confounded with inguinal hernia than with any other; the tumor, however, is deeper, and the

ring of the abdominal muscle, which lies entirely above the tumor in femoral hernia, completely surrounds the parts in that of the inguinal kind. In the treatment of femoral hernia, when symptoms of strangulation occur, we must use all the remedies commonly, practised for hernia in general; only that here, in attempting to reduce the parts by the hand, the pressure should be made directly upwards. An incision of sufficient length is to be made through the integuments, so as to allow that part of the tendon which forms the stricture to be laid fairly in view ; and, after dividing the integuments, we are cautiously to cut the fascia lata of the thigh, and separate any glands which may come in the way till the stricture and part of the sac distinctly appear. The stricture is then to be divided, by cutting fibre after fibre successively. The spermatic vessels in the male, or round ligament in the uterus in the female, may be avoided by cutting in a direction towards the umbilicus, carefully dividing the tendon transversely. Some authors, from a sense of the danger attending this part of the operation, have recommended merely to dilate the passage, instead of dividing the tendon ; but, in such a situation, to attempt a farther dilatation without the assistance of the knife, would probably

be seldom attended with any advantage. After the parts are reduced, the wound is to be dressed as directed in the treatment of hernia in general ; a piece of thin leather spread with some adhesive plaster retains the dressings better, and with much more ease, than any other bandage.

In exomphalos, or umbilical hernia, the parts protruded pass out at the umbilicus, and are commonly the intestines, or omentum, or both ; sometimes part of the stomach, the liver, and even the spleen, have been found in the sac. Here, as in other ruptures, the peritonaeum forms the sac, and in recent cases it is generally very evident ; but by the size of its contents, or a long continuance of the disorder, it sometimes becomes so connected with the surrounding parts, that by many its existence has been doubted, and sometimes the swelling has increased to such a degree as to burst even the skin itself. The disease occurs most frequently in infancy, soon after birth. In the adult state, corpulent people are more subject to it than those of a contrary habit; and pregnant women are particularly subject to it, on account of the size of the uterus.

The diagnosis in this disease is readily made, as the disorder can scarcely be confounded with any other. If the disease be attended to in due time, a bandage properly fitted will generally ef-fect a cure ; and, in such swellings as occur in pregnancy, delivery will commonly remove the disorder : but, even in cases of pregnant women, a bandage early applied and properly used will give considerable relief, till a cure can be obtained by delivery. In this disease the omentum is more frequently pushed out than any other viscus ; hence umbilical herniae in general are not productive of such bad symptoms &s usually occur in the otfyer kinds of rupture. When, however, the intestines protrude, the usual symptoms of a strangulated hernia are apt

to be induced, and, when the means usually employed for returning the intestine into the abdomen do not succeed, a cure, it is evident, must depend entirely on a thorough removal of the stricture. In performing this operation, an incision through the integuments is the first step to be taken, so as to expose the stricture of the tendon and the neck of the sac. .The stricture is to be removed in the manner already described ; and, as the tendon completely surrounds the neck of the sac, the stricture may be cut wherever it can be most readily dilated. A radical cure, similar to that for the other species, has been proposed, but with as little probability of success,

Ventral rupture is a protrusion of some of the bowels through the interstices of the abdominal muscles, and is most frequently observed in some of the parts most contiguous to the linea alba. The treatment of this species of disease is exactly the same with that of exomphalos, or the rupture of the navel.

Cystic hernia, or hernia of the bladder, though less frequent than that of the omentum or intestines, is not very uncommon. The situation in which it occurs is in the groin, through the abdominal ring, in the forepart of the thigh, under Poupart's ligament, so as to form inguinal or crural hernia. Instances have likewise occurred of the bladder being pushed into the perinaeum. Sometimes it occurs by itself, without any complication ; at other times it is accompanied with intestines and omentum, both in inguinal and femoral herniae ; when complicated with bubonocele, the protruded part of the bladder is situated between the intestine and spermatic chord.

The usual symptoms are a tumor, attended with fluctuation either in the groin, in the fore part of the thigh, or perinaeum, which generally subsides when the patient voids urine. When the swelling is large, before water can be made with freedom it is commonly necessary to have recourse to pressure, at the same time that the tumor, when in the groin or thigh, is as much elevated as possible , but when the swelling is small, and especially when no stricture is as yet produced, the patient generally makes water with great ease, and without any assistance from external pressure. When the disease occurs, without any complication, it is commonly owing to a suppression of urine. In the diagnosis, care must be taken not to mistake it for a hydrocele. In recent cases, the part protruding may in general be easily reduced, especially if we attend to the suppression of urine, which probably gave. rise to the disease. A proper truss ought afterwards to be worn for a long time. When the disease has been of long standing, adhesion takes place between the bladder and cellular substance of the scrotum. In this case, therefore, as long as no symptoms occur to render the operation necessary, a suspensory bandage, so fitted as effectually to support the prolapsed part, is the only probable means of relief. Sometimes the bladder, owing to a suppression of urine, at other times part of the intestines, have been found to protrude through the vagina. This is called hernia vaginalis. In the former case a fluctua-HER

tion of water is perceptible to the touch. The reduction is made by laying the patient on her back, with her loins somewhat raised, and pressing with the fore finger from the vagina. Descents may in future be generally prevented, Dy evacuating the urine often, and by the use of a pessary introduced into the vagina. Nearly the same means are employed in reducing the intestine, when it is found to protrude.

HERNIARIA, rupture-wort; a genus of the digynia order, and pentandria class of plants ; natural order eleventh, sarmentaceae : CAL. quinquepartite ; there are five barren stamina, and a monospermous capsule : COR. none. The most remarkable species is the H. glabra, or smooth rupture-wort, a native of many parts of England. It is a low trailing plant, with leaves like the smaller chickweed ; the flowers come out in clusters from the side of the stalks at the joints, and are of a yellowish-green color. This plant is a little saltish and astringent. Cows, sheep, and horses, eat it ; goats and swine re-fuse it.

HERNOSAND, an extensive government in the north of Sweden, comprising the provinces of Angermannland, Jemptland, and Medelpad. Its territorial extent is 18,000 square miles, but so thin is the population that the whole does not exceed 100,000. The country is well wooded.

HERNOSAND, or HERNOSUND, a town in the north of Sweden, in Angermannland, the capital of the foregoing government, and a bishop’s see. It stands on the island of Herno, in the Gulf of Bothnia, and is united to the continent by a bridge. It has a college with seven teachers, and from sixty to seventy students : a botanical garden ; and a good harbour. It was formerly a staple town, and its trade in linen is still very considerable. It has suffered repeatedly from the Russians : and is 240 miles north by west of Stockholm. Population 2500.

HE’RO, n. s. | Lat. heros; Gr. ijpwc..

HE’ROESS, n. s. A man eminent for bra—

HERO’ICAL, adj. very ; or in any other

HERO’ICALLY, adv. (respect, as a hero in

HERO’IC, adj. j learning : heroess, he—

HERO’ICLY, adv. roine, a female hero :

HER’OINE, n. s. } heroical, noble ; brave ;

HER’OISM, n. s. J illustrious ; productive of heroes : heroism, the qualities and character of a hero.

Bolingbroke

From John of Gaunt doth bring his pedigree, Being but the fourth of that heroick \mz.Shakspeare. In which were held, by sad disease,

Heroes and heroesses.

Verse makes heroick virtue live,

But you can life to verses give.

I sing of heroes, and of kings, In mighty numbers mighty things. Cowley.

Methinks heroick poesy, ‘till now,

Like some fantastic fairy land did show. Id.

These sure, said I, will me obey ;

These sure heroick notes will play. Id.

Not that which justly gives heroick name

To person, or to poem. Milton.

Samson hath quit himself Like Samson, and heroickly hath finished A life heroick. Id.

Chapman. Waller,

And few indeed can parallel our climes

For worth Aeroic or heroic crimes. ManeU.’

Not heroically in killing his tyrannical cousin.

Sidney.

Musidorus was famous over all Asia for his heroical enterprizes. /<j.

An heroick poem is the greatest work which the soul of man is capable to perform : the design of it is to form the mind to heroick virtue by example.

Dryden.

Though you have courage in an heroical degree, I ascribe it to you as your second attribute. Id.

I have chosen the most heroick subject which any

poet could desire : I have taken upon me to describe

the motives, the beginning, progress and successes of

a most just and necessary war. Id.

But inborn worth, that fortune can control,

New-strung, and stiffer bent her softer soul ;

The heroine assumed the woman's place,

Confirmed her mind, and fortified her face. Id.

Free from all meaning, whether good or bad •, And, in one word, heroically mad. Id.

Yet when some virtue much outgrows the rest, It shoots too fast, and high to be expressed, As his heroic worth struck envy dumb Who took the Dutchman, and who cut the boom. Id. Then shall the British stage

More noble characters expose to view,

And draw her finished heroines from you. Addison.

Onward they march embattled to the round Of martial harmony j fifes, cornets, drums, That rouse the sleepy soul to arms and bold Heroic deeds. Someroille'ti Chase.

Heroes in animated marble frown. Pupe.

These are thy honors, not that here thy bust Is mixed with heroes, or

with kings thy dust. Id.

In this view he ceases to be an hero, and his return is no longer a virtue. Id. Odyuey.

If the Odyssey be less noble than the Iliad, it is more instructive ; the Iliad abounds with more heroism, this with more morality. Bruoine.

Why should we kill the best of passions love ? It aids the hero, bids ambition rise To nobler heights, inspires immortal deeds, Ev'n softens brutes, and adds a grace to virtue.

Thomson* The solitary silent solemn scene

Where Caesars, heroes, peasants, hermits, lie

Blended in dust together. Dyer,

Some write a narrative of wars and feats

Of heroes little known, and call the rant

An history. Cowper.

Heroes alas ! are things of small concern ; Could history man's secret heart reveal And what imports a heaven-born mind to leam Her transcripts to explore what bosom would not

yearn ? Beattic.

An hour ago you would have given your soul

To look like other men, and now you pause

To wear the form of heroes.

Byron. The Deformed Transformed.

A HERO, in Pagan mythology, was a great and illustrious person, of a mortal nature, but supposed, after his death, to partake of immortality, and to be placed among the number of the gods. The Greeks erected columns and other monuments over the tombs of their heroes, and established a kind of worship in honor of the names both of their heroes and heroines. The Romans also raised statues in honor of their heroes ; but there were six of a superior order, who were

supposed to be admitted into the community of the twelve great gods, *viz.* Hercules, Bacchus, ./Esculapius, Romulus, Castor, and Pollux. Authors distinguish between the worship which the ancients paid to their heroes, and that offered to their gods. The latter consisted of sacrifices and libations ; the former was only a kind of funeral honor, in which they celebrated their exploits, concluding the rehearsal with feasts. -

The HERO OF A POEM, or ROMANCE, is the principal personage, or he who acts the chief part of it. Thus the hero of the Iliad is Achilles ; of the Odyssey, Ulysses ; of the /Eneid, JEneas ; of Tasso's Jerusalem, Godfrey of Bul-loign.

HERO, in fabulous history, a famous priestess of Venus, who lived at Abydos, in a tower on the banks of the Hellespont. Leander her lover, who lived at Sestos on the other side of the strait, every night swam over to visit her, being directed by a light fixed on the tower. But the light being put out in a stormy night, the youth missed his way, and was drowned ; on which Hero threw herself into the sea, and perished.

HERO, THE OLD, and HERO, THE YOUNG, two celebrated Greek mathematicians. The latter was a disciple of Ctesibius. Their works were translated into Latin by Borochius ; Spiralium Liber, by Hero senior; and Tractat. artis et machin. militar. by Hero junior. They flourished about A. A. C. 130 and 100.

HERO, NORTH and SOUTH, two islands of Lake Champlain. On the former, thirteen miles in length and two in breadth, is a township annexed to Chittenden county, Vermont. South Hero is an island on the same lake, belonging also to that county. It is ten miles long and five broad, and produces good grain crops. There is also a quarry in it of gray marble, which has the appearance of being a petrifaction of scallops, a species of shell common in this vicinity.

HEROD, improperly styled the Great, tyrant of Judaea, was born at Ascalon, about A. A. C. 68. His father, Antipater the Idumean, or Edomite, appointed him governor of Galilee : Mark Antony made him tetrarch, or ethnarch ; and he afterwards obtained the kingdom of Judaea, which was confirmed to him by Augustus, a short time before the birth of our Saviour. At the birth of our Lord, in the vain hope of cutting off the Messiah, he caused all the infants of Bethlehem under two years of age to be massacred. His barbarity was as fatal to his own family as to his subjects ; for he murdered his beautiful wife Mariamne, her mother Alexandra, her brother Aristobulus, her grandfather Hyrcanus II., and his own sons Alexander and Aristobulus; which led the emperor Augustus to say, that it was better to be Herod's swine than his sons. He died miserably within three years after the birth of Christ, aged seventy.

HEROD AGRIPPA I. and II. See AGRIPPA.

HEROD ANTIPAS, the son of Herod the Great, by his wife Cleopatra, a native of Jerusalem. Herod, in his will, named his son Archelaus his successor, giving Antipas the title of Tetrarch of Galilee and Peraea. Antipas adorned and fortified the principal places of his dominions. He married the daughter of Aretas king of Arabia;

whom he divorced about A. D. 33, to marry his sister-in-law Herodias, wife to his brother Philip, who was still living. St. John the Baptist, exclaiming against this incest and adultery, was imprisoned in the castle of Machaerus ; and afterwards beheaded by Herod's order, as recorded in Mat. xiv., Mark vi. and Luke iii. Aretas, to revenge the affront which Herod had offered to his daughter, declared war against him, and overcame him in a very obstinate engagement. Herod, being afterwards detected as a party in Sejanus's conspiracy, was banished by the emperor Caligula into Lyons in Gaul, whither Herodias accompanied him. This Antipas is the Herod who, being at Jerusalem at the time of our Saviour's passion (Luke xxiii. 11), ridiculed him, by dressing him in a white robe, and sending him back to Pilate, as a mock king, whose ambition gave him no umbrage. The time when he died is not known, but it is certain he died in exile, as well as Herodias. Josephus says he died in Spain.

HERODIAN, an eminent Greek historian, who flourished at Rome in the third century, in the reigns of Severus, Caracalla, Heliogabalus, Alexander, and Maximin. His history begins from the death of Marcus Aurelius the philosopher, and ends with those of Balbinus and

Maximin, and the beginning of the reign of Gordian. It is written in very elegant Greek ; and there is an excellent translation of it into Latin, by Angelus Politianus. It was published by Henry Stephens in 4to. in 1581 : by Boeder, at Strasburg, in 1662, in 8vo. ; and by Hudson, at Oxford, in 1699, 8vo.

HERODIANS, a sect among the Jews, mentioned in Matt. xxii. 16, and Mark iii. 6. Commentators are much divided with regard to them. St. Jerome, in his dialogue against the Lucife-rians, takes the name to have been given to such as owned Herod for the Messiah ; and Tertullian and Epiphanius are of the same opinion. But the same Jerome, in his Comment on St. Matthew, treats this opinion as ridiculous; and maintains, that the Pharisees gave this appellation by way of ridicule to Herod's soldiers, who paid tribute to the Romans ; agreeably to this, the Syrian interpreters render the word by the domestics of Herod, i. e. Herod's courtiers. M. Simon, in his notes on the 22nd chapter of Matthew, advances a more probable opinion. The name he supposes to have been given to such as adhered to Herod's party and interest, and were for preserving the government in his family, about which there were great divisions among the Jews. F. Hardouin will have the Herodians and Sadducees to have been the same. Dr. Prideaux is of opinion that they were distinguished from the other Jews by their concurrence with Herod's scheme, of subjecting himself and his dominions to the Romans, and by complying with many of their heathen usages and customs. This symbolizing with idolatry, upon views of interest and worldly policy, was probably that leaven of Herod against which our Saviour cautioned his disciples. It is farther probable, that they were chiefly of the sect of the Sadducees ; because the leaven of Herod is also called the leaven of the Sadducees.

IIERODIAS. See HERCD. She was granddaughter of Herod the Great,

so that even her marriage with her uncle Philip was incestuous, as well as her adultery with her brother.

HERODOTUS, an ancient Greek historian, the son of Lyxus and Dryo, horn at Halicarnassus in Caria, in the first year of the seventy -fourth Olympiad, about A. A. C. 484. Halicarnassus being at that time under the tyranny of Lygda-mis, grandson of Artemisia, queen of Caria, Herodotus retired to Samos; whence he travelled over Egypt, Greece, Italy, &c., and acquired the knowledge of the history and origin of many nations. He then began to digest the materials he had collected, and composed that history which has preserved his name ever since. He wrote it in the isle of Samos. Lucian informs us, that when Herodotus left Caria to go into Greece, he began to' consider with himself,

The lofty means to be for ever known, And make the ages yet to come his own.

llis history, he presumed, would easily procure him fame, and raise his name among the Grecians, in whose favor it was written ; but then he saw that it would be tedious to go through all the cities of Greece, and recite it to the inhabitants of each city. He thought it best therefore to take the opportunity of .heir assembling all together ; and accordingly recited his work at the Olympic games, which rendered him more famous than even those who had obtained the prizes. None were ignorant of his name, nor was there a single person in Greece who had not either seen him at the Olympic games, or heard those soeak of him who had seem him there. His work is divided into nine books ; which, according to the computation of Dionysius Halicarnassensis, contain the most remarkable occurrences within a period of 240 years ; from the reign of Cyrus to that of Xerxes, when the historian was living. These nine books are named after the nine muses, each book being distinguished by the name of a muse ; and this has given birth to two disquisitions : *viz.* 1. Whether they were so called by Herodotus himself; and, 2, For what reason they were so called. As to the first, it is generally agreed that Herodotus did not impose these names himself; but it is not agreed why they were imposed by others. Lucian tells us, that these names weve given them by the Grecians at the Olympic games, when they were first recited, as the best compliment that could be paid the man who had taken pains to do them so much honor. Others have thought, that the names of the Muses have een fixed upon them by way of reproach, to intimate, that Herodotus, instead of true history, , had written a work of fiction. Aldus Manutius, Joachim Camerarius, and Henry Stephens, have written apologies for him ; and have very justly observed, that he seldom

relates any thing of doubtful credit,without producing the authority on which his narration is founded ; and, if he has no certain authority to fix it upon, always uses the terms, ut ferunt, ut ego audivi, See. There is ascribed also to Herodotus, but falsely, a Life of Homer, which is usually printed at the end of his work. He wrote in the Ionic dialect, and his style and manner have been much admired.

There have been several editions of his works ; two by Henry Stevens, in 1570 and 1592; one by Gale at London in 1679; and one by Gronovius at Leyden in 1715, which is the best.

HEROIC AGE is tnat age or period of the world wherein the heroes, or those called by the poets the children of the gods, are supposed to have lived. It coincides with the fabulous age.

HEROIC POEM is that which undertakes to describe some extraordinary action, or enterprise. HoTier, Virgil, Statius, Lucan, Tasso, Camoens, Milton, and Voltaire, have composed heroic poems. In this sense, heroic poem coincides with epic poem.

HEROIC VERSE is that wherein heroic poems are usually composed ; or it is that proper for such poems. In the Greek and Latin, hexameter verses are oeculiarly denominated heroic verses, as being alone used by Homer, Virgil, &c. Alexandrine verses, of twelve syllables, were formerly called heroic verses, as being supposed the only verse proper for heroic poetry ; but later writers use verses of ten syllables.

HER’ON, n. s. j Fr. heron ; Ital. airone ;

HER’ONRY, n. s. M}r. tpwv. A bird that

HER’ONSHAW, n. s.J feeds 011 fish , heronry, a place where these birds breed’.

He saw when voided were wilde dcre, These fauconers upon a faire rivere, That with hir haukes han the heron slain.

Chaucer. The Frankeleine’t Tale. The scornyng jaie ; the eles foe the heroune, The false lapwing, all full of trecherie.

Chaucer. The Assemblee of Fouies. The heron, when she soarcth high, sheweth winds.

Bacon.

So lords, with sport of stag and heron full, Sometimes we see small birds from nests do pull.

Sidney.

They carry their load to a large heronry above three miles. , Derham's Phyrico-Theology.

HERON, in ornithology. See ARDEA. This bird is a very great devourer of fish, and will do more mischief to a pond than even an otter. People who have kept herons, and have had the curiosity to' number out the fish they feed them with into a tab of water, and count them, have found that a heron will eat fifty moderate sized roach and dace in a day. It has been found, that, in carp-ponds visited by this bird, one heron will eat up 1000 store carp in a year, and will hunt them so close that very few can escape. The readiest method of destroying this mischievous bird is by fishing for him in the manner of pike, with a baited hook; the bait consisting of small roach or dace, and the hook fastened to one end of a strong line, made of silk and wire twisted together. The wire should be entered under the gills of the roach, and run just under the skin to the tail ; in which condition the fish will live several days; for if it be dead the heron will not touch it. To the other end of the line is fastened a stone of two pounds weight ; and, several of these baited lines being sunk by means of the stone in different parts of the pond, in a night or two the heron will certainly be taken.

HEROPHILUS, an ancient physician, born in Chalcedon about A. A.C. 500. lie was an

accurnte anatomist, and is said to have discovered the lacteal vessels, as well as to have made some discoveries in botany.

HER'PES, n. s. Gr. S'PTTIC. A cutaneous imflammation of two kinds : miliaris, or pos-tularis, which is like milletseed upon the skin ; and excedens, which is more corrosive and penetrating, so as to form little ulcers.'

A farther progress towards acrimony maketh a herpes ; and, if the access of acrimony be very great, it maketh an herpes excedens. Wiseman'* Surgery.

HERQUI, or ERQUI, a village of France, in the department of the North Coasts, with a harbour on the British Channel ; eighteen miles west of St. Malo, and four and a half E. N. E. of St. Brieux.

HERQUI BAY, and HERQUI POINT, a bay and cape on the coast of the above village. Sir Sidney Smith sailed into this bay on the 17th of March, 1796, and destroyed several French ships.

HERRENBERG, a town of Germany, in Wurtemberg, fourteen miles S, S. E. of Stutt-gard.

HERRENBREITUNGEN, a town of Franconia, in Henneberg, on the Werra.

HERltENGRUND, a mining town of Hungary, four miles N. N.W. of Neusohl. Near it is a productive spring, impregnated with sulphate of copper ; the metal is obtained in the form of an oxide by precipitation with iron in the usual way, and is called cement-copper. Here is also a subterraneous passage leading from the town to a place called Stara Hora, or the Old Hill.

HERRERA, a town of Spain, in Old Castile, thirty-two miles N. N.W. of Burgos.

HERRERA (Ferdinand de), an eminent Spanish poet of the sixteenth century, was born at Seville, and principally succeeded in the lyric poetry. Besides his poems, he wrote notes on Garci-lasso de la Vega, and an account of the war of Cyprus, and the battle of Lepanto, &c.

HERRERA TORDESILLAS (Anthony), a Spanish historian, secretary to Vespasian Gonzaga, viceroy of Naples, and afterwards historiographer of the Indies, under Philip II., who allowed him a considerable pension. He wrote a general History of the Indies, in Spanish, from 1492 to 1 554 ; and of the World (not so much esteemed) from 1554 to 1598. He died in 1625, aged about sixty-six.

HERRICK (Robert), a poet of the seventeenth century, was a native of

London ; and educated at St. John's College, and Trinity Hall, Cambridge. He took orders, and in 1629 was presented to the living of Dean Prior in Devonshire. Under the government of Cromwell he suffered deprivation ; but he recovered his benefice after the Restoration, which he did not long survive. His compositions were published in 1648 under the title of Hesperides, or the Works both Humane and Divine of Robert Herrick, 8vo. A selection from them, with an account of the author, by Dr. Nott, was again printed at Bristol in 1810; and a complete edition at Edinburgh in 1823, 2 vols. 8vo.

HER'RING, n. s. Sax. breriinˆ ; Teut. Jter-tng ; Belg. herink. A small sea fish.

The coast it plentifully stored with round fish, pit-chard, herring, mackrel, and cod. Carew.

Buy my herring fresh. Swift,

HERRING. See CLUPEA. HERRING FISHERY. See FISHERY. HERRING (Thomas), archbishop of Canterbury, was the son of the Rev. John Herring, rector of Walsoken in Norfolk, where he was born ia 1693. He was educated at the free grammar school of Wisbech, and at Jesus College, Cambridge ; was afterwards chosen fellow of Corpus Christi College, and continued a tutor there upwards of seven years. Having entered into orders, in 1719, he was successively minister of Great Shelford, Stow. cum Qui, and Trinity in Cambridge; chaplain to Dr. Fleet-wood, bishop of Ely; rector of Rettingdon ia Essex, and of Barly in Hertfordshire ; preacher to the Society of Lincoln's Inn, chaplain in ordinary to king George II., rector of Blech-ingley in Surrey, and dean of Rochester. In 1737 he was consecrated bishop of Bangor, and in 1743 he was made archbishop of York. When the rebellion broke out in 1745, and the king's troops were defeated at Prestonpans, he Convened the nobility, gentry, and clergy of his diocese, and addressed them in an animated speech ; which had such an effect, that a subscription ensued, to the amount of £40,000; and the example was followed by the nation in general. On the death of Dr. Potter, in 1747, he was translated to the see of Canterbury ; but in 1753 was seized with a violent fever, which brought him to the brink pf the grave ; and, after languishing about four years, he died on the 13th of March, 1757. He expended upwards of £6000 in repairing and adorning the palaces of Croydon and Lambeth. This worthy prelate possessed, in a most eminent degree, the virtues of public life ; he was an excellent

preacher, and a true friend to religious and civil liberty. After his death was published a volume of his sermons on public occasions.

HERRNHUT, a small town of Saxony, in Upper Lusatia, built by count Zinzendorf in 1722 for the use of the Moravian brethren. Its manufactures consist of cotton and linen stuffs, stockings, sealing-wax, hats, colored paper, ribands, and utensils of copper, brass, and steel. Its observatory and burial-ground on an adjacent hill are worthy attention. Before the erection of this place, the Moravian brethren were scattered throughout the continent. It is nowthe capital of the Moravian establishments, and from it the brethren frequently take the name of Herrnhutters. It is six miles south of Lobau. Inhabitants about 1800.

HERSCHELL (Sir William), LL.D., the distinguished astronomer, was son of a musician of Hanover, born November 15th, 1738. He was destined by his father for his own profession, and placed at the age of fourteen in the band of the Hanoverian guards. Quitting this regiment abruptly, he arrived in England in 1757 ; and obtained the patronage of the earl of Darlington. He also succeeded in conducting several concerts, oratorios, &c., in the palatinate of Durham, and the neighbourhood. In 1766 he became organist at Halifax; then at the

Octagon chapel, Bath, which, together with his pupils, produced him a good income. He had now tor some time devoted his leisure hours to the mathematics and astronomy ; and set about constructing a telescope for himself: he soon produced a seven, a ten, and a twenty feet reflector, having in the latter case used nearly 200 object mirrors before he could satisfy himself. From this period he gradually withdrew from his musical engagements. Late in 1779 he began a survey of the heavens with a seven feet reflector, and after eighteen months' labor, discovered, on the 13th of March, 1781, a new planet, which he named the Georgium Sidus. This drew upon him the public attention, and the patronage of his late majesty ; who, by the settlement of a handsome salary, enabled him to devote the rest of his life to astronomy, at Dat-chett, near Windsor, and at Slough ; where he commenced the erection of his forty feet telescope, and completed it in 1787. In 1783 he discovered a volcanic mountain in the moon, and from farther observations, with the assistance of his instrument, in

1787, two others were plainly distinguished, emitting fire from their summits ; he also ascertained that the Georgium Sidus was surrounded with rings, and had six satellites, &c. In 1802 Herschell laid before the Royal Society a catalogue of 5000 new nebulae, nebulous stars, planetary nebulae, and clusters of stars, which he had discovered ; and received from the university of Oxford the honorary de-gree of doctor of laws, which was followed up, in 1816, by the Guelphic order of knighthood from the regent. He continued his astronomical observations till within a short period of his death, which took place at Slough in August,

1822.

HERSCHELL, the name given by some foreigners to the new planet, called Georgium Sidus by Dr. Herschell, who discovered it. See ASTRONOMY.

HERSE, n. s. & v. a.' \ See HEARSE. A HERSE'LIKE, adj. } temporary monument raised over a grave ; the carriage in which corpses are drawn at a funeral : herselike, fu-nereal ; suitable to funerals ; dull ; dismal.

And, after that, about the herses Full many orisons and verses, Withouten note, ful softely Said were ; and that full hertily That all the night, till it was day, The peple in the church con pray.

Chaucer's Dreame.

I would my daughter were dead at my foot, and the jewels in her ear. O, would she were hersed at my foot, and the ducats in her coffin.

Shakspeare.

Even in the Old Testament, if you listen to David's harp, you shall hear as many herselike airs as carols.

Bacon. The Grecians spitefully drew from the darts the

corse, And hersed it, bearing it to fleet. Chapman.

The house is hersed about with a black wood, Which nods with many a heavy-headed tree.

Crashaw. When mourning nymphs attend their Daphuis'

herse, Mlio does not weep that reads the moving verse'?

Roscummon,

On all the line a sudden vengeance waits, And frequent herset shall besiege your gates.

Pope.

HERSE. Fr. herce, i. e. a harrow. In fortification, a lattice, or portcullis, in form of a har-row, beset with iron spikes. It is usually hung by a rope fastened to a maulinet ; to be cut, in case of surprise, or when the first gate is bro-ken with a petard, that the herse may fall, and stop up the passage of the gate or other entrance of a fortress. It is otherwise called a sarrasin, or cataract; and when it consists of straight stakes, without any cross pieces, it is called orgues.

HERSE is also a harrow which the beseiged, for want of chevaux de frise, lay in the way, or in breaches, with the points up, to incommode the march of the enemy's horse or infantry.

HERSELF', pron. See HER. A female individual as distinguished from others ; mistress of her own thoughts; the oblique case of the reciprocal pronoun.

The daughter of Pharaoh came down to wash herself. Exodus. She returned answer to herself. Judget.

Not that 1 may encresen hire honour, For she hireselven, is honour and rot* Of bountce, next hire sone ; and soules bote.

Chaucer. The Prioresses Tale. The jealous o'er-worn widow and herself, Since that our brother dubb'd them gentlewomen, Are mighty gossips in this monarchy. Shakspeare.

And while vain pomp does her restrain Within her solitary bower, She courts herself in amorous vein, Herself both Danze and the shower. Marcell. The more she looks, the more her fears increase, At nearer sight ; and she's herself the less.

Dryden.

HERSENT (Charles), a French divine of the seventeenth century, who wrote a work entitled Optati Galli de cavendo Schismate. As in this work he charged Cardinal Richelieu with views inimical to the Gallican church, he was obliged to quit France, and retire to Rome ; where he incurred censure from the Inquisition, by publishing some peculiar opinions on the doctrine of grace, and was excommunicated. He then returned to France; wrote a Paraphrase on Solomon's Song, with other tracts ; and died in

HERSILIA, the wife of Romulus, the first king of Rome. After her death she was deified, and worshipped under the names of Horta and Orta.

HERSILLON, in the military art, a sort of plank or beam, ten or twelve feet long, whose two sides are driven full of spikes or nails to incommode the inarch of the infantry or cavalry. The word is a diminutive of herse.

HERTFORD, or HARTFORD, the county town of Hertfordshire, and a borough sending two members to parliament, stands on the river Lea, twenty-one miles north of London. Its British name appears to have been Durocobriva, or the Red-Ford, from the color of the gravel at the bottom of the river : others derive it from hart a deer, there formerly having been great numbers here. It has also been written Hereford. See the county. The arms of the town

are a hart couchant in the water ; but they are probably derived from the name of the town. Alfred erected a castle here to check the depredations of the Danes, who came by water from the Thames to Ware ; and several Saxon monarchs held courts here. There are in Hertford two parish churches, All Saints' and St. Andrew's. The governors of Christ's Hospital, in London, have a gallery in the latter for the accommodation of the children of their school here, which contains about 400 boys and sixty girls. Here are three dissenters' meeting-houses, a well-established Sunday-school, and a public charity-school for boys and girls. The county gaol and penitentiary-house is anew and cornuio-dious building. The town has had several charters of incorporation, but is now" governed by a mayor, a high-steward (who is generally a nobleman), a recorder, nine aldermen, a town clerk, achamberlain,ten capital burgesses, sixteen assistants, and two sergeants at mace. The county election is held here in the shire-hall, a noble building erected by Mr. Adam, in 1780. The electors of

the borough consist of householders, and such freemen as were inhabitants when made free. The number of voters exceeds 620. In the reign of William I. a priory of Benedictine monks was founded here, under the abbey of St. Alban's : the remains of its castle consist at present of a gate-house, and an ancient wall with angular towers. The market on Saturday is well supplied with grain. Fairs, second Saturday before Easter-Sunday, Old May-day, Old Midsummer-day, and November 8th, all for cattle.

HERTFORD COLLEGE, is an important establishment of the East India Company at Hertford. The establishment of this college arose out of a project of the marquis of Wellesley; who, during his administration in India, founded at Calcutta a collegiate institution, to provide the means of acquiring a knowledge of the languages, the laws, and the local usages of our Indian empire. The directors of the East India Company disapproved in part of the plans of the governor-general ; but they at the same time felt the necessity of giving some knowledge to those whom they had nominated as writers : the result was the establishment of the Hertford College.

The system of instruction here adopted holds a medium between the strictness of our public schools and the laxity of the English universities. Every youth, upon being nominated by a director, must, previous to his admission, produce a testimonial from his schoolmaster, and pass an examination in Greek, Latin, and arithmetic, before the professors : those who are found deficient are remanded till another period ; for the lectures of the different professors in the college are given in a manner to make preparation necessary, and to encourage most effectually habits' of future application. They embrace, in substance, all the important parts of classical literature, the oriental languages, the elements of mathematics and natural philosophy, the laws of England, general history, and political economy.

Examinations take place twice a year, which

continue twelve days ; and are conducted upon the general plan of the collegiate examinations of our universities, particularly of Cambridge, The questions are framed with a view to ascertain the degree of progress and actual proficiency in each particular department on the subjects studied during the term ; and the answers, in all practicable cases, ate given in writing, in the presence of the professors, and without reference to books. After the examination is over, the

professor of each department reviews, at his leisure, the papers he has received, and places, as nearly as he can, each individual in the numerical order of his relative merit, and in certain divisions implying his degree of positive merit. These arrangements are finally subject to the control of the whole collegiate body. Besides these classifications, prize-medals, books, and honorary distinctions, are awarded to those who are the heads of classes, or as high as second, third, fourth, or fifth, in two, three, four, or five, departments. The course of study occupies two years, and is designed to commence at such an age, that the student may be ready to proceed to India by the time he is eighteen oˆ nineteen years old : having thus begun the study of the oriental languages, he is prepared to prosecute them with advantage at Calcutta, so as to proceed to any official appointment on arriving at his majority.

Each pupil, of whom there are eighty, pays £100 per annum to the college ; which is not thought to cost the company more than £10,000 a year. Among its professors this college has already ranked the distinguished names of Sir James Mackintosh and Mr. Malthus.

HERTFORDSHIRE, a county of England, which, as well as those of Bedford and Bucks, belonged to the Cassii, or Catieuchlani, terms signifying men in hostility, or of battle ; the latter particularly meaning warriors of the coverts. After the Romans had obtained possession of the island, it was included in the province or district called Flavia Caesariensis. During the Saxon usurpation it was unequally divided between the kingdom of the East Saxons and that of Mercia, — The name of Hertford, the county town, seems to be derived from much the same source as that of the county just described. It was also written Hereford by the Saxon authors, which is thought to be a corruption of. Here Ford, i. e. the Army's Ford.

This is an inland county, situated between the parallels of 51° 37' and 52° 5' N. lat. It is bounded on the north and west by Bedfordshire and Cambridgeshire, by Buckinghamshire on the west, by Essex on the east, and by MiddleseJ on ;he south. ' It measures,' says Mr. Young, ' twenty-eight miles from east to west, thirty-six miles from north to south, and 1 30 miles in circumference.' It contains eight hundreds, nineteen market-towns, 120 parishes, and 949 villages. It is in the dioceses of London and Lincoln, the province of Canterbury, and is included in the home circuit.

Of the climate of this county Mr. Young writes, ' I met with no registers of the weather ; nor vould they probably have contained any thing r'aterially different fioru ether counties

equally southern. The harvest is not forwarder here than in Cambridgeshire ; and in the thickest woodland parts, where the soil is wet, it is not so forward as in the more open parts of that adjacent county.' The air, however, is deemed generally mild and healthy. The surface is in many parts richly diversified with hill and dale, clothed with noble woods, and thickly studded with numberless parks attached to the seats of the nobility and gentry.

The soils, as delineated on Mr. Young's map, are of the following character : Much the largest portion, occupying all the western border, and extending diagonally beyond the middle of the county, as far as Wotton-Wood Hall, and also round Hertford, is loam of different qualities. The next portion is clay, occupying two districts ; the smallest of which is the southern, a stiff, harsh, and tenacious soil; the other, which is much the largest, is the north-east district, consisting of rather a strong wet loam, on a stiff basis of clay-marl. The chalky district extends along a great part of the north-west borders, south-west and due east of Baldock the eastern extremity. But chalk forms the basis, at different depths, of the whole county. The surface chalk consists of two variations : — chalk with no other mixture than what ages of cultivation and manuring have added, and what is called marm, which is a white marl, from a mixture of a portion of clay. Both these soils are good, but the latter is the best. The fourth, or last district, is denominated ' poor gravel.' It is a small triangular patch, having the town of Hatfield nearly in the centre of its base. Besides these, there is a small slip of rich loam extending along the borders of the county; between Theobald's and Hoddesdon. But all these soils are extremely varied and intermixed.

The principal rivers are the Lea and the Colne, and these two are composed of many inferior streams, most of whose sources lie in this county. The Lea rises near Lea-Grove Bedfordshire, enters Herts near Bower Heath, and, traversing the county in a north-westerly direction, joins the Stort about a mile east of Hoddesdon, then runs nearly south, and continues with that river, for the most part, the boundary of the

county towards the east. The Colne, being the same river that is called Verulam, Verlam, or Muse River, rises in the hundred of Dacorum, near Marget Street, and the confines of Bedfordshire. It runs S.S. E. to St. Alban's, and by the walls of the Roman Verulam ; thence nearly south till it loses its original name of Verulam and its consequence, near Colney Street, in the river Colne, which is there a small stream, and rises near Kit's End in Middlesex. Besides these, there are several smaller streams, particularly the Maren, the Beane, the Rib, the Quin, the Ash, and the Gade. The Nine-Sister Spring of the celebrated Cam at Ashmead, the source of the Hix near Hitchin, and the sources of other rivers are in this county. — The Grand Junction Canal, from Braunston Wharf on the Coventry Canal to Old Brentford, where it joins the Thames, enters the county of Hertford above Berkhamstead, and follows the course of the • Bulbum 'and Gade to Rickmansworth ; and

thence the course of the Colne, till it leaves tne county. — The few medicinal springs of this province are chiefly chalybeate ; these are confined to the south part. Some incrustating springs have been noticed near Colthall, in the northern part of the county. — The agricultural produce consists principally of wheat, barley, and apples : there are no minerals of any consequence.

Hertfordsnire sends seven members to parliament : *viz.* three for the county, two for Hertford, and two for St. Alban's.

Hertfordshire has produced the following celebrated characters : *viz.* St. Alban, the proto-martyr of England, born at Verulam, now St. Alban's, in the third century. He suffered dur-ing the Dioclesian persecution, A. D. 303. — John Shute, lord viscount Barrington, a learned and pious nobleman and theological writer, was born at Theobalds, 1678. Died 1734.— Nicholas Brekespeare, Pope Adrian IV., the only Englishman who ever attained that dignity, was born at Langley near St. Alban's ; he died, not without suspicion of poison, in 1159. — The pious and amiable poet Cowper, was born at Berkhamstead, 1741 ; died April 25th, 1800. — tlichard Cromwell, eldest son of Oliver, was born at Cheshunt, 1626 ; died 1712.— Sir Richard Fan-shawe, a statesman and poet, born at Ware, 1607; died 1666. — Robert Hill, a remarkable self-taught linguist; born at Tring, 1699; died 1777. — Sir John King, an eminent lawyer, born at St. Alban's, 1639; died about 1677. — Sir John Mandeville, a remarkable traveller, born at St. Alban's; died at Liege, 1371. — Thomas Stanley, a learned poet and historian, born'in this county, in 1644 ; died 1678.

— John Walker, the worthy author of the Pronouncing Dictionary, and several other valuable works,born at Barnet, 1732; died 1807.— Seth Ward, a learned divine and mathematician born at Buntingford, 1617; died in a state of insanity, 1689. Hertford, the county town, gives the title of marquis to the Seymour-Conway family. This county may be said in general to be destitute of manufactures ; yet not entirely so. Plaiting straw is a resource for poor women and children in one part of the county, and is carried on to a great extent in and near Dunstable, and at Redbourne, St. Alban's, Berkhamstead, Hitchin, &c. — Malt is also made to a considerable extent.

HERTHA, or HLRTHUS, in mythology, a goddess worshipped by the ancient Germans. She is mentioned by Tacitus, in his book De Moribus Germanorum, cap 40.. Vossius supposes that this goddess was Cybele : but she was more properly Terra or the Earth ; for the Germans still use hert for the earth, whence also the English word earth.

HERVEY (James), a clergyman of exemplary piety, was born in 1714, and succeeded his father in the livings of Weston-Favell. and Collingtree, in Northamptonshire. These, being within five miles of each other, he attended alternately with his curate; till, being confined by ill health, he resided constantly at Weston; where he diligently pursued the labors of the ministry and his studies. This excellent divine died on Christmas day 1758, leaving the little he possessed to buy warm clothing for the poor in

that severe season. No work is more generally or deservedly known than his Meditations and Contemplations : containing Meditations among the Tombs, Reflections on a Flower-garden, a Descant on Creation, Contemplations on the Night and Starry Heavens, and a Winter Piece. The sublime sentiments in these pieces have the peculiar advantage of being conveyed in a a flowing elegant language, and

they have accordingly gone through many editions. He published, besides, Remarks on lord Bolingbroke's Letters on History ; Theron and Aspasio, or a Series of Dialogues and Letters on the most Important Subjects ; some sermons and other tracts.

HERY, v. a. Sax. benian, to praise ; to celebrate. To hallow; to regard as holy. Now no longer in use.

And whan that folk it to his fader told, Not only he, hut all his contree mery Was for this childe, and God they thanke and hery.

Chaucer. The Clerkes Tale. But by the mouth of children thy bountee, Parfourmed is, for on the brest sinking Sometime shewen they thin herying.

Chaueer. The Prioresset Tale. Then wouldst thou learn to carol of love, And hery with hymns thy lasse's glove.

Spenser.

HESBON, ESEBON, or HESHBON, in ancient geography, the royal city of the Amorites, in the tribe of Reuben, according to Moses; though in Josh. xxi. 39, where it is reckoned among the Levitical cities, it is put in the tribe of Gad ; which proves its situation to be on the confines of both.

HESDIN, a well built and fortified town in the department of the Pas-de-Calais, France, situated among the marshes of the small river Canche. Including the four suburbs contiguous, Hesdin contains about 5000 inhabitants, chiefly employed in the manufacture of stockings, caps, &c. It is twelve miles south-east of Montreuil, and twenty-seven west of Arras.

HESELRIGE (Sir Arthur), Bart., was the eldest son of Sir Thomas Heselrige, of Nosely, in Leicestershire, a gentleman of an ancient family, and succeeded to the title on the death of his father, in 1629. He was one of the representatives in parliament for the county of Leicester in 1640, when he distinguished himself by his opposition to the arbitrary measures of the court; and was active in procuring a bill of attainder against lord Stafford. His name appears among the members of parliament, whose arrest was the object of Charles I.'s visit to the house of commons. In the civil wars, Sir Arthur Heselrige was governor of Newcastle ; and commanded a regiment of cuirassiers, which he had raised. He also acted at the head of a committee at Leicester, for the confiscation of the property of the royalists. He particularly attached himself to Cromwell, whose

confidence he enjoyed ; and, after the death of the king, was appointed one of the council of state. The protector likewise nominated him a member of his house of peers. At the beginning of the Restoration, he endeavoured to counteract the designs of Monk ; and did not live to witness the triumph of the royal cause, his death having

taken place January the 7th, 1660. Two letters which he wrote on military service have been published ; 1. Concerning the revolt and recovery of Tinemouth Castle ; London, 1648, 4to.; and 2. A Letter to William Lenthall, concerning a great victory obtained by the Parliament Forces in Northumberland, London, 1648, folio.

HESHUSIUS (Tilleman), a German Lutheran divine, born at Wessel in 1526. He wrote, 1. Commentaries on the Psalms : 2. On Isaiah : 3. On St: Paul's Epistles; and, 4, On Justification and the Lord's Supper. He died in 1588.

HESIOD, a »ery ancient Greek poet; but whether contemporary with Homer, or a little older, is not agreed among the learned. His father, as he tells us in his Opera et Dies, was an inhabitant of Cumse, one of the ./Eolian Isles, now called Taio Nova; and removed thence to Ascra, a little village of Bceotia, at the foot of Mount Helicon,where Hesiod was probably born. Of what rank his father was is no where said ; but that he was driven by misfortunes from Cuma? to Ascra, Hesiod himself informs us. His father seems to have prospered better at Ascra, than he did in his own country ; yet He-siod could arrive at no higher fortune than keeping sheep on the top of Mount Helicon. Here he first devoted himself to the service of the Muses, as he boasts in his Generatio Deorum : —

Erewhile as yet the shepherd swain behold, Feeding beneath the sacred mount his fold, With love of charming song, his breast they fired : There me the heavnenly muses first inspired ; There, when the maids of Jove the silence broke, To Hesiod thus the shepherd swain they spoke, &c. On the death of the father, an estate was left, which ought to have been equally divided between Hesiod and his brother Perses ; but Per-ses defrauded him in the division, by corrupting the judges. The last circumstance he mentions relating to himself is his conquest in a poetical contention. Archidamus, king of Eubcea, had instituted funeral games in honor of his own memory, which his sons afterwards took care to have performed. Here Hesiod was a competitor for the prize in poetry ; and won a tripod, which he

consecrated to the Muses. When he was grown old (for it is agreed by all that he lived to a very great age), he removed to Locris, a town about the same distance from mount Parnassus as Ascra was from Helicon. His death was tragical. The man with whom he lived at Locris, a Milesian born, ravished a maid in the same house ; and though Hesiod was entirely ignorant of the fact, yet, being maliciously accused to her brothers as an accomplice, he was unjustly slain with the ravisher, and thrown into the sea. The Theogony and Opera et Dies are the only undoubted pieces of this poet now extant ; but it is supposed that even these have not comedown to us complete. A good edition of Hesiod's works was published by Le Clerc, at Amsterdam, in 1701.

HESIONE, in fabulous history, the daughter of Laomedon, king of Troy, and sister of king Priam. Being exposed to be devoured by a sea-monster, Hercules killed it ind

her; but, Laomedon refusing him the promised reward, he sacked Troy, and gave Hesione to Telamon.

HESTTANCY,n.s.) Fr. hesiter; Lat.

HES'ITATE, v. a. > hcesito Indecision, HESITATION, n. s. J doubt, suspense : hesitate, to faulter, demur, pause : hesitation, intermission of speech; difficult utterance; suspense; delay.

The reason of my hesitancy about the air is, that I forgot to try whether that liquor, which shot into crystals, exposed to the air would not have done the like in a vessel accurately stopped. Boyle.

I cannot foresee the difficulties and hesitations of every one : they will be more or fewer, according to the capacity of each peruser.

Woodward. Natural History.

Some of them reasoned without doubt or hesitancy, and lived and died in such a manner as to show that they believed their own reasonings. Atlerbury.

A spirit of revenge makes him curse the Grecians in the seventh book, when they hesitate to accept Hector's challenge. Pope.

Willing to wound, and yet afraid to strike

Just hint a fault, and hesitate dislike ;

Alike reserved to blame or to commend,

A tim'rous foe, and a suspicious friend. Pope.

Many clergymen write in so diminutive a manner, with such frequent blots and interlineations, that they are hardly able to go on without perpetual hesitations.

Swift.

HESPER, HESPERUS, Gr. IffTrtpoc, in astronomy, the evening star ; an appellation given to Venus when she sets after the sun. See HESPERUS.

HESPERIA, or HESPERIA MAGNA, an ancient name of Italy ; so called by the Greeks from its western situation.

HESPERI CORNU is called the Great Bay by the author of Hanno's Periplus ; but most interpreters, following Mela, understand a promontory ; some Cape Verd, others Palmas Cape : Vossius takes it to be the former, since Hanno did not proceed so far as the latter cape.

HESPERIDE&L, in botany, from the Hesperides ; golden or precious fruit : the nineteenth order in Linnseus's natural method. See BO-TANY.

HESPERIDES, in ancient mythology, the granddaughters of Hesperus, the brother of Atlas. According to Diodorus, these brothers possessed great riches in the western parts of Africa. Hesperus had a daughter called Hesperia, who married her uncle Atlas, and from this marriage proceeded seven daughters, called Hesperides from the name of their mother, and Atlantides from that of their father. According to the poets, the Hesperides were three in number, ./Egle, Arethusa, and

Hesperethusa. Hesiod, in his Theogony, makes them the daughters of Nox, Night, and seats them in the same place with the Gorgons; *viz.* at the extremities of the west, near mount Atlas ; because the sun sets there. They were fabled to have had the keeping of certain golden apples, on the other side of the ocean. A dragon watched the garden, but Hercules slew him, and carried off the apples. Pliny and Solinus suppose the dragon to mean an arm of the sea, wherewith the garden was encompassed, and which defended

the entrance; and Varro supposes, that the golden apples were sheep. Others, with more probability, say they were oranges.

HESPERIDES, GARDENS OF TIIE, in ancient geography, are placed by some authors at Larach, a city of Fez ; by others at Bernich, a city of Barca, which accords better with the fable. Others take the province of Susa in Morocco for the island wherein the garden was seated. And, lastly, Rudbecks places the Fortunate Islands, and these gardens, in his own country, Sweden.

HESPERIDUM INSUL.E, in ancient geography, islands near the Hesperi Cornu ; but the accounts of them are so much involved in fable, that nothing certain can be affirmed of them.

HESPERIS, ROCKET, dame's violet, or queen's gilliflower; a genus of the siliquosa order, and tetradynamia class of plants ; natural order thirty-ninth, siliquosae. The petals are turned obliquely; there is a glandule within the shorter stamina; the siliqua almost upright ; the stigma forked at the base, conuivent, or closing at the top : CAL. close. The species are,

1. H. inodora, the scentless rocket, with a fibrous root; upright, round, firm stalks, two feet high, garnished with spear-shaped, acute, pointed, sharply indented, close-sitting leaves; and all the branches terminated by large spikes of scentless flowers, with obtuse petals, of different colors and properties in the varieties. This species makes a fine appearance, but has no scent.

2. H. matronalis, the common sweet-scented garden rocket, having fibrous roots, crowned with a tuft of long, spear-shaped, rough, leaves; upright, single, hairy stalks, two feet high ; garnished with oval, lanceolate, slightly indented, close-sitting leaves ; and the stalk and branches terminated by large and long spikes of sweet-scented flowers of different colors and properties in the varieties, of which there are a

great num-ber. All the varieties of this species are so remarkable for imparting a fragrant odor, that the ladies were fond of having them in their apartments. Hence they derived the name of dame's violet ; and, bearing some resemblance to a stock gilliflower, were sometimes also called queen's gilliflower; but are now most commonly called rocket.

3. H. tristis, the dull-flowered night-smelling rocket, has fibrous roots, upright, branching, spreading, bristly stalks, two feet high ; spear shaped pointed leaves ; and spikes of pale pur pie flowers, of great fragrance in the evening. All the species are hardy, especially the first and second, which prosper in any of the open borders, and any common garden soil; but the third should have a dry warm situation, and a few may be placed in pots to be sheltered in case of inclement weather. They may be propagated either by seeds, by offsetts, or by cuttings off the stalks.

HESPERUS, in mythology, the brother of Atlas, and grandfather of the Hesperides. Diodorus, lib. iii. relates, that Hesperus, having ascended to the top of Mount Atlas, the better to observe the stars, never returned ; and hence he was fabled to have been changed into the star

called Lucifer in the morning, and Hesperus in the evening.

HESSE CASSEL, an electorate of Western Germany, bordering on Hanover, the Prussian States, Hesse Darmstadt, and Nassau. In 1803 the former title of Landgrave was first exchanged by the House of Hesse for that of elector, through the influence of Napoleon: but, the reigning prince not being sufficiently subservient to France, his territories were afterwards added to the kingdom of Westphalia : and the elector retired to Prague. One of the first effects of the

victories of the allies, in 1813, was the re-estab- lishment of this prince. He holds the eighth place in the German States, and has three votes in the grand assembly of the diet.

His dominions consist, according to the final settlements of the congress of Vienna, of Upper and Lower Hesse, the grand duchy of Fulda, the territory of Hanau, and the lordship of Schmalkalden, with some smaller adjacent territories. They are divided into ten provinces, thus described : —

Provinces.

Containing in English Sq. miles.

Population.

Chief Towns

Inhabitants.

1 . Lower Hesse … 2. Upper Hesse … 3. Hersfeld ….

1883 651 159 223 136 117 618 95 427 194

248,000 58,319 19,010 26,600 16,102 22,826 68,006 47,457 63,000 27,000

CASSEL

19,500 6500 5222 1100 2267 4697 7488 1000 11,997 2666

Hersfeld

4. Ziegenhain …. 5. Fritzlar .

6. Schmalkalden … 7 Fulda …

Schmalkalden …. Fulda

8. Isenburg . .

9. Hanau

10. Schauenburg …

Rintclen

Much of the surface of these provinces is occupied with hills abounding with wood and minerals ; and interspersed with valleys devoted to pasturage. Upper Hesse is partly occupied by the lofty range of Wesergebirge. The elevated parts of Fulda are Vogelsberg and Rhoen ; and Schmalkalden is principally occupied by the forest of Thuringia. The climate, on the whole, is cold and uncongenial in comparison with the latitude. Hanau produces the most useful vegetables ; its soil is rich, and its climate comparatively mild. It is the only district in which the vine flourishes. But agriculture is altogether in a backward state.

The chief rivers of Hesse Cassel are the Maine, the Fulda, the Werra, the Edder, and the Lahn. Tobacco is grown along the banks of the Werra and the Maine ; but potatoes supply a great part of the population with food. Flax is raised in some places, and is a valuable article for domestic purposes. The mountainous districts afford large supplies of timber ; and many useful metallic productions. Among these are silver, copper, iron, cobalt, vitriol, salt, alum, marble, basalt, and coal. Cassel, the capital of the electorate, is situated on the Fulda, in the district of Lower Hesse. Other chief places are Hanau, Marburg, and Fulda. Linen, made from the flax grown in the country, is the staple manufacture ; besides supplying the home consumption, the linen and yarn annually exported amount to about £300,000. Much of the native iron and steel is wrought upon the spot in Schmalkalden. The silk manufacture is carried on in a few places ; and cotton spinning has been lately introduced. The commerce of Hesse Cassel languishes for want of free channels. Its principal streams, the Maine and the Werser, traverse only corners of its territory, and heavy

duties are levied on tne navigation of others, by the states through which they pass to the sea.

Education is restricted to the higher ranks by law ; and the press is greatly restrained here. The constitution is a limited hereditary monarchy : the states, consisting of the prelates, and nobles, deputies from the towns.

The reigning family and most of the inhabitants are Calvinists ; they amount to about 340,000. The Lutherans are stated at 150,000; the Catholics at about 90,000, and the Jews at 8500. Smaller sects make up the remainder of the population. The contingent to the confederate army is 5400 men, but the whole of the armed force amounts to 8000 or 10,000, and the revenue to about 500,000. A public debt has lately been incurred, equal to about one year's revenue.

HESSE DARMSTADT, or the GRAND DUCHY OF HESSE, is situated near the Rhine, and belongs to another branch of the House of Hesse. It is divided into two parts, by the country of Hanau and the territory belonging to Frankfort, which stretches along the right bank of the Maine. The southern portion of these dominions, which is the most fertile, contains an area of 2000 square miles, and a population of 350,000. The other division contains about 1 900 square miles, and a population of 250,000. The territorial extent of the whole grand duchy, including its possessions on the left bank of the Rhine, has been lately stated by M. Pauli to include only 3617 square miles, and 620,630 inhabitants, which is about 171 persons to each square mile.

None of the minor states of Germany have benefited by the French Revolution more than this. The landgrave became an early member of the confederation of the Rhine, and, with tire title of

grand duke, received considerable accessions of territory, with the sovereignty of the free cities within his dominions. In 1809 he obtained further accessions, inconsequence of his exertions against Austria ; and when, after the battle of Leipsic, he agreed to join the allies, it was on condition of preserving his territory entire. The congress of Vienna, in 1815, confirmed this treaty ; and in the cessions made to Hesse Darmstadt on the left bank of the Rhine, in return for what was relinquished on the right, to suit other members of the

alliance, the balance was in favor of the grand duke, both as to population and compactness of territory.

Hesse Darmstadt is fully as mountainous as Hesse Cassel, its northern division containing part of the ranges of the Vogelsberg and Wersterwald ; while the southern has on the right of the Rhine the rugged and romantic Odenwald, and on the left a number of hills and mountains, branching off from Mont Tonnerre. Its metallic products of iron, copper, and lead, supply the chief articles of commerce ; but the soil is often poor, and in many districts the lower orders live chiefly on potatoes : in the valleys corn and vegetables are successfully cultivated ; also flax ; and in certain situations tobacco ; vines only appearing along the banks of the Maine and Rhine. The pasturage in general is good ; and salt is obtained in large quantities at Creutznac. The rivers, besides the Rhine and Maine, are the Lahn, the Nidda, the Ohen, the Schwalm, and the Itter, all to the north of the Maine. The climate is healthy, and the position of the country favorable to trade ; but this advantage has been little improved. The principal manufactures, which are also in a drooping state, are linen, woollen, leather, and hardware. Its chief towns are, Mentz, population 25,000 ; Darmstadt (the capital) 1 2,000 ; Worms, 5700 ; Giessen 2500. The town of Darmstadt has of late increased rapidly, principally from a twenty years' exemption from taxes, granted here to whoever builds a house in conformity with the government plan.

The constitution of Hesse Darmstadt is a limited monarchy, divided into states or representatives ; but the latter are not often assembled. The crown is hereditary in the male line, and the sovereign is considered of age at eighteen. Hesse Darmstadt has one vote and the ninth place at the smaller assembly of the Germanic diet ; at the larger it has three votes. Besides the ministry, the high court of appeal, and other offices at Darmstadt, each province has a regency, a court of justice, a chamber of finance, and a commission for the domain lands. The minor divisions of the grand duchy are bailiwics. The revenue is calculated at £400,000, of which £80,000 go to pay the interest of the national debt. The military are between 6000 and 7000 men, besides militia. In point of education Hesse Darmstadt has of late made considerable advances. There is a university at Giessen ; at Mentz a school of law ; and classical schools at Giessen, Darmstadt, Mentz, and Worms.

HESSE-HOMBURG, a small principality to the south of Hesse-Darmstadt at the foot of the Tau-i.us Mountains, and belonging, with the title cif

landgrave, to a younger branch of the family” o Hesse-Darmstadt. It formerly had only about 7000 inhabitants ; but the influence at the congress of Vienna of four sons of the reigning prince who acted a distinguished part in the late wars of Austria, obtained it several additional districts, and it now reckons 20,000 inhabitants. In 1806, when the confederation of the Rhine was formed, the landgrave was deprived of his states. Its new territories are on the left side of the Rhine. The landgrave is an independent member of the Germanic confederation; but his revenue hardly exceeds £18,000 a-year. The family residence is at the town of Homburg, containing about 3500 inhabitants, and situated in a beautiful country, at the foot of lofty mountains. It is called, on that account, Homburg on the Height. The eldest of the sons, the hereditary prince, married the princess Elizabeth of England in 1818: another of the brothers is married to a princess of Prussia. The professed religion here is Calvinism.

HESSIAN FLY, a very mischievous insect, which a few years ago appeared in North America ; and whose depredations then threatened entirely to destroy the crops of wheat in that country. It is, in its perfect state, a small winged insect ; but the mischief it does is while in the form of a caterpillar; and the difficulty of destroying it is increased by its being as yet unknown where it deposits its eggs, to be hatched before the first appearance of the caterpillars. These mischievous insects begin their depredations in autumn, as soon as the wheat begins to shoot up through the ground. They devour the tender leaf and stem with great voracity, and continue to do so till stopped by the frost ; but no sooner is this obstacle removed by the warmth of the spring, than the fly appears again, laying its eggs now upon the stems of the wheat just beginning to spire. The caterpillars, hatched from these eggs, perforate the stems of the remaining plants at the joints, and lodge themselves in the hollow within the corn, which shows no sign of disease till the ears begin to turn heavy. The stems then break; and, being no longer able to perform their office in supporting and supplying the ears with nourishment, the corn perishes about the time that it goes into a milky state. These insects attack also rye, barley, and timothy grass, though they seem to prefer wheat. This terrible insect appeared first in Long Island during the American war, and was supposed to have been brought from Germany by the Hessians ; whence its name. Thence it proceeded inland at the rate of about fifteen or twenty miles annually; and in 1789 had reached 200 miles from the place where it was first observed. At that time it continued to proceed with unabating increase ; being apparently stopped neither by rivers nor mountains. In the fly state it is likewise

exceedingly troublesome ; by getting into houses in swarms, falling into victualsand drink; filling the windows, and flying perpetually into the candles. It still continued to infest Long Island as much as ever ; and in many places the culture of wheat was entirely abandoned. Mr. Morgan, in a communication to the Philadelphia Society for promoting

HET

agriculture, informs us, that he had made himself acquainted with the fly, by breeding a num-ber of them from the chrysalis into the perfect state. The fly is at first of a white body with long black legs and whiskers, so small and motionless as not to be easily perceived by the naked eye, though very discernible with a microscope ; but they soon become black and very nimble, both on the wing and feet, being about the size of a small ant During the height of the brood in June, where fifty or 100 of the nits have been deposited on one stalk of wheat, he has sometimes discovered, even with the naSed eye, some of them twist and move on being disturbed : this is while they are white ; but they do not then travel from one stalk to another, nor to different parts of the same stalk. The usual time of their spring hatching from the chrysalis is in May. ‘ Those who are doubtful whether the fly is in their neighbourhood, or cannot find their eggs or nits in the wheat, may satisfy themselves by opening their windows at night, and burning a candle in the room. The flies will enter in proportion to their numbers abroad. The first night after the commencement of wheat harvest, this season, they filled my dining room in such numbers as to be exceedingly troublesome in the eating and drinking vessels. Without exaggera-tion I may say, that a glass tumbler, from which beer had been just drunk at dinner, had 500 flies in it in a few minutes. The windows are filled with them when they desire to make their escape. They are very distinguishable from every other fly by their horns or whiskers.’ In its perfect state it is probably a tenthredo, like the black negro fly of the turnip. As great quantities of wheat

were at this time imported from America into Britain, it became an object worthy of the attention of government, to consider how far it was proper to allow of such importation, lest this destructive insect might be brought along with the grain. See our article ENTOMOLOGY.

HEST, n. s. Sax. bser-t. Command; precept; injunction. Obsolete, or written behest.

When faith fayleth in priestes sawes, And tordes hestes are holden for lawes, And robberie is holde purchase, And lecherie is holde solace ; Then shall the lord of Albion Be brought to great confusion. Chaucer's Prophecie.

Thou wast a spirit too delicate .

To act her earthy and abhorred commands.

Refusing her grand hests, Shakspeare.

HESYCHIUS, the most celebrated of all the ancient Greek grammarians, whose works are extant. He was a Christian; and, according to some, the same with Hesychius, patriarch of Jerusalem, who died in 609. He wrote a Greek lexicon ; which, in the opinion of Casaubon, is the most learned and useful work of that kind produced by the ancients. Schrevelius published a good edition of it in 1668, in 4to. with notes; but the best are those of John Alberti, printed at Leyden in 1746, and Ruhnkenius, in 1776; both in 2 vols, folio.

HETEROCLITE, n. s. \ Fr. het eroclite ;

HETEROCLTT'ICAL, adj. $ Lat. heteroclitum. VOL. XI.

Nouns declined irregularly; any person or thing deviating from the common rule.

In the mention of sins lieteroclitical, and such as •want either name or precedent, there is ofttimes a sin, even in their histories. Browne.

The heteroclite nouns of the Latin should not be touched in the first learning of the rudiments of the tongue. Watt*.

HET'ERODOX, adj. & n. s. Fr. heterodoxe ; Gr. trtpoc, different, and Sofa, creed or opinion A person deviating from the established opinions ; a peculiar sentiment : generally applied to religious tenets.

Not only a simple heterodox, but a very hard paradox it will seem, and of great absurdity, if we say attraction is unjustly appropriated unto the loadstone. Browne's Vulgar Errourt.

Partiality may be observed in some to vulgar, in others to heterodox tenets. Locke.

HETERODROMUS VECTIS, a lever in which the fulcrum, or point of suspension, is between the weight and the power. It is the same with what is called a lever of the first kind.

HETEROGE'NEAL, adj.) Fr. heterogene :

HETEROGENE'ITY, n. s. > Gr. trepoc and yt—

HETEROGE'NEOUS, adj. j vof. Differing in nature or kindred : opposition in qualities.

Let the body adjacent and ambient be not cornma-terial, but merely heterogeneal towards the body that is to be preserved : such as quicksilver and white amber to herbs and flies.

Guaiacum, burnt with an open fire in a chimney, is sequestered into ashes and soot ; whereas the same wood, distilled into a retort, does yield far other heterogeneities, and is resolved into oil, spirit, vinegar, water, and charcoal. Boyle.

The light whose rays are all alike refrangible, I call simple, homogeneal, and similar ; and that whose rays are some more refrangible than others, I call compound, heterogeneal, and dissimilar. Newton.

I have observed such heterogeneous bodies, which I found included in the mass of this sandstone.

Woodward.

HETEROGENEITY, in physics, is also used for the heterogeneous parts themselves • in which sense, the heterogeneities of a body are the same things with its impurities.

HETEROGENEOUS NOUNS, one of the three variations in irregular nouns ; or such as are of one gender in the singular number, and of another in the plural. Heterogeneous, under which are comprehended mixed nouns, are six fold. 1 . Those which are of the masculine gender in the singular number, and neuter in the plural ; as, hie tartarus, haec

tartara. 2. Those which are masculine in the singular number, but masculine and neuter in the plural ; as hie locus, hi loci, and haec loca. 3. Such as are feminine in the singular number, but neuter in the plural; as, hsec carbasus, and haec carbasa. 4. Such as are neu-ter in the singular number, but masculine in the plural ; as, hoc ccelum, hi caeli. 5. Such as are neuter in the singular, but neuter and masculine in the plural ; as, hoc rastrum, hi rastri, and hoecras-tra. And, 6, Such as are neuter in the singular, but feminine in the plural ; as, hoc epulum, hae epulse.

HETEROS'CIANS, n. s. Gr. irlpoc and fffla. Those whose shadows fall only one way, as the shadows of us who live north of the tropic fall at noon always to the north.

Q

HETH, nn, Heb. i. e. fear, the second son of Canaan, grandson of Ham, and progenitor of the Hittites, Gen. x. 15. He dwelt southward of the promised land, at Hebron or its neighbourhood. Ephron, an inhabitant of Hebron, was a descendant of Heth, and the city in Abraham's time was peopledˆ by his posterity. See HITTITES.

HETRURIA, or ETRURIA, in ancient geography, a celebrated country of Italy, west of the Tiber. Tt originally contained twelve different nations, which had each their respective monarch. Their names were Veientes, Clusini, Perusini, Cortonenses, Arretini, Vetuloni, Vo-laterrani, Russellani, Volscinii, Tarquinii, Fali-sci, and Caeretani. The inhabitants were famous for their confidence in omens, dreams, auguries, &c. They all proved powerful and resolute enemies to the rising empire of the Romans, and were conquered only after much effusion of blood.

HETTSTADT,or HECKSTADT, a mining town of Prussian Saxony, on the Wipper, in the county of Mansfeld. The mines of the neighbourhood, though less extensively worked than formerly, are considerable ; and here is an elegant furnace for melting silver. Population 2750. Five miles north of Mansfeld, and nine north of Eisleben.

HEV7EI, in ancient geography, the Hivites, one of the seven nations who occupied Canaan ; a numerous people, and the same with the Kad-monaei, who dwelt at the foot of Hermon and partly of Libanus, or between Libanus and Her-mon, Judges iii. 3. To this Bochart refers the fables concerning Cadmus and Harmonia, chaaged to se/pents ; the name hevi denoting a wild animal, such as is a serpent. Cadmus, who is said <to have carried the use of letters to Greece, seems to have been a Kadmonean ; of whom the Greeks say that he came to their country from Phoenicia.

HEVELIUS, or HEVELKE (John), an astronomer of the last century, was born at Dantzic in the year 161 1 . He studied in Germany, England, and France, and every where obtained the es-teem of the learned. He was the first who discovered a libration in the moon, and he made several important observations on the other planets. He also discovered several fixed stars, which he named the firmament of Sobieski, in honor of John III. king of Poland. His wife was also well skilled in astronomy. In 1763 and 1769 he published a description of the instruments with which he made his observations, under the title of Machina Ccelestis. But in September of that year, while he was in the country, his house at Dantzic was burnt down, by which he lost not only his observatory and all hif valuable instruments, but also a great number of copies of his Machina Caelestis. He died in 1687, aged seventy-six. In 1690 were published his Firmamentum Sobiscianum, and Prodromus Astronomise et novas Tabulae solares, una cum Ca-talogo Stellarum fixarum, in which he gives the necessary preliminaries for taking an exact catalogue of the stars. He was made a burgo-mas- ter of Dantzic ; which office he is said to have executed with the utmost integrity.

HEVES, a palatinate of Upper Hungary, lately united with that of Outer Solnak. The two districts contain a population of about 180,000. The products are corn, wine, tobacco, and alum. The inhabitants, almost all of Hungarian descent, are mixed with a few Sclavonians, Germans, and gipsey wanderers. The province is named from the small town of Heves, but the diets are held at Erlau ; and the

archbishop of that place is upper palatine.

HEURNIUS, or VAN HEURN (John), M. D., a learned Dutch physician, born at Utrecht in 1543. He studied a* Louvaine, Paris, Padua, and Pavia. On his return he was elected a magistrate of Amsterdam ; after which he became professor of anatomy, and rector of the university at Leyden, where he died in 1601. He wrote commentaries on Hippocrates, and various treatises on different diseases.

HEW, v. a. \ Part, hewn, or hewed. Sax.

HEW'ER, n. s.) beapan ; Teut. hauen; Goth. and Swed. huga. To cut by blows with an edged instrument; to form or shape with an axe; to form with labor or exertion : hewer, one whose employment is to cut wood or stone : when used with the particles down, it signifies to fell ; up, to excavate from below; off", to separate.

Thou hast hewed thee out a sepulchre here, as he that hewed him out a sepulchre on high. Isaiah xxii

Upon the joint the lucky steel did light, And made such way that hewed it quite in twain.

Spenser.

Yet shall the axe of justice hew him down, And level with the root his lofty crown. Sandys. Brave followers, yonder stands the thorny wood, Which, by the heavens' assistance and your strength, Must hy the roots be hewn up yet ere night.

Shakspeare.

Scarce can I speak, my choler is so great : Oh ! I could hew up rocks and fight with flint. Id.

I had purpose

Once more to hew thy target from thy brawn, Or lose my arm for't. Id.

He that depends

Upon your favours, swims with fins of lead, And hews dawn oaks with rushes. Id,

One Vane was so grievously hewn, that many thousands have died of less than half his hurts, whereof he was cured. Hayward.

Nor is it so proper to hew out religious reformations by the sword, as to polish them by fair and equal disputations. King Charles.

He from the mountain hewing timber tall, Began to build a vessel of huge bulk. Sfilton.

At the building of Solomon's temple th' re were fourscore thousand hewers in the mountains. Browne.

The gate was adamant ; eternal frame ; Which, hewed by Mars himself, from Indian quarries

came, The labour of a god. Dryden's Fables.

Next unto bricks are preferred the square hewn stone. Martinet:

This river rises in the very heart of the Alps, and has a long valley that seems hewn out on purpose to give its waters a passage amidst so many rocks.

Addison on Italy.

We'll force the gate where Marcus keeps his guard, And hew down all that would oppose our passage.

Addison.

I now pass my days, not studious nor idle, rather polishing old works than heicing out new.

Pope to Sveift.

HEX

HEWSON (William), a very ingenious anatomist, was born in 1739. He

was assistant to Dr. Hunter, and afterwards in partnership with him ; but, on their disagreement, read anatomical lectures at his own house, in which he was seconded by Mr Falconer. He wrote Enquiries inti trie Properties of the Blood, and the Lymphatic System, 2 vols. ; and disputed with Dr. Monro the discovery of the lymphatic system of vessels in oviparous animals. He died in 1774 in consequence of absorption from a wound received in dissecting.

HEX'AGON,n. s. -\ Fr. heiagone ; Gr. Jg,

HEXAG'ONAL, adj. \ six, and yiavia, an angle.

HEXAG'ONY, n. s. 3 A ˆgure of six sides or angles : the most capacious of all the figures that can be added to each other without any interstice ; and therefore the cells in honeycombs are of that form : applied to whatever has six sides or angles.

When I read in St. Ambrose of hexagonies, or sex-angular cellars of bees, did I therefore conclude that they were mathematicians ? Bramkall.

As for the figures of crystal, it is for the most part hexagonal, or six-cornertd. Browne.

Many of them shoot into regular figures : as crystal and bastard diamonds into hexagonal'. Ray.

HEXAGYNIA, from f£ six, and y»vq a fe-male, an order of plants in the class polyandria, consisting of such as have six styles. See BOTANY.

HEXAHFDRON, in geometry, one of the five Platonic bodies, or regular solids, being the same with a cube.

HEXAM'ETER, n. s. Gr. g{ and plrpov. A verse of six feet.

The Latin hexameter has more feet than the English heroic. Dryden.

HEXAMETER VERSE. The first four feet may be either spondees or dactyls; the fifth is generally a dactyl, and the sixth a spondee.

Such are the following verses of Virgil :

1234 5 6

Tityre', | tu patu|l» recujbans sub [tegmine | fagi, Sllves|trem tenujl mu|sam uiedl|taris a|ven& : Nos patri|ae fljnes, et I dulcia j linquimus | arva , Nos patrl|am fugi|inus tu [Tftyre | lentils in | umbra Formojsam re'sojnare' dojces Amajryllda | sylvas.

HEXAMILI, HEXAMILION, or HEXAMILIUM, a celebrated wall, built by the emperor Emanuel in 1413, over the isthmus of Corinth. It took its name from «£ six, and juiXtov, which in the Romaic signifies a mile, being six miles long. The design of it was to defend Peloponnesus from the incursions of the barbarians. Amurath II. having raised the siege of Constantinople, in 1424, demolished the hexamilium, though he had before concluded a peace with the Greek emperor. The Venetians restored it in 1463, by 30,000 workmen, employed for fifteen days, and covered by an army commanded by Bertoldo d'Este, general of the land forces, and Lewis Loredano, commander of the sea. The infidels made several attempts upon it; but were repulsed, and obliged to retire from the neighbourhood thereof ; but Bertoldo being killed at the siege of Corinth, which was attempted soon after, Bertino Calcinato, who took on him the command of the army, abandoned, upon the approach of the beglerbeg, both the siege and the defence of the wall, which had cost them so dear ; upon which it was finally demolished.

HEXANDRIA, in botany, from ˆ six, and avrip, a man, the sixth class in Linnaeus's sexual method, consisting of plants with hermaphrodite flowers, furnished with six stamina of an equal length. See BOTANY.

HEXAN'GULAR, adj. Gr. «? and Lat. angu-lus. Having six corners.

Hexangttlar sprigs or shoots of crystal.

Woodward.

HEXAPLA, from «£ six, and airXota I unfold, in church history, a Bible disposed in six columns ; containing the text, and versions thereof, compiled and published by Origen, with a view to securing the sacred text from future corruptions, and to correct those that had been already introduced. Eusebius relates that Origen, after bis return fiom Rome under Caracalla, learned Hebrew, and began to collect the several ver-

sions that had been made of the sacred writings» and of these to compose his Tetrapla and Hexapla. But others say that he did not begin till the time of Alexander, after he had retired into Palestine, about A. D. 231. Besides the translation of the sacred writings called the Septuagint, made under Ptolemy Philadelphus, about A. A. C. 280, the Scriptures had been since translated into Greek by other interpreters. The first of those versions, or (reckoning the Septuagint) the second, was that of Aquila, a proselyte Jew, the first edition of which he published in the twelfth year of Adrian, or about A. D. 128, the third was that of Symmachus, published as is supposed, under Marcus Aurelius, but, as some say, under Septimus Severus, about A. D. 200; the fourth was that of Theodotion, prior to Symmachus's, under Commodus, or about A. D. 175. These Greek versions, says Dr. Kennicot, were made by the Jews from their, corrupted co-pies of the Hebrew, and were designed to stand in the place of the Seventy, against which they were prejudiced, because it seemed to favor the Christians. The fifth was found at Jericho, in the reign of Caracalla, about A. D. 217; and the sixth at Nicopolis, in the reign of Alexander Severus, .about A. D. 228 : lastly, Origen himself recovered part of a seventh, containing only the Psalms.

Origen, who had held frequent disputations with the Jews in Egypt and Palestine, observing that they always objected to those passages of Scripture quoted against themselves, and appealed to the Hebrew text the better to vindicate t lose passages, and confound the Jews by showing that the Seventy had given the sense of the Hebrew, or rather to show, by a number of different versions, what the real sense of the He-brew was ; undertook to reduce all the several versions into a body along with the Hebrew text, so as they might easily be confronted, a.nd afford a mutual light to each other. He made the H«-

brew text his standard ; and, allowing that corruptions might have happened, and the old Hebrew copies might and did read differently, he marked such words or sentences as were not in his Hebrew text, nor the later Greek versions, and added such words or sentences as were omitted in the Seventy, prefixing an asterisk to the additions, and an obelisk to the others. For this purpose he made eight columns ; in the first he gave the Hebrew text in Hebrew characters ; in the second, the same text in Greek characters ; the rest were filled with the several versions above mentioned ; all the columns answering verse for verse, and phrase for phrase ; and in the Psalms there was a ninth column for the seventh version. This work Origen called ‘E £a7rXa, Hexapla, q. d. sextuple,, or a work of six columns, as only regarding the first six Greek versions. See TETRA-PLA. Indeed, St. Epiphanius, taking in likewise the two columns of the text, calls the work Oc-tapla, as consisting of eight columns. This celebrated work, which Montfaucon imagines consisted of fifty large volumes, perished long ago, probably with the library at Caesarea, where it was preserved in 653 ; though several ancient writers have preserved pieces 6f it, particularly St. Chrysostom on the Psalms, Philoponus in his Hexameron, &c. Some modern writers have earnestly endeavoured to collect fragments of the Hexapla, particularly Flaminius Nobilius, Dru-sius, and F. Montfaucon, in two folio volumes, printed at Paris in 1713.

HEX’APOD, n. s. Gr. S£ and TTOˆC. An ani-mal with six feet.

I take those to have been the hexapods, from which the greater sort of beetles come ; for that sort of hexa-podt are eaten in America Ruy—

HEXAS’TIC, a s. Gr. ‘& and <rtYOC-A poem of six lines.

HEXHAM, a town of Northumberland, with a market on Tuesday. It is seated on the Tyne, and had formerly, besides the fine old church, a celebrated abbey of which the ruins are scarcely now left. Its ancient and spacious church, which was founded in 674, is highly ornamented, in the inside, in the Gothic taste. In the choir was a beautiful oratory, now converted into a pew. On the screen, at the entrance of the choir, are several grotesque monastic paintings. On the west of the church are the remains of the priory, which was a very spacious building. There is a large room, with an oaken roof, which was the refectory, and is now used for public entertainments. Near this place, in 1463, was fought a bloody battle, between the houses oˆ York and Lancaster, in which the latter was defeated. Hexham is noted for its manufactory of tanned leather, shoes, and gloves; and is twenty-two miles west of Newcastle, and 279 N. N. W. of London.

HEY, infer;'. ~\ Dan. andSw-d. hut.

HEr'DAY,»nto > &n.s. £Hey, and heyday, are

HEY'DEGIVES, n. s.) expressions of joy, or exultation ; frolic : and sometimes wonder, or wildness: heydigives, a wild frolic; dance; but now obsolete.

But friendly fairies met with many graces, And light-foot nymphs can chase the lingering night With heydegives, and trimly trodden traces. Spenser.

At your age

The fieyday iu the blood is tame, it's humble, And waits upon the judgment. Sltakspaure.

Thou'lt say anon he is some kin to thee, Thou spendest such heyday wit in praising him.

Id.

Twas a strange riddle of a lady, Not love, if any loved her, heyday ! \

Hudibras.

Shadwell from the town retires, T$ bless the town with peaceful lyrick, The-aJiey for praise and panegyrick. Prior.

HEY (John), D D. a modern divine, was born in 1734, and educated at Catherine Hall, Cambridge ; whence he removed in 1758 to a fellowship in Sidney College, where he took his degree of D. D. in 1780, and became the first proiessor of divinity on the Norrisian foundation. This chair he resigned in 1705. He was for many years rector of Passenham, in Northamptonshire, and of Calverton, in Buckinghamshire, but re'signed both in 1814 to settle in London, where he died the following year. His works are — 1. Redemption, a Seatoaiau prize poem ; 2. Lectures on Divinity, 4 vols. 8vo. ; 3. Seven Sermons on several Occasions, 8vo.; 4. Discourses on the Malevolent Sentiments, 8vo.; 5. Observations on the Writings of St. Paul.

HEYDON (John), who sometimes assumed the name of Eugenius Theodidactus, was a great pretender to skill in the Rosicrucian philosophy-and astrology, in the reign of king Charles I. ; and wrote a

considerable number of chemical and astrological works, with curious titles. This ridiculous author was much resorted to by the duke of Buckingham, who was infatuated with judicial astrology. He employed him to calculate the king's and his own nativity, and was assured that the aspects of the heavens promised to him success and fortune. The duke also employed i him in some treasonable and seditious practices, for which he was sent to the Tower. He lost much of his former reputation by telling Richard Cromwell and Thurloe, who went to him disguised like cavaliers, that Oliver would infallibly be hanged by a certain time ; which he outlived several years.

HEYDON, a town in the East Riding of Yonc-shire, with a market on Thursday. It is seated on a river, which soon falls into the Humber ; and was formerly a considerable town, but is now much decayed. It is a corporation, governed by a mayor, recorder, nine aldermen, two bailiffs who have the power of choosing sheriffs, and are justices of the peace. It returned two members to parliament, chosen by the burgesses, who claim their privilege either by descent, by seven years' apprenticeship to a freeman, or by an honorary gift at the discretion of the corporation, but was disfranchised in 1832. It is 8. m. W. from Hull, and 182 from London.

IIEYLIN (Dr. Peter), an eminent English writer, born at Burford in Oxfordshire, in 1600. He studied at Hart Hall, Oxford, where he took his degrees of M.A. and D. D., and became an able geographer and historian. He was appointed one of the chaplains in ordinary to king Charles I., rector of Hemingford in Hunting-.

denshire, a prebendary of Westminster, and obtained several other livings; but of these he was deprived by the parliament, who also sequestered his estate ; by which means he and his family were reduced to great necessity. However, upon the Restoration, he was

restored to his spiritualities • but never rose higher than to be sub-dean of Westminster. .He died in 1662, and was interred in Westminster, where a neat monument was erected to his memory. His writings are very numerous : the principal of which are, 1. Microcosmus, or a Description of the Great World. 2. Cosmographia. 3. The History of St. George. 4. Ecclesia Vindicata, or the Church of England justified. 5. Historical and Miscellaneous Tracts, -&c.

HEYNE (Christian Gottlob), a celebrated modern German critic, was the son of a weaver of Glogau in Silesia, and born in 1729. But at a very early age Heyne taught other children, to provide funds for the extension of his own education. He completed his education at Leipsic, where he soon obtained reputation for his classical acquirements, and was assisted by the post of librarian to count Bruhl. He also increased his narrow income by translations of French and English works. In 1755 appeared his edition of Tibullus, and soon after that of Epictetus. He was involved in great distress by the seven years' war; the entry of the Prussians into Dresden leading to the dispersion of count Bruhl's library. He was, however, taken into the family of Von Schonberg as a tutor, in which situation he married, and in 1763 succeeded Gesner as professor of rhetoric at Gottingen. Here he also became secretary to the Society of Sciences. In 1775 he formed a catalogue of the library at Gottingen, in which laborious work, extending to 150 folio volumes, he was warmly encouraged by his late majesty George III., whose three younger sons were for some time under his tuition. He died suddenly, July 12th, 1814, leaving three children by a first wife, and six by a second. His principal works are his editions of Homer and Virgil, with notes and elucidations ; and Opuscula Academica, 6 vols. 8vo.

HEYTESBURVr, atown standing on the river Willey, four miles east from Warminster, and ninety-two from London. The church, formerly collegiate, is a spacious building; it is built in the form of a cross, with a tower in the centre, containing six bells; and is about 400 years old. Here is a well endowed hospital, and a grammar-school. The greater part of this town was destroyed by fire in 1766, since which the houses have been commodiously rebuilt, which has greatly improved its appearance. It consists principally of one wide street. It was an ancient borough by prescription, and sent two members to parliament, who were elected by the burgage holders. A woollen manufacture is established here, which has much increased its population. It was disfranchised in 1832.

IIEYWOOD (Eliza), one of the mostvolumi-uous novel writers this island ever produced ; of Miose origin we know no more than that her

father was a tradesman, and that she was born about 1696. In the early part of her life, her pen, whether to gratify her own disposition, or the

prevailing taste, dealt chiefly in licentious and memoirs of personal scandal : the celebrated Atalantis of Mrs. Manley served her for a model ; and the Court of Carimania, the New Utopia, with some other pieces of a like nature, were the copies her genius produced. She also attempted dramatic writing and performance, but did not succeed in either. Whatever it was that provoked the resentment of Pope, he gave full scope to it by distinguishing her as gaining one of the prizes in the games introduced in honor of dullness, in his Dunciad. Nevertheless, it is undeniable, that there is much spirit and ingenuity in her manner of treating subjects, which the friends of virtue may perhaps wish she had never meddled with at all. But, whatever offence she may have given to delicacy or morality in her early works, she appears to have endeavoured to atone for, in the latter part of her life ; as no author then appeared a greater advocate for virtue. Among her riper productions may be specified, The history of Miss Betsy Thoughtless, 4 vols. ; The Female Spectator, 4 vols. ; Jemmy and Jenny Jessa;ny, 3 vols. ; The Invisible Spy, 4 vols. ; with a pamphlet entitled A Present for a Servant Maid. She died in 1759.

HEYWOOD (John), one of the most ancient dramatic poets, was born at North Miras, near St. Alban's in Hertfordshire, and educated at Oxford. Thence he retired to the place of his nativity ; where he became acquainted with Sir Thomas More, who had a seat in that neighbourhood. This patron of genius introduced him to the princess Mary, and afterwards to her father Henry VIII., who was much delighted with his wit and skill in music, anc by whom he was frequently rewarded. Wher Mary came to the crown Heywood became a favorite at court. On the accession of Elizabeth being a zealous Papist, he decamped, and settler at Mechlin in Flanders, where he died in 1565 He was a man of no great learning, nor were his poetical .talents extraordinary ; but he possessed talents of more importance in the times in which he lived, namely, those of a jester. He wrote several plays; 500 epigrams; A Dialogue it Verse concerning English Proverbs ; and The Spider and Fly, a Parable, a thick 4to. Before •the title of this last work is a whole-lenglr wooden print of the author; who is also represented at the head of every chapter of the book, of which there are seventy-seven. He left two sons, who both became eminent Jesuits.

HEZEKIAH,,orEzEKiAS,Heb.irvpTn,i.e.the strength of Jah or Jehovah, one of the best kings of Judea, succeeded his father Ahaz, A. M. 3278. His reformation of his subjects from idolatry ; his grand and soiemn celebration of the passover; his invitation to the Israelites to assist at it ; his throwing off the Assyrian yoke ; his miraculous deliverance from the invasion by Sennacherib, after the blasphemous defiance of Rabshakeh ; his mortal disease, prophetic prayer, and miraculous recovery, with the fatal consequences of his vanity after it, are recorded in 2 Kings xviii, — xx.; 2 Chron. xxix. — xxxii. ; and Isaiah xxxvi — xxxix. He collected the proverbs of Solomon,, contained in the xxv., xxvi., xxvii., xxviii., xxix.,

chapters of that book. See Prov. xxv. Upon the miraculous retrogression of the shadow on Ahaz's dial, we need say little. Those who doubt the existence of a Deity, or deny his power over the material world, will not be convinced by any arguments. But those who believe that the Almighty, when he gave existence to matter, and subjected it to certain laws, did not thereby limit his own infinite power, will not think it more incredible, that he who created light by his word should invert the shadow of the gnomon, so as to make it appear to have gone ten degrees backward, than that a watchmaker should tarn back the hour or minute-hand of a clock, in a direction contrary to the natural motion which, he himself has given it. How this was done, whether by a momentary retrograde motion given to the terrestrial globe, or only by an inversion of the usual motion of the solar rays upon the gnomon, it is neither necessary nor possible to determine. See AJA-LON. Upon the former supposition it must have been observed over one half of the globe. That it was however observed by the Chaldean astronomers at Babylon, seems evident from Merodach-Baladan's congratulatory embassy on Hezekiah's recovery. Hezekiah died in the fifty-fourth year of his age, and twenty-ninth of his reign, A. M. 3307.

HIARBAS, a king of the Getulians, who made war against queen Dido.

HIATION, n. s. t Lat. hio, hiatus. The

HIA'TUS, n. s. \ act of gaping ; an aperture.; a breach ; the opening of the mouth by the succession of an initial to a final vowel.

Men observing the continual hiation, or holding open the cameleon's mouth, conceive the intention thereof to receive the aliment of air ; but this is also occasioned by the greatness of the lungs. Browne.

Those hiatus'* are at the bottom of the sea, whereby the abyss below opens into and communicates with it.

Woodward .

Ths hiatus should be avoided with more care in poetry than in oratory ; and I would try to prevent it, unless where the cutting it off is more prejudicial to the sound than the hiatus itself. Pope.

HIATUS is particularly applied to those verses where one word ends with a vowel, and the fol-lewing word begins with one, and thereby occasions the mtmth to be more open, and the sound to be very harsh. It is also used in speaking of MSS., to denote their defects, or the parts that have been lost or effaced.

HIBER'NAL, adj. Lat. hibernus. Belong-iag to the winter.

This star should rather manifest its warming power in the Winter, when it remains conjoined with the SUB in its hibernal conversion. Browne.

HIBERNIA, one of the ancient names of Ireland, is derived by some from hibernum tem-pus, winter time, because in that season the nights are long there. . But it appears more probable that it has been derived from Erin, the name given to the island by the original inhabitants ; whence Jerna, the name given it by Claudian, Iverna by Ptolemy, and Juverna by Juvenal, are evidently derived. See IRELAND.

HIBISCUS, Syrian mallow, a genus of the polyandria order, and monadelph'a class of plants ; natural order thirty-seventh, columni-

ferae : CAL. double, the exterior one polyphyl-lous : CAPS, quinquelocular and polyspermous. Of this genus there are thirty-six species; the most remarkable are,

1 . H. abelmoschus, the musk-seeded hibiscus, a native of the West Indies, where the French cultivate great quantities of it. The plant

rises with an herbaceous stalk three or four feet high, sending out two or three side branches, garnished with large leaves cut into six or seven acute angles, sawed on their edges, having long foot-stalks, and placed alternately. The stalks and leaves are very hairy. The flowers come out from the wings of the leaves upon pretty Ions; foot-stalks which stand erect. They are large, of a sulphur color, with purple bottoms ; and are succeeded by pyramid ical five-cornered capsules, which open in five cells, filled with large kidney-shaped seeds of a very musky odor. It is annual in this country, though biennial in places where it is native. It is propagated by seeds, and is cultivated in the West Indies by the French for the sake of its seeds.

2. H. esculentus, the eatable hibiscus, rises to five or six feet ; has broad five-parted leaves, and large yellow flowers. The okra or pod is from two to six inches long, and one inch diameter. When ripe it opens longitudinally in five different places, and discharges a number of heart-shaped seeds. It is a native of the West Indies, where it is cultivated in gardens and enclosures as an article of food. The whole of it is mucilaginous, especially the pods. ‘ These,’ Dr. Wright informs us, ‘ are gathered green, cut into pieces, dried, and sent home as presents, or are boiled in broths or soups for food. It is the chief ingredient in the celebrated pepper-pot of the West Indies, which is a rich olla ; the other articles are either flesh meat, or dried fish and capsicum. This dish is very palatable and nourishing. As a medicine, okra is employed in all cases where emollients and lubricants are indicated.’

3. • H. mutabilis, the changeable rose, has a soft spungy stem, which, by age, becomes ligneous and pithy. It rises to the height of twelve or fourteen feet, sending out branches towards the top, which are hairy, garnished with heart-shaped leaves, cut into five acute angles on their borders, and slightly sawed on their edges ; of a lucid green on their upper side, but pale below. The flowers are produced from the wings of the leaves ; the single are composed of five petals, which spread open, and are at first white, but afterwards change to a bluish-rose color, and, as they decay, turn purple. In the West Indies all these alterations happen on the same day, and the flowers themselves are of no longer duration ; but in Britain the changes are not so sudden. The flowers are surrounded by short, thick, blunt capsules, which are very hairy ; having five cells, which contain many small kidney-shaped seeds, having a fine plume of fibrous down adhering to them.

4. H. rosa Sinensis, the China rose, has an arborescent stem, and egg-pointed sawed leaves. It is a native of the East Indies; but, the seeds having been carried by the French to their West India settlements, it

thence obtained the name

of Martimco rose. Of this there are the double and single flowering kinds ; the seeds of the first frequently produce plants that have only single flowers, but the latter seldom vary to the double kind.

5. H. Syriacus, commonly called althaea fratex, is a native of Syria. It rises with shrubby stalks to the height of eight or ten feet, sending out many woody branches covered with a smooth gray bark, garnished with oval spear-shaped leaves, whose upper parts are frequently divided into three lobes. The flowers come out from the wings of the stalk at every joint of the same year's shoot. They are large, and shaped like those of the mallow, having five large roundish petals which join at their base, spreading open at the top in the shape of an open bell. These appear in August ; and, if the season is not too warm, there will be a succession of flowers till September. The flowers are succeeded by short capsules with five cells, filled with kidney-shaped seeds ; but, unless the season proves warm, they will not ripen in this country. Of this species there are four or five varieties, differing in the color of their flowers : the most common has pale purple flowers with dark bottoms ; another has bright purple flowers with black bottoms ; a third has white flowers with purple bottoms; and a fourth variegated flowers with dark bottoms. There are also two with variegated leaves, which are by some much esteemed. All these varieties are very ornamental in a garden. They may be propagated either by seeds or cuttings. The seeds may be sown in pots filled with light earth about the end of March, and the young plants transplanted about the same time next year. They succeed in full ground, but must be covered in winter whilst young, otherwise they are apt to be destroyed.

6. H. tiliaceus, the maho tree, is a native of both the Indies. It rises with a woody, pithy stem, ten feet high, dividing into several branches

towards the top, which are covered with a woolly down, garnished with heart-shaped leaves ending in acute points They are of a lucid green on their upper side, hoary on the under side, full of large veins, and are placed alternately. The flowers are produced in loose spikes at the ead of the branches, and are of a whitish-yellow color. They are succeeded by short acuminated capsules, opening in five cells, filled with kidney-shaped seeds. It is propagated by seeds. The inner rind is very strong, and of great esteem. Dampier says, ‘ They (the Musketo Indians) make their lines, both for fishing and striking, with the bark of maho, which is a sort of tree or shrub that grows plentifully all over the West Indies, and whose bark is made up of strings or threads very strong : you may draw it off either in flakes or small threads, as you have occasion. It is fit for any manner of cordage, and privateers often make their rigging of it.’

7. II. trionum, Venice mallow, or flower of an hour, is a native of some parts of Italy, and has long been cultivated in the gardens of this country. It rises with a branching stalk a foot and a half high, having many short spines, which are soft, and do not appear unless closely viewed. The leaves are divided into three lobes, which

are deeply jagged almost to the midrib. The flowers come out at the joints of the stalks, upon pretty long foot-stalks. They have a double empalement : the outer being composed of ten long narrow leaves, which join at their base; the inner is of one thin leaf swollen like a bladder, cut into five acute segments at the top, having many longitudinal purple nbs, and is hairy. Both these are permanent, and enclose the capsule after the flower is past. The flower is composed of five obtuse petals, which spread open at the top ; the lower part forming an open bell-shaped flower. These have dark purple bottoms, but are of a pale sulphur color above. In hot weather the flowers continue but a few hours open, whence the English name; but there is a succession of flowers that open daily for a considerable time. It is propagated by seeds, which should be sown where the plants are designed to remain, for they do not well bear transplanting. They require no other culture than to be Kept free from weeds, and thinned where they are too close ; and, if the seeds are permittee, to scatter, the plants will come up fully a? well as if they had been sown.

HICCIUS Doccius, n. s. ‘Corrupted, I fancy, from hie est doctus, this, or here is the learned man.’ — Dr. Johnspn. Used by jugglers of themselves. A cant word for a juggler; one that pliys fast and loose.

An old dull sot, who told the clock For many years at Bridewell dock, At Westminster and Hicks's hall And hicciut doccius played in all ; Where, in all governments and times, H' had been both friend and foe to crimes.

Hudibra*

HIC'COUGH, n. s. & v. n. i Dan. hicken ; HICK'UP, v.n. i Swedish, hicka;

Belg. hik, hickse. A convulsive action of the diaphragm, producing sobs: hickup is a corruption of hiccough.

So by an abbey's skeleton of late I heard an echo supererogate Through imperfection, and the voice restore, As if she had the hiccough o'er and o'er.

Cleaveland.

Quoth he, to bid me not to love, Is to forbid my pulse to move, My beard to grow, my ears to prick up, Or, when I'm in a fit, to hickup. Hudibrai. Sneezing cureth the hiccough, and is profitable unto women in hard labour. Browne's Vulgar Errauri.

If the stomach be hurt, singultus, or hiccough follows. Wiseman. HICCOUGH, or HICKUP, is a spasmodic affection of the stomach, oesophagus, and muscles subservient to deglutition, arising sometimes from some particular stimulus acting on the stomach, esophagus, diaphragm, &c., and sometimes from a general affection of the nervous system. See MEDICINE.

HIC ETAS of Syracuse, an ancient philosopher and astronomer, who taught that the sun and stars were motionless, and that the earth moved round them. This is mentioned by Cicero, and possibly gave the first hint of the true system to Copernicus. He flourished «.bout A. A. C. 344. HICRES (George), a celebrated English di-vine, born in 1642. In 1681 he was made

king's chaplain, and two years after dean of Worcester. The death of Charles II. stopped his farther preferment; for, though his church principles were very high, he manifested too much zeal againt popery to be a favorite with James II. On the revolution, he with many others was deprived for refusing to take the oaths to king William and queen Mary; and soon after, archbishop Sancroft and his colleagues, considering how to maintain episcopal succession among those who adhered to them, Dr. Hickes carried over a list of the deprived clergy to king James ; and with his sanction a private consecration was performed, at which it is said lord Clarendon was present. Dr. Hickes was consecrated suffragan bishop of Thetford, and died in 1715. He wrote 1. Institutiones Grammatics Anglo-Saxonicae, et Maeso-Gothicse. 2. Antiqua Literature. Septentrionalis. 3. Two treatises, one of the Christian priesthood; the other of the dignity of the episcopal order. 4. Jovian, or an answer to Julian the Apostate. Three volumes of sermons : with many temporary controversial pieces on politics and religion.

HICK'WALL, n. s. > Old words for a wood—

HICK'WAY, n. s.) pecker.

HID, part . -\ Sax. brt>an ; Belg.

HID'DEN, part. I hoedan; Teut. huten.

HIDE, v. a, & v. n. v To conceal ; to with—

HIDE AND SEEK, n. s. i hold or withdraw

HI'DER, n. s. J from sight or knowledge : to lie concealed : hide and seek, a play in which some hide themselves and others seek them. For fere almost out of his wit he brayde,

And to his goddes pitously he preide

For socour ; but it mighte not betide :

For drede of his him thoughte that he diede,

And ran into a garden him to hide.

Chaucer. The Monkei Tale.

A vaunt, and quit my sight ; let the earth hide thee !

Shakspeare.

His reasons are as two grains of wheat hid in two bushels of chaff. Id. Merchant of Venice.

Thus fame shall be atchieved, renown on earth ; And what most merits fame, in silence hid. Milton. Other hidden cause

Left them superior. Id.

Blame not the muse that brought those spots to light,

Which ift your splendor hid corrode your light.

Marvell.

Saturnian spite pursues me through the earth, No corners left to hide my long-wished birth. Id.

Seas hid with navies, chariots passing o'er The channel, on a bridge from shore to shore.

Dryden.

Nile hears him knocking at his sevenfold gates, And seeks his hidden spring, and fears his nephews' fates. Id.

Then for my corps a homely grave provide, Which love and me from public scorn may hide.

Id.

A fox, hard run, begged of a countryman to help him to some hiding place. L'Estrange.

With what astonishment and veneration may we look into our own souls, where there are such hidden stores of virtue and knowledge, such inexhausted sources of perfection? Addison.

Hell trembles at the sight, and hides its head In utmost darkness, while on earth each heart Is filled with peace. Rowe's Royal Convert,

Nature and nature's laws lay hid in night : God said, Let Newton be, and all was light. Pope.

The boys and girls would venture to come and play at hide and seek in my hair. Gulliver's Traveli. HIDAGE, HIDAGIUM, was an extraordinary tax payable to the kings of England for every hide of land. This taxation was levied not only in money, but in provision, armour, &c. ; and when the Danes landed in Sandwich, in 994, king Ethelred taxed all his lands by hides ; so that every 310 hides found one ship furnished, and every eight hides furnished one jack and one saddle, to arm for the defence of the kingdom, &c. Sometimes the word hidage was used for the being quit of that tax ; which was also called hidegild, from the Saxon, * a price or ransom paid to save one's skin or hide from beating.'

HIDALGO, in modern history, a title given in Spain to all who are of noble family. The Hidalgos claim a descent from those valiant soldiers who retired into Castile, and the mountains of Asturias, and other remote parts of Spain, on the invasion of the Moors, where, having fortified themselves, they successively descended into the plains, in proportion to the success of their arms : from the notoriety of their persons, or the lands they became possessed of, they acquired the appellation of Hidalgos notorios, Hidalgos de solor conocido, or de casa solariega. Otalora says that the true meaning of Hidalgos de solar conocido is explained by the laws of Castile to be a well-known mansion or possession, the nature of which is particularly explained in the laws of Perditas, which describe three sorts of tenures called devisa, solariega, and behetria. By the first, lands are devised by the ancestor; solariega is a tenure upon another person's manor, and obliges the owner to receive the lord of the fee when necessity obliges him to travel ; and behetria is of the nature of an allodium. In proportion as these aborigines gained ground on the Moors, and increased in their numbers, many private persons distinguished themselves by their valor, and obtained testimonies of their services called cartas de merced, which served them as a foundation of their birth and good descent, without which documents their posterity could not make it appear ; and if, from lapse of time, or other unavoidable accidents, such proofs should happen to be lost or destroyed, the law affords them a remedy, by a declaration, importing, that such persons as are supposed to have had such certificates, may be relieved by making it appear that their ancestors, time immemorial, have al-ways been held and reputed as Hidalgos, and enjoyed the privileges of such, from a strong presumption in their favor; the possession of land having equal force to any other document; which is fully set forth in the Pragmatica of Cordova.

HIDALGO Y COSTILLA (Don Miguel), a priest, who first kindled the insurrection in Mexico, which has resulted in the independence of that country. He was the resident clergyman in the town of Dolores, in the intendenciaot'Goanaxoato, and regarded as a man of talents in early life. His intercourse with the Indian population af forded him opportunities of perceiving their dislike to the Spaniards ; and this led him to irom

the plan of a general revolt. Circumstances hastened the execution of the scheme ; and captain Allende, having collected a few soldiers, inarched to Dolores, where he arrived on the 10th of September 1810, and joined Hidalgo. Allende and the priest, at the head of the insurgents, now pillaged the houses of the Spaniards in the town of San Miguel el Grande; and on the 29th of September gained possession-of Goanaxoato, in the treasury of which town they found a large quantity of coin and silver bars. Don J. Villegas, appointed viceroy by the regency of Cadiz, arrived at this period at Mexico, and sent a body of troops against Hidalgo. His measures at first however were ineffectual ; Hidalgo attached the Indians to his cause, by repealing the tax called tributes, which they had paid ever since their original conquest. From Goanaxoato he marched on Valladolid October the 20th, and was joyfully received by two regiments of militia. Soon after, being proclaimed generalissimo of the Mexican forces, he found himself at the head of eighty regiments, of 1000 men each. He now, therefore, proceeded towards Mexico, when Villegas, having but a handful of troops for its defence, applied to the archbishop of Mexico, and to the inquisition, for a sentence of excommunication against Hidalgo and" his adherents. This awed the Mexicans from joining the insurgents ; disappointed their expectations of assistance; and Hidalgo became irresolute. After having waited in the neighbourhood of the capital till the viceroy had recalled his troops, he began a retreat. At Aculco, however, he was overtaken and

completely defeated, on the 7th of November. He then retired to Goanaxoato, whither he was followed by the Spanish army, who took the place with great slaughter. Hidalgo fled to Guadalaxara; and on the 17th of January, 1811, suffered a further and ruinous defeat at the bfidge of Calderon. One of his own officers delivered him up on the 21st of March, 1811; and having previously been degraded from the priesthood he was put to death on the 27th of July that year.

HIDDENSOE, a small island of Pomerania, off the west coast of the island of Rugen. The pasture is tolerable ; but the inhabitants, who amount to about 500, are chiefly fishermen. It is ten miles long and two broad. Long-. 13° 10’ E., lat. 54° 35’ N.

HIDE, n. s. I Sax. by«e; Belg.

HIDE’EOTJND, adj. \hinde; Teut. hunt. The skin of an animal either raw or dressed ; the human skin in contempt ; a certain quantity of land : hidebound, being in the state in which the bark will not give way to the growth ; harsh ; untractable ; niggardly ; penurious. A horse is said to be hidebound when his skin sticks so hard to his ribs and back, that you cannot with your hand pull up or loosen the one from the other. It sometimes, comes by poverty and bad keeping ; at other times from over-riding, or a surfeit.

Oh, tiger’s heart, wrapt in a woman’s hide! How could’st thou drain the life-blood of the child ?

Shakspt’are.

A root of a tree may be hidebound, but it will not keep open without somewhat (ut into it. Bacon.

One of the first things was a more particular Inquisition than had been before of every hide of land within the precincts of his conquest, and how they were holden. Wotton.

And still the harsher and hidebowider The damsels prove, become the fonder.

Hudibrtu.

His mantle, now his hide, with rugged hairs Cleaves to his back ; a famished face he bears.

Dryden.

The trembling weapon past

Through nine bull hides, each under other placed On his broad shield. Id.

Pisistratus was first to grasp their hands, And spread soft hides upon the yellow sands.

Pope.

Like stinted hidebound trees, that just have got Sufficient sap at once to bear and rot. Swift.

HIDE is particularly applied to the skin of large cattle, as bullocks, cows, horses, &c. Hides are either raw, that is just as taken off the carcase : salted, or seasoned with salt, alum, and saltpetre, to prevent their spoiling : or curried and tanned. See TANNING.

HIDE OF LAND was as much as would maintain a family : some call it sixty, some eighty, and others 100 acres.

HID'EOUS, adj. ˆ Fr. hideux. Horrible; HID'EOUSLY, adv. > dreadful ; deformed ; HID'EOUSNESS, n.s. J shocking : it is used by Spenser in a sense not now retained ; detestable.

With that the chorle his clubbe gan shake ; Frowning his eyen gan to make An hideous chere, as man in rage ; For yre he brent in his viage.

Chaucer. Romaunt of the Rose. The hrighte swerdes weuten to and fro So hideously, that with the leste stroke, It seined that it wolde felle an oke.

Id. The Knightes Tale. O hideous hanger of dominion ! Spenser.

I arm myself

To welcome the condition of the time ; Which cannot look more hideously on me, Than 1 have drawn it in my fantasy. Shakspeare.

Some, monsters in my thoughts, Too hideous to be shewn. Id. Othello.

I fled, and cryed out death ! Hell trembled at the hideous name, and sighed From all her caves, and back resounded death.

Milton.

If he could have turned nimself to as many forma as Proteus, every form should have been made hid»- ous. Sidney.

Her eyes grew stiffened, and with sulphur burn •, Her hideous looks and hellish form return ; Her curling snakes with hissings fill the place, And open all the furies of her face. Dtgden.

This, in the present application, is hideously profane ; but the sense is intelligible.

Collier's Defence.

'Tis forced through the hiatuses at the bottom of the sea with such vehemence, that it puts the sea into the most horrible disorder, making it rage and roar with the most hideous and amazing noise.

Woodward's Natural History. What avails it that indulgent heaven From mortal eyes, has wrapt the woes to come If we, ingenious, to torment ourselves, Grow pale at hideous fictions of our own '

Armstrong.

HIE

HIE

HIDJELLE,HiJALi, or lNGELLEE,a town in the province of Bengal, situated on the west bank of the Hooghly River, fifty-five miles S.S.W, from Calcutta, During the Mogul government it was the capital of a fouj dairy or military station, comprehending 1098 square miles. This district is situated on the low margin of the river Hooghly, where it unites with the bay of Bengal, it was first dismembered from the Soubah of Orissa, and annexed to Bengal, in the reign of Shah Jehan; and is very productive in grain and salt. 'The salt land 13 that portion exposed to the overflowing of the tides, usually called the churs or banks ; where mounds of earth, strongly impregnated with saline particles, named kalaries or working-places, are formed. Each of these

heaps is estimated on a medium to yield 233 maunds (eighty ‘bs. each) of salt, requiring the labor of seven manufacturers ; who, by an easy process of filtration and boiling, are enabled to complete their operations from November to June, before the setting in of the periodical rains.’ Hamilton.

HIE, v. n. Sax. {nesan; Goth heya. To hasten ; to go in haste.

Thus in hir doubles as they stode — Waxing the se, coming the flode — Was cried : ‘ To ship goe every wight :’ Then was, but hie that hie him might.

Chaucer’s Dreame.

When they had marked the changed skies, They wist their hour was spent ; then each to rest Yiim’hies. Id. Faerie Queene.

My will is even this, That presently you hie you home to bed.

Shakspeare. Well, I will hie, And so bestow these papers as you bade me. Id.

Auster spyed him ; Cruel Auster hither hyed him. Crashate.

The snake no sooner hist, But virtue heard it, and away she hyed. Id.

Some to the-shores do fly, Some to the woods, or whither fear advised : But running from, all to destruction hie. Darnel. Thither, full fraught with mischievous revenge, Accursed, and in a cursed hour, he hies. Milton.

Thus he advised me, on yon aged tree Hanc up thy lute, and hie thee to the sea.

Waller. The youth, returning to his mistress Aie».

Dryden.

His folded flocks secure, the shepherd home Hies merry hearted, and by turns relieves The ruddy milk-maid of her brimming, pail.

Thomson’s Sea»ons.

HIELMAR, a lake between Sudermannland and Nericia, in the central part of Sweden, communicating with the lake of Malar. It is about forty miles long, but of small width ; and contains a number of rocks and islands. Sixty miles west of Stockholm.

HFERARCH, nr s. } Fr. hierarque; Gr.ttpoj;,

HIERARCHICAL, adj. > a priest, and apˆoc chief.

HIERARCHY, n. s. j The chief of a sacred

order : hierarchy, a sacred government; rank, or

subordination of holy beings ; the ecclesiastical

establishment.

Jehovah, from the summit of the sky, Environed with his winged hierarchy, The world surveyed. Sandys.

The presbytery had more sympathy with the discipline of Scotland than the hierarchy of England.

Bacon.

He rounds the air, and breaks the hymnick notes Tn' birds, heav'n's choristers, organick throats j Which, if they did not die, might seem to be A tenth'rank in the heavenly hierarchy. Donne,

Out of the hierarchies of angels sheen, The gentle Gabriel called he from the rest.

Fairfax.

The blessedest of mortal wights, now questionless the highest saint in the -celestial hierarchy, began to be «o importuned, that a great part of the divine liturgy was addressed solely to her. Howel.

Angels, by imperial summons 'called, Forthwith from all the ends of heaven appeared, Under their hierarchs in orders bright. Milto: .

These the supreme king Exalted to such power, and gave to rule, Each in his hierarchy, the orders bright. Id

When an old Scotch covenanter shall be The champion for the English hierarchy,

ManeU.

While the old Levitical hierarchy continued, it was part of the

ministerial office to slay the sacrifices.

South.

Consider what I have written, from regard for the church established under the hierarchy of bishops.

Swift.

HIERACITES, in church history, Christian heretics in the third century : so called from their leader Hierax, a philosopher of Egypt ; who taught that Melchisedek was the Holy Ghost, denied thfe resurrection, and condemned marriage.

HIERACIUM, hawkweed ; a genus of the polygamia aequalis order, and syngenesia class of plants ; natural order forty-ninth, composite. The receptacle is naked : CAL. imbricated and ovate ; the pappus simple and sessite. The most common species are,

1. JH. aurantiacum, commonly called Grim the collier, has many oblong, oval, entire leaves, crowning the root ; an upright, single, hairy, and almost leafless stalk, a foot high, terminated by reddish orange-colored flowers in a corymbus. These flowers have dark, oval, ash-colored, calyces; whence the name. This is the only species cultivated in gardens It is propagated by seeds or parting the roots-. The seed may be sown in autumn or spring. In June, when the plants are two or three inches high, they may be picked out and planted in beds, where they must be left till the next autumn, and then transplanted where they are to re-main.

2. H. Pilos ella, the mouse-ear, has blossoms red on the outside, and pale yellow within; the cups set thick with black hairs. The flowers open at 8 A. M., and close about ~2 P. M. It grows commonly in dry pastures in England ; it has a milky juice, but is less bitter and astringent than is usual with plants of that class. It is reckoned hurtful to sheep. Goats eat it ; sheep are not fond of it ; horses and swine refuse it.

3. H. umbellatum grows to the height of three feet, with an erect and firm stalk, terminated with an umbel of yellow flowers. It is a native of Scotland, and grows in rough stony places, but is not very common. The flowers are

sometimes used for dyeing yarn of a fine yellow eolor,

HIERAPOLIS, in ancient geography, a town of Phrygia, abounding in hot springs, and having its name from the number of its temples. There iire coins exhibiting figures of various gods who had temples here. Of this place was Epictetus the stoic philosopher. It is now called Pambouk ; and is situated near the Scamander, on a portion of Mount Mesogis, six miles from Laodicpa, The worship of the great Syrian goddess, called Atergatis, was established in this town ; but no traces now remain of her temple. The only remarkable monument is a subterraneous canal, which conducts the water from the mountains of the north for the distance of four leagues.

HIERARCHY. Some of the rabbies reckon four, others ten, orders or ranks of angels ; and give them different names according to their supposed degrees of power and knowledge.

HIERES, ISLES OF, is the name of a cluster of three small islands of the Mediterranean, neat the south coast of France, and about eleven miles from the town of Hieres. They are called Porquerolles, Porticros, and the isle of Titan. Giens, sometimes reckoned one of them, is more properly a peninsula. Porquerolles, the largest, does not contain 100 inhabitants. Porticros, three leagues farther to the east, and more ele*-vated, has a small harbour, but only fifty inhabitants. All of them are defended by forts.

HIERES, a town in the department of the Var France, nine miles east of Toulon. It is at the foot of a steep rock or mountain, surrounded by a beautiful plain. The old town, which stood on the high part of the mountain, has been abandoned. On entering the new town the streets are found to be mean and dirty, and singularly contrasted with the neat white houses of which they are composed. The environs are pleasant; abounding with gardens containing the best fruits, particularly oranges, and covered with, verdure throughout the year. But the air of Hieres is unhealthy, owing to exhalations from the marshes, and from a salt lake in the neighbourhood. Here great

quantities of salt are obtained, and exported, as well as oil, wine, and fruit, to Toulon and Marseilles. Hieres was formerly a sea-port of consequence : but the sea has now retired to the distance of a league. The celebrated Massillon was born here. Population

7000.

HIERO I., king of Syracuse, succeeded his brother Gelon, A. A. C. 478. He made war against Theron, tyrant of Agrigentum, and took Himera. He gained three crowns at the Olympic games by horse and chariot racing, for which he iis celebrated by Pindar ; whose conversation, with that of other literati, rendered him humane and liberal. He died A. A. C. 467. ‘

HIEKO II., king of Syracuse, was a descendant of Gelon, and was eleeted king A. A. C. 268. He carried on war against thp Romans for some time along with the Carthaginians; but made peace, and continued ever after their firm ally. He was a relation of Archimedes ; and was a prince of great learning and virtue, and encouraged arts and commerce. He died A. A. C.

HIKRO’S CROWN, in hydrostatics. Hiefo II, having furnished a goldsmith with a quantity of fine gold to make a crown, suspected, upon receiving it, that he had been cheated, by his using a greater quantity of silver alloy than was necessary. He applied to Archimedes to discover the fraud without defacing the crown ; which he did by this experiment : He procured a ball of pure gold and another of silver, each exactly of the same weight with the crown ; and judging that if the crown were of pure gold it would be of equa1 bulk, and, upon putting it in water, expel an equal quantity of the water with the golden ball ; if of silver, it would expel an equal quantity with the silver one ; but, if of an intermediate quality, the quantity of water expelled would be in, exact proportion. This upon trial he found to be the case ; ana, by comparing the quantities of water displaced, discovered the proportions of gold and silver in the crown.

HIEROCLES, a cruel persecutor of the Christians, and a violent promoter of the persecution under Dioclesian, flourished A D. 302. He wrote some books against the Christian religion ; in which he aims to show some inconsistencies in the Holy Scriptures, and compares the miracles of ApolloniusTyanaeus to those of our Saviour. He was refuted by Lactantius and Eusebius. The remains of his works were collected into one volume by bishop Pearson ; and published in 1654, with a learned dissertation prefixed.

HIEROCLES, a Platonic philosopher of the fifth century, who taught at

Alexandria, and was admired for his eloquence. He wrote seven books upon Providence and Fate, dedicated to the philosopher Olympiodorus, who by his embassies did the Romans great services under Honorius and Theodosius II. But these books are lost, and we only know them by the extracts in Photius. He wrote also a Commentary upon the golden verses of Pythagoras ; which is still extant, and has been several times published with those verses.

HIE'ROGLYPH, 7». s. -^ Fr. hieroglyphe ;

HIEROGLYPHIC, n. s. ^Gr. «poc, yXv$o>.

HIEROGLYPH'ICAL, adj. i An emblem ; a

HIEROGLYPH'ICALLY, adv. s figure by which a word was implied. Hieroglyphics werp used before the alphabet was invented. Hieroglyph seems to be the proper substantive, and hieroglyphic the adjective. The. art of. writing in picture : charged with hieroglyphical sculpture ; emblematical.

In tins place stands a stately hieroglyphical obelisk of Thebau marble. Sandys's Travels.

The Egyptian serpent figures time, And, stripped, returns into his prime ; If my affection thou would'st win, First cast thy hieroglyphick skin. Cleaveland.

4 lamp amongst the Egyptians is the hieroglyphick of lifp. Wilkint's Dcedalus.

The original of tne conceit was probably hieroglyphical, which after became mythological, and, by a process of tradition, stole into a total verity, which was but partly true in its morality.

Browne's Vulgar Errors.

This hieroglyphick of the Egyptians was erected for parental affection, manifested in the protection of her young ones, when her nest was set on fire.

Id.

HIEROGLYPHICS.

Others have spoken emblematically and hieroglyphically as the Egyptians, and the phoenix was the hieroglyphick of the sun. Browne.

The first writing men used was only the single pictures and gravings of the things they would represent, •which way of expression was afterwards called hieroglyphic h. Woodward.

Between the statues obelisks were placed, And the learned walls with hieroglyphicks graced.

Pope.

No brute can endure the taste of strong liquor, and consequently it is against all the rules of hierogly-phich to assign any animals as patrons of punch.

Swift.

once I was well versed in the forgotten

Etruscan letters, and — were I so minded — Could make their hieroglyphic* plainer than Your alphabet. The Deformed Transformed.

HIEROGLYPHICS were in use among the Egyptians, and that as well in their writings as inscriptions ; being the figures of various aui-mals, the parts of human bodies, and mechanical instruments. It was the custom to have the walls, doors, &c., of their temples, obelisks, &c., engraven with such figures. Hieroglyphics are properly emblems or signs of divine, sacred, or supernatural things ; by which they are distinguished from common symbols, which are signs of sensible and natural things. Hermes Trismegistus is commonly esteemed the inventor of hieroglypnics : he first introduced them into the heathen theology, whence they have been transplanted into the Jewish and Christian. Sacred things, says Hippocrates, should only be communicated to sacred persons. Hence the ancient Egyptians communicated to none but their kings and priests, and those who were to succeed to the priesthood and the crown, the secrets of nature, and of their morality and history ; and this they did by a kind of cabbala, which, at the same time that it instructed then, only amused the rest of the people. Hence the use of hieroglyphics, or mystic figures, to veil their morality, politics, &c., from profane eyes. This author and many others do not keep to the precise character of a

hieroglyphic, but apply it to profane as well as divine things. Hieroglyphics are a kind of real characters, which do not only denote, but in some measure express the things. Thus, according to Clemens Alexandrinus, (Stroit). v.) a lion is the hieroglyphic of strength and fortitude ; a bullock, of agriculture ; a horse, of liberty ; a sphinx, of subtlety, &c. Such is the opinion that has generally been embraced, both by ancient and modern writers, of the origin and use of hieroglyphics. It has been almost uniformly maintained, that they were invented by the Egyptian priests to conceal their wisdom from the knowledge of the vulgar ; but the late bishop Warburton has, with much ingenuity and learning, endeavoured to show that this account is erroneous. He thinks the first kind of hieroglyphics were mere pictures, because the most natural way of communicating our conceptions, by marks or figures, was by tracing out the images of things; and this is verified in the case of the Mexicans, whose only method of writing their laws and history was by this picture writing. But the hieroglyphics invented by the Egyptians were an improvement on this “rude

and inconvenient essay towards writing, for they contrived to make them both pictures and characters. In order to effect this improvement, they were obliged to proceed gradually, by first making the principal circumstance of the subject stand for the whole ; as in the hieroglyphics of Horapollo, which represent a battle of two armies in array by two hands, one holding a shield and the other a bow : then putting the instrument of the thing, whether real or metaphorical, for the thing itself, as an eye and sceptre to represent a monarch, a ship and pilot the governor of the universe, &c. ; and finally, by making one thing stand for or represent another, where their observations of nature, or traditional superstitions led them to discover or imagine any resemblance : thus the universe was designed by a serpent in a circle, whose variegated spots denoted the stars ; and a man who had nobly surmounted his misfortunes was represented by the skin of the hyaena, because this was supposed to furnish an invulnerable defence in battle. The Chinese writing, he observes, was the next kind of improvement in the use of hieroglyphics. The Egyptians joined characteristic marks to images ; the Chinese threw out the images and retained only the contracted marks, and from these marks proceeded letters. The general concurrence of different people, in this method of recording their thoughts, can never be supposed to be the effect of imitation, sinister views, or chance ; but must be considered as the uniform voice of nature speaking to the rude conceptions of mankind ; for not only the Chinese of the East, the Mexicans of the West, and the

Egyptians of the South, but the Scythians likewise of the North, and the intermediate inhabitants of the earth, *viz.* the Indians, Phoenicians, Ethiopians, &c., used the same way of writing by picture and hieroglyphic. He farther shows, that the several species ot hieroglyphic writing took their rise from nature and necessity, and not from choice and artifice, by tracing, at large the origin and progress of the art of speech. He proceeds to show how, in process of time, the Egyptian hieroglyphics came to be employed for the vehicle of mystery. They used their hieroglyphics two ways; the one more simple, by putting the part for the wnole which was the curiologic hieroglyphic ; and the other more artificial, by putting one thing ot resembling qualities for another, called the tropic-hieroglyphic : thus the moon was sometimes represented by a half circle, and sometimes by a cynocephalus. They employed their proper hieroglyphics to record openly and plainly their laws, policies, public morals, and history, and all kinds of civil matters : this is evident from their obelisks, which were full of hieroglyphic characters, designed to record singular events, memorable actions, and new inventions ; and also from the celebrated inscription on the tem-ple of Minerva at Sais, where an infant, an old man, a hawk, a fish, and a river-horse, expressed this moral sentence : ‘ All you who come into the world and go out of it, know this, that the gods hate impudence.’ However, the tropical hieroglyphics, which were employed to divulge, gradually produced symbols which were designed to secrete or conceal : thus Egypt was sometimes

expressed by the crocodile, sometimes by a burning ceuser with a heart upon it ; where the simplicity of the first representation, and the abstruseness of the latter, snow that the one was a tropical hieroglyphic for communication, and the other a tropical svmbol invented for secrecy. Enigmatic symbols wereiafterwards formed by the assemblage of different things, or of their properties that were less

known ; and, though they might have been intelligible at first, yet when the art of writing was invented, hieroglyphics were more generally disused ; the people forgot the signification of them; and the priests, retaining and cultivating the knowledge of them, because they were the repositories of their learning and history, at length applied them to the purpose of preserving the secrets of their religion. Sir John Marsham thinks that symbols were the original of animal worship in Egypt (Can. Chron. p. 58) : because in these was recorded the history of their greater deities, their kings, and lawgivers, represented by animals and other creatures. The symbol of each god was well known and familiar to his worshippers, by means of the popular paintings and engravings on their temples and other sacred monuments, so that the symbol presenting the idea of the god, and that idea exciting sentiments of religion, it was natural for them, in their addresses to any particular god, to turn to his representative mark or symbol ; especially when we consider, that the Egyptian priests feigned a divine original for hieroglyphic characters, in order to increase the veneration of the people for them. These would of course bring on a relative devotion to these symbolic figures, which, when it came to be paid to the living animal, would soon terminate in an ultimate worship. Another consequence of the sacredness of the hieroglyphic characters was, that it disposed the more superstitious to engrave them on gems, and wear them as amu-lets or charms. This magical abuse seems not to have been much earlier than the established worship of the god Serapis, which happened under the Ptolemies, and was first brought to the general knowledge of the world by certain Christian heretics and natives of Egypt, who had mixed a number of Pagan superstitions with their Christianity. These gems, called abraxas, are frequently to be met with in the cabinets of the curious, and are engraven with all kinds of hieroglyphic characters. To these abraxas succeeded the talismans. See ABRAXAS.

HIEROGRAMMATEI,HiEROGRAMMATiSTS, Ispoypa/i/iarac, i. e holy registers, were an order of priests among the ancient Egyptians, who presided over religion and learning. They had the care of the hieroglyphics, and were the ex-positors of religious doctrines. They were regarded as a kind of prophets ; and it is said, that one of them predicted to an Egyptian king, that an Israelite (meaning Moses), eminent for his qualifications and achievements, would depress the Egyptian monarchy. The hierogrammatei were always near the king, to assist him with their information and counsels. The better to fit them for this, they made use of the knowledge they had acquired in the motions of the celestial luminaries, as well as the writings of their pre-

decessors, wherein their function and duties were delivered. They were exempted from all civil employments, were reputed the first persons in dignity next the king, and bore a kind of sceptre in form of a ploughshare. After Egypt became a Roman province they sunk into neglect.

HIEROG'RAPHY, n. s. Gr. «p6c and ypdˆw. Holy writing.

HIEROMANCY, HIEROMANTIA, upopav-ua, in antiquity, that species of divination which predicted future events from observing the various things offered in sacrifice. See DIVINATION and SACRIFICE.

HIEROMENIA, in ancient Greek chronology, the month in which the Nemean games were celebrated, called also Boedromion.

HIEROMNEMON, Gr. from wpoc, sacred, and pvrjftuv, a remembrancer, an officer in the ancient Greek church, whose principal function was to stand behind the patriarch at the sacraments, ceremonies, &c., and show him the prayers, psalms, &c., which he was to rehearse. He also clothed the patriarch in his pontifical robes, and assigned the places of all those who had a right to be around him when seated on his throne, as the master of the ceremonies now does to the pope.

HIEROMNEMON, in Grecian antiquity, a delegate chosen by lot, and sent to the great council of the Amphictyons, to take care of what concerned religion. The hieromnemones were reckoned more honorable than the other members of that assembly, the general meetings of which were always summoned by them, and their names were prefixed to the decrees made by that council.

HIEROMNEMON was also the name of a stone used by the ancient Greeks in divination, but no description of it is extant.

HIER'OPHANT, n. s. Gr. Upo0dj>r»jc. One who teaches rules of religion ; a priest.

Herein the wantonness of poets, and the crafts of their heathenish priests and hierophants, abundantly gratified the fancies of the people. Hale.

HlEROPHANT, HlEROPHANTAjOr HlEROPHANTES, from Upof, holy, and <paiva>, I appear; a priest among the Athenians, who was properly the chief person that officiated in the eleusinia. This office

was first executed by Eumolpus, and continued in his family for near 1200 years; though, when any person was appointed to this dignity, he was required always to live in celibacy. Apollodorus observes, that the hierophantes instructed persons initiated into their religion in the mysteries and duties thereof, and hence he derived his name : for the same reason he was called prophetes, the prophet. He had officers under him to assist him, who were also called prophetes, and exeges, i. e. explainers of divine things. They dressed and adorned the statues of the gods, and bore them in processions and solemn ceremonies.

HIEROPHYLAX, an officer in the Greek church, keeper of the holy utensils, vestments, &c.

HIERTING, or JETTING, a sea-port town of Denmark, in North Jutland, at the mouth of the Warde, with a good harbour : twenty-two miles north-west of Ripen. Long. 8° 22’ E., lat. 55° 29’ N.

HIGGINSON, Francis, an eminent preacher, was bora in England, and received his degrees from Emanuel college, Cambridge. He then embraced the ecclesiastical profession, and settled at Lancaster, where he soon acquired a high reputation for pulpit eloquence. But he subsequently left the English church, and became a convert to the doctrines and manners of the puritans. His eloquence and fervor, however, procured him the offer of some of the best livings in the country ; but he refused them on account of his opinions, and supported himself by keeping a school. When the company of Massachusetts Bay began to form a plantation there in

1628, they applied to Mr. Higginson to go thither and prosecute his ecclesiastical labours. He promptly acceded to the request, and in May,

1629, set sail from the Isle of Wight, and on the 29th of the ensuing June, arrived in Salem harbor. it is related that when the ship was receding from the coast of England, he called up his children and the other passengers, and said to them, ” We will not say, as the Separatists were wont to say at their leaving of England, Farewell, Babylon ! farewell, Rome ! but we will say, Farewell, dear England! farewell, the church of God in England, and all Christian friends there ! We do not go to New England as separatists from the church of England, though we cannot but separate from the corruptions in it, but we go to practise the positive part of church reformation, and propagate the gospel in America.” There were but seven houses in Salem at the time of his arrival, but he immediately entered upon the performance of his duties. These, however, he was not destined to discharge long, for he died in August, 1630. He wrote an account of New England, entitled, A short and true Description of the Discoveries and Commodities of the Country, which is printed in the first volume of the Collections of the Historical Society of Massachusetts. One of his sons, also named Francis, who was an excellent scholar, kept a school for some time in New England, but finally settled in the county of Westmoreland, in his native country. He wrote a book against the Society of Friends, called the Irreligion of Northern Quakers, said to be the first publication against that sect. He also published a treatise, De quinque maximis Luminibus ; De Luce increatd ; De Luce creatd ; De Lumina Natura, Gratiee et Gloria.

HIG’GLE, v. n. } Probably a

HIG’GLEDIT-PIGGLEDY, adv. / corruption of

HIG’GLER, n. s. * haggle. To be

penurious ; to sell provisions from door to door ; the adverb is a cant woid for confusedly.

HIGH, adj. Sax. heah, his ; Goth., Swed., and Teut. ha ; Dan. hay.

Long upwards ; rising above from the surface, or from the centre : opposed to deep, or long downward.

Their Andes, or mountains, were far higher than those with us ; whereby the remnants of the generation of men were, in such a particular deluge, saved.

Bacon.

The higher parts of the earth being continually spending, and the

lower continually gaining, they must of necessity at length come to an equality.

Burnet's Theory,

Fast did they fly as them their feete could bear, High over hilles and lowly over dales.

Spenser. Faerie Queene. They meet to hear and answer such high things.

Shahspeare.

Boastful ; ostentatious.

His forces, after all the high discourses, amounted really but to eighteen hundred foot. Clarendon.

Arrogant ; proud ; lofty.

The governor made himself merry with his high and threatening language, and sent him word he would neither give nor receive quarter. Clarendon.

Severe ; oppressive.

When there appeareth on either side an high hand, violent prosecution, cunning advantages taken, and combination, then is the virtue of a judge seen.

Bacon.

Noble ; illustrious.

Trust me, I am exceeding weary. — I had thought weariness durst not have attacked so high blood — It doth me, though it discolours the complexion of my greatness to acknowledge it.

Shakspeare.

Violent; tempestous ; loud. Applied to the wind.

More ships in calms on a deceitful coast, Or unseen rocks, than in high storms are lost.

Denham. Spiders cannot weave their nets in a high wind.

Duppa. At length the winds are raised, the storm blows

high ;

Be it your care, my friends, to keep it up In its full fury. Addison't Cato.

Tumultuous ; turbulent ; ungovernable.

Not only tears

Rained at their eyes ; but high winds worse within, Began to rise ; high passions, anger, Mistrust, suspicion, discord, hate, shook, sore Their inward state of mind. Milton.

Can heav'nly minds such high resentment show, Or exercise their spite in human woe ? Dryden.

Full; complete: applied to time; now used only in cursory speech.

High time now 'gan it wax for Una fair, To think of those her captive parents dear.

Faerie Queene.

Sweet warriour, when shall I have peace with you ? High time it is this war now ended were. Spetuer.

It was high time to do so, for it was now certain that forces were already upon their march towards the West. Clarendon.

It was hiah time for the lords to look about them.

Id.

Raised to any, great degree: as, a high pleasure ; high luxury; a high performance; a high color.

Solomon lived at ease, and ful Of honour, wealth, high fare. Milton.

High sauces and spices ate fetched from the Indies.

Baker.

Advancing in latitude from the line. They are forced to take their

course either high to the North, or low to the South. Abbot.

At the most perfect state ; in the meridian : as, by the sun it is high noon : whence probably the foregoing expression, high time.

It is vet high day, neither is it time that the cattle should be gathered." Gen. xxix. 7.

Far advanced into antiquity. The nominal observation of the several days of the

veek is very high, and as old as the ancient Egyptians, who named the same according to the seven planets.

Browne.

Dear ; exorbitant in price.

If they must be good at so high a rate, they know they may be safe at a cheaper. South.

Capital ; great ; opposed to little : as, high treason, in opposition to petty.

HIGH, n. s. High place ; elevation ; superior region : only used with from and on.

Which when the king of gods beheld from high, He sighed. Dryden.

On HIGH. Aloft; above; into superior regions.

Wide is the fronting gate, and raised on high, With adamantine columns threats the sky. Dryden.

HIGH is much used in composition with variety of meaning.

Hl'GH-BLEST. Supremely happy.

The good which we enjoy from heaven descends ; But that from us ought should ascend to heaven, So prevalent, as to concern the mind Of God high-blest, or to incline his will, Hard to belief may seem. Milton.

HI'GH-BLOWN. Swelled much with wind ; much inflated.

I have ventured, •

Like little wanton boys that swim on bladders,

These many Summers on a sea of glory ;

But far beyond my depth : my high-blown pride

At length, broke under me, and now has left me,

Weary, and old with service, to the mercy

Of a rude stream, that must for ever hide me.

Shakspeare.

Hl'GH-BORN. Of noble extraction. Cast round your eyes

Upon the high-born beauties of the court ;

There chuse some worthy partner of your heart.

Rowe.

HI'GH-BUILT, adj. Of lofty structure.

I know him by his stride, The giant Harapha of Gath ; his look Haughty as is his pile, high-built and proud. Milton. Covered with lofty buildings.

ID dreadful wars

The high-built elephant his castle rears, Looks down on man below, and strikes the stars.

Creech.

HIGH-CO'LORED. Having a deep or glaring color.

A fever in a rancid oily blood produces a scorbutic fever, with high-coloured urine, and spots in the skin.

Flayer. HI'GH-DESIGNING. Having great schemes.

His warlike mind his soul devoid of fear, His high-designing thoughts were figured there.

Dryden.

HI’GH-FED. Pampered. A favourite mule, high-fed, and in the pride of flesh and mettle, would still be bragging of his family.

L’ Estrange.

HI’GH-FLAMING. Throwing the flame to a great height.

Hecatombs of bulls to Neptune slain, High-flaming, please the monarch of the main.

Pope.

HI’GH-FLIER, n.s. One that carries his opinions to extravagance.

She openly profcsst;th herself to be a high-flier \ and it is not improbable she may also be a Papist at heart.

Swift.

HI’GH-FLOWN, adj. High and flown, from

fly—

Elevated ; proud.

This stiff necked pride nor art nor force can bend, Nor higft-Jlown hopes to Reason’s lure descend.

Denham.

Next brave Philotimus in post did ride : Like rising ladders was his climbing mind ; His high-flown thoughts had wings of courtly pride.

Fletcher’s Purple Island. Turgid ; extravagant.

This fable is a high-flown hyperbole upon the miseries of marriage. L’Estrange. HI’GH-FLYING. Extravagant in claims or opinions.

Clip the wings Of their high-flying arbitrary kings.

Dryden’s Virgil. HI’GH-HEAPED, adj. Covered with high piles.

The plenteous board high-heaped with cates divine, And o'er the foaming bowl the laughing wine. Pope. Raised into high piles.

I saw myself the vast unnumbered store Of brass, high-heaped amidst the regal dome.

Pope.

HI'GH-HEELED. Having toe heel of the shoe much raised.

By these embroidered high-heeled shoes, She shall be caught as in a noose. Swift.

HI'GH-HUNG. Hung aloft.

By the high-hung taper's light I could discern his cheeks were glowing red.

Dryden.

HI'GHLAND, n. s. High and land. Mountainous region.

Ladies in the highlands of Scotland use this discipline to their children in the Winter, and find that cold water does them no harm. Locke.

The wondering moon

Beholds her brother's steeds beneath her own; The highlands smoaked, cleft by the piercing rays.

Addison.

HIGHLANDS OF SCOTLAND. See SCOTLAND.

HIGHLAND COUNTY, a county of the state of Ohio, United States, bounded south by Adam's county, east by Pike, north by Ross, Clinton, and Fayette, and west by Clermont. It is watered by Brush and Point creeks, and by the upper streams of the little Miami. Its surface is hilly, and the climate healthy, but it is thinly settled. Hillsborough is the chief town.

HIGHLANDER, n.s. From highland. An inhabitant of mountains ; mountaineer.

His cabinet council of highlanders. Addison,

HIGHLANDERS, a general appellation for the inhabitants of the

mountainous parts of Scotland, to the north and north-west including those of the Hebrides. They are a branch of the ancient Celtae, and are undoubtedly the descendants of the first inhabitants of Britain, as appears from the many monuments of their language, still retained in the most ancient names of places in all parts of the island. The Highlanders, or, as they are often termed by ancient authors, the Caledonians, were always a brave, warlike, and hardy race of people ; and, in the remotest times, seem to have possessed a degree of refinement in sentiments and manners then unknown to the other nations that surrounded them. This appears

not only from their own traditions and poems, but also from the testimony of many ancient authors. This civilisation was probably owing in a great measure to the order of the bards, or Druids, and some other institutions peculiar to this people. The ancient Highlanders lived by hunting alone, till some time after the era of Fingal, who was one of their kings towards the close of the third century. For some ages after that period, they turned their chief attention to the pastoral life, which afforded a less precarious subsistence. Till of lite, agriculture in most parts of the Highlands made little progress. The Highlanders always had a king, and enjoyed a government of their own, till Kenneth II. hav-ing subdued the Pictish kingdom, in 845, transferred thither the seat of royalty. This event proved very unfavorable to the Highlands, which from this period began to decline. The country, no longer awed by the presence of the sovereign, fell into anarchy. The chieftains began to extend their authority, to form factions, and to foment divisions and feuds between contending clans. The laws were either too feeble to bind them, or too remote to take notice of them. Hence sprung all those evils which long disgraced the country, and disturbed the peace of its inhabitants. Robbery or plunder, provided it was committed on any one of an adverse clan, was countenanced : and their reprisals on one another were perpetual. Thus quarrels were handed down from one generation to another, and the whole clan was bound in honor to espouse the cause of every individual that belonged to it. The genius of the people was thus

greatly altered ; and the Highlanders of a few ages back were almost as remarkable for their irregular and disorderly way of life, as their predecessors had been for civilisation and virtue. But one of the strongest features that marked the character of the Highlandprs, in every age, was their hospitality and benevolence to strangers. At night the traveller was always sure to find a hearty welcome in whatever house he should go to ; and the host thought himself happier in giving the entertainment than the guest in receiving it. Even with regard to their enemies, the laws of hospitality were observed with the most sacred regard. They who fought against each other in the day, could join in the night feast, and even sleep together, in the same house. From the same principle, they were, in most cases, so faithful to their trust, that they rarely betrayed any confidence reposed in them. A promise they thought as binding as an oath, and held it equally inviolable and sacred. The Caledonians in all ages have been much addicted to poetry and music. The poems of Ossian, -so universally repeated, and so highly esteemed by every Highlander, are a strong proof of the early proficiency of this people in the poetical art. The genius and character of the Gaelic poetry is well known. It is tender, simple, beautiful, and sublime. Among the ancient Highlanders, the harp was the chief instrument of music. It suited the mildness of their manners, and was well adapted to the peace and quiet which they enjoyed un-der their own kings. In a later period, however, when the constant quarrels of their chiefs, and

the endless feuds of contending clans, turned all their thoughts to war, it was forced to give place to the bag-pipe, an instrument altogether of the martial kind, and therefore well suited to the state of the country at that time. Their dress consisted of alight woollen jacket, or tartan, woven in squares of various colors, in which red, green, blue, and black are most prevalent. The kilt is a short petticoat of the same stuff, reach ing to the knees ; and the hose, or short stockings, are woven in diamonds of red and white, tied under the knee with garters, often beautifully ornamented : the Highlanders have generally a pouch made of the skin of a badger, fox, or other animal, hanging before, in which they keep their tobacco and money, and this part of their dress is generally adorned with silver buttons and tassels ; their plaid is also of tartan, consisting of twelve or thirteen yards of cloth, wrapped round them in a graceful manner, fastened round the middle by a belt, falling to the knees behind, and confined by a broach .or silver pin to the top of the left shoulder : this is often their only cover, both within doors and when obliged to repose in the fields. The truis or trews, which are a sort of tartan pantaloons, are only worn by the gentry,

instead of the kilt. Indeed, Sir John Sinclair contends, that the trews were the most ancient dress of the Highlanders, and that the kilt is of comparatively modern introduction. The Highlanders generally affected to' have their dress of the color of the heath oh which they reposed, probably from a principle of security in time of war, or that they might not be discovered while they lay in the heaths, waiting for their game. Their ancient arms were the broad sword and target, Lochaber axes, and a dirk, to which, before the act for disarming the Highlanders, in 1748, the pistol stuck into the girdle had been added. Always armed with a dirk and pistol, they were ready to resist an assault, or revenge a provocation, as soon as it was given. This circumstance contributed to render them polite and guarded in their behaviour to one another. When embodied by their chieftain, they were armed with a broad sword, a dagger;- a target, a musket, and two pistols. In close engagement, and in broken ranks, they were irresistible. The only foe they dreaded was cavalry.' As soon as the battle was over, most of the troops dispersed, and returned home to dispose of their plunder, and to provide for their families. Their religion was deeply tinctured with superstition. They believed in ghosts and apparitions ; by appearances in the heavens they predicted future events ; they practised charms and incantations for the cure of various diseases; and to some individuals they thought the divinity had communicated a portion of his prescience. The language of the Highlanders is still the Gaelic ; which, with many of their customs and manners, has been secured to them by their mountains and fastnesses, amidst the many revolutions which the rest of the island has undergone in so long a course of ages. That it has been formerly a good deal cultivated, appears from the style of its poems and tales, and from several ancient MSS. that have come down to the present times. To strangers the Gaelic has a forbidding aspect

on account of die number of its quiescent consonants (which are

retained to mark the derivation of words and their variations in case and tense), but its sound is abundantly musical and harmonious, and its genius strong and masculine. See GAELIC. The Highlanders have begun of late years to apply to learning, agriculture, and especially to commerce, for which their country, every where indented with arms of the sea, is peculiarly favorable. Cattle are the chief staple of the country ; but it produces more grain than would supply its inhabitants, if so much of it were not consumed in whisky. That article, however, is thought by physicians to be necessary for the health of the natives, when taken in moderation, on account of the coldness of the climate and the lowness of their diet. The Highlanders are beginning to avail themselves of their mines, woods, wool, and fisheries ; and by a vigorous application, with due encouragement from government, may become a prosperous and vseful people. They are active, persevering, industrious, and economical. They are remarkably bold and adventurous, which qualifies them for being excellent seamen and soldiers. They are generally of a middle size, rather above it than otherwise; their eyes are lively, their features distinctly marked, and their persons strong and well made. Their countenances are open and ingenuous, and their tempers frank and communicative.

HIGH'LY, adv. From high.

With elevation as to place and situation ; aloft.

In a great degree.

Whatever expedients can allay those beats, which break us into different factions, cannot but be useful to the public, and highly tend to its safety. Addison.

1 1 cannot but be highly requisite for us to enliven our faith, by dwelling often on the same considerations. Atterbury.

Proudly ; arrogantly ; ambitiously.

What thou woaldst highly,

That thou wouldst holily ; wouldst not play false, And yet wouldst wrongly win. Shakspeare.

With esteem; with estimation.

Every man that is among you, not to think of himself more highly than he ought to think.

Rom. xii.

HIGH-METTLED. Proud or ardent of spirit.

He fails not in these to keep a stiff rein on a hiyh-mettled Pegasus ; and takes care not to surfeit here, as he has done on other heads, ,by an erroneous almndance. Garth.

HIGH-MI'NDED. Proud; arrogant. Because of unbelief they were broken off, anJ thou standest by faith : be not high-minded, hut fear.

Rom. xi. 20.

My breast I'D burst with straining of my courage, But I will chastise this high-minded strumpet.

Shakspeare.

HIGHMORE(Joseph), esq., an eminent painter, born in London June 13th, 1692, the son of Mr. Edward Highmore, coal merchant. Having an early and strong inclination to painting, his father, wishing to gratify him, made a proposal to his uncle, who was serjeant painter to king VOL. XL

William HI.; but, this failing, he was articled us clerk to an attorney in 1707 ; but so mucii against his inclination, that in three years he resolved to indulge his natural disposition to his favorite art ; and employed his leisure hours in designing, and in studying geometry, perspective, architecture, and anatomy, without any instructors except books. By these exertions he soon arrived at such perfection in his favorite art, that he painted many pictures, which were not only valued highly in his own time, but are now the objects of admiration to painters. On the institution of the academy of painting, sculpture, &c., in London, in 1753, he was elected one of the professors. In 1754 he published in 4to. A Critical Examination of those two Paintings (by Rubens) on the ceiling of the Banqueting House at Whitehall, in which Architecture is introduced so far as relates to Perspective; together with the Discussion of a Question which has been the subject of Debate among Painters. In the solution of this question, he proved, that Rubens and other great painters were mistaken in the practice, and Mr. Kirby and several others in the theory ; and in vol. XVII. of the Monthly Review, he animadverted (anonymously) on Mr. Kirby's unwarrantable treatment of Mr. Ware, and detected his errors, even when he exults in his own superior science. Mr. Highmore, in a

practice of forty-six years, painted many portraits, of which seveial have been engraved. In the historical branch, which was then much less cultivated than it is at present, we shall only mention Hagar and Ishmael, a present to the Foundling hospital : The good Samaritan : The finding of Moses, purchased at his sale by general Lister: Tbellarlowe Family, as described in Clarissa, now in the possession of T. W. Payler, esq. : Clarissa herself: The Graces unveiling Nature, drawn by memory from Rubens : The Clementina of Grandison, and the Queen Mother of Edward IV. with her younger son, &c., in Westminster Abbey ; in the possession of his son. He was the author of various publications which were well received ; but his most capital work was his Practice and Perspective, on the principles of Dr. Brook Taylor, &c., in 1 vol. 4to., 1763. This not only evinced his scientific knowledge of the subiect, but, by its perspicuity, removed the only objection that can be made to the system of Dr. Taylor. His Epistle to an Eminent Painter, published in the Gentleman's Magazine for 1 778, shows that his talents were by no means impaired at the age of eighty-six. Indeed he retained them to the last, and had even strength and spirit sufficient to enable him to ride out daily on horseback the summer before he died. A strong constitution, habitual temperance, and constant attention to his health, in youth as well as in age, preserved his faculties to his eighty-eighth year, when he died March 3rd, 1780. He was interred in Canterbury cathedral, leaving one son, Anthony, educated in his own profession, and a daughter. His tints, like those of Rubens and Vandyke, instead of being impaired, are improved by time. His idea of beauty, when he indulged his fancy, was of the highest kind ; and his knowledge of perspective

gave him great advantages in family pieces, of which he painted more than any one of his time. He could take a likeness by memory as well

as by sitting, as appears by his picture of the duke of Lorraine (afterwards emperor), which Faber engraved; and those of king George II. (in York assembly-room) ; queen Caroline, the two Miss Gunnings, &c.

HI'GHMOST, adj. An irregular word. Highest; topmost.

Now is the sun upon the highmost hill

Of this day's journey. Shakspeare.

HIGHNESS, w. s. From high.

Elevation above the surface ; altitude ; loftiness.

The title of princes; anciently of kings.

Honour is also cleped gret dignitee and highneste. Chaucer. Tfte Persona* Tale. Most royal majesty,

I crave no more than that your highness offered.

Shakspeare.

How long in vain had nature s'.rived to frame A perfect princess, ere her highness came ? Waller.

Beauty and greatness are eminently joined in your royal highness. Dryden.

Your highness much mistakes me,

The first snake was a flatterer — I am none ;

And for my deeds, I only sting when stung.

Byron. Deformed Transformed.

Dignity of nature; supremacy.

Destruction from God was a terror to me, and by reason of his highness I could not endure. Job xxxi.

HIGH-PRINCIPLED. Extravagant in notions of politics.

This seems to be the political creed of all the high-yrincipled men I have met with. Swift.

HIGH-RED. Deeply red.

Oil of turpentine, though clear as water, being digested upon the purely white sugar of lead, has in a short time afforded a high-red tincture. Boyle.

HIGH-SE'ASONED. Piquant to the palate. Be sparing also of salt in the seasoning of all his victuals, and use him not to high-seasoned meats.

Locke. HIGH-SI'GHTED. 'Always looking upwards.

Let high-sighted tyranny range on, Till each man drop by lottery. Shakspeare.

HIGH-SPIRITED. Bold; daring; insolent.

HIGH-STOM'ACHED. Obstinate; lofty. High-stomached are they both, and full of ire ; In rage, deaf as the-sea, hasty as fire. Shakspeare.

HIGHT. This is an imperfect verb, used only in the preterite tense with a passive signification: Sax. betan, to call ; Germ, hessen, to be called. Was named ; was called.

And whan the king that Yarbas hight it wist, As he that had hire loved ever his life, And wowed hire to haven to his wife, Soche sorow as he hath maked, and soche chere, It is a routhe and pile for to here.

Chaucer. Legende of Good Women. Two yonge knightes ligging by and by, Bothe in on armes wrought ful richely ; Of whiche two, Arcite highte that on, And he that other highte Palamon.

Id. The Knightes Tale. The city of the great king hight it well, Wherein eternal peace and happiness doth dwell.

Spenser.

Within this homestead lived, without a prer For crowing loud, the noble Chanticleer ; So hight her cock. Dryden's Nun's Priest.

It is sometimes used as a participle passive r called ; named. It is now obsolete, except in burlesque writings.

Amongst the rest a good old woman was, Hight mother Hubberd. Hubberd's Tale.

Ilearn he hiyht. Pope.

HIGH-TASTED. Gustful; piquant. Flattery still in sugared word betrays, And poison in high-tasted meats conveys. Denham.

HIGH-VI'CED. Enormously wicked.

Be as a planetary plague, when Jove Will o'er some high-viced city hang his poison In the sick air. Shxkspeare.

HIGH-WATER, n. s. High and water. The utmost flow of the tide.

They have a way of draining lands that lie below the high-water, and are something above the low-water mark. Mortimer.

HIGHWA'Y, n. s. High and way. Great road; public path. So few there be

That chuse the narrow path, or seek the right : All keep the broad highway, and take delight With many rather for to go astray. Faerie Queene.

Two inscriptions give a great light to the histories of Appius, who made the highway, and of Fabius the dictator. Addison.

Entering on a broad highway, Where power and titles scattered lay, He strove to pick up all he found. Swift.

Figuratively a train of action, with apparent consequence.

I could mention more trades we have lost, and are in the highway to lose. Child on Trade.

HI'GHWAYMAN, n. s. Highway and man. A robber that plunders on the public roads.

Tis like the friendship of pickpockets and highway-men, that observe strict justice among themselves.

Bent ley.

A remedy like that of giving my money to an high-wayman, before he attempts to take it by force, to prevent the sin of robbery. Swift.

HI'GH-WROUGHT. Accurately finished; nobly labored.

Thou triumphest, victor of the high-wrought day. And the pleased

dame, soft smiling, leadest away.

Pope.

HIJAR (Duke de), a Spanish grandee, mem-ber of the modern Junta of Bayonne, and grand master of the ceremonies to king Joseph Buonaparte. He was of an ancient Castilian family, and born in 1775; during the life of his father he was known by the title of the duke d'Alliaga, and engaged in the study of literature and the fine arts. In 1808 he was summoned to Bayonne by the order of Napoleon; and, after the second abdication of king Charles, appointed to the of-fice of master of the ceremonies to the new sovereign Joseph. He however abandoned the cause of the intruder as soon as the partizans of Ferdinand VII. took active measures to support his authority. Hence the duke was included in the list of Castilian nobles proscribed by the decree of Burgos; on which he retired to London, and remained there till the progress

of events had brought about the restoration of Ferdinand. He was then recalled to Madrid, and in 1814 appointed Spanish ambassador to France. He died in 1817, a short time after having received the order of the Golden Fleece.

HILARIA, in antiquity, feasts celebrated annually with great pomp and joy, by the Romans, on the 8th of the kalends of April, or 25th of March, in honor of Cybele. Every person dressed himself as he pleased, and took the badges of whatever dignity or quality he fancied. The statue of the goddess was carried in procession through the streets, accompanied by multitudes in the most splendid attire. The day before the festival was spent in mourning. Cy-bele represented the earth, which at this time of the year begins to feel the kindly warmth of the spring ; so that this sudden transition from sor-

row to joy was an emblem of the vicissitude of the seasons. The Romans took this feast originally from the Greeks, who called it avafiacnc q. d. ascensus ; the eve of that day they spent in tears and lamentations, and thence denominated it Karaflaffic, descensus. Afterwards the Greeks took the name IXapia from the Romans ; as appears from Photius, in his extract of the life of the philosopher Isidore. Casaubon maintains, that, beside this particular signification, the word was also a general name for any joyful or festival day, whether public, or private and domestic. But Salmasius does not allow of this. Tristan (torn. i. p. 482) distinguishes between hilaria and hilariae. The former, according to him, were public rejoicings; and the latter prayers made in consequence thereof; or even of any private feast or rejoicing, as a marriage, &c. The public lasted several days ; during which all mourning and funeral ceremonies were suspended.

HILARION, the founder of the monastic life in Palestine, was born at Gaza, A. D. 291, of a pagan family, but embraced Christianity ; and, having visited St. Anthony the anchoret in Egypt, followed his example, on returning to his own country, and obtained a great number of followers. He returned at last to the island of Cyprus, where he died in 371.

HILARITY, n. s. Lat. hilaritas. Merriment; gaiety.

Averroes restrained his hilarity, and made no more thereof than Seneca coramendeth, and was allowable in Cato ; that is, a sober incalescence for wine.

Browne.

HILARJUS, an ancient father of the Christian church, who flourished in the fourth century. He was born, as St. Jerome informs us, at Poictiers, of a good family; who gave him a liberal education in the pagan religion. He was advanced to the bishopric of Poictiers A. D. 355, according to Baronius ; and became a most zealous champion for the orthodox faith, particularly against the Arians, who were then gaining ground in France. He assembled several councils there, in which the determinations of the synods of Rimini and Seleucia were condemned. He wrote a treatise concerning synods ; and a famous work in twelve books on the Trinity, which is much admired. He died in the end of the year 367. His works have been published ; but the last

and best edition was given by the Benedictines at Paris in 1693.

HILARIUSE (Joseph), an eminent antiquary, born at Enzesfeld, in Austria, in 1737. In 1751 he joined the Jesuits, and became eminent as a teacher of rhetoric and grammar in the college at Vienna, of which he was appointed praefectus rei nummariae. To acquire a perfect knowledge of ancient coins, he visited Italy; and, in 1770, having renounced the vows of his order, he was appointed director of the imperial cabinet of ancient coins, and dean of philosophy and the fine arts. He was a man of a cheerful temper, extensive knowledge, and irreproachable morals. He died in 1798.

HILARODI, ancient poets among the Greeks, who went about singing songs, somewhat graver than the Ionic pieces, accompanied with some instrument. From the streets they were at last introduced into tragedy, as the magodi were into comedy. They appeared dressed in white, and were crowned with gold At first they wore shoes ; but afterwards they assumed the crepida, being only a sole tied over with a strap.

HILARY (Sr.), or ST. HELIER, the chief town in the Isle of Jersey, having a very commodious harbour on the east side of St. Aubin's Bay, four miles east of St. Aubin's. The town consists of several good streets, and the courts of justice for the island are held here. In the centre of the town stands the court-house, a very stately structure, and near it the parish church, where the service is performed both in French and English. The harbour is defended by a strong castle, the residence of the governor ; it is surrounded by deep trenches and strong walls, and the entrance is by a drawbridge secured by an iron gate. A workhouse and a public hospital have been erected here. Three gazettes are published here weekly in French, and one in English. There are three packets hence to Weymouth weekly, and regular traders to Southampon, and in summer there is a steam boat. On the top ot a high rocky hill, near the town, was discovered, in the year 1785, a mass of stones ranged in a circular form, some perpendicular, and others lying horizontally on the former. It was called a Druidical temple, and was completely covered with earth at the time of discovery. General Conway, then governor, had the stones removed to Park Place, in Berkshire, where they were again erected and disposed in their original form.

HILARY (ST.), a saint of the Roman Calendar, born at Aries in 401. He succeeded Honoratus as bishop of Aries, and presided in the council at Rome in 441. He wrote, 1. Homilies, under the name of Eusebius of Emessa. 2. The Life of St. Honoratus. 3. Opuscula. He died in 449, aged forty-eight.

HILDBURGHAUSEN, SAXE, a small duchy in the interior of Germany, bounded by Saxe-Meinungen and Saxe-Coburg ; it contains a territorial extent of 217 square miles, and about 32,000 inhabitants. The soil is in general poor, particularly in the north, where it comprises a part of the forest of Thuringia ; and there are few manufactures : but woollens, linen, thread, glass, dye-stuffs, salt, and vitriol, are exported in small quantities. The duke holds the fourth

rank among the princes of the house of Saxe, and has a share of a vote in the smaller Germanic diet, and a full vote in the general assembly. His revenue is not more than £20,000 : . but his petty state has its assembly of nobles and town deputies, with an administration divided into the departments of justice, finance, education, police, public works, and the army ; the latter consisting of not more than 250 men. Appeals from the local magistrates go to the council of the duchy, afterwards to the court of justice at Jena. The d uke, in common with other neighbouring princes, is interested in the University of that place.

HILDBURGHAUSEN, a town in the interior of Germany, the capital of the duchy of this name, is situated on the Wurra, and contains about 2500 inhabitants. It has a gymnasium, a seminary for schoolmasters, and some manufactures of cloth. The states of the duchy hold their meetings in the town-hall. It is seventeen miles south-east of Meinungen, and twenty north-west of Coburg.

HILDESHEIM, a province in the south of Hanover, lying between 51° 44’ and 52° 25’ of N. lat. and adjacent to the province of Gottingen. The superficial extent is estimated at 680 square miles, and the population at 130,000. The surface is uneven, particularly in the

south, where it is intersected by the Ham Mountains, and the soil is stony, but in the middle and north it is rich and productive.

This province is watered by the Innerste, the Oker, the Ecker, and the Fuse. The chief products are corn, flax, fruit, and hops : which, as well as cattle and wool, are objects of export. The prevailing religion is the Lutheran. The revenue is estimated at £90,000. Hildesheim was once an independent ecclesiastical state, the bishopric having been founded by Charlemagne. It had a succession of warlike bishops, one of whom having undertaken a contest, in 1519, against the dukes of Brunswick and Hanover, these princes procured a ban of the empire to be issued against him, and took possession of his estates, which they did not restore till 1643, after establishing here the Lutheran doctrines. The treaty of Westphalia placed the bishopric under the protection of Hanover, and thus it continued till 1802, when it was included among the territory given to the king of Prussia. After 1807 it formed a part of the kingdom of Westphalia, and in 1815 it was added by the congress of Vienna to the kingdom of Hanover. It has its own states, and is governed as an independent province, divided into fifteen bailiwics.

HILDESHEIM, a city of Hanover, the chief town of the principality of that name, is of considerable extent, containing 11,000 inhabitants. It was formerly fortified ; but its walls have been demolished, and converted into public walks, and the whole place has an old and very irregular appearance. It stands on a declivity near the Innerste, which, dividing into two branches, forms a beautiful island, covered with gardens. The Old and New Towns have each their own magistrates, but in affairs affecting the general interest, they hold meetings in common. The council and the majority of the citizens are Lutherans : the bishop and a part of the inhabitants

Catholics. The large Gothic cathedral contains the Irmlnsaule, a celebrated monument of the ancient Saxons, supposed to have been the co-lumn which originally supported an image of Arminius, or Herman, the commander, who cut off the legions of Quintilius Varus, and was deified by the Saxons. This relic stands in the front of the grand choir, and supports a chandelier. The Catholics have ten other churches, the Lutherans eight. Here were formerly seven monasteries and collegiate chapters, which have been secularised. The episcopal palace, council-house, the arsenal, public stables, and the mint, are also worth notice. The chief employment of the inhabitants is brewing and the manufacture of yarn and linen. Twenty miles south-east of

Hanover, and twenty west by south of Wolfen buttel.

HILDESLEY (Mark), bishop of Sodor and Man, was the son of Mark Hildesley, rector ol Houghton, and born at Marston in Kent, in 1698. He was educated at Trinity College, Cambridge, and elected a fellow in 1723. In 1724 he was appointed Whitehall preacher; in 1731 vicar of Hitchin, and in 1735 rector of Holwell. He preached generally from memory, and his exemplary conduct in his vicarage and rectory not only gained him the character of a truly primitive priest, but recommended him to the duke of Athol, as the most proper successor to the worthy bishop Wilson, in the see of Sodor and Man ; whose philanthropic design of printing a translation of the whole Bible in the Manks language, bishop Hildesley brought to a happy conclusion, after his consecration in 1755 ; and died within ten days of its publication, December 7th, 1772.

HIL'DING, n.t. Sax. {nld, signifies a lord ; perhaps hilding means originally a little lord, in contempt, for a man that has only the delicacy or bad qualities of high rank ; or a term of reproach abbreviated from hinderling, degenerate. — Johnson. A sorry paltry fellow: also used for a mean woman.

He was some hilding fellow, that had stolen

The horse he rode on. Shakspeare.

If your lordship find him not a hilding, hold me m more in your respect. Id.

A base slave,

A hilding for a livery, a squire's cloth. Id.

Laura, to his lady, was but a kitchen weuch . Helen and Hero, hildtngs and harlots. Id.

This idle toy, this hilding, scorns my power, And sets us all at nought. Howe's Jane Shore.

HILL, n. s.) Sax. \>\\ pyl ; Goth, hoi,

HIL'LOCK, n. s. l/iuugel; Teut. hugeL ; Swed.

HIL'LY, adj. J hygel. An elevation of ground less than a mountain : hillock, a little hill : hilly, . of unequal surface.

And, downward from an hill, under a bent

Ther stood the temple of Mars Armipotent.

Chaucer. Tlie Knightes Tale.

Three sides are sure embarred with crags and hills, The rest is easy, scant to rise espyed ; But mighty bulwarks fence the plainer part : So art helps nature, nature strengtheneth art.

Fairfax

Jerusalem is seated on two hill*, Of height unlike, and turned side to fcide. Id.

Towards the hilly corners of Druina remain yet hei very Aborigines, thrust amongst an assembly of mountains. //• .

Sometime walking not unseen, Hy hedge-row elms, on hillocks green. Milton.

Virgin daughter of Locraine, Sprung of old Anchises' line, May thy brimmed waves for this Their full tribute never miss, From a thousand petty rills

That tumble down the snowy hilla ! Id.

O woods, O fountains, hillocks, dales, and bowers, With other echo late I taught your shades To answer, and resound far other song.

Id. Paradise Lost. My sheep are thoughts, which I both guide and

serve ; Their pasture is fair hillt of fruitless love.

Sidney.

HILL, Rowland, reverend, son of sir Rowland Hill, was born at Hawkstone, in 1744, and educated at Eton and Cambridge. While yet at Eton he embraced the views of the Methodists, and at Cambridge he preached in the prison and in private houses, before entering into holy orders ; he also preached in the tabernacle and chapel of Whitfield, in London — a step which at once identified him with the Calvinistic Methodists. Family influence prevented him, however, from formally joining that body, his avowed predilection for which, at the same time, rendered it extremely difficult for him to obtain ordination in the church. At length he obtained a title to orders, and was ordained deacon. ” Soon after,” says a notice of him, ” this man of God determined upon disobedience to earthly statutes and human canons, that he might be obedient to a heavenly vision, and perform a divine and immortal work. In imitation, therefore, of his illustrious patron and pattern, Whitfield, he soon began to lift up his voice in a wider sphere of labour — to proclaim the gospel to listening crowds in barns, meeting-houses, and, when they were too small or too distant, or not to be procured, in streets and fields, by the highways and hedges.” In 1783 he laid the foundation of Surry chapel, in the Blackfriar’s-road, London, in the duties of which he has spent about the half of every subsequent year, employing the rest of the time in provincial excursions. His sermons are represented to be a singular mixture of solemri exhortations and violent denunciations : sometimes he introduced odd stories, puns, and jokes. He died on the llth of April, 1833.

HILL (Aaron), a poet of considerable eminence, the son of a gentleman of Malmesbury Abbey in Wiltshire, was born in 1685. His fa-ther’s imprudence having cut off his paternal inheritance, he left Westminster school at fourteen years of age, and embarked for Constantinople, to visit lord Paget the English ambassador there, who was his relation. Lord Paget received him with surprise and pleasure, provided him a tutor, and sent him to travel. He accordingly passed through Egypt, Palestine, and Turkey, and returning home with his noble nalron, visited most of the courts of Europe. About 1709 he published his first poem, entitled Camillas, in honour of the earl of Peterborough,

who had been general in Spain ; and being in the same year made master of Drury-lane theatre, he wrote his first tragedy, Elfred, or the Fair Inconstant. In 1710 he became master of the opera-house in the

Haymarket ; when he wrote an < pera called Rinaldo, which met with great success, being the first that Handel set to music after he arrived in England. Unfortunately Mr. Hill was a projector as well as a poet, and in 1715 obtained a patent for extracting oil from beech-nuts ; which undertaking miscarried after engaging three years of his attention. He was also concerned in the first attempt to settle the colony of Georgia, from which he never reaped any advantage. Mr. Hill seems to have lived in perfect harmony with all the writers of his time, except Pope, with whom he had a short paper war, occasioned by that gentleman's introducing him in the Dunciad, as one of the competitors for the prize offered by the goddess of Dulness, in the following lines : —

Then Hill essayed ; scarce vanished out of sight, He buoys up instant, and returns to light ; He bears no token of the sabler streams, And mounts far off among the swans of Thames.

This, though conveying an oblique compliment, roused Mr. Hill to take notice of it ; which he did in a poem written during a journey to the north, entitled The Progress of Wit, a ca-veat for the use of an eminent writer : in the following lines Pope's too well-known disposition is elegantly, yet severely characterised : —

Tuneful Alexis on the Thames' fair side, The ladies' play-thing and the Muses' pride ; With merit popular, with wit polite, Easy tho' vain, and elegant tho' light ; Desiring and deserving others' praise, Poorly accepts a Fame he ne'er repays : Unborn to cherish, sneakingly approves ; And wants the soul to spread the worth he loves.

Pope was very indignant at the ' sneakingly approves,' in the last couplet ; and indeed through the whole controversy afterwards, in which it was generally thought that Hill had much the advantage, Pope seems rather to ex press his repentance by denying the offence, than to vindicate himself, supposing it to have been given. Mr. Hill, besides many other poems, wrote one, called The Northern Sfar, upon the actions of czar Peter the Great; for which he was several years afterwards complimented with a gold medal from the empress Catharine I. according to the czar's desire. He likewise altered some of Shakspeare's plays, and translated some of Voltaire's. His last production was Merope, which was brought upon the stage in Drury-lane by Garrick. He died on the 8th of February, 1749, in the very minute of the earthquake; and, after his decease, four volumes of his works in prose and verse were published in 8vo., and his dramatic works in 2 vols.

HILL (Joseph), an English divine of the seventeenth century, born in Leeds, and educated at St. John's College, Cambridge. He became fellow of Magdalen College, whence he was ejected for nonconformity, in 1662. He became pastor of a congregation at Rotterdam, where he died in 1707. He published an enlarged editi'on of ScV.revelius's Greek Lexicon.

HILX (Sir John), a voluminous writer, born in 1716. Having attended the botanical lectures of the Apothecary's Company, he soon made himself acquainted with the theoretical as well as practical parts of botany; and was employed by the duke of Richmond and lord Petre in the arrangement of their botanic gardens. Assisted by the liberality of these noblemen, he executed a scheme of travelling over the kingdom, to collect the most rare plants ; vrhich he afterwards published by subscription : but the profits of this undertaking did not answer his expectation. He next resorted to the stage, but, after a few unsuccessful attempts, it was found he had no pretensions to the sock or buskin ; so he returned to his botanical pursuits, and his business as an apothecary. At length, about 1746, he translated from the Greek, Theophrastus's Tract on Gems, which he published by subscription ; and which, being well executed, procured him friends, reputation, and money. Encouraged by this, he engaged in works of greater extent and importance. The first was A general Natural History, in 3 vols. folio. He next engaged with George Lewis Scott, esq., in furnishing a Supplement to Chambers's Dictionary. He at the same time started the British Magazine ; and while he was engaged in a great number of these and other works, some of which seemed to require the continued attention of a whole life, he carried on a daily essay, under the title of the Inspector. Amidst this hurry of business, Mr. Hill was so laborious and ready in all his undertakings, and was withal so exact an economist of his time, that he scarcely ever missed a public amusement for many years : where, while he relaxed from the severer

pursuits of study, he gleaned up articles for his periodical works. It would not be easy to trace Dr. Hill (for he had now procured a diploma from the university of St. Andrew's) through all his various pursuits. Being refused admission as a member of the Royal Society, he ridiculed that learned body in A Review of the Works of the Royal Society of London, 4to. 1751. This, together with his over-writing himself upon all subjects without reserve, made him sink in the estimation of the public. He found, as usual, however, resources in his own invention. He applied himself to the preparation of certain simple medicines; such as the essence of water-dock, tincture of valerian, balsam of honey, &c. The well-known simplicity of these medicines made the public judge favorably of their effects, so that they had a rapid sale. Soon after the publication of the first of these medicines he obtained the patronage of the earl of Bute, through whose interest he acquired the management of the royal gardens at Kew, with a handsome salary : and to wind up the whole of an extraordinary life, having, a little before his death, seized an opportunity to introduce himself to the knowledge of the king of Sweden, that monarch invested him with one of the orders of his court. Garrick thus characterised Hill : —

For physic and farces his rival there scarce is ; His farces are physic, his physic a farce is.

He died in 1775

IIILLAH, or HELLAU, a considerable town of Asiatic Turkey, in the province of Irak-Arabi,"ot pachalic of Bagdad. It is about sixty miles to the south of Bagdad, on the western bank of the Euphrates, on the borders of the great Syrian desert; and is remarkable as standing in the vicinity of the ruins of BABYLON, which see.

The town has an extensive and well-regulated bazaar, several excellent caravanseras built of Babylonian brick, and is in general well-built. It is governed by a hakeem, appointed by the pasha of Bagdad. A quarter of the town, situated on the eastern bank, is connected with the other by a bridge of boats. The soil in the vicinity is fertile, but much neglected. The Euphrates widens as it approaches this place, where it is about 200 paces wide, and in spring about forty feet deep. The tides of the Persian Gulph are felt twenty or twenty-five miles above Korna ; and flat-bottomed boats, not exceeding fifty tons burden, can pass up to Hillah about six months in the year. During the other six months the marshes of Lemloon entirely obstruct the

passage.

HILLEL (senior), of Babylon, president of the sanhedrim of Jerusalem. He formed a celebrated school there, in which he maintained the oral traditions of the Jews against Shammai, his colleague, whose disciples adhered only to the written law ; and this controversy gave rise to the sects of Pharisees and Sadducees. He was likewise one of the compilers of the Talmud. He also labored much to give a correct edition of the sacred text ; and there is attributed to him an ancient MS. Bible, which bears his name. He nourished about A. A.- C. 30, and died in a very advanced age.

HILLEL, the nasi, or prince, another learned Jew, the grandson of Judas Hakkadosh, or the Saint, the author of the Mishna, lived in the fourth century. He composed a cycle; and was one of the principal doctors of the Gemara. The greatest number of the Jewish writers attribute to him the correct edition of the Hebrew text which bears the name of Hillel, mentioned above. There have been several other Jewish writers of the same name.

HILLIA, in botany, a genus of the monogynia order, and hexandria class of plants : CAL. hexaphyllous : COR. cleft in six parts, and very long; the berry inferior, bilocular, and polyspermous.

HILLSBOROUGH, a borough, fair, and post-town of Ireland, in the county of Down, Ulster, sixty-nine miles from Dublin. The earl of Hillsborough has a fine seat here. The town is pleasantly situated and well-built, in view of Lisburn, Belfast, and Carrickfergus Bay; the church is magnificent, having an elegant spire, as lofty as that of St. Patrick's in Dublin, and seven painted windows. There is an excellent inn here, and a thriving manufacture of muslins. It has three fairs, and sent two members to the Irish parliament before the Union.

HILLSBOROUGH, CAPE, a cape on the north-east coast of New Holland, in long. 148° 44' E., lat. 20° 56' S.

HILLSBOROUGH, a county of New Hampshire, United States, bounded north by Graftou

HIMALAYA.

county, south by the state of Massachusetts, west by Cheshire, and east by Rockingham county. Its population are all free, and follow agriculture as their chief employment. The chief towns areAmherst and Hopkinton.

HILLSBOROUGH, one of the middle districts of North Carolina, bounded north by the state of Virginia, south by Fayetteville district, east by Halifax, and west by Salisbury.

HILT, n. s. Sax. bilt, from beah > an, to hold. The handle of any thing, particularly of a sword.

Now sits expectation in the ait, And hides a sword from hilt unto the point With crowns imperial ; crowns and coronets.

Shakspeare. Take thou the kilt,

And, when my face is covered as ‘tis now, Guide thou the sword. Id. Julius Ceetar.

Be his this sword, whose blade of brass displays A ruddy gleam ; whose hilt, a silver blaze Pope.

HIM. Saxon, bim.

The oblique case of he.

Me he restored unto my office, and him he hanged.

Gen. xli.

His wallet lay before him, in his lappe,

Chaucer. Prologue to the Cant. Tales.

But Juan saw not this : each wreath of smoke Appeared to him but as the magic vapour

Of some alchymic furnace, from whence broke The wealth of worlds, a wealth of tax and paper.

Byron.

The fifth, who, by a Christian mother nourished, Had been neglected, illused, and what not, Because deformed, yet died all game and

bottom To save a sire who blushed that he begot him. Id.

Him was anciently used for it in a neutral sense.

The subjunctive mood hath evermore some conjunction joined with him. Accidence.

The HIMALAYA, HIMALEH, or HIMACTAL (literally the Snowy) MOUNTAINS, is the name, sufficiently appropriate, of a vast range of mountains separating India from Thibet, or Lesser Tartary. It is in fact the highest part of the Imaus, or Emodus range of ancient writers, and extends from the defile of the Sutuleje near Cashmere, to that of the Bramapootra, being in length from north-west to south-east nearly 1000 British miles ; the western extremity is in lat. 32°, and long. 77° ; the eastern in lat. 24°, and long. 95°. The length of this stupendous range is various. Every account we receive of a passage through them gives a detail of many days' journey, through deserts of snow and rocks ; and it is to be inferred, that on the north-east, as well as the Hindostan side, they advance to, and retreat from the IDW ground in an equally irregular manner. Some accounts indeed would in-duce the belief, that long ranges, crowned with snow-clad peaks, project in various places from the great spire, and include habitable and milder districts ; for, in all the routes of which we have accounts, hills covered with snow are occasionally mentioned as occurring, even after the great deserts are passed, and the grazing country entered. The breadth, then, of this crest of snow-clad rock itself cannot fairly be estimated at less than from seventy to eighty miles. The great snowy belt, although its loftiest crest is broken into numberless cliffs and ravines, nevertheless presents a barrier perfectly impracticable, except in those places where hollows that become the beds of rivers have in some degree intersected it, and facilitated approach to its more remote recesses. Few rivers hold their course wholly through it; indeed, in the upper part, the Sutuleje alone has been traced across this rocky barrier, and there is a path along its stream, from different parts of which roads diverge, that lead in various directions through the mountains. No reasonable doubt can now exist of the very long and extraordinary course which that river takes. The routes given below will trace it particularly, nearly to its origin. Several other passes through the Himalaya exist to the south-eastward; but Europeans are unacquainted with all of them beyond Kumaoon, between which and that of the Sutuleje the passes of Joar, Darma, Nitteemana, Lamanittee, Gurooneettee, and Birjee, are found practicable for the conveyance of goods.

Beside these chief passes, there are others of more danger and

difficulty that pervade the snowy range in various directions, finding outlets to the milder countries beyond. Such is the pass near the source of the river J'pannevie, that from Bhurassoo to the neighbouring districts of China; a path also said to exist near Kedar-nauth, &c. &c. These are all so dangerous and toilsome, that few but the wildest inhabitants of the most inhospitable regions choose to invade their deserts of eternal rock and snow, where no living thing is seen, and no means are to be obtained for long preserving life. To the westward of the Sutuleje the passes are perhaps more frequent, certainly less difficult. The pass of Cooloo through Stanpore, by Lucktote to Gara and Ludhak, and that through Chumbee by Joocela, Mookhee, and Htoorpore, are among the best and most frequented. With those which may exist farther to the westward between Chambee and Cashmire, we are unacquainted ; but it is well known that a comparatively easy and much frequented road is found from the Punjab to Cashmire, and through that valley to Ludhak, and the other states and districts of Thibet. We are also unacquainted, even by information, with the actual course through the hills to Cashmire, but it doubtless leads along the river Jy,thure, which arises in the hills bounding that valley to the north-east and east.

The limit of perpetual congelation in the Himalaya Mountains has been a matter of some controversy. A writer in the Quarterly Review has asserted that this height is below 11,000 feet above the sea, and has maintained that the height of the range itself will be found much inferior to that of the Andes. Captain Webb, from numerous heights taken with the barometer, has drawn a very different conclusion.

' Near the temple of Milum,' says Mr. Fraser, * elevated 11,405 feet, there were large fields of oe or rye, and buckwheat; and, at an elevation of about 13,000 feet, he procured some plants of spikenard. On the 21st of June, Captain Webb's camp was 11,680 feet above Calcutta. The surface was covered with rich vegetation as high as the knee, very extensive beds of strawberries in full flower, and plenty of currant-bushes in

blossom all around, in a clear spot of rich black mould soil, surrounded by a noble forest of pine, oak, and rhododendron. On the 22d of June he reached the top of Pilgoenta-Churhaee, 12,642 feet

above Calcutta : there was not the smallest patch of snow near him, and the surface was covered with strawberry plants, butter-cups, dandelion, and a profusion of other floweis. The shoulders of the hill above him, about 450 feet more elevated, were covered with the same to the top, and about 500 feet below was a forest of pine, rhododendron, and birch. These facts lead Captain Webb to infer that the inferior limit of perpetual congelation in the Himalaya Mountains, is beyond 1 3,500 feet, at least, above she level of Calcutta.'

These conclusions of captain Webb receive much support from the following observations of Mr. Fraser.

' On the night of the 16th we slept at Bheemkeudar, near the source of the Coonoo and Bheem streams. There is no wood near this place, even in the very bottom of the valley, and we had left even the stunted birch at a considerable distance below; but there was a profusion of flowers, ferns, thistles, &c., and luxuriant pasturage. Captain Webb's limit of wood is at least as high as 12,000 to 12,300 feet. I would therefore presume the site of Bheemkeudar to be considerably above that level, say 13,000 to 13,300 feet above Calcutta. From thence we ascended at first rather gradually, and then very rapidly, till we left all luxuriant vegetation, and entered the region of striped and scattered, and partially melting snow, for nearly two miles of the peram-bulator. From calculating the distance passed, and adverting to the elevation we had attained, I would presume that this was at least 1500 feet above Bheemkeudar, or from 14,500 to 15,000 feet above Calcutta.

'We proceeded onwards, ascending very rapidly, while vegetation decreased gradually to a mere green moss, with here and there a few snow-flowers starting through it ; snow fast increasing, till at length we entered on what I presume was the perennial and unmelting snow, entirely beyond the line of vegetation, where the rock was bare even of lichens.' p. 327.

From these and other facts, which Mr. Fraser details, he considers the line of perpetual congelation as between 15,000 and 16,000 feet above Calcutta. In the Rol or Shatul pass, the seeds of a species of campanula were gathered at the height of 16,800 feet above the level of the sea, at a spot where the thermometer at noon, in the middle of October, stood at 27° of Fahrenheit. Shrubs were found in a vegetating state at a still greater altitude.

The spot which obtains the name of Jumno-tree, or the source of the Jumna, is very little below the place where the various small streams,

formed on the mountain's brow by the melting of many masses of snow, unite in one, and fall into

a basin below. To this basin, however, there i« no access ; for, immediately above this spot, the rocks again close over the stream, and, though not so lofty as those below, they interpose a complete bar to further progress in the bed of the torrent. A mass of snow, too, had fallen from above at the farther extremity of this pass, under which the river runs. Between the two banks the view is closed by the breast of the mountain, which is of vivid green, from perpetual moisture, and is furrowed by time and the torrents into numberless ravines, and down these ravines are seen trickling the numerous sources of this branch of the Jumna. Above this green bank, rugged, bare, and dark rocky cliffs arise, and the deep calm beds and cliffs of snow, towering above all, finish the picture. Noble rocks of varied hues and forms, crowned with luxuriant dark foliage, and the stream foaming from rock to rock, form a foreground not unworthy of it.

' At the place where it is customary to perform ablution,' says Mr. Fraser, ' the rock on the north-east side of the river is very steep. Between the lamina; of this rock, which appears to be quartzose, run several small streams of warm water, forming together a considerable quantity. There are several other sources ; and one in particular, from which springs a column of very considerable size, is situated in the bed of the river between two large stones, and over it falls a stream of the river water. This water is hotter than that already noticed ; the hand can-not bear to be kept a moment in it, and it emits much vapor. These warm springs are of great sanctity ; and the spot for bathing is at that point before mentioned, where one of a considerable size rises u a pool of the cold river water, and renders it milk warm. This jet is both heard and seen as it plays under the surface of the pool. Here all the people bathed, while the pundit said prayers, and received his dues ; and here also I bathed, was prayed over, and submitted to be marked by the sacred mud of the hot springs on the forehead like the rest, and of course was obliged to make my present to the priest for his ministry.' — Page 429. In this range is also found Gungootree, the source of the GANGES (see that article) ; the Brahmapootra and the Indus.

The superior altitude of the Himalaya range to the mountains of the Andes has been established beyond a doubt, by the survey of captain Blake. The following are altitudes deduced from his observations, by Mr. Colebrooke : —

Altitude in feet above the sea.

Peak without name … 21,935

Chandragiri, or Mountain of the) OQ _n_ Moon …. f 23’°°

Peak without name … 24,108

Swelagar or Nepal … 25,261

Dhwalagiri, or Ghasu Coti, or the

White Mountain

28,015

HTM

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HIM

The following is a Corrected TABLE of the HEIGHTS of the Principal Snowy Peaks of the

HIMALAYA MOUNTAINS. *#* The letters refer to Captain Hodgson’s Tables attached to his Official Survey.

STATIONS.

North Latitude.

Longitude East from Greenwich.

Elevation above the Sea in English Feet.

District or State.

A No 1 …

30 18 3*0

7°9 45 5*4

79 57 22 79 51 33 78 48 35 79 16 05 79 06 01 79 03 11 78 50 10 78 49 52 78 50 37 78 58 58 79 06 41 79 07 30 78 51 26 79 02 47 78 50 02 78 47 33 79 05 40 79 05 35 78 32 37 78 30 39 79 00 57 78 33 32 78 29 37 78 30 03 78 29 15 78 49 28 78 48 53 78 31 13 78 23 55 78 22 25 78 18 19 78 21 44 78 36 10 77 44 06 77 43 52

23,531 25,749 23,317 17,017 23,441 21,162 23,062 19,928 19,530 21,940 22,792 22,798 1

22,654]

21,772 21,379 21,964 20,296 22,390 22,906 20,916 20,122 18,681 21,155

20,668 \ 20,668 S

20,501)

1 8,795 V 19,352 j

21,178 19,481 19,512 19,044 21,411 21,389 18,798 22,700

Jawahir Ditto. Ditto .- Garhwal. Badrinath.

Jaunli. Ditto.

Garhwal.

Ditto. Ditto. Ditto. Ditto. Ditto. Ditto. Ditto. Ditto. Ditto. Garhwal.

Ditto.

Ditto.

Garhwal and Bissaher. Ditto. Ditto. Ditto. Ditto. Ditto. Kullu and Chamba. Bissaher.

A No 2

30 22 19 30 30 42 30 43 33 30 44 01 30 46 08 30 47 36 30 47 55 30 48 55 30 51 04 30 51 27 30 51 38 32 52 29 30 52 46 30 54 37 30 54 53 30 57 12 30 58 18 30 59 25 .31 00 00 31 00 11 31 00 30 31 01 21 31 05 49 31 05 52 31 05 55 31 07 40 31 08 21 31 13 51 31 14 13 31 16 04 31 19 45 31 29 22 31 37 20 31 41 18 31 53 17

P or A No 3

J … ,•. ‘.’

B Middle Peak . ~ • •’••

\] .

D

O

Q C .

C (Jaunli Peak) ….

M Mount Moira

St Patrick . ….

F— C

The Pyramid . . …

F

G Sri Kanta , … .

Rudra Himaleh ….

Great E. or Banderpuch … Low E .

Black E ……

II Middle Peak

H. Right Peak

H Left Peak

Jhala Peak

Tawara Peak .

The Cone or S

Peak «, No. 39, left or high . . L. (No! 40), N. Western Peak . No. 46, or Needle Peak …

Purkyal

HIMERA, in ancient geography, the name of two rivers in Sicily, *viz.*

HIMERA running into the Tuscan Sea, and now called Fiume di Termini ; and another runs into the Libyan Sea, divi ling Sicily into two parts, being the boundary between the Syracu-sians to the east, and Carthaginians to the west. These rivers rise from different springs.

HIMERA, an ancient town of Sicily, at the mouth of the Himera, on its left, or west side. It was a colony of Zancle, and afterwards destroyed by the Carthaginians.

HIMERENSES THERMJE, in ancient geography, a town of Sicily. After the destruction of the town of Himera, by the Carthaginians, such of the inhabitants as remained settled in the same territory, near the ancient town, now called Termini. It was made a Roman colony by Augustus.

HIMSELF, pron. Him and self.

In the nominative the same as he, only more emphatical, and more expressive of individual personality.

It was a sparing speech of the ancients to say, that a friend is another himself ; for that a friend is far more than himself. Bacon.

With shame remembers, while himself was one Of the same herd,

himself the same had done.

Denham.

Her eyes, her lips, her cheeks, her shapes, her

features,

Seem to be drawn by love's own hand ; by love Himself in love. Dryden.

It is added to a personal pronoun or noun, by way of emphatical discrimination.

He himself returned again. Jwtget.

God himself is with us for our captain. Chron.

And he himself was swete as is the rote Of Acoris or any Setewale.

Chaucer. TheMillere* Tale. In ancient authors it is used reutrally for itself.

She is advanced Above the clouds as high as Heaven himself.

Shakspeare.

In the oblique cases it has a reciprocal signification.

David hid himself in the field. Samuel.

It is sometimes not reciprocal. I perceive it was not altogether your brother's evil disposition made him seek his death ; but a provoking merit set a work by a rcproveable badness in himself.

Shaktpeare.

Nothing in nature can so peculiarly gratify the noble dispositions of humanity, as for one man to see another so much himself as to sigh his griefs, and groan his pains, to sing his joys, and do and feel every thing by sympathy. South.

By HIMSELF. Alone ; unaccompanied. Ahab went one way by himself, and Obadiah went another way by himself. Kings.

He thoughte wel that every mac Wol helpe himself in love, if that he can ; And, eke deliver himself out of prison.

Chaucer. The Knightet Tale. Each on himself relied, As only in his arm the moment lay Of victory. Milton.

But when by shame constrained to go on board, He heard how the wild cannon nearer roared, And saw himself confined like sheep in pen ; Daniel then thought he was in lyon's den. Marvdl. Some write, confined by physick ; some by debt ; Some, for 'tis Sunday ; some because 'tis wet. Another writes because his father writ. And proves himself a bastard by his wit. Young.

HIN, n.s. Heb. fit. A measure of liquids among Jews, containing about ten pints.

With the one lamb a tenth deal of flour, mingled with the fourth part of an hin of beaten oil.

Exod. xxix. 40.

HINCKLEY, a town of Leicestershire, with a market on Monday. It has a large handsome church, with a lofty spire ; and a considerable stocking manufactory. It is twelve miles south-west of Leicester, and ninety-one N. N.W. of London.

H1NCMAR, or HINCMARUS, archbishop of Rheims, A. D. 845, was a zealous defender of the liberties of the Gallican church, but was obliged to fly from Rheims when the Normans invaded that province. He died at Epernay in 882. His works were printed in 1645, in 2 vols. folio.

HIND, n. s. The female of the red deer : a servant : a peasant or rustic.

Canst thou mark when the hinds do calve ? Job.

And many an hart and many an hinde, Was both before me and behinde.

Chaucer. Boke of the Duchesse. The n'as baillif, ne herde, ne hine,

That he ne knew his sleight and his covine.

Id. Prologue to the Cant. Tales. How he slew, with glancing dart amiss,

A gentle hind, the which the lovely boy

Did love as life. Faerie Qtieene.

A couple of Ford's knaves, his hinds, were called forth by their mistress, to carry me in the name of foul cloaths to Datchet-lane. Shakspeare.

The Dutch, who came like greedy hinds before, To reap the harvest their ripe years did yield, Now look like those, when rolling thunders roar, And sheets of lightning blast the standing field.

Dryden.

Nor Hercules more lands or labours knew, Not though the brazen-footed hind he slew. Id.

He cloathed himself in coarse array, A laboring hind in shew. Id. Fables.

Fearful as is the hare or hunted hind, Her face and breast she oft with crosses signed ; No customs would she break or change her settled

mind. Fletcher's Purple Island.

HIND, adj. ~} Adjec. COIP—

HIN'DER, v. a., v. n., & adj. par. hinder ; su-HIN'DERANCE, n. s. \ perlat. hindmost.

HIN'DERER, n. s. (Saxon, bynt > an.

HIN'DERING, part. j Backward ; con—

HIN'DERLING, n. s. trary in position

HIN’DERMOST, adj. j to the face ; as

HIND’MOST, adj. J hind legs. Sax.

{nneman, bine, bmbjuan. The word hinder signifies to prevent, as by going behind, and pulling a person back; to raise impediments; to obstruct : hinder, the position contrary to the face. Hinderling, a worthless degenerate ani-mal : hindermost, or more properly hindmost, the last ; that which comes in the rear : hinderance, an impediment, is used with the particles of and to before the thing hindered, with to before the person.

Hinder me not, seeing the Lord hath prospered my way. Gen. xxiv. 56.

He put the handmaids and their children foremost, and Leah and her children after, and Rachel and Joseph hindermost. Genesis.

He met thee by the way, and smote the hindmost of thee. even all that were feeble behind. Dent, xxv.

The whole world shined with clear light, and none were hindered in their labour. Wisd. xvu. 20.

Full many a worthie man, and wise,

Han hindered and idoen to die

These losinge’ous with her flatterie.

Chaucer. Romaunt of the Rote, Tucked he was, as is a frere, aboute ;

And ever he rode the hinderest of the route.

Id. Prologue to the Cant. Tales.

False opinions, touching the will of God to have things done, are wont to bring forth mighty and violent practices against the hinderances of them, and those practices new opinions, more pernicious than the first ; yea, most extremely sometimes opposite to the first. Hooker.

They must be in every Christian church the same, except mere impossibility of so having it be the hin-df ranee. Id.

Like to an entered tide they all rush by,

And leave you hindermost. Shakspeare.

You minimus of hindering knot-grass made ! Id.

Tis not his wont to be the hindmost man, Whate'er occasion keeps us from him now. Id.

Brakes, great hinderers of all plowing, grow. May.

If the alms were hindered only by entreaty, the hinderer is not tied to restitution, because entreaty took not liberty away from the giver. Taylor.

Bears, fighting with any man, stand upon their hinder feet, and so this did, being ready to give me a shrewd embracement. Sidney.

Solitude damps thought and wit ; too much company dissipates and hinder* it from fixing. Temple.

What hinderance have they been to the knowledge of what is well done ? Dryden.

• *i ? r n •

'-

HINDOSTAN.

251

Have we not plighted each our holy oath, One soul should both inspire, and neither prove His fellow's hinderance in pursuit of love ? Id,

Let him retire, betwixt two ages cast. The first of this and hindmost of the last, A losing gamester. Id.

This objection hinder* not but that the heroick action of some commander, enterprised for the Christian cause, and executed happily,

may be written. Id.

What hindert younger brothers, oeing fathers of families, from having the same right. Locke.

As the hinder feet of the horse stuck to the mountain, while the body reared up in the air, the poet with great difficulty kept himself from sliding off his back. Addiaon.

He must conquer all these difficulties, and remove all these hinderances out of the way that leads to justice. Atterbury.

The stag

Hears his own feet, and thinks they sound like more, And fears bis hind legs will o'ertakc his fore. Pope.

The race by vigor, not by vaunts, is won ; So take the hindmost, hell — he said, and run. Id.

HINDBERRIES, n. s. The same as raspberries.— Ainsworth.

HINDOSTAN (from Pers. Hindoo, black, and stan, place), the place or country of the Blacks, called by the aboriginal inhabitants Bahrat, or Bahrat Kind, the dominions of Bahrat, is a region of Asia, occupying from about the eighth to the thirty-fifth degree of north latitude, and from the sixty-eighth to the ninety-second degree of east longitude. Its general boundaries on every side but the east are well defined ; and are, northward, the great Himalaya range, the Indus west; the Indian Ocean and the Bay of Bengal south ; and the eastern hills and forests of Tipperah and Chittagong east. Excepting in Bootan, the primitive religion of BRAHMA (which see) every where prevails ; nor is it to be found beyond these limits, except in Assam and Cassay. The length, from north to south, is nearly 1900 miles. Its greatest breadth is about 1500 miles. In estimating the area, the southern triangle is found to contain about 710,000 square miles, and the northern one 570,000, so that the whole surface comprises 1,280,000 square miles. Taking the population at 100,000,000, the num-ber of individuals to a square mile will be seventy-eight.

The following is an ABSTRACT of the present STATE OF HINDOSTAN and its RULING POWERS : distinguishing the extent of their respective

Territories, and the number of the Inhabitants.

Geographical Square Miles.

Population.

I. BRITISH POSSESSIONS. Bengal, Bahar, and Benares ….. Acquisitions in Hindostan Proper, and Orissa since > 1799 . -]

162,000 60,000

29,000,000 10,000,000

Under the Bengal Presidency …. Under the jurisdiction of the Madras Presidency Ditto of the Bombay Presidency ….

222,000 125,000 10,000

39,000,000 1 2,000,000 2,500,000

Total of British Hindostan

357,000

53,500,000

II. BRITISH ALLIES AND TRIBUTARIES. The Nizam …….. The Peshwa and Guicowar ….. Nabob of Oude . . … Mysore Rajah Travancor and Cochin Rajahs ….

76,000 53,000 13,000 22,000 5,000

8,000,000 5,000,000 2,000,000 2,000,000 500,000

Total under British jurisdiction and influence .

526,000

71,000,000

III. INDEPENDENT PRINCIPALITIES. Under the dominion and influence of Scindia, Hoi-i kar, and other Mahratta chiefs … . J Ditto of the Nagpoor Rajah …..

75,000

58,000 63,000

6,000,000

3,000,000 2,000,000

Ditto of the Lahore Rajah and the Seiks

54,000

4,000,000

Under the Rajahs of Joudpoor, Jyenagur, OdeyO poor, and other Rajpoot Chiefs ; the Ameers of Sinde, the Cabul government, and Chief ! of Cashmere; the Rajahs of Bootan, Assam, j and innumerable Goand, Coolee, and other petty | Native Chiefs J

776,000 244,000

86,000,000 15,000,000

Total of Hindostan .

1,020,000

101,000,000

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HINDOSTAN.

This region is divided by its great natural features into Northern Hindostan, Hindostan Pro-per, the Deccan, and the South of India.

1. Northern Hindostan comprehends Cashmere on the west, and Bootan on the east, with the intermediate mountainous provinces, situated between the first range that rises from the plains on the northern frontiers of Delhi, Oude, Bahar, and Bengal, and the lofty Himalaya ridge bordering on Thibet. The whole tract last-mentioned is subject to the Ghoorkhali state of Nepaul, and has been but little explored. The appellations by which the districts are most commonly known are, Serinagur, or Gerwal, Badrycazrama, Kemaoon, Jemlah, the twenty-four Rajahs, Lam-jungh, Gorcah, Nepaul, Mocwanpoor, Morung, and Kyraut. The inhabitants of this wild country have never been permanently subdued or civilised by any of the various masters of India.

2. Hindostan Proper contains the eleven large soubahs, or provinces, originally formed by the emperor Acbar, and is bounded on the south by the Nerbuddah River, and the Deccan. The names of its provinces are Lahore, Mooltan, including Sinde, Gujrat, Ajrneer, Delhi, Agra, Malwah, Allahabad, Oude, Bahar, and Bengal. This is considered the most civilised and richest part of Hindostan, and contained the seats of its most famous empires, both Hindoo and Mahommedan. The inhabitants also (Bengal excepted) may be considered as a superior race, both physically and intellectually, to the population of the other divisions.

3. The Deccan is bounded on the north by the course of the Nerbuddah River, and from its source by an imaginary line extending in the same parallel of latitude to the mouth of the Hooghly. To the south its boundaries are the Krishna and Malpurba rivers. Within this space are comprehended Aurungabad, Khandesh, Beder, Hyderabad, Nandere, the Northern Circars, Berar, Gundwana, Orissa, and great part of Bejapoor. Having been invaded at a much later period than Hindostan Proper, it contains a much greater proportion of Hindoo inhabitants.

4. The South of India has the figure of a triangle, of which its northern boundary, the river Krishna, is the base, and the coasts of Coromandel and Malabar the sides. The provinces herein comprehended are a small part of Bejapoor, the Balaghaut ceded districts, the Carnatic Northern, Central, and Southern ; Mysore, Ca-nara, Malabar, Barramahal, Coimbetoor, Dindi-gul, Salem, and Kiitnagherry, Cochin, and Travancor. In this division of Hindostan the Mahommedans did not obtain a footing until a very recent period, and some part was never subdued by them.

The whole if Hindostan is watered by noble rivers, most of which have retained their ancient appellations. N The principal in point of magnitude are the Brahmapootra, the Ganges, the In-dus, the Sutuleje, the Krishna, the Godavery, the Jumna, the Nerbuddah, the Cavery, the Goggrah, the Tuptee, the Mahanuddy, the Megna, the Soane, the Chumbul, the Beyah, the Gunduck, and the Ravey.

Its most remarkable mountains are the great Himalaya ridge on the Berth, the hills of Ke-

maoon and Sewalic, the Eastern and Western Ghauts, and the Vindhyan chain of mountains, which cross it nearly parallel to the course of the Nerbuddah, and pass through the provinces of Bahar and Benares.

The chief cities and towns are all now possessed by the British. The three largest and most populous are Surat, Benares, and Calcutta ; the next in rank are Delhi, Madras, Bombay, Agra, Lucknow, Patna, Moorshedabad, Dacca, Poona, Hyderabad in the Deccan, Nagpoor, Catmandoo, Oojain, Jyenagur, Amritsir, Lahore, and Seringapatam.

As each of the more important divisions of Hindostan obtains our particular attention, in its alphabetical place, a few remarks on some

com-mon features of this interesting region are all that can be necessary in this place.

The climate here varies of course with the latitude, but still more with the relative height of places. Though often considered otherwise, it appears in point of fact to be as healthy as any other region of the world of the same extent. Its hottest parts are the Northern Circars, and the sandy plains through which the Indus flows. Dr. Roxburgh, speaking of the land breezes of Coromandel, says : — ‘ Should the sea-breeze fail, as sometimes happens, the land wind decreases gradually until it dies away in the beginning of the night, which, on account of its calmness, is dismal to a degree ; next morning a little mo-tion of the air is again perceptible ; but, at the usual time, the wind sets in as strong and as hot as before. Every thing we put our hands upon is distressing to the touch, which must be the case when the temperature of the body is inferior to that of the atmosphere. This we experienced for almost a fortnight in the year 1799, in the Northern Circars, when the thermometer at eight o’clock at night stood at 108°, and at noon at 112°. Shades, globe-lamps, and tumblers, then very often crack and break to pieces, and the wooden furniture warps and shrinks so much that even the nails fall out of the doors, tables, &c. In their greatest intensity, however, I have never seen the thermometer rise higher than 115°, *viz.* in the coolest part of the house; though some say they have observed it at 130°.’

It is in this district that the noxious state of the air, in the season of vegetation, creates what is called the hill fever ; supposed to arise from the union of putrid vegetable exhalations with the fog so constantly prevailing : and here the bamboos frequently take fire in the hot season from their own friction in the wind.. Even the native tribes cannot bear long exposure to these hot winds, and shut up their houses against them : Europeans generally cool their apartments by mr.htis. of straw, grass, or matting, constantly watoeJ.

On the coaste of Coromandel and Malabar, the climate and seasons are very different at the same time. The whole of the year being divided into wet and dry ; while one coast is saturated with rain, the other is scorched by heat. In the mountainous parts, the rain falls much earlier. In the north-west of Hindostan, towards the banks of the Indus, the thermometer generally vanes from 90° to 100° during the months of

June and July. At Surat, the annual variations are from 59° to 96° ; and at Bombay from about 64° to 98°. The hottest months on the Malabar coast are April and May. At Cochin, during the former, the thermometer sometimes rises to 105°.

Though the mountains of the northern confines are clad in perpetual snow, winter is unknown on the plains. The heat is here frequently extreme ; while thunder, lightning, and hurricanes are often so tremendous, that nothing experienced in Europe, can give an adequate idea of them ; and most parts are deluged with rain at particular seasons. Near the coast the winds blow alternately from the land and sea; but, in the interior, the refreshing influence of the sea-breeze is not felt. In Bengal Fahrenheit's thermometer often rises to 110°, in the hottest part of the year. During March, April, and May, with the early part of June, the season is dry and hot in this province. The four succeeding months are generally rainy ; while January and February are subject to excessive fogs.

At Calcutta the range of the thermometer is sometimes 40°; the following list shows the greatest and least temperature of the seven months, from October to April inclusive, with the prevailing winds of that period.

Months.

Maximum.

Minimum.

Winds.

October . .

94°

70°

North.

November .

89

60

ditto.

December .

88 £

52

North-east.

January . .

85

63

ditto.

February .

92

68

ditto.

March …

104

72

South.

April …

110

72

ditto.

The whole of Mysore, enclosed by the eastern and western ghauts consists of a table land about 3000 feet above the sea, from which rise several chains and groups of hills , that give birth to many of the rivers that water the lower grounds near the coast : this is perhaps more temperate and healthy than any other tract of equal extent within the tropics. The torrents of rain, which are poured so copiously on both the coasts, have their force broken by the mountains on each side, and only reach the interior in frequent and agreeable showers.

In Bengal, and some other places, the rain often pours down with such continued violence, that four or five inches frequently fall in a single day, during the first two months of the monsoon. The annual quantity in the lower parts of this province is generally between seventy and eighty inches. When the rain ceases, and the sky becomes clear, the moisture of the ground renders the evaporation great, and this, as the weather cools, causes the dews to be excessively penetrating, and the fogs thick. Here a large quantity of moisture is now retained by the marshes, woods, and jungles, full of decayed vegetable matter, which protracts the power of vegetation through the winter. The barometer is remarkably steady in most parts of India throughout the year, at the medium of thirty inches.

Hindostan has little variety of soil, considering its extent. It is almost universally a light, po-rous, black, mould ; except in the more elevated parts, which are stony ; and some few districts towards the western borders are sandy. The valleys hare rich alluvial deposits. Cultivation is in the rudest state ; and has been stationary for ages : it depends largely on irrigation, and in travelling through the country an opinion may always be formed of the wisdom of the government, and condition of the people, from the number and state of preservation of the water-courses. Rice is the principal article of nourishment of the natives, and the first object of attention in the cultivation of it is to have the soil plentifully supplied with water.

In Hindostan Proper the harvest is divided into two periods, the Khereef and the Rubbee ; the former is cut in September and October, the latter in March and April.

The ploughs here merely scratch the soil to the depth of two or three inches ; and the harrow in many districts consists of a single rake, in others the want of it is supplied by the branch of a tree.

In the lower parts of the country, where the soil is annually enriched by the overflowings of the rivers, and particularly in those of Bengai, habitations placed on elevated mounds, and fields above the rest of the country, appear like islands in the water. During the prevalence of the flood, the only means of communication between distant places is a navigation over the fields, where the ears of rice are frequently floating on the surface. The peasants go in this manner to the markets, accompanied by their families and domestic animals, from an apprehension that the water may suddenly increase, and drown their children and establishment. On the subject of the agriculture of Bengal Mr. Hamilton makes some remarks applicable to the whole of Hindostan.

‘ A cultivator,’ he observes, ‘ who employs servants, employs one for each plough, and pays him monthly wages, which on an average does not exceed one rupee per month, and in a very cheap district the wages are so low as half a ru-pee ; but the task on a medium of one-third of an acre per day is completed by noon. The cat-tle are then left to the herdsman’s care, and the ploughman follows other occupations during the remainder of the day. Generally he cultivates some land on his own account, and this he commonly rents from his employer for a payment in kind. If the herd be sufficiently numerous to occupy one person, a servant is entertained, and receives food, money, and clothing, to the value of one rupee and a half per mensem. The plough itself costs less than a rupee. The cattle employed in husbandry are of

the smallest kind, the cost on an average being not more than five rupees each. The price of labor may be computed from the usual hire of a plough with its yoke of oxen, which may be stated on the medium to be about four-pence per day. The cleaning of the rice is executed with a wooden pestle and mortar, the allowance of husking it being nearly uniform ; the person performing this contracting to deliver back five-eighths of the

xveight in clean rice, the surplus, with the chaff or bran, paying for the labor. Five quarters of rice per acre are reckoned a large produce, and a return of fifteen for one on the seed.'

Other staple productions of Hindoo agriculture are tobacco, sugar, silk, cotton, and indigo. Hindostan also produces generally the fruits of the torrid zone ; mangoes, oranges, pine-aooles, mulberries, and grapes are common.

In nothing does Hindostan differ so much from Europe as in its forest trees. The fir, of all our trees, is the only one that is indigenous there, and it is only found in the northern mountains. Its best timbers are teak, saul, and toone ; it has also a variety of woods for furniture. The fish differ considerably from those of Europe ; but the quadrupeds and birds are the same as are to be found in several other warm countries. The tiger, lion, and elephant, are met with ; and every department of zoology is rich in species.

The diamond takas the lead in the mineral riches of India; sapphires, topazes, and rubies, are also found, as well as gold; but the particular regions distinguished for these, as well as the details of the commerce and manufactures generally, are noticed in the description of the various provinces, districts, and towns.

Two distinct professions of religion are recognised here, the Hindoo and the Mahommedan ; but the professors of the former faith are about seven times as numerous as those of the latter. There are also many Christians intermixed with the other classes of the population ;

and a few Par-sees, or followers of Zoroaster, particularly on the western coast, with some of the ancient Jai-mas in other parts.

Of the peculiarities of the Hindoo religion, Mr. Mill, in his history of British India, observes, * Besides the causes which usually give superstition a powerful sway in ignorant and credulous ages, the order of priests obtained a greater authority in India than in any other re-gion of the globe ; and this again they employed with astonishing success in multiplying and corroborating the ideas on which their power and consequence depended. Every thing in Hindostan was transacted by the deity. The laws were promulgated, the people were classified, the government was established, by the divine being. The astonishing exploits of the divinity were endless in that sacred land. For every stage of life, from the cradle to the grave, for every hour of the day, for every function of na-ture, for every social transaction, God prescribed a number of religious observances. And meditation upon his incomprehensible attributes, as it was by far the most difficult of all human operations, so was it that glorious occupation which alone prepared the intense votary for the participation of the divine nature.' See BRAHMINS.

The Mahommedans are divided into the two great sects of Soonies and Shiahs. The first acknowledge Abubekir, Omar, and Osrnan, as the legitimate successors of Mahomet; while the latter curse these personages, and call them usurpers, saying that Aly was the first lawful caliph. Except in this point, there is not much difference between them ; but there is a number of subdivisions ; and they have as many saints as

are to be found in the Romish kalendar. They are also divided into four great tribes of Shaikh, Syed, Patau, and Mogul. The first are either descended from Arabs, or converts to their religion. The second claim their descent from Mahomet, and are the same as the Emirs of Turkey, but are generally descendants of Persians. The third are Afghauns or their descendants ; and the fourth persons of Mogul or Tartar origin. The third class of inhabitants are the Seiks, who possess the province of Lahore. Their religion is described as pure deism : but the common people retain many of the tenets of their Hindoo or Mahommedan ancestors.

Various languages are spoken in Hindostan ; but the correspondence of the higher orders of people is generally carried on in Persian. The Hindoostanee, being a mixture of Persian and the current language of

the Hindoos, may be esteemed the most useful of the vernacular tongues, there being but few villages from Cashmeer to Cape Comorin in which some per-son does not understand it. The learned and religious language of the Hindoos is Sanscrit, and of the Mahommedans, Arabic.

Marriage is considered among the Hindoos as a religious duty ; as it is ‘ by this that a man enters on the second state of existence, and takes his place in society ;’ and, as none but male descendants can perform the obsequies to the manes of their ancestors, it is thought an irre-parable calamity to die without male issue. Scarcely any state can be more degrading, however, than that of the women among the Hindoos. Till three years after their nuptial age they are entirely at the disposal of their father ; and it is one of the sacred duties of a parent to place his daughter in a situation to be-come a mother. If he neglects this, till the time above specified, he forfeits all control over her, and she is then at liberty to choose for herself. When married she is immured in her husband’s dwelling, and her dependence upon him is perpetual and entire. ‘ By a girl, or by a young wo-man,’ say the institutes of Menu, ‘ or by a woman advanced in years, nothing must be done even in her own dwelling place according to her own mere pleasure : in childhood a female must be dependent on her father; in youth on her husband ; her lord being dead, or her sons ; a woman must never seek independence.’ If ever so ill treated, she is commanded to revere her husband as a superior being. Polygamy is tolerated, but females, except among the Nairs, are not permitted to marry a second time. A husband can dismiss his wife on numerous pretences ; but there is nothing that can dissolve the wife from her matrimonial engagement. She is never permitted to eat in the presence of her husband. ‘ The young wife,’ says the abb6 Dubois, ‘ beaten by her husband, and harassed by her mother-in-law, who treats her as a slave, finding no remedy for ill usage but in flying to her father’s house — recalled by fair promises of kinder treatment — the word broken — recourse had to the same remedy — but at last the children which she brings into the world, and other circumstances compel her to do her best, by remaining in her husband’s house, with the show of being contented with her lot. — The object for

which a Hindoo marries is not to gain a companion to aid him in enduring the evils of life, but a slave to bear children, and be subservient to his rule.' Marriages are contracted at an early age by both parties. An unmarried man at twenty-five, and a female at fifteen, would be considered as extraordinary occurrences. Girls are generally married between the age of seven and nine ; but remain at their father's house for a few years till they are considered fit to go home.

In former ages human sacrifices were common in Hindostan, and numerous acts of religious suicide still occur. Children are thrown to sharks in the Ganges, devotees plunge themselves into the sacred and fatal stream, widows expire in the funeral piles of their husbands, and it is considered as one of the grandest achievements of piety for the deluded objects of Indian superstition to sacrifice themselves to the honor of their gods on solemn festivals. On these occasions the image of the supposed deity, as at Juggernauth, mounted on a ponderous car, is drawn in procession by a multitude of priests and worshipers. The devotees, even parents, with children in their arms, throw themselves before the wheels of his car, and are instantly crushed to death.

The Hindoos are generally below the Europeans in stature, and their muscular strength is less than their bodily frame seems to indicate. The form of the females is slender and delicately proportioned, and ' their skins,' says Mr. Orme, ' are of a polish and softness beyond that of all their rivals on the globe.'

The Hindoo has been well described as a kind of sensitive plant; his imagination and his passions are easily inflamed, and his whole mental powers seem to be in unison with the delicacy of his structure. The simplicity of his food, and the smallness of his consumption, as well as the climate, have, undoubtedly, an effect in producing that feebleness which so strongly marks him. Many Hindoos abstain from the use of animal food, in consequence of their peculiar religious belief; and where a total prohibition does not exist it is but little used. Their agility is manifested in those contortions and feats which render them the most complete tumblers and jugglers in the world. Their messengers will travel, and their troops march, quicker than the most robust Europeans. Among the distinguishing traits of the Hindoo character must be classed indolence, falsehood, avarice, apathy, filth, and indelicacy. It is a maxim with them, that ' it is more happy to be seated than to walk, it is more happy to sleep than to awake, but the

happiest of all is death.' This listlessness is not merely the effect of the climate and manner of living, but it is an evident and natural consequence of their mode of native government and religion. Even Mr. Scott Waring, comparing the females of India with those of Persia, observes, ' their terms of reproach are indelicate in the utmost degree. I will not disgust the reader by noticing any of them, but I may safely aver that it is not possible for language to express, or imagination to conceive, more indecent or grosser images.'

Hindostan was but little known to those ancient writers whose works have come down to us, prior to the expedition of Alexander. It appears from Arian that he entered the country of Cabul, about the year 326 B. C., and found it possessed by several petty chiefs. Crossing the Indus he was opposed by Poor, or Porus, on the banks of the Behut (Hydaspes) ; after defeating whom he continued his route across the Chunaub and Ravee rivers, until he reached the Bay eh or Setlege (Hyphasis), whence he returned by the same road to the Behut. Embarking here in boats, he proceeded to Pattala (Tatta), at which place having landed, he continued his march through Mekran to Persia. This expedition appears to have had little effect on the politics of Hindostan.

The reigns of Bickermajeet and Chunderpaul are placed in the centuries before and after our era; and there is a tradition, that about this time one of the kings of Persia invaded Hindostan. The next event of consequence which occurred was the introduction of some of the pastoral tribes of Scythians into the mountains which separate Hindostan from Balkh. This, as may be collected from De Guisne's History of the Huns, and other circumstances, took place about the beginning of the fifth century. For a considerable period they conducted themselves peaceably, and by degrees spread over all the region lying between Persia and the Indus. They were at first known by their Tartar name of Alkai, or Altai, but subsequently by that of Afghaun.

At the end of the seventh century the Arabs, having subdued all Persia, invaded Cabul, and were for a time successful ; but in the year 697 they were defeated by the Hindoos, and their general, Khaled Ben Abdullah, with a number of his followers, made prisoners. The general obtained permission to settle with his followers in the mountains of Paishawur, where, intermar-rying with the Afghauns, they converted them to the Mahommedan religion. It is from this union that several of the tribes sprung who now erroneously boast of being descended

from the famous Khaled. The Afghauns, in process of time having much increased, descended from the mountains, and the Hindoos endeavoured in vain to drive them back.

The next important point in the history of this country was the occupation of the city of Ghizne, by the Persian chief Abistagy, and the foundation of the Ghiznean empire by his successor Subactageen, whose son, the celebrated Mahmoud, supported by the Afghanns, invaded Hindostan seven times between the years 1001 and 1030, and subdued the country as far as the Jumna. The Ghiznean empire existed till the year 1 189, when it was put an end to by an Afghaun chief named Mohammed Ghory, who captured Lahore, and caused the last prince of that dynasty to be put to death. Mohammed Ghory extended his conquests to Benares. He was assasinated in 1206 : upon which Cattub mounte ;l the throne, and became the first Mussulman king of Delhi, extending his dominions to the mouths of the Ganges. The Afghauns kept, pos session of the capital, and the title of emperors

of Hindostan, till the year 1398, when Timour, or Tamerlane, invaded it, took Delhi, and compelled the weak Mahmoud to seek his safety in flight. And now another formidable Mahommedan power, called the Bhamenee Sultans, became established at Kulberga, in the Deccan, or south of Hindostan; when several of the governors of provinces threw off their allegiance to the court of Delhi, and assumed independence. Timour remained but a few months in India; and Mahmoud returned to his capital, and to the nominal title of emperor, which he retained for fourteen years; his power, however, was but nominal. Upon his death, a Syed took possession of the throne, and had for his successors, his son, grandson, and great-grandson; but the only territory remaining to them was a small district round Delhi.

In 1450 Beloly, of the Afghaun tribe of Lody, took possession of the throne, which he, and his son, and grandson, retained till 1525 ; when Ibrahim was defeated by the Mogul prince Zehire Addeen Mohammed Baber. During the period these two last dynasties sat on the throne of

Delhi, four other independent Mahommedan powers had been established in the Deccan, or south, on the ruin of the first, or Bhausenee family of Kulherga, *viz.* the Adilshahy of Bejapore ; the Bereed, or Ahmedshahy, of Beider ; the Nizam Shahy of Ahmednagur ; and the Cuttabshahy of Golcondah. The Hindoo Bijanagur prince also retained considerable power. The provinces of Bengal, Joanpore, and Gujerat, were also be-come distinct kingdoms.

Sultan Baber, the founder of the Mogul dynasty of Hindostan, was the son of Omar, who was the son of Abu Syed, the son of Mohammed, the son of Miran Shah, the son of Timour, or Tamerlane, on which account his is sometimes called the Timourean dynasty. Baber extended the Mogul conquests to the borders of Bengal, but died after a short reign of five years, and was succeeded by his son Homayon. This prince subdued both the provinces of Gujerat and Bengal, which had been long independent of Delhi ; but in the year 1540 received two signal defeats from Shere Khan, an Afghaun of the tribe of Soor, and was compelled to seek refuge in Persia. Shere took the title of Shere Shah, and governed Hindostan with great ability fov ten years, until he was killed at the siege of Callenger, a strong fortress in Bundelcund. His son Selim died in 1551, after a reign of nine years. During these two reigns, caravanseras were erected at every ten miles along the high road from Bengal to the banks of the Indus. On the death of Selim, his cousin Mohammed, having first murdered a youth who was the heir, took possession of the throne ; but was in his turn dispossessed by a competitor named Ibrahim, who was also driven out by Sekunder, a nephew of the emperor Selim.

In 1554 the Mogul emperor Homayon, having returned to Hindostan with some Persian auxiliaries, defeated Sekunder in the vicinity of Sirhind, and again took possession of the throne ; which, however, he enjoyed but a short ;eriod, as he died at Delhi in the following year, and was succeeded by his son Akbar. “From 1555 till 1T07, the throne of Hindostan

was occupied by Akbar, Jeiiu.fgirt, Sliah-Jeha», and Aurungzebe, under the title of Aalumgire, four of the most powerful monarchs that ever governed that kingdom. Their territories extended from Candahar to Arracan, which, in a straight line, would measure 2000 miles ; and they subdued the four Mahommedan states of the Deccan, or south of India. But from this period the Mogul empire began to decline. The attacks of the Mahrattas, the Rajpoohs, and the Sciks, joined to domestic dissentions, shook the throne, till the year 1720, when it was

occupied by the emperor Mohammed Shah. It was during this reign that the Mahrattas, in the year 1735, carried their arms to the vicinity of Delhi; and in 1739 Nadir Shah of Persia took and plundered Delhi, and separated from Hindostan all the countries to the west of the Indus. After this the Mahrattas obtained possession of several of the provinces ; the nizam or governor of the Deccan threw off his allegiance, and the mandates of the Mogul emperor were disobeyed. After an unfortunate reign, of twenty-seven years, Mohammed Shah died, and was succeeded, in 1747, by his son Ahmed Shah, who was deposed and blinded in the year 1753, and succeeded by Aalumgire II. During this reign the city of Delhi was twice taken and sacked by the Afghaun king of Cabul, and the Mahrattas ; which events completely annihilated the little remaining power of the emperor. In 1761 the prince Ali Goher obtained the title of emperor Shah Alum II. ; and, after residing for some years under the protection of the English at Allahabad, raised a small force, and took possession of the ruins of his capital. He was at length cruelly blinded by aRohillah chieftain ; he, however, continued his nominal reign, under the protection of the Mahrattas, till 1803, when Delhi was taken by the British. He died in the year 1806, after a long and disastrous reign of forty-four years. With this prince the Mogul dynasty may be said to have terminated : under the article INDIA will be found a sketch of the rise and progress of our important possessions here.

HINGE, n. s. & v. a. Dan. hang, from Goth. gang ; Goth, and Teut. ang, a hook. Joints on which a door or gate turns ; the four cardinal points of the compass : figuratively a governing rule, or principle of action: to be off the hinges is a phrase signifying a state of indisposition, irregularity, or disorder : hinge to furnish with hinges; to bend.

Be thou a flatterer now, and hinge the knee, And let his very breath, whom thoul't observe, Blow off thy cap. Shakspeare

Then from the hinge their strokes the gates divorce, And where the way they cannot find, they force.

Denham.

If when the moon is in the hinge at Ease, The birth breaks forward from its native rest ; Full eighty years, if you two years abate, This station gives. Creech's Manilitu.

At the gate

Of heaven arrived, the gate self-opened wide, On golden hinges

turning. Milton.

The man’s spirit is out of order, and off the hinges ; and, till that be put into its right frame, he will be perpetually disquieted. Tillotson.

The other hinge of punishment might turn upon a law, whereby all men, who did not marry by the age

of five and twenty, should pay the thir.5 part of their

revenue. Temple.

Heaven’s imperious queen shot down from high j

At her approach the brazen hinge* fly,

The gates are forced. Dryden.

Methinks we stand on ruins, Nature shakes About us, and this universal frame So loose, that it but wants another push To leap from off” its hinges. Id*

HINGHAM, or HENGHAM (Sir Ralph de), an English lawyer of the thirteenth century, was the proprietor of an estate at Hingham, in Norfolk. He appears also to have held a canonry in St. Paul’s cathedral, London, and was one of the justices of the king’s bench, and a justice itinerant under Edward I., among the number of those first appointed. He was the chief commissioner for the government of the kingdom, while Edward visited Palestine ; but, after the king’s return, was dismissed from office for bribery, and finedZOOO marks,on the non-payment of which he was imprisoned, and afterwards banished, with nine of his brethren. Hingham was in disgrace till the accession of Edward II., in 1308, when he was raised to the office of chief justice of the common pleas, but died the same year. He is chiefly known from Selden having published, in the original Latin, with English notes, a treatise of his entitled Summa Magna et Parva, relating to the ancient forms of plead-ings ; and composed a register of writs

mentioned by Dugdale.

HINGHAM, a market town and parish of Norfolk, ninety-nine miles north from London. The buildings are tolerably neat, but the streets are irregular. The church is a very large building with a lofty tower, erected in the reign of Edward III. In the church were held seven guilds, each hav-ing a stipendiary chaplain serving at the respective altars constituting a choir. The tower is very higt,- and large, and contains eight bells. The river Yare has its source near this town. Market on Saturday.

HINGHAM, a port town of Plymouth county, Massachusetts, fourteen miles south-east from Boston, and 455 from Washington. It lies on the south side of Boston harbour, and contains three congregational churches, a woollen manu- , factory, and a well endowed academy. It has some trade, and is a place of considerable resort of company from Boston in the summer. Population about 2400.

HING-HOA, a city of China of the first rank, in the province of Fo-kien, near the sea-coast. The walls are thick, and the streets well paved. The city is adorned with several triumphal arches, and majestic public buildings. Silk and rice are its chief commodities. It is 900 miles south of Pekin.

HINOJOSA, a town of Spain in Cordova. It is surrounded with mountains, and has a manufacture of coarse cloth, much worn by the Franciscans. Inhabitants 4000. Eighteen miles north of Llerena.

HINT, v. a. & n. s. Fr. enter, indice ; Latin indicium. To bring to mind by a slight allusion; to mention imperfectly; to insinuate: u,yri with the particle at, it implies a slight reference t& VDme subject; a suggestion or intimation. VOL. XI.

On this hint I spake, She loved me for the dangers I had past.

Shakspeare. Othello.

Let him strictly observe the first stirrings and inti* mations, the first hints and whispers of good and evil, that pass in his heart. South.

Actions are so full of circumstances, that, as men observe some parts more than others, they take different hints, and put different interpretations on them.

Additon.

Speaking of Augustus's actions, he still remembers that agriculture ought to be some way hinted at throughout the whole poem. Id. On the Georgicki.

Willing to wound, and yet afraid to strike, Just hint a fault, and hesitate dislike. Pope.

In waking whispers, and repeated dreams, To hint pure thought, and warn the favoured soul.

Thomson.

HIP, n. s., v. a. & interj.~\ From Sax. J>eopa. HIP'PISH, adj. /The joint of the

H i P'SHOT, £ thi gh ; the haunch .

HIP'WORT. j To have on the hip.

A low phrase. To hare an advantage over another. It seems to be taken from hunting, the hip or haunch of a deer being the part commonly seized by the dogs : to sprain the hip : hip-hop a cant word : hip, an exclamation, as the Latin heus ; hippish, fanciful, hypochondriac; hipshot, having a dislocated hip: hipwort a plant; hip the fruit of the dogrose. See HEPS.

• And of a gode brede

Hire hippes were. Chaucer. Boke of the Duchetse.

Eating hips, and drinking watery foam. Hubberd't Tale.

His horse was hipped. Shakspeare.

How now, which of your hips has the most profound

sciatica ? Id.

If this poor brach of Venice, -whom I cherish For his quick hunting, stand the putting on, I'll have our Michael Cassio on the hip. Id.

Why should you want ? Behold, the earth hath

roots; The oaks bear masts, the briars scarlet hips. Id.

Years of store of haws and hips do commonly por» tend cold winters. Bacon's Natural History.

So shepherds use To set the same mark on the hip Both of their sound and rotten sheep. Hudibrat. Hippocrates affirmeth of the Scythians, that, using continual riding, they were generally molested with the sciatica or hip gout. Browne's Vulgar Erroun.

Against a stump his tusks the monster grinds, And ranched his hips with one continued wound.

Dryden.

Why do you go nodding and waggling so like a fool, as if you were hipshot ? says the goose to the gosling.

L'Estrange.

Your different tastes divide our poet's cares j One foot the sock, t'other the buskin wears : Thus, while he strives to please, he's forced to tlo't, Like Volscius hip-hop in a single boot. Congreve.

HIP, in the materia medica, the fruit of the dogrose or wild brier. See ROSA. It contains an acidulous, yet sweetish pulp ; with a rough prickly matter enclosing the seeds from which the pulp ought to be carefully separated before it be taken internally. The Wirtemberg College observes, that from a neglect of this, pulp ot hips sometimes occasions a pruritus andt uneasiness about the anus ; and the conserve of it has been known to excite violent vomiting. The conserve is the only officinal preparation of this fruit which possesses any medical virtues, but is merely used by the apothecaries as a vehicle

for other remedies. The Edinburgh College omit it.

HIP, in architecture, the angle formed by two parts of the roof when it rises outwards. Hips are also those pieces of timber which are placed at the corners of a roof. They are much longer than rafters, on account of their oblique position.

HIPPARCHIA, a celebrated lady born at Maronea in Thrace, in the time of Alexander the Great. Her attachment to learning and philosophy was so great, that, having attended the lectures of Crates the cynic, she fell in love with him, and resolved to marry him, though he was both old and deformed. Crates himself was prevailed upon by her friends, to try to dissuade her from her singular choice, which he did by displaying his poverty, his cloak, his bag, and his deformity, but all in vain. At last he told her she could not be his wife, unless she resolved to live as he did. This she cheerfully agreed to, assumed the habit of the order, and accompanied him every where to public entertainments, &c., which was not customary with the Grecian ladies. She wrote several tragedies, Philosophical Hypotheses, and Reasonings and Questions proposed to Theodorus the Atheist : but none of her works are extant.

HIPPARCHUS, an eminent astronomer, born at Nice, in Bithynia, who flourished between the 154th and 163rd Olympiads. His Commentary upon Aratus's Phenomena is still extant. This astronomer was acquainted with the particular motion of the fixed stars from west to east, by which their longitude changes ; and, by foretelling eclipses, he taught mankind not to fear them. Pliny, who relates this, admires him for making a review of all the stars ; by which his descendants would be enabled to discover whether they are born and die, whether they change their places, and whether they increase and decrease.

HIPPIA, in botany, a genus of the polygamia necessaria order, and syngenesia class of plants. The receptacle is naked ; there is no pappus; the seeds are naked with broad margins ; CAL. hemispheric, and subimbricated : the radius consists of ten corollas, obscure, and rather cleft into three. Species four, small plants resembling the tansy.

HIPPISLEY (Sir John Coxe), bart. D.C.L. F.R. and A. S., was descended of an ancient Somersetshire family, and the only surviving son of William Hippisley, esq., of Yatton, was born in 1765. Having graduated as D.C.L, at Hertford College, Oxford, in 1776, he became a member and bencher of the Inner Temple ; but on his return from Italy, in 1780, he was appointed through the interest of lord North to an office of trust in India, which he held during the wars with Hyder Ali and Tippoo Saib. Return • ing to England in 1 790, he was elected member of parliament for Sudbury, of which borough he became

recorder, and represented it also in five parliaments. Mr. Hippisley in 1796 negociated a marriage between the duke of Wirtemberg and the princess royal of England, on which occasion he was raised to the baronetage. Being an Active magistrate and a warm supporter of

many useful institutions, he distinguished himself on several occasions in the house by his speeches, especially upon Irish affairs, and was a strenuous supporter of Catholic emancipation. He published an octavo volume in favor of this measure in 1806, a speech on Mr. Grattan's mo-tion in 1812, and a series of letters to the earl of Fingal in 1813. He was also the author of a treatise on Prison Discipline, printed in 1823, recommending the hand crank-mill for the tread-mill, as a punishment for convicts. His death took place May 3d, 1825.

HIPPO, or HIPPON, in ancient geography, two towns on the coast of Africa, now called Bicerta and Bona.

HIPPOBOSCA, the horse fly, in zoology, a genus of insects belonging to the order of dip-tera. The beak consists of two valves, is cylindrical, obtuse and hanging ; and the feet have several claws. There are four species, distinguished by their wings, &c. The most remarkable is the hippobosca equina, the pest of horses and cows. This insect is broad, flat, shining, and as it were scaly. Its head, thorax, and abdomen, are yellow, undulated with brown ; and the legs are intersected with yellow and brown. The wings, crossed one over the other, exceed the length of the body by above one-half; they are transparent, tinged with a little yellow towards their outward edge, and have a spot near that edge of a brown color. These insects are very difficult to be killed, on account of the hard crustaceous shell which covers them ; and they fix so close and fast to the poor animals with their claws, that they cannot rub or bite them off without wounding themselves.

HIPPOCASTANUM, the common horse-chestnut. See .ZEscuLUS. It may be here added, that, from several experiments in the French Memoires d'Agriculture, it appears that the fruit of the horse-chestnut affords a wholesome nourishment for cattle, and may even be employed with success in fattening them. It is said to render the tallow of those fattened with it particularly firm. The milk yielded by cows fed upon it is also said to be thicker and richer than that produced from any other food. The fruit of this tree has been likewise used as food for sheep and poultry, and as soap for washing. It was much employed in powder as a sternutatory by an itinerant oculist, and has been recommended by some others in certain states of

ophthalmia, headach, &c., in which erchines are indicated. Its effects as a sternutatory may also be obtained, by using it under the form of infusion or decoction drawn up into the nostrils. It is entirely with a view to its errhine power, that it has a place in the Pharmacopoeia of the Edinburgh College.

HIPPOCE'NTAUR, n. s. Gr. iirwoKtvravpoc ; Fr. hippocentaure. A fabulous monster, half horse and half man.

How are poetical fictions, how are Mppocentaurs and chimeras to be imagined, which are things quite out of nature, and whereof we can have no notion?

Dryden.

HIPPOCENTAURS, from ITTTTOC, a horse, KIV-riot, I spur, and ravpoc, a bull. A people of Thessaly, inhabiting near mount Pelion, became

thus denominated, because they were the first that taught the art of mounting animals ; which occasioned some of their neighbours to imagine that the beast and man were but one creature. The hippocentaurs should seem to have differed from the centaurs in this, that the latter rode only on bullocks, and the former on horses, as the names intimate. See CENTAUR.

HITPOCRAS, n. s. Fr. hypocras, quasi vinum Hippocratis. A medicated wine.

Sack and the well-spiced hippocrass, the wine,

Wassail the bowl, with ancient ribbands fine.

King.

HIPPOCRAS is composed of wine, with spices and other ingredients, and is much used in France, as a cordial after meals. There are various kinds of it, according to the kind of wine and other ingredients used : as white, red, claret, and strawberry hippocras ; hippocras without wine; cyder hippocras, &c. The London Dispensatory directs it to be made of cloves, ginger, cinnamon, and nutmegs, grossly powdered, and infused in canary with sugar ; to this infusion may be added, milk, a lemon, and some slips of rosemary, and the whole strained through flannel. It is recommended as a cordial, and in paralytic and nervous cases.

HIPPOCRATES, the greatest physician of antiquity, was born ia the island of Coos, in the eightieth Olympiad, and flourished during the Peloponnesian war. He was the first on record who laid down precepts concerning physic ; and according to his biographer, Soranus, was descended from Hercules and ˆEsculapius. He was first a pupil of his father Heraclides, then of Herodicus, then of Gorgias of Leontium, the orator, and, according to some, of Democritus of Abdera. After being instructed in physic and the liberal arts, and losing his parents, he left Coos, and practised physic all over Greece; where he was so much admired for his skill, that he was publicly sent for to Perdiccas, king of Macedonia, who was then thought to be consumptive. But Hippocrates, as soon as he arrived, pronounced the disease to be entirely mental. For, upon the death of his father Alexander, Perdiccas fell in love with Philas, his father's mistress ; which Hippocrates discerning by the change her presence always wrought upon him, a cure was soon effected. Being entreated by the people of Abdera to come and cure Democritus of a supposed madness, he went; but, upon his arrival, instead of finding Democritus mad, he pronounced all his fellow citizens so, and Democritus the only wise man among them. He heard many lectures from him ; which made Celsus and others imagine, that Hippocrates was the disciple of Democritus, though it is probable they never saw each other till this interview. Hippocrates had also public invitations from other countries. Thus, when a plague invaded the Illyrians and Paeoniaus, the kings of those countries entreated him to come to their relief: he did not go : but, learning from the messengers the course of the winds there, he concluded that the distemper would come to Athens ; and, foretelling what would happen, applied himself to take care of the city and the students. He was indeed such a lover of his country, that when his

fame had reached as far as Persia, and Artaxerxea entreated him, with a promise of great rewards, to come to him, he refused to go, saying that ‘ he had food, clothing, and a habitation in his own country : that it would be unworthy of him to aspire to the wealth or grandeur of the Persians, or to cure barbarians who were the enemies of Greece.’ He also delivered his own country from a war with the Athenians, by prevailing with the Thessalians to come to their assistance, for which he received very great honors from the Coans. The Athenians also honored him greatly ; they admitted him next to Hercules in the Eleusinian ceremonies ; gave him the freedom of the city ; and voted a public maintenance for him and his family in the pry-tanaeum at Athens, where none were maintained but such as had done signal service to the. state. He died among the Larissseans, some say in his ninetieth year, some in his eighty-fifth, others in his 104th, and some in his 109th. The best edition of his works is that of Foesius, in Greek and Latin. Hippocrates wrote in the Ionian dialect.

HIP’POCRATES’S SLEEVE, n, s. A woollen bag, made by joining the two opposite angles of a square piece of flannel, used to strain syrups and decoctions for clarification.

HIPPOCRENE, in ancient geography, a fountain of Mount Helicon, on the borders of Boeotia, sacred to the Muses. Ovid makes Hippocrene and Aganippe the same. See AGANIPPE.

HIPPOCREPIS, common horseshoe vetch, in botany, a genus of the decandria order, and diadelphia class of plants : natural order thirty-second, papilionaceae. The legumen is compressed and crooked, with many incisions on the interior suture. There are five species ; all low herbaceous trailing plants, with yellow flowers. They are propagated by seeds ; but, having no great beauty, are seldom kept in gardens.

HIPPODROME, or HIPPODROMUS, from Gr. Ijnrof, a horse, and tfpofioc, a course. In antiquity, a course wherein chariot and horse races were performed, and horses exercised. The Olympian hippodrome, or horsecourse, was a space of ground 600 paces long, surrounded with a wall, near Elis, on the banks of the Alpheus. It was uneven, and in some degree irregular, on account of the situation; in one part was a hill of a moderate height, and the circuit was adorned with temples, altars, and other embellishments. See STADIUM. There is a famous hippodrome at Constantinople, which was begun by Alexander Severus, and finished by Constantine. The circus, called by the Turks atmeican, is 400 paces long, and above 100 paces wide. At the entrance there is a pyramidal obelisk of granite in one piece, about fifty feet high, terminating in a point, and charged with hieroglyphics.

The Greek and Latin inscriptions on its base show that it was erected by Theodosius; the machines that were employed to raise it are represented upon it in basso-relievo. There are some vestiges in England of the hippodromus, in which the ancient inhabitants of this country performed their races ; the most remarkable is that near Stone-henge, which is a long tract of ground, about

350 feet, or 200 Druid cubits wide, and more than a mile and three quarters, or 6000 Druid cubits, in length, enclosed quite round with a bank of earth, extending directly east and west. The goal and career are at the east end. The goal is a high bank of earth, raised with a slope inwards, on which the judges are supposed to have sat. The metre are two tumuli, or small barrows, at the west end of the course. These hippodromes were called in the language of the country rhedagua, the racer rhedagwr, and the carriage rheda, from the British word rhedeg, ‘ to run.’ One of these hippodromes, about half a mile south of Leicester, retains evident traces of the old name rhedagua, in the corrupted one of Rawdikes. There is another, says Dr. Stukely, near Dorchester ; another on the banks of the Lowther, near Penrith in Cumberland ; and another in the valley, just without the town of Royston. . «•.••

HI’PPOGRIFF, n. s. Gr. MTTTOC and ypoi// ; Fr. hippogriffe. A winged horse ; a being imagined by Ariosto.

He caught him up, and without wing

Of hippogriffe bore through the air sublime.

Milton.

HIPPOLYTE,(St.), a small town of France, in the department of Doubs,

Franche Comte, the chief place of the canton, and about eighteen miles south of Montbelliard. It is a post-town, and contains about 3500 inhabitants. Its situation is very picturesque, in the bottom of a valley, surrounded with high mountains, at the confluence of the rivers Doubs and Desoubre. On arriving at this spot an agreeable prospect meets the eye ; it wanders delighted over ridges of mountains, cultivated hills, and delightful valleys near the town, of which the point of the steeple is just seen peeping out from the foot of the mountain. The verdure of the hemp which is cultivated in the valley, the vines, which cover the hills even to the tops, the majestic gloom of the forests which extend over the most elevated of the mountains, and the black smoke issuing from the numerous forges, give an indescribable charm to this smiling and animated picture. Here are manufactures of clock-makers' tools, jewellery, and gravers ; likewise of hats, pipes, and brass work ; tan-houses, dye-houses, cheese factories, &c. ; and in the neighbourhood are blast-furnaces, forges, and flatting-mills.

HIPPOLYTE, (St.), a handsome town of the department of the Gard, Languedoc, the chief place of the canton of Vigan. It has a tribunal of commerce, and a council of manufactures, and is a post-town, with 5500 inhabitants. It is pleasantly situated at the foot of the Cevennes Mountains, on the Vidourle, not far from the source of that river. A canal running through it furnishes several fountains with water, and works a great number of mills. This town is rendered remarkable from the circumstance, that an insult offered to a priest, who was carrying the host through it to a sick person, furnished a pretext for the revocation of the edict of Nantes, which involved so many thousands in banishment and ruin on account of their religious opinions. It has manufactories of silk and cot-tou stockings, woollen stuffs, and glue, and large

tan-yards ; and carries on a commerce in fruits and silk.

HIPPOLYTE, in fabulous history, a queen of the Amazons, who was conouered by Hercules, and married to Theseus : by whom she had

HIPPOLYTUS, famous in fabulous history for his virtue and his misfortune. His stepmother Phaedra fell in love with him, and when he refused to pollute his father's bed, she accused him to Theseus of offering violence to her per-son. Her accusation was readily believed, and Theseus entreated Neptune to punish the incontinence of his son. Hippolytus fled from the resentment of his father; and, as he pursued

his way along the sea shores, his horses were so frightened at the noise of sea-calves which Neptune had purposely sent there, that they ran among the rocks till his chariot was broken, and his body torn to pieces. Temples were raised to his memory, particularly at Trazene, where he received divine honors. Diana is said to have restored him to life.

HIPPOMANE, the manchineel tree, a genus of the monadelphia order, and moncecia class of plants : natural order thirty-eighth, tricoccae : MALE has an amentum and bifid perianthiurn, without any corolla : the FEMALE perianthium is trifid ; there is no corolla ; the stigma is tripartite ; and the plum or capsule tricoccous. The species are,

1. H. biglandulosa, with oblong bay leaves, is a native of South America, and grows to as large a size as the mancinella, from which it differs mostly in the shape of its leaves.

2. H. mancinella, with oval sawed leaves, is a native of all the West India islands. It has a smooth brownish bark ; the trunk divides upward into many branches, garnished with oblong leaves about three inches long. The flowers come out in short spikes at the end of the branches, but make no great appearance, and are succeeded by fruit of the same shape and size with a golden pippin. The tree grows to the size of a large oak. Strangers are often tempted to eat the fruit of this species ; the consequences are, an inflammation of the mouth and throat, pains in the stomach, &c., which are very dangerous, unless remedies are speedily applied. The wood is much esteemed for making cabinets, book-cases, &c., being very durable, taking a fine polish, and not being liable to become worm-eaten : but, as the trees abound with a milky caustic juice, fires are made round their trunks, to burn out this juice; otherwise those who fell the trees would be in danger of losing their sight by the juice flying in their eyes. This juice raises blisters on the skin wherever it falls, turns linen black, and makes it fall out in holes. It is also dangerous to work the wood after it is sawn out ; for, if any of the sawdust happens to get into the eyes of the workmen, it causes inflammation ; to prevent which, they generally cover their faces with fine lawn during the time of working the wood. It is with the juice of this tree that the Indians poison their arrows.

3. H. spinosa, with holly leaves, is a native of Campeachy, and seldom rises above twenty feet high; the leaves greatly resemble those of the

crrnmon holly, and are set with sharp prickles at the end of each indenture. They are of a lucid green, and continue all the year. These plants, being natives of very warm climates, cannot be preserved in this country without a stove ; nor can they by any means be made to rise above five or six feet high, even with that assistance. They are propagated by seeds ; but must have very little moisture, or they will certainly be killed by it. — These trees have all a very poisonous quality, abounding with an acrid milky juice of a highly caustic nature.

HIPPOMANES, from iiriros, a horse, and uavia, madness, • a sort of poison famous among the ancients as an ingredient in amorous philters, or love charms. Authors are not agreed about the nature of the hippomanes. At the end of Bayle's Dictionary is a very learned dissertation on the hippomanes, and all its virtues real and pretended.

HIPPONA, or EPONA, from iiriroe, a horse, in ancient mythology, the goddess of horses. See EPONA.

HIPPONAX, a Greek poet, born at Ephesus, A. A. C. 540. He cultivated the same satirical poetry as Archilochus, and was not inferior to him in the beauty and vigor of his lines. His satirical raillery obliged him to fly from Ephesus. As he was naturally deformed, two brothers, Buphalus and Anthermus, made a statue of him ; which, by the ugliness of its features, exposed the poet to universal ridicule. Hipponax, resolving to revenge the injury, wrote such bitter invectives and satirical lampoons against them, that they hanged themselves in despair.

HIPPOPHAE, sea-buckthorn ; a genus of the tetrandria order, and dioecia class of plants; natural order sixteenth, calyciflorse : MALE CAL. bipartite: COR. none: FEMALE CAL. blind : COR. none : there is one style, and a monospermous berry. The chief species are,

1. H. Canadensis, with a shrubby brown stem, branching eight or ten feet high, with oval leaves, and male and female flowers on different

plants.

2. H. rhamnoides, with a shrubby stem, branching irregularly eight or ten feet high, having a dark brown bark. It is armed with a few thorns, and has spear-shaped, narrow, sessile leaves, of a dark green above, and hoary underneath. Both these species are very hardy, and may be propagated in abundance by suckers from the roots, by layers, and by cuttings of their young shoots. They are retained in gardens on account of their two-colored leaves in summer; and, in winter, on account of the appearance of the young shoots, which are covered with turgid, irregular, scaly buds. Goats, sheep, and horses, eat this species ; cows refuse it.

HIPPOPHAGI, in ancient geography, a peo-ple of Scythia, so called from their living on horseflesh ; the fare at this day of the Tartars, their descendants. Also a people of Persia.

HIPPOPODES, or HIPPOPODI*, from ITTTTOC, horse, and TTSC, a foot, in ancient geography, an appellation civen to a certain people situated on the banks of the Scythian Sea, who were supposed to have had horses' feet. The Hippopodes are mentioned by Dionysius, Mela, Pliny, and St. Augustine. It is conjectured that they had this

appellation given them on account of their swiftness or lightness of foot. Mr. Pennant supposes them to have been the inhabitants of the Bothnian Gulf, and that they were the same sort of people as the Finni Lignipedes of Olaus. They wore snow shoes ; which he thinks might fairly give the idea of their being, like horses, hoofed and shod.

HIPPOPOTAMUS, n.s. Gr. .TTITOC and Trora/ioc. The river horse. Au animal found in the Nile.

HIPPOPOTAMUS, the river horse, is a genus of quadrupeds belonging to the order of belluae, the characters of which are these : They have four foreteeth in the upper jaw, disposed in pairs at a distance from each other ; and four prominent foreteeth in the under jaw, the intermediate ones being longest. There are two tusks in each jaw; those of the under one very long, and obliquely truncated ; in both they stand solitary, and are recurvated. The feet are hoofed on the edges. There is but one known species, *viz.* the hippopotamus amphibius, or river horse. The head of this animal is of an enormous size, and the mouth vastly wide. The ears are small and pointed, and lined within very thickly with short fine hairs. The eyes and nostrils

are small in proportion to the bulk of the animal. On the lips are some strong hairs scattered in patches. The hair on the body is very thin, of a whitish color, and scarcely discernible at first sight. There is no mane on the neck, as some writers assert, only the hairs on that part are rather thicker. The skin is very thick and strong, and of a dusky color. The tail is about a foot ‘ong, taper, compressed, and naked. The hoofs are divided into four parts. The legs are short and thick. In bulk it is second only to the elephant. The length of a male has been found to be seventeen feet, the circumference of the body fifteen, the height nearly seven, the legs nearly three, the head above three and a half, and the girth nearly nine. The mouth, when open, is above two feet wide ; and furnished with forty-four teeth of different figures (including the cutting teeth and the canine). The cutting, and particularly the canine teeth of the lower jaw, are very long, and so hard and strong that they strike fire with steel. This circumstance, it is probable, gave rise to the fable of the ancients, that the hippopotamus vomited fire from his mouth. The substance of the canine teeth is so white, so fine, and so hard, that it is preferable to ivory for making artificial teeth. The cutting teeth, especially those of the under jaw, are very long, cylindrical, and chamfered. The canine teeth are also long, crooked, prismatic, and sharp, like the tusks of the wild boar. The grinders are square or oblong, like those of man, and so large that a single tooth sometimes weighs three pounds. The tusks, according to Dr. Sparman, are twenty-seven inches long. With such powerful arms, and such a prodigious strength of body, the hippopotamus might render himself formidable to every other animal. But he is naturally of a mild disposition, and is only formidable when provoked. His bulk is so great, that twelve oxen have been found necessary to draw one ashore, which had been shot in a river above

the Cape; and, according to Hasselquist, its hide is a load for a camel. Though he delights in the water, and lives in it as freely as upon land, yet he has not, like the beaver or otter, membranes between his toes. The great size of his belly renders his specific gravity nearly equal to that of water, and makes him swim with ease. These animals inhabit

the rivers of Africa, from the Niger to Berg River, many miles north of the Cape of Good Hope. They formerly abounded in the rivers nearer the Cape, but are now almost extirpated. They are not found in any of the African rivers which run into the Mediterranean, except the Nile, and even there only in Upper Egypt, and in the fens and lakes of Ethiopia, which that river passes through. From the unwieldiness of his body, and the shortness of his legs, the hippopotamus is not able to move fast upon land, and is then extremely timid. When pursued, he takes to the water, plunges in, sinks to the bottom, and is seen walking there at full ease ; he cannot, however, continue there long without often rising towards the surface ; and in the daytime is so fearful of being discovered, that, when he takes in fresh air, the place is hardly perceptible ; for he does not venture even to put his nose out of the water. In rivers unfrequented by mankind he is less cautious, and puts his whole head out of the water; If wounded, he will rise and attack boats or canoes with great fury, and often sink them by biting large pieces out of the sides : and frequently people are drowned by these animals ; for they are as bold in the water as they are timid on land. It is reported that they will at once bite a man in two. In shallow rivers the hippopotamus makes deep holes in the bottom, in order to conceal his great bulk. When he quits the water, he usually puts out half his body at once, and smells, and looks around ; but sometimes rushes out with great impetuosity, and tramples down every thing in his way. During the night he leaves the rivers in order to pasture; when he eats sugar-canes, rushes, millet, rice, &c., consuming great quantities, and doing much damage in the cultivated fields. But as he is so timid on land, it is not difficult to drive him off. ‘ The Egyptians,’ Hasselquist informs us, * have a curious man-ner of freeing themselves in some measure from this destructive animal. They remark the places he frequents most, and there lay a great quantity of peas : when the beast comes on shore hungry and voracious, he falls to eating what is nearest him ; and, filling his belly with the peas, they occasion an insupportable thirst : he then returns immediately into the river, and drinks upon these dry peas large draughts of water, which suddenly causes his death ; for the peas soon begin to swell with the water, and not long after the Egyptians find him dead on the shore, blown upas if killed with the strongest poison.’ The river-horse also feeds on roots of trees, which he loosens with his great teeth ; but never eats fish, as is asserted by Dampier. The hippopotami sleep in the reedy islands in the middle of the stream, and on these they bring forth their young. A herd of females has but a single male : they bring one young at a time, and that on the land, but suckle it in the water.

They are capable of being tamed. Belon says, 4 he has seen one so gentle as to be let loose out of a stable and fed by its keeper, without attempting to injure any one.' They are generally taken in pitfalls, and the poor people eat the flesh. In some parts the natives place boards full of sharp irons in the corn grounds ; which these beasts strike into their feet, and so become an easy prey. Sometimes they are struck in the water with harpoons fastened to cords, and ten or twelve canoes are employed in the chase. The hippopotamus was known to the Romans. Scaurus treated the people with the sight of five crocodiles and one hippopotamus during his aedileship, and exhibited them in a temporary lake. Augustus produced one at his triumph over Cleopatra. This animal is the behemoth of Job ; who admirably describes its manners, its food, and its haunts, chap. xl. ver. 15 — 24. An entertaining account of the hippopotamus is given in Sparman's Voyage to the Cape of Good Hope, where these animals are called sea-cows. After giving a particular narrative of a hunting expedition, for* two days, upon which he and Mr. Immelman had set out, on the 24th of January, 1776, accompanied by other three Europeans, and two Hottentots, and wherein he himself was once in imminent danger of his life from one of these animals, Mr. Sparman proceeds as follows : — ' The same night (the 26th) we betook ourselves again to our posts ; and at half after eight, it being already very dark, a sea-cow began at intervals to put its head up above the water, and utter a sharp, piercing, and very angry cry,which seemed to be between grunting and neighing. Perhaps this cry may be best expressed by the words he'urkh, hurkh, huh-huh : the two first being uttered slowly, in a hoarse, but sharp and tremulous sound, resembling the grunting of other animals ; while the third or compound word is sounded extremely quick, and is not unlike the neighing of a horse. It is true, it is impossible to express these inarticulate sounds in writing; but perhaps one may make nearer approaches to it than to the gutturo-palatial sounds of the Hottentot language. At eleven o'clock came the same or some other hippopotamus, and visited the posts we occupied. He did not, however, dare to come up, though we heard him nibble the boughs, which hung over the surface of the water, as well as a little grass and a few low shrubs, which grew on the inside of the river's banks. We were, however, in hopes, that this way of living would not long suffice animals, one of which only requires almost a larger portion than a whole team of oxen. Thus far at least is certain, that if one should calculate the consumption of provision made by a sea-cow from the size of its fauces, and from that of its body and belly, which hangs almost down to the ground, together with the quantity of grass which I have at different times observed to have been consumed by one of them, in spots whither it has come over night to graze, the

amount would ap-pear almost incredible. We passed the following night at the same posts, the sea-cows acting much as before. On the 28th, after sunrise, just as we were thinking of going home to our

waggons, there comes, a female hippopotamus, with her calf, from some other pit or river, to take up her quarters in that which we were then blockading. While she was waiting at a rather steep part of the river's banks, and looking back after her calf, which was lame, and came on but slowly, she received a shot in her side, upon which she directly plunged into the river, but was not mortally wounded ; for Flip, the farmer'-s son, the drowsiest of all sublunary beings, who had shot her, and that instant could hardly be awakened by two Hottentots, was still half asleep when he fired his piece. And happy was it for him, that the enormous beast did not make towards his hiding or rather sleeping place, and send him into the other world to sleep for ever. In the mean while his sho.t was so far of service, that one of my Hottentots ventured to seize the calf, and hold it fast by its hind legs, till tlie rest of the hunting party came to his assistance; upon which the calf was fast bound, and with the greatest joy borne in triumph to our waggons ; though, while they were taking it over a shallow near the river, the Hottentots were very much alarmed, lest the wounded mother, and the other sea-cows should be induced by the cries of the calf to come to its rescue ; the creature, as long as it was bound, making a noise a good deal like a hog that is going to be killed, or thas got fast between two posts. The sound, however, proceeding from the hippopotamus calf was more shrill and harsh. It showed likewise a considerable share of strength in the attempt it made to get loose, and was quite unmanageable and unwieldy ; the length of it being three feet and a half, and the height two feet, though the Hottentots supposed it to be no more than a fortnight, or at most three weeks old. When at last it was turned loose it ceased crying ; and when the Hottentots had passed their hands several times over its nose, in order to accustom it to their effluvia, it began directly to take to them.' ' While the calf was yet alive,' he adds, ' I made a drawing of it, a copy of which may be seen in the Swedish

Transactions for 1778. After this it was killed, dissected, and eaten up in less than three hours time. The reason of this quick despatch was partly the warmth of the weather, and partly our being in absolute want of any other fresh provisions. We found the flesh and fat of this calf as flabby as one might have expected from its want of age, and consequently not near so good as that of the old sea-cows ; of which I found the flesh tender, and the fat of a taste like marrow, or at least not so greasy and strong as other fat. It is for this reason likewise that the colonists look upon the flesh and fat of the sea-cow as the wholesomest meat that can be eaten; the gelatinous part of the feet in particular, when properly dressed, being accounted a great delicacy. The dried tongues of these animals are also considered, even at the Cape, as a rare and savoury dish. On my return to Sweden, I had the honor to furnish his majesty's table with a dried sea-cow's tongue, two feet and eight inches long. With respect to form, the tongue of a full-grown hippopotamus is very blunt at the tip, and is in fact broadest at that part : if at the same time it is slanted off towards one side,

and marked with lobes, as I was informed it is, this circumstance may, perhaps, proceed from the friction it suffers against the teeth, towards the side on which the animal chiefly chews ; at leasi some traces of this oblique form were discoverable on the dried tongue I am speaking of. The hide of the adult hippopotamus bears a great resemblance to that of the rhinoceros, but is rather thicker. Whips made of this hide are likewise stronger, and, after being used some time, are more pliable than those made of the hide of the rhinoceros usually are, though they are not so transparent as these latter are when new. That the hippopotamus actually lives in salt water, I have seen evident proofs at the mouths both of the Kromme and Camtour ri-vers, particularly in the latter, on my journey homewards; where many of these animals blowed themselves in broad day light, and thrust their heads up above the water ; and one of them, in particular, which had been wounded by an ill-directed shot on the nose, neighed from anger and resentment. In Krakekamma I saw on the beach manifest traces of a hippopotamus which had come out of the sea, but had retired thither again directly.

' The method of catching the hippopotamus consists (besides shooting it) in making pits for it, in those parts which the animal passes, in his way to and from the river : but this method is peculiar to the Hottentots ; and is only practised by them in the rainy season, as the ground in summer is too hard for that purpose. It is said that they have never succeeded in killing this huge aquatic animal with

poisoned darts, though this way of killing game is practised with advantage by the -Hottentots for the destruction both of the. elephant and rhinoceros. The hippopotamus is not so quick in its pace on land as the generality of the larger quadrupeds, though perhaps it is not so slow and heavy as M. de Buffon describes it to be ; for both the Hottentots and colonists look upon it as dangerous to meet a hippopotamus out of the water; especially as, according to report, they had had a recent instance of one of these animals, which, from certain circumstances, was supposed to be in rut, having for several hours pursued a Hottentot, who found it very difficult to make his escape. Having already exceeded the limits I had prescribed to myself, I do not intend to dwell here on the anatomy of the hippopotamus we caught ; particularly as the internal conformation of the calves is somewhat different from that of the adult animal. I shall therefore only briefly mention the following particulars : the stomachs were four in number, and consequently one more than in the foetus examined by M. Daubenton, which was kept in spirits. Compare Buffou, torn. xii. tab. ir. fig. 2. The two first stomach were each of them about seven inches long ana. three inches in diameter; the third was nine inches in length, and a little wider than the two former ; the fourth was seven inches long, and at the upper part five inches broad, but decreased by degrees on one side till it terminated in the pylorus, which had an aperture an inch in width, being about half as wide again as the cardia. I did not observe any such valves as M. Dauben-264

ton has delineated. The first stomach was found cante, raedio longitudinaliter sub-brunneo, sub-mostly empty, it containing only a few lumps of tus pallide fusco, in the elegant Treatise on

Worms, whirh M. Adolphus Nodeer, first secretary of the patriotic society, is preparing for the press. Instead of the lightev colored streak upon the back, there was discoverable in some of these leeches one and sometimes two longitudinal

cheese or curd ; it likewise differed from the rest by the superior fineness of its internal coat. The internal membrane of the second

stomach was rather coarser, and had many small holes in it ; it likewise contained several clods of caseous

matter, together with a great quantity of sand brownish lines, which grew fainter and fainter and mud. The third stomach had very visible towards the extremities. This huge animal has

folds, both longitudinal and transversal, on the inside of it, and contained caseous lumps of a yellow color and harder consistence than the others, together with several leaves quite whole and fresh, and at the same time some dirt. The

doubtless obtained its present name, merely in consequence of the neighing sound it makes, as otherwise in its form it bears not the least resemblance to a horse, but rather to a hog. Neither does it in the least resemble the ox; so it could

interior membrane of the fourth stomach was be only the different stomachs of this animal very smooth, though it was not without folds ; which could occasion it to be called sea-cow at in the stomach itself there was a good deal of the Cape ; and perhaps it is for the same reason dirt, with a small quantity of curds, which were that the Hottentots call it the t'gao, which nearly whiter than they were in any of the other sto-approaches to t'kau, the name by which the machs. 'This fourth stomach in a great measure buffalo is known among these people. Mr. Max-covered the rest, being situated on the right side well, in his account of Coango, says ' I never of the animal, and was found to have the upper had the good fortune to kill a hippopotamus, part of the melt adhering to its superior and in-although I have often attempted it by muffling the terior edge. This latter viscus, which was one oars and warily approaching them, but they al-foot long and three inches broad, diverged from it downwards on the left side. The intestinal canal was 109 feet long; the liver measured

ways took the alarm and retreated to deep water. This inclines me to think, that one of their rramber stands sentinel while the others sleep.

They

fourteen inches from right to left, and seven or presented, however, many oportunities of being

eight from the hind part to the fore part. On its anterior edges it had a large notch, being in

fired at, rearing their huge heads abruptly out of the water, sometimes only a few yards from the

other respects undivided and entire ; it was of boat, putting us under no small apprehension by an oblique form, being broadest towards the left their tremendous bellowing and threatening as-side, where I discovered a gall-bladder five pect. Many a volley was fired at them, but inches in length. In the uterus there was nothing whether the hide is proof against ball, or the

particularly worthy of observation. I found two teats, and the heart surrounded with much fat ; the length of this muscle was five inches, and the breadth about four inches and a half. The communication between the auricles, called the foramen ovale, was above an inch in diameter.

current carried the wounded out of our reach, we could not ascertain.

HIPPOPOTAMUS FOSSIL. Zoologists are acquainted with one living species of hippopotamus only , but late observations have proved that the bowels of the earth contain the fossil remains

Each lung was eleven inches long, ana undi-of two perfectly distinct species, one of which vided : but, at the superior and exterior parts of appears not to differ in any. respect from the one the right lung, there were two globules or pro-still existing ; the other being, as it were, a mi-cesses, elevated half an inch above the surface ; and on the side

corresponding to it in the left

niature copy of the larger, is nearly of the size of the wild boar. The discovery of this latter lung, and in the upper part of it, there was a we owe to the indefatigable Cuvier, who has

little excrescence, terminating in a point : some-likewise proved the existence of the other species

what below this, yet more forwards, there was in a fossil state. Several authors, prior to that

found likewise a process half an inch in height, celebrated naturalist, have mentioned fossil

Directly over the lower part of the communica-bones of the great African hippopotamus, but

tion formed between the right and left lungs, there was a kind of crest or comb, measuring an inch from the top to the basis. One of my brother sportsmen said, he had once observed a peculiar kind of vermin on the body of one of these am-

subsequent observations proved that they had been rather too rash in forming their diagnosis.

Some writers, on the other hand, have been in the possession of real fossil remains of the hippopotamus without being aware of it. Thus

phibious animals ; but on the calf we caught we Aldrovandus has figured several molares of this found nothing but a species of leech, which kept animal under the name of elephant’s teeth, while

only about the anus, and likewise a good. way up in the straight gut, where, by a timely abstraction of the blood, they may be of use to

these large amphibious animals; and particularly may act as preservatives againstthe piles,repaying themselves for their trouble in kind ; most of them were very small ; but on the other hand there was a considerable number of them. The only large one I saw of this species, being somewhat more than an inch in length, I described and made a drawing of: this is inserted by the name of the Hirudo Capensis, corpore supra nigri-

the real elephant's teeth, of which he has likewise given a representation, were considered by him as belonging to some large unknown animal. The only authors who have been more correct, both in the application of the name of hippopotamus, and in their observations respecting the fossil remains of the animal in question, are Antoine de Jussieuand Daubenton; the fossil bones described by the former, as early as 1 724, cannot be doubted to be really those of the river horse ; and those indicated by Daubenton under the same name, and deposited (promiscuously with

others, which belong to the mastodonte, in the museum at Paris, were the first that served to convince Cuvier of the existence of fossil remains of

1. The great or common hippopotamus. — One of the last-mentioned specimens of osseous remains, consists in a poition of the right side of the lower jaw containing two molar teeth ; the other in a single molar tooth. The place where they were found is not known with certainty. A third specimen, examined by Cuvier, is a fragment of the upper jaw, with two molar teeth, in the collection of M. de Dree; it is penetrated by a ferruginous substance, but does not bear any indication of its origin ; it is not, however, improbable that it was found in the

neighbourhood of Montpelier.

More satisfactory than the preceding specimens, with regard to its locality, was one in the collection of M. Miot. This, bone, which was known to have been gathered in the Val d'Arno, in Tuscany, is an astragalus, resembling that of a hog, to which animal the hippopotamus approaches more than to any other, with regard to the conformation of all its parts. The place where bones of the hippopotamus are actually found being thus ascertained, Cuvier applied to Fabbroni at Florence, who sent him drawings of two molar teeth, and one representing a fragment of a tusk or canine tooth, which Cuvier soon ascertained to belong to the animal in question. Respecting the canine tooth, it is observed by Fabbroni, that it differs from that of the African hippopotamus in its diameter being greater compared with its length, and also in its spiral curvature being much more distinct. He adds, that these teeth are scattered in various parts of the upper valley of Arno, but unaccompanied either by jaws or other bones.

Cuvier thinks there is no material difference «ither between these fossil teeth or the astragalus he has examined, and those of the living species ; and indeed it is remarkable, that the animal, whose existence in a fossil state had at first appeared doubtful to geologists, should be one whose fossil remains far more strikingly resemble the bones of the still existing species, than any other fossil remains which naturalists have referred to living animals, such as the elephant, the rhinoceros, &c.

. 2. The small fossil hippopotamus. — The mass out of which Cuvier extracted the remains of this species (but the geological relation of which is unfortunately unknown), resembles the osseous breccia of Gibraltar, Dalmatia, and Cette, except that the matrix, instead of being calcareous and stalactitical, is a homogeneous sandstone, which uniformly fills up all the intervals between the bones; the bones also form a far more considerable portion of the mass than is the case in the Gibraltar rock. After having performed the difficult operation of disengaging all the separate osseous fragments, M. Cuvier found that they belonged to an animal of which no traces had hitherto been discovered, but which was unquestionably a congener of the common hippopotamus. The teeth were found to agree in all essential points with those of the other species ; and the remainder of the osseous fragments, which

were next examined, confirmed, without a single exception, what had been indicated by the characters of the teeth.

HIPPURIS, mare's-tail ; a genus of the monogynia order and monandria class of plants ; natural order fifteenth, inundatae : CAL. none, nor any petals ; the stigma is simple ; and there is one seed. There are two species, one a native of Britain, and which grows in ditches and stagnant waters. The flower of this plant is found at the base of each leaf, and is as simple as can be conceived ; there being neither empalement nor blossom ; and only one chive, one pointal, and one seed. It is a very weak astringent. Goats eat it; cows, sheep, horses, and swine, refuse it.

HIPPUS, an affection of the eyes, that makes them represent objects in the like kind of motion as when on horseback.

HIRAM, a king of Tyre, contemporary with Solomon, whom he supplied with cedar, gold, silver, and other materials for building the tem-ple. He died A. A. C. 1000.

HIRAM, an artist of Tyre, who assisted in the erection of Solomon's temple, and other public buildings at Jerusalem, flourished A. A. C.

1015.

HIRCHˆHQRN, a town of Germany, in the circle of the Lower Rhine, with a strong castle ; seated on the side of a hill on the Neckar, and in the palatinate. Mr. Crutwell places it in the electorate of Mentz, seven miles east of Heidelberg, and twelve south of Erbach. Long. 9° 0’ E., lat. 49° 28’ N.

HIRE, v. a. & n. s. “) Sax. Syrian, type ;

HIRE’LING, n. s. & adj. > Dan. hyre ; Swed.

HI’RER, n. s. jhyra; Belgic huur.

To procure any thing for temporary use at a certain price : the price so paid to engage a servant in temporary service ; the wages paid to them : to bribe ; to let at a certain price : hireling one who serves for wages, in a good or bad sense; a prostitute ; a venal person : hirer in Scotland is one who keeps small horses to let.

They that were full, hired out themselves for bread ; and they that were hungry, ceased. 1 Sam. ii.

They weigh silver in the balance, and hire a goldsmith, and he maketh it a god. ha. xlvi. 6.

From thennesforth the Jewes han conspired This innocent out of this world to chace : An homicide han they hired, That in an aleye had a privee place And as the child gan forthly for to pace This cursed Jew him hent and held him fast And cut his throte and in a pit him caste.

Chaucer. The Prioresses Tale. About him lefte he no mason •That stone could laie, ne no querrour ; He hired hem to make a tour.

Id. Romaunt of the Rose.

The hireling longs to see the shades descend, That with the tedious day his toil might end, And he his pay receive. Sandys.

Groat thanks and goodly meed to that good sire ; He thence departing gave for his pains hire.

Spenser.

I cannot strike at wretched kerns, whose arms Are hired to bear their

staves. Shattspeart

I have five hundred crowns, The thrifty hire I saved unto your father. Id.

In the framing of Hiero's ship there were three hundred carpenter* employed for a year, besides many other hirelingt for carriages. Wilkins's Deedalut.

Though little was their hire, and light their gain, Yet somewhat to their share he threw. Dryden.

All arts and artists Theseus could command, Who sold for hire, or wrought for better fame. Id. Tis frequent here to see a freeboru son

On the left hand of a rich hireling run.

Id. Juvenal.

His sordid avarice rakes In excrements, and hires the Jakes. Id.

Themetes first, 'tis doubtful whether hired, Or so the Trojan destiny required, Moved that the ramparts might be broken down.

Dryden. Then trumpets, torches, and a tedious crew

Of hireling mourners for his funeral due. Id.

Men that hire out their words and anger j that are more and less passionate, according as they are paid for it, and allow their client a quantity proportionable to the fee which they receive. Addison.

Now she shades thy evening walk with bays, No hireling she, no

prostitute to praise. Pope.

HIRE (Philip de la), an eminent French mathematician and astronomer, born at Paris in 1640. His father, who was painter in ordinary to the king, designed him for the same profession: but he devoted himself to mathematical studies, and was nominated, together with M. Picard, to make the necessary observations for a new map of France, by the directions of M. Colbert. In 1683 he was employed in continuing the famous meridian line begun by M. Picard ; and was next engaged in constructing the grand aqueducts projected by Louis XIV. He died in 1718, after having written a great number of works, besides several occasional papers dispersed in Journals, and in Memoirs of the Academy of Sciences.

HIRPINI, in ancient geography, a people of Italy, next to the Samnites, to the south-east and descendants from them; situated to the north of the Picentini, and to the west of the Apuli, having on the north the Appennines and a part of Samnium. The name is from Hirpus, a term denoting in their language a wolf; either because under the conduct of this animal the colony was led and settled, according to Strabo ; or because, like that prowling animal, they lived on plunder, according to Servius.

HIRSCHBERG, a town of Silesia, in the principality of Jauer, famous for its trade and manufactures. In 1549 it was burnt ; in 1633 pillaged by the Saxons; and in 1634 burnt by the Imperialists. It is twenty-two miles south-east of Buntzlau.

HIRSCHBERG, a well-built commercial town in the principality of Jauer, Silesia, at the confluence of the Bober and the Zacke. It is the chief place of a circle, and contains 6000 inhabitants, chiefly Lutherans. The support of the inhabitants is chiefly a trade in linen, and fine lawn; here are also some woollen manufactures. This town was burnt down in 1549 ; in 1633 it was pillaged by the Saxons; and in 1634 again burned by the Imperial troops. It is twenty-three miles W. S.W. of Jauer, and thirty-five west of Schweidnitz.

HIRSCHFELD, or HERSFELD, a southern district and town of Hesse-Cassel. The district is 168 square miles in extent, with a population of 22,000, and divided into eight bailiwics : it is in general very fertile, but in part covered with wood. The town is walled and situated on the Fulda, which is here navigable. It contains 5500 inhabitants, and has a well regulated Calvinistic gymnasium. It has also some manufactures

of cloth and leather. Twenty-five miles north of Fulda.

HIRSCHING (Frederic Charles Gottlob), a learned German professor, was born at Uffen-heim, December 21st, 1762. He had been nominated supernumerary professor of philosophy at Erlangen, but had scarcely at his death entered on the functions of his office. He is chiefly known for his researches on history and geography. His best works are — A Description of the Principal Libraries of Germany, Erlangen, 1786, 4 vols. 8vo. ; An Account of the most Curious Pictures, and collections of Engravings, 6 vols. 8vo.; and A Dictionary of Celebrated Persons of the Eighteenth Century, continued after his death by J. H. M. Ernesti and others, at Cobourg. Hirsching's portion of the work consists of the first five volumes. He died at Erlangen, March llth, 1800.

HIR'SUTE, adj. Latin hirsutus. Rough; rugged.

There are bulbous, fibrous, and hirsute roots : the hirsute is a middle sort, between the bulbous, and fibrous ; that, besides the putting forth sap upwards and downwards, putteth forth in round. Bacon.

HIRTELLA, in botany, a genus of the monagynia order; and pentandria class of plants. There are five petals ; the filaments are very long, persisting and spiral ; the berry is monospermous; the style lateral. Species four; natives of Guiana and the West Indies.

HIRUDO, the leech, a genus of insects belonging to the order of vermes intestinae. The body moves either forward or backward. There are several species, principally distinguished by their color. The most remarkable are the following : —

H. geometra, the geometrical leech, grows to an inch and a half in length ; and has a smooth and glossy skin of a dusky-brown color but in some seasons greenish spotted with white. When in motion its back is elevated into a kind of ridge ; and it then appears as if measuring the space it passed over like a compass, whence its name. Its tail is remarkably broad ; and it holds as firmly by it as by the head. It is common on stones in shallow running waters ; and is often found on trouts and other fish after spawn-ing time.

H. medicinalis, the medicinal leech, the form of which is well known, grows to the length of two or three inches. The body is of a blackish-brown color, marked on the back with six yellow spots, and edged with a yellow line on each side ; but both the spots and the lines grow faint, and almost disappear, at some seasons. The head is smaller than

the tail, which fixes itself very firmly to any thing the creature pleases. It is viviparous, and produces but one young one at a time, which is in July. It is an inhabitant of

clear running waters, and is well known for its use in bleeding. The leech's head is armed with a sharp instrument that makes three wounds at once. It consists of three sharp tubercles, strong enough to cut through the skin of a man, or even of an ox or horse. The mouth is as it were the body of the pump, and the tongue or fleshy nip-ple the sucker ; by the working of this piece of mechanism, the blood i°, made to rise up to thp conduit which conveys it to the animal's stomach, which is a membranaceous skin divided into twenty-four small cells. The blood which is sucked out is there preserved for several months almost without coagulating, and proves a store of provision to the animal. The nutritious parts, pure and already digested by animals, require not to be disengaged from the heterogeneous substances : nor indeed is there any thing like an anus discoverable in the leech ; mere transpira-tion seems to be all that it performs, the matter fixing on the surface of its body, and afterwards coming off in small threads. Of this an experiment may be tried by putting a leech into oil, where it keeps alive for several days ; upon being taken out and put into water, there appears to loosen from its body, a kind of slough shaped like the creature's body. The organ of respiration seems to be situated in the mouth ; for if, like an insect, it drew its breath through vent holes, it would not subsist in oil, as by it they would be stopped up. This is the only species that is used in medicine ; being applied to the skin to draw off blood. If the leech does not fasten, a drop of sugared milk is put on the spot it is wished to fix on, or a little blood is drawn by means of a slight puncture, after which it immediately settles. The leech when fixed should be watched, lest it should find its way into the anus when used for the hemorrhoids, or penetrate into the oesophagus if employed to draw the gums ; otherwise it would make great havock in the stomach or intestines. In such a case, the best and quickest remedy is to swallow some salt ; the application of which makes it quit its hold when it sucks longer than is intended. Salt of

tartar, volatile alkali, pepper, and acids, make it also leave the part on which it was applied. Cows and horses have been known to receive them in drinking into the throat. The usual re-medy is to force down some salt, which makes them fall off. If, on the contrary, it is intended that the leech should draw a larger quantity of blood, the end of its tail is cut off; and it then sucks continually to make up the loss it sustains. The discharge occasioned by the puncture of a leech is usually of more service than the process itself. When too abundant, it is easily stopped with brandy, vinegar, or other styptics, or with a compress of dry linen rag bound strongly on the bleeding orifice.

H. muricata, the muricated leech, has a taper body, rounded at the greater extremity, and furnished with two small tentacula, or horns, strongly annulated and rugged upon the rings, the tail dilated. It inhabits the Atlantic Ocean, and is by the fishermen called the sea-leech. It adheres to fish, and generally leaves a black mark on the spot.

H. sangui-suga, the horseleech, is of a larger

size than the medicinal leech. Its skin is smooth and glossy ; the body is depressed ; the back is dusky; and the belly is of a yellowish-green, having a yellow lateral margin. It inhabits stagnant waters. At Ceylon, travellers who walk bare-legged are molested by the great numbers of leeches concealed under the grass. All leeches vary in their color at some seasons, but they are generally of a dusky greenish-brown or yellow, and often variegated. They are very restless before a change of weather, if confined in glasses. They suck blood with greater avidity than the medicinal, and are dangerous to apply to the skin for that reason.

HIRUNDO, in ornithology, a genus of birds of the order of passeres. There are numerous species, chiefly distinguished by their color. The most remarkable are the following : —

1. H. ambrosiaca, the ambergris swallow. It is about the size of a wren, with a gray plumage and a very forked tail ; the bill is blackish, and the legs are brown. It inhabits Senegal, and is said to smell very strong of ambergris.

1 . H. apus, the swift, is a large species, being nearly eight inches long, with an extent of wing nearly eighteen inches, though the weight of the bird is only one ounce. Their feet are so small, that the action of

walking and rising from the ground is extremely difficult, but they have full compensation, being furnished with ample means for an easy and continual flight. It is more on the wing than any other swallow; its flight is more rapid, and that attended with a shrill scream. It rests by clinging against some wall, or other apt body : whence Klein styles this species hirundo muraria. It breeds under the eaves of houses, in steeples, and other lofty buildings ; and makes its nest of grasses and feathers. Its feet are of a particular structure, all the toes standing forward : the least consists of only one bone ; the others of an equal number, *viz.* two each ; in which they differ from those of all other birds ; a construction, however, nicely adapted to the purposes in which their feet are employed. The swift is a summer inhabitant of these kingdoms. It comes the latest, and departs the soonest, of any of the tribe ; not always staying till the middle of August, and often not arriving before the beginning of May. A pair of these birds were found adhering by their claws, and in a torpid state, in February 1766, under the roof of Longnor Chapel, in Shropshire ; on being brought to a fire, they revived, and moved about in the room. The materials of its nest it collects either as they are carried about by the winds, or picks them up from the surface in its sweeping flight. Its food is undeniably the insects that fill the air. Its drink is taken in transient sips from the water's surface. Even its amorous rites are performed on high. The swift is a most alert bird, rising very early and retiring to roost very late ; and is on the wing in the height of summer at least sixteen hours. In the longest days it does not withdraw to rest till nine iu the evening, being the latest of all day birds. Just before they retire whole groups of them assemble high in the air, and squeak, and shoot about with wonderful rapidity. But this bird is never so much alive as in sultry thundery

weather, when it expresses great alacrity, and calls forth all its powers. When the hen has sat hard all day, she rushes forth just as it is almost dark, and stretches and relieves her weary limbs, and snatches a scanty meal for a few minutes, and then returns to her duty of incubation. Swifts, when wantonly shot while they have young,

discover a little lump of insects in their mouths, which they pouch and hold under their tongue. In general, as already observed, they feed in a much higher district than the other species; they also range to vast distances ; since locomotion is no labor to them, who are endowed with such wonderful powers of wing. At certain times in the summer, however, they have been observed hawking very low for hours together over pools and streams ; and, upon enquiring into the object of their pursuit that induced them to descend so much below their usual range, it has been found that they were taking phryganeae, ephemerae, and libellulae (cadew-flies, may-flies, and dragon-flies), that were just emerged out of their aurelia state. They are out all day long, even though wet, feeding, and disregarding the rain. But windy weather, and particularly with heavy showers, they dislike ; and on such days withdraw, and are scarcely ever seen. 'There is a circumstance respecting the color of swifts,' Mr. White remarks, ' which seems not to be unworthy our attention. When they arrive in the spring, they are all over of a glossy dark soot color, except their chins, which are white ; but, by being all day long in the sun and air, they become quite weather-beaten and bleached before they depart, and yet they return glossy again in the spring. Now if they pursue the sun into lower latitudes, as some suppose, in order to enjoy a perpetual summer, why do they not return bleached ? Do they not rather perhaps retire to rest for a sea-son, and at that juncture moult and change their feathers, since all other birds are known to moult soon after the season of breeding ? Swifts are very anomalous in many particulars, dissenting from all their congeners not only in the number of their young, but in breeding once in a summer ; whereas all the other British hirundines breed invariably twice. They retire, as to the main body of them, by the 10th of August, and sometimes a few days sooner; and every straggler invariably withdraws by the 20th, while their congeners, all of them, stay till the beginning of October ; many through all that month, and some occasionally to the beginning of November. This early retreat is mysterious and wonderful, since that time is often the sweetest season in the year. But, what is more extraordinary, they begin to retire still earlier in the most southerly parts of Andalusia, where they can be no ways influenced by any defect of heat ; or, as one might suppose, defect of food. Are they regulated in their motions with us by a failure of food, or by a propensity to moulting, or by a disposition to rest after so rapid a life, or by what ? This is one of those incidents in natural history, that not only baffles our searches, but almost eludes our guesses. Swifts never perch on trees or roofs, and so never congregate with their congeners. They are fearless while haunt-ing their nesting places, and are not to be scared with a gun; and are often beaten down with poles and

cudgels as they stoop to go under the eaves. Swifts are much infested with those pests to the genus called hippoboscae hirunch-nis ; and often wriggle and scratch themselves ip their flight, to get rid of that clinging annoyance. And young ones, overrun with these insects, are sometimes found under their nests, fallen to the ground ; the number of vermin rendering their abode insupportable. The Swedes have bestowed a very pertinent name on this swallow, calling it ring-swala, from the perpetual rings or circles that it takes round the scene of its nidification. As these birds are apt to catch at every thing on the wing, many have taken them by a bait on a cock-chafer tied to a thread, which they have swallowed as freely as a fish theirs. In the Isle of Zaut the boys are said to get on an elevated place, and, merely with a hook baited with a feather, have caught five or six dozen of them in a day. Besides our island, the swift is known to inhabit the whole of the European continent ; and has also been noticed at the Cape of Good Hope, and Carolina in North America. Hence, most likely, it is a general inhabitant of both the old and new continents.

3. H. borbonica, the wheat swallow, is about the size of the swift : the plumage above is blackish brown ; beneath gray, marked with longitudinal brown spots : the tail is even at the end : the bill and legs are black. This species inhabits the Isle of France ; frequenting places sown with wheat, and glades of woods ; affecting elevated situations, and frequently seen perched on trees and stones. It follows herds of cattle for the sake of the flies that surround them ; and is frequently seen in the wake of ships in great numbers, in the road near the isle, for the same purpose. It is often observed in the evenings about the clefts in the mountains, where it is said to pass the night, and where it makes its nest; which is composed of straw and feathers. It lays two eggs, of a gray color, dotted with brown.

4. H. Cayennensis, the white-colored swallow, is about the size of the martin : the head and bill are black ; the chin and throat white, passing from the last in a narrow collar round the neck ; between the bill and eye is a streak of white, which forks off into two, one passing a little above, and the other a little way beneath the eye ; the rest of the plumage is black, with a gloss of violet ; but the greater coverts, nearest the body, are brown edged with white : the quills and tail are black, the last forked ; the legs are black, and all the four toes placed be-fore, as in the swift, and covered with feathers to the claws. This bird makes its nest in the houses at Cayenne. It is of a large size, in shape of a truncated cone ; five inches one way by three the other, and nine inches in length. It is composed of the down of dog’s bane, well woven together ; the cavity divided obliquely about the middle, lengthways, by a partition, which spreads over that part of the nest

where the eggs lie, which is pretty near the base : a small parcel of the same soft down, forming a kind of plug, is placed over the top, serving to keep the young

brood from the impression oi the air; whence we may suppose them to be very tender.

6. H. esculenta, the edible swallow, is of a blackish-gray color, inclining a little to green ; but on the back to the tail, as well as on the belly, this blackish color gradually changes into a mouse color. The whole length of the bird, from the bill to the tail, is about four inches and a half, and its height from the bill to the extremity of the middle toe three and a quarter. The distance from the tip of the one wing to that of the other, when extended, is ten and a quarter. The largest feathers of the wing are about four inches in length. The head is flat; but, on account of the thickness of the feathers, appears round, and to be of a large size in proportion to the rest of the body. The bill is broad, and ends in a sharp extremity, bent downwards, in the form of an awl. The width of it is increased by a naked piece of skin, somewhat like parchment, which, when the bill is shut, lies folded together ; but which, when the bill opens, is considerably extended, and enables the bird to catch with greater ease, while on wing, the insects which serve it for food. The eyes are black, and of a considerable size. The tongue, which is not forked, is shaped like an arrow. The ears are flat, round, naked spots, with small oblong openings, and are entirely concealed under the feathers of the head. The neck is very short, as well as the legs and bones of the wings. The thighs are wholly covered with feathers, and the very tender lower parts of the legs, and the feet themselves, are covered with a skin like black parchment. Each foot has four toes, three of which are before, and one turned backwards. They are all detached from each other to the roots ; and the middle one, together with the claw, is fully as long as the lower part of the leg. Each toe is furnished with a black, sharp, crooked claw, of a considerable length, by which the animal can, with great facility, attach himself to crags and rocks. The tail is fully as

long as the body together with the neck and the head. When extended it is in the form of a wedge, and consists of ten large feathers. The first four on each side are long ; and, when the tail is closed, extend almost an inch beyond the rest. The other feathers decrease towards the middle of the tail, and are equal to about the length of the body. But the most curious part of the natural history of this bird consists in the nest, which is composed of such materials as render it not only edible, but one of the greatest dainties of the Asiatic epicures. These nests are found in vast numbers in certain caverns, in various isles in the Sooloo Archipelago, situated between long. 117° and 120°, and lat. 5° and 7°, particularly in three small isles, or rather rocks ; in the caverns of which the nests are found fixed to the stones in astonishing numbers. They are also found in amazing quantities on a small island called Toe, in the straits of Sunda, the caverns of which are lined with the nests ; but no where in greater abundance than about Croee, near the south end of Sumatra, four miles up a river of that name. But they are not peculiar to the above places; for they are likewise common from Java to Cochinchina on the north, and from

the point of Sumatra west, to New Guinea on the east, where the sea is said to be covered with a viscous substance like half-melted glue, which the bird is supposed either to take up from the surface with its bill during flight, or to pick from the rocks when left there by the waves . Of these nests, it is said, the Dutch alone export from Batavia 1000 pickles, upwards of ISOOlbs. English weight, every year, which are brought from the Isles of Cochinchina, and those lying to the east of them. It is surprising that, among other luxuries imported from the east, these nests should not have found a way to our tables ; being yet so scarce in England as to be kept as rarities in the cabinets of collectors. The bird itself at Sumatra is called layonglayong.

H. melba, the white-bellied swift, is in length eight inches and a half, and weighs 2 oz. 4 dr. , the bill is half an inch long, somewhat bent, and black : the upper parts of the body are of a gray brown ; the wings and tail deepest, with a gloss of red and green in some lights : the throat, breast, and belly, are white ; on the neck is a collar of gray brown, mixed with black: the sides are dusky, and white mixed ; lower part of the belly and under tail-coverts the same as the back : the legs are flesh-colored, and covered with feathers on the fore part and inside : all the toes are placed forward, as in our swift. This bird inhabits Ae mountainous parts of Spain ; building in the holes of rocks. It is found also on the borders of the Rhone, in Savoy, the isle of Malta, Alps of Switzerland, and rock of Gibraltar. It comes into

Savoy the beginning of April, and frequents the ponds and marshes for fifteen or twenty days ; after which it retires to the mountainous parts to breed. It flies high-er than our swift ; but feeds on the same food, and its flesh is accounted a delicate morsel. This species is not numerous. Scopoli says it builds on the summit of the mountains of Tyrol.

H. nigra, the black swallow, measures nearly six inches in length : the color of the bird is wholly black, and the tail is forked. It inhabits St. Domingo and Cayenne ; but it is not numerous. It is often seen to perch on dead trees : and only inhabits dry savannahs inland. It scoops out a hole in the earth, half a foot long, with the mouth, very small, so as just to permit entrance : in this cavity it constructs the nest and rears its young.

H. purpurea, the purple swallow, is in length seven inches,and the whole body is of a deep violet, very glossy : the quills and tail are of the same color, but still deeper, and the last forked : the legs and claws are blackish, ana the bill is black. The color of the female is dusky brown, with a slight tinge of violet. This species is found in summer in Carolina and Virginia : coming in May, and retiring at the approach of winter. The people are very fond of them, and make little conveniencies of boards on the outsides of their houses for the birds to build in, as is done for sparrows in England ; being desirous to keep them near, as they are of much use in alarming the poultry of the approach of the hawk and other birds of prey ; not only shrieking violently on the appearance of these enemies, but attack

ing them with all the efforts of our martins in Europe.

H. riparia, the sand martin, or shore bird, is four inches and three-quarters in length, with the whole upper parts of the body of a mouse-color, the throat and under parts white, the bill and legs blackish. It is common about the banks of rivers and sand-pits, where it terebrates a round and regular hole in the sand or earth, which is serpentine, horizontal, and about two feet deep. At the inner end of this burrow

does the bird deposit, in a good degree of safety, her rude nest, consisting of fine grasses and feathers, usually goose-feathers,very inartificially laid together. ‘Though at first,’ says Mr. White, ‘one would be disinclined to believe that this weak bird, with her soft and tender bill and claws, should ever be able to bore the stubborn sand-bank without entirely disabling herself; yet with these feeble instruments have I seen a pair of them make great despatch ; and could remark how much they had scooped that day by the fresh sand which ran down the bank, and was of a different color from that which lay loose and bleached in the sun. In what space of time these little -artists are able to mine and finish these cavities, I have never been able to discover ; but it would be a matter worthy of observation, where it falls in the way of any naturalist to make his remarks. One thing is remarkable — that, after some years, the old holes are forsaken and new ones bored ; perhaps because -the old habitations grow foul and fetid from long use, or because they may so abound with fleas as to become untenantable. This species of swallow is strangely annoyed with fleas ; and we have seen fleas, bed fleas (pulex irritans), swarming at the mouths of these holes, like bees on the stools of their hives. The sand martin arrives much about the same time with the swallow ; and lays, as she does, from four to six white eggs. But as this species is crypto-game, carrying on the busines of nidification, incubation, and the support of its young in the dark, it would not be easy to ascertain the time of breeding, were it not for the coming forth of the broods, which appear much about the time, or rather somewhat earlier than those of the swallow. The nestlings are supported in common like those of their congeners, with gnats and other small insects ; and sometimes they are fed with libellula (dragon flies) almost as long as themselves. This hirundo is said to lay only once in a year, and to produce its young more early than the rest of its tribe : though, from this last circumstance, it would seem probable that they breed at least a second time, like the house-martin and swallow. It does not always take pains to make a hole for a nest ; frequently laying in cavities of quarries, and in hollows of trees, where it is convenient. When they hap-pen to breed near hedges and inclosures they are often dispossessed of their breeding-holes by the house sparrow, which is on the same account a fell adversary to house martins. These hirundines are no songsters, but rather mute, making only a little harsh noise when a person ap-prpaches their nests. They seem not to be of a sociable turn, never with us congregating with their congeners in the autumn. They have a

peculiar manner of flying, rlitting about with odd jerks and

vacillations, not unlike the motions of a butterfly. Doubtless the flight of all hirundines is influenced by, and adapted to, the peculiar sort of insects which furnish their food.

H. rustica, the common or chimney swallow,, is distinguished from all the other species by the superior forkiness of its tail, and by the red spot on the forehead and under the chin. The crown of the head, the whole upper part of the body, and the coverts of the wings, are black, glossed with a rich purplish blue, and most resplendent in the male : the breast and belly white, and in the male tinged with red : the tail is black ; the two middle feathers are plain, the others marked transversely near the ends with a white spot : the exterior feathers of the tail are much longer in the male than in the female. The food is the same with that of all the genus ; *viz.* insects. For taking these, in their swiftest flight, their parts are admirably contrived ; their mouths are very wide to take in flies, Sec., in their quickest motions ; their wings are long, and adapted for distant and continual flight : and their tails are forked, to enable them to turn the readier in pursuit of their prey. This species is the first comer of all the British hirundines; and appears in general on or about the 13th of April, though now and then a straggler is seen much earlier. This species, though called the chimney swallow, by no means builds altogether in chimneys, but often in barns and out-houses against the rafters ; as Virgil long ago remarked, (Georg. lib. iv. 306). In Sweden she builds in barns, and is called ladw swala, the barn swallow. In the warmer parts of Europe, where there are no chimneys to houses except they are English built, she constructs her nest in porches, gateways, galleries, and open halls. But in general, witli us, this species breeds in chimneys ; and haunts those stacks where there is a constant fire, for the sake of warmth; generally prefering one adjoining to the kitchen, and disregarding the perpetual smoke of that funnel. Five or six or more feet down the chimney does this little bird begin to form her nest about the middle of May, which consists, like that of the house martin, of a crust or shell composed of dirt or mud, mixed with short pieces of straw to render it tough and permanent; with this difference, that, whereas the shell of the martin is nearly hemispheric, that of the swallow is open at the top, and like half a deep dish. This nest is lined with fine grasses, which are often collected as they float in the air. Wonderful is the address (Mr. vVhite observes) which this adroit bird shows all day long in ascending and descending through so narrow a pass. When hovering over the mouth of the funnel, the vibration of her wings acting on the confined air occasions a rumbling noise like thunder. It is probable that the dam submits to this inconvenient situation, so low in the shaft, in order to secure her brood from rapacious birds, and

particularly from owls, whicli frequently fall down chimneys, perhaps in attempting to get at these nestlings. This bird lays from four to six white egs;s, dotted with red specks ; and brings out her first brood about the last week in June, or the

first in July. The progressive method by which the young are introduced into life is very curious : First, they emerge from the shaft with difficulty enough, and often fall down into the room below : for a day or so they are fed on the chimney top, and are then conducted to the dead leafless bough of some tree, where, sitting in a row, they are attended with great assiduity, and may then be called perchers. In a day or two more they become fliers, but are still unable to take their" own food : therefore they play about near the place where the dams are hawking for flies ; and when a. mouthful is collected, at a certain signal given, the dam and the nestling advance, rising towards each other, and meeting at an angle ; the young one all the while uttering such a little quick note of gratitude and complacency, that one must have paid very little regard to the wonders of Nature, who has not remarked this feat. The dam betakes herself immediately to the rearing of a second brood, as soon as she is disengaged from her first; which she at once associates with the first broods of house martins; and with them congregates, clustering on sunny roofs, towers, and trees. She brings out her second brood towards the middle and end of August. Every species of hirundo drinks as it flies along, sipping the surface of the water ; but the swallow only washes on the wing, by dropping into a pool for many times together ; in very hot weather house martins and bank martins dip and wash a little. The swallow is a delicate songster, and in soft sunny weather sings both perching and flying, on trees in a kind of concert, and on chimney tops : it is also a bold flier, ranging to distant towns and commons even in windy weather, which the other species seern much to dislike ; nay, even frequenting sea-port towns, and making little excursions over the salt-water. Horsemen on wide downs are often closely attended by a little party of swallows for miles together, which play before and behind them, sweeping around, and collecting all the sculking insects that are

roused by the trampling of the horses' feet : when the wind blows hard, without this expedient, they are often forced to settle to pick up their lurking prey. This species feeds much on little coleoptera, as well as on gnats and flies ; and often settles on dug ground, or paths, for gravel to grind and digest its food. Mr. Pennant says, that, for a few days previous to their departure, they assemble in vast flocks on house-tops, churches, and trees, from whence they take their flight. They are supposed to take up their winter quarters in Senegal and parts adjacent; and seem to possess in turn the whole of the old continent, being known from Norway to the Cape of Good Hope on the one hand, and from Kamtschatka to India and Japan on the other. They are also found in all parts of North America, migrating north and south as with us. Kalm says, that in America they build in houses and under the outsides of the roofs; also on the mountains, in such parts of them as project beyond the bottom, as well as under the corners of perpendicular rocks.

12. II. urbica, the martin, is inferior in size to tne chimney swallow, and its tail much less

forked. The head and upper part of the body, except the rump, are black glossed with blue : the breast, belly, and rump are white; the feet are covered with a short white down. 'They begin to appear about the 16th of April; and for some time they in general pay no attention to the business of nidification : they play and sport about, either to recruit from the fatigue of their journey, if they do migrate at all ; or else that their blood may recover its true tone and texture after it has been so long benumbed by the severities of winter. About the middle of May, if the weather be fine, the martin begins to think in earnest of providing a mansion for its family. The crust or shell of this nest seems to be formed of such dirt or loam as comes most readily to hand, and is tempered and wrought together with little bits of broken straws to render it tough and tenacious. As this bird often builds against a perpendicular wall, without any projecting ledge under, it requires its utmost efforts to get the first foundation firmly fixed, so that it may safely carry on the superstructure. On this occasion the bird not only clings with its claws, but partly supports itself by strongly inclining its tail against the wall, making that a fulcrum; and, thus steadied, it works and plasters the materials into the face of the brick or stone. But then, that this work may not, while it is soft and green, pull itself down by its own weight, the provident architect has prudence and forbearance enough not to advance her work too fast ; but by building only in the morning, and by dedicating the rest of the

day to food and amusement, gives it sufficient time to dry and harden. About half an inch seems to be a sufficient layer for a day. By this method, in about ten or twelve days, is formed an hemispheric nest, with a small aperture towards the top, strong, compact, and warm; and perfectly fitted for all the purposes for which it was intended. But then nothing is more common than for the house sparrow, as soon as the shell is finished, to seize on it as its own, to eject the owner, and to line it after its own manner. After so much labor is bestowed in erecting a mansion, as nature seldom works in vain, martins will breed on for several years together in the same nest, where it happens to be well sheltered and secure from the injuries of the weather. The shell or crust of the nest is a sort of rustic work, full of knobs and protuberances on the outside : nor is the inside of those that I have examined smoothed with any exactness at all; but it is rendered soft and warm, and fit for incubation, by alining of small straws, grasses, and feathers ; and sometimes by a bed of moss interwoven with wool. In this they tread or engender frequently during the time of building ; and the hen lays from three to five white eggs. At first, when the young are hatched, and are in a naked and helpless condition, the parent birds, with tender assiduity, carry out what comes from their young. Were it not for this affectionate cleanliness, the nestlings would soon be burnt up and destroyed in so deep and hollow a nest, by their own caustic excrement. As soon as the young are able to shift for themselves, the dams immediately turn their thoughts

to the business of a second brood: while the first flight, shaken off and rejected by their nurses, congregate in great flocks, and are the birds that are seen clustering and hovering, on sunny mornings and evenings, round towers and steeples, and on the roofs of churches and houses. These congregatings usually begin to take place about the first week in August ; and therefore we may conclude that by that time the first flight is pretty well over. Martins love to frequent towns,

especially if there are great lakes and rivers at hand. They are by far the least agile of the British hirundines; their wings and tails are short, and therefore they are not capable of such surprising turns, and quick and glancing evolutions, as the swallow. Accordingly, they make use of a placid easy motion, in a middle region of the air, seldom mounting to any great height, and never sweeping long together over the surface of the ground or water. They do not wander far for food; but affect sheltered districts, over some lake, or under some hanging wood, or in some hollow vale, especially in windy weather. They breed the latest of all the swallow kind ; in 1772 they had nestlings until October the 21st, and are never without young as late as Michaelmas. As the summer declines, the congregating flocks increase in numbers daily, by the constant accession of the second broods; till at last they swarm in myriads upon myriads round the villages on the Thames, darkening the face of the sky as they frequent the aits of that river, where they roost. They retire in vast flocks together about the beginning of October ; but have appeared of late years in a considerable flight in this neighbourhood, for one day or two, as late as November the 3rd and 6th, after they were supposed to have been gone for more than a fortnight. They therefore withdraw, with us, the latest of any species. Unless these birds are very short-lived indeed, or un-less they do not return to the district where they are bred, they must undergo vast devastations somewhere ; for the birds that return yearly bear no manner of proportion to the birds that re-tire.

HIS, Pronoun possessive. Saxon)jyj-. The masculine possessive pronoun of he, anciently used in a neutral sense, where we now say its. It is sometimes used as a sign of the genitive case ; as, the man his ground, for the man's ground. It is now rarely thus used, as its use proceeded probably from a false opinion that the s formative of the genitive case was his contracted. Sometimes used in opposition to this man's ; anciently before self.

Of his linage am I and his ofspring By veray line, as of the stok real ; And now I an) so caitif and so thral, That he that is my mortal enemy I serve him as his squierly pourely.

Chaucer. The Kmghtes Tale. Who can impress the forest, bid the tree Unfix his earth-bound root ?

Shakspeare. Macbeth. Were I a king,

I should cut off the nobles for their lands, Desire his jewels, and this other's house.

Shakspeare.

England hie approaches makes as fierce As waters to the sucking of a gulph.

, Id. Henry V.

Opium loseth some of hit poisonous quality if it be vapoured out, mingled with spirit of wine.

Bacon,

Where is this mankind now ? who lives to age Fit to be made M ethusalem hit page ? Donne.

Every of us, each for his self, laboured how to recover him. Sidney.

This rule is not so general, but that it admitteth hit exceptions. Carew's Survey of Cornwall.

Thus while he spake, each passion dimmed hit

face,

Thrice changed with pale ire envy and despair ; Which marred hit borrowed visage and betrayed Him counterfeit. Milton's Paradise Lett.

His mind secure does the vain stroke repeat, And finds the drums Lewis's march did beat.

Marvell. Whene'er I stoop he offers at a kiss ;

And when my arms I stretch, he stretches hit.

Addigon.

As the wood-pigeon coos without his mate, So shall my doleful dirge bewail her fate. Gay.

By thy fond consort, by thy father's cares, By young Telemachus Aw blooming years. Pope.

' Let man's own sphere,' said he, ' confine hit view ; Be man's peculiar work his sole delight.' Beattie.

HISINGEN, an island in the south-west of Sweden, at the mouth of the large river Gotha-Elf, on which the town of Gottenburg was first built. It is about sixteen miles long and six broad. Long. 1 1° 4′ 8″ E., lat. 57° 45’ N.

HISPA, in zoology, a genus of insects belonging to the coleoptera order, the characters of which are these: — The antennae are fusiform, growing gradually larger from each extremity towards the middle, and are situated between the eyes : the thorax and elytra are covered with protuberances or spines. The H. atra, found in Britain, is all over of a deep unpolished black, and has the upper part of its body entirely covered with long and strong spines, which render it bristly like the shell of a chestnut. There is even a spine at the case of the antennas ; the thorax has a row set transversely, which are forked ; and the elytra are furnished with a very great number that are single. Its being thus covered with spines makes it resemble a hedgehog in miniature. It is rather difficult to catch, letting itself fall down on the ground as soon as approached. It bears its antennae upright before it. See ENTOMOLOGY.

HISPALIS, in ancient geography, a town of Bcetica, in Hispania Ultra, an ancient mart or trading town on the Bastis, navigable quite up to it for ships of burden, and thence to Cordu-ba for river barges. It was also called Colonia Romulensis. It had a conventus juridicus, a court of justice or assizes. It is now called Seville.

HISPANIA, in ancient geography, a country or kingdom of Europe, now called Spain ; called Hesperia Ultima by Horace, because the west-most part of Europe ; also Iberia, from the river Iberus. Its name Hispania, or Siravia, is of Phoenician original, from its great number of rabbits ; the Phoenicians, who settled several colonies on the coast, calling it Spanjah, from these animals. It has the sea on every side, except

on that next to Gaul, from which it is separated by the Pyrenees. The Romans first divided it into Hispania Citra and Ultra under two praetors. In that state it continued down to Augustus; who divided the Farther Spain into Baetica, which he left to the people to be governed by a proconsul ; and Lusitania, which he added to his own provinces ; calling the Hither Spain Tarraconensis. Hispania was anciently much celebrated for its fertility, of which it has greatly fallen short in modern times. Strabo says, the people were of a warlike turn ; and, their bodies being formed for hardships and labor, they ever preferred war to peace, and were remarkably prodigal of life. See SPAIN.

HISPANIOLA, or St. Domingo, the largest of the Antilles or Caribbee Islands, in the West In-dies. See DOMIXGO (St.)

HISS, v.a., v. n., & n. s. > Sax. ˆj-cean, to HIST, interj. 3 contemn ; Dut. hissen. To utter anoiselikethatofaserpentandsome other animals. It is remarkable, that this word cannot be pronounced without making the noise which it signifies. To condemn at a public execution ; to explode ; to procure disgrace : hiss, the voice of a serpent ; censure ; an expression of contempt, or disapprobation, as used in theatres : hist, an exclamation commanding silence. ‘ Of this word I know not the original : some have thought it a corruption of hush, hush it, husht, or hist ; but I have heard that it is an Irish verb commanding silence.’ — Dr. Johnson.

Every one will hiss him out to his disgrace.

Ecclits. xxii. 2.

The merchants shall hist at thee. Ezeh. xxvii. 36. Men shall pursue with merited disgrace ,• Hits, clap their hands, and from his country chace.

Sandys,

Thy mother plays, and I

Play too ; but so disgraced a part, whose issue Will hitt me to my grave.

Shakspeare. Winter’* Tale. What’g the newest grief? — That of an hour’s age doth hilt the speaker, Each minute teems a new one. Id. Macbeth.

In the height of this bath to be thrown into the Thames and cooled glowing hot, in that surge, like a horse shoe ; think of that ; hissing hot. Shahspeare.

Mute silence hist along ! ‘Less Philomel will deign a song, In her sweetest saddest plight. Smoothing the rugged brow of night. Milton.

He AIM for hiss returned, with forked tongue To forked tongue. Id.

He heard

On all tides from innumerable tongues, A dismal universal hiss, the sound Of publick scorn ‘. Id.

She would so shamefully fail in the last act, that instead of a plaudite she would deserve to be hissed off the stage. More.

I have seen many successions of men, who have shot themselves into the world, some bolting out upon the stage with vast applause, and others hissed-off, and quitting it with disgrace. Dryden.

See the furies arise : See the snakes that they rear, How they hiss in their hair.

Id. Alexander’s Feast. Against the steed he threw His forceful spear, which, hissing as it flew, Pierced through the yielding planks. Dryden. VOL. XI.

Fierce champion fortitude, that knows no fears Of hisses, blows, or want, or loss of ears. POJ.V.

Hist, hist, says another that stood by, away, do.— tor ; for here’s a whole pack of dismals coining.

Swift.

With penitential aspect as they pass, All point at earth, and hiss at human pride, The wisdom of the wise, and prancings of the great.

Young. Thither with one consent they bend,

Their sorrows with their lives to end,

While each in thought already hears

The water hissing hi his ears. Seattle.

HISSAR FEROZEH, a flat district of Delhi, Hindostan, situated between the twenty-eighth and thirtieth degrees of northern latitude, on the western side of the river Jumna. The only natural stream which runs through it is the small river Sursutty ; and, in order to supply this deficiency, one of the Afghaun1 emperors of the fourteenth century caused two canals to be cut ; the first from the Setlege, the other from the Jumna, both of which joined at the town of His-sar, whence they are supposed to have been divided into a number of small cuts. Thus a part of the district received the name of Harriana, up ; but the country produces horses, camels, and cattle; and during the prosperous period of the Mogul empire it was considered as the personal estate of the heir apparent. Various petty chiefs now rule here. The chief towns are Hissar, Hansy, and Sursutty.

HISSAR FEROZEH, the capital of the foregoing district, is in the midst of a once sandy desert, where water was sold at a high price to the travellers that passed this way from Persia to Delhi. Sultan Feroz, having caused the two before-mentioned canals to be dug, laid the foundations of a town and fortress, to which he gave the name of the Fort of Feroz. It was built of stone brought from the neighbouring hills of Nosa, and now belongs to an independent chief. Long. 75° 53’ E., lat. 28° 41’ N.

HISTER, in entomology, a genus of the coleoptera order of insects. The first articulation of the antennae is compressed and curved ; the last is considerably larger than the others, and appears to be a solid knob; the head is drawn within the body; the mouth is forcipated; the elytra are shorter than the body ; and the fore-legs are dentated. The body is polished and very shining, and its form almost square ; the thorax large and highly polished ; anteriorly it is made with a slope, in the cavity of which is lodged the head, the position of which is often only discovered by the projection of the maxillae; the head being, for the most part, so drawn un-der the thorax, that the insect looks as if it had none. The elytra are as it were cut off towards the extremity, and do not cover the whole of the abdomen. They are extremely smooth, and only have a few striae, scarcely perceptible towards their outward side. Lastly, the hinder part of the abdomen, which projects beyond the elytra, is round and blunt. These insects are sometimes found in cow-dung, and often on sand. They vary prodigiously in size; but differ very little either in form or color, being all very dark. The larva?, as well as the perfect insects, are frequently met with in the dung of horses, cows, &c.

HISTO’RIAN, n. s. HISTORICAL, adj. HISTOR’IC, adj. HISTORICALLY, adv. HISTOR’IFY, v. a. HISTORIOGRAPHER, n. $.

Fr. histoire ; Lat. historia; Gr.iropia. A writer of facts and events : historify, to relate or re-cord in history :

HISTORIOGRAPHY, n. s. historiographer, HIS’TORY, n. s. cropta and ypaˆw,

HIS’TORY-PIECE, n. s. J a writer of history : history, a narration of events, delivered with dignity ; mere narration ; knowledge of events narrated : history-piece, a picture representing some memorable event.

This false judge, that highte Appius, (So was his name, for it is no fable, But knowen for an historical thing notable, The sentence of it sith is out of doute) This false judge goth now fast aboute To hasten his delit all that he may.

Chaucer. The Doctoures Tale.

Because the beginning seemeth abrupt, it needs that you know the occasion of these several adven-tores ; for the method of a poet historical is not such as of ar. historiographer. Spenser.

0 famous moniment of womens prayse ! Matchable either to Semiramis,

Whom antique hietory so high doth rayse,

Or to Hypsiphil, or to Thomiris. Spenser.

When that which the word of God doth but deliver historically, we construe as if it were legally meant, and so urge it further than we can prove it was intended, do we not add to the laws of God ? Hooker.

What thanks sufficient, or what reeompence Equal, have I to render thee, divine Historian ‘ Milton.

The gospels, which are weekly read, do all historically declare something which our Lord Jesus Christ himself either spoke, did, or suffered in his own per-son. Id. His words or his oath, Cannot bind him to troth, And he values not credit or hiitory , And though he has served thro’ Two ‘premiceships now, He knows not his trade nor his mystery. Manell.

The third age they term historicon ; that is, such wherein matters have been more truly historified, and therefore may be believed. Broicne’s Vulgar Errours.

O, muse, historify Her praise, whose praise to learn your skill hath

framed me. Sidney.

In an historical relation we use terms that are most proper and best known. Burnet’s Theory.

Our country which has produced writers of the first figure in every other kind of work, has been very bar- »«m in good historians. Addison.

What poor ideas must strangers conceive of persons famous among us, should they form their notions of them from the writings of those our historiographers.

Id.

With equal justice and historick care, Their laws, their toils, their arms with his compare.

Prior.

1 put the journals into a strong box, after the man-ner of the historiographers of some eastern monarchs.

Arbuthnot’s History of John Bull. After his life has been rather invented than written, I shall consider him historically as an author, with re-pard to those works he has left behind him.

Pope’s Estay on Homer.

His works resemble a large history-piece, where even the less important figures have some convenient place.

Pope. Here rising bold the patriot’s honest face ;

There warriors frowning in historick brass. Id. Justly Caesar scorns the poet’s lays j

It is to hiitory he trusts for praise. Id.

What histories oftoil could I declare !

But still long-wearied nature wants repair. Id.

Not added years on years my task could close, The long historian of my country’s woes. Id.

History, so far as it relates to the affairs of the Bible, is necessary to divines. Watts.

HISTORY may, in general, be defined an account of the most remarkable events which have occured in the world, arranged in the order in which they happened, together with the causes from which they originated, and the different effects they produced. The word l<ropia literally denotes a search for curious things, a de-sire of knowing, or even a rehearsal of things we have seen ; being formed from the verb !<rop«v, which properly, signifies to know a thing by having seen it. But the ideas attached to it be-came gradually more extensive, and it is now applied to the knowledge of things taken from the report of others: from the verb i(r»jp, I know ; and hence, among the ancients, several of their great men were called polyhistores, i. e. persons of various and general knowledge.

The word history is, however, sometimes used to signify a description of things, as well as an account of facts. Thus Theophrastus calls his work on the nature and properties of plants, a history of plants ; we have a treatise of Aristotle, entitled a history of animals ; and to this day the description of plants, animals, and minerals, are called by the general name of natural history.

But what chiefly merits the name of history, and what is here considered as such, is an account of the principal transactions of

mankind from the beginning of the world ; generally divided into two parts, *viz.* civil and ecclesiastical. The first contains the history of mankind in their various relations to one another in common life; the second considers them as acting, or pretending to act, in obedience to what they believe to be the will of the Supreme Being. Civil history, therefore, includes an account of all the different states that have existed in the world, and likewise of those men who in different ages of the world have most eminently distinguished themselves, either for their good or evil actions. This last part of civil history, however, sometimes forms a distinct branch of study styled biography.

Few accomplishments are more valued than an accurate knowledge of the histories of different nations ; and no literary production is more respectable than a well-written history of any na-tion : although the truth of Goldsmith's remark must be acknowledged, that history is generally little more than the register of human contention and calamity.

Geography and chronology have been called the eyes of history. The person whq would

study history, therefore, ought first to make himself acquainted with the state of the world in general in different ages ; the nations who inhabited the different parts of it ; what their extent of territory was ; at what particular time they arose, and when they declined. He should next inform himself of the various events which have happened to each particular nation ; and thus he will discover many of the causes of those revolutions, which before he only knew as facts. For, a person may be familiar with the Roman history from the time of Romulus, without knowing why the city of Rome happened to be built at that time. This cannot be understood without a particular knowledge of the former state of Italy, and even of Greece and Asia ; the origin of the Romans being commonly traced as high as jEneas, one of the heroes of Troy.

The outline of history maybe easily obtained by the inspection of any

historical chart ; but as one has been published by Mr. Tegg, at a low price, and exceedingly well calculated to illustrate the subject, the editor of this work thinks it right to furnish an outline of its contents.

The plan extends back only to the Flood ; the preceding period of 1656 years is therefore left blank in the chart. There being 2348 years from the Flood to the birth of Christ, the space between them is divided into twenty-three parts, each representing 100 years or a century, and a fraction representing the remaining forty-eight years. The space from the birth of Christ downwards is divided into eighteen parts or centuries : and all these parts, together with some centuries preceding the birth of Christ, are subdived into tens.

The vertical columns are geographical divisions ; and events are marked in their proper centuries and proper columns. Thus the rise of any state, as that of Assyria, is marked in its proper geographical column, and in that place pt the twenty-first century before Christ at which ttie beginning of its history is dated ; thence we trace Us continuance to the end of the seventh century before Christ, when it became extinct. The building of Rome is marked about the mid-dle of the eighth century before Christ. Its territory extends by degrees to the conquest of all Italy ; next to Spain, Macedonia, &c., until it comes to extend from Britain to Egypt. It continues of this magnitude until about the middle of the fifth century after Christ, when it begins to lose those provinces out of which the modern kingdoms of Europe have been formed in the order set down. As this appears on mere inspection, it will be more easily remembered than when it is conveyed in numbers only. The dates are taken chiefly from Blair's Chronological Ta-bles. It would have been easy to have extended this chart by inserting remarkable events, the successions of kings and great men, &c., but clearness and simplicity appeared a preferable object. It was therefore thought proper to leave to every person the filling up of his own plan with such articles as are most in the line of his study. We have given a few specimens of the succession of the Roman emperors, and of the kings of England and France ; and of the eras of «neor two remarkable men, as those of Tacitus

the historian, and Attila. One person may fill this plan with the names of statesmen and warriors, another with scholars and philosophers, &c. As space is here employed to represent time, it is material that equal periods should be represented by equal spaces ; and, if possible, that the parts of the same empire should be placed together. We have seen both these circumstances neglected in charts of universal history.

PART I.

OF CIVIL HISTORY. INTRODUCTION.

Civil History, though it might seem incapable of any natural division, except that of arranging it according to the different states whose transactions it describes, may yet be very properly divided into the following periods, at each of which a great revolution took place, either with regard to the whole world, or ‘a very considerable part of it : *viz.*

1. The creation of man; 2. The flood; 3. The commencement of profane history, i. e. when leaving the fabulous relations of heroes, demi-gods, &c., to the poets, we arrive at some facts which demand our belief. 4. The conquest of Babylon by Cyrus, and the destruction of the Babylonian empire. 5. The reign of Alexander the Great, and the overthrow of the Persian em-pire. 6. The destruction of Carthage by the Romans, when the latter had no longer any rival capable of opposing their aim at universal em-pire. 7. The reign of Trajan, when the Roman empire was at its greatest extent. 8. The division of the empire under Constantine. 9. The destruction of the western empire by Odoacer, and the settlement of the different nations of Eu-rope. 10. The rise of Mahomet and the conquests of the Saracens and Turks. 11. The Crusades, and the space intervening between that time and the American war. 12. The last but not the least important era, from the commenopmpnt of the American war to the period of the French revolution.

With regard to the number of years which have elapsed since the creation of the world, there have been many disputes. The compilers of the Universal History determine it to have taken place in the year 4305 B. C., so that, according to them, the world is now in the 6106th year of its age. Others think it was created only 4000 years B. C., so that it is not yet 5831 years old. But see our article CHRONOLOGY. Be this, as it will, however, the whole account ot ttic creation rests on the truth of the Mosaic history ; which we must of necessity accept, because we can find no other, which does not either abound with the grossest absurdities, or lead us into absolute darkness. The Chinese and Egyptian pretensions to antiquity are so absurd and ridiculous, that the bare reading of them must be a sufficient confutation of those pretensions to every reasonable person.

SECT. I. — FROM THE CREATION TO THE DE-LUGE.

The transactions during this period are little known, nothing indeed

being recorded of them

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but what is to be found in the first six chapters of Genesis. In general, we know, that men were not at that time in a savage state, as poets and even historians have supposed ; but that they had made some progress in the arts, had invented music, and found out the method of working metals. They seem also to have lived in one vast community, without any of those divisions into different nations which have since taken place, and which evidently proceeded from the confusion of languages.

The most material part of their history, however, is, that having once begun to trangress the divine commands, they proceeded to greater and greater lengths of wickedness, till at last the Deity thought proper to send a flood on the earth, which destroyed the whole human race, except eight persons, *viz.* Noah and his family.

This terrible catastrophe happened, according to the Hebrew copy of the Bible, 1656 years after the creation ; according to the Samaritan copy, 1307. For the different conjectures concerning the natural causes of the flood, see the article DELUGE.

SECT. II. — FROM THE DELUGE TO THE COMMENCEMENT OF PROFANE HISTORY.

For the history of this period we must again have recourse to the Scriptures, almost as much as for that of the first. We now find the human race reduced to eight persons, possessed of nothing but what they had saved in the ark, and the whole world to be stored with animals from those which had been preserved along with them. In what country their original settlement was made, is uncertain. The ark rested on Mount Ararat in Armenia, but it is impossible to know \vhether Noah and his sons made any stay in the neighbourhood of this mountain or not. Certain it is, that some time after the whole or

the greatest part of the human race were assembled in Babylonia, where they engaged in building a tower, with the foolish and impious intention, as it would seem, of ascending to heaven. The Deity punished them by confounding their language ; whence the division of mankind into different nations.

By the most probable accounts Gomer, the son of Japheth the son of Noah, was the father of the Gomerians or Celtes, *i.e.* of all the barbarous nations who inhabited the northern parts of Eu-rope, under the names of Gauls, Cimbrians, Goths, 8cc., and who also migrated into Spain, where they were called Celtiberians. From Magog, Meshech, and Tubal, three of Comer's brethren, proceeded the Scythians, Sarmatians, Tartars, and Moguls. The other three sons of Japheth, Madai, Javan, and Tiras, are said to have been the fathers of the Medes, the lonians, Greeks, and Thracians.

The children of Shem were Elam, Asshur, Arphaxad, Lud, and Aram. The first settled in Persia, where he became the father of that mighty nation : the descendants of Asshur peopled Assyria : Arphaxad settled in Chaldea. Lud is supposed by Josephus to have taken up his residence in Lydia ; though this is controverted. Aram, with more certainty, is believed to have settled in Mesopotamia and Syria.

The children of Ham were Cush, Mizraim Phut, and Canaan. Cush is thought to have remained in Babylonia, and to have been king oi the south-east parts of it, afterwards called Khu-zestan. His descendants are supposed to have removed into the eastern parts of Arabia ; from whence they by degrees migrated into the corresponding part of Africa. Mizraim peopled Egypt, Ethiopia, Cyrenaica, Libya, and the rest of the northern parts of the same continent. The place where Phut settled is not known ; but Ca-naan is universally allowed to have settled in Phoenicia ; and to have founded those ' nations who inhabited Judea, and were afterwards mostly exterminated by the Jews.

Monarchical government began early, Nimrod the son of Cush having procured himself to be made king of Babylon. Asshur soon after emigrated from the new kingdom ; built Nineveh, afterwards capital of the Assyrian empire ; and two other cities, called Resen and Rehoboth, of the situation of which we are now ignorant Whether Asshur at this time set up as king for himself, or whether he held those cities as vassa. to Nimrod, is uncertain. About the same time various other kingdoms sprang up in different parts of the world. Thus the

Scripture mentions the kings of Egypt, Gerar, Sodom, Gomorrah, &c., in the time of Abraham ; and we may reasonably suppose, that these kings reigned over nations which had existed for some time.

The first considerable national revolution on record is the migration of the Israelites out of Egypt, and their establishment in the land of Canaan. For the history of these transactions we must refer to the Old Testament, where the reader will see that it was attended with a terrible catastrophe to the Egyptians, and with the utter extermination of some of the descendants of Ham, who inhabited Judea. The settlement of the Jews in the land of Canaan is supposed to have happened about 1491 B. C.

For nearly 200 years after this period we find no authentic account of any other nations than those mentioned in Scripture. About 1260 B.C. the Greeks began to make other communities feel the effects of that enterprising and martial spirit for which they were so remarkable, and which they had undoubtedly exercised upon one another long before. Their first enterprise was an invasion of Colchis, for the sake of the golden fleece. Whatever was the nature of this expedition, it is probable they succeeded in it ; and that this specimen of the produce and riches of Asia inclined them to Asiatic expeditions afterwards. x\ll this time we are totally in the dark about the state of Asia and Africa, except in so far as can be conjectured from Scripture. The ancient empires of Babylon, Assyriajand Persia, probably still continued in the former continent, and Egypt and Ethiopia seem to have been considerable kingdoms in the latter.

About 1184 years B. C. the Greeks again distinguished themselves by their expedition against Troy, a city of Phrygia Minor ; which they plundered and burnt, massacreing the inhabitants with the most unrelenting cruelty. ./Eneas, a Trojan prince, escaped with some followers into Italy, where he became the remote founder of the

Roman empire. At this time Greece was divided into a number of small principalities, several of which seem to have been in subjection

to Agamemnon, king of Mycenae. In the reign of Atreus, the father of Agamemnon, the Heraclidae, who had been banished by Eurystheus, were again obliged to leave this country. Under their champion Hyllus they claimed the kingdom of Mycenae as« their right, pretending that it belonged to their ancestor Hercules, who was unjustly deprived of it by Eurystheus. See HERACLID.E and HERCULES. The controversy was decided by single combat ; but, Hyllus being killed, they departed, under a promise of not returning for fifty years.

About the time of the Trojan war, also, we find the Lydians, Mysians, and some other nations of Asia Minor, first mentioned in history. The names of the Greek states mentioned during this uncertain period are: 1. Sicyon. 2. The Leleges. 3. Messenia. 4. Attica. 5. Crete. 6. Argos. 7. Sparta. 8. Pelasgia. 9. Thessaly. 10. Attica. 11. Phocis. 12. Locris. 13. Ozo-lea. 14. Corinth. 15. Eleusis. 16. Elis. 17. Pilus. 18. Arcadia. 19. ˆEgina. 20. Ithaca. 21. Cephalenia. 22. Phthia. 23. Phocidia. 24. Ephyra. 25. ˆEolia. 26. Thebes. 27.Callista. 28. jˆEtolia. 29. The Dolopes. 30. Oechalia. 31. Mycenae. 32. Euboea. 33. The Minyae. 34. Doris. 35. Pherae. 36. Ionia. 37. Trachin. 38. Thesprotia. 39. Mynnidonia. 40. Salamis. 41. Scyros. 42. Hyperia or Melite. 43. The Vulcanian Isles. 44. Megara. 45. Epirus. 46. Achaia. 47. The isles of the jEgean Sea. Concerning many of these we know little or nothing; the most remarkable particulars respecting the rest may be found under their names.

About 1048 B.C. the kingdom of Judea un-der king David approached its utmost extent of power. Leaving the reader to acquaint himself, from Scripture, with the details of its condition under Solomon, we may c bserve that the first shock given to the Jewish grandeur in the division of the kingdom into two, through the imprudence of Rehoboam, rendered it the more easily a prey to Shishak king of Egypt; who five years after came and pillaged Jerusalem, and all the fortified cities of Judah. The commerce to the East Indies, begun by Solomon, seems now to have been discontinued. Whether this Shishak was the Sesostris of profane writers or not, seems questionable; his expedition against Jerusalem, as recorded in Scripture, was very similar to the desultory conquests ascribed to Sesostris, and it seems impossible to fix on any other king of Egypt who can be supposed to have undertaken this expedition in the days of Rehoboam.

In 941 B. C. Zera, an Ethiopian, invaded Ju-dea with an army of 1,000,000 infantry and 300 chariots ; but was defeated with great slaughter by Asa, who engaged him with an army of 580,000 men. About this time also the Syrians had become a considerable people, and bitter enemies both to the kings of Israel and Judah ; aiming in

fact at the conquest of both nations, by pretending to assist the one against the other. In 740 B.C., however, the Syrian empire was totally destroved by Tiglath-Pileser, king of Assyria ; as was also the k;-.g<lom of Samaria by

Shalmaneser his successor in 721. The people were either massacred, or carried captives into Media, Persia, and the countries about the Caspian Sea.

While the eastern nations were thus destroying each other, the foundations of very formidable empires were laid in the west, which, in process of time, were to swallow up almost all the eastern ones. In Africa, Carthage was founded by a Tyrian colony, about 869 B. C., according to those who ascribe the highest antiquity to that city; but, according to others, it was founded only in 769, or 770 B. C. In Europe a very considerable revolution took place about 900 B. C. The Heraclidse, after several unsuccessful attempts, at last conquered the whole Peloponnesus. From this time the Grecian states became more civilised, and their history less obscure. The institution, or rather the revival and continuance, of the Olympic games, in 776 B. C., also greatly facilitated not only the writing of their history, but that of other nations ; for, as each Olympiad consisted of four years, the chronology of every important event became indubitably fixed by referring it to such and such an Olympiad. In 748 B.C., or the last year of the seventh Olympiad, the foundation of Rome was laid by Romulus; and, forty-three years after, the Spartan state was new modelled, and received from Lycurgus those laws, by observing of which it afterwards arrived at such a pitch of prosperity.

SECT. III. — FROM THE COMMENCEMENT OF PROFANE HISTORY TO THE ERECTION OK THE BABYIONIAN EMPIRE BY NEBUCHADNEZZAR.

With the beginning of the twenty-eighth Olympiad, or 568 B. C., commences the third general period above mentioned, when profane history becomes sorae%vhat clear, and the relations concerning the different nations may be depended upon with some degree of certainty. The general state of the world at this period was as follows: —

The northern parts of Europe were thinly inhabited, or filled with unknown and barbarous nations. France and Spain were inhabited by the Gomerians or Celtes. Italy was divided into a number of petty

states, arising partly from Gaulish, and partly from Grecian colonies . among which the Romans had already become formidable. They were governed by their sixth king, Servius Tullius ; had increased their city by the demolition of Alba Longa, and the removal of its inhabitants to Rome ; and had enlarged their dominions by several cities taken from their neighbours.

Greece was divided into a number of smaK states, among which the Athenians and Spartans, being the most remarkable, were rivals to each other. The former had, about 599 B.C., received the excellent laws of Solon, and were enriching themselves by navigation and commerce ; the latter were become formidable by the martial institutions of Lycurgus. The other states of most consideration were Corinth, Thebes, Argos, and Arcadia.

In Asia Nebuchadnezzar now sat on the throns of Babylon. By him the kingdom of Judea was

totally overthrown in 587 B. C. Three years before this he had taken and razed the city of Tyre, and overrun all Egypt. He is even said by Josephus to have conquered Spain, and reigned there nine years; but this seems improbable. His empire comprehended Phoenicia, Palestine, Syria, Babylonia, Media and Persia, and part of India. When we consider that the whole strength of this mighty empire was employed in beautifying the metropolis, we cannot regard the wonders of that city, as related by Herodotus, as at all incredible.

SECT. IV. — FROM THE ERECTION OF THE BABYLONIAN EMPIRE TO ITS OVERTHROW BY CYRUS.

This fourth general period is very short, embracing only the revolution occasioned by the misconduct of Evil-merodach, Nebuchadnezzar's son, in his father's life time. Having, in a hunting match, entered the country of the Medes, and some of his troops coming up to relieve the garrisons in those places, he joined them to those already with him, and without the least provocation be-gan to plunder and lay waste the

country. This produced an immediate revolt, which quickly extended over all Media and Persia. The Medes, headed by Astyages, and his son Cy-axares, drove back Evil-merodach and his party with great slaughter; nor does it appear that they were afterwards reduced by Nebuchadnezzar. The new empire continued daily to gather strength ; and at last Cyrus, Astyages's grandson, a prince of great prudence and valor, being made generalissimo of the Median and Persian forces, took Babylon itself, in the year 538, B.C. See BABYLONIA.

The Romans, during this period, increased in power under the wise government of Servius Tullius, a pacific prince, who rendered this people more formidable by a peace of twenty years, than his predecessors had done by all their victories. The Greeks now began to interfere with the Persians, on account of the lonians, or Grecian colonies in Asia Minor. Whether the Lydians had been subdued by the Babylonish monarch or not, is not ascertained ; though it is probable that they were either in subjection to him, or greatly awed by his power, as before his death nothing considerable was undertaken by them. It is also very probable that during the insanity of Nebuchadnezzar, spoken of by Daniel, the affairs of his kingdom would fall into confusion. Certain it is, that, if the Babylonians did not regard Croesus as their subject, they considered him as a very faithful ally.

When Cyrus, therefore, was proceeding in his conquest of the Babylonish empire, before he proceeded to attack the capital, he offered advantageous terms to the lonians, but they refused to submit to him. Soon after, however, Croesus himself being defeated and taken prisoner, the lonians sent ambassadors to Cyrus, offering to embrace his terms. These were now refused \ and the lonians applied to the Spartans for aid. Thus commenced the hatred between the Greeks and Persians. The transactions of Africa during this period are almost entirely unknown ; though

the Carthaginians were doubtless enriching themselves by means of their cc-nmerce.

SECT. V. — FROM THE ERECTION OF THE PERSIAN EMPIRE TO ITS OVERTHROW BY ALEX-ANDER : AND TO THE DIVISION OF THE GRE-CIAN EMPIRE, UPON HIS DEATH. Cyrus having now become master of all the east, the Asiatic affairs continued for some time in a state of tranquillity. The Jews obtained leave to return to their own country, and rebuild their temple. The successor of Cyrus, Cam-byses,

added Egypt to his empire. He intended also to have subdued the Carthaginians; but the Phoenicians refused to supply him with ships.

In 517, B. C., the Babylonians, finding themselves grievously oppressed by their Persian masters, resolved to shake off the yoke, and for this purpose stored their city with provisions. When Darius Hystaspis advanced against them, they collected all the women, old men, and children, into one place, and strangled them without distinction, whether wives, fathers, mothers, brothers, or sisters ; every one being allowed to select only one wife and a maid-servant. This cruel policy did not avail them : their city was taken, and the king caused the walls to be beat down from 200 to fifty cubits height.

Darius then turned his arms against the Scythians ; after which he directed his course eastward, and reduced the country as far as the Indus. In the mean time, the lonians revolted ; and the conquest of Greece was projected : but the expeditions for that purpose ended most unfortunately for the Persians. See ATTICA, PERSIA, and SPARTA.

In 459, B. C., the Egyptians attempted to recover their liberty, but were reduced after a war of six years. In 413, B.C., they revolted a second time ; and, being assisted by the Sidonians. drew upon the latter that terrible destruction foretold by the prophets ; while they themselves were so thoroughly humbled, that they never after made any attempt to recover their liberty.

The revolt of Cyrus the younger against his brother Artaxerxes Mnemon, in which, through his own rashness, he miscarried, and lost his life at the battle of Cunaxa, in the province of Babylon, happened in the year B.C. 401 or 403. 10,000 Greek mercenaries, who served in his army, made their way back into their country, though surrounded on all sides by the enemy. In this retreat they were commanded by Xenophon, who has received the highest praise on account of his conduct and military skill. Two years after, the invasion of Agesilaus, king of Sparta, threatened the Persian empire with totpl destruction.

The various transactions between the Grecian states, though they make a considerable figure in their respective histories, make but a small one in a general sketch. We shall, therefore, only observe, that in 404, B.C., the Athenian power was totally broken by the taking of their city by the Spartans. See ATTICA. In 370 that of the Spartans received a severe check from ‘.he Thebans at the battle of Leuctra; and

eight years after was still further reduced by the battle of Mantinea. The Macedonians, a barbarous nation lying to the north of the states of Greece, now rose into power under Philip, who being no stranger to the weakened situation of Greece, began to meditate the conquest of it.

The particulars of this enterprise will be found under the article MACEDON. Here it is sufficient j» mention, that by first attacking those he was sure he could overcome, and corrupting those whom he thought it dangerous to attack ; by sometimes pretending to assist one state and sometimes another, and by imposing upon all as best suited his affairs, he finally gained his end. In 338 B.C. he procured himself to be elected general of the Amphictyons, and, having once obtained liberty to enter that country with an army, he quickly convinced the states that they must all submit to him.

Philip when master of all Greece, projected the conquest of Asia, when he was suddenly assassinated.

Alexander his son was possessed of every quality necessary for the execution of so great a plan ; and his impetuosity of temper made him execute it with an unheard of rapidity. He met with only two checks in his Persian expedition. The one was from the city of Tyre, which for seven months resisted his utmost efforts ; the other was from Memnon the Rhodian, who had undertaken to invade Macedonia. The first of these obstacles Alexander at last overcame, and treated the governor and inhabitants with the utmost cruelty. The other was scarcely felt ; for Memnon died after reducing some of the Grecian islands, and Darius had no other general capable of conducting the undertaking. The power of the Persian empire was totally broken by the victory gained over Darius at Arbela, in the year 331 B. C., and next year a total end was put to it by the murder of the king by Bessus.

Alexander now invaded and reduced Hyrcania, Bactria, Sogdiana, and all the vast tract of country now called Bukharia. Having entered India, he reduced all the nations to the river Hyphasis, one of the branches of the Indus. But when he would have proceeded farther, and extended his conquests quite to the eastern extremities of Asia, his

troops positively refused to follow him.

Rome and Carthage were now making considerable advances in the west. During the time of their kings, the Romans had made a very considerable figure among the Italian nations ; but after their expulsion, and the commencement of the republic, their conquests became much more rapid and extensive. In 501 B.C. they subdued the Sabines ; eight years after, the Latins ; and in 399 the city of Veii, the strongest in Italy, excepting Rome itself, was taken after a siege of ten years. But in the midst of their successes a sudden irruption of the Gauls had almost put an end to their power. The city was burnt to the ground in 383 B. C., and the capitol on the point of being surprised, when the Gauls, who were climbing up the walls in the night, were accidently discovered and repulsed. Rome was soon rebuilt; but at the celebrated Camil-lus's death, which happened about 352 B. C.,its

territory scarcely extended six or seven league from the capital. The people had been divided by Romulus into two classes, namely patricians and plebeians, answering to our nobility and commonalty. Between these two bodies were perpetual jealousies and contentions ; which retarded the progress of the Roman conquests, and revived the hopes of the nations they conquered . The tribunes of the people were perpetually opposing the consuls and military tribunes, and the senate had often recourse to a dictator endowed with absolute power. Thus had the Romans continued for nearly 400 years, running the same round of wars with the same enemies, and reaping little advantage from their conquests, till at last matters were compounded, by choosing one of the consuls from among the plebeians ; and from this time chiefly we may date the prosperity of Rome.

The Carthaginians in the mean time continued to enrich themselves by commerce ; but were by no means equal to the Romans in power. A new state, however, made its appearance during this period, which may be said to have taught the Carthaginians the art of war. This was Si-cily. At what time it was first peopled cannot be ascertained. In the second year of.the seventeenth Olympiad, or 710 B.C., some Greek colonies are said to have arrived on the island, and in a short time founded several cities, of which Syracuse was the chief.

The first considerable monarch of Syracuse was Gelon, who obtained the sovereignty about the year 483 B. C. The Carthaginians possessed some part of the island as early as 505 B.C.; but, in twenty-eight years after, they had been totally driven out by Gelon.

The island also proved the scene of much slaughter and bloodshed in the wars of the Grecian states. Before the year 323 B.C.. however, the Carthaginians had made themselves masters of a very considerable part of Sicily; whence all the power of the Greeks could not dislodge them. After the destruction of Tyre almost all the commerce in the western part of the world fell to the share of the Carthaginians ; but whether they had at this time made many settlements in Spain, is not known. It is certain, that they traded to that country for the sake of the silver, as they probably also did to Britain for tin. In the year 323 B. C. Alexander the Great died at Babylon, without settling the affairs of his vast empire, or even naming a successor ; and four new empires immediately rose out of it.

SECT. VI. — FROM THE DIVISION OF THE GRE-CIAN EMPIRE, TO THE DESTRUCTION OF THE CARTHAGINIAN REPUBLIC BY THE ROMANS.

Alexander had left behind him a victorious, and, we may say, invincible army, commanded by most expert officers, all equally ambitious of authority. Cassander, the son of Antipater, had seized Macedonia and Greece ; Antigonus, Asia Minor ; Seleucus had Babylon and the eastˆ ern provinces ; and Ptolemy, Egypt and the western ones. One of these empires, however, soon fell ; Antigonus being defeated and killed by Seleucus and Lysimachus at the Battle of Ipsus, in 301 B. C. The greatest part of his

dominions then fell to Seleucus : but several provinces took the opportunity of these confusions to shake off the Macedonian yoke altogether; and thus were formed the kingdoms of Pontus, Bithynia, Pergamus, Armenia, and Cappadocia.

The two most powerful and permanent empires, however, were those of Syria, founded by Seleucus, and Egypt by Ptolemy Soter. The kings of Macedon, though they did not preserve the same authority over the Grecian states that Alexander, Antipater, and Cassander had done, yet effectually prevented them from those out-ra.es upon one another for

which they had formerly been so remarkable. •

While the eastern parts of the world were thus deluged with blood, the Romans and Carthaginians also proceeded in their attempts to enslave the western nations. About the year 253 B. C. the former had made themselves masters of almost the whole of Italy ; but Pyrrhus king of Epirus, in 271 B. C., entered that country, and maintained a war with them for six years. He was finally defeated, however, and the Ro-mans being invited into Sicily, to assist the Mar-mertines against Hiero II. king of Syracuse and the Carthaginians, they immediately commenced a war with the latter, which continued for twenty-three years ; and the consequence was the entire loss of Sicily to the Carthaginians; soon after the Romans seized on Sardinia.

Ilamilcar now set about the subjugation of Spain ; and his son Asdrubal continued the war with success ; till at last the Romans engaged him to make the river Iberus the boundary of his conquests.

The transactions of the second Punic war are perhaps the most remarkable recorded in history. We now see the Romans, who for more than 500 years had been constantly victorious, unable to resist the efforts of a single man, until at last, Hannibal, the conqueror of Italy, was obliged to abandon his final designs for want of 20,000 or 30,000 men. Hannibal had concluded an alliance with Philip VI. of Macedonia. Had that prince sent an army to the assistance of the Carthaginians in Italy, immediately after the battle of Cannae, there can be no doubt but the Romans •would have been forced to accept of peace. Philip, however, -could not be roused. The issue was that the Carthaginian armies, unsupported in Italy, were recalled into Africa, which the Ro-mans had invaded. Here Hannibal was defeated at the battle of Zama, which finished the second Punic war, in the year 188 B. C.

All this time Egypt, Syria, and Greece, had been promoting their own ruin by mutual wars. The Syrian empire was now governed by Antiochus the Great, and to him Hannibal applied, when he was obliged to leave his country, and the Romans declared war against him. The event was, that Antiochus was every where defeated, and forced to conclude a peace upon very disadvantageous terms.

The states of Greece, weary of the tyranny of the Macedonians, now entered into the resolution of recovering their liberties. For this purpose was framed the Achaean League; but they at lust came to the imprudent determination of

calling in the Romans to defend them. This produced a war in which the latter were victorious ; but Perseus, the successor of Philip, renewed the war, until Macedon submitted to the Romans, 167 B. C.

After this, war was declared a third thru against the unfortunate Carthaginian state ; there was now no Hannibal to command their armies, and Carthage was utterly destroyed in the year 146 B. C. The same year the Romans put an end to the liberties they had pretended to grant the cities of Greece, by the entire destruction, .of Corinth.

The only transaction of any considerable consequence in the Syrian empire, at this period, is the oppression of the Jews by Antiochus Epiphanes. After their return from the Babylonish captivity, they continued in subjection to the Persians, till the time of Alexander. From that time they were subject to the kings of Egypt or Syria, as the fortune of either happened to prevail. Egypt being reduced by Antiochus Epiphanes, the Jews fell under his dominion ; and, being severely treated by him, imprudently showed some signs of joy on a report of his death. This brought him against them with a powerful army; and in 170 B. C. he took Jerusalem by storm, committing the most horrid cruelties on the inhabitants. Their religion was for a while totally abolished, their temple profaned, an image of Jupiter Olympius set up, and a sow sacrificed on the altar of burnt offerings. In 167 B. C., however, Mattathias restored the true worship in most of the cities of Judea; and in 165 the temple, was purified by Judas Maccabaeus. This was followed by a long series of wars between the Syrians and Jews, in which the latter were almost always victorious.

SECT. VII. — FROM THE DESTRUCTION OF CARTHAGE TO THE DEATH OF TRAJAN, WHEN THE ROMAN EMPIRE HAD ATTAINED TO ITS UTMOST EXTENT.

The empire of Syria at first comprehended all Asia to the river Indus, and beyond it ; but in 312 B. C. most of the Indian provinces had been by Seleucus ceded to Sandrocottus, or Androcottus, a native, -who in return gave him 500 elephants. Of the empire of Sandrocottus we know nothing farther than that he subdued all the countries between the Indus and the Ganges ; so that from this time the greatest part of India became independent of the Syro-Macedonian princes. In 250 B. C., however, the empire sustained a much greater loss by the revolt of the Parthians and Bactrians from Antiochus Theos. The former could not be subdued ; and, as they held in subjection to them the extensive country now called Persia, their defection was an irre-parable loss.

Whether any part of their country was afterwards recovered, by the kings of Egypt or Syria, is not certain. The general state of the world B. C. 146 was as follows : —

In Asia were the empires of India, Parthia, and Syria, with the smaller states of Armenia, Pontus, &c., to which we must add that of Arabia, which during the sixth period had be-come of some consequence, and had maintained its independence from the days of Ishmael. 1 1

Africa were the kingdoms of Egypt and Ethiopia; the Carthaginian territories, now subject to the Romans; and the kingdoms of Numidia, Mauritania, and Getulia, ready to be swallowed up by the same ambitious and insatiable power, now that Carthage was destroyed, which had served as a barrier against it. To the south lay unknown and barbarous nations, secure by their situation and insignificance, rather than their strength, or distance from Rome. In Europe we find none to oppose the progress of the Roman arms, except the Gauls, and some nations of Spain.

The Spaniards had indeed been subdued by Scipio Africanus during the second Punic war ; but in 155 B. C. they revolted; and under the conduct of one Viriathus, formerly a robber, held out for a long time against all the armies the Romans could send into Spain. Him the consul Caepio caused to be murdered about 138 B. C., because he found it impossible to reduce him by force. Numantia defied the whole Roman power for six years longer.

About this time Attalus king of Pergamus left by will the Roman people heirs to all his goods ; upon which they immediately seized on his kingdom and reduced it to a Roman province, under the name of Asia Proper. In 122 B.C. the Balearic Islands, now called Majorca, Minorca, and Ivica, were subdued. The event of it was the total reduction of Numidia, which took place about the year 105 B. C. ; but Mauritania and Getulia preserved theii liberty for some time longer.

In the east the empire of Syria continued to decline ; by which means

the Jews not only had an opportunity of recovering their liberty, but even of becoming almost as powerful, or at least of extending their dominions as far, as in the days of David and Solomon. The Syrian empire was farther reduced by the civil dissensions between the two brothers, Antiochus Gryphus and Antiochus Cyzicenus ; during which the cities of Tyre, Sidon, Ptolemais, and Gaza, declared themselves independent. This happened about 100 B.C.; and, seventeen years after, the whole was reduced by Tigranes king of Armenia. On his defeat, by the Romans, the latter reduced Syria to a province of their empire. Pontus was subdued about 64 B. C. The kingdom of Judea also was reduced under the same power about this time. It owed the loss of its liberty to the same cause that had ruined various other states, namely, calling in the Romans to be arbitrators between contending parties. Hyrcanus and Aristobulus had contended for the kingdom, when the latter applied to the Romans, and Pcmpey the Great decided against him ; but at the same time deprived Hyrcanus of all regal power, and did not allow him to extend his territory beyond the ancient borders of Judea.

In the west, however, the Gauls were still free, and the Spanish nations bore the Roman yoke with great impatience ; while the kingdom of Egypt remained independent. The battle of Ac-tium, however, determined the fate of Antony, Cleopatra, and Egypt itself; which was reduced to a Roman province, about the year 29 B. C.

This same event was the destruction of the

Roman republic ; and it proved advantageous to the few nations of the world who still retained their liberty. That outrageous desire of conquest, which had so long marked the Roman character, now in a measure ceased ; and after the final reduction of Spain, and the conquest of Maesia and Pannonia, the empire enjoyed for some time a profound peace.

The only remarkable transactions which took place during the remainder of this period, were the conquest of Britain by Claudius and Agricola, and the destruction of Jerusalem by Vespasian and Titus. The war with the Jews began A.D. 67; and was occasioned by their obstinately claiming the city of Caesarea, which the Romans had added to Syria. It ended in 73, with the most terrible destruction of their city and nation ; since which time they have never been able to exercise sovereign authority. The southern parts of Britain were totally subdued by Agricola about ten years after.

In the year 98, of the Christian sera, Trajan was emperor of Rome ; and the empire reached its utmost extent. Having ˆconquered the Da-cians, a German nation beyond the Danube, he turned his arms eastward; reduced all Mesopotamia, Chaldaea, and Assyria ; and having taken Ctesiphon, the capital of the Parthian empire, appointed them a king. After this he proposed to return to Italy, but died by the way.

SECT. VIII. — FROM THE COMMENCEMENT or THE DECLINE OF THE ROMAN EMPIRE, TO ITS DIVISION UNDER CoNSTAMTINE.

No sooner, however, had the vast empire of the Romans attained its utmost degree of power, than, like its predecessors, it began to decline. The provinces of Babylonia, Mesopotamia, and Africa, almost instantly revolted, and were abandoned by Adrian, the successor of Trajan. The Parthians, having recovered their liberty, were very formidable enemies, and the barbarians of the northern parts of Europe continued to increase in strength. At different times, however, some warlike emperors arose, who put a stop to the incursions of these barbarians ; and, about the year 225, the Parthian empire was totally overthrown by the Persians. But the latter be-came still more troublesome enemies to the em-pire than the Parthians ; and, though often defeated, they long continued to infest it on the east. In 260 the defeat and captivity of Valerian, by the Persians, threatened the empire with utter destruction. Thirty tyrants now seized the government at once; and the barbarians, pouring in on all sides, ravaged almost all the provinces. By the vigorous conduct of Claudius II., Aurelian, Tacitus, Probus, and Carus, the empire was in part, indeed, restored to its former lustre ; but the barbarians were never thoroughly subdued.

An end was put to these evils when the em-pire was united under Constantine the Great ; but in 330 a mortal blow was given to it, by his removing the imperial seat to Constantinople. The establishment of Christianity, now corrupted with the grossest superstitions, proved also no small detriment to the empire.

SECT. IX. — FROM THE DIVISION OF THE ROMAN EMPIRE TO THE DESTRUCTION OF THE WESTERN PART OF IT, AND THE RISE OF MAHOMET AND OF THE EUROPEAN STATES. We now see that mighty empire, which formerly occupied almost the whole world, weakened by division, and surrounded by enemies. On the east, the Persians ; on the north, the Scythians, Sarmatians, Goths, and a multitude of other barbarous nations, watched all occasions to break into it; and miscarried in their attempts rather through their own barbarity than the strength of their enemies.

Some of the Roman emperors indeed withstood this inundation of savages; but as the latter grew daily more numerous, and the Ro-mans continued their intestine wars, they were at last obliged to take large bodies of barbarians into their pay, and teach them their military discipline. This at last proved their total destruction ; for, in 476, the barbarians who served in the Roman armies, and were dignified with the title of allies, demanded the third part of the lands of Italy as a reward for their services ; and, meeting with a refusal, revolted, and made themselves masters of Rome itself.

Spain was at this time held by the Goths and Suevians ; Africa (that is, Barbary and Biledul-gerid), by the Vandals ; the Burgundians, Goths, Franks, and Alans, had erected several small states in Gaul ; Italy was subjected to the He-ruli under Odoacer, who had assumed the title of King of Italy ; and Britain was abandoned.

The empire, indeed, continued to maintain its sway at Constantinople, and comprehended all Asia Minor and Syria, as far as Persia ; in Africa, the kingdom of Egypt ; and Greece in Europe. It was engaged, however, in continual wars with the Persians, Bulgarians, and other barbarous nations ; and superstition and a general relaxation of military discipline hastened its downfal.

Among the western nations, revolutions succeeded one another with rapidity. The He-ruli under Odoacer were driven out by the Goths under Theodoric. The Goths were expelled by the Romans ; and, while the two parties were contending, both were attacked by the Franks. The Romans were in their turn expelled by the Goths : the Franks again invaded Italy, and made themselves masters of the province of Venetia ; but at last the superior fortune of the emperor of Constantinople prevailed, and in 553 the Goths were finally subdued.

Narses, their conqueror, governed Italy as a province of the eastern empire till the year 568, when Longinus his successor made considerable alterations. Being invested with absolute power, by

Justinian, he suppressed the consulares, correctores, and presides ; and placed in each city of note a governor, whom he distinguished with the title of duke. The city of Rome was not more honored than any other; for Longinus, having abolished the name of senate and consuls, appointed a duke of Rome as well as of other cities. To himself he assumed the title of ex-arch ; and, residing at Ravenna, his government was styled the exarchate of Ravenna. While he was establishing this new empire, the greatest part of Italy was conquered by the Lombards.

In 487 Clovis, the founder of the French monarchy, possessed himself of all the counties lying between the Rhine and the Loire. See FRANCE.

In Spain the Visigoths erected a kingdom ten years before the conquest of Rome by the He-ruli. This they extended eastward, about the same time that Clovis was extending his conquests to the west; so that the two kingdoms united at the river Loire. The consequence of this was an immediate war, and Clovis proved victorious.

Another kingdom had in the mean time been founded in the western parts of Spain by the Suevi. In 409 this kingdom was entirely subverted by Theodoric king of the Goths, who in 584 became masters of almost all Spain.

Africa,, properly so caHed, had changed its masters three times during this period. The Vandals had expelled the Romans, and erected an independent kingdom, which was at last overturned by the emperors of Constantinople ; and from them the greatest part of it was taken by the Goths in 620.

SECT. X. — FROM THE RISE OF THE MAHOM-MEDAN SUPERSTITION TO THE COMMENCEMENT OF THE CRUSADES.

The tenth general period of history commences with the flight of Mahomet in the year 622 (whence his followers date their era called the Hegira). The Roman empire in the west was now annihilated ; the Persian empire, and that of Constantinople, weakened by their mutual wars and intestine divisions ; the Indians and other eastern nations unaccustomed to war, and ready to fall a prey to the first invader ; the southern parts of Europe were also in a distracted and barbarous state ; while the inhabitants of Arabia, from their earliest origin accustomed to war and plunder, were like a flood pent up, and

ready to overwhelm the rest of the world.

With amazing celerity, therefore, they overran all Syria, Palestine, Persia, Bukharia, and India, extending their conquests farther to the eastward than ever Alexander had done. On the west their empire soon extended over Egypt, Barbary, Spain, Sicily, Sardinia, Majorca, Minorca, &c., and many of the isles in the Archipelago : nor were the coasts of Italy itself free from their incursions ; they are even said to have reached the distant and barren country of Iceland. But at last this great empire began to decline, and its ruin was very sudden. Mahomet had not taken care to establish the apostle-ship in his family, or to give any particular directions about a successor. The consequence was, that the caliphat, or succession to the apos-tleship, was seized by many usurpers; and those who resided at Bagdad were regarded only as a kind of high priests. Of these divisions the Turks took advantage, to establish their authority in many provinces.

While the barbarians of the east were thus conquering, for the glory or God and his apostle Mahomet, the western nations professed an equal regard for the divine glory, and exemplified it in the respect they paid to the pope and the clergy

Ever since the establishment of Christianity, by Constantine, the bishops of Rome had been gradually extending their power; and when in 726 Luitprand, king of the Lombards, had taken Ravenna, and expelled the exarch, the pope undertook to restore him. He applied, for this purpose, to the Venetians, who are now first mentioned in history, and by their means the exarch was restored. Some time before a quarrel had happened between pope Gregory II., and Leo III., emperor of the east, about the worship of images. Leo, who, in the midst of so much barbarism, had still preserved some share of common sense, reprobated this in the strongest terms, and commanded the objects of it to be destroyed throughout his dominions. At the instigation of the pope a revolt ensued ; the exarch, who attempted to fulfil the emperor’s commands, was excommunicated ; and then torn in pieces by the multitude : the duke

of Naples shared the same fate : and a vast number of the iconoclasts, or image-breakers, as they were called, were slaughtered without mercy.

Charles Martel, who then governed France as mayor of the palace, was in the end applied to ; but, before a treaty could be concluded, all the parties concerned were cut off. Constantino Copronymus, who succeeded Leo at Constantinople, not only persisted in the opposition to image worship, begun by his predecessor, but prohibited also the invocation of saints.

Zachary, who succeeded Gregory III. in the pontificate, proved as zealous an adversary as his predecessor ; and Pepin, who succeeded Charles Martel in the sovereignty of France, proved as powerful a friend to the pope as his fa-ther had been. The people of Rome had nothing to fear from Constantinople ; and therefore drove out all the emperor's officers. Awed by the power of France, the Lombards for some time allowed the pope to govern the dominions of the exarchate in peace ; but in 752 Astolphus, king of Lomoardy, again threatened Rome itself. Upon this an application was made to Pepin, who obliged Astolphus to restore the places he had taken, and gave them to the pope, or, as he said, to St. Peter. The Greek emperor, to whom they of right belonged, remonstrated to no purpose. The pope from that time became possessed of considerable territories in Italy. It was not, however, before the year 774 that he was fully settled in this new dominion.

The world was now once more shared among three great powers. The empire of the Arabs or Saracens extended from the Ganges to Spain ; comprehending almost all of Asia and Africa which has ever been known to Europeans, China and Japan excepted. The eastern Roman em-pire was reduced to Greece, Asia Minor, and the provinces adjoining to Italy. The empire of the west, under Charlemagne, comprehended France, Germany, and the greatest part of Italy.

Of all nations on the earth, the Scots and Picts, and the remote ones of China and Japan, seem to have enjoyed, from their situation, the greatest share of liberty ; unless perhaps we except the Scandinavians, who, under the names of Danes and Normans, were soon to infest iheir southern neighbours.

The Saxon heptarchy was dissolved in 827, and the whole kingdom of England reduced under one head. ,The Danes and Normans be-gan to

make depredations, and infest the neighbouring states. The former conquered the Anglo-Saxons, and seized the government, but were in their turn expelled by the Normans in 1066. In Germany and Italy the greatest disturbances arose from the contests between the popes and emperors. To all this, if we ˆdd the internal contests which happened through the ambition of the powerful barons of every kingdom, we can scarcely form an idea of times more calamitous than those at which we now arrive. All Europe, nay, all the world, was one great field of battle, for the empire of the Turks was not in a more settled state than that of the Europeans. Caliphs, sultans, emirs, &c., waged continual war with each other in every quarter ; new sovereignties every day sprung up, and were as quickly destroyed. At last the crusades, by directing the attention of Europeans to one particular object, made them in some measure suspend the slaughter of one another.

SECT. XL — FROM THE COMMENCEMENT OF THE CRUSADES TO THAT OF THE AMERICAN REVOLUTION.

The crusades originated in the superstition of the two grand religious parties into which the world was at that time divided, namely, the Christians and Mahommedans. See CRUSADES. Both looked upon the small territory of Palestine, which they called the Holy Land, to be an invaluable acquisition. The first crusades accordingly poured forth in multitudes, like those with which the kings of Persia formerly invaded Greece ; and their fate was nearly similar. They at first, indeed, carried every thing before them ; but their want of conduct soon lost what their valor had obtained, and very few of that vast multitude which had left Europe ever returned. A second, a third, and several other crusades, were preached, and were attended with like success and like reverses. Vast numbers took the cross, and repaired to the Holy Land ; which they polluted by the most abominable massacres and treacheries, and from which very few of them returned.

Jenghiz Khan, the greatest as well as the most bloody conqueror that ever existed, now made his appearance in the east. The rapidity of his conquests seemed to emulate those of Alexander ; but the cruelties he committed were altogether unparalleled.

The Moguls, over whom he assumed the sovereignty, were a people of Tartary, divided into a number of petty governments, who owned subjection to one sovereign, whom they called Vang-Khan, or the great khan. Temujin, afterwards Jenghiz Khan, was one of these petty princes, unjustly deprived of the greatest part of his inheritance at the age of thirteen. Twenty-seven years after, which corresponds with the

year 1201, he totally reduced the rebels; and, as a specimen of his lenity, caused seventy of their chiefs to be thrown into as many caldrons of boiling water. In 1 202 he defeated and killed Vang-khan himself, known to Europeans by the name of Prester John of Abia ; ind, pos-

sessing himself of his vast dominions, became thenceforward irresistible. In 1206 he was declared khan of the Moguls and Tartars ; and took upon him the title of Jenghiz Khan, or the great khan of khans. This was followed by the reduction of the kingdoms of Hya in China, Tangut, Kitay, Turkestan, Karazim, or the kingdom of Gazna, Great Bukharia, Persia, and part of India; all which vast regions were reduced in twenty-six years, no fewer than 14,470,000 persons being computed to have been massacred by him. He died in the beginning of 1227. His successors completed the conquest of China and Korea ; but were foiled in their attempts on Cochin China, Tong-King, and Japan.

His empire, however, was soon divided and weakened until we arrive at the times of Timur Bek, or Tamerlane. The Turks. at this time, urged forward by the inundation of Tartars who poured in from the east, were forced upon the remains of the Greek empire ; and at the time of Tamerlane they had almost confined this once mighty empire within the walls of Constantinople. In 1335 the family of Jenghiz Khan became extinct in Persia.

In 1362 Tamerlane invaded Bukharia, which he reduced in five years. He proceeded in his conquests, though not with the same celerity as Jenghiz Rhan, till 1387, when he had subdued all Persia, Armenia, Georgia, Karazim, and great part of Tartary. After this he proceeded westward, subduing all the countries to the Euphrates, made himself master of Bagdad, and even pillaged Moscow. Thence he turned his arms to the east, and totally subdued India. In 1 393 he invaded and reduced Syria ; and, having turned his arms against the Turks, forced their sultan, Bajazet I., to raise the siege of Constantinople. At last this great conqueror died in 1405, while on his way to conquer China, and most of the nations he had conquered recovered their liberty. In 1453

the conquest of Constantinople by the Turks fixed that wandering people to one place; and though they now possess very large regions in Europe, Asia, and Africa, an effectual stop has long been put to their further progress.

About this time learning began to revive in Europe, where it had long been lost ; and the invention of printing rendered it impossible for the ancient barbarism ever to return. This soon produced improvements in navigation ; and the discovery of many unknown regions.

In the end of the fifteenth century the vast continent of America became known to Europe ; and, about the same time, the passage to the East Indies by the Cape of Good Hope was accomplished. The Portuguese had the advantage of being the first modern discoverers of the eastern, and the Spaniards of the western world. Neither neglected so favorable an opportunity of enriching themselves by commerce ; but their avarice, and perfidious behaviour towards the natives, proved at last its own punishment, and, in many cases, soon ended in their expulsion. See MEXICO, PERU, &c. These possessions of the Spaniards and Portuguese excited other European nations to make attempts to share with them in their treasures, by planting colonies and

making settlements in the East and West Indies, and thus the rage of war was in some measure transferred from Europe to these distant regions; where, after various contests, the British at last obtained a great superiority.

In Europe the only considerable revolutions, of the fifteenth and sixteenth centuries, were the expulsion of the Moors and Saracens from Spain, by the taking of Grenada in 1491 ; the union of the kingdoms of Arragon and Castile, by the marriage of Ferdinand a.nd Isabella ; and the revolt of the states of Holland from the Spaniards. After much contention and blood shed, these last obtained their liberty, and were declared a free people in 1609.

During the seventeenth century two very important revolutions took place in Great Britain, which, though they may seem to be of a local nature, merit particular notice iu a general history of the world, on account of their important consequences to other nations. The bloody persecutions which had been carried on both in Scotland and England, on account of religion, about the commencement of the reformation, had awakened among mankind an attention to their civil as well as

religious rights. The reformation was established in England : and the obstinate adherence to prerogative, on the part of the crown, produced so violent an opposition on that of the people, that the king was at last brought to the scaffold, and England for a short time became a commonwealth. See GREAT BRITAIN. When again the arbitrary measures of James II. would have restored both popery and a despotic monarchy, the glorious Revolution of 1688 was effected, by which those rights and privileges were established, which have ever been since the boast of Britons.

In the mean time most of those persons who had emigrated from Great Britain to America, on account of civil or religious persecution, being of republican principles, and jealous of the smallest encroachments upon their rights, naturally instilled those principles into the minds of their children ; and thus laid the foundation for that jealousy of power, and spirit of resistance to oppression, which afterwards excited the American war, and resulted in the independence of the UNITED STATES, which see.

SECT. XII. — FROM THE COMMENCEMENT OF THE AMERICAN WAR, TO THE CONCLUSION OF THE FRENCH REVOLUTIONARY WAR, BY THE PEACE IN 1801.

The consequences of this contest were the general diffusion of those principles, upon which the resistance of the Americans to the mother country was founded, throughout the different states of Europe, particularly in France, Germany, Holland, and Italy. Out of it arose the French Revolution.

In Asia, the taking of Constantinople by the Turks, and the rise of the British empire in Hindostan, are the only modern events of great importance. The Turks possess trie western part of the continent called Asia Minor, to the Euphrates. The Arabs are again confined within their own peninsula; which they possess, as they

have ever done, without owning subjection to any foreign power.

In Africa the Turks, partly in consequence of British prowess and perseverance, still nominally possess Egypt, which they conquered in 1517. They have also a jurisdiction over the states of Barbary. On the

western coasts are many settlements of European nations, particularly of the British and Portuguese ; and -the south extremity is permanently held by the for-mer. The eastern coasts are almost entirely unknown.

The modern state of EUROPE will be best seen by a reference to that article ; and the history of all its principal states sketched in their alphabetical places.

PART II. OF ECCLESIASTICAL HISTORY.

This has indeed been hitherto rather the history of corrupt churches than of religion. It is perhaps best divided into Jewish and Christian church history: but the latter may be variously subdivided, as into the history of Christianity until its political establishment by Constantine ; the rise and progress of the papal power ; the superstition that disgraced the dark ages, &c. We shall adopt a chronological subdivision of this kind.

SECT. I. — OF THE JEWISH RELIGION.

From the time of the flood to the coming of Christ idolatry prevailed among all the nations of the world, the Jews excepted; and even they were on all occasions extremely ready to run into it, as is evident from their history in the Old Testament. At the ‘time of Christ’s appearance the religion of the Romans, as well as their empire, extended over a great part of the world. Various individuals among the heathens perceived the absurdities of that system : but being destitute of means, as well as of all enlightened and steady desire to effect a reformation, it was never attempted.

Two modifications of the Jewish religion at this time flourished in Palestine, *viz.* the Jewish, properly so called, and Samaritan; between whose respective followers reigned the most violent hatred. The difference between them seems to have been chiefly about the supreme or superior place of worship.; which the Jews insisted to be Jerusalem, and the Samaritans mount Gerizim.

But, though the Jews were certainly right as to this point, they had greatly corrupted their religion. They indeed expected a saviour, but mistook his character; imagining that he was to be a powerful and a warlike prince, who should set them free from the Roman yoke. ‘ They also imagined that the whole of religion consisted in observing the rites of M-oses, and some others which they had added to them ; as is evident from the many charges our Saviour brings against the

pharisees, who had the greatest reputation fc-r sanctity. To these corrupt and vicious principles they added several absurd and superstitious notions concerning the divine nature, invisible powers, magic, &c., which they had

partly imbibed during the captivity in Babylon, and partly from their neighbours in Arabia, Sy-ria, and Egypt. The principal sects among them were the ESSENES, PHARISEES, and SADDUCEES : see these articles. The Samaritans, according to the most general opinion, had corrupted their religion still morerthan the Jews.

SECT. II.— HISTORY OF CHRISTIANITY, FROM ITS ORIGIN TO ITS ‘ESTABLISHMENT BY Cos—

STANTINE THE GREAT.

When the true religion was preached by the Saviour of mankind, and his apostles, its rapid progress “alarmed the Jews, and raised various persecutions against its followers. See the Acts of the Apostles, and the New Testament epistles. The Jews, indeed, seem at first to have been every where the chief promoters of persecution : for the Heathen showed no very violent spirit of opposition % against the Christians; though they were soon induced to hate them as much as the Jews themselves. Tacitus acquaints us with the causes of this. Nero, having set on fire the city of Rome, to avoid the imputation transferred it to the Christians. Our author informs us that they were already abhorred on account of their many ˆand enormous crimes. ‘The author of this name [Christians],’ says he, ‘was Christ, who, in the reign of Tiberius, was executed under Pontius Pilate, procurator of Judea. The pestilent superstition was for a while suppressed : but it revived again, and spread, not only over Judea, where this evil was first broached, but to Rome, whither from every quarter of the earth is constantly flowing whatever is hideous and abominable amongst men, and is there readily embraced and practised. First, therefore, were apprehended such as openly avowed themselves to be of that sect ; then by them were discovered an immense multitude ; and all were convicted, not of the crime of burning Rome, but of hatred and enmity to mankind. Their death and tortures were aggravated by cruel derision and sport; for they were either covered with the skins of wild beasts, and torn in pieces by devouring dogs, or fastened to crosses, or wrapped up in combustible garments, that, when the day-light failed, they might, like torches, serve to dispel the darkness of the night. Hence, towards the miserable sufferers, however guilty -and deserving the most exemplary

punishment, compassion arose ; seeing they were doomed to perish, not with a view to the pub-lic good, .but to gratify the cruelty of one man.' That this account of Tacitus is downright misrepresentation, and 'calumny, must be evident to every one who reads it. It is impossible that any person can be convicted of hatred and en-mity to mankind, without specifying the facts by which this hatred has shown itself. The burning of Rome would indeed have been a very plain indication of enmity to mankind, but of this Tacitus himself clears them, and mentions no other crime of which they were guilty.

The persecution under Nero was succeeded by anotherunderDomitian; during which the apostle John was banished to Patmos, where he saw the visions, and wrote the book called Revelation, which completes the canon of Scripture. This

persecution commenced in the ninety-fifth year of the Christian era.

During the first century the Christian religion spread over a great number of different countries ; but as we have now no authentic records of the travels of the apostles, or the success which attended them, it is impossible to determine how far the gospel was carried. We are however assured that, even during this early period, many corruptions were creeping in, the progress of which was with difficulty prevented even by the apostles themselves.

The second century commences with the third year of Trajan. The Christians were still persecuted ; but, as the Roman emperors were for the most part of this century princes of a mild and moderate turn,, they persecuted less violently than formerly. Yet Marcus Aurelius, notwithstanding the clemency and philosophy for which he is so much celebrated, treated the Christians worse than Trajan, Adrian, or even Severus himself, who was noted for his cruelty. This respite from rigorous persecution proved a very favorable circumstance for the spreading of the Christian religion ; yet it is by no means easy to point out the particular countries through which it was diffused. We are, however, assured that, in the second century, Christ was worshipped

as God almost through the whole east ; as also among the Germans, Spaniards, Celtes, and many other nations. The writers of this century attribute the rapid progress of Christianity chiefly to the extraordinary gifts that were imparted to the first Christians, and the miracles which were wrought at their command. Many of the moderns, however, are so far from being of this opinion that they expressly deny the authenticity of all miracles said to have been wrought since the days of the apostles. To enter into the particulars of this controversy is foreign to our purpose, and we must refer to the writers who have treated of this point.

The corruptions which had been introduced in the first century, and which were almost coeval with Christianity itself, continued to gain ground in the second. Ceremonies, in themselves futile and useless, but which must be considered as highly pernicious when joined to a religion incapable of any other ornament than the upright and virtuous conduct of its professors, were multiplied for no other purpose than to please the multitude, or the immediate possessors of power. The immediate consequence of this was, that the attention of Christians was drawn aside from the important duties of piety and morality : and they were led to imagine that a careful observance of ceremonies might atone for the neglect of moral duties. This was the most pernicious opinion that could possibly be entertained ; and was the foundation of that enormous system of ecclesiastical power which afterwards took place. Another corruption was the introduction of mysteries, as they were called, into the Christian religion ; that is, insinuating that some parts ot the worship in common use had a hidden efficacy and power, far superior to the plain and obvious meaning assigned to them by the vulgar : and, by paying peculiar respect to these mysteries, the pretended teachers of the religion of Jesus

accommodated their doctrines to the taste of their heathen neighbours, and obtained unbounded influence over their minds. They persuaded the people that the ministers of the Christian church succeeded to the character, rights, and privileges of the Jewish priesthood ; and accordingly the bishops considered themselves as invested with a rank and character similar to those of the high priest among the Jews, while the presbyters represented the priests, and the deacons the Levites. This notion, which was first introduced in the reign of Adrian, proved a source of very considerable honor and profit to the clergy.

The form of ecclesiastical government was in this century rendered permanent and uniform. One inspector or bishop presided over each assembly, to which office he was elected by the voices of the whole people. To assist him in his office, he formed a council of presbyters, which was not confined to any stated number. To the bishops and presbyters the ministers or deacons were subject ; and the latter were divided into a variety of classes. During a great part of this century the churches were independent of each other ; or .were joined together by no association, or confederacy, but that of charity. Each assembly was a little state governed by its own laws. But in process of time all the churches of a province were formed into one large ecclesiastical body, which, like confederate states, assembled at certain times, in order to deliberate about the common interests : this institution had its origin among the Greeks ; but in a short time it became universal. The general assemblies, which consisted of the deputies or commissioners from several churches, were called synods by the Greeks, and councils by the Latins ; and the laws enacted in them were termed canons, i. e. rules.

These councils, of which we find not the smallest trace before the middle of this century, changed the whole face of the church, and gave it a new form ; for by them the ancient privileges of the people were diminished, and the power and authority of the bishops greatly augmented. At length they openly asserted that Christ had empowered them to prescribe to his people authoritative rules of faith and manners. Another effect of these councils was the gradual abolition of that perfect equality which reigned among bishops of the primitive times : for the order and decency of these assemblies required, that some one of the provincial bishops met in council should be invested with a superior de-gree of power and authority; and hence arose the rights of metropolitans. In the mean time the bounds of the church were enlarged ; the custom of holding councils was followed wherever the sound of the gospel had reached ; and the universal church had now the appearance of one vast republic formed by a combination of a great number of little states. Ecclesiastics were now appointed in different parts of the world ax neads of the church, whose office it was to preserve the consistence and union of that immense body, whose members were so widely dispersed. Such was the nature and office of the patriarchs ; among whom, at length, the bishop of Rome

assumed the title and authority of prince of the patriarchs.

During the second century the most remarkable of the sects which sprung up was the Ascetics. These owed their rise to a notion of some doctors of the church, that Christ had established a double rule of sanctity and virtue for two different orders of Christians. Of these, one was ordinary, the other extraordinary ; the one of -a lower dignity, the other more sublime : the first for persons in the active scenes of life ; the other for those who, in a sacred retreat, aspired after the glory of a celestial state. They now therefore divided into two parts all those moral doctrines and instructions which they had received either by writing or tradition: one of these divisions they called precepts, and the other counsels. The name of precepts they gave to those laws that were universally obligatory ; and that of counsels to those which related to Christians who proposed to themselves greater and more intimate communion with the Supreme Being.

They were distinguished from other Christians, not only by their titles of Ascetics, STTOV-SaTot, EsXacrot, and philosophers, but also by their garb. In this century, indeed, those who embraced such an austere kind of life submitted themselves to all these mortifications m private, without breaking asunder their social bands, or withdrawing themselves from mankind ; but in process of time they retired into deserts, and, after the example of the Essenes and Therapeutze, formed themselves into select companies.

At length the Ascetic sect, which began first to show itself in Egypt, passed into Syria and the neighbouring countries, and reached the European nations ; hence that train of austere and superstitious vows and rites which totally obscured, or almost annihilated, Christianity ; the celibacy of the clergy, and many other absurdities. The errors of the Ascetics, however, did not stop here : in compliance with the doctrines of some Pagan philosophers, they affirmed, that it was not only lawful, but even praise-worthy, to deceive, and to use the expedient of a lie, in order to advance the cause of piety and truth : thus arose the pious frauds for which the church of Rome has been notorious, and which in modern times she has often attempted to revive.

As Christians thus deviated more and more from the true practice of their religion, they became more zealous in the external profession of it. Anniversary festivals were celebrated in commemoration of the death and resurrection of Christ, and of the effusion of the Holy Ghost on the apostles. Concerning the days on which these festivals were to be kept there arose violent contests. The Asiatic churches in general

differed in this point from those of Europe : and, towards the conclusion of the second century, Victor, bishop of Rome, insisted upon the eastern churches following the rules laid down by the western ones. This they absolutely refused to do: upon which Victor cut them off from communion with Rome ; but the difference was after a time adjusted.

During most of the third century the Christians were allowed to enjoy their religion, with-

out molestation. The emperors Maximinus and Decius, indeed, made them feel the rigors of a severe persecution ; but their reigns were short, and from the death of Decius to the time of Dioclesian the church enjoyed tranquillity.

Several alterations were now made in the manner of celebrating the Lord's supper. The prayers used on this occasion were lengthened, and the solemnity and pomp with which it was attended were considerably increased. Gold and silver vessels were used in the celebration ; it was thought essential to salvation, and for that reason administered even to infants. — Baptism was celebrated twice a year to such as, after a long course of trial and preparation, offered themselves candidates. The remission of sins was thought to be its immediate consequence ; while the bishop, by prayer and imposition of hands, was supposed to confer those sanctifying gifts of the Holy Ghost that are necessary to a life of righteousness and virtue. An evil demon was supposed naturally to reside in every per-son, who was the author and source of all the corrupt dispositions and unrighteous actions of that person. The driving out of this demon was therefore an essential property of baptism; and, in consequence of this opinion, the baptized persons returned home clothed in white garments, and adorned with crowns, as sacred emblems ; the former of their inward purity and innocence, and the latter of their victory over sin and the world. Fasting also began now to be held in more esteem than formerly, and the sign of the cross also was supposed to administer a victorious power over all sorts of trials and calamities. The heresies which troubled the church, during this century, were those of the GNOSTICS, whose doctrines were new modelled and improved by Manes, from whom they were afterwards chiefly called Manicheans, the Hi ERACITES, NOETIANS, SABELLIANS, and NOVATIANS ; for au account of which, see these articles.

The fourth century is remarkable for the establishment of Christianity

by law in the Roman empire; which, however, did not take place till the year 324.

SECT. III. — HISTORY OF THE CHURCH OF ROME FROM ITS ESTABLISHMENT TO THE ERECTION OF THE POPE'S SUPREMACY BY PHOCAS. The civil establishment of the Christian religion, however favorable to the outward peace of the church, was far from promoting eitherˆ its internal harmony, or the reformation of its leaders. The clergy, who had all this time been augmenting their power at the expense of the liberty of the people, now set no bounds to their ambition. The bishop of Rome was the first in rank, and distinguished by a sort of pre-eminence above the rest of the prelates. Hence it happened, that when a new pontiff was to be chosen by the presbyters, the city of Rome was generally agitated with dissentions, tumults, and cabals. The intrigues and disturbances which prevailed In that city in the year 366, when, upon the death of Liberius, another pontiff was to be chosen in his place, are a sufficient proof of this. Upon that occasion, one faction elected

Damasus to that high dignity ; while the opposite party chose Ursicinus, a deacon of the vacant church, to succeed Liberius. This dou-ble election gave rise to a dangerous schism, and to a sort of civil war within the city ; which was carried on with the utmost barbarity and fury, and produced the most cruel massacres and desolations. The inhuman contest ended in the victory of Damasus.

But the bishops of Rome had not yet acquired that pre-eminence of power and jurisdiction which they afterwards enjoyed. They were citizens as well as their brethren, and subject, like them, to the laws and edicts of the emperors. Even the ecclesiastical laws were enacted either by the emperor or councils, and none of the bishops acknowledged that they derived their authority from the permission or appointment of the bishop of Rome. About A. D. 372, however, Valentinian enacted a law, empowering that bishop to examine and judge other bishops, that religious disputes might not be decided by any profane or secular judges, and certain prelates, assembled in

council at Rome in 378, recommended the execution of it in their address to the emperor Gratian.

The removal of the seat of empire to Constantinople, however, raised up, in the bishop of this new metropolis, a formidable opponent -to the bishop of Rome. For as the emperor, to render Constantinople a second Rome, enriched it with all the rights and privileges of the ancient capital of the world ; so its bishop, measuring his own dignity and rank by the magnificence of the new city, and its eminence as the residence of the emperor, assumed an equal degree of dignity with the bishop of Rome, and claimed a superiority over the rest of the episcopal order. Accordingly, in a council held at Constantinople in 381, by the authority of Theodosius the Great, the bishop of that city was, during the absence of the bishop of Alexandria, and against the consent of the Roman prelate, placed, by the third canon of that council, in the first rank after the bishop of Rome.

Nectarius was the first bishop who enjoyed these new honors of the see of Constantinople. His successor, the celebrated John Chrysostom, extended still farther the privileges of that see, and included within its jurisdiction all Thrace, Asia, and Pontus ; nor were the succeeding bishops of that imperial city deficient in zeal to augment their privileges and extend their dominion. Thus the bishops of Alexandria were not only filled with the most inveterate hatred against those of Constantinople, but a contention was excited between the bishops of Rome and the latter; which, after being carried on for many ages, terminated in the separation of the Greek and Latin churches.

By the arrangements of Constantine the four bishops of Rome, Constantinople, Antioch, and Alexandria, were distinguished by a certain de-gree of pre-eminence over the rest. These four prelates answered to the four praetorian prefects, and it is probable, that even in this century they were distinguished by the Jewish title of patriarchs. After these followed the exarchs, who cad the inspection of several provinces, and an-

swered to the appointment of certain civil officers who bore the same title. In a lower class were the metropolitans, who had only the government of one province ; under whom were the archbishops, whose inspection was confined to certain districts. In this gradation the bishops brought up the rear; but the sphere of their authority was not in all places equally extensive ; being in some considerably ample, and in others confined within narrow limits. To these various

ecclesiastical orders we might add that of the chorepiscopi, or superintendents of the country churches ; but this last order was in most places suppressed by the bishops, with a design to ex-tend their own authority, and enlarge the sphere of their power and jurisdiction.

The administration of the church was divided by Constantine into an external and internal inspection. The latter, which was committed to bishops and councils, related to religious controversies, the forms of divine worship, the offices of priests, the vices of the ecclesiastical orders, &c. The external administration of the church the emperor assumed to himself. This comprehended all those things which related to the outward state and discipline of the church ; it likewise extended to all contests that should arise between the ministers of the church, superior as well as inferior, concerning their possession, their reputation, their rights and privileges, their offences against the laws, &c., but no controversies that related to matters purely spiritual were cognizable by this external inspection. In consequence of this division of the ecclesiastical government, Constantine and his successors called councils, presided in them, appointed the judges of religious controversies, terminated the differences which arose between the bishops and the people, fixed the limits of the ecclesiastical provinces, took cognizance of the civil causes that subsisted between the ministers of the church, and punished the crimes committed against the laws by the ordinary judges appointed for that purpose. But this famous division of the administration of the church was never explained with sufficient accuracy ; so that, both in the fourth and fifth centuries, there are frequent instances of the emperors determining matters purely ecclesiastical, and likewise of bishops and councils determining matters which related merely to the external form and government of the church.

Many additions were now made by the emperors and others to the wealth and honors of the clergy ; and the bishops contended with each other in the most scandalous manner concerning the extent of their respective jurisdictions : while they trampled on the rights of the people, and the privileges of the inferior ministers. In many places, however, the presbyters assumed an equality with the bishops in point of rank, and many complaints are made by authors in this century of the vanity and effeminacy of the deacons.

In the fifth century the bishops of Constantinople, having already reduced under their jurisdiction all the Asiatic provinces, began to grasp at further accessions of power. By the twentv-eighth canon of the council of Chalcedon, ii was

lesolveu, that the same rights and honors which Lad been conferred on the bishop of Rome were due to the bishop of Constantinople, on account of the equal dignity and lustre of the two cities. The same council confirmed also, by a solemn act, the bishop of Constantinople in the spiritual government of those provinces ever which he had usurped the jurisdiction. Leo the Great, bishop of Rome, opposed with vehemence the passing of these laws ; and his opposition was seconded by that of several prelates. But their efforts were vain, as the emperors threw their weight into the balance, and thus supported the decisions of the Grecian bishops. In consequence of the decisions of this council, the bishop of Constantinople began to domineer over the bishops of Antioch and Alexandria.

About this time Juvenal, bishop of Jerusalem, also attempted to withdraw himself and his church from the jurisdiction of the bishop of Csesarea, and aspired after a place among the first prelates of the Christian world. Encouraged by the protection of Theodosius the younger, this aspiring prelate assumed the dignity of patriarch of all Palestine, and usurped a jurisdiction over the provinces of Phoenicia and Arabia. Hence arose a warm contest between Juvenal and Maximus bishop of Antioch; which the council of Chalcedon decided, by restoring to the latter tLe provinces just mentioned.

In 588 John bishop of Constantinople, surnamed the Faster, either by his own authority or that of the emperor Mauritius, summoned a council at Constantinople to enquire into an accusation brought against Gregory bishop of Antioch ; and upon this occasion assumed the title of oecumenical or universal bishop. This title had been enjoyed by the bishops of Constantinople without any offence ; but now Gregory the Great, then bishop of Rome, suspecting that John was aiming at a supremacy over ail the churches, opposed his claim with great vigor. For this purpose he wrote to the emperor, and others whom he thought capable of assisting him in his opposition ; but all his efforts were without effect ; and the bishops of Constantinople were allowed to enjoy the disputed title, though not in the sense

which had alarmed the Roman pontiff. See GREGORY.

In the beginning of the seventh century Boniface III. engaged Phocas, emperor of Constantinople, to take from the bishop of that metropolis the title of oecumenical or universal bishop, and to confer it upon the Roman pontiff; and thus was first introduced the supremacy of the pope.

SECT. V. — HISTORY OF THE CHURCH OF ROME FROM THE ERECTION OF THE POPE'S SUPREMACY TO HIS ASSUMPTION OF UNIVERSAL POWER.

In the eighth century the power of the bishop of Rome, and of the clergy in general, prodigiously increased. A chief cause of this, besides the superstition of the people, was the peculiar difficulties of European princes in securing themselves on their thrones. The whole continent being in the most unsettled and barbarous condition, they endeavoured to attach VOL. XI

warmly to their interests those whom they considered as their friends and clients. For this purpose they distributed among them extensive territories, cities, and fortresses, with the various rights and privileges belonging to them; reserving only to themselves the supreme dominion and military service. For this reason it was, by the European princes, reckoned a high instance of political prudence to distribute among the bishops and other Christian doctors the same sort of donations which had formerly been given to their generals and clients. By means of the clergy they hoped to check the seditious and turbulent spirits of their vassals ; and to maintain them in their obedience by the influence and authority of their bishops.

This prodigious accession to the opulence and authority of the clergy in the west began at their head, *viz.* the Roman pontiff; whence it spread gradually among the inferior sacerdotal orders. The barbarous nations, who had received the gospel, looked upon the bishop of Rome as the successor of their chief druid or high priest: and the see of Rome arrived at despotic authority in civil and political matters. Hence arose the monstrous opinion, that such persons as were excluded from the communion of the church by the pontiff, or any of his bishops, forfeited thereby not only their civil rights and advantages as citizens, but even the common claims and privileges of humanity. This was the fatal source of wars, massacres, and rebellions, without number.

We have seen, in the annals of France, the important influence of the Roman pontiff in confirming the usurpation of Pepin. He dissolved the obligation of the oath of fidelity and allegiance which Pepin had sworn to Childeric, and anointed and crowned him king. This complaisance of the pope was rewarded with the exarchate of Ravenna and its dependencies.

In the succeeding centuries the Roman pontiffs continued to increase their power by every kind of artifice ; and by continually taking advantage of the civil dissensions which prevailed throughout Italy, France, and Germany. The wisest and most impartial among the Roman Catholic writers acknowledge, that, from the time of Louis the Meek, the ancient rules of ecclesiastical government were gradually changed in the courts of Europe by the counsels and instigation of the church, and new laws substituted in their places. The European princes suffered themselves to be divested of the supreme authority in religious matters, which they had derived from Charlemagne ; the power of the bishops was greatly diminished; and even the authority of both provincial and general councils began to decline.

The popes were now eagerly bent upon establishing the maxim, That the bishop of Rome was constituted and appointed by Jesus Christ supreme legislator and judge of the church; and did not scruple to employ some of their most ingenious and zealous partizans in forging conventions, acts of councils, epistles, and other records, by which it might appear, that, in the first ages of the church, the Roman pontiffs were clothed with the same supreme authority which they now assumed.

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In the eleventh century their power seems to have risen to its utmost height. They now received the pompous titles of Masters of the World, and Universal Fathers. They presided over every council by their legates, assumed the authority of supreme arbiters in all controversies that arose concerning religion or discipline, and maintained the

pretended rights of the church against the encroachments and usurpations of kings and princes. Their authority was confined, however, within certain limits; both by sovereign princes, that it might not attain universal civil dominion ; and by the bishops who were galled by its spiritual despotism..

From the time of Leo IX. the popes employed every method which the most artful ambition could suggest to pass these limits. We find instances of their giving away kingdoms, and loosing subjects from their allegiance to their sovereigns ; among which the history of John, king of England, is very remarkable. At last they plainly affirmed the whole earth to be within their jurisdiction ; and, on the discovery of America and the East Indies, granted we know to the Portuguese a right to all the countries lying eastward, and to the Spaniards all those lying to the west of Cape Non in Africa.

SECT. VI. — OF VARIOUS SUPERSTITIONS WHICH PREVAILED, FROM THE FIFTH CENTURY TO THE REFORMATION.

All this time superstition reigned triumphant over those remains of Christianity which had escaped the corruptions of the first four centuries. In the fifth commenced the invocation of the souls of departed saints. Their assistance was entreated by many fervent prayers, and the images of those who, during their lives had acquired the reputation of sanctity, were honored with worship in several places. A singular and irresistible* efficacy was also attributed to the bones of martyrs, and to the figure of the cross, in defeating the attempts of Satan, and removing all sorts of sickness and calamities. The famous Pagan doctrine concerning the purification of departed souls by means of a certain kind of fire, i. e. purgatory, was also fully received and explained.

In the sixth century Gregory the Great advanced an opinion, that all the words of the sacred writings were images of invisible and spiritual things ; for which reason he loaded the churches with a multitude of ceremonies the most insignificant and futile that can be imagined : hence arose a new and most difficult science, namely, the explication of these ceremonies, and the investigation of the causes and circumstances whence they derived their origin. A new method was contrived of administering the Lord’s Supper, with a magnificent assemblage of pompous rites. This was called the canon of the mass. Baptism, except in cases of necessity, was administered only on the great festivals. An incredible number of temples were erected in honor of the saints. The places set apart for public worship were also very numerous, and almost equalled in number by the festivals invented to

bring the Christian religion as near the model of paganism as possible. In the seventh

century religion seemed to be altogether buried under a heap of superstitious ceremonies; the worship of the true God and Saviour of the world was exchanged for the worship of bones, bits of wood (said to be of the cross), and the images of saints. The piety of this and some succeeding ages consisted in building and embellishing churches and chapels; in endowing monasteries and basilics ; hunting after the relics of saints and martyrs, and treating them with an absurd and excessive veneration ; in pilgrimages to those places which were esteemed holy, particularly to Palestine, &c. The genuine religion of Jesus was now utterly unknown both to clergy and people, if we except a few of its doctrines contained in the creed. In this century, also, the superstitious custom of solitary masses had its origin. These were celebrated by the priest alone in behalf of souls detained in purgatory, as well as upon some other occasions. They proved a source of immense wealth to the clergy, though under Charlemagne they were condemned by a synod assembled at Mentz.

A new superstition, however, sprung up in the tenth century. It was imagined, from Rev. xx. 1 , that Antichrist was about to make his appearance on the earth, and that soon after the world would be destroyed. A universal panic ensued; vast numbers of people, abandoning all their connexions in society, and giving over to the churches and monasteries all their worldly effects, repaired to Palestine, where they imagined that Christ would descend from heaven to judge the world. Others devoted themselves by a solemn and voluntary oath to the service of the churches, convents, and priesthood, whose slaves they became, in the most rigorous sense of that word, performing daily their heavy tasks; and all this from a notion that the supreme judge would diminish the severity of their sentence, and look upon them with a favorable and propitious eye, on account of their having made themselves the slaves of their minister. When an eclipse of the sun or moon happened to be visible, the cities were deserted, and their miserable inhabitants fled for refuge to hollow caverns, and hid themselves among the craggy rocks, and under the bending summits of steep mountains. The opulent attempted to bribe the saints and the Deity himself by rich donations conferred upon the sacerdotal tribe, who were looked upon as the immediate vicegerents of heaven. In many places temple?, palaces, and noble edifices, both public and private were suffered to decay, nay, were deliberately pulled down, from a notion that they were no

longer of any use, as the final dissolution of all things was at hand. No language, in a word, is sufficient to express the confusion and despair that tormented the minds of miserable mortals upon this occasion. This terror became one of the accidental causes of the crusades.

That nothing might now be wanting to complete the reign of antichrist in Europe, it was in the eleventh century determined that divine worship should be celebrated in the Latin tongue, though now unknown throughout the continent : and, during a great part of this century, Christians were employed in rebuilding and ornamenting

Iheir chvche?, which they had destroyed through the superstitious apprehensions of the previous period.

The ecclesiastical affairs of Europe thus proceeded till the time of the Reformation. The clergy were immersed ia crimes and barbarism ; and the laity, imagining themselves able to purchase pardon of their sins for money, followed the example of their pastors without remorse; while the absurd principle, that religion consists in acts of austerity, and an unknown mental correspondence with God, produced the most extravagant and ridiculous behaviour in devotees and reputed saints. They not only lived among the wild beasts, but also after the manner of those savage animals; they ran naked through the deserts, and aped the agitations of madness and frenzy ; avoided the sight and conversation of men ; remained almost motionless in certain places for years, exposed to the rigor and inclemency of the seasons, and, towards the conclusion of their lives, shut themselves up in narrow and miserable huts : all this being considered as true piety, and the only acceptable method of worshipping the Deity.

About the beginning of the sixteenth century, the Roman pontiffs enjoyed the utmost tranquillity; nor had they, according to the appearance of things at that time, any reason to fear opposition to their authority. The commotions which had been raised by the Waldenses, Albigenses, &c., were now entirely suppressed, and the world bowed to their power. We must not however conclude, from

this apparent security of the pontiffs and their adherents, that their measures were universally applauded. Not only private persons, but also the most powerful princes and sovereign states, exclaimed loudly against the tyranny of the popes, and the unbridled licentiousness of the clergy. They demanded, therefore, a reformation of the church in its head and members, and a general council to accomplish it. But these complaints and demands produced little effect ; they came from persons who never entertained the least doubt about the supreme authority of the pope ; and who of consequence, instead of attempting themselves to bring about that reformation which was so ardently desired, remained entirely inactive, or looked only for redress to those who were interested in perpetuating abuses.

While the so much desired reformation seem-ed to be at the greatest distance, it suddenly rose, however, from a quarter whence it was not at all expected. Martin Luther, a monk of the order of St. Augustine, ventured to oppose himself to the whole torrent of papal power and despotism. This bold attempt was first made public on the 30th of September 1517; and, notwithstanding all the efforts of the pope and his adherents, the doctrines of Luther continued daily to gain ground. -Others, encouraged by his success, lent their assistance in the work of reformation ; which at last produced new churches, founded upon principles quite different from that of Rome, and which still continue. But for an account of the transactions of the reformers, and the more mo-dern history of the church, see LUTHER and REFORMATION.

PART III.

OF THE COMPOSITION OP HISTORY.

Having thus furnished the reader with a sketch of the two great practical views of our subject, we may advert to the art of composing history, as it has been treated by Cicero and others.

The requisites mentioned by that great writer may be arranged under four heads, Truth, Subject, Order, and Style.

SECT. I. — OF HISTORICAL TRUTH.

Truth is the basis and foundation of history It is the life and soul of it, and that by which i*. is distinguished from fable or romance. An historian therefore ought not only to be a man of probity, but void of

all passior or bias. He must have the stead mess of a philosopher, joined with the vivacity of the poet and orator. Without the former, he will be insensibly swayed by some passion to give a false coloring to the actions or characters he describes, as favor or dislike to parties or persons affects his mind. And, without the latter, his descriptions will be flat and cold.

But historical truth consists of two parts, one is, Not to state any thing we know to be false. Nor is it sufficient to excuse an historian, in relating a falsehood, that he did not know it to be so when he wrote, unless he first used all the means in his power to inform himself of the truth. We are informed of Thucydides, that when he wrote his history of the Peloponnesian war, he did not satisfy himself with the best accounts he could obtain from his countrymen the Athenians, fearing they might be partial in their own cause ; but spared no expense to inform himself how the same facts were related by their enemies the Lacedaemonians. And PolybiUS travelled into Africa, Spain, Gaul, and other parts of the world, to write his history of the Roman affairs.

The other branch of historical truth is, Not to omit any thing that is true, and necessary to set the matter treated of in a clear and full light. In the actions of past ages or distant countries, wherein the writer has no personal concern, he can have no great inducement to break in upon this rule. But, where interest or party is engaged, it requires no small candor, as well as firmness of mind, constantly to adhere to it. Affection to some, aversion to others, fear of disobliging the friends of those in power, &c., will often interpose and try his integrity. Besides, an omission is less obnoxious to censure than a false assertion ; for the one may be easily ascribed to ignorance or forgetfulness ; whereas the other will, if discovered, be commonly look-ed upon as design, He, therefore, who in such circumstances, from a generous love to truth, is superior to all motives to betray or stifle it, justly deserves the character of an honest historian.

Polybius says on this head, ‘ A good man ought to love his friends and his country, and to have a like disposition with them, both towards their friends and enemies. But when he takes upon him the character of an historian they must all be forgot.’ Integrity is undoubtedly the principal qualification of an historian ; when we

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can depend upon this, other imperfections are more easily passed over. Suetonius is said to have written the lives of the twelve Caesars as free from external influence as they themselves lived. What better character can be given of a writer ?

Sometimes, indeed, a judgment may be form-ed of the veracity of an author, from his manner of expressing himself, and a certain candor and frankness, always uniform and consistent, that runs through his writings.

Thus, where things are uncertain because of their being reported various ways, it is partiality in an historian to give the most unfavorable account, where others areas well known and equally credible. Again, it is a proof of the same bad spirit when the facts themselves are certain and evident, but the design and motives of those concerned in them are unknown and obscure, to as-sign some ill principle, such as avarice, ambition, malice, interest, or some other vicious habit, as the cause of them.

SECT. II.- — OF THE SUBJECT OF HISTORY.

By the subject of history we mean facts themselves, together with such matters as are either connected with them, or may at least is requisite to set them in a just and proper light. But, although the principal design of history is to re-cord facts, yet all facts do not merit the regard of an historian ; but such only as may be thought of use in regulating human conduct. Nor is it allowable for him, like the poet, to form the plan and scheme of his work as he pleases. His business is to report things as he finds them, without coloring or disguise.

Some histories aiford more entertainment than others, from the nature of the events which they record ; and it may be esteemed the happiness of an historian to meet with such a subject, but it is not his fault if it be otherwise. Thus Herodotus begins his history with showing, that the barbarians gave the first occasion to the wars between them and the Greeks, and ends it with an account of the punishment which, after some ages, they suffered from the Greeks on that ac-com.t. Such a relation must not only have been agreeable to his countrymen the Grecians, for whose sakes it was written ; but likewise very instructive, by informing them of the justice of

Providence in punishing public injuries in this world, wherein societies, as such, are only capable of punishment. On the other hand, Thucydides begins his history with the unhappy state of his countrymen the Athenians ; and in the course of it plainly intimates, that they were the cause of the calamitous war between them and the Lacedaemonians : Whereas, had he been more inclined to please and gratify his countrymen than to convey the truth, he would have endeavoured to make their enemies appear the aggressors.

Cicero observes, justly, that history ‘is conversant in great and memorable actions.’ For this reason an historian should always keep posterity in view ; and relate nothing which does not seem worth the notice of after ages. To descend to trivial and minute matters, such as frequently occui in the common affairs of life, is below the

dignity of historical composition. Pliny the younger has some fine reflections upon this subject : ‘You advise me,’ says he, ‘to write a history; and not you only, for many others have done the same, and I am myself inclined to it. Not that I believe myself qualified for it, which would be rash to think till I have tried it; but because I esteem it a generous action not to suffer those to be forgotten whose memory ought to be eternised ; and to perpetuate the names of others, together witn one’s own. For there is nothing I am so desirous or ambitious of, as to be remembered hereafter ; which is a thing worthy of a man, especially of one who, conscious of no guilt, has nothing to fear from posterity.’ And when Dion Cassius has mentioned some things of less moment in the life of Commodus, chiefly indeed filled up with cruelty and folly, he thus apologises for himself: — ‘I would not have it thought that I descend below the gravity of history in writing these things : for, as they were the actions of an emperor, and I was present and saw them all, and both heard and conversed with him, I did not think it pro-per to omit them.’ He seems to think those actions, when performed by aji emperor, might be worth recording, which, if done by a person of inferior rank, would not have deserved notice.

But, although facts in general are the proper subject of history, they may be differently considered with regard to the extent of them, as they relate either to particular persons or communities of men. And from this consideration history has been distinguished into three sorts, biography, and particular and general history. Writing the lives of single persons is called biography. By particular history is meant that of particular states, whether for a shorter or longer space of time. And general history contains an account of several states existing together

in the same period of time.

The general subject, or argument of history, in its several branches, may be reduced to narration, reflection, speeches, and digressions.

1. By narration is meant a description of facts or actions, with such things as are necessarily connected with them; namely, persons, time, place, design, and event.

But an accurate historian goes still further, and considers the causes of actions, and what were the designs and views of those who were principally concerned in them. Some, as Polybius has well observed, are apt to confound the beginnings of actions with their springs and causes, which ought to be carefully separated. For the causes are often very remote, and to be looked for at a considerable distance from the actions themselves. Thus, as he tells us, some have represented Hannibal's besieging Saguntum in Spain, and passing the Ebro, contrary to a former agreement between the Romans and Carthaginians, as causes of the second Punic war. But these were only the beginnings of it. The true causes were the jealousies and fears of the Carthaginians from the growing power c>f the Romans; and Hannibal's inveterate hatred to them, -with which he had been impressed from his infancy.

Again, the true springs and causes of actions

are to be distinguished from such as are only feigned and pretended For, generally, the worse designs men have in view, the more solicitous they are to cover them with specious pretences. It is the historian's business, therefore, to lay open and expose to view these arts of politicians. So, as the same judicious historian remarks, we are not to imagine Alexander's carrying over his army into Asia to have been the cause of the war between him and the Persians. Philip, his father, made preparations for it, but did not live to execute it. That was left for his son. But, as Philip could not have done this without first bringing the other states of Greece into his de-sign, his pretence to them was only to avenge the inju-ies they had suffered from the Persians. Lastly, an historian should relate the issue and event of the actions he describes. This is undoubtedly the most useful part of history; since the greatest advantage arising from it is to teach us experience from what has happened. When we learn from the examples of others the happy effects of wisdom, prudence, integrity, and other virtues, it naturally excites us to imitate them, and to pursue the same measures in our own conduct. Polybius therefore observes, that * he who takes from history the causes, manner, and end of actions, and omits to take notice whether the event was answerable to the means made use of, leaves nothing in it but a bare amusement, without any benefit or instruction.'

2. Reflections made by the writer have been both extravagantly applauded and unreasonably condemned. If the philosopher is allowed to draw inferences from his precepts, and their effects on society, why should not the historian have an equal right to make reflections upon Ihe facts he relates? The reader is equally at liberty to judge for himself in both cases : we therefore find, that the best historians have taken this liberty. Thus Livy makes a very beautiful observation upon the ill conduct of Hannibal in quartering his army in Capua after the battle of Cannae. ' Those,' says he, ' who are skilled in military affairs reckon this a greater fault in the general, than his not marching his army immediately to Rome after his victory at Cannae ; for such a delay might have seemed only to defer the victory, but this ill step

deprived him of the power to gain it.' — Lib. xxiii. c. 18.

Lord Gardenstone, on the other hand, remarks of Mr. Hume, that ' his account of the house of Stuart is not the statement of an historian, but the memorial of a pleader in a court of justice.' — Gard. MiscelL p. 305.

3. Speeches inserted by historians are of two sorts, namely, oblique and direct. The former are such as the historian recites in his own person, and not in that of the speaker. Of this Kind is that of Hannibal in Justin, by which he endeavours to persuade king Antiochus to carry the seat of the war against the Romnm into Italy. It is rather a narrative of the operations of Hannibal's mind.

In direct speeches, the person himself is introduced as addressing his audience; and therefore the words as well as the sense are suited to nis character. Such is the speech of Eumenes, one of Alexander's captains and successors, made

to his soldiers when they had traitorously bound him in chains, to deliver him up to his enemy Antigonus, in the same author.

After all, this is a matter on which critics are divided ; whether any, or what kind of speeches, ought to be allowed in history. Some think all should be excluded, as breaking the thread of the discourse. Others only object to what have been called direct speeches, as generally any thing but real ones. Thus when Livy, for example, gives us the speeches of Romulus, the Sabine women, Brutus, and others, in the first ages of the Roman state, both the things themselves are imaginary, and the language wholly incongruous with the times in which the parties lived. However, there is scarcely an ancient historian now extant, either Greek or Latin, who has not inserted several speeches in his works, both oblique and direct.

4. Digressions, if properly managed, afford the reader both pleasure and advantage. Like speeches, they should neither be too long nor frequent ; lest they interrupt the course of the history, and divert the reader from the main de-sign. But now and th.en to introduce a beautiful description, or some remarkable incident, which may throw light on the subject, is so far from an interruption, that it is rather a relief to the reader, and excites him to go on with greater pleasure and attention. See ORATORY.

SECT. III. — OF ORDER.

As most histories consist of an introduction, and the body of the work, in each of which some order is requisite, we shall treat of them separately.

1. The design of tie introduction is the same here as in orations. For the historian proposes three things by his introduction, which may be called its parts : 1. To give his reader some general view of the subject ; 2. To engage his attention, and to possess him with a favorable opinion of himself and his performance. Livy's introduction has been very much applauded by the learned, as a masterpiece. It gives the following account of his design :— ' Whether,' says he, ' it may answer any valuable end for me to write the history of the Roman affairs from the beginning of the city, I neither am certain, nor, if I was, should I venture to declare it.' Pie then endeavours to prepare the reader's attention, by representing the grandeur and usefulness of the subject. ' Either I am prejudiced in favor of my subject, or there never was any state greater, more virtuous, or more fruitful of good examples, or in which avarice and luxury had a later admittance, or poverty and thriftiness were either more highly or longer esteemed.' And then he proceeds to ingratiate himself with his readers. ' Although my name is obscure, in so great a number of writers, yet it is a comfort that they cloud it by their fame and character. For I shall gain this advantage by my labor, that I shall be diverted for a time from the prospect of those evils which the present age has seen ; while my mind is wholly intent upon former times, and free from all that care which gives the writer uneasiness, though it cannot bias him against the truth.' Sallust is greatly blamed by Quintilian

on account of his introductions, which are so general, that they might suit other histories as well as those to which they are prefixed. Introductions should likewise be proportioned to the length of the work. We meet with some few histories, in which the writers immediately enter upon their subject, without any introduction ; as Xenophon in his Expedition of the younger Cy-rus, and Caesar in his Commentaries of the Gal-lic and Civil Wars. But the latter does not profess to write a history ; and therefore left himself more at liberty, as well in this respect as in some others.

2. But order is principally to be regarded in the body of an historical

work. And this maybe managed two ways ; either by attending to the time in a chronological series, or the different nature and circumstances of the things contained in the history.

In a general history, the order of time cannot always be preserved ; though, where the actions of different communities have respect to one as the principal, they should all, as far as possible, be referred to the transactions of that state. But even here the several affairs of those different states ought to be related separately, which will necessarily occasion the anticipating some things, and postponing others, so that they cannot all stand in the exact order of time in which they were performed. However, Velleius Paterculus says very justly, ‘ Every entire .action, placed together in one view, is much better apprehended than if divided by different times.’ In this case, therefore, for better preserving the chronology, it is usual with historians, when they have finished any particulat narrative, in passing to the next, to express the time by some short and plain transition.

The division of histories into books was designed for the better distinction of the subject, and ease of the reader. The dividing these books into chapters is rather a practice of modern editors, founded on similar reasons, than countenanced by the example of ancient authors.
SECT. IV.— OF STYLE.

An historical style is said to be of a middle nature, between that of a poet and orator, differing from both, not only in the ornamental parts, but also in the idioms and forms of .expression. Cicero observes (De Clar. prat. c. 75) ‘ that nothing is more agreeable in history than brevity of expression, joined with purity and perspicuity.’ Purity indeed is not peculiar to history, but yet is absolutely necessary ; for nobody will think him fit to write a history, who is not master of the language in which he writes : when Albinus, therefore, had written a history of the Roman affairs in Greek, and apologised for any improprieties that might be found in the language upon the account of his being a Roman, Cato called him a trifler, for choosing to do that which, after he had done it, he was obliged to

ask pardon for doing. Nor is perspicuity less requisite in an historical style. The nature of the subject plainly directs to this; for, as history consists principally in narration, clearness and perspicuity is no where more necessary.

Cicero again, treating of an historical style (De Orat. lib. ii. c. 15, 20),

says, « It ought to be fluent, smooth, and even ; free from that harshness and poignancy which is usual at the bar.' The historian has no necessity for the variations of the declaimer. It is his province to espouse no party, to have neither friend nor foe, but to appear disinterested and indifferent to all ; his language, therefore, should be smooth and equal.

Dionysius (Epist. ad. Cn. Pompeium) makes ' decency a principal virtue in an historian ; ' which he explains by saying, that ' he ought to preserve the characters of the persons and dignity of the actions of which he treats.' To do this it is necessary, that an historical style should be animated with a degree of life and vigor ; with out which neither the characters of eminent persons, nor their remarkable actions, can be duly represented : for even things in themselves great and excellent, if related in a cold and lifeless way, will not affect us in a degree suitable to their importance. Whence it appears, that painting and imagery make up no small part of the historian's province, though his colors must not be so strong and glittering as those of either the poet or the orator.

As to dignity in the use of tropes and figures, the same author says, ' History should be embellished with such figures as are neither vehement, nor carry in them the appearance of art.' This is agreeable to what Cicero observes, in comparing Xenophon and Callisthenes : ' Xenophon the Socratic,' he says, ' was the first philosopher, and after him Callisthenes, the scholar of Aristotle, who wrote a history : the latter is almost £ rhetorician ; but the style of the former is more moderate, and has not the force of an orator ; it is less vehement, perhaps, but in my opinion, more sweet and agreeable.' The difference between these two writers, with regard to their style, consisted chiefly in the choice of their fi gures. An historical style admits indeed of end less varieties, according to the nature and dignity of the subject. The lives of particular persons do not require such strength and majesty of expression, nor such ornaments of language, as 3 history of the Roman empire. And accordingly we find the style of Nepos and Suetonius very different from that of Livy. The former is smooth and easy ; but the latter often approaches near to the sublime ; other historians again have kept a medium between these. Upon the whole, therefore, we may conclude, that the middle style is generally the proper one for history : but a variety and flexibility of style is not only requisite in different subjects, but likewise in different parts of the same work

HISTRION'ICAL, adj. } Lat. histrio; Fr. HISTRION'IC, > hittrion. Befitting

HISTRION'ICALLY, adv. j the stage ; suitable to a player; becoming a buffoon ; theatrical.

HIT, v. a., v. n., & n. s. Goth, and Swed. hetta; Dan. hitti: Minsheu says from Lat ictus. To strike ; to touch with a blow ; to touch the mark ; to attain or reach ; to be conformable or adapted ; to catch by the right bait : to hit off is to determine luckily : to hit out to perform by good luck : also, to clash ; to chance ; to succeed ; to light on : a stroke ; a fortuitous event ; a lucky chance.

And king Emetrius, for all his strengthe Is borne out of his sadel a swerdes lengthe : So hitte him Palamon, or he were take : — But all for naught : he was brought to the stake. Chaucer. The Knightes Tale.

Having the sound of ancient poets ringing in his ears, he mought needs in singing hit out some of their tunes. Spenser,

Oft expectation fails, and most oft there Where most it promises ; and oft it hits Where hope is coldest and despair most sits. Shitksp.

Were I but twenty-one, Your father's image is so hit in you, His' very air, that I should call you brother, As I did him. Id.

Have all his ventures failed ? What, not one hit 1

Id.

The king hath laid, that in a dozen passes between you and him, he shall not exceed you three hits. Id.

There is a kind of conveying of effectual and imprinting passages amongst compliments, which is of singular use, if a man can hit upon it. Bacon.

The experiment of binding of thoughts would be diversified, and you are to note whether it hits for the most part. Id. Natural History.

Hail, divinest melancholy ! Whose saintly visage is too bright To hit the sense of human sight. Milton.

But thou bringest valour too and wit, Two things that seldom fail to hit. Hudibras.

But with more lucky hit than those That use to make the stars depose. Id.

When I first saw her I was presently stricken j and I, like a foolish child, that when any thing hits him will strike himself again upon it, would needs look again, as though I would persuade mine eyes that they were deceived. Sidney.

Is he a god that ever flies the light ? Or naked he ? disguised in all untruth ? If he be blind, how hitteth he so right ? Id. Search every comment that your care can find, Some here, some there, may hit the poet's mind.

Roscommon.

It is much, if men were from eternity, that they should not find out the way of writing sooner : sure he was a fortunate man, who, after men had been eternally so dull as not to find it out, had the luck at last to hit upon it. Tillotson.

What prince soever can hit off this great secret, need know no more either for his own safety, or that of the people he governs. Temple.

You've hit upon the very string, which touched, Echoes the sound, and jars within my soul : There lies my grief. Dryden's Spanish Fryar.

So he the famed Cilician fencer praised, And at each hit with wonder seemed amazed.

Dry den.

These hits of words a true poet often finds, without seeking. Id.

This may hit 'tis more than barely possible Id.

There's a just medium betwixt eating two much and too little ; and

this dame had hit upon't, when the matter was so ordered that the hen brought her every day an egg. L' Estrange.

The fisherman's waiting, and the lucky hit it had in the conclusion, tell us, that honest endeavours will not fail. Id.

If bodies be extension alone, how can they move and hit one against another ; or what can make distinct surfaces in an uniform extension ? Locke.

Birds learning tunes, and their endeavours to hit the notes right, put it past doubt that they have perception, and retain ideas, and use them for patterns.

Id.

His conscience shall hit him in the teeth, and tell him his sin and folly. South.

So hard it is to tremble, and not to err, and to hit the mark with a shaking hand. Id.

If the rule we judge by be uncertain, it is odds but we shall judge wrong ; and, if we should judge right, yet it is not properly skill, but chance j not a true judgment but a lucky hit. Id.

None of them hit upon the art. Addison.

If at first he minds his hits,

And drinks champaigne among the wits,

Five deep he toasts the towering lasses. Prior.

Bones, teeth, and shells, being sustained in the water with metallic corpuscles, and the said corpuscles meeting with and hitting upon those bodies, be-come conjoined with them. Woodward. If casual concourse did the world compose,

And things and hits fortuitous arose,

fhen any thing might come from any thing ;

For how from chance can constant order spring ?

Blackmore.

Here's an opportunity to shew how great a bungler my author is in hitting features. Atterbwy.

To suppose a watch, by the blind hits of chance, to perform diversity of orderly motions ; without the regulation of art, this were the more pardonable absurdity. Granville.

There's but a true and a false prediction in any telling of fortune ; and a man that never hits on the right side, cannot be called a bad guesser, but musr miss out of design. Bentley.

All human race would fain be wits, And millions miss for one that hits. Swift.

HITCH, v. n. Sax. hiejan, or Fr. hocher. — Skinner. To catch; to move by jerks. I know not where it is used but in the following passage. — Johnson.

Whoe'er offends at some unlucky time

Slides in a verse, or hitches in a rhyme ;

Sacred to ridicule his whole life long,

And the sad burthen of some merry song.

HITHE, n. s. Sax. hyiSe. A small haven to land wares out of vessels or boats: as Queen-hithe, and Lambhithe, now Lambeth.

HITH'ER, adv. & adj. ~\ Saxon, hifceri, hy—

HITH'ERMOST, adj.

HITH'ERTO, adv.

HITH'ERWARD,

HITH'ERWARDS, adv.

sign ; used in opposition to thither : hithermost, nearest on this side : hitherto, yet ; at every time till the present : hitherwards, this way ; this road ; towards the place nearest to the speaker. Frende ! what is thy name ?

Art thou come hider to have fame ?

Have fame ! nay, forsothe, Frende ! quod I,

I come not hither, grant mercy,

For no soche cause by my hed. Chaucer.

Pandare answered : Be we cotnen hither

To fetchen fire and renncn home again. Id.

Pope.

The pri- . mary idea is approximation, whether of time, place, or de-

More ample spirit than hitherto was wont, Here needs me, while the famous ancestries Of my most dreadful sovereign I recount.

Faerie Queens.

Caesar, tempted with the fame Of this sweet island never conquered, And envying the Britons blazed name, O hideous hunger of dominion ! hither came.

Spenser.

Hereupon dependeth whatsoever difference there is between the states of saints in glory ; hither we refer whatsoever belongeth unto the highest perfection of man, by way of service towards God. Hooker.

In this we are not their adversaries, though they in the other hitherto have been ours. Id.

Some parcels of their power are forth already, And only hitherward. Shakspeare. Coriolanut.

The king himself in person hath set forth, Or hithenrards intended speedily. Shakspeare.

A puissant and mighty power Is marching hitherward in proud array. Id.

Men must endure Their going hence, even as their coming hither. Id.

Look now for no enchanting voice, nor fear The bait of honied words ; a rougher tongue Draws hitherward. Milton.

Hitherto, lords, what your commands imposed I have performed, as reason was, obeying. Id.

Who brought me hither Will bring me hence, no other guide I seek. Id.

After these,

But on the hither side, a different sort, From the high neighh'ring hills descended. Id.

That which is external can be extended to a greatet extent at the hithermost extreme. Hale.

An eternal duration may be shorter or longer upon the hither end, namely that extreme wherein it is finite. Id.

Hither belong all those texts, which require of us that we should not walk after the flesh, but after the spirit. Tillotson.

Hitherto I have only told the reader what ought not to be the subject of a picture or of a poem.

Drydtn.

Hitherto she kept her love concealed, And with those graces every day beheld The graceful youth. Id.

He could not have failed to add the opposition of 111 spirits to the good alone : this has hitherto been the practice of the moderns. • Id. Juvenal.

To correct them, is a work that has hitherto been assumed by the least qualified hands. Swift.

Come hither, ye that preis your beds of down And sleep not : see him sweating o'er his bread Before he eats it. Cowper's Task.

HIVE, n. s., v. a., & v. n.) Sax. hype, from HI'VER, n. s. \ Goth. htu. The

habitation and receptacle for bees; the bees themselves ; a company of persons : hive, to put in hives ; to harbour ; to contain ; to take shelter or reside in companies. Hiver o«e who puts bees into hives.

But while that I beheld this sight, I herde a noise approchen blive, That fareth as bees doen in an hive Agenst hir time of out flying.

Chaucer. The House of Fame. So bees with smoke, and doves with noisome

stench, Are from their.Aaiesand houses driven away.

Shakspeare. He sleeps by day

More than the wild cat : drones hive not, with me, Therefore I part with him. Id.

The commons, like an angry hive of bees That want their leader, scatter up and down. la. What is a ship but a prison ? And so many cities are but as so many hives of bees.

Burton's Anatomy of Melancholy. Ambitious now to take excise Of a more fragrant paradise, He at Fuscara's sleeve arrived, Where all delicious sweets are hived.

Cleaveland.

So wandering bees would perish in the air, Did not a sound, proportioned to their ear, Appease their rage, invite them to the hive.

Waller.

Mr. Addison of Oxford has been troublesome to me : after his bees, my latter swarm is scarcely worth hiving. Dryden.

Let the hirer drink a cup of good beer, and wash his hands and face therewith. Mortimer.

When bees are fully settled, and the cluster at the biggest, hive them.

Id. Husbandry.

Bees have each of them a hole in their hives ; their honey is their own, and every bee minds her own concerns. Addison.

In summer we wander in a paradisaical scene, among groves and gardens ; but at this season we get into warmer houses, and hive together in cities.

Pope's Letters.

What modern masons call a lodge, was by antiquity called a hive of free masous ; and therefore, when a dissention happens, the going off is to this day called swarming. Swift.

HIVITES, an ancient people descended from Canaan, who dwelt at first in the country afterwards possessed by the Caphtorims, or Philistines, of Scripture. There were also Hivites in the centre of the promised land ; for the Shechem-ites and the Gibeonites were Hivites. Gen. xxxiv. 2. Josh. xi. 19. There were also some beyond Jordan, at the foot of Mount Hermon. Bochart says, that Cadmus, who carried a colony of Phoenicians into Greece, was a Hivite. He derives Cadmus from the Hebrew Kedem, i. e. the east, because he was of the eastern part of Canaan; and Hermione, from Hermon. See

HO, interj. \ Lat. e?u>. A call ; a sudden

HOA. > exclamation to give notice of a o—

proach, or any thing else.

What noise there, ho ? Shakspeare.

Here dwells my father Jew : hoa, who's within ?

Id.

Stand, fin ! speak the word along Id.

When I cried hoa !

Like boys, kings would start forth, and cry,

Your will. Id.

Ho, swain, what shepherd owns that ragged sheep ?

Dryden.

HOADLEY (Benjamin), successively bishop of Bangor, Hereford, Salisbury, and Winchester, was born in 1676. His first preferment was the rectory of St. Peter le Poor, and the lectureship of St. Mildred's in the Poultry. In 1706 he published some Remarks on bishop Atterbury's Sermon at the funeral of Mr. Bennet. Two years after, Mr. Hoadley again entered the lists .against this formidable antagonist; and in his Exceptions against a sermon published by Dr. Atterbury, entitled The Power of Charity to cover Sin, he attacked the doctor with his usual strength of reasoning. In 1709 another dispute arose bi1-

tween these two learned combatants, concerning the doctrine of non-resistance, occasioned by a performance of Mr. Hoadley's, entitled The Measures of Obedience ; some positions in which Dr. Atterbury endeavoured to confute, in his elegant Latin sermon, preached that year before the London clergy. In this debate Mr. Hoadley signalised himself in so eminent a degree, that the house of commons addressed the queen, to. grant him some preferment as a reward for the signal services Ire had rendered to the cause of civil and religious liberty. But the principles which he espoused were repugnant to the tem-per of those times; and the queen, though she promised to attend to their requests, never did so. A Mrs. Howland, however, presented him, unasked, to the rectory of Streatham in Surrey. Soon after the accession of king George I. he was consecrated bishop of Bangor: but in 17f7, having broached some opinions concerning the nature of Christ's kingdom, Sec., he again became the object of popular clamor; when he was distinguished by another mark of royal regard, by the convocation being successively prorogued, till that resentment had

subsided. In 1721 he was translated to Hereford; in 1723 to Sajis-bury ; and in 1734 to Winchester : when he published his Plain Account of the Sacrament; which also occasioned much controversy. As a •writer, he possessed uncommon abilities. His Sermons (published in 1754 and 1755) are esteemed inferior to few writings in the English language, for plainness and perspicuity, energy, strength of reasoning, and a free and masterly style. In private life he was facetious, easy, and complying ; fond of company, yet •would frequently leave it for study or devotion. He died ia 1761, aged eighty-three. Besides the above, he wrote, 1. Terms of Acceptance, 8vo. 2. Reasonableness of Conformity. 3. On the Sacrament. His tracts and pamphlets are extremely numerous ; and the reader may see a catalogue of them in the Supplement to the Biog. Brit.

HOA'DLEY (Benjamin), M. D. and F.R.S., son of the bishop, was born in 1706 ; and studied at Benet College, Cambridge, under the tuition of Dr. afterwards Archbishop Herring. Applying himself to mathematics and philosophy, he was, when very young, admitted a member of the Royal Society. He was made register of Hereford, and was appointed physician to his majesty's household, but died at his house in Chelsea in 1757. He wrote, 1. Three Letters on the Organs of Respiration, 4to. 2. The Suspicious Husband, a comedy. 3. Observations on a Series of Electrical Experiments ; and 4. Ora-tio Anniversaria, in Theatre Col. Med. Londin. ex Harvei Institute, habita die 18° Octob. 1742. HOAIN-GAN-FOO, or HWOOEE-GAN-FOO, a considerable city of China, in the province of Kiangnan, situated on the bank of the great canal. Its population crowded round the late British embassy under lord Amh'erst. There is a large dock yard in the vicinity ; and the canal is above the level of the town. Long. 118" 47' E., lat. 53° 30' N.

HOANG-HO. or Yellow River, a remarkable river of China, and one of the most promi-

nent features in its geography. See CHINA. It derives its name from the yellow color given it by the clay and sand washed down in the time of rain. After a course of nearly 600 leagues, it discharges itself into the Eastern Sea" not far from the mouth of the Kiang. Though broad and rapid, it is in many places too shallow for any important navigation : it is also liable to overflow its banks, so that it has been necessary in many places to raise dikes on the side of it for the defence of the country.

HOANG-TCHEOU, a city of China of the first rank, in the province of Hou-Quang, on the Yang-Tse, 585 miles south of Pekin. HOAR, adj. -\ Sax. hari: Isl.Aor; Goth. HOAR'FROST, n.s. f hara. White; gray with HOAR'INESS, n. s. {age; white with frost: hoar-HOAR'V, adj. J frost is the congelations of dew on frosty mornings : hoary, mouldy ; mossy or rusty.

When the dew was gone up, behold upon the face of the wilderness there lay a small round thing, as •mall as the hoar-frost on the ground.

Exod. xvi. 14.

Though I be hoor, I fare as doth a tre That blosmeth er the fruit ywoxen be ; The blosmy tre is neither n'is neither drie ne ded I fele me no wher hoor but on my bed.

Chaucer. The Merchantes Tale. It governed was and guided evermore Through wisdom of a matron grave and hoar.

Spctuer.

A comely palmer clad in black attire Of ripest years and hairs all hoary grey. Id.

There was brought out of the city into the camp very coarse, hoary, moulded bread.

Knolles's History.

Solyman, marvelling at the courage and majesty of the hoary old prince in his so great extremity, dismissed him and sent him again into the city. Id.

The seasons alter ; hoary headed frosts Fall in the fresh lap of the crimson rose.

Shakspeare, A people,

Whom Ireland sent from loughs and forests hoar.

Fair/cue

Oft listening how the hounds and horn Cheerly rouse the slumbering morn, From the side of some hoar hill Through the high wood echoing shrill.

Milton. L' Allegro.

He grows a wolf, his hoarinet* remains, And the same rage in other members range.

Dryden. Has then my hoary head deserved no better?

Rowe.

Thus she rested on her arm reclined, The hoary willows waving with the wind.

Addison.

Then in full age and hoary holiness, Retire, great preacher, to thy promised bliss. Prior.

Cool breathes the morning air, and Spreads wide her hoary mantle o'er.

Gay's Rural Sports.

In Fahrenheit's thermometer, at thirty-two degrees, the water in the air begins to freeze, which is known by hoar-frosts. Arbuthnot.

Now swarms the populace, a countless throng • Youth and hoar age, and man drives man along.

Pope.

Island of bliss, all assaults Baffling, like thy hoar cliffs, the loud sea wave.

Thomson.

a ad the wood,

The covert of old trees, with trunks all hoar,

But light leaves, young as joy, stands where it stood,

Offering to him and his a populous solitude.

Byron. Childe Harold.

HOAR-FROST, according to many Cartesians, is formed of a cloud, and either congealed in the cloud, and so let fall, or ready to be congealed as soon as it arrives at the earth. Hoar-frost, M. Regis observes, consists of an assemblage of little parcels of ice crystals, which are of various figures, according to the different dispositions of the vapors when condensed by the cold.

HOARD, n. s., v. a. & v. n. > Saxon hortb ; HOARD'ER, n. s. J Teutonic hard, a

treasure. A store laid up in secret ; a hidden stock ; a treasure : to lay up in store ; to store or preserve secretly : sometimes it is enforced by the particle up.

Ful riche was his tresour and his fiord, For which ful fast his counter dore he shet.

Chaucer. The Shipmannes Tale. He feared not once himself to be in need, Nor cared to hoard for those whom he did breed.

Spenser.

Happy always was it for that son, Whose father for his hoarding went to hell.

Shakspeare.

I have a venturous fairy, that shall seek The squirrel's hoard, and fetch thee thence new nuts.

Id.

The hoarded plague of the gods requite your love !

Id.

Beauty is nature's coin, must not be hoarded, But must be current, and

the good thereof Consists in mutual and partaken bliss Unsavoury in the enjoyment of itself.

Milton. Comut.

The base wretch who hoards up all he can, fs praised, and called a careful thrifty man.

Dryden.

You hoard not health for your own private use, But on the publick spend the rich produce. Id.

I have just occasion to complain of them, who, because they understand Chaucer, would hoard him up as misers do their grandam gold, only to look on it themselves, and hinder others from making use of it. Id.

Since commodities will be raised, this alteration will be an advantage to nobody but hoarders of money.

Locke.

They might have even starved, had it not been for this providential reserve, this hoard, that was stowed in the strata underneath, and now seasonably disclosed. Woodward.

A superfluous abundance tempts us to forget God, when it is hoarded in our treasures, or considered as a safe, independent provision laid up for many years.

Rogers.

You will be unsuccessful, if you give out of a great man, who is remarkable for his frugality for the pub-tick, that he squanders away the nation's money ; but you may safely relate that he hoards it.

Arbuthnot's Art of Political Lying.

HOARE (William), was born in the year 1707, of respectable parents, at Eye in Suffolk, and received the advantages of education in a school at that time of high repute for classical instruction. He discovered an early disposition for painting; and, after he left school, his father earned him to London, and placed him under

the tuitior of Grisoni, an Italian painter. From the skill of Grisoni the scholar could derive little profit ; but it is probable that from his conversation he imbibed that ardent desire of visiting the works of the Italian masters, which prompted him to set the example of a system afterwards pursued with so much avidity and success by most of our young students in painting. The name of William Hoare stands first on the list of those English painters who have resorted to Italy, with a view to professional improvement. Arriving at Rome, he placed himself in the school of Francisco Imperiali, and was the fellow pupil of Pompeio Battoni. During a residence of nine years in Italy he made numerous copies of the historical works of the great masters, and he returned to England filled with visionary hopes, and an ardent love of his profession, which did not desert him even at the latest period of an extended life. Finding himself a stranger in London, and without the means of rendering his talents known, he accepted an invitation from some of his friends who resided at Bath, in Somersetshire, and there found such constant employment in painting portraits, that he was induced to settle in that city. From the study of Rosalba's pictures, he added the practice of crayons to that of oil-painting, and carried it to a degree of excellence second only to the powers of that celebrated paintress. He maintained at Bath a very high character as a portrait painter. He gave to the altar of St. Michael's church, at Bath, a figure of our Saviour, as large as life ; and afterwards painted for the octagon chapel, in that city, an historical composition, representing 'The Miracle at the Pool of Bethesda.' These exertions procured him commissions for a few historical pictures, the principal merit of which consists in the display of an elegant taste, and faithful study of nature. Residing at a distance from the metropolis, where the competition of younger artists was continually accelerating the advance of English art, he retained to the last the style which he had adopted in the Italian school. His most celebrated portrait in oil is a half-length of William Pitt, the first earl of Chatham. On the formation of the Royal Academy he was elected one of the original members, and was a constant exhibitor for many years. He died at Bath in 1792.

HOARHOUND, Lat. marrubium. A plant.

Hoarhovnd has its leaves and flower-cup covered very thick with a white hoariness : it is famous for the relief it gives in moist asthmas, of which a thick and viscous matter is the cause ; but it is now little used. Hill,

HOARHOUND. See MARRUBIUM. HOARHOUND, WHITE. See

BALLOTA. HOARSE, o < #. -i Sax. har; Swed. hes ; HOARSE'LY, adv. > Belg. haarsch. Having HOARSE'NESS, n.s. j the voice rough, as with a cold ; having a rough sound.

Me thought, I herde an hunter blowe T' assay his gret home, and to knowe Whethre it were clere or horse of sowne.

Chaucer. Boke of the Duchesse. Come, sit, sit, and a song.

— Clap into't roundly, without hawking or spitting, or saying we are hoarse. Shaksjieare.

The raven himself is hoarse, That croaks the fatal entrance of Duncan Under my battlements. Id. Macbeth.

I oft have heard him say, how he admired Men of your large profession that could speak To every cause, and things mere contraries Till they were hoarse again, yet all be law.

Ben Jonson.

The voice is sometimesjintercluded by an hoarseness, or viscous phlegm. Holder.

I had a voice in heaven, ere sulph'rous steams Had damped it to a hoarseness,

Dryden. King Arthur.

The hounds at nearer distance hoarsely bayed ; The hunter close pursued the visionary maid.

Dryden.

The -want of it in the windpipe occasions hoarseness in the gullet, and difficulty of swallowing.

Arbuthnot on Aliments.

HOARSENESS is a diminution or temporary loss of the voice, sometimes attended with a preternatural asperity or roughness of utterance. The parts affected are the trachea and larynx. It is occasioned by a slight inflammation of the mucous membrane covering those parts ; and is relieved by mucilaginous linctuses ; warm diluting drinks, such as bran-tea, linseed-tea, &c. ; assisted by opiates and sudorific medicines taken at bed-time.

HOBBES (Thomas), born at Malmsbury in 1588, was the son of a clergyman. He completed his studies at Oxford, and being afterwards patronized by the Devonshire family, attended one of the sons in his travels through France and Italy, during which he translated Thucydides. In 1626 his patron the earl of Devonshire died; and in 1628 his son died also. In 1631 the countess dowager of Devonshire desired to put the young earl under his care, who was then about the age of thirteen. In 1634 he republished his translation of Thucydides, which he had previously given to the world in 1628. The same year he accompanied his noble pupil to Paris, where he applied his vacant hours to the study of natural philosophy. From Paris he attended his pupil into Italy, where at Pisa he became known to Galileo, soon after which he returned with the earl of Devonshire into England. Afterwards, foreseeing the civil wars, he went to seek a retreat at Paris ; where he became intimate with the famous Des Cartes, with whom he afterwards kept up a correspondence upon several mathematical subjects, as appears from his letters published in Des Cartes's works. In 1642 Mr. Hobbes first printed a few copies of his book De Give, which, in proportion as it became known, raised him many adversaries, who charged him with instilling principles of a dangerous tendency. While in France Sir Charles Cavendish, brother to the duke of Newcastle, proved a constant friend and patron to Mr. Hobbes ; who, by engaging, in 1645, in a controversy about squaring the circle, became so famous, that in 1647 he was recommended to instruct Charles II. in mathematics. In 1647 was printed in Holland, by M. Sorbiere, a more complete edition of his De Give; to which are prefixed two Latin letters to the editors by Gassendi, and F. Mersenne, in

commendation of it: and in 1650 was published at London a small treatise of Mr. Ho'obess, entitled Human Nature ; and another, De Corpore Politico. All this time he had been digesting his religious, political, and moral principles, into a complete system, called the

Leviathan, which was printed at London in 1650 and 1651. In 1660, upon the Restoration, he came up to London, where he obtained from the king an annual pension of £100. But in ˆ666 his Leviathan, and his treatise De Cive, were censured by Parliament ; which alarmed him very much, as did also a bill brought into the house of commons to punish atheism and profaneness. In 1669 he was visited by Cosmo de Medicis, afterwards duke of Tuscany, who gave him ample marks of his esteem ; and having received his picture, and a complete collection of his writings, caused them to be deposited among his curiosities, in the library at Florence. He was also visited by foreign ambassadors and other strangers, who were curious to see a person whose opinions had been so widely celebrated. In 1672 he wrote his own Life in Latin verse, when he had completed his eighty-fourth year ; and in 1674 he published a poetical English version of the four books of Homer's Odyssey ; which were so well received, that he translated the whole Iliad and Odyssey, which he likewise published in 1675. About this time he went to spend the remainder of his days in Derbyshire : where, notwithstanding his advanced age, he published several pieces, to be found in his works. He died in 1679, aged ninety-two. In his last sickness his frequent questions were, whether his disease was curable ? and when intimations were given that he might have ease, but no remedy, he said, ' I shall be glad to find a hole to creep out of the world at ; ' which are reported to have been his last sensible words. Hobbes's style is incomparably better than that of any ˆther writer in the reign of Charles I. ' He has in translation,' says Granger, ' done Thucydides as much justice as he has done in-jury to Homer. But he was for striking out new paths in science, government, and religion; and for removing the land-marks of former ages. His ethics have a strong tendency to corrupt our morals, and his politics to destroy that liberty which is the birthright of every human creature. He is commonly represented as a sceptic in religion, and dogmatist in philosophy ; but he was a dogmatist in both. The main principles of his Leviathan are as little founded on moral or evangelical truths, as the rules he has laid down for squaring the circle are in mathematical demonstration. His book on human nature is esteemed the best of his works.'

HOBBIMA (Minderhout), an eminent landscape painter, bom about 1611 at Antwerp. He studied entirely after nature, and-his choice was exceedingly picturesque. He was particularly fond of describing slopes diversified with shrubs, plants, or trees, which conduct the eye to some building, ruin, grove, or piece of water, and frequently to a delicate remote distance. The figures which he designed are but indifferent. Conscious of his inability in that respect, he admitted but

few figures into his

designs, and usually placed them somewhat removed from the immediate view at a prudent distance from the front line. However, most of his pictures were supplied with figures by Ostade, Teniers, and other famous masters, which gave them a great additional value. They are very scarce.

HOB’BLE, v. n. & n. s.-\ Gothic hoppe, a

HOB’BI.ER, n.s. (horse; Fr. hobin, a

HOB’BLINGLY, adv. £ pacing horse. An

HO-B’BY, n. s. J Irish or Scottish

horse ; a pacing horse ; a garran : to walk

lamely ox awkwardly upon one leg more than

the other ; to hitch ; to walk with unequal and

encumbered steps ; to move roughly or unevenly :

hence an uneven awkward gait. Feet being

ascribed to verses, whatever is done with feet is

likewise ascribed to them. Hobblingly in its literal

and figurative acceptation is clumsily, aukwardly, with halting gait : hobby the name of a

small pony ; a stick on which boys get astride

to ride ; a stupid fellow.

1 have studied eight or nine wise words to speak to you, which these hobby horses must not hear.

Shakspeare.

For twenty hobblers armed, Irishmen so called, because they served on hobbies, h< > paid sixpence a-piece per diem. Davies.

Those grave contenders about opinionative trifles look like aged Socrates upon his boy's hobby horse.

Glanville. The friar was hobbling the same way too.

Dryden.

Those ancient Romans had a sort of extempore poetry, or untuneable hobbling verse. Id.

As young children who are tryed in Go-carts, to keep their steps from sliding, When members knit, and legs grow stronger, Make use of such machine no longer ; Bat leap pro lihitu, and scout Oa horse called hobby, or without. Prior.

While you Pindarick truths rehearse, She hobbles in alternate verse. Id.

Some persons continued a kind of hobbling march on the broken arches, but fell through. Addison.

No hobby horse with gorgeous top, Could with this Rod of Sid compare. Swift. Was he ever able to walk without leading-strings, •without being discovered by his hobbling ? Id.

HO'BBY, n. s. Fr. hobereau. A species of hawk.

They have such a hoveriug possession of the Val-toline, as an hobby hath over a lark. Bacon.

The people will chop like trouts at an artificial fly, and dare like larks under the awe of a painted hobby.

L' Estrange. Larks lie dared to shun the hobby's flight.

Dryden.

HOBGOB'LIN, n. s. According to Skinnen for robgoblins from Robin Goodfellow, Hob being the nickname of Robin : but more probably according to Wallis and Junius, hopgoblins empusae, because they do not move their feet : whence, says Wallis, came the boys' play of fox in the hole, the fox always hopping on one leg. A frightful fairy.

Fairies, black, grey, green, and white, Attend your office and your quality : Crier hobgoblin, make the fairy o-yes.

Shakspeare.

HOBLERS, or HOBILERS, hobelarii, in an. cient English customs, were men who, by their tenure, were obliged to maintain a light horse or hobby, for the certifying any invasion towards the sea-side. The name was also used for certain Irish knights, who used to serve as light-horsemen upon hobbies. ,

HOB'NAIL, n. s. i F*rom hobby and nail.

HOB'N AILED, adj. J A nail used in shoeing a hobby or little horse ; a nail with a thick strong head.

Steel, if them turn thine edge, I beseech Jove on my knees thou mayest be turned into hobnails.

Shakspeare.

We shall buy maidens as they buy hobnails, by the hundred. Id.

Wouldest thou, friend, who hast two legs alone, Wouldest thou, to run the gauntlet, these expose To a whole company of hobnailed shoes ? Dryden.

HOB'NOB. This is probably corrupted from hab nab by a coarse pronunciation. See HAB NAB.

His incensement at this moment is so implacable, that satisfaction can be none, but pangs of death and sepulchre : hobnob is his word ; give't or take't.

Shakspeare.

HOCHE (Lazarus), a celebrated general in the service of the French republic, was born on the 24th of June, 1768, in the suburbs of Versailles. His father was the keeper to Louis XV's dog-kennel. Such an

origin precluded him from the advantages of a liberal education. By the kindness of his aunt, who was a green grocer at Versailles, he was taught to read and write, and finally engaged as a stable-boy at Versailles. But an accidental glance at a work of Rousseau's determined him to travel. For this purpose he enlisted for the East Indies, but was removed into the French guards. He was only sixteen when he was ordered to join his regiment at Paris. Anxious to make up for the deficiency of his education, he employed all his leisure hours, and even part of those usually spent in sleep, in embroidering caps, the profits of which labor he devoted chiefly to the purchase of books. These he read with avidity, and soon made himself master of the theory of military tactics. His merit now attracted notice, and he was raised to the rank of corporal in 1788. The French guards were the chief cause of turning the scale against the court in favor of the people, on the 14th of July, 1789, at the at-tack on the Bastile ; and Hoche w%s one of the first in leading on the assault. When La Fayette new-modelled the corps, Hoche was promoted ; and soon after, Servan, then minister of war, sent him a lieutenant's commission in the regiment of Rouergue; which he joined, June 24th, 1792, in the garrison at Thionville, where he first distinguished himself in action. After this, being drafted into the army of the Ardennes, he performed the most essential services under general Leveneur: particularly at that critical period when the treachery of Dumourier and Miranda had endangered the destruction of the army of the North. But it would swell this article beyond all due bounds were we to fol-low our hero through all the scenes in which he was engaged, from the time that he was ap-HOC

pointed general in chief; or attempt to delineate his brilliant actions at Wertz, Weissembourg, Freischweiller, Germerslieim, Worms, Spire, Fort Vauban, &c. It was in the midst of this career of victory that the envy of his enemies procured him to be apprehended and lodged in the coctiergerie at Paris, from which he was not liberated till the memerable 9th of Thermidor, 1795. Upon his liberation he was sent to sub-due the insurgents of La Vendee ; and his well arranged plans

were the chief cause of the failure of our unfortunate expedition to Quiberon. Hoche's zeal for his country led him to think, that an invasion of England or Ireland was not only practicable, but that it would be crowned with success. The latter measure was at last attempted, and its failure is well known. Our hero's feelings may be easier conceived than described. His narrow escape in the Fraternite, through the midst of the British fleet, hardly lessened the disappointment. Being, however, afterwards appointed to the command of the army of the Sambre and Meuse, he led his troops to new victories ; and Montabour, Uierdorff, Al-tenkirchen, &c., witnessed their valor. — But the career of this great general was now drawing near a close. The excessive fatigues he had undergone had impaired his constitution, and brought on a gradual decay, attended with an incessant cough and difficulty of breathing; while the unsettled state of affairs at Paris added to his distress of body, by increasing his anxiety of mind. He died September 17th, at Wetzlar, in the thirtieth year of his age, not without suspicion of poison. His last words were, ' Farewel my friends ! Desire the Directory to take care of Belgium.' He was interred with great pomp at Coblentz.

HOCHSTETTER (Andrew Adam), a protestant divine, born at Tubingen in 1698. He was professor of divinity in that university, and afterwards rector. His chief works are, 1. Col-legium Puflfendorsianum ; 2. De Festo Expi-ationis et hirco Azahel ; 3. De Conradino, ultimo ex Suevis duce ; 4. De Rebus Albigensibus. He died in 1717.

HOCHHEIM, a small town in the duchy of Nassau, four miles from the Rhine, celebrated for the wine termed Hock. It stands on a small eminence occupied by vineyards finely exposed to the sun, and the best wine of the place is produced on a little elevation of eight acres, sheltered from the north ; the average produce is twelve large casks of wine, which are said to fetch, as soon as made, from £120 to £150 sterling. The town is twenty miles west of Frankfort, and four north-east of Mentz.

HOCHSTADT, a town of Bavaria, at the in-flux of the river Egwied into the Danube. It is remarkable as the scene of many bloody conflicts. 1. The imperialists were defeated near it by the elector of Bavaria in 1703. 2. In 1704 (13th of August) the French and Bavarians sustained a most signal defeat in this neigh-boorhood from the duke of Marlborough and prince Eugene. 3. In 1800 the French, under Moreau, obtained a considerable victory here over the Austrians. Population 2300. Nineteen miles north-west of Augsburg, and twenty-nine west of Neubur?.

HOCK, n. s. & v. a.) .The same with hough ,

HOCK’LE, v. a.] Saxon boh. The joint

between the knee and the fetlock. Hock and hockle to disable in the hock.

HOCK, n. s. J From Hockheim ou the

HOCKAMORK.) Maine. Old strong Rhenish. Restored the fainting high and mighty,

With brandy, wine, and aqua vitae ;

And made ‘em stoutly overcome

With hachrach, hockamore and mum. Hudibrat.

Wine becomes sharp, as hock, like vitriolick acidity.

Flayer.

If cyder-royal should become unpleasant, and as unfit to bottle as old hockamore, mix one hogshead of that and one of tart new cyder together.

Mortimer.

Ring for your valet, bid him quickly bring Some hock and soda-water ; then you’ll know

A pleasure worthy Xerxes the great king ; For not the blest sherbet, sublimed with snow,

Not the first sparkle of the desert spring, Nor Burgundy in all its sunset glow,

After long travel, ennui, love, or slaughter,

Vie with, draughts of hock and soda water.

Don Juan.

HOCK’HERB, n.s. Hock and herb. A plant ; the same with mallows.

HOCKHOCKING, a river in the state of Ohio, United States ; it has its

rise near a branch of the Scioto, and, running south-west, falls into the Ohio at Tray, in N. lat. 38° 57', after a course of about eighty miles. It is navigable to Athens, forty miles from its mouth, for large keel boats ; about six miles above this are rapids, which prevent any further ascent.

HOCUS Pocus. Swed. hokus pokus. The original of this word is referred by Tillotson to a formula of transubstantiation in the Romish church, in which they say hoc est corpus, this is the body (of the Lord). Junius derives it from Welsh hocced, a cheat, and poke and pocus a bag, jugglers using a bag for conveyance. It is corrupted from some words that had once a meaning, and which, perhaps, cannot be discovered. A juggle; a cheat.

This gift of hocus pocuising and of disguising matters is surprising. L'Estrange.

HOD, n. s. ") Corrupted perhaps in con—

HOD'MAN, n.s. > tempt from hood, a hod being

HOD'MANDOD. j carried on the head ; perhaps from Teut. herrd, or hotte, a wicker basket ; a kind of trough in which a laborer carries mortar to the masons : hodman a laborer that carries mortar : hodmandod a fish.

Those that cast their shell are the lobster, the crab, the crawfish, and the hodmandod or dodman.

Bacon. A fork and a hook to be tampering in clay,

A lath, hammer, trowel, a hod or a tray. Tuner.

HODGE-PODGE, n. s. French hache pochc, hochepot quasi hachis en pot. A medley of ingredients boiled together.

Ye han not knowe the wille of your true frendes olde and wise, but ye han caste alle hir wordes in an hochepot, and enclined your herte to the more part and to the greter uombre, and ther be ye condescended. Chaucer. The Tale of Melibeus.

They have made our English tongue a gallimaufrey, or hodge-podge of all other speeches. Spenser.

It produces excellent corn, whereof the Turks make their trachana and bouhourt, a certain hodge-podge of sundry ingredients. Study's

Travel*.

HODGES (Nathaniel), M.D., a learned English physician, son of the RCT. Dr. Thomas Hodges, dean of Hereford. He was educated in Westminster, and graduated at Oxford in

1659. He settled in London; practised with great success during the plague in 1665, and was made fellow of the college of physicians in 1672; but was afterwards confined in Ludgate jail for debt, where he died in 1684. He wrote, 1. Vindiciae Medicinae et Medicorum,

1660, 8vo. 2. Aot/xoXoyta, 1672, 8vo. This work was translated into English by Dr. Quincy, and printed at London in 8vo., 1720. It gives an historical account of the rise, progress, symptoms, and cure of the plague.

HODIER/NAL, adj. Lat. hodiernus. Of to-day.

HODY (Humphry), a learned English divine, born in 1659. At twenty-one years of age he published his celebrated Dissertation against Aristeas's history of the seventy interpreters; which was received with great applause. He treated the subject more fully twenty years after, in his De Bibliorum Textibus Originalibus, Ver-sionibus Grsecis, et Latina vulgata, libri IV. In 1689 he wrote the Prolegomena to John Melala's Chronicle, printed at Oxford; and in 1690 was made chaplain to bishop Stillingfleet The deprivation of the nonjuring bishops engaged him in a controversy with Mr. Dodwell ; which recommended him to archbishop Tillotson, to whom, as well as his successor, Dr. Tennison, he was for some time chaplain. In 1698 he was made regius professor of Greek at Oxford, and archdeacon in 1704. On the controversy about the convocation, he, in 1701, published a .•listory of English Councils and Convocations, and of the clergy's sitting in parliament, &c. He

died in 1706, leaving in MS. an account of those learned Greeks who retired to Italy on the taking of Constantinople, &c., which was published in 1742 by Dr. Jebb.

HOE, n. s. & v. a. Goth, hog ; Teut. hawe ; Fr. houe ; Dut. houwe. An instrument to cut up the earth, of which the blade is at right angles with the handle: to cut or dig with a hoe.

They must be continually kept with weeding and hoeing. Mortimer.

They should be thinned with a hoe. Id.

A HOE is somewhat like a cooper's adze, to cut up weeds in gardens, fields, &c. This instrument is of great use in hacking and clearing the corners and patches of land.

HOEING, in the new husbandry, is the breaking or dividing the soil by tillage while the corn or other plants are growing thereon. It differs from common tillage (which is always performed before the corn or plants are sown or planted) in the time of performing it ; and it is much more beneficial to the crops than any other tillage.

HOESCHELIUS (David), a learned German, born at Augsburg, in 1556. He was made principal of the college of St. Anne ; and, being also librarian, he enriched the library with a great number of Greek books and MSS. He published editions of Origen, Basil, Philo Judaeus, Gregory of Nyssa, Gregory of Nazian-

zen, Chrysostom, Appian, Pliotius, Procopius Anna Comnena, Hori Apollinis Hieroglyphics, &c., some with Latin translations, others in Greek only with notes. In 1595 he published a cata logue of the Greek MSS. in the Augsburg library, which, for order and judicious arrange ment, is esteemed a masterpiece. He died at Augsburg in 1617, much regretted.

flOF, HOFF, or STADT ZUM HOF, an old town of Franconia, on the river Saale, belonging to Bavaria. It was founded in the eleventh century, and admitted to the privileges of a free imperial town. The manufactures are woollens, cotton, and leather : here are also extensive breweries ; and in the neighbourhood fine quarries of marble. In 1759 prince Henry of Prussia defeated in this place a party of Austrians, under count Palfi. Population 5000. Twenty-two miles N.N.E. of Bayreuth, and forty-six north-east of Bambe rg.

HOFER (Andrew), a Tyrolese chieftain, born at Passeyer in 1765, and who kept an inn in that town. The Tyrol being transferred to Bavaria by the treaty of Presburg, when the war with Austria was in 1809 renewed, the inhabitants rose in a mass to drive out the Bavarians, and place themselves under the Austrian dominion. Hofer was now elected their chief, and obtained some advantages over the enemy ; but, the peace of Vienna having confirmed the cession of his country to Bavaria, he laid down his arms. He was however accused of having endeavoured to ex-cite disaffection to the new government, and a price was set on his head. After a long search he was found hidden in a cabin on the summit of a lofty peak, surrounded by snow and glaciers. January 27th, 1810, his hut being surrounded by a body of grenadiers, he surrendered ; and was conducted to Botzen, and afterwards to Mantua, where he was condemned by a council of war to be shot. The sentence was almost immediately executed. After his death he was revered by his countrymen as a martyr; and the emperor of Austria has ennobled his son.

HOFFMAN (Daniel), a German divine, born in 1539. He was professor of the university of Helmstadt from 1598, and maintained that phi' losophy was a mortal enemy to religion ; and that what was true in philosophy was false in theology. jThese absurd tenets occasioned a warm and extensive controversy. At length Hoffman was compelled by Julius, duke of Brunswick, to retract his invectives against philosophy, and to acknowledge, in the most open manner, the harmony and union of sound philosophy with true and genuine theology. He died in 1611, aged seventy-two.

HOFFMAN (Frederic), M. D., an eminent physician, born at Hall near Magdeburg in 1660. He took his degree in 1681 ; was made professor of physic at Hall in 1693 ; and filled the chair till his death, in 1742. His works were collected at Geneva in six large volumes, folio, 1748 and 1754. When travelling through Holland he became acquainted with Paul Hermann, and not long after with the celebrated Boyle, whom he cured of a dangerous disease. He also attended the emperor Charles VI., and his em-

press, as well as Frederic of Prussia. He was the first who composed Seidlitz powders. He died in his eighty-second year.

HOFFMAN (John James), professor of Greek at Basle, was born at Basle in 1 635. He published at Geneva, in 1677, a learned work entitled Lexicon. Universale Historico-Geographico-Poe-tico-Philosophico-Politico-Philologicum ; in 2 vols. folio. He afterwards enlarged it with a supplement; and died at Basle, in 1706, aged seventy-one.

HOFFMAN (Maurice), M. IX, was born of a

§ood family, at Furstenwalde, in Brandenbourg, eptember 20th, 1621; and was driven early from his native country by war and pestilence. In 1637 he was sent to study in the college of Colun. Famine and the plague drove him thence to Kopnik, where he buried his father; and in 1638 he went to Akorf, to his maternal uncle, who was a professor of physic. Here he finished his studies in classical learning and philosophy, and then applied with the utmost ardor to physic. In 1641 he went to the university of Padua; where anatomy and botany were the great objects of his pursuit ; and he became deeply skilled in both. After three years he returned to Altorf, to assist his uncle, now growing in-firm, in his business ; and, taking the degree of M. D., applied himself to practice, in which he had great success. In 1648 he was made professor extraordinary in anatomy and surgery ; in 1649 professor of physic, and soon after mem-ber of the college of physicians; in 1633 professor of botany, and director of the physic-gar- den. He acquitted himself excellently in these various employments ; and, in his profession, his reputation was so high and extensive, that many princes of Germany appointed him their physician. He died of an apoplexy in 1698, aged seventy-six, after having published a great num-ber of works.

HOFFMAN (John Maurice), son of the preceding, by his first wife, was born at Altorf in 1653 ; and sent to a school at Herszprugk, where, having acquired a competent knowledge of the Greek and Latin, he returned to his father at Altorf at sixteen, and studied philosophy and physic. He went afterwards to Frankfort on the Oder, and next to Padua, where he studied two years. Then, making a tour of part of

Italy, he returned to Altorf in 1674, and was admitted M. D. In 1677 he was made professor extraordinary in physic, and in 1681 professor in ordinary. George Frederic, marquis of Anspach, chose him for his physician ; and Hoffman attended him into Italy, and renewed his acquaintance with the literati of that country. Upon the death of his father, in 1698, he succeeded him in his places of botanic professor and director of the physic-garden. He was elected also rector of the university of Altorf; a post which he had occupied in 1686. He lost his great friend and patron, the marquis of Anspach, in 1703: bat found the same kindness from his successor William Frederic, who pressed him so earnestly to reside near him, and made him such advantageous offers, that, in 1713, he removed from Altorf to Anspach, where he died in 1727. He had married a wife in 1681, by

whom he had five children. He published a great number of works, which are highly esteemed.

HOG, n. s. Welsh hwch, from Goth.

HOG'COTE, n. s. hoggwa ; Swed. hugga, to

HOG'GEKEL, n, s. cut, says Mr. Thomson ;

HOG'HERD, n. s. the general name of swine;

HOG'GISH, adj. ˆ>a castrated boar: 'to bring

HOG'GISHLY, adv. hogs to a fine market,' to fail

HOGS'HEAD, n. s. of one's design : hogcote,

HOG'STY, n. s. hogsty a house for hogs ;

HOG'WASH, n. s. J hoggerel a two year old ewe : hogherd a keeper of hogs : hoggish and hoggishly, brutish ; greedy; selfish: hogshead, a measure of liquids containing sixty-three gallons; any large barrel : hogwash the draff which is given to swine.

Ran cow and calf ; and eke the veray hogget So fered were, for berking of the dogges, And shouting of the men and women eke, They ronnen so, hem thought hir hertes breke.

Chaucer. The Notmes Preestes Tale.

This will raise the price of hogs, if we grow all to be pork eaters.

Shaktpeare.

Blow strongly with a pair of bellows into a hogshead, putting into it before that which you would have preserved ; and in the instant that you withdraw the bellows, stop the hole. Bacon. Only a target light, upon his arm

He careless bore, on which old Gryll was drawn,

Transformed into a hog with cunning charm.

Fletcher's Purple Island.

Suspicion Miso had, for the hoggish shrewdness of her brain, and Mopsa, for a very unlikely envy.

Sidney.

Out of a small hogcote sixty or eighty load of dung hath been raised. Mortimer.

You have brought your hogs to a fine market.

Spectator.

Varro tells, that every jugerum of vines yielded six hundred urns of wine : according to this proportion, our acre should yield fifty-five hogsheads and a little more. Arbuthnot.

Your butler purloins your liquor, and the brewei sells you hn/jwash. Id. History of John Bull.

The hog that plows not, nor obeys thy call,

Lives on the labours of this Lord of all. Pope.

The families of farmers live in filth and nastiness, without a shoe or stocking to their feet, or a house so convenient as an English hogsty. Swift.

They slung up one of their largest hogshead*; 1 drank it off ; for it did not hold half a pint.

Id. Gulliver's Travels.

The terms hogherd and cow-keeper are not to be used in our poetry ; but there are no finer words in the Greek. Broume.

HOG, in zoology. See Sus.

HOG, on board of a ship, is a sort of flat scrubbing broom, formed by enclosing a number of short twigs of birch, or such wood, between two pieces of plank fastened together, on cutting off the ends of the twigs. It is used to scrape the filth from the ship's bottom under water, particularly in the act of boot-topping. For this purpose they fit to this broom a long staff with two ropes ; one of which is used to thrust tne hog under the ship's bottom, and the other to guide and pull it up again close to the planks. This business is commonly performed in the ship's boat, which is confined as close as possible to the vessel's side during the operation, and is shifted from one part of the side to another till

the whole is completed. Since vessels however have been more universally copper-bottomed this has been laid aside.

HOGARTH (William), the celebrated painter, was born in 1697, or 1698, in the parish of St. Martin, Ludgate. ' He was bound,' says Mr. Walpole, ' to a mean engraver of arms on plate ; but, before his time was expired, he felt the impulse of genius, and that it directed him to painting.' During his apprenticeship he set out one Sunday, with two or three companions, on an excursion to Highgate. The weather being hot they went into a public-house, where they had not been long before a quarrel arose between some persons in the same room. One of the disputants struck the other on the head with a quart pot and cut him very much. The blood running down the man's face, together with his agony frcm the wound, which had distorted his features into a most hideous grin, presented Hogarth with too laughable a subject to be overlooked. He drew out his pencil, and produced on the spot one of his most ludicrous figures. What made this piece the more valuable was, that it exhibited an exact likeness of the man, with a portrait of his antagonist, and the figures in caricature of the principal persons gathered round. The first piece in which he distinguished himself as a painter is supposed to have been a representation of Wanstead Assembly. The figures in it were drawn from the life, and

without burlesque. The faces were said to be extremely like, and the coloring rather better than in some of his more highly finished performances. From the date of the earliest plate that can be ascertained to be his work it is supposed that he be-gan business for himself about 1720. Engraving of arms and shop bills was his first employment. The next was to design and furnish plates for booksellers. There are many family pictures by Hogarth, in the gtyle of serious conversation pieces, still existing. In the early part of his

life a nobleman (lord O) came to sit for his

picture. It was executed with a skill that did honor to the artist's abilities; but the likeness was rigidly observed, without even the necessary attention to compliment. The peer, disgusted at this counterpart of himself, was not fond of pay-ing for a reflector that would only exhibit his deformities. Some time was suffered to elapse before the artist applied for his money ; but, after many applications made without success, he sent him the following card : — Mr. Hogarth's

dutiful respects to lord O : finding that he

does not mean to have the picture which was drawn for him, is informed again of Mr. H's necessity for the money : if, therefore, his lordship does not send for it in three days, it will be disposed of, with the addition of a tail and some other little appendages, to Mr. Hare, the famous wild beast man ; Mr. H. having given that gentleman a conditional promise of it, for an exhibition picture, on his lordship's refusal.' This intimation had the desired effect. The picture was paid for and committed to the flames. Mr. Nichols assures us, from unquestionable authority, that almost all the personages who attend the levee of the Rake were undoubted portraits ; and th-H in Southwark Fair, and Modern Midnight

Conversation, as many more were discoverable. The duke of Leeds has an original scene in The Beggar's Opera, painted by Hogarth. It is that in which Lucy and Polly are on their knees, be-fore their respective fathers, to intercede for the life of Macheath. All the figures are either known or supposed to be portraits. Mr. Walpole has a picture of a scene in the same piece, where Macheath is going to execution. In this also the likenesses of Walker and Miss Fenton, afterwards duchess of Bolton (the first Macheath and Polly), are preserved. In 1726, when the affair of Mary Tofts, the rabbit-breeder of Godal-ming, engaged

the public attention, a few of our principal surgeons subscribed their guinea a-piece to Hogarth, for an engraving from a ludicrous sketch he had made, on that subject. This plate contains, amongst other portraits, that of M. St. Andre, then anatomist to the royal household, and in high credit as a surgeon. In 1730 Mr. Hogarth married the only daughter of Sir James Thornhill. The union was a stolen one, and consequently without the approbation of Sir James, who, considering the youth of his daughter, then barely eighteen, and the slender finances of her husband, as yet an obscure artist, was not easily reconciled to the match. Soon after this period, however, he be-gan his Harlot's Progress (the coffin in the last plate is inscribed Sept. 2d, 1731) ; and was advised by lady Thornhill to have some of the scenes in it placed in the way of his father-in- law. Accordingly, one morning, Mrs. Hogarth conveyed several of them into his dining-room. When he arose he enquired whence they came ; and, being told, he said, ' Very well ; the man who can furnish representations like these can also maintain a wife without a portion.' He soon after, however, became reconciled and generous to the young couple. In 1732 Hogarth ventured to attack Mr. Pope, in a plate called The Man of Taste ; containing a view of the gate of Burlington House, with Pope whitewashing it and bespattering the duke of Chandos's coach. This plate was intended as a satire on Pope, Mr. Kent the architect, and the earl of Burlington. In 1733 the third scene of his Harlot's Progress introduced him to the notice of the great. One of his excellencies consisted in what may be termed the furniture of his pieces. ' The Rake's levee room,' says Mr. Walpole, ' the nobleman's dining-room, the apartments of the husband and wife in Marriage a la Mode, the alderman's parlour, the bed-chamber, and many others, are the history of the manners of the age.' In 1745 Hogarth sold about twenty of his capital pictures by auction ; and in the same year acquired additional reputation by the six prints of Marriage a la Mode, which may be regarded as the groundwork of a novel called the Marriage Act, by Dr. Shebbeare, and of the Clandestine Marriage. Soon after the peace of Aix-la-Chapelle he went over to France, and was taken into custody at Calais, while he was drawing the gate of that town ; a circumstance which he has recorded in his picture entitled O the Roast Beef of Old England ! published March 26th 1749. He was actually carried before the governor as a spy, and after a very strict examination committed a pri-HOG

soner to Granfire, his landlord on his promising that Hogarth should not go out of this house tiii he was to embark for England. In 1753 he appeared in the character of an author, and published a 4to. voluine entitled tae Analysis of Beauty, written with a view of fixing the fluctuating ideas of taste. This work was translated into German by Mr. Mylius when in England, under the author's inspection ; and the translation was printed in London, price five dollars. A new and correct edition was in 1754 proposed for publication at Berlin, by Ch. Fr. Vok ; with an explanation of Hogarth's satirical prints, translated from the French ; and an Italian translation was published at Leghorn in 1761. Hogarth had one failing in common with most people who attain wealth and eminence without a liberal education : he affected to despise every kind of knowledge which he did not possess. Previously to his commencing author one of our artist's common topics of declamation was the uselessness of books to a man of his profession. But Garrick himself was not more open to flattery. A word in praise of Sigismundi, his favorite work, might have commanded a proof print, or an original sketch from Hogarth. A specimen of his propensity to merriment, on the most trivial occasions, is observable in one of his cards requesting the company of Dr. Arnold King to dine with him at the Mitre. Within a circle, to which a knife and fork are the supporters, the written part is contained. In the centre is drawn a pye, with a mitre on the top of it : and the invitation concludes with the following words in three Greek letters, H B II, — Eta, Beta, Pi. In the Miller's Feast Mr. Hogarth thought proper to pillory Sir Isaac Shard, a gentleman proverbially avaricious. Hearing this, the son of Sir Isaac, a young man of spirit, just returned from his travels, called at the painter's to see the picture ; and, among the rest, asking the Cice-rone ' Whether that odd figure was intended for any particular person ?' on his replying that ' it was thought to be very like one Sir Isaac Shard' he immediately drew his sword and slashed the canvas. Hogarth appeared instantly in great wrath : to whom Mr. Shard calmly justified what he had done, saying ' that this was a very unwarrantable license ; that he was the injured party 3 son, and that he was ready to defend any suit at law ;' which, however, was never instituted. About 1757 his brother-in-law, Mr. Thornhill, resigned the place of king's serjeant-painter in favor of Mr. Hogarth.

Of his lesser plates many were destroyed. When he wanted a piece of copper he would take any plate from which he had already worked off such a number of impressions as he supposed he should sell. He then

sent it to be effaced, and altered to his purpose. The plates which remained in his possession were secured to Mrs. Hogarth by will, dated August the 12th 1764, chargeable with an annuity of £80 to his sister Anne, who survived him.

HOGH, n. s. Dut. hoogh. A hill or rising ground.

That well can witness yet unto this day,

The western hoijh, besprinkled with the gore

Of mighty Gozmot. Faerie Quecne.

VOL. XI

Plants.

HOGS'BEANS, r..

HOGS'BREAD,

HOGS'MUSUUOOMS,

HOUS'FENNEL. J

HOG'S DUNG is by Mortimer reckoned one of the richest manures we are acquainted with ; and the next in value to sheep's dung ; and is found to be equal in virtue to twice the quantity of any other. It is an excellent manure for pasture grounds, and excels all other kinds of dung for trees. The farmers, who use it for their lands, generally take care to save it, by well paving the styes ; and increase the quantity by throwing in bean-stalks, stubble, and many other things of a similar nature. By this management, many farmers have procured fifty or sixty loads a-year of excellent manure out of a small stye. The best way of using this dung is by mixing it with horse dung: and for this reason the stye should be near the stable, that the two cleansings may be mixed in one heap, and used together. They have, in many parts of Staffordshire, a poor light, shallow land, on which they sow a kind of white pea: the land is neither able to bear this nor any thing else to advantage for their reaping ; but, when the peas are ripe, they turn in as many hogs as the quantity of peas will fatten, suffering them to live at large, and to remain there day and night : and thus the land

produces a good crop of hay for several years afterwards ; or, at worst, it raises grass enough to make good pasture.

HOGSTIES, THE, a dangerous rocky reef among the Bahamas, situated between the Great Heneagua and Crooked Island. Ships sailing to Europe from Jamaica, through the Crooked Island passage, clear them safely by steering from Ocean Bight, in the Great Heneagua, twelve leagues north-west, then north by west, half west about eleven leagues to Castle Island, the south point of South Crooked Island. Long. 73° 50’ W., lat. 21° 40’ N.

HOGUE, a fishing town and cape of France, on the north-west point of the department of the Channel, and late province of Normandy ; near which admiral Rook burnt the French admiral’s ship, called the Rising Sun, with twelve more large men of war, the day after the victory obtained by admiral Russel near Cherburg, in May 1692. Long. 1° 35’ W., lat. 49° 50’ N. The town contains about 2000 inhabitants anil has a small fort.

HOHENBERG, a county of Suabia, in tht Black Forest, now belonging to Wirtemberg, It consists of two parts, the Upper and the Lower ; in the former is the source of the Neckar, and at no great distance that of the Danube. Both divisions are woody and hilly ; the Lower, however, admits of tillage, and produces some wine. Iron abounds in both. The chief town is Rothenburg.

HOHENLINDEN, a village of Germany, in Bavaria, on the Danube : near which the Frenrb under general Moreau defeated the Austrians, i»n the 3rd of December, 1800, killed and wounded 12,000, and took 10,000 prisoners, among whom were three generals, together with eighty pieces of cannon and 200 loaded waggons, &c. At this place, too, the emperor Francis II signed

the convention in 1800, by which he gave up the forts of Ulm, Ingoldstadt, and Philipsburg, to the French.

HOHENLOHE, a district in the circle of Franconia, forming part of an extensive tract of country which has the Danube on the south, and the Maine on the north. The rivers of this country are the Jaxt,the Tauber,and the Kocher: the produce is corn, flax, and vines. Here are also extensive woods, and some few iron mines. The princes of Hohenlohe have now only their titles : the territory has belonged to Wirtemberg since 1806.

HOHENZOLLERN, a small principality of Germany, in the circle of Suabia, divided into two parts, Hohenzollern Hechingen, and Hohenzollern Sigmaringen. It is surrounded by Baden and Wirtemberg. The surface of the country is hilly and woody : but there is some good pasturage in various parts. The chief town is Hechingen, a small place, situated on .he Starzel, containing about 2600 inhabitants, with an unimportant manufacture of woollen cloth. It is the residence of the prince, and the seat of the courts and public offices of the principality. Population about 50,000.

HOIDEN, n.s. &v.n. Welsh hoeden ; Lat. fttmina levioris farna. An ill-taught awkward country girl : to romp indecently.

Some of them would get a scratch ; but we always discovered, upon examining, that they had been hai-dening with the young apprentices. Swift.

HOISE, v. a. | Fr. hausser ; Low German HOIST. S hissen, from Goth, ha; Saxon

heah, high. A variation from the same word as heave : the idea here is to raise on high, with effort ; it is a transitive verb requiring an agent and an object ; thus sailors hoist the long boat ; whales when killed are hoisted into the vessel.

They loosed the rudder-bands and hoisted up the mainsail to the wind, and made toward the shore.

Acts xxvii. 40.

Auria had hoised sail, and was on his way toward the bay of Naupactus. Krutlles’s History.

‘Tis the sport to have the engineer hoist up with his own petar. Shakspeare Hamlet.

Join you with me ; Well quickly hoist duke Humphrey from his seat.

Shakspeare.

That man which prizeth virtue for itself, and cannot endure to hoise and strike his sails, as the divers natures of calms and storms require, must cut his sails of mean length and breadth, and content himself with a slow and sure navigation. Raleigh.

Hoise sail , and fly ; And in thy flight aloud on Gratis cry.

Chapman.

We thought for Greece The sail* were hoisted, and our fears release.

Dryden.

They hoist him on the bier, and deal the dole, And there's an end. Id. Persius.

What haste she made to hoist her purple sails! And to appear magnificent in flight, Drew half our strength away. Id. All for Love.

Their navy swarms upon the coasts : they cry To hoist their anchors, but the gods deny. D'-yden.

What made Absalom kick at all the kindnesses of his father, but because his ambition would needs be fingering the sceptre, and hoisting him iˆto his father's throne ? Swih,

If 'twas an island where they found the shells, they straightways concluded that the whole island lay originally at the bottom of the sea, and that it was hoitted up by some vapour from beneath.

Woodward'* Natural History.

Seize him, take, hoist him up, break off his hold, And toss him headlong from the temple's wall.

Southern. Some hoitted oat the boats.

Byron. Don Juan.

HOISTING, the operation of drawing up any body by the assistance of one cr more tackles. Hoisting is never applied to the act of pulling up

any body by the help of a single block, ex-cept in extending the sails by drawing them upwards along the masts or stays, to which it is invariably applied.

HOKE-DAY, HOCK-DAY, or HOCK-TUESDAY, in ancient English customs (dies Martis quern ouindenam paschae vocant), the second Tuesday after Easter week ; a solemn festival celebrated for many ages in England, in memory of the great slaughter of the Danes, in 1002. This is still kept up in some counties ; and the women bear the principal sway in it, stopping all passengers with ropes and chains, and exacting some small matter from them to make merry with. This day was used on the same footing with Michaelmas for a general term or time of account. We find leases without date reserving so much rent payable ad duosanni terminos, scil. ad. le hoke-day, & ad festum sancti Michaelis. In the accounts of Magdalen College, Oxford, there is yearly an allowance pro mulieribus hockantibus of some manors of theirs in Hampshire ; where the men hock the women on Mondays, and the women hock them on Tuesdays. The meaning of it is, that on that day the women in merriment stopped the way with ropes, and pulled passengers to them, desiring something to be laid out for pious uses.

HO-KIEN, or HO-KIEN-FOU, a city of China, in the province of Petcheli, between two rivers, eighty-seven miles south of Pekin. It has two cities of the second, and fifteen of the third class, in its district. Long. 133° 29’ E. of Ferro, lat. 38° 28’ N.

HOLAIVA, or HOOLAIVA, one of the Hapaee Islands, in the South Pacific Ocean, thirty miles from Annanooka. It was uncultivated and uninhabited when visited by captain Cook, except by one man employed. in catching turtle. The trees and plants are similar to those of Lefooga, to which it is joined by a reef.

HOLBEACH, a market town of Lincolnshire, eight miles east of Spalding, and 109 north from London. The town is of great antiquity, but indifferently built, and is seated in the fens. The church is a Gothic building, with a lofty tower and spire, which may be seen at a great distance. Market on Thursday.

HOLBEIN <Hans or John), a celebrated painter born at Basil in Switzerland, in 1498. He learned the rudiments of his art from his father, who was also a painter ; but soon showed his superior genius. In the town-house of Basil lie painted our Saviour’s Passion ; and in the fish market of the same city Death’s Dance, and a Dance of Peasants, which were very much ad-

HOL

mired. Erasmus was so pleased with them, that he desired him to draw his picture, and was ever after his friend. He staid some years longer at Basil, till his necessities, occasioned by extravagance and an increasing family, made him com-ply with Erasmus's persuasions to go to England. In his journey he staid some days at Strasburg, where it is said he applied to an eminent painter for work, who ordered him to give a specimen of his skill. On which Holbein finished a piece with great care, and painted a fly on the most conspicuous part of it; after which he privately withdrew, and pursued his journey. When the painter returned home, he was astonished at the beauty and elegance of the drawing, and especially at the fly, which he at first took for a real one, and endeavoured to re-move it with his hand. He now sent all over the city for his journeyman ; but, after many enquiries, discovered that he had been thus deceived by the famous Holbein. Holbein, having in a manner begged his way to England, presented a letter of recommendation from Erasmus to Sir Thomas More, and showed him Erasmus's picture. Sir Thomas, being then lord chancellor, received him kindly, and kept him in his house between two and three years : in which time he drew Sir Thomas's picture, and those of many of his friends. The chancellor, having now adorned his apartments with the productions of this great painter, resolved to introduce him to Henry VIII. For this purpose he invited that prince to an entertainment ; having, before he came, hung up all Holbein's pieces in the great hall. The king, on his first entrance into this room, was so charmed with the sight, that he asked whether the artist was living, and to be employed for money. Upon this, Sir Thomas presented Holbein to the king, who immediately took him into his service. While he was here an affair happened which might have proved fatal to him, had he not been protected by the king. His fame attracted a nobleman to see him when he was drawing a figure after the life. Holbein sent to desire his lordship to defer the honor of his

visit to another day ; which the nobleman taking for an affront, broke open the door, and very rudely went up stairs. Holbein hearing a noise, came out of his chamber ; and meeting his lordship at his door, fell into a violent passion ; and pushed him down stairs. Immediately, however, reflecting on what he had done, he made the best of his way to the king, and the nobleman following him, the king ordered Holbein to ask his pardon ; when the courtier would not be satisfied with less than his life. Upon this the king sternly replied, ‘ my lord, you have not now to do with Holbein, but with me — I can whenever I please make seven lords of seven ploughmen, but I cannot make one Holbein of even seven lords.’ Holbein died of the plague at his loigings at Whitehall, in 1554. He painted with equal excellence in every manner ; in fresco, in water-colors, ir. oil, and in miniature. His genius was sufficiently shown in the historical style, by two -celebrated compositions which he painted in the hall of the Stillyard company. It is worthy of remark that Holbein always painted with hi? left hand.

HOLBERG (Lewis), a Danish author, bom at Bergen in Norway, in 1685. He rose from a menial state to be assessor of the Consistory court at Copenhagen. He wrote a History of Denmark, some comedies and miscellanies ; for which he was created a baron. He died in

1754.

HOLCROFT (Mr.), was born in Orange-court, Leicester-fields, December 22d, 1744. His father was a shoemaker, and, when Holcroft was in his teens, he was a servant to the honorable Mr. Vernon, his chief employment being to ride his master's race-horses, which were in training to run for the plate at Newmarket. He persevered to the age of twenty-five years, with some little interruption, in his father's trade. About that period of life, however, he conceived a passion for the stage, and offered his services at the same time to Mr. Charles Macklin, and Mr. Samuel Foote. Foote encouraged him, but Macklin talked to him in so specious a style, and held out to him so many temptations and prospects which were never realised, that he was induced to decide for Macklin and Ireland, a decision which he continued long to repent. In the profession of a player, Mr. Holcroft continued, not with the most flattering success, till after the production of the play of Duplicity, in 1 78 1 . Immediately on the exhibition of this comedy he withdrew from the stage as an actor, and for several years devoted his attention principally to dramatic composition. His writings of this kind were : — The Noble Peasant, an opera. The Choleric Fathers, an opera. The Follies of a Day, a comedy, translated from the French of Beaumarchais. Seduction, a come-dy, 1786. The German Hotel, a drama, translation, 1790. The School for Arrogance, a comedy, partly from the French of Destouches, 1791. The Road to Ruin, a comedy, and the best of his dramatic writings, 1792. Love's Frailties, a comedy, 1794. The Deserted Daughter, a comedy, 1795. The Man of Ten Thousand, a comedy, 1796. The Force of Ridicule, a comedy, 1796. He is much to Blame, a co-medy, very successful, 1798. Knave or Not, a comedy, 1798. Deaf and Dumb, a comedy, from the French, very successful, 1801. The Tale of Mystery, an after-piece, from the French, 1802. Hear Both Sides, a comedy, 1803. The Vindictive Man, a comedy, 1806. Mr. Holcroft also exercised his talent, with advantage to his reputation, in the Novels of Anna St. Ives, published 1792, and Hugh Trevor, published 1794. He also produced a third novel, entitled Brian Perdue, in the year 1807. The public is further indebted to the pen of Mr. Holcroft for many translations. The Private Life of Voltaire, 12mo. The Memoirs of Baron Trenck, in 3 vols. 12mo. The Secret History of the Court of Berlin, by the Count de Mirabeau, 2 vols. 8vo. Tales of the Castle by Madame de Genlis, 5 vols. 12mo. The Posthumous Wrorks of Frederic II. King of Prussia, 13 vols. 8vo. An Abridged Display of the Physiognomy of Lavater, 3 large vols. 8vo. Holcroft at the beginning of the French revolution displayed much zeal in the cause of liberty ; and, his

conduct having excited the alarm of government,

ne was included in the prosecution for treason instituted against Hardy, Home Tooke, and Thelwall, in 1794. But, these persons having been acquitted, Holcroft and the rest were discharged. He died in 1809. Holcroft is stated to have been the first who introduced on the English stage those popular entertainments termed melo-dramas.

HOLCUS, Indian millet or corn, a genus of the monoecia order, and polygamia class of plants, natural order fourth, gramina. Hermaphrodite CAL. anuniflorous or biflorous glume : COR. a glume with an awn ; there are three stamina, two styles, and one seed. Male CAL. a bivalved glume : COR. none ; but three stamina. There are thirteen species, two of which are natives of Britain. The most remarkable of these is

II. lanatus, or the creeping soft grass of Hud-son. Anderson, in his Essays on Agriculture, says, this is one of the most valuable kinds of meadow grasses, its pile being exceedingly soft, close, and succulent. It delights in moisture, and is seldom found in dry ground, unless the soil be exceedingly rich. It is often found on those patches near springs, over which water often flows ; and may be known by the uncommon softness and succulence of the blade, the lively light green color of the leaves, and the matted intertexture of its roots. But, notwithstanding the softness of its first leaves, when the seed-stalks advance they are rough to the touch, and the plants assume a very different appearance. The ear is branched out into a great number of fine ramifications like the oat, but much smaller. The seeds adhere to the stalk, and to each other after being separated from it, as if mixed with cobweb, so that they do not spread readily in sowing. But the

running roots spread so fast, that a small quantity, sowed very thin, would soon stock a large field.

H. sorghum, or Guinea corn, is the most re-luarkable of the foreign species. The stalks are large, compact, and full eight feet high. In Senegal the fields are entirely covered with it. The negroes, who call it guiarnot, cover the ears when ripe with its own leaves to shelter it from the sparrows. The grain made into bread is esteemed very wholesome. With this the slaves in the West Indies are generally fed, each being allowed from a pint to a quart every day. The negroes on the coast of Guinea make of two kinds of this corn a thick-grained pap called couscous, which is their common food.

HOLD, in the old glossaries, is mentioned in the sair.e sense with wold. i. e. a governor or chief officer; but in some other places for love, as holdlic lovely.

HOLD, v. a. Sax. healdan ; low Germ, holden ; Dan. holde ; Germ, hulten, and haben, to have. To hold is a physical act, and signifies to have in a particular mode, as by the application of bodily strength in a greater or less degree : hence to keep ; detain ; retain ; contain as within boundaries : the different uses and applications of this word are very numerous; it is used both in a literal and figurative sense.

To grasp in the hand ; to gripe; to clutch. Lift up the lad, hold him in thy band. Genesis.

France, tliou maycst hold a serpent by the tongue, A fasting tyger safer by the tooth, Than keep in peace that hand which thou dost hold.

Shakspeare.

To connect; to keep from separation. The loops held one curtain to another.

ExoA. xxxvi. 12. To keep ; to retain ; to gripe fast : not to let

go-Prove all things ; hold fast that which is good.

2 Thes. v.

Too late it was for satyr to be told, Or ever hope recover her again ; In vain he seeks, that having cannot hold.

Faerie Queene.

Uis ragged shield was like a rocky mould, On which an anchor bit with surest hold : I hold by being held,' was written round in gold.

Fletcher' '» Purple Island. To maintain as an opinion. Thou hast there them that hold the doctrine of Ba-laam. Rev.

To consider ; to regard.

I as a stranger to my heart and me Hold thee from this for ever. Shakrpeare.

To think of; to judge with regard to praise or blame.

What saw we, eke, of hem that deliten hem in swering, and hold it a gentrie or manly dede to swere gretothes? Chaucer. The Persones Tale.

I hold him but a fool, that will endanger His body for a girl that loves him not.

Shakspeare.

One amongst the fairest of Greece, That hf.lds his honour higher than his ease. Id. He would make us amends, and spend some time with us, if we held bis company and conference agreeable. Bacon.

This makes thee, blessed Peace ! so light to hold, Like summer's flies that fear not winter's cold.

Fairfax.

As Chaucer is the father of English poetry, so I hold him in the same degree of veneration as the Grecians held Homer, or the Romans Virgil.

Dry den.

Ye Latian dames, if any here, Hold your unhappy queen Amata dear ! Id.

Hold such in reputation. Philip.

Minds

By nature great, are conscious of their greatness, And hold it mean to borrow ought from flattery.

Rowe’s Royal Convert To receive, and keep in a vessel. She tempers dulcet creams, nor these to hold Wants her fit vessels pure. Milton.

To contain ; to receive into its capacity : as a hogshead holds sixty-three gallons ; the sack is too little to hold the grain.

To keep ; not to spill.

Broken cisterns that can hold no water.

Jeremiah. To keep ; to hinder from escape.

For this infernal pit shall never hold Celestial spirits in bondage. Milton.

To keep from spoil ; to defend.

With what arms

We mean to hold what anciently we claim Of empire. Milton.

To keep from loss.

Man should better hold his place By wisdom. Milton.

To have any station.

The star that bids the shepherd fold, Now the top of heaven doth hold. Milton.

And now the strand, and now the plain they held i Their ardent eyes with bloody streaks were filled.

Dry den.

Observe the youth who first appears in sight, And hulds the nearest station to the light. Id.

To possess ; to have.

The castle, holden by a garrison of Germans, he commanded to be besieged. KnoUet's History.

Holding Corioli in the name of Rome, Even like a fawning greyhound in the leash, To let him slip at will. Shakspeare.

Assuredly it is more shame for a man to lose that •which he holdeth, than to fail in getting that which he never had. Hayward.

To possess in subordination. He was willing to yield himself unto Solyman as Lis vassal, and of him to hold his seigniory for a. yearly tribute. Knolles.

The terms too hard by which I was to hold The good. Milton.

To suspend; to refrain.

Men in the midst of their own blood, and so furiously assailed, held their hands, contrary to the laws of nature and necessity. Bacon.

Death ! what do'st ? 0 hold thy blow ! What thou do'st, thou do'st not know.

Crashauj. To stop ; to restrain.

We cannot hold mortality's strong hand.

Shakspeare. Fell, banning hag ! inchantress, hold thy tongue.

u.

Unless thou find occasion, hold thy tongue ; Thyself or others, careless talk may wrong.

Denham.

When straight the people by no force compelled, Nor longer from their inclination held, Break forth at once. Waller.

Hiild your laughter, then divert your fellowser- vants. Swift. To fix to any condition.

His gracious promise you might, As cause had called you up, have held him to.

Shakspeare. To keep ; to save.

Stay but a little ; for my cloud of dignity Is held from falling with so weak a wind, That it will quickly drop : my day is dim.

Shakspeare.

To confine to a certain state. The Most High then shewed signs for them, and held still the flood, ‘till they were passed over.

2 Eidr. xiii. 14.

To detain; to keep in confinement or subjec-. tion.

Him God hath raised up, having loosed the pains of death, because it was not possible that he should be holden of it. Acts.

To retain ; to continue.

These reasons moved her star-like husband’s heart ; But still he held his purpose to depart. Dryden.

To practise with continuance.

Night

And chaos, ancestors of nature, hold Eternal anarchy. Milton.

Not to intermit.

Seed-time and harvest, heat and hoary frost, 5haK hold their course. Milton.

To solemnise ; to celebrate.

He held a feast in his house, like the feast of a king .

1 Sam.

The king, the quene, and every lord, With all the ladies, by one accord, Helde a generall assembly. Chaucer’s Dreame. The queen this day here holds her parliament But little thinks we shall be of her

council.

Shakspeare. To conserve ; not to infringe.

Her husband heard it, and held his peace,

Numb. xxx. 7.

She said, and held her peace ; ./Eneas went, Unknowing whom the sacred sibyl meant.

Dry den.

To manage ; to handle intellectually. Some in their discourse desire rather commendation of wit, in being able to hold all arguments, than of judgment in discerning what is true. Bacon.

Great souls

By nature half divine, soar to the stars And hold a near acquaintance with the gods.

Roice.

And there they stand, as stands a lofty mind Worn, but unstooping to the iiaser crowd, All tenantless, save to the crannying wind, Or holding dark communion with the cloud.

Byron. Childe Harold. To maintain.

Whereupon they also made engines against their engines, and held them battle a long season.

1 Aloe. vi. 52. To carry on conjunctively.

The Pharisees held a council against them.

Matt.

To prosecute or continue-To hold forth ; to offer ; exhibit or propose. Christianity came into the world with the greatest simplicity of thought and language, as well as lif» and manners, holding forth nothing but piety, charity, and humility, with »foe belief of the Messiah and of his kingdom. Temple.

Observe the connection of ideas in the propositions, which books hold forth and pretend to teach as truths.

Locke.

My account is so far from interfering with Moses, that it holds forth a natural interpretation of his sense.

Woodward.

To hold forth. To protend ; to put forward to view.

How joyful and pleasant a thing it is to have a light held us forth from heaven to direct our steps !

Cheyne.

To hold in. To restrain ; to govern by the bridle.

I have lately sold my nag, and honestly told his greatest fault, which is, that he became such a lover of liberty, that I could scarce hold him in. Swift. To hold in. To restrain in general. These men's hastiness the warier sort of you doth not commend ; ye wish they had held themselves longer in, and not so dangerously flown abroad.

Hooker. To hold off. To keep at a distance.

Although 'tis fit that Cassio have his place • Yet, if you please to hold him off a while, You shall by that perceive him.

Shakspeare. Othello.

The object of sight ioth strike upon the pupil of the eye directly, without any interception ; whereas the cave of the ear doth hold off the sound a little from the organ. Bacon.

I am the better acquainted with you for absence, as men are with themselves for affliction : absence does but hold off a friend, to make one see him truly.

Pope to Swift.

To hold on. To continue ; to protract : to push forward.

I went forth, myself, alone boldily And helde the way downe by a broke side.

Chaucer. The Cuckowe and tfie Nightingale. They took Barbarossa, holding on his course of Africk, who brought great fear upon the country

Knolles'i History.

If the obedience challenged were indeed due, then did our brethren both begin the quarrel and hold it on.

Saunden.

To hold out. To extend ; to stretch forth. The king held out to Esther the golden sceptre that was in his hand. Esth. v. 2.

To hold out. To offer ; to propose. Fortune holds out these to you, as rewards.

Ben Jonson. To hold out. To continue to do or suffer.

He cannot long hold out these pangs, The incessant care and labour of his mind.

Sfui/ispeare.

To hold up. To raise aloft. I should remember him : does he not hold up his head, as it were, and strut in his gait ?

Shakspeare.

The hand of the Almighty visibly held up, and prepared to take vengeance. Locke.

To hold up. To sustain; to support by influence or contrivance.

It followeth', that all which they do in this sort proceedeth originally from some such agent as knoweth, appointeth, holdeth up, and

actually frameth the same.

Hooker.

The time misonlered doth in common sense Crowd us, and crush us to this monstrous form, To hold our safety up. Shakspeare.

And so success of mischief shall be borne, And heir from heir shall hold his quarrel up. Id. Those princes have held up their sovereignty best, which have been sparing in those grants. Davies.

There is no man at once ekher excellently good or extremely evil, but grows either as he holds himself up in virtue, or lets himself slide to viciousness.

Sidney.

Then do not strike him dead with a denial, Bat hold him up in life, and cheer his soul With the faint glimmering of a doubtful hope.

Addison's Cato. To keep from falling.

We have often made one considerably thick piece of marble take and hold up another, having purposely, caused their flat surfaces to be carefully ground and polished. Boyle.

To HOLD, v. n.

To stand ; to be right ; to be without exception.

To say that simply an argument, taken from man's authority, doth hold no way, neither affirmatively nor negatively, is hard. Hooker.

This holdeth not in the sea-coasts. Bacon.

Ine lasting of plants is most in those that are largest of body; as oak. elm, and chesuut, and this holdeth in trees ; but in herbs it is often contrary.

Id.

When the religion formerly received is rent by discords, and when the holiness of the professors of religion is decayed, and full of scandal, and withal the times be stupid, ignorant, and barbarous, you may doubt the springing up of a new sect ; if then also there should arise any extravagant and strange spirit,

to make himself author thereof ; all which points hela when Mahomet published his law. Id.

Nothing can be of greater use aud defence to the

mind than the discovering of the colours of good and

evil, shewing in what cases they hold, and in what

they deceive. Id.

Where outward force constrains, the sentence

folds ;

But who constrains me ? Milton.

None of his solutions will hold by mere mechanicks.

More.

This unseen agitation of the minute parts will hold in light and spirituous liquors. Boyle.

The reasons given by them against the worship of images, will equally hold against the worship of images among Christians. Stillingjleet.

The proverb holds, that to be wise and love Is hardly granted to the gods above.

Dryden's Fables.

As if the experiment were made to fold For base production, and reject the gold.

Dryden.

This remark, I must acknowledge, is not so proper for the colouring as the design, but it will hold for both.

Id.

The drift of this figure holds good in all the parts of the creation. L'Estrange.

Our author offers no reason ; and, when any body does, we shall see

whether it will hold or no. Locke.

The rule holds in land as well as all other commodities. Id.

It holds in all operative principles whatsoever, but especially in such as relate to morality ; in which not to proceed, is certainly to go backward. South.

This seems to hold in most cases. Addison.

Sanctorius's experiment of perspiration, being to the other secretion as five to three, does not hold in this country, except in the hottest time of Summer.

Arbuthnot on Alimenl».

The analogy holds good, and precisely keeps to the same properties in the planets and comets.

Cheync.

In words, as fashions, the same rule will hold ; Alike fantastick, jf too new or old. Pope.

To continue unbroken or unsubdued. Our force by land hath nobly held.

Sliakspenre. To last ; to endure.

We see by the peeling of onions, what a holding substance the skin is. Bacon.

Never any man was yet so old, But hoped his life one Winter more might hold.

Denham. To continue without variation.

We our state Hold, as you yours, while our obedience holds.

Sliltmt. He did not hold in this mind long.

L' Estrange. To refrain.

His dauntless heart would fain have held From weeping, but his eyes rebelled. Dryden. To stand up for ; to adhere. Through envy of the devil came death into the world, and they that do hold of his side do find it.

Wisd. ii. 24.

They must, if they hold to their principles, agree that things had their production always as now they have. Hale.

When Granada for your uncle held, You was by us restored, and he expelled.

Dryden. Numbers hold With the fair freckled kins and beard of gold :

So vig'rous are his eyes, such rays they cast, So prominent his eagle's beak is placed. Id.

To be dependent on.

The mother x if the house holds of the lady, had rather, yea and will, have her son cunning and bold.

Ascham.

The other two were great princes, though liolding of him ; men both of giant-like hugeness and force.

Sidney.

Tb.e great barons had not only great numbers of knights, but even petty barons holding under them.

Temple. My crown is absolute, and holds of none.

Dryden,

To derive right.

‘Tis true, from force the noblest title springs ; I therefore hold from that which first made kings.

Dry den.

Te maintain an opinion.

Men hold and profess without ever having examined.

Locke.

To hold forth. To harangue; to speak in public ; to set forth publicly.

A petty conjurer, telling fortunes, held forth in the market-place. L’Estrange.

To hold in. To restrain one’s self.

I am full of the fury of the Lord : I am weary with holding in. Jer. vi. 11.

To hold in. To continue in luck.

A duke, playing at hazard, Jteld in a great many hands together. Swift.

To hold off. To keep at a distance without closing with offers.

These are interests important enough, and yet we must be wooed to consider them; nay, that does not prevail neither, but with a perverse coyness we hold off. Decay of Piety.

To hold on. To continue ; not to be interrupted.

The trade held on for many years after the bishops became Protestants ; and some of their names are still remembered with infamy, on account of enriching their families by such sacrilegious alienations.

Swift.

To hold on. To proceed.

He held on, however, ‘till he was upon the very point of breaking. L’Estrange.

To hold out. To last ; to endure.

Before those dews that form manna come upon trees in the valleys, they dissipate, and cannot hold out.

Bacon.

As there are mountebanks for the natural body, so ara there mountebanks for the politick body ; men that perhaps have been lucky in two or three experiments, but want the grounds of science, and therefore cannot hold out. Id.

Truth, fidelity," and justice, are a sure way of thriving, and will hold out, when all fraudulent arts and devices will fail. Tillotson.

By an extremely exact regimen a consumptive per-son may hold out for years, if the symptoms are not violent. Arbuthnot.

To hold out. Not to yield ; not to be subdued.

The great master went with his company to a place where the Spaniards, sore charged by Achimetes, had much ado to hold out. Knolles's History.

You think it strange a person, obsequious to those ac loves, should hold out so long against importunity.

Boyle.

Nor could the hardest ir'n hold out A <-ainst his blows. Hudibrcu.

I would cry now, my eyes grow womanish ;

But yet my heart holds out.

Dryden's Spanish Friar.

The citadel of Milan has held out formerly, after the conquest of the rest of the duchy. Adduon,

Pronounce your thoughts : are they still fixt To hold it out, and fight it to the last ? Or are your hearts subdued at length, and wrought. By time and ill success, to a submission ? Id.

As to the holding out against so many alterations o. state, it sometimes proceeds from principles.

Collier on Pride.

To hold together. To be joined.

Those old Gothick castles made at several times, hold together only, as it were, by rags and patches.

Dryden.

To hold together. To remain in union.

Even outlaws and robbers, who break with all the world besides, must keep faith amongst themselves, or else they cannot hold together. Locke.

To hold up. To support himself.

All the wise sayings which philosophers could muster, up, have helped only to support some few stout and obstinate minds, which, without the assistance of philosophy, could have held up pretty well of themselves. Tillotson.

To hold up. Not to be foul weather. Though nice and dark the point appear,

Quoth Ralph, it may hold up and clear.

Hudibrat.

To hold up. To continue the same speed.

When two start into the world together, the success of the first seems to press upon the reputation of the latter ; for why could not he huld up ?

Collier of Envy.

To hold with. To adhere to ; to co-operate with.

There is none that holdeth with me in these things but Michael. Daniel.

HOLD has the appearance of an interjection ; but is the imperative mood. Forbear ; stop ; be still.

Hold, ho ! lieutenant — sir — Montano ! Gentlemen, Have you forgot all servse of place and duty ? The general speaks to you — hold, hold,

for shame ‘

Shakspeare. Hold, hold ! are all thy empty wishes such !

A good old woman would have said as much.

Dryden.

HOLD, n. s. From the verb. The act of seizing; gripe; grasp; seizure. It is used with great frequency, both literally and tiguratirely, both for manual and intellectual agency. The verbs with which it is oftenest united are take, lay, and have.

Uzzah put forth his hand to the ark of God, and took hold of it ; for the oxen shook it. 2 &-JOT. vi. 6.

Those bards delivered no certain truth of a iy thing ; neither is there any certain hold to be takei > of any antiquity which is received by tradition.

Spenser on Ireiina.

The wits of the multitude are such, that K»?-ny things they cannot lay hold on at once. Hooker

This is to give him liberty and power : Rather thou should’st lay hold upon him, send him To deserved death, and a just punishment.

Ben Jonson. Let but them Find courage to lay hold on this occasion.

Mute*

He seized the shining bough with griping lutld, And rent away with

ease the lingering gold.

Dry den.

The devii himself, when let loose upon Job, could not transport that patient good man beyond his tem-per, or make him quit his hold. L' Estrange.

The hand is divided into four fingers bending forwards, and one opposite to them bending backwards, and of greater strength than any of them singly, which we call the thumb, to join with them severally or united, whereby it is fitted to lay hold of objects of any size or quantity. Ray on the Creation.

Yet then, from all my grief, O Lord. Thy mercy set me free,

Whilst in the confidence of prayer, My soul took hold on thee. Addition.

We are strangely backward to lay hold of this safe, this only method of cure. Atterbury.

He kept his hold,

Nor lost 'till beauty was decayed and old, And love was by possession palled and cold.

Granoille.

Something to be held ; support. If a man be upon an high place, without rails or good hold, he is ready to fall. Bacon.

Power of keeping.

On your vigor now My hold of this new kingdom all depends.

Milton. Catch ; power of seizing.

The law hath yet another hold on you.

Shakspeare.

Prison ; place of custody.

They lay him in hold, because it was not declared what was to be done with him. Hooker.

They laid hands on them, and put them in hold unto the next day. Acts.

The prisoner to his hold retired. Dryden. Custody.

King Richard, he is in the mighty hold Of Bolingbroke. SJiakspeare.

Power ; influence operating on the mind.

Fear is that passion which hath the greatest power over us, and by which God and his laws take the surest hold of us. Tillotson.

Rural recreations abroad, and books at home, are the innocent pleasures of a man who is early wise ; and give fortune no more hold of him than of necessity he must. Dryden.

Let it consist with an unbeliever's interest and safety to wrong you, and then it will be impossible you can have any hold upon him, because there is nothing left to give him a check, or to put in the balance against his profit. Swift.

Hold of a ship. All that part which lies be^- tween the keelson and the lower deck.

Now a sea into the hold was got, Wave upon wave another sea had wrought.

Dryden. Again the weather threatened, — again blew

A gale, and in the fore and after hold

Water appeared. Byron. Don Juan.

A lurking place : as the hold of a wild beast or deer.

A fortified place ; a fort ; a safe residence. These separated themselves unto David, into the hold to the wilderness, men of might. Chronicles, He shall destroy the strong holds.

Jeremiah.

She driveth forth into our ocean Thurghout our wide see, til at the last Under an hold, that nempnen I ne can,

For in Northumberland, the wave hire cast, And in the sand hire ship

stiked so fast. That thennes wolde it not, in all a tide : The wille of Christ was, ther she shulde abide.

Chaucer. The Man of Lawet Tale.

It was his policy to leave no hold behind him ; bu

make all plain and waste. Spenser.

HOLD, is the whole interior cavity or belly of a ship, or all that part of her inside which U comprehended between the floor and the lower deck throughout her whole length. This capacious apartment usually contains the ballast provisions, and stores of a ship of war, and the principal part of the cargo in a merchantman. The disposition of these articles with regard to each other, naturally falls under consideration in the article STOWAGE ; it suffices in this place to say, that the places where the ballast, water, provisions, and liquors are stowed, are known by the general name of the hold. The several store-rooms are separated from each other by bulk-heads, and are denominated according to the articles which they contain, the sail-room, the bread-room. See SHIP BUILDIKG.

HOLD'ER, «. *. -\ One that retains any

HoLD'ER-rcuiH, n.s. f thing in his hand; a

HOLD'-FAST, ;*. s. £ tenant who holds lands

HOLD'ING, J under another Holderforth, a public speaker, a preacher, or haranguer.

Hold-fast, any thing which takes hold, as a

hook or catch. Holding, a tenure ; a farm ; the

burden or chorus of a song.

The holding every man shall beat as loud As his strong sides can volley. Shakspeare. In times past holdings wore so plentiful, and holder* so scarce, as well was the landlord, who could not get one to be his tenant. Carew.

Whence some tub holdersforth have mane In powdering tubs the richest trade. Hudibrai The several teeth are furnished with holdfaits suitable to the stress that they are put to. Ray.

The makers and holders of plows are wedded to their own particular

way. Mortimer.

He was confirmed in this opinion upon seeing the holderforth. Addison.

HOLDER (William), D. D. and F.R.S., a learned author, born in Nottinghamshire, and educated in Pembroke Hall, Cambridge. In 1642 he became rector of Blechingdon, Oxford; in 1660 Doctor of Divinity ; was afterwards canon of Ely and St. Paul's, and sub-dean and sub-almoner to king Charles II. He distinguished himself by teaching a young gentleman to speak who was born deaf and dumb, *viz.* Alexander Popham, son of colonel Edward Popham, whi was some time an admiral in the service of the long parliament. Dr. Wallis however completed this task; for young Popham, having forgotten a great part of Holder's instructions, was sent to the doctor who restored him to the use of his speech. Holder published a book entitled The Elements of Speech ; an essay of enquiry into the natural Production of Letters : with an appendix concerning persons that are deaf and dumb, 1669, 8vo. In the appendix he relates by what methods he brought Popham to speak. In 1 678 he published in 4to. a Supplement to

the Philosophical Transactions of July 1670, with some reflections on Dr. Wallis's letter there inserted. This was written to claim the glory of having taught Popham to speak, which Dr. Wallis in the above letter had arrogated to himself ; upon which Wallis published a Defence of the Royal Society, and the Philosophical Transactions, particularly those of July 1670, in answer to the cavils of Dr. William Hol-der, 1678, 4to. Holder was skilled in the theory and practice of music, and wrote a Treatise of the natural Grounds and Principles of Harmony, 1694, 8vo. He wrote also a Discourse concerning Time, with Application of the natural Day, lunar Month, and solar Year, &c. 1694,

8vo. He died at London, January 24th, 1696-7.

HOLDSWORTH (Edward), a polite and elegant scholar, born about 1688, and trained at Winchester school. He was thence elected demy of Magdalen College, Oxford, in July 1705, took the degree of M. A. in April 1711, became a college tutor, and had many pupils. In 1715, when he was to be chosen a fellow, he left the college, because he would not swear allegiance to the new government. The remainder of his life was spent in travelling with young noblemen as a tutor: in 1741 and 1744 he was at Rome in this capacity. He died of a fever at lord Digby's house at Coleshill, December 30th, 1747. He wrote, 1. Muscipula, a poem, of which there is a good English translation by Dr. John Hoadley, in vol. 5 of Dr. Dodsley's Miscellanies. 2. Pharsalia and Philippi; or the two Philippi in Virgil's Georgics attempted to be explained and reconciled to History, 1741, 4to. 3. Remarks and Dissertations on Virgil, published with several notes and additional remarks by Mr. Spence, 1768, 4to.

HOLE, n. s. ˆ Goth. Sax. and

HOL' LOW, adj. n. s. & v. a. j Dut. hoi ; Teut. HOL'LOW-HEARTED, adj. '. [hohl. A. cavity, HOL'LOWLY, adv. (perpendicular or

HOL'LOWNESS,K. s. (otherwise; a per—

HOL'LOW-ROOT, n. s. J foration ; a cave ; cell ; mean habitation : arm-hole, the cavity under the shoulder. Hollow, excavated; this respects the body itself; the absence of its own materials produces hollowness : these words are used in a figu rative sense ; applied to sound, noisy, like reverberations from a cavity : to character, unfaithful; insincere; dishonest; treacherous. Hollow-root, a plant.

He touched the holloa* of his thigh. Gen. xxii. 25.

— — — — — Ne left he nought, But through the verger he hath sought If he might finden hole or trace Wherethrough that me [I] mote forth by pace Or any gappe, he did it close.

Chaucer. Romaunt of the Rote . And for a countenance, in his bond he bore An holow stikke, (take kepe and beware !) In the ende of which an unce and no more, Of silver lumaile put was.

Id. The Chanones Yemannes Tale. Upon his bloody finger he doth wear A precious ring, that lightens all the hole.

Shukspeare.

You shall arraign your conscience, And try your penitence, if it be sound, Or hollowly put on. Id.

The earth had not a hole to hide this deed. Id. O earth, bear witness,

And crown what I profess with kind event,

If I speak true ; if hollowly, invert,

What best is boaded me to mischief ! Id.

The southern wind,

Now by his hollow whistling in the leaves,

Foretel* a tempest. Id.

Who art thou, that lately didst descend

Into this gaping hollow of the earth ? Id.

It is fortune's use

To let the wretched man outlive hi* wealth, To view with hollow eye and wrinkled brow An age of poverty. Id. Merchant of Venice.

Thy youngest daughter does not love thee least ; Nor are those empty-hearted whose low sound Reverbs no hollownets. U. King Lear.

I've heard myself proclaimed,

And by the happy hollow of a tree

Escaped the hunt. Id.

If you throw a stone or a dart, they give no sound ; no more do bullets, except they happen to be a little hollowed in the casting, which hollownest penneth the air. Bacon.

I suppose there is some vault or hollow, or isle, be-hind the wall, and some passage to it. Id.

Hollow church papists are like the roots of nettles, which themselves sting not ; but bear all the stinging leaves. Id.

Tickling is most in the soles, and under the arm-holes and sides. Id.

Conscience !

Poor plodding priests, and preaching friars make

Their hollow pulpits ; and empty aisles

Of churches ring, with that round word.

Jien Joruon.

I have seen earth taken up by a strong wind, so that there remained great empty hollownest in the place. Hakewill.

What could be expected from him, but knotty and crooked hollow-hearted dealings ? Hoteel.

Against the horse's side his spear

He throws, which trembles with enclosed fear ;

Whilst from the hollows of his womb proceed

Groans not his own. Denham.

A loadstone is so disposed, that it shall draw unto it, on a reclined plane, a bullet of steel, which, as it ascends near to the loadstone, may fall down through some hole, and so return to the place whence it began to move. Wilkint't Deedalui.

He seemed

For dignity composed and high exploit ;

But all was false and hollow. Milton.

The hollow abyss

Heard far and wide, and all the host of Hell, With deaf'ning shout returned their loud acclaim.

Id. The hollow-hearted, disaffected,

And close malignants are detected. Hudibras.

Look upon linen that has small holes in it : those holes appear black, men are often deceived in taking holes for spots of ink ; and painters, to represent holes make use of black. Boyle.

Trees, rudely hollowed, did the waves sustain, F.re ships in triumph plowed the watery plain.

I)ryde.n.

He fret?, he fumes, he stares, he stamps the ground ; The hollow towers with clamours ring around. Id. When Alexander first beheld the face

Of the great cynick, thus he did lament :

How much more happy thou, that art content

To live within this little hole, than I

Who after empire, that vain quarry fly. Id.

Thence issued such a bla*t and hollow roar, As threatened from the hinge to heave the door. Id.

Some search for hollow trees, and fell the woods.

Id.

There are the tops of the mountains, and under their roots in holes and caverns the air is often detained.

Bur net.

An heap of sand or fine powder will suffer no hollowness within them, though they be dry substances.

Id.

A tortoise spends all his days in a hole, with a house upon his head. L'Eatrange.

People, young and raw, and soft natured, think it an easy thing to gain love, and reckon their own friendship a sure price of any man's ; but when experience shall have shewn them the hardness of most hearts, the hollowness of others, and the baseness and ingratitude of almost all, they will then find that a friend is the gift of God, and that he only who made hearts can unite them. South.

Multitudes were employed in the sinking of wells, and the hollowing of trees. Spectator.

I have frighted ants with my fingers, and pursued them as far as another hole, stopping all passages to their own nest, and it was natural for them to fly into the next hole. Addison.

A fine genius for gardening thought of forming such an unsightly hollow into so uncommon and agreeable a scene. Id.

The litile springs and rills are conveyed through little channels into the main hollow of the aqueduct.

lil. on Italy. Forest grew

Upon the barren hollows, high o'ershadowing The haunts of savage beasts. Prior.

Himself, as in the hollow of his hand. Holding, obedient to his high command, The deep abyss. Id.

HOLERACE/E, from holus, pot-herbs, the name of the twelfth order in Linnaeus's fragments of a natural method, consisting of plants which are used for the table, and enter into the economy of domestic affairs. See BOTANY.

HOLIDAY (Dr. Barten), a learned divine and poet, was the son of a tailor in Oxford, and born there about 1593. He studied at Christ Church College, and in 1615 took orders. He had been admired for his skill in poetry and oratory : and now, distinguishing himself by his eloquence as a preacher, he obtained two benefices in the diocese of Oxford. In 1618 he went as chaplain to Sir Francis Stewart, when he accompanied Count Gondamore to Spain. Afterwards he became chaplain to the king; and before 1626 was made archdeacon of Oxford. In 1642 he took the degree of D. D. at Oxford ; near which place he sheltered himself during the rebellion ; but after the

Restoration returned to his archdeaconry, where he died in 1661. His works are, twenty sermons, published at different times ; Philosophise politobarbane specimen, 4to. ; Survey of the world, a poem in ten books, 8vo. ; A translation of Juvenal and Persius ; Technogamia, or the Marriage of the Arts, a comedy.

I1OLILY, adv. ˆ Sax. halijjDut. ACT/-

HOLINESS, n. s. I Ugh; Goth. holg,from

HOLY, adj. bal, healthy, or whole,

HOLY-GHOST, n. s. >-or in a state of salva-HOLY THURSDAY, n. s. I tion: in Gr. aytoc; HOLY-WEEK, n. s. \ Lat. sanctus. Holy

HOLY-DAY, n. s. J and holiness, derived

irorn the northern languages, have now altogether a Christian signification, as referable principally

to the life and temper of a Christian; and typi-cally to religious acts, ceremonies, and places : it is principally to the mind what sanctity is to the outward garb ; the latter may be counterfeited, the former cannot : it has, however, been used in a more extended sense as good; pious ; consecrated ; inviolable. Holiness is the titular appellation of the pope of Rome : holy-ghost, Sax. hah; and jaj-t, the third person in the adorable Trinity : holy Thursday, the day on which the ascension of Christ is commemorated ; ten days before Whitsunday : holy-week, the week before Easter, called also Passion-week : holy-day, corrupted to holiday, the day of ecclesiastical festival; anniversary east; a day of gaiety and joy; a time that comes seldom.

And, plainly and generally, Sacrilege is to reve holy thing fro holy place ; or unholy thing, out of holy place ; or holy thing out of unholy place.

Chaucer. The Personei Tale. This foule sinne is platly ayenst the Holy Gost. Al be it so that every sinne is ayenst ‘the Holy Gott ; yet, natheles, for as moche as bountee apperteineth proprely to the Holy Gost, and envie comethj proprely of malice ; therefore, it is proprely ayenst the bountee of the Holy Gost. Id.

Shortly therein so perfect he became That, from the first unto the last degree, His mortal life he learned had to frame In holy righteousnesse

without rebuke or blame.

Spenser. Faerie Queene.

This victory was so welcome unto the Persians, that in memorial thereof they kept that day as one of their solemn holy-days for many years after.

Knotted s History. I here appeal unto the pope, To bring my whole cause ‘fore his holiness.

Shakspeare.

State, holy or unhallowed, what of that ? Id.

See where his grace stands ‘tween two clergymen ! And see a book of prayer in his hand ! True ornaments to know a holy man. Id.

An evil soul producing holy witness, Is like a villain with a smiling cheek. Id.

Ill it doth beseem your holiness To separate the husband and the wife. Id.

Thou would’st be great, Art not without ambition -, but without The illness should attend it : what thou would’st

highly, That would’st thou kolily. Id.

What, [have I ‘scaped love-letters in the holiday time of my beauty, and am I now a subject for them?

Id.

He has deserved it, were it carbuncled Like holy Phosbus’ car. Id. Antony and Cleopatra.

With joy he will embrace you ; for he’s honourable, And, doubling that, most holy. Id. Cymbeline.

Religion is rent by discords, and the holiness of the professors is decayed, and full of scandal. Bmcon.

And young and old come forth to play On a sunshine Itoliday. Milton.

Friendship, a rare thing in princes, more rare between princes, that so holily was observed to the last of those two excellent men. Sidney.

Rome’s holidays you tell, as if a guest With the old Romans you were wont to feast. Waller.

Bare was his hoary head ; one holy hand Held forth his laurel crown, and one his sceptre.

Dryden.

Courage is but a holiday kind of virtue, to be seldom exercised. Id.

Is not the care of souls a load sufficient ? >

Are not your holy stipends paid for this ? Id,

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HOLLAND.

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If strength of persuasion be the light which must guide us, 1 ask. how shall any one distinguish the inspirations of the Holy Ghost ? Locke.

Common sense could tell them that the good God could not be pleased

with any thing cruel j nor the most holy God with any thing filthy and unclean. South.

His holiness has told some English gentlemen, that those of our nation should have the privileges.

A ddison on Italy.

Then in full age, and hoary holineu Retire, great teacher, to thy promised bliss Prior.

We see piety and holiness ridiculed as morose singularities. Rogers—

We know ourselves, our mission, and thine order j Waste not thy holy words in idle uses, It were in vain. Byron. Manfred.

HOLINESS, was anciently a title given to all bishops. The Greek emperors also were addressed under the title of Holiness, as being anointed with holy oil at their coronation. Du Cange adds, that soir.e of the kings of England have had the same attribute ; and that the orientals have frequently refused it to the pope.

HOLINSHED (Raphael), an English historian, famous for his Chronicles of England, Scotland, and Ireland, was descended from a good family in Cheshire ; but neither the time of his birth, nor events qf his life, are known. He appears to have been a man of considerable learning. His Chronicles were first published •it London in 1570, in 2 vols. folio; and then in 1587, in 3 vols. In this second edition several sheets in the second and third volumes were destroyed, for containing some passages disagreeable to queen Elizabeth and her ministers ; but these have since been printed apart. Holinshed was not the sole compiler of this work, being assisted in it by several other hands. The time of his death is unknown; but, from his will, prefixed to Ilearne's edition of Cambden's Annals, it appears to have happened between 1578 and 1582. A new edition was published in 1814.

IIOLITSCH, a manufacturing town of Hungary on the Morawa, first patronised as such by the empeior Francis I. The manufacture now chiefly cultivated' is that of a species of white ornamental stone. In the neighbourhood is an estate cultivated by the government, as a model of agriculture. Population 4000, thirty-four miles. south-east of Brunn.

HOLK.AR (Jeswunt Rao), a modern Mahratta chief, who distinguished himself by his wars with the English. He first took arms under Moadjha Scindia, and succeeded Maharow Holkar, soubah of Malwa, in the command of the Deccan. He was now able to bring into the

field 1CO,000 men, of whom one-half were cavalry. But engaging in several unfortunate wars with his neighbours, and with the English, his power and territories were very much diminished. Holkar commenced hostilities against the English in 1804, the result of which was a treaty concluded December 24th, the following year, by which all his maritime provinces were ceded to the British. In 1817 the insurrection of the Pindarrees induced Holkar again to make war on the English, but the defection of the Peishwa deranged his operations ; and he was ultimately deprived of two-thirds of his remaining dominions. lie died in 1825.

HOLLA, interj. & v. n. \ Fr. kola. A word

HOLLOW, v.n. i used in calling to

any one at a distance : to shout ; to halloo ; to hoot : hollow is written incorrectly for holla. But I will find him when he lies asleep,

And in bis ear I'll holla Mortimer 1

What halloing and what stir is this to-day ?

Shakspeare. List, list ! I hear

Some far off holla break the silent air. Milton.

This unseen judge will wait, and in your ear Will hollow rebel, tyrant, murderer. Dryden.

I pass for a disaffected person and a murderer, because I do not hoot and hulluw, and make a noise.

A ddison.

He with his hounds comes hollowing from the stable, Makes love with nods, and kneels beneath a table.

Pope.

HOLLAND, n. $. Fine linen made in Hol- *and.

Some for the pride of Turkish courts designed For folded turbants finest Holland bear. Dryden.

HOLLAND, NORTH and SOUTH, are two important provinces of the

kingdom of the Netherlands, that have often given name to the Seven United Provinces, but these appellations have been merged in the title of the kingdom : and Holland is now, properly, the maritime peninsula of that name, divided into the two parts we have specified. It is bounded on the north and west by the German Ocean, on the east by the Zuider Zee and the ci-devant state of Utrecht, and on the south by the Meuse and Dutch Brabant ; extending from lat. 51° 40' to 53° 10' N. : its longitude is about 180 miles east of London. The length of the whole, including the Texel and the other islands of the Meuse, is about ninety miles ; the breadth is various, from fifteen to forty-eight, the greatest breadth being southward. It contains ninety walled towns, besides many others, and above 400 villages. Before the Revolution, in 1795, six large cities had seats in the states general, *viz.* Dort, Haerlem, Delft, Leyden, Amsterdam, and Gouda. The number of inhabitants was estimated at 800,000. They ako reached this number in 1801 ; but in 1817 they had been reduced by the war to 748,000.

The soil is so soft and marshy, that, but for the constant care in forming ditches and canals, it would be hardly capable of cultivation ; some part of it lies even lower than the sea, from which it is secured by dikes, twenty-five cr thirty feet high, and as many broad at top. The meadow grounds are rich, and feed great numbers of cows; the making of butter and cheese being a principal occupation. These meadows are generally under water during the winter, and the inhabitants only discharge them from it by mills adapted, as in the fenny parts of England, to this particular purpose. The Hollanders are affable, industrious, laborious, absorbed in trade, excellent sailors, moderate politicians, and lovers of liberty. A free exercise of religion is allowed to all persuasions, but Calvinism is the most prevailing.

Holland now sends twenty-two members to the States General, and, in point of jurisdiction, is under the high court of the Hague. The

division into the two governments of South and North Holland is recognised by the constitution of 1814; the former containing 1170 square miles, with 389,000 inhabitants, and being divided into the six

districts of the Hague, Ley-den, Rotterdam, Dort, Gorcum, and the Briel; while North Holland, which, in official papers, is called by its ancient name of West Friesland, contains 930 square miles, with 359,000 inhabitants, and is divided into the four districts of Amsterdam, Haerlem, Hoorn, and Alkmaar.

The following is *he population of the chief towns : —

Amsterdam	200,000
Rotterdam	54,000
Hague .	42,000
Leyden .	31,000
Haerlem	20,000
Dort	19,000
Delft .	14,000
Gouda .	12,000
Alkmaar	10,000
Hoorn .	9,000

This country was anciently inhabited by the Batavians, who derived their origin from the Catti, a people of Germany. Having been obliged to abandon their country on account of civil wars, they came to establish themselves in an island, formed by the waters of the Rhine and Wahal or Leek, and named their country Batavia or Betuwe, from Batton, the son of their king. These people served in the Roman armies in quality of auxiliary troops ; and historians inform us, that some of them were at the battle of Pharsalia. They formed the ordinary guard of the emperor Augustus. The services which they rendered Germanicus, in Germany, were so important, that the senate gave them the appellation of brothers. They had afterwards a considerable share in the conquest of Britain, under Plancius and Agricola. They strengthened the party of Galba, and afterwards that of Vi-tellius ; and it was principally to their valor that Julian the Apostate was indebted for the victory he obtained over the Germans near Strasburgh. The name of Holland is said to have been given it on account of the vast and thick forests of wood with which it was at one time covered ; Holtlant, in German, signifying woodland. Others think that the Normans, who made a descent Here about 836, gave the country this name, founding their opinion on the resemblance of names found in this country to those in Denmark and Norway, the ancient residence of the Normans; as Zealand, Oland, Schagen, Bergen, &c. On the decline of the Roman empire, the Batavians, having thrown off their yoke, came under the dominion of the Saxons, and then of the French, under Childeric I. king of France. The

Normans and the Danes were the next masters, from the time of Charlemagne, and ravaged the country three times with fire and sword. When they were driven away, Charles the Bald, emperor and king of France, erected Holland into a county in 863, in favor of Thierry, duke of Aquitaine,: who, five years after, was also made count of Zealand, by Louis king of Germany. In 1299 the county of Holland devolved to the counts of Hainault; and in 1436 it fell to Philip the Good, duke of Burgundy, and afterwards to the emperor Maximilian, whose descendant, Philip II. king .of Spain, was the last count of Holland ; the seven provinces revolting from him, and after a long struggle forming an independent republic. The states of this province had the title of the states of Holland and West Friesland, and were formed of the nobility and towns. The num-ber of the nobility admitted into the assembly was not limited, and not always the same ; they were elected by a majority of votes, and rarely exceeded ten. The towns which had a right to send deputies were originally six, but at last eighteen, of which seven were in North Hollana, and eleven in South Holland. The number of deputies sent by each town was not fixed. In the late war Holland at first appeared hostile to the new republic, but never heartily cooperated with the allies. The stadtholder was willing to co-operate heartily with Britain and Prussia, but a party more powerful than his own were his enemies, and, on the invasion of Holland by the French, in the beginning of 1795, the stadtholder with his family took refuge in England. Holland was now under various forms of French domination until the year 1813. The Batavian republic was established under the authority of France in 1795; and transformed into the kingdom of Holland, and Louis Bonaparte proclaimed king on the 5th of June, 1806. On the 1st of July, 1810, Louis abdicated the throne in favor of his eldest son, and retired as a private citizen into Bohemia. But this did not meet with Napoleon’s approbation, and he incorporated Holland with the French empire on the 9th of the same month. At length the people became weary of this connexion. The events of 1813 had weakened the power that bound them; the people rose, their fetters were broken, and ‘ Orange boven’ (up with the House of Orange), resounded through the country. A provisional government was formed at Amsterdam on the 18th of November. William Frederick, of Nassau and Orange, landed from England at the close of the same month, entered Amsterdam on the 2nd of December, and was proclaimed Sovereign Prince of the United Netherlands, on the following day. By the act of congress, signed at Vienna on the 31st of May, 1815, the seventeen provinces of the Netherlands, which had formerly been subject to the dukes of Burgundy, were reunited under the prince of Orange, as William I., king of the Netherlands. See NETHERLANDS.

HOLLAND, NEW, an island of the South Pacific Ocean, the largest in the world, and long supposed to form part of a great southern continent. The Portuguese and Spaniards appear to have visited it in the sixteenth century, but it was the Dutch who first made it known to Europe. In 1605 they coasted it along the western shore as far as 13° 45’ of S. lat. ; the farthest point of land in their map being called Cape Keer Weer, or Turn-again. In 1616 the west coasts were discovered by Dirk Hartag, commander of an outward bound vessel from Holland to India ; and in the year 1801 there was found, by some of the

navigators by whom that coast was visited, a plate of tin, with an inscription and date, in which it was mentioned that it had been left by him. In 1627 the south coast was discovered for an extentof 1000 miles, by a ship commanded by Pieter Niiyts. In 1628 the west coast was again visited by several of tbe Dutch East India vessels; and in the following year a Dutch ship, commanded by captain Pelsart, was wrecked’ on the coast. In 1642 Abel Tasman was sent by the Dutch East India Company to complete the sur-vey of the coast ; and he accordingly visited the northern shores of New Holland, which he called Anthony Van Diemen’s Land, to distinguish it from Van Diemen’s Land, in the south, previously discovered. In 1644 the western coasts were further explored by Tasman, but little is known of his discoveries in this quarter. It only appears that he represented the people as savage, and going naked, and that he could not understand their language. They once came to the number of fifty, double armed, dividing themselves into two parties, intending to have surprised the Dutch, who had landed twenty-five men ; but the firing of guns frightened them, so that they fled. Their prows are made of the bark of trees : their coast is dangerous : there are few vegetables : the people use no houses. The inhabitants are very numerous, and threw stones at the boats sent by the Dutch to the shore. They made fires and smoke all along the coast, which, it was conjectured, they did to give notice to their neighbours of strangers being upon the coast. They appear to live very poorly, go naked, and eat yams and other roots.

In 1688 Dampier fell in with this island, and visited it again 1699. He describes the inhabitants as the most miserable people in ihe world, without houses, and clothes ; black, tall, thin, straight bodied, ‘with small limbs, great heads, and heavy brows.’ Their eyelids are always half closed, to keep the flies out of their eyes, which are here so troublesome, that no fanning will drive them away from the face ; and without the assistance of both hands to keep them off, they will fill one’s nostrils and mouth too, if the lips are not shut close ; so that from their infancy, being thus annoyed with those insects, they ne-ver open their eyes like other people, and consequently cannot see far, unless they hold up their heads as if they were looking at something over them. They have great bottle noses, pretty full, and wide mouths ; are long visaged, and of most unpleasant aspect.’

Captain Cook in 1770 traced its eastern side witli an accuracy that left little to be performed by his successors. Since the voyage of this great navigator, the separation of Van Diemen’s land has been ascertained by the enterprising Bass ; and the voyages of D’Entrecastaux, Baudin, and Flinders, have completed the outline of the coasts.

The eastern coast, or NEW SOUTH WALES (which see), commences at Cape York, in 10° 30’ S. lat., and terminates at Wilson’s Promontory in Bass’s Strait, in 39° 0’ including an extent of 700 leagues. A chain of mountains appears to nin parallel to this coast, through its whole length, whose bases are from ten to thirty leagues

from the sea. Until very recently all attempts to pass this natural barrier have been unsuccessful. It has, however, at last been overcome, and, instead of the sandy deserts or the inland seas with which conjecture had occupied the interior, the discovery of beautiful meadows, watered by considerable rivers and by chains of ponds, has given to the colonists new prospects of extension and riches. The coasts towards the south are in general elevated and covered with lofty trees. Towards the north they are lower, bordered with mangrove swamps, and lined with a labvrinth of islets and coral reefs. The Blue Mountains, which rise behind the seat of the co-lony, are a mixture of primitive and secondary rocks, and have not yet been discovered to contain any metal. See BOTANY BAY.

The rivers which emptythemselves on the east coast are few, and of no magnitude in proportion to the extent of the country. The Hawkesbury, which is the most considerable, empties itself into Broken Bay, north of Port Jackson, and, though deeply encased, it

often overflows, and has several times swept away the buildings and corn magazines on its banks.

At Port Jackson the climate is nearly similar to that of the Cape of Good Hope. In December the heat is greatest, the thermometer sometimes rising to 112°, and the grass has been known to take fire spontaneously. Short intervals of north-west wind sometimes bring a degree of suffocating heat, equal to the scirocco or kamsin, while at others masses of ice eight inches long fall as hail. Tremendous storms, attended with thunder and lightning, have also occasionally occurred, and a shock of an earthquake was experienced in 1801. The climate is nevertheless extremely healthy ; and in July and August, the winter of this hemisphere, the coolness of the air is invigorating and pleasant.

The principal trees met. throughout New Holland are the eucalyptus, or gum tree, of various kinds, and the casuarina, or beef wood of the colonists of Port Jackson. With the exception of some bad roots, and a few berries, nature seems to have denied this vast country any species of alimentary vegetable, but all those of Europe and many of the tropics have been introduced into the colony.

The native dog excepted, all the quadrupeds discovered in New Holland approach the didel-phus genus, by the pouch or sack formed of the skin of the belly, and in which their young take shelter when alarmed. The largest of these animals is the kangaroo, which grows to the length of five feet. A smaller species, named brush kangaroo, is the size of the hare ; and the little animal named the kangaroo rat is only so called from its diminutive bulk. The womat is the size of a turnspit dog, and has some resemblance to the bear. The tachyglossus has the figure of the porcupine of Africa and the manner of feeding of the ant-eater of America. The amphibious mole, ornithorincus, is a very singular animal, having the jaws of a quadruped terminated by the bill of a duck, the feet webbed and with claws, and, from the absence of breasts in the female, it is supposed to be oviparous ; it is about sixteen inches long, and lives in fresh

water ponds The flying opossum has its name from the long leaps it takes from tree to tree, and which it is enabled to do by the skin which unites the fore and hind legs on each side of the body. The native dog is of the jackal species, and never barks ; though it follows the native, it is not to be entirely domesticated.

The birds, which are particularly deserving mention, are the cassowary or emu, the menura superba, a pheasant which unites the beauties of the bird of paradise and the peacock. Among the parrot tribe are many beautiful species, and particularly the large white a,.d the black cocka-too. Aquatic birds are numerous, and among them are a gigantic pelican, some new species of geese and ducks, and the black swan, which is met in vast numbers towards the south. The other birds are the brown eagle, several species of falcons, crows, kingfishers, bustards, pigeons of several species, quails, curlews, herons, &c.

Lizards and snakes are met with in abundance, and swarms of winged insects darken the air, particularly moths, of which the variety is endless.

The indigenous population of New Holland are of the grand stock of Oceanic Negroes, hav-ing the hair frizzled but not woolly, the nose flat, nostrils large, mouth enormously wide, lips thick, and eyes hollow ; the teeth are white and even, the sight extremely quick, the limbs disproportionably slender, doubtless from their miserable nourishment. In some the complexion is as black as the African negro, while others are nearer a copper color. Their thick bushy beards, and the bones and reeds they stick in their noses, give the men a horrible appearance, which is not improved by the daubing their faces with red or white clays, and anointing their bodies with stinking fish oil, which, collecting the dust, forms a crust of filth that defies the sting of the musquito. Although they seem at times to feel very sensibly the chilliness of the air, they have no idea of any other clothing than a few skins of dogs or opossums sewed together, with which they cover their shoulders, and which are only used by the men, the women going entirely na-ked. In every other respect the New Hollanders seem to be the people under the sun who have made the least progress in civilisation.

The food of those who inhabit the coasts is confined to the fish they strike with their spears, or which their women take with hook and line, and to the shell-fish they detach from the rocks at low water ; an occasional dead whale also, that drives ashore, affords them a feast, which they never quit until it is all devoured. Those who inhabit the woods suosist on the few opossums and other animals they can catch,

on wild honey, lizards, and worms.

Their huts are composed of branches of trees, shaped like an oven, the fire-place before the opening, while the smoke and ordure remain inside, and here they sleep pell-mell with their knees to their mouths. Their canoes are of bark tied at the ends and extended by cross sticks. Their weapons are spears pointed with bones of animals or fish, or with bits of spar, clubs and bucklers of bark. Their implements are a stone

adze, their fishing hooks of pearl-shell, and their lines of the inner bark of a tree.

Their societies consist of tribes of twenty to thirty individuals, who are distinguished by the word gal added to the name of the district they occupy ; thus Botany Bay is called Gwea, and its tribe Gwea-gal. Polygamy is general, and the manner of procuring a wife is unparalleled in brutality. The man who fancies a girl watches until he finds her unprotected by any of her tribe, when he fells her to the ground with his club, and drags her bleeding and senseless to his hut, where the marriage is consummated in a manner too disgusting for description ; and she afterwards follows him as his wife, without the smallest idea of escaping from the frequent repetition of the most barbarous treatment.

Among their singular customs is that of depriving the women of the two first joints of the little finger of the left hand. One tribe has also the right of extracting a front tooth from the young men of other tribes ; and recently women have been met with, in the interior, with but one eye, being deprived of the other as it would ap-pear intentionally.

The New Hollander's ideas of a future state extend to the belief, that after death they re-turn to the clouds, whence they originally dropped, an idea also found amongst the Alfo-rezes of Ceram. They are the slaves of superstition, believing in magic, witchcraft, and spectres ; hence they will not approach a grave. They also draw omens from falling stars, and have charms against thunder and lightning. The young people are buried, but warriors past the middle age are burned. The horrible custom also prevails of burying the suckling infant with its mother, and the foetus is often destroyed in the womb ; both which practices doubtless arise from the difficulty of rearing children. Nevertheless these savages are not entirely devoid of the feelings of

human beings : they have been seen to weep over the graves of their friends or relations; they show a high respect for old age; and they have not that irresistible propensity to thieving which marks the islanders of the Pacific.

The language of the tribes that inhabit the colony is sonorous and not disagreeable to the ear; but those who live both to the north and south have dialects radically different from each other, and from any known language.

On the separation of the British American colonies from England, she was at a loss where to send those criminals whom the law did not condemn to capital punishments, or whose sentence of death the sovereign mitigated. The west coast of Africa, between Cape Negro and the Cape of Good Hope, was first thought of for this purpose; but, on the recommendation of Si Joseph Banks, New South Wales was fixed upon, and in 1788 the fleet with the persons intended to found the settlement arrived at Botany Bay ; but, this place being found ineligible, the governor Philip made choice of Port Jackson, twelve miles farther north, which had been seen and named, but not examined by Captain Cook, and the infant town received the name of Sydney. Although in its infancy the colony had to con-NEW HOLLAND.

tend against great difficulties, arising from the necessity of procuring every species of provision from England, and above all from the evil habits of the colonists, and latterly from the dissensions amongst the chief persons forming its government : nevertheless such is the force of the innate principle of man to better his condition, that, in spite of every obstacle, the colony has always advanced, and has at last become nearly independent for necessaries of the mother country. See WALES, NEW SOUTH.

In 1811 the colonial shipping consisted of twenty-nine vessels, from fourteen to 186 tons, chiefly employed in conveying coals from Coal River, corn from the Hawkesbury and George’s River, and sealing among the islands in Bass’s Strait.

Port Jackson is an excellent harbour, entered between two high steep heads, and penetrating many miles, forming upwards of 100 coves.

The only danger is a ledge of rocks across the entrance, leaving a channel on each side with four fathoms depth. Sydney Town is composed of good houses of stone and brick, of the officers of government and chief free settlers ; the habitations of the lower class are of wood, plastered. The public buildings are a church, barracks, a jail, orphan school, a stone bridge over a little creek which receives a small run of fresh water, and the government-house.

The out settlements immediately dependent on Sydney are Paramatta at the head of the harbour, consisting of barracks, a government-house, church, and jail, with a street of dwelling houses. The Greeuhills or Hawkesbury, on the banks of the river, of this name, consists of a large granary of brick, and a number of wooden dwelling-houses. An establishment was found in 1805 at Coal River, in Port Hunter, north of Port Jackson, which received the name of King's Town.

The topography of New Holland, after taking leave of the colony of Port Jackson, offers little more than barren names. We shall, however, endeavour to present the reader with an idea of its principal points. Commencing at Cape York, which forms the south side of Endeavour Strait of Cook, the coast trends south-east to Cape Flattery, and then S.S.E. to Magnetic Is-land. South of Cape Flattery is Endeavour River, where captain Cook observed alligators and oysters of an enormous size. The natives baked their victuals in holes in the ground. From Magnetic Island, so named from the vacillation of the needle near it, the coast again takes a south-east direction, to the Great Bay of In-lets of Cook, before which are many islands; and from the latitude of 17° to 23° a chain of coral reefs defends the coast from the attacks of the sea, and has been named by captain Flinders Barrier Reefs. In Broad Sound the tide rises thirty or thirty-five feet. No fresh water was found on its shores, and this necessary object is only found in stagnant pools in Shoal-water Bay, where captain Flinders observed pummice stone washed up on the shore. The eastern direction of the coast ends at Sandy Cape, the south point of Hervey Bay, where the huts of the natives \vere observed by Cook to be constructed with more solidity than to the south. Glass-house Bay was named from several hills behind it resembling those edifices. It receives some rivers, considerable in comparison with the scanty rills met on all the rest of the coast to the north ; and pummice stone was found on its shores.

From Point Look-out the coast takes a direction to the west of south, and has no place of shelter to Port Stephens, where commences the immediate territory of the colony of Port Jackson, named Cumberland County. Port Stephens (Yaca-aba of the natives) is full of shoals, and

only fit for small craft. Broken Bay is a large expanse of water, dividing into many branches, and receiving the river Hawkesbury, the most considerable of New Holland; it is navigable to the settlement at the Green Hills, ninety miles from the sea; but about twelve miles above this, its bed is crossed by a bar of rocks.

South of Port Jackson the coast has been minutely explored, and found to possess the following places in succession. Botany Bay, thus named by Sir Joseph Banks, from the great variety of plants found on its shores ; it is a large expanse of water, but so filled by banks as to afford no anchorage for ships, except exposed to the sea. Its shores are also in many places swampy. It receives George's River, of considerable size, on which are some farms, whose produce is sent by sea to Sydney.

From Cape Howe the coast takes an abrupt westerly direction, trending about south-west to Wilson's Promontory, in Bass's Strait. This promontory, which is the south point of New Holland, is a vast mass of granite, joined to the continent by a narrow low isthmus. Between it and Cape Howe the shore presents an unbroken continuity of white sandy beach.

On the south coast of New Holland, in Bass's Strait, are Western Port and Port Philip. The former, discovered by Bass, has since been examined by Baudin, and found to contain two islands instead of one. It is a large basin, fit for the reception of ships of burden.

Port Philip, discovered by lieutenant Grant, is entered from a large bay, to which the English navigator gave the name of King, and the French that of Talleyrand. From an entrance only half a mile wide Port Philip expands to a basin 150 miles in circuit. Its shores are in general moderately elevatpd and sandy, but covered with wood, particularly the casuarina. Except a small river, which it receives, it is al-most totally destitute of fresh water, and hence the intention of forming an establishment here was abandoned.

From Cape Albany Otway (Cape Marengo of the French) the west point of Bass's Strait, the coast takes a direction to the (north of west. The whole extent, from 130° of longitude to Bass's Strait, was visited nearly at the same time by captain Flinders, and Baudin the French navigator.

From Cape Bridgewˆler (Montaigne) to the Gulf of St. Vincent (Bay Josephine) the coast is composed of sandy cliffs, and frightfully barren.

NEW HOLLAND.

Spencer's Gulf (Gulf Buonaparte;) is separated from that of St. Vincent by a peninsula named York by captain Flinders, and Cambaceres by ihe French ; it is seventy leagues deep and ten to twenty-five broad, and terminates in a mangrove swamp. Near the entrance of the gulf, on the west shore, is Port Lincoln (Champagny), an excellent harbour, formed by three basins, whose entrance is covered by an island.

The coast which forms the west shore of the Australian Bight of Flinders, was discovered by Nuyts, in 1627. From the head of the bight to longitude 123° it is composed of sandy cliffs, from 400 to 600 feet high, forming a level platform, with very few trees, and beyond which inland nothing is visible from the sea. On this singular line of coast captain Flinders observes, ' that the equality of elevation, and the evidently calcareous nature, seem to bespeak it to have been the exterior line of a vast coral reef, which is always more derated than the interior part. From the gradual subsiding of the sea, or perhaps by a sudden convulsion of nature, this bank may have attained its present height above the surface of the sea ; and on this supposition, together with the fact of no hill or elevation being seen within it, it may be presumed, that in that direction there is either a low sandy plain, or the bank may be a barrier separating the external from an internal sea.' Behind the Lucky Bay of Flinders is a fresh water lake, a mile in extent, communicating with the sea by a rivulet. The coast continues low and sandy, with some intervals of barren hills, apparently granite, to King George the Third's Sound of Vancouver.

This is a large gulf with two good ports. The shores are composed of perpendicular cliffs, or sand-hills, behind which, in the interior, rise high mountains, whose white and elevated summits resemble vast edifices in ruins ; Mount Gardner has the appearance of being a volcano. On some of the promontories perfect coral is found, at the height of 1000 feel above the sea.

The south-west part of New Holland is named in the maps Leeuwin, or Lion's Land, from the Dutch ship that first visited it in 1660. Cape Leeuwin is the south-west point.

The land of Edels comprehends the middle of the west coast. Swan River in 32° 4', was ascended by the French twenty leagues, and found to run through a low country, traversed by calcareous strata, and covered with large eucalyptus.

Endiacht, or Concord Land, extends along the northern part of the west coast, under the tropic.

The Shark's Bay of Dampier is surrounded by sandy shores, but wooded. . Dampier mentions seeing here rabbits with very short fore legs, evidently, the kangaroo. The French naturalists observed that these coasts are covered with petrified shells, and that the incrustations calcareo-greeous formed them. The peninsula of Peron divides Shark's Bay into two gulfs, both forming good roads, but devoid of fresh water.

De Witt's Land includes all the north-west part of New Holland, and is the least explored.

The points seen by Dampier are composed of sandy downs, with fir-trees (doubtless the casuarina) and no water. Cape Murat of the French seems to be the Cape William of the Dutch. Capes Poivre, Malouet, and Dupuy, in 20° 30', form a great promontory, between which and Rosemary Island, one of the archipelago of Dampier, the coast is entirely unexplored.

About the 121° there is an opening not examined, twenty-six leagues in breadth, whence the coast extends to the north-west and north. It is not certain whether Cape Missiessy in 19° 12', and Cape Vallerat in 18° 12', are on an island or the continent. From Cape Hugyens, in 17° 38', the coast lies north. Near the Cape is Gantheaume Island, of considerable size.

From Cape Rhuliere to Cape Van Diemen in 11° 10', the coast forms a great gulf to the south-east, and the land of De Witt terminates at the latter Cape.

The land of Arnheim extends from Cape Van Diemen to the gulf of Carpentaria. In Van Diemen's Bay, on this coast, the sea is said to be occasionally luminous, and hence this phenomenon probably spreads into the Banda Sea, as already noticed. Further east the Dutch charts mark Difficult Bay, which receives the river Speult, and before which is Crocodile Island.

The gulf of Carpentaria in the old Dutch charts presents such a number of rivers, that it was generally considered as receiving almost all the fresh waters of New Holland. Captain Flinders, who sailed entirely round it, found that not one of these supposed rivers has any existence ; but, on the contrary, that fresh water is generally more scarce here than even on the east coast. The western side of the gulf is moderately elevated and lined by chains of considerable islands, while the eastern coast presents a continuity of very low sandy shores, entirely free from islands. The principal trees are the eucalyptus and casuarina.

The first considerable bay on the west shore is that of Arnheim, before which are the Wessels and English Company's Islands, composed of sterile hills, but with valleys, through which run streams of fresn water, and in which are found the wild nutmeg and cabbage palm. These islands are visited by Malay proas from Timor and Macassar to procure trepang. Grcot Island, of the Dutch charts, named Busching by the German geographers, is before Limmen's Bight. Sir Edward Pellew's Islands, farther south, abound in the cabbage palm and kangaroos ; and Wellesley's Group, the last towards the head of the gulf, are frequented by innumerable green turtle.

The natives seen by captain Flinders in the gulf, differed in no respect from those of Port Jackson, except in having lost two of the upper front teeth, and in being circumcised. A curious fact in the history of these savages, unless it is supposed that they have adopted this practice from the Mahommedan Malays who visit the gulf, which is not, however, probable. The canoes of these people are composed of strips of bark, whose edges overlay each other and are sewed together.

HOLLAND (Philemon), M. .D., commonly called the translator-general of his age, was educated in the university of Cambridge. He was long

a schoolmaster at Coventry, where he also practised physic. He translated Livy, Pliny's Natural History, Plutarch's Morals, Suetonius, Ammianus Marcellinus, Xenophon's Cyropaedia, and Camden's Britannia, into English; and the geographical part of Speed's Theatre of Great Britain into Latin. The Britannia, to which he made many useful editions, was the most valuable of his works. It appears from the date of the Cyropsedia, that he continued to translate till he was eighty years of age. He died in 1636, aged eighty-five.

HOLLAR (Wenceslaus), a celebrated engraver, born at Prague in 1607. His parents were in a respectable line of life ; and he was at first designed for the law. But the civil commotions which happened in his youth, ruining his family affairs, he was placed with Marian, a very able designer and engraver of landscapes, under whose instructions he made rapid progress. He now principally excelled in drawing geometrical and perspective views and plans of buildings, ancient and modern. He travelled through several of the great cities of Germany ; but, notwithstanding his merit, met with so little encouragement, that he found it very difficult to support himself. The earl of Arundel being in Germany, however, took him under his protection, and recommended him to king Charles I. of England. He engraved a variety of plates from the Arundel collection, and the portrait of the earl himself on horseback. The civil wars which happened soon after in this country ruined -his fortune. He was taken prisoner, with some of the royal party, and with difficulty escaped ; when he returned to Antwerp, and joined his old patron. Here he settled for some time, and published a considerable number of plates ; but, his patron leav-jng the place, Hollar fell again into distress, and was obliged to work for the booksellers. At the Restoration he returned to England, where he still could but barely subsist; and the plague, with the succeeding fire of London, putting a stop to business for some time, his affairs were so much embarrassed, that he never afterwards obtained a tolerable maintenance. It is said that he used to work for the booksellers at the rate of four-pence an hour ; and always had an hourglass before him. He died in 1677. His works amount nearly to 24,000 prints, according to Vertue's Catalogue ; and the lovers of arts are zealous to collect them. They are etchings performed almost entirely with the point ; and possess great spirit. His views of abbeys, churches, ruins, &c., with his shells, muffs, and every species of still life, are admirable ; his landscapes frequently have great merit; and his distant views of towns and cities are not only executed in a very accurate, but a very pleasing manner.

HOLLOW TOWER, in fortification, is a rounding made of the remainder of two brisures, to join the curtain to the orillon, where the

small shot are played, that they may not be so much exposed to the view of the enemy.

HOLLY, n. .1. Saxon, boleyn ; Dutch, hiJs ; Lat. ilex. A plant. The leaves are set about VOL. XI.

the edges with long, sharp, stiff prickles: the berries are small, round, and generally of a red color, containing four triangular striated seeds in each. Of this tree there are several species; some variegated in the leaves, some with yellow berries, and some with white. — Miller. Fairest blossoms drop with every blast ;

But the brown beauty will like hollies last. Gay.

Some to the holly hedge Nestling repair, and to the thicket some ; Some to the rude protection of the thorn. Thomson.

HOLLY, in botany. See ILEX.

HOLLY, KNEE. See Ruscus.

HOLLY, SEA. See ERYNGIUM.

HOL'LYHOCK, n. s. Sax. bohbeck commonly called holyoak. Rosemallow. It is in every respect larger than the common mallow.

Holyoaki far exceed poppies for their durableness, and are very ornamental. Mortimer.

HOLLYHOCK. See ALCEA.

HOL'LYROSE, n. s. J D1 A - .,

, Plants. — Amsworth

HOL LYTREE. 5

HOLMAN (Joseph George), a dramatic writei and performer, was born in London, and educated at Queen's College, Oxford, with a view lc the church ; but, having a passion for the stage, he soon quitted the university; and made his debut, in 1784, at Co vent Garden theatre. At the end of the season he repaired to Dublin, and to Edinburgh ; but remained with the Coven* Garden company until 1800. Upon a difference, with the manager, he repaired to America, where he became manager of the theatre in Charlestown. His death took place

in 1817, together with that of his second wife, two days after their marriage, by the yellow fever. His productions are, Abroad and at Home, a comic opera ; Red Cross Knights, a play; Votary of Wealth, a comedy; What a Blunder, a comic opera ; Love gives the Alarm, a comedy ; and The Gazette Extraordinary, a comedy.

HOLME, n. s. Holme or howme, whether jointly or singly, comes from the Saxon bolme, a river island ; or if the place be not such, the same word signifies also a hill, or mountain. The ilex ; the evergreen oak.

Under what tree did'st thou take them companying together ? who answered, under a holm tree.

Su». 58.

The carver holme, the maple seldom inward sound.

Spenter.

HOLME, in botany. ' See ILEX.

HOLME SOUND, a beautiful frith, on the coast of Orkney, leading to the German Ocean by Stromness. It has a circular island in the middle, called Lambholme, three miles in circumference, on which there is a farm, and which forms with the main land a pretty safe place of anchorage for ships of 200 tons burden. It has a small pier, along side of which vessels of fifty tons may lie securely.

HOLMES, FtATandSHARp, two small islands in the British Channel, three leagues from the coast of Caerdiff. The former has about sixty acres of land, well cultivated, and a lighthouse, where several pilots are to be found. The latter is between Somerset and Wales ; and is a per-Y

pendicular rock, about 400 feet high, inaccessible except by two small passages. The soil is sandy and barren.

HOLMIT£, anew mineral, which occurs crystallised in the form of an oblique four-sided prism, and having a specific gravity of 3-597. Its constituents are 27 lime, 21 carbonic acid, 6£ alumina, 6£ silica, 29 oxide of iron, and 10 water.

HO'LOCAUST, n.s. Gr. oXoc and KOIW. A burnt sacrifice; a sacrifice of which the whole was consumed by fire, and nothing retained by the offerer.

Isaac carried the wood for the sacrifice, which being an holocaust, or burnt-offering, to be consumed unto ashes, we cannot well conceive a burthen for a boy.

Browne.

Let the eye behold no evil thing, and it is made a sacrifice j let the tongue speak no filthy word, and it becomes an oblation ; let the hand do no unlawful action, and you render it a holocaust. K«y—

Eumenes cut a piece from every part of the victim, and by this he made it an holocaust, or an entire sacrifice. Broome.

HOLOCAUSTS, from oXoc, whole, and <caia>, I consume with fire, are often mentioned by the heathens as well as Jews ; particularly by Xenophon, who speaks of sacrificing holocausts of oxen to Jupiter, and of horses to the sun : and they appear to have been in use long before the institution of the other Jewish sacrifices by the law of Moses : see Job i. 5, xlii. 8, and Gen. viii. 20, xxii. 13. On this account the Jews, who would not allow the Gentiles to offer on their altar any other sacrifices peculiarly enjoined by the law of Moses, admitted them by the Jewish priests to offer holocausts ; because these were a sort of sacrifices prior to the law, and common to all nations. Holocausts were deemed by the Jews the most excellent of all their sacrifices. It is said that this kind of sacrifice was in common use among the heathens, till Prometheus introduced the custom of burning only a part, and reserving the remainder for his own use. See SACRIFICE.

HOLOFERNES, a lieutenant-general of the armies of Nabuchodonosor, king of Assyria, who, having in a remarkable encounter overcome Arphaxad king of the Medes, sent to all the neighbouring nations requesting them to submit to his empire, and pretending that there was no power capable of resisting him. At the same time, he passed

the Euphrates, at the head of a powerful army, entered Cilicia and Syria, and subdued almost all those provinces. Being resolved to conquer Egypt, he advanced towards Judea, little expecting any resistance from the Jews. But he was soon informed that they were preparing to oppose him ; and he accordingly began to besiege Bethulia. Having cut off the water which supplied it, and set guards at the only fountain which the besieged had near the walls, the inhabitants were soon reduced to extremity, and resolved to surrender, if God did not send succours in five days. A female named Judith, being informed of their resolution, now resolved, it is said, to kill Holofernes in his tent. She accordingly repaired to his tent richly attired, and pretended that God had

inspired her with the design of surrendering herself to him; when, in raptures with her beauty, he invited her to a great feast, and sunk upon his couch intoxicated. Judith, who in the night was left alone in his tent, cut off his head with his sword ; and, departing with her servant, returned with it to Bethulia. At day-break the besieged made a sally upon their enemies, who, going into the general's tent, discovered his headless carcase. They now fled with precipitation, leaving their camp, and its rich spoil, to the Jews; who pursued them, killed a great number, and returned loaded with booty. There is a great diversity of opinions concerning the time when this war between Holofernes and the Jews happened. Some date it in the captivity of Manasseh, and the pontificate of Eliakim the high-priest ; others place it at some time after the Babylonish captivity ; and many doubt the truth of the whole transaction.

HO'LOGRAPH,«.s. Gr. oXoc ypaˆw. This word is used in the Scottish law to denote a deed written altogether by the granter's own

i i T '- * ™

hand.

HOLOGRAPH, or HOLOGRAPHUM, of o\of, all, and 7pa0o», I write, in the civil law, is chiefly used of a testament written wholly in the testa-tor's own hand. The Romans did not approve of holographic testaments ; and, though Valentinian authorised them, they are not used where the civil law is in full force.

HOLOSTEUM, in botany, a genus of the tri-gynia order, triandria class of plants ; natural order twenty-second, caryophyllei : CAL.

pentaphyllous ; the petals five : CAPS, unil ocular, and nearly cylindrical, opening at top. Species five, of which one only, H. umbellatum, found flowering on old walls in the spring, is a native of Britain.

HOLOTHURIA, in zoology, a genus belonging to the order of vermes mollusca. The body detached, naked, gibbous, terminated by the anus : many tentacula at the other extremity, surrounding the mouth. There are twenty-three species, all inhabitants of the ocean.

1. H. pentactes, the five-rowed holothuria, has the mouth encompassed with tentacula, the body bearing tentacula five different ways. The animal is of a red color, nearly oval, or somewhat cylindrical, assuming various shapes. The mouth is set round with ten rays bristly at the points; the body longitudinally dotted in five places with clay-colored hoi haw warts, situated two together. It inhabits the sea of Norway, taking in and casting out again the water as it swims.

2. H. physalis, the bladder-shaped holothuria. The body of this species is oval, approaching to triangular, of a glossy transparency ; the back sharp-edged, of a dark green color, whence run out a number of sinews : anteriorly the body is of a reddish hue. The trunk spiral, reddish, towards th»3 thicker 3nd. Many tentacula of unequal length under that thicker end; the shorter ones are taper and thicker, the middle ones capillary, the point clay-color, and in shape like a ball ; the rest are loneer and filiform, of which the middlemost is thicker, and twice as long. Brown, in his Jamaica, calls it a diaphanous bladder with numerous tentacula representing a man’s

belly ; above, it is furnished with a comb full of cells : under the other extremity hang a number of branchy tentacula.

3. II. tremula, the quivering holothuria, commonly measures eight inches in length when dead ; but alive it extends itself more than a foot, or contracts its body into a ball. Its figure is cylindric, the diameter of which is every way equal to an inch and a few lines. The back, of a dark brown, bears a variety of fleshy pyramid-like nipples, of a dark color likewise at their basis, but white at their apex. Out of them all exudes a whitish mucilage, serving to lubricate the body. The belly is of a pale brown, and set all over with cylindric tentacula, in such numbers that the head of a pin could scarcely find room between. Their diameter is not much above a line, and their length is that of four lines. They are of a shining whiteness, except the extremity, which is of a dark color, and shaped like a socket. By the help of these tentacula the holothuria fixes its body at the bottom of the sea, so as not to be easily forced away by tempests, which would otherwise happen the more frequently, as this zoophyte dwells near the shores where the water scarcely rises to a fa-thom's height.

HOLP,) The old preterite and participle

HOLPEN. 5 of HELP, which see.

His great love, sharp as his spur, hath holp him To's home before us. Shakspeare.

In a long trunk the sound is holpen, though both the mouth and the ear be a handful from the trunk ; and somewhat more holpen when the hearer is near, than when the speaker. Bacon.

HOLROYD (John Baker), lord Sheffield, a modern political writer and statesman, was a native of Yorkshire, and descended from an ancient family. When young he served under the marquis of Granby, in Germany, and afterwards travelled. On his return to England in 1776 he retired to the country, but during the American war raised at his own expense a regiment of dragoons, of which he had the command ; and was commonly called colonel Holroyd. He was created lord Sheffield, of Dunamore in Ireland, while he sat in the house of commons as member for Bristol. He was next promoted to an Irish earldom; and in 1802 to an English barony. His death happened May 30th, 1821, at the age of eighty. Lord Sheffield wrote Observations on the Commerce of the American States, which went through several editions ; besides tracts on the Slave Trade, and on Irish affairs. He is most known, however, as the friend of Gibbon, and the editor of his posthumous works.

HOLSTEIN, an extensive duchy of Denmark, at the northern extremity

of Germany, bounded by the German Ocean and the Elbe west and south, the Baltic on the east, and Sleswick on the north ; on the coast it has the gulf of Kiel, the bay of Colberg, and the gulf of Lubeck. Its superficial extent is about 3250 square miles.

The eastern part is hilly, and abounds in woods and lakes ; but Holstein has no mountains of importance. In the neighbourhood of Kiel, the capital, and Lubeck, the ground is well cultivated and f.n le; but the central part of the

duchy is barren and heathy : the western part, on the shores of the Elbe and the German Ocean, is a flat low alluvial tract, secured with dike? against the sea. The soil of the higher parts is often light and sandy. The principal rivers of Holstein are the Elbe,- the Eyder, and the Stor ; the only lake of consequence is the Ploen. The canal of Kiel (See DENMARK) joins the Baltic to the Eyder and the German Ocean. The productions of Holstein are very similar to those of England, *viz.* wheat, barley, and oats; potatoes, hemp, flax, hops, and fruit; but its wealth is in its pasturage, sheep, and cattie. It possesses also vast numbers of horses, and the breeds are in general good. The mineral products are lime and salt, manufactured at Oldenlohe : the chief quarries of lime are in the neighbourhood of Segeberg. The only important sea-port is Al-tona. Gluckstadt, a smaller sea-port, is situated lower down the Elbe. Altona has a population of 23,000; Rendsburgh, 7600; Kiel (the capital), 7100; and Gluckstadt, 5200: the whole duchy about 360,000 souls. Lutheranism is the prevailing religion.

The exports of Holstein are cattle, horses, cheese, butter, and corn : 6000 horses are supposed to be sent abroad annually. The manufactures, with the exception of those of Altona, are-not extensive.

This duchy is divided into Holstein Proper, the lordship of Pinneberg, and the county of Ranzau ; the last two being small districts in the south-west, adjacent to Altona. Older divisions, now obsolete, were Stormarig, Ditmarscb, Wa-gria, and Holstein Proper. The whole is subdivided into bailiwics.

Charlemagne declared Holstein the northern frontier of Germany along the Eyder: it was then constituted an earldom, subsequently a duchy, and in 1523 became united with Denmark, on the reigning duke obtaining that crown : since then its history is identified with that of DEN MARK, which see. In 1806, on the formation of the

confederation of the Rhine, the whole of the duchy, along with Pinneberg, Ranzau, and Al-tona, were declared to form no longer a part of the empire ; and the king of Denmark lost his seat in the diet. In 1815, on the establishment of the Germanic confederation, he was re-admit- ted by the congress of Vienna, and was allowed, for this duchy and Lauenburg, three votes in the general assembly, and a place, the tenth in rank, at the ordinary diet. The interior constitution of Holstein has since received material improvement; and the Danish laws are universally introduced.

HOLSTEIN (Luke), or Holstenius (Lucas), a learned German, born at Hamburg in 1596. lie was bred a Lutheran ; but, being converted to popery by F. Sirmond the Jesuit, he went to Rome, and attached himself to cardinal Francis Barberini, who took him under his protection. Pope Urban VIII. gave him a canonry of St. Peter's ; Innocent X. made him librarian of the Vatican ; and Alexander VII. sent him, in 1655, to queen Christina of Sweden, whose formal profession of the Catholic faith he received at Inspruck. He spent his life in study, and was very learned both in sacred and profane autiquity. Though

he was not the author of any great works, his notes and dissertations on the works of others have been highly esteemed for the judgment and precision with which they are drawn up.

HOL'STER, n. s. Sax. Jjeolj-teri ; Dan. hyi- «fer, from to hold, a hiding-place. A case for a horseman's pistol.

In's rusty hulsters put what, meat Into his hose be could not get. Hudibras.

HOLT, whether at the beginning or ending of the name of any place, signifies that it is or hath been woody, from the Saxon \>o"c, a wood ; or sometimes possibly from the Saxon \>ol, i. e. hollow, especially

when the name ends in tun or dun.

HOLT (Sir John), eldest son of Sir Thomas Holt, serjeant at law, was born in 1642. He entered himself of Gray's Inn in 1658 ; and soon became a very eminent barrister. In the reign of James II. he was made recorder of London, •which office he discharged with much applause for about a year and a half; but lost his place for refusing to support the king's arbitrary measures. On the arrival of the prince of Orange, he was chosen a member of the convention parliament, which afforded him a good opportunity of displaying his abilities : so that, as soon as the government was settled, he was made lord chief justice of the court of king's bench, and a privy counsellor. He continued chief justice twenty-two years, with great repute for steadiness, integrity, and thorough knowledge in his profession. Upon great occasions he asserted the law with intrepidity, though he thereby incurred by turns the indignation of both houses of parliament. He published some Reports, and died in 1709. He had a British abhorrence of the interference of the military in popular tumults. When applied to sanction, by the presence of one of his people, the proceedings of the military sent to quell a riot excited by the infamous practice of crimping, the chief justice asked the officer what he intended to do if the populace refused to disperse. He replied, ' we have orders to fire upon them :' ' Have you so ?* said the judge ; ' then observe, if one man is killed, I will take care that you and every soldier of your party shall be hanged. Sir, acquaint those who sent you, that no officer of mine shall attend soldiers, and let them know,, likewise, that the laws of this land are not to be executed by the sword. These things belong to the civil power, and you have nothing to do with them.' s

HOLT, a market town of the county of Norfolk, pleasantly situate on a hill eighteen miles north from East Dereham, and 119 from Lon-don. It is a neatly built town, with a good sessions-house, which is also used tor an assembly-room. The poor-house is a liandsome building; and there is an excellent free-school,, founded by Si-John Gresham, in the market-place, which Jias annexed to it a scholarship and fellowship in Sydney College, Cambridge. The patronage and government of this school is in the London Fishmongers' Company. Market on Saturday.

HOLWELL (John Zephaniah), F. R. S., a gentleman memorable on account of his literary merits, as well as from his being the last survivor of the twenty-three who escaped the dreadful ca-

tastrophe in the Black Hole at Calcutta, in 1756. He was born in 1700,. and at an early period of life was sent to Bengal as a writer in the East India Company's service. In 1756 he was se-cond in council at Fort William, when an offence was given to the nabob of Bengal by the governor's protecting a fugitive native. In revenue for this, the nabob marched against the fort with a powerful army. Drake, the governor, who had given the offence, deserted his station, and the command devolved on Mr Holwell, who, with the few men he had, bravely defended the place to the last extremity. The-melancholy consequences are related in our articles CALCUTTA and INDIA. Mr. Holwell's excellent constitution overcame all his hardships, and soon after his release he returned to England. In 1758 he published a well written and affecting narrative of the sufferings of himself and his companions. He wrote also several tracts on Indian affairs, particularly a work in three parts, entitled Events relative to Bengal and Hindostan. The Manner of Inoculating for the Small Pox in the East In-dies. A new Experiment for the Prevention of Crimes; published in 1786. He also published a tract, entitled Dissertations on the Origin, Na-ture, and Pursuits of Intelligent Beings, and on Divine Providence, Religion, and Religious Worship. Mr. Holwell died at his seat at Pin-ner, in Middlesex, on the 5th of November, 1 798, in the ninety-eighth year of his age.

HOLY GHOST. See THEOLOGY.

HOLY GHOST, ORDER OF THE, one of the principal military orders in France, instituted by Henry III. in 1569. It consisted formerly of 1 00 knights, who were to make proof of their nobility for three descents. The king was the grand master or sovereign ; and, as such, took an oath on his coronation day to maintain the dignity of the order. The knights wore a golden cross (see diagram), hung

about their necks by a blue silk riband or collar. But before they received the order of the Holy Ghost, that of St. Michael was conferred as a necessary degree ; and for this reason their arms were sunounded with a double collar.

HOLYHEAD, a sea-port and market-town, cape, and parish of Wales, on the Isle of Anglesea, in the Irish Channel, whence packet-boats for Dublin usually sail every day. It has a mar-ket on Saturday. The parish is a peninsula about six miles long, and two or three broad, bounded nearly the sea. The church stands above the harbour, within an old quadrangular fortification, with-a bastion at each corner, built about 450. On a mountain near it is another old fortification called Turris Munimentum, which is a stone wall without mortar ; and in its centre is a small turret, that contains a well. Holyhead was formerly visited by Irish rovers, and was defended as a place of consequence. There are several druidical remains in its neighbourhood. The church was built in the reign of Edward III. and is m the form)f a cross,

with a very antique porch and steeple. The old chapel near it is now converted into a school-house. A salt-house was erected on an island in the harbour in queen Anne’s reign, but it is now in ruins. It is said that one of the Welsh princes founded a college here about the year

580 ; but some suppose that it was not founded till the beginning of the twelfth century. The head of this college was called Pendas, and was one of the three spiritual lords of Anglesea. At the dissolution of the monasteries it became the property of the Gwynnes, till in 1648, it was settled by Thomas Gwy nne, esq. on Jesus' College, Oxford, for the maintenance of two fellows and as many scholars. It has good inns, but no fresh water, except from the clouds, nor any bread but what comes from Ireland. A bath and assembly-room were erected in 1770. Under the mountains that overhang the town is a large ca-vern in the rock, supported by natural pillars, called the Parliament House, accessible only by boats, and the tide runs into it. The rocks abound with sea-ware, of which they make kelp. It is 9 miles S. of the Skerries, 60 E. of Dublin, and 290 N.\V. of London. It is contributory with Beaumaris in sending a member to parliament.

HOLY ISLAND, a small island on the coast of England, ten miles south-east of Berwick, in Northumberland. Bede calls it a semi-island, as being twice an island and twice continent in one day ; for, at the flowing of the tide, it is encompassed by water : and, at the ebb, there is almost dry passage both for horses and carriages to and from the main land ; from which, if measured on a straight line, it is about two miles east; but, on account of some quicksands, passengers are obliged to make so many detours that the length of the way is nearly doubled. The water over these flats at spring tides is only seven feet deep. This island was by the Britons called Inis Medicante, and Lindisfarn ; and, from its becoming the habitation of some of the first monks in this country, it afterwards obtained its present name of Holy Island. It measures from east to west about two miles and a quarter, and from north to south nearly one mile and a half. At the north-west part runs out a spit of land of about a mile in length. The monastery is situated at the south extremity ; and a little north of it stands the village, chiefly inhabited by fishermen. There is plenty of fish and fowls; but the air and soil are bad. The north and east coasts are formed of perpendicular rocks ; the other sides sink by gradual slopes to the sands. There is a commodious harbour, defended by a block-house ; which last was surprised and taken in 1715, but was soon retaken. Holy Island, though really part of Northumberland, belongs to Durham; and all civil disputes must be determined by the justices of that county. It was a very ancient episcopal seat, and had eighteen bishops till the removal of the see to Chester. The north and south walls of the church are standing ; part of the west end remains, but the east is down. The columns of the nave are of four different kinds, twelve feet high and five feet diameter, massy and richer than those of Durham ; the bases and capitals

plain, supporting circular arches. Over each arch are large windows in pairs, separated by a short column : and over these are smaller single windows. In the north and south walls are some pointed arches. The length of the body is 138 feet, breadth eighteen feet, and with the two aisles thirty-six feet. Somewhat to the east is the base of a cross, and to the west the present parish church.

HOLY-ROOD DAY, a festival observed by the Roman Catholics, in memory of the exaltation of our Saviour's cross.

HOLY-ROOD HOUSE. See EDINBURGH.

HOLYWELL, a town of North Wales, in Flintshire, chiefly celebrated for a spring, called St. Winifred's Well, from whence it takes its name. This well lies at the bottom of three high hills, and is covered by a small Gothic building, which is said to have been erected by the countess of Richmond, mother of Henry VII. The Gothic work on the outside of this building, which forms a canopy to the wall, is very handsome. The accommodations for bathing are very good; the water is very clear, and never freezes, boils up like a caldron, and discharges upwards of twenty-six tons of water in a minute. It now turns several mills erected for working copper, making brass wire, paper, and snuff, and winding cotton, &c. At the back of the town is a hill, in which lead ore is found. It is 52m. N.N.W. of Shrewsbury, and 21 2 N.W.of London. It shares the elective franchise with Flint.

HOLZMINDEN, a town of Germany, in the states of Brunswick, principality ofWolfenbuttel, at the confluence of the Weser and the Holz, containing 3300 inhabitants. It has large iron works, and a brisk trade in wood. Three miles north-east of Corvey, and twenty west of Gruben-hagen.

HOM'AGE, n. s. & v. a. > Fr. hommage ; low

HOM'AGER, n. s. } Lat. homagium ; Fr.

hommager, from homo, a man, homage being the service of every man. Service paid and fealty professed to a sovereign, or a superior lord ; obeisance ; respect paid by external action. Bishops do homage before the king on appointment to their sees.

For, sothly, he ne shuld have, than, in all his lif corage to sinne — but give his herte and body to the service of Jesu Crist, and thereof do him homage.

Chaucer. The Persones Tale. Call my sovereign yours. And do him homage as obedient subjects,

Shahspeare,

Thou blushest, Antony ; and that blood of thine Is Caesar's homager. Id.

His subjects, traytors, are received by the duke of Bretagne, his homager. Bacon's Henry VII.

The chiefs, in a solemn manner, did their homaget, and made their oaths of fidelity to the earl marshal.

Davics.

His spear against her head he fiercely threw, Which to that face performing homage due, Kissing her helmet, thence in thousand shivers flew. Fletcher's Purple Island.

The gods great mother, when her heavenly race Do homage to her. Denham.

A tuft of daisies on a flowery lay They saw, and thitherward they went their way ; To this both knights and dames their homage made, And due obeisance to the daisy paid. Dryilen.

HOM 326

Go, go. with homage yon proud victors meet ! Go, He like dog beneath your master's feet. Id.

What is station high ?

Tis a proud mendicant ; it boasts and begs ; It begs an alms of homage from the throng, And oft the throng denies its charity.

Young's Night Thoughts. No eyes

Bat mine now drink this sight of loveliness ; I should be sole in this sweet solitude, And with the spirit of the place divide The homage of these waters. — I will call her.

Byron. Manfred, To what gulphs

A single deviation from the track Of human duties, leads even those who claim The homage of mankind, as their born due, And find it, till they forfeit it themselves.

Id. Sardanapaliu,

HOMBERG (William), a celebrated physician, chemist, and philosopher, born in Batavia, in the East Indies, in 1652. His father was a Saxon gentleman, who afterwards settling at Amsterdam, this son prosecuted his studies there ; and thence removed to Jena, and to Leipsic. In 1642 he was made advocate at Magdeburg, where he studied experimental philosophy. Some time after he travelled into Italy; and studied medicine, anatomy, and botany, at Pa-dua. He afterwards studied at Bologna, and at Rome. He at length travelled into France, England, and Holland ; obtained the degree of M.D. at Wittemberg; travelled into Germany and the North : visited the mines of Saxony, Bohemia, Hungary, and Sweden ; and returned to France, where M. Colbert made him such advantageous offers as induced him to fix his residence at Paris. M. Homberg, who was already well known for his discovery of phosphorus, for a pneumatic machine of his own invention, more perfect than that of Guericke, was received into the Academy of Sciences in 1691, and had the care of the laboratory. The duke of Orleans, afterwards regent, made him his chemist, presented him with a pension, and, in 1704, made him his first physician. He had abjured the Protestant religion in 1682, and died in 1715. There are many learned and curious pieces of his writing, in the memoirs of the Academy of Sciences, and in several journals.

HOMBERG IN HESSE, a walled town of Hesse-Cassel, Germany, on the Elze, with 2900 inhabitants, and manufactures of iron and glass. It consists of the old and new town ; and has an ancient castle on a hill, remarkable for a well of the extraordinary depth of 480 feet. Twenty miles south of Cassel, and eleven S.S. E. of Fritzlar.

HOMBURG ON THE HEIGHT, a town of Germany, the capital of the principality of Hesse-Homburg. It is situated on the Lahn, and has manufactures of watches, caps, stockings, and hats. Nine miles north of Frankfort. Population 3000.

HOME’, n. s. & adj.~\ Goth, haim; Swed.

HOME’LILY, adv. 9heim; Dan. hiern; Sax.

HOME’LINESS, n. s. (ham; Scot. hame. His

HOME'LY, adj. & adv. J own house; a private dwelling ; his own country ; place of constant residence : when united with a substantive it si?-

nines of the same country. Home, to one's house or country ; close to one's own bosom or affairs ; to the utmost, fully, entirely. Homely, plain, coarse, rude ; plain, not elegant; not beautiful : applied both to persons and things. The word home conveys a meaning to an Englishman which no foreign language can supply, and is rather to be felt than expressed : it is applied to persons and things.

Alia the king cometh home, sone after this, Unto his castel, of the which I you told ; And asketh wher his wif and child is.

Chaucer. The Man of Lawes Tale. God grante thee thin homly fo to espie For in this world n'is werse pestilence, Than homly fo all day in thy presence.

Id. The Marchantes Tale. Not only this Griseldes thurgh hire wit Coude all the fete of wifly homlinesse.

Id. The Cferket Tale.

For right as men sayn that overgret homlinesse en-gendereth dispreising ; so fareth it, by to gret hunii-litee or mekeness. Id. The Tale of Melibeut.

Within this wood, out of a rock did rise A spring of water, mildly tumbling down ;

Whereto approached not in any wise The homely shepherd, nor the ruder clown.

Spenser.

I'm now from home, and out of that provision Which shall be needful for your entertainment.

Shakspeare.

Accuse him home and home. Id.

.Home-keeping youth have ever homely wits. Id. Our stomachs will make what's homely savoury.

Id.

Like rich hangings in an homely house, So was his will in his old feeble body. Id.

Be plain, good son, and homely in thy drift : Riddling confession finds but riddling shrift. Id.

How can tyrants safely govern home, Unless abroad they purchase great alliance ? Id. Their determination is to return to their homes, and to trouble you no more. Id.

With his prepared sword he charges home My unprovided body. Id. King Lear.

A loyal sir

To him thou followest : I will pay thy graces Home both in word and deed. Id. Tempest. Men of age object too much, adventure too little, and seldom drive business home to the full period : hut content themselves with a mediocrity of success.

Bacon.

Let the exportation of home commodities be more in value than the importation of foreign. Id.

That cometh up home to the business, and taketh off the objection clearly. Sanderson.

Homely persons, the more they endeavour to adorn themselves, the more they expose the defects they want to hide. Clarendon.

It is for homely features to keep home ; They had their name thence. Milton.

But when such amity at home is showed, What then are their confederacies abroad.

Marvell.

Each place handsome without curiosity, and homely without loathsomeness. Sidney.

Crafty enough either to hide his faults, or never to shew them, but when they might pay home. Id.

I am sorry to give him such home thrusts ; for he lays himself so open, and uses so little art to avoid them, that I must either do nothing, or expose his weakness. StiRinijfeet.

HOME.

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Something like home that is not home is to be desired ; it is found in the house of a friend. Temple.

Hntne is the sacred refuse of our life, Secured from all approaches but a wife.

Dryden.

When Hector went to see His virtuous wife, the fair Andromache, He found her not at home ; for she was gone. Id. Those who have homes, when home they do repair, To a last lodging call their wandering friends. Id.

Thus, like the god his father, homely drest, He strides into the hall a horrid guest. Id.

Their homely fare dispatched, the hungry band luvade their trenchers next. Id.

Poison may be false ;

The home thrust of a friendly sword is sure. Id. With honour to his home let Theseus ride, With love to friend. Id.

At home the hateful names of parties cease, And factious souls are wearied into peace. Id. Ke that encourages treason lays the foundation of a doctrine that will come home to himself.

L’Estrange.

One of Adam's children in the mountains lights on a glittering substance ; home he carries it to Adam, who finds it to be hard, to have a bright yellow colour, and exceeding great weight. Locke.

It is observed by some, that there is none so homely but loves a looking-glass. South.

This is a consideration that comes home to our interest. Addison.

Homer has opened a great field of raillery to men of more delicacy than greatness of genius, by the homeliness of some of his sentiments. Id.

Break through the thick array Of his thronged legions, and charge home upon him.

Id.

Flandria, by plenty made the home of war, Shall weep her crime, and bow to Charles restored.

Prior.

They who pass through a foreign country, towards their native home, do not usually give up themselves to the pleasures of the place. Atterbury.

I can only refer the reader to the authors themselves, who speak very home to the point. Id.

These considerations, proposed in general terms, you will, by particular application, bring home to your own concern. Wake.

Now Strephon daily entertains His Chloe in the homeliest strains. Swift. He makes choice of some piece of morality ; and, in order to press this home, he makes less use of reasoning. Broome. She comes too meanly drest to win our smile ; And calls herself Content, a homely name !

Young's Night Thoughts.

His warm but simple home, where he enjoys With hei who shares his pleasures and his heart Sweet converse. Cowper's Task.

May the grass wither from thy feet ! the woods Deny thee shelter ! earth a home ! the dust A grave ! the sun his light ! and heaven her God !

Byron. Where rose the mountains, these to him were

friends ;

Where rolled the ocean thereon was bis home, Where a blue sky, and glowing clime extends, He had the passion and the power to roam.

Id. Childe Harold.

HOME (Henry), lord Kames, an eminent Scottish lawyer, and author, descended from an ancient family, was born in 1696, in Berwickshire. In early youth he was lively, and eager in the acquisition of knowledge. After studying

the civil and the municipal law of his country, at Edinburgh, he attended for some time the chamber of a writer to the signet. The strength and vivacity of his natural abilities, combined with unwearied application, soon raised him to be an ornament to the Scottish bar ; and, on the 2d of February, 1752, he was advanced to the bench as one of the judges of the court of session, under the title of lord Kames. Before this period, however, notwithstanding the unavoidable labors of his profession, he had become the author of several works. In 1728 he published Remarkable Decisions of the Court of Session from 1716 to 1728 in 1 vol. folio.— In 1732 appeared Essays upon several subjects in Law, *viz.* Jus tertii ; Beneficium Cedendarum Actio-num; Vinco Vincentem; and Prescription; in 1 vol. 8vo. This was succeeded, in 1741, by Decisions of the Court of Session from its first institution to the year 1740, abridged and digested under proper heads, in form of a Dictionary, in 2 vols. folio : a very laborious work, and of the greatest utility to the practical lawyer. In 1747 appeared Essays upon several subjects concerning British Antiquities, *viz.* 1. Introduction of the feudal law into Scotland. 2. Constitution of parliament. 3. Honor, dignity. 4. Succession, or descent; with appendix upon hereditary and indefeasible right, composed in 1745, and published in 1747, in 1 vol. 8vo. It may be proper, though not in strict chronological order, to continue the list of his writings on law, before we mention his works on other subjects. In 1757 he published The Statute Law of Scotland abridged, with Historical Notes, in 1 vol. 8vo. In 1759 he produced a new work, entitled Historical Law Tracts, in 1 vol. 8vo. In 1760 he published in 1 vol. folio The Principles of Equity ; a work which shows both the fertility of the author's genius and his indefatigable application. In 1766 he gave to the pub-lic another volume, in folio, of

Remarkable Decisions of the Court of Session, from 1730 to 1752. In 1777 appeared his Elucidations respecting the Common and Statute Law of Scotland, in 1 vol. 8vo. In 1780 a volume in folio, of Select Decisions of the Court of Session, from 1752 to 1768.

Lord Kames was much inclined to metaphysical disquisitions. In 1751 he published Essays on the Principles of Morality and Natural Religion, a small volume, which gave rise to much controversy. It contained, in the most explicit terms, the doctrine which then made so much noise, under the appellation of philosophical necessity. In 1761 he published an Introduction to the Art of Thinking, in 1 vol. 12mo. His Elements of Criticism appeared in 1762, in 3 vols. 8vo. A farther evidence of the various pursuits of his active mind was given in 1772, when he published a work in one volume 8vo, entitled The Gentleman Farmer, being an attempt to improve Agriculture by subjecting it to the test of Rational Principles. This book met with a very favorable reception in Scotland, where, as a practical farmer, its author gave many proofs of his skill. After he succeeded, in right of his lady, to the ample estate of Blair Drummond in Perthshire, he formed, and in part successfully ex

ecuted, a plan for turning a large moss, consisting of at least 1500 acres into arable land. In 1773 lord Karaes published Sketches of the History of Man, in 2 vols. 4to. His last work, entitled Loose Hints upon Education, chiefly concerning the Culture of the Heart, was published in 1781, in 1 vol. 8vo, when its venerable author was in his eighty-fifth year. Lord Karaes published many temporary and fugitive pieces. He for a a great length of time had the principal management of all the societies and boards for promoting the trade, fisheries, and manufactures, in Scotland. He took likewise a chief lead in the distribution and application of the funds arising from the estates in Scotland, which had unfortunately been annexed to the crown. Nor was he less zealous in supporting, both with his writings and personal influence, various literary associa-r tions. Lord Kames died on the 27th day of December, 1782. As he had no disease but the debility

necessarily resulting from extreme old age, a .fe%v days before his death he went to the court of session, addressed all the judges separately, told them he was speedily to depart, and took a solemn and an affectionate farewel. A life of lord Kames, with a view of his writings, was published by lord Woodhouselee.

HOME (John), an eminent dramatic poet, born in the vicinity of Ancrum, in Roxburghshire, in 1724. It being the desire of his parents that he should enter the church, he attended the philosophical and theological classes of the university of Edinburgh for several years. But his studies were for a while suspended by the pub-lic commotions of the year 1745. Mr. Home was one of about twenty students of the university who offered their services as volunteers, to act against the common enemy. But intimidated by the number of their opponents, or adverse to the hardships of a military life, the college company soon disbanded. Mr. Home, however, retained his arms, and marched with a detachment of the royal army to Falkirk ; where, in the bat-tle fought in its neighbourhood, in which the rebels vanquished the king's troops, he was taken prisoner, and confined for some time in the castle of Doun. From this place of captivity he effected his escape ; and, the battle of Cullo-den having blasted all the hopes of the pretender's adherents, tranquillity and order were soon restored. Mr. Home resumed his studies, and was licensed to preach in 1747. Not long after he visited England ; for it appears that he was introduced to Collins the poet, at Winchester, by a Mr. Barrow, who had been his fellow-stu- dent at the university. Collins addressed to him his Ode on the Superstition of the Highlanders, considered as the subject of poetry, composed in 1749, but not published till many years after his death. In 1750 he was settled minister of Athelstaneford, in East Lothian; but having been accustomed to the bustle of a city, and the society of men of letters, Mr. Home found himself rather disagreeably situated, in an obscure village, where he had no opportunity of distinguishing himself. It was about this period that, in his retirement, he began seriously to court the dramatic muse. The first tragedy he wrote was Aijis, founded on a portion of the Lacedaemonian

history. This being rejected by the London theatres, he next composed his celebrated Douglas. In presenting this to the London manager, he had the mortification of a second refusal ; and Garrick said afterwards that no circumstance, in the course of his management, gave him so much concern as the rejection of this play. But the ardor of Home was not to be thus suppressed. Being acquainted with the leading characters in Scotland, a ready reception of his play at Edinburgh was

secured, and at the first representation of it in the theatre in Canongate, on the 14th of December, 1756, Mr. Home and several of his clerical brethren were present. The hue and cry was immediately raised ; that a clergyman should write a play, and that ministers of the gospel should witness its performance, were crimes unheard of in the Annals of the church. The author was summoned to appear before the bar of the presby» tery; his friends were peremptorily dragged before the same tribunal, some of them dismissed with censure, and others suspended from their office. While such was the state of affairs in Scotland, Douglas having been performed to crowded houses during the greater part of the season, and fully gratifying the most sanguine hopes of the author, it was, through the* interest of David Hume, brought forward on the London stage. Here it soon became a starrdard tragedy, and maintains its ground to the present day. The clamors of his enemies having not yet subsided in Scotland, Mr. Home preached his farewell sermon to his congregation on the 5th of June, 1757; and, to prevent further proceedings in the church courts against him, gave in the resignation of his charge to the presbytery of Haddington two days after. With his living, Mr. Home appears for a while to have abandoned his native land, for he now repaired to London, where he produced several other tragedies, under the patronage of Garrick. They are all, however, greatly inferior to his Douglas. Agis, the first of his dramatic pieces, was finely acted, and assisted by spectacle ; otherwise, it is probable that it would not have been performed a second night. His third tragedy was founded on the cruel treatment which the two Setons, sons of the governor of Berwick, had experienced from the English. At Garrick's suggestion, the title was altered, from the siege of Berwick to the siege of Aquileia, and it was acted in 1759. Some of the passages are very fine, but upon the whole it is a tame performance. Mr. Home's last production, Alfred, lived only three nights. In the year 1760 Mr. Home published a volume of plays, containing Agis, Douglas, and the Siege of Aquileia, which he dedicated to his present majesty, then prince of Wales. Three other tragedies appeared some time after. The whole were collected and edited in two volumes at Edinburgh, in 1798, under the inspection of the late Mr. Woods. Mr. Home, at the advanced age of seventy-eight, published his long-meditated work, entitled The History of the Rebellion in Scotland, in 1745 — 6, in which he recorded the exploits and remarks of his youth, but the public were disappointed in it. For a considerable time prior to his death, Mr. Home's

mind as well as body, seemed to be much impaired, and in this distressful state he lingered for many years. He died at Merchiston House, on the 4th of September, 1808, in the eighty-fifth year of his age.

HOME'BORN, adj. Home and bora. Native ; natural.

Though to be thus elemented, arm These creatures from homeborn iniriosick harm. .

Donne. Domestic ; not foreign.

Numerous bands With homeborn lyes, or tales from foreign lands.

Pope.

HOME'BRED, adj. Home and bred. Native; natural.

God hath taken care to anticipate every man, to draw him early into his church, before other competitors, homebred lusts, or vicious customs of the world, should be able to pretend to him. Hammond.

No homebred jars her quiet state controul, Nor watchful jealousy torments her soul. Gay. Not polished by travel ; plain ; rude ; artless; uncultivated.

Only to me two homebred youths belong.

Dry den, Domestic ; not foreign.

But if of danger, which hereby doth dwell, And homehred evil, ye desire to hear, I can you tydings tell. Spenser. Faerie Queene.

This once happy laud, By homebred fury rent, long groaned.

Phillip*.

HOME'FELT, adj. Home and felt. Inward , private.

Yet they in pleasing slumber lulled the sense,

And in sweet madness robbed it of itself j

But such a sacred and homefelt delight,

Such sober certainty of waking bliss,

I never heard till now. Milton.

Happy next him who to these shades retires, Whom nature charms, and whom the muse inspires, Whom humbler joys of homefelt quiet please, Successive study, exercise, and ease. Pope.

HOME'LYN, n. s. A kind of fish.

HOME'MADE, adj. Home and made. Made at home ; not manufactured in foreign parts.

A tax laid on your native product, and homemade commodities, makes them yield less to the first seller.

Locke.

HOMER, n. s. A Hebrew measure of about three pints.

HOMER, the prince of the Greek poets, flou-nshed, according to Dr. Blair, about 900 B. C.; according to Dr. Priestley, 850; according to the Arundelian marbles, 300 after the taking of Troy ; and, agreeably to them all, above 400 years before Plato and Aristotle. Seven cities disputed the glory of having given him birth, which are enumerated in the following distich : — • Smyrna, Rhodes, Colophon, Salamis, Chios, Argos, Athenae ;

Orbis de patria certat, Homere tua.

Or, as a modern poet has complained : — Seven mighty towns contend for Homer dead, Through which the living Homer begged his bread.

We have no authentic particulars of his life. The most regular account is that which goes

under the name of Herodotus, and is usually printed with his history : and though it is supposed to be spurious, yet, as it is ancient, was made use of by Strabo, and exhibits the idea which the later Greeks, and the Romans in the age of Augustus, entertained of Homer, we

must content ourselves with it, Menalippus, a native of Magnesia, is said to have settled at Cumae, where he married the daughter of a citizen called Homyres, and had by her a daughter, Critheis. The father and mother dying, the young woman was left under the tuition of Cleonax, her father's friend, by whom she was seduced, and who, on her proving with child, sent her to Smyrna, which was then building, to conceal the misfortune. This was eighteen years after the founding of Cumae, and about 168 after the destruction of Troy. Critheis was here delivered of Homer, whom she called Melesigenes, because he was born on the banks of that river. Her good conduct afterwards induced Phemius, a schoolmaster, to marry her, and adopt her son After the death of Phemius and Critheis, Homer succeeded to his father-in-law's school; until a shipmaster named Mentes, who was a man of learning, persuaded him to travel with him. This brought him to Egypt ; whence he brought into Greece the names of their gods, the chief ceremonies of their worship, and a more improved knowledge of the arts. He also visited other parts of Africa and Spain ; in his return whence he touched at Ithaca, where he was first troubled with a disease of his eyes. Being recommended to Mentor, one of the chief men of Ithaca, he was here informed of many things relating to Ulysses, which he afterwards inserted in his Odyssey; and, after much time spent in visiting the coasts of Peloponnesus and the islands, arrived at Colophon, where he lost his sight. He now returned to Smyrna, and finished his Iliad. Some time after, the low state of his finances obliged him to go to Cumse, where his poems were highly applauded ; but when he proposed to immortalise their town, if they would allow him a salary, he was answered, that there would be no end of maintaining all the 'O/iijpot, or blind men : hence he is said to have obtained the name of Homer. He afterwards wandered through several places to Chios, where he married, and composed his Odyssey. Some time after, having produced various verses in praise of the cities of Greece, especially of Athens and Argos, he went to Samos, where he spent the winter reciting them. In the spring he proceeded to lo, one of the Sporades, intending to continue his voyage to Athens. Landing, however, at Chios by the way, he fell sick and died, and was buried on the sea shore. The principal works ascribed to Homer are the Iliad and Odyssey. The Batra-chomyomachia, or battle of the frogs and mice, is rejected by almost all modern critics, as a pa-rody incompatible with the simplicity of the Homeric age. Of his Hymns some are acknowledged by Lucian and Pausanias ; others are undoubtedly spurious. Of the Iliad and Odyssey, the editions are very numerous. The best are those of Barnes, Clarke, and Heyne. The two leading English translations are those of Pope and Cowper, in rhyme and blank verse

It has, however, been much controverted whether the Iliad and Odyssey were originally epic poems of the kind they now appear to be ; and particularly, whether they were the production of anyone individual, or only a happy assemblage of detached rhapsodies. This question has been ably discussed by Heyne and Wolf, the modern critics upon Homer; and the arguments of these great scholars, cannot be dismissed as rash conjectures. We shall avail ourselves, therefore, of Mr. Talfourd's able abstract of them in Mr. Rutt's Appendix to Dr. Priestley's Lectures on Oratory and Criticism.

' The first object, in a case of this kind,' observes this ingenious gentleman, 'should be to ascertain those facts in which all parties agree. The light which external history affords us is rather feeble and dubious. It must be admitted, that there is no fact well authenticated respecting the existence of the poems in a connected form, until we are told that they were brought into Greece by Lycurgus. Plutarch, in his Life of that legislator, informs us that, in his journey in Asia, ' he probably had sight of Homer's poems, which were first preserved by the posterity of Creophylus ; and, having observed that the delightful fictions thrown over them did not prevent the author from abounding in maxims of state policy and rules of moral action, transcrrbed them, and carried with him into Greece that entire collection which we have now among us. For at that time there was only an obscure rumor in Greece of the fame of these poems, and only a few scattered fragments in circulation, until Lycurgus published them entire.' Hence Cleomenes called Homer the poet of the Spartans. Besides Plutarch, Dio Chrysostom, Hera-elides Pontus, and ./Elian, bear testimony to the fact of the poems having, in some state or other, been introduced into Greece by Lycurgus. Heyne, indeed, contends that nothing more is to be gathered from these authorities, than that the poems were preserved among the Chians by means of the recitations of the rhapsodists ; and that the knowledge of their merit was brought to Sparta by her lawgiver, on his return from his travels. Whatever was done by Lycurgus fell very short of exhibiting the poems in that state hi which even the Greeks afterwards possessed them. For a number of writers agree in declaring that the honor of this noble work belongs to Pisistratus, or to some 'of his family. Solen now made a law for the recital of the poems ; and is even said to have directed that this office should be performed, not by repeating them in fragments, without re-

gard to the progress of the story, but in some order of regular succession.

‘It must be allowed that the expression of Cicero, that Pisistratus ‘primus Homeri libros confusos antea, disposuisse dicitur,’ will not prove much, even respecting the opinion of the orator, as to their original condition. For it does not follow, because the books of Homer were confused or disarranged in the time of their first editor, that they were not composed in a regular series. Indeed the expression, ‘ works of Homer then in confusion,’ seems to imply that Pisistratus did not divide the poems into books for the first time, or first apply to them that de-

nomination. The other external evidence on either side is but trivial. The works must be for the most part, their own witnesses.

‘The chief arguments by which the hypothesis adopted by Wolf and Heyne is supported are, 1. It is exceedingly improbable that, in any age to which Homer’s personal existence can be referred, one man should have been capable of composing works of the extent, consistency, and poetical elevation of the Iliad and Odyssey. 2. It seems impossible that poems of so great a length as the Iliad and the Odyssey should have been composed and preserved entire, without being committed to writing ; and it is certain that there is not the least trace, even in tradition, of any complete written or engraved copy of the works of Homer till the exertions of his Athenian editor, or at least till those of Lycurgus. 2 The profession of the rhapsodists, as is evident from many Greek writers, flourished from the earliest periods. Their name, compounded from pair-Teiv wSijv, to join together or compose verses, signified their occupation and character. They answered, in many respects, to the Celtic bards. They chaunted, sung, or recited poems, chiefly, at least in the earliest times, of their own composition, at the tables of princes, and in public assemblies, as well as in the houses of the great. They were held in high esteem and even veneration, more especially in the earliest periods ; and they were the sole depositaries of the religion, the moral precepts, and the old aad fcrccite. legends of the people among whom they lived. — It is further alleged that there are parts of the Iliad and Odyssey, even as they now exist, which are either entirely spurious, or very much corrupted from the original. Of the former of these descriptions seems to be the passage in the eighteenth book of the Iliad, from v. 356 to v. 368, in which, from the mourning of the Greeks over the body of Patroclus, we are suddenly presented with a taunting speech of Jupiter to Juno,

and her angry reply, neither of which bears the least relation to the immediate subject; and, at the close, we as suddenly re-turn to Thetis, in her ascent to the palace of Vulcan. In the fourth book of the Odyssey a passage occurs, at the 620th line, where a conversation with Menelaus is abruptly broken off, and four lines follow of which all explanation seems hopeless. Eustathius has recourse to the violent measure of changing the whole scene from the palace of Menelaus at Sparta to that of Ulysses at Ithaca. But the passage is now universally agreed to be either misplaced or. spurious. Other and yet more important instances are brought forward by Heyne, in the notes to the different books of his edition of Homer.

‘ On the other side, the following arguments are adduced, to establish the individuality of the author of the Iliad : — 1. The genius which the Iliad exhibits is no proof that it is not the production of a single mind in a barbarous age. Those who speak of poetry as a progressive art, and liken it to the improvements of social life, and things which depend for their excellence 05 experience, seem to know little of its essence. I has no connexion with the progressions of time >

it depends not on external circumstance ; it follows not in the train of knowledge, nor improves as mathematical science is unfolded ; its origin is in the heart, and its objects are to be found in every part of the creation. Indeed, the age of Homer was far more favorable to its perfection than later times. The truth is, that no one ever supposes Homer to have written with a standard of epic poetry before him, like that which Aristotle has drawn from his works. He composed from the impulses of an harmonious mind ; and his compositions were, therefore, harmonious. There is nothing wonderful, or even paradoxical, in this. Genius is the soul of art. The unities admired by the critics must originally take their rise from the heart, from the natural perception of loveliness, from the innate admiration of order, or they are worthless. Genius broods over the events it celebrates, and brings them into keeping and harmony. There is nothing really so methodical as the most daring invention, in so far as method is more

than an empty form. If Homer conceived the plan of an epic in his mind, and strove to write ‘ up to the height of his great argument,’ it was because he felt that within such a compass his mind would discover a fit and noble range. 2. The objection which arises from the ignorance of letters, or the want of the materials for writing, is certainly of a more formidable kind. But it is to be remembered, that the very uncertainty attending the introduction of letters into Greece proves that they must have been of high antiquity, and certainly before the first Olympiad, when a regular computation of time began. The testimony of Josephus, who speaks merely in a sceptical tone, and not at all in that of decided negative, is rendered of less importance by the circumstance that he was attempting to depreciate, as far as possible, the antiquities of Greece, and to throw discredit on its eaily history. But, even supposing the works of Homer not to have been originally transcribed, the very opponents of his personality have furnished us with the means by which they were probably transmitted. The rhapsodists, whom they suppose, and probably with justice, to hare recited his poems, were no unworthy depositaries of so great a treasure, especially if we hold them in the veneration with which they would desire us to regard them. 3. Setting aside, for the sake of argument, all the technical rules of epic poetry, which have been sometimes said to have been observed in the works imputed to Homer, there is very strong internal evidence that they are, or, at least, that one of them is, the production of an individual genius. In the whole texture one pervading mind is clearly to be seen. Poets even of the same age, and when treating of nearly the same subject, can scarcely be supposed to have attained so complete a uniformity of style. If two leaves of the forest are never found exactly to correspond, how shall we believe that a number of minds, and these of the first and most original class, should so exactly agree ? The same epithets recur, the same kind of similes prevail, the same mode of expression is used in the last as in the first book of the Iliad. — And, lastly, that there are interpolations in the Iliad and Odyssey may be readily admitted, without affecting the authenticity of the whole. And it is to be observed, that some corruptions have been noticed as such by the most ancient critics — a circumstance which proves, that, though their attention was directed to the question, they never doubted, as they have never expressed any doubt, of the genuineness of the great mass of the poems. The evidence in favor of the common hypothesis, from the testimony of every age, is exceedingly strong. Pindar, who lived 485 years before Christ, repeatedly mentions Homer as he would any other person, and not as a collection of verses. He speaks of the Iliad as having rendered Ajax immortal, and he alludes to the perils of Ulysses as having been celebrated, adored, and rendered greater, by

the delightful poetry of Homer. In the fragments collected by Brunck, Mimerinus and Simonides both allude to Homer. The lat-ter speaks of him as the man of Chios, and quotes the beautiful comparison made by Glau-cus, of human life to the fall of leaves and their springing forth again into verdure. Herodotus repeatedly refers to our bard. He quotes the Iliad and the Odyssey, and distinguishes between them. He even, which is stronger than all, de-nies the Cypriacs to be genuine productions of Homer, because they contradict the Iliad. Thucydides also frequently alludes to him, and always without any intimation that he is speaking of a number of songs by various authors. Aristotle flourished but a short interval from the time when the family of Pisistratus were in power, and yet nothing can be more clear than that he had no idea that they had, for the first time, collected together and arranged the poems which they edited; for he criticises at large that very arrangement ; he gives it the highest praise ; he makes it the basis of a system of epic poetry ; and yet he never attributes this to any other than to the original author. He bestows HO praise on Pisistratus, who, in this respect, deserved it all.'

HOMER (Henry), Rev., the son of a clergyman, the rector of Birdingbury, Warwickshire, was born there in 1752. He received the rudiments of his education at Rugby school, and afterwards took the degree of bachelor in divinity at Emanuel College, Cambridge, in 1783. Mr. Homer, in conjunction with Dr. Coombe and others, assisted in bringing out a variorum edition of Horace, and ably edited the works of Caesar, Livy, Tacitus, Sallust, and the epistles of Ovid. His death took place in 1791.

HOME'SPUN, adj. Home and spun. Spun or wrought at home ; not made by regular manufacturers.

Instead of homenjitin coifs were seen Good pinners, edged with colberteen. Stnft.

Not made in foreign countries.

He appeared in a suit of English broad-cloth, very plain, but rich : every thing he wore was substantial, honest, homespun ware. Addison.

Plain; coarse; rude; homely; inelegant.

They sometimes put on, when they go ashore, long sleeveless coats of homespun cotton. Sandy's Tr.

We say, in our homespun English proverb, He killed two birds with

one stone. Dryden.

Our homenpu* authors must forsake the field,

And Shakspeare to the soft Scarlatti yield.

Addison.

HOMESPUN’, n. s. A coarse, inelegant, rude, untaught, rustic man. Not in use.

What hempen humeipunt have we swaggering here, So near the cradle of the fairy queen 1 Shakipeare. HOME’STALL, n. s.) Sax. J>am and r-re’ae. HOME’STEAD, n. s. \ The place of the house.

Both house and homestead into seas are borne, And rocks are from their own foundations torn.

Dry den,

HOME’WARD, adj. > Sax. bam and pearifc. HOME’WARDS, adj. j Towards home ; towards the native place; towards the place of residence.

For Goddes love, let us now sone at eve Our Icvc take, and homwarde let us tourne.

Chaucer, Troilus and Creseide. My affairs Po even drag me homrwira.

Shakspeare.

Since such Love’s natural station is, may still My love descend, and journey down the hill, Not panting after growing beauties ; so I shall ebb on with them who homeward go.

Donne.

Look homeward, angel now, and melt with ruth ; And, O ye dolphins, waft the hapless youth!

Milton.

hen Urania homeward did arise, Leaving in pain their well-fed hungry eyes.

Sidney.

And wandering homewards, seek our safety hence.

Dryden.

Like a long team of snowy swans on high, Which clap their wings, and cleave the liquid sky, Which, homeward from their watery pastures borne, They sing, and Asia's lakes their notes return. Id. Or when the ploughman leaves the task of day, And trudging homeward whistles on his way ; When the big-uddered cows with patience stand, Waiting the strukings of the damsel's hand. Gay. HOMICIDE, n. s. J Fr. homicide; Lat. HOMICI'DAL, adj. $ homicidium, from homo. Manslaughter ; destruction : murder, in some cases. Homicidal, murderous ; destructive ; bloody.

Homicide (that is manslaughter) is in divers wise. Som maner of homicide is spirit ue\ and som is bodily. Chaucer. The Persones Tale.

The apostle? command to abstain from blood : construe this according to the law of nature, and ?'t will seem, that homicide only is forbidden ; but construe it in reference to the law of the Jews, about which the question was, and it shall easily appear to have a clean other sense, and a truer, when we expound it of eating, and not of shedding blood. Hooker.

I'd undertake the death of all the world, So might I live one hour in your sweet bosom. — If I thought that, I tell thee, homicide, These nails should rend that beauty from my cheeks.

Shaktpeare.

What wonder is't that black detraction thrives ! The homicide of names is less thau lives. Dryden.

Hector comes, the homicide, to wield His conquering arms, with corps to strew the fie'd.

Id. The troop forth issuing from the dark recess,

With homicidal rage, the king oppress. Pope.

HOMICIDE, in law, signifies in general the taking away of any person's life. It is of three kinds; justifiable, excusable, and felonious. The first has no share of guilt at all ; the second very little; but the third is the highest crime against

the law of nature that man is capable of committing.— Blackstone.

HOMICIDE, EXCUSABLE, is of two sorts, according to this learned commentator, per infortunium, by misadventure; or se defendendo, upon a principle of self-preservation. We will first see wherein these two species of homicide are distinct, and then wherein they agree.

1. Homicide per infortunium, or by misadventure, is where a man, doing a lawful act, without any intention of hurt, unfortunately kills another : as where a man is at work with a hatchet, and the head thereof flies off and kills a starider-by; or where a person, qualified to keep a gun, is shooting at a mark, and unde-signedly kills a man; for the act is lawful, and the effect is merely accidental. So where a parent is moderately correcting his child, a master his apprentice or scholar, or an officer punishing a criminal, and happens to occasion his death, it is only misadventure, for the act of correction was lawful : but if he exceeds the bounds of moderation, either in the manner, the instrument, or the quantity of punishment, and death ensues, it is manslaughter at least, and in some case (according to the circumstances) murder ; for the act of immoderate correction is unlawful. Thus, by an edict of the emperor Constantine, when the rigor of the Roman law with regard to slaves began to relax and soften, a master was allowed to chastise his slave with rods and imprisonment, and if death accidentally ensued he was guilty of no crime : but if he struck him with a club or a stone, and thereby occasioned his death, or if in any other yet grosser manner ' immoderate suo jure utatur, tune reus homicidii fit.' But to proceed. A tilt or tournament, the martial diversion of our ancestors, was however an unlawful act ; and so are boxing and sword-playing, the succeeding amusements of their posterity : and, therefore, if a knight in the former case, or a gladiator in the latter, be killed, such killing is felony of manslaughter. But, if the king command or permii such diversion, it is said to be only misadventure; for then the act is lawful ; in like manner as, by the laws both of Athens and Rome, he who

killed another in the pancra-tium, or public games, authorised or permitted by the state, was not held to be guilty of homicide. Likewise to whip another's horse, whereby he runs over a child and kills him, is held to be accidental in the rider, for he has done nothing unlawful; but manslaughter in the person who whipped him, for the act was a tresspass, and at best a piece of idleness, of inevitably dangerous consequence. And in general, if death en-sues in consequence of an idle, dangerous, and unlawful sport, as shooting or casting stones in a town, or the barbarous diversion of cock-throwing ; in these and similar cases the slayer is guilty of manslaughter, and not misadventure only ; for these are unlawful acts.

2. Homicide se defendendo, or in self-defence, upon a sudden affray, is also excusable, rather than justifiable, by the English law. This species of self-defence must be distinguished from that just now mentioned, as being calculated to hinder the perpetration of a capital crime ; which is not only a matter of excuse, but of justification. But

the self-defence which we are now speaking of, is that whereby a man may protect himself from an assault, or the like, in the course of a sudden brawl or quarrel, by killing him who assaults him. And this is what the law expresses by the word chance-medley, or (as some rather choose to write it) chaud-medley ; the former of which in its etymology signifies a casual affray, the latter an affray in the heat of blood or passion; both of them of pretty much the same import; but the former is in common speech too often erroneously applied to any manner of homicide by misadventure ; whereas it appears by stat. 24 Henry VIII. c.5, and our ancient books, that it is properly applied to such killing as happens in self-defence upon a sudden rencounter. The right of natural defence does not imply a right of attacking : for, instead of attacking one another for injuries past or impending, men need only have recourse to the proper tribunals of justice. Wherefore, to excuse homicide by the plea of self-defence, it must appear that the slayer had no other possible means of escaping from his assailant. In some cases this species of homicide (upon chance-medley in self-

defence) differs but little from manslaughter, which also happens frequently upon chance-medley in the proper legal sense of the word. But the true criterion between them seems to be this : when both parties are actually combating at the time when the mortal stroke is given, the slayer is then guilty of manslaughter ; but if the slayer hath not begun to fight, or (having be-gun) endeavours to decline any further struggle, and afterwards, being closely pressed by his antagonist, kills him to avoid his own destruction, this is homicide excusable by self-defence. For which reason the law requires, that the person who kills another in his own defence, should have retreated as far as he conveniently or safely can, to avoid the violence of the assault, before he turns upon his assailant ; and that not fictitiously, or in order to watch his opportunity, but from a real tenderness of shedding blood. And though it may be cowardice in time of war, between two independent nations, to flee from an enemy; yet, between two fellow subjects, the law countenances no such point of honor : because the king and his courts are the vindices injuriarum, and will give to the party wronged all the satisfaction he deserves. In this the civil law also agrees, or perhaps goes rather farther; qui cum aliter tueri se non possunt, damni culpam dede-rint, innoxii sunt. The party assaulted must therefore flee as far as he conveniently can, either by reason of some wall, ditch, or other impediment, or as far as the fierceness of the assault will permit him ; for it may be so fierce as not to allow him to yield a step, with manifest danger of his life, or enormous bodily harm ; and then in his defence he may kill his assailant instantly. And, as the manner of the defence, so is also the time to be considered : for if the person assaulted does not fall upon the aggressor till the affray is over, or when he is running away, this is revenge and not defence. Neither under the coior of self-defence, will the law permit a man to screen himself from the guilt of deliberate murder; for if two persons, A and B, agree to

fight a duel ; and A gives the first onset, and B retreats as far as he safety can, and then kills A, this is murder, because of the previous malice and concerted design. But if A upon a sudden quarrel assaults B first, and, upon B's returning the assault, A really and bona fide flies ; and, being driven to the wall, turns again upon B and kills him, this may be se defendendo, according to some ; though others have thought this opinion too favorable : inasmuch as the necessity, to which he is at last reduced, originally arose from his own fault. Under this excuse of self-defence the principal civil and natural relations are comprehended : therefore, master and servant, parent and child, husband and wife, killing an assailant in the necessary defence of each

other respectively, are excused ; the act of the relation assisting being construed the same as the act of the party himself. There is one species of homicide se defendendo where the party slain is equally innocent as he who occasions his death : and yet this homicide is also excusable from the great universal principle of self-preservation, which prompts every man to save his own life preferably to that of another, where one of them must inevitably perish. As, among others, inˆ that case mentioned by lord Bacon, where two persons being shipwrecked, and getting on the same plank, but finding it not able to save them both, wne of them thrusts the other from it, whereby he is drowned. He who thus preserves his own life, at the expense of another man's, is excusable through unavoidable necessity, and the principle of self-defence ; since their both remaining on the same weak plank is a mutual, though innocent, attempt upon, and endangering of, each other's life. Let us next take a view of the circumstances wherein these two species of homicide, by misadventure and self-defence, agree ; and those are in their blame and punishment. For the law sets so high a value upon the life of a man, that it always intends some misbehaviour in the person who takes it away, unless by the command or express permission of the law. In the case of misadventure it presumes negligence, or at least a want of sufficient caution in him who was so unfortunate as to commit it, who therefore is not altogether faultless. And, as to the necessity which excuses a man who kills another se defendendo, lord Bacon entitles it necessitas culpabilis, and thereby distinguishes it from the for-mer necessity of killing a thief or a malefactor. For the law intends that the quarrel or assault arose from some unknown wrong, or some provocation, either in word or deed : and since in quarrels both parties may be and usually are in some fault, and it scarcely can be tried who was originally in the wrong, the law will not hold the survivor entirely guiltless. But it is clear, in the other case, that, where I kill a thief who breaks into my house, the original default can never be upon my side. The law besides may have a farther view, to make the crime of homicide more odious, and to caution men how they venture to kill another upon their ;jwn private judgment ; by ordaining, that he who slays his neighbour, without an express warrant from the law so to do, shall in tio case be absolutely free from guilt. Nor i? the law of England singular in

this respect. Even the slaughter of enemies required a solemn purgation among the Jews ; which implies, that the death of a man, however it happens, will leave some stain behind it. And the Mosaical law appointed certain cities of refuge for him ‘ who killed his neighbour unawares ; as if a man goeth into the wood with his neighbour to hew wood, and his hand fetcheth a stroke with the axe to cut down a tree, and the head slippeth from the helve, and lighteth upon his neighbour that he die, he shall flee into one of those cities and live.’ But it seems he was not held wholly blameless, any more than in the English law ; since the avenger of blood might slay him before he reached his asylum, or if he afterwards stirred out of it till the death of the high priest. In the imperial law likewise casual homicide was excused, by the indulgence of the emperor signed with his own sign-manual, annc-tatione principis ; otherwise, the death of a man, however committed, was in some degree punish-able. Among the Greeks homicide by misfortune was expiated by voluntary banishment for a year. In Saxony a fine is paid to the kindred of the slain ; which also, among the western Goths, was little inferior to that of voluntary homicide : and in France, under the old government, no person was absolved in cases of this nature, without a largess to the poor, and the charge of certain masses for the soul of the party killed. The penalty inflicted by the English law is said by Sir Edward Coke to have been anciently no less than death ; which, however, is with reason denied by later and more accurate writers. It seems rather to have consisted in a forfeiture, some say of all the goods and chattels, others of only a part of them, by way of fine or weregild : which was probably disposed of, as in France, in pios usus, according to the humane superstition of the times, for the benefit of his soul who was thus suddenly sent to his account with all his imperfections on his head. But that reason having long ceased, and the penalty, especially if a total forfeiture, growing more severe than was intended, in proportion as personal property has become more considerable, the delinquent has now, and has had as early as the English records will reach, a pardon and writ of restitution of his goods as a matter of course and right, only paying for suing out the same. And, indeed, to prevent this expense, in cases where the death has notoriously happened by misadventure or in self-defence, the judges usually permit, if not a direct, a general verdict of acquittal.

HOMICIDE, FELONIOUS, is an act of a very different nature from the former, being the killing of a human creature, of any age or sex,

without justification or excuse. This may be done either by killing one's self, or another man : for the consideration of which see the articles MANSLAUGHTER, MURDER, and SUICIDE.

HOMICIDE, JUSTIFIABLE, is of different kinds. 1. Such as is owing to some unavoidable necessity, without any will, intention, or desire, and without any inadvertence or negligence, in the party killing, and therefore without any shadow of blame ; as, for instance, by virtue of such an office as obliges one, in the execution of

public justice, to put a malefactor to death, who has forfeited his life by the laws and verdict of his country. This is an act of necessity, and even of civil duty : and therefoie not only justifiable, but commendable, where the law requires it. But the law must require it, otherwise it is not justifiable : therefore wantonly to kill the greatest of malefactors, felon, or a traitor, at-tainted, or outlawed, deliberately, uncompelled, and extrajudicially, is murder. And farther, if judgment of death be given by a judge not authorised by lawful commission, and execution is done accordingly, the judge is guilty of murder. Also such judgment, when legal, must be executed by the proper officer, or his appointed deputy ; for no one else is required by law to do it, which requisition it is that justifies the homicide. If another person doth it of his own head, it is held to be murder; even though it be the judge himself. It must farther be executed, servato juris ordine ; it must pursue the sentence of the court. If an officer beheads one who is adjudged to be hanged, or vice versa, it is mur-der; for he is merely ministerial, and therefore only justified when he acts under the authority and compulsion of the law. But, if a sheriff changes one kind of punishment for another, he then acts by his own authority, which extends not to the commission of homicide : and besides this license might occasion a very gross abuse of his power. The king indeed may remit part of a sentence, as in the case of treason, all but the beheading ; but this is no change, no introduction of a new punishment ; and in the case of felony, where the judgment is to be hanged, the king, it has been said, cannot legally order even a peer to be beheaded. Again, in some cases homicide is justifiable rather by the permission, than by the absolute command, of the law : either for the advancement of public justice, which without such indemnification would never be carried on with proper vigor ; or in such instances where it is committed for the prevention of some atrocious crime, which cannot otherwise be avoided. 2. Homicides committed for the advancement of public justice are (1). Where an officer, in the execution of his office, either in a civil or criminal case, kills a person

that assaults and resists him. (2). If an officer, or any private person, attempts to take a man charged with felony, and is resisted ; and, in the endeavour to take him, kills him. (3). In case of a riot, or rebellious assembly, [the officers endeavouring to disperse the mob are justifiable in killing them, both at common law, and by the riot act, 1 Geo. I. c. 5. (4). Where the prisoners in a gaol, or going to a gaol, assault the gaoler or officer, and he in his defence kills any of them, it is justifiable, for the sake of preventing an escape. (5). If trespassers in forests, parks, chases, or warrens, will not surrender themselves to the keepers, they may be slain ; by virtue of the statute 21 Edward I. stat. 2, de malefactoribus in parcis, and 3 & 4 W. & M. c. 10. But, in all these cases, there must be an apparent necessity on the officer's side ; *viz.* that the party could not be arrested or apprehended, the riot could not be suppressed, the prisoners could not be kept in hold, the deer-stealers could not but

escape, unless such homicide were committed; otherwise, without such absolute necessity, it is not justifiable. (6.) If the champions, in a trial by battle, killed either of them the other, such homicide was justifiable, and was imputed to the just judgment of God, who was thereby presumed to have decided in favor of the truth. 3. In the next place, such homicide as is committed for the prevention of any forcible and atrocious crime, is justifiable by the law of nature; and also by the law of England, as it stood so early as the time of Bracton, and as it is since declared by stat. 24, H. VIII., c. 5. If any person attempts a robbery or murder of another, or attempts to break open a house in the night-time (which extends also to an attempt to burn it), and shall be killed in such attempt, the slayer shall be acquitted and discharged. This reaches not to any crime unaccompanied with force, as picking of pockets ; or to the breaking open of any house in the daytime, unless it carries with it an attempt of robbery also. So the Jewish law, 'which punished no theft with death, makes homicide only justifiable in case of nocturnal housebreaking : ' if a thief be found breaking up, and he be smitten that he die, no blood shall be shed for him ; but, if the sun be risen upon him, there shall blood be

shed for him ; for he should have made full restitution.' At Athens, if any theft was committed by night, it was lawful to kill the criminal, if taken in the fact ; and, by the Roman law of the XII tables, a thief might be slain by night with impunity, or even by day, if he armed himself with any dangerous weapon : which amounts very nearly to the same as is permitted by our constitution. The Roman law also justifies homicide, when committed in defence of the chasˆ‘ty either of one's self or relations ; and so also, according to Selden, stood the law in the Jewish republic. The English law likewise justifies a woman killing one who attempts to ravish her : and so too the husband or father may be justified in killing a man who attempts a rape upon his wife or daughter; but not if he takes them in adultery by consent ; for the one is forcible and felonious, but not the other. And there is no doubt but the forcibly attempting a crime, of a still more detestable nature, may be equally resisted by the death of the unnatural aggressor. For the one uniform principle that runs through our own, and all other laws, seems to be this : That where a crime, in itself capital, is endeavoured to be committed by force, it is lawful to repel that force by the death of the party attempting. But we must not carry this doctrine to the same length that Mr. Locke does ; who holds, ' that all manner of force without right upon a man's person, puts him in a state of war with the aggressor; and, of consequence, that, being in such a state of war, he may lawfully kill him that puts him under this unnatural restraint.' However just this conclusion may be in a state of uncivilised nature, yet the law of England, like that of every other well regulated community, is too tender of the public peace, too careful of the lives of the subject, to adopt so contentious a system ; nor will it suffer with impunity any crime to be prevented by death, unless the same, if committed, would also be

punished by death. In these instances of justifiable homicide, it may be observed, that the slayer is in no kind of fault whatsoever, not even in the minutest degree ; and is therefore to be totally acquitted and discharged, with commendation rather than blame. But that is not quite the case in excusable homicide, the very name whereof imports some fault, some error, or omission ; so trivial, however, that the law excuses it from the guilt of felony, though in strictness it judges it deserving of some little degree of punishment. See HOMICIDE, EXCUSABLE.

By stat. 39 Geo. III., c. 37, persons tried under the act 28 H. VIII., c. 15, for murder, and found guilty of manslaughter only, are declared entitled to the benefit of clergy, &c., as if it had been committed on

land. And by stat. 46 Geo. Ill-, c. 54, such offences may be tried in any of his majesty's islands or colonies by virtue of a commission under the great seal to commissioners, who shall have all such powers as are given bv stat. 28 H. VIII., c. 15. And by stat. 57 Geo. III., c. 53, murders, &c., committed in the Bay of Honduras, New Zealand, Otaheite, or any islands or places, not within his majesty's dominions, by the master or crew of any British ship, or persons having been such, may be tried in any of his majesty's islands or colonies, under a commission issued by virtue of the act 46 Geo. III., c. 54. Now, at Honduras, such offences may be tried by commissioners specially appointed by virtue of a subsequent act. 59 Geo. III. c. 44. See also stat. 58 Geo. III., c. 98, as to offences relative to the slave-trade, title Slaves. Under stat. 10, 11, W. III., c.25, sect. 13, murders committed in Newfoundland, &c., may be tried in any county in England ; and it does not appear that this act is repealed by stat. 32 Geo. III., c. 46, or the acts creating courts of jurisdiction in that country.

On the whole, homicide is malicious, and of course amounts to murder, unless where, first, justified by the command or permission of the law : secondly, excused on the account of accident or self-preservation ; or, thirdly, alleviated into manslaughter, by being either the involuntary consequence of some act, not strictly lawful, or (if voluntary) occasioned by some sudden and sufficiently violent provocation. And all these circumstances of justification, excuse, or allevia-tion, it is incumbent upon the prisoner to make out, to the satisfaction of the court and jury : the latter of whom are to decide whether the circumstances alleged are proved to have actually existed ; the former, how far they extend to take away or mitigate the guilt. For all homicide is presumed to be malicious, until the contrary appeareth upon evidence. — Fost. 255.

HOMILET'ICAL, adj. Gr. tyiXjjncoc-So- cial ; conversable.

His life was holy, and when he had leisure for retirements, severe : his virtues active chiefly, and homiletical ; not those lazy sullen ones of the cloyster.

A tterbury.

HOM'ILY, n.s. Fr. homilie ; Gr. 6/uXt'a. A discourse read lo a congregation.

Homilies were a third kind of readings usual in former times ; a most commendable institution, as well then to supply the casual, as now the necessary defect of sermons. Hooker.

What tedious homily of love have you wearied your parishioners withal, and never cried, Have patience, good people ! Shaktpeare. As You Like It.

If we survey the homilies of the ancient church, we shall discern that, upon festival days, the subject of the homily was constantly the business of the day. Hammond's Fundamentals.

HOMILY, from 6/uXoc, an assembly, is a sermon upon some point of religion, delivered in a plain manner, so as to be easily understood by the people. The Greek homily, says M. Fleury, signifies a familiar discourse, like the Latin ser-mo; and discourses delivered in the church were so named, to intimate that they were not harangues or matters of ostentation and flourish, like those of profane orators, but familiar and useful discourses, as of a master to his disciples, or a father to his children. All the homilies of the Greek and Latin fathers were composed by bishops. The privilege was not ordinarily allowed to priests till towards the fifth century. St. Chrysostom was the first presbyter that preached statedly. Origen and St. Augustine also preached ; but it was by a peculiar license. Photius distinguishes homily from sermon, in that the homily was performed in a more familiar manner; the prelate interrogating and talking to the people, and they in their turn answering and interrogating him, so that it was properly a conversation; whereas the sermon was delivered with more form, and in the pulpit, after the manner of the orators. The practice of compiling homilies, to be committed to me-mory, and recited by ignorant or indolent priests, commenced towards the close of the eighth century ; when Charlemagne ordered Paul Deacon and Alcuin to form homilies or discourses upon the Gospels and Epistles, frora the ancient doctors of the church. This gave rise to that famous collection entitled the Homiliarium of Charlemagne, which being followed as a model by many productions of the same kind, composed by private

persons, from a principle of pious zeal, contributed much says Mosheim to nourish the indolence, and perpetuate the ignorance of a worthless clergy. There are still extant several fine homilies, composed by the ancient fathers, particularly St. Chrysostom and St. Gregory. The Clementine homilies are nineteen homilies in Greek, published by Cotelerius, with two letters prefixed; one of them written in the name of Peter, the other in the name of Clement, to James bishop of Jerusalem ; in which last letter they are entitled Clement's Epitome of the Preaching and Travels of Peter. According to Le Clerc, these homilies were composed by an Ebionite in the second century; but Montfaucon supposes that they were forged long after the age of St. Athanasius. Dr. Lardner apprehends, that they were the original or first edition of the Recognitions ; and that they are the same with the work censured by Eusebius under the title of Dialogues of Peter and Ap-pion.

HOMILIES, Two BOOKS OF, in the Church of England, are two books of plain sermons, set out by public authority, and ordered to be read in churches on Sundays and holidays, when there was no sermon. The first book was compiled

and published in the beginning of Edward the VI's reign ; and the second in queen Elizabeth's time, by order of convocation, 1563.

HOMINE lleplegiando, a writ for the bailing of a man out of prison, when he is confined without commandment of the king or his judges, or from any cause that is repleviable. But this writ is now seldom used; a writ of habeas corpus being sued out on the necessary occasions.

HOMO, man, is ranked by Linnaeus under the class of mammalia and order of primates, or chiefs ; and characterised by having four parallel fore teeth both in the upper and lower jaw, and two mamma on the breast. The only species is the

H. sapiens, or sapient man, so named as being endowed with wisdom far superior to, or rather exclusive of, all other animals. See MAN.

The following is the arrangement of the species offered by Dr. Gmelin as more convenient than that of Linnaeus.

H. albus, white, formed by the rules of symmetrical elegance and beauty. This division includes almost all the inhabitants of Europe ; those of Asia on this side of the Oby, the Caspian, Mount Imaus, and

the Ganges ; likewise the natives of the north of Africa, of Greenland, and the Esquimaux.

H. badius, brown, of a yellowish brown color; having scanty hairs, flat features, and small eyes. This variety takes in the whole inhabitants of Asia not included in the preceding division.

H. cupreus, copper-colored, the complexion of the skin resembling the color of copper not burnished. The whole inhabitants of America, except the Greenlanders and Esquimaux.

H. fuscus, tawny, chiefly of a dark blackish-brown color ; having a broad nose, and harsh coarse straight hair. The inhabitants of the southern islands, and of most of the Indian islands. See PHYSIOLOGY.

H. niger, black, of black complexion, having frizzly hair, a flat nose, and thick lips. The whole inhabitants of Africa, excepting those of its more northern parts. This variety is ranked by Dr. Gmelin third in order, though in the gradation of color it certainly should be last.

HOMODROMUS VECTIS, or lever, in mechanics, is a lever in which the weight and power are both on the same side of the fulcrum as in the lever of the second and third kinds ; being so called because here the weight and power move both in the same direction, whereas in the heterodromus they move in opposite directions.

HOMOGE'NEAL, ,adj. ~\ Fr. homogene ;Gr.

HOMOGE'KEOUS, adj. | o/toytvjjc-Show—

HOMOGE'NEALNESS, n. s. [ing the same na—

HOMOGENE'ITY, n. s. j ture or principles ;

HOMOGE'NEOUSXESS, n. s. 1 similitude of kind :

HOMOG'ENY, n. s. j thus blood is said

to be an homogeneous fluid. Homogeny, a word obsolete, signifies joint nature.

The means of reduction, by the fire, is but by congregation of homogeneal parts. Bacon.

By the driving back of the principal spirits, which preserve the consistence of the body, their government

is dissolved, and every part returueth to his nature or homjyeny. Id.

Ice is a sirnilary body, and homogeneous concretion, whose material property is water.

Browne's Vulgar Errours.

The light, whose rays are all alike refrangible, I call simple, homogtneal, and similar: and that whose rays are some more refrangible than others, I call compound, heterogeneal, and dissimilar. Newton.

An homogeneous mass of one kind is easily distinguishable from any other j gold from iron, sulphur from allum, and so of the rest. Woodward.

The mixtures require a greater degree of fluidity and similarly, or homogeneity of parts. Arbuthnot.

Upon this supposition of only different diameters, it U impossible to account for the homogeneity or similarity of the secerned liquors. Cheyne.

HOMOLOGATION, from 6/*o\oyia, consent, in the civil law, the act of confirming or rendering a thing more valid and solemn, by publication, repetition, or recognition thereof.

HOMO'LOGOUS, adj. Fr. homologue ; Gr. o;ioXoyoc. Having the same manner or proportions.

HOMO'NYMOUS, adj. Fr. homonyme; Gr. O/JWJ/VJKOC- Denominating different things ; equivocal ; ambiguous.

As words signifying the same thing are called synonymous, so equivocal words, or those which signify several things, are called homonymons, or ambiguous ; and when persons use such ambiguous words, with a design to deceive, it is called equivocation. Watts.

HONAN, a province of China, bounded on the north by that of Petcheli and Chansi, on the west by Chansi, on the south by Houquang, and on the east by Chantong. Every thing that can contribute to render a country delightful is said to be united in this province ; the Chinese therefore call it Tong-hoa, or the middle flower; it is situated indeed almost in the centre of China. The ancient emperors, invited by the mildness of the climate and the beauty of the country, fixed their residence here for a time. But the abundance of its fruits, pastures, and corn, the effeminacy of its inhabitants who are accounted extremely voluptuous, and the cheapness of provisions, have prevented trade from being so flourishing here as in the other provinces. The whole country is flat, excepting towards the west, where there is a long chain of mountains, covered with thick forests ; and the land is in such a high state of cultivation, that those who travel through it imagine they are walking in an immense garden. Besides the Hoangho, which runs through this province, it is watered by a great number of springs and fountains. It has also a valuable lake, which is frequented by a prodigious number of workmen, because its water is said to have the property of communicating a lustre to silk, which cannot be imitated. Exclusive of forts, castles, and places of strength, this province contains, eight fou, or cities of the first class, and 102 of the second and third. In cne of these cities, named Nan-yang, is found a kind of serpent, the skin of which is marked with small white spots : the Chinese physicians steep it in wine, and use it as a remedy against the palsy.

HONDEKOETER (Melchior), a famous Dutch painter, born at Utrecht in 1637, who excelled in painting animals, and especially birds. VOL. XI.

His father and grandfather were of the same profession. He was trained up to the art by his father ; but surpassed not only him, but even the best of his contemporaries in a very high degree. Till he was seventeen years of age he continued under the direction of his father, and accustomed himself to paint birds in an elegant variety of actions and attitudes : and after his father's death, in 1653, he received instruction from his uncle, John Baptist Weeninx. His pencil was wonderfully neat and delicate ; his touch light ; his coloring exceedingly natural, lively, and remarkably transparent ; and the feathers of his fowls were expressed with such a swelling softness as might readily and agreeably deceive the eye of any spectator. It is reported that he had trained up a cock to stand in any attitude he wanted to describe, and that he used to place the cr°ature near his

easel ; so that at the motion of his hand the bird would fix itself in the proper posture, and would continue in that particular position, without the smallest perceptible alteration, for several hours together. His pictures sell at a high price, and are much sought after. He died at Utrecht in 1695, aged fifty-nine.

HONDIUS (Jesse), an eminent letter-founder, and engraver on copper and ivory, born in Flanders in 1563. He was author of a work entitled Descriptio Geographica Orbis Terrarum, published in folio, in 1607. He died in 1611.

HONDURAS, a province of the former kingdom of Guatimala, New Spain, now a portion of the central United States of North America, is bounded on the north by the bay of this name, which separates it from Yutacan ; east by the Caribbean Sea ; south by the province of Nicaragua ; and west by Vera Paz. Its length is about 390 miles ; and its breadth, from north to south, about 150 miles. Here Columbus landed, 14th August, 1502, on his fourth voyage, and took formal possession of the country for the king of Spain.

What is properly called the coast of Honduras extends from the Gulf of Anatic to Cape Honduras, where commences the Mosquito shore. The Mosquito Indians, who inhabit it, entertain that implacable enmity to the Spaniards, which has always prevented the latter from attempting any establishments on the coast. The only place of any consideration on this coast is San Fernando de Omoa, a large fort on a convenient bay ; a fine river runs close to it, but it is the most unhealthy part of the coast from the stagnant waters. Truxillo is a town a mile from the sea, between two rivers abounding in fish : its port is safe, and the most frequented of the coast of Honduras.

The soil here is of great fertility, producing three crops of maize a-year ; but the climate is hot, moist, and unhealthy to Europeans. The pasturage, as may be supposed, is luxuriant in the highest degree ; and the precious metals have been found in the mountains. The chief products are mahogany log, and various dye woods, dyeing drugs, wool, cotton, wax, and honey. The rivers, which are numerous, abound in fish.

The indigenous inhabitants are idle and profligate : when first found by the Spaniards they were wholly careless of any other food than root*

and insects, and soon became addicted to drunkenness.

Great Britain took possession of the Mosquito shore for eighty years, ending in 1788, and the Spaniards have always reckoned this a part of Honduras. Cape Gracios a Dios was the place where the British first established themselves, in the terrritory of Honduras Proper, in 1730. They then also fixed a colony about seventy-eight miles from Cape Honduras, or 162 miles from Cape Gracios a Dios. Farther south, at Bluefields River, 210 miles from the first colony, they afterwards found a fine harbour, an extensive river, and a natural situation for a fort, with spacious, beautiful, and fruitful plains. The Indians are largely employed by the British in striking the manati, or sea-cow, for the sake of the oil : they are much attached to the English; and being, after long and exterminating contests, driven into the mountains by their Spanish invaders, they never revisited the coast till the latter took possession of the shore. The same tribes inhabit nearly the whole coast of Honduras; but the most numerous tribe exists near Cape Gracios a Dios. The chief towns are Valladolid, or Comayaguas, Truxillo, Gracios a Dios, Omoa, or St. Francisco de Omoa.

HONDURAS BAY is that gulf of the Caribbean Sea between the peninsula of Yucatan and Cape Honduras. The English claim the right of cutting logwood on the coast of all this gulf, from Cape Catoche, on an island at the north-east point of Yucatan, to the river St. Juan in 12°, which has several times occasioned disputes with the Spanish government. The first adventurers in this business were persons of desperate fortunes and characters, who fled from the West India Islands ; and who, during the season of inactivity on shore, pursued the business of piracy. In 1722 the Spaniards destroyed their establishments, and put to death all the persons they found in them ; but, another settlement being formed, Spain at last was prevailed on to tolerate it within certain limits, and with the stipulation of building no forts. The former are, by treaty of 1783, the district between the Rio Hondo and the River Ballize, or Wallis of the English, the course

of the rivers being the fixed boundaries : this district is a great plain full of lakes and swamps. The River Ballize has a course of 200 miles ; and at its mouth is the grand establishment of the English for cutting mahogany, composed of wooden dwellings, of the rudest kind,

The trees are cut at the wet season of the year, and, after being dragged from the forests to the banks of the rivers, they are made into rafts and floated to the shore. These rafts frequently consist of 200 logs, and are floated as many miles; and, when the floods are unusually rapid, they sometimes break asunder, and the whole of the wood is hurried away to sea. But the mahogany obtained here is not equal in quality to that procured from the Spaniards. A few particulars of the mode of obtaining it will, however, be interesting.

The gangs of negroes employed in the work consist of from ten to fifty each ; few exceed the latter number. The larger bodies are commonlv

divided into several small ones : a plan which, it is supposed, facilitates labor. Each gang has one belonging to it who is stylei the huntsman. He is generally selected from the most intelligent of his fellows : and his chief occupation is to search the woods, or, as in this country it is termed, the bush, to find labor for the whole. A negro of this description is often valued at more than £500. About the beginning of August the huntsman is despatched on his errand; and3 if his owner be working on his own ground, this is seldom an employment of much delay. lie cuts his way through the thickest of the woods to the highest spots, and climbs the tallest tree he finds, from which he minutely surveys the surrounding forests. At this season the leaves of the mahogany tree are invariably of a yellow-reddish hue ; and an eye accustomed to it can discover, at a great distance, the places where the wood is most abundant. He now descends, and to such places his steps are directed ; when without compass, or other guide than what observation has imprinted on his recollection, he never fails to reach the exact point to which he aims.

It is common to cut the mahogany tree about twelve feet from the ground, and a stage is erected for the axe-man employed. This, to an observer, would appear a labor of much danger, but it is seldom that any accident happens to the person engaged in it. The body of the tree, from the dimensions of the wood it furnishes, is deemed the most valuable ; but, for purposes of an ornamental kind, the branches or limbs are preferred, the grain of these being iriuch closer, and the veins richer. The last day of cutting down the trees, if the negroes

have not been disturbed in their labor, is always one of festivity and merriment.

In the short intervals of leisure which now succeed they are employed in the improvement of their dwellings or huts composed of a few sticks and leaves, or in search of game, in which they are generally successful. The more ingenious turn their attention to the manufacture of small articles from the less valuable mahogany. The growth of the logwood here is extremely rapid, so much so that it is said to attain maturity in five or six years, when it is cut and sent to Europe in logs of a few feet long.

Besides the mahogany and logwood tree, Honduras Bay produces two or three kinds of the mangrove, as the red, white, and black. The first is preferred for the firmness of its texture, and its extreme durability. Its bark is little inferior to oak bark, when applied to the purpose of tanning. Cedars are large and abundant, and are commonly used in ship-building. The palmetto, the sapadilla, and the sea-grape trees, are all also found very useful. Large pines of a superior quality abounded in many places. The bullet-tree, the iron-wood-tree, the calabash-tree, and the button-wood tree, are also valuable. The althea grows at a considerable distance from the coast, and is generally made into rafts for floating the logwood to the sea. The bark is also woven into ropes, which are nearly equal in strength and durability to those made of hemp. The tree that exudes the resinous sub-HON

stance called caoutchouc, or elastic gum, from which Indian-rubber is made, grows plentifully in several provinces of Guatimala, particularly in various parts of Honduras. In addition to these may be enumerated the locust-tree, the fustic, the cocoa-nut-tree, the cabbage, and the silk-cotton-trees, besides which both trees and shrubs of a medicinal nature grow in great variety and profusion.

The banana-bird is much admired for the beauty of its pknnage, and the rice-bird rivals the ortolan in flavor. The shores abound with aquatic birds of different kinds. But one of the most singular signts

exhibited by the feathered race is in the myriads of swallows that are found in some parts during the periodical rains, particularly in Honduras. These birds rest for the night among the rushes of some watery savannah, and as soon as the dawn appears they quit their retreat in a body, and always rise to a certain height, in a spiral and compact form, which at a distance resembles an immense volume of smoke, after which they disperse for the day. Their descent to their resting places is at sun-set, and is made much in the same way, but with almost inconceivable rapidity. The noise that accompanies it can only be compared to the falling of a vast torrent, or the rushing of a mighty wind. The humming-bird is seen in most of its splendid varieties, and the oxilis, one of the most minute and beautiful of this elegant tribe, is very common. The number of fish, insects, and reptiles, is also great.

The approach to this coast, and particularly to the Bay of Honduras, is attended with imminent danger ; the difficulty of the navigation indeed is demonstrated by the numerous remains of vessels that have been wrecked on the different reefs and keys which are dispersed along it. During the continuance of north-winds, the danger becomes much increased. The weather at such seasons is usually hazy ; and the currents, which in this part of the world are peculiarly governed by the influence of the winds, run with such extraordinary and unequal rapidity, as frequently disappoints all calculation. It is also worthy of remark, that so deceitful are the different keys found, from the general resemblance they bear to each other, that the most experienced seaman, when placed amongst them, often becomes fatally perplexed. Indeed, on making this coast, it is very unsafe to proceed without a pilot.

On taking a departure from Honduras, the hazard becomes, if possible, greater. The first object to attain in this instance is to make what are called the Northern Triangles, or three keys immediately close together, of a form analogous to that which their name imports, and distant in a N.N. E. direction about ten leagues from Ballize. A further stretch is then made for Cape Antonio, on the west side of Cuba. The making of this last place is considered as the most important object on the voyage homeward. Vessels who cannot do this are often driven into the gulf of Mexico, and not unfrequently remain becalmed there for many weeks, or have to beat up for the gulf of Florida.

HONE, n. s. This word Casaubon deriyes

from Gr. OKOVJJ ; Junius from Welsh hogsaen; Skinner, who is always rational, from Saxon paen, a stone ; hsenan to stone. — Johnson. There can be no question that Skinner is right as to the immediate origin of this word : the Goths had also liein, a whetstone. A whetstone for a razor.

A hone and a parer to pare away grass. Tuster. To HONE, v. n. Sax. bonsian. To pine ; to long for any thing.

HONE (George Paul), a German lawyer, born at Nuremburg in 1662. He was bailiff of Cobourjr, and counsellor to the duke of Meinin-gen. His chief works are, 1. Lexicon Topogra-phicum Franconice. 2. History of the duchy of Saxe-Cobourg. He died at Cobourg in 1747. HON'EST, adj. } Fr. lioneste ; Lat. hones-HON'ESTLY, aav. s tus. Upright ; just ; sin-HON'ESTY, n.s. J cere ; candid; chaste; fair ; open. Honest is the most familiar and universal term, applied alike to actions and principles.— Crabb.

Thus Walter lowly, nay but really, Wedded with fortuiiat honettetee, —

In Goddes pees liveth ful esily At home, and grace ynough outward had he :

And for he saw that under low degree Was honest virtue hid, the people him held A prudent man, and that is seen ful scld.

Chaucer. The Clerkei Tale.

Follow not, therefore, the common reputation of honesty. If you will seem honest, be honest ; or else seem as you are. Seek not the name without the thing ; nor let the name be the only mark you shoot at. Wyatt's Letters to his Son.

Thou shall not have thy husband's lands. — Why, then mine honesty shall be my dower.

Shaktpeare. What art thou ?

A very honest-hea.rttd fellow, and as poor as the king.

Id. Wives may be merry, and yet honest too. Id.

It doth make me tremble, There should those spirits yet breathe, that when they

cannot

Live honestly, would rather perish basely. Ben Jonson. An honest physician leaves his patient, when he can contribute no further to his health. Temple.

Goodness, as that which makes men prefer their duty and their promise before their passions or their interest, and is properly the object of trust, in our language goes rather by the name of honesty ; though what we call an honest man, the Romans called a good man ; and honesty, in their language, as well as in French, rather signifies a composition of those qualities which generally acquire honor and esteem.

Id.

Tate will subscribe, but fix no certain day, He's honest, and as wit comes in, will pay. Tate Heaven that made me honest, made me more Than ever king did, when he made me love.

Rowe's Jane Shore.

For some time past all proposals from private per sons to advance the public service, however honestly and innocently designed, have been called flying in the king's face. Swift.

The way to relieve ourselves from those sophisms, is an honest and diligent enquiry into the real nature and causes of things. Watts.

If you come for our thanks, take them and hence, The dungeon gloom is deep enough without you, And full of reptiles not less loathsome, though Their sting is honester. Byron—

Sax. fmmg ; Belg. honig; Germ, honec, honag. This word is found in all the Go-thic and Teutonic dialects. A thick, viscous, fluid substance, produced by bees. See APIS. Honied, covered with honey : sweet ; luscious. To honey is to talk fondly. Mo-

HON'IED, adj. HON'EY-BAG, n. s. HON'EY-COMB, n. s. HON'EYCOMBED, adj. FON'EY-DEW, n. s. HON'EY-FLOWER, n. s. HON'EY-GNAT, ra. s. HON'EY-MOON, n.s. HON'EYSUCKLE, n. s. HON'EYLESS, adj. HON'EY-WORT, n. s.

neyless being without honey. The several compounds have specific meanings : Honey-bag, the stomach. Honeycomb, the cells of wax in which the bee stores her honey. Honeycombed is a term used respecting a piece of ordnance flawed with little cavities by being ill cast. Honey-dew, a sweet dew which rests on leaves and flowers at particular seasons. Ho-ney-flower, a plant. Honey-gnat, an insect. Honey-moon, the first month after marriage, when there is nothing but tenderness and pleasure. Honeysuckle, Lat. caprifolium, woodbine. Honeywort a plant. It hath a perennial root, and the appearance of a shrub. This plant produces large spikes of chocolate-coloured flowers in May, in each of which is contained a large quantity of black sweet liquor, from whence it is supposed to derive its name. — Miller.

The Swalowe, murderer of the beies smale, That maken honie of floures freshe of hewe.

Chaucer. The Assemblie of Foules. What do ye , honeycombe ! swete Alisoun ? My faire bird ! my swete sinamoune !

Id. The Milleres Tale. Bid her steal into the pleached bower, Where honeysuckles, ripened by the sun, Forbid the (sun to enter ; like to favourites, • Made proud by princes, that advance the pride Against the power that bred it. Shakspeare.

The king hath found Matter against him, that for ever mars The honey of his language. Id.

A honey tongue, a heart of gall, Is fancy's spring, but sorrow's fall. Id.

Nay, but to live

In the rank sweat of an incestuous bed, Stewed in corruption,

honeying and making love Over the nasty sty. Id. Hamlet.

So work the honey bees, Creatures that by a ruling nature teach The art of order to a peopled kingdom. Id. Honey ! you shall be well desired in Cyprus ; I've found great love amongst them. Oh, my sweet ! I prattle out of fashion, and I dote. Id. Othello.

But for your words, they rob the Hybla bees, And leave them honeyless. Shakspeare.

And the mute wonder lurketh in men's ears, To steal his sweet and honied sentences. Id.

Touching his education and first fostering, some affirm, that he was fed by honey bees.

Raleigh's History.

In ancient time there was a kind of honey, which, either of its own nature, or by art, would grow as hard as sugar, and was not so luscious as ours.

Bacon.

The bee with honied thigh. That at her flow'ry work doth sing. Milton.

Watch upon a bank With ivy canopied, and interwove With flauntin? ho*iev-suckle. Id.

That even would cut their throats like selfish slaves

whom

Now they fawn on ; Like deadly locusts eat the honey up Which those industrious bees so hardly toiled for.

Otway's Orphan. Why, honey bird, I bought him on purpose forthee.

Dryden.

Then melfoil beat and honeysuckles pound ; With these alluring savours strew the ground. Id. When the patient is rich, there is no fear of physicians about him as thick as wasps to a honey pot.

Ij'Eitrange.

There is a honey-dew which hangs upon their leaves, and breeds insects. Mortimer.

The honey-bag is the stomach, which bees always fill to satisfy, and to spare, vomiting up the greater part of the honey to be kept against winter. Grew.

How honey-dews embalm the fragrant morn, And the fair oak with luscious sweets adorn.

Garth.

A man should keep his finery for the latter season of marriage, and not begin to dress till the honey-moon is over. Addison.

A mariner having discharged his gun which was honeycombed, and loading it suddenly again, the pow-der took fire. Wiseman.

Honey is the most elaborate production of the vegetable kind, being a most exquisite vegetable sope, resolvent of the bile, balsamick, and pectoral : honey contains no inflammable spirit, before it has felt the force of fermentation ; for by distillation it affords nothing that will burn in the fire. Arbuthnot.

New wine, with Aon«/-tempered milk, we bring; Then living waters from the crystal spring. Pope. The milliners who furnish drapery Misses, Throughout the season, upon speculation Of payment ere the honey-moon's last kisses Have waned into a crescent's coruscation, Thought such an opportunity as this is

Of a rich foreigner's inclination Not to be overlooked : — and gave such credit That future bridegrooms swore and sighed and paid it.

Byron.

HONEY, as a medicine, is a very useful detergent and aperient, powerfully dissolving viscid juices, and promoting the expectoration of tough phlegm. In some particular constitutions it has an inconvenience of griping, or of proving purgative ; which is said to be in some measure prevented by previously boiling the honey. This, however, with all constitutions, is by no means effectual ; and the circumstance has had so much weight with the Edinburgh College, that they do not now employ it in any preparation, and have entirely rejected the mella medicata, substituting syrups in their place : but honey is doubtless very useful in giving form to different articles, although there are some individuals with whom it may disagree. In

order, however, to obtain the good effects of the honey itself, it must be used to a considerable extent, and as an article of diet. The following remarkable instances of the good effects of honey in some asthmatic cases are given by Dr. Monro, in his Medical and Pharmaceutical Chemistry : — ‘ The late Dr. John Hume, one of the commissioners of the sick and hurt of the royal navy, was for many years violently afflicted with an asthma. Having taken many medicines, without receiving relief, he at last resolved to try the effects of honey, having long had a great opinion of its virtues as

pectoral. For two or three years he ate some ounces of it daily, and got entirely free of his asthma, and likewise of a gravelly complaint with which he had been long afflicted. About two years after he had recovered his health, when he was sitting one day in the office for the sick and hurt, a person laboring under a great difficulty of breathing, who looked as if he could not live many days, came to him and asked him by what means he had been cured of his asthma. Dr. Hume told him the particulars of his own case, and mentioned to him the means by which he had found relief. For two years after he heard nothing of this person, who was a stranger to him, and had seemed so bad that he did not imagine that he could have lived many days, and therefore had not even asked him who he was; but, at the end of that period, a man seemingly in good health, and decently dressed, came to the sick and hurt office, and returned him thanks for his ciire, which he assured him had been entirely brought about by the free use of honey.’

HONEY-DEW, a term frequently applied to a clammy saccharine substance, which is often seen covering the leaves and other parts of different kinds of trees and plants, at some particular seasons of the year. It does not appear that the cau-se of this extraordinary appearance is yet fully understood, as it has not by any means been

well ascertained whether it derives its origin from external circumstances, or some morbid affection of the vegetables themselves. It is generally, however, supposed to be the production of insects. See APHIS.

HONEYSUCKLE. See LoNICERA.

HONEYSUCKLE, AFRICAN FLY. See HALLE—

RIA.

HOXEY-SUCKLE, AMERICAN UPRIGHT. See

AZALEA.

HONEYSUCKLE, FRENCH. See HEDYSARUM.

HONEYSUCKLE GRASS. SeeTRIFOLIUM.

HONEY-WORT. See CERINTHE, and SISON.

HONFLEUR, a sea-port of France, in the department of Calvados (Normandy), the chief place of the canton and arrondissement of Pont-1'Eveque. It has a tribunal of commerce and of inferior causes, an exchange, several foreign vice-consulates, a school of navigation of the fourth class, and is a post-town containing 10,000 inhabitants. High water at nine o'clock, at the full and change.

This town is beautifully situated on the left bank of the Seine, near the spot where it empties itself into the channel; and has an excellent port, capable of containing from thirty to thirty-five vessels. The tide rises from twenty to twenty-two feet from the open sea to the basin of the port, which is furnished with flood-gates to re-tain the waters at every height. The two beacons on the moles have been replaced by two lighthouses. There are regular passage-boats every day ˆbetween this port and Havre. On the side of Grace there are beautiful walks on the sea-shore, commanding extensive views of the ocean and of both banks of the Seine from its mouth. Honfleur was anciently well fortified and endured several sieges: in 1440 the generals of Charles VII. took it from the English, and in

1594 it was the last place that submitted to Hen-ry IV.

It has manufactures of lace, and is celebrated for sea biscuits ;

sulphate of iron and sulphuric acid are made here : it has also sugar refineries, vinegar breweries, tan yards, oil mills, rope grounds, and yards for ship-building. Its commerce consists in corn, cider, melons, sea fish, salt provisions, red and salted herrings, and building wood : it is the mart for colonial produce. It fits out vessels for the cod and whale-fisheries, and for the colonies ; and has an export and import trade with the different maritime powers of Europe and America. It is about thirty-six miles north-east of Caen, fifty-one west of Rouen, nine south-east of Havre, and 144 north-west of Paris.

HONIMOA, or Uliasser, one of the Molucca Islands ; nine miles long, and three and a half broad. It is fertile in rice and cloves.

HONITON, a borough of Devonshire, with a market on Saturday, and a fair in July. A dreadful fire happened there in July 1747, which consumed three parts of the town : the damage was computed at £43,000. It has one church, half a mile from the town ; and a large manufactory of bonelace. Just before the entrance into the town, from London, is a hill which commands one of the most beautiful prospects in the kingdom. Honiton has sent two members to parliament since the 28th of Edward I. It is seated on the Otter, 148 miles W. S. W. of London. HON'OR, n. s. & v. a. ~) Fr. honneur , Latin HON'ORARY, adj. \ honor. These terms

HON'ORABLE, adj. [respect the principle HON'ORABLENESS, n.s. f which actuates men HON'ORABLY, adv. \ in the adjustment of HON'ORER, n. s.) their rights, and are

derived from the Heb. hon, substance or wealth. Honor extends to every thing estimable or entitled to esteem. — Crabb. Honoris dignity; reputation ; magnanimity ; reverence ; chastity ; dignity of mien ; glory ; public marks of respect ; privileges and titles of rank or birth ; civilities; decorations: on my honoris a form of protestation used by the lords in judicial decisions instead of an oath ; hence a common pledge for the veracity of the speaker : to honor is to reverence ; dignify ; glorify, or make illustrious : honorable, free from taint or reproach ; honest without intention of deceit ; all the other acceptations of honor belong to it : honorary is often used as conferring honor without gain ; as honorary secretary, &c.

He was called our father, and was continually honored of all men, as the next person unto the king.

Esth. xvi. 11.

The poor man is honoured for his skill, and the rich man is honoured for his riches. Ecclta. x. 30.

He that is honoured in poverty, how much more in riches ? Id. 31.

As he was honourable in all his acts, so in this that he took Joppe for an haven. 1 Mac. xiv. 5.

Honour honoureth him for his noblesse.

Chaucer. The Complaint < >f Venus.

Also thou shall not swere for envie, neyther for favour ne for nede, — but only for rightwisnesse, and f)i declaring of trouthe to the honour and worship of God. Id. The Persones Tale.

Not fer fro thilke pale is honourable, Wher as this markis shope his marriage, Ther stood a thorpe, of sight delitable. 14.

Sith this wretched woman overcome, Of anguish, rather than of crime hath been, Preserve her cause to her eternal doom ; And in the mean vouchsafe her honourable tomb.

Spenser.

They take thee for their mother, And every day do honour to thy grave. Shakspeare.

His grace of Canterbury,

Who holds his state at door, ‘mongst pursuivants. — Ha ! ‘tis he, indeed ! Is this the honour they do one another ? Id.

Be the honour flawed,

I have three daughters, the eldest is eleven ; If this prove true, they'll pay for it. Id.

She dwells so securely on the excellency of her honour, that the folly of my soul dares not present itself : she is too bright to be looked against. lit. My hand to thee, nay honour on my promise. Id.

Thinkest thou it honourable for a nobleman Still to remember wrongs ? Id.

Thou happy father,

Think that the clearest gods, who make them honours Of man's impossibilities, have preserved thee. Id.

Return unto thy Lord, Bid him not fear the separated councils : His honour and myself are at the one ; And at the other is my good friend Catesby. Id.

Henry the seventh, truly pitying My father's loss, like a most royal prince, Restored to me my honours; and, from ruins, Made my name once more noble. Id.

We nourish 'gainst our senate ' The cockle of rebellion, insolence, sedition, Which we ourselves have plowed for, sowed and scattered, By mingling them with us, the honoured number. Id.

If that thy bent of love be honourable, Thy purpose marriage, send me word to-morrow. Id.

Now shall I see thy love ; what motive may Be stronger with thee than the name of wife ? — That which upholdeth him, that thee upholds, His honour. Oh, thine honour, Lewis, thine honour.

Id.

Methinks I could not die any where so contented as in the king's company, his cause being just and his quarrel honourable. Id.

Sir, 111 tell you,

Since I am charged in honour, and by him That I think honourable. Id.

The reverend abbot, With all his convent, honourably received him. Id.

Here's a Bohemian Tartar tarries the coming down of thy fat woman : — let her descend, my chambers are honourable. Id.

A man is an ill husband of his honour, that entereth into any action, the failing wherein may disgrace him more than the carrying of it through can honour him.

Bacon.

After some six weeks, which the king did honourably interpose, to give space to his brother's intercession, he was arraigned of high treason, and condemned.

Id.

The earl sent again to know if they would entertain their pardon, in case he should come in person, and assure it : they answered, they did conceive him to be so honourable, that from himself they would most thankfully embrace it. Hayward.

Close to him pleasing went with painted face, And honour by some hidden cunning made ; Not honour's self, but honour's semblance base, For soon it vanished like an empty shade.

Fletcher's Purple Island.

Two of far nobler shape, erect and tall, Godlike erect ! with native honour clad In naked majesty, seemed lords of all. Mtiton.

Therefore with manlier objects we must try His constancy, with such that have more show Of worth, of honour, glory, and popular praise, Rocks whereon greatest men have oftest wrecked.

Id.

Riches and honour they from laymen reap And with dull crambo feed the silly sheep.

Mar veil.

Then warlike kings, who for their country fought, And honourable wounds from battle brought.

Dryden.

Many of those persons, who put this honourable task on me, were more able to perform it themselves.

Id. He saw his friends, who whelmed beneath the

‘waves, Their funeral honours claimed, and asked their qciet

graves. Id.

The sire then shook the honours of his head, And from his brows damps of oblivion shed. Id.

Tis just ye gods ! and what I well deserve ! Why did I not more honourably starve ? Id.

A late eminent person, the honour of his profession for integrity and learning. Burnet’s Theory.

This monument is only honorary, for the ashes of the emperor lie elsewhere. Addison on Italy.

Honour’s a sacred tie, the law of kings The noble mind’s distiguishing perfection. That aids and strengthens virtue where it meets her, And imitates her actions where she is not : It is not to be sported with. Id. Cato.

Honours were conferred upon Antonine by Hadrian in his infancy. Wotton’s Roman History.

If by honour is meant any thing distinct from conscience ‘tis no more than a regard to the censure and esteem of the world. Rogers.

This is a duty in the fifth commandment, required towards our prince and our parent, under the name of honour ; a respect, which, in the notion of it, implies a mixture of love and fear, and, in the object, equally supposes goodness and power. Id.

Such discourses, on such mournful occasions as these, were instituted not so much in honour of the dead, as for the use of the living. Atterbury.

Numbers engage their lives and labours, some to heap together a little dirt that shall bury them in the end ; others to gain an honour, that at best can be celebrated but by an inconsiderable part of the world, and is envied and calumniated by more than ‘tis truly given. Wake’s Preparation for Death.

How loved, how honoured once, avails thee not.

Pope.

I must not omit Mr. Gay, whose zeal in your concern is worthy a friend and honourer. Id.

Then here a slave, or if you will a lord, To do the honours, and to give the word. Id.

———— there is a woman Worthy a brave man's liking. Were ye such You would have honoured her.

Byron. Deformed Transformed,

HONOR is used for a mark of esteem or submission, expressed by words, actions, and exts-rior behaviour, by which we make known the respect we entertain for a person on account of his dignity or merit. The word is used in general for the etteem due to virtue, glory, and reputation. It is also used for virtue and probity themselves, and for an exactness in performing whatever we have promised. Virtue and Honor were deified among the ancient Greeks and

Romans, and had a joint temple consecrated to them at Rome: but afterwards each of them had separate temples, which were so placed that no one could enter the temple of Honor without passing through that of Virtue ; by which the Romans were continually put in mind that virtue is the only direct path to true glory. Plutarch tells us that the Romans, contrary to their usual custom, sacrificed to Honor uncovered ; perhaps to denote, that, wherever honor is, it wants no covering, but shows itself openly to the world.

HONOR, in the beau monde, has a meaning materially different from

the above, and which it is easier to illustrate than define. It is however subject to a system of rules, called the laws of honor, constructed by people of fashion, calculated to facilitate their intercourse with one another, and for no other purpose. Consequently nothing is considered as inconsistent with honor, but what tends to incommode its intercourse. Hence, as Paley very properly states the matter, profaneness, neglect of public worship or private devotion, cruelty to servants, rigorous treatment of tenants or other dependents, want of charity to the poor, injuries done to tradesmen by in-solvency or delay of payment, with numberless examples of the same kind, are accounted no breaches of honor; because a man is not a less agreeable companion for these vices, nor the worse to deal with in those concerns which are usually transacted between one gentleman and another. Again, the law of honor being constituted by men occupied in the pursuit of pleasure, and for the mutual convenience of such men, will be found, as might be expected from the character and design of the law-makers, to be, in most instances, favorable to the licentious indulgence of the natural passions. Thus it allows of fornication, adultery, drunkenness, prodigality, duelling, and revenge in the extreme; and lays no stress upon the opposite virtues.

The king is styled the fountain of honor, as being the source of honors, dignities, &c. See PREROGATIVE. Although the origin of all sovereignty is in the people, yet it is absolutely impossible that government can be maintained without a due subordination of rank. The British constitution has therefore entrusted the king with the sole power of conferring dignities and honors, in confidence that he will bestow them only upon such as deserve them. Hence all degrees of nobility, of knighthood, and other titles, are received by immediate grant from the crown : either expressed in writing, by writs or letters patent, as in the creation of peers and baronets ; or by corporeal investiture, as in the creation of a simple knight. From the same principle also arises the prerogative of erecting and disposing of offices ; for honors are in their nature convertible and synonymous. All offices under the crown carry, in the eye of the law, an honor along with them ; because they imply a superiority of abilities, being supposed to be always filled with those who are most able to execute them. In fact all honors, in their original, had duties or offices annexed to them ; an earl, comes, was the conservator or governor of a county ; and a knight, miles, was bound to attend the

king in his wars. For the same reason, therefore, that honors are in the disposal of the king, offices ought to be so likewise ; and, as the king

may create new titles, so may he create new offices; but with this restriction, that he cannot create new offices with new fees annexed to them, nor annex new fees to old offices ; for this would be a tax upon the subject, which cannot be imposed but by act of parliament. Wherefore, in 13 Hen. IV., a new office being created by the king's letters patent for measuring cloths, with a new fee for the same, the letters patent were, on account of the new fee, revoked and declared void in parliament. Upon the same or like ground the king has also the prerogative of conferring privileges upon private persons : such as granting places or precedence to any of his subjects, or converting aliens, or persons born out of the king's dominions, into denizens ; whereby some very considerable privileges of natural born subjects are conferred upon them. Such also is the prerogative of erecting corporations ; whereby a number of private persons are united together, and enjoy many liberties, powers, and immunities in their political capacity, which they were incapable of in their natural.

HONOR, MAIDS OF, are young ladies in the queen's household, whose office is to attend the queen when she goes abroad, &c. In Britain they are six in number, and their salary is £300 a year each.

HONOR POINT, in heraldry, is that next above the centre of the escutcheon, dividing the upper part into two equal portions.

HONORS OF WAR, in a siege, is when a governor, having made a long and vigorous defence, is at last obliged to surrender the place to the enemy for want of men and provisions, and makes it one of his principal articles to march out with the honors of war; that is, with shouldered arms, drums beating, colors flying, and all the baggage, &c.

HONORS, MILITARY. All armies salute crowned heads in the most respectful manner, drums beating a march, colors and standards dropping, and officers saluting. Their guards pay no compliment, except to the princes of the blood ; and even that by courtesy, in the absence of the crowned head. To the commander in chief the whole line turns out without arms, and the camp-guards beat a march, and salute. To generals of horse and foot, they beat a march, and salute; lieutenant-generals of ditto, three ruffs, and salute ; major-generals of ditto two ruffs, and salute ; brigadiers of ditto one ruff and salute ; colonels of ditto, rested arms, and no beating. Sentinels rest their arms to all field-officers, and shoulder to every officer. All governors that are not general officers, in all p!aces where they are governors, have one ruff, with rested arms ; but for those who have no commission as governors, no drum beats. Lieutenant-governors have the main-guard

turned out to them with shouldered arms. The admiral or commander-in-chief of his majesty's fleet, is to rank with a field-martial of the army. The admirals, with their flags on the main-top-mast-head, are to have rank with generals. Vice-ad- mirals are to have rank as lieutenant-generals

Rear-admirals are to have rank as major-gene- rals. Commodores, with broad pendants, are to have rank as brigadier-generals.

Captains commanding post ships, after three years from the date of their first commission for a post ship, are to have rank as colonels. All other captains, commanding post ships, are to have rank as lieutenant-colonels. Captains of his majesty's ships or vessels, not taking post, are to have rank as majors. Lieutenants of his majesty's ships are to have rank as captains.

The rank and precedence of sea officers, in the classes above-mentioned, are to take place according to the seniority of their respective commissions.

No land officer is to command any of his majesty's squadrons or ships, nor any sea-officer to command at land; nor shall either have a right to demand military honors due to their respective ranks, unless they are upon actual service.

All guards and sentinels are to pay the same compliments to the officers of the royal navy as are directed to be paid to the officers of the army, according to their relative ranks.

The compliments above directed are to be paid by the troops to officers in the service of any power in alliance with his majesty according to their respective ranks.

The honors paid by sentinels to the officers when encamped, or in garrison, are — Field-mar- shals; two sentinels, with ordered firelocks, at their tent or quarters. Generals of horse or foot; two sentinels, one with his firelock shouldered, the other ordered. Lieutenant-generals; one, with firelock ordered. Major-generals ; one, with firelock shouldered. The first battalion of guards go under arms to the king only; not to stand by, nor draw up in the rear of their arms to any other; nor to give sentinels to foreigners. Second and third battalions draw up behind their arms to the princes, and to field-marshals ; but when on grenadier guards, or outposts, they turn out, as other guards do, to the officers of the day. They give one sentinel with shouldered arms to the princes of the blood, and to field-marshals when they lie alone in garrison.

HONORABLE, a title conferred on the youngest sons of earls, the sons of viscounts and barons ; as also on such persons as have the king's commission, and upon those who enjoy places of trust and honor. Members of the king's privy council are styled right honorable.

HONORARY is often applied to persons who bear some title or office merely for the name's sake, without performing any of its functions, or receiving any advantage from it; such as honorary counsellors, honorary fellows, &c.

HONORIACI, in antiquity, an order of soldiery in the eastern empire, who introduced the Goths, Vandals, Alani, Suevi, Sec., into Spain. Didymus and Verinianus, two brothers, had, with great vigilance and valor, defended the passages of the Pyreneans against the Barbarians for some time, at their own expense ; but, being at length killed, the emperor Constantius appointed the honoriaci to defend those passages, who, after laying them open to all the nations of the north then ravaging the Gauls, joined those nations themselves.

HONORIUS, the second son of Theodosius the Great, was associated in the empire with his brother Arcadius, A. D. 395. See ROME. He died at Ravenna, A. D. 423, aged thirty-nine.

HONTHEIM (John Nicholas de), a learned author, born at Treves in 1700. He was made suffragan to the archbishop elector, and was a man of great taste and erudition. He wrote, 1. Historia Trevisensis Diplomatica et Pragmatica, 3 vols. folio. 2. A Supplement to it, in 2 vols. folio. 3. De Prasenti Statu Ecclesiae Liber Singularis, 5 vols. 4to. He died in 1790.

HOOD, in composition, is derived from the Sax. f>ad ; in Germ, helt ; in Dut. Iteid. It denotes quality ; character ; condition ; as, knighthood ; childhood ; fatherhood. Sometimes it is written after the Dutch, as maidenhead. Sometimes it is taken collectively : as, brotherhood, a confraternity ; sisterhood, a company of sisters. HOOD, n. s. & v. a. \ Sax. bod, probably HOOD'MAN-BLIND, n. s. >from hepod, head. HOOD'WINK, v. a. j The upper covering of

a woman's head ; a monk's cowl; a covering put over the hawk's eyes when he is not to fly ; an ornamental fold that hangs down the back of a graduate, to mark his degree : to hood, to dress in a hood ;to blind ; to cover : hood man-blind a play in which the person hooded is to catch another, and tell the name ; blindman's buff : hoodwink, to blind with something bound over the eyes ; to cover; hide; deceive; impose upon.

A white cote and a blew hode wered he.

Chaucer. Prologue to Cant. Talet, While grace is saying, I'll hood mine eyes Thus with my hat, and sigh, and say. Amen.

Shakspeare. What devil was't, That thus hath cozened you at hoodman blind ?

Id.

Be patient ; for the prize I'll bring thee to, Shall hoodwink this mischance. Id.

We will bind and hoodwink him so, that he shall suppose he is carried into the leaguer of the adversaries. Id.

So have I seen, at Christmas sports, one lost. And hoodwinked, for a man embrace a post.

Ben Jonson. Then might ye see,

Cowls, hoods, and habits, with their wearers tost, And fluttered into rags. Milton's Paradise Lost. She delighted in infamy, which often she had used to her husband's shame, filling all men's ears, but his, with reproach j while he, hoodwinked with kindness, least of all men knew who struck him. Sidney.

They willingly hoodwinking themselves from seeing his faults, he often abused the virtue of courage to defend his foul vice of injustice. Id.

An hollow crystal pyramid he takes, In firmamental waters dipt above ;

Of it a broad extinguisher he makes, And hoods the flames that to their quarry strove.

Dryden.

In velvet, white as snow, the troop was gowned : Their hoods and sleeves the same. Id.

Prejudice so dexterously hood-winkt men's minds as to keep them in the dark, with a belief that they are more in the light. Locke.

Must I wed Rodogune ? Fantastick cruelty of hoodwinked chance !

Rowe, Satan is fain to hoodwink those that start.

Decay D/' Piety

The cobler aproned, and the parson gowned, The friar hooded, and the monarch crowned.

Pope.

On high, where no hoarse winds or clouds resort, The hoodwinked goddess keeps her partial court.

Garth.

He undertook go to muffle up himself in his hood, that none should discern him. Wotton.

Let due civilities be paid, The wall surrender to the hooded maid. Gay.

• The lacerna came, from being a military habit, to be a common dress : it had a hood, which could be separated from and joined to it. Arbuthnot.

Then she who hath been hoodwinked from her birth, Doth first herself within death's mirrour see.

Davies.

HOOD (Robert, or Robin), a famous outlaw and deer-stealer, who chiefly harbored in Sher-wood forest, in Nottinghamshire. He was a man of family, which, by his pedigree, appears to have had some title to the earldom of Huntingdon ; and lived about the end of the twelfth century. He was famous for archery, and for his treatment of all travellers who came in his way, levying contributions on the rich, and relieving the poor. Falling sick at last, and requiring to be blooded, he is said to have been betrayed, and bled to death. He died in 1247, and was buried at Kirklees in Yorkshire, then a Benedictine monastery, where his gravestone is still shown.

HOOD (Samuel Lord Viscount), an English admiral, entered as a midshipman in the navy in 1740, and six years after was promoted to a lieutenancy; in 1754 he was made master and commander, and in 1759 post-captain. His father, we believe, was a clergyman in Devonshire. In 1778 he had the office of commissioner of Portsmouth dockyard bestowed on him, but resigned it two years after, and was employed in the West Indies, where he preserved the is>le of St. Christopher's from being taken by count de Grasse, and was a rear-admiral at the defeat of that officer by Rodney, April 12th 1782. His services were now rewarded with an Irish peerage. In 1784 he was M.P. for Westminster; but vacated his seat in 1788 on obtaining the appointment of a lord of the admiralty. In 1793 he signalised himself by the taking 'of Toulon, and afterwards Corsica ; in reward for which he was made a viscount, and governor of Greenwich hospital. He died at Bath in 1816.

HOOF, n.s. } Sax. |>OF 5 Out. hoef;

HOOF'ED adj. > Teutonic huff. The hard

HOOF'-BOUND, adj. j horny substance on the feet of graminivorous animals. Hoofed, furnished with hoofs. Hoof-bound, a disease to which horses are subject.

With the hoofs of his horses shall he tread down all thy streets. Ezek. xxvi. 11.

The bull and ran know the use of their horns, as well as the horse of his hoofs. More.

Among quadrupeds, the roe-deer is the swiftest ; cf all the hoofed the horse is the most beautiful ; ‘of all the clawed the lion is the strongest. Grew.

‘Now I behold the steed curvet and bound,

And paw with restless hoof the smoking ground.

Gay.

A horse is said to be hoof-bnur,d when he has a pain iii ;he fore-f.‘ci, occasioned by the dryness and con-

traction or narrowness of the horn of the quarters, which straitens the quarters of the heels, and oftentimes makes the horse lame. A hoof-bound horse has a narrow heel, the sides of which come too near one another, insomuch that the flesh is kept too tight, and has not its natural extent. Farrier’s Dictionary.

And long upon my startled ear Rung his dark courser’s hoofs of fear.

Byron. The Giaour.

HOOFT (Peter Cornelius Van), an eminent historian and poet, born in Amsterdam in 1581. He was lord of Muyden, and judge of Goyland. He died at the Hague in 1647. He wrote, 1. History of the Netherlands, from the Abdication of Charles V. to the year 1588. 2. Several Comedies, and Poems. 3. Historia Henrici IV. for which Louis XIII. made him a knight of St. Michael. 4. A Translation of Tacitus into Dutch.

HOOGEVEEN (Henry), a learned Dutch author, born at Leyden in 1712. His parents, though poor, gave him a good education, and in 1732 he became assistant master in the academy of Gorcum, and in 1738 removed to Cu-lemburg. In 1745 he settled at Breda; in 1761 at Dort ; and in 1764 at Delft, where he died in 1 794. His works are 1 . An Edition of Vigerus de Idiotismis Linguae Graecae. 2. Doctrina Particularum Linguae Gracae, 2 vols. 4to. 3. Several Latin Poems, &c. 4. Dictionarium Analo-gicum Grsecum. Cambridge 1800.

HOOGHLY, or Saatgong, a district of Ben-gal, situated between 21°

and 23° of N. lat.,and extending on both sides of the river Bhagarutty. The coast is swampy and overgrown with jungle; but the northern part is fertile. It is intersected by rivers, and contains two extensive salt manufactories, as well as all the principal towns of the European nations settled in Bengal, on the Bhagarutty.

HOOGHLY, or Golin, a town of Bengal, once the capital of the foregoing district. It is supposed to have been founded and fortified by the Portuguese in the year 1538, and soon drew away the trade from Saatgong. In the middle of the seventeenth century the emperor Shah Jehan, who was irritated against the Portuguese attacked this place, and after a siege of three months and a half it was taken. In this siege not less than 1000 men of the Portuguese were killed, and 4400 men, women, and children, taken prisoners. On its capture 500 of the best looking young persons were sent to Agra ; the girls being distributed amongthe harems of the emperor and nobility, and the boys forcibly made Mahommedans. Hooghly now became an imperial port : and a special governor was appointed, who, in the course of time, became independent of the provincial authorities. A few years after the English and Dutch obtained permission to erect factories here; when the former imprudently built theirs in the town ; but the Dutch made choice of a spot two miles down the river. Hooghly, under the name of Bukhshy Bunder, became at this period the emporium of the greatest part of the trade carried on between Europe, Persia, Arabia, and India. The duties were le-vied ad valorem at two per cent, from Mahommedans, and three and a half from all others

except the English, who only paid 3000 rupees annually on the whole amount of their trade. At last (1686) a dispute occurred between the im-, perial troops and the English soldiers, when both parties had recourse to arras. During the conflict, our admiral Nicholson opened a cannonade on the town, which burnt 500 houses, and the British

factory, valued at £300,000 sterling. The nabob, who resided* at Dacca, was so highly incensed at this, that he ordered all the English factories and property to be confiscated. He also sent a force to expel them from Hooghly ; but the English in the mean time embarked all their property and dropt down the river to Chuttanutty, the present Calcutta. At the peace of the following year, the nabob wished the English to return to Hooghly ; but they declined the offer, and established themselves at Chuttanutty. In 1696 Hooghly was taken and plundered by the rebels Soobhar Sing and Rehim Khan, but was soon after recovered by the Dutch and restored to the Mogul government.

Hooghly was governed from this period to the middle of the last century by foujdars, under the nabob of Bengal; and, as it was a place of considerable importance and emolument, they always appointed one of their particular friends. On the 10th of January 1757 it was taken by the British ; and after retaken by the nabob Seraje-ad-dowleh : in the month of June it was again taken possession of by the British. They nevertheless afterwards permitted the nabobs Meer Jaffier and Cossim Aly to appoint the foujdars ; but in 1765, when the East India Company was appointed by the emperor dewan or collector of the revenues of Bengal, Bahar, and Orissa, they transferred the port duties from Hooghly to Calcutta : since this period the former has declined. The -site of the old English factory is occupied by a handsome jail. Long. 80° 28’ E., lat. 22° 24’ N.

HOOGHLY RIVER, or the Bhagirutty is a river of Bengal, formed by the junction of the Ganges, the Dummooda, and Roapnarain rivers. The entrance is extremely dangerous and difficult, by reason of the sand-banks, frequently shifting ; and which it would be the height of folly in the captain of any ship to attempt to pass without a pilot. The spring tides run up with great violence, advancing at the rate of fifteen miles an hour, and frequently overset boats. The effect is called by the natives Hooma. It gives notice of its approach by a rumbling noise : and the mode of escaping its fury is by getting into deep water, and facing it. The tide does not extend more than thirty miles abore Calcutta. There are several kinds of good fish caught in this river ; but it also abounds with crocodiles and sharks. At Calcutta it is about three quarters of a mile broad ; bnt at the mouth eight or ten miles wide. Few rivers have a more extensive commerce than it carries on ; but it is only navigable for ships as high as the tide reaches. It is esteemed by the Hindoos the most sacred branch of the Ganges : and those who cannot afford to burn their-dead, throw their bodies into it.

IIOOGSTRATTEN (David Van), profpssor of belles lettres at

Amsterdam, was born at Rot-

terdam in 1658. He published, 1. Poems in Latin. 2. Poems in Flemish. 3. A Latin Flemish Dictionary. 4. Notes upon Nepos and Terence. 5. A fine edition of Phaedrus, for the prince of Nassau, in the style of the classics in usum Deiphini. ˆIn the evening of Nov. 13th, 1724, he fell into a canal, and, though immediately taken out, died within eight days after, from the cold and fright.

HOOK, n. s. & v. a. ~\ Sax. hoc ; Bel. hoeck ; HOOK'ED, adj. (Teutonic hoeke. Any

HOOK'EDNESS, n. s. £ thing bent so as to catch HOOK'NOSED, adj. J hold : as a shepherd's hook, and pot-hooks ; the curvated wire on which the bait is hung for fishes ; a snare ; an iron to seize the meat in the caldron, called a flesh-hook; a sickle ; an instrument to lop branches of trees ; the part of the hinge fixed to the post : hence the saying ' off the hooks ' for in disorder or out of temper. Hook, a field sown two years running : hook-or-crook, one way or other. To hook, to catch; entrap; fasten; draw out, whether by force or artifice. Hooked, bent; curvated. Hooknosed, having the aquiline nose-rise in the mid-dle.

.Among the ropes, ran the sheriug hokes ;

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He sticketh him upon his speres ordes :

He rent the saile with hokes like a sithe :

He bringeth the cuppe and biddeth hem be blith.

Chaucer. Legende of Good Women. Successours to Peter ben these In that, that Peter Christe forsoke, That leven had Gods love to lese Than shepherde had to lese his hoke ;

He culleth the shepe as doth the coke Of hem sekcn the woll to rende,

And falsely glose the Gospell boke ; God for his mercy hem amende !

Chaucer. The Plowmannes Tale. Then came to them a good old aged syre, Whose silver lockes bedeckthis beard and hed, With shepheard's

hooke in hand in fit attyre.

Spenser's Faerie Queem. About the caldron many cooks accoiled, With honks and ladles, as need did require ; The while the viands in the vessel boiled. Id.

Like unto golden hooks, That from the foolish fish their baits do hide.

Spenser.

This falling not, for that they had not far enough undermined it, they assayed with great hooks ana strong ropes to have pulled it down. Knolles.

My bended hook shall pierce Their slimy jaws. Shakspeare.

I may justly say with the hooknosed fellow of Rome there, Caesar, I came, saw, and overcame.

Id. Henry IV.

A shop of all the qualities tlmt man Loves woman for, besides that hook of wiving. Fairness, which strikes the eye. Shakspeare.

But she

I can hook to me. Id. Winter's Tale. Though divine Plato thus of pleasures thought, They us with hooks and baits, like fishes caught.

Denham.

Which he by hook or crook had gathered, And for his own inventions fathered. Hudibras. Gryps signifies eagle or vulture ; from whence the epithet grypus, for an hooked or aquiline nose.

Browne

HOO

Now thou threatenest, with unjust decree,

To seize the prize which I so dearly bought :

Mean match to thine ; for still above the rest,

Thy hooked rapacious hands usurp the best.

Dryden.

He would bring him by hook or crook into his quarrel. Id.

She was horribly bold, meddling, and expensive, easily put off t fa hooks, and monstrous hard to be pleased again. L'Estrange.

Pease are commonly reaped with a hook at the end of a long stick. Mortimer.

Caterpillars have claws and feet : the claws are hooked, to take the better hold in climbing from twig tn twig, and hanging on the backsides of leaves.

Grew.

The huge jack he had caught was served up for the first dish : upon our sitting down to it, he gave us a long account how he had hooked it, played with it, foiled it, and at length drew it out upon the bank.

Addisun. Let me less cruel cast the feathered hook

With pliant rod athwart the pebbled brook.

Silent along the mazy margin stray

And with the fine-wrought fly delude the prey.

Gay's Rural Sports. Not that I'd lop the beauties from his book,

Like flashing Bentley with his desperate hook.

Pope.

While Sheridan is off the hookt, And friend Delany at his books. Swift.

HOOKS OF A SHIP are all those forked timbers which are placed directly upon the keel, as well in her run as in her rake. Can-hooks are those which being made fast to the end of a rope with a noose (like that which brewers use to sling or carry their barrels on), are made use of for slings. Loof-hooks are a tackle with two hooks ; one to hitch into a cringle of the main or fore sail, in the bolt-rope at the leech of the sail by the clew ; and the other is to hitch into a strap, which is spliced to the chess tree. Their use is to pull down the sail, and succour the tackles in a large sail and stiff gale, that all the stress may not bear upon the tack. It is also used when the tack is to be seized more secure, and to take off or put on a bonnet or drabbler.

HOOK (James), a musician of Norwich, was born 1746, and studied the science which he afterwards professed under Garland, organist to the cathedral of that city. His musical productions amount to more than 140 complete works. Of these the principal are The Ascension, an oratorio, 1776 : Cupid's Revenge, a pastoral, 1772 ; Lady of the Manor, 1778; Jack of Newbury, 1795; Wilmore Castle, 1800; Soldier's Return, 1805 ; Operas. Tekeli, a melodrame ; The Siege of St Quentin ; Music Mad ; and several other dramatic pieces, besides upwards of 2000 songs.

HOOKAH, in eastern customs, a pipe of peculiar construction, through which tobacco is smoked. Out of a small vessel, of a bell or globular form, and nearly full of water, issue two tubes, one perpendicularly, on which is placed the tobacco ; the other obliquely to which the person who smokes applies his mouth ; the smoke by this means, being drawn through water, is cooied in its passage and rendered more grateful. The hookah is known and used throughout the East ; and it is frequently an implement of a

very costly nature, being of silver, and set with precious stones : in the better kind, that tube which is applied to the mouth is very long and pliant, and is termed the snake ; people who use it in a luxurious manner, nil the vessel through which the smoke is drawn with rose-water, and it thereby receives some of the fragrant quality of that fluid. They are now becoming common in this country, and may be had at every tobacco-nist's.

HOOKE (Nathaniel), author of a well known Roman History, was a Roman Catholic by profession, and much attached to the doctrines of quietism and mysticism taught by Fenelon. The only particulars of his early life now known are furnished in the following letter to the earl

of Oxford, dated October 7, 1722 : ‘My lord, the first time I had the honor to wait upon your lordship since your coming to London, your lordship had the goodness to ask me, what way of life I was then engaged in ; a certain mauvaise honte hindered me at that time from giving a direct answer. The truth is, my lord, I cannot be said at present to be in any form of life, but rather to live extempore. The late epidemical distemper seized me* (alluding to the unfortunate adventure of the South Sea Scheme) ; ‘ I endeavoured to be rich ; imagined for a while that I was, and am in some measure happy to find myself at this instant but just worth nothing. If your lordship, or any of your numerous friends, have need of a servant, with the bare qualifications of being able to read and write, and to be honest, I shall gladly undertake any employments your lordship shall not think me unworthy of. I have been taught, my lord, that neither a man’s natural pride, nor his self-love, is an equal judge of what is fit for him ; and I shall endeavour to remember, that it is not the short part we act, but the manner of our performance, which gains or loses us the applause of Him who is finally to de-cide of all human actions. My lord, I am just now employed in translating from the French a History of the Life of the late archbishop of Cam-bray ; and I was thinking to beg the honor of your lordship’s name to protect a work which will have so much need of it. The original is not yet published. It is written by the author of the Discourse upon Epic Poetry, in the new edition of Telemaque. As there are some passages in the book of a particular nature, I dare not solicit your lordship to grant me the favor I have mentioned, till you first have perused it. The whole is short, and pretty fairly transcribed. If your lordship could find a spare hour to look it over, I would wait upon your lordship with it, as it may possibly be no unpleasing entertainment. I should humbly ask your lordship’s par-don for so long an address in a season of so much business. But when should I be able to find a time in which your lordship’s goodness is not employed ? I am, with perfect respect and duty, my lord, your lordship’s most obliged, most faithful, and most obedient humble servant, Nathaniel Hooke.’ The translation here spoken of was afterwards printed in 13mo, 1723. From this period till his death Mr. Hooke enjoyed the confidence and patronage of men not less distinguished by virtue than by titles. He published

a Translation of Ramsay's Travels of Cyrus, in 4to. ; in 1733 he revised a translation of The History of the Conquest of Mexico by the Spaniards, by Thomas Townsend, esq. ; printed in 2 vols. 8vo. ; and in the same year he published, in 4to., the first volume of The Roman History, from the building of Rome to the ruin of the Commonwealth ; illustrated with maps and other plates. In the dedication to this volume, Mr. Hooke took the opportunity of telling Pope, that the displaying his name at the head of those sheets was ' like the hanging out a splendid sign, to catch the traveller's eye, and entice him to make trial of the entertainment the place affords .' The volume is introduced by Remarks on the History of the Seven Roman Kings, occasioned by Sir Isaac Newton's objections to the supposed 244 years duration of the royal state of Rome. His nervous pen-was next employed in digesting An Account of the conduct of the Dowager duchess of Marlborough, from her first coming to Court to the year 1710, in a letter from herself

to lord , in 1742, 8vo. ; her grace was so

well pleased with this performance, that she complimented the author with a present of £5000, a sum which far exceeded his expectations. The second volume of his Roman History appeared in 1745 ; to which Mr. Hooke added The Capitoline Marbles, or Consular Calendars, an ancient Monument accidentally discovered at Rome in the year 1545, during the Pontificate of Paul III. In 1758 he published Observations on, 1 . The Answer of M. 1'Abbe de Vertot to the late earl of Stanhope's Enquiry concerning the Senate of ancient Rome : dated December 1719. 2. A Dissertation upon the Constitution of the Roman Senate, by a Gentleman : published in 1743. 3. A Treatise on the Roman Senate, by Dr. Conyers Middleton : published in 1747. 4. An Essay on the Roman Senate, by Dr. Thomas Chapman: published in 1750; which he inscribed to Mr. Speaker Onslow. The third volume of Mr. Hooke's Roman History, to the end of the Gallic war, was printed under his inspection before his last illness ; but did not appear till after his death, which happened in 1764. The fourth and last volume was published in 1771. Mr. Hooke left two sons ; of whom one was a divine of the church of England ; the other a doctor of the Sorbonne, and professor of astronomy in that formerly illustrious seminary.
HOOKE (Robert), an eminent English mathematician and philosopher,

was born in the Isle of Wight, in 1635. He very early discovered a genius for mechanics, by making curious toys with great art and dexterity. He was educated under Dr. Busby in Westminster school ; where he acquired Greek and Latin, with Hebrew and some other oriental languages ; and made himself master of a great part of Euclid's Elements. About 1653 he went to Christ Church in Oxford, and in 1655 was introduced to the Philosophical Society there ; who first employed him to assist Dr. Wallis in his operations in chemistry, and afterwards recommended him to the honorable Robert Boyle, whom he served several years in the same capacity. He was also instructed in astronomy about this time by Dr. Seth Ward, and henceforward distinguished himself by many mechanical inventions and improvements. He invented several astronomical instruments for making observations both at sea and land ; and was particularly serviceable to Mr. Boyle in completing the invention of the air-pump. Sir John Cutler having founded a mechanical school, in 1664, he settled an annual stipend on Mr. Hooke for life, entrusting the president, council, and fellows of the Royal Society, to direct him with respect to the number and subject of his lectures ; and on the llth of January, 1664, 1665, he was elected by that society curator of experiments for life, with an additional salary. The rebuilding of the city of London after the dreadful fire in 1666 requiring an able person to set out the ground to the proprietors, Mr. Hooke was appointed one of the surveyors. Mr. Oldenburgh, secretary to the Royal Society, dying in 1677, Mr. Hooke was appointed to supply his place, and began to take minutes at the meeting in October, but did not publish the Transactions. In 1691 he was employed in forming the plan of the hospital near Hoxton, founded by Robert Aske, alderman of London, which were elegantly rebuilt in 1827; and in December, the same year, Hooke was created M. D. by a warrant from that prelate. In 1696 an order was granted to him for repeating most of his experiments at the expense of the Royal Society, upon a promise of his finishing the observations, and deductions from them, and of perfecting the description of all the instruments contrived by him ; but his increasing illness and general de-cay rendered him unable to perform it. He continued some years in this wasting condition, till he was quite emaciated. He died March 3rd, 1702, at his lodgings in Gresham College, and was buried in St. Helen's church, Bishops-gate Street, his funeral being attended by all the members of the Royal Society, then in London. He wrote, 1. Lectiones Cutlerianae. 2. Micro-graphia, or Descriptions of minute bodies made by magnifying glasses. 3. A Description of Helioscopes. 4. A Description of some Mechanical Improvements of Lamps and Water Poises. 4to. 5. Philosophical Collections. After his death were : published, 6. Posthumous works

collected from his papers by Richard Waller, secretary to the Royal Society.

HOOKER (John), was born in Exeter, about 1524. He was instructed in grammar by Dr. Moreman, vicar of Menhiniot in Cornwall, and thence removed to Oxford. He next travelled to Germany, and resided some time at Cologne, where he kept exercises in law, and graduated. Thence he went to Strasburg, where he studied divinity under the famous Peter Martyr. He now returned to England, and soon after visited France, intending to proceed to Spain and Italy; but was prevented by a declaration of war. Returning therefore again to England, he fixed his residence in his native city, where, having married, he was in 1554 elected chamberlain, being the first person who held that office, and in 1571 represented his fellow-citizens in parliament. He died in 1601, and was buried in the cathedral at Exeter. He wrote, among other works, 1. Order and Usage of keeping of Parliaments in Ireland. 2. The events of Comets or Blazing

Stars, made upon the sight of the Comet Pagonia, •which appeared in November and December, 1677. 3. AP addition to the Chronicles of Ireland from 1546 to 1568 ; in the second vo-lume of Holinshed's-Chronicles. 4. A Description of the city of Exeter, and of the Son-drie Assaults given to the same; Holinshed's Chronicle, vol. III. 5. A Book of Ensigns. 6. Translation of the History of the Conquest of Ireland, from the Latin of Giraldus Cambrensis'; in Holinshed's Chronicle, vol. ii. 7. Synopsis Chorographica, or an Historical record of the province of Devon ; never printed.

HOOKER (Richard), a learned divine, nephew to the preceding, born at Heavytree, near Exeter, in 1553. By his uncle he was first supported at the University of Oxford, with the addition of a small pension from Dr. Jewel, bishop of Salisbury, who in 1561 got him admitted one of

the clerks of Corpus Christi College. In 1573 he was elected scholar. In 1577 he took the de-gree of M. A. and was admitted fellow. In July, 1579, he was appointed deputy professor of the Hebrew language. In 1581 he took orders; and, being appointed to preach at St. Paul's cross, he came to London, where he was unfortunately drawn into a marriage with Joan Churchman, the termagant daughter of his hostess. Having thus lost his fellowship he continued in the utmost distress till 1584, when he was presented by John Cheny, esq. to the rectory of Drayton-Beauchamp, in Buckinghamshire. In this retirement he was visited by Mr. Edwin Sandys, and Mr. George Cranmer, his former pupils. They found him, with a Horace in his hand, tending some sheep in the common, his servant having been ordered home by his Xantippe. They attended him to his house ; but were soon deprived of his company by an order from his wife for him to come and rock the cradle. Mr. Sandys's representation to his fa-ther of his tutor's situation, procured him the mastership of the Temple. Here he met with considerable molestation from one Travers, lecturer of the Temple, and a bigoted Puritan, who .a the afternoon endeavoured to confute the doctrine he had delivered in the morning. From this disagreeable situation he solicited archbishop Whitgift to remove him to some country retirement, where he might prosecute his studies in tranquillity. Accordingly, in 1591 he obtained :he rectory of Boscomb'in Wiltshire, together with a prebend in the church of Salisbury, of which he was also made sub-dean. In 1594 he was presented to the rectory of Bishops-Bourne in Kent, where he died in 1 600. He was buried in his parish church, and a monument [erected to his memory by William Cooper, Esq. He wrote, 1. Ecclesiastical Polity, in eight books. 2. A Discourse of Justification, &c., with two sermons, Oxford, 1612, 4to. 3. Several other sermons printed with the Ecclesiastical Polity.

HOOKER, in naval architecture, a vessel much <ised by the Dutch, built like a pink, but rigged and masted like a hoy. Hookers will lie nearer a wind than vessels with cross sails can do. They are from fifty to 200 tons burden, and with a few hands will sail to the East Indies.

HOOLE (John), a poet and translator of some

celebrity, was born in London, December 1727, and was the son of a watchmaker. He acquired at a private boarding school an accurate knowledge of the Latin and French languages, and at the age of seventeen entered as a clerk at the East India House, where he closely studied the Italian language. He commenced the translation of the

Jerusalem Delivered of Tasso in 1758, and published it in 1763. The dedication to the queen was composed by Dr. Johnson. In 1767 he published a translation of six dramas of Metastasio, in 2 vols. ; and the next year brought out his tragedy of Cyrus ; Timantheg in 1770, and Cleone in 1775, all equally unsuccessful dramatic efforts. In 1773 he published the first volume of his Orlando Furioso, the farther progress of which was impeded by his advancement to the auditorship of the Indian accounts; he however concluded it in 1783, in 5 vols. 8vo. In 1785 he wrote the life of his friend, Mr. Scott, of Amwell, and having retired from the India House, after a service of forty-two years, he took up his abode, with his wife and son, at the parsonage-house of Abinger, near Dorking. Here he connected the narrative of his Orlando in twenty-four books, and disposed the stories in a regular series. In 1792 he translated Tasso's Rinaldo, and ended his litarary labors with a Collection of dramas from Metastasio : but his translations are considered meagre and spiritless. He died respected in

1803.

HOOP, n. s. & v. a.) Sax. J»op ; Swed. hop ;

HOOP’ER, n.s. $ Belg. hoep. Any thing

circular by which something else is bound, particularly casks or barrels ; the whalebone with which women extend their petticoats; a far-thingale; any thing circular. Hooper, a cooper, one that hoops tubs. Hoop, to encircle ; clasp ; surround : bind or enclose with hoops.

Thou shall prove a shelter to thy friends, A hoop of gold to bind thy brothers in, That the united vessel of their blood Shall never leak. Shakspeare. Henry IV.

If I knew What hoop would hold us staunch, from edge to

edge O’ the’ world, I would pursue it. Shakspeare.

A quarrel, ho, already ! what’s the matter ? — About a hoop of gold, a paltry riag. Id.

If ever henceforth thou

Shalt hoop his body more with thy embraces, I will devise a death. Id. Winter’s Tale.

The three-fooped pot shall have ten hoops, and I will make it felony to drink small beer. Shakspeare.

The casks for his majesty’s shipping were hooped as a wine-cask, or hooped with iron. Raleigh.

I hoop the firmament, and make This my embrace the zodiack. Cleaveland. To view so lewd a town, and to refrain, What hoops of iron could my spleen contain !

Diyden.

That shelly guard, which hoopt in the eye, and hides the greater part of it, might occasion his mistake. Grew.

I have seen at Rome an antique statue of Time, with a wheel or hoop of marble in his hand.

Addison.

And learned Athens to our art must stoop, Could she behold us tumbling through a hoop.

Pope.

At coming in you saw her stoop : The entry brushed against her hoop. Swift. All that, hoops are good for is to clean dirty shoes, and to keep fellows at a distance. Clariiia.

HOOP, v. n. & v. a. \ Goth, wopgan or HOOP'ING-COUGH, n. s. i wopyan, or French hcttpper, derived from the Gothic. This word is often written whoop, which is more proper if we deduce it from the Gothic ; and hoop if we derive it from the French. — Johnson. To shout ; to make an outcry by way of call or pursuit. Hooping-cough, or whooping-cough, from hoop to shout. A convulsive cough, so called from its noise ; the chincough.

And, therwithal, they shriked and they huvped ; It seined as that the heven shulde falle.

Chaucer. The Nonne* Preestes Tale. Dastard nobles

Suffered roe, by the voice of slaves, to be Hooped out of Rome. Shakspeare. Coriolanui.

HOOPER (George), a learned author, born at Grimeley in Worcestershire, about 1640. He was educated at Westminster, studied at Oxford, and was well skilled in mathematics, and the eastern languages. In 1672 he became chaplain to the bishop of Winchester ; and soon after to archbishop Sheldon; and in 1677 almoner to the princess of Orange, whom he accompanied to Holland. In 1691 he was

made dean of Canterbury; and in 1702 bishop of Bath and Wells. He wrote, 1. The Church of England free from the imputation of Popery ; 2. A Discourse concerning Lent; 3. New danger of Presbytery; 4. An Enquiry into the state of the Ancient Measures ; 5. De Valentinianorum haeresi conjecture ; 6. Several sermons ; and 7. An Enquiry into the state of the Ancient Measures ; the Attic, Roman, and Jewish ; with an appendix, concerning our old English money and measures; 1721, 8vo. He died in 1727. All his works were printed in 1 vol. folio, at Oxford, 1757.

HOOPER (John), bishop of Worcester, was born in Somersetshire, and educated at Oxford. In 1518 he took the degree of A. B., and afterwards became a Cistercian monk; but, disliking his fraternity, returned to Oxford, and became somewhat of a Lutheran. In 1539 he was made chaplain and steward to Sir John Arundel, who afterwards suffered with the protector in the reign of Edward VI. But that very Catholic knight, as Wood calls him, discovering him to be a heretic, he was obliged to leave the kingdom. After continuing some time in France he returned to England, and lived with a gentleman named Seintlow ; but, being again discovered, he escaped in the habit of a sailor to Ireland ; thence embarked for the continent, and fixed his abode in Switzerland. Upon Edward's accession, Mr. Hooper returned once more to his native country. In 1550, by his old patron Sir John Arundel's interest with the earl of Warwick, he was consecrated bishop of Gloucester ; and in 1552 was nominated to the see of Worcester, which he held in commendam with the former. But Mary had scarce ascended the throne, before he was imprisoned, tried, and condemned to the flames. He suffered at

Gloucester on the 9th of Februaiy, 155-i, being then near sixty years of age. He was an avow-ed enemy to the church of Rome, and in the former reign had been one of Bonner's accusers.

HOORN, a sea-port town of the Netherlands, in North Holland ; in the department of the Texel, and late province of West Friesland. Its name is derived from the curving shape of the port ; and it is the capital of an extensive district of North Holland. In 1426 it was surrounded with the walls, and, in 1 508, greatly enlarged ; but in 1557 it was almost destroyed by a storm and inundation which broke down the dams. In 1577 the harbour was built, which is reckoned the best on the Zuider Zee. The adjacent lands are fertile, and famed for fattening cattle. The town is still fortified, and has five gates, several churches and hospitals. Hence also commences a canal, which leads through

Alcmaer to Petten, and connects the Zuider Zee with the North Sea.

The manufactures are of carpets and woollen cloths ; ship-building is also extensively carried on. Its trade is in cattle, butter, cheese, and herrings, and is very extensive. This town was entered by a strong body of British (12,000), on the 19th' of September, 1799, while the Russians and the remainder of our troops were engaged at Alcmaer in an action which terminated unfavorably; these troops bore a part next day in the second battle of Alcmaer. Hoorn was the birth-place of Schouten the navigator. Population about 9000 : fourteen miles east of Alcmaer, and twenty N.N. E. of Amsterdam.

HOORN, or HORN, a town of France in the department of the Lower Meuse, and late bishopric of Liege ; three miles west of Ruremond, and twelve south of Venlo. Long. 5° 55' E, lat. 51° 12' N.

HOORN, or HORN ISLANDS, two islands in the South Pacific Ocean, on the north of the Friendly Isles, discovered in the year 1616 by Le Maire and Schouten, who landed and staid here some days; their ship lying at anchor at the mouth of a river called, after the name of the vessel, the Gulf of Concord. They are supposed to be the same islands which are called Hamoa by the natives. Long. 171° 20' E., lat. 15° S.

HOORNBECK (John), professor of divinity in the universities of Leyden and Utrecht, was born at Haerlem in 1617. He was well acquainted with the classical, oriental, and European languages, and published many works ; among which are, 1. A refutation of Socinianism, in 3 vols. 4to. ; 2. A Treatise for the conviction of the Jews ; 3. Of the Conversion of the Heathen; 4. Institutiones Theologies, &c. Bayle represents him as a complete model of a divinity professor.

HOOT, v. n., v. a., & n. s. Fr. huer, huec ; Welsh hut; Swed. hut. To shout in contempt ; to cry as an owl; to drive with noise and shout. Clamor; noise; shouting.

We loved him ; but, like beasts, Our coward nobles gave way to your clustf-rs, Who did hoot him out o' the' city. Shakspeare.

Some keep back

The clamorous owl, that nightly hoots, and wonders At our queint sports. ttf.

HOPS.

The owl of Rome, whom boys and girls will hoot ! That were I set up for that wooden god That keeps our gardens, could not fright the crows, Or the least bird, from muting on my head.

Ben Jonson,

Its assertion would be entertained with the hoot of the rabble. Glanville's Scepsis.

A number of country folks happened to pass thereby, who hollowed and hooted after me as at the arrantest coward. Sidney. -

Matrons and girls shall hoot at thee no more.

Dryden.

Partridge and his clan may hoot me for a cheat and impostor, if I fail in any particular of moment.

Swift.

When the falling stars are shooting, And the answered owls are hooting.

Byron. Manfred,

HOP, v. n. & n. s. ˆ Sax. boppan ; Teut. HOP'PERS, n. s. > happen ; Swedish, hoppa. HOP'PER, n. s. j To jump or skip lightly ; to leap on one leg ; to walk lamely or halt. A hop is a jump ; also a place where meaner people dance. Hopper, he who hops or jumps on one leg ; the box or open frame of wood into which the corn is put to be ground, so called because it is always hopping, or in agitation, and which is called in French, for the same reason, tremie or tremue ; a basket for carrying seed. ' In Saxon to hoppe signifies exactly the same as to dance, though with us it hath acquired a ludicrous sense ; and hopster is a female dancer.' — Notes to Chaucer. Hoppers, commonly called Scotch hoppers, a kind of play in which the actor hops on one leg.

Right by the hopper wol I stand Quod John and seen how that the corn gas in ; Yet, saw I never (by my fader kin) .' How that the hopper wagges til and fra.

Chaucer. The Reves Tale. Yet, saw I brent the shippes hoppesteres.

Id. The Knightes Tale. Softly fee.l

Her feeble pulse, to prove if any drop Of living blood yet in her veins did hop.

Faerie Queene. I would have thee gone, And yet no further than a wanton's bird, That lets it hop a little from her hand, And with a silk thread plucks it back again.

Shakspeare.

Co, hop me over every kennel home ; For you shall hop without my custom, sir. Id.

Be kind and courteous to this gentleman, Hop in his walks, and gambol in his eyes. Id. Men with heads like dogs, and others with one huge foot alone, whereupon they did hop from place to place. Abbot.

I'd sooner trust my fortune with a daw, That hops at every butterfly it sees, Than have to do in honour with a man That sells his virtues for a woman's smiles.

Otway.

The painted birds, companions of the spring, Hopping from spray to spray were heard. Dryden. Your Ben and Fletcher, in their first young flight, Did no Volpone, nor no Arbaces write ; But hopped about, and short excursions made From bough to bough, as if ihey were afaid. Id.

The limping smith observed the saddened feast, And hopping here and there, himself a jest, Put in his word. Id. Homer.

Just at the hopper will I stand,

In my *vhol« life I never saw grist ground,

And mark the clack how justly it will sound.

Betterton.

The salt of the lake Asphaltites shooteth into perfect cubes. Sometimes they are pyramidal and plain, like the hopper of a mill. Grew.

When my wings are on, I can go above a hundred yards at a hop, step, and jump. Addisan.

I am highly delighted to see the jay or the thrush hopping about my walks. Id. Spectator.

Why don't we vindicate ourselves by trial or deal, lud hop over heated ploughshares blindfold ?

Collier.

Graminivorous birds have the mechanism of a mill : their maw is the hopper which holds and softens the gˆain, letting it drop by degrees into the stomach.

Arbuthnot on Aliments.

HOP, n. s. & v. a. Belg. hop ; Lat. lupulus, or perhaps from hoop, to bind round. A plant used in the composition of beer : hop to impregnate with hops.

If hop yard or orchard ye mind for to have,

For hop poles and crotches in lopping to save.

Tutser.

The planting of hop yards is profitable for the planters, and consequently for the kingdom. Bacon.

Beer hath malt first infused in the liquor, and is afterwards boiled with the hop. Id.

Next to thistles are hop strings, cut after the flowers are gathered. Derham.

Brew in October, and hop it for long keeping.

Mortimer.

Have the poles without forks, otherwise it will be troublesome to part the hop vines and the poles.

Id.

When you water hops, on the top of every hill put dissolved dung, which will enrich your hop hills.

Id.

In Kent they plant their hop gardens with apple-trees and cherry-trees between. Id.

The price of hoeing of hop ground is forty shillings an acre. Id.

Hop holes, the largest sort, should be about twenty foot long, and about nine inches in compass. Id.

To increase the milk, diminished by flesh meat, take malt-drink not much hopped. Arbuthnot.

HOP, in botany, see HUMULUS. Hops were first brought into England from the Netherlands in the year 1524. They are first mentioned in the English statute-book in 1552, *viz.* in the 5 and 6 of Edw. VI. cap. 5. And by an act of parliament of the first year of king James I. anno 1603, cap. 18, it appears that hops were then produced in abundance in England. The hop being a plant of great importance, we shall consider what relates to the culture and management of it, under distinct heads.

The hop-planters esteem the richest and strongest ground the most proper; and, if it be rocky within two or three feet of the surface, the hops will prosper well ; but they will not thrive on a stiff clay or spongy wet land. The Kentish planters esteem ,‘new land best for hops ; they plant their hop-gardens with apple trees at a large distance, and with cherry trees between ; and when the land has done its best for . hops, which they reckon it will in about ten years, the trees may begin to bear. The cherry trees last about thirty years, and, by the time the apple trees are large, they cut down the cherries The Essex planters reckon a moory lanu trie

most proper for hops. As to the situation of a hop-ground, one that inclines to the south or west is the most eligible ; but, if it be exposed to the north-east or south-west winds, there should be a shelter of

some trees at a distance, because the north-east winds are apt to nip the tender shoots in the spring ; and the south-west winds frequently break and blow down the poles at the end of summer, and very much endanger the hops. In winter provide soil and manure for the hop-ground against the following spring. If the dung be rotten mix it with two or three parts of earth, and let it incorporate together till you have occasion to use it in making your hop hills ; but, if it be new dung, then let it be mixed as before till the spring in the next year, for new dung is very injurious to hops. Dung of all sorts was formerly more commonly used than it is now, especially when rotted and turned to mould, and they who have no other manure must use it : which if they do, cows' or hogs' dung, or human ordure mixed with mud, may be a proper compost, because hops delight most in manure that is cool and moist.

Hops require to be planted in a situation so open as that the air may freely pass round and between them, to dry up and dissipate the moisture, whereby they will not be so subject to fire-blasts, which often destroy the middle of large plantations, while the outsides remain unhurt. As for the preparation of the ground for planting, it should in the preceding winter be ploughed and harrowed even ; and then lay upon it in heaps a good quantity of fresh rich earth, or well rotted dung and earth mixed together, sufficient to put half a bushel in every hole to plant the hops in, unless the natural ground be very fresh and good. The hills where the hops are to be planted should be eight or nine feet asunder, that the air may freely pass between them ; for in close plantations they are very subject to what the hop-planters call the fire-blast. If the ground is intended to be ploughed with horses between the hills, it will be best to plant them in squares chequerwise ; but if it be so small that it may be done with the breast-plough or spade, the holes should be ranged in a quincunx form. Which way soever is adopted, a stake should be stuck down at all the places where the hills are to be made. Great caution should be observed in the choice of the plants, as to the kind of hop ; for if the hop-garden be planted with a mixture of several sorts of hops that ripen at different times, it will cause a great deal of trouble, and be a great detriment to the owner. The two best sorts are the white and the gray bind ; the latter is a large square hop, more hardy, and is a more plentiful bearer, and ripens later than the former. There is another sort of the white bind, which ripens a week or ten days before the common; but this is tenderer, aid a less plentiful bearer ; but it has this advantage, that it comes first to market. But if three grounds, or three distant parts of one ground, be planted with these three sorts, there will be this convenience, that they may be picked successively as

they become ripe. The sets should be five or six inches long, with three or more joints or buds on them. If there be a sort of

hop you value, and would increase plants and sets from, the superfluous binds may be laid down when the hops are tied, cutting off the tops, and burying them in the hill ; or, when the hops are dressed, all the cuttings may be saved ; for almost every part will grow, and become a good set the next spring. As to the seasons of planting hops, the Kentish planters prefer October and March, both which sometimes succeed very well; but the sets are not to be had in October, unless from some ground that is to be destroyed; and likewise there is some danger that the sets may be rotted, if the winter prove very wet; therefore the most usual time oi procuring them is in March, when the bops are cut and dressed. As to the manner of planting the sets, there should be five good sets planted in every hill, one in the middle and the rest round about sloping, the tops meeting at the centre ; they must stand even with the surface of the ground; let them be pressed close with the hand, and covered with fine earth, and a stick should be placed on each side the hill to secure it. The ground being thus planted, all that is to be done more during that summer, is to keep the hills clear from weeds, and to dig up the ground in May, and to raise a small hill round about the plants In June you must twist the young binds or branches together into a bunch or knot; for if they are tied up to small poles the first year, in order to have a few hops from them, it will not countervail the weakening of the plants. A mixture of compost or duna; being prepared for hop-ground, the best time for laying it on, if the weather prove dry, is about Michelmas, that the wheels of the dung-cart may not injure the hops, nor furrow the ground : if this be not done then, you must wait till the frost has hardened the ground, so as to bear the dung-cart; and this is also the time to carry on your new poles, to recruit those that are decayed and to be cast out every year. If you have good store of dung, the best way will be to spread it in the alleys all over the ground, and to dig it in the winter following. The quantity they will require will be forty loads to an acre, reckoning about thirty bushels to the load. If you have not dung enough to cover all the ground in one year, you may lay it on one part one year, and on the rest in another, or a third ; for “there is no occasion to dung the ground after this manner oftener than once in three years. Those who have but a small quantity of dung, usually content themselves with laying on about twenty loads upon an acre every year ; this they lay only on the hills, either about November, or in the spring; which last some account the best time, when the hops are dressed, to cover them after they are cut ; but, if it be done at this

time, the compost or dung ought to be very well rotted and fine. As to the dressing of the hops, when the hop-ground is dug m January or February, the earth about the hilis and very near them, ought to be taken away with a spade, that you may come the more conveniently at the stock to cut it. About the end of February, if the hops were planted the spring before, or if the ground be weak, they ought to be dressed in dry weather ; but else, if the ground be strong and in perfection, the

middle of March will be a good time ; and the latter end of March, if it be apt to produce over rank binds, or the beginning of April may be soon enough. Then having with an iron picker cleared away all the earth out of the hills, so as to clear the stock to the roots, with a sharp knife you must cut erf all the shoots which grew up with the binds the last year; and also all the young suckers, that none be left to run in the alley, and weaken the hill. It will be proper to cut one part of the stock lower than the other, and also to cut that part low that was left highest the preceding year. By pursuing this, method you may expect to have stronger buds and also keep the hill in good order. In dressing those hops that have been planted the year before, you ought to cut off both the dead tops and the young suckers which have sprung up from the sets, and also to cover the stocks with fine earth a finger's length in thickness.

About the middle of April the hops are to be poled, when the shoots begin to sprout up ; the poles must be set to the hills deep into the ground, with a square iron picker or crow, that they may the better endure the winds; three poles are sufficient for one hill. These should be placed as near the hill as may be, with their bending tops turned outwards from the hill, to prevent the binds from entangling ; and a space between two poles ought to be left open to the south to admit the sunbeams. The poles ought to be in length sixteen or twenty feet, more or less, according as the ground is in strength ; and great care must be taken not to overpole a young or weak ground, for that will draw the stock too much, and weaken it. If a ground be overpoled, you are not to expect a good crop from it ; for the branches which bear the hops will grow very little till the binds have overreached the poles, which they cannot do when the poles are too long. Two small poles are sufficient for a ground that is young. If you wait till the

sprouts or young binds are grown to the length of a foot, you will be able to make a better judgment where to place the largest poles ; but, if you stay till they are so long as to fall into the alleys, it will be injurious to them, because they will ertangle one with another, and will not clasp about the pole readily. Maple or aspen poles are accounted the best for hops, on which they are thought to prosper best, because of their warmth ; or else, because the climbing of the hop is promoted by means of the roughness of the bark. But, for durability, ashen or willow poles are preferable ; but chestnut poles are the most durable of all. If, after the hops are grown up, you find any of them have been underpoled, taller poles may be placed near those that are too short to receive the binds from them.

As to the tying of hops, the buds that do not clasp of themselves to the nearest pole, when they are grown to three or four feet high, must be guided to it by the hand, turning them to the sun, whose course they always follow. They must be bound with withered rushes, but not so close as to hinder them from climbing up the pole. Continue to do this till all the poles are nirnished with binds, of which two or three are

enough for a pole; and all the sprouts and binds that you have no occasion for are plucked up ; but, if the ground be young, then none of these useless binds should be plucked up, but should be wrapped up together in the middle of the hill. When the binds are grown beyond the reach of your hands, if they forsake the poles, you should make use of a stand ladder in tying them up. Towards the end of May, when you have made an end of tying them, the ground must have the summer dressing : this is done by casting up with the spade some fine earth into every hill. A month after this hoe the alleys with a Dutch hoe, and make the hilb up to a convenient bigness. About the middle of July hops begin to blow, and will be ready to gather about Bartholomew-tide. A judgment may be made of their ripeness by their strong scent, their hardness, and the brownish color of their seed. When by these tokens they appear to be ripe, they must be picked with all the expedition possible ; for if at this time a storm of wind should come, it would do them great damage by breaking the branches, and bruising and discoloring the hops ; and it is very well known, that hops picked green and bright will sell for a third more than those which were discolored and brown. The most convenient way of picking them is into a long square frame of wood, called a bin, with a cloth hanging on ten-ter hooks within it, to receive the hops as they are picked. The frame is composed of four pieces of wood joined

together, supported by four legs, with a prop at each end to bear up another long piece of wood, placed at a convenient height over the middle of the bin; this serves to lay the poles upon, which are to be picked. This bin is commonly eight feet long, and three feet broad ; two poles may be laid on it at a time, and six or eight persons may work at it, three or four on each side. It will be best to begin to pick the hops on the east or north side of the ground, if you can do it conveniently ; this will prevent the south-west wind from breaking into the garden. Having made choice of a plot of ground, containing eleven hills square, place the bin upon the hill which is in the centre, having five hills on each side ; and, when these hills are picked, remove the bin into another piece of ground of the same extent, and so proceed till the whole hop-ground is finished. When the poles are drawn up to be picked, take care not to cut the binds too near the hills, especially when the hops are green, because it will make the sap to flow excessively. The hops must be picked very clean, i. e. free from leaves and stalks ; and, as there shall be occasion, two or three times in a day the bin must be emptied into a hop-bag made of coarse linen cloth, and carried immediately to the oast or kiln to be dried ; for, if they should be long in the bir. or bag, they will be apt to heat and be discolored If the weather be hot there should no more poles be drawn than can be picked in an hour, and they should be gathered in fair weather if it can be, and when the hops are dry ; this will save some expense in firing, and preserve their color better when they are dried. The crops of hops being thus bestowed, take care of

the poles against another year, which are best to be laid up in a shed, having first stripped off the haulm from them ; but if you have not that conveniency, set up three poles in the form of a triangle, or six poles as you please, wide at bottom ; and having set them into the ground with an iron picker, and bound them together at the top, set the rest of your poles about them ; and, being thup disposed, none but those on the outside wil' be subject to the injuries of the weather, for

:J1 the inner poles will be kept dry, unless at the top ; whereas, if they were on the ground, they would receive more damage in a fortnight then by standing all the rest of the year. The best method of drying hops is with charcoal on an oast or kiln, covered with hair-cloth, of the same form and fashion as that used for drying malt. There is no need of particular directions for making these, as every carpenter and bricklayer in those countries where hops grow, or malt is made, knows how to build them. The kiln ought to be square, and may be of ten, twelve, fourteen, or sixteen feet over at the top, where the hops are laid, as the plantation requires, and room will allow. There ought to be a due proportion between the height and breadth of the kiln and the beguels of the steddle where the fire is kept, *viz.* if the kiln be twelve feet square on the top, it ought to be nine feet high from the fire, and the steddle ought to be six feet and a half square, and so proportionably in other dimensions. The hops must be spread even upon the oast a foot thick or more, if the depth of the curb will allow it ; but care must be taken not to overload the oast if the hops be green or wet. The oast ought to be first warmed with a fire before the hops are laid on, and then an even steady fire must be kept under them ; it must not be too fierce at first, lest it icorch the hops, nor must it be suffered to sink or slacken, but rather be increased, till the hops be nearly dried, lest the moisture or sweat which the fire has raised fall back and discolor them. When they have lain about nine hours they must be turned, and in two or three hours more they may be taken off the oast. It may be known when they are well dried by the brittleness of the stalks and the easy falling off of the hop leaves. It is found by experience that the turning of hops, though it be after the most easy and best manner, is not only an injury to the hops, but also a waste of fuel and time, because they require as much fuel and as long a time to dry a small quantity, by turning them, as a large one. Now this may be prevented by having a cover to be let down and raised at pleasure to the upper bed whereon the hops lie. This cover may also be tinned, by nailing single tin plates over the face of it ; so that when the hops begin to dry, and are ready to burn, i. e. when the greatest part of their moisture is evaporated, then the cover may be let down within a foot or less of the hops like a reverberatory, which will reflect the heat upon them, so that the top will soon be as dry as the lowermost, and every hop be equally dried. As soon as the hops are taken off the kiln lay them in a room for three or four weeks to cool, give, and tough-sn ; for if they are bagged immediately they

will powder, but if they lie a while (and the longer they lie the better, provided they be covered close with blankets to secure them from the

air) they may be bagged with more safety, not being liable to be broken to powder in treading ; and this will make them bear treading the better, and the harder they are trodden the better they will keep. The common method of bagging is as follows : they have a hole made in an upper floor, either round or square, large enough to receive a hop-bag, which consists of four ells and a half of ell-wide cloth, and also contains ordinarily 2ˆ cwt. of hops ; they tie a handful of hops in each lower corner of the bag to serve as handles to it ; and they fasten the mouth of the bag, so placed that the hoop may rest upon the edges of the hole. Then he that is to tread the hops down into the bag, treads the hops on every side, another per-son continually putting them in as he treads them till the bag is full ; which being well filled and trodden, they unrip the fastening of the bag to the hoops, let it down, and close up the mouth of the bag, tying up a handful of hops in each corner, as was done in the lower part. Hops being thus packed, if they have been well dried, and laid up in a dry place, will keep good several years ; but care must be taken that they be not spoiled by the mice making their nests in them.

In spring, while the bud is yet tender, the tops of the plant being cut off and boiled are eaten like asparagus, and found very wholesome, and of service to loosen the body. The heads and tendrils are good to purify the blood in the scurvy, and most cutaneous diseases; decoctions of the flowers, and syrups thereof, are of use against pestilential fevers ; juleps and apozems were formerly made with hops for hypochron-driacal and hysterical affections, and to promote the menses. A pillow stuffed with hops, and laid under the head, is said to procure sleep in fevers attended with a delirium. His late majesty George III. had a pillow of this kind presented for his use in 1787. But the principal use of hops is in the brewery, for the preservation of malt liquors ; which, by the superaddition of this balsamic, aperient, and diuretic bitter, be-come less viscid, less apt to turn sour, more palatable, more disposed to pass off by urine, and in general more salubrious. They are said to contain an agreeable odoriferous principle, which promotes the vinous fermentation. When slightly boiled, or infused in warm water, they increase its spirituosity.

To judge of the quality of hops, observe how far a yellow clamminess, peculiar to this plant abounds in the sample : the brightest colored hops are not always the best flavored ; but purchasers dwell much on the color, which should therefore be preserved as bright as possible. A hop plantation, on a good soil, may be continued from fifteen to thirty years. They in general, however, begin to decline about the tenth year. Some advise that the plantation should then be destroyed, and a fresh one made ; others consider it the best plan to break up and plant a

portion of new ground every two years, letting an equal quantity of the old be destroyed, as in

this way a regular succession of good plantation will be kept up, and the expense be gradually incurred. For this is a serious consideration ; being estimated, in some districts, at from not less than £70 to £100 the acre. The produce is uncertain ; often very considerable ; but some seasons nothing, after all the labor of culture, ex-cept picking, has been incurred. Where the lands are of the proper sort, and there are hop-poles on the farm, and the farmer has a sufficient capital, it is probably a sort of husbandry that may be had recourse to with advantage ; but, under the contrary circumstances, hops will sel-dom answer. ‘ In growing them in connexion with a farm,’ says Mr. Loudon, ‘ regard should be had to the extent that can be manured without detriment to the other tillage lands. On the whole, hops are an expensive and precarious crop, the culture of which should be well considered before it is entered upon.’

From this useful writer we abstract the following account of the diseases of hops. ‘ It is apt,’ he observes, ‘ in the very early stage of its growth, to be devoured, as it rises above the surface of the ground, by the ravages of an insect of the flea kind. At a more advanced age it is subject to the still more injurious effects of the green or long-winged fly, red spider, and otter moth ; the former, by the depositing of their ova, afford the means of producing lice in great abundance ; by. which the plants are often very greatly, if not wholly destroyed, and the larvae of the latter prey upon the roots, and thus render the plants weak and subject to disease. The honey-dew is another disease to which the hop is exposed about the same time, and by which it is often much injured. The mould occurs in general at a somewhat later period, being equally injurious. Hop-crops are also exposed to other injuries, as the blight and fire-blast, but which take place at different times, though mostly towards the latter periods of the growth of the plants. The flea, which is said to be an insect of the same kind as that which is so prejudicial to the young turnip, is observed to make the

greatest havock in seasons where the nights are cold and frosty, and the days hot and inclined to be dry ; eating off the sweet tender tops of the young plants ; and which, though not wholly destroyed, shoot forth afterwards in a far less vigorous manner, and of course become more exposed to diseases. It has been found to commit its depredations most frequently on the plants in grounds that have been dunged the same year; on which account it has been suggested that the manure employed for the purpose of covering the hills should be previously well mixed and incorporated as we have directed; and that it should be applied either over the whole of the land, or only the hills, as soon as possible after the plants have been cut over ; but the former practice is probably the best. It makes its greatest depredations in the more early cold spring months, at the latter end of April and beginning of the succeeding month, disappearing as the season becomes more mild and warm. In, these cases, the principal remedy is that of hav-ing the land in a sufficient state of fertility, to enable the young plants to shoot up with such

vigor and rapidity as to become quickly incapable of being fed upon and devoured by the insect. And the frequent stirring of the mould about the roots of the plants by the hoe may be of utility in the same view.

‘ With respect to the green or long-winged fly, it mostly makes its appearance about the latter end of May, and in the two succeeding months ; being supposed to be produced by the prevalence of north-easterly winds about that period. It is highly destructive to the young leaves of the plants. They are said, under such a state of the wind, to scarcely ever fail covering the leaves : and, by dropping their ova, producing an abundance of lice, by which the crops are often much injured; as, when they have once obtained complete possession of the plants, they seldom or ever leave them before they are wholly destroyed. The forwardest and most luxuriant hop-vines, are in general the most disposed to be attacked by insects of this sort. Their removal chiefly depends upon a change taking place in the wind more to the south, and the setting in of more mild, warm, and temperate weather.’ It has been found that the otter moth, by depositing its eggs upon the roots of the plants, renders them liable to be attacked by the larvae, and the healthy growth of the hops to be thereby greatly impaired, the crops being of course much injured in their produce. Stirring the earth well about the roots of the plants may probably sometimes be serviceable in cases of this kind.

‘ The honey-dew mostly occurs after the crops have been attacked by some of these kinds of insects, and when the weather is close, moist, and foggy. In these cases, a sweet clammy substance is produced upon the leaves of the plants, which has the taste of honey, and they have at first a shining appearance, but afterwards soon be-come black. It is a disease that mostly happens in the more forward crops ; and the chief dependence of the planter for its removal, according to Bannister, is that of heavy thunder showers taking place; as by this means, when the destruction of the hops has not proceeded too far, they are often much restored, the insects that devour the leaves and vines being greatly destroyed, the growth of fresh shoots promoted, and a favorable bloom brought on the plants. The fen, mould, or mildew, is a disease to which the hop-crop is exposed at a later period of its growth, and which chiefly attacks the part where the hop is attached to the stem. It is said that its production is greatly promoted by moist damp weather, and a low situation ; those hop-crops, that grow in low, close, rich, grounds, being the most liable to be attacked by it : and it is found . to soon spread itself over the whole crop, after it has once seized upon any part of it. The nature of this vegetable disease has not been yet sufficiently investigated ; it has been suggested by Darwin and Willdenow to be a plant of the fun-gus kind, that is capable of growing without light or change of air, attaching itself to plants already in a morbid condition, and by its roots penetrating their vessels. And, on this supposition, the best remedy is believed to be that of thinning the plants, in order to afford a more free circulation of air, and admit the light more

extensively ; by which the vigor of the hop-plants may be restored, and the disease be of course removed. In this view, it is probable, by planting the hills more thinly, and making them at greater distances

from each other, the disease might in some measure be prevented from taking place.

‘ Diseases termed blights are frequently met with in hop-crops, at different periods of the growth of the plants, but mostly in the more early stages of their rising from the hills, while the nights are cold and frosty In the spring months, and the days have much sun and heat ; by which the living powers of the plants are greatly exhausted in the daytime by the stimulus of heat, and of course much injured, or wholly destroyed in the nights, from being exposed to a freezing air, which is incapable of exciting the actions which are necessary for the preservation of vegetable life. As the presence of this disease is supposed to be greatly connected with the prevalence of winds from the northern or easterly quarters, there is often a flea produced of a similar kind to that which attacks the shoots in their early growth. It is highly injurious, by preying upon the nutriment of the blossoms, and thereby diminishing their weight and changing them to a brown color, which is very prejudicial in their sale at the market. The fire-blast is also a disease that hop-crops are exposed to, in the later periods of their growth, and generally supposed to proceed from the particular state of the air or weather. It has been conjectured to be the effect of lightning, as it takes place, for the most part, at those seasons when it is the most prevalent, and in a very sud-den manner : and besides, the most forward and most luxuriant vines are the most subject to be affected. It has been suggested, that in exposures that are particularly liable to have the-, crops thus injured, it may be advisable to plant thinner, to keep back the growth of the plants as much as possible, by extirpating all the most forward shoots, and to employ a less proportion of the earthy compost in their culture.’

The hop-grower has the annoyance of being placed under the excise laws. Every grower of hops in Britain being legally obliged to give notice to the excise, on or before the first day of September, of the number of acres he has in cultivation ; the situation and number of his oasts ; the place or places of bagging, which, with the store-rooms, or warehouses, in which the packages are intended to be lodged, are entered by the revenue officer. No hops can be removed from the rooms thus entered before they have been weighed and marked by a revenue officer ; who marks, or ought to mark, not only the weight, but the name and residence of the grower, upon each package. There is a penalty on importing or using corrupt hops, imposed bystat. 1 Jac. *I.e.* 18. No bitter is to be used in brewing but hops, by 9 Ann. c. 12, sec. 24 ; and no hops are to be imported into Ireland from other parts but Great Britain, 5 Geo. II. c. 9. Landing foreign hops, before the duty is paid, incurs the penalty of having the hops burnt, and ship forfeited,

7 Geo. II. c. 19. There is also a penalty on so-phisticating hops, 7 Geo. II. c. 19 sec. 2; on cutting hop-binds, 10 Geo. II. c. 32, sec. 4; and oy 6 Geo. II. c. 37, sec. 6, this is made a felony.

without benefit of clergy. For the duty upon hops see stats. 39 & 40 Geo. III. c. 81 ; and 48 Geo. III. c. 134 for preventing frauds in the trade of hops : these acts regulate the mode of packing, bagging, and weighing them.

HOPE, n. s. & v. n.~} Sax. popa ; Dut. hope HOPE'FUL, adj. Germ.hoff'en; Gr.oTrevt*

HOPE'FULLV, adv. \ Expectation of future HOPE'FULNESS, n, s. ˆgood attended with plea-HOPE'LESS, adj. . sure ; confidence in a HO'PER, n. s. I future event, or the fu—

HO'PINGLY, adv. J ture conduct of any person : that which gives hope ; the object of hope : to live in expectation or confidence as to the future : hopeful, likely to gratify desire, ob-tain success, or answer expectation ; full of hope : this sense is almost confined to Scotland, though found in good writers : hopeless, without hope ; desperate : hoper, one that has pleasing expectatations : hopingly, with encouragement : hope, a sloping plain between the ridges of mountains.

There is hnpe of a tree, if cut down, that it will sprout out again. Job xiv. 7.

He shall strengthen your heart, all ye that hope in the Lord. Psalm xxxi. 24.

It is good being put to death by men, to look for hope from God, to be raised up again by them.

2 Mac. vii. 14.

Blessed is he who is not fallen from his hope in the Lord. Eccliu. xiv. 2.

If hope me faile, than alle am I Ungracious and unworthy ; In hope I woll comforted be ; For love, whan he betaught hire me, Sayed that hope where so I go Should aie be relese to my wo.

Chaucer. Romaunt of tfie Rose.

With him weut Hope in rancke, a handsome mayd, Of chearefull looke and lovely to behold j In silken samite she was light arayd, And her fayre locks were woven up in gold.

Spenter. Faerie Queene.

Are they indifferent, being used as signs of immoderate and hopeless lamentation for the dead ? Hooker.

Men of their own natural inclination hopeful and strongly conceited, whatsoever they took in hand. Id. Alas ! I am a woman, friendless, hvpelest.

Shaktpeare.

Thy mother felt more than a mother's pain, And yet brought forth less than a mother's hope ; To wit, an indigested deformed lump. Id.

The sun shines hot; and, if we use delay, Cold-biting winter mars our hoped for hay. Id.

He will advance thee : I know his noble nature, not to let Thy hopeful service perish. Id.

When in heaven she shall his essence see, This is her sovereign good, and perfect Miss ;

Her longing, wishings, hopes, all finished be ; Her joys are full, her motions rest in this. fiariet.

Sweet hope ! kind cheat ! fair fallacy ! by thee We are not where or what we be ; But what and where we would be ; thus art thou Our absent presence, and our future now. Crathatr.

One sign of despair is the peremptory contempt of the condition which is the ground of hope ; the going on not only in terrours and amazement of conscience, but also boldly, hopingly, and confidently in wilful habits of sin. Hammond,

Hope ! of all ills that men Endure The only cheap and universal cure ! Thou captive's freedom, and thou sick man's health ! Thou loser's victory, and thou beggar's wealth !

Covcley.

Faith it opposed to infidelity, and hope to despair.

Taylor.

Hope for good success, according to the efficacy of the causes and the instrument , and let the husbandman hope for a good harvest. Id.

What to the old can greater pleasure be, Than hopeful and ingenious youth to see ?

Denham.

They were ready to renew the war, and to prosecute it hopefully, to the reduction or suppression of the Irish. Clarertdon.

He watches with greedy hope to find His wish, and best advantage, us asunder; Hopeless to circumvent us joined, where each To other, speedy aid might lend at need.

Milton. He sought them both, but wished his hap might

find

Eve separate : he wished, but not with hope Of what so seldom chanced : when to his wish, Beyond his hope, Eve separate he spies. Id.

But physick yet could never reach The maladies thou me dost teach j Whom first the cramp of hope does tear, And then the palsy shakes of fear. Marvell. From your promising and generous endeavours we may hopefully expect a considerable enlargement of the history of nature. Glanville.

I was hopeful the success of your first attempts would encourage you to make trial also of more nice and difficult experiments. Boyle.

To encourage our hopes, it gives us the highest assurance of most lasting happiness, in case of obedience. Tillotson.

The Trojan dames

To Pallas' fane in long procession go, In hopes to reconcile their heavenly foe.

Dryden.

Hopeless of ransom, and condemned to lie In durance, doomed a lingering death to die. Id.

She was his care, his hope, and his delight, Most in his thought, and ever in his sight. Id. Who knows what adverse fortune may befall ! Arm well your mind, hope little, and fear all. Id.

So stands the Thracian herdsman with his spear Full in the gap, and hopes the hunted bear. Id.

Why not comfort myself with the hope of what may be, as torment myself with the fear on't ?

L'Estrange.

Hope is that pleasure in the mind which every one finds in himself, upon the thought of a profitable future enjoyment of a thing, which is apt to delight him. Locke.

May sorrow shame and sickness overtake her, And all her beauties like my hopes be blasted.

Howe's Royal Convert.

They take up a book in their declining years, and grow very hopeful scholars by that time they are threescore. Addison.

Set down beforehand certain signatures of hopeful-ness, or characters, whereby may be timely described what the child will prove in probability. Wotton.

He left all his female kindred either matched with peers of the realm actually, or hopefully with earls' sons and heirs. Id.

Whatever ills the friendless orphan bears, Bereaved of parents in his infant years, Still must the wronged Telcmachus sustain, If hopeful of your aid, he hopes in vain. Pope. With looks unmoved, he hopes the scaly breed. And eyes the dancing cork and bending reed. Id.

I except all hopers, who turn the scale, because the strong expectation of a good certain salary will outweigh the loss by bad rents. Swift.

Hope, of all passions, most befriends us here ; Passions of prouder name befriend us less. Joy has her tears ; and transport has her death ; Hope like a cordial, innocent though strong, Man's heart at once inspirits and serenes.

Young's Night Thoughtt. But to the generous still improving mind That gives the hopeles* heart to sing for joy, Diffusing kind beneficence around Boastless as now descends the silent dew.

Thomson's Seasons. The wretch condemned with life to part,

Still still on hope relies And every pang that rends the heart

Bids expectation rise. Goldsmith.

On the verge,

From side to side, beneath the glittering morn, An Iris sits, amidst the infernal surge, Like Hope upon a death-bed ; and unworn Its steady dyes, while all around is torn By the distracted waters, bears serene Its brilliant hues with all their beams unshorn ; Resembling, 'mid the torture of the scene, Love watching Madness with unalterable mien.

Byron. Childe Harold.

HOPE, in ethics, is the desire of some good, attended with a belief of the possibility, at least, of obtaining it ; and enlivened with joy, greater or less, according to the greater or less probability of our possessing the object of our hope. Alexander, preparing for his Asian expedition, distributed his hereditary dominions among his friends; allotting to some villages, to others boroughs, to others cities; and, being asked what he had reserved for himself, replied, Hope.

HOPE (Dr. John), professor of botany in the university of Edinburgh, was born in Edinburgh on the 10th of May 1725. After finishing the usual course of education, he studied medicine at the university of Edinburgh. Hav-ing finished his academical education, he visited other medical schools, and upon his return obtained the degree of M. D. from the univeisity of Glasgow in 1750. A few months after he was admitted a member of the royal college of physicians in Edinburgh, and entered upon the practice of medicine in that city. In 1761 Dr. Hope, by a commission from his majesty, was appointed king's botanist for Scotland, and superintendant of the royal garden at Edinburgh ; and a few weeks after was elected, by the town council of Edinburgh, successor to Dr. Alston in the professorships of botany and materia me-dica. In 1777 he was nominated regius professor of

medicine and-botany in the university, and had the offices of king's botanist and superintendant of the royal garden conferred upon him for life, which till that time had been granted during pleasure only. Dr. Hope married the daughter|of Dr. Stevenson, an eminent physician in Edinburgh ; by whom he had four sons and one daughter. He died in November 1786. He was a member not only of the Royal Society of London, but also of several foreign societies ; and at the time of his death he held the distinguished office of president of the royal college of physicians.

HorE LAND, an island of the South Pacific Ocean, discovered in 1772 by Mr. Marson. It is inteisected by mountains, rising above each

other in a triple range, which are covered with snow, and so high as to be visible at the distance of twelve leagues. It is not far from Cerara Island, in long. 32° 11' E., and lat. 46° 45' N.

HOPEA, in botany, a genus of the polyandria order, and polyadelphia class of plants : CAL. quinquefid, superior: COR. pentapetalous; the stamina are many, and coalited into five pencils; there is one style; the fruit is a plum, with a trilocular kernel. There is only one species, *viz.* a native of Carolina.

HOPE, GOOD, CAPE OF. See GOOD HOPE, HOPKINS (Ezekiel), bishop of Deny in Ireland, was the son of a clergyman in Devonshire ; and was for some time chorister of Magdalen College, Oxford, and usher of the adjoining school. He was afterwards a presbyterian minister, and was extolled as an excellent preacher. Lord Roberts, happening to hear him preach, was so pleased with his discourse and his man-ner, that he retained him as his chaplain, when he was sent as lord lieutenant into Ireland, and preferred him to the deanery of Raphoe; and, on his being recalled, so strongly recommended him to his successor that he

was soon preferred to the bishopric of Raphoe, whence he was translated to Derry. During the war under the earl of Tyrconnel, at the revolution, he withdrew into England ; and was chosen minister of St. Mary, Aldermanbury, in London, where he died in 1690. His Sermons, his Exposition of the teu Commandments, and that of the Lord's prayer, are much esteemed. His works were printed together, folio, in 1710.

HOPLITjE, or HOPLITES, from OTT\OV, ar-mour, in antiquity, were such of the candidates at the Olympic and other sacred games as ran races in armour. One of the finest pieces of the famous Parrhasius was a painting which represented two hophtes ; the one running, in a violent perspiration, the other laying his arms down, as quite spent and out of breath.

HOPLITODROMOS, from ojrXov, armour, and dpfpw, I run, in the ancient gymnastic sports, a term applied to such persons as went through those toilsome and robust exercises in complete armour; by which the exercise became much more violent, and the wearing of armour in the time of battle much more easy.

HOPLOMACHI, 'O:r\ojuaxot> °f bir\ov, and fia\onat, [fight, in antiquity, a species of gladiators who fought in armour, either completely armed from head to foot, or only with a casque and cuirass.

HOR, a mountain, or mountainous tract of Arabia Petraa, situated in that circuit which the Israelites took to the south and south-east of Edom in their way to the borders of Moab. Aaron died on it. It was also called Seir.

HORyE, 'Qpai, the Hours, in ancient mythology, were esteemed goddesses, the daughters of Jupiter and Themis ; at first only three in num-ber, Eunomia, Dice, and Irene ; to whom were ifterwards added two more, Carpo and Thallote. Homer makes them the door-keepers of heaven. Ovid allots them the employment of harnessing the sun's horses;

Jungere equos Titan vclocibus iraperat Horis ;

and speaks of them as standing at equal distances about the throne of Sol ;

et positae spatiis aequalibus, Horae.

The poets represent them as dressed in fine colored or embroidered robes, and gliding on with a quick and easy motion. They presided over the seasons, and were worshipped at Athens.

HOR/EA, in antiquity, solemn sacrifices, consisting of fruits, &c., offered in spring, sum-mer, autumn, and winter; that heaven might grant mild and temperate weather. These, according to Meursius, were offered to the goddesses called Horae.

HORAL, adj. 7 Fr. horaire ; Lat. hora. Re-HORARY, adj. $ lating to the hour; continuing for an hour. See HOUR.

I'll draw a figure that shall tell you What you perhaps forgot befell you, By way of horary inspection, Which some account our worst erection.

Hudibras.

When, from a basket of summer-fruit, God by Amos foretold the destruction of his people, thereby was declared the propinquity of their desolation, and that their tranquillity was of no longer duration than those horary or soon decaying fruits of summer.

Browne's Vulgar Errovn.

In his answer to an horary question, as what hour of the night to set a fox-trap, he has uiscussed, under the character of Reynard, the manner of surprising all sharpers. Taller.

Howe'er reduced and plain, The watch would still a watch remain ; But, if the Jioral orbit ceases, The whole stands still, or breaks to pieces.

Prior.

HORAPOLLO, or HORUS APOLLO, a grammarian of Panaplus in Egypt, according to Sui-das, who first taught at Alexandria, and then at Constantinople under Theodosius. There are extant, under his name, two books on the hieroglyphics of the Egyptians ; which Aldus first published in Greek in 1505, in folio; and they have often been published since, with a Latin version and notes. It is not certain, however, that the grammarian of Alexandria was the au-thor of these books ; they being rather thought to belong to another Horapollo of more ancient date : on which head, see Fabricius's Bibliotheca Gneca.

HORATII, three Roman brothers, who, in the reign of Tullus Hostilius,

fought against the three Curiatii, who belonged to the army of the Albans. The two armies being equal, three brothers on each side were chosen to decide the contest of superiority. Two of the Horatii were first killed ; but the third, by his address, successively slew the three Curiatii, and by this victory rendered the city of Alba subject to the Romans. See ROME.

HORATIUS, surnamed Codes from his los-ing an eye in combat, was nephew to the consul Horatius Pulvillus, and descended from the surviving brother who killed the Curiatii. Por-senna, laying siege to Rome, drove the Romans from Janiculum; and pursued them to the wooden bvidge over the Tiber which joined the city to Janiculum. Largius, Herminius, and Horatius Codes, sustained the shock of the

enemy on the bridge, and prevented their entering the city with the Romans ; but, Largius and Herminius having passed the bridge, Horatius Codes was left alone, and repulsed the enemy till the bridge was broken under him : he then threw himself armed into the Tyber, swam across the river, and entered Rome in triumph.

HORATIUS FLACCUS (Quintus), a celebrated lyric Roman poet, was the grandson of a freed man, and was born at Venusium, 64 B. C. He had the best masters in Rome, after which he completed his education at Athens. Having taken up arms, he embraced the party of Brutus and Cassius, but threw away his shield at the battle of Philippi. Some time after he gave himself up entirely to the study of poetry. His talents soon made him known to Augustus and Mecaenas, who had a particular esteem for him, and loaded him with favors. Horace also contracted a strict friendship with Agrippa, Pollio, Virgil, and all the other great men of his time. He lived without ambition, and led a tranquil and agreeable life with his friends, but was subject to a defluxion in his eyes. He died at the age of fifty-seven. There are still

extant his Odes, Epistles, Satires, and Art of Poetry; of which there have been a great number of editions. The best are those of the Louvre, in 1642, folio; of Paris, 1691, 4to.; of Cambridge, 1699; that with Bentley's emendations, printed at Cambridge in 1711; Fowlis' edition, Glasgow, 1 744 ; and, we may add, the edition printed at St. Andrews, in 1796, under the care of the learned Dr. Hunter, who, in correcting it, compared the text with those of above forty other copies.

HORDE, n. s. A clan ; a migratory crew of people. It is applied only to the Tartars.

Of lost mankind, in polished slavery sunk, Drove martial horde on horde with dreadful sweep, And gave the vanquished world another form.

Thomson.

Nor would the hostile horde

Of many-nationed spoilers from the Po Quaff blood and water. Byron. Childe Harold.

HORDEUM, barley, in botany, a genus of the digynia order, and triandria class of plants; natural order fourth, gramina : CAL. lateral, bivalved, uniflorous, and triple. The involucrura consists of six leaves, and contains three flowers. Common receptacle toothed and excavated. There are ten species ; only one of which, viz : —

1. H. murinum, or wall barley grass, is a na-tive of Britain.

2. H. vulgare, or common barley, cultivated in our fields. Its native place is said to be Si-cily. For the culture &c. of common barley, see RURAL ECONOMY.

HORDICALIA, or HORDICIDIA, in antiquity, a religious feast held among the Romans on the 15th of April, wherein they sacrificed cattle big with young. A great part of the offer-rings were made in the temple of Jupiter. They consisted of thirty cows big with calf, and were offered to Tellus, the earth. The calves taken out of their bellies were burnt at first by the pontifices, afterwards by the eldest vestal virgin.

HOREB, or OREB, a mountain of Arabia Pe-traca, contiguous to and on the south side of

mount Sinai ; the scene of many miraculous appearances.

HOREHOUND. See MARRUBIUM. HOREHOUND, BASE. See STACHYS. HOREHOUND, BASTARD. See SIDERITIS HOREHOUND, WATER. See LYCOPDS. HORESTI, an ancient nation of North Britain, beyond Solway Frith, mentioned by Tacitus. Their country, according to Camden, is now called Eskdale.

HORITES, an ancient people, who at first dwelt in the mountains of Seir beyond Jordan (Gen. xiv. 6.) They had princes, and were powerful, even before Esau made a conquest of theii country. (Gen. xxxvi. 20 — 30.) The Horites, the descendants of Seir, and the Edomites, seem afterwards to have been confounded, and to have composed but one people. (Deut. ii. 2, xxxiii. 2, and Judg. v. 4.) They dwelt in Arabia Petraea and Arabia Deserta, to the south-east of the promised land. We find the Hebrew word DHlf! Chorim, which in the book of Genesis is translated Horites, used in an appellative sense in several other passages of Scripture, and to signify nobles, or great and powerful men (1 Kings xxi. 8, 11, and Neh. ii. 16, iv. 14, v. 7, vi. 17, vii. 5, xii. 17, Eccl. x. 17, Isa. xxxiv. 12, Jer. xxvii. 20, xxxix. 6) ; and it has been supposed, that the Greeks might derive hence their heroes, in like manner as they derived Anax, a king, from the sons of Anak, the famous giant.

HORI'ZON, n. s. } Gr. opi£wv. The line HORIZONTAL, adj. > that terminates the HORIZONTALLY, adv. j view, distinguished into sensible and real : the sensible horizon is the circular line which limits the view ; the real is that which would bound it, if it could take in the hemisphere. Near the horizon ; parallel to the horizon; on a level.

When the morning sun shall raise his car Above the border of this horizon, We'll forward towards Warwick and his mates.

Shaktpeare.

She began to cast with herself from what coast this blazing star should first appear, and at what time it must be upon the horizon of Ireland. Bacon,

As when the sun, new risen, Looks through the horizontal misty air, Shorn of his beams ; or from behind the moon, In dim eclipse, disastrous twilight sheds On half the nations. Milton.

In his East the glorious lamp was seen, Regent of day ; and all the horizon round Invested with bright rays. Id.

As it will not sink into the bottom, so will it neither float above, like lighter bodies ; but, being near in weight, lie superficially, or almost horizontally unto it.

Browne.

An obelisk erected, and golden figures placed horizontal about it, was brought out of Egypt by Augustus. Id.

The morning lark, the messenger of day, Saluted in her song the morning gray ; And soon the sun arose with beams so bright, That all the horizon laughed to see the joyous sight.

Dryden.

When the sea is worked up in a tempest, so that the horizon on every side is nothing but foaming billows and floating mountains, it is impossible to describe the agreeable honour that rises from such » prospect. Ad'liaon

The problem is reduced to this : what perpendicular height is necessary to place several ranks of row-ers in a plane inclined to a horizontal line in a given angle? Arbuthnot on Coins.

Fields, woods, and streams, Each towering hill, each humble vale below, Shall hear my cheering voice ; my hounds shall wake The lazy morn, and glad the horizon round.

Somerville's Chase.

Hail to the joyous day! with purple clouds The whole horixon glows. Thomson.

She who was named Eternal, and arrayed Her warriors but to conquer — she who veiled Earth with her haughty shadow, and displayed, Until the o'er-canopied horixon failed, Her rushing wings — Oh she was Almighty hailed ! Byron. Childe Harold.

The HORIZON, in geography and astronomy, <s a great circle of the sphere, dividing the world into two parts or hemispheres ; the one upper and visible, the other lower and hid. The word literally signifies bounding the sight; being formed of 'opt'Jw, I bound. See ASTRONOMY and GEOGRAPHY.

HORIZON, RATIONAL, TRUE, or ASTRONOMICAL, also called simply and absolutely the horizon, is a great circle, whose plane passes through the centre of the earth, and whose poles are the zenith and nadir.

HORIZON, SENSIBLE, VISIBLE, or APPARENT, is a less circle of the sphere, which divides the visible part of the sphere from the invisible. Its poles, too, are the zenith and nadir : and consequently the sensible horizon is parallel to the rational ; and it is cut at right angles, and into two equal parts, by the verticals. The sensible horizon is divided into eastern and western.

A HORIZONTAL DIAL is that drawn on a parallel to the horizon: having its gnomon or style elevated according to the altitude of the pole of the place it is designed for. Horizontal dials are, of all others, the most simple and easy.

HORIZONTAL LINE, in perspective, is a right line drawn through the principal point, parallel to the horizon : or it is the intersection of the horizontal and perspective planes. See PERSPECTIVE.

HORIZONTAL PLANE is that which is parallel to the horizon of the place, or nothing inclined thereto. The business of levelling is to find whether two points be in the horizontal plane ; or how much is the deviation. See LEVELLING.

HORMINUM, clary, in botany, a genus of the gymnospermia order, and didynamia class of plants : natural order forty-second, verticillatae ; CAL. campanulated, with four segments nearly equal ; the fourth larger, and emarginated : COR. upper lip concave. There are several species ; the most remarkable of which is the

H. verbenaceum, or common wild clary. It grows naturally on sandy and gravelly ground in many parts of Britain. It has sometimes been called oculus Christi, from the supposed virtues of its seeds in clearing

the sight, which it does by its viscous covering; forwhen any thing happens to fall into the eye, if one of the seeds is put in at one corner, and the “eyelid kept close over it, moving the seed gently along the eye,

HORN’-BEAK, n. s. HORN’FISH, n. s. HORN’-BEAM, n. s. HORN’BOOK, n. s. HORN’EB, adj. HORN’ER, n. .«. HOR’NET, n. s. HoRN’-rooT, n. s. HORN’-OWL, n. s. HORN’-PIPE, n. s. HORN’-STONE, n. s. HORN’-WORK, n. s. HORN’Y, adj.

whatever happens to be there will stick to it, and so be brought out.

HORN, n. s. ~\ Saxon, J?onn ; Gothic,

haurn; Belg. horn, hoorn. The hard bodies which grow on the heads of some graminivorous quadrupeds, and serve them for weapons. An instru- ”ment of wind music : the extremity of the moon, when wax-ing or waning ; the feelers of a snail : this gives rise to the proverb, to ‘pull in your horns ;’ to repress one’s

ardor : a drinking-cup : antler of a cuckold : figuratively horn-mad, mad as a cuckold. Horn-beak, horn-fish, a kind of fish. Hornbeam, a species of tree. Hornbook, the first book used by children, and covered with horn. Horner, one that works in, or sells horn. Hornet, Sax. J’yrinette, from its horns : a very large strong stinging fly, which makes its nest in hollow trees. Hornfoot, hoofed. Horn-owl, a species of owl with horns. Hornpipe, a country dance. Hornstone, a kind of blue stone. Horn-work, a kind of angular fortification: horned, horny, made of, or resembling horn.

He shewed him, or they went to soupere, Forestes, parkes, ful of wilde dere ; — Ther saw he hartes with hir hornet hie The gretest that were ever seen with eie.

Chaucer. The Franheleines Tale. Janus sit by the fire with double herd And drinketh, of his bugle horn, the wine. Id.

A lusty tabrere,

That to thee many a hornpipe played, Whereto they dauncen each one with his maid.

Spenser.

The squire ‘gan nigher to approach, And wind his horn under the castle wall, That with the noise it shook as it would fall.

Id. Faerie Queene.

As when two rams, stirred with ambitious pride, Fight for the rule of the rich fleeced flock,

Their horned fronts so fierce on either side Do meet, that, with the terrour of the shock, Astonished both stand senseless as a block. Id.

There’s a post come from my master, with his horn full of good news. Shakspeare.

I am glad he went not in himself : if he had , he would have been Aorn-mad. Id.

He teaches boys the hornbook. Id.

Love’s feeling is more soft and sensible, Than are the tender horns of cockled snails. Id.

Aufidius,

Hearing of our Marcius’s banishment, Thrust forth his horns again into the world, Which were inshelled when Marcius stood for Rome, And durst not once peep out. Id.

If I have horns to make one mad, Let the proverb go with me, I’ll be horn-mad. Id. There many a hornpipe he tuned to his Phyllis.

Raleigh. No beast that hath horns hath upper teeth.

Bacon.

Let all the quicksilver i’ the mine Run to the feet veins, and refine Your firkhum jerkhum to a dance, Shall fetch tb« fiddlers out of France,

HOR

To wonder at the hornpipes here Of Nottingham and Derbyshire. Ben Jonson. Yes I have brought (to help our vows) Horned poppy, cypress boughs. Id.

Mad frantick men, that did not inly quake ! With hornfoot horses, and brass wheels, Jove's storms to emulate. Hakewill on Providence.

Thither all the horned host resorts, To graze the ranker mead. Denham.

He thought he by the brook of Cherith stood, And saw the ravens with their horny beaks Food to Elijah bringing even and morn. Milton.

Retiring from the popular noise I seek This unfrequented place to find some ease, Ease to the body some, none to the mind, From restless thoughts, that like a deadly swarm Of hornets armed, no sooner found alone, But rush upon me thronging, and present Time past, what once I was, and what am now.

Id. Samson Agonittei. Merchants, venturing through the main, Slight pyrates, rocks, and horns for gain.

Hvdibrat.

The goddess to her crooked horn Adds all her breath : the rocks and woods around, And mountains, tremble at the infernal sound.

Dryden.

Fair Ascanius, and his youthful train, With horns and hounds a hunting match ordain.

Id.

Tyrrheus, the foster-father of the beast, Then clenched a hatchet in his horny fist. Id. She blessed the bed, such fruitfulness conveyed, That ere ten moons had sharpened either horn, To crown their bliss, a lovely boy was born. Id. Thou king of horned floods, whose plenteous urn Suffices fatness to the fruitful corn. Id.

Silence, in times of suffering, is the best j ‘Tis dangerous to disturb a hornet’s nest. Id, Nothing has been considered of this kind out of the ordinary road of the hornbook and primer. Locke.

The horny or pellucid coat of the eye doth not lie in the same superficies with the white of the eye, but riseth up above its convexity, and is of an hyperbolical figure. Ray on the Creation. Hornets do mischief to trees by breeding in them.

Mortimer.

The skin of a bull’s forehead is the part of the hide made use of by horners, whereupon they shave their bores. Grew.

Florinda danced the Derbyshire hornpipe in the presence of several friends. Tatler,

Bending the bull’s tough neck with pain, That tossrs back his horns in vain. Addison. The pineal gland was encompassed with a kind of horny substance. Id.

To master John the English maid A hornbook gives of gingerbread ; And, that the child may learn the better, As he can name, he eats the letter. Prior. As the serum of the blood is resolvable by a small heat, a greater heat coagulates it so as to turn it horny, like parchment; but when it is thoroughly putrified, it w'l no longer concrete. Arbuthnot.

All that process is no more surprising than the eruption of horns in some brutes, or of teeth and beard in men at certain periods of age. Bentley.

The moon Wears a wan circle round her blunted horns.

Thomson.

Unhappy confiding in the length Of horny beak, or talons crooked strength, Who durst abide his rage ; the blade descends. And from the panting trunk the pinion rends.

Beat tie.

This moon, which rose last night round as my shield, Had not yet filled her Iwrn, when by her light A band of fierce barbarians from the hills Rushed like a torrent down upon the vale, Sweeping our flocks

and herds. Home's Douglas, I'll call him

Who bears the golden horn, and bears such bright

And blooming aspect, Huon ; for he looks

Like to the lovely boy lost in the forest

And never found till now.

Byron. Deformed Transformed.

HORN, in physiology, is of the same nature as the gelatinous matter of animals, and is only that matter charged with a less quantity of water, and a larger quantity of earth, and sufficiently condensed to have a firm and solid consistence. By digesting horn with water, in Papin's digester, it may be entirely converted into jelly. Horn is a perfectly animalised matter, and furnishes in distillation the same principles as all animal matters ; that is, at first a pure phleghm, with a degree of heat not exceeding that of boiling water ; then a volatile alkaline spirit, which bej comes more and more penetrating and strong ; a fetid, light, and thin oil ; a concrete volatile salt, which forms ramifications upon the sides of the receiver; much air; fetid oil, which becomes more and more black and thick; and, lastly, it leaves in the retort a considerable quantity of almost incombustible coal, from which, after its incineration, scarcely any fixed alk.ali can be obtained. Animal oil, and particularly that which is drawn first in the distillation of horn, is susceptible of acquiring great thinness and volatility by repeated distillations. The horns of stags, contain a larger quantity of the same kind of earth which is in bones ; hence they seem to possess an intermediate nature betwixt horns and bones. Horns make a considerable article in the arts and manufactures. Bullocks' horns, softened by the fire, serve to make lanterns, combs, knives, ink-horns, tobacco-boxes, &c.

In the staining or dyeing of horn the black dye is given by steeping brass in aqua-fortis till it be returned green : with this the horn is washed once or twice, and then put into a warmed decoction of logwood and water. Green is begun by boiling it, &c., in alum water ; then with verdigris, ammoniac, and white wine vinegar ; keeping it hot therein till sufficiently green. Red is begun by boiling it in alum water, and finished by decoction in a liquor compounded of quicklime steeped in rain water, strained, and to every pint an ounce of Brasil-wood added. In this decoction the bone, &c., is to be boiled till sufficiently red.

In order to imitate tortoise-shell, the horn to be dyed must be first pressed into proper plates, scales, or other flat form ; then take of quicklime two parts, and of litharge one part : temper them together to the consistence of a soft paste with soap lie. Put this paste over all the parts of the horn, except such as are proper to be left transparent, in order to give it a nearer resemblance of the tortoise shell. The horn must re-main in this manner covered with the paste till it be thoroughly dry; when, the paste being brushed off, the horn will be found partly opaque and partly transparent, in the manner of tortoise-shell : and when put over a foil, of the kind of

laten called assidue, will be scarcely distinguishable from it. It requires some degree of fancy and judgment to dispose of the paste in such a manner as to form a variety of transparent parts of different magnitudes and figures; and it will be an improvement to add semitransparent parts ; which may be done by mixing whiting with some of the paste to weaken its operation in particular places ; by which spots of a reddish-brown will be produced, which, if properly interspersed, especially on the edges of the dark parts, will greatly increase both the beauty of the work, and its similitude with the real tortoise-shell.

HORN, in geography. See HOORN.

HORN, a musical instrument of the wind kind, is chiefly used in hunting, to animate and bring together the dogs and the hunters. The term was anciently, wind a horn, all horns being in those times of a winding shape; but, since straight horns were made, we say blow a horn, and sometimes sound a horn. See Music. The Hebrews made use of horns formed of ram’s horns to proclaim the Jubilee.

HORN, FRENCH, is a wreathed or contorted trumpet. It labors under

the same defects as the trumpet itself; but these have of late been so palliated as to require no particular selection of keys for this instrument.

HORN, an island on the coast of Florida, between Ship and Massacre Islands. It is nearly seventeen miles long, and about half a mile wide, having many trees on the middle of it.

HORN, CAPE, is the most southern extremity of South America, and the south point of a group of islands, of unequal extent, lying before Nassau Bay, known by the name of the Hermit Islands. North-west of the cape are two peaked rocks, like sugar-loaves. Some other straggling rocks lie west, and one south of it ; but they are all near the shore. It is cold, lofty, and covered with wood. It was discovered by Jacob le Maire, a Dutchman, in 1616 ; and Anson and others have encountered, in passing this cape, the most dreadful tempests ; but of late years it has been the common course of all vessels, being found much preferable to the tedious passage through the straits of Magellan. The shore is inhabited by savages, of whom little is known. Long. 67° 46’ W., lat. 55° 58’ S.

HORN, FALSE, CAPE, a cape of South America, nine miles north-east of Cape Horn.

HORNBACH, a town of Germany in the late duchy of Deux Fonts, now annexed to the French republic, and included in the department of Savre and Moselle. It is seated on the river Horn, with a Benedictine abbey, five miles south-east of Deux Fonts. Long. 7° 36’ E., lat. 49° 10’ N.

HORNBEAM, in botany. See CARPINUS.

HORNBERG, an ancient town of Germany, in the Black Forest, and duchy of Wirtemberg, with a fortress upon a mountain. It is seated on the river Gutlash, twenty-one miles north-east of Friburg. Long. 8° 27’ E., lat. 48° 12’ N.

HORN-BILL. See BUCEROS.

HORNBLEND is a black or green indurated bole of clay, consisting of scaly particles, which are distinguishable from those of mica, by being

less shining, thicker, and rectangular. It is generally found amongst iron ores, and sometimes intermixed with mica, forming a compact

stone.

HORNCASTLE, a market town of Lincolnshire. It had a castle, from the architecture of which, and the coins sometimes dug up, it is thought to have been a station of the Romans. The town is well built and tolerably healthy. It is a signiory of thirteen lordships. It has a mar-ket on Saturday, and fairs in June and August. It is twenty miles east of Lincoln, and 136 north of London.

HORN-DISTEMPER, a disease incident to horned cattle, affecting the internal substance of the horn, commonly called the pith, which it insensibly wastes, and leaves the horn hollow. The pith is a spongy bone, the cells of which are filled with an unctuous matter. It is furnished with a great number of small blood-vessels, is overspread with a thin membrane, and appears to be united by sutures with the bones of the head. According to an account of this distemper published by Dr. Tufts in the Memoirs of the American Academy, vol. i., the spongy bone is sometimes partly, and sometimes entirely wasted. The horn loses its natural heat, and a degree of coldness is felt upon handling it. The distemper, however, is seldom suspected without a particular acquaintance with the other symptoms, which are a dulness in the countenance of the beast, a sluggishness in moving, a failure of appetite, an inclination to lie down, and, when accompanied with an inflammation of the brain, a giddiness and frequent tossing of the head. The limbs are sometimes affected with stiffness, as in a rheumatism ; in cows the milk often fails, the udder is hard, and in almost all cases there is a sudden wasting of the flesh. As soon as the distemper is discovered, an opening into the diseased horn should be immediately made ; which may be done with a gimlet of a moderate size, in such a part of the horn as is most favorable for the discharge. It is recommended as most prudent to bore at first two or three inches above the head. If it is found hollow, and the gimlet passes through to the opposite side, and no blood discharges from the aperture, it may be best to bore still lower, and as near the head as it shall be judged that the hollowness extends. This opening is affirmed to be a necessary measure, and often gives immediate iclief. Care must be taken to keep it clear, as it is apt to be clogged by a thin fluid that gradually oozes out and fills up the passage. Some saw off the horn ; but, according to the best information, it does not succeed better than boring. From the cases Dr. Tufts has seen, he is led to conclude that injections are in general unnecessary; that, when the distemper is early discovered, no more is required than a proper opening into the horn, keeping it sufficiently clear for the admission of fresh air, the removal of the compression, and the discharge of floating matter. But when the distemper has communicated its effects to the brain, so as to

produce a high degree of inflammation, it is doubted whether any method of cure will succeed.

HORNE (George), D.D., bishop of Norwich, was born at Otham in Kent, in 1730. He was

educated at Maidstone, and took his degrees of M. A. and D.D. at Oxford. In 1753 he entered into orders, and was soon distinguished as a preacher. In 1776 he was elected vice-chancel- lor; and, in 1781, bishop of Norwich. Having early adopted the principles of Hutchinson, he displayed his abilities in defending them. He wrote, 1 . An impartial state of the case between Sir Isaac Newton and Mr. Hutchinson ; 2. The-Theology and Philosophy in Cicero's Somnium Scipionis explained, 8vo. ; 3. Spicilegium Shuck-fordianum, or A Nosegay for the Critics, 8vo. ; 4. A View of Mr. Kennicott's Method of Correcting the Hebrew Text, 8vo. ; 5. Considerations on the Life and Death of John the Baptist, 8vo., 1769 ; 6. A Commentary on the Psalms, 2 vols. 4to.; 7. A Letter to Ada'm Smith, LL.D., on the Life, Death, and Philosophy of David Hume, 12mo.; 8. Letters on Infidelity, 12mo. 9. A Letter to Dr. Priestley, 8vo. ; 10. Sermons, 5 vols.; and several other works. He died at Bath in 1792; and was much esteemed for his learning and piety.

HORN EC K (Dr. Anthony), a learned divine, born at Baccharach, in the Lower Palatinate, in 1641. He studied divinity under Dr. Spanheim at Heidelberg; afterwards completed his studies at Oxford, and became vicar of Allhallows in that city. In 1665 he became tutor to lord Torrington, son of the duke of Albemarle, who presented him to the rectory of Doulton in Devonshire, and a prebend in Exeter. He was afterwards chosen preacher of the Savoy. In 1693 he was collated to a prebend in Westminster, and to another in the cathedral of Wells. He published, 1. The Great Law of Consideration ; 2. The Happy Ascetic;

3. Delight and Judgment; 4. The Fire of the Altar; 5. The Exercise of Prayer; 6. The Crucified Jesus; Several Sermons, and other works. He died in 1696, and was interred in Westminster Abbey, where a monument is erected to his memory.

HOJINER (Francis), esq., M.P. and barrister-at-law, was born at Edinburgh in the year 1778. He was educated at the high school, and finished his studies at the university of that place, where he formed an intimacy with lord Henry Petty, subsequently marquis of Lansdowne, Mr. Broug-ham, and the early conductors of the Edinburgh Review. He himself was one of its ablest writers. He first came into parliament in the year 1806. In 1810 he was chairman to the Bullion Committee, and the author of the then excellent re-port on that intricate subject. His application to business, however, so much impaired his constitution, that he was obliged to seek the climate of Italy, and died, greatly lamented, at Pisa, 8th February, 1817.

HORNET, in zoology. See VESPA.

HORN-FISH, or GAR-FISH. See Esox.

HORNING, in Scots law, a writing issuing from the signet, in his majesty's name, at the instance of a creditor against his debtor, commanding him to pay or perform within a certain time, on pain of being declared rebel, and by a caption put in prison.

HORNIUS (George), professor of history at Leyden, was born in the Palatinate, and died at Leyden in 1670. He went mad at the latter

part of his life ; which was supposed to be occasioned by the loss of 6000 florins he had entrusted with an alchymist at the Hague. His works are, 1. Historia Ecclesiastica, ad ann. 1666, which is esteemed; 2. De Originibus Americanis, 1652, 8vo. ; 3. Geographia Vetus et Nova; 4. Orbis Politicus.

HORNPIPE, a common instrument of music in Wales, consisting of a wooden pipe, with holes at stated distances, and a horn at each end ; the one to collect the wind blown into it by the mouth, and the other to carry off the sounds as modulated by the performer.

HORNPIPE is also the name of an English air, probably derived from the above instrument. The measure is triple time, with six crotchets in a bar ; four beats with the hand down and two up.

HORNSEA, a town of Yorkshire, 188 miles from London. It is almost surrounded by a small arm of the sea ; and the church, having a high steeple, is a noted sea-mark.

HORNSBY (Thomas), D.D., an English mathematician and astronomer, was born 1734, and became Savilian professor of astronomy, profesor of natural philosophy, lecturer on experimental philosophy, and keeper of the Ratcliffe library, Oxford. He had taken the degrees of M.A. and D.D., and was a fellow of the Royal Society. He published the following papers in their Transactions : — On the Parallax of the Sun, 1763; Observations on the Solar Eclipse, April 1st, 1 764, at Oxford ; Account of the Improvements to be made by Observations of the Transit of Venus, in 1769 ; Observations on the Transit of Venus, and Eclipse of the Sun, June 3d, 1769 ; The Quantity of the Sun's Parallax, as deduced from Observations of the Transit of Venus, on June 3d, 1769; Enquiry into the Quantity and Direction of the proper Motion of Arcturus ; with some Remarks on the Diminution of the Obliquity of the Ecliptic. Dr. Hornsby also distinguished himself as the editor of the Astronomical Observations of Dr. Bradley, at Greenwich, which were published in 2 vols. folio, 1798.

HOROG'RAPHY,n.s. Fr. horographie ; Gr. wpa and ypa0w. An account of the hours.

HOR'OLOGE, n. s. $ Latin horologium ;

HOROL'OGY. J Greek wpa and Xtyw.

Any instrument that tells the hour : as a clock ; a watch ; an hourglass.

He'll watch the horologe a double set, If drink rock not his cradle Shaktpeare.

Before the days of Jerome there were horologies, that measured the hours not onlv by drops of water in glasses, called clepsydra, but also by sand in glasses, called clepsammia. Browne.

HOROLOGE, HOROLOGIUM, QpoXoyiov, of wpa, an hour, and \tyir, I read or speak, a common name among the ancient writers for any instrument or machine for measuring the hours ; such are our clocks, watches, sun-dials, &c. Modern inventions, and gradual improvements, have given birth to some new terms that come properly under this head, and annexed new meanings to others totally different from what they had originally. All chronometers that announced the hour by striking on a bell were called clocks: thus, we read of pocket-clocks. In like manner.

all clocks that did not strike the hour, were called watches or time-pieces. In Sir Isaac Newton's report to the house of commons, in 1713, relative to the longitude act, he states the difficulties of ascertaining the longitude by means of a watch : yet it is obvious, from several circumstances, that his remarks were to be understood of a time-piece regulated by a pendulum ; for his objections are founded on the known properties of the pendulum, some of which differ essentially from the properties of the balance and spring. At this time, such machines for measuring time as are fixed in their place are called clocks, if they strike the hour : if they do hot strike the hour, they are called time-pieces; and when constructed with more care, for a more accurate measure of time, they are called regulators. Mr. John Harrison first gave the name of time-keeper to his watch, for which he received £20,000. See CLOCK MAKING.

HOROM'ETRY, n. s. Fr. horomet rie ; Gr. wpa and /ierpew. The art of measuring hours.

It is no easy wonder how the horometry of antiquity discovered not this artifice. Browne.

HOR'OSCOPE, n. s. Fr. horoscope ; Greek wpoffKowoc. The configuration of the planets at the hour of birth.

The Greek names this the horoscope ;

This governs life, and this marks out our parts,

Our humours, manners, qualities and arts.

Creech.

A proportion of the horoscope unto the seventh house, or opposite

signs every seventh year, oppresseth living creatures. Browne.

Him born beneath a boding horoscope,

His sire, the blear-eyed Vulcan of a shop,

From Mars his forge sent to Minerva's school.

Dryden.

How unlikely is it, that the many, almost numberless conjunctions of stars, which occur in the progress of a man's life, should not match and countervail that one horoscope or conjunction which is found at his birth. Drummond.

They understood the planets and the zodiack by instinct, and fell to drawing schemes of their own horoscopes in the same dust they sprung out of.

Bentley.

HOROSCOPE, from wpo, an hour, and ffieeirTopcu, I consider, in astrology, is the degree or point of the heavens rising above the eastern point of the horizon at any given time, when a prediction is to be made.

HOROSCOPE is also used for a scheme or figure of the twelve houses or twelve signs of the zodiac, wherein is marked the disposition of the heavens for any giren time.

HORREA, in Roman antiquity, were public magazines of corn and salt meat, out of which the soldiers were furnished on their march in the military roads of the empire. Horrea was also the name which they gave to their granaries.

HOR'RENT, adj. ~\ Fr. horreur; Lat. hor—

HOR RIBLE, adj. reo, horror, horridus,

HOR'RIBLENESS, n. s. horrificus, horrisomu.

HOR'RIBLY, adj. Words severally exHOR'RID, adj.)>pressive of feelings

HOR'RIDNESS, n. s. HORRJF'IC, adj. HORRIS'ONOUS, adj, HOR'ROR,

n. s.

I which affect the senses I more than the mind. I Horrid and horrible, _) derivatives of horror,

signify the extreme of those sensations, which, through the eye for the most part produce corresponding feelings. The order is thus : fearful ; dreadful ; frightful ; tremendous ; terrible ; terrific ; horrible ; horrid. Crabb says, ‘ shrieks may be frightful, thunder and lightning tremendous, the roaring of a lion terrible, the glare of his eye terrific, the actual spectacle of killing horrible or horrid.’ Horrisonous, sounding dreadfully. Horrent, pointed outwards ; bristled with points. Horror is extreme terror, mixed with detestation; dreadful thoughts; gloom; dreariness : a term used in medicine to describe the first stage of an ague fit.

Horrour is always drede of harme that is to come. Chaucer. The Persones Tale.

Certes, ther is non so horrible sinnc of man that ne may in his lif, be destroyed by penitence, thurgh ver-tue of the passion and of the death of Crist. Id.

Over them sad horrour, with grim hue,

Did always soar, beating his iron wings ; And after him owls and night-ravens flew,

The hateful messengers of heavy things.

Faerie Queene

Give colour to rcy pale cheek with thy blood, That we the horrider may seem to those Which chance to find us. Shakspeare. Cymbeline.

Not in the legions

Of horrid hell can come a devil more damned, In evils to top Macbeth. Shakspeare. Macbeth.

I have supt full with horrours ; Direness, familiar to my slaughterous thoughts, Cannot once start me. Id.

No colour affecteth the eye much with displeasure : there be sights that are horrible, because they excite thn memory of things that are odious or fearful.

Bacon.

All objects of the senses, which are very offensive, do cause the spirits to retire ; and, upon their flight, the parts are in some degree destitute, and so there is induced in them a trepidation and horrour.

Id. Natural History. A dungeon horrible on all sides round, As one great furnace flamed. Milton.

Horror on them fell, And horrid sympathy. Id

Him a globe

Of fiery seraphim incircled round With bright emblazonry and horrent arms. Id.

Me damp horrour chilled

At such bold words, vouched with a deed so bold

Id

Death

Grinned horrible a ghastly smile to hear, His famine should be filled ; and blest his maw, Destined to that good hour. Id. Paradise Lost.

O conscience into what abyss of tear? And horrors hast thou driven me. Milton.

Deep harrow seizes every human breast ; Their pride is humbled, and their fear confest.

Dryden. I can forgive

A foe, but not a mistress, and a friend ! Treason is there in its most horrid shape Where trust is greatest ! and the soul resigned Is stabb'd by her own guards. Id

The contagion of these ill precedents, both in civility and virtue, horribly infects children. Locke.

Eternal happiness and eternal misery, meeting with a persuasion that

the soul is immortal, are of all others, the first the most desirable, and the latter the most horrible to human apprehension. South.

HORSE.

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A bloody designer suborns his instrument to take away such a man's life, and the confessor represents the horridness of the fact, and brings him to repentance. Hamm'jnd.ˆ

Her gloomy presence saddens all the scene, Shades every flower, and darkens every green ; Deepens the murmur of the falling floods, And breathes a browner horrour on the woods.

Pope.

Already I your tears survey, Already hear the horrid things they say. Id. His jaws horrifick, armed with threefold fate, Here dwells the direful shark. Thomson.

But hence ye thoughts ! that rise in Horror's shape, This hour bestows or ever bars escape.

Byron. The Bride of Abydos.

HORROR strictly signifies such an excess of fear as makes a person tremble. See FEAR, FRIGHT, and TERROR. In medicine it denotes a shivering and shaking of the whole body, coming by fits. It is common at the beginning of all fevers, but is particularly remarkable in those of the intermittent kind.

HORROR OF A VACUUM was an imaginary principle among the ancient -philosophers, to which they ascribed the ascent of water in pumps, and other similar phenomena, which are now known to be occasioned by the weight of the air.

HO11ROX (Jeremiah), a celebrated English mathematician and astronomer of the seventeenth century, was born at Toxteth, near Liverpool, about 1619, and educated at Emanuel College, Cambridge. He began, about 1633, to study astronomy ; but made little

proficiency in the science for about three years, after which we find him in correspondence with the Gresham College professor. He accurately observed the transit of Venus over the sun's disk, November 24th, 1639 ; but was unfortunately cut off by death January 3d, 1640-1 ; only a few days after he had finished his treatise, entitled Venus in Sole visa. Other productions of his pen, left in an imperfect state, were collected and published by Dr. Wallis, in 1673, under the title of Opera Posthuma. Horrox seems to have been the first who ever predicted or observed the passage of Venus over the sun's disk; and his theory of lunar motions afforded assistance to Newton, who spoke of him as a genius of the highest order.

HORSE, n.s.&u.o. J Sax. borip Aneigh-HORSE'HACK, n. *. $ ing quadruped, used in war, and draught, and carriage; a constellation: to take a horse to set out to ride : used in a plural sense for horses, horsemen ; cavalry ; something on which linen is hung to dry; a wooden machine which soldiers ride by way of punishment : joined to another substantive, it signifies something large or coarse, as horse-face. Horse, to mount ; to carrj on the back; to ride; to cover a mare. Horseback, riding postur

And, after that, within a while, I sie

****

* such a rout

As all men on erth had ben assembled,

On that place, well horsed for the none*, Stering so fast that all the crth trembled.

But for to speke of riches and stones, And men and horse, I trow the large wones

Of Preter John ne all his tresory. Might not unneth have bought the tenth party. Chaucer. The Floure and the Leafg. I've seen the French, And they can well on horseback. Shakspeare.

Stalls, bulks, windows

Are smothered, leads are filled, and ridges honed With variable complexions ; all agreeing In earnestness to see him. Id,

A horse ! a horse ! my kingdom for a horse ! Id.

I did hear The galloping of horse : who was't came by ?

Id.

The armies were appointed, consisting of twenty-five thousand horse and foot, for the repulsing of the enemy at their landing. Bacon's War with Spain.

If they had known that all the king's horse were quartered behind them, their foot might very well have marched away with their horse. Clarendon.

Then came the thrifty troop of privateers Whose horses each with other interferes, Before them Higgins rides with brow compact, Mourning his countess anxious for his act.

Manett.

Alexander fought but one remarkable battle, wherein there were any elephants, and that was with Porus, king of India ; in which notwithstanding he was on horseback. Browne.

He came out with all his clowns, horsed upon such cart-jades, and so furnished, as I thought with myself, if that were thrift, I wisht none of my friends ever to thrive. Sidney.

When mannish Mevia, that two-handed whore, Astride on horseback hunts the Tuscan boar.

Dryden't Juvenal. The' Arcadian horse With ill success engage the Latin force.

Id. Mneid.

We call a little horse, such a one as comes not up to the size of that idea which we have in our minds to belong ordinarily to horses. Locke.

If you let him out to horse more mares than your own, you must feed him well. Mortimer.

I took horse to the lake of Constance, which is

formed by the entry of the Rhine. Addison on Italy. ˆ

If your ramble was on horseback, I am glad of it oa

account of your health. Swift to Gay. •

Stern Hassan only from his horse Disdains to light, and keeps his course.

Byron. The Giaour.

HORSE, in zoology. SeeEouus. Horses were very rare in Judea till Solomon's-time. Before him we find no horsemen mentioned in the armies of Israel. David, having defeated Hadadezer king of Shobah (2 Sam. viii. 4, 5), took 1700 horses, and lamed all belonging to the chariots of war, reserving only 100 chariots. The judges and princes of Israel rode on mules or asses. After David's time horses were more common in Judea. Solomon had a great number of horses ; but he kept them rather for pomp than for war, for he had no military expeditions. Moses had forbidden the king of the Hebrews to keep a great number of horses (Deut. xvii. 16), lest at any time he should be inclined to carry the people into Egypt. Josiah took away the horses which his predecessors had consecrated to the sun (2 Kings xxiii. 17). We know the sun was worshipped over all the east, and that the horse, the swiftest of tame beasts, was consecrated to this deity, who was represented as riding in a chariot drawn by the most beautiful

and swiftest horses in the world, and performing every day his journey from east to west, in order to communicate his light to mankind.

Xonophon describes a solemn sacrifice of horses to the sun : they were all the finest steeds, and were led with a white chariot, crowned, and consecrated to the god. The horses which Josiah removed out of the court of the temple were piobably appointed for similar sacrifices. The rabbins say that these horses were every morning put to the chariots dedicated to the sun, whereof there is mention made in the same book ; and that the king, or some of his officers, got up and rode to meet the sun in its rising, as far as from the eastern gate of the temple to

the suburbs of Jerusalem. Others are of opinion that the horses mentioned in the book of Kings were of wood, stone, or metal, erected in the temple in honor of the sun. Horses were used both among the Greeks and Romans in war, but were not originally very numerous ; for, as each horseman provided his own horse, few would be able to bear the expense. Horses, for a considerable time, were managed by the voice alone, or by a switch, without bridle, saddle, or stirrups. Their harness was skins of beasts, and sometimes cloth. Both horses and men, amongst the Greeks, underwent a severe probation before their admission into the cavalry.

In tfie management of a horse, upon a journey, see that his shoes be not too strait, or press his feet, but be exactly shaped ; and let him be shod some days before you begin a journey, that they may be settled to his feet. Observe that he is furnished with a bit proper for him, and by no means too heavy, which may incline him to carry low, or to rest upon the hand when he grows weary, which horsemen call making use of his fifth leg. The mouth of the bit should rest upon his bars about half a finger's breadth from his tushes, so as not to make him frumble from his lips; the curb should rest in the hollow of his beard a little above the chin ; and, if it gall him, you must defend the place with a piece of buff or other soft leather. Observe that the saddle do not rest upon his withers, reins, or back bone, and that one part of it do not press his back more than another. Some riders gall a horse's sides below the saddle with their stirrup-leathers, especially if he be lean; to prevent this, you should fix a leather strap between the points of the fore and hind bows of the saddle, and make the stirrup leather pass over them. Begin your journey with short marches, especially if your horse has not been exercised for a long time ; suffer him to stale as often as you find him inclined ; and even invite him to it ; but do not excite mares to stale, as their vigor is thereby diminished. Ride softly for a quarter or half an hour before you arrive at an inn, that the horse, not being too warm, nor out of breath, when put into the stable, you may unbridle him ; but, if business obliges you to ride fast, you must then (the weather being warm) let him be walked, that he may cool by degrees ; if it be very cold, let him be Covered with cloths ; but, in case you have not the conveniency of a sheltered walk, stable him forthwith, and let his whole body be rubbed and dried with straw. As soon as the

horse is partly dried, and ceases to heat m the flanks, let him be unbridled, his bit washed, cleansed, and wiped, and let him eat his hay at pleasure. If he be very dry, and has not got water on the road,

give him oats washed in good mild ale. The dust and sand will sometimes so dry the tongues and mouths of horses, that they lose their appetites. In such case, give him bran well moistened with water to cool and refresh his mouth ; or wash his mouth and tongue with a wet sponge, to oblige him to eat. These directions are to be observed after moderate riding ; but, if you have rode excessively hard, unsaddle your horse, and scrape off the sweat with a knife, or scraper, holding it with both hands, and scraping always with the hair ; then rub his head and ears with a large hair-cloth, wipe him also between the fore and hind legs ; in the mean time, his body should be rubbed all over with straw, especially under his belly and beneath the saddle, till he is thoroughly dry. That done, set on the saddle again, cover him ; and if you have a warm place, let him be gently led up and down in it, for a quarter of an hour ; but if you have not, let him dry whert he stands. Or you may unsaddle him immediately; scrape off the sweat; let the hostler take a little vinegar and squirt it into the horse's mouth ; then rub his head between the fore and hind legs, and his whole body, till he is pretty dry : let him not drink till he be thoroughly cool, and has eaten a few oats ; for many, by drinking too soon, have been spoiled. Set the saddle in the sun or by a fire, in order to dry the pannels.

When horses are arrived in an inn, a man should, before they are unbridled, lift up their feet, to see whether they want any of their shoes, or if those they have do not rest upon their sides ; afterwards he should pick and clear them of the earth and gravel, which may be between their shoes and soles. If you water them abroad upon their return from the river cause their feet to be stopped with cow-dung, which will ease their pain ; and, if it be in the evening, let the dung continue in their feet all night, to keep them soft and in good condition : but, if you) horse have brittle feet, it will be requisite to anoint the fore feet, at the onsetting of the hoofs, with butter, oil, or hog's grease, before you water him in the morning, and in dry weather they should also be greased at noon. Many horses, as soon as unbridled, instead of eating, lay themselves down to rest, because of the pain they feel in their feet, so that one is apt to think them un-well : but, if their eyes are lively and good and it they will eat lying, they are in good health ; yet if you handle the feet perhaps they will feel extremely hot, which discovers their suffering in that part. Examine, therefore, if their shoes do not rest upon their soles, which is somewhat difficult to be certainly known without unshoeing them ; but if you take off their shoes, and look to the inside of them, you may perceive that those parts which rest upon the soles are more smooth and shining than the others : in this case, pare the feet in those parts,

and fix on their shoes again, anointing the hoofs, and stopping the soles with hog's-lard.

After a long day's journey, at night feel your

horse's back : if he be pinched, galled, or swelled (if you do not immediately discover it, perhaps you may after supper), there is nothing better than to rub it with good brandy, or with lead water. If the galls are between the legs, use the same remedy ; but if the hostler rubs him well between the legs, he will seldom be galled in that part. To preserve horses after travel, as soon as you arrive from a journey, immediately draw the two heel-nails of the fore feet ; and, if it be a large shoe, then four : two or three days after, you may blood him in the neck, and feed him for ten or twelve days only with wet bran, without giving him any oats ; but keep him well littered. The reason of drawing the heel-nails is because the heels are apt to swell, and, if they are not thus eased, the shoes would press and straiten them too much ; it is also advisable to stop them with cow-dung for a while ; but do not take the shoes off nor pare the feet.

The following bath will be very serviceable for preserving a horse's leg. Take the dung of a cow or ox, and make it thin with vinegar, so as to be of the consistence of thick broth ; and, having added a handful of small salt, rub his fore legs from the knees, and the hind legs from the gam-brels, chafing them well with and against the hair, that the remedy may sink in and stick to those parts. Thus leave the horse till morning, not wetting his legs, but giving him his water that evening in a pail; next morning lead him to the river, or wash his legs in soft water, which will keep them from swelling. Those persons who, to recover their horse's feet, make a hole in them, which they fill with moistened cow-dung, and keep it in their fore feet during the space of a month, act very injudiciously; because, though the continual moisture that issues from the dung occasions the growing of the hoof, yet it dries and shrinks it so excessively when out of that place, that it splits and breaks like glass, and the foot immediately straightens. It is certain that cow-dung, contrary to the opinion of many people, spoils

a horse's hoof; it does indeed moisten the sole ; but it dries up the hoof, which is of a different nature from it. In ordei, therefore, to recover a horse's feet, instead of cow-dung, fill a hole with blue wet clay, and make him keep his fore feet in it for a month. Most horses that are fatigued, or over-ridden, and made lean by long journeys, have their flanks altered without being pursy, especially vigorous horses that have worked too violently. To recover them, give each of them in the morning half a pound of honey very well mingled with scalded bran; and, when they readily eat the half pound, give them the next time a whole one, and afterwards two pounds, every day continuing this course till your horses are empty, and purge kindly with it ; but, as soon as you perceive that their purging ceases, give them no more honey. Administer powder of liquorice in the scalded bran for a considerable time ; and, to cool their blood, it will not be improper to let them have three or four glisters. If the horse be very lean, give him some wet bran, over and above his proportion of oats ; and grass is also beneficial, if he be not pursy. Sometimes exces-s;ve feeding may do horses more harm than good,

by rendering them subject to the farcy. Be cautious, therefore, in giving them too great a quantity at a time. When a horse begins to drink water heartily, it is a certain sign that he will recover in a short time. All the time you are upon a journey, let your horse drink of the first good water you come to, after seven o'clock in the morning if it be in summer, and after nine or ten in winter. That is accounted good water which is neither too quick and piercing, nor too muddy. This is to be done, unless you would have him gallop a long time after drinking ; for if so, you must forbear. Though it is the cus-stom in England to run and gallop horses after drinking; yet, says M. de Sollysel, it is the most pernicious practice that can be imagined for horses. Although a horse be warm, and sweat very much, yet if he is not quite out of breath, and you have still four or five miles to ride, he will be better after drinking a little, than if he had drunk none at all. But if the horse be veiy warm, you should at coming out of the water, redouble your pace, to warm the water in his belly. If when you bait he be hot or sweaty, you must not let him drink, as it would endanger his life ; and, when his bridle is taken off, his excessive thirst will hinder him from eating, so that he will not offer to touch his meat for an hour or two; therefore. he should have his oats given him washed in ale or beer, or only a part of them, if you intend to feed him again after he has drunk. Some think that horses are often spoiled by giving them oats before their water; because they say the water makes the oats pass too soon, and out of the stomach undigested. But M. de

Sollysel affirms, that though it be the common custom not to do it till after, yet it is proper to feed with oats both before and after, especially if the horse be warm, and has been hard rode.

HORSE, STONE. See STALLION.

The count de Buffon gives the following directions for breeding horses : — When the stallion is chosen, and all the mares intended for him are collected together, there must be another stone-horse, to discover which of the mares are in heat ; and, at the same time, contribute to inflame them. All the mares are to be brought successively to this stone-horse; which should also be inflamed, and suffered frequently to neigh. As he is for leaping every one, such as are not in heat keep him off, while those which are so suffer him to approach them. But, instead of being allowed to satisfy his impulse, he must be led away, and the real stallion substituted in his stead. This trial is necessary for ascertaining the true time of the mare's heat, especially of those which have not yet had a colt; for, with regard to such as have recently foaled, the heat usually begins nine days after their delivery ; and on that very day they may be led to the stallion to be covered ; and nine days after, by the experiment above-mentioned, it may be known whether they are still in heat. If they are, they must be covered a second time; and thus successively every ninth day while their heat continues : for when they are impregnated their heat abates, and in a few days ceases entirely. The stud must be fixed in a good soil,

and in a suitable place, proportioned to the numbers of mares and stallions intended to be used. This spot must be divided into several parts, enclosed with rails ojr ditches well fenced ; in the part where the pasture is the richest, the mares in fold, and those with colts by their sides, are to be kept. Those which are not impregnated, or have not yft been covered, are to be separated, and kept with the fillies in another close, where the pasture is less rich, that they may not grow too fat. Lastly, the young stone coits, or geldings, are to be kept in the driest part of the fields, and where the ground is most unequal ; that, by running over the uneven surface, they may acquire a f-eedom in

the motion of their legs and shoulders. This close, where the stone colts are kept, must be very carefully separated from the others, lest the young horses break their bounds, and enervate themselves with the mares. If the tract be so large as to allow of dividing each of these closes into two parts, for putting oxen and horses into them alternately, the pasture will last much longer than if continually eaten by horses ; the ox improving the fertility, whereas the horse lessens it. In each of these closes should be a pond ; standing water being better than running, which often gripes them ; and, if there are any trees in the ground, they should be left standing, their shade being very agreeable to the horses in great heats ; but all stems or stumps should be grubbed up, and all holes levelled, to prevent accidents. In these pastures the horses should feed during the summer ; but in the winter the mares should be kept in the stable and fed with hay. The colts also must be housed, and never suffered to feed abroad in winter, except in very fine weather. Stallions that stand in the stable should be fed more with straw than hay ; and moderately exercised till covering tune, which generally lasts from the beginning of April to the end of June. But during this season they should have no other exercise, and be plentifully fed, but with the same food as usual. Before the stallion is brought to the mare he should be dressed, as that will greatly increase his ardor. The mare must also be curried, and have no shoes on her hind feet, some of them being ticklish, and apt to kick the stallion. During the first seven days, let four different mares be successively brought to him; and the ninth day let the first be again brought, and so successively while they continue in heat : but, as soon as the heat of any one is over, a fresh mare is to be put in her place, and covered in her turn every nine days ; and as several retain even at first, second, or third time, it is computed that a stallion, by such management, during the three months, may cover fifteen or eighteen mares, and beget ten or thirteen colts. After being covered, nothing more is requisite than to lead her away to the field.

The first foal of a mare is never so strongly formed as the succeeding ; so that care should be taken to procure for her, the first time, a larger stallion, that the defect of the growth may be compensated by the largeness of the size. Particular regard should also be had to the difference or congruity of the fashion of the stallion and the mare, in order to correct the faults

of the one by the perfections of the other; especially never to make any disproportionate copulations, as of a small horse with a large mare, or a large horse with a small mare ; as the produce of such

copulation would be small, or badly proportioned. It is by gradation that we must endeavour to arrive at natural beauty. It has been observed, that horses fed in dry and light grounds produce temperate, swift, and vigorous foals, with muscular legs and a hard hoof; while the same bred in marshes and moist pastures have produced foals with a large heavy head, a thick carcass, clumsy legs, bad hoofs, and broad feet. These differences proceed from the air and food ; but what is more difficult to be accounted for, and still more essential than what we have hitherto observed, is, to be continually crossing the breed to prevent a degeneracy. In coupling of horses, the color and size should be suited to each other, the shape contrasted, and the breed crossed by an opposition of climates : but horses and mares foaled in the same stud should never be joined. These are essential articles ; but there are others which should by no means be neglected ; as, that no short-docked mares be suffered in a stud, because, from their being unable to keep off the flies, they are much mere tormented by them than others which have a long sweeping tail ; and their continual agitation frcm the stings of these insects, occasions a diminution in the quantity of their milk, and has a great influence on the constitution and size of the colt, which will be vigorous in proportion as its dam is a good nurse. Care must also be taken that the stud mares be such as have been brought up in pastures, and never over-worked. Mares which have always been brought up in the stable on dry food, and afterwards turned to grass, do not breed at first ; some time is required for accus-tominer them to this new aliment. Though the usual season for the heat of mares be from the beginning of April to the end of June, yet it is not uncommon to find some among a large num-ber that are in heat before that time; but it is advisable to let this heat pass over without giving them to the stallion, because they would foal in winter ; and the colts, besides the inclemency of the season, would have bad milk for their nourishment. Again, if the mares are not in heat ‘ill after the end of June, they should not be covered that season ; because the colts, being foaled in summer, have not time for acquiring strength sufficient to repel the injuries of the following winter. Many, instead of bringing the stallion to the mare, turn him loose into the close, where all the mares are brought together ; and there leave him to choose such as will stand to him. This is a very advantageous method for the mares ; they will always take horse more certainly than in the other ; but the stall ion, in six weeks, will do himself more damage than in a number of years by moderate exercise, conducted in the manner already mentioned. When the mares are pregnant, and their belly begins to swell, they must be separated from those that are not, lest they hurt them. They usually go eleven months and some days ; and foal standing, whereas most other quadrupeds lie down. Those

that cannot foal without great difficulty, must be assisted ; the foal must be placed in a proper situation ; and sometimes, if dead, drawn out with cords. The head of the colt usually presents itself first, as in all other animals : at its coming out of the matrix, it breaks the secundines or integuments that enclose it, which is accompanied with a great flux of the lymph contained in them ; and at the same time one or more solid lumps are discharged, formed by the sediment of the inspissated liquor of the allan-toides. This lump, which the ancients called the hippomanes of the colt, is so far from being, as they imagined, a mass of flesh adhering to the head of the colt, that it is separated from it by a membrane called amnois. As soon as the colt is fallen, the mare licks it, but without touching the hippomanes ; which points out another error of the ancients, who affirmed that she instantly devours it. The general custom is to have a mare covered nine days after her foal-ing, that no time may be lost ; but it is certain, that the mare having, by this means, both her present and future foal to nourish, her ability is divided, and she cannot supply both so largely as she might one only. It would therefore be better, in order to have excellent horses, to let the mares be covered only every other year ; they would last the longer, and bring foals more certainly : for, in common studs, it is so far from being true that all mares which have been covered bring colts every year, that it is considered as a fortunate circumstance if half, or at most two-thirds of them foal. Mares, when pregnant, will admit of copulation ; but it is never attended with any superfoetation. They usually breed till they are fourteen or fifteen years of age ; and the most vigorous till they are about eighteen. Stallions, when well managed, will engender till the age of twenty, and even beyond ; but it must be observed, that such horses as are soonest made stallions are also the soonest incapable of generation : thus the large horses, which acquire strength sooner than the slender, and are therefore often used as stallions as soon as they are four years old, are incapable of generation before they are sixteen.

The breed of horses in Great Britain is as mixed as that of its inhabitants : the frequent introduction of foreign horses has given us a

variety that no other single country can boast : most other countries producing only one kind ; while ours, by a judicious mixture of the several species, by the happy difference of our soils, and by our superior skill in management, has brought each quality of this noble animal to the highest perfection. In the annals of Newmarket may be found instances of horses that have literally outstripped the wind, as the celebrated M. Condamine has shown in his remarks on those of Great Britain. Childers is an amazing instance of rapidity; his speed having been more than once exerted equal to eighty-two feet and a half in a second, or nearly a mile in a minute. The species used in hunting is a happy combination of the former with others superior in strength, but inferior in point of speed and lineage : a union of both is necessary ; for the fatigues of the chase must be supported by the

spirit of the one, as well as by the vigor of the other. No country can bring a parallel to the strength and size of our horses destined for the draught; or to the activity and strength united of those that form our cavalry. In London there are instances of single horses that are able to draw on a plain, for a small space, the weight of three tons ; but could with ease, and for a continuance, draw half that weight. But the most remarkable proof of the strength of our British horses is to be drawn from that of our mill horses : some of these will carry at one load thirteen measures ; which, at a moderate computation of seventy pounds each, will amount to 916 pounds; a weight superior to that which the less sort of camels will bear : this will ap-pear less surprising as these horses are by degree? accustomed to the weight; and the distance they travel no greater than to and from the adjacent hamlets. Our cavalry, in the late campaigns (when they had opportunity), showed, over those of our allies, as well as the French, a great superiority both of strength and activity : the enemy was broken through by the impetuous charge of our squadrons; when the German horses, from their great weight and inactive make, were unable to second our efforts

The present cavalry of this island only supports its ancient glory. It was eminent in the earliest times; our scythed chariots, and the activity and good discipline of our horses, struck terror even into Caesar’s legions : and the Britons, as soon as they became civilised enough to coin, took care to represent on their money the animal for which they were so celebrated. It is now impossible to trace out this species ; for those which exist among the indigenes of Great Britain, such as the little horses of Wales and Cornwall, the hobbies of Ireland,

and the shelties of Scotland, though admirably well adapted to the uses of those countries, could never have been equal to the work of war : but probably we had even then a larger and stronger breed in the more fertile and luxuriant parts of the island. Those we employ for that purpose, or for the draught, are an offspring of the German or Flemish breed, meliorated by our soil and a judicious culture. The English were ever attentive to an -exact culture of these animals. The esteem that our horses were held in by foreigners, so long ago as the reign of Athelstan, may be collected from a law of that monarch, prohibiting their exportation, except they were designed as presents. These must have been the native kind, or the prohibition would have been needless ; for our commerce was at that time too limited to receive improvement from any but the German kind, to which country their own breed could be of no value. But, when our intercourse with the other parts of Europe was enlarged, we soon laid hold of the advantages this gave of improving our breed. Roger de Belesme, earl of Shrewsbury, first introduced the Spanish stallions into his estate in Pow Island, from which that part of Wales was for many ages celebrated for a swift and generous race of horses. Giraldus Cambrensis, who lived in the reign of Henry II., takes notice of it ; and Michael Drayton, contemporary with Shakspeare, alludes to theii excellence in

the sixth part of his Polyolbion. This kind was probably destined to mount our gallant nobility or courteous knights for feats of chivalry. From these sprung, to speak the language of the times, the flower of coursers, whose elegant form added charms to the rider, and whose activity and managed dexterity gained him the palm in that field of gallantry and honor. The increase of our inhabitants, and the extent of our manufactures, together with the former neglect of internal navigation to convey those manufactures, multiplied the number of horses : an excess of wealth, before unknown in these islands, increased the luxury of carriages, and added to the necessity of a

culture of these animals : their high reputation abroad has also made them a branch of commerce, and proved another cause of their vast increase.

In France, horses of the Bretagne breed are strongly made, and have generally black hair, or brown-bay ; and good legs and feet, with a hardy mouth, and a head short and fleshy ; but in general they are clumsy. The horses of Tranche Comte are said to have the legs of tigers, and the belly of a hind ; but they are short and thick, and of a middle size ; being much more proper for drawing than riding. The horses of Gascony are not unlike those of Spain ; but they are not so handsome nor so active, and therefore they are more proper to draw carriages. The Limosin horses are very vicious, and are good for little till they are six years old. Their color is generally bay, or a bay-brown. The horses of Normandy are much like those of Bretagne ; and those of Poitou have good bodies, legs, feet, and eyes ; but they are far from being handsome. The horses of Germany are more handsome than those of Belgium and are of great use for carriages, and the army, especially for drawing artillery. They have a great deal of hair about the legs ; are not large, but are well set ; and yet have tender feet. The Hungarian horses are excellent for the coach, as well as for riding ; but they are large, though well proportioned ; are of all colors, and in general very swift. The Danish horses are low, short, and square ; but they have a fine head and short hair. The horses of the Low Countries are very fit for the coach, and they are often known by the name of Flanders mares. The Polish horses are like the Danish ; only they have not so fine a forehand ; their color is generally a bright bay, and that of the outward peel of an onion ; and they are fiery and vicious. The horses of Switzerland are pretty much like those of Germany. Those of Piedmont are fiery, of a middle size, and of all sorts of colors ; their legs are good and handsome, their eyes fine, their ears small, and their mouths good ; but they do not carry their heads well. The horses of Naples and Italy are generally ill made and lean ; they never do well in a colder climate. The Spanish horses are well made and handsome, as well as very active and nimble ; they have good eyes, handsome legs and heads, and are easily managed ; The Turkish horses are of different shapes ; but are generally swift, though their mouths are bad. Most of them are white, though there are other colors ; and they are in general large, hardy, strong, and fit for the road. The horses of Barbary, commonly called barbs, have strong hoofs and are fine racers : they preserve their vigor to the last ; some of them are used as stallions in Britain. The horses of China are very vigorous, though low in height. Those of the Eluth Tartars are good and full of fire, and their size is much the same as the Polish horses ; they are afraid of

nothing, not even of the lions and tigers. In various parts of Hindostan they are numerous, and of all colors ; but generally of the mid-dle size, though there are some as large and as handsome as those in Europe. The wild horses of Tartary differ little from the tame; but are so swift, that they will avoid the arrows of the m'ost skilful hunters.

HORSES, DRAUGHT, in farming, are a sort of coarse-made horses destined for the service of the cart or plough. These, for what is called the show draught, are to be chosen of an equal height ; for otherwise, when put into the cart, one draws unequally with the other. The draught horse should be large bodied and strong loined, and of such a disposition as rather to be too dull than too brisk, and rather to crave the whip than to draw more than is needful. Mares are the fittest for this use for the farmer, as they will be kept cheap, and not only do the work, but give a yearly increase of a foal. They should have a good head, neck, breast, and shoulders ; for the rest of the shape, it is not of much consequence. Draught horses should be always kept to that employ. Some put them to the sad-dle on occasion, but it does them harm, alters their pace, and spoils them for labor. The draught horse ought to have a large broad head, because horses of this shaped head are less subject than others to diseases of the eyes. The ears should be small, straight, and upright; the nostrils large and open, that he may breathe with the more freedom. A horse with a full and bold eye always promises well. On the other hand a sunk eye and an elevated brow are bad signs The horse is esteemed fittest for this purpose, also, that has a large and round buttock, which neither sinks down nor cuts. He must have a firm and strong tail, and the dock mi'st be thick and well furnished with hair, and placed neither very high nor very low. The legs should be rather flat and broad than round ; the round-ness of the leg being a fault in a horse destined to labor that will soon ruin him. As to the hin-der le°-s, the thighs should be fleshy and long, and the whole muscle which shows itself on the outside of the thigh should be large and very thick.

Nothing is so essential to the health of these serviceable creatures as cleanliness ; if they are fed ever so well, and not kept clean, they will be subject to numerous diseases. The servant who has the care of them ought to be up very early, and to clean the racks and mangers from all filth. The currying of them must be carefully performed every morning, but not in the stable, for the dust to fall upon the other horses. After the horses are dusted, you should twist a wisp of straw hard up, and, wetting it in water, nab the legs, shoulders, and body. Many of the diseases of draught horses, are owing to bad water. If there be any running stream in the neighbour-

hoed, they should always be led to that to water every day in summer, but in winter well-water is warmer and better for them. If there be a necessity of giving them well-water, in summer, it must be drawn up some hours before the time, and exposed to the sunbeams in tubs or troughs; marsh-water, or that of lowland ditches, is worst of all. When the laboring horse has drunk his water, he should have his oats given him, carefully sifted. It is a common practice, as soon as a horse is come in from his work, to rub down his legs with a hard wisp of hay ; but the best judges of horses absolutely condemn this, and observe, that after hard labor it brings down hu-mors into them, and makes them stiff. The rubbing itself is wholesome, but the doing it when the creature is hot is the mischief. The racks are to be well supplied with hay, and the horses should be left to rest and eat about two hours, and then led to water ; after this they should be fed. In the evening, the first thing to be doae is to examine the feet, and see if any thing is amiss about the shoes. A very material tiling for the preservation of all sorts of cattle, but of none so much as draught horses, is fresh and clean litter.

In old horses, the eye-pits are generally deep ; but this is only an equivocal mark, being also found in young horses begot by old stallions. The most certain knowledge of the age is to be obtained from the teeth. Of these a horse has forty; twenty-four grinders or double teeth, four tushes, and twelve foreteeth ; mares have no tushes, or at least very short ones. It is not from the grinders that we know the age ; it is discovered first by the fore teeth, and afterwards by the tushes. The twelve foreteeth begin to shoot within twelve days after the colt is foaled. These first or foal teeth, are round, short, not very solid, and are cast at different times, to be replaced by others. At the age of two years and a half the four middle foreteeth are cast, two in the upper jaw and two in the lower. In one year more four others drop out, one on each side of the former, which are already replaced. When he is about four years and a half old he sheds four others, and always next to those which have fallen out and been replaced. These four foal-teeth are replaced by four others, but are far from growing so fast

as those which replaced the eight former, and are called the corner-teeth; they replace the last four foal-teeth, and by these the age of a horse is discovered. They are easily known, being the third both above and below, counting from the middle of the jaw. They are hollow, and have a black mark in their cavity. When the horse is four years and a half old they are scarcely visible above the gum, and the ca-vity' is very sensible ; at six years and a half they begin to fill ; and the mark continually diminishes and contracts till seven or eight years, when the cavity is quite filled up, and the black spot effaced. After eight years, these teeth ceasing to afford any knowledge of the age, it is judged of by the tushes : which are four teeth adjoining to those last mentioned ; and, like the grinders, are not preceded by any other teeth. The two in the lower jaw usually begin to shoot at three years and a half, and those of the upper

jaw at four ; continuing very sharp-pointed till six. At ten the upper seem blunted, worn out, and long, the gum contracting itself as its years increase ; the barer therefore they are, the older is the horse. From ten to thirteen or fourteen years little can be seen to indicate the age ; but at that time some hairs of the eye-brows begin to turn gray. This mark, however, is equivocal, horses from old stallions or mares having gray hairs in the eye-brows when they are not above nine or ten years old. In some horses the teeth are of such a hardness as not to wear ; and in such the black mark always subsists, being never effaced by time ; but the age of these horses, which are called beguts by the French, is easily known ; the hollow of the tooth being filled up, and at the same time the tushes very long. This is more common in mares than in horses. The age of a horse may be also known, though less accurately, by the bars in his mouth, which wear away as he advances in years.

When the horse is without blemish the legs and thighs are clean, the knees straight, the skin and shank thin, and the back-sinew strong and well braced. The sinews and the bones should be so distinct as to make the legs appear thin and lathy, not full and round. The pastern joints should never be large and round, nor must there be any swelling near the coronet. The hock should be lean and dry, not puffed up with wind. With regard to the hoof, the coronet should be equally thick, and the horn shining and grayish. A white horn is the sign of a bad foot, for it will wear out in a short time ; and likewise when the horn is thin, it is liable to be spoiled in shoeing, and by travelling hard on stony grounds. This is best known when the shoe is taken off; for then the verge all round the sole will appear thin, and the horse will wince

at the least touch of the pincers. A strong foot has the fibres of the hoof very distinct, running in a direct line from the coronet to the toe, like the grain of wood. In this case care must be taken to keep the foot moist and pliable. The greatest inconvenience attending a hard strong foot is its being subject to rifts and fissures, which cleave the hoof quite through sometimes from the coronet down to the bottom. A narrow heel is likewise a defect ; and, when it is not above two fingers in breadth, the foot is bad. A high heel causes a horse to trip and stumble often ; and the low one, with long yielding pasterns, is very apt to be worn quite away on a journey. Too large a foot in proportion to the rest of the body renders a horse weak and heavy. The head of a horse should be small, and rather lean than fleshy. The ears should be small, erect, thin, sprightly, and pointed. The forehead, or brow, should be neither too broad nor too flat, and should have a star or snip thereon. The nose should rise a little, and the nostrils should be wide, that he may breathe more freely. The muzzle should be small, and the mouth neither too deep nor too shallow. The jaws should be thin, and not approach too near together at the throat, nor too high upwards towards the onset, that the horse may have sufficient room to carry his head in an easy graceful posture. The eyes should be of a middle size, bright, lively, and full of fire. The tongue should

be small, that it may not be too much pressed by the bit ; and it is a good sign when his mouth is full of white froth, for it shows that he will not soon be overheated. The neck should be arched towards the middle, growing smaller by degrees from the breast and shoulder to the head. THe hair of the mane should be long, small, and fine; and, if it be a little frizzled, so much the better. The shoulder should be pretty long; the withers thin, and enlarge gradually from thence downwards ; but so as to render his breast neither too narrow nor too gross. A thick shouldered horse soon tires, and trips and stumbles every minute ; especially if he has a thick large neck at the same time. When the breast is so narrow that the fore-thighs almost touch, they

are never good for much. A horse of a middle size should have the distance of five or six inches between his fore-thighs, and there should be less distance between his feet than his thighs near the shoulders when he stands upright. The body of a horse should be of a middling size in proportion to his bulk, and the back should sink a little be-low the withers ; but the other parts should be straight and no higher behind than before. He should also be home-ribbed ; but the short ribs should not approach too near the haunches, and then he will have room to fetch his breath. When a horse's back is short in proportion to his bulk, and yet otherwise well limbed, he will hold out a journey, though he will travel slow. When he is tall, at the same time with very long legs, he is but of little value.

The wind should never be overlooked in the choice of a horse : and it may easily be known by his flanks, if he is broken-winded, when he stands quiet in the stable ; because he always pinches them in with a very slow motion, and drops them suddenly. A thick-winded horse fetches his breath often, and sometimes rattles and wheezes. This may be always discovered when he is put to brisk exercises. The temper of a horse should always be observed ; a vicious horse generally lays his ears close to his pole, shows the whites of his eye, and looks sullen and dogged. An angry horse may be known by his frowning looks ; and he generally seems to stand in a posture of defence. When he is very vicious he pays no regard to the groom that feeds him : however, some horses that are ticklish will lay back their ears, and yet be of a good disposition. A fearful horse is apt to start, and never leaves it off till he is old and useless. A fretful horse is very unfit for a journey ; and you may discover his temper as soon as he gets out of the stable. A dull, heavy, sluggish horse may be easily known, whatever tricks are used to rouse hi? spirits.

With regard to the color of a horse, the bright bay, and indeed all kinds of bays in general, are accounted good colors. The chestnut horse is generally preferable to the sorrel, unless the former happens to be bald, or party colored, with •white legs. Brown horses have generally black manes and tails, and their joints are of a rusty black. Those of this color that are dappled arc much handsomer than the rest. Horses of a shining black, and well marked without too much white, are high in esteem for their beauty. A star, or

blaze, or white muzzle, or one or more feet tipped with white, are thought to be rather better than those that are quite black. Of grays, the dappled are accounted best ; though the silver gray make a more

beautiful appearance, and often, prove good. The iron gray with white manes and tails are thought not to be so hardy. Grays of every kind will turn white sooner or later ; but the nutmeg gray, when the dappled parts incline to bay or chestnut, are said to be good hardy horses. Roan horses have a diversity of colors mixed together ; but the white is most predominant. They are all generally hardy, and fit for the road ; and some are exceedingly good. Those of a strawberry color most resemble the sorrel, and they are often marked with white on the face and legs. When the bay is blended with it, he seems to be tinctured with claret ; and some of these prove to be very good. Dun, sallow, and cream-colored horses have a list down their backs ; and their manes and tails are black. Dun horses are seldom chosen by gentlemen ; and yet they may be very useful to the country farmer. The sallow and cream-colored are more esteemed, both for beauty and use. Those horses that are finely spotted with gay colors like leopards are a great rarity, and for that reason are usually in the hands of wealthy men.

HORSES, RACE. See RACING.

HORSEBEAN, n. $. Horse and bean. A small bean usually given to horses.

Only the small horsebean is propagated by the plough. Mortimer.

HORSE'BLOCK. n. «. Horse and block. A block on which they climb to a horse.

HORSEBOAT', n. s. Horse and boat. A boat used in ferrying horses.

HORSEBOY', n.s. Horse and boy. A boy employed in dressing horses ; a stable-boy.

Some horieboys, being awake, discovered them by the fire in their matches. Knolles's History.

HORSE'BREAKER, n. s. Horse and break. One whose employment is to tame horses to the saddle.

Under Sagittarius are born chariot-racers, hone-breakers, and tamers of wild beasts. Creech.

HORSECHEST'NUT,H.s. Lat. <rsrw/aj. Horse, and chestnut. A tree. It hath digitated or fingered leaves : the flowers, which consist of five leaves, are of an anomalous figure, opening with two lips : there are male and female upon the same spike : the female flowers are

succeeded by nuts, which grow in green prickly husks. Their whole year's shoot is commonly performed in three weekb' time, after which it does no more than increase in bulk, and become more firm ; and all the latter part of the Summer is occupied in forming and strengthening the buds for the next year's shoots.

The hortechcstnut grows into a goodly standard.

Mortimer.

HORSE'COURSER, n. s. Horse and courser. Junius derives it from horse and cose, an old Scotch word, which signifies to change ; and it should therefore, he thinks, be written horsecoser. The word now used in Scotland is horsecouper, to denote a jockey, seller, or rather changer of horses. It may well be derived from course, as

he that sells horses may be supposed to course ' or exercise them. One that runs horses, or keeps horses for the races. A dealer in horses.

A Florentine bought a horse for so many crowns, upon condition to pay half down : the horsecourser comes to him next morning for the remainder.

L'Estrange.

A servant to a horsecourser was thrown off his horse.

Wiseman.

HORSE'CRAB, n. $. A kind of fish.

HORSE' CUCUMBER, n. s. Horse and cucumber. A plant.

The horsecucitmber is the large green cucumber, and the best for the table, green out of the garden.

Mortimer.

HORSE’DUNG, n. s. Horse and dung. The excrements of horses.

Put it into an ox’s horn, and, covered close, let it rot in hot horsedung. Peacham on Drawing.

HORSE’EMMET, n. s. Horse and emmet. Ant of a large kind. »

HORSEFLESH, n.s. Horse and flesh. The flesh of horses.

The Chinese eat horseflesh at this day, and some gluttons have colt’s flesh baked. Bacon.

An old hungry lion would fain have been dealing with a good piece of horseflesh ; but the nag he thought would be too fleet for him. L’ Estrange.

HORSE’FLY, n. s. Horse and fly. A fly that stings horses, and sucks their blood.

HORSE’FOOT, n.s. An herb. The same with coltsfoot.

HORSE’HAIR, n.s. Horse and hair. The hair of horses.

His glittering helm, which terribly was graced

With waving horsehair. Dryden.

HORSE’HEEL, n. s. An herb. HORSE’LAUGH, n. s. Horse and laugh. A loud violent rude laugh.

A horselaugh, if you please, at honesty ; A joke on Jekyl. Pope.

HORSE’LEECH, n. s. Horse and leech. A great leech that bites horses.

The horseleech hath two daughter*, crying Give, give. Proverbs.

Let us to France ; like horseleeches, my boys,

The very blood to suck. Shakspeare.

From leech ; signifying a physician. A farrier.

HORSE’LITTER, n.s. Horse and litter. A carriage hung upon poles between two horses, in which the person carried lies along.

He that before thought he might command the waves of the sea, was

now cast on the ground and carried in an horselitter. 2 Mac. ix. 8

HORSE'MAN, n. s. Horse and man. One skilled in riding.

A skilful horseman, and a huntsman bred.

Dry den.

One that serves in wars on horseback.

Encounters between horsemen on the one side, and foot on the other, are seldom with extremity of danger ; because, as horsemen can hardly break a bat-tle on foot, so men on foot cannot possibly chase horsemen. Hayward.

In the early times of the Roman commonwealth a

horseman received yearly tria inillia Kris, and a foot

soldier one mille ; that is more than sixpence a-day

to a horseman, and twopence a-day to a foot soldier.

Arbuthnot on Coins.

I saw him urge as fleet a steed As ever served A. horseman's need.

Byron. The Giaour.

A rider ; a man on horseback.

With descending showers of brimstone fired, The wild Barbarian in the storm expired ; Wrapt in devouring flames the horseman raged, And spurred the steed in equal flames engaged.

Addison.

A horseman's coat shall hide Thy taper shape, and comeliness of side.

Prior.

HORSEMANSHIP.

HORSE'MANSHIP, n.s. From horseman. The art of riding ; the art of

managing a horse. He vaulted with such ease into his seat,

As if an angel dropt down from the clouds

To turn and wind a fiery Pegasus,

And witch the world with noble horsemanship.

Shakspeare.

His majesty, to shew his horsemanship, slaughtered two or three of his subjects. Addison.

They please themselves in terms of hunting or horsemanship. Wotton >

Peers grew proud, in horsemanship t* excel ;

Newmarket's glory rose, as Britain's fell. Pope.

HORSEMANSHIP, in its utmost latitude, comprehends whatever relates to the knowledge of the make, color, age, temper, and qualities of horses ; their respective countries and climates, with the method of breeching, breaking, propagating, &c. ; the discovery of the uses or services they are fitted for; whether for war, the race, the saddle, or labor; and forwarding and accommodating them for these purposes.

In this general sense it also includes the knowledge of the defects and diseases of horses, and the remedies proper for them, with the several operations requisite thereto; and thus comprehends the whole art of farriery. But the word is most commonly used for the art of riding and directing a horse to advantage ; not only in the ordinary motions, but more especially in the managing, or making him work upon volts, airs, &c., and in this view chiefly we propose to consider it.

•SECT. I. — OF PREPARING HORSES TO BE MOUNTED.

Though most horses are bought at an age when they have already been backed, they should be prepared for the rider with the same care, gentleness, and caution, as if they had never been handled, in order to prevent accidents, which might otherwise arise from a skittishness or other causes : and, as it is proper that they should be taught the figure of the ground they are to go

npon when they are at first mounted, they should be previously trotted in a longe on circles, without any rider.

The earl of Pembroke's directions on this subject are :— Put an easy cavesson upon the horse's nose, and make him go forward round you, standing quiet and holding the longe ; and let another man, if you find it necessary, follow him with a whip. All this must be done very gently, and but a little at a time; for horses are spoiled by overmuch work more than by any other treatment whatever; and that by very contrary effects; for sometimes it drives them into vice, madness, and despair, and often stupifies and totally dispirits them.

The first obedience required in a horse is going forwards; till he performs this duty freely, never think of making him rein back, which would inevitably make him restive ; as soon as he goes forwards readily, stop and caress him. Remember in this, and every other exercise, to use him to go equally well to the right and left ; and, when he obeys, caress him and dismiss him immediately. If a horse that is very young takes fright, and stands still, lead on another horse before him, which probably will induce him to follow. i.*uta snaffle in his mouth; and, when he goes freely, saddle him, girting him at first very loose. Let the cord which you hold be long and loose ; but not so much so as to endanger the horse's entangling his legs in it. Small circles, in the beginning, would constrain the horse too much, and put him upon defending himself. No bend must be required at first ; never suffer him to gallop false ; but, whenever he attempts it, stop him without delay, and then set him off afresh. If he gallops of his own accord, and true, permit him to continue : but, if not, do not demand it of him at first. Should he jump, shake the cord gently upon his nose, and he will fall into his trot again. If he stands still, plunges, or rears, let the man who holds the whip make a noise with it ; but never touch him till necessary to make him go on. When you change hands, stop and caress him, and entice him to come up to you : for by presenting yourself, as some do suddenly before horses, and frightening them to the other side, you run a great risk of making them shy. If he keeps his head too low, shake the cavesson to make him raise it ; and in whatever the horse does, whether he walks, trots, or gallops, let it be

a constant rule, that the motion be determined, and really such as is intended, without the least shuffling, pacing, or any other irregular gait.

SECT. II. — OF PLACING THE RIDER, AND RENDERING HIM FIRM ON HORSEBACK.

The greatest attention, and the same gentleness that is used in teaching a horse, should also be observed in training his rider. Every method must be practised to create and preserve, both in man and horse, all possible feeling and sensibility ; contrary to the usage of many riding-masters, who seem industriously to labor at abolishing these in both.

As many essential points depend upon the manner in which a man is at first placed on horseback, it ought to be attended to with exact-

ness. The absurdity of putting a man, who perhaps has never been on horseback before, upon a rough trotting horse, to which he is obliged to cling with all the force of his arms and legs, is sufficiently obvious. No man can be well seated on horseback, unless he be unconstrainedly mas-ter of the balance of his body, and at his ease ; which cannot be, if his attention be otherwise engaged ; as it must wholly be in a raw unprepared horseman on a rough horse.

The first time a man is put on horseback he should be placed upon a very gentle horse ; and not attempt to trot him till he is quite easy in the walk ; nor gallop, till he trots properly. Nor should horses be made to trot till they are obedient, and their mouths well formed on a walk ; nor to gallop, till the same be effected on a trot. When he attains firmness in his seat, the more he trots rough horses the better. This is the best, easiest, and shortest method : by it a man is soon made a sufficient horseman ; but in the other methods a man contracts all sorts of bad habits, and rides worse every day. Before a man mount he should be taught to know if the curb be well placed ; that is, when the horse has a bit in his mouth, which at first he should not ; but only a snaffle, till the rider is firm in his seat, and the horse also somewhat taught : likewise if the nose-band be properly tight; the throat-band somewhat loose; and the mouth-piece neither too high nor too low in the horse’s mouth, so as not to wrinkle the skin nor to hang lax ; the girths drawn moderately, but not too tight ; and the crupper and the breastplate properly adjusted. A very careful hand may venture on a bit at first, and succeed with it ; only with colts it is better to avoid

any pressure on the bars at first, which a curb, though ever so gently used, must in some degree occasion. When the bridle, &c., have been well looked to, let the man approach the horse gently near the shoulder; then, taking the reins and an handful of the mane in his left hand, let him put his foot softly in the left stirrup, by pulling it towards him, lest he touch the horse with his toe; then, raising himself up, let him rest a moment on it with his body upright, but not stiff; and after that, passing his right leg clear over the saddle, without rubbing against any thing, let him seat himself gently down. He must be cautious not to take the reins too short,, for fear of making the horse rear, run, fall back, or throw up his head ; but let him hold them of an equal length, neither tight nor slack, and with the little finger between them. Horses should be accustomed to stand still to be mounted, and not to stir till the rider pleases. All soldiers are instructed to mount and dismount equally well on both sides, which may be of great use in times of hurry and confusion.

The rider should be placed in his saddle, with his body rather back, and his head held up without stiffness ; seated neither forwards, nor very backwards : with the breast elevated a little, and the lower part of the body a little forwards ; the thighs and legs turned in without constraint, and the feet in a straight line neither turned in nor out. By this position the natural weight of the thighs has a proper pressure, and the legs are

ready to act : they must hang down easy and naturally, and so as not to be wriggling about, touching, and tickling the horse’s sides, but always near them, in case they should be wanted, as well as the heels. The body must be kept easy and firm, and without any rocking ; which :s a bad habit easily contracted, especially in galloping. The left elbow must be gently leant against the body a little forwards : unless it be so rested, the hand cannot be steady, but will always be checking, and consequently hurt the horse’s mouth. The hand and elbow ought to be equally high; if the hand were lower, it would constrain and confine the motion of the horse’s shoulders : but, as the

mouths of horses are different, the place of the hand also must occasionally differ : a leaning, low, heavy forehand requires a high hand ; and a horse that pokes out his nose a low one. The right arm must be placed in a symmetry with the left; only let the right hand be a little more forward or backward, higher or lower, as occasion may require, in order that both hands may be free ; both arms must be a little bent at the elbow, to prevent stiffness. A soldier's right hand should be kept unemployed in riding; it carries the sword, which is a sufficient business for it.

One rule ought never to be neglected about the hand, that it must be kept clear of the body ; i. e. about two inches and a half forwards from it, with the nails turned opposite to the belly, and the wrist a little rounded downwards ; a position not less graceful than ready for slackening, lightening, and moving the reins from one side to the other as may be found necessary.

When the rider is well placed, the more rough trotting he has without stirrups the better; but with a strict care always that his position be preserved very exactly. In all cases great care must be taken to hinder his clinging with his legs : in short, no clinging by hands or legs is ever to be allowed. If the motion of the horse be too rough, slacken it, till the rider grows by degrees more confident ; and, when he is quite firm and easy on his horse in every kind of mo-tion, stirrups may be given him ; but he must never leave off trotting often without any. The stirrups should be neither short nor long ; but of such a length, that when the rider, being well placed, puts his feet into them (about one-third of the length of each foot from the point of it), the points may be between two and three inches higher than the heels. The rider must not bear upon his stirrups, but let the natural weight of his legs rest on them ; for, if he bears upon them, he will be raised above and out of his saddle ; which should never be, except when a soldier charges sword in hand, with the body inclined forwards at the very instant of attacking. Spurs may be given as soon as the rider is grown familiar with stirrups ; or even before, if his legs are well placed.

The hand should always be firm, but delicate; that is, a horse's mouth should never be surprised by any sudden transition of it, either from slack to tight, or from tight to slack. Every thing in horsemanship must be effected by degrees, but at the same time with spirit and resolution. That hand which, by giving and taking

properly, gains its point with the least force, is the best ; and the

horse's mouth, under sucL a direction, will consequently be the best, sup posing equal advantages in both from nature. This principle of gentleness should be observed upon all occasions, and in every part of horsemanship. Sometimes the right hand will be necessary, upon troublesome horses, to assist the left ; but the less this is done the better. The snaffle must on all occasions be uppermost; that is, the reins of it must be above those of the bridle, whether the snafflle or the bit be used separately, or together.

When the rider knows enough, and the horse is sufficiently prepared and settled to begin any work towards suppling, one rein must be shortened according to the side worked to; but it must never be so much shortened as to make the whole strength rest on that rein alone : for, not to mention that the work would be false and bad, one side of the horse's mouth would thus be always deadened ; whereas it should always be kept fresh by its own play, and by the help of the opposite rein's acting delicately in a somewhat smaller degree of tension ; the joint effect of which produces in a horse's mouth the proper, gentle, and easy degree of appui or bearing.

A coward and a mad man make equally bad riders, and are both soon discovered and confounded by the superior sense of the creature they are mounted upon, who is at the same time equally spoiled by both. The coward, by suffering the animal to have his own way, not only confirms him in his bad habits, but creates new ones in him ; and the mad or violent rider, by false and violent motions and corrections, drives the horse, through despair, into every vicious trick that rage can suggest.

The hands and legs should always act in correspondence with each other; the latter being subservient and assistant to the former. Upon circles, in 'walking, trotting, or galloping, the outward leg is the only one to be used, and that only for a moment at a time, in order to set off the horse true, or put him right if he be false ; and, as soon as that is done, it must be taken away again immediately : but if the horse be lazy, or otherwise retain himself, both legs must be used and pressed to his sides at the same time together. The less the legs are used, in general, the better. Very delicate good riders, with horses they have diessed themselves, will scarcely ever use them. By the term outward is understood the side which is more remote from the centre ; and by inward is meant the side next to the centre. In reining back, the rider should be careful not to use his legs, unless the horse back on his shoulders ; in which case they must be both applied gently at the same time, and correspond with the hand. If the horse refuse to back at all, the rider's legs must be gently approached, till the horse lifts up a leg,

as if to go forwards ; at which time, the rein of the same side with that leg which is lifted up, will easily bring it backwards, and oblige the horse to back ; but if the horse offers to rear, the legs must be instantly removed. The inward rein must be tighter on circles, so that

the horse may bend and look inwards, and the outward one crossed over a little towards it, and both held in the left hand.

The man and horse should begin on very slow motions, that they may have time to understand what is taught them ; and in proportion as the effects of the reins are better comprehended, and the manner of working becomes more familiar, the quickness of motion may be increased. Every rider must learn to feel, without the help of the eye, when a horse goes false, and remedy the fault accordingly : this is an intelligence which nothing but practice, application, and attention, can give. A horse may not only gallop false, but also trot and walk false. If a horse gallops false, that is to say, if going to the right he leads with the left leg, or if going to the left he leads with the right; or in case he is disunited, i. e. if he leads with the opposite leg behind to that which he leads with before ; stop him immediately, and put him off again properly. The method of effecting this is by approaching your outward leg, and putting your hand outwards; still keeping the inward rein the shorter, and the horse's head inwards, if possible : and, if he should still resist, then bend and pull his head outwards also ; but replace it again, bent properly inwards, the moment he goes off true. A horse is said to to be disunited to the right, when going to the right, and consequently leading with the right leg before, he leads with the left behind; and is said to be disunited to the left, when going to the left, and consequently leading with the left leg before, he leads with the right behind. A horse may at the same time be both false and disunited ; in correcting both which faults, the same method must be used. He is both false and disunited to the right, when in going to the right he leads with the left leg before, and the right behind ; notwithstanding that hinder leg be with propriety more forward under his belly than the left, because the horse is working to the right : and he is false and disunited to the left, when in going to the left he leads with the right leg be-fore and the left behind; notwithstanding, as above, the hinder leg be with propriety more forward under his belly than the right, because the horse is working to the left.

In teaching to sit rightly on horseback, the greatest attention must be given to prevent stiffness, and sticking by force in any manner : stiffness disgraces every undertaking, and sticking serves only to throw a man when displaced a greater distance from his horse : whereas, by a proper equilibrating position of the body, and by the natural weight only of the thighs, he must be firm and secure in his seat. As the rider becomes more firm, and the horse more supple, it is proper to make the circles less ; but not too much so, for fear of throwing the horse forward upon his shoulders.

Some horses, when first the bit is put into their mouths, if great care be not taken, will put their heads very low. With such horses, raise your right hand with the bridoon in it, and play at the same time with the bit in the left hand, giving and taking. On circles, the rider must lean his body inwards ; unless great attention be

given to make him do it, he will be perpetually losing his seat. It is scarcely possible for him to be displaced, if he leans his body properly inwards.

SECT. III. — OF SUPPLING HORSES WITH MEN

UPON THEM BY THE EPAULE EN DEDANS, &C., WITH AND WITHOUT A LoNGE, ON ClRCLES AND ON STRAIGHT LlNES.

When a horse is well prepared and settled in all his motions, and the rider firm, it will be pro-per to proceed towards a farther suppling and teaching of both. Begin this new work by bringing the horse’s head a little more inwards than before, pulling the inward rein gently to you by degrees. When this is done try to gain a little on the shoulders, by keeping the inward rein the shorter as before, and the outer one crossed over towards the inward one. The intention of these operations is this : the inward rein serves to bring in the head, and procures the bend ; whilst the outward one, that is a little crossed, tends to make that bend perpendicular, and as it should be ; that is to say, to reduce the nose and the forehead to a perpendicular line with each other : it also serves, if put forward, as well as crossed, to put the horse forward, if necessary ; many horses being apt, in this and other operations, rather to lose their ground backward, when they should rather advance : if the nose were drawn in towards the breast, beyond the perpendicular, it would confine the motion of the shoulders, and have other bad effects.

All other bends besides those above specified are false. The outward rein, being crossed, not in a forward sense, but rather a little backward, serves also to prevent the outward shoulder from getting too forward, and makes it approach the inward one ; which facilitates the inward leg's crossing over the outward one, which is the motion that so admirably supples the shoulders. Care must be taken that the inward leg pass over the outward one without touching it : this inward leg's crossing over must be helped also by the inward rein, which you must cross towards and over the outward rein every time the outward leg comes to the ground, in order to lift and help the inward leg over it : at any other time, but just when the outer leg comes to the ground, it would be wrong to cross the inward rein, or to attempt to lift up the inward leg by it; nay, it would be demanding an absolute impossibility, and pulling about the reins and horse to no purpose : because, in this case, a very great part of the horse's weight, resting upon that leg, would render such an attempt not only fruitless, but also prejudicial to the sensibility of his mouth : moreover, it would put the horse under a necessity of straddling before, and of leading with the wrong leg.

When the horse is thus far familiarised to what you require of him, proceed to effect by degrees the same crossing in his hinder legs. By bringing in the fore legs more you will ot course engage the hinder ones in the same work : if they resist, the rider must bring both reins more inwards ; and, if necessary, put back also, and approach his inward leg to the horse ; and

if the horse throws out nis croup too far, he must bring both reins outwards, and, if abso-

whatever may be demanded of him. The me-thod that is commonly used, of forcing a horse

lutely necessary, he must also make use of his sideways, is a glaring absurdity, and very hurt-

outward leg, in order to replace the horse : observing that the croup should always be consi-

ful to the animal ; instead of suppling him, it obliges him to stiffen and defend himself, and

derably behind the shoulders, which in all actions often makes a creature that is naturally bene-must go first ; and, the moment that the horse volent, restive, frightened, and vicious, obeys, the rider must put his hand and leg again A running snaffle is best for horses who have in their usual positions. very long and high forehands, and who poke

Nothing is more ungraceful in itself, more de-out their noses ; but, for such as bore and keep trimental to a man's seat, or more destructive of their heads low, a common one is preferable ; the sensibility of a horse's sides, than a conti.- though any horse's head may be kept up also nual unsettledness in a horseman's legs, which with a running one, by the rider keeping his

prevents the horse from ever going a moment hands very high and forwards : but whenever

together, steady, or determined. A horse should either is used alone without a bridle, upon horses

never be turned, without first moving a step that carry their heads low and that bore, it must

forwards : and, when it is doing, the rider must be sawed about from one side to the other, not lift his elbow, and displace himself; a mo- This lesson of the epaule en dedans should be

tion only of the hand from the one side to the taught to all who intend to teach horsemanship

other being sufficient for that purpose. It should or to break horses; and the more of such that

also be a constant rule, never to suffer a horse can be found the better : none others should

to be stopped, mounted, or dismounted, but ever be suffered upon any occasion to let their

when he is well placed. The slower the motions horses look any way besides the way they are

are when a man or horse is taught any thing, the going. But all horses whatever, and all men

better. who are designed for teaching others, must go

The figures worked upon must be great at thoroughly and perfectly through this excellent

first, and afterwards made less by degrees, ac-lesson, cording to the improvement which the man and horse make ; the cadenced pace also, which they work in, must be gradually augmented. The changes from one side to the other should be in

SECT. IV. — OF THE HEAD TO THE WALL, AND

THE CROUP TO THE WALL.

a bold determined trot, and at first quite straight forwards, without demanding any side motion

This lesson should be practised immediately after that of the epaule en dedans, in order to place the horse properly the way he goes, &c.

on two pistes, which it is very necessary to require The difference between the head to the wall, and

afterwards when the horse is sufficiently suppled, the croup to the wall, consists in this : in the

By two pistes is meant, when the fore and former the foreparts are more remote from the

hinder parts do not follow, but describe two centre, and go over more ground ; in the latter,

different lines. the hinder parts are more remote from the centre,

In the beginning, a longe is used on circles, and consequently go over more ground ; in both,

and also on straight lines, to help both the rider as well as in all other lessons, the shoulders must

and the horse ; but afterwards, when they are go first. In riding horses, the head to the wall is

grown more intelligent, they should go alone, the easier lesson of the two at first, the line to be

At the end of the lesson, rein back ; then put worked upon being marked by the wall, not far

the horse forwards by degrees, approaching both from his head.

legs gently to his sides, and playing with the The motion of the legs to the right is the same

“bridle : if he rears, push him out immediately as that of the epaule en dedans to the left, and

into a full trot. Shaking the cavesson on the so vice versS. ; but the head is always bent and

horse’s nose, and also putting yourself before turned differently: in the epaule en dedans the

him and rather near to him, will generally make horse looks the contrary way to that which he

him back, though he otherwise refuse to do it : goes ; in this he looks the way he is going. In

moreover, a slight use and approaching of the the beginning very little bend is required ; too

rider’s legs will sometimes be necessary in back-much at once would astonish the horse, and make

ing, in order to prevent the horse from going too him defend himself ;

it must be augmented by

much upon his shoulders: but the pressure of degrees. If the horse absolutely refuses to obey,

the legs ought to be very small, and taken quite it is a sign that either he or his rider has not been

away the moment that he puts himself upon his sufficiently prepared by previous 1’essons. It

haunches. If the horse A’ill not back upon a may happen that weakness or a hurt in some

straight line properly, the rider must not be per-part of the body, or sometimes temper, though

roitted to have recourse immediately to his leg, seldom, may be the cause of the horse’s defend—

and so distort himself by it; but first try, if ing himself: it is the rider’s business to find out

crossing over his hand and reins to which ever whence the obstacle arises ; and, if he finds it to

side may be necessary, will not be alone suffi-be from the first mentioned cause, the previous

cient : and if not, then employ the leg. lessons must be resumed ; if from the second,

After a horse is properly prepared, and goes proper remedies must be applied ; and if from

freely on his several paces, he ought to be kept the last cause, when all fair means that can be

to a proper degree upon his haunches, with his tried have failed, proper correction must be

hinder legs well placed under him ; whereby used.

he will be always pleasant to himself and his In practising this lesson to the right, bend the

rider, will be light in hand, and ready to execute horse to the right

with the right rein ; helping the

left leg over.the right (at the time when the right leg is just come to the ground), with the left rein crossed towards the right, and keeping the right shoulder back with the right rein towards your body, in order to facilitate the left leg's crossing over the right ; and so likewise vice vers£ to the left, each rein helping the other by their properly mixed effects. In working to the right the rider's left leg helps the hinder parts on to the right, and his right leg stops them if they get too forwards ; and so vice Yers£ to the left : but neither ought to be used, till the hand being employed in a proper manner has failed, or finds that a greater force is necessary to bring about what is required than it can effect alone ; for the legs should not only be corresponding with, but also subservient to, the hand ; and all unnecessary aids, as well as all force, ought always to be avoided as much as possible.

In the execution of all lessons the equilibrium of the rider's body is of great use to the horse ; it ought always to go with, and accompany every motion of the animal ; when to the right, to the right ; and when to the left, to the left. Upon all horses, in every lesson and action, it must be observed, that there is no horse but has his own peculiar appui or degree of bearing, and also a sensibility of mouth, as likewise a rate of his own, which it is absolutely necessary for the rider to discover. A bad rider always takes off at least the delicacy of both. The horse will in-form his rider when he has got his proper bearing in the mouth, by playing pleasantly and steadily with his bit, and by the spray about his chaps. A delicate and good hand will not only always preserve a light appui or bearing in his sensibility ; but also of a heavy one, whether natural or acquired, make a light one. The lighter this appui can be made, the better, provided that the rider's hand corresponds with it ; if it does not, the more the horse is properly prepared, so much the worse.

Instances of this inconvenience of the best of appuis, when the rider is not equally taught with the horse, may be seen every day. Gentlemen try to get their horses bitted, as they call it, without being suitable prepared themselves for riding them ; the consequence of which is, that they ride in danger of breaking their necks ; till at length, after much pulling about, and by the joint insensibility and ignorance of

themselves and grooms, the poor horse gradually becomes a mere senseless unfeeling automaton ; and thereby grows what is called settled. When the proper appui is found, and made of course as light as possible, it must not be kept duly fixed without any variation, but be played with ; otherwise one equally continued tension of reins would render both the rider's hand and the horse's mouth very dull. Slight and frequent giving and taking is therefore necessary to keep both perfect.

Whatever pace or degree of quickness you work in, be it ever so fast, or ever so slow, it must be cadenced ; time is as necessary for a horseman as for a musician. This lesson of the head and of the tail to the wall is especially to be taught every soldier ; scarcely any manceu-vte can be performed without it. In closing

and opening files, it is almost every moment wanted.

SECT. V. — OF MAKING HORSES STAND FIRE, AMD

ENDURE NOTSES, ALARMS, SlGHTS, &C.

To make horses stand fire, the sound of drums, and different noises, use them to :t by degrees in the stable at feeding-time ; and, instead of beino-frightened at it, they will soon come to like it as a signal for eating. With regard to such horses as are afraid of burning objects, begin by keeping them still at a certain distance from some lighted straw : caress the horse ; and in proportion as his fright diminishes, bring gradually the burning straw nearer, and increase the size of it. By this means he may very quickly be brought to be so familiar with it, as to walk undaunted even through it.

As to horses that are apt to lie down in the water, if animating them, and attacking them vigorously, should not have the desired effect, then break a straw-bottle full of water upon their heads, and let the water run into their ears, which is a thing they dislike very much.

All troop horses must be taught to stand qui ct and still when they are fired from, to stop the moment you present, and not to move after firing till they are required to do it : in short, the horse must be taught to suffer the rider to act upon him with the same freedom as if he was on foot. Patience, coolness, and temper, are the only means requisite for accomplishing this end. Begin by walking the horse gently ; then stop and keep him from stirring for some time, so as to accustom him by degrees not to have the least idea of moving without orders : if he

does, then back him : and when you stop him, and he is quite still, leave the reins loose.

To use a horse to fire-arms, first put a pistol or carabine in the manger with his seed ; then use him to the sound of the lock and the pan ; after which, when you are upon him, show the piece to him, presenting it forwards, sometimes on one side, sometimes on the other : when he is thus far reconciled, proceed to flash in the pan ; after which, put a small charge into the piece, and so continue augmenting it by degrees to the quantity which is commonly used : if he seems uneasy, walk him forward a few steps slowly; and then stop, back, and caress him. Horses are also often disquieted and unsteady at the clash, and drawing, and returning of swords ; all which they must be familiarised to gradual., and gently.

It is necessary for cavalry in general, but particularly for light cavalry horses, to be very ready and expert in leaping ditches, hedges, gates, 8cc. The leaps, of whatever sort, to which horses are at first brought, ought to be very small, and the rider must keep his body back, raise his hands a little in order to help the fore parts of the horse up, and be very attentive to his equilibrium. It is best to begin at a low bar covered with furze, which pricking the horse's legs, if he does not raise himself sufficiently, prevents his contracting a sluggish and dangerous habit of touching, as he goes over. Let the ditches also you first bring horses to be narrow. Accustom them to come up to every thing which they are

to leap over, and to stand coolly at it for some tune ; then to raise themselves gently up in order to form an idea of the distance. When they leap well standing, use them to walk gently up to the leap, and to go over it without first halting at it. After this practice is familiar to them, repeat it in a gentle trot, and so by degrees faster and faster, till at length it is as familiar to them to leap flying on a full gallop as another way.

As horses are apt to be frightened at the sight and smell of the dead of

their own species, it is advisable to habituate them to walk and leap over carcasses ; but the greatest gentleness ought here to be used. Horses should also be accustomed to swim ; and a very small portion of strength is sufficient to guide a horse in the water, where they must be permitted to heave their heads, and be no way constrained

The practice of cutting off extremities from horses is in all cases very pernicious. It is particularly so in regard to a troop-horse's tail. It is almost incredible how much they suffer at the piquet for the want of it; kicking about and laming one another; whilst other horses, with their tails on, brush off all flies, are cool and at their ease, and mend daily.

SECT. VI. — OF REINING BACK, AND MOVING FORWARD IMMEDIATELY AFTER; PIAFING PILLARS, &c.

Never finish your work by reining back with horses that have any disposition towards retaining themselves ; but always move them forwards, and a little upon the haunches also, after it, be-fore you dismount, unless they retain themselves very much indeed; in which case nothing at all must be demanded from the haunches. This lesson of reining back, and piafing, is proper to conclude with, and puts a horse well on the haunches : it may be done, according as horses are more or less suppled, either going forward, backing, or in the same place : if it is done well advancing, or at most on the same spot, it is sufficient for a soldier's horse. For to piafe in backing is too much to be expected in the hurry ot training numbers of men and horses together-This lesson should indeed never be attempted at all, till horses are very well suppled, and accustomed to be put together; otherwise it will create restiveness. If they refuse to back, and stand motionless, the rider's legs must be approached with the greatest gentleness to the horse's sides : at the same time that the hand is acting on the reins to solicit his backing. This seldom fails of procuring the desired effect, by raising one of the horse's fore legs, which is consequently very easily brought backwards by a small degree of tension in the reins.

Well performed, this lesson is particularly serviceable, when pillars are used. Very few regimental riding-houses have pillars, and it is fortunate they have not ; for though, when used with skill, they are one of the greatest and best discoveries in horsemanship ; they must be allowed to be very dangerous and pernicious when not under proper direction.

SECT. VII. — Of CURING RESTIVENESS, ViciOUSNESS, STARTING, &c.

Whenever a horse makes resistance, one ought to examine very minutely all the tackle about him ; if any thing hurt or tickle him ; whether he have any natural or accidental weakness, &c. For want of this precaution many disasters happen, and the animal is frequently accused falsely of being restive and vicious. Correction, according to the way it is used, throws a horse into more or less violent action, which, if he be weak, he cannot support ; but a vicious strong horse is to be considered in a very different light, being able both to undergo, and consequently to profit by all lessons ; and is far preferable to the best natured weak one upon earth. Patience and attention are never failing means to reclaim such a horse ; in whatsoever manner he defends himself, bring him back frequently with gentleness (not, however, without having given him proper chastisement if necessary) to the lesson which he seems most averse to.

Horses are by degrees made obedient, through the hope of reward and the fear of punishment. To blend the operation of the two judiciously together is very difficult; requiring much thought and practice, a good head, and a good disposition. The coolest and best-natured rider will always succeed best. If a horse be impatient, or choleric, never strike him, unless he absolutely refuse to go forward ; which you must then resolutely oblige him to do, and which will be of itself a correction. Resistance in horses is sometimes a mark of strength and vigor, and proceeds from spirit, as well as sometimes from viciousness or weakness. Great care should, therefore, be taken to distinguish from which of these causes a horse's resistance arises, before any remedy or punishment is adopted. It is sometimes a bad sign when horses do not at all resist, and may proceed from a sluggish disposition. Horses again are oftener spoilt by having too much done to them, and by attempts to dress them in too great a hurry.

After a horse has been well suppled, if there are no impediments, natural or accidental, and he still resist, chastisement becomes necessary ; but this must not be frequent, but always firm, and as little violent as possible. Some horses have quicker parts and more cunning than others. Many will imperceptibly gain a little every day on the rider. Various, in short, are their dispositions and capacities. It is the rider's business to find these out, and to make a horse sensible of attachment, but at the same time that he will be master.

Plunging is a common defence among restive and vicious horses ; if they do it while backing, they must, by the rider's legs and spurs

firmly applied, be obliged to go forward, and their heads kept up high. But, if they do i1 flying forwards, keep them back, and ride them gently and very slow for a good while together. Of all bad tempers and qualities in horses, those which are occasioned by harsh treatment and ignorant riders are the worst.

Rearing is a vicious habit, and, in weak horses especially, a very dangerous one. While

the horse is up, the rider must yield his hand ; and, when the horse is descending, he must vigorously determine him forwards ; if this be done a.i any other time but while the horse is coming down, it may add a spring to his rearing, and make him fall backwards. With a skilful hand on them, horses seldom persist in this habit. If the foregoing method fail, make the horse kick up behind by getting somebody on foot to strike him behind with a whip ; or by pricking him with a goad.

Starting often proceeds from a defect in the sight, which, therefore, must be carefully examined. Whatever the horse is afraid of, bring him up to gently, and caress him at every step. Nothing but great gentleness can correct this fault. If you let him pass the object without bringing him up to it, you increase the fault, and confirm him in his fear. Before such horses as are to a great degree fearful of any object, make a quiet horse, proceed towards it, and gradually entice them to approach nearer and nearer. If the horse thus alarmed be undisciplined and headstrong, he will probably run away with his rider; when his head must be kept up high, and the snaffle moved backwards and forwards from right to left, taking up and yielding the reins of it, as well as the reins of the bit ; but this last must not be moved backwards and forwards like the snaffle, but only taken up and yielded properly. No man ever yet did, or ever will, stop a horse, or gain any point over him by main force, or by pulling against him.

SECT. VIII. — RULES FOR INEXPERIENCED HORSEMEN.

On this subject Mr. Thompson has given the following rules : — In the first place, every horse should be accustomed to stand still when he is mounted. One would imagine this might be readily granted ; yet we see how much the contrary is practised. When a gentleman mounts at a livery stable, the groom takes the horse by the bit, which he bends tight round his under jaw : the horse, striving to go on, is forced back; advancing again, he frets, as he is again stopped short, and hurt by the manner of holding him. The rider, in the mean time, mounting without the bridle, or at least holding it but slightly, is helped to it by the groom, who, being thoroughly employed by the horse's fluttering, has at the same time both bridle and stirrup to give. This confusion would be prevented, if every horse were taught to stand still when he is mounted. Forbid your groom, therefore, when he rides your horse to water, to throw himself over from a horse-block, and kick him with his leg even before he is fairly upon him. This wrong man-ner of mounting is what chiefly teaches horses this vicious habit.

A constant practice of mounting in the proper manner is all that is necessary to prevent a horse from going on till the rider is fairly in the saddle. A common method is to stand near the croup or hinder part of the horse, with the bri-dle held long. By this manner of holding the bridle, before you mount, you are liable to be kicked ; and, when you are mounted, your horse may go on some time, or play what gambols he

pleases, before the rein is short enough in your hand to prevent him. It is common likewise for an awkward rider, as soon as his foot 's in the stirrup, to throw himself with all his force to gain his seat ; which he cannot do, perhaps, till he has first overbalanced himself on one side or the other. The way to mount with ease and safety is, to stand rather before than behind the stirrup. In this posture take the bridle short, and the mane together in your left hand, helping yourself to your stirrup with your right, so that your toe may not touch the horse in mounting. When your left foot is in the stirrup, move o» your right, till you face the side of the horse, looking across over the saddle. Then with your right hand grasp the hinder part of the saddle ; and with that and your left, which holds the mane and bridle, lift yourself upright on your left foot. Remain thus a mere instant on your stirrup, only so as to divide the action into two motions. While you are in this posture you have a sure hold with both hands, and are at liberty either to get safely down, or to throw your leg over and gain your seat. By this deliberate motion likewise you avoid, what every good horseman will endeavour to avoid, putting the horse into a flutter.

To dismount, hold the bridle and mane together in your left hand, as when you mounted; §ut your right hand on the pommel of the sad-le, to raise yourself; throw your leg back over the horse ; grasp the hinder part of the saddle with your right hand ; remain a moment on your stirrup ; and in every respect reverse the actions of mounting your horse. Take care not to bend your right knee in dismounting, lest your spur should rub against the horse.

When you ride, hold your bridle at a convenient length. Sit square, and let not the purchase of the bridle pull forward your shoulder : but keep your body even, as it would be if each hand held a rein. Hold your reins with the whole grasp of your hand, dividing them with your little finger. Let your hand be perpendicular; your thumb will then be uppermost and placed on the bridle. Bend your wrist a little outward; and, when you pull the bridle, raise your hand towards your breast, and the lower part of the palm rather more than the upper. Let the bridle be at such a length in your hand, as, if the horse should stumble, you may be able to raise his head, and support it by the strength of your arms, and the weight of your body thrown backward. If you hold the rein too long, you are subject to fall backward as your horse rises. If, knowing your horse perfectly well, you think a tight rein unnecessary, advance your arm a little (but not your shoulder) towards the horse's head, and keep your usual length of rein. By this means you have a check upon your horse, while you indulge him.

If you ride with a curb, make it a rule to hook on the chain yourself; the most quiet horse may bring his rider into danger, should the curb hurt him. If, in fixing the curb, you turn the chain to the right, the links will unfold themselves, and then oppose a farther turning. Put on the chain loose enough to hang down on the horse's under lip, so that it may not rise and

press his jaw till the reins of the bridle are moderately pulled. If your horse has been used to stand still when he is mounted, there will be no occasion for a groom to hold him ; but if he does, suffer him not to touch the reins, but that part of the bridle which comes down the

cheek of the horse. He cannot then interfere with the management of the reins, which belongs to the rider only; and holding a horse by the curb (which is ever painful to him) is evidently improper when he is to stand still.

Take care not to ride with your arms and el-bows as high as your shoulders ; nor let them shake up and down with the motion of the horse. The posture is unbecoming, and the weight of the arms (and of the body too if the rider does not sit still) acts in continual jerks on the jaw of the horse, which must give him pain, and make him unquiet, if he has either a tender mouth or any spirit.

Riders wonder why horses are gentle as soon as they are mounted by skilful horsemen. The reason is, the horse goes on at his ease, yet finds all his motions watched ; which he has sagacity enough to discover. Such a rider hides his whip, if he finds his horse is afraid of it ; and keeps his legs from his sides. Avoid the ungraceful custom of letting your legs shake against the sides of the horse : and as you are not to keep your arms and elbows high, and in motion, so you are not to rivet them to your sides, but let them fall easy : an awkward horseman seems flying off at all points.

It is often said with emphasis, that such a one has no seat on horseback; meaning not only that he does not ride well, but that he does not sit on the right part of the horse. To have a good seat is to sit on that part of the horse which, as he springs, is the centre of motion ; and from which, of course, any weight would be with most difficulty shaken. As in the rising and falling of a board, placed in equilibrio, the centre will be always most at rest, the true seat will be found in that part of your saddle into which your body would naturally slide if you rode without stirrups ; and is only to be preserved by a proper poise of the body, though the generality of riders imagine it is to be done by the grasp of the thighs and knees. The rider should consider himself as united to his horse in this point ; and, when shaken from it, endeavour to restore the balance.

The mention of the two extremities of a bad seat may help to point out the true one. The one is, when the rider sits very far back on the saddle, so that his weight presses the loins of the horse; the other, when his body hangs forward over the pommel of the saddle. The first maybe seen practised by grooms when they ride with their stirrups affectedly short ; the latter by fearful horsemen on the least flutter of the horse. Every good rider has, even on the hunting saddle, as determined a place for his thighs as can be made for him by the bars of a demi-peak. Indeed there is no difference between the seat of

either : only, as in the first you ride with shorter stirrups, your body will be consequently more be-hind your knees.

To have a good seat for the rider, the saddle

must fit well. In general the saddle presses as nearly as possible on that part which we have described as the point of union between the man and the horse ; but so as not to obstruct the motion of the horse's shoulders. Place yourself in the middle or lowest part of it : sit erect ; but with as little constraint as in a chair. The ease of action marks the good rider: you may repose yourself, but not lounge. The studied exactness acquired in the riding-house, by those whose deportment is not easy, appears ungenteel and unnatural.

If your horse stops short, or endeavours, by raising and kicking, to unseat you, do not bend your body forward, as many do in those circumstances : that motion throws the breech forward, and the rider out of his seat; whereas the advancing the lower part of the body, and bending back the upper part and shoulders, is the method both to keep your seat, and to recover it when lost. The bending your body back, and that in a great degree, is the greatest security in flying leaps ; it is a security, too, when your horse leaps standing. The horse's rising does not try the rider's seat ; the lash of his hind legs ought chiefly to be guarded against, and is best done by the body being greatly inclined back. Stiffen not your legs or thighs ; and let your body be pliable in the loins, like the coachman's on his box.

This manner of sitting will counterbalance every rough motion of the horse ; whereas the fixture of the knees, so commonly laid a stress on, will in great shocks conduce to the violence of the fall. Were the cricket-pkyer, when the ball is struck with the greatest force, to hold his hand firm and fixed to receive it, the hand would be bruised, or perhaps the bones fractured by the resistance. To obviate this, he yields his 'hand to the motion of the ball for a certain distance ; and thus, by a due mixture of opposition and obedience, catches it without sustaining the least injury. The case is exactly the same in riding : the skillful horseman will recover his poise by giving some way to the motion; and the ignorant horseman will be flung out of his seat by endeavouring to be fixed.

Stretch not out your legs before you ; this will push you against the back of the saddle ; neither gather up your knees, like a man riding on a pack ; this throws your thighs upwards ; each practice unseats you.

Keep your legs straight down ; and sit not on the most fleshy part of the thighs, but turn them inwards, so as to bring in your knees and toes. It is more safe to ride with the ball of the foot pressing on the stirrup, than with the. stirrup as far back as the heel ; for the pressure of the heel, being in that case behind the stirrup, keeps the thighs down.

When you find your thighs thrown upwards, widen your knees to get them and the upper part of your fork lower down on the horse. Grasp the saddle with the hollow or inner part of your thighs, but not more than just to assist the balance of your body : this will also enable you to keep the spurs from the horse's sides, and to bring your toes in. Sink your heels straight down ; for, while your heels and thighs keep down, you cannot fall ; this, aided by the bend of the back, gives the security of a seat to those

who bear themselves up in their stirrups in a swift gallop, or in the alternate rising and falling in full trot.

Let your seat determine the length of your stirrups, rather than the stirrups your seat. If more "precision is requisite, let your stirrups, in the hunting saddle, be of such a length, as that, when you stand in them, there may be the breadth of four fingers between your seat and the saddle. It would greatly assist a learner, if he would practice in a large circle, as directed in Sect. II., without stirrups ; keeping his face looking on the outward part of the circle, so as not to hare a full yiew of the horse's head, but just of that which is on the outward part of the circle; and his shoulder, which is towards the centre of the circle, very forward. You thus learn to balance your body, and keep a true seat, independent of your stirrups ; you may probably likewise escape a fall, should you at any time lose them by being accidentally sha-ken from your seat.

As the seat in some measure depends on the saddle, because a saddle with a high pommel is thought dangerous, the other extreme prevails, and the pommel is scarcely allowed to be higher than the middle of

the saddle. The saddle should lie as near the back-bone as can be. without hurting the horse ; for the nearer you sit to his back, the better seat you have. If it does so, it is plain the pommel must rise enough to secure the withers from pressure ; therefore a horse, whose withers are higher than common, requires a high pommel. If, to avoid this, you make the saddle straight, the inconvenience spoken of follows ; you sit too much above the horse's back, nor can the saddle form a proper seat. There should be no ridge from the button at the side of the pommel, to the back part of the saddle. That line also should be a little concave for your thighs to lie at ease. In short, a saddle ought to be, as nearly as possible, as if cut out of the horse.

When you want your horse to move forward, raise his head a little, and touch him gently with your whip ; or else press the calvfs of your legs against his sides. If he does not move fast enough, press them with more force, and so till the spur just touches him. By this practice he will, if he has any spirit, move upon the least pressure of the leg. Never spur him by a kick ; but, if it be necessary to spur him briskly, keep your heels close to his sides, and slacken their force as he becomes obedient. When your horse attempts to be vicious, take each rein separate, one in each hand, and, advancing your arms forward, hold him very short. In this case it is common for the rider to pull him hard, with his arms low. But the horse, thus having his head low too, has it more in his power to throw out his heels: whereas, if his head be raised very high, and his nose thrown out a little, he can neither rise before nor behind ; because he can give himself neither of those motions, without having his head at liberty. A plank, placed in equilibrio, cannot rise at one end unless it sinks at the other.

If your horse is headstrong, pull not with one

continued pull, but stop, and back him often, just shaking the reins, and making repeated pulls till he obeys. Horses are so accustomed to bear on the bit when they go forward, that they are discouraged if the rider will not let them do so. If a horse is loose-necked, he will throw up his head at a continued pull ; in which situation the rider, seeing the front of his face, can have no power over him. When your horse does thus, drop your hand, and give the bridle play, and he will of course drop his head again into its proper place : while it is coming down make a second gentle pull, and you will find his mouth. With a little practice, this is done almost instantaneously ; and this method will stop, at the distance of a few yards, a horse which will run away with those who pull at him with all their might.

Almost every one has observed, that when a horse feels himself pulled with the bridle, even when he is going gently, he often mistakes what was designed to stop him, as a direction to bear on the bit, and go faster. Keep your horse's head high, that he may raise his neck and crest; play a little with the rein, and move the bit in his mouth, that he may not press on it in one constant and continued manner ; be not afraid of raising his head too high ; he will naturally be too ready to bring it down, and tire your arms with its weight, on the least abatement of his mettle. When you feel him heavy, stop him, and make him go back a few paces : thus you break by degrees his propensity to press on his bridle.

Many are pleased with a round neck, and a head drawn in towards his breast ; but this is a mistake. Let your horse carry his head bridling in, provided he carries it high, and his neck arching upwards : but if his neck bends downwards his figure is bad, his sight is too near his toes, he leans on the bridle, and you have no command over him. If he goes pressing but lightly on the bridle, he is the more sure-footed, and goes pleasanter, as your wrist only may guide him. If he hangs down his head, and makes you support the weight of that and his neck with your arms bearing on his fore legs (which is called being on his shoulders), he will strike his toes against the ground, and stumble. If your horse is heavy upon the bit, tie him every day for an hour or two, with his tail to the manger, and his head as high as you can make him lift it, by a rein on each post of the stall, tied to the rings of the snaffle-bit.

Horse-breakers and grooms have a great propensity to bring a horse's head down, and seem to have no seat without a strong hold by the bridle. They know indeed that the head should yield to the reins, and the neck form an arch ; but do not take the proper pains to make an arch upward. A temporary effect of attempting to raise the horse's head may perhaps be making him push out his nose. They will here tell you, that his head is too high already ; whereas it is not the distance from the nose, but from the top of his head to the ground, which determines the head to be high or low. Besides, although the fault is said to be in the manner of carrying the

head, it should rather be said to be in that of the neck ; for, if the neck was raised, the head would be more in the position of one set on a well formed neck.

The design, therefore, of lifting up the head is to raise the neck, and (hereby bring in the head ; for, even while the bridle makes the same line from the rider's hand to the bit, the horse's nose may be either drawn in or thrust out, according as his neck is raised or depressed. Instead of what has been here recommended, we usually see colts broken with their heads cavessoned very low, their necks stiff, and not in the least suppled. When the breaking tackle is left off, and they are mounted for the road, having more food and rest, they frequently plunge, and a second breaking becomes necessary. Then, as few gentlemen can manege their own horses, they are put into the hands of grooms, from whom they learn a variety of bad habits.

No curb, martingale, or other forcible method, will teach a horse to carry his head or neck in a posture which nature has made uneasy to him. By trying to pull in his nose farther than he can bear you will give him a bad habit. You could not indeed contrive a more effectual method to make him continually toss his nose up and throw his foam over you. It is a common custom to be always pulling at the bridle, as if to set off to advantage either the spirit of the horse, or the skill of the rider. Our horses therefore are taught to hold their heads low, and pull so as to bear up the rider from the saddle, standing in his stirrups, even in the gentlest gallop : how very improper this is we may be experimentally convinced ; when we happen to meet with a horse which gallops otherwise we immediately say, he canters excellently, and find the ease and pleasure of his motion. When horses are designed for the race, and swiftness is the only thing considered, the method may be a good one.

It is not to be wondered that dealers are al-ways pulling at their horses : that they have the spur constantly in their sides, and are at the same time continually checking the rein : by these means they make them bound, and champ the bit, while their rage has the appearance of spirit. These people ride with their arms spread, and very low on the shoulders of their horses : a method which makes them stretch their necks, and gives a better appearance to their forehands : it conceals also a thick jaw, which, if the head were up, would prevent its yielding to the bit : it hides likewise the ewe-neck, which would otherwise show itself. Indeed, if you have a horse unsteady to the bit, formed with a naturally heavy head, or one which carries his nose

obstinately in the air, you must find his mouth where you can, and make the best of him.

Many hoises are taught to start by whipping them for starting. How is it possible they can know it is designed as a punishment ? In the riding house the horse is taught to rise up before, and to spring and lash out his hinder legs, by whipping him when tied between two pillars, with his head a little at liberty. If he understood this to be a punishment for doing so, he would not by that method learn to do it. He seems to be in *he same manner taught to spring and

fly when he is frightened. Most horses would go quietly past an object from which they weie beginning to fly if their riders, instead of gathering up their bridles and showing themselves so ready, would throw the reins loose upon their necks.

When a horse starts at any thing on one side the generality of riders turn him out of the road, to make him go up to the cause of his starting : if he does not get the better of his fear, or readily comply, he commonly goes past the ob-ject, making with his hinder parts, or croup, a great circle out of the road ; whereas he should learn to keep straight on, without minding objects on either side. If he starts at any thing on the left, hold his head high, and keep it straight in the road, pulling it from looking at the thing he starts at, and keeping your right leg hard pressed against his side, towards his flank : he will then go straight along the road. By this method, and by turning his head a little more, he may be forced with his croup close up to what frightened him : for, as his head is pulled one way, his croup necessarily turns the other.

Always avoid a quarrel with your Horse, if you can : if he is apt to start you will find occasions enough to exercise his obedience, when what he starts at lies directly in his way, and you must make him pass ; if he is not subject to start you should not quarrel with him about a trifle. It must be observed, however, that this rule, in go-ing past an object, may perhaps be a little irregular in a maneged horse, which will always obey the leg : but even such a horse, if he is really afraid, and not restive, it may not be amiss to make look another way ; unless the object be something to the sight of which you would particularly accustom him. The case will also be different with a horse whose fear is owing to his not being used to objects; but such a one is not to be rode by any horseman to whom these rules are directed : the starting here meant arises merely from the horse’s being pampered, and

springing through liveliness.

The piactice of making a horse go immediately v p to every thing he is afraid of, and not suffering mm to become master of his rider, seems to be sometimes carried too far.

We are apt to suppose that a horse fears nothing so much as his rider : but may he not, in many circumstances, be afraid of instant destruction? of being crushed ? of being drowned ? of falling down a precipice ? Is it a wonder that a horse should be afraid of a loaded waggon ? may not the hanging load seem ‘to threaten the falling on him ? There cannot be a rule more general than, in such a case, to show him there is room for him to pass. This is done by turning his head a very little from the carriage, and pressing your leg which is farthest from it against his side.

A horse is not to stop without a sign from his rider. Is it not then probable that, when driven up to a carriage he • starts at it, he conceives himself obliged either to attack or run against it? Can he understand the rider’s spurring him, with his face directed to it, as a sign for him to pass it ? That a horse is easily alarmed for his face

and eyes is eyident from this, that he will even catch back his head from a hand going to caress him. That he will not go with any force, face to face, even to another horse, if in his power to stop ; and that he sees perfectly sideways, are useful hints for the treatment of horses with re-gard to starting. Though you ought not to whip a horse for starting, there can be no good effect from clapping his neck with your hand to encourage him. If you take any notice of his starting, it should be rather with some tone of voice which he usually understands as an expression of dislike to what he is doing ; for there is opposition mixed with his starting, and a horse will ever repeat what he finds has foiled his rider.

Notwithstanding the directions above given, of not pressing a horse up to a carriage he starts at, yet, if one which you apprehend will

frighten him meets you at a narrow part of the road, when you have once let him know he is to pass it be sure you remain determined, and press him on. Do this more especially when part of the carriage has already passed you : for if, when he is frightened, he is accustomed to go back, and turn round, he will certainly do it if he finds, by your hand slackening and legs not pressing, that you are irresolute ; and this at the most dangerous point of time, when the wheels of the carriage take him as he turns. Remember not to touch the curb rein at this time; it will certainly check him.

The person who would lead a horse by the bridle should not turn his face to him when he refuses to follow him : if he raises his arms, shows his whip, or pulls the bridle with jerks, he frightens the horse, instead of persuading him to follow ; which a little patience may bring about. Ride with a snaffle ; and use your curb, if you have one, only occasionally. Choose your snaffle full and thick in the mouth, especially at the ends to which the reins are fastened. Most of them are made too small and long ; they cut the horse's mouth, and bend back over the bars of his jaw, working like pincers.

The management of the curb is a very nice matter : a turn of the wrist, rather than the weight of your arm, should be applied to it. The elasticity of a rod, when a fish is hooked, may give some idea of the proper play of a horse's head on his bridle ; his spirit and his pliableness are both marked by it. A horse should never be put to do any thing which he is not ready at, in a curb ; you may force him, or pull his head any way, with a snaffle, but a curb acts only in a straight line. A horse may indeed be turned out of one track into another by a curb ; but it is because he knows it is a signal. When he is put to draw a chain, and does not understand the necessity he is then under of taking a larger sweep when he turns, you frequently see him restive, as it is then called ; but put him on a snaffle, or buckle the rein to that part of the bit which does not curb him, and the horse submits to be pulled about, till he understands what is desired of him. These directions suppose your horse to have spirit, and a good mouth ; if he has not, you must take him as he

is, and ride him with such a bit as you find most easy.

Whan you ride upon a journey be not so attentive to your horse's nice carriage of himself as to your encouragement of him, and keeping him in good humor. Raise his head ; but, if he flags, indulge him with bearing a little more upon the bit than you would suffer in an airing.

If a horse is lame, tender-footed, or tired, he naturally hangs upon his bridle. On a journey, therefore, his mouth will depend greatly on his strength and the goodness of his feet. Be then very careful about his feet, and let not a blacksmith spoil them.

Few people, even though practised in riding, know they have any power over a horse but by the bridle ; nor any use for the spur, except to make him go forward. A little experience will teach them a further use. If the left spur touches him, and he is at the same time prevented from going forward, he has a sign, which he will soon understand, to move sideways to the right ; in the same manner to the left, if the right spur goads him. He afterwards, through fear of the spur, obeys a touch of the leg, in the same man-as a horse moves his croup from one side of the stall to the other, when any one strikes him with his hand. In short, his croup is guided by the leg as his head is by the bridle. He will never disobey the leg, unless he becomes restive. By these means you will have a far greater power over him ; he will move sideways 'if you close one leg to him; and straight forward if both : even when he stands still, your legs held near him will keep him on the watch ; and, with the slightest unseen motion of the bridle upwards, he will raise his head, and show his forehand to advantage. On this use of the legs of the rider, and guidance of the croup of the horse, are founded all the airs (as the riding-masters express themselves) which are taught in the manege ; the passage, or side-motion of troopers to close or open their files ; and indeed all their evolutions.

But some degree of this discipline is convenient even for common use. It is useful if a horse is apt to stumble or start. By pressing your legs to his flank, and keeping up his head, he is made to go light on his fore-legs, which is aiding and supporting him ; and, if he does actually stumble, by helping him at the very instant to exert himself, while as yet any part of him remains not irrecoverably impressed with the precipitate motion. Hence this use of the hand and legs of the rider is called giving aids to a horse ; for, as to holding up the weight of a heavy inactive horse by mere pulling, it is as impossible as to recover him when falling down a precipice. A horse is supported and helped by the hands and legs of his rider in every action they require of him ; hence he is said to perform his airs by the aids from his rider.

The same discipline is useful if a horse starts For if, when he is beginning to fly to one side, you press your leg on the side he is flying to, he stops his spring immediately; he goes past what he started at, keeping straight on, or as you choose to direct him : and he will not fly back

from any thing if you press him with both legs ; you keep his haunches under him going down a hill ; help him on the side of a bank ; more easily avoid the wheel of a carriage ; and approach more gracefully and nearer to the side of a coach or horseman. When a pampered horse curvets irregularly, and twists his body to and fro, turn his head either to the right or left, or both alternately (but without letting him move out of the track), and press your leg to the opposite side; your horse cannot then spring on his hind-legs to one side, because your leg prevents him ; nor to the other, because his head looks that way, and a horse does not start and spring to the side on which he looks. Hence the impropriety of the habit which many riders have, of letting their legs shake against the sides of the horse: if a horse is taught, they are then continually pressing him to violent action ; and if he is not they render him insensible and incapable of being taught. The fretting of a hot horse will hence be excessive, as it can no otherwise be moderated than by the utmost stillness of the seat, hands, and legs of the rider.

Coltg at first are taught to bear a bit, and by degrees to pull at it. If they did not press it, they could not be guided by it. By degrees they find their necks strongei than the arms of a man; and that they are capable of making great opposition, and often of foiling their riders. Then is the time to make them supple and pliant. The part which of all others requires most this pliancy is the neck. Hence the metaphor of stiffnecked for disobedient. A horse cannot movp his head but with the muscles of his neck: this may be called his helm ; it guides his course, changes and directs his motion.

In a word, the inexperienced horseman should endeavour to remember on all occasions, that there is an ability and readiness in a horse to move every limb, on a sign given him by the hands or legs of his rider ; as well as to bend his body, and move in a short compass,

quick and collected, so as instantly to be able to perform any motion. See VETERINARY ART.

HORSE'MARTEN, n. s. A kind of large bee.

HORSE'MEAT, n. s. Horse and meat. Pro-vender.

Though green peas and beans be eaten sooner, yet the dry ones that are used for horsemeat are ripe last.

Ba.con.

HORSE'MINT, n. s. A large coarse mint.

HORSE'MUSCLE, n. s. A large muscle.

The great horsemuscle, with the fine shell, that breedeth in ponds, do not only gape and shut as the oysters do, but remove from one place to another.

Bacon.

HORSENS, a well-built sea-port of Jutland, on the Cattegat. It contains about 2400 inhabitants, and has manufactures of flannel and woollen stuffs, and good fisheries. Nineteen miles S. S. W. of Aarhuus. Long. 9° 52' E., lat. 55° 52' N

HORSE'PLAY,n.s. Horse and play. Coarse, rough, rugged play.

He is too much given to horseplay in his raillery, and comes to battle like a dictator from the plough.

Dry den. VOL. XL.— PART 2.

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HORSE'POND, ». s. Horse and pond. A pond for horses.

HORSE'RACE, n.s. Horse and race. A match of horses in running.

In horseraces men are curious that there be not the least weight upon the one horse more than upon the other. Bacon.

Trajan, in the fifth year of his tribuneship, entertained the people with a fwrserace. Addison.

HORSE'RADISH, n. $. Horse and radish. A root acrid and biting : a species of scurvy-grass.

Horseradish is increased by sprouts spreading from the old roots left in the ground, that are cut or bro-ken off. Mortimer.

Stomachicks are the cresse acrids, as horteradith and scurvy-grass, infused in wine.

Floyer on the Humouri.

HORSE'SHOE, n.s. Horse and shoe. A plate of iron nailed to the feet of horses. An herb.

I was thrown into the Thames, and cooled glowing hot in that surge, like a horseshoe. Shakspeare.

HORSESHOE, in fortification, a work sometimes of a round, soxnetimes of an oval figure, enclosed with a parapet, raised in the ditch of a marshy place, or in low grounds ; sometimes also to cover a gate, or to lodge soldiers, to prevent surprises, or relieve a tedious defence.

HORSESHOE HEAD, a disease in infants in which the sutures of the skull are too open, or too great a vacuity is left between them ; so that the aperture shall not be totally closed up, or the cranium in that part not be so hard as the rest for some years after. When the disease continues long, it is reputed a sign of weakness and short life. Sometimes the disorder arises from a collection of water in the head, called an hydrocephalus.

HORSESHOE ISLAND, a low island, near the north coast of New Holland at the bottom of the gulf of Carpentaria, between one and two miles long. Lat. 17° 2' S.

HORSESHOE POINT, the most southerly point, near the east end of the island of St. Christopher. Lono-. 63° 32' Wr., lat. 17° 19' N.

HORSE'STEALER, n. s. Horse and steal. A thief who takes away horses.

He is not a pickpurse, nor a horsettealer ; but, for his verity in love, I do think him as concave as a covered goblet, or a worm-eaten nut.

Shakspeare. As You Like ft.

HORSETAIL, n.s. A plant. See EPHEDRA and EQUISETUM.

HORSETONGUE, n. s. An herb. See Rus-cus.

HORSE-VETCH. Hippocrepis.

HORSE'WAY, n.s. Horse and way. A

broad way by which horses may travel.

Knowest thou the way to Dover ? — Both stile and gate, horseway and footpath.

Shakspeare. King Lear.

HORSE-WORM, in natural history, a species of fly worm called also bott, produced of eggs deposited by a two-winged fly, of the shape and size of the humble bee, in the intestines of horses. See BOTTS.

HORSEY ISLAND, a small island off the coast

of Essex, opposite Walton lights. It is six miles in circumference, and abounds with game. Four miles from Harwich.

HORSHAM, a borough £.nd market town of Sussex, near St. Leonard's forest, thirty-six miles from London, so named from Horsa, brother to Hengist the Saxon. It is one of the largest towns in the county, and has sent members to parliament since the 30th of Edward I. The county gaol is in this town, and the assizes are often held here. It is a borough by prescription, governed by two bailiffs, and burgage holders, &c., who elect the member of parliament. It has a very fine church, and a well-endowed free school ; with a weekly market on Saturday, famous for poultry, and a monthly fair. Here are several meeting-houses

for dissenters, and several charitable gifts to the poor parishioners.

HORSLEY (John), M. A. and F. R. S., a learned English antiquary born at Northumberland, and educated in Scotland, where he took his degree. He was afterwards minister of a dissenting congregation in Northumberland, where he died in 1731. He wrote an extensive and learned work, entitled Britannia Romana, wherein he gives a copious and accurate account of the relics of Roman antiquity in Britain.

HOBSLEY (Samuel), a learned modern di-vine of the English church, was born October 1733 in St. Martin's in the Fields, London, of which parish his father held the curacy. His grandfather was a dissenter. He was educated, according to some accounts, at Westminster •school, and at Trinity Hall, Cambridge, where he took the degree of LL. B. in 1758 : but Mr. Chalmers disputes his ever being at Westminster. Having been ordained, he became curate to his father, then rector of Newington Butts, which benefice he resigned to his son in 1759. In 1767 he was chosen a fellow of the Royal Society ; and published the same year an elaborate treatise, entitled The Power of God deduced from the computable instantaneous production of it in the Solar System, 8vo. This he afterwards called 'a singular and whimsical production, which would in all probability roll down the gutter of time and be forgotten.' In 1768 he went to Christ Church, Oxford, as private tutor to lord Guernsey, son of the earl of Aylesford ; and took at that university the degree of LL. D. In 1770 he printed, at the Clarendon press, Apollonii Pergaei Inclinationum, Libri ii. Restituebat S. Horsley. In November 1773 he was elected secretary to the Royal Society ; and presented by the earl of Aylesford to the rectory of Aldbury, in Surrey, which he held by dispensation, with that of Newington. The next year he published Remarks on the Observations made in the last Voyage towards the North Pole, for discovering the Acceleration of the Pendulum in lat. 79° 50', in a letter to the hon. C. J. Phipps, 4to*; and married, in December, the daughter of the Rev. John Botham, his predecessor at Aldbury. He now (1776) circulated proposals for a new edition of the works of Sir Isaac Newton, in five volumes quarto, and procured the patronage of bishop Lowth,.who collated him to a prebend in St. Paul's. He resigned Aldbury in 1779, and the next year obtained the living of

Thorley. In 1781 he became archdeacon of St. Alban's, and early in 1782 vicar of South Weald in Essex. In 1783 and 1784 he was engaged in a controversy with Sir Joseph Banks, respecting his conduct as president of the Royal Society ; and delivered several very

eloquent speeches on the occasion. Dr. Horsley finally withdrew from the society, and about the same period commenced his celebrated controversy with Dr. Priestley. See our article ANTITRINITARIANISM. Lord chancellor Thurlow now presented him to a prebendal stall in the cathedral of Gloucester ; and in 1788 he was, through the same interest, made bishop of St. David's, fully supporting in his episcopal character the reputation for learning and ability which he had previously acquired. His first charge, delivered in 1790, attracted great attention, as did his speech in the house of lords, on tire Catholic bill, May 31st, 1791 . He was promoted to the see of Rochester, and made dean of Westminster in 1793, on which he resigned the living of Newington : and in 1802 he was translated to St. Asaph. He died at Brigh-ton, October 4th, 1806. Bishop Horsley, besides the works noticed, was the author of Critical Disquisitions on the 18th chapter of Isaiah, 4to.; Hosea, a new translation, with notes, 4to. ; a Translation of the Psalms, 2 vols. ; Biblical Criticisms; 4 vols. 8vo.; Sermons; Charges; Elementary Treatises on the Mathematics ; on the Prosodies of the Greek and Latin Languages ; and Various Papers in the Philosophical Transactions.

HORSTIUS (Dr. James), professor of medicine in the university of Helmstadt, was bom at Torgau, in 1537, and took the degree of M. D. at Francfort in 1562. He wrote five treatises ; 1. On the Qualities of a Good Physician ; 2. On those of a Good Apothecary ; 3. On the Plague, in German; 4. A Commentary in Hbros Hippocratis de corde; and, 5, De Noctambulis, on Sleep-walkers. He died in 1600.

HORSTIUS (Gregory), M. D., nephew of the above, called the ˆEsculapius of Germany, was also born at Torgau in 1578. He graduated at Basil in 1606, and was professor of physic in several universities. He published several books, which are esteemed, and died at Ulm in

HORTA'TION, n. *.} Lat. hortatio, hortar. HOR'TATIVE, n. s. >The act of exhorting or HOR'TATORY, adj. J encouraging ; a precept which animates or exhilarates. Hortatory, applicable to precepts, not to persons; lively, animating, Sic.; as a hortatory speech, not a hortatory speaker.

HORTENSIUS (Lambert), a philosopher, historian, and poet, born at Utrecht in 1501. He assumed this name because his father was a gardener. He studied at Louvain, and was many years rector at Naarden, where he died in 1577. He wrote De Bello Germanico, and several other works.

HORTENSIUS (Martin), a celebrated astronomer, born at Delft in 1605. He wrote a treatise De Mercurio sub sole viso, et Venere in visa; also two tracts De Utilitate et Dignitate Mathe-seos ; et de Oculo ejusque pracstantiA. He died in 1539.

HOR TIC ULTURE, n. *. > Lat. hortus and HOR'TULAH, adj.) adtura. The art

of cultivating gardens Hortulan, belonging to

a garden.

This seventh edition of my hortulan kalendar is

yours. Eoelyn.

HORTICULTURE (of Latin hortus, a garden, and colo I till or dress) is the art of practical gardening, and we adopt this term in preference, because of its direct bearing upon practical operations, as well as because it has been very properly used of late to designate some important societies of gentlemen associated to promote the art — the

principal of which was established at London, in 1809.

We shall not detain the reader with the praises of this pursuit, to be found in almost all our polite writers, but adopt a brief sketch of its history from Horace Walpole, and proceed to give practical directions : —

SECT. I. — HISTORY OF GARDENING.

‘ Gardening,’ says Mr. Walpole, ‘ was probably one of the first arts that succeeded to that of building houses, and naturally attended property and individual possession. Culinary, and afterwards medicinal herbs, were the objects of every head of a family : it became convenient to have them within reach, without seeking them at random in woods, in meadows, and on mountains, as often as they were wanted. When the earth ceased to furnish spontaneously all those primitive luxuries, and culture became requisite, separate enclosures for rearing herbs grew expedient. Fruits were in the same predicament ; and those most in use, or that demanded attention, must have entered into and extended the domestic enclosure. Noah planted a vineyard, and drank of the wine ; and thus were vineyards, as well as kitchen-gardens and orchards, introduced. No doubt the prototype of all these was the garden of Eden.’

‘ We have reason to think, that for many centuries the term garden implied no more than a kitchen-garden or orchard. The garden of Alcinous, in the Odyssey, is the most renowned in the heroic times. No admirer of Homer can read this description without rapture.’ ‘ Yet,’ continues our author, ‘ what was that boasted paradise with which

the gods ordained To grace Alcinuus and his happy land ?

Why, divested of harmonious Greek and bewitching poetry, it was a small orchard and vineyard, with some beds of herbs and two fountains that watered them, enclosed within a quickset hedge. The whole compass of this pompous garden contained four acres. The trees were apples, figs, pomegranates, pears, olives, and vines. Alcinous’s garden was planted by the poet, enriched by him with the fairy gift of eternal summer, and was no doubt an effort of imagination surpassing any thing he had ever seen. As he has bestowed on the same happy prince a pa-

lace with brazen walls, and columns of silver, he certainly intended that the gardens should be proportionably magnificent.’

The hanging gardens of Babylon were a still greater prodigy. But, as they are supposed to have been formed on terraces, Mr. Walpole concludes, ‘ they were, what sumptuous gardens have been in all ages till the present, unnatural, enriched by art, possibly with fountains, statues, balustrades, and summer-houses, and were any thing but verdant and rural.’ The suiting of the situation to the nature of the trees seems, from the account given by Josephus, (Contra Apion, lib. i. s. 19), to have been one view in these erections. And the success seems to have been answerable, as the trees, says Quintus Curtius, lib. 5, flourished extremely well, and grew as tall as in their native situations.

The eastern gardens appear to have been planted adjoining to the house or palace to which they belonged. Thus king Ahasuerus went immediately from the banquet of wine to walk in the garden of the palace. Esther, vii. 7. The gar-den of Cyrus, at Sardis, mentioned by Xenophon, seems also to have been contiguous to the palace : as was that of Attalus, mentioned by Justin, lib. xxxvi. c. 4.

The character of the gardening, among the Greeks, it is not very easy to ascertain. The Academus was a wooded shady place ; and the trees appear to have been of the olive species. It was situated beyond the limits of the walls, and adjacent to the tombs of the heroes ; and, though we are not informed of the particular manner in which this grove was laid out, it may be gathered from Pausanias’s Attica, that it was elegantly ornamented. At the entrance was an altar dedicated to Love. Within were the altars of Prometheus, the Muses, Mercury, Minerva, and Hercules; and at a small distance the tomb of Plato. So that, in all probability, it was highly adapted by art, as well as nature, to philosophic reflection and contemplation. Plutarch says, ‘ that before the time of Cimon, the Academus was a rude and uncultivated spot: but that it was planted by that general, and had wa-ter conveyed to it. It was divided into gymnasia, or places of exercise, and philosophic walks, shaded with trees. These flourished very well, until they were destroyed by Sylla, along with those in the Lyceum. Near the academy were the gardens of the philosophers, of Plato and Epicurus ; which, however, were probably but small. The scene of Plato’s Dialogue concerning Beauty is elegantly described as being on the banks of the Ilissus, and under the shade of the plantane ; but, as no artificial arrangement of objects is mentioned, the prospect seems to have been merely natural.

A taste for gardening does not appear to have prevailed among the Romans, otherwise than as a matter of utility, till a very late period ; at least the writers on husbandry, Cato, Varro, Columella, and

Palladius, make no mention of a garden as an object of pleasure, but solely with

respect to its productions of herbs and fruits. The gardens of Lucullus are the first we find mentioned of remarkable magnificence ; though indeed, from the extravagance to which these were arrived, it is evident they could not be the first. Plutarch speaks of them as incredibly expensive, and equal to the magnificence of kings. They contained artificial elevations of ground to a surprising height, of buildings projected into the sea, and vast pieces of water upon land. In short, his extravagance was so great, that he acquired the appellation of the Roman Xerxes. It is not improbable, from the consideration of Lucullus having spent much time in Asia, in a situation wherein he had an opportunity of observing the most splendid constructions of this kind, that these gardens might be laid out in the Asiatic style.

The Tusculan villa of Cicero, though often mentioned, is no where described in his works, so as to give an adequate idea of the style in which his gardens were disposed ; and little is to be traced in Virgil relative to this subject. Pines, it seems probable, were a favorite ornament in gardens (Eccl. vii. 65) ; and flowers, roses especially, were much esteemed (Georg. iv. 118), perfumes indeed having been always highly valued in warm climates. Virgil places Anchises in Elysium, in a grove of bays, of the sweet-scented kind. There appears also to have prevailed among the Romans a piece of luxury relative to gardens, which is equally prevalent at present among us, namely, the forcing of flowers at seasons of the year not suited to their natural blowing : and roses were then, as at present, the principal flowers upon which these experiments were tried ; as appears from Martial, Lampridius, and others. See Epig. 1. vi. ep. 80, &c.

When Roman authors, Mr. Walpole remarks, whose climate instilled a wish for cool retreats, speak of their enjoyments in that kind, they sigh for grottoes, caves, and the refreshing hollows of mountains, near

irriguous and shady founts ; or boast of their porticoes, walks of plants, canals, baths, and breezes from the sea. Their gardens are never mentioned as affording shade and shelter from the rage of the dog-star. Pliny has left us descriptions of two of his villas. As he used his Laurentine villa for his winter retreat, it is not surprising that the garden makes no considerable part of the account. All he says of it is, that the gestatio, or place of exercise, which surrounded the garden (the latter consequently not being very large), was bounded by a hedge of box, and, where that was perished, with rosemary ; that there was a walk of vines ; and that most of the trees were fig'and mulberry, the soil not being proper for any other sorts. On his Tuscan villa he is more diffuse ; the garden makes a considerable part of the descriptio" : — and what was the principal beauty of that pleasure ground ? Exactly what was the admiration of this country about a century ago ; box trees cut into monsters, animals, letters, and the names of the master and the artificer. In an age when architecture displayed all its grandeur, all i.s purity, and all its taste ; when arose Vespasian's amphitheatre, the temple of Peace,

Trajan's forum, Domitian's baths, and Adrian's villa, the ruins and vestiges of which still excite our astonishment ; a Roman consul, a polished emperor's friend, and a man of elegant literature and taste, delighted in what the mob now scarcely admire in a college garden. All the ingredients of Pliny's corresponded exactly with those laid out by London and Wise on Dutch principles. He talks of slopes, terraces, a wilderness, shrubs methodically trimmed, a marble basin, pipes spouting water, a cascade fall tug into the basin, by trees alternately planted with planes, and a straight walk, whence issued others parted off by hedges of box and apple-trees, with obelisks placed between every two There wants nothing but the embroidery of a parterre, to make a garden in the reign of Trajan serve for the description of one in that of king William III. In one passage, however, Pliny seems to have conceived that natural irregularity might be a beauty ; in opere urbanissimo, says he, subita velut illati ruris imitatio. Something like a rural view was contrived amidst so much polished composition. But the idea soon vanished ; lineal walks immediately enveloped the slight scene, and names and inscriptions in box again succeeded to compensate for the daring intrusion of nature.

In the paintings found at Herculaneum are a few traces of gardens. They are small square enclosures, formed by trellis-work and espaliers, and regularly ornamented with vases, fountains, and careatides, elegantly symmetrical, and pro-per for the narrow spaces

allotted to the garden of a house in a capital city.

From these remarks it appears how naturally and insensibly the idea of a kitchen garden slid into that which has for so many ages been peculiarly termed a garden, and by our ancestors in this country distinguished by the name of a pleasure garden. A square piece of ground was originally parted off in early ages for the use jf the family : to exclude cattle, and ascertain the property, it was separated from the fields by a hedge. As pride and design of privacy increased, the enclosure was dignified by walls; and, in climes where fruits were not lavished by the ripening glow of nature and soil, fruit trees were assisted and sheltered from surrounding winds by the like expedient ; for the inundation of luxuries, which have swelled into general necessities, have almost all taken their source from the simple fountain of reason.

When nature and prospect were thus excluded, by the custom of making square gardens enclosed with walls, pomp and solitude combined to call for something that might enrich and enliven the insipid and unanimated partition. Fountains, first invented for use, which grandeur loves to disguise and throw out of sight, received embellishments from costly marbles, and, at last, to contradict utility as it were, tossed their waste of waters into air in spouting columns. Art, in the hands of rude man, had at first been made a succedaneum to nature ; in the hands of ostentatious wealth it became the means of opposing nature ; and, the more it traversed the march of the latter, the more nobility thought its power was demonstrated. Canals measured by the

line were introduced in lieu of meandering streams, and terraces were hoisted aloft in opposition to the facile slopes that imperceptibly unite the valley lo the hill. Balustrades defended these precipitate and dangerous elevations, and flights of steps rejoined them to the subjacent flat from which the terrace had been dug. Vases and sculpture were added to the unnecessary balconies, and statues furnished the lifeless spot with mimic representations of the excluded sons of men. Thus difficulty and expense were the constituent parts of those sumptuous and selfish solitudes ; and every improvement that was made was but a step farther from nature. The tricks of water-

works to wet the unwary, not to refresh the panting spectator; and parterres embroidered in patterns like a petticoat, were but the childish endeavours of fashion and novelty to reconcile greatness to what it surfeited on.

To crown these impotent displays of false taste, the shears were applied to the lovely wildness of form with which nature has distinguished each various species of tree and shrub. The venerable oak, the romantic beech, the useful elm, even the aspiring circuit of the lime, the regular round of the chestnut, and the almost moulded orange-tree, were corrected by such fantastic admirers of symmetry. The compass and square were of more use in plantations than the nursery-man. The measured walk, the quincunx, and the etoile, imposed their unsatisfying sameness on every royal and noble garden. Trees were headed, and their sides pared away : many French groves seem green chests set upon poles. Seats of marble, arbors, and summer-houses, terminated every vista; and symmetry, even where the space was too large to permit its being remarked at one view, was so essential, that, as Pope observed, —

• Each alley has a brother, And half the garden just reflects the other.

It does not precisely appear what our ancestors meant by a bower: it was probably an arbor; sometimes it meant the whole frittered enclosure, and in one instance it certainly included a labyrinth. Rosamond's bower was indisputably of that kind ; though whether composed of walls or hedges we cannot determine. A square and a round labyrinth were so capital ingredients of a garden formerly, that in Du Cer-ceau's architecture, who lived in the time of Charles IX. and Henry III., there is scarcely a ground-plot without one of each.

In Kip's Views of the Seats of our Nobility and Gentry, every house is approached by two CT three gardens, consisting, perhaps, of a gravel walk, and two grass-plats or borders of flowers. Each rises above the other by two or three steps, and as many walls and terraces, and so many iron gates, that we recollect those ancient romances in which every entrance was guarded by giants or dragons. Yet, though these and such preposterous inconveniences prevailed from age to age, good sense in this country had perceived tne want of something at once more grand and more natural.

These reflections, and the bounds set to the waste made by royal spoilers, gave origin to parks. They were contracted forests, and ex-

tended gardens. Hentzer says, after Rous of Warwick, the first park was that at Woodstock. If so, it might be the foundation of a legend that Henry II. secured his mistress in a labyrinth ; it was no doubt more difficult to find her in a park than in a palace, where the intricacy of the woods, and various lodgings buried in covert, might conceal her actual habitation. It is more extraordinary that, having so long ago stumbled on the principle of modern gardening, we should have persisted in retaining its reverse, symmetrical and unnatural gardens.

Milton's description of Eden is a warmer and more just picture of the present style than Claude of Lorraine could have painted from Hagley or Stourhead. The first lines we quote exhibit Stourhead, says our author, on a more magnificent scale : —

Through Eden went a river large, Nor changed his course, but through the shaggy hill Passed underneath ingulphed : for God had thrown That mountain as his garden mound, high raised Upon the rapid current

Hagley seems pictured in what follows : —

Which through veins

Of porous earth, with kindly thirst updrawn, Rose a fresh fountain, and with many a rill Watered the garden

What coloring, what freedom of pencil, what landscape in these lines !

From that sapphire fount the crisped brooks,

Rolling on orient pearl and sands of gold, With mazy error under pendent shades, Ran nectar, visiting each plant, and fed Flowers worthy of Paradise, which not nice art In beds and curious knots, hut nature boon Poured forth profuse on hill and dale and plain, Both where the morning sun first warmly siiioie The open fields ; and where the unpierced shade, Imbrowned the noontide bowers : — Thus was this

place A happy rural seat of various view.

Now let us turn to an admired writer, posterior to Milton, and see how cold, how insipid, how tasteless is his account of what he pronounced a perfect garden. We speak not of his style, which it was not necessary for him to animate with the coloring and glow of poetry. It is his want of ideas, of imagination, of taste, that deserve censure, when he

dictated on a subject which is capable of all the graces that a knowledge of beautiful nature can bestow. Sir Wil- ‘iam Temple was an excellent man; Milton, a genius of the first order.

‘ The best figure of a garden,’ says Sir William, ‘ is either a square or an oblong, and either upon a flat or a descent : they have all their beauties, but the best I esteem an oblong upon a descent. The beauty, the air, the view, make amends for the expense, which is very great in finishing and supporting the terrace walks, in levelling the parterres, and the stone stairs that are necessary from one to the other. The perfectest figure of a garden I ever saw, either at home or abroad, was that of Moor park in Hertfordshire, when I knew it about thirty years ago. It was made by the countess of Bedford, esteemed among the greatest wits of her time, and celebrated by Dr Donne; and with very great care, excellent con-

trivance, and much cost ; but greater sums may be thrown away without effect or honor, if there want sense in proportion to money, or ‘ if nature be not followed; which I take to be the great rule in this, and perhaps in every thing else, as far as the conduct not only of our lives but of our governments.’ [We shall see how natural that admired garden was.] ‘ Because I take the gar-den I have named to have been in all kinds the most beautiful and perfect, at least in the figure and disposition, that I ever have seen, I will describe it for a model to those that meet with such a situation, and are above the regard of common expense. It lies on the side of a hill, upon which the house stands, but not very steep. The length of the house, where the best rooms and those of most use or pleasure are, lies upon the breadth of the garden ; the great parlour opens into the middle of a terrace gravel walk that lies even with it, and which may lie, as I remember, about 300 paces long, and broad in proportion ; the border set with standard laurels and at large distances, which have the beauty of orange trees out of flower and fruit. From this walk are three descents by many stone steps, in the mid-dle, and at each end, into a very large parterre. This is divided into quarters by gravel-walks, and adorned with two

fountains and eight statues in the several quarters. At the end of the terrace walk are two summer houses, and the sides of the parterre are ranged with two large cloisters open to the garden, upon arches of stone, and terminating with two other summer-houses even with the cloisters, which are paved with stone, and designed for walks of shade, there being none other in the whole parterre. Over these two cloisters are two terraces covered with lead and fenced with balusters ; and the passage into these airy walks is out of the two summer-houses at the end of the first terrace walk. The cloister facing the south is covered with vines, and would have been proper for an orange house, and the other for myrtles or other more common greens, and had, I doubt not, been cast for that purpose, if this piece of gardening had been then in as much vogue as it is now. From the middle of this parterre is a descent by many steps flying on each side of a grotto that lies between them, covered with lead, and flat, into the lower garden, which is all fruit-trees ranged about the several quarters of a wilderness, which is very shady ; the walks here are all green, the grotto embellished with figures of shell rock-work, fountains, and water-works. If the hill had not ended with the lower garden, and the wall were not bounded by a common way that goes through the park, they might have added a third quarter of all greens ; but this want is supplied by a garden on the other side the house, which is all of that sort, very wild, shady, and adorned with rough rock -work and fountains. This was Moor Park when I was acquainted with it, and the sweetest place, I think, that I have seen in my life, either before or since, at home or abroad.'

' It is unnecessary to add any remarks on this description. Any man might design and build as sweet a garden, who had been born in and never stirred out of Holborn. It is not,

however, peculiar to Sir William Temple to think in that manner. How many Frenchmen are there who have seen our gardens, and still prefer unnatural flights of steps and shady cloisters covered with lead ! Le Nautre, the architect of the groves and grottoes of Versailles, came hither on a mission to improve our taste. He planted St. James's and Greenwich parks — no great monuments of his invention.'

' Fortunately Kent and a few others were not quite so timid, or we might still be going up and down stairs in the open air. It is true, we have heard much lately, as Sir William Temple did, of irregularity and imitations of nature in the gardens or grounds of the Chinese. The former is certainly true : they are whimsically irregular, as European

gardens are formally uniform and unvaried : but, with regard to nature, it seems as much avoided as in the squares and oblongs and straight lines of our ancestors. An artificial perpendicular rock starting out of a flat plain, and connected with nothing, often pierced through in various places with oval hollows, has no more pretension to be deemed natural than a lineal terrace or a parterre.

* Having thus cleared our way by ascertaining what have been the ideas of gardening in all ages, as far as we have materials to judge by, it remains to show to what degree Kent invented the new style, and what hints he had received to suggest and conduct his undertaking. We have seen what Moor Park was, when pronounced a standard. But, as no succeeding generation in an opulent and luxurious country contents itself with the perfection established by its ancestors, more perfect perfection was still sought; and improvements had gone on, till London and Wise had stocked all our gardens, with giants, animals, monsters, coats of arms, and mottos, in yew, box, and holly. Absurdity could go no farther, and the tide turned. Bridg-man, the next fashionable designer of gardens, was far more chaste; and whether from good sense, or that the nation had been struck by the admirable paper in the Guardian, No. 173, he banished verdant sculpture, and did not even revert to the square precision of the foregoing age. He enlarged his plans, disdained to make every division tally to its opposite ; and though he still adhered much to straight walks with high clipped hedges, they were only his great lines ; the rest he diversified by wilderness, and with loose groves of oak, though still within surrounding hedges. As his reformation gained footing, he ventured, in the royal garden at Richmond, to introduce cultivated fields, and even morsels of forest appearance, by the sides of those endless and tiresome walks that stretched out of one into another without intermission. But this was not till other innovators had broke loose too from rigid symmetry. But the capital stroke, the leading step to all that has followed, was the destruction of walls for boundaries, and the invention of fosses— an attempt then deemed so astonishing, that the common people called them Ha ! Ha's ! to express their surprise at finding a sudden and unperceived check to their walk. No sooner was this simple enchantment made, than levelling, mowing, and rolling, fol-HORTICULTURE.

lowed. The contiguous ground of the park without the sunk fence was to be harmonised with the lawn within ; and the garden in its turn was to be set free from its prim regularity, that it might assort with the milder country without. The sunk-fence ascertained the specific garden ; but that it might not draw too obvious a line of distinction between the neat and the rude, the contiguous outlying parts came to be included in a kind of general design; and, when nature was taken into the plan, under improvements, every step that was made pointed out new beauties, and inspired new ideas. At that moment appeared Kent ; painter enough to taste the charms of landscape, bold and opinionative enough to dare and to dictate, and born with a genius to strike out a great system from the twilight of imperfect essays. He leaped the fence, and saw that all nature was a garden. He felt the delicious contrast of hill and valley changing imperceptibly into each other, tasted the beauty of the gentle swell or concave slope, and remarked how loose groves crowned an easy eminence with happy ornaments ; and, while they called in the distant view between their graceful stems, removed and extended the perspective by delusive comparison.

‘ Thus the pencil of his imagination bestowed all the arts of landscape on the scenes he handled. The great principles on which he worked were perspective, light, and shade. Groups of trees broke too uniform or too extensive a lawn ; evergreens and woods were opposed to the glare of the champaign ; and where the view was less fortunate, or so much exposed as to be beheld at once, he blotted out some parts by thick shades, to divide it into variety, or to make the richest scene more enchanting by reserving it to a farther advance of the spectator’s step. Thus selecting favorite objects, and veiling deformities by screens of plantations ; sometimes allowing the rudest waste to add its soil to the richest theatre : he realised the compositions of the greatest masters in painting. Where objects were wanting to animate his horizon, his taste as an architect could bestow immediate termination. His buildings, his seats, his temples, were more the works of his pencil than of his compasses. We owe the restoration of Greece and the diffusion of architecture to his skill in landscape. But of all the beauties he added to the face of this beautiful country, none surpassed his management of water. Adieu to canals, circular basins, and cascades tumbling down marble steps, that last absurd magnificence of Italian and French villas. The forced elevation of cataracts was no more. The gentle stream was taught to serpentize seemingly at its pleasure ; and, where discontinued by different levels, its course appeared to be concealed by thickets properly interspersed, and glittered again at a distance, where it might be supposed naturally to

arrive. Its borders were smoothed, but preserved their waving irregularity. A few trees scattered here and there on its edges sprinkled the tame bank that accompanied its meanders ; and when it disappeared among the hills, shades descending from the heights leaned towards its progress, and framed the distant point of light

under which it was lost, as it turned aside to either hand of the blue horizon.

‘ Succeeding artists have added new master-strokes to these touches ; perhaps improved or brought to perfection some that have been named. The introduction of foreign trees and plants contributed essentially to the richness of coloring so peculiar to our modern landscape. The mixture of various greens, the contrast of forms between our forest trees and the northern and West Indian firs and pines, are improvements more recent than Kent, or but little known to him. The weeping willow and every florid shrub, each tree of delicate or bold leaf, are new tints in the composition of our gardens. But just as the encomiums are that have been bestowed on Kent’s discoveries, he was neither without assistance nor faults. Pope undoubtedly contributed to form his taste. The design of the prince of Wales’s garden at Carlton House was borrowed from the poet’s Twickenham. There was a little of affected modesty in the latter, when he said, of all his works, he was most proud of his garden. And yet it was a singular effort of art and taste to impress so much variety and scenery on a spot of five acres. The passing through the gloom from the grotto to the opening day, the retiring and again assembling shades, the dusky groves, the larger lawn, and the solemnity of the termination at the cypresses that ied up to his mother’s tomb, were managed with exquisite judgment; and though lord Peterborough assisted him

‘ To form his quincunx, and to rank his vines.’ those were not the most pleasing ingredients of his little perspective.’

Having routed professed art (for the modern gardener exerts his talents to conceal his art), Kent, like other reformers, knew not how to stop at the just limits. He had followed nature, and imitated her so happily, that he began to think all her works were equally proper for imitation. In Kensington Garden he planted dead trees, to give a greater air of truth to the scene — but he was soon laughed out of this excess. His ruling principle was, that nature abhors a straight line. His mimics, for every genius has his apes, seemed to think that she could love nothing but what was crooked. Yet so many men of taste of all

ranks devoted themselves to the new improvements, that it is surprising how much beauty has been struck out, with how few absurdities. Still in some lights the reformation seems to have been pushed too far. Though an avenue crossing a park or separating a lawn, and intercepting views from the seat to which it leads, are capital faults ; yet a great avenue cut through woods, perhaps before entering a park, has a noble air. In other places the total banishment of all particular neatness immediately about a house, which is frequently lefi gazing by itself in the middle of a park, is a defect. Sheltered, and even close walks, in so very uncertain a climate as ours, are comforts ill exchanged fcr the few picturesque days we enjoy ; and whenever a family can purloin a warm and even something of an old fashioned garden, from the land scape designed for them by the undertaker in fashion, without interfering with the picture.

they will fini satisfaction on those days which do not invite strangers to come and see their improvements.'

Thus we have brought down the history of this elegant art to the present period. And from what has been said, it must be evident that gardening, in the perfection to which it is now brought in Britain, is entitled to a place of considerable rank among the liberal arts. ' It is,' says Mr. Wheatley, ' as superior to landscape-painting as a reality to a representation : it is an exertion of fancy ; a subject for taste ; and being released now from the restraint of regularity, and enlarged beyond the purposes of domestic convenience, the most beautiful, the most simple, the most noble scenes of nature, are all within its province. For it is no longer confined to the spots-from which it takes its name ; but regulates also the disposition and embellishments, of a park, a farm, a forest, &c., and the business of a gardener is to select and apply whatever is great, elegant, or characteristic, in any of them ; to discover, or to show all the advantages of the place upon which he is employed ; to supply its defects, to correct its faults, and to improve its beauties.'

Enough has been said upon the large scale of ornamental gardening.

We shall now restrict ourselves to the description of such a plan of gardening as will be found to answer best for those who prefer the utile to the dulce, and re-gard usefulness and convenience more than ornament.

SECT. II. — OF THE CHOICE OF GROUND FOR A GARDEN

When, you have the choice of a place proper for a garden, the most essential points to be considered are, general situation, soil, exposure, water, and prospect.

The situation ought to be moderately elevated : if a garden be too high it will be exposed to the winds, which are very prejudicial to trees ; if it be too low, the dampness, the vermin, and the creatures that breed in ponds and marshy places will add much to its insalubrity. The best situation is on the side of a hill, especially if the slope be easy ; if a good deal of level ground be near the house ; and if it abound with springs : for being sheltered from the fury of the winds, and the violent heat of the sun, a temperate air will be enjoyed; and the water that descends from the hill, either from springs or rain, will not only supply fountains, &c. for ornament, buf, when it has performed its office, will water the adjacent valleys.

A good soil is next to be considered; for it is scarcely possible to make a fine garden in a bad soil. There are indeed methods of meliorating ground, but they are expensive ; and sometimes, when the expense has been bestowed of laying good earth three feet deep over the whole surface, a garden has been ruined, when the roots of the trees have reached the natural bottom. To judge of the quality of the soil, observe whether heath, thistles, or such like weeds, grow spontaneously, in it ; and, if there be large trees near, whether they grow crooked and ill shaped ; and are of a faded green, and full of moss, or ver-

min : in all such cases the place is to be rejected But, if it be covered with grass fit for pasture, the depth of the soil may be tried by digging holes three or four feet deep ; and if there be three fee*. of good earth it will do very well, but less thar two will not be sufficient. The quality of good ground is neither to be stony nor too hard to work ; neither too dry, too moist, nor too sandy and light ; nor too strong or clayey, which is the worst of all for gardens.

The next requisite is water ; the want of which is one of the greatest

inconveniences that can attend a garden, and will bring a certain mortality upon whatever is planted in it, especially in the droughts that often happen in a hot and dry situation in summer ; add to this, its usefulness in making fountains, canals, cascades, &c., which are the greatest ornaments of any garden.

The last thing to be considered is the prospect of a fine country; and, though this is not absolutely necessary, yet it is one of the most agreeable accompaniments of a garden ; besides, if a garden be planted in a low place that has no kind of prospect, it will not only be disagreeable but unwholesome.

SECT. III. — OF LAYING OUT AND PLANTING GARDENS.

Gardens are usually distinguished into Flower, Fruit, and Kitchen Gardens. The first, being designed for pleasure and ornament, is generally placed next the back front of the house; and the two latter, being designed for use, are less conspicuous. But, though the fruit and kitchen gardens are here mentioned as distinct, they are often united ; they equally require a good soil and exposure, and should both be placed out 01 the view of the house. According to Miller, the area of a handsome garden may take up thirty or forty acres, but no more ; and the following rules should be observed in the disposition of it. There ought always to be a descent of at least three steps from the house ; this will render the house more dry and wholesome, and the prospect on entering the garden more extensive. The first thing that should here present itself should be an open lawn of grass ; which ought to be considerably broader than the front of the building ; and, if the depth be one-half more than the width, it will have a better effect : if on the sides of the lawn there are trees planted irregularly, by way of open groves, the regularity of the lawn will be broken, and the whole rendered more like nature.

For the convenience of walking in damp weather, this lawn should be surrounded with a gravel walk, on the outside of which should be borders three or four feet wide for flowers ; and from the back of these the prospect will be agreeably terminated by a slope of evergreen shrubs; which, however, should never be suffered to exclude agreeable prospects, or the view of handsome buildings. These walks may lead through the different plantations, gently winding about in an easy natural manner ; and, as no garden can be pleasing where there is a want of shade or shelter, they should lead as soon as possible into plantations

Narrow rivulets, which have a constant stream,

if they are judiciously led about the garden, have a better effect than large stagnating ponds or canals. When wildernesses are intended, they should not be cut into stars and other ridiculous figures, nor formed into mazes or labyrinths, or any thing which in a great design might appear trifling.

In a word, the several parts of a garden should)e diversified ; but, in places where the eye takes in the whole at once, the two sides should be always the same. The general disposition of a garden and of its parts ought to be accommodated to the different situations of the ground, to hu-mor its inequalities, to proportion the number of sorts of trees and shrubs to each part, and to shut out from the view of the garden no objects that may become ornamental.

Practical attention to a garden is by some esteemed a degrading employment. It is true, indeed, that pastoral and agricultural manners, if we may form a judgment from the dignified descriptions of Virgil, are greatly degenerated. The employments of shepherds and husbandmen are now become mean and sordid, and the work of the garden is usually left to a peasant. But the operations of grafting, of inoculating, of pruning, of transplanting, are curious experiments in natural philosophy; and, that they are pleasing as well as curious, those can testify who remember what they felt on seeing their attempts in these brandies of practical gardening attended with success. Among the employments suitable to old age, Cicero has enumerated the superintendance of a garden. It requires no great exertion of mind or body ; and its satisfactions are of that kind which please without violent agitation. Its beneficial influence on health is an additional reason for an attention to it at an age when infirmities abound.

A very limited tract, properly attended to, will furnish ample employment for an individual. Nor let it be thought a mean care ; for the same hand that raised the cedar, formed the hyssop on the wall. Even the orchard, cultivated solely for ad vantage, exhibits beauties unequalled in the shrubbery ; nor can the greenhouse produce an

appearance to excel the blossom of the apple and the almond.

The kitchen garden ought to be situated on one side of the house, near the stables, whence the dung may be easily conveyed to it ; and, af-ter having built the wall, borders should be made under them, which, according to Mr. Miller, should be eight or ten feet broad. Upon these borders, exposed to the south, many sorts of early plants may be sown ; and, upon those exposed to the north, may be sown some late crops ; taking care not to plant any deep-rooting plants, especially beans and peas, too near the fruit trees.

Next proceed to divide the ground into quarters ; the best figures for these are a square or an oblong, if the ground will admit of it. The size of these quarters should be proportioned to that of the garden ; if too small, the ground will be lost in walks, and, the quarters being enclosed by espaliers of fruit trees, the plants will draw up slender, for want of a more open exposure. The walks should also be proportioned to the

size of the ground : these in a small garden should be six feet broad, but in a laige one ten, and ou each side of the walk there should be allowed a border three or four feet wide between it and the espalier. In these borders may be sown small sallads, or any other herbs that do not take deep root or continue long ; but they should not be sown or planted with the same plants two years together.

In the quarter nearest to the stables, and best defended from the cold winds, should be the hotbeds, for early cucumbeis, melons, &c., and to these there should be a passage from the stables, and a gate through which a small cart may en-ter. The most important points of general culture consist in well digging and manuring the soil, and giving a proper distance to each pla«t, according to their different growths : as also in keeping them clear from weeds ; for which purpose, always observe to keep the dunghills free from them, otherwise their seeds will be constantly brought in and spread with the dung.

SECT. IV. — THE GARDENER’S KALENDAR.

Under this head we proceed to point out what is proper to be done in the different months of the year, ir the Kitchen-Garden, Flower-Garden, Orchard, &c. The arrangement is drawn up for the climate of the midland counties of England; but will suit more northern parts where the climate is mild, equally well, upon allowing a difference of

ten or twelve days later for sowing or planting. Where the seasons are still more backward, a proportional allowance will be made by the judicious gardener.

JANUARY.

In January every thing should be done tha. (he •weather and circumstances will permit (even if not absolutely necessary), in order to lessen the tcof <c of next month, which, when it happens to be an open season, is a very important one, in which the loss of a single day is of consequence.

Kitchen garden. — Asparagus, in this season, being one of the greatest rarities which the art of gardening affords, ought to be ˆplanted every month, to have a regular succession of it till April, as it is above three weeks before it will be fit to cut, and the fourth hot-bed should now be made. Beans of the early mazagan sort must be planted for the second crop. Beets and cabbages of every sort, intended to procure seed from, should now be planted, if this was omitted in October. Carrots, to draw young, for the first crop, should now be sown; and those intended for seed should be planted. Cauliflower plants under glasses and frames should be covered with pea-straw, or mats, to defend them from the frost. Celery should be digged up as soon as the frost begins, for daily use, and the other covered with straw. Cress, mustard, radish, and rape, should be sown every week on a hot-bed. Cucumbers, for the first crop, to come early in March, should now be sown. As soon as they are three or four days' old put each into a small pot, and every week sow more to have plenty of plants. Dung should be wheeled into the kitchen-garden in frosty weather, when other work cannot be done. Endive should be digged up, like the celery, as

soon as the frost begins, and the rest covered with straw. Ground lying vacant should be digged up, if omitted in October, and thrown up into ridges. Hotbeds and loam should be prepared for asparagus, cucumbers, and melons. Lettuces under glasses should be examined, and, if they be killed, sow more on a hot-bed. Mint should be planted

in pots, and, if there be no hot-bed, it will grow in a warm room. Mushroom beds will require regular attendance, and frost and rain must be kept out by dry straw and mats. Onions, to draw young, should be sown on a warm border. Peas under the south wall, for the first crop, should have the earth drawn up to them in a dry day, and sticks placed to them to defend them from the violence of the winds ; and sow the second crop. Plant asparagus for the fourth crop. Beans for the second crop of Mazagans. Beets, cabbages, carrots, parsnips, for seed. Mint and potatoes on a hot-bed. Onions for eschalions and seed. Radishes for the second crop, sow in a warm situation, and the first crop on a hot-bed. Small sallading, as cress, mustard, rape, radishes, sow every week on a hot-bed. Sow carrots for the first crop, and the second of peas. Sow on hotbeds, carrots and cucumbers for the first crop. Cress, mustard, radish, and rape for sallads : sow likewise turnips.

Flower garden and shrubbery. — -Anemones which were planted in the autumn, will require to be covered with pea-straw, rotten tan, or mats. Auricula and polyanthus seeds may now be sown in boxes or pots in mild weather. Auriculas should be sheltered from violent rains and frost by mats ; and at the end of the month fresh earthed . Beds for bulbous roots should be digged and thrown up into ridges, that they may be planted the first fine weather, if any roots remain unplanted ; but it is bad policy not to plant them in October or the beginning of November. Bulbous rooted flowers in boxes or glasses should be removed in frosty weather, before night, from the windows ; nor should they be set on chimney-pieces until they are in flower, for shade draws all flowers up very weak. Boxes under five inches deep, eight wide, and sixteen long, filled with light sandy earth, without any dung, are better than glasses, and will not require so much trouble. Stir up the earth often with a table fork. Carnations must be sheltered from violent rains and frost by mats. Plant at the end of the month, or sooner if the weather be mild, all sorts of bulbous roots, as crocuses, jonquilles, narcissuses, polyanthus-narcissuses, snow-drops, tulips, 8tc. Plant flowering shrubs, which are hardy, and flower early, as almonds, double-flowering cherries, honeysuckles, lilacs, meze-reons, roses, &c. Shrubs and trees of all sorts may be planted at the end of this month. — Trenches should be cut to carry off the water, if it stands any where after heavy rains.

Fruit garden and orchard. — Apple-trees should be pruned as soon as the violent frosts are over. Espaliers ought always to be repaired before the buds of the trees begin to open. The fruit room should be often examined, to pick out all fruit which begins to decay ; and nail mats before the windows to keep out the frost. Ground for

planting should be prepared by digging th* holes ready ; and, if wettish, a cart load of good loam should be brought for each standard tree, and formed into a little hill before the tree be planted. Scrape off the moss from all fruit trees. Orchards in general are much neglected, by not cutting out the dead wood and branches that cross each other, Pear-trees require pruning, both standards, espaliers, and against walls, as soon as the weather becomes mild. Prune currants, gooseberries, and raspberries. Strawberries in pots may be placed on hotbeds for forcing. Vines should not be pruned till towards the end of the month.

Greenhouse. — Air may be given to the plants, if the weather be mild. Fire must be made if it freezes, and particularly when it begins to thaw, or if it is foggy weather, to dry the house ; for dampness is as prejudicial as cold ; and, if there be no flue, light a few candles in frosty weather. To know for a certainty when it begins to freeze, set a pan of water near the windows. Leaves, which are anyway decayed should be constantly picked off, particularly from the geraniums. Succulent plants, such as aloes, ficoides, &c., should not have any water this month. Water for all sorts of plants should be the softest that can be got ; rain-water is the best ; the chillness should be taken off by letting it stand in the house some days before it is used ; and this month it should be given very sparingly. Windows in frosty weather should be kept very close, by pasting strips of paper where the wind blows in, for that contributes to the frost ; and, if the windows must be covered with mats, take them down in the daytime to admit the light; for, if plants be shut up in the dark, their leaves will soon fall off; and the outward door should be opened as seldom as possible ; but, to have it proper, there should be another door leading through a shed.

FEBRUARY.

When the ground can be conveniently worked, this is a very busy month, and no time should be lost, nor hands spared, that every thing may be done in its earliest season. The last u-eek is particularly important ; some full crops should then be sown, and many other things be done which are frequently neglected.

Kitchen garden. — Asparagus should have the mats taken off the glasses, except when it snows; for without light it will not be green ; and the fifth and last crop should be planted on a hot-bed. Beans of the early sorts mu«t now be planted for the third crop, and at the end

of this month the first crop of the large sorts, as Windsor, long-podded, &c. Sow beets, but let the ground be digged very deep. Boorcole or kale, and broccoli, will want earthing up, but let the dead leaves be first picked off. Sow cabbages, for the second crop of sugarloaf, and the first of red, and plant out those sown in August. Sow carrots at the end of the month for the general crop, on a deep sandy soil. Cauliflowers under glasses must be examined, all the dead leaves picked off, and the earth stirred up. In mild weather give them air, and plant some out, leaving only the two strongest under each glass.

Sow the second crop on a gentle hot-bed. Sow celery for the first crop on a gentle hot-bed, and draw earth up to blanch what remains in the ground, in dry weather. Sow coleworts for the first crop : cress and mustard every week on hotbeds. Cucumber beds must be constantly attended to, to keep them up to a proper heat, and another made for the plants raised last month : when they have three or four rough leaves, plant them out, three or four to each light, and sow more seed. Tie up en-dive for blanching, and plant out some for seed. Eschalots, garlic, and rocambole, should not be deferred planting, or the roots will be very small. Ground lying vacant should be digged and thrown up into ridges, to prepare it ready for sowing. Horseradish should now be planted. Hotbeds for cucumbers, melons, and smal1 salhding, prepare, and have plenty of dung. Sow leeks, and mark some for seed. Plant out lettuces from under glasses, if the weather be mild, and sow the second crop. Give plenty of air to the forced ones. Sow melons at the beginning of the month for the first crop, and, •when about three days old, plant each in a small pot. Plant mint in pots on a hot-bed. Defend mushroom beds from wet. Sow onions at the end of this month or beginning of the next for the general crop : weed those sown in autumn, and plant some for seed. Sow parsley for edgings, and some curled, very thin on a bed, to grow large for garnishing of dishes, and the large rooted. Sow parsnips on ground dig-ged very deep. Peas out of the ground should have the earth drawn up to them, as they advance in dry weather, and will require sticking. Sow marrowfats

and other large sorts, and the third crop of hotspurs. Plant asparagus for forcing, for the last crop : beans for a third crop : Windsors for the first : cauliflowers from under the glasses : endives for blanching and seed : eschalots, garlic, and rocambole : horse-radish : lettuces from under glasses : leeks, onions, and parsley for seed : potatoes in hotbeds for the first crop. Uncover radishes in mild weather, and put the straw on again at night. Sow fennel. Sow on hotbeds, cauliflowers, celery, cress, cucumbers, melons, mustard, radish, rape for sallads. Sow spinach, the first crop, and hoe the winter crop if it be too thick. Water should be carried away, if it stands after heavy rains, by cutting trenches.

Fluuer garden and shrubbery. — Anemones and ranunculuses should not be deferred planting the first mild weather, or th?y will flower weak ; and the beds should be prepared some time beforehand. Hardy annual flowers, such as sweet-peas, larkspurs, candy-tuft, alysson, com-bottles, persicarias, and some few others, may be now sown, and they will flower very early. Auriculas must be defended by mats from wet, the decayed leaves constantly pulled off, and fresh earthed. Box for edgings may be planted in mild weather. Bulbous roots of every kind unplanted should not be deferred the first opportunity which offers of mild weather; and let the beds be thrown up into ridges beforehand. Bulbous roots in boxes, pots, or glasses, require a regular attention to water them ; and

the earth should be stirred up once a week. Carnations must be fresh potted, and sheltered from heavy rains by mats. Flowering shrubs and forest trees of all sorts, except evergreens, may be planted at the end of the month. Grass walks, if intended to be made next month, should have the ground prepared by levelling it. Hotbeds for sowing amaranths, balsams, and other tender annuals, should be prepared, and the seed sown at the end of the month. Hyacinths which are above ground should be covered with mats supported by hoops. Mignonette must be sown on a hot-bed, or it will do in a pot placed in a warm room where the sunshine comes ; but let the seed be sown very thin. Perennial-rooted flowers at the end of the month may be removed from the seed-beds, and the old roots transplanted. Plant anemones and ranunculuses. Shrubbery should be digged over and raked smooth, to destroy the young weeds beginning to shoot ; but the trees should first be pruned. Shrubs of all sorts should have the suckers taken off, and, if small, be planted in beds a foot asunder until they are stronger ; and any sorts may now be planted.

Fruit garden and orchard. — Apple anc1 pear trees should be finished pruning the first mild weather. Plant cuttings of currants and gooseberries. Prepare grafts of apples and pears. Place hurdles against peaches, nectarines, and apricots, in the beginning of the month ; they should be about two feet higher than the walls, that they may be set sloping; and must be fastened with stakes, and remain there till the fruit is set. Sow kernels of apples and pears, for stocks. Planting all sorts of fruit-trees should be finished early in the month, and the roots covered with mulch. Pinning wall-trees should be finished. Strawberries may be planted at the end of the month, and the old beds dressed ; those on hotbeds must be frequently watered. Vines, finish pruning before they bleed. Wall-trees, as apricots, nectarines, peaches, plums, pears, should be finished pruning in the month, and those done in October must be examined, and the dead ends cut off.

Greenhouse. — Admit air very freely in mild weather. Earth the top of the pots, but first take out the old an inch deep. Fire must be made in foggy weather to dry the house. Leaves this month decay very fast ; therefore they will require picking off almost every day, but especially from the geraniums. Myrtles, oranges, winter cherries, and some others, water frequently, but not too much at a time. Succulent plants, as aloes, ficoides, &c., must not have any water given them in this month, for it will cause them to rot. Water the plants which require it frequently, but very sparingly ; for too much moisture in the house will injure the plants. Windows may be opened for a few hours in the middle of the day, but should be shut again about two o'clock, or whenever it begins to be foggy.

MARCH.

The Jirst week in this month, like the last in February, is very valuable to the good gardener

and must be used industriously if he would have things in season. Necessary assistance must not be spared. Nature now waits for us, let us not neglect to attend upon her.

Kitchen garden. — Alisanders sown in autumn, should be hoed to a foot asunder, and more seed sown. Aromatic shrubs and herbs on beds, weed and fresh earth, early in the month ; and sow and plant more of all sorts. Dress artichokes, and take the suckers off for a fresh plantation. Asparagus seed must now be sown to raise roots for forcing, and for fresh beds : at the end of about twelve years destroy the old beds, but take up the roots and force them : by now and then making one new bed, a constant succession may be kept up in full vigor. Plant out that which was sown last year. Fork up the beds, and rake them smooth, but do not leave the alleys above six inches lower than the top of the bed. Water the beds in a morning in dry weather, early in the month, with the drainings from a dunghill, to forward them. Make fresh plantations in moist weather. Plant beans for the fourth early crop, and the second of Windsors : cut off the tops of those in flower. Finish sowing beets. Sow boorcole of various sorts for the first crop. Sow broccoli of the early sort for the first crop. Cabbages ; sow the third crop of sugarloaf, the second of red, and the first of savoys. Sow carrots now for the principal crop. Sow capsicums, for pickling, on a hot-bed. Cauliflowers must be planted out, leaving two only of the strongest to each glass : draw earth up to the stems, and prop up the glasses. Prick out those sown last month, and sow the third crop. Prick out the last crop of celery from the seed-bed, and sow the second. Thardons must be sown, and cives planted. Prick out the first crop of colewort. Cress, mustard, radish, and rape, may now be sown in the open ground for sallading ; and cover the seed for a few days with a raat, or place hand-glasses over it. Sow cress and mustard very thin for seed. Cucumber beds must be kept to a good heat, by cutting off some around the sides, and adding fresh hot dung instead of it. Plant out the second crop on a fresh bed. About the 20th sow seeds of the Turkey, and some for bell-glasses. Prepare hotbeds for planting cucumbers and melons. Plant Jerusalem artichokes. Sow leeks. Sow kidney-beans at the end of the month, on a warm border. Plant out lettuces, from under the glasses. Sow the third crop of Cos or other sorts. Plant out melons from the first hot-bed. Sow cantaleupes for the second crop, and some on a tan-bed, and for bell-glasses. Mint beds, weed and earth, ;>nd plant more. Mushroom beds make for summer use. Nasturtiums for pickling, sow at the end of the month. Carefully weed onion beds before the weeds are high ; and finish” sowing the principal crop. Sow parsley, both curled and large rooted. Finish sowing parsnips. Earth up peas in dry weather, and stick. Sow the second crop of marrowfats. Plant artichokes, asparagus, beans, cives, cucumbers, Jerusalem artichokes, lettuces, melons, mushrooms, potatoes, and tarragon. Plant aromatic herbs and shrubs; as balm, camomile, lavender, mint, pennyroyal.

rosemary, rue, sage, savory, thyme, &c, Po* and sweet-herbs should now be sown. Slip pot-marjoram, savory, and thyme. Weed potatoes, and plant the principal crop. Sow radishes, the fourth crop, and rampionr. Sow angelica, basil, borage, burneˆ, celeriac, chervil, clary, corianders, cucumbers, dill, fennel, hyssop, marjoram, marygolds, melons, purslane, rampions, sals?fy, savory, scorzonera, sea-kale, skirrets, sorrel, spinach, tarragon, thyme, tomatoes. Weed spinach, and sow the second crop. Plant tarragon, and sow tomatoes. Turnips, sow the first crop. Sow water-cresses, in a moist place, or where it may be constantly supplied with waste water from the pump. Destroy weeds while small, which will save future trouble.

Flower garden and shrubbery. — Anemones and ranunculuses, if any remain unplanted, must not be deferred longer than the first mild day. Anemones in flower should be covered with mats in windy or rainy weather. Annual flowers which are tender, if sown early in the month, will require a second hot-bed to be transplanted into ; and, if not sown, should not be deferred any longer, to have them early and strong. Sow those also mentioned in sect. II. of the general catalogue, on a moderate hot-bed. Annual flowers of all the hardy sorts in the catalogue may be sown about the middle of the month in small patches where they are to remain ; hollow the earth out in the form of a basin, fifteen inches over, and an inch deep, and sow the seeds very thin all over it, and not a small patch in the mid-dle, as is too frequently the custom. Auriculas should be removed into the stand, and, if some flat oyster-shells be laid on the earth, they will keep it moist, and save trouble in watering them. Borders of the flower-garden will require to be hoed over or weeded, to destroy weeds whicn are beginning to shoot, and then raked, that they may appear neat. Box for edgings, in mild weather. Bulbous roots in beds should be covered with mats in rainy or stormy weather, and the earth stirred gently up with the fingers to destroy the weeds ; those also in the house must be constantly attended to. Carnations, if not potted last month should be done the beginning of this. Evergreen shrubs, and trees of all sorts, may be planted in mild weather; then cover the roots with turf turned downwards, moss, fern, pea-straw, or some such things, to keep the ground moist, which is better, and gives less trouble than watering. Plant flowering shrubs and forest-trees of all sorts, early in the month, and cover the roots. Grass walks must be swept and rolled. Gravel walks will need turning and rolling, after being weeded, and cleaned from moss with a birch broom. Hyacinths must be covered with mats or canvas, to prevent their flowers from being spoiled, but not kept too close. Larkspurs, in beds or patches,

must be thinned and not left nearer than eight or ten inches. Mignonette, sown last month, should be transplanted, and more of it sown. Myrtles, winter cherries, and other hardy greenhouse plants, planted against walls, should have the mats rolled up in fine weather, and the dust washed off from their leaves, but covered again at night. Perennial and biennial flowers must

be sown on beds, very thin, that they may be strong ; those sown last year should be transplanted, and the old roots of the perennials divided. Plant annuals from the first hot-bed : biennials ‘ and perennials from the seed-bed : evergreens of all sorts : perennials, by dividing their roots, and seedlings of last year’s sowing : shrubs and trees early in the mouth : strawberries and thrift for edging. Shrubberies should be pruned early in the month : the suckers taken off, and planted a foot at least asunder, and the rows two feet apart : the ground hoed or digged, and then raked over, that it may ap-pear neat and clean. Plant strawberries, for an edging to the shrubbery, at six inches asunder; the flowers make a pleasing appearance and afterwards you will have very large fruit by their being in a single row. Plant strawberry trees, against a south wall, which will preserve the flowers, and ripen the fruit. Constantly destroy weeds by hoeing while small, with a Dutch hoe, made to cut both ways, by which method you may always keep your shrubbery in order, with very little trouble.

Fruit garden and orchard. — Apricot, nectarine, and peach trees, should have hurdles placed before them, to defend the blossoms from hail ; or else stick branches of yew, fern, or fir, amongst them, but hurdles are the best. Fig trees which have mats nailed over them should have them taken away by degrees, by first un-nailing them at the bottom, towards the end of the month. Graft trees, and cut down the bud-ded ones. Peach and nectarine trees ought to be finished pruning at the beginning of the month, if omitted till then ; the heads of those lately planted should be cut off. Planting of all sorts should be finished at the beginning ot the month. Strawberry beds should now

be attended to ; hoe them first to destroy the weeds, and stir up the earth between them ; then spread some very rotten dung and earth over them. Those on hotbeds want frequent watering, and the dead leaves should be constantly picked off, to let the sun come to the fruit. New plantations may now be made. Vines may now be layered : draw some strong bearing branches through the bottom of the pot, and plunge the pot into the ground ; and then they may be transplanted the next season, and produce fruit the first year; plant cuttings. Finish pruning wall trees, and mulch those lately planted.

Greenhouse. — Give air freely in the middle of the day, except the wind be very cold. Place geraniums near the windows to prevent their being drawn up weak. Myrtles, winter cherries, and other hardy plants, will want fresh potting, and, if the weather be mild, may be taken out to make more room, but set them in a sheltered place at first. Orange trees, if their leaves be mildewed, will want washing with a sponge and warm water. Those with ill shaped heads should be cut down, and placed on a strong hot-bed. Sow kernels in pots, good strong seed, and, if they are set an inch asunder, they will grow faster. Succulent plants may now have a little water, but not much at a time. Water the plants in the middle of the day, and only when the sun shines ; but the water should be set in

the house for two or three days to take off th« chillness, and use soft water. Windows may be opened lor a few hours in the middle of all fine days.

APRIL.

If by any means the proper early cropping of the ground has been prevented, make no delay to Jinish and to get the garden into a complete state of cultivation. Let nothing now be met with that appears slovenly or disgusting.

Kitchen-garden. — April being the latest time for sowing the principal crops of the kitchen garden, if any thing directed to be performed last month was omitted, or the weather would not permit, let it be done early in this. Aromatic herbs and shrubs of all the following sorts should now be planted, as balm, camomile, pennyroyal, peppermint, spearmint, tansey, lavender, rosemary, rue, sage, southernwood, wormwood, &c. Finish both sowing and plant-, ing asparagus early in the month. Let the beds be forked and raked smooth, and watered twice a-week with drainings of a dunghill. Cut off every bud, however

small ; for, if they be left on, they weaken the others ; this method is in general only practised by the London kitchen-gardeners. Never suffer any weeds to remain after they are an inch high, for they weaken the asparagus very much. Beans in flower should have their tops cut off; and draw the stalks of the first crop close to the wall by strings, and earth them up. Plant the third crop of Windsors. Kale and broccoli should have the first crop pricked out, and the second sown. Cabbages of the early sort should have their leaves tied up to forward their cabbaging. Prick out from the seed-bed the third crop of sugarloaf, the second of red, and the first of savoys. Prick out capsicums from the seed-bed, to prevent their growing weak, upon another hot-bed . Weed carrots, thin the first crop, and sow the second to draw young. Search for caterpillars, upon cabbages and apple-trees particularly. Cauliflowers should have the earth drawn up very high to raise the glasses, and a piece of brick put under each corner, and at the end of the month taken quite away. Break down the leaves when the flowers of any begin to appear; earth the second crop, and prick out the third. Celery, prick out the second crop, and sow the third. Sow cress and mustard every week. Cucumber beds must be attended to, and plenty of air given them, when mild ; and, if the heat declines, fresh dung must be added to the sides. Make a gentle hot-bed within the ground for those that are to be under bell or hand glasses, and plant them on it at the end of the month. Sow more seed, that you may have plenty of plants. Endive planted out for seed should be earthed up, and the first crop sown. Sow finochio, in drills a foot asunder, for the first crop. Hotbeds for sowing of melons for bell glasses must be prepared, and loam and rotten dung procured, to be ready. Sowˆkidney beans, the second crop, and the first of the scarlet flowering. Tie up lettuces, to assist their cabbaging ; those in beds should be thinned to a foot distance ; others planted out, and the fourth crop sown very thin in an airy place. Melon

beds will require to be kept up to a good heat, and the second and third crops planted out. Finish making mushroom beds early in the month, which will last till September. Onion beds must be attended to,

to keep clear from weeds as soon as any appear, and sow the second crop to draw young. Ttiin parsley for garnishing dishes, and leave those plants which have the best curled leaves. Sow the large-rooted. Earth up peas frequently, and stick them as soon as any tendriiS appear. Sow the third crop of marrowfats. Plant beans and mushrooms. Plant cucumbers and melons on fresh hotbeds. Potatoes should now be finished planting. Pot and sweet herbs may still be sown and planted ; and weed and earth the beds. Sow purslane on a warm border in rich earth. Sow radishes for a fifth crop in a cool place. Slip and plant out last year's rosemary, rue, sage, savoy, and thyme. Search often for snails and slugs. Sow aromatic herbs and shrubs. Sow on a hot-bed cucumbers and melons. Sow spinach, the third crop, in a cool place. Turnips, hoe the first crop and sow the second. Weed all the beds of seedlings, while the weeds are small, and any other crops also.

Flmoer garden and shrubbery. — Anemones in stormy weather will still require covering with mats. Annual flowers on hotbeds will require thinning, and some of the strongest must be planted into single pots. Hardy annuals, if not already sown as directed in March, should be deferred no longer, and sown very thin. Auriculas in bloom must be constantly attended to, and defended from violent winds, but yet have plenty of air in mild weather; the seed-beds will want frequent and gentle waterings. Balm of Gilead may be sown or slipped, but the strongest plants will be raised from seed. Biennial and perennial flowers, finish sowing early in the month. Weed or hoe the borders of the shrubbery and flower-garden, and rake frequently. Still plant box for edgings in mild weather. Bulbous rooted flowers, which were planted in boxes or glasses, as soon as the flowers are decayed, should be planted in the ground to strengthen the roots. Carnation seed may now be sown, and stir up the earth frequently of those in pots. Crocus leaves are by many persons cut off; but it greatly weakens the young roots, for the old ones decay, and new roots are formed every year ; if they hang over in the walks tie them up in a knot. Finish planting evergreen trees and shrubs, and sow the seed. Grass walks must be swept, rolled, and mowed ; if any places be bare, lay down some pieces of fresh turf, or sow some hay seeds. Prepare the ground by levelling, early in the month, where fresh walks are to be made. Gravel walks must be frequently rolled in dry weather, and turned if the top be dirty, but sweep them well first. Hyacinths in bloom, shade with mats or canvas. Kidney beans, with scarlet flowers, will form a pleasing shady walk towards the end of the summer ; they must be sown on each side of the walk three or four feet wide, at six inches asunder, and sticks of eight or nine feet long placed to them, or

sticks of five feet long will do with some osiers to form the arch at the top. Larkspurs must now be thinned for the last time, and left eight or. ten inches asunder; if taken up carefully with a trowel, they may be planted again ; by this method the flowers will be strong, and the seed abundant. Layer laurustinuses and various other shrubs, but omit the rose trees till June. Sow mignonette, on a warm border. Myrtles and hardy greenhouse plants against walls, towards the end of the month, may have the mats taken away, and fresh ones planted where necessary. Those from the seed-beds transplanted, and the old roots of the perennials divided. Plant the olive-leaved phillyreas, to make nosegays, as the leaves greatly resemble myrtle. Plant annuals from the hotbeds into pots, and plunge them into another hot-bed : biennials and perennials on the borders : myrtles, heaths, and other hardy greenhouse plants: hollies and quick for hedges : strawberries and thrift for edgings : shrubs aud trees of all sorts early in the month : tuberoses in pots on a hot-bed. Water seedling beds of flowers, shrubs, and trees, often, but very little at a time. Shrubberies should be finished digging and raking, aud frequently hoed when any weeds appear. Shrubs or flowers in pots are best to be set in pans, which will save much trouble in watering. Sow balm of Gilead in pots : carnations and pinks in boxes or pots : evergreen shrubs and trees : mignonette ; scarlet kidney beans : perennial flowers of all sorts : shrubs and trees o€ every kind on shady borders, or in boxes. Mix seeds which are small, first with some dry earth, that they may not be sown too thick. Sow tobacco very thin in a bed of fine rich earth. Plant tuberoses on pots on a hot-bed. Turf should be finished laying, and often watered in dry weather. Water seedling beds and shrubs lately planted, in a morning, during this month, on account of the frosts. Weeds should be destroyed while very small, to prevent their running up to seed, especially on beds of seedlings.

Fruit garden and orchard. — Apricots commonly growing in clusters require to be thinned three different times : as soon, therefore, as they are the size of a horse bean, it is proper to begin. Budded fruit-trees, such as apricots, cherries, nectarines, peaches, plums, must be examined to pull off all the shoots which come from the stock. Caterpillars may now be readily found in their webs, but more particularly on apple trees. Grafted fruit-trees, as apples, cherries, pears, must often be examined to take off the shoots below the grafts; and replace any clay which has cracked or fallen off. Apply hog’s dung to any fruit-trees which are blighted. Take away hurdles when the fruit is set. Finish planting and pruning nectarines and peaches. Planting and pruning should be entirely finished early in the month ; and, if any trees be removed so late, it should be those which have

been planted in baskets and trained. Search for snails in the holes of walls. Finish dressing and planting strawberry beds, but plant only strong runners of the last year, and at the following distances— for, in general, they are planted too close, which causes the fruit to be mouldy for want of air. On beds, four feet wide, plant four rows

the foot asunder, ot the scarlet, alpine, wood, and green : hautboys, three rows, at sixteen inches asunder. Bath Chili, Devonshire Chili, Carolina and pine-apple Chilis, three rows, and each plant twenty inches asunder. Chilis, three rows at two feet asunder at least : these are but little known; the Carolina are generally taken for them, which are pale, hollow in the centre, and frequently woolly: when there are three rows, plant them in quincunx order in the following manner : —

Decayed leaves from the forced ones should be constantly picked off, and frequently watered. Vines should be examined when they first begin to shoot, and all buds pulled off which grow in improper places. Plant cuttings early in the month. Wall trees of all sorts should not be deferred pruning longer than the beginning of the month.

Greenhouse. — Give air, very freely by keeping the windows open all day, except in storms of hail. American aloes may have water very often, and should be fresh potted. Earth the tops of all the pots, with the compost which each plant requires ; and shift those which are in too small pots. Geraniums should be removed as near as possible to thxe windows, to prevent their being drawn up weak ; branches which begin to rot must be cut off, and decayed leaves constantly pulled off. Inarch orange and lemon trees. Constantly pull off decayed leaves from all plants, but especially the geraniums. Myrtles, if prevented from being set out last month, may be removed in this, but should be in a sheltered place. Prune and fresh-pot any plants that may need it. Orange trees must be fresh-potted after the myrtles are taken out; leaves which are mildewed must be cleaned with a sponge and water a little warm, and the stems well brushed. Seeds of any sort which are

ripe may still be sown on a hot -bed. Succulent plants will require frequent watering, but give very little at a time. Water the plants only when the sun shines, and keep the windows shut for two or three hours after. Windows may be opened on all fine days, from about nine in the morning till four, except when it hails

MAY.

Let this delightful month be ushered in with due respect by the gardens being in excellent order, to which end let no help be spared, when the gardener is not competent to perform the work himself. It is often too much for the most industrious man. We now gather vegetables that have stood the winter, and have been the care of many months, with some of the products of spring also.

Kitchen garden. — Aromatic herbs and shrubs may still be sown and planted. Artichokes should have the young shoots pulled off, lest they rob the principal one. Asparagus beds ought to be frequently weeded, as it prevents seeing the buds so readily, if the weeds be not pulled up ; and in very dry weather watering them will be proper. Beans will require to have their tops cut off as they come into flower, and the

earth drawn up to their stems. Prick out the second crop of kale, and be sure to have plenty of plants, for in all long frosty winters its utility is fully proved. Cabbages will often want hoeing and earthing up. Plant the second crop, and the first of red. Sow the fourth crop, and the second of savoys. Cabbage turnips, turnip-rooted cabbages, American and white Scotch cabbages, and Anjou boorcole, must now be sown ; whether they are intended for feeding cattle, or for eating. They are most profitable when very large, therefore sow the seed very thin. Plant out capsicums, where they are to flower, and tomatoes into rich ground, or between the bell glasses of cucumbers. Carrots should be weeded before the weeds overtop them, and thinned by hoeing. Caterpillars may now be readily found in the webs, and particularly on apple trees. Cauliflowers to be cut from October to December and plant out the second crop. Prick out the third crop of celery, and sow the fourth. Plant out the first of coleworts. Sow cress and mustard every week on a cool border ; and hoe that which is intended for seed. Cucumbers for the fourth crop may be planted out, and let some be against walls, both for seed and superior flavor. Sow now in the open ground. If plants be attacked with black flies, fumigate them with tobacco smoke. Endive, thin the first crop and sow the second. Eschalots, garlic, and rocambole, may have a few roots taken up for

present use. Sow finochio for the second. Hoe or weed the beds of beets, carrots, leeks, lettuces, onions, parsley, parsnips, turnips, &c., and thin them before they are too crowded. Sow kidney beans the third crop of dwarfs, and the second of runners. Thin lettuces in beds, and then sow the fourth crop. Melons on the tan-bed must be thinned. Sow seed for an autumn crop ; prick out each into a small pot, as soon as the rough leaves appear. Fumigate with tobacco smoke any that are attacked with red spiders. Mushroom beds will want frequently gentle waterings. Thin nasturtiums to a foot asunder, and place some sticks amongst them to prevent their trailing upon the ground. Those planted for seed will require stakes and strings to support them. Sow the third crop to draw young. Parsley for garnishing dishes, thin to eight or ten inches asunder. Sow peas, the fourth crop of marrowfats, and earth and stick those which require it. Hoe the ground before the potatoes appear. Pot-herbs and sweet herbs in beds must be frequently weeded, particularly seedlings. Prick out from the seed-beds, broccoli, cabbages, kale and melons. Radishes for seed should now be planted. Choose only the straight well shaped ones, and which are of a good color. Sage must still be slipped and planted. Seeds of all sorts nearly ripe will often require staking, and defending from birds. Slugs and snails may easily be found and destroyed after rain, or early in the morning. Sow broccoli, cauliflowers, cucumbers, melons, onions, purslane, and radishes. Sow spinach, the sixth crop, in a cool place. Sow turnips, the thii J crop, and hoe the other. Water often, in dry weather, beds of seedlings. Weeds of no sort should be suffered to seed, and many sorts when

cut down will still ripen their seeds, if not raked up and carried away. Weed, before the young weeds overtop the young plants, the seed-beds and crops of broccoli, cabbages, carrots, endive, Jinochio, kale, leeks, lettuces, onions, pot-herbs, fpinach, and turnips.

Flower garden and shrubbery. — Annuals from ftie hotbeds should be removed into larger pots, and encouraged in their growth as much as possible, by being constantly watered. Annuals sown on borders will

require thinning, weeding, watering in dry weather, and the earth drawn up to support them ; but leave a ridge round them to retain the water. Auriculas out of bloom, and the seed boxes, should be removed into a shady place. Weed biennial and perennial flowers in the seed-beds, and thin if necessary. Hoe the borders of the shrubbery and flower garden, and frequently rake them, that they may always look neat. Bulbous roots, which flower early, as aconites, anemones, crocuses, irises, snow-drops, and several others, should be taken up as soon as the leaves are withered, and* before they entirely disappear, for then they are more readily found. Those in boxes or glasses, which have done flowering, should be put into the ground to strengthen the roots. Carnations will require sticks to be placed to them as soon as they begin to spindle, and the earth should be often stirred up. Evergreen shrubs and trees lately planted must be frequently watered, and they may also be layered. Weed, roll, and mow the grass walks often. Gravel walks will require frequent rolling. Hyacinths, as soon as the leaves begin to decay, should be taken-up, then laid on a ridge of earth with their leaves downwards, and covered with earth two or three inches thick, to harden and ripen the roots. Insects of various sorts, as earwigs, caterpillars, snails, Sec., should be searched for and destroyed. Mignonette may be sown in the open ground, for a succession in the autumn. Myrtles, heaths, and other hardy greenhouse plants against walls, will often require watering. Plant annuals into larger pots, and on the borders ; and cover them with a pot till they have taken root. Ranunculuses should be weeded, and the earth gently stirred with the fingers. Rosetrees infected with green flies or grubs must be constantly examined ; wash off the flies with water, and pinch those leaves which have grubs in them with the finger and thumb. To have roses late in autumn, cut off every flower-bud which now appears, from two or three trees, and water them well for about ten days afterwards. Seeds of every sort of flowers which are ripe should be gathered. Shrubberies should be often hoed with a Dutch hoe, to destroy the young weeds ; and shrubs and flowers in pots should be set in pans, and often watered. Sow annuals to flower late in autumn ; as alyssons, candy-tufts, cornbottles, yellow fu-mitories, larksp .is, lavateras, yellow lupines, mignonette, poppies, dwarf stocks, pansies, and sweetsceuted peas. Still plant tuberoses, to flower late in autumn. Tulips, if out of bloom, should have their seed-vessels broken off, and the early ones taken up. Water annuals, seedlings newly planted, and shrubs and trees, very often in dry weather. Weeds should particularly be prevented from going to seed : the mos. ˚xpeditious method is to cut them up with a Dutch hoe, made to cut both ways; and, if neatly done, the borders will not require raking afterwards, if Cut while very small.

Fruit garden and orchard. — Apricots should be thinned for the second time, and all foreright shoots pulled off. Blighted trees should have hogs' dung spread over the border ; then fork up the ground and water it well. Pull off curled leaves, water the trees all over, and strew tobacco dust on the leaves ; or fumigate them with tobacco smoke, which will greatly help to destroy the insects. Examine budded trees often, and pull off improper shoots. Caterpillars must be searched for upon apple trees, and destroyed. Disbud all the wall trees, by pulling off buds which come out in improper places. Espalier trees should be examiued to disbud them and train in the shoots. Grafted trees should have the clay taken off, if properly united . Nectarines and peaches will require thinning for the first time, and the trees to be disbudded. Forced strawberries should have the dead leaves pulled off and be frequently watered. Those which are beginning to flower, or have lately been planted, must be often watered in dry weather. It is not generally known that hautboys and chili strawberries do not, like all the other species, produce hermaphrodite flowers, but male and female flowers on separate plants ; and persons ignorant of this fact allege their hautboys are blind ; whereas those flowers which turn black in the middle are male plants, and never will produce fruit. To make a plantation properly, let a person skilled in botany examine them when in flower ; he will then easily distinguish them by the male stamina above a quarter of an inch high. Most of them should be pulled up, and the male ones marked with a stick ; for they cannot be distinguished when out of flower. The females indeed will produce fruit, but neither so large nor well flavored, and often ill shaped ; and the seed will not grow, unless impregnated by the male flowers. In making a new plantation, do it in the following man-ner:—

The rrˆale plants may be transplanted when in riower, if covered with a flower-pot for a few days after : three males will do for every fourteen females. Vines will require a constant attendance to pull off weak shoots, especially where two come together, and to nail the branches. Water trees lately planted, or any infected with insects.

Greenhouse. — Air must be given freely except on cold nights. American aloes must be often watered and placed near the windows. Take out geraniums towards the end of the month, except those with variegated leaves. Turn myrtles which are small out of the pots, and plant them in a bed of light rich earth. Orange trees must be fresh potted, if not done last month ; and, as soon as the leaves of mulberry trees are the size of a half crown, it shews that the weather is set-

tied, and they may safely be set out. Water constantly the young trees sown in March, or any on the hotbeds. Seedling plants should be attended to, and shaded with mats, when the sun is hot in the middle of the day, and be often watered. Succulent plants should be earthed at the top, but not shifted; and may still remain in the house towards the windows, and be often but sparingly watered. Water plants frequently, and a little at a time, rather than too much at once. Windows may be kept open all day, and, towards the end of the month, all night, to inure the plants by degrees to the open air.

JUNE.

In this month the gardener begins to find some pause to his labor. The ground is now fully cropped, as to principals, and the chief business is to see that tlie various plants according to their different ages and growth have necessary attention and assistance.

Kitchen garden. — Aromatic herbs, flowers, and shrubs, for drying and distilling, gather when dry; they are in the greatest perfection just as the flowers begin to open. Beans will still require earthing, and the tops of those which are in flower should be cut off. Beets should be thinned to their proper distance of ten or twelve inches at least. Plant the first crop of kale, and sow the third. Broccoli, plant the first, prick out the third, and sow the fourth crop. Cabbages, plant the third crop, prick out the fourth and sow the fifth. Red cabbages, plant the second crop, and sow the third. Savoys, plant the first, prick out the second, and sow the third. Cabbage-turnips, &c., for cattle, as described under last month, sow for the second crop. Carrots and parsnips, finish hoeing, and leave them at eight or ten inches distance at least, Capsicums, finish planting out, and hoe and water them often hi dry weather ; for in late seasons they will not ripen unless brought very forward early. Search for caterpillars on cabbages and apple trees. Cauliflowers, plant the third crop, and prick out the fourth. Plant the first crop of celery, prick out the fourth, and sow the fifth. Coleseed and rape may now be sown, if the ground be in pro-per order. Sow the second crop of coleworts. Cress and mustard intended to stand for

seed should now be hoed for the last time ; the cress left at six inches distance, and the mustard at eight. Nail up or stick cucumbers against walls. Thin and draw up earth to the stems of those under bell glasses, and water them frequently. Plant out the first crop of endive, thin the second, and sow the third. Sow the third crop of finochio or Italian fennel. Hoe or weed the beds of beets, carrots, leeks, lettuces, onions, parsley, parsnips, turnips, &c., to their proper distances. Kidney beans, sow the fourth crop, and place sticks to the runners. Plant lavender, rosemary, rue, and sage nuttings, in the shade. Hoe and thin leeks to about four inches distant, to be ready for transplanting in July. Sow the sixth crop of lettuces in a cool place, and thin those for seed to a foot distant. Cover melons in frames with mats in the middle of the day, and lay pieces of broken earthen plates or dishes under the fruit. Plant out those for the oiled VOL. XI.

papers. Examine often the mushroom beds, that they do not want water. Thin the onions to six or eight inches distant. Thin parsley in beds for garnish, and the large rooted to eight or ten inches. Parsnips must be thinned to ten or twelve inches. Sow the last marrowfat peas in a cool place. Plant lettuces and melons. Weed pot-herbs and sweet-herbs often, and gather for drying, just before they begin to flower; then tie them up in small bunches, and hang them across lines in a shady room to dry. Prick out broccoli, cabbages, cauliflowers, and celery. Sow turnips and turnip-radishes. Sow radishes the seventh crop, and turnip-rooted, and black Spanish, in a cold place. Rape and coleseed may now be sown. Seeds of all sorts must be gathered as they ripen, and defended from birds. Sow spinach, the fifth crop; thin in a cool place. Thin the -following crops, and leave them at their proper distances. Leeks may be left at four inches, and transplanted in July. Lettuces intended for seed, at least a foot asunder; but fifteen inches will be better. Turnips at six or eight inches. Sow the fourth crop of turnips, and hoe the others. Water all beds of seedlings and cuttings frequently. Weeding the young crops is of the utmost consequence this month, especially if it be a rainy season, and must not on any account be omitted ; nor let any weeds run to seed.

Flower garden and shrubbery. — Take up anemones before their leaves are quite withered, and they will be more readily found. Annuals from the hotbeds will require fresh potting, and may be placed in the open air if it be settled and warm, but will want frequent watering. Annuals on the borders should have the earth stirred up with a hoe, and be often watered, and more sown to flower in autumn, as described under last month. Hoe and rake borders of the

flower garden and shrubbery frequently. Box may be clipped, but always do it in moist weather. Bulbous rooted flowers of every sort, whose leaves are nearly withered, should be taken up before the leaves entirely disappear, and put into shallow wooden boxes, as directed for hyacinths, as soon as dry. Carnations require to be examined frequently and tied up to the sticks. Search for the ear wigs. Evergreens may be clipped in moist weather. Grass and gravel walks will often require weeding, but it should be done after rain, for then the roots may be drawn out without breaking: they will often want mowing and rolling also. Hyacinths, as soon as dried, should betaken out of the ground, then rubbed with a woollen cloth to clear them entirely from earth, and laid in shallow wooden drawers ; but they should never be put into flower-pots, earthen pans, or laid on brick floors, for they will contract a mildew or mouldiness, which will make them rot. Insects of all sorts should be sought for and destroyed. Kidney beans will want earthing, sticking, and the runners to be trained to the sticks. Mignonette, from the seed-beds, should be transplanted into small pots, and only three put into each ; it will then be ready to put into larger pots, or upon the borders. Myrtles, and other greenhouse

plants against walls, should be often watered, all foreright shoots pulled off while small, and the others nailed to the walls with long narrow shreds of fine cloth. Plant out perennials and biennials from the seed-beds in showery weather ; and, if the sun should be very hot soon after, cover each plant with a flower-pot, until they have taken root. Pinks may now be increased by making pipings or cuttings, but a glass must oe placed ove; them. Plant out all annuals from he seed-bod* and hotbeds : pipings of carnations, and pirlis. Attend to ranunculuses, and take them up as soon as the leaves are quite withered. Rose trees may now be layered and budded, and some very rotten dung spread on the ground, and digged in, and often watered; the flies and grubs must also be attended to. Seedlings of trees, shrubs,

or flowers, should be covered with mats in the daytime, and often watered ; but, if in pots, remove them into the shade. Seeds of all sorts which are ripening should be attended to, and gathered before they drop out of the pods. By a little attention to them, in most seasons, enough may be got for the next year, and the expense of buying saved. Shrubberies ought frequently to be looked over; all straggling branches should be cut off or tied up ; and the grounds stirred with a Dutch hoe. Shrubs in pots may be set in pans, and watered often. Sow annuals, as described under last month, to flower in autumn, in any vacancies that may be on the borders of the shrubbery or flower garden. Tulips should be taken up be-fore their leaves are quite decayed, that they may be found more readily ; and, if any of the offsets be very small, plant them again directly, and lay the roots to dry in shallow boxes. Tulips produce rew bulbs every year, and the old ones decay entirely ; therefore they should never be taken up until the new bulbs are quite formed. Water annuals in pots constantly; seed-beds of all sorts; and shrubs and trees lately planted. Weeds, in this month, it is of the utmost consequence to destroy before they flower. When cut down they should be raked up and carried away, for many sorts will otherwise ripen their seeds lying on the ground.

Fruit garden and orchard. — Apple trees in espaliers must be often examined ; all foreright shoots should be taken off while small, and the others regularly trained to their proper distances. Search for caterpillars. If the standard apple trees be infected with caterpillars, light some damp straw, and with a fork direct the smoke through the tree, and they will soon be suffocated, and instantly drop down. Apricots must be thinned for the third and last time, and the shoots frequently nailed up. Blighted trees must be constantly attended to, as directed last month. Bud apricot, cherry, and peach trees. Cherry trees against walls should be covered with nets, to defend the fruit from birds. Look over the espalier trees often, and train the shoots in regular order. Nail up fig trees with very strong shreds. Nail up every week shoots of wall trees. Nectarines and peaches will require thinning the second time, nailing up the shoots and pinching off the ends where vacancies want filling up. Nail up pears and plums as they shoot, and pull

off all foreright shoots. Keep stocks, intended to be budded, free from weeds. Strawberries in flower will need frequent watering in dry weather. Lay tiles or wheat straw under the fruit of the scarlets, and pull off all decayed leaves; this will keep the fruit clean, and cause it to ripen sooner by several days. Cut off all runners as fast as they

shoot. To make some fresh beds, reserve the first runners, as they are the strongest. Attend the flowering of the hautboys, as directed under last month. Vines require constant attendance, in rubbing off improper buds, and nailing up the shoots. Water those trees frequently which are blighted : and all newly planted trees in dry weather.

Greenhouse. — Air may now be given very freely in the greenhouse, and the windows may be kept open all night. Fresh earth aloes, and place near the windows, but take out the Americans. Plant cuttings of various sorts, under bell or hand glasses, at the end of the month. Earth all the plants every month at top, if not shifted. It makes them look neater, and grow better. Geranium seedlings sown in March will now require pricking out, and cuttings planted under glasses. Inarch jessamines, lemons, and oranges. Layer jessamines, oleanders, &c. Plant myrtle cuttings at the end of the month under glasses, but never take them off till they have grown two inches. Orange trees, if not taken out at the end of last month, will require it at the beginning of this. Clean well the leaves which are mildewed, or have insects on them, with a sponge and warm water. Inarching may now be performed,, Those on hotbeds, aud the young seedlings, must be attended to, and the stems of the old trees should be frequently washed. Often water seedling plants of all sorts ; shade them in the middle of the day, and prick out the strongest to make room for others. Succulent plants may now be shifted, the offsets taken off, placed near the windows, and be often watered. Watering some of the plants will be necessary almost every day.

JULY.

In the month of July there is a cessation from the great bustle and more laborious works of gardening; yet ‘ its many cares’ still Jind employment for the willing hand : perfection will not be attained without perseverance in the means. Let nothing, therefore, be omitted that may tend to crown the gardener’s credit with a continued production of Jine vegetables, fruits, and jloicers.

Kitchen garden. — Aromatic herbs, flowers, and shrubs, gathered last month, if hung on lines, will soon be dried. It is then better to strip off the leaves and flowers from the stalks, and put them into paper bags, which will preserve their flavor better, and keep them free from dust. Continue to gather them before their flowers are too much opened. Asparagus, if wished for in au-tumn, must be attended to at the beginning of this month ; the stalks must be cut down, and, if it be dry weather, the beds must be very well watered with the draining from a dunghill. Next day fork them up lightly, and rake them smooth ; if the

weather continues dry, water them every night for a week, and in about eight or ten days they

will be fit to cut. If this be done every year, leave two or three beds uncut at spring, and make some more beds to allow for this double crop. Beans : plant the fifth crop of Mazagan, and the fourth of Windsor, for late crops. Fi-nish thinning of beets to their proper distance. Plant the second crop of kale, prick out the third, and the first of Anjou. Plant out the third crop of broccoli, and prick out the fourth. Plant the fourth crop of cabbages, and prick out the fifth. Prick out the third crop of red cabbages. Plant the second crop of Savoys, and prick out the third. Cabbage turnips, &c., for cattle, prick out the first crop. Sow carrots to draw young, the third crop. Earth up capsicums, and often water them. Plant out the fourth crop of cauliflowers. Plant the second of celery, and prick out the fifth. Finish sowing coleseeds, colevvorts, and rape. Prick out the second crop of coleworts. Stick cucumbers on the open ground, with branches of elm or other sticks. Lay tiles on endive, or tie up the first crop ; plant the se-cond, thin the third, and sow the fourth very thin. Take up some eschalots and garlic for present use. Sow finochio, the fourth crop. Sow kid-ney beans, on a south border, the fifth and last crop. Still plant lavender and rosemary cuttings. Plant out leeks in double rows, at six inches distance, and a foot between the rows. Sow the seventh crop of lettuces in a cooi place; and hoe those intended for seed. Melons must be frequently attended to. Water mushrooms in dry weather. Pull onions, when their leaves begin to wither, out of the ground. Sow the first crop of Welsh onions, and the last crop to draw young. Sow the third crop of parsley near a south wall. Peas sown last month will want sticking. Sow the fourth crop of hotspurs. Plant red cabbages, rosemary, and Savoys. Prick out broccoli, cabbages, celery, coleworts, and boorcole. Sow radishes, the eighth crop ; also turnip-rooted, and black Spanish; and hoe the first. Seeds of all sorts must be attended to, and gathered as they ripen. Sow rape and turnip-radishes. Sow spinach, the sixth crop, and the first of prickly, in a cool place, very thin. Sow turnips, the fifth and principal crop for winter use, and

hoe the other crops. Water beds of seedlings, and all young crops. Weeds must be constantly attended to, and raked off the ground, or else many sorts will ripen as they lie on the ground.

Flower garden and shrubbery — Annuals in pots require a constant attention, lest they should want water ; and those on the borders require sticking and tying. Seeds nearly ripe must be watched and gathered, else many sorts will be lost. Annuals, to flower late in autumn, may still be sown. Auriculas and polyanthuses from the seed bed should be transplanted upon a shady border, and, if possible, in rainy weather. Finish cutting of box and evergreen shrubs. Bud the curious sorts of jessamines, roses, &c. Bulbous roots must still be attended to, to take up dry and clean, and then put in shallow wooden boxes. Saffron, crocus, and many other sorts, which flower in autumn, may now be planted. Carnations must be constantly watered, earwigs searched for, and layers and pipings made. Evergreens, if required, may now be transplanted ; but it should be done in rainy weather, and let the clipping be finished. Grass and gravel walks must be frequently weeded, mowed, and rolled. Hyacinths should be examined to see that there is no mouldiness among them ; and, if any be decayed, they must be taken away. Kid-ney beans must be examined, if they are trained to the sticks, and watered in dry weather. Lilies of many sorts, if they have done flowering, may be taken up ; but the roots are so full of moisture, that the small offsets must be planted again directly. Mignonette should now be sown to flower in winter, and more put into pots. Myrtles, and other greenhouse plants against walls, will require frequent nailing and watering. Fi-nish planting perennials and biennials for the seed beds. Pinks : finish making pipings or cuttings. Plant auricula and polyanthus seedlings : biennial and perennial seedlings : cuttings of scarlet lychnis and pinks : offsets of lilies : offsets of autumnal flowering bulbs : pipings of carnations and pinks : saffron-crocus. Ranunculuses must be taken up, and laid in the shade to dry; then well cleaned from earth, and laid in shallow boxes, or put into paper boxes. Finish layering and budding of rose trees. Seedling trees, shrubs, and flowers, must be properly shaded and watered. Seeds now begin to ripen very fast ; and therefore must be constantly attended to and gathered. Shrubberies will require frequent attention in pruning or hoeing. Sow the last crop of hardy annuals. Tulips should be finished taking up, and as soon as dry the earth should be rubbed off, and then laid in shallow boxes. Water frequently young trees, and shrubs planted this spring. Weeds, if it be rainy this month, grow very fast; the ground should therefore be frequently hoed, and no weeds suffered to run to seed.

Fruit garden and orchard. — Destroy ants, flies, and wasps, as soon as

they appear, by hanging bottles half filled with sugar or honey and water. Often look over apricot trees ; pull off all foreright shoots, and nail those which are to remain. Attend to blighted trees, and water the borders often. Budding of apricots, cherries, and peaches, finish. Currants intended to be preserved till autumn should now be covered with mats. Often examine espalier trees, and train in the shoots. Fig trees require nailing up as they shoot, with strong nails and long shreds. Fruit should be gathered in the morning, as soon as the sun has dried the dew from it, and before it is heated, and then laid in a cool room. The fruit room should now be prepared ; it should be situated to the south, the shelves neat and clean, the walls covered with tiles, or else whitewashed or painted white. Destroy insects of all sorts. Nail up every week the shoots of wall trees. Thin nectarines and peaches for the third and last time, and nail up the shoots. Water strawberries in flower constantly in dry weather, and pull off decayed leaves. Tie up the fruit of the hautboys and other large sorts to sticks. Cut off all runners after the first, and these should be planted out as soon as some rain falls. Vines must be very often attended to, to nail up the shoots, and pull off all improper buds. Wall trees require constant attention, to nail up and water in very dry

weather. Water the blighted and newly planted trees, strawberries in flower or runners lately planted.

Greenhouse. — African aloes, and other succulent greenhouse plants, may now be set out in the open air. Cuttings of asters, geraniums, myrtles, &c., should now be planted under bell or hand glasses, which should not be taken off until they have grown an inch. Earth the tops of all the pots, first taking a little out. In planting geranium cuttings, prick out the seedlings before they are too thick. Those with variegated leaves do best in alcoves or un-der a little shelter. Paint and whitewash the greenhouse. Inarching and layering various sorts may still be performed. Plant myrtle cuttings under glasses, and water frequently near the glasses, without taking them off. The small ones

may be planted in beds. Orange trees must be examined : if there be insects under the leaves wash them off. Shade and water those on hotbeds often. Plant stocks, when four inches high, in separate pots. Pans should be placed under all the pots, as it is better for the plants, and saves much trouble in .watering. Shade, water, and prick out seedling plants. Succulent plants, as aloes, cereuses, ficoides, and Indian figs, torch-thistles, &c., may now be set abroad. Watering the plants must be attended to every day.

AUGUST.

In this month (as in some measure before) the gardener anticipates the product of the future year, and sows various vegetables in autumn to stand the winter, for spring and summer use; so that in this and other respects August is an important season, as will be seen by the work directed to be done. The times for the different sowings should be exactly observed to secure success.

Kitchen garden. — Sow alisanders, angelica, and chervil. Asparagus cut down last month will require constant watering. Beans planted last month will also want watering. Boorcole, broccoli, cabbages, cauliflowers, and coleworts, lately planted, will require hoeing around them, and earth must be drawn up to their stems. Plant out the third crop of broccoli. Cabbages, for the first crop at spring, should be sown about the 10th or 12th day of the month. Prick out the second crop of cabbage turnips. Weed carrots sown last month as soon as they appear. Sow cauliflowers, for the first spring crop, about the 20th in rich earth, but shade them in the middle of the day by mats. Earth the crop of celery for blanching, and plant out the third. Plant out some of the second crop of coleworts. Sow corn sallad on beds. Cucumbers for pickling, either large or small, to have them fine, should now be gathered ; and they will be free from spots and save much trouble in greening. Train them regularly into the sticks. Often tie up endive for blanching; plant out the third crop, and thin the fourth. Take up eschalots, garlic, and rocambole, if the stalks be quite withered : clean them from earth, and keep them in a dry place. Kidney beans, sown for the last crop, must be watered in dry weather. Finish planting out leeks. Lettuces for standing through

the winter, and for forcing, must now be sown very thin at three different tunes in the month : and plant out those last sown on the south bor-der. Melons, in rainy weather, must be defended from wet by putting hand glasses over them, and sticks placed for the pickling

melons to run up. Prepare mushroom beds, by having dung and spawn ready for the next month. Onions must be frequently turned, that they may be well dried. Sow the second crop of Welsh onions. Gather peppermint, for distilling, as soon as it begins to flower. Sow some hotspur peas, on a south border, for the fifth and last crop. Plant celery, endive, leeks, and lettuces. Prick out Anjou, Brussels boorcole, cabbage-turnips, and turnip-rooted cabbages. Sow radishes, the ninth and last crop. Seeds, nearly ripe, must be guarded from birds, particularly radish seeds. Sow cress, fennel, mustard, and sorrel. Sow the second crop of prickly broadcast spinach ; and then, at spring, hoe it into beds four feet wide, with paths of eighteen inches between the beds. Hoe, a/id sow the sixth crop of turnips. Water seedling beds in the morning. Weeds grow very fast in moist weather, and therefore must bo hoed frequently, raked together, and carried away.

Flower garden and shrubbery. — Annuals in pots will want frequent watering, those on borders sticking and tying, and the seeds gathering of those nearly ripe. Anemone and auricula seeds are sown this month by many, but they do better in January or February. Slip and fresh pot the auriculas. Balsams in pots, from which seed is intended to be raised, must be removed into shelter. Plant bulbous roots, that flower in autumn, early in the month. Bulbous roots of all sorts should have their offsets planted at the end of the month. Take off carnation layers, and plant out the pipings from under the glasses. Finish clipping of evergreen trees and shrubs. Grass walks and lawns require frequent mowing. Gravel walks must be weeded and rolled. Take up lilies if their leaves be decayed ; but the offsets must be planted again directly. Plant mignonette in pots to flower in winter, and place them under a south wall. Myrtles and greenhouse plants against walls must be pruned and nailed, and constantly watered. Plant out the pipings of pinks if they have struck roots. Plant Guernsey lilies in pots. Attend to seeds of a?l sorts of flowers and shrubs, and gather them as they ripen. Remove seedlings in pots to places where they will have the morning sun. Shrubberies will want frequent hoeing to keep down the weeds. Strawberry runners will require to be constantly taken off as they shoot out, to keep the borders and walks neat. Water plants in the morning at the end of the month. Weeds must be frequently destroyed to prevent their running to seed.

Fruit garden and orchard. — Destroy ants, flies, and wasps, by supplying fresh bottles of sugar, or honey, and water. Apple trees on espaliers will require frequent examining. Finish the budding of all trees, and pull off buds and shoots from the stocks. Currants intended to be preserved, finish covering with mats. Examine espalier tree? constantly, to train in the shoots,

Nail up fig trees with strong nails. Gather fruit early in the morning, and lay it in a cool room. Finish the fruit room, by whitewashing or painting, and putting the shelves in order. Destroy insects of all sorts. Nail up every week the fruit trees. Nail up nectarines and peaches frequently. Attend to pear and plum trees, both on walls and against espaliers, constantly. Transplant strawberry runners, if rooted, in rainy weather, and cut off all the others as they shoot. Vines must be constantly nailed up, as they shoot very fast, and the bunches of grapes begin to be heavy, and all weak shoots must be constantly taken off. Water strawberry runners lately planted, or any blighted fruit trees.

Greenhouse. — Take off the offsets of aloes, both African and American, and plant them in separate pots. Often water the cuttings of myrtles, geraniums, &c. Earth the tops of all the pots. Water geraniums and myrtles constantly, but pour on the water gently. Oranges still bud till the middle of the month. Prune any which require it, as this is the season of their shooting. Water the young stocks and those on hotbeds. Finish the painting and whitewashing of the greenhouse. Finish picking out seedling plants, and water and shade them. Shift the plants which require it into large pots, and earth the others. Succulent plants should be shifted, and, if the end of the month be rainy, take them in. Water very freely, if the weather be dry, but do it in the morning.

SEPTEMBER.

Gardens begin now to fail of their wonted beauty, and therefore dying flowers, all litter, and every thing unsightly, should be removed, and the ground frequently cleaned, that every thing may look neat if not gay.

Kitchen garden. — Aromatic herbs and shrubs should have their decayed stalks cut down to strengthen them; and transplant them. Beans planted in July must be earthed up, and the tops pinched off as soon as they begin to flower. Plant out the third crop of kale and the

first of Anjou ; hoe the other crops, and earth them up. Plant out part of the fourth crop of broccoli, and earth up the other crops. Plant out the fifth crop of cabbage; prick out the first crop, on a south border, and earth up any that want it. Plant out the third crop of Savoys and red cabbages; and the first crop of cabbage - turnips. Hoe carrots sown in July, and leave them at six inches distance. Cauliflowers sown last month must be pricked out, watered, and shaded until they are rooted. Earth up the fourth crop, and break down the leases if they begin to flower. Plant out the fourth crop of celery, and earth up the firstand second to blanch. Chardons will also require blanching. Plant out more of the second ciop of coleworts, a few at a time, to thin the bed. Sow cress and mustard every week, and at the end of the month under glasses. Cucumbers for pickling should be finished gathering ; which will show the advantage of sticking them, and pickling early. Plant out a little of the fourth crop of endive to thin it, and give the rest more room. Tie up some to blanch. Eschalots, garlic, and rocambole, should have the offsets and small roots planted. Lettuces must be thinned early in the seed-bed, if sown thick, and pricked out on a south border to about four or five inches asunder. Melons for pickling will now be fit to gather. Make mushroom beds, at the beginning of the month. Gather nasturtiums for pickling. Finish sowing onions early in the month, the second crop of Welsh. Weed those sown last month before the weeds are high. Plant water-cresses. Prick out cabbages, cauliflowers, lettuses. Ga-ther seeds constantly as they ripen. Sow cress, mustard, turnips, and water-cresses. Finish sowing spinach for spring use, and hoe that sown last month. Plant tarragon roots. Hoe and thin turnips, turnip radishes, and black Spanish radishes. Water in dry weather any crops lately planted out. Weeds must be particularly attended to amongst the onions, carrots, and lettuces, while they are small.

Flower garden and shrubbery. — Plant anemones, single flowered, at the end of the month to flower early. Annuals in pots must be frequently watered to ripen the seeds. Remove auriculas, that they may have the morning sun, and finish slipping them. Balsams, cockscombs, egg-plants, or other curious annuals in pots, which are wished to raise seeds from, must be placed under shelter in an alcove, greenhouse, or room fronting the south, and then the seeds will ripen. Prepare beds for planting bulbous roots early in the month. Plant box for edgings at the beginning of the month, or as soon as any rain falls. Plant bulbous roots of all sorts early in the month ; but the offsets, and lilies, and crown imperials, first. Plant evergreens at the end of the month, if the ground bo moist. Grass walks may now be repaired, or new ones made. Weed and roll gravel walks often. Plant hyacinths,

jonquilles, lilies, narcissuses, polyanthus-narcissuses, Sec., at the end of the month. Plant laurel cuttings in the shade. Layer laurustinuses and other shrubs. Take up lillies which flower late, as soon as their leaves are decayed, but plant the offsets again directly, and all other sorts of lilies. Place mignonette in pots, under shelter. Myrtles and greenhouse plants against walls must be constantly watered in dry weather. Plant out perennial seedlings, and divide the old roots. Plant box for edgings ; evergreens, crown imperials, and lilies, early in the month ; cuttings of laurel, honeysuckles, jessamines, shrubs, and trees of all sorts ; but not until after there has been some rain. Strawberries and thrift for edgings. Ga-ther seeds in the middle of the day. Weed and earth seedling beds. Prune, hoe, and rake shrubberies. Sow hardy annuals, as cornbottles, larkspurs, panseys, persicarias, poppies, sweet peas, &c., to flower early in spring. Constantly take off strawberry runners, and replace any of the edgings which want ; dig up entirely the old plants ; then take away some of the earth, and bring in fresh loam. Plant tulips, and all sorts of bulbous roots, the offsets first. Lay down turf for grass walks. Constantly hoe and rake weeds off the ground ; in dry weather the seeds will ripen, and in wet weather the roots will strike again.

HORTICULTURE.

Fruit garden and orchard. — Destroy ants, flies, wasps, and insects of all sorts constantly. Sow cherry kernels on beds. Plant currant and gooseberry cuttings and trees. Nail up fig-trees frequently with strong shreds. Attend to the fruit room, and pick out the rotten pears, or any other sorts which begin to decay. Put grapes into bags of crape, gauze, or paper. Plant currants, gooseberries, raspberries, strawberries. Strawberries should be planted early in the month, and then they will be well rooted before the frost begins. Dress the beds, and plant some strong roots in pots to force. Plant some alpines in pots, and put them under a frame, and they will bear fruit till January. Top-dressing, in cold wet weather, of soot, salt, or ashes, is proper to be spread on the borders of fruit trees. Vines will require frequent nailing ; take of all the weak shoots, that the grapes may not be too much shaded.

Greenhouse. — Remove aloes into the greenhouse in the beginning of the month, but leave out the American ones till the end. Plant cuttings and seedlings in separate pots, and earth the tops of all the pots. Set in geraniums with variegated leaves early in the month, and leave off watering the leaves. Take myrtles out of the ground and pot them. Fresh earth orange trees, thin the fruit, or most of it will fall off, and take them into the house at the end of the month. Take in succulent plants of all sorts early in the month, and give them very little water. Take in aloes, variegated geraniums, and succulent plants, at the beginning of the month ; orange trees and tender plants at the end ; but myrtles and hardy plants may remain out till the beginning of the next month, unless there is an appearance of frosty nights. Water in the morning, and keep the windows open all night; leave off watering the geraniums over the leaves.

OCTOBER.

This is the chief month of the year for planting trees, shrubs, fyc. No part of it should be lost, in either working the ground well for the purpose, or putting in the plants as soon as possible. Early planting, if the ground be Jit, is of more consequence than many are willing to ad-mit.

Kitchen garden. — As October is the only time to crop a kitchen garden before winter, omit not any thing ordered now, till next month, and if it can be done at the beginning, instead of the end of the month, it will be much better, lest rain should come on. Weed aromatic herbs and shrubs in beds, and spread some earth over them. Cut down asparagus stalks, hoe the weeds, and spread earth from the paths on them, but first a little rotten dung. Prepare hotbeds for forcing, and plant three-year old plants for the first crop. Beans ; the early Mazagan must be planted on a south border, for the first crop. Plant out Anjou boorcole, the second crop early in the month, and hoe the ground around the others. Plant out broccoli, the rest of the fourth crop. Plant out half the cabbages sown in August, of the early sorts, in a warm situation.

Plant cabbage-turnips early in the month, aad earth up the others. Finish hoeing carrots, sown in July. Attend to cauliflowers, beginning to flower, by breaking down the leaves. Those intended for glasses will want planting out ; let there be six to each glass, and the rest in a frame, or under a south wall. Plant out celery, the fifth and last crop, and earth up the second to blanch. Finish planting coleworts, Sow

cress, mustard, and radish, under glasses, and on a hot-bed at the end of the month. Tie up endive, to blanch, or lay tiles on it, and plant more. Plant eschalots, garlic, and rocambole. Throw up vacant ground into ridges. Hoe boorcole, broccoli, cabbages, and cabbage-turnips; and draw up earth to their stems. Hoe carrots-Prepare hotbeds, for forcing asparagus and lettuces. Plant out lettuces, cabbage and brown Dutch, on asparagus beds, some under glasses, and others on hotbeds for forcing. Finish gathering melons for pickling. Plant mint in pots, on a hot-bed. Cover mushroom beds well with straw and mats, to defend them from rain. Onions will require to be very well weeded, and should be examined two or three times in the month. Sow peas, the early hotspurs on a south border near the wall, for a first crop. Plant on hotbeds asparagus for the first crop, and lettuces, and mint. Plant out to stand for seed beets, cabbages, carrots, parsley, parsnips, turnips. Weed pot-herbs and sweet herbs on beds ; stir up the earth, and spread some over them. Seeds of all sorts should be threshed out, dried, and put into bags. Sow peas on a south border. Hoe spinach for the last time before winter. Destroy weeds in every part of the garden.

Flower garden and shrubbery. — Any thing ordered last month, if omitted, finish early in this, as the beginning of this month is the proper time when the flower garden and shrubbery should be put into order before the winter. Finish planting anemones, to flower early, the first week in the month. Remove auriculas and carnations into shelter, and in wet weather cover them with mats. Balsams, cockscombs, egg-plants, &c., intended to raise seed from, must be constantly attended to, to hasten the ripening of the seed. Turn over beds and composts for bulbous roots frequently. Finish planting box for edgings, early in the month. Plant bulbous roots for forcing in pots or boxes, and finish planting all others before the rain sets in. Plant crocuses, aconites, snow-drops, and any bulbous roots which flower early in the spring, at the beginning of the month. Plant evergreens of all sorts early in the month. Finish laying grass walks, and repair any difficult places. Weed gravel walks, and roll them in dry weather. Plant hyacinths, jonquilles, lilies, narcissuses and polyanthus-narcissuses, early in the month. Finish layering of shrubs. Take off layers and suckers, if rooted. Mignonette should be removed under glasses, or else into a greenhouse or warm closet. Finish planting perennials. Plant bulbous roots early in the month; as aconites, amaryllises, cornflags, crown-imperial.-, daffodils, garlic moly, irises, martagons, pan-cratiums, ranunculuses, snow-drops, star of Beth-HORTICULTURE.

lehem, tulips, &c-Plant also perennials at the beginning of the month : shrubs and trees of all sorts: strawberries and thrift for edgings: place seedlings in pots, under a south wall in the ground; and weed and earth seedlings in beds. Gather seeds in the middle of the day. Finish pruning and hoeing shrubberies, to lie neat for the winter. Finish planting shrubs and trees. Take off suckers and layers; and, if small, plant them in beds two feet asunder, to be ready against the next season. Finish planting tulips early in the month, and all sorts of" bulbous roots. Finish laying turf early in the month. Hoe and rake off weeds, or they will root again. If possible leave nothing ordered this month unfinished, on account of the uncertainty of the weather in the succeeding month.

Fruit garden and orchard. — Gather apples and pears in the middle of fine dry days. Plant apple trees at the end of the month. Plant currants, gooseberries, and raspberries. Examine grapes in bags, to see that they are not mouldy vi decayed. Gather nectarines and peaches in the middle of the day. Orchards, or fruit trees intended to be planted, should have the ground prepared, and the holes digged some weeks be-fore-hand ; if the soil be very good, some loam and rotten dung should be mixed together, and the trees planted in it. If the orchard be wet, bring a cart load of earth at least for each tree ; form the earth into a little hill, about a foot high, and plant the tree upon it, but dig up the tuft first a foot deep in a circle of four or five feet over. Gather peaches in the middle of the day, and, if not ripe, lay them in the sun for a few days in a window ; they are much improved by roasting gently like apples, and eating them with sugar and wine. Plant peach trees at the end of the month. Plant fruit trees of all sorts. Prune all sorts of wall trees, but sweep off all the leaves first with a birch broom. Finish dressing strawberry beds, and water the alpines frequently under the frames. Vines in pots should be transplanted ; make the holes ready, pour water into them, and then gently turn them out of the pot, or place the pot in the hole and break it, and then the roots cannot be disturbed, and you will have fruit the next year. Finish pruning and planting wall trees, early in the month.

Greenhouse. — Give air very freely in the day time, and leave some of the windows open at night, until the end of the month. Earth the tops of the pots. Take in geraniums early in this month, if not done the last ; water them sparingly, or they will begin to shoot afresh, and pick off constantly all decayed leaves. Clean leaves well, before the plants are set in order, and pick off dead ones. Take in myrtles towards the end of the month. Orange trees should not remain out this month; examine

the leaves before setting them in, for insects, which fasten themselves underneath, and pick them off; if any leaves be mildewed, wash them with warm water and a sponge. Water succulent plants sparingly. Water myrtles, orange-trees, winter cherries, and all woody plants often. Open the windows, every fine day, but keep them shut in foggy weather.

NOVEMBER.

Though the last is the better month for planting, yet this is the time more commonly adopted; it certainly must not now be delayed. The leaves not being all off should be no obstacle.

Kitchen garden. — Cut down artichoke stalks and earth them up. Asparagus on hotbeds must have air given to it ; and make and plant the second bed ; cut down the stalks, and finish dressing the beds. Finish planting beans for the first crop. Plant beets, cabbages, and carrots for seed. Take up carrots and lay them in sand. Give some air to cauliflowers under glasses and frames, in the middle of fine days. Earth up celery when dry, to blanch. Sow cress, mustard, and radishes on hotbeds. Take up endive, not planted out, and plant on the south side of a ridge, raised up two feet high. Throw up vacant ground into ridges. Prepare hotbeds for forcing asparagus and lettuces. Attend to lettuces in hotbeds, and give them air in the middle of the day. Guard mushroom beds from wet. Take up parsnips and large rooted parsley. Draw earth to the peas and beans above ground, and place traps to catch mice. Plant asparagus on a hot-bed for the second crop : endive on the south side of a ridge : and beets, cabbages, and carrots, for seed. Dig up potatoes, sort them, pick out' the damaged ones, and reserve the best for use in winter. Sow early short-topped radishes about the tenth day, and spread wheaten straw over the beds. Dig up salsafy, skirrets, and scorzoneras. Sow cress, mustard, and radishes on hotbeds for small sallading. Hoe spinach again, if it be too thick. Drain off stagnant water; weed all the crops; and take off the weeds to prevent their rooting again.

Flower garden and shrubbery. — November be-ing; generally a very rainy month, if any thing happened to be omitted last month, let it be done early in this. Bulbous roots, intended for blowing in water early, may now be placed on the glasses, and let all others be finished planting at the beginning of the month. Those in pots or boxes must

be frequently watered, and placed as much in the sun and light as possible; for in the shade they will draw up weak. Composts wanted for flowers in spring should now be collected ; such as loam, sand, willow-earth, rotten tan, dung, &c. Let them be laid in dry sunny places, and be frequently turned over, but by no means in cold wet places. Gravel walks near the house should be rolled a little when the weather will permit ; their being kept hard prevents weeds from growing; but never throw them up into ridges. Leaves should be constantly swept up as they fall, or they will spoil the walks. Myrtles planted against walls should have two boards about six inches wide fixed, one at each side, with a third at the top, on which a mat should be nailed, to roll up and down occasionally. Plant early in the month all bulbous roots ; particularly those for forcing. Shrubberies should be pruned, and digged or hoed. All sorts of shrubs and trees should be finished planting early in the month ; and long litter, straw, or turf, turned downwards, should be laid over the roots to keep out the frost.

HORTICULTURE.

Trenches should be digged, and drains made to carry off the water wherever it stands ; a large flower pot, placed downwards in the earth, will carry off a great quantity of water.

Fruit garden and orchard. — Finish gathering apples and pears ; after they have lain together and sweated, the most valuable sorts, which keep long, should be wiped dry with a cloth. Prune and plant apple and pear trees. Prune, and pull off the green figs. Attend to the fruit room ; pick out every leaf, and all specked and decayed apples or pears. Finish planting orchards at the beginning of this month, and stake the trees. Finish planting and pruning of espaliers, standard and wall trees, early in the month. Place strawberries in pots for forcing, under frames ; and attend to the alpines. Finish pruning and planting of wall trees.

Greenhouse. — Give air in the middle of the day, unless when very foggy. Earth the tops of any of the pots, when any mould appears on them. Constantly pick off geranium leaves as they decay more than any others, and give them water very sparingly : also, all decayed

leaves, as they corrupt the air of the house very much. Succulent plants, as aloes, ficoides, &c., will require but very little water; large aloes the most. Water woody plants often, but give them only little at a time; as dampness is more prejudicial in a greenhouse than cold.

DECEMBER.

The garden is no longer decorated with flowers or verdure ; but it contains many things of promise, which demand attention. There are still some works of labor; and, where there is plenty of dung and frames, hotbeds may be made use of, and spring anticipated.

Kitchen garden. — Asparagus must be planted for the third crop, and give it both light and air to color it. If the beds be not warm enough, line them with fresh dung. Boorcole, broccoli, and cabbages must be well earthed up, to keep them upright, and all decayed leaves picked otf. Cauliflower plants must have air while the weather is mild, and pick off dead leaves. Earth up celery when dry, for blanching. Sow Ciess, mustard, and radishes, on hotbeds every %veek. Weed and turn over dunghills in frosty weather. Tie up endive for blanching. Hotbeds must be attended to, and plenty of hot dung and loam provided for cucumbers and melons. Lettuces under glasses must have air given them in the middle of mild days. Mushroom beds must have dry straw. Earth up peas and beans above ground. Roots preserved in sand, as carrots, potatoes, Sec., should be finished before the frost sets in. Search for snails in the holes of the walls. Sow cress, mustard, and radishes, on hotbeds every week. Repair, grind, and put in order tools. Set traps to catch mice in ; and make trenches to drain off the water.

Flower garden and shrubbery. — Examine auriculas frequently, and pick off all decayed leaves. Bulbous roots for forcing must be constantly attended to, to give them water, which should always be soft; and change that in the glasses when foul. Carnations in pots should be plunged into the ground ; but, if ashes or sand

be put between the pots, it will keep them dryer than earth. Flowers and shrubs in pots should be plunged into the ground, to keep the frost from the roots. Forest trees may still be planted, if there be not much frost ; otherwise it is better to defer it till spring. Shrubs and trees may still be pruned ; and long litter, &c., laid over the roots of those lately planted. Trendies and drains should be made wherever the water stands.

Fruit garden and orchard, — Examine apples and pears in the fruit room ; pick out such as appear the soundest of the best sorts, and wrap each in a piece of paper. This will cause them to keep several weeks longer. Repair espaliers ; prune the trees ; spread some rotten dung on the border, and fork it in. Finish pruning fig trees. Guard the fruit room from frost, but give it some air, when the weather is not very damp nor frosty. Examine the orchard, and take care that the newly planted trees are well staked and mulched ; and cut out the dead wood from the standard trees. Finish pruning and planting wall trees early in the month.

Greenhouse. — Air must be given whenever the weather is mild and will permit it. Earth the tops of the pots, but first take out a little of the old. Frost must be guarded against, by keeping the doors and windows close, when it begins to freeze. Constantly pick off decayed leaves. Myrtles and other greenhouse plants against walls will require to have mats placed before them ; and in the middle of fine days, before the frost is set in, rolled up, but let down again at night. Long litter, or rotten tan, should also be laid over the roots to preserve them from the frost. Myrtles may also be preserved in deep pits made against a south wall, and covered in very frosty weather with mats and straw nearly a foot thick. Many are preserved in the nurseries near London, with only hurdles laid over the pit, without any glass, and covered very thick iu frost with straw and mats. Succulent plants will require but very little water. Water those plants which require it very sparingly. Open the windows for three or four hours in the middle of the day.

SECT. V. — MODERN IMPROVEMENTS IN HORTICULTURE.

Thus far the general directions we have given will enable the reader to superintend the ordinary occupations of the garden throughout the year. Certain considerable improvements in this art within the last few years demand a more particular description. We shall class them alphabetically under the same general divisions of horticultural la'-ior that pervade our calendar, *viz.* the kitchen, flower, and fruit garden : —

I. In the KITCHEN GARDEN — 1. An early pur-ple variety of broccoli, called the Cape broccoli, first attracts our notice. It is of a very superior flavor, but apt in cultivation to start into flower ; clever management, however, will obviate this. Two crops are sown in the middle rf April and" May, the first on any border of light soil. The plants may be removed in a month into sandy loam,, manured ; and should not stand nearer than two feet apart. Frequent hoeing is

necessary. The

second crop should be planted in pots directly from the seed bed. Then sink the pots until the broccoli heads are formed. If these pots in the end of November, are placed in a glass ‘frame, very fine broccoli may be had in the depth of winter.

2. Cale, Sea. — Sea-cale is now cultivated on a very superior principle, and is an important market vegetable at Covent Garden. It should be trenched at least two feet deep in a light soil, and having a dry bottom. Recent dung or coarse manure must not be added, the shoots being apt to imbibe a disagreeable flavor from them : sea-weed or rotten leaves are best as ma-nure. The plant may be propagated by offsets, or by small pieces of the rpot, having eyes or buds attached to them ; but it rises freely from seed, sown in patches in March, and leaving fully two feet between each patch. During the first two years, it must be well hoed and weeded. At the approach of winter, some gardeners throw a little light stable dung, or a covering of fresh sandy soil, over the whole bed. In the third year, the plants are fit for blanching ; and, if the bed be well managed, it will continue productive for several years. It is proper, however, to sow a small bed yearly to ensure a succession of young and vigorous plants. Fresh seed may be kept in readiness, by allowing two or three plants to produce their flowers and seeds each year; the flowers, which are white and smell of honey, appear in May, and the seeds in September.

In the first volume of the Memoirs of the Caledonian Horticultural Society, Sir George Mackenzie describes an excellent method of blanching. The sea-cale bed is covered early in the spring with clean and dry oat-straw, which is removed as often as it becomes musty. The shoots rise through the straw, and are at the same time pretty well blanched. Mr. Barton, gardener at Bothwell Castle, employed tree-leaves for this purpose. He found that a thin covering of stable dung, sufficient only to keep the leaves from being blown about, was useful in forwarding the production of the sea-cale shoots, a slight fermentation being thus induced. The shoots rise sweet and tender

among the leaves, in the early part of spring ; but it must evidently be difficult in this way to regulate the heat of fermentation. Another method consists in placing over each plant a flower-pot of the largest size, inverted ; and blanching-pots, constructed for this express purpose, are described by Mr. Maher, in the first volume of the Transactions of the Horticultural Society of London. Each pot, during the season, will, upon an average, furnish a dish and a half of shoots.

By means of these pots sea-cale is forced with great facility. In autumn vigorous sea-kale is dressed off in the open border, that is, the stalks are cut over, and all decayed leaves are removed. The ground is at the same time loosened around the plants, and a thin covering of fine gravel, or sifted ashes, laid on the surface. A pot with a moveable lid is now placed over each plant, or patch of plants, if two or more have remained together, and stable litter is closely packed all round the pots, and pressed firmly

down, to the depth of a foot or more ; but the fermentation produced should never exceed 60° Fahrenheit. In the space of a month shoots will be ready for cutting; and successive shoots may be thus obtained throughout the winter. This method of forcing sea-kale, has universally superseded the plan of planting it in hotbeds, under glass frames, where it has been tried.

3. Cauliflower plants have been of late preserved through the winter in the following way : — At the end of October the firmest and best shaped are lifted with a ball of earth attached 10 the roots, and arranged round the borders of the peach-house, or vinery, close together, but without touching. The larger outside leaves are removed, and any points of leaves that immediately overhang the flower. While the houses are kept without fire, in the first part of the winter, mats and straw are used to cover the cauliflower plants from frost. You may also plant them in hot-bed frames, and draw off the glass in mild days ; covering them with mats, &c., as the weather becomes severe, and carefully removing the decayed leaves.

4. Cress, America. This is, in fact, a biennial variety of ours, erysimum pracox, and much resembles the common winter cress, E. barbarea, but its leaves have apleasanter and milder while warm taste. It has latterly become a favorite sallad, and may be sown at two or three times during the summer, either broadcast, or in drills a foot asunder, on a light soil. When the outer leaves are gathered it should be so managed, that the new ones are regularly produced. Make a late

sowing in August or September, on a sheltered border, and the plants will afford leaves until March.

5. Melons. The ingenious and scientific Mr. Knight has given some useful cautions to gardeners respecting preserving the leaves of melons. Many old horticulturalists have stripped the plant of them, as he contends, most injudiciously, the finen ess of the fru it often being sacri ficed thereby. He recommends the employing pegs more freely both to keep the plant, the roots particularly, in its place, and the leaves upright and steady. The Valentia and the Salonica melon are modern favorites. The former will keep many weeks, and has reached us in our late intercourse with the Peninsula. It is, generally speaking, to be managed like the common melon : the fruit gathered when nearly ripe, and suspended in a dry airy room, will keep till February. It is of a lozenge or long oval shape ; the skin thin, and of a dark green color ; the pulp whitish, firm, and juicy. The Salonica is nearly spherical, with a smooth face, and of a gold color ; the pulp of the same general appearance as the Valentia, but more abundant in saccharine.

6. Mushrooms are thus raised by what is called Oldacre's method. For the compost he obtains fresh short dung, which has neither been exposed to wet nor fermentation ; to which is added about a fifth part of sheep's droppings, or of the cleanings of a cow-house ; the whole being well mixed and incorporated. The beds are now formed in coarse wooden boxes. (1.) A stratum of the prepared mixture, about three inches thick, is beaten together on the bottom with aflat wooden

mallet ; then another layer beaten as before ; and this is repeated till the beds are half a foot thick, and very firm. (2.) The boxes are now placed in the mushroom-house, or any place where a slight increase of temperature can be procured. (3,) When fermentation takes place, and the beds are about milk-warm, holes are dibbled in the mass, about nine inches apart, for receiving the spawn, which is of course to be previously prepared. (4.) These holes are left open until the heat is on the decline, and before it is quite gone a piece of spawn is thrust into

each, and they are closed with the compost. (5.) A week afterwards the beds are covered with a coating of rich mould, mixed with about a fifth part of horse-droppings, and beaten down with the back of a spade. (6.) The place is now kept as nearly and equally at 55° Fahrenheit as it can be. When the boxes become dry, it is found necessary to sprinkle over them a little soft water, but this must be done with circumspection. The more free air can be admitted, so as to exclude the frost, the better for the flavor of the mushrooms.

7. Onions are much improved, it has been found, by transplanting. Mr. Knight's plan is to sow the seed (preferring the variety named white Portugal onion), at the usual spring sea-son, thick under the shade of trees, and in a poor soil. In the autumn the bulbs being small, but of firm texture, are taken from the ground, and preserved till the succeeding spring, when they are planted at equal distances, perhaps six inches from each other. The plants thus produced possess superior strength and vigor to those raised directly from the seed, owing to the quantity of previously generated sap being greater in the bulb than the seed. In Spain and Portugal they can accomplish this in one summer.

8. Mr. Knight some years ago obtained a new and most beautiful pea, by pollen taken from different varieties of blossom, white and gray the plant generally rising to the height of eight or ten feet. In exposed situations it is apt to be injured by the winds; but in sheltered places, and with the aid of stakes, it proves extremely productive. The blossoms are large and white, and both the legumes or cods, and the seeds or peas, are large. The. peas are of a cream color : as they begin to dry, they shrivel or contract in some degree ; from which circumstance the name of wrinkled pea has been given them among seedsmen. The flavor, when boiled, is peculiarly rich, no pea indeed has hitherto been found to yield an equal quantity of saccharine, and it retains its flavor in autumn uncommonly well. It should not be sown before April or May.

9. Potatoes have been improved under the auspices of the Horticultural Societies of the country, but a hardy growth of them is yet wanted. An important fact in the cultivation of potatoes was noticed about the year 1806, by Mr. Thomas Dickson of Edinburgh, *viz.* that the most healthy and productive plants were to be obtained by employing as seed-stock tubers which had not been thoroughly ripened, or even by planting only the wet, or least ripened ends of long-shaped potatoes. Mr. Knight has also shown the advantage of using, as seed-stock,

potatoes which have grown late in the preceding year, or have been only imperfect! ‘ ripened. It is likewise important to observe that it seems established, if a valuable kind is exhausted, or has lost its good qualities-, it may be restored merely by planting the tubers late in the sum-mer, and preserving the produce of this late planting for seed-stock.

Supplies of young potatoes are often produced, during winter, in boxes placed in the mushroom-house, in the shade at the back of a hothouse, or in a common cellar, out of the reach of frost. Old potatoes are placed in October in layers, alternating with a mixture of tree leaves, sand, and light mould. Vegetation soon proceeds ; and, there being no opportunity for the unfolding of stems and leaves, the energies of the plants are expended in the production of young ones. Be-fore mid-winter these attain the usual size and appearance of early potatoes ; but they are inferior and of a watery taste.

10. No modern addition to our horticultural productions has been more extensively approved than that of rhubarb stalks, and they are every year improving. We do not find them adopted in any other country ; but they are an important article of trade to the green-grocers both of Lon-don and Edinburgh. By the employment of young seedling plants, say of Rheum rhaponti-cum, hybridum, compactum, or Sibiricum, the proper removal of leaves, and the keeping of the plants from flowering, the succulent stalk, when peeled, cut down, and baked into tarts, has the appearance of apples, and a mild sweetness preferred by many people. In the open ground the stalks are produced from April till midsummer. Vegetation may be hastened during March, by throwing over the plants some loose haum, care being taken not to injure the shoots. Rhubarb may be forced much in the manner of sea-kale ; but the stalks thus become not only of a lighter color, but have less of the peculiar flavor of the plant. Mr. Knight mentions a method of forcing rhubarb by planting it in pots. In the beginning of winter a number of roots of rhubarb are dug up, and placed in some large and deep pots, each being made to receive as many as it will contain. Some fine sandy loam is then washed in, so as closely to fill the interstices between the roots, the tops of which are so placed as to be level with each other, and about an inch below the surface of the mould in the pots. The pots are placed in any kind of hothouse; and other pots of the same size are inverted over them. If water be freely supplied, vegetation proceeds very rapidly : three successive crops of leaf-stalks may generally be obtained. The shaded spaces of vineries or peach-houses, which are generally wholly

unoccupied, are exceedingly well suited for this operation.

11. Sprouts, called Brussels sprouts (the chou a jets of that neighbourhood), are the smaller rosettes of the stem leaves of this kind of cabbage, resembling the Savoy. They are very delicate eating, and are cultivated much in the manner of coleworts in general. The seed is to be sown in Spring, and seedlings planted out before midsummer on showery days. The plants grow as high as three feet, and the sprouts form a narrow

pyramidal growth round the stem In October the plants should be furnished round the roots with additional earth. The earliest sprouts be-come fit for use in November ; and, if the weather be mild, they continue good, or even improving till March. Two or three of the best plants, with the rosettes small and closely set, should be allowed to run to flower, in order to secure a supply of seed. In the London Horticultural Transactions, vol. iii., Mr. Van Mons of Brussels states, that, by successive sowings, the, sprouts are there obtained for the greater part of the year. The tops of the plants are cut off a fortnight before beginning to gather the sprouts ; which, it is thought, promotes the production of rosettes. The sprouts are preferred when small or young ; if they be more than half an inch in diameter, they are thought too large. In the spring, when the plants have a tendency to mn to flower, their growth is checked, by transplanting them to a cool situation.

2. Turnips. — The navew, or navet of the French, is a variety of our brassica napus, first cultivated in this country during the late war. The cultivation is similar to that of other turnips ; but the root, which is carrot-shaped, is of a much higher flavor. It is put whole into soups, after being scraped. The Maltese turnip, a fine yellow variety of a round shape and very smooth skin, has also been much cultivated of late : it is best preserved in sand during winter. The Aberdeen yellow turnip is something similar to it in appearance. The Swedish ruta baga is also now preferred by many for the winter, on account of its rich flavor and agreeable sweetness. It may either be stored in sand, or,

being a hardy plant, may remain in the ground till wanted. Powdered quicklime sprinkled over the young plants has been found an excellent remedy against the ravages of the turnip fly.

II. In the FLOWER GARDEN and SHRUBBERY we may notice the additions which have been made of late years to the rose tribes cultivated in this country. These have been largely increased from China, as in Lady Banks', the blush, the crimson, and the Macartney rose. Some varieties of the crimson China rose, with semi-double flowers, are particularly beautiful. Varieties of the Scots and Ayrshire roses have also extended themselves over England. The latter grows with remarkable rapidity, and has been found useful in covering walls or paling. It is the R. ca-preolata of Don.

Several Japan shrubs have been also adopted as highly ornamental. We may enumerate, 1. The Japan apple, (Pyrus Japonica) ; the gold plant (Aucuba Japonica); and the corchorus, or Kerrea Japonica.

From Ireland, within these few years, have been brought three very ornamental evergreens. 1 . The most important is a broad-leaved Irish ivy, the most superior plant of that tribe. It both grows more freely, and has leaves three or four times larger, as well as of a much brighter green, than the common ivy. 2. The next plant we shall mention is a kind of yeu; remarkable for its upright growth, and fine dark foliage. 3. The Irish furze, also remarkable for its upright growtli.

The Siberian lilac is a pretty shrub of .ate introduction. The size of the leaf is between that of the two old species. It seems to be the varin of the French. Ribes aureum, or the yellow-flowered currant,makes also a fine appearance when in blossom. It requires shelter, or to be trained. The tree-peony, or moutan, is also planted in a sheltered situation, and forms a beautiful ornament to the garden or shrubbery when in flower.

The cultivation of dahlias, we may add, has become very fashionable ; and the showy geraniums have greatly increased. Acacias have been yielded from New Holland in great abundance ; while the heaths of the Cape of Good Hope have become so numerous, and are so beautiful, that upwards of 200 species of them are already adopted.

III. The FRUIT GARDEN and NURSERY operations have received more attention and improvement of late years, perhaps, than any other branch of horticulture. We shall first notice the chief new varieties of

fruit that have been introduced.

1. Of Apples. — Mr. Knight has distinguished himself in the culture both of the apple and pear. We owe to him, or his improved methods of cultivation, the yellow Tngestrie pippin, the Scotch, nonpareil and the Braddock nonpareil. The Downton pippin, so named after Mr. Knight's seat, has been long known. The Wormsley pippin is a variety of the latter, and a very fine large juicy fruit. The russet nonpareil was raised at Pitmaston near Worcester, from seeds of the nonpareil. The blossom is more hardy than that of the parent variety, and the fruit compressed of a dull green, and much covered with russet ; the pulp is of a pleasant and very aromatic consistence. The martin nonpareil is another fine dessert species raised near Worcester America has of late yielded, the important addition of the Newtown pippin of Long Island, a fine dessert apple, similar to the rennet; it keeps well, is in perfection in January, but continues good till March or April. In this country the tree requires a wall with a good aspect. The Spitzenberg apple has somewhat of the pine-apple flavor : the tree requires a sheltered west situation and good soil ; the fruit is of fine appearance. The American nonpareil, or pomme de grise, is a high-flavored apple, introduced only a few years ago : and also flourishes best on a west wall. The Canadian rennet may be added as a good wall apple.

2. The Elton cherry was produced by Mr. Knight from the pollen of the white heart and the blossom of the graflfion. It has a deep crimson tinge on the petals, and very long fruit stalks. The black eagle he obtained from the graffion and may-dukp. The Waterloo and early black cherry were similarly produced. All these are great improvements in regard to handsome and juicy fruit.

3 . The cranberry of America (Vaccinium Ma-crocarpum) is a useful recent addition to our hardy fruit. It is large for a cranberry, grows freely, and to a good height, and is distinguished by the smoothness of its stem. It flourishes most in a damp situation or near water.

4. In currants nothing exceeds the large Dutch white and the Champagne, an intermediate curran

between red and white, but larger and more juicy than the red. The Pollock white is an excellent and very sweet variety, raised from the seed, at the garden of Sir John Maxwell, Bart.

5. Gooteberries have been considerably improved in Lancashire, where they speak highest of the Warrington, the Captain, the Old Ironmonger, and the red Champagne. Wilmot's early red likewise deserves mention : it is early ripe, large, and of excellent flavor ; in May, it is better for tarts and sauces than most others, the skin melting down with the rest of the berry. It is easily cultivated and very productive.

6. Grapes are too important for an incidental notice like the present, see VINE. But we may here mention that Mr. Knight has successfully mingled the pollen of the Aleppo grape with the flower of the white chassilas, and produced one of the best of the new varieties of the grape, the variegated chasselas.

7. The Woodhall is the only new variety of nectarine ; and is so named from its having been raised at Woodhall, near Holyton in Scotland, by Mr. Walter Henderson, a successful cultivator of the citrus and erica tribes. The fruit, which is very successful, generally approaches to the elruge ; but it is more juicy, and of a higher flavor. The tree has never shown the slightest symptom of mildew. The blossom is small, early, and hardy.

8. In the Orangery large trees are not now so frequently found as formerly. The citron and the lemon are preferred for training on trellises, or for covering the back wall of a hothouse. Mr. Benham of Islesworth, and Mr. Henderson of Woodhall, are considered, we believe, among the most successful cultivators of the orange tribes, and have lately introduced the Malta or sweet Philippine orange. It is of a beautiful round shape, reddish-yellow rind, and crimson juice. The fruit is small. The shaddock sometimes attains in England a large size, the fruit weighing from four pounds to eight pounds or upwards ; but it is not fit to be eaten in a raw state.

9. Mr. Knight meets us again as a successful cultivator of peaches. He planted several trees in laige pots, and paid every attention to bringing them to a state of high health and vigor ; he then applied to the pistil of one good kind the antheras of another; each tree was allowed to bring not more than three peaches to perfection ; and thus he produced the Acton and Spring Grove peach, both of a beautiful bright color, and firm but melting vinous pulp. Braddick's American

peach is recommended in the London Horticultural Transactions, vol. ii. It is a large yellow fruit, red next the sun ; the pulp yellow, and of high flavor. It is not, however, hardy, nor does the tree freely produce.

10. Invars the Worm&ley Bergamot, and the Bon Chretien, much cultivated near London, are the only important new varieties. The Wormsley Bergamot has been raised by Mr. Knight from the blossom of the autumn bergamot, dusted with the pollen of the St. Germain. The sickle pear of America is also an addition-to our fruit gardens.

11. In the third volume of the London Horticultural Transactions, Mr. Hooker has described Wilmot's new early Orleans plum. It resembles generally the common Orleans ; but the fruit ripens three weeks before that fruit ; while the blossom expands later than in almost any of the plum tribe. The fruit resembles the Orleans, but is more juicy, and of finer flavor ; the tree is vigorous and fertile. Coe's golden drop is also a new variety. The leaves are uncommonly large, and this is the principal character of the variety. When the fruit is ripe, the pulp is of a gold yellow color; it is dotted next the sun with violet and crimson. The fruit may be kept for many weeks hung up in a dry place. The trees require a west wall.

Improvements in the rearing of fruit trees. — Mr. Knight, in his treatise on the apple and pear, notices the fact that some of the finest cider and perry fruits of the seventeenth century have become extinct, and observes that, as each variety of fruit springs from an individual at first, it is by means of grafting or budding, that the individual has been extended. Whatever tendency to decay and extinction existed in the individual at first, must, he remarks, exist in all the extensions of that individual accomplished by means of buds or grafts. By careful management, or fortunate situation, the health and life of a particular individual or original tree, therefore, may be -prolonged ; and, in like manner, some buds or grafts, placed on vigorous stocks and nursed in favorable situations, may long survive the other buds or grafts from the same tree, or may long survive the original unengrafted tree. Still, in all of them, there is a progress to extinction ; the same inevitable fate awaits them : the only renewal of an individual, the only true reproduction, is by seed. Mr. Knight's doctrine, in this respect, seems now to be established, and the importance of acquiring new varieties of our staple fruits is generally acknowledged.

Our author has taken uncommon pains to procure promising seeds for this purpose. For example, he prepared stocks of the best kinds of

apple capable of being propagated by cuttings, and planted these stocks against a wall in a rich soil; these were next year grafted with the golden pippin. In the course of the following winter the young trees were raised from the ground, and, the roots being shortened, they were replanted. By this mode of treatment they were brought into a bearing state at the end of two seasons. Only two apples were suffered to re-main on each tree ; these consequently attained a large size and perfect maturity; and the seeds thus procured were sown to procure seedlings allied to the golden pippin.

Mr. Knight, Mr. Macdonald, and others, have also been at great pains to bring the pollen of one kind of approved fruit in contact with the pistils of others ; an operation of great nicety. Mr. Knight opened the unexpanded blossom of the variety destined to be the female parent of the new progeny, and with a pair of small pointed scissors cut away all the stamina while the anthers were yet unripe, taking great care to leave the style and stigmata uninjured. The full blown blossoms of the other variety were after-

wards applies, The fruits resulting from such artificial impregnation have been of the most promising character. He has often remarked in the progeny a strong prevalence of the constitution and habits of the female parent. In this country, therefore, in experimenting on pears, the pollen of the more delicate French kinds, as the crasanne, colmar, or chaumontelle, should be dusted upon the flowers (always deprived of stamina) of the muirfowl egg, the gray achan, the green yair, or others that are hardy or of British origin. By these means, it may be hoped that, in the course of another generation, excellent winter pears may be obtained in abundance from our standard trees; for at present we are nearly destitute of hardy winter pears.

We find ourselves indebted to the ingenuity of Mr. Knight at every step of our progress through the nursery and fruit garden. Obserr-ing how slow some trees, as the mulberry and walnut for instance, are in bearing, he has ascertained, that if cions be taken from prolific branches of bearing trees, the young trees may be made to anticipate

the course of nature many years. If indeed the stocks be planted in pots, and grafted by approach, they will generally afford fruit in three years.

In training young trees, of the peach and pear kinds, Mr. Knight's plants are headed down as usual, a year after being grafted ; two shoots only are allowed to each stem, and these are trained to an elevation of about 5°. A branch trained upright, it is well known, grows much more luxuriantly than one confined to an horizontal position. Advantage is taken of this law of vegetation, and, in order to procure the shoots of equal length, the stronger is depressed and the weaker elevated. All lateral shoots are carefully removed. Next season as many branches are encouraged as can be laid in without over-shading each other; and care is taken in the spring to select the strongest and earliest buds near the termination of the year-old branches, to be trained lowest, and the weakest and latest buds near the base of the branches to be trained inclining upwards : the result is, that, at the end of the season, each annual shoot comes to be nearly of equal vigor. In the following winter half of the shoots are shortened, and the other half left at full length, one shoot being left and the other cut alternately. In the third year, the central part of a peach-tree will consist of bearing wood. The size and general health, and equality of vigor in every part, of young trees trained by these rules, evince a very regular distribution of sap ; and the rules at any rate are simple and of easy observance. Such trees, as they advance, are trained in the fan mode, always preferable where the walls are of a sufficient height.

We may here notice, as connected with this subject, that it has been found to promote." the growth of fruit in trees to bend the extreme branches of them, in training, downwards. It checks the tendency to produce wood. It is also a modern practice to conduct the extreme branches of fruit-trees from one side of a wall to the other. Sir Joseph Banks having a Gan-sel's bergamot pear-tree on a north aspect,

where the fruit did not succeed, caused some branches to be turned over to the south side, and trained downwards, when they not only produced fine fruit, but abundance of it. The roots of the May-duke cherry, and some others, require to be in a cool soil. On the north side of a wall, therefore, such trees thrive best ; but it has been found, that if their extreme branches be turned over the wall, and trained downwards on the south side, they are not only brought into plentiful bearing, but yield their fruit earlier.

Decorticating, or cleansing the skins of trees by stripping off the bark and washing them, has long been practised. Mr. Lyon, of Edinburgh, has lately invented several simple instruments for facilitating the removal of the bark, and carried the practice much farther than his predecessors. He recommends its being adopted even for young and bearing trees much more frequently, and not merely, as heretofore, in case of the bark appearing diseased or insect-eaten.

The decortication of vines has been revived, and strongly recommended of late, in a pamphlet by Sir John Sinclair.

For improvements in various horticultural erections, see HOTHOUSES, PINE-STOVES, &c.

SECT. VI. — A TABLE SHOWING THE NUMBER OF

CROPS REQUIRED OF EACH SORT OF VEGETABLES, TO HAVE A REGULAR SUCCESSION THROUGH THE YEAR; WITH THE TlME OF SOWING AND PLANTING. KITCHT.N GARDEN PLANTS, SEEDS, AND ROOTS

No. of Crops Alisanders 2

Angelica 2

Artichoke 1

Asparagus 1

— forced 5

— in autumn Balm

Basil Beans, early

— late

Beets

Boorcole or kale

— Anjou Borage Broccoli Burnet Cabbages, early

— late

— red

— Savoy

— for cattle

— for seed Cabbage turnips Camomile Capsicums Carrots to draw

young 3

— principal crop 1

— for seed 1

Time of Sowing, &c.

March, August

March, August

March or April

March or April

October, November, December, January, February

July, if cut down

March or April

March or April

October, January, February, March, July

February, March, April, July

February or March

March, April, June

May, June

February or March

March, April, May, June

March or April

August

February, March, May June

February, March, June

March, May, June

May, June

October or November

May, June

March or April

March or April

> January, April, July

February or March February

HORTICULTURE.

No. of Crops, Cauliflowers 4

Celery

Chardons Chervil Gives Clary Coleseed Coleworts Corn sallad Cress for seed

— for sallad

— on hotbeds Cucumbers

— on hotbeds 3

— for bell glasses!

— on open ground 1

Dill Endives Escalions Eschalot Fennel Finochio Garlic

Horseradish Hyssop Jerusalem artichokes \

Kidney beans 5

— Runners

Lavender

Leeks

Lettuces

Marjoram

Marygolds

Melons

— for autumn

Mint

Mushrooms

Mustard, for seed 1

— for sallad

— on hotbeds

Nasturtiums • 1

Onions to draw

young

— principal crop — for seed —Welsh Parsley — large rooted Parsnips

Peas, hotspurs 5

— Marrowfats

Pennyroyal

Potatoes

— on hotbeds

Purslane

Radishes

— on hotbeds — for -sallad — for seed Kampion

Time of Sowing, &c. August, February, March,

May February, March, April,

May, June March or April March, August March or April March or April June or July February, June or July March, August March or April March to September October to March January, February, March,

April, May

January, February, March April

May or June March or April April, May, June, July January or February February, September February, August April, May, June, July February, September February, or March March or April

February or March

March, April, May, June,

July

April, May May or June February or March February to August March,

April February to April February, March, April May

March or April March, September March or April March to September October to March March or April

January, April, May, July

February or March

February or March

July, August

February, March, July

February, April

February, March or April

October, January, February, July, August

February, March, April, May, June

March or April

February, March, April

January or February

March, April, May

January to August, ‘ and November

January, February

March to September

May

March or April

No. «f Crops. Time of Sowing, &c

Rape 1 June 01 July

— for sallad March to September

Rocambole 2 February, September

Rosemary 1 May or June

Rue 1 March or April

Sage 1 March or April

Salsafy 1 March or April

Savory 1 March or April

Savoy cabbage 3 March, May, June

Scorzonera 1 March or April

Scotch kale 3 March, April, June

Sea kale 3 March or April

Skirrets 1 March or April

Sorrel 2 March or August

Spinach 6 February to July

— winter 2 July, August, or September

Tansey 1 March or September

Tarragon 1 March or September

Thyme 1 March or April

Tomatoes 1 March or April

Turnips 6 March to August

— for seed 1 February

Turnip-cabbage 2 May, June

Turnip-radish 2 June, July

Water-cress 2 March, September.

SECT. VII. — CATALOGUE OF FLOWERS, SHRUBS, AND TREES USUALLY CULTIVATED.

1 . Tender Annual Flowers. To be sown on a strong hot-bed the last week in February, or first in March, transplanted afterwards upon another at four inches distance ; then planted in small pots in May ; afterwards in larger, and at the end of June placed in the open air.

1. Amaranths 6. Humble plant

2. Balsams 7. Ice plant

3. Cockscombs 8. Sensitive plant

4. Egg-plants 9. Stramoniums.

5. Glocest. amaranths

2. Annual Flowers.

To be sown on a moderate hot-bed in March or April, transplanted afterwards, before they are too thick, in rich light earth, and covered with mats ; and in a month or six weeks into pots, or borders of the flower-garden.

1. African marygold 8. French marygold

2. Browallia, blue 9. Marvel of Peru

3. Capsicum 10. Mignonette

4. Cape marygold 11. Nolana

5. Chinese aster 12. Palma Christi

6. Chinese or Indian 13. Stock Julyflower

pink 14. Sultan, yellow

7. Chrysanthemum 15. Zinnia.

In sowing them, fix numbers to them, corresponding with these, to distinguish each sort when they appear.

3. Hardy Annual Flowers.

To be sown in March or April on the borders of the flower garden. Those marked thnsf, be-ing very hardy, may be sown in the beginning of February, to flower early. Hollow the earth out in form of a little basin, about a foot over, and two inches deep ; draw a circle near the

edge half an inch deep, and drop a few seeds in it ; thin them soon after they appear, and leave them

at six inches distance, but the large sorts wider. In dry weather they will want frequent watering. Gather the seeds as they ripen, and you may save the expense of buying in another season.

1. Adonis flowerf 23. Mallow

2. Alkekengi 24. Mignonette

3. Alysson 25. Nasturtiumf

4. Amaranth 26. Nigella, or devil in

5. Amethystea a bushf

6. Balm, Moldavian 27. Pansies, or hearts-

7. Belvidere ease

8. Candy-tuftf 28. Peas, sweet scent-

9. Catchfly, Lobel’sf edf

10. Caterpillar trefoil 29. Persicariaf

11. Clary,red and white 30. Poppyf

12. Convolvulus 31. Safflower, or bas-

13. Cornbottlef tard saffron

14. Cucumber, spurt-32. Snail trefoil

ing 33. Snap-dragon

15. Fumitory, yellow 34. Stock Julyflowerf

16. Hedgehog trefoil 35. Sunflower

17. Honeywort 36. Sweet sultan

18. Indian corn 37. Tobacco

19. Ketmia 38. Venus’s looking-

20. Larkspur glassf

21. Lavateraf 39. Venus’s navelwort

22. Lupine 40. Xeranthem

In July sow again annual stock, candy-tuft, convolvulus minor, cornbottles, Lobel’s catchfly, and yellow lupines, and they will flower until the frost kills them.

4. Biennial Flowers.

To be sown in March or April in beds very thin ; as soon as the plants touch one another thin them, and leave them at four or six inches asunder ; those drawn out, plant at the same distance. In July transplant them all upon beds, at eight inches asunder; there to remain till the end of September, when they must be planted upon the borders of the flower garden, and they will produce their flowers the next summer, after which they will perfect their seeds and die.

1. Canterbury bell 7. Poppy, yellow

2. Colutea, /Ethiopian 8. Rocket [horned

3. French honeysuckle 9. Scabious

4. Globe thistle 10. Stock Julyflower

5. Honesty, or moon-11. Sweet William

wort 12. Tree Primrose

6. Mallow tree 13. Wall flower

5. Perennial Flowers,

Which, if sown in the same manner as the biennials, and transplanted into the borders

of the flower garden, will continue for several years.

1. Alysson 11. Ox-eye daisy

2. Auricula 12. Pea, everlasting

3. Bee larkspur 13. Pinks

4. Campanula 14. Polyanthus

5. Carnation 15. Rhubarb

6. Columbine 16. Rose campion

7. Flax 17. Snap dragon

8. Foxglove 18. Valerian

9. Hawkweed 19. Greek valerian

10. Hollyhock

6. Perennial Flowers,

Which are propagated by dividing their roots in spring, in March or April ; or in the autumn, in September.

1. Adonis flower 46. Lychnidea

2. Anemone 47. Mad wort

3. Asphodel 48. Marsh Marygold

4. Asters 49. Meadow-sweet

5. Batchelor’s button 50. Milfoil

6. Bean-caper 51. Milk-vetch

7. Bear’s-breech 52. Mint

8. Borage 53. Moth-mullen

9. Bugloss 54. Navelwort

10. Campanula 55. Peony

11. Campion 56. Pilewort

12. Cardinal flower 57. Plantain

13. Christmas rose 58. Primrose

14. Cowslip 59. Ragged Robin

15. Cranesbill 60. Ranunculus

16. Crowfoot 61. Reed

17. Daisies 62. Rhubarb

18. Dog-tooth violet 63. Saxifrage

19. Dragons 64. Skullcap

20. Dropwort 65. Sneezewort

21. Eternal flower 66. Side-saddle flower

22. Fennel giant 67. Soapwort

23. Feverfew 68. Solomon’s seal

24. Flag 69. Spiderwort

25. Foxglove 70. Spurge

26. Fraxinella 71. Stonecrop

27. Fumitory 72. Sunflower

28. Garlic 73. Swallow-wort

29. Gentianella 74. Thrift

30. Golden locks 75. Throatwort

31. Golden rod 76. Toadflax

32. Greek valerian 77. True love

33. Hellebore 78. Valerian

34. Hepatica 79. Vervain

35. Herb benet 80. Veronica

36. Houseleek 81. Violet

37. Lady’s mantle 82. Viper’s bugloss

38. Lady’s slipper 83. Wake-robin

39. Lady’s smock 84. Willow-herb

40. Lily of the valley 85. Wolf’s-bane

41. Lion’s tail 86. Wormwood and

42. London pride some others; but

43. Loose-strife with very little

44. Lupine beauty to recom-

45. Lychnis mend them. “7. Bulbous and Tuberous Rooted Flowers.

1. Aconites 14. Lily

2. Amaryllis 15. Martagon

3. Anemone 16. Narcissus

4. Bulbocodium 17. Pancratiums

5. Cornflags 18. Polyanthus Narcis-

6. Crocuses sus

7. Crown imperial 19. Ranunculus

8. Cyclamen 20. Sisyrinchium

9. Daffodil 21. Snowdrop

10. Garlic Moly 22. Star of Bethlehem

11. Hyacinth 23. Tuberoses

12. Jonquille 24. Tulips

13. Iris

To be taken up in April, May, and June, as soon as their leaves are withered, and planted again in September or October, but their offsets in August. The ranunculuses and anemones not to be planted till February. The seed to be sown in February, in boxes.

8. Bulbous-rooted Flowers.

1. Amaryllis 5. Daffodil

2. Colchicum 6. Lily, Belladonna

3. Crocus 7. — Guernsey

4. Cyclamen 8. Saffron

These flower in autumn. They require to be planted in August, and to be taken up in April or May, as soon as their leaves are decayed ; but their offsets in July.

9. Deciduous Flowering Shrubs and Ornamental

Trees.

To be planted in March, April, September, and October.

1. Acacia, rose-flower- 37. Jesuits'-bark tree,

ing false

2. Almond tree 38. Indigo, bastard

3. Allspice 39. Ironwood tree

4. Althaea 40. Judas tree

5. Ash, mountain 41. Kidney-bean tree

6. Annona, or papaw 42. Laburnum

7. Azalea 43. Lac, or varnish tree

8. Berberry tree 44. Leatherwood

9. Bignonia or trumpet 45. Lilacs

flower. 46. Mezereon

10. Bladder sen a 47. Nightshade

11. Bramble 48. Olive-tree, wild

12. Buckthorn 49. Passion flower

13. Caragna 50. Peach trees

14. Cassioberry bush 51. Periploca, or Virgi-

15. Catalpa, or trum-nian silk

pet flower. 52. Plum trees

16. Ceanothus 53. Poison trees

17. Cephalanthus 54. Pomegranate tree

18. Cherry tree 55. Privet

19. Cinquefoil, shrubby 56. Raspberry

20. Clethra 57. Restharrow

21. Cornel 58. Rose tree, eighty ra-

22. Crab-tree rieties

23. Cytisus 59. St. Peter’s wort

24. Diervilla 60. Sassafras

25. Dogwood 61. Service tree

26. Fothergilla 62. Snowdrop, or fringe

27. Ginkgo, or maiden-tree

hair-tree 63. Spindle tree

28. Gueldres rose 64. Spiraea

29. Halesia 65. Sumach

30. Hammealis 66. Syringa

31. Hawthorn. 67. Tamarisk

32. Hickery nut 68. Tea tree

33. Honeysuckle 69. Toothach tree

34. Honeysuckle, up-70. Traveller’s joy

right 71. Tupelo tree

35. Hypericum 72. Viburnum

36. Jasmin 73. Weeping willow

10. Deciduous Forest Trees. To be planted from the middle of February *JI1 the beginning of April, and from September till December

1. Acacia 9. Elder 17. Maple

2. Alder 10. Elm 18. Nettle-tree

3. Ash 11. Hickery 19. Oak

4. Beech. 12. Hornbeam 20. Plane .

5. Birch 13. Horse chest-21 . Poplar

6. Chestnut 14. Larch [nut 22. Tulip tree

7. Crab-tree 15. Lime 23. Walnut

8. Cypress 16. Magnolia. 24. Willow

1 1. Evergreen Flowering Shrubs and Ornamental Trees.

To be planted in March, April, September, und October.

1. Alaternus 4. Arbutus

2. Andromeda 5. Bay

8. Arbor vitae 6. Bignonia

7. Box

8. Brooms

9. Cassine, or South

Sea tea-tree

10. Cistus or rock rose

11. Crab tree

12. Cytisus, hairy ever-

green

13. Groundsel tre«

14. Holly

15. Honeysuckle

16. Juniper

17. Ivy.

18. Kalmia

19. Lavender

20. Laurel

21. Laurt»3tmus

22. Magnolia

23. Phillyrea

24. Privet

25. Purslane tree

26. Pyracantha

27. Rhododendron

28. Rose tree

29. Rosemary

30. Rue

31. Savin

32. Spindle tree

33. Sweet briar

34. Tea tree

35. Widow-wail

12. Evergreen Forest Trees.

To be planted from the middle of February till the end of April, and from September till December.

1. Cedar 3. Cypress 5. Oak 7. Yew.

2. Cork 4. Fir 6. Pine

13. Fruit Trees.

To be planted in February, March, October and November.

1. Almond 8. Fig 15. Pear

2. Apple 9. Filbert 16. Plum

3. Apricot 10. Gooseberry 17. Quince

4. Berberry 11. Medlar 18. Raspberry

5. Cherry J2. Nectarine 19. Service

6. Crab-tree 13. Nut-tree 20. Vine

7. Currant 14. Peach 21. Walnut

The following method may be taken for preserving the blossoms of fruit trees in spring. Procure some -sheep-hurdles made of hazel or willow branches, about two or three feet higher than the walls. At spring, just before the blossoms of the fruit-trees begin to open, place these before the trees, and fasten them in windy weather with stakes, and, by their being taller than the walls are high, they may be set sloping about two feet from the bottom of the walls, which will keep them steady. When the fruit is set, and entirely out of danger, take them quite away, and by keeping in a dry place they will last many years, and will be always worth one-third of the first cost for lighting fires, when unfit for any other use.

In an experiment that was made, the hurdles were placed before the trees in December ; they also defended a crop of peas, and both seemed to be much benefited, particularly the peas. Possibly vines might also thus be defended in spring, and come forwarder ; at least it

is worth trying where the walls are not too high.

14. Hardy Greenhouse Plants. To be planted against a south wall, in the open ground, the roots covered with tan or long litter. These will not be killed except in very severe frosts, and then they generally shoot up afresh from their roots. By this method, many curious plants, formerly only kept in greenhouses, will now ornament the walls, where they will appear in greater vigor and beauty, and many may produce both flowers and fruit, which they will r.oc do when confined in pots in a greenhouse.

HOS

!. Bay tree 11.

— Blue-berried Carolinian

2. Boxthorn 12.

— African

3. Broom

— Starry 13.

— Montpelier 14.

4. Cedar tree 15.

— Bermudian 16.

— Goa 17.

5. Fig, Indian

6. Heath 18.

— Many-flowered

— Mediterranean

— Three-flowered

7. Jasmin, Catalonian

8. Laurel, Alexandrian

9. Myrtle 19. — Portugal 20.

— Upright Italian 21. 10. Magnolia

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HOS

Oleander.

— Red

— White Olive-tree

— Box-leared

— Provence Pistachia nut-tree Pomegranate, dwarf Ragwort, sea

Rose tree, Chinese Rosemary, silver-leaved Sophora

— Small leaved Otaheite

— Broad-leaved Ro-man

— Double-flowered Strawberry tree Tea tree, green Winter cherry.

For other particular operations in gardening, see ESPALIER, FRUIT-TREES, GRAFTING, GREENHOUSE, HOTBED, INARCHING, INOCULATING, ORCHARD, PLANTING, PRUNING, TREES, &c. &c. and the culture of the" different plants under their respective generic names.

HORTUS Siccus, a dry garden, an appellation given to a collection of specimens of plants, dried and preserved. The value of such a collection is evident, as a thousand minutiae may be preserved in the well-dried specimens of plants, which the most accurate engraver

would overlook.

HORUS, a renowned deity of ancient Egypt. He was an emblem of the sun. Plutarch, in his treatise De Iside et Osiride, says, ‘ that virtue which presides over the sun, whilst he is moving through space, the Egyptians called Horus, and the Greeks Apollo.’ Job also calls Ur or Orus, the sun — ‘ If I gazed upon the sun (Ur, Orus) when he was shining, or on the moon (Jare’cha) •walking in brightness,’ &c. Ch, xxxi. ver. 26, 27, 28. The interpretation left by Hermapion of the hieroglyphics engraved on the obelisk of Heliopolis (accordingto Ammianus Marcellinus) is in these remarkable words : ‘ Horus is the supreme lord and author of time.’ He is called Invisible in winter, Jupiter in the spring, the Sun in summer, and towards the end of autumn the tender Jao. The Egyptians represented him borne on lions, which signified the sun’s entrance into the sign of the lion. They who presided over the divine institutions then placed sphynxes at the head of the canals and sacred fountains, to warn the people of the approaching inundations. Plutarch, in his Treatise of Isis and Osiris, relates the sacred fable of Horus ; that he was the son of Osiris and Isis ; that Ty-phon. after killing his brother Osiris, took possession of the kingdom: that Horus, leaguing with Isis, avenged the death of his father, expelled the tyrant from his throne without depriving him of life, and reigned gloriously in Egypt. A person who has travelled in Egypt easily discovers natural phenomena hid under this veil of fable. As the philosophers acknow-VOL. XI

ledged the influence of the moon over the state of the atmosphere, they united Isis with this god, to drive the usurper from the throne. The priests, considering Osiris as the father of time, might bestow the name of his son Horus on the sun, who reigned three months in the year This, according to Mr. Savary, is the explication of this allegory.

HOSAN’NAH, n. s. Gr-ooawa. An exclamation of praise to God.

O thou ! that art so faire and ful of grace, Be thou min advocat in that high place, Ther as withouten ende is songe Osanne, — Thou Cristes mother doughter of dere Anne.

Chaucer. The Second Nonnet Tale. Through the vast of heaven It sounded, and the faithful armies rung Huiarma to the Highest. Milton.

The public entrance which Christ made into Jerusalem was celebrated with the hosamnas and acclamations of the people. Fiddes.

Hos ANN A, in the Hebrew ceremonies, was a prayer rehearsed on the several days of the feast of tabernacles ; thus called, because there was frequent repetition therein of the word KJJfitnn, i. e. save us, we pray. There are many of these hosannahs. The Jews call them hoschannoth, i. e. the hosannahs : and style them hosanna of the first day, hosanna of the second day, &c., according as they are rehearsed.

HOSANNA RABBA, or grand hosanna, is a name given to the feast of the tabernacles, which lasts eight days ; because during the course thereof they are frequently calling for the assistance of God, the forgiveness of their sins, and his blessing on the new year ; and to that purpose they make great use of the hoschannoth above mentioned. — The Jews also apply the term hosanna rabba more peculiarly to the seventh day of this feast, because they more immediately on that day invoke the divine blessing, &c. HOSE, n. *. } Sax. f>0fa, plur. hosen ; HO'SIER, n. s. > Welsh, hosan ; Erse, ossan ; HO'SIERY, n.s. J plur. ossanen ; Fr. okausse. Applicable either to breeches or stockings. Hosier, one who sells stockings. Hosiery, stockings and other articles of worsted, cotton, or silk.

These men were bound in their coats, hoten, hats, and other garments, and cast into the midst of the burning fiery furnace. Dan. iii. 21.

He being in love, could not see to garter his hose , and you, being in love, cannot see to put on your hose. Shakspeare.

Guards on wanton Cupid's hose. Id.

Here's an English taylor come hither for stealing out of a French hose. Id.

He cross examined both our hote, And plundered all we had to lose. Hudibras. Will she thy linen wash, or hosen darn, And knit thee gloves ? Gay'* Pastorals.

As arrant a cockney as any hosier in Cheapside. Swift. HOSEA, the son of Beeri, one of the minor prophets, lived in the kingdom of Samaria, and delivered his prophecies under Jeroboam II. and his successors, kings of Israel ; and under Uzziah, Jotham, Ahaz, and Hezekiah, kings of Judah. His principal design is to publish the gross idolatries of the people of Israel and Judah, to denounce the divine vengeance against them, and to fortel the captivity in Assyria.

HOS PIT ABLE, adj. HOS’PITABLY, adv. HOS’PITAL, n.s. HOSPITAL’ITY, n. *.

HOS’PITALLER, «. S.

HOS’PITATE, v. a. HOST, n. s. & v. a. HOS’TEL, n.s. HOS’TELRY, n.s. HOS’TESS, n. s. HOS’TESS-SHIP, n.s.

Fr. liospital, hospita—

lite, hospitaller, hoste ; Lat. hospitabilis, hospitalis, twspitor, hospes. These words signify places and persons, >where and by whom kindness and entertainment are given to strangers, or relief to the sick; together with the correspond-J ing dispositions of

HOS’TLER, n. s. HOS’TRY, n.s. _

generosity and liberality, as hospitable, hospital, hospitality : host has not only this meaning, but is also the landlord of an inn. Hostel, hostelry, an inn. Hostess-ship, a landlady of an inn. Hostler, one who takes care of horses at an inn. Hostelry, and hostry, the place where the horses of guests were kept. These words were formerly applied to gratuitous liberality shown to strangers and others by persons of opulence ; but, with the exception of hospitality, are now generally used in reference to inns, where accommodations are purchased by the traveller. ‘Hospitallers are religious persons of both sexes, who attended the sick in hospitals.’ — Chaucer’s Glossary. And bade our Hoste he shulde to him say, That alle we, to tell his tale him pray. Our Hoste had the wordes for us alle ; Sire Freest, quod he, now faire you befalle Say what you list and we shul gladly here.

Chaucer. Prologue to the Persona Tale. But ley as still as any stone, remembryng his foly That he woH trust a Tapster of a common hoitry.

Chaucer. The Pardonere and Tapstere. Saint Austin saith a man may be In houses that ban properte, As Templars and Hospitelers.

Id. Romaunt of the Rose.

They spyed a goodly castle, placed Foreby a river in a pleasant dale, Which chusing for that evening's hospital, They thither marched. Faerie Queene.

The cause why they are now to be permitted is want of convenient inns for lodging travellers on horseback, and hostlers to tend their horses by the way. Spenser on Ireland.

The Lacedemonians, forbidding all access of strangers into their coasts, are, in that respect, deservedly blamed, as being enemies to that hospitality which, •for common humanity's sake, all the nations on the earth should embrace. Hooker

Go, bear it to the centaur, where we host ; And stay there, Dromio, till I come to thee.

Shakspeare.

My master is of a churlish disposition, And little recks to find the way to heaven By doing deeds of hospitality.

Id. As You Like It.

It is my father's will I should take on me The hostess-ship o' the' day : you're welcome, sirs.

Shakspeare.

Time's like a fashionable host, That slightly shakes his parting guest by the hand ; But with his arms outstretched, as he would fly, Grasps in the comer. Id Troilus and Cressida.

Ye were beaten out of door, And railed upon the hostess of the house.

Shakspeare.

I'm your host :

With robbers* hand my hospitable favour You should not ruffle thus. Id.

Fair and noble hostess, We arc your guests to-night. Jd. Macbeth. Here, father, take the shadow of this tree For your good host. Id. King Lear.

Homer never entertained either guests or hosts with long speeches, till the mouth of hunger be stopped. Sidney.

Undistinguished civility is like a whore ov a hostess.

Temple.

Swift rivers are with sudden ice constrained, And studded wheels are on its back sustained ; An hostry now for waggons, which before Tall ships of burden on its bosom bore.

Dryden's Georgia.

Receive the shipwrecked on your friendly shore ; With hospitable rites relieve the poor. Drfyden.

Be as kind an hostess as you have been to me, and you can never fail of another husband. Id.

That always chuses an empty shell, and thus hot-pitatet with the living animal in the same shell.

Crew's Museewn.

I am about to build an hospital, which I will endow handsomely for twelve old husbandmen. Addaon.

Ye thus hospitably live,

And strangers with good cheer receive. Prior. They who were so careful to bestow them in a col • lege when they were young, would be so good as to provide for them in some hospital when they are old.

Wotton.

The first they reckon such as were granted to the hospitallers in titulum beneficii. Ayliffe '3 Parergon.

The former liveth as piously and hospitably as the other. Swift.

How has this spirit of faction broke all the laws of charity, neighbourhood, alliance, and hospitality. Id.

HOSPITAL, or spital, is formed of the Latin hospes, a host or stranger. See HOST. In the first ages of the church the bishop had the immediate charge of all the poor, also of the widows, orphans, strangers, &c. When the churches came to have fixed revenues, it was decreed that at least one-fourth part thereof should go to the relief of the poor; and, to provide for them the more commodiously, divers houses of charity were built, since denominated hospitals. They were governed wholly by the priests and deacons, under the inspection of the bishop. In course of time separate revenues were assigned for the hospitals ; and many, from motives of piety and charity, gave lands and money for erecting hospitals. When the church discipline began to relax, the priests, who till then had been the administrators of hospitals, converted them into a sort of benefices, which they held at pleasure, reserving the greatest part of the in-come to their own use ; so that the intentions of the founders were frustrated. To remove this abuse, the council of Vienne expressly prohibited the giving any hospital to secular priests in the way of a benefice ; and directed the administration thereof to be given to sufficient and responsible laymen, who should take an oath for the faithful discharge thereof, and be accountable to the ordinaries. This decree was confirmed by the council of Trent. In Britain hospitals are buildings properly endowed, or otherwise supported by charitable contributions, for the reception and support of the poor, aged, infirm, sick, or helpless. A charitable foundation, laid

*hus for the sustenance of the poor, is to continue for ever. Any person seised of an estate in fee, may, by deed enrolled in chancery, erect and found an hospital, and nominate such heads and governors therein as he shall think fit ; and this shall be incorporated, and

subject to the inspection and guidance of the heads and visitors nominated by the founder. Likewise such corporations shall have, take, and purchase lands, so as not to exceed £200 a year, provided the same be not held of the king; and to make leases, reserving the accustomed yearly rent. For a list of the principal hospitals in this country, see ENGLAND.

HOSPITAL (Michael de I'), chancellor of France in the sixteenth century, was born at Auvergne in 1505. Although, from political motives, he opposed all severe measures against the Protestants, yet, to prevent the introduction of the inquisition, he agreed to the edict of Ro-morantin. The spirit of toleration he evinced made him much suspected by the Roman Catholics, and extremely odious to the court of Rome. His pacific views being disliked by Catharine de Medicis, who had contributed to his advancement, she excluded him from the council of war. He retired in 1568 to his country seat at Vignia, but his privacy was cruelly interrupted by the massacre of St. Bartholomew. When a troop of horse approached his house he was asked if he would defend himself by fire-arms; ' By no means,' said he, ' if the wicket is not wide enough to admit the assassins, set open the great gates.' The men, however, who were sent on the bloody errand, were overtaken by a message from the king, announcing that 1'Hospital was not among the proscribed, and he was told that the authors of the deed had pardoned him his constant opposition to their plans ; ' I did not indeed know,' said the old chancellor, ' that I had merited either death or pardon.' He died in 1573, aged sixty-eight. He published some excellent speeches, memoirs, and poems.

HOSPITAL (William Francis Antony), marquis de St. Merne, a celebrated mathematician, born in 1661. He was a geometrician almost from his infancy ; but, at the age of nineteen, entered the army, and was made a captain of horse. He however soon gave up his commission, in order more closely to follow his favorite pursuit. In 1693 he was made an honorary member of the academy of sciences at Paris ; and he published a work upon Sir Isaac Newton's calculations, entitled, L' Analyse des Infinimens Petits. He engaged afterwards in another work, in which he included Les Sections Coniques, les Lieux Geometriques, la Constructions des Equations, et Une Theorie des Courbes Mechaniques : but a little before he finished it he was seized with a fever, of which he died, February 2d, 1704, aged forty-three. It was published after his death.

HOSPITALLERS, an order of religious knights, who built an hospital at Jerusalem, wherein pilgrims were received. To these pope Clement V. transferred the effects and revenues of the templars ; whom, by a

council held at Vienne, he suppressed for their misdemeanours. These hospitallers were called knights of St. John at Jerusalem ; and are now called knights of Malta. See MALTA.

HOSPODAR, a title borne by the princes of Walachia and Moldavia, who receive the investiture of their principalities from the grand seignior. HOST, n. s. & v. w.ˆv Fr. hostilite ; Lat. hot-HOS'TAGE, n. s. I tis, hostilis. An army ; HOS'TILE, adj. ˆnumbers assembled in

HOSTILITY, n.s. i war; any great number. HOS'TINGS, n. s. J Host, to encounter in battle ; to review or muster. Hostage, one left in pledge for security of performance of conditions. Hostile, adverse ; opposite. Hostility, the practices of an open enemy ; open war ; opposition in war.

Octavian, that wode was of this dede, Shope him — an hoste on Anthony to iede, Al utterly for his destruction, With stoute Romaines, cruel as lion.

Chaucer. Legends of Good Women. Therfor he made his chalenge his yen for to have Or els he shuld for them fyne yf he wold them have, And ligg for them iu hostage till the fynaunce came. This was the sotilte of the blynde man.

Id. The Merchantes Second Tale. Lords have had the leading of their own followers to the general hostinys. Spenser on Ireland.

He has now at last

Given hostile strokes, and that not in the presence Of dreaded justice, but on the ministers That do distribute it. Shakspettre.

Give to a gracious message An host of tongues ; but let ill tidings tell Themselves, when they be felt. Id.

Let every soldier hew him down a bough, And bear't before him ; thereby shall we shadow The numbers of our host. Id. Macbeth.

Your hostages I have, so have you mine ; And we shall talk before we fight. Shakspeare.

Do this message honourably ; And, if he stand on hostage for his safety, Bid him demand what pledge will please him best.

Id.

Neither by treason nor hostility To seek to put me down, and reign thyself. Id. He that hath wife and children, hath given hostages to fortune ; for they are impediments to great enterprises, either of virtue or mischief. Bacon.

Hostility being thus suspended with France, preparation was made for war against Scotland. Hayward.

What peace can we return, But, to our power, hostility and hate, Untamed reluctance and revenge ? Milton.

Strange to us it seemed At first, that angel should with angel war, And in fierce hostings meet. Id.

Twixt host and host but narrow space was left A dreadful interval, and front to front Presented stood in terrible array Of hideous length. IJ

Fierce Juno's hate, Added to a hostile force, shall urge thy fate.

Dry den.

After these came, armed with spear and shield, An host so great as covered all the field. Id.

New authors of dissension spring from him, Two branches, that in hosting long contend For sovereign sway. Philips.

We have shewed ourselves fair, nay, generous adversaries ; and have carried on even our hostilities with humanity. Atterbury.

They who marry give hostages to the publick, that they will not attempt to ruin or disturb the peace of it.

Id.

The Romans, having seized a great number < i hostages, acquainted them with their resolution.

Arbiilhnot on Coini.

Blast their design

Great God of Hoitt ! nor let thy creatures fall Unpitied victims at ambition's shrine.

Porteus's Death.

One effort more to break the circling host I They form — unite — charge — waver — all is lost ! Byron. Cortair.

But Hassan's frown and furious word Are dreaded more than hostile sword.

Id. Giaour.

The question was this — is there less hostility in a Portuguese army crossing the frontier, when avowedly in the pay and service of Spain ? Canning.

HOST, n. $. Fr. hostie ; Lat. hostia. The sacrifice of the mass in the Romish church ; the consecrated wafer.

Pope Gregory IX. first decreed a bell to be rung, as the signal for the people to betake themselves to the adoration of the host. The vessel wherein the hosts are kept is called the cibory ; being a large kind of covered chalice. Dr. A. Rees.

HOST is a term of mutual relation, applied both to a person who entertains another, and to the person thus lodged. It is formed of the Latin hospes, thus called quasi hostium, or osti-um petens ; for ostium was anciently written with the aspirate. It was a custom among the ancients, when any stranger asked for lodging*, for the master of the house and the stranger, each of them to set a foot on their own side of the threshold, and swear they would neither of them do any harm to the other. It was this ceremony that raised so much horror against those who violated the law of hospitality on either side ; as they were considered as perjured.

HOST is also used by way of abbreviation for hostia, a victim or

sacrifice offered to the deity. Hence host, in the church of Rome, is a name given to the elements used in the eucharist, or rather to the consecrated wafer ; which they offer up every day, a new host or sacrifice for the sins of mankind. They pay adoration to the host, upon the presumption that the elements are no longer bread and wine, but transubstantiated into the real body and blood of Christ. See TRANSUBTANTIATION. The vessel wherein the hosts are kept is called the cibory ; being a large kind of covered chalice.

HOSTE (Paul 1'), an eminent French mathematician, born in 1652. He was a Jesuit, and professor of mathematics at Toulon. He wrote, l.Traite" des Evolutions Navales, folio, 1727. Traite"s des Mathematiques les plus ne-cessaires a un Officier, 3 vols. 12mo. He died at Toulon, in 1700.

HOSTIA, Host, in antiquity, a victim offered in sacrifice to a deity. The word is formed from hostis, an enemy ; it being the custom to offer up a sacrifice before they joined battle, to render the gods propitious ; or, after the battle was over, to give them thanks. Some derive the word from hostio, q. d. ferio, I strike. Isidore remarks, that the name hostia was given to those sacrifices which they offered before they marched to attack an enemy, antequam ad hostem per-gerent, in contradistinction from victima, which were properly those offered after the victory. Hostia also signified the less sorts of sacrifice, and victima the larger. A. Gellius says, that

Sax. bat ; Scot, hat ; Heb. ars, fire ; Germ. heiss ; Lat. cestus. Hav-ing the power to excite the sense of heat; contrary to cold ; fiery : applied figuratively to temper and disposition, as ardent; zealous; ea-ger ; violent ; vehement ;

every priest, indifferently, might sacrifice the hostia, but that the victima could be offered by none but the conqueror himself. But we find these two words promiscuously used by ancient writers. We read of many kinds of hostiae • as H. ambar vales, victims sacrificed after having been solemnly led round the fields at the ambar-valia: H. ambegnae, or ambiegne, sacrifices of cows or sheep that had brought forth twins : H. amburbiales, victims slain after the amburbium : H. bidentes, animals of two years old : H. caviares, or caneares, victims sacrificed every fifth year by the pontiffs, in which they offered the part of the tail called caviar: H. harugae, victims offered to predict

future events from : H. mediales, black victims offered at noon : II. prodigse, sacrifices in which the fire consumed all, and left nothing for the priests : H. pura, pigs or lambs ten days old : H. succedaneae, sacrifices offered after others which had exhibited some ill omen.

HOT, adj.

HOT'LY, adv.

HOT'NESS, n. s.

HOT'BRAINED, adj.

HOT'HEADED, adj.

HOT'HOUSE, n.s.

HOT'MOUTHED, adj.

HOT'SPUR, n.s.

HOT'SPURRED, adj.

HOT'BED, n. s.

lustful; piquant; acrid: as applied to substances, most of the compounds are sufficiently expressive. Hothouse, a place to rear plants and exotics; a bagnio; a brothel. Hotmouthed, headstrong and ungovernable. Hotspur, a violent and passionate, man ; a pea of speedy growth. Hotbed, a bed of earth made hot by the fermentation of dung.

But I n'ot how it happed, sodainly As, about none, the sonn so fervently Waxe hote that the pretty tender floures Had lost the beauty of hir fresh collours.

Chaucer. The Floure and the Leafe.

The enemy, now at hand, began hotly to skirmish in divers places with the Christians.

Knolles'i History.

Now she professes a hothouse, which is a very ill house too. Shakspeare. Measure for Measure.

My nephew's trespass may be well forgot ; It hath the excuse of youth

and heat of blood, A harebrained hotspur governed by a spleen.

Stwkspeare. What is thy name ? — Thou'lt be afraid to hear it. — No, though thou call's! thyself a hotter name Than any is in hell. Id. Macbeth.

I do contest

As hotly aud as nobly with thy love, As ever in ambitious strength I did Contend against thy valour. Id. Coriolanus. Come, come, lord Mortimer, you are as slow, As hot lord Percy is on fire to go. Shakspeare.

The great breezes which the motion of the air in great circles, such as are under the girdle of the world, produceth, do refrigerate ; and therefore, in those parts, noon is nothing so hot as about nine in the fore-noon. Bacon,

The bed we call a hotbed is this : there was taken horsedung, old and well rotted j this was laid upon *

bank half a foot high, and supported round about with planks, and upon the top was cast sifted earth two fingers deep. Id,

Where lately harboured many a famous whore, A purging bill, now fixed upon the door, Tells you it is a hothouse ; so it may, And still be a whorehouse : th' are synonyraa.

Ben Jonson,

Wars are begun by hairbrained dissolute captains, parasitical fawners, unquiet hotspurs, and restless innovators. Burton.

To draw Mars like a young Hippolytus, with, an effeminate countenance, or Venus like that hotspurred Harpalice in Virgil, this proceedeth from a senseless judgment. Peacham.

Nature to youth hot rashness doth dispense, But with cold prudence age doth recompense.

Denham.

She has, quoth Ralph, a jointure, Which makes him have so hot a mind t' her.

Hudibraa.

The stag was in the end so hotly pursued, that ha was driven to make courage of despair. Sidney.

Though this controversy be revived, and hotly agitated, I doubt whether it be not a nominal dispute.

Boyle.

I fear my people's faith,

That hotmouthed beast that bears against the curb, Hard to be broken. Dryden's Spanish Friar.

You shall find 'em either hotbrained youth, Or needy bankrupts. Id,

Our army Is now in hot engagement with the Moors.

Dry den.

Voracious birds, that hotly bill and breed, And largely drink, because on salt they feed. Id.

Hot and cold were in one body fixt j And soft with hard, and light with heavy mixt.

Id.

It is no wonder that men, either perplexed in the necessary affairs of life, or hot in the pursuit of plea. sures, should not seriously examine their tenets.

Locke.

Of such peas as are planted or sown in gardens, the hotspur is the speediest of any in growth.

Mortimer.

Preserve the hotbed as much as possible from rain.

Evelyn.

Black substances do soonest of all others become hot in the sun's light, and burn ; which effect may proceed partly from the multitude of refractions in a little room, and partly from easy commotion of so very small corpuscles. Newton.

One would not make the same person zealous for a standing army and publick liberty ; nor a hotheaded crackbrained coxcomb forward for a scheme of moderation. Arbuthnot.

HOTBEDS, in gardening, are made with fresh horsedung, or tanners' bark, and covered with glasses to defend them from cold winds. By the skilful management of hotbeds, we may imitate the temperature of warmer climates; by which means the seeds of plants brought from any of the countries within the torrid zone may be made to flourish even under the poles. The hotbeds commonly used in kitchen-gardens are made with new horsedung mixed with the litter of a stable, and a few sea-coal ashes, which last are of great service in retaining the heat of the dung. This should remain six or seven days in a heap; and being then turned over, and the parts mixed well together, it should be again cast into a heap ; where it may continue five or

six days longer, by which time it will have acquired a due heat. The hotbeds are thus made : — In some sheltered part of the garden dig out a trench of a length and width proportionable to the frames you intend it for ; and, if the ground be dry, about a foot, or a foot and a half deep ; but, if it be wet, not above six inches; then wheel the dung into the opening, stirring every part of it with a fork, and laying it exactly even and smooth on every part of the bed, with the bottom part of the heap, which is commonly free from litter, upon the surface. If it be designed for a bed to plant out cucumbers to remain, make a hole in the middle of the place designed for each light about ten inches over and six deep, which should be filled with good fresh earth, thrusting in a stick to show the places where the holes are ; then cover the bed all over with the earth that was taken out of the trench, about four inches thick, and put on the frame, letting it remain till the earth

be warm, which commonly happens in three or four days after the bed is made, and then the plants may be placed in it. If the hot-bed be designed for other plants, there need be no holes made in the dung ; but, after having smoothed the surface with a spade, cover the dung about three or four inches thick with good earth, putting on the frames and glasses as before. Settle the dung close with a fork, and, if it be pretty full of long litter, it should be trod down equally ot every part. During the first eight or ten days after the bed is made, cover the glasses slightly in the night, and in the daytime carefully raise them, to let out the steam. As the heat abates the covering should be increased ; and, as the bed grows cold, new hot dung should be added round the sides of it. The hot-bed made with tanners' bark is, however, much preferable to that described above, especially for all tender exotic j)lants and fruits, which require an equal degree of warmth for several months, which cannot be effected with horsedung. They are thus made : — Dig a trench about three feet deep, if the ground be dry ; but, if wet, it must not be above a foot deep at most, and must be raised two feet above the grouna. The length must be proportioned to the frames intended to cover it; but it should never be less than ten or twelve feet, and the width not less than six. The trench should be bricked up round the sides to the height of three feet, and filled in the spring with fresh tanners' bark that has been lately drawn out of their vats, and has lain in a round heap, for the moisture to drain out of it, only three or four days. As it is put in, gently beat it down equally with a dung-fork ; but it must not be trodden, which wosld prevent its heating, by settling it too close ; then put on the frame, covering it with glasses; and in about ten or fourteen days it will begin to heat; at which time plunge your pots of plants or seed into it, observing not to tread down the bark in doing it. These beds will continue three or four months in a good temper of heat; and if you stir up the bark pretty deep, and mix a load or two of fresh bark with the old when you find the warmth decline, you will preserve its heat two or three months longer. Many lay hot horsedung in the bottom

of the trench under the bark; but this ought never to be done unless the bed is wanted sooner than the bark would heat of itself, and even then there ought only to be a small quantity of dung at the bottom. The frames which cover these beds should be proportioned to the several plants they are designed to contain. If they are to cover the ananas or pine-apple, the back part should be three feet high, and the lower part fifteen inches ; if the bed be intended for taller plants, the frame must be made of a depth proportionable to them; but, if it be for sowing of seeds, the frame need not be above fourteen inches high at the back, and seven in the front ; by which means the heat will be much greater.

HOTHOUSES. The changes that have of late years taken place in these important adjuncts to scientific gardening it will be impossible to enumerate in the compass of this article. Their form and general structure have been much varied and the spherical shape largely introduced. A considerable improvement in the mode of glazing hothouses deserves also to be mentioned. It consists in making the upper and lower edges of the panes segments of a circle, instead of being rectilinear or horizontal ; the upper edge being made concave, the lower convex. For a pane eight inches wide, a curvature five-eighths of an inch deep in the centre is sufficient. The advantages of this circular form must be evident. The rain which falls, or moisture which collects on the exterior of the glass, gravitates to the centre of the pane, and runs down in a continued line, instead of passing along the sides of the bars, and being partly detained by the capillary attraction of the two surfaces, at the overlapping of the panes. The extent to which one pane overlaps another can, at the same time, therefore, be much lessened ; one-eighth of an inch is found sufficient. This narrowness of the lap, again, prevents breakage from the lodging of moisture, and the sudden expansion produced by freezing during the variable weather of winter. When these circular panes are cut from whole sheets of glass, the expense is scarcely greater than for oblong squares. It is proper that the glass should be “flat or equal; and the kind known by the name of patent crown glass is preferred. In stoves or hothouses, where a high temperature must be maintained, the laps are puttied. In this case, a small central opening is left in the putty, by inserting a slip of wood at first, and •withdrawing it when the pane is pressed down to its bearing ; by this little aperture the condensed vapor generated within escapes without dropping on the plants. Mr. Loudon uses thin sheet lead in place of putty for closing the laps; he thus avoids all risk of expansion from frost, and the lap can *hus be made exceedingly narrow. See VENTILATION.

Heating of hot-louses by steam. — But of all the recent improvements

in gardening, the most important, perhaps, is the use of steam for communicating the artificial heat, in place of depending, as formerly, on the passage of heated ˆir through flues, aided in particular houses, nailed stoves, by the fermentation of tanner's bark. The advantage arising from the use of

steam consists in this, that an equable high temperature can thus be maintained for a length of time with great ease and certainty, and the plants can scarcely ever be liable to suffer a scorching heat; ladies and gentlemen visiting the house are also much less apt to be annoyed with the smoke. It has been found also that seven bushels of coal go as far in keeping up steam heat, as ten bushels do in maintaining an equal temperature the other way. It fortunately happens too, that steam may very advantageously be resorted to in aid of the common flues conveying smoke and heated air. A steam-apparatus may be appended to any ordinary hothouse, without incurring any material expense, or any considerable alteration in structure, thus: a boiler is erected over the usual furnace, the smoke of which pas-ses through the flues as formerly. Metal, generally copper, pipes are laid along the top of the brick-flues. A square shape is sometimes preferred ; and the pipes are set on edge, so that any condensed vapor trickling to the bottom may occupy little room, or present only a small surface, till it make its way back to the boiler, to which a gentle inclination is given. The boiler as in the common steam-engine, is supplied from a Cistern above, and is made to regulate itself by a simple contrivance ; in the feed-head is a valve which is opened by the sinking of a float, which descends in proportion as the water is dissipated in steam ; and being balanced by a weight, whenever a sufficient quantity of water is admitted, rises again and shuts the valve. A safety-valve is added, loaded according to the strength of the boiler; nnd there is another valve for admitting atmospheric air, in case of the condensation of the steam causing a vacuum in the boiler. Instead of these steam operations requiring more of the time and attention of the gardener, he will be greatly relieved, and have several additional hours a day which he may devote to other concerns. If the furnace be duly charged, and the boiler properly prepared, the hothouse may be left with confidence for eight or even ten hours together, the temperature continuing equal for that length of time. Where forcing is practised, the gardener is thus also relieved from much anxiety and night-watching.

For heating stoves, conservatories, and greenhouses, steam is likewise well adapted. The difficulty of maintaining continually a high

temperature in a large stove has, no doubt, been one cause of the comparative neglect into which the cultivation of fine tropical plants has fallen. By means of steam, this is most effectually removed.

For the conservatory and greenhouse, if the steam be in action from three to nine o'clock P. M. the ttmperature will be kept constantly within a proper range, in ordinary winter weather. In severe frosts the steam must, of course, be longer applied. The most extensive steam apparatus for the heating of plant-houses is to be seen at the grounds of Messrs. Loddiges, near Hackney, where glazed houses to the extent of almost 1000 feet in length, and forming three sides of a square, are heated solely by steam from a single boiler, of an oblong shape, measuring eleven feet by four, and made of malleable iron. In narrow houses, intended for greenhouse plants, a single

steam pipe is found sufficient. In other houses, of considerable height and breadth, or where a higher temperature is required, as in the palm-house, the steam-flue is made to describe two or three turns. The pipes at Hackney are of iron, of a round shape, and four inches bore. They are flanched and screwed together with bolts and nuts. When they make returns within the house, the joints are formed with iron cement on milboard dipped in white lead.

Where steam is employed in the principal suite of hot houses, it will be found easy to con-vey it also to the melon ground ; the melon pits or frames must, however, in this case, have their side-walls of brick. See FURNACE.

HOTCOCK'LES, n. s. Fr. hautes coquilles. A play in which one covers his eyes, and guesses who strikes him.

HOTCH'POT, n. s. > Fr. huche en poche, or HOTCH'PUTCH. $ hoc he en po£,as Cambden

has it, as being boiled up in a pot ; yet the for-mer corruption is now generally used. A mingled hash ; a mixture ; a confused mass.

HOTHAM, ADMIRAL, SIR HENRY, K.C.B., &c. This brave officer and accomplished gentleman was born in 1774, and was the youngest son of the second lord Ilotham. In the early part of the revolutionary war, he took the command of the Hectre, sloop of war; and was posted, in 1795, into the Mignonne, from which period he continued in active and perilous service, in the Dido, Blanche, and Immolalite frigates, until the peace of Amiens, and was particularly successful in the capture and destruction of several large French privateers. On the renewal of hostilities in 1803, he was appointed to the Imperiense ; next transferred into the Revolu-tionaires with the latter of which he assisted in the destruction of three French frigates, in the Sable D'Olonne, and he afterwards aided the Spanish guerrillas and patriots, on the north coast of Spain, in resisting the usurpation of the French army. His assistance was not confined merely to the supplying of ammunition and provisions and other necessaries, but his prudent advice was conferred in a manner that proved affection, and rendered those to whom it was given grateful. In 1812, on board the Northumberland, in a style the most gallant and skilful, he drove ashore and destroyed, at the entrance of L'Orieni, two French frigates of fourty-four guns each, and an eighteen gun brig ; and during the American war, he was captain of the fleet to admiral S. B. Warren. In 1813, he was nominated colonel of marines, and in the following year became flag officer, and served this office in the channel fleet on Napoleon's re-turn from Elba. From 1818 to 1822, he officiated as one of the lords of the admiralty, after which he was appointed commander-in-chief of the British squadron in the Mediterranean, in which situation he died in March, 1831. Sir Henry was married to the lady Frances Rous, 1816, by whom lie had issue three children.

HOTTENTOTS, a people once inhabiting a considerable district of South-eastern Africa, bordering on the Cape of Good Hope. Their couv'.rj extended to the territory of the Caffres, and .vas bounded on the north by the Orange

River. Found by Europeans in a very low state of civilisation, they have not only undergone no material improvement, but have been for the greater part reduced to a state of wretched servitude, and are now principally to be found as menial servants within the colony of this Cape.

Considered as a whole they are a singularly insulated people; being as distinct, in their persons and manners, from the negro of the west, as they are from the Caffre of the eastern shores, of this continent. Their

number has been lately estimated at about 12,000; the greater part (perhaps 10,000 of them) being found in the Graff Reynal district.

No distinct kraals, or villages, such as Kolben states himself to have found in the neighbourhood of Camtoos River, are now seen in any part of the colony, nor even twenty independent individuals in whole districts where they most abound. They have been wholly subdued by the Dutch, to a sort of service worse than slavery \ and have purchased the enjoyment of some few European indulgences, not only at the price of every thing dear to man in society, but almost at the forfeiture of the necessaries of his physical existence. They are the menials of every sort of establishment at the Cape ; and while the slaves, from their price, and the circumstance of their being transferable property, are said to be treated better than many European servants, and to live in much more comfort than the peasantry of many civilised states, the Hottentot, in the remoter parts, is exposed to as cruel usage as any of the West Indian slave-drivers can exercise. If he be killed by his master, society does not seem to have any property in him, and the master feels only the personal loss of his services, as the price of his vengeance. Small shot are frequently fired into his legs by way of punishment; and one of the ordinary modes of chastisement is to lash him with heavy thongs of the hide of a rhinoceros, while his more savage proprietor smokes a certain number of pipes.

From many similar instances of cruelty, recorded by Mr. Barrow, we extract the following: ‘ We had scarcely parted from these people, when, stopping at a house to feed our horses, we, by accident, observed a young Hottentot woman, with a child in her arms, lying stretched on the ground in a most deplorable condition. She had been cut from heat to foot with one of thosi infernal whips, made from the hide of a rhinoceros or sea-cow, known by the name of samboes, in such a barbarous and unmerciful manner, that there was scarcely a spot on her whole body free from stripes ; nor had the sides of the little infant, in clinging to its mother, escaped the strokes of the brutal monster. The only crime alleged against her was the attempt to follow her husband, who was among the number of tho»e of his countrymen that had determined to throw themselves upon the protection of the English.’

A pamphlet, published by Baron de P ,

private secretary to governor Jansen, during the peace of Amiens, gives an account of fifteen poor Hottentots going to a farm to beg tobacco, being most inhumanely tortured to extort from them the

confession of a crime they never contemplated,

viz. that they came to rob the colonists — and that then they were shot in cold blood. Of another instance, equally inhuman, we give the following translation: — ‘As soon as the English had abandoned the fort (at Algoa Bay), a boor, named Ferrara, of a Portuguese family, made himself master of it, and kept possession till the arrival of a detachment of troops, which government sent thither, under the command ot major Von Gelter. The Caffres, fully persuaded that the late peace had put an end to all disturbances between them, sent to the new commander of the fort a bullock to be slain, as the test of reconciliation and friendship. The Caifre, sent on the occasion, put himself under the guidance of a Hottentot ; and Ferrara, by way of returning the kind intention, laid hold of the Caffre and broiled him alive ; bound the poor Hottentot to a tree, cut a piece of flesh out of his thigh, made him eat it raw, and then released him.’

Their field occupations are to guard the numerous herds and flocks of these districts, to scour the country with them oftentimes for food or water, and endure all the extremes of the climate on scorching plains and snowy heights, covered by a single sheep-skin. Some, regarded as free by the law, and who were bargained with by the boors from year to year, at the rate of an ox, a couple of cows, or a dozen sheep, for their services, had their wages, up to a late period, stopped upon every pretext that occurred ; and the loss of an ox or sheep of the master’s was sure to be visited on the poor Hottentot. Should no such accidents occur (in a country peculiarly exposed to them) the wretched hireling would often have a bill for tobacco or spirits brought in against his wages to the full amount. Such was the general lot of the unmarried, and those who were the least wretched in their condition.

Those who have families generally live in straw huts, at a short distance from the farm Aouses, in which their children are early seen to be running about ; and, by an old law of the colony, any Hottentot child who has eaten the bread of a farmer becomes his property until

he is twenty-five years of age. This is interpreted in the most literal way, so far as to get the children into their service, but the period of his emancipation the Hottentot is e.ther too ignorant to reckon, too inured to the yoke to feel any de-sire for its removal, or too old (for he is an aged man at thirty) for such libert) as would be afforded him to be a blessing. This part of the law, therefore, is only resorted to occasionally, when the starving wretch is set adrift on the world without prospect or possession of any kind. This at least is the shocking picture of their condition drawn from several recent accounts ; and we can find only general assurances of the improvements introduced by government of late, and of the superior vigilance with which the laws are now administered, as a ground of hope that their situation has been truly ameliorated of late years.

It needs not much philosophy to account for the listless disposition, and gradual diminution of such a race. Entailing nothing but misery on their posterity, they have no rational motives for marriage; and many more of them remain single

than is common in uncivilised tribes. Those who marry have not usually more than two or three children, and very many of their women are wholly barren. The mode of confining their marriages to their own immediate kraal or horde has been thought to have a tendency to deterio-rate their race; but certain it is, that, in their marriages with each other, the physical powers of nature seem exhausted, and their very name, without some radical change in their condition, seems likely to be soon forgotten. The children of the Hottentot women, who marry Europeans, are, on the other hand, numerous, active, and robust. These are called baastards by the Dutch colonists, and are becoming an important part of the population.

In personal appearance the Hottentot has been often caricatured by travellers. His face, generally speaking, is certainly far from what an European would reckon handsome, though it differs materially in different families, the nose being in some particularly flat, and in others as remarkably raised. Their cheekbones are high, their chin small and pointed, and their eyes placed at a remarkable distance from each other. The general color of their eyes is a deep chestnut, their teeth beautifully white. The color of the skin resembles that of a faded leaf, being of a yellowish-brown, but many are nearly as white as Europeans. The hair, which has the appearance and feel of a hard shoe-brush, grows in singular tufts at a distance from each other, and does not cover the whole surface of the scalp, but, if suffered to grow

long, it hangs in the neck, in hard twisted tassels. Their limbs are extremely well-proportioned and delicate, but there is nothing to indicate muscular strength : yet it is rarely that a cripple or deformed person is seen amongst them, and, though not long lived, their health is generally firm. Many of the women, when quite young, might serve as perfect models of the human figure, so exquisite is their form ; their hands and feet are small and delicate, and they move in an easy and graceful manner. Their charms, however, are quickly dissipated by child-bearing, and their whole frame undergoes a more complete revolution than that of any other human female. The abdomen protrudes, the breasts grow flaccid, and at last enormously distended, while the posteriors acquire immense masses of fat, that give the whole figure a very awkward appearance, especially in walking. There is another peculiarity in the Hottentot female, which Mr. Barrow fully ascertained to be a natural appendage, both in the Bosjesman women (whom he regards as apart of the same race) and the common Hottentot ; the elongation of the nymphse, from three to five inches and a half.

The Hottentot dress is simple, and ill contrived for some of the purposes they seem to have in view. A belt cut from the skin of some animal is fastened round the body of the man, to which is attached a curious kind of a bag in front, made of the skin of a jackal. Behind hangs a triangular piece of dried skin, with the broad part downwards, and designed originally to flap and cool the body, as well, perhaps, as to rid it of insects. A sheep-skin in winter is all the addition thai is

ever made to this belt ; it is worn with the wool inwards, or outwards, according to the weather, and serves at night for a bed and bedding. The t'emale wears a longer apron attached to the belt in front, made of skin cut into threads, and variously ornamented with shells, metal buttons, glass beads, and other trinkets. The whole of »the body behind she covers with a sheep's skin which reaches down to the calf of her leg ; and thus attired she makes a singular noise in moving from place to place.

The unctuous matter with which the Hottentots anoint themselves has often been remarked upon. This custom, though filthily practised, is evidently conducive to the suppleness of their skin and their general health in a hot climate. It is suffered to accumulate from month to month, occasionally melting and being removed ; or, covered with dust, it gathers a complete black coating which hides the natural color of the skin, except on the face and hands. These are said to be rubbed frequently with the dung of cattle as their best means of clearing off the grease.

The Hottentot is as remarkably patient of nunger as he is voracious in his manner of taking and preparing food. In his native state he is content to live on roots, gums, and the larvse of insects, and sometimes makes bread from the pith of the palm tree ; he indulges, however, in animal food as often as he can procure it. An ox is no sooner slain than he rushes upon the carcase with his knife, and slashes out of it an immense steak ; this he again divides spirally, as a whip-maker cuts his thongs, by introducing his knife at the edge and bringing it repeatedly round to the middle, until he has converted it into some yards of flesh, which he coils round his hand and throws upon the hot ashes of his wood fire. When the meat is just warmed through, he takes it with both hands, and beginning at one end of the length soon devours the whole, considering the ashes that adhere to it as a substitute for salt. His napkin is equally characteristic ; its offices are performed by rubbing his hands on different parts of his person. Ardent spirits and tobacco have been the snares, and are the present curse, of this people. Duped out of their lands by the gratifications of this description which the first Dutch settlers offered them, they retain a passionate fondness for both, as the only sort of enjoyment that relaxes the rigor of their oppression. Scarcely at any other time than when taking them are they seen to smile ; and the nocturnal dances, in which the Bosjesman. delights, are banished from the customs and recollection of the tribes within the colony. A few musical instruments remain amongst them. A kind of guitar called the gabowie, which consists of three strings, stretched over a hollow piece of wood, with a long handle ; a wind instrument, called the gowra, made of a piece of gut or sinew twisted into a cord, and fastened to a wooden pipe about three feet long ; and a flute made of the bark of trees.

The arts practised amongst the Hottentots are tew ; comprising only the sewing of skins together for their winter dress ; the manufacturing of a coarse kind of earthenware ; and the pre-

paration of their weapons, the hassagai or javelin, and the bow and arrow. All the tribes are good marksmen ; and those that are free, and who occasionally resort to other tribes on the borders, are still very dexterous in the use of their ancieut means of warfare. The hassagai is made of a head of iron, about a foot in length, attached to a shaft of wood about four feet long, and is thrown by the finger and thumb, grasping it firmly in the middle. The bow is a plain piece of wood, sometimes tapered at the ends, and measuring about a yard in length. The string is composed of the muscles of animals of the ante-lope species, twisted into a cord ; and the stem of an aloe forms a quiver for the arrows. These are not above two feet long, and consist of a reed, into one end of which is inserted a piece of hard bone, about four inches long, and fixed by strings of gut to a small piece of iron having a triangular point. These strings contain the poi-son with which they are frequently armed, and which has the appearance and consistence of a sort of varnish. They also conceal a piece of quill pointed toward the opposite end of the arrow, and designed to lacerate the wound it makes. The Hottentot gathers this poison from several vegetables, and sometimes from the serpents of his native shores. The latter, indeed, mixed with the juices of certain bulbous rooted plants, is his principal resource ; he lays it on with a brush which he keeps in his quiver, which is furnished with about a dozen arrows, and a sandstone to sharpen the points. If he has killed an animal, which he wants for eating, with one of these arrows, he immediately cuts away the flesh that surrounds the wound, and squeezes the blood as much as possible from the body, when it is found to be perfectly harmless food.

His knowledge of physical nature is very confined. He only distinguishes among the heavenly bodies, the sun and rnoon, and the stars generally ; denoting the time of day in which any particular event happened by pointing to the place which the sun then occupied in the heavens. Past events they pile one upon another, when they have to reckon beyond -a day, and state that such a circumstance transpired before some other, in a very confuted way. Mr. Bar-row declares that he could find none of them in the remote part of the colony who could count beyond five, or put two numbers . together without the aid of the fingers. The seasons they reckon by the moons before and after the roots of the iris edulis are fit for food : but they cannot fairly be reckoned as a stupid people ; they learn the Dutch language with great facility ; and perform any kind of domestic service with as much address as a European servant.

In their general character, indeed, considering them as an uncivilised people, the observations of all recent travellers have united to place

them high. Partaking for ages the phlegmatic indolence of their Dutch masters, who are fond of a train of servants to perform the duties of a few, they exhibit at Cape Town an inveterate habit of sloth ; but where any sort of effort has been made to cultivate their powers, and give them a

feeling of hope and liberty in their occupations, they have been found active, intelligent, and useful. Better soldiers are not trained from the lower orders of any country. A corps of about 500 of them had been formed into a regiment in the Dutch service prior to the British attack on this settlement in 1795, and they are said to have acted with more spirit on that occasion than any other part of the troops. This regiment was afterwards adopted into the British service by Sir James Craig, and additional numbers enlisted into it. ‘ It is therefore, with the opportunity of knowing them well,’ says this officer, ‘ that I venture to pronounce them an intelligent race of men. All who bear arms exercise well, and understand immediately, and perfectly, whatever they are taught to perform. Many of them speak English tolerably well. We were told that so great was their propensity to drunkenness, we should never be able to re-duce them to order or discipline ; and that the habit of roving was so rooted in their disposition, we must expect the whole corps would desert the moment they had received their clothing. With respect to the first, I do not find they are more given to the vice of drinking than our own people ; and, as to their pretended propensity to roving, that charge is fully confuted by the circumstance of only one man having left us since I first adopted the measure of assembling them, and he was urged to this step from having accidentally lost his firelock. Of all the qualities,’ he adds, ‘ that can be ascribed to a Hottentot, it will be little expected that 1 should expatiate upon their cleanliness ; and yet it is certain that, at this moment, our Hottentot parade would not suffer in a comparison with that of some of our regular regiments. Their clothing may, perhaps, have suffered more than it ought to have done, in the time since it was issued to them, from their ignorance of the means of preserving it; but those articles which are capable of being kept clean

by washing, together with their arms and accoutrements, which they have been taught to keep bright, are in good order. They are likewise cleanly in their persons ; the practice of smearing themselves with grease being entirely left off. I have frequently observed them washing themselves in a rivulet, where they could have in view no other object but cleanliness.'

The efforts of the Moravians would seem to confirm this account of their capabilities as a people. No congregation in England appears more desirous to be neat and clean on a Sunday than the Hottentots at the churches of their settlements. Other missionaries have recently endeavoured to ameliorate the condition of some of the wilder tribes who inhabit the north and north-west of the colony, and some degree of success appears to have resulted from an experiment of this kind even among the Bosjesman part of their race. On the whole they will be regarded by the philanthropist as an amiable and most interesting people. To much faithfulness and honesty they add a decided regard to truth in all their statements, and a remarkable frankness when accused of faults. To each other they are kind and generous ; much attached to children ; patient of pain and injuries ; and

almost entirely devoid of the cunning and malignity of savage tribes. In their field occupations they are uncommonly expert, and seem to have a sort of peculiar instinct in tracing a passage over the deserts; in following game, which they can discover at a great distance ; and with regard to the general resources of their country. They will even follow the flight of a bee with the eye to an incredible length of way, and can distinguish the foot marks of their master or companions from a thousand with which they may be intermingled. A better race of agricultural servants, to be cheaply obtained, and permanently attached to a settler's household, no man can desire to find.

It is remarkable that all traces of a national religion are entirely lost among this people Kolben asserts, that in his time they believed in a deity whom they described ' as an excellent man, who does ill to no one, and lives far beyond the moon ; but that they regarded him, like some modern Christians, as too remote a being to be worshipped. When the moon is at the full they made sacrifices to her, he adds, accompanied with prayer for favorable seasons, with dancing, leaping, and violent grimaces. They had also a malignant divinity, little, deformed, and ill-natuied, to whom they offered sacrifices by way of softening his temper. Mo-dern travellers find none of these notions or usages remaining. Marriages and funerals are equally conducted

without any sort of ceremony. On the death of a chief, or near relation, they shave their heads, but inter all their dead without any further observance than piling a heap of stones over the grave, and being very scrupulous ever after not to pass it without throwing on an additional stone. The heads of young girls are always shaved on their showing the first signs of maturity, their ornaments taken off, and the whole person carefully cleaned. They kill their cattle, ordinarily, by piercing the spinal marrow, immediately behind the horns, and cutting the throat to let off the blood. They also, toward the north of the colony, observe a strange cus-tom of the South Sea islanders, as a remedy-in some diseases, that of cutting off the first joint of the little finger. Beyond these there are no customs of this people of any particular note.

Their language is of the most extraordinary construction. A sudden retraction or clacking of the tongue, not unlike the noise of a hen in a farm yard, may be said to constitute its chief peculiarity, and will describe their mode of pronouncing most of their monosyllables, and the leading syllable of compound words. This sound is varied according to the signification of the word about to be uttered ; for the same sound, with the dental, will have a very different meaning with the palatial retraction of the tongue. The noise of the former is precisely that by which we commonly express disappointment or impatience; and is not an insulated movement, which precedes or follows a syllable, but at the same moment is incorporated and thrown out with it. The Hottentot seems thus to have performed all that is essential to language by a very limited number of compound

words, aided by a peculiar mode of enunciating them. He does not make a bad imitation of nature in some cases. We may easily trace the croaking of the frog in kroaak, or kraaic; the lowing of the ox in ‘mnuo; the mewling of the cat in meau ; the neighing of the horse in hahae ; and the breaking of the sea upon the shore in hurroo. On first seeing a gun they called it kaboo, and will pronounce this word so emphatically to a stranger that he cannot mistake their meaning. The

ka is thrown out with a strong palatial stroke of the tongue, in imitation of that of the flint against the c”over of the pan ; and with outstretched lips, a full mouth, and prolonged sound, the boo sends forth the report. At first it appears next to impossible for an European to acquire this language, but, as the chief difficulty arises from a proper action of the tongue, it is soon overcome. Many of the Dutch peasantry not only speak it, but introduce into their own language a similar clacking of the organ .

We add a short vocabulary of some principal words, and what is commonly called the Lord’s prayer, as a specimen of the language.

Surrie, the sun.

Hoonooei, lightning

Ka, the moon.

Qua, wind.

Koro, the stars.

Tookai, rain.

Koo, the earth.

Quaina, a man.

Kom, air or light.

Quaisha, a woman.

Ei, fire.

Toona, a dog.

Ham, water.

Hasai, to-day.

Heoonoo, thunder.

Quatrie, to-morrow.

NUMERALS.

Quae,

one.

Kara,

two.

Gona,

three.

Haka,

four.

Gose, five.

THE LORD’S PRAYER.

Cita eip — ne nanoop na — sa ons anooke — Our Father — the heaven in — thy name hallowed be — sa koop ha — sa ei i — hoop ei — ne thy kingdom come — thy will be done — earth on — the nanoop na koommi — cita ceeorobe bersp mata heaven in as — our daily bread give us — neei i cita soorootikoo oobekata — cita — this day and our debts forgive us — our

soorooti aukoo citee oobeka koomi — i ta indebted men we forgive as — and not oowa keikata — gawe coreta eip ga — o temptation lead in us — but deliver us evil from — for sa ne koop ke i de keip — i de isa — thine the kingdom is and the power — and the glory — i amo. in eternity.

HOTTENTOT’S HOLLAND, a small interior district of the colony of the Cape of Good Hope, extending inland from False Bay. It produces wine, brandy, poultry, fruits, &c., for the Caoe market.

HOTTINGER (John Kerry), a native of Zu-rich in Switzerland. He was born in 1620, and taught the oriental languages at Leyden. He was drowned with part of his family, in the river

Leroit, in 1667. He wrote a prodigious numbet of works; the principal of which are, 1. Exercitationes Anti-Morinianae de Pentateucho Samaritano, 4to. ; in which he defends the Hebrew text against father Morin. 2. Historia Orientalis 4to. 3. Bibliothecarius quadripartitus. 4.

The-saurus Philologicus Sacrae Scripture, 4to. 5. Historia Ecclesiastica. 6. Promptuarium, sive Bibliotheca Orientalis, 4to.

HOTTONIA, water violet; a genus of the monogynia order, and pentandria class of plants; natural order twenty-first, precise. COR. salver-shaped ; the stamina placed in the tube of the corolla : CAPS, is unilocular. There is but one species, *viz.*

H. palustris, with a naked stalk. It grows naturally in the standing waters in many parts of England. The leaves, which are for the most part immersed in water, are finely winged and flat like most of the sea plants, and at the bottom have long fibrous roots, which strike into the mud : the flower-stalks rise five or six inches above the water, and towards the top have two or three whorles of purple flowers, terminated by a small cluster of the same. These flowers have the appearance of those of the stock gilliflower, and make a pretty appearance on the surface of the water. It may be propagated in deep standing waters by procuring its seeds when they are ripe, from the places of their natural growth ; which should be immediately dropped into the water in those places where they are designed to grow, the spring following they will appear; and, if they are not disturbed, they will soon propagate themselves in great plenty. Cows eat this plant; swine refuse it.

HOUBIGANT (Charles Francis), a learned divine, born at Paris in 1686. He was celebrated for his knowledge of the Hebrew ; and translated the whole of the Old Testament from that language into Latin : published with notes at Paris in 1753, in 4 vols. folio. He also translated some English works into French. He died in

HOUBRAKEN (Jacob), a celebrated portrait engraver. His works are distinguished by an admirable softness and delicacy of execution. They are pretty numerous ; and, most of them being for English publications, are sufficiently known in this country. The greater part of the portraits' of illustrious men published in London by I. and R. Knapton, were his workmanship.

HOVE, the preterite of heave ; hoven, part, passive.

Tom Piper hath hoven and puffed up cheeks ; If cheese be so haven, make Cisse to seek creeks.

Tusset.

HOVEDON (Roger de), of an illustrious family in Yorkshire, is said to have been born at Hovedon, now called Howdon, in the reign of Henry I. He studied the law, and became domestic chaplain to Henry II., who employed him to transact several ecclesiastical affairs, in which he acquitted himself with honor. His most meritorious work was his Annals of England, from A. D. 731 , when Bede's ecclesiastical history ends, to A. D. 1202. It is one of the most voluminous of our ancient histories, and is more valuable for

the sincerity with which it is written, and the great Tariety of facts it contains, than for its style or arrangement.

HOVEL, n. s. & v. a. Sax. pope. Diminutive of house. A shed open on all sides, and covered over head ; a mean habitation : to take shelter in a hovel.

So likewise a hovel will serve for a roome,

To stack on the pease, when harvest shall come.

Tuner.

And was't thou fain, poor father, To hovel thee with swine and rogues forlorn, In short and musty straw ? Shakspeare.

If you make a hovel, thatched, over some quantity of ground, plank the ground over, and it will breed saltpetre. Bacon.

Your hay it is mowed, your corn it is reaped, Your barns will be full, and your hovels heaped.

Dryden.

The men clamber up the declivities, dragging their kine with them, where they feed them and milk them, and do all the dairy-work in such sorry hovels and sheds as they build to inhabit during the summer.

Ray on the Creation.

HOVEN CATTLE, in husbandry, black cattle or sheep swollen by eating too voraciously of clover, on any other succulent food. The animal, when not quickly relieved, dies in half an hour. An extraordinary quantity of air being taken down with the clover, in its passage from the intestines upwards, forces the broad leaves of the clover before it, till they close up the passage at the entrance, and thus prevent the wind from returning. The common method of relief is to stab the beast into the paunch, but this is always dangerous and often fatal. Mr. Richard Eager of Graffham, near Guildford, received fifty guineas from the Society for the Encouragement of Arts, &c., for publishing the following method practised by him for curing hoven cattle : — ' Let the farmer have always ready smooth knobs of wood, of different sizes, fixed to the end of a flexible cane, which for oxen should be at least six feet long, and for sheep three feet. When a beast is hoven let one person take hold of him by the nostril and one horn ; let another hold his tongue fast in one hand, putting the cane down his throat with the other. Be careful not to let the animal get the knob of the cane between his grinders ; observe also to put the cane far enough down : the whole length will not injure. You will find the obstacle at the entrance of the paunch : push the cone hard, and when you perceive a smell to come from the paunch, and the animal's body to sink, the cure is performed.'

HOVER, v. n. Welsh hovio ; Teut. hie ofer. To hang over; to hang in the air overhead; to stand in suspense or expectation ; to wander about one place.

O Night ! alas ! why wilt thou ore us hove As long as Alcmena laie with Jove !

Chaucer. Troilus and Creteide. The landlord will no longer covenant with him ; for that he daily looketh after change and alteration, and hovereth in expectation of new worlds.

Spenser on Iceland. Some fiery devil hovers in the sky, And pours down mischief.

Shakspeare. King John.

Ah, my poor princes! ah, my tender babes ! If yet your gentle souls fly in the air,

And be not fixed in doom perpetual, Hover about me with your airy wings, And hear your mother's lamentation.

Id. Richard II!. She that will but now discover Where the winged wag doth hover, Shall, to-night, receive a kiss, How, or where, herself would wish. Jonson, A hovering mist came swimming o'er his sight, And sealed his eyes in everlasting night. Dryden.

The truth and certainty is seen, and the mind fully possesses itself of it j in the other, it only hovers about it. Locke.

We see so warlike a prince at the head of so great an army, hovering on the borders of our confederates.

A dditon.

Great flights of birds are hovering about the bridge, and settling upon it. Id.

Till as the earthly part decays and falls, The captive breaks her prison's mouldering walls ; Hovers a-while upon the sad remains, Which now the pile, or sepulchre, contains, And thence with liberty unbounded flies, Impatient to regain her native skies. Prior.

Some less refined, beneath the moon's pale light, Hover, and catch the shooting stars by night. Pope.

I alone.

With bended bow, and quiver full of arrows, Hovered about the enemy, and marked The road he took. Home's Douglas.

HOUGH, n. s. & v. a. Sax. bo5 ; Fr. hue The lower part of the thigh; an adz; a hoe • to hamstring ; to disable by cutting the sinews ; to cut up ; to hawk.

Thou shalt hough^iheir horses. Josh ii. 6.

Blood shall be from the sword unto the belly, and dung of men unto the camel's hough.

2 Esd. xiii. 36.

Did they really believe that a man, by houghs and an axe, could cut a god out of a tree ? Stillingfleet.

Neither could we hough or spit from us ; much less could we sneeze or cough. Grew.

HOUGH, in the manege, is the joint of the hind leg of a beast which connects the thigh to the leg.

HOUGH (John), a prelate of the church of England justly celebrated for his spirited and prudent resistance to the arbitrary measures of James II.. with regard to the presidency of Magdalen College Oxford. He was the son of a citizen of London, descended from the Houghs of Cheshire, and born in 1650. He received his education at Magdalen College, of which he became a fellow in 1675-In 1681 he was appointed chaplain to the duke of Ormond, lord lieutenant of Ireland ; and returned to England the next year with that nobleman; through whose influence he was made a prebendary of Westminster, and presented to the living of Tempsford, Bedfordshire. He graduated B. D. in 1687, and soon after encouraged the fellows of his college to reject the mandamus of the king in favor of one Anthony Farmer, who had not been fellow either of Magdalen or of New College, as required by the statutes. As a statutable majority no%v concurred in electing Mr. Hough president, he accepted the office in defiance of the royal order; his election was confirmed by the bishop of Winchester, the visitor of the college, and he was admitted D.D. This was the commencement of that clerical resistance to the tyrannical proceedings of Jame?,

so creditable to the established church, and which so materially contributed to the revolution of 1688. In vain did the king's ecclesiastical commissioners deprive him in form of the presidentship, and install Dr. Parker, Catholic bishop of Oxford, by proxy, in his room. The fellows refused to sign a submission to their new president, and to the number of twenty-five, with Dr. Hough, they were in consequence expelled the college, and declared incapable of any ecclesiastical dignity or benefice. James, however, on the appearance of the prince of Orange's declaration, meanly retracted these illegal proceedings, and restored our courageous divine and his companions to their rights. In April, 1690, Dr. Hough was made bishop of Oxford : and, in 1699, he was translated to the see of Litchfield and Coventry. Lastly, in 1717, he removed to that of Worcester, which he held for twenty-six years. His death took place on the 8th of March 1743. He was a munificent benefactor both to Magdalen College and his various sees, and his private charities were great. Dr. Hough only published during his lifetime eight occasional sermons, and left strict orders that nothing should be printed from his MSS.

HOUGHTON, MAJOR, celebrated for his travels in the interior of Africa, was a captain in the sixty-ninth regiment of foot, and, in 1779, acted as fort-major in the island of Goree, under .general Rooke. In 1789, hearing that the African Association wished to penetrate to the Niger by the way of Gambia, he offered his services to execute their plan. His offer being accepted he left England on the 1 6th of October 1790, and arrived at the mouth of the Gambia on the 10th of November, where he was kindly received by the king of Barra, whom he had formerly visited when at Goree, and who offered him all the assistance in his power. From this place he proceeded to Junkiconda, and thence to Medina, where he met with an equally favorable reception from the king of Woolli, of which kingdom Medina is capital: he next journeyed 150 miles to the country of the Foolies; thence to Bondou ; and thence to Ferbanna, the capital of Bambouk, where he was seized with a fever and delirium, but met with the utmost kindness and humanity from the king and his subjects. From Ferbanna he intended to travel to Tombucto and Houssa, the utmost limits of the proposed journey ; but, having reached Jarra, he fell in

with some Moors, who were travelling to Tisheet, a place in the Great Desert, who, under .pretence of conducting him on his journey, robbed him of every thing and left him to perish at a place called Farra ; where Mungo Park (the latest traveller to Africa) was shown the spot to which his body had been dragged, but could not learn whether he died of hunger or was murdered by the Mahommedan Moors. Thus perished, in the prime of life, a man whose travels and enquiries greatly enlarged the sphere of European knowledge respecting Africa, and who, had he lived, would have continued to throw much light on these unknown countries. His last despatch to the association was dated from Ferbanna, July 14th 1791.

HOULIERES (Antoniette de Lagarde des), a

French lady, whose poetry is highly esteemed. She was born at Paris in 1638. She was the pu-pil of Henault, and adopted his sceptical principles. Her works and those of her daughter have been collected and printed together. The daughter obtained the poetic prize in the French Academy against Fontenelle. Both these ladies were members of the academy of Ricovatri ; the mother was also a member of the academy of Aries. Her life is prefixed to her works in the Paris edition of 1747, in 2 vols. 12mo. She died in 1694; and her daughter in 1718.

HOULT, n. s. Sax. J>olr. A small wood. Obsolete.

Or as the wind, in hoults and shady greaves,

A murmur makes among the boughs and leaves.

Fairfax.

HOUND, n. s. & v. a. ~\ Sax. Jam's ; Dan.

HOUND'-FISH, n. s. (Swed. and Teutonic,

HOUNDS'TONGUE, n. s. thund; Scot. hund. A

HOUND'TREE, n. s. J dog used in the chase.

Hound, to set on chase; to hunt; to pursue.

Hound-fish, a kind of fish. Houndstongue, a

plant. Hound-tree, a kind of tree.

And I herde, goynge up and downe, Men, horses, houndes, and other thinge ; And al men speken of huntinge.

Chaucer. Boke of the Duchesse. This duk wol have a cours at him, or twey, With houndes swiche as him lust to commando.

Id. The Knightes Tale.

Hounds and greyhounds, mungrels, spaniels, curs, Are cleped all by the name of dogs.

Shaktpeare. Macbeth.

God is said to harden the heart permissively, but not operatively nor effectively ; as he who only lets loose a greyhound out of the slip, is said to hound him at the hare. Drum/mil.

Jason threw, but failed to wound The boar, and slew an undeserving hound, And through the dog the dart was nailed to ground.

Dryden.

If the wolves had been hounded by tygers, they should have worried them. L'Estranye.

The kind spaniel and the faithful hound, Likest that fox in shape and species found, Pursues the noted path and covets home. Prior.

Let hares and hounds in coupling straps unite, The clacking hen make friendship with the kite.

Gay.

HOUND. See CANIS. Among sportsmen it is generally understood that hounds of the middle size are the most proper, all animals of that description being stronger than such as are either very small or very large. The shape ought to be particularly attended to ; for, if the hound be not well proportioned, he can neither run fast nor do much work. His legs ought to be straight, his feet round and not very large, his shoulders back, his breast rather wide than narrow, his chest deep, his back broad, his head small, his neck thin, his tail thick and bushy and well carried. None of those young hounds which are out at the elbows, or such as are weak from the knee to the foot, should ever be taken into the pack. That the pack may look well the hounds should be as much as possible of a size: and, if they be also handsome, the pack will then be perfect. This, however, contributes nothing to the

goodness of a pack; for very unhandsome

paries, consisting of hounds entirely different in size and color, often afford very good sport. It is only necessary that they should run well together; to which indeed a uniformity in size and shape seems to contribute. The pack that can run ten miles, or any other considerable space, in the shortest time, may be said to go fastest, though the hounds taken separately might be considerably inferior to others in swiftness. A pack of hounds, considered in a collective body, go fast in proportion to the excellence of their noses and the head they carry. Packs composed of hounds of various kinds seldom run well. When the packs are very large the hounds are seldom sufficiently hunted to be good ; twenty or thirty couple therefore, or at most forty, will be sufficient for the keenest sportsman in this country, as thus he maybe enabled to hunt three or even four times a week. The number of hounds to be kept must, however, in a considerable degree, depend on the strength of the pack and the country in which they hunt. They should be left at home as seldom as possible : and too many old hounds should not be kept. None ought to be kept above five or six seasons, though this also is somewhat uncertain, as we have no rule for judging how long a hound will last. In breeding of hounds considerable attention ought to be paid to the dog from which you breed. All such are to be rejected as have a tender nose, as are babblers or skitters. An old dog should never be put to an old bitch. January, February, and March, are the best months for breeding; late puppies seldom thrive. After the females begin to grow big with young, it will not be proper to let them hunt any more, or in-deed to remain for a much longer time in the kennel. Sometimes these animals will have an extraordinary number of whelps. Mr. Beckford informs us, that he has known a bitch have fifteen puppies at a litter ; and he assures us, that a friend of his informed him, that a hound in his pack Drought forth sixteen, all alive. In these cases it is proper to put some

of the puppies to another bitch, if you want to keep them all ; but, if any are destroyed, the best colored ought to be kept. The bitches should not only have plenty of flesh, but milk also ; and the puppies should not be taken from them till they are able to take care of themselves : their mothers will be relieved when they learn to lap milk, which they will do in a short time. After the puppies are taken away from their mother, the litter should have three purging balls given them, one every other morning, and plenty of whey the intermediate day. If a bitch bring only one or two puppies, and you have another that will take them, by putting the puppies to her the former will soon be fit to hunt again. She should, however, be first physicked, and it will also be of service to anoint her dugs with brandy and water. Whelps are very liable to the distemper, to which dogs in general are subject, and which frequently makes great havock among them at their walks. Young hounds should be fed twice a-day, as they seldom take kindly to the kennel-meat at first, and the distemper is most apt to seize them at this time. It is impossible to determine how many young hounds

ought to be bred in order to keep up the pack as this depends altogether on contingencies. The deficiencies of one year must be supplied by the next; but it is probable, that from thirty to thirty-five couple of old hounds, and from eight to thirty-five couple of young ones, will answer the purpose, where no more than forty couple are to be kept. A considerable number, however, ought always to be bred ; for it is undoubtedly and evidently true, that those who breed the greatest number of hounds must ex-pect the best pack. After the hounds have become acquainted with the huntsman, and answer to their names, they ought to be coupled, and walked out among sheep ; and two dogs should not be coupled together, when you can avoid it. As young hounds are awkward at first, a few ought only to be set out at a time with people on foot, and they will soon afterwards f&llow a horse. With regard to the first entering of hounds to a scent, our author gives the following directions : — ‘ You had better enter them at their own game ; it will save you much trouble afterwards. Many dogs, I believe, like that scent best which they were first blooded to : but, be this as it may, it is most certainly reasonable to use them to that which it is intended they should hunt. Hounds ought to be entered as soon as possible, though the time must depend on the nature of the country in which they are. In corn countries hunting may not be practicable till the corn is cut down ; but you may begin sooner in grass countries, and at any time in woodlands. Hounds at their first entrance cannot be encouraged too much. When they are

become handy, love a scent, and begin to know what is right, it will then be soon enough to chastise them for what is wrong ; in which case one severe beating will save a great deal of trouble. When a hound is flogged, the whipper-in should make use of his voice as well as his whip. They should be low in flesh when you begin to hunt ; the ground being generally hard at that time, so that they are very liable to be shaken. Sometimes the huntsman turns down a cat before them, which they kill ; and, when the time of hunting approaches, he turns out young foxes or badgers ; taking out some of the most steady of his old hounds to lead on the young ones. Small covers and furze brakes are drawn with them to use them to a halloo, and to teach them obedience. If they find improper game, and hunt it, they are stopped and brought back ; and, as long as they will stop at a rate, they are not chastised. To lender fox-hunting complete, no young hounds should be taken into the pack the first season ; a requisite too expensive for most sportsmen. The pack should consist of about forty couple of hounds, that have hunted one, two, three, four, or five seasons. The young pack should consist of about twenty couple of young hounds, and an equal number of old ones. They should have a separate establishment, and the two kennels should not be too near one another. When the season is over, the best of the young hounds should be taken into the pack, and the draft of old ones exchanged for them. Many must be bred to enable a sportsman to take in twenty couple of young hounds

every season. It will always be easy to keep up the number of old bounds ; for, when your own draft is not sufficient, drafts from other packs may be obtained, and at a small expense. When young hounds are hunted together for the first season, and have not a sufficient number of old ones along with them, it does more harm than good.’

HOUP,n.s. Lat.wpwpa. The pewet or lapwing. HOU-QUANG, a province of China, in the centre of the empire; divided into two parts

by the Yang-tse-kiang. The greater part of it is level, and watered by lakes, canals, and rivers; which render it so fertile that the Chinese call it the storehouse of the empire; and it is a saying among them, that ‘the abundance of Kiang-si could furnish all China with a breakfast; but the province of Houquang could maintain all its .inhabitants. Some princes of the race of Hong-vou formerly resided in this province; but that family was entirely destroyed by the Tartars when they conquered China. The people here boast much of their cotton cloths, simples, gold mines, wax, and paper made of the bamboo-reed. The northern part of the province contains eight cities of the first class, and sixty of the second and third. The southern comprehends seven of the first class, and fifty-four of the second and third, exclusive of forts, towns, and villages, which are numerous.

HOUR, n. s. ~\ Fr. heure ; Latin

HOUR’GLASS, n. s. I hora ; Gr. wpa. The HOUR’LY, adj. & adv. > twenty-fourth part of HOUR’PLATE, n. s. i a natural day ; the HOURS, re. s. J space of sixty mi

nutes ; a particular time; the time as marked by the clock. Hourglass, a glass filled with sand, which, by running through a narrow hole, marks the time ; the space of time. Hourly, happening every hour; frequently; often repeated. Hourplate, the dial; the plate on which the hours pointed by the hand of a clock are inscribed. Hours, personification of imaginary beings.

Ther shal not perishe an here of his hed, ne a moment of an houre ne shall not perishe of his time, that he ne shal yeve thereof a rekening.

Chaucer. The Pernones Tale, The thridde houre inequal that Palamon Began to Venus’ temple for to gon, Up rose the Sonne and up Emelie, And to the temple of Diane gan hie.

Id. The Knightes Tale.

Whose silver gates (bv which there sate an hory Old aged sire with hower-glasse in hand Night tyme) she entred, were he lief or sory.

Spenser’s Faerie Queene. Then came the Hotares, faire of high love, And timely Night, the which were all endewed With wondrous beauty fit to kindle love ; But they were virgins all, and love eschewed That might forslack the charge to them fore-shewed By mighty love ; who did them porters make Of heaven’s gate (whence all the gods issued) Wliich they did dayly watch and nightly wake By even turnes, ne ever did their charge forsake.

Id.

Vexation almost stops my breath, That sundered friends greet in the hour of death.

Shakspeare.

See the minutes how they run : How many makes the hour full conipieat. How many hours bring about the day, How many days will finish up the year, How many years a mortal man may live.

Shakspeare. The hour runs through the roughest day. Id.

Our estate may not endure Hazard so near us, as doth hwrly grow Out of his lunacies. Id. Hamlet.

When we can intreat an hour to serve, We'll spend it in some words upon that business, If you would grant the time. Id. Macbeth.

In sickness, the time will seem longer without a clock or hourglass than with it ; for the mind doth value every moment. Bacon.

We, within the hourglass of two months, have won one town, and overthrown great forces in the field.

Id.

Eliza till this hour might reign, Had she not evil counsels ta'en ; Fundamental laws she broke, And still new favourites she chose, Till up in arms my passions rose And cast away her yoke. Cowley.

They with ceaseless cry

Surround me, as tbou sawest ; hourly conceived, And hourly born, with sorrow infinite To me ! Milton's Paradise Lost.

Next morning, known to be a morning better by the hourglass than the day's clearness. Sidney.

Great was their strife, which hourly was renewed, Till each with mortal hate his rival viewed.

Dryden. Alcyone

Computes how many nights he had been gone, Observes the waining

moon with hourly view, Numbers her age, and wishes for a uew. Id.

Love reckons hours for months, and days for years, And every little absence is an age. Id.

Shake not his hourglass, when his hasty sand Is ebbing to the last. Id. Spanish Friar.

The conscious wretch must all his arts reveal, From the first moment of his vital breath, To his last hour of unrepenting death. Id. JEneid. If eyes could not view the hand, and the characters of the hourplate, and thereby at a distance see what o'clock it was, their owner could not be much benefited by that acuteness. Locke.

Our neighbour let her floor to a genteel man, who kept good hours. Toiler.

They are as loud any hour of the morning, as our own countrymen at midnight. Addison.

We must live in hourly expectation of having those troops recalled, which they now leave with us.

Swift.

No more in vain conjecture let me wear My hours away, but seek the hermit's cell ; "Pis he my doubt can clear, perhaps my care dispel.

Beattie. Thine are the hours and days when both are

cheering And innocent! Byron.

Within few hours I shall not call in vain — Yet in this hour I dread the thing I dare : Until this hour I never shrunk to gaze On spirit good or evil, now I tremble, And feel a strange cold thaw about my heart.

Id. Manfred.

I have epigrams that want nothing but the sting ; conundrums, that need nothing but an explanation j rebusses and acrostics, that will be complete with the addition of the name only. These being in great request may be had at an hour's warning.

Canning. Microcosm.

HOUR. An hour, with us, is a measure of time, equal to a twenty-fourth part of the natural day, or the duration of the twenty-fourth part of the earth's diurnal rotation. It answers nearly to fifteen degrees of the equator. It is divided into sixty minutes ; the minute into sixty seconds, &c. The division of the day is very ancient ; as it is shown by Kirchei1. The most ancient hour was the twelfth part of the day. Herodotus, lib. ii., says .that the Greeks learnt from the Egyptians the method of dividing the day into twelve parts. The division of the day into twenty-four hours was net known to the Romans before the first Punic war. Till that time they only regulated their days by the rising and setting of the sun. They divided the twelve hours of the day and night into four watches, containing three hours each. See CHRONOLOGY.

HOURS, horae, in the Romish church, are certain prayers performed at stated times of the day ; as matins, vespers, lauds, &c. The less hours are, prime, tierce, sixth, and none. They are called canonical hours, being rehearsed at certain hours prescribed by the canons, in commemoration of the mysteries accomplished at those hours; these hours were anciently called also courses, cursus. The first constitution, enjoining the observation of the canonical hours, is of the ninth century, in a capitular of Heito, bishop of Basil, enjoining the priests never to be absent at the canonical hours by day or night.

HOURIS, in Mahommedan theology, females promised to the faithful in paradise ; formed for this purpose, with eternal beauty and undecaying charms.

HOUSATONICK, a river of Connecticut, United States, which rises in Berkshire county, and runs a south-east course along the whole breadth of the state ; emptying itself into Long Island Sound, between Stratford and Milford. It is navigable to Derby about twelve miles; and above that is well adapted for machinery. A bar of shells at its mouth obstructs the navigation of large vessels. Between Salisbury and

Canaan is a cataract, where the whole water of the river, which is 150 yards wide, falls sixty feet perpendicularly.

HOUSE, B.S., v.a. & v.n.ˆ Sax. Pur; Bel.

HOUS'IKG, n. s. thuys; Scott, huse.

HOUS'LING, adj. £ A place of human

Houss, n. s. J abode ; a place

where studious or religious persons live in com-mon, as a monastery ; a college : the manner of living; station of a planet astrologically considered ; family of ancestors ; descendants and kindred ; a body of parliament assembled, as lords or commons. House, to harbour ; shelter; to reside, or take up one's abode ; to have an astrological station in the heavens. Housing, quantity of inhabited building. From Fr. house-aux, heuses, or hotises. Cloth originally used to keep off dirt, now added to saddles as ornamental. Housling, a house warming ; something provided for entertainment at first entrance into a house. Houss has the same meaning with housing, but is an obsolete word. House is frequently used in composition, as in the examples which follow : —

I wol you all the shape devise Of House and cite -, and al the wise Howe I gan to this place approche.

Chanter. The House of Fame. In the subarbes of the town, of cbambres aud of

halles,

And all other howseing that to a lord belongit; Wos tioon wythyn the cete, ne noon so wele behongit With clocers of highe pryse, ne wallid so about e, As was a Senatours hous wythyn and eke wythoute. Id. The Mcrchantes Second Tale. Ne suffer it to house there half a day.

Hubberd's Tale.

Oh, can your counsel his despair defer, Who now is houted in his sepulchre ? Sandys. His own two hands the holy knot did knit, That none but death for ever can divide ;

His own two hands, for such a turn most fit, The howling fire did

kindle and provide.

Faerie Queene.

The red rose and the white are on his face, The fatal colours of our striving house*.

Shakspeare. Graze where you will, you shall not house with me.

Id.

Slander lives upon succession, For ever housed where it gets possession. Id. Houses are built to live in, not to look on ; therefore let use be preferred before uniformity, except where both may be had. Bacon.

As we house not country plants to save them, so we may house our own to forward them. Id.

, Mere cottagers are but housed beggars. Id. Upon the North-sea a valley houseth a gentleman, who hath worn out his former name. Caret*.

Nor were the crimes objected against him so clear, as to give convincing satisfaction to the major part o* both houses, especially that of the lords.

King Charles.

Summers three times eight, save one. She had told ; alas ! too soon, After so short time of breath, To house with darkness and with death. Milton. These must assist her in her countermines To overthrow the Derby-house designs. MarteU. Palladius wished him to house all the Helots.

Sidney.

Pure spiritual substances we cannot converse with, therefore have need of means of communication, which some make to be the celestial houses: those who are for the celestial houses worship the planets, as the habitations of intellectual substances that animate them. Stillingjleet.

By delaying my last fine, upon your grace’s accession to the patrimonies of your house, I may seem to have made a forfeiture. Dryden.

Wit in northern climates will not blow, Except, like orange trees, ‘tis housed from snow. Id.

In fear of this, observe the starry signs, Where Saturn houses, and where Hermes joins. Id.

I, housing in the lion’s hateful sign, Bought senates ; and deserting troops are mine.

Id.

In expectation of such times as these, A chapel housed ‘em, truly called of ease. Id. Six lions’ hides with thongs together fast, His upper parts defended to his waist ; And where man ended, the continued vest, Spread on his back, the houts and trappings of a beast. Id.

A poet is not born in every race ; Two of a house few ages can afford , One to perform, another to record.

Id. Fables.

Theodosius arrived at a religious house in the city, where now Conscantia resided. Addison.

He kept a miserable house, but the blame was laid wholly upon madam. Swift.

In a house the doors are moveable, and the rooms square ; yet the house is neither moveable nor square.

Watts. Is thy face like thy mother’s my fair child !

Ada! sole daughter of my house and heart.

Byron. Childe Harold.

By what shadow of argument could the House of Lords be maintained in equal authority and jurisdiction with the House of Commons, when once that Houie of Commons should become a mere deputation, speaking the people's will, and that will the rule of government. Canning's Speeches.

HOUSE. See ARCHITECTURE. Among the Jews, Greeks, and Romans, houses were flat on the top for walking on, and had usually stairs on the outside, by which they might ascend and descend without coming into the house. Each house was so laid out, that it enclosed a quadrangular area or court; which being open to the sky, gave light to it. This was the place where company was received, and for that purpose it was strewed with mats or carpets, for their better accommodation. It was paved with marble or other materials, according to the owner's ability, and provided with covering to shelter them from the inclemency of the weather. This part of their houses, called by the Romans impluvium, or cava sedium, was provided with channels to carry off the water into the common sewers. The level roof was covered with a strong plaster by way of terrace. Hither, especially among the Jews, it was customary to retire for meditation, private converse, devotion, or the enjoyment of the evening breezes. It is surprising that so few modern houses are built with this convenience. Tlie Grecian houses were usually divided into two parts, in which the men and women had distinct mansions. The apartment of the men was towards the gate, and called AvSpwvtrif ; that of the women was the farthest part of the house, and called YvvaiKiavtrig.

HOUSE, in astrology, is the twelfth part of the heavens. The division of the heavens into houses is founded upon the pretended influence of the stars, when meeting in them, on all sublunary bodies. These influences are supposed to be good or bad ; and to each of these houses particular virtues are assigned, on which astrologers prepare and form a judgment of their horoscopes. The horizon and meridian are two circles of the celestial houses, which divide the heavens into four equal parts, each containing three houses ; six of which are above the horizon, and six below it ; and six of these are called eastern, and six western houses. Thus a scheme or figure of the heavens is composed of twelve triangles, in which are marked the stars, signs, and planets, so included in each of these circles. Every planet has likewise two particular houses, in which it is pretended that they exert their influence in the strongest manner ; but the sun and moon have only one, the house of the former being Leo, and that of the latter Cancer. See ASTROLOGY.

HOUSE ISLAND, an island of England, one mile and sixty-eight chains from the coast of VOL. XL

Northumberland. It is the largest of the Farn Islands. Farn is about a mile in compass, and has a fort and a lighthouse. It contains about six or seven acres of rich pasture ; and the shore abounds with good coals which are dug at the ebb of tide. St. Cuthbert is said to have passed the last two years of his life on this island. A priory of Benedictines was afterwards established in it for six or eight monks, subordinate to Dur-ham. A square tower, the remains of a church, and some other buildings, are still to be seen on this island ; and a stone coffin, said to be that of St. Cuthbert. At the north end of the isle is a chasm, from the top to the bottom of the rock, communicating with the sea ; through which, in tempestuous weather, the water is forced with great violence and noise, and forms a fine jet d* eau of sixty feet high. It is called by the inhabitants of the opposite coast, the Churn.

HOUSE'BREAKER, n.s. House and break. Burglar; one who makes his way into houses to steal.

All housebreakers and sharpers had thief written on their foreheads. L'Estrange.

HOUSE'BREAKING,n.s. House and break Burglary.

When he hears of a rogue to be tried for robbing or housebreaking , he will send the whole paper to the government. Swift.

HOUSE'DOG, n.s. House and dog. A mastiff kept to guard the house.

A very good housedog, but a dangerous cur to strangers, had a bell about his neck. L'Estrange.

You see the goodness of the master even in the old housedog. Addison.

HOUSEHOLD, n. s. House and hold. A family living together.

Two households, both alike in dignity, In fair Verona, where we lay our scene, From ancient grudge break to new mutiny.

Shakspeare.

A little kingdom is a great household, and a great household a little

kingdom. Bacons Advice to VU.

Of God observed

The one just man alive, by his command, Shall build a wondrous ark, as thou beheldest, To save himself and household from amidst A world devote to universal wreck. Milton.

He has always taken to himself, amongst the sons of men, a peculiar household of his love, which at all times he has cherished as a father, and govfrued as i. master : this is the proper household of faith : in the first ages of the world, ‘twas sometimes literally no more than a single household, or some few families.

Sprat.

Great crimes must be with greater crimes repaid, And second funerals on the former laid j Let the whole household in one ruin fall, And may Diana’s curse o’ertake us all.

Dryden’s Fables.

Learning’s little household did embark, With her world’s fruitful system in her sacred ark.

Swift.

In his own church he keeps * -seat, Says grace before and after meat ; And calls, without affecting AITS, His household twice a-day to prayers. I < t. Family life ; domestic management.

An inventory, thus importing The several parcels of his plate, his treasure, Rich stuffs, and ornaments of household.

Shakspeare, 2F

It is used in the manner of an adjective, to signify domestic ; belonging to the family.

Cornelius called two of his household servants.

Acts x. 7. For nothing lovelier can be found

In woman than to study household good ;

And good works in her husband to promote.

Milton.

It would be endless to enumerate the oaths among the men, among the women the neglect of household affairs. Swift.

We sacrifice to dress, till household joys And comforts cease. Cawpcr.

HOUSEHOLD, PRINCIPAL OFFICERS OF HIS MAJESTY'S. These are the lord steward, lord chamberlain, the groom of the stole, the master of the great wardrobe, and the master of the horse. The civil government of the king's house is under the care of the lord steward, who, be-ing the chief officer, has authority over all the other officers and servants, except those of his majesty's chapel, chamber, and stable; and he is the judge of all crimes committed either within the verge or the court. Under him are the treasurer, the comptroller, cofferer, the mas-ter of the household, the clerks of the green-cloth, and the officers and servants belonging to the accounting house, the marshalsea, the verge, the king's kitchen, the household kitchen, the acatery, bake-house, pantry, buttery, cellar,

Eastry, &c. Next to him is the lord chamber-lin, who has under him the vice-chamberlain, the treasurer, and comptroller of the chamber; forty-eight gentlemen of the privy-chamber, twelve of whom wait quarterly ; the gentleman usher, the grooi-3 of the great chamber, the pages of the presence chamber ; the mace-bearers, cup-bearers, carvers, musicians, &c. The master or keeper of the great wardrobe has ander himadeputy,comptroller, clerk of the robes, brusher, &c. ; and a number of tradesmen and artificers, who are all sworn servants to the king. The master of the horse has under his command the equerries, pages, footmen, grooms, coach-men, farriers, saddlers, and all the other officers and tradesmen employed in his majesty's stables. Next to the civil list of the king's court, is the military, consisting of the band of gentlemen pensioners, the yeomen of the guard, and the

troops of the household.

HOUSEHOLDER, n. s. From household. Master of a family.

A certain householder planted a vineyard.

Matt. xxi. An houteholder, and that a grete was he.

Chaucer. Prologue to the Canterbury Tales.

HOUSE'HOLDSTUFF, n. s. Household and stuff. Furniture of house ; utensils convenient for a family.

In this war that he maketh, he still flieth from his foe, and lurketh in the thick woods, waiting for advantages : his c.loke is his bed, yea, and his household-stuff'. Spenser on Ireland.

A great part of the building was consumed, with much costly householdstiiff". Bacon.

A woman had her jest for her householdstiiff".

L'Estrange.

HOUSE'KEEPER, n. s. House and keep. Householder ; master of a family.

To be said an honest man and a good housekeepe goes as fairly as to say a graceful man and a great scholar. Shakspeare.

If I may credit housekeeper* and substantial tradesmen, all sorts of provisions and commodities are risen excessively. Locke.

One who lives in plenty; one that exercises hospitality.

The people are apter to applaud housekeepers than houseraisers. Wotton.

One who lives much at home.

How do you both ? You are manifest housekeepers. What are you sewing there ? Shakspeare. Coriolanus.

A woman servant that has the care of a family, and superintends the other maid servants.

Merry folks who want by chance A pair to make a country-dance, Call the old housekeeper, and get her, To fill a place for want of better. Swift.

A housedog. Not in use.

Distinguish the housekeeper, the hunter.

Shakspeare.

HOUSEKEEPING, adj. House and keep. Domestic ; useful to a family.

His house for pleasant prospect, large scope, and other housekeeping commodities, challenged! the pre-eminence. Carew.

HOUSEKEEPING, n. s. Hospitality ; liberal and plentiful table.

I hear your grace hath sworn out housekeeping.

Shakspeare.

His table was one of the last that gave us an example of the old housekeeping of an English nobleman : an abundance reigned, which shewed the master's hospitality. Prior.

HOUSE'LEEK, n. s. House and leek. A plant.

The acerbs supply their quantity of cruder acids ; as juices of apples, grapes, the sorrels, and houseleek.

Flayer.

HOUSE'LESS, adj. From house. Wanting abode ; wanting habitation.

Poor naked wretches,

How shall your houseless heads and unfed sides, Your looped and windowed raggedness, defeno

you. Shakspeare.

This hungry, houseless, suffering, dying Jesus, fee many thousands with five loaves and two fishes.

West.

The stranger's step profaned his desolate halls An exile, outcast,

houseless, nameless object, He fled for life, and scarce by flight did save it.

Maturin's Bertram.

HOUSE'MAID, n. s. House and maid. A maid employed to keep the house clean.

The housemaid may put out the candle against the looking-glass. Swift.

HOUSE'ROOM,n.s. House and room. Place in a house.

Houseroom that costs him nothing, he bestows j Yet still we scribble on, though still we lose.

Dryden.

HOUSE'SNAIL, n. s. A kind of snail.

HOUSE'WARMING,n. s. House and warm A feast of meny-making upon going into a nev» house.

HOUSE'WIFE,ra.s. House and wife. This is now frequently written huswife, or hussy.

The mistress of a family.

You will think it unfit for a good housewife to stir in or to busy herself about her housewifery.

Spenter on Ireland.

1 have room enough, but the kind and hearty housewife is dead. Pope

to Swift.

A female economist.

Fitting is a mantle for a bad man, and surely for a bad housewife it is no less convenient ; for some of them, that be wandering women, it is half a wardrobe.

Spenser on Ireland.

Let us sit and mock the good housewife, Fortune, from her wheel, that her gifts may henceforth be disposed equally. Shakspeare.

Farmers in degree, He a good hasband, a good housewife she.

Dry den.

Early housewives leave the bed, When living embers on the hearth are spread. Id. The fairest among the daughters of Britain shew themselves good stateswomen as well as good haute-wives. Addison.

One skilled in female business. He was bred up under the tuition of a tender mo-ther, till she made him as good an housewife as herself : he could preserve apricocks, and make jellies.

Addison.

HOUSE'WIFELY, adv. From housewife-With the economy of a careful woman.

HOUSE'WIFERY, n.s. From housewife. Skill in the arts becoming a housewife ; domestic or female business; management becoming the mistress of a family.

You will think it unfit for a good housewife to stir in or to busy herself about her housewifery.

Spenser on Ireland. He ordained a lady for his praise,

Generally praiseful ; fair and young, and skilled in housewiferies. Chapman's Iliad.

Little butter was exported abroad, and that discredited by the housewifery of the Irish in making it up.

Temple.

HOUS'EL, n. s.&cv. a. Sax. Jjufl, from Goth. hunsel, a sacrifice ; orLat. hostia, dimin. hostiola. The holy eucharist : to give or receive the eucharist. Both the noun and verb are obsolete.

HOUSING, or HOUSE-LINE, in the sea-language, a small line, formed of three fine strands or twists of hemp, smaller than rope yarn. It is chiefly used to seize blocks into their strops, to bind the corners of the sails, or to fasten the bottom of a sail to its bolt-rope, &c. See BOLT ROPE.

HOUSING, among bricklayers, a brick which is warped, or cast crooked or hollow in burning.

HOUSTONIA (c&rulea) ; the delicate cruciform flowers of this, one of our earliest spring plants, are familiar to almost every observer ; and yet, strange as it may seem, it has no where, to our knowledge, received a common name. It usually grows in patches, which are conspicuous even at a distance, though the flowers individually are inconsiderable in size. The stems are slender and dichotomous, about four inches high, and bear small opposite leaves. The flowers are light blue, or sometimes white. The tube of the corolla is longer than the calyx, and is divided at the summit into four spreading segments. It belongs to the tetrandria monagynia of Linnaeus. All the species of Houstonia are exclusively confined to Nortb America.

HOUSSA, or HAOUSSA, an extensive central kingdom of Africa, on the shores of the Niger, having a capital also of this name. It appears, from the accounts of Park and others, to be the most civilised of any of the native states of Africa; and the city is the great mart to the eastward of Tombuct'oo, two days' journey to the north of the Niger. The African merchants speak of it as larger and more populous than Tombuctoo.

The country is said to be an extensive region, comprehending various inferior states ; particularly Cano, Guber, Daura, Cabi,Nyffe,and Noro. The inhabitants are negroes, but not quite black, and the most intelligent people in the interior of Africa. They have an extraordinary delight in dancing and singing. Their agricultural system is remarkably perfect. They (manufacture also a great quantity of cotton cloths, with which they supply Fezzan ; and can dye all colors ex-cept scarlet. According to Mr. Bowdich, Houssa is situated some days journey to the north of the branch or tributary of the Niger called the Gam-baroo.

HOU-TCHEOU, a city of China, in the province of Tche-kiang. It is a city of the first class, and is situated on a lake, from which it takes its name. The quantity of silk manufactured here is almost incredible. To give some idea of it, we shall only say, that the tribute paid by a city under its jurisdiction, named Te-tsin-hiem, amounts to more than 500,000 ounces of silver. Its district contains seven cities, one of which is of the second, and six of the third class.

HOUTEVILLE (Claud Francis), a French author, born in 1689. He was secretary to the French Academy, and wrote a work entitled La Verite de la Religion Chretienne prouvee par les Faits. He died in 1743, aged fifty-four.

HOUTHOVE, a town of France, in the department of Lys, and late province of Austrian Flanders ; six miles north-west of Bruges. HOW, adv. ~\ Sax. hu ; Belgic and

HOWBE'IT, adv. j Teut. wie, hoe. ' These HOW'BE, adv. *> several words are adver—

HOWEV'ER, adv. i sative conjunctions: they HOWSOEV'ER, adv. J join sentences together that stand more or less in opposition to each other.' — Crabb. How, to what degree ; in what manner ; for what reason ; by what means ; in what state. It is used in a sense marking proportion; it is used also in exclamation and affirmation. Howbeit and howbe, nevertheless ; notwithstanding : they are nearly obsolete. However, whatsoever manner or degree ; at all events ; nevertheless. Howsoever, relates entirely to manner.

How is it thou hast found it so quickly ?

Gen. xxvii.

How long wilt thou refuse to humble thyself before me ? Exodus.

How are cne mighty fallen ! Sam.

How doth the city sit solitary as a widow !

1 Lam.

How oft is the candle of the wicked put out ! AnA how oft cometh their destruction upon them \ Jot, O how I love thy law ! it is my meditation.

P salrm 2 F 2

HOW

How much better is it to get wisdom than gold ! and to get understanding, rather to be chosen than silver ! Proverb*.

Howe false was, eke, duke Theseus, That as the storie telleth us, How he betrayed Adriane.

Chaucer. The House of Fame. Siker thou speakest like a lewd lorrel, Of heaven to deemon so,

Howbe I am but rude and borrel, Yet nearer ways I know. Spanser.

There is a knowledge which God hath always revealed unto them in the works of nature : this they honour and esteem highly as profound wisdom, howbeit this wisdom saveth them not. Hooker.

Things so ordained are to be kept, howbeit not necessarily, any longer than till there grow some urgent cause to ordain the contrary. Id.

Marked you not,

How that the guilty kindred of the queen Looked pale when they did hear of Clarence's death ?

Shakspeare. This ring he holds

In most rich choice ; yet in his idle fire, To buy his will, it would not seem too dear, Howe'er repented of. Id.

The man doth fear God, howsoever, it seems not in him. Id.

How now, my love ? Why is your cheek so pale ? How chance the roses there to fade so fast ? Id.

Berosus, who, after Moses, was one of the most ancient, howsoever he hath been since corrupted, doth in the substance of all agree. Raleigh's History.

Thick clouds put us in some hope of land, knowing hoic that part of the South Sea was utterly unknown, and might have islands or continents. Bacon.

There was no army transmitted out of England, howbeit the English colonies in Ireland did win ground upon the Irish. Davies.

A great division fell among the nobility, so much the more dangerous by how much the spirits were more active and high. Hayward.

How many children's plaints and mothers' cries ! How many woeful widows left to bow To sad disgrace ! Daniel's Civil War.

Prosecute the means of thy deliverance By ransom, or how else. Milton's Agonutet.

To trace the ways Of highest agents, deemed however wise.

Milton.

How cou-ld the Dutch but be converted when The Apostles were so many fishermen. Marvell.

Consider into how many differing substances it may be analysed by the fire. Boyle.

Our chief end is to be freed from all, if it may be, however, from the greatest evils ; and to enjoy, if it may be, all good, however the chiefest. Tillotson.

In your excuse your love does little say ; You might howe'er have took a fairer way.

Dryden.

Whence am I forced, and whither am I borne ? How, and with what reproach shall I return ? Id. We examine the \vby and the how of things.

L'Estrange.

'Tis much in our power koto to live, but not at all Itow or when to die. Id.

Its views are bounded on all. sides by several ranges of mountains, which are however at so great a distance, that they leave a wonderful variety of beautiful prospects. A ddison on > Italy.

It is pleasant to see how the small territories of this little republick are cultivated to the best advantage.

Id.

I do not build my reasoning wholly on the case of persecution ; however I do not exclude it. Atterbury.

By how much they would diminish the present ex-tent of the sea, so much they would impair the fertility, and fountains and rivers of the earth. Bentley.

Few turn their thoughts to examine how those diseases in a state are bred, that hasten its end ; which would, however, be a very useful enquiry. Swift.

Fain would I sing what transport stormed his soul How the red current throbb'd his veins along,

When, like Pelides, bold beyond controul, Without art graceful, without effort strong, Homer raised high to heaven the loud, the impetuous song. Beattie.

Loud complaint, however angrily It shakes its phrase, is little to be feared, And less distrusted. Byron.

HOWAKIL, a bay on the coast of Abyssinia, containing several islands, the principal of which, also called Howakil, has its eastern point in lat. 15° 1'. Mr. Salt here found numerous portions of the opsian, or obsidian stone of the ancients, which he was told were more abundant up the country. He thinks it the bay which is noted for this mineral in the Periplus of the Erythrean Sea.

HOWARD (Charles), an able statesman and experienced seaman, was the son of lord William Howard, baron of Effingham, and born in 1536. He served under his father, who was lord high admiral of England, till the accession of queen Elizabeth. In January, 1573, he succeeded his father in title and estate : after which he became chamberlain of the household; and in 1585 was made lord high admiral, when the Spaniards were sending their armada to conquer

England. When he received intelligence of the approach of the Spanish fleet, he the first night left the port with six ships. The next morning, though he had only thirty sail, and those the smallest of the fleet, he attacked the Spanish navy; but first despatched his brother-in-law, Sir Edward Hobby, to the queen, to desire her to make the proper disposition of her land forces for the security of the coast, and to hasten as many ships as possible to his assistance His valor was conspicuously displayed in his repeated attacks of a superior enemy. The queen expressed her high sense of his merit, and granted him a pension for life. In 1596 he commanded the navai forces sent against Spain; and upon his return, in 1597, he was created earl of Nottingham. The next eminent service in which he was engaged was in 1599, when the Spaniards seemed to meditate a new invasion. The queen, however, drew together, in a fortnight's time, such a fleet, and army, as took away all appearance of success from her foreign and domestic foes; and she gave the earl the sole and supreme command of both the fleet and army, with the title of lord lieutenant general of all England, an office unknown in succeeding times. When age and infirmity had unfitted him for action he resigned his office, and spent the remainder of his life in retirement, till his decease; which happened ia 1624, in the eighty-seventh year of his age.

HOWARD (Henry), earl of Surry, a soldier and a poet, the son and grandson of two lords treasurers, dukes of Norfolk, was born about 1520, and educated in Windsor Castle, with young Fitzroy, earl of Richmond, natural sou to king

lienry VIII. Wood says, that he was for some time a student at Cardinal College, Oxford. In his youth he became enamoured of the fair Ger-aldine, whom his sonnets have immortalised ; and whose superlative beauty he maintained, in the romantic spirit of the times, in various tournaments in the principal cities of Italy, ' against all comers, whether Christians, Jews, Saracens, Turks, or cannibals, and was victorious in them ail; as well as in ont fought in 1540 at Westminster, against Sir John Dudley, Sir Thomas Seymour, and

others. In 1542 he marched, under his father, against the Scots ; but was, on his return, confined in Windsor Castle for eating flesh in Lent, contrary to the king's proclamation. In 1544, on the expedition to Boulogne, he was appointed field-marshal of the English army ; and after taking that town, in 1546, made captain-general of the king's forces in France ; but, attempting to intercept a convoy, he was defeated by the French, and soon after superseded in his command by the earl of Hertford. He married Frances, daughter of John, earl of Oxford ; and, after her death, had the boldness to propose himself to the princess Mary. For this the Seymours, rivals of the Norfolk family, and now in favor with the king, accused him of aspiring to the crown. Accordingly Surry and his father, the duke, were committed to the tower in December, 1546 ; and, on the 13th of January following, Surry was tried at Guildhall, and beheaded on Tower Hill on the 19th, nine days before the death of the king. The accusations brought against this amiable and innocent young nobleman on his trial, were so extremely ridiculous, that one is astonished how it was possible, even in the most despotic reign, to find a judge and jury so pusillanimously villanous as to carry on the farce of justice on the occasion. Walpole speaks of him as ' an almost classic author, the ornament of a boisterous, yet not unpolished court ; a man, as Sir Walter Raleigh says, no less valiant than learned, and of excellent hopes.' His poems were published in 1557, 12mo. ; and in 1565, 1574, 1585, and 1587, 8vo.

HOWARD (John), esq., commonly characterised by the epithet of the philanthropist, was the son of an upholsterer in St. Paul's Church Yard. He was born at Hackney in 1726; and was put apprentice to a grocer in Watling Street. His father died in 1742, leaving only this son and a daughter, to both of whom he bequeathed handsome fortunes. His constitution being very weak, the remaining time of his apprenticeship was bought up, and he applied himself to the. study of medicine and natural philosophy. Falling into a nervous fever, while he lodged with a widow lady, Mrs. Sarah Lardeau, he was nursed with so much care and attention, that he resolved to marry her out of gratitude. In vain did his friends expostulate with him upon the extravagance of such a proceeding, he being about twenty-eight and she about fifty-one years of age ; nothing could alter his resolution, and they were privately married about 1752. She was possessed of a small fortune which he presented to her sister. His wife died November 10th, 1755, aged fifty-four, and about this time he was elected F. U.S. In 1756 he embarked

in a Lisbon packet, to make the tour of Portugal, when the vessel was taken by a French privateer. ‘ Before we reached Brest,’ says he ic his Treatise on Prisons, p. 11, ‘ I suffered the extremity of thirst, not having for above forty hours one drop of water, nor hardly a morsel of food. In the castle at Brest I lay six nights upon straw ; and observing how cruelly my countrymen were used there and at Morlaix, whither I was carried next, during the two months I was at Carhaix upon parole, I corresponded with the English prisoners at Brest, Morlaix, and Dinan; at the last of those towns were several of our ship’s crew, and my servant. I had sufficient evidence of their being treated with such barbarity, that many hundreds had perished, and that thirty-six were buried in a hole at Dinan in one day. When I came to England, still on parole, I made known to the commissioners of sick and wounded seamen the sundry particulars, which gained their attention and thanks. Remonstrance was made to the French court; our sailors had redress ; and those that were in the three prisons mentioned above were brought home in the first cartel ships. Perhaps,’ adds Mr. Howard, ‘ what I suffered on this occasion increased my sympathy with the unhappy people whose case is the subject of this book.’ He afterwards made the tour of Italy ; and at his return settled at Brokenhurst, a pleasant villa in the New Forest, near Lymington, in Hampshire, having in 1758 married a daughter of Edward Leeds, esq., of Croxton, Cambridgeshire, king’s serjeant. This lady died in 1765 in child-bed, and after her death Mr. Howard left Lymington, and purchased an estate at Cardington, near Bedford. Being appointed, in 1773, sheriff of Bedfordshire, this office brought the distress of prisoners more immediately under his notice. He personally visited the county jail, where he observed such scenes of calamity as he had before no conception of. He inspected the prisons in some neighbouring counties, and, finding in them equal room for complaint, he determined to visit the principal prisons in England. The farther he proceeded the more shocking were the scenes he discovered, which induced him to exert himself to the utmost for a general reform in those places of confinement; considering it as of the highest importance, not only to the wretched objects themselves, but to the community at large. Upon this subject he was examined in the house of commons in March 1774, when he had -the honor publicly to receive their thanks. This encouraged him to proceed. He revisited all the prisons in the kingdom, together with the principal bouses of correction. In 1775 he enlarged his circuit by going into Wales, Scotland, and Ireland, where he found the same need of reformation. One of his principal objects was, to put a stop to the jail fever ; which raged so dreadfully in many of the prisons as to render them to the last degree dangerous : a distemper by which more had been taken off

than by the hands of the executioner ; and which, in several instances, had been communicated from the prisoners into the courts of justice, and had proved fatal to the magistrates and judges, and to multitudes of persons

who attended the trials, as well as to the families of discharged felons and debtors. Another end he proposed was, to procure the immediate release of prisoners, who upon trial were acquitted, but who often continued long to be unjustly detained for not being able to pay the accustomed fees. But the greatest object was, to introduce a thorough reform of morals into our prisons ; where he had found the most flagrant vices to prevail in such a degree, that they were become seminaries of wickedness and villany, and the most formidable nuisances to the community, in consequence of the promiscuous intercourse of prisoners of both sexes, and of all ages and descriptions ; whereby the young and less experienced were initiated, by old and hardened sinners, into all the arts of villany and the mysteries of iniquity. For the attainment of these great objects, Mr. Howard spared neither pains nor expense, and cheerfully exposed himself to much inconvenience and hazard ; particularly from that malignant distemper, of which he saw many dying in the most loathsome dungeons, into which none who were not obliged, besides himself, would venture. ‘ I have been frequently,’ says Mr. Howard, ‘ asked what precautions I use to preserve myself from infection in the prisons and hospitals which I visit. I here answer, next to the free goodness and mercy of the Author of my being, temperance and cleanliness are my preservatives. Trusting in Divine Providence, and believing myself in the way of my duty, I visit the most noxious cells ; and, while thus employed, I fear no evil. I never enter an hospital or prison before breakfast ; and, in an offensive room, I seldom draw my breath deeply.’ His laudable endeavours he had the pleasure to see, in some instances, crowned with success ; particularly in regard to the healthiness of prisons, some of which were rebuilt under his inspection. With a view to a more general and happy regulation, and the reformation of criminals, Mr. Howard resolved to visit other

countries, in hopes o,f collecting some information which might be useful in his own. For this purpose he travelled into France, Flanders, Holland, Germany, Switzerland, Prussia, and Austria, and visited Copenhagen, Stockholm, Petersburg, Warsaw, and some cities in Portugal and Spain. On his return, he published in 1 777 The State of the Prisons in England and Wales, with Preliminary Observations, and an Account of some foreign Prisons, 4to. And in 1778 he took a third journey through the Prussian and Austrian dominions, and the free cities of Germany and Italy. The observations made in this tour were published in 1780 with remarks respecting the management of prisoners of war, and the hulks on the Thames. In 1781 he again revisited Holland, some cities in Germany, and the capitals of Denmark, Sweden, Russia, and Poland ; and in 1783 some cities in Portugal and Spain, and returned through France, Flanders, and Holland. The substance of all these travels was afterwards thrown into one narrative, published m 1784. He also published a curious account of the Bastile, in 8vo. He next visited the lazarettos in France and Italy, to obtain information

concerning the best methods to prevent the spreading of the plague. He then proceeded to Smyrna and Constantinople, where that most dreadful of human distempers prevailed, and, though he actually caught the plague, ‘ that merciful Providence,’ as he remarks, ‘which had hitherto preserved him, was pleased to extend his protection to him in this journey also, and to bring him home once more in safety.’ In his return he revisited the chief prisons and hospitals in the countries through which he passed, and afterwards went again to Scotland ; and thence to Ireland, where he inspected the Protestant Charter Schools, in some of which he had observed shameful abuses, which he had reported to a committee of the Irish house of commons. At Dublin he was created LL.D. by the university. At Glasgow and Liverpool he was enrolled among their honorary members. Upon his return, having again inspected the prisons in England, and the hulks on the Thames, to see what alterations had been made, he published the result of his last laborious investigations, in An Account of the principal Lazarettos in Europe with various Papers relative to the Plague, together with further Observations on some foreign Prisons and Hospitals, and additional remarks on the present State of those in Great Britain and Ireland, with a great number of plates. He also published the Grand Duke of Tuscany’s New Code of Criminal Law, with an English Translation. He concluded his Account of Lazarettos with announcing his * intention again to quit his country, revisit Russia, Turkey &c., and extend his tour to the East.’ Accordingly, he

set out in summer 1789 on this hazardous enterprise ; the principal object of which was to administer James's Powder, a medicine in high repute in malignant fevers, under a strong persuasion that it would be equally efficacious in the plague. In this second tour in the East, having spent some time at Cherson, a Russian settlement on the Dnieper, he caught a malignant fever, in visiting tlie Russian hospital, which carried him off on the 20th of January, after an illness of about twelve days. He was buried, as he desired, in the garden of a villa, belonging to a French gentleman from whom he had received much kindness, by his faithful servant who had attended him in his former journeyings. While absent on his first tour to Turkey, &c., his character for active benevolence had so much attracted the public attention, that a subscription was set on foot to erect a statue to his honor, and in no long space above £1500 were subscribed for that purpose. But in consequence of two letters from Mr. Howard himself to the subscribers (inserted in the Gentleman's Magazine) the design was laid aside. The testimony of public respect, which he refused when living, has however been conferred on his me-mory, and his monumental statue was one of the first placed in the cathedral of St. Paul's. And surely if the devotion of time, strength, fortune, and finally life, to the sole service of his fellow creatures merits a token of public esteem, it was deserved by one who (to adopt the expressive worris of Burke) visited all Europe and the East, ' not to survey the sumptuousness of palaces, i i

the stateliness of temples ; not to make accurate measurements of the remains of ancient grandeur, nor to form a scale of the curiosity of modern art; not to collect medals, or to collate MSS.; but to dive into the depth of dungeons; to plunge into the infection of hospitals; to survey the mansions of sorrow and of pain; to take the gauge and dimensions of misery, depression, and contempt ; to remember the forgotten ; to attend to the neglected ; to visit the forsaken ; and to

compare and collate the distresses of all men in all countries. His plan is original ; and it is as full of genius as it is of humanity. It is a voyage of discovery, a circumnavigation of charity ; and already the benefit of his labor is felt more or less in every country.'

HOWARD (Sir Robert), an English historian and poet of the seventeenth century. He was a younger son of Thomas earl of Berkshire, and educated at Magdalen College, Oxford. He suffered much during the civil war, but on the Restoration was knighted, and elected M. P. for Stockbridge, in Hants, in 1661. He was afterwards appointed auditor of the Exchequer ; but, upon James II.'s accession, became a zealous friend to the Revolution. He wrote, 1. The History of the reigns of Edward II. and Richard II. in 8vo. 1690. 2. The History of Religion ; 8vo. 1694: and some Poems and Plays. He also translated Statius's Achilles, and the fourth book of Virgil's ˆ.neid, 8vo. 1660. He died about 1699.

HOWDEN, a town in the East Riding of Yorkshire, 180 miles from London, on the north side of the ( )use. It has a market on Saturday, and four fairs. Here was formerly a collegiate church of five prebendaries, erected in the sixteenth century; adjacent to which the bishops of Durham have a palace. One of them built a very tall steeple to the church, whither the inhabitants might retire in case of inundations ; to which it is very liable from the great freshes that come down the Ouse sometimes at ebb. It is sixteen miles south-east of York, and twenty-three west of Hull.

HOWDYE. Contracted from how do ye. In what state is your health ? A message of civility.

I now write no letters but of plain business, or plain howd'ye's, to those few I am forced to correspond with. Pope.

HOWE (John), a learned English nonconfor-mist divine, born in 1630. He became minister of Great Torrington in Devonshire, and was appointed household chaplain to Cromwell ; but finally offended him by preaching against the doctrine of particular faith. When Oliver died he continued chaplain to Richard ; and, when Richard was deposed, he returned to Torrington, where he continued till the act of uniformity set him aside. He afterwards settled at Utrecht, until the declaration for liberty of conscience was published by king James II., under shelter of •which he returned to London, where he died in 1705. He published a great number of sermons and religious works, which have been reprinted in 2 vols. folio.

HOWE (John), esq. an eminent English statesman and writer, was the brother of Sir Scroop

Howe, and born in Nottinghamshire. He was M. P. for Cirencester in the convention parliament 1688-9, and was reelected for that town or for Gloucestershire in the three last parliaments of king William III., and the three first of queen Anne. He was a zealous friend of the Revolution, and wrote a panegyric on king William, but afterwards opposed his measures, and it was chiefly owing to Mr. Howe, that, in 1699, the house agreed to allow half-pay to the disbanded officers. In 1702 he was made a member of the privy-council, vice-admiral of Gloucester, and paymaster-general of the guards ; in which last he was succeeded by Mr Walpole in 1714. He died at his seat of Stowell in 1721. He was author of several poems. His son was created lord Chidworth.

HOWE (Richard), earl Howe, a late brave English admiral, born in 1725. He entered the naval service very young, and when only twenty was appointed captain of the Baltimore sloop of war, in which he attacked and beat off two French frigates of thirty guns each. In this ac-tion he was dangerously wounded in the head ; but recovering was made a post-captain in the Triton frigate. After this he obtained the command of the Dunkirk of sixty guns, when he took a French sixty-four gun ship, off the coast of Newfoundland. In 1757 he served under admiral Hawke on the French coast, and in 1758 was appointed commodore of a squadron with which he destroyed a great number of ships and magazines at St. Malo. In August 6th 1759 he took Cherbourg, and destroyed the basin. At the unfortunate affair of St. Cas, he displayed equal courage and humanity, by saving the retreating soldiers at the risk of his life. By the death of his brother, in 1758, he became lord Howe, and soon after had a share in the glorious victory over Conflans ; for which he received the thanks of king George II. In 1763 he was appointed first lord of the admiralty, and in 1765 treasurer of the navy. In 1770 he was made rear-admiral of the blue, and commander-in-chief of the Mediterranean. During the American war he commanded the fleet on that coast. In 1782 he was sent to the relief of Gibraltar, which he accomplished in sight of the enemy’s fleet, which he in vain challenged to combat. In 1783 he was made first lord of the admiralty, and continued in that high station till 1788, when he was created an earl. In 1793 he commanded the channel fleet, and on June 1st, 1794, obtained a decisive victory over the most powerful fleet evei equipped by the French republic ; for which he received the thanks of their majesties, who visited him on

board of his ship at Spithead, when the king presented him with a magmncent sword, a gold chain and medal. He also received the thanks of both houses, and the freedom of the city of London. In 1795 he succeeded admiral Forbes as general of the marines, and in 1797 was made knight of the garter. He died in August 1799, aged seventy-four.

HOWE'S ISLAND, or LOUD HOWE'S ISLAND. a small island in the neighbourhood of New South Wales, discovered February 17th, 1788. South lat. 31° 36' E., long. 159° 4'. It is of an arched figure, lying from north-west to south-

past, the two extremities, including a space of about six miles, though, by reason of the curved figure of the island itself, it is near seven in length. It is deeply indented on the middle of the east part by a bay named Ross's Bay, and on the west has another named Prince William Henry's Bay ; so that the whole appears like two islands joined together by an isthmus, in some places not above half a mile broad. On the south part of that division which lies most to the north are two considerable bays, named Callam's and Hunter's Bay ; and on the south-west part of the other are two high mountains, the most southerly named Mount Gower, and the other Mount Lidgbird. The convex part of the island lies towards the north-east, and the concave side towards the south-west, is terminated by two points named Point King and Point Philip. No fresh water was found on the island ; but it abounds with cabbage palms, mangrove, and manchineel trees, even up to the summits of the mountains;' besides celery, spinach, and some other esculent plants. There are great numbers of gannets, and a land fowl of a dusky-brown color, with a bill about four inches long, and feet like those of a chicken. These were found to be fine meat, and were very fat. There are many large pigeons, and the white birds found in Norfolk Island were also met with in this one. The bill of this

bird is red, and very strong, thick, and sharp pointed. Great numbers of fine turtles frequent this island in summer, but go northward in winter. The coast abounds with fish. About four leagues from this island is a remarkably high rock, named Ball's Pyramid. This island may be approached without danger ; but about four miles from this pyramid there is a very dangerous rock, which appears above the surface of the water. The isthmus which joins the two parts has been formerly overflowed, and the island disjoined, as in the very centre large beds of coral rocks and great quantities of shells were seen. On the east, which seems in general to be the weather side, the sea has thrown up a bank of sand from twenty-five to thirty feet high, which serves as a barrier against future inundations. The island also appears to have suffered by volcanic eruptions, as great quantities of pu-mice stones were found upon it. Mr. Austin ilso found that the whole reef which shelters the west bay had been burnt up. The time he visited it was that of the incubation of the gannets, of which there were then prodigious numbers, their nests being only hollows made in the sand, there not being any quadrupeds on the island to disturb them. He also met with beautiful parrots and parroquets ; a new species of coots, rails, and magpies ; and a very beautiful small bird of a brown color with a yellow breast, and yellow on the wing, which seemed to be a species of humming bird. They found also a black bird like a sheervvater, having a hooked bill, and which burrows in the ground. The only insects met with were common worms and ants ; which last were numerous.

HOWE'S ISLAND, is also an island in the South Pacific Ocean, 'discovered by Wallis in 1767, who observed cocoa-nuts growing on it. It is ubout sixty miles long, and four broad. It was

observed by captain Cook in 1774, who found t to be composed of several smaller islands, ana appearing to have no inhabitants. By the natives it is called Mopetra. Long. 154° 7' W., lat. 16° 46' S.

HOWEL (Lawrence), a zealous nonjuring di-vine of the last century, was educated at Jesus College, Cambridge, and graduated M.A. in 1688. After keeping a school at Epping, he received ordination among the non-jurors from Dr. George Hickes, the titular bishop of Thetford. He published Synopsis Canonum SS. Apostolorum, Lond. 1708, folio; Synopsis Canonum Ecclesiae Latins, 1710, folio; a View of the Pontificate to 1563, 1712, 8vo. ; and a History of the Bible, with Engravings, by Sturt, 1716, 3 vols. 8vo. But he is chiefly remarkable as the author of a pamphlet, in 1716, entitled The Case of Schism in

the Church of England. He was tried at the Old Bailey for this attack on the establishment, sentenced to be degraded from his clerical office, to pay a fine of £500, and to be twice whipped. The latter part of the sentence was afterwards remitted, in consideration of his clerical character, but the remainder was rigidly executed ; he was stripped of his gown in open court, and, being unable to pay the fine, was detained in Newgate till his death, July 19th,

HOWITZ, or HOWITZER, a kind of mortar, mounted upon a field carriage like a gun. The difference between a mortar and a howitz is, that the trunnions of the first are at the end, and at the middle in the last. The invention of howitzers is of much later date than mortars, and had their origin from them. The construction of howitzers is as various and uncertain as that of mortars, excepting the chambers which are cylindric. They are distinguished by the diameter of the bore ; for instance, a ten inch howitz is the diameter of that which is ten inches ; and so of the smaller ones. See GUNNERY.

HOWL, v. n. & n. s. Belg. hug/en and huil . Lat. ululo. To cry as a wolf or a dog ; to utter cries of distress or pain ; to speak in a belluine cry or tone : it is used poetically of many noises loud and horrid. Howl, the cry of a wolf or dog, or of a human being in agony.

He found him in a desert land, and in the wast* howling wilderness. Deut. xxxii. 10.

Therefore will I howl, and cry out for all Moab.

Jer. xlviii

Methought a legion of foul fiends Environed me, and howled in mine ears Such hideous cries, that with the very noise I trembling waked. Shakspeare. Richard III, If wolves had at thy gate howled that stern time, Thou should ‘st have said, Go, porter, turn the key.

Shakspeare.

The damned use that word in hell, Holdings attend it. Id. Romeo and Juliet.

Each new morn

New widows howl, new orphans cry, new sorrows Strike Heaven on the face. Id. Macbeth.

I have words

That would be hnwled out in the desart air, Where hearing fhould not catch them. Id.

Murther,

Alarmed by his sentinel the wolf, Whose howl's his watch. (d.

He and his monstrous «-oute are heard to howl Like stable woulves, or tigers at their prey.

Milton' '» Camus.

As when a sort of wolves infest the night, With their wild howlings at fair Cynthia's light.

Waller.

She raves, she runs with a distracted pace, And fills with horrid Iwitis the public place.

Dryden.

The noise grows louder still,

Rattling of armour, trumpets, drums and atabelles ; And sometimes peals of shout that rend the heavens,

Like victory : then groans again, and howlings Like those of vanquished men.

Dryden's Spanish Fryur.

Peace, monster, peace ! Go tell thy horrid tale To savages, and howl it out ill desarts ! Phillips.

These and the like rumours are no more than the last howls of a dog dissected alive. Swift.

Behold with berries smeared, with brambles torn, The babes now

famished lay them down to die j Amidst the howl of darksome woods forlorne, Folded in one another's arms they lie, Nor friend nor stranger hears their dying cry.

Beattie.

The Hell of waters ! whero they howl and hiss And boil in endless torture. Byron. Childe Harold.

HOWTH, a promontory and small town of Ireland, which forms the north entrance of the bay of Dublin. It belongs principally to the earl of Howth ; and it has continued in possession of the family above 700 years. The shores off this hill are rocky and precipitous, affording, however, several harbours for small craft. It was formerly called Ben-hedar, i. e. the Birds' Promontory; and celebrated for having Dun Criomthan, or the royal palace of Criomthan, erected on it, he having been chief or king of this district, and memorable for making several successful descents on the coast of Britain against the Romans in the time of Agricola. Howth, now stripped of trees, was also formerly covered with venerable oaks, and a seat of the Druids, one of their altars still remaining in a sequestered valley on the east side of the hill. The town of Howth is seven miles east of the metropolis On the top of the bailly is a lighthouse, and another at the end of the new pier ; the harbour is small, but has been recently improved at a great expense ; steam-vessels, well manned and appointed, used to sail daily from this port for Holyhead. The town is extremely picturesque. Howth Castle or abbey is ancient, and stands in the middle of it. On the west shore are the ruins of St. Mary's church, with some ancient monuments of lord Howth's ancestors. See DUBLIN, COUNTY.

HOX, v. a. From Sax. poj. To hough; to hamstring.

Lodronius, perceiving the old soldier's meaning, alighted, and with his sword hoxed his horse, saying aloud, This day, valiant soldiers, shall you have me both your general and fellow soldier, fighting on foot as one of yourselves. Knolles.

HOY, n. s. Old. Fr. hou. A large boat sometimes with one deck.

He sent to Germany strange aid to rear : From whence eftsoons arrived here three hoys Of Saxons; whom he for his safety employs.

Faerie Queene.

To define a barge and hoy, which are between a boat and a ship, is hard. Watts's Lnytch.

HOY, a considerable island of the Orkney groupe, lying south from the mainland of Scotland. It is about fifteen miles long from south-east to north-west, and six miles and a half at its greatest breadth. The peninsula of Walls, on the south-east, contains some fertile land; but the greater part of the island is mountainous and barren; encumbered with large rocks and almost inaccessible. The only crops are black oats, bear, and of late potatoes. The fishery and kelp-making add a little to the means of the inhabitants, but they are chiefly employed in the breeding and rearing of sheep. The dwarfie stone, a remarkable relic of antiquity found in this island, measures thirty-two feet in length, sixteen and a half in breadth, and seven and a half in height, hollowed in the inside into several apartments. Population between 500 and 600. Four miles west from Ronaldsay, and six north from Dunnet Head in Caithness.

HUAJOCINGO, or HUETJOCINGO, a large town of Mexico, in the intendancy of La Puebla de los Angelos. It once gave name to a small independent republic. •

HUAHEINE, or AHEINE, which signifies woman, the easternmost of the groupe of the Society Islands. It is twenty-four miles in circumference, and divided into two peninsulas, by a narrow isthmus overflowed by the tides. la other parts of the island there are salt lakes. It has a very narrow stripe of fertile low land next the shore. The hills are strongly marked by volcanic fire, and in some parts cultivated. The productions are similar to those of Otaheite, but about a month earlier. Owharra, on the west coast, is a harbour of good anchorage in eighteen fathoms water, secure from winds. The inhabitants mix cocoa-nuts with yams, scraping both fine, and, having incorporated the powder, they put it into a wooden trough, with a number of hot stones, by which an oily kind of hasty pudding is made, called poe. They are larger and stouter than those of Otaheite. The women are also not so dark.

HUANTAJAYA, a mountain of Peru, in Arica, only two leagues from the Pacific Ocean, famous for its silver mines. They are surmounted with beds of rock-salt in a desert destitute of water; and furnish from 40,000 Ibs. to 80,000 Ibs. Troy, of native silver yearly.

HUAPENTE, a considerable river of Quito, in the province of Ambato. It rises in the mountains of Quelenda, covered with perpetual snow, and first runs due south ; then it turns westward and joins the Ambato

on the east, just before it enters the Pachantica.

HUB'BUB. n. s. Johnson conjectures from up up. or hob-nob. Mr. Thomson sa)s, from Goth, opa up, to call out. See HOOP. A tumult; a riot.

People pursued the business with all contempt of the government ; and in the hubbub of the first day there appeared nobody of naite or reckoning, but the actors were really of the dregs of the people.

Clarendon.

Why woives raise a hulbub at her, And dogs howl whcD she shines in water. Hudibrtu >

An universal hubbub wild Of stunning sounds, and voices all confused, Borne through the hollow dark, assaults his ear With loudest vehemence. Milton's Paradise Lost.

HUBELY, or HOOBLY, a populous town of the province of Bejapore, Hindostan, surrounded by a mud wall and ditch. It carries on a considerable trade with Goa, and has manufactures of both silk and cotton. Formerly the English East India Company had a factory here. It was plundered by the Mahrattas in 1673, at which time it belonged to the king of Bejapore. But in 1685 it was taken by the Moguls, under the command of Muayem, the son of Aurungzebe ; but soon after the death of that monarch, in 1707, it was again taken by the Mahrattas, under whose dominion it still continues. Long. 75° 10' E., lat. 15° 24' N.

HUBER (Ulric), a celebrated civilian of the seventeenth century, was born at Dockum in 1636. He became professor of law at Franeker ; and wrote, 1. A Treatise De Jure Civitatis ; 2. Jurisprudentia Frisica ; 3. Specimen Philosophise Civilis ; 4. Institutiones Historic Civilis ; 5. Dissertationes de genuine aetate Assyriorum et Regno Medorum ; and other works which are much esteemed. He died in 1694.

HCBER (Zacharias), the son of the preceding, was born at Franeker in 1669, and succeeded his father in his professorship. He published, 1. De VeroSensu Legis IXD. de legePompeia, 4to ; Dissertationum Libri Tres, &c. He died in 1772.

HUBERT (St.), in heraldry, the name of an order of knighthood, instituted by Gerard V. duke of Juliers, in memory of a victory gained by him over Arnold of Egmont, on St. Hubert's day, in the year 1447. In 1709 it was revived by John William, elector-palatine of the Rhine. It was also used at Wurtemberg, where the reigning duke of Wurtemberg was grand master. The collar of the order is a chain of gold, to which a cross pattee, set with jewels, is suspended, from the angles of which issue rays of gold ; on the centre is a medallion of gold en-amelled, with a portrait of St. Hubert, kneeling before a crucifix, placed between the horns of a stag, all proper. The knights also wear, on the left side of their coat, a circle surrounded with rays, embroidered in gold; and, in the middle of it, a German motto, signifying, ' Keep firm in the Faith.' At all times, except festival days, they wear the cross tied to a red riband, which passes scarf-wise from the left shoulder to the right thigh.

HUBNER (John), a learned geographer of Germany, who taught geography at Leipsic and Hamburg with extraordinary reputation ; and died at Hamburg in 1732, aged sixty-three. His principal works are, 1. Bibliotheca Ilistorica, Ham-bur°ensis ; 2. Musaeum Geographicum, printed at Basil in 1746, in 6 vols. 12mo.

HUCK'ABACK, n. s. A kind of linen on which the figures are raised.

HUCKLE'BACKED (German hocker, a

HUCK'LEBOXE. $ bunch; Dut. hucken.

Crooked in the shoulders ; the hip bone.

HUCK'STER, n. s. & v. n. \ Germ, hoch,

HUCK'STERF.R, n. s. J a pedlar; hock-

ster, a she pedlar. One who sells goods by re-tail : figuratively, a trickish mean fellow. Huckster, to deal in petty bargains.

And now the Ape wanting his huckster man, That wont provide his necessaries, gan To grow into great lacke, ne could upholde His countenance in those his garments oldc.

Spenter. Mother Hubberd't Tale.

God deliver the world from such guides, or rather such hucksters of souls, the very shame of religion.

South.

There cannot be a more ignominious trade than the being huckster* to such vile merchandise.

Government of the Tongue.

Should thy shoe wrench aside, down, down you fall, And overturn the scolding huckster's stall ; The scolding huckster shall not o'er thee moan, But pence expect for nuts and pears o'erthrown.

Gay.

There should be a confederacy of all servants, to drive those China hucksters from the doors. Swift.

Those hucksterers or money-jobbers will be found necessary, if this brass-money is made current. Id.

They must pay a shilling, for changing their piece into silver, to some huckstering fellow who follows that trade. Id.

HUDDERSFIELD, or HUTHERSFIELD, a market town of Yorkshire, sixteen miles from Leeds, thirty-nine from York, and 189 north-west from London. The manufactures consist chiefly of serges, kerseymeres, frieze, and narrow and broad cloths. The church is an ancient plain building. Here is a very extensive cloth-hall, erected by Sir J. Ramsden in 1765. It is built in a circular form, two stories high, divided into two courts. Over the entrance is a bell, placed in a handsome cupola,, to regulate the opening and closing of the market, which is held on Tuesday from seven till twelve A. M. Here is also a dispensary, established in 1814, and a national-school in 1819. This town has a canal navigation for three miles to the river Calder, whence the river navigation is continued to Wakefield ; and the Huddersfield canal passes on to Ashton-under-Line, and finally enters the Peak-forest and other canals. Two miles south of the town, on Castle-hill, are still visible the remains of the ancient Roman city of Camelodunum. In the vicinity are several medicinal springs. Huddersfield sends one member to parliament.

HUD'DLE, v. a., v. n. & n. s. Etymology Un certain. Probably from hood ; to dress up so close as not to be discovered ; to cover up in haste ; to perform in a hurry ; to throw together in confusion; to come

in a crowd : huddle is tumult; confusion; obscurity.

Glance an eye of pity on his losses, That have of late so huddled on his back, Enough to press a royal merchant down.

Shakspeare.

Brown answered after his blunt and huddling man-ner. Bacon.

Thyrsis, whose artful strains have oft delayed The huddling brook to hear his madrigal, And sweetened every muskrose of the dale. Milton.

Your carrying business in a huddle, Has forced our rulers to new model. Hudibras. That the Aristotelian philosophy is a huddle of words and terms insignificant, has been the censure of the wisest. Qlanville.

Their eyes are more imperfect than others ; for they will run against things, and, huddling forwards, fall from high places. Browne't Vulgar Errourt.

I have given much application to this poem : this is not a play huddled up in haste. Dryden.

When continued rain

The labouring husband in his bouse restrain,

Let him forecast his work with timely care,

Which else is huddled when the skies are fair.

Id.

Nature doth nothing in a huddle. L'Estrange.

Our adversary, huddling several suppositions together, and that in doubtful and general terms, makes a medley and confusion. Locke.

The understanding sees nothing distinctly in things remote, and in a huddle. Id.

Several merry answers were made to my question, which entertained us 'till bed-time, and filled my mind with a huddle of ideas. Addison.

At twelve she rose with much ado ; Her cloaths were huddled on by two. Prior. Now all in haste they huddle on

Their hoods, their cloaks, and get them gone.

Swift. And reading what they never wrote,

Just fifteen minutes huddle up their work,

And with a well-bred whisper close the scene.

Cowper's Task.

HUDSON (Henry), an eminent English navigator, celebrated for his attempts, about the beginning of the seventeenth century, to find the north-west passage to India and China. This intrepid mariner, in searching after a north-west passage to the South Seas, discovered Hudson's straits, through which he hoped to find out a new way to Asia by America. He made altogether three voyages on this adventure ; the first in 1607, and the second in 1608. In his third and last, in 1610, he entered the straits that lead into a new Mediterranean, and passing along the coast of Latrador, which he named New Britain, discovered a great part of the bay known by his name. His ardor for discovery not being abated by the difficulties he struggled with, in this empire of winter, he staid here till the ensuing spring, and prepared in the beginniug of 1611 to pursue his enterprize; but his crew, who suffered equal hardships, without the same spirit to support them, mutinied, seized upon him and seven of those who were most faithful to him, and committed them to the fury of the icy seas in an open boat. Hudson and his companions were either swallowed up by the waves, or gaining the inhospitable coast were destroyed by the savages, for they were never more heard of; but the ship and the rest of the men returned home.

HUDSON (Jeffery). See DWARF.

HUDSON (John), a learned English critic, born in 1662. He distinguished himself by several editions of Greek and Latin authors ; and, in 1701, was elected head keeper of the Bodleian library at Oxford. In 1712 he was appointed principal of St. Mary's Hall, through the interest of the famous Dr. Ratcliffe ; and it is said that the university of Oxford is indebted for the most ample benefactions of that physician to Dr. Hudson's solicitations. He died in 1719, while he was preparing for publication a catalogue of the Bodleian library, which he had caused to be transcribed in six folio volumes.

HUDSON, or North River, a river of the state of New York, which rises in a mountainous country west of Lake Champlain, in the counties of Essex and Montgomery, about lat. 44° N., and communicates with the Atlantic, below New York city. The distances of principal places on it are : —

Miles. Whole distance . From its source to > Sandy Hill, about J

Waterford . .42 142

Troy … 4 146

Albany … 6 152

Hudson …30 182

Poughkeepsie . 55 237

Newburgh . .10 247

New York . . 65 312

The Narrows . .12 324

It is navigable for the largest ships to Hudson and for sloops to Troy. The tide flows up as far as Troy. It is remarkably straight for 200 miles, and is, on the whole, one of the finest rivers in America. There

are upon its banks a number of handsome and flourishing towns; and in passing up the river there is exhibited much fine and picturesque scenery.

HUDSON, a city, port of entry, and the capital of Columbia county, New York. It stands on the east bank of the Hudson River, thirty miles south of Albany, 130 north of New York, and 336 miles from Washington. It was founded in 1784, and is pleasantly situated, regularly laid out, and well-built; the streets intersecting each other at right angles. It contains four houses of public worship ; one for Presbyterians, one for Episcopalians, one for Quakers, and one for Methodists, an academy, and two banks. The city is considerable both for its trade and manufactures. The shipping owned here in 1816 amounted to 2761 tons. Claverack Creek, which flows on the eastern side of the town, and Abram's, or Factory Creek, on the northern side, afford good seats for various mills and manufactories. The woollen manufactory on Claverack Creek is said to be one of the most extensive in the state. Two weekly newspapers are published here.

HUDSON'S BAY, a large bay of North America, lying between 51° and 69° of N. lat., discovered in 1610 by Henry Hudson. See HUDSON. The country lying round Hudson's Bay is called New Britain, or the country of the Esquimaux ; comprehending Labrador, now New North and South Wales. See LABRADOR. The entrance of the bay from the ocean, after leaving to the north Cape Farewell and Davis's Straits, is between Resolution Isles on the north, and Button's Isles on the Labrador coast to the south, forming the eastern extremity of Hudson's Straits. The coasts are very high, rocky, and rugged at top ; in some places precipitous, but sometimes exhibit large beaches. The isles of Salisbury, Nottingham, and Digges, are also very lofty and naked. The depth of water in the middle of the bay is about 140 fathoms. From Cape Churchill to the south end of the bay are regular soundings ; near the shore shallow, with muddy or sandy bottom. To the north of Churchill the soundings are irregular, the bottom

rcckv and in some parˆ the rocks appear above <ne surface at low water. From Moose River, or the bottom of the bay, to Cape Churchill, the knd is flat, marshy, and wooded with pines, birch, larch, and willows. From Cape Churchill to Wager's Water the coasts are high and rocky to the very sea, and woodless, except the mouths of Pockerekesko and Seal rivers. The hills on their back are naked, nor are there any trees for a great distance inland. The mouths of all the rivers are filled with shoals, except that of Churchill, in which the largest ships may lie; but ten miles higher the channel is obstructed with sand-banks ; and all the rivers, as they have been navigated, are full of rapids and cataracts from ten to sixty feet perpendicular. Down these rivers the Indian traders find a quick passage ; but their return is a labor of many months. As far inland as the company have settlements is flat, nor is it known how far to the eastward the great chain seen by our navigators from the Pacific Ocean branches off. The eastern boundary of the bay is Terra di Labrador ; the northern part has a straight, coast facing the bay, guarded with isles innumerable. A vast bay, called the Archiwinnipy Sea, lies within it, and opens into Hudson's Bay by means of Gulph Hazard, through which the Beluga whales dart in great numbers. Here the company had a settlement for the sake of the fishery, and for trading with the Esquimaux ; but deserted it as unprofitable about 1758 or 1759. For the climate, animals, and phenomena of the country adjacent to Hudson's Bay, see LABRADOR, and AMERICA, NORTH.

HUDSON'S BAY COMPANY. About sixty years after the intrepid Hudson had penetrated the great gulf, known by this name, the British government granted to a party of merchants, called the Hudson's Bay Company, the chartered possession of extensive tracts near the shores of this sea. The territories claimed by this company are stated by some writers to ex-tend from the seventieth to the 115th degree of west longitude, and as far south as the forty-ninth degree of latitude, thus comprehending a length of 1300 or 1400 geographical miles, by a medial breadth of 350 miles. Animated by a prospect of gain, the company have pushed their discoveries into the interior, and thus has a knowledge of these vast wilds been obtained, beyond what any other motives would possibly have supplied. Two of the principal journeys, performed by Messrs. Hearne and Mackenzie, have been mentioned in our article AMERICA. A rival body, called the North-west Company, has been recently established at Montreal. Both of them erect forts, and form settlements on the lakes and other favorable situations. Churchill Fort, or Fort Prince of Wales, on the west coast of Hudson's Bay, is the most northern settlement, while

Hudson’s Fort, on the river Suskashawan, in longitude 107 degrees west, is considered as the most western belonging to the Hudson’s Bay Company.

HUDSON’S HOUSE, one of the Hudson’s Bay Company’s factories in North America, situated on the south-west side of Suskashawan River, 100 miles east of Manchester House, and 167

south-east by east of Buckingham House; in long. 106° 27’ 20* W., lat. 53° 0’ 32’ N.

HUDSON’S STRAITS, the narrow sea between the Atlantic Ocean and Hudson’s Bay, north or Labrador. See HUDSON’S BAY.

HUDSON IA, in botany, a genus of the monogynia order, and dodecandria class of plants : COR. none : CAL. is pentaphyllous and tubular : stamina fifteen : CAPS, unilocular, trivalvular, and trispennous. Species one only, a native of Virginia.

HUE, «. s. Sax. biepe. Color; dye. This word is significant of ‘ modes of color; as a faint, or blended color.’ — Crabb.

But thus moche I dare saine, that she Was white, rody, freshe, lifely hewed; And, every day, hire beaute newed.

Chaucer. Boke of the Ducheste. For never in that land Face of fair lady she before did view, Or that dread lyon’s look her cast in deadly hue.

Spenter.

To add another hue unto the rainbow, Is wasteful and ridiculous excess.

Shakrpeare. King John. Drop, drop, you violets, change your hues, \ow red, now pale, as lovers use, And on your death go out as well As when you lived unto the smell ; That from your odour all may say This is the shepherds’ holiday. Jonson.

Flowers of all hue, and without thorn the rose.

Milton.

To whom the angel, with a smile that glowed Celestial rosy red, love’s proper hue, Answered. Id. Paradise Lost.

And such appeared in hue, as when the force Of subterranean wind transports a hill Torn from Pelorus, or the shattered side Of thundering JEtaa., whose combustible And fuelled entrails thence conceiving fire Sublimed with mineral fury, aid the winds, And leave a singed bottom all involved With stench and smoke. Milton.

Yours is much of the cameleon hue, To change the die with distant view. Dryden.

the snows above

The very Glaciers have his colours caught, And, sun-set into rose-hues, sees them wrought By rays which sleep there lovingly.

Byron. Childe Harold.

HUE, n. s. ˆ Fr. huee, huer. A clamor; <»

HUER, n. s. J legal pursuit; an alarm given to

the country, as ‘ hue and cry :’ huer, one whose

business it is to give an alarm, or call out others

Hue and cry, villain, go ! Assist me, knight, I am

undone : fly, run, hue and cry! villain, I am undone.

Shakspeare.

They lie hovering upon the coast, aud are directed by a balker or huer, who standeth on the cliff-side, and from thence discerneth the course of the pilchard.

Carew’s Survey.

Immediately comes a hue and cry after a gang of thieves, that had taken a purse upon the road.

L’Estrange.

If you should hiss, he swears he’ll hiss as high ; AnH, like a culprit, join the hue and cry. Addison.

The hue and cry went after Jack, to apprehend him dead or alive, wherever he could be found.

Arbuthnot's John Butt.

HUE AND CRY, in law, the pursuit of a per son who has committed felony on the highway. If a party robbed, or any in the company of one

murdered or robbed, come to the constable of the next town, and require him to raise hue-and- cry, or to pursue the offender, describing him, and showing, as near as he can, which way he is gone, the constable is forthwith to call for aid from the parish to seek the felon ; and, if he is not found there, he is to give the next constable warning, till he be apprehended, or pursued to the sea-side.

And, that such hue-and-cry may more effectually be made, the hundred is bound by. the same statute, cap. 3, to answer for all robberies therein committed, unless they take the felon, which is the foundation of an action against the hundred, in case of any loss by robbery. By stat. 27 Eliz. cap. 13, no hue-and-cry is sufficient, unless made with both horsemen and footmen. And, by stat. 8, Geo. II. cap. 16, the constable or like officer refusing or neglecting to make hue-and-cry, forfeits £5, and the whole district is still in strictness liable to be amerced, according to the law of Alfred, if any felony be committed therein, and the felon escape. Hue-and-cry may be raised either by precept of a justice of a peace, or by a peace-officer, or by any private man that knows of a felony.

HUEN, or HUENA, an island in the Baltic, with a village, three miles from the coast of Sweden, eight in circumference, and fourteen north by east of Copenhagen ; famous for Tycho Brahe's observatory. See BRAHE.

HUER, a name given to certain fountains in Iceland, forming at times jets d'eau of scalding water arising out of cylindrical tubes of unknown depths. The largest is that which is called Geyer or Geyser, in a plain rising into small hills, and in the midst of an amphitheatre, bounded by the most magnificent and various-shaped icy mountains ; among which the three-headed Hecla soars pre-eminent. Of this, as ex-emplifying the general appearance of these tremendous fountains, we extract the following description from the Travels of Dr. Henderson. * On our approach, the first thing we observed,7 says the doctor, ' was a large circular mound, formed of the decompositions of the fountain,

justly distinguished by the appellation of the Great Geyser, from the middle of which a great degree of evaporation was visible. Ascending the rampart we had the spacious basin at our feet, more than half filled with the most beautiful hot crystalline water, which was just moved by a gentle ebullition, occasioned by the escape of steam from a cylindrical pipe or funnel in the centre. This pipe I ascertained, by admeasure-ment, to be seventy-eight feet in perpendicular depth. Its diameter is in general from eight to ten feet, but near the mouth it gradually widens, and opens almost imperceptibly with the basin, the inside of which exhibits a whitish surface, consisting of a siliceous incrustation, which has been rendered almost perfectly smooth by the incessant action of boiling water. The diameter of the basin is fifty-six feet in one direction, and forty-six in another ; and, when full, it measures about four feet in depth, from the surface of the water to the commencement of the pipe. The borders of the basin, which form the highest part of the mound, are very irregular, owing to

the various accretions of the deposited substances ; and at two places are small channels equally polished with the interior of the basin, through which the water makes its escape when it has been filled to the margin. The declivity of. the mound is rapid at first, especially on the north-west side, but instantly begins to slope more gradually, and the depositions are spread all around to different distances, the least of which is nearly 100 feet. On leaving the mound, the hot water passes through a turfy kind of soil, and, by acting on the peat, mosses, and grass, converts them entirely into stone, and furnishes the curious traveller with some of the finest specimens of petrifaction.

‘ On hearing a sound resembling the discharge of distant artillery/ continues our author, ‘ I ran to the mound, which shook violently under my feet, and I had scarcely time to look into the basin, when the fountain exploded, and instantly compelled me to retire to a respectful distance on the windward side. The water rushed up out of the pipe with amazing velocity, and was projected by irregular jets into the atmosphere, surrounded by immense volumes of steam, which, in a great measure, hid the column from the view. The first four or five jets were inconsiderable, not exceeding sixteen or twenty feet in height. These were followed by one about fifty feet; which was succeeded by two or three considerably lower ; after which came the last, exceeding all the rest in splendor, which rose at least to the height of seventy feet. Th’e large stones which we had previously

thrown into the pipe were ejected to a great height, especially one, which was thrown much higher than the water. On the propulsion of the jets they lifted up the water in the basin nearest to the orifice of the pipe to the height of a foot, or a foot and a half, and on the falling of the column it not only caused the basin to overflow at the usual channel, but forced the water over the highest part of the brim, behind which I was standing, the great body of the column (at least ten feet in diameter), rose perpendicularly, but divided into a number of the most superb curvated ramifications ; and several smaller spoutings were severed from it, and projected in oblique directions, to the no small danger of the spectator, who is apt to get scalded, ere he is aware, by the falling of the jet. On the cessation of the eruption, the water instantly sunk, but rose again directly to about half a foot above the orifice, where it remained stationary at the temperature of 183° of Fahrenheit. This fountain has, however, by other travellers been observed to throw its water to the amazing height of 360 feet.' Dr. H. observed the Stocker, another of these huers, form a jet of 200 feet. These huers rise in the very sea, and form scalding fountains amidst the waves. Their distance from land is unknown ; but the new volcanic isle, twelve miles off Reickenes, proves that the subterraneous fires and waters extend to that distance.

HUESCA, an old fortified town in the north of Arragon, in Spain, situated in a plain on the Isuela. Its works have gone into ruins, but it is still a bishop's see, has a university, two large schools, a cathedral, and 6800 inhabitants, with

manufactures of cloth and leather. Thirty miles north-east of Saragossa.

HUET (Peter Daniel), a learned French writer, born at Caen in Normandy, February 8th, 1630. At an early age he began the study of

philosophy, mathematics, the languages, and antiquities. He contracted a strict friendship with Bochart, and accompanied him to Sweden. Queen Christina would have engaged him in her service; but he, sensible of her inconstant temper, returned to France. All he brought with him was a copy of a MS. of Origen, which he transcribed at Stockholm. He refused several offers, from Christina after she abdicated, and also from Charles X. her successor. In 1670, M. Bossuet being appointed preceptor to the dauphin, Louis XIV. chose M. Huet for his colleague, with the title of sub-preceptor. He formed the plan of the commentaries in usum Delphini, and directed the execution. He entered into holy orders at the age of forty -six ; and soon after he was presented to the abbey of Aunay ; and in 1685 to the bishopric of Soissons, which he exchanged for that of Avranches. After ten years he resigned, and was made abbot of Fontenay near Caen. He died in 1721, aged ninety-one. His principal works are, 1. De Claris interpretibus, et de-optimo genere inter-pretandi : 2. Origenis Commentaria ; Gr. et Lat. cum notis : 3. A Treatise on the origin of the Romans: 4. Demonstratio Evangelica, fol. : 5. Questiones Alnetanae de Concordia rationis et fidei : 6. Of the situation of the Terrestrial Paradise; in French : 7. A History of the Commerce and Navigation of the Ancients, which has been translated into English. 8. Commentarius de Rebus ad eum Pertinentibus : 9. Huetiana. HUFF,n. s., v. a.&u.n.~\ From hove, or HUF'FER, n.s. I hoven, swelled. See

HUF'FISH, adj. vTo HEAVE. So in

HUF'FISHLY, adv. i some provinces they HUF'FISHNESS, n. s. J say the bread huffs up, when it begins to heave or ferment : huff, therefore, may be ferment. To be in a huff is to be in a ferment. Sudden affront ; anger, or arrogance ; one swelled with a false opinion of his own value : huff, to swell ; to puff; to treat with insolence ; to bluster ; storm ; bounce about, and swell with indignation: a buffer is a bully; a blusterer ; a petulant noisy person.

Quoth Ralpho, honour's but a word To swear by, only in a lord ; In others it is but a huff, To vapour with instead of proof. Hudibras.

His frowns kept multitudes in awe, Before the bluster of whose huff All hats, as in a storm, flew off. Id.

Nor have I hazarded my art To be exposed i' the' end to suffer, By such a braggadocio buffer. Id,

A thief and justice, fool and knave, A huffing officer and slave. Id.

Huffing to cowards, fawning to the brave, To knaves a fool, to credulous fools a knave.

Roscommon.

A huffing, shining, flattering, cringing coward, A cankerworm of peace, was raised above him.

Otway.

Now what's his end ? O charming glory, say ! What, a fifth act to crown his huffing play ? Dryden.

As for you, colonel huff-cap, we shall try before a civil magistrate who's the greater plotter. Id.

We have the apprehensions of a change to keep a check upon us in the very huff of our greatness.

L' Estrange.

A Spaniard was wonderfully upon the huff about his extraction. Id.

What a small pittance of reason and truth is mixed with those huffing opinions they are swelled with !

Locke.

In many wild birds the diaphragm may easily be huffed up with air, and blown in at the windpipe.

Grew.

This senseless arrogant conceit of theirs made them huff at the doctrine of repentance, as a thing below them. South.

Lewd shallow-brained huffs make Atheism and contempt of religion the sole badge and character of wit.

Id.

No man goes about to ensnare or circumvent another in a passion, to lay trains, and give secret blows in a present huff. Id.

When Peg received John's message, she huffed and stormed like the

devil.

Arbuthnot’t History of John Bull.

HUG, v. a. & n. s.) Sax. bejiaa, to

HUG’GERMUGGER, n. s. $ hedge, to enclose ; Germ, hagen. To press in close embrace ; to fondle ; to treat with tenderness ; to hold fast ; to gripe in wrestling : hug, a close embrace ; a particular gripe, called a Cornish hug: huggermugger, corrupted perhaps from huger mocker, or hug in the dark. Morcker, in Danish, is darkness, whence our murky. It is written by Sir Thomas More hoker moker. Hoker, in Chaucer, is peevish, cross-grained, of which moker may only be a ludicrous reduplication. Hooke is likewise in German a corner, and moky is in English dark. We know not how to determine. Secrecy; bye-place.

Now hold in huggermugger in their hand, And all the rest do rob of floods and land.

Hubberd’s Tale.

And chalenge to ourselves our portions dew Of all the patrimonie, which a few Now hold in huggermugger in their hand, And all the rest doo rob of good and land.

Spenser. Mother Hubberd’s Tale. He be wept my fortune, And hugged me in his arms. Shahspeare. I, under fair pretence of friendly ends, And well placed words of glozing courtesy, Baited with reasons not unplausible, Wind me into the easy hearted man, And hug him into snares. Milton’ t Comus.

But if I can but find them out, Where e’er the’ in huggermugger lurk, I’ll make them rue their handy work.

Hudibrat.

What would not he do now to hug the creature that had given him so admirable a serenade !

L’Estrange.

There’s a distinction betwixt what’s done openly and bare-faced, and a thing that’s done in huggermugger f under a seal of secrecy and concealment.

Id.

King Xerxes was enamoured upon an oak, which he would hug and kiss. Harvey on Consumptions. We hug deformities, if they bear our names.

Glanville. Admire yourself. And, without rival, hug your darling bock.

Roxommon.

Even in that urn their brother they confess, And hug it in their arms, and to their bosom press.

Itryden.

Though they know that the flatterer knows the falsehood of his own flatteries, yet they love the impostor, and with both arms hug the abuse. South. Mark with what joy he hugs the dear discovery.

Rowe.

Age makes us most fondly hug and retain the good things of life, when we have the least prospect of enjoying them. Atterbwy.

How ever and anon awake the soul, As with a peal of thunder, to strange horrors In this long restless dream, which idiots hug, Nay wise men flatter with the name of life.

Young’s Brothers.

HUGE, adj. -\ Belg. hoogke ; Swed. hoeg. HUGK’LY, adv. (The primary idea here is HUGE’NESS, n.s. (high; but these words are HU’G Y, adj. J peculiarly applicable to magnitude, as opposed to quantity and number: huge is vast ; immense ; great, even to deformity : it is used figuratively in the sense of greatly ; very much.

That verely, anone I gan to fele An huge parte relesed of my smerte.

Chaucer. Complaint of the Blache Knightes. She caught in hand an huge great yron mace, Wherewith she many had of life deprived.

Spenser. Faerie Queene.

In which his worke he had sixe servants prest, About the andvile standing evermore With huge great hammers, that did never rest From heaping stroakes which thereon roused sore.

Id.

My mistress exceeds in goodness the hugeness of your unworthy thinking. Skakspeare.

HUGH CAPET, son of Hugh the Great, a powerful duke in France ; his capital was Paris. The last Carlovingians had been stripped of al-most all their possessions, and at the same time of their power, by their restless vassals. One only still remained — Charles, duke of Lower Lorraine. He was passed over in the election of king, and Hugh, renowned for his boldness and sagacity, possessed himself (987) of the throne, to which he had no claim, by fraud and force. The duke of Lorraine endeavoured, in-deed, to enforce his claim by arms, but he was taken prisoner by Hugh, and died 992. Thus Hugh founded the third race of French kings, in three principal lines : the Capets, who filled the throne from 987 to 1328, the line of Valois to 1589, and that of Bourbon till Louis XVI (1793), occupied the throne 800 years, and, in 1814, after the abdication of Napoleon, returned to it in the person of Louis XVIII. In 1830, the elder line was deposed, and the line of Orleans called to the throne. The family estates of Hugh were converted into royal domains, except that the duchy of Burgundy passed over to his brothers, Otho and Henry, and to their successors. Hugh endeavoured to confirm his power by courage and prudence, without taking vengeance on his earlier enemies. According to some, he obtained the name of Capet from his large ‘lead ; according to others, from his sagacity ; others consider it his family name. Hugh died 996. He made Paris the capital of the kingdom.

HUGHES, (John), an English poet, born in 1677. In the earliest parts of his youth he cultivated poetry and music, in both of which he made great progress. Lord chancellor Cow-per made him secretary for the commissioners of the peace, which he held till 1719, when he died on the same night in which his tragedy of The Siege of Damascus was

first acted. He was then forty-two. He translated Fontenelle's Dialogues of the Dead, Vertot's revolutions of Portugal, and the letters of Abelard and Eloisa, He gave a very accurate edition of Spenser' works, with his life, glossary, and remarks , and wrote several papers in the Spectator, Tatler, and Guardian.

HUGHES (Jabez), younger brother of the preceding, was born in 1685. He published, in 1714, a translation of Claudian's Rape of Proserpine, and Lucan's Sextus and Erictho : also Suetonius's twelve Caesars, and some of Cervan tes's novels. He died in 1731.

HUGHES (Griffith ;>, Rev. F. R. S., an Engiisl naturalist, minister of Lacy's parish, in the island of Barbadoes, circulated in 1749 proposals for publishing the natural history of that island. He appears to have been highly esteemed by Dr. Stephen Hales, and other men of science in England. The work appeared in 1750, in a folio volume, in ten books, with twenty-four engravings ; and it was republished, with a larger number of plates, in 1760. This production contains a good account of the zoophytes, which here grow on the rocks by the sea side. Mr. Hughes also published n paper in the Philosophical Transactions on this subject.

HUGONIA, in botany, a genus of the decandria order and monadelphia class of plants; natural order malvacea?. — Jussieu : COR. pentapetalous : fruit a plum with a striated kernel. Species three, tropical plants.

HUGONOTS, or HUGUENOTS, an appellation given to the Reformed Churches, or Protestants of France. The name had its first rise in 1560; but authors are not agreed as to its origin. One of the two following seems to be the least forced derivation. One of the gates of the city of Tours is called the gate Fourgon, by corruption from feu Hugon, i. e. the late Hugon. This Hu-gon was once count of Tours. Davila and others pretend, that the nickname of Huguenots was first given to the French Protestants, because they used to meet in the night-time in subterraneous vaults near this gate of Hugon ; and what seems to countenance this opinion is, that they were first called Huguenots at Tours. Others say that the leaguers gave this name to the reformed, because they were for keeping the crown in the royal line of Hugh Capet ; whereas the leiguers were for giving it to the house of Guise, as descended from Charlemagne. Others derive it from a faulty French pronunciation of the German word eidgnosser, signifying confederates, originally applied to that valiant part of the citizens of Geneva, who entered into an alliance with the Swiss cantons, to main their liberties against the tyrannical attempts of Charles III. duke of

Savoy. These confederates were called Eignots, whence Huguenots. The persecution

which the Huguenots underwent has scarcely its parallel in civil or ecclesiastical history : though they obtained a peace from Henry III. in 1576, it was of short continuance ; and their sufferings, mitigated by the famous edict of Nantes, granted to them in 1598 by Henry IV., were again renewed, after the revocation of this edict, by Louis XIV. in 1685. See FRANCE.

HUKE,n.s. Fr. huque; Belg. huik. A cloak.

As we were thus in conference, there came one that seemed to be a messenger, in a rich huke.

Bacon’s New Atlantis.

HULK,n.5.&u.a. Sax. bulc; Dut. hulcke ; Teut. and Swed. hoik. The body of a ship ; any thing bulky or unwieldy: hulk, to exenterate, as to hulk a hare, that is, to take out its viscera.

And Harry Monmouth’s brawn, the hulk Sir John, Is prisoner to your son. Shakxpeare.

There’s a whole merchant’s venture of Bourdeaux stuff in him : you have not seen a hulk better stuffed in the hold. Id.

The custom of giving the colour of the sea to the hulks, sails, and mariners of their fly-boats, to keep them from being discovered, came from the Veneti.

A rbuthnot.

They Argo's hulk will tax, And scrape her pitchy sides for wax. Swift.

The sooty hulk

Steered sluggish on. Thomson.

Ah grievance sore, and listless dull delay, To waste on sluggish hulks the sweetest breeze !

Byron. Childe Harold.

A HULK is an old ship of war, fitted with an apparatus, to fix or take out the masts of the king's ships, as occasion requires. The mast is extremely high, and properly strengthened by shrouds and stays, to secure the sheers, which serve, as the arm of a crane, to hoist out or in the masts of any ship lying alongside. These sheers are composed of several long masts, whose heels rest upon the side of the hulk, and having their heads declining outward from the perpendicular, so as to hang over the vessel whose masts are to be fixed or displaced. The tackles, which extend from the head of the mast to the sheer-heads, are intended to pull in the latter towards the mast-head, particularly when they are charged with the weight of a mast after it is raised out of any ship, which is performed by strong tackles depending from the sheer-heads. The effect of these tackles is produced by two capsterns, fixed on the deck for this purpose.

HULL,n.s.&v. n.) Goth, hulga; Belg. hue;

HUL'LY, adj. S Scot. hule. The husk or

integument; the outer covering; the body of a ship : it is now confounded with hulk, otherwise jt properly signifies the mere skeleton of a ves-sel. The verb signifies to float ; to drive to and fro without sails or rudder : hully is husky.

Will you hoist sail, sir? here lies your way. — No, good swabber, I am to hull here a little longer.

Shakspeare.

He iooked, and saw the ark hull on the flood. Milton.

They saw a sight full of piteous strangeness ; a ship,

or rather the carcase of a ship, or rather some few

bones of the carcase, hulling there, part broken, part

burned, and part drowned. Sidney.

Deeo in Uieir hulls our deadly bullets light,

Ana turouga ,ne yielding planks a passage find.

Dryden.

People walking down upon the shore, saw somewhat come hullinij toward them. L'Estrange.

So many arts hath the Divine Wisdom put together, only for the hull and tackle of a thinking creature.

Grew.

The tree will wither long before its fall ; The hull drives on, though mast and sail be torn.

Byron. Childe Harold.

HULL, or Kingston upon Hull, a borough, sea-port, and market town of the East Riding of Yorkshire, thirty-six miles south-east of York, and 170 from London, situate at the conflux of the Hull and Humber. The town is large and populous, containing two churches, several meeting houses, a free school, a charity school, and some hospitals. Among the latter is one called Trinity House, in which are maintained many distressed seamen, both of Hull and other places, that are members of its port. It is governed by twelve elder brethren and six assistants ; and out of the former are chosen annually two wardens, and out of the younger brethren two stewards; and these have authority to determine questions between masters and seamen. A handsome infirmary is erected without the town to the north. Here are also an exchange and a custom-house, and over the Hull a stone bridge, consisting of fourteen arches. A good harbour was made here by Richard II. This town has not only the most considerable inland traffic of any port in the north of England, but a foreign-trade superior to any in the kingdom, excepting the ports of London, Bristol, Liverpool, and Yarmouth. By means of the many large rivers that fall into the Humber, it trades to almost every part of Yorkshire, as well as to Lincolnshire, Nottinghamshire, Staffordshire, Derbyshire, and Cheshire; the commodities of which counties are brought hither, and exported to Holland, Hamburgh, France, Spain, the Baltic, and other parts of Europe. In return for those, are imported iron, copper, hemp,

flax, canvas, Russia linen and yarn, besides wine, oil, fruit, and other articles. Quantities of corn are also brought hither by the navigable rivers. The trade of Hull with London, particularly for corn, lead, and butter, and with Holland and France, for those commodities, as well as for cloth, kerseys, and other manufactures of Yorkshire, is very considerable. But in the town itself there are no manufactures of any consequence, except several oil-mills in the neighbourhood worked by steam, and such as are attached to the marine for rope, tar, block-making, &c. This town returns two members to parliament, the right of election being in the burgesses, which right is held either by the sons of burgesses, or by having served seven years' apprenticeship to a freeman, by purchase, or from donation for public service. The entire civil authority over the town, and what is denominated the county, a district of more than eighteen miles in circumference, is, by various royal charters, particularly those of king Henry VII. and king Charles II., vested in the corporation, which consists of the mayor, the recorder, twelve aldermen, the sheriff, two chamberlains, a town clerk, a water-bailiff, and other officers, besides a high steward, who is generally somˆ nobleman of rank. The mayor is admiral of the

lluir.ber, and possessed of the power of life and death over criminals within his jurisdiction. The mayor of Hull has two swords, one given by Kinu. Richard II. the other by Henry VIII. but only one is borne before him at a time ; also a cap of maintenance, and an oar of lignum vitae, as a badge of his admiralty jurisdiction within the limits of the Humber.

HULME (Nathaniel), F.R. S. and F. A.S., was a native of Yorkshire, and served an apprenticeship to an apothecary. He was afterwards a surgeon in the navy ; and on the peace of 1763 became a student of medicine at Edinburgh, where he graduated as M.D. in 1765. He settled in London, and at first devoted his attention to midwifery; but in 1775 was, through the influence of lord Sandwich, elected physician to the Charter-house, which situation he retained till his death, in April, 1807, at the age of seventy-five. In 1800 he published,

in the Philosophical Transactions, an account of a series of experiments on light spontaneously emitted. Some other papers, and several medical tracts, also proceeded from his pen. Among the latter are a treatise on a Puerperal Fever, and another on the Stone and Scurvy, which were translated into German.

HUL'VER, n.a. Holly. This herber was all full of floures gendes j

Into the whiche as I beholde began —

Betwixt an hulfere and a wode bende,

As I was ware — I saw where laie a man

In blacke. Chaucer. Complaint of Blacke Knight.

Save hulver and thorn, thereof flail for to make.

Tusser.

HUM,u. a.,n.s.&interj.^\ Goth, and Swed.

HUM'-BIBD, n. t. f hum ; Dut. homelan.

HUM'DRUM, adj. [To make the noise

HUM'MER, n. s. J of bees ; to make an

inarticulate and buzzing sound; to pause in speaking with an audible emission of breath; to make a dull heavy noise ; to sing low ; to applaud, because approbation in public assemblies was formerly expressed by a hum. In Hudibras it appears to be used for ham. The interjection is an expression of doubt or deliberation : humbird, the humming bird: humdrum, dull ; dron-ish ; stupid : hummer, an applauder. To black Hecat's summons

The shard-born beetle, with his drowsy hums,

Hath rung night's yawning peal.

Shakspeare. Macbeth,

Let not your ears despise the heaviest sound That ever yet they heard. — Hum! I guess at it. Id.

From camp to camp, thro' the foul womb of night, The hum of either army still resounds. Shakspeare.

These shrugs, these hums and haws. When you have said she's goodly, come between, Ere you can say she's honest. Id. Winter's Tale.

I think he'll hear me : yet to bite his lip, And hum at good Cominius, much unhearts me.

Shakspeare.

Upon my honour, Sir, I heard a humming, Ami that a strange one too, which did awake me. Id. The cloudy messenger turns me his back,

Aad hums ; as who should say, You'll rue. Id.

The humming of bees is an unequal buzzing. Bacon.

Towered cities please us then, And the busy hum of men. Milton.

Shall we, quoth she, still humdrum, VOL. XI

And see stout Bruin all alone.

By numbers basely overthrown? Hu'.i'jrat.

Having pumped up all his wit, And hummed upon it, thus he writ. Id.

I still acquiest,

And never hummed and hawed sedition, Nor snuffled treason. Id.

And though his countrymen the Huns, Did stew their meat between their hums, And the horses' backs, on which they straddle, And every man eat up his saddle. Id.

All ages have conceived the wren the least of birds, yet our own plantations have shewed one far less ; that is, the humbird, not much exceeding a beetle. Browne.

One theatre there is of vast resort, Which whilom of requests was called the court ; But now the great exchange of news 'tis hight, And full of Aunt and buz from noon 'till night.

Dry den.

Your excuses want some grains to make 'em current : hum and ha will not do the business. Id.

An airy nation flew,

Thick as the humming bees that hunt the golden dew In Summer's heat. <.

So weary bees in little cells repose ; But if night-robbers lift the well-stored hive, An humming through iheir waxen city grows. Id. The man lay humming and hawing a good while ; but, in the end, he gave up himself to the physicians.

L'Estrange.

. You hear a him in the right place.- Spectator. I was talking with an old humdrum fellow, and, be-fore I had heard his story out, was called away by business. Addison.

Who sat the nearest, by the words o'ercome, Slept fast : the distant nodded to the hum. Pope.

See Sir Robert — hum!

And never laugh for all my life to come. Id Nor undelightful is the ceaseless hum, I'o him who muses through the woods at noon.

Thomson.

And oh the little warlike world within ! The well-reeved guns, the netted canopy, The hoarse command, the busy humming din, When, at a word, the tops are manned on high.

Byron. Childe Harold.

HU'MAN, adj. ~} Fr. humain; Lat. hu-HUMANE', adj. manus. Having the quali—

HuMANE'LY,«cfo. j ties of man as contradis-HU'MANIST, n s. J>tinguished from brutes; HUMAN'ITY, n. s. f belonging to man : hu-HU'MANISE, v.a. mane, kind; civil; be-Hu'MANKiND,n.s. } nevolent; good-natured: HU'MANLY, adv. J humanist, a philologer; a grammarian : humanity, the nature and feelings of man; the collective body of mankind: gram-matical studies are called literte humaniores, perhaps because they conduce to enlighten the mind and polish the manners : humanly, after the notions, and according to the power, of men ; kindly; but this more properly belongs to hu-" manity.

O noble Markis ! your humanitee Assureth us, and yeveth us

hardiuesse As oft as time is of necessitee, That we to you now tell our hevinesse.

Chaucer. The Clerkes Tale.

The king is but a man as I am : the violet smells to him as it doth to me ; all his senses have but human conditions. Shakspsare.

If they would yield us the superfluity, white it were wholesome, we might guess they relieved us humanely.

Id. 2 G

A rarer spirit never did steer humanity. Shakspeare. The middle of humanity thou never knewest, but the extremity of both ends. Id.

Love of others, if it be not spent upon a few, doth naturally spread itself towards many, and maketh men become humane and charitable. Bacon.

For man to tell how humifn life began Is hard ; for who himself beginning knew ?

Milton.

Thee, serpent, subtilcst beast of all the field I knew ; but not with human voice indued. Id.

If he can untie those knots, he is able to teach all humanity, and will do well to oblige mankind by his information. Glanville.

To preserve the Hebrew intire and uncorrupt, there hath been used the highest caution humanity could in-vent. Browne.

Look to thyself : reach not beyond humanity.

Sidney.

All men ought to maintain peace, and the common offices of humanity and friendship, in diversity of opinions. Locke.

Intuitive knowledge needs no probation, nor can have any, this being the highest of all human certainty .

Id.

Envy, malice, covetousness, and revenge, are abolished : a new race of virtues and graces, more di-vine, more moral, more humane, are planted in their stead. Sprat.

How few, like thee, enquire the wretched out. And court the offices of soft humanity ? Like thee reserve their raiment for the naked, Reach out their bread to feed the crying orphan, Or mix their pitying tears with those that weep ?

Rowe. Death is the privilege of human nature ;

And life, without it, were not worth our taking.

Id. Fair Penitent.

Was it the business of magick to humanize our natures with compassion, forgiveness, and all the instances of the most extensive charity ? Addison.

Here will I paint the characters of woe, And here my faithful tears in showers shall flow To humanize the flints whereon I tread. Wotton.

Thus the present happy prospect of our affairs, humanly speaking, may seem to promise. Atterbury. Though learned, well bred ; and though well bred,

sincere ; Modestly bold, and humanely severe. Pope.

Blest with a taste exact, yet unconfined j A knowledge both of books and humankind. Id. It will never be asked whether he be a gentleman born, but whether he be a human creature ! Swift.

Affliction is the wholesome soil of virtue j Where patience, honor, sweet humanity, Calm fortitude, take root, and strongly flourish.

Mallet and Thomson's Alfred. Some grudged the savage land her sacred dust j Stamped the cursed soil ; — and with humanity (Denied Narcissa) wished them all a grave.

Young's Narcitta.

Fierce as the tiger, madder than the seas, Desperate, and armed with more than human strength.

Armstrong.

I have ten thousand names, and twice As many attributes ; but as I wear A htonan shape, will take a human name.

Byron. Deformed Transformed.

— — — a far hour shall wreak

The deep prophetic fulness of this verse, And pile on human beads the mountain of my curse. Id. Childe Harold.

HUMBER, a river formed by the Trent, Ouse, Derwent, and several other streams. By the in-land navigation it has a communication with the Mersey, Dee, Ribble, Severn, Thames, Avon, &c., which navigation, including its windings, extends above 500 miles, in the counties of Lincoln, Nottingham, York, Lancaster, Westmoreland, Chester, Stafford, Warwick, Leicester, Ox-ford, Worcester. The Humber divides Yorkshire from Lincolnshire, and falls into the German Ocean near Holderness.

HUM'BLE, adj. & v. a. ~\ Fr. humble, humiˆ HUM'BLEBEE, n. s. lite ; Lat. humilis,

HuM/BLEBEE-EATER,n.s. humus, the ground. HUM'BLENESS, n. *. Humble, and hu—

HUM'BLER, n. s. mility, are opposed

HUM'BLEMOUTHED, adj. [to pride and self-HUM'BLEPLANT, n. s. ("conceit, and imply, HUM'BLES, n. s. not arrogant; low;

HUMBLESS', n. s. modest ; timid ;

HUM'BLY, adv. submissive: hum—

HUMILIA’TION, n.s. ble is applicable to

HUMIL’ITY, n. s. _, persons, and stations; humility, to disposition: to humiliate is to degrade; to mortify; to humble with external circumstances of contempt, displeasure, or degradation: bumblebee, and humblebee-eater ; the former is a buzzing wild bee, also the name of a herb ; the latter, a fly that eats the bee. What is the true etymology of this word is rather doubtful. The bumblebee is known to have no sting. The Scotch call a cow without horns an humble cow ; so that the word seems to signify inermis, wanting the natural Dr. Beattie. Humbler, one that submits, or subdues himself to others : humblemouthed, mild and meek in speech : humbleplant, a sensitive plant : humbless, an obsolete expression for humility: humiliation, condescension; degradation or disgrace : ‘ humility is opposed to arrogance or assumption.’ — Crabb.

Yet, sith I have mine owne penaunce isought, With humble spirite shal I it receve, Though that the king of Love my life bereve.

Chaucer. The Court of Love.

‘ My Lorde,’ quod she, ‘ I beseche you in alle hum-blesse, that ye wol not wilfully replie ageiu my resons, ne distempre your herte, though I speke thing that you displese.’ Id. Tale of Melibeus.

Lady ! thy bountee, thy magnificence, Thy vertue, and thy gret humilitee, Ther may no tongue exprtsse in no science.

Id. The Prioresses Tale. And with meek humbless, and afflicted mood, Pardon for thee, and grace for me intreat. Spenser. And mighty proud to humble weak does yield. Id.

When we make profession of our faith, we stand ; when we acknowledge cur sins, or seek unto God for favour, we fall down ; because the gesture of constancy becometh us best in the one, in the other the behaviour of humility. Hooker.

The former was an humiliation of Deity, the latter an humiliation of manhood ; for which cause there followed upon the latter an exaltation of that which was humbled ; for with power he created the world, but restored it by obedience. Id.

They were used to bend. To send their smiles before them to Achilles, To come humbly as they used to creep to holy altars.

Sha/upeare.

The honey bags steal from the humblebeet, And for night tapers crop their waxen thighs. Id.

Now we have shewn our power, Let us seem humbler after it is done, Than when it was a-doing. Id. Coriolanus. Thy humble servant vows obedience, And faithful service ‘till the point of death.

Shakspeare,

I do not know that Englishman alive With whom my soul is any jot at odds, More than the infant that is born to-night ; . I thank my God for my humility.

Id. Richard III. The executioner

Falls not the axe upon the humbled neck, But first begs pardon. Id. As You Like It.

You are meek and humblemouthed : but your heart I s ci ammed with arrogancy, spleen, and pride.

Shakspeare.

It was answered by us all, in all possible hitmble-nesi, but yet with a countenance, that we knew he spoke it but merrily. Bacon.

What the height of a king tempteth to revenge, the humility of a Christian teacheth to forgive.

King Charles.

A grain of glory, mixed with humbleness, Cures both a fever and lethargickness. Herbert. In process of time the highest mountains may

be humbled into vallies ; and again, the lowest vallies exalted into mountains. Hakewill on Providence.

The' example of the heavenly lark, Thy fellow-poet, Cowley, mark ! Above the skies let thy proud musick sound, Thy humble nest build on the ground. Cowley. We should be as humble in our imperfections and sins, as Christ was in the fulness of the spirit, great wisdom, and perfect life.

Taylor's Rule of Holy Living. There are some that use Humility to serve their pride, and seem Humble upon their way, to be the prouder At their wished journey's end. Denham's Sophy. The humility of the style gained them many friends.

Clarendon.

Yearly injoined, some say, to undergo This annual humbling certain numbered days. To dash their pride and joy, for man seduced.

Milton.

Thy humiliation shall exalt With thee thy manhood also to this throne. Id.

Why do I humble thus myself, and, suing For peace, reap nothing but repulse and hate ?

Id.

With tears

Watering the ground, and with our sighs the air Frequenting, sent from hearts contrite, in sign Of sorrow unfeigned, and humiliation meek. Id. I am rather with all subjected humbleness to thank her excellencies, since the duty thereunto gave me rather heart to save myself, than to receive thanks.

Sidney.

With how true humblenet*

They looked down to triumph over pride ! Id. John fared poorly, according unto the apparel he wore, that is, of camel's hair ; and the doctrine he preached was humiliation and repentance. Browne.

Write him down a slave, who, humbly proud, With presents begs preferments from the crowd.

Dryden.

As high turrets for their airy steep Require foundations in proportion deep j And lofty cedars as far upwards shoot, As to the nether heavens they drive the root ; So low did her secure foundation lyr, She was not humble, but humility. Id.

You, if an humble husband, may request, Provide and order all things for the best. Id.

This would not be to condescend to their capacities, when he humbles himself to speak to them, but to lose his design in speaking. Locke.

The humbleplant is so called, because, as soon as you touch it, it prostrates itself on the ground, and in a short time elevates itself again : it is raised in hotbeds. Mortimer.

It is an easy matter to extol humility in the midst of honour, or to begin a fast after dinner. South.

Ah ! prince, hadst thou but known the joys which

dwell With humbler fortunes, thou wouldst curse thy royalty !

Rowe.

We are pleased, by some implicit kind of revenge, to see him taken down and humbled in his reputation, who had so far raised himself above us. Addison

The mistress of the world, the seat of empire, The nurse of heroes, the delight of gods, That humbled the proud tyrants of the earth. Id.

In midst of dangers, fears, and death, Thy goodness I'll adore ;

And praise thee for thy mercies past, And Itumbly hope for more. Id* '

Ten thousand trifles light as these, Nor can my rage nor anger move :

She should be humble who would please ; And she must pufier, who can love. Prior.

Let the sinner put away the evil of his doings, and humble himself by a speedy and sincere repentance ; let him return to God, and then let him be assured that God will return to him. Rogers,

This puts us in mind once again of the humblebees and the tinder-boxes. Atterbury.

Fortune not much of humbling me can boast : Though double taxed, how little have I lost! Pope.

It may serve for a great lesson of humiliation to mankind, to behold the habits and passions of men trampling over interest, friendship, honour, and their own personal safety, as well as that of their country.

Swift.

Humble love,

And not proud reason, keeps the door of Heaven ; Love finds admission, when proud science fails.

Young.

How humble now Lies that ambition which was late so proud !

Smollet's Regicide.

' O pity great Father of Light !' then I cried, ' Thy creature who fain would not wander from thee, Lo humble in dust I relinquish my pride : From doubt and from darkness thou only canst free.'

Beattie.

' Vengeance is mine alone !'

So saith the Lord, and with all humblenets His servant echoes back the awful word.

Byron. Manfred. many a night on the earth.

On the bare ground, have I bowed my face, And strewed my head with ashes j I have known The fulness of humiliation, for I sunk before mv vain despair, and knelt To my own desolation. Id.

HUMBLE BEE. See BOMBYLIUS. HUME (David), a celebrated historian, oorn in Edinburgh, April 20th, 1711. He was destined for the bar, and passed through his academical courses in the university of Edinburgh : but never put on the gown, nor even took the introductory steps for that purpose. The writings of Locke and

Berkeley had directed the attention of the generality of learned men towards metaphysics ; and Mr. Hume, having early

applied himself to studies of this kind, published in 1739 the first two volumes of his Treatise of Human Nature, and the third the following year. H3 had the mortification, however, to find his book generally decried ; and to perceive that the tasie for systematic writing was now on the decline. In 1742 he published two small volumes, consisting of Essays moral, political, and literary. These were better received ; but contributed little to his reputation as an author, and still less to his profit ; and, his small patrimony being now almost spent, he accepted an invitation from the marquis of Annandale to visit him in England. With this nobleman he staid a year, and then received an invitation from general St. Clair, to attend him as secretary to his expedition against the coast of France. In 1747 he attended this general in the same station in his embassy to Vienna and Turin. In 1749 he returned to Scotland, and spent two years with his brother ; where he composed the second part of his essays, entitled Political Discourses, which were published at Edinburgh in 1752. The same year also he brought out, in London, his Enquiry Concerning the Principles of Morals, •which he esteemed the best of his performances. This year also he was appointed librarian to the Faculty of Advocates at Edinburgh ; which „ of-fice gave him the command of a large library. He then planned his History of England ; which he at first confined to that of Britain under the house of Stuart. This was almost universally condemned on its publication, but soon after seemed to sink in oblivion. Dr. Herring, archbishop of Canterbury, and Dr. Stone, primate of Ireland, were the only literati of the author's acquaintance who approved of the work. He next published his Natural History of Religion ; to which an answer was speedily published, in the name of

bishop Hurd, of which, however, he was not the sole author. In 1756 the second volume of the History of the Stuarts appeared. This was better received, and in some degree helped to retrieve the character of the former volume. Three years after his History ofthe Houseof Tudor appeared ; which was, however, but little admired. But the author continued to finish at his leisure the more early part of the English history. This was published in 1761 with tolerable success. Mr. Hume being now above fifty, and having obtained by his works an independent fortune, retired to Scotland. He, however, soon after attended the earl of. Hertford as secretary on his embassy to Paris in 1763. In 1765, the earl being appointed lord lieutenant of Ireland, Mr. Hume was entrusted with the management of the business of the state till the arrival of the duke of Richmond in the end of the year. In 1767 he returned to Edinburgh, with a great increase of fortune, and again resolved on retirement. Once more he was disappointed in this by an invitation from general Conway, to become an under secretary of state. In 1769 he returned to Edinburgh, possessed of an income of about £1000 a year. In spring 1775 he was struck with aaisorder in the bowels ; which at first pave him no alarm, but eventually proved incurable. He died on the 25th August, 1776 ; and was interred in the Calton burying-ground, Edinburgh, where

a plain monument was erected to his memory. ‘ In point of style,’ says lord Gardenstone, ‘ Mr. Hume may be studied as a perfect model. Pure nervous, eloquent, he is simple without weakness, and sublime without effort. In the art of telling a humorous story he can never be excelled ; and, when he chose to exert himself, he was even a considerable master of the pathetic; but it was his misfortune to despise accuracy of research, and fidelity of citation. He was a bitter Tory ; and, while detection flashed in his face, he commonly adhered to whatever he had once written. His account of the house of Stuart is not the statement of an historian, but the memorial of a pleader in a court of justice. He sometimes asserts a positive untruth, contradicted by the very author whom he pretends himself to be quoting ; but more commonly gains his purpose by suppressing the whole evidence on the opposite side of the question.*

HUMECrv.a. -\ Fr. humccter ; Lat.

HCIMEC’TATE, v. a. I humecto ; Fr. humidt;

HUMECTA’TION, n. s. >Lat. humidus. Humect

HU’MID, adj. HUMID’ITY, n.s.

is to wet ; to moisten : 1 humectation, the act of

moistening : humidity, a state of dampness and moisture ; also, that quality which we call moisture, or the power of wetting other bodies. It differs from fluidity, depending altogether on the congruity of the component particles of any liquor to the pores or surfaces of such particular bodies as it is capable of adhering to.

We’ll use this unwholesome humidity, this gross watery puirpion. Shaktpeare.

O blessing-breeding sun, ward from the earth Rotten humidity: below thy sister’s orb Infect the air! Id. Timon of Athens.

Plates of brass applied to a blow, will keep it down from swelling : the cause is repercussion, without humectation, or entrance of any body.

Bacon’s Natural History.

Her rivers are divided ia sluices, to humectate the bordering soil. Howel’s Vocal Forest.

Iris there, with humid bow, Waters the odorous banks that blow Flowers of more mingled hue Than her purpled scarf can shew. Milton. The Nile and Niger do not only moisten and con-temperate the air by their exhalations, but refresh and humectate the earth by their annual inundations.

Browne.

That which is concreted by exsiccation, or expression of humidity, will be resolved by humectation, as earth and clay. Id.

The queen, recovered, rears her humid eyes. And first her husband on the poop espies. Dryden.

If they slip easily, and are of a fit size to be agitated by heat, and the heat is big enough to keep them in agitation, the body is fluid ; and if it be apt to stick to things, it is humid. Newton’s Opticks.

The medicaments are of a cool humecting quality, and not too much astringent. Wiseman's Surgery.

Young animals have more tender fibres, and more humidity, than old animals, which have their juices more exalted and relishing. Arbuthnot.

The modest virtues mingled in her eyes, Still on the ground dejected, darting all Their humid beams into the blooaiing flowers.

Thomson,

HU'MERAL, adj. Fr. humeral, from Lat. hit-merus. Belonging to the shoulder.

The largest crooked needle should be used, with a ligature, in taking up the humeral arteries in amputation. Sharp.

HUMERI Os, or HUMERUS, in anatomy, the uppermost bone of the arm, popularly called the shoulder-bone ; extending from the scapula, or shoulder-blade, to the upper end of the cubitus, or elbow. See ANATOMY.

HUMICUBATION, n. s. Lat. humi and cubo. The act of lying on the ground.

Fasting and sackcloth, and ashes and tears,, and humicubations, used to be companions of repentance.

Bramhall.

HUMILIATI, a congregation of religious in the church of Rome, established by some Mi-lanese gentlemen on their release from prison,

where they had been confined under the emperor Conrad, or, as others say, under Frederick I., in 1 162. This order, which acquired great wealth, and had no fewer than ninety monasteries, was abolished by Pope Pius V. in 1570, for luxury and cruelty, and their houses given to the Domi-nicans and Cordeliers.

HUMMIXG-BIRD (trochilus). These beautiful birds, which may be termed the gems of animated nature, are peculiar to America, and almost exclusively tropical. They are distinguished by their long and slender bill, and attenuated and retractile tongue, which is divided into two filaments from the middle to the tip. They feed on honey, though they are also insectivorous. Their flight is extremely rapid, and, whilst feeding, they remain poised in the air by means of the horizontal motion of their wings, which produces a humming noise, whence their common name is derived. The genus trochilus is very extensive. We have, however, only one species in the United States, the T. colubris, belonging to the subgenus mellisuga (Bris.), or those having straight bills. This well-known and splendid little bird arrives in Pennsylvania towards the end of April, and begins to build its nest early in May. This is usually fixed on the upper side of a horizontal branch, seldom above ten feet from the ground. It is hemispherical, and about an inch in diameter, lined with vegetable down, and covered externally with lichen. The female lays two eggs of a white color. The humming-bird is very fond of tubular flowers, particularly those of the trumpet vine. When he alights, he always prefers the small dead twigs of a tree or bush, where he dresses and arranges his plumage with great dexterity. His only note is a single chirp, not louder than that of a cricket. The humming-bird is very irascible, two males scarcely ever meeting without a contest ensuing. They will also attack birds of a much larger size, as wrens or king-birds, and sometimes have contests for a favorite flower with the humblebee. From the beauty of this bird, many attempts have been made to domesticate them, but unsuccessfully, though they have been kept from three to four months with attention. They are exceedingly susceptible of cold, and droop and d.e when deprived of the animating influence of the sun's rays. There is every reason to believe that insects form no inconsiderable portion of their food. They begin to retire

south in September, and, in November, take re-fuge, for the winter, in Florida. The humming-bird is three inches and a half in length, and four and a quarter irˆ extent. The whole back, upper part of the neck, sides under the wings, tail coverts, and two middle feathers of the tail,

are of a rich golden green ; the tail is forked, and, as well as the wings, of a deep brownish purple; the bill and eyes are black; but what constitutes their chief ornament, is the splendor of the feathers of the throat, which, when viewed in a proper light, rival the ruby in brilliancy. These feathers are of singular strength and texture, lying close together, like scales, and varying, when moved before the eye, from a deep black to a fiery crimson and burning orange. The female is destitute of them. The young males begin to acquire them in September. (For fuller information, we must refer to Wilson, Am. Orn. vol. 2, from which the above sketch is condensed.) That magnificent work Les Oiseaux Mouches, vividly represents most of the known species.

HU'MORAL, adj. - Fr. humeur; Ital. HU'MORIST, n. s. , humoristo ; Lat. hu—

HU'MOROUS, adj. mor. The radix of

HU'MOROUSLY, adv. (all these words is HU'MOROUSNESS, n. s. [humor, which lit-HU'MORSOME, adj. erally signifies mois—

HU'MORSOMELY, adv. ture or fluid : it i-i HU'MOR, 7i. s. & v. a. •* applied to the fluid of the human body ; and as these were formerly considered to be immediately connected with the state of temper, and the disposition of the animal spirits and moral feelings, it is figuratively used in a good and bad sense, for plea-surable feelings; jocularity; merriment; petulance ; peevishness ; a trick ; caprice, or inclination : humoral retains only a literal signification, as proceeding from humors: humorist, on ! who gratifies his humor ; has odd conceits, or peculiar passions : humorous, pleasant; jocose; full of odd images ; — also, capricious ; whimsical : humorsome, peevish ; fickle ; petulant : humor, to gratify; sooth by compliance; to indulge : the humor of a person is his present disposition or temper of mind.

By a wise and timeous inquisition the peccant humours and humorists must be discovered and purged, or cut off : mercy in such a case, in a king, is true cruelty. Bacon to Villiers.

In private, men are more bold in their own humours; tnd, in consort, men are more obnoxious to others' humoun ; therefore it is good to take both. Bacon.

0 you awake then : comeˆ away, Times be short, are made for play ; The humorous moon too will not stay : What doth make you thus delay 1

Ben Jonson.

Another thought her noble humour fed. Fairfax.

This sort of fever is comprehended under continual humoral fevers. Harvey on Consumptions.

To after age thou shall be writ the man, That with smooth air could humour best our tongue.

Milton.

Their humours are not to be won, But when they are imposed upon. Hudibrai.

This alludes to the story of the satyr Marsyas, who contended with Apollo, which I think is more humorous. Id. on Italy.

fs my friend all perfection, all virtue and discretion? Has he not humours to be endured, as well as kindness to be enjoyed ? South.

Thy humorous vein, thy pleasing folly, Lies all neglected, all forgot ;

And pensive, wavering, melancholy, Thou dreadest and hopest thou knowest not what.

Prior.

We resolve by halves, and unadvisedly ; we resolve r..shly, sillily, or humorously, upon no reasons that will hold. Calamy.

You humour me, when I am sick ; Why not when I'm splenetick ? Pope.

Good humour only teaches charms to last, Still makes new conquests, and maintains the past.

Td.

Obedience and subjection were never enjoined by God to humour the passions, lusts, and vanities, of those who are commanded to obey our governours.

Swift.

It has been humorously said, that some have fished the very jakes for papers left there by men of wit.

Id.

Our science cannot be much improved by masquerades, where the wit of both sexes is altogether taken up in continuing singular and humorsome disguises.

Id.

Children are fond of something which strikes their fancy most, and sullen and regardless of every thing else, if they are not humoured in that fancy.

Watts's Logick.

He that would learn to pass a just sentence on persons and things, must take heed of a fanciful temper of mind, and an humorous conduct in his affairs. Id.

The notion of the humorist is one that is greatly pleased, or greatly displeased, with little things ; his actions seldom directed by the reason and nature of things. Wattt.

The child had a humour which was cured by the waters of Glastonbury. Fielding.

HUMP, n. s. } Goth, and Svfcd.hump;

HUMP'BACK, n. s. > Belg. homp. The pro—

HUMP'BACKED, adj. j tuberance formed by a crooked back.

These defects were mended by matches ; the eyes were opened in the next generation, and the hump fell.

Tatler.

The chief of the family was born with a humpback and very high nose. Id.

HUMPHREY (Dr. Lawrence), a celebrated English divine of the sixteenth century, who, on the persecutions of Mary, retired, with other Protestant refugees, to Zurich. He returned on the accession of queen Elizabeth ; and was made president of Magdalen College, Oxford, dean of Gloucester, and dean of Winchester. He was an able linguist, and published, 1. De Heligi-onis Conservations et Reformatione, deque Primatu Regum, &c.

HUMPHREY (Ozias), well known as the most distinguished miniature painter of his time. He was born in 1742, and died in 1810.

HUMULUS, the hop, a genus of the pentandria order, and dicecia class of plants ; natural order fifty-third, scabrida; : MALE CAL. pentaphyllous : COR. none : FEMALE CAL. monophyllous, patent obliquely, and entire : COR. none ; styles two : SEED one within the calyx, the latter consisting of one large leaf. There is only one spe-

cies, *viz.* H. lupulus, sometimes found wild m hedges near houses and gardens, but probably not indigenous. The stalk is weak and climbing ; it creeps up the support in a spiral, ascending always from the right hand to the left. Th* stalks and the leaves are rough to the touch ; the upper leaves are heart-shaped, the lower ones divided into three lobes serrated on the edges, and grow in pairs on long foot-stalks. The male flowers grow on a distinct plant on branched peduncles ; the females on peduncles in pairs of the form of a strobilus, or cone, composed of large imbricated calyces, containing each one or two seeds. See HOP.

HUNCH, v. a. 1 Germ, husch; Teut.

HCNCH'BACKED,^'. \ fiocker. To strike or punch with the fists; to crook the back: hence the substantive means crook-backed. But I more fear Creon!

To take that hunchbacked monster in my arms,

The' excrescence of a man. Dryden's Oediput.

Thy crooked mind within hunched out thy back, And wandered in thy limbs. J)ryden

His person deformed to the highest degree, flat-nosed, and hunchbacked. L'E.ttrange.

Jack's friends began to hunch and push one another : why don't you go and cut the poor fellow down?

Arbuthnot.

The second daughter was peevish, haggard, pale, with saucer-eyes, a sharp nose, and hunchbacked.

Id, History of John Bull.

HUNDRED, o$.&«.«. } Sax. bun'o, and HUN'DREDTH, adj. S J > un'»rie&;Dut.Ao«-

derd; Goth, hund, ten ; perhaps, as Mr. Thomson conjectures, from fiaund, haunder, the hands. The number consisting of ten multiplied by ten : hundredth, the tenth part ten times told; the ordinal of a company consisting of a hundred : a hundred, a canton or division of a county, perhaps once containing a hundred manors. Old Fr. hundrede ; low Lat. hundredwn.

An hundrede thousand bodies of mankind Han rockes slain, al be they not in mind.

Chaucer. The Frankelei.net Tide.

We shall not need to use the hundredth part of that time, which themselves bestow in making invectives.

Hooker.

Imposts upon merchants do seldom good to the king's revenue ; for that that he wins in the hundred, he loseth in the shire. Bacoi.

For justice they had a bench under a tree, where Ket sat, and with him two of every hundred whence their companies had been raised : here complaints were exhibited. Hayward

One, bestowes

On pious-workes, the hundredth part, of those

Ill-gotten goods, which from the poore he seazed.

And thinkes his God in that his highly pleased.

George Withers. A hundred altars in her temple smoke,

A thousand bleeding hearts her power invoke. Dryden’s

Very few will take this proposition, that God is pleased with the doing of what he himself commands, for an innate moTa’t principle : whosoever does so, will have reason to think hundreds of propositions innate.

LocKe.

Many thousands had seen the transactions of our Saviour, and many hundred thousands received an account of them from the mouths of those who were eye-witnesses. Addieun.

HUNGARY

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If this medium is rarer within the sun’s body than at its surface, and rarer there than at the hundredth part of an inch from its body, and rarer there than at the orb of Saturn, I see no reason why the increase of density should stop. Newton.

Lands, taken from the enemy, were divided into centuries or hundreds, and distributed amongst the soldiers. Arbuthnot.

HUNDRED was anciently so called either from its containing 100 families, or from its furnishing 100 able men for the king’s wars. After king Alfred divided England into counties, and gave the govern nent of each county to a sheri these counties were divided into hundreds, of which the constable was the chief officer. The grants of hundreds were at first made by the king to particular persons : but they are not now held by grant or prescription, their jurisdiction being devolved to the county court ; a few only excepted, that have been by privilege annexed to the crown, and still remain in the nature of a franchise.

A HUNDRED COURT is only a larger court baron, being held for all the inhabitants of a particular hundred instead of a manor ; and resembling the former in all points, except that it is of a greater

jurisdiction. This is said by Sir Ed-ward Coke to have been derived out of the county court for the ease of the people, that they might have justice done them at their own doors, without any charge or loss of time : but its institution was probably coeval with that of hundreds themselves, which were formerly observed to have been introduced, though not invented, by Alfred, being derived from the policy of the ancient Germans. The centeni were the principal inhabitants of a district composed of different villages, originally in number 100, but afterwards only called by that name; and who probably gave the same denomination to the district out of which they were chosen. Tacitus, who had examined their constitution still more attentively, informs us not only of the authority of the lords, but that of the centeni, the hundredors or jury; who were taken out of the common freeholders, and had themselves a share in the determination. ‘ Eliguntur in conciliis et principes qui jura per pagos vicosque reddunt : centeni singulis, ex plebe comites, consilium simul et auctoritas ad-sunt.’ This hundred court was denominated haereda in the Gothic constitution. Bat this court, as causes are equally liable to removal from hence as from the common court baron, and by the same writs, and may also be reviewed by writ of false judgment, is therefore fallen into equal disuse with regard to the trial of actions.

HUNDSRUCK, a district of Germany, in the circle of the Upper Rhine, between the Rhine, the Moselle, and the Nahe ; formerly belonging to the elector of Treves, the elector Palatine, and the prince ; afterwards annexed to the French republic by the treaty of Luneville ; but now included in the dominions of the king of Prussia.

HUNG, the preterite and part. pass, of hang. A murderer yonder was huna in chains,

Iho sun and the wind had shrunk his veins ;

I bit off a sinew, I clipped his hair,

und brought off his rags, that danced i’ the air.

J onsen.

A wife so hung with virtues, such a freight. What mortal shoulders can support t

Dryden’t JwsenaL

On two near elms, the slackened cord I hung} Now high, now low, my Blouzelinda swung. Gay.

A room that is richly adorned, and hung round with a great variety of pictures, strikes the eye at once. W-atts.

HUNGARY, a kingdom of Europe, forming an important part of the Austrian dominions. At different periods of the history of this country this name has been applied with a very different signification. In the fourteenth and fifteenth centuries Hungary comprised part of modem Poland and European Turkey, and was divided into ten separate governments, or kingdoms, *viz.* Hungary Proper, Croatia, Sclavonia, Dalraatia, Bosnia, Bulgaria, Moldavia, Galicia, and Lodo-meria, besides xhe principality of Transylvania. Several of these provinces have long since been detached from Hungary ; but that country has still a close political and military connexion with the Austrian provinces of Sclavonia, Croatia, and Dalmatia. Our article, however, will only have reference to Hungary properly so called.

This kingdom, for such it is still termed, is of a compact heptagonal figure, its length being about 370 miles, and its general breadth about 300. It is surrounded by mountains, except on the south, where its frontier is along the Danube and the Drave. It is bounded west by part of Germany, on the north by Galicia, on the east by Transylvania and Wallachia, on the south by Turkey, Sclavonia, and Croatia. It lies between 16° 5’ and 27° 6’ E. long., and 44° 13’ and 49° 26’ N. lat., and has a territorial extent of 84,500 square miles, which is greater than England and Scotland together. Its population, including Sclavonia and Croatia, has been thus stated : —

Extent in English Square Miles.

Population

(1805.)

1. Circle this side the Danube, 23,595 2. Circle beyond the Danube, 16,896 3. Circle this side the Theisa, 15,510 4. Circle beyond the Theisa, 26,946 5. Province of Sclavonia, 3,570 6. Province of Croatia, 2,262

2,194,390 1,662,239 1,442,626 1,919,284 287,868 260,829

88,779

7,767,236

But this is the conscription list ; and excludes therefore the nobility and clergy : Blumenbach takes the population in 1 817 at 8,500,000. The circles above enumerated have superseded the old political division of Upper and Lower Hungary ; they are divided into counties, of which there are thirteen in the first circle, and eleven in each of the others.

The mountains of Hungary constitute its principal geographical peculiarity. The Carpathians form a semicircle, extending from the south-east portion of the kingdom till it meets the Danube on the western frontier : but, in the course of the circle they describe, many projecting ranges ex-tend themselves into level land. On the western side the Ca-inthians cover a considerable portion of the kingdom. The highest points in the Car-

pathian Mountains are the Lomnitzer Spitze, 8545 feet; the great Kryw an, 8218; the Caes-mark 8194 ; and the Uinacke 7597 feet above the level of the sea. The loftiest of the Carinthian range is the Terklou, elevated to 10,485 feet. To the eastward of this extend the Norischen and Rhetian Alps, the highest of whose summits within the Austrian dominions reaches the height of 14,814 feet. The greatest expanse of level land in Hungary is to the eastward of the Theisa, forming a rich plain of 20,000 square miles. Another level, called the Three Cornered Plain, is to the eastward of the Danube, beginning near Presburgh ; its base line extends 150 miles in length.

First amongst the rivers of Hungary, though it has its source out of the kingdom, is the noble Danube ; and next may be ranked the Drave, the

Marosch, the March, the White Koresch, and the Izamos. In the Carpathian range originate the Theyss, the Waag, the Gran, the Poprace, and .the Temes, which all fall into the Danube. The principal lakes are Balaton and Nieusiedl, west ; Palitsch on the south-west, and Grunsee or the Gun lake among the Carpathians. There are also several extensive marshes here, as that of the Isle of Schut on the west, and that of Saxetje on the east of the kingdom. A great part of the county of Torontal on the frontier of the Bannat is composed of marshes, overflowed by the Danube and its tributaries.

The climate among the mountains is of course bleak ; but in the south it is in general mild ; in the sandy districts extremely hot ; on the banks of the rivers and near the marshes there is much humidity : indeed it is a prevailing characteristic of the climate of the level part of Hungary. After the hottest days of sum- . mer, a copious and chilling dew falls. Rain is not, however, very frequent in the plains, through the prevalence of high winds. On the other hand, rain and hail occur frequently in the mountainous provinces. Except in the Bannat and other marshy parts, the inhabitants are healthy; but here agues and inflammatory diseases are frequent, and in some places the plica of Poland appears.

The mineral products of the mountains form an important part of the riches of Hungary. It is divided into four mining districts, *viz.* Upper and Lower Hungary, Nagy Banya, and the Ban-nat ; each having its particular court for the decision of all questions relative to the mines. In the first the chief towns are Schemnitz, Crem-niiz, New Sohl, Uj Banya, Herrengrund, and Libetho Banya. In the second most of the mines are in the county of Zyps, and the produce is chiefly copper. The district of Nagy-Banya adjoins Transylvania, and has several gold mines ; but their produce is inconsiderable. Of the Bannat district the chief town is Oravitza. The whole annual produce of these miries is about 21,000 marks (each of 8oz.) of gold; 93,000 marks (ditto) of silver; 23,000 cwt. of lead; 48,500 cwt. of copper; 41,000 cwt. of forged iron ; and 500 cwt. of zinc. Gold il occasionally found in the sand of livers, and is washed by the gypsies. Various precious stones are also discovered in the mountains ; and in

the county of Marmarosch are sometimes found small crystals of great beauty. A more substantial description of mineral wealth consists 10 salt mines, which are abundant in Hungary, particularly in the counties of Saros and Marmarosch ; and which belong exclusively to the government.

The soil of Hungary varies with its remarkable diversities of elevation. The mountains, and many tracts amongst them, are dry, sterile, and sandy, often exhibiting neither living creature, jshrub, nor tree, for many miles; yet terraces bordering on them have fine pasturage ; and the plains are of luxurious vegetation.

In the north, clay, stone, and gravel, prevail : and the ground produces at best but a scanty return for labor. In the south there are also many tracks unfit for agriculture. The extensive heaths of Debreczin and Ketszkemet are covered either with sand or the most scanty vegetation, and several other tracks are moving sands. To the north, corn is not produced in a sufficient quantity for the consumption of the inhabitants, and barley, common rye, and ikritza (a productive species of rye from Moravia), are most frequently sown ; in the south, wheat, maize, millet, and, in the marshes of the Bannat, rice. From the south, wheat is exported in considerable quantity. Oats are cultivated throughout the kingdom. Potatoes are abo raised by the Sclavonians and Germans, and pulse by the followers of the Greek church. Hemp, flax, tobacco, and saffron, are also cultivated. The climate is favorable to various kinds of fruit, but its culture is very little attended to. Agriculture indeed throughout Hungary is in an extremely backward state. The ground is ill-ploughed and ill-sown ; a bundle of sticks or branches serve for the harrow, and the roller is unknown. Enclosure, drainage, and the irrigation of meadows, are also scarcely thought of here. When it is necessary to store corn, a hole, of sufficient width to admit a man, and to let it down, is dug to a certain depth, and the ground is then scooped out, so as to form a cavern of some size. When damp is apprehended, the bottom and sides are covered with straw, after which the corn is put in, and the neck, or opening, filled with earth. The north of Hungary, on the whole, though mountainous, is better cultivated than the fertile tracks in the south.

The extent of land employed in vineyards is very considerable ; amounting, it is said, to nearly 1,000,000 acres; and the produce amounts to many hundred thousand hogsheads. But the Hungarian wines vary both in taste and strength : Tokay is the best, then come the wines of Rust, Odenburg, Menes, St. George, Buda, and Erlau. Hungary also abounds in wood : resinous trees are common in the north ; in the south oak is plentiful. Here again, however, is great diversity in the different parts of the kingdom. The forest of Rakony, m the western counties of Veszprim and Szala, is more than seventy miles in length ; and the counties of Tolna, Baranya and Schumeg, in the west, are almost covered with forests; while a large track, extending from Pest to Debreczin on one side, and on the other into the Bannat, is totally destitute of wood. In

some piaces are immense woods of plum-trees : the inhabitants distil from the fruit a liquor called slivavicza.

Grellman makes the extent of land in Hungary 39,329,000 jochs, which are nearly equal to an English acre. Of this 23,905,126 jochs only are in cultivation ; the remainder is sandy deserts, lakes, morasses, or mountains. The productive lands are thus divided : — 4,897,218 arable, 638,767 gardens, 911,176 vineyards, 2,129,225 meadows, 5,536,000 pastures, 850,000 ponds, and 8,940,740 woods.

Breeding cattle is a very important branch of the rural economy. The horses are active and hardy, but small, and inferior to those of most other parts of the Austrian empire. They have, however, improved of late years. The whole number of them does not exceed 480,000. The horned cattle are much valued in other countries. The steppes between Debretzen, Temeswar, Neusatz, and Pest, are their native homes, and here their number has been taken at 886,900 oxen, and 1,508,100 cows, which, by sale to the surrounding countries, have produced annually nearly £500,000 sterling. The sheep are stated to be upwards of 8,000,000. There are prodigious flocks between the Darube and the Theisa. The wool is coarse, and the owners reckon on the cheese, rnilk, and flesh, more than the fleeces. In Western Hungary the flocks have been much improved of late years, by crosses with the Merino and the sheep of Padua. Wool to the value of £500,000 is here exported. Swine are reared in abundance ; there are yearly from 200,000 to 250,000 exported. Goose feathers are also largely exported by the Jews; and in the Bannat, where the mulberry-tree flourishes, the breeding of silkworms has been a good deal attended to of late.

Hungary is not a manufacturing country, such occupations being greatly disdained, and except for the preparation, in the first stage, of its minerals, tobacco, or potash, or such articles as essential oils from the resinous trees, or leather from the hide, there are very few establishments worth notice. At Sassin, in the north-west, is a cotton manufacture, which in 1800 gave employment to 20,000 persons ; but is now in a neglected state ; and at Caschau, in the north, there is a

manufacture of coarse cloth ; but the only place where fine cloth is prepared is Oedenburg. In the large towns indeed there are workmen in various departments, but few establishments of any importance, and manufactured goods are therefore imported in large quantities, from the other Austrian states. The commerce of the country is fettered by no internal taxes, a circumstance of which the Hungarians are very proud, but the Austrian government has environed it with custom houses, where a duty of 1£- percent, is gathered on all goods that pass into it from the other Austrian states. WTe may thus see that the encouragement of manufactures within the kingdom, will never, voluntarily, become the po-licy of that government. The external commerce of Hungary is carried on principally with Silesia, Poland, and the North of Italy : the first two drawing their wine, and the latte? lar?p g.'ipplies of corn from hence. Fmme is the only good poit of the kingdom : while the central

point of all its commerce is Pest, which has four great fairs annually that regulate in a great degree the prices for the year throughout the kingdom. Other places which have considerable trade are Presburg, Raab, Roman, and Oedenburg toward the German dominions of Austria; Kaschau, Eperies, and Leutschau towards Galicia ; Uebreczin, Ezegedin, and Temeswar to-ward Moldavia and Wallachia ; and Semlin and Neutsatz toward Turkey.

The nobles, though differing in titles and rank, have all equal privileges ; that is, the Magnates having personally a seat and vote in the diet ; and the other nobles their representatives. The higher clergy are considered as nobles ; and the nobility alone can possess free lands, or those enjoying the jus dominale, and they are exempt from taxes, tithes, and the quartering of soldiers j but, on the other hand, they are bound to perform personal military service, when the diet decrees the levy en masse.

The citizens, or burghers, are the inhabitants of those cities which own no superior lord under the monarch. They have similar privileges to the nobility, by which they are exempted from taxes and tithes, and from the quarterings of the military; and their deputies have seats in the diet. They are also governed by their own magistrates. They cannot, however, hold estates out of their cities, nor institute a suit against the nobles, except in the name of the corporation to which they belong.

The peasants are slaves generally, with a greater or less degree of

servitude ; but some few are qualified colonists, and free. The lot of this class has been of late years much improved. They are allowed to acquire property, to leave their estates to their heirs, and to become burghers, if they can do so. They are still, however, incapable of commencing suits against either the nobility or burghers. The majority of the Hungarians are Catholics, but other sects are established upon nearly an equality, and have their independent revenues and discipline. In 1805 the Catholics, including the Greek church and Armenians who had united with them, were 4,647,832. The independent Greek church were 1,161,138; the Calvinists, or Reformed, 1,002,490; the Lutherans 624,776 ; and the Jews 75,128 in number. The Catholic clergy consist of three archbishops, seventeen diocesan and nineteen titular bishops ; besides abbots, priors, &c. The Greek church has one archbishop, seven bishops, eighteen deans, several abbots, and nearly 3000 priests. The Reformed have, in four superintendencies, 1300 ministers; and the Lutherans, in four superintendencies, 480 pastors. Each of the sects have their separate institutions, also, for educating those of their confession. The Catholics one university, five academies, one lyceum, two philosophical institutes, fifty-five gymnasia, six grammar-schools, and nine schools for preparing teachers for the villages, whose number is 2690. The Catholic Greeks have 380 schools, and the same number of teachers. The independent Greeks 1230 schools, and 2 gymnasia. The reformed 3 colleges^ gymnasia, and 1600 schools. The Lutherans 1 lyceum, 1 college, 10 gymnasia, and 630 schools. Pop. of Hungary in 1825, 8,895,627.

The constitution of Hungary is a mixed monarchy, in which the king, as the great executive magistrate, has ample prerogatives. He appoints to all the archbishoprics, bishoprics, and high ecclesiastical offices of the Catholic church, without any interference of the pope, though these dignitaries do not enter on their functions till confirmed in them at Rome. They cannot bequeath their property without the royal consent; and, if they die intestate, the crown is heir. The king has the farther power of suppressing monasteries, or religious orders, entirely.

He is also regarded as the protector of the Protestants in their privileges. The executive government is administered by the Vienna chancery, in connexion with the statthalterey, or council of state, at Buda ; and subordinate to it are the comitatus, or county meetings, held under a lord lieutenant. The great officers of state are, . The palatine, who is nominated by the diet out of four candidates proposed by the king, and whose office is for life ; his powers as protector of the throne during a minority, and as occasional mediator between the king and the diet, are very great. 2. The locum tenens regius, or viceroy, who is now frequently the same per-son as the palatine. 3. The judex curiae regiae, a law officer of great influence. 4. The bannus, or governor of Croatia, Sclavonia, and Dalmatia. 5. The tavernicus, formerly director of the royal revenue, but now president of the sedes taverni-calis, or court of exchequer. These, and the inferior officers of state, such as the chamberlains, &c., are called barons of the kingdom, and they rank among the maginates.

The revenue is derived from the regalia, enjoyed by the crown in its own right, and the contributions or taxes granted by the diet. The regalia are, the crown lands; a monopoly of salt; the coinage; mines; tolls on imports and exports ; fines and penalties ; the income of the vacant bishoprics; the taxes paid by the Jews and the free towns; 5 per cent, on the salaries of certain pensions of office ; the contributions of bishoprics and abbeys towards repairing of fortresses ; the post-office ; the lotteries ; monti di pieta; and some others. The taxes voted periodically by the diet are on cattle, land, trades, the poll-tax, &c. For the collection of these, the country is divided into 621 opforten, or petty districts; and the produce of this part of the revenue is about £500,000; its total produce between £3,000,000 and £4,000,000 sterling, or nearly one-third of the whole revenue of the Austrian empire.

The military force of Hungary has also always been very important to the empire: it consists of twelve regiments of infantry of 3857 men each, and ten complete hussar regiments of 1698 men each, making together 63,364 regulars, recruited from time to time among the peasantry, and much increased in time of war, or when what is termed the insurrectio is called forth. In 1797 this irregular force was 18,000 cavalry and 35,000 infantry; in 1800 it was 11,000 horse and 26,000 foot; and in 1809, when the national spirit was fully roused, 18,000 horse and 21,000 foot. On the boundaries of the Turkish empire is a military colony which hold the lands they cultivate upon the terms of being

always ready for active service when a war breaks out with that power. They are all regi • mented, and have been drilled.

Though Hungary has a language of its own, it is not generally spoken, nor supposed to be understood by more than one-third of the people. Until within a very late period the only written language was Latin, and it is still the most com-mon medium of communication. But when Maria Theresa formed her Hungarian guards, ? number of young men of noble families weie drawn to Vienna, and taught to feel the inferiority of their nativ« country in not possessing a national literature. This stimulated them to the cultivation of the vernacular tongue, which was further promoted by the attempt of the emperor Joseph to introduce the German into their public transactions ; and since that period the study of this language has produced some good poets and miscellaneous writers.

From the period of the settlement of the Mag-yars in this country, in the ninth century, we find it for a length of time governed by a duke, the elected head of various independent principalities. One of the last of these dukes was Geysa: who, becoming a proselyte to Cnris-tianity, was baptised ; after which he resigned the government to his son Stephen, who took the title of king, A. D. 1000. The disposal of the crown was now disputed between the Turkish and German emperors for nearly 200 years : buc after 1527, when Ferdinand, archduke of Austria, was advanced to the throne, the Austrians found means to influence the elections in such a manner, as to keep the crown in their family till 1687. when it was settled hereditarily on their heirs-inale ; and now, in consequence of an act of the diet of Presburg in 1723, in case of the failure of heirs-male, it is to descend to females.

The present division of the kingdom into counties was introduced by Bela III., who died in 1196. His son Andrew II., infected with the rage of the crusades, allowed the nobles to deprive him of a considerable part of his prerogative ; and the privileges which they thus obtained were incorporated under his successor, in 1222, into what is called the Golden Bull. Mary, granddaughter of Bela IV., having married a prince of the royal family of France, the house of Anjou derived from her their claims to the crown of Hungary. Accordingly, a brother of Louis IX. of France, named Charles, was crowned king of Hungary in 1310, and raised that country to its highest splendor. Having married a sister of Casimir, king of Poland, one of his sons succeeded to that crown ; but the successors of this great prince were far inferior to him in talent : and for a century the history of Hungary presents little else than a series of disturbances. At last the archduke of Austria, having married the only daughter of king Sigismund, succeeded to the crown in 1437 ;

and the house of Austria has ever since reigned in Hungary.

Of the manners and customs of this interesting people we cannot present a more faithful summary than from the pen of Dr. Bright.

The Hungarians, according to this writer, exhibit the martial spirit of their Sclavonian ances tors, and are, in all the ranks above the peasant ry, very jealous of their peculiar privileges.

They are tall and well made ; and fond of ath-eti<' oxercises. The dress of the higher classes consists generally of a fur cap, a close coat, girded with a sash, and covered with a mantle or cloak; this gives them an air of dignity, while the practice of not shaving the upper lip adds to it a sort of military effect. The females are in general handsome, and dress in dark colors with long sleeves.

The peasant appears in general void of ' all stimulus to invention, all excitement to extraordinary exertion. No one has proceeded in the arts of life and civilisation a step farther than his neighbour. When you have seen one you have seen all. From the same little hat covered with straw, falls the same matted long hlack hair, negligently plaited, or tied in knots ; and over the same dirty jacket and trowsers is wrapped on each a cloak of coarse woollen cloth, or sheep-skin, still retaining its wool. Whether it be winter or summer, week-day or sabbath, the Sclavoriian of this district never lays aside his cloak, or is seen but in heavy boots. Their instruments of agriculture are throughout the same, and in all their habitations is observed a perfect uniformity of design. A wide muddy road separates two rows of cottages, which constitute a village. From amongst them there is no possibility of selecting the best or the worst ; they are absolutely uniform. In some villages the cottages present their ends, in others their sides, to the road ; but there is seldom this variety in the same village. The interior of the cottage is generally divided into three small rooms on the ground floor, and a little space in the roof destined for lumber. The roof is commonly covered with a very thick thatch, the walls are whitewashed, and pierced towards the road by two small

windows. The cottages are usually placed a few yards distant from each other. The intervening space defended by a rail and gate, or a hedge of wickerwork towards the road, forms the farm-yard, which runs back some way, and contains a shed or out-house for the cattle. Such is the outward appearance of the peasant and his habitation.'

The Austrian government has, as we have stated, mitigated the lot of the peasants in some degree : this good work was commenced by Maria Theresa, who fixed the quantity of land upon each estate (called a session) which a peasant should possess, and the services Ye should render his lord in return. The peasants are not absolutely fixed to the soil, but may be dismissed if the superior finds cause ; nor does the son always succeed the father, though this is usual ; nor has the peasant any absolute claim to a whole session, but, if one-half or one third is awarded to him by the lord, only that proportion of the stipulated service can be required.

The services required of the father of a family, for the whole session, are 104 days of labor during the year, if he work without cattle, or fifty-two days if he bring two horses or oxen, or four, if necessary, with ploughs and carts. In this work he may either employ himself, or, if he prefer and can afford it, may send a servant. Besides this, he must give four fowls and twelve eggs, and one pfund and a half of butter ; and every thirty peasants must give one calf yearly. '

He must also pay a florin for his house — must cut and bring home a klafter of wood — must spin in the family six pfund of wool or hemp, provided by the landlord — and, among four pea sants, the proprietor claims what is called a long journey, that is, they must transport twenty centners, each 100 Ibs. French weight, the distance of two days' journey out and home ; and, besides all this, they must pay one-tenth of all their products to the church, and one-ninth to the lord.

Dr. Bright gives the following description of the interior of a Hungarian cottage : — ' The door opens in the side of the house into the middle room or kitchen, in which is an oven constructed of clay, well calculated for baking bread, and various implements for household purposes, which generally occupy this apartment fully. On each side of the room is a door, communicating on one hand with the family dormitory, in which are the two windows that look into the road. This chamber is usually small, but well arranged ; the beds in good order, piled upon each other to be spread out on the floor at night, and the walls covered with a multiplicity of pictures and images

of our Saviour, together with dishes, plates, and vessels of coarse earthenware. The other door from the kitchen leads to the store-room, the repository of a great part of the peasant's riches, consisting of bags of grain, of various kinds, both for consumption and for seed, bladders of tallow, sausages, and other articles of provision, in quantities which would astonish us to find in an English cottage. We must, however, keep in mind, that the harvest of the Hungarian peasant anticipates the income of the whole year; and, from the circumstances in which he is placed, he should rather be compared with our farmer than our laborer. The yards or folds between the houses are usually much neglected, and are the dirty receptacles of a thousand uncleanly objects. Light carts and ploughs, with which the owner performs his stated labor, his meagre cattle, a loose rudely formed heap of hay, and half a dozen ragged children, stand there in mixed confusion, over which three or four noble dogs, of a peculiar breed, resembling in some degree the Newfoundland dog, keep faithful watch.'

For the following delineation of the people assembled at a Hungarian fair, by a native writer, we are indebted to the industry of Mr. Myers, and his valuable Geography : —

' The manner in which the Hungarian peasant conducts himself in the sale of his produce, is, when compared to that of the Sclavonian, the German, and the Jew, with whom he is surrounded, remarkable and interesting. The Sclavonian enlarges on the excellence and cheapness of his ware, with palpable and suspicious eagerness. The German dresses out his merchandise, turns it from one side to the other, and presents himself to the purchasers with a commanding self-sufficiency The Jew swears with heart and soul that he will injure no man — and the Raitzer is stern, silent, and unaccommodating ; but, on that account, his characteristic and fiery eye pleads with the greater eloquence. The Hungarian alone keeps himself perfectly passivfa in his dealings. He allows his goods to be inspected • answers shortly and directly to the

question, and attempts not to impose either oy words or artifice. You

perceive by his embarrassment that he is unaccustomed to low arts, his good temper evidently counteracts the feeling of poverty, which is therefore borne with ease and content. Shirt and skin, and little else, are to be seen, except his long hair, which hangs loosely over his shoulders ; and all these are scarcely to be distinguished from each other, so disguised are they by filth and negligence. The appearance .n drizzling weather of the Konigs-strass, which is the district of the Jews, is little more attractive -.han the quarter frequented by the peasants. \Vhoever feels inclined to study the character of .his people will now find an ample opportunity. Here they swarm together like bees, fix themselves on the passenger who appears likely to trade with them, or traffic amongst themselves with affected grimaces and assumed appearance of activity; while they look with their eyes turned both towards the right and towards the left, on a hundred objects at a time.'

Sax. {mnjeri ; Swed. hunger ; Belg. hanger. De-sire of food ; the pain felt from fasting ; figuratively, any violent desire: J hungerbitten, pain-

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HUN'GER, n. s. & v. n.

HUN'GERBIT, adj.

HUN'GERBITTEN, adj.

HUN'GERLY, adj. & adv.

HUN'GERSTARVED, adj.

HUN'GRED, adj.

HUN'GRILY, adv.

HUN'GRY, adj.

ed, or weakened by hunger: hungerly, with keen appetite : hungry, in a figurative sense, is, not fat ; not prolific ; fruitful, or more disposed to draw from other substances than to impart to them.

Thou shalt serve thine enemies in hunger and in thirst Deut. xxviii. 48.

His strength shall he hungerbitten. Job xviii. 12.

Au'd in his herte anon, ther fell a thought, That they for hunger wolden do him dien ; Alas ! quod he, alas that I was wrought.

Chaucer. The Monkes Tale, Then came the autumne, all in yellow clad, As though he ioyd in his plentious store, Laden with fruits that made him laugh, full glad That he had banisht hunger, which tofore Had by the belly oft him pinched sore.

Spenser. Faerie Queene. Dost thou so hunger for my empty chair That thou will needs invest the* with my honours, Before thy hour be ripe? O, foolish youth, Thou seek'st the greatness that will overwhelm

thee, Stay but a little. Shakspeare. Henry IV.

That face of his the hungry cannibals Would not have touched, would not have stained with blood. Shakspeare.

My more having, would be as a sauce To make me hunger more. Shakspeare. Macbeth.

All my followers to the eager foe Turn back, and fly like ships before the wind, Or lambs pursued by hungerstarved wolves.

Shakspeare. His beard

Grew thin and hungerly, and seemed to ask His sops as he was drinking. Id.

They are all but stomachs, and we all but food j They eat as hungerly, and, when they're full, They belch us. Id.

You have saved my longing, and I feed Most hungerly on your sight. Id.

Odours do in a small degree nourish, and we see men an hungered love to smell hot bread. Bacon.

The more fat water will bear soap best ; for the hungry water doth kill its unctuous nature. Id.

Widely they gape, and to the eye they roar, As if they hungered for the food they bore.

Cowley.

Yea, povertie and hunger did produce, The best inventions, and, of chiefest use.

G. Withers. content me,

And from the sting of famine fear no harm, Nor mind it, fed with better thoughts that feed Me hung'ring more to do my Father's will.

Milton. Thyself

Bred up in poverty and straits at home j Lost in a desert here, and hungerbit. Id.

And when your loose desires once get dominion, No hungry churl feeds coarser at a feast : ˆvery rank fool goes down. Otway't Orphan.

Thus much to the kind rural gods we owe, Who pitied suffering mortals long ago j When on harsh acorns hungrily they fed, And gave e'm nicer palates, better bread.

Dryden. For hunger of my gold I die. Id.

As to some holy house the afflicted came, The hunger starved, the naked, aad the lame, Want and diseases, fled before her name. Id,

The subacid part of the animal spirits, being cast off by the lower nerves upon the coats of the stomach, vellicates the fibres, and thereby produces the sense we call hunger. Grew.

But when the sun displays his glorious beams, And shallow rivers flow with silver streams, Then the deceit the scaly breed survey, Bask in the sun, and look into the day ; You now a more delusive art must try And tempt their hunger with a curious fly

Gay's Rural Sportt.

Something viscous, fat, and oily, remaining in the stomach, destroys the sensation of hunger.

Arbuthnot on Aliments.

She knew that the best feelings must have victual. And that a shipwrecked youth would hungry be ; Besides being less in love she yawned a little, And felt her veins chilled by the neighbouring

sea; And so she cooked their breakfast to a tittle.

Byron. Don Juan.

HUNGER is occasioned by long abstinence from food when the body is in health. See ABSTINENCE. In famine life may be protracted, with less misery, by a moderate allowance of water. For the acrimony and putrefaction of the humors are obviated by such dilution, the small vessels are kept permeable, and the lungs are furnished with that moisture which is essential to the performance of their functions. Redi, who made many experiments to ascertain the effects of fasting on fowls, observed that none were able to support life beyond the ninth day to whom drink was denied; whereas one indulged with water lived more than twenty days. Hippocrates has observed, that children are more afi'ected by abstinence than young persons ; these more than the middle-aged; and the middle-aged more than old men. The power to endure famine, however, must depend no less upon the state of health and strength than on the age of the sufferer.

To those who by their occupations are exposed to such dreadful calamities, it is of serious importance to be instructed in the means of al-

leviating them. The American Indians are said to u:»e a composition of the juice of tobacco and the shells of snails, cockles, and oysters, calcined, •whenever they undertake a long journey, and are likely to be destitute of provisions. It is probable the shells are not burnt into quicklime, but only so as to destroy their tenacity, and to render them fit for levigation. The mass is dried and formed into pills, of a proper size to be held between the gum and lip, which, being gradually dissolved and swallowed, obtund the sensations both of hunger and of thirst. Tobacco, by its narcotic quality, seems weh adapted to counteract the uneasy impressions which the gastric juice makes on the nerves of the stomach when it is empty ; and the combination of testaceous powders with it may terjd to correct the secretion that is supposed to be the chief agent in digestion, and which, if not acid, is always united with acidity. To prevent the calamity of famine, at sea, it has been proposed by Dr. Lind, that the powder of salep should

constitute part of the provisions of every ship's company. This powder and portable soup, dissolved in boiling water, form a rich thick jelly ; and an ounce of each of these articles furnishes one day's subsistence to a healthy full-grown man. Indeed, from Dr. Percival's experiments, it appears that salep contains more nutritious matter, in proportion to its bulk, than any other vegetable production now used as food. The following composition is greatly extolled by Avicenna, the celebrated Arabian physician : — Take sweet almonds and beef suet, of each 1 Ib. ; of the oil of violets 2 oz. : and of the roots of marsh mallows 1 oz. : bray these ingredients together in a mortar, and form the mass into boluses, about the size of a common nut.' Gum Arabic might be a good substitute for salep, in the composition already recommended; and, as it gives such firmness to the mass as to require manducation, the saliva, by these means separated and carried into the stomach, would further contribute to assuage the sensations both of hunger and of thirst.

With respect to the cause of hunger, it has been, by turns, attributed to the direct impulse of the vital principle, to the frictions-of the sides of the stomach against each other, to the dragging of the liver upon the diaphragm, to the action of bile upon the stomach, to the acrimony and acidity of the gastric juice, to fatigue of the contracted fibres of the stomach, to compression of the nerves of this viscus, &c. &c.

Hunger arises, like all other internal sensations, from the action of the nervous system ; it has no other seat than this system itself, and no other causes than the general laws of organisation. What very well proves the truth of this assertion is, that it sometimes continues though the stomach is filled with food ; that it cannot be produced though (he stomach has been some time empty ; lastly, that it is so subject to habit as to cease spontaneously after the habitual hour of repast is over. This is true not only of the feeling which takes place in the region of the stomach, but also of the general weakness that accompanies it, and which, consequently, cannot be considered as real, at least ia the first instant in which it is manifested

In attempting to recover those who ha/e suffered from famine, great circumspection i» required. Warmth, cordials, and food, are the means to be employed; and the«e may prove too powerful in their operation, if not administered with judgment. For the body, by long fasting, is reduced to a state of more than infantile debi lity ; the minuter vessels of the brain, and of the other organs, collapse for want of fluids to

distend them ; the stomach and intestines shrink ia their capacity ; and the heart languidly vibrates, having scarcely sufficient energy to propel the scanty current of blood. Under such circumstances a proper application of heat seems an essential measure, and may be effected by placing on each side a healthy man in contact with the patient. Pediluvia or fomentations may also be used with advantage. The temperature of these should be lower than that of the human body, and gradually increased according to the effects of their stimulus. New milk, weak broth, or water gruel, ought to be employed both for the one and the other; as nutriment may be conveyed into the system this way, by passages probably the most pervious in a state of fasting, if not too long protracted. Wine whey will answer a good purpose, and afford an easy and pleasant nourishment. When the stomach has been a little strengthened an egg may be mixed with the whey, or administered under some other agreeable form. The yolk of one was, to Cornaro, sufficient for a meal ; and the narrative of this noble Venetian, in whom a fever was excited by the addition of only two ounces of food to his daily allowance, shows, that the return to a full diet should be conducted with great caution, and by slow gradations.

HUNGERFORD, a market town of Berkshire, seated on the Rennet, in a low and watery soil. It is a great thoroughfare in the Bath and Bristol road, sixty-four miles from London ; and was formerly called Ingleford Charnham Street. The constable of this town, who is chosen annually, is lord of the manor, which he holds immediately of the crown. They have a horn here which holds about a quart, and appears by an inscription on it to have been given by John of Gaunt, together with a grant of the royal fishery, in a part of the river which abounds with good trout and crawfish. Here is a market on Wednesday, and a fair in August.

HUNINGUE,or HuNiNGUEN,a small, and not long since a very strong, town of the department of the Upper Rhine ˆAlsace, Prance), the chief place of a canton, in the arrondissement of Altkirch. It is a post town, and contains about 1000 inhabitants. This town is very advantageously situated on the left bank of the Rhine, near the frontiers of Switzerland, about a mile and a half from Bale. It was dismantled in 1815. by order of the allied powers, and is now comparatively a heap of ruins : the inhabitants, discouraged by the injustice with which they regard their town as having been treated, have to a great extent abandoned it. The houses, which were burned and demolished during the siege, still re-main in the same state as they were left by that te:rible event. The last days previous to the destruction of Huninguen were marked by. one of

the most astonishing deeds of arms (ˆsay the French) that has been witnessed in our age, so fertile in transactions of this kind. ‘Blockaded by 25,000 Austrians, its feeble garrison consisting of 140 men, united with a few of the inhabitants, defended the place with the greatest courage. It was not until twelve days siege, and after having lost half of its defenders, that it made an honorable capitulation, by which the garrison was allowed to retire to the army of the Loire. The next day a platoon of infantry, two platoons of artillery, and five gendarmes, headed by general Barbaregre, with the officers of his staff, and followed by the wounded, came out of the place, with drums beating, in the presence of the enemy’s army and an immense crowd of spectators, astonished that so feeble a company, which did not comprise more than fifty effective men, could have made so extraordinary a defence, and treated on equal terms with an army of 25,000.’ Huninguen is twenty-one miles east of Altkirch, and twenty-seven south-east of Mulhausen.

HUNKS, n. s. Isl. hunsker, sordid. A covetous sordid wretch; a miser; a curmudgeon.

She has a husband, a jealous, covetous, old hunks.

Dryden.

The old hunks was well served, to be tricked out of a whole hog for the securing of his puddings.

L’Estrange.

Irns has given all the intimations of being a close liunki, worth money. Addison.

HUNNIADES (John Corvinus), waywode of Transylvania, a general of the Hungarian armies, who was the terror of the Turks, and repeatedly defeated them under Amurath II. and Mahomet IT. He forced both these bloody conquerors to raise the siege of Belgrade; but died, to the

great grief of all Christendom, in 1456. See CON-STANTINOPLE,

HUNNS, or HUNS, an ancient race, who formerly inhabited that part of Sarmatia bordering on the Palus Maeotis and the Tanais, the ancient boundary between Europe and Asia. Their country, as described by Procopius, lay north of Mount Caucasus, which, extending from the Euxine to the Caspian Seas, parts Asiatic Sarmatia from Colchis, Iberia, and Albania; lying on the isthmus between the two seas. Here they resided unknown to other nations, and themselves ignorant of other countries, till the year 376. At this time a hind pursued by the hunters, or, according to some authors, an ox stung by a gad-fly, having passed the marsh, was followed by some Hunns to the other side, where they discovered a country much more agreeable than their own. On their return, having acquainted their countrymen with what they had seen, the whole nation passed the marsh, and falling upon the Alans, who dwelt on the banks of the Tanais, almost exterminated them. They next fell upon the Ostrogoths, whom they drove out of their country, and forced to retire to the plains between the Borysthenes and the Tanais, now known by the name of Podolea. Then, attacking the Visigoths, they obliged them to shelter themselves in the most mountainous parts of their country ; till at last the Gothic nations, finding it impossible to withstand such an inundation of barbarians, obtained leave from the emperor Valens to settle

in Thrace. The Hunns thus became masters of all the country between the Tanais and Danube in 376, where they continued quietly till 388, when great numbers of them were taken into the pay of Theodosius I. The} frequently passed the Danube, committing the greatest ravages in the western empire : sometimes they fell upon the eastern provinces, where they put all to fire and sword. They were often defeated and repulsed by the Romans, but the empire was now too weak to subdue or prevent them from making incursions ; so that they continued to make daily encroachments, and became every day more formidable than before. In 441 the Hunns, under Attila, threatened the westerr empire with total destruction. This monarch, having made himself master of all the northern countries, from the confines of Persia to the banks of the Rhine, invaded Maesia, Thrace, and Illyricum ; and the emperor, not thinking himself safe in Constantinople, withdrew into Asia. Attila then attacked Gaul, where he destroyed several cities, massacring the inhabitants. At last he was driven out by Aetius the Roman general and Theodoric king of the Goths, and could never afterwards make any progress. About A* D. 452, or 453, Attila died, and his kingdom was split into a number of

small states by his numerous children, who waged perpetual war with each other. The Hunns then ceased to be formidable, and became daily less able to cope with the other barbarous nations whom Attila had kept in subjection. Still, however, their dominion was considerable; and in the time of Charles the Great they were masters of Transylvania, Walachia, Servia, Carniola, Carinthia, and the greater part of Austria, together with Bosnia, Sclavonia, and that part of Hungary which lies beyond the Danube. In 776, while Charles was in Saxony, two princts of the Hunns, Caganus and Juganus, sent ambassadors to him, requesting an alliance with him. Charles received them with extraordinary marks of friendship, and readily complied with their request. Howevei, they entered, not long after, into an alliance with Taffila of Bavaria, who had revolted from Charles. Accordingly Charles, having assembled a very numerous army, divided it into two bodies, one of which he commanded himself, and the other he committed to the care of his generals. The two armies entered the country of the Hunns at different places, ravaged their country far and near, burnt their villages, and took all their strong holds. This he continued for eight years, till the people were almost totally extirpated ; nor did the Hunns ever afterwards recover themselves, or appear as a distinct na-tion. *

The Hunns according to Marcellinus were a very savage and barbarous nation. They begin to practise their cruelty, says Jornandes, upon their own children, the very first day they come into the world, cutting and mangling the cheeks of their males, to prevent the growth of hair, and to strike terror into the enemy with their countenances, thus deformed and covered with scars. Their food was roots and raw meat, they being quite unacquainted with the use of fire, and having no houses, nor even huts ; but living in the woods, and on the mountains, where,

from their infancy, they were inured to hunger, thirst, and all kinds of

hardships ; nay, they had such an aversion to houses, which they called the sepulchres for the living, that, when they went into other countries, they could hardly be prevailed upon to come within the walls of any house, not thinking themselves safe. They used even to eat and sleep on horseback, scarce ever dismounting ; which induced Zosimus to assert that the Hunns could not walk. Day and night were indifferent to them as to buying, selling, eating, and drinking. They had no law, nor religion; but complied with their inclinations, without the least restraint. In war they began the battle with great fury, and a hideous noise : if they met with a vigorous opposition, their fury abated after the first onset ; and, when once put into disorder, they never rallied, but fled in the utmost confusion. They were quite unacquainted with the art of besieging towns ; and never attacked an enemy's camp. They were a faithless nation, and thought themselves no longer bound by the most solemn treaties than they found their advantage in observing them. Hence we often find them breaking into the Roman empire, in defiance of the most solemn engagements. Several corps of Hunns, after their coming into Europe, served in the Roman armies against the Goths and other barbarous nations ; nay, they were ready, for hire, to fight against each other.

HTTNNS, NEPHTHALITE, or the White Hunns, inhabited a rich country, bordering on the north of Persia, and a considerable distance from the Sarmatian or Scythian Hunns above described, with whom they had no intercourse nor the least resemblance either in their persons or manners. They were a powerful nation, and often served against the Romans in the Persian armies ; but, in the reign of the emperor Zeno, being provoked by Perozes king of Persia laying claim to part of their country, they defeated the Persians in two pitched battles, slew their king, overran all Persia, and held it in subjection for two years, obliging Cabades, the son and successor of Perozes, to pay them a yearly tribute. These Hunns did not wander, like the others, from place to place; but, contented with their own country, which supplied them with all necessaries, they lived under a regular government, subject to one prince, and seldom made in-oads, unless provoked, into either the Persian or Roman territories. They lived according to their own laws, and dealt uprightly with one another, as well as with the neighbouring people. Each of their great men used to choose twenty or more companions to enjoy with him his wealth, and partake of all his diversions; but, upon his decease, they were all buried with him in the same grave. The Nephthalites were, however, a far more civilised nation than the Scythian Hunns, who, breaking into the empire, filled most of the provinces of Europe with blood and slaughter.

HUNT, v.a., v. n., & n. s. “| Sax. buntian, HUN’TER, n. s. \ from jmndi >, a

HUN’TING-HORN, n. s. I dog. • The lead-HUN’TRESS, n. s. j ing idea in this

HUN’TSMAN, n. s. \ word is searching

HUNTS’MANSHIP, n. s. J after; and in the

strictest sense foi objects not within sight : as to chase wild animals ; to pursue ; search for ; direct, or manage hounds ; to follow the chase • hunt is a pack of hounds ; a chase ; a pursuit •, hunter, either the individuals who are engaged in the chase, or the dog that scents the game : hunting-horn, a bugle : huntress, a woman that follows the chase : huntsman, one who delights in the chase, or the servant who manages it : huntsmanship, the qualifications of a hunter.

Wilt thou hunt the prey for the lion, or fill the appetite of the young lions ? Job xxxviii. 39. Evil shall hunt the violent man to overthrow him.

Ptalm cxl.

Within a lodge out of the way, Beside a well in a forest, Where after hunting I toke rest, Nature and kind so in me wrought, That halfe on slepe they me ybrought.

Chaucer’s Dreame.

Methought, I herde an hunter blowe T’essay his gret home.

Chaucer. Bake of the Duchesse. And therwithall Diane gan appeare With bowe in hond right as an hvnteresse.

Id. The Knightes Tale.

Not certainly affirming any thing, but by conferring of times and monuments, I do hunt out a probability. Spenser

Like as a huntsman, after weary chace, Seeing the game escape from him away, Sits down to rest him. Id. Sonnet*.

And thou, thrice crowned queen of night, survey With thy chaste eye, from thy pale sphere above, Thy huntress’ name, that my full life doth

sway.

Shakspeare.

The hunt is up, the morn is bright and gray ; The fields are fragrant, and the woods are green.

Id.

The man that once did sell the lion's skin, While the beast lived, was killed in hunting him.

la.

I've heard myself proclaimed ; And by the happy hollow of a tree, Escaped the hunt. Id. King Lear.

Of dogs, the valued file Distinguishes the swift, the slow, the subtle, The housekeeper, the hunter. Id. Macbeth.

At court your fellows every daj Give the art of rhiming, huntsmanship, or play.

Donne.

The heart strikes five hundred sorts of pulses in an hour, and is hunted into such continual palpitations, through anxiety, that fain would it break.

Harvey on Consumptions.

Down irom a hill the beast that reigns in woods, First hunter then, pursued a gentle brace, Goodliest of all the forest, hart and hind. Milton.

Shall I call

Antiquity from the old schools of Greece, To testify the ˆrms of chastity ? Hence had the huntress Dian her dread bow, Fair silver-shafted queen, for ever chaste. Id.

Such game, whilst yet the world was new, The mighty Nimrod did pursue : What huntsman of our feeble race, Or dogs, dare such a monster chace ? Waller.

The common hunt, though from their rage restrained

By sovereign power, her company disdained, Grinned as they passed.

Dryden. Hind and Panther.

HUN

HUN

Another** n-irars the unhappy hunter bore, Glut'mg bis lather's eyes with guiltless gore.

Id. jEneid.

Appiv this moral rather to the huntsman, that managed tne chace, than to the master. L'Estrange.

One followed study and knowledge, and another hawking and hunting. Locke.

Very much of kin to this is the hunting after arguments to make good one side of a question, and wholly to neglect and refuse those which favor the other side. Id.

This was the arms or device of our old Roman fumten ; a passage of Manilius lets us know the pagan hunter* had Meleager for their patron.

Addison.

He hunti a pack of dogs better than any, aud is famous for finding hares. Id.

We should single every criminal out of the herd, and hunt him down, however formidable and overgrown ; and, on the contrary, shelter and defend vir-tue. Id.

On the old pagan tombs, masks, hunting matches, and Bacchanals are

very common. Id. on Italy.

Whilst a boy, Jack ran from school, Fond of his hunting-horn and pole. Prior.

In vain malignant streams and winter fogs Load the dull air, and hover round our coasts j The huntsman ever gay, robust, and bold, Defies the noxious vapor and confides In this delightful exercise to raise His drooping head, and cheer his heart with joy.

Somerville's Chase.

Bold Nimrod first the savage chace began, A mighty hunter, and his game was man. Pope.

Let old Arcadia boast her ample plain. The immortal huntress, and her virgin train ; Nor envy Windsor. Id*

Would Edwin this majestic scene resign For aught the huntsman's puny craft supplies ? Ah ! no : he better knows great nature's charms to

prize.

Beattie.

What is here ? Who seems not of my trade, and yet hath reached A height which none even of our mountaineers, Save our best hunters may attain.

Byron. Manfred.

HUNT (Thomas), D. D., a learned oriental scholar of the last century, was born in 1696, and graduated at Oxford in 1721 as A. M. In 1738 he was elected Arabic professor in that university; and his inauguration address on this occasion has been printed. In 1744 he took his doctor's degree, and three years after became regius professor of Hebrew and canon of Christchurch. He wrote also Observations on the Proverbs, which with his Sermons were edited by Dr. Kennicott iu 1774.

HUNTER, a county of eastern Australia, bounded on the north by the Hunter river, the Goulburn, and a natural boundary between this and the county of Phillip : on the west by the dividing range which separates it from Roxburgh : on the south by the range which separates it from the counties of Cook and Northumberland: on the east by the Wollombi brook, to its junction with the Hunter river.

HUNTER (Dr. William), a celebrated anatomist and physician, was born in 1718, at Kil-bridge, in Lanarkshire. At fourteen his father sent him to the college of Glasgow, where he spent five years; and by his prudent behaviour and diligence acquired the esteem of the pro-

fessors. His father had designed him fur ths church; but. becoming acquainted with the celebrated Dr. Cullen, he resolved to devote himself to the profession of physic. His father having consented, he, in 1737, went to reside with Dr. Cullen, and at the end of three years it was agreed that he should prosecute his medical studies in Edinburgh and London. He accordingly set out for Edinburgh in November 1740; where he attended the lectures of the medical professors. Dr. Douglas soon after invited him into his family to assist in his dissections, and to superintend the education of his son ; and by his friendly assistance enabled him to enter as a surgeon's pupil at St. George's Hospital under Mr. James Wilkie, and as a dissecting pupil under Dr. Frank Nichols. He soon became expert in dissection, and Dr. Douglas was at the expense of having several of his preparations engraved. In 1743 he communicated to the Royal Society an Essay on the Structure and Diseases of articulating Cartilages. At length an opportunity occurred for the display of his abilities as a teacher of anatomy. A society of navy surgeons had an apartment in Covent Garden, where they engaged the late Mr. Samuel Sharpe to deliver a course of lectures on the operations of surgery. Mr. Sharpe continued to repeat this course, till, finding that it interfered too much with his other engagements, he declined the task in favor of Mr. Hunter ; who gave the society so much satisfaction, that, in the winter of 1746, they requested him to extend his plan to anatomy, and gave him the use of their room for his lectures. In 1747 he was admitted a member of the corporation of surgeons ; and in the spring of 1748, soon after the close of his lectures, he set out m company with his pupil, Mr. James Douglas, on a tour through Holland to Paris. He returned to London early enough to begin his winter course of lectures about the usual time. Dr. Douglas had now acquired considerable reputation in midwifery; which induced Mr. Hunter to direct his views chiefly to the same practice ; and he was elected surgeon, first to the Middlesex, and soon

afterwards to the British Lying-in Hospital. Iu 1750 he obtained the degree of M. D. from the university of Glasgow, and began to practise as a physician; when he quitted the family of Mrs. Douglas and went to reside in Jermyn Street. In 1756 he was admitted a licentiate of the Royal College of Physicians. Soon after he was elected a member of the Medical Society; and to the Observations and Enquiries, published by that society, he at different periods contributed several valuable papers. In 1762, when the queen became pregnant, Dr. Hunter was consulted ; and in 1764 he was appointed physician extraordinary to her majesty. In 1767 Dr. Hunter was elected F. R. S. ; and in 1768 communicated to that learned body observations on the bones, commonly supposed to be elephants' bones, which have been found near the Ohio in America. In 1768 he became a fellow of the Society of Antiquaries ; and, at the institution of a Royal Academy of Arts, he was appointed by his majesty to the office of professor of anatomy. In

Jauuary 1781 he was unanimously elected president of the Medical Society. His name and talents were now known and respected in every part of Europe, in 1780 the Royal Medical Society at Paris elected him one of their foreign associates; and in 1782 he received a similar mark of distinction from the Royal Academy of Sciences in that city. The most splendid of his medical publications was the Anatomy of the Human Gravid Uterus. This great work, which had been begun so early as 1751, was delayed till 1775, by the author's desire of sending it into the world as perfect as possible. In 1755 he communicated to the Royal Society an Essay on the Origin of the Venereal Disease. In 1777 he joined with Mr. Watson in presenting to it a short account of the late Dr. Maty's illness, and of the appearances on dissection ; and in 1778 he published his Reflections on the Section of the Symphysis Pubis. We must now notice the formation of the celebrated Hunterian Mu-seum. Before Mr. Hunter had practised midwifery many years, he found he had acquired a fortune sufficient to place him in easy and independent circumstances. This he set apart as a resource, whenever age or infirmities should oblige him to retire from business. As his wealth continued to accumulate, he formed a laudable design of

engaging in some scheme of public utility, and resolved to erect an anatomical academy. For this purpose he purchased a spot of ground in Great Windmill Street, where he erected a spacious house, to which he removed from Jermyn Street in 1770. He had formed already one of the finest anatomical museums ever seen, and he now extended his views to fossils, and to the promotion of literature. In a short time he became possessed of ‘ the most magnificent treasure of Greek and Latin books that has been accumulated by any person since the days of Mead.’ A cabinet of ancient medals contributed likewise much to the richness of his museum. In 1781 it received a valuable addition of shells, corals, and other curious subjects of natural history, which had been collected by the late Dr. Fothergill, who had directed by his will, that his collection should be appraised after his death, and that Dr. Hunter should have the offer of it at £500 under the valuation. Accordingly Dr. Hunter purchased it for £1200. About two years after, 17th of March, 1783, he was seized with a violent attack of gout and nausea. On the 20th he found himself so much recovered, that he determined to give the introductory lecture to the operations of surgery. He accordingly delivered it, but was seized in consequence with a paralytic stroke, and died on Sunday the 30th. By his will, the use of his museum, under the direction of trustees, devolved to his nephew Matthew Baillie, B. A., and, in case of his death, to Mr. Cruikshank for thirty years, at the end of which period the whole collection was bequeathed to the university of Glasgow. The collection is now in Glasgow, and an elegant bvilding has been erected for its reception. The sum of £8000 is left as a fund for the support and augmentation of it.

HUNTER (John), a celebrated anatomist, bro-VOL. XI, ‘

ther to the Dr. of that name, was born at Long Calderwood in 1728. He was at first apprenticed to a carpenter ; but, hearing that his brother was then the most celebrated teacher of anatomy in London, he expressed a desire to assist him in ins researches. The Dr., willing to serve him, invited him to London, where he arrived in September, 1748; and from this period he was seriously engaged in anatomy, under the instruction of his brother, and his assistant, Mr. Symonds. In the summer of 1749 he attended Mr, Cheselden, at Chelsea Hospital, where he learned the first rudiments of surgery. In 1751 he became a pupil at St. Bartholomew’s. In 1752 he went to .Scotland; and the following year entered, as a gentleman commoner, at St. Mary Hall, Oxford. In 1754 he became a surgeon’s pupil at St. George’s Hospital, where he continued during summer; and in 1756 was appointed

house-surgeon. In 1755 his brother admitted him to a partnership in his lectures. The forming of anatomical preparations was at this time a new art, and little known ; every preparation, therefore, skilfully made, was proportionably valuable, and in the construction of these Mr. J. Hunter was particularly clever. He studied human anatomy for ten years, during which period he traced the ramifications of the olfactory nerves upon the membranes of the nose, and discovered the course of some of the branches of the fifth pair of nerves. In the gravid uterus, he traced the arteries to their termination in the placenta. He was also the first who discovered the existence of the lymphatic vessels in birds. So eagerly did he attach himself to comparative anatomy, that he embraced every means of prosecuting it to advantage. He applied to the keepers of wild beasts for the bodies of those which died, and purchased all rare animals which he heard of. In Octobei 1760 Mr. Adair, inspector-general of hospitals, appointed him a surgeon on the staff; and in spring 1761 he went with the army to Belleisle. On his return he settled in London ; where he taught anatomy and surgery for several winters, and resumed his researches in comparative anatomy. On the 5th of February, 1767, he was chosen F. R. S. In 1768 he became a member of the corporation of surgeons; and in 1769 was elected one of the surgeons of St. George's Hospital. In May 1771 his Treatise on the Natural History of the Teeth was published : and in July he married Miss Home, daughter of Mr. Home, surgeon to Burgoyne's regiment. In 1776 he was appointed surgeon extraordinary to his majesty, and in 1783 was chosen a member of the Royal Society of Medicine, and the Royal Academy of Surgery in Paris. About this time he erected, at the expense of £3000, a building for his collection, in which there was a room fifty-two feet long, by twenty-eight feet wide, lighted from the top, and having a gallery all round, for containing his preparations. Under this were two apartments ; one for his lectures, and the other for weekly meetings of medical friends during winter, under the title of Lyceum Medicum Londinense. At this period Mr Hunter was at the height of his chirurgical ca-reer; his mind and body were both in full vigor.

Some instances of his extraordinary skill may be added. He removed a tumor from the side of the head and neck of a patient at St. George's Hospital, as large as the head to which it was attached ; and, by bringing the cut edges of the skin together, the whole was nearly healed by the first incision. He also discovered the present mode of performing the operation for the popliteal aneurism, by taking up the femoral artery on the thigh. In 1786 Mr. Hunter was appointed deputy surgeon-general to the army. He now published his work upon the Venereal Disease, which had a very rapid sale ; and another entitled, Observations on certain Parts of the Animal Economy. Upon the death of Mr. Adair, in 1792, he was appointed inspector-general of hospitals, and surgeon-general to the army. He was also elected a member of the Royal College of Surgeons in Ireland. In 1792 lie was elected an honorary member of the Chirurgo-Physical Society of Edinburgh, and was chosen one of the vice-presidents of the Veterinary College, then first established in London. The collection of comparative anatomy which Mr. Hunter has left, must be allowed to be a proof of talents, assiduity, and labor, which cannot be contemplated without admiration. It remains an unequivocal test of his perseverance and abilities, and an honor to the country. Mr. Hunter for many years of his life had been subject to attacks of angina pectoris particularly when irritated by any. little accident. On October 16th 1793, when in his usual state of health, he went to St. George's Hospital, and, some of the minor arrangements irritating his mind, endeavoured to restrain his vexation, but turning round to Dr. Robertson, one of the physicians of the hospital, gave a deep groan and dropt down dead; being then in his sixty-fifth year.

HUNTER (Robert), esq., an English gentleman, author of the famous Letter on Enthusiasm, which, on its first appearance, was ascribed by some to lord Shaftesbury, and by others to dean Swift. In 1 708 he was appointed governor of Virginia, but was made prisoner by the French on his voyage thither. In 1710 he was appointed governor of

New York, and sent with 2700 Palatines to settle there. He returned to England in 1719, and on the accession of George II. was continued governor of New York and New Jersey. He was appointed governor of Jamaica in February, 1727, 1728, where he died March 31st, 1734. He also wrote a farce entitled An-droboros.

HUNTER (Henry),D.D.,apresbyterian divine was born at Culross in Perthshire in 1741, and at the age of thirteen sent to the university of Edinburgh. At seventeen be became tutor to a gentleman who was afterwards one of the lords of the session. The illness and death of his fa-ther having prevented him from retaining that situation, he now accepted one of the same kind in the family of lord Dundonald, at Culross. In 1764 he obtained a license to preach, and in 1766 was ordained minister of South Leith ; but removed in 1771 to London, to become pas-tor to the Scottish church London Wall. His popular Sacred Biography, commenced in 1788,

and was extended to seven volumes, octavo. During the progress of this work Dr. Hunter became a convert to the physiognomical system of Lavater, and in 1787 made a visit to Switzerland, for the purpose of procuring intelligence from the author preparatory to an English translation of his works. In 1790 he became secretary to the corresponding board of the Society for Propagating Christian Knowledge in the Highlands of Scotland. In 1795 appeared his Sermons preached on various Occasions, to which were subjoined illustrative memoirs and anecdotes; and in 1798 his Lectures on the Evidences of Christianity, in conjunction with those of the Rev. John Fell. He died at Bristol Hot Wells, October 27th, 1802. Dr. Hunter - also translated from the French Euler's Letters on Natural Philosophy ; St. Pierre's Studies of Nature ; Saurin's Sermons ; Sonnini's Travels j and Castera's Memoirs of Catharine II. of Rus-sia. Two volumes of his Sermons, &c., with a biographical memoir, were published posthumously.

HUNTER, in the manege, signifies a horse qualified to carry a person in the chase. The hunter ought to have great care and indulgence in the stable ; he ought to have much rest and quiet, and to be well supplied with good food, clean litter, and fresh water ; he should be often dressed, and suffered to sleep as much as he pleases. He should be so fed, that his dung may be rather soft than hard, and of a bright color. Some sportsmen are for keeping their horses out at grass all the buck-hunting season, never taking them into the stable at all, but allowing them in the field as much oats with their grass as they will

eat. The horse may be thus rid three days in the week for the whole season, and never injured by it. The whole shape of a horse intended for a hunter should be this : — the ears should be small, open, and pricked; or, though they be somewhat long, yet if they stand erect like those of a fox, it is a sign of hardiness. The forehead should be long and broad, not flat ; or, as it is usually termed, mare-faced, but rising in the middle like that of a hare ; the feather should be placed above the eye, the contrary being thought by some to threaten blindness. The eyes should be full, large, and bright; the nostrils not only large, but looking red and fresh within ; for an open and fresh nostril is always esteemed a sign of a good wind. The mouth should be large, deep in the wicks, and hairy. The windpipe should be large, and appear straight when he bridles his head ; for if, on the contrary, it bends like a bow on his bridling, it is not formed for a free passage of the breath. The head should be set on to the neck, that a space may be felt between the neck and the chine; when there is no such space, the horse is said to be bull-necked ; and this is not only a blemish in the beauty of the horse, but also occasions his wind not to be so good. The crest should be strong, firm, and well risen ; the neck should be straight and firm; the breast should be strong and broad ; the ribs round like a barrel; the fillets large; the buttocks rather oval than broad ; the legs clean, flat, and straight; the mane and tail ought to be long and thin;

when short and bushy, they are counted marks of dulness. When a hunter is thus chosen, and has been taught such obedience that he will readily answer tc the rider's signals of the bri-dle, hand, voice, calf of the leg, and spurs ; that he knows how to make his way forward ; has gained a true temper of mouth, and a right placing of his head ; and has learned to stop and turn readily : if his age be sufficiently advanced, he is ready for the field. It is a rule with all staunch sportsmen, that no horse should be used in hunting till he is full five years old ; some hunt them at four, but the horse at this age is not come up to his full strength and courage, and will not only fail at every tough trial, but will be much more subject to strains and

accidents, than if he were a year older, when his strength would be confirmed. When he is five years old, he may be put to grass from May till August, for the weather between these is so hot, that it will be proper to spare him. When the horse has evacuated all his grass, and has been properly shod, and the shoes have had time to settle to his feet, he may be ridden abroad. During the time that he is used to hunting he must be allowed a more strengthening food, mix-ing some old split beans at every feeding with his oats.

HUNTERDON, a county of New Jersey, United States, forty miles long and thirty-two broad ; bounded on the east by Somerset, south-east by Burlington, south-west and west by the Delaware, and north-west by Sussex county. It is divided into ten townships. On Muskonetcong Mountain, in this county, is a chalybeate spring much frequented. It falls into an artificial reservoir made so as to accomodate both bathers and drinkers. Trenton is the capital.

HUNTING, the diversion of pursuing four-foot- ed beasts of game. These are hunted in the fields, woods, and thickets, in various ways. We find that among the earliest civilised nations hunting made one of their diversions ; and, among the wild and barbarous, it supplied them with food. The Roman jurisprudence established it as a law, that, as the natural right of things which have no master belongs to the first possessor, wild beasts, birds, and fishes, are the property of those who can take them first. But the northern barbarians who overran the Roman em-pire, bringing with them a stronger taste for the diversion, and the people being now possessed of other and more easy means of subsistence from the lands and possessions of those they had vanquished, their chiefs began to appropriate the right of hunting, and, instead of a natural right, to make it a royal one.

The hunting used by the ancients was much like that now practised for the rein-deer ; which is seldom hunted at force, or with hounds ; but only drawn with a blood hound, and taken with nets and engines. Thus they did with all beasts ; whence a dog is never commended by them for opening before he has discovered where the beast lies. Their huntsmen, indeed, were accustomed to shout and make a great noise, as Virgil observes in his Georgics,

Ingentem clamore premes ad retia cervum. But this was only to bring the deer to the nets

laid for him. Among the Sicilians of the mid-dle ages this diversion

was greatly practised. The hunters, when informed which way a herd or deer passed, gave notice to one another, and every one brought with him a cross-bow or long bow, and a bundle of staves shod with iron, the heads bored, with a cord passing through them all : thus provided they came to the herd, and forming a large ring surrounded the deer. Then each, taking his stand, unbound his faggot, set up his stake, and tied the end of the cord to that of his next neighbour, ten feet from each other. Then taking feathers dyed in crimson, and fastened on a thread, they tied them to the cord ; so that with the least breath of wind they would whirl round. Those who kept the stands then withdrew, and hid themselves in the next covert. Then the chief ranger entering within the line, with hounds to draw after the herd, roused the game with their cry ; which flying towards the line were turned off, and still gazing on the shaking and shining feathers wandered about as if kept in with a real wall. The ranger still pursued, and calling every person by name as he passed by their stand,, commanded him to shoot the first, third, or sixth as he pleased : and if any of them missed, or singled out another than that assigned him, it was counted disgrace. By these means, as they passed by the several stations, the whole herd was killed by the several hands. Hunting formed the chief employment of the ancient Germans, and probably of the Britons also, when not engaged in war. Ancient historians tell us, that this was the case even so late as the third century with those unconquered Britons who lived beyond Adrian's wall ; and that they subsisted chiefly by the prey that they took in this way. The great attachment shown by all the Celtic nations to hunting, however, proceeded most probably from its being a preparation for war. By it their youth acquired that courage, strength, swiftness, and dexterity in handling their arms, which made them so formidable to their enemies. By it, too, they freed their country from those mischievous animals which abounded in the forests, and furnished themselves with materials for those feasts which seem tr» have constituted their greatest pleasure. St. strong and universal was the passion for hunting among the ancient Britons, that even young ladies of the highest rank and greatest beauty spent much of their time in the chase. They employed much the same weapons in hunting that they did in war, viz, long spears, javelins and bows and arrows ; having also great numbers of dogs to assist them in finding and pursuing their game. These dogs were much admired among other nations, on account of their swiftness, strength, fierceness, and exquisite sense of smelling.

Hunting was a favorite diversion of the celebrated Jenghiz Khan, and the East Indian princes still show the same inclination to the chase ; and the Mogul princes were celebrated for their hunting expeditions.

A circuit of between 400 and 600 miles was generally made ; the hunters bending their course towards the skirts of the northern mountains, where the country is wild and uncultivated. The vizier took along with

him not only his court and seraglio, but a great part of the inhabitants of his capital, he was also followed by 500 or 600 horse, and several battalions of regular sepoys with their field pieces : 400 or 500 elephants also accompanied him ; of which some were used for riding, others for right-ing, and some for clearing the jungles and forests of the game. A great number of wheel carriages, drawn by bullocks, likewise attended for' the convenience of Ihe women. The animals used in the sport were principally about 300 greyhounds, 200 hawks, and a few trained leopards for hunting deer. A vast number of matchlocks were carried along with the company, with many English pieces of various kinds; and every article that could contribute to luxury or pleasure was likewise carried along with the army. Wild boars were sometimes started, and either shot, or run down by the dogs and horsemen. Hunting the tiger, however, was looked upon as the principal diversion, and the discovery of one of these animals was accounted a matter of great joy. The cover in which he is found is commonly long grass, or reeds of such a height as frequently to reach above the elephants ; and it is difficult to find him in such a place, as he commonly endeavours either to steal off, or lies so close to the ground that he cannot be roused till the elephants are almost upon him. He then roars and skulks away, but is shot at as soon as he can be seen. If he be not disabled, he continues to sculk along, followed by the elephants. The elephants themselves are very much afraid of this terrible animal, and discover their apprehensions by shrieking and roaring as soon as they begin to smell him or hear him growl ; generally attempting to turn away from the place where he is. When the tiger ctn be traced to a particular spot, the elephants are disposed of in a circle round him , in which case he will at last make a

desperate attack, springing upon the elephant that is nearest, and attempting to tear him with his teeth or claws. Some, but very few, of the elephants, can be brought to attack the tiger ; and this they do by curling up their trunks un-der their mouths, and then attempting to toss, or otherwise destroy him with their tusks, or to crush him with their feet and knees. It is considered as good sport to kill one tiger in a day ; though sometimes, when a female is met with her young ones, two or three will be killed. The other objects of pursuit in these excursions are wild elephants, buffaloes, and rhinoceroses. An English traveller was present at the hunting of a wild elephant of vast size and strength. An attempt was first made to take him alive by surrounding him with tame elephants, while he was kept at bay by crackers and other fireworks; but he constantly eluded every effort of this kind. Sometimes the drivers of the tame elephants got so near him, that they threw strong ropes over his head, and endeavoured to detain him by fastening them around trees ; but he constantly snapped the ropes like packthreads, and pursued his way to the forest. Some of the strongest and most furious of the fighting elephants were then brought up to engage him ; but he attacked ‘hem with such fury that they were all obliged -*.c desist. In his struggle with one of them he

broke one of his tusks, and the broken piece, which was upwards of two inches in diameter, of solid ivory, flew up into the air several yards above their heads. Orders were now given to kill him, as it appeared impossible to take him alive ; but even this was not accomplished without the greatest difficulty. He twice turned and attacked the party who pursued him ; and in one of these attacks struck the elephant obliquely on which the prince rode, threw him upon his side, but then passed on without offering further in-jury. At last he fell dead, after having received, as was supposed, upwards of 1000 balls into his body.

Among the Mexicans also were similar hunting-matches, sometimes appointed by the king; at others to provide victims for .sacrifices. A large wood, generally that of Zacatapec, near the capital, was pitched upon as the scene of these grand hunting-matches. Here they chose the place best adapted for setting a number of snares and nets. The wood was enclosed by some thousands of hunters, forming a circle of six, seven, or eight miles, according to the number of animals they intended to take. Fire was then set to the grass in a great number of places, and a terrible noise made with drums, horns, shouting, and whistling. The hunters gradually contracted their circle, continuing the noise till the game were enclosed in a very small space. They were

then killed or taken in snares, or with the hands of the hunters. The first Spanish viceroy of Mexico, resolving to hunt in this manner, chose out a great plain in the country of the Otomies, lying between the villages of Xilotepec and S. Giovani del Rio ; the Indians being ordered to proceed according to their usual cus-tom. The viceroy, attended by a vast retinue of Spaniards, repaired to the place appointed, where accommodations were prepared for them in houses of wood erected for the purpose. A cir-cle of more than fifteen miles was formed by 11,000 Otomies, who started such a quantity of game on the plain, that the viceroy was quite astonished, and commanded the greater part of them to be set at liberty, which was accordingly done. The number retained, however, consisted of upwards of 600 deer and wild goats, 100 ca-jotes, with an innumerable number of hares, rabbits, and other smaller animals. The plain still retains the Spanish name Cazadero (the place of the chase).

Chamois HUNTING is carried on principally for the sake of the leather formed from the hide of the chamois (ceivus rupicapra of Linne) ; which is only found on the high peaks of the Alps. The chamois hunter generally sets out in the night, that he may reach by break of day the most elevated pastures where the goats come to feed before they arrive. As soon as he discovers the place where he hopes to find them, he surveys it with his glass. If he finds none of them there, he proceeds always ascending: whenever he descries any, he endeavours to get above them, either by stealing along some gully, or getting behind some rock or eminence. When he is near enough to distinguish their horns, which is the mark by which he judges of the distance, he rests his piece on a rock, takes his

aim with great composure, and rarely misses. This piece is a rifle-barrelled carabine, into •which the ball is thrust. If he has wounded the chamois, he runs to his prey, and for security hamstrings it ; if the road home is difficult, he skins the chamois, and leaves the carcase ; but, if it is practicable, he throws the animal on his shoulders, and bears him to his village, though at a great distance, and often over frightful precipices: he feeds his family with the flesh, which is excellent, especially when the creature is young, and he dries the skins for sale. ‘ But if, as is the most common case, the vigilant chamois perceives the approach of the hunter, he immediately takes flight

among the glaciers, through the snows, and over the most precipitous rocks. It is particularly difficult to get near these animals when there are several together; for then one of them, while the rest are feeding, stands as sentinel on the point of some rock that commands a view of the avenues leading to the pasture ; and, as soon as he perceives any ob-ject of alarm, he utters a sort of hiss, at which the others instantly gather round him to judge for themselves of the nature of the danger ; if it is a wild _beast, or hunter, the older ones put themselves at the head of the flock, and away they fly, ranged in a line, to the most inaccessible retreats. It is here that the fatigues of the hunter begin : instigated by his passion for the chase, he is insensible to danger; he passes over snows, without thinking of the hor: id precipices they conceal ; he entangles himself among the most dangerous paths, and bounds from rock to rock, without knowing how he is to return. Night often surprises him in the midst of his pursuit ; but he does not for that reason abandon it ; he hopes that the same cause will arrest the flight of the chamois, and that he* shall next morning overtake them. Thus he passes the night, not at the foot of a tree, like the hunter of the plain, nor in a' grotto, softly reclined on a bed of moss, but at the foot of a rock, and often on the bare points of shattered fragments, without the smallest shelter. There, alone, without fire, without light, he draws from his bag a bit of cheese, with a morsel of oaten bread, which make his common food : bread so dry, that he is sometimes obliged to break it between two stones, or with the hatchet he carries with him to cut out steps in the ice. Having thus made his solitary and frugal repast, he puts a stone below his head for a pillow, and goes to sleep, dreaming on the route which the chamois may have taken. But soon he is awakened by the freshness of the morning ; he gets up, benumbed with cold ; surveys the precipices which he rmrt traverse to overtake his game; drinks a littk brandy, of which he is always provided with a •••mall portion, and sets out to encounter new dangers. Hunters sometimes remain in these solitudes for several days together, during which time their families, their unhappy wives in particular, experience a state of the most dreadful anxiety : and yet the hunters are much attached to this kind of life. I knew, says M. Saussure, a well-made, handsome man, who had just married a beautiful woman : — ' My grandfather,' said he to me, ' lost liii lift in the chase so did my father ;

and I am persuaded, that I too shall die in the same manner : this bag which I carry with me when I hunt I call my grave-cloaths, for I am sure I shall have no other; yet if you should offer to make my fortune on condition of abandoning the chase of the chamois, I could not

consent.' I made some excursions on the Alps with this man : his strength and address were astonishing; but his temerity was greater than his strength ; and I have heard, that, two years afterwards, he missed a step on the brink of a precipice, and met with the fate he had expected.

HUNTING THE Fox makes a very pleasant exercise, and is either above or below ground. To hunt a fox with hounds, you must draw about groves, thickets, and bushes near villages. When you find one, stop up his earth the night before you design to hunt, about midnight ; while he is out to prey. This may be done by laying two white sticks across in his way, which he will imagine to be some trap laid for him ; or they may be stopped up with black thorns and earth mixed. The pack should consist of twenty-five couple. The hounds should be at the cover at sunrising. The huntsman should then throw in his hounds as quietly as he can, and let the two whippers-in keep wide of him on either hand ; so that a single hound may not escape them; let them be attentive to his halloo, and let the sportsmen be ready to encourage or rate as that directs. The fox ought on no account to be hallooed too soon, as in that case he would most certainly turn back, and spoil all the sport. Two things Mr. Beckford particularly recommends, *viz.* the keeping all the hounds steady, and making them all draw. Many huntsmen, says he, are fond of having them at their horse's heels ; but they never can get so well or soon together as when they spread the cover ; besides, I have often known, when there have been only a few finders, that they have found their fox gone down the wind, and been heard of no more that day. Much depends upon the first finding of your fox : for I look upon a fox well found to be half killed. People are generally in too great a hurry on this occasion. There are but few instances where sportsmen are not too noisy, and too fond of encouraging their hounds, which seldom do their business so well as when little is said to them. The huntsman ought to begin with his foremost hounds, and keep as close to them as he can. No hounds can then slip down the wind and get out of his hearing; he will also see how far they carry the scent, a necessary requisite ; for without it he never can make a cast with any certainty. You will find it not less necessary for your huntsman to be active in pressing his hounds forward when the scent is good, than to be prudent in not hurrying them beyond it when it is bad. It is his business to be ready at all times to lend them that assistance which they so frequently need, and which, when they are first at a fault, is the most critical. A hound at that time will exert himself most ; he afterwards cools, and becomes more indifferent about his game. Those huntsmen who do not get forward enough to take advantage of this eagerness and impetuosity,

and direct it pro-470

perly, seldom know enough of hunting to be of much use to them afterwards. Though a huntsman cannot be too fond of hunting, a whipper-in easily may. His business will seldom allow him to be forward enough with the hounds to see much of the sport. His only thought therefore should be to keep the hounds together, and to contribute as much as he can to the killing of the fox : keeping the hounds together is the surest means to make them steady. When left to themselves they seldom refuse any blood they can get ; they become conceited ; learn to tie upon the scent ; and besides this they frequently get a trick of hunting by themselves, and are seldom good for much afterwards. Every country is soon known ; and nine foxes out of ten, with the wind in the same quarter, will follow the same track. It is easy therefore for the whipper-in to cut short and catch the hounds again. With a nigh scent you cannot push on hounds too much. Screams keep the fox forward, at the same time that they keep the hounds together, or let in the tail hounds : they also enliven the sport ; and, if discreetly used, are always of service ; but in cover they should be given with the greatest caution. Halloos seldom do any hurt when you are running up the wind, for then none but the tail hounds can hear you : when you are running down the wind, you should halloo no more than may be necessary to bring the tail-hounds forward; for a hound that knows his business seldom .wants encouragement when he is upon a scent. Most fox hunters wish to see their hounds run in a good style. A pack of harriers, if they have time, may kill a fox, but I defy them to kill him in the style in which he ought to be killed ; they must hunt him down. If you intend to tire him out, you must expect to be tired also yourself; I never wish a chase to be less than one hour, or to exceed two : it is sufficiently long if properly followed, it will seldom be longer unless there be a fault somewhere, either in the day, the huntsman, or the hounds. Changing from the hunted fox to a fresh one is as bad an accident as can happen to a pack of fox-hounds, and requires all the ingenuity and observation that man is capable of to guard against it. Could a fox-hound distinguish a hunted fox as the deer hound does the deer that is blown, fox-hunting would then be perfect. A huntsman should always listen to his hounds while they are running in cover ; he should be particularly attentive to the headmost hounds, and he should be

constantly on his guard against a skirter ; for, if there be two scents, he must be wrong. Generally speaking, the best scent is least likely to be that of the hunted fox : and, as a fox seldom suffers hounds to run up to him as long as he is able to prevent it, so, nine times out of ten, when foxes are hallooed early in the day, they are all fresh foxes. The hounds most likely to be right are the hard-running line-hunting ones ; or such as the huntsman knows had the lead before there arose any doubt of changing. With regard to the fox, if he break over an open country, it is no sign that he is hard run ; for they seldom at any time will do that unless they are a great way before the hounds. Also, if he run up the wind ; they

seldom or never do that when they have been long hunted and grow weak; and when they run their foil, that also may direct him. All this requires a good ear and nice observation ; and indeed in that consists the chief excellence of huntsmen. When the hounds divide in two parts, the whipper-in, stopping, must attend to the huntsman and wait for his halloo, before he attempts to stop either : for want of proper management in this, I have known the hounds stopped at both places, and both foxes lost. If they have many scents, and it is uncertain which is the hunted fox, let him stop those that are farthest down the wind ; as they can hear the others, and will reach them soonest: in such a case there will be little use in stopping those that are up the wind. When hounds are at a check, let every one be silent and stand still. Whippers-in are frequently at this time coming on with the tail-hounds. They should never halloo to them when the hounds are at fault ; the least thing does them harm at such a time, but a halloo more than any other. The huntsman, at a check, had better let his hounds alone, or content himself with holding them forward, without taking them off their noses. Should they be at a fault, after having made their own cast (which the huntsman should always first encourage them to do), it is then his business to assist them farther; but, except in some particular instances, I never approve of their being cast as long as they are inclined to hunt. Gentlemen, when hounds are at fault, are too apt themselves to prolong it. They should always stop their horses some distance behind the hounds ; and, if it be possible to remain silent, this is the time. They should be careful Hot to ride before the hounds or over the scent ; nor should they ever meet a hound in the face unless to stop him. Should you at any time be before the hounds, turn your horse’s head the way they are going, get out of their track, and let them pass by you. In dry weathei, and particularly in heathy countries, foxes will run the roads. If gentlemen at such times will ride close upon the hounds, they may drive them miles

without any scent. High-mettled fox-hounds are seldom inclined to stop whilst horses are close at their heels. No one should ever ride in a direction which, if persisted in, would carry him amongst the hounds, unless he be at a great distance behind them. The first momert that hounds are at fault is a critical one. Those who look forward may perhaps see the fox ; or the running of sheep, or the pursuit of crows, may give them some tidings of him. Those who listen may sometimes take a hint which way he is gone from the chattering of a magpie ; or perhaps be at a certainty from a distant halloo : nothing that can give any intelligence at such a time ought to be neglected. Gentlemen are too apt to ride all together : were they to spread more, they might sometimes be of service ; particularly those who, from a knowledge of the sport, keep down the wind : it would then be difficult for either hounds or fox to escape their observation. You should, however, be cautious how you go to a halloo. The halloo itself must in a great measure direct you ; and, though it afford no certain rule, yet you may

frequently guess whether it can be depended upon or not. At the sowing time, when boys aie keeping off the birds, you will sometimes be deceived by their halloo ; so that it is best, when you are in doubt, to send a whipper-in to know the certainty of the matter. Hounds ought not to be cast as long as they are able to hunt. It is a common idea, that a hunted fox never stops ; but Mr. Beckford informs us that he has known them stop even in wheel ruts in the middle of a down, and get up in the middle of the hounds. The greatest danger of losing a fox is at the first finding him, and when he is sinking ; at both which times he will frequently run short, and the eagerness of the hounds will frequently carry them beyond the scent. When the fox is first found, every one ought to keep behind the hounds till they are well settled to the scent ; and, when the hounds are catching him, they ought to be as silent as possible ; and eat him eagerly after he is caught. In some places they have a method of treeing him ; that is, throwing him across the branch of a tree, and suffering the hounds to bay at him for some minutes before he is thrown among them : the intention of which is to make them more eager, and to let in the tail-

hounds ; during this interval also they recover their wind, and are apt to eat him more readily. Our author, however, advises not to keep him too long, as he supposes that the hounds have not any appetite to eat him longer than while they are angry with him.

In case a fox escape so as to earth, countrymen must be got together with shovels, spades, pickaxes, &c., to dig him out, if they think the earth not too great. They make their earths as near as they can in ground that is hard to dig, as in clay, stony ground, or amongst the roots of trees; and their earths have commonly but one hole, and that is straight and a long way in before you come at their couch. Sometimes they take possession of a badger's old burrow, which has a variety of chambers, holes, and angles. To facilitate this way of hunting the fox, the huntsman must be provided with one or two terriers to put into the earth after him, that is, to fix him into an angle ; for the earth often consists of many angles : the use of the terrier is to know where he lies ; for as soon as he finds him, he continues baying or barking, so that which way the noise is heard that way dig to him. Your terriers must be garnished with bells hung in collars, to make the fox bolt the sooner ; besides, the collars will be some small defence to the terriers. The instruments to dig with are, a sharp-pointed spade, which serves to begin the trench where the ground is hardest, and broader tools will not so well enter ; the round hollowed spade, which is useful to dig among roots, having very sharp edges ; the broad flat spade to dig with, when the trench has been pretty well opened, and the ground softer; mattocks and pickaxes to dig in hard ground, where a spade will do but little service ; the coal-rake to cleanse the hole, and to keep it from stopping up ; clamps, wherewith you may take either fox or badger out alive to make sport with afterwards.

HUNTING THE HARE. As of all chases the hare makes the greatest pastime, so it gives

no little pleasure to see the craft of this small animal for her self-preservation. If it be rainy, the hare usually takes to the highways ; and if she come to the side of a young g-ove, or spring, she seldom enters, but squats down till the hounds have overshot her ; and then she will return the way she came, for fear of the wet and dew that hangs on the boughs. In this case the huntsman ought to stay 100 paces before he comes to the wood side, by which means he will perceive whether she return as aforesaid ; which if she do, he must halloo in his hounds, and call them back ; and that presently, that the

hounds may not think it the counter she came first. The next thing to be observed is the place where the hare sits, and upon what wind she makes her form, either upon the north or south wind : she will not willingly run into the wind, but upon, aside, or down the wind ; but if she form in the water, it is a sign she is foul and measled; if you hunt such a one, have a special regard all the day to the brook sides ; for there and near plashes, she will make all her crossings, doublings, &c. Some hares are so crafty that as soon as they hear the sound of a horn they instantly start out of their form, though it were at the distance of a quarter of a mile, and go and swim in some pool, and rest upon some rush-bed in the midst of it. Such will not stir thence till they hear the sound of the horn, and then they start out again, swim to land, and stand up before the hounds for hours before they can kill them, swimming and using all subtleties and crossings in the water. Nay, such is the subtlety of a hare, that sometimes, after she has been hunted three hours, she will start a fresh hare, and squat in the same form. Others, after being hunted a considerable time, will creep under the door of a sheep-cot, and hide themselves among the sheep; or, when they have been hard hunted, will run in among a flock of sheep, and will by no means be gotten out till the hounds are coupled up, and the sheep driven into their pens. Some of them will take the ground like a coney, which is called going to the vault. Some will go up one side of the hedge and come down the other, the thickness of the hedge being the only distance between the courses. A hare that has been sorely hunted, has got upon a quickset hedge, and ran a good way upon the top thereof, and then leapt offupon the ground ; and they frequently betake themselves to furze bushes, and leap from one to the other, whereby the hounds are frequently in default. Having found where a large hare has relieved in some pasture or corn field, you must then consider the season of the year, and the weather : for, if it be in spring or summer, a hare will not then set in bushes, because they are often infested with pismires, snakes, and adders; but will set in corn fields and open places. In winter, they seat near towns and villages, in tufts of thorns and brambles, especially when the wind is northerly or southerly. According to the season and nature of the place where the hare is accustomed to seat, there beat with your hounds, and start her ; which is better sport than trailing her from her relief to her form After the hare has been started, and is on

foot, 3tep in where you saw her pass, and halloo in your hounds, until they have all undertaken it and go on with it in full cry ; then recheat to them with your horn, following fair and softly at first, making not too much noise either with horn or voice ; for at the first hounds are apt to over-shoot the chase through too much heat. But when they have run an hour, and you see the hounds are well in with it, and stick well upon it, then you may come in nearer with them, because their heat will then be cooled, and they will hunt more soberly. But above all things, mark the first doubling, which must be your direction for the whole day ; for all the doublings that she will make afterwards will be like the former ; and according to the policies that you shall see her use, and the place where you hunt, you must make your compasses great or small, long or short, to help the defaults, always seeking the moistest and most commodious places for the hounds to scent in.

HUNTING THE HART OR STAG. Gesner, speaking of hart-hunting, observes, that this wild and subtle beast frequently deceives its hunter by windings and turnings. Wherefore the prudent hunter must train his dogs with words of art, that he may be able to set them on and take them off at pleasure. First he should encompass the beast in her own layer, and so unharbour her in the view of the dogs, that so they may never lose her slot or footing. Neither must he set upon every one, either of the herd or those that wander solitarily, or a little one ; but partly by sight, and partly by the footing and fumets, make a judgment of the game, and also observe the largeness of his layer. The huntsman, having made these discoveries in order to the chase, takes off the couplings of the dogs; and some on horseback, others on foot, follow the cry with the greatest art, observation, and speed ; remembering and intercepting him in his sub-tle turnings and headings; with all agility leaping hedges, gates, pales, ditches : neither fearing thorns, down-hills, nor woods, but mounting a fresh horse if the first tire. follow the largest head of the whole herd, which must be singled out of the chase; which the dogs perceiving must follow, not following any other. The dogs are animated to the sport by the winding of horns, and the voices of the huntsmen. But sometimes the crafty beast sends forth his little squire to be sacrificed to the dogs and hunters, instead of himself, lying close the mean time. In this case the huntsman must sound a retreat, break off the dogs and take them in, that is, leam them again, until they be brought to the fairer game ; which rises with fear, yet still strives by flight, until he is wearied and

breathless. The nobles call the beast a wise hart, who, to avoid all his enemies, runs into the greatest herds, and so brings a cloud of error on the dogs, to obstruct their farther pursuit ; sometimes also bearing some of the herd into his footings, that so he may the more easily escape by amusing the dogs. Afterwards he betakes himself to his heels again, still running with the wind, not only for the sake of refreshment, but also because he can thus more easily hear the voice of his pursuers, whether they be

far off or near. But being again discovered by >.ne hunters, and the sagacious scent of the dog-,ˆ he flies into herds of cattle, as cows, iheep, &c.ˆ leaping on a cow or ox, laying the foreparts of his body thereon, so that touching the earth only with his hinder feet, he may leave very little or no scent behind. But their usual manner is, when they see themselves hard beset, and every way intercepted, to make force with their horns at the enemy who first comes upon them, unless they be prevented by spear or swoid. When the beast ,is slain, the huntsman winds the fall of the beast ; and then the whole company come up, blowing their horns in triumph for such a conquest; among whom, the skilfullest opens the beast, and rewards the hounds with whal properly belongs to them for their future encouragement, for which purpose the huntsmen dip bread in the blood of the beast to give to the hounds. It is very dangerous to go in to a hart at bay ; of which there are two sorts, one on land-and the other in water. If the hart be in deer/ water, where you can not well come at him, couple up your dogs ; for, should they continue long in the water, it would endanger their surbating or foundering. In this case get a ˆoat and swirr. to him, with drawn dagger, or else with a rope that -has a noose, and throw it over his horns: for, if the water be so deep that the hart swims, there is no danger in approaching him ; otherwise you must be very cautious. As to the land hay, if a hart be burnished, consider the place ; for if it be in a plain and open place, where there is no wood or covert, it is dangerous and difficult to come in to him ; but if he be on a hedge-side, or in a thicket, then, while the hart is staring on the hounds, you may come softly and covertly behind him, and cut his throat. If you miss your aim, and the hart turn head upon you, then take refuge at some tree ; and, when the hart is at bay, couple up your hounds ; and when you see the hart turn head to fly, gallop in roundly io him, and kill him with your sword. The first ceremony, when the huntsman comes in to the death of a deer, is to cry ‘ ware haunch,’ that the hounds may not break in to the deer; which being done, the next is the cutting his throat, and blooding the youngest hounds, that they may the better love a deer, and learn to

leap at his throat : then the mort having been blown, and all the company come in, the best person, who hath not taken say before, is to take up the knife that the keeper or huntsman is to lay across the belly of the deer, some holding by the fore legs, and the keeper or huntsman drawing down the pizzle, the person who takes say, is to draw the edge of the knife leisurely along the middle of the belly, beginning near the brisket, and drawing a little upon it, enough in the length and depth to discover how fat the deer is ; then he that is to break up the deer, first slits the skin from the cutting of the throat downwards, mak-ing the arber, that so the ordure may not break forth, and then he paunches him, rewarding the hounds with it. In the next place, he is to present the same person who took say, with a drawn hanger, to cut off the head of the deer. Which being done, and the hounds rewarded, the concluding ceremony is, if it be a stag, to draw a

triple mort ; and if a buck, a double one, and then all who have horns blow a recheat in concert, and immediately a general whoop.

HUNTING THE OTTER is performed with dogs, and also with otter spears ; with which, when they find themselves wounded, they -make to land, and fight with the does most furiously, as if they were sensible that cold water would annoy their green wounds. There is indeed craft to be used in hunting them, but they may be caught in snares under water, and by river sides : but great care must be taken, for they bite sorely ; and, if they remain long in the snare, they will get themselves free by their teeth. In hunting them, one man must be on one side of the river, and another on the other, both beating the banks with dogs ; and the beast not being able to endure the water long, you will soon discover if there be an otter or not in that quarter. If any of the hounds find out an otter, then view the soft grounds and moist places, to find out which way he bent his head : and then follow the hounds, and lodge him as a hart or deer. But if you do not find him quickly, you may suppose he is gone to couch somewhere farther off from the river ; for sometimes they will go to feed a considerable

way from the place of their rest, choosing rather-to go up the rivet than down it. Those who hunt otters must carry their spears, to watch his vents, that being the chief advantage ; and if they perceive him svrimming under water, they must endeavour to strike him with their spears, and, if they miss, must pursue him with their hounds, which, if they be pood, will go chanting and trailing along the river side, and will beat every root cf a tree, osier-bed, and tuft of bul-rushes i nay, they will sometimes take water and bait the beast like a spaniel, by which means he will hardly escape.

We will now give a short definition of the principal terms used in hunting. 1. For beasts as they are in company : — Hunters say, a herd of harts, and all manner of deer ; a bevy of roes; a sounder of swine; a rout of wolves; a richess of martens ; a brace or leash of bucks, foxes, or hares ; a couple of rabbits or coneys. 2. For their lodging : — A hart is said to harbour ; a buck lodges ; a roe beds ; a hare seats or forms ; a coney sits ; a fox kennels ; a marten trees; an otter watches ; a badger earths ; a boar couches. Hence, to express their dislodging, they say, un-harbour the hart ; rouse the buck ; start the hare ; bolt the coney ; unkennel the fox ; untree the marten; vent the otter; dig the badger; rear the boar. 3. For their noise at rutting time : — A hart belleth ; a buck growns or treats ; a roe bellows ; a hare beats or taps ; an otter whines ; aboarfreams; a fox barks; a badger shrieks; a wolf howls; a goat rattles. 4. For the footing and treading : — Of a hart, they say the slot ; of a buck, and all fallow-deer, the view ; of all deer, if on the grass, and scarce visible, the foiling; of a fox, the print; and of other vermin, the footing ; of an ‘otter, the marks ; of a boar, the track ; the hare, when in open field, is said to sore ; when she winds about to deceive the hounds, she doubles; when she beats on the hard highway, and her footing comes to be perceived, she pricketh ; in snow, it is called the trace of

the hare. 5. The tail of a hart, buck, or other deer, is called the single ; that of a boar, the wreath; of a fox, the brush, or drag; and the tip at the end. the chape ; of a wolf, the stern; of a hare and coney, the scut. 6. The ordure of a hart and all deer, is called fewmets orfewmish-ing ; of a hare, crotiles or crotising ; of a boar, lesses; of a fox, the billiting; and of other vermin, the fuants ; of an otter, the spraints. 7. As the attire or parts of deer, thoseiof a stag, if perfect, are the bur, the pearls, the little knobs on it, the beam, the gutters, the antler, the sur-antler, royal, sur-royal, and all at top the croches ; of the buck, the bur, beam, brow-ant- ler, black-antler, advancer, palm, and spellers. If the croches grow in the form of a man’s hand, it is called a palme’l

head. Heads bearing not above three or four, and the croches placed aloft, all of one height, are called crowned heads ; heads having double croches, are called forked heads, because the croches are planted on the top of the beams like forks. 8. Of the young, they say, a litter of cubs, a nest of rabbits, a squirrel's dray. 9. The terms used in respect of the dogs, &c., are as follows : — Of greyhounds, two make a brace; of hounds, a couple; of greyhounds, three make a leash ; of hounds, a couple and half. They say, let slip a greyhound ; and, cast off a hound. The string wherein a greyhound is led, is called a leash ; and that of a hound, a lyome. The greyhound has his collar, and the hound his couples. We say a kennel of hounds, and a pack of beagles. 10. The following terms and phrases are more immediately used in the progress of the sport itself : — When the hounds, being cast off, and finding the scent of some game, begin to open and cry, they are said to challenge ; when they are too busy ere the scent be good, they are said to babble; when too busy where the scent is good, to bawl ; when they run it endwise' orderly, holding in together merrily, and making it good, they are said to be in full cry ; when they run along without opening at all, it is called running mule; when spaniels open in the string, or a greyhound in the course, they are said to lapse; when beagles bark and cry at their prey, they are said to yearn ; when the dogs hit the scent the contrary way, they are said to draw amiss , when they take fresh scent and quit the former chase for a new one, it is called hunting change ; when <hey hunt the game by the heel or track, they are said to hunt couriter ; when the chase goes off, and returns again traversing the same ground, it is called hunting the foil ; when the dogs run at a whole herd of deer, instead of a single one, it is called running riot; dogs set in readiness where the game is expected to come by, and cast off after the other hounds are passed, are called a relay. If they be cast off ere the other dogs come up, it is called vauntlay; when, finding where the chase has been, they make a proffer to enter, but return, it is called a blemish ; a lesson on the horn to encourage the hounds, is named a call, or recheat ; that blown at the death of a deer, is called the mort ; the part belonging to the dogs of any chase they have killed is the reward. They say, take off a deer's skin; strip or case a hare, fox, and all sorts of vermin •

which is done oy beginning at the snout, ana turning the skin over the ears down to the tail.

HUNTINGDONSHIRE. Before the Roman invasion, this county, with the adjacent counties of Cambridge, Norfolk, and Suffolk, was inhabited by the Cenamini or Cenemagni. The Romans included it in the province of Flavia Caesariensis. The Saxons made it part of the kingdom of East Anglia, at which time it was called Huntendunescyre and Hantandunscyre. It was subsequently subjugated by the Mercian kings. Huntendunscyre signifies hunters'-down shire, this district being at the time it was so first named well adapted for the sport of hunting, as it was almost one continued forest.

Huntingdonshire, sometimes called Hunts, is an inland county, bounded by Northamptonshire on the north, north-west, and west ; by Bedfordshire on the south and south-west ; and by Cambridgeshire on the east, south-east, and north-east. It extends in length about twenty-six miles, in breadth twenty, and in circumference about seventy-six miles, containing about 194,950 acres of land. It lies in the Norfolk circuit, and its ecclesiastical government is in the province of Canterbury, and the diocese of Lincoln. The fenny part of it is in the Bedford Level. It is divided into four hundreds, one borough, six market-towns, and seventy-nine parishes. It is remarkable that this county and Cambridgeshire are joined together under one civil government, there being but one high sheriff for both, who is alternately chosen one year out of Cambridgeshire, the second out of the Isle of Ely in the same county, and the third out of this county.

The climate of Huntingdonshire on the whole is tolerably healthy, considering that all the east or north-east part of the county is skirted by fens, and that but a small part of it is well supplied with spring-water. Mr. Maxwell remarks, that this county possesses several distinct sorts of soil : *viz.* first, fens or moors ; second, skirty land; third, meadow land ; fourth, strong deep stapled soil, either consisting of clay or of gravel with a mixture of loam; and, fifth, thin stapled light cky. It appears, from an invaluable list in Mr. Parkinson's View of the Agriculture of this county, that the greater part is watered by ponds. The Ouse and the Nen are the only rivers which communicate with the county, the former falling into, it at St. Neots, whence it winds through several parishes into Cambridgeshire, which it enters at or near Erith. The latter divides the northern part from the county of Northampton, in which county it rises, and, flowing through a delightful vale, reaches Huntingdonshire near Elton. It is here that it

forms the boundary between the two counties, and, meandering to the north, passes Yarwell and Wansford ; soon after, winding to the east, through a more level country, it pursues a devious course to Peterborough, below which it sinks into the Fens, and slowly winds through Wisbech to the sea. Some smaller streams water the north-east side of this county, together with large meres, or pools of water ; namely, Whittlesea-mere, Ramsey-mere, Ugg-mere, &c. Most of the meres are visited by abundance of wild fowl. The river Ouse is navigahlp along

its whole line across this county. Inland navigation is neglected in Huntingdonshire : there is, however, a canal, navigable from Ramsay to Lynn in Norfolk; also from Warboys to the same place.

The chief produce of this county is corn and cattle, with fowl and sheep. The cheese of Hunts is deemed of an excellent quality. The sheep are a mixed race, and have been much improved by crosses of the Lincolnshire and Leicestershire breeds. They are without horns, and of imperfect shape, but are found profitable from the quantity of wool they produce ; their fleeces weighing from seven to eight pounds each. Those of the native sheep still found, seldom exceed four pounds in weight. The cows are bred with little attention, and are also a mixture of many races. A principal object of pursuit is the suckling of calves to supply veal to London. Many horses are bred in the lower part of the county.

Two medicinal springs are mentioned by Camden, and after him by Fuller, as found at Hailweston, near St. Neots. From one of these issued fresh water, and from the other water somewhat saline. Judging of the productive quality of the ground in this county by the test laid down by Fuller, we may infer that few counties are more fertile and rich. ‘ The goodness of the ground,’ he says, ‘ may certainly be collected from the plenty of convents erected therein, at St. Neots, Hinchingbrook, Huntingdon, Sautrie, St. Ives, Ramsey, &c.; so that the fourth foot at least in this shire was abbey-land, belonging to monks and friars ; and such weeds we know would not grow but in rich ground. If any man say that monks might not choose their own habitations, being confined therein to the pleasure of their founders ; know, there were few founders that did not first consult some religious person in the erection of convents ; and such would be sure to choose the best for men of their own profession. Sure I am, it would set all England hard to show, in so short a distance, so pleasant a park as Way-bridge, so fair a meadow as Portsholme, and so fruitful a

tillage as Godmanchester, all three within so many miles in this county.'

The county of Hunts returns four members to parliament; *viz.* two for the county, and two for the county town, Huntingdon. The family of viscount Hinchingbrook, as well as the ducal branch of Manchester, has always possessed a considerable influence over this county. The Probys and Ludlows have also been frequently returned. Mr. Montague, the husband of the celebrated Mrs. Montague of Portman-square, sat for the county town in 1734, 1741, 1747, 1754, and 1762. The duke of Manchester and the earl of Sandwich are deemed proprietors or patrons of both the shire and the town.

Sawtrey Beaumes, in this county, is thought to have been the birth-place of Beaumais, bishop of London in the time of Henry I., and surnamed Rufus to distinguish him from his nephew, who was afterwards bishop of the same see. He was appointed the first warden of the marshes of Wales, and afterwards governor of the whole of Salon. HP died in January 1127-8,

HUN

— Richard Broughton, author of the Monas-ticum Britannicum, was born at Stukely, on the high-road from Huntingdon towards Stilton. — Sir Robert Bruce Cotton, the celebrated antiquary, whose inestimable MSS and library are now in the British Museum, was born at Denton in 1570. Died 1621. — Huntingdon gave birth to Oliver Cromwell. — Richard Cromwell (Oliver's brother) was also a native of this town. Died 1712. — Stephen Marshall, the parliamentary divine, and head of the Smectym-nians, and whom Dugdale calls ' the bell-wether of that blessed flock,' ' Presbyterianorum anti-sig—

nanus,' was born at Godmanchester. • Roger,

de St. Ives, an Augustine friar, who wrote against the Lollards about 1390, was born at St. Ives, and appears to have been living in 1420.

There is scarcely any manufacture in this county. A little wool-stapling and spinning of yarn are carried on in some places ; also a lace manufactory at Kimbolton. Stilton is famous for its cheese : and there is a vinegar manufactory of some extent at the foot of Huntingdon bridge. The remains of antiquity in this county are principally Roman ; among them are the vestiges of three roads, which were constructed by that people. The remains of Ramsey Abbey and Castle, the seat of

the family of Oliver Cromwell, are of venerable date; and the churches of St. Ives, Bluntisham, and St. Neots, and the castle of Kimbolton are ancient.

HUNTINGDON, the chief town of the above county, is pleasantly situated on the north bank of the Ouse, over which there is here a bridge of six arches. It at present consists of but four parishes, having two churches, and two dissenting chapels ; but is said to have been formerly a place of more importance, and to have numbered fifteen churches. Near the church of St. Mary was anciently a priory of black canons, and on an eminence near it stood a castle, erected by Edward the Elder, and enlarged by David I. of Scotland, earl of Huntingdon. Towards the eastern side of ithe town, where the principal part of it formerly stood, the lanes which divide the enclosures from each other still retain their ancient names ; and in a piece of ground, called the Priory-Close, two stone coffins were dug up several years ago. The county assizes, in March and July, contribute greatly to the support of the town. The town-hall is a good modern building, with a piazza and shambles. The lower part contains the civil and criminal courts ; and above is a spacious assembly room. The market place is commodious, and the market well supplied. The principal street is very respectable in appearance, and the whole place is well paved and lighted. Here is a free grammar-school, and a charitable green-coat-school. The county gaol is a small structure in the High-street. Huntingdon is famous for being the native place of Oliver Cromwell, whose baptism is entered in the register for 1599. It is a borough by prescription, and sends two members to parliament, chosen by about 200 freemen and inhabitant householders. It is governed by a mayor, •*welve aldermen, and a common council of burgesses. The Ouse being navigable from Lynn, through this town up to Bedford, it derives its

supply of coals, wood, &c.,from Lynn by barges. It has a market on Saturday, noted for corn. Fifteen miles north-west of Cambridge, and fifty-eight and a half north of London.

HUNTINGDON, an extensive mountainous county of Pennsylvania, bounded north and north-west by Lycoming county, east and north-east by Mifflin, south-east by Franklin, south and south-west by Bedford and Somerset, and west by Westmoreland. It is about seventy-five miles long, and thirty-nine broad. Limestone, iron ore, and lead, are found here. It contains eighteen townships. Huntingdon, the chief

town, is situated at the north-east side of the Juniatta river, fifty miles from its mouth. It contains a court-house and a jail. Twenty-three miles south-west of Lewistown, and 184 W.N.W. from Philadelphia.

HUNTINGDON (Selina), countess of, was the second daughter of Washington, earl Ferrers, and born in 1707. She married, June 3d 1728, Theophilus, earl of Huntingdon, by whom she had a family of four sons and three daughters; but, becoming a widow, she embraced the principles of the Calvinistic methodists, and patronised the Rev. George Whitefield, whom she afterwards made her chaplain. She was long considered as the head of the sect of Calvinistic methodists, who were designated as the people of lady Huntingdon. She founded schools and colleges for their preachers, supported them with her purse, and expended annually large sums. She died June 17th, 1791, much respected for her virtues.

HUNTINGTON, or HUNT (William), who styled himself S.S., was born near Cranbrook in the weald of Kent, in 1774. He does not spare his mother's reputation in endeavouring to sustain his own ; he was ' the offspring,' he tells us, of « a double adultery.' At first he was a farmer's servant of the lowest description ; then, for a while, a gun-maker; then, again, a farmer's servant; then a gardener; then a gunpowder-manufac- turer; then a coal-heaver (at which period lie first began to preach) ; then a shoemaker ; and, finally, a dissenting teacher. He added to his original name Hunt, the syllables 'ington* to escape the demand of the parish of Frittenden in Kent upon him for an illegitimate child ; and S. S. to proclaim that he was, in his own estimation, a sinner saved

' You know,' he says, ' we clergy are very fond of titles of honor ; some are called lords spiritual, though we have no such lords but in the persons of the ever-blessed Trinity ; others are named doctors of divinity, and prebends, though God gives no such titles ; therefore I cannot conscientiously add D.D. to my function, though some hundreds have been spiritually healed under ray ministry ; nor have I £14 to spare to buy the dissenting title of D. D. Being thus circumstanced, I cannot call myself a lord spiritual, because Peter, the pope's enemy, condemns it; nor can I call myself lord high primate, because supremacy, in the Scriptures, is applied only to kings, and never to ministers of the gospel. As I cannot get at D. D. for the want of cash, neither can I get at M. A. for the want of learning ; therefore I am compelled to fly for refuge to S. S., by which I mean Sinner Saved.'

His own fanatical story of his conversion, and * call ‘ to preach, has been adverted to by the Quarterly Review (No. 48.), and other writers, to bring into contempt all modern ‘ experience ‘ in religion, and conversions as different from this man’s as that of St. Paul the apostle. We entirely doubt Hunt’s pretensions to having ever been a real lover of good morals, and therefore dismiss his whole profession of Christianity as a mixture of knavery and fanaticism. No man of right feeling would have thought it needful to confess his mother’s sins ; no man, as we think, that ever hated his own, would have related them in the manner he has done.

It will be sufficient, therefore, to add, that he removed from Thames Ditton, where he commenced preacher, to London about the year 1796; that he first officiated in a chapel of lady Huntingdon’s in Margaret-street, but soon obtained one of his own , and finally built the handsome meeting-hous<« in Gray’s-Inn Lane, called Providence Chapel published largely ; married the widow of Sir James Saunderson, a late lord mayor; and dieˆ rich, in 1813.

HURD (Richard), D D., bishop of Worcester, a distinguished divne and elegant classical scholar, was born, ar ne himself informs xis, at Congreve, in Staffordshire, in 1720. There being a good grammar school at Brewood, he was educated there under the Rev. Mr. Hillman, and, upon his death, under his successor, the Rev. Mr. Budworth, and continued under his care till he went to the university, when he was admitted to Emanuel College, Cambridge. He took his B. A.‘s degree in 1738-39; hisM.A.‘s degree, and was elected fellow, in 1742. In 1749 he took his degree of B. D. He published the same year Remarks on Mr. Weston’s Book on the Rejection of Heathen Miracles, and his Commentary on Horace’s Ars Poetica, which last book introduced him to the acquaintance of Dr. Warburton, by whose recommendation to Dr. Sherlock, bishop of London, he was appointed Whitehall preacher in May 1750. He published the Commentary on the Epistle to Augustus in 1751 ; the new edition of both Comments, with

dedication to Mr. Warburton, in 1753 ; and the Dissertation on the Delicacy of Friendship in 1755. His Remarks on Hume's Natural History of Religion appeared in 1757; and he was instituted this year (February 16th), to the rectory of Thurcaston, in the county of Leicester, on the presentation of Emanuel College. He published Moral and Pol tical Dialogues in 1759. In 1762 he published the Letters on Chivalry and Romance ; and Dialogues on Foreign Travel in 1 763 ; and Letter to Dr. Le-land of Dublin in 1764. He was made preacher of Lincoln's Inn, on the recommendation of Mr. Charles Yorke, &c., November 6th, 1765; was collated to the archdeaconry of Gloucester, on the death of Dr. Geekie, August 27th, 1767; and was appointed to open the Lecture of bishop Warburton on Prophecy in 1 768. He took the degree of D. D. at Cambridge, in the commencement of this year. He published the Sermons on Prophecy in 1772; was consecrated bishop of Litchfield and Coventry, the 12th of February, 1775; and published the first volume of Sermons preached at Lincoln's Inn, 1776; Dr. Hurd was now made preceptor to the prince of Walt's and his brother prince Frederick. He lost his old and best friend, bishop Warburton, June 7tti, 1779. He was elected member of the Royal Society of Gottingen, January llth, 1781 ; and on the death of the bishop of Winchester was translated to the see of Worcester, and made a clerk of the closet. In 1783 archbishop Coin-wallis died, and Hurd had it is said the offer of the archbishopric from his majesty; but he beg-ged leave to decline it, as a charge not suited. to his temper and talents, and much too heavy for him to sustain, especially in these times. It was also offered to the bishop of London, Dr. Lowth, and refused by him, as was foreseen, on account of his ill health. It was then given to Dr. Moore, bishop of Bangor. Declining all offers of preferment, bishop Hurd continued to fulfil thp duties of his station for more than twenty years: during which period he enjoyed the countenance and respect of the royal family, from several members of which he even received repeated visits. The king presented to him two fine full length pictures of his Majesty and the Queen, which the bishop put up in his drawing-room with a suitable inscription. After a few days' confinement to his bed, he expired in his sleep, on Saturday morning, May 28th, 1808; having completed four months beyond his eighty-eighth year. He was buried in Hartlebury church-yard, according to his own directions. He had been bishop of Worcester for almost twenty-seven years ; a longer period than any bishop of that see since the Reformation.

HUNYAD, a palatinate of Transylvania on the frontier of Hungary. It has an area of 2250 square miles, and a population of above 100,000, chiefly Walachians, with a few Germans and Hungarians.

HURA, in botany, a genus of the monadelphia order, and monoecia class of plants, natural order fifty-eighth, tricoccae. The amentum of the male is imbricated, perianth truncated : COR. none, the filaments cylindrical, peltated on top, and surrounded with numerous or double antherae. Female : CAL. none : COR. none : STYLE is funnel-shaped, the stigma cleft in twelve parts : CAPS, twelve-celled, with a single seed in each cell. There is but one species, *viz.*

H. crepitans, a native of the West Indies. It rises with a soft ligneous stem to the height &• twenty-four feet, dividing into many branches, which abound with a milky juice, and have scars on their bark where the leaves have fallen off. The male flowers come out from between the leaves upon foot-stalks three inches long; and are formed into a close spike or column, lying over each other like the scales of fish. The female flowers are situated at a distance from them ; and have a long funnel-shaped tube spreading at the top, where it is cut into twelve reflected parts. After the flower, the germen swells, and becomes a round compressed ligneous capsule, having twelve deep furrows, each being a distinct cell, containing one large round compressed seed. When the pods are ripe, they burst with violence, and throw out their seeds to a considerable distance. It is propagated by

seeds raised on a hot-bed ; and the plants must be constantly kept in a stove. The kernels are said to be purgative, and sometimes emetic.

HUE'DLE, n. s. Sax. pyji&el ; Goth. hurd. A texture of sticks woven together ; a crate. Grate on which criminals are dragged to execution.

Settle your fine joints 'gainst Thursday next,

Or I will drag thee on a hurdle thither.

Shakspeare,

The blacKsmith was hanged, drawn, and quartered at Tyburn ; taking pleasure upon the hurdle, to think that he should be famous in aftertimes. Bacon.

The sled, the tumbril, hurdles and the flail,

These all must be prepared. Dryden's Georgicks.

HURDLES, in fortification, are made of twigs of willows or osiers interwoven close together, sustained by long stakes, in the figure of a long square, the length being five or six feet, and the breadth three and a half. The closer they are wattled together, the better. They serve to render the batteries firm, or to consolidate the passage over muddy ditches; or to cover traverses and lodgments for the defence of the workmen against fireworks or stones. The Romans had a kind of military execution for mutineers, called putting to death under the hurdle. The criminal was laid at his length in a shallow water, under an hurdle, upon which was heap-ed stones, and so pressed down till he was drowned.

HURDLES, in husbandry, certain frames made either of split timber, or of hazel rods wattled together, to serve for gates in enclosures, or tc make sheep-folds, &c.

HURDIS (James), D. D., a poet of the last century, was the son of a gentleman of small fortune, and born at Bishopstone, in Sussex, in 1763. He was educated at Chichester, and in 1780 entered a commoner of St. Mary Hall, Oxford. In 1782 was chosen a demy of St. Mary Magdalen. Two years after Mr. Hurdis became tutor to the youngest son of lord Chichester, the honorable George Pelham, since' bishop of Exeter. In 1788 first appeared his Village Curate, which was followed by Adriano, Panthea, Elmer and Ophelia, and the Orphan Twins. In 1791 he was presented to the living of Bishopstone; and in 1793 elected professor of poetry at Oxford, where in 1794 he took the degree of B. D. and in 1797 that of D. D. He died December 23d, 1801. In addition to the above works Dr. Hurdis was author of A Disquisition on Genesis 1 and 21 ; Select Remarks on the First Ten Chapters of Genesis; Sir Thomas More, a Tragedy; Cursory Remarks on the Arrangement of the Plays of Shakspeare ; A Vindication of the University of Oxford from the aspersions of Mr. Gibbon ; The Favorite Village, a poem, and Twelve Dissertations on the Nature and Occasions of Prophecy. His poems were published after his death in three volumes by subscription, with a life by his sister.

HURDWAR, or HAREDWARA, a town of the province of Delhi, Hindostan, on the western Mnk of the Ganges, near to the issuing of that river from the mountains. It is one of the most famous places of Hindoo purification ; and

pilgrims from every part of India resort hithei, in the month of April ; on which occasion a number of merchants also attend, and form one of the largest fairs held in Hindostan. Since it came into possession of the British the heavy taxes have been abolished, and every encouragement is held out to the merchants; in consequence of which, at the great fair held every twelfth year, 1,000,000 of persons have attended. A British magistrate, supported by police officers and a corps of native infantry, always attends. Long. 78° 2' E., lat. 29° 57' N.

HURE (Charles), a French divine, the son of a laborer at C'hampigny sur Yonne, born in 1639. He studied theology and the eastern languages with such success that he became principal of the college at Bencourt. He wrote. 1. A Dictionary of the Bible, in 2 vols. folio. 2. A sacred Grammar. 3. A translation of the New Testament into French He was a Jansenist ; and died in 1717.

HURL, v. a. & n. s. ~] From hurolt, to throw HURL-BAT, ra. s. (down, Islandic; or, HUR'LER, n. s. • ˆaccording to Skinner, HURL'WIXD, n. s. f from whirl. Fr. harlu-HUR'LY, j brelu, inconsiderately :

HUR'LY-BURLY. J hurl, to throw with violence ; to utter with vehemence, but this sense is not in use ; to play at a kind of game : hurl, Uimult ; commotion : hurlwind for whirl-wind, a violent gust : hurl-bat for whirl-bat, a weapon whirled rapidly round : hurly-burly, from the French word, as above, tumult or bustle. To hurl ' implies an unusual vehemence on the part of the agent, and an excessive provocation on the part of the sufferer.'

If he thrust him of hatred, or hurl at him by lay-ing of wait. Numbers xxxv. 20.

They use both the right hand and the left in hurling stones. Chronicles xii. 2.

Like scattered down by howling Eurus blown, By rapid hurlwinds from his mansion thrown.

Sandys.

The glad merchant that does view His ship far come from watry wilderness, He hurls out vows. Spenser.

All places were filled with tumult and hurly-burly, every man measured the danger by his own fear ; and such a pitiful cry was in every place, and in cities presently to be besieged. Knolles.

He in the same hurl murdering such as he thought would withstand his desire, was chosen king. Id If heav'ns have any grievous plague in store, O, let them keep it 'till thy sins be ripe, And then hurl down their indignation On thee ! Shalnpeare. Richard //…

He holds vengeance in his hand, To hurl upon their heads that break his law.

Shakspeare,

I with my nails digged stones out of the ground, To hurl at the beholders of my shame. li.

Winds take the ruffian billows by the top, That with the hurly death itself awake. Id.

Poor discontents,

Which gape and rub the elbow at the news Of hurly-burly innovation. Id.

Methinks, I see this hurly all on foot. Id.

Hurl ink and wit, As madmen stones. Ben Joruan.

The huflen must hnrl man to man, and not two set upon one man at

once.

Carew's Survey of Cornwall.

Hurling taketh its denomination from throwing of the ball, and is of two sorts ; to goals, and to the country : for hurling to goals there are fifteen or thirty players, more or less, chosen out on each side, who strip themselves, and then join hands in ranks, one against another : out of those ranks they match themselves by pairs, one embracing another, and so pass away ; every of which couple are to watch one another during this play. Carew.

When ballf against the stones are hardest throwne, Then highest up into the aire they fly ; So, when men hurlc us (with most fury) downe, Wee hopefull are to be advanced thereby.

G. Withers.

Corrupted light of knowledge hurled Sin, death, and ignorance o'er all the world.

Denham. His darling sons,

Hurled headlong to partake with us, shall curse Their frail original and faded bliss. Milton.

Highly they rag'd against the Highest, Hurlirui defiance towards the vaults of heaven.

Id.

Thus the rash Phaeton with fury hurled And rapid rage, consumes our British world.

Marvell.

She strikes the lute ; but if it sound. Threatens to hurl it on the ground. Waller.

Young Phaeton,

From East to North irregularly hurled, First set himself on fire, and then the world.

Dryden.

Conjure him far to drive the Grecian train, And hurl them headlong to

the fleet and main.

Pope.

To hurl the dart, to ride the car, To stem the deluges of war, And snatch from fate a sinking land ; Trample the invader's lofty crest And from his grasp the dagger wrest And desolating brand. Seattle.

The captive usurper, Hurled down from his throne, Lay buried in torpor, Forgotten and lone. I broke through his slumbers, I shivered his chain, I leagued him with numbers, He's tyrant again. Byron's Manfred.

HURON, a large lake of North America, one of the five principal ones which lie partly in the British territories, and partly in those of the United States. Its form is nearly triangular, and its circumference above 1000 miles, being upwards of 240 miles long from east to west, and 180 broad from north to south. It has many bays and islands, and communicates with lake Michigan on the west by the straits of Michilli-mackinac, with Lake Superior on the north-east by those of St. Mary, and with lake Erie on the south by those of Detroit. It abounds with fish, particularly trout and sturgeons, and its banks with sand cherries. The Chippeway, Ottoway, and Huron Indians reside on its banks. It lies between 80° 10' and 84° 30' W. long., and between 43° 30' and 46° lO'N. lat.

On the western side of lake Huron an extensive series of islands, called the Manatoulin Islands, stretches in an easterly direction for 160 miles ;

on some of which the land rises into elevations of great height. On this lake, also, the navigator is often assailed by violent storms, attended with thunder and lightning, more terrific than in any other part of North America. Lake Michigan, at the western angle, although distinguished by a separate name, can only be considered as a part of Lake Huron, deepening into a bay of 262 miles in length, by fifty-five in breadth, and whose entire circumference is 731 miles. Between it and Lake Huron there is a peninsula, that at the widest part is 150 miles; along which, and round the bottom of Michigan runs part of the chain forming the Land's Height to the southward ; whence descend many large and numerous streams that run into it. On the north side of Lake Huron many rivers of considerable size run down from the Land's Height. One of them, called French River, communicates with

Lake Nipissing, whence a succession of smaller ones, connected by short portages, opens an intercourse with the Ottawa River, that joins the St. Lawrence near Montreal. On the eastern extremity of the lake is the Matchedash River, which through another succession of lakes, separated only by one short portage, establishes a communication by Lake Simcoe, Holland River, and Yonge Street, with the town of York, the capital of Upper Canada. The land bordering on the western shore of the lake is greatly inferior in quality to that on Lake Erie. It is mixed with sand and small stones, and is principally covered with pines, birch, and some oaks.

HURON, a county of the United States, in Ohio, bounded south by Richland, or the parallel of lat. 41° N. and Indian Lands; east by Medina and Cayahoga counties; north by Lake Erie ; and west by Indian Lands. It is watered by Black, Vermillion, and Huron rivers, Pipe and Cold creeks, and Sandusky and Portage rivers. The chief place is Aveny.

HURON, a river of the United States, in the North Western Territory, which rises near the Sciota, and running north-east falls into Lake Erie.

HURONS, atribe of North American Indians, which was formerly numerous, and dwelt on the east of lake Huron; but, in 1650, they were driven out by the Iroquois, and retired to the south-west of lake Erie. The six nations (the Mohawk tribes or Iroquois) call the Hurons father, without doubt because they are descended from the Hurons, who are now reduced to 700 warriors. They are among the most civilized of the North American Indians, live in gooc houses, have horses, cows, and swine, and raise gram for sale. Their proper name is Wyandots. (See North American Review, vol. 24, pp. 419, 428.) The Iroquois are sometimes included un-der the name of Hurons, but they are a separate people.

HUR'RICANE, n. s.) Fr. ouragan; Span.

HURRICA'NO, n. s. S hraacan. A violent storm, such as is often experienced in the western hemisphere.

A storm or hwrricano, though but the force of air, makes a strange havoc where it comes. fiurnet.

So, where our wide Numidian wastes extend, Sudden th' impetuous hurricanes descend, Wheel through the air, in circling eddies play, Tear up the sands, and sweep whole plains away.

Addison.

HURRICANES, in the warm climates, greatly exceed the most violent storms known in this country. ' The ruin and desolation accompanying a hurricane,' says Dr. Mosely in his Treatise on Tropical Diseases, ' cannot be described. Like fire, its resistless force consumes every thing in its track, in the most terrible and rapid manner. It is generally preceded by an awful stillness of the elements, and a closeness and mistiness in the atmosphere, which makes the sun appear red, and the stars larger. But a dreadful reverse succeeding — the sky is suddenly overcast and wild — the sea rises at once from a profound calm into mountains — the wind rages and roars like the noise of cannon — the rain descends in deluges — a dismal obscurity envelopes the earth with darkness — the superior regions appear rent with lightning and thunder — the earth often does, and always seems to tremble— terror and consternation distract all nature — birds are carried from the woods into the ocean; and those whose element is the sea seek for refuge on land — the frightened animals in the field assemble together, and are almost suffocated by the impetuosity of the wind in searching for shelter, which, when found, serves only for destruction — the roofs of houses are carried to vast distances from their walls, which are beaten to the ground, burying their inhabitants under them — large trees are torn up by the roots, and huge branches shivered off, and driven through the air in every direction, with immense velocity — every tree and shrub that withstands the shock, is stripped of its boughs and foliage — plants and grass are laid flat on the earth — luxuriant spring is changed in a moment to dreary winter. This dreadful tragedy ended, when it happens in a town, the devastation is surveyed with accumulated horror : the harbour is covered with wrecks of boats and vessels ; and the shore has not a vestige of its former state remaining. Mounds of rubbish and rafters in one place, heaps of earth and trunks of trees in another, deep gullies from torrents of water, and the dead and dying bodies of men, women, and children, half buried, and scattered about, where streets but a few hours before were, present the miserable survivors with a shocking conclusion of a spectacle to be followed by famine, and, when accompanied by an earthquake, by mor-tal diseases.' These destructive phenomena are now thought to arise from electricity, though the manner in which it acts in such cases is unknown. See WIND. See PNEUMATICS.

HUR’RY, v.n. & n. s. (Sax. penˆian, to HUR’RIER, n. s. } plunder : hurs was

likewise a word used by the old Germans in urging their horses to speed, and seems the imperative of the verb. — Johnson. To hasten; to put into precipitation or confusion ; to drive confusedly ; to move on with precipitation : hurry, turr ult ; commotion : hurrier, a disturber.

Your nobles will not hear you j but are gone To offer service to your enemy ; And wild amazement hurries up and down The little number of your doubtful friends.

Shakspeare.

Among all the horrible hurries in England, Ireland was then almost quiet. Hayward.

Mars, that horrid hurrier of men. Chapman.

For whom all this haste Of midnight march, and hurry’d meeting here ?

Milton.

That hurryed o’er

Such swarms of English to the neighb’ring shore.

Dryden.

Did you but know what joys your way attend, You would not hurry to your journey’s end. Id. Impetuous lust hurries him on to satisfy it. South. It might have pleased him in the present heat and hurry of his rage ; but must have displeased him infinitely in the sedate reflection. Id.

Stay these sudden gusts of passion, That hurry you away. Route’s Royal Convert.

Ambition raises a tumult in the soul, it inflames the mind, and puts into a violent hurry of thought.

Addison.

A long train of coaches and six ran through the heart, one after another in a very great hurry. Id.

I do not include the life of those who are in a perpetual hurry of affairs, but of those who are not always engaged. Id.

A man has not time to subdue his passions, establish his soul in virtue, and come up to the perfection of his nature, before he is hurried off the stage. Id.

After the violence of the hurry and commotion was over, the water came to a state somewhat more calm. Woodward.

The pavement sounds with trampling feet, And the mixt hurry barricades the street.

Gay't Trivia.

If a council be called, or a battle fought, you are not coldly informed, the reader is hurried out of himself by the poet's imagination.

Pope's Preface to the Iliad. Time hurries on

With a resistless unremitting stream, Yet treads more soft, than e'er did midnight thief, That slides his hand under the miser's pillow, And carries off his prize. Blair.

Ah ! then and there was hurrying to and fro, And gathering tears, and tremblings of distress, And cheeks all pale, which, but an hour ago, Blushed at the praise of their own loveliness.

Byron. Childe Harold.

HURST CASTLE, a fortress in Hampshire ou a remarkable tongue of the county, projecting two miles into the sea toward the Isle of Wight, though scarcely 200 yards over at high water. The castle was built by Henry VIII., and consists of a round tower, fortified by bastions. Here Charles I. remained for several days previous to his trial. It is two miles west of Yarmouth.

HURT, v.a. & n s. ˆ Imperf. I hurt ; pre-HURT'ER, n. s. terper. I have hurt. Sax.

HURT'FUL, adj. J'yf1* > Teut. hurtew;

HURT’FULLY, adv. I Fr. heurter, to strike. H URT’FULNESS, n. s. ‘ Hurt implies corporeal

HURT’LESS, adj. HURT’LESSLY, adv.

injury, as mischief; wound; blow; bruise;

HURT’LESSNESS, n. s) mental oain, or wounded feelings ; souuw : rtisoleasure , personal loss by injustice or w»ong : hurtful, mischievous;

HUR

pernicious: hurtless, innocent; harmless; incapable of doing injury.

I have slain a man to my hurt. Genesit.

Why should damage grow to the hurt of the king ?

Ezra. See thou hurt not the oil and wine. Revelation.

For there n’as lady ne creture, Save on the wals old portraiture Of horsmen, haukes, and hounds, And hurt dere all full of woundes, Some like bitten, some hurt with shot.

Chaucer’s Dreame.

Spiritual theft is sacriledge, that is to say, Hurting of holy thinges. Id. The Persones Tale. The hurt thereby is greater than the good.

Spenser.

She joyed to make proof of her cruelty On gentle dame, so hurtless and so true.

Id. Faerie Queene.

Secret neglect of our duty is but only our own hurt : one man’s contempt of the common prayer of the church of God may be most

hurtful unto many.

Hooker.

Where is he wounded ?

— There will be large cicatrices to shew the people : he received seven hurts i' the' body.

Shuhspeare. Coriolanus.

My heart is turned to stone : I strike it, and it hurts my hand. Id. Othello.

Carter adventured bravely, and received two great hurts in his body. Hayicard.

Virtue may he assailed, but never hurt; - Surprized by unjust force, but not enthralled.

Milton.

The Adonis of the sea, is so called, because it is a loving and innocent fish, that hurts nothing that has life. Walton.

Unto her home he oft would go, Where bold and hurtless many a play he tries,

Her parents liking well it should be so ; For simple goodness shined in his eyes. Sidney. Your neighbours have found you so hurtlessly strong, that they thought it better to rest in your friendship than make new trial of your enmity. Id.

It breeds contempt

For herds to listen, or presume to pry, When the hurt lion groans within his den.

Dry den.

The hurtful hazle in the vineyard sbun, Nor plant it to receive the setting sun.

Id. Georgicks.

Shorter every gasp he takes, And vain efforts and hurtless blows he makes.

Id. Mneia.

The pains of sickness and hurts, hunger, thirst, and cold, all men feel. Locke.

In arms and science tis the same, Our rivals' hurts create our fame. Prior.

HURTERS, in fortification, pieces of timber about six inches square, placed at the lower end of the platform, next the parapet, to prevent the wheels of the gun carriage from hurting the parapet, whence the name.

HURTLE, v. n. & v. a. Prabably from hurt. Fr. heurter; Ital. urtare. To clash; to skirmish ; to run against any thing ; to jostle ; to meet in shock and encounter ; to move with violence or impetuosity, but this meaning is obsolete.

He foineth on his foo with a tronchoun ;

An he him hurileih with his hors, adoun.

Chaucfr. The Kmqhtei Talc.

And hertily thei hurtlen al at ones And fro the top, doune comcth the grete stones.

Id. Legende of Goud Wimnˆi. His harmful club he gau to hurtle high, And threaten battle to the fairy knight.

Faerie Queene. The noise of battle hurtled in the air. Shakspeare.

Kindness

Made him give battle to the lioness, Who quickly fell before him ; in which hurtliny, From miserable slumber I awaked.

Shakspeare. As You Like It.

HUS'BAND, n. s. &v.a.ˆ Dan. and Swed HUS'BANDLESS, adj. I hits bonde, master,

HUS'BANDLY, adj. Vfrom house and

HUS’BANDMAN, n. s. iRun. bonda ; or

HUS’BANDRY, n. s. J Dan. and Swed.

bonde, a conductor, a male guide. A man married to a woman ; the male of animals : an economist; a man that knows and practises the methods of frugality and profit : a tiller of the ground, or farmer : the verb signifies to manage with frugality ; to till or cultivate : husbandless, without a husband : husbandly, thrifty ; frugal : husbandman, an agriculturist : husbandry, tillage of land by manual labor ; thrift; frugality; parsimony.

And after dinner, gonnen they to dance And sing also, sauf Dorigene alone, Which made alway hire complaint and hire mone, For she ne saw him on the dance go, That was hire husband and hir love also.

Chaucer. The Frankeleine* Tale. This widewe, which I tell you of my tale, Sin thilke day that she was last a wif, In patience led a full simple iif. For litel was hir catel and hir rente ; By husbondry of swiche as God hir sente She found herself, and eke her doughtien two.

Id. The Nonnes Priestes Tale. Husbandry supplieth all things necessary for food.

Spenser. Husband’s work is laborious and hard.

Hubberd’s Tale.

Asked if in husbandry he ought did know, To plough, to plant, to reap, to sow. Id.

Bare plots full of galls, if ye plow overthwart ; And compass it then, is a husbandly part. Titster,

Think you I am no stronger than my sex, Being so fathered and so husbanded ? Shakspeare.

If you shall prove

*> This ring was ever her’s you shall as easy Prove that I husbanded her bed in Florence, Where yet she never was. Id.

Lorenzo, I commit into your hands The husbandry and manage of my house. Id.

It will be pastime passing excellent, If it be husbanded with modesty. Id.

A widow husbandless, subject to tears ; A woman, -naturally born to fears. Id.

Thjs Davy serves you for good uses ; he is your serving-man, and your husbandman. Id.

Why, woman, your husband is in his oh) lunes again : he so takes vn yonder with my husbund, and so rails against all married mankind. Id.

In my right,

By me invested, he compeers the best. — That were the most, if he should husband you.

Id,

Peace hath from France too long been chased j And all her husbandry doth lie on heaps, Corrupting in its o\vn fertility. Id. Henry P_

There's husbandry in heaven ; The candles are all out. Id. Macbeth.

Thy husband is thy lord, thy life, thy keeper, Thy head, thy sovereign. Id. Taming of the Shrew.

The seeds of virtue may, by the husbandry of Christian counsel, produce better fruit than the strength of self-nature. Raleigh.

Husbandry the Spaniards wanting in the valleys of Mexico, could not make our wheat bear seed. Id.

I heard a great husband say, that it was a common error to think that chalk helpeth arable grounds.

Bacon.

A farmer cannot husband his ground, if he sits at a

great rent.

Id.

The French, wisely husbanding the possession of a victory, kept themselves within their trenches.

Id. Henry VII.

Many men love the sea, others husbandry ; briefly, they cannot agree in their own trades and professions, much less in their lives and actions.

Burton. Anat. Mel.

If thou be master-gunner, spend not all That thou canst speak at once ; but husband it, And give men turns of speech. Herbert.

In those fields

The painful husband ploughing up his ground, Shall find all fret with rust, both pikes, and shields.

Hakewill.

He was a father to the fatherless, To widows he supplied a husband's care.

Fletcher's Purple Island. Thus with Sapphira and her husband's fate (A fault which I like them am taught too late), For all that I gave up I nothing gain. And perish for the past that I retain. Cotcley. Such, as good husbands covet or good wives (The dere companions of most happy lives) Wrong courses take to gain them ; yet contemne Their honest love, who rightly counsel them.

G. Withers.

A family governed with order will fall naturally to tbe several trades of husbandry, tillage, and pasturage.

Temple.

This •areful husband had been long away, Whom his chaste wife and little children mourn.

Dry den.

If continued rain

The lab'ring husband in his house restrain, Let him forecast his work. Id. Georgicks.

Let any one consider the difference between an anre of land sown with wheat, and an acre of the same land lying without any husbandry upon it, and he will find that the improvement of labour makes the value. Locke.

The contract and ceremony of marriage is the occasion of the denomination of relation of husband. Id. The greatest schemes which human wit can forge, Or bold ambition dares to put in practice, Depend upon our husbanding a moment, And the light lasting of a woman's will.

Howe's Lady Jane Grey.

You have already saved several millions to the publick, and that what we ask is too inconsiderable to break into any rules of the strictest good husbandry.

Swift.

The mule being more swift in his labour than the ox, more ground was allowed to the mule by the htu-bandman. Brootne.

And if in che mean time her husband died, But heaven forbid that such a thought should cross Her brain though in a dream! (and then she

sighed), Never could she survive the common loss.

Byron. Don Juan. VOL. XI.

HUSBANDRY, as an art, may include all that is practical in AGRICULTURE as a science. See that article.

It is usually held to embrace still more, L •?- the selection and management of stock and the entire business of the grazier. The usuage of our language, as will be seen above, even down to Swift's time, included also in good husbandry domestic management of all sorts, and even political economy. It was originally applied to agricultural pursuits only because they formed one of the largest of the ordinary occupations of mankind. On consideration, therefore, we have felt that RURAL ECONOMY will more specifically designate the practical parts of the science of agriculture, not included in that article : we may hope at that period of our work to see some of the contemplated measures of government with regard to the agricultural interests assume a definite shape ; and shall be able to include the latest agricultural inventions and improvements. HUSH, interj., adj., & v. n. ˆ Danish hyt ; HUSH-UP, v. a. > Goth. thus. The

HUSH-MONEY. J interjection is

expressive of silence ! be still ! no noise ! the adjective signifies silent ; quiet : the verbs, to be still, or cause to be still; to appease: to hush-up, to suppress in silence ; to forbid to be mentioned : hush-money, a bribe to secure silence. ' Husht ! pees,' quod the miller, ' seist thou not

the Frere

How he lowreth under his hood with a doggish eye.

Chaucer. The Pardonere and Tapttere.

When they were set, and husht was al the place.

Id. The Knightet Tale.

This frowned, that fawned, the third for shame

did blush ;

Another seemed envious or coy ; Another in her teeth did gnaw a rush ; But at these strangers' presence every one did hush.

Spenser. Speak softly ; All's husht as midnight yet.

Shahspeare. Tempest. My love would speak ; my duty hushes me.

Shahspeare.

The king hath done you wrong ; but hush ! ‘tis so.

Id.

As we often see, against some storm, A silence in the heavens, the rack stands still, The bold winds speechless, and the orb below As hush as death. Id. Hamlet

When in a bed of straw we shrink together, And the bleak winds shall whistle round oar heads, Wilt thou then talk thus to me 1 Wilt thou then Hush my cares thus, and shelter me with love “!

Otway.

Hushed as midnight silence go ; He will not have your acclamations now.

Dryden. The court was hushed, and a whisper ran.

Addis fn.

This matter is hushed up, and the servants are for bid to talk of it. Pope.

A dexterous steward, when his tricks are found, Htuhmoney sends to all the neighbours round ; His master, unsuspicious of his pranks, Pays all the cost, and gives the villian thanks.

Swift.

Alas! thou art pale, and on thy brow t’.ie drops Gather like night new. My beloved, hush — Calm thec. Byron.

•21

Speak to me,

For I have called on thee in the still night, Startled the slumbering birds from the hushed

boughs,

And woke the mountain wolves, and made the caves Acquainted with thy vainly echoed name.

Id. Manfred.

HUSK, n. s. &v.a. } Belg. hulsck; Swed.

HUS'KED, adj. £ hulsa. The outmost in—

HTJS'KY, adj. j tegument of fruits : husk,

to strip off the integument : husked, covered with a husk : husky, abounding in husks.

HUSKISSON (William, the right honorable), was born 1769, and sent to Paris, while quite young, to study anatomy and medicine. On the breaking out of the French revolution, he was warmly disposed to the liberal side of the question, and was an active member of the London Corresponding Society, though not, as has been said, of the Jacobin Club at Paris. He was soon after, however, introduced to the notice and favor of Mr. Pitt, and, in 1796, was placed in the office of Mr. Dundas (lord Melville), then secretary of the home department. In 1801, he was appointed receiver-general of the duchy of Lancaster, and a commissioner of trade and plantations. He soon after entered parliament as member for Morpeth. Here Mr. Huskisson did not speak much, but was very useful to the ministry in financial matters, both in parliament and in preparing papers. When Mr. Canning's difference with lord Castlereagh induced him to leave the ministry (1809), Mr. Huskisson retired with him, and in subsequent debates it soon appeared that a third party existed in the house, agreeing with the ministry on questions of general policy, but joining the opposition in demanding retrenchment in the public expenditure. On the appointment of Mr. Canning to the foreign secretaryship, Mr. Huskisson entered the cabinet with him as president of the board of trade. In Ihe Goderich ministry he became secretary for the colonies, and retained that post in the Wel-lington ministry, composed of the warm enemies of his late friend, Mr. Canning; but it was soon

apparent that no cordial cooperation could take place between men of such opposite principles, and Mr. Huskisson and his friends were soon obliged to withdraw. His death took place September 15, 1830. Being present at the celebration on the opening of the Liverpool and Manchester rail-way, he came inadvertently in \he course of one of the steam-carriages, moving tt a rapid rate, which passed over him, arid •rushed one of his legs. He died very soon after.

HUSS (John), an eminent reformer and mar-tyr, born at Huss, in Bohemia. He lived at Prague, where he was distinguished by his uncommon erudition and eloquence, and performed the functions of professor of divinity in the university, and pastor in the church of that city. He adopted the sentiments of Wickliffe, and the Waldenses ; and in 1407 began openly to oppose and preach against divers errors in doctrine, as well as corruptions in point of discipline, then reigning in the church. He also endeavoured to withdraw the university of Prague from the jurisdiction of Gregory XII., whom the kingdom of Bohemia had hitherto acknowledged

as the lawful head of the church. This occasioned a violent altercation between the archbishop of Prague and our reformer, which the latter daily augmented by his exclamations against the court of Rome, and the corruptions that prevailed among the sacerdotal order. Several other circumstances contributed to inflame the resentment of the clergy against him. He adopted the philosophical opinions of the Realists, and strongly opposed, and persecuted, as some say, the Nominalists, whose number and influence were considerable in the university of Prague. He also multiplied the number of his enemies in 1408, by procuring a sentence in favor of the Bohemians, who disputed with the Germans concerning the number of suffrages which their respective nations were entitled to, in all matters decided by election, in this university. In consequence of a decree obtained in favor of the former, which restored them to their constitutional right of three suffrages, usurped by the latter, the Germans withdrew from Prague, and, in 1409, founded a new academy at Leipsic. This event no sooner happened than Huss began to inveigh with greater freedom than he had be-fore done against the vices and corruptions of the clergy, and to recommend, in a public man-ner, the writings and opinions of Wickliffe, as far as they related to the papal hierarchy, the despotism of the court of Rome, and the corruption of the clergy. Hence an accusation was brought against him, in 1410, before the tribunal of John XXIII., by whom he was solemnly expelled from the communion of the church. Notwithstanding this sentence of

excommunication, he proceeded to expose the Romish church with a fortitude and zeal that were almost universally applauded. He was now, therefore, summoned to appear before the council of Constance. Secured, as he apprehended, from the rage of his enemies, by the safe conduct granted him by the emperor Sigismund for his journey to Constance, his residence in that place, and his return to his own country, he obeyed the order of the council, and appeared before it to demonstrate his innocence. But, by the most scandalous breach of public faith, he was cast into prison, declared a heretic, and burnt alive in 1415 ; a punishment which he endured with unparalleled magnanimity and resolution. The same uuhappy fate attended Jerome of Prague, his intimate companion, who attended the council to support his persecuted friend. See JEROME. John Huss's writings, which were numerous and learned, were burnt along with him ; but copies of most, if not all of them, were preserved, and published after the invention of printing.

HUSSITES, in ecclesiastical history, a party of reformers, the followers of John Huss. They adhered to their master's doctrine after his deatn with a zeal which broke out into an open war, that was carried on with the most savage and un-> paralleled barbarity. John Ziska, a Bohemian knight, in 1420, put himself at the head of the Hussites, who were now become a very considerable party, and threw off the despotic yoke of Sigismund, who had treated their brethren in the most barbarous manner. Ziska was succeeded by Procopius, in the year 1424. The acts of

barbarity that were committed on both sides were horrible beyond expression : for, notwithstanding the irreconcileable opposition between the religious sentiments of the contending parties, they both agreed in this one horrible principle, that it was lawful to persecute and extirpate with fire and sword the enemies of the true religion ; and such they reciprocally held each other. These commotions in a great measure subsided, by the interference of the council of Basil, in 1433. The Hussites, who were divided into two parties, the Calixtines and Taborites, spread over all Bohemia and Hungary, and even Silesia and Poland ; and there are remains of them still subsisting in all these parts.

HUSTINGS, n. s. Sax. burting. A council ; a court held ; the place where it is held.

HUSTINGS is a court held in Guildhall before the lord-mayor and aldermen of London, and reckoned the supreme court of the city. Here deeds may be enrolled, outlawries sued out, and replevins and writs of error determined. In this court also is the election of the lord-mayor and sheriffs, of the four members of parliament for the city, &c. This court is very ancient, as appears from the laws of Edward the Confessor. Some other cities have likewise had a court bearing the same name, as Winchester, York, &c.

HUSTLE, v. a. Perhaps corrupted from hurtle. To shake together in confusion.

HUSTNAPOOR, or HASTiNANAGARA,aonce famous and ancient city, founded by Rajah Hasti, fifty miles north-east from the city of Delhi, much celebrated in the Hindoo Mythological Poems. It is about twenty miles south-west from Daranagur, standing on a branch of the Ganges, formerly the bed of that river. There remains only a small place of worship, the extensive site of the ancient city being entirely covered with large ant-hills.

HUSUM, a town of Denmark, in the duchy of Sleswick, and capital of the bailiwic of Hu-sum, with a strong citadel and a very handsome church. It is seated on the river Ow, on the German Ocean, and is subject to the duke of Holstein Gottorp. Long. 9° 8' E., lat. 54°. 32' N.

HUS' WIFE, 7i. s. & v. a. } From housewife.

HUS'SY, n. s. > It is common to

HUS'WIFERY, n. s. j use housewife in

a good, and huswife in a bad sense. A bad manager; also a thrifty woman; an economist : huswifery, good or bad management, especially in rural business. Hussy (corrupted from housewife, taken in an ill sense), a sorry or a bad woman ; a worthless wench. It is often used ludicrously in slight disapprobation. See HOUSEWIFE.

Good huswifery trieth To rise with the cock ; 111 huswifery lyeth

Till nine of the clock. Tuner.

If cheeses in dairie have Argus his eyes,

Tell Cisley the fault in her huswifery lies. Id. Why should you want?

The bounteous huswife, Nature on each bush

Lays her fulness before you. Shakspeare.

Bianca,

A huswife, that, by selling her desires,

Buys herself bread and cloth. Id. Othello.

But huswifing the little Heaven had lent, She duly paid a goat for quarter-rent ; And pinched her belly, with her daughters' too, To bring the year about with much ado. Dryden. Get you in, hussy, go : now will I personate this hopeful young jade. Southern's Innocent Adul.

HUT. n. s. Sax. butte ; Fr. hute. A poor cottage.

Our wand'ring saints, in woful state, To a small cottage came at last, Where dwelt a good old honest yeoman, Who kindly did these saints invite In his poor hut to pass the night. Swift.

Sore pierced by wintry winds

How many shrink into the sordid hut

Of cheerless poverty. Thomson.

HUTCH, n. s. Sax. bpsecca ; Fr. huche. A corn chest.

The best way to keep them after they are threshed, is to dry them well, and keep them in hutches, or close casks. Mortimer.

HUTCHESON (Dr. Francis), an elegant writer of the eighteenth century, the son of a dissenting minister in the north of Ireland. He was born in 1694, and, having gone through the usual school education, was removed to the University of Glasgow. He afterwards returned to Ireland, and was about to be settled as minister to a small congregation of dissenters, in the north of that country, when some gentlemen of Dublin invited him to commence a private academy there. He had been fixed but a short time in Dublin, when his merits made him generally known ; and his acquaintance was sought by men of all ranks, who had a taste for literature. Lord viscount Molesworth, and Dr. Synge, bishop of Elphin, lived in friendship with him, and assisted him with their observations upon his Enquiry into the Ideas of Beauty and Virtue, before it came abroad. The first edition was

published without the author's name ; but such was the reputation of the work, that lord Granville, then lord lieutenant of Ireland, enquired out the author, and treated him with distinguished marks of his esteem. From this time his acquaintance began to be still more courted by men of distinction in Ireland. A few years after his Enquiry, his Treatise on the Passions was published. Both these works have been often reprinted, and much admired, even by those who have not assented to his philosophy. After conducting a private academy in Dublin for seveti or eight years, with great reputation and success, he was called, in 1 729, to Scotland, to be professor of philosophy in the University of Glasgow. Several young gentlemen came with him from the academy, and his high reputation drew many more thither from England and Ireland. He died in 1747, aged fifty-three, leaving behind him one son, Francis Hutcheson, M. D., who published, from his father's original MS., A sys-tem of Moral Philosophy, in three books ; at Glasgow, 1755, in 2 vols. 4to.

IIUTCHINS (John), an English topographer, born at Bradford Peverell, where his father was curate, in 1698. He was educated at Baliol College, Oxford ; and, having entered into orders, obtained several benefices, and at last the rectory of Wareham, in 1743, where he died in 1773 He wrote the History and Antiquities of ths

county of Dorset, which was published by subscription in 2 vols. folio, with a number of beautiful plates.

HUTCHINSON (John), a well known philosophical writer, born in 1674. He at first served the duke of Somerset as steward, and in the course of his travels employed himself in collecting fossils. The duke afterwards made him his riding surveyor, a sinecure place of £200 a-

year, with a good house in the Meuse. In 1724 he published the first part of his Moses's Principia, in which he ridiculed Dr. Woodward's Natural History of the Earth, and attacked the doctrine of gravitation established in Newton's Principia; in 1727 he published the second part of his Moses's Principia, containing the principles of the Scripture philosophy. From this time to his death, he published a volume every year or two ; which, with the MSS. he left behind him, were published in 1748, in 12 vols. 8vo. An abstract of the whole has been published in 1 vol. 12mo. However fanciful or extravagant his views of Scripture, his writings are the result of intense study and application. He died August 28th, 1737.

HUTCHINSONIANS, a name given to those who adopt the religious and philosophical opinions of Mr. J. Hutchinson. The reader may find a distinct and comprehensive summary of the Hutchinsonian system in a book, entitled Thoughts concerning Religion, &c., printed in Edinburgh in 1743 ; and in a letter to a bishop, annexed to it, first printed in 1732, and written by president Forbes. Bishop Home, the Rev. Julius Bates, and the Rev. W. Jones, as well as the respectable lexicographer Mr. Parkhurst, have been considered as his disciples.

HUTTANY, a large trading town in the Mahratta territories, in the province of Bejapoor, twenty miles east from Mirjee. It has an extensive commerce with Bombay, Surat, Rachore, &c., in its manufactures of silk and cotton sarees, piece goods, &c., but its staple article is grain. The town is enclosed by a wall and ditch, and there is a stone fort of no great strength. But liere is an excellent durrumsalla, or place of accommodation for travellers. It is capable of lodging 500 persons, the horses and camels being picketed round the building. Huttany was, in 1679, a considerable place when it was taken from Serajee, who had reduced it, by the confederates from Bejapoor ; and the English factory at Carwar, about the middle of the seventeenth century, had considerable tramckings here ; but, on account of its frequent revolutions, the intercourse ws discontinued.

HUTTEN (Ulrir: De), one of the early reformers, was born at Seckenburg, the seat of his family, in 1488. He studied at Fulda in 1506, and took the degree of M. A. at Frankfort on the Oder ; after which he went into the imperial army, and was at the siege of Padua in 1509. Having published several poetical pieces, which were much admired, the emperor Maximilian I., upon his return to Germany in 1516, bestowed on him the poetical crown. His cousin John de Hutten, court-marshal to Ulric, duke of Wirtemberg, being murdered by the duke, our author gave vent to his vengeance, not only by his pen, in satirising the duke in various poems, letters,

orations, and dialogues (collected and printed at Steckleburg in 1519, 4to), but also by his sword; for the duke being impeached before the diet 01 Augsburgh, for this and other crimes, and a league being formed against him, Hutten engaged in the war. About 1520, having become a convert to the doctrines of Luther, Hutten employed his pen in defence of that great reformer, and published Leo the Xth's bull against him with comments, which so exasperated the Pope that he wrote to Albert elector of Mentz, in whose military service Hutten had engaged, to send him bound hand and foot to Rome. Hutten, however, withdrew to Brabant, and was for some time at the court of the emperor Charles V. He afterwards went to Ebernburg, where he was protected by Francis de Sickengen, a friend of Luther. He died, in August 1523, in an island in the lake of Zurich. His Latin poems were published at Frankfort in 12mo, in 1538.

HUTTON (Charles), LL. D. and F. R. S., a celebrated mathematician, was born at Newcastle-upon-Tyne, August 14th, 1737. At an early age, and during the laborious accumulation of most of his own elementary knowledge, he undertook the profession of a teacher, at a village called Jesmond, from whence he removed to his native place, where he conducted a respectable seminary from 1760 to 1773. At this period he had lord Eldon, the late chancellor, for a pupil. In 1771, the bridge of Newcastle being nearly destroyed by a flood, Mr. Hutton drew up suggestions for the future security of the fabric. In 1773 he offered himself as a candidate for the professorship of the Royal Military Academy at Woolwich, and, after a rigid examination, was elected. Soon after he was chosen a fellow of the Royal Society, whose transactions he enriched with so many valuable papers, that he was fixed upon, in 1775, to conduct the observations on the Mean Density of the Earth. He was also appointed the foreign secretary to the society, which office he held till the accession of Sir Jo-seph Banks to the presidency, who rather illiberally displaced him, on the plea that the situation ought to be filled by a resident of the metropolis Upon this the doctor resigned. In 1785 Dr Hutton published his Mathematical Tables ; and, the year following, Tracts on Mathematical and Philosophical Subjects, 3 vols. 8vo. In 1787 appeared the Compendious Measurer, which was followed by his Elements of Conic Sections, In 1795 came out his Mathematical and Philosophical Dictionary, in 2 vols. 4to. In 1803 hn undertook, with Drs. Pearson and Shaw, an abridgment of the Philosophical Transactions. While this great undertaking was in progress he produced a translation of Montucla's Recreations in Mathematics and Natural Philosophy, and a Course of Mathematics, in two octavo volumes. In 1806 he resigned

the mastership of the Academy at Woolwich, on a pension oT £500 a-year. He died at his house in Bedford-row, January 27th, 1823. Dr. Hutton was twice married, and left one son, a general in the army, and two daughters.

HUTTON (William), an ingenious miscellaneous writer, was born at Derby in 1723. From the age of seven to fourteen he worked at a silk-mill, and was afterwards apprenticed to a stocking-weaver

at which trade he laboured as a journeyman, until he taught himself bookbinding, by which he added t6 his humble income, in 1750 he opened a book-shop in Birmingham, to which he added a circulating library, and succeeded so well as to be enabled to embark in the paper business, in which, by industry and fiugality, he arrived gradually at opulence. In 1791 his house in Birmingham, and villa near that town, were burnt by the rioters, for which he obtained but an inadequate remuneration. He died September 20th, 1815, at the advanced age of ninety-two. The works of this acute and self-taught man are, The History of Birmingham, 8vo; Journey to London ; History of the Court of Requests, and of the Hundred Court of Birmingham, a lively and ingenious work ; History of Blackport ; History of the Battle of Bosworth Field ; History of Derby ; Description of the Roman Wall ; Remarks upon North Wales ; Tour to Scarborough ; Poems ; Trip to Coatham, &c.

HXJTTCN (James), M.D., was born in Edinburgh in 1726. He was sent first to the high school of Edinburgh, and afterwards to the university, where he entered as a student of humanity, in November 1740. His friends wishing him, however, to follow business rather than science, he was placed as an apprentice to a writer to the signet ; but he was afterwards allowed to exchange the profession of a writer for that of a physician. After attending the classes in the university of his native

town, from 1744 to 1747, he repaired to Paris, where he pursued, with great ardor, the study of anatomy and chemistry. Having resided in that metropolis nearly two years, he returned by the way of the Low Countries, and took the degree of M. D. in September 1749. His thesis is entitled, De Sanguine et Circulatione in Microcosmo. Dr. Hutton did not, however, enter upon the practice of medicine. He cultivated his farm in Berwickshire till it ceased to have any attractions for him ; and, in 1768, he took up his abode in Edinburgh, and from that time devoted his undivided attention to scientific pursuits. A good deal of his leisure, says Mr. Playfair, was now employed in the prosecution of chemical experiments. In one of these he first discovered an alkali in zeolite, or in a stony body. About this time he visited the salt-mines in Cheshire, and made those observations on the concentric circles marked on the roof of these mines, to which he has referred in his Theory of the Earth as affording a proof that the salt rock was not formed from mere aqueous deposition. While at Edinburgh he read several papers to the Philosophical Society of that city, but which, from that society being soon after incorporated with the Royal Society, were never published, with the exception of a treatise On certain Natural Appearances of the Ground on the Hill of Arthur's Seat. The institution of the Royal Society of Edinburgh had the good effect of calling forth from Dr. Hutton the first sketch of a theory of the earth, the formation of which had been the great object of his life. Another paper from his pen, a Theory of Rain, appeared also in the first volume of the Edinburgh Transactions. He had long studied meteorology with

great attention ; and this communication contains one of the few speculations in that branch of knowledge entitled to the name of theory. A more voluminous work from Dr. Hutton's pen made its appearance soon after, *viz.* An Investigation of the Principles of Knowledge, and of the Progress of Reason, from Sense to Science and Philosophy, in 3 vols. 4to. His activity was now called into exertion by an attack on hi« Theory of the Earth, made by Mr. Kirwan in the Memoirs of the Irish Academy. Before this period, though Dr. Hutton had been often urged by his friends to publish his entire work on the Theory of the Earth, he had conlinually put off the publication ; but he now began the revisal of his MS., and resolved immediately to send it to the press. The work was accordingly published, in 2 vols. 8vo., in 1795; and contained, besides the treatise formerly given in the Edinburgh Transactions, a more detailed application of his principles to the explanation of appearances. He next began a work on the Elements of Agriculture, in the progress of which, however, he was

seized with a violent fever ; and, though he recovered from the immediate danger, it left him to emaciated and feeble, that he died about three months after, March, 1797.

HUXING, among fishermen, a particular me-thod of catching pikes. For this purpose they take as large bladders as can be got ; blow them up, and tie them close and strong ; and at the mouth of each tie a line, longer or shorter according to th«> depth of the water. At the end of the line is fastened an armed hook, artfully baited ; and thus they are put into the water with the advantage of the wind, that, they may gently move up and down the pond. When a large pike has struck himself, it affords great entertainment to see him bounce about in the water with a bladder fastened to him ; at last, when they perceive him almost spent, they take him up.

HUYGENS (Christian), one of the greatest mathematicians and astronomers of the seventeenth century, was the son of Constantine Huygens, lord of Zuylichem, who had served three successive princes of Orange in the quality of secretary. He was born at the Hague in 1629, and discovered from his infancy an extraordinary partiality for the mathematics ; in which he soon made great progress, and perfected himself under the famous professor Schooten, at Leyden. In 1649 he went to Holstein and Denmark, in the retinue of Henry count of Nassau. He travelled into France and England; was, in 1663, chosen F. R. S ; and, upon his return to France, M. Colbert settled a considerable pension upon him to engage him to fix at Paris ; to which M. Huygens consented, and staid there from 166G to 1681, where he was admitted a member of the Academy of Sciences; and daily added to the reputation of that society. He was the discoverer of Saturn's ring, and a third satellite belonging to that planet. He discovered the means of rendering clocks exact, by applying the pendulum, and rendering all its viorations equal by the cycloid. He died at the Hague in 1695. He was the author of several excellent works. The principal of these are contained in

two collections ; the first printed at Leyden in 1682; in 4to, entitled Opera Varia ; and the se-cond at Amsterdam in 1728, in 2 vols. 4to., entitled Opera Reliqua.

HUYNEN, or HUYNGEN, a town of Germany, in the late archbishopric of Cologne, now annexed to Prussia. It is twenty-five miles south of Cologne, and is included in the grand duchy of the Lower Rhine.

HUYSUM (Justus Van), an eminent painter, born at Amsterdam in 1659. He studied under Nicholas Berchem, and painted flowers, landscapes, and battles.

HUYSUM (John), a celebrated Dutch painter, whose subjects were flowers, fruit, and landscapes. He was born at Amsterdam in 1682, and was a disciple of Justus Van Huysum his father. He began at first to paint, not so much for the ?cquisition of money as of fame, and therefore did not aim at expedition, but at delicacy. Having first attentively studied the pictures of Mignon and other artists of distinction in his own style, he painted every thing after nature ; and, was so exact, as to watch even the hour of the day in which his model appeared in its greatest perfection. His reputation finally rose to such a height, that he fixed immoderate prices on his works ; so that none but princes, or those of princely fortunes, could become purchasers. Six of his paintings were sold at a public sale in Holland for prices almost incredible. One of them, a flower-piece, for 1450 guilders, a fruit piece for 1500, and the smaller pictures for 900. The vast sums which he thus received caused him to redouble his endeavours to excel; no person was admitted into his room while he was painting ; and his method of mix-ing the tints, and preserving the lustre of his colors, was an impenetrable secret. From the same principle, he would never take any scholars, except one lady, named Haverman ; and he grew envious and jealous even of her merit. It is universally agreed that he has excelled all who ever painted fruit and flowers before him, both in the delicacy of his pencil and his manner of finishing. The greatest truth, united with the greatest brilliancy, and a velvet softness on the sirfaceof his objects, are visible on every part of his compositions ; and his touch looks like the pencil of nature. Those pictures which he painted on a clear ground are preferred as having greater lustre ; yet there are some on a dark ground, in which appear rather more force and harmony. In grouping his flowers, he generally designed those which were brightest in the centre, and gradually decreased the force of color from the centre to the extremities. He also painted landscapes with great applause. He died in 1749, aged sixty-

seven.

HUZZ, v. n.) Etymology from

HUZZA’, interj. & v. n.] the sound. To buzz; to murmur : huzza, a cry of acclamation or joy; to utter acclamation ; to receive with shouts of pleasure.

The Iniz-t-s 01 tlie rabble are the same to a bear lliat they are to a prince. L’Estrange.

He was huxzaed into the court by several thousands of weavers and clothiers. Addiac”

A caldron of fat beef, and stoop of ale, On the huzzaing mob shall still prevail.

King’s Cookery.

You keep a parcel of roaring bullies about me day and night ; huzxat and hunting-horns never let me cool. Arbuthnot.

All fame is foreign, but of true desert ; Plays round the head, but comes not to the heart : One self-appoving hour whole years outweighs Of stupid starers and of loud huzzas. Pope.

Huzza boys ! — By the Royal George, I swear, Tom Coxen and the crew shall straight be there.

Garrich.

HY’ACINTH, n. s. 1 Fr. hyacinthe ; Lat.

HYACIM’THINE, adj.] fiyacinttms ; Gr. vativQof.

A flower ; the same with the lapis lyncurius of

the ancients : hyacinthine, having the color of

the hyacinth.

The Spartan mirtle, whence sweet gumb does

Howe, The purple hyacinthe, and fresh costmarie.

Spenser. Faerie Queene. And hyacinthin locks

Round from his parted forelock manly hung Clustering. Milton's Paradise Lost.

Beds of hyacinth and roses, Where young Adonis oft reposes. Id. Comus.

Let these hyacinth boughs Be his long, flowing hair, And wave o'er his brows As thou wavest in air.

Byron. The Deformed Transformed. Her hair in hyacinthine flow When left to roll its folds, below ; As midst her handmaids in the hall She stood superior to them all, Hath swept the marble where her feet Gleamed whiter than the mountain sleet.

Id. The Giaour.

HYACINTH, in botany. See CRINUM, HYACINTHUS, and SCILLA.

HYACINTHIA, in antiquity, feasts held at Sparta, in honor of Apollo, and in commemoration of his favorite Hyacinthus. They lasted three days; the first and third of which were employed in bewailing the death of Hyacinthus, and the second in feasting and rejoicing.

HYACINTHUS, hyacinth, in botany, a genus of the monogynia order, and hexandria class of plants; natural order tenth, coronariae: COR. campanulated, and there are three melliferous pores at the top of the germen. There are thirteen species ; of which the most remarkable is H. orientalis, the eastern hyacinth. Of this there are a great number of varieties, amounting to some hundreds. It has a large, purplish, bulbous root, sending up several narrow erect leaves, eight or ten inches long ; the flower-stalk is upright, robust, and succulent, from ten to fifteen inches in height; adorned upward with many large funnel or bell-shaped flowers, swelling at the base, and cut half way into six parts ; collected into a large pyramidal spike of different colors in the varieties; flowering in April or May. They are hardy, and will prosper any where, though the finer kinds require a little shelter during the winter, and may be propagated either by seeds or offsets from the roots. The properties of a good oriental hyacinth are, a stem, perfectly upright, of moderate length, and so strong and well-proportioned that it will sus-HY.E

tain the weight of tne florets without bending ; the florets should be large, swelling below, expanded above, and numerous, ten or fifteen at least, but are often twenty or thirty in number ; and should be placed equally round the stem, the pedicles, on which they grow longer below than above, diminishing gradually in length up-ward, in such a manner as to represent a pyramid, and each pedicle sufficiently strong to support the florets without drooping. The curious in these plants take care never to plant the fine sorts two years together in the same bed of earth ; for, by planting them every year in a fresh bed, the beauty of the flowers is greatly improved.

HYACINTHUS, the son of Amyclas king of Sparta, was beloved both by Apollo and Zephyrus. The youth showing most affection for the former, his rival grew jealous; and, to be revenged, one day, as Apollo was playing at the discus with Hyacinthus, Zephyrus turned the direction of a quoit, which Apollo had pitched, full upon the head of Hyacinthus, who fell down dead. Apollo then transformed him into a flower of the same name ; and, as a farther token of respect, instituted the feasts of Hyacinthia.

HY'ADES, n. s. \ Gr. vaStf. A watery con—

HY'ADS, n. s. J stellation.

Then sailors quartered heaven, and found a name For every fixed and every wandering star ; The pleiads, hyadi. Dryden's Georgickt.

HYADES, in astronomy, are seven stars in the bull's head, famous among the poets for the bringing of rain. Whence their name Yadijc, from the Greek vttv, 'to rain.' The principal of them is in the left eye, by the Arabs called Alde-baran.

HYADES, in the mythology, the daughters of Atlas and Pleione. Their brother Hyas being torn to pieces by a lioness, they wept for his death with such vehemence, that the gods, in compassion, translated them into heaven, and placed them in the bull's forehead, where they continue to weep ; this constellation being supposed to presage rain. Others represent the Hyades as the nurses of Bacchus ; and the same with the Dodonides, who fearing the resentment of Juno, and flying from the cruelty of king Lycurgus, were translated by Jupiter into

heaven.

HYAENA, in natural history, a species of the canis, with the tail straight and annulated ; the hairs of the neck long and erect : ears naked : toes, four on each foot. It has six incisores, and two canine teeth in each jaw : and between the tail and the anus a transverse orifice. This quadruped is almost as large as a wolf, excepting that its legs are not so long ; the hair of it is rough, and its skin spotted with divers colors. Hyaenas were formerly produced at Rome in the public games, and they have been represented on some medals on account of their rarity. It inhabits Asiatic Turkey, Syria, Persia, Barbary, and the Cape of Good Hope. It has no neck, but its head is fastened to the vertebrae of the back, so that it is forced to turn itself quite round, whenever it would look behind. It is very cruel and voracious ; it drags dead bodies out of their graves, and carries them to its den. It also preys on herds and flocks, and has been

known to run off with live children. It is a solitary unsociable animal, living in caves. Several fossil remains of these animals have been lately found in Kirkdale, Yorkshire. See our article ENGLAND.

HY./ENIUS LAPIS, in natural history, a stone said to be found in the eyes of the hyaena. Pliny informs us, that those creatures were in old times hunted and destroyed for the sake of these stones, and that it was supposed they gave a man the gift of prophecy by being put under his tongue.

HY' ALINE, adj. Gr. vaXivoc-Glassy ; crystalline ; made glass ; resembling glass.

From heaven-gate not far, founded in view

On the clear hyaline, the glassy sea. Milton.

HYBLA, in ancient geography, a town on the east coast of Sicily, called also Hybla Parva, Galeotis, and Megara ; which last name it took from the Megareans, who led thither a colony. In Strabo's time Megara was extinct, but the name Hybla remained on account of its excellent honey named from it. It was situated between Syracuse and the Leontines. Galeotae and Megarenses were the riames of the people, who were of a prophetic spirit, being the descendants of Galeus, the son of Apollo.

HYBLA MAJOR, in ancient geography, a town of Italy, in the tract

lying between Mount JEtna and the river Simaethus. In Pausanias's time it was desolate.

HYBLA MINOR, or HER*, an inland town of Sicily, situated between the rivers Oanus and Herminius; now called Ragusa.

HYBL./EI COLLES, small eminences at the springs of the Albus, near Hybla, famous for their variety of flowers, especially thyme; the honey gathered from which was by the ancients reckoned the best in the world, excepting that of Hymettus in Attica.

HYB'RIDOUS, adj. Gr. fyfyc ; Lat. kybridn. Begotten between animals of different species.

Why such different species should not only mingle together, but also generate an animal, and yet that that hybridous production should not again generate , is to me a mystery. Ray.

HYBRISTICA, of Gr. t/jSpic, injury, in antiquity, a solemn feast held among the Greeks, with sacrifices and other ceremonies ; at which the men attended in the apparel of women, and the women in that of men, to do honor to Venus in quality either of a god or goddess, or both. According to others, the hybristica was a feast celebrated at Argos, wherein the women, being dressed like men, insulted their husbands, and treated them with all marks of superiority, in memory of the Argian dames having anciently defended their country with singular courage against Cleomenes and Demaratus.

HYDARTHRUS, from Gr. vSup, water, and apQpov, a joint, in medicine, is more usually known by the name of white swelling, and is in this country but too common. Systematic writers have generally distinguished this disease into two kinds, *viz.* scrofulous and rheumatic. The scrofulous is, however, much more important and dangerous than the other kind, and is perhaps the most serious disorder of the bones tr-

which man is subject. It commonly commences with a violent pain in one part of the joint, generally the knee, and there appears from the beginning a uniform swelling of the whole surrounding integuments. Great tension generally prevails ; but at first there is seldom any external change of color. From the commencement of the disease the motion of the joint is attended with exquisite pain, and the patient keeps it constantly in a relaxed posture, finding that the easiest. Hence, the tendons become extremely stiff and rigid, till at last the joints have the appearance of complete and real anchyloses. The swelling now begins to augment, till the joint has acquired three or four times its natural size ; the cuticular veins become turgid and varicose; at the same time that the muscular substance of the limb below decays, though it frequently acquires an equality in size by becoming oedematous; the pain becomes intolerable, especially when the person is warm in bed, or otherwise heated ; abscesses form in different parts, which, either breaking of themselves, or, by being laid open, discharge considerable quantities of matter, but without any remarkable effect in reducing the size of the swellings. The bones are found to be carious, and pieces of them are frequently discharged. In the mean time, the health of the patient gradually declines, ‘from the violence of the pain, and the absorption of matter into the system, which takes place in some degree from its first formation in the different abscesses ; but which never appears so evidently till the different abscesses have been laid open ; after which, a quick pulse, night sweats, and a weakening diarrhoea, are sure to occur, which generally carry off the patient, if the member is not either amputated, or the disease cured some other way. See MEDICINE.

HYDAT’IDES, n. s. From ZSup. Little transparent bladders of water in any part ; most common in dropsical persons, from a distension or rupture of the lympheducts.

All the water is contained in little bladders, adhering to the liver and peritoneum, known by the name of hydatides. Wiseman.

HYDE (Edward), earl of Clarendon, and lord high chancellor of England, was descended from an ancient family in Cheshire, and born at Dinton near Hindon, in Wiltshire, in 1608. He was entered of Magdalen Hall, Oxford, where in 1625 he took the degree of A. B., and afterwards studied the law in the Middle Temple. In the parliament which began at Westminster, April 10th, 1640, he served

for Wotton Basset in Wiltshire. But, that parliament being soon after dissolved, he was chosen for Saltash in Cornwall, in the long parliament. His abilities were taken notice of, and he was employed in several committees to examine into grievances; but at last, being dissatisfied with the proceedings of the parliament, he retired to the king, and was made chancellor of the exchequer, a privy counsellor, and knight. Upon the decline of the king's cause he went to France, where, after the death of king Charles I., he was sworn of the privy council to Charles II. In 1649 he and lord Cottington werp sent ambassadors extraordinary into Spain, and in 1657 he was constituted lord high chancellor of England. In 1659 the duke of York became enamoured of Anne Hyde, the chancellor's eldest daughter, but carefully concealed the amour both from the king and chancellor. After the Restoration, however, he fulfilled his promise of marriage, and her father was chosen chanceller of the university of Oxford; soon after created baron Hindon, viscount Cornbury, and earl of Clarendon ; and, on the death of Henry lord Falkland, was made lord lieutenant of Oxfordshire. In these important stations his principal aim was neither to abridge the king's prerogative, nor encroach upon the liberties of the people ; he therefore refused to set aside the petition of right, nor would he endeavour again to raise the star-chamber or high-commission courts : and when he might have obtained for the king £2,000,000, for a standing revenue, he asked only £1,200,000, which he thought would still keep the king dependent upon his parliament. In this just conduct he is said to have been influenced by his father's dying advice. In 1662 he opposed a proposal for the king's marriage with the infanta of Portugal, and the sale of Dunkirk; and in the following year articles of impeachment for high treason were exhibited against him by the earl of Bristol; but they were rejected by the house of lords. In 1664 he opposed the war with Holland. In August, 1667, he was removed from his post of lord chancellor, and in November following impeached of high treason, and other crimes and misdemeanors, by the house of commons ; upon which he retired into France, Mien a bill was passed for banishing him from the king's dominions. He now resided at Rouen in Normandy; and dying there, in 1674, his body was brought to England, and interred in Westminster Abbey. He wrote, 1. A History of the Rebellion, 3 vols. folio. 2. A Letter to the Duke of York, and another to the Duchess, upon their embracing the Romish religion. 3. An Answer to Hobbes's Leviathan. 4. A History of the Rebellion and Civil Wars in Ireland, 8vo., and some other works. His character is thus pane-gyrised by Horace Walpole: — 'Sir Edward Hyde, who opposed an arbitrary court and embraced the party of an afflicted one, must be allowed to have acted conscientiously. A better proof was his behaviour on the

Restoration, when the torrent of an infatuated nation entreated the king and his ministei to be absolute. Had Clarendon sought nothing but power, his power had never ceased. A corrupted court, and a blinded populace, were less the causes of the chancellor's fall, than an ungrateful king, who could not pardon his lordship's having refused to accept for him the slavery of his country. Like justice herself, he held the balance between the necessary power of the supreme magistrate and the interests of the people. This never-dying obligation his contemporaries were taught to overlook and clamor against, till they removed the only man, who, if he could, would have corrected his master's evil government. Almost every virtue of a minister made his character venerable. As an historian, he seems more exceptionable. His majesty and eloquence, his power of painting characters, his knowledge of his subject, rank

HYD

him in the first class of writers ; yet he has both great and little faults. Of the latter, his stories of ghosts and omens are not to be defended. His capital fault is his whole work being a labored justification of king Charles. If he relates faults, some palliating epithet always slides in ; and he has the art of breaking his darkest shades with gleams of light, that take off all impression of horror. One may pronounce on my lord Clarendon, in his double capacity of statesman and historian, that he acted for liberty, but wrote for prerogative.'

HYDE (Thomas), D.D., professor of Arabic at Oxford, and one of the most learned writers of the seventeenth century, was born in 1636, and studied first at Cambridge, and afterwards at Oxford. Before he was eighteen years of age he was sent from. Cambridge to London to assist Walton in the great work of the Polyglot Bible ; and about that period undertook to transcribe the Persian Pentateuch out of the Hebrew characters, which archbishop Usher, who well knew the difficulty of the undertaking, pronounced to be an impossible task to a

native Persian. He, however, succeeded in his task, and was made archdeacon of Gloucester, canon of Christ Church, head keeper of the Bodleian library, and professor of Hebrew and Arabic, in the university of Oxford. He was interpreter and secretary of the Oriental languages, during the reigns of Charles II., James II., and William III. Of all his learned works (the very catalogue of which, as observed by Anthony Wood, is a curiosity), his Religio Veterum Persarum is the most celebrated. Dr. Gregory Sharpe collected several of his pieces formerly printed, and republished them, with some additional dissertations, and his life prefixed, in 2 elegant vols. 4to. He died on the 18th of February, 1702. Among his other works is, A Latin Translation of Ulug Beig's Observations on the Longitude and Latitude of the fixed Stars.

HYDER ALY, or ALI, a celebrated Indian usurper, and for some time a formidable opponent of the British interest in the East Indies. He was the son of a killader, or governor of a fort, to the king of Mysore, and acquired his skill in military tactics in the French army. In 1753 he distinguished himself as their auxiliary at Trichinopoly. In 1763, being commander of the Mysore army, he dethroned his sovereign, and governed the kingdom under the title of regent. In the wars with the British, between 1767 and 1770, he displayed great spirit and abilities; but in 1771 he was totally defeated by the Mahrattas. During the peace that followed he greatly improved his army and revenues. In 1780 he made an irruption into the Carnatic, and cut to pieces a British detachment under colonel Baillie ; but his victorious career was soon stopped by Sir Eyre Coote, who, with a force scarcely exceeding 7000 men, gained a complete victory over Hyder Ali at the head of 150,000, and defeated him six times successively afterwards, the last of which victories was obtained on the 7th of June 1782. Hyder died in December 1782.

HYDERABAD, Telin;?ana, or Golconda, an extensive province of Hindostan, situated chiefly

between the sixteentn and nineteenth degrees of northern latitude, and between the rivers Godavery and Kistna ; but the name is now also applied to all the territories of the Nizam. It may be stated therefore to be bounded on the north-east by the territories of the Berar rajah, and on the north-west by those of the Poonah Mahrattas, on the west by the same power, and on the south and east by the British possessions ; being about 350 miles in extreme length, and about 300 in breadth. It thus comprises the ancient provinces of Beder

and Nandere, part of Dowlet or Aurungabad, part of Bejapore, and part of Berar ; and is principally governed by zemindars, or granted in jagiers (fiefs) to the officers of government. The former are nearly independent. The whole of the land, except some portions set aside for charitable purposes and the estates of the ni-zam and his family, is thus in the hands of a few individuals; but it is fertile, and, if well managed, it would yield much more abundantly. Its commerce is very confined^ the diamond mines hardly paying the expense of working; and the only other article being cotton, which is bartered for salt and European commodities. The chief towns are Hyderabad, Golconda, Warangole, Aurungabad, Beder, and Ellichpore. A considerable portion of the inhabitants are Mahommedans : the majority, however, are Hindoos; but the population is thin.

Hyderabad was once subject to the rajahs of Telingana and Bijanagur, but was conquered by the Mahommedans in the fifteenth century, and in the year 1512 was formed into a separate kingdom under the name of Golconda. Abdoo-lah Kuttub Shah, of the original dynasty, died in 1674, and was succeeded by his son in law Aboul Hussen, who, in the year 1687, was taken prisoner by Aurungzebe, and Golconda converted into one of the provinces of the Mogul empire, and, with the other five southern provinces, was formed into a viceroyalty, called the Soubadar of the Deccan. In 1719 a Mogul officer, named Cheen Khilij Khan, appointed to this government, had a very large army placed under his command to keep freebooters in awe ; and this inspired him with the ambition of founding an independent kingdom. He for several years employed himself in getting possession of the strong holds ; and, when summoned to Delhi, proceeded thither with so large a force as to overawe his master.

He is also accused of having encouraged the Persian Nadir Shah to invade Hindostan in 1739 ; and having, after that event, been appointed vi-zier or prime minister, he left to Mohammed the emperor nothing but the name. For two years he governed at Delhi with absolute sway, during which period he appointed his son Ghazy ad Deen, his deputy ; but, the Mahrattas having invaded the Deccan, he marched in 1 741 to meet them with a numerous army. On his arrival at Arcot he found that country in total confusion : and not fewer than twenty petty chiefs assuming the title of rajah : the measures that he pursued, however, tranquillised the country ; and he disposed of its different offices to his friends, without consulting the court of Delhi. He mu made Aurungabad his capital, but died at Boor

hanpore in the year 1748, aged 104 years. His eldest son, Ghazy ad Deen, was, at this period, one of the ministers at Delhi ; and the second son, Nasir Jung, having obtained possession of the treasure and the army, was too powerful to be dispossessed : he was therefore confirmed by the emperor Ahmed as soubadar of the Deccan. Assassinated in 1750, this prince was succeeded by his nephew Muzuffer Jung, who was put to death the following year, and succeeded by his cousin Salabut Jung, who held the government for ten years. He was then confined by his brother Nizam Aly, who for nearly twenty years was engaged in wars with Hyder Aly, the British, and the Mahrattas ; and had it not been for his alliance with the British, in 1800, his kingdom would have been annihilated. Nizam Aly transferred the seat of government from Aurungabad to Hyderabad, and died in 1803, being succeeded by his son Mirza Sekunder Jah ; and the family is supported in its authority by a British force of 10,000 men, and by treaties of alliance offensive and defensive. There is also a British ambassador constantly residing at this court.

HYDERABAD, the capital of the above kingdom, is situated on the south bank of the Musa, about six miles from the fortress of Golconda. It is said to have been founded about the year 1586, by Mohammed Kootub Shah, who named it Hyderabad, in compliment to the caliph Aly, one of whose titles was Hyder Allah (the Lion of God). It continued to be the residence of the Kootub Shahy dynasty till 1687, when it was taken by Aurungzebe. The late Nizam Aly was the first of the nizams that made it his residence, and expended considerable sums of money in improving Hyderabad. It is now a fine and flourishing city, of about seven miles in circumference, surrounded by a stone wall, with towers at the angles and gates. It contains two palaces and some handsome mosques ; and between it and Golconda are various splendid tombs.

HYDERABAD is also the name of a city, the capital of the province of Sinde, Hindostan. A fortress of this name stands on a rock the foot of which is washed by the Fulalee, a branch of the river Indus. Its shape is an irregular pentagon, defended at the angles by round towers. The fortifications are of such a nature as to be very formidable to the native troops. Inside the fort is a good bazaar and several handsome mosques. It is the residence of the princes, who form the aristocracy by which this province is governed, and contains about 15,000 inhabitants. A considerable trade is carried on, by means of the ri-ver,

with Moultan Tattah, and other towns at the mouths of the Indus.

HYDNUM, in botany, a genus of the natural order of fungi, cryptogamia class of plants. The fungus is echinated or prickly on the under side. One of the species, *viz.*

H. imbricatum, is a native of Britain, and is found in woods. It has a convex hat, tiled, standing on a smooth pillar, of a pale flesh color, with white prickles. It is eaten in Italy, and is said to be of a very delicate taste.

HY’DRA, n. s. Lat. hydra. A monster with many heads slain by Hercules : whence any multiplicity of evils is termed a hydra.

Or like the hell-borne hydra, which they faine That great Alcides whilome overthrew, After that he had laboured long in vaine To crop his thousand heads, the which still new Forth budded, and in greater number grew.

Spenser. Faerie Quee'f New rebellions raise

Their hydra heads, and the false North displays Her broken league to imp her serpent wings.

Miltun.

More formidable hydra stands within, Whose jaws with iron teeth severely grin. Dryden.

Subdue

The hydra of the many-headed hissing crew. Id. HYDRA, in fabulous history, was a serpent in the marsh of Lerna, in Peloponnesus, with many heads, one of which being cut off, another, or two others, immediately succeeded in its place, unless the wound was instantly cauterised. Hercules attacked this monster; and, having caused lolaus to hew down wood for flaming brands, as he cut off the heads he applied the brands to the wounds, by which means he destroyed the hydra. This hydra is supposed to have been a multitude of serpents which infested the marshes of Lerna, near Mycene, and seemed to multiply as they were destroyed. Hercules, with the assistance of his companions, cleared the country of them, by burning the reeds in which they lodged.

HYDRA, in astronomyˆ a southern constellation, consisting of a number of stars, imagined to represent a water serpent. See ASTRONOMY.

HYDRA, in zoology, a genus of the order of zoophyta, belonging to the class of vermes. There are several species, known by the general name of polypes. See ANIMALCULE, and PO-LYPUS.

HYDRA, an island between the Archipelago, and the eastern side of the peninsula of the Morea, south of the gulf of Athens and east of that of Napoli, long. 20° 50’ E. lat. 37° 20’ N. It is about twenty-four miles long from north-east to south-west, and ten miles in breadth across the middle, where it is broadest, the extremities tapering almost to a point. If in other parts of Greece, as M. Castellan remarks, we see a people either miserable or diseased, in a rich country and under a balsamic climate, the rocks of Hydra present us with the agreeable spectacle of a vigorous population, which has found the means of creating for itself riches out of a territory naturally confined and barren, and has displayed a spirit of enterprise and speculation almost unique even in Greece. The Schypetars of Albania are found in Hydra as in some other districts of Greece ; these colonists, to whom, after the expe dition of the Russians into Greece, many refugees from the Peloponnesus united themselves, have improved the ancient race of inhabitants This appears in the activity which they now discover, and sometimes also by the examples of harshness and cruelty which they afford, and the piracies which they commit.

Happily the greater part of the population of the island prefer enriching themselves by peaceable and honest means, and owe their prosperity solely to their industry. According to M. Pouque-ville they have 120 vessels, forty of which are from 400 to GOO tons burden, which used to visit all the ports of the Mediterranean and of the

Atlantic as far as America. The productions and merchandise of France, of Italy, of the Barbary states, and of Egypt, furnish the Hydriots with objects of traffic to the ports of the Levant. The Peloponnesus, especially the can-ton of Olympia, supplies them with wood for the building of their ships, and many of the continental Greeks afford them funds, which these islanders use to the greatest advantage, though they are destitute of the sciences, and all their knowledge is practical. Even in navigation itself, they are mariners by necessity and by education. From their very childhood they undertake sea voyages, employ themselves in the management of ships, learn to know the latitudes they must constantly travel over, and share in the profits of the expedition. They are hard drinkers, it is true ; and it is said that they sometimes empty in one month the vessels destined for the supply of the whole voyage. Yet these mariners, though often intoxicated, are intelligent, and of wonderful probity : they carry no bills of lading ; the money, which they are intrusted to convey, they put into ticketed bags, and forward with the utmost fidelity. Their vessels are well armed, and since the year 1821 they have boldly attacked and put to flight the Turkish squadrons. This island formerly used to furnish an important supply of sailors, and even officers for the Turkish navy.

The island of Hydra owes its embellishments to the people that inhabit it; nature is very sparing : it is from Attica that they fetch even those vegetables with which they used formerly to supply that country ; so great is the change that has taken place in this province. The town of Hydra, where the senate is held, contains about 3000 houses, and 16,000 inhabitants, some of whom are rich. They are very fond of dress. The merchants speak three or four different languages. There is a small port for ships, and the quay is lined with houses neatly whitened, the fronts of which are furnished with covered galleries. A great number of warehouses, filled with grain and other provisions, bespeak the trade to •which the inhabitants are devoted. The women, who are brown, but well made and of an agreeable figure, appear in the streets, having their veils thrown over only the lower parts of the body, while the children, entirely naked, run about on the shore, or swim near the coast. A female, convicted of an intrigue, would be imprisoned for life, and the seducer punished with the bastinado and banished, if private vengeance did not direct against him the poniards and pistols of the injured relatives.

There is a handsome church in the town, which attracts the attention of foreigners : its front is ornamented with pillars of white marble, and surmounted by a steeple of the same material ; it has also a cloister surrounding it, formed with arches. The images painted in water

colors, the sculptures in wood, and the gilded adornings of the choir, the pilasters of marble which separate the latter from the nave, every thing announces, that the inhabitants spared nothing to embellish the place of their worship, which they practise with all the fervor common to the Greeks. Their Papas know how to make themselves useful and

even necessary to their countrymen ; they bless their ships with great pomp. Without this ceremony, they think, the captain and his crew would have no prosperity ; and they never fail to burn little wax-lights before the image of the Ma-sionna or Panagia, which is placed at the stern.

This island has not even a single spring. From their commerce, however, they derive good bread, and wine of no inferior quality. On their return from their voyages, the Hydriots love to indulge in good cheer. What Tyre was on a large scale Hydra is in miniature. If the island were larger, this rock would have great influence over the affairs of Greece.

HYDRABAD, the capital of Golconda and of the Deccan, a large city, seated in a plain, on the banks of a river that runs into the Kistna. It is surrounded with walls, and defended with towers ; and contains above 100,000 inhabitants It is 690 miles south of Delhi, and 270 E. N.W. of Madras, according to Mr. Crutwell ; but Dr Brookes and J. Walker make it 352 miles north by east of that city. Long. 78° 52’ E., lat. 17° 17’N.

HYDRABAD, a fort of Hindostan Proper, in the province of Sindy, the residence of a Mahommedan prince, who is tributary to the king of Candahar. It is situate on the Indus, near Nusserpour. Long. 69° 30’ E., lat. 25° 29. N.

HY’DRAGOGUES, n. s. Gr. ˆWp and ay a* ; Fr. hydragogue. Such med icines as occasion the discharge of watery humors, which is generally the case of the stronger cachartics, because they shake most forcibly the bowels and their appendages.

HYDRAGOGUES, from vdwp, water, and ayav, to draw, are used in dropsies ; but the original use of the term proceeded upon a mistaken supposition, that every purgative had some particular humor which it would evacuate, and which could not be evacuated by any other. It is now, however discovered, that all strong purgatives will prove hydragogues, if given in large quantity or in weak constitutions. The

principal medicines recommended as hydragogues are — the juice of elder, the roots of iris, soldanella, mechoacan, jalap, &c.

HYDRANGEA, in botany, a genus of the digynia order, and decandria class of plants; natural order thirteenth, succulentae : CAPS, bilocular, birostrated, and cut round or parting horizontally. There are four species ; the chief, H. arborescens, is a native of North America, whence it has been brought to Europe, and is preserved in gardens, more for the sake of variety than beauty. It rises about three feet high ; ?nd has many soft pithy stalks, garnished with two oblong heart-shaped leaves, placed opposite. The flowers are produced at the top of the stalks in a corymbus. They are white, composed of five petals with ten stamina surrounding the style. These plants are easily propagated by parting the roots, in the end of October. They thrive best in a moist soil, but must be sheltered from frost.

HYDRARGYRUM, mercury, or quicksilver; so called from v£o>p, water, and apywpoc, silver ; q. d. water of silver, on account of its resembling liquid or melted silver. See PHARMACY.

HYDRASTIS, in botany, a genus of the polygamia order, and polyandria class of plants. There is neither calyx nor nectanum ; there are three petals ; and the berry is composed of a monospermous acini.

HYDRAU'LICS, n. s. } Gr. W«p, water, HYDRA U'LICAL, adj. > duXoc, a pipe. The HYDEAU'LIC, adj. j science of conveying water through pipes or conduits •, hydraulical, hydraulic, from the substantive, relating to the conveyance of water through pipes.

Among the engines in which the air is useful, pumps may be accounted, and other hydraulical engines. , Derham.

We have employed a virtuoso to make an hydruu-liek engine, in which a chymical liquor, resembling blood, is driven through elastick channels.

Arliuihnut and Pope.

HYDRAULICS comprehend the science of the motion of fluids and the construction of all kinds of instruments and machines relating thereto. See HYDROSTATICS, AND PUMPS.

HYDRIODIC ACID, in chemistry, is, like the muriatic acid, a gaseous substance when in an insulated state. If four parts of iodine be mixed with one of phosphorus, in a small glass retort, applying a gentle heat, and adding a few drops of water from time to time, a gas comes over, which must be received in the mercurial bath. Its specific gravity is 4-4. It is elastic and invisible, but has a smell somewhat similar to that of muriatic acid. Mercury after some time decomposes it, seizing its iodine, and leaving its hydrogen, equal to one-half the original bulk, at liberty. Chlorine, on the other hand, unites to its hydrogen, and precipitates the iodine. From these experiments, it evidently consists of vapor of iodine and hydrogen, which combine in equal volumes, without change of their primitive bulk. Hydriodic acid is partly decomposed at a red boat, and the decomposition is complete if it be mixed with oxygen. Water is then formed and iodine separated.

We can easily obtain an aqueous hydriodic acid very economically, by passing sulphureted hydrogen gas through a mixture of water and iodine in a Woolfe's bottle. On heating the liquid obtained, the excess of sulphur flies off, and leaves watery hydriodic acid. When exposed to the air, it is speedily decomposed, and iodine is evolved. Concentrated sulphuric and nitric acids also decompose it. When poured into a saline solution of lead, it throws down a fine orange precipitate. With solution of per-oxide of mercury, it gives a red precipitate ; and, with that of silver, a white precipitate insoluble in ammonia.

The compounds of hydriodic acid with the salifiable bases may be easily formed, either by direct combination, or by acting on the basis in water with iodine. Upon a determinate quantity of iodine, pour solution of potassa or soda, till the liquid ceases to be colored. Evaporate to dry ness, and digest the' dry salt in alcohol, which will retain the hydriodate. Then distil off the alcohol, and complete the neutralisation of the potassa, by means of a little hydriodic acid separately obtained. Sulphurous and muriatic acids, as well as sulphureted hydrogen, produce

no chat.ge on the hydriodates, at the usual tenr perarute of the air.

Chlorine, nitric acid, and concentrated sulphuric, instantly decompose them, and separate the iodine. With solution of silver, they give a white precipitate insoluble in ammonia; with the pernitrate of mercury, a greenish-yellow precipitate ; with corrosive sublimate, a precipitate of a fine orange-red, very soluble in an excess of hydriodate ; and, with nitrate of lead, a precipitate of an orange-yellow color. They dissolve iodine, and acquire a deep reddish-brown color.

Hydriodate of ammonia results from the combination of equal volumes of ammcniacal and hydriodic gases; though it is usually prepared by saturating the liquid acid with ammonia. It is nearly as volatile as sal ammoniac ; but it is more soluble and more deliquescent. It crvstal-lises in cubes.

Hydriodate of zinc is easily obtained, bj putting iodine into water with an excess of zinc, and favoring their action by heat. When dried it becomes an iodide. See CHEMISTRY.

HYDROCELE, in medicine, from vSup, water, and icijXij, a tumor, would literally signify any swelling or tumor produced by water; bur it is confined by surgeons of the present time to those which possess either the membranes of the scrotum, or the coats of the testicle and its vessels. Of this disease there are only three different kinds, one the anasarcous hydrocele, in which the fluid is lodged in the cellular texture of the scrotum ; a second in which it is contained in the tunica vaginalis ; and a third in which it it is collected in the spermatic cord.

The anasarcous hydrocele is generally a symptom of dropsy throughout the whole body ; but some instances have occurred of a local cause producing a mere local dropsy of the scrotum. Thus, it has been known to happen from swellings in the groin and in the abdomen obstructing the passage of the lymphatics. When this is the case, if tumors producing such obstructions can be extirpated, no other means will afford such effectual relief : but, when they are so deeply seated as to render any attempt for removing them improper, the practice of making punctures in the most depending part of the tumor to drain off the fluid must be employed, with a view to palliate such symptoms as occur.

The hydrocele of the tunica vaginalis, is a preternatural collection of the aqueous fluid, employed by nature for lubricating the surface of the testicle. The symptoms are, a fulness at first observed about the inferior parts of the testicle, and most remarkable when the patient is erect, becoming gradually more tense as the disease advances ; the

tumor by degrees changing from the globular to the pyramidical forru ; no degree of pressure making the swelling disappear at any period of the disease. In the early part of the disease, therefore, if it be not combined with hernia, or with a hydrocele of the cord, the spermatic process may be distinctly felt, because the swelling does not extend beyond the scrotum. In its more advanced state, it can-not be distinguished ; the weight of the tumor, now drags the skin of the neighbouring parts so much as to cause the penis almost to disappear ;

and in this state of the disease the testicle can-not be felt without much difficulty. On a minute examination, a hardness is always to be felt along that part of the scrotum where the testicle is situated ; and at this point pressure excites some uneasiness. Fluctuation of fluid may in general be distinguished through the whole course of the disease. In late stages, however, the appearance of a fluid is not very evident.

The transparency of the tumor has been generally supposed to be the principal criterion of this species of the disorder : but this must depend upon the nature of the contents, or thickness of the sac ; so that, though the transparency of the tumor is a certain sign of the existence of water, its opacity cannot upon any account be considered as an indication of its absence. Through the whole course of the disease, the tumor is not attended with pain, but some uneasiness is commonly felt in the back by the weight of the swelling of the spermatic cord. This is more particularly the case when a suspensory bandage is not used. In the radical cure of hydrocele, in whatever way it is attempted, some degree of inflammation will take place.

The cure of the hydrocele of the tunica was formerly effected by one of three methods ; either by caustic, by the seton, or by incision. Although in most cases any one of these methods will induce a cure, yet that of simple incision is less liable to produce violent inflammation, the danger of which from the proximity of the intestines is too evident to require discussion.

But the surgeons of the present day do not generally make use of any of these systems. The cure is now generally attempted by the injection of some irritating fluid which will cause inflammation throughout the whole extent of the tunica. The preference is usually given to wine, and commonly that is somewhat diluted ; but, where no pain is excited by the injection, the liquor should be discharged, and a stronger one used. For where no pain takes place a cure is not to be expected.

The hydrocele of the spermatic cord is either anasarcous or encysted. The anasarcous kind is attended with a colorless tumor in the course of the spermatic cord, soft and inelastic to the touch, and unaccompanied with fluctuation. In an erect position of the body it is of an oblong figure ; but, when the body is recumbent, it is flatter. Generally it is no longer than that part of the cord which lies in the groin, though it sometimes extends as far as the testicle, and even stretches the scrotum to an uncommon size ; an instance of which is related by Mr. Pott, who from a swelling of this kind discharged eleven pints at once. By pressure a great part of the swelling can always be made to recede into the abdomen ; but it instantly returns to its former situation on the pressure being withdrawn.

When the tumor is connected with general anasarca of the system, it can only be cured with “;he rest of the disease; but, when the swelling is local, the remedy is also to be locally applied. An incision is to be made of such a size as may be sufficient for discharging the whole of the water; in the performance of which, attention is necessary to guard against hurting the sper-

matic vessels. The contents of the tumor being discharged, the sore is to be treated like any othe : simple wound.

Encysted hydrocele of the spermatic coni sometimes begins in the upper, but generally in the lower part of the spermatic cord. On its first appearance it is so small as to give little or no trouble ; hence it is seldom particularly attended to till it has acquired a considerable size. By degrees it extends as far as the abdominal muscles/ and sometimes reaches to the bottom of the scrotum; and, to a person unacquainted with the appearance of the disorder, may be mistaken for a hydrocele of the tunica vaginalis. But here the tumor is always above the testicle, which is distinctly felt below ; whereas, in the advanced stages of hydrocele in the vaginal coat the testicle cannot be distinctly felt. In the encysted hydrocele of the cord, the figure and size of the

penis is little altered ; whereas, in cases of common hydrocele, the penis frequently disappears almost entirely. In adults, the cyst, in every variety of incysted hydrocele, becomes so firm as not to be affected by external applications ; so that, when the tumor becomes large, it is necessary to use means for producing either a palliative or radical cnre, in the same manner as is done for a hydrocele in the tunica vaginalis. See SURGERY and MEDICINE.

HYDROCEPHALUS, in medicine, (from vSuip water, and KujtaXij the head), is as the name imports a dropsy of the head, and is commonly called water on the brain. It is a disease almost peculiar to children, being seldom observed in persons above the age of twelve or fourteen, and it seems to be most prevalent in scrofulous families. With respect to the proximate cause of hydrocephalus very opposite opinions are entertained by different medical writers. It appears generally to begin with slight inflammation, but whether as a cause or only as a symptom is a matter of dispute. The disease appears to be constitutional. Patients usually complain first of a pain in some part below the head, commonly about the nape of the neck and shoulders ; often in the legs ; and sometimes, but rarely, in the arms. The pain is not uniformly acute, nor always fixed to one place ; and sometimes does not affect the limbs. Some have violent sickness and headaches alternately. From being perfectly well and sportive, some are in a few hours seized with those pains in the limbs, or with sickness, or headach, in a slight degree ; whilst others are observed to droop a few days before they complain of any local indisposition. In this manner they continue three, four, or five days. They then complain of an acute deep-seated pain in the head, extending across the forehead from temple to temple ; of which, and a sickness, they alternately complain in short and affecting exclamations ; dosing a little in the intervals, breathing irregularly, and sighing much while awake. Sometimes their sighs, for a few minutes, are incessant. As the disease advances, the pulse becomes slower and irregular, till within a day or two of the fatal termination when it becomes exceedingly quick; the breathing being deep, irregular, and laborious. After the first access, which is often attended with

feverish heats, the heat of the body is for the most part temperate, till at last it keeps pace with the increasing quickness of the pulse. The head and praecordia are always hot from the first attack. The sleeps are short and disturbed, sometimes interrupted by watchfulness and startings. In the first stage there is a peculiar sensibility of the eyes, and intolerance of light. But in the progress of the disease a very opposite state occurs. The pupil is remarkably dilated, and cannot be made to contract by the action even of strong light. Various methods of cure have been attempted, but the disease almost always terminates fatally. See MEDICINE.

HYDROCYANIC ACID. See PRUSSIC ACID.

HYDRODYNAMICS. See HYDROSTATICS.

HYDROCHARIS, the little water lily, a genus of the enneandria order, and dicecia class of plants; natural order first, palmae. Male spatha diphyllous : CAL. trifid: COR. tripetalous ; the three inferior filaments styliferous. Female CAL. trifid : COR. tripetalous ; the styles six : CAPS, six celled and polyspermous inferior. There is only one species, a native of Britain, growing in slow streams and wet ditches. It has kidney-shaped leaves, thick, smooth, and of a brownish-green color, with white blossoms. There is a variety with double flowers of a very sweet smell.

HYDROCOTYLE, water navel wort, a genus of the digynia order, and pentandria class of plants; natural order forty-fifth, umbellatae. The umbel is simple; the involucrum tetraphyllous ; the petals entire ; the seeds are half round and compressed. There are several species, none of which are ever cultivated in gardens. One of them, a native of Britain, growing in marshy grounds, is supposed by some farmers to occasion the rot in sheep. The leaves have central leaf-stalks, with about five flowers in a rundle ; the petals are of a reddish white.

HYDROGEN GAS, in chemistry (from vflwp, water and ftvvau to produce), is the lightest species of ponderable matter hitherto discovered. The following is the best method of obtaining it :— Into a phial furnished with a bent tube fitted to its cork, or into a retort, put some pieces of pure redistilled zinc, or harpsichord iron wire, and pour on them sulphuric acid diluted with five times its bulk of water.

An effervescence will ensue, occasioned by the decomposition of the water, and disengagement of hydrogen, which may be collected in the pneumatic apparatus. For very accurate researches, it must be received in jars over mercury, and exposed to the joint action of dry muriate of lime, and a low temperature. It derived its name from the property it possseses of forming water when mixed with oxygen, and exposed to the electric shock. If a bottle, containing the effervescing mixture of iron and dilute sulphuric acid, be shut with a cork, having a straight tube of nar-row bore fixed upright in it, then the hydrogen will issue in a jet, which, being kindled, forms the philosophical candle of Dr. Priestley. If a long glass tube be held over the flame, moisture will speedily bedew its sides, and harmonic tones will soon begin to sound. Mr. Faraday, in an ingenious paper inserted in the tenth number of

the Journal of Science, states, that carbonic oxide produces, by the action of its flame, similar sounds, and that therefore the effect is not due to the affections of aqueous vapor, as had formerly been supposed. He shows, that the sound is nothing more than the report of a continued explosion, agreeably to Sir H. Davy's theory of the constitution of flame. Vapor of ether, made to burn from a small aperture, produces the same sonorous effect as the jet of hydrogen, of coal gas, or olefiant gas, on glass and other tubes. Globes from seven to two inches in diameter, with short necks, give very low tones ; bottles, Florence flasks, and phials, always succeeded ; air jars, from four inches diameter to a very small size, may be used. Some angular tubes were constructed of long narrow slips of glass and wood, placing three or four together, so as to form a triangular or square tube, tying them round with packthread. These, held over the hydrogen jet, gave distinct tones.

Professor Dobereiner has discovered that, by throwing a jet of hydrogen gas on a small pellet of spongy platinum, the platinum instantly becomes red hot and the jet of hydrogen inflamed.. Mr. Gordon of Oxford Street has formed a lamp on this principle, which is actually a new apparatus for procuring instantaneous fire. See our articles CHEMISTRY in which the nature properties and combination of hydrogen are fully treated of, and GAS in which its application to lighting of roads, shops, &c., is detailed. One of the principal objections to its use as a light is the strong disagreeable smell. But if hydrogen gas, obtained by the solution of iron in sulphuric acid, be made to pass into pure alcohol, it almost entirely loses its smell. Water added to the alcohol renders it milky ; and, on resting some hours, a

volatile oil separates, which is the cause of the well-known smell of hydrogen gas. This gas is obtained perfectly free of smell, by putting into pure water an amalgam of potassium ; but, if there be added to the water an acid or sal-ammoniac to accelerate the development of the gas, the latter will have the smell, which is observed during the solution of zinc in weak sulphuric acid. Ann. de China, et de Phys., October 1824.

HYDROG'RAPHER, n. s. } Fr. hydro—

HYDROGRAPHY, n. s. Sgraphe; Greek,

w5wp and ypa$w. One who draws maps of the sea. Description of the watery parts of the globe.

It may be drawn from the writings of our hydro-graphert. Boyle.

HYDROGRAPHY is the art of measuring and describing the sea, rivers, canals, lakes, &c. With regard to the sea, it gives an account of its tides, counter-tides, soundings, bays, gulfs, creeks, &c.; also the rocks, shelves, sands, shallows, promontories, harbours ; the distance and bearing of one port from another ; with every thing that is remarkable, whether out at sea or on the coast.

HYDROLEA, in botany, a genus of the digynia order, pentandria class of plants: CAL. pentaphyllous : COR. rotaceous ; the filaments at the base cordate : CAPS, bilocular and bivalved.

There are four species, two of which are natives of South America, two of the East Indies.

HY'DROMANCY, n. s. Fr. hydramantie ; Gr. v£up and fiavria. Prediction by water.

Divination vras invented by the Persians : there are four kinds of divination ; hydromancy, pyromancy, acromancy, and gcomancy. Ayliffe.

HY’DROMEL, n. «. Fr. hydromel ; Gr. and /i«Xi. Honey and water.

HYDROM’ETER, n. s. } Greek vSwp and

HYDROM’ETRY, n.s. S /«rpov. An instrument to measure the extent or depth of water; the act of measuring it.

HYDROMETER, (from the Greek wo&»p and Utrpov). A measurer of the density of fluids, is an instrument, which, being immured in fluids, such as water, brine, beer, brandy, determines the proportion of their densities, or their specific gravities, and thence their qualities. The use of the Hydrometer depends on the following propositions : 1. The hydrometer will sink in different fluids in an inverse proportion to the density of the fluids. 2. The weight required to sink an hydrometer to an equal depth in different fluids, will be directly as the density of the fluids. Each of these two propositions gives rise to a particular kind of hydrometer, the one with the graduated scale, the other with weights. See HYDROSTATICS.

HYDROPHO’BIA, n.s. Fr. hydropkubie ; Gr. vdpoQopia. Dread of water.

HYDROPHOBIA in medicine, is a disease generally communicated to man by the bite of a rabid dog, and is so called because one of its principal symptoms is the inability of the patient to swallow water or any other liquid. It is called by some writers canine madness, and seldom makes its appearance till a considerable time after the bite of the rabid animal. In some few instances it has commenced in seven or eight days from the accident ; but generally the patient continues in health for twenty, thirty, or forty days, or even much longer. The bite will in general be healed long before that time, frequently with the greatest ease ; though sometimes it resists all kinds of healing applications, and forms a running ulcer, which discharges a quantity of matter for many days. The approach of the disease is known by the cicatrix of the wound becoming high, hard, and elevated, and by a peculiar sense of prickling at the part; pains shoot from it towards the throat ; sometimes it is surrounded with livid or red streaks, and seems to be in a state of inflammation ; though often there is nothing remarkable to be observed. The patient becomes melancholy, loves solitude, and feels sickness at the stomach. Sometimes the peculiar symptom, the dread of water, comes en all at once. Sometimes the disease begins like a common sore throat ; and, the soreness daily increasing, the hydrophobic symptoms appear like a convulsive spasm of the muscles of the fauces. In others, the mind is first affected, and a real dread of water arises before the patient tries whether he can

swallow it. But, in whatever manner this symptom comes on, the most painful sensations accompany every attempt to swallow liquids. Nay, the bare sight of water, or any thing clear, will give the utmost uneasiness, or even throw the patient into convulsions. The patient, however, is not as yet deprived of reason. Some have, merely by the dint of resolution, conquered the dread of water, though they never could overcome the convulsive motions which the contact of liquids occasioned, and yet this has been of no avail; for the convulsions and other symptoms increasing, have always overpowered the individual at last ; and a great flow of viscid saliva into the mouth now takes place ; as it has the same effect upon their fauces that other liquids have. This therefore is blown off with violei:ce, which in a patient of Dr. Fothergill's occasioned a noise like the barking of a dog. Patients then have an insatiable thirst, but are unable to get down any drink without the -utmost difficulty ; though sometimes they can swallow bread soaked in liquids, slices of oranges, or other fruits. There is a pain under the scrobiculus cordis, as in the tetanus. But the symptoms are so various, that they cannot be enumerated ; for we seldom read two cases of hydrophobia which do not differ very remarkably. Sometimes every member is convulsed by fits, but most violently from the navel up to the breast and oesophagus. The fit comes on perhaps every quarter of an hour, the fauces are not red, nor the tongue dry. The pulse is not at all feverish ; and, when the fit is over, nearly like a sound pulse. The face grows pale, then brown, and during the fit almost black, the lips livid, the head is drowsy, and the ears tingling ; the urine limpid. At last the patient is weary, the fits are less violent, the pulse becomes weak, intermittent, and not very quick ; and at last the whole body becomes cold. If the patient can get sleep, so he will expire. The blood drawn a few hours before death appears good in every respect. The hydrophobia seems to be a symptom peculiar to the human race ; for the mad animals which communicate the infection do not seem to have any dread of water.

With regard to the symptoms ot madness in dogs, they are very equivocal ; and those particularly enumerated by some authors are only such as might be expected in dogs much heated or agitated by being violently pursued and struck. The most certain symptom, indeed, is that all other dogs avoid and run away from one that is mad ; and even large dogs will not attack one of the smallest size who is infected with this disease. You may discover whether a dog who has been killed was really mad or not, by rubbing a piece of meat along the inside of his mouth, and then offering it to a sound dog. If the latter eats it, it is a sign the dog was not mad ; but, if the other rejects it with a kind of a howling noise, it is certain that he was. Dr. James

tells us, that among dogs the disease is infectious by staying in the same place ; and, that after a kennel has been once infected, the dogs put into it will be for a considerable time afterwards in danger of going mad. He rejects as false the opinion, that dogs, when going mad, will not bark : though he owns that there is a very considerable change in their bark which becomes hoarse and hollow.

It is said, that the causes commonly assigned for this disease among animals *viz.* heat, feeding

upon putrid flesh, want of water, &c., are not sufficient to produce the distemper. It does not appear that madness is more frequent among dogs in the warm than in the cold climates ; nay, in the island of Antigua, where the climate is very hot, and the water very scarce, this distemper has never, it is said, been observed. As to putrid aliment, it seems natural for dogs to prefer this to any other, and they have been known to subsist upon it for a long time without detriment. With .regard to the immediate cause among mankind, there is not the least doubt that the hydrophobia is occasioned by the saliva of the mad animal being mixed with the blood. It does not appear that this can operate through the cuticula ; but, when that is rubbed off, the smallest quantity is sufficient to communicate the disease, and a slight scratch with the teeth of a mad animal has been found as pernicious as a large wound. It is certain, also, that the infection has been communicated by the bites of dogs, cats, wolves, foxes, weasels, swine, and even cocks and hens, when in a state of madness.

If the disease once exhibits its symptoms in a human patient the chances for recovery are small indeed : there having never been one well authenticated case of the recovery of a really hydrophobous person. — Prevention is the only chance, and removal of the contagious matter the only fair hope, of preserving life. Of all the means of removal, the cutting out the part to which the tooth has been applied, is unquestionably the most effectual. This therefore should not be delayed ; one-quarter of an hour’s hesitation will sometimes prove fatal. But, besides cutting away the part, careful washing may be used. Cold water should be poured upon the wound from a considerable height, that the mat-ter may be washed away with some force. Even after removal by the knife careful washing is still proper. And after both these, to prevent, as far as can be, the possibility of any contagious matter lurking about the wounded part,

it should not be allowed to heal, but a discharge of matter should be supported for several weeks, by ointment with cantharides, or similar applications. By these means there is the best chance of removing the matter at a sufficiently early period. Prevention may also be obtained by the destruction of the contagious matter at the part; and, where there is the least reason to think that a complete removal has not been obtained, these should always be had recourse to. With this intention the actual cautery, and burning with gunpowder, have been employed. And fire is, doubtless, one of the most powerful agents that can be used for this purpose. Recourse has also been had to washing, both with acids and alkalies. Of the former, vinegar has been chiefly used ; but more may be expected from the latter, particularly from the caustic alkali, so far diluted that it can be applied with safety ; for, from its influence as a solvent of animal mucus, it gives a better chance of a complete removal of the poison. See MEDICINE, Index.

HYDROPHYLUM, water leaf: a genus of the monogynia order, and pentandria class of plants : COR. campanulated, with five melliferous

longitudinal stria on the inside; the stigma is bifid : CAPS, globose and bivalved. There are three species, the chief is — H. Virginianum, the water leaf of Morinus. It grows naturally in Canada . and many other parts of America on moist spongy ground. The root is composed of many strong fleshy fibres, from which arise many leaves with foot-stalks five or six inches long, jagged into three, five, or seven lobes, almost to the mid-rib, indented on their edges. The flowers are produced in loose clusters hanging downwards, are bell-shaped, and of a dirty white color. It may be propagated by parting tha roots ; which ought to be done in autumn, that the plants may be well rooted before spring, otherwise they will require a great deal of water.

HYDRO P’ICAL, adj.) Fr. hydrnpique,

HYDROPICK, adj. J from Lat. fiydrops ;

Gr. iiSpo-iriKos. Dropsical ; diseased with extra-vasatea water : resembling dropsy.

Cantharides heat the watery parts of the body ; as urine, and hydropieal water.

Bacon’i Natural History, The world’s whole sap is sunk :

The general balm the hydropick eartn hath drunk.

Donne.

Every lust is a kind of hydropick distemper, and the more we drink the more we shall thirst. Tillotson. Hydropick wretches by degrees decay,

Growing the more, the more they waste away ;

By their own ruins they augmented lye,

With thirst and heat amidst a deluge fry.

Blackmore.

Hydropieal swellings, if they be pure, are pellucid.

Wiieman.

One sort of remedy he uses in dropsies, the water of the hydropieks. Arbuthnot.

HYDROSELENICAcio. The best process which we can employ for procuring this acid, according to M. Berzelius, consists in treating the seleniuret of iron with the liquid muriatic acid. The acid gas evolved must be collected over mercury. As in this case a little of another gas, condensable neither by water nor alkaline solutions, appears, the best ‘substance for obtaining absolutely pure hydroselenic acid would be seleniuret of potassium.

Seleniureted hydrogen gas is colorless. It reddens litmus. Its density has not been determined by experiment. Its smell resembles, at first, that of sulphureted hydrogen gas ; but the sensation soon changes, and another succeeds, which is at once pungent, astringent, and painful. The eyes become almost instai,tly red and inflamed, and the sense of smelling entirely disappears. A bubble of the size of a little pea is sufficient to produce these effects. Of all the bodies derived from the inorganic kingdom, seleniureted hydrogen is that which exercises the strongest action on the animal economy. Water dissolves this gas ; but in what proportions is not known. This solution disturbs almost all the metallic solutions, producing black or brown precipitates, which assume, on rubbing with polished haematites, a metallic lustre. Zinc, manganese, and cerium, form exceptions. They

yield flesh-colored precipitates, which appear to be hydro-seleniurets of the oxides, whilst the others, for the most part, are merely metallic seleniurets. See

HYDROSTAT'ICAL, adj. \ Gr. vSup and HTDKOSTAT'ICALLY, adv. > Tcrrwcij. The HYDROSTAT'ICS, n. s. j science of weighing fluids, and bodies in fluids.

A human body forming in such a fluid, will never be reconciled to this hydrostatical law ; there will be always something lighter beneath, and {something heavier above ; because bone, the heaviest in specie, will be ever in the midst-Bentley.

The weight of all bodies around the earth is ever proportional to the quantity of their matter : for instance, a pound weight, examined hydroslatically, doth always contain an equal quantity of solid mass. Id.

HYDROSTATICS and HYDRAULICS; from vSup, •water, and <rar«»j, the art of weighing : and itlwp and avXoc, a pipe or flute, (the doctrine of raachir.es worked by water, because organs when first invented were thus first sounded, or filled with wind). In the arrangement of our more important treatises we endeavour to unite the consideration of scientific propriety with the convenience of alphabetical order. Looking only to the latter of these, in regard to the above sciences, HYDRAULICS would claim a prior place, but as this arrangement would, of necessity, tend to render the subject obscure and unconnected, it will be advisable to connect these important subjects and to treat of them in their natural order; beginning with the weight and pressure of water, and then showing the application of hydrostatic equilibrium in the construction of hydraulic machines.

We had better in the first instance explain the nature of fluidity. A perfect freedom of motion is essential to this state, and fluid bodies are usually divided into elastic, and non-elastic. Air is an example of the first, as its bulk may be lessened by augmenting the pressure, and

enlarged by diminishing the compressive force. Water, on the contrary, is said to be non-elastic, 01 incompressible, not because it is absolutely so, but because its compressibility is so very small, as to make no sensible difference in our calculations, relative to its weight or motion.

The compressibility of water was a subject which engaged the attention of philosophers at a very early period. The Florentine academicians, from the following experiment, inferred that it could not be diminished in bulk : they took a globe of gold, which was the least porous of any body at that time known ; and, having filled it with water, they closed it up. They then subjected the globe to a great compressive force, which squeezed the water through its pores, before any indentation could be made in it. As a hollow sphere has a greater capacity than any other form, under the same surface, the academicians supposed that the compressive power, which was applied to the globe, must either force the particles of the fluid closer together, or drive them through the metal, before the globe yielded in the slightest degree to compression. With respect to its precise ob-ject, therefore, this celebrated experiment is not VOL. XI.

entirely conclusive, because they had no means of determining whether the diminution of the internal capacity of the globe by pressure, was exactly equal to the quantity of water forced through its pores ; but they certainly proved the extreme minuteness of the particles that could be forced through so dense a metal as gold. The inference, drawn by the Florentines, re-, mained uncontradicted till about 1762, when Canton published some experiments on the subject. With the barometer at 29J°, and the thermometer at 50°, he states the following to be the results obtained : —

Compression of spirits

of wine . . 66 parts in 1,000,000

Oil of olives . . 48 Ditto

Rain-water . . 46 Ditto

Sea-water . ‘ . 40 Ditto Mercury . . 3 Ditto

These results he obtained in the following manner : he took a glass tube, about two feet long, with a ball at one end, of an inch and a quarter in diameter; he filled the ball end part of the tube with water,

which had previously been deprived of air as much as possible ; he then placed it under the receiver of an air-pump, and removed the pressure of the atmosphere : under this treatment, he observed that the water rose a little in the tube. On the contrary, when he placed the apparatus upon a condensing engine, and by condensing the air in the receiver, increased the pressure upon the water, he observed that the water descended in the tube. In this manner he proved that water expanded one part in 21,740, when the pressure of the atmosphere was removed”; and submitted to a compression of one part in 10,870, under the weight of a double atmosphere. He also observed, that water possessed the remarkable , property of being more ,‘compressible in winter than in summer; contrary to the effect on spirit of wine and oil of olives. Lest it might be supposed the compressibility, thus discovered, might be owing to air lodged within the fluids employed, a quantity of water was caused to imbibe more air than it contained in a preceding trial, but its incompressibility was not increased. These experiments, although, upon the whole, so apparently decisive of the questions they were instituted to determine, are not yet to be received without some caution ; and, in particular, ‘the remark that the addition of a portion of so compressible a fluid as air did not rerder water more compressible than before, is rather staggering ; and is calculated to throw a veil of doubt over all the rest. It remained, therefore, for future investigators to determine the data for this branch of the science ; but, even granting all the compressibility that has been contended for, the quantity of it is too small to be noticed in practice.

The piezometer employed by Mr. Perkins, in his experiments on the compressibility of water,

is represented in plate I. fig. 1. HYDROSTATICS and HYDRAULICS. The end I, of a cylinder S, three inches wide and eighteen long, being made water-tight by a plate firmly soldered to it : a cap, also water-tight, was screwed on the extremity. The rod a, ˆths of an inch in

diameter, and carrying a flexible ring C, was made to pass through a tight stuffing-box F. The compression was effected in a cannon, the top of which was capable of containing the piezometer. It was fixed vertically in the earth, the touch-hole being plugged tight, and the muzzle about eighteen inches above ground. A strong cap was firmly screwed on at the mouth, and in the centre of it a small forcing pump, with a piston ths of an inch in diameter, was tightly screwed, and a valve introduced to ascertain the degree of pressure, one pound of pressure on that valve indicating an atmosphere. In performing experiments with this apparatus, the piezometer was introduced into the cannon, the water being forced in till the cap showed signs of leakage : the valve at the same time indicating a pressure of 100 atmospheres; when the piezometer was taken out of the cannon, the flexible ring, C, was eight inches upon the rod a, which proved that the rod had been forced that length into the cylinder, and that the compression was about one per cent. ; in order to produce this compression, three per cent, must be pumped into the gun; an effect arising from the expansion of the gun, or the entrance of the water into the pores of the cast iron.

On his voyage to England, Mr. Perkins repeated this experiment frequently, and with the same result ; by sinking the piezometer with fifty-four pounds of lead, to the depth of 500 fathoms, which gives nearly a pressure of 100 atmospheres. Being satisfied that the above piezometer would not show all the compression, he made another, consisting of a small tube, closed at the lower end, and water-tight ; at the upper end, the water entered through a small aperture, closed by a delicate valve opening inwards ; it was then perfectly filled with water (the weight of which was accurately known), and subjected in a common hydraulic press to a pressure of about 326 atmospheres. When taken out, and weighed, there was found an increase of water, amounting to about 3£ per cent. This water had been previously boiled and cooled down to 48°, and kept at that temperature during the experiment.

Fluids have weight, and gravitate towards the earth according to their density in the same way that solids do ; but from the want of cohesion among their particles they are, however, incapable of assuming and retaining any particular form or figure without support and assistance, and consequently they always take the form of the vessel which contains them, and they also exert a certain force against the sides of that vessel from their tendency to fall, which constitutes their lateral pressure ; for fluids not only press downwards with their whole weight, in obedience to gravitation, but they press sideways or laterally in all directions at the same time and from the same cause,

and consequently no fluid can re-main in a state of quiet equilibrium, unless every

part of its surface is equidistant from the centre of the earth, or in what is generally called a level plane, although that apparent plane is, in fact, not a plane, but partakes of the convexity of the earth. And it is for the purpose of establishing such an equilibrium that fluids always run from a higher to a lower situation.

For the purpose of explaining the manner lu which the surfaces of fluids become level, it may be very fairly supposed that the particles of which they are composed are placed one upon another so as to form what may be termed pillars or columns of particles as represented in plate I. fig. 2, and supposing all the particles to be of the same size and weight, then the six which are on one side will be an exact balance to the six which are on the other (both columns being supported by the bottom of the vessel which contains them), and their two tops will be level ; but, if the two upper particles t and v are supposed to be taken away, a balance can no longer exist, for now there will be six particles in one column, while there are but four in the opposite one to press against and resist them, the consequence of which will be that the tallest column will descend, and the particle u will fall into the situation of w, while that marked x will, with its column, ascend into the situation v, and thus x and u will come to the same level, and a balance or equilibrium will be again restored. Every vessel is supposed to be filled by an infinite number of such columns, although two only are represented in the figure to prevent confusion. The cause of bodies floating upon fluids, or sinking in them, may be explained by the same reasoning, for whenever a solid is immersed in a fluid, it displaces a quantity of water, and consequently renders the columns of particles underneath it shorter, and therefore lighter, than those which surround it. It will only then be to conceive that the two particles t and v, in the last figure represent a body which is partly immersed in the water, and is floating near its surface ; the columns under that body will be shorter than those which surround it, but the weight of the body becomes a counterpoise to the greater length of the surrounding columns, and must in every case be precisely equal to the quantity of water which it displaces, otherwise it cannot float, for all bodies which are incapable of so becoming this counterpoise, or, in other words, are so heavy that their small bulk will not per-mit them to displace as much water as is equal to their own weight, must inevitably sink ; consequently all things which are lighter than their bulks of water will swim, and all that are heavier must sink, unless

when they are placed in a boat or hollow vessel, which by its bulk enables them to displace more water than is equal to their weight, and then they will float. A ship therefore of 500 tons burthen must displace 500 tons of water from the bed or hollow which it makes itself up to its water-line, and in this way the tonnage of vessels is estimated.

The truth of this position is very satisfactorily proved by putting the model of a ship or any other body capable of floating into a scale, and exactly balancing it with water in the other scale. The floating body is then to be removed and

placed in a small cistern, previously filled quite full of water, when a quantity of it will flow over, and on again removing the floating body a racuity of water will be found, which will be exactly reinstated by the quantity in the scale, being the weight of the floating body.

The balance which has been stated to take place among the columns of water may be pleasingly illustrated by the simple expedient of tying a bladder in a flaccid way over the end of a large patent lamp glass, or other cylinder which is open at both ends; when, upon filling the same to a little above the Madder, it will be borne down by the weight of the water, and will continue in the same situation even when the apparatus is immersed in water, until such immersion causes the water, both within and without the glass, to stand at the same level ; and, whenever this is the case, a balance occurs between the pressures of the internal and external water, and the bladder will become quite flaccid, thus indicating that it is under no pressure either from above or below ; on pressing the glass a little deeper into the water the external columns will become the longest, and consequently the most powerful, and the bladder will therefore in this case be as forcibly protruded upwards into the glass as it was at first pressed downwards.

The ancient method of supplying towns with water was by means of aqueducts, or bridges built over the valleys, and supporting either pipes or an open conduit or channel. These stupendous and costly

erections, the remains of which still adorn the ruins of some ancient cities, and which exist in a more perfect state in the neighbourhoods of Paris and Lisbon, could not have been constructed for want of a knowledge of fluids rising to their common level, but probably from the practical difficulty of uniting a long range of pipes, in such a manner as to remain perfectly water-tight against the pressure of a heavy column of water, a circumstance which is by no means easy, even in our present state of improvement, and with all the advantage of cast iron and the most durable materials, instead of stone or earthenware, which appears to have been chiefly resorted to for pipes in the formation of the older water-works.

The New River water-works, which are of such vast importance to the comfort and health of the great metropolis of England, are in themselves a species of aqueduct, and unite all the varieties in the construction of water-works. The spring that supplies them rises atWare, in Hertfordshire, and its waters are conducted in an artificial channel or cut, formed for their conveyance alone, which is sometimes raised by arches and embankments very considerably above the natural surface of the ground, and at others sinks deeply into it, for upwards of thirty-eight miles. At length it ends in the open basin or reservoir, called the New River Head, at Islington, which is sufficiently high to supply the lower parts of the town by its natural descent into the pipes. To accomplish the rest, a powerful steam-engine is placed near this reservoir, for the purpose of working pumps which force a part of the water into still more elevated reservoirs on Pentonville Hill, acd in the Hampstead read, and what these

cannot command is effected by an air vessel attached to the pumps of the steam engine, so that the greater part of London is supplied, without the expense of any other power than the water's natural gravitation, and the remainder by the well appropriated power of a steam engine.

There is a very singular paradoxical experiment illustrative of this part of our subject. It is this, that any quantity of water, or any other fluid, however small, may be made to balance and support any quantity, or any weight, how great soever. Thus, the water in a pipe, or canal, open at both ends, always rises to the same height at both ends, whether those ends be wide or narrow, equal or unequal. And since the pressure of fluids is directly as their perpendicular heights, without any regard to their quantities, it follows, that whatever the figure or size of the vessels may be, provided their heights be equal,

and the areas of their bottoms equal, the pressures of equal heights of water are equal upon the bottoms of those vessels, even though the one should contain 1000, or 10,000 times as much as the other. Mr. Ferguson has illustrated this matter by the following apparatus : — Let two vessels, plate 1, figs. 3 and 4, such as C and O, be of equal heights, but very unequal capacity ; let each vessel be open at both ends, and their bottoms E and F of equal widths ; let the brass bottoms be exactly fitted to each vessel, not so as to go into them, but for each vessel to rest upon respectively ; and let a piece of wet leather be put between each vessel and its brass bottom, for the sake of keeping them close. Join each bottom to its vessel by a hinge, A F, so that it may open like the lid of a box; and let each bottom be kept up to its vessel by equal weights, B I, hung to lines which pass over the pulley as <at I, the blocks being fixed to the sides of the vessel, and the lines tied to hooks at D B, fixed in the brass bottoms opposite to the hinges. Thing's being thus prepared, hold one vessel upright in the hand over a basin on a table, and cause water to be poured slowly into it, till the pressure of the water bears down its bottom at the side, and raises the weight, and then part of the water will run out beneath. Mark the height at which the surface of the water stood in the vessel when the bottom began to give way ; and then, holding up the other vessel in the same manner, cause water to be poured into it, and it will be seen that, when the water rises in this vessel just as high as it did in the former, its bottom will also give way at the same height, and it will lose part of the water.

The cause of this apparently surprising phenomenon is, that, since all the parts of a fluid at equal depths below the surface are equally pressed in all directions, the water immediately below the fixed part will be pressed as much upward, against its lower surface within the ves-sel, by the action of the column in the centre, as it would be by a column of the same height, and of any diameter whatever: and therefore, since action and reaction are equal, and contrary to each other, the water immediately below the surface, B, will be pressed as much downwards by it as if it were immediatoly touched,

and pressed by a column of the whole height, and of the diameter AB; and therefore the water in the cavity beneath will be pressed as much downwards upou its bottom, F, as the bot-tom of the other vessel is pressed by all the water above it.

When a machine is constructed expressly for the purpose of showing, in the most striking manner, that the pressure of fluids is as their perpendicular heights, and that a quantity, however small, may be made to support a weight, or another quantity, however large, it may be most advantageously made in the form of what is called the hydrostatical bellows. This apparatus may now be examined. It consists of two circular boards I, plate I. fig. 5, about sixteen inches in diameter ; these boards are connected by means of a strong leather, which entirely surrounds them, and permits them to open and close like a pair of common bellows, with this difference, that they open equally all round, and therefore the boards always remain parallel to one another. The leather, at its junctures, is well secured, and the whole machine is water-tight. In the upper board is fixed a pipe, A C, communicating with the interior, and reaching above to a considerable height, suppose five feet. Through this pipe let some water be poured into the bellows, and the upper board will be observed to rise a little ; place a weight, B, upon it, pour in more water, and it will rise, though we increase the weight very considerably. In-deed, we may add water till the leathers are at their utmost extension ; the water will then fill in the tube, and the upper board cannot be depressed, nor the water forced out of the small tube, until the pressure upon it is more than that of a column of water whose diameter is equal to that of the interior of the bellows, and its height equal to that in the tube ; by increasing, therefore, the length of the tube, a most enormous weight might be raised by the pressure of a few ounces of water.

To illustrate this singular experiment, we may suppose a hole to be made in any part of the upper board, and another tube to be inserted there ; the water would certainly rise to the same level in them both ; and, supposing the board to be filled with tubes, the water would obtain the same level in them all, because a series of pipes would, in fact, form a solid cylinder of water. If we suppose the hole to be of the same diameter as the interior of the tube, and fitted with a piston, then, if the tube contained two ounces of water, the piston would sustain a weight of two ounces without being depressed. If the area of the whole were twice that of the bore of the tube, two ounces in the tube would -sustain four ounces on the piston. In this manner, every

part equal to the bore of the tube is pressed upwards with a force equal to the weight of fluid in the tube. Hence, if the proportion subsisting between the area of the tube and that of the bellows be multiplied by the weight of water in the tube, the product will express the force with which the boards are separated.

In lieu of the bellows part of the apparatus, the leather of which would be incapable of re-

sisting any very considerable pressure, Mr, Bramah suggested the use of a very strong metal cylinder, in which a piston was so packed as to move water-tight ; and, as a substitute for the high column of water, he employed a small forcing pump, to which any power can be applied ; and thus the pressing column becomes indefinitely long, although the whole apparatus is of itself comparatively small.

In plate I., fig. 6, we have a section of one of these presses, in which b is the piston of the large cylinder, formed of a solid piece of metal turned truly cylindrical, and carrying the lower board v of the press upon it : r is the piston of the small forcing pump, being also a cylinder of solid metal, moved up and down by a handle or lever. The whole lower part of the press is sometimes made to stand in a case, S a, containing more than a sufficient quantity of water, as at C, to fill both the cylinders; and the suction pipe of the forcing-pump dipping into this water will be constantly supplied. Whenever, therefore, the handle is moved upwards, the water will rise through the conical metal valve, opening upwards into the bottom of the pump t ; and, when the handle is depressed, that water will be forced through another similar valve g, opening in an opposite direction in the pipe of a communication between the pump and the great cylinder d, which will now receive the water by which the piston rod b will be elevated at each stroke of the pump t. Another small conical valve, /’, is applied by means of a screw to an orifice in the lower part of the large cylinder, the use of which is to release the pressure whenever it may be necessary ; for, on opening this valve, any water which was previously contained in the large cylinder d will run off into the reservoir by the passage c, and the piston b will descend ; so that the same water may be used over and over again. The power of such a machine is enormously great ; for supposing the hand to be applied at the end of the handle with a force of only ten pounds, and that this handle, or lever, be so constructed as to multiply that force but five times, then the force with which the piston r descends will be equal to fifty pounds : let us next suppose that the magnitude of the piston b is

such, that the area of its horizontal section shall contain a similar area of the smaller piston r fifty times ; then fifty times multiplied by fifty gives 2500 pounds, for the force with which the piston b and the presser v vill rise. A man can, however, exert ten times this force for a short time, and could therefore raise 25,000 pounds ; and would do more if a greater disproportion existed between the two pistons b and r, and the lever or handle of the pump were made more favorable to the exertion of his strength.

Mr. Hawkins has contrived an hydrostatic weighing machine, which may be easily understood by reference to plate I. fig. 7 : a is a cylinder made of tin, and japanned, which is partly filled with water; b is another cylinder, rather less in diameter, resting upon and floating in the water contained in the external vessel. A graduated scale and glass tube, c , are seen to run parallel to the vessel a, with which they are con-

tiected at bottom ; so that the water always stands at the same height in both. The central cylinder is furnished with a dish or scale for holding the goods to be weighed, the pressure of which causes it to sink. The water being thus displaced in the larger vessel is raised in the small tube in an equal proportion, and the exact weight of the goods will be indicated by the scale attached to the tube. This ingenious contrivance is well adapted for small weights ; and, if mercury be substituted for the water recommended by Mr. Hawkins, the range of the - instrument may be extended, without its accuracy being affected by its evaporation, f

If a hole be made in the side of a vessel, the water will spout forth in a curvilinear path because fluids press equally in all directions.

The velocity with which water spouts out, at a hole in the side or bottom of a vessel, is as the square root of the depth or distance of the hole below the surface of the water : for, in order to make double the quantity of a fluid run through one hole as through another of the same size, it will require four times the pressure of the other, and

therefore the aperture must be four times the depth of the other below the surface of the water ; and, for the same reason, three times the quantity, running in an equal time through the same sort of hole, must run with three times the velocity, which will require nine times the pressure, and consequently the hole must be Tiine times as deep below the surface of the fluid, and so on.

To prove this by experiment, let two pipes of equal sized bores be fixed into the side of a vessel, one pipe being four times as deep below the surface of the water in the vessel as the other is : and, whilst the pipes run, let water be poured constantly into the vessel, so as to keep it always full. Then if a cup thaf holds a pint be so placed as to receive the water that spouts from the upper pipe, and at the same moment a cup that holds a quart be placed to receive the water from the lower pipe, both cups will be filled at the same time by their respective pipes.

The horizontal distance to which a fluid will spout from a horizontal pipe in any part of the side of an upright vessel, below the surface of the fluid, is equal to twice the length of a perpendicular to the side of the vessel, drawn from the mouth of the pipe to a semicircle described upon the altitude of the fluid : and therefore the spout will be to the greatest distance possible from a pipe whose mouth is at the centre of the semicircle ; because a perpendicular to its diameter (supposed parallel to the side of the vessel), drawn from that point, is the longest that can possibly be drawn from any part of the diameter to the circumference of the semicircle.

Thus if the vessel AB, plate I. fig. 8, be full of water, the horizontal pipe D be in the middle of its side, and the semicircle N E C be described upon D, as a centre, with the radius, or semi-diameter DC, orDN, the perpendicular DE to the diameter C D N is the longest that can be drawn from any part of the diameter to the circumference : and, if the vessel be kept full, the jet will spout from the pipe D to the horizontal distance M M, which is double the length of the

perpendicular D E. If two other pipes, as F and G, be fixed into the side of the vessel, at equal distances above and below the pipe D, the perpendiculars FH and G I, from these pipes to the semicircle, will be equal ; and the jets spouting from them will each go to the horizontal distance N K, which is double the length of either of the perpendiculars F H or G I.

The reader will easily perceive that the curve described by the spouting fluid, in all the different situations, will be that of a parabola; being acted upon by the combined forces of the lateral pressure of the fluid in the vessel, and the force of gravity.

When a solid body is plunged in any liquid, it must displace a quantity of that liquid exactly equal to its own bulk. Hence, by measuring the bulk of the liquid so displaced, we can ascertain precisely the bulk of the body ; for the liquid can be put into any shape, as that of cubical feet or inches, by being poured into a vessel of that shape, divided into equal parts, or the vessel in which the body is plunged may be of that shape, and so divided. If the width of the vessel is four inches by three, or twelve square inches, and divided on the upright side into twelfths of an inch, when a body of any irregular shape, as a bit of rough gold or silver, is plunged in it, every division that the water rises will show that one-twelfth of twelve cubic inches, or one cubic inch of water, has been displaced; so that, if it rises two divisions, the body contains exactly two solid inches of metal. And this is by far the easiest way of measuring the solid contents of irregular bodies.

When a body is so plunged it will remain in whatever part of the fluid it is put in, if it be of the same weight with the fluid ; that is, if the bulk of the body weighs as much as the same bulk of the fluid ; for in this case it will be the same thing as if the fluid were not displaced, and as an equal quantity of the fluid would have remained at rest there, being equally pressed on all sides, so will the solid body: it will be pressed from below with the same weight of fluid as from above. But if the body be heavier than the fluid, bulk for bulk, this balance will be destroyed, and the weight of the fluid pressing from above will be greater than that pressing from below, by the weight of the solid body, which will therefore sink to the bottom. So, if it be lighter than an equal bulk of the fluid, it will rise through the fluid to the surface. But if a solid heavier than the fluid he plunged to a depth as many times greater than its thickness, as the solid is heavier than the fluid, and there protected by any means from the pressure of the fluid above, it will float notwithstanding its weight, because the pressure from below, being in proportion to the depth, will counterbalance the weight of the body, and there will be no pressure from above, except the weight of the body. Thus, lead is somewhat above eleven times heavier than water. If a cube of lead be placed so as to press closely against the bottom of a wooden pipe one foot square, closed at the top, and plunged twelve feet deep, and held upright, it will there swim ; the water pressing it upwards with a force greater than its weight, and there being no pres-502

sure from the water downwards. So if a body ighter than water, as cork, be placed at the bot-tom of a vessel, and so smoothly cut that no water gets between its lower surface and the surface of the bottom, it will not rise but remain fixed there, because it is pressed downwards by the water from above, and there is no pressure from below to counterbalance that from above. It follows from these principles, that if any body be weighed in the air, and then weighed in any liquid, it will seem to lose as much as an equal bulk of the liquid weighs. Not that the body really loses its weight, but that it is pressed upwards by a force equal to the weight of the liquid, the place of which it fills. Thus, if a piece of lead weigh an ounce before being plunged in water, that is, require an ounce weight on the opposite scale to balance it ; if you hang it by a thread from its own scale, and let it be plunged so that the water in a full jar covers it, a quantity of water equal to the bulk of the lead will run over the sides of the jar, and a number of grains equal to the weight of this quantity of water must be taken out of the opposite scale to restore the balance : for the lead is now pressed downwards in the water with a force not equal to its own weight, but to the difference between its own weight and that of an equal bulk of the water. And in this manner we can determine the relative weights of all bo-dies, or the proportion which they bear to each other in weight ; which is called their specific gravity ; that is, their weight in kind, and sometimes their relative gravity, that is, their weight compared with the weight of other bodies. By weighing a known bulk, as a cubic foot or a cubic inch of any two substances, we can find their specific gravity ; or their gravity as compared with each other : if, for instance, we found a cubic inch of iron weighed 1948 grains, and a cubic inch of lead 2858, we should say, that the specific gravities of the two substances were in the proportion of 3 to 4£ nearly ; and so we might find the specific gravity of a solid substance, as compared with that of a liquid, by weighing an equal bulk of each. But this operation is extremely difficult, because it requires the substances compared to be formed accurately into the same shape and size ; and, when we are not allowed to change their figure, the comparison cannot be made at all. Thus we could not ascertain the specific gravity of precious stones, crystals, metallic ores, or animal and vegetable substances, without in effect destroying them. But the hydrostatic balance, upon the principles now explained, affords a perfectly easy and most accurate method of comparing all substances

solid and fluid. We have only to weigh any substance first in air, and then in water ; the difference of the weights is the weight of a bulk of water equal to the bulk of the substance ; and by comparing any other substance with water, in like manner, we ascertain its specific gravity, as compared with that of the first substance.

Let us now take an example of the use of the hydrostatic balance. If a guinea suspended in air be counterbalanced by 129 grains in the opposite scale, and upon being immersed in water re-

quires ?i grains to be put in the scale over it, in order to restore the equilibrium ; we thus find that a quantity of water, of equal bulk with the guinea weighs 7£ grains, or 7-25; by which divide 129, the weight of the guinea in air, and the quotient, or 17-793, shows that the guinea is so many times heavier than its bulk of water. Whence if any piece of gold be tried, by weighing it first in air, then in water, and if upon dividing the weight in air by the loss in water, the qtu> tient is 17-793, the gold is good ; if the quotient is 18, or between 18 and 19, the gold is very fine; but, if it be less than 17J, the gold is too much alloyed with other metal. If silver be tried in this manner, and found to be eleven times heavier than water, it is very fine : if it be 10J times heavier, it is standard: but, if it be any less weight compared with water, it is mixed with some lighter metal, such as tin.

When substances are lighter than water, a different mode of treatment to that which has been described must be adopted for obtaining their specific gravities ; for now some force is necessary for producing their submersion : — To effect this a small pulley moving with little friction may be attached to the bottom of the water jar, or to a weight sufficiently heavy to cause it to remain steadily there ; and the hair attached to the substance, must in this case pass downwards under the pulley, and rise again so that its opposite end may fix to the hook of one of the scale pans. The substance is first to be weighed in the scale in the ordinary manner, and afterwards placed in the jar ; water must then be added, until the substance, by floating, draws the Scale beam into an horizontal position ; after which weights must be placed in the opposite scale until the substance is drawn under the water. See SpEciFrc GRAVITIES.

Mr. Ritchie's hydrostatic balance is cheap and delicate ; it is constructed as follows : — Let a slender beam of wood be procured, about eighteen or twenty-four inches long, and tapering a little from the middle to each end. Let a fulcrum of tempered steel, resembling

the blade of a penknife, be made to pass through the middle of the beam, a little above the centre of gravity. Similar steel blades are also made to pass through the ends of the beam for suspending the scales. The fulcrum rests on two small portions of thermometer tubes, fixed horizontally on the upright support E F, fig. 9, plate I. The support has a slit passing along the middle, to allow the needle at EF to play between the sides. A small scale made of card, and divided into any num-ber of equal parts, is placed at F, for the purpose of ascertaining the point at which the needle remains stationaiy. This balance possesses extreme delicacy. It may even be made more sensible than that belonging to the Royal Society of London.

To ascertain the weight of any body, place it in one of the scales, and bring the needle to any point by means of small shot placed in the other scale ; observe the point opposite to which the needle rests, or the middle between its extreme point of oscillation ; remove the body, and put into the scale as many known weights as will bring the needle to the same division as

before. These weights will evidently be equal to the weight of the body, whether the arms of the balance be equal or not. This method of weighing is due to Borda.

In the use of the hydrostatical balance generally, it will be proper to observe the following general precautions. The water in which the solid is to be weighed, besides its being either distilled or rain water, must be quite clean. Its temperature, as well as that of the solid, must be as near as possible to 62° of Fahrenheit's thermometer ; for which purpose the ball of the thermometer must be placed in the water, and the temperature is adjusted by the addition of hot or cold water. If the solid body be soluble in water, or if it be porous enough to absorb any water, then it must be varnished, or coated with some oily or greasy substance ; but in that case some allowance is to be made on account of the varnish, &c. When the solid i? weighed in water, its upper part ought to be a little way below the surface of the water; for instance, about an inch ; and it must by no means be suffered to touch the sides

or bottom of the jar. Care must be taken that no bubbles of air adhere to the solid under water ; for they would partly buoy it up. These may be easily removed by means of a feather. The solid must be of a compact form, and free from accidental

or artificial vacuities, so as not to harbour any air ; for otherwise its specific gravity cannot be ascertained by weighing in water, &c. Thus a piece of silver, which is much heavier than water, may be formed into a hollow sphere, which will ap-pear to be much lighter than water ; for, if this sphere were immersed in water, it would displace a quantity of water which is equal not only to the silver, but also to the space which is contained in the sphere. It is for this reason that a ship might be made of iron, or of copper, or, in short, of any substance whose specific gravity far exceeds that of water, and yet it would float as well as a ship which is made of wood in the usual way.

In order to determine the specific gravity of liv.ng men, Mr. Robertson prepared a cistern seventy-eight inches long, thirty inches wide, and thirty inches deep ; and, having procured ten men for his purpose, the height of each was taken, and his weight, and afterwards they plunged successively into the cistern. A ruler, graduated to inches and decimal parts of an inch, was fixed to one end of the cistern, and the height of the water noted before each man went in, and to what height it rose when he immersed himself under its surface.

The following Table contains the several results of his experiments : —

No. of. Men

Height.

Weight.

Height of water before immersion.

Height of water when immersed.

Water raised.

Solidity.

Weight of water.

Ft. In.

Ibs.

In.

In.

In.

Ibs.

1

6 2

161

19-30

21-20

1-90

2-573

160-8

2

5 10f

147

19-25

21-16

1-91

2-586

161-6

3

5 OJ

156

19-21

21-06

1-85

2-505

156-6

4

5 6|

140

19-17

21-21

2-04

2-763

172-6

5

5 5J

158

19-13

21-21

2-08

2-817

176-0

6

5 5J

158

19-09

21-26

2-17

2-939

183-7

7

5 4f

140

19-05

21-06

2-01

2-722

170-1

8

5 H

132

19-01

20-86

1.85

2-505

156-6

9

5 4|

121

18-97

20-76

1-^9

2-424

151-5

10

5 3|

148

18-93

20-66

1-73

One of the reasons, Mr. Robertson says, that induced him to make these experiments, was a desire to know what quantity of fir or oak tim-ber would be sufficient to keep a man afloat in river or sea water, thinking that most men were specifically heavier than river or common fresh water ; but the contrary appears from the trials before recited ; for, except the first and last, eˆery man was lighter than his equal bulk of fresh water, and much more so than his equal bulk of sea water : consequently, if persons who fall into the water could preserve their presence of mind, many might be preserved from drowning, and a piece of wood, not larger than an oar, would buoy a man partly above water as long as he could adhere to it.

It is evident also that a reference to the same general principle will enable us to ascertain the specific gravities of different fluids. For, if the same substance be weighed in two fluids, the •weight which it loses in each is as the specific gravity of that fluid. Thus a cubic inch of lead

loses 253 grains when weighed in water, and only 209 grains when weighed in rectified spirits ; therefore a cubic inch of rectified spirit weighs 209 grains, an equal bulk of water weighing 253 ; and so the specific gravity of the water is about a fourth greater than that of the spirit.

Upon this principle the hydrometer is constructed. There are various kinds of hydrometers. One is a glass or copper ball with a stem, on which is marked a scale of equal parts or degrees. The point to which the stem sinks in any liquid being ascertained, and marked on this scale, we can tell how many degrees any other liquid is heavier or lighter, by observing the point to which the stem sinks in it. Another and a very simple hydrometer is formed by preparing a number of hollow glass beads of different weights, but the proportions of which are known, and the beads marked accordingly ; they are then successively dropped in the fluid to be examined, until one is found which neither sinks nor comes up to the surface, but remains at rest,

wherever it is placed in the liquid. You thus ascertain that the liquid is of the same specific gravity with this bead. If the same bead be dropped into another liquid, and sink, that liquid must be lighter than the first; if the bead come to the top, the second liquid is heavier than the first ; and by trying the liquid with the other beads, until one is found which neither sinks nor floats, you ascertain the relative weight of the liquid by the number of the bead.

A hydrometer of great delicacy and peculiarly useful for measuring the specific gravity of different waters, and thereby ascertaining their degrees of purity, consists of a ball of glass three inches diameter, with another joining it, and opening into it, of one inch diameter, B and C, plate I. fig. 10, and a brass neck d, into which is screwed a wire a 0, about ten inches long, and one-fortieth of an inch diameter, divided into inches, and tenths of an inch. The whole weight of this instrument is 4000 grs. when loaded with shot in the lower ball. It is found that, when plunged into water in the jar, a grain laid upon the top a makes it sink one inch; therefore a tenth of a grain sinks it a tenth of an inch. Now it will stand in one kind of water a tenth of an inch lower than in another, which shows that a bulk of one kind of water equal to the bulk of the instrument weighs one-tenth of a grain less than an equal bulk of the other kind of water ; so that a difference in specific gravity of one part in 40,000 is thus detected. This weight of 4000 grs. is convenient for comparing water ; but the quantity of shot in the lower ball may be varied, so as to make it lighter or heavier, and so adapt it to measure the specific gravities of lighter or heavier liquids. It will always be an accurate and very delicate measure for liquids of nearly the same weight. Indeed its delicacy is so great, that an impurity too slight to be detected by the taste, will be discovered by this instrument.

The areometer invented by M. De Parcieux, of Paris, is more simple, and affords a very accurate comparison of different liquids. It is only a different form of the instrument just described. A glass phial, about two inches or two inches and a half in diameter, and seven or eight long, with a plane or round bottom, is corked tight, and into the cork is fixed apeifectly straight wire of about one-twelfth of an inch

diameter, and thirty inches long. The phial is loaded with shot, so as to make it sink in the heaviest liquid to be examined, leaving the wire just below the surface. There is a cylinder of glass, about three or three and a half inches diameter, and three or four feet long, •with a scale of equal parts on the side. The liquor to be tried is put into this ; and the scale marks the point to which the top of the wire sinks. This instrument is so sensible, that if it stands at any point in water of the common temperature, and the sun's rays fall upon the water, Jhe wire will sink several inches, from the slight increase of heat causing an increase of bulk, and consequently a diminution of relative weight in the water ; and it will rise again when carried into the shade. A pinch of salt or sugar thrown in makes it rise some inches, and a little spirits poured in make it sink. With one of these instrument?, weighing somewhat less than twer.ty-four ounces, and plunged in water, there is a fall or rise of above half an inch for every f^ th part of the water displaced ; so that the difference of igggjjo th part is easily perceived.

Fahrenheit's hydrometer, like the common one, consists of a hollow ball, with a counterpoise c, fig. 11, but the stem B is very slender, and terminates in a small dish A. Round the middle of the stem is drawn a fine line ; and there are no divisions on the stem, which is always immersed in the fluid to be tried, up to the mark, by placing as much weight as may be required in the small dish A. Hence, us the part immersed is constantly of the same magnitude, and the whole weight of the hydrometer is known, this last weight, added to the weight in the dish, will be equal to the weight of fluid displaced by the instrument.

Mr. Clarke's hydrometer is made of copper, because ivory imbibes spirituous liquors, and glass is apt to break. It consists of a brass wire about one-fourth of an inch thick, passing through and soldered into the copper ball Bb, fig 12, plate 1. The upper part of the wire is filed flat on one side of the stem of the hydrometer, and marked at m, to which division it exactly sinks in proof spirits. There are two other marks, A and B ; the one showing that the liquor is one-tenth above proof, when this instrument sinks to A, and the other indicating one-tenth under proof when it emerges to B ; a brass weight, as C, having been previously screwed on to the bottom at c. There is a great variety of weights of different sizes, as K, &c., adapted to liquors that differ more than one-tenth from proof, and for determining the specific gravities of all such liquors as occur in trade, as well as for showing the specific gravities of all fluids down to common water. The round part of the wire above the ball may be marked across, so that with the weight C, which fits the instrument for the trial of river water, in which it sinks to RW, it m?.y serve for wines or other waters : thus in

spring water it will sink to S P ; in mineral water to M I ; in sea-water to S E; and in the water of salt springs to S A : and the marks br, ra,po, me, denote the divisions to which the instrument descends in Bristol water, rain water, port wine, and mountain wine, respectively.

This hydrometer is inferior to Fahrenheit's in two respects. In the first place, either a bubble of air, or a portion of the fluid, will be hid in that part of the cavity of the ballast weight which is not filled by the screw ; and it is of very different consequence which of the two is there. And secondly, the weights acting on the instrument, by their residual gravity, will not be constant ; or, in other words, an additional weight will be accompanied by an addition to the bulk of the immersed part of the instrument ; and in the case where the specific gravity of the liquid is not given, but required, it will not be easy to determine how much the operation of the one is counteracted by the other However, though this last consideration evinces that the instrument is not fit for general use, yet it is accurate for the trial of ardent spirits, or any other parti • cula-liquid, when the weights aie adjusted V y experiment to the intended use

Sikes's hydrometer is now generally employed, especially since its adoption by the commissioners of his majesty's customs. This instrument has but nine shifting weights, applicable upon the upper part of the stem, and is used with a set of tables, or a sliding rule sold with it, for computing compensation for different temperatures. The scale is divided into ten principal divisions, each of which is subdivided into five parts, and by the separate application of the weights in succession completes the range of strength from pure alcohol to water, each weight being equivalent to ten principal divisions. This hydrometer, with the weight marked 60, screwed on to the lower stem, is so adjusted as to sink to the line mark P on the scale of the instrument when placed in proof spirit, of the temperature of 51° Fahrenheit, and, by the addition of the square weight on the top of the stem, it sinks to the same point in distilled water of the same temperature. This weight being just one-twelfth part of the entire

weight of the whole hydrometer, together with its bottom weight No. 60, causes the scale to show the difference between water and proof spirit, which, the act states, shall weigh exactly twelve-thirteenth parts of an equal bulk of distilled water.

Mr. Meikle's hydrometer consists of a glass tube, open at both ends, and bent into a kind of double syphon, having four parallel legs; so that the open ends are pointed in the same direction or upwards, as shown in fig. 13, plate I. The manner of using it is very simple. Let one of the ends be stopped with a finger or cork, and water be poured into the other. This fluid will only rise a small way into the second leg, because of the included air. Next stop the other orifice, and open the one first closed ; and, hav-ing poured into the latter the liquid whose specific gravity is to be tried, open the top of the water tube ; then, the instrument being held upright, the two liquids will arrange themselves so as to press equally on the included air. This pressure will be measured by the difference in the heights of the two columns of either liquid, multiplied by its specific gravity, so that, by dividing the difference of the two columns of water by the difference of those of the other liquid, we obtain the specific gravity of the lat-ter; that of water being unity. The difference between the columns may be measured by applying any scale of small equal parts, or the glass may be attached to a graduated plate furnished with verniers, &c. The longer the columns of liquids employed, the more accurate the process. The expansion of the glass, or its capillary action, cannot affect the result, nor is it influenced by the expansion of the scale ; the only correction required will be to reduce the observations to one temperature.

There are other methods of judging of the strength of spirituous liquors, which though useful are not accurate, such as the taste, the size and appearance of the bubbles when shaken, the sinking or floating of olive oil in it, and the appearances that it exhibits when burned ; if it burns away perfectly to dryness, and inflames gunpowder, or a piece of cotton immersed in it, it is considered as alcohol ; the different spirituous

liquors leave variable proportions of water, when thus burned in a graduated vessel.

There is the greatest difficulty in ascertaining what is meant by the terms proof spirit. Dr. Thomson, quoting the act of parliament of 1 762, states, that at the temperature of 60°, the specific gravity of proof

spirit should be 0-916 ; and he also observes, that proof spirit usually means a mixture of equal bulks of alcohol and water; but the specific gravity of such a mixture will, of course, depend upon that of the standard alcohol, which is not specified. It appears from Gilpin's Tables that spirit of the specific gravity -916, at 60°, consists, by weight, of 100 parts of alcohol, specific gravity -825, at 60°, and 75 of water ; and, by measure, of 10O parts of the same alcohol, and 61-87 of water.

One of the most accurate and convenient methods of obtaining the specific gravity of fluids is by what is called a thousand grain bottle. This is sold by most of the philosophical instrument makers, together with a weight, which is an exact counterpoise for the bottle when filled with distilled water ; its magnitude being adjusted by grinding down the length of its neck, until it holds exactly 1000 grains of water at 60° of Fahrenheit. This instrument consequently requires no computation, but is simply to be filled with fluid, and placed in one scale of a balance, while its counterpoise is placed in the other. If the fluid put into it is lighter than water, it will appear deficient in weight, and as many, grains must be added to the scale that contains it as will restore the balance. This at once shows that the specific gravity of the fluid under examination is negative, or less than the standard, and consequently must be a frac-tional number; but, should the fluid be heavier than water, the bottle will preponderate, and weights must be put |into the opposite scale, when their amount will be positive, and must be added to the amount of the standard. For example : if the bottle were filled with sulphuric ether, it would require 739 grains to be placed in the same scale to restore the balance, consequently its specific gravity would be thus expressed 0-739. Had it been filled with sea-water, which is rather denser than that which is distilled, twenty-six-hundredths, or rather bet-ter than one-fourth of a grain must have been added in the opposite scale, and these, as already explained, must be added to the standard 1-000 to express the specific gravity of such water, which would be thus written 1-026. Sulphuric acid again, being still heavier, would, in like manner require 875 grains, and would accordingly be expressed 1-875.

A bottle, however, holding 1000 grains is often inconveniently large, and a small and thin globular phial, with a piece of thermometer tube ground into it by way of stopper, will be found more useful • such a phial should not weigh more than from 'fifty to sixty grains, and may contain between 400 and. 500 grains of water. To use it it should be accurately counterbalanced in a delicate pair of scales, and then filled with distilled water, and the stopper thrust in, the capillary opening in

which allows a little to ooze out, and prevents the likelihood of bursting the

phial ; it is then to be wiped clean and dry, and again carefully weighed, by which the quantity of water it contains is ascertained ; the water being poured out it is next filled with the liquid whose specific gravity is required, taking care that it is of the same temperature as the water ; we then weigh as before, and divide the weight by the former weight of water, the product gives the specific gravity required. Thus, suppose the phial to contain 425 grains of water at the temperature of 45°, it will be found to hold 5737-5 grains of pure mercury of the same temperature; and 5737-5 -f-425 — 13-5 the specific gravity of mercury. Or, supposing the liquid lighter than water, such as alcohol, of which we may assume the pnial to contain 350-5 ; then 350-5 -f-425 = 0-824, the specific gravity of the alcohol under trial.

The following table is given by Mr. Gilpm, in the eighty-fourth volume of the Philosophical Transactions, and is of essential use for taking the specific gravities both of solids and fluids, by enabling the operator to reduce the weight or bulk of the distilled water, employed in any case, to that which it would have at any other common temperature, and particularly to 60°, which is the usual standard.

Thus, for example, since the specific gravity of water at 47° is 1*0008 grains, and at 60° is 1-00000, (and consequently 1-0008 grains, at 47°, are equal in bulk to 1-00000 grains at 60°), it follows that it would require 252-708 grains at 47°, to equal the space of a cubic inch; for 1-00000 : 1-0008 :: 252-506 (the weight of a cubic inch at 60°), ; 252-708.

TABLE of the SPECIFIC GRAVITT of WATER, at every Degree of

Temperature, from 30°

80° Fahrenheit.

to

Fahr. 30°

31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55

Specific Gravity.

1-00074 1-00078 1-00082 1-00085 1-00088 1-00090 1-00092 1-00093 1-00094 1-00094 1-00094 1-00093 1-00092 1-00090 1-00088 1-00086 1-00083 1-00080 1-00076 1-00072 1-00068 1-00063 1-00057 1-00051 1-00045 1-00038

Fahr.

56°

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

Specific Gravity.

1-00031 1-00024 1-00016 1-00008 1-00000 0-99991 0-99981
0-99971 0-99961 0-99950 0-99939 0-99928 0-99917 0-99906
0-99894 0-99882 0-99869 0-99856 0-99843 0-99830 0-99816
0-99802 0-99788 0-99774 0-99759

The above particulars are essential to a right understanding of our subject, as far as water, which is the standard of comparison, is con-

cerned ; but we must not close this view of hy drostatic equilibrium without furnishing a more general table.

TABLE OF SPECIFIC GRAVITIES.

Acid, Acetic . r» 1-062 Arsenic , . 3-391 Arsenious . . 3-728 Benzoic . . 0-667 Boracic, crystallised 1-479 Do. fused . 1-803 Citric ””.’ . 1-034 Formic . . 1-116 Fluoric . . 1-060 Molybdic . . 3-460 Muriatic . . 1-200 Nitric . . 1-271 Do. highly concentrated . . 1-583 Phosphoric, liquid 1-558

Do. solid . 2-800 Sulphuric . . 1-850 Agate …. 2-590 Alcohol, absolute . . 0-797 Do. highly rectified 0.809 Do. of commerce . 0-835 Alum …. 1-714 Amber. from 1-065 to 1-1 00 Ambergris from 0-780 to 0-926 Amethyst, common . 2-750 oriental . 3-391 Amianthus from 1-000 to 2-313 Ammonia, aqueous . 0-875 Arragonite … 2-900 Azure-stone . . 2-850

Barytes, sulphate of, from 4-000 to 4-865 Do. carbonate of, from 4-100 to 4-600 Basaltes . from 2-421 to 3-000 Beryl, oriental . . 3-549 Do. occidental . . 2‘723 Blood, human . . 1-053 Do. crassamentum of 1-245 Do. serum of . .1 -030 Borax … 1-714 Butter … 0-942 Camphor … 0‘988 Caoutchouc, or Indian rubber … 0-933

TABLE OF SPECIFIC GRAVITIES. — Continued.

Cornelian, speckled . 2-61 Chalcedony, common, from

2-600 to 2-65

Chalk . from 2-252 to 2-657 Chrysolite … 3-400 Chrystalline lens of the eye 1-100

Coals . from 1-020 to 1-300 Copal . .’ . 1-045

Coral, red, from 2‘630 to 2-857 white, from 2-540 to 2-570 Corundum …3-710 Cyder …. 1-018 Diamond, oriental, colorless … 3-521 Do. colored varieties, from

Sulphureted do. 1‘180 Sulphurous acid 2-22 Glass, crown . . 2‘52 green . . 2-64

flint from 2-760 to 3-00(plate . .2-94

Cinnabar, from Almaden 6-902 Granite . from 2-613 to 2‘956

Do. Brasilian

Do. colored varieties, from

3-523 to 3-550 Heliotrope, or bloodstone

3-444

Dolomite from 2-540 to 2-830 Dragon’s blood (a resin) Ether, Acetic . . 0-866 Muriatic . . 0-729 Nitric . . 0-908 Sulphuric . from

3-518 to 3-550 Honeystone, or mellite, from

0 632 to 0-775

rum arabic … 1‘452

cherry-tree . . 1-48 Junpowder, loose . 0‘836

shaken . 0-93 solid . . 1-745 typsum, compact, from

1-872 to 2-288 crystallised, from

2-311 to 3-000

Honey

from 2-629 to 2-700

1-450

1-560 to 1-666 1‘204 Hornblende, common, from

3-250 to 3-830 basaltic, from

3-160 to 3-333 Hornstone from 2‘533 to 2-810

Hyacinth

from 4-000 to 4-780

Emerald from 2-600 to 2-770JJasper . from 2-358 to 2-816 Euclase from 2-900 to 3-300 Jet …. 1-300 Fat of Beef • . . 0-923JIndigo … 1-009

Hogs . . 0-936,Ironstone from Carron . 3-281

Mutton . . 0-923 Do. Lancashire Veal . . 0-934’Isinglass . .

Felspar from 2-438 to 2-700 Ivory …. Flint, black . . 2-582 Lapis Nephriticus .

Gamboge … 1-222 Lard

0-947 Milk

3-573 1-111 1-825

2-894 Mica

or not . . 7-788 Lead . . 11-33

Manganese . 8-000 Mercury, solid, 3°

below 0 of Fahr. 15-61 Do. at 32° of Fahr. 13-61 Do. at 60° of Fahr. 13-58 Do. at 2 12° of Fahr. 13-37 Molybdenum 8-600

Nickel, cast . 8-279 forged . 3-666 Osmium and Rhodium, alloy of . 19-50 Palladium . 11-80

Platinum . . 21-47 Potassium at 59°

Fahr… 0-865

Rhodium . 10-65

Selenium . 4-300

Silver . . 10-47

hammered 10-51

Sodium at 59° Fahr. 0-972

Steel, soft . 7-833

tempered 7-816

Steel, hardened 7-840

tempered and

hardened 7-818 Tellurium, from

5-700 to 6-115 Tin, Cornish . 7-291 Do. hardened 7-299 Tungsten . 17-40

Uranium . . 9-000 Zinc from 6-900 to 7-191 from 2-650 to 2-934

1-032

Garnet, precious, from

Lead, glance or galena from

Mineral pitch, or asphal—

4-000 to 4-230

Derbyshire, from 6-565

tum, from 0-905 to 1-650

Do. common, from 3-576 to 3-700

to 7-786

Mineral tallow . . 0-770

Gases, — Atmospheric air 1-000 Aramoniacal . 0-590

Limestone, compact, from 2-386 to 3-000

Myrrh (a resin) . . 1-360 Naphtha from 0-700 to 0-847

Carbonic acid . 1-527

Magnesia, native, hydrate 1 Nitre …. 1-900

Carbonic oxide 0-972

of … 2-330,Obsidianum from 2-348 to 2-370

Carbureted hydro—

Do. carbonate of,

Oils, Essential — Amber 0-868

gen . . 0-972

from 2-220 to 2-61 2

Anise-seed 0-986

Chlorine . . 2.500

Malachite, compact, from

Carraway-seed 0-904

Chlorocarbonous

3-572 to 3-994

Cinnamon 1-043

acid . . 3-472

Marble, Carrara . . 2-716

Cloves . 1-036

Chloroprussic acid 2-152

white, Italian . 2-707

Fennel . 0-929

Cyanogen . . 1-805

black veined . 2-704

Lavender 0-894

Euchlorine . 2-440

Parian . . 2-560

Mint, common 0-898

Fluoboric acid . 2-371

Mastick (a resin) . . 1-074

Turpentine 0-870

Fluosilicic acid 3-632

Melanite, or black garnet,

Wormwood 0-907

Hydriodio. acid 4-340

from 3-691 to 3-800

Expressed — Sweet al—

Hydrogen . . 0‘069

Metals, Antimony . 6-702

monds . . 0-932

Muriatic acid . 1-284

Arsenic . . 5-763

Codfish . 0-923

Nitric oxide . 1-041

Bismuth . . 9-880

Filberts . 0-916

Nitrogen . . 0-972

Brass, from 7‘824 to 8-396

Hempseed 0-926

Nitrous acid . 2-638

Cadmium . . 8‘600

Linseed . 0-940

Nitrous oxide . 1‘527

Chromium . 5-900

Olives . 0-915

Oxygen . . I’lll

Cobalt . . 8-600

Poppyseed 0-939

Phosphureted hy—

Columbium . 5-600

Rapeseed 0-913

drogen . . 0-902

Copper . . 8-900

Walnuts from

Prussic acid . 0-937

Gold, cast . . 19-25

0-923 to 0-947

Sub-carbureted hy—

Do. hammered . 19-35

Whale . 0-923

drogen . . 0‘555

Iridium, hammered 23-00

Dpal, precious . . 2-114

Sub-phosphureted

Iron, cast at Carron 7‘248

Do. common, from 1-958 to 2-114

ditto . . 0-972

Do. bar-hardened,

Opium … 1-336

TABLE OF SPECIFIC GRAVITIES. — Continued.

Orpiment from 3-048 to 3-500

Do. carbonate of,

Cedar, Indian 1-315

Oyster-shell . .2092

from 3-658 to 3-675

American 0-561

Pearl, oriental, from 2-510

Stone, Bristol, from 2-510

Cherry-tree . 0-715

to 2-750

to 2-640

Citron . . O’f-26

Pearlstone . . 2-340

cutlers’ . . 2-111

Cocoa-wood . 1 -040

Pe.it from 0-600 to 1-329

grinding . . 2-142

Crab-tree . 0-765

Peruvian bark … 0‘7b4

hard . . 2-460

Cork . . 0240

Phosphorus . . 1-770

paving, from 2-415

Cypress, Spanish 0-644

Pitchstone from 1-970 to 2-720

to 2-708

Ebony, American 1-331

Plumbago, or graphite,

Portland . . 2-496

Do. Indian 1-209

from 1-987 to 2-400

Rotten . . 1-981

Elder-tree . 0-695

Porcelain from China 2 ‘384

Sugar … 1-606

Elm-tree . .0-671

Sevres 2 145

Sulphur, native . . 2-033

Filbert-tree . 0-600

Porphyry from 2‘452 to 2-972

fused . . 1-990

Fir, male . 0-550

Porphyry, Seltzer . 1-003

Talc . from 2-080 to 3-000

Do. female . 0-498

Proof-spirit . . 0-923

Tallow … 0-941

Hazel . . 0-600

Pumice-stone from 0-752 to 0-914lTopaz from 4*010 to 4‘061

Jasmin, Spanish 0-770

Quartz from 2-624 to 3-750

Tourmaline from 3-086 to 3-362

Juniper-tree . 0-556

Realgar from 3-225 to 3-338

Turquoise, from 2‘500 to 3-000

Lemon-tree . 0-703

Rock-crystal from 2-581 to 2-888

Ultramarine . . 2-360

Lignum vitae 1-333

Ruby, oriental . \ . 4-283

Uranite …2-190

Linden-tree . 0-604

Sal gem … 2-143

Vesuvian from 3-300 to 3‘575

Mastick-tree . 0-849

Sapphire, oriental, from

Vinegar from 1-013 to 1-080

Mahogany . 1-063

4-000 to 4-200

Water, distilled • . 1-000

Maple-tree . 0-750

Sardonyx from 2-602 to 2-628

sea . . 1-028

Medlar . o‘944

Scammony of Smyrna 1‘274

Water, of Dead Sea 1-240

Mulberry, Spanish 0-&97

Aleppo 1‘235

Wax, bees’ . . 0-964

Oak-heart, 60 yrs.

Schorl from 2-922 to 3‘452

white . . 0-968

old . . 1-170

Serpentine from 2-264 to 2-999

shoemakers’ . 0-897

Olive-tree . 0-927

Shale …. 2-600

Whey, cows’ . . 1-019

Orange-tree . 0-705

Silver glance, from 5-300 to 7-208

Wine, Bourdeaux . 0-993

Pear-tree . 0-166

Slate (drawing) ~ . . 2-110

Burgundy . 0-991

Plum-tree . 0-785

Smalt … 2-440

Constance . 1-081

Pomegranate-tree 1-351

Spar, fluor, from 3-094 to 3-791

Malaga . . 1-022

Poplar-tree . 0-383

Do. calcareous, from 2-620

Port … 0-997

Do. White Spanish 0-529

to 2-837

White Champagne 0-997

Quince-tree . 0*705

Do. double refrg. from

Wood, Alder . . 0-800

Sassafras . . 0-482

Castleton . 2-724

Apple-tree . 0-793

Vine . . 1-327

Spermaceti . . 0-943

Ash- . . 0-845

Walnut . . 0-681

Spodumene or triphane,

Bay-tree ‘ :‘V: 0-822

Willow . . 0-585

from 3-000 to 3‘218

Beech . . 0-852

Yew, Dutch . 0-788

Stalactite from 2-323 to 2-546

Box, French . 0-912

Spanish . 0-807

Steam of water . . 0‘481

Dutch . - 1-328

Knot of 16 yrs. old 1-760

Steatite from 2-400 to 2-665

Brasilian, Red 1-031

Woodstone from 2-045 to 2*675

Stilbite from 2-140 to 2-500

Campeachy . 0-913

Zeolite from 2-073 to 2-718

Strontian, sulphate of, from

Cedar, wild . 0-596

Zircon from 4‘385 to 4-700*

3-583 to 3-958

Palest 0-613

* Tt may be proper to add, that Mr. S. L. Kent, to whom we are indebted for much valuable information on this subject, has nearly completed the most extensive and accurate series of observations on the specific gravity of mineral bodies that has ever been attempted.

Having in the preceding portion of our article ex drained the nature of hydrostatic pressure, we may now proceed to treat of fluids in motion, and the structure of hydraulic machines.

One of the most simple instruments for raising water is the syphon ; a bent tube which owes its operation to the pressure of the atmosphere. The ordinary syphon is represented at fig. 1, plate II., HYDROSTATICS and HYDRAULICS; and consists of a crooked tube ABC, of such a length, and with such an angle, or so bent at the vertex, as that, when the orifice A is placed on a horizontal plane, the height of A B may not exceed thirty-two or thirty-three feet. For common uses a foot or half a foot high suffices. If now the less arm A B be immersed in water, or any other liquid, and the air be sucked out of it by the aperture C till the liquor

follow, it will continue to flow out of the vessel, through the tube B C, as long as the aperture A is under the surface of the liquor. Or if the syphon be at first filled with the fluid, and the aperture C stopped with the finger until the aperture A is immersed, the event will be precisely the same. During the process of sucking, the air in the tube is rarefied, and the equilibrium destroyed ; consequently the water must be raised into the less leg A B, by the preponderating pressure of the atmosphere. The syphon being thus filled, the atmosphere presses equally on each extremity, so as to sustain any equal quantity of water in each leg ; but the air not being able to sustain all the water in the longer leg, and being more than able to sustain that in the shorter leg, with ihe excess of force, therefore, it will raise new water into the shorter leg; and this new water cannot make its way

MYBM4DSTATICS & HYBKATDTJLICS

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out by protruding the first before it : by this means the water is continually driven out at the longer leg, as fast as it is raised by the shorter.

The syphon will raise a stream of water to a considerable altitude in every situation where a little descent can be procured, but, while the operation continues, no water can directly be taken out of the stream above the lowest part of the tube. When, however, the two open ends of a syphon are closed, a quantity of water may be let out of the highest part, and its place supplied by introducing a like quantity of no use : all the avenues for the purpose being then closed, and the stream suffered to flow through the tube, the useless water will be displaced, and a fresh quantity may be soon after drawn off. This mode of exchanging fluids may be useful in furnishing a supply for domestic purposes; but there are some cases in which the water drawn off by this arrangement would not be thought sufficiently pure. To effect the same end the following apparatus has been suggested. In the upper part of the syphon E E, fig. 2, plate II., are inserted two small pipes, and their apertures in the inside of the tube should be divided by a projecting piece a quarter of an inch thick ; wherever the pipes are inserted, the piece must be placed in such a position that the current will strike against one of its flat sides. The pipe which opens on that side of the obstacle, or dam, struck by the stream, may be called the water-pipe, and that on the other side the air-pipe. Insert their other ends into a circular vessel, the air-pipe opposite to c must rise to near the top of this vessel, but the water-pipe o need not rise above the place of its insertion; a cock perfectly air-tight must be fixed in each pipe between the vessel and syphon ; the vessel must also have a tube in its lower pait for letting out water. This tube must have a cock fixed in it, or a valve, covered with leather, to close its lower

end. To hasten the delivery of the water in this vessel, the external air may be admitted in such a manner as is most convenient.

The communication between the vessel and syphon being intercepted by turning the cocks in the pipes c o, and the branches closed at their lower ends, the tube may be filled with water through an aperture in the top. After this aperture is closed, and a stream of water let into the cistern o for supplying the syphon, the ends of the branches may be opened, and a continued stream will flow through the tube.

When it is required to fill the vessel c o with water, exclude the external air, and open the pipes between it and the syphon. The vessel will soon be filled, and the water may be let out by opening the tube for that purpose ; aftei which the small pipes are again closed by turning the cocks.

In estimating the discharge by a syphon, the head of water must be reckoned equal to the difference between the levels of the surface of the water, and of the lower orifice. The reason of this will be obvious, when it is recollected that the length of the shorter leg is only measured to the surface of the water, however far it may reach below ; and that, as the action of the

instrument is dependent on the discharging leg being the longer of two, the greater the difference in favor of this leg, the greater will be the force employed in promoting the discharge.

The improved syphon of M. Buten is shown at fig. 3, where A B is the long branch, with a bulb at A, and D C the short branch. This syphon requires neither to be blown into, nor any suction. It is sufficient to fill the long branch A B, and the ball A with the liquid, and to plunge ihe short branch C D into the liquid to be decanted. The bulb A, in emptying itself, draws off the liquid in contact with the short branch, and, though the bulb itself is partly empty, the flow is unremitting.

Another improved syphon by M. Kempel, is shown at fig. 4 It has the same advantages as that of M. Buten, and is more easily constructed on a large scale. A part of the liquid to be decanted is poured into the funnel A, at the top of the tube A B, which is fitted into the shoit branch of the syphon. As soon as the flow commences, through the long branch D C, the tube A B is withdrawn, and the flow of water continues.

The syphon is also occasionally disguised to form a philosophical toy,

called Tantalus's cup, from the well known fable. This cup has a hollow stem, as at y, fig. 5, into which a small glass syphon z is cemented in such a manner that the upper bend of the syohon may be a little below the top of the cup, and the shortest leg a may very nearly touch it. On pouring water into the cup it will rise to its proper level in the tube a, but still the cup will hold water, but, on attempting to fill it, the water will still rise up the tube a until it reaches the bend, which it will flow over and thus fill the whole of the longer leg z b , and the instant this is effected the water will flow continuously from b until the cup is quite emptied. The upper part of the syphon z a may be concealed by placing a hollow image of a man over it, with the chin on a level with the bend of the syphon, when the cup will hold water until filled to the chin of the figure, but the water will begin to flow away as soon as it reaches that point.

The strange appearance of intermitting springs, or springs which run for a time and then stop altogether, and after a time run again, and then stop, is entirely occasioned by the channels in which the water flows being formed like syphons. Thus if A B C fig. 6, plate II., represents a hill or mountain, in which there is a hollow E F G, and a channel bent like a syphon F H B leading out of it. The water collected from the rills d will fill the hollow, and, as soon as it rises to the line O P, of the same height with H, it will rise to H in the channel, and then flow out through B, till the whole runs off to the level of F. It will then cease to flow until the hollow is again filled to the level O P, when it will flow again, and so on. Some springs called variable or reciprocating, do not cease to flow, but only discharge a much smaller quantity of water for a certain time, and then give out a greater quantity. This is owing to the hollow being supplied from another hollow, which is situated higher up, and has a common runner going to join the stream below the bend H; for this

pipe keeps the stream always supplied to a certain degree, and when the lower hollow, which feeds the syphon runner F H, is filled up to O H, both the common runner and the syphon runner feed the stream

together, until the lower hollow is ‘drained.

In some places the most absurd tales are told and believed by ignorant people respecting such springs ; their flowing and ceasing are ascribed to witchcraft; and designing men have sometimes taken advantage of the credulity of others, and gained credit for themselves, by fortelling the return of the spring after it had ceased, or pretending to stop it when it was running. Some notions connected with superstitions of this kind are adverted to in the account given of an intermitting, or rather a variable spring, at Laywell, near Torbay, in Devonshire, by Dr. Atwell, the first person who distinctly explained these appearances by a reference to the nature of the syphon. * It is a long mile,’ says he, ‘ distant from the sea, upon the north side of a ridge of hills lying between it and the sea, and making a turn or angle near this spring. It is situated in the side of those hills, near the bottom, and seems to have its course from the south-west towards the north-east. There is a constantly running stream which discharges itself near one corner into a basin, about eight feet in length, and four feet and a half in breadth, the outlet of which is at the farthest end from the entrance of the stream, about three feet wide and of a sufficient height. This I mention that a better judgment may be made of the perpendicular rise of the water in the basin at the time of the flux or increase of the stream. Upon the outside of the basin are three other springs which always ran, but with streams subject to alike regular increase and decrease with the former : they seem indeed only branches of the former, or rather channels discharging some parts of the constantly running water, which could not empty itself all into the basin; and, therefore, when by means of the season or weather the springs are large and high, upon the flux or increase of this fountain, several other little springs are said to break forth, both at the bottom of the basin and without it, which disappear again upon the ebb or decrease of the fountain. All the constant running streams put together at the time I saw them, were, I believe, more than sufficient to drive an overshot mill, and the stream running into the basin might be one-half of the whole. I had made a journey, purposely to see it, in company with a friend ; when we came to the fountain we were informed by a man working just by the basin, that the spring had flowed and ebbed about twenty times that morning, but had ceased doing so about half an hour before we came. I observed the stream running into the basin for more than an hour by my watch, without perceiving the least variation in >‘t, or the least alteration in the height of the suiface of the water in the basin ; which we could observe with great nicety by means of a broad stone laid in a shelving position in the water. Thus disappointed, we were obliged to go and take some little refreshment

at our inn ; after which, we intended to come back and spend the rest of our time by the fountain,

before we returned home. They told us in the house that many had been disappointed in this manner, and the common people superstitiously imputed it to I know not what influence which the presence of some people had over the fountain ; for which reason they advised, that, in case it did not flow and ebb when we were both present, one of us should absent himself, to try whether it would do so in the presence of the other. Upon our return to it, the man, who was still at work, told us that it had begun to flow and ebb abo.ut half an hour after we went away, and had done so ten or twelve times in less than a minute. We saw the stream coming into the basin, and likewise the others on the outside of the basin began to increase, and to flow with great violence, upon which the surface of the water in the basin rose an inch and a quarter perpendicularly, in nearly the space of two minutes ; immediately after which the stream began to abate again to its ordinary course, and in nearly two minutes time the surface was sunk down to its usual height, where it remained two minutes more ; then it began to flow again as before, and, in the space of twenty-six minutes, flowed and ebbed five times ; so that an increase, decrease, and pause, taken together, were made in about five minutes, or a little more. I could observe by the mark upon the stones, that the surface of the water in the basin had risen, before we came, at least three quarters of an inch perpendicularly higher than we saw it; and I thought that I could perceive some very little abatement each turn, both in the height, and in the time of its sinking ; but the time of the pause, or standing on the surface at its usual height, or equable running of the stream, was lengthened, yet so as to leave some abatement in the time of the rising, sinking, and pause altogether.'

It should seem, that, in the hill from which this stream comes, there are three hollows, or reservoirs, of different sizes, and connected by syphons of different widths. The times of the increase and decrease lengthening, arises from the water sinking in one of the reservoirs, which makes it flow more slowly than when it is full.

Having already briefly adverted to the principle upon which the syphon acts, it will now be necessary for us to show in what manner this instrument may be employed as a prime mover. The apparatus to which we allude was contrived by Mr. C. A. Busby, the son of Dr. Busby, and termed the hydraulic orrery. The original apparatus, as described by Mr. Busby, in the fortieth volume of the Transactions of

the Society of Arts, is exceedingly complicated ; but the following arrangement, as constructed by Mr. Partington, and employed by him in his public lectures, will be found to possess much greater simplicity, and its construction will be easily understood. A, fig. 7, plate II., represents a tin water-tight vessel, placed in a circular trough C. The upper vessel of water is furnished with an upright stem of wire, supporting a ball S, which is intended to represent the sun. The smaller balls, E and m, revolve round the larger sphere in the same time that the earth and moon revolve round the sun, and as such, serve to convey a

tolerably accurate Idea of the movements of ..hose bodies. The syphon B may be considered as the prime mover ; as the lateral apertures at D, by allowing the escape of a small portion of water from the lower extremity of the instrument, destroy the equilibrium within the tube, and give a preponderance of power to the side which is opposed to the jet, and by this simple process an equable rotatory motion is produced : the whole apparatus floating round the central wire that supports the sun.

The mode of constructing pumps must next be examined. The common sucking-pump consists of a pipe, open at both ends, in which is a moveable piston, bucket, or sucker, in which is situated the valve. The piston is leathered round, so as to move freely, but not to admit any air between it and the pump-barrel. When the pump is worked, the piston is raised, and causes a vacuum between itself and the valve below ; the external pressure of the air upon the surface of the water in the well then forces it up through the lower valve to supply the vacuum, when the whole space between the valves is filled with water. At the next stroke of the pump, the piston is forced down, and the water rises through the upper valve ; when the piston, on being again raised, in addition to its former operation, lifts up the water which had before passed through the upper valve, and discharges it from the spout of the pump; and this it continues to do as long as the pump is worked. Thus, every time the piston is raised, the lower valve

rises, and the upper one falls ; and every time it is depressed the upper valve opens, while the lower one shuts.

As it is the pressure of the atmosphere which causes the water to rise and follow the piston or bucket as it is drawn up ; and since a column of water, about thirty-two feet high, is of the same weight as a column of air of equal area, from the earth to the utmost height of the atmosphere, therefore, the perpendicular height of the piston or bucket, from the surface of the water in the well, must always be less than thirty-two feet. For, independently of the inconvenience in most cases of having so long a stroke, if it were ever so much increased, the water would never rise higher than thirty-two feet (nor indeed so high, as it would have the weight of the valve to lift), and there would be an empty space between the surface of the water in the pump-barrel and the sucker, and consequently a considerable loss of time and labor. But, when the water has once passed through the upper valve, it may be lifted by it to any height, if the piston-rod be made long enough, and a sufficient degree of strength employed, without ever lengthening the stroke.

The construction of pumps is usually explained to the student by glass models, in which the action both of the pistons and valves may be seen. In order to understand the arrangement of the common pump, we may refer to fig. 8, plate II. A is a vessel intended to contain water, which must be deep enough to rise at least as high as from B to C. The valve a on the moveable bucket D, and the valve b on the fixed box E (which box quite fills the bore of the pipe or barrel at E), will

each lie close, by its own weight, upon the hole in the bucket and box, until the engine begins to work. The valves are made of brass, and covered underneath with leather for closing the holes more exactly ; and the bucket D is raised and depressed alternately by the handle F and rod G c, the bucket being supposed at H before the working begins.

Take hold of the handle F, and thereby draw up the bucket from H to I, which will make room for the air in the pump to dilate itself, by which its spring is weakened, and then its force is not equivalent to the weight or pressure of the outward air upon the water A : and, therefore, at the first stroke, the outward air will press up the water through the notched foot B, into the lower pipe, about as far as d : this will condense the rarefied air in the pipe between d and I to the same state it was in before ; and then, as its spring within the pipe is equal

to the force or pressure of the outward air, the water will rise no higher by the first stroke ; and the valve b, which was raised a little by the dilatation of the air in the pipe, will fall, and stop the hole in the box E ; and the surface of the water will stand at d. Then depress the piston or bucket from I to H, and, as the air in the part H cannot get back again through the valve b, it will (as the bucket descends), raise the valve a, and so make its way through the upper part of the barrel c, into the open air. But, upon raising the bucket D a second time, the air between it and the wa-ter in the lower pipe at d, will be again left at liberty to fill a larger space ; and so, its spring being again weakened, the pressure of the outward air on the water A, will force more water up into the lower pipe from d to e ; and when the bucket is at its greatest height I, the lower valve b, will fall, and stop the hole in the box E, as before. At the next stroke of the bucket or piston, the water will rise through the box E towards H, and then the valve b, which was raised by it, will fall when the bucket D is at its greatest height. Upon depressing the bucket again, the water cannot be pushed back through the valve b, which keeps close upon the hole whilst the piston descends. And, upon raising the piston again, the outward pressure of the air will force the water up through E, where it will raise the valve, and follow the bucket to I. Upon the next depression of the bucket D it will go down into the water in the barrel H ; and, as the water cannot be driven back through the now close valve b, it will raise the valve a as the bucket descends, and will be lifted up by the bucket when it is next raised. And now, the whole space below the bucket being full, the water above it cannot sink when it is next depressed ; but, upon its depression, the valve a will rise to let the bucket go down ; and when it is quite down the valve a will fall by its weight, and stop the hole in the bucket. When the bucket is next raised, all the water above it will be lifted up and begin to run off by the pipe K, And thus, by raising and depressing the bucket alternately, there is still more water raised by it ; which, getting above the pipe K, into the wide top L, will supply the pipe, and make it run with a continued stream,

The common sucking-pump may, by a small addition, be converted into a lifting-pump, fitted for propelling the water to any distance, and with any velocity. Fig. 9 is a sucking-pump whose working-barrel A B has a lateral pipe, C, connected with it close to the top. This terminates in amain, or rising-pipe, furnished, or not, with a valve. The top of the working-barrel A B is shut by a strong plate, having a hollow neck terminating in a small flanch. The piston-rod passes through this neck, and is accurately turned and polished. A number of rings of leather are put over the rod, and strongly compressed round it by another flanch and several screwed bolts. By this contrivance, the rod is closely grasped by the leathers, but may be easily drawn up and down, while all passage of air and water is effectually prevented. The piston is perforated, and furnished with a valve open ing upwards. There is also a valve T on the top of the suction-pipe ; and it will be of advantage, though not absolutely necessary, to put a valve L at the bottom of the rising-pipe. Now, suppose the piston at the bottom of the working-barrel ; when it is drawn up, it tends to compress the air above it, because the valve in the piston remains shut by its own weight. The air, therefore, is drawn through the valve L into the rising-pipe, and escapes. In the mean time, the air, which occupied the small space between the piston and the valve T, expands into the upper part of the working-barrel ; and its elasticity is so much diminished thereby, that the atmosphere presses the water of the cistern into the suction-pipe, where it rises until an equilibrium is again produced. The next stroke of the piston, downwards, allows the air which had come from the suction-pipe into the barrel during the ascent of the piston, to get through its valve. Upon drawing up the piston, the air is also drawn off through the risi.ig pipe. Repeating this process brings the water at last into the working-barrel, and it is then driven along the rising-pipe by the piston.

This is one of the best forms of a pump. The rarefaction may be very perfect, because the piston can be brought so near to the bottom of the working barrel ; and, for forcing water in opposition to great pressures, it appears preferable to the common forcing-pump ; because in that, the piston-rod is compressed and exposed to bending, which greatly hurts the pump, by wearing the piston and barrel on one side. This soon renders it less tight ; and much water squirts out by the sides of the piston. But in this pump the piston-rod is always drawn, or pulled, which keeps it straight, and rods exert a much greater force in opposition to a pull than to compression. The collar of leather round the piston-rod is found by experience to be very impervious to water ; and, though it needs but little repair, yet the whole is very accessible ; and, in this respect much preferable to the common pump in deep

mines, where every fault of the piston obliges us to draw up some hundred feet of piston-rods. By this addition, too, any com-mon pump, for the service of a house, may be converted into an engine for extinguishing fire ; or may be made to convey the water to every

part of the house ; and this without* hurting or obstructing its common uses. All that is necessary is, to have a large cock on the upper part of the working-ban el, opposite to the lateral pipe in this figure. This cock serves for a spout, when the pump is used for common purposes ; and the merely shutting this cock converts the whole into an engine for extinguishing fire, or for supplying distant places with water. It is scarcely necessary to add, that, for these services, it will be requisite to connect an air-vessel with some convenient part of the rising-pipe, in order that the current of water may be continual.

It is of considerable importance that as equable motion as possible be produced in the main pipe, which diminishes those strains to which it is otherwise liable. The application of an air vessel, at the beginning of the pipe, answers this purpose. In great works it is usual to effect this by the alternate action of two pumps. It will be rendered still more uniform if four pumps be employed, succeeding each other at the interval of one quarter of the time of a complete stroke.

But ingenious men have attempted the same thing with a single pump ; and many different constructions for this purpose have been proposed and executed. Fig. 10 represents one of the best. It consists of a working-barrel a b, closed at both ends ; the piston c is solid, and the piston-rod passes through a collar of leathers at the top of the barrel. This barrel communicates laterally with two pipes nand k, the communications being as near to the top and bottom of the bar-rel as possible. At each of the communications are two valves, opening upwards. The two pipes unite in a larger rising-pipe at b, which bends a little back, to give room for the piston-rod. Suppose the piston down close to the en-try of the lateral pipe h ; when it is diawn up, it compresses the air above it, and drives it through the valve in the pipe k, whence it escapes through the rising-pipe ; at the same time it rarefies the air below it. Therefore the weight of the atmosphere shuts the valve m, and causes the water in the cistern to rise through the valve n, and fill the lower* part of the pump. When the piston is pushed down again this water is fresh driven through the valve m, because n immediately shuts ; and then most of the air which was in this part of the pump at the beginning goes up through it, some of the

water coming back in its stead. In the mean time the air which remained in the upper part of the pump after the ascent of the piston, is rarefied by its descent ; because the valve o shuts as soon as the piston begins to descend, the valve p opens, the air in the suction-pipe ft, expands into the barrel, and the water rises into the pipes by the pressure of the atmosphere. The next rise of the piston must bring more water into the lower part of the barrel, and must drive a little more air through the valve o, namely, part of that which had come out of the suction-pipe h ; and the next descent of the piston must drive more water into the rising-pipe /c, and along with it most, if not all, of the air which remained below the piston, and must rarefy still more the air remaining above the piston; and more water

will come in through the pipe h, and get into the barrel. It is evident, that a few repetitions will at last fill the barrel on both sides of the piston with water. When this is accomplished, there is no difficulty in perceiving how, at every rise of the piston, the water of the cistern will come in by the valve n, and the water in the up-per part of the barrel will be driven through the valve o; and, in every descent of the piston, the water of the cistern will come into the bairel by the valve p, and the water below the piston will be driven through the valve m ; and thus there will be a continual influx into the barrel through the valves n and p, and a continual discharge along the rising-pipe /, through the valves m and o.

This machine is certainly equivalent to two forcing-pnmps, although it has but one barrel and one piston ; but it has no sort of superiority. It is not even more economical, in most cases; because, probably, the expense of the additional workmanship will equal that of the barrel and piston, which is saved. There is, indeed, a sav-ing in the rest of the machinery, because one lever produces both motions. It therefore can-not be called inferior to two pumps ; and there is undoubtedly some ingenuity in the contrivance.

The forcing-pump represented at fig. 1, plate III., consists of a barrel A B, and a piston or forcer C. It is also provided with an air-vessel v.

When the forcer is first moved upwards in the barrel, the air between that and the water below, having room to dilate, by its natural spring, will of course be rarefied ; the pressure of the atmosphere beingintercepted by the force of the barrel A 13 on one hand, and by the upper valve at S in the branching-pipe, on the other, the water will rise from the spring into A B, for the reason already given ; and repeated strokes of the piston will fetch up the fluid to the forcer, and fill the cavity of the pipes between the fixed valves D and S. The water in this manner raised, being hindered from going down again by the lower valve, will be pressed by the forcer every time it descends, and be thereby obliged to make its way where there is least resistance, *viz.* through the upper valve at S. And whenever, on the rising of the forcer, this pressure intermits, the valve at S will immediately close under the weight of the upper water, and prevent its return that way, while the piston is rising with a fresh supply ; and this is repeated at every stroke of the forcer.

It is evident that the operation of a pump is by starts, and that the water in the main remains at rest, pressing on the valve during the time that the piston is withdrawn from the bot-tom of the working-barrel. It is in most cases desirable to have this motion equable, and in some cases it is absolutely necessary. Thus, in the engine for extinguishing fires, the spout of water, going by jerks, could never be directed with a certain aim, and half of the water would be lost by the way ; because a body at rest cannot in an instant be put in rapid motion ; and the first portion of every jerk of water would have nut a small velocity. A very ingenious contrivance has been fallen upon for obviating this in» VOL. XI.

convenience, and procuring a stream uearlr equable. At any convenient part of the rising pipe, beyond the valve S, there is

annexed a. strong and capacious vessel V, closed at top by a small pipe T fixed into it, which reaches nearly to the bottom of the vessel. When the water is forced along the rising-pipe, S, it gets into this vessel, and rises above the lower part of the pipe T. The air, which is above the water in the ves-sel, being now confined, and being condensed into a smaller space by the admission of more water at each action of the piston, presses by its elasticity upon the surface of the water, which cannot return by the valve S, and forces it up the pipe T in a continued stream. This air-vessel must be so large, that the change of bulk of the compressed air, during the inaction of the piston, may be inconsiderable, otherwise the stream will not continue until the next stroke. We must not imagine, that because the stream produced by the assistance of an air-vessel is almost perfectly equable, and because as much water runs out during the returning of the piston as during its active stroke, that it therefore doubles the quantity of water. No more water can run out than what is sent forward by the piston during its effective stroke. The continued stream is produced only by preventing the whole of this water from being discharged during this time, and by providing a propelling force to act during the piston's return. It is, however, a matter of fact, that a pump, furnished with an air-vessel, delivers a little more water than it would do without it.

In forcing-pumps it is of the utmost consequence to avoid all contractions in the pipes. The main, which leads from the forcing-pumps, should be equal to the working barrel. If it be only half the diameter, it has but one-fourth of the area ; the velocity in the main is four times greater than that of the piston ; and the force necessary for discharging the same quantity of water is sixteen times greater. It is not, however, possible to avoid these contractions altogether, without making the main wider than the barrel ; for if only so wide, with an entry of the same size, the valve makes a considerable obstruction. Unskilful engineers endeavour to obviate this, by making an enlargement in that part of the main which contains the valve. If this be not done with great judgment, it will increase the obstruction ; for, if this enlargement be full of water, the water must move in the direction of its axis with a diminished velocity ; and, when it comes to the main, it must again be accelerated. In short, any abrupt enlargement, which is to be afterwards contracted, does as much harm as a contraction, unless it be so short that the water in the axis keeps its velocity until it reach the contraction. All angular enlarge-ments, all boxes into which the pipes, from different working-barrels, unite their water before it goes into a main, must therefore be avoided by an artist who would execute a good machine ; and the different

contractions, which are unavoidable at the seats of valves, and the perfora-tions of pistons, &c., should be diminished, by giving the parts a trumpet shape. In the air-vessel, for producing a constant stream, this is at'

very great consequence. The throat, or the end of the tube through which the water is forced by the expansion of the confined air, should be always formed in this manner. A neglect of this seemingly trifling circumstance will diminish the performance at least one-fifth.

The requisites of a valve are, that it be tight, and of sufficient strength to resist the pressure to which it is exposed ; that it afford a free passage to the water ; and that it do not allow much to go back whilst it is shutting. The clack-valve is of all others the most obvious and common. It consists merely of a leather flap, covering the aperture, and having a piece of metal on the upper side, both to strengthen and to make it heavier, that it may shut of itself. Sometimes the hinge is of metal. The hinge being liable to be worn by such incessant motion, and as it is troublesome, especially in deep mines and under water, to undo the joint of the pump, in order to put in a new valve, it is frequently annexed to a box like a piston, made a little conical on the outside, and dropt into a conical seat made for it in the pipe, where it sticks fast; and, to draw it up again, there is a handle, like that of a basket, fixed to it, which can be laid hold of by a long grappling-iron. The only defect of this valve is, that, by opening very wide, when pushed up by the stream of water, it allows a good deal to go baˆk during its shutting again.

The butterfly-valve is free from most of these inconveniences, and seems to be the most perfect of the clack-valves. It consists of two semicircular flaps revolving round their diameters, which are fixed to a bar placed across the opening thiough the cistern. Some engineers make their great valves of a pyramidal form, consisting of four clacks, whose hinges are in the circumference of the water-way, and which

meet with their points in the middle, and are supported by four ribs, which rise up from the sides, and unite in the middle. This is a most excellent form, affording a more spacious water-way, and .•shutting very readily.

There is another form of a valve, called the button, or tail-valve. It consists of a plate of metal turned conical on the edge, so as exactly to fit the conical cavity of its box. A tail projects from the under side, which passes through a cross bar in the bottom of the box, and has a little knob at the end, to hinder the valve from rising too high. This valve, when nicely made, is unexceptionable. It has great strength, and is therefore proper for all severe strains ; and it may be made perfectly tight by grinding. Accordingly, it is used in all cases where tightness is of indispensable consequence. It is most durable, and the only kind that will do for passages where steam or hot water is to pass through.

Mr. Perkins has contrived an ingenious and valuable ship's pump, which may be constructed by sea-faring people while at sea, from materials that are always found on board ; *viz.* deal boards or planks, leather, nails, canvas, and tar.

This pump is constructed as follows : take four strips of deal boards, of suitable width and length, nail them firmly together, so as to forma square trunk : this trunk is next covered entirely with tarpawling ; then another layer of boards is

laid over the trunk, observing to break the joints. A third layer of boards, nailed firmly to the first and second layer, will complete the body of the pump, if of a common size (say five inches) ; bi f, if the pump is larger, it may be strengthened by adding more layers of boards. The substitute for the upper box of the common pump consists of two isosceles triangular valves, the sides of which are double the length of the base, jointed with leather to two square pieces of wood (hard wood, if convenient). These two pieces of board, to which the valves are jointed, play diagonally in the pump. Between these two pieces of board is fastened, with nails, the pump rod, which is also made of deal board : the leather which forms the joint should be extended over the sides of the valves, so as to form the stuffing, as the valves lie oblique'y in the angles of the pump. The inside of the valves may be loaded with sheet lead, if convenient ; at any rate, they should be filled with as many nails as the valves will hold without weakening them. The upper valves are furnished with a check string, to prevent

the friction of the valves on the sides of the pump ; this check, which may be made of small line, is very important to the ease of working the pump. It should be so adjusted as to prevent the valves from resting on the sides of the pump; the leather only should touch the pump. The lower valves, which are fixed to the bottom of the pump, aie made similar to the upper valves, with the exception of the rod and check. Between the lower valves a piece of hard wood, for hooking up the valves, if no sheet iron or copper is at hand, should be fastened.

This pump works very easily, owing to the water-way by the valves being much greater than the water-way through common boxes. It is not liable to choke, in consequence of the water not being wire-drawn below the boxes or valves ; for the water-way below the valves may be so contracted as to draw up even iron ; but, by enlarging the bottom of the pump, this will be remedied.

Plate III., HYDROSTATICS and HYDRAULICS, fig. 2, is a side section of the pump ; and fig. 4 the upper end of the trunk. A A, body of the pump : C C, pump rods: D D, upper valves : E E, lower valves.

We may now notice the ingenious pump contrived by Mr. Aust, for which he was rewarded by the Society of Arts. The advantages which it possesses over pumps of the ordinary construction depend on the curvilinear form of the bar-rel, which allows, and indeed obliges, the rod, the handle, and the lever, on which it works, to be all in one piece. Hence results, not only a much greater simplicity in the workmanship, and consequent cheapness, but a greater steadiness and precision of action, whereby more water is discharged, and the leathering of the valve will last a much longer time without want ing repair.

Plate III., fig. 3, is a view of the pump, act, the barrel, forming a curve of a quartet of a circle, fixed at the upper end to the head /, and at its lower to the pipe b: b b, the pipe that conducts the water into the barrel ; it is made curvilinear, in order that as little ob-

stacle as possible may be opposed to the ascending water: c, c,c, the piston, the handle, and the ever, on which it works, all in one piece ; the piston part is curved, to correspond with the curvature of the barrel : d, the pivot on which the lever of the handle works: e, a flat plate to which the whole apparatus is fastened, and which may itself be screwed to a block of wood fixed against the wall.

Mr. Eve's patent pump is probably one of the most ingenious and valuable inventions of its kind that has appeared of late years ; there are no valves to open and close, the moving parts being rotatory ; their speed may therefore be increased at pleasure, and to an almost unlimited degree. The water pumped up is in proportion to the speed of the revolving parts, and to the force applied. Figs. 5, 6, will, however, best illustrate its construction. A shows a front view ; and B an interior view ; after the end of the case with the cog-wheels is removed.

The principle is this : two cylinders of equal diameter (three inches and a half) and equal length (six inches), move in close contact on axes or pivots, and revolve in opposite directions, in an outer case or box. These cylinders have each two wings, of three-fourths of an inch area, and two grooves ; and, as they revolve, the wing of one cylinder falls regularly into the groove of the other, alternately, and so in rotation ; and in order that the groove may present itself regularly to the wings of the opposite cylinder, and let them pass, cog-wheels, placed outside the case, are fixed to the axes or pivots, which project : these cog-wheels insure not only an even revolution of the two moving parts, but they communicate the power, which is applied by means of a handle, to the axis of a large toothed wheel gearing into one of the two cog-wheels.

The pump-case is placed upon a common pipe, descending down to the well twenty-one feet below. Two men, turning the handle, raise half a ton of water in three minutes with this small pump ; which is allowed to be a most satisfactory result, considering that, as the first pump constructed on this principle, it has of course many imperfections.

By substituting an air-vessel, with a hose and pipe, the machine becomes the most simple, strong, and effectual fire-engine. It may be converted into a water-wheel, where a small stream with a high fall of water exists, or be acted upon by steam as a rotatory steam-engine.

The advantages which it possesses over com-mon pumps are manifold and self-evident. The most conspicuous are, a saving of power, on

account of the friction being much less than in ordinary pumps. It requires no leathering, being made entirely of metal ; it does not wear, as no parts touch or rub, except the axes or pivots on their bearings. Its simplicity, strength, and elegance, and the ease with which it is turned into a fire-engine, the saving of room, and weight in pump work, if applied to deep wells or shafts in mines, the advantages as a ship's pump, are peculiar, and too numerous here to enumerate.

Mr. William Brunton, of Butterly iron works in Derbyshire, has presented to the Society of A.rts an improved pump for mining, which ob-

viates many difficulties connected with the ordinary arrangements. To prevent the pump drawing air, he has introduced aside pipe, connecting the parts of the working barrel which are above and below the bucket, which pipe has a stop valve, that the miners can regulate with the greatest ease, so as to keep the engine to its full stroke, without drawing air, by letting down the water from the upper part of the barrel into the lower, so that it is working again in its own water. Instead of having the whole weight of the lower lift of pumps standing on the bottom, it is fixed in the pit by cross beams, and the miner has only to fit and move an additional pipe or wind-bore, which slides upon the lower length of the pump like a telescope, to lengthen down, and this additional wind-bore is besides crooked, and turned aside like a short crank, which, by the facility with which it turns round in the leathered collar above the nose of it, can easily be removed into every fresh hole which is made in the bottom by the miners. The pumps are supported in the pit by beams placed across at proper distances, so as to suit the lengths of the pipes, or lengths of the pump, which are nine feet. Short pieces are laid across these, with half circular holes m them : which being put round the pump, first beneath the flanches, firmly sustain its weight, but may quickly be removed when it is required to lower the pumps in the pit ; and, as they are not fastened by any bolt, they do not prevent the pumps being drawn upwards, if it becomes necessary to take out the pumps when the pit is full of water. The pumps by these means remain stationaiy, and the suction-pipe lengthens as the pit is sunk, until it is drawn out to its full ex-tent ; the whole column is then lowered to the next flanches, and another pipe is added to the top. The pumps being thus kept stationary till nine feet are sunk, the pipe at the top will of course deliver the water at the same level at all times, and, instead of being obliged to lengthen the column every yard sunk, it will only be necessary every nine feet. Plate III., fig. 7, explains the construction of Mr. Brunton's pump,

being a section through the centre of the working barrel and suction-piece. A is the door which unscrews to get at the clack of the pump ; B is the working barrel, with the bucket D working in it ; E is the clack, also shown enlarged in figs. 8 and 9 ; F is the suction-pipe, and G G a moveable lengthening piece : this slides over, and includes the other when the pump is first fixed ; but, as the pit is sunk, it slides down over the pipe F, to reach the bottom. The outside of the inner pipe F is turned truly cylindrical and smooth, and the inside of the outer pipe G, at the upper end, for about six inches down, is made to fit it. The junction is made perfect, by leathers being placed in the bottom of the cup a a, which holds water and wet clay over them, to keep them wet and pliable, and consequently air-tight. The lower extremity of the suction-pipe G, terminates in a nose R, pierced with a num-ber of small holes, that it may not take up dirt This nose is not placed in a line with the pipe, but curved to one side of it, like a crank, so as to describe a circle when turned round. By this means the miners, by turning it round upon th«

pipe F, can always place the nose R in the deepest part of the pit; and, when they dig or blast a deeper part, they turn the nose about into it, the sliding tube lengthening down to reach the bot-tom of the hole, as shown in the figure. By this means there is never a necessity to set a shot for blasting so near the pump-foot as to put it in any danger of being injured by the explosion, as is the case in the common pump, in which this danger can only-be avoided by moving the pump-foot to one side of the pit, which necessar.ly throws the whole column of pumps out of the perpendicular.

The construction of the clack is explained by the preceding figs., the former being a section, and the latter a plan. LL is a cast-iron ring, fitting into a conical seat in the bottom of the chamber of the pump, as shown in fig. 10 ; it has two stems /, I, rising from it, to support a second iron ring M M ; just beneath this, a bar m extends across from one stem to another, and has two screws tapped through it ; these

press down a second cross-bar n, which holds the leather of the valves down upon the cross-bar of the ring L, and this makes it fast, forming the hinge on which the double valves open, without the necessity of making any holes through the leather, as is com-mon ; but the chief advantage is, that by this means the clack can be repaired, and a new leather put in, with far less loss of time than at present, an object of the greatest importance ; for in many situations the water gathers so fast in the pit, that if the clack fails, and cannot be quickly repaired, the water rises above the clack door, so as to prevent any access to it, and there is no remedy in the common pump but drawing up the whole pile of pumps, which is a most tedious and expensive operation. In Mr. Brunton's pump, the clack can at any time be drawn out of it, by first drawing out the bucket, and letting down an iron prong Z, which has hooks on the outside of its two points : this, when dropped down, will fall into the ring M, and its prongs springing out will catch the under side, and hold it fast enough to draw it up. Another part of Mr. Brunton's improvement consists in the addition of a pipe H, which is cast at the same lime with the barrel, and communicates with it at the top and bottom, just above the clack : at the upper end the pipe is covered by a flat sliding plate, which can be moved by a small rod b, passing through a collar of leather; the red has a communication by a lever, so that the valve can be opened or shut by the men in the bottom of the pit. The object of this side pipe is to let down such a proportion of the water which the pump draws, as will prevent its drawing air ; though, of course, the motion of the engine will be so adapted as not to require a great proportion of the water to be thus returned through the side pipe, yet it will not be possible to work the engine so correctly as not to draw some without this contrivance, and, if it does, it draws up much dirt and pieces of stone into the pump, besides causing the engine to work very irregularly, in consequence of partially losing its load every time the air enters the pump. Another use of the side pipe is to let down water into the chamoer of the clack to fill it, when the engine is first

set to work, after the pumps have been standing still, and the lower part of the barrel and chamber empty.

When a spiral pipe, consisting of many con-volutions, arranged either in a single plane, or in a cylindrical or conical surface, and revolving round a horizontal axis, is connected at one end by a water-tight joint with an ascending pipe, while the other end receives, during each revolution, nearly equal quantities of air and water, the machine is called a spiral pump. It was invented about 1746, by Andrew Wirtz, a

pewterer at Zurich. The end of this pipe is furnished with a spoon, containing as much water as will fill half a coil, which enters the pipe a little before the spoon has arrived at its highest situation; the other half remaining full of air, which communicates the pressure of the column of water to the preceding portion, and in this man-ner the effect of nearly all the water in the wheel is united, and becomes equivalent to that of the column of water, or of water mixed with air, in the ascending pipe. The air nearest the joint is compressed into a space much smaller than that which it occupied at its entrance ; so that, where the height is considerable, it becomes advisable to admit a larger portion of air than would naturally fill half the coil, and this lessens the quantity of water raised, but it lessens also the force required to turn the machine. The joint ought to be conical, in order that it may be tightened when it becomes loose, and the pressure ought to be removed from it as much as possible. The loss of power, supposing the machine well constructed, arises only from the friction of the water in the pipe, and the friction of the wheel on its axis ; and, where a large quantity of water is to be raised to a moderate height, both of these resistances may be Tenderer) inconsiderable. But, when the height is very great, the length of the spiral must be much increased, so that the weight of the pipe becomes extremely cumbersome, and causes a great friction on the axis, as well as a strain on the machinery : thus, for a height of forty feet, Dr. Young found that the wheel required above 100 feet cf a pipe which was three-quarters of an inch in diameter ; and, more than one-half of the pipe being always full of water, we have to overcome the friction of about eighty feet of such a pipe, which will require twenty-four times as much excess of pressure to produce a given velocity, as if there were no friction. The centrifugal force of the water in the wheel would, also, materially impede its ascent if the velocity were considerable, since it would be always possible to turn it so rapidly as to throw the whole watejr back into the spoon. The machine which Dr Young had erected being out of repair, he thought it more eligible to substitute for it a common forcing-pump, than to attempt to make any further improvement in it, under circumstances so unfavorable. But if the wheel, with its pipes, were entirely made of wood, it might in many cases succeed better ; or the pipes may be made of tinned copper, or even of earthen ware, which might be cheaper and lighter than lead.

The chain-pump consists of two square or cy-

lindrical barrels, through which a chain passes, having a great number of flat pistons, or valves, fixed upon it at proper distances. The chain passes round a wheel, fixed at one end of the machine. The teeth of this are so contrived as to receive one-half of the flat pistons, which go free of the sides of the barrel by nearly a quarter of an inch, and let them fold in, and they take hold of the links as they rise. A whole row of the pistons, which go free of the sides of the barrel by nearly a quarter of an inch, are always lifting when the pump is at work, and, as this machine is generally worked with rapidity, they bring up a full bore of water in the pump. It is worked either by one or two handles, according to the labor required.

The many fatal accidents which happen to ships, from the choking of their pumps, makes it an important object in naval affairs to find some machine for freeing ships from water, not liable to so dangerous a defect. The chain-pump, being found least exceptionable in this respect, was adopted in the British navy ; but the chain-pump itself is not free from imperfections. If the valves are not well fitted to the cylinders, through which they move, much water will fall back ; if they are well fitted the friction of many valves must be considerable, besides the friction of the chain round the sprocket-wheels, and that of the wheels themselves. To which may be added the great wear of leathers, and the disadvantage which attends the surging and breaking of the chain. The preference, therefore, which has been given to chain-pumps over those which work by the pressure of the atmosphere, must have arisen from one circumstance, that they have been found less liable to choke.

In point of friction, of coolness, and of cheapness, the sucking pump has so evidently the advantage over the chain-pump, that it will not fail to gain the preference, whenever it shall be no longe* liable to be choked with gravel and with chips.

Buchanan's pump, which, like the common pump, acts by the pressure of the atmosphere, is not liable to the defects incident to other pumps upon that principle, being essentially different from any in general use.

The principal object of its invention was to remove the imperfection of choking, and, in attaining this important end, a variety of collateral advantages nave also been produced, which enhance its utility.

The points in which it differs essentially from the common pump, and by which it excels, are, that it discharges the water below the piston, and has its valves lying near each other.

The advantages of this arrangement are — that the sand or other matter, wh.ch may be in the water, is discharged without injuring the barrel or the piston-leathers ; so that, besides avoiding unnecessary wear and tear, the power of the pump is pieserved, and not apt to be diminished or destroyed in moments of danger, as is often the case with the common and chain-pumps — that the valves are not confined to any particular dimensions, but may be made capable af discharging every thing that can rise in the suction-piece, without danger of being choked— that, if

there should happen upon any occasion to be an obstruction in the valves, they are both within the reach of a person's hand, and may be cleared at once, without the disjunction of any part of the pump — and that the pump is rendered capable of being instantaneously converted into an engine for extinguishing fire. Besides, it occupies very little space in the hold, and thus saves room for stowage.

But this pump is not confined to nautical uses alone ; its adaptation extends to the raising of water in all situations, and with peculiar advantage where it happens to be mixed with sand or substances which destroy other pumps, as, for instance, in alum-works, in mines, in quarries, in the clearing of foundations ; and in its double capacity it will be very convenient in gardens, bleaching-grounds, in stable, and farm yards, and in all manufactories, or other places, where there is a necessity for raising water and the risk of fire.

With all these advantages, it is a simple and durable pump, and may be made either o”f metal or wood, at a moderate expense.

Fig. 1, plate IV. HYDROSTATICS and HYDRAULICS, is a vertical section of the pump, as made of metal, in which A is the suction-piece, B the inner valve, C the outer valve.

The valves are of the kind called clack-valves. Their hinges are generally made of metal, as being more durable than leather.

D the working-barrel, E the piston, G the spout.

The following parts are necessary only when the pump is intended to act as a fire-engine.

H an air-vessel, which is screwed like a hose-pipe, that it may, at pleasure, the more readily be fixed or unfixed.

There is a perforated stopple for the spout, made for receiving such pipes as are common to fire-engines. It is oval and tapered, and, being introduced transversely, upon being pulled back, becomes immediately tight.

These parts being provided, all that is necessary to make the pump act as a fire-engine, after having been used as a sucking-pump, is to plug up the spout with the stopple.

No particular mode being essential in the working of this pump, it may, according to choice, or circumstances, be wrought by all the methods practised with the common pump. In many cases, however, it may be advantageous to have two of them so connected as to have an alternate motion, in which case one air-vessel, and even one suction-piece, might serve both.

The usual method of working pumps, either in distilleries, &c., or on board ships, is to force the water to the top of the barrel, and allow it to run off to a lower level.

It is quite clear that, if the water in this care descends from the top of the pump to a place of delivery much below the top of the pump-barrel, the fall of the water through this height is a mechanical force which is entirely wasted, and which may be actually employed in raising the water through a part of the pump-barrel. Mr. Witty avails himself of this power in a very ingenious manner. ‘ Instead of letting the water or liquid escape from a common pump, ai the

usual place of delivery, I caused it to descend again in a syphon-pipe to the lowest level at which it can conveniently be delivered ; and as ihis descent is considerable in ships, brewhouses, &c., a considerable saving of labor is effected in working pumps by a descending column of water or liquor, counterbalancing as much in length of the rising column in the pump, as the height which it descends in the syphon-pipe, to the place where it can be delivered.' We have no doubt that this invention will be found to be of great practical value, as it relieves the men at the pump of a very great part of their labor. In cases of danger, at sea, it may prove the means of saving both the ship and the crew.

If we consider the water, which in ordinary pumps falls from the top of the barrel to the placeof its reception, as a mechanical force which is lost, we may avail ourselves of it, by various contrivances, for assisting in the work to be performed. In Mr. Witty's contrivance, the men at the pump raise the water to the bottom of the short leg of the syphon, and it is then drawn through the syphon by the action of the longer branch. There are many cases, however, when we may allow the men to raise the water to the top of the barrel, and employ the direct force of the descending fluid to work another pump', or perform any other piece of work that may be required.

Mr. Robert Clarke, of Sunderland, has proposed an improvement in the mode of applying men's force to pumping, which is worthy the consideration of seamen. It is to change the posture of standing to sitting, and making the action the same as that of rowing, which, besides that it is by philosophers considered as the most efficacious application of a man's force, is to sea-men most particularly so from their habitual practice of it. He objects to the ordinary action of pumping with a brake, as the posture is weak, and requires much force to preserve it. It oppresses the man by over-stretching his loins on one side, and incommodes respiration by the flexure of the body on the other side. Too much motion of the shoulder-joint is required, as the muscles which act on the arm-bone at this joint, are

disproportionate to the effort they must make, when the arm vibrates on the shoulder-joints as a centre, for the force to be communicated by the hand. Besides this, the arms themselves are at one instant enfeebled, by being thrown above the head and requiring a pull, and the next instant requiring a pushing effort ; which changes of direction, in the exertion and sustaining force, are too continual and rapid for long continuance ; in standing, too, the body is a continued dead weight upon the legs.

The action of rowing is powerful to a surprising degree, and so well adapted to a man's ease, that he can continue it a greater length of time without fatigue, than any other mode of exertion ; for, though the motion is large, it is made up of easy motions in several joints; the velocity and resistance of which, suit the muscles employed. Very little sustaining force is required ; for the body is supported, and returns unloaded to its charge : the breathing also is free. The manner of carrying this into effect is very simple : the

lever or brake being bent at right angles at a centre pin, so that it hangs straight down when it is at rest, instead of being horizontal ; then to the lower extremity a rod is jointed, which is carried rather in an inclined direction upwards to the seaman, who is seated before the pump with a rest for his feet. The rod has a cross handle, to hold by both hands, and in some cases it may be made long enough for two men to sit side by side upon the same seat; and by drawing and pushing it, in the same manner as rowing, the perpendicular lever is caused to vibrate, and the horizontal arm, or bended part which suspends the pump spear, partakes of the motion sufficiently for pumping.

The latest improvements in ship-pumps are by captain Jekyl. This gentleman has invented an addition to the pump of an air vessel, and a stuffing-box for the rod to pass through, by which it will raise the water to a greater height than the head of the pump, and a hose being attached to the pump spout, by very simple means, the water is conveyed to any desired part of the ship, and thrown in a jet through a nose-pipe with great force, to extinguish fire, if such a calamity should befal a ship, and thus the pump is rendered of two-fold service. The idea of converting the pump to a fire-engine is not new, having been attempted in many different ways by forcing-pumps; but these having pipes proceeding from the lower part of the barrels and valves, which are not very accessible, are always liable to choke up by obstructions, and have not succeeded in general use. The air-vessel

has always been in the way. if made of a sufficient size to answer the purpose of equalizing the stream. Captain Jekyl has obviated these objections, and, without altering the material parts of the hand-pump, has rendered it as complete a fire-engine as can be wished. This is explained by fig. 2, plate IV., which is a section of the pump through its whole length. A B C is the iron brake er lever to work it. It is branched at the same extreme end, and has a wooden pole, C, fixed in it, for several men to hold at once : D is the iron stanchion or fulcrum of the brake ; it is fixed to the pump-head by means of strong iron hoops at E E and F F, which at the same time strengthen the work of the pump, The centre-pin is to be at a height of two feet six inches above the ship's deck. H are the slings of the pump, united by a firlock or pin to the end of the brake, and suspending the pump-spear I, by means of the joint-piece g. I K is the pump-spear, made of copper in the upper part I, a:,d the lower length K of iron : the latter has the bucket M attached to it. The valve of the bucket is made in a very simple and effective manner ; the valve being merely a round plate of brass, with a hole through the centre to receive the rod, upon which it rises and falls, and covers the aperture in the bucket. The bucket is a ring of brass, with a cross bar to fix the rod in : it is made in two thicknesses, one above the other, and a cup of leather is held in between them, projecting all round the upper part of the bucket, and turning up, to make a tight fitting in the barrel. The two rings of the bucket are held together by the piston-rod passing through both, and a cross-wedge beneath

L is the brass chamber in which the bucket works : it is well fitted into the wood of the pump-tree, so that the water cannot leak by it, and is bored smooth withinside. N is the lower box, fitted into the lower part of the pump-tree, beneath the chamber : it has a groove round it into which oakum is placed, and when it is put down makes a tight joint : its valve is of the same construction as th£t of the bucket, with the addition of a ring or eye on the top of the pin, on which the valve rises and falls. By this eye the box can be drawn up when it needs repair, -by first drawing up the bucket of the pump, and putting an

iron hook down into this eye. OOP is the air-vessel : this is a cylinder of sheet cop-per, soldered to a cover of brass ; within the centre of it is a tube, likewise soldered to the cover, through which the copper pump-spear passes, and is fitted round at top with a collar of leather and stuffing. To prevent the escape of the water, it is packed with hemp and two rings of leather. R shows the place of two iron bars, fitted through the head of the pump, and confining the cover, O O, of the air-vessel ; they are fastened by the wedges d : it is by these only that the air-vessel is held down : a circle of leather is first put round the air-vessel, just beneath its lid, and this, being pressed upon the recess in the wood, makes the joint tight. I is the pump nozzle, which delivers the water. When it is used as a fire-engine, a hose is fixed on by its link-joints, and keys or wedges : the nozzle is fixed to the pump by four screw-bolts going through the thickness of the pump, and is fixed in such a direction as will most conveniently lead to a receiver which unites the hoses from all three of the ship's pumps.

Fig. 3 is the link-joint 'of the hose, T representing the pump-spout, made of cast iron, and screwed to the pump-tree ; e e is the collar or socket, made of brass, with the hose X bound upon it. This has two trunnions, on which a link, /", is fitted, one on each side; these links pass through grooves in the cast-iron piece T, and a key g, put down through the link behind it, draws the joint tight, without any screwing or farther trouble. The socket ee is fitted into the nozzle, and has a leather ring to make it tight. The outside of the pump is to be hooped at every three feet, to prevent it from bursting by the pressure of the water. The disposition of the three hand-pumps in a ship's well renders their connexion with a common receiver very convenient to bring all the water into one stream, which will then be very powerful, and more capable of extinguishing a fire than any moveable engine. Two hand-pumps are always placed on the starboard side of the main-mast, in the well, and one of them being the cistern pump, used for washing decks, its foot stands upon a small cistern fixed upon the step of the main-mast, and supplied with water by a pipe through the ship's side, with a cock to admit it at pleasure ; there is one pump on the larboard side of the mast, three separate hoses being united with each of the pumps by a link-joint at one end, and, with three necks attached by similar joints at the other, bringing all the water into one; and a hose being joined by a link-joint, I, to the opposite end of

the receiver, conveys the whole water to any part of the ship. The receiver has the three nozzles k k k at one end made in a divergent direction, agreeably to the directions in which the hoses come from

the three different pumps, and a valve is placed withinside, before each hose, to open inwards, in order that the receiver may be used for one or two pumps, whilst the others are repairing or getting ready, or that, if any of the hoses burst, the water may not escape from the receiver at that nozzle. There are two handles fixed to the receiver, to lift and carry it, as it is to be moveable, and when in use is proposed to be laid on the grating of the main hatchway, as the most central situation, from which the hose may be carried in any direction. Z is a branch pipe, or jet, screwed at the end of the great hose X; and it also unscrews i\ the extreme end, to fit on jets of different bores, in the same manner as all other fire-engines. In working, the pressure of the water condenses the air contained in the receiver, OOP, into a small space, and its reaction to resume its former bulk equalizes the efflux of water from the nozzle of the pump.

In some experiments it performed as well as could be desired, a single pump forming a very effective engine ; but, when the three were combined, it was superior in force to any ever seen, and would throw a stream of an inch in diameter over the main topmast head of a seventy-four gun ship. Besides, the length of the handle C admitting several men to work at once, an accession of force is gained by a rope «, made fast to the brake AB, and conducted through a single block, hooked to the deck at m, and thence along the ship's deck. At this any number of men may be applied very advantageously to produce the stroke, leaving those at the handle only to re-turn it by lifting the handle. If the ship proves leaky, and the stuffing-box is thought to be an obstruction to the working of the pump, the air-vessel, may be taken out, by drawing the wedges d, and taking out the bars R, which confine it; then after taking out the key which connects the joint-piece g with the copper rod, also removing the brake, lift out the air-vessel by the two screws of the stuffing-box, and fix on the joint-piece again ; but fix the guide-eye H in the lowest pair of holes, so that it will receive the top of the copper rod, and prevent the pump-spear having any play in the slings. In this state it acts as a common hand-pump, but the air-vessel can be restored to its place and be ready for work in two minutes. To prevent any of the work being neglected from carelessness, the inventer proposes that one of the pumps shall be always used to wash the ship by the hose and jet in the morning, which it would do much more effectively than by the present mode of raising the water into buckets; and the force with which the jet of water is thrown would very completely wash into every recess of the gun-carriages, and other places where a brush cannot reach ; while, by this constant exercise, the pumps would always be ready, at a moment's notice, on an alarm of fire.

The following simple and ingenious method of working a ship's pump, when the crew are either too few in number, or too much exhausted

to attend to that duty, when the performance is most necessary, namely, in a heavy gale, was put in practice with great success by captain Leslie, of the ship George and Susan, on a late voyage from Stockholm to North America. He fixed a spar aloft, one end of which was ten or twelve feet above the top of his pumps, and the other projected over the stern ; to each end he affixed a block, or pulley ; he then fastened a rope to the spears of the pump, and, after passing it through both pulleys along the spar, dropped it into the sea astern. To the rope he fastened a cask, 110 gallons measurement, and containing sixty or seventy gallons of water. This cask answered as a balance-weight, and every motion of the ship from the roll of the sea made the machinery work. When the stern descended, or when a sea or any agitation of water raised the cask, the pump-spears descended ; and the contrary motion of the ship raised the spears, when the water flowed out. The ship was cleared out in a few hours, and the crew were of course greatly relieved.

In the Persian wheel, water may be raised by means of a stream d, plate IV. fig. 4, turning a series of floats, and furnished with buckets a b, suspended by strong pins fixed in the side of the rim ; but the wheel must be made as high as the water is intended to be raised above the level of that part of the stream in which the wheel is placed. As the wheel turns, the buckets on the one side descend into the water, and then go up full on the other ; when they arrive at C they strike against the end of the fixed trough and are overset, and empty the water into the trough ; from which it may be conveyed in pipes to the place where it is designed for ; and, as each bucket gets over the trough, it falls into a perpendicular position again, and goes down empty, until it comes to the water at d, where it is filled as before. On each bucket is a spring, which, going over the top or crown of the bar, raises the bottom of the bucket above the level of its mouth, and so causes it to empty all its water into the trough.

Sometimes this -wheel is made to raise water no higher than its axis; and then, instead of buckets hung upon it, its spokes are made of a bent form, and hollow within ; these hollows opening into holes on the outside of the wheel, and also into those in the box upon the axis. So that, as the holes dip into the water, it runs into them ; and, as the wheel turns, the water rites in the hollow spokes, and runs out in a stream from a series of holes, thus falling into the trough, whence it is conveyed by pipes to its destination.

Nearly allied to the Persian wheel, but much more elegant in its contrivance, is the screw of Archimedes, a machine invented and used by this philosopher, for raising water and draining land in Egypt, about 200 yea -s before the Christian era. The cochlion consists of a succession of buckets or recesses to be filled with the water to be raised ; but instead of their being separate and detached, as in the Persian wheel, they are formed by the lower parts of the hollow thread of a screw, and their motion and succes-lion are brought about bv turning that screw.

This will be better understood by referring to fig. 5, which is a representation of this machine, and in which vuw x shows a flexible tube or pipe, wound in a screw-like form round a solid cylinder y y, the two extreme ends of which are equipped with pivots, so that the cylinder, with its encircling screw-formed tube, may be made to revolve on its axis by the force of running water, or any other power applied to its upper or lower end. Lastly, this machine must be supported by its two pivots, so as to make an angle with the horizon, as shown in the figure. If now the lower end v of the tube be supposed to be covered with water, that water wiii flow to its own level within the tube, and wiii occupy the lowest bend v; and if now the cylinder, ˆy, be turned round by its handle, in a direction from left to right, the lower end of the spiral tube will become elevated above the surface of the water in the reservoir, and that water which had entered into the tube will have no opportunity of escaping, but, by the motion of the screw-tube, will flow within it, until, at the end of the first revolution, it will be found in the second lower bend u. In the mean time the lowest extreme end of the tube will have made a second dip into the water of the reservoir, and will receive a second charge, which, in like manner, will be transferred to u, at the next revolution, while the water lately at u will be elevated to w ; until at length, when the cylinder has made as many revolutions as there are turns of the tube round it, each lower bend will become filled with water, whatever may be the length of the cylinder yy ; and as the extreme upper end a

of the tube becomes depressed, in each revolution, into the situation of a lower bend, it will there discharge its water into an elevated cistern b, placed to receive it. The quantity of water raised by this machine will depend upon the capacity of the screw-pipe, and the angle above the horizon at which it is placed to work; but it will be seen by the figure, that there is room to dispose several pipes, parallel to each other, round the same cylinder, when they will all work simultaneously ; or the whole cylinder itself maybe made into a hollow screw, by merely placing a thin screw-formed diaphragm or partition round its central axis, which is the most usual form of the machine in practice. On a small scale, it may be constructed by wrapping one or more flexible lead pipes round a solid cylinder of wood, which forms a useful machine for raising water to small heights. It was formerly much used, but owing to its liability t become choked by mud, weeds, and other impediments, and the great difficulty of cleaning it out, it is seldom met with. It has, from its specious appearance of seeming to throw the entire weight of water that it is raising upon its axles, and the little friction with which these may be made to move by friction-rollers, had astonishing powers ascribed to it; but, if investigated, it will be found that the water is merely made to flow up an inclined plane ; and whether water or any other weight be drawn up a fixed inclined plane, or it be stationary until moved by an inclined plane being forced under it, as is the case with the

quantities of water contained in the several bends v, u, w, x, &c., the mechanical effort will be the same ; consequently, this machine possesses no other mechanical advantage over other constructions of pumps, except that its motions are attended by less friction than belongs to most of them.

The rope-pump of Vera, described in most books on hydraulics, consists of an upper and lower pulley, formed in the ordinary manner, but with several grooves in each, in which endless ropes of very loosely spun horsehair or wool are made to move with great rapidity by a multiplying wheel connected with the upper ˆulley. The lower pulley, together with a great part of the rope, moves in the water, which is merely brought up by adhering to the ropes, and the rapidity of their motion. This, therefore, is but a very imperfect and rude kind

of bucket-pump, and is by no means deserving the place it has so long held in the catalogue of hydraulic Jtiachines.

Sarjeant's pump may be considered as a cheap and useful prime mover. It was originally applied to the raising of water at Irton Hall ; and a small stream in the neighbourhood was brought by a wooden trough, into which was inserted a piece of two-inch leaden pipe, a part of which is seen at A, plate 4, fig. 6.

The stream of the pipe is so directed as to run into the bucket B, when the bucket is elevated ; but so soon as it begins to descend, the stream flows over it, and goes to supply the wooden trough, or well, in which the foot of the forcing-pump C stands, of three inches bore.

D is an iron cylinder, attached to the pump-rod, which passes through it. It is filled with lead, and weighs about 240 Ibs. This is the power which works the pump, and forces the water through 420 feet of inch pipe, from the pump up to the house.

At E is fixed a cord, which, when the bucket comes to within four or five inches of its lowest projection, becomes stretched, and opens a valve in the bottom of it, through which the water empties itself.

There is another machine for the purpose of procuring motion and power by water, which was invented by Dr. Barker towards the close of the last century, and which is generally known by the name of Barker's Centrifugal Mill. Its general construction is shown at fig. 7, plate IV., in which v u is a metal pipe of considerable height, its top v being widened or extended into a funnel shape. The pipe is maintained in its vertical position, as shown in the figure, by resting on a pointed steel pivot turning into a brass box w at the lower extremity, while the upper part has a cylindrical steel axis passing through the top y y of a frame which supports it : the pipe v u is consequently free to move round upon its own axis, which it does with very little friction. Towards the lower extremity of the pipe v u, and at right angles to its axis, two or more smaller pipes or arms with closed external ends are inserted as at z a, and an adjustable orifice is made at the side of each of these small pipes as near as possible to its end, and placed on opposite sides of such pipes,

so that water issuing from them may spout horizontally and in opposite directions, as shown at the letters z and a. One end of a pipe B communicates with a supply of water which it delivers into the

funnel head v without touching it in any part, and the supply of this pipe must be so regulated by a cock or otherwise, that it may constantly keep the pipe u u filled with water without running over, at the same time that the discharge is going on from the orifices z a, which will deliver their water with a force proportionate to the perpendicular height of the column of water contained in u v ; and, since the holes z a are in opposite directions, the water in passing from them will meet with such a resistance from the surrounding air as to throw the pipe u v, with its arms and axis a; into rapid roratory motion, and this axis may communicate its motion and power to wheel-work or machinery, or even to a mill-stone connected with its upper end. This machine is described and highly spoken of in almost all the books that teach of hydraulic machinery, but it does not appear to have been carried into practical effect in England.

The centrifugal pump may be considered as bearing some resemblance to Barker's Mill inverted, as the water in this case rises up the tube A A fig. 8, plate IV., from the reservoir E, and is thrown off by the centrifugal force at the ends of the lateral branch B C. This branch is furnished with valves at the extremities ; and, a quantity of water having been poured into the lower vessel E, the cylinder and the lateral branch are also filled with water. The apparatus is then put into motion by turning the handle at G, and the centrifugal force driving out the valves at the extremities of the branch, the water rushes rapidly into the trough D, from which it returns into the reservoir through a hole at f. The water at the same time rises through a valve, at the bottom of the 'tube A A, opening upwards.

The Water Ram, or Belier Hydraulique, as it was called by its inventor, M. Montgolfier, of Paris, is a highly useful and simple machine, for the purpose of raising water without the expenditure or aid of any other force than that which is produced by the momentum or moving force of a part of the water that is to be raised ; and is one of the most simple and truly philosophical machines that hydraulics can boast. The action of this machine depends entirely upon the momentum that is generated whenever a body is put into motion, and its effect is so great as to give the apparatus the appearance of acting in defiance of the established laws of hydrostatic equilibrium ; for a moving column of water of small height is made to overcome and move another column much higher than itself.

The form and construction of the water-ram is shown at fig. 9. Suppose o to represent a cistern or reservoir, or the source of a spring which is constantly overflowing and running to waste, by means of a channel a few feet lower than itself, as at the level line p p. Instead of

permitting the water to run over the sides of o, let it be conducted to the level line p p, by means of iron or other pipes q q connected with the side of the reservoir, and terminating by an

orifice r, in which a conical or other valve s is placed so as to be capable of effectually closing the pipe when such valve is drawn upwards; t is an adjustable weight fixed on to the spindle of the valve s, by means of which the valve is kept down and open ; any water therefore that is in the cistern o will flow down the pipe q q, and escape at the orifice r, so long as the valve remains down, but, the instant it is raised and shut, all motion of the water is suspended. Thus situated, the adjustment of the weight t must take place, and, by adding to or subtracting from it, it must be made just so heavy as to be capable of sinking or forcing its way downwards, against the upward pressure of the water, the force of which will depend upon the perpendicular distance from the surface of the water in o, to its point of discharge at r (represented by the dotted line o v). But the water by mov-ing acquires momentum and new force, and consequently is no longer equal to the column o v, to which the valve has been adjusted, but is superior to it, by which it is enabled to overpower the resistance of the weight t , and it carries the valve up with it, and closes the orifice r. This is no sooner done than the water is constrained to become stationary again, by which the momentum is lost, and the valve and weight once more become superior, and fall, thus re-opening the orifice and permitting the water to move again; and, as the pressure of the water and the weight of the valve each become alternately superior, the valve is kept in a constant state of vibration, or of opening and shutting without any external aid, whatever. Such is the principle upon which the motion of the water in the pipe q q is produced : but the momentum generated cannot be instantly annihilated ; and it is not only of sufficient power to raise the valve s, but likewise to burst open the lower end of the pipe q q, unless a sufficient vent be provided by which this accumulated force can escape. Accordingly a second valve u is placed near the lower end of the pipe q q, and is made to open upwards into an air-vessel, having a

discharging pipe x; and consequently, whenever the valve s is closed, the water, which otherwise would have flowed from the orifice r, now opens the valve u and enters the air-vessel, until the spring of the contained air overcomes the gradually decreasing force of the momentum, when the valve u closes, and that at s opens to permit the water to make a second blow or pulsation, and in this way the action of the machine continues unceasingly without any external aid so long as it is supplied with water, and remains in repair. A small running stream is necessary for this machine, as the water at o should be kept at one constant elevation to ensure the perfection of its action. A much greater quantity of water likewise escapes at the orifice r, between the pulsat'ons, than can be raised in the delivering pipe x, particularly if it extends to any considerable height; for the comparative quantity of water discharged through x, and permitted to run to waste at r, must always depend upon the respective perpendicular heights of the pressing rolumn o v, and the delivered or resisting column « j, and the rapidity of the pulsations will likewise depend on the same circumstances. A very insignificant pressing column o v is capable of raising a very high ascending column u x, so that a sufficient fall of water may be obtained in almost every running brook, by damming up its upper end to produce the reservoir o, and carrying the pipes q q down the natural channel of the stream until a sufficient fall be obtained ; for a considerable length of descending pipes from o to r is necessary to insure the certain effect of the machine, since, if the column q q is not of sufficient length, its water will be thrown back into the reservoir, instead of entering the air-vessel, which requires to be replenished with air, and this is admitted into it by the self-acting shifting valve, shown at b in the shaded part of it, which is an enlarged view of the air-vessel in an improved form ; its valve is made by a ball at a, having a metal bridle over it to prevent its rising too high.

In taking the height to which water is to be raised by a pump, perpendicular height alone is to be regarded, and not lateral extension, because fluids press according to their perpendicular height. Thus, if a pipe 100 feet long is six feet higher at one end than at the other, the six feet only are to be regarded as the height to which the water must be raised, and the 100 feet may be disregarded, except so far as it produces friction detrimental to the motion of the water. The height of a lift of water must be taken from the surface of the water which is to be lifted to the surface of the cistern, or reservoir, or end of the pipe that is to receive or delirer it, and not from the bottom of the suction-pipe, because that pipe may descend any distance below the surface of the water to be raised without affecting the

measurement, since the water will always rise to its own level within that pipe, without the aid of any exertion of force by the pump. Be careful, likewise, to introduce no right-angled or short turns into pipes, if they can be avoided ; but let every such turn be a regular curved sweep, and the larger and more regular that sweep is made, the less impediment it will offer to the passage of the water.

In order to determine the force or power necessary to work a pump of any description, the height to which the water is to be raised must always be taken into account ; for this height multiplied into the area of the piston, and reduced to any of the usual denominations of weight, will give the amount of resistance to be overcome (friction of the pump only excepted). The size of the pipe containing the water is quite immaterial, provided it be large enough to prevent friction and unnatural velocity in the water ; and the entire perpendicular height from the surface of the water raised to the point where it is delivered, whether occupied by suction or feeding-pipe, or delivering pipe from a forcing pump must be added together, and considered as the height of the lift : so that if a lift and force-pump of four inches in diameter, in the working-barrel, has ten feet of three-inch suction-pipe below its piston, and twenty feet of two-inch delivering-pipe (including the length of the working-barrel) above it, the column to be lifted will be equal to thirty feet of four-inch

pipe filled with water. The contents in gallons of thirty feet of four-inch pipe must therefore be found, and, as each imperial gallon of water weighs 10 Ibs. avoirdupois, the weight or load upon the pump will be immediately found, to which must be added from one-tenth to one-sixth, according to the construction of the pump, for friction. The load upon an eccentric or any other pump may be found by the same rule, if the effective horizontal area of the piston, or its substitute, be found ; and this be in like man-ner multiplied into the height of the

lift. . It therefore becomes important to know the weight and quantity of water which a certain length of pipe of any given diameter will contain, and a tolerably close approximation to this may be obtained by squaring the diameter of any pipe ia inches, and cutting off the last figure of the product by a decimal point, which will nearly give the contents in ale-gallons of one yard in length of such pipe. Thus, for example, if a pipe is six inches in diameter, 6 times 6 make 36, and introducing the decimal point would re-duce this number to 3‘6, so that one yard of such pipe would contain three gallons and six-tenths. If a three-inch pipe had been taken, then 3 x 3 — 9 ; consequently there remains but one figure to cut off. The gallons’ place must therefore be supplied by a cypher, thus, 0‘9, and the yard of such pipe would contain but nine-tenths of a gallon.

For greater certainty, however, the following table and rules are introduced. They are extracted from Brunton’s Compendium of Mechanics ; a recent little work, published at Glasgow, and which is replete with useful information : —

TABLE of the Contents of a Pipe one inch diameter for any required Height.

Feet

Quantity

Weight in

Gallons,

high.

in Cub. In.

Avoir. Oz.

Wine Mea.

1

9-42

5-46

0-0407

2

18-85

10-92

•0816

3

28-27

16-38

•1224

4

37-70

21-85

•1632

5

47-12

27-31

•2040

6

56-55

3277

•2423

7

65-97

38-23

•2448

8

75-40

43-69

•3264

9

84-82 1 49-16

•3671

10

94-25 54-62

•4080

20

188-49 109-24

•8160

30

282-74

163-86

1-2240

40

376-99

218-47

1-6300

50

471-24

273-09

2-0400

60

565-49

327-71

2-4480

70

659-73

382-33

2-8560

80

753-98

436‘95

3-2640

90

848-23

491-57

3-6700

100

942-48

546-19

4-0800

200

1884-96

1092-38

8-1600

Yithough the above table only gives the contents o(a pipe one inch in diameter, it will serve as a

standard for pipes of any other size, by observing the following

Rule. — Multiply the numbers found in the table against any height by the square of the diameter of the pipe, and the product will be the number of cubic inches, avoirdupois ounces, and wine gallons of water, that the given pipe will contain.

Example. — How many wine gallons of water are contained in a pipe six inches diameter, and sixty feet long : —

2-4480 X 36 = 88-1280 wine'gallons.

The wine gallon contains 231 cubic inches, and the new imperial gallon 277-274 cubic inches ; therefore, to reduce the wine to the imperial gallon, divide by 1-20032 ; and for a like reduction of the ale gallon, which contains 282 cubic inches, divide by 0-98324.

HYDROSULPHURETS. Compounds of sulphureted hydrogen with the salifiable bases.

HYDROTHIONIC ACID. Sulphureted hydrogen, the hydrosulphuric acid of M. Gay Lussac.

HYDROTIC, n. s. . Fr. bydrotique; Gr. I'Caip. Purger of water or phlegm.

He seems to have been the first who divided purges into hydrotickt and purgers of bile. Arbutknot.

HYDRUNTUM, in ancient geography, a noble and commodious port of Calabria, from which there was a short passage to Apollonia. (Pliny) famous for its antiquity, and for the fidelity and bravery of its inhabitants ; now called Otranto. Long. 19° 15' E , lat. 40° 12' N.

HYEMANTES, in the primitive church, offenders who were not allowed to enter the porch of the churches with other penitents, but were obliged to stand without, exposed to the inclemency of the weather, even in winter.

HYEN, n. s. > Fr. hyene ; Lat. hyana. An

HYE'NA, n. s. 5 animal like a wolf; said fabulously to imitate human

voices.

I will weep when you are disposed to be merry ; I will laugh like a hyen, when you are inclined to sleep.

Shakspcare. Out, out, hyena ; these are thy wonted arts,

And arts of every woman false like thee.

Milton. Samson Agonistes.

The hyena was indeed well joined with the braver, as having also a bag in those parts, if thereby we understand the hyena odorata, or civet cat.

Browne's Vulgar Errows.

Oh the bewitching tongues of faithless men ! 'Tis thus the false hyena makes her moan To draw the pitying traveller to her den. Otway. A wonder more amazing would we find j

The hyena shews it of a double kind ;

Varying the sexes in alternate years,

In one begets, and in another bears.

Dryden's Fables.

The keen hyenti, fellest of the fell. Tluimson.

Tearing, and grinning, howling, screeching, swearing. And with hyena laughter, died despairing.

Byron. Don Juan.

HYGEIA, or HYGIˆA, Greek, 'Yyiaa, in mythology, the daughter o ˆEsculapius, and the goddess of health, among the ancient Greeks, called by the Romans Salus. See SALUS.

HYGINUS (Caius Julius), a grammarian, the freedman of Augustus, and the friend of Ovid,

was born in Spain, or, according to others, in Alexandria. He wrote many works, all of which are lost, except his Fabularum Liber, and Astro-nomicon Po&ticon, lib. iv., and even these are come down to us very imperfect. The best edition is that of Munker, in the Mythographi Latini; 2 vols. 8vo. 1681.

HYGHOM'ETER, n. s. Fr. hygrometre; Gr. wypoc and ptTptu. An instrument to measure the degrees of moisture.

A sponge, perhaps, might be a better hygrometer than the earth of the river. Arbuthnot on Air.

Tlie HYGROMETER, HYGROSCOPE, or NOTIO-METER, is used for measuring the degrees of dryness and moisture of the atmosphere, as the barometer and thermometer measure its different degrees of gravity and warmth, although this instrument is far from being yet so perfect as these. There are three general principles on which hygrometers have been constructed: 1. The lengthening and shortening, or twisting and untwisting, of strings by dryness and moisture ;

2. The swelling and shrinking of solid substances by moisture or dryness ; and, 3, By the increase or decrease of the weight of particular bodies, which absorb the humidity of the atmosphere.

There are various kinds of hygrometers ; for whatever body either swells by moisture, or shrinks by dryness, is capable of being formed into a hygrometer. Such are woods of most kinds, particularly deal, ash, poplar, &c. Such also is catgut, the beard of a wild oat, and twisted cord, &c. The best and most usual contrivances for this purpose are as follows: 1. Stretch a common cord or a fiddle-string along a wall, passing it over a pulley ; fixing it at one end, and to the other end hanging a weight, carrying a style or index. Against the same wall fit a plate of metal, graduated, or divided into any number of equal parts ; and the hygrometer is complete. For it is constantly observed, that moisture sensibly shortens cords and strings; and that, as the moisture evaporates, they return to their former length again. The same is observed of a fiddle-string ; and hence such strings are apt to break in damp weather, when not slackened by the screws of the violin. Hence it follows, that the weight will ascend when the air is

more moist, and descend again when it becomes drier ; by which means the index will be carried up and down, and, by pointing to the several divisions on the scale, wiil show the degrees of moisture or dryness. 2. For a more accurate hygrometer, strain a whipcord or cat-gut t)ver several pulleys and proceed as before for the rest of the construction. Nor does it matter whether the several parts of the cord be parallel to the horizon, or perpendicular to it, or in any other position ; the advantage of this over the former method being merely the having a greater length of cord in the same compass; for the longer the cord, the greater is the contraction and dilatation, and consequently the degrees of variation of the index over the scale, for any given change of moisture in the air.

3. Fasten a twisted cord or harpstring to a hook at A, plate HYGROMETER, fig. 1, and suspend by it a weight B can-vine an index C nearly touching

the horizontal board or table on which is described the circular scale D E. Upon an increase or decrease of the humidity of the air, the index will show the quantity by twisting, and consequently the increase or decrease of moisture or dryness. Those Dutch toys called weather-houses, wnere a small image of a man, and one of a woman, are. fixed upon the ends of an index, are constructed upon this principle. For the index, being sustained by a cord or twisted catgut, turns backwards and forwards, bringing out the man in wet weather, and the woman in dry. 4. Fasten one end of a cord or catgut A B, fig. 2, to a hook at A ; and to the other end a ball D of about 1 lb. weight: upon which draw two concentric circles, and divide them into any number of equal parts, for a scale ; then fit a style or index E C into a proper support at E, so as the extremity C may almost touch the divisions of the ball. Here the cord twisting or untwisting will indicate the change of moisture, by the successive application of the divisions of the circular scale, as the ball turns round to the index C. An hygrometer may be made of the thin boards of ash or fir, by their s%velling or contracting. But these, and all the other kinds of this instrument above described, become in time sensibly less and less accurate ; till, at last, they lose their effect entirely, and suffer no alteration from the weather. But the following sort is much more durable, serving for many years with tolerable accuracy. To the extremity of the balance, fig. 3, fix at E a sponge, or other body, that easily imbibes moisture. To prepare the sponge, it may be proper first to wash it in water very clean ; and, when dry again, in water or vinegar in which there has been dissolved sal ammoniac, or salt of tartar; after which let it dry

again. Now, if the air become moist, the sponge will imbibe it and grow heavier, and consequently will preponderate, and turn the index towards C ; on the contrary, when the air becomes drier, the sponge becomes lighter, and the index turns towards A ; thus showing the state of the air. Mr. Gould, in the Philosophical Transactions, instead of a sponge, recommends oil of vitriol, which grows sensibly lighter or heavier from the. degrees of moisture in the air ; so that, being saturated in the moistest weather, it afterwards retains or loses its acquired weight, as the air proves more or less moist. The alteration in this liquor is so great, that in fifty-seven days it has been known to change its weight from three drachms to nine ; and has shifted the tongue or index of a balance thirty degrees. So that in this way a pair of scales may afford a very nice hygrometer. Oil of sulphur or cam-panum, Or oil of tartar per deliquium, or the liquor of fixed nitre, maybe used instead of the oil of vitriol. This balance may be contrived in two ways ; by either having the pin in the middle of the beam, with a slender tongue a foot and a half long, pointing to the divisions on an arched plate, as in fig. 3 ; or the scale with the liquor may be hung to the point of the beam near the pin, and the other extremity made so long as to describe a large arch on a board placed for that purpose, as in fig. 4. It may be observed, with regard to hygrometers of wood,

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that the wood shrinks most in summery and swells most in winter, but is most liable to change in the spring and fall ; that this motion

happens chiefly in the daytime, there being scarcely any variation in the night; and that there is a motion even in dry weather, the wood swelling in the morning, and shrinking in ihe afternoon : also that the wood by night as well as by day, usually shrinks when the wind is in the north, north-east, and east, both in summer and winter ; that by constant observation of the motion and rest of the wood, with the help of a thermometer, the direction of the wind may be told nearly without a weather-cock.

Drs. Hales and Desaguliers contrived another form of sponge hygrometer. They made an horizontal axis, having a small part of its length cylindrical, and the remainder tapering conically with a spiral thread cut in it, after the manner of the fuzee of a watch. See fig. 5. The sponge is suspended by a fine silk thread to the cylindrical part of the axis, upon which it winds. This is balanced by a small weight, W, - suspended also by a thread, which winds upon the spiral fuzee. When the sponge grows heavier, in moist weather, it descends and turns the axis, and so draws up the weight; which, coming to a thicker part of the axis, becomes a balance to the sponge, and its motion is shown by an attached scale ; and vice versa, when the air becomes drier. Salt of tartar, or any other salt, or pot ashes, may be put into the scale of a balance, and used instead of the sponge.

De Luc's contrivances for an hygrometer are very ingenious. Finding that even ivory swells with moisture, and contracts with dryness, he made a small and very thin hollow cylinder of ivory, open only at the upper end, into which is fitted the under or open end of a very fine long glass tube, like that of a thermometer, Into these is introduced some quicksilver, filling the ivory cylinder, and a small part of the length up the glass tube. The consequence is this : When moisture swells the ivory cylinder, its bore or capacity grows larger, and consequently the mercury sinks in the fine glass tube; and, vice versa, when the air is drier, the ivory contracts, and forces the mercury higher up the tube of glass. An instrument thus constructed is in fact also a thermometer, and must necessarily be affected by the vicissitudes of heat and cold, as well as by those of dryness and moisture. It is a known fact, that a hair will stretch when moistened, and contract when dried ; and M. de Saussure found, by repeated experiments, that the difference between the greatest extension and contraction, when the hair is properly prepared, and has a weight of about three grains suspended by it, is nearly one-fortieth of its whole length, or one inch in forty. This circumstance suggested the idea of a new hygrometer. To render these small variations of the length of the hair perceptible, an apparatus was contrived, in which one of the extremities of the hair is fixed, and the other, bearing the counterpoise

above-mentioned, surrounds the circumference of a cylinder, which turns upon an axis to which a hand is adapted, marking upon a dial, in large divisions, the almost insensible motion of this axis. About

twelve inches high is recommended as the most convenient and useful : and, to render them portable, a contrivance is added, by which the hand and the counterpoise can be occasionally fixed. But M. de Luc, in his Idees sur la Meteorologie, vol. i., opposed M. de Saussure's plan, on the ground that all hairs, if immersed in water, first lengthen and then shorten. He was answered by Saussure, who, at the same time, published a detailed account of his instrument.

In plate HYGROMETER, fig. 6, there is a representation of his whole original instrument, with the hair and other appendages complete. The lower extremity of the hair, a b, is* held by the screw pincers b, more distinctly represented at B ; and, by a screw at the end of these, the hair is fastened to the bottom plate C. The upper extremity, a, of the hair is held by the under chaps of the double pincers a. These pincers below hold the hair, and above fasten a very fine narrow slip of silver, carefully annealed, which rolls round the arbor or cylinder d, a separate figure of which is shown, DF, fig. 7. This arbor which carries the needle or index E in the separate figure, is cut in the shape of a screw ; and the intervals of the threads of this screw have their bases flat, and are cut square so as to receive the slip of silver that is fastened to the pincers a, and joined in this manner with the hair. M. de Sausure observes that hair alone, fixed immediately to the arbor, would not do; for it curled upon it, and acquired a stiffness that the counterpoise was not able to surmount. The arbor was cut in a screw form, in order that the slip of silver in winding upon it should not increase the diameter of the arbor, nor ever take a situation too oblique and variable. The slip is fixed to the arbor by a small pin F. The other extremity of the arbor, D, is shaped like a pulley, flat at the bottom, so as to receive a fine supple silken string, to which is suspended the counterpoise g in the large figure, and G in the side one. This counterpoise is applied to distend the hair; and acts in a contrary direction to that of the hair, and the moveable pincers to which the hair is fixed. If, then, the hair should be loaded with the weight of four grains, the counterpoise must weigh four grains more than the pincers. The arbor at one end passes through the centre of the dial, and turns therein, in a very fine hole, on a pivot made very cylindrical, and well polished : at the other end is also a similar pivot, which turns in a hole made in the end of the arm of the cock. M. de Saussure had hygrometers made with hairs fourteen inches long ; but

he found one foot sufficient. The arbor is three-fourths of a line in diameter at the base between the threads of the screw, or the part on which the slip winds. The variations, when a hair properly prepared is applied to it, are more than an entire circumference, the index describing about 400° in moving from extreme dryness to extreme humidity.

M. Saussure has even made smaller instruments to be carried in the pocket, and to make experiments with under small receivers ; they were only seven inches high by two inches broad ; which, notwithstanding their variations, were

very sensible. In the preparation of the hair, it is necessary to free it of its natural unctuosity, which in a great measure deprives it of its hygrometrical sensibility. A number of hairs are boiled in a lie of vegetable alkali ; and among these are to be chosen for use such as are most transparent, bright, and soft : particular precautions are necessary for preventing the straining of the hair, which renders it unfit for the intended purpose. The two fixed points of the hygrometer are the extremes both of moisture and dryness. The former is obtained by exposing it to air completely saturated with water, by placing it in a glass receiver standing in water, the sides of which are kept continually moistened. The point on the dial, at which the hand after a certain interval remains stationary, is marked 100. The point of extreme dryness, not absolute dryness, ‘ for that does not exist, but the greatest degree of it that can be obtained, is produced by introducing repeatedly into the same receiver containing the instrument, and standing now upon quicksilver, certain quantities of deliquescent alkaline salts, which absorb the moisture of the air. This hygrometer is considered by M. Saussure as possessed of every property requisite for such an instrument : as, it points out the smallest variation of moisture in the air : its indications are quick : it is always consistent : several of them agree : it is affected only by aqueous vapors : and its variations are in proportion to those of the air.

The best hygrometer upon the third principle, *viz.* that of the

alteration of the weight of substances, by attracting the moisture of the air, and for ascertaining the quantity as well as the de-gree of moisture in the variation of the hygrometer, is that of Mr. Coventry of London. The account he gives of it is as follows : — ‘ Take two sheets of fine tissue paper, such as is used by hatters; dry them carefully at about two feet distance from a tolerably good fire, till after repeatedly weighing them in a good pair of scales no moisture remains. When the sheets are in this perfectly dry state, reduce them to exactly fifty grains ; the hygrometer is then fit for use. The sheets must be kept free from dust, and exposed a few minutes in the open air ; after which may be always known, by weighing them, the exact quantity of moisture they have imbibed. For many years, adds he, the hygrometer has engrossed a considerable share of my attention; and every advantage proposed by others, either as it respected the substances of which the instrument was composed, or the manner in which its operations were to be discerned, has been impartially examined. But I have never seen an hygrometer so simple in itself, or that would act with such certainty or so equally alike, as the one I have now described. The materials of which it is composed, being thin, are easily deprived wholly of their moisture ; which is a circumstance essentially necessary in fixing a datum from which to reckon, and which, I think, can-not be said of any substance hitherto employed in the construction of hygrometers : with equal facility they imbibe or impart the humidity of the atmosphere, and show with the greatest exactness when the least alteration takes place.’ For

easier weighing the paper, take a piece of round tin or brass the size of a crown piece, through the centre of which drill a hole, and also thiee others round it at equal distances : then cut about 100 papers ; and, after putting them under the tin or brass, drive through each hole a strong pin into a board, in order to round them to the shape of the plate : the papers must then be separated and exposed to the air a few hours with that already weighed, and so many of them taken as are equal to the weight already specified. This done, thread them together through these holes made by the pins, putting between every paper on each thread a small bead, to prevent the papers from touching each other, and also that the air may be more readily admitted. The top of the hygrometer is covered with a card cut to the same size ; and which, by its stiffness, supports all the papers, and keeps them in proper shape. Before the papers are threaded, the beads, silk, card, and a thin piece of brass about the size of a sixpence, which must be placed at the bottom, and through which the centre string passes, must be weighed with the greatest exactness, to bring them to a

certain weight, suppose fifty grains ; now the paper in its driest state, being of equal weight, they will weigh together 100 grains; consequently, what they weigh more at any time is moisture. To obviate the difficulty of trying experiments with weights and scales, Mr. Coventry contrived a machine or scale by which to determine at one view the humidity or dryness of the atmosphere. This, with its case, is represented by fig. 8. The front and back of the case are glass ; the sides fine gauze, which excludes the dust and admits the air ; the case is about ten inches high, eight inches broad, and four inches deep. A, a brass bracket in front, behind which, at about three inches and a half distance, is another ; these support the axis of the index E, also of the beam D, and another which supports the stem B, to which the ivory scale of divisions C is fixed. G, a brass scale suspended in the usual manner to the end of a beam D, and weighing exactly 100 grains. This scale is an exact counterpoise to the papers I, and the different apparatus. The manner of suspension is as follows : — The axis g, of the beam, which is made of brass, instead of hanging on pivots as in common scales, turns with two steel edges kk, fixed in the extremities of the brass axis : these edges are shaped like the edge of a knife, and act on two steel concave edges *,* , in order to render the friction as small as possible. D is a fine scale beam fixed at right angles with the axis g. E, the steel index fixed to the under side of the same axis. F, a brass sliding weight : h is the axis that holds the stem B to which the scale of divisions C is fixed. A,A, the brass brackets which support the whole by four screws, two of which are seen at i, I, that screw the brackets to the top of the case. The axis of the scale of divisions is hung on pivots, one of whiclr is seen at m, that, should the case not stand level, the stem B may always be in a perpendi-culai situation. The hygrometer, before use, should be thus adjusted : — To the end of the beam where the hygrometer is suspended, hang a weight of 1 00 grains, which is equal to the weight of

the scale ; then move the sliding-weight F up or down the index E, till one grain will cause the index to traverse neither more nor less than the whole scale of divisions ; then add half a grain to the scale, in order to bring the index to 0 ; and the instrument, after taking off the 100 grain weight and hanging on the papers, is fit for use; then put grain weights in the scale till the index is brought within compass of the scale of divisions. Example : H is three grains on the brass scale, and the index points at 10 ; consequently there are three grains and fVj'.hs of a grain of moisture in the papers. If four grain weights are kept, *viz.* 1, 2, 4, and 5, they will make any number from one to nine, which are as many as will be wanted. Sometimes the index will continue traversing within the scale of divisions for many days without shifting the weights ; but, if otherwise, they must be changed as occasion may require. ' One great advantage (says Mr. Coventry) of this hygrometer, above all others that have attracted my notice, is that it acts from a certain datum, namely, the dry extreme ; from which all the variations towards moist are calculated with certainty : and, if constructed with that precision represented by the drawing, it will afford pleasure to the curious in observing the almost perpetual alteration of the atmosphere, even in the most settled weather. In winter it will be constantly traversing from about 8 A. M. till 4 or 5 P. M. towards dry ; and in summer, from about 4 A.M. till 6 or 7 P.M. when the weather is hot and gloomy, the hygrometer discovers a very great change towards moisture; and, when clear and frosty, that it contains a much greater quantity of moisture than is generally imagined '

HYGROMETRY, the art or science of measuring the moisture of the atmosphere. See HYGROMETER.

HY'GROSCOPE, n. s. fr.hygroscope; Gr. vypoc and (TKOTTEW. An instrument to show the moisture and dryness of the air, and to measure and estimate the quantity of either extreme. — Quincy.

Moisture iu the air is discovered by hygrotcopes.

Arbuthnot.

HYGROSCOPE is commonly used in the same sense with hygrometer, but Wolfius makes a difference from the etymology of the words. The hygroscope (he says) only shows the changes of humidity or dryness in the air, but the hygrometer measures them.

HYLA, in ancient geography, a river of Mysia Minor, famous for the death of Hylas. It runs by Prusa, whence it seems to be the same with

the Ryndacus, which runs north-west into the Propontis.

HYLAS, in fabulous history, son of Theo-damus, and favorite of Hercules. He was ravished by the nymphs of a fountain as he was taking out water ; and afterwards drowned in the Hyla.

HYLOZOISTS, v\»j, matter, and £WJ?, life, a sect of atheists among the ancient Greek philosophers, who maintained that matter had some natural perception, without animal sensation, or reflection in itself considered ; but that this imperfect life occasioned that organisation whence

sensation and reflection afterwards arose. Of these, some held only one life, which they called a plastic nature, presiding regularly and invariably over the whole corporeal universe, which they represented as a kind of large plant or vegetable : these were called the cosmoplastic and stoical atheists, because the stoics held such a nature, though many of them supposed it to be the instrument of the deity. Others thought that every particle of matter was endued withlife, and made the mundane system to depend upon a certain mixture of chance and p_astic or orderly nature united together. These were called Stra-tonici from Strato Lampsacenus, a disciple of Theophrastus, called also Physic us, who was first a celebrated Peripatetic, and afterwards formed this new system of atheism for himself.

HYM, n. s. A species of dog (unless it is by mistake for lym. — Johnson.)

Avaunt, you curs Mastiff, greyhound, mungril grim, Hound or spaniel, branch or hym ; Or bobtail tike, or trundle tail, Tom will make him weep and wail.

Shakspeare.

HY’MEN, n.s. } Greek, vˆv,

HYMENE’AL, n. s. & adj. > w/i£j/atoc. The

HYMENE’AN, n. s. & adj. j god of marriage :

the virginal membrane : a marriage song : any

thing pertaining to marriage.

And wedded had he with full blissful chere. King Pandiones faire doughter dere, That Light Progne, the floure of hire coontie, Though Juno liste not at the fest to be, Ne Hymen, that the god of weddyng is.

Chaucer. Legende of Good Women. Run now you shepherd swains ; ah ! run you thither, Where this fair bridegroom leads the blessed way : And haste you lovely maids, haste you together With this sweet bride, while yet the sunshine day Guides your blind steps ; while yet loud summons

call,

That every wood and hill resounds withal, Come Hymen, Hymen, come, drest in thy golden pall.

Fletcher's Purple Island, And heavenly choirs the hymenean sung.

Milton.

For her the spouse prepares the bridal ring ; For her white virgins hymeneal* sing. Pope.

The suitors heard, and deemed the mirthful voice A signal of her hymeneal choice. Id. Odyssey.

HYMEN, or HYMENJEUS, in ancient mythology the son of Bacchus and Venus, and the god of marriage. He was invoked in epithalamiums, and other matrimonial ceremonies. The poets crown this deity with a chaplet of roses, and represent him enervated with pleasures, dressed in a yellow robe and yellow shoes, with a torch in his hand. The new married couple bore garlands of flowers on the wedding day ; which custom also obtained among the Hebrews, and even among Christians during the first ages of the church, as appears from Tertullian.

HYMEN, 'Y/XJJV, in anatomy, is a thin membrane or skin, sometimes circular, of different breadths, more or less smooth, and sometimes semilunar, formed by the union of the internal membrane of the great canal with that on the inside of the aloe, resembling a piece of fine parchment. This membrane is stretched in the

neck of the womb of virgins, below the nymphae, leaving in some subjects a very small opening, in others a larger, and in all rendering the external orifice narrower than the rest of the cavity, and to be broken when they are deflowered; an effusion of blood following the breach. See ANATOMY, The hymen is considered as the test of virginity, an opinion which is very ancient. See Deuteronomy 22, 13. In infants it is a fine thin membrane, not very conspicuous, because of the natural straitness of the passage it-self, which does not admit of any great expansion in so little room. This membrane grows more distinct, as well as firm, by age, and it is sometimes very strong and even impervious, when incision becomes necessary.

HYMEN/EA, the bastard locust tree ; a genus of the monogynia order, and decandria class of plants : natural order thirty-third, lomentacese. CAL. quinquepartite : there are five petals, nearly equal ; the style is intorted ; the legumen full of meally pulp. There is but one species, *viz.*

H. courbarilla, or the courbaril, a large tree which grows naturally in the Spanish West In-dies. The trunk is covered with a ligh ash-co-lored bark ; is often more than sixty feet high, and three in diameter. The branches are furnished with dark green leaves, which stand by pairs on one common foot-stalk, diverging from their base in manner of a pair of shears when opened. The flowers come out in loose spikes at the ends of the branches, and are yellow, striped with purple. Each consists of five petals placed in a double calyx, the outer leaf of which is divided into five parts, and the inner one is cut into five teeth at its brim. In the centre are ten declining stamina, longer than the petals, surrounding an oblong germen, which becomes a thick, fleshy, brown pod, four or five inches long and one broad, with a suture on both edges, and includes three or four purplish seeds, somewhat of the shape of Windsor beans, but smaller. The seeds are covered with a light brown sugary substance, which the Indians scrape off and eat with great avidity, and which is very pleasant and agreeable. At the principal roofs, under ground, is found collected in large lumps a yellowish-red transparent gum, which, when dissolved in rectified spirit of wine, affords a most excellent varnish, and is the gum anime

of the shops.

HYMENOPTERA, from v/tijv, membrane, and Trftpov, a wing, in the Linnaean system of zoology, an order of insects, having four membranaceous wings ; the tails of the females are furnished with stings, which in some are used for instilling poison, and in others for merely piercing the bark and leaves of trees, and the bodies of other animals, in which they deposit their eggs. See ENTOMOLOGY.

HYMETHUS, or HYMETTUS, in ancient geography, a mountain of Attica near Athens, fa-mous for its marble quarries, and for its excellent honey. See GREECE. Pliny says that Crassus first fetched marble columns from it.

HYMN, n. s., v. a., & v. n. 3 Fr. hymne ;

HYK N'ICK, adj. 5 Gr. vpvoe, v/ivea.

A song of praise or adoration ; an encomiastic son? to some superior being; to praise, or wor-

ship, or sing songs of thanksgiving : hjmnic, relating to hymns, or spiritual songs.

Doe thou vouchsafe with thy love-kindling ligbt To* illuminate my dim and dulled eyne, And beautitie this sacred hymne of thyne.

Spenser's Hymnet. As I erst in the praise of mine own dame,

So now in honour of thy mother dear,

An honourable hymn I eke should frame. Speruer.

Oar solemn hymns to sullen dirges change j *"»ur bridal flowers serve for a buried corse. Sha/up. When steel grows

Soft as a parasites silk, let hymns be made

An overture for the wars. Id. Coriolantu.

There is au hymn sung ; buti the subject of it is always the praises of Adam, and Noah, and Abraham, concluding ever with a thanksgiving for the nativity of our Saviour. Bacon.

He rounds the air, and breaks the hymnick notes In birds', heaven's

choristers, organick throats j Which, if they did not die, might seem to be A tenth rank in the heavenly hierarchy. Donne.

They touched their golden harps, and hymning

praised God and his works. Milton.

Whose easier business were to serve their lord High up in Heaven, with songs to hymn his throne, And practised distance, to cringe, not fight. Id.

Farewell, you happy shades,

Where angels first should practise hymni, and string Their tuneful harps, when they to heaven would sing

Dryden. He had not left alive this patient saint,

This anvil of affronts, but sent him hence,

To hold a peaceful branch of palm above,

And hymn it in the quire. Id. Spanish Friar.

How the soldier's rough strain seems

Softened by distance to a hymn-like cadence !

Byron. Deformed Transformed.

A HYMN, Isidore remarks, is properly a song of joy, full of the praises of God, and is distinguished from threna, which is a mourning song, full of lamentation. St. Hilary, bishop of Poictiers, is said to have been the first that composed hymns to be sung in churches, and was followed by St. Ambrose. In the Greek Liturgy there are four kinds of hymns; but the word is not taken in the sense of a praise offered in verse, but simply of a laud or praise. The angelic hymn, or gloria in excelsis, makes the first kind ; the trisagion, the second ; the cherubic hymn, the third ; and the hymn of victory and triumph, called tTTtviKioc, the last. The hymns of the ancients generally consisted of three sorts of/ stan-zas; one of which, called strophe, was sung by the band as they walked from east to west; another, called antistrophe, was performed as they returned from west to east ; the third part or epode, was sung before the altar. The Jewish hymns were accompanied with trumpets, drums, and cymbals.

HYOIDES, in anatomy, the bone at the root of the tongue. See

ANATOMY.

HYOSCYAMUS, henbane : a genus of the monogynia order, and pentandria class of plants t natural order twenty-eighth, luridae. COR. fun-nel-shaped and obtuse : stamina inclining to one side : CAPS, covered and bilocular. There are several species, one of which, *viz.*

II. niger, or common henbane, is a native of Britain. It grows on road-sides, and among

rubbish. It is a biennial plant, with long fleshy roots which strike deep into the ground, sending out several large soft leaves, deeply flashed on their edges ; the following spring the stalks come u p, about two feet high, garnished with flowers standing on one side in a double row, sitting close to the stalks alternately. They are of a dark purplish color, with a black bottom; and are succeeded by roundish capsules, which open with a lid at the top, and have two cells filled with small irregular seeds. The seeds, leaves, and roots of this plant, as well as of all other species of this genus, are poisonous : and many well attested instances of their bad effects are recorded; madness, convulsions, and death, being the common consequence. In a smaller dose, they occasion giddiness and stupor. It is said that the leaves scattered about a house will drive away mice. — The juice of the plant, evaporated to an extract, is prescribed in some cases as a narcotic ; in which respect it may be a powerful medicine if properly managed. The dose is from half a scruple to half a drachm. Goats are not fond of the plant ; horses, cows, sheep, and swine, refuse it.

To HYP, v. a. Barbarously contracted from hypochondriack. To make melancholy; to dispirit.

I have been to the last degree hypped since I saw you. Spectator.

HYP’ALLAGE, n. s. Gr. wn-aXXayj). A figure by which words change their cases with each other.

HYPANTE, or HYPERPANTE, a name given by the Greeks to the feast of the presentation of Jesus in the temple. — This word, which signifies lowly or humble meeting, was given to this feast from the meeting of old Simeon and Anna the prophetess in the temple, when Jesus was brought thither.

HYPATIA, a learned and beautiful lady of antiquity, the daughter of Theon, a celebrated philosopher and mathematician, and president of the famous Alexandrian school, was born at Alexandria about the end of the fourth century. She made such progress in philosophy, geometry, astronomy, and the mathematics, that she was esteemed the most learned person of her time. At length she was thought worthy to succeed her father in that distinguished and important employment, the government of the school of Alexandria; and to teach from the chair of Ammonius and Hierocles. Her fame was so extensive, and her worth so universally acknowledged, that she had a very crowded auditory. One of her pupils was the celebrated Synesius, afterwards bishop of Ptolemais, who every where bears the strongest and most grateful testimony to her abilities and virtues. When Nicephorus intended to pass the highest compliment on the princess Eudocia, he thought he could not do it better than by calling her another Hypafia. But while Hypatia shone the brightest ornament of Alexandria, a kind of civil war which broke out between Orestes the governor, and St. Cyril the patriarch, proved fatal to the lady. In 415 about 500 monks attacked the governor, and would have killed him had he not been rescued by the townsmen ; but, the respect which Orestes had for Hypatia caus-VOL. XL

ing her to be traduced among the mob, who dragged her from her chair, tore her to pieces, and burned her limbs. Cyril has been suspected of fomenting this tragedy, and Dr. Cave endeavours to remove the imputation of such a horrible action from the patriarch ; calling the Alexandrian mob, levissimum hominum genus, ‘ a very trifling inconstant people.’ But though Cyril should neither have been the perpetrator, nor the contriver of Hypatia’s death, yet he did not discountenance it ; for he received the dead body of Ammonius, one of the most forward in the riot, and pronounced a panegyric upon the ruffian, as having died a martyr for the truth. This transaction, so disgraceful to the church of Alexandria, took place A. D. 415 in the reign of Theodosius II. Hypatia published Commentaries on Apollonius’s Conies, Diophantus’s Arithmetic, and other works.

HYPECOUM, wild cumin : a genus of the digynia order, and tetandria class of plants ; natural order twenty-fourth, corydales : CAL. diphyllous : the petals four : the exterior two laigerand trifid : the fruit

apod. There are seven species, all low herbaceous plants with yellow flowers, and easily propagated by seeds. The juice is of a yellow color, resembling that of celandine, and is affirmed by some eminent physicians to be as narcotic as opium. From the nectarium the bees collect great quantities of honey.

HY'PER, n. s. A word barbarously curtailed by Prior from hypercritic. — Johnson. A hypercritic : one more critical than necessity requires. Prior did not know the meaning of the word. The force of the Greek preposition, however, which is the etymon of this word, is to increase the force or meaning of those words with which it is found in composition, as may be seen by the examples : —

Criticks I read on other men, And hypers upon them again. Prior.

HYPERBATON, in grammar, a figurative construction, inverting the natural and proper order of words and sentences. The several species of the hyperbaton are, the anastrophe, the hysteron-proteron, the hypallage, synchysis, tmesis, parenthesis, and the hyperbaton strictly so called. See ANASTROPHE.

HYPERBATON, strictly so called, is a long retention of the verb which completes the sentence. Instances occur in Virgil, wherein the verb is placed at the distance of nine lines from the nominative.

HYPER'BOLA, n. s. ~\ Fr. hyperbole ; Gr. HYPER'BOLE, n. s. \virip and /3oXXu>. In

HYPERBOL'ICAL, adj. [geometry, a section HYPERBOL'IC, adj. [of a cone made by a

HYPERBOL'ICALLY, adv. \ plane, so that the HYPERBOL'IFORM, adv. J axis of the section inclines to the parallel leg of the cone, which in the parabola is opposite to it, and in the ellipsis intersects it. The axis of the hyperbolical section will meet also with the opposite side of the cone, when produced above the vertex. — Harris. Hyperbole a figure in rhetoric by which any thing is increased or diminished beyond the exact truth; as, he runs faster than lightning. His possessions are fallen to dust. He was so gaun*.,

the case of a flagelet was a mansion for him. — Shakspeare.
Hyperbolic, hyperbolical, having the nature of an hyperbole, exaggerated, or ex-tenuated, beyond the truth : hyperboliform, having the form of an hyperbola.

Terms unsquared

Which, from the tongue of roaring Typhon dropt,

Would seem hyperbola.

Shakspeare. Troilus and Cressida. Taffata phrases, silken terms precise, Three-piled hyperboles, spruce affectation, Figures pedantical, these Summer flies, Have blown me full of maggot ostentation.

Shakspeare.

Yet mav all be solved, if we take it hyper bolically.

Browne.

They were above the hyperboles, that fond poetry bestows upon its admired objects. Glanville.

It is parabolical, and probably hyperbolical, and therefore not to be taken in a strict sense. Boyle.

The horny or pellucid coat of the eye riseth up, as a hillock, above the convexity of the white of the eye, and is of an hyperbolical or a parabolical figure. Ray on the Creation.

Cancellated in the middle with squares, with triangles before, and behind with hyperbolic lines.

Grew's Muteewn. Hyperboles, so daring and so bold,

Disdaining bounds, are yet by rules controlled ;

Above the clouds, but yet within our sight,

They mount with truth, arid make a tow'ring flight.

Granville.

Had the velocities of the several planets been greater or less than they are, or had their distances from the sun, or the quantity of the sun's matter, and consequently his attractive power, being greater or less than they are now, with the same velocities, they would not have revolved in concentrick circles, but have moved in hyperbolas very eccentrick.

Bent ley.

The common people understand raillery, or at least rhetorickj and will not take hyperboles in too literal a sense. Swift.

Scylla 'is seated upon a narrow mountain, which thrusts into the sea a steep high rock, and hyperbolically described by Homer as inaccessible.

Broome's Notes on the Odyssey.

HYPERBOLA. See CONIC SECTIONS.

HYPERBOLE, in rhetoric. See ORATORY. Lord Kames, in his Elements of Criticism, observes, that ' an object uncommon with respect to size, either very great of its kind or very little, strikes us with surprise ; and this emotion forces upon the mind a momentary conviction that the object is greater or less than it is in reality : the same effect, precisely, attends figurative grandeur or littleness, and hence the hyperbole, which expresses this momentary conviction. A writer is generally more successful in magnifying by a hyperbole than in diminishing. The reason is, that a minute object contracts the mind, and fetters its power of imagination ; but that the mind, dilated and inflamed with a grand object, moulds objects for its gratification with great facility. Longinus cites .he following ludicrous instance of a diminishing hyperbole from a comic poet ; — ' he was owner of a plot of ground not larger than a Lacedemonian let-ter.' But, for the reason now given, the hyperbole has by far the greater force in magnifying objects. It is unnecessary to quote examples. Homer, Virgil, Shakspeare, and all our best

poets abound with them, and many are to be found in Scripture. See Gen. xiii. 15, 16; and John xxi. 25. The nicest point of all is to ascertain the natural limits of the hyperbole, beyond which, being overstrained, it has a bad effect. Longinus with great propriety compares this kind of hyperbole to a bow-string, which relaxes by overstraining, and produces an effect directly opposite to what is intended.'

HYPERBOLIC CONOID, a solid formed by the revolution of a cone about its axis.

HYPERBOLICUM ACUTUM, a solid made by the revolution of the infinite area contained between the curve of the hyperbola and its asymptote. This produces a solid, which, though infinitely long, and generated by an infinite area, is demonstrated by Torricelli to be equal to a finite solid body.

HYPERBO'REAN, n. s. Fr. hyperboreen ; Lat. hyperboreus. Northern.

HYPERBOREAN, in ancient geography, was applied to those people and places which were situated to the north of the Scythians. The ancients had very little acquaintance with these Hyperborean regions ; all they tell us of them is very dubious, much of it false. Diodorus Siculus says, the Hyperboreans were thus called, because they dwelt beyond the wind Boreas; wTTtp signifying beyond, and Boptac, Boreas, the north-wind. This etymology is more natural than that of Rudbeck, who would have the word to be Gothic, and to signify nobility. Herodotus doubts whether there were any such nations as the Hyperborean. Strabo, who believes there are, does not take Hyperborean to signify beyond Boreas or the north ; the preposition wTrtp, he supposes only to form a superlative, and to mean most northern Most modern geographers, as Hoffman, Cellarius, &c., place the Hyperboreans in the north parts of Europe, among the Siberians and Samoieds ; and think the Hyperboreans of the ancients were those who lived farthest to the north. The Hyperboreans of our days are those Russians who inhabit between the Volga and the White Sea. According to Cluvier, the name Celtes was synonymous with that of Hyperboreans.

HYPERCATALECTIC, adj. in Greek and Latin poetry, is applied to a verse that has one or two syllables too much, or beyond the regular and just measure ; as,

Musae sorores sunt Minervae

HYPERCRITIC, n. s. ? Fr. hypercri

HYPERCRIT'ICAL, adj. Clique; Gr. vntp, rpirteof. A critic captious beyond use or rea-son.

Those hypercriticfu in English poetry differ from the opinion of the Greek and Latin judges, from the Italians and French, and from the general taste of all ages. Dry den.

We are far from imposing those nice and hypercritical punctilios, which some astrologers oblige our gardeners to. Evelyn.

Such hypercritical readers will consider my business was to make a body of refined sayings, only taking care to produce them in the most natural man-ner. Swift.

HYPERDULIA, in the Romish theology (from uTrtp, above, and £aXta, worship), the

worship rendered to the holy virgin. The worship offered to the saints is called dulia; and that to the virgin hyperdulia, as being superior.

HYPERIA, in ancient geography, the seat of the Phaeacians near the Cyclops. Srme take it to be Camarina in Sicily ; according to others it is supposed to be Melita, an adjoining island. This is confirmed by Apolkmius Rhodius. The Phaeacians afterwards removed to Corcyra, being expelled by the Phoenicians, who settled in Melita before the Trojan war, on account of the commodious harbours.

HYPERICUM, St. John's wort, a genus of the polyandria order, and polyadelphia class of plants ; natural order twentieth, rotaceae : CAL. quinquepartite ; the petals five ; the filaments many, and coalited at the base into five pencils : CAPS, is a pencil. Of this genus there are

eighty-eight species, most of them hardy, deciduous shrubs, and undershrubby plants, adorned with oblong and oval simple foliage, and pentapetalous yellow flowers in clusters. The most remarkable are,

1. H. androsasmum, tutsan or park leaves, which has an upright undershrubby stalk, two feet high, branching by pairs opposite ; and, at the ends of the stalks, clusters of small yellow flowers appear in July and August, and are succeeded by roundish berry-like black capsules. This plant is hardy, and grows naturally in many parts of Britain. It has long held a place in the medicinal catalogues; but its virtues are not much valued at present. The leaves given in substance are said to destroy worms. By distillation they yield an essential oil. The flowers tinge spirits and oils of a fine purple color. Cows, goats, and sheep, eat the plant ; norses and swine refuse it. The dried plant, ooiled in water with alum, dyes yarn of a yellow color ; and the Swedes give a fine purple tinge ro their spirits with the flowers.

2. H. aseyron, or dwarf American St. John's wort, has spreading roots, sending up numerous slender, square stalks, a foot long ; oval, spear-shaped, close-sitting, smooth leaves, by pairs opposite ; and, at the end of the stalks, large yellow flowers. It is a hardy plant.

3. H. Canariense, has shrubby stalks, dividing and branching six or seven feet high ; oblong, close-sitting leaves by pairs; and, at the ends of the branches, clusters of yellow flowers appearing in June and July. This species and the hircinum propagate by suckers.

4. H. hircinum, or stinking St. John's wort. It rises three or four feet high, with several shrubby two-edged stalks from the root, branching by pairs opposite at every joint; oblong, oval, close-sitting, opposite leaves ; and, at the ends of all the young shoots, clusters of yellow flowers. Of these there are three varieties ; one with strong stalks, six or eight feet high, broad leaves, and large flowers ; the other with strong stalks, broad leaves, and without any disagreeable odor; the third bas variegated leaves. All these varieties are shrubby and hardy plants. They flower in June and July in such numerous clusters, that the shrubs appear covered with them ; and produce abundance of seeds in autumn.

•5. II. monogynum, the one-styled China hypericurrijTias a shrubby purplish stalk, about two feet high ; oblong, stiff, smooth, close-sitting leaves, of a shining green above, and white underneath ; clusters of

small yellow flowers, with colored cups, and only one style, flowering the greatest part of the year. This species is propagated by layers and cuttings, planted in pots, and plunged in a hot-bed.

HYPERIDES, an orator of Greece, and a disciple of Plato and Isocrates, who governed the republic of Athens. He defended with great zeal and courage the liberties of Greece ; but was put to death by Antipater's order, A. A. C. 322. He composed many orations, of which only one is extant. He was one of the ten celebrated orators of Greece ; and, though the intimate friend of Demosthenes, accused him of taking bribes, and obtained his banishment.

HYPERIUS (Andrew Gerard), a learned divine of Ypres. He was educated in France; but, embracing Protestant principles, he came to England,and afterwards settled as professor of divinity at Marpurg, where he died in 1564. His works make seven vols. folio.

HYPER'METER, n. s. Greek, ijrtp and psrpov. Any thing greater than the standard requires.

When a man rises beyond six foot, he is an hyper-meter, and may be admitted into the tall club.

Addison.

HYPERMNESTRA, in fabulous history, one of the fifty daughters of Danaus, king of Argos, the only one who refused to obey her father's bloody order. See DANAIDES and DANAUS.

HYPERSARCO'SIS, n.s. Gr. iwfpadpicaxrif, virtp and <mpKO£. The growth of fungous or proud flesh.

Where the hypersarcosia was great, I sprinkled it with precipitate, whereby I more speedily freed the ulcer of its putrefaction. Wiseman.

HYPERTHYRON, in architecture, a sort o table, usually placed over gates or doors of thf Doric order, above the chambranle, in form of a frieze.

HJ'PHEN, 7i. s. Gr. tyiv. A note of conjunction ; as, vir-tue, ever-living.

HYPNOTIC, n. s. Gr. ZTTVOS-Any medicine that induces sleep.

HYPNUM, feather-moss, in botany, a genus of the natural order of musci, and the cryptogamia class of plants. The antherae are

opercuiated, or covered with a lid ; thecalyptera smooth; the filament lateral, and rising out of a perichaetium, or tuft of leaflets different from the other leaves of the plant. There are*l56 species, many of them natives of Great Britain. The most remarkable are,

1. H. parietinum, which has shoots nearly flat and winged, undivided for a considerable length, and the leaves shining ; but the old shoots do not branch into new ones. It grows in woods and shady places, and is used for filling up the chinks in wooden houses, whence the trivial name.

2. H. proliferum is of a very singular snuc-ture, one shoot growing out from the centre of another ; the veil is yellow and shining ; the lid with a kir.d of long bill ; the leaves not shining ;

sometimes of a yellowish, and sometimes of a ueep green. This moss covers the surface of the earth in the thickest shades, through which the sun never snmes, and where no other plant can grow

HYPOBOLE, or subjection, from viro, and {3a\Xtit, I cast, in rhetoric, a figure, when several things are mentioned, and each of them is refuted in order. When complete it consists of three parts; a proposition, an enumeration of particulars with their answers, and a conclusion. Thus Cicero, upon his return from banishment, vindicates his conduct in withdrawing so quietly, and not opposing the faction that ejected him. See ORATORY.

HYPOCAUSTUM, from viro and raw, to burn, among the ancient Greeks and Romans, a subterraneous place, where was a furnace to heat the baths. Hypocaustum was also a kind of kiln to heat their

winter parlours. The remains of a Roman hypocaustum were discovered under ground at Lincoln in 1739. We have an account of these remains in the Philos. Trans. No. 461.

HYPOCH#,RIS, hawk's-eye, in botany, a genus of the polygamia aequalis order, and syngenesia class of plants ; natural order forty-ninth, compositae. The receptacle is paleaceous : CAL. a little imbricated ; the pappus glumy. There are five species, of which the most remarkable is the

H. maculata, or spotted hawk's-eye, a native of Britain. It grows on high grounds. The leaves are oblong, egg-shaped, and toothed ; the stem almost naked, generally with a single branch ; the blossoms yellow, opening at 6 A. M. and closing at 4 P. M. The leaves are boiled and eaten like cabbage. Horses are fond of this plant when green, but not when dry. Cows, goats, and swine eat it ; sheep are not fond of it.

H YPOCHON'DRES, n. s. } Fr. hypocondre ;

HYPOCHON'DRIAC, adj. > Gr. viroxovSpiov.

HYPOCHONDRI'ACAL, adj. j The two regions lying on each side of the cartilago ensiformis, and those of the ribs, and the tip of the breast, which have in one the liver, and in the other the spleen. — Quincy. Hypochondriac, melancholy ; because this disease was formerly supposed to be connected with the state of the liver, which is placed in the right hypochonddum.

Cold sweats are many times mortal, and always suspected ; as in great fears, and hypochondriacal passions, being a relaxation or forsaking of the spirits. Bacon's Natural History.

The blood, moving too slowly through the celiack and mesenterick arteries, produces various complaints in the lower bowels and hypochondries ; from whence such persons are called hypochondriack. Arbuthnot.

Socrates laid down his life in attestation of that most fundamental truth, the belief of one God : and yet he's not recorded either as fool or hypochondriack.

Decay of Piety.

HYPOCHONDRIASIS, in medicine. See MEDICINE.

HYFOCIST, n.$. Cr. Mctˆi Fr. hy-pociste.

ffypocist is an inspissated juice considerably hard and heavy, of a fine shining black colour, when bro-ken. The stem of the plant is thick and fleshy ; and much thicker at the top than towards the bottom. The fr'ijts contain a tough glutinous liquor, gathered be-

fore they are ripe : the juice is expressed, then formed into cakes. Hill.

HYPOCIST, or HYPOCISTIS is obtained from the sessile asarum, and greatly resembles the true Egyptian acacia. The juice is evaporated over a very gentle fire, to the consistence of an extract, and, when formed into cakes, is exposed to the sun to dry. It is an astringent of considerable power ; is good against diarrhoeas and haemorrhages of all kinds ; and may be used in repellent gargarisms in the manner of true aca-cia ; but it is rarely met with genuine, the Ger-man acacia being usually sold under its name. See ASARUM.

HYPOC'RISY, n. s. ˆ Gr. vTro/ep.ˆ and

HYP'OCRITE, n. s. f V7rorpir»jc. Dissi—

HYPOCRIT'ICAL, adj. ("mutation with re—

HYPOCRIT'ICALLY, adv. 3 gard to the moral or religious character; an insincere dissembling person : falsely; in a dissembling manner.

A wise man hateth not the law ; but he that is an hypocrite therein, is as a ship in a storm.

Ecclvi. xxxiii. 3.

Thou shalt not shrive thee for vaine glorie, ne for ypocrisie, ne for no cause, but only for the doute of Jesu Crist and the hele of thy soule.

Chaucer. The Persones Talc.

He heartily prays some occasion may detain us longer : I dare swear he is no hypocrite, but prays from his heart. Shakspeare.

Who can describe

Women's hypocrisies ? their subtle wiles,

Betraying smiles, feigned tears, inconstancies ?

Ot way's Orphan. Next stood Hypocrisy with holy leer,

Soft smiling and demurely looking down ;

But hid the dagger underneath the gown.

Dryden. Fair hypocrite, you seek to cheat in vain ;

Your silence argues, you ask time to reign. Id.

Now you are confessing your enormities ; I know it by that hypocritical, down-cast look. Id.

Kings and priests are in a manner bound

For reverence sake to be close hypocrites. Id.

Beware, ye honest : the third circling glass Suffices virtue ; but may hypocrites, Who slily speak one thing, another think, Hateful as hell, still pleased unwarned drink on, And through intemp'rance grow awhile sincere.

Phillips.

Whatever virtues may appear in him, they will be esteemed an hypocritical imposture on the world ; and, in his retired pleasures, he will be presumed a libertine. Rogers.

The making religion necessary to interest might increase hypocrisy ; but if one in twenty should be brought to true piety, and nineteen be only hypocrites, the advantage would still be great. Swift.

Hypocrisy is much more trouble than open infidelity and vice ; it wears the livery of religion, and is cautious of giving scandal : nay, continued disguises are too great a constraint : men would leave off their vices, rather than undergo the toil of practising them in private. Id, Let others skrew their hypocritick face. Id.

If I am nothing — For nothing shall I be an hypocrite, And seem well pleased with pain. Byron.

HYPOGAS'TRICK, adj. Yr.hypogastrique; Gr. viro and ya<ri/p. Seated in the lower part of the belly.

The swelling we supposed to rise from an effusion of serum through all the hypogastrick arteries.

Witeman.

HYPAGASTRIC, an appellation given to the ‘internal branch of the iliac artery.

HYPOGASTRIUM. See ANATOMY.

HYPOGE’UM, or HYPOGˆEUM, n. s. Gr. ‘viro and y»j. A name which the ancient architects gave to all the parts of a building that were under ground, as cellars and vaults. It was also used by the Greeks and Romans for subterraneous tombs in which they buried their dead.

HYPOGEUM, in astrology, a name given to the celestial houses below the horizon : especially the imum coeli, or bottom of heaven.

HYPOGLOSSI, externi, or majores, in anatomy, the ninth pair of nerves, called also lin-guales et gustatorii. See ANATOMY.

HYPOGLOSSIS, or HYPOGLOTTIS, of viro, under, and yXwrra, tongue, in anatomy, a name given to two glands of the tongue, situated under it , near the venae ranulares. There are other two, one on each side of it. They serve to fil-trate a kind of serous matter, of the nature of saliva, which they discharge into the mouth by little ducts near the gums.

HYPOLITE (St.), in France. See HIPPOLYTE.

HYPOMOCHLION, the fulcrum or prop of a lever, or the point which sustains its pressure in raising or lowering bodies. It is also used for a roller set under a lever, or under stones, timber, &c., to assist in removing them.

HYPONITRIC ACID. See NITRIC ACID.

HYPOPHOSPHORIC ACID. See PHOSPHORIC ACID.

HYPOSCENIUM, in antiquity, a partition under the Logeum, or pulpit of the Greek theatre, appointed for the music.

HYPOSTASIS, n. t. i Fr. hypostase ; Gr.

HYPOSTAT'ICAL, adj. J viroˆaaif. Distinct

subsistence ; personality, as applied to the holy Trinity : hypostatical, constituent as distinct ingredients; distinctly; personal.

Let our Carneades warn men not to subscribe to the grand doctrine of the chymists, touching their three hypostatical principles, till they have a little examined it. Boyle.

The oneness of our Lord Jesus Christ, referring to the several hypostaset in the one eternal, indivisible, divine nature, and the eternity of the Son's generation and his co-eternity and consubstantiality with the Father, are assertions equivalent to those comprised in the ancient simple article. Hammond.

HYPOSTASIS literally signifies substance, or subsistence, but is used in theology for person. Thus we hold that there is but one nature or essence in God, but three hypostases or persons. This term is of a very ancient standing in the church. St. Cyril repeats it several times, as well as the phrase union according to hypostasis. The first time it occurs is in a letter from that father to Nestorius, where he uses it instead of irpoffwTrov, the word we commonly render per-son, which did not seem expressive enough. This term occasioned great dissentions in the ancient church, both among the Greeks and the Latins. In the council of Nice hypostasis was

denned to denote the same with essence or substance ; so that it was heresy to say that Jesus Christ was of a different hypostasis from the Fa-ther ; but custom altered its meaning. In the necessity they were under of expressing themselves strongly against the Sabellians, the Greeks used the word hypostasis, and the Latins persona ; which proved the occasion of endless disagreement. The phrase rp«c viroˆaattf, used by the Greeks, offended the Latins, who translated wiroˆaffie by substantia. The barrenness of the Latin tongue in theological phrases allowed them but one word for the two Greek ones, aerta and vTTozaatc ; and thus disabled them from distinguishing essence from hypostasis. They therefore chose rather to

use the term tres per-sonse and tres hypostases. — An end was put to these logomachies in a synod held at Alexandria about A. D. 362. at which St. Athanasius assisted : after which the Latins made no scruple of saying tres hypostases, nor the Greeks three persons.

HYPOSULPHURIC ACID. See SULPHUEIC ACID.

HYPOTHEC, or HTPOTHECA, Gr. V7ro0jjici|, a thing subject to obligation ; in the civil law, an obligation, whereby the effects of a debtor are made over to his creditor to secure his debi. As the hypotheca is an engagement for the security of the creditor, various means have been made use of to secure to him the benefit of the convention. The use of the pawn or pledge is the most ancient, which is almost the same with the hypotheca ; all the difference consisting in this, that the pledge is put into the creditor's hands ; whereas, in a simple hypotheca, the thing remained in the possession of the debtor. It was found more easy to engage an estate by a civil covenant than by an actual delivery ; accordingly it was first practised among the Greeks ; and from them the Romans borrowed it ; only the Greeks, the better to prevent frauds, used to fix some visible mark on the thing, that the public might know it was hypothecated or mortgaged by the proprietor ; but the Romans, looking on such advertisements as injurious to the debtor, forbade the use of them. The Roman lawyers distinguished four kinds of hypothecas : the conventional, which was with the will and consent of both parties; the legal, which was appointed by law, and for that reason called tacitly the praetor's pledge, when, by the night or non-ap- pearing of the debtor, the creditor was put in possession of his effects ; and the judiciary, when the creditor was put in possession by virtue of a< sentence of the court.

HYPOTH'ENUSE, n. s. Fr. hypotenuse; Gr. vworivuffa. The line that subtends the s right angle of a right-angled triangle ; the sub-tense.

The square of the hypothenuse, in a right-angled triangle, is equal to the squares of the two other sides.

Locke .

HYPOTHENUSE. See GEOMETRY. HYPOTH'ESIS, n. s. -\ Fr. kypothese ; HYPOTHETICAL, adj, >Gr. v-iroGtaif. A HYPOTHET'ICALLY, adv. j supposition ; a sys-tem formed upon some principle not proved •

hypothetical, including a supposition : conditionally.

The mind casts and turns itself restlessly from one thing to another, till at length it brings all the ends of a long and various hypothesis together ; sees how one part coheres with another, and so clears off all the appearing contrarieties that seemed to lie cross, and make the whole unintelligible. South.

With imagined sovereignty Lord of his new hypothesis he reigns : He reigns : how long ? till some usurper rise : And he too, mighty thought, mighty wise, Studies new lines, and other circles feigns.

Prior.

The only part liable to imputation is calling her a goddess: yet this is proposed with modesty and doubt, and hy pathetically. Broome.

Conditional or hypothetical propositions are those whose parts are united by the conditional particle if ; as, if the sun be fixed , the earth must move.

Watt*.

HYPOTHESIS, in disputation. False hypotheses are often made, in order to draw the antagonist into absurdities ; and even in geometry truths are often deducible from false hypotheses. Every hypothetical proposition may be distinguished into hypothesis and thesis ; the first rehearses the conditions under which any thing is affirmed or denied ; and the latter is the thing itself affirmed or denied. Thus, in the propo-•ition, a triangle is half a parallelogram, if the bases andˆ altitudes of the two be equal ; the lat-ter part is the hypothesis, ‘ if the basis,’ &c., and tfie former the thesis, ‘ a triangle is half a parallelogram.’ In strict logic we are never to pass from the hypothesis to the thesis ; that is, the principle supposed must be proved, before we require the consequence to be allowed.

HYPOTHESIS, in physics, &c., denotes a sys-tem formed to account for some phenomenon or appearance of nature ; such as gravity, magnetism, the deluge, the tides, &c. The real causes of natural things generally lie very deep ; observation and experiment are in most cases extremely slow, and the human mind is very impatient : hence we often invent something that may seem like the cause, and which appears calculated to answer the several phenomena, so that it may possibly be the true cause.

HYPOTIPOSIS. See ORATORY.

HYPOXIS, in botany, a genus of the monogynia order, and hexandria class of plants ; natural order tenth, coronariae : COR. is divided into six parts, and persisting, superior: CAPS, narrowing at the base: CAL. a bivalved glume. Species thirteen, natives of warm climates.

HYPSICLES, an ancient mathematician of Alexandria, who flourished under Marcus Aurelius He wrote a work entitled Anaphoricus, or A Book of Ascensions, printed in Greek and Latin at Paris in 1680.

HYPSICRATES, an ancient Phoenician nis-torian, who wrote a history of Phoenicia in his native tongue, which was saved from the flames of Carthage when that city was destroyed, and translated into Greek.

HYPSIPYLE, in fabulous history, the daughter of Thoas, queen of Lemnos. All the women in the island having conspired to murder the men, in revenge for their husbands having pre-

ferred their female slaves to them, she saved het father's life. The Argonauts, soon after landing at Lemnos, rendered the women pregnant, and Hypsipyle had twins by Jason. Being afterwards banished by her subjects, she was taken by pirates, and sold to Lycurgus, king of Nemaea.

HYPSISTARII, from v^^of, highest, a sect of heretics in the fourth century ; so called from the profession they made of worshipping the most high God. Their doctrine was a compound of Paganism, Judaism, and Christianity. They adored the most high God with the Christians ; but they also revered fire and lamps with the Heathens, and observed the sabbath, and the distinction of clean and unclean things with the Jews. They bore a near resemblance to the Euchites, or Massaliaus.

HYRAX, the saphan, or ashkoko, in zoology, a genus of the mammalia class of animals, and of the order of glires. The generic characters are,

two broad and distinct fore teeth above ; four contiguous, broad, flat notched, fore teeth oelow ; and four large grinders on each side in both jaws. The fore feet have four toes, the hind feet only three. There is no tail, and the clavicles are wanting. There are two species.

1. H. Capensis, the Cape ashkoko, has flat nails on all the toes, except one toe of each hind foot, which is armed with a sharp-pointed claw. It inhabits the Cape of Good Hope ; is about the size of a rabbit, being about fifteen inches long ; the head is short, with the back part very thick, and the snout very short and blunt ; the eyes are small ; the ears oval and open, brown, woolly, and half hid in the fur ; the legs are very short, the upper joints of both being concealed beneath the skin; the hind legs are rather longer than the fore ; the feet are large, black, and naked ; the body is short, thick, and contracted, with a prominent belly, and is covered with a soft woolly fur, of a yellowish-brown or grayish color, hoary at the roots ; the sides are of a dirty whitish gray, and along the back is a brownish stripe. This fur is interspersed with longer and coarser black hairs, and a few very coarse long bristles. The fore feet have four short, scarcely divided, thick toes, furnished with flat nails ; the two outer toes of the hind feet are similar, but the inner toe is longer, and has a sharp claw. This animal has a sharp voice, and acute sense of hearing ; its gait is very wavering and unsteady, owing to the shortness of its thighs, and unequal length of the hind and fore legs ; notwithstanding which it is very active, and moves by leaps ; it is very cleanly, lives entirely on vegetable food, drinks little, is fond of heat, and burrows in the ground. In manners and general appearance this animal resembles the mar-mot and cavy ; in the conformation of its toes it has some analogy with the maucauco ; but, from the circumstances of the teeth, it cannotbe ranked with the last ; and the peculiarity of the feet has caused Gmelin to separate it from both of the former.

2. H. Syriacus, the Syrian ashkoko, of Bruce and Schreber, has soft tender nails on all the toes. It inhabits Syria and Ethiopia. The body of this species is more lengthened than that of the former, and the snout more oblong. The

fur is of a reddish-gray color, like that of the wild rabbit ; the throat, breast, and belly, being white ; all over the body a number of long, strong, and polished hairs, are scattered among the fur. The body and head of the individual described by Mr. Bruce measured seventeen inches; the ears are broad, open, and rounded ; each side of the mouth is garnished with long whiskers: in walking, which is performed creeping low with the belly almost touching the ground, the hind feet are used as far as the heel ; all the toes have short, broad, weak, flat nails, except the inner toe of the hind foot, which is provided with a flat crooked nail somewhat longer than the rest ; the soles of the feet are formed of fleshy naked protuberances divided by furrows. It lives mostly about the mouths of caves or clefts in rocks, is gregarious, feeds entirely on vegetables, is mild, feeble, timid, and easily tamed, and has no voice or cry. Mr. Bruce is of opinion, that this animal is the gannim, or daman Israel, of the Arabs, and the saphan of sacred Scripture, which has erroneously been translated the rabbit. Its flesh is very white, but is not eaten by the Abyssinians or Mahommedans. He is also of opinion, that it rmninates, or chews the cud.

HYRCANIA, in ancient geography, a country of the Farther Asia, lying south-east of the Mare Hyrcanum ; with Media on the east, Parthia on the south, and Margiana on the west, famous for its tigers, vines, figs, and olives.

HYRCANIA, the metropolis of the above country, thought to be the Tape of Strabo, the Syrinx of Polybius, the Zeudracarta of Arrian, and the Asaac of Isidorus Characenus.

HYRCANIA, an ancient town of Lydia, in the campus Hyrcanus, near Thyatira ; destroyed by an earthquake in the reign of Tiberius ; so called from colonists from Hyrcania. The peo-ple were called Hyrcani Macedones, because mixed with Macedonians.

‘ f Are all from the Saxon byrij-t,

HERST!) a wood or grove’

HYSSOP, n. t. Fr. hyssope ; Lat. hyssopus. A verticillate plant.

The hyssop of Solomon cannot be well conceived to be onr common hysinp • for that is not the least of vegetables observed lo grow upon walls ; but rather some kind of capillaries, which only grow upon walls and stony places. Browne.

It hath been a great dispute, whether the hyssop commonly known is the same which is mentioned in Scripture. Miller.

HYSSOP. See HYSSOPUS.

HYSSOP, HEDGE. See GRATIOLA.

HYSSOP, MOUNTAIN. SeeTnYMBRA.

HYSSOPUS, hyssop; a genus of the symn.0-spermia order, didynamia class of plants. There are three species ; but only one of them is cultivated for use : *viz.*

H. ofrkinalis, the common hyssop : it has under shrubby, low, bushy stalks, growing a foot and a half high ; small, spear-shaped, close-setting, opposite leaves, with several smaller ones rising from the same joint : and all the stalks and branches terminated by erect whorled spikes of flower* of different colors in the varieties. They arc very hardy plants ; and may be propagated either

by slips or cuttings, or by seeds. The leaves have an aromatic smell, and a waˆm pungent taste. Besides the general virtues of aromatics, they are particularly recommended in humoral asthmas, coughs, and other disorders of the breast and lungs ; and are said to promote expectoration greatly. Hyssop was generally used in purifications amongst the Jews by way of sprinkling. Sometimes they add a little wool to it of a scarlet color. They dipped a bunch of hyssop, some branches of cedar and red wool, in water mingled with the blood of a bird, in purifying lepers.

HYSTASPES, a noble Persian of the royal race of the Achaemenides, the father of king Darius I. He was the first who introduced the learning and sciences of the Indian Brahmins into Persia. Ctesias says he was killed by a fall from a mountain, whither he had gone to see a royal monument erected by Darius.

HYSTERIA, or the hysteric affection, from wztpa, the womb, a disease in women, called also suffocation of the womb, and vulgarly fits of the mother. It is aspasmodico-convulsive affection of the nervous system, proceeding from the womb. See MEDICINE, Index.

orders in the womb : a state troubled with these disorders.

In hysterick women the rarity of symptoms doth oft strike an astonishment into spectators. Harvey.

Many hysterical women are sensible of wind passing from the womb. Flayer on the Humours.

Parent of vapours, and of female wit, Who gave the hysterick or poetic fit. Pope.

This terrible scene made too violent an impression upon a woman in her condition, and threw her into a strong hysterick fit. Arbuthnot and Pope.

A kind of wild and horrid glee, Half epileptical and half hysterical.

Byron. Don Juan.

HYSTERON PROTERON, in grammar and rhetoric, a species of hyperbaton, wherein the proper order of construction is so inverted, that the part of any sentence which should naturally come first is placed last : as in this of Terence, Valet et vivit, for vivit et valet : and in the following of Virgil, Moriamur, et in media arma ruamus, for In media arma ruamus, et moria-mur.

HYSTRIX, in zoology, the porcupine, a genus of quadrupeds belonging to the order of glires. The characters are these : they have two fore teeth, obliquely divided both in the upper and under jaw, besides eight grinders ; and the body is covered with quills or prickles. There are five species, *viz.*

1. H. cristata, the crested porcupine, has four toes on the fore feet, five on the hind feet, a crested head, a short tail, and the upper lip is divided like that of a hare. The length of the body is about two feet, and the height about two and a half. The body is covered with prickles, some of them nine or ten inches long, and about one-fourth of an inch thick. Like the heds;e-ho<_r, he rolls himself up in a globular form, in •rhich position he is proof against the attacks of the most rapacious animals. The prickles ar*»

exceedingly sharp, and each of them has five large black and as many white rings, which succeed one another alternately from the root to the point. These quills the animals can erect or let down at pleasure; when irritated he beats the ground with his hind feet, erects his quills, shakes his tail, and makes a considerably rattling noise with his quills. Most authors have asserted that the porcupine, when irritated, darts his quills to a considerable distance against the enemy. But count Buffon and some other late naturalists, after repeatedly irritating him without effect, assure us, that he possesses no such power. He says, indeed, that when the creature was much agitated with passion, some of the quills, which adhered but slightly to the skin, would fall off, particularly from the tail ; and this circumstance, he imagines, has given rise to the mistake. The porcupine, though originally a native of Africa and the Indies, can live and multiply in the more temperate climates of Spain and Italy. Pliny, and every other natural historian since Aristotle, tell us, that the porcupine conceals itself during winter, and brings forth its young in eighty days. But these circumstances remain to this day uncertain. The porcupine, in a domestic state, is not a fierce or illnatured animal ; with his fore feet, which are strong and sharp, he can cut through a strong board ; he eats bread, fruits, roots, &c.; he does considerable damage when he gets into a garden.

2. H. dorsata, or Canada porcupine, the urson of Buffon, has four toes on the fore feet, five on the hind feet ; and has quills only on the back, which are short, and almost hid among the long hair He is about two feet long. This species inhabits North America as high as Hud-son's Bay ; and makes its nest under the roots of great trees. It will also climb among the boughs, which the Indians cut down when one is in them, and kill the animal by striking it over the nose. They are very plentiful near Hudson's Bay ; and many of the trading Indians depend on them for food. They feed on wild fruits and bark of trees, especially juniper; eat snow in winter, and drink water in summer, but avoid going into it. When they cannot avoid their pursuer, they will sidle towards him, in order to touch him with the quills, which seem but weak weapons of offence ; for, on stroking the hair, they will come out of the skin sticking to the hand. The Indians stick them in their noses and ears, to make holes for the placing their ear-rings and other finery : they also trim the edges of their deer-skin habits with fringes made of the quills, or cover with them their bark boxes.

ii. H. dorsata alba, the white Canadian porcupine, is a variety mentioned by M. Pennant, of a uniform white color.

3. H. macroura has five toes both on the hind and fore feet ; his tail is very long and the prickles are elevated. He inhabits the isles of the Indian Archipelago, and lives in the forests.

4. II. Mexicana, the Mexican porcupine, the hoitzlacuatzin, or the coendon of Buffon, is of a ausky color, with very hong bristles intermixed with the down : the spines three inches long, slender, and varied with white and yellow ;

scarcely apparent except on the tail, which Hernandez says is thicker and shorter than that of the prehensilis. He adds that the tail from the middle to the end is free from spines ; and that he grows to the bulk of a middle-sized dog. His length is eighteen inches from the nose to the tail ; the tail nine French measure, but taken from a mutilated skin. He inhabits the mountains of Mexico, lives on fruits, and may be easily tamed. The Indians pulverise the quills, and say they are very efficacious in gravelly cases; and applied whole to the forehead will relieve the most violent head-ache. They ad-here till filled with blood, and then drop off. Count Buffon confounds this species with the prehensilis, of which he makes it a third variety ; but Pennant, who had seen a specimen, ranks it as a distinct speciesrin which he is followed by Kerr.

5. H. prehensilis, or the Brasilian porcupine, has four toes on the fore feet, five on the hind, and a long tail. It is considerably less than the cristata, being only seventeen inches long from the point of the muzzle to the origin of the tail, which is nine inches long ; and the legs and feet are covered with long brownish hair ; the rest of the body covered with quills interspersed with long hair; the quills are about five inches long, and about one-twelfth of an inch in diameter. He feeds upon birds and small animals. He sleeps in the day like the hedgehog, and searches for his food in the night. He climbs trees, and supports himself by twisting his tail round the branches. He is generally found in the high grounds of America from Brasil to Louisiana, and the southern parts of Canada. His flesh is esteemed very good food.

HYTHE, or HITHE, an old market town of Kent and one of the Cinque Ports, had formerly four churches, and was, according to Leland, * a very great town in length.’ At present it has neither port nor buildings of any moment ; the beach being nearly a mile from the town.

Queen Elizabeth in the seventeenth year of her reign, granted a

charter of incorporation to the mayor, twelve jurats, and twenty-four com-mon-council men of the town and port ot Hythe, who, with the freemen, making about 140 in num-ber, chose two members of parliament, formerly returned by the town ; it now sends but one

The houses are chiefly situated in one long street, running parallel with the sea, but having smaller ones branching off at right angles. The court-hall and market-place are in the centre of the town ; the latter was built by Philip viscount Strangford, who represented this port in parliament in the twelfth of Charles II. All the houses on the side of the hill have an uninterrupted view of the sea southward, Romney Marsh, and the adjacent country. The old market, on Saturdays, has been long disused, though the farmers have for some time held a meeting on Thursdays, for selling their corn.

There are two hospitals, or alms-houses, in the parish of .Hythe ; one called St. Bartholomew's, and the other St. John's. The former was founded by Haimo, bishop of Rochester, about the year 1336, and is situated at a short distance south-westward from the church. There are ten poor persons, five men and five women, and 100

I

acres of land belonging to this foundation. It is unaer the management of three trustees, now called wardens, chosen by the mayor and corporation. The hospital of St. John is situated at the east end of the town in High Street. Its revenues are at present derived from fifty-four acres of land. The number and qualifications of the poor relieved are at the discretion of the tiustees, and there are six apartments for their accommodation. The church is a spacious old structure, consisting of a nave, chancel, two aisles, and north and south transepts, with a tower at the west en I. From the centre rises' a low tower, of early English architecture. It occupies a very elevated situation on the acclivity of the hill above the town. The room over the

porch is the Town Hall, where the mayor and other members of the

corporation are chosen. In the crypt or vault, under the east of the chancel, is piled a vast quantity of human skulls and bones ; the mass being twenty-eight feet in length, and eight feet in height and breadth. They are supposed to have been the remains of Britons, slain in a bloody battle fought on the shore between this place and Folkstone, with the retreating Saxons in the year 456 ; and to have attained their whiteness by lying for some time exposed to the sea spray. Several of the skulls have deep cuts in them. A military canal commences at this place, and proceeds to the neighbourhood of Appledore.

I & J.

I is the ninth letter in the alphabet, and considered both as a vowel and a consonant, though as the vowel ai.d consonant differ in form as well as sound they may be more properly accounted two letters. It is called in the Hebrew, Jod ; Chald. Jud; Arab. Jc ; Assyr. Jothim; ˆ.gypt. Joquum, Jamin; Arm. Inni, Je, Jech; Gr. Iwra; Lat. I : it is a personal pronoun, answering to the Gr. fyu), and Lat. ego; Goth, ik; Sax. ic; Dut. ic/t; as I, accusative me, from Gr. /«; plural we; accus. plu. us. Me is sometimes written for I, and I was often used in common conversation for yea, aye, yes : I is the first person as opposed to all others, as I myself, used emphatically. I, at the beginning of a word in the common edition and even the MS. of Chaucer, often repiesents a corruption of the Sax. prepositive expletive particle He, which, in some editions of his works, is represented by y.

There is none greater in this house than /.

Gen. xxxix. 9. Be of good cheer, it is /; be not afraid.

Matt. xiv. 27.

I have now ben a court-man all my lif ; And God it wot, though / unworthy be, *have stonden in ful gret degree Abouten lordes of ful high estat : Yet had* never with non of hem debat ; 7 never hem contraned, trewely *wot wel, that my lord can more than 7; What that he saith,* holde it firme and stable 1 say the same or clles semblable.

Chaucer. The Merchants Tale. I do not like these several councils, I.

Shafupeare.

Hath Romeo slain himself? Say thou but *, And that bare vowel,* , shall poison more Than the death-darting eye of cockatrice. Id.

Did your letters pierce the queen ? — 7, sir ; she took ‘em and read ‘em in my presence And now and then an ample tear trilled down. Id.

What shall I do to be for ever known, And make the age to come my own ? 7 shall like beasts or common people die, Unless you write my elegy. Cowley.

Hence, and make room for me. When chance of business parts us two, What do our souls, I wonder, do? Id.

Thus, having passed the night in fruitless pain, / to my longing friends return again.

Dryden’s JEneid. Sweet contemplation elevates my sense,

While 7 survey the works of providence. Gay. Of night impatient, we demand the day,

The day arrives and for the night toe pray.

Blackmore.

There is but one man whom she can have, and that is me. Clarissa.

I vowel has a long sound, as fine, thine, which is usually marked with an e final ; and a short sound, as sin, thin. Prefixed to e it makes a diphthong of the same sound with the soft i, or double e, ee: thus field, yield, are spoken as feeld, yeeld ; except friend, which is spoken frend. Subjoined to a or e it makes them long, as fail, neigh : and to o makes a mingled sound, which approaches more nearly to the true notion of a dipthong, or sound composed of the sounds of two vowels, than any other combination of vowels in the English language, as oil, coin. The sound of j, before another i, and at the end of a word, is always expressed by y.

It is pronounced by throwing” the breath suddenly against the palate, as it comes out of the larynx, with a small hollowing of the tongue, and nearly the same opening of the lips as in pronouncing a or e. The ancients sometimes changed i into u ; as decumus for decimus ; maxumus for maximus, &c. I and J have long been considered as one letter by grammarians, with different sounds and powers, according to

its position; and Mr. Bayle, in his Historical and Critical Dictionary, also arranges Y along with them. As a numeral, I signifies one, and stands for so many units as it is times repeated : thus I, one ; II, two ; III, three, &c. ; and when put before a higher numeral, it subtracts its value, as IV, four; IX, nine, &c. But, when set after it, so many are added to the higher numeral as there are I's added : thus VI is 5 -(- 1, or six ; VII, 5 + 2, or seven ; VIII, 5 + 3, or eight. The ancient Romans likewise used IQ, for 500, CIˆ for 1000, 133 for 5000, C for 10,000, 1333 for 50,000, and for 100,000.

JAAR, a river of the kingdom of the Netherlands, which, rising in the province of Liege, near Tongres, falls into the Meuse at Maastricht.
JAB'BER, v. a. 1 Scot, gabben ; horn gab, JAB'BERER, n. s. $ the mouth ; Belg. gabberan. To talk inarticulately, indistinctly, or idly. See GABBER.

Out-cant the Babylonian labourers At all their dialects of jabberers. ffudibras. We scorn, for want of talk, to jabber Of parties. Swift.

JABLONSKI (Daniel Ernest), a learned Po-lish Protestant divine, born at Dantzic in 1660. He became successively minister of Magdeburg, Lissa, Koningsberg, and Berlin ; and was at length ecclesiastical counsellor, and president of the Academy of Sciences at the latter. He took great pains to effect a union between the Lutherans and Calvinists ; and wrote some works which are esteemed, particularly Meditations on the Origin of the Scriptures, &c. He died in

JABLONSKI (Paul Ernest), the son of the above, was born at Berlin, and became professor of divinity at Frankfort on the Oder. He wrote, 1. Disquisitio de lingua Lycaonica; 2. De Memnone Graecorum ; 3. Institutiones Historic Ecclesiastics, 2 vols. 8vo. ; 4. Pantheon ./Egypticorum, 3 vols. 8vo. He died in 1757,

JABLONSKI (Theodore), counsellor of the court of Prussia, and secretary of t'ne Royal Academy of Sciences at Berlin, was also a man of distinguished merit. He published in 1711 a French and German Dictionary ; a Course of Morality in 1713; a Dictionary of Arts and Sciences in 1721 ; and translated Tacitus de Moribus Germanorum into high Dutch in 1724. JACAMAR (galbula, Brisson). These brilliant birds are nearly connected with the kingfishers, from which, however, they differ by the form of their beak and feet. Their plumage has a metallic lustre; which it is almost impossible to imitate by art. They live in damp woods, and feed cm insects. Most if not all the true jacamars, are natives of tropical America. There are several species found in India, having a shorter and stouter beak, to which Le Vaillant has given the generic name of jacamerops.

JACATRA, a district and formerly a kingdom of Java, of which Batavia is the capiul. The last of its sovereigns being subdued by the Dutch East India Company's troops, in the year 1619, they have ever since been possessed of it. The country comprised thirty districts, containing together 33,914 families, or 203,484 inhabitants, and is watered and fertilised by several rivers, most of which, however, arc little better than rivulets in the dry season. Its productions are coffee, sugar, and rice, indigo, cotton-yarn, turmeric, and cadjang or lentiles, from which last the inhabitants express oil.

JA'CENT, adj. Lat.jaceres. Lying at length. So laid, they are more apt in swagging down to pierce than in the jacent posture.

Wotton't Architecture.

JACHAL, a river of Chili, in the province of Cuyo, which runs east, and loses itself in a lake. It has a small town of tha same name near it.

JACI, JACI D'AQUILA, or JACI REALE, a maritime town in the Val di Demona, on the coast of Sicily, situated near the foot of Mount /Etna.

It is protected by a fort; and the river Acis, from which the town anciently took its name, forms a harbour here. The buildings are chiefly of indurated lava, in which the country abounds. The inhabitants manufacture considerable quantities of linen. The environs are fertile in fruit, silk, hemp, and flax. Population 11,000. Ten miles N. N. E. of Catania, and fifteen south by west of Taormind.

JA'CINTH, n. s. (For hyacinth.) The same with hyacinth. A gem of a deep reddish-yellow, approaching to a flame color, or the deepest amber. — Woodward.

The same properties I find ascribed to the jacinth, and topaze. They allay anger, grief ; diminish madness ; much delight and exhilarate the mind.

Burton. Anatomy of Melancholy.

JACK, n. s. Probably from the Fr. Jaques, James, says Dr. Johnson : but there was a Sax. Seoj and Goth, jog, jugg, from og, ug, young, meaning a young lad.

The diminutive of John. Used as a general term of contempt for saucy or paltry fellows. So hideous was the noise, a benedicite !

Certes he Jukke Straw and his meinie

Ne maden never shoutes half so shrille,

Whan that they wolden any Fleming kille,

As thilkc day was made upon the fox.

Chaucer. The Nonnes Prees'es Tale.

You will perceive that a Jack gardant cannot Office me from my son Coriolanus. Shahspeare.

Every Jack siave hath his belly-full of fighting, and 1 must go up and down like a cock that nobody can match. /^

JACK BOOTS, n. s. From jack, a coat of mail. Boots which serve as armour to the legs.

A man on horseback, in his breeches and jack boots, dressed up in a commode and a night rail.

Spectator.

JACK BY THE HEDGE, re. s. Erysimum alliaria.

Jack by the hedge is an herb that grows wild under hedges, is eaten as other sallads are, and much used in broth. Mortimer.

JACK PUDDING, n. s. Jack and pudding. A zani ; a merry-andrew.

Every Jack pudding will be ridiculing palpable weaknesses which they ought to cover. L' Estrange.

JACK WITH A LANTERN. An ignis fatuus.

JACKAL (cam's aureus, Lin.). There is no essential difference between the dog and the jackal, as they will breed together, producing prolific offspring. This species of quadrupeds is very widely extended throughout the warmer regions of the old world. It is found in Africa, from Barbary to the Cape of Good Hope ; in Syria, in Persia, aad throughout all southern Asia. It is about two feet and a half in length, and about fourteen inches in height; the length of the tail about eight inches ; the eyes are small ; the tail bushy ; the head, neck, sides of the belly, thighs, and outer part of the limbs and ears, of a dirty yellow ; underneath and on the sides of the lower jaw, the end of the upper lip, under the neck and belly, and the inner surface

of the limbs, somewhat white ; the back and sides of the body, to the tail, of a grey-yellow, which is abruptly divided from the surrounding lighter colors ; the tail, a mixture of yellow and black hair, the black prevailing at the extremity ; the muzzle and nails black. AH travellers who have been in the countries where the jackals are found, mention the ravages they commit, and their dreadful nocturnal cries, which, answered as they are by all their companions, produce the most appalling effects. Their voice has often been described as more terrific

than the howl of the hyaena or the roar of the tiger, and deprives of repose all hearers who have not been long accustomed to it. The jackal can be tamed with tolerable facility, but always preserves an extreme timidity, which he manifests by concealing himself on hearing the slightest unusual sound, or at the sight of a person whom he is unaccustomed to. This fear is different from that of most wild animals, and he closely resembles a dos in fear of chastisement, for he will offer no resistance when he is touched. The most celebrated commentators on the Bible consider that the 300 ani i als, to whose tails Samson tied firebrands, were jackals. This opinion is grounded on the great number of these animals found in Syria, and on their assembling in large packs; whereas the fox is comparatively scarce, and is always solitary. The jackal has been popularly termed the lion's provider, from an opinion that it rouses the prey for that quadruped. The fact appears to be, that every creature in the forest is set in motion by the fearful cries of the jackals; the lion and other beasts of prey, by a sort of instinct and the call of appetite, attend the chase, and seize such timid animals as betake themselves to flight at the noise of this nightly pack. Buffon gives the following character of the jackal: "It unites the impudence of the dog with the cowardice of the wolf, and, participating in the nature of each, is an odious creature, composed of all the bad qualities of both."

JACKALE'NT, n. s. Jack in Lent, a poor starved fellow. A simple sheepish fellow.

You little jackalent, have you been true to us ? — Ay, I'll be sworn.

S/iahspeare. Merry Wives of Windsor.

JACK'ANAPES, n. s. Jack and ape.

Monkey ; an ape.

A coxcomb ; an impertinent Which is he 1

— That jackanapes with scarfs. Shakspeare.

People wondered how such a young upstart jackanapes should grow so pert and saucy, and take so much upon him. Arbuthnot.

JACKDA'W, n. s. Jack and daw. A cock daw; a bird taught to imitate the human voice.

To impose on a child to get by heart a long scroll of phrases, without any ideas, is a practice fitter for a jackdaw than for any thing that

wears the shape of man. Watts.

JA'CKET, n. s. Fr. jacquel. A short coat; a cloie waistcoat.

In a blue jacket, with a cross of red.

Hubberd's Tales.

She fell upon the jacket of the parson, who stood gaping at her. L' Estrange.

JACKSON, a county of the United States, in Indiana, west of Clark and Jefferson counties, north of Washington, east of Orange, and south of Indian county. It is watered by White River and its creeks, and was laid out in 1815.

JACKSON, a county of the United States, in

West Tennessee. Its chief town is Williamson.

JACKSON, a town in the United States of North

America, in the county of Washington, and state

of New York.

JACKSON, a town in the United States of North America, in the county of Waldo, and state of Maine : twenty-three miles N. W. of Castine. Population 493.

JACKSON, CAPE, or POINT JACKSON, a cape on the coast of New Holland. Long. 175° 10' E., lat. 40° 54' S.

JACOB, Heb. aipv, i. e. a supplanter. The son of Isaac and Rebekah, was born A. M. 2168, and A. A. C. 1836. The history of this patriarch is recorded in Genesis xxv. He died in Egypt in the 147th year of his age, and was honorably interred in Abraham's burying-place, near Hebron.

JACOB (Giles), an eminent lawyer, born at Romsey, in Southamptonshire, in 1686. He is principally known for his Law Dictionary in 1 vol. folio, which has been often printed. He also wrote two dramatic pieces ; and a Poetical Register, containing the lives and characters of English dramatic poets. He died in 1744.

JACOB (Henry), celebrated as the founder of the first Independent or Congregational church in England, was a native of Kent, and received his academical education at St. Mary's Hall, Oxford. Having entered into holy orders, he was made precentor of Corpus Christi College, and afterwards obtained the benefice of Cheriton in Kent. In the year 1604 he published Reasons taken out of God's Word, and the best of Human Testimonies, proving the Necessity of Reforming our Churches of England. The publication of this, and of another work, against what was falsely called ' learned preaching,' drew down upon him the persecution of bishop Bancroft, and to avoid this persecution he fled to Holland. At Leyden he met with Mr. Robinson, with whom he had frequent conferences, and became a convert to what were then called Brownist principles, since known by the name of Independency. In Holland he published several treatises, and upon his return he avowed a design of setting up a separate congregation upon the model of those in Holland. This, in a short time, he carried into effect, and thus laid the foundation of the first Independent Congregational church in England. He was elected pastor of the church, and continued with his people till the year 1624, when, being desirous of entering on a more enlarged sphere of usefulness, he went to Virginia, where he soon afterwards died. He was author of many publications, which were highly esteemed in his day. JACOB'S LADDER, n. s. Polemonium ; the same with Greek valerian.

JACOB'S STAFF, n. s. A pilgrim's staff. Staff concealing a dagger. A cross staff; a kind of astrolabe.

JACOB BEN HAJIM, a rabbi famous for the

collection of the Masora in 1515, together with the text of the Bible, the Chaldaic paraphrase, and Rabbinical commentaries.

JACOB BEN NAPHTHALI, a famous rabbi of the fifth century : he was one of the principal Maso-rets, and bred at the school of Tiberias in Palestine with Ben Aser. The invention of the vowel points, and of accents to facilitate the reading of the Hebrew, are ascribed to these two rabbies : and said to have been begun in an assembly of the Jews held at Tiberias, A. D. 476.

JACOB£,US (Oliger), a celebrated professor of physic and philosophy at Copenhagen, born in 1651 at Aarhusen in Jutland, where his father was bishop. Christian V. intrusted him with the management of his grand cabinet of curiosities ; and Frederick IV., in 1698, made him counsellor of his court of justice. He wrote many medical works, and some excellent poems.

JAC'OBINE, n. s. A pigeon with a high tuft. — Ainsworth.

JACOBINS, in history, the name of one of the principal parties in the French revolution, so called from their meeting in the hall of the Jacobin Friars at Paris. Many of them were members of the constituent national assembly of France, and many more were deputies to the different conventions which succeeded it. They are represented as having been determined enemies to monarchy, aristocracy, and the Christian religion. The origin of this sect or party has been ascribed to M. Voltaire, < who, being weary,' as he said himself, ' of hearing people repeat, that twelve men were sufficient to establish Christianity, resolved to prove that one might be sufficient to overthrow it. Full of this project, he swore, before 1730, to dedicate his life to its accomplishment ; and for some time he flattered himself that he should enjoy alone the glory of destroying the Christian religion. He found, however, that associates would be necessary ; and, from the numerous tribe of his admirers and disciples, he chose D'Alembert and Diderot as the most proper persons to co-operate with him in his designs. He contrived to embark in the same cause with Frederick II. of Prussia, who wished to be thought a philosopher, and •who of course deemed it expedient to talk and write against a religion he had never studied, and into the evidence of which he had probably never deigned to enquire. This royal adept was one of the most zealous of Voltaire's coadjutors, till he discovered that the philosophists were waging war with the throne as well as with the altar. The abbe Barruel says, that ' at its very first appearance, this sect counted 300,000 adepts ; and it was supported by 2,000,000 of men, armed with torches and pikes, and all the firebrands of the revolution ; ' and, he adds, that it was ' the coalition of a triple sect, of a triple conspiracy, in which, long before the revolution, the overthrow of the altar, and the ruin of the throne, had been debated

and determined.' See FRANCE.

JAC'OBITE, n. s. & adj.) Lat.jaco&ws. A

JAC'OBITISM, n. s. $ term applied to

those who disseminated the doctrines of one Jacob, a Syrian, which taught the single nature of Christ in opposition to the received doctrine

of his two-fold character as human and divine : also a term of political import, applied to those who were attached to the cause of king James II. This word is also used for Jacobin, or White Friar.

Sometimes am I hore and olde, Now I am yong and stout and bolde, "Now am I Robert now Robin, Now Frere Minor, now Jacobin.

Chaucer. Romaunt of the Rote.

He [James] made puritans in his time, as Jansenists have been since made in France, and Jacobites in Britain by calling men so, and by treating them as such. Bolingbroke.

JACOBITES, a term of reproach bestowed on persons who, vindicating the doctrines of passive obedience and non-resistance to princes, disapproved of the revolution of 1688, and asserted the supposed rights of the Stuart family.

JACOBITES, in church history, a sect of Christians in Syria and Mesopotamia; so called either from Jacob, a Syrian, who lived in the reign of the emperor Mauritius, or from one Jacob, a monk who flourished in 550. They are of two sects, some following the rites of the Latin church, and others continuing separated from it. There is also a division among the latter, who have two rival patriarchs. They hold but one nature in Jesus Christ ; with respect to purgatory, and prayers for the dead, they are of the same opinion with the Greeks and other eastern Christians : they consecrate unleavened bread at the eucharist, and are against confession, believing that it is not of divine institution.

JACOBS (Jurian), an eminent Swiss painter, born in 1610. He was the disciple of F. Sny-ders, and painted portraits, historical pieces, and animals, particularly the latter, in a masterly manner. He died in 1664.

JACOBUS, a gold coin, worth 25s. so called from king James VI. See COIN. There are two kinds of jacobus, the old and the new ; the former valued at 25s. weighing six pennyweights ten grains ; the latter called also carolus, valued at 23s., weighing five pennyweights twenty grains.

JACQUELOT (Isaac), a French protestant di-vine, born at Vassy, in 1647. On the revocation of the edict of Nantes, he retired to the Hague, and thence to Berlin, where he was made chaplain to the king of Prussia. While he lived at Berlin, he entered into a warm controversy with MT. Bayle on the doctrine advanced in his dictionary favoring Manicheism, which continued until his death. In this dispute M. Jacquelot declared in favor of the Remonstrants. He wrote, 1. Dissertations sur 1' Existence de Dieu; 2. Dissertations sur le Messie ; 3. Lettres 4 Messieurs les Prelates de 1'Eglise Gallicane ; 2 vols. of Sermons, &c. He was employed in finishing an important work on the divine authority of the holy Scriptures, when he died suddenly in 1708, aged sixty-one.

JACQUINIA, in botany, a genus of the monogynia order, and pentandria class of plants : COR. is decemfid ; the stamina inserted into the receptacle ; the berry monospermous. Species five, natives of the West Indies.

JACTITA'TION, n.s. Lat.jactito. Tossing motion ; restlessness ; heaving. A term in the canon law for a false pretension to marriage.

If the patient be surprised with jactitation, or great oppression about the stomach, expect no relief from cordials. Harrey.

JACULATION, n. s. Lat. jaculatio, jocular. The act of throwing missive weapons.

So hills amid’ the air encountered hills, Hurled to and fro with jaculation. Milton.

J ADD ESSES, an inferior order of priests in Ceylon, who have the care of the chapels appropriated to the genii, a third order of gods among these idolaters. These priests are applied to by the people in times of disease or calamity, who offer a cock to appease the anger of the demons. JADE, n. s., v.a., &v.n.-\ The etymology JA’DISH, adj. (is doubtful : Min—

JA’DED, adj. i sheu derives it

JA’DRY, n. s. 3 from the Hebrew

jaduh, rejicere ; Skinner from gaad, a goad, or ‘spur. A horse without spirit; a hired horse ; a worthless nag ; an ironical appellation of a young woman; a species of stone: to jade is to tire; harass ; weary, applied originally to horses : to overbear, crush, or degrade : to sink. Jadish, vicious, when applied to a horse ; unchaste ; incontinent ; frolicsome : jaded, wearied ; exhausted : jadry, the properties of a bad or vicious horse, now obsolete.

Be blithe, although thou ride upon a. jade. What though thin horse be bothe foale and lene, If he wol serve thee, recke thee not a bene : Loke that thyn herte be mery evermo.

Chaucer. Prologue to the Nonnes Preestes Tale. With his banners, and his well-paid ranks, The ne’er-yet-beaten horse of Parihia We’ve jaded out o’ the field.

Shakspeare. Anthony and Cleopatra. I do not now fool myself, to let imagination jade roe ; for every reason excites to this. Shakspeare.

When they “should endure the bloody spur, They fall their crest, and, like deceitful jades, Sink in the trial. Id. Julius Caesar.

The horsemen sit like fixed candlesticks, With torchstaves in their hand ; and their poor jade* Lob down their heads, dropping the head and hips.

Shakspeare. The honourable blood Must not be shed by such a. jaded groom. Id.

If we live thus tamely, To be thus jaded by a piece of scarlet, Farewell nobility. Id. Henry VIII

It is good in discourse to vary and intermingle speech of the present occasion with arguments : for it is a dull thing to tire and jade any thing too far.

Bacon.

Shall these, these old jades, pass the flower Of youth, that you have, pass you. Chapman.

So have I seen with armed heel, A wight bestride a commonweal, While still the more he kicked and spurred, The less the sullen jade was stirred. Hudibras.

That horsed us on their backs, to show us A jadish trick at last, and throw us. Id.

Alas, what wights are these that load my heart! I am as dull as winter-starved sheep Tired as a jade in overloaden cart. Sidney.

If fleet dragon's progeny at last Proves jaded, and in frequent matches cast 7io favour for the stallion we retain, Ana no respect for the degenerate strain.

Dryden.

The plain nag came upon the trial to prove those to be jadet that made sport with him. L' 'Estrange.

'Tis to no boot to be jealous of a woman ; for if the humour take her to be jadish, not all the locks and spies in nature can keep her honest. Id

The mind once jaded, by an attempt beyond its power, is very hardly brought to exert its force again.

Locke

Many offer at the effects of friendship, but they do not last : they are promising in the beginning, tbut they fail and jade and tire in the prosecution.

South.

You see now and then some handsome youngj'ade* among them : the sluts have very often white teeth and black eyes. Addison.

False steps but help them to renew their race, As, after stumbling, jades will mend their pace.

Pope.

In diamonds, pearl, and rich brocades, She shines the first of battered jade*, And flutters in her pride. Swift.

But, she, the cunningest jade alive, Says, ‘tis the ready way to thrive. Stepney. There are seasons when the brain is overtired or jaded with study or thinking ; and upon some other accounts animal nature may be languid or cloudy, and unfit to assist the spirit in meditation. Watts.

Sated with nature’s boons, what thousands seek, With dishes tortured from their native taste, And mad variety to spur beyond Its wiser will the jaded appetite ! Armstrong.

JAEN, an extensive province of the eastern part of Andalusia, Spain, surrounded by the provinces of Granada, Murcia, Cordova, and La Mancha. Its territorial extent is 4730 square miles ; and its population about 207,000. The north is occupied by the Sierra Morena, which separates it from La Mancha : another lofty chain divides it from Granada. These districts are in a great measure covered with wood : in the central part of the province the soil is in some places rich, in others barren and sandy ; the climate in the plains is hot, and in certain situations unhealthy. With bad cultivation, this province produces wine, oil, silk, and corn, in considerable abundance, especially along the Guadalquivir. It was formerly famous for its horses. The minerals of common occurrence are salt, lead, and copper ; the only manufactures woollen and silk. The chief towns are Jaen, Ubeda, Baeza, and Anduxa. The chief river is the Guadalquivir, but there are a number of smaller streams. Jaen was formerly the smallest of the Andalusian monarchies, and remained in the hands of the Moors till 1243, when it was conquered by Ferdinand II. king of Castile. The king of Spain is still styled king of Jaen.

JAEN, a considerable city of Spain, the capital of the province of this name, is situated on the banks of the Guadalbulon, at the foot of a mountain composed almost entirely of marble. It is surrounded by walls and towers, is neatly built, and has several handsome churches and squares. It is a bishop’s see, and the cathedral is a noble building. Water is distributed to all parts of the town by means of public fountains. Jaen was a well-known place in the time of the Romans : it was then called Oringi or Oningi ; and its ancient ruins, among others

an aqueduct, attest its importance. It nourished also under the Moors, when its manufactures of silk are said to have been of importance. Population

about 28,000 It is about thirty-six miles north of Granada.

JAEN DE BRACAMOROS, a government of Co-lombia, in Quito, bounded on the north by Loja and Quixos y Macas ; on the east by Maynas ; on the west by Piura; and on the south by Caxamarca or Chacapoyasin Peru. Its southern and western frontiers limit the territories of Peru.

The climate here is hot, though the rains are not so violent or lasting as in Quixos. The summer is the pleasantest season, as the heat, the rains, and the tempests, abate during that period.

The pongo de Manseriche, or strait by which the False Maranon passes the Andes, is partly in this district. The embarkation on the Lauricocha, the present name for a river which was, until very lately, supposed to be the Maranon, is usually at Chuchunga, a village of Bracamoros, in 5° 29’ S. lat. four days’ journey from Jaen, the river not being navigable nearer than this, on account of the rapids. All the rivers of Jaen flow into the Lauricocha, or descend into the deserts of the Maranon, to join that noble stream. The rivers of this government formerly produced a great deal of gold, but no exertions are made to procure it at present.

Those parts of this country which are under cultivation are very fertile, but nearly the whole government is covered with forests. The cacao flourishes very much. Tobacco is produced in great quantities : and the cigars of Jaen are universally sought after in Peru, Chili, and Quito. Cotton trees are also abundant, and their produce constitutes a

great part of the trade of the inhabitants. Animals peculiar to the wilds of Jaen are the cougar or puma, the jaguar, and the great black bear of the Andes. They have also a very large animal called danta, as big as an ox ; its skin is white, and it has a horn in the middle of its head bending backwards. The woods are well stocked with reptiles and birds.

Its commerce in cotton, tobacco, and mules, is brisk ; and carried on chiefly with the provinces of Peru and Quito, in return for European articles.

The post communication is carried on down the rivers : the Indian who carries the letters wraps them in his dress, which he ties round his head, and travelling with a great knife in his hand with which he clears the underwood which may obstruct his road when obliged to land. He descends, swimming for two days, the river of Guacabamba, or Chamaya (full of rapids), and then the Amazons, to Tomependa, a village of Jaen. The postman passes the rapids by land, and generally carries with him a log of bombax or balsa, in order to rest himself on in the water.

Native Indians are found here in large hordes; and migrating from one hunting ground to another. Jaen the capital is in 5° 25’ S. lat. on the Chinchipe : its inhabitants are about 4000. Valladolid, Loyola, and Santiago de las Montanes are also chief towns.

JAFFA, the ancient JOPPA, is a town of Palestine on the Mediterranean. See JOPPA. It is now inhabited by Turks and Arabs with a mixed race of Armenians, Greeks and Maronites. The Christians sects have each small convents.

The town, standing on an eminence, is rather handsome ; it contains about a thousand inhabitants, and is the usual landing place of the pilgrims, who come by sea to visit Jerusalem. It it surrounded by a stone wall, with several alternate squares and round towers, and in the centre is an old ruined citadel. Its ancient haven is choked up, and the road is rocky and uneven ; a great surf also beats on the shore. The neighbourhood abounds in citrons, lemons, and oranges ; and Dr. Clarke says he no where tasted equally fine water melons : the chief trade is in these fruits and the importation of rice from Egypt. The customs are levied by the pacha of Gaza. Jaffa, being in 1 799 taken by Buonaparte, became the scene of that massacre of prisoners of which Sir Robert Wilson first published the account. Four days after

its surrender, he says, 3800 men were led to a field near the town, and publicly shot. Dr. Clarke saw here the fragments of bodies imperfectly buried; but he did not hear of the massacre: but Buonaparte himself partially acknowledged it to lord Ebrington and Mr. Warden; and justified it on the ground that these were prisoners who, after being taken and dismissed on parole, had afterwards joined the garrison of Jaffa. But see our article NAPOLEON. Forty miles west of Jerusalem. Long. 34° 53’ E., lat. 32° 2’ N.

JAFFNAPATAM, a district, or rather a distinct island, at the northern extremity of the island of Ceylon, directly opposite to Negapatam in the southern Carnatic. It is of an oblong shape, and from its maritime situation it escapes the intensely hot winds which prevail on the continent. The climate is, therefore, on the whole healthy, the cultivation superior, and fruits, vegetables, and game, abundant. Sheep have been reared with considerable success. Dr. Davy supplies us with two analyses of the soils of this island. One of a soil of a tobacco field, which is manured by means of sheep, like turnip-ground in England ; the other of rice-ground, which receives no manure, but is carefully irrigated. The tobacco soil, of a reddish-brown color, collected when perhaps partially exhausted, the crop not having been long taken off the ground, consisted of

95-5 siliceous sand, colored by iron, with a few particles of calcareous matter.

2-0 vegetable matter.

2-5 water.

100-0

The rice-soil, of a light gray color, containing a good deal of straw in a finely-divided state, consisted of

95-5 siliceous sand, with traces of iron, carbonate of lime and alumine. 2*5 vegetable matter. 2‘0 water.

1000

Cinnamon and pepper are produced also in sufficient quantity to be occasionally articles of foreign commerce. Dependent on Jaffna district, and at a small distance, are several islands of no

great size, which the Dutch have named Delft, Harlem, Leydeu, and Amsterdam. In these islands are bred horses and cattle, as from their excellent pasture they are well adapted for this purpose. The woods towards Kandy are inhabited by an extraordinary race of savages, known by the name of Bedahs or Vaddahs, supposed to be the original inhabitants of the country.

JAFFNA, a fortified town of Ceylon, is the capital of the foregoing island or district, and possesses a good citadel. It was taken, after a short resistance, by the British troops, in 1795. Here is a flourishing manufacture of cotton goods. The inhabitants are Mahommedans ; but since Ceylon was taken by the English many of the country-born Dutch families have settled in this place, as being cheaper and healthier than Columbo. It is garrisoned by the British troops, and is esteemed the second town of Ceylon.

JAGEPORE, or JEHAZPORE, a large town of the province of Orissa, Hindostan, capital of a district of the same name, situated on the south side of the Byturnee, which is here nearly half a mile broad. It is a straggling place, and has a manufacture of cotton cloths. The independent rajah of this place, in the year 1243, not only repelled the Afghauns from his own territory, but pursued them into Bengal, and laid siege to Gour. These princes retained their independence till 1568, when all Orissa was subdued by Calla-pahar, the general of Solyman Kerany, king of Bengal. During the Mahommedan governments it was also a place of consequence ; and until they were expelled by the Mahrattas.

JAGG, v. a. & n. s. } Welsh gagaw ; Teut.

JAG’GY, adj. > zacke. To cut into in—

JAG’GEDNESS, n. s. J dentures ; to cut into teeth, as a saw ; to-produce rough and irregular edges : jagg, a protuberance ; a denticulation ; the state produced in any thing which is hacked or mangled.

Some leaves are round, some long, some square, and many jagged on the sides.

Bacon’s Natural History.

The jagging of pinks and gilliflowers is like the inequality of oak leaves ; but they never have any small plain purls. Bacon.

First draw rudely your leaves, making them plain, before you give them their veins by jagyednes*.

Peacham on Drawing.

The figure of the leaves is divided into so many jaggs or escallops, and curiously indented round the edges. Ray.

Take off all the staring straws, twigs, and jaggs in the hive, and make them as smooth as possible.

Mortimer’s Husbandry. His tow’ring crest was glorious to behold ;

His shoulders and his sides were scaled with gold ;

Three tongues he brandished when he charged his foes ?

His teeth stood jaggy in three dreadful rows.

A ddison.

The banks of that sea must be jagged and torn by the impetuous assaults, or the silent underminings of waves ; violent rains must wash down earth from the tops of mountains. Bentley.

An alder-tree is one among the lesser trees, whose younger branches are soft, and whose leaves are jugged. Watts.

Amid those angles, infinitely strained, They joyful ‘cave their jaggy salts behind. Thomson.

JAGGERNAUT. See JUGGERNAUT.

JAGHIRE, a district of the Carnatic, Hindostan, included in the collectorship of Chin cleput. It extends from Madras northward to .the Pullicat Lake ; southwards to Allumparva ; ‘and westward beyond Conjeveram ; being about 108 miles along shore, and forty-seven inland in the widest part, containing altogether 2440 square miles. See CHINCLEPUT.

JAGHIRE, in the Indian polity, a grant of land from a sovereign to a subject, revocable at pleasure, but generally a liferent.

JAGO (Richard), an ingenious poet, vicar of Snitterfield in Warwickshire, and rector of Kim-cote in Leicestershire. He was the intimate friend and correspondent of Shenstone, with whom he studied at University College, Oxford. He took the degree of A. M. July 9th, 1739. He was author of several poems in the fourth and fifth volumes of Dodsley’s Collection, and published a Sermon on the Causes of Impatience, preached at Harbury in Warwickshire, where he was vicar. He also wrote a poem, entitled Edge-hill, for which he obtained a large subscription in 1767; and The Blackbirds, a beautiful elegy, in the Adventurer. He died May 28th. 1781.

JAGO (St.), or YAGO, the principal of the Cape Verd Islands, is forty miles long and twenty broad. It is mountainous, and barren, but with a few fertile spots which produce abundance of fruits and vegetables.

St. Jago, the capital, is situated in a valley, but does not now contain more than half a dozen families.

Porto Praya, near the middle of the south side, is one of the best roads among these islands; being perfectly safe, except from the middle of August to the beginning of November, when southerly winds blow with great violence. The bay is about one mile and a half wide between the points, and the same depth, with from fourteen to four fathoms. On its west side is a small island called Quails, Green, or French Island, and off the west point of the bay, round Tuberon point, is a ledge of breakers running out one-third cf a mile.

A fort is built on the cliff, at the head of the bay, and mounts a few iron guns. Midway between St. Jago and Bonavista is the Leton reef of coral on which the Lady Burgess East Indiaman was wrecked in 1807; abundance of fish are found near it.

JAGO (St.), a town and province of Chili, bounded by that of Aconcagua to the north, the Andes to the east, the river Maypo to the

south, and Melipilla to the west. The province is fifteen leagues in extent from east to west, and twelve from north to south, watered by the rivers Mapocho, Colina, and Zampa, and by several other beautiful streams. It also contains the lake Pudaguel, about three leagues in length. It is the most fertile part of Chili, producing great quantities of corn, wine, and fruits, particularly peaches. The mountains of Caren also abound with gold mines, and that part of the Andes which is attached to it with silver. The former are worked only in the summer months, namely, December, January, February, and March.

JAJ

Twenty leagues from the town, which stands on the Mapocho River, is the great mine of Kempu. Further towards the south is another, named Maipo, tht metals of which are lowered down by engines from a very lofty mountain, called San Simon : here also are the mines De San Pedro Nolasco, which yield a considerable portion of massy silver. On the east of this place is Valle Blanco, where silkworms breed. Besides these mines there are five lavaderos, or washing-places, in the mountain of Guindo, and some other veins in the old asiento of Til til. The top of Calen is covered with lavaderos of the richest gold. This province has also copper and tin mines; and in Lampa are three of silver and one of lead. In the small settlement of Monte-negro a vein of jasper has been lately discovered.

The town of St. Jago is of noble appearance. The great square measures 450 feet on each side. In the midst is a handsome bronze fountain. The north side is occupied by the palaces of the presidents of the audience and city, beneath which are the public prisons. On the western are the cathed-al and the palace of the archbishop. The private houses are handsome and pleasant, but, on account of earthquakes, are usually of but one story. There is a suburb to the south, called St. Isidore, separated from the city by a street four times as broad as the others called Cannada. Here is also what was once a

royal university. Inhabitants altogether about 46,000. Fifty-five miles E. S. E. of Valparaiso.

JAGO (St.), a town of the island of Cuba, on the south coast, and founded by Don Diego Ve-lasquez in 1514. It has a fine port, defended by two castles and a battery, which was long considered as the capital of the island, but is now much reduced. It is the see of a bishop, and stands on a river of the same name about six miles from the sea.

JAGO (St.), DEALA.NGI, a town of Mexico, the capital of Veragua, is situated in a fertile country, producing maize, plantains, &c.,with plenty of cattle, in which a regular trade is carried on with Panama. It has some mines in its district, and contains an elegant hospital: 110 miles south-west of Porto-Bello.

JAGO (St.), DE CACEM, a large town in the south-west of Portugal, in the province of Alen-tejo, on the bay called Laguna de Pera : thirty-six miles south of Setubal.

JAGO (St.), DE LOS CAVALLEROS, a town of the island of St. Domingo, ninety miles north of St. Domingo. Long. 75° 32’ W., lat. 19° 36’ N.

JAGO (St.), DE COMPOSTELLA. See CoMPOS-TEH.A

JAGRA, or GIARRA, a country of Western Africa, to the south of the Gambia. It is about fifty miles from the sea, and rich in corn, particularly rice, and cotton. Park says, that the king and queen were, on one occasion, both put to death, in consequence of the former having disclose*4 to his wife the «ecret of Mumbo Jumbo.

JAJGUR, a town, fortress, and district of Hindostan, in the province of Ajmeer. It formerly belonged to the rajah of Odeypore, but

now to Kotsch. The fortress stands on a hill, and is strong : the district contains 84 villages, most of which are inhabited by a Hindoo tribe called Meena, who have the singular custom of the younger brothers marrying the widows of the elder : they are a predatory people, and carry off all the children of the villages they attack.

JAGUAR, (felis onca, Lin.) This name, having been applied to several different species, is apt to create some degree of confusion. The jaguar holds the same rank among the animals of the new continent as the tiger among those of the old. On the whole upper part of its body it is

of a bright yellowish fawn colour, which passes on the throat, belly, and inside of the legs, into a pure white. On this ground, the head, limbs, and under surface, are covered with full black spots, of various sizes, and the rest of the body with annular patches, either with a black point in the centre, or formed of small black spots arranged in a circular form. This animal is found in the swampy forests of South America, especially in the neighbourhood of large rivers, in which he swims with great ease. Of his power of swimming, as well as of his extraordinary strength, the following circumstance, related by D'Azara, will give some idea : A jaguar, after having attacked and destroyed a horse, carried the body of his victim to the bank of a broad and rapid river, about sixty paces distant, over which he swam with his prey, and then dragged it into the adjoining wood. Possessed of such tremendous powers, this animal is the dread of the inhabitants of the countries he infests. It is seldom, however, that he attacks the human race, though he will not shun man when he meets with him. His favorite prey appears to be the larger quadrupeds, such as oxen, horses, sheep, and dogs, which he attacks indiscriminately, and in the same treacherous manner as the rest of his tribe, uniformly singling out the last of a herd as the object of attack. When he has made choice of a victim, he springs on its back, and, placing one of his paws upon the back of the head, whilst he seizes its muzzle with the other, twists its head round with a sudden jerk, thus dislocating its spine, and instantly depriving it of life. The jaguar is generally considered as untamable, and to maintain his savage ferocity even in the captive state; but this assertion is amply contradicted by facts. The inhabitants of South America hunt the jaguar in various ways, either with a pack of dogs or by means of the lasso; this latter mode, however, can only be employed upon plains or open grounds. The Indians are even hardy enough to attack this formidable creature single-handed, armed with a lance of five feet in length, and their left arm enveloped in a sheep skin ; by means of which, they frustrate the first onset of the furious animal, and gain sufficient time to plunge their weapon into his body before he has time for a second attack. Notwithstanding the strength and ferocity of the jaguar, he finds a powerful opponent in the great ant-eater, although this latter animal has no teeth to defend himself; as soon as the jaguar attacks the ant-eater, it lies down on its back, and suffocates or strangles him with its long claws.

JAMAICA.

JAIL, n. t. ˆ Fr. geol. A prison : JAIL'BIRD, n. s. ˆjailbird, one who has been JAIL'ER, n. s. 3 in a jail. See GAOL. It is written either way, but commonly by later writers jail.

JALAP. See CONVOLVULUS. This root is brought in thin transverse slices from Xalapa in New Spain. Such pieces should be chosen as are most compact, hard, weighty, dark -colored, and bound most with black circular strive. Slices of bryony root, when mixed with those of jalap, may be easily distinguished by their whiter co-lor and less compact texture. Jalap in substance, taken in a dose of about half a dram in plethoric, or cold phlegmatic habits, proves an effectual, and in general a safe purgative. In hypochondriacal disorders, and hot bilious temperaments, it gripes violently, but rarely takes effect as a purge. An extract made by water purges almost universally, but weakly, and has a considerable effect by urine. The root remaining after this process gripes violently. The pure resin, prepared by spirit of wine, occasions most violent gripings, and other distressing symptoms, but scarce proves at all cathartic : triturated with sugar or with almonds into the form of an emul-sion, or dissolved in spirits, and mixed with syrups, it purges plentifully in a small dose, without occasioning much disorder : the part of the jalap remaining, after the separation of the resin, yields to water an extract, which has no effect as a cathartic, but operates powerfully by urine. Its officinal preparations are an extract made with water and spirit, a simple tincture and compound powder. By M. Henry's analysis, the constituents of this root are,

Resin Extract . Starch Woody fibre

Jal. sain.

48 -140 102 210

500

JALEMUS, in antiquity, a kind of mournful song, used upon occasion of death, or any other affecting accident. Hence the Greek proverbs, taXf/ta oMcportpoc, i. e. more sad than a jalemus ; tic r«c laXi/iHg eyypaTrreoc, worthy to be ranked among jalemuses.

JALLONKADOO, a considerable country of Western Africa, which includes the sources of the Bafing, and of almost all the other rivers which form the Senegal. It is mountainous, and in many parts barren. The inhabitants are governed by a number of petty chiefs, commonly at enmity with each other ; and their language differs considerably from that of the Mandingos, though there is a great affinity in many words. Caravans travel for five days here without seeing a human habitation ; and if any of the party is unable to keep up with the rest, he has little hope but of perishing with hunger, or by wild beasts.

JALNAH, a district of Hindostan, in the

province of Aurungabad, situated between the

nineteenth and twentieth degrees of northern

latitude. It was taken by the British from the

Mahrattas in 1803, anl by them ceded to the Nizam.

JALNAH, or jALNAPoaE, a town and fortress of Hindostan, the capital of the above district, is now the headquarters of the nizam's subsidiary force. The town and fort are on opposite sides of the river. Long. 76° 34' E., lat. 19° 45' N.

JALOFFS, or OUALOFFS, are a people of Africa, who occupy most of the country between the lower part of the Gambia and that of the Senegal. Their territory is reckoned by. Mr. Golberry to occupy 4800 square leagues. They are of handsome person for negroes, their color being a fine bright black, and their features, upon the whole, regular and graceful. They boast of being thf most ancient nation in this part of Africa, and were formerly subject to a common sovereign, called the Burb-y-Jaloff, who still occupies a considerable country in the interior. The Jaloffs profess Mahommedanism, but combine with it many of their own superstitions. They are fearless hunters and brave warriors. Those inhabiting the towns rank also among the most expert thieves in the world, using their toes with the same dexterity as their

fingers. They excel in the manufacture of cot-ton cloth, to which they give a superior dye; and great quantities of a particular bean are exported to Morocco for the purposes of dyeing. The language of the Jaloffs is agreeable and soft; but they have a singular mode of numeration, using as its basis the number five ; and all their calculations are performed by the motion of the fingers, for they write nothing.

JAM, n. s. Arab. jama. A conserve of fruits boiled with sugar and water.

JAMAICA, the most considerable and valuable of the British West India Islands, is separated from the west end of St. Domingo, by the channel called by our seamen the Windward Passage. The island is 150 miles long and forty broad, containing 4,080,000 acres ; thus distributed :

690,000 acres are under sugar canes, and wood for the use cf the sugar-works.

700,000 in pasture.

350,000 all other species of agriculture.

1,740,000, leaving upwards of 2,000,000 of acres of unproductive mountain land, of which not above a quarter is improvable.

The Blue Mountains are an elevated ridge, which runs through the island longitudinally and is covered with vast forests of mahogany _ lignum vitae, iron wood, logwood, brazilletto, and many other heavy and close-grained woods. On the north, at a small distance from the sea, the land rises in small round-topped hills, leathered with spontaneous groves of pimento, under whose shade is a beautiful turfy carpet. This side of the island is also finely watered, every valley having its rivulet and every hill its cascade, many of which tumble from overhanging cliffs into the sea. In the back ground a vast amphitheatre of forest presents itself melting gradually into the distant Blue Mountains, whose heads are lost in the clouds. On the south coast the picture is more sublime, but less pleasing. The mountains, approaching the sea in stupendous ridges, first present to the na

vigator a scene of magnificent savageness ; but on Hearing the land the picture softens, cultivated spots being perceived on the sides of the hills, and at last the vast savannahs, covered with sugar canes, stretching from the sea to the foot of the mountains, offer the pleasing indication of human industry.

Jamaica has upwards of 100 rivers, rising in the mountains and running with torrent rapidity to the sea. This rapidity, as well as the obstructions from rocks, renders them unnavigable by any thing but canoes. The deepest is Black River on the south coast, which flows gently through a considerable tract of level country, and is navigable by flat boats thirty miles. The island has also some medicinal springs, warm, sulphureous, and chalybeate.

Appearances of metals are observed in the island, but the industry of the English colonists has always been more wisely employed in the certain profits of agriculture.

The climate of this island, even on the coasts, is temperate, the medium heat at Kingston throughout the year being 80° and the least 70°. In ascending towards the mountains, the temperature quickly alters with the elevation. Eight miles from Kingston the maximum is but 70° ; at fourteen miles, where the elevation is 4200 feet, the general range is 55° to 65°, and the minimum in winter 44°. On the highest summit, called Blue Mountain Peak, 7431 feet above the sea, the range in the summer is from 47° at sunrise to 58° at noon, and the minimum in winter is 42°.

Besides the staple exports, consisting of sugar, indigo, coffee and cotton, the cultivated vegetables of Jamaica are maize, Guinea corn, and calavances, for the food of the negroes ; and almost all the kitchen vegetables of Europe, together with many indigenous ones, as the sweet potatoe, yam, eddoe root, callaloo (a kind of spinach, and the commonest substitute for greens), cassava, okery, &c.

Few of the northern European fruits thrive, but the indigenous ones are numerous and delicious ; the principal are the plantain, cocoa-nut, guava, sour-sop, sweetsop, papaw custard apple, mammee apple, avocado pear, star apple,

cashew apple, granadilla, prickly pear, pine apple, &c. The orange, lime, lemon, mane and grape have been naturalised, as well as t cinnamon tree, of which there are now considerable plantations. The horned cattle, sheep, and hogs, of the island are abundant and their flesh excellent. The indigenous quadrupeds of Jamaica are the armadillo, the opossum, the racoon, the agouti, the pecare or Mexican hog, the musk-rat, the alco, and the monkey. Of these only the agouti and the monkey now remain, (jf the lizard there are many varieties. The woods and marshes abound in great variety of wild fowl, some of them of exquisite flavor. Of these the most highly esteemed is the ortolan or October bird, or rice bird of South Carolina. These birds arrive in South Carolina in the month of September, to devour the rice ; and, remaining there about three weeks, arrive in prodigious flights in Jamaica, about the month of October. Parrots are still found in the groves. The following was the progressive population of Jamaica to 1812 :—

	Whites.	Free people of color.	Slaves.
1658	4,500	1,400	
1670	7,500	8,000	
1734	7,644	86,146	

1746

10,000

112,428

1768

17,947

176,914

1775

18,500

3,700

190,914

1787

30,000

10,000

250,000

1805

—

—

280,000

1812

—

—

359,812

The official value of the imports from Jamaica into England, and exports to the island :

Imports.

Exports.

1809 1810

£4,068,897

4,303,337

£3,033,234

2,303,179

The principal objects of export from the island were,

Coffee.

Sugar.

Ram.

Pimento.

Cotton.

1809 1810

cwt.

214,415 252,808

cwt.

1,104,612 1,611,422

galls.

3,470,250 3,428,452

Ibs.

2,210,367 2,372,964

Ibs.

1,886,748 1,798,172

In 1807, when the exports were somewhat inferior to the above years, the number of vesiels that cleared out from the island was,

Vessels.

Tonnage.

Seamen,

For Great Britain

242

63,471

7748

For Ireland …

10

1,231

91

For British America

66

6,133

449

For the United States .

133

13,041

493

For the Foreign West Indies

22

1,903

155

For Africa ….

1

109

8

Total

474

85,888

9344

i

1

JAMAICA.

547

The revenues are perpetual and animal. The perpetual revenue law, which was passed in the year 1728, raises about £12,000 per arinum. The other public revenues are derived from occasional grants of the legislature. The principal taxes consist of a duty of twenty shillings per head on all negroes imported, a duty on all rum and other spirits consumed within the island, a poll tax on all slaves and stock, and a rate on rents and wheel carriages. There is also a penalty imposed on all persons who fail to keep one white person for every thirty blacks, which has become a productive source of revenue.

Jamaica is divided into three counties, *viz.*

Parishes.

Town.

Villaget.

Middlesex .

8

1

13

Surrey . .

7

o

8

5

3

6

The capital is St. Jago de la Vega, or Spanish Town, on the river Cobre, six miles from the south coast, and in the county of Middlesex. It contains about 5000 inhabitants, and is the residence of the governor, whose palace is a magnificent building.

The legislature of the island is composed of the governor, a council nominated by the crown, consisting of twelve gentlemen, and a house of assembly containing forty-three members, elected by the freeholders. The power of making laws is vested in the assembly and the governor, who has the privilege of a veto on the acts of the legislative body ; and a further power of rejection is reserved to the crown. Until his majesty's pleasure is known, however, laws are valid.

The two towns of the county of Surrey are Kingston and Port Royal ; the latter situated on a narrow sandy peninsula that separates Port Royal Bay from Kingston Harbour. In 1 692 this town contained 2000 houses, when an earthquake swallowed nine-tenths of it, covering the houses with seven fathoms water. It was immediately rebuilt, but ten years after it was destroyed by fire, and being again rebuilt, was a third time destroyed by ahurricane in 1722. This succession of calamities caused the inhabitants to remove to Kingston, on the west side of the harbour, five miles from Port Royal ; and here the chief government offices have been built, but the royal naval arsenal, for careening and refitting ships, is at Port Royal.

The town of Kingston contains a population of 35,000 inhabitants : the harbour can hold 1000 ships, and those of 200 lay at the quays. Both the harbour and bay are protected by strong fortifications, which place them beyond all possible insult from an enemy.

The towns of the county of Cornwall are, Savannah le Mar, which, being destroyed by the lurricane of 1780, now contains but sixty to seventy houses : it is at the south-west end of the island. Montego Bay Town, on the north coast, contains 225 houses : seventy large ships

and eighty smaller vessels load here annually. Falmouth, the third town, is also on the north coast, on the south side of Martha Brea Harbour ; including the villages of Martha Brea and the Rock, the number of houses is 250. Thirty large ships, besides small vessels, load here for England.

The villages of Jamaica are generally small hamlets on the bays, where the produce is shipped in the droggers to be conveyed to the ports of clearance. The few other places worthy of mention are Lucea Harbour on the north coast, and Bluefields and Carlisle Bay on the south.

Jamaica was discovered in 1494 by Columbus. He was shipwrecked on it in 1503 ; and remained here on this occasion, in considerable distress, more than twelve months. A Spanish colony was established on it in the year 1509 ; all whose establishments were abandoned in 1655, except St. Jago de la Vega. Diego, the son of Columbus, according to the powers granted to his father by the king of Spain, appointed Esquivel, a noble Castilian, as governor of the newly discovered island, in the year 1506, who built a town, called Sevilla Nueva, near the spot where Columbus was shipwrecked. In the year 1596 Sir Anthony Shirley invaded and plundered Jamaica, and about forty years afterwards it was again plundered by a party of English, under colonel Jackson. In the year 1655 this island was taken by the English, under the command of Penn and Venables, who had been sent by Cromwell to seize on Hispaniola: it was afterwards settled by 3000 soldiers, disbanded from the parliamentary army ; and these were followed by 1500 royalists. From this time the colony has gradually increased in importance, though its tranquillity has been occasionally disturbed by the inroads of the Maroons, the slaves of the Spanish settlers, who, on the surrender of the island to the English, fled to the mountains, where they have since lived in an almost savage state. In 1738 a treaty was concluded with them, by which their freedom was secured, along with a grant of 1500 acres of land. They remained peaceable till the year 1795, when a new war commenced between them and the white inhabitants. Being vigorously attacked, however, apd the barbarous expedient of blood-hounds being resorted to, for the purpose of tracing their haunts, they were at last compelled to surrender at discretion to their enemies the whites, by whom about 600 of them were transported to Nova Scotia. Long. 76° 45’ W., lat 18° 12’ N.

JAMB, n. s. Fr. jambe, a leg. Any sup porter on either side, as the posts

of a door.

No timber is to be laid within twelve inches of the foreside of the chimney jambs. J/oron.

IAMBE, in fabulous history, a servant girl of Metanira, afterwards wife of Celeus, king of Eleusis, who endeavoured to exhilarate Ceres, when she travelled in search of Proserpine. From the humor she displayed on that occasion, free and satirical verses are said to have been called iambics.

lA'MBIC, n. s. Fr. iambique ; Lat. iambi-cus. Verses composed of iambic feet, or a

short and long syllable alternately : used originally in satire, therefore taken for satire.

In thy felonious heart though venom lies, It does but touch thy Irish pen, and dies : Thy genius calls thee not to purchase fame In keen iambicks, but mild anagram. Dryden.

IAMBICS, in ancient poetry. See IAMBUS. There are two kinds of iambics, *viz.* dimeter and trimeter ; the former contains four feet, and the latter six. See VERSE.

JAMBLICUS, a celebrated Platonic philosopher of Colchis, whom Julian equals to Plato. He was the disciple of Anatolius and Porphyry, and died in the reign of Constantine the Great.

JAMBLICUS, another celebrated Platonic philosopher, born at Apamea, in Syria, and nearly contemporary with the former. Julian

wrote several letters to him, and it is said he was poisoned under the reign of Valens. It is not certainly known to which of the two we ought to attribute the works in Greek under the name of Jamblicus, *viz.* 1. The Histoiy of the Life of Pythagor. 3, and the sect of the Pythagoreans.

2. An Exhortation to the Study of Philosophy.

3. A piece against Porphyry's letter, on the mysteries of the Egyptians.

IAMBUS, in the Greek and Latin prosody, a poetical foot, consisting of a short syllable followed by a long one ; as in

u - u - u-u—

6«8 Xeyw, Dei meas.

Horace calls the iambus pes citus, a swift rapid foot. The name, according to some, took its rise from Iambus, the son of Pan and Echo, who invented this foot. Others derive it from lambe, queen of Eleusis. Others from, the Greek we, poison ; or ta/t/3ijw, I rail ; because iambics were at first only used in satire.

JAMES I., king of Scotland in 1423, fell into the hands of his enemies in his thirteenth year, when flying from the snares of his ambitious uncle, who governed his dominious, and was suspected of designs against his life. Having secretly embarked for France, the ship was taken by an English privateer off Flamborough Head ; and the prince and his attendants, among whom was the earl of Orkney, were confined in a neighbouring castle until they were sent to Lon-don. He was detained till summer 1417, when Henry V. carried him with him into France in his second expedition. Hector Boece tells us, that Henry IV. and V. furnished their royal prisoner with the best teachers in all the arts and sciences ; and that, by their assistance, he made great proficiency in every part of learning ; that he became a perfect master in grammar, rhetoric, poetry, music, and all the secrets of natural philosophy, and was inferior to none in divinity ' and law. Above a century after his death he was celebrated in Italy by Alexander Tassoni, a writer of undoubted credit : ' We may reckon among moderns (says he) James, king of Scotland, who not only composed many sacred pieces of vocal music, but also of himself invented a new kind of music, plaintive and melancholy, different from all other ; in which he hath been imitated by Carlo GesusMo, prince of

Venosa, who, in our age, hath improved music with new and admirable inventions.' As Jame~ I. was one of the most accomplished princes that ever filled a throne, he was also one of the most unfortunate. After spending almost twenty years in captivity, and encountering many difficulties on his return into his native kingdom, he was murdered by assassins in the prime of life. Only three of his poems are now extant, *viz.* Christ's Kirk on the Green, Peebles at the Play, and the King's Quair.

JAMES II., king of Scotland, succeeded his fa-ther in 1447, when not seven years of age ; and was killed at the siege of Roxburgh in 1460, aged twenty-nine.

JAMES III. succeeded his father in 1460, in the seventh year of his age. The most striking feature in his character was his excessive fondness for the fine arts, and for those who excelled in them, on whom he bestowed his confidence and favor. This excited in his fierce and haughty nobles dislike and contempt of their sovereign, and indignation against the objects of his favor ; which produced the most pernicious consequences, and ended in a rebellion that proved fatal to James, who was slain in 1488, aged thirty-six.

JAMES IV. succeeded his father in 1488. He subdued his rebellious subjects ; and afterwards, taking part with Louis XII. against Henry VIII. of England, he was slain in the battle of Flod-den-Field in 1513, aged forty-one. His Latin epistles are classical, compared with the barbarous style of the foreign princes with whom he corresponded. The attention he paid to the civilisation of his people, and his distribution of justice, merit the highest praise.

JAMES V. king of Scotland, in 1513, was but eighteen months old when his father lost his life. When of age, he assisted Francis I. of France against the emperor Charles V., for which service Francis gave him his eldest daughter in marriage in 1535. This princess died in two years; and James married Mary of Lorraine, daughter of Claud, duke of Guise, and widow of Lewis of Orleans, by whom he had one child, the unfortunate Mary queen of Scots, born only eight days before his death, which happened December 14th, 1542, in his thirty-fifth year.

JAMES I. king of England, and VI. of Scotland, was the son of Mary queen of Scots, whom he succeeded in Scotland in 1567, as he did Elizabeth in England in 1603. Strongly attached to the Protestant religion, he signalised himself in its support ; which gave rise to the conspiracy of the Papists to destroy him and all the English nobility by the gunpowder plot, discovered November 5th, 1605. The chief glory

of this king's reign consisted in the establishment of new colonies, and the introduction of some manufactures. The nation enjoyed peace, and commerce flourished during his reign. Yet his administration was despised both at home and abroad for, being the head of the Protestant cause in Europe, he did not support it in the war of Bohemia; abandoning his son-in-law, the elector palatine ; negociating when he should have fought, deceived at the same time by the courts

of Vienna and Madrid ; and continually sending illustrious ambassadors to foreign powers, but never making a single ally. He valued himself much upon his polemical writings ; and was so fond of theological disputations, that he founded, for this express purpose, Chelsea College ; which was converted to a much better use by Charles II. His Basilicon Doron, Commentary on the Revelation, writings against Bellarmine, and his Daemonologia, or Doctrine of Witchcraft, are sufficiently known. There is a collection of his writings and speeches in one folio volume. Several other pieces of his are extant; some of them in the Caballa, others in MS. in the British Museum, and others in Howard's collection. He died in 1 625, in the fifty-ninth year of his age, and twenty-third of his reign.

JAMES II. of England and VII. of Scotland, grandson of James I., succeeded his brother Charles II. in 1685. A bigot from his infancy to the Romish religion and hierarchy, he sacrificed every thing to establish them, in direct contradiction to the experience he had acquired, during the long reign of his brother, of the genius and character of the people he was to govern. Guided by the Jesuit Peters, his confessor, and the infamous chancellor Jeffries, he violated the laws enacted for the security of the Protestant religion ; and he rather chose to live and die, as he believed, a saint, than to support the dignity of his ancestors, or perish beneath the ruins of his throne. The consequence was the revolution in 1688. James II. died in France in

1710, aged sixty-eight. He wrote, 1. Memoirs of his own Life and Campaigns to the Restoration ; the original of which is preserved , in the Scotch College at Paris. This piece is printed at the end of Ramsay's Life of Marshal Turenne. 2. Memoirs of the English Affairs, chiefly naval, from the year 1660 to 1673. 3. The Royal Sufferer, king James II., consisting of meditations, soliloquies, vows, &c., composed at St. Germain's.

JAMES (Dr. Thomas), a learned English critic and divine, born about 1571. He was educated at Winchester, and studied at Oxford, where he took his degree of D.D. and was appointed keeper of the public library. He distinguished himself by the arduous undertaking of publishing a catalogue of the MSS. in each college library at both universities. He was elected to this office in 1602, and held it eighteen years, when he resigned it. In the convocation held with the parliament at Oxford, in 1625, of which he was a member, he moved to have proper commissioners appointed to collate the MSS. of the fathers in all the libraries in England, with the Popish editions, in order to detect any forgeries ; but, this proposal not meeting with the desired encouragement, he engaged in the laborious task himself, which he continued until his death in 1629. He left behind him a great number of learned works.

JAMES (Robert), M.D., an English physician of great eminence, and particularly distinguished by his fever powder, was born at Kinverston, in Staffordshire, 1703. He was of St. John's College in Oxford, where he took the degree of A.B., and afterwards practised physic at Sheffield,

Litchfield, and Birmingham. Thence L«r removed to London, became a licentiate in the College of Physicians, practised physic, and, in 1743, published a Medicinal Dictionary, in 3 vols. folio. Soon after he-published an English translation, with a Supplement, by himself, of Rammazini de Morbis Artificum ; to which he prefixed a piece of Frederic Hoffman upon En-demial Distempers, 8vo. In 1746 he published the Practice of Physic, 2 vols. 8vo. ; in 1760 on Canine Madness, 8vo. ; in 1764 a Dispensatory, 8vo. In 1755, the-king being at Cambridge, he was admitted M. D. by mandamus. In 1 778 were published a Dissertation upon Fevers, and a Vindication of the Fever Powder, 8vo. ; with a short Treatise on the Disorders of Children. This was the eighth edition of the Dissertation, of which the first was printed in 1751 ; and the purpose of it was, to set forth the success of this powder, as well as to describe more particularly the manner of

administering it. The Vindication was posthumous and unfinished : for he died March 23d, 1776, while employed upon it.

JAKES (St.), surnamed Major, or the Greater, the son of Zebedee, and the brother of John the evangelist, was born at Bethsaida, in Galilee. The only authentic accounts we have of him are recorded by the evangelists. It is believed that St. James first preached the gospel to the dispersed Jews ; and afterwards returned to Judea, where he preached at Jerusalem, when the Jews excited Herod Agrippa against him, who put him to a cruel death about A. D. 44. Thus he was the first of the apostles who suffered martyrdom. St. Clement, of Alexandria, relates, that his accuser was so struck with his constancy, that he became converted, and suffered with him. The Spaniards pretend that they had St. James for their apostle, and boast of possessing his body.

JAMES (St.), surnamed Minor, or the Less, an apostle, the brother of Jude, and the son of Cleophas and Mary, the sister of the mother of our Lord, is called in Scripture the Just, and the brother of Jesus, who appeared to him in particular after his resurrection. He was the first bishop of Jerusalem, when Ananias II., high priest of the Jews, caused him to be condemned, and delivered him into the hands of the people and the Pharisees, who threw him down from the steps of the temple, when a fuller dashed out his brains with a club, about the year 62. His life was so holy, that Josephus considers the ruin of Jerusalem as a punishment inflicted on that city for his murder. He was the author of the epistle which bears his name.

JAMES (St.), an hospital and burying ground near Basil, in the Helvetic republic, and near the small river Birs. It is famous for a desperate battle fought by about 3000 Swiss against an army of 30,000 French, commanded by the dauphin, afterwards Louis XL, in which only thirty-two of the former remained alive, desperately wounded, on the field of battle. Sixteen that escaped from the field were branded with infamy, for not having sacrificed their livfes in defence of their country. The conqueror himself, wno was compelled to retire with his irmy into

Alsace, declared that such another victory would ruin it.

JAMES (St.), EPISTLE OF, a canonical book of the New Testament, being the first of the catholic or general epistles; which are so called, as not being written to one but to several Christian churches. It is addressed partly to believing and partly to infidel Jews.

JAMES (St.), OF THE SWORD, San Jago del Es-pada, a military order in Spain, instituted in 1170, by Ferdinand II. king of Leon and Gallicia, to stop the incursions of the Moors ; three ‘inights obliging themselves by a vow to secure the roads. A union was proposed and agreed to in 1170 between these and the canons of St. Eloy; and the order was confirmed by the pope in 1175. The highest dignity is that of grand master, which is held by the king of Spain. The knights are obliged to make proof of their descent from families that have been noble for four generations on both sides ; they must also make it appear that these their ancestors have neither been Jews, Saracens, nor heretics; nor even called in question by the inquisition. The novices are obliged to serve six months in the galleys, and to live a month in a monastery, formerly they took a vow of celibacy, but Alexander III. gave them permission to marry. They .now make no vows but of poverty, obedience, ind conjugal fidelity; to which, since 1652, they have added that of defending the immaculate conception of the holy virgin. Their habit is a white cloak, with a red cross on the breast. This is esteemed the most considerable of all the military orders in Spain ; the king carefully preserves the office of grand master in his family, on account of the rich revenues and offices, whereof it gives him the disposal. The number of knights is much greater now than formerly, .ill the grandees choosing rather to be received into this than into the order of the golden fleece; insomuch as this gives them many considerable privileges in all the provinces of Spain, but especially in Catalonia.

JAMES RIVER, or the JAMES, or the Flu-vanna, a large navigable river of Virginia, which rises on the west side of Jackson’s Mountain, and, running a south-west course, under the name of Jackson’s River, receives Carpenter Creek from the Allegany Mountains, after which it is named James River; thence, running south-east, it waters eight counties of Virginia, and at last falls into Chesapeake Bay near James

Town. Its navigation is interrupted at Richmond by falls.

JAMES'S POWDER, a medicine prepared by Dr. R. James, of which the basis has been long known to chemists, though the particular receipt for making it lay concealed in chancery till made public by Dr. Monro, who gives the following copy of it : ' Take antimony, calcine it with a continued protracted heat, in a flat, unglazed, earthen vessel, adding to it from time to time a sufficient quantity of any animal oil and salt, well dephlegmated ; then boil it in melted nitre for a considerable time, and separate the powder from the nitre by dissolving it in water.' Dr. Monro adds, that ' when the doctor first administered his powder, he used to ioiu ovie grain of « mercurial pieparation to thirty-eignt grains of nis

antimonial powder; but in the latter part of his life he often declared that he had long laid aside the addition of the mercurial.' Dr. James, at the end of the receipt given into chancery, says * the dose of these medicines is uncertain ; but in general thirty grains of the antimonial, and one grain of the mercurial, is a moderate dose.' Of this medicine Dr. Monro says, ' Like other active preparations of antimony, it sometimes operates with great violence, even when given in small doses; at other times a large dose produces very little visible effects. I have seen three grains operate briskly, both upwards and downwards ; and I was once called to a patient to whom Dr. James had himself given five grains of it, and it purged and vomited the lady for twenty-four hours, and in that time gave her between twenty and thirty stools; at other times I have seen a scruple produce little or no visible effect. So far as I have observed, I think that the dose of this powder to an adult, is from five to twenty grains ; and that when it is administered, one ought to begin by giving small doses. Where patients are strong, and a free evacuation is wanted, this is a useful remedy : and it may be given, in small repeated doses, as an alterative in many cases ; but where patients are weakly, and in low fevers, it often acts with too great violence ; and I have myself seen instances, and have heard of others, where patients have been hurried to their graves by the use of this powder in a very short time.' See MEDICINE.

JAMESONE (George), an excellent painter, justly termed the Vandyck of Scotland, was the son of Andrew Jamesone, architect; and was born at Aberdeen in 1586. He studied under Rubens, at Antwerp; and, after his return, applied with indefatigable industry to portraits in oil, though he sometimes practised in miniature, and also in history and landscapes. His largest portraits were somewhat less than life. His

excellence consists in delicacy and softness, with a clear and beautiful coloring ; his shades not charged, but varnished, with little appearance of the pencil. When king Charles I. visited Scotland, in 1 633, the magistrates of Edinburgh employed Jamesone to -make drawings of the Scottish monarchs ; with which the king was so pleased, that, enquiring for the painter, he sat to him, and rewarded him with a diamond ring from his own finger. Jamesone always drew himself with his hat on, either in imitation of his master Rubens, or on having been indulged in that liberty by the kin» when he sat to him. Many of Jameson's works are in both the colleges of Aberdeen ; and he is said to have drawn the Sybils from living beauties in that city. Ilis best works are from 1630 to his death, which happened at Edinburgh in 1644.

JAMTLAND. a mountainous province of Sweden, near Norway, of an oval form, seventy miles long and sixty broad, annexed to Sweden by the treaty of Roschild, in 1658. It abounds with mines of copper, lead, saltpetre, alum, lapis ollarius, rock-crystals, &c. It is thinly peopled ; but the east part is fertile in corn, &c.

JAMYN (Amadis), a celebrated French poet in the sixteenth century. He is esteemed the rival of Ronsard, who was his contemporary and

friend. He was secretary to Charles IX., and died about 1585. He wrote, 1. Poetical Works, 2 vols. ; 2. Philosophical Discourses to Pasicharis and Rodanthe, with Seven Academical Discourses ; 3. A Translation of the Iliad of Homer, begun by Hugh Sabel, and finished by Jamyn ; with a translation into French verse of the three first books of the Odyssey.

JANE OF FLANDERS was the wife of John de Mountfort, a competitor for the dukedom of Brittany upon the death of John III. This duke,

dying without issue, left his dominions to -his niece Jane, wife of Charles de Blois, nephew to the king of France ; but John Mountfort, brother to the late duke, though by a second marriage, claimed the duchy, and was received as successor by the people of Nantes. The greatest part of the nobility swore fealty to Charles de Blois. This dispute occasioned a civil war; in the course of which John was taken prisoner, and sent to Paris. This misfortune would have ruined his party, had not his interest been supported by the extraordinary abilities of his wife, Jane. Bold, daring, and intrepid, she fought like a warrior in the field ; shrewd, sensible, and sagacious, she spoke like a politician in the council ; and, endowed with the most amiable manners and winning address, she was able to move the minds of her subjects by the force of her eloquence, and mould them to her pleasure. She was at Rennes when she received the news of her husband's captivity ; but that disaster served only to rouse her native courage and fortitude. She forthwith assembled the citizens ; and, holding in her arms her infant son, recommended him to their care and protection in the most pathetic terms, as the male heir of their ancient dukes, who had always governed them with lenity and indulgence, and to whom they had ever professed the most zealous attachment. She declared herself willing to run all hazards with them in so just a cause ; pointed out their resources in the alliance of England ; earnestly beseeching them to make one vigorous effort against a usurper, who, being forced upon them by the intrigues of France, would, as a mark of his gratitude, sacrifice the liberties of Brittany to his protector. The people, moved by the affecting appearance, and animated by the noble conduct of the princess, vowed to live and die with her in defending the rights of her family ; and their example was followed by almost all the Britons. The countess went from place to place, encouraging the garrisons of the several fortresses, and providing them with every thing necessary for their subsistence ; after which she shut herself up with her son in Hennebon, where she resolved to wait for the succours which Edward III. had promised to send to her assistance. Charles de Blois, accompanied by the dukes of Burgundy and Bourbon, and many other noblemen, took the field with a numerous army, and, having reduced Rennes, laid siege to Hennebon, which was defended by the countess in person. This heroine repulsed the assailants in all their attacks with the most undaunted courage ; and, observing one day that their whole army had left the camp to join in a general storm, she rushed forth at a postern gate, with 300 horse, set fire to

their tents and baggage, killed their sutlers and servants, and raised

such a terror and consternation through all their quarters, that the enemy gave over their assault, and, getting betwixt her and the walls, endeavoured to cut off her retreat into the city. Thus intercepted, she put the spurs to her horse, and, without halting, galloped directly to Brest, which lay at the distance of two and twenty miles from the scene of action. There, being supplied with a body of 500 horse, she immediately returned, and, fighting her way through part of the French camp, was received into Hennebon, amidst the acclamations of the people. Soon after this the English succours appeared, and obliged the enemy to raise the siege.

JANEIRO, Rio DE, a jurisdiction of Brasil, in South America, seated between the Tropic of Capricorn and lat. 22° S. It is bounded on the north by Spirito Sancto, on the east and south by the Atlantic Ocean, and on the west by the Minas Geraes. It is extremely fertile for a mountainous country, particularly in sugar, which is one of its chief exports. Besides the river Janeiro, twenty-seven other streams of inferior magnitude water this region : and the plains are consequently clothed with the richest pastures. But indolence reigns triumphant : the population is very thin and badly clothed, badly fed, and sensible, as it would seem, of none of these advantages.

JANEIRO, Rio DE, a city of Brasil, and its capital, stands for the greater part on a plain on the west side of the bay close to the sea. An accumulation of hills of various elevations rise to the south. It extends about two miles from east to west, and its northern side is enclosed by five mountains, which merely leave a space for a single street between their base and the ocean. The houses are chiefly built of stone, and balconied, but consist only of one story. The ground-floors, which are not occupied as shops or stores, exhibit the gloomy aspect of closely-latticed windows and doors. In the upper part, also, wooden lattices are frequently introduced. The streets cross each other at right angles. The principal one runs north and south, and is the head of several more that stretch towards the west, and are crossed again by others parallel to the first. Most of the streets are narrow and badly paved. The open spaces denominated squares are very irregular, and meanly laid out. The palace square is the principal in point of buildings, and is about 150 yards long, and eighty wide. The royal residence occupies one side, while the convent of the Car-melites, and the senate-house, forms another. The square of Roceo is about 180 yards long, and 100 wide. The other principal public buildings are the mint, the armoury, the naval and military arsenals, and the custom-house. A neat theatre has also been built. The cathedral is a recent and tolerably respectable modern structure. Water is conveyed from the neighbouring hills by means of a noble aqueduct of a double tier of arches, from which it is

conducted to various fountains.

Provisions are ill supplied to this capital . poultry, fish, and even beef are dear, and ill attended to ; and mutton is not often seen

Pork is the best meat, and the vegetables are fine; but living is said to be as dear as in Lon-don, without half its comforts.

The entrance to the port of Rio Janeiro is twenty-one . leagues west of Cape Frio ; it is known by some islands off it, *viz.* Redonda, two leagues and a half south by west of Santa Cruz fort. It is high, round, and rocky, with two rocky islets two leagues east of it, and four miles off shore is Razor Island, four leagues south of Santa Cruz fort. The entrance is also known by a remarkable break in the land, between two perpendicular and naked mountains of granite ; that on the left is insulated, and has the exact form, of a sugar loaf, the peak of which is 680 feet above the sea ; that on the right is a mountain attached to the coast, which rises to the same height as the former, but with a gentle ascent to the summit. A small island lies in the entrance, and narrows the channel to three-quarters of a mile ; when through this narrow entrance, a beautiful basin opens of at least 1 00 miles in circumference, being thirty miles long, and ten to fourteen wide, with several small, but exuberantly fertile islands, covered with the most beautiful trees and shrubs. The shores of the basin rise in general abruptly to hills of moderate height, behind which are other ridges, increasing in elevation till their summits are lost in the clouds. There is reason to suppose that this vast basin was once a lake, separated from the sea by a narrow bank, the less solid parts of which have been worn away, leaving only the rocky bar which now crosses the entrance from two miles without Santa Cruz fort to the sugar loaf, with seven to ten fathoms water on it towards the east, while at its west extremity the rocks are above water. Both within and without

this bar the depth is eighteen fathoms. All parts of the port afford anchorage to the most numerous fleets, and with the greatest facility of access and egress, by means of the sea and land breezes, which are regular. The entrance is defended by the forts of Santa Cniz and St. Lucia.

This is of course the chief mart of the Brasils, particularly of the mining districts. Troops of mules are constantly seen traversing the roads between these districts and this place; each carrying a burden of about 3 cwt. to the distance, perhaps, of 1500 or 2000 miles. Their homeward freight consists generally of salt or iron. The prosperity of Rio de Janeiro is marked by the rapid increase of its inhabitants, particularly since the residence of the court here. Mr. Mawe states the population, including the negroes, which are the most numerous class, at 100,000 ; Mr. Henderson, at 150,000.

JANEWAY (James), a dissenting clergyman of the seventeenth century, was born in Hertfordshire about the year 1636. He obtained a studentship at Christ Church, Oxford, but resigned his situation and all hopes of future pre-T'erment in 1662, for his refusal to comply with the test act. He now came to London, and was for several years pastor of a congregation at llotherhithe. His works are, Heaven on Earth, and the Saints' Encouragement to Diligence, &.C., 8vo. ; A Token for Children, which has gone through several editions; A Legacy to

my Friends (printed after his decease); and several other devotional tracts, besides the life of his brother John Janeway. His death took place in 1674.

JAN'GLE, v. 7i. & n. s. > Fr. jangler. To JAN'GLER, n. s. > altercate; to quarrel ; to bicker in words ; to make an inharmonious sound : jangler, a quarrelsome, noisy, chattering fellow.

Jangling, as whan man speketh to naoche before folk, and clappeth as a mille, and taketh no kepe •what he sayth. Chaucer. The Personei Tale.

Good wits will be jangling ; but, gentles agree, This civil war of wits were much belter used On Navarre and his book-men. Shakspeare.

Now see that noble and that sovereign reason,

Like sweet bells jangled out of tune and harsh.

Id. Hamlet.

There is no errour which hath not some appearance of probability resembling truth, which when men, who study to be singular, find out, straining reason, they then publish to the world matter of contention and jangling. Raleigh.

Ere Gothic forms were known in Greece,

And in our verse ere monkish rhimes

Had jangled their fantastic chimes. Prior.

JANICULARIS, or JANICULUM, a hill of ancient Rome, added by Ancus Martins ; the burial-place of Numa, and of Statius Cascilius the poet : having the Tiber on the east and south ; the fields on the west ; and a part of the Vatican on the north. It was so called, either from an ancient city, or because it was a janua, or gate, whence they issued out and made excursions on the Tuscans. Virg. Val. Flaccus. It is now called Montorius, a corruption of Mons Aureus, from its sparkling sands. From this hill, on account of its height, is the most extensive prospect of Rome.

JAN'IZARY, n. s. A Turkish word, compounded of jengi, young, and cheri, a soldier ; a young or raw soldier. One of the guards of the Turkish king.

His grand vizir, presuming to invest

The chief imperial city of the West,

With the first charge compelled in haste to rise ;

The standards lost, and janizaries slain,

Render the hopes he gave his master vain.

Waller.

JANISSARIES, or JANIZARIES, an order of infantry in the Turkish armies, formerly reputed the grand seignior's foot-guards, but lately dissolved. The word "genizers,' in the Turkish language signifies novi homines, or new troops. D'Herbelot tells us, that jenitcheri signifies a new band ; and that the name was first given by Amurath I., who, choosing out one-fifth of his Greek Christian prisoners, and instructing them in the discipline of war and the doctrines of their religion, sent

them to Hagi Bektasche (a person whose pretended piety rendered him extremely revered among the Turks), that he might confer his blessing on them, and at the same time give them some mark to distinguish them from the rest of the troops. Bektasche, after blessing them, cut off one of the sleeves of his fur gown, and put it on the head of the leader of this new militia ; from which time (viz. A. D. 1361) they retained the name jenitcheri, and the fur cap. As, in the Turkish

army, the European troops are distinguished from those of Asia ; the janissaries were also distinguished into janissaries of Constantinople, and Damascus. Their dress consisted of a dolyman, or long gown, with short sleeves, which was given them annually by the grand seignior on the first day of Ramazan. They wore no turban, but a kind of cap which they called zarcola, and a long hood of the same stuff hanging on their shoulders. On solemn days they were adorned with feathers, which were stuck in a little case on the fore part of the bonnet. Their arms in Europe, in time of war, were a sabre, a carabine or musket, and a cartouch-box hanging on the left side. At Constantinople, in time of peace, they carried a long staff. In Asia, where powder and fire-arms are more uncommon, they carried a bow and arrows, with a poniard, which they called haniare. They were at first called jaja, that is, footmen, to distinguish them from the other Turks, the troops whereof consisted mostly of cavalry. The number of janissaries was generally above 40,000 ; divided into 162 companies or chambers called odas, where they lived together at Constantinople as in a convent. They were of a superior rank to all other soldiers, and were also more arrogant and factious ; and it was by them that the public tranquillity was often-, est disturbed. The government might therefore be said to be in the hands of the janissaries. They were employed to escort travellers, and especially ambassadors and persons of high rank on the road ; in which cases they behaved with the ut-most zeal and fidelity.

JANIZARIES, at Rome, are officers of the pope, called also participantes, on account of certain duties which they enjoy in the annates, bulls, or expeditions, being officers of the third bench or college of the Roman chancery. The first bench consists of writers, the second of abbreviators, and the third of janizaries, who are a kind of correctors and revisers of the pope's bulls.

JANOWITZ, a town of Bohemia, in the cir-cle of Kaushim, famous for a battle in 1645 between the Swedes and the Imperialists, when the latter were defeated. It is forty-eight miles south-east of Prague. Long. 15° 38' E., lat. 49° 45' N.

JANSEN, or JANSENIUS (Cornelius), D. D., bishop of Ypres, and professor of divinity, in the universities of Louvain and Douay, was one of the most learned divines of the seventeenth century, and founder of the sect of Jansenists. He was born in Holland of Catholic parents, and studied at Louvain. Being sent to transact some business of consequence relating to the university, into Spain, the Catholic king, viewing with a jealous eye the intriguing policy of France, engaged with him to write a book to expose the French as not good Catholics, as they formed alliances with Protestant states. Jansen performed this task in his Mars Gallicus; and was rewarded with the see of Ypres in 1635. rle had, among other writings before this, maintained a controversy against the Protestants upon the subjects of grace and predestination ; but his Augustinus was the principal labor of his life, on which he spent above twenty years. See ˆANSEJJISTS.

JANSENISTS, in church history, a sect of Roman Catholics in France, who followed the opinions of Jansenius, in relation to grace and predestination. In 1640 the universities of Louvain and Douay, and particularly F. Moli-na and F. Leonard Celsus, condemned the opinions of the Jesuits on grace and free-will. This having set the controversy on foot, Jansenius opposed to the doctrine of the Jesuits the sentiments of St. Augustine ; and wrote a treatise on grace entitled Augustinus. This treatise was attacked by the Jesuits, who accused Jansenius of maintaining heretical opinions; and afterwards, in 1642, obtained of pope Urban VIII. a formal condemnation of Jaasenius's treatise ; when the partisans of Jansenius gave out that the bull was spurious, and composed by a per-son devoted to the Jesuits. After the death of Urban, Jansenism began to be more warmly controverted, and one published The Torch of St. Augustine ; another found Snuffers for St. Augustine's torch, and father Veron found A gag for the Jansenists, &c. In 1650 sixty-eight bishops of France subscribed a

letter to pope Innocent X. requesting an enquiry into and condemnation of the five following propositions, extracted from Jansenius's Augustinus : — 1. Some of God's commandments are impossible to be observed by the righteous, even though they endeavour with all their power to accomplish them. 2. In the state of corrupted nature we are incapable of resisting inward grace. 3. Merit and demerit, in a state of corrupted nature, does not de-pend on a liberty which excludes necessity ; but on a liberty which excludes constraint. 4. The Semi pelagians admitted the necessity of an inwan' preventing grace for the performance of each particular act, even for the beginning of faith ; but they were heretics in maintaining that this grace was of such a nature, that the will of man was able either to resist or obey it. 5. It is Semipelagianism to say, that Jesus Christ died, or shed his blood for all mankind in general. In 1 652 the pope appointed a congregation for examining into the dispute. Jansenius was condemned ; and the bull of condemnation, published in 1653, filled all the pulpits in Paris with violent outcries against the heresy of the Jansenists. In 1656 pope Alexander VII. issued out another bull, in which he condemned the five propositions of Jansenius. At last Clement XI. put an end to the dispute by his constitution of July 17th, 1705 ; in which, after having recited the constitution of his predecessors in this affair, he declares, ' that in order to pay a proper obedience to the papal constitutions concerning the present quetion, it is necessary to receive them with a respectful silence.' The clergy of Paris, the same year, approved and accepted thii bull, and none dared to oppose it. This is the famous bull Unigenitus, so called from its beginning with the words Unigenitus Dei Filius, &c., which occasioned so much confusion in France.

JANSENIUS (Cornelius), bishop of Ghent, was born at Hulst, in Flanders, in 1510. He distinguished himself at the council of Trent by his learning and modesty. He wrote a Harmony of the Gospels, and other works ; and died at Ghent in 1576.

JANSSEN (Cornelius), called also Johnson, *n eminent portrait-painter, born at Amsterdam. He resided in England for several years ; where he was engaged in the service of king James I. and painted several excellent portraits of that monarch, his children, and the principal nobility. He had not the freedom of hand nor the grace of Vandyck ; but, in other respects, he was accounted his equal, and in finishing superior. His paintings are easily distinguished by their smooth, clear, and delicate tints, and by a strong character of truth and nature. He generally painted on board ; and, for the most part, his draperies are black; probably because the opposition of that tint made his flesh colors appear more beautifully bright, especially in his female figures. It is said, that he used a quantity of ultra-marine in the black colors, as well as in his carnations; which may be one great cause of their preserving their original lustre even to this day. He often painted in a small size in oil, and often copied his own works in that manner. His fame began to be obscured on the arrival of Vandyck in England ; and, the civil war breaking out some time after, he returned to his own country, where his paintings were in the highest esteem. He died in 1685.

JANSSENS (Abraham), an historical painter, was born at Antwerp in 1569. He was contemporary with Rubens, and, in many' of the finest parts of the art, was accounted not inferior to him. He once challenged him to a competition, but Rubens modestly replied, that the world would certainly do them both justice. Sandrart assures us, that he not only gave a fine round-ness and relief to his figures, but also such a warmth and clearness to the carnations, that they had all the look of real flesh ; and his coloring was as durable as it was beautiful, retaining its original lustre for many years. His finest performance is a resurrection of Lazarus, in the cabinet of the elector Palatine, and is greatly

admired.

JANSSENS (Victor Honorius), historical painter, was born at Brussels in 1664, and was a disciple of Volders, under whom he continued seven years. He afterwards went to Rome, where he studied the works of Raphael, designed after the antiques, and sketched the beautiful scenes around that city. His paintings rose in esteem, and the principal nobility of Rome employed him. He associated with Tempesta, the celebrated landscape painter, for several years, and painted the figures

in the works of that great master as long as they resided together. He composed historical subjects, both in a small and a large size ; but he found the demand for his small pictures so considerable, that he was induced to paint most frequently in that size. Returning to Brussels, his performances were as much admired there as they had been in Italy ; and he adorned most of the churches and palaces of Brussels with his compositions. His invention was fruitful; he designed correctly, his coloring is natural, his pencil free, and his heads beautiful and elegant. His large and small paintings, in correctness and taste, had equal merit, but the coloring of the former appears more raw and cold than that of the latter.

For small historical pictures, he war preferable to all the painters of his time.

JANTY, adj. Corrupted from Fr. gentil. Showy ; fluttering.

This sort of woman is a janty slattern : she hangs on her cloths, plays her head, and varies her posture.

Spectator.

JANUARIUS (St.), the patron saint of Na-ples, where his head is occasionally carried in procession, in order to stop the eruptions of Vesuvius. The liquefaction of his blood is a famous miracle at Naples. Thfi saint suffered martyrdom about the er.d of thi third century. When he was beheaded, a pious lady of Naples caught about an ounce of his blood, which, tradition says, has been carefully preserved in a bottle ever since, without having lost a single grain of its weight. This of itself, were it demonstrable, might be considered as a greater miracle than the circumstance on which the Neapolitans lay so much stress, *viz.* that the blood, which has congealed and acquired a solid form by age, is no sooner brought near the head of the saint, than, as a mark of veneration, it immediately liquefies. This experiment is made thrice a-year, and is considered by the Neapolitans as a miracle of the first magnitude. The substance in the bottle, which is exhibited for the blood of the saint, is supposed to be something naturally solid, but which melts with a small degree of heat. When first brought out of the cold chapel, it is in its solid state ; but when brought before the saint by the priest, and rubbed between his warm hands, it melts. The head and blood of the saint are kept in a kind of press, with folding doors of silver, in the chapel of St. Januarius belonging to the cathedral church. The real head is probably not so fresh and well

preserved as the blood. On that account it is not exposed to the eyes of the public; but is enclosed in a large silver bust, gilt and enriched with jewels of high value. The blood is kept in a small repository by itself. The chemical process for imitating this pretended miracle is fey a solution of gold by the muriatic acid. Though this acid has no action on gold in its metallic state, yet if the metal is previously attenuated, or reduced to a calx, either by precipitation from aqua regia, or by calcination in mixture with calcinable metals, this acid will perfectly dissolve it, and keep it in solution. This solution is of a yellow color, gives a purple stain to the skin, bones, and other solid parts of animals, and strikes a red color with tin. In distillation the nitrous acid arises, and the muriatic acid remains combined with the gold in a blood-red mass, soluble in spirit of wine. If, towards the end of the distillation, the fire is hastily raised, part of the gold distils in a high saffron-colored liquor, and part sublimes into the neck of the retort, in clusters of long slender crystals of a deep red color, fusible in a small heat, deliquating in the air, and easily soluble in water. This red sublimate of gold being easily fusible by the heat of one's hand, is exhibited by the Neapolitan priests for St. Januarius's blood.

JAN'UARY, n. s. Lat. Januarius. The first month of the year, from Janus, to whom u was among the Romans consecrated.

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JAPAN.

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January is clad in white, the colour of the earth at this time, blowing his nails. This month had the name from Janus, painted with two faces, signifying Providence. Peucham.

JANUARY may also be derived from janua, a gate, this month being, as it were, the gate of the year. January and February were introduced into the year by Numa Pompilius ; Romulus’s year beginning in March. The kalends, or 1st of this month, was under the protection of Juno, and consecrated to Janus by an offering of a cake made of new meal and new salt, with new frankincense and new wine. On this day the consuls elect took possession of their office, and, with the flamines, offered sacrifices and prayers for the prosperity of the empire : all animosities were suspended, and friends gave and received Strense, or new-year’s gifts.

JANUS, in fabulous history and mythology, the first king of Italy, who received Saturn hospitably, when he was driven from Arcadia by Jupiter. He tempered the manners of his subjects, and taught them civility ; and from him they learned to improve the vine, to sow corn, and to make bread. After his death he was adored as a god. He was thought to preside over all new undertakings. Hence, in all sacrifices, the first libations of wine and wheat were offered to Janus; all prayers were prefaced with a short address to him ; and the first month of the year was dedicated to and named from him. See JANUARY. Janus was represented with two faces, either to denote his prudence, or that he views at once the past and approaching years ; he had a sceptre in his right hand, and a key in his left, to signify his extensive authority, and his invention of locks.

JANUS was also the name of a street in Rome, chiefly inhabited by bankers and usurers. It was so called from two statues of Janus erected in it, one at the top, the other at the bottom. The top of the

street was therefore called Janus summus, the bottom Janus imus, and the middle Janus medius. Hence Horace, lib. i. Epist. 1. v. 54.

Haec Janus summus ab itno Perdocet : and Sat. 3. lib. ii.

Postquam omnis res mea Janum Ad medium fracta est.

JANUS,TEMPLE OF, in ancient history, a square building at Rome, as some say, of entire brass, erected by Romulus, containing a statue of Janus five feet high, with brazen gates on each side, which were always kept open in war, and shut in time of peace. But the Romans were so much engaged in war, that this temple was shut only twice from the foundation of Rome till the reign of Augustus, and six times afterwards. It was shut, 1. I>tfring the long reign of Numa, who instituted this ceremony. 2. In A.U.C. 519, after the end of the first Punic war. 3. By Augustus after the battle of Actium, A.U.C. 725. 4. On Augustus's return from the war against the Cantabrians in Spain, A. U. C. 729. 5. Under the same emperor, in A. U. C. 744, and A. A. C. 5. ; when there was a general peace throughout the whole Roman empire, which lasted twelve years. 6. Under

Nero, A. U. C. 811. 7. Under Vespasian, in 824. 8. Under Constantius, when, upon Mag-nentius's death, he was left sole possessor of the empire, in 1105. Some dispute this, hower-er, and say that the last time it was shut was under Gordian, about A. U. C. 994. Virgil gives us a noble description of this custom, ./En. lib. iii. ver. 607, &c.

JAPAN. The isles or empire of Japan consists of three considerable, and a great number of small islands, separated from the peninsula of Corea, and the coast of Chinese Tartary, by the strait of Corea and the sea of Japan, and extending between the latitudes of 30° and 41°. These islands were first made known to Europe by Marco Paulo, who collected some details respecting them from the Chinese, under the name of Zipangri. In 1535, or 1548, they were visited by the Portuguese.

The word Japan (Je-pen or Je-paun) is Chinese, and signifies the country of the rising sun. The three principal islands are Niphon, Kiusiu, and Sikokf. Their surface presents a variety of mountains, hills, and valleys. Many of the mountains contain volcanoes, but in general they are well clothed with evergreen trees, and give birth to numerous rivulets, which fertilise the valleys, but seldom arrive at the magnitude of rivers. The hills are cultivated to their summits, and

present the smiling picture of human industry, in the midst of vestiges of physical convulsions. In the island of Niphon, in the centre of an extensive valley, is a lake, said to be in length equal to fifty hours of a horse's pace, and one-third of that in breadth. The east coasts are lined with rocks, against which the sea beats with incessant fury. The climate approaches to humid, the most abundant rains falling after Midsummer, and during this season it thunders almost every night. The maximum of the thermometer, at Nangasaki, in August, is 98°, and the minimum in January 35°. The summer heat is, however, moderated by frequent sea breezes; and the snow never lies on the ground more than a few days.

Rice is the principal grain cultivated, but wheat, barley, rye, and Indian corn, are also produced ; the potatoes are indifferent, but peas, beans, cabbages, and turnips, are equal to those of Europe. The islands have no apple trees, but pears grow to a very large size ; and oranges, figs, shaddocks, bananas, cocoa-nuts, jacks, and other fruits of the tropics, arrive at perfection ; ginger, black pepper, sugar, cotton, and indigo, are cultivated in great quantity; the tea shrub grows wild in the hedges; and on the sides of the smaller mountains are found the Indian laurel and cam-phor. The islands also afford other medicinal plants, such as the muquet of Japan, the aromatic acore, squine root, cerete of Japan, moxa, snake-wood, murgo root, the opium poppy, jalap, &c. The cypress, larch, and weeping-willow, are common.

These islands have but a scanty proportion of quadrupeds, there being but few hogs, and neither goats nor sheep ; the first two are considered as injurious to agriculture, and therefore are not allowed to propagate. The horses and black cattle are in small number, and the only

JAPANNING.

be f.gures in gold and silver, these must be traced out with a pencil in the varnish, over the rest of the work ; and, when this varnish is almost dry, the leaf-gold, or silver, is to be laid on, and polished afterwards with some smooth substance.

Wood and metals do not require any other preparation, but to have their surface perfectly even and clean : but leather should be strained either on frames or on boards ; as its bending or forming folds would

otherwise crack and force off the coats of varnish : and paper should be treated in the same manner, and have a previous strong coat of some kind of size ; but it is rarely made the subject of japanning till it is converted into papier mache, or wrought by other means into such form that its original state, particularly with respect to flexibility, is lost.

One principal variation from the method formerly used in japanning is, the using or omitting any priming or undercoat on the work to be japanned. In the older practice, such priming was always used; and is at present retained in the French manner of japanning coaches and snuff-boxes of the papier mache" ; but, in the Birmingham manufacture, it has been always rejected. The advantage of using such priming or undercoat is, that it makes a saving in the quantity of varnish used : because the matter of which the priming is composed fills up the inequalities of the body to be varnished ; and makes it easy, by means of rubbing and water-polishing, to gain an even surface for the varnish : this was, therefore, such a convenience in the case of wood, as the giving a hardness and firmness to the ground was also in the case of leather, that it became an established method. There is this inconvenience always attending the use of an undercoat of size, that the japan coats of varnish and color will be constantly liable to be cracked and peeled off by asy violence, and will not endure so long as the bodies japanned in the same manner, but without any such priming ; as may be easily observed in comparing the wear of the Paris and Birmingham snuff-boxes; the latter, when good of their kind, never peeling or cracking, unless by great violence, or such a continued rubbing as wastes away the substance of the varnish ; while the japan coats of the Parisians crack and fly off in flakes, after any knock or fall, particularly near the edges.

The laying on the colors in gum-water, instead of varnish, is also another variation from the method of japanning formerly practised ; but the much greater strength of the work, where they are laid on in varnish or oil, has occasioned this way to be exploded in most regular manufactories : however, they who practise japanning on cabinets, or other such pieces as are not exposed to much wear and violence, may not find it worth their while to encumber themselves with the preparations necessary for the other :nethods, and may paint with water-colors on an undercoat laid on the wood, or other substance, of v.-hich the piece to be japanned is formed ; and then finish with the proper coats rf varnish, according to the methods below taught : if the colors are tempered with the strongest isinglass,

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Priming. — The priming is of the same nature with that called clear-coating, by house-painters ; and consists only in laying on, and drying in the most even manner, a composition of size and whiting, or, sometimes, lime instead of the latter. The common size has been generally used for this purpose : but, where the work is of a nicer kind, it is better to employ the glovers', or the parchment size ; and if a third of isinglass be added, it will be still better, and, if not laid on too thick, is much less liable to peel and crack. The work should be prepared by this priming, by being well smoothed with the fish-skin, or a glass-shaver ; and, being made thoroughly clean, should be brushed over once or twice with hot size, and diluted with two-thirds of water, if it be of the common strength. The priming should then be laid on with a brush as evenly as possible ; and should be formed of a size whose consistence is betwixt the common kind and glue, mixed with as much whiting as will give it a sufficient body of color to hide the surface of whatever it is laid upon, but not more.

If the surface be very clean on which the priming is used, two coats of it laid on in this man-ner will be sufficient ; but if, on trial with a fine wet rag, it will not receive a proper water-polish on account of any inequalities not sufficiently filled up, one or more coats must be given it; and, whether a greater or less number be used, the work should be smoothed, after the last coat but one is dry, by rubbing it with Dutch rushes. When the last coat is dry, the water-polish should be given, by passing over every part of it with a fine rag gently moistened, till the whole appear perfectly plain and even. The priming will then be completed, and the work ready to receive the painting, or colored varnish : the rest of the proceedings being the same in this case as where no priming is used.

When wood or leather is to be japanned, and no priming is used, the best preparation is to lay two or three coats of coarse varnish, composed in the following manner : — Take of rectified spirits of wine one pint, and of coarse seed-lac and resin, each, two ounces. Dissolve the seed-lac and resin in the spirit; and then strain off the varnish. The varnish, as well as all others formed of spirits of wine, must be laid on in a warm place ; and, if it can be conveniently managed, the piece of work to be varnished should be made warm likewise; and, for the same reason, all dampness should be avoided ; for either cold or moisture chills this kind of varnish, and prevents its taking proper hold of the substance on which it is laid.

Japan-grounds. — When the work is so prepared, or by the priming with the composition of size and whiting above described, the proper japan-ground must be laid on ; which is much the best formed of shell-lac varnish, and the color desired, if white be not in question, which demands a peculiar treatment, or great brightness be not re-

quired, when also other means must be pursued. The colors used with the shell-lac varnish may be any pigments whatever, which give the tint of the ground desired ; and they may be mixed together to form browns or any compound co-lors.

As metals never require to be undercoated with whiting, they may be treated in the same manner as wood or leather, when the under coat is omitted, except in the instances referred to below.

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may be diminished, and a little crude turpentine added to the gum-anime to take off the brittleness.

A very good varnish, free entirely from all brittleness, may be formed by dissolving as much gum-anime as the oil will take in old nut or poppy oil, which must be made to boil gently when the gum is put into it. The ground of white color itself may be laid on in this varnish, and then a coat or two of it may be put over the ground ; but it must be well diluted with oil of turpentine when it is used. This, though free from brittleness, is nevertheless liable to suffer by being indented or bruised by any slight strokes; and it will not well bear any polish, but may be brought to a very smooth surface without, if it be judiciously managed in the laying it on. It is likewise somewhat tedious in drying, and will require some time where several coats are laid on ; as the last ought not to contain much oil of turpentine.

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Black grounds may be formed by either ivory-black or lamp black : but the former is preferable where it is perfectly good. These may be always laid on with shell-lac varnish, and have their upper or polishing coats of common seed-lac varnish, as the tinge or fulness of the varnish can be here no injury. For forming the common black japan grounds, by means of heat on metal, the piece of work to be japanned must be painted over with drying oil : and, when it is of moderate dryness, must be put into a stove of such a degree of heat as will change the oil to black, without burning it so as to destroy or weaken its tenacity. The stove should not be too hot when

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the work is put into it, nor the heat increased too fast, either of which errors would make it blister; but the slower the heat is augmented, and the longer it is continued provided it be restrained within the due degree, the harder will be the coat of japan. This kind of varnish requires no polish, having received, when properly managed, a sufficient one from the heat.

The best kind of tortoise-shell ground produced by heat is not less valuable for its great hardness, and enduring to be made hotter than boiling water without damage, than for its beautiful appearance. It is to be made by means of a varnish prepared in the following manner : take of good linseed-oil one gallon, and of umber half a pound ; boil them together till the oil become very brown and thick ; strain it then through a coarse cloth, and set it again to boil, in which state it must be continued till it acquire a pitchy consistence, when it will be fit for use. Having prepared thus the varnish, clean well the metal plate which is to be japanned ; and then lay vermilion tempered with shell-lac varnish, or with drying oil diluted with oil of turpentine, very thinly, on the places intended to imitate the more transparent parts of the tortoise-shell. When the vermilion is dry, brush over the whole with the black varnish, tempered to a due consistence with oil of turpentine ; and, when it is set and firm, put the work into a stove, where it may undergo a very strong heat, and be continued a considerable time ; if even three weeks or a month, it will be the better. This was given amongst other receipts by Kunckel ; but appears to have been neglected till it was revived with great success in the Birmingham manufactures, where it was not only the ground of snuff-boxes, dressing-boxes, and other such smaller pieces, but of those beautiful tea-waiters that have been so justly esteemed and admired in several parts of Europe to which they have been sent. This ground may be decorated with painting and gilding in the same manner as any other varnished surface, which had best be done after the ground has been duly hardened by the hot stove ; but it is well to give a second annealing with a more gentle heat after it is finished.

Method of painting japan work. — Japan work ought properly to be

painted with colors in varnish, though, for the greater despatch, and in some very nice and small works for the freer use of the pencil, the colors are frequently tempered in oil ; which should previously have a fourth part of its weight of gum-anime dissolved in it ; or, in default of that, of the gums san-darac or mastich. When the oil is thus used it should be well diluted with spirit of turpentine, that the colors may be laid more evenly and thin; by wiiich means fewer of the polishing or upper ooats of varnish become necessary.

In some instances water colors are laid on grounds of gold, in the manner of other paintings ; arid are best when so used in their proper appearance, without any varnish over them; they are also sometimes so managed as to have the effect of embossed work. The colors employed in this way for painting are both prepared by means of isinglass size, corrected with honey or sugar-candy. The body of which the

embossed work is raised need not, however, be tinged with the exterior color, but is best formed of very strong gum-water, thickened to a proper consistence by bole-armenian and whiting in equal parts ; which, being laid on the pro-per figure and repaired when dry, may be then painted with the proper colors tempered in the isinglass size, or in the general manner witn shell-lac varnish.

Method of varnishing japan work. — The last and finishing part of japanning lies in the laying on and polishing the outer coats of varnish; which are necessary, as well in the pieces that have only one simple ground of color, as with those that are painted. This is in general best done with common seed-lac varnish, except in the instances and on those occasions where we have already shown other methods to be more expedient : and the same resaons which decide as to the fitness or impropriety of the varnishes, with respect to the colors of the ground, hold equally with regard to those of the painting: for where brightness is the most material point, and a tinge of yellow will injure it, seed-lac must give way to the whiter gums; but where [hardness and a greater tenacity are most essential, it must be adhered to ; and where both are so necessary, that it is proper one should give way to the other m a certain degree reciprocally, a mixed varnish must be adopted.

This mixed varnish, as we have already observed, should be made of the picked seed-lac. The common seed-lac varnish, which is the most useful preparation of the kind hitherto invented, may be thus made :

— Take of seed-lac three ounces, and put it into water to free it from the sticks and filth that are frequently intermixed with it ; and which must be done by stirring it about, and then pouring off the water and adding fresh quantities in order to repeat the operation till it be freed from all impurities, as it very effectually may be by this means. Dry it then and powder it grossly and put it with a pint of rectified spirit of wine into a bottle, of which it will not fill above two-thirds. Shake the mixture well together, and place the bottle in a gentle heat, till the seed appear to be dissolved, the shaking being in the mean time repeated as often as may be convenient ; and then pour off all that can be obtained clear by this method, ajid strain the remainder through a coarse cloth. The varnish thus prepared must be kept for use in a bottle well stopped. When the spirit of wine is very strong it will dissolve a greater proportion of the seed-lac : but this will saturate the com-mon, which is seldom of a strength sufficient for making varnishes in perfection. As the chilling, which is the most inconvenient accident attending those of this kind, is prevented or produced more frequently, according to the strength of the spirit ; we shall therefore take this opportunity of showing a method by which weaker rectified spirits may with, great ease at any time be freed from the phlegm, and rendered of the first de-gree of strength.

Take a pint of the common rectified spirit of wine, and put it into a bottle of which it will not fill above three-parts. Add to it half an ounce of pearl-ashes, salt of tartar, or any other

alkaline salt, heated red-hot and powdered as well as it can be without much loss of its heat ; shake the mixture frequently for the space of half an hour, before which time a great part of the phlegm will be separated from the spirit, and will appear, together with the undissolved part of the salts, in the bottom of the bottle. Let the spirit then be poured off or freed from the phlegm and salts by means of a

tritorium or separating funnel; and let half an ounce of the pearl ashes, heated and powdered as before, be added to it, and the same treatment repeated. This may be done a third time if the quantity of phlegm separated by the addition of the pearl-ashes appear considerable. An ounce of alum, reduced to powder and made hot, but not burnt, must then be put into the spirit, and suffered to remain some hours, the bottle being frequently shaken : after which the spirit, being poured off from it, will be fit for use.

The manner of using the seed-lac or white Tarnishes is the same, except with regard to the substance, used in polishing; which, where a pure white, or great clearness of other colors is in question, should be itself white : whereas the browner sorts of polishing dust, as being cheaper and doing their business with greater despatch, may be used in other cases. The pieces of work to be varnished should be placed near a fire, or in a room where there is a stove, and made perfectly dry ; and then the varnish may be rubbed over them by the proper brushes made for that purpose, beginning in the middle and passing the brush to one end ; and then with another stroke from the middle passing it to the other. But no part should be crossed or twice passed over in forming one coat, where it can possibly be avoided. When one coat is dry another must be laid over it, and this must be continued at least five or six times or more, if on trial there be not sufficient thickness of varnish to bear the polish without laying bare the painting or the ground-color underneath.

When a sufficient number of coats is thus laid on, the work is fit to be polished ; which must be done, in common cases, by rubbing it with a rag dipped in Tripoli or pumice-stone, commonly called rotten stone, finely powdered ; but towards the end of the rubbing a little oil of any kind should be used along with the pow-der; and, when the work appears sufficiently bright and glossy, it should be well rubbed with the oil alone, to clean it from the powder, and give it a still brighter lustre. In the case of white grounds, instead of the Tripoli or pumice-stone, fine putty or whiting must be used, both which should be washed over to prevent the dan-ger of damaging the work from any sand or other gritty matter that may happen to be commixed with them.

It is a great improvement in all kinds of japan work to harden the varnish by means of heat, which in every degree that it can be applied short of what would burn or calcine the matter, tends to give it a more firm texture. Where metals-form the body, therefore, a very hot stove may be used, and the pieces of work may be continued in it a considerable time ; especially if the heat be gradually increased ; but,

where wood is in Vot. XI.

question, heat must be sparingly used, as it would otherwise warp or shrink the body so as to injure the general figure.

JAPETUS, in fabulous history, the son of Ccelus, or Titan, and Terra. He married Asia, or Clymene, by whom he had Prometheus, Epimetheus, Atlas, and Menoetius. The Greeks considered him as the father of all mankind.

JAPHETH, the son of Noah. His descendants possessed all Europe and the isles in the Mediterranean, including those which depend on Asia. They had all Asia Minor, and the northern parts of Asia above the sources of the Tigris and Euphrates. Noah, when he blessed Japheth, sajd, ‘ God shall enlarge Japheth, and he shall dwell in the tents of Shem, and Canaan shall be his servant.’ This blessing or rather prophecy of Noah was accomplished when the Greeks, and after them the Romans, carried their conquests into Asia and Africa, where were the dominions of the posterity of Shem and Canaan. The sons of Japheth were Gomer, Magog, Madai, Javan, Tubal, Meshech, and Tiias. The Scripture says, ‘ that they peopled the isles of the Gentiles, and settled in different countries, each according to his language, family, and people.’ It is supposed that Gomer was the father of the Cimbri, or Cimmerians ; Magog of the Scythians ; Ma-dai of the Medes; Javan of the lonians and Greeks ; Tubal of the Tibareni ; Meshech of the Muscovites or Russians, and Tiras of the Thracians. By the isles of the Gentiles, the Hebrews understand the isles of the Mediterranean, and all the countries separated by the sea from the continent of Palestine; whither also the Hebrews could go by sea only, as Spain, Gaul, Italy, Greece, and Asia Minor. The name of Japheth was very little altered by profane authors, who call him Japetus. Th’e poets made him the father of heaven and earth. The Greeks believe that he was the father of their race, and acknowledge nothing more ancient than him. Besides the seven sons above-mentioned, the Septuagint, Eusebius, the Alexandrian Chronicle, and St. Austin, give him an eighth, called Eliza, who is not mentioned either in the Hebrew or Chaldee.

JAR, v. n. & n. s. Sax. eojine, anger, or Fr. guerre, war, or old Teut. garren, to clamor. To strike together with a kind of short rattle: to sound untuneably : figuratively, to clash ; to interfere; to quarrel; to dispute: jar, a discordant sound; discord; debate; a state in which a door unfastened may strike the post; an earthen vessel, from Ital.

giano.

Natlˆess, my brother, since we passed are Unto this point, we will appease our jar.

Hubberd.

When those renowned noble peers of Greece, Through stubborn pride, among themselves did Jar,

Forgetful of the famous golden fleece, Then Orpheus with his harp their strife did bar.

Spenser.

He maketh war, he maketh peace agaiu, And yet his peace is but continual jar : O miserable men, that to him subject an> !

Id. Fasris Queene.

At last, though long, our jarrmg notes agree.

Shuktpeare.

id.

I perceive you delight not in musick. — Not a whit, when it jars so.

O, you kind gods ! Cure this great breach in his abused nature. The' untuned and jarring senses, O, wind up, Of this child-changed father .

Id. King Lear.

For orders and degrees Jar not with liberty, but well consist.

Milton. Paradise Lo»t. On a sudden open fly, With impetuous recoil and jarriny sound, The' infernal doors, and on their hinges grate Harsh thunder, that the lowest bottom shook Of Erebus. Id.

First was the world as one great cymbal made, Where jarring winds to infant nature played.

Martell.

A string may jar in the be«t master's hand, And the most skilful archer miss his aim.

Roscommon.

About the upper part of the jar there appeared a good number of bubbles. Boyle.

In r, the tongue is held stiffly at its whole length, by the force of the muscles j so as when the impulse of breath strikes upon the end of the tongue, where it finds passage, it shakes and agitates the whole tongue, whereby the sound is affected with a trembling ja*.

Holder's Elements of Speech. The rings of iron, that on the doors were hung, Sent out a. jarring sound, and harshly rung.

Dryden.

He mead for cooling drink prepares, Of virgin honey in the Jar*. Id.

They must be sometimes ignorant of the means conducing to those ends, iu which alone they can jar and oppose each other. Id.

The state is out of tune ; distracting fears And jealous doubts jar in our public counsels.

Rowe's Jane Shore. Warriors welter on the ground, Whilst empty jar* the dire defeat resound. Garth. My knees tremble with the jarring blow. Gay.

The chaffering with dissenters, and dodging about this or t'other ceremony, is but like opening a few wickets, and leaving them a-jar, by which no more than one can get in ai a time. Swift.

He keeps his tempered mind serene and pure, And every passion ?.pt)y harmonized Amid a. jarring world. Thomson's Seasons. — Summer.

JARCHI (Solomon), called also Raschi and Isaaki, a famous rabbi, born at Troyes, who flourished in the twelfth century. He was a perfect master of the Talmud and Gemara. A great part of his commentaries are printed in Hebrew, and some have been translated into Latin by the Chiistians. They are all greatly esteemed by the Jews, who have bestowed on the author the title of prince of commentators.

JA'RDES. n. s. Fr. Hard callous tumors in horses, a little below the bending of the ham on the outside. This distemper in time will make the horse halt, and grow so painful as to cause him to pine away, and become light-bellied. It is most common to maneged horses, that have been kept too much upon their haunches. — Farrier's Dictionary.

JARDINS (Mary Catharine Des), an ingenious, but profligate French writer, born at Alen- £on, in 1640. Being obliged to leave Alenconon account of an intrigue, she went to Paris, where she wrote plays and novels, which occupy 10 >ols. 12mo. She died in 1683.

JARDYN (Karel, or Charles Du), a celebrated painter, born at Amsterdam in 1640. He was a disciple of Nicholas Berchem, and travelled in Italy when a youug man ; but, arriving at Rome, he gave himself up alternately to study and dissipation. Yet his paintings rose into high repute, and they were bought up at great prices. To revisit his native city he at last left Rome, but, passing through Lyons, he was pievailed upon to stay there for some time, and found as much employment in that city as he could execute. But the profits of his paintings were not adequate to his profusion ; and, to extricate himself from the incumbrances in which his extravagance had involved him, he married his hostess who was very old, but also very rich. Ashamea of this adventure, he returned to Amsterdam, accompanied by his wife, and there for some time followed his profession with as much success as he had met with in Italy or Lyons. He returned to Rome the second time ; and, after a year or two spent there in his usual extravagant mannei, he settled at Venice. In that city his merit was well known, which procured him a very honorable reception. He lived there highly caressed, and continually employed ; but died at the age of thirty-eight. In his coloring and touch he resembled his master, but he added a force which distinguishes the great painters of Italy. Most of his pictures seem to express the warmth of the sun, and the light of

mid-day. They are not much encumbered ; a few figures, some animals, and a little landscape for the back grounds, generally comprise the whole of his composition. However, some of his subjects are more extensive, containing more objects, and a larger design. His works are much sought after, but not easily met with.

JARGEAU, an ancient town of France, in the department of Loiret, and late province of Orleanois, taken by the English in 1438, and retaken by Joan of Arc the next year. It is ten miles south-east of Orleans, and seventy south-west of Paris.

JAR'GON, n.s. Tr. jargon; Span.gericonca. Unintelligible talk; gabble; gibberish.

Nothing is clearer than mathematical demonstra" tion; yet, let one, who is altogether 'gnorant in ma-thematicks, hear it, and he will hold it to be plain fustian or jargon. Bramhall.

From this last toil again what knowledge flows ? Just as much, perhaps, as shows That all his predecessor's rules Were empty cant, all jargon of the schools. Prior.

During the usurpation an infusion of enthusiastic jargon prevailed in every writing. Swift.

The merest word that ever fooled the ear, From out the schoolman 's jargon I should deem The golden secret, the sought ' Kalon' found, And sealed in my soul. Byron.

JARGON, in lithology, a kind of precious stone, of the nature of the diamond, but softer; found in Brazil, according to M. de Bomare; but in Ceylon, according to M. Rome" de L'Isle. Its specific gravity is nearly equal to that of the ponderous spar, being 4416. Its crystals consist of two tetrahedral pyramids of equal sides, separated by a short prism ; so that the jargon is properly of a dodecahedral form. According

to some lapidaries, the jargon comes nearest to the sapphire in hardness ; and as it has, when cut and polished, a great resemblance to the diamond, jargons are called by some soft diamonds ; and one may be easily imposed upon in purchasing these for the true kind, when they are made up iu any sort of jewellery work. On exposing this stone to a violent fire, M. D'Arcet found the surface a little vitrified where it stuck to the porcelain test in which it was set ; whence it appears, that the jargon has not the least resemblance to the diamond in its essence.

JARGONELLE', n. s. A species of pear. See PEAR.

JARGONIA, in mineralogy, a new kind of earth discovered by Rlaproth in the jargon of Ceylc/n. It resembles argill more than any other earth, though it differs essentiallyfrom it in some respects. Its color is white, and its specific-gravity probably exceeds 4000. It is incapable of uniting to fixed air ; at least, when precipitated from acids by mild alkalies, it takes up none. It is soluble in dilute vitriolic acid (as also in the nitrous and muriati;); and with a slight excess of this acid it forms, in a moderate heat, by spontaneous evaporation, stelliform crystals of an astringent taste, easily soluble in water. Its so'utions, like those of argill, are precipitable by volatile caustic, as well as by fixed alkali. It is also soluble in the concentrated acetous acid ; this solution will not crystallise ; but, if it be evaporated to dryness, the saline powder thus had will not attract the moisture of the air, as acetous alum does ; neither does the acetous acid act so powerfully on argill as on this earth. It is insoluble in a boiling solution of caustic fixed alkali, in which argill is perfectly soluble. It is infusible, not only by fixed alkalies, but also by microcosmic salt, to which argill yields. Bo-rax, however, melts it, but without any effervescence, in which respect also it differs from argill.

JARNAC, a town of France, in the department of the Charente, containing 1700 inhabitants. It is remarkable for a victory obtained by Henry III. (then duke of Anjou), over the Hu-gonots, in 1596, when their general Louis I. prince of Conde was killed. It is seated on the Charente, eighteen miles north-west of Angoule'me.

JAROSLAV, a city and government of European Russia, bounded by Vologda, Kostroma, Vladimir, Tver, and Novogorod, and lying between 37° 45' and 41° 15' of E. long., and 56° 44' and 58° 52' of N.

lat. The territorial extent of this government is above 14,000 square miles, and its population 800,000. The surface consists of large undulating plains, traversed by the Wolga, the Schekna, the Mologa, and numerous smaller rivers. The lakes are also numerous. The soil, where it is not marshy, is sand, clay, or black mould. The climate is not particularly severe ; but agriculture is in a backward state, and large quantities of corn are imported for consumption. The inhabitants rear cattle, and trade in wood to great extent ; flax and hemp are likewise cultivated, and a few manufactures appear. The government is divided into ten circles or districts; but the steppes of Jaroslav are distinct from them.

JARCSLAV, the capital of the foregoing government, and a bishop's see, is situated on the Wolga, 146 miles N.N. E. of Moscow, and 3GO E. S. E. of St. Petersburg. It is built almost entirely of wood ; but the manufactures of silk, linen, and Russia leather, are on a large scale, and it has a noted bell-foundry. Here is an academy endowed with valuable lands (for the education of superior youth. The number of students hardly ever exceeds fifty ; but there is also a high-school for the education of those of less elevated birth, and a theological seminary on a considerable scale. Peter the Great founded its manufactures; but they were still more indebted to the fostering care of John Ernest, duke of Courland, who resided here many years. Population 19,000.

JAROSLAW, a large town of Austrian Po-land, in Galicia, on the river San. Its manufactures are of wax and cloth, but they are very indolently conducted ; the chief trade is in linen and flax ; a large fair is held on the 15th of Au-gust. It is forty-eight miles W. N.W. ofLem-burg, and 110 east of Cracow.

JASHER, a book which Joshua mentions, and refers to in chapter x. 1 3. ' Is not this written in the book of Jasher?' It is difficult to determine what this book of Jasher, or the upright, is. St. Jerome and the Jews believed it to be Genesis, or some other book of the Perttateuch. Some think it was public annals, or records, which were styled justice or upright, because they contained a faithful account of the history of the Israelites. Grotius believes, that this book was a song, made to celebrate this miracle and this victory, because the words cited by Joshua as taken from this work, ' Sun, stand thou still upon Gibeon, and thou moon in the valley of Ajalon,' are such poetical expressions as do not suit with historical memoirs ; and in the second book of Samuel (i. 18.) mention is made of a book under the

same title, on account of a song made on the death of Saul and Jonathan. See AJALON.

JASIONE, in botany, a genus of the monogynia order, and syngenesia class of plants; natural order twenty-ninth, campanaceae : CAL. ten-leaved : COR. five regular petals : CAPS, beneath, two-celled. Species one only — J. mon-tana, a native of Europe.

JASION, or JASIUS, in fabulous history, the son of Jupiter and Electra, and king of Arcadia. Having improved agriculture, he was fabled to have married the goddess Ceres, by whom he had three sons, Plutus, the god of riches, Philo-melus, and Corybas. All the gods were present at the wedding. He was killed by lightning, and worshipped by the Arcadians.

JASK, a town of Croatia.

JAS'MINE, n. s. Fr. gelseminum, jasmin. It is often pronounced jessamine. A creeping shrub with a fragrant flower.

Thou, like the harmless bee, mayst freely range j From jasmine grove to grove may'st wander.

Thomson.

JASMINUM, jasmine or jessamine tree, in botany, a genus of the monogynia order, and diandria class of plants ; natural order forty-fourth, sepiarise: COR. quinquefid, the berry dicoccous ,

the SEEI 3 arillated, and the anthers within the tube. The species are numerous, the principal are,

1. J. azoricum, the azorian white jessamine, has shrubby, long, slender stalks and branchps, rising upon supports fifteen or twenty feet high, with pretty large flowers of a pure white color ; coming out in loose bunches from the ends of the branches, and appearing most part of the summer and autumn.

2. J. fruticans, the shrubby yellow jasmine or jessamine, has shrubby, angular, trailing stalks and branches, rising upon supports eight or ten feet high ; trifoliate and simple alternate leaves; with yellow flowers from the sides and ends of the branches, appearing in June ; frequently producing berries of a black color. This species is remarkable for sending up many suckers from its roots ; of en so plentifully as to overspread the ground, if not taken up annually.

3. J. grandiflorum, the great-flowered Cntalo-nian jessamine, has a shrubby, firm, upright stem, branching out into a spreading head from about three to six or eight feet high, with large fiowers of a bluish-red color without, and white within, appearing from July to November. Of this there is a variety with semi-double flowers, having two series of petals.

4. J.humile, the dwarf yellow jessamine, has shrubby firm stalks, and angular branches, of low, somewhat robust and bushy growth ; broad, trifoliate, and pinnated leaves ; and large yellow flowers in July, sometimes succeeded by berries.

5. J. odoratissimum, the most sweet-scented yellow Indian jessamine, has a shrubby upright stalk, branching erect, without supports, six or eight feet high, with bright yellow flowers in bunches from the ends of the branches ; flowering from July till October, and emitting a most fragrant odor. This species, as well as the first and third, may be increased by layers or seeds, or by grafting and budding them upon the common white and shrubby yellow jessamine. They are tender, and require shelter iu a greenhouse in winter, and therefore must always be kept in pots to move them out and in occasionally. The pots must be filled with light, rich earth, frequently watered in summer, but moderately, about once a-week in winter. Prune off all the decayed wood when it appears, and retrench the rambling shoots, to preserve the heads somewhat regular ; managing them in other respects as the common greenhouse plants.

6. J. officinale, the common white jessamine, has shrubby, long,

slender, stalks and branches, rising upon supporters fifteen or twenty feet high, with numerous white flowers from the joints and ends, of a very fragrant odor. There is a variety with white-striped, and another with yellow-striped leaves. This species, with the fruticans and humile, are sufficiently hardy to thrive in this climate without shelter. They may be easily propagated by layers and cuttings ; and the striped varieties by grafting or budding on stocks of the common kind.

JASON, the Greek hero who undertook the

Argonautic expedition, was the son of ˆson and

Alcimede (See -ZEsou), and was -educated by

Chiron the Centaur. His uncle Pelias having

aurped nis father's kingdom, Jason boldly de-

manded it of him, but was advised by him first to go to Colchis and recover the golden fleece previous to the restoration of it. jEetes, king of Colchis, subjected him to several arduous enterprises, all which Jason, by the aid of Juno and Medea, accomplished, and then set sail for Eu-rope with Medea, to whom he proved faithful for ten years, but afterwards deserted her. See AR-GONAUTS.

JAS'PER, n. s. Fr. jaspe ; Lat. iaspis. A hard stone of a bright beautiful green color, sometimes clouded with white, found in masses of various sizes and shapes. It is capable of a very elegant polish, and is found in many parts of the East Indies, and in Egypt, Africa, Tartary, and China. — Hill.

And upon pillers grete, of jasper long, I sawe a temple of brasse ifounded strong.

Chaucer. The A ssemble of Foulet. And underneath a bright sea flowed Of jasper, or of liquid pearl, whereon Who after came from earth sailing arrived, Wafted by angels, or flew o'er the lake Rapt in a chariot drawn by fiery steeds.

Milton. Paradise Lost.

The most valuable pillars about Rome are four columns of oriental jasper in St. Paulina's chapel, and one of transparent oriental jasper in the Vatican library. Addison on Italy.

The basis of jasper is usually of a greenish hue, and spotted with red, yellow, and white. Woodward,

What is her pyramid of precious stones ? Of porphyry, jasper, agate and all hues Of gem and marble, to encrust the bones Of merchant dukes ? Byron. Childe Harold.

JASPER, id mineralogy, a genus of silicious earths, or a sub-species of the rhomboidal quartz of Jameson. Kirwan distinguishes three families, *viz.* common jasper, ˆEgyptian pebble, and striped jasper. The colors of common jasper are milk-white, grayish-white, or yellowish-white, citron, ochre-yellow, brownish-yellow, blood-red, brownish dark red, brown, olive, or dark green ; and variegated, spotted or veined with many of these. It is met with either in large masses, or blunt detached, fragments. Gerhard found some irregularly crystallised, in hexahedral prisms, among the fossils sent to him by Beyer from Schneeberg; and Baron Born mentions some found in the Palatinate. Its lustre is 2‘1; its transparency 0, or nearly 1 ; its fracture conchoidal, sometimes imperfectly, sometimes flatly ; its hardness, from 9 to 19; specific gravity from 2-58 to 2-7. The heavier sort seems evidently contaminated with metallic particles. Jasper, when heated, does not decrepitate or harden. Alkalies and microcosmic salt flux it with difficulty ; borax better, and without effervescence. Even by oxygen jasper is scarcely, and but imperfectly melted, as appears by the experiments of Lavoisier. As Gerhard found it to yield in a chalk crucible, ,in the parts that touched the chalk, it is probable it contains a small portico of argill, with a much larger of silex. Unless very impure, it does not wither by exposure to the air. Its transitions are into hornstone, opal, argillite, and lithomarga ; it is often intimately mixed with chalcedony. The mineral acids have no immediate effect upon it, but corrode it by some months immersion. On treating a small

piece of green jasper with vitriolic acid, some crystals of alum and green vitriol were obtained ; which shows that iron and clay are ingredients in its composition. It occurs principally in veins as a constituent of agate. It is found in the Pent-land Hills, and in trap and transition rocks in Ayrshire and Dumfriesshire. It receives a good polish.

The Egyptian jasper often exhibits a variety of colors in the s-ame specimen, either in regular, or irregular, concentric and alternating stripes, or layers, or in dots and dendritical figures. The most usual colors are the yellow, brown, gray, milk-white, leek-green, and black ; this last only in dots. It is found in spheroidal, or flat rounded masses, which are enveloped in a coarse rough crust. The lustre is glimmering, the fracture conchoidal. It is feebly translucent at the edges, and as hard as hornstone. Its specific gravity is 2‘63. It occurs loose in the sands of Egypt.

Striped jasper is known by its bands of gray, green, yellow, and red ; and is therefore termed banded jasper by Werner. It occurs massive in whole beds. The fracture is conchoidal and opaque ; less hard than Egyptian jasper, and rather easily frangible. Specific gravity 2-5. It occurs in secondary clay-porphyry in the Pent-land Hills, and near Friburg in Saxony. It receives a fine polish.

Jasper martialis, or sinople, is also a family of this genus. It is a dark red stone, containing eighteen or twenty per cent, of metal. Near Chemnitz, where it forms very considerable veins, as Brunnich informs us, it has frequently specks of marcasite, cubic lead ores, and blend. It has likewise much gold. There are several varieties differing in the coarseness and fineness of their texture, as well as the shade of their color ; varying from a deep brown to a yellow. The last is attracted by the magnet after calcination.

JASSY, a considerable city of European Tur-key, the -capital of Moldavia, and residence of the hospodar, who is a vassal of the grand seignior. In 1753 the whole city, with the palace of the hospodar, some popish convents, and a new Lutheran church, were destroyed by fire ; and in 1772 it was desolated by the plague : it is still in a ruinous state. It is seated on the Pruth, and is defended by a castle. However, it has been several times taken in the wars between the Turks and the Russians and Austrians ; the last time by the latter in 1788, who restored it at the peace of Reichenbach in 1790. In 1792 a peace was concluded here. Long. 27° 35’ E., lat. 47° 8’N.

JASZBERENY, a large and central town of Hungary, on the Sadwa, the

residence of the military commandant of the provinces of Jazyga and Rumania. The environs are fertile in corn and pasturage ; and a good trade in the former, and in horses and cattle, centres here. The town contains a Franciscan monastery, and is remarkable as having been the residence of the famous Attila, whose tomb is still exhibited to strangers. Population 12,000. Thirty-eight miles east of Pest.

IATROLEP'TIC, adj. Fr. iatroleptique ; Gr. iarpbc and aXitˆw. That which cures by anointing.

JATROPHA, the cassada plant ; a genus ».- the monadelphia order, and moncecia class of plants; natural order thirty-eighth, tricoccae. Male CAL. none: COR. monopetalous and funnel-shaped ; there are ten stamina, one alternately longer than the other. Female CAL. none: COR. pentapetalous and patent ; there are three bifid styles : CAPS, trilocular, with one seed in each cell. There are seventeen species. The most remarkable are the following : —

1. J. curcas, the English physic nut, with leaves cordate and angular, is a knotty shrub, growing about ten or twelve feet high. The extremities of the branches are covered with leaves; and the flowers, which are of a green herbaceous kind, are set on in an umbel round the extremities of the branches, but especially round the main stalks. These are succeeded by as many nuts, whose outward tegument is green and husky, which being peeled off discovers the nut, whose shell is black and easily cracked : this contains an almond-like kernel, divided into two parts ; between which separation lie two milk-white thin membranaceous leaves, easily separable from each other. These have not only a resemblance to perfect leaves, but have, in particular, every part, — the stalk, the middle rib, and transverse ones, as visible as in any leaf whatsoever. This species is a native of the West Indies, and is planted round negro gardens. A decoction of the leaves of it, and of the third species (which grows wild), Dr. Wright says, is often used with advantage in spasmodic gripiugs, attended with vomiting : it sits easier on the stomach than any thing else, and seldom fails to bring about a discharge by stool.

2. J. elastica, with ternate leaves, elliptic, very entire, hoary underneath, and longly petiol-ed. This is the hevea Guianensis of Aublet, which yields the caoutchouc or Indian rubber; for a particular account of which, see CHEMISTRY and CAOUTCHOUC.

3. J. gossypifolia, cotton-leaved jatropha or belly-ache bush, the leaves

of which are quinquepartite, with lobes ovate and entire, and glandular branchy bristles. The stem, which is covered with a light grayish bark, grows to about three or four feet high, soon dividing into several widely extended branches. These are neither decorated with leaves nor flowers till near the top, which is then surrounded by the former : tneir foot-stalks, as well as the young buds on the extremity of the branches, are guarded round with stiff hairy bristles, which are always tipt with glutinous liquid drops. From among these rise several small deep-red pentapetalous flowers, the pistil of each being thick set at the top with yellow farinaceous dust, which blows off when ripe; these are succeeded by hexagonal, husky, blackish berries, which when ripe open by the heat of the sun, emitting a great number of small dark-colored seeds, which serve as food for ground-doves.

4. J. manihot, the bitter cassada, has palmated leaves; the lobes lanceolate, very entire, and polished. It is a native of the West Indies, where it is used as food. The root of bitter cassada has no fibrous or woody filaments in the heart, and neither boils nor roasts soft. It may be de-

prived of the noxious qualities, which reside in the juice, by heat. Ca.ssada bread, therefore, is thus made : — The roots are washed and scraped clean ; then grated into a tub or trough : after this they are put into a hair bag, and strongly pressed, to squeeze out the juice, and the meal or farina is dried in a hot stone basin over the ‘ire, and made into cakes. It also makes excellent puddings, equal to millet. The scrapings of fresh bitter cassada are successfully applied to ulcers. Cassada roots yield a great quantity of starch, which the Brasilians export in little lumps, under the name of tapioca. According to F. Labat, the small pieces of manioc which have escaped the grater, and the clods which have not passed the sieve, are not useless. They are dried in the stove after the flour is roasted, and then pounded in a mortar to a fine white powder, with which they make soup. It is “Jkewise used for making a’ kind of thick coarse cassada, which is

roasted till almost burnt ; of this, fermented with molasses and West India poatoes, they prepare a drink called ouycou.

5. J. multifida, or French physic nut, with leaves many-parted and polished, and stipules bristly and multitid, grows to ten feet high. The main stalk divides into very few branches, and is covered with a grayish-white bark. The leaves stand upon six-inch foot-stalks, surrounding the main stalk, generally near the top, in an irregular order. The flowers grow in bunches, umbel-fashion, upon the extremities of each large stalk, very much resembling, at their first appearance, a bunch of red coral : these afterwards open into small five-leaved purple flowers, and are succeeded by nuts, which resemble those of the curcas. This species is a native of the West Indies, and is cultivated there as an ornamental shrub. The seeds of this, as well as of the curcas and gossypifolia, are drastic purgatives and emetics. They yield, by decoction, an oil of the same uses and virtues as the oleum ri-cini.

JAVA, an important island of the Eastern Seas, separated from Sumatra by the strait of Sunda, about five leagues wide where narrowest. The island is 250 leagues long and from thirty to fifty broad. Its name, according to some, signifies great, while others derive it from the Malay, djav, the name of a grain that grows on it. The Arabs and Persians call it Gezira al Maha Rajah, the island of the great king.

Java is traversed by a chain of high mountains from east to west, approaching nearest to the south coast, and giving rise to innumerable torrents/which, in the rainy season, inundate ?11 the low lands : but their mouths are choked with sand, and admit only small vessels. The greatest elevation of the chain is towards the east, and the highest summits are on the narrowest part of the island behind Cheribon. Several of the mountains are volcanoes ; that named Gete” 8000 feet above the level of the sea.

The year is here divided into two seasons ; one of which is called the east or dry monsoon, and the other the west monsoon, Or rainy season. The east or good monsoon commences in the months of April and May, and finishes the end of September, or the beginning of October. The

trade winds then blow from four or five leagues off shore, through the whole of the Indian Seas to the south of the line from the south-east

and E. S. E. at times going as far south as S. S. E. with fine dry weather. The west or bad monsoon begins the latter end of November, or early in December. While it continues, the wind often blows with great violence, and is accompanied by heavy torrents of rain, which render the season genejally unhealthy. The same winds are found to prevail every where to the south of the line, and last until the conclusion of February, or commencement of March, from which time they are very variable until April, when the easterly winds begin to blow. Hence these three months, as also October and part of November, are called the shifting months, and the breaking up of the monsoons are considered at Batavia as the most unhealthy season of the year. As far as nine or ten degrees south of the line, when the westerly winds prevail, the contrary takes place at the same time and distance to the north of it ; and vice versa, when to the north the westerly winds blow, the easterly prevail to the south of the line ; which alteration greatly assists the navigation of Java.

Along the coast of Java the land and sea breezes blow every day, without exception, and moderate the intensity of the heat.

The northern coast of the island is, in general, low and considered unhealthy, from the marshes, stagnant waters, and thick vegetation. At the distance of some leagues from the scathe climate becomes salubrious, and the cold increases in ascending from the foot of the mountains, until at a country house of the governor of Batavia, only six leases from the city, fires are agreeable morning and evening.

Java may be considered, on the whole, the most fertile and best cultivated of all the eastern islands. At the foot of the mountains is a rich alluvial soil of from ten to even fifty feet deep. Rice and maize are its staple agricultural products; but coffee, tobacco, and cotton, which have all been introduced by Europeans, are also grown in abundance. Agriculture has received that degree of attention here which the bounties of nature seem to demand ; its implements are much superior to those found in Hindostan, and, though there are few of the extensive tanks here constructed in the latter country, the brooks and rivers are advantageously employed for irrigation. The rice of Java is exported to China, and sometimes even to Europe : it is considered inferior to that of Carolina and Bengal. The former will sell for 18s. a cwt., and the latter for 11s. 3d., when that of Java fetches only 9s. 9d. This is attributed to the careless modes of husking and drying here used. The Java maize is not a superior grain. But coffee has been found to flourish very decidedly in this island; and particularly suits the land unfit for rice. It is said to be far superior to any we receive from the West Indies : and is exported to the amount of 26,000,000

Ibs. In 1818 27,400,000 Ibs. of clayed sugar were exported. The molasses, mixed with thirty-five parts of rice, and three of palm wine, (out of 100) yield the arrack for which Java is famous. Of tobacco, 5,000,000 Ibs. are said

to be exported annually ; and of the birds' nests which are reckoned a luxury in China, 27,000 Ibs.

But the teak of this island is its most important production, and the Duch show their estimation of it by subjecting it to a rigid monopoly : its forests, it is said, would yield 50,000 beams for ship-building annually; and, under the more liberal system adopted by the British, their produce was enquired after throughout Bengal. Latterly the price of Java teak has risen, but the article has almost disappeared.

The quantity of pepper produced in Java was once considerable : in 1777 it was 6,000,000 Ibs. ; but the European consumption has decreased, and the supplies from other eastern countries have much diminished the return for this article here.

Java is abundant in fruit and fruit trees, among which may be enumerated the cocoa nut and many other palms, shaddocks, oranges, lemons, citrons, tamarinds, the jack tree, mangoes, mangosteens, pine-apples, bananas, the sweetsop, custard-apple, the rambutan, and guava ; in addition to which are grapes, melons, pumpkins, pomegranates, and figs. The mangosteen, reckoned the most delicious fruit of the east, is of a singularly good flavor. The tree on which it grows is extremely beautiful, bearing, like the orange, its fine spherical fruit and flowers at the same time. 'The celebrated upas, or poison tree, of which the account by Foersch attracted little attention, until it was inserted as a note to Dr. Darwin's Poem of the Botanic Garden, is now established/ says Mr. Hamilton, ' to be entirely of fabulous existence.' The animal tribes are those of all the eastern islands. The buffalo supplies milk, butter, and beef, and is the animal principally employed in domestic labor. While working, it is extremely slow, but steady ; its work, however, falls short of what might be expected, from its size and strength. They are not found in a wild state, being too much exposed to the attacks of the tiger, which is here of a large size. Horses are used in many parts, but the breed is small.

Reptiles and inferior animals are very abundant. ‘A glass of water, taken out of the canal at Batavia, becomes,’ says Mr. Hamilton, ‘ in a few hours a collection of animated matter; the minute portions of which, multiplying by division and subdivision, move about with astonishing rapidity ; and the bay, swarming with myriads of living creatures, exhibits in the night time a phos-phorescent light.’ The insect tribes are also extremely numerous and annoying. The last mentioned writer specifies snakes, scorpions, spiders, ants, musquitoes, fire-flies, and many other dangerous and disgusting vermin, as swarming in the roads, houses, and bed-chambers. ‘ A venomous spider is very common in the thickets of Java, the body of which is two inches in diameter, and the length of the fore legs or claws four inches, covered with hair, the color black, and the inouth red.’

Some compensation is found for these annoyances in the immense number and variety of birds in Java; from the cassowary to the humming bird, which is little larger than a common bee. This department of nature abounds in

noble and beautiful species. Among them are lories and parroquets, argus pheasants, the golden thrush, and the kings-fisher.

The present native inhabitants are a brown colored, healthy race, professing Mahommedanism : but in the mountains there is still said to be found a tribe, who, adhering to the original religion, abstain from animal food, and believe in the metempsychosis. There are also found some descendants of an ancient Chinese colony, and many ancient Chinese temples are scattered over the island. The yellow color reserved for the habits of the emperor seems also to have been adopted from China.

Sir Stamford Raffles, the late intelligent British governor here, gives a far more favorable picture of the Javanese than the Dutch writers. ‘They are/ he says, * warm-hearted, generous, and very susceptible of grateful attachment. The English, who placed confidence in them, found them honest in the intercourse of common life ; and they share only in a slight degree those habits of piracy for which the Malay tribes are so notorious. In society they are uncommonly good-humored, courteous, and polite, and are scarcely ever seen in a passion, unless on those occasions when they are hurried to the last extreme of violence. These unhappily, however, too often occur, under the impulse of that violent jealousy and revenge which form their

ruling passions.'

Human life, indeed, seems held cheaper in this, than in any other part of the East : an assassin may be hired for the moderate sum of fifteen or twenty shillings ; but, in general, the injured party conceives it more honorable to decline this cheap mode of redress, and to seek vengeance with his own hand. Some of the Malay tribes found here driven to desperation, run furiously into the streets, and kill indiscriminately all whom they meet, till they are themselves overpowered or cut down ; an atrocity which, by a corruption of the native term, is called ' running a muck.'

The Javanese language is a copious dialect of the Sanscrit ; and is very beautiful in the written character. In general terms, however, it is said to be deficient : such as those of space, nature, solidity, &c., being entirely wanting. Their literature is chiefly metrical, and may be divided into lyrical compositions or songs ; romances founded on Hindoo legends, and on modern story; histories of modern transactions, and legal and ethical tracts. Of these the songs, in which feeling and passion are simply expressed, are the most pleasing. Its history, which only commences with the Mahommedan invasion, is chiefly a metrical legend, written under the eye of successive princes.

Their interior government is absolute : all rank emanates from the sovereign ; and no bounds are set to the marks of respect shown by the inferior to the higher classes. No individual can stand in the presence of his superior not even the heir apparent in that of the sovereign. Whenever a chief appears, in public, his inferiors must throw themselves into a posture, best described by the English term 'squatting;' in which they remain till he disappears. Sir S. Raffles was much annoyed, in one of his

progresses, by observing the whole population quitting their work, and remaining fixed in this uneasy posture so long as he remained in sight.

The lot of the female sex differs here considerably, however, from what is usual in Asiatic society. They are much more unconstrained ; and suffered to mix with general society. British gentlemen have been admitted to visit the harams of the sultans and chiefs, where they were received by the ladies with a dignified propriety that appeared very striking. The commercial and pecuniary affairs of the family are almost wholly entrusted to women. The right of divorce, however, with which they are indulged equally with the other sex, is said to be carried by them beyond all bounds. It is very common for a woman, before the age of thirty, to have divorced three or four husbands ; and Mr. Crawfurd had one pointed out to him who was living with her twelfth. Little difficulty occurs in regard to the disposal of the children, for, in Java, they are never viewed in the light of a burden. They are both few in number (a circumstance ascribed to the hard labor which the' mothers undergo) and easily supported. Polygamy is permitted by law, but is chiefly confined to the great ; with whom the first wife alone is of their own rank, and mistress of the family ; the others occupy a decidedly inferior place.

The population is divisible into that portion subject to European power, and which amounts to about 3,000,000 : and that portion still under the native government, which comprises about 1,500,000 souls. The European towns are BATAVIA (which see), Surabaga, and Samarang ; the first containing perhaps 60,000 souls, and the last two half that number. The native capitals, Surakerta and Yas Yukerta, contain about 100,000 inhabitants each. The Chinese in the island here are estimated at nearly another 100,000: and the manufacture of sugar, salt, and arrack, is wholly engrossed by them. The slaves are about 30,000.

Java was long subject to the Dutch. But on the 4th of August, 1811, a British force was landed here, and, on the 10th, it took Batavia by storm ; the Dutch general, Janssens, retreating to the eastern extremity of the island, and finally capitulating for the general surrender of it. In the following year the British government engaged in a war with the native sovereign, which ended in the cession of extensive and important districts. Under the excellent government of Sir Stamford Raffles it rapidly improved. But upon the downfal of the French Empire, and the restoration of independence to Holland, this possession was restored to that country. At the close of 1816 the Dutch re-took possession of Java.

JAUCOURT (Louis de), a French compiler who conducted the Bibliotheque Raisonee, from its commencement to 1740; and had a share in the French Encyclopedie and Musaeum Sabae-anum. He also compiled a Lexicon Medicum Universale, but the MS. was lost in the vessel taking it to Holland. He died in 1740.

JAVEL, v. a. & n. s. For jable. To bemire ; to soil over with dirt through unnecessary tra-

versing and travelling. This word is still retained in Scotland and the northern counties. Javel, a wandering dirty fellow.

When as time, fiying with wings swift, Expired had the term that those two jai-els Should tender up a reckoning of their travels.

Hubberd.

Sir Thomas More, preparing himself for execution, put on his best apparel, which the liev..enant compelled him to put off again, saying, That he who should have them was but a javel. What, says Sir Thomas, shall I account him a javel, who shall this day do me so great a benefit 1 More.

JAVELIN, n. s. Fr. javeline. A spear or half-pike, which anciently was used either by foot or horse. It had an iron head pointed.

Others, from the wall, defend With dart and javelin, stones and sulphurous fire ; On each hand slaughter and gigantick deeds.

Milton.

She shakes her myrtle javelin : and, behind, Her Lycian quiver dances in the wind. Dryden

Flies the javelin swifter to its mark, Launched from the vigour of a Roman arm ?

Additon.

The JAVELIN, in antiquity, was five feet and a half long ; the shaft was of wood, and the point of steel. Every soldier in the Roman armies had seven of these, which were very light and slender.

JAUN'DICE, n. s. Fr. jaunisse, jaune, yel-low. A distemper from obstructions of the glands of the liver. See ICTERUS. Jaundiced,

infected with the jaundice.

Why should a man, whose blood is warm within, Sit like his grandsire cut in alabaster? Sleep when he wakes, and creep into the jaundice By being peevish 1 Shakspeare. Merchant of Venice.

Those were thy thoughts, and thou couldst judge

aright, 'Till int'rest made a. jaundice in thy sight. Dryden.

All seems infected, that the' infected spy, As all looks yellow to the jaundiced eye. Pope.

The eyes of a man in the jaundice make yellow observations on every thing ; and the soul, tinctured with any passion, diffuses a false color over the appearances of things. Watts.

JAUNDICE. See MEDICINE.

JAUER,xa principality of Prussia, in Lower Silesia, forming part of the government of Lieg-nitz, bounded on the south and west by Bohemia and Lusatia. It has only a superficial extent ot 1300 square miles, but about 200,000 inhabitants. The surface is diversified with woody hills and fruitful plains. Here are also mines of pit-coal and iron. Corn is imported ; but the manufactures are extensive; and it exports linen, gauze, iron, glass, and porcelain. The chief towns are Jauer, Hirschberg, Lowenberg, and Bunzlau, the capitals of small districts.

JAUER, CIRCLE OR DISTRICT OF, is a part of the above principality, comprising 147 square miles, with a population of 22,000 inhabitants.

JAUER, a fortified town of Silesia, and the capital of the principality and circle of that name, stands on the river Jauer, otherwise called the Wuttend Neisse (or raging Neisse), from its ravages when swelled by rains or ice. It contains five Catholic churches and monasteries, and a Lutheran church. Here is a woollen and cotton

manufacture, and a good trade in flax and yarn In 1776 most part of this place was burnt down; but it has been rebuilt with improvements. Sixteen miles north-west of Schweidnitz, and thirty-one west of Breslau.

JAUNT, v.n. & n. s. I Fr. janter, gentil,

JAUNT'INESS, n.s. J To wander here and there; to ramble; to bustle about: jaunt, a flight, or excursion, commonly used ludicrously, but solemnly by Milton: jauntiness, airiness; flutter; gentility.

I was not made a horse,

And yet I bear a burthen like an ass ;

Spur-galled and tired by jaunting Bolingbroke.

Shakspeare. Richard II.

Our Saviour meek, and with untroubled mind, After his airy jaunt, though hurryed sore, Hungry and cold betook him to his rest. Milton. He sends me out on many a jaunt,

Old houses in the night to haunt. Hudibras.

If you are for a merry jaunt, I'll try for once who can foot it farthest. Dryden's Spanish Fryar.

They parted, and away posts the cavalier in quest of his new mistress : his faistjaunt is to court.

L' Estrange.

A certain stiffness in my limbs entirely destroyed that jauntiness of air I was once master of. Addison.

Thus much of the scheme of my design in this part have I run over, and led my reader a long and tedious jaunt in tracing out those metallic and mineral bodies.

Woodward.

JAUTS, a people of Hindostan, first mentioned about the beginning of

the eleventh century, on the in\asion of India by Mahmoud the Gaznevide. He found them established on the eastern bank of the Indus, and preparing to op-pose his passage by a large fleet of boats, to the number of several thousands. They were, however, completely defeated, and driven into the neighbouring mountainous districts. In the reign of Aurengzebe, Churamana, a Jaut of distinction, collected some troops, and gradually rose from a captain of banditti to be a powerful chieftain. He had once the audacity to attack and plunder the rear of that monarch's army : when pursued, he took refuge among the mountains of Narwar. The Jauts, on the decline of the power of Aurengzebe's successors, gradually rose into notice, particularly under their chief Sooraje Mull, who at last almost dictated in the counsels of the Mogul emperor. Ahmed Shaw, however, the Caubul sovereign, defeated this chieftain, and compelled him to seek the alliance of the Mahrattas. His son, Jowaliar Sing, was assassinated, and in the hand of his successor (at his father's death an infant), all the power of this tribe was diminished to the possession of the fortress of Bhurtpoor, and a small district around. Here, in 1805, the rajah Run-jeet Sing received Hoikar and his army, after their defeat by lord Lake, and the British in the siege of that place sacrificed a vast number of lives. Ultimately, however, it capitulated, and the Jaut rajah was compelled to pay twenty lacks of rupees.

JAW, n. s. Fr.joue, a cheek * whence joow-bone, or cheekbone, then jaw. The bone of the mouth in which the teeth are fixed : the mouth.

My tongue cleaveth to my jaws, and thou hast brought me into the dust of death. Pˆalm xxii, 15.

A generation whose teeth are as swords, and their jaw teeth as knives, to devour the poor. Prov. xxx. My bended hook shall pierce their slimy jaws.

Shakspeare.

I from the jaws of a gardener's bitch Did snatch these bones and then leaped the ditch.

Ben Jonson. O that fortune

Had brought me to the field where thou art famed To have wrought such wonders with an ass's jaw.

Milton. Samson Agonistes.

The jaw bones, hearts, and galls of pikes are very medicinable. Walton's Angler.

More formidable hydra stands within, Whose jaws with iron teeth severely grin. Dryden.

Piso, who probably speaks Aristotle's meaning, said that the crocodile doth not only move his upper Jaw, but that his nether jatc is immoveable. Grew.

A smeary foam works o'er my grinding jaws, And utmost anguish shakes my laboring frame.

Rome. (The creature was his father's dog, that died)

Now feeling all the vulture in his jaws, With some remorse received (though first denied), As a great favour one of the fore-paws.

Byron. Don Juan.

JAXT, a river of Germany, in Wirtemberg, which rising in Oettingen, flows through the principality of Ellwangen, and runs into the Neckar, opposite Wimpfen in Suabia. Its volume of water is large, and it serves for floating wood, but is not navigable.

JAXT, in Germany, a northern department of the kingdom of Wirtemberg, deriving its name from the above river, and having the Baden territory on the west, and Bavaria on the east. This name, formerly given to a province with an extent of 700 square miles and 130,000 inhabitants, is, since the year 1818, extended to a track of country of more than twice that size and population.

JAY, n. s. Named from his cry. — Skinner. A bird ; pica glandaria.

The. chattering pie ;

The scorning jaie ; the eles foe the heroune ; The false lapwing, all full of trecherie.

Chaucer. The Assemble of Foules. Two sharp-winged sheers, Decked with diveis plumes, like painted jays, Were fixed at his beck, to cut his airy ways.

Faerie Queene.

We'll use this unwholesome humidity, this gross watery pumpion — we'll teach him to know turtles from jays. Shakspeare.

What, is the jay more precious than the lark, Because his feathers are more beautiful ? Id.

I am highly delighted to see the jay or the thrush hopping about my walks Spectator.

Admires the jay the insect's gilded wings, Or hears the hawk when Philomela sings ? Pope. Ten thousand warblers cheer the day, and one The live-long night ; nor these alone, whose notes Nice-fingered art must emulate in vain, But cawing rooks, and kites that swarm sublime In still-repeated circles, screaming loud ; The jay, the pie, and e'en the boding owl, That hails the rising moon, have charms for me.

Cowper.

JAY, in ornithology. See CORVUS. JAY (Guy Michael le), a French gentleman, who distinguished himself by causing a polyglot Bible to be printed at his own expense in 10

vols. folio. This undertaking however proved his ruin ; for he printed it with his own name, and thus offended cardinal Richelieu, who, after the example of cardinal Ximenes, was ambitious of eternising his name, by affixing it to such a noble copy of the Holy Scriptures. He also made it too dear for the English market; on which Dr. Walton undertook his polyglot Bible, which, being more commodious, reduced the price of M. le Jay's. After the death of his wife, M. le Jay took orders, was made dean of Veze-lay in the Nivernois, and Louis XIV. gave him the post of counsellor of state. He died in 1675.

JAZEL, n, t. A precious stone of an azure or blue color.

JAZER, or JASER, in ancient geography, a Levitical city in the territory of the Amorites, beyond Jordan, ten miles west, or rather south-west, of Philadelphia, and fifteen miles from Esebon ; and therefore situated between Philadelphia and Heshbon, on the east border of the tribe of Gad, supposed to be the Jazorem of Josephus.

IBABA, one of the largest towns in Abyssinia, and the capital of the province of Mait-sha. It is little inferior to Gondar in extent, and the country around is remarkably fertile.

IBARRA, a fertile province of South America, in Quito, bounded east by the province of Sucumbios, and by the woods of the Indians ; north by the province of Pastes ; west by that of Esmeraldas ; and south by that of Otavalo. It is twenty leagues in length from north-west to south-east, and, for the most part, of a hot climate. It abounds in excellent corn, and sugar-canes. Great quantities of cotton and fruit are also grown. Its principal commerce consists in fine cotton stuffs. It is fertilised by many rivers. Those of chief importance are the Pisco, the Taguando, and the Blanco, which, being united, form the Mira.

IBARRA, the capital of the foregoing province, is situated on an extensive and delightful plain, watered on the east by the river Taguando, and west by Ajavi. The streets are wide and convenient, and the buildings of good construction. It has several convents and a monastery ; and the suburbs are inhabited by Indians. Population 12,000. Forty-two miles north-east from Quito.

IBBERVILLE, a river, or rather a natural canal, of West Florida, which in May, June, and July, when the Mississipi overflows and runs into it, forms a communication for vessels drawing three or four feet, from the Mississipi to the Gulf of Mexico east, through lakes Mauripas and Pontchartrain ; but is dry all the rest of the year.

IBERIA, the ancient name of Spain, so called from the river Iberus, now Ebro.

IBERIA was also the name of an inland country of Asia, having Colchis and a part of Pontus on the west, Mount Caucasus on the north, Albania on the east, and Armenia Major on the south. It is now the western part of Georgia.

The IBERIAN MOUNTAINS are the most extensive mountain range in Spain, and commence at the north of that country, west of the Ebro. They separate the two Castiles from Arragon,

and extending on the shores of the Mediterranean, traverse, under different names, Va-lencia, Granada, and Murcia ; terminating on the Mediterranean, in the promontories of Oropesa, Martino, Palos, and Gata. The Sierra de Oca, in the province of Burgos, forms part of this range. The highest point is the Cabeco de Maria, in the Sierra de

Alcarraz, having an elevation of 7300 feet. Among other ascertained elevations are the peak of the Sierra Espadan, 4160 ; the Casueleda, in the Sierra of that name. 3300; and the peak of Penaglosa 2770 feet in height.

IBERIS, sciatica cresses, or candy-tuft, a genus of the siliquosa order, and tetradynamia class of plants : COR. irregular ; the two exterior petals larger than the interior ones; the silicula polyspermous, emarginated. There are eighteen species : —

1 . I. amara, the bitter candy-tuft, has branching stalks like the urabellata, which rise from eight to twelve inches high ; small, spear-shaped, and slightly-indented leaves; and all the branches terminated by racemose bunches of white flowers in June and July.

2. I. semperflorens, the ever-flowering shrubby iberis, has low undershrubby stalks, very branchy, growing to the height of eighteen inches, with white flowers in umbels at the ends of the branches, appearing at all times of the year.

3. I. sempervirens, the tree candy-tuft, has low undershrubby stalks, very branchy and bushy, rising to the height of ten or twelve inches, with white flowers in umbels at the ends of the branches, appearing great part of the sum-mer. This and the last species are tender, and must be put in pots, to be sheltered from the winter frosts. They are easily propagated by slips or cuttings.

4. I. umbellata, the common candy-tuft, has herbaceous, short, round, and very branchy stalks of tufty growth, from about six to ten inches high ; small spear-shaped leaves, the lower ones serrated, the upper entire ; and all the stalks and branches terminated by umbellate clusters of flowers of different colors in the varieties. This species and the amara, No. 1, being hardy annuals, may be sowed in any common soil in March, till Midsummer, and will thus afford a succession of flowers from June to September.

IBIS. See TANTALUS.

IBN DOREID, or DOREIDI, a famous Arabic poet of the ninth century, was a native of Bassora, but, in consequence of a foreign invasion, resided twelve years with a relative at Oman, after which he returned to his native place. Some years after this he went to Fars, and was employed in the administration of the finances there. He is said to have been reduced to great indigence by his generosity, and retiring to Bag-dad, when his patron was displaced, attracted the notice of the

caliph Moctade/, who gave him a pension. He died at Bagdad A. D. 933. His works are numerous, comprising every species of poetical composition. An ode, entitled Alcas-sydeh Almacsoureh, has been commented on by a multitude of critics : and it has engaged the attention of modern orientalists. It was pub-IBR

Jished by Scheidius at Harderwick, in 1768; and by Haitsma, at Fianeker, in 1773, 4to. with a Latin translation.

IBN EL ALAM (Ali Ben al Hassan), a cele-biated Arabian astronomer, the author of an astronomical table, containing the result of numerous observations made at Bagdad in the reign of Adadodawla: but this work is lost. After the death of Adadodawla he left his country on a pilgrimage, and died on his return, at Osaila, in 985.

IBN KHILCAN (Schems-eddin Abou'l Abbas Ahmed), an Arabian historian, descended from the family of the Barmecides, was born at Arbel in 1211 : he went early in life into Syria, and thence to Egypt : in 1261, after having filled the office of cadi at Cairo, he was promoted to the station of cadi of Damascus. He continued there till 1270, when we find him professor in one of the colleges at Cairo. In 1277 he was re-installed in his post at Damascus, soon after which he joined in the revolt of the governor of that city against the sultan. The attempt was unsuccessful, and Ibn Khilcan was condemned to death, but afterwards pardoned, and again restored to his office. He died at Damascus in 1282. His principal work is a biographical dictionary, entitled The Decease of eminent Personages, and the Lives of Contemporaries. An outline of it was published by M. B. Fred. Tydeman, at Leyden, in 1809, under the title of Specimen Philologicum Exhibens Conspectum operis Ibn Chalicani de vitis Illustrium Virorum, 4to.

IBN YOUNIS (Ali Ben Abdalrahman), an illustrious Arabian astronomer, born of a noble family, A. D. 979. The caliph Azyz facilitated his studies in that science, and Ibn Younis soon justified the generosity of his patron. He carried on his researches in an observatory near Cairo ; and embodied the result of his observations in a work called Zydj Ibn Younis, in which he corrected many of the errors of preceding astronomers. He was also skilled in music. His

death took place A. D. 1008.

IBRAHIM, sultan of the Turks, succeeded his brother Amurath, or Morad IV., in 1640, be-ing then in his twenty-third year. He had been long kept a prisoner by Morad, who would have put him to death, had he not been prevented by his mother ; and such was the state of his mind, that he refused admission to the great officers of the government when they came to announce his brother's death, and his own accession to the throne, nor could he be prevailed on to open the doors of his dungeon till the dead body of Mo-rad was laid in his view. Ibrahim was ill fitted for the cares of a crown, and resigned the duties of his station to his ministers, contenting himself with trifling amusements and gross voluptuous-ness. One of the first events of his reiˆn was the capture of Azof, the principal post of the Cossack pirates, who infested the Black Sea ; by which measure their depredations were repressed, and the navigation rendered clear to Constantinople. An attempt was made upon the island of Candia, but it was not successful. The voluptuousness of Ibrahim was the cause of his death ; he had violated the chastity of the beautiful

daughter of the mufti, who resolved upon revenge, and .ook such means as to effect the end. He ordered the sultan to appear before nim, which he refused ; he then declared him an infidel, and incapable of exercising the authority of government. The janissaries took the part of the head of tne church, and he was almost immediately strangled. This was in the year 1649. He left several sons, of whom three successively filled the throne.

IBRAHIM EFFENDI, a distinguished Turk in the seventeenth century, who was a member of the body of Ulema, or lawyers, and, being skilled in the Persian and Arabic languages, occupied several posts of importance at Constantinople. The gospel history, on examination, produced a conviction on his mind of the truth of Christianity, and he was baptised at Pera in 1671. Thence he retired to Venice, and was confirmed in the church of St. John the Baptist. Two years after he assumed the habit of St. Dominic, and the name of Paul Anthony Effen-di. He left to the library of St. John and St. Paul the Four Evangelists, translated into Ara-bic, with the Psalms, Canticles, and other books of the Old Testament ; and died in 1697, at the age of fifty-six.

IBYCUS, a Greek lyric poet, of whose works there are only a few fragments remaining, flourished A. A. C. 550. It is said that he was

assassinated by robbers ; and that, dying, he called upon some cranes he saw flying to bear witness. Some time after one of the murderers, seeing some cranes, said to his companions, ‘There are the witnesses of Ibycus’s death:’ which being reported to the magistrates, the assassins were put to the torture, and, having confessed the fact, were hanged. Thence arose the proverb Ibyci Grues.

ICA, a province of Peru, bounded east by Castro Vireyna and Lucanas, south-east and south by Cumana, and west by the Pacific Ocean. It is fifty leagues in length from north to south, and in extreme breadth twenty-four from east to west. It is of a hot temperature, especially towards the coast, where various desert tracks are found. But, in general, the province may be said to be fertile in fruits, grain, and pulse, particularly grapes, the vines yielding in many parts solely from the moisture they derive from the earth. The wines and brandies manufactured are carried to Lima, Pa-nama, and Guayaquil, and the mountainous provinces of the Sierra. Olive plantations are also numerous. The produce is conveyed by means of asses, which abound here. The country i& watered by several rivers.

ICA, the capital of the above province, situated in a valley twenty-five miles south of Pisco, has several convents and a college, which formerly belonged to the Jesuits. A glass foundry is also established here. It carries on a brisk traffic in wine and brandy. It is 140 miles E.S.E. from Lima.

ICE, n. s. & -v. a. ~\ Saxon, if-; Swed. is;

ICE-HOI SE, Tz.i. | Gothic, ise ; Belgic, eyse.

ICE’LANDER, u. s. (ˆWater, or other liquor,

I’CICLE, n. s. f made solid by cold ; conI’CINESS, n. s. I creted sugar: to break the

I’CY, adj. J ice, is to make the first

opening to any attempt : ice, to cover with ice; to turn to ice ; to cover with concreted sugar : ice-house, a place in which ice is deposited against the warm months : Icelander, an inhabitant of Iceland : icicle, a shoot of ice hanging from a pedicle : iciness, the state of generating ice; sensation of severe cold: icy, in a figurative sense, cold-hearted ; free from passion; impenetrable.

Nowe hole for colde, now colde for hete again ; Now cold a.s yse ; and now, as coles red, For hete I brenne.

Chaucer. Complaint of the Blacke Knight. You naked trees, whose shady leaves are lost, Wherein the birds were wont to build their bowre, And now are clothed with mosse and hoarie frost, Insteede of blosomes, wherewith your buds did flowre ; I see your teares, that from your boughes do raine, Whose drops in drerie ysiclei remaine.

Spenser. Shepheardes Calender. If you break the ice, and do this feat, Atchieve the elder, set the younger free For our access, whose hap shall be to have her, Will not so graceless be to be ingrate. Shakspeare. Thou art all ice, thy kindness freezes. Id.

You are no surer, no, Than is the coal of fire upon the ice, Or hailstone in the sun. Id. Coriolanus.

If thou tio’st find him tractable to us, Encourage him, and tell him all our reasons ; If he be leaden, icy, cold, unwilling, Be thou so too. Id. Richard HI.

Thou wouldest have never learned The icy precepts of respect. Id. Timon.

Thus have I broken the ice to invention, for the lively representation of floods and rivers necessary for our painters and poets. Peacham on Drawing.

After he’d a while looked wise, At last broke silence and the ice. Hudibras.

If distilled vinegar or aqua-fortis be poured into the powder of loadstone, the subsiding powder, dried, retains gome magnetical virtue ; but if the menstruum be evaporated to a consistence, and afterwards doth shoot into icicles, or crystals, the loadstone hath no

power upon them. Browne's Vulgar Errours.

He relates the excessive coldness of the water they met with in summer, in that icy region where they were forced to winter. Boyle.

Prom locks uncombed, and from the frozen beard, Long icicles depend, and cracking sounds are heard.

Dryden.

In thy fair brow there's such a legend writ Of chastity, as blinds the adult'rous eye : Not the mountain ice, Congealed to chrystal, is so frosty chaste As thy victorious soul which conquers man And man's proud tyrant passion. Id.

If I should ask whether ice and water were two distinct species of things, I doubt not but I should be answered in the affirmative. Locke.

The common dropstone consists principally of spar, and is frequently found in form of ah icicle, hanging down from the tops and sides of grottos.

Woodward's Natural History. Bear Britain's thunder and her cross display To the bright regions of the rising day ; Tempt icy seas, where scarce the waters roll, Where clearer flames glow round the frozen pole.

Pope.

Tis here all meet ! The shivering Icelander, and sun-burnt Moor.

Blair's Grave.

ICE, in physiology, a solid, transparent, and brittle body, formed of some fluid, particularly water, by means of cold. See articles CHEMISTRY, COLD, FREEZING, FROST, and HEAT.

Galileo was the first that observed ice to be lighter than the water which composed it ; and hence it happens, that ice floats upon water, its specific gravity being to that of water as 8 to 9. This rarefaction of ice seems to be owing to the air-bubbles produced in water by freezing ; and which, being considerably large in proportion to the water frozen, render the body so much specifically lighter : these air-bubbles, during their production, acquire a great expansive power, so

as to burst the containing vessels, though ever so strong. M. Merian, in a dissertation on ice, attributes the increase of its bulk chiefly to a different arrangement of the parts of the water from which it is formed ; the icy skin on the water being composed of filaments, which are constantly and regularly joined at an angle of 60° ; and which, by this angular disposition, occupy a greater volume than if they were parallel. He found the augmentation of the volume of water by freezing, in different trials, a 14th, an 18th, a 19th, and when the water was previously purged of air, only a 22d part: that ice, even after its formation, continues to expand by cold, for, after water had been frozen to some thickness, the fluid part being let out by a hole in the bottom of the vessel, a continuance of the cold made the ice convex ; and a piece of ice, which was at first only a 14th part specifically lighter than water, on being exposed some days to the frost, became a 12th part lighter. To this cause he attributes the bursting of ice on ponds. On Lake Champlain, and other American lakes, and even on narrow rivers, fissures and rents of enormous magnitude are often made in the ice, and are always accompanied with loud reports, like those of cannon. The unwary traveller, who, with his sleighs and horses, adventures by night, and sometimes even by day, across the great northern lakes, is frequently swallowed up in the openings, which are thus unexpectedly made in the ice. When the weather grows warm .again, before the ice melts, the fissures close, and sometimes the edges of them even overlap. Wax, resins, and animal fats, made fluid by fire, instead of expanding like watery liquors, shrink in their return to solidity : for solid pieces of the same bodies sink to the bottom of the respective fluids; a proof that these bodies are more dense in their solid than in their fluid state. The osls which congeal by cold, as olive oil, and the essential oil of ani-seeds, appear also to shrink in their congelation. Hence, the different dispositions of different kinds of trees to be burst by, or to resist, strong frosts, are by some attributed to the juices with which the tree abounds; being in the one case watery, and in the other resinous or oily.

Though it has been generally supposed that the natural crystals of ice are stars of six rays, forming angles of 60° with each other, yet this crystallisation of water, as it may properly be called, seems to be as much affected by circumstances as that of salts. Hence we find a considerable difference in the accounts of those who

have undertaken to describe these crystals. M. Merian informs us, that they are stars with six radii ; and his opinion is confirmed by observing the figure of frost on glass. M. Rom6 de L'Isle determines the form of the solid crystal to be an equilateral octahedron. M. Hassenfratx found it to be a prismatic hexahedron.

On the 3d of January 1821 the late Dr. Clarke observed at Cambridge regular crystals of ice, many of which were more than an inch long. Pie exhibited them to several members of the University, and frequently in their presence measured the angles of the rhombic crystals, with the goniometer of Carangeau, which he found to be 120° and 60°. After a thaw took place, the crystals preserved in melting the same inclination of their planes. The above very interesting results confirm the anticipation of Dr. Brewster, who, from the optical structure of ice, referred it to the rhomboidal or pyramidal systems of professor Mohs.

Ice forms generally on the surface of water ; but this, too, like the crystallisation, may be varied by an alteration in the circumstances. In Germany, particularly in the northern parts, there are three kinds of ice. 1. That which forms on the surface. 2. That formed in the middle of the water, resembling nuclei or small hail. 3. The ground ice which is produced at the bot-tom, especially where there is any fibrous substance to which it may adhere. This is full of cells like a wasp's nest, but less regular, and frequently raises vecy heavy bodies from the bottom by means of its inferiority in specific gravity to the water in which it is formed. This ice differs from that continuous kind which is formed along the edge of rivers, and particularly in places where the water is quiet; it never forms in lakes, pools, or other stagnant water, and motion appears to be a condition essential to its existence. At first sight it might be taken for an aggregation of snow penetrated by water, swimming at the surface, rather than for ice ; but a closer examination will not fail to discover its true characters. In fact it is formed of an assemblage of a multi-titude of small, thin, and rounded plates of ice, having a diameter of a few lines. They are individually

transparent, but their aggregation presents at a distance the appearance of a semitransparent mass like wet snow. It is known that, before rivers begin to carry the ground-ice, the temperature of the air must have been for several days previous some degrees below zero ; and it is observed, in general, that a cold wind, blowing in a direction contrary to the current of the river, is singularly favorable to the formation of this sort of ice.

Plot, in his History of Oxfordshire, observes, that all the watermen, with whom he has had an opportunity of speaking on the subject, agree in thinking, that the rivers of the country always begin to freeze at the bottom. He describes the manner in which the small pieces of ice, called ice-meers, rise from the bottom to the surface, and mentions their frequently containing gravel or stones, which they have carried along with them. Hales confirms these observations ; and says, that the watermen of the Thames assert, that, some days before that river is frozen at

the surface, they feel the ice at the bottom with their poles, and that they see it rising to the surface. Mr. Streake relates, that, in February 1806, at Pillau, chains of iron, six feet in length, which had remained a long time lost at the bottom of the water, a cable thirty fathoms long, and stones weighing from three to six pounds, were raised to the surface, enclosed in a thick envelope of ice ; and that an anchor, after having remained an hour in the water, was taken out covered with a layer of ice.

The following explanation of this phenomenon is what M. Merian considers the most natural. If it be true, that, in winter, running water is first cooled at the surface, it is also true, that its constant agitation, especially when aided by a wind blowing in a direction contrary to that of the current, continually mixes the water of the surface and that of the bottom, notwithstanding the inconsiderable difference of their specific gravities. The temperature of the bottom and that of the surface, even in pretty deep rivers, does not present any remarkable difference, while the prominent bodies fixed at the bottom present points of attachment to the forming ice, much more advantageous than a constantly agitated surface ; and it is well known what influence these points or nuclei have in general upon crystallisation. The water sufficiently cooled begins therefore to be converted into ice at the bottom, particularly in places where shelter is afforded by prominences from the impetuosity of the current.

In many countries the warmth of the climate renders ice not only a desirable, but even a necessary article ; so that it becomes an object of some consequence to discover a ready and cheap method of procuring it.

ICEBERGS,large bodies of icefillingthe valleys between the high mountains in northern latitudes. Among the most remaikable are those of the east coast of Spitsbergen ; see GREEN-LAND, and SPITZBERGEN. They are seven in number, but at considerable distances from each other : each fills the valleys for tracts unknown, in a region totally inaccessible in the internal parts. The glaciers of Switzerland seem contemptible to these ; but present often a similar front into some lower valley. The last exhibits over the sea a front 500 feet high, emulating the emerald in color ; cataracts of melted snow precipitate down various parts, and black spiring mountains, streaked with white, bound the sides, and rise, crag above crag, as far as eye can reach in the back ground. At times immense fragments break off, and tumble into the water, with a most dreadful noise. Masses have been seen resembling a Gothic church, with arched windows and doors, and all the rich drapery of that style, composed of crystals of the richest sapphirine blue ; tables with one or more feet ; and often immense flat roofed temples, like those of Luxor on the Nile, supported by round transparent columns of coerulean hue, float by the astonished spectator. These icebergs are the creation of ages, and receive annually additional height by the falling of snows and rain, which often instantly freezes, and repairs the loss occasioned by the influence of the melting sun.

ICE

The following account of an excursion to the Seven Icebergs, in July 1818, is given by captain Scoresby. A strong north-westerly swell having for some hours been beating on the shore, had loosened a number of fragments attached to the iceberg, and various heaps of broken ice denoted recent shoots of the seaward edge. ‘ As we rowed,’ says he, ‘ towards it, with a view of proceeding close to its base, I observed a few little pieces fall from the top; and, while my eye was fixed upon the place, an immense column, probably fifty feet square, and 159 feet high, began to leave the parent ice at the top, and, leaning majestically forward, with an accelerated velocity fell with an awful crash into the sea. The water into which it plunged was

converted into an appearance of vapor or smoke, like that from a furious cannonading. The noise was equal to that of thunder, which it nearly resembled. Tbe column which fell was nearly square, and in magnitude resembled a c'nurch. It broke into thousands of pieces. This iceberg was full of rents, as high as any of our people ascended upon it, extending iu a direction perpendicularly downward, and dividing it into innumerable columns. The surface was very uneven, being furrowed and cracked all over. This roughness appeared to be occasioned by the melting of the snow, some streams of water being seen running over the surface ; and others could still be heard pursuing their course through sub-glacial channels to the front of the iceberg, where, in transparent streams, or in small cascades, they fell into the sea. In some places chasms of several yards in width were seen, in others they were only a few inches or feet across. One of the sailors, who attempted to walk across the iceberg, imprudently stept into a narrow chasm filled up with snow to the general level. He instantly plunged up to his shoulders, and might, but for the sudden extension of his arms, have been buried in the gulf.'

In the first ages of the Spitzbergen fishery, when the ships sometimes moored close to the shore, many serious disasters were occasioned by the fall of pieces of icebergs. One of the Russia Company's ships, which was on the whale-fish- ery in the year 1619, was driven on shore in Bell Sound, by ice setting in from the sea. The captain, with most of his crew and boats, was absent at the time of the accident; but, on the first intelligence, caused his boats to be hauled up on the ice, and proceeded on board to endeavour to get the ship off. After they had been using every endeavour for this purpose, during about an hour, a main piece of an adjoining ice-cliff came down, and almost overwhelmed the vessel and her crew in its ruins. The shock must have been tremendous. The ice which fell struck the ship so high and so forcibly, that it carried away the foremast, broke the main-mast, sprung the bowsprit, and flung the ship over with such violence, that a piece of ordnance was thrown overboard from under the half deck ; and the captain and some of the crew were projected in the same way. The captain, notwithstanding his imminent danger, with fragments of ice flying in all directions, and the masts of the ship falling .•tround him, escaped unhurt; but the mate, and

two more of the crew, were killed, and many others were wounded.

ICE-CREAM, cream coded by ice. Take a sufficient quantity of cream, and when it is to be mixed with raspberry, or currant, or pine, a quarter part as much of the juice or jam as of the cream ; after beating, and straining the mixture through a cloth, put it with a little juice of lemon into the mould, which is a pewter vessel, and varying in size and shape at pleasure ; cover the mould, and place it in a pail about two-thirds full of ice, into which two handfuls of salt have been thrown ; turn the mould by the hand-hold with a quick motion to and fro, in the man-ner used for milling chocolate, for eight or ten minutes; then let it rest as long, and turn it again for the same time ; and, having left it to stand half an hour, it is fit to be turned out of the mould, and to be sent to table. Lemon-juice and sugar, and the juices of various kinds of fruits, are frozen without cream ; and when cream is used, it should be well mixed.

ICE-HILL, a sort of structure common upon the Neva at Petersburgh, which affords a perpetual fund of amusement to the populace. It is constructed in the following manner : — A scaffolding is raised upon the river about thirty feet in height, with a landing place on the top, the ascent to which is by a ladder. From this summit a sloping plain of boards, about four yards broad and thirty long, descends to the superficies of the river ; it is supported by strong poles gradually decreasing in height, and its sides are defended by a parapet of planks. Upon these boards are laid square masses of ice about four inches thick, which, being first smoothed with the axe and laid close to each other, are then sprinkled with water; by these means they coalesce, and, adhering to the boards, immediately form an inclined plain of pure ice. From the bottom of this plain the snow is cleared away forthe length of 200 yards, and the breadth of four, upon the level bed of the river ; and the sides of this course, as well as the sides and top of the scaffolding, are ornamented with firs and pines. Each person, being provided with a sledge, mounts the ladder ; and, having attained the summit, he sets himself upon his sledge at the upper extremity of the inclined plain, down which he suffers it to glide with considerable rapidity, poising it as he goes down ; when the velocity acquired by the descent carries it above 100 yards upon the level ice of the river. At the end of this course there is usually a similar ice-hill, nearly parallel to the former, which be-gins where the other ends ; so that he immediately mounts again, and in the same manner glides down the other inclined plane of ice. This diversion he repeats as often as he pleases. These ice-hills exhibit a pleasing appearance upon the river, from the trees with which they are ornamented, as well as from the moving objects which at particular times of the day are descending without intermission.

ICEHOUSE, a house in which ice is reposited against the warm months. The aspect of ice-houses should be towards the east or south-east, for the advantage of the morning sun to expel the damp air, as that is more pernicious than

warmth; for which reason, trees in the vicinity of an ice-house tend to its disadvantage. The best soil for an ice-house to be made in is chalk, as it conveys away the waste water without any artificial drain ; n?xt to that loose stony earth or gravelly soil. Its situation should be on the side of a hi 11, for the advantage of entering the cell upon a level.

To construct an ice house, first choose a pro-per place at a convenient distance from the house or houses it is to serve : dig a cavity of the figure of an inverted cone, sinking the bottom in a concave form, to make a reservoin for the waste water till it can drain off; if the soil require it, cut a drain to a considerable distance, or so far as will come out at the side of the hill, or into a well, to make it communicate with the springs ; and in that drain form an air-trap by sinking the drain so much lower in that place as it is high, and bring a partition from the top an inch or more into the water, which will consequently be ir the trap, and will keep the well air-tight. Work up a sufficient number of brick piers to receive a cart-wheel, to be laid with its convex side upwards to receive the ice; lay hurdles and straw upon the wheel, which will let the melted ice diain through, and serve as a floor. The sides and dome of the cone are to be nine inches thick, and the sides to be done in steened brick-work, i. e. without mortar, and wrought at right angles to the face of the work : the filling in behind should be with gravel, loose stones, or brick-bats, that the water which drains through the sides may the more easily escape into the-well. The doors of the ice-house should be made as close as possible, and bundles of straw placed always before the inner door to keep out the air. The ice when to be put in should be collected during the frost, broken into several pieces, and rammed down in strata of not above a foot, to make it one complete body ; the care in putting it in, and well ramming it, tends much to its preservation. In a season when ice is not

to be had in sufficient quantities, snow may be substituted. Ice may be preserved in a dry place under ground, by covering it well with chaff, straw, or reeds. Chaff is much used for this purpose in Italy.

ICE ISLAND, a name given by sailors to a great quantity of ice collected into one huge solid mass, and floating about upon the seas near or within the polar circles. In the midst of those tremendous masses navigators have been arrested and frozen to death. In this manner the brave Sir Hugh Willoughby perished with all his crew in 1553 ; and in the year 1773 lord Mulgrave was caught in the ice, and was near experiencing the same unhappy fate. The forms assumed by the ice in this chilling climate are very pleasing. The surface of that which is congealed from the sea watei is flat and even, hard, and opaque, resembling white sugar. The greater pieces, or fields, are many leagues in length : the smaller are the meadows of the seals, on which those animals at times frolic by hundreds. The motion of the smaller pieces is as rapid as the currents : the greater, which are sometimes 200 leagues long, and sixty or eighty broad, move slow and ‘majestically, often fix for a time, immoveable by the power of the ocean, and then produce near the horizon that bright white appearance called the blink. The approximation of two great fields produces a most singular phenomenon : the larger forces the less out of the water, and adds it to its surface : a second and often a third succeeds; so that the whole forms an aggregate of a tremendous height. These float in the sea like so many rugged mountains, and are sometimes 500 or 600 yards thick ; but the far greater part is concealed beneath the water. These are continually increased in height by the freezing of the spray of the sea, or of the melting of the snow, which falls on them. Those which remain in this frozen climate receive continual increase ; others are gradually wafted by the northern winds into southern latitudes, and melt by degrees by the heat of the sun, till they waste away in the boundless element. The collision of the great fields of ice, in high latitudes, is often attended with a noise that for a time takes away the sense of hearing any thing else ; and the less with a grinding of unspeakable horror. The water which dashes against the mountainous ice freezes into an infinite variety of forms ; and gives the voyager ideal towns, streets, churches, steeples, and every sh?pe which imagination can frame.

ICELAND, an island of the North Atlanac Ocean, belonging to Denmark, extends according to Henderson from lat. 63° 20’ to 67° 20’, and between 15° 30’ and 22° 30’ W. long. It is of an irregular oval figure, about 380 miles in length, and about 230 in its greatest breadth, containing upwards of 60,000 square miles : Dr. Henderson says 67,000 ; but the estimates of its size vary considerably. The coast

is indented all round with numerous deep gulfs, bays, and creeks ; several of which form excellent harbours.

When this island was discovered by the Norwegians, in 860, it was uninhabited : that nation first colonised it in 878 ; since which its history has been very accurately kept. The whole country is composed of stony and barren mountains, whose summits, though the highest does not reach 5000 feet, are covered with glaciers (Snae-fell Jokul, the highest point, is 4558 feet). These mountains present two distinct characters ; first, those formed by thirty to forty regular horizontal strata of rock ; while the second are composed of various substances minglea and confused, such as great masses of rock, agglomerations of pu-mice stone, &c., cemented by gravel and clay. These are evidently of volcanic origin, and in-deed the whole island may be considered as a vast cauldron filled with combustible matters, whose ignition produces frequent and sometimes most dreadful earthquakes and eruptions; amongst which those of 1783 were tne most tremendous of any recorded in history. ‘ In that year,’ says the abbe” Ordinaire, ‘ it was feared, that this island would fall to pieces, so dreadful and multiplied were the convulsions produced by its volcanoes and internal fires. A thick sulphureous smoke rendered the island absolutely invisible to mariners at sea, while the people on shore were in danger of being suffocated by it. The fog, which about this time spread -over all

Europe, was considered as an effect of these exhalations. Frightful hollow roarings proceeded from the bottom of the sea. From Mount Shap-ton-gluber (Skaptar Jokul) there poured a terrific torrent of liquid fire for six weeks, which ran ninety miles to the sea and was fifty miles in breadth, and the perpendicular height of its sides from eighty to 100 feet ; it dried up twelve rivers and filled extensive valleys, so that the whole surface of the country was in a state of igneous fluidity, and resembled an immense lake of melted metal.

Not equal to the above in its terrific consequences, but still worth recording, was the eruption of the old volcano of Eyafjeld Jokul in

December 1821.

Europehad this month experienced aremarkable fall of the barometer, accompanied with an agitation of the magnetic needle, which indicated, in the opinion of many persons, some extraordinary convulsion of nature. It was afterwards found that this old Icelandic volcano, which had been quiet since 1612, was suddenly on the 16th in a state of great activity.

This mountain, otherwise called Cape Hecla, is about 5666 feet in height. It is nearly equidistant from Kolla and Hecla, and is the southernmost of the chain where the dreadful eruption broke out about the middle of the last century.

On the 19th of December, 1821, the eruption began. The crater was formed at the distance of five miles, from the minister's house at Holt, and discharged itself thrc-ugh the thick mass of ice that enveloped it, and which is seldom melted. The ice was dispersed in every direction, and a mass, eighteen feet high and sixty feet in circumference, fell towards the north. A number of stones, of different sizes, rolled down the mountain, accompanied with a noise like thunder; and this was immediately followed by a discharge of an enormous and lofty column of flame, which illuminated the whole country, and allowed the people at Holt to read as perfectly within their houses at night as if it had been day. Ashes, stones, gravel, and heavy melted masses of rock, some of which weighed about fifty pounds, were thrown up, and one of these last was found at the distance of five miles from the crater. On the day immediately following the eruption, a great quantity of the fine grayish-white powder of pumice was discharged, and carried about by the wind so as to fall like snow, and cover the adjacent country. It penetrated into the houses through every opening. It exhaled a disagreeable smell of sulphur, brought on affections of the eyes, and occasioned diseases among the sheep in Vester Eyafjeld and Oster Landoe. On the 25th a violent storm raged from the south, and, by the united action of the wind and the rain, the fields were cleared of the sulphureous dust which had covered them. On the 26th and 27th of December -there was a heavy storm from the north-east, and the barometer, which had been gradually falling since the 18th of December, when it was 29° 16', had reached on the 26th of December its lowest point at 28° 49'. On the 18th of February the barometer, which had been at 29° 42', on the llth fell to 27° 72'. So late as the 23rd of February the Eyafjeld Jokui emitted smoke greatly resembling the steam of boiling water ; and some persons were of opinion that the mountain had decreased, and was lower near the cra-ter, as it evidently appeared to be when viewed from north to south. It is stated

that the water. in the rivers that flow from the Jokul and the surrounding mountains, had been considerably enlarged during the first day's eruption. A con'- stant rumbling noise was heard in the vicinity of the volcano, attended occasionally by a dreadful crash as if the immense masses of stones and ice were on the eve of being precipitated down the mountain.

The total number of previous eruptions of volcanoes in Iceland appears to be the following :—

From Hecla, since the year 1004 inclusive 22

From Kattlagiau Jokul 900 7

From Krabla 1724 4 In different parts of the Guld—

bringe Syssel 1000 3

At sea 1583 2

From the lake Grimsvath, in 1716 1

From Eyafialla Jokul in 1717 1

From Eyrefa Jokul, in 1720 1

Prom Skaptar Jokul, in 1783 1

In chronological order, the different eruptions mentioned by Icelandic authors stand thus : In the years 900, 1000, 1104, 1137, 1222, 1300, 1340, 1341, 1362, 1389, 1422, 1538 (Vesuvius erupted thesame year), 1554 (ˆEtna), 15 38, 1619, 1636 (ˆEtna), 1693 (Vesuvius, 1692 ; JEtna 1694), 1716, 1717 (Vesuvius), 1720, 1724, 1728, 1730 (Vesuvius), 1754 (Vesuvius), 1755 (#,taa), 1756, 1766 (ˆtna and Vesuvius), 1771, and 1772, flames seen on Hecla; 1783. Thus it appears, that many of the eruptions that are known to have taken place, since Iceland was inhabited, have not been particularly noticed ; and it is very probable that numerous eruptions of less note have been passed over. We may reckon active all those mountains which have burned within the last century. Of these there are six ; — Hecla, Krabla, Cattlagiau, Eyafialla, Eyrefa, and Skaptar Jokul.

These internal fires have produced a great number of yawning fissures and caverns, and give rise to innumerable boiling springs, which the natives use both medicinally and to cook their victuals without fire. The most celebrated is that of Geyser, near Skalholt, the approach to which is announced by a noise resembling the fall of a great cataract. At intervals, several times a day, it throws up a column of boiling water many feet in thickness, to the height of nearly 100 feet. Mineral springs are also common, and basaltic columns are scattered over the island, sometimes covering spaces of two or three miles in length without interruption : they have generally from three to seven sides, are from five to seven feet in thickness, and from twelve to sixteen yards in length.

Specimens of silver, copper, and iron ores have been found in Iceland, and induce the supposition that it has mines of these metals: in

other mineral substances it is extremely rich, having sulphur, onyx, zeolite, chalcedony, porphyry, pumice-stone, rock-crystal, jasper, ugate, carneolas, the celebrated calcareous spath or Iceland spar, that gives a double refraction, Several varieties of argillaceous earth, clay for porcelain, limestone, 8cc.

The gulfs of the shores are filled with islands, and abound in fish, amphibious animals of the genus of phoca, and sea birds. The rivers, or rather torrents, are numerous, and, as well as the lakes, some of which are of considerable size, are well stocked with salmon and trout.

The climate of Iceland is not extremely cold, but the seasons are variable The sea, at a small distance from the snores, is seldom frozen ; and very little ice is ever seen near the west coast, notwithstanding its proximity to Greenland. On the east coast, the floating ice does not drift farther south than Berufiord in 64£°. The prevailing winds are from the north, and the extremes of the temperature are between 35° below the freezing point to 70°. In some years the month of January is accompanied by violent storms from the north-west that drive vast

mountains of ice into the bays of the north coast, which chill the atmosphere and prolong the winter. On this ice arrive herds of white bears, which commit great ravages among the sheep, but are soon destroyed, government paying ten dollars a head for their destruction, besides purchasing their skins. Thunder is very rarely heard, and never but in winter and in the vicinity of the volcanoes.

The most attractive curiosity of an Iceland winter is the aurora borealis ; which is no where more beautiful or more constantly exhibited. Dr. Henderson says, ‘ I had the opportunity of contemplating the northern lights almost every clear night the whole winter, sometimes shooting across the hemisphere in a straight line, and presenting to the view, for a whole evening, one Tast steady stream of light, but more commonly they kept dancing and running about with amazing velocity, and a tremulous motion, exhibiting as they advanced some of the most beautiful curvated appearances. On gaining one point of the hemisphere, they generally collected, as if to muster their forces, and then began to branch out in numerous ranks, which steered off to the greatest distances from each other as they passed the zenith, yet so as always to preserve the whole of the phenomena in an oval shape, when they contracted nearly in the same way as they had expanded, and, after uniting in a common point, they either returned in a few minutes, or were lost in a stream of light, which grew fainter and fainter, the nearer it approached the opposite side of the heavens. They were mostly of a dunnish yellow, yet often assumed mixtures of red and green, They almost always took their rise from the summit of Mount Erian, whicL is about due north-east from Reykeavik, ai.d proceeded in a south-west direction. When visible the whole length of the hemisphere, they were uniformly strongest towards the north and north-east, and were always sure to be seen in that quarter when they appeared no where else. VOT,. XI.

Once or twice I observed them in the south, but they were faint and stationary.’

Though the island at present produces no trees of importance, there can be no doubt but that it was formerly well wooded, the roots and trunks of trees, chiefly birch, being found in the morasses; and a species of fossil or imperfectly petrified wood, apparently oak, called surtur brand, is met with in large quantities, principally in the mountains, and partly supplies the inhabitants with fuel, the deficiency of which necessary is made up towards the south by turf anc* cow-dung. On the north coast drift wood i.-> generally

abundant.

According to the Icelandic annals, wheat was formerly sown here with success, but this grain will not now come to maturity ; and the ripening of rye, oats, and barley, is so very precarious, that agriculture is almost entirely confined to the manuring some meadows for pasture and hay. In the island are reckoned 300 gardens, producing potatoes, cabbages, carrots, and turnips, but no fruit trees of any kind. The most useful indigenous plants are some cochlearia, and the Iceland moss used in dyeing. It seems probable, that the destruction of the woods, and the feebleness of vegetation in general; is owing to the increased severity of the cold, caused by the accumulation of ice between this island and Greenland, which now forms a solid mass precluding all approach to the latter, though, according to the annals, the communication was formerly open.

The wild animals of Iceland are the arctic or white, and the brown or blue fox, wild cats, rats and mice. The domestic are rein-deer, horses, black cattle, sheep, goats, dogs, and cats. The rein-deer introduced from Norway have rapidly multiplied. The horses are of a small but large-boned breed, and capable of great fatigue ; they are the only land conveyances, the want of roads precluding the use of wheel carriages. The black cattle are small and without horns, while the sheep are all furnished with them. In 1810, the island had, horses, 27,000; black cattle, 20,000 ; sheep, 225,000. Goats are chiefly found in the north, and there are no hogs. The dogs are of three varieties, the sheep or Icelandic dog of Buffon, and two other varieties of the Danish dog. The only poultry reared, from the dear-ness of corn, are a few common cocks and hens. The wild birds, which the Icelanders take either for their feathers or as food, are the swan, wild geese, ducks, puffins, and other aquatic birds, the woodcock, heathcock, &c. The eider duck builds its nest in the rocks of the coast, and its down is carefully collected, but there is a heavy fine for killing the bird. It disappears in au-tumn, but where it retires to is unknown. The Iceland falcons are considered the best of Eu-rope for spon, and considerable numbers were formerly sent to Copenhagen for the royal amusement, but this tribute is no longer demanded.

Besides the destructive effects of earthquakes and volcanoes, the Icelanders have to fear almost equally the disruptions of the secondary or agglomerated mountains, and the avalanches. Th J

former usually happen in summer, after heavy rains, which washing away the clay that supported the masses of rock, they roll into the valleys, and carry destruction with them. The principal diseases to which the Icelanders are subject are catarrhal fevers, pleurisy, diarrhoea, leprosy, and hypochondria. Their general food consists of dried or fresh fish, milk, cheese, curds, and bread. As luxuries, meat stewed in milk, smoked meat, porridge of wheat or barley flour and milk, sour and salted butter. The Icelanders observe Lent so strictly, that they not only do not touch meat, but even abstain from mentioning it during tiiis season. Their chief beverage is tolerable beer, of their own brewing, and a fermented liquor produced from milk. The higher classes have, of late years, become habituated to the use of tea, sugar, and coffee, wines, brandy, &c.

The Icelanders fabricate almost all their domestic utensils, and manufacture the whole of their wool into a coarse cloth called wadmar, or into stockings, gloves, jackets, carpets, &c. The men as well as women are employed during winter in their domestic manufactures. As soon as the ice is melted cutting turf begins, and, when the thawed waters have run off from the meadows, they are cleared of the straw and other rubbish collected on them during winter, and which, by preventing the sun's rays from penetrating the ground would hinder the grass from shooting. When this operation is completed, a thin layer of manure is spread on them, which finishes the field labor until the time of mowing, which usually commences in the middle of July, and lasts till September.

The fishery principally occupies the inhabitants of the south and west coasts. Its chief objects are cod and herrings: the former, as abundant as in Newfoundland, are cured in the same manner as in Norway. The herrings arrive in shoals in June and July. About 2000 boats are usually employed in the fisheries. The Icelanders also take for their oil the arctic shark, small whales, and seals, which arrive at the same time as the white bears on the ice. A part of the fish is, after being dried, reduced to pow-der, and serves to feed the cattle in winter. The extent of the fisheries, considered as a branch of commercial industry, is, however, very confined, both from the imperfection of the boats

and nets and from the want of capital.

Iceland is politically divided into four quarters, or amts, named after the cardinal points, which are subdivided into eighteen syssels, or districts, and these again into less jurisdictions, called hreppar. The island is governed by a grand bailiff, who is also bailiff of the southern quarter : the other three quarters are under the immediate superintendance of two subordinate bailiffs. The written laws are according to the Norwegian code, and there is an appeal to the supreme tribunal at Copenhagen. The island has no regular troops.

The population of Iceland in former times is said to have exceeded 100,000. In 1810 it was estimated at 47,000, or about thirty-three persons to a square mile for the whole island, or 102 to 104, considering only the habitable parts. Dr.

Henderson takes it at 50,000. In 1824, according to Gieman's dsecription of Iceland, it was 50,092 ; the whole being extended over a considerable space, and having but one physician, four surgeons, and 154 Christian pastors. Volcanic convulsions, and other accidents, epidemical diseases, and more particularly the system of commercial monopoly, which by keeping the people poor discourages marriage, are given as the causes of this decreased population.

The revenue raised in the island is about 30,000 rixdollars, the whole of which is supposed to be absorbed in the expense of its government and various establishments; so that the nett revenue to the king of Denmark is confined to the produce of the customs, which is reckoned at little more than 6000 rixdollars. The official communication between Denmark and Iceland is by packet.

Iceland has scarcely any collection of houses that deserves the name of a town. In the ancient system of commercial monopoly twenty-five ports were allowed the privilege of importation, and at each of these the company had an establishment of three or four houses. In 1787 six of these ports were granted considerable privileges, and as they become inhabited are to enjoy the rank of cities : they are Reikiavik, Westmanna, Grennefiord, Isafiord, Eyafiord, and Eskefiord. Reikiavik is now considered the capital, containing 500 inhabitants, whose houses are of wood coated with tar and red clay ; the church and prison alone being of stone. The harbour is sheltered by several small islands, which render it safe. Skalholt, often called the capital in books of geography, probably because it is the residence of one of the two

bishops, consists of only the bishop's house, the church, and a few wooden cottages. In all the other parts of the island the habitations, even of the better sort of Icelanders, are miserable hovels of turf, without windows, and the huts of the common class are such wretched dens, that it is wonderful how any thing in the human form can breathe in them.

Dr. Henderson speaks highly of the personal dispositions of the Icelanders ; and all travellers notice their general intelligence and abilities. ' I have been surprised,' says Dr. H., ' at the degree of cheerfulness and vivacity which I found to prevail among them, and that not unfrequently under extreme depression and want. Their predominant character is that of unsuspecting frankness, pious contentment, and a steady liveliness of temperament, combined with a strength of intellect and acuteness of mind seldom to be met with in any other part of the world. They have also been noted for the unconquerable attachment which they feel for their native island. With all their privations, and exposed, as they are, to numerous dangers from the operation of physical causes, they live under the practical influence of one of their common proverbs : Island er hinn besta land sera solinn kinnar upp&. Iceland is the best land on which the sun shines.'

On the subject of their literary attainments another recent traveller observes, ' I have frequently been astonished at the familiarity with

which many of these self-taught peasants have discoursed on subjects which, in other countries, we should expect to hear started by those only who fill the professor's chair, or who have otherwise devoted their lives to the study of science.' The same traveller remarks, in another place, * it is no uncommon thing to hear youths repeat passages from Greek and Latin authors, who have never been farther than a few miles from the place where they were born. Nor do I scarcely ever recollect entering a hut where I did not find some individual capable of entering into conversation with me on topics which would be reckoned altogether above the understanding of people of the same rank of society in other countries of Europe. On many occasions, in-deed, the common Icelanders discover an acquaintance with the history and literature of other nations which is

perfectly astonishing.'

ICELANDIC CRYSTAL, in mineralogy, a pure calcareous spar, in oblique rhomboidal prisms, principally known for its double refraction. With respect to the figure of Iceland crystals, they are not all of the regular form of an oblique parallelepiped, though the generality of them are such. For this crystal spar, like many others, shoots out from a large base on the rock, into many irregular, uneven-sided scalenous

Eyramids, small and large ; which, when broken y gentle strokes with a hammer, readily split into many pieces, parallel-wise to the base ; and those on the outside are of irregular forms, with opposite sides and angles unequal. Some are like a wedge or isosceles prisms, some quadrangular pyramids. Again, some of these spars are very hard, and will take a fine polish ; others are softer. Some of these pieces are colorless and transparent as glass itself, though few of these are to be met with, the greatest part being foul with mundic, and other opacous matter. Some pieces are of a yellowish hue, and others of a darker complexion ; but all agree in having a double refraction and a double focus, when ground into lenses; but they differ in other respects, according to their different species. Iceland crystal will bear a red heat without losing its transparency ; and, in a very intense heat, calcines without fusion ; steeped a day or two in water it loses its natural polish. It is easily scratched with the point of a pin ; it will not give fire on being struck against steel ; and ferments and is dissolved in aqua fortis. It is found in Iceland, whence it has its name ; and in France, Germany, and many other places. The phenomena of this stone are very remarkable, were first suggested by Bartholine, and have been examined with great accuracy by M. Huygens and Sir Isaac Newton. In other pellucid bodies it is well known that there is only one refraction, in this there are two ; so that objects viewed through it appear double. In other transparent bodies a ray falling perpendicularly on the surface passes straight through, without suffering any refraction ; and an oblique ray is always divided ; but, in Iceland crystal, every ray, whether perpendicular or oblique, becomes divided into two, by means of the double refraction. Mr. B. Martin prepared several prisms of Iceland crystal which exhibited not only a

double but a multiple refraction. A single prism produced a six-fold refraction, and a prism which afforded two images applied to one of

six produced twelve images. He farther observes, with respect to Iceland crystal, that, though the sides of its plane of perpendicular refraction be parallel to one another, a beam of light transmitted through them will not be colorless; in which property it differs from all other known substances. See OPTICS.

ICENI, an ancient nation of South Britain, who inhabited the counties now called Suffolk, Norfolk, Cambridgeshire, Huntingdonshire, and the Isle of Ely.

ICE-PLANT. See MESEMBRYANTHEMUM.

ICHE, a town of France in the department of Vosges, four miles S. S. E. of Marche, and four and a quarter N. N. E. of Chatillon sur Saone.

ICHNEU'MON, n. s. Gr. l%vkvˆv. A small animal that breaks the eggs of the crocodile.

ICHNEUMON, in zoology. See VIVERRA.

ICHNEUMONFLY,' n. s. A sort of fly.

The generation of the ichneumonjiy is in the bodies of caterpillars, and other nymphae of insects.

Derhan's Physico-Theology.

ICHNEUMON, the ichneumon fly, in entomology, a genus of flies of the hymenoptera or-der. The mouth is armed with jaws, without any tongue ; the antennae have above thirty joints; the abdomen is generally petiolated, joined to the body by a pedicle or stalk; the tail is armed with a sting, enclosed in a double-valved cylindrical sheath; the wings are lanceolated and plain. This genus is very numerous. In Gmelin's edition of the Systema Naturae 415 species are enumerated. They are divided into families, from the color of their scutellum and antennae, as follow: 1. Those with a whitish scutcheon, and antennae annulated with a whitish band. 2. Those which have a white escutcheon and antennae entirely black. 3. With a scutcheon of the same color as the thorax; the antennae encompassed with a fillet, 4. With a scutcheon of the same color as the thorax ; the antennae black and setaceous. 5. With setaceous clay-colored antennas. 6. With small filiform antennae, and the abdomen oval and slender. One striking character of these species of flies is the almost continual agitation of their antennas. The name ichneumon has been applied to them from the service they do by destroying caterpillars, plant-lice, and other insects ; as the ichneumon or mangouse is said to destroy the

crocodiles. The variety to be found in the species of ich-. neumons is prodigious; among the smaller species there are males who perform their amorous preludes in the most passionate and gallant manner. The posterior part of the females is armed with a wimble, visible in some species, no ways discoverable in others ; and that instrument, though so fine, is able to penetrate through mortar and plaster ; the structure of it is more easily seen in the long-wimbled fly. The food of the family to be produced by this family is the larva of wasps or mason bees ; for it no sooner espies one of those nests, but it fixes on it with its wimble, and bores through the mortar of

which it is built. The wimble itself consists of three pieces : two collateral ones, hollowed out into a gutter, serve as a sheath, and contain a compact, solid, dentated stem, along which runs a groove that conveys the egg from the animal, who supports the wimble with its hinder legs, lest it should break ; and, by a variety of movements, which it dexterously performs, it bores through the building, and deposits one or more eggs, according to the size of the ichneumon, though the largest drop but one or two. Some agglutinate their eggs upon caterpillars ; others penetrate through the caterpillar's eggs, though very hard, and deposit their own in the inside. When the larva is hatched, its head is so situated, that it pierces the caterpillar, and penetrates to its very entrails. These larvae suck out the nutritious juices of the caterpillar, without attacking the vitals of the creature, who appears healthy, and even sometimes transforms itself to a chrysalis. It is not uncommon to see those caterpillars fixed upon trees, as if they were sitting upon their eggs ; and it is afterwards discovered that the larvae, which were within their bodies, have spun their threads, with which, as with cords, the caterpillars are fastened down, and so perish miserably. Plant-lice, the larvae of the

curculiones, and spider's eggs, are also sometimes the cradle of the ichneumon fly. Carcases of plant-lice, void of motion, are often found on rose-tree leaves ; they are the habitation of a small larva, which, after having eaten ap the entrails, destroys the springs and inward economy of the plant-louse, performs its metamorphosis under shelter of the pellicle which enfolds it, contrives itself a small circular outlet, and sallies forfii into open air. There are ichneumons in the woods, who dare attack spiders, run them through with their sting, tear them to pieces, and thus avenge the whole nation of flies of so formidable a foe : others, destitute of wings, and those are females, deposit their eggs in spiders' nests. The ichneumon of the bedeguar, or sweet-briar sponge, and that of the rose-tree, perhaps only deposit their eggs in those places, because they find other insects on which they feed.

ICHNOG'RAPHY, n.s. Gr. lxvoc and yp<tyo». The ground plot.

It will be more intelligible to have a draught of each front in a paper by itself, and also to have a draught of the ground-plot or iconography of every story in a paper by itself. Afoxon.

TCHNOGRAPHY, in perspective, from iˆvoc, footstep, and ypaˆw, to write, is the view of any thing cut off by a plane parallel to the horizon, just at the base of it.

ICHNOGRAPHY, among painters, signifies a description of images or of ancient statues of marble and copper, of busts and semi-busts, of paintings in fresco, mosaic works, and ancient pieces of miniature.
.I'CHOR, n.i.) Gr. IX<»P-A thin sanious

I'CHOROUS, adj. \ watery fluid like serum : ichorous, a serous, sanious, undigested state of a wound or ulcer.

The lung-growth is imputed to a superficial sanious or ichorotu exulceration. Harvey on Consumption. _

The pus from an ulcer of the liver, growing thin and ichorous, corrodes the vessels. Arbuthnot on Diet.

Milk, drawn from some animals that feed only upon flesh, will be more apt to turn rancij and pu-trify, acquiring first a saline taste, which is a sign of putrefaction, and then it will turn into an ichor.

Arbuthnot on Alimcntt.

ICHOR, in surgery, is sometimes used for a thicker kind of humor flowing from ulcers, called also sanies.

ICHTHYOCOLLA, isinglass, or fish-glue, from i\Qvc, fish, and eoXXa, glue, a preparation from the fish named huso. See ACCIPENSER and CHEMISTRY. The best description of isinglass, and of the method of making it, is that given by Humphrey Jackson, esq., in the sixty-third vo-lume of the Philosophical Transactions. ‘All authors (he says) who have hitherto delivered processes for making ichthyocolla, fish-glue, or isinglass, have greatly mistaken both its constituent matter and preparation.’ No artificial heat is necessary to the production of isinglass, neither is the matter dissolved for this purpose ; for, as the continuity of its fibres would be destroyed by solution, the mass would become brittle in drying, and snap short asunder, which is always the case with elue, but never with isinglass. The latter, indeed, may be resolved into glue with boiling water; but its fibrous re-composition would be found impracticable afterwards, and a fibrous texture is one of the most distinguishing characteristics of genuine isinglass. A due consideration that an imperfect solution of isinglass, called fining by the brewers, possessed a peculiar property of clarifying malt liquors, induced me to attempt its analysis in cold subacid mehstruums. One ounce and a half of good isinglass, steeped a few days in a gallon of stale beer, was converted into good fining, of a remarkably thick conscience ; the same quantity of glue, under similar treatment, yielded only a mucilaginous liquor resembling diluted gum-water, which, instead of clarifying beer, increased both its tenacity and turbidness, and communicated other properties in no respect corresponding with those of genuine fining. If what is commercially termed long or short stapled isinglass be steeped a few hours in fair cold water, the entwisted membrane? will expand, and re-assume their original beautiful hue, and, by a dexterous address, may be perfectly unfolded.’ The sounds, or air-bladders, of freshwater fish in general, are preferred for this purpose, as being the most transparent, flexible, delicate substances. These constitute the finest sorts of isinglass ; those called book and ordinary staple are made of the intestines, and probably of the peritonaeum of the fish. Thebelluga yields the greatest quantity, as being the largest and most plentiful fish in the Muscovy rivers but the sounds of all freshwater fish yield more or less fine isinglass, particularly the smaller sorts, found in prodigious quantities in the Caspian Sea, and several hundred miles beyond Astrakhan, in the Wolga, Yaik, Don, and even as far as Siberia, where it is called kle or kla by the natives, which implies a glutinous matter; it is the basis of the Russian glue, which is preferred to all other kinds for its strength. The

sounds, which yield the finer isinglass, consist of parallel lines, and are easily rent longitudinally ; but the ordinary sorts are found composed of double membranes, whose fibres cross each other obliquely, resembling the coats of a bladder; hence the former are more readily pervaded and divided with subacid liquors ; but the latter, through a peculiar kind of interwoven texture, are with great difficulty torn asunder, and long resist the power of the same menstruum; yet, when duly, resolved, are found to act with equal energy in clarifying liquors. Isinglass receives its different shapes in the following manner: the parts of which it is composed, particularly the sounds, are taken from the fish while sweet and fresh, slit open, washed from their slimy sordes, divested of every thin membrane which envelopes the sound, and then exposed to stiffen a little in the air. In this state they are formed ‘nto rolls about the thickness of a finger, and in length according to the intended size of the staple; a thin membrane is generally selected for the centre of the roll, round which the rest are folded alternately, and about half an inch of each extremity of the roll is turned inwards. The due dimensions being thus obtained, the two ends of what is called short staple are pinned together with a small wooden peg; the middle of the roll is then pressed a little downwards, which gives it the resemblance of a heart shape; and thus it is laid on boards, or hung up to dry. The sounds which compose the long staple are longer than the former ; but the operator lengthens this sort at pleasure by interfolding the ends of one or more pieces of the sound with each other. The extremities are fastened with a peg like the former; but the middle part of the roll is bent more considerably downwards ; and, to preserve the shape of the three obtuse angles thus formed, a piece of round stick, about a quarter of an inch diameter, is fastened in each angle with small wooden pegs, in the same manner as the ends. In this state it is permitted to dry long enough to retain its form, when the pegs and sticks are taken out, and the drying completed ; lastly, the pieces of isinglass are colligated in rows, by running packthread through the peg-holes, for convenience of package and exportation. The membranes of the book sort, being thick and refractory, will not admit a similar formation with the preceding; the pieces, therefore, after their sides are folded inwardly, are bent in the centre, in such a manner that tire opposite sides resemble the cover of a book, whence the name ; a peg, being thus run across the middle, fastens the sides together, and thus it is dried like the former. This sort is inr terleaved, and the pegs run across the ends, the better to prevent its unfolding.

Cake isinglass is formed of the fragments of the staple sorts, put -into a flat metalline pan, with a very little water, and heated just enough to make the parts cohere like a pancake when it is dried ; but frequently it is overheated, and such pieces are ‘ useless in fining. Experience has taught the consumers to reject them. Isinglass is best made in summer, as frost gives it a disagreeable color, deprives it of weight, and impairs its gelatinous principles ; its fashionable forms are unnecessary,

and frequently injurious to its native qua ities. Isinglass is sometimes used in medicine; and may be given in a thin acrimonious state of the juices, in the same manner as the vegetable gums and mucilages, regard being had to their different disposition to putrescence. Women subject to the fluor albus take it dissolved in milk. See CHEMISTRY.

ICHTHYOL’OGY, n. s. Fr. ichthyologie , •Gr. i’x0voXoyia, from i’x0v>c and Xiyw. The doctrine of the nature of fish.

Some there are, as camels and sheep, which carry no name in ichthyology. Browne’* Vulgar Errovn.

ICHTHYOLOGY. See PISCES. ‘ ICHTHYOPH’AGY, ». s. Gr. ix6i>s and 0ayw. Diet of fish ; the practice of eating fish.

ICHTHYOPHAGI (from «x0vc, fish and Qayilv to eat), nations who according to the fabulous accounts of Herodotus lived only upon fish. They had cattle, but made no use of them, excepting to feed their fish withal : they made their houses of large fish-bones, the ribs of whales serving them for their beams. The jaws of these animals served them for doors; and the mortars wherein they pounded their fish, and baked it in the sun, were nothing else but their vertebrae.

ICHTHYPERIA, in natural history, a name given by Hill to the bony palates and mouths of fishes, usually met with fossile, either in single pieces or fragments. They are of the same substance with the bufonitse ; and are of very various figures, some broad and short, others longer and slender; some very gibbose, and others plainly arched. They are likewise of various sizes, from the tenth of an inch to two inches long, and an inch in breadth.

ICKENILD STREET, an old Roman highway, so called from the Iceni, which extended from Yarmouth in Norfolk, the east part of the

kingdom of the Iceni, to Barley in Hertfordshire, giving name in the way to several villages, as Ickworth, Icklingham, and Ickleton. From Bar-ley to Royston it divides the counties of Cambridge and Hertford. From Ickleford it goes by Tring, crosses Bucks and Oxfordshire, passes the Thames at Goring, and extends to the west of England.

1COLMKILL, or ICOLUMBKILL, a celebrated island of Scotland, and one of the Hebrides ; called also I, Hy, Hii, and anciently lona : famous for the monastery founded in it by St. Columba. These ruins are much dilapidated, but they are now preserved by a strong wall erected round the chief parts, at the expense of the Argyle fa-mily. The cathedral is thirty-eight yards long, and eight broad ; the east window of which is a beautiful specimen of Gothic workmanship. In the middle stood a tower, three stories high, supported by four arches. Near the altar-place is a beautiful tomb of black marble, with the figure of the abbot Macfingone. On the north of the cathedral are some remains of the bishop's house, and on the south is a small neat chapel, in which are many curious tombs to the memory of the lords of the isles. Here is also an enclosed burying-ground, containing the tombs of forty-eight Scottish kings, four kings of Ireland, eight of Norway, and one of France, all buried

here from the supposed peculiar sanctity of the ground. Bede calls it Hi; but the proper name is I, which in the Gaelic signifies an island. The name lona is now quite lost, and it is al-ways called I, except when the speaker would wish to lay an emphasis upon the word ; it is then called Icolumkill. ' It Ires in the Atlantic, and is separated from the west point of Ross by a narrow channel, called the Sound of I. It is about three miles long, and from half a mile to a mile in breadth. It is flat, consisting of heath, green pasture, rocks, and arable ground, very fertile.'

I'CON, n. s. -) Greek, tucovo/cXaTJjc,

ICON'OCLAST, n. s. \ eixotv and icXa$w. Icon, a

ICONOL'OGV, n. s. 3 picture, or representation :

iconoclast, a breaker of images: iconology, the

doctrine of representation by a picture.

Some of our own nation, and many Netherlander, whose names and icons are published, have deserved good commendation. Hahewill on Providence.

Boysardus, in his tract of divination, hath set forth the icons of these ten, yet added two others.

Browne's Vulgar Errors.

ICONIUM, in ancient geography, the capital city of Lycaonia in Asia Minor, now called Cogni. St. Paul coming to Iconium (Acts xiii. 51 ; xiv. l,&c.), in A. D.45, converted many Jews and Gentiles there. But some incredulous Jews excited the Gentiles to rise against Paul and Barnabas, which obliged them to fly to the neighbouring cities. St. Paul undertook a second journey to Iconium, A. D. 51.

ICONOCLASTS, ICONOCLASTES, ICONOCLASTS, are titles which the church of Rome gives to all who reject the use of images. Not only the reformed, but some of the eastern churches, are called Iconoclaslae, and esteemed by them heretics, as opposing the worship of the images of God and the sainsts, and breaking their representations in churches. The opposition to images began in Greece under the emperor Bardanes, soon after the commencement of the eighth century, when the worship of them became common. But the tumults occasioned by it were quelled by a revolution, which, in 713, deprived Bardanes of the imperial throne. The dispute, however, broke out with redoubled fury under Leo the Isaurian, who issued out an edict, in 726, abrogating the worship of images. This edict occasioned a civil war, which bioke out in the islands of the Archipelago, and ravaged a part of Asia, and afterwards reached Italy. The civil commotions in Italy were chiefly promoted by the Roman pontiffs, Gregory I. and II. Leo was excommunicated, and his subjects in the Italian provinces, rising in arms, either massacred or banished all the emperor's officers. Leo however assembled a council at Constantinople in 730, which degraded Germanus, the bishop of that city, who was a patron of images ; and ordered all the images to be publicly buint. But the zeal of Gregory II. in favor of image-worship was surpassed by his successor Gregory III. ; in consequence of which the Italian provinces were torn from the Grecian empire. Constantine Copronymus, in 754,

convened a council at Constantinople, regarded by the Greeks as the seventh oecumenical council, which solemnly

condemned the worship and use of images ; and his successor Leo IV. pursued the same measures, and enacted penal statutes to extirpate idolatry. Irene, who poisoned her husband Leo in 780, and usurped the throne during the minority of her son Constantine, summoned a council at Nice in Bithynia, in 786, called the second Nicene council, which restored the worship of images, and denounced severe punishments against those who maintained, that God was the only object of religious adoration. Charlemagne distinguished himself as a mediator in this con troversy : he ordered four books to be composed, refuting the arguments urged by the Nicene bishops to justify the worship of images ; which he sent to pope Adrian in 700, to engage him to withdraw his approbation of the decrees of the last council of Nice. Adrian wrote an answer; and in 794 a council of 300 bishops, assembled by Charlemagne at Frankfort on the Maine, confirmed the opinion contained in the four books, and solemnly condemned the worship of images. In the Greek church, after the banishment of Irene, the controversy concerning images broke out anew, and was carried on by the contending parties, during half the ninth century, with various success. The emperor Nicephorus appears to have been an enemy to this worship ; but his successor, Michael, Curopalates, patronised and encouraged it. But the scene changed on the accession of Leo the Armenian, who assembled a council at Constantinople in 814, that abolished the decrees of the Nicene council. His successor, Michael Balbus, disapproved the worship of images, and his son Theophilus treated the idolaters with great severity. However, the empress Theodora, after his death, and during the minority of her son, assembled a council at Constantinople in 842, which approved the decrees of the second Nicene council, and restored image-worship. The council held under Fho-tius in 879, reckoned by the Greeks the eighth general council, also confirmed the Nicene decrees ; upon which a festival was instituted by the Greeks, called the feast of orthodoxy. The council of Paris, assembled in 824 by Louis the Meek, allowed the use of images in churches, but prohibited rendering them religious worship. But, towards the conclusion of this century, the Gallican clergy began to pay a kind of religious homage to the images of saints, and their example was followed by the Germans and other nations. However, the Iconoclasts still had their adherents among the Latins ; the most eminent of whom was Claudius, bishop of Turin, who, in 823, ordered all images, and even the cross, to be cast out of the churches, and burnt; and he wrote a treatise against the use and

worship of them. The controversy was again revived by Leo bi-shop of Chalcedon, in the eleventh century, on the emperor Alexius's converting the silver images that adorned the churches into money, to supply the exigencies of the state. The bishop maintained that he had been guilty of sacrilege, and published a treatise to show that in these images there resided an inherent sanctity, and that the adoration of Christians ought to be extended to them. Alexius assembled a council at Constantinople, which determined, that the images of

Christ and the saints were to be honored only with a relative worship ; and that invocation and worship were to be addressed to the saints only as the servants of Christ. In the western church the worship of images was opposed by several considerable parties, as the Petrobrussians, Albigenses, Waldenses, &c., till at length this idolatrous practice was entirely abolished in many parts of the Christian world by the Reformation.

ICONOGRAPHIA, or ICONOGRAPHY, from ttKov, and ypaˆw, I describe. The description of images or ancient statues of marble and cop-per ; also of busts and semi-busts, penates, paintings in fresco, mosaic works, and ancient pieces of miniature.

ICONOLATRˆ, or ICONOLATRES, from «eov, and \arpevu, I worship, or Icorioduli, those who worship images : a name which the Iconoclastae give to those of the Romish communion on account of their adoring images. See ICONOCLASTS.

ICOSAHEDRON, in geometry, a regular solid, consisting of twenty triangular pyramids, whose vertexes meet in the centre of a sphere supposed to circumscribe it ; and therefore have their height and bases equal: wherefore the solidity of one of these pyramids multiplied by twenty, the number of bases, gives the solid contents of the

icosahedron.

ICOSANDRIA, from «ico < n, twenty, and avr/p, a husband, the name of the twelfth class in Lin-nams's sexual method, consisting of plants with hermaphrodite flowers, which are furnished with twenty or more stamina, inserted into the inner side of the calyx or petals. See BOTANY.

ICTER'ICAL, n. s. Fr. icterique ; Lat. icte-rus. Afflicted with the jaundice : a term applied to remedies for the cure of jaundice.

In the jaundice the choler is wanting, and the icte-rioal have a great sourness, and gripes with windiness.

Floyer.

ICTERUS, the jaundice. See MEDICINE.

ICY CAPE, the most north-western headland of North America, opposite to Cape North in Asia. The opening into Bhering's Straits runs between them.

IDA, in ancient geography, a mountain in the heart of Crete, the highest in the island ; sixty stadia in compass ; the nursing place of Jupiter. Also the name of the mountain of Mysia, or rather a chain of mountains, extending from Zeleia, on the south of the territory of Cyzicus, to Lectum, the utmost promontory of Troas, &c. It was covered with green wood, and the elevation of its top opened a fine extensive view of the Hellespont and the adjacent countries ; for which reason it was frequented by the gods dur-ing the Trojan war, according to Homer. The top was called Gangara, and celebrated by the poets for the judgment of Paris. See PARIS.

IDALIUM, in ancient geography, a promontory on the east side of Cyprus, now called Capo di Griego ; with a high rugged eminence rising over it, in the form of a table ; sacred to Venus. The eminence was covered with a grove.

IDE'A, n. s. } Fr. idee ; Gr. t£ta. Mental

IDE'AL, adj. > image: ideal, pertaining to

IDE'ALLY, adv. j mind ; mental ; intellectual ; fanciful ; not perceived by the senses.

Our Saviour himself, being to set down the perfect idea of that which we are to pray and wish for on earth, did not teach to pray or wish for more than only that here it might be with us, as with them it is in heaven. Hooker.

I did infer your lineaments, Being the right idea of your father ; Both in your form and nobleness of mind.

Shakspeare. Her sweet idea wandered through his thoughts.

Fairfax

How good, how fair,

Answering his great idea ! Milton's Paradise Lost. A transmission is made materially from some parts, and ideally from every one. Browne's Vulgar Errouri.

Happy you that may to the saint, your only idea Although simply attired, your manly affection utter.

Sidney.

If Chaacer by the best idea wrought. The fairest nymph before his eyes he set. Dryden. Whatsoever the mind perceives in itself, or is the immediate object of perception, thought, or understanding, that I call idea. Locke.

There is a two-fold knowledge of material things ; one real, when the thing, and real impression of things on our senses, is perceived ; the other ideal, when the image or idea of a thing, absent in itself, is represented to and considered on the imagination.

Cheyne't Philosophical Principles. The form under which these things appear to the mind, or the result of our apprehension, is called an idea. Watts.

Delightful task ! to rear the tender thought. To teach the young idea how to shoot, To pour the fresh instruction o'er the mind, To breathe the enlivening spirit, and to fix The generous purpose, in the glowing breast.

Thomson.

IDENTITY, «. s. -) Fr. identite ; Lat. idem.

IDEN'TICAL, adj. > Sameness, as opposed to

IDEN'TIC, adj. j diversity, whether ap plied to persons or things ; comprising the same idea.

Their majus is identical with magis. Hale.

The beard's the identich beard you knew,

The same numerically true. Hudibras.

There is fallacy of equivocation from a society in name, inferring an identity in nature : by this fallacy was he deceived that drank aqua-fortis for strong water. Browne's Vulgar Errours.

Those ridiculous idzntical propositions, that faith is faith, and rule is a rule, are first principles in this controversy of the rule of faith, without which nothing can be solidly concluded either about rule or faith. Tittotson's Sermons*

Considering any thing as existing, at any determined time and place, we compare it with self existing at another time, and thereon form the ideas of identity and diversity. Locke.

Certainly those actions must needs be regular, where there is an identity between the rule and the faculty.

Smith's Sermons.

By cutting off the sense at the end of every first line which must always rhime to the next following, is produced too frequent an identity in sound, and brings every couplet to the point of an epigram. Prior.

If this pre-existent eternity is not compatible with a successive duration, as we clearly and distinctly perceive that it is not, then it remains, that some being, though infinitely above our finite comprehensions, must have had an identical, invariable continuance from all eterni«y, which being is no other than God. Bentley's Sermons,

IDES, n s. Fr. ides ; Lat. idus. A term anciently used among the Romans, and still re-

tamed m the Rcmish kalendar. It is the 13th day of each month, except in the months of March, May, July and October, in which it is the 15th day, because in these four months it was six days before the nones, and in the others four days.

A soothsayer bids you beware of the idea of March.

Shakspeare.

IDES, in the ancient Roman kalendar, the name given to the thirteenth day of the month, except in March, May, July, and October, in which it fell on the fifteenth. The origin of the word is .contested. Some will have it formed from ijtiv, to see ; because the.full moon was commonly seen on the days of the ides : others from tiSoc, figure, from the image of the full moon then visible : others from the Hetrurian word iduo, i. e. I divide, because the ides divided the moon into two nearly equal parts. The ides came between the kalends and the nones; and, like them, were reckoned backwards. Thus they called the fourteenth day of March, May, July, and October, and the twelfth of the other months, pridie idus, or the day before the ides ; the next preceding day they called the tertia idus; the next quarta, and so on, reckoning always backwards till they came to the nones. This method of reckoning time is still retained in the chancery of Rome, and in the kalendar of the breviary. The ides of May were consecrated to Mercury : the ides of March were esteemed unhappy, after the murder of Caesar on that day; the ides of August were consecrated to Diana, and were observed as a feast-day by the slaves. On the ides of September, auguries were taken for appointing the magistrates, who formerly entered into their offices on the ides of May, afterwards on those of March.

IDES (Evert Ysbrant), a Russian traveller employed by Peter the Great, was a native of Gluckstadt in Holstein, and, entering into the service of the czar, was in 1692 sent on an embassy to China. After his return to Europe he published the Travels of Ysbrant Ides from Mos-cow to China, which were translated into English, and printed in 1 vol. 4to. in 1706.

IDIOC’RACY, n. s. } Fr. idiocrase ; Greek

IDIOCRAT’ICAL, adj. £t&oc, icpaertc and aw.

IDIOSYX’CRASY, n. s. j Peculiarity of constitution ; peculiar temperament or disposition of body.

Whether quails, from any idiosyncrasy or peculiarity of constitution, do innocuously feed upon hellebore, or rather sometimes but medicinally use the same.

Browne’s Vulgar Errdurt.

The understanding also hath its idiosyncrasies, as well as other faculties. Glanville’s Scepsis.

ID’IOCY, n. s.~\ Fr. idiot ; Latin idiota ;

ID’IOT, n. s. td. iSnaria, ifowrijc, iSuar—

ID’IOTISM, n.$. fifffiog. Idiot is a fool; a

IDIOT’IC, adj. J natural : an imbecile person without the powers of reason : idiocy want of understanding: idiotism, folly; mental imbecility; also peculiarity of expression; more properly called idiom : idiotic, foolish ; weak ; senseless; like an idiotic. This word is often used in a meaning inferior to its full import.

By idle boys and ideots vilified, Who me and my calamities deride. Sandys.

Life is a tale,

Told by an ideot, full of sound and fury, Signifying nothing. Shakspeare. Macbeth.

What else doth he herein, than by a kind of circuiu-locution tell his humble suppliants that he holds them ideott, or base wretches, not able to get relief ?

Raleigh’s Essays.

I stand not upon their idiocy in thinking that horses did eat their bits. Bacon.

Embryos and idiots, eremites and friars,

White, black and grey, with all their trumpery.

Milton.

Scholars sometimes in common speech, or writing, in their native language, give terminations and idioi-itms suitable to their native language unto words newly invented. Hale.

Many idiot* will believe that they see what they only hear. Dennis.

IDIOCY, and Lunacy, in law, excuse from the guilt of crimes. See CRIME. ‘ For the rule of law,’ says Blackstone, ‘ as to lunatics, which also may be easily adapted to idiots, is, that furiosus furore solum punitur. In criminal cases, therefore, idiots and lunatics are not chargeable for their own acts, if committed when under these incapacities ; no, not even for treason itself.’

ID’IOM, n.s. ˆ Fr. idiome ; Gr. i&w/ja.

IDIOMAT’ICAL, adj. >A mode of speaking pe—

IDIOMAT’IC, adj. j culiar to a language or dialect; the particular cast of a tongue ; a phrase; phraseology.

He did Romanize our tongue, leaving the words translated as much Latin as he found them ; wherein he followed their language, but did not comply with the idiom of ours. Dryden.

Some that with care true eloquence shall teach, And to just idioms fix our doubtful speech. Prior.

Since phrases used in conversation contract meanness by passing through the mouths of the vulgar, a poet should guard himself against idiomatick ways of speaking. Spectator.

IDIOP’ATHY, n. s. Fr. idiopathie ; Gr. i£ioc and TraOoQ. A primary disease that neither depends on nor proceeds from another.

IDIOPATHY, in medicine, is opposed to sympathy. Thus, an epilepsy is idiopathie when it happens merely through some injury in the brain ; and sympathetic when it is the consequence of some other disorder.

IDIOT, or IDEOT, in law, denotes a fool from his birth. See IDIOCY and LUNACY. A person who has understanding enough to measure a yard of cloth, number twenty rightly, and tell t’.ie days of the week,

&c., is not an idiot in the eye of the law. But a man who is born deaf, dumb, and blind, is considered by the law in the same state as an idiot. Indeed it is doubted, if e\ er such an unfortunate human being has existed. See ANATOMY.

I'DLE, adj. & v. n. ˆ Sax. y'&el ; Goth, odall.

I'DLEHEADED, adj. I Lazy; averse from labor;

I'DLENESS, n. s. V disengaged ; useless ;

I'DLER, n. s. Vvain; unfruitful; bar

I'DLY, adv. ,/ren; trifling; unimportant : idle, to lose time in laziness or inactivity : idleheaded, foolish ; unreasonable ; delirious ; infatuated : idleness, laziness ; want of employment; omission of business; unimportance; inefncacy ; uselessness; foolishness; mail-

ness : idly, lazily ; foolishly ; carelessly : idler, a sluggard ; a lazy person.

A few sheep, spinning on the feld she kept ; She woulde not ben iiiel til she slept.

Chaucer. The Clerhes Tale, And as for hire that crouned is in grene, It is Flora, of these floures goddesse. And all that hire, on hire awaiting, bene, — It are such folke that loved idelnesse, And not delite in no kind besinesse.

Id. The Flonre and the Leafe. Suffice it then, thou money god, quoth he. That all thine idle offers I refuse ; All that I need I have : what needeth me To covet more than I have cause to use ?

Faerie Qtteene.

Let this and other allegations, suitable unto it, cease to bark any longer idly against the truth, the course and passage whereof it is not in them to hinder.

Hooker.

For often have you writ to her ; and she in modesty,

Or else for want of idle time, could not again reply.

Shakspeare.

Of antres vast, and desarts idle, It was my hent to speak. Id. Othello.

He was met even now,

Crowned with rank fumiter and furrow weeds. Darnel, and all the idle weeds that grow lu our sustaining corn. Id. King Lear.

I will slay myself, For living idly here in pomp and ease.

Shakspeare.

Ten thousand harms, more than the ills I know, My idleness doth hatch. Id. Antony and Cleopatra.

Nature being liberal to all without labour, necessity imposing no industry or travel, idleness bringeth forth no other fruits than vain thoughts and licentious pleasures. Raleigh.

Many of these poor fishermen and idlers, that are commonly presented to his majesty's ships, are so ignorant in sea-service, as that they know not the name of a rope. Id.

There is no heat of affection, but is joined with some idleness of brain. Bacon's War with Spain.

These idleheaded seekers resort thither. Carew.

They astonished, all resistance lost, All courage ; down their idle weapons dropped.

Milton.

Thenceforth I set myse f to play My solitary time away ; With this, and

very well content, Could so mine idle life have spent.

Marvell.

All which yet could not make us accuse her, though it made us pine away for spite, to lose auy of our time in so troublesome an idleness. Sidney.

And threatening France, placed like a painted

Jove, Held idle thunder in his lifted hand. Dryden.

These are the effects of doting age, vain doubts, and idle cares, and over caution. Id.

He, fearing idleness, the nurse of ill, In sculpture exercised his happy skill. Id.

Upon this loss she fell idleheaded, and to this very day stands near the place still. L' Estrange.

Children generally hate to be idle ; all the care then >s, that their busy humour should be constantly employed in something of use to them. Locke.

Supposing, among a multitude embarked in the same vessel, there are several that iu a tempest will rather perish than work ; would it not be madness in the rest to stand idle, and rather chuse to sink than do nr>oie than comes to their share ? Addison.

Nor is excess the only thing by which sin breaks men in their health, and the comfortable enjoyment of themselves ; but many are also brought to a very ill and languishing habit of body by mere idleneu, and idleness is both itself a great sin, and the cause of many more. South t Sermons.

And modern Asgil, whose capricious thought Is yet with stores of wilder notions fraught, Too soon convinced shall yield that fleeting breath, Which played so idly with the darts of death.

Prior

Yet free from this poetic madness, Next page he says, in sober sadness, That she, and all her fellow-gods, Sit idiiny in their high abodes. Id.

But shall we take the muse abroad, To drop her idly on the road ? And leave our subject in the middle, As Butler did his bear and fiddle ? Id.

He wishes to recal the precious hours he has spent in trifles, and loitered away in idle and unprofitable diversions. Rogers.

An idle reason lessens the weight of the good ones you gave before. Swift.

Now every splendid object of ambition

Which lately with their various glosses played

Upon my brain, and fooled my idle heart.

Are taken from me by a little mist

And all the world is vanished. Young's Busiris.

How various his employments, whom the world Calls idle, and who justly in return Esteems that busy world an idler too ! Cowper.

For health and idleness to passion's flame are oil and gunpowder. Byron. Don Juan.

IDLENESS. In China it is a maxim, that if there be a man who does not work, or a woman that is idle, in the empire, somebody must suffer cold or hunger: the produce of the lands not being more than sufficient, with culture, to maintain the inhabitants : and therefore, though the idle person may shift off the want from himself, yet it must fall somewhere. The court of Areo-pagus at Athens punished idleness, and examined every citizen how he spent his time. The intention was that the Athenians, knowing they were to give an account of their occupations, should follow only such as were laudable, and that there might be no room left for such as lived by unlawful arts. The civil law expelled all vagrants from the city : and, in the English law, all idle persons or vagabonds, whom our ancient statutes describe to be ' such as wake on the night, and sleep on the day, and haunt customable taverns and ale-houses, and routs about ; and no man wot from whence they come, ne whither they go ;' or such as are more particularly described by stat. 17 Geo. II. c. 5, and divided into three classes, idle and disorderly persons, rogues and vagabonds, and incorrigible rogues : all these are offenders against the good order, and blemishes in the government, of any kingdom. They are therefore all to be punished by the statute last mentioned. Persons harboring vagrants are liable to a fine of forty shillings and to pay all expenses

brought upon the parish thereby : in the same manner as, by the ancient laws, whoever harboured any stranger for more than two nights, was answerable to the public for any offence that such his inmate mig'.t com-IDO

IDOCRASE is found most usually in distinct crystals, with the general form of short, square prisms. Their primary form is a right prism, with square bases ; and the crystals yield to cleavage parallel to all its planes, with sufficient brilliancy to obtain incidences of 90° by the reflective goniometer in every direction. Lustre, vitreous, inclining to resinous, sometimes very distinctly the latter ; color, various shades of brown, passing into leek-green, pistachio-green, olive-green, and oil-green ; streak, white, semitransparent, or only translucent on the edges. If viewed in the direction of the axis, the colors incline more to yellow; perpendicular tp it, more to green ; hardness between that of feld-spar and quartz ; specific gravity, 3.399. It also occurs massive and granular. Idocrase was first found among the lavas of Mount Vesuvius, and hence its old name, Vesuvian. It was afterwards discovered at Eger, in Bohemia, and, being taken for a new mineral, was called Egeran. A variety resembling egeran has been called lobo'ite and frugardite. Another, from Tellemarken, in Norway, of a blue color, and containing copper, has been called cyprine. Idocrase has yielded by analysis the following results (the two first were obtained by Klaproth, the third by count Dunin Borkousky) :

Vesuvian

Vesuvian Egeran

from

from from

Vesuvius.

Siberia. Bohemia.

Silica,

35.50

42.00 41.00

Alumine,

33.00

16.25 22.00

Lime,

22.25

84.00 22.00

Magnesia,

0.00

0.00 3.00

Oxide of iron

7.50

5.50 6.00

Oxide manganese, 0.25

a trace 2.00

Potash,

0.00

0.00 1 .00

The varieties from Vesuvius and from Fassa in the Tyrol, easily melt into a dark-colored globule. The localities of idocrase in Europe are numerous. In the United States, it has been met with, handsomely crystalline, at Worcester, in Massachusetts, of a reddish brown color, like the egeran of Bohemia ; in Newton, New Jersey, also in white limestone, with blue corun-dum, in large yellowish-brown crystals ; and at Amity, Orange county, New York, in white limestone, with augite, spinelle, and brucite.

I'DOL, n. s. ~} Gr. fiSog, ti8u\ov ; Lat.

IDOL'ATER, n. s. I idolum ; Fr. idole. The IDOL'ATRIZE, v. a. I primary meaning here IDOL'ATROUS, adj. (js similitude: an idol Inoi/ ATROUSLY, adv. r is an image; acounter-IDOL'ATRY, n. s. feit; a representation;

I'DOLIST, n. s. an image worshipped

I'DOI.IZE, v. a. J as the representative of

Deity ; one loved to adoration : idolater, one who pays divine honors to idols ; one who worships for God that which is not God ; this conduct is called idolatry, from Gr. u8o£ and Xarptia, cultus : idolist is a poetic word signifying a worshipper of images : to idolize is to love supremely, tenderly, or to adoration ; to reverence.

Id-dairy is not only an accounting or worshipping tliat for God which is not God, but it is also a wor-

shipping the true God in a way unsuitable to his na-ture ; and particularly by the mediation of images and corporeal resemblances. South.

So gracious is their idol, dear variety, That for another's love they would forego An angel's form, to mingle with a devil's.

Howe's Ambitious Stepmother.

The kings were distinguished by judgments or blessings, according as they promoted idolatry, or the worship of the true God. Addiion's Spectator.

The apostle is there arguing against the gnosticks, who joined in the idol feasts, and whom he therefore accuses of participating of the idol god. Atterbury.

An astrologer may be no Christian ; he may be an idolater or a pagan ; but I would hardly think astrology to be compatible with rank atheism.

Bentley's Sermons. See there he comes, the exalted idol comes.

Somervile.

Like a coy maiden, ease, when courted most, Farthest retires — an idol at whose shrine Who oft'nest sacrifice are favored least. Covrper. Parties, with the greatest violation of Christian unity, denominate themselves, not from the grand author and finisher of our faith, but from the first broacher of their idolixed opinions. Decay of Piety.

For man, to man so oft unjust, Is always so to women, one sole bond Awaits them, treachery is all their trust, Taught to conceal, their bursting hearts despond Over their idol. Byron. Don Juan.

IDOLATRY may be distinguished into two kinds. By the first, men adore the works of God, the sun, the moon, the stars, angels, demons, men, and animals ; by the second, men worship the work of their own hands, as statues, pictures, and the like. The celestial bodies were the first objects of idolatrous worship. Afterwards, as men became more corrupt, they began to form images, and to entertain the opinion, that by virtue of consecration, the gods were called down to inhabit their statues; though it is certain, that the wiser heathens considered them only as figures designed to recal to their minds the memory of their gods. But the people in general believed the statues themselves to be gods, and paid divine worship to stocks and stones. Soon after the flood, idolatry seems to have prevailed : for, so early as the time of Abraham, we scarcely find any ojther worship. And it appears, from Scripture, that Abraham's forefathers, and even Abraham himself, were for a time idolaters. The Hebrews were expressly forbidden to make any representation of God ; they were not so much as to look upon an idol : and, from the time of the Maccabees to the destruction of Jerusalem, the Jews extended this precept to the making the figure of any man : by the law of Moses they were commanded to destroy all

the images they found, and \vere forbidden to apply any of the gold or silver to their own use, that no one might receive the least profit from any thing belonging to an idol. The Jewish rabbies even asserted that it was unlawful to use any vessel that had been employed in sacrificing to a false god, to warm themselves with the wood of a grove after it was cut down, or to shelter themselves under its shade. But the Christian religion, wherever it prevailed, entirely rooted out the Pagan idolatry ; as did also the Mahommedan, which is

built upon the worship of one God. Protestant Christians, however, still charge those of the church of Rome with paying an idolatrous worship to the pictures or images of saints and martyrs; before which they burn lamps, wax-candles, and incense ; and, kneeling, offer up their vows and petitions : they, like the Pagans, are said to believe that the saint to whom the image is dedicated presides in a particular manner about its shrine, and works miracles by the intervention of its image; and that, if the image were destroyed or taken away, the sai'nt would no longer perform any miracle in that place. See MYTHOLOGY.

IDOMENEUS, one of the heroes at the Trojan war, succeeded his father Deucalion on the throne of Crete. He accompanied the Greeks to Troy with a fleet of ninety ships, and behaved with great valor. At his return he made a vow to Neptune in a dangerous tempest, that, if he escaped from the fury of the seas and storms, he would offer to the god whatever living creature first presented itself to his eye on the Cretan shore. Unfortunately his son came to congratulate him upon his safe return. Idomeneus performed his vow, but the inhumanity of this sacrifice rendered him so odious in the eyes of his subjects, that he left Crete, and migrated in quest of a settlement. He came to Italy, and founded a city on the coast of Cala-biia, which he called Salentum, He died in an extreme old age, after he had had the satisfaction of seeing his new kingdom flourish, and his subjects happy. According to the Greek scholiast on Lycophron, Idomeneus, during his absence in the Trojan war, entrusted the management of his kingdom to Leucos, to whom, he promised his daughter Clisithere in marriage at his return. Leucos at first governed with moderation, but he was persuaded by Nauplius, king of Eubcea, to put to death Mada, the wife of his master, with her daughter Clisithere, and to seize the kingdom. After these violent measures he strengthened himself on the throne of Crete, and Idomeneus at his return found it impossible to expel the usurper.

IDOMENEUS, a Greek historian, a native of Lampsacus, who flourished in the a?e of Epicurus. He wrote a history of Samothracia.

IDO'NEOUS, adj. Lat. idoneus. Proper; convenient ; adequate.

You entangle, and so fix their saline part, by making them corrode some idoneous body. Boyle.

An ecclesiastical benefice is sometime void de jure et facto, and then it ought to be conferred on an idonenus person. Ayliffe.

I'DYL, n. s. Lat. idyllium ; Gr. oˆwXXiov. A small short poem.

I. E. for id est, or that is.

That which raises the natural interest of money is the same that raises the rent of land, i. e. its aptness to bring in yearly, to him that manages it, a greater overplus of income above his rent, as a reward to his labour. Locke.

IDYLLION, in ancient poetry, a diminutive of the word eidos, properly signifying any poem of moderate extent. But, as the collection of Theocritus's poems were called idyllia, and the pastoral pieces were by far the

best in that collection, the term idylhon is appropriated to pastoral pieces.

JEAL'OUS, adj. ˆ Fr. jaloux ; Lat. zelo~

JEAL'OUSY, n. s. (sus; Gr. £ij\of. Sus—

JEAL'OUSLY, adv. ˆpicious in love; emu—

JEAL'OUSNESS, n. s. Jlous; cautious against

dishonor; vigilant; careful; fearful; always,

however, connected with suspicion.

I have been very jealous for the Lord God of hosts.

1 Kings. I am jealous over you with godly jealousy.

2 Cor. ii. 2.

And night and day did ever his diligence Hire for to please and don hire reverence : Save only, if that I the soth shall sain Jelotu he was. Chaucer. The Manciples Tale.

And jealousie,

That wered of yelive goldes a gerlond, And hadde a cuckow sitting on hire hond.

Id. The Knightes Tale. But gnawing jealousy out of their sight Sitting alune, his bitter lips did bite.

Faerie Queene.

How all the other passions fleet to air, As doubtful thoughts, and rash embraced despair ; And shuddering fear, and green-eyed jealousy !

0 love, be moderate ; allay thine extasy.

Shakspeare.

Why did you suffer Jachimo, Slight thing of Italy, To taint his noble heart and brain With needless jealousy ? Id. Cymbeline.

To both these sisters have I sworn my love : Each jealous of the other, as the stung Are of the adder. Id. King Lear.

Wear your eye thus ; not jealous, nor secure :

1 would not have your free and noble nature, Out of self-bounty, be abused : look to't.

Shakspeare.

Mistress Ford, the honest woman, the virtuous creature, that hath the jealous fool to her husband !

Id.

Although he were a prince in military virtue approved, and jealous of the honour of the English nation ; yet his cruelties and parricides weighed down his virtues. Bacon's Henry VIII.

We cannot be too jealous, we cannot suspect ourselves too much to labor under the disease of pride which cleaves the closer to us by our belief or confidence that we are quite without it.

Lord Clarendon.

The obstinacy in Essex, in refusing to treat with the king, proceeded only from his jealousy, that when the king had got him into his hands he would take revenge upon him. Id.

They, jealous of their secrets, fiercely opposed My journey strange, with clamorous uproar Protesting fate supreme. Milton.

Tis doing wrong creates such doubts as these ; Renders us jealous, and destroys our peace.

Waller.

Small jealouiies, ‘tis true, inflame desire ; Too great, not fan, but quite blow out the fire.

Dry den.

A jealous empress lies within your arms, Too haughty to endure neglected charms. Id.

I could not, without extreme reluctance, resign the theme of your beauty to another hand : give me leave to acquaint the world that I am jealous of this subject.

Id.

Oh jealousy ! thou bane of pleasing friendship, Thou worst invader of our tender bosoms.

Howe’s Jane. Shore.

In Procris' bosom when she saw the dart, She justly blames her own suspicious heart. Imputes her discontent to jealous fear. And knows her Strephon's constancy sincere. Gay. While the people are so jealous of the clergy's ambition, I do not see any other method left for them to reform the world, than by using all honest arts to make themselves acceptable to the laity. Swift.

Thy numbers, jealousy, to nought were fixed, Sad proof of thy distressful state ? Of differing themes the veering song was mixed. And now it courted love, now raving called on hate.

Collitis's Odes.

How nicely jealous is every one of us of his own repute, and yet how maliciously prodigal of other men's ! Decay (f Piety.

That's noble, and bespeaks a nation proud And jealous of the blessing. Cuwper's Task.

I was not treacherous then — nor thou too dear — But he has said it — and the jealous well, Those tyrants, teasing tempting to rebel, Deserve the fate their fretting lips foretell . Byron.

JEALOUSY, WATERS OF, under the Mosaic law, were a species of ordeal, which seem to have given rise to numerous similar appeals to a

it with water out of the brazen basin that was near the altar of burnt offerings, cast some dust into it taken from the pavement of the temple, mingled something bitter, as wormwood, with it, and having read the curses above-mentioned to the woman, and received her Answer of Amen, he scraped off the curses from the vellum into the pitcher of water. During this time another priest tore her clothes as low as her bosom, made, her head bare, untied the tresses of her hair, fastened her torn clothes with a girdle below her breast, and presented her with the tenth part of an ephah, or about three pints of barley meal, which was in a frying pan, without oil or incense.

The other priest, who had prepared the waters of jealousy, then gave them to be drank by the accused person, and, as soon as she had

swallowed them, he put the pan with the meal in it into hand. This was waved before the Lord, and a part of it thrown into the fire of the altar. If the woman were innocent she returned with her husband ; and the waters, instead of incommoding her, made her more healthy and fruitful

divine decision of doubtful cases. The rabbies than ever; if, on the contrary, she were guilty, comment on the text, Num. v., in the following she was seen immediately to grow pale, her eyes manner: — When any man, prompted by the spirit started out of her head, and, lest the temple

of jealousy, suspected his wife to have committed adultery, he brought her first before the judges, and accused her of the crime ; but as she asserted her innocency, and refused to acknowledge herself guilty, and as he had no witnesses to produce, he required that she should be sentenced to drink the waters of bitterness, which the law had appointed ; that God, by this means, might discover what she wished to conceal. After the judges had heard the accusation and the denial, the man and his wife were both sent to Jerusalem, to appear before the sanhedrim, who were the sole judges in such matters. The rabbies say, that the judges of the sanhedrim, at first, endeavoured, with threatenings, to confound the woman, and cause her to confess her crime — when she still persisted in her innocence, she was led to the eastern gate of the court of Israel, where she was stripped of the clothes she wore, and dressed in black, before a number of persons of her own sex. The priest then told her, that, if she knew herself to be innocent, she had no evil to apprehend ; but, if she were guilty, she might expect to suffer all that the law threatened ; to which she answered, Amen, Amen.

The priest then wrote the words of the law upon a piece of vellum, with ink that had no vitriol in it, that it might be the more easily blotted out. The words written on the vellum were, according to the raboies, the following : —

* If a strange man have not come nearthee, and ttiou art not polluted by forsaking the bed of thy husband, these bitter waters which I have cursed will not hurt thee: but, if thou have gone astray from thy husband, and have polluted thyself by coming near to another man, may thou be accursed of the Lord, and become an example for all his

people ; may thy thigh rot, and thy belly swell till it burst ! may these cursed waters enter into thy belly, and, being swelled therewith, may thy thigh putrefy !'

After this the priest took a new pitcher, filled

should be defiled with her death, she was carried out, and died instantly with all the ignominious circumstances related in the curses, which the rabbies say had the same effect on him witli whom she had been criminal, though he were absent, and at a distance. They add, however, that if the husband himself had been guilty with another woman, then the waters had no bad effect even on his criminal wife; as in that case the transgression on the one part was, in a certain sense, balanced by the transgression on the other.

There is no instance in the Scriptures of this kind of ordeal having ever been resorted to; and probably it never was during the purer times of ihe Hebrew republic.

JEAN BON ST. ANDRE, baron, originally a French Protestant minister, and then a revolutionary statesman, was born at Montauban in 1749. At the commencement of the revolution in September, 1792, he was nominated deputy to the National Convention, from the department of Lot, and joined the party of the Mountain ; voting for the death of the king, and contributing to the destruction of the Girondists. He was a member of the committee of public safety during the tyranny of Robespierre, and on board the French fleet in the battle with lord Howe,' on the 1st of June, 1794, as a commissary of the convention. He subsequently became more moderate in his political conduct, and amnesty of October, 1795, having restored him to liberty, he was sent as consul to Algiers. After this he became prefect of Mayence, in which station he is said to have distinguished himself by his integrity and intelligence. Having held the post thirteen years, he died, much regretted, in December, 1815.

JEANNIN (Peter), in biography, was born in 1540, and brought up to the law. Becoming, at an early age, advocate in the parliament of Burgundy, and distinguished by his eloquence.

He was appointed agent for the affairs of the province. In this capacity, though a zealous Ca-thofic, he resisted the order for perpetrating the massacre of the Protestants on St. Bartholomew's day, at Dijon ; but joined the leaguers in support of the established religion. Being deputed by the duke of Mayenne to negociate with Philip of Spain, the protector of the league, he soon discovered the real design of that prince was to gain possession of some of the best provinces of France : and, on his return, exerted himself to detach the duke from the Spaniards. Henry IV. made him a member of his council, and nothing was for a time undertaken without his advice. He died at the age of eighty-two, in the year 1622, having witnessed the succession of seven kings to the throne of France. His Memoirs and Negociations, published in 1659 at Paris in folio, have since been printed in 4 vols. 12mo.

JEARS, or GEERS, in the sea-language, an assemblage of tackles, by which the lower yards of a ship are hoisted along the mast to their usual station, or lowered thence as occasion requires ; the former of which operations is called swaying, and the latter striking.

JEBB (Samuel), M. D., a learned physician, born at Nottingham, and educated at Cambridge. He settled at Stratford-le-Bow, where he practised with great credit till his death. He published, 1. S. Justini Martyris cum Tryphone Dialogus; 1729, 8vo. 2. Bibliotheca Literaria, a learned compilation, of which only ten numbers were published, 1722. 3. De Vita et Rebus gestis Marias Scotorum regime; 8vo. 4. An edition of Aristides with notes; 2 vols. 4to. 1728. 5. An elegant edition of Caii de Canibus Britannicis, &c. ; 8vo. 1729. 6. Another of Baconi Opus Majus ; folio, 1733. 7. Another of Hodii de Graecis illustribus Linguae Gnecse instauratoribus ; 8vo. 1742. He died March the 9th, 1772.

JEBB (Sir Richard), Baronet, M. D., born at Stratford, in Essex, was educated at Oxford ; but, being by principle a non-juror, he could not be matriculated, nor take any degree at that university. He afterwards studied medicine at London and Leyden ; and obtained, from the latter university, the degree of doctor of medicine. Upon settling in London

he became licentiate of the college of physicians; and, in the year 1768, was elected a fellow of that body. He was now for some time physician to St. George's Hospital, and to the Westminster infirmary. About 1777 he was made physician-extraordinary to the king; and in 1780 physician in ordinary to the prince of Wales. On the death of Sir Edward Wilmot, in 1768, he was appointed one of the physicians in ordinary to his majesty ; but this office he did not enjoy many months ; for, being in attendance on two of the princesses, who were affected with the measles, he was suddenly attacked with fever in their apartments at Windsor, and died, after a few days' illness, on the 4th day of July, 1787, in the fifty-eighth yeaT of his age.

JEBB (John), M. D., a modern divine, who seceded from the establishment, was born in London in 1736, and received his early education in Ireland ; whence he removed to Peter

House, Cambridge, and took the degree of B. A, there in 1757. In 1761 he proceeded M.A., and obtained a fellowship, which he relinquished on being presented in 1764 to the rectory of Oving-ton, Norfolk. He published in 1765, in conjunction with the Rev. Messrs. Thorpe and Wollaston, Excerpta quaedam e Newtoni Prin-cipiis Philosophise Naturalis, cum Notis Variorum, 4to. In 1766 he returned to Cambridge, and resumed the office of tutor ; delivering in 1768 a course of lectures on the Greek Testament. Next year he obtained three livings in the county of Suffolk, and was appointed chaplain to the earl of Harborough, having married into that nobleman's family. About 1772 he warmly espoused the scheme of archdeacon Black-burne, to procure the abolition of clerical subscription, and, the freedom of his opinions having rendered his situation in the university and church unpleasant, he determined to relinquish both his clerical and university appointments. This he did in September, 1775, and immediately published a statement of his motives. He now took up his residence in the metropolis, and adopted the profession of physic. Having procured a diploma from the university of St. Andrew's, and being admitted a licentiate of the college of physicians, as well as a fellow of the Royal Society, he commenced practice in 1778. His practice was very successful. In the latter part of his life he actively engaged in the discussions relating to the American war, and was a frequent speaker in the popular assemblies of the metropolis. His death took place March 2d, 1786. The year following a collection of his works, theological, political, and medical, was published, with memoirs of his life, by Dr. Dis-ney, 3 vols. 8vo.

JEBUSˆI, JEBUSITES, one of the seven ancient nations of Canaan, descendants of Jebusi, a son of Canaan ; so warlike and brave, as to have maintained their ground, especially in Jebus, afterwards called Jerusalem, to the time of David.

JECHONIAH, or JECHONIAS. king of Judah, succeeded his father Jehoiakim, A. A. C. 599, when he was only eight years old ; and had reigned only three months and ten days when he was carried to Babylon by Nebuchadnezzar. He was afterwards promoted by Evil-Merodach, about A. A. C. 562.

JEDBURGH, a town of Scotland, capital of Roxburghshire, situated nearly in the middle of the county, on the banks of the river Jed, whence its name. It is well built and populous, and has a good market for corn and cattle. On the west side of the river, near its junction with the Teviot, stand the beautiful ruins of an abbey founded by David I., a part of which ancient pile still serves for a parish-church. Jedburgh is the seat of the sheriff's court and presbytery ; and is a barony in the family of Lothian. The original name Gadborough is said to be derived from the Gadeni, a tribe who anciently inhabited the whole tract of country between Northumberland and the Teviot. In a charter granted by king William the Lion in 1165, to the abbot and monks of Jedburgh, the name is often spelt Jedwarth

JEDDO, or YEDDO. See YEDDO. JEER, v. a. & n. s. } Gothic gar ; Belgic, JEER'ER, n. s. >scheer; Italian xinocare.

JEER'INGLY, adv. jTo scoff; flout; ridicule or mock : jeerer ; a scorner ; a mocker.

The merry world did on a day With his trainbands and mates agree,

To meet together where I lay, And all in sport to jeer at me. Herbert.

My children abroad are driven to disavow me, for fear of being jeered. Hoioel't England'* Tears.

Abstain from dissolute laughter, petulant uncomely jests, load talking and jeering , which are called indecencies, and incivilities. Taylor.

He jeeringly demandeth, whether the sonorous rays are refracted. Derham.

Midas, exposed to all the jeers, Had lost his art, and kept his ears. Swift,

They tipt the forehead in a jeer, As who should say — she wants it here j She may be handsome, yonng, and rich ; But none will burn her for a witch. Id.

JEFFERSON (Thomas, esq.) late president of the United States. He was born April 2d, 1743, according to some accounts, in the county of Albemarle, Virginia, at Shadwell, a country seat which now belongs to his grandson, within a short distance of Monticello, and about half a mile distant from his Ravannah mills; but, according to others, in Chesterfield county. His family were amongst the earliest emigrants to Virginia; of which colony his grandfather, Thomas Jefferson was a native. His father Peter Jefferson, and colonel Fry, vrere commissioned to determine the boundary line between Virginia and North Carolina in the year 1747. Mr. Jefferson was educated in America : he received the highest honors at the college of William and Mary; and studied law under the celebrated George Wythe, late chancellor of Virginia. He applied himself closely to the study of geometry, geography, natural history, and astronomy; and he was devotedly attached to literature and the fine arts. When he came of age, in 1764, he was put into the nomination of justices of the county in which he lived; at the first election following he became one of its representatives in the legislature, and, before he had attained his twenty-fifth year, he was a distinguished member of the Virginia assembly, taking an active part in all the measures adopted in opposition to the English government. In 1775 he is said to have been the author of the Protest against the Propositions of lord North. From the assembly of Virginia he was sent to the old congress, which brought about the revolution, and was there distinguished by the warmth of his sentiments and the energy of his compositions. He was afterwards employed from 1777 to 1779 with Mr. Pendleton and Mr. Wythe in the revisal and reduction to a single code of the whole body of the English statutes, the acts of the Virginia assembly, and certain parts of the common law. In 1780 (succeeding Patrick Henry, the successor of lord Dunmore), he was elected governor of Virginia, an office which he held during the whole of the revolutionary war. Much difference of opinion occurred respecting his conduct as governor, at

the time of the invasion of Virginia by Cornwallis

and Arnold ; but, as he received the thanks of his fellow-citizens, it must be presumed that by them, at least, it was deemed satisfactory. In 1783 he was employed in drawing up a constitution for Virginia. He was nominated ambas sador to Spain, but his destination was subsequently changed to France. There, obtaining the confidence of Vergennes and Calonne, he obtained many concessions in favor of American commerce. From France he came over to England, went back to Versailles, and returned to America in 1789, rendering to Mr. Jay, the minister to foreign affairs, a satisfactory account of his negociations. Shortly after his return “he was appointed secretary of state to the new government. Soon after the house of representatives directed him to form a plan for reducing the currency, weights, and measures, to one standard ; and subsequently he was also employed to draw up a report respecting the fisheries. Early in 1794 he resigned his office as secretary of state, and retired to his seat at Monticello. From that period he was regarded as the chief of the opposition. After remaining some time in retirement he was, in 1797, called on to fill the vice-president’s chair, under Mr. Adams, and, on the expiration of that gentleman’s term, in 1801, elected his successor. In 1805 he was reelected; and, in his first message to the senate and house of representatives, he developed his project of improvement in the public administration. In 1807, in consequence of the differences which arose between the governments of Great Britain and the United States, he called a meeting extraordinary of the congress, and submitted to them his plan for defending the country. To preserve the shipping and commerce of America from the cruisers of France and England, he laid an embargo on ah the ports of the United States, until the danger was over, When his second term of presidentship had nearly expired he was solicited by the assembly of Pennsylvania to accept the office a third time. This, however, he resolutely refused, was succeeded by Mr. Maddison, and, like his friend Washington, retired to private life, in which he died 4th July, 1826. Mr. Jefferson in 1774 published A summary View of the Rights of British America. In 1781 appeared his Notes on Virginia. He has also written Memoirs on the Fossil Bones found in America. As an agriculturist he was active, and fond of experiment. He invented a new plough, or rather effected an improvement in the old one. At an early age Mr. Jefferson married the daughter of Mr. Wright, a barrister in Virginia. By her, who has been some years dead, he had four daughters, only one of whom, we believe, survives.

JEFFERSON, a county of Indiana, United States, bounded on the east by Switzerland county, on the south by the river Ohio, on the west by the county of Clark, and on the north by Indian lands. It contains excellent land, and is watered by several streams running into the Ohio.

JEFFEHSON, another county of the United States, in Kentucky, bounded north and west by the Ohio River, south by Nelson county, and south-east and east by Shelby. Louisville, at the rapids of the Ohio, is the chief town.

JEFFERSON, a county of the United States, in Ohio, bounded on the north by Columbiana county, on the west by Harrison county, on the south by Belmont county, and on the east by the Ohio. The chief town is Steubenville.

JEFFERSON, a county of the United States, in East Tennessee. Dandridge, the chief town.

JEFFERSON, a county of Georgia, erected in 1796 from the counties of Burke and Warren.

JEFFERSON'S RIVER, one of the three branches into which the Missouri is divided, near its source, and so called in honor of the late president Jefferson, by captains Lewis and Clarke, in 1806. It abounds with beavers, by whose operations the channel is almost dammed up, and falls into the Missouri, 2848 miles from its mouth, in lat. 45° 22′ 34″ N.

JEFFERSONIA, a genus of plants so named in honor of the late president of the United States. Class and order pentandria monogynia : CAL. below, composed of five short oval imbricated leaves ; COR.

monophyllous, funnel-shaped on the receptacle, sub-pentangular, bearing the filaments near the base, its margin hypocrateri-form, divided into five round ducts nearly equal; style petiform, shorter than the petal, but longer than the stamens; stigma quadrifid; antherae erect, linear, sagittated; fruit two univalved, carinated, polyspermous capsules, united at the base, opening on their tops and contiguous sides, having flat seeds, with a marginal wing. Only one species is as yet discovered, viz :—

J. sempervirens. It is a shrub with round polished twining stems, which climb up on bushes and small trees ; the petioles short, opposite ; leaves oblong, narrow, entire, evergreen, acute ; flowers axillary, yellow, having a sweet odor. The woods in Georgia are full of this delightful shrub, which is covered with blossoms for many months in the year.

JEFFREYS (Sir George), baron Wem, commonly called Judge Jeffreys, was the sixth son of John Jeffreys, esq., of Acton in Denbighshire; and was educated at Westminster ; whence he removed to the Inner Temple, where he applied himself to the study of the law. He soon became recorder of London, and was next made solicitor to the duke of York; and in 1689 was knighted, and made chief justice of Chester. At length, resigning the recordership, he obtained the post of chief-justice of the King's-bench, and, soon after the accession of James II., the great seal. During the reign of king Charles II. he had shown himself a bitter enemy to those dissenting ministers, who, in that time of persecution, were tried by him ; and was one of the greatest advisers and promoters of all the oppres-sions and arbitrary measures carried on in the reign of James II. ; and his sanguinary and inhuman proceedings against Monmouth's adherents in the west will ever render his name infamous. See ENGLAND. Whenever the prisoner was of a different party, or he could please James by condemning him, instead of appearing, according to the duty of his office, as his counsel, he would scarcely allow him to speak for himself; but would load him with the grossest and most vulgar abuse, browbeating, insulting, and ridiculing the witnesses that spoke in his behalf;

and even threatening the jury with fines and imprisonment, if they made the least hesitation in bringing in the prisoner guilty. Yet it is said, that, when he was under no state influence, he could occasionally act uprightly. The mayor and aldermen of Bristol had been used to transport convicted criminals to the American plantations, and sell them for their own private emolument, privately

threatening to hang petty thieves if they did not petition for transportation. This infamous trade, which had been carried on many years, coming to the knowledge of the lord chief-justice, he made the mayor stand at the bar in his scarlet and fur, with his guilty brethren the aldermen, and plead as common criminals. He then obliged them to give securities to answer informations; but the proceedings were stopped by the revolution. On the arrival of the prince of Orange, the lord chancellor, dreading the public resentment, disguised himself in a seaman's dress, in order to leave the kingdom ; and was drinking in a cellar, when he was recognised by a scrivener, who gave notice that he was there; and the mob rushing in, seized him, and carried him before the lord mayor ; who sent him with a strong guard to the lords of the council, by whom he was committed to the Tower, where he died April 18th, 1689.

JE'GGET, n. s. A kind of sausage.

JEHOVAH, or JAH, mn», signifies the Being who is self-existent, and gives existence to others. The Jews had so great a veneration for this name that they left off the custom of pronouncing it, whereby its true pronunciation was forgotten. They call it tetragrammaton, or the name with four letters ; and assert, that whoever knows the true pronunciation of it cannot fail to be heard by God.

JEHUD, or JOUD, mountains in the north-west part of Hindostan Proper, extending from Attock east, to Bember. They are part of the territory of the mountaineers, called Gickers, Gehkers, or Kakares. After Timur had passed the Indus, in 1398, the chiefs of these mountains came to make their submission to him ; as Am-bisares, the king of the same country, did to Alexander about 1730 years before.

JEJUNE', adj. > Lat. jejunus. Empty;

JEJUNE'NESS, n.s.] vacant; hungry ; dry : deficient in matter; jejuneness, penury; poverty.

Causes of fixation are, the even spreading both parts, and the jejuneness, or extreme comminution of spirits. Bacon.

Gold is the only substance which hath nothing in it volatile, and yet melteth without much difficulty ; the meltino-sheweth that it is not jejune, or scarce in spi-rit. Id.

In gross and turbid streams there might be contained nutriment, and not in jejune or limpid water.

Browne.

You may look upon an enquiry made up of mere narratives, as somewhat jejune. Boyle.

JEL’LIED, adj. \ Latin gelatium. See

JEL’LY,TZ. s. S GELLY. Any thing brought to a state of gluten ; a sweetmeat.

They, distilled

Almost to jelly with the effect of fear, Stand dumb, and speak cot to him. ShaJtspeare.

The kiss that sips

The jellied philtre of her lips. Cleaveland. The desert came on, and jellies brought.

King.

That jelly’* rich, this malmsey healing ; Pray dip your whiskers.

Pope’s Satire of Horace.

JELLY is a form of food, or medicine, prepared from the juice of ripe fruits, boiled to a proper consistence with sugar ; or the strong decoctions of the horns, bones, or extremities of animals, boiled to such a height as to be stiff and firm when cold, without the addition of sugar. The jellies of fruits are cooling, saponaceous, and acescent, and therefore are good in all disorders of the primae vise, arising from alkalescent juices. Jellies made from animal substances are all

alkalescent, and, therefore, good in all cases in which an acidity of the humors prevails : the alkalescent quality is, however, in a great measure taken off by the addition of lemon juice and sugar. A sort of jellies were formerly much in use, called compound jellies ; these had the restorative medicinal drugs added to them, but they are now seldom prescribed.

JELLY, OAT, a preparation of common oats, recommended by many of the German physicians in hectic disorders, to be taken with broth of snails or cray-fish. It is made by boiling a large quantity of oats, after (he husk rs taken off, with some hartshorn and currants, together with a leg of veal cut in pieces, and with the bones all broken. These are to be set over the fire with a large quantity of water, till the whole is reduced to a jelly ; which, when strained and cold, will be very firm. A few spoonfuls are to be taken every morning, diluted with a basin of either of the above-mentioned broths, or any other warm liquor.

JEMAULABAD, formerly Narsinga Augady, a town and fortress of India, in the province of Canara. The fort, which has existed from time immemorial, was thoroughly repaired by Tippoo Sultan, and is built upon an immense rock, wholly inaccessible except by one narrow path ; it may, indeed, be deemed impregnable. It yielded, however, to the British arms after a few days bombardment in 1799. Long. 75° 24’ E., lat. 13° N.

JEMME, EL, the ancient Tisdra, or Tisdrus, a town of Tunis, in Africa, distinguished by its splendid remains of antiquity. Here is a spacious and beautiful amphitheatre, which consisted originally of sixty-four arches, and four ranges of columns. The highest range is nearly fallen ; and Mahomet Bey, during a revolt of the Arabs, lately caused four of the arches to be blown up, in order that it might not be converted into a fortress. In other respects this monument is entire. El Jemme also contains many altars with defaced inscriptions, columns and fragments, one of which is a naked trunk of a Venus, in the posture and dimensions of the Medicean. Ninety miles south of Tunis.

JENA, a small town of the interior of Germany, on the Saale, in the grand duchy of Saxe-Weimar. It is surrounded on every side by lulls of considerable elevation ; aiid has above 5000 inhabitants, who derive their subsistence

chiefly from theMniversity, the three /early fair* and some small manufactures of linen and hats-The only public building worth notice

is the ducal castle, where a branch of the family of Weimar resides, and in which there is a good library, a museum, and cabinet of natural history. In the vicinity is the old castle of Kirchberg, now in ruins.

Jena is most remarkable for its university, founded in 1558. It belongs to four proprietors, the grand duke having one-half, and the other half being shared between Saxe-Gotha, Saxe-Coburg, and Saxe Meinungen. It has four faculties, *viz.* divinity, law, medicine, aud philosophy, which are taught by eighteen regular and fifteen extraordinary professors : there are also private teachers in the town. The number of students varies considerably; in 1818 they did not exceed 600. Here are also two literary societies; one called the Latin Society, established in 1734: the other a Society for the investigation of the natural history of Germany : the members of both have distinguished themselves ; and the literary journals of this place are in great repute in Germany. Another considerable institution at Jena is its court of appeal, which received a considerable extension of jurisdiction in 1816. It is forty-three miles south-west of Leipsic, and thirteen miles east by south of Weimar. For an account of the sanguinary battle of Jena, see PRUSSIA.

JENGHIZ, or JENGHIZ KHAN, khan or emperor of the Moguls, one of the most bloody conquerors that ever existed, was born in 1193, and began to reign when he was only thirteen years of age. He conquered Cathay, Corea, the greatest part of China, and almost all Asia. He destroyed about 14,000,000 of the human race, under pretence of extirpating superstition, and establishing the worship of one God. See MO-GULS. He died A. D. 1237.

JENKIN (Robert), a learned English divine in the eighteenth century, who was educated at Cambridge, became master of St. John's College, and wrote several books much esteemed ; *viz.* 1. An Historical examination of the authority of General Councils, 4to.; 2. The Reasonableness and Certainty of the Christian Religion, 2 vols. 8vo ; 3. Defensio S. Augustini , written against M. Le Clerc ; 4. A Translation from the French of the Life of Apollonius Ty-anseus.

JENKINS (Sir Leoline), a learned civilian and able statesman of the eighteenth century, bom in Glamorganshire about 1623. Being obnoxious to the parliament, during the civil war, he went abroad ; but, returning on the Restoration, he was admitted an advocate in the court of the arches, and succeeded Dr. Exton as judge. When the queen-mother Henrietta died in 1669, at Paris, her whole estate, real and personal, wa? claimed by her nephew, Louis XIV. ; upon which Dr. Jenkins's opinion being called for, and approved, he went to Paris,

with three others, on a commission, and recovered her effects ; for which he received the honor of knighthood. He officiated as one of the mediators at the treaty of Nimeguen ; in which tedious negociation he was engaged about four years and a half; and

was afterwards made a privy counsellor and secretary of state. He died in 1685, and, as he never married, bequeathed his whole estate to charitable uses, and became so great a benefactor to Jesus College, Oxford, that he is generally looked on as the second founder. All his letters and papers were collected and printed in 1724, in 2 vols. folio.

JENKINSON (Charles), first earl of Liverpool, was the eldest son of colonel Jenkinson, the youngest son of Sir Robert Jenkinson, the second baronet of the family, which had been respectably settled at Walcot, near Charlbury, Oxon. for above a century. He was born in 1727, and educated at the Charter House, on the foundation : whence he removed to University College, Oxford, and took his degree of M.A. there in 1752. The family was not at this time opulent : and Mr. Jenkinson is said to have assisted himself considerably in early life by his literary talents. He printed Verses on the Death of Frederick, prince of Wales, which attracted some notice; and in 1756 published A Discourse on the Establishment of a Constitutional Force in England ; this was succeeded by A Discourse on the Conduct of Great Britain in regard to Neutral Nations, during the present War, 1758. He was also a contributor to the early numbers of the Monthly Review. In 1761 he obtained a seat in parliament through the influence of lord Bute, and was made under-secretary of state. In 1766 he became a lord of the Admiralty, from which board he subsequently removed to that of the Treasury. In 1772 he was appointed vice-treasurer of Ireland, and soon after obtained the sinecure of the clerkship of the Pells. In 1778 he was secretary at war, and, on the dissolution of the administration of lord North, joined that portion of it which supported Mr. Pitt. He

now became president of the board of trade, to which office he united in 1786 the chancellorship of the duchy of Lancaster. In the same year he was elevated to the peerage, by the title of baron Hawkesbury, of Hawkesbuiy, in the county of Gloucester ; and in 1 796 became earl of Liverpool. His death took place on the 7th of December, 1808. Lord Liverpool was thought to enjoy, in a particular manner, the favor and confidence of George III. ; and, having early devoted his attention to politics, he became exceedingly conversant with the law of nations, and the principles and details of commerce. Besides the works above-mentioned he was the author of A Collection of Treatises from 1646 to 1673, 3 vols. 8vo., 1785; and A Treatise on the Coins of the Realm, in a Letter to the King, 1805.

JENNENS (Charles), generally known by the jocose appellation which his profusion gained him, of Solyman the Magnificent. He was a native of Gopsal, in Leicestershire, and employed a large fortune, acquired by his family in trade at Birmingham, as well in the encouragement of literature as in the most unbounded hospitality, and in the keeping up of a princely establishment. The selection of the words for Handel's celebrated oratorio, the Messiah, is ascribed to him, and he had in contemplation a splendid edition of the works of Shakspeare. VOL. XI

JENNER (Edward), M.D., F.R.S., was the son of the Rev. Stephen Jenner, vicar of Berkeley, in Gloucestershire, where he was born, May 17th, 1749. He was apprenticed to Mr. Ludlow, a surgeon, at Cirencester, on leaving whom, he became a pupil of the celebrated John Hunter, at St. George's Hospital, and while there received an offer to go out with captain f-ook in his first voyage ; and another to accompany Mr. Warren Hastings to Bengal. These proposals were declined ; and he chose to settle at Berkeley, where he studied natural history ; and communicated to the Royal Society a paper on the habits of the cuckoo, which was inserted in their Transactions for 1788. Prior to this period he had been endeavouring to investigate the nature of cow-pox, from observing, that among the dairy people of Gloucestershire many resisted inoculation. On enquiry, he found that the cause of this lay uniformly in the patients' having been infected with another cutaneous disease, contracted from their cows. Mr. Jenner now proceeded in a course of experiments to ascertain whether the matter of the cow-pox, transmitted from one inoculated person to another, would prove a preventive of the small-pox. The result was confirmatory of his expectati ins, and in 1798, having previously taken his doctor's degree at Edinburgh, he published An Enquiry into

the Causes and Effects of the Cow-pox, which was followed the next year by Farther Observations on the Variolas Vaccinae. The subject now became one of general interest, and honors and rewards crowded in upon the -> i > thor ; the University of Oxford presented him with a medical degree by diploma; he was chosen a fellow of the royal and various literary societies ; and he received the grant of £20,000 from parliament. After a career of successful practice at Cheltenham as a physician, and a life devoted to the benefit of mankind, Dr. Jenner died suddenly of an apoplectic stroke at Berkeley, January 25th, 1823. The emperor of Russia, when in this country in 1814, sought an interview with Dr. Jenner, treated him with great attention, and offered, it is said, to bestow a Russian order of nobility on him. He also visited the king of Prussia, marshal Blucher, and the cossack general count Platoff, the latter of whom said to him, ‘ Doctor, you have extinguished the most pestilental disorder that ever appeared on the banks of the Don.’

JENNET, See GENNET. A Spanish horse.

On the twelfth of December yearly, the emperoi rides into the field, which is without the city, with all his nobility, on jennets and Turkey horses in great state. Miltun. History of Muscovia.

The Spanish king presents & jennet, To shew his love. Prior.

JEN’NETING, n.s. Corrupted from Juneting, an apple ripe in June. A species of apple soon ripe, and of a pleasant taste.

JENNINGS (David), D.D., a learned dissenting divine, was the son of an ejected minister, and born at Kibworth, in Leicestershire, in 1691. He was respectably educated in London, and in 1714 entered on the pastoral duty. He 2Q

eventually was chosen minister of an independent congregation, meeting in Old Gravel-lane, Wapping. In 1743 he became a trustee of the charities of Mr. William Coward, and one of his lecturers at the chapel in Little St. Helen's, and the next year theological tutor at the academy founded by that gentlemen. He now published several works of merit for the use of the students, particularly An Introduction to the use of the Globes and the Orrery, and also the application of Astronomy to Chronology, &c. 8vo. 1747. An Appeal to Reason and Common Sense for the truth of the Holy Scriptures. An Introduction to the Knowledge of Medals, 8vo. ; and a treatise on Jewish Antiquities, 2 vols. 8vo., which is one of the best works extant on the subject. He died September 16th, 1762.

JENSON, or JANSONIUS (Nicholas), a French printer and type founder, who flourished at Ve-nice in the fifteenth century. He -was the first who fixed the form and proportions of the Ro-man character, and his editions are still valued for the beauty of the printing. The first book he printed was Decor Puellarum, in 4to., 1471. He died about 1481.

JENTACULUM, among the ancient Romans, a morning refreshment' like our breakfast. It was exceedingly simple, consisting, for the most part, of bread alone. The Greeks distinguished this meal by the names of aicpano/ioc, or cuepa-

JENYNS (Soame), esq., a celebrated English writer, born in London in 1704. He was the only son of Sir Roger Jenyns of Bottisham, Kt. He was entered a fellow commoner at St. John's College, Cambridge, where his genius soon appeared in juvenile essays and poetical effusions, many of which were published in Dodley's Collection. He was elected M. P. for Cambridge in 1741, and, being repeatedly reelected, continued to sit in parliament till 1780. In 1775 he was appointed a lord of trade, which post he held till the board was abolished in 1780. In one part of his life he was a deist : but, upon a closer enquiry into the evidences of Christianity, his faith and piety returned, in which he continued stedfast till his death. He published 1 . A Poem on the Art of Drawing, 1728 ; 2. Poems in 2 vols. 12mo. 3. Various Essays in the Periodical Paper entitled The World, 1753. 4. An Enquiry into the Nature and Origin of Evil, 12mo, 1757. 5. Political essays and poems, 2 vols. 12mo., 1761. 6. Thoughts on the Causes and Consequences of the present High Price of Provisions, i761. 7. A View of the Internal Evidence of the Christian Religion, 1 776. 8. Disquisitions on Several Subjects ; which last produced several

anonymous criticisms. He died at Lon-don, December 18th, 1787. The intellectual powers of Soame Jenyns were of a superior order. Burke said, Soame Jenyns was one of those who wrote the purest English, that is, the simplest and most aboriginal language, the least qualified with foreign impregnation.

JEOFAILE, from J'ay faille, I have failed, a term in law, used for an oversight in pleading or other proceedings at law.

JEOP'ARD, v. a.") Supposed to be derived JEOP'ARDOUS, adj. >from j' ai perdu, or jeu JEOP'ARDY, n.t j perdu. Skinner and Ju-

nius. Hazard ; danger ; peril. A word not now in use. To jeopard is to put in peril.

He had been accused of Judaism, and did 1'oldly jeopard his body and life for the religion of the Jews.

2 Mac.

And harde it is, sothe, for a man to seche — Upon the point of deth, in jeopardise — Uuto his foe, to linden remedye.

Chaucer. Complaint of the Blacks Knight

And would ye not poor fellowship expel, Myself would offer you t'accompany, la this adventure's chanceful jeopardy.

Hubberd

Thy rage shall burn thee up, and thou shah turn To ashes, ere our blood shall quench that fire : Look to thyself, thou art in jeopardy. Shakspeare.

We may impute to all excellencies in compositions a kind of poverty, or at least a casualty or jeopardy.

Bacon.

JEPHTHAH, judge of Israel, and successor to Jair in the government of the Hebrew republic, was a native of Mispeh, and the son of one Gilead by a harlot. The unkindness of his brethren, his promotion to the command of the army, his message to the king of the Ammonites, his rash vow, and its melancholy consequences, with his important victories over the Ammonites and Ephraimites, are recorded in Judges

xi. and xii. These events happened about A. M. 2817. Jephthah, after judging Israel six years, died, and was buried in the city of Gilead. St. Paul (Heb. xi. 32) places Jephthah among the saints of the Old Testament, whose faith distinguished them. With regard to Jephthah's vow, most commentators believe that this daughter of Jephthah was not sacrificed, as that would have been a violation of the law of Moses ;. and especially when, by the same law, he might have redeemed her for ten shekels of silver ; therefore they contend, that Jephthah only devoted her to a state of celibacy, or dedicated her to the service of God. — On the other hand, those who maintain that Jephthah's daughter was actually sacrificed, urge, that vows of perpetual virginity arc institutions of a modern date; and, had there been no more in it, there would have been little occasion for rending his clothes, and bemoaning himself as he did; besides the bitter lamentations made by herself, and by the daughters of Israel in succeeding times. But in answer to this it is observed, 1. That these lamentations are expressly recorded to have been made (Jud. xi. 37, 38), not for her untimely death, but on account of her virginity ; which, though no nunneries were instituted by the law of Moses might be (and in all probability was) the alternative of Jephthah's vow. And, as a decisive evidence, there was an alternative, the Hebrew word vau, rendered and in our translation, likewise signifies or ; and therefore the vow ran in these terms — ' Whatsoever cometh forth of the doors of my house to meet me, shall surely be the Lord's, or I will offer it up for a burnt offering,' *i.e.* provided it be proper for being sacrificed.

JEREMIAH, an inspired writer of the race of the priests, the son of Hilkia of Anathoth, of the tribe of Benjamin. He was called to the prophetic office when very young, about the 13th year of Josiah, and continued in the discharge

of it about forty years. He was not carried captive to Babylon with the

other Jews, but remained in Judea to lament the desolation of his country. He was afterwards a prisoner in Egypt with his disciple Baruch, where it is supposed he died in a very advanced age. Some of the Christian fathers say he was stoned to death by the Jews, for preaching against their idolatry ; others, that he was put to death by Pharaoh Hophrah, because of his prophecy against him.

JEREMIAH, THE PROPHECY OF, a canonical book of the Old Testament. Part of this prophecy relates to the time after the captivity of Israel, and before that of Judah, from the first chapter to the forty-fourth ; part of it to that of the latter captivity, from the forty-fourth chapter to the end. Jeremiah predicts the grievous calamities that were approaching, particularly the seventy years captivity in Chaldea. He also foretels their deliverance and happy return, and the recompence which Babylon, Moab, and other enemies of the Jews, should meet with in due time. There are likewise several intimations in this prophecy concerning the kingdom of the Messiah ; also several remarkable visions and types, and historical passages relating to those times. The fifty-second chapter does not belong to the prophecy of Jeremiah , but probably was added by Ezra, and contains a narrative of the taking of Jerusalem, and of what happened during the captivity, to the death of Jechonias. St. Jerome has observed that Jeremiah's style is more easy than that of Isaiah and Hosea ; that he retains something of the rusticity of the village where he was born ; but that he is also at times learned and majestic.

JERICHO, or HIERICHUS, in ancient geography, a city of Judea, between Jordan and Jerusalem, 150 stadia from the latter, and sixty from the former. Josephus says, ' the whole space from Jerusalem is desert and rocky, and equally barren and uncultivated from Jericho to the lake Asphaltites ; yet the places near the town and above it are extremely fertile and delicious, so that it may be justly called a divine plain, surpassing the rest of the land of Canaan, and surrounded by hills in the manner of an amphitheatre.' It produces dates ; from which it is called the city of palm trees, by Moses. It is now called Raha ; and is situated, Volney informs us, ' in a plain six or seven leagues long, by three wide, around which are a number of barren mountains, that render it extremely hot. Here formerly was cultivated the balm of Mecca.

JERK, v. a., v. n. & n. s. Saxon geneccan. To strike with a quick smart blow ; to lash. It is sometimes written yerk; to strike up suddenly, as an angler withdraws his line on perceiving a bite ; to accost eagerly. Jerk, a smart quick lash; a sudden spring; a jilt. I lack iniquity

Sometimes to do me service : nine or ten times

I thought to've jerked him here under the ribs.

Shakspeare.

Well run Tavraey, the abbot's churl ; His jade gave him a jerk,

As he would have his rider hurl His blood after the kirk. Ben Jonson.

Contemn the silly taunts of fleering buffoonery ; and the jerks of that wit, that is but a kind of confident folly. Glanville.

Nor blush, should he some grave acquaintance

meet, But, proud of being known, will jerk and greet.

Dryden.

Wit is not the jerk or sting of an epigram, nor the seeming contradiction of a poor antithesis, neither is it so much the morality of a grave sentence, affected by Lucan, but more sparingly used by Virgil. Id.

Lobsters use their tails as fins, wherewith they commonly swim backwards by jerks, or springs, reach, ing ten yards at once. Grew.

Bastings heavy, dry, obtuse, Only dullness can produce ; While a little gentle jerking Sets the spirits all a-workmg. Swift.

JERKIN, n. s. Sax. cyrtrelkin. A jacket; a short coat ; a close waistcoat.

A man may wear it on both sides like a leather jerkin. S/iakspeare.

Then strip thee of thy carnal jerkin, And give thy outward fellow a firking.

Hudibras.

Unless we should expect that nature should make jerkins and stockings grow out of the ground, what could she do better than afford us wool ? More.

Imagine an ambassador presenting himself in a poor frize jerkin, and tattered clothes, certainly he would have but small audience. Smith's

Sermons.

I walked into the sea, in my leathern jerkin, about an hour before high water. Gulliver's Travels.

JERKIN, n. $. A kind of hawk. — Ainsworth. This should be written gyrkin.

JERNINGHAM (Ed ward), a modern English poet and dramatic writer was descended from the ancient Roman Catholic family of this name in Norfolk, and' brother of Sir William Jerningham, bart. Born in 1727, he was sent to the English College at Douay, in Flanders, for his education, and afterwards removed to Paris. On his return to England, however, he became a member of the established church. One of his earliest productions was a poem in favor of the Magdalen, which was followed by The Deserter, 1769; The Funeral of Arabert, Monk of La Trappe, 1771; Faldoni and Teresa, 1773; The Swedish Curate; The Fall of Mexico, 1775; Honoria, or the Day of all Souls, 1782; The Rise and Progress of Scandinavian Poetry, 1784; Enthusiasm, 1789 ; &c. His play, called Margaret of Anjou, was acted in 1777; the siege of Berwick, a tragedy, in 1794; and the Welsh Heiress, a comedy, in 1795. A collection of his works appeared in 4 vols. 8vo. 1806. He also published An Essay on the Mild Tenor of Christianity, and other religious tracts. His death took place November 17th, 1812. Mr. Jerningham is spoken of with respect by lord Byron in his English Bards, and was a very amiable man.

JEROME, or HIERONYMUS, (St.), a famous doctor of the church, and the most learned of all the Latin fathers, was the son of Eusebius ; and was bom at Stridon, a city of ancient Pannonia, about A. D. 340. He studied at Rome under Donatus, the learned grammarian. After being baptized, he went into Gaul, and transcribed St. Hilary's book De Synodis. He then went into Aquileia, where he contracted a friendship

xvith Heliodorus, who prevailed on him to travel with him into Thrace, Pontus, Bithynia, Galatia, und Cappadocia. In 372 he retired into a desert in Syria, where he was persecuted by the orthodox of Melitius's party, as a Sabelliau, because he made use of the word hypostasis, as used by the council of Rome in 369. This obliged him to go to Jerusalem ; where he studied the He-brew language, to acquire a more perfect knowledge of the Holy Scriptures ; and consented to be ordained, provided he should not be confined to any particulai church. In 381 he went to Constantinople to hear St. Gregory ofNazianzen; and in 382 returned to Rome, where he was made secretary to pope Damasus. He soon, however, returned to the monastery of Bethlehem, where he held a controversy with John of Jerusalem and Rufinus concerning the Origenists ; and was the first who wrote against Pelagius. He died on the 30th of September, 420, about eighty years of age. The last edition of his works is that of Verona, in 11 vols. folio. His principal works are, 1. A Latin Version of the Scriptures, commonly called the Vulgate. 2. Commentaries on the Prophets, Ecclesiastics, St. Matthew, and the Epistles to the Galatians, Ephesians, Titus, and Philemon. 3. Polemical treatises against Montanus, Helvidius, Jovinian, vTigilantius, and Pelagius. 4. A treatise on the lives and writings of the Ecclesiastical authors who had flourished before his time. His style is lively and animated, and sometimes sublime.

JEROME OF PRAGUE, so called from the place of his birth, in Bohemia. Having embraced the opinions of John Huss, he began to propagate them in 1 480. The council of Nice cited him to appear before them, and give an accoun* of his faith. In obedience to this citation, he went to Constance; but on his arrival, in 1415, finding Huss in prison, he set out for his own country. Being seized, however, on the way, imprisoned, and examined, he was so intimidated, that he retracted, and pretended to approve of the condemnation of the opinions of Wickliff and Huss; but on the 26th of May, 1416, he condemned that recantation, and sentence was accordingly passed on him ; in pursuance of which he was burnt in 1416. He was a person of great talents, learning, and elocution.

JERSEY is a populous island of the English channel, twelve miles long and six broad. The north side is composed of rocky cliffs forty to fifty fathoms high, while the south shore is nearly level with the sea ; a ridge of hills runs through the centre, whose sides are covered with orchards, 24,000 hogsheads of cyder have been yielded by their fruit in one year. The other chief pursuit is the rearing cattle, particularly sheep, whose wool, together with cyder, form the only exports; the island is obliged to import corn from France and England. The number

of inhabitants is upwards of 20,000.

The two towns of Jersey are St. Helier and St. Aubin. The former, being the chief place, is situated nearly in the middle of the south side of the bay of St. Aubin, the best road of the island, but still dangerous, from numerous rocks scattered round the entrance. The town consists of several good streets, and is defended by

numerous batteries, but chiefly by Elizabeth Castle, standing on a rock insulated at high water.

On the west side of the island is St. Ouen's Bay, and on the east St. Catherine's Bay, which are safe roads according to the wind. All the accessible parts of the island are defended by batteries or towers. See GUERNSEY.

Christianity was first planted here, it is believed, in the sixth century, and the island made part of the see of Dol in Bretagne. It is now governed by a dean. Besides the abbey of St. Helier, there were four priories, Noirmont, St. Clement, Bonnenuit, and le Leek, and above twenty chapels, now mostly in ruins. During the American war this island was twice invaded by the French. The first attempt was in 1779. About 6000 men were embarked in flat-bot- tomed boats, and endeavoured to land in the bay of St. Ouen, on the 1st of May, supported by five frigates, and other armed vessels ; but they met with such vigorous resistance, that they were compelled to retire without having landed a single person. Another attempt was now resolved on. The troops and seamen were equally desirous of retrieving their honor ; but they were for some time prevented from making any attempt by bad weather; and, before another opportunity offered, the squadron designed to cover their descent was attacked by Sir James Wallace, who drove them ashore on the coast of Normandy, silenced a battery under whose guns they had taken shelter, captured a frigate of thirty-four guns, with two rich prizes, burnt two other large frigates, and a considerable number of smaller vessels. The scheme, though thus totally disconcerted, was resumed in 1781. The conduct of this expedition was given to baron Rullecourt, a man of courage, but very deficient in the prudence requisite for such an enterprise. His force consisted of 2000 men; with whom he embarked in tempestuous weather, hoping that he might thus be able to surprise the garrison. Many of his transports, however, were dispersed, and he himself, with the remainder, obliged to take shelter in some islands in the neighbourhood. As soon as the weather grew calm, he landed, in a

dark night, at Grouville, where he made prisoners of a party of militia. Hence he proceeded with the utmost expedition to St. Helier, and, being wholly unexpected, seized on a party of men who guarded it, together with the commanding officer, and the magistrates. Rullecourt then drew up a capitulation, the terms of which were, that the island should be instantly surrendered to the French, and the garrison sent to England ; threatening the town with immediate destruction in case of non-com- pliance. This point being gained, he summoned Elisabeth Castle to surrender in virtue of the capitulation just concluded. To this a peremptory refusal was given, and followed by such a vigorous discharge of artillery, that he was obliged to retire into the town. In the mean time the British troops stationed in the island under the command of major Pierson began to assemble from every quarter : being required by the French commander to submit, that officer replied, that if the French themselves did not,

•within twenty minutes, lay down their arras, he would attack them. An attack was accordingly made with such impetuosity, that the French were totally routed in less than half an hour, and driven into the market-place, where they endeavoured to make a stand. Their commander, exasperated at this change of affairs, endeavoured to wreak his vengeance on the captive governor, whom he obliged to stand by his side during the whole time of the conflict. This, however, was quickly over ; the French were broken on all sides, the baron himself mortally wounded, and the next in command obliged to surrender himself and the whole party prisoners of war ; the captive governor escaped without a wound. This last disaster put an end to all hopes of the French ministry of being able to reduce the island, and was indeed no small mortification to them; 800 troops having been landed at that time, of which not one escaped. During the late wars Jersey flourished, and was we believe never attacked .

JERSEY, NEW, one of the United States of North America, is bounded north by New York, east by the Hudson and the Atlantic, south by the Atlantic, and west by Delaware Bay and River, which separates it from

the states of Delaware and Pennsylvania. It is 163 miles long, and fifty-two broad; containing 8320 square miles. Population, in 1790, 184,189; in 1800 211,149; and, in 1810, 245,592, of whom 10,851 were slaves, and 7843 free blacks. The number of militia, in 1817, amounted to 35,169.

Trenton is the seat of government. The other most considerable towns are Newark, New Brunswick, Elizabethtown, Burlington, and Amboy.

There are fourteen banks in this state ; and the counties, number of townships, population, and chief towns are thus exhibited by the last census .

Counties.

Town—

Popula-

Chief Towns.

ships.

tion.

Berpen

7

22,414

Hackinsack i

C Burlington,

Burlington

12

31,066

< Bordentown

(~ Mount Holly

Cape May

3

4,945

Cumberland

8

14,001

Bridgetown

Essex

10

41,928

$ Newark J Elizabethtown

Gloucester

10

28,431

I Gloucester ˆ Woorlbury

Hunterdon

10

31,066

Trenton

Middlesex

8

23,157

f N. Brunswick \ Amboy

Mcnmouth

7

29,232

Freehold

\iorris

10

23,580

Morristown

Milem

9

14,155

Salem

Somerset

7

17,689

Boundbrook

Missex

15

20,349

Newton.

Barren

18,634

116

Delaware River separates this state from Penn-v sylvania, and the Hudson forms the northern part of the eastern boundary. The other considerable rivers are (he Raritan, Passaic, Ilackinsack, Grot I'gg Harbour River, and Musccnecunk.

The three northern counties, Sussex, Morris, and Bergen, are mountainous. The next four, Hunterdon, Somerset, Essex, sad Middlesex, are agreeably diversified with hills and valleys. South Mountain, a great ridge of the Alleghany range, crosses the state in lat. 41° N., and the Kittatinny ridge crosses a little to the north of South Mountain. The greater part of the six southern counties is composed of the long range of level country, which commences at Sandy Hook, and Ihes the coast of the middle and southern states Much of this range is nearly barren, producing only shrub oaks and yellow pines ; but the rest of the state has a large proportion of good soil, excellent for grazing, and for the various purposes of agriculture. The productions are wheat, rye, maize, buckwheat, potatoes, oats, and barley. Great numbers of cattle are raised in the mountainous parts for the markets of New York and Philadelphia. Large quantities of butter and cheese are also made. New Jersey is remarkable for an excellent breed of horses. The exports are flour, wheat, horses, cattle, hams, cyder, lumber, flax seed, leather, and iron. The greater part of the produce exported from this state passes through New York and Philadelphia.

Great quantities of leather are manufactured at the valuable tanneries of Trenton, Newark, and Elizabethtown. Large quantities of shoes are made at Newark. There is a glass-house in Gloucester county, and there are paper mills and nail manufactories in various parts of the state. But the most important manufacture is that of iron. In the county of Morris there are seven rich iron mines, two furnaces, two rolling and slitting mills, and about thirty forges. The an-nual produce of these works is about 540 tons of bar iron, 800 tons of pig, besides large quantities of hollow ware, sheet iron, and nail rods. There are also iron-works in the counties of Burlington, Gloucester, Sussex, &c. The annual produce in the whole state is computed at about 1200 tons of bar iron, 1200 tons of pig, and eighty tons of nails, exclusive of small articles.

Two colleges have been incorporated in this state, one at Princeton, and one at New Brunswick. The latter is not at present in operation. There are theological seminaries at Princeton and New Brunswick ; and academies have been established at Amboy, Amwell, Baskingridge, Bedminster, Bergen, Bloomfield, Bordentown, Bridgetown, Burlington, Camden, Elizabethtown, Flemington, Hackinsack, Morristown, New Brunswick, Newark, Newton, Salem, Springfield, Somerville, and Trenton. Most of these academies have but small funds, and five or six of them are not incorporated.

The most numerous denomination of Christians in New Jersey is the English Piesby-terians, who have seventy-four churches, ant fifty-nine clergymen. The Dutch Reformed have thirty-one churches, and twenty clergymen ; the Baptists have thirty churches, and twenty-three clergymen ; the Episcopalians have twenty-four churches, and eleven clergymen ; the Congregationalists have nine churches, and five clergymen; the Friends have forty-four meeting-houses. The Methodists are numerous; the number of com-municants was stated, in 1811, at 6739.

JERUSALEM.

The legislature is composed of a legislative council, and a house of assembly; the former consisting of thirteen members, one from each county, and the latter of thirty-five members, all chosen annually. The. executive is composed of a governor chosen annually by a joint vote of both branches of the legislature, a vice-president chosen by the council, and a privy council, composed of three members of the legislative council. The annual elections are in October. New Jersey sends six representatives to congress.

JER’SEY, n. s. From the island of Jersey, where much yarn is spun. Combed wool, and yarn made of combed wool.

JERVIS (John), earl of St. Vincent, a late distinguished naval commander, was descended of an ancient family in Staffordshire. His father, Swynfen Jervis esq., was auditor of Greenwich Hospital. Our admiral was born at Meaford Hall, January 9th, 1734 (old style). At the age of fourteen he was a midshipman on board the Gloucester, of fifty guns ; and, in 1755, served as lieutenant under Sir C. Saunders, in the expedition againt Quebec. Soon after he was appointed as

commander to the Experiment, and afterwards to the Albany sloop. In 1760 he obtained the rank of captain of the Foudroyant, and fought in the action between admiral Keppel and the French fleet in July 1778. la 1782 he engaged and took the Pegase, of seventy-four auns and 700 men. Receiving a severe wound in the head from a splinter, he obtained the red riband as a reward for this gallant conduct.

In 1794 he had the command of a squadron equipped for the West Indies, and reduced Mar-tinique, Guadaloupe, and St. Lucie ; for which lie received the thanks of parliament, and the freedom of the city of London. On the 14th of February 1797, however, he obtained his great victory. Being in command of the Mediterranean fleet of fifteen sail, he engaged and defeated twenty-seven Spanish-ships of the line, the smallest carrying seventy-four guns, and seven of them mounting from 112 to 130 each. He was now raised to the English peerage, by the titles of baron Jervis and earl of St. Vincent. To this was added a pension of £3000 a year, and a gold medal from the king. In 1801 he became first lord of the admiralty ; in whichjca-pacity he undertook and executed many salutary reform* in naval expenditure, but resigned his post in 1804. May, 1814, lord St. Vincent was appointed general of marines, and July 19th, 1821, admiral of the fleet. He died March 1 5th, 1823, in his eighty-ninth year, and a monument was voted by the house of commons to be erected to his memory in St. Paul's cathedral.

JERUSALEM, Heb. from TV they shall see, andcVttf, Salem, Peace, a famous and ancient city, capital of Judea, now a province of Turkey in Asia. According to Manetho, an Egyptian historian, it was founded by the shepherds who invaded Egypt in an unknown period of antiquity. See EGYPT. According to Josephus, it was the capital of Melchisedek's kingdom, called Salem in the book of Genesis : and the Arabians assert, that it was built in honor of Melchisedek by twelve neighbouring kings. We know nothing of it with certainty, however, till the t;-ae

of king David, who took it from the Jebusitos, and made it the capital of his kingdom, which it ever after continued to be. It was first taken in the days of Joash, by Hazael, king of Syria, who slew all the nobility, but did not destroy the city. It was afterwards taken by Nebuchad"- nezzar king of Babylon, who destroyed it, and carried away the inhabitants. Seventy years after it was rebuilt, by permission of Cyrus king of Persia, and it continued to be the capital of Judea (though frequently suffering much from the Grecian monarchs of Syria

and Egypt), till the time of Vespasian emperor of Rome, by whose son Titus it was totally destroyed. See JEWS. It was, however, rebuilt by Adrian : and seemed likely to have recovered its former grandeur, being surrounded with walls, and adorned with several noble buildings; the Christians also being permitted to settle in it. But this was a short-lived change ; for when the empress Helena, mother of Constantine the Great, visited this city, she found it in the most ruinous situation. Having formed a design of restoring it to its ancient lustre, she caused, with a great deal of cost and labor, all the rubbish that had been thrown upon those places where our Saviour had suffered, been buried, &c., to be removed. In doing this, they found the cross on which he died, as well as those of the two malefactors who suffered with him ; and (as the writers of those times relate) discovered by a miracle that which had borne the Saviour of mankind. She then caused a magnificent church to be built, which enclosed as many of the scenes of our Saviour's sufferings as could conveniently be done, and adorned the city with several other buildings. The emperor Julian is said to have formed a de-sign of rebuilding the temple of Jerusalem, and of restoring the Jewish worship, on purpose to give the lie to our Saviour's prophecy concerning the temple and city of Jerusalem; namely, that the temple should be totally destroyed, without one stone being left upon another : and that the city should be trodden down of the Gentiles till the times of the gentiles were fulfilled. In this attempt, however, according to the accounts of the Christian writers of that age, the emperor was frustrated by an earthquake and fiery eruption from the earth, which totally destroyed the work, consumed the materials which had been collected, and killed a great number of the workmen. This event has been the subject of much dispute. Bishop Warburton published a treatise expressly on the truth of this fact, and collected testimonies in favor of it, from Ammianus Marcellinus, and Gregory of Nazianzen ; for which we shall refer our readers to the bishop and the original authors. But it is a matter of very little consequence, whether this event happened, with the circumstances related by these authors, and quoted by the bishop, or not. If Julian did make any attempt to rebuild the tem-ple, it is certain that something obstructed his attempt, because the temple was never rebuilt. If he made no such attempt, the prophecy of our Saviour still holds good; and it surely cannot detract from the merit of a prophecy, that no-body ever attempted to elude it, or prove it to be a falsehood. Jerusalem continued in the hand? of the eastern emperors till the reign of the caliph

Omar, who reduced it under his subjection. The Saracens continued in possession of it till 1099, when it was taken by the Crusaders, They founded a new kingdom, of which Jerusalem was the capital, and Godfrey the first king. See GODFREY. The Christian kingdom of Jerusalem lasted eighty-eight years under nine kings, when it was taken by Saladin, sultan of Egypt in 1187. See EGYPT. In 1217 the Saracens were expelled by the Turks, who have ever since continued in possession of it. Jerusalen, in its most flourishing state, was divided into four parts, each enclosed with its own walls; *viz.* 1. The old city of Jebus, which stood on mount Zion, where the prophets dwelt, and where David built a magnificent castle and palace, which be-came the residence both of himself and successors ; on which account it was emphatically called the city of David. 2. The lower city, called also the Daughter of Zion, being built after it; on which stood the two magnificent palaces which Solomon built for himself and his queen ; that of the Maccabaean princes ; and the stately amphitheatre built by Herod, capable of containing 80,000 spectators ; the strong citadel built by Antiochus, to command and overtop the temple, but afterwards razed by Simon the Maccabee, who recovered the city from the Syrians ; and lastly, a second citadel, built by Herod, upon a high and craggy rock, and called by him Antonia. 3. The new city, mostly inhabited by tradesmen, artificers, and merchants ; and, 4, Mount Moriah, on which was built the famed temple of Solomon, described in 2 Kings vi. and vii. ; and, since then, that rebuilt by the Jews on their return from Babylon, and afterwards built almost anew, and greatly adorned and enriched by Herod. Some idea of the magnificence of this temple may be had from the following considerations: 1. That there were no fewer than 164,300 men employed in the work: 2. That, notwithstanding this prodigious number of hands, it took up seven years in building : 3. That the height of this building was 120 cubits, or eighty two yards ; and the courts round it about half as high : 4. That the front, on the east side, was sustained by ramparts of square stone, of vast bulk, and built up from the valley below; which last was 300 cubits high, and being added to that of the edifice amounted to 420 cubits ; to which, if we add, 5, The height of the principal tower above all the rest, *viz.* sixty, it will bring it to 480 cubits, which, reckoning at two feet to a cubit, will amount to 960 feet; but, according to the length of that measure, as others reckon , *viz.* at two feet and a half, it will amount to 1200

feet; a prodigious height from the ground, and such as might well make Josephus say, that the very design of it was sufficient to have turn-ed the brain of any but Solomon. 6. These «amparts, which were raised in this manner, to fill up the prodigious chasm made by the deep valley below, and to make the area of a sufficient breadth and length for the edifice, were 1000 cubits in length at the bottom, and 800 at the top, and the breadth of them 100 more. 7. The huge buttresses which supported the ramparts were of the same height, square at tne top, and fifty c-ibits broad, and jutted out 150 cubits at

the bottom. 8. The stones of which they were built were, according to Josephus, forty cubits long, twelve thick, and eight high, all of marble, and so exquisitely joined, that they seemed one continued piece, or rather polished rock. 9. According to the same Jewish historian, there were 1453 columns of Parian marble, and 2906 pilasters ; of such thickness, that three men could hardly encircle them ; with height and capitals proportionable, of the Corinthian order. But it is probable, that Josephus has given us these last two articles from the temple of Herod, there being nothing like them mentioned by the sacred historians, but a great deal about the prodigious cedars of Lebanon used in that noble edifice, the excellent workmanship of them adapted to their several ends; together with their gilding and other ornaments. At present Jerusalem is called by the Turks Cudsembaric, Coudsheriff, and Ileleods, or the Holy City.

Dr. Clarke, on his recent visit to this spot, did not find it, as a whole, that picture of desolation which he had been prepared to expect. On reaching an eminence, to the north of the city, he observes, ‘ the sight burst upon us all. We had not been prepared for the grandeur of the spectacle which the city alone exhibited. Instead of a wretched and ruined town, by some described as the desolated remnant of Jerusalem, we beheld, as it were, a flourishing and stately metropolis, presenting a magnificent assemblage of domes, towers, palaces, churches, and monasteries ; all of which, glittering in the sun’s rays, shone with inconceivable splendor.’ All Bey speaks of the streets as tolerably regular, straight, and well paved, several of them having footpaths, but they are narrow and dull, and many of them on a descent. The houses are two or three stories high, with few windows and very small doors. Most of them are constructed of freestone, and their fronts wholly without ornament; so that, in walking the streets, it does not require any great stretch of fancy to conceive one’s self in the corridors of a vast prison. The population is estimated at 30,000, more than 20,000 of whom are said to be Christians, with about 7000

Mussulmans, besides Arabs, Turks, Jews, &c. Dr. Clarke says, ‘ in Jerusalem there are sects of every denomination, and perhaps of almost every religion upon the earth. As to those who call themselves Christians, in opposition to the Moslems, we found them divided into sects, with whose distinctions we were often unacquainted. It is said there are no Lutherans ; and if we add, that, under the name of Christianity, every degrading superstition and profane rite, equally remote from the enlightened tenets of the gospel and the dignity of human nature, are professed and tolerated, WP shall afford a true picture of the state of society in this country.’

The edifice most resorted to by Christian pilgrims is that called the Church of the Holy Sepulchre. It was built, as already intimated, by the empress Helena, the mother of Constantine, and is a handsome structure, 300 feet long, and nearly 200 broad, professing to comprehend within these limits the scene of all the great events of the crucifixion, burial, and resurrection

of the Messiah. Over the door is a has relief of great antiquity, representing his entrance into Jerusalem, with the multitude strewing palm branches before him. On entering the church, the first thing shown is a slab of white marble in the pavement, surrounded by a balustrade. This is stated to be the spot where the body was anointed by Joseph of Arimathea. There appears next a large round fabric, standing in the midst of the principal aisle, and beneath the main dome.

The first part constitutes a kind of ante-chapel, containing what is said to be the sepulchre, be-fore the mouth of which appears a block of white marble, stated to be the stone on which the angel sat. The sepulchre itself is composed of thick slates of. that beautiful stone commonly called Verde autico, and the entrance, which is of the same substance, is broken and rugged, in consequence of the number of pieces carried off as relics. Here lamps are kept continually burning.

Beyond the sepulchre, and still beneath the roof of the same church,

are shown two rooms, one above another. Close by the entrance to the lower chamber are the tombs of Godfrey of Bouillon and of Baldwin, the modern kings of Jerusalem, with Latin inscriptions in the Gothic character. At the extremity is exhibited a figure, or cleft, in the natural rock, which is said to be the rent produced at the crucifixion. On ascending to the upper apartment, the pilgrim is shown an altar, venerated as mount Calvary, the place of crucifixion ; and on it are shown the marks or holes of the three crosses ; and here again the same rent appears in the wall.

In galleries round the church, and in small buildings attached to it on the outside, are apartments for the reception of friars and pilgrims. They are occupied by a number of monks of different nations, who devote themselves to the service of the sepulchre, and many of whom do not stir for many years from the sepulchre. In the course of passion week, particularly, they perform a variety of ceremonies, which were witnessed by Maundrell and Pococke. They represent, for instance, the crucifixion in an effigy of wax ; a sermon suited to the subject is preached, and a hymn sung. In due time the nails are taken out, and the image brought down and interred with all the ceremonies of the east. The next day is spent in singing the Lamentations of Jeremiah ; and on the following morning, being supposed that of the resurrection, the sepulchre is opened, and all possible marks of joy exhibited. Pococke says that most of these ceremonies were carried on in a very tumultuous and indecent manner.

Dr. Clarke, however, disputes altogether the fact of this being the site of the real crucifixion and burial of Christ. Calvary, besides, is described as without the city, while the church of the sepulchre is within it; so that pilgrims are obliged to suppose that the walls of this fallen place have been extended, so as to include it. Again, while Calvary is said to be a mount, there is not here the least trace of a hill ; the ground being entirely plain, except the small rise of about twenty steps leading up to the

altar, the supposed scene of crucifixion. This is so obvious, that travellers have been obliged to suppose that the empress Helena artificially levelled the whole of the ground, with a view to the more convenient erection of her church ; but it seems very improbable that this pious princess should thus have studiously obliterated every trace of the events which she intended to commemorate. The altar also, although it professes to exhibit the marks of the three crosses, has no dimensions in the least capable of containing them ; and the

sepulchre, instead of being cut out of the living rock, is composed of pieces cemented together; and the stone, with which it was supposed to have been shut, does not fit it. Dr. Clarke thinks he discovered a place far more likely to be the real theatre of these transactions in riding out of the city, by what is called Sion gate, when he came to a deep dingle or trench, called Tophet or Gehennon, and abounding with sepulchral excavations, for a particular description of which we must refer the reader to his Travels.

Certainly, however, the most splendid edifice in Jerusalem is the Saracenic mosque of the caliph Omar. Into this no Christian is suffered to enter. Dr. Clarke considered it superior in its architecture to any other edifice he saw in Turkey. It appears to occupy part of the site of the ancient temple ; and its numerous arcades, splendid dome, noble area, and high state of preservation, render it, especially when the pilgrims are passing to and fro in their imposing costume, a most magnificent display of Moslem superstition.

The monks here resident consisted originally of various nations and professions, each of which had a quarter assigned to it; but the number has of late been reduced to four, the Latins, Greeks, Armenians, and Copts, of which the last are now almost reduced to nothing. Each fraternity has altars and a sanctuary of its own ; but the possession of the holy sepulchre has often been contested with great fury, especially between the Greeks and Latins. Maundrell saw upon some of the monks deep scars, which they had received in these combats. In 1690, however, through the indefatigable exertions ot the French monarch, the Latins were secured in this possession; and, though Christians of al. nations procure access to the church, they alone can solemnize service in it. These guardians of the holy sepulchre are called Terra Sancta friars, and live constantly within the walls. They have a fat and rosy appearance, and are thought to possess a considerable treasure. The Greek monastery consists of many separate, small, but well supported, establishments. The Armenian is the largest and most splendid in Jerusalem. Every thing here is oriental. The patriarch receives his visitors with royal stateliness, in a flowing vest of silk ; sits amidst clouds of incense; and regales them with all the luxuries of the east. The monks generally are said to be well acquainted with what is passing in Europe, and watch for the expected dissolution of the Turkish empire.

Jerusalem is included in the pachalic of Damascus ; but the surrounding territory forms a

sort of independent district. The grand seignior assigns the revenues here gathered to supplying the expenses of the ladies of the seraglio. For this purpose they are collected by agents, and transmitted to the kislar aga, or chief of the black eunuchs. The exactions of these agents, with the incursions of the Arabs, have of late greatly reduced the city and suburbs.

JERUSALEM ARTICHOKES, n, s. A species of sunflower.

Jerusalem artichokes are increased by small offsets, and by quartering the roots. Mortimer.

JESS, n. s. Fi.gecte: Ital. getto ; Lat. jacio. Short straps of leather tied about the legs of a hawk, with which she is held on the fist.

That like an hawke which feeling herself freed From bells and iesses which did let her flight, Him seemed his feet did fly and in their speed delight.

Spenser. Faerie Queene. If I prove her haggard.

Though that my jesses were her dear heart strings j I'd whistle her off, and let her down the wind To prey at Fortune. Shahspeure. Othello.

JES'SAMINE, n. s. See JASMINE. A fragrant flower.

Her goodly bosom, like a strawberry bed j

Her neck, like to a bunch of cullambines ;

Her breast like lilies, ere their leaves be shed ;

Her nipples like young blossomed jeisamines,

Spenser.

JESSAMINE. See JASMINUM.

JESSELMERE, a large, barren district of liindostan, in the province of Ajmeer, situated about the twenty-eighth degree of northern latitude. The greater part of it is an uninterrupted tract of sand, without a single stream, and the well water only procurable at a very greatdepth. Being, however, within the influence of the periodical rains, some parts of it are cultivated ; but are of little value. It is governed by its aboriginal chiefs.

JESSO, an island on the eastern coast of Asia, north of Japan, and forming one of an independent archipelago, very little known until the voyages of La Perouse and Broughton.

The island called by the Japanese Jesso (the shore) and Mosin (the body hairy) is named Chica by the natives, according to La Perouse, and Insu (Greenland) according to Broughton; it is separated from Niphon by the strait of Sangaar, five leagues broad, named by the Japanese Matsi, or Strait, and the town on the south Matsimay.

This name is sometimes applied to the whole island, which is entirely composed of high and well wooded mountains, whence descend numerous rivers. The trees are oak, elm, ash, maple, birch, beech, linden, yew, silver pine, poplar, yoke elm, willow, and a great variety of shrubs. The fruit trees are chestnuts, plums, with grapes, and many species of berries. Of esculent vegetables, most of those common to Europe are found here, either wild or uncultivated, such as wheat, maize, millet, French beans, peas, lentils, turnips, radishes, carrots, beet, garlic, onions, besides hemp, tobacco, &c. The wild animals are deer, bears, foxes, and rabbits ; the bears are taken when young, and reared like dogs till a

certain age, when they arc confined m cagea, where they are fattened for food. It is said, the women allow them to suck them when first taken ; and, although they feast on them with the rest of the family, they weep for their death, as for that of a child. The shores abound with seals and sea-otters, and the bays with fish, particularly sprats, which are driven into them in immense shoals by the whales. The rivers are also full of salmon.

The proper natives of Jesso, or Mosins, according to Krusenstern, call themselves Ainos ; they are taller and stouter than the Japanese ; their faces are covered with thick black beards, which mingles with their

black and rather frizzled hair ; and, according to Broughton, their bodies are also covered with hair more than any other people, whence their Japanese denomination of Mosin. Both sexes paint or tattoo figures of flowers or animals on the lips and back of the hands.

Their arms are the bow and arrow : they are said to be without laws, money, or writing, and the only religious worship observed amongst them is the pouring libations and lighting fires in honor of the Japanese divinity, Kamoi. They allow of polygamy, and punish adultery in both parties ; but a man who receives from a woman her ear-rings is held guiltless, as it is then supposed that she has seduced him. Incest is not considered a crime, and brothers and sisters marry. Their language has no affinity to any other known one, but is neither rude nor disagreeable to the ear. The Mosins trade with the southern Kurilians by barter. When the latter want commodities they appear near the shores of Jesso, and the Mosins immediately lay the objects they are supposed to want on the beach and retire. The Kurilians then land, and, selecting those they mean to take, place them on one side, with the objects they intend to give in exchange by them, and retire in their turns, when the Mosins reappear ; and it is by a succession of this silent bargaining that they at last arrive at an agreement. The chief objects of commerce are dried fish, dried sea-weed (fucus saccharinus) which is considered a delicacy by the Japanese, fish oil, beaver, zibelline, otter, fox, and bear skins, &c.

The dress of the Mosins is chiefly of cloth made from the inner bark of the linden : both sexes are fond of smoking. At the southern and western shores the Japanese have establishments, and are said to have fortified a portion of the latter, lately.

JESSORE, or KHALAFABED, a district of Bengal, north-east of Calcutta, bounded on the north by the Ganges, and on the east by Back-ergunge. The northern part is very fertile ; but the southern, which extends into the sunderbunds or woods, produces only coarse rice and salt. The district is, however, very populous, and the inhabitants are in the proportion of nine Mahommedans to seven Hindoos.

JESSO aE, or MOORLEY, the capital of the district of that name, is in the Ayeen Akberry, call-ed Russoolpore. It is situated on the western side of the Boirub, and on the high road from Calcutta to Dacca. It was the residence of a

tbujdar under the Mogul government, and it is still a flourishing place. Long. 89° 1 6’ E., lat. 23° 7’ N.

JEST, v. n. & n. ». 3 Lat. gestus, gesticular.

JK’STER, n. s. $To divert or make merry

by words and actions. Jest, anything ludicrous ; the object of jests ; ludicrous ; not serious ; game; not earnest. A jester, one given to merriment or sarcasm ; a buffoon ; a licensed scoffer kept at court to the time of Charles I.

And, tho’ [then] descended doune fromjestes old To Diomede ; and thus she spake and told.

Chaucer. Troilus and Creseide.

Another sort of light loose fellows do pass up and down, amongst gentlemen, by the name of jeiters ; but are, indeed, notable rogues, and partakers not only of many stealths, but also privy to many traitorous practices. Spenser on Ireland. That high All seer, which I dallied with,

Hath turned my feigned prayer on my head,

And given in earnest, what I begged in jest.

Shakspeare.

Fear you the boar, and go so unprovided ? — You may jest on : but I do not like these several

councils. Id. Richard III.

But is this true, or is it else your pleasure,

Like pleasant travellers, to break &jest

Upon the company you overtake ? Shakspeare. The skipping king, he

rambled up and down

With shallow jesters, and rash bavin wits ;

Soon kindled and soon burnt. Id. Henry IV.

If I suspect without cause, why then make sport at me ; then let me be your jest, I deserve it.

Shakspeare.

As for jest, there be certain things which ought to be privileged from it ; namely, religion, matters of state, and great persons. Bacon.

No man ought to have the less reverence for the principles of religion, or for the holy Scriptures, because idle and profane wits can break jests upon them.

Tittotson.

When his playfellows chose him their king, he spoke and did those things in jest, which would have become a king in earnest. Grew.

He had turned all tragedy to jest. Prior.

Where arc the jesters now ? the men of health Complexiouedly pleasant ? Blair'* Grave.

Now, as a jester, I accost you, Which never yet one friend had lost you.

Swift.

While thro' their cheerful land the rural talk The rural scandal and the rural jest Fly harmless, to deceive the tedious time, And steal unfelt the sultry hours away. Thomson.

When you the dullest of dull things have said, And then ask pardon for the jest you made. Young.

JESUA LEVITA, a learned Spanish rabbi, in the fifteenth century, who wrote a curious work entitled Halichot Olam, or the Ways of Eternity ; a useful introduction to the study of the Talmud. It was reprinted in Hebrew and Latin, at Hauo-ver, in 1714, 4to.

JESUITS, or the society of Jesus, a celebrated religious order of the Romish church, founded by Ignatius Loyola. See LOYOLA. The plan of

its constitution and laws was suggested, as the founder asserted, by the immediate inspiration of heaven. But, notwithstanding this high pretension, his design met at first with violent opposition. Pope Paul III., to whom Loyola had applied for his authority to confirm the institution, referred his petition to a committee of

the cardinals. They represented the establishment to be unnecessary as well as dangerous, and Paul refused to grant his sanction. At last Loyola removed his scruples to the new foundation by an offer which it was impossible to re-sist. He proposed, that besides the vows of poverty and of monastic obedience, common to all the orders of regulars, the members of this society should take a third vow of obedience to the pope, binding themselves to go whitherso-ever he should command for the service of religion, and without requiring any thing from the holy see for their support. At a time when the papal authority had received such a shock by the revolt of so many nations from the Romish church, and also when every part of the popish system was attacked with so much violence and success, the acquisition of a body of men, thus peculiarly devoted to the see of Rome, and whom it might set in opposition to all its enemies, was an object of the highest consequence. Paul, instantly perceiving this, confirmed the institution of the Jesuists by his bull, granted the most ample privileges to the members of the society, and appointed Loyola to be the first general of the or-der. The event fullyjustified Paul's discernment. In less than half a century, the society obtained establishments in every country that adhered to the Roman Catholic church ; its power and wealth increased amazingly ; the number of its members became great ; and the Jesuits were celebrated by the friends, and dreaded by the enemies of the Romish faith, as the most able and enterprising order in the church.

The constitution and laws of the society were perfected by Laynez and Aquaviva, the two generals who succeeded Loyola, men far superior to their master in abilities and in the science of government. They framed that system of profound and artful policy which distinguished the order. Many circumstances concurred in giving a peculiarity of character to the order of Jesuits, and in forming the members of it not only to take greater part in the affairs of the world than any other body of monks, but to acquire superior influence in the conduct of them. The primary object of almost all the monastic orders is to separate men from the world, and from any concern in its affairs. In the solitude and silence of the cloister the monk is called to work out his own salvation by extraordinary acts of mortification and piety. He

is dead to the world, and ought not to mingle in its transactions. He can be of no benefit to mankind but by his example and his prayers. On the contrary, the Jesuits were taught to consider themselves as formed for action. They were chosen soldiers, bound to exert themselves continually in the service of God, and of the pope his vicar on earth. Whatever tends to instruct the ignorant, or can be of use to reclaim or to oppose the enemies of the holy see, was their object. That they might have leisure for this active service, they were totally exempted from those functions the performance of which is the chief business of other monks. They appeared in no processions; they practised no rigorous austerities ; they did not consume their time in the repetition of tedious offices ; but attended to all the transactions of the

world, with a view to their influence upon religion ; they were directed to study the (impositions of persons of high rank, and to cultivate their friendship; and, by the very constitution as well as genius of the order, a spirit of action and intrigue was infused into all its members. As the object of the society of Jesuits differed from that cf the other monastic orders, the diversity was no less in the form of its government. The other orders are voluntary associations, in which whatever affects the whole body is regulated by the common suffrage of all its members. The executive power is vested in the head of each society ; the legislative authority resides in the community. Affairs of moment, relating to particular convents, are determined in conventual chapters ; such as respect the whole are considered in general congregations. But Loyola, full ot the idea of implicit obedience, which he had derived from his military profession, appointed that the government of his order should be purely, monarchical. A general, chosen for life by deputies from the several provinces, possessed power supreme and independent, extending to every person and case. ” He nominated provincials, rectors, and every other officer employed in the government of the society, and could remove them at pleasure. In him was vested the sovereign administration of the revenues and funds of the order. Every member belonging to it was at his disposal :

and by his uncontrollable mandate he could impose on them any task, or employ them as he pleased. To his commands they were required to yield not only outward obedience, but to resign to him their inclinations and sentiments. They were to listen to his injunctions as if they had been uttered by Christ himself. Under his direction they were to be mere passive instruments, like clay in the hands of the potter. Such a singular form of policy could not fail to impress its character on all the members of the order, and to give a peculiar force to all its operations. There is not in the annals of mankind, any. example of such a perfect despotism exercised, not over monks shut up in a convent, but over men dispersed among all the nations of the earth. As the constitution of the order vested in the general such absolute dominion, it carefully provided for his being perfectly informed with respect to the character and abilities of his subjects. Every novice who offered himself a candidate was obliged to lay open his conscience to the superior, or a person appointed by him ; and not only to confess his sins, but to discover the inclinations, the passions, and the bent of his soul. This was to be renewed every six months. The society, not satisfied with thus penetrating into the innermost recesses of the heart, directed each member to observe the words and actions of the novices : they were constituted spies upon their conduct, and were bound to disclose every thing of importance concerning them to the superior. That this scrutiny into their character might be as complete as possible, the no-viciate was long, during which they passed through the several gradations of ranks in the society ; and they must have attained the full age of thirty-three years before they could be admitted to take the final vows, by which they became members.

By these methods the superiors, under whose immediate inspection the novices were placed, acquired a thorough knowledge of their dispositions and talents. That the general, who was the soul that animated and moved the whole society, might have under his eye every thing necessary to direct him, the provincials and heads of houses were obliged to transmit to him regular and frequent reports of the members under their inspection. In these they descended into minute details with respect to the character, abilities, temper, and experience of each person, and the particular department for which he was best fitted. These reports were entered into registers kept on purpose, that the general might at one view survey the state of the society all over the globe ; observe the talents of its members; and thus choose the instruments which his absolute power could employ in any service for which he thought proper to destine them.

As it was the professed intention of the Jesuits to promote the salvation of men, this engaged them in many active functions. They considered the education of youth as their peculiar province ; they aimed at being spiritual guides and confessors ; they preached frequently in order to instruct the people ; they set out as missionaries to convert unbelieving nations. The novelty of the institution, as well as the singularity of its objects, procured the order many admirers and patrons. The governors of the society availed themselves of every favorable circumstance ; and the number and influence of its members increased rapidly. Before the expiration of the sixteenth century,they had obtained the chief direction of the education of youth in every catholic country in Europe. They had become the confessors of all its catholic monarchs ; a function of importance in any reign, but, under a weak prince, superior even to that of the minister. They were the spiritual guides of almost every person eminent for rank or power. They possessed the highest interest with the papal court, as the most zealous and ablest champions for its authority. The advantages which they derived from all these circumstances are obvious. They formed the minds of men in their youth, and retained an ascendant over them in their advanced years. They possessed the direction of the most considerable courts in Europe. They mingled in all affairs. They took part in every intrigue and revolution. The general, by the extensive intelligence he received, regulated the operations of the order with perfect discernment : and, by means of his absolute power, carried them on with vigor and effect. Together with the power of the order, its wealth increased. Various expedients were devised for eluding the obligation of the vow of poverty. The order acquired ample possessions in every catholic country ; and by the number and magnificence of its public buildings, with the value of its property, it vied with the most opulent of the monastic fraternities. Besides the sources of wealth common to the regular clergy, the Jesuits possessed one peculiar to themselves. Under pretext of promoting the success of their missions, and of facilitating the support of their missionaries, they obtained a special li-604

cense from the court of Rome to trade with the nations which they labored to convert. In consequence of this they engaged ia extensive and lucrative commerce both in the East and West Indies, and opened warehouses in Europe for vending their commodities. They imitated

the example of other commercial societies ; obtained settlements ; and acquired possession of a large and fertile province in South America, and reigned as sovereigns over some hundred thousand subjects. Unhappily the vast influence which the Jesuits acquired, by all these different means, was often exerted with the most pernicious effect Such was the tendency of that discipline observed by the society in forming its members, and such the fundamental maxims in its constitution, that every Jesuit was taught to regard the interest of the order as the capital object to which every con sideration was to be sacrificed. This attachment to their order, the most ardent perhaps that ever influenced anybody of men, was the characteristic principle of the Jesuits, and serves as a key to the genius of their policy, as well as the peculiarities of their conduct. As it was for the advantage of the society that its members should possess an ascendant over persons in high rank, or of great power, the desire of acquiring and preserving such an ascendant led the Jesuits to propagate a system of relaxed) and pliant morality, which accommodates itself to the passions of men, justifies their vices, tolerates their imperfections, and authorises almost every action that the most audacious or crafty politician would wish to perpetrate. As the prosperity of the order was intimately connected with the preservation of the papal authority, the Jesuits, influenced bj the same principle of attachment to the interests of their society, have been the most zealous patrons of those doctrines which tend to exalt ecclesias-ical power on the ruin of civil government. They attributed to the court of Rome a jurisdiction as extensive and absolute as was claimed by the most presumptuous pontiffs in the dark ages. They contended for the entire independence of ecclesiastics on civil magistrates. They published such tenets concerning the duty of opposing princes, who were enemies of the Catholic faith, as countenanced the most atrocious crimes, and tended to dissolve all the ties which connect subjects with their rulers. As the order derived both reputation and authority from the zeal with which it stood forth in defence of the Romish church, its members considered it as their peculiar duty to combat the opinions and check the progress of the Protestants. They used every art, and employed every weapon against them. They opposed every gentle and tolerating measure in their favor. They incessantly stirred up against them all the rage of ecclesiastical and civil persecution. Whoever considers the events which happened in Europe, during the sixteenth and seventeenth centuries, will find the Jesuits responsible for most of the pernicious effects arising from that corrupt casuistry, those extravagant tenets, and that intolerant spirit, which disgraced the church of Rome throughout that period, and which brought so many calamities upon civil society.

Amidst the many bad consequences flowing

from the institution of this order, mankind derived from it considerable advantages. As the Jesuits, in their first attempts to establish colleges, were violently opposed by the universities in different countries, it became necessary for them, in order to acquire the public favor, to surpass their rivals in science and industry. This prompted them to cultivate the study of ancient literature with extraordinary ardor, and engaged them in various methods for facilitating the instruction of youth. Nor has the order been successful only in teaching literature ; it has produced likewise eminent masters in many branches of science, and can boast of a greater number of ;ngenious authors than all the other religious fraternities taken together. But it was in the new world, that the Jesuits exhibited the most wonderful display of their abilities, and contributed •nost effectually to the benefit of the human species. The conquerors of that unfortunate quarter of the globe had nothing in view but to plunder, enslave, and exterminate its inhabitants. The Jesuits alone made humanity the object of their settling there. About the beginning of the seventeenth century they obtained admission into the fertile province of Paraguay. They found the inhabitants strangers to the arts, subsisting precariously by hunting or fishing, and hardly acquainted with the first principles of government. The Jesuits instructed and civilised these savages. They taught them to cultivate the ground, to rear tame animals, and to build houses. They brought them to live together in villages ; trained them to arts and manufactures ; made them taste the sweets of society, and accustomed them to the blessings of security and order. These peo-ple became the subjects of their benefactors, who governed them with a tender and paternal attention. Respected and beloved, almost to adoration, a few Jesuits presided over several hundred thousand Indians. They maintained ‘a perfect equality among all the members of the community. Each of them was obliged to labor, not for himself alone, but for the public. The produce of their fields, and the fruits of their industry, were deposited in storehouses, from which each individual received every necessary supply. By this institution almost all the passions which disturb the peace of society, and render the members of it unhappy, were restrained. A few magistrates, chosen by the Indians themselves, watched over the public tranquillity, and secured obedience to the laws. The sanguinary punishments frequent under other governments were unknown. An admonition from a Jesuit, a slight mark of infamy, or, on some particular occasion, a few lashes with a whip, were quite sufficient to maintain good order among these innocent and happy

people. But even in these meritorious efforts of the Jesuits for the good of mankind, the genius and spirit of their order appeared. They aimed at establishing in Paraguay an independent empire, subject to the society alone, and which, by the superior excellence of its constitution and police, could scarcely have failed to extend its dominions over all the southern continent of America. With this view, to prevent the Spaniards or Portuguese in the adjacent settlements from acquiring any dangerous

influence over the people within the limits of the province subject to the society, the Jesuits endeavoured to inspire the Indians with hatred and contempt of these nations. They cut off all intercourse between their subjects and the Spanish or Portuguese settlements. They prohibited any private trader of either nation from entering their territories. When they were obliged to admit any person in a public character from the neighbouring governments, they did not permit him to have any conversation with their subjects ; and no Indian was allowed even to enter the house where these strangers resided, unless in the presence of a Jesuit. To render any communication between them as difficult as possible, they industriously avoided giving the Indians any knowledge of the Spanish or any other European language ; but encouraged the different tribes which they had civilised to arquire a certain dialect of the In-dian tongue, and labored to make that the universal language throughout their dominions. To render this empire secure and permanent, they instructed their subjects in the European arts of war. They formed them into bodies of cavalry and infantry, completely armed, and regularly disciplined. They provided a great train of artillery, as well as magazines stored with all the implements of war. Thus they established an army so numerous and well appointed, as to be formidable in a country where a few sickly - and ill-dis- ciplined battalions composed all the military force kept up by the Spaniards or Portuguese. Such were the laws, policy, and genius of this formidable order.

But the courts of Europe bad observed for two centuries the ambition

and power of the order. While they felt many fatal effects of these, they however could not fully discern the causes to which they were to be imputed. They were unacquainted with many of the singular regulations in the political constitution of the Jesuits, which formed the enterprising spirit of intrigue that distinguished its members, and elevated the society to such a height of power. It was a fundamental maxim with the Jesuits, from their institution, not to publish the rules of their order. These they kept concealed as an impenetrable mystery. They never communicated them to strangers, nor even to the greater part of their own members. They refused to produce them when required by courts of justice; and, by a strange solecism in policy, the civil power in different countries authorised or connived at the establishment of an order of men whose constitution and laws were concealed with a solicitude whicli alone was a reason for examining them. During the prosecutions carried on against them in Portugal and France, the Jesuits imprudently produced the mysterious volumes of their institute. By these authentic records the principles of their government were discovered, and the sources of their power investigated, with a degree of certainty which, previously to that event, it was impossible to a' tain. The pernicious effects of the constitution of this order had rendered it early obnoxious to some of the principal powers in Europe, and gradually brought on itsdownfal. The emperor Charles V. saw it expedient to check its progress in his dominions : it was expelled

England by proclamation, 2 James I., in 1604 ; Venice in 1606; Portugal in 1759; France in 1764; Spain and Sicily in 1767; and totally suppressed and abolished by pope Clement XIV. in 1773. See FRANCE.

Since the downfal of Napoleon the Jesuits have shown themselves in France, and various parts of the continent, in considerable numbers. They have at least two flourishing seminaries, we believe, also, in this country : we are, however, amongst those who believe the partial revival of this and every other form of popery is transient : in France we know it only confirms the educated and respectable classes in the Deism of the revolution.

JESUS, THE SON OF SiRACH, a native of Jerusalem, composed, about 200 B C., the book of Ecclesiasticus, called by the Greeks Ilavaptroc, ' replenished with virtue ;' who also quote it un-der the title of the Wisdom of Solomon the Son of Sirach. His grandson, who was also of the same name, and a native of Jerusalem, translated it from the Hebrew into Greek about 121 B. C. This Greek version is extant, but

the Hebrew original is lost.

JET, n. s. & v. n. 3 Sax jaˆac ; Dut. get ;

JETTY, adj. 3 Lat. gagates. A beautiful fossil. See below. From Fr. jet : a spout or shoot of water; a yard. Jet, to shoot forward ; to jut out ; to strut or agitate the body by a proud gait ; to jolt or be shaken ; from Fr jetter. Jetty, made of jet ; black as jet.

His bill wos black, and as the jet it shone ; Like asure were his legges, and bis tone.

Chaucer. The Nonnes Preestes Tale. What orchard unrobbed escapes, Or pullet dare walk in their jet ?

Tvtser's Husbandry.

Contemplation makes a rare turkey-cork of him : how he jet* under his advanced plumes. Shakspeare.

Think you not how dangerous It is to jet upon a prince's right ? Id.

Black, forsooth ; coal-black, as jet. Id.

There is more difference between thy flesh and hers, than between jet and ivory. Id.

The bottom clear, Now laid with many a set

Of seed pearl, ere she bathed her there, Was known as black as jet. Drayton.

The people about Capo Negro, Cefala, and Mada-gascar, are of a jetty black.

Browne's Vulgar Errours. Her hair

Adown her shoulders loosely lay displayed, And in her jetty curls ten thousand Cupids played.

Prior.

Prodigious 'tis, that one attractive ray Should this way bend, the next an adverse way ! For should the' unseen magnetick jets descend All the same way, they could not gain their end .

Blackmure.

Nigrina black, and Merdamante brown, Vied for his love in jetty bowers below. Prpe. Thus the small jet, which hasty hands unlock, Spurts in the gardener's eyes who turns the cock.

Id.

One of us in glass is set, One of us you'll find in jet . Swift.

Under Sowing jet, The neck slight shaded.

Thomson's Summer.

C06

JEWS.

JF.T, a black inflammable substance of the bituminous kind, harder than asphaltum, and susceptible of a good polish. It becomes electrical by rubbing, attracting light bodies like yellow amber. Its fracture is striated, and it splits more easily in the direction of the strix. Its hardness from 6 to 7. The specific gravity of a piece ex-tant in the king's cabinet, at Paris, was found by Brisson to be 1259. Yet Buffon tells us it floats on water, and Muschenbroek will have its specific gravid 1744. It burns with a greenish flame : and it has been frequently confounded with the lapis obsidianus, the specific gravity of which, according to Kirwan, is no less than 1744. It also resembles cannel coal extremely in its hardness, receiving a polish, not soiling the fingers, &c., so that it has also been confounded with this. The distinction, however, is easily made ; for cannel coal wants the electrical properties of jet, and its specific gravity is no less than 1273. M. Magellan is of opinion that jet is a true amber, differing from the yellow kind only in the mere circumstance of color, and being lighter on account of the greater quantity of bituminous matter which enters into its composition. When turning it emits a bituminous smell. It is never found in strata or continued masses like fossil

stones ; but always in separate and unconnected heaps like the true amber. Great quantities of it have been dug up in the Pyrenean

Mountains ; also near Batalha, a small town of Portugal; and in Galicia in Spain. It is found also in Ireland, Sweden, Prussia, Germany, and Italy. It is used in making small boxes, buttons, bracelets, mourning jewels, &c. Sometimes it is also employed in conjunction with oils in making varnishes. When mixed with lime in powder it is said to make an extraordinary hard and durable cement.

JET D'EAU, a French term, adopted into the English language, for a fountain that casts up water to a considerable height in the air. See HYDROSTATICS.

JET'SAM, n. s., » French jetter. Goods or

JET'SON. I other things which, having

been cast over board in a storm, or after shipwreck, are thrown upon the shore, and belong to the lord-admiral.

JETTY HEAD, a name usually given in the roya dockyards to that part of a wharf which projects beyond the rest ; but more particularly the front . of a wharf whose side forms cue of the cheeks of a dry or wet dock.

JEWS.

JEW, n. s. } Lat. Judx us f Gr. IsSau > f, JEW'RY, n. s. Mleb.jehudi. The descendants of Abraham, as distinguished from all the Gentile nations. Jewry, used by Chaucer as the •district of any place inhabited by Jews.

She freyneth, and she praieth pitously To every Jew that dwelled in thilke place, To telle hire, if hire childe went out forth by.

Chaucer. The Prioresses Tale. Ther was in Asie, in a gret citee, Amoages Cristen folk a Jewerie — Sustened by a lord (of that count ree), For foule usure and lucre of vilanie.

Id.

Glory he requires, and glory he receives Promiscuous from all nations Jew or Greek.

Milton's Paradise Regained. ' There's a pasty — a pasty,' repeated the Jew, I don't care if I keep a corner for't too ;' What the de'il mon, a

pasty ! ‘ re-echoed the Scot, Though splitting, I’ll still keep a corner for that.’ We’ll all keep a corner,’ the lady cried out, We’ll all keep a corner,’ was echoed about.

Goldsmith.

JEWS. This name seems first to have been given to the descendants of the patriarch Abraham, by his eldest son, Isaac, after their captivity in Babylon, and is derived from that of the patriarch Judah,the tribe of that name constituting, •with the tribe of Benjamin, the chief part of this people that has been preserved distinct from other nations.

The history of the Jews is the most remarkable, and certainly the most ancient, in the world, taking its date before the commencement of profane history, and resting, in part, on the authenticity of the Old Testament, in which alone it is recorded ; for the writings of Josephus seem chiefly to have been derived from that

source. To the Bible, therefore, we may refer our readers for the early account of this people, such as their descent from the twelve sons of Jacob, from whence arose their division into twelve tribes ; their going down into Egypt ; their treatment there ; their Exodus, or departure from that country, under the conduct of Moses ; their passage through the wilderness, and settlement in the land promised to Abraham. We begin this sketch of their history with their re-turn from Babylon, and the rebuilding of their city and temple under Ezra and Nehemiah, at which time the Old Testament ceases, and profane historians first notice them. For a chronological list of their judges and kings during the commonwealth of Israel, to the taking of Samaria by the Assyrians, see the article ISRAEL ; and for that of the kings of Judah, from Solomon’s death to the captivity in Babylon, see the article JUDAH.

About 536 B. C. Cyrus the Great, after having subdued Babylon, and the whole of Western Asia, determined to restore the Jews to their native country, and to permit them to rebuild Jerusalem with its temple. He therefore published a decree, allowing them to carry home with them all their sacred vessels, and engaging himself to bear the expense of rebuilding the temple. Many, however, chose rather to stay in Chaldea ; and the more zealous who returned were, as we have intimated, portions of the three tribes of Judah, Benjamin, and Levi, who set out under the conduct of Zerubbabel, and laid the foundations of the temple about 538 B. C. The building advanced (Ezra vf. 1), and

every thing seemed to succeed with his countrymen when they were opposed by the Samaritans, the descendants of those heathens who had colonised

the iand of the ten tribes. These people, exasperated by the Jews refusal of their assistance In the work, determined to impede them; this they first attempted by misrepresentations of their motives to the Persian court, and prevailed so far as to procure an order for suspending their proceedings, and afterwards obstructed them by open force. The Jews, however, made their appeal to the government, and procured a new decree in their favor, on which they proceeded, maintaining their ground against their enemies by force of arms. When the temple was finished, Nehemiah endeavoured to restore the ancient worship, and to correct various abuses which had crept in among the people, in which he was assisted by Ezra.

The Jews, however, though restored to the free exercise of their religion, were at this time few in number, and their country only a province of Syria, dependent on the kings of Persia. The Syrian governors for a long time committed the administration of their affairs to the high priests, and to this circumstance may be attributed their subsequent misfortunes. Men were thus introduced into that important office through ambition or avarice, and contrary to the Mosaic institution, which had fixed it in the family of Aaron. A fatal proof of this occurred in the year 373 B. C. Bagoses, governor of Syria, having contracted a friendship with Joshua, the brother of Johanan, the high priest, promised to confer the office upon him not long after his brother had been invested with it; when, on an interview taking place between the brothers in the inner court of the temple, Joshua fell by the hands of Johanan, and the temple was thus most scandalously polluted. In consequence of this a heavy fine was laid on it, which was not taken off for seven years. The first public calamity which befel the Jewish nation, after this, happened in the year 351 B. C., when Darius Ochus, king of Persia, besieged and took Jericho, carrying off all the inhabitants into captivity. From this time they continued so faithful to

the Persians, that they had almost incurred the displeasure cf Alexander the Great. That monarch liaving resolved upon the siege of Tyre, and being informed that the city was wholly supplied with provisions from Judea, Samaria, and Galilee, sent to Jaddua, then high priest, to demand of him the tribute which he had been accustomed to pay to the Persians. The Jewish pontiff excused himself on account of his oath of fidelity to Darius. Alexander was on this so provoked, that he had no sooner completed the reduction of Tyre than he marched against Jerusalem. The inhabitants, in the greatest consternation, had recourse to prayers; and Jaddua is said to have been commanded, by an intimation from heaven, to go and meet Alexander. He accordingly set out, dressed in his pontifical robes, at the head of all his priests, and attended by the rest of the people attired in white garments. Alexander, it is said, was seized with such awful respect on seeing this venerable procession, that he embraced the high priest, and paid a kind of religious adoration to the name of God engraven on the front of his mitre. On his followers being surprised at this behaviour, the

Macedonian monarch informed them that he paid that respect not to the priest, but to his God, having seen a vision at Dia, of a person of the same appearance and dress as the pontiff before him, promising him the conquest of Per-sia, and encouraging him in his expedition. He afterwards accompanied Jaddua into Jerusalem, where he offered sacrifices in the temple. The high priest, it is said, showed him at this time the prophecies of Daniel, wherein the destruction of the Persian empire by himself is plainly foretold ; in consequence of which the king went away highly satisfied, and at his departure asked Jaddua if there was any thing in which he could gratify him or his people. Jaddua then told him, that, according to the Mosaic law, they neither sowed nor ploughed on the seventh year, and therefore would esteem it a high favor if the king would remit their tribute that year. To this request Alexander readily yielded; and having confirmed all their privileges, particularly that of living under their own laws, he departed This story has been doubted by some writers ; but, whatever credit may be attached to it, it is certain that the Jews enjoyed the favor of Alexander.

All their good fortune, however, seemed to expire with that prince. Situated between Syria and Egypt, Judea was necessarily involved in many of the quarrels of Alexander's ambitious successors, who governed those countries. It first fell to the portion of Laomedon, one of that monarch's generals, together with Syria and Phenicia ; but soon afterwards, Ptolemy having deprived him of his possessions,

Judea was called upon to yield to the conqueror. The Jews refusing to break their allegiance, to their former prince, Ptolemy now invaded them with a great army, soon reduced the open country, and laid siege to Jerusalem, which, being strongly fortified by nature and art, seemed likely to stand out for a long time. Taking advantage, however, of the Jews' superstitious fear of breaking the sabbath, he assaulted the place on that day, and easily took it; 100,000 of them are said to have been now carried into captivity ; but Ptolemy, afterwards reflecting on their known fidelity to their conquerors, restored the Jews to all the privileges they had enjoyed under the Macedonian government. Some of his captives he put into garrisons, others he settled in Libya and Cyrene. From those who took up their residence in the latter of these countries descended the Cyrenean Jews, mentioned in the New Testament. Five years after, when he was forced to yield the country to Antigonus, merely reserving to himself Acre, Samaria, Joppa, and Gaza, he settled a multitude of Jews at Alexandria, and endowed them with considerable privileges. The conduct of Antigonus was so tyrannical, that numbers of his Jewish subjects fled into Egypt, and others took refuge with Seleucus, who also granted them considerable immunities. Thus this nation became gradually spread over Syria and Asia Minor, while Judea seemed in danger of being depopulated, when it was recovered by Ptolemy in 292 B. C.

The affairs of the Jews now took a more prosperous turn, and continued improving till the

reign of Ptolemy Philopater, when they were harassed by the incursions of the Samaritans ; and Antiochus Theos, king of Syria, at the same time invaded Galilee. Ptolemy, however, marched against Antiochus, and defeated him ; after which, having gone to Jerusalem to offer sacrifices, he ventured to enter the temple itself; and penetrated the two outer courts ; but, as he was about to enter the sanctuary, he was, it is said, struck with such dread and terror, that he fell down half dead. On this he raised a dreadful persecution against

the Jews, which was stopped by a still more extraordinary event (see the article EGYPT), and the Jews again restored to favor. About the year 204 B. C. Judea was subdued by Antiochus the Great; and on this occasion the Jews failed in their loyalty to the Egyptians, the whole nation readily submitting t”> the king of Syria. That monarch was so well pleased with this, that he sent a letter to his general, informing him that he designed to restore Jerusalem to its ancient splendor, and to recal all the Jews that had been scattered; that on account of his reverence for their God, he would repair their temple, and grant them 20,000 pieces of silver for the expenses of their worship, together with 1400 measures of fine wheat and 375 of salt for their offerings; that the public service should be restored, and the priests ; and that no stranger or Jew, that was unpurified, should enter the holy place of the temple ; denouncing a pei.alty of 3000 pieces of silver on any one who should transgress these regulations. He also exempted from taxes, for three years, all Jews who should settle in the metropolis, and set at liberty all that had been sold for slaves.

But this state of prosperity was very soon interrupted, a quarrel, the cause of which is unknown, arising in the year 176 B. C., between Onias the high priest, and Simon the governor of the temple, it led to the most fatal consequences. Simon, not being able to prevail over Onias, informed Apollonius, the governor of the country, that a great treasure was hid in the temple, which might be seized for the king of Syria. On hearing which, that monarch sent Heliodorus to talce possession of the supposed treasure ; but he, through a miraculous interposition, according to the Jews’ account, could not enter the sacred precinct. Simon, upon this, accused the high priest of having invited Heliodorus to Jerusalem, and a civil war was at once excited. Soon after, however, on the complaint of Onias to the king, Simon was sent into exile; but Antiochus Epiphanes having succeeded to the crown of Syria, and being at that time in great want of money, Jason, the high priest’s brother, purchased the office for 350 talents, and procured an order that his brother should be Confined at Antioch for life. For 150 talents more, Jason obtained permission to build a gymnasium at Jerusalem, like those of the Grecian cities, and to confer the citizenship of Antioch on as many Jews as he pleased. By these means, his countrymen being great admirers of the Greek customs, he soon formed a strong party. A general apostasy now took place ; the worship of the temple was neglected, and Jason

gave himself up to paganism. He was, however, soon supplanted by his brother Menelaus, whom he had sent with the tribute to

Antiochus, and who, having offered 300 talents more than his brother had given, obtained the high priesthood, and returned with his commission to Jerusalem ; but Jason was too powerful for him, and he was obliged to retire to Antioch. On this the Jews of the capital informed Antiochus that it was their determination to renounce their religion, and Conform to that of the Greeks ; and the tyrant granted them troops, by means of which they drove Jason out of the city, who fled for protection to the Ammonites. Menelaus now failing to pay the tribute, he was summoned to Antioch, and commissioned his brother Lysimachus to se'l several of the golden vessels of the temple to raise the money. In the mean time his brother Onias, who was still a prisoner at Antioch, hearing of the sacrilege that had been committed, complained bitterly that an insurrection was about to break out among the Jews there, on which Menelaus bribed Andronicus, the governor of the city, to murder Onias. This produced vehement accusations against the murderer on Antiochus's return to the capital, who at length ordered Andronicus to be executed. Still Menelaus preserved his influence by means of his money ; but the drawing of such large sums from Jerusalem incensed the people, and they massacred his brother Lysimachus, whom he had left governor.

After this, when Antiochus went to Tyre, the Jews sent deputies to him, justifying the death of Lysimachus, and accusing Menelaus of being the author of all their troubles ; the latter, however, who was never at a loss while he could procure money, pleaded his cause with such ef-fect, that the deputies were put to death ; and, having thus obtained a complete victory, he be-came an absolute tyrant. At this time Jerusalem had no protectors ; if there were any zealous men left in the sanhedrim, they were so much terrified that they did not venture to resist him, though they were well aware of his design to overthrow the religion and liberty of his country. While these things were passing, Antiochus was occupied in the conquest of Egypt ; and it was re-reported, that he was killed at the siege of Alexandria. On hearing this, the Jews imprudently manifested their joy, when Jason, taking advantage of the opportunity, appeared before Jerusalem with 1000 resolute men: the gates were soon opened by some of his friends, and, Menelaus retiring to the citadel, he filled the city with the most horrid butcheries. He was obliged, however, to leave both the city and country, on receiving the intelligence that Antiochus was marching against him with a powerful army. That prince, highly provoked at this rebellion, and especially at the rejoicings the Jews had made on the re-port of his death, now resolved to punish the city with the utmost severity. Accordingly, about 170 B.C., having made himself master of it. he treated them with such cruelty, that, within three

days, no fewer than 40,000 are said to have been killed, and as many sold for slaves. In the midst of this dreadful calamity, the apostate* Menelaus found means not only to escape-the

general slaughter, but even to regain the favor of the king, who, having by his means plundered the temple of every thing valuable, returned to Antioch in triumph. But, before he departed, he put Judea under the government of one Philip, a barbarous Phrygian; made Andronicus, a person of a similar disposition, governor of Samaria; and left Menelaus, the most hateful of the three, in possession of the high priesthood. Though the Jews suffered exceedingly under these tyrannical governors, still greater calamities awaited them. About 168 B. C , Antiochus having been most severely humbled by the Ro-mans, conceived the design of wreaking his vengeance on the unhappy Jews. For this purpose he despatched Apollonius at the head of 22,000 men, ordering him to plunder all the cities of Judea, to murderall the men, and sell the women and children for slaves. Apollonius, on his arrival, assumed an appearance of peaceable intentions ; nor indeed was he suspected of hostile intentions by the Jews, as he usually had the management of the tribute in Palestine. On the sabbath, however, he suddenly commanded his men to arms. Some he sent to the temple and synagogues, with orders to cut in pieces all whom they found there ; whilst the rest, going through the streets, massacred all that came in their way; the Jews not making the least resistance, for fear of breakins the sabbath. He next ordered the city to be plundered and set on fire, pulled down all the respectable buildings, demolished the walls, and carried away captive about 10,000, who had escaped the slaughter. From that time the service of the temple was totally suspended. The Syrian troops built a large fortress on an eminence in the city of David, which commanded that edifice; and strengthened it with a wall and stately towers. From this place the soldiers could easily see and sally out upon all that attempted to enter the temple; many were continually plundered by them, and the rest, not daring to stay any longer in the city, fled for refuge to the neighbouring nations. Antiochus, not yet satiated with the blood of the Jews, resolved either totally to abolish their religion, or to destroy their whole race. He therefore made a proclamation, that all nations within his dominions should forsake their old religion and gods, and worship those of the king under the most severe penalties. He sent overseers into every

province to see these orders strictly executed ; arid, knowing that the Jews were the only people who would disobey them, special directions were given to treat them with the greatest severity. Athenseus, an old and cruel minister well versed in all the pagan rites, was sent on this occasion into Judea. He first dedicated the temple to Jupiter Olympius, setting up his statue on the altar of burnt-offerings. Another altar of smaller size was raised before it, on which they offered the sacrifices of that god. All who refused to come and worship the idol were either massacred or put to some cruel tortures, till they complied or expired under the hands of the executioners Altars, groves, and statues, were also raised in every part of the country, and the inhabitants forced to conform to this false worship under the same severe penalties ; VdL. XL

while it was instant death to observe the sabbatL, circumcision, or any other institution of Moses.

These horrid scenes at length aroused the zeal of a priest, named Mattathias, for the worship ot his fathers. He had fled to Moti'm, his native town, during the persecution that was rag:ng at Jerusalem; and, while he was there, Apelles, one of the king's officers, came to force the inhabitants to comply with the orders of Antiochus. Mattathias and his sons were earnestly entreated by him to give up their religion, and the greatest promises held out to them of the king's favor on their compliance ; Mattathias however declared, that though the whole nation and all the world were to conform, he with his sons would continue faithful to their God. Perceiving one of his countrymen about to sacrifice to an idol, he ran upon him and slesv him; while his sons, animated with the same spirit, despatched the officer and his men, overthrew the idol and the altar, and, running through the city, called upon all, who were zealous for the law of God, to fol-low them. They soon found themselves at the head of a considerable body of their countrymen, with whom they departed into one of the deserts of the country ; and were followed thither by many more. Seeing the danger to which they were exposed by their too scrupulous observance of the sabbath, they now determined on defending themselves, if attacked, on that day.

Perceiving his followers daily increasing, Mattathias, in the year 167 B.C., made an at-tack upon the Syrian army, and the apostate Jews ; having taken many of the latter, he put them to death, and obliged a great number to betake themselves to foreign countries. By these means he struck terror into his foes, and, marching from one city to

another, overturned the idolatrous altars, re-opened the synagogues, made diligent search for the sacred books, and caused fresh copies of them to be taken ; he also restored the reading of the Scriptures, and haa all the males, horn since the persecution, circumcised. Eventually he was so successful, that in one year he had extended this reformation through the greatest part of Judea; and would most probably have completely accomplished it, had he not been arrested in his course by death. He was succeeded, however, by his son Judas, surnamed Maccabaeus, one of the most renowned heroes that the Jewish annals can boast. With a small body of 6000 men he took possession of some of the strongest fortresses in the country, and became the terror of the Syrians, the Samaritans, and apostate Jews. He defeated the Syrians in five pitched battle-* in one year, and entirely drove them out of the country ; and afterwards purified the temple, restoring the worship of the true God, which had ceased for three years and a half. To prevent the Syrian garrison, whom he could not dispossess, from hindering the worship of the temple, he fortified the mountain on which it stood, leaving a garrison to defend it ; and strengthened Bethzura, a fortress about twenty miles distant. In the mean time Antiochus, returning from an unsuccessful expedition into Persia, was informed that the Jews had revolted, driven his generals with their armies out of

Judea, and re-established their ancient worship. Filled with fury, at this intelligence, he threatened to exterminate the whole race, and commanded his charioteer to drive towards that country with the utmost speed : scarcely, however, had he given this order, when he was seized with a violent malady in his bowels, that no remedy could abate. Still he hurried forward, until he fell from his chariot, and was forced to be put into a litter. At last he was constrained to stop at Tabie, a town on the frontiers of Persia and Babylonia, enduring, it is said, excruciating agonies from the vermin that bred in his intestines, and the stench which was insupportable even to himself. The torments

of his mind were greater than those he endured in his body ; Polybius, agreeing with the Jewish historians, tells us, that he was haunted by spectres and apparitions, which upbraided him with his wicked deeds, so that he was in a continual delirium. Having languished in this dreadful state for a considerable time, he expired ; and thus the Jews were delivered from the most inveterate enemy they had ever known. Still the war was carried on by his generals, but Judas always defeated them, and in 163 B. C., obtained a peace on very advantageous terms. On the Syrian generals renewing hostilities, they met the same repulses as before ; Judas obtained the victory over them in five engagements, but in the sixth, being abandoned by most of his men, he was slain, together with 800 who continued faithful to him.

This event rilled his countrymen with the greatest consternation. Jonathan, his brother, however, succeeded him, and conducted their affairs with the same prudence and success, until he was treacherously seized and put to death by a Syrian usurper of the name of Tryphon, who afterwards murdered his own sovereign. After this the traitor prepared to invade Judea, but his designs were frustrated by Simon, the brother of Jonathan. This pontiff repaired and garrisoned the fortresses of the country, took Joppa and Gaza, and drove the Syrians out of the citadel of Jerusalem; when in the year 135, B. C., he was also murdered through the treachery of Ptolemy, his son in law.

Hyrcanus I. succeeded him, who was the first person since the captivity that had assumed the regal dignity, and who raised the na'ion to greater prosperity than it had ever enjoyed since that period. He entirely shook off the Syrian yoke, subdued the Samaritans, demolished their capital city, and made himself master of all Syria, as well as Samaria and Galilee, of which he kept undisturbed possession till within a year of his death. In him, we are told by the author of the fourth book of Maccabees, were united three dignities, that never before met in any other person, namely, the royal dignity, the high priesthood, and the gift of prophecy ; but the evidence of the last is very equivocal. He was much disturbed in the last year of his reign by a quarrel with the Pharisees, to whom he had been a great friend, and who had occupied the most honorable stations in the government ; <»t length, however, one of them, named Eleazar, oegan to dispute the legitimacy of Hyrcanus,

saying that his mother was a slave, and therefore he could not enjoy the dignity of the priesthood. The whole sect affected to believe this report, which so incensed the king that he immediately joined the

Sadducees, and would never be reconciled to their rivals, who raised all the seditions they could during the short time that he survived. He died about 107 years B. C., and was succeeded by Aristobulus, his eldest son who conquered Iturea.

He was a most cruel tyrant, murdering one of his brothers, together with his mother, and keeping the rest closely confined during his reign, which happily proved but short. To him succeeded, in 105, Alexander Jannseus, the greatest conqueror, next to David, that ever wielded the Jewish sceptre. He was hated, however, by the Pharisees, and was once very near being killed in tumult excited by them ; but, having caused his guards to fall upon the mutinous mob, they killed 6000 of them, and dispersed the rest. After this, being unable to remain quiet in his own kingdom, he left Jerusalem, resolving to devote himself wholly to his conquests ; but, while he was busied in subduing his enemies abroad, the Pharisees raised a rebellion against him. This was quelled in the year 86 B. C., and the rebels were treated most barbarously. The faction, however, was by these means so thoroughly crushed, that they never dared to lift up their heads as long as he lived. Having conquered several parts of Syria, he died 79, B. C.

Though Alexander had two sons, Hyrcanus and Aristobulus, he bequeathed the government to his wife Alexandra as long as she lived ; and directed her just before his death to send for the principal leaders of the Pharisees, and pretend to be entirely devoted to them. With this ad-vice the queen complied ; but found afterwards great difficulty how to act with them, as they would at last be satisfied with nothing less than the extirpation of their adversaries. A most cruel persecution, therefore, took place against the Sadducees, which continued for four years ; until, upon their earnest petition, they were sent into the several garrisons of the kingdom, to secure them from the rage of their enemies. Being not long after attacked with a dangerous sickness, her youngest son, Aristobuius, formed a strong party to secure the crown to himself : the queen, however, displeased with his conduct, appointed Hyrcanus, whom she had before made high priest, to be her successor also in the kingdom, and soon afterwards expired.

The Pharisees now raised an army against Aristobulus, which almost instantly deserted to him ; Hyrcanus, therefore, was obliged to make peace on the terms of abandoning the royal and pontifical dignity. But this did not extinguish his party. A new cabal was raised by Antipater, an Idumaean proselyte, the father of Herod the Great ; who carried off Hyrcanus into Arabia, pretending that his life was in danger in Judea,

and applied to Aretas, king of that country, who undertook to restore the deposed monarch. Having invaded Judea, he defeated Aristobulus, and closely besieged him in Jerusalem. The latter, therefore, now sought the alliance of the Romans; and having bribed Scaurus, one of

their geserab, he defeated Aretas, cutting off 7000 of his men, and driving him quite out of the country. Sotm after the two brothers sent presents to Pompey, at that time commander-in- chief of the Roman forces in the east, making him arbitrator of their differences. But he, fearing that Aristobulus, against whom he intended to declare, might obstruct his intended expedition against the Nabatheans, dismissed them •with a promise, that, as soon as he had subdued Aretas, he would come into Judea and decide their controversy. This so offended Aristobulus, that he departed without even taking leave of the general, who on his part took no less umbrage at this want of respect. The consequence was, that Pompey entered Judea, and summoned Aristobulus to appear before him. The Jewish prince would now gladly have excused himself, but he was forced by his own people to comply in order to avoid a war. He accordingly waited on him several times, and was dismissed with great marks of friendship. At last, Pompey insisting that he should deliver into his hands all the fortified places, Aristobulus plainly perceived that he was on his brother's side, upon which he fled to Jerusalem, resolving to oppose the Romans to the utmost of his power. Pompey quickly followed him, and, to prevent hostilities, Aristobulus was at last forced to throw himself at the feet of the haughty Ro-man, and promise him a considerable sum of money. This was accepted; but, Gabinus being sent with some troops to receive the sum, the garrison of Jerusalem now shut the gates against him, and refused to fulfil the agreement. Pompey was so exasperated that he immediately marched with his whole army against the city, and laid regular siege to it. As the fortifications were strong, he mjght have found it very difficult to accomplish his design, had not the Jews been again seized with a qualm of conscience respecting the observance of the sabbath day. From the time of the Maccabees they had not scrupled to take up arms against an offend-ing enemy on the sabbath ; but now'they thought, that, though it was lawful on that day to stand on their defence when attacked, it was unlawful to do any thing to prevent those preparations which the enemy might make. Never, therefore, attempting to hinder the

erection of batteries, or the making of breaches in their walls on the sabbath, the beseigers at last made so great a breach, that the garrison could no longer resist them. The city was taken in the year 63 B.C. ; 12,000 of the inhabitants were slaughtered, and many more put an end to their own lives: the priests, who were engaged in their usual service, choosing rather to be butchered with their brethren than to interrupt the worship. Hycanus, again made high priest, was now forbidden to assume the title of king, to wear a crown, or to extend his dominions beyond Judea. The walls of Jerusalem Pompey demolished, to prevent all future attempts at revolt, and left Scaurus as governor, with a strong-force : be-fore he departed, however, he offended the Jews more than ever, by penetrating into the sacred recesses of the temple, and taking a view of the golden table, the candlestick, the censers,

lamps, and other vessels ; but lie did not venture to touch them, and on retiring commanded the priests to purify the place in the usual manner.

Pompey, after this, set out for Rome, taking with him as captives, Aristobulus, Alexander, and Antigonus, ins sons, to adorn his triumph. Alexander made his escape into Judea, where he raised 10,000 foot, and 1500 horse, and fortified some strong holds, from which he made constant incursions into the neighbouring country : while Hyrcanus was no sooner delivered from the ri-valship of his brother, than he became indolent as usual, and trusted the management of his affairs to Antipater, who took this opportunity to advance his own interests. He attempted by all means to ingratiate himself with the Romans, and Scaurus, being in great want of provisions for an army which he had marched against the metropolis of Arabia, received from him a plentiful supply of corn and other necessaries. Soon after this he prevailed on the king to pay 200 talents to the Romans, to preserve the country, as he alleged, from being ravaged by Alexander. The latter, now venturing a battle, was defeated with great loss, and besieged in the fortress of Alexandrion, where he would have been obliged to surrender, but his mother interceded for him with the Roman general. After this the fortresses were again demolished, and Hyrcanus reinstated in his pontifical dignity ; the province being divided into five districts, with a separate court of judicature in each.

Thus the government was changed from a monarchy to an aristocracy, and the Jews became subject to a set of the most arbitrary tyrants. About this time Aristobulus, having escaped from Rome, formed new

troubles in Judea, but was conquered and again taken prisoner ; his son also renewed his attempts, but suffered a similar defeat and lost nearly 10,000 men. After this Crassus was made governor of the province, the only act of whose government, worthy of record, is his having plundered the temple of its treasures and sacred utensils, valued at more than £2,000,000 sterling. Having committed this sacrilege he set out on his expedition against Parthia, where he perished miserably, as a judgment, according to the Jews, for his impiety.

The nation had some respite from oppression during the war between Caesar and Pompey, and this likewise afforded them an opportunity of gaining the favor of the former, of which the politic Antipater readily availed himself. Caesar rewarded him for his services by confirming Hyrcanus in the priesthood, and entailing on his posterity the principality of Judea for ever. He restored the Jews to their ancient privileges, ordering a pillar to be erected on which these grants were to be engraved, together with his own decree ; and soon after, coming himself to Judea, gave them permission to fortify the city and rebuild the wall which Pompey had demolished. During his life, the Jews, indeed, hardly seemed to feel the Roman yoke.

But after his death those great disorders en-sued, which were not effectually checked, till Herod, who had been made king of Judea by

Marc Antony in the year 40 B. C., was settled on the throne. On this occasion another cruel massacre took place followed by the death of Antigonus, who maintained himself against Herod for three years, murdered his brother Phasael, and cut off Hyrcanus's ears to render him unfit for the high priesthood.

The circumstances of the Jews were not at all improved by this change of masters ; Herod becoming one of the greatest tyrants that history has ever mentioned. At the beginning of his reign he put to death all

those who had taken part with his rival Antigonus, and confiscated their goods for his own use. So jealous was he in this respect, that he stationed guards at the city gates, to watch the bodies as they were conveyed out, lest any of their riches should be carried with them. He next sent for Hyrcanus from Parthia, whither he had been banished, and put him to death in despite of the most solemn promises of safety. Having no other victims, to satiate his thirst for blood, his cruelty turned on his own family. He had married Mariamne, the daughter of Hyrcanus, whose brother Aristobulus, a young prince of great merit, the tyrant caused to be drowned in a bath. Afterwards being summoned to appear, first before Marc Antony and then before Augustus, to answer for some crimes laid to his charge, he left orders that if he was condemned, Mariamne should be put to death. The consequence was, she conceived the greatest aversion for him, and was not backward in showing it. Enraged at this, Herod caused her to be falsely accused of infidelity, and she was condemned and executed. But with her ended all the happiness of her husband. His love increased so much after her death, that for a long time he appeared like a distracted person. Her death was followed by that of her mother Alexandra, and soon after by that of several other persons who had joined her in an attempt to secure the kingdom to her grandsons. Having now freed himself from most of his supposed enemies, Herod began to show a contempt of the Jewish ceremonies, by introducing a number of Roman games at Jerusalem. Ten assassins at last resolved to enter the theatre, while the tyrant was celebrating these games, with daggers concealed under their clothes. They had the desperate satisfaction to think, that, if they perished, the tyrant would be rendered still more odious by the punishment they suffered. Herod, informed of their design, put this however to the proof, and caused them to be put to a most excruciating death : the people were so much exasperated against the informer, that they tore him to pieces, and cast his flesh to the dogs. For a long time he tried in vain to discover the authors of this affront ; but at last, by means of the rack, he extorted from some women the names of the principal persons concerned, whom he caused immediately to be put to death, together with their families. In consequence of this, disturbances arose, so that, apprehending nothing less than a general revolt, he began to fortify Jerusalem with several additional works, rebuilt Samaria, and put garrisons into several fortresses. About the year 23, B. C., he began to adorn the towns of Judea with many stately buildings. His

most remarkable and magnificent undertaking, however, was the rebuilding and beautifying the temple, which he is said to have

accomplished in a style of grandeur superior even to that' of Solomon's. Ten thousand artificers were set to work, under the direction of 1000 priests, all of whom were kept in constant pay : 1000 carts were employed in fetching materials ; and such a number of other hands were employed, that every thing was got ready within two years. After this they set about pulling down the old building, and rearing up the new one with the same expedition; the holy place, or temple, properly so called, was finished in a year and a half. The remainder in somewhat more than eight years. The temple, or holy place, was sixty cubits high, and sixty broad : in the front he added two wings, which projected twenty cubits more on each side. The stones were white marble, twenty-five cubits in length, twelve in height, and nine in breadth, all wrought and polished with exquisite beauty. Instead of doors, the gates were closed with very costly veils, and on each side were planted two stately columns, from whose cornices hung golden festoons and vines, with clusters of grapes, leaves, &c., curiously wrought. The superstructure, however, which was reared on the old foundation without sufficient additions, proved too heavy, and sunk down about twenty cubits. Yet this foundation was of an astonishing strength and height. The platform was a regular square of a stadium or furlong on each side. Each front had a spacious gate, enriched with suitable ornaments ; that on the west had four gates, one of which led to the palace, another to the city, and the two others to the suburbs and fields. This enclosure was surrounded with a strong and high wall of large stones, well cemenjed ; and on the inside had in each front a stately gallery, supported by columns of such a size, that three men could but just embrace them. There were 162 of them, which supported a cedar ceiling of beautiful workmanship, and formed four galleries, the middlemost of which was the largest and highest, being forty-five feet in breadth, and 100 in height ; those on each side were but thirty feet wide and fifty high. The piazzas and court were paved with marble of various colors ; and, at small distance from the galleries, was a second enclosure, surrounded with a flight of beautiful marble rails, with stately columns at proper distances, on which were engraven admonitions in Greek and Latin, forbidding strangers and Jews that were not purified, to proceed farther under pain of death. This enclosure had but one gate on the east side, none on the west, hut on the north and south it had three, at equal distances. A third enclosure surrounded the temple, or holy place, and the altar of burnt offerings, forming what was called the court of the Hebrews. This was also square, having the wall on the outside surrounded by a flight of fourteen steps, which hid a considerable part of it ; on the top a terrace of twelve cubits in breadth was carried completely round the whole. In this enclosure

there was one gate on the east side, none on the wesi, but on the north and south side? four, at equal distances ; and to each of them five steps

ascended, in order to reach the level of the inner court. On the inside of each of these gates two spacious square chambers were raised in the form of a pavilion, thirty cubits wide, and forty high, each supported by columns of twelve cubits in circumference. The altar of burnt offerings, built of unhewn stones, was forty cubits high ; and fifteen feet in height, with the ascent smooth and without steps It was encircled with a low rail, dividing the court of the priests from that of the lay Israelites, none but the former being allowed to come within the enclosure. Herod had this temple dedicated with the greatest pomp, and presented it with trophies of his former victories. '

In the midst of these magnificent works, however, this prince's mind was not diverted from its usual cruelty. His sister Salome piompted him to the murder of his two sons by Mariamne, Alexander and Aristobulus, who had been educated at the imperial court, and were much admired by all who knew them. About this time also, urged by his wicked jealousy, he attempted to destroy the Saviour of the world, and 2000 innocent children perished on the occasion. He had the mortification soon after to discover, that Antipater had conspired against him, for which he had him tried and condemned for treason ; but a more terrible calamity awaited him : he was seized with a loathsome and incurable disease, in which his pains were so intolerable, that his life became a burden. To the great joy of the Jews he died about five days after Antipater, having divided his dominions among his sons; udea he gave to Archelaus, Galilee and Peraea to Herod Antipas, and made Philip tetrarch of Trachonitis, Ituraea, Batanea, and Paneas ; he also left considerable legacies to his sister Salome and others of his relations. Aware that the Jews would rejoice at his death, he called together all the chiefs of them to Jericho, and ordered them to be shut up in ths circus, leaving directions with Salome and her husband, to have them all butchered, as soon as he

expired. ‘ By these means,’ said he, ‘ I shall not only damp the people’s joy, but secure a real mourning for my death !’ These cruel orders, however, were not executed. Immediately on the tyrant’s death Salome wenttothe Hippodrome, where theheads of the Jews were imprisoned, and dismissed them, telling them, that the king had no further oscasion for their attendance.

Tumults, seditions, and insurrections followed: Archelaus was opposed by his brethren, and obliged to appear before Augustus, to answer some complaints that were made against him ; when the emperor, having heard both parties, assigned to Archelaus one-half of the kingdom with the title of ethnarch, or governor of a nation, and divided the remainder between Philip and Herod. For some years Archelaus continued to govern in peace; butat last, the Jews complaining of his tyranny, Augustus summoned him to his presence, and banished him to Yienne in Dauphiny.

Judea was thus reduced to a Roman province, and, being ordered to be taxed, Cyrenius, the governor of Syria, was sent to see the decree executed, which he c*d, and having sold the

palaces of Archelaus, and seized his treasure, returned to Antioch. This new tax first sowed the seeds of dissension between the Romans and Jews. Always impatient of a foreign yoke, and knowing from their prophecies that the time was come for the appearance of their Messiah, whom they expected to be a great and powerful warnor, they thought they had only to take up arms and victory would crown their efforts. From this time, therefore, this infatuated people, while they rejected the true Messiah, were ready to follow every impostor, who chose to assume that character, and thus brought on with their spiritual, their temporal destruction likewise. About the sixteenth year of Christ Pontius Pilate was appointed governor; whose administration, according to Josephas, was one continued scene of venality, rapine, and tyranny. Such a governor was ill calculated to appease the ferments occasioned by the tax. Instead of this he inflamed them by introducing his standards with images, pictures, consecrated shields, &c., into their city ; and at last attempting to drain the treasury of the temple, under pretence of bringing an aqueduct into Jerusalem. The most remarkable transaction of his government, however, was his condemnation of Jesus Christ, whom he ordered to be crucified at the instigation of the Jews ; seven years after which he was removed : and in a short time Herod Agrippa, the grandson of Herod the Great, was made king by Caligula. He did not,

however, long enjoy this honor ; for having raised a persecution against the Christians, and blasphemously suffered himself to be styled a God by some deputies from Tyre and Sidon, he was miraculously struck in the bowels with a fatal disease, and died most miserably. On his death Judea was once more reduced to a Roman province, and had new governors appointed over it. About this time also Gessius Florus, the last and worst governor the Jews ever had, was sent into the country. Josephus seems at a loss for words to describe his rapine and cruelty ; indeed his whole behaviour was so profligate, that he was looked upon by the Jews rather as a bloody executioner than a magistrate. Many of the inhabitants sought an asylum abroad, while those who remained applied to Cestius Gallus, governor of Syria; beseeching him to pity their unhappy state. Florus, who was present, made a jest of them ; and Cestius dismissed them with a general promise that the governor should conduct himself better. He then set about computing the number of Jews at that time in Jerusalem, by the number of lambs offered at the festival, in order to send an account of it to Nero. By his computation, they amounted to 2,556,000 ; though Josephus estimates them at 3,000,000.

In the year 67, A. D., began the fatal war with the Romans, which ended in the destruction of Jerusalem. It took place in consequence of the decision of a contest with the Syrians concerning Caesarea ; the Jews maintaining that it belonged to them, because it had been built by Herod ; and the Syrians asserting that it had always been reckoned a Greek city. Both parties took up arms, but Felix put an end to the contest for a time, by sending some of the chiefs

of each nation to Rome, to plead their cause be-fore the emperor, and Nero decided it against the Jews. Upon this they flew in all places to arms ; and, though they every where lost ground, yet from this fatal period their rage never abated. Nothing was heard of but robberies, murders, and every kind of cruelty : and cities and villages were filled with murdered victims. The Jews spared neither Syrians nor Romans : and this led to the destruction of great numbers of their peaceful

brethren ; 20,000 Jews were massacred at Caesarea, 50,000 at Alexandria, 2000 at Ptolemais, and 3500 at Jerusalem. A great number of assassins, in the mean time, having joined the factious in Jerusalem, beat the Romans out of Antonia, a fortress adjoining to the temple, and other strong places. The Romans were at last reduced to such straits, that they capitulated on the single condition that their lives should be spared ; notwithstanding which they were all massacred by the furious zealots. This treachery was soon revenged on the Jews of Scythopolis. They had offered to assist in reducing their factious brethren ; but, being suspected by the townsmen, were obliged to retire into a neighbouring wood, where, on the third night, they were murdered to the number of 13,000, and-all their wealth carried off. The rebels then crossed the Jordan, and took the fortresses of Machserus and Cyprus ; which last they razed to the ground, after having put all the Romans to the sword. — • This brought Cestius Callus, the Syrian governor, into Judea with all his forces ; the Jews, however, partly by treachery and partly by force, overcame him and drove him out of the country. Dreadful dissensions now prevailed among them, and many of the higher ranks, fearing the resentment of the Romans, left the city ; while the Christians, remembering their Saviour's admonition, retired to Pella on the other side of Jordan, which the war did not reach. In the mean time Vespasian the Roman general, and soon afterwards emperor, left Greece, and, marching into Judea with a powerful army, ordered his son Titus to bring fresh forces from Alexandria ; before he could arrive, however, the Jews had twice attempted to take Ascalon, but were repulsed on both occasions with the loss of 10,000 men. Early in the year 68 Vespasian entered Galilee at the head of 60,000 men, well armed and disciplined ; he took and burned Gadara, and afterwards laid siege to Jotapa, which made so stout a resistance, that, when he took the place, he ordered all the Jews to be slain or carried into captivity : 40,000 perished on this occasion, and only 1200 were made prisoners, among whom was Josephus, the celebrated historian. Japhawas taken next, after an obstinate resistance, the men being all massacred and the women and children carried away as captives. The Samaritans, who had collected together on Mount Gerazim, were a week after this put to the sword. Joppa was taken by storm, and 4000 Jews, who attempted to escape by their ships, were either drowned or slain. Tarriches, Tiberias, Gamala, Gischala, andltabyr, were successively assaulted and carried. On the inhabitants of Gischala being inclined to surrender, a seditious Jew at the head of the faction, named John,

opposed it and overawed the whole city. On the sabbath day he

entreated Titus to forbear hostilities till to-morrow, and he would then surrender ; but instead of this he fled to Jerusalem with as many as would follow him. Being pursued by the Romans, 6000 of his men were killed, and 3000 women and children brought back prisoners to Titus.

The Jews were at this time divided into three parties : one which was for putting an end to the war by submission to the Romans ; another, which breathed nothing but war, and obstinately set themselves against all amicable measures. But by far the most numerous and powerful party consisted of men of profligate character, who committed the most horrid and unnatural crimes under the mask of religion, affirming, that it was dishonorable to God to submit to Romans and heathens, and who bound themselves by a vow, that they would put down all foreign authority or perish in the attempt. These dissensions spread throughout all the country, and houses and families were so divided against each other, that, as our Saviour foretold, ‘ a man’s foes were often those of his own household.’ ‘ In short,’ says Josephus, ‘ the zealots acted more like incarnate devils than men.’ The other parties suffered much more from them, it is said, than even from the Romans. They murdered all that opposed them in the adjacent country, and then entered Jerusalem, where they met with a stout resistance from Ananus, who had lately been high priest : a fierce engagement took place, and the zealots being driven into the inner enclosure of the temple, were closely besieged. On this John of Gischala, who had till now taken sides with the moderates, was sent to them with terms of peace ; but, contrary to expectation, he persuaded them to hold out and call in the Idumeans : 20,000 of these therefore came to their relief and were admitted during a stormy night. The city immediately became the theatre of cruelties of every description, and 12,000 persons of respectable birth perished. At length, the Idumeans complaining of putting so many to death, the zealots erected a mock tribunal for the condemnation of their victims ; but the judges having once acquitted a person, who was manifestly innocent, the zealots murdered him in the temple, and deposed th# magistrates. They next massacred the common people to such an extent that numbers fled for refuge to the Romans, by whom they were instantly put to death. During these transactions Vespasian staid at Csesarea, well knowing that the strength of the Jewish nation \vas rapidly wasting away. At last the zealots, having either killed or driven out of the city all the opposite party, began to contend with each other. One Simon, who had his headquarters at Massada, formed a party against John, and retreated with the spoil into the fortress. In order to increase his party he promised liberty to the slaves, and proportionable encouragement

to the freemen, who would join him; so that he was soon at the head of a large army. Unable to attack Jerusalem, he first invaded Idumea; and after a sharp engagement, in which the victory was doubtful, having corrupted the enemy's general, and having procured the army to be given up to him,

he got possession of the country. Here he committed such excesses, that the wretched inhabitants were obliged to seek shelter in Jerusalem, where John tyrannised in such a manner that the Idumeans revolted, killed a great number of his men, plundered his palace, and forced him to retire into the temple. In the mean time the people set fire to the city, and called a council, in which it was agreed to admit Simon with his troops to oppose John and the zealot-. Simon's first attempt, however, was ineffectual, and he was obliged to besiege the zealots iu the temple. The miseries of the city were now increased by the starting up of a third party, under the conduct of Eleazar, who seized on the court of the priests, and kept John confined within that of the Israelites. None were admitted into the avenues of the temple but those who came to offer sacrifices ; and by these offerings he maintained himself and his men. John was thus hemmed in between two powerful enemies. He defended himself, however, with great resolution ; and when the city was invested by the Romans, pretending to come to an agreement with his rivals, he totally cut off or forced Eleazar's men to submit : so that the factions were again reduced to two. The Romans, in 72, began to advance towards the capital, destroying many thousands, and wasting the country as they went along; in 73 Titus invested the city, and immediately sent in offers of peace, which were rejected with contempt.

John now held the whole temple in his possession, together with the valley of Cedron ; while Simon possessed the city, some parts of which John had so laid waste that they served for a field of battle, from which they jointly sallied against the common enemy, and to which they returned to renew their own hostilities. The Romans now drew nearer to the walls, having with great labor levelled all the ground as

far as Bethara. In the mean time Titus sent Josephus to the besieged with offers of peace ; but they were again rejected with indignation. Again he sent Nicanor and Josephus with fresh offers, when the former received a wound in his shoulder ; upon •which Titus resolved to begin the assault.

The Romans directed their engines against the city on the 14th April. The Jews had likewise machines upon the walls, which they had taken from Cestius, but they were so ignorant of the use of them, that they did little execution, till they were instructed by some Roman deserters : the Roman towers and machines made terrible navock. The least stones they threw were nearly 1 cwt. ; and these they could send to the length of a quarter of a mile with incredible force. Titus had reared three towers fifty cubits high ; which, being plaited with iron, the Jews tried in vain to set fire to : they were at length forced to retire out of the reach of their arrows ; and the battering rams were at full liberty to play against the wall. A breach was soon made, at which the Romans entered ; and the Jews, forsaking this enclosure, retired within the next. This happened about the 28th of April. John defended the temple and the castle of Antonia, and Simon the rest of the city. Tilus now drew close to the second wall, and applied his battering rams so furiously, that, after a feint ot' being willing to surrender, the Jews, who were in one of the towers, set it on fire, and threw themselves into the flames. This opened to the Romans an entrance into the second enclosure, when Titus, anxious to save the city, would not suffer any part of the wall to be demolished ; so that his men were repulsed by Simon.

The famine, which was in the city, at length brought on a pestilence ; and, as these two dreadful judgments increased, the rage of the factious became more violent. ' I should,' says Josephus ' undertake an impossible task were I to attempt a detail of all the cruelties of these impious wretches ; it will be sufficient to say, that I dc not think that any city, since the creation, ever suffered such dreadful calamities, or abounded with men so fertile in all kinds of wickedness.' Titus, after causing his army to be drawn up, and provisions to be given to his soldiers in the sight of the Jews, again sent Josephus to ex-hort them not to plunge themselves into ineviable ruin ; when this infatuated people not only received him with bitter invectives, but began to threaten his life. Numbers, however, were prevailed on to steal away privately to the Ro-mans, who raised a strong wall round the city to prevent provisions from being brought in, Jerusalem was now filled with dead bodies, which lay rotting in heaps in the streets. The wretched soldiery, taken in the sallies, were crucified by order of Titus to terrify the rest, while the zealots gave it out, that they were such as

had fled to him for protection. Many indeed who went over to the Romans were butchered by the soldiers from the idea that they had swallowed great quantities of gold ; and, though Titus used all his authority, he could not entirely put a stop to this barbarous conduct. At the same time the faction within the city, making sport of the miseries of their starving brethren, and finding that they could not prevent the people from abandoning them, procured some vile pretenders to prophesy, to encourage the despairing survivors by predicting a speedy and miraculous deliverance.

It was during this scarcity of provision that a wretched mother was reduced to the extremity of killing and eating her own child. At the news of this event every one was horror-struck, the people gave themselves over as abandoned to the divine judgments, and Titus, hearing of it, vowed that the city should be razed to its very foundations. About this time he took the castle of Antonia, and, determining to hasten on the siege, caused the gates of the temple to be set on fire, at which the Jews were so terrified, that they suffered themselves to be devoured by the flames, without attempting to extinguish them.

The two factions having now plundered all the inhabitants, rich and poor, seized the treasury of the temple : they even appropriated the sacred oil, and drank the wine destined for the sacrifices. Nothing but the temple now remained, yet such an infatuation prevailed among them, that they still expected a miraculous deliverance, and the vile monster John seemed confident of its security ; so that when Josephus was sent for the last time, to upbraid him for exposing that

sacred place and the wretched remains of God’s people to certain destruction, he replied, that he was defending the Lord’s vineyard, which, he was certain, could not be taken by any human force. Titus himself condescended to speak to them, and endeavoured to persuade them to surrender ; all, however, was in vain, and he was at last forced to proceed to those extremities which he earnestly wished to avoid.

On the 17th of July, Josephus observes, that the daily sacrifices ceased for the first time since their restoration by Judas Maccabaeus, no proper person remaining to offer them. Titus upbraided the factious with this portentous circumstance, calling upon them to come out of the temple and fight on more proper ground ; but, these remonstrances being of no avail, the Romans on the 28th set fire to the north gallery, which enclosed the outer court of the temple from the castle Antonia to the brook Cedron, a considerable portion of which the Jews had already burned. Thus they obtained an easy entrance into the outer court, and obliged the besieged to retreat to that of the priests. For six days Titus tried to beat down one of the galleries in that part, but it was so strong, that the force of his engines, united with the efforts of his troops in sapping, were unable to overthrow it ; he next tried scaling, but was vigorously repulsed, and obliged to de-sist with the loss of some standards, and a considerable number of men. Finding that his desire of saving the building only led to the destruction of many lives, he now set fire to the gates, which, being plated with silver, burned all night, the meltal running down in the melting. The flames soon reached the porticoes and galleries, while the besieged did nothing to extinguish them, but looked on, uttering impotent curses against the Romans. On the 9th of August Titus gave orders to extinguish the fire ; and assembled a council to deliberate and determine whether the remainder of the building should be saved or destroyed. Many were for its immediate destruction ; but finding their general inflexibly bent on saving so noble an edifice, against which he said they could have no quarrel, they yielded, and the next day was fixed upon for a general assault. In the interval, the Jews having quarrelled with the Roman soldiers, or directed, as Josephus says, by the hand of Providence, one of the latter snatched a blazing firebrand, and, getting on the shoulders of his com-rades, cast it through a window into one of the apartments, which surrounded the sanctuary, and instantly the whole north side up to the third story was in a blaze ; this happened on the same day, and in the same month, in which the place had been formerly burned by Nebuchadnezzar. Titus, who had gone to rest for a little time, awaking at the noise, ran to give immediate or-ders for the fire to be extinguished. He called, entreated, threatened, and even caned his men ; but they were so intent upon destroying all that was left, that he was not regarded. Finding all his endeavours vain, he entered the sanctuary, and most holy place, the remaining riches and grandeur of which surpassed, he said, all that had been told him. He saved the golden candlestick, tho table of the show-bread, the altar of

incense, all of pure gold, and the book of tie law, wrapped up in a rich golden tissue. On his leaving the place, the soldiers obliged those who staid behind to come out, and, setting it on fire, began to carry off the rich vessels, robes, platings of the gates, &c. A horrid massacre followed, in which neither age nor sex was spared ; thousands perished by the flames, others by falling from the battlements. Among those destroyed were 6000 persons drawn thither by a false prophet, who had promised them on that very day a miraculous deliverance. The Romans carried their fury so far as to burn all the treasure-houses, though they were full of the rich furniture, plate, vestments, &c., which had been laid up in them for security ; nothing in fine was left standing except two of the gates, and the court destined for the women.

The seditious in the mean time, under Simon and John of Gischala, found means to retire into the city, and sent to desire a parley with Titus. They were told, that, though they had been the cause oe all this bloodshed, yet their lives should be spared, if they would lay down their arms and surrender; but to this they replied, that they had bound themselves by a solemn oath never to surrender ; and only begged permission to retire to the mountains with their wives and children. This so provoked the Roman general, that he resolved none of them should be spared ; and he immediately abandoned the city to the rage of the soldiers, who murdered all those that fell into their hands, while the factious, who were left, went and fortified themselves in the royal palace, where they put to death 8000 of their own countrymen.

The preparations for the attack of the upper city occupied Titus from the 20th of August tr. the 8th of September, on which day it was takeri and set fire to, his men indiscriminately putting to the sword all the inhabitants, with the exception of those who were shut up in the court of the women. The youngest and most beautiful were reserved for Titus's triumph, and all above seventeen years of age were sent into Egypt, or into Syria and other provinces, to be employed in the public works and the theatres. There were 97,000 of these prisoners, besides 11,000 who were starved through neglect, or who starved themselves in despair. The total number that perished in this war is said to have amounted to 1,400,000, besides great numbers who perished in caves, woods, wildernesses, common sewers, &c. The two grand rebels were found, and reserved for the conqueror's triumph; John, beinˆ pinched with hunger, came out and obtained his life, but was condemned to perpetual imprisonment ; but Simon, whose retreat was better supplied, held out till the end of October. These, with 700 of the handsomest captives, attended the triumphal chariot; after which, Simon having been dragged through the streets of Rome with a

rope round his neck, and severely scourged, was put to death, and John was sent into confinement. The castle of Massada, where Eleazar was entrenched with a numerous garrison, held out for a long time against the Romans, who surrounded it with a high wall, and then set it on fire. The wind blew the flames so fiercely

against the Jews, that Eleazar in despair persuaded them to kill their wives and children, and afterwards to choose ten men to kill the rest , one of the survivors was then to kill the others and himself, after having set fire to the place. This was all accomplished, and when the Romans, the next day, were about to scale the walls, they were surprised at seeing no one on them, until two women came forth from an aqueduct, where they had concealed themselves, and informed them of the horrid catastrophe. Titus ordered his men to demolish every part of the city, and not to leave a vestige of its noble structures, ex-cept a piece of the western wall and three towers, as a monument to future ages of the desperate resistance of the Jews, the strength of the city, and the skill and valor of its conqueror.

Thus a complete termination was put to the Jewish worship, and the existence of the nation, nor have they been able since that time to gain any footing in Judea ; but have been scattered, according to the predictions of their prophets, over the face of the whole earth, and become a by-word and a repronch among all nations. They still continue vainly to expect the coming of a Messiah, to deliver them from the wretched state into which they have fallen ; and this hope has had so powerful an influence, that notwithstanding the many persecutions they have endured, both from Pagans, Mahommedans, and professed Christians, they have never been induced to mingle with any of the nations among which they have been scattered. In different ages they have suffered dreadful massacres. In this country formerly the life of a Jew, and the disposal of all his effects, were subject to the pleasure of the lord of the place where he lived. At the time of the crusades they were harassed by the most cruel exactions, and often treated with the utmost barbarity. The reigns of our Richard

I. and John may be reckoned among the times of their greatest oppression. Popular prejudices ran so high against them, that in 1348, when a fatal distemper prevailed in many parts of Europe, they were accused of having poisoned the springs and wells, and a million and a half of them were cruelly massacred. Rather more than a century after this, 500,000 were driven out of Spain, and 150,000 from Portugal; Edward I. imitated this wicked example by expelling great numbers from this country. Since, however, arts and learning have revived in Europe, they have felt the benefit of that increased humanity, which has extended all over the globe ; France, Holland, and other states, allow them the rights of citizenship ; England and Prussia tolerate and protect them; and even the emperor of Austria has removed some restrictions under which they labored in his dominions. It is to be hoped that this humane treatment will continue and increase, until their prejudices against Christianity will no longer find a support in the conduct of its professed disciples.

The attention of the friends of religion has been much turned of late, especially in this country, towards the amelioration of the condition of this people, and their conversion to Christianity. Many exertions have been made

for this purpose, and a society has jeen for some years in operation, having this latter object especially in view ; it is to be lamented, however, that as yet little progress has been made, and but few real conversions effected. The prophecies too, relative to this extraordinary nation, have been much investigated, to ascertain, by the assistance of unfolding events, what expectations may be justly formed with regard to them Some Christians think that the Holy Scriptures predict their restoration to their own land, there to be converted to Christ, and thence to become missionaries for the conversion of the heathen world; while they expect a personal appearance of the Lord Jesus to reign over them, and to execute judgments upon the western, or Christian church, on account of its dreadful declension and corruptions. A few have asserted that they will fight their way to the Holy Land, and after exterminating the Mahommedans, who at present possess it, build their temple, and set up again their ancient worship. Others oppose both ot these hypotheses, contending that the prophecies referred to in their support were almost all written previous to the Babylonian captivity, or at the time the Jews were captives, and therefore were fulfilled at the restoration, which took place in consequence of the decree of Cyrus, king ot Persia; that not a vestige of the ten “tribes 01 Israel seems to have been traced, and

therefore they may be considered as lost ; and that to suppose the restoration of the Jewish nation to their own land, and especially the re-establishment of their ancient worship, is utterly opposed to the nature of the kingdom of Christ, which he himself declares to be spiritual, and not of this world. They consider that the prophecies of the future glory and splendor of the church all relate to the spread of the gospel in the latter days, and the increase of believers in Christ of all nations, who are, according to the declarations of the New Testament, the saints, the true Israel of God ; and, finally, that to suppose God's people should ever effect the triumph of their cause by war and bloodshed is directly contrary to the law of the Saviour, which forbids the use of the temporal sword, and allows no weapon but that of the Spirit, that is, the word of God, to be used in the advancement of his kingdom. They moreover contend, that these sentiments, professedly designed by their upholders to conciliate the Jews, are really calculated to strengthen their prejudices against the real doctrine of Christ, and to interpose still greater hindrances to their conversion.

The ceremonies and religious rites of this peo-ple should be taken from the law of Moses as found in the Scriptures ; but they have added a multitude of absurd customs and traditions, most of them derived from their elders and rabbies, who have lived since the closing of the canon of the Old Testament, and written various commentaries upon it. In the Holy Scriptures, therefore, will be found the most genuine account -of their antiquities ; and the writings of their historian, Josephus, have added much that is curious and interesting, in illustration of those sacred records.

JEWEL.

Fr. joyaux ; Dut. jew-

JEWEL, n. s. \ IT. joyaux ; uni.jew—

JEW'EL-IIOUSE, n. s. yealen; Italian gioiello, JEW'ELLER, n. s. } from Latin gaudialis. Any ornament of great value, used commonly of such as are adorned with precious stones; a term of fondness ; an appellation of tender re-gard. Jewel-house is the place where regal ornaments are reposited. Jeweller, one who traffics in precious stones.

The bridel is in to the four yborne, And kept among his jewels lefe and dere : The hors vanisht, I not in what manere, Out of his sight.

Chaucer. The Squieres Tale. Amongst the rest a iewell rich he found, That was a ruby of right perfect hew..

Spenser. Faerie Queene. Here, wear this jewel for me, 'tis my picture.

Shakspeare.

They found him dead and cast into the streets, An empty casket, where the jewel, life, By some damned hand was robbed and ta'en away.

Id.

Bid farewell to your sisters. — Ye jewels of our father, with washed eyes Cordelia leaves you. Id. King Lear.

The king has made him master of the jewel-house.

Shakspeare.

Jewels too, stones, rich and precious stones, Stolen by my daughter ! Id.- Merchant of Venice.

But should I now to you relate The strength and riches of their state ;

The powder patches and the pins The ribbons, jewels, and the rings ; The lace, the paint, the warlike things,

That make up all their magazines. Cowley. These grains were as like little dice as if they had . been made by a jeweller. Boyle.

The price of the market to a jeweller in his trade is one thing ; but the intrinsick worth of a thing to a man of sense is another. L'Estrange.

The pleasure of the religious man is an easy and portable pleasure, such an one as he carries about in his bosom, without alarming either

the eye or envy of the world : a man putting all his pleasures into this one, is like a traveller's putting all his goods into one jewel. South.

I will turn jeweller : I shall then deal in diamonds, and all sorts of rich stones. Addison.

Proud fame's imperial seat With jewels blazed, magnificently great. Pope.

JEWEL. See DIAMOND, and RUBY. Jewels made a part of the ornaments with which the Jews, Greeks, and Romans, especially their ladies of distinction, adorned themselves. So prodigious was the extravagance of the Roman ladies, that Pliny the elder says he saw Lollia Paulina with an equipage of this kind amounting, according to Dr. Arbuthnot's calculation, to £322,916 13s. 4d. of our money. Precious stones, amongst the Romans and all the ancients, were much scarcer and consequently in higher esteem than they are amongst us, since a commerce has been opened with the Indies. The ancients did not know how to cut and polish them to much perfection ; but colored stones were not scarce, and they cut them very well either hollow or in relief. When luxury had gained ground amongst them, the Romans hung pendants and pearls in their ears; and for this purpose the ears of both sexes were frequently bored.

JEWEL (John), a learned English writer and bishop, born in 1522, and educated at Oxford. In 1540 he proceeded A. B., became a noted tutor, and was soon after chosen rhetoric lecturer in his college. In February, 1544, he commenced

A. M. He had early imbibed protestant principles, and inculcated them to his pupils ; but privately till the accession of kind Edward VI., in 1546, when he made a public declaration of his faith, and entered into a close friendship with Peter Martyr. In 1550 he took the degree of

B. D., and preached before the university with great applause. Upon the accession of queen Mary, in 1553, he was one of the first who felt the rage of the storm then raised against the Reformation ; for before any law was made, or order given by the queen, he was expelled Corpus Christi College by the fellows, by their own private authority; but he continued in Oxford till he was called upon to subscribe to some of the popish doctrines, under the severest penalties, to which he submitted. But this did not procure his safety; for he was obliged to fly, and, after encountering many difficulties, arrived at Frankfort, in the second year of queen Mary's reign, where he made a public recantation of his subscription to the popish doctrines. Thence he went to Strasburg, and afterwards to Zurich, where lie resided with Peter Martyr. He returned to England in 1558, after Mary's death; and in 1559 was consecrated bishop of Salisbury. The university of Oxford, in 1565, conferred on him in his absence the degree of D. D. In this character he attended queen Elizabeth to Oxford in 1566, and presided at the disputations held before her on that occasion. He had

greatly distinguished himself by a sermon preached at St. Paul's cross when he was made a bishop ; in which he gave a public challenge to all the Roman Catholics in the world to produce but one clear testimony out of any father or famous writer, who flourished within 600 years after Christ, for any one of the articles which the Ro-manists maintain against the church of England; and, two years afterwards, he published his famous Apology for that church. But his watchful and laborious life impaired his health, and brought him quickly to the grave. He died at Monkton Farley in 1571, in the fiftieth year of his age. He wrote 1. A View of a seditious Bull sent into England by Pope Pius V. in 1569. 2. A Treatise on the Holy Scriptures. 3. An Exposition of St. Paul's two Epistles to the Thessalonians. 4. A Treatise on the Sacrament. 5. An Apology for the National Church. 6. Several sermons, controversial treatises, and other works. His admirable Apology was translated from the Latin by Anne, the second of the four learned daughters of Sir Anthony Coke, and mother of Sir Francis Bacon. It was published as it came from her pen, in 1564, with the approbation of the queen and the prelates. It was printed in Greek at Constantinople, under the direction of St. Cyril the patriarch. His Defence of it, against Harding and other popish divines, was in such esteem, that queen Elizabeth, king James I., king Charles I., and four successive archbishops, ordered it to be kept chained in alJ parish churches, for public use.

JEZ

JEWEL-BLOCKS, in sea language, two small blocks suspended at the extremity of the main and fore top-sail-yards, by an eye-bolt driven from without into the middle of the yard-arm, parallel to its axis. Their use is to retain the upper part of the topmast studding-sails beyond the skirts of the top-sails, so that each of those sails may have its full force of action, which would be diminished by the encroachment of the other over its surface. The halliards, by which those studding-sails are hoisted, are accordingly passed through the jewel-blocks ; whence, communicating with a block on the topmast head, *hey lead downwards to the top or decks, where fhey may be conveniently hoisted. See SAIL.

JEWS-EARS, n. s. From its resemblance of the human ear. — Skinner. A fungus, tough and thin ; and naturally, while growing, of a rumpled figure, like aflat and variously hollowed c ip ; from an inch to two inches in length, and about two-thirds of its length in breadth. Its sides in many places run into the hollow, so as to represent in it ridges

like those of the human ear. It generally grows on the lower parts of the trunks of elder-trees decaying. The com-mon people cure themselves of sore throats with a decoction of it in milk.

An herb called Jews-ear groweth upon the lower parts of elder, and sometimes ashes : in warm water it swelleth, and openeth extremely. Bacon.

JEWS-HARP, n. s. A kind of musical instrument held between the teeth, which gives a sound by the motion of a broad spring of iron, which, being struck by the hand, plays against the breath.

JEWS-MALLOW, n. s. Lat. cor chorus. Rau-wolf says it is sown in great plenty about Aleppo as a pot-herb, the Jews boiling the leaves of this plant to eat it with their meat.

JEWS-STONE, n. s. The clavated spine of a very large eeg-shaped sea-urchin, petrified by long lying in the earth. It is of a regular figure, oblong, and rounded, swelling in the middle, and gradually tapering; about three-quarters of an inch in length, and half an inch in diameter ; ridged and furrowed alternately, in a longitudinal direction ; and its color is a pale dusky gray, with a faint cast of dusky reddishness. It is found in Syria.

JEZIDES, among the Mahommedans, the name of a numerous sect inhabiting Turkey and Persia, so called from their head Jezid, an Arabian prince, who slew the sons of Ali, father-in-law to Mahomet ; for which reason he is by true Mussulmans reckoned a parricide, and his followers heretics. There are about 20,000 Jezides in Turkey and Persia ; who are of two families, black and white. The white are clad like Turks, and distinguished only by their shirts, which are not slit at the neck like those of others, but have a round hole to put the head through. This is in memory of a golden ring, or circle of light, which they say descended from heaven upon the neck of their cheq, the head of their religion, after his undergoing a fast of forty days. The black Jezides, though married, are the monks, or religious of the order; and these are railed fakirs. The Turks

exact excessive taxes from the Jezides, who hate them as their mortal enemies, and are attached to Christians ; being never circumcised but

when they are compelled. They are extremely ignorant, never reading even the koran ; and, though they make vows and pilgrimages, have no places of religious worship. It is said to be a point of their religion never to speak ill of the devil, lest he should resent the injury, if ever he should come to be in favor with God again, which they think possible. They bury their dead at the first place they come at, rejoicing as at a festival, and celebrating the entry of the deceased into heaven. They go in companies like the Arabians, and change their habitations every fifteen days. When they get wine, they drink it to excess.

JEZRAEL, or JEZREEL, a town in the north of Samaria, towards mount Carmel, on the borders of Galilee (Joshua xix.), said to be one of the towns of Issachar, where stood a palace of the kings of Israel; 1 Kings xxi. 18.

JEZREEL, a valley of Samaria (J'udges vi. 17), situated north of the town, running from west to east ten miles, between two mountains ; the one' to the north commonly called Hermon, near mount Tabor ; the other Gilboa. It is two miles broad.

JEZZAR PACHA, or the Butcher Pacha, a famous pacha of Seide and Acre, in modern times. He was born in Bosnia, in the early part of the last century, and originally named Ahmed. In his youtii he sold himself to a trader, who took him to Egypt, where he was purchased by the noted Ali Bey, by whom he was promoted in a few years to the office of governor of Cairo. In 1773, when Ali became unfortunate, the emir Yusef confided to our hero the government of Berout, in Syria, in which post he betrayed the trust reposed in him; and Yusef, assisted by the sheik Dhaher and a1 Russian squadron, laid siege to Berout. Una-ble to resist these formidable foes, Jezzar surrendered himself into the hands of Dhaher, and went with him to Acre, whence he soon escaped. We now find the capitan pacha Hassan appointing him pacha of Acre and Syria. His zeal in this service was recompensed with new favors, and he was made a pacha of three tails, with the title of vizier. He largely extended the boundaries of his government, and, in spite of the efforts of the Turkish court to displace him, asserted and retained an independent authority as long as he lived. He was absolute master of this part of Syria at the period of the French invasion of Egypt ; and with the aid of a naval force under Sir Sydney Smith, and of M. Phe-lippeaux, a French engineer, defended the city of St. Jean d'Acre against the reiterated attempts of Buonaparte. After a siege of sixty-one days, the conqueror of Italy and Egypt was obliged to relinquish his enterprise. He died at an advanced age, in 1804, leaving behind him a vast treasure.

IF, conjunction. Goth, ef; Belg. of; Sax. jip, literally the verb give : see the examples. Granting or allowing that ; whether or not ; suppose it be granted that.

, For O thing, Sires ! sanfly dare I seie, That frendes, everich, other must obeie, If they wol longe holden compaguie.

Chaucer. The Frankeleines Ta'.e.

If thou wolt vanquish thin enemie, see them be patient. Id. The Persones Tale.

Absolute approbation, without any cautions, qualifications, ifs or amis. Hooker.

If that rebellion

Came like itself in base and abject routs ; I say, if damned commotion so appeared, In his true, native, and most proper shape. You, reverend father, and these noble lords, Had not been there. Shahtpeare. Henry IV. If they have done this deed, my noble lord — — If ! talk'st thou to me of if* ? Thou art a traitor.

Shakspeare.

His sword is all his argument, not his book, Altho' no scholar he can act the cook, And will cut throats again if he be pay'd ; ' In th' Irish shambles he first learned the trade.

Marvell.

If e'er he be king I know Britain's doom We must all to a stake or be converts to Rome. Id.

Try but awhile if you. be wise The trial neither costs nor ties. Id.

Such mechanical circumstances, if I may so call them, wen not necessary to the experiments. Boyle.

Uncertain if by augury, or chance ; But by this easy rise they all advance.

Dry den.

The province of the soul is large enough To fill up every cranny of your time, And leave you much to answer, if one wretch Be damned by your neglect. Id.

This seeing of all things, because we can desire to nee all things, Malhranche makes a proof that they are present to our minds ; and, if they be present, they can no ways be present but by the presence of God, who contains them all. Locke.

She doubts if two and two make four : It can't — it may be — and it must ; To which of these must Alma trust? Nay, further vet they make her go, In doubting if she doubts or no. Prior.

All of them supposed the apostle to have allowed the Epicurean maxims to be good j if so be there were no resurrection. Atterbury.

Tisiphone, that oft hast heard my prayer, Assist, if Oedipus deserve thy care.

Pope's Statins. If they,

Things of ignoble or of savage mood, Endure and shrink not, we, of nobler clay, May temper it to bear, — it is but for a day.

Byron. Childe Harold.

IF, an island of France, in the department of the mouths of the Rhone, and late province of Provence ; the most eastern of the three before the harbour of Marseilles. It is very well fortified, and its port one of the best in the Mediterranean.

IGLA, or IGI.AWA, a river of Moravia, which rises in Bohemia, and crosses the circles of Znaym and Brunn, joining the Schwarza; after which the united stream falls into the Theya near Unterwisternitz.

1GLAU, a circle and town of Moravia, extends from the circle of Brunn, along the borders of that of C/aslau and Tabor, in Bohemia, to

the south-west extremity of Moravia, where it meets the archduchy of Austria. The whole area is 1060 square miles; its population 151,000.

It is mountainous, but has abundance of good pasture, and some arable land. A silver mine was once wrought, but is now relinquished.

The town is ancient, and situated m a hilly district near the river Iglau. It is fortified, and contains a large provincial school, six churches, and two convents. Here are manufactures of woollens, which are made of great fineness ; the half, or more, is annually exported to Italy by way*of Trieste. The trade in corn, hops, and hemp, is also considerable. Population 11,000: sixty-two miles south-east of Prague, and 122 south-east of Dresden.

IGLESIAS, a large town on the south-west coast of the island of Sardinia. It is a bishop's see and has a cathedral, with three convents and a small bay. Its trade is in olives, honey, and cheese. Population 6000 : thirty-four miles west of Cagliari.

IGNATIA, in botany, a genus of the monogynia or Jer and pentandria class of plants : CAL. five-toothed : COR. long ; the fruit a unilocular plum, with many seeds. There is but one species, *viz.*

I. amara, a native of India. The fruit contains the seeds called St. Ignatius's beans. It grows in the Philippine Islands, and winds itself about the tallest trees to the top; it has large, ribbed, bitter leaves, a flower like that of the pomegranate, and a fruit larger than a melon. The fruit is covered with a thin, glossy, blackish, green, and marbled shell, under which is lodged another of a stony hardness ; within this is contained a soft, yellow, bitterish pulp, in which lie the seeds or beans, to the number commonly of twenty-four, each covered with a silvery down. Koning relates, that a person by drinking a spirituous tincture of them was throw into strong convulsions ; and Dr. Grim says, that a dram of the seed, in substance, occasioned for a time, a total deprivation of the senses.

IGNATIUS (St.), surnamed Theophrastus, one ot the fathers of the church, was born in Syria, and said to be educated under the apostle John. He was also acquainted, we are told, with some of the other apostles, especially Peter and Paul. Being fully instructed in the doctrines of Christianity, he was ordained by St. John, bishop of Antioch, about A. D. 67. In this important post he continued above forty years, a zealous defender of the Christian iˆligion, till A. D. 107,

when Trajan, flushed with a victory which he had obtained over the Scythians and Daci, about the ninth year of his reign, came to Antioch, which he entered with the pomp of a triumph. Ignatius presented himself to the emperor; and, in a long discourse, vindicated his faith with freedom. He was in consequence cast into prison, and sentence passed upon him; that, being incurably superstitious, he should be carried bound to Rome, and there thrown to wild beasts. Arriving at Smyrna, he visited Polycarp, bishop of that place, and was himself visited by the pastors of the Asian churches round the country. In return he wrote letters to the churches of the Ephesians, Magnesians, and Trallians, for their instruction and establishment in the faith. He also wrote to the Chris-IGN

tians at Rome, to acquaint them with his state, and passionate desire not to be hindered in the course of martyrdom, which he was now hastening to accomplish. His guard set sail with him for Troas, a noted city of Phrygia Minor, near the ruins of Troy, whither several churches sent messengers to him ; and hence too he despatched epistles to the churches of Philadelphia and Smyrna ; and, as Eusebius relates, to Polycarp, recommending to him the care of the church of Antioch. From Troas they sailed to Neapolis, in Macedonia; thence to Philippi; and, passing on foot through Macedonia and Epirus, they came to Epidaurum, in Dalmatia; where, again taking shipping;, they sailed to Pu-teoli ; whence, after a stay of twenty-four hours, a fair wind quickly carried them to the Roman port near Ostia, at the mouth of the Tiber, about sixteen miles from Rome. That his punishment might be the more public, the festival of the Saturnalia, and that part of it tfhen they celebrated the Sigillaria, was pitched on for his execution; at which time it was the custom to entertain the people with the bloody conflicts of gladiators, and fighting with wild beasts. Accordingly, on the 13 kal. Jan. i. e. Dec. 20, he was brought out into the amphitheatre, and the lions, being let loose, quickly despatched him, leaving nothing but a few of his bones. These wore gathered up by two deacons, who had been the companions of his journey ; and, being transported to Antioch, were interred in the cemetery; whence,

by order of the emperor Theodosius, they were removed with great solemnity to the Tycheon, a Pagan temple within the city, now consecrated to the memory of the martyr. St. Ignatius stands at the head of those Antini-cene fathers, who defend the true divinity of Christ, whom he calls the Son of God and his eternal Word. He is also reckoned the champion of the episcopal order, as superior to that of priest and deacon. But the most important use of his writings respects the authenticity of the Holy Scriptures, which he frequently quotes and alludes to. Archbishop Usher's edition of his works, printed in 1047, is thought the best; yet there is a later edition extant at Amsterdam, where, besides the best notes, there are the dissertations of Usher and Pearson. IGNATIUS'S BEAN. See IGNATIA. IG'NEOUS, adj. ^| Lat. ignis, ignis po-IS'MPOTENT, adj. \tens, ignis-fatuus, ignis IG'NIS-FAT'UUS, n.s. et vomo. Of or per-IG'NITE, v.a. plaining to fire ; contain-IGNIT'ION, n. s. ing> emitting, or having

IGNITI'BLE, adj. I the nature of fire : ig-IGNIV'OMOUS, adj. J nipotent. presiding over fire : ignis-fatuus, Will with the wisp, Jack with a lantern ; vulgar names for an electric or phosphoric light, seen at night in marshy and damp places : ignite, a chemical term : to kindle ; to set on fire : ignition, the act of kindling : ignitible, inflammable ; capable of being set on fire : ignivomous, vomiting fire.

That the fire burns by heat, leaves us still ignorant ' of the immediate way of igneous solutionsˆ

Glanville's Scepsis,

Such bodies only strike fire which have sulphur or parts. Browne's Vulgar Erruurs.

The laborant stirred the kindled nitre, that the ignition might be presently communicated. Boyle.

Those black circular lines we see on dishes, and other turned vessels of wood, are the effects of ignition, by the pressure of an edged stick upon the vessel turned nimbly in the lathe. Ray.

Take good firm chalk, ignite it in a crucible, and then powder it. Grew'* Musatum.

Vapours arising from putrified waters are usually called iynes fatui. Newton's Optichs.

Volcanos and ignivomous mountains are some of the most terrible shocks of the globe. Derham.

IGNATIUS LOYOLA. See LOYOLA and JESUITS.

IGNIS FATUUS is a light, supposed to be of a phosphoric nature, appearing frequently in mines, marshy places, and near stagnating waters. It was formerly thought, and is still by the superstitious believed, to be ominous, and to presage death or misfortunes. People have been led by these lights into marshy places, where they have perished; whence its various names; as if it were an evil spirit who delighted in mischief. See CHEMISTRY and METEOR.

IGNITION is commonly restrained to that kind of burning which is not accompanied with flame, such as that of charcoal, cinders, metals, stones, and other solid substances. Vitrification, evaporation, dissipation, and all the other effects of ignition, depend on the presence of air. See COMBUSTION.

IGNOBLE, adj. \ Fr. ignoble; Lat. ignobi—

IGNOBLY, adv. S lis. From in negative particle, and nobilis, noble. Mean of birth ; not of illustrious race : worthless; not deserving honor; used both of things and persons : ignobly, ignominiously ; disgracefully.

The noble isle doth want her proper limbs ; Her royal stock graft with ignoble plants. Sltakspeare.

To these, that sober race of men, whose lives Religious, titled them the sons of God, Shall yield up all their virtue, all their fame Ignobly ! Milton’s Paradise Lost.

As when in tumults rise the ignoble crowd, Mad are their notions, and their tongues are loud.

Dryden.

Here, overmatched in fight, in heaps they lie ; There scattered o’er the fields ignobly fly. Id.

Man ! know thyself ; all wisdom centres there ; To none man seems ignoble, but to man. Young.

The man we celebrate must find a tomb,

And we that worship him ignoble graves.

Cowper.

Your first tears quenched by her, and your last

sighs

Too often breathed out in a woman's hearing, When men have shrunk from the ignoble care Of watching the last hour of him who led them.

Byron,

IGNOMINIA, a species of punishment among the ancient Romans, whereby the offender suffered public shame, either by the praetor's edict, or by order of the censor. This punishment, besides the scandal, deprived the party of the privilege of bearing any offices, and almost all other liberties of a Roman citizen.

IGNOMIN'IOUS, adj. ˆ Fr. ignominie ; Lat.

IGNOMIN'IOUSLY, adv. \ ignominia, from in

IG'NOMINY, n.s. j privative, and nomen

name. Mean; shameful; reproachful; dishonorable ; used both of persons and things : ignominy, disgrace; infamy; dishonor.

Lat. ignoro, from in privative, and nos-

• co, noro, to know. French ignoratio, ig-

' norer. Ignoramus

Adieu and take thy praise with thce to heaven : Thy ignominy sleep with thee in the grave.

Shakspeare.

They with pale fear surprised, Fled ignominious. Milton.

Strength from truth divided, and from just, Illaudable, nought merits but dispraise And ignominy; yet to glory aspires, Vain-glorious, and through infamy seeks fame.

Id.

Cethegus, though a traitor to the state, And tortured, ‘scaped this ignominious fate. Id. It is some allay to the infamy of him who died ignominiously to be buried privately. South.

Their generals have been received with honour after their defeat, yours with ignominy after conquest.

Addison.

They gave, and she transferred the curst advice, That monarchs should their inward soul disguise ; By ignominious arts, for servile ends, Should compliment their foes, and shun their friends.

Prior.

Nor has this kingdom deserved to be sacrificed to one single, rapacious, obscure, ignominious projector.

Swift.

XGNORA’MUS, n. s.

JG’NORANCE, n. s.

IG’NORANT, adj. & n.s.

IG’NORANTLY, adv.

IGNORE’, v. a. is a word properly used by the grand inquest impanneled in the inquisition of causes criminal and public ; and written upon the bill, whereby any crime is offered to their consideration, when they mislike their evidence as defective, or as too

weak to make good the presentment : the effect of which word, so written, is that all farther enquiry upon that party, for that fault, is thereby stopped, and he delivered without farther answer. A foolish fellow ; a vain uninstructed pretender ; a low word : ignorance, want of knowledge in general, as to any particular subject, and discovered by external effect : ignorant, uninformed; unenlightened ; unknown, undiscovered (in poetry) ; ignorantly made or done : an untaught person : ignore, to be ignorant of, not to know. Boyle endeavoured to introduce this word, but it has not been received, and is now applied only to a grand jury when they throw out a bill of indictment ; and are said to ignore the bill.

So foolish was I and ignorant, I was as a beast.

Psalm Ixxiii.

For other thought and other dede also, Might never ben but soche as purveiance (Which maie not be disceved never mo) Hath feled, biforne, withouten ignoravnce.

Chaucer. Troilus and Creseide. If all the clergy were as learned as themselves are that most complain of ignorance in others, yet our book of prayer might remain the same. .Hooker.

In such business

Action is eloquence, and the eyes of the ignorant More learned than the ears.

Shakspeare. Coriolanus. Ignorance is the curse of God, Knowledge the wing wherewith we fly to heaven.

Shakspeare.

Still baaish your defenders, ‘till at length Your ignorance deliver you, As most abated captives, to some nation That won you without blows. Id.

If you know aught, which does behove my knowledge

Thereof to be informed, imprison ‘t not In ignorant concealment. Id. Winter’s Tale.

Thy letters have transported me beyond This ignorant present time,

and I feel now The future in the instant. Id. Macbeth.

His shipping,

Poor ignorant baubles, on our terrible seas Like egg-shells moved. Shakspeare.

Let not judges be so ignorant of their own right, as to think there is not left to them, as a principal part of their office, a wise application of laws.

Bacon's Esiayt.

Did I for this take pains to teach, Our zealous ignorants to preach ? Denham. O visions ill foreseen ! Better had I Lived ignorant of future ! so had borne My part of evil only. Milton's Paradise Lost. Philosophy would solidly be established, if men would more carefully distinguish those things that they know from those that they ignore. Boyle.

I ignored not the stricter interpretation, given by modern criticks to divers texts, by me alledged. Id.

He that doth not know those things which are of use for him to know, is but an ignorant man, whatever he may know besides. Tillotson.

The greatest and most cruel foes we have, Are those whom you would ignorantly save.

Dryden.

Ignorant of guilt, I fear not shame. Id.

Tell an ignoramus, in place and power, that he has a wit and an understanding above all the world, and he shall readily admit the commendation. South.

If we see right, we see our woes ; Then what avails it to have eyes ?

From ignorance our comfort flows, The only wretched are the wise ! Prior.

It' is in every body's power to pretend ignorance of the law. Sherlock.

Fools grant whate'er ambition craves, And men once ignorant, are slaves. Pope.

When a poet, an orator, or a painter has performed admirably, we

sometimes mistake his blunders for beauties, and are so ignorantly fond as to copy after them. Watt*.

Knowledge is not happiness, and science But an exchange of ignorance for that Which is another kind of ignorance. Byron.

IGNORANCE, or mistake, in law, a defect of will, whereby a person is excused from the guilt of a crime, when, intending to do a lawful act, he does that which is unlawful. For here, the deed and the will acting separately, there is not that conjunction between them which is necessary to form a criminal act. But this must be an ignorance or mistake of fact, and not an error in point of law. • As if a man, intending to kill a thief ar housebreaker in his own house, by mistake Tcills one of his own family, this is no criminal action : but if a man thinks he has a right to kill a person excommunicated or outlawed wherever he meets him, and does so, this is wilful murder. For a mistake in point of law, which every person of discretion not only may, but is bound and presumed to know, is, in criminal cases, no sort of defence. Ignorantia juris, quod quisque tenetur scire, neminem excusat, is as well the maxim of English law as it was of the Roman.

IGUARACU, a town in the province of Pa-raiba, Brasil, standing about two leagues from

the sea. The woods that border the roads here are so thick as to be impassable to a man on foot, unless he carries in his hand a hatchet to cut his way. The town is partly situated upon a hill, and partly in the plain, where a rivulet runs, over which is a stone bridge. The place plainly denotes that it has enjoyed greater prosperity than at present : many houses are only of two stories. The streets are paved, but are much out of repair. It contains several churches and good shops, and about 800 inhabitants. The view from the principal church is said to

be grand; and the only regular inn of which the country can boast is established here.

IHRE (John), a celebrated Swedish professor of rhetoric and politics, was born in March, 1707. On account of the early death of his father, a professor of theology at Lund, he was brought up by his grandfather, the archbishop of Upsal, and in 1730 travelled for improvement. On his return he was elected a member of the Academy of Sciences; and in 1757 public professor of poetry. In 1748 he was appointed professor of rhetoric and politics, an office which he discharged with great reputation for forty years. In 1756 he was raised to the rank of counsellor of the chancery. He died in 1780. His works are, Conspectus Prselectionum in Lin-guam Suecanam 1745; Lexicon Dialectorum, 1766; Glossarium Suio-Gothicum, 2 vols. folio, 1769. Rewrote also on the old catalogue of the Suio-Gothic kings, and on the old West-Gothic laws.

JIB, the foremast sail of a ship, being a large stay-sail extended from the outer end of the bowsprit, prolonged by the jib-boom, towards the fore topmast-head. See SAIL. The jib is a sail of great command with any side wind, but especially when the ship is close-hauled, cr has the wind upon her beam ; and its eifort in casting the ship, or turning her head to leeward, is very powerful and of great utility, particularly when the ship is working through a narrow channel.

JIBBEL AUKESS, or AURAS, an extensive chain of mountains in North Africa, on the southern part of the province of Constantina, and territory of Algiers. It may be considered as one of the branches of the Atlas ; and is about 120 miles in circuit, connecting itself with Mount Jurjura. It was called by Ptolemy, Audus,and, in the middle ages, Mons Aurasius. Various beautiful valleys intervene, and almost the whole of it is extremely fertile. The native tribes enjoy their own laws, and are independent, except in paying a certain tribute to the Algerine government, which is gathered every year by a flying camp. In proceeding to the southward they find higher and more rugged mountains, and a hardier race, who bid these authorities defiance. The most formidable tribe is that of the Neardee, who have their chief fortification on a high, rugged, and conical mountain. Within the last century, a princess of the name of Umhaany, emulating the heroines of old, led to battle in person several of these clans. A number of ancient ruins are spread over these mountains, and several rivers rise from them.

JIB-BOOM, in naval affairs, a boom run out

from the extremity of the bowsprit, parallel to its length, and serving to extend the bottom of the jib and the stay of the fore-top-gallant-mast. This boom, which is nothing more than a continuation of the bowsprit forward, to which it may be considered as a topmast, is usually attached to the bowsprit by means of two large boom-irons, or by one boom-iron, and a cap on the outer end of the bowsprit ; or, finally, by the cap without, and a strong lashing, within, instead of a boom-iron, which is generally the method of securing it in small merchant ships. It may therefore be drawn ir. upon the bowsprit aj occasion requires; which is usually practised when the ship enters a harbour, where it might very soon be broken or carried away, by the vessels which are moored therein, or passing by under sail.

JIDDA, DJIDDA, or DSJIDD-A, a town of Ara-bia, on the Red Sea, situated, according to Bruce, in a very unwholesome, barren, and desert part of the country. From this disagreeable situation, it is probable that it would have been long ago abandoned, had it not been for its vicinity to Mecca, of which it may be considered as the port, and the vast annual influx of wealth occasioned by the India trade. The town itself receives but little advantage, for all the customs are sent to the sheriff of Mecca. ‘ The gold,’ says Mr. Bruce, ‘ is returned in bags and boxes, and passes on as rapidly to the ships as the goods do to the market, and leaves as little profit behind. In the mean time provisions rise to a prodigious price, and this falls upon the townsmen, while all the profit of the traffic is in the hands of strangers ; most of whom, after the market is over (which does not last six weeks), retire to Yemen and the adjacent countries, which abound in every sort of provision.’ The port of Jidda is very extensive, and contains numberless shoals, small islands, and sunk rocks, but in the harbour itself ships may ride secure, whatever wind blows. The only danger is in coming in or going out. Jidda was surrounded with walls in 1540, by El Guri, sultan of Egypt, to protect it from the Portuguese; but these are now in a state of decay. The town is superior to that of Mocha ; the houses are built of large blocks of madrepore; and, though the streets are narrow (which in this climate affords the advantage of their being shaded during the greatest part of the day), it is of imposing aspect in consequence of the hills which rise behind it. The entrance to the road it would be imprudent to attempt without a pilot; but, if signals be made, the pilots meet a ship at the proper distance, and carry her to the anchorage, which is three miles from the town, in twelve fathoms of water. The landing place is in front of the vizier’s palace; the custom-house likewise faces the sea, and is a lofty handsome building. The English are the principal European

nation who carry on a trade here. When a vessel arrives, the first thing done is to have all the packages examined by the native government. Presents must then be made to the bashaw and other officers ot government; for which purpose two or three articles of each part of the cargo are generally selfCted. The goods are now sold on credit, till

the returns are procured from Mecca, for which market they are bought. The imports consist almost exclusively of piece-goods from the coast of Coromandel; and a small quantity of spices, beetle-nut, opium, sugar, tin, and tobacco. Almost the only export is coffee ; the returns are made in Spanish, Venetian, and German coins, and pearls. The duties are about 12 per cent. Long. 39° 15’ E., lat. 21° 29’ N.

JIG, n. s. & v. a. -\ Ital. giga ; Teul. geige ; JIG-MAKER, n.s. V a fiddle. A light careless JIG’GUMBOB, n. s. Jdance or tune: to dance carelessly or lightly, used in contempt : jig-maker, one who dances or plays merrily : jiggumbob, a trinket; a knick-knack; a slight contrivance in machinery.

When Cyrus had overcome the Lydians, that were a warlike na’.ion, instead of their warlike musick, he appointed to them certain lascivious lays and loose jigs; by which he so mollified and ahatcd their courage, that they forgot their former fierceness.

Spenser on Ireland.

Your only jig-maker ! what should a man do but be merry ? Shakspeare. Hamlet.

As fiddlers still,

Though they be paid to be gone, yet needs will Thrust one more jig upon you. Donne.

Austerity shall know that you dare, in these jig-given times, to countenance a legitimate poem.

Ben Jonson.

AH the swains that there abide, With jigs and rural dance resort. Milton.

He rifled all his pokes and fobs Of gimcracks, whims, and jiggumbobs. Hudibras. As for the jigging part and figures of dances, I count that little. Locke.

The muses blushed to see their frien'ls exalting Those elegant delights of jig and vaulting. Fenton.

They wrote to her friends in the country, that she should dance a jig next October in Westminster Hall.

Arbuthnot.

Another Phcebus, thy own Phoebus reigns, Joys in my jigs and dances in my chains. Pope. JILT, n'.s., v.a. &v.n. Isl. gilia, from the verb gellen, to seduce ; to entrap in an amour. Mr. Lye. Perhaps from giglot, by contraction ; or gillet, or g: licit, the diminutive of gill, the ludicrous name of a woman. Query from GULL. A woman who gives her lover hopes and deceives him ; a name of contempt : jilt to practice amorous deceit.

Avoid both courts and camps, Where dilatory fortune plays the jilt With the brave, noble, honest, gallant man, To throw herself away on fools.

Otway's Orphan. Tell who loves you ; And who is jilted for another's sake.

Dry den.

Tell a man, passsionately in love, that he is jilted ; bring witnesses of the falsehood of his mistress, and three kind words of hers shall invalidate all their testimonies. Locke.

She might have learned to cuckold, jilt, and sham, Had Covent Garden been at Surinam. Congreve.

When love was all an easy monarch's care, Jilt* ruled the state, and statesmen farces writ.

Pope.

JING?LE, v.a. & n.$. See GINGLE. To

clink or sound sharply.

What should the wars do with these jingling fools ?

Shakspeare.

With noises

Of roaring, shrieking, howling, jingling chains, We were awaked. Id. Tempett,

If you plant where savages are, do not only enter tain them with trifles and jingles, but use them justly.

Bacon'i Essay*.

Vulgar judges are nine parts in ten of all nations, who call conceits and jingles wit. Dryden.

The bells she jingled, and the whistle blew. Pope.

What crouds of these, impenitently bold, In sounds and jingling syllables grown ol 1 ! la.

IL.\, ILAY, or ISLAY, one of the Western Isles of Scotland, lying south-west of Jura. It is twenty-eight miles long from north to south, and eighteen broad from east to west. On the east side it is full of. mountains covered with heath : on the south it is tolerably well cultivated. In some parts there is great plenty of limestone, and lead-mines are worked in three different places. The only harbours in Ila are at Loch-dale and Bowmore. Here are several rivers and lakes well stored with trouts, eels, and salmon. In the centre is Loch Finlagan, about three miles in circuit, with the little isle of that name in the middle. Here the lords of the isles formerly resided in all the pomp of royalty ; but the palaces and offices are now in ruins. Instead of a throne, Macdonald stood on a stone seven feet square, in which there was a hollow cut to receive his feet ; here he was crowned and anointed by the bishop of Argyle and seven inferior priests, in the presence of the chieftains. This stone still exists. The ceremony (after the new lord had collected his kindred and vassals) was truly

patriarchal. After putting on his armour, helmet, and sword, he took an oath to rule as his ancestors had done ; to govern as a father would his children : his people, in return, swore that they would pay the same obedience to him as children would to their parent. The dominions of this potentate about 1586 consisted only of Ila, Jura, Knapdale, and Kin-tvre : so reduced were they from what they had been before the deprivation of the great earl of Ross in the reign of James III. Near this is another little isle, where he assembled his council, llan na Corlle, or the island of council; where thirteen judges constantly sat to decide differences among his subjects, and received for their trouble the eleventh part of the value of the affair tried before them. In the first island were buried the wives and children of the lords of the isles ; but their own persons were deposited in the more sacred ground of lona. On the shores of the lake are some marks of the quarters of his Carnauch and Gilli-glasses, i. e. the military of the isles : the first word signifying a strong man, the last, a grim-looking fellow. The former were light-armed, and fought with darts and daggers; the latter with sharp hatchets. These are the troops that Shakspeare alludes to, when he speaks of a Donald, who

From the Western Isles Of Kernes and Gallow-glasses was supplied.

These lords had also a house and chapel at Laganon, on the south side of Loch-andaal : a strong castle on a rock in the sea, at Dunowaik, at the south-east end of the country ; for they made this island their residence after their expu!-

sion from that of Man, in 1304. There is a tradition, that while the Isle of Man was part of the kingdom of the Isles, the rents were paid in this country : those in silver were paid on a rock, still called Craig-a-nione, or the rock of the silver rent; the other, Craig-a-nairgid, or the rock of rents in kind. These lie opposite to each other, at the mouth of

a harbour on the south side of this island. There are several forts built on the isles in freshwater lakes, and divers caverns in different parts of the island, which have been used occasionally as places of strength.

It seems to have been long a seat of empire, probably jointly with the Isle of Man, as being most conveniently situated for the government of the rest of the Hebrides ; for Crovan, the Norwegian, after his conquest of that island in 1066 retired and finished his days in Ila. On the retreat of the Danes it became the seat of the lords of the isles ; and continued,, after their power was broken, in the reign of James III. in their descendants the Macdonalds. It was in the possession of Sir James Macdonald in 1598, who gained the battle of Traii-dhruinard. His power gave umbrage-to James VI., who directed the lord of Macleod, Cameron of Lochiel, and the Mac-neils of Barra, to support the Macleans in another invasion. The rival parties met near the hill of Benbigger, east of Killarrow; a fierce engagement ensued ; the Macdonalds were defeated, and almost entirely cut off. Sir James escaped to Spain, but returned in 1620, was pardoned, received a pension, and died at Glasgow. But the king, irritated by the disturbances raised by private wars waged between these and other clans, resumed the grant made by his predecessor, and transferred it to Sir John Campbell of Calder, who held it on paying an annual feu-duty of £500 sterling. The island was granted to Sir John as a reward for his undertaking the conquest ; but the family considered it as a dear acquisition.

ILCHESTER, or IVELCHESTER, a borough and market town of Somersetshire, seated on the right bank of the river Ivel, about 122 miles from London. It appears to have been strongly fortified by the Romans, and at the time of the Norman conquest contained several churches. The foss-way retains its name, and passes through the principal street ; and the pavement of the original ford, formed of flag-stones, may be seen on the west side of the bridge. Upon the bridge, which consists of two large arches, and at its foot, are two dwelling-houses, formerly chapels. The town at present consists of four streets. It has a church, dedicated to St. Mary, with an octagonal tower of stone, fifty feet high; it has also a meeting-house for dissenters. The county court-house and new gaol are good buildings; and here is the county-gaol. A court is held here every Wednesday four weeks. It was a borough by prescription, and is governed by a bailiff and twelve capital burgesses, who, together with the inhabitants not receiving arms, returned two members to parliament: the returning officer being the bailiff. Here is a good alms-house for sixteen poor women and a housekeeper. It was disfranchised in 1832.

Segovia, owing its origin to the erection of the royal palace of La Granja. It stands on the north side of the mountain of Guadarama, and contains about 4300 inhabitants. Here are manufactures of steel, linen, and glass; conducted on the government account, and at which are made the splendid mirrors sold at Madrid. The church contains a striking monument of Philip V. The palace takes its name from a granary which once stood upon the same spot, and which was purchased by Philip V. in 1721, from the Hieronymite friars. The external appearance is not magnificent, though the facade towards the gardens is neat. The interior contains a great number of paintings, statues, busts, &c., arranged in galleries. But the chief ornament here is the gardens. The soil was originally most unpromising and devoid of moisture ; but the elevations have been levelled, the cavities filled, and the scattered rills of the mountain collected, so as to water the gardens, and form a small river. The water-works are magnificent. The whole seems to have been planned on the model of Versailles. This is the highest royal residence in Europe, being at an elevation of 3800 feet above the sea. Forty miles north by west of Madrid, eight south-east of Segovia, and twenty-three north of the Escurial.

ILE, n. s. Corrupted from Fr. aisle. A walk or alley in a church or public building. Properly aisle.

Upward the columns shoot, the roofs ascend, And arches widen, and long ilei extend. Pope.

ILERAY, an island of Scotland, on the west coast of north Uist, separated from it and from the isle of Kirkbost by sands, which are overflowed at high water. It is three miles ‘long, half a mile broad, and yields good crops of bar-ley, besides pasture for cattle.

ILERDA, in ancient geography, the capital of a nation of Spain, called the Ilergetes, situated on an eminence between the rivers Sicoris and Cinga. It was often besieged and taken, being exposed to the incursions from Gaul; and under Gallienus it was destroyed by the Germans. It is now called Lerida in Catalonia, on the Segra.

ILE’USr«.s. Lat.

An ileus, commonly called the twisting of the guts, is really either a circumvolution, or insertion of one part of the gut within the other. Arbuthnot

I’LEX, n. s. Lat.

The ilex, or great scarlet oak, thrives well in England, is a hardy sort of tree, and easily raised of acorns. The Spaniards have a sort they call enzina ; the wood of which, when old, is finely chambletted, as if it were painted. Mortimer.

ILEX, the holm or holly, a genus of the tetra-gynia order, and tetrandria class of plants, natural order forty-third, dumosce : CAL. quadriden-tated : COR. rotaceous ; there is no stylo : SEED a monospermous berry. There are several species ; but the most remarkable is the

I. aquifolium, or common holly. Of this there are many varieties with variegated leaves, which are propagated by the gardeners for sale, and, some years ago, were in great esteem, but at present are little regarded ; the practice of filling gardens with shorn evergreens being abolished.

In the disposition of plantations of evergreen trees and shrubs, however, a few of the most lively colors have a good effect in winter, if properly disposed. The common holly grows naturally in woods and forests in many parts of England, where it rises from twenty to thirty feet, and sometimes more, but the ordinary height is not above twenty-five feet : the stem, by age, becomes large, and is covered with a grayish smooth bark ; and those trees which are not lop-ped or browsed by cattle are commonly furnished with branches the greatest part of their length, forming a sort of cone ; the branches are garnished with oblong oval leaves, of a lucid green on their upper surface, but are pale on their under, having a strong mid-rib ; the

edges are indented and waved, with sharp thorns terminating each of the points, so that some of the thorns are raised upward, and others are bent downward, and being very stiff they are troublesome to handle. The leaves are placed alternate on every side of the branches ; and from the base of their foot-stalks come out the flowers in clusters, standing on very short foot-stalks ; each of these sustain five, six, or more flowers. They are of a dirty white, and appear in May ; but are succeeded by roundish berries, which turn to a beautiful red about Michaelmas, and continue on the trees, if not destroyed, till after Christmas. The common holly is a very beautiful tree in winter ; therefore deserves a place in all plantations of evergreen trees and shrubs, where its shining leaves and red berries make a fine variety. It is propagated by seeds, which never come up the first year, but lie in the ground ; therefore the berries should be buried in the ground one year, and then taken up and sown at Michaelmas, upon a bed exposed only to the morning sun ; the following spring the plants will appear, which must be kept clean from weeds ; and, if the spring prove dry, it will be of great service to the plants if they are watered once a week ; but too much moisture is very injurious to these plants when young. In this seed-bed the plants may remain two years, and then be transplanted in autumn, into beds about six inches asunder, where they may stand two years longer} during which time they must be constantly kept clean from weeds ; and, if they nave thriven well, they will be strong enough to transplant where they are designed to remain ; for, when they are transplanted at that age, they will grow to a larger size than those which are removed when they are much larger: but, if the ground is not ready to receive them, they should be transplanted into a nursery in rows two feet distant, and one foot asunder ; where they may remain two years longer. If they are to be grafted with any of the variegated kinds, that should be performed after they have grown one year in the nursery ; but the plants so grafted should continue two years after in the nursery, that they may make good shoots before they are removed ; though the plain ones should not stand longer than two years in the nursery, because, when they are older, they do not transplant so well. The best season for removing hollies is in autumn, especially in dry land : but, where the soil is cold and moist, they may be

transplanted with great safety in spring, if the plants are not too old, or have not stood long unremoved. Sheep in winter are fed with croppings of holly. Birds eat the berries. The bark fermented, and washed from the woody fibres, make the common bird-lime. The plant makes an impenetrable fence, and bears chop-ping, though it does not,

in all respects, answer equally well with the hawthorn. The wood is used in veneering, and is sometimes stained black to imitate ebony. Handles for knives, and cogs for mill-wheels, are made of it.

ILFRACOMBE, a sea-port of Devonshire, with a spacious basin, formed by a fine pier projecting into the Bristol Channel. The high tides here allow large vessels to enter the harbour. This port employs a number of brigs and sloops, chiefly in carrying ore from Cornwall, coal from Wales, and corn to Bristol. A number of fishing skiffs belong to it. It is seated almost opposite Swansea, in Glamorganshire, and is forty-nine miles N.N. W. of Exeter, and 181 west by south of London.

ILHEOS, one of the four provinces of Brasil, which compose the captaincy of Bahia, bounded on the north by the province of Todos Santos; south by the river Grande, which separates it from Porto Seguro ; east by the Atlantic ; and west by the country of the Indians. It is fertile and well watered, producing considerable quantities of cotton, sugar, and Brasil wood.

ILHEOS, the capital of the foregoing province, is situated in a bay, the entrance of which is defended by a fort, which has a small garrison, and a governor. It has two convents of monks, with a college, which formerly belonged to the Jesuits. Ninety-three miles north from Porto Se-guro, and 126 south-west of the bay of Todos Santos.

ILHEOS, a large river of Brasil, in the province of this name, which rises in the mountains of the interior, runs east, and enters the sea, forming at its mouth a beautiful port. There is an island of the same name situated at the mouth of this river, in long. 39° 27’ W., lat. 14° 37’ S.

ILIA, the daughter of Numitor, and mother of Romulus, the founder of Rome. See NU-MITOR.

IL’IAC, adj.) Relating to the lower

IL’IAC-PAS’SION,/Z.S. J bowels. Iliac-passion, a kind of nervous cholic, whose seat is the ilium, whereby that gut is twisted, cr one part enters the cavity of the part immediately below or above ; whence it is also called the volvulus, from volvo, to roll.

Those who die of the iliac pnssion have their bellies much swelled. Flayer on the Humours.

ILIAC REGION. See ANATOMY.

ILIAD, I\iac, from Ilium, an ancient epic poem, the finest of the works attributed to Ho-mer. The poet's design was to show the Greeks, •who were divided into several statps, how much it was their interest to preserve harmony among themselves ; for which end he sets before them the calamities that befel their ancestors from the wrath of Achilles, and his misunderstanding with Agamemnon ; and the advantages that afterwards accrued to them from their

union. The Iliad is divided into twenty-four books or rhapsodies. See HOMER.

ILINISSA, a lofty peak of the western equa-torial Andes, and one of the most picturesque of those which are seen from the city of Quito. The summit rises to the height of 17,238 feet above the level of the sea, and is divided into two points, which Humboldt thinks are the wrecks of a volcano. Ilinissa is in the parallel of Coto-paxi, and joins the summit of Ruminavi by thf Alto de Tiopfillo, which forms a transverse link, whence the waters run off towards both the Pacific and the Atlantic Oceans.

ILIUM, ILION, or ILIOS, in ancient geography, a name of Troy, most commonly used by the poets, and distinguished by the epithet Ve-tus, from that afterwards called Ilium Novum. See TROY.

ILIUM NOVUM is thought to be the Iliensium Pagus of Strabo. New or modern Ilium was a village near the sea, with a temple of Minerra, where Alexander, after the battle of Granicus, offered gifts, and named it a city, which he ordered to be enlarged. His orders were executed by Lysimachus, who encompassed it with a wall of forty stadia. It was afterwards adorned by the Romans, who granted it immunities as to their mother city.

ILK, adj. Sax. ealc. rihe same. It is still retained in Scotland, and denotes each ; as, ilk ane of you, every one of you. It also signifies, the same ; as, Macintosh of that ilk, denotes a gentleman whose surname and the title of his estate are the same; as, Macintosh of Macintosh.

Wo worthe, alas ! that ilke dayes light On which I sawe him first with eyeu twain.

Chaucer. Troilus and Creseide.

Ther helpeth nought ; all goth that ilke wey : Than may I saiu that alle thing mote dey.

Id. The Knightes Tale.

Shepherds, should it not yshend Your roundels fresh, to hear a doleful verse Of Rosalind, who knows not Rosalind, That Colin made ? ilk can I you rehearse.

Spenser.

ILL, adj., n s., St adv. Is a contraction of the word evil : the substantive and adverb are used in composition to denote any bad quality. Bad as opposed to good, whether physical or moral ; sick; disordered. See EVIL. Ill, wickedness ; misfortune ; misery. Ill, not well ; with pain or difficulty.

Who speketh for me now in my ahsence ? Alas no wight ; and that is all my care ; For, well wote I, as ill as I ye fare.

Chaucer. Troilta and Creseide. There some ill planet reigns ; I must be patient, ‘till the Heavens look With an aspect more favourable. Shakspeare.

Of his own body he was ill, and gave The clergy ill example. Id. Henry VIII.

Dangerous conjectures in iW-breediug minds.

Id. Hamlet.

I have an t’Z/-divining soul : Methinks I see thee, now thou art below, As one dead in the bottom of a tomb.

Shakspeare.

You wish me health in very happy season ; For 1 am on the sudden

something ill.

I was at her house ilie hour she appointed.

— ‘And you sped, sir ?

— Very tW-favouredly. Id.

The example*

Of every minute’s instance, present now Have put us in these ill-beseeming arms. Id.

Neither is it ill air only that maketh an ill seat ; but ill ways, ill markets, and ill neighbours.

Bacon’s Essays.

Some of an ill and melancholy nature, incline the company to be sad and i7/-disposed ; others, of a jo-vial nature, dispose them to be merry. Bacon.

Ill, to man’s nature, as it stands perverted, hath » natural motion strongest in continuance. Id.

My colleague,

Being so ill affected with the gout, Will not be able to be there in person.

Ben Jonion. These are the product Of those ill mated marriages thou sawest, Where good with bad were matched. Milton.

Thou desirest

The punishment all on thyself ! ala*! Bear thine own first ; ill able to sustain His full wrath, whose thou feelest as yet least part. And my displeasure bear’st so HI. Id.

Hither, of ill joined sons and daughters born, First from the ancient world these giants came. Id.

Your ill meaning politician lords. Under pretence of bridal friends and guests, Appointed to await me thirty spies, Who, threatening cruel death, constrained the bride To wring from me and tell to them my

secret. Id.

Shall these e'er dare to contradict my will, And think a prince o'the blood can e'er do ill

Marvell.

Much better, when I find virtue in a fair lodging, than when I am bound to seek it in an ill favoured creature, like a pearl in a dunghill. Sidney.

Near to an old ill favoured castle they meant to perform their unknightly errand. Id.

The ungrateful treason of her ill chosen husband overthrows her. Id.

I have known two towns cf the greatest consequence lost, by the governours falling ill in the time of tha sieges. Temple.

Young men to imitate all ills are prone ; But are compelled to avarice alone : For then in virtue's shape they follow vice.

Dryden.

Strong virtue, like strong nature, struggles still, Exerts itself, and then throws off the ill. Id.

Ill bears the sex a youthful lover's fate, When just approaching to the nuptial stale. Id.

Lead back thy Saxons to their ancient Elbe : I would restore the fruitful Kent, the gift Of Vortigern, or Hengist's iU bought aid. Id.

Ill at ease, both she and all her train The scorching sun had borne, and beating rain. Id.

No look, no last adieu before he went ! In an ill boding hour to slaughter sent.

Id. JEneid.

Did you never taste delicious drink out of an t'/I looked vessel ? L' Estrange.

Actions are pleasing or displeasing, either in themselves, or considered as a means to a greater and more desirable end : the eating of a well - seasoned dish, suited to a man's palate, may move the mind, by the

delight itself that accompanies the eating, without reference to any other crd ; to which the consideration of the pleasure there is in health and strength may add a new gust, able to make us swallow an ill relished potion. ‘ Locke.

They would not make bold, as every where they do, to destroy ill formed and mis-shaped productions.

Id.

Plain and rough nature, left to itself, is much better than an artificial ungratefulness, and such studied ways of being ill fashioned. Id.

Holding of ill tasted things in the mouth, will make a small salivation. Grew.

Our generals at present are such as are likely to make the best use of their numbers, without throwing them away on any ii.’ concerted projects.

Addison on the War. I see thy sister’s tears.

Thy father’s anguish, and thy brother’s death, In the pursuit of our ill fated loves. Addison.

We simple toasters take delight To see our women’s teeth look white, And every saucy ill bred fellow Sneers at a mouth profoundly yellow. Prior. Th« second daughter was a peevish, forward, ill conditioned creature as ever was. Arbuthnot.

A spy distinguished from his airy stand, To bribe whose vigilance,

yEgisthus told A mighty sum of ill persuading gold. Pope.

There motley images her fancy strike, Figures ill paired, and similes unlike. Id.

If a man had but an ill favoured nose, the deep thinkers would contrive to impute the cause to the prejudice of his education. Swift.

When desperate ills demand a speedy cure, Distrust is cowardice, and prudence folly.

Dr. Johnson's Irene.

Love, fame, ambition, avarice — 'tis the same, Each idle — and all ill — and none the worst —

For all are meteors with a different name, And Dca'h the sable smoke where vanishes the flame. Byron. Childe Harold.

ILLAC'HRYMABLE, adj. Lat. illachryma-bilis. Incapable of weeping.

ILLAPSE', n. s. Lat. illapsus. Gradual emission or entrance of one thing into another.

As a piece of iron red hot, by reason of the illapse of the fire into it, appears all over like a fire, so the souls of the blessed, by the illapse of the divine essence into them, shall be all over divine. Norri*.

Sudden attack ; casual coming.

Life is oft preserved

By the bold swimmer in the swift illapse Of accident disastrous. Thomson'* Summer.

To ILLA'QUEATE, v. a. Lat. illaqueo. To entangle ; to entrap ; to ensnare.

I am illaqueated, but not truly captivated into your conclusion. More'* Divine Dialogue;.

ILLAQUEA'TION, n. s. From illaqueate. The act of catching or ensnaring.

The word in Matthew doth not only signify suspension, or pendulous illaqueation, but also suffocation. , Browne.

A snare ; any thing to catch another ; a noose.

ILLATION, n. s. Lat. illatio. Inference ; conclusion drawn from premises.

Herein there seems to be a very erroneous illation from the indulgence of God unto Cain, concluding an immunity unto himself. Browne.

Illation so orders the intermediate ideas as to discover what connection there is in each link of the chain, whereby the extremes are held together. Locke.

IL'LATIVE, adj. Lat. Hiatus. Relating to illation or conclusion.

In common discourse or writing such casual particles as for, because, manifest the act of reasoning as well as the illative particles then and therefore. Watt*.

ILLAU'DABLE, adj. Lat. illauJabilis. Unworthy of praise or commendation.

Strength from truth divided, and from just ,

Illaudable, nought merits but dispraise. Milton.

ILLAU'DABLY, adv. From illaudable. Unworthily ; without deserving praise.

It is natural for all people to form, not illaudably, too favourable a judgment of their own country.

Broome.

ILLE ET VILAINE, a north-west department of France, including the north-east part of Brittany, and bounded partly by the English Channel and partly by the frontier line of other departments of Brittany. Its superficial extent is about 2750 square miles : its population 508,000. The surface is in general level, or intersected by small hills, and it is watered by the Ille, Vilaine, Meu, and Seiche ; the small portion of coast which it has on the side of the English channel is bordered with a multitude of islets. Hardly half this department is in a state of cultivation, and the agriculture practised is of a very rude kind. The climate, however, is good, the pastures rich, and the breeding of cattle very successful. Flax is cultivated to a large extent, and affords

materials for linen manufactures. Apples, pears, and various fruits are abundant, and the cyder and perry good, but the climate is not warm enough for the vine. The fisheries on the coast are also productive. The department is divided into the arrondissements of Rennes (the capital), St. Malo, Fougeres, Vitre", Redon, and Montfort.

ILLECEBRUM, in botany, a genus of the monogynia order, and pentandria class of plants : natural order twelfth, holoraceae. CAL. pentaphyllous. and cartilaginous : COR. none : the stigma simple : CAPS, quinquevalved, and monospermous. There are several species, of which the most remarkable are

I. capitatum, and I. paronychia. Both have trailing stalks nearly two feet long, which spread on the ground, garnished with small leaves like those of knot grass. The heads of the flowers come out from the joints of the stalks, having neat silvery bractea surrounding them, which make a pretty appearance. Their flowers ap-pear in June, and there is generally a succession of them for at least two months. When the au-tumn proves warm, they ripen their seeds in October. The seeds should be sown in a bed of light earth in the beginning of April : the plants come up in May, when they should be kept clean from weeds till they are fit to remove. Some should be planted in small pots, and the rest in a warm border, observing to water and shade them till they have taken new root These plants are sometimes killed in severe winters ; for which reason some of them should be planted in pots, that they may be sheltered.

ILLE'GAL, adj. Lat. in and legalis. Contrary to law.

No patent can oblige the subject against law, unless an illegal patent passed in one kingdom can bind another, and not itself. Swift.

ILLEGALITY, n. s. From illegal. Contrariety to law. '

He wished them to consider what votes they hˆl passed, of the illegality of all those commissions, and

of the unjustifiableness of all the proceedings by vir-tue of them. Clarendon.

ILLE'GALLY, adv. From illegal. In a jianner contrary to law.

ILLEGIBLE, adj. Jn and legibilis. From Lat. lego. That cannot be read.

The secretary poured the ink-box all over the writings, and so defaced them that they were made altogether illegible. Howel.

ILLEGITIMACY, n. s. From illegitimate. State of bastardy.

ILLEGITIMATE, adj. Lat. in and legiti-mus. Unlawfully begotten; not begotten in wedlock.

Grieve not at your state : For all the world is illegitimate. Cleaveland.

Being illegitimate, I was deprived of that endearing tenderness and uncommon satisfaction, which a good man finds in the love and conversation of a parent. Addison's Spectator.

ILLEGITIMATELY, adv. From illegitimate. Not begotten in wedlock.

ILLEGITIMATION, n. s. From illegitimate. The state of one not begotten in wedlock.

Richard III. bad a resolution, out of his hatred to both of his brethren, to disable the issues, upon false and incompetent pretexts, the one of attainder, the other of illegitimation. Bacon.

ILLER, a large river and circle of Suabia. The former rises in the Tyrol, passes by Kemp-ten and Memmingen, and falls near Ulm into the Danube, which it renders navigable. Wood is floated down ; and it forms, during the latter part of its course, the boundary between Bavaria and Wirtemberg.

The circle comprises the country to the south of che circle of the Upper Danube, but it underwent considerable changes in 1810 ; in 1815 also part of it, which had formerly belonged to Austria, was restored ; and next year, on the final arrangement of the Bavarian provinces, the name of this circle was suppressed, and the part of it that remained to Bavaria was annexed to the circle of the Upper Danube.

ILLEV’IABLE, adj. Fr. lever. That cannot be levied or exacted.

He rectified the method of collecting his revenue, and removed obsolete and illeviaile parts of charge.

Hale.

ILLFA’VORED, adj. Deformed. O what a world of vile illfavmtred faults

Look handsome in three hundred pounds a-year !

Shakspeore.

ILLFA’VOREDLY, adv. With deformity. Roughly; ruggedly : in ludicrous language.

He shook him very illfavouredly for the time, raging through the very bowels of the country, and plundering all wheresoever he came. Howel.

ILLFA’VOREDNESS, n. s. Deformity.

ILLIB’ERAL, ad} Lat. illiberalis.

Not noble ; not ingenuous.

The charity of most men is grown so cold, and their religion so illiberal. King Charles.

Not munificent; not generous ; sparing.

Yet subsist they did , and well too : an argument that that earth did not deal out their nourishment with an oversparing or illiberal hand. Woodward.

ILLIBERAL’ITY, n. s. Lat. Wberditas. From illiberal. Meanness of mind ; parsimony; niggardness ; want of munificence

The illiberality of parents, in allowance towards their children, is an harmful error, and acquaints them with shifts. Bacon.

ILLIB’ERALLY, adv. From illiberal. Dis ingenuously; meanly.

One that has been bountiful only upon surprise or incogitancy,

illiberally retracts. Decay of Piety.

ILLICIT, adj. Fr. illicite ; Latin illicitus. Unlawful ; as, an illicit trade.

ILLICIUM in botany, a genus of the penta-gynia order, and dodecandria class of plants : CAL. tetraphyllous, and deciduous : there are eight petals, and eight petaloid subulated nectaria. There are sixteen stamina with bifid antherae : CAPS, are ovate, compressed, and inonospermous. There are two species, *viz.*

I. anisatum, a native of the woods of China and Japan. It rises with an erect branched stem to the height of a cherry tree ; and is covered with an ash colored bark, under which is another bark that is green, fleshy, somewhat mucous, and of an aromatic taste, combined with a small degree of astringency. The wood is hard and brittle ; the pitch small in quantity, fungous, and of a green herbaceous color. The leaves resemble those of laurel ; the flowers those of narcissus. These last generally stand single, are of a pale white, and consist of sixteen petals, which differ in their form. The extremity of the flower-stalk being continued into the germen or seed bud of the flower, forms eight conjoined capsules, or one deeply divided into eight parts. Of these capsules, some frequently decay ; the rest enclose each a single seed, somewhat resembling that of palma christi, and which, when the hardish corticle that closely covers and involves it is broken, exhibits a kernel that is white, fleshy, soft, and of a vapid taste. The bonzes, or priests of China and Japan, persuade the inhabitants that the gods are delighted with this tree. Hence they generally place before their idols garlands and bundles made of the branches.

I. floridanam, with red flowers, and very odorous fruit, is a native of China.

To ILLI'GHTEN, v. a. In and lighten. To enlighten ; to illuminate. A word, I believe, only in Raleigh.

Corporeal light cannot be, because then it would not pierce the air, nor diaphanous bodies ; and yet every day we see the air illightened. Raleigh.

ILLIMITABLE, adj. Lat. in and limet. That cannot be bounded or limited.

Although in adoration of idols, unto the subtiler heads, the worship perhaps might be symbolical ; yo was the idolatry direct m the people, whose credulity is illimitable, and who may be made believe that any thing is God. Brncne.

With what an awful world-revolving power, Were first the unwieldy planets launched along The illimitable void ! Thomson's Summer

ILLIM'ITABLY, adv. From illimitable. Without susceptibility of bounds.

ILLIM'ITED, adj. Fr. illimte ; Lat. in and limes. Unbounded; interminable.

From illimited.

ILLIM'ITEDNESS, n. *.

Exemption from all bounds.

The absoluteness and illimitednetfof his commission was generally much spoken of. Clarendon.

ILLINOIS, a river of the Illinois territory, formed by the junction of the Theakiki and Plein, in the north-west part of Indiana, North America. In the Illinois territory it pursues a south-westerly direction, and flows into the Mississippi, twenty-one miles above the Missouri. It is upwards of 400 yards wide at its mouth, and is about 400 miles long from its junction to the Mississippi, and is of easy navigation. It has a very gentle current, unbroken by falls or rapids, and passes through a fine country. The Plein, its northern head branch, interlocks with the Chicago, which flows into lake Michigan.

ILLINOIS, a state of North America, bounded north by the north-west territory, east by Indiana, south by the Ohio, which separates it from Kentucky, and west by the Mississippi ; 345 miles long from north to south, and 210 from east to west ; containing about 52,000 square miles. In 1810 it was divided into two counties, and subdivided into twelve townships ; and contained 12,282 inhabitants, all free people, slavery not jeing admitted.

Tne counties, chief towns, ana population, according to the last census, are thus exhibited : —

Counties.

Pop.

Chief Towns.

Bond Crawford

3124 3113

Perry sville. Palestine.

Edwards

1649

Albion

Franklin

4081

Franckfort.

jallatin Jackson

7407 1827

Equality. Brownsville.

Johnson

1596

Vienna.

Madison

6229

Edwardsville.

Monro

2119

Waterloo.

Pope Randolph St. Clair

3320 4436 7092

Golconda. Kaskaskia. Belleville.

Union Washington White

Total, with districts } not here named i

Jonesborough. Nashville. Carmi.

157,5751 of whom 746 are (slaves.

By the preceding enumeration it appears that the population has exceeded the number required by the law of congress for the admission of this territory into the union as a state, which took piace in 1818.

Kaskaskia is the seat of government. The other most considerable towns areShawneetown, Cahokia, Edwardsville, Brownsville, Belleville, and Carmi.

The Mississippi, Ohio, and Wabash, form about two thirds of the whole boundary of this district. The other most considerable rivers are the Illinois, Kaskaskia, Muddy, Saline, Little Wabash, Michilimackinack, Crow Meadow, Rainy, Vermilion, Mine, Spoon, Rocky, and Sangamoin.

The peninsula between the Mississippi and Illinois rivers has been surveyed as military

bounty lands. Congress appropriated for this object 3,500,000 acres ; and the surface actually surveyed amounts to an area about equal to 240 townships, each six miles square ; equal to 8640 square miles, or 5,530,000 acres, nearly. It was necessary that the number surveyed should exceed the number appropriated, as the act of congress provides that the several portions granted shall be fit for cultivation. These lands are described as being very good.

The southern and middle parts of the territory are for the most part level. The banks of the Illinois and Kaskaskia, in some places, present a sublime and picturesque scenery. Several of their tributary streams have excavated for themselves deep and frightful gulfs, particularly those of the Kaskaskia, whose banks, near the junction of Big Hill Creek, present a perpendicular front of solid limestone 140 feet high. The north-western part of the territory is a hilly broken country, thougli there are no high mountains. The climate resembles that of Indiana and Ohio. The low and wet lands in the southern part are unhealthy.

The soil has been divided into six distinct kinds. 1. Bottomland, bearing a heavy growth of honey-locust, pecan, black-walnut, beach, sugar-maple, buckeye, pawpaw, grape-vines, &c. This land is of the first quality, and is found in greater or less quanties on all the considerable rivers. It is of inexhaustible fertility, and is annually cultivated without manure. 2. Newly formed land, found at the mouths and confluences of rivers, It produces sycamore, cotton-wood, water maple, water ash, elm, wil-low, oak, &c. There are many thousand acres of this land at the mouth of the Wabash, and at the confluence of the Ohio with the Mississippi. It is annually inundated, and is unhealthy. 3-Dry prairies, approaching the rivers and bordering on the bottom land, from thirty to 100 feet higher, and from one to ten miles wide. These prairies are destitute of trees, except where they are intersected by streams of water and occasional tracts of woodland. It has been estimated that as much as two-thirds of the whole territory consists of open prairie. The dry prairie has a black rich soil, well adapted to purposes of agriculture, and is covered with rank grass. 4. Wet prairie, found remote from streams, or at their sources. This is generally cold and unproductive, abounding with swamps and ponds, covered with tall coarse grass. 5. Land covered with timber, moderately hilly, well watered, and of a rich soil. 6. Hills, of a sterile soil and destitute of timber, or covered with stunted oaks and pines.

The prevailing forest tree in Illinois is oak, of which as many as thirteen or fourteen different species have been enumerated. Honey-locust, black-walnut, mulberry, plum, sugar-maple, black-locust, elm, bass-wood, beach, buckeye, hackberry, coffee-nut, sycamore, spice-wood, sassafras, black and white haws, crab-apple, wild cherry, cucumber, and pawpaw, are found in their congenial soils throughout the territory, White pine is found on the head branches of the Illinois.

Copper and lead are found in several parts of

the territory. Coal has been discovered in several places, on the Big Muddy in great quantities near Brownsville, on the Kaskaskia near the town of that name, near the town of Edwardsville, on the Illinois fifty miles above Illinois lake, and in other places. Salt water is found in several places sufficient to furnish immense quantities of salt. The famous salt works belonging to the United States are in the vicinity of Shawneetown. See SALINE. Iron ore has also been discovered.

The productions are corn in abundant crops, tobacco, flax, hemp, oats, potatoes, and some cotton in the southern parts-Wheat does well when properly managed, except on the bottoms, where the soil is too rich.

ILLITERATE, adj. Lat. illiteratus. Unlettered ; untaught ; unlearned ; unenlightened by science.

The duke was illiterate, yet had learned at court to supply his own defects, by the drawing unto him of the best instruments of experience. Wotton.

The illiterate writer, emperick like applies To minds diseased unsafe chance remedies : The learned in schools, where knowledge first began Studies with care the anatomy of man; Sees virtue, vice, and passions in their cause, And fame from science, not from fortune draws.

Dry den.

In the first ages of Christianity not only the learned and the wise, but the ignorant and illiterate embraced torments and death. Tillotson.

ILLIT'ERATENESS, n. s. From illiterate. Want of learning ; ignorance of science.

Many acquainted with chymistry but by report, have, from the illiterateness and impostures of those that pretend skill ia it, entertained an ill opinion of the art. Boyle.

ILLFFERATURE, n. s. In and literature. Want of learning. A word not much used.

The more usual causes of this deprivation are, want of holy orders, illiterature, or inability for the discharge of that sacred function, and irrcligion.

Ayliffe's Parergon.

ILL’NESS, n. s. From ill. Badness or inconvenience of any kind, natural or moral : sickness ; wickedness.

Thou would be great ; Art not without ambition ; but without The illness should attend it. Shakspeare.

He that has his chains knocked off, and the prison-doors set open, is perfectly at liberty, though his preference be Determined to stay by the illneu of the weather. Locke.

On the Lord’s day which immediately preceded his illness, he had received the sacrament.

Atterbury.

Since the account her majesty received of the insolent faction, during her late illness at Windsor, she hath been willing to see them deprived of power to do mischief. Swift.

ILLNA’TURE, n. s. 1 111 and nature. Ha-ILLNA’TURED, adj. \ bitual malevolence ; want of humanity : habitually malevolent ; wanting kindness or good will ; mischievous.

The fondly studious of increase, Rich foreign mold on their illnatured land Induce. Philipt.

ninature inclines a man to those actions that thwart and sour and disturb conversation, and consists of a

proneness to do ill turns, attended with a secret joy upon the sight of any mischief that befalls another, and of a nutter insensibility of any kindness done him.

South.

These ill qualities denominate a person illnatured, they being such as make him grievous and uneasy to all whom he deals and associates himself with.

Id.

Stay, silly biro, the illnatured task refuse ; Nor be the bearer of unwelcome news.

Addiscm.

It might be one of those illnatured beings who are at enmity with mankind, and do therefore take pleasure in filling them with groundless terrors.

Atterbury. Who can describe

Their affectation, pride, illnuture, noise Pronenes* to change, even from the joy that pleased

‘em. Rowe’s Ambitious Stepmother.

ILLOGICAL, adj. 3 111 and logical. Ig-ILLOG’ICALLY, adv. > norant or negligent of the rules of reasoning.

One of the dissenters appeared to Dr. Sanderson so bold and illogical in the dispute, as forced him to say, he haa never met with a man of more pertinacious confidence, and less abilities. Walton.

Reason cannot dispute and make an inference so utterly illogical. Decay of Piety.

ILLUDE’, v. a. Lat. illudo. To deceive; to mock ; to impose on ; to play upon ; to torment by some contemptuous artifice of mockery.

Sometimes athwart, sometimes he strook him strait, And falsed oft his blow, t’ illude him with such bait.

Faerie Queene.

In vain we measure this amazing sphere, While its circumference, scorning to be brought Even into fanceed space, illudes our vanquished thought. Prior.

ILLUME’, v. a. ~} Fr. illuminer ; Span.

ILLU’MINE, v. a. \ alumbrar ; Lat. lumen

ILLT/MINATE, v. a. [and illumino, to en—

ILLUMINA’TION, n.s. flighten. The primary

ILLU’MINATIVE, adj. \ idea is the communi—

ILLU’MINATOR, n. s. J cation of light : the words are nearly synonymous : illumine, is a poetic variation of illuminate. To enlighten ; to adorn with lamps ; to enlighten with knowled’ge or grace ; to adorn with pictures of gold and various colors, as in old

missals ; to illustrate : illumination is either the act of supplying light, or the effect of it : illuminative, having the power to give light : illuminator, the agent by whom light is shed on any subject.

Satan had no power to abuse the. illuminated world with his impostures. Sandys' Travels.

Do thou vouchsafe, with thy love-kindling light, T' illuminate my dim and dulled eyn. Spenser.

Hymns and psalms are such kinds of prayer as are not conceived upon a sudden ; but framed by meditation beforehand, or by prophetical illumination are inspired. Hooker.

When yon same star, that's westward from the pole, Had made his course, t' illumine that part of heaven, Where now it burns. Shakspeare. Hamlet.

The sun is but a body illightened, and an illumination created. Raleigh't History.

We have forms of prayer imploring God's aid and blessing for the illumination of our labours, and the turning them into good and holy uses. Bacon.

No painting can be seen in full perfection, but as all nature is illuminated by a single light. Wotton.

Wha* makes itself and other tilings be seen, being accompanied by light, is called fire : what admits the illuminative action of fire, and is not seen, is called air. Diyby on Bodies.

He made the stars,

.And set them in the firmament of heaven, T” illuminate the earth and rule the night.

Milton.

To confirm his words, out flew Millions of flaming swords, drawn from the thighs Of mighty cherubims : the sudden blaze Far round illumined hell. Id.

What in me is dark, Illumine ! what is low, raise and support ! Id.

But he though blind of sight, Despised and thought extinguished quite, With inward eyes illuminated, His fiery virtue roused From under ashes into sudden flame.

Id. Samson Agonistes.

Flowers are strewed, and lamps in order placed, And windows with illuminations graced. Dryden.

When he illuminates the mind with supernatural light, he does not extinguish that which is natural.

Locke.

No holy passion, no illumination, no inspiration, can be now a sufficient commission to warrant those attempts which contradict the common rules of peace.

Sprat’* Sermons.

Reason our guide, what can she more reply Than that the sun illuminates the sky ; Than that night rises from his absent ray, And his returning lustre kindles day 1 Prior.

Illuminators of manuscripts borrowed their title from the illumination which a bright genius giveth to his •work. Felton.

To Cato, Virgil paid one honest line ; O let my country’s friends illumine mine.

Pope.

My health is insufficient to amplify these remarks, and to illumine the several pages with variety of examples. Wu.it>:.

The mountain’s brow Illumed with fluid gold, his near approach

Betokens. Thomson's Summer.

ILLUMINATE, Lat. i. e. enlightened, a name assumed by a secret society, said to be founded on the 1st of May 1776, by Dr. Adam Weishaupt, professor of canon law in the University of Ingoldstad. The avowed object of this order was, ' to diffuse from secret societies, as from so many centres, the light of science over the world ; to propagate the purest principles of virtue ; and to reinstate mankind in the happiness which they enjoyed during the golden age fabled by the poets.' Such a philanthropic object was doubtless well adapted to make a deep impression on the minds of ingenuous young men; and to such alone did Weishaupt at first address himself. But ' the real object/ we are assured by professor Robison and abbe Barruel, ' was, by clandestine arts to overturn every government and every religion ; to bring the sciences of civil life into contempt; and to reduce mankind to that imaginary state of nature, when they lived independent of each other on the spontaneous productions of the earth.' Free masonry being in high reputation all over Europe, when Weishaupt first formed the plan of his society, he availed himself of its secrecy, to introduce his new order, of which he constituted himself general, after initiating some of his pupils, whom he

styled Areopagites, in its mysteries. And when report spread the news throughout Germany, of the institution of the order of Illuminees, it was generally considered as a mere college lodge, which could interest the students no longer than during the period of their studies. Weishaupt's character too, which at this time was respectable for morality, as well as erudition, prevented all suspicion of his harbouring any such dark designs as have since come to light. But it would far exceed the limits to which our work is restricted, to give even an outline of the nature and constitution of this extraordinary society ; of its secrets and mysteries; of the deep dissimulation, consummate hypocrisy, and shocking impiety of its founder, and his associates; of their Jesuitical art in concealing their real objects, and their incredible industry and astonishing exertions in making converts ; of the absolute despotism, and complete system of espionage, established throughout the order ; of its different degrees of Novices, Minervals, Minor and Major Illuminees, Epopts or Priests, Regents, Magi, and Mankings ; of the Recruiters, or Insinu-ators, with their various subtle methods of insinuating into all characters and companies; the blind obedience exacted of the Novices ; &c. &c. Such of our readers as wish to be fully informed of these matters, we must refer to the abbe Barruel's works, and to professor Robisoc's Proofs of

a Conspiracy against all the Religions and Governments of Europe.

ILLUMINATING, a kind of miniature painting, anciently much practised for illustrating and adorning books. Besides the writers of books there were artists called illuminators, whose profession was to ornament and paint manuscripts. The writers first finished their part, and the illuminators embellished them with ornamented letters and paintings. We often find blanks left in MSS., for the illuminators, which were never filled up. Some of the ancient MSS. are gilt and burnished in a style superior to later times. Their colors were excellent, and their skill in preparing them must have been very great. The practice of introducing ornaments, drawings, emblematical figures, and even portraits, into MSS., is of great antiquity. Varro wrote the lives of 700 illustrious Romans, which he enriched with their portraits, as Pliny attests in his Natural History. Pomponius Atticus was the author of a work on the actions of the great men amongst the Romans, which he ornamented with their portraits. But these works have not been transmitted to posterity. There are, however, many precious documents remaining, which exhibit the advancement and decline of the arts in different ages and countries. These inestimable paintings and illuminations display the manners, customs, habits, ecclesiastical, civil, and military, weapons and instruments of war, utensils and architecture, of the ancients; and are of the greatest use in illustrating many important facts relative to the history of the times in which they were executed. A very armient MS. of Genesis, which was in the Cotton library, and almost destroyed by a fire in 1731, contained 250 curious paintings in water colors : twenty-one fragments, which e:-caped the fire.

were engraved by the society of antiquaries of London. Several specimens of curious paintings also appear in Lambecius's catologue of the imperial library of Vienna, in which forty-eight drawings, of

nearly equal antiquity with those in ‘ the Cotton library, are engraven; and several others may be found in various catalogues of the Italian libraries. The drawings in the Vatican copy of Virgil made in the fourth century, before the arts were entirely neglected, illustrate the different subjects treated of by the Roman poet. A miniature drawing is prefixed to each of the gospels brought over to England by St. Augustine in the sixth century, preserved in the library of Corpus Christi College, Cambridge : in the compartments of those drawings are depicted representations of several transactions in each gospel. Csedmon’s Poetical Paraphrase of the book of Genesis, written in the eleventh century, which is preserved amongst F. Junius’s MSS. in the Bodleian library, exhibits many specimens of utensils, weapons, instruments of music, and implements of husbandry used by the Anglo-Saxons. After the introduction 01 printing, this elegant art of illuminating gradually declined, and at length was quite neglected. On the whole, it may be observed, that, from the fifth to the tenth century, the miniature paintings in Greek MSS. are generally good, as are also some among those of Italy, England, and France. From the tenth to the middle of the fourteenth century they are commonly very bad, and may be considesed as so many monuments of the barbarity of those ages ; towards the end of the fourteenth the paintings in MSS. were much improved; and, in the two succeeding centuries, many excellent illuminations were produced.

ILLUMINED, ILLUMINATI, in church history, a term anciently applied to such persons as had received baptism. This name was occasioned by a ceremony in the baptism of adults ; which consisted in putting a lighted taper in the hand of the person baptised, as a symbol of the faith and grace he had received in the sacrament.

ILLUMINED, ILLUMINATI, is also the name of a sect of heretics, who sprang up in Spain about A. D.I 575, and were called by the Spaniards Almabrados. Their principal doctrines were, that by means of a sublime manner of prayer, to which they had attained, they entered into so perfect a state, that they had no occasion for ordinances, sacraments, or good works ; and that they could give way, even to the vilest actions, without sin. The sect of Illumined was revived in France in 1634, and was soon after joined by the Guerinetes, or disciples of Peter Guerin ; but they were so hotly pursued by Louis XIII., that they were soon destroyed.

ILLU’SION, n. s. Fr. illusion ; Lat. illusio. Mockery : false show ; counterfeit appearance ; error.

For prestes of the temple tellen this, — • That dremes ben the

revelacions Of godcles ; and alles well thei tell, iwis! Thut thoi hen iufernalle illusions.

Chaucer. Troilus and Creseide.

That, distilled by magick fiights, Shall raise such artificial sprighls,

As, by the strength of their illusion, Shall draw him on to his confusion.

Shakspeare.

There wanted not some about him that would have persuaded him that all was but an illuiion.

Bacon.

So oft they fell

Into the same illusion ; not as man, O'er whom they triumphed.

Milton.

An excuse for uncharitableness, drawn from pretended inability, is of all others the most general prevailing illusion. Atterbury.

Many are the illusions by which the enemy endeavours to cheat men into security, and defeat their salvation. Rogers.

To dream once more I close my willing eyes, Ye soft illusions, dear deceits, arise ! Pope.

We must use some illusion to render a pastoral delightful j and this consists in exposing the best side only of a shepherd's life, and in concealing its miseries. Id.

But, in the world's full light, those charming

dreams, Those fond illusions vanish. Thomson.

ILLU'SIVE, adj. Lat. illusus. Deceiving by false show.

The heathen bards, who idle fables drest, Illusive dreams in mystic forms exprest.

Blackmore. While the fond soul Wrapt in gay visions of unreal bliss, Still paints the illusive form.

Thomson's Spring.

ILLUSORY, adj. From Lat. in and luso-rius ; Fr. illusoire. Deceiving ; fraudulent.

Subtilty, in those who make profession to teach or defend truth, hath passed for a virtue : a virtue in-deed , which, consisting fqr the most part in nothing but the fallacious and illusory use of obscure or deceitful terms, is only fit to make men more conceited in their ignorance. Locke.

ILLUSTRATE, ». a. ILLUSTRATION, n. s. ILLTJS'TRATIVE, adj.

~\ Fr. illustrer ; Lat. I illustrp ; Span, es- \ clareccr ; Gr. \ap-

ILLTJS'TRATIVELY, adv. ˆ irpvvai. To brighten ILLUS'TRIOUS, adj. with light; to ex—

ILLUS'TRIOUSLY, adv. plain; clear; eluci-ILLUS'TRIOUSNESS, n.s. _, date; to make apparent: illustration, an explanation or exposition : illustrative, having the quality of elucidating : illustrious, from Latin illustris, famous ; renowned ; noble, either in descent or by exploits ; eminent ; excellent.

The magnanimous and most illustrate king Cophe-tisa set eye upon the pernicious and indubitate beggar Zenelophon. Shakspeare.

Matter to me of glory ! whom their hate Illustrates, when they see all regal power Given to me to c[ueli their pride. Milton.

Hell could no longer hold us iu her bounds, Nor this unvoyagrable gulf obscure Detain from following thy illustrious track.

Id. Paradise Lost.

They play much upon the smile or illustrative argumentation, to induce their enthymemes unto the people. Browne.

Authors take up popular conceits, and from tradition, unjustifiable, or false, illustrate matters of undeniable truth. Id.

Things are many times delivered hieroglyphically, metaphorica'ly, iltustra!ii < ely, and not with reference to action. Id.

ILL

Of every nation, each illustrious name,

Such toys as those have cheated into fame.

Dry den.

Whoever looks about him will find many living il-autrations of this emblem. L'Estrange.

Space and duration, being ideas that have something very abstruse and peculiar in their nature, the comparing them one with another may perhaps be of use for their illustration. Locke.

Thee she enrolled her gartered knights among, Illustrating the noble list. Philips.

In other languages the most illustrious titles are derived from things sacred. Smith.

He disdained not to appear at festival entertainments, that he might more illustriously manifest his charity. Atterbury.

You, carrying with you all the world can boast, To all the world illustriously are lost. Pope.

Tt is often a difficult mattei to illustrate gracefully the text of a sermon from the context, and to point nut the connexion between them. Blair's Sermon*. It is also in my orders

That your illustrious lady admitted.

Byron. The Two Foicari.

ILLUSTRIOUS, ILLUSTRIS, was, in the Roman empire, a title of honor peculiar tO people of a oertain rank. It was first given to the most distinguished amongst the knights, who had a right to bear the latus clavus; afterwards, they were entitled illustrious who held the first rank among those called Monorati; viz., the praefecti praetorii,

prafecti urbis, treasurers, comites, &c. There were, however, different degrees among the illustrious. There were illustres whom they called majores, and others called illustres minores : the praefectus praetorii was a degree below the master of the offices, though they were both illustres.

ILLYRiA, ILLYRICUM, or ILLYRIUM, in ancient geography, a country in Europe, extending from the Adriatic to Pannonia. Illyricum is the name used by Livy, Herodotus, and St. Paul. Its boundaries are variously assigned. Pliny makes it extend in length from the Arsia to the Drinius, thus including Liburnia on the west, and Dalmatia on the east; which is also the opinion of Ptolemy ; who settles its limits from Mount Scardus aad the Upper Moasia on the east, tr Istria on the west. It was a Roman province, divided by Augustus into the Superior and luienor, but of which the limits are left very indeterminate botn oy ancient historians and geographers. It now forms part of Croatia, Bosnia, Istria and Sclavonia.

ILLYRIA, a modern kingdom of South Europe, subject to Austria, comprehending Carinthia, Carniola, the vicinity of Trieste, Friuli, Cividal, Venetian Istria, a part of Croatia, and several islands in the gulf of Quarnero. It is bounded by Salzburg, Styria, Croatia, the Adriatic, the governmentof Venice, and the Tyrol. Most of this district has been long subject to Austria: ‘he name of Illyria was given to it by Buonaparte in 1810, and it was retained by the Austrians, on new-modelling the territorial divisions, in 1816. It is called a kingdom, and consists of the two governments of Laibach and Trieste ; the former inland, the latter maritime. These are subdivided into circles, the extent and population of which are as follow : —

GOVERNMENT OF TRIESTE.

Circles.

Square Miles.

Population.

Trieste

. 1440

175,935

Karlstadt

. 1278

108,205

Goritz

. 974

115,142

Fiume

1320

131,484

5,012

coi /-> £ < ?

GOVERNMENT

OF LAIBACH.

Circles.

Laibach

. 1425

139,088

Neustadtl .

. 1646

166,527

Adelsberg .

1458

104,200

Klagenfurt .

.875 ‘

162,759

Villach

2175

1 37,337

Total

13,591

-689,911 1,220,977

The chief towns are those that give name to the circles.

Austrian Illyria is mountainous ; being intersected by the Carinthian and Julian Alps, including the rugged and lofty range called the Karst. These mountains are mostly covered with forests, and it has several other bare and unproductive tracts ; but, on the other hand, there are a number of fertile valleys, enjoying a mild and warm climate. On the coast of the Adriatic, however, the bora, an impetuous wind severely felt in Croatia, is very destructive, and exhausts the soil. The principal rivers of Illyria are the Save, the Drave, the Laibach, and the Isonzo.

All the finer fruits of the south of Europe are produced here, and flax is cultivated in some districts ; but the forests supply immense quantities of timber. Silk is also cultivated, and on the sea coast the fishing is extensive. The mineral kingdom is also rich. At Idria quicksilver and cinnabar are produced in large quantities : and copper and iron mines every where abound. Other mineral products are calamine, vitriol, alum, saltpetre, and pit-coal : on the coast bay salt is made. Olives, oil, timber, and the product of the mines, are the staple commodities. The pastures are in general good, and the rearing of cattle and sheep is carried on with success. The manufactures are various, but not on a large scale, and consist of linen, woollen, and silk ; straw-plaiting, and hardware. The Austrian em-pire has no sea-ports except on the Adriatic, and Trieste and Fiume, the principal towns of Illyria, lie exactly in the road to the interior of the empire : the former is accordingly an entrepot for the trade of Germany, and the latter for that of Hungary.

This country remained under the dominion of Buonaparte, after the campaign of 1809, four years. The operations of the Austrians and British for its recovery took place in the close of

ILLYRIAN ISLANDS. Under this name are sometimes comprised the islands in the Adriatic, lying along the coast of Dalmatia. The principal are Veglia, Cherso, Arbe, Pago, Isola, Grossa, Brazza, Lesina, Lissa, Curzola, Sabion-cello, Meleda, and Lagosta. They all belong to the house of Austria.

ILLYRIUS (Matthias Flaccus,orFrancowitz), one of the most learned divines of the Augsburg confession, born in Istria, anciently called Illyrica, in 1520. He is said to have been a man of extensive learning, and great zeal ; but of a passionate temper. He studied under Luther and Melancthon ; and published a great number of works. He also had the chief direction of the Centuriae Magdeburgenses. He died in 1575.

ILMEN, a considerable lake of Russia, in the government of Novogorod : it is forty-eight miles long, and from twelve to eighteen wide,' receiving various rivers. The Russians call it Osero-Ilmen.

ILMINSTER, a market town of Somersetshire, four miles north-west from Crewkerne, and 133 W. S. W. from London. This town is seated on the Ille ; and, though low, is healthy, and was formerly a manufacturing town of some importance. It consists principally of two streets, one of which is a mile in length. The church is a handsome Gothic building, ornamented with a quadrangular tower in the centre, containing five bells and a clock. Within is a monument, erected in the beginnirig of the seventeenth century, to the memory of Nicholas Wad-ham and Dorothy his wife, the founders of Wadham College, Oxford. Here is a free grammar -school, endowed by them, with considerable property, now greatly improved, together with a good

salary and a house for the head master and his assistant. Market on Saturday.

” ILUS, in fabulous history, the fourth king of Troy, and son of Tros by Calirrhoe, father of Laomedon, and grandfather of Priam. He received the Palladium from Jupiter. See PALLA-DIUM.

I’M. Contracted from I am.

1M, is used commonly, in composition, for in before mute letters. What is im in Latin, when it is not negative, is often em in French ; and our writers, as the Latin or French occurs to their minds, use im or em : formerly im was more common, and now em seems to prevail.

Fr. image, imaginable, imaginant, imagi-natif; Latin imago; Span, imagcn; Greek J = -«KWV. The root of all I these words is image ; any corporeal repre-I sentation ; a picture; a likeness ; an idol; a

IM’AGE, n. s. & v. a.ˆ

IM’AGERY, n. s.

IMAG’INABLE, adj.

IMAG’INANT, adj.

IMAGINARY, adj.

IMAGINA’TION, n. s.

IMAGINATIVE, adj.

IMAG’INE, v. a.

IMAG’INER, n.s. copy ; similitude in appearance ; an idea or picture painted in the fancy: imagery, sensible lepresentations ; phantasms of the mind ; show; appearance : imaginable, possible to be conceived : imaginant, forming ideas : imaginary, fancied ; visionary ; unreal ; existing only in imagination : imagination, a faculty of the mind by which ideal pictures are formed ; the power of forming fanciful pictures, or representing absent things and beings to one’s self and others ; conception ; contrivance ; a fanciful opinion : imaginative, fantastic; full of fancies or imaginations: imagine, to copy by fancy;

scheme; contrive : imaginer, one who forms ideas.

iVTanasseh set the carved image in God's house.

Chronicles.

Thou hast seen all their vengeance, and all their imaginations against me. Lam. iii. 60.

Whose is this image and superscription ? Matt.

Whan that hire father slaine was on a night, Unto Dianes temple goth she right And hente the image in hire handles two, Fro which image wold she never go.

Chaucer. The Frankeleines Tale. His word is ben so comfortabill, and corny th so in

seson

That my wit is ovircome to make eny reson Contrary to counsaill, at myn ymagynocioune : Wherfor I wol tel a Tale to your consolacioune.

Id. The Pardonere and Tapttere. He ne ete, drouke, ne slept, ne worde seide, Imagining, aie, that she was unkinde ; For which, well nigh he wext out of his mind.

Id. Troilus and Cresei.de. Of marble stone was cut An altar carved with cunning imagery.

Faerie Queene .

The one is too like an image, and says nothing ; and the other too like a lady's oldest son, evermore talk. ing-Shahspeare.

Thy brother I. Even like a stony image, cold and numb. Id.

False sorrow's eye, Which, for things true, weeps things imaginary. Id.

The image of the jest I'll shew you here at large. Id.

Long mayest thou live,

To bear his image and renew his glories ! Id. I have be wept a worthy husband's death, And lived by looking on his images : But now two

mirrours of his princely semblance Are cracked in pieces by malignant death. Id.

Princes have but their titles for their glories, An outward honour for an inward toil j And, for unfelt imaginations,

They often feel a world of restless cares. Id.

Deny to speak with me? They're sick, they're

weary ?

They have travelled all night ? Mere fetches ; The images of revolt. Id. King Lear.

This is the man should do the bloody deed : The image of a wicked heinous fault Lives in his eye. Id. King John.

Look what notes and garments he doth give thee, Bring them, I pray thee, with imagined speed.

Sha/upearc. Prespnt fears

Are less than horrible imaginings. Id.

Fortune is nothing else than a power imaginary, to which the successes of human actions and endeavours were for their variety ascribed. Raleigh's History.

The juggler took upon him to know that such an one should point in such a place of a garter that was held up ; and still he did it, by first telling the imaginer, and after bidding the actor think. Id.

We will enquire what the force of imagination is, either upon the body imaginant, or upon another body.

Id.

Imagination I understand to be the representation of an individual thought. Imagination is of three kinds : joined with belief of that which is to come ; joined with memory of that which is past ; and of things present, or as if they were present : for I comprehend in this imagination feigned and at pleasure, as if one should imagine such a man to be in the vestments of a pope, or to have wings. Id.

Lay fetters and restraints upon the imaginative and fantastick part, because our fancy is usually pleased with the entertainment of

shadows and gauds.

Taylor’s Ride of Holy Lirinq

IMA

638

IMA

Things of the world fill the imaginattot part with beauties and fantastick imagery. Taylor.

0 whither shall I run, or which way fly The sight of this so horrid spectacle, Which erst my eyes beheld, and yet behold ! For dire imagination still pursues me. Milton.

; on his right

The radiant image of his glory sat, His only Son. Id. Paradise Lost.

Our simple apprehension of corporeal objf-cts, if present, is sense ; if absent, imagination : when we would perceive a material object, our fancies present us with its idea. Glanville.

Sometimes despair darkens all her imaginations ; sometimes the active passion of love cheers and clears her invention. Sidney.

1 fancyed pleasures, none but one who loves And doats as I did, can imagine like them.

Otway.

It is not imaginable that men will be brought to obey what they cannot esteem. South.

Men sunk into the greatest darkness imaginable, re-tain some sense and awe of a Deity. Tillotson.

The face of things a frightful image bears, And present death in various forms appears.

Dryden'i JEneid.

wish there may be iu this poem any instance of good imagery. Dryden.

How are immaterial substances to be imagined, which are each things whereof we can have no no-tion? Id.

When in those oratories might you see Rich carvings, portraitures, and imagery • Where every figure to the life expressed The godhead's power. Id.- Knight's Tale.

He made us to his image all agree That image is the soul, and that must be, Or not the maker's image, or be free. Id.

Still muf t I be upbraided with your line ; But your late brother did not prize me less, Because I could not boast of images. Id.

We are apt to think that space, in itself, is actually boundless ; to which imagination, the idea of space, of itself, leads us. Locke.

What are our ideas of eternity and immensity but the repeated additions of certain ideas of imagined parts of duration and expansion, with the infinity of number, in which we can come to no end of addition ?

Id.

The image of deity may be a proper object for that which is but the image of a religion. South.

The crowd indeed

Who kneel before the image, not the god, Worship the deity their hands have made.

Rowe's Ambitious Stepmother. Why wilt thou add to all the griefs I suffer, Imaginary ills and fancied tortures. Addisun.

Honour's a fine imaginary notion That draws in raw and inexperienced men To real mischief, while they hunt a shadow. Id.

What can thy imagery or sorrow mean : Secluded from the world, and all its care, Hast thou to grieve or joy, to hope or fear ?

Pt'or.

Outcasts of mortal race ! can we conceive Image of aught delightful, soft, or great? Id.

His ear oft frighted with the imaged voice Of heaven, when first it thundered. Id.

All the visionary beauties of the prospect, the paint aud imagery that attracted our senses, fade and dis-z-ppear. Rogers.

It might be a mere dream which he saw; the imagery of a melancholick fancy, such as musing men mistake for a reality. Atterbury.

Fate some future bard shall join, In sad similitude of griefs to mine, Condemned whole years in absence to deplore, And image charms he must behold no more.

Pope.

Where beams of warm imagination play, The memory's soft figure melt away. Id.

Whet, we speak of a figure of a thousand angles, we may have a clear idea of the nnruber one thousand .angles ; but the image, or sensible idea, we cannot distinguish by fancy from the image of a figure that has nine hundred angles. Watts.

Imagination's fool and error's wretch Man makes a death which Nature never made.' Young.

For this was thy fair image Stampt on his soul in godlike lineaments ?

Porteus's Death.

Now my sere fancy ' falls into the yellow Leaf/ and imagination droops her pinion, And the sad truth which hovers o'er my desk Turns what was once romantic to burlesque.

Byrun. Don Juan.

IMAGE, in theology, the use and adoration of images have been long controverted. The first instance that occurs in any credible author, of images among Christians, is that recorded by Tertullian de Pudicitia,

of certain cups, or chalices, on which was represented the parable of the good shepherd carrying the lost sheep on his shoulders: but this instance only proves, that the church at that time did not think emblematical figures unlawful ornaments of chalices. Another instance is taken from Eusebius, who says, that in his time there were to be seen two brass statues in the city of Paneas or Caesarea Philippi ; the one of a woman on her knees with her arms stretched out, the other of a man over against her with his hand extended to receive her : these statues were said to be the images of our Saviour and the woman whom he cured of an issue of blood. From the foot of the statue representing our Saviour, says the historian, sprung up an exotic plant, which, as soon as it grew to touch the border of his garment, was said to cure all sorts of distempers. Eusebius, however, vouches none of these things; nay, he supposes that the woman who erected this statue of our Saviour was a pagan, and ascribes it to a pagan custom. Philostor-gius expressly says, that this statue was carefully preserved by the Christians, but that they paid no kind of worship to it, because it is not lawful for Christians to worship biass or any other matter. Justin Mart. Apol. ii. p. 44. Clem. Alex. Strom. 5, Strom. 1, and Protr. p. 46, Aug. de Civit. Dei. lib. vii. c. 5, and lib.iv. c. 32. Id. de Fide et Symb. c. 7, Lactant. lib. ii. c. 3, Tertull. Apol. c. 12, Arnob. lib. vi. p. 202. Tertullian, Clemens Alexandrinus, and Origen, were of opinion, that, by the second commandment, painting and engraving were unlawful to a Christian, styling them evil and wicked arts. Tert. de Idol. cap. 3, Clem. Alex. Admon. ad Gent. p. 41, Origen contra Celsum. lib. vi. p. 182. The use of images in churches, as ornaments, was first introduced by some Christians in Spain, in the beginning of the fourth century; but the practice was condemned as a dangerous innovation, in a council held at Eliberas in 305. Epiphanius, in a letter preserved by Jerome

com. 11. ep. 6, bears a strong testimony against images ; and he may

be considered as one of the first Iconoclasts. The custom of admitting pictures of saints and martyrs into churches was rare in the end of the fourth century ; but be-came common in the fifth. But they were still considered only as ornaments, and even in this view they met with very considerable opposition. In the following century the custom of thus adorning churches became almost universal, both in the east and west. Petavius expressly says, that no statues were yet allowed in the churches; because they bore too near a resemblance to the idols of the Gentiles. Towards the close of the fourth, or beginning of the fifth century, images, which were introduced by way of ornament, and then used as an aid to devotion, began to be actual'y worshipped. However, it continued to be the doctrine of the church in the sixth, and in the beginning of the seventh century, that images were to be used only as helps to devotion, and not as objects of worship. The worship of them was condemned in the strongest terms by Gregory the Great ; as appears by two of his letters, written in 601. From this time to the beginning of the eighth century, there occurs no instance of any worship, given or allowed to be given to images by any council or assembly of bishops whatever. But they were commonly worshipped by the monks and populace in the beginning of the eighlh century ; insomuch, that in 726, when Leo published his famous edict, it had already spread into all the provinces subject to the empire. See ICONOCLASTS.

IMAGE, in optics, a figure in the form of any object, made by the rays of light issuing from the several points of it, and meeting in so many other points, either at the bottom of the eye, or on any other ground, or on any transparent me-dium, where there is no surface to reflect them. Thus we are said to see all objects by means of their images formed in the eye.

IMAGE, in rhetoric, also signifies a lively description of any thing in a discourse. Images in discourse are defined by Longinus to be, in general, any thoughts proper to produce expressions, and which present a kind of picture to the mind. But, in the more limited sense, images are such discourses as come from us, when, by a kind of enthusiasm, or an extraordinary emotion of the soul, we seem to see the things whereof we speak, and present them before the eye of those who hear us. These images, or pictures, are of great use, to give weight, magnificence, and strength, to a discourse. They warm and animate it ; and, when managed with art, seem, as it were, to subdue the hearer, and put him in the power of the speaker.

IMAGO, in entomology, a name given by Linnaeus to the third state of insects, when they appear in their proper shape and colors, and

undergo no more transformation. See ENTO-MOLC GY.

IMAM, or IMAN, a minister in the Mahommedan church, answering to a parish priest among us. The word properly signifies a prelate, one who presides over others; but the Mussulmans frequently apply it to a person who has the care of a mosque, who is always there

first, and reads prayers to the people, which they repeat after him. The imam is to be clear of all gross sins, otherwise he may be deposed, and his dignity couferred on another, \fter an imam, however, has once been owned as such, he who denies that his authority comes immediately from God is accounted impious ; he who does not obey him is a rebel. The imams have no outward mark of distinction ; their habit is the same with that of the Turks in common, except that the turban is a little larger, and folded somewhat differently. Imam is also applied, by way of excellence, to the four chiefs or founders of the four principal sects among the Mahommedans. Thus Ali is the imam of the Persian sect, or sect of the Schiates ; Abubeker the imam of the Sunnites, which is the sect followed by the Turks ; Saphii, or Safiy, the imaro of another sect, &c

IMAUS, in ancient geography, the largest mountain of Asia, and a part of Taunts ; from which the whole of India extends into a vast plain, resembling Egypt. (Strabo, Pliny.) It extends through Scythia as far as to the Mare Glaciale, dividing it into Scythia iutra Imaum, and Scythia extra Imaum (Ptolemy) ; and, stretching out along the north of India to the eastern ocean, separates it from Scythia. It had various names according to the different countries through which it extended.

IMBECILE’, adj. & t>. a. \ Fr. imbealle,

IMBECIL’ITY, n. $ \ Lat. imbecilis, in,

sine, and baculo. Weak ; feeble ; wanting strength either of mind or body, generally used with relation to the former. This word is corruptly written embezzle ; to weaken an estate or fortune by unjust appropriation.

These wicked wretches, these honndes of hel, (As I have told plaine in this sentence)

Were not content my dcre love thu* to quel ; But yet they must embeiile his presence, —

As I perceive by covert violence

They have him conveied to my displeasure For here is lafte but naked sepulture.

Chaucer. Lament of Mary Magdelein.

That way we are contented to prove,which, being the worse in itself, is notwithstanding now, by reason of common imbecility, the fitter and likelier to be brooked.

Hooker. Strength would be lord of imbecility,

And the rude son would strike his father dead.

Shakspeare.

Princes must in a special manner be guardians of pupils and widows, not suffering their persons to be oppressed, or their states imbeciled.

Taylor't Rule of Holy Living.

When man was fallen, and had abandoned his primitive innocence, a strange imbecility immediately seized and laid hold of him. Woodward.

IMBIBE', v. a. ~\ Fr. imbiber; Lai. imbibo.

IMBI'BEE, n.s. > To drink in; to draw in

IMBIBIT'ION, n. s. j or suck up ; to drench, saturate, or soak. This sense, though unusual, perhaps unexampled, is necessary in English, unless the word imbue be adopted, which our writers seem not willing to receive. To admit into the mind. Imbiber, one who drinks. Imbibition, the act of sucking or drinking in.

Most powders grow more coherent by mixture of water than of oil ; the reason it the congruity of bodies, which maketh a perfecter imbibition and incorporation.

Bacon.

1MB

A pot of ashes will receive more hot water than cold, for as much as

the warm water imbibeih more of the salt. Browne.

A drop of oil, let fall upon a sheet of white paper, that part of it, which, by the imbibition of the liquor, acquires a greater continuity and some transparency, will appear much darker than the rest ; many of the incident beams of light being now transmitted, that otherwise would be reflected. Boyle.

It is not easy for the mind to put off those confused notions and prejudices it has imbibed from custom.

Locke.

Metals, corroded with a little acid, turn into rust, which is an earth tasteless and indissolvable in water ; and this earth, imbibed w'th more acid, becomes a me-tallick salt. Newton.

Those that have imbibed this error, have extended the influence of this belief to the whole gospel, which they wi1' not allow to contain any thing but promises.

Hammond.

The torrent merciless imbibes Commissions, perquisites, and bribes. Sicift. Conversation with foreigners enlarges our minds, and sets them free from any prejudices we are ready to imbibe concerning them. Watii.

Illumined wide The dewy-skirted clouds imbibe the sun.

Thomson's Autumn.

1MBITTER, v. a. From bitter. To make bitter ; figurately to deprive of pleasure ; to make unhappy ; to exasperate.

Is there any thing that more imbittert the enjoyments of this life than shame ? South.

Let them extinguish their passions which imbitter their lives, and deprive them of their share in the happiness of the community. Additon's Freeholder.

IMBOD'Y, v. a. & v. n. To invest with a body ; to make corporeal ; to incorporate, to condense, to enclose ; to unite in a mass, or to coalesce.

I by vow am so imbodied yours, That she which marries "you must

marry me.

Shakspeare.

The soul grows clotted by contagion, Imbodies and imbrutes • ‘till she quite lose The divine property of her first being. Milton.

Never since created man

Met such imbodied force, as named with these, Could merit more than that small infantry Warred on by cranes. Id. Paradite Lost.

Under their head imbodyed all in one. Hilton. Though assiduity in the most fixed cogitation be no trouble to immaterialized spirits, yet is it more than our imbodied souls can bear without lassitude.

Glanville’s Scepsis.

Then Clausus came, who led a num’rous band Of troops imbodied, from the Sabine land.

Dryden. JEneat. An opening cloud reveals An heavenly form embodied, and arrayed With robes of light. Dryden.

The idea of white, which snow yielded yesterday, and another idea of white from another snow to-day, put together in your mind, imbudy and run into one.

Locke.

In those strata we shall meet with the same metal or mineral imbodied in stone, or lodged in coal, that elsewhere we found in marie. Woodward.

IMBOIL’, v.n. From boil. Toexestuate; to effervesce; to move with violent agitation, like hot liquor in a caldron. Not now in use.

1MB

With whose reproach anii odious menace, The knight imboiling in his haughty heart, Knit all his forces, and ‘gan soon embrace His grasping hold. Faerie Queens.

IMBOL’DEN, v. a. From bold. To raise to confidence ; to encourage.

‘Tis necessary he should die : Nothing imboldens sin so much as mercy.

Shakspeare.

I think myself in better plight for a lender thun you are, the which hath something imboldened me to this unseasoned intrusion. Id.

I was the more emboldened, because I found I had a soul congenial to his. Dryden.

Nor -flight was left, nor hopes to force his way ; Imboldened by despair, he stood at bay. Id.

Their virtues and superior genius imboldened them, in great exigencies of state, to attempt the service of their prince and country out of the common forms.

Swift.

IMBO’SOM, v. a. From bosom. To bold on the bosom ; to cover fondly with the folds of one’s garment ; to hide under iny cover.

The Father infinite, By whom in bliss imbosomed sat the Son.

Milton.

Villages imbosomed soft in trees, And spiry towns by surging columns marked.

Thomson. To admit to the heart, or to affection.

But glad desire, his late imbosomed guest, Yet but a babe, with milk of sight he nurst.

Sidney

Who glad to imbosom his affection vile, Bid all she might, more plainly to appear.

Faerie Queene.

IMBOUND’jV.o. From bound. To enclose; to shut in.

That sweet breath, Which was imbounded in his beauteous clay.

Shakipeare.

IMBOW, v. a. J From bow. To arch ; lMBOw'MEXT,re. s. J to vault.

Prince Arthur gave a box of diamond sure, Imbowed with gold and gorgeous ornament.

Faerie Queene.

Imbowed windows be pretty retiring places for conference : they keep both the wind and sun off.

Bacon.

The roof all open, not so much as any imbowment near any of the walls left. Id.

Let my duo feet never fail, To walk the studious cloister's pale, And love the high imbowed roof, With antick pillar massy proof. Milton.

IMBOW'ER, v. a. From bower. To cover with a bower; to shelter with trees.

Thick as autumnal leaves that strow the brooks In Valumbrosa, where the Etrurian shades High over-arched imbower. Milton's Paradise Lost. And stooping thence to Ham's embowering walks, In spotless peace retired. Thomson.

IMBRANG'LE, v. a. To entaDgle. A low word.

With subtle cobweb cheats They're catched in knotted law, like nets ; In which, when once they are embrangled, The more they stir, the more they're tangled.

Hudibras.

IM'BRICATED, adj. From Lat. imbrex. Indented with concavities ; bent &nd hollowed like a roof or gutter-tile.

1MB

IMBRICATED SHELLS, in natural history, are those which are elevated into transverse ridges, lying over one another at the base, in the manner of the tiles on a house-top. Also the name of a peculiar species of cordiformis, or heart-shell, whose sides are remarkably ridged in this transverse manner, and at the same time so divided longitudinally, by seven high ribs running from the apex to the edge, that the whole represents the roof of a house with the beams and rafters, before they are covered by the tiling.

IMBRICATION, n. s. Lat. imbrex. Con-care indenture.

All is guarded with a well-made tegument, adorned with neat imbrications, and many other fineries.

Derham.

IMBROS, an island in the Grecian archipelago, situated east of Mount Athos, west of the peninsula of the Dardanelles, south of Samothracia, and north-east of Lemnos. N. lat. 40° 10', E. long. 23° 25'. It is not much visited by European travellers, and greatly resembles most of the other Greek islands, presenting the same aspect of fertility, the same delightful climate, and similar manners of the inhabitants. Imbros was anciently much larger than it is at present, but the inroads of the sea have by degrees reduced it to a surface the circumference of which is scarcely thirty miles. A porphyry rock forms the basis of the island, in several places appearing bare, and interrupting the vegetation of the soil ; in some parts covered with sponges on the sea-coast, where it is carpeted with a great quantity of moss ; while caper-bushes, asphodel, and other plants spontaneously take root in its interstices. In the beds of the torrents are found grouped together the agnus castus and the nerion ; and here also are found jasper, and banks of yellow earth for dyeing, which the inhabitants ex-port to Constantinople. This island is infested with several sorts of serpents, none of which, however, are venomous. Olives, wild pear-trees, and kermesoaks, the acorns of which serve to fatten a great number of pigs, are the only trees that grow in Imbros. Its principal produce is com, which is an article of exportation ; in other respects it has little commerce, and the inhabitants are by no means industrious ; as they have no good ports, they are seldom visited by foreign vessels. The

whole island contains but five or six villages, and 1000 houses.

The English traveller, Sibthorpe, happening to land here, was very hospitably entertained by the Papas, at a panagia, or village festival. He was conducted to a hamlet surrounded by olive trees, where two priests were officiating in s. rustic kind of chapel, in the presence of a great number of peasants. In these remote corners of the Greek commonwealth the distribution of provisions forms a part of every religious festival, as it did among the first Christians. The Englishman, having presented his offering, was considered as a member of the parish, and admitted to the sacred banquet. Five lambs, sacrificed in honor of the patron, whose festival they were celebrating, were cut in pieces and distributed among the men, women, and children, as were also other provisions, such as kouikous and inisitra, flummery, olives, and raisins. The

priest then blessed the bread and the wine, and every man of the community presented himself, to rece've from the hands of the pastor a small piece of the bread dipped in the wine. The women did not partake of this mystical distribution, probably on account of the wine, the use of which their habitual sobriety forbids to the Greek women. While eating the consecrated bread, every one made with his finger, the sign of a cross on his mouth. This ceremony passed with great simplicity, while happiness seemed to brighten the countenances of the rustic guests. There was only one of the priests, however, who showed any affability towards the stranger ; the others were gloomy and silent.

1MBROWN , v. a. From brown. To make brown; to darken; to obscure; to cloud \V here the morning sun first warmly smote The open field, and where the unpierced shade Imbroumed the noontide bowers. Milton,

The foot grows black that was with dirt imbrowned, And in thy pocket gingling halfpence sound. Gay.

Another age shall see the golden ear Imbrvwn the slope, and nod on the parterre.

Pope.

Imbrowned with native bronze, lo ! Henley stands.

U.

IMBRUE’, v. a. From in and brue. To steep; to soak; to wet much or long. This seems indifferently written with im or em.

Thou mad’st many hearts to bleed Of mighty victors, with wide wounds embrued, And by thy cruel darts to thee subdued. Speruer.

At me, as at a mark, his bow he drew, Whose arrows in my blood their wings imbrue.

Sandys.

The merciless Turks, embrued with the Christian olood, were weary of slaughter, and began greedily to seek after the spoil. Knollet.

There streams a spring of blood so fast From those deep wounds, as all embrued the face Of that accursed caitiff. Daniel’s. Civil War

Lucius pities the offenders, That would embrue their hands in Cato’s blood.

Addison.

Lo ! these hands in murder are imbrued, Those trembling feet by justice are pursued.

Prior.

There, where two ways in equal parts divide. The direful monster frow afar descried, Two bleeding babes depending at her side; Whose panting vitals, warm with life, she draws, And in their hearts embrues her cruel claws. Pope.

His virgin sword jEgysthus’ veins imbrued ; The murderer fell, and blood atoned for blood.

Id.

A good man chuses rather to pass by a verbal in-jury than imbrue his hands in blood. Clarissa To pour; to emit moisture. Obsolete.

Some bathed kisses, and did oft embrue The sugared liquor through his melting lips.

Faerie Queene.

IMBRUTE > .a.&v.n. From brute. Tode-grade to brutality ; to sink down to brutality.

I, who erst contended

With gods to sit the highest, am now constrained Into a beast ; and mix with bestial slime, This essence to incarnate and imbrute. Milton.

The soul grows clotted by contagion, Imbodies and imbrutei, ‘till she quite lose The divine property of her first being. Id.

IMBST, or UIMST, a town of the Austrian states, in the Tyrol, on the Inn. It has 2200 inhabitants, and is the chief place of a district, including the Upper Immerthal and the Vinstgau, with a population of 96,000. Imbst has acquired notoriety from the number of Canary birds reared in it for sale. The annual value of birds was formerly £4000. Eight miles south-west of Stambs, and nine S. S. E. of Ruetten.

IMBUE’, v.a. Lat. imbuo. To tincture deep; to imbibe or soak with any liquor or die.

• they satiate and soon fill.

Though pleasant, but ihy words, with grace divine

Imbued, bring to their sweetness no satiety.

Milton.

I would render this treatise intelligible to every rational man, however little versed in scholastick learning, among whom I expect it will have a fairer passage, than among those that are deeply imbued with other principles. Digby. ‘

Clothes which have once been thoroughly imbued with black, cannot well afterwards be dyed into lighter color. Boyle.

Where the mineral matter is great, so as to take the tj'r . the body appears imbued and tinctured with the color. Woodward.

To IMBURSE', v. a. Fr. bourse. To stock with money. This should be emburse, from Fr. embourser.

IMIRETTA, a country of Asia, north of Persia, stretches along the southern limit of Caucasus, having the Black Sea on the westNand Georgia on the east, and lies between the forty-third and forty-fourth degree of north latitude. The internal government is in a great measure independent; but, in 1784, Russia assumed a nominal supremacy here. 'Almost every family chooses for itself a habitation in the woody hills, or pleasant valleys, where they live in the most retired manner. The Imiretians are said to have deep sounding tones by which they understand and call each other on any important occasion ; and, on this signal being given, hundreds of people issue from places where no one could have supposed there had been a creature. They are chiefly of Georgian origin. The capital is Cotatis, on the left bank of the Phasis.

IMIT ABILITY, n. s. *} Lat. imitabilis ; Fr. IM ITABLE, adj. j writable ; Span, imi—

IM'ITATE, v. a. (tar; Lat. imitor. The

IMITA'TION, n. s. f quality of being imi—

IM'ITATIVE, adj. \ table: imitable, wor—

IM'ITATOR, n. s. j thy or possible to be

imitated : imitate, to copy ; endeavour to resemble; to counterfeit; to pursue the course of a composition with parallel images: imitation, the act of copying; the copy; a method of translation : imitative, inclined to copy or resemble ; thus man is an imitative being: aiming at resemblance, as, painting is an imitative art ; formed after some original : imitator, one that copies after or resembles another.

How could the most base men, and separate from all imitable qualities, attain to honour but by an observant slavish course ? Raleigh.

We imitate and practise to make swifter motions than any out of our muskets. Bacon.

As acts of parliament are not regarded by most tmitable writers, I

account the relation of them improper for history. Hayward.

Despise wealth, and imitate a. god. Cowley.

This hand appeared a shining sword to wield, And that sustained an imitated shield.

Dryden'i JEneid, This temple, less in form, with equal grace,

Was imitative of the first in Thrace. Dryden.

Imitators are but a servile kind of cattle, says the poet. Id.

Since a true knowledge of nature gives us pleasure, a lively imitation of it, cither in poetry or painting, must produce a much greater ; for both these arts are not only true imitation* of nature, but of the best na-ture. " Id.

In the way of imitation, the translator not only varies from the words and sense, but forsake* them as he sees occasion; and, taking only some general hints from the original, rms division on the groundwork. Id.

According to the multifariousness of this imitability, so are the possibilities of being. Norris

For shame ! what, imitate an ode ? Gay.

The characters of men placed in lower stations of life, are more useful, as being imitable by greater numbers. Atterbury.

Several other arts imitate as well as Poetry ; and an imitation of human manners and characters may be carried on in the humblest Prose, no less than in the more lofty Poetic strains. Blair'* Lectures.

IMITATION, in music, admits of two different Senses. Sound and motion are either capable of imitating themselves by a repetition of their own particular modes; or of imitating other objects of a nobler and more abstracted nature. Nothing perhaps is so purely mental, nothing so remote from external sense, as not to be imitable by music. 'Dramatic or theatrical music,' says Rousseau, ' contributes to imitation no less than painting or poetry : it is in this common pr.n-ciple that we must investigate both the origin and the final cause of all the fine arts. But this imitation is not equally extensive in all the

imitative arts. Whatever the imagination can represent to itself is in the department of poetry. Painting, which does not present its pictures to the imagination immediately, but to external sense, and to one sense alone, paints only such objects as are discoverable by sight. Music might appear subjected to the same limits, with respect to the ear; yet it is capable of paintini every thing, even such images as are objects of ocular perception alone: by a magic almost inconceivable it seems to transform the ears into eyes, and endow them with the double function of perceiving visible objects by the mediums of their own; and it is the greatest miracle of an art, which can only act by motion, that it can make that very motion represent absolute quiescence. Night, sleep, silence, solitude, are the noble efforts, the grand images, represented by a picturesque music. Though all nature should be asleep, he who contemplates her does not sleep ; and the art of the musician consists in substituting, for this image of insensibility in the object, those emotions which its presence excites in the heart of the contemplator. He not only,' continues Rousseau, 'ferments and agitates the ocean, animates the flame to conflagration, makes the fountain murmur in his harmony, calls the rattling shower from heaven, and swells the torrent to restless rage ; but he paints the horror? of a boundless and frightful desert, involves the

subterraneous dungeon in tenfold gloom, soothes the tempest, tranquillises the disturbed elements, and from the orchestra diffuses a recent fragrance through imaginary groves ; nay, he excites in the soul the same emotions which we feel from the immediate perception and full influence of these objects.' Imitation, in its technical sense, is a reiteration of the same air, or of one which is similar, in several parts where it is repeated by one after the other, either in unison, or at the distance of a fourth, a fifth, a third, or any other interval whatever. The imitation may be happily enough pursued, even though several notes should be changed ; provided the same air may always be

recognised, and that the composer does not deviate from the laws of proper modulation. Frequently, in order to render the imitation more sensible, it is preceded by a general rest, or by long notes, which seem to obliterate the impression formerly made by the air, till it is renewed with greater force and vivacity by the commencement of the imitation. ,

IMMACTJLATE, adj. Fr. immacule ; Lat. immaculatus. Spotless, pure, undefiled, as applied to character; limpid, clear, not turbid, as applied to fluids.

To keep this commandment immaculate and blameless, was to teach the gospel of Christ. Hooker. His words are bonds, his oaths are oracles ;

His love sincere, his thoughts immaculate.

Shahipeare.

Thou clear, immaculate, and silver fountain, From whence this stream, through muddy passages, Hath had his current and denied himself. Id.

The king, whom catholicks count a saint-like and immaculate prince, was taken away in the flower of his age. Bacon.

Were but my soul as pure

From other guilts as that, Heaven did not hold

One more immaculate. Denham's Sophy.

The world's infectious ; few bring back at eve

Immaculate, the manners of the morn. Young.

Hence chartered boroughs are such public plagues, And burghers, men immaculate perhaps In all their private functions, once combined, Become a loathsome body, only fit For dissolution, hateful to the main. Cowper.

IMMAN'ACLE, v. a. From manacle. To fetter; to confine.

Thou can'st not touch the freedom of my mind With all thy charms, although this corporal rind Thou hast immanacled. Milton.

IMMANE', adj. Lat. immanis. Vast; prodigiously great.

IM’MANENT, adj. Fr. immanent; Lat. in and maneo. Intrinsic ; inherent ; internal.

Judging the infinite essence by our narrow selves, we ascribe intellections, volitions, and such immanent actions, to that nature which hath nothing in common with us. Glimville.

What he wills and intends once, he willed and intended from all eternity ; it being grossly contrary to the very first notions we have of the infinite perfections of the Divine Nature to state or suppose any new immanent act in God. South.

IMMAN’IFEST,a$. In and manifest. Not manifest; not plain. Not in use.

A time not much unlike that which was before time, ˆmmanifest and unknown. Browne’s Vulgar Errours.

IMMAN’ITY, n. s. Lat. immanitas. Barbarity ; savageness. VOL XT.

It was both impious and unnatural That such immunity and bloody strife Should reign among professors of one faith.

ShakspeuTe.

IMMARTIAL, adj. In and martial. Not warlike.

My powers are unfit,

Myself immartial. Chapman’s Odyssey.

IMMASK’, v. a. In and mask. To cover > to disguise.

I have cases of buckram for the nonce, to immask our noted outward garments.

Shakspeare. Henry IV.

IMMATE’RIAL, adj. ~} Fr. immateriel ; Lat.

IMMATERIALITY, n.s. \ in and materia. In—

IMMATE’RI ALLY, adv. ! corporeal; distinct

IMMATE’RIALISED, < W//. [from, or void of mat—

IMMATE’RIALNESSˆJ.S. j ter ; unimportant;

IMMATE’IUATE, adj. J without weight; impertinent; without relation. This sense has crept into the conversation and writings of many persons, but ought to be rejected. Immaterially, in a manner not depending upon matter: imma-terialised, incorporeal. The other words are synonymous.

Angels are spirits immaterial and intellectual, the glorious inhabitants of those sacred palaces, where there is nothing but light and immortality ; no shadow of matter for tears, discontentments, griefs, and un-comfortable passions to work upon ; but all joy, tranquility, and peace, even for ever and ever, do dwell.

Hooker.

It is a virtue which may be called incorporeal and immateriate, whereof there be in nature but few.

Bacon.

After a long enquiry of things immerse in matter, I interpose some object which is immateriate, or less materiate ; such as this of sounds. Id.

As then the soul a substance hath alone. Besides the body, in which she is confined j

So hath she not a body of her own, But is a spirit, and immaterial mind. Davies.

Montanus, in his consultations, holds melancholy to be material or immaterial.

Burton’s Anatomy of Melancholy.

Though assiduity in the most fixed cogitation be no trouble to immaterialixed spirits, yet it is more than our embodied souls can bear without lassitude.

Glaneille’s Scepsis.

The visible species of things strike not our senses immaterially ; but, screaming in corporal rays, do carry with them the qualities of the object from whence they flow, and the medium through which they pass. Browne’s Vulgar Errours.

No man that owns the existence of an infinite spirit can doubt the possibility of a finite spirit ; that is, such a thing as is immaterial, and does not contain any principle of corruption. Tillotson.

When we know cogitation is the prime attribute of a spirit, we infer its immateriality, and thence its immortality. * Watts.

Those immaterial felicities we expect, suggest the necessity of preparing our appetites, without which heaven can be no heaven to us. Decay of Piety.

IMMATURE', adj. ~\ Lat. immaturw. Not

IMMATURE'LY, adv. f arrived at fulness or

IMMATVRE'NESS, n. s. I completion ; unripe ;

IMMATURITY, n. s. J hasty; before the natural time ; premature ; a state short of perfection ; incompleteness. Used generally in the figurative

The land enterprize of Panama was an ill-measured and immature counsel, grounded upon a false account, that the passages were no better fortified than Drake had left them. Bacon.

We are pleased, and call not that death immature, if a man lives 'till seventy. Taylor.

The earth was formed, but in the womb as yet Of waters, embryon immature involved, Appeared not. Milton's Paradise Lost.

I might reasonably expect a pardon from the ingenuous for faults committed in an immaturity of age and judgment. Glanville.

This is your time for faction and debate,

For partial favour, and permitted hate ;

Let now your immature dissension cease,

Sit quiet. Dryden.

IMMEABIL'ITY,n.s. LsA.immeabilis. Want of power to pass. So it is used in the example ; but it is rather incapability of affording passage.

From this phlegm proceed white cold tumours, viscidity, and consequently immeability of the juices.

Arbuthnot.

IMMEASURABLE, adj. > From in and

IMMEAS'URABLY, adv. J measure. That cannot be measured ; immense ; indefinitely extensive ; beyond all measure.

The Spaniards immeasurably bewail their dead.

Spenser.

Churches reared up to an height immeasurable, and adorned with far more beauty in their restoration than their founders before had given them. Hooker. From the shore

They viewed the vast immeasurable abyss,

Outrageous as a sea, dark, wasteful, wild. Milton. There ye shall be fed, and filled,

Immeasurably ; all things shall be your prey. Id.

What a glorious shew are those beings entertained with, that can see such tremendous objects wandering through those immeasurable depths of ether !

Additon's Guardian.

Nor friends are there, nor vessels to convey, Nor oars to cut the immeasurable way.

Pope’s Odyssey.

IMMECHAN’ICAL, adj. In and mechanical. Not according to the laws of mechanics.

We have nothing to do to show any thing that is immechanical, or not according to the established laws of nature. Cheyne.

Nothing will clear a head possessed with immechanical notions. Mead.

IMME’DIACY, n. s.) Fr. immediat ; Lat.

IMME’DIATE, adj. > in and medius. Next

IMME’DIATENESS, n. s. j unto ; presently following ; without any interposing medium : this seems to be the primary and essential meaning. Not acting by second causes ; instant ; present with regard to time : immediacy, personal greatness ; power of acting without dependance. This is a harsh word, and sense peculiar, I be-believe, to Shakspeare : immediately is instantly, without the intervention of other cause or event : the substantive has a similar meaning.

He led our powers,

Bore the commission of my place and person, The which immediacy may well stand up, And call itself your brother. Shaksjteare. King Lear. Her father hath commanded her to slip

Away with Slender, and with him at Eaton

Immediately to marry. Shakspeare.

Immediate are my needs, and my relief,

Must not be tost and turned to me in words

But find supply immediate. Id. Timon.

It is much to be ascribed to the immediate will of God, who giveth and taketh away beauty at his pleasure. Abbot.

Death denounced that day, Which he presumes already vain, and voia Because not yet inflicted, as he feared, By some immediate stroke. Milton’s Paradise Lost.

Reason in man obscured, or not obeyed Immediately inordinate desires And upstart passions catch the government From reason, and to servitude reduce Man till then free. Id.

Moses mentions the immediate causes of the deluge, the rains and the waters ; and St. Peter mentions the more remote and fundamental causes, that constitution of the heavens. Burnet.

God's acceptance of it, either immediately by himself, or mediately by the hands of the bishop, is that which vests the whole property of a thing in God.

South.

But, she, howe'er, of victory sure, Contemns the wreath too long delayed ;

And armed with more immediate power, Calls cruel silence to her aid. Prior.

The news immediate to her mother brought, While, pierced with anxious thought, she pined away The lonely moments for Lavinia's fate.

Thomson. Autumn.

IMMED'I CABLE, adj. Lat. immedicabilis. Not to be healed ; incurable ; beyond the skill of a physician.

My griefs ferment and rage, Nor less than wounds immedicable, Rankle and fester, and gangrene To black mortification. Milton's Agonistes.

IMMEM'ORABLE, adj. > These words are

lMMEMo'RiAL,arf/. 5 derived from in

and memoria. Immemorable is not worth recollection ; and immemorial, past the time of recollection : so ancient that they cannot be traced to their origin.

All the laws of this kingdom have some memorials in writing ; yet all have not their original in writing ; for some obtained their force by immemorial usage or custom. Hale.

By a long immemorial practice, and prescription of an aged thorough-paced hypocrisy, they come to believe that for a reality, which, at first

practice of it, hey themselves knew to be a cheat. South.

IMMENSE’, adj. ~\ Fr. immense; Lat.

IMMEN’SITY, n. s. {immensus ; Greek «-

IMMENSURABIL’ITYˆ.S. £ ptroia. That which

IMMEASURABLE, adj.) cannot be limited, bounded, or measured ; infinite : terms applicable to buildings and to the universe ; applicable also to the attributes of Deity, which are beyond the grasp of finite understandings.

O goodness infinite ! goodness immense !

That all this good of evil shall produce ! Milton.

By the power we find in ourselves of repeating, as often as we will, any idea of space, we get the idea of immensity. Locke.

He that will consider the immensity of this fabrick, and the great variety that is to be found in this inconsiderable part of it which he has to do with, may think that in other mansions of it there may be other and different intelligent beings. Locke.

As infinite duration hath no relation unto motion and time, so infinite or immense essence hath no relation unto body j but is a thing distinct from all corporeal magnitud’e, which we mean when vre speak of immensity, and of God as of an immense being.

Grew.

All these illustrious worlds,

And millions which the glass can ne'er descry,

Lost in the wilds of vast immensity,

Are suns, are centers. Blackmore's Creation.

We shall find that the void space of our system is immensely bigger than all its corporeal mass. Bentley.

How our hearts tremble at thy love immense ! Ill love immense, inviolably just. Young.

Lo from the dread immensity of space

Returning, with accelerated course,

The rushing comet to the sun descends.

Id. Night Thoughts. Meantime refracted from yon eastern cloud,

Bestriding earth, the grand ethereal bow

Shoots out immense. Thomson.

IMMERGE/ v. a. ~) Lat. immergo. To

IMMERSE', v. a. & adj. > put under water ; to

IMMER'SION, n. s. J sink or cover deep; to keep in a state of intellectual depression : immerse, buried ; covered (not much in use) : immersion, the act of putting a body below the surface of any fluid ; the state of being overwhelmed or lost.

After long enquiry of things immerse in matter, I interpose some object which is immateriate or less materiale ; such as this of sounds, that the intellect may become not partial. Bacon,

He stood

More than a mile immersed within the wood ;

At once the wind was laid. Dryden.

It is a melancholy reflection that our country, which, in times of popery, was called the nation of saints, should now have less appearance of religion in it than any other neighbouring state or kingdom ; whether they be such as continue still immersed in the

errors of the church of Rome, or such as are recovered out of them. Addison's Freeholder.

Achilles's mother is said to have dipped him, when he was a child, in the river Styx, which made him invulnerable all over, excepting that part which the mother held in her hand during this immersion.

Id. Guardian.

They observed that they were immersed in their rocks, quarries, and mines, in the same manner as they are at this day found in all known parts of the world. Woodward.

Many persons, who, through the heat of their lusts and passions, through the contagion of ill example, or too deep an immersion in the affairs of life, swerve from the rules of their holy faith ; yet would, upon extraordinary warnings, be brought to comply with them. A tterbury.

We are prone to engage ourselves with the business, the pleasures, and the amusements of this world : we give ourselves up too greedily to the pursuit, and immerse ourselves too deeply in the enjoyments of them.

Id.

It is impossible to have a lively hope in another life, and yet be deeply immersed in the enjoyments of this. •% Id.

One half sate up, though numbed with the immersion, While t'other half were laid down in their place, At watch and watch. Byron. Don Juan.

IMMERTT, n.s. Lat. 'immeritum. Want of worth ; want of desert. This is a better word than demerit, which is now used in its stead.

When I receive your lines, and find their expressions of a passion, reason and my own immerit tell me it must not be for me. Suckling.

IMMETHOD'ICAL, adj. ? In and metho—

IMMETHOD'ICALLY, adv.) dical. Confused ; without regularity or method.

M. Bayle compares the answering of an immethodi-cul author to the hunting of a duck : when you have

him full in your sight, he gives you the slip, and becomes invisible. Addison.

IM'MINENCE, n. s. \ Fr. imminent ; Lat. IM'MINENT, adj. 5 imminens. Nearness

of any ill or danger; threatening; impending, always used in an ill sense.

What dangers at any time are imminent, what evils hang over our heads, God doth know, and not we.

Hooker.

I do not speak of flight, of fear, of death ; But dare all imminence, that gods and men Address their dangers in. Shakspeare.

Three times to-day You have defended me from imminent death. Id.

These she applies for warnings and portents Of evils imminent j and on her knee • Hath begged, that I will stay at home to-day. Id.

To them preached

Conversion and repentance, as to souls In prison, under-judgments imminent.

Milton.

Men could not sail without imminent danger and inconveniences. Pope.

IM'MINGLE, v. a. ˆ From in and mingo, IMMISCIBII/ITY, n. s. \ mmisceo. To mingle ; to IMMIS'CIBLE, v. a. 3 mix; unite : immiscible, that does not admit of being mingled.

Some of us, like thee, through stormy life Toiled, tempest-beaten, ere we could attain This holy calm, this harmony of mind, Where purity and peace immingle charms.

Thomson.

IMMINUTION, n.s. From Lat. imminuo. Diminution ; decrease.

These revolutions are as exactly uniform as the earth's are, which

could not be, were there any place for chance, and did not a Providence continually oversee and secure them from all alteration or imminution.

Ray on the Creation.

IMMIS'SION, n. s. > Lat. immissio,immitto. IMMIT', v. n. 5 The act of sending in ;

contrary to emission : to send in.

To IMMIX', v. a. In and mix. To min-gle.

Samson, with these immixt, inevitably Pulled down the same destruction on himself.

Milton.

IMMIX'ABLE, adj. In and mix. Impossible to be mingled.

Fill a glass sphere with such liquors as may be clear, of the same color, and inimitable. Wilkins.

IMMOBILITY, n. s. Fr. immobilite ; from Lat. immobilis. Unmoveableness ; want of mo-tion ; resistance to motion.

The course of fluids through the vascular solids must in time harden the fibres, and abolish many of the canals ; from whence dryness, weakness, immobility, and debility of the vital force.

Arbuthnot on Aliments.

IMMOD'ERATE, anj.^ Fr. immodere ;

IMMOD'ERATELY, adv. > Lat. immoderatus.

IMMODERA'TION, n. s. j From in privative, and modus : excessive ; beyond a due measure ; in an excessive degree : want of moderation ; excess.

Immoderately she weeps for Tybalt's death.

Shakspeare.

One means, very effectual for the preservation of health, is a quiet and cheerful mind, not afflicted with violent passions, or distracted with immoderate cares. Ray on the Creation. 2T2

The heat weakened more and more the arch of the earth, sucking out the moisture that was the cement of its parts, drying it immoderately, and chapping it.

Burnet's Thzory.

IMMOD'EST, adj. \ Fr. immodeste ; Span. IMMOD'ESTY, n. s. $ immodesta ; Lat. immo-destus ; sine modestia. A term peculiarly applicable to the conduct of females ; less in de-gree than impudent, but implying more culpability than indecent; a want of delicacy, chastity, or purity; and applicable, not merely to the disposition, but to the externals, as words, looks, attire, &c. : it has also been used to signify unreasonable, exorbitant, arrogant, but these terms belong to immoderate.

*Tis needful that the most immodest word Be looked upon and learned ; which once attained, Comes to no further use

Than to be known and hated. Shakspeare.

She railed at herself, that she should be so immodest to write to one that she knew would flout her.

Id.

Immodest deeds you hinder to be wrought ; But we proscribe the least immodest thought.

Dryden.

Immodest words admit of no defence, For want of decency is want of sense.

Roscommon. It was a piece of immodesty. Pope.

IM'MOLATE, v. a. > Fr. immoler ; Lat.

IMMOLA'TION, n. s. limmolo. To sacrifice; to kill and offer in sacrifice : immolation implies either the act or the offering.

In the picture of the immolation of Isaac, or Abraham sacrificing his son, Isaac is described as a little boy. Browne.

These courtiers of applause being oftentimes reduced to live in want, these costly trifles so engrossing all that they can spare, that they frequently enough are forced to immolate their own desires to their vanity.

Boyle. Now immolate the tongues, and mix the wine,

Sacred to Neptune, and the powers divine. Pope.

We make more barbarous immolations than the most savage heathens. Decay of Piety.

IMMO'MENT, adj. In and moment. Trifling ; of no importance or value. A barbarous word.

I some lady-trifles have reserved, Immoment toys, things of such dignity As we greet modern friends withal.

Shaktpeare.

IMMOR'AL, adj. \ From ire privative, and

IMMORAL'JTY, n. s. S mos. Wanting regard to the laws of natural religion ; practically vicious; dishonest; wanting virtue: acts opposed to the laws of God, as theft, adultery, false witness, Sec.

Such men are put into the commission of the peace who encourage the grossest immoralities, to whom all the bawds of the ward pay contribution. Swift. There's Epicurus

And Aristippus, a material crew '.

Who to immoral courses would allure us ;

By theories quite practicable too.

Byron. Don Juan.

IMMORTAL, adj. ˆ Tr.immortalitc;

IKMORTAL'ITY, n. s. fLat. immortalis.

IMMOR'TALLY, adv. £ From in and mor—

IMMOR'TALISE. v. a. & v. n.) talis. Exempt

from death ; being never to die ; perpetual ; immortalise, to make immortal ; to exempt from oblivion; to become immortal, in this sense peculiar to Pope : immortally, for ever; without death, and without evil.

But that immortall light, which there dolh shine, Is many thousand times more bright, more cleare More excellent, more glorious, more divine ; Through which to God all mortall actions here And even the thoughts of men, doe plaine appeare For from the eternal truth it doth proceed, Thro' heavenly vertue which her beames doe breed. Spenser. Hymnet.

Though virtue vitall dyd vanishe away, Hir virtues inward remayn immortal, Eterne, and exempte from deathe and dekay, As fountaynes flowying with course contynuall.

G. Cavendish's Mttrical Visions. Drive them from Orleans, and be immortalised.

Shakspeare.

Her body sleeps in Capulet's monument, And her immortal part with angels lives. Id.

Give me my robe, put on my crown j I have Immortal longings in me. Id.

There is your crown, And he that wears the crown immortally, Long guard it yours ! Id. Henry IV.

For mortal things desire their like to breed. That so they may their kind immortalixe. Daviet.

Only some twinkling stars remain beheld : Then mortal made ; yet, as one fainting dies, Two other in its place succeed ing -rise ; And drooping stock with branches fresh immortalixe.

Fletcher's Purple Island.

Quaff immortality, and joy. Milton.

Nine times the space that measures day and night To mortal men, he with his horrid crew Lay vanquished, rolling in the fiery gulf, Confounded though immortal. Id. Paradise Lost.

The Paphian queen,

With gored hand, and veil so rudely torn. Like terror did among the immortals breed, Taught by her wound that goddesses may bleed.

Waller.

W hat pity ‘tis that he cannot wallow immortally in his sensual pleasures ! Bentley.

Fix the year precise,

When British bards begin t’ immortalise. Pope. When we know cogitation is the prime attribute of a spirit, we infer its immateriality, and thence its immortality. Watts.

But not the pomp that royalty displays, Nor all the imperial pride of lofty Troy, Nor virtue’s triumph of immortal praise, Could rouse the languor of the lingering boy.

Beattie.

But here, here in this goblet is his title To immortality, — the immortal grape From which he [Bacchus] first expressed the soul,

and gave

To gladden that of man, as some atonement For the victorious mischiefs he had done.

Byron. Sardanapalut.

IMMOVE’ABLE, adj. \ Lat.ircaudwKweo. IMMOVE’ABLY, adv. ‘ $ Not ableto be forced from its place ; not liable to be carried away ; real in law ; unshaken ; unaffected.

His name was Talus, made of iron mould, Immmeable, resistlesse, without end.

Spenser. Faerie Queene. From beds of raging fire, to starve in ice Their soft ethereal warmth, and there to pine

Immoneable, infixed, and frozen round, Periods of time, thence hurried back to fire.

Milton, Paradise Lost.

We shall not question his removing the earth, when ke finds an immooeable base to place his engine upon.

Browne.

How much happier is he, who, centrating on himself, remains immovable, and smiles at the madness of the dance about him ! Dryden,

How revered is the face of this tall pile, Whose ancient pillars rear their marble heads To bear aloft its arch'd and pond'rous roof, By its own weight made stedfast and immoveable.

Congreve.

Immovably firm to their duty, when they could have no prospect of reward, Atterbury.

IMMU'NITY, n. s. Fr. immunite ; Lat. im-muniias ; Span, immunidad ; Ital. immunita, va-cuus a munere. Freedom ; exemption ; privilege ; discharge from obligation.

Simon sent to Demetrius, to the end he should give the land an immunity, because all that Tryphon did was to spoil. 1 Mac. xiii. 34.

Of things harmless whatsoever there is, which the whole church doth observe, to argue for any man's immunity from observing the same, it were a point of most insolent madness. Hooker.

Common apprehensions entertain the antidotal condition of Ireland, conceiving only in that land an immunity from venamous creatures. Browne.

Granting great immunities to the commons, they prevailed so far as to

cause Palladius to be proclaimed successor. Sidney.

IMMURE', v. a. & n. s. Old Fr. emurer ; Lat. in and muris. To enclose with walls ; to confine ; to shut up or imprison. Immure, a wall ; an enclosure.

Lysimachus immured it with a wall. Sandys.

Pity, you ancient stones, these tender babes,

Whom envy hath immured within your walls !

Shakspeare.

One of these three contains her heavenly picture ; And shall I think in silver she's immured ! Id.

Their vow is made

To ransack Troy ; within whose strong immures

The ravished Helen, Menelaus' queen,

With wanton Paris sleeps. Id.

Afthe first descent on shore he was not immured with a wooden vessel, but he did countenance the landing in his long-boat. Wotton.

IMMU'SICAL, adj. In and musical. Inharmonious : wanting proportion of sound.

All sounds are either musical, which are ever equal, or immusical, which are ever unequal, as the voice in speaking, and whisperings. Bacon.

We consider the immusical note of all swans we ever beheld or heard of. Browne.

IMMUTABILITY, n.*.-) Ft. immuable,

IMMU'TABLE, adj. > immutabilit'e ; Lat.

IMMU'TABLY, adv. J immutabile. Exemption from change ; invariableness : unalterable ; ever the same. Immutability can only be predicated of the Deity, and is one of his essential attributes.

By two immutable things, in which it was impossible for God to lye,

we have a strong consolation.

Heb. vi.

The immutability of God they strive unto, by working after one and the same manner. Hooker.

God made thee perfect, not immutable. MHtvn. So without least impulse or shadow of fate,

Or aught by me iinmuiably'fore&een,

They trespass, author to themselves in all Both what they see and what they chuse.

Id. Paradise Lost. His love is like his essence, immutably eternal.

Boyle.

Thy threat'nings, Lord, as thine, thou mays: re-voke ; But if immutable and fixed they stand,

Continue still thyself to give the stroke, And let not foreign foes oppress thy land. Dryden.

IMOLA, a populous district of Italy, in the department of Reno. The number of its citizens was, in 1801, reckoned 116,728.

IMOLA, a city of Italy, in the province of Ro-magna, capital of the above district, anciently Forum Cornelii. By a former division of the Italian republic, it was included in the department of the Amone. It is seated on an island formed by the Santerno; is strongly fortified with walls, turrets, and ditches ; and has an ancient castle, with a cathedral and twelve churches. On the llth of February, 1797, a rebellion was quelled in this town, and the papal army defeated by the French, under Buonaparte, assisted by the legion of Lombardy. The town is a bishop's see, and its streets are neat, containing several buildings wortli the attention of the traveller. Imola has produced several men of note, the most distinguished of whom were Giovanni da Imola, professor of jurisprudence at Bologna, and Giovanni Tartagno, his son. Its academy was once of considerable repute, particularly about 1566; and the poetry of Zappi, one of its members, retains a high character. Population 8400. Eighteen miles south-east of Bologna, and forty N.ft. E. of Florence.

IMP, n. s. & v. a. Welsh, imp, a shoot, im-pio, to engraft. A son; the offspring; a progeny ; a subaltern devil. Imp, to lengthen or enlarge with any thing adscititious : it was originally a term used by falconers, who repair a hawk's wing with adscititious feathers.

Of feeble trees ther comen wretched impel.

Chaucer. Prologue to the Monket Tale. Such we deny not to be the imps and limbs of Satan.

Hooker.

If then we shall shake off our slavish yoke, Imp out our drooping country's broken wings.

Shakspeare. A lad of life, an imp of fame. Id. Henry V.

Help, ye tart satyrists to imp my rage With all the scorpions that should whip this age.

Cleaveland, New rebellions raise

Their hydra heads, and the false north displays Her broken league to imp her serpent's wings.

Milton.

With cord and canvass from rich Hamburgh sent, His navy's molted wings he imps once more.

Dryden.

New creatures rise,

A moving mass at first and short of thighs ; 'Till shooting out with legs, and imped with wings. The grubs proceed to bees with pointed stings. Id,

As soon as you can hear his knell, This god on earth turns d — 1 in hell ; And, lo! his ministers of state, Transformed to imps, his levee wait. Swift

To IMPACT, v. a. Lat. impactus. To drive close or hard.

They arc angular ; but of what particular figure is not easy to determine, because of their being impacted so thick and confusedly together.

Woodward on Fossils.

To IMPAINT, v. a. In and paint. To paint ; to decorate with colors. Not in use.

Never did insurrection want Such water-colors to impaint his cause.

Shakspeare.

IMPAIR' v. a., v. n. & n. s. ~t Fr. empirer; IMPAIRMENT, n. s. S Lat. pejor. To

make worse; to diminish; to injure ; lessen in quantity, value, or excellence : to be lessened or worn out. Impair, diminution ; decrease ; not used. Impairment, injury.

Flesh may impair, quoth he, but reason can repair.

faerie Queene.

To change any such law, must needs, with the common sort, impair and weaken the force of those grounds whereby all laws are made effectual.

Hooker. Objects divine Must needs impair and weary human sense.

Milton.

That soon refreshed him wearied, and repaired What hunger, if aught hunger had impaired, Or thirst. Milton's Paradise Regained.

A loadstone, kept in undue position, that is, not lying on the meridian, or with its poles inverted, receives in longer time impair in activity

and exchange of faces, and is more powerfully preserved by site than dust of steel. Browne.

His posterity, at this distance, and after so perpetual impairment, cannot but condemn the poverty of Adam's conception, that thought to obscure himself from his Creator in the shade of the garden.

Browne's Vulgar Errours. Nor was the work impaired by storms alone, But felt the approaches of too warm a sun. Pope. In years he seemed, but not impaired by years.

Id.

To IMPALE, in heraldry, is to conjoin two coats of arms pale-wise. Women impale their coats of arms with those of their husbands. See HERALDRY, Plate III.

IMPAL'PABLE, adj. Fr. impalpable. In and palpable. Not to be perceived by touch.

If beaten into an impalpable powder, when poured out, it will emulate a liquor, by reason that the smallness of the parts do make them easy to be put into motion. Boyle.

IMPAR'ADISE, v. a. Italian, imparadisare. To put in a place or state resembling paradise in felicity

All my souls be

fmparadised in you, in whom alone .' I understand, and grow, and see. Donne.

Thus these two

Imparadised in one another's arms, The happier Eden, shall enjoy their fill Of bliss on bliss. Milton's Paradise Lost.

This imparadised neighbourhood made Zelmane's soul cleave unto her, both through the ivory case of her body, and the apparel which did overcloud it.

Sidney.

IMPAR'ITY, n. s. Lat impur. Inequality ; disproportion; oddness; indivisibility into equal parts.

Some bodies are hard, some soft : the hardness is caused chiefly by the

jejnneness of the spirits, and their imparity with the tangible parts. Bacon.

What verity is there in that numeral conceit in the lateral division of man, by even and odd ? and so by parity or imparity of letters in men's names, to determine misfortunes on either side of their bodies ?

Browne's Vulgar Errours.

IMPARK', v. a. In and park. To enclose with, or for a park ; to sever from a common. IMPART', v. a. \ Latin impertire. To IMPARTIBLE, adj. S grant; to give; to make known by words or tokens ; to communicate ; to grant as to a partaker. Impartible, communicable : this word is elegant, although used by few writers.

But, when sweets words their ioyning sweet disparted To th'eare a dainty musique they imparted.

Spenter. Britain'* Ida. Gentle lady,

When first I did impart my love to you, I freely told you all the wealth I had Ran in my veins.

Shahspeare. Merchant of Venice. As in confession the revealing is for tho ease of a man's heart, so secret men come to the knowledge of many things, while men rather discharge than impart their minds. Bacon.

To give just form to every regiment ; Imparting to each part due strength and 'stablishment. Fletcher's Purple Island. The same body may be conceived to be more or less impartible than it is active or heavy. Digby.

Thou to me thy thoughts Wast wont, I mine to thee was wont to impart.

Milton.

High state and honours to others impart, But give me your heart. Dryden.

Thy form benign, O goddess, wear, Thy milder influence impart; Thy philosophic train be there To soften not to wound my heart.

Gray. Ode to Adversity.

IMPARTIAL, adj. \ Fr. impartial; Lat.

IMPARTIALITY, n. s. > in and partes. Equit—

IMPAR'TIALLY, adv. j able ; free from regard

to party; indifferent; disinterested ; equal in the

distribution of justice; just: impartially, with

unbiassed judgment; honestly ; justly; without

favor or preference of one to another.

Such pardon therefore as I give my folly, Take to thy wicked deed ; which when thou seest Impartial, self severe, inexorable, Thou wilt renounce thy seeking.

Milton. Samson Agonistes. Success I hope, and fate I cannot fear: Alive or dead, I shall deserve a name ; Jove is impartial, and to both the same.

Dryden

Since the Scripture promises eternal happiness and pardon of sin, upon the sole condition of faith and sincere obedience, it is evident, that he only can plead a title to such a pardon, whose conscience impartially tells him that he has performed the required condition. South.

Nay, I have listened Impartially to thee — why not to them.

Byron. Sardanapalus.

IMPAS'SABLE, adj. In and passable. Not to be passed ; not admitting passage ; impervious.

There are in America many high and impassable mountains, which are very rich. Rulciyh.

Over this gulf

Impassable, impervious ; let us try, To found a path from hell to that new world. t

Milton.

IMPASSIBLE, adj. ~\ Fr. impassibilite ; IMPASSIBILITY, n. s. Lat. in and putior, IMPASS'IBLENESS, n. s. \ impatientia. Exemp-IMPAS'SIVE, adj. ˆ> tion from suffering :

IMPA'TIENCE, n.s. j insusceptible of in-IMPA'TIENT, adj. I jury from external

IMPA'TIENTLY, adv. J causes : impassive has the same meaning : impatience, rage and fretfulness under suffering; vehemence of temper ; eagerness : impatient, vehemently agitated by some painful passion ; hot ; hasty ; ardently desirous.

Impatient is he that wol not be taught.

Chaucer. The Persones Tale.

All the power of his wits has given way to his impatience. Shakspeare. King Lear.

To be impatient at the death of a person, concerning whom it was certain he must die, is to mourn because thy friend was not born an-angel.

Taylor's Rule of Holy Living.

He considered one thing so impatiently, that he would not admit any thing else to be worth consideration. - Clarendon. Yet hard for gods, and too unequal work we find, Against unequal arms to fight in pain, Against unpained, impassive, from which evil Ruin must needs ensue. Milton's Paradise Lost.

The experiment I resolved to make was upon thought, and not rashness or impatience. Temple.

The tortured savage turns around, And flings about his foam, impatient of the wound.

Dry den.

She told him what those empty phantoms were, Forms without bodies, and impassive air.

Id. JEneid.

Secure of death, I should contemn thy dart, Though naked, and impassible depart. Dryden.

The headstrong beast Rushes along impatient of the course ; Nor hears the rider's call ; nor feels the rein.

Rowe's Royal Convert.

The impatient man will not give himself time to be informed of the matter that lies before him.

Addisvn's Spectator.

If the upper soul check what is consented to by the will, in compliance with the flesh, and can then hope that, after a few years of sensuality, that rebellious servant should be eternally cast off, drop into a perpetual impassible nothing, take a long progress into a land where all things are forgotten, this would be some colour. Hammond.

Fame, impatient of extremes, decays Not more by envy than excess of praise. Pope.

Pale suns, unfelt at distance, roll away ; And 011 the impassive ice the lightnings play. Id. How shameless a partiality is it, thus to reserve all the sensualities of this world, and yet cry out for the impassibleness of the next ? Decay of Piety.

IMPASTED, adj. In and paste. Concreted as into paste.

Horribly trickt

With blood of fathers, mothers, daughters, sons, Baked and impasted with the parching fires.

Shaltspeare.

IMPATIENS, touch-me-not, a genus of the monogamia order, syngenesia class of plants ; natural order twenty-fourth, corydales : CAL. diphyllous : COR. pentapetalous and irregular, with

a hooded nectarium: CAPS, superior and quinquevalved.

I. balsamina, or balsam, is a native of India. It has a fibrous root, an upright, thick, succulent stalk, branching all around a foot and a half or two feet high; with long, spear-shaped, sawed leaves, the upper ones alternate ; and from the joints of the stalk and branches clusters of short foot-stalks, each sustaining one large irregular flower, of different colors in the varieties ; flowering from June or July till September. This species requires artificial warmth. The seeds will indeed grow in the full ground, but rarely before May ; and more freely then, if covered with a hand-glass, &c. But the plants raised by artificial heat will flower five or six weeks sooner than those raised in the natural ground. The seeds ought therefore always to be sowed on a hot-bed in March or April, and the plants continued therein till June; and, if the frames be deep, they will then be drawn up to the length of two or three feet; after which they may be planted in pots, which must likewise be continued in the hot-bed till the plants have taken fresh root.

I. noli-me-tangere, or common yellow bal-samine, is a native of Britain, but is cultivated in many gardens for curiosity. It has a fibrous root, an upright jointed, succulent, stalk, about eighteen inches high, with alternate oval leaves ; and, from the axillas of the stalks, long, slender, branching foot-stalks, each sustaining many yellow flowers ; succeeded by taper capsules, that burst open, and dart forth their seeds with great velocity, whence its name. It is very hardy, and will grow freely from the seeds in any common border.

IMPATRONISE, v. a. Fr. impatromser, in and patronise. To gain to one’s self the power of any seigniory. This word is not usual.

The ambition of the French king was to impa-tronixe himself of the dutchy. Bacon’s Henry VII.

IMPAWN’, v. a. In and pawn. To impig-norate ; to pawn ; to give as a pledge ; to pledge.

Go to the king, and let there be impawned Some surety for a safe return again.

Shakspeare. Henry IV. Many now in health Shall drop their blood, in approbation Of what your reverence shall invite us to ; Therefore take heed how you impawn our person, How you awake our sleeping sword of war.

Shakspeare.

IMPEACH’, v. a. & n.s. *} Fr. empecher; IMPEACH’ABLE, adj. Lat. impedio, im—

IMPEACH’ER, n. s. [peto. To hinder ;

IMPEACH’MENT, n. s. j to accuse by public IMPEDE’, v. a. authority: impeach,

IMPEDIMENT, n. s. J hindrance ; impediment : impeachable, accusable ; chargeable with criminality : impeachment, a public accusation ; an obstruction or hindrance, but this latter sense is obsolete : impediment is used for opposition, obstruction, or hindrance: impede, to hinder.

They bring one that was deaf, and had en impediment in his speech. Mark vii. 32.

Each doov he opened without any breach ; There was no bar to stop, nor foe him to impeach.

Spenser.

What impediment* there are to hinder it, and which were the speediest way to remove them.

Hooker.

But fur my tears,

The moist impediments unto my speech, I had forestalled this dear and deep rebuke.

Shakspeare.

The king, provoked to it by the queen, Devised impeachments to imprison him.

Id. Richard III.

Why, what an intricate impeach is this ! If here you housed him, here he would have been j If he were mad, he would not plead so coldly.

Shakspeare. And soon

In order, quit of all impediment ; Instant without disturb they took alarm And onward move embattled.

Milton. Paradise Lost.

The minds of beasts grudge not at their bodies comfort, nor are their senses letted from enjoying their objects : we have the impediments of honour, and the torments of conscience. Sidney.

Had God omitted by positive laws to give religion to the world, the wisdom of his providence had been impeachable. Grew.

They were both impeached by a house of commons.

Addison.

Great dissentions were kindled between the nobles and commons on account of Coriolanus, whom the latter had impeached. Swift.

The consequences of Coriolanus's impeachment had like to have been fatal to their state. *(*.

All the forces are mustered to impede its passage. Decay of Piety.

Suspicion is a heavy armour, and With its own weight impedes more than it protects.

Byron.

IMPEARL,' v. a. In and pearl. To form in resemblance of pearls; to decorate as with pearls.

Innumerable as the stars of night, Or stars of morning, dewdrops, which the sun Impearls on every leaf, and every flower. Milton.

IMPEC'CABLE, adj. \ Fr. impeccable, im-IMPECCABIL'ITY, n. s. J peccabilitc ; Lat. in and pecco. Exempt from the possibility of sinning :

strictly applicable to the deity alone.

That man pretends he never commits any act prohibited by the word of God, and then that were a rare charm to render him impeccable, or that is the means of consecrating every sin of his.

Hammond on Fundamentals.

Infallibility and impeccability are two of his attributes. Pope.

IMPEL,' v. a. i Lat. impello. To drive IMPEL' LENT, n. s. 3 °n towards a point ; to urge forwards ; to press on : impellent, an impulsive power; a power that drives forward.

How such a variety of motions should he regularly managed, in such a wilderness of passages, by mere blind impellents and material conveyances, I have not the least conjecture. Glanville.

So Mirrah's mind, impelled on either side, Takes every bent, but cannot long abide. Dryden.

The surge impelled me on a craggy coast. Pope. Propitious gales

Attend thy voyage, and impel thy sails.

Id. Odyssey.

Such the perfect hand 1 Lat poised impels and rules the steady whole.

Thomson. And was of yor

Patron or tyrant as the changing mood Of petty power impelled, of those who wore The wreath which Dante's brow alone had worn

before. Byron. Childe Harold.

IMPEND' v. n. -\ Latin impendeo. To IMPEN'DENT, adj. f hang over ; to be at hand ; IMPENDENCE, n.s. I to press nearly; a state IMPEN'DING, part . J of near approach : in its figurative meaning, generally used in an ill sense.

Good sometimes is not safe to be attempted, by rear son of the impendence of a greater sensible evil.

Hale.

If the evil feared or impendent be a greater sensible evil than the good, it over-rules the appetite to aver sation. Id.

Dreadful in arms, on Landen's glorious plain Place Ormond's duke : impendent in the air Let this keen sabre, comet-like appear. Prior.

No story I unfold of publick woes, Nor bear advices of impending foes.

Pope's Odytsey.

Destruction sure over all your heads impends ; Ulysses comes, and death his steps attends. Prpe.

The forest deepens round. And more gigantic still the impending trees Stretch their extravagant arms athwart the gloom.

Armstrong. Nought

Could urge the prince thy kinsman to require Thus much from thee, but some impending danger. Byron. Sardanapalus.

IMPENETRABILITY, n.s. ˆ Fr. impe-IMPEN'ETRABLE, adj. > netrabilite;

IMPENETRABLY, adv. j Lat. in and

penetro. The quality of not being pierceable or entered by external force : impervious ; insusceptible of intellectual impression ; not to be reformed or moved ; with hardness to a degree incapable of impression; not to be wrought upon by entreaty.

It is the most impenetrable cur That ever kept with men. — Let him alone ; I'll follow him no more with bootless prayers.

Shakspeare.

Some will never believe a proposition in divinity, if any thing can be said against it : they will be credulous in all affairs of life, but impenetrable by a ser-mon of the gospel. Taylor.

Three of adamantine rock, Impenetrable, impaled with circling fire Yet unconsumed. Milton's Paradise Lost.

Deep into some thick covert would I run, Impenetrable to the stars or sun. Dryden.

All bodies, so far as experience reaches, are either hard, or may be

hardened ; and we have no other evidence of universal impenetrability, besides a large experience, without an experimental exception.

Newton's Opticks.

Blunt the sense, and fit it for a skull Of solid proof, impenetrably dull. Pope.

O might I here

In solitude like savage, in some glade Obscured, where highest woods impenetrable To star or sun-light, spread their umbrage broad And brown as evening. Byrvn.

i MPEN'ITENCY, n.s ~\ Fr. impenitence ; I MPEN'ITENCE, n. s. /Latin in privative IMPEN'ITENT, adj. £a.nd.p&nitentiu. Ob—

IMPEN'ITENTLY, adv. J duracy ; want of remorse for crimes ; disregard of God's threatenings against sin : negligent of the duty of repentance; without sorrow for evil doings.

Our Lord in anger hath granted some impenitent men's request • as, on the other side, the apostle's suit he hath of favour and mercy not granted.

Hooker. They died

Impenitent, and left a race behind Like to themselves. Milton.

Where one man ever comes to repent, a thousand end their days in final impenitence. South.

He will advance from one degree of wickedness and impenitence to another, ‘till at last he becomes hardened without remorse. Rogers.

When the reward of penitents, and punishment of impenitents, is once assented to as true, ‘tis impossible but the mind of man should wish for the one, and have dislike to the other. Hammond.

What crowds of these, impenitently bold, In sounds and jingling syllables grown old, Still run on poets ! Pope,

IMPEN’NOUS, adj. Latin in and penna. Wanting wings. This word is convenient, but, I think, not used.

It is generally received an earwigg hath no wings, and is reckoned amongst impennou* insects ; but he that shall, with a needle, put aside the short and sheathy cases on their back, may draw forth two wings, larger than in many flies, Browne.

IM’PERATE, adj. ˆ Fr.inipcratif;la.t.im-IMPER’ATIVE, adj. ˆperatus. Done volun-IMPER’ATIVELY, adv. J tarily ; done by the direction of the mind. Imperative, commanding, expressive of command.

Those natural and involuntary actings are not done by deliberation, yet they are done by the energy of the soul and instrumentality of the spirits, as well as those imperate acts, wherein we see the empire of the soul. Hale.

The verb is formed in a different manner, to signify the intention of commanding, forbidding, allowing, disallowing, intreating ; which likewise, from the principal use of it, is called the imperative mood.

Clarke’s Latin Grammar.

The IMPERATIVE is one of the moods of a verb, used when we would command, intreat, or adviset. In the Latin and Greek languages this mood’ has a peculiar termination to distinguish it, doce or doceto, teach ; lege or legito, read, &c., and not only so, but the termination varies, according as we address one or more persons, as audi and audite ; aesirw, cucsircuv, aesirwtrav, Sec.

IMPERATOR, Latin, i. e. commander, in Roman antiquity, a title of honor conferred on Victorious generals by their armies, and ‘afterwards confirmed by the senate. Though originally no more than a military title in the republican armies, yet upon the degeneracy of the Roman republic, and assumption of the supreme power by Caesar and Augustus, it was used to express the most unlimited despotism,

and a rank superior to that of king. Ile«ice the origin of emperor.

IMPERATORIA, masterwoit, a genus of the digynia order, and pentandria class of plants: natural order forty-fifth, umbellata;. The fruit is roundish, compressed in the middle, gibbous, and surrounded with a border ; the petals are inflexo-emarginated. There is only one species, viz,

I. ostruthium, a native of the Austrian and Styrian Alps and other mountainous places of Italy. Lightfoot informs us, that he found it in several places on the banks of the Clyde in Scotland; but whether it be indigenous is uncertain. The root is as thick as a man's thumb, running in the ground ; it is fleshy, aromatic, and has a strong acrid taste, biting the tongue like pellitory of Spain ; the leaves arise immediately from the root ; they have long foot-stalk?, dividing into three very short ones at the top, each sustaining a trilobate leaf, indented on the border. The foot-stalks are deeply channelled, and, when broken, emit a rank odor. The flower-stalks rise about two feet high, dividing into two or three branches, each terminated by a pretty large umber of white flowers, whose petals are split; these are succeeded by oval compressed seeds, or by parting the roots in autumn. It thrives best in a shady situation. The root has a flower similar to that of angelica, and is esteemed a good sudorific.

IMPERCEPTIBLE, adj.~\ Fr. impercepti—

IMPERCEP'TIBLENESS, n. s. >ble ; Lat. in and

IMPERCEPTIBLY, adv. > percipio. Not to

be discovered or perceived ; small ; subtle ; quick

or slow, so as to elude observation : the quality

of eluding observation.

Some things are in their nature imperceptible by onr sense ; yea, and the more refined parts of material existence, which, by reason of their subtilty, escape our perception. Hale.

Many excellent things there are in nature, which, by reason of their subtilty and imperceptibleness to us, are not so much as within any of our faculties to apprehend. Id.

In the sudden changes of his subject with almost imperceptible connections, the Theban poet is his master. Dryden.

Upon reading of a fable we are made to believe we-advise ourselves : the moral insinuates itself imperceptibly, we are taught by surprize, and become wiser and better unawares. Addison.

IMPER'FECT, adj.-) Fr. imparfait ; Lat.

IMPERFEC'TION, n.s. > imperfectus, from in and

IMPER'FECTLY, adv. jperficio. Not complete; not absolutely finished; frail; not entirely good. Imperfection, is either physical or moral defect ; a failure. Imperfectly, not thoroughly finished or rendered complete.

For, certes, Jesu Crist is entirely all good ; in him is not imperfection ; and therefore he forgeveth all parfitly, or elles never a dele.

Chaucer. The Personet Tale.

Laws, as all other things human, are many times full of imperfection ; and that which is supposed be-hoveful unto men,proveth oftentimes most pernicious.

Hooker.

Something he left imperfect in the state, Which, since his coming forth, is thought of, Which brought the kingdom so much fear and danger. That his return was most required. Shahspeare.

The middle action, which produceth imperfect bo-dies, is fitly called, by some of the ancients, inquination or inconcoction, which is a kind of putrefaction.

Bacon.

Opinion is a light, vain, crude, and imperfect thing, settled in the imagination ; but never arriving at the understanding, there to obtain the tincture of reason.

Ben Jonson.

A inarcor is either imperfect, tending to a greater withering, which is curable ; or perfect, that is, an entire wasting of the body, excluding all cure.

Harvey on Consumption!. His creating hand Nothing imperfect or deficient left Of all that he created, much less man Or aught that might his happy state secure, Secure from outward force.

Milton’s Paradise Lost.

The ancients were imperfect in the doctrine of me- *eors, by their ignorance of gunpowder and fireworks.

Browne.

The still-born sounds upon the palate hung. And died imperfect on the faltering tongue.

Dryden.

Imperfections would not be half so much taken no-tice of, if vanity did not make proclamation of them.

L’Estrange.

As ohscure and imperfect ideas often involve our reason, so do dubious words puzzle men. Locke.

Should sinking nations summon you away, Maria’s love might justify your stay j Imperfectly the many vows are paid, Which for your safety to the gods were made.

Stepney.

The world is more apt to censure than applaud, and himself fuller of imperfections than virtues.

Addison’s Spectator.

That his taste for the true pathetic was imperfect, too manifestly appears, from the general tenor of his translations, as well as tragedies. Beattie.

IMPERFECT TENSE, in grammar, a tense that denotes some preterite case, or denotes the thing to be at that time present, and not quite finished ; as scribebam, I was writing.

IMPER'FORABLE, adj. 1 Lat. in andper-IMPER'FORATE, adj. \foro. Not to be

bored or pierced through ; without an orifice.

Sometimes children are born imperforate ; in which case a small puncture, dressed with a tent, effects the cure. Sharp.

IMPE'RIAL, adj.

IMPERIALIST,

IMPE'RIOUS,

Jt, ttiAJ-., aaj. ~\ ;'RIALIST, n. s. I i :'RIOUS, adj. N. i ;'RiousLY,adu. i ;

,'RIOUSNESS.7i.S.J

IMPE'RIOUSNESS.

Fr. imperial; Latin impenalis. Royal ; mark- , ing sovereignty ; belonging to an emperor or monarch; commanding. Imperialist, one belonging loan emperor. Imperious, tyrannical ; haughty ; arrogant ; powerful ; overbearing. Imperiously, in an insolent or arrogant manner. Imperiousness, the air of command or authority.

If it be your proud will To show the power of your imperious eyes.

Spenser.

The imperialists imputed the cause of so shameful a flight unto the Venetians. Knolles's History.

This imperious man will work us all From princes into pages.

Shakspcare. Henry VIII. My due from thee is this imperial crown, Which, as immediate from thy place and blood, Derives itself to me. Id. Henry IV.

Who's there, that knocketh so imperiouslyl

S/iakspeare.

The' imperial flower his neck with pearl attires j The lily high, her silver grogram rears.

Fletcher's Purple Island.

Who can abide, that, against their own doctors, six whole books should, by their fatherhoods of Trent, be under pain of a curse imperiously obtruded upon God and his church ? Hall.

On such day As Heaven's great year brings forth, the' empyreal

host

Of angels, by imperial summons called, Innumerable before the' Almighty's throne Forthwith from all the ends of Heaven appeared, Under their hierarchs, in order bright.

Milton's Paradise Lost.

So would he use his imperiousness, that we had a delightful fear and awe, which made us loth to lose our hopes. Sidney.

He is an imperious dictator of the principles of vice, and impatient of all contradiction. More.

A man, by a vast and imperious mind, and a heart large as the sand upon the sea shore, could command all the knowledge of nature and art. Tillotson.

The main body of the marching foe Against the' imperial palace is designed.

Dryden.

How much I suffered, and how long I strove Against the' assaults of this imperious love ! Id.

Imperiousness and severity is but an ill way of treating men, who have reason of their own to guide them.

Locke.

It is not to insult and domineer, to look disdainfully, and revile imperiously, that procures an esteem from any one. South.

The sage transported at the approaching hour, Imperiously thrice thundered on the floor ! Garth.

O death ! I stretch my view ; what visions rise ! What triumphs ! toils imperial! arts divine. Young.

And beauteous Greece ; And the great queen of earth, imperial Rome.

Dyer's Ruint of Rome. Italy ! Time, which, hath wronged thee with ten thousand

rents

Of thine imperial garment, shall deny, And hath denied, to every other sky, Spirits which soar from ruin. Byron. Childe Harold.

What ? thus suspected — with the sword slung o'er us But by a single hair, and that still wavering To be blown down by his imperious breath, Which spared us — why, I know not.

Id. Sardanapaltis.

IMPERIAL DIET. See DIET.

IMPERIALI (John Baptist), a celebrated physician, of a noble family, born at Vicenza, in 1568. He was professor of philosophy and physic at Padua ; and composed several esteemed works in prose and verse, particularly Exercitationes Exotica; Venet. 1640; 4to. He died in

IMPER’ISHABLE, adj. Fr. imper issable ; Lat. in and pereo. In and perish. Not to be destroyed.

We find this our empyreal form Incapable of mortal injury, Imperishable; and, though pierced with wound, Soon closing, and by native vigour healed. Milton.

The high, the mountain majesty of worth Should be, and shall, survivor of its woe, And from its immortality look forth

In the sun’s face, like yonder Alpine snow, — Imperishably pure, beyond all things below.

Byron. Childe Harold.

IMPER’SONAL, adj. I Fr. impersonal; Lat.

IMPEU’SONALLV, adv. \impersonalis. Not va-ried according to the persons.

Impersonals be declined throughout all moods and tenses : a verb impersonal hath no nominative case be-fore it. Accidence.

IMPERSONAL VERBS, in Latin grammar, are verbs to which the nominative of any certain per-son cannot be prefixed ; or verbs destitute of the two first and principal persons, as decet, oportef, &c. The impersonal verbs of the active voice end in t, and those of the passive in tur; they are conjugated through the third person singular of almost all the tenses and moods : they want the imperative, instead

of which the present of the subjunctive is used; as preniteat, pugnetur, &c.

IMPERSUA'SIBLE, adj. Lat. in and per-suasibilis. Not to be moved by persuasion.

Every pious person ought to be a Noah, a preacher of righteousness ; and if it be his fortune to have as impersuasible an auditory, if he cannot avert the deluge, it will yet deliver his own soul, if he cannot benefit other men's. Decay of Piety.

IMPERTINENCE, n. s.-\ Fr. impertinence ;

IMPER'TINENCY, n. s. (from Lat. in and

IMPER'TINENT, adj. &n.s. (pertinens. That

IMPER'TINENTLY. J which belongs not

to the present, or has no present weight ; trifling ; importunate ; meddling : impertinence, folly ; intrusion : impertinent, a trifler, or intruder : impertinently, troublesomely ; officiously ; intru-sively.

The law of angels we cannot judge altogether impertinent unto the affairs of the church of God.

Hooker.

O, matter and impertinency mixt, Reason and madness !

Shakspeare. King Lear.

Some, though they lead a single life, yet their thoughts do end with themselves, and account future times impertinences. Bacon.

It will be said I handle an art no way suitable to my employments or fortune, and so stand charged with intrusion and impertinency.

Wotton's Architecture.

I have had joy given me as preposterously, and as impertinently, as they give it to men who marry where they do not love. Suckling.

The contemplation of things that are impertinent to us, and do not concern us, are but a more specious idleness. Tillotson.

Governours would have enough to do to trouble their heads with the

politicks of every meddling officious impertinent. U Estrange.

I envy your felicity, delivered from the gilded impertinences of life, to enjoy the moments of a solid contentment. Evelyn.

Why will any man be so impertinently officious as to tell me all this is only fancy ? If it is a dream, let me enjoy it.

Addison.

Nothing is more easy than to represent as impertinencies any parts of learning, that have no immediate relation to the happiness or convenience of mankind.

Id.

There are many subtle impertinencies learnt in the schools, and many painful trifles, even among the mathematical theorems and problems. Watts.

Adieu for him

The dull engagements of the bustling world ! Adieu the sick impertinence of praise ! Akenside. IMPERTRANSIBIL'ITY, n. s. Lat. in and pertranseo. Impossibility to be passed through.

I willingly declined those many ingenious reasons given by others ; as of the impertransibility of eternity, and impossibility therein to attain to the present limit of antecedent ages. Hale.

IMPER'VIOUS, adj. \ Lat. impervius, fiom

IMPER'VIOUSNESS, n. s. $ in per via. Impassable ; impenetrable ; inaccessible ; the state of not admitting any passage.

Let the difficulty of passing back

Stay his return, perhaps, over this gulf

Impassable, impervious ; let us try

To found a path from hell to that new world.

Milton.

We may thence discern of how close a texture glass is, since so very thin a film proved so impervious to the air, that it was forced to break the glass to free itself. Boyle.

The cause of reflection is not the impinging of light on the solid or impervious parts of bodies.

Newton's Opticks.

A great many vessels are, in this state, impervious by the fluids. Arbuthnot.

From the damp earth impervious vapours rise, Increase the darkness, and involve the skies. Pope.

IMPETIG'INOUS, adj. From Lat. impetigo. Scurfy ; covered with small scabs.

IM'PETRABLE, adj. } Fr. impetrer ; Lat.

IM'PETRATE, v. a. > impetro. Possible to

IM*PETRATION, n. s. J be obtained by entreaty : to obtain by solicitation : the act of obtaining by prayer.

The blessed sacrament is the mystery of the death of Christ, and the application of his blood, which was shed for the remission of sins, and is the great means of impetration, and the meritorious cause of it.

Taylor.

IMPETUOSITY, n. s.ˆ Fr. impetueux;

IMPET'UOUS, adj. I Lat. impetus. Vio—

IMPET'UOUSLY, adv. Ment ; forcible ; vehe—

IMPET'UOUSNESS, n. s. t ment ; fierce ; pas—

IM'PETUS, n.s. ,/sionate: fury; vehemence of passion : impetus, violent effort; or violent tendency to any point : applicable to men and things.

I will set upon Aguecheek a notable report of valour, and drive the

gentleman into a most hideous opinion of his rage, skill, fury, and impetuosity.

Shakspeare. Twelfth Night.

The mind gives not only licence, but incitation to the other passions, to take their freest range, and act with the utmost impetuosity. Decay of Piety.

I wish all words of rage might vanish in that breath that utters them ; that, as they resemble the wind in fury and impetuousness, so they might in transientness.

Id.

The whole intrigue was contrived by the duke, and so violently pursued by his spirit and impetuosity.

Clarendon.

Down rushed the rain Impetuous, and continued till the earth No more was seen. Milton.

They view the windings of the hoary Nar ; Through rocks and woods impetuously he glides While froth and foam the fretting surface hides.

A ddison.

The king, ‘us true, is noble, but impetuous. Rowe. Why did not they continue their descent ‘till they were continuous to the sun, whither both mutual attraction and impetus carried them ? Bentley’s Sermons.

Blind and impetuous in its fond pursuits, Leaves the grey-headed

reason far behind.

Thomson. To check the’ irnpetuout all-involving tide

Of human woes, how impotent thy strife !

High o’er thy mounds devouring surges ride,

Nor reck thy baffled toils, or lavished life.

Beat tie. Judgment of Purit.

IMPIERCE’ABLE, adj. In and pierce. Impenetrable; not to be pierced.

Exceeding rage inflamed the furious beast ;

For never felt his impierceable breast

So wondrous force from .hand of living wight.

Spenser.

IMPI’ETY, n. s. 1 Fr. impiete ; Lat. impietas.

IM’PIOUS, adj. ˆIrreverence towards the

IM’PIOUSLY, adv. 5 Supreme Being ; an act of •wickedness, expressive of irreligion : in this sense it has a plural. Impious, wicked ; ungodly; profane.

That Scripture standeth not the church of God in any stead to direct, but may be let pass as needless to be consulted with, we judge it prophane, impious, and irreligious to think. Hooker.

If they die unprovided, no more is the king guilty of those impieties for which they are now visited.

Shakspeare.

Can Juno such impieties approve ? Denham.

Cease then this impious rage. Milton.

Then lewd Auchemolus he laid in dust, Who stained his stepdame’s bed with impious lust.

Dry den.

Shame and reproach is generally the portion of the impious and irreligious. South.

When vice prevails, and impious men bear sway, The post of honour is a private station. Addison. The Roman wit, who impiously divides

His hero and his gods to different sides,

I would condemn. Granoille.

They, impious, dared to prey

On herds devoted to the god of day. Pope.

We have a melancholy prospect of the slate of our religion ; such amazing impieties can he equalled by nothing, but by those cities consumed of old by fire.

Swift.

O ye cold-hearted frozen formalists ! On such a theme, ‘tis impious to be calm. Young.

‘Twas not enough

By subtle fraud to snatch a single life ! Puny impiety! Porteus’s Death..

Alas! thou sinnest now, my Cain j thy words Sound impious in mine ears. Byron.

IMPIGTMORATE, v.a.) Lat. in and pig—

IMPIGNORA’TION, n. s. > nus. To pawn or pledge : the act of pawning, or putting in pledge.

To IMPINGE’, v. n. Lat. impingo. To fall against; to strike against; to clash with.

Things are reserved in the memory by some corporeal exuviae and material images, which, having impinged on the common sense, rebound thence into some vacant cells of the brain. Glanville.

The cause of reflection is not the impinging of light on the solid or impervious parts of bodies.

Newton’s Opticks.

IMPING'UATE, v. a. Lat. in and pinguis. To fatten ; to make fat.

Frictions also do more nil and impinguate the bo.'y than exercise ; for that in frictions the inward parts are at rest. Bacon.

IMPLACABILITY, n. s. } Lat. « and

IMPLA'CABLE, adj. £ placabilis. Not

IMPLA'CABLY, adv. j to be pacified ;

inexorable ; malicious : implacability, unap-peaseable malice : implacably is used once by Dryden in a kind of mixed sense of a tyrant's love.

His incensement is so implacable, that satisfaction can be none but by pangs of death. Shakspeare.

I see thou art implacable, more deaf

To prayers than winds and seas. Milton.

I love,

And 'tis below my greatness to disown it : Love thee implacably, yet hate thee too. Dryden.

The French are the most implacable and the most dangerous enemies of the British nation. Addison.

Vain thought ! to hide them from the general scorn That haunts and dogs them like an injured ghost Implacable. Blair's Grave.

IMPLANT,' v. a. i Lat. in and planto

IMPLANTA'TION, n. s. 3 To infix ; to insert ; to place ; to engraft ; to settle : to set, or sow : the act of setting or planting.

See, Father ! what first fruits on earth are sprung From thy implanted grace in man.

Milton. Paradise Lost. How can you him unworthy then decree,

In whose chief part your worths implanted be ?

Sidney.

No need of public sanctions this to bind, Which Nature has implanted in the mind. Dryden.

God, having endowed man with faculties of knowing, was no more obliged to implant those innate notions in his mind, than that, having given him reason, hands, and materials, he should build him bridges. Locke.

There grew to the outside of the arytenoides another cartilage, capable of motion by the help of some muscles that were implanted in it. Ray.

IMPLAUSIBLE, adj. In and plausible. Not specious ; not likely to seduce or persuade.

Nothing can better improve political school-boys than the art of making plausible or implausible harangues against the very opinion for which they resolve to determine. Stoift.

IM'PLEMENT, n. s.) Lat. impleo. Some—

IMPLE'TIOX, n. s. J thing that fills up vacancy or supplies wants ; tools of manufacture ; vessels of a kitchen : impletion, the act of filling, or the state of being full.

Unto life many implements are necessary ; more, if we seek such a life as hath in it joy, comfort, delight, and pleasure. Hooker.

Theophrastus conceiveth, upon a plentiful impletion, there may succeed a disruption of the matrix.

Browne.

Wood hath coined seventeen thousand pounds, and nath bis tools and implements to coin six times as much. Swift.

Proud Ksculapius' son

Where are thy boasted implements of art

And all thy well crammed magazines of health ?

Blair's Grace.

to simple: to embarrass; to involve; to infold and perplex : implication, an inference, not expressed ; an involution, or entanglement.

The ingredients of saltpetre do so mutually impli-cate and hinder each other, that the concrete acts but very languidly. Boyle.

Three principal causes of firmness are the gross-ness, the quiet contact, and the implication of the component parts. Id.

Though civil causes, according to some men, aro of less moment than criminal, yet the doctors are, by implication, of a different opinion. Ayliffe's Parergon.

Every poem is either simple or implex : it is called simple when there is no change of fortune in it ; implex <vhen the fortune of the chief actor changes from bad to good, or from good to bad. Spectator.

IMPLICIT, adj. > Fr. implicite ; Lat. im—

IMPLIC'ITLY, adv.) plicitus. Entangled ; enfolded ; but this sense is rare : inferred, not expressed ; entire ; resting upon another ; connected with another over which that which is connected tc it has no power ; trusting without reserve or examination : implicitly, with unreserved confidence or obedience.

There be false peaces or unities, when the peace is grounded but upon an implicit ignorance ; for all colours will agree in the dark. Bacon.

No longer by implicit faith we err,

Whilst every man's his own interpreter. Derham,

My blushing muse with conscious fear retires, And whom they like

implicitly admires. Roscommon.

In the first establishments of speech there was an implicit compact, founded upon common consent, that such and such words should be signs, whereby they would express their thoughts one to another. South,

We implicitly follow in the track in which they lead us, and comfort ourselves with this poor reflection, that we shall fare as well as those that go before us.

Rogers.

Learn not to dispute the methods of his providence ; but humbly and implicitly to acquiesce in and adore them. Atterbury.

The divine inspection into the affairs of the world doth necessarily follow from the nature and being of God ; and he that denies this, doth implicitly deny his existence : he may acknowledge what he will with his mouth, but in his heart he hath said there is no God. Bentley.

In his woolly fleece

I cling implicit. Pope.

The humble shrub,

And bush with frizzled hair implicit. Thomson.

Bliss ! sublunary bliss ! proud words and vain !

Implicit treason to divine decree ! Young.

No knife had curbed the rambling sprays,

No hand had wove the implicit maze. Beattie. We have the implicit order of the Guinta

To await their coming here, and join them in

Their office. Byron. The Two Fotcari.

IMPLORE’, v. a. & n. s. > Fr. implorer ;

IMPLO’RER, n. s. $ Lat. imploro. To

call upon in supplication ; to solicit ; to ask or

beg : the act of begging or intreaty : implorer,

a solicitor ; a petitioner.

Urged sore

With piercing words and pitiful implore, Him hasty to arise. Faerie Queene.

Do not say ‘tis superstition, that I kneel, and then implore her blessing.

Shakspeare. Winter’s Tale. Mere irnpiorers of unholy suits, Breathing, ,ike sanctified and pious, The better to beguile. Id. Hamlet.

They ship their oars, and crown with wine The holy goblet to the powers divine, Imploring all the gods that reign above.

Pope’s Odyssey.

Fain to implore the aid of Flattery’s screen, Even from thyself thy loathsome heart to hide.

Beattie. Minstrel.

IMPLY’, v. a. Fr. impliquer ; Lat. imphco. To unfold ; to cover ; to entangle. Not in use. To involve or comprise as a consequence or concomitant.

His courage stout,

Striving to loose the knot that fast him ties, Himself in straighter bonds too rash implies.

Faerie Queene.

And Phoebus flying so most shameful sight, His blushing face in foggy cloud implies. Id.

That it was in use among the Greeks, the word tri-clinium implieth. Browne’s Vulgar Errours.

Bows the strength of brawny arms imply, Emblems of valour, and of victory. Dryden.

Where a malicious act is proved, a malicious intention is implied. Sherlock.

IMPOI'SON, v. a. Fr. empoisonner. It might be written empoison. To corrupt with poison ; to kill with poison; but this is rare.

One doth not know How much an ill word doth impoison liking.

Shakspeare.

A man by his own arms impoitoned, And with his charity slain. Id.

IMPO'LARILY, adv. In and polar. Not according to the direction of the poles. Little used.

Being impolarily adjoined into a more vigorous loadstone, it will, in a short time, exchange its poles.

Browne.

IMPOL'ITICALLY, adv.-\ In and politic. IMPOLITICLY, adv. t Imprudent ; in—

IMPOL'ITICAL, adj. £ discreet; void of

IMPOL'ITIC, adj. J art or forecast.

He that exhorteth to beware of an enemy's policy, doth not give counsel to be impolitick ; but rather to use all prudent foresight and circumspection, lest our simplicity be overreached by cunning slights. Hooker. IMPON'DEROUS, adj. In and ponderous. Void of perceptible weight.

It produces visible and real effects by imponderoiu and invisible emissions. Browne's Vulgar Errours. IMPOROS'ITY, n. s.) In and porous. IMPO'ROUS, ad). J Absence of interstices ; compactness : close of texture ; completely solid.

The porosity or imporosity betwixt the tangible parts, and the greatness or smallness of the pores.

Bacon.

It has its earthly and salinous parts so exactly resolved, that its body is left imporous, and not discreted by atomical terminations.

! Browne's Vulgar Errours.

If atoms should descend plump down with equal velocity, being all perfectly solid and imporous, they would never the one overtake the other.

Ray on the Creation.

IMPORT, v. a. & n. s.ˆj Fr. importer ; LaL,

IMPOR'TABLE, adj. importo. To carry

IMPOR'TANCE, n. s. | into any country

IMPOR'TANT, adj.)>from abroad; to im—

IMPOR'TATIOK, n. s. ply ; to produce a

IMPOR'TER, n. s. consequence ; to be

IMPOR'TLESS, adj. J of moment, weight

or consequence : import and importance, mo-ment; tendency; consequence; importunity; but this is only used by Shakspeare. Any thing imported from abroad is called an import : important, of weight or consequence : importation, the act of bringing from abroad : importer, the agent by whom imports are made : importless, trifling; of no moment. Importable is accented by Spenser on the first syllable, and signifies insupportable ; not to be endured.

God for his manace him so sore smote,

« *****

****

Thatte his oeines weren importable.

Chaucer. The Monkes Tale. Both at once him charge on either side, “With hideous strokes and importable power,

That forced him his ground to traverse wide, And wisely watch to ward that deadly stour.

Faerie Queene. He fiercely at him flew, And with important outrage him assailed ; Who soon prepared to field, his sword forth drew, And him with equal valour countervailed. Id. Himself not only comprehended all our necessities, but in such sort also framed every petition as might most naturally serve for many ; and doth, though not always require, yet always import a multitude of speakers together. Hooker.

The name of discipline importeth not as they •would fain have it construed ; but the self same thing it signifieth, which the name of doctrine doth.

Id.

Something he left imperfect in the state, Which since his coming forth is thought of. which Imports the kingdom so much fear and danger, That his return was most required. Shakspeare.

Maria writ

The letter at Sir Toby’s great importance ; In recompence whereof he hath married her.

Id.

Great France My mourning and important tears hath pitied. Id.

What occasion of import Hath all so long detained you from your wife ?

Id.

It had been pity you should have been put together with so mortal a purpose, as then each bore, upon importance of so slight a nature. Id.

We less expect

That matter needless, of importless burthen, Divide thy lips. Id.

Her length of sickness, with what else more

serious

Importeth thee to know, this bears. Id.

A notable passion of wonder appeared in them ; but the wisest beholder, that knew no more but seeing, could not say if the importance were joy or sorrow.

Id. Winter's Tale.

This question we now asked, imported, as that we thought this land a land of magicians. Bacon.

Let the heat be such as may keep the metal perpetually molten ; for that above all importeth to the work. Id.

Number in armies importeth not much, where the people is of weak courage. Id.

The king's reasonable profit should not be neglected upon importation and exportation. Id.

This superadds treachery to the crime : 'tis the fal-sifying the most important trust. Decay of Piety.

It may import us in this calm to hearken more than we have done to the storms that are now raising abroad. Taylor.

This to attain, whether heaven move, or earth, Imports not, if thou reckon right. Milton.

O then, what iuterest shall I make To save my last important stake, When the most just have cause to quake ?

Roscommon.

Add to the former observations made about vegetables a third of the same import made in mineral substances. Boyle.

If I endure it, what imports it you ? Dryden.

Some business of import that triumph wears You seem to go with. Dryden and Lee's Oedipus. TL-e great important end that God designs religion for, the government of mankind, sufficiently shews the necessity of its being rooted deep in the heart, and put beyond the danger of being torn up by any ordinary violence. South.

These mines fill the country with greater numbers of people than it would be able to bear, without the importation of corn from foreign parts.

Addison.

The emperor has forbidden the importation of their manufactures into any part of the empire.

Id. on Italy.

When there is any dispute, the judge ought to appoint the sum according to the eloquence and ability of the advocate, and in proportion to the import of the cause. Ayliffe.

Examine how the fashionable practice of the world can be reconciled to the important doctrine of our religion. Rogers.

For El is I would sail with utmost speed, T' import twelve mares, which there luxurious feed.

Pope.

Thy own importance know,

Nor bound thy narrow views to things below. Id. It is impossible to limit the quantity that shall be brought in, especially if the importers of it have so sure a market as the Exchequer. Swift.

Of what seems

A trifle, a mere nothing by itself, In some nice situations turns the scale Of Fate, and rules the most important actions.

Thomson.

Joy is an import ; joy is an exchange ; Joy flies monopolists ; it calls for two : Rich fruit ! Heaven planted ! never plucked by one.

Young.

It is of importance to observe, that, whatever is easy and agreeable to the organs of speech, always sounds grateful to the ear. Blair's Lectures.

Drink and be mad then, 'tis your country bids ; Gloriously drunk obey the' important call : Her cause demands the assistance of your throats, Ye all can swallow, and she asks no more. Cowper.

Now shall this rule be allowed to every science, and not to the most important of all sciences — the science of life and manners ? Beattif.

The good old gentleman had been detained By winds and waves, and some important captures ;

And, in the hope of more at sea remained, Although a squall or two had damped his raptures.

Byron. Don Juan.

IMPORTUNATE, adj.~} Fr. importuner ; IMPOR'TUNATENESS, n. s. I Latin importunus. IMPOR'TUNATELY, adv. [Unseasonable soli- IMPORTUNE', v. a. & adj. j citations ; inces-IMPORTUNE'LY, adv. \ sant petition. Im-IMPORTU'NITY, n. s. J porturie, to teaze ; harass ; or molest. Importune, constantly recurring; troublesome; vexatious; unseasonable; coming at a wrong time. Importunely, troublesomely ; incessantly. Importunity, incessant solicitation.

And for he n'ill be importune Unto no wight, lie onerous. Nor of hire godesse covetous.

Chaucer, Romaunt of the Rose. And the' armies of their creatures all, and some Do serve to them, and with importune might War against us the vassals of their will. Spenser.

But the sage wizard telles (as she has redd) That it importunes death and doleful diery hedd.

Id. Faerie Queene. If fortuned, whilest she stifly strove, And the wide sea. importuned long space With shrilling shriekes Proteus abrode did rove, - Along the fiery waves driving his finny drove. Id.

The palmer bent his ear unto the noise, To weet who called so importunely : Again he heard a more efforced voice, That bade him come in haste. Id.

Overcome with the importunity of his wife, a wo-man of a haughty spirit, he altered his former purpose. Knolles. Against all sense you do importune her. Shakspeare. I was in debt to my importunate business, but he would not hear my excuse. Id.

Henry, king of England, needed not to have bestowed such great sums, nor so to have busied himself •with importune and incessant labour, to compass my death and ruin, if I had been a feigned person.

Bacon's Henry VII.

If he espied any lewd gaiety in his fellow-servants, his master should straightways know it, and not rest free from importuning, until the fellow had put away his fault. Carew.

Their pertinacity is such, that when you drive them out of one form, they assume another ; and are so importunately troublesome, as makes many think it impossible to be freed from them. Duppa.

The constitutions that the apostles made concerning deacons and widows, are, with much importunity, but very importunely urged by the disciplinarians.

Sanderson.

Thrice I deluded her, and turned to sport Her importunity. Milton's Agonistes.

No fair to thine

Equivalent, or second '. which compelled Me thus, though importune perhaps, to come And gaze and worship thee. Milton.

The same airs which some entertain with most delightful transports to others are importune.

Glanville’s Scepsis.

The bloom of beauty other years demands, Nor will be gathered by such withered hands ; You importtmt it with a false desire. Dryden.

Every one haih experimented this troublesome intrusion of some frisking ideas, which thus importune the understanding, and hinder it from being employed.

Locke.

A rule restrains the most importunate appetites of our nature. Rogers.

We have been obliged to hire troops from several princes of the empire, whose ministers and residents here perpetually importuned the court with unreasonable demands. Swift. IMPOSE’, v. a. &TI.S.”! Fr. imposer, impo-IMPOSE’ABLE, adj. IMPO’SER, n. s.

IMPOSI’TION, n. s. IM’POST, n. s. IM’POSTS, n. s. IMPOS’TOR, n. s. IMPOS’TURE, n. $.

sition, impoite, impos-teur. Lat. in and p ono. Imposition, to on as a burden ; a penalty : to enjoin as a duty ; to fix on, or J impute to ; to obtrude

fallaciously ; to deceive, when used with on : among printers, to put the pages on the stone

and fit on the chase in order to carry the form s to press. Impose, a command or injunction. Imposeable, to be laid as obligatory on any one. Imposer, one who enjoins. Imposition, the act of laying any thing on another; of annexing; injunction ; constraint; oppression; cheat; imposture ; a supernumerary exercise enjoined on scholars as a punishment. Impost, a tax ; a toll ; a custom paid : in architecture, that part of a pillar, in vaults and arches, on which the weight of the whole building lieth. Impostor, one who cheats by a fictitious character. Imposture, a fraud, cheat, or deception, committed by giving to persons or things a false character.

It shall not be lawful to impose toll upon them.

Ezra vii.

Yet greatly did the Beast repine at those Straunge hands, whose like till then he never bore, Ne ever any durst till then impose.

Spenser's Faerie Queene.

There was a thorough way made by the sword for the imposing of the laws upon them. Id. on Ireland.

What good or evil is there under the sun, what ac-tion correspondent or repugnant unto the law which God hath imposed upon his creatures, but in or upon it God doth work, according to the law which himself hath eternally purposed to keep. Hooker.

According to your ladyship's impose I am thus early come. Shakspeare.

If a son do fall into a lewd action, the imputation, by your rule, should be imposed upon his father. Id.

The first imposition of names was grounded, among all nations, upon future good hope conceived of children. Camden.

Taxes and imposts upon merchants do seldom good to the king's revenue ; for that that he wins in the hundred, he loseth in the shire. Bacon.

From imposition of strict laws, to free Acceptance of large grace ; from servile fear To filial ; works of law, to works of faith. Milton. This cannot be allowed , except we impute that unto the first cause which we impose not on the second ; or, what we deny unto nature, we impute unto nativity itself. Browne.

The universities' sufferings might be manifested to all nations, and the imposers of these oaths might re-pent. Walton.

Thou on the deep imposest nobler laws, And by that justice hast removed the cause. Waller.

The imposition of the name is grounded only upon the predominancy of that element, whose name is ascribed to it. Boyle.

Physicians and philosophers have suffered themselves to be so far imposed upon as to publish chymical experiments which they never

tried. Id.

Christianity hath hardly imposed any other laws upon us, but what are enacted in our natures, or are agreeable to the prime and fundamental laws of it.

Tillotion

To tyrants others have their country sold, Imposing foreign lords for foreign gold.

Dryden’s JEneid. Impose but your commands, This hour shall bring you twenty thousand hands.

Dryden.

It was neither imposed on me, nor so much as the subject given me by any man. Id.

Our poet thinks not fit

To impose upon you what he writes for wit. Id. The constraint of receiving and holding opinions by authority was rightly called imposition. Locke.

He that thinks the name centaur stands for some

real being, imposes on himself, and mistakes words for tkins;s. Id.

We know how successful the late usurper was, while his army believed him real in his zeal against kingship j but when they found out the imposture, upon his aspiring to the same himself, he was presently deserted, and never able to crown his usurped greatness with that

title. South.

Shame and pain, poverty and sickness, yea death and hell itself, are but the trophies of those fatal conquests got by that grand impostor, the devil, over the deluded sons of men. Id,

They were not simply imposeable-on any particular man, farther than he was a member of some church.

Hammond.

The second part of confirmation is the prayer or benediction of the bishop, made more solemn by the imposition of hands. Id.

On impious realms and barbarous kings impose Thy plagues, and curse them with such ills as those.

Pope.

A greater load has been laid on us than we have been able to bear, and the grossest impositions have been submitted to, in order to forward the dangerous designs of a faction. Swift.

Let it not be made, contrary to its own nature, the occasion of strife, a narrow spirit, and unreasonable impositions on the mind and practice. Waits.

Form new legends,

And fill the world with follies and impostures. Irene. — — — — ^— for she was one Fit for the model of a statuary, A race of mere impostors, when all's done.

Byron. Don Juan. I see the colour comes Back to your cheek : Heaven send you strength to

bear What more may be imposed ! Id. The Two Foscari.

IMPOSITION OF HANDS, a religious ceremony, by which a bishop lays his hand or hands on the head of a person, in ordination, confirmation, or in uttering a blessing. This practice is also frequently observed by dissenters at the ordination of their ministers, when all the ministers present place their hands on the head of him whom they are ordaining, while one of them prays for a blessing on him and on his future labors. It is. also used by some dissenting churches on the the reception of each member, and as a mode of invoking the blessing

and Spirit of God, grounded on Heb. vi. 2. They are not, however, agreed as to the propriety of this ceremony ; nor do they consider it as an essential part of ordination. Imposition of hands was a Jewish ceremony, introduced not by any divine authority, but by custom ; it being the practice among those people, whenever they prayed to God, for any person to lay their hands on his head. Our Saviour observed the same custom, both when he conferred his blessing on children, and when he cured the sick ; adding prayer to the ceremony. The apostles likewise laid hands on those upon whom they bestowed the Holy Ghost. The Jewish priests observed the same custom when any one was received into their body. And the apostles themselves underwent the imposition of hands afresh when they entered upon any new undertaking. In the ancient church, imposition of hands was even practised on persons when they married, which custom the Abyssinians still observe.

IMPOSSIBLE, a$.) Fr. impossible; Lat.

IMPOSSIBILITY, ra. s. \iinpossibilis. Not to be

done or attained ; impracticable ; the state of

being not feasible ; that which is beyond our

power.

With men this is impossible ; but with God all things are possible. Mat. xix. 26.

It was impossible that the state should continue quiet. 2 Mac.

Of hir delitc, or joies, one of the lest Were impossible to my wit to saie.

Chaucer. Troilus and Creseide. For, trusteth wel, it is impossible That any clerk wol speken good of wives, (But — if it be of holy seiutes lives) Ne of none other woman never the mo.

Id. Prologue to the Wif of Bathes Tale. Though men do, without offence, wish daily that the affairs, which with evil success are past, might have fallen out much better ; yet to pray that they may have been any other than they are, this being a manifest impossibility in itself, the rules of religion do not permit. Hooker.

Admit all these impossibilities and great absurdities to be possible and convenient. Whitgifte.

Let the mutinous winds

Strike the proud cedars ‘gainst the fiery sun, Murdering impossibility, to make What cannot be, slight work. Shakspeare.

Difficult it is, but not impossible. Chillingworth.

Impossibilities! oh no, there’s none, Could I bring thy heart captive home. Cowley. Simple Philoclea, it is the impossibility that doth torment me ; for unlawful desires are punished after the effect of enjoying, but impossible desires in the de-sire itself. Sidney.

It is impossible the mind should be stopped any where in its progress in this space, how far soever it extends its thoughts. Locke.

We cannot believe it impossible to God to make a creature with more ways to convey into the understanding the notice of corporeal things than five. Id.

Those who assert the impossibility of space existing without matter, must make body infinite. Id.

I my thoughts deceive

With hope of things impossible to find. Walsh. They confound difficulty with impossibility. South. When we see a man with like passions and weakness with ourselves going before us in the paths of duty, it confutes all lazy pretences of impossibility.

Rogers.

‘Twere impossible for any enterprise to be lawful, if that which should legitimate it is subsequent to it.

Decay of Piety.

Is it not recommended to those who study to excel in any art or science, that they form themselves after the most perfect models, even although it be morally impossible for them ever to attain the perfection of these models ? Beattie.

IMPOSSIBILITY is either physical or moral. Moral impossibility is when any thing, in its own nature, is possible, but yet is attended with such difficulties, as that, all things considered, it appears impossible.

Thus it is morally impossible that a man should throw the same number with three dice 100 times successively. Physical impossibility is that which is contrary to the law of nature, and which, therefore, cannot by any means or method within our conception possibly be accomplished. %

IMPOST, in law. is particularly applied to that tax which the crown receives for merchandises imported into aay port or haven.

IMPOSTHUMATE, v. n. «c } This seems

IMPOSTHUMA'TION, n. s. [y. a. >to have been

IMPOST'HUME, n. s, J formed by corruption from impostem, as South writes it; and impostem to have been written erroneously for apostem, Gr. atrb'znpa, an abscess. — Johnson. These are old medicinal words now out of use. To form an abscess or cyst, containing purulent matter : the act of forming an abscess, or the state in which it is formed.

Now rotten diseases, ruptures, catarrhs, and bladders full of imposthumes, make preposterous discoveries. Shakspeare.

He that maketh the wound bleed inwards, endan-gcreth malign ulcers and pernicious imposthumations.

Bacon's Essays.

Humours of tongues impoithumcd purged with shame are mended

Fletcher. The Purple Island.

Fumes cannot transude through the bag of an im-potthume. Harvey.

An error in the judgment is like an impostem in the head, which is always noisome, and frequently mortal.

South.

The bruise imposthumated, and afterwards turned to a stinking ulcer, which made every body shy to come near her. Arbuthnot.

They would not fly that surgeon, whose lancet threatens none but the imposthumated parts.

Decay of Piety.

IM’POTENCE, n. s. ~\ Fr. impotent ; Lat.

IM’POTENCY, n. s. ˆ impotens ; in and po—

IM’POTENT, adj. t tens. Weak ; feeble ;

IM’POTENTLY, adv. > disabled by nature f»r diseasp in body or mind ; without power of restraint ; without power of propagation. Impotently, powerlessly ; feebly.

In those porches lay a great multitude of impotent folk, of blind, halt, and withered. Johnv. 3.

There sat a certain man, impotent in his feet, being a cripple from his mother’s womb, who never had walked. Acts xiv.

But impotence with her owne wilfull hands One of Maleger’s cursed darts did take. So ryved her trembling hart, and wicked end did make. Spenser’s Faerie Queene.

We that are strong must bear the imbecility of the impotent, and not please ourselves. Hooker.

I have learned that fearful commenting Is leden servitor to dull delay ; Delay leads impotent and pale-faced beggary.

Shakspeare.

Yet wealth is impotent . To gain dominion, or to keep it gaineo.

Milton.

Will he, so wise, let loose at once his ire, Belike through impotence, or unaware, To give his enemies their wish, and end Thorn in his anger,

whom his anger saves To punish endless ? Id.

The impotent poor might be r»lieved, and the idle forced to labour. Temple.

With jealous eyes at distance she had seen, Whispering with Jove, the silver-footed queen ; Then impotent of tongue, her silence broke, Thus turbulent in rattling tone she spoke.

Dryden.

Yet all combined,

Your beauty and my impotence of mind. Id. He told beau Prim, who is thought impotent, that his mistress would not have hi:n, because he is a slo-ven, and committed a rape. Tatler. Vor.. XI.

Although in dreadful whirls he hung, High on the broken wave,

I knew thou wert not slow to hear, Nor impotent to save. Addison's Spectator.

God is a friend and a father, whose care supplies our wants, and defends our impotence, and from whose compassion in Christ we hope for eternal glory hereafter. Rogers.

Weakness, or the impotence of exercising animal motion, attends fevers. Arbuthnot.

This is not a restraint or impotency, but the royal prerogative of the most absolute king of kings ; that he wills to do nothing but what he can ; and that he can do nothing which is repugnant to his divine goodness. Bentley.

Dulness with obscenity must prove As hateful sure, as impotence in love. Pope.

To a mind resolved and wise There is an impotence in misery Which makes me smile, when all its shafts are in me.

Young's Revenge.

IMPOTENCE, in moral agency. Divines and philosophers distinguish two sorts of impotency ; natural and moral. The first is a want of some physical principle, necessary to an action; or where a being is

absolutely defective, or not free and at liberty to act ; the second imports a want of will, and sometimes only a great difficulty ; as a strong habit to the contrary, a violent passion, &c. IMPOTENCE is a canonical disability, to avoid marriage in the spiritual court. The marriage is not void ab initio, but voidable only by sentence of separation during the life of the parties IMPOUND', v. a. To enclose as in a pound to confine or shut up in a penfold.

England

Hath taken and impounded as a stray The king. Shakspeare. Henry V.

The great care was rather how to impound the re-bels, that none of them might escape, than that any doubt was made to vanquish them. Bacon.

Seeing him wander about, I took him up for a stray, and impounded him, with intention to restore him to the right owner. Dryden.

IMPOW'ER. See EMPOWER.

IMPRACTICABLE,ˆ. > Fr. impractica—

IMPRAC'TICABLENESS, n. s. \ ble ; in and practicable ; Gr. Trpayfta. Not to be performed ; untractable ; unmanageable; stubborn: an impossibility.

And yet this tough impracticable heart Is governed by a dainty-fingered girl.

Rowe's Jane Shore.

Had there not been still remaining bodies, the legitimate offsprings of the antediluvian earth, 'twould have been an extravagant and impracticable undertaking to have gone about to determine any thing concerning it. Woodward.

To preach up the necessity of that which our experience tells us is utterly impracticable, were to affright mankind with the terrible prospect of universal damnation. Rogers.

I do not know a greater mark of an able minister than that of rightly adapting the several faculties of men, nor is any thing more to be lamented than the impracticableness of doing this. Swift.

IM'PRECATE, v. a. ˆ Fr. imprecation ;

IMPRECA’TIOK, n. s. > Lat. imprecor, impre—

IM’PRECATORY, adj. j catio. To call for a curse, or any evil, on one’s self or others : an imprecation is a prayer, always used in a bad sense ; a wish for evil.

My mother shall the horrid furies raise With imprecations. Chapman’s Odyssey.

Sir John Hotham, uncursed by any imprecation of mine, paid the forfeit of his own and his eldest son’s head. King.

With imprecations thus he filled the air, And angry Neptune heard the unrighteous prayer.

Pope. No light, save yon faint gleam, which shews me

walls

Which never echoed but to sorrow’s sounds, The sigh of long imprisonment, the step Of feet on which the iron clanked, the groan Of death, the imprecation of despair.

Byron. The Two Foscari.

IMPREGN,’ v. a. j French, im—

IMPREG’NATE, v. a. & adj. v pregnable ; Lat. IMPREGNATION, n. s. 3 in, prte, and old

Lat. geno. To fill with any matter or quality ; to fill with young ; to

make pregnant or prolific : impregnation, the act of making prolific ; that with which any thing is impregnated ; saturation ; impregnate, impregnated.

They ought to refer matters unto counsellors, which is the first begetting or impregnation ; but when they are elaborate in the womb of their counsel, and grow ripe to be brought forth, then they take the mat-ter back into their own hands. Bacon. In her ears the sound

Yet rung of his persuasive words, impregned

With reason, to her seeming. Milton.

Hermaphrodites, although they include the parts of both sexes, cannot impregnate themselves.

Browne.

With native earth their blood the monsters mixed ; The blood, endued with animating heat, Did in the impregnate earth new sons beget. Dryden.

What could implant in the body such peculiar impregnations, as should have such power? Derham.

Christianity is of so prolific a nature, so apt to impregnate the hearts and lives of its proselytes, that it is hard to imagine that any branch should want a due fertility. Decay of Piety.

The unfruitful rock itself, impregned by thee,

Forms lucid stones. Thomson.

That man is of a temper too severe :

Hard, but as lofty as the rock, and free

From all the taints of common earth — while I

Am softer clay, impregnated with flowers.

Byron. Sardanapalus.

IMPREG’NABLE, adj. \ Fr. imprenabk ,-

IMPREG’NABLY, adv.) Lat. non-prehendus. Not to be stormed or taken ; unshaken ; unmoved ; invincible : impregnably, defended in

such man-ner as to defy external force.

A castle strongly seated on a high rock, joineth by an isthmus to the land, and is impregnably fortified.

Sandys. Hast thou not him, and all

Which he calls his, inclosed with a wall

Of strength impregnable ? Id.

Let us be backed with God, and with the seas, Which he hath given for fence impregnable, And with their helps alone defend ourselves.

Shakspeare. There the capitol thou see'st,

Above the rest lifting his stately head

On the Tarpeian rock, her citadel

Impregnable. Milton.

Two giants kept themselves in a castle, seated upon the top of a rock, impregnable, because there was no coming to it but by one narrow path, where one man's force was able to keep down an army. Sidney.

The man's affection remains wholly unconcerned and impregnable ; just like a rock, -which, bein§ plied continually by the waves, still throws them bacK again, but is not at all moved. South.

IMPREJUTHCATE, adj. Lat. in pra and judko. Unprejudiced ; not prepossessed ; impartial.

The solid reason of one man with imprejudicate apprehensions, begets as firm a belief as the authority or aggregated testimony of many hundreds. Browne.

IMPREPARATION, n. s. In and preparation. Unpreparedness ; want of preparation.

Imp/reparation and unreadiness when they find in us, they turn it to the soothing up of themselves.

Hooker.

IMPRESS, v. a. & n. s. A Lat. impressum.

IMPRES'SION, n. s. ^To print; stamp;

IMPRES'SIBLE, adj. L fix deep ; mark ;

IMPRES'SURE, n.s. J to force into service ; now generally written press : impress is a mark made by pressure ; effect of one substance on another ; mark of distinction ; device ; seizure : impression, act of pressing ; effect of pressure ; image in the mind ; efficacious agency or influence ; effect of a military attack ; an edition of a work : impressible, that may be impressed ; soft; tender: im pressure, the mark, dent, or impression.

Eke other sain, that through impression*, As if a wight hath fast a thing in minde, That thereof cometh soche avisions : And other sain, as thei in bokes finde, That after times of the yere, by kinde, Men dreme. Chaucer. Troilia and Creseide.

And of hire loke, in him there gan to quicken So grete desire and suche affection, That in his hertes bottom, gan to sticken Of her his fixe and depe impressioun. Id.

And with meeke service and much suit did lav Continuall siege unto her gentle hart ; Which, being whylome lauucht with lovely dart, More eath was new impression to receive However she her paynd with womanish art To hide her wound that none might it perceive.

Spenser. Faerie Queene. But nothing might relent her hasty flight ; So deepe the deadly feare of that foule swaine Was eart impressed in her gentle spright. Id.

So foul and ugly, that exceeding fear Their visages imprest, when they approached near

Spenser.

Lean but upon a rush, The cicatrice and capable impressure Thy palm some moments keeps. Shakspeare.

Ajax was here the voluntary, and you as under au impress. Id.

Why such impress of shipwrights, whose sore task Does not divide the Sunday from the week ? Id.

Your ships are not well manned ; Your mariners are muleteers,

reapers, people Ingrossed by swift impress.

Id. Antony and Cleopatra. His age has charms in it, his title more, To pluck the common bosoms on his side, And turn our imprest launces in our eyes, Which do command them. Id. King Lear,

Like to a chaos, or unlicked bear-whelp. That carries no impression like the dam.

Shakspeare.

This weak impress of love is as a figure Trenched in ice, which with an hour's heat Dissolves to water.

Id. Two Gentlemen of Verona. Macbeth shall never vanquished be, until

Great Birnam-wood to Dunsinane's high hill

Shall come against hinr

— That will never be :

Who can impreis the forest, bid the tree

Unfix his earth-bound root! Id. Macbeth.

To be distracted with many opinions, makes men to be of the last impression, and full of change.

Bacon. His spear a spit, a pot -lid broad his shield,

Whose smoky plain a chalked impresse filled ;

A bag sure sealed : his word, much better than spilled. Fletcher. The Purple Island.

Ormond should contribute all he could for the making those levies of men, and for impressing of ships. Clarendon.

IMPRESSION, in the arts, is used to signify the transfer of certain figures by pressure from a hard to a soft substance. This transfer affords the means of multiplying copies, and takes place in typography, copper-plate printing, lithography, &c. Engravers in copper and wood work in piane surfaces ; the gem and stamp engravers, however, produce elevated or sunk figures ; consequently the impressions appear in relievo, and the substances which receive them must be susceptible of being raised or depressed. In order to obtain impressions from copper-plates, a coloring substance must be put in the incisions of the plate. In the case of wood-cuts, the coloring matter is applied to the elevations. In both cases, the copy is procured by pressure. There are two kinds of impressions: — 1. that executed upon plane surfaces, as in lithography, copper-plate printing, and copies from wood-cuts. The instruments for it are the printing, rolling, and lithographic press. The goodness of the copies depends partly on the care and skill of the printer; partly also on the degree in which the plate has been used. The best copies are always among the first hundred, and are called, with us, the proof impressions ; on the continent of Europe, uran't la lettre, i. e., those struck off before the name of the engraving is inscribed on the plate. These are sold at a higher price than the subsequent impressions. An engraved plate affords more good copies than an etched one, and this more than one in aqua tinta. Copies are taken from wood-cuts in the same way as from copper-plates. The same de-gree of care, however, is not necessary in conducting the process. — 2. Copies in relievo. These are impressions of medals and gems, or stamps, so as to leave raised or sunken figures (empreinte}. Medals and engraved gems are valuable, as historical monuments and works of art, and the mode in which copies of them are made is a matter of importance. Representations of them in copper-plate engravings cannot properly express their character as works of ait. Impressions are therefore taken immediately from them, by means of fine sealing-wax, sulphur, wax, glass, &c. Copies in vitreous substances are called pastes.

IMPRESSING OF SEAMEN. The power of impressing s = amen for the sea-service by the king's

commission, has been a matter of great dispute, and submitted to with great reluctance. Sir Michael Foster attempts to prove, that the practice of impressing, and granting powers to the admiralty for that purpose, is of very ancient date, and has been uniformly continued by a regular series of precedents to the present time : whence he concludes it to be part of the common law. The difficulty arises hence, that no statute has expressly declared this power to be in the crown, though many of them strongly imply it. The stat. 2 Ric. II., c. 4., speaks of mariners being arrested and retained for the king's service, as of a thing well known, and practised without dispute; and provides a remedy against their running away. By a later statute, if any water-man, who uses the river Thames, shall hide himself during the execution of any commission of pressing for the king's service, he is liable to heavy penalties. By another (5 Eliz. c. 5) no fisherman shall be taken by the queen's commission to serve as a mariner; but the commission shall be first brought to two justices of the peace, inhabiting near the sea coast where the mariners are to be taken, to the intent that the justices may choose out and return such a number of able-bodied men, as in the commission are contained, to serve her majesty. And by others, especial protections are allowed to seamen, in particular circumstances, to prevent them from being impressed. Ferrymen are also said to he privileged from being impressed at common law. All which do most evidently imply a power of impressing to reside somewhere ; and if any where, it must, from the spirit of our constitution, as well as from the frequent mention of the king's commission, reside in the crown alone. This method of manning the navy can be considered as only defensible from public necessity, to which all private considerations must give way. The following persons are exempted from being impressed : apprentices for three years ; the mas-ter, mate, and carpenter, and one man for every 100 tons of vessels employed in the coal trade ; all under eighteen years of age and above fifty-five; foreigners in merchant-ships and privateers ; landmen betaking themselves to sea for two years ; seamen in the Greenland fishery, and harpooners employed during the interval of the fishing season in the coal trade, and giving security to go to the fishing next season. In cases of threatened or actual invasion of a colony, or other unforeseen necessity, commanders of ships of war there may, with consent of the governor and council of the colony, press seamen, to make up their usual complement. Such seamen to be discharged, if they require it, when the service is performed. Captains refusing their discharge to pay the penalty of £50.

IMPRESSION is applied to the species of objects which are supposed to make some mark on the senses, the mind, and the memory. The

Peripatetics assert, that bodies emit species resembling them, which are conveyed to the com-mon sensorium, and they are rendered intelligible by the active intellect; and, when thus spiritualised, are called expressions, or express species, as being expressed from others.

IMPRIMATUR, a Latin verb, signifying,

Let it be printed, much used on English books printed in the sixteenth and seventeenth centuries, and introducing copies of warrants for their publication, signed by the lord chancellor or other public officer : or when

Some learned decree [would say] ‘ Tis right/ And imprimatur ushered it to light.

The pope still exercises an authority of this kind on bulls circulated amongst catholics. See INDEX.

IMPRINT, v. a. Fr. imprinter. To mark on

any substance; to fix on the mind and memory.

There is a kind of conveying of effectual and j’mprinting passages, amongst compliments, which is of

singular use. Bacon.

One of the same seal, imprinted upon pieces of •wax of different colours.

Holder’s Elements of Speech.

We have all those ideas in our understandings which we can make the objects of our thoughts, without the help of those sensible qualities which first imprinted them. Locke.

Retention is the power to revive again in our minds those ideas, which, after imprinting, have disappeared.

Id.

By familiar acquaintance he has got the ideas of those two different things distinctly imprinted on his mind. Id.

When we set before our eyes a round globe, the idea imprinted in our mind is of a flat circle, variously shadowed. Id.

Having surveyed the image of God in the soul of nan, we are not to omit those characters of majesty that God imprinted upon the body. South.

She amidst his spacious meadows flows ; Inclines her urn upon his fattened lands, And sees his numerous herds imprint her sands.

Prior.

LMPRIS'ON, v.a. } fi.emprisonner. To IMPRIS'ONMENT,ˆ, s. S shut up ; to confine; to keep from liberty : confinement ; clausure.

He imprisoned was in chains remediless ; For that Hippolytus' rent corse he did redress.

Spenier.

His sinews waxen weak and raw Through long imprisonment and hard constraint.

Id.

Now we are in the street, he first of all, Improvidently proud, creeps to the wall ; And so imprisoned and hemmed in by me, Sells for a little state his liberty. Donne.

At length the flame breaks from the' imprisoning

cold

With horrid noise, tearing the limber mould ; While down, in liquid tears, the broken vapours

rolled. Fletcher' 't Purple Itland.

The prince who saw his long imprisonment Now end in never ending liberty ; To meet the victim from his castle went. Id.

Which shall I first bewail, Thy bondage or lost sight ? Thou art become, O worst imprisonment ! The dungeon of thyself. Milton's Agomstes.

Try to imprison the resistless wind ; So swift is guilt, so hard to be confined.

Dryden.

From retentive cage

When sullen Philomel escape*, her notes She varies, and of past imprisonment Sweetly complains. Phillips.

Count Ser'ni, still close prisoner in this castle, lost his senses by his long imprisonment and afflictions.

A dilison.

It is not improbable, that all the virtual heat in the juices of vegetables, metals, and minerals, may be owing to the action of the imprisoned rays. Cheyne.

If a man imprisons himself in his closet, and employs reason to find out the nature of the corporeal world, without experiments, he will frame a scheme of chimeras. Watts.

It is well if they don't fix the brand of heresy on the man who is leading them out of their long imprisonment, and loosing the fetters of their souls.

Id. on the Mind. Both the same to me : the after Freedom as is the first imprisonment.

Byron. The Two Foscari.

IMPRISONMENT, in law. No person is to be imprisoned but as the law directs, either by the command or order of a court of record, or by lawful warrant; or the king's process, on which one may be lawfully detained. Where the law gives power to imprison, in such case it is

justifiable, provided he that does it in pursuance of a statute, exactly pursues the statute in the manner of doing it; for otherwise it will be deemed false imprisonment, and of consequence is unjustifiable. Every warrant for commitment for imprisoning a person, ought to run, ‘ till delivered by due course of law,’ and not ‘ until farther order ;’ which has been held illegal : and thus it also is, where one is imprisoned on a warrant not mentioning any cause for which he is committed.

Every confinement of the person is an imprisonment, whether it be in a common prison or in a private house, or in the stocks, or even by forcibly detaining one in the public streets. Unlawful, or false imprisonment, consists in such confinement or detention without sufficient authority : which authority may arise either from some process from the courts of justice; or from some warrant from a legal power to commit, un-der his hand and seal, and expressing the cause of such commitment; or from some other special cause warranted, for the necessity of the thing, either by common law or act of parliament ; such as the arresting of a felon by a private person without warrant, the impressing of mariners for the public service, or the apprehending of wag-goners for misbehaviour in the public highways. False imprisonment also may arise by executing a lawful warrant or process at an unlawful time, as on a Sunday; or in a place privileged from arrests, as in the verge of the king’s court. The remedy is of two sorts ; the one removing the in-jury, the other making satisfaction for it. The satisfactory remedy for this injury of false imprisonment, is by an action of trespass vi et armis, usually called an action of false imprisonment ; which is generally, and almost unavoidably, accompanied with a charge of assault and battery also ; and therein the party shall recover damages for the injuries he has received ; and also the defendant is, as for all other injuries committed with force, vi et armis, liable to pay a fine to the king for the violation of the public peace.

IMPROBABILITY, n. s.-v Fr. improbable ;

IMPROB’ABLE, adj. I Lat. in and probo.

IMPROB’ABLV, adv. \ That which is unIM’PROBATF. v.a. i likely, incredible,

j ‘

iMPROBA’nON, W. S.

proved : in a manner not approved. Not to approve, improbate ; act of disallowing, improba-tion ; which words are not commonly used.

Aristotle tells us, if a drop of wine be put into ten thousand measures of water, the wine, being overpowered, will be turned into water : he speaks very improbably. Boyle.

As to the improbabilities of a spirit appearing, I boldly answer him, that a heroic poet is not tied to the bare representation of what is true, or exceeding probable. Dry den.

This account of party-patches will appear improbable to those who live at a distance from the fashionable world. Addison.

The difficulty and the improbability of attempting this successfully is great. Hammond.

It warns the reader to expect nothing but truth, and consequently every appearance of fiction in the sequel must produce a bad effect, and bear the mark of improbability. Beattie.

IMPROBITY, re. s. Lat. improbitas, impro-bus. Want of honesty ; dishonesty; baseness.

He was perhaps excommunicable, yea, and cast out for notorious improbity. Hooker.

We balance the improbity of the one with the improbity of the other. L’ Estrange.

IMPROLIF’ICATE, v. a. In and prolific.

To impregnate ; to fecundate. A word not used.

A difficulty in eggs is how the sperm of the cock

improlificates, and makes the oval conception fruitful.

Browne.

IMPROP'ER, adj. } Fr. impropre ; Lat. im—

IMPUOP'ERLY, adv. ˆproprius. Not well adapt—

IMTROPRI'ETY, n. s. J ed ; unqualified ; unfit ;

inaccurate; wrong : incongruously; out of order

or place.

They assuring me of their assistance in correcting my fault where I spoke improperly, I was encouraged.

Dryden.

He disappeared, was rarified ; For 'tis improper speech to say he died : He was exhaled. Id.

Improperly we measure life by breath : Such do not truly live who merit death.

Id. Juvenal.

As every science requires a peculiar genius, so likewise there is a genius peculiarly improper for every one. Burnet.

Many gross improprieties, however authorised by practice, ought to be discarded. Swift.

*I have heard private tutors complain, that they

were obliged to have recourse to flattery or bribery to

engage the attention of their pupil ; and I need not

observe how improper it is to 'set the example of such

practices before children. Beattie.

IMPRO'PRIATE, v. a. j Lat. in and pro—

IMPROPRIA'TION, n. s. >prius. To convert

IMPRO’PRIATOR, re. s. J to private use : the

putting of the possessions of the church in lay

hands, is called impropriation ; and impropriator

is a layman that has such possession.

For the pardon of the rest, the king thought it not fit it should pass by parliament ; the better, being matter of grace, to impropriate the thanks to himself.

Bacon’s Henry VII.

Having an impropriation in his estate, he took a course to dispose of it for the augmentation of the vicarage. Spelman.

Mrs. Gulston, being possessed of the impropriate parsonage of Bardwell in Suffolk, did procure from the king leave to annex the same to the vicarage. Id,

Where the vicar leases his glebe, the tenant must pay the great tythes to the rector or imprapriator.

Ayliffe’s Parergon.

An impropriation is properly so called when the church land is in the hands of a layman ; and an appropriation is when it is in the hands of a bishop, college, or religious house, though sometimes these terms are confounded. Id.

IMPROS’PEROUS, adj.) In and prosper-IMPROS’PEROUSLY, adv. \ ous. Unhappy ; unfortunate ; unsuccessful.

This experiment has been but very improsperously attempted. Boyle.

Seven revolting years are wholly run, Since the imjrrosperous voyage we begun.

Dry den.

This method is in the design probable, how improsperous soever the wickedness of men hath rendered the success of it. Hammond.

Our pride seduces us at once into the guilt of bold, and punishment of improsperoiu rebels.

Decay of Piety.

IMPROVABLE, adj. ~] Fr. improuver ;

IMPROV'ABLENESS, n. s. Lat. ire and probus,

IMPROV'ABLY, adv. \ quasi probum fa—

IMPROVE', v. n. & tfc a. f cere. — Skinner. To

IMPROVEMENT, re. s. | approach, or ad—

IMPROV'ER, n. s. J vance any thing or

being, nearer to perfection : to make attainment in goodness : improvable, capable of being made better : improvably, in a manner that admits of amelioration : improvement, melioration ; alteration for the better ; progress; instruction', edification : improver, any person or thing that conduces to this progress. There is an old meaning to improve, *viz.* to disprove ; but this is obsolete.

Though the prophet Jeremy was unjustly accused, yet doth that improve any thing that I have said ?

Whitgifte.

I love not to improve the honour of the living by impairing that of the dead. Denham.

They were the greatest improvers of those qualifications with which courts used to be adorned.

Clarendon.

Man is accommodated with moral principles, improvable by the exercise of his faculties.

Hole's Origin of Mankind.

Adventures in knowledge are laudable, and the essays of weaker heads afford improvable hints unto better. Browne.

They have it by tradition from their mothers Which they improve each day, and grow more exquisite ! Otway's Atheitt.

Some virtues tend to the preservation of health, and others to the improvement and security of estates.

Tillotson.

The first started ideas have been examined, and many effectually confuted by the late improvers of this way. Locke.

Animals are not improvable beyond their proper genius : a dog will never learn to mew, nor a cat to bark. Grew.

I look upon your city as the best place of improvement ; from the school we go to the university, but from the universities to London. South.

There is a design of publishing a history of architecture, with its several improvements and decays.

Addison.

The parts of Sinon, Camilla, and some few others, are improvements on the Greek poet. Id.

I have a fine spread of improvable lands, and am already planting woods and draining marshes.

Id. Spectator

We takp. care to improve in our frugality and diligence ; virtues which become us, particularly in times of war. Atterbury.

Horn fir is like a skilful improver, who places a beautiful statue so as to answer several vistas. Pope, Heaven seems improved with a

superior ray,

And the bright arch reflects a double day. Id,

We have stock enough, and that too of so improvable a nature, that it is capable of infinite advancement. Decay of Piety.

Virtue, our present peace, our future prize, Man's tinprecarions natural estate Improveable at will, in virtue lies Its tenure sure ; its income is divine, Young.

The few that pray at all pray oft amiss ; And seeking grace to' improve the prize they hold Would urge a wiser suit, than asking more.

Cowper.

For this was all thy caution ? For this thy painful labours at the glass, To' improve those charms, and keep them in repair, For which the spoiler thanks thee not ?

Blair's Grave.

Who can tell what happy, what glorious effects might be produced, were an equal proportion-of industry applied to the regulations of the passions and the strengthening and improving the reasonable powers. Beattie.

Glowing, and circumfused in speechless love, Their full divinity inadequate That feeling to express, or to improve, The gods become as mortals, and man's fate Has moments like their brightest.

Byron. Childe Harold.

I am not prepared to sacrifice or to hazard the fruits of centuries of experience, of centuries of struggles, and of more than one century of liberty as perfect as ever blessed any country upon the earth, for visionary schemes of ideal perfectibility, or doubtful experiments, even of possible improvement.

Canning,

IMPROVI'DED, adj. ~\ Fr. imprevu ; Lat. IMPROVIDENCE, n. s. I improvisus. Unfore-iMPROv'jfiENT, adj. | seen ; unexpected : IMPROV'IDENTLY, adv. ˆimprovidence, want IMPROVIS'JON, n. s. I of caution; want of MPROVISATO'RE, n. s. I forethought : impro- IMPROVIS'ATRICE, n. s. J vident, wanting care to provide :

improvidently, without care or forethought; improvisatore and improvisatrice, ex-temporaneous composers, or speakers, in prose or poetry..

She suborned hath This crafty messenger with letters vain,

To work new woe, and improvided scath, By breaking off the band betwixt us twain.

Spenser,

Improvident soldiers, had your watch been good, This sudden mischief never could have fallent

Shakspeare,

Now we are in the street, he first of all, Improvidently proud, creeps to the wall ; / And so imprisoned and hemmed in by me, Sells for a little state his liberty. Donne.

When men well have fed, the blood being warm, Theu are they most improvident of harm. Daniel.

I shall conclude this digression, and return to the time when that brisk and improvident resolution was taken. Clarendon,

Men would escape floods by running up to mountains ; and, though some might perish through improvidence, many would escape. Hale.

This were an improvident revenge in the young ones, whereby they must destroy themselves. Browne.

Her rmprovision would be justly accusable. Id, The improvidence of my neighbour must not make me inhuman. L' Estrange.

Of this I'm sure at least there's no servility In mine irregularity of chime, Which rings what's uppermost of new or hoary, Just as I feel the improvisatore,

Byron. Don Juan.

IMPRU'DENCE, n. s. 1 Fr. imprudence; IMPRU'DENT, adj. J Lat. in and prudent.

Want of prudence; indiscretion; negligence: inattention to interest.

There is no such imprudent person as he that neglects God and his soul. Tillotson° IM'PUDENCE, n. s. ~\ French, impudence ; IM'PUDENCY, n. s. (Latin, impudentia, in IM'PUDENT, adj. fand pudens. Immo-IM'PUDENTLY, adv. 3 desty ; shamelessness : unchaste ; rude ; saucy.

Impuden' is he that, for his pride, hath no shame of his sinnes. Chaucer. The Persones Tale.

At once assail With open mouths, and impudently rail. Sandyt.

That when the haughty Titanesse beheld, All were she fraught with pride and impudence ; Yet with the sight thereof was almost queld.

Spenter. Faerie Queene. I ne'er heard yet

That any of these bolder vices wanted Less impudence to gainsay what they did, Than to perform it first.

Shakspeare. Winter's Tale.

It is not a confident brow, nor the throng of words that come with such more than impudent sawciness from you, can thrusc me from a level consideration.

Id. Henry IV.

Why should soft Fabius impudently bear Names gained by conquest in the Gallic war? Why lays he claim to Hercules his strain, Yet dares be base, effeminate, and vain? Dryden.

When we behold an angel, not to fear, Is to be impudent. Id. Spanish Fryar.

IMPUGN,' v. a. 1 Fr. impugner ; Lat. im—

IMPUGN'ER, n. s. $ pugno. To attack or assault by law or argument.

Of a strange nature is the suit you follow j

Yet in such rule, that the Venetian law

Cannot impugn you.

Shakspeare. Merchant of Venice.

St. Hierom reporteth, that he saw one of these in his time ; but the

truth hereof I will not rashly impugn, or over boldly affirm. Peacham on Drawing.

I cannot think myself engaged to discourse of lots ; as to their nature, use, and allowableness ; and that not only in matters of moment and business, but also of recreation, ‘which is impugned by some, though bet-ter defended by others. South.

IMPU’ISSANCE, n.s. Fr. Impotence ; inability ; weakness ; feebleness.

As he would not trust Ferdiuando and Maximilian for supports of war, so the impuasance of the one, and the double proceeding of the other, lay fair for him for occasions to accept of peace. Bacon.

IM’PULSE, n. s. } Fr. impulsion : Lat. im—

IMPUL’SION, re. s. fpulsus, from in and petto.

IMPUL’SIVE, adj. J Communicated force; the effect of one body acting upon another ; influence acting on the mind ; idea impressed : impulsion, the agency of body in motion upon body ;

influence acting on the mind : impulsive, having the power of impulse.

The motion in the minute parts of any solid body passeth without sound ; far that sound that is heard sometimes is produced only by the breaking of the air, and not by the impulsion of the air. Bacon.

To the impulsion there is requisite the force of the body that moveth, and the resistance of the body that is moved ; and if the body be too great it yieldeth too little ; and if it be too small it resisteth too little. Id. Natural History. Nature and duty bind him to obedience j

But, those being placed in a lower sphere,

His fierce ambition, like the highest mover,

Has hurried with a strong impulsive motion

Against their proper course. Denham's Sophy.

But thou didst plead

Divine impulsion, prompting how thou mightest

Find some occasion to infest our foes.

Milton's Agonistes.

These were my natural impulses for the undertaking ; but there was an accidental motive, which was full as forcible. Dryden.

Mean time, by Jove's impulse, Mezentius armed, Succeeded Turnus. Id.

Moses saw the bush burn without being consumed, and heard a voice out of it : this was something besides finding an impulse upon his mind to go to Pharaoh, that he might bring his brethren out of Egypt.

Locke, Bodies produce ideas in us manifestly by impulse. Id.

What is the fountain, or impulsive cause, of this prevention of sin? It is perfectly free grace. South.

If these little impulses set the great wheels of devotion on work, the largeness and height of that shall not at all be prejudiced by the smallness of its occasion. •. Like two great rocks against the raging tide,

Unmoved the two united chiefs abide,

Sustain the' impulse, and receive the war. Prior. Poor men ! poor papers ! we and they

Do some impulsive force obey,

And are but played with, do not play. Id.

Bodies, from the impulse of a fluid, can only gravitate in proportion to their surfaces, and not according to their quantity of matter, which is

contrary to experience. Cheyne.

But they were not aware that there are things Which make revenge a virtue by reflection, And not an impulse of mere anger.

Byron. Doge of Venice.

The impulse once given may be too impetuous to be controlled, and, intending only to change the guidance of the machine, they may hurry it and themselves to irretrievable destruction. Canning.

IMPU'NITY, n.s. Fr. impunte, ; Lat. impu-nitas. Freedom from punishment; exemption from punishment.

In the condition of subjects they will gladly continue, as long as they may be protected and justly governed, without oppression on the one side or impunity on the other. Davies.

A general impunity would confirm them ; for the vulgar will never believe that there is a crime where they see no penalty. Addison,

Men, potent in the commonwealth, will employ their ill-gotten influence towards procuring impunity, or extorting undue favours, for themselves or depen-dants. Atterbury.

IMPURE', adj. •% Fr. impurite; Lat. im-IMPURE'LY, adv. tpurifas. From in and IMPURF/NESS, n. s. fpurus. Want of sanc-IMPU'HITY, n. s. J tity, holiness, or chastity ;

feculent admixture: defiled with guilt: whatever is contrary to sanctity or purity, either in persons or things.

He daily did apply himselfe to donne All dewfull service, voide of thoughts impure Ne any paines ne pcrill did he shonne.

Spenser. Faerie Queene. If black scandal, or foul-faced reproach, 4.ttend the sequel of your imposition, /our meer enforcement shall acquittance me From all the impure blots and stains thereof.

Shakspeare.

No more can impure man retain and move In that pure region of a worthy love, Than earthly substance can unforced aspire, And leave his nature to converse with fire.

Donne.

Hypocrites austerely talk, Condemning as impure what God has made Pure, and commands to some, leaves free to all.

Mtiton.

One could not devise a more proper hell for an im-pure spirit, than that which Plato has touched upon.

Addison.

Foul impurities reigned among the monkish clergy, . Atterbury.

Cleanse the alimentary duct by vomiting, and clys-ters, the impurities of which will be carried into the blood. Arbuthnot.

IMPURITY, in the law of Moses, is any legal defilement. Of these there were several sorts. Some were voluntary, as the touching a dead body, or any animal that died of itself, or any creature that was esteemed unclean ; or the touching things holy, by one who was not clean, or was not a priest; the touching one who had a leprosy, or who was polluted by a dead carcase, &c. Sometimes these impurities were involuntary; as when any one inadvertently touched bones, or a sepulchre, or any thing polluted ; or fell into such diseases as pollute, as the leprosy, &c. The beds, clothes, and moveables which had touched any thing unclean, contracted also a kind of impurity, and, in some cases, communicated it to others. These legal pollutions were generally removed by bathing, and lasted no longer than the evening. The persons polluted immersed themselves in water, and either had their clothes on when they did so, or washed their clothes separately. Other pollutions continued seven days, as that which was contracted by touching a dead body. That of women in their monthly courses lasted till this was over with them ; that of women after child-birth lasted forty days after the birth of a boy, and fifty after that of a girl. Others lasted till the person was cured. Many of these pollutions were expiated by sacrifices ; and others by water mixed with the ashes of a red heifer, sacrificed on the great day of expiation. When the leper was cured he went to the temple, and offered two birds, one of which was killed, and the other set at liberty. He who had touched a dead body, or had been present at a funeral, was to be purified with the water of expiation, upon pain of death. A woman after child-birth offered a turtle and a lamb for her expiation ; or, if poor, two turtles, or two young pigeons. Those impurities, which are accurately described in the law of Moses, were only figures of those

more important impurities, the sins and iniquities committed against God or our fellow creatures. The saints and prophets of the Old Testament were sensible of this ; and our Saviour has strongly inculcated, that, not outward and corporeal pollutions, but such inward pollutions as the violations of justice, truth, and charity, defile the soul, and render it polluted in the sight of God.

To IMPU'RPLE, v.a. Tr.empourprer. From purple. To make red ; to color as with purple.

Now in loose garlands, thick thrown off the bright Pavement, that like a sea of jasper shone, Impurplcd with celestial roses smiled. Milton.

IMPUTABLE, adj. ~) Fr. imputer ; Latin IMPU'TABLENESS, n. s. 1 imputo. Chargeable IMPUTATION, n. s. (upon any one ; that of IMPU'TATIVE, adj. [which one may be IMPUTE', v. a. \ accused : imputable—

IMPU'TER, n. s. J ness, the quality of

being imputable : imputation, attribution of any thing, but generally of ill ; censure : reproach ; hint : impute, to charge upon or accuse ; sometimes to attribute good ; to reckon to one what is not strictly his own.

It was imputed to him for righteousness.

Romans iv. 22.

Whatsoever happens they also the least feel that scourge of vulgar imputation, which notwithstanding they deserve. Hooker.

Trust to me, Ulysses ; Our imputation shall be oddly poised In this

wild action.

Shakspeare. Troilus and Cressida. If a son that is sent by his father about mer~handise do fall into some lewd action, the imputation of his wickedness, by your rule, should be imposed upon his father. Shakspeare.

Antonio is a good man.

— Have you heard any imputation to the contrary ? — No, no ; my meaning is to have you understand me that he is sufficient. Id. Merchant of Venice.

If I had a suit to master Shallow, I would humour his men with the imputation of being near their master.

Shakspeare.

Men in their innovations should follow the example of time, which innovateth but quietly, and by degrees scarce to be perceived ; for otherwise whatsoever is new and unlocked for, even mends some, and impairs others ; and he that is holpen takes it for a fortune, and thanks the time ; and he that is hurt for a wrong, imputeth it to the author. Bacon's Essays.

Thy merit

Imputed shall absolve them who renounce Their own both righteous and unrighteous deeds.

Milton.

To use intellections and volitions in the infinite essence, as an hypothesis is allowable, but a rigorous imputation is derogatory to him, and arrogant in us. Glantrille's Scepsis.

I made it by your persuasion, to satisfy those who imputed it to folly. Temple.

Impute your dangers to our ignorance.

Dryden.

I have formerly said that I could distinguish your writings from those of any others : 'tis now time to clear mysell from any imputation of self-conceit on that subject. Id.

This obscurity cannot be imputed to want of language in so great a master of style. Locke.

‘Tis necessary to the imputablenens of an action, that it he avoidable. Norris.

That first sort of foolishness is imputalle to them.

South.

Let us be careful to guard ourselves against these groundless imputations of our enemies, and to rise above them. Addison.

If the wife departs from her husband, through any default of his, as on the account of cruelty, then he shall be compelled to allow her alimony ; for the law deems her to be a dutiful wife as long as the fault lies at his door, and she is in no wise imputable.

Ayliffe.

Neither do I reflect upon the memory of his late majesty, whom I entirely acquit of any imputation upon this matter. Swift.

I have read a book imputed to lord Bathurst, called a dissertation on parties. Id.

Nor you, ye proud, impute to these the fault, If memory o’er their tomb no trophies raise, Where thro’ the long-drawn aisle and fretted vaiut, The pealing anthem swells the note of praise-,

Gray’s E’ttyy.

IN, prep. Lat. in. Noting the place where any thing is present ; not without.

In school of love are all things taught we see ; There learned this maid of arms the ireful guise.

Fairfax.

Is this place here not sufficient strong To guard us in ? Daniel’s Civil War.

And what they pleased to do with the young khan In heaven, I know not, nor pretend to guess.

Byron.

Noting the state or thing present at any time. In Armorike, that called is Bretaigne, Ther was a knight, that loved and did his peine To serve a ladie in his beste wise.

Chaucer. The Frankeleines Tale. The other is only by error and misconceit named the ordinance of Jesus Christ : no one proof is yet brought forth, whereby it may clearly appear to be so in very deed. Hooker.

Like one of two contending in a prize, That thinks he hath done well in people's eyes.

Shahspeart.

Sir Edmund Courtney, and the haughty prelate, With many more confederates, are in arms. Id.

Danger before, and in, and after the act, You needs must grant is great.

Daniel's Civil War.

However it be in knowledge, I may truly say it is of no use at all in probabilities ; for the assent there, being to be determined by the preponderaucy, after a due weighing of all the proofs on both sides, nothing is so unfit to assist the mind in that as syllogism.

Locke.

God hath made our eternal and temporal interests, in most cases, very consistent. Smalridge's Sermons. None was so little in their friendships, or so much in that of those whom they had most abused.

Dunciad.

Noting the time.

When we would consider eternity a parte ante, what do we but, beginning from ourselves and the present time we are in, repeat in our minds the ideas of years or ages past ? Locke.

Noting power. To feed men's souls, quoth he, is not in man.

Hubberd's Tale. Noting proportion.

Let usury in general be reduced to five in the hundred, and let that rate be proclaimed to be free and current. Bacon.

I cannot but lament the common course, which, at least, nine in ten of those who enter into the ministry are obliged to enter. Swift.

IN

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TNA

According to.

In all likelihood I brought all my limbs out of the bed, which, ‘tis probable, he has not done off the breach. Collier.

Concerning.

I only consider what he, who is allowed to have carried this argument farthest, has said in it. Locke.

For the sake of. A solemn phrase.

Now, in the names of all the gods at once, Upon what meat does this our Caesar feed, That he is grown so great ?

Shakspeare. Julius Castor. In the name of the people, And in the power of us the tribunes, we B-anish him our city. Id. Coriolanus.

Now, in the name of honour, Sir, I beg you That I may see your father’s death revenged.

Dryden. Noting cause.

King Henry, be thy title right or wrong, Lord Clifford vows to fight in thy defence.

Shakspeare. In that. Because.

Some things they do in that they are men ; in that they are wise men, and Christian men, some things ; some things in that they are men misled, and blinded with error. Hooker.

He cannot brook such disgrace well, as he shall run into j in that it is a thing of his own search.

Shakspeare.

In as much. Since ; seeing that. Those things are done voluntarily by us, which other creatures do naturally, in as much as we might stay our doing of them if we would. Hooker.

IN, adv.

Witnin some place ; not out.

I fear me, you'll be in 'till then. Shakspeare.

Now painter, shew us in the blocks and dye

The counsellors of all this villany. Marvell.

How infamous is the false, fraudulent, and unconscionable person : especially if he be arrived at that consummate and robust degree of falsehood as to play tn and out, and shew tricks with oaths, the sacredest bonds which the conscience of man can be bound with. South.

Engaged to any affair.

We know the worst can come ; 'tis thought upon : We cannot shift being in, we must go on. Daniel.

These pragmatical flies value themselves for being in at every thing, and are found at last to be just good for nothing. L'Estrange.

Placed in some state.

Poor rogues talk of court news, Who loses and who wins j who's in, who's out.

Shakspeare.

Must never patriot then declaim at gin, Unless, good man, he has been fairly in? Pope. Noting immediate entrance. Go to thy fellows ; bid them cover the table, serve in the meat, and we will come in to

dinner.

Shakspeare.

He’s too big to go in there : what shall I do ? — Let me see’t ; I’ll in, I’ll in : follow your friend’s

advice.

I’ll in. Id. Merry Wives of Windsor.

Into any place.

Next fill the hole with its own earth again, And trample with thy feet, and tread it in.

Dryden.

Is it not more eligible to come in with a smooth gale, thau to be tossed at sea with a storm ? Collier. In the said cavity lies loose the shell of some sort

of bivalve larger than could be introduced in at those holes. Woodward.

Close; home.

The posture of left-handed fencers is so different from that of the right handed, that you run upon their swords if you push forward ; and they are in with you, if you offer to fall back without keeping your guard. Tatter.

In has commonly in composition a negative or privative sense, as in the Latin ; so active denotes that which acts, inactive that which does not act. In before r is changed into r ; as irregular : before I into / ; as illative : and into 771 before some other consonants, as, improbable.

INA, in biography, one of the most illustrious princes in the Saxon heptarchy, succeeded to the throne of Wessex in 689, and began his reign by endeavouring to extend his dominions by force of arms. He invaded Kent, but was induced, by a large subsidy, to desist from his enterprise. He soon after obtained possession of Cornwall and Somersetshire, which he annexed to his kingdom, treating the vanquished with a degree of humanity but little practised by the Saxon conquerors. By his code of laws he is placed at the head of the

Saxon kings as a legislator; and, though disturbed by occasional insurrections at home, his long reign of thirty-seven years may be regarded as one of the most prosperous of the heptarchy. In the decline of life he made a pilgrimage to Rome, and, after his return, retired to a cloister where he died.

INABILITY, n. s. In and ability. Impuis-sance ; impotence ; want of power.

If no natural nor casual inability cross their desires, they, always delighting to inure themselves with actions most beneficial to others, cannot but gather great experience, and through experience the more wisdom.

Hooker.

Neither ignorance nor inability can be pretended r and what plea can we offer to divine justice to prevent condemnation ? Rogers.

INAB'STINENCE, n. s. In and abstinence-Intemperance ; want of power to abstain ; prevalence of appetite.

Diseases dire ; of which a monstrous crew Before thee shall appear, that thou may'st know What misery the inabstinence of Eve Shall bring on man. Milton.

INACCESSIBLE, adj. Fr. inaccessible; in and accessible. Not to be reached ; not to be approached.

Whate'er you are,

That in this desert inaccessible,

Under the shade of melancholy boughs,

Lose and neglect the creeping hours of time.

Shakspeare.

Many other hidden parts of nature, even of a far lower form, are inaccessible to us. Hale.

And by proof we feel

Our power sufficient to disturb bis heaven,

And with perpetual inroads to alarm,

Though inaccessible, his fatal throne :

Which, if not victory, is yet revenge.

Milton. Paradise Lost.

There shall we see the ends and uses of these things, which here were either too subtile for us to penetrate, or too remote and inaccessible for us to come to any distant view of, Ray.

This part, which is so noble, is not altogether m-accetsWle ; and that an easy way may be found to it, ‘tis to consider nature and to copy her. Dryden. Ye, to whom the tops

Of mountains inaccessible are haunts,

And earth’s and pecan’s caves familiar things —

I call upon you. Byron. Manfred.

INAC’CURACY, n. s. 3 In and accurate.

IKAC’CURATE, adj. 5 Want of exactness ; not accurate; used sometimes of persons, but more frequently of performances.

A sentiment which is expressed in accurate language, and in a period, clearly, neatly, and well arranged, always makes a stronger impression on the mind, than one that is expressed inaccurately, or in a feeble or embarassed manner. Murray.

INACTION, n. s.~\ Fr. inaction; Lai. in

INAC’TIVE, adj. f and ago. Cessation from

INAC’TIVELY, adv. for forbearance of labor;

INACTIVITY, n. s. J not busy; idle ; indolent; sluggish: without motion; in a state of rest; sluggishness.

In seasons of perfect freedom, mark how your son spends his lime ; whether he inactively loiters it away, when left to his own inclination. Locke.

A doctrine which manifestly tends to discourage the endeavours of men, to introduce a lazy inactivity, and neglect of the ordinary means of grace.

Rogers.

The times and amusements past are not more like a dream to me, than those which are present : I lie in a refreshing kind of inaction. Pope.

Virtue, concealed within our breast, Is inactivity at best. Swift.

INAD’EQUATE, adj.) Lat. in and ada—

INAD’EQUATELY, adv.] quo. Not equal to the purpose ; defective ; falling below the proportion ; not completely.

These pores they may either exactly fill, or but inadequately. Boyle.

Remorse for vice

Not paid, or paid inadequate in price, What farther means can reason now direct ? Dryden.

Inadequate ideas are such, which are but a partial or incomplete representation of these archetypes to which they are referred. Locke.

INADVERTENCE, n.s.-\ Fr. inadvertence ; INADVER’TENCY, n. s. (Lat. inandadver-INADVER’TENT, adj. t tens. Careless—

INADVER’TENTLY, adv. J ness ; negligence ; act or effect of inattention.

From an habitual heedless inadvertency, men are so intent upon the presen that they mind nothing else.

L’Estrange.

There is a difference between them, as between inadvertency and

deliberation, between surprise and set purpose. South.

The productions of a great genius, with many lapses and inadvertencies, are infinitely preferable to the works of an inferior kind of author, which are scrupulously exact. Addison.

Aristotle mentions Telegonus as the son of Circe and Ulysses, who afterwards slew his father with the bone of a fish inadvertently. Brooms.

Worthy persons, if inadvertently drawn into a deviation, will endeavour instantly to recover their lost ground. Clarissa.

An inadvertent step may crush the snail That crawls at evening in the public path, But he that has humanity, forewarned, Will tread aside and let the reptile live. Cowper.

INA'LIENABLE, adj. In and alienable. That cannot be alienated, or granted to another.

INAL'IMENTAL, adj. In and alimentaL Affording no nourishment.

Dulcoration importeth a degree to nourishment ; and the making of things inalimental to become alimental, may be an experiment of great profit for making new victual. Bacon.

INAMIS'SIBLE, adj. Fr. inammissible ; Lat. in and amissum. Not to be lost.

These advantages are inamissible. Hammond.

INANE', adj. ~\ Fr. inanime, inani—

INAN'IMATE, v.a. Saadj. i tion; Lat. inanis, in—

INAN'IMATED, adj. > a?iimatus. Empty ;

INANI'TION, n. s. i void ; either in body

INAN'ITY, n.t. J or mind; want of fulness in the vessels of the animal : inanimate, void of life ; without animation ; to animate or quicken ; not now used in this sense : inanity, emptiness ; void of space : inanition, deficiency in the vessels of any animal body.

The spirits of animate bodies are all in some degree kindled ; but

inanimate bodies have spirits no whit inflamed. Bacon. There's a kind of world remaining still,

Though she which did inanimate and fill

The world be gone ; yet in this last long night

Her ghost doth walk, that is, a glimmering light.

Donne.

This opinion excludes all such inanity, and admits no vacuities but so little ones as no body whatever can come to, but will be bigger than they, and must touch the corporal parts which those vacuities divide.

Digby on Bodies. The golden goddess, present at the prayer,

Well knew he meant the' inanimated fair,

And gave the sign of granting. Dryden.

We sometimes speak of place in the great inane, be-yond the confines of the world. Locke.

Weakness which attends fevers proceeds from too great fulness in the beginning, and too great inanition in the latter end of the disease. Arbuthnot on Diet.

All the ideas of sensible qualities are not inherent in the inanimate bodies ; but are the effects of their motion upon our nerves. Bentley.

Both require the constant influence of a principle different from that which governs the inanimated part of the universe. Cheyne.

From roofs when Vcrrio's colours fall. And leave inanimate the naked wall, Still in thy song should vanquished France appear.

Pope.

Could it be pride ? Or modesty, or absence, or inanity?

Byron. Don Juan.

INAPPETENC Y, n. s. Lat. in and appetentia. Want of appetite.

INAPPLICABLE, adj. \ Lat. in and applico.

INAPPLICABILITY, n. s. >Not adapted to a

INAPPLICA'TION, n. s. J particular use ; unfit for the purpose : inapplication, indolence or negligence.

INAR'ABLE, adj. Lat. in and aro. Incapable of tillage.

INARCHING, in gardening. See GRAFTING.

INARTICULATE, a$.} Fr. inarticuli;

INARTIC'ULATELY, adv. >Lat. IB and articu—

INARTIC'ULATENESS, n. s. j lus. Indistinct utterance ; confusion of sounds ; want of clearness in pronunciation.

Observe what inarticulate sounds resemble any of the particular letters.

Wilkim's Mathematical Magic.

By the harmony of words we elevate the mind to a sense of devotion ; as our solemn musick, which is inarticulate poesy, doth in churches. Dryden.

INARTIFICIAL, adj. > Lat. in, artem, facio.

INARTIFIC'IALLY, adv. j Contrary to, or without art ; natural.

This lofty humour is clumsily and inartlfiddlly managed, when it is effected by those of a self-denying profession. Collier.

I have ranked this among the effects j and it may be thought inartificial to make it the cause also.

Decay of Piety.

INATTENTION, n. s. ˆ Fr. inattention ;

INATTEN'TIVE, adj. >Lat. in, attentus.

lNATTF.N'TivELY,arfv. j Disregard ; nealect;

heedlessness : without care: in an indifferent

manner.

Persons keep out of the reach of the reproofs of the ministry, or hear with such inattention or contempt as renders them of little effect. Rogers.

We see a strange inattention to this most important prospect. Id.

Novel lays attract our ravished ears ; But old. the mind with inattention hears. Pope. If we indulge the frequent roving of passions, we shall procure an unsteady and inattentive habit.

Waits.

What prodigies can power divine perform More grand than it produces year by year, And all in sight of inattentive man ? Cowper.

INAU'DIBLE,rt$. In and audible. Not to be heard ; void of sound.

Let's take the instant by the forward top ;

For we are old, and on our quickest decrees

The' inaudible and noiseless foot of time

Steals, ere we can effect them. Shakspeare.

INAU'GURATE, v.a.) Lat. inauguro. To

INACGURA'TION, n.s. J consecrate, or invest with a new office by solemn rites ; to begin with good omens.

The royal olive was solemnly sworn, at his inauguration, to observe these things inviolable. Hotael.

At his regal inauguration his old father resigned the kingdom to him. Browne's Vulgar Errows.

And after the manner which the Roman Catholic church before time hath observed in anointing and inaugurating kings, we will anoint and inaugurate him. Milton. Prose Works.

Those beginnings of years were propitious to him, as if kings did chuse remarkable days to inaugurate their favours, that they may appear acts as well of the time as of the will. Wotton.

INAURATION, n. s. Lat. inauro. The art of gilding or covering with gold.

The Romans had the art of gilding after our man-ner ; but some sort of their inauration, or gilding, must have been much dearer than ours.

Arbuthnot on Coins.

INAUSPI'CIOUS, adj. In and auspicious. Ill-omened; unlucky; unfortunate.

Oh here

I will set up my everlasting rest ; And shake the yoke of inauspicious stars From this world -wearied flesh. Sltakspeare,

Though Heaven's inauspicious eye Lay black on love's nativity,

Her eye a strong appeal can give ; Beauty, smiles, and love shall live.

CrasluLW.

The stars feel not the diseases their inauspicinus influence produces. Boyle.

With inauspicious love a wretched swain Pursued the fairest nymph of all the plain ; She plunged him hopeless in a deep despair.

Dryden.

INBE'ING, n.s. In and being. Inherence 5 inseparableness.

When we say the bowl is round, the boy is witty, these are proper or inherent modes ; for they have a sort of inbeing in the substance itself, and do not arise from the addition of any other substance to it.

Watts.

IN’BORN, adj. In and born. Innate; implanted by nature.

Led by sense of good, Inborn to all, I sought my needful food.

Dryden.

AH passions being inborn within us, we are almost equally judges of them. Id.

Some Carolina, to Heaven’s dictates true, Thy inborn worth with conscious eyes shall see And slight the imperial diadem for thee.

Addison.

Monarch of the climes,

And those who dwell in them ; for, near or far, Our inborn spirits have a tint of thee, Even as our outward aspects ; — thou dost rise, And shine, and set in glory, Fare thee well !

Byron. Manfred.

INBRE’ATHED, adj. In and breathe. Inspired ; infused by inspiration.

Blest pair of Syrens, pledges of Heaven’s joy, Sphere-born harmonious sisters Voice and Verse,

Wed your divine sounds, and mixt power employ, Dead things with inbreathed sense, able to pierce.

Milton.

I’NBRED, adj. In and bred. Produced within; hatched or generated within.

My inbred enemy Forth issued. Milton’s Paradise Lost.

A man thinks better of his children than they deserve ; but there is an impulse of tenderness, and there must be some esteem for the setting of that in-bred affection at work. L’Estrange.

But he unmoved contemns their idle threat ; And inbred worth doth boasting valour slight !

Dryden.

INCA, or YNCA, an appellation anciently given by the native

Peruvians to the kings of that country, and the princes of their blood. Pedro de Cieca, in his Chronicles of Peru, gives the origin of the incas : that country had been for a long time the theatre of all sorts of crimes, war, and dissensions, till at last two brothers appeared, one of whom was called Mango Capac, of whom the Peruvians relate many wonders. He built the city of Cusco, made laws, established order and harmony by his wise regulations; and he and his descendants took the name ot inca. which signifies king or great lord. These incas became so powerful, that they rendered themselves masters of all the country from Chili to Quito, and from the Maul on the south to the Augasmago on the north, these two rivers forming the bounds of their empire, which extended above 1300 leagues in length. This they enjoyed till the divisions

between Huascar and Atabalipa ; at which time the Spaniards made themselves masters of the country, and destroyed the empire of the incas in 1533. See MEXICO.

INCAGE', v. a. In and cage. To coop up; to shut up ; to confine in a cage, or any narrow space.

And yet incaged in so small a verge, Thy waste is no whit lesser than thy lord's.

Shakspeare.

It made my imprisonment a pleasure , Ay, such a pleasure as incaged birds Conceive. Id. Henry VI.

INCALES'CENCE, n. s. 3 Latin incalesco.

INCALES'CENCY. $ The state of growing warm , warmth ; incipient heat.

Averroes restrained his hilarity, making no more thereof than Seneca commendeth, and was allowable in Cato ; that is, a sober incalescence,

and regulated estuation from wine. Browne.

The oil preserves the ends of the bones from incalescency, which they, being solid bodies, would necessarily contract from a swift motion. Ruy—

INCANTATION, n. s. 3 Fr. incantation ;

INCAN'TATORY, adj. i Lat. incanto. A charm uttered by singing ; enchantment : incantatory, dealing by enchantment ; magical.

My antient incantations are too weak, And hell too strong. Shakspeare. Henry VI.

By Adam's heakeniug to his wife, mankind, by that her incantation, became the subject of labour, sorrow, and death. Raleigh.

The great wonders of witches, their carrying in the air, and transforming themselves into other bodies, a* reported to be wrought, not by incantations or ceremonies, but by anointing themselves all over, move a man to think that these fables are the effects of imagination ; for ointments, if laid on any thing thick, by stopping of the pores, shut in the vapours, and send them to the head extremely.

Bacon's Natural Hittory.

The name of a city being discovered unto their enemies, their penates and patronal gods might be called forth by charms and incantations. Browne.

Fortune-tellers, jugglers, geomancers, and the like incantatory impostors, daily delude them. Id.

The nuptial rites his outrage strait attends ;

The dower desired is his transfigured friends :

The incantation backward she repeats,

Inverts her rod, and what she did, defeats.

Garth.

The commands which our religion hath imposed on its followers are not like the absurd ceremonies of pagan idolatry, that might look like incantations and magick, but had no tendency to make mankind the happier. Bentley.

INCANTON, t>. a. In and canton. To unite to or into a canton or separate community.

When the cantons of Bern and Zurich proposed the incorporating Geneva in the cantons, the Roman Catholics, fearing the protestant interest, proposed the incantoning of Constance as a counterpoise.

Addison on Italy,

INCAPABIL'ITY, n. s.~\ Fr. incapable, in—

INCA'PABLEUESS, n. s. capacitt; Lat. in and

INCA'PABLE, adj.

INCAPA'CIOUS, adj.

INCAPA'CIOUSNESS, n. s.

INCAPACITATE, v. a.

INC'APACH y, n. s.

| capax. Want of Y power or want of room ; unable to comprehend, learn, J or understand : in-

ability either in law or fact ; in body or mind :

in conversation, a man is said to be incapable of falsehood : incapacious, narrow ; not containing sufficient space : incapacitate, to make weak ; to disable or disqualify : incapacity, a state of inability either corporeal or mental.

Incapable and shallow innocents ! You cannot guess who caused your father's death.

Shakspeare.

Is not your father grown incapable Of reasonable affairs ? Is he not stupid With age ? Id. Winter's Tale.

You have nothing to urge but a kind of incapability in yourself to the service. Suckling.

Wilmot, when he saw Goring put in the command, thought himself incapable of reparation. Clarendon.

Since now we find this our empyreal form Incapable of mortal injury.

Milton’s Paradise Lost.

It chiefly proceedeth from natural incapacity, and genial indisposition. Browne’s Vulgar Errours.

Souls that are made little and incapacious,, cannot enlarge their thoughts to take in any great compass of times or things. Burnet.

Admonition he imputes either to envy, or else ignorance and incapacity of estimating his worth.

Government of the Tongue.

The inactivity of the soul is its incapacity to be moved with any thing common. Arbuthnot.

Monstrosity could not incapacitate from marriage.

Id.

Their lands are almost entirely taken from them, and they are rendered incapable of purchasing any more. Swift.

Nothing of consequence should be left to be done in the last incapacitating hours of life. Claris.

Is it true, as Rousseau asserts, that this language [French], on account of the incessant monotony of the pronunciation, is incapable of harmony. Beattie. INCARCERATION, n. s. > Lat. incarcero. INCAR’CERATE, v. a.) To imprison ;

confine.

Contagion may be propagated by bodies, that easily incarcerate the infected air ; as woollen clothes.

Harvey.

INCARN’, v. a. &cv.n. -v Fr. incarne. ; INCAR’NADINE, v. a. I Ital.

incarnadine; INCAR'NATE, v. a. & adj. j> Lat. in and carne. INCARN A'TION, n. s. I To cover with flesh ; INCAR'NATIVE, n. s. J to breed flesh : incarnadine, to dye red : incarnate, to clothe with flesh ; to embody : incarnation, the act of assuming a body ; the state of breeding flesh : incarnative, a medicine promotive of granula-tion.

For thee, through wicked entencion, The yere of the incarnacion, A thousande and two hundred yere Five and nfte, ferther ne nere Broughten a boke with sorie grace To yeven ensample in common place.

Chaucer. Romaunt of the Ro»e. Undoubtedly even the nature of God itself, in the person of the son, is incarnate, and hath taken to it-self flesh. Hooker.

We must beware we exclude not the nature of God from incarnation, and so make the son of God incarnate not to be very God. Id.

Will all great Neptune's ocean wash this blood Clean from my hand ? No, this my hand will rather The multitudinous sea incarnadine, Making the green one red. Shalapeare. Macbeth.

A most wise sufficient means of redemption and salvation, by the satisfactory death and obedience of the incarnate son of God, Jesus Christ, God blessed for ever. Sanderson.

Upon the Annunciation, or our Lady-day, meditate on the incarnation of our blessed Saviour.

Taylor's Guide to Devotion. I, who erst contended

With gods to sit the highest, amˆ now constrained Into a beast, and mix with bestial slime, This essence to incarnate and imbrute. Milton.

The slough came off, and the ulcer happily incarned.

Wiseman.

The flesh will soon arise in that cut of the bone, make exfoliation of what is necessary, and incarn it.

Id.

The pulsation under the cicatrix pioceeded from the too lax incarnation of the wound. Id.

I deterged the abscess, and incarned by the com-mon incarnative. Id. Surgery.

But he's possest, Incarnate with a thousand imps. Swift.

They,

Like to incarnate Molochs, feed on ours Until 'tis time to give them to the tombs, Which they have made so populous. Byron.

INCARNATION, in theology, signifies the act whereby the Son of God assumed the human nature ; or the mystery by which Jesus Christ, the eternal Word, was made man to accomplish the work of our salvation. The era first used among Christians, whence they numbered their years, is the time of the incarnation, that is, of Christ's conception. This era was first established by Dionysius Exiguus, about the beginning of the sixth century, till which time the era of Dioclesian had been in use. Some time after this it was considered that the years of a man's life were not numbered from the time of his conception, but from that of his birth ; which occasioned them to postpone the beginning of this era for a year, retaining the cycle of Dionysius entire in every thing else. See CHRONOLOGY. At Rome they reckon the years from the birth of Christ on the 25th of December, which custom has obtained from the year 1431. In several other countries they also reckon from the incarnation, but differ as to the day of the incarnation, fixing it, after the primitive manner, not to the day of the birth, but conception of our Saviour. The Florentines retain the day of the birth, and begin their year from Christmas.

INCASE', v. a. In and case. To cover; to inclose ; to inwrap.

Rich plates of gold the folding doors incase,

The pillars silver. Pope's Odyssey.

INCAUTIOUS, adj. } Lat. in and cautus.

INCAU'TIOUSLY, adv. \ Unwary ; negligent ; heedless; indiscreet.

His rhetorical expressions may easily captivate any incautious reader. Keill against Ewrnet.

A species of palsy invades such as incatttimisly ex-pose themselves to the morning air. Arbuthnot.

INCEN'DIARY, n.s. ~\ Fr. incendiaire, IN'CENSE, n. *., v. a. & v. n. I encens ; Latin,

INCEN'SEMENT, n. s. INCEN'SION, n. s. INCEN'SOR, n. s. IN'CENSORY, n. s. INCEN'TTVE, n. s. & adj.

| inceado, incen- >diarius, inceraum. One who sets houses or towns on fire ; one who

inflames factions, or promotes quarrels : incense also has a literal and figurative meaning : perfumes exhaled by fire, in honor of deity : tc perfume ; to enkindle to rage ; to inflame with a-nger ; to make furious ; to exasperate : incensement, rage or fury (an old word): incension, (also out of use), the act of kindling ; the state of being on fire : incensor, an inflamer of passions : incensory, the vessel in which incense is burnt and offered, more commonly called a cen-ser : incentive, that which kindles or provokes ; incitement ; motive ; used either as a spur to good or ill : exerting ; encouraging.

Upon such sacrifices, my Cordelia, The gods themselves throw incense.

Shakspeare. King Lear. The world, too saucy with the gods, Incenses them to send destruction.

Id. Julius Caesar.

If 'gainst yourself you be incensed, we'll put you, Like one that means his proper harm, in manacles.

Shahspeare.

‘He is attended with a desp’rate train ; And what they may incense him to, being apt To have his car abused, wisdom bids fear. Id.

Tractable obedience is a slave To each incensed will. Id. Henry VIII.

His incensement at this moment is so implacable, that satisfaction can be none but by pangs of death.

Id.

Senna loseth its windiness by decoction, and subtile or windy spirits are taken off by incention or evaporation. Bacon.

Many priests were impetuous and importunate »’«- censors of the rage. Hayioard.

Their unreasonable severity was not the least incentive, that blew up into those flames the sparks of discontent. King Charle*.

Nor could any order be obtained impartially to examine impudent incendiaries. Id.

Foul idolatries, and other faults, Heaped to the popular sum, will so incense God as to leave them. Milton’s Paradise Lost.

Congruity of opinions, to our natural constitution, is one great incentive to their reception.

Glanville’s Scepsis

How could my pious son thy power incense? Or what, alas ! is vanquished Troy’s offence?

Dryden.

Incendiaries of figure and distinction, who are the inventors and publishers of gross falsehoods, cannot be regarded but with the utmost detestation.

Addison.

It encourages speculative persons, with all the m-centives of place, profit, and preferment. Id.

Numa the rites of strict religion knew ; On every altar laid the incense due. Prior,

Competency is the most incentive to industry : too little makes men desperate, and too much careless.

Decay of Piety. His pure thoughts were borne, Like fumes of sacred incense, o'er the clouds, And wafted thence, on angels' wings, through ways Of light, to the bright source of all. Congreve.

Even the wisdom of God hath not suggested more pressing motives, more powerful incentives to charity, than these, that wr shall be judged by it at the last dreadful day. Atterbury.

Several cities of Greece drove them out as incendiaries, and pests of commonweals. Bentley, The breezy call of inceme-breathing morn.

The swallow twittering from her straw-built shed.

The cock's shrill clarion, or the echoing horn, No more shall rousa them from their lonely bed.

Gray's Elegy.

Vainly his incense soars, his victim bleeds ; Poor child of Doubt and Death, whose hope is built on reeds. Byron. Childe Harold.

INCENDIARY, in law. A bare attempt to set fire to another's dwelling-house, or out-houses, barn, or stable, unless it absolutely burns, does not fall within the description of incendit et combussit. But the burning and consuming of any part is sufficient ; though the fire be afterwards extinguished. It must also be a malicious burning ; otherwise it is only a trespass. This crime is called arson. Among the ancients incendiaries were burnt. The punishment of arson was death by the ancient Saxon laws and Gothic constitutions; and, in the reign of Edward I., incendiaries were burnt to death. The stat. 8 Hen. VI., c. 6, made the wilful burning of houses, under special circumstances, high treason ; but it was reduced to felony by the general acts of Edward VI. and Mary I. This offence was denied the benefit of clergy by 21 Hen. VIII. c. 1, which statute was repealed by 1 Edw. VI. c. 12 ; and arson was held to be ousted of clergy, with respect to the principal, by inference from the stat. 4 and 5 P. & M. c. 4, which expressly denied it to the accessory ; though now it is expressly denied to the principal also, by 9 Geo. I. c. 22. See ARSON.

INCENSE, or FRANKINCENSE, a dry resinous rich perfume, with which the Pagans and Roman Catholics perfume their temples, altars, ficc. The word comes from the Latin incensum q. d. burnt. The burning of incense made part of the daily service of the ancient Jewish church. The priests drew lots to know who should offer it : the destined person took a large silver dish, • in which was a censer full of incense ; and, being accompanied by another priest carrying some live coals from the altar, went into the temple. There, in order to give notice to the people, they struck upon an instrument of brass placed between the temple and the altar; and, being returned to the altar, he who brought the fire left it there, and went away. Then the offerer of the incense waited till the burning of the holocaust ; immediately upon which he set fire to the incense. The quantity of incense offered each day was half a pound in the morning, and as much at night. One reason of this continual burning of incense might be, that the effluvia of the multitude of victims continually offered up might have inspired the worshippers rather with disgust and aversion, than awe and reverence, had it not been overpowered by the fragrance of those perfumes.

INCEPTION, n. s.~) L,a..inceptio,inceptivus.

INCEP’TIVE, adj. > The beginning : one who

INCEP’TOR, n. s. j is in his rudiments.

The inception of putrefaction bath in it a maturation.

Bacon.

An inceptive and desitive proposition, as, the fogs vanish as the sun rises ; but the fogs have not yet be-gun to vanish, therefore the sun is not yet risen.

Locke.

INCEPTIVE, a word used by Dr. Willis to express such moments, or first principles, which,

though of no magnitude themselves, are yet capable of producing such as are. Thus a point has no magnitude itself, but is inceptive of a line which it produces by its motion. So a. line, though it have no breadth, is yet inceptive of breadth ; that is, it is capable, by its motion, of producing a surface which has breadth, &c.

INCERTITUDE, n. s. Fr. incertitude ; Lat. incertitude. Uncertainty; doubtfulness.

INCES’SANT,a$. 2 Lat. in and cessans. INCES’SANTLY, adv. $ Unceasing ; without intermission; continual; uninterrupted.

Mercie shall I purchase by incessant crying j The mercies of our Lorde, er, shall I syng.

Chaucer. The Remedie of Love. Both his hands most filthy feculent, Above the water were on high extent, And famed to wash themselves incessantly.

Faerie Queene.

The incessant weeping of my wife, Forced me to seek delays. Shakspeare.

Who reads

Incessantly, and to his reading brings not A spirit and judgment equal or superior.

MUton. If by prayer

Incessant I could hope to change the will Of him who all things can, I would not cease To weary him with my assiduous cries. Id.

The Christians, who carried their religion through so many persecutions, were incessantly comforting one another with the example and history of our Saviour and his apostles. Addisun.

In form, a herald of the king she flies From peer to peer, and thus incessant cries.

Pope.

The sun has lost his rage ; his downward orb Shoots nothing now but animating warmth And vital lustre, that, with various ray, Lights up the clouds, those beauteous robes of heaven, Incessant, rolled into romantic shapes The dream of waking fancy. Thornton.

IN'CEST, n. s. -\ Fr. inceste ; Lat. iiices-INCEST'DOUS, adj. v turn. Unnatural and lNCEST'uousLY,acfo). J criminal connexion of" persons within prohibited degrees of affinity : incestuous, guilty of unnatural cohabitation : incestuously, in an unnatural manner.

Is't not a kind of incest to take life From thine own sister's shame ? Shakspeare.

Hide me, thou bloody hand, Thou perjure, thou simular of virtue, That art incestuous. Id. King Lear.

If weakness may excuse, What murderer, what traitor, parricide, Incestuous, sacrilegious, but may jJeaii it ?

Milton. Paradise Lost.

When boys shall take their sisters for their mate, And practise incest between seven and eight.

Marve,l.

Macareus and Canace, son and daughter to /Eolus, god of the winds, loved each other incestuously.

Dryden.

Ere you reach to this incestuous love, You must divine and human rights remove.

Id.

He who entered in the first act, a young man like Pericles, prince of Tyre, must not be in danger in the fifth act of committing incest with his daughter.

Id. Dufrexnoy.

We may easily guess with what impatience the world would have heard an incestu us Herod discoursing of chastity. South.

INCEST, by the rules of the church, was formerly most absurdly extended even to the seventh degree ; but it is now restricted to the third or fourth. Most nations look on incest with horror, Persia and Egypt excepted. In the history of the ancient kings of those countries we meet with instances of brothers marrying their sisters, because they thought it too mean to join in alliance with their own subjects, and still more so to marry into any foreign family. Vortigern, king of South Britain, equalled or rather exceeded them in wickedness, by marrying his own daughter. The late queen of Portugal was married to her uncle, and the prince of Brasil, the son of that incestuous marriage, was wedded to his aunt. But they had dispensations for these marriages from his holiness !

INCEST, SPIRITUAL, is an ideal crime committed between persons who have a spiritual alliance by means of baptism or confirmation. This ridiculous fancy was made use of, as an instrument of great tyranny, in times when the power of the pope was unlimited, even queens being sometimes divorced upon this pretence.

INCEST, SPIRITUAL, is also understood of a vicar, or other beneficiary, who enjoys both the mother and daughter ; that is, holds

two benefices, one whereof depends upon the collation of the other. Such spiritual incest renders both the one and the other of these benefices vacant.

INCH, n.s., v. a., & v. n.-\ Sax. mce ; Lat.

INCHED’, -adj. f undo. A measure

IN’CHIPIN, n. s. i of length supposed

INCH’MEAT, n. s. J equal to three grains

of barley laid end to end : the twelfth part of a foot ; a proverbial name for a small quantity ; a nice point of time : inch, to drive by inches ; to give sparingly : inched, containing inches in length or breadth : inchipin, some of the inside of a deer : inchmeal, a piece an inch long.

Beldame, I think, we watched you at an inch.

Shakspeare. The plebeians have got your fellow tribune ;

They’ll give him death by inches. Id. Coriolamts.

Poor Tom, proud of heart to ride on a bay trotting horse over four inched bridges. Id. King Lear.

All the’ infections that the sun sucks up From bogs, feus, flats, on Prospero fall, and make

him

By inchmeal a disease ! Id. Tempest.

As in lasting, so in length is man,

Contracted to an inch, who was a span. Donne.

A foot is the sixth part of the stature of a man, a span one eizhth of it, and a thumb’s breadth or inch one seventy -second. Holder on Time.

Valiant they say, but very popular;

He gets too far into the soldiers graces,

And inches out my master. Dryden’s Cleomenes.

Is it so desirable a condition to consume by inches, and lose one's blood by drops ? Collier.

The sun should never miss, in all his race,

Of time one minute, or one inch of space.

Jilackmore.

The commons were growing by degrees into power and property, gaining ground upon the patricians inch by inch. Swift.

Life's little stage is a small eminence,

Inch-high the grave above.

Young's Night Thoughts.

INCH, an island considered part of the county of Donegal, Ireland. It is in the bay

called Lough Swilly, and contains about 2000 acres of fertile land. It was formerly the chief resort of the Lough Swilly herring fishery : but this has now declined. It is six miles north-west from Londonderry.

INCHBALD (Mrs. Elizabeth), was the daughter of Mr. J. Simpson, a farmer of Stanningfield, in Suffolk, where she was born in the year 1756. She came to London on the death of her father, and when only sixteen years of age, with a view to obtain a theatrical engagement; where attracting the attention of Mr. Inchbald, then a performer of some note, they married, and she accompanied her husband on several professional tours. After his death she made her debut October 3rd, 1780, at Covent Garden, as Bellario in the play of Phi-laster. Here she continued about eight years, and from those personal attractions which she retained to a late period, united with considerable natural talents, she was very popular. Retiring from the stage, in 1 789, she devoted herself to those literary labors for which she is equally known. Her works consist of A Mogul Tale, a farce, 1 784 ; I'll tell you what, a comedy ; Appearance is against them, and the Widow's Vow, farces, 1786 ; The Child of Nature, a dramatic piece; The Midnight Hour, a farce ; Such Things are, a play, 1788 ; The Married Man, a comedy, 1789 ; Next door Neighbours, a comedy ; and, A Simple Story, a novel, in four 12mo. vols. in 1791 : Every one has his Fault, a comedy, 1 793 ; Wedding Day, a comedy, 1794 ; Nature and Art, a

novel, in two vols. 12mo., 1796 ; Wives as they were, and Maids as they are, a comedy, 1797; Lover's Vows ; a play from the German of Kot-zebue, 1798; Wise Man of the East, a comedy, 1799; and to Marry and not to Marry, 1805. She also edited the British Theatre, with biographical and critical remarks, in 25 vols. 12mo., during the period from 1806 to 1809 ; a similar collection of popular farces, in seven vols. 12mo., and The Modern Theatre, in ten vols. 1809. She died at Kensington, August 1st, 1821, in her sixty-sixth year, having preserved throughout life an unblemished reputation.

INCH-COLM, or Columba, the isle of Columba ; an island in the frith of Forth, famous for its monastery. This monastery was founded in 1123, by Alexander I., on the following occasion : In passing the frith of Forth he was overtaken with a violent storm, which drove him to this island, where he met with the most hospitable reception from a poor hermit, then residing here in the chapel of St. Columba, who, for the three days that the king continued there tempest bound, entertained him with the milk of his cow, and a few shell-fish. The king, from the sense of the danger he had escaped, and in gratitude to the saint to whom he attributed his safety, vowed some token of respect; and accordingly founded here a monastery of Augustines, and dedicated it to St. Columba. Allan de Mortimer lord Aber-dour, who attended Edward III. in his Scottish expedition, bestowed half of those lands on the monks of this island for the privilege of a family burial place in their church. The buildings made in consequence of the piety of Alexander were very considerable. There are still to be seen a large square tower belonging to the church, the

ruins of the church, and of several other buildings. The wealth of this place in the time of Edward III. proved so strong a temptation to his fleet, then lying in the Forth, that the English landed, and spared not even the furniture more immediately consecrated to divine worship.

But, in a storm which instantly followed, many of them perished ; those who escaped vowed to make ample recompense to the injured saint. The tempest ceased ; and they made the promised atonement. The Danish monument, figured by Sir Robert Sibbald, lies on the south-east side of the building on a rising ground. It is of a rigid form, and the surface ornamented with scale-like figures. At each end is the representation of a human head.

INCH-EFFRAY, Gael. i. e. the isle of mas-ses, an ancient abbey of Perthshire, now in ruins, seated on a rising ground, formerly surrounded by the water of the Po, and belonging to the earl of Kinnoul. It was endowed with many privileges by David I. and Alexander III. Mauritius, abbot of Inch-Effray, was at the battle of Bannockburn. The property of this ancient abbey, and six or seven acres of ground adjacent, constitute lord Kinnoul patron of twelve parishes that were formerly attached to it.

INCH-GARVIE, a small island in the frith of Forth, near Queensferry. It was anciently for-tifieo, and after the alarm occasioned by the appearance of Paul Jones and his squadron in the frith in 1779, its fortifications were repaired, and four iron guns, twenty pounders, mounted upor them, and furnished with 100 rounds of ammunition each. An artillery man resides upon it, to take care of the stores.

INCH-KEITH, a small island in the frith ot Forth, half way between Leith and Kinghorn . Its name was derived from the gallant Keith, who so greatly signalised himself by his valor in 1010, in the battle of Barry, in Angus, against the Danes; after which he received in reward the barony of Keith in *Lothian, and this little isle. In 1549 the English fleet, sent by Edward VI. to assist the lords of the congregation against the queen dowager, landed, and began to fortify this island, of the importance of which they grew sensible, after their neglect of securing the port of Leith so lately in their power. They left here five companies to cover the workmen under the command of Cotterel ; but their operations were soon interrupted by M. Desse, general of the French auxiliaries, who took the place, after a gallant defence on the part of the English. The Scots kept possession for some years ; but at last the fortifications were destroyed by act of parliament, to prevent it from being of any use to the former.

IN’CHOATE, v. a. & adj. \ Latin, inchoo.

INCHOA’TION, n.s. STo begin or un—

INCHO’ATIVE, adj. j dertake : the commencement of any work.

It discerneth of four kinds of causes ; forces, frauds, crimes various of stellionate, and the inchoations or middle acts towards crimes capital, not actually perpetrated. Bacon.

It is neither a substance perfect, nor a substance inchoate, or >n the way of perfection.

Rateigh's History.

The setting on foot some of those arts in those parts would be looked upon as the first indication of them, which yet would be but their reviving.

Hole's Origin of Mankind.

INCHOFEN, or INCHOFER (Melchior, a learned Jesuit, born at Vienna in 1584. After studying the law, he joined the Jesuits in 1607. He taught philosophy and mathematics at Messina, and published The Blessed Virgin Mary's Letter to the people of Messina proved to be genuine : folio, 1630. This work excited great disturbances. Complaints were preferred against him before the congregation of the Index at Rome, on account of this publication. He immediately repaired to the city, vindicated himself, and was allowed to reprint his work, with a small alteration in the title. He wrote several other works, particularly a satire on the Jesuits : and died at Milan, in 1648.

INCIDE,' v. a. ~} Lat. incido, to cut ;

IN'CIDENCE, n. s. incido, to fall ; Fr. inIN'CIDENCY, n. s. | cidence. To cut : in-IN'CIDENT, adj. &n. s. ^>cident, casually: in-INCIDEN'TAL, adj. I ciclental, accidental ; INCIDEN'TALIY, adv. \ casual ; unexpected ; IN'CIDENTLY, adv. J apt to happen : incidental, not intended ; not necessary to the chief purpose : incidently, occasionally ; by the bye.

As the ordinary course of common affairs is di»- posed of by genera) laws, so likewise men's rarer incident necessities and utilities should be with special equity considered. Hooker.

In mirrours there is the like angle of incidence, from the object of the glass, and from the glass to the eye.

Bacon.

It was incidently moved amongst the judges what should be done for

the king himself, who was at-tainted ; but resolved that the crown takes away defects. Id. Henry VII.

His wisdom will fall into it as an incident to the point of lawfulness. Id. Holy War.

These general rules are but occasionally and incidentally mentioned in Scripture, rather to manifest unto us a former, than to lay upon us a new obligation.

Sanderson.

The satisfaction you received from those incidental discourses which we have wandered into. Milton.

I treat either purposely or incidentally of colors.

N Boyle.

No person, no incidsnt in the play, but must be of use to carry on the main design. Dryden.

He enjoys his happy state most when he communicates it, and receives a more vigorous joy from the reflexion than from the direct incidency of his happiness.

Norris.

Constancy is such a firmness of friendship as overlooks all those failures of kindness, that through passion, incident to human nature, a man may be guilty of. South.

The direction with which one body strikes upon another, and the angle made by that line, and the plane struck upon, is called the angle of incidence. In the occursions of two moving bodies, their incidence is said to be perpendicular or oblique, as their directions or lines of motion make a straight line or an oblique an-gle at the point of contact. Quincy.

I would note in children not only their articulate answers, but likewise smiles and frowns upon incident occasion*. Wotton.

In equal incidences there is a considerable inequality of refractions, whether it be that some of the in-

ciilent rays are refracted more and others less constantly, or one and the same ray is by refraction disturbed. Newton's Opticks.

The permanent whiteness argues, that in like incidence* of the rays there is no such separation of the emerging rays. Newton.

By some, religious duties scarce appear to be regarded at all, and by others only as an incidental business, to be done when they have nothing else to do. Rogeri.

The menses are promoted by all saponaceous substances, which incide the mucus in the first passages.

Arbuthnot.

In a complex proposition the predicate or subject is sometimes made complex by the pronouns who, which, whose, whom, &c., which make another proposition : as, every man, who is pious, shall be saved. Here the whole proposition is called the primary or chief, and the additional proposition is called an incidental proposition. Watts.

To one who has read the second book of Virgil, Voltaire's Massacre of St. Bartholomew will appear very trifling. It is uninteresting and void of incident ; »he horrors of it arise upon reflection. Rcattie.

INCIDENT, in a poem, is an episode, or particular action joined to the principal action, or depending on it. The poet ought always to make choice of such incidents as are susceptible of ornament suitable to the nature of his poem. A variety of incidents well conducted is the beauty of an heroic poem, which ought always to take in a certain number of incidents to suspend the catastrophe that would otherwise break out too soon.

INCIDENT, in law, is a thing appertaining to, or following another, that is more worthy or principal. A court baron is inseparably incident

to a manor ; and a court of pie-poudre to a fair.

INCIDENT DILIGENCE, in Scots law, a warrant granted by a lord ordinary in the court of session, for citing witnesses to prove any point, or for the production of any writing necessary for preparing the cause for a final determination, or before it goes to a general proof.

INCIN'ERATE, v. a. > Fr. incineration;

INCINERATION, n. s.] Lat. in and cineres. To burn to ashes : the act of consuming by fire to ashes.

By baking, without melting, the heat indurateth, then maketh fragile ; lastly, it doth incinerate and calcinate. Bacon.

Fire burneth wood, making it first luminous, then black and brittle, and lastly broken and incinerate.

Id.

These dregs are soon incinerated and calcined into such salts which produce coughs.

Harvey on Consumptions.

I observed in the fixt salt of urine, brought by de-puration to be very white, a taste not unlike common salt, and very differing from the caustick lixiviate taste of other salts made by incineration. Boyle

INCIRCUMSPECTION, n.s. In and circumspection. Want of caution ; want of heed.

An unexpected way of delusion, whereby he more easily led away the incircumspection of their belief.

Browne.

INCISED', adj. ~\ Fr. inciser ; Lat. incisus.

INCIS'ION, n. s. /A cut ; any wound made

INCI'SIVE, adj. ˆby a cutting instrument:

INCI'SOR, n.s. la surgical term ; division

INCI'SURE, n. s.) of viscosities by medicine : VOL. XL

incisive, having the quality of cutting or dividing : incisor, a cutter ; the teeth in the fore part of the mouth : incisure, a cut ; an aperture. Let us make incision for your love,

To prove whose blood is reddest, his or mine.

Shakspeare.

God help thee, shallow man : God make incision in thee, thou art raw. Id. As You Like It.

Abstersion is a scouring off, or incision of viscous humours, and making them fluid, and cutting between them and the part j as in nitrous water, which sr.oureth linen. Bacon.

The colour of many corpuscles will cohere by being precipitated together, and be destroyed by the effusion of very piercing and incisive liquors. Boyle.

The reception of one is as different from the admission of the other, as when the earth falls open under the incisions of the plough, and when it gapes to drink in the dew of heaven, or the refreshments of a shower.

South.

I brought the incited lips together. Wiseman.

A small incision knife is more handy than a larger for opening the bag. Sharp's Surgery.

In some creatures it is wide, in some narrow, in some with a deep incisure up into the head, for the better catching and holding of prey, and comminuting of hard food. Derham.

INCITATION, n. s. Lat. incite, incitatio. INCITE', v. a. Incitement; incentive;

INCITE'MENT, n. s. motive ; impulse ; the act of inciting; the power of inciting ; to stir up ; to animate ; to urge on : incitement, motive ; impulse; cause of action.

A marvel it were, if a man of great capacity, having such incitements to make him desirous of all further-ances unto his cause, could espy in the whole scripture of God nothing which might breed at the least a

probable opinion of likelihood, that divine authority was the same way inclinable. Hooker.

How many now in health Shall drop their blood, in approbation Of what your reverence shall incite us to?

Shakspear .

No blown ambition doth our arms incite ; But love, dear love, and our aged father's right.

Id.

Antiochus, when he incited Prusias to join in war, set before him the greatness of the Romans, comparing it to a fire, that took and spread from kingdom to kingdom. Bacon.

Hartlib seems sent hither by some good providence, to be the occasion and incitement of great good to this island. Milton.

What if the sun

Be centre to the world, and other stars, By his attractive virtue and their own Incited, dance about him various rounds.

Id. Paradise Lost.

Dr. Ridley defines magnetical attraction to be a natural incitation and disposition conforming untu contiguity, an union of one magnetical body unto another. Browne'* Vulgar Errowrs.

The multitude of objects do proportionably multiply both the possibilities and incitations.

Government of the Tongue. If thou must reform the stubborn times, From the long records of distant age Derive incitements to renew thy rage.

Pope's Statiut.

Nature and common reason, in all difficulties, where prudence or courage are required, do rather incite us to fly for assistance to a single person than a multitude. Sieift.

The mind gives not only licence, but incita'ion to the other passions to act with the utmost impetuosity.

Decay of Piety,

INCIV'IL, adj.) Fr. incivil ; Lat. in and INCIVIL'ITY, n. s. \ civis. Want of courtesy : rude; unpolished.

Abstain from dissolute laughter, uncomely jests, loud talking and jeering, which, in civil account, are called indecencies and incivilities. Taylor.

He does offend against that reverence which is due to the common apprehensions of mankind, whether true or not, which is the greatest incivility.

Tillotson.

Swell, curled waves, high as Jove's roof ; Your incivility doth shew, That innocence is tempest proof.

L'Estrange. Old Song.

INCLEDON (Benjamin Charles), a late eminent vocalist, was born at St. Keveram, in Cornwall, in 1764, his father being a member of the faculty. The fine tones of his voice, and his early taste for music, induced his parents to article him to the celebrated Jackson of Exeter cathedral until he had attained his fifteenth year. He then took an opportunity to quit Exeter abruptly, and entered as a common sailor onboard the Formidable, a ninety-eight gun ship, commanded by captain Cleland. He remained in the navy about five years ; where his vocal abilities attracting the notice of his officers, especially of lord Mulgrave (then captain Phipps), and admirals Pigott and Hervey, he was advised to try his fortune on the stage ; and they gave him letters of recommendation to both Sheridan and Colman. He, however, made his first appearance before an audience in Collins's Southampton Company, in 1783, as Alphonso, in the Castle of Andalusia. At Bath, the following year, he was introduced to the acquaintance of Rauzzini,

who gave him the great benefit of his instructions. October, 1790, he first appeared . in London, at Covent Garden theatre, and played with great success the character of Dermot, in O'Keefe's farce of the Poor Soldier. Justice was now amply awarded him by the public ; and a high degree of popularity attended him, till the infirmities of his advancing years, and an irregular mode of life, compelled him to retire. His voice, a rich tenor of extraordinary power and sweetness, embraced a compass of about fourteen notes in the natural, and ten notes in falsetto ; his intonation also was singularly correct. Shield wrote many airs expressly for him. He died at Worcester, llth of February, 1826, and was buried at Hampstead.

vln 1828 young Incledon made his debut successfully in his father's principal vocal characters at the Theatre Royal, Covent Garden.

INCLEM'ENCY, n. s. 3 Lat. in and clement.

INCLEM'ENT, adj. $ Unmerciful ; cruel ;

severe ; rough ; unpitying : .it is used more frequently of things than men.

Teach us further by what means to shun The' inclement seasons, rain, ice, hail, and snow.

Milton.

And, though by tempests of the prize bereft, In heaven's inclemency some ease we find : Our foes we vanquished by our valour left.

Dryden.

INC

I stand

Naked, defenceless, on a foreign laud : Propitious to my wants, a vest supply To guard the wretched from the' inclement sky.

Pope,

INCLINABLE, adj.~\ Lat. inclino, inclina-INCLINATION, n.s. | bilis ; Gr. K\IVI). Hav-

a propension of . j will ; favorably disINCLINE’, v. n. & v. a.) posed; willing; tending by disposition : with to. Inclination, tendency towards any point ; natural aptness ; propension of mind ; disposition or desire ; love ; affection ; regard ; disposition : used with to, for the tendency of the magnetic needle to east or west In pharmacy, the act by which a clear liquor is poured off from some fseces or sediment by only stooping the vessel, which is also called clecanta-tion. Inclinatory, and inclinatorily, obliquely; with inclination to one side or the other : incline, to tend ; to lean ; to give tendency or direction to any place or state; to attend; to bend; to incurvate.

Their hearts inclined to follow Abimelech.

Judget.

Her house inclineth unto death, and her paths unto the dead. Proverbs ii. 18.

A marvel it were, if a man of capacity could espy in the whole scripture nothing which might breed a probable opinion that divine authority was the same way inclinable. Hooker.

The gall and bitterness of certain men’s writings, who spared him little, made him, for their sakes, the less inclinable to that truth which he himself should have honored. Id.

Doth his majesty Incline to it, or no ? — He seems indifferent : Or rather swaying more upon our part.

Shaktpearc, Bid him

Report the features of Octavia, her years, Her inclination. Id. Antony and Cleopatra.

The king was wonderfully disquieted, when he found that the prince was totally aliened from all thoughts of, or inclination to, the marriage.”

Clarendon.

The timely dew of sleep,

Now falling with soft slumberous weight, inclines Our eyelids. Milton.

But that from us aught should ascend to heaven So prevalent, as to concern the mind Of God high-blest, or to incline his will, Hard to

belief may seem, yet this will prny.‘r. Id.

Desire,

Inclinable now grown to touch or ; , Solicited her longing eye. Id.

Whether they be refrigerated inclinatorily, or somewhat equinoxially, that is, toward the eastern or western points, they discover some verticity.

Browne’s Vulgar Errourt.

If that inclinatory virtue be destroyed by a touch from the contrary pole, that end which before was elevated will then decline. Id.

We have had few knowing painters, because of the little inclination which princes have for painting.

Dryden.

With due respect my body I inclined, As to some being of superior kind. Id.

A mere inclination to a thing is not properly a willing of that thing ; and yet, in matters of duty, men frequently reckon it for such : for otherwise how should

they so often plead and rest in the honest and well inclined disposition of their minds, when they are justly charged with an actual non-performance of the law ? Siuth.

INCLINATION, in mathematics, means the direction of a line, with regard to a certain point (according to the sense of the ancient

mathematicians, Apollonius and Pappus particularly). In astonomy, this word signifies the angle which the orbits of the planets and comets make with the ecliptic or orbit of the earth. This angle is the smaller, the less the planet or comet is distant from the ecliptic. According to the latest observations of Lalande and Bode, this angle of inclination is, in the different planets, as follows : — Mercury 7°, Venus 3° 23’ 20*, Mars 1° 51’, Pallas about 30°, Ceres 10° 47*, Jupiter 1° 19’ 10% Saturn 2° 30’ 20% Uranus 0°43’ 45’. More exact determinations with regard to Ceres, Pallas, .‘uno, and Vesta, may be expected at some future period. The comets make frequently very great angles with the ecliptic, for they traverse the heavens in all directions. The inclination of the moon’s path is different, according as the sun affects it differently, but it is between 5° 1’ and 5° 17’. (For the inclination of the magnetic needle, see MAGNETIC NEEDLE.

INCLINED PLANE. The inclined plane is one of the three mechanical powers, or simple machines, formed, as its name imports, by a plane surface, supposed to be perfectly hard and inflexible, and which is always inclined obliquely to the weight or resistance to be overcome. The wedge is a modification of this machine, being formed of two inclined planes placed base to base. The screw is another modification, being, in fact, merely an inclined plane wound round a cylinder. This machine enables us to raise a given weight along the inclined surface to a given elevation, with less expense of force than •would be required to raise it perpendicularly to the same elevation. This perpendicular weight is called the elevation of the plane, and the two lines enclosing the angle which it subtends, are called the base, and the width of the plane. See MECHANICS.

INCL1P’, v. a. In and clip. To grasp; to enclose ; to surround.

What’er the ocean pales, or sky inclip*, Is thine, if thou wilt ha’t.

Shakspeare. Antony and Cleopatra.

INCLOISTER, v. a. In and cloister. To shut up in a cloister.

INCLOUD’, v. a. In and cloud. To darken ; to obscure.

In their thick breaths, Rank of gross diet, shall vre be inclouded, And forced to drink their vapour.

Shakspeare

INCLUDE’, v. a. 1 Lat. includo ; Fr. in-INCLU’SIVE, adj. \clusif. To enclose or INCLUSIVELY, adv. j shut in ; to comprise,

comprehend, or contain in the sum or number :

inclusively is the thing mentioned reckoned into

the account.

This desire being recommended to her majesty, it

liked her to include the same within one intire lease.

Bacon.

Instead of enquiring whether he be a man of virtue, the question is only whether he be a whig or a tory ; under which terms all good and ill qualities are included. Swift.

I'll search where every virtue dwells. From courts inclusive down to cells. Id.

INCOAG'ULABLE, adj. In and coagulable. Incapable of concretion.

INCOEXISTENCE, n. s. In and coexistence. The quality of not existing together; non-association of existence. An unusual word.

Another more incurable part of ignorance, which sets us more remote from a certain knowledge of the coexistence or incoexistcnce of different ideas ia the same subject, is, that there is no discoverable connexion between any secondary quality and those primary qualities it depends on. Locke.

INCOG', adv. i Lat. incognitus. A state

INCOG'NITO, adv. S of concealment ; unknown; in private.

But if you'r rough, and use him like a dog,

Depend upon it, he'll remain incog. Addison.

'Twas long ago Some gods came down incognito. Prior.

INCOG'ITANCY, n. s. > Lat. incogitantia.

INCOG ˆTATI VE, adj. } In and cogito. Want of thought ; wanting the power of thought.

Next to the stupid and meerly vegetable state of incogitancy, we may rank partial and piece-meal consideration. Decay of Piety.

One man's fancies are laws to succeeders, who afterwards misname all unobsequiousness to their tnco-gitancy presumption. Boyle.

Purely material beings, as clippings of our beards, and sensible, thinking, perceiving beings, such as we find ourselves, we will call cogitative and incogitative beings. Locke.

INCOHERENCE, n.s.ˆ Lat. m and co—

INCOHE'RENCY, n. s. (hcero. Want o

INCOHE'RENT, adj. i cohesion ; loose—

INCOHE'RENTLY, adv. J ness of material parts; want of connexion; incongruity; want of dependence of one part upon another : incoherent, loose ; inconsistent ; inconsequential.

If plaister be beaten into an impalpable powder, when poured out it will emulate a liquor, by reason that the smallness and incoherence of the parts do both make them easy to be put into motion, and makes the pores they intercept so small, that they interrupt not the unity or continuity of the mass. Boyle.

I find that laying the intermediate ideas naked, in their due order, shows the incoherence of the argumentations better than syllogisms. Locke.

Incoherence! in matter, and suppositions without proofs, put handsomely together, are apt to pass for strong reason. Id.

We have instances of perception whilst we are asleep, and retain the memory of them ; but how extravagant and incoherent are they, and how little conformable to the perfection of a rational being ! Id.

Had the strata of stone become solid, but. the matter whereof they consist continued lax an<? incoherent, they had consequently been as pervious as those of marie or gravel. Woodward.

The character of Eurylochus is the imitation of a person confounded with fears, speaking irrationally and incoherently. Broome.

INCOLU'MITY.ra.s. Lat. incolumitas. Safe*;/; security. A word very little in use.

The parliament is necessary to assert and preserve the national rights of a people, with the inwlumity and welfare of a country Howel.

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INCOMBUSTIBILITY, n.s.} Latin in—

INCOMBUS'TIBLE, adj. £ combustus.

INCOMBUS'TIBLENESS, n. s. J The quality of resisting fire so that it cannot consume : incombustible, not to be consumed by fire.

It agrees in this common quality ascribed unto both, of being incombustible, and not consumable by fire.

Wilkins.

The stone in the Appennines is remarkable for its shining quality, and the amianthus for its incombusti-bility. Ray.

INCOMBUSTIBLE CLOTH. See ASBESTOS. M. Magellan informs us that the Romans enclosed dead bodies in cloth of this kind. In 1756 or 1 757 he tells us, that he saw in the Vatican a large piece of asbestos cloth, found in a stone tomb, with the ashes of a Roman, as appeared by the epitaph. The under-librarian, to show that it was incombustible, lighted a candle, and let some drops of wax fall on the cloth, which he set on fire with a candle in his presence, without any detriment to the cloth. Its texture was coarse, but much softer than he could have expected. See AMIANTHUS.

IN'COME, n. s. In and come. Revenue ; produce of any thing.

No fields afford So large an income to the village lord.

Dryden.

Thou who repinest at the plenty of thy neighbour, and the greatness of his incomes, consider what are frequently the dismal consequences of all this.

South.

St. Gaul has scarce any lands belonging to it, and little or no income but what arises from its trade ; the great support of this little state is its linen manufacture. Addison on Italy.

Notwithstanding the large incomes annexed to some few of her preferments, this church hath in the whole little to subsist on. Atterbury.

None can say that this was not good advice, The only mischief was, it came too late ; Of all experience ‘tis the usual price ; A sort of income tax, laid on by fate.

Byron. Don Juan.

INCOMMENSURABILITY, n. s.) Latin, INCOMMENSURABLE, adj. \in, con,

INCOMMENSURATE, adj. J mensura. The state of one thing with respect to another, when they cannot be compared by any common measure : not to be reduced to any measure common to both ; not to be measured together, such as that the proportion of one to the other can be told,

The diagonal line and side of a quadrate, which, to our apprehension, are incommensurate, are yet commensurable to the infinite comprehension of the divine intellect. More.

As all other measures of time are reducible to these three ; so we labour to reduce these three, though strictly of themselves incommensurate to one another, for civil use, measuring the greater by the less. Holder on Time.

If the year comprehend days, it is but as any greater -space of time may be said to comprehend a less, though the less space be incommensurate to the greater. id.

Our disputations about vacuum or space, incommensurable quantities, the infinite divisibility of matter, and eternal duration, will lead us to

see the weakness of our nature. Watts.

INCOMMENSURABLE, in geometry, is used where two lines, when compared to each other, have no common measure, how small soever, that will exactly measure them both. And, in general, two quantities are said to be incommensurable when no third quantity can be found that is an aliquot part of both.

INCOMMENSURABLE NUMBERS are such as have no common divisor that will divide them both equally.

INCOM'MODATE, v. a. ~} Lat. incommo—

INCOMMODE', v. a. j dus. To be in-

INCOMMO'DIOUS, adj. convenient to

INCOMMO'DIOUSLY, adv. j to embarrass;

INCOMMO'DIOUSNESS, n. s. to hinder : in—

INCOMMOD'ITY, n. s. J commodious,

vexatious without much mischief: incommodity, trouble ; inconvenience.

Declare your opinion, what incommodity you have conceived to be in the common law, which I would have thought most free from all such dislike.

Spenser's State of Ireland.

Things of general benefit, for in this world what is so perfect that no inconvenience doth ev<;r follow it ? may by some accident be incommodious to a few.

Hooker.

If iron can be incorporated with flint or stone, without over great charge, or other incummodity, the cheapness doth make the compound stuff profitable.

Bacon.

A gnat, planted upon the horn of a bull, begged the bull's pardon ; but rather than incommode ye, says he, 111 remove. L'Estrange.

Men's intentions in speaking are to be understood, without frequent explanations and incommodious interruptions. Locke.

Diseases, disorders, and the incommodioutness of external nature, are inconsistent with happiness.

Burnet.

By considering the region and the winds, one might so cast the rooms, which shall most need fire» that he should little fear the incommodity of smoak.

Wotton's Architecture.

Although they sometimes molest and incommode the inhabitants, yet the agent, whereby both the one and the other is effected, is of that indispensable necessity to the earth and to mankind, that they could not subsist without it. Woodward.

INCOMMUNICABIL'ITY, n. s.-v Latin, in

INCOMMU'NICABLE, adj. 'privative,

INCOMMU'NICABLY, adv. i and com—

INCOMMI/NICATING, adj. ˆ munico.

Not impartible ; not to be made the property of more than one; not to be expressed, uttered, or told : incommunicating, having no intercourse.

They cannot ask more than I can give, may I but reserve to myself the incommunicable jewel of my conscience. King Charles.

To annihilate is both in reason, and by the consent of divines, as incommunicably the effect of a power divine, and above nature, as is creation itself.

Hakewill on Providence.

The judgments and administrations of common justice are preserved from that confusion that would ensue, if the administration was by several incommn-nicating hands, or by provincial establishments.

Hole’s Common Law.

Light without darkness is the incommunicable claim of him that dwells in light inaccessible.

GlanvUle.

It was agreed on both sides, that there was one supreme excellency, which was incommunicalle to any creature. Stillingjieet.

N ettner did he treat them with these peculiarities of favor in thu extraordinary discoveries of the gospel only, out a;s-> of those incommunicable revelations of the divine love, in reference to their own personal interest m it. South.

INCOMPACT, adj. 3 Inand.orapacted. Not INCOMPAC’TED, adj. $ joined ; not cohering. Salt, say they, is the basis of solidity and permanency in compound bodies, without which the other four elements might be variously blended, but would remain incompacted. Boyle.

INCOM’PARABLE, adj. } Lat. in, com-IXCOM’PARABLY, adv. S pa.ro, and compa-rabilis. Excellent beyond compare, or competition ; done in a manner beyond all praise.

A founder it had, whom I think incomparably the •wisest man that ever the French church did enjoy, since the hour it enjoyed him. Hooker.

A most incomparable man, breathed as it were

To an untirable and continuate goodness.

Shahspeare.

Her words do shew her wit incomparable. Id.

Now this mask

Was cried incomparable, and the ensuing night

Made it a fool and beggar. Id. Henry VIII.

My heart would not suffer me to omit any occasion, whereby I might make the incomparable Pamela see how much extraordinary devotion I bore lo her service. Sidney.

If I could leave this argument of your incomparable beauty, I might turn to one which would equally oppress me with its greatness. Dryden.

Self-preservation will oblige a man voluntarily to undergo any less evil, to secure himself but from the probability of an evil incomparably greater.

South.

There are the heads of Antoninus Pius, the Fau-stinas, and Marcus Aurelius, all incomparably well cut. Addisun on Italy.

INCOMPAS'SIONATE, adj. In and com-passionate. Void of pity; void of tenderness.

INCOMPATIBILITY, n. s. j Lat. in and

INCOMPATIBLE, adj. \competo, pro—

INCOMPAT'IBLY, adv. j perly incom—

petibility. Inconsistent with something else ; such as cannot subsist or cannot be possessed together with something else : it is followed by with, sometimes with to ; a state or manner which is inconsistent with something else.

Fortune and love have ever been so incompatible, that it is no wonder, madam, if, having had so much of the one for you, I have ever found so little of the other for myself. Suckling.

The reason of the stress rests not upon the incom-petibility of excess of one infinitude above another either in intension or extension ; but the

incompeti-bility of any multitude to be infinite. Hale.

The repugnancy of infinitude is equally incompetible to continued or successive motion, and depends upon the incompossibility of things successive with infinitude. Id.

We know those colours which have a friendship •with each other, and those which are incompatible, by mixing together those colours of which we would make trial. Dryden.

Sense I have proved to be incompatible with mere bodies, even those of the most compound and elaborate textures. Bentley.

May not the outward expressions of love in many good Christians be greater to some other object than to God ? Or is this incompetible with the sincerity of the love of God. Hammond.

INCOM PETENCY, n. s. . Fr. incompe—

INCOM'PETENT, adj. > fence ; Lat. in

INCOMPETENTLY, adv. jandompeto. Inability ; want of qualification : not suitable ; inadequate. In the civil law it denotes a defect of right to do any thing.

Richard III. had a resolution, out of hatred to his brethren, to disable their issues, upon false and incompetent pretexts, the one of attainder, the other of illegitimation. Bacon.

Our not being able to discern the motion of a sha-dow of a dial-plate, or that of the index upon a clock, ought to make us sensible of the incompetence of our eyes to discern some motions of natural bodies incomparably slower than these. Boyle.

I thank you for the commission you have given me : how I have acquitted myself of it must be left to the opinion of the world, in spight of any protestation which I can enter against the present age, as incompetent or corrupt judges. Dryden.

Laymen, with equal advantages of parts, are not the most incompetent judges of sacred things. Id.

Every speck does not blind a man, nor does every infirmity make one unable to discern, or incompetent to reprove, the grosser faults of

others.

Government of the Tongue.

An equal attraction on all sides of all matter is just equal to no attraction at all ; and by this means all the motion in the universe must proceed from external impulse aloiie, which is an incompetent cause for the formation of a world. Bentley.

INCOMPLETE,’ adj. \ Lat. in and com—

INCOMPLETE’NESS, n. s. $ pletus. These words denote an imperfect unfinished state.

It pleaseth him in mercy to account himself incomplete, and maimed without us. Hooker.

The incompleteness of our seraphick lover’s happiness, in his fruitions, proceeds not from their want of satisfactoriness, but of an intire possession. Boyle.

In incomplete ideas we are apt to impose on ourselves, and wrangle with others, especially where they have particular and familiar names. Locke.

INCOMPLI’ANCE, n. *. Untractableness ; obstinacy; refusal of compliance.

Self-conceit produces peevishness and incompliance of humour in things lawful and indifferent. Tillotson.

Consider the vast disproportion between the worst inconveniences that can attend our incompliance with men, and the eternal displeasure of an offended God.

Rogers.

INCOMPOSED/ adj. In and composed. Disturbed; discomposed; disordered. Not much used.

Somewhat incomposed they are in their trimming, and extraordinary tender of their young ones.

Howel. Thus Satan ; and him the Anarch old,

With faltering speech and visage incomposed,

Answered. I know thee stranger who thou art.

Milton. Paradise Lost.

INCOMPOSSIBIL'ITY, n. s. > Latin, in, INCOMPOS'SIBLE, adj. 5 con, possum.

Quality of being not possible but by the negEF-tion or destruction of something : inconsistency with something.

Though the repugnancy of infinitude be equally incompetible to continued or successive motion, and depends upon the incompossibility of the very nature of things successive or extensive with infinitude, yet that incompatibility i* more conspicuous in discrete quantity, that ariseth from individuals already actually distinguished. Hole's Origin of Man/and.

INCOMPREHENSIBILITY, n .s.-\ Fr.

INCOMPREHENSIBLE, adj. f incom—

INCOMPREUEN'SIBLENESS, n. s. I prehen—

INCOMPREHEM'SIBLY, adv. J sibilite;

Lat. in, cow, prekendo. That which cannot be taken hold of or conceived in the mind : an old sense of these words, now out of use, was not to be contained : in this sense incomprehensible is used by Hooker.

Presence every where is the sequel of an infinite and incomprehensible substance ; for what can be every where but that which can no where be comprehended *

Hooker.

How incomprehensibly glorious is the light that is in ihee, since one glimpse of this created light gave so lively a glory to all thy workmanship ! Bp. Hall.

Stars that seem to roll Spaces incomprehensible. Milton.

And last of all that unutterable incomprehensible mystery of two natures united into one person, and again of one and the same nature diffused into a triple personality. South' s Sermons.

I conclude that for any one to deny or reject the mysteries of our religion as impossible, because of the imcomprehensibleness of them, is upon all true principles, both of divinity and philosophy, utterly inconsequent and irrational. Id.

The laws of vegetation and propagation are the arbitrary pleasure of God, and may vary in manners incomprehensible to our imaginations. Bentley.

His precepts tend to the improving and perfecting the most valuable part of us, and annexing incomprehensible rewards as an eternal weight of glory.

Hammond.

I might argue from God's incpmprehensibleness : if we could believe nothing but what we have ideas of, it would be impossible for us to believe God is incomprehensible. Waits.

INCOMPRESSIBLE, adj. ? Lat. in, con, INCOMPRESSIBIL'JTY, n. s. j pressus. Not

capable of being compressed into less space. Hardness is the reason why water is incompressible,

when the air lodged in it is exhausted. Cheyne.

INCONCUR'RING, adj. Lat. in, con, curro. Not concurring.

They derive effects not only from inconcurrmg causes, but things devoid of efficiency. Browne.

INCONCEAL'ABLE, adj. Lat. in con celo. Not to be hid ; not to be kept secret.

The inconcealable imperfections of ourselves will hourly prompt us our corruption, and loudly tell us we are sons of earth. Brtnane.

INCONCEIVABLE, adj. ˆ Latin, in and

INCONCEIV'ABLY, adv. S conceptus. Not

INCONCEP'TIBLE, udj. j to be conceived :

in a manner or degree beyond human comprehension : inconceptible is obsolete, it has a similar meaning.

It is inconceptible how any such man, that hath stood the shock of an eternal duration without corruption, should after be corrupted. Hale.

It is inconceivable to me, that a spiritual substance should represent an extended figure. Locke.

Does that man take a rational course to preserve himself, who refuses the endurance of those lesser troubles, to secure himself from a condition inconceivably more miserable ? South.

How two ethers can be diffused through all space, cne of which acts upon the other, and by consequence is reacted upon, without retarding, shattering, dis-

persing, and confound ing one another's motions, is inconceivable. Netcton's Opticks.

Such are Christ's promises, divine inconceivable promises : a bliss to be enjoyed to all eternity, and that by way of return for a weak obedience of some few years. Hammond.

They fall into a contrary extreme, and would persuade us, that the attributes of God are all alike inconceivable to us as they are in themselves, and can be known no way to except by analogy. Bolingbroke.

INCONCLU'DENT, adj.ˆ Lat. in and con-INCONCLU'SIVE, adj. tcludo. Inferring

INCONCLUSIVELY, adv. £no consequence; INCONCLU'SIVENESS, n. s. J not inforcing any determination of the mind : to reason inconclusively is without any such evidence as determines the understanding: inconclusiveness, want of rational cogency.

A man, unskilful in syllogism, at first hearing, could perceive the weakness and inconclusiceness of a long, artificial, and plausible discourse, wherewith some others, better skilled in syllogism, ‘iave been misled.

Locke.

The depositions of witnesses themselves, jas being false, various, contrariant, single, inconcludent.

Ayliffe’s Parergon.

INCONCOCT, adj. } Lat. in and concoctus.

INCONCOCT’ED. adj. VUnripened; immature;

INCONCOC’TION, n. s. j not fully digested : these words are nearly useless.

The middle action, which produceth such imper” feet bodies, is fitly called inquination, or inconcoction, which is a kind of putrefaction.

Bacon’s Natural History.

While the body, to be converted and altered, is too strong for the efficient that should convert it, it is all that while crude and inconcoct ; and the process is to be called cruidity and inconcoction. Bacon.

I understand, remember, and reason better in my riper years, than when I was a child, and had my organical parts less digested and i*iconcocted. Hale.

INCON’DITE, adj. Lat. incor-ditus. Irregular; rude; unpolished.

Now sportive youth

Carol incondite rhimes with suiting cotes, And quaver inharmonious. Phillips.

INCONDITIONAL, adj. > Lat. in and con-INCONDI’TIONATE, adj. $ ditto. Without exception, limitation, or stipulation ; not restrained by conditions ; absolute.

From that which is but orue in a qualified sense, an inconditional and absolute verity is inferred.

Browne.

They ascribe to God, in relation to every man, an eternal, unchangeable, and inconditionate decree of election or reprobation. Boyle.

INCONFOR'MITY, n. s. Lat. in, cum, forma. In and conformity. Incompliance with the practice of others.

We have thought their opinion to be, that utter inconformity with the church of Rome was not an extremity whereunto we should be drawn for a time, but the very mediocrity itself, wherein they meant we should ever continue. Hooker.

INCONFU'SION, n. s. Lat. in and eonfusus. In and confusion. Distinctness. Not used.

The cause of the confusion in sounds, and the in-confusion in species visible, is, for that the sight work-eth in right lints, and so there can be no coincidence in the eye ; but sounds iliat move in oblique and

arcuate lines, must need sencounter and disturb the one the other. Bacon.

INCON'GRUENCE, ra. s.*\ Fr. incongruity ; INCONGRUITY, n. s. f Ital. incongruitd ;

INCON'GRUOUS, adj. ? Latin incongruo.

INCONGRUOUSLY, adv. J Want of adaptation : incongruity, unsuitaoleness ; absurdity ; want of agreement with something else ; want of symmetry ; not fitting to the kind or occasion.

This werke who so shal se, or yrede, Of inconyrvite doe me not impeche.

Chaucer. Remedie of Lone. She, whom after what form soe'er we see, Is discord aud rude incongruity ; She, she is dead, she's dead. Donne,

Humidity is but relative, and depends upon the congruity or incongruence of the component particles of the liquor to the pores of the bodies it touches. Boyle.

The fathers make use of this acknowledgment of the incongruity of images to the Deity, from thence to prove the incongruity of the worship of them.

Stillingfleet.

Wiser heathens condemned the worship of God as incongruous to a divine nature, and a disparagement to the deity. Id.

To avoid absurdities and incongruities, is the same law established for both arts : the painter is not to paint a cloud at the bottom of a picture, nor the poet to place what is proper to the end in the beginning of a poem. Dryden.

INCONNEX'EDLY, adv. In and connex. Lat. in and connecto, to bind together. Without any connexion or dependence. Little used.

Others ascribed hereto, as a cause, what perhaps but casually or inconnexedly succeeds. Browne.

INCON'SCIGNABLE, 'adj. In and con-seionable. Lat. in and conscius. Void of the sense of good and evil ; without influence of conscience. Not used.

So inconscionable are these common people, and so little feeling have they of God, or their own souls' good. Spenser.

INCONSEQUENCE, n. s.) Lat. in and INCON'SEQUENT, adj. J consequor ; Fr.

inconsequence. Want of just inference in reasoning ; without suitable conclusions.

The ground he assumes is unsound, and his illation from thence deduced inconsequent. Hakewill.

Men rest not in false apprehensions without absurd and inconsequent deductions from fallacious foundations, and misapprehended mediums, erecting conclusions no way inferrible from their premises.

Browne's Vulgar Errours.

This he bestows the name of many fallacies upon j and runs on with

shewing the inconsequence of it, as though he did in earnest believe it were an impertinent answer. Stittingfleet.

And yet as absurd, as fallacious, and inconsequent as this way of discoursing is, it is one of the chief foundations of the doctrine of merit, and consequently of the religion of too great a part of the world.

South’* Sermons.

INCONSID’ERABLE, adj.’} Latin in and INCONSIR’ERABLENESS, n. s. \ consideratio. INCONSID’ERATE, adj. I Unworthy of

INCONSID’ERATELY, adv. [notice; trifling; IMCONSID’ERATENESS, n. s. \ of little value; INCONSIDERA’TION, n. s _) small in importance : inconsiderate, from inconsideratus, careless; inadvertent; inattentive: want of thought ; negligence ; inattention : used both of persons and things.

The king, transported with just wrath, inconsiderately fighting and precipitating the charge, before his whole numbers came up, was slain in the pursuit.

Bacon.

When thy inconsiderate hand

Flings ope this casement with my trembling name, Then think this name alive, and that thou thus In it offcndest my genius. Donne.

S. Gregory reckons uncleanness to be the parent of blindness of mind, inconsiderat ion, precipitancy or giddiness in actions, and self-love. Taylor.

I am an inconsiderable fellow, and know nothing.

Denhttm. If you lament it,

That which now looks like justice will be thought

An inconsiderate rashness. Id. Sophy.

He who laid down his life for the redemption of the transgressions, which were under the first Testament, cannot be so inconsiderate of our frailties.

Decay of Piety.

If men do know and believe that there is such a being as God, not to demean ourselves towards him as becomes our relation to him is great stupidity and inconsiderateness. T illation.

The most inconsiderable of creatures may at somt time or other come to revenge itself upon the greatest.

L' Estrange.

From the consideration of our smallness and inconsiderableness, in respect of the greatness and splendor of heavenly bodies, let us with the holy psalmist raise up our hearts. Ray on the Creation.

Joseph was delighted with Mariamne's conversation, and endeavoured with all his art to set out the excess of Herod's passion for her ; but, when he still found her cold and incredulous, he inconsiderately told her the private orders he left behind. Addison.

It is a very unhappy token of our corruption, that there should be any so inconsiderate among us as to sacrifice morality to politicks. Id. Freeholder.

May not planets and comets perform their motions more freely, and with less resistance, in this ethereal medium, than in any fluid which fills all space adequately without leaving any pores, and by consequence is much denser than quicksilver or gold ? And may not its resistance be so small as to be inconsiderable ?

Newton.

Let no sin appear small or inconsiderable by which an almighty God 'is offended, and eternal salvation endangered. Rogers.

If we were under any real fear of the papists, it would be hard to think us so stupid not to be equally apprehensive with others, since we are likely to be the greatest sufferers ; but we look upon them to be altogether as inconsiderable as the women and children.

Swift.

INCONSISTING, adj.ˆ Lat. in and consto. INCONSIS'TENCE, n. s. j Not compatible INCONSISTENCY, n. s. s. with : inconsistency, INCONSISTENT, adj. i such opposition as INCONSIS'TENTLY, adv. J that one proposition infers the negation of the other ; such contrariety

that both cannot be together ; absurdity ; incongruity : inconsistent, unsuitable ; unsteady ; changeable ; contrary ; with self-contradiction. Finding no kind of compliance, but sharp protestations against the demands, as inconsistent with conscience, justice, or religion, the conference broke off.

Clarendon.

The persons and actions of a farce are all unnatural, and the manners false ; that is, inconsisting with the characters of mankind. Dryden's Dufresnoy.

The idea of an infinite space or duration is very obscure and confused, because it is made up of two parts very different, if not inconsistent. Locke.

There ia a perfect inconsistency between that which is of debt, and that which is of free gift. South.

Mutability of temper, and inconsistency with ourselves, is the greatest weakness of human nature.

Addison.

Compositions of this nature, when thus restrained, shew that wisdom and virtue are far from being inconsistent with politeness and good humour.

Id. Freeholder.

If a man would register all his opinions upon love, politics, religion, and learning, what a bundle of inconsistencies and contradictions would appear at last.

Swift.

When inconsistent with a greater good, Reason commands to cast the less away.

Dr. Johnson's Irene.

INCON'SOLABLE, adj. Fr. inconsolable; Lat. in and consolor. Not to be comforted ; sorrowful beyond susceptibility of comfort.

Her women will represent to me that she is inconsolable, by leason of my unkindness. Addison.

They take pleasure in an obstinate grief, in rendering themselves inconsolable. Fiddes's Sermon.

INCON'SONANCY, n.s. Lat. in and con-sono. Disagreement with itself.

INCONSPIC'UOUS, adj. Lat. in and con-spicio. In and conspicuous. Indiscernible ; not perceptible by the sight.

When an excellent experimenter had taken pains in accurately filling up a tube of mercury, we found that yet there remained store of inconspicuous bubbles.

Boyle.

INCON'STANCY, n. s. a Fr. inconstant ;

INCON'STANT, adj. $ Lat. in and consto.

Unsteadiness ; mutability ; diversity. Inconstant, wavering ; not firm in resolution ; various of inclination; wanting perseverance; applicable to persons.

Your inconstance is your confusion.

Chaucer. The Sompnoures Tale. I have suffered more for tbeir sakes, more than the villainous inconstancy of man is able to bear.

Shakspeare.

O swear not by the moon, th' inconstant moon, That monthly changes in her circled orb, Lest that thy love prove likewise variable. Id.

Be made the mark

For all the people's hate, the princess' curses, And his son's rage, or the old king's inconstancy.

Denham.

I do not think it a mark of inconstancy to accommodate our measures, as we do the course which we steer at sea, to the winds and storms of the political horizon. Milton's Prose Works.

Inconstant Sylvia, when yet I had not found him counterfeit, One morning (I remember well) Tyed in this silver chain and bell, Gave it to me, nay, and I know What he said then ; I'm sure I do. Marvell. He is so naturally inconstant, that I marvel his soul finds not some way to kill his body. Sidney.

O Virtue you affect, inconstancy you practise.

Otway's Orphan.

Trust not a man, we are by nature false, Dissembling, subtile, cruel, and inconstant. Id. Where Unprcparedness is encountred with unexpected Force, Weakness with Violence, Inconstancy with Importunity, there Destruction must needs be not the effect of chance but nature, and by the closest connexion of causes unavoidable.

South's Strmotis

Irresolution on the schemes of life which offer to our choice and inconstancy in pursuing them are the greatest causes of all our unhappiness. Addison.

As much inconstancy and confusion is there in their mixtures or combinations ; for it is rare to find any of them pure and unmixt. Woodward.

Inconstant, blind, Deserting friends at need, aud duped by foes.

Thomson.

I hate inconstancy — I loathe, detest, Abhor, condemn, abjure, the mortal made Of such quicksilver clay, that in his breast No permanent foundation can be laid.

Byron. Don Juan.

INCONSUMABLE, adj. 2 Lat. in and con-INCONSUMP'TIBLE, adj. 5
sumo. Not to be wasted, spent, or brought to an end : not to be
destroyed by fire.

Before I give any answer to this objection of pretended inconsumptible lights, I would gladly see the effect undoubtedly proved. Digby on Bodies.

By art were weaved napkins, shirts, and coats, in-consumable by fire, and wherein they burnt the bodies of kings. Browne.

INCONTESTABLE, adj. f Fr. inconiesta-INCONTES'TABLY, adv. J ble ;
Lat. in and contestor. Not to be disputed, debated, or controverted :
clear beyond all doubt.

Our own being furnishes us with an evident and incontestable proof of a Deity ; and I believe no body can avoid the cogency of it, who will carefully attend to it. Locke.

INCONTIG'UOUS, adj. Lat. in and contigo. In and contiguous. Not
touching each other ; not joined together.

They seemed part of small bracelets, consisting of equally little incontiguous beads. Boyle.

INCONTINENCE, n. s. ˆ Lat. in and con—

INCON'TINENCY, n. s. ' tineo. Inability to

INCON'TINENT, adj. ˆrestrain the pas—

INCON'TINENTLY, adv. J sions : unchaste ;

indulging unlawful pleasures: an old meaning

of incontinent and incontinently is, shunning

delay; immediately.

Men shall be lovers of their own selves, faise accusers, incontinent, fierce. 2 Tim. iii. 3.

•They ran towards the far rebounded noise, To weet what wight so loudly did lament ; Unto the place they came incontinent.

Spenser. Faerie Queene Dispersed all their troupe incontinent, And sent them home to tell a piteous tale Of their vaine prowesse turned to

their proper bale.

Id. He says he will return incontinent.

Shakspeare.

The cognizance of her incontinency Is this ; she hath bought the name of whore thus

dearly. Id.

In these degrees have they made a pair of stairs to marriage, which they will climb incontinent, or else be incontinent before marriage. Id.

Come, mourn with me for what I do lament, And put on sullen black incontinent.

Id. Richard II.

The cause of this war is no other than that we will not incontinently submit ourselves to our neighbours.

Hayward.

But beauty, like the fair Hesperian tree, Laden with blooming gold, had need the guard Of dragon-watch with uninchanted eye, To save her blossoms, and defend her fruit Fiom the rash hand of bold incontinence. Milton.

This is my defence :

I pleased myself, I shunned incontinence, And, urged by strung desires, indulged my sense.

Dryden.

The words sine veste Dianam agree better with Livia, who had the fame of chastity, than with either of the Julias, who were both noced of incontinency .

Id.

Incontinently I left Madrid, and have been dogged and waylaid through several nations.

Ar but knot and Pope.

INCONTINENCE, in medicine, signifies an inability in any of the organs to retain what should not be discharged without the concurrence of the will. It is most frequently used with regard to a diabetes, or an involuntary discharge of urine. See MEDICINE.

INCONTROVERTIBLE, adj. > Lat. in,

INCONTROVER'TIBLY, adv. j controverto.

Indisputable; to a degree beyond controversy or dispute.

The Hebrew is incontrovertibly the primitive and surest text to rely upon ; and, to preserve the same uncorrupt, there hath been used the highest caution humanity could invent. Browne's Vulgar Errours.

When any tenet is generally received and adopted as an incontrovertible principle, we seldom look back to the arguments upon which it was first established.

Johnson's Rambler.

INCONVE'NiENCE, n. s.^ Fr. incon-INCONVE'XIENCY, n. s. tvenient ; Lat. in INCONVE'NIENT, adj. £ and convenio.

INCONVE'NIEXTLY, adv. JUnfitness; inexpedience ; cause of uneasiness ; disadvantage : inconvenient, unfit ; incommodious ; unseasonable ; not agreeing either in time, place, or occasion.

Seying the manyfolde inconvenience Falling by unbrydled prosperite Whiche is uot tempered with moral prudence,

*****

Moved I am, bothe by right and equite, To youthe's wele somwhat for

to endite.

Chaucer. Prologue to the Remedie of Love.

They lean to their own customs, though they be more unjust, and more inconvenient for the common people. Spenser on Ireland.

We are not to look that the church should change her publick laws, although it chance that for some particular moii the same be found inconvenient, especially when there may be other remedy against particular inconveniences. Hooker.

They [)l<;ad against the inconveniences, not the unlawfulness of popish apparel ; and against the inconvenience, not the unlawfulness of ceremonies in burial.

Id.

There is a place upon the top of mount Athos above all clouds of rain, or other inconvenience.

Raleigh's History.

Man is liable to a great many inconveniences every moment, and is continually unsecure even of life it-self. Tillotson.

The inconvenience of old age makes him incapable of corporal pleasures. Dryden.

Would not quickness of sensation be an inconvenience to an animal, that must lie still where chance has once placed it ? Locke.

He knows that to be inconvenient, which we falsely think convenient for us. Smalridge.

Consider the disproportion between the worst inconveniences that stand in compliance with men, and the eternal displeasure of God. Rogert.

We are freed from many inconveniences, ana we enjoy several advantages. Atterbury.

The things of another world, being distant, operate but faintly upon us ; to remedy this inconveniency, we must frequently revolve their certainty and importance.

Id. The next amusement mortgages our fields ;

Slight inconvenience prisons hardly frown,

From hateful time if prisons set us free. Young.

Another inconvenience attending private education is the suppressing of the principle of emulation, without which, it rarely happens that a boy prosecutes his studies with alacrity or success. Beattie.

This country, with its eyes open to all the inconveniences of the connexion, but with its memory full of all its benefits, and with all the feelings belonging to them, renewed solemnly the previously existing obligations. Canning.

INCONVER'SABLE, adj. Lat. in and con-versor. In and conversable. Incommunicative ; ill-qualified by temper for conversation ; unsocial. He is a person very inconversable. Afore.

INCONVERTIBLE, adj. Lat. in and con-verto. In and convertible. Not transmutable ; incapable of change.

It entereth not the veins, but taketh 1 eave of the permeant parts, and accompanieth the inconvertible portion unto the siege. Browns.

INCON VIN'CIBLE, adj. > Lat. in and con—

INCONVIN'CIBLY, adv. $ mncor. Not to be convinced; incapable of conviction.

It is injurious unto knowledge obstinately and in-convincibly to side with any one. Browne.

INCOTMY, adj. Perhaps from in and conn, to know. Unlearned ; artless. This sense is uncertain. In Scotland it denotes mischievously unlucky : as, he's an incony fellow. This seems to be the meaning of Shakspeare.

O' my troth, most sweet jests, most incony vulgar

wit, When it comes so smoothly off. Shakspeare.

INCOR'PORAL, adj. ~\ Fr. incor—

INCORPORAL'ITY, n. s. pore I ; Lat.

INCOR'PORALLY, adv. in and cor—

INCOR’PORATE, v. a., v. n. & adj. pus. These INCORPORATION, n. s. J > words have

INCORPO’REAL, adj. j opposite

INCORPO’REALLY, adv. j meanings :

INCORPORE’ITY, n. s. incorporal,

INCORPSE’, v. a. J incorporality, incorporally, signify immaterial ; distinct from matter, as do also incorporeal, incorporeally ; incorporate is to mingle into a mass ; to conjoin as one body ; to form into a corporation ; to unite, associate, embody : incorporeity is immateriality : incorpse, to unite in one body ; in the former words in is used as a privative, in the latter it has the force of increase or addition.

The apostle affirmeth plainly of all men Christian, that be they Jews or Gentiles, bond or free, they are all incorporated into one company, they all make but one body. Hooker

In him we actually are, by our actual incorporation into that society which hath him for thtlr head.

Id.

Villainous thoughts, Roderigo, when these muiua.i-ties so marshal the way, hard at hand comes the mas-ter and main exercise, the incorporate conclusion.

Siuikspeare. Othello.

Who the swelling clouds in bladders ties, To mollify the stubborn

clods with rain, And scattered dust incorporate again ? Sandys.

By your leaves, you shall not stay alone Till holy church incorporate two in one.

Shakspeare. Upon my knees

I charm you, by that great vow Which did incorporate and make us one. Id.

It is Casca, one incorporate To our attempts. Id. Julius Caesar.

Your most grave belly was deliberate, Not rash, like his accusers, and thus answered : True is it, my incorporate friends, quoth he, That I receive the general food at first, Which you do live upon. Id. Coriolanus.

Why do’st thou bend thine eye on vacancy, A lid with the incorporal air doest hold discourse ?

SJiakspeare.

He grew unto his seat,

As he had been incorpsed and demy-natured With the brave horse. Id. Hamlet.

Moses foreborc to speak of angels, and things invisible and incorporate. Raleigh.

It is a virtue which may be called incorporeal and immateriate, whereof there be in nature but few.

Bacon.

Hearing striketh the spirits more immediately than the other senses, and more incorporeally than the smelling. Id.

Make proof of the incorporation of iron with flint ; for if it can be incorporated without over great charge, the cheapness of the flint doth make the compound stuff profitable. Id.

This, with some little additional, may further the intrinsick incorporation. Id. Natural History.

The sacne is incorporated with a majority, and nam-eth burgesses to parliament. Carew.

Death and I Are found eternal, and incorporate both. Milton.

Thy soul

In real darkness of the body dwells, Shut out from outward light, f incorporate with gloomy night. Id.

Thus incorporeal spirits to smallest forms Reduced their shapes immense. Id.

Courtesy, that seemed incorporated in his heart, would not be persuaded by danger to offer any offence.

Sidney.

It is not universally true, that acid salts and oils will not incorporate or mingle. Boyle.

Sense and perception must necessarily proceed from some incorporeal substance within us. Bentley.

The idolaters, who worshipped their images as gods, supposed some spirit to be incorporated therein, and so to make together with it a person fit to receive a worship. Stillinyfleet.

All this learning is ignoble and mechanical among them, and the Confutian only essential and incorporate in their government. Temple.

It finds the mind unprepossessed with any former notions, and so easily gains upon the assent, grows up with it, and incorporate* into it. South.

The Romans did not subdue a country to put the inhabitants to fire and sword, but to incorporate them into their own community. Addison's Freeholder.

Incorporated minds will always feel some inclination towards exterior acts, ritual observances.

Johnson. Rambler.

INCORPORATIONS, or trades, in the polity of the Royal boroughs of Scotland, are societies of tradesmen or artists, incorporated by royal charter, and* endowed with certain exclusive privileges, agreeably to the nature of their respective profes-

sions. Their number varies in the different royal boroughs, and they have more or less share in the government of their respective burghs according to the constitution of each. See CORPORATION.

INCORRECT, adj. •} Lat. in and cor-INCORRECT'LY, adv. rigo. That which

INCORRECTNESS, n.s. [is faulty or cannot INCOR'RIGIBLE, adj. fbe corrected ; in—

INCOR'RIGIBLENESS, n. s. J accurate ; full of INCOR'RIGIBLY, adv. J faults : incorrigible, applied to persons who cannot be reformed or amended, and to things which cannot be improved: incorrigibleness, hopeless depravity: incorrigibly, wicked beyond the possibility of reform.

Some men appear incorrigibly mad, They cleanliness and company reno-jiice.

Roscommon.

What we call penitence becomes a sad attestation of our incorrigibleness. Decay of Piety.

Provoked by these incorrigible fools, I left declaiming in pedantick schools. Dryden. What are their thoughts of things, but variety of incorrigible error ? L' Estrange.

I would not have chiding used, much less blows, 'till obstinacy and incorrigibleness make it absolutely necessary. Locke.

Whilst we are incorrigible, God may in vengeance continue to chastise us with the judgment of war.

Smalridge.

The piece you think is incorrect : why take it ; I'm all submission ; what you'd have it, make it.

Pope,

The most violent party-men are such as have discovered least sense of religion or morality ; and when such are laid aside, as shall be found incorrigible, it will be no difficulty to reconcile the rest. Swift.

INCORRUPT,' adj. ~] Fr. incorruptible ; INCORRDP'TED, adj. \ Lat. in and cor—

INCORRUPTIBIL'ITY, n. s. \ruptus. Pure in INCORRUPTIBLE, adj. ("conduct and prin-INCORRUP'TION, n. s. \ ciples ; free from INCORRUPT'NESS, n. s. J depravity : incorruptibility, irisusceptibleness of corruption or decay: incorruptible, not admitting decay; pure: incorruptness, purity of manners; honesty; integrity. A mind above the power of bribes is incorruptible.

So also is the resurrection of the dead : it is sown in corruption, it is raised in incorruption. 1 Cor.

Philo, in his book of the world's incorruptibility, alledgeth the verses of a Greek tragick poet.

Hakewill. Sin, that first

Distempered all things, and, of incorrupt, Corrupted. Mtiton's Paradise Lost

In such abundance lies our choice, As leaves a great store of fruit untouched, Still hanging incorruptible. Id.

Probity of mind, integrity, and incorrutpness of manners, is preferable to fine parts and subtile speculations. Woodward.

Our bodies shall be changed into incorruptible and immortal substances, our souls be entertained with the most ravishing objects, and both continue happy throughout all eternity. Wake.

INCORRUPTIBILES, INCORRUPTIBLES, in ecclesiastical history, the name ot n sect which sprang out of the Eutychians. Their distinguishing tenot was, that the body of Jesus Christ was

incorruptible ; by which they meant, that after, and from the time

wherein he was formed in the womb of his holy mother, he was not susceptible of any change or alteration ; not even of any natural and innocent passions, as of hunger, thirst, &c. ; so that he eat without any occasion before his death, as well as after his resurrection. And hence they took their name.

INCRAS'SATE, v. a. } Lat. in and crassus. INCRASSA'TION, n. s. > The act of thickening, INCRAS'SATIVE, n. s. j and the state of growing thick, are called incrassation : incrassate, to make thick : incrassative, having the quality of thickening.

The two latter indicate restringents to stanch, and mcrassatives to thicken the blood. Harvey.

Nothing doth conglaciate but water ; for the determination of quicksilver is fixation, that of milk coagulation, and that of oil incrassation, Browne.

If the cork be too light to sink under the surface, the body of water may be attenuated with spirits of wine j if too heavy, it may be incrassated with salt. Id. Vulgar Errours.

Acids dissolve or attenuate ; alcalies precipitate or incrassate. Newton's Opticks.

Acids, such as are austere, as unripe fruits, produce too great a stricture of the fibres, incrassate and coagulate the fluids ; from whence pains and rheumatism.

Arbuthnot.

INCREASE', v. n., v. a., & n. s.) Lat. in INCREA'SER, n. s. i andcresco.

To grow more in number, or greater in bulk; to advance in quantity or value, or in any quality capable of being more or less ; to be fertile ; to make more or greater : increase, augmentation ; addition to the original stock ; produce ; generation ; progeny ; the state of waxing or growing full orbed : increaser, he who increases.

Take thou no usury of him nor increase. Levit. Hear and observe to do it, that it may be well with thee, and that ye may increase mightily.

Dent. vi. 3.

He hath increased in Judah mourning and lamentation. Sam. I will increase the famine. Esek. v. 16. I will increase them with men like a

flock.

Id. xxxvi.

Profane and vain babbling will increase unto more ungodliness. 2 Tim. ii. 16.

Hye thee from this slaughter-house, Lest then increase the number of the dead.

Shakspeare,

Into her womb convey sterility ; Dry up in her the organs of increase, And from her derogate body never spring a babe.

Id.

Seeds, hair, nails, hedges, and herbs, will grow soonest, if set or cut in the increase of the moon.

Bacon's Natural History. Upon his shield a palm-tree still increased, Though many weights its rising arms depressed : His word was, ' Rising most, by being most oppressed.'

Fletcher's Purple Island.

As Hesiod sings, spread waters o'er thy field, And a most just aud glad increase 'twill yield.

Denham.

Our maker bids increase; who bids abstain But our destroyer, foe to God and man ? Milton.

Fishes are more numerous or increasing than beasts or birds, as appears by their numerous spawn. Hale. It serves to increase that treasure, or to preserve it.

Temple.

From fifty to threescore he loses not much in fancy ; and judgment, the effect of observation, still increases.

Dryden.

For three years he lived with large increase In arms of honour, and esteemed in peace. Id.

Those grains which grew produced an increase be-yond expectation. Mortimer's Husbandry.

Henry, in knots, involved his Emma's name Upon this tree ; and, as the tender mark, Grew with the year and widened -with the bark : Venus had heard the virgin's soft address, That as the wound the passion might increase.

Prior.

Since the desire is infinite, nothing bnt the absolute and increased Infinite can adequately fill it. Cheyne.

Him young Thoasa bore the bright increase Of Phorcys. Pope's Odyssey,

Hail, bards triumphant ! born in happier days, Whose honours with increase of ages grow, As streams roll down, enlarging as they flow. Pfpe,

Methinks they both, as we recede from them, Appear to join the innumerable stars Which are around us, and as we move on Increase their myriads. Byron's Cain.

INCREDIBILITY, n. s.ˆj Fr. incredibi—

INCRED'I BLE, adj. lite, incredule ; La—

INCRED'IBLENESS, n. s. tin, incredibilis,

INCEED'IBLY, adv. ˆincredulus. Sur—

INCREDU'LITY, n. s. \ passing belief: the

INCRED'ULOUS, adj. 1 quality or manner

INCRED'ULOUSNESS, n.s. j of being not to be

believed. Incredulity, hardness of belief ; refusal

of credit to testimony ; the state or disposition

of unbelief.

The ship Argo, that there might want no incredible thing in this fable, spoke to them. Raleigh.

He was more large in the description of paradise, ..o take away all scruple from the incredulity of future ages. Id.

I am not altogether incredulous but there may be such candles as are made of salamander's wood, be-ing a kind of mineral which whiteneth in the burning, and consumeth not. Bacon,

Yet God has wrought things as incredible For his people of old : what hinders now ?

Milton's Samson Agvnistes.

For objects of incredibility, none are so removed from all appearance of truth as those of Corneille's Andromede. . Dryden.

Presenting things impossible to view, They wander through incredible to true.

Granville.

INCRE'MABLE, adj. Lat. in and cranr,

Not consumable by fiie.

If from the skin of the salamander these increma-ble pieces are composed. Browne's Vulgar Errours.

IN'CREMENT, n. s. Lat. incrementum. The act of growing greater ; increase or produce.

Divers conceptions are concerning the Nile's incre* ment, or inundation. Browne's Vulgar Errours.

The orchard loves to wave

With Winter winds : the loosened roots then drink Large increment, earnest of happy years. Phillips.

This stratum is expanded at top, serving as the seminary that furnisheth matter for the formation and increment of animal and vegetable bodies.

Woodward.

IN’CREPATE, v a > Lat. increpo, incre-INCREPA’TION, n.s.) patio. To chide: re prehension.

, v. a. -\

INCRUS TATE, v. a. > incrusto. To cover with INCRUSTA’TION, n. s. J an additional coat adhering to the internal matter ; a covering ; something superinduced.

INCUBATION. Birds, fishes, insects, worms and reptiles, as is well known, lay eggs, from which the young animals are produced by means of warmth. The four last named classes leave the fecundation of the eggs to the warmth of the sun; birds employ the warmth of their own bodies for this purpose. The process which they use is called incubation. All known birds, with the exception of the cuckoo, discharge this office themselves. The cuckoo deposits its eggs in the nest of the hedge-sparrow and other small birds. The ostrich, contrary to the com-mon opinion, sits upon its eggs, the male in company with several females, day and night. Among many sorts of birds, as the common hen, ducks, geese, &c., the business of incubation is confined to the female ; among others, especially those which live in pairs, as the dove, lark, sparrow, &c., the male takes part. The female usually leaves the eggs for some hours, about noon, to seek food and bathe herself. In other species of birds, the male remains near the fe-male during the process, protects her from in-jury, brings her food, &c. This is the case with the canary bird, goldfinch, linnet, &c. The perseverance and devotion of the female during the period of incubation is admirable. She submits to the most inconvenient postures, to avoid injuring her eggs, and forgets her food and her companions. If she is compelled by hunger to quit her post, she covers her eggs with feathers, moss, wool, &c. Birds in general become comparatively tame during this period. Others defend their nests with

the greatest courage. The domestic hen boldly encounters the largest dog. Only a few birds living in a state of freedom, allow their nests to be disturbed. Many desert them entirely, if a man has displaced the eggs during their absence ; for instance, the canary bird. The gradual developement of the young bird in the egg has been observed, particularly in the case of the eggs of the domestic hen. The covering of the young bird, when it first leaves the egg, is a sort of down ; this is gradually superseded by feathers. The little creature remains for some hours or longer, in the nest, under its mother, till it has become accustomed to the external air. The old birds, particularly the female, now manifest the greatest care for their young, in protecting them and providing for their wants. They bring them suitable food, which, when necessary, the mother softens first in her crop. The dirt of the young is thrown out of the nest by the old birds as long as the young remain blind. Water and marsh birds, soon after birth, leave the nest, and follow their mother into the water. The old birds teach them where to find their food. The mother protects them, takes them in stormy weather under her wings, and exposes herself to much inconvenience to save them from suffering. The time of incubation generally varies with the size of the birds. The linnet requires but fourteen days, the common hen twenty-one, and the swan

forty-two days. In warm climates, the tim? of incubation is said to be somewhat shorter. In Africa, the hen is said to sit but thirteen days. With us, too, in very cold weather, geese and hens are known to sit much longer than in warm. The warmth required for fecundating the eggs is about 104° Fahr. The artificial hatching of eggs is practised in Egypt. In Naples, ovens for this purpose were constructed in the fourteenth century. But in Egypt, this art has been carried to a high degree of perfection. The ovens intended for this purpose are made of brick, and sunk some depth in the earth. They consist of two stories, connected with each other, and divided into several apartments. In a corner of the building is an oven, which is heated daily three to four hours, for ten days in succession, with cow and camel's dung, the usual fuel of the country. The heat is regulated by the feeling of the superintendent. The temperature to be produced is compared with the warmth of baths. When the heat is too great, some passages are opened for the air. The floors of the divisions or apartments are covered with mats, and a layer of straw thereupon, on which the eggs are laid, so, however, as not to touch each other. They are turned twice by day, and as often by night. After eight or ten days, the eggs are examined with a lamp, to ascertain the progress of the process of fecundation. Those which appear to be unfruitful are thrown away ;

the others, on the fourteenth day, are put in the upper story. On the twentieth or twenty-first day, the young bird issues out. The owner of the oven receives a third part of the eggs for his trouble. The inhabitants of a village called Berme, in the Delta, are the persons who carry on this art throughout the country. In China, also, artificial hatching is practised. The eggs there are put in wooden boxes, which are filled with sand, and placed upon heated iron plates. Of late, a Frenchman has published a work on this subject, in which he seeks to introduce the Egyptian ovens on an improved plan. He heats his ovens with boiling water.

INCUBUS (Latin incubus, one who lies upon); a spirit, to whom was ascribed the oppression known by the vulgar name of nightmare, in Greek ephialtes (from t-rei and aXXo/zat, I leap upon). The English nightmare is from mair, an old woman or hag, in which form the spirit was generally supposed ‘o appear, pressing upon the breast, and impeding the action of breathing. The French cauchentare cochemare (qui couche sur) is of the same character and origin. These daemons play an important part in the superstitions of the middle ages, having been, perhaps, not unfrequently employed, like the elder gods of Greece, to cloak the advances of earthly lovers. The nuns and other young ladies of the middle ages, were not always safe from their violence or their persuasions, as numberless tales and grave histories abundantly prove. Augustin (De Civil. Dei) mentions the fact that Syhanos, Panes, et Faunas, quos vulgo Incubos vacant, improbox sccpe extititse mulieribus, et carum appetisse ac peregisse con-cubitum. The word is also used for the oppression or feeling of suffocation which sometimes

comes on during sleep. The sufferer experiences a short period of intense anxiety, fear, horror, &c. ; feels an enormous weight on his breast ; is pursued by a phantom, monster, or wild beast, whom he cannot escape ; is on the brink of a precipice, from which he cannot remove, or is, perhaps, rolling down it without being able to make any exertion for his safety, and his limbs refuse to do their office, until he

suddenly awakens himself by starting from his recumbent posture, or by a loud cry; he is then in a state of great terror, and the body is often covered with sweat. It is generally owing to repletion and indigestion, and is often superinduced by lying on the back. It is most common in those seasons of the year which most increase the volume of the fluids — in spring and autumn. Homer (//. xxii. 200), and Virgil (jEn. xii. 908), have given striking pictures of its benumbing power, and Fuseli has represented its agonies. He is said to have eaten an immoderate supper of raw pork, for the purpose of obtaining a vivid conception of his subject.

INCUL'CATE, v. a.) fi.inculquer; Lat.

INCUL'CATE, n. s. $ inculcn. To impress by frequent admonitions ; to enforce by repetition. Inculcation, repeated admonition.

INCULT, adj. Fr. incultus; Lat. inculte. Uncultivated; unfilled.

INCUL'PABLE, adj. \ Latin inculpabilis.

INCUL'PABLY, adv. $ Not deserving bUn.e: not in a responsible manner.

INCUM'BENCY, n. s. \ Latin incvmbo.

INCUM'BENT, adj. & n. s. S The act of lying upon another ; the state of-keeping a benefice. Incumbent, resting ; lying upon ; imposed as a duty; obligatory. Incumbent, the present possessor of an ecclesiastical benefice.

With wings expanded wide ourselves we'll rear,

And fly incumbent on the dusky air. Dryden.

An INCUMBENT, or minister, resident on hjs benefice, is so called, because he does, or at least ought to, bend his whole study to discharge the cure of his church.

INCUM'BER, v. a. Fr. encombrer. To embarrass. See ENCUMBEK.

My cause is called, and that long looked-for day Is still encumbered with some new delay. Dry den.

INCUR', v. a.) Lat. incurro ; Span, in—

INCUR'SION, n. s. $ c«rrir;Ital. incorrere. To become liable to blame or punishment ; to press on the senses : incursion, a hostile attack ;

invasion without conquest ; inroad ; ravage. They, not obeying,

Incurred, what could they less ? the penalty ;

And, manifold in sin, deserved to fall. Milton.

INCURABILITY, n. «.-v Fr. incurabilite ;

INCU'KABLE, adj. i Latin in and euro.

INCU'RABLENESS, n. s. s Impossibility of

INCU'RABLY, adv. i cure : remediless ;

INCTJ'RIOVS, adj. J not to be removed

by medicine : these words are used principally with reference to bodily disease ; but also in a figurative sense, as descriptive of any state which is beyond remedy : incurious is negli • gent ; inattentive.

We'll instantly open a door to the manner of a proper and improper consumption, together with the

reason of the incurability of the former, and facile care of the other. Harvey.

No man withholds thee, nothing from thy hand Fear I incurable ; bring up thy van ; My heels are fettered, but my fist is free.

Milton. Samson Agonistes.

We cannot know it is or is not, being incurably ignorant. Loche.

A schirrus is not absolutely incurable, because it. has been known that fresh pastur» has cured it in cattle.

Arbuthnot.

The Creator did not bestow so much skill upon his creatures, to be looked upon with a careless incurious eye. Derham.

He seldom at the park appeared ; Yet, not incurious, was inclined To know the converse of mankind. Swift.

If idiots and lumuicks cannot be found, incurable* may be taken into

the hospital. Id.

But ah ! what woes remain ! life rolls apace And that incurable disease old age, In youthful bodies more severely felt, More sternly active, shakes their blasted piime.

Armstrong.

INCURVATION, n.s.ˆ lAt.incurvo. The

INCUR'VATE, v. a. \ act of bending ; the

INCUR'VITY, n.s. j state of being bent ;

flexion of the body in token of reverence : to crook : a change from a straight line.

One part moving while the other rests, one would think, should cause an incurvation iu the Hue.

Glanville.

The incurvity of a dolphin must be taken not really, but in appearance, when they leap above water, and suddenly shoot down again : strait bodies, in a sudden motion, protruded obliquely downward, appear crooked. Browne.

He made use of acts of worship which God hath appropriated ; as incurvation, and sacrifice.

Stilling/fleet.

Sir Isaac Newton has shewn, by several experiments of rays passing by the edges of bodies, that they are innovated by the action of these bodies.

Cheyne.

IN'DAGATE, v. a. ˆ Lat. indago. To search,

INDAGA'TION, n. a. C or beat out : indagation,

INDAGA'TOR, n. s. Jan enquiry or examination: indagator, an examiner.

Part hath been discovered by himself, and some by human indagation. 'Browne's Vulgar Errowr*.

The number of the elements of bodies requires to be searched into by such skilful indagaton of nature.

Boyle.

Paracelsus directs us, in the indagation of colours, to have an eye principally upon salts. Boyle.

INDART, v. a. In and dart. To dart in ; to strike in.

I'll look to like, if looking liking move ; But no more deep will I indart mine eye, Than your consent gives strength to make it fly.

ShakJipeare.

INDEBT, v. a. 1 Lat. in and debeo. To

INDEBT'ED, adj. $ put into debt ; to oblige or put under obligation : indebted, obliged by something received ; bound to restitution ; having incurred a debt. It has to before the person to whom the debt is due, and for before the thing received.

Forgive us our sins, for we forgive every one that is indebted to us Luke xi. 4.

If the course of politick affairs cannot in any good course go forward without fit instruments, and that

which fitteth them be their virtues, let polity acknowledge itself indebted to religion, godliness being the cliiefest top and well-spring of all true virtues, even as God is of all things. Hooker.

He for himself Indebted and undone, has nought to bring.

Milton.

Let us represent to our souls the love and beneficence for which we daily stand indebted to God.

Rogers.

Few consider how much we are indebted to government, because few can represent how wretched mankind would be without it. Atterbury.

This blest alliance may Th’ indebted nation bounteously repay.

Granville.

We are wholly indebted for them to our ancestors.

Swift.

Thy forehead wrapt in clouds, A leafless branch thy sceptre, and thy throne, A sliding car indebted to no wheels. Cowper. For the most valuable comforts of life we are indebted to the social and benevolent attentions of one another. Beattie.

Friends fail — slaves fly — and all betray — ana more Than all the most indebted — but a heart That loves without self-love. “Pis here — now prove it.

Byron.

INDE’CENCY, n. s. j Fr. indecence; Lat.

INDE’CENT, adj. > in and decet. Any

INDE’CENTLY, adv. j thing unbecoming ;

any thing contrary to good manners ; something

wrong, but scarcely criminal : unfit to be seen 01

heard.

If on they rushed, repulse

Repeated, and indecent overthrow

Doubled, would render them yet more despised,

And to their foes a laughter.

Milton's Paradise Lost.

Characters, where obscene words were proper in their mouths, but very indecent to be heard.

Dry den.

He will in vain endeavour to reform indecency in his pupil, which he allows in himself. Locke.

Till these men can prove these things, ordered by our church, to be either intrinsically unlawful or indecent, the use of them, as established amongst us, is necessary. South.

And it is abominable, because it abounds in filthy and indecent images. Beattie.

INDECID'UOUS, adj. Lat. in, de, cado In and deciduous. Not falling ; not shed. Used of trees that do not shed their leaves in winter.

We find the statue of the sun framed with rays about the head, which were the indeciditous and unshaken locks of Apollo. Browne.

INDECLINABLE, adj. Fr. indeclinable; Lat. indedinabilis. Not varied by terminations.

Pondo is an indeclinable word, and when it is joined to numbers it signifies libra. Arbuthnot.

INDEC'OROUS, adj. } Lat. in, decus, inde-INDECO'RUM, n. s. J COTWJ. Conduct unsuitable, unsemly, and improper : unbecoming. What can be more indecorous than for a creature to violate the commands, and trample upon the authority, of that awful Excellence to whom he owes his life ?

Norris.

The soft address, the castigated grace, Are indecorums in the modern maid. Young.

INDEED', adv. Belg. inde dtedt ; Teut. inder that, *i.e.* that is truly. See DEED. In reality ; in truth : used emphatically to express

superiority, as above the common late : this is to be granted ; a particle of connexion. It is used sometimes as a slight assertion or

recapitulation in a sense hardly perceptible or explicable, and, though some degree of obscure power is perceived, might, even where it is properly enough inserted, beomitted without being missed. To denote concession in comparisons.

Some, who have not deserved judgment of death, have been for their goods' sake caught up and carried streight to the bough : a thing indeed very pitiful and horrible. Spenser.

Though such assemblies he had indeed for Religion'* sake, hurtful nevertheless they may prove as well in regard of their fitness to serve the turn of hereticks, and such as privily will venture to instil their poison into new minds. Hooker.

Then didst thou utter, I am yours for ever, Tis grace indeed. Shakspeare.

Against these forces were prepared to the number of near one hundred ships j not so great of bulk indeed, but of a more nimble motion. Bacon.

I said I thought it was confederacy between the juggler and the two servants ; tho' indeed I had no reason so to think. Id.

Borrows in mean affairs his subjects' pains ; But things of weight and consequence indeed, Himself doth in his chamber them debate.

Duties. Yet loving indeed, and therefore constant.

Sidney.

This limitation, indeed, of our author will save those the labour who would look for Adam's heir among the race of brutes ; but will very little contribute to the discovery of one next heir amongst men. Locke.

Such sons of Abraham, how highly soever they may have the luck to be thought of, are far from being Israelites indeed. South.

There is indeed no great pleasure in visiting these magazines of war, after one has seen two or three of them. Addison.

There is nothing in the world more generally dreaded, and yet less to be feared, than death : in-deed, for those unhappy men whose hopes terminate in this life, no wonder if the prospect of another seems terrible and amazing. Wake.

When young indeed

In full content, we sometimes nobly rest, Unanxious for ourselves.' Young.

It is indeed true that habits of long acquaintance will sometimes overcome dislike. Beattie

Indeed a certain fair and fairy one Of the best class, and better than her class.

Byron. Don Juan.

I dread it, indeed, but upon far other grounds ; 1 dread it from a consciousness of the tremendous power Great Britain possesses of pushing hostilities in which she maj be engaged to consequences which I shudder to contemplate. Canning.

INDEFATIGABLE, adj.) Spanish and INF-EFAT'IGABLY, adv. y French, indefatigable; Lat. in and defatigo. Unwearied; not exhausted with labor; diligent: without intermission, and without tiring.

Who shall spread his airy flight, Unborne with indefatigable wings, Over the vast abrupt. Milton.

A mar. indefatigably zealous in the service of the church and state, and whose writings have highly deserved of both. Dryden.

The ambitious person must rise early and sit up late, and pursue his design with a constant indefatigable attendance : he must be infinitely patient and servile. South.

INDEFECTIBIL'ITY, n. s.) Lat. in and

INDEFEC’TIBLE, adj. J defectus. The

4uality of suffering no decay, decline, or defect : unfailing; constant.

INDEFEI’SIBLE, adj. Tr.indefaisable. Not to be cut off; not to be vacated ; irrevocable.

So indefeifible is our estate in those joys, that, if we do not sell it ic reversion, we shall, when once invested, be beyond the possibility of ill husbandry.

Decay of Piety.

[NDEFEN’SIBLE, adj. Lat. in and defen-sus. That cannot be defended or maintained.

As they extend the rule of consulting Scripture to all the actions of common life, even so far as to the taking up of a straw, so it is altogether false or inde-fensible. Sanderson.

INDEFINITE, adj.ˆ Fr. indefini ; Italian

INDEFINITELY, adv. ? indefinite ; Lat. indefi—

INDEFIN’ITUDE, n. s. J nitus. Not determined or limited ; undecided ; large beyond human comprehension, although not absolutely without limits : quantity not limited or denned.

We observe that custom, whereunto St. Paul al-ludeth, and whereof the fathers of the church in their writings make often mention, to shew indefinitely what was done ; but not universally to bind for ever all prayers unto one only fashion of utterance. Hooker.

Though a position should be wholly rejected, yet that negative is more pregnant of direction than an indefinite ; as ashes are more generative than dust.

Bacon’s Essays.

Her advancement was left indefinite ; but thus, that it should be as great as ever any former queen of England had. Bacon.

They arise to a strange and prodigious multitude, if not indefinitude , by their various positions, combinations, and conjunctions. Hale.

We conceive no more than the letter beareth j that is, four times, or indefinitely more than thrice.

Browne.

Tragedy and picture are more narrowly circumscribed by place and time than the epick poem ; and the time of this last is left indefinite. Dryden.

If the word be indefinitely extended, that is, so far as no human intellect can fancy any bounds of it, then what we see must be the least part. Ray.

Though it is not infinite, it may be indefinite ; though it is not boundless in itself, it may be so to human comprehension. Spectator.

A duty to which all are indefinitely obliged, upon some occasions, by the expressed command of God.

Smalridge.

INDELIB'ERATE, adj. > Fr. indelibere.

INDELIB'ERATED. 5 In and deliberate.

Unpremeditated ; done without consideration.

Actions proceeding from blandishments, or sweet persuasions, if they be indeliberated, as in children, who want the use of reason, are not presently free actions. Bramhall.

The love of God better can consist with the indeliberate commissions of many sins, than with an allowed persistance in any one. Government of the Tongue.

INDELIBLE, adj. Fr. indelebile ; Lat. in-delebilis. Not to be blotted out or effaced ; not to be annulled.

Wilful perpetration of unworthy actions brands with indelible characters the name and memory.

King Charles.

They are indued with indelible power from above to feed, to govern this household, and to consecrate pastors and stewards of it to the world's end. Sprat.

Thy heedless sleeve will drink the coloured oil, And spot indelible thy

pocket soil. Gay's Trivia.

INDELICACY, n. s. > Latin in and delicia ;

INDEL'ICATE, adj. 5 hence delicatus. Wart of decency; coarseness of appearance or man-ner : inelegant. See DELICACY.

Your papers would be chargeable with worse than indelicacy, they would be immoral, did you treat detestable uncleanness as you rally an impertinent self-love. Additon.

INDEMNIFICATION, n.s.ˆ Fr. indem-INDEM'NIFY, v. a. ˆnite; Ital. in—

INDEM'NITY, n. s. j demnita ; in,

and Lat. damno. Security against loss; reim-bursement of penalty or loss, and security from punishment : to preserve from injury.

I will use all means, both of amnesty and indemnity, which may most fully remove all fears, and bury all jealousies in forgetfulness. King Charles.

Insolent signifies rude and haughty, indemnify to keep safe. Watts.

Just laws, to be sure, and admirable equity, if a stranger is to collect a mob which is to set half Manchester on fire ; and the burnt half is to come upon the other half for indemnity, while the stranger goes off unquestioned, by the stage ! Canning.

INDENT, v. a., v. n,&n.s.\ Fr. dente ,-

INDENTATION, n. s. > Ital. indenture ;

INDENTURE, n. s. j Latin ire and

dens; a tooth. To mark any thing with inequalities like a row of teeth ; to cut in and out ; to make a wave or undulate. Indent, from the method of cutting counterparts of a contract together, that, laid on each other, they may fit, and any want of conformity may discover a fraud ; to contract ; to bargain ; to make a compact. Indent, inequality ; incisure. Indentation, wav-ing in any figure. Indenture, a covenant, so named because the counterparts are indented or cut one by the other ; a contract of which there is a counterpart.

In Hall's chronicle much good matter is quite marred with indenture English.

Ascham's Schoolmaster.

Trent shall not wind with such a deep indent. To rob me of so rich a bottom here. Shakspeare

Shall we buy treason, and indent with fears,

When thev have lost and forfeited themselves ?

Id.

About his neck

A green and gilded snake had wreathed itself, Who with her head, nimble in threats, approached The opening of his mouth ; but suddenly, Seeing Orlando, unlinked itself, And with indented glides did slip away Into a bush. Id. As You Like It.

He descends into the solemnity of a pact and cove, nant, and has indented with us. Decay of Piety.

Trent, who, like some earth-born giant, spreads

His thirty arms along the indented meads. Milton.

The serpent then, not with indented wave,

Prone on the ground, as since ; but on his rear

Circular base of rising folds, that towered

Fold above fold, a surging maze '. Id.

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INDEPENDENCY.

The margins do not terminate in a straight line, but are indented, each indentation being continued in a small ridge, to the indentation that answers it on the opposite margin. Woodward.

The margins on each side do not terminate in a straight line, but are

indented. Id.

The critick to his grief will find How firmly these indentures bind. Swift.

INDEPEN’DENCE, n. s.-\ French indepen—

INDEPEN’DENCY, n. s. f dance ; in, and

INDEPENDENT, adj. & n. s. t Latin, dependeo.

INDEPENDENTLY, adv. J Freedom ; exemption from control: not depending; not supported by any other ; not relying on another ; not controlled. It is used with on, of, or from, the object; of which on seems most proper, since we say to depend on, and consequently dependent on; not relating to any thing else as its superior. Independent, one who holds that every congregation is a complete church, subject, in religious matters, to no superior authority. Independently, without reference to other things or subjects.

We shall, in our sermons, take occasion to justify such passages in our liturgy as have been unjustly quarrelled at by presbyterians, independents, or other puritan sectaries. Sanderson.

Dispose lights and shadows, without finishing every thing independently the one of the other. Dryden.

Since all princes of independent governments are in a state of nature, the world never was without men in that state. Locke.

Creation must needs infer providence, and God’s making the world irrefragably proves that he governs it too ; or that a being of dependent nature remains nevertheless independent upon him in that respect.

South.

Dreams may give us some idea of the great excellency of a human soul, and some intimations of its independency on matter. Add’uon.

A very famous independent minister was head of a college in those times. Id. Spectator.

The town of St. Gaul is a protestant republick, independent of the abbot, and under the protection of the cantons. Add’uon.

The consideration of our understanding, which is an incorporeal

substance independent from matter ; and the contemplation of our own bodies, which have all the stamps and characters of excellent contrivance ; these alone do very easily guide us to the wise Author of all things. Bentley.

Let fortune do her worst, whatever she makes us lose, as long as she never makes us lose our honesty and our independence. Pope.

Give me, I cried, enough for me, My bread and independency : So bought an annual rent or two, And lived just as you see I do. Id.

Hail ! Independence, hail ! Heaven's next best gift To that of life and an immortal soul !

Thomson's Liberty. I praise you much, ye meek and patient pair,

For ye are worthy ; chusing rather far

A dry but independent crust, hard earned,

And eaten with a sigh, than to endure

The rugged frowns and insolent rebuffs

Of knaves in office. Cowper.

He was as independent — aye, much more

Than those who were not paid for independence.

Byron. Don Juan.

The house of Braganza was placed at the head of an independent monarchy at the instance and by the friendship of Great Britain, Canning.

INDEPENDENCY. Under the term BISHOP we have stated at considerable length the chief arguments in favor of the episcopal form of church government. It will be fair to add a more detailed statement of the principal arguments of the Independents in favor of their plan. In support of it, they observe, that the word ucuXnoia, translated church, is always used in Scripture to signify either a single congregation, or the place where a single congregation meets. Thus that unlawful assembly at Ephesus, brought together against Paul by the craftsmen, is called iKK\nout, a church. Acts xix. 32, 39, 41. The

word, however, is generally applied to a more sacred use ; but still it signifies either the body assembling, or the place in which it assembles. The whole body of the disciples at Corinth is called the church, and spoken of as coming together into one place. 1 Cor. xiv. 23. The place into which they came together has been likewise thought to be called a church. See 1 Cor. xi. 18,20. Wherever there were more congregations than one there were likewise more churches than one. See 1 Cor. xi. 18. The whole nation of Israel is indeed called a church, but it was no more than a single congregation ; for it had but one place of public worship, *viz.* first the tabernacle, and afterwards the temple. The Catholic church of Christ, his holy nation and kingdom, is also a single congregation, hav-ing one place of worship, *viz.* heaven, where all the members assemble by faith and hold communion; and in which, when they shall all be fully gathered together, they will in fact be one glorious assembly. We find it called 'the general assembly and church of the first-born, whose names are written in heaven.' The Independent can find no other description of a church in the New Testament; not a trace of a diocese or presbytery consisting of several congregations all subject to one jurisdiction. The number of disciples in Jerusalem was certainly great before they were dispersed by the persecution; yet they are never mentioned as forming distinct assemblies, but as one assembly meeting with its elders in one place ; sometimes in the temple, sometimes in Solomon's porch, and sometimes in an upper room. After the dispersion the disciples who fled from Jerusalem, as they could no longer assemble in one place, are never called a church by themselves, or one church, but the churches of Judea, Samaria, and Galilee (Acts ix. 31, Gal. i. 22). Whence the Independents conclude that in Jerusalem the words church and congregation were of the same import ; and if such was the case there, where the gospel was first preached, we may reasonably expect to find it so in other places. Thus, when Paul on his journey calls the elders of the church of Ephesus to Miletus, he speaks to them as the joint overseers of a single congregation. See Acts xx. 28. Had the church at Ephesus consisted of different congregations, united under such a jurisdiction as that of a modern presbytery, it would have been natural to say ' Take heed to yourselves, and to the flocks over which the Holy Ghost hath made you overseers :' but this is a way of speaking of which the Independents find not an instance in the whole New Testament.

INDEPENDENCY.

The sacred writers, when speaking of all the Christians in a nation or province, never call them the church of such a nation or province, but the churches of Galatia (Gal. i. 2), of Macedonia (2 Cor. viii. 1), and of Asia (1 Cor. xvi. 10). On the other hand, when speaking of the disciples in a city or town, who might ordinarily assemble in one place, they uniformly call them a church ; saying the church of Antioch, the church at Corinth, the church of Ephesus, and the like.

In each of these churches or congregations there were elders or presbyters, and deacons ; and in every church there seem to have been more than one elder, in some many, who ‘ labored in word and doctrine.’ Thus we read (Acts xiv. 23) of Paul and Barnabas ordaining elders in every church ; and (Acts xx. 17) of a company of emers in the church of Ephesus, who were exhorted to ‘ feed the flock, and to take heed to themselves, and to all the flock over which the Holy Ghost had made them overseers :’ but of such elders as are to be round in modern Presbyterian churches, who neither teach, nor are apt to teach, the Independents find no vestige in the Scriptures, nor in the earliest writers of the Christian church. The rule or government of this presbytery or eldership in a church is not their own, but Christ’s. They are not lords over God’s heritage, nor can they pretend to more power over the disciples than the apostles had. But when the administration of the apostles in the church of Jerusalem, and other churches where they acted as elders, is enquired into by an Independent, it does not appear to him that they did any thing of common concern to the church, without the consent of the multitude : nay, it seems they thought it necessary to judge and determine in discipline in presence of the whole church (Acts vi 1, 6; xv. 22; 1 Cor. v.

3, 4, 5).

Excommunication and absolution were in the power of the church at Corinth, and not of the elders, as distinguished from the congregation (1 Cor. v., 2 Cor. ii.) The apostle indeed speaks of his delivering some unto Satan (1 Tim. i. 20), but it is by no means clear that he did it by himself, and not after the manner pointed at, 1 Cor. v. 4, 5 ; even as it does not appear, from his saying, in one epistle, that the gift was given unto Timothy by the putting on of his hands, that this was not done in the presbytery of a church, as in the other epistle we find it actually

was. The trying and judging of false apostles was a matter of the first importance : but it was done by elders with the flock at Ephesus (Rev. ii. 2; Acts xx. 28 — 30); which flock did in the days of Ignatius all partake of the Lord's supper, and pray together in one place. Even the power of binding and loosing, or the power of the keys, as it has been called, was by our Saviour conferred not upon a particular order of disciples, but upon the church. See Matt, xviii. 15, 16, 17, 18. It is not said, if he shall neglect to hear the one or two, tell it to the elders of the church ; far less can it be meant that the offended person should tell the cause of his offence to all the disciples in a presbytery or diocese consisting cf many congregations : but he is required VOL. XI.

to tell it to that particular church or congregation to which they both belong ; and the sentence of that assembly, pronounced by its elders, is in a very solemn manner declared to be final, from which there lies no appeal to any jurisdiction on earth.

With respect to the constituting of elders in any church or congregation, the Independent reasons as follows. The officers of Christ's appointment are either ordinary and permanent in the church, or they were extraordinary and peculiar to the planting of Christianity. The extraordinary officers were employed in laying the plan of the gospel churches, and in publishing the New Testament revelation. Such were the apostles, the chosen witnesses of our Saviour's resurrection ; such were the prophets inspired by the Holy Ghost for explaining infallibly the Old Testament by the things written in the New ; and such were the evangelists, the apostle's ministers. These can be succeeded by none in that which was peculiar to them, because their work was completed by themselves. But they are succeeded in all that was not peculiar to them by elders and deacons, the only two ordinary and permanent orders of ministers in the church. We have already seen that it belongs to the office of the elder to feed the flock of Christ; and the only question to be settled is, how men are ordinarily called to that office ; for about the office of the deacon there is little or no dispute. No man now can pretend to be so called of God to the ministry of the word as the apostles and other inspired elders were, whom he chose to be the publishers of his revealed truth, and to whose mission he bore witness in an extraordinary manner.

But what the apostles were to those who had the divine oracles from their mouths, that their writings are to us : and therefore, as no man can lawfully pretend a call from God to make any addition to those

writings, so neither can any man pretend to be lawfully called to the ministry of the word already written, but in the manner which that word directs. Now there is nothing of which the New Testament speaks more clearly than of the characters of those who should exercise the office of elders in the church, and of the actual exercise of that office. The former are graphically drawn in the epistles to Timothy and Titus ; and the latter is minutely described in Paul's discourse to the Ephesian elders, in Peter's exhortation to elders, and our Lord's commission to those ministers with whom he promised to be always present even unto the end of the world. It is not competent for any man or body of men to add to, or diminish from, the description of a gospel minister given in these places, so as to insist upon the necessity of any qualification which is not there mentioned, or to dispense with any qualification as needless which is there required. Neither has Jesus Christ, the only legislator to the church, given to any ministers or people any power or risjht whatsoever to call, send, elect, or ordain, to that office, any person who is not qualified according to the description given in his law. Let a man have hands laid upon him by such as could prove an uninterrupted descent by imposition of hands

from the apostles; let him be set apart to that office by a Company of ministers themselves the most conformable to the scripture character, and let him be chosen by the most holy people on earth ; yet, if he answer not the New Testament description of a minister, he is not called of God to that office, and is no minister of Christ, but is indeed running unsent. No form of ordination can pretend to such a clear foundation in the New Testament as the description of the persons who should be elders of the church ; and the lay-ing on of hands, whether by bishops or presbyters, is of no more importance in the mission of a minister of Christ, than the waving of one's hand in the air, or the putting of it into his bosom ; for now, when the power of miracles has ceased, it is obvious that such a rite, by whomsoever performed, can convey no powers, whether ordinary or extraordinary. Indeed it appears to have been sometimes used even in the apostolic age without any such intention. See Acts xiii. 3. In a word, whoever in his life and conversation is conformable to the character which the

inspired writers give of a bishop or elder, and is likewise qualified by his ‘ mightiness in the scripture/ to discharge the duties of that office, is fully authorised to administer the sacraments of baptism and the Lord’s supper, to teach, exhort, and re-buke, with all long suffering and doctrine, and has all the call and mission which the Lord now gives to any man ; whilst he who wants the qualifications mentioned has not God’s call, whatever he may have ; nor any authority to preach the gospel of Christ, or to dispense the ordinances of his religion. From this view of the Independent principles, which is faithfully taken from their own writers, it appears, that, according to them, even the electi on of a congregation confers upon the man whom they may choose for their pastor no new powers, but only a new relation between him and a particular flock, giving him an exclusive right, either by himself or in conjunction with other pastors constituted in the same manner, to exercise among them that authority which he derives immediately from Christ, and which, in a greater or less degree, is possessed by every sincere Christian.

There are two sects of Independents in Scotland : the first of whom have no peculiar denomination besides the general one of Independents or Congregationalists. Their religious sentiments are strictly Calvinistic, and they agree in general *ith those of the English Independents. The other sect is generally denominated in Scotland Glassites, from their founder Mr. John Glas; and sometimes in England Sandemanians, from Mr. Robert Sandeman, who spread their doctrines in England and America. Some subdivisions have lately taken place among them : but both sects agree in the general principles above stated with regard to church government.

The INDEPENDENTS are a sect of protestants, so called from their maintaining that each congregation of Christians, which meets ordinarily in one place for public worship, is a complete church, has full power to regulate every thing relating to religious government within itself, and is in no respect dependent upon, or accountable to, other churches. This terra is used specifically

for a respectable and increasing body of Protestant dissenters in England : a large portion of the Protestant churches of North America are also Independent* ; and the term will describe gene-rically the sentiments upon church government of the Baptists in both these countries, and various other dissenting bodies in England.

The Independents, considered as a sect, arose in England during

Elizabeth's reign. The hierarchy established by her, the vestments worn by the clergy, the book of common prayer, and, above all, the sign of the cross used in administering baptism, were very offensive to many of her subjects, who, during the persecutions of queen Mary I., had taken refuge among the protestants of Germany and Geneva. They thought that the church of England resembled in these particulars the antichristian church of Rome ; and they called for a more thorough reformation and a purer worship. From this circumstance they were first stigmatised by their adversaries with the general name of Puritans. Elizabeth was not disposed to comply with their demands ; and the Puritans were not united among themselves. Unanimous in nothing, but in their anti-pathy to the forms of doctrine and discipline established by law, they were soon divided into a variety of sects.

Of these the most famous was that which was formed about 1581 by Robert Brown, a man of insinuating manners, but neither steady nor consistent in his principles and conduct. See BROWN. He did not differ much, in point or doctrine, either from the church of England, or from the rest of the Puritans; but he had formed new and singular notions concerning the nature of a church, and the rules of ecclesiastical government. He maintained that such a number of persons as could be contained in an ordinary place of worship ought to be considered as a church, and enjoy all the rights and privileges of an ecclesiastical community. These small societies he pronounced independent, jure divino, and entirely exempt from the jurisdiction of the bishops, in whose hands the court had placed the reins of spiritual government; as well as from that of presbyteries and synods, which other Puritans regarded as the supreme visible sources of ecclesiastical authority. He also maintained that the power of governing each congregation resided in the people; and that each member had an equal share in this government. Hence all points both of doctrine and discipline were submitted to the discussion of the whole congregation ; and whatever was supported by a majority of voices passed into a law. The congregation also elected certain brethren to the office of pastors, to perform the duties of public instruction and divine worship ; reserving however to themselves the power of dismissing these ministers, and reducing them to the condition of private members, whenever they should think such a step conducive to the spiritual advantage of the community. The right of the pastors to preach was not exclusive, or peculiar to them alone. To any member who thought proper to exhort or instruct the brethren, was accorded the liberty of prophesying or preaching. The zeal with which Brown and his asso

dates propagated these opinions was doubtless intemperate. He affirmed that all communion was to be broken off with those religious societies that were founded upon a different plan from his ; and treated the church of England as a spurious church, whose ministers were unlawfully ordained, whose discipline was popish and antichristian, and whose sacraments and institutions were destitute of all efficacy. The sect, unable to endure the severe treatment which followed the avowal of these sentiments, retired into the Netherlands, and founded churches at Middlebourg, Amsterdam, and Leyden; but their founder returned to England ; and, having renounced his principles of separation, took or-ders in the established church, and obtained a benefice.

The Puritan exiles, whom he thus abandoned, soon split into parties, and their affairs declined. This engaged the wiser part of them to mitigate the severity of their founder's plan, and to soften the rigrr of his uncharitable decisions. The person who had the chief merit of bringing about this reformation was John Robinson, one of their pastors, a man who had much piety, and no inconsiderable portion of learning. This well-meaning reformer, perceiving the defects that reigned in the discipline of Brown, and in the spirit and temper of his followers, employed his zeal and diligence in correcting them, and in new modelling the society, so as to render it less odious to its adversaries, and less liable to the just censure of those true Christians who look upon charity as the chief end of the commandments. Hitherto the sect had been called Brownists. But Robinson having, in his Apology, affirmed, Cartum quemlibet particularem esse totam, integram, et perfectam ecclesiam, ex suis partibus constantem, immediate et Independenter quoad alias ecclesias sub ipso Christo, the sect was henceforth called Independents, of which the apologist was considered as the founder. The Independents now exhibited candor and charity enough to acknowledge that true religion and solid piety might flourish in communities under the jurisdiction of bishops, or the government of synods and presbyteries. They were also much more attentive than the Brownists, in keeping up a regular ministry in their communities : for, while the latter allowed promiscuously all ranks and orders of men to teach in public, the Independents had, and still

have, a certain number of ministers, chosen respectively by the congregations where they are fixed ; nor is any person among them permitted to speak in public before he has submitted to a proper examination of his capacity and talents, and been approved of by the heads of the congregation. This society has produced divines as eminent for learning, piety, and virtue, as any church in Christendom.

From 1642 the Independents are very frequently mentioned in our annals. The English Independents assumed this title publicly in a piece which they published at London in 1644, entitled Apologetical Narration of the Independents. But afterwards, to avoid the odium of sedition and anarchy charged on the sect, numbers of them renounced this title, and called

themselves Congregational Brethren, and their religious assemblies congregational churches. The first Independent or congregational church in England was set up in 1616 by Mr. Jacob, who had adopted the religious sentiments of Robinson. The charge alleged against them by Rapin (in his History of England, vol. II. p. 514, folio edition), that they could not so much as endure ordinary ministers in the church, &c., is groundless. He was led into this mistake by confounding the Independents and Brownists. Other charges equally unjustifiable have been urged against the Independents by this historian, and others. Rapiu says, that they abhorred monarchy, and approved of a republican government. This might have been true with regard to many persons among them, in common with other sects ; but it does not appear, from any 01 their public writings, that republican principles formed their distinguishing characteristic. On the contrary, in a public memorial drawn up by them in 1647, they declare, that they do not disapprove of any form of civil government, but '.do freely acknowledge that a kingly government, bounded by just and wholesome laws, is both allowed by God, and also a good accommodation unto men.' The Independents, however, have been generally ranked among the regicides, and charged with the death of Charles I. Whether this fact be admitted or denied, no conclusion can be fairly drawn from the greater prevalence of republican principles, or from violent proceedings at that period, that can affect the distinguishing tenets and conduct of the Independents in our times. It is certain that the present Independents are steady friends to a limited monarchy. Rapin is further mistaken when he represents the religious principles of the English Independents as contrary to those of all the rest of the world. It appears from two confessions of faith, one composed by Robinson on behalf of the English Independents in

Holland, and published at Leyden in 1619, entitled Apologia pro Exulibus Anglis, qui Brownistze vulgo ap-pellantur ; and another drawn up in London in 1658, by the principal members of this community in England, entitled A Declaration of the Faith and Order owned and practised by the Congregational Churches in England, agreed upon and consented unto by their Elders and Messengers, in their Meeting at the Savoy, October 12th, 1658, as well as from other writings of the Independents, that they differed from the rest of the reformed in no single point of any consequence, except that of ecclesiastical government; and their religious doctrines were almost entirely the same with those adopted by the church of Geneva.

During the administration of Cromwell the Independents acquired considerable reputation and influence ; and he made use of them as a check to the ambition of the Presbyterians, who aimed at a very high degree of ecclesiastical power, and who had succeeded, soon after the elevation of Cromwell, in obtaining a parliamentary establishment of their own church government. But after the Restoration their cause declined; and in 1691 they entered into an association with the Presbyterians residing in and

<rbout London, comprised in nine articles, that tended to the maintenance of their respective institutions. These may be found in the second volume of Whiston's Memoirs, and the substance of them in Mosheim. At this time the Independents and Presbyterians, called from this association the United Brethren, were agreed with regard to doctrines, being generally Calvinists, and differed only with respect to ecclesiastical discipline. But at present, though the English Independents and Presbyterians form two distinct parties of Protestant Dissenters, they are distinguished by very trifling differences with regard to church government. The Independents are generally more attached to the tenets distinguished by the term Calvinism than the Presbyterians.

Independency was first carried to the American colonies in 1620, and, by successive puritan emigrants from England, in 1629 and 1633. One Morel, in the sixteenth century, endeavoured to introduce it into France ; but it was condemned at the synod of Rochelle, where Beza presided ; and again at the synod of Rochelle in 1644. On this subject,

see Mosheim's Ecclesiastical History, by Maclean, vol. IV.; Neal's History of the Puritans, vols. II. III. and IV. ; and Burnet's History of his own Times, vol. I., &c. The Independents of the present day, it may be added, have sustained a noble part in the advocacy of Bible, Missionary, and Education Societies, of every description.

INDERABIA, an island of small extent near the mouth of the Persian Gulf. It is perhaps three miles in length, low, level, and narrow, and separated from the main land by a strait, three miles in breadth, and which may be navigated without much danger : but ships running for shelter under the island must not come within a mile of its south-east end, until a tree, which stands by itself, bears W.N.W. Lat. 26° 40' N.

INDERGEREE, a river of Sumatra, on the north-east coast, running into the sea, in long. 103° 20' E., lat. 0°33'S.

INDERGUR, or INDARGHUR, is the name of various hill fortresses in Hindostan, so called after one of the Hindoo deities.

INDERMAY POII;T, a cape on the north coast of Java, in long. 108° 18' E., lat. 6° 12' S.

INDESERT,'n.s. In and desert. Want of merit. This is a useful word, but not much received.

Those who were once looked on as his equals, are apt to think the fame of his merit a reflection on their own indeterts. Addison.

INDES'INENTLY, adv. Fr. indesinenter ; Lat. in and desino. Without cessation. They continue a month indesinently.

Ray on the Creation.

INDESTRUCTIBLE, adj. In and destructible. Lat. in and destruo. Not to be destroyed. Glass is so compact and iirm a body, that it is inde-itructible by art or nature. Boyle.

INDETER'MINABLE, adj.-\ Fr. indeter-INDETER'MINATE, adj. I mini; Lat. in,

INDETER'MINATELY, adv. >de, termino. INDETER'MIXED, adj. i Not to be fixed,

ISDETERMIXA'HOX, n. s. J defined, or settled ; indeterminate, unfixed; indefinite: inde-

ternjinately, not in a settled manner : indetermination, want of fixed or stated direction.

By contingents I understand all things which may be done, and may not be done, may happen, or may not happen, by reason of the indetermination or acc'- dental concurrence of the causes. Bramhall.

There is not only obscurity in the end, but beginning of the world ; that, as its period is inscrutable, so is its nativity indeterminable. Browne.

His perspicacity discerned the loadstone to respect the North, when ours beheld it indeterminately. Id.

We should not amuse ourselves with floating words of indetermined signification, which we can use in several senses to serve a turn. Locke.

The rays of the same color were by turns transmitted at one thickness, and reflected at another thickness, for an indeterminate number of successions.

Newton's Optichs.

The depth of the hold is indeterminately expressed in the description. Arbuthnot on Coins.

INDETERMINATE PROBLEM, or unlimited problem, in algebra, that which admits of a great number of different answers, or of innumerable different solutions. In such problems the num-ber of unknown quantities concerned is greater than the number of conditions or equations by which they are to be found ; from which it happens, that generally some other conditions or quantities are assumed to supply the defect, which, being taken at pleasure, give the same number of answers as varieties in those assump-tions. Diophantus was the first writer on Indeterminate Problems, in his Algebra, first published in 1575 by Xylander. His book being wholly on this subject, such questions have been called Diophantine Problems. Des Cartes, Fermat, Frenicle, Wallis, Euler, Grange, &c., have cultivated this branch of algebra : and Mr. J. Leslie, in the second volume of the Edinburgh Philosophical Transactions, has given an ingenious paper on the solution of Indeterminate Problems, by a

new and general principle. INDEVOUT, adj. } Lat. indevotus (in, deo> INDEVO'TION, n. s. S votus); Fr. indevot. Not religious : a want of devotion ; irreligion.

He prays much ; yet curses more ; whilst he is meek, but indevout. Decay of Piety.

Let us make the church the scene of our penitence, as of our faults ; deprecrate our former indevotion, and, by an exemplary reverence, redress the scandal of prophaneness. Id.

IN'DEX, n. s. Lat. indico. The discoverer; the hand that points to any thing, as the hour of a dial ; the table of contents to a book. To such indexes, although small

To their subsequent volumes, there is seen

The baby figure of the giant mass

Of things to come at large. Shakvpeare.

Her silver head adorning

(Her dotage index) much she bragged, yet feigned , For by false tallies many years she gained.

Fletcher's Purple Island,

That which was once the index to point out all virtues, does now mark out that part of the world where least of them resides. Decay of Piety.

Tastes are the indexes of the different qualities of plants, as well as of all sorts of aliment. Arbuthnot.

They have no more inward self-consciousness of what they do or suffer, than the index of a watch, or the hour it points to. Bentley.

If a boo> has no index or good table of contents, 'tis very useful to make one as you are reading it ; and in your index to take notice only of parts new to you.

Wattt.

But I shall add them in a brief appendix, To come between mine epic and its index.

Vyro'.t. Don Juan.

INDEX, EXPURGATORY, a catalogue of prohibited books in the church of Rome. The first catalogues of this kind were made by the inquisitors ; and afterwards approved of by the council of Trent, with some retrenchments and additions. Thus, an index of heretical books being formed, it was confirmed by a bull of Clement VIII. in 1595, and printed with several introductory rules ; by the fourth of which the use of the Scriptures in the vulgar tongue is forbidden in these words : — ' Since it is plain by experience, that if the sacred writings are permitted every where, and without difference to be read in the vulgar tongue, men, through their rashness, will receive more harm than good ; let the bishop or inquisitor determine, with the ad-vice of the parish priest or confessor, to whom to permit the reading of the Bible, translated by Catholic authors in the vulgar tongue, according as they shall judge whether it be most likely that such reading of the scripture may do harm, or tend to the increase of faith and piety. Let them also have the same power as to all other writings. But if any, without such leave, shall presume to read or have them, without first showing the Bible to the ordinaries, he shall not receive the absolution of his sins. And as to all booksellers who shall sell the Bibles translated into the vulgar tongue, without such leave, or by any other method shall publish them, let them forfeit the price of the books, and let the money be given to pious uses by the bishop ; and let them be subject to other punishments; at the pleasure of the said bishop, according to the nature of the offence. As to regulars, they shall not read or buy them, without leave first obtained from their prelates.' By the tenth rule it is ordained, that no book shall be printed at Rome without the approbation of the pope's vicar or some person delegated by the pope ; nor in any other place, unless allowed by the bishop of the diocese, or some person deputed by him, or by the inquisitor of heretical pravity. In pope Clement's catalogue is a decree that all the books, even of Catholic authors, written since the year 1515, which was the year preceding that in which Lu-ther began to declaim against indulgences, should be corrected ; not only by retrenching what is not conformable to the doctrine of Rome, but also by adding what may be judged proper by the correctors.

The duke of Alva, after this, procured another to be punted at Antwerp in 1571, which was published by Francis Junius about the year 1586. There were two others published in 1584 and 1612, by the cardinals Quiroga and San-doval. and several others by the inquisitors

and masters of the sacred palace. The most consi-

derable of all the indices is that of Anthony, a Sotomayor, supreme president aud inquisiter-general in the kingdom of Spain, which was made for all the states subject to the king of Spain, and comprehends all the others. This was published, with the advice of the supreme senate of the general inquisition, in 1640, and reprinted at Geneva in 1667. To this there were many rules prefixed ; and to the Geneva edition was added the index of the decrees which were made by the master of the holy palace, by virtue of his office, or by the command of the holy congregation, or by the holy congregations for the indices and holy office, after the before-men- tioned index of the council of Trent. The rules of the former indices are explained and confirmed by these ; and the fifth rule, which enlarges the fourth of the index of Treat, prohibits not only all bibles in the vulgar tongue, comprehending all except those that are Hebrew, Greek, Latin, Chaldee, Syriac, Ethiopic, Persic, and Arabic ; but all parts of them, either printed or manuscript, with all summaries and abridgments in the vulgar language or tongue. — Limborch't Hi$- torif of the Inquisition, book ii., chap. 16.

The INDEX OF A BOOK is that part annexed to a book, referring to the particular matters therein contained. The index is intended to to point out every important particular in abook, in its alphabetical order, that the reader may at once, and without difficulty, find out any article he wishes to be informed of, that is discussed or mentioned in the work : and as these are hardly known even to the author, till the work is finished, the index always appears with most propriety subjoined to the work. Every book of any extent ought to have both contents and index. Most modern indexes to books are very carelessly compiled. About a century or two ago very complete indexes were made to various learned works by the editors of the classics in usum Delphini, as well as by Minellius, Farna-bius, Oudendorp, Ruddiman, and other literati. But now the compilation of an index, jeing thought too great a drudgery by authors, is often entrusted to persons very ill-qualified for the task ; in consequence of which modern indexes are seldom either complete or properly arranged. And if the work is extensive, the reader is perplexed with three or four different indexes, or an index divided into so many parts, while one complete general index, properly compiled and arranged, would answer the purpose much better.

INDEX OF 4 GLOBE is a little stile fitted on to the north pole, and turning round with it, pointing to certain divisions in the hour circle. It is sometimes also called gnomon. See GEOGRAPHY,

INDEXTERTTY, n. t. In and dexterity. Want of dexterity; want of readiness; want of handiness ; clumsiness ; aukwardness.

The indexterity of our consumption-curers demonstrates their dimness in beholding its causes. Harvey.

INDIA.

INDIA, an abridgment of Hindostan, is a name often given to that region of Asia lying to the south of Tartary, and between Persia and China, •with its dependent islands. It contains, besides Hindostan, the BIRMA.N EMPIRE, Si AM, COCHIN CHINA, To NQUIN, THIBET, JAPAN, and CEYLON ; but is now, in its geographical features, more usually, and far more properly, described under those respective heads, which see, also the maps.

But we may conveniently consider, under this head, the chief occurrences, of an historical kind, connected with this interesting portion of the earth.

I.India as known to the ancients. — By the name of India the ancients understood only the western peninsula, on this side the Ganges, and the peninsula beyond it, having little or no knowledge of the countries which lie farther eastward. But though originally they were acquainted only with the western parts of Hindostan, they gradually extended the name of India over the other countries they discovered to the east; so that probably they would have involved all the rest in the same general designation, had they been as well acquainted with them as are the moderns. By whom these countries were originally peopled is a question which, in all probability, will never be solved. Certain it is, that some works in these parts discover marks of astonishing skill and power in the inhabitants ; such as the images in the island of Elephanta, the rocking stones of immense weight, yet so nicely balanced that a man can move them with his hand, the

observatory at Benares, &c. These stupendous works are, by Bryant, attributed to the Cushites or Babylonians ; and it is possible that the subjects of Nimrod, the beginning of •whose kingdom was in Shinar, might extend themselves in this direction, and thus fill the fertile regions of the east with inhabitants, before they migrated to the less mild and rich countries to the westward. Thus would be formed for a time that great division betwixt the inhabitants of India and other countries ; so that the western nations knew not even of the existence of India, but by obscure report ; while the inhabitants of the latter, ignorant of their own origin, invented a thousand idle tales concerning the antiquity of their tribes, which some of the moderns have been credulous enough to believe. The first among the western nations who distinguished themselves by their application to navigation and commerce, and who were of consequence likely to discover these distant nations, were the Egyptians and Phoenicians. The former, however, soon lost their inclination for naval affairs, and held all sea-faring people in detestation ; though the extensive conquests of Sesostris, if we can believe them, must have in a great measure supplied this defect. He is said to have fitted out a fleet of 400 sail in the Arabian Gulf or Red Sea, which conquered all the countries lying along the Erythrean Sea to India ; while the army, led by himself, marched through Asia, and subdued all the countries to the Ganges; after which he

crossed that river, and advanced to the Eastern Ocean. Great disputes have been carried on with respect to this conqueror, and his expedition ; but Dr. Robertson, in his Disquisition concerning Ancient India, doubts whether any such expedition was ever made. Herodotus makes no mention of the conquest of India by Sesostris, though he relates his history at some length : and Diodorus Siculus, who first mentions it, informs us that he had it from the Egyptian priests ; who related * many things rather from a desire to promote the honor of their country than from attention to truth.' Strabo rejected the account altogether, and ranks the exploits of Sesostris in India with the fabulous ones of Bacchus and Hercules.

It is certain, however, that the Tyrians kept up a constant intercourse with some parts of India by navigating the Arabian Gulf, or the Red Sea. Of this navigation they became masters by taking from the Idumeans some maritime places on the coast; but, as the distance betwixt the nearest place of that sea and Tyre was considerable, the land carriage must have been very tedious and expensive ; for which rea-son it was necessary to become masters of a port on the east of the

Mediterranean, nearer to the Red Sea than Tyre. With this view they took possession of Rhinvelura ; and to that port all the goods from India were conveyed by a much shorter and less expensive route. This is the first authentic account of any intercourse betwixt India and the western part of the world : and to this we are without doubt in a great measure to ascribe the vast wealth and power for which the city of Tyre was anciently renowned ; for in other respects the whole territory of Phoenicia was but of little consequence. Notwithstanding the frequency of these voyages, however, the ancients have left little account of them. The most particular description we have of the wealth, power, and commerce of ancient Tyre, is in the prophecies of Ezekiel. If the. Tyrians kept any journals of their voyages, it is probable that they were lost when the city was destroyed by Alexander the Great.

Though the Israelites, in the reigns of David and Solomon, carried on an extensive and lucrative commerce, yet Dr. Robertson is of opinion that they did not trade to any part of India. There are only two places mentioned to which their ships sailed, *viz.* Ophir and Tarshish ; both of which are now supposed to have been situated on the east coast of Africa ; the ancient Tarshish was probably the present Mocha : and Ophir the kingdom of Sofala, so remarkable in former times for its mines, that it was called by oriental writers the golden Sofala. See OPHIR and TARSHISH. Thus India continued long unknown to, and undisturbed by the western nations. But, soon after the destruction of the Babylonian monarchy by the Persians, we find Darius Hystaspis undertaking an expedition against the Indians. Herodotus informs us, that he sent Scylax of Caryandra to explore

the river Indus ; who sailed from Caspatyrus, a town at its source, and near the territories of Pactya, eastward to the sea; thence, turning westward, he arrived at the place where the Phoenicians had formerly sailed round Africa, after which Darius subdued the Indians, and became master of that coast. His conquests, however, were not extensive, as they did not reach beyond the territory watered by the

Indus ; yet the acquisition was very important, as the revenue derived from the conquered territory, according to Herodotus, was near a third of that of the whole Persian empire. But very little knowledge of the country was acquired by this expedition of Darius, for the Greeks paid no re-gard to the transactions of barbarians ; and as for Scylax, he told so many incredible stories in the account he gave of his voyage, that he was disbelieved in almost every thing, whether true or false. The Greeks acquired much more knowledge of India by Alexander's expedition, although be went no farther into the country than the Setlege (Hyphasis). See HINDOSTAN. The breadth of this district, from Ludhana on the Setlege to Attack on the Indus, is computed to be 259 geographical miles in a straight line ; and Alexander's march, computed in the same manner, did not exceed 200; nevertheless by the spreading of his numerous army over the country, and the exact measurement and delineation of all his movements by men of science whom he employed, a very extensive knowledge of the western part of India was obtained. Of this celebrated conqueror's exploits, previous to this expedition, an account will be found under the article MACEDON.

According to major Renuel, the space of country through which Alexander sailed on the Indus was not less than 1000 miles; and as, during the whole of that navigation, he obliged the nations on both sides of the river to submit to him, we may be certain that the country on each side was explored to some distance. An exact account, not only of his military operations, but of every thing worthy of notice relating to the countries through which he passed, was preserved in the journals of his three officers, Lagus, Nearchus, and Aristobulus ; and these journals Arrian followed in the composition of his history. From these authors we learn, that, in the time of Alexander, the western part of India was possessed by seven very powerful monarchs. The territory of Porus, which Alexander first conquered and then restored to him, is said to have contained no fewer than 2000 towns ; and the king of the Prasii had assembled an army of 20,000 cavalry, 2000 armed chariots, and a great number of elephants, to oppose the Macedonian monarch on the banks of the Ganges. The navigable rivers with which the Panjab country abounds, afforded then, and still continue to afford, an intercourse from one part to another by water : and, as these rivers probably had then many ships on them for commerce, Alexander might easily collect all the number he is said to have had, *viz.* 2000; since it is reported, that Semiramis was opposed by double the number on the Indus, when she invaded India.

The country on each side the Indus was

found, in the time of Alexander, to be in no de- . gree inferior in population to the kingdom of Porus. The climate, soil, and productions of India, as well as the manners and customs of the inhabitants, are exactly described, and the descriptions found to correspond in a surprising manner with modern accounts. The stated change of seasons, now known by the name of monsoons, the periodical rains, the swellings and inundations of the rivers, with the appearance of the country during the time they continue, are particularly mentioned. The descriptions of the inhabitants are equally particular ; their living entirely upon vegetables; their division into tribes or casts, with many of the particularities of the modern Hindoos. The military operations, however, extended but a very little way into India properly so called ; no further indeed than the modern province of Lahore, and the countries on the banks of the Indus, from Moultan to the sea. To secure the obedience of those countries, Alexander built, it is said, a number of fortified cities ; and, the farther eastward he extended his conquests, the more necessary did he find this task. Three he built in India itself; two on the banks of the Hydaspes, and a third on the Acesines, both navigable rivers, falling into the Indus, after they have united their streams. By these he intended not only to keep the adjacent countries in awe, but to promote a commercial intercourse between different parts. With this view, on his return to Susa, he surveyed the course of the Euphrates and Tigris, causing the cataracts or dams to be removed, which the Persian monarchs had built to obstruct the navigation of these rivers. After the navigation was thus opened, he proposed that the valuable commodities of India should be imported into the other parts of his dominions by the Persian Gulf, and through the Red Sea to Alexandria, and thence dispersed over Europe.

On the death of Alexander, the eastern part of his dominions devolved first on Pytho, the son of Agenor, and afterwards on Seleucus. The latter was sensible of the advantages of keeping India in subjection. With this view, he undertook an expedition into that country, partly to confirm his authority, and partly to defend the Macedonian territories against Sandracottus, king of the Prasii. The particulars of his e*pedition are very little known ; Justin being the only author who mentions them. Plutarch tells us that Seleucus carried his arms farther into India than Alexander ; and Pliny, whose authority is of considerably greater weight than either, corroborates the testimony of Plutarch in this instance, though his language is obscure. Bayer thinks it implies that Seleucus marched from the Hyphasis to the Hysudrus, thence to Palibothra, and thence to the mouth of the Ganges; the

distances of the principal stations being marked, and amounting in all to 2244 Roman miles. But Dr. Robertson considers it very improbable that the expedition of Seleucus should have been continued so far, as in that case ‘ the ancients would have had a more accurate knowledge of this part of the country than they seem ever to have possessed.’ The career of Seleucus in the east was stopped by Antigonus, who prepared

to invade the western part of his dominions. The former was therefore obliged to conclude a treaty with Sandracottus ; but Dr. Robertson is of opinion, that during the lifetime of Seleucus, which continued forty-two years after the death of Alexander, no diminution of the Macedonian territories took place. With a view of keeping up a friendly intercourse with the Indian prince, Seleucus sent Megasthenes, one of Alexander’s officers, to Palibothra, capital of the kingdom of the Prasii, on the banks of the Ganges. This city is by Dr. Robertson thought to be the modern Allahabad, but major Rennel supposes it to be Patna. As Megasthenes resided in this city for a considerable time, he made many observations relative to India in general, which he afterwards published. But he mingled with his relations the most extravagant fables ; such as accounts of men with ears so large that they could wrap themselves up in them ; of tribes with one eye, without mouths or noses, &c., if the extracts from his book, given by Arrian, Diodorus, and other ancient writers, can be credited. After the embassy of Megasthenes to Sandracottus, and that of his son Damaichus to Alli-trochidas, the successor of Sandracottus, we hear no more of the affairs of India with regard to the Macedonians, until the time of Antiochus the Great, who made a short incursion into India about 197 years after the death of Seleucus. All that we know of this expedition is, that the Syrian monarch, after finishing a war he carried on against the two revolted provinces of Parthia and Bactria, obliged Sophagasenus, king of the country which he invaded, to pay a sum of money, and give him a number of elephants. It is probable that the successors of Antiochus were obliged, soon after his death, to abandon all their Indian territories.

After the loss of India by the Syrians, an intercourse was kept up for some time betwixt it and the Greek kingdom of Bactria. This last became an independent state about sixty-nine years after the death of Alexander ; and, according to the few hints we have conceming it in ancient authors, carried on a great traffic with India. Nay, the Bactrian monarchs are said to have conquered more extensive tracts in that region than Alexander himself had done. Six princes reighed over this new kingdom in succession ; some of whom, elated wjth the conquests they had made, assumed the title of the great king, by which the Persian monarchs were distinguished in their highest splendor. Strabo informs us, that the Bactrian princes were deprived of their territories by the Scythian Nomades, who came from the country beyond the Saxartes, and were known by the names of Asii, Pasiani, Tachari, and Scaurauli. This is confirmed by the testimony of the Chinese historians, quoted by M. de Guignes. According to them, about 126 years before the Christian era, a powerful horde of Tartars pushed from their native seats on the confines of China, and obliged to move farther to the west, passed the laxartes, and, pouring in upon Bactria like an irresistible torrent, overwhelmed that kingdom, and put an end to the dominion of the Greeks, after it had lasted nearly 130 years. From this time to the close of the

fifteenth century all thoughts of establishing anj dominion in India were totally abandoned by the Europeans. The only object now was to promote a commercial intercourse with that country ; and Egypt was the medium by which that intercourse was to be promoted. Ptolemy, the son of Lagus, first raised the power and splendor of Alexandria, by carrying on a trade to India. His son Ptolemy Philadelphus prosecuted the same plan very rigorously. In his time the Indian commerce once more began to centre in Tyre; but, to remove it effectually thence, he attempted to form a canal between Arsinoe on the Red Sea, near the place where Suez now stands, and the Pelusiac, or eastern branch of the Nile. This canal was about 100 cubits broad, and thirty deep ; so that by means of it the productions of India might have been conveyed to Alexandria entirely by water. We know not whether this work was ever finished, or whether it was found useless on account of the dangerous navigation towards the northern extremity of the Red Sea; but it is certain that no use was made of it, and a new city, named Berenice, situated almost under the tropic upon the western shore of the Red Sea, became the staple of Indian commerce. Thence the goods were transported by land to Coptos, a city three miles from the Nile, to which it. was joined by a navigable canal. Thus, however, there was a very tedious land carriage of no less than 258 Roman

miles through the barren desert of Thebais; but Ptolemy caused search to be made every where for springs, and, wherever these were found, he built inns for the accommodation of travellers.

Ships during this period sailed from Berenice, and coasting along the Arabian shore to the promontory of Syagrus, now Cape Rafalgate, held their course along the coast of Persia, till they arrived at the mouth of the western branch of the Indus. They either sailed up this branch till they came to Pattala, now Tatta, at the upper part of the Delta, or continued their course to some other emporium on the west part of the Indian coast. A more convenient course was afterwards found by sailing directly to Zizenis, a plaoe concerning which there is now some dispute. Montesquieu believes it to have been the kingdom of Sigertis, on the coast adjacent to the Indus, and which was conquered by the Bactrian monarchs; but major Rennel is of opinion that it was a port on the Malabar coast. Dr. Robertson thinks that during the time of the Ptolemies very little progress was made in the discovery of India, and contests the opinion of major Rennel, that ‘ under the Ptolemies the Egyptians extended their navigation to the extreme point of the Indian continent, and even sailed up the Ganges to Palibothra, now Patna.’ In this case, he thinks, that the interior parts of India must have been much better known to the ancients, than we have any reason to believe they were. The extreme danger of navigating the Red Sea in ancient times seems to have been the principal reason which induced Ptolemy to remove the communication with India, from Arsinoe to Berenice, as there were other haibours on the s-jme coast considerably nearer the Nile

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than it. After the ruin of Coptos, by the emperor Dioclesian, the Indian commodities were conveyed from the Red Sea to the Nile from Cosseir, supposed by Dr. Robertson to be the Philoteras Portus of i*tolemy, to Cous, the Vicus Apollinis, a journey of four days. Hence Cous, from a small village, became an opulent city; but in. process of time the trade from India removed to Kene, farther down the liver. It was to this monopoly of Indian commerce, that Egypt owed its vast wealth and power, during the time of its Macedonian monarchs; but it appears surprising that no attempt was made by the Syrian monarchs to rival them in it, especially as the latter were in possession of the Persian gulf, from whence they might have imported the Indian commodities by a much shorter navigation than could be done by the Egyptians.

On the conquest of Egypt by the Romans, the Indian commodities continued, as usual, to be imported to Alexandria in Egypt, and from thence to Rome; but the most ancient communication betwixt the east and west parts of Asia seems never to have been entirely given up. Syria and Palestine are separated from Mesopotamia by a desert; but the passage through it was much facilitated by its affording a station which abounded in water. Hence the possession of this station became an object of such consequence, that Solomon built upon it the city called in Syria Tadmor, and in Greek Palmyra. Both these names are expressive of its situation in a spot adorned with palm trees. Though its situation for trade may to us seem very unfavorable ; being sixty miles from the Euphrates, by which alone it could receive the Indian commodities, and 203 from the nearest coast of the Mediterranean ; yet the value and small bulk of the goods in question rendered the conveyance of them by a long carriage over land not only practicable but lucrative and advantageous. Hence the inhabitants became opulent and powerful, and this place long maintained its independence after the Syrian empire became subject to Rome.

2. India from its intercourse with the Romans, until the erection of the Gaznian empire. — The excessive eagerness of the Romans for Asiatic luxuries of all kinds kept up an unceasing intercourse with India, during the whole time that the empire continued in its power; and, even after the destruction of the western part, it was kept up between Constantinople and those parts of India which had been visited formerly by merchants from the,, west. Long before this period, however, a much better method of sailing to India had been discovered by one Hip-palus, the commander of an Indian ship, who lived about eighty years after Egypt had been annexed to the Roman empire. This man hav-ing observed the periodical shifting of the monsoons, and how steadily they blew from the east or west during

some months, ventured to leave the coast, and sail boldly across the Indian Ocean, from the mouth of the Arabian Gulf to Musiris, a port on the Malabar coast ; which discover}' was reckoned a matter of such importance, that the name of Ilippalus was given

to the wind by which he performed the voyage. Pliny gives a very particular account of the manner in which the Indian traffic was now carried on, mentioning the particular stages, and the distances between them : *viz.* From Alexandria to Juliopolis, according to this writer, was two miles; and there the cargo destined for India was shipped on the Nile, and carried to Coptos, distant 303 miles, the voyage being usually performed in twelve days. From Coptos they were conveyed by land to Berenice, distant 258 miles, and halting at different stations as occasion required. The journey was finished on the twelfth day ; but on account of the heat the caravan travelled only in the night. The ships left Berenice about midsummer, and in thirty days reached Ocelis, now Gella, at the mouth of the Arabian Gulf, or the modern Cape Fartaque on the coast of Arabia Felix; from whence they sailed in forty days to Musiris, already mentioned. Their homeward voyage began early in December; when setting sail with a north-east wind, and meeting with a south or south-west one when they entered the Arabian Gulf, the voyage was completed in less than a year. With regard to the situation of Musiris, as well as of Barace, another Indiun port to which the ancients traded, major Rennel and Dr. Robertson agree that they stood between Goa and Tellicherry ; and that probably the modern Meerzaw or Mer-jee is the Musiris, and Barcelore the Barace of the ancients. Ptolemy, who flourished about A. D. 200, having the advantage of so many previous discoveries, gives a more particular description of India than is to be met with in any of the ancient writers; notwithstanding which his accounts are frequently inconsistent not only with modern discoveries, but with those of more ancient geographers than himself. A capital error in his geography is, that he makes the peninsula of India stretch from the Sinus Barygazenus, or gulf of Cambay, from west to east; instead of extending, according to its real direction, from north to south; and this error appears the more extraordinary, that Megasthenes had published a measurement of this peninsula, nearly consonant to truth, which had been adopted with some variations by Eratosthenes, Strabo, Diodorus Siculus, and Pliny. His information concerning the situation of places, however, was much more accurate. With respect to some districts on the eastern part of the peninsula, as far as the Ganges, he comes very near the truth. M. d'Anville, has determined the modern names of many of Ptolemy's stations, as Kilkare, Negapatam, the mouth of the

river Cauveri, Masulipatam, &c. The peninsula of Malacca was in all probability the boundary of the ancient discoveries by sea, but by land they had correspondence with countries still farther distant.

• While the Seleucidse continued to enjoy the empire of Syria, the trade with India continued to be carried on by land in the way already mentioned. The Romans, having extended their dominions as far as the Euphrates, found this method of conveyance still established, and the trade was by them encouraged and protected. But the progress of the caravans being frequently

interrupted by the Parthians, particularly when they travelled towards those countries where silk and others of the most valuable manufactures were procured, it became an object to the Romans to conciliate the friendship of the sovereigns of those distant countries. This attempt seems to have been made; for the Chinese historians tell us, that Antoun, by whom they mean the emperor Marcus Antoninus, the king of the people of the western ocean, sent an embassy to Ounti, who reigned in China A. D.

With regard to the Indian islands, considering the little way they extended their navigation, the ancients could not be acquainted with many of them. Ceylon, however, they called Taprobane : the name was entirely unknown in Europe be-fore the time of Alexander the Great ; but that conqueror, though he did not visit, had heard of it ; but all the accounts of ancient geographers concerning it are confused and contradictory. The other islands described by Ptolemy to the eastward of Taprobane are, according to Dr. Robertson, those called Andaman and Nicobar in the Gulf of Bengal. From the time of Ptolemy to that of the emperor Justinian we have no account of any intercourse of the Europeans wv.ci India, or of any progress made in the geographical knowledge of the country. Under that emperor Cosmas, an Egyptian merchant, made some voyages to India, whence he acquired the surname of Indicopleustes. Having afterwards turned monk, he published several works; one of which, named Christian Topography, has reached us. In this, though mixed with many strange reveries, he relates, with great simplicity and appearance of truth, what he had seen in his travels or had learned from others ; and describes several places on the western coast of the hither peninsula, which he calls the chief seat of the pepper trade. From one of the ports on that coast, named Male, Dr. Robertson thinks that the name of Malabar may probably be derived, as well as that of Maldives, given to a cluster of islands at no great distance. Cosmas informs us also, that in his time the island of Taprobane had become a great staple of trade. He supposed it to lie about half way betwixt the Persian Gulf and the country of the Sinae : in consequence of which commodious situation it received the silk of the Sinae, and the precious spices of the remote regions of the east, which were from thence conveyed to all parts of India, Persia, and the Arabian Gulf. He calls it not Taprobane, but Sieldibia, derived from Selendib, or Serendib, a name by which it. is still known in the east. From him also we learn, that the Persians, hav-ing overthrown the empire of the Parthians, applied themselves with great diligence and success to maritime affairs ; in consequence of which they became formidable rivals to the Romans in the Indian trade. The latter being thus in danger of entirely losing that lucrative branch, Justinian formed a scheme of preserving some share of it by means of his ally the emperor of Abyssinia. In this he was disappointed, though afterwards he obtained his end in a way entirely unexpected. Two monks who had been employed as missionaries in different parts of the «ast, and had penetrated as far as the country of the Seres or China, induced by the

liberal promises of Justinian, brought a quantity of the eggs of silkworms in a hollow cane. They were then hatched by the heat of a dunghill ; and, being fed with the leaves of the mulberry, worked and multiplied as well as in those countries of which they are natives. Vast numbers were soon reared in Greece ; from whence they were exported to Sicily, and from thence to Italy ; in all which countries silk manufactures have since been established. On the conquest of Egypt by the Saracens, in 640, the India trade was of course transferred to them ; and they soon began to pursue it with much more vigor than the Ro-mans had done. The city of Bassora was buill by the caliph Omar, upon the west banks of the great river formed by the union of the Euphrates with the Tigris. Thus the command of both rivers was secured, and the new city soon became a place of almost as much consequence as Alexandria itself.

Dr. Robertson takes notice, that, from the evidence of an Arabian merchant who wrote in 852, it appears, that not only the Saracens, but the Chinese also, were destitute of the mariner's compass; contrary to a common opinion, that this instrument was known in the east long before its discovery in Europe. Notwithstanding this disadvantage, they penetrated far beyond Siam, which had set bounds to the navigation of Europeans. They became acquainted with Sumatra and other Indian islands; extending their navigation as far as Canton in China. A regular commerce was now carried on from the Persian Gulf to all the countries lying betwixt it and China, and even with China itself. Many Saracens settled in India properly so called, as well as in the countries beyond it. In the city of Canton they were so numerous, that the emperor permitted them to have a cadi or judge of their own religion; the Arabian language was understood and spoken in every place of consequence ; and ships from China are even said to have visited the Persian Gulf. According to the Arabian accounts of those days, the peninsula of India was at that time divided into four kingdoms. The first was composed of the provinces situated on the Indus and its branches, the capital of which was Moultan. The second had the city of Canoge, which, from its remaining ruins, appears to have been a very large place. The Indian historians relate, that it contained 30,000 shops, in which betel nut was sold, and 60,000 sets of musicians and singers who paid a tax to government. The third kingdom was that of Cachemire, first mentioned by Massoudi, who gives a short description of it. The fourth kingdom, Guzerat, is represented by the same author as the most powerful of the whole. Another Arab writer, who flourished about the middle of the fourteenth century, divides India into three parts ; the northern comprehending all the provinces on the Indus ; the middle extending

from Guzerat to the Ganges ; and the southern, which he denominates Comar, from Cape Comorin. From the relation of the Arabian merchant above mentioned, explained by the commentary of

another Arabian who had likewise visited the eastern -parts of Asia, we learn many particulars concerning the inhabitants of these distant regions at that time, which correspond with what is observed among them at this day. They take notice of the general use of silk among the Chinese, and the manufacture of porcelain, which they compare to glass. They also describe the tea-plant, with the manner of using its leaves; whence it appears, that in the ninth century the use of this plant in China was as common as it is at present. They mention likewise the great progress which the Indians had made in astronomy ; a circumstance which seems to have been unknown to the Greeks and Ro-mans ; they assert, that in this branch of science they were far superior to the most enlightened nations of the west, on which account their sovereign was called the King of Wisdom. The superstitions, extravagant penances, &c., known to exist at this day among the Indians, are also mentioned by those writers ; all which particulars manifest that the Arabians had a knowledge of India far superior to that of the Greeks or Romans. The industry of the Mahommedans, in exploring the most distant regions of the east, was rivalled, however, by the Christians of Persia, who sent missionaries all over India and the countries adjoining, as far as China itself. But, while the western Asiatics thus kept up a constant intercourse with these parts, the Europeans had in a manner lost all knowledge of them. The port of Alexandria, from which they had formerly been supplied with the Indian goods, was now shut against them ; and the Arabs, satisfied with supplying the demands of their own subjects, neglected to send any by the usual channels to the towns on the Mediterranean. The inhabitants of Constantinople and some other great towns were supplied with Chinese commodities by the most tedious and difficult passage imaginable. The silk of that country was purchased in the most westerly province named Chensi ; thence it was conveyed by a caravar., which marched eighty or 100 days to the

banks of the Oxus. Here it was embarked, and carried down the river to the Caspian ; whence, after a dangerous voyage across that sea, it was carried up the river Cyrus as far as it is navigable ; after which it was conducted by a land-carriage of five days to the river Phasis, then down that stream into the Euxine, and thence to Constantinople. The passage of goods from Hindostan was less tedious ; being carried either directly to the Caspian or to the Oxus, but by a passage much shorter than that from China ; after which they were conveyed down the Phasis to the Euxiue, and thus to Constantinople. In spite of every difficulty, however, this commerce nourished, and Constantinople became a considerable mart for East Indian commodities ; and from it all the rest of Europe was chiefly supplied with them for more than two centuries. The perpetual hostilities in which the Christians and Mahommedans were during this period engaged, contributed still to increase the difficulty; but, the more it increased, the more desirous Europeans seemed to be of possessing the luxuries of Asia. About this

time the cities of Amalfi and Venice, with some others in Italy, having acquired a great degree of independence, began to exert themselves in promoting domestic manufactures, and importing the productions of India. Some traces of this revival of a commercial spirit, according to Dr. Robertson, may be observed from the end of the seventh century. But, during the seventh and eighth centuries, it is very probable that no commercial intercourse whatever took place betwixt Italy and Alexandria ; for, prior to this period, all the public deeds of the Italian and other cities of Europe were written upon paper made of the Egyptian papyrus, but after that upon parchment. About the end of the tenth century, a considerable revolution took place in India, by the conquests of Mahmud Gazni, who erected the empire of Gazna.

3. India, from the erection of the Gasman empire, to the death of Mohammed Shah. — The authentic history of Hindostan is reckoned to commence with the conquests of Mahmud Gaz-ni. Major Rennel thinks nothing before that period is to be depended on. Mahmud's kingdom had arisen out of that of the Saracens, who had extended their conquests immensely, under the caliph Al-Walid, both to the east and west. Mahmud was the third from Abistagi, a governor of Khorasan, who had revolted from the king of Bucharia. He possessed great part of the ancient Bactria. Gazna, near the source of the Indus, and Balkh, were his chief cities. After conquering the rest of Bactria, he invaded Hindostan, A. D. 1000, and reduced the province of Moultan, which was inhabited by the Kuttry and Rajpoot tribes (the Catheri and Malli of Alexander), who still retained their ancient

bravery, and made a very formidable resistance. Mahmud being equally influenced by a love of conquest, and a superstitious zeal to exterminate the Hindoo religion, a league was at last formed against him among all the Indian princes, from the Ganges to the Nerbudda. Their allied troops were, however, defeated; and in 1008 the fa-mous temple of Nagracut in the Panjab was destroyed. In 1011 Mahmud destroyed the city and temple of Tanafar, and reduced Delhi. In 1018 he took Canoge, and demolished the temples of that and several other cities; but failed in his attempts on Ajimere. In his twelfth expedition, in 1024, he reduced the whole peninsula of Guzerat, and destroyed the famous temple of Sumnaut, as well as those of all the other cities he conquered. At his death, in 1028, he possessed the east and largest part of Persia, with the Indian provinces from the west part of the Ganges to Guzerat, and those between the Indus and the mountains of Ajimere.

But in 1158 this extensive empire began to fall to pieces. The west and largest part was seized by the Gauri, while the east contiguous to the Indus remained in the possession of Cus-roe, whose capital was Lahore. In 1184 his sons were expelled by the Gauri, and in 1 1 94 Mohammed Gori penetrated into Hindostan as far as Benares, committing as great devastation as Mahmud . Gazni had done. He also reduced the south part of Ajimere, ar.d the territory

south of the Jumna, the fort of Gualior, &c. On his death, in 1205, the empire of Gazna was again divided, and the Patan or Alghan empire was founded by Cuttub, who had the Indian part, the Persian remaining to Eldoze. Cuttub made Delhi his capital; and in 1210 his successor, Altumish, reduced the greatest part of Hindostan Proper. One of his sons obtained the government of Bengal, and, from this period, one of the emperor's sons had always that government. During his reign, the bloody Jenghiz Khan put an end to the other branch of the Gaznian empire, as related under the article GAZNA, but Hindostan was left undisturbed.

The kingdom of Malwa, which had been reduced in 1205 by Cuttub,

shook off the yoke in 1265, and the Rajpoots revolted. From this period the most dreadful confusion and massacres followed almost to the time that the British government commenced. The empire being subdivided among a set of rapacious governors, the people were reduced to the greatest degree of misery. To add to their distress, the Moguls made such frequent and formidable invasions, that at last the emperor Ferose II. allowed them to settle in the country in 1292. The emperor was incited by Alia, governor of Gurrah, to attempt the conquest of the Deccan; and Alia being employed in that business, wherein he amassed an immense quantity of treasure, no sooner accomplished it, than he deposed and murdered Ferose, and assumed the sovereignty of Hindostan. After this he reduced the forts of Guzerat, Ratanpour, and Cheitore; and in i303 the city of Warangole, capital of Tellin-gala. After this the remainder of Malwa was subdued; in 1306 the conquest of the Deccan was undertaken; and in 1310 Alia carried his army into Dowiatabad and the Carnatic. But all this usurper's expeditions, and those of his general Cafoor, seem to have been made more with the view of plunder than of permanent conquest. The quantity of riches Cafcor amassed was so great, that it is said his soldiers carried away only the gold, leaving the silver behind as too cumbersome. In 1322 several places rebelled, but were reduced; and the Carnatic was ravaged from sea to sea in 1 326, when Alia died. His successors were not able to retain the dominions he left. Under Mohammed III. the inhabitants of the Deccan revolted, and drove the Mahommedans completely out of all their territories, except the city of Dowiatabad. In 1344 Belaldeo, king of the Deccan, who had headed the revolt, founded the city of Bisnagur. Many provinces in Bengal, Guzerat, and Panjab, also revolted. Ferose III., who succeeded Mohammed in 1351, was a wise prince, who preferred the improvement of his empire by the arts of peace, to the extension of it by war and conquest. In his reign, which lasted thirty-seven years, agriculture, commerce, and manufactures, were encouraged. But upon his death, in 1388, a civil war broke out, which continued five years, till Mahmud III. succeeded in 1393. During this period Hindostan exhibited the uncommon phenomenon of two emperors residing in the same capital, yet at war with each other. In this unfortunate situation of affairs, Tamerlane, after subduing all the weˆt of Tartary iti.'l Asia, turned his anns against Hindostan, and made an easy conquest of it. But the bloody monster, not contented with his victory, ordered a general massacre of the inhabitants, in consequence of which it is said, that 100,000 of them were murdered in one hour. In January, 1399 he defeated the Indian army, with great slaughter and soon after took the city of Delhi, which then consisted of three cities, surrounded by walls. Though no resistance was made, and of course there was no

pretence for bloodshed, yet a quarrel was fomented within a few days by his Tar tar soldiers, who pillaged the city, massacred most of the people, and sold the rest for slaves. The spoils, in plate and jewels, were immense After this dreadful carnage, Tamerlane marched through the other provinces of Hindostan, defeating the Indians everywhere, and slaughtering the worshippers of fire. On the 25th of March this bloody conqueror retired, leaving Mahmud in possession of the throne, and reserving only Panjab to himself.

The death of Mahmud III., in 1413, put an end to the Patan dynasty. He was succeeded by Chizer, a descendant of Mahomet the impostor, and his posterity continued to reign till 1450, when Alia II. abdicated the throne, and Belloli, an Afghan, took possession of it. Under him a prince who resided at Jionpour became so formidable, that he left him only the shadow of authority. Belloli's son, however, recovered a great part of the empire, about 1501, when he made Agra his residence. In the reign of Ibra-ham II. Sultan Baber, a descendant of Tamerlane, conquered a considerable part of the em-pire. His first expedition was in 1518; and in 1525 he took Delhi. On the death of Baber, who reigned only five years, his son Humaioon was driven from the throne, and obliged to take shelter among the Rajpoot princes of Ajimere. The sovereignty was usurped by Sheer Khan, who in 1545 was killed at the siege of Cheitore. His territories extended from the Indus to Ben-gal ; but the government was so unsettled, that no fewer than five sovereigns succeeded within nine years after his death. This induced a strong party to join in recalling Humaioon; who is said to have been a prince of great virtue and abilities ; but he lived only one year after his return. Upon his death, in 1555, his son Acbar succeeded, one of the greatest princes that ever reigned in Hindostan. He was then only fourteen years of age ; but, during his long reign of fifty-one years, he established the empire on a more sure foundation than it had probably ever been before. His first years were spent in reducing the revolted provinces, and in securing their future obedience, not only by appointing faithful governors, but by attending to the rights and privileges of the people, aiid establishing an unlimited toleration in religion. In 1585 he invaded the Deccan ; but, though the war continued twenty years, the only progress made was the reduction of Candeish, Tellingana, the west part of Berar, and the north part of Amednagur. The city of Amednagur was taken in 1601, after a tedious and bloody siege. Under his successor, Jehan Guire, the war was faintly carried on, the

empire being disturbed by his rebellious son Shah Jehan, and his councils distracted by the influence of his mistress Noor Jehan. In this monarch's reign Sir Thomas Roe, the first British ambassador at the court of Hindostan, arrived. Jehan 'Guire died in 1627, and was succeeded by his son Shah Jehan, who pushed the conquest of the Deccan with vigor, but in so destructive a manner, that most of the princes submitted. A war next broke out with the Portuguese which ended in their expulsion from Hoogly. Shah Jehan was a debauched prince ; and his rebellion against his father was retaliated by that of his son Aurengzebe, who dethroned him, disguising his ambition under the mask of religion, and committing the greatest crimes under that pretence. He engaged in a war with his brothers, Morad and Dara, whom he defeated and put to death, and then pretended to lament their misfortune. He, however, treated his father with tenderness till his death in 1666. From 1660, when Aurengzebe attained full possession of the throne, till 1678, a profound tranquillity prevailed throughout the empire; but from a jealousy of Sevagee, the founder of the Mahratta state, he undertook the conquest of the Deccan; and, having quelled a rebellion of the Patans beyond the Indus, he persecuted the Hindoos so severely, that the Rajpoot tribes - in Ajimere commenced a war against him. In this war, having headed his armies in person, he was hemmed in among the mountains, and would have been taken prisoner, had not the Rajpoots generously allowed him to escape, as well as his empress, whom they actually had taken prisoner. This did not prevent him from renewing his incursions into that country in 1681.

He took and razed Checture, committing great devastations, and destroying the Hindoo temples and idols every where ; but was at last obliged to abandon his persecutions, and allow the Hindoos to remain in peace. He reduced, however, the greatest part of the Deccan, and even during the last five years of his life was employed in the field. His long absence from his capital occasioned rebellions to break out in various parts ; and about this period the Jats, or Jauts, first made their appearance in the province of Agra. At his death, in 1707, his empire extended from 10° to 35° lat., and nearly as many degrees in long. ' His revenue,' says major Rennel, ' exceeded £35,000,000 sterling, in a country where provisions are about four times as cheap as in England. But so weighty a sceptre could be wielded only by a hand like

Aurengzebe's ; and accordingly, in fifty years after his death, a succession of weak princes and wicked ministers reduced this astonishing empire to nothing.'

He left four sons ; Mausum, Azem, Kaum-Bush, and Acbar. This last had rebelled against his father, and been obliged to fly to Persia thirty years before. A civil war commenced between Mausum and Azem ; and a decisive battle was fought, wherein 300,000 men were engaged on each side, and Azem was defeated and killed. Mausum then assumed the title of Bahader Shah, and, during his short reign of five years, gave proofs of considerable abilities. He defeated

and-killed his brother Kaum-Bush ; after which he reduced the Seiks, a new sect of religionists, who, in the reign of Shah Jehan, had silently established themselves along the eastern mountains, and had now taken up arms in Lahore, ravaging the country to the banks of the Jum-nah. Bahader Shah died at Lahore, after a short illness, and the empire was again contested among his four sons. Of these the second, named Azem Coshaum, took possession of the treasures, but was opposed by hi? brothers, who agreed to divide the empire. Azem was defeated and killed, in a battle gained chiefly by the valor of Shah Jehan, the youngest, who was willing to abide by the agreement. But the intrigues of Zoolfecar Khan, an omrah in high trust, prevented this. A new civil war took place, in which Jehan was killed. The two surviving brothers tried their fortune in a third battle, in which Je-hauder, the eldest, being victor, took possession of the throne ; but in nine months was dethroned by Furroksere, the son of Azem Oosha-un, assisted by Houssein AH Khan and Abdoollah Khan, two brothers, who bad extensive governments in the eastern provinces. In 1713 the Seiks again took arms ; and, in 1716, were grown so formidable, that the emperor marched against them. About this time the English East India Company obtained the famous firman, or grant, by which their goods of export and im-port were exempted from duties. Furroksere was deposed and murdered by the brothers Houssein and Abdoollah, who set up another emperor, whom they also deposed and murdered in the same year ; and thus, in eleven years after Aurengzebe's death, eleven of his posterity, who had either possessed or been competitors for the throne, were exterminated ; and the government declined so rapidly, that the empire seemed ready to fall to pieces. In 1718 the two brothers raised to the throne Mohammed Shah, the grandson of Bahader : who, warned by the fate of his predecessors, soon rid himself of these two powerful subjects, though at the expense of a civil war. But new enemies started up. Nizam Al Mulek, viceroy of the

Deccan, in 1722, had been offered the place of vizier, or prime minister, but did not accept it. Independence was his aim, and the increasing power of the Mahrattas furnished him with a pretence for augmenting his army. Persuaded that he had a party at court, he, in 1738, came thither, with a great body of armed followers ; but, finding that the interest of the emperor was still too powerful for him, he invited the famous Persian usurper, Nadir Shah, or Kouli Khan to invade Hindostan.

This invitation was readily accepted, and Nadir entered the country without opposition ; yet, when far advanced into Hindostan, he considered the issue of matters to be so uncertain, that he offered to evacuate the country and re-tire for fifty lacks of rupees, about £500,000 sterling. The intrigues of the nizam and his party hindered the emperor from complying with this demand ; instead of which he threw himself upon the usurper's mercy, who then took possession of Delhi, and demanded a ransom of £30,000,000 sterling. After a conference with

the emperor, Nadir seized upon 200 cannon, with some treasure and jewels which he sent off to Candahar. He then marched back to Delhi, where a commotion arose about the price of corn. While Nadir endeavoured to quell it, a shot was fired at him, and narrowly missed him; upon which the barbarian ordered a general massacre of the inhabitants, and slaughtered 120,000, or, according to some, 150,000 persons. This was followed by a seizure of all the jewels, plate, &c., which could be found ; besides, exacting the £30,000,000, which was done with the utmost rigor.

In the midst of these scenes Nadir caused the marriage of his son to be celebrated with a granddaughter of Aurengzebe, and then took leave of the emperor, with professions of friendship, on the 6th of May 1 739. He is said to have carried off goods and treasure to the value of £125,000,000 sterling. Mohammed had also ceded to him all the provinces of Hindostanwest of the Indus. The villanous nizam possessed almost all the remaining power of the empire, which he

employed to establish himself in the sovereignty of the Deccan. Bengal had become independent in 1738, under Aliverdy Cawn, and was not long after invaded by a vast army of Mahrattas in the emperor's name, who, not be-ing able to pay them his arrears of tribute, sent them to Bengal to collect it themselves. About the same time the Rohillas, a tribe from the mountains between India and Persia, erected an independent state on the east of the Ganges, eighty miles from Delhi. The empire seemed now to be running fast to its dissolution. Nadir Shah being murdered, Abdallah, one of his generals, seized on the east part of Persia and the adjacent Indian provinces which Mohammed Shah had ceded to Nadir, and formed them into the kingdom of Kandahar, or Abdalli. See KAN-DAHAR, AND NADIR SHAH.

4. India, from the death of Mohammed Shah to the recovery of Calcutta by the English, in 1757. — In 1739 Mohammed Shah died, and was succeeded by his son Ahmed ; during whose reign, which lasted only six years, the division of the remainder of the empire took place ; and nothing remained to the family of Tamerlane but a small tract of territory round Delhi. The Jauts established themselves in Agra; Oude was seized on by Seifdar Jang, father of the late Su-jah Dowlah ; Allahabad by Mohammed Kouli ; Ajmere reverted to its ancient lords the Rajpoots ; Malivah was divided between the Poonah Mahrattas and several native zemindars ; and the Mahrattas, besides their dominion in the Deccan, possessed the greatest part of Berar, Guzerat,and Orissa. Abdallah, having established Ms empire of Kandahar, entered Lahore and Moultan : and now ' the whole country of Hindostan,' says ma-jor Rennel, ' was in commotion, each party fearing the machinations or attacks of the other; so that all regular government was at an end, and villany was practised in every form. Perhaps in the annals of the world it has seldom happened, that the bonds of government were so suddenly dissolved, over a portion of country containing at least 60 000,000 of inhabitants.' In 1748 the nitam Al Mulek died, at the age of 104; and

was succeeded by his son Naz-r Jung, to the prejudice of his elder brother Gazi, vizier to the nominal emperor.

The contest that followed on this occasion, for the throne of the Deccan and the nabobship of Arcot, first engaged the British and French to act as auxiliaries on opposite sides. Immediately after the peace of Aix-la-Chapelle, the French commandant, M. Dupleix, began to sow dissension among the nabobs, who had by this time usurped the sovereignty of the country. Nizam Al Mulek, viceroy of Deccan

and nabob of Arcot, had, as officer for the Mogul, nominated Anaverdy Khan to be governor of the Carnatic in 1745. On the death of the nizam his second son, Nazir Zing, was appointed to succeed him in his viceroyalty, and his nomination was confirmed by the Mogul. He was opposed by his cousin Muzapher Zing, who applied to Dupleix for assistance. By him he was supplied with a body of Europeans and some artillery ; after which, being also joined by Chunda Saib, an active Indian prince, he took the field against Nazir Zing. The latter was supported by a body of British troops under colonel Laurence : and the French, dreading the event of an engagement, retired in the night ; so that their ally was obliged to throw himself on the clemency of Nazir Zing. His life was spared, though he himself was detained as a state prisoner; but the traitor, forgetting the kindness shown him on this occasion, entered into a conspiracy against the life of Nazir Zing, and murdered him in his camp ; in which infamous transaction he was encouraged it is said by Dupleix and Chunda Saib, who had retired to Pondicherry. Immense riches were found in the tents of Nazir Zing, great part of which fell to the share of Dupleix, whom Muzapher Zing now associated with |himself in the government. By this association the Frenchman assumed the state and formalities of an eastern prince ; and he and his colleague Muzapher Zing appointed Chunda Saib nabob of Arcot. In 1749 Anaverdy Khan had been defeated and killed by Muzapher Zing and Chunda Saib, assisted by the French ; after which his son, Mohammed AH Khan, had put himself under the protection of the English at Madras, and was confirmed by Nazir Zing, as his father's successor in the nabobship or government, of Arcot. This government therefore was disputed betwixt Mohammed AH Khan, appointed by the legal viceroy Nazir Zing, and supported by the English company, and Chunda Saib, nominated by the usurper Muzapher Zing, and protected by Dupleix, who commanded at Pondicherry. Muzapher, however, did not long enjoy his ill-acquired authority; for in 1751 the nabobs who had been the means of raising him to the power he enjoyed, thinking themselves ill rewarded for their services, fell upon him suddenly, defeated his forces, and put him to death; proclaiming Salabat Zing next day viceroy ot the Deccan. On the other hand, the Mogul appointed Gauzedy Khan, the elder brother of Salabat Zing, who was confirmed by Mohammed AH Khan in the government of Arcot; but the affairs of the Mogul were at that time in such disorder that he could not support the nomination he had

made. Chunda Saib in the mean time determined to recover, by force, the nabobship of Arcot, from which he had been deposed by the Mogul, who had placed Anaverdy Khan in his room. With this view he had recourse to Dupleix at Pondicherry, who reinforced him with 2000 sepoys, sixty Caffrees, and 420 French ; upon condition that, if he succeeded, he should cede to the French the town of Velur in the neighbourhood of Pondicherry, with its dependencies, consisting of forty-five villages. Thus reinforced, he defeated Anaverdy Khan, who lost his life in the engagement, re-assumed the government of Arcot, and punctually performed the engagements he had come under to his French allies. All this time Mohammed AH Khan had been supported by the English, to whom he fled after his father's death. By them he was supplied with a reinforcement of men, money and ammunition, under the conduct of major Laurence, a brave and experienced officer; whereby he gained some advantages over the enemy ; and, repairing afterwards to Fort St. David's, he obtained a farther reinforcement. With all this assistance, however, he accomplished nothing of any moment ; and, the English auxiliaries having retired, he was defeated by his enemies. He now was obliged to enter into a more close alliance with the English, and cede to them some commercial points which had been long in dispute ; after which captain Cope was despatched to put Trichinopoli in a state of defence, while de Gingis, a Swiss officer, marched at the head of 400 Europeans to the assistance of the nabob. On this occasion Mr. (afterwards lord) Clive first appeared in a military capacity. He had been employed before as a writer, but seemed very little qualified for that or any other department of civil life. He now marched towards Arcot at the head of 210 Europeans and 500 sepoys ; and in his first expedition displayed the qualities of a great commander. His movements were conducted with such secrecy and despatch, that he made himself master of the enemy's capital before they knew of his march ; and gained the affections of the people by his generosity, in affording protection without ransom. In a short time, however, he found himself invested in Fort St. David's by Rajah Saib, son to Chunda Saib, an Indian chief, pretender to the nabobship of Arcot, at the head of a numerous army; the operations of the siege being conducted by European engineers. Thus, in spite of his utmost efforts, two practicable breaches were made, and a general assault given ; but Mr. Clive, having intelligence of the intended attack, defended himself with such vigor, that the

assailants were every where repulsed with loss, and obliged precipitately to raise the siege. Mr. Clive, being reinforced by a detachment from Trichinopoli, then marched in quest of the enemy ; and, having overtaken them in the plains of Arani, attacked and entirely defeated them on the 3d of December 1751. This victory was followed by the surrender of the forts of Timery, Conjaveram, and Arani ; after which he returned in triumph to Fort St. David's. In the beginning of 1752 he marched towards Madras, where he was reinforced by a small body of troops from Bengal. Though the whole did not

exceed 300 Europeans, with as many natives as were sufficient to give the appearance of an army, he boldly proceeded to a place called Koveripauk, about fifteen miles from Arcot, where the enemy lay to the number of 1500 sepoys, 1700 horse, with 150 Europeans, and eight pieces of cannon. Victory was long doubtful, until Mr. Clive having sent round a detachment to fall upon the rear of the enemy, while the English attacked the entrenchments in front with their bayonets, a general confusion ensued, the enemy was routed with considerable slaughter, and only saved from total destruction by the darkness of the night. The French to a man threw down their arms on this occasion, and surrendered themselves prisoners of war; all the baggage and cannon falling at the same time into the hand of the victors. On the return of Mr. Clive to Fort St. David's, he was superseded in the command by major Laurence. Being detached by him with 400 Europeans, a few Mahratta soldiers, and a body of sepoys, to cut off the enemy's retreat to Pondicherry, he was attended with his usual success, took several forts, vanquished the French commander M. d'Anteuil, and obliged him with all his party to surrender prisoners of war. Chunda Saib, in the mean time, lay encamped with an army of 30,000 men at Syringham, an island near Trichinopoli ; but, major Laurence having intercepted his provisions, he was forced to fly. Being obliged to pass through the camp of the Tanjore general, he obtained a pass for that purpose : but was nevertheless detained by the na-bob, who was an ally of the British, and his head was struck off. After the flight of Chunda Saib his army was attacked and routed by major Laurence ; and the island of Syringham surrendered, with about 1000 French soldiers under the command of Mr. Law, brother to him who schemed the Mississippi Company. M. Dupleix, mortified at this bad success, proclaimed Rajah Saib, son to Chunda Saib, nabob of Arcot ; and afterwards produced forged commissions from the great Mogul, appointing him governor of all the Carnatic from the Kristnah to the sea. To carry on this deception, a messenger pretended to come from

Delhi, and was received with all the pomp of an ambassador from the great Mogul. ˆDupleix, mounted on an elephant and preceded by music and dancing women, after the oriental fashion, received his commission from the hands of this impostor; after which he affected the state of an eastern prince ; kept his durbar or court, appeared sitting cross-legged on a sofa, and received presents as sovereign of the country, from his own council as well as from the natives. Thus the forces of the English and French East India companies were engaged in a course of hostilities, under the title of auxiliaries to the contending parties at a time when no war existed between the two nations. In the mean time Gauzedy Khan assumed the dignity appointed him by the Mogul ; but had not been in possession of it above fourteen days when he was poisoned by his own sister. His son, Shah Abadin Khan, was appointed to succeed him by the Mogul ; but, the latter being unable to give him proper assistance, Salabat Zing remained without any rival, and made a present to the

French commander of all the English possessions to the northward. Thus concluded the campaign of 1752. Next year both parties received considerable reinforcements ; the English by the arrival of admiral Watson with a squadron of ships of war, having on board a regiment commanded by colonel Aldercroon ; and the French by M. Gadeheu, commissary and governor-gene- ral of all their settlements, on whose arrival M. Dupleix departed for Europe. The new governor made the most friendly proposals, and desired a cessation of arms until the disputes could be adjusted in Europe. These being readily listened to on the part of the British, deputies were sent to Pondicheny, and a provisional treaty and truce were concluded, on condition that neither of the two companies should for the future interfere in any of the differences that might take pkce in the country. The other articles related to the settlements that should be retained or possessed by the respective companies until fresh orders should arrive from the courts of London and Versailles ; and till then it was stipulated, that neither of them should be allowed to procure any new grant or cession, or to build forts in defence of any new establishment ; nor should they

proceed to any cession, retrocession, or evacuation of what they then possessed ; but every thing should remain on the same footing as formerly.

The treaty was published on the llth of January 1755; at the end of which month admiral Watson returned with his squadron from Bombay; and M. Gadeheu returned to France in the beginning of February, leaving M. Leyrit his successor at Pondieherry. M. Bussy, with the soubahdar Salabat Zing, commanded in the north ; and M. de Saussay was left to command the troops at Syringham. Matters, however, did not long continue in a state of tranquillity. Early in the year it appeared that the French were endeavouring to get possession of all the Deccan. M. Bussy demanded the fortress of Golconda from Salabat Zing ; and M. Leyrit encouraged the governor who rented Velu to take up arms against the nabob. He even sent 300 French and as many sepoys from Pondicherry to support this rebel, and oppose the English employed by the nabob to collect his revenues from the tributary princes. In this office they had been engaged ever since the cessation of hostilities; one-half of the revenue being paid to the nabob, and the other to the company, which now involved them in military expeditions into the country of the polygars, who had been previously summoned to send agents to settle accounts with the nabob. Four of them obeyed the summons ; but one Lachenaig refused, and it was therefore resolved to attack him. The country was very strong, being fortified both by nature and art : it was surrounded by craggy hills, detached from one another, and covered with bushes so as to be impassable for any but the natives. The works, which the natives had thrown up from hill to hill, were indeed very rude, being formed of large stones laid one upon another without any ce-ment, and flanked by round earthen towers ; but before the wall was a deep and broad ditch, with

a large hedge of bamboos in front, so thick that it could not be penetrated but by the hatchet or fire. Two lines of this kind were forced, though not without some loss ; after which, Lachenaig was obliged to submit. The English army now marched to Madura, a strong Indian town about sixty miles south of Trichinopoli. On their approach it submitted without opposition, and the inhabitants seemed pleased with their change of government. Here a deputation was received from a neighbouring polygar, desiring an alliance, accompanied with an offer of two settlements on the sea coast, opposite to the island of Ceylon. Before this time they could not have reached Tinevelly, but by a circuitous march of 400 or 500 miles ; but

from the new settlements the distance to that place was only fifty miles, and reinforcements or supplies of any kind might be sent them from Madras or Fort St. David in four or five days. This offer being accepted, colonel Heron, the English commander, marched to attack the governor of Madura, who had fled to Coilgoody. The road was so rugged, that cannon could with difficulty be brought up : and, as the troops were not furnished with scaling ladders, there seemed to be little hope of gaining the place. The colonel, however, determined to make an assault after the Indian manner, by burning down the gates with straw ; and eventually the place was taken and plundered, not sparing even the temples. After this exploit the army returned to Madura ; where leaving a garrison, they proceeded to Tinevelly, which submitted without opposition, and owned the jurisdiction of the nabob. It afterwards appeared that the revenues collected in this expedition had not been sufficient to defray the expenses of the army ; and a report being spread that Salabat Zing was advancing into the Carnatic along with M. Bussy, the French commander, it was thought proper to recal colonel Heron to Tri-chiiiopoli. Before this he had been prevailed on by Mazuphe Cawn, the Indian chief who accompanied him, to convey to him an investiture of the countries of Madura and Tinevelly, for an annual rent of £187,500 sterling. In his way he was likewise induced by the same chief to make an attempt on a strong fort named Nelly-tangaville, situated about thirty miles west of Tinevelly, and belonging to a refractory polygar. This attempt, however, proving unsuccessful for want of cannon, the colonel returned with Mazuphe Cawn to Trichinopoli. The last expedition of this commander was against ‘a fort named Volsynatim, situated near the entrance of the woods belonging to the Colleries. In their march the English army had to go through the pass of Natam, one of the most dangerous in the peninsula. It begins about twenty miles north of Trichinopoli, and continues for six miles through a wood ; being barely sufficient to admit a single carriage, at the same time that a bank running along each side rendered it impossible to widen it. A detachment of pioneers and sepoys were sent to scour the woods before the main body ventured to pass through such a dangerous defile; but the march was after all stopped by one of the heaviest tumbrils sinking in a slough, out of which the oxen were not able

to draw it. This prevented the other tumbrils from moving forward, as well as three field pieces that formed the rear division of artillery, and the whole line of baggage ; and in this divided and defenceless state the rear division of the baggage was attacked by the Indians; and the whole would have been destroyed, had it not been for the courage and activity of captain Smith, who here commanded forty Caffres and 200 sepoys, with one six-pounder. Considerable damage, however, was done, and the Indians recovered their gods. Colonel Heron being tried, by a court-martial for misconduct in this expedition, and found guilty, was declared incapable of serving the company ; soon after which he returned to Europe, and died in Holland.

In the mean time Nanderauze, an Indian prince, formed a scheme to get possession of Trichinopoli ; and communicated his design to 3M. de Saussay, the commander of the French troops : but this gentleman communicated this intelligence to the English commander, and the enterprise miscarried. As soon as the company were informed of the acquisitions made by M. Bussy in the Deccan, it was determined to encourage the Mahrattas to attack Salabat Zing, in oruer to oblige him to dismiss his French auxiliaries. It was necessary therefore to select a commander well experienced in the political systems of the country, as well as in military affairs ; and for this purpose Mr. Clive, now governor of Fort St. David's, Was invested with a lieutenant-colonel's commission in the king's troops. Three companies of the king's artillery consisting of 100 men each, and 300 recruits, were sent from England on this occasion, and they arrived at Bombay on the 27th of November : when on a sudden the presidency of Madras conceived that this expedition could not be prosecuted without infringing the convention made with the French commander. It was therefore laid aside, and the presidency of Madras directed all their force for the present against Tu-lagee Angria, who had long been a formidable enemy to the English commerce. The dominions of this pirate consisted of several islands near Bombay, and an extent of land on the continent about 180 miles in length, and from thirty to sixty in breadth. He possessed also several forts that had been taken from the Europeans ; the trade of piracy having, it seems, been hereditary in his family, and indeed followed by most of the inhabitants of this coast. His fleet consisted of two kinds of vessels peculiar to this country, named grabs and gallivats ; both having generally two masts, and some three ; the latter being about 200 tons burden, and the former 150. They had forty or fifty oars, by which they might be moved at the rate of four miles an hour ; and were mounted with six or eight pieces of cannon, carrying balls from 6 to 12 Ibs. Angria had

commonly a fleet of sixty or seventy of these vessels. An unsuccessful attempt had been made in 1717, by the presidency of Bombay, against the forts of Geriah and Kennary, the principal strong holds of Angria. Another was made in 1722, under admiral Matthews, against a fort named Coilabley, about fifteen leagues south of Bom-bay : but this also miscarried, through the VOL. XI.

cowardice and treachery of the Portuguese, who pretended to assist the English. The Mahrattas having implored the assistance of the English against this common enemy, commodore William James was sent from Bombay on the 22ncJ of March 1755, with the Protector of forty-four,, the Swallow of sixteen guns, and two bomb ketches ; but with instructions not to hazard the fleet by attacking any of the pirate's forts, only to blockade the harbours, while the Mahratta army carried on their operations by land. He had scarcely commenced his voyage when he fell in with a considerable fleet of the pirates, which he would have taken, had it not been for the timidity and dilatory behaviour of his allies. They had invested three of the forts, but durst not approach nearer than two miles, and even there entrenched themselves up to the chin, to be secure against the fire of the fort. The commodore, provoked at this pusillanimous behaviour, determined, for the honor of the British arms, to exceed the orders he had received. Running within 100 yards of a fort named Severndroog, he in a few hours ruined the walls, and set it on fire ; a powder magazine also blowing up, the people, to the number of about 1000, abandoned the place. The whole force of the attack being then turned upon Goa, a white flag was soon hung out as a signal of surrender. The governor, however, did not wait the event of a capitulation, but passed over to Severndroog, where he hoped to maintain his ground. The fire was now renewed against this fortress ; and, the seamen having cut a passage through one of the gates with their axes, the garrison soon surrendered ; at the same time that two other forts besieged by the Mahrattas hung out flags of truce and capitulated, and thus were four of Angria's forts, hitherto deemed impregnable, subdued in one day. These successes were followed by the surrender of Bancoote, a strong fortified island, now called Fort Victoria, which the British retained in possession : the other forts were delivered up to the Mahrattas. On the arrival of admiral Watson in November 1755, it was determined to root out the pirate at once, by attacking Geriah his capital : but it was so long since any Englishmen bad seen this place, and the reports of its strength had been so much exaggerated, that it was thought proper to first reconnoitre it. It was then attacked by such a formidable fleet, that Angria, losing courage at their approach, fled to the Mahrattas,

leaving Geriah to be defended by his brother. The fort was soon obliged to surrender. All its ramparts were either cut out of the solid rock, or built of stones ten feet long edgeways : in it were found 200 pieces of brass cannon, six brass mortars, and a great quantity of ammunition and military stores, besides money and effects to the value of £125,000 About 2000 people were made prisoners; among whom were the wife, children, mother, brother, and admiral of the pirate ; but they were treated with clemency : and his family, at their own request, continued under the protection of the English at Geriah. The other forts belonging to Angria soon submitted; so that his power on the coast of Malabar was entirely annihilated. While the affairs of the British went on thus

successfully, M. Bussy had been constantly employed near the person of Salabat Zing, and made use of his influence with that prince to enlarge the possessions of the French : at length the prime minister of Salabat Zing represented to him the danger and shame of allowing a small body of foreigners thus to give law to a great prince ; and, having formed a powerful combination against the French, obtained an order for their dismission. M. Bussy took his leave without any marks of disgust, having under his command about 600 Europeans, 5000 sepoys, and a fine train of artillery. Orders were sent to all the polygars to oppose his passage; but, notwithstanding this opposition, Bussy reached Hydra-Dad with very little loss. Here he took possession of a garden belonging to the kings of Golconda, where he resolved to keep his post until succours should arrive from Pondicherry and Masulipatam. Salabat Zing proposed to attack him here ; and, the better to attain his purpose, applied to the English presidency at Midras for a body of troops to assist him in that service. Accordingly a detachment of 400 Europeans and 1500 sepoys was on the point of being ordered to join Salabat, when expresses from Bengal informed them of the greatest danger that had ever threatened the British settlements in Hindostan. This arose from the displeasure of Surajah

Dowla, the new nabob of Bengal. His grandfather Aliverdy Khan having died, in April or May 1756, Surajah succeeded to the nabobship of Bengal, Bahar, and Orixa. He was congratulated on his accession by Mr. Drake, the English president at Calcutta, and readily promised protection to his countrymen ; but he soon after took offence at the imprisonment of Omichund, an eminent Gentoo merchant, who had lived several years under the protection of the English government. Of this circumstance, however, Surajah did not lirectly complain ; but founded his pretence of war upon the conduct of the English in repairing the fortifications of Calcutta; which indeed was absolutely necessary, on account of the great probability of a war with the French. The nabob, however, threatened an attack if the works were not instantly demolished. With this requisition the president and council pretended to comply ; but nevertheless went on with them. Surajah Dowla took the field on the 30th of May 1756, with an army of 40,000 foot, 30,000 horse, and 400 elephants ; and on the 2d of June detached 20,000 men to invest the fort at Cassumbazar, a large town on an island formed by the west branch of the Ganges; This fort was regularly built, with sixty cannon, and defended by 300 men, principally sepoys. The nabob pretending a desire to treat, Mr. Watts, the chief of the factory, was persuaded to put himself in his power; which he had no sooner done, than he was made a close prisoner, along with Mr. Batson, a surgeon, who accompanied him. The two prisoners were tieated with great indignityˆ and threatened with death ; but two of the council who had been sent for by the tyrant's command were sent back again, with orders to persuade the people of the factory to surrender it at discretion. This proposal met with great opposition ; but was at last complied with, though very little to the advantage of the prisoners ; for they were not only deprived of every thing they possessed, but stripped almost naked, and sent to Hoogly, where they were closely confined. The nabob, encouraged by this success, marched directly to Calcutta, which he invested on the 15th. The capture of this city, and the catastrophe that followed, are related under the article CALCUTTA. See also HOLWELL. The news of this disaster put an end to the expedition projected against M. Bussy ; and colonel Clive was instantly despatched to Bengal with 400 Europeans and 1 000 sepoys, on board of the fleet commanded by admiral Watson. They did not arrive till the 15th Of December at a village called Fulta, situated on a branch of the Ganges, where the inhabitants of Calcutta had taken refuge after their misfortune. Their first operations were against the forts of Busbudgia, Tanna, Fort William, and Calcutta, now in the hands of the enemy All these were reduced almost as soon as they approached them. Hoogly, the place of rendezvous for all nations who traded to Bengal (its warehouses and

shops being always filled with the richest merchandise of the country), was likewise reduced and destroyed, with the granaries and storehouses of salt on each side the river; which proved very detrimental to the nabob, by depriving him of the means of subsistence for his army. Surajah Dowla, enraged at this success of the English, now seemed determined to crush them at once by a general engagement. From this, however, he was intimidated by a successful attack on his camp, which induced him to conclude a treaty, on the 9th of February, 1757, on the following conditions : 1. That the privileges granted to the English by the Mogul should not be disputed : 2. That all goods with English orders should pass, by land or water, free of any tax : 3. All the Company's factories which had been seized by the nabob .should be restored ; and the goods, money, and effects, accounted for: 4. That the English should have liberty to fortify Calcutta : and, 5. To coin their own gold and silver.

5. India from the war with France in 1757 to the taking of Pondicherry in 1761. — As intelligence was now received of a war between France and England, an attack was meditated on Chandernagore. It remained therefore only to obtain the consent of the nabob ; but, in ten days after the conclusion of the treaty, he sent a letter to admiral Watson, complaining of his intention, and surmising that the English designed to turn their arms against him as soon as they made themselves masters of Chandernagorc. This was strenuously denied by the admiral; and a number of letters passed, in which the latter made use of expressions which were supposed to imply a tacit consent that Chandernagore should be attacked. An attack was therefore made, and it soon capitulated. This intelligence, however, seemed to be by no means agreeable to Surajah Dowla. He pretended displeasure on account of the English infringing the treaties, and complained that they had ravaged some parts of his dominions. This was denied by the admiral; but from this time both parties made preparations for war. The nabob returned no

answer till the 13th of June, when he sent a declaration of war. The

English council at Calcutta now resolved on the deposition of the nabob ; which at this time appeared practicable, by supporting the pretensions of Meer Jaffier AH Cawn, who had entered into a conspiracy against him. Meer Jaffier had married the sister of Aliverdy Cawn, the predecessor of Surajah ; and was now supported in his pretensions by the general of the horse, and by Jugget Sect the nabob's banker, the richest merchant in all India. By these three the design was communicated to' Mr. Watts, the English resident at the nabob's court, and by him to colonel Clive and the se-cret committee at Calcutta. The management of the affair being left to Mr. Watts and Mr. Clive, it was thought proper to communicate it to Omichund, through whom the correspondence that was necessary might be carried on with Meer Jaffier. This agent proved so avaricious, that it was resolved to serve him in his own way; and, by a piece of treachery to him also, to gain their point with both parties. Two treaties were therefore written out; in one of which it was promised to comply with Omichund's demand, but in the other his name was not even mentioned ; and both these treaties were signed by all the principal persons concerned, admiral Watson alone excepted, whom no political motives could influence to sign an agreement which he did not mean to keep. These treaties, the same in every other respect, were to the following purport: 1. All the effects and factories belonging to Bengal, Bahar, and Orixa, were to remain in possession of the English, nor should any more of the French ever be allowed to settle in these provinces. 2. In consideration of the losses sustained by the English Company, by the capture and plunder of Calcutta, he agreed to pay one crore of rupees, or £1,250,000 sterling. 3. For the effects plundered from the English at Calcutta, he engaged to pay fifty lacks of rupees, or £625,000. 4. For the effects plundered from the Gentoos, Moors, and other inhabitants of Calcutta, twenty lacks, or £250,000. 5. For the effects plundered from the American merchants, inhabitants of Calcutta, seven lacks, or £87,500. 6. The distribution of all these sums to be left to admiral Watson, colonel Clive, Roger Drake, William Watts, James Kilpa-trick, and Richard Becher, esquires, to be disposed of by them to whom they think proper.

Colonel Clive began his march against Surajah Dowla on the 13th of June, the day on which that, chief sent off his last letter. The decisive action at Plassey followed, in which the treachery of Meer Jaffier, who commanded part of the nabob's troops, and stood neuter during the engagement, rendered the victory easy. The unfortunate nabob fled to his capital, but left it the following evening, disguised like a faquir, with only two attendants. By these he appears to have been abandoned and even robbed ; for on the 3d of July he was found

wandering forsaken and almost naked on the road to Patna. Next day he was brought back to Muxadabad ; and a few hours after privately beheaded by Meer Jaffier's eldest son.

The usurper took possession of the capital in

triumph ; and, on the 29th of June, colonel Clive went to the palace, and in presence of the rajahs and giandees of the court solemnly handed him to the musnud (or carpet) and throne of state, where he was unanimously saluted soubahdah or nabob, and received the submission of all present. While these transactions were going forward, the utmost efforts were used to expel the French entirely from Bengal. By the articles of capitulation at Chandernagore, the whole of that garrison were to continue prisoners of war ; but, about the time of signing the treaty, Mr. Law with a small body of troops made his escape out of Cassumbazar, and bent his march towards Patna. There he had been protected by the late nabob ; and, on the commencement of fresh hostilities, had collected about 100 French, the only remains of that nation in Bengal. With these he was within two hours' march of Surajah Dowla's camp when the battle of Plassey was fought ; on hearing of which he stopped; but afterwards, being informed of the nabob's escape, he marched again to his assistance, and was within a few hours of joining him when he was taken. Three days after he was pursued by Major Eyre Coote at the head of 223 Europeans, three companies of sepoys, fifty Lascars, or Indian sailors, and ten Marmutty men, or pioneers, to clear the roads, together with two pieces of cannon, six-pounders. On this expedition the major exerted his utmost diligence to overtake his antagonist, and spent a very considerable space of time in the pursuit ; for, though he set out on the 6th of July, he did not return to Muxadabad till the 1st of September. Mr. Law, however, had the good fortune to escape. Major Coote now obliged Ramnarain, the most powerful rajah in the country, to swear allegiance to Meer Jaffier; and laid open the interior state of the northern provinces. Before his return, admiral Pocock had succeeded to the command of the fleet on the decease of admiral Watson. News were also received, that the French had been very successful on the coast of Coromandel.

Salabat Zing had applied to the English for assistance against the French ; but, as they were prevented from performing their agreement by the disaster at Calcutta, he was under the necessity of accommodating the differences with his former friends, and admitting them again into his service. M. Bussy was now reinforced by the

troops under Law, who had collected 500 Europeans in his journey. With these he undertook to reduce the English factories of Inge-ram, Bandermalanka, and Vizagapatam : but as the latter was garrisoned by 140 Europeans and 420 sepoys, it was supposed that it would make some defence ; by the conquest of it, however, the French became masters of all the coasts from Ganjam to Masulipatam. In the southern provinces the like bad success attended the British cause. The rebel polygars, having united their forces against Mazuphe Cawn, obtained a complete victory ; after which, the English sepoys being prevailed upon to quit Madura, the conqueror seized upon that city for himself. In the beginning of 1758 the French made an attempt on Trichinopoli. The command was given to M. d'Auteuil, who invested the place

with 900 men in battalion, 4000 sepoys, 100 hussars, and a great body of Indian horse. The place was then in no condition to withstand such a force, as most of the garrison had gone to besiege Madura under captain Caillaud ; but hearing of the danger he marched back, and entered the town by a road which the enemy had neglected to guard : when the French general drew off his forces disconcerted, and returned to Pondicherry. Captain Caillaud then laid siege to Madura, but was so vigorously repulsed, that he was obliged to turn the siege into a blockade, and, before any progress could be made in it, Mazuphe Cawn was prevailed upon to resign it for the sum of 170,000 rupees. A large garrison of sepoys was now again therefore put into the place, and Caillaud returned to Trichinopoli. An attempt was next made by colonel Ford on Nellore ; but the enterprise proved unsuccessful, through the unheard of cowardice of a body of sepoys, who, having sheltered themselves in a ditch, absolutely refused to stir a step. Several other enterprises of no great moment were undertaken; but the event was on the whole unfavorable to the British, whose force by the end of the campaign was reduced to 1718 men, while that of the French amounted to 3400 Europeans, of whom 1000 were sent to Pcndicherry.

Both parties now received considerable reinforcements from Europe ; admiral Pocock being joined on the 24th of March by commodore Stevens with a squadron of five men of war, and the French by nine men of war and two frigates,- having on board general Lally with a large body of troops. The British admiral went in quest of them, and an engagement took place, in which the French were defeated with the loss of 600 killed and a great number wounded ; while the English had only twenty-nine killed and eighty-nine wounded. The former returned to Pondicherry, where they landed their men, money, and troops. After the battle three of the British captains were tried for misbehaviour, and two of them dismissed from the service. As soon as his vessels were refitted, the admiral sailed again in quest of the enemy ; but could not bring them to an action before the 3d of August, when the French were defeated a se-cond time, with the loss of 251 killed and 602 wounded. Notwithstanding this success at sea, the British were greatly deficient in land forces ; the re-establishment of their affairs in Bengal having almost entirely drained the settlements on the coast of Coromandel. The consequence of this was the loss of Fort St. David, which the French general Lally reduced, destroying the fortifications and villages, and ravaging the country in such a manner as filled the natives with indignation. He proved successful, however, in the reduction of Devicottah, but was obliged to retreat with loss from before Tanjore, his army being distressed for want of supplies. From this time the affairs of the French daily declined. On their retreat from Tanjore, they abandoned the island of Syringham ; they took Tripatore, however, but were defeated in their designs on the important post of Chingla-pet, about forty-five miles south-west of Madras. Their next enterprises on Fort St. George and

Madras were equally unsuccessful. The latter was besieged from the 12th of December, 1758, to the 27th of February, 1759, when they were obliged to abandon it with great loss.

The remainder of the year 1 759 proved entirely favorable to the British arms. D'Ache the French admiral, who had been very roughly handled by admiral Pocock on the 3d of August, 1758, having refitted his fleet, and been reinforced by three men of war at the islands oi Mauritius and Bourbon, now ventured once more to face his antagonist. A third battle en-sued on the 10th of September, 1759, when the French, notwithstanding their superiority both in number of ships and weight of metal, were obliged to retreat with considerable loss ; having 1500 men killed and wounded, while those on board the English fleet did not exceed 569. By the 17th of October the British

fleet was completely refitted; and admiral Pocock, having been joined by a reinforcement of four men of war, soon after returned to England. All this time the unfortunate general Lally had been employed in unsuccessful endeavours to retrieve the affairs of his countrymen ; but his fate was at last decided by laying siege to Wandewash, which had lately been taken by colonel Coote. The advantage in numbers was entirely in favor of the French general ; the British army consisting only of 1700 Europeans, including artillery and cavalry, while the French amounted to 2200 Europeans. The auxiliaries on the English side were 3000 black troops, while those of the French amounted to 10,000 black troops, and 300 Caffres ; nor was the difference less in proportion in the artillery, the English bringing into the field only fourteen pieces of cannon and one howitzer, while the French had twenty-five pieces in the field and five on their batteries against the fort. The battle began about 11 A. M. on the 22d of January, 1760, and in three hours the whole French army fled towards their camp; but quitted it on finding themselves pursued by the English, who took all their cannon except three small pieces. They collected themselves under the walls of Cheltaput, about eighteen miles from the field of battle, and soon after retired to Pondicherry. Colonel Coote now caused the country to be wasted to the very gates of this fortress, by way of retaliation for what the French had done in the neighbourhood of Madras. He then set about the siege of Cheltaput, which surrendered in one day ; a considerable detachment of the enemy was intercepted by captain Smith ; the fort of Timmery was reduced by major Monson, and the city of Arcot by captain Wood. This last conquest enabled the British to restore the nabob to his dominions, of which he had been deprived by the French ; and it greatly weakened both the French force and interest in India. M. Lally, in the mean time, had recalled his forces from Syringham, by which means he augmented his army with 500 Europeans. These were now shut up in Pondicherry, which was become the last hope of the French in India. To complete their misfortunes, admiral Cornish arrived at Madras with six men of war ; and, as the French had now no fleet in these parts, the admiral readily engaged to co-operate with the land forces. The consequence

was the reduction of Carical, Chellambrum, and Verdachellum,' by a strong detachment under major Monson; while colonel Coote reduced Permacoil, Almamverpa, and Waldour. He was thus at last enabled to lay siege to Pondicherry itself; and the place capitulated on the 15th of January, 1761, by which an end was put to the power of the French in this part of the world.

6. Of the British wars with the native powers, to the appointment of lord Clive as governor of Bengal. — While the British were thus employed Meer Jaffier, the nabob of Bengal, who had been raised to that dignity by the ruin of Surajah Dowla, found himself in a very disagreable situation. The treasure of the late nabob had been valued at sixty-four crore of rupees (about £80,000,000 sterling), and in expectation of this sum, Meer Jaffier had submitted to the exactions of the English. On his accession to the government, however, the treasure of which he became master fell so much short of expectation, that he could not fulfil his engagements to them, and was reduced to the extremity of mortgaging his revenues. In this dilemma his grandees became factious and discontented, his army mutinous for want of pay, and himself odious to his subjects. The English themselves, who had raised him to supreme power, also brought a variety of charges against him. On the 13th of June, 1760, Mr. Holwell wrote from Calcutta to Mr. Warren Hastings, that he had received, by express, intelligence of the murder of the princesses of Aliverdy Khan and Shah Ahmet in a most inhuman man-ner, by Meer Jaffier's orders. In like manner we are told that many others of Surajah Dowla's relations had perished ; yet when it was thought proper to replace Meer Jaffier, in 1761, all these dead persons were found alive excepting two. It must also be remembered, in behalf of the unfortunate nabob, that, besides the sums exacted of him by the English at his accession, he had ceded to them a large extent of territory, and granted them so many immunities in trade, that he had in a manner deprived himself of all his resources. There were accounts of this remarkable revolution published at the time materially differing from one another. Our troops according to each of them took possession of the palace ; Meer Cossim was raised to the musnud ; and the old nabob hurried into a boat, with a few of his domestics and necessaries, and sent away to Calcutta in a manner wholly unworthy of the high ,ank he so lately held. The servants of the company, who were the projectors of the revolution, made no secret that there was a present promised them of twenty lacks of rupees from Cossim, who was desirous of making the first act of his power the assassination of Jaffier, and was very much displeased when he found that the English

intended giving him protection at Calcutta.

It could scarcely be supposed that Meer Cos-sim, raised to the nabobship in this manner, would be more faithful to the English than Meer Jaffier had been. Nothing advantageous to the interests of the company could indeed be reasonably expected from such a revolution. No successor of Meer Jaffier could be more entirely in subjection than the late nabob, from his natural

imbecility, had been. This last consideration had induced many of the council at first to op-pose the revolution ; and indeed the only plausible pretence for it was, that the administration of Meer Jaffier was so very weak, that, unless he was aided and even controlled by some persons of ability, he himself must soon be ruined, and very probably the interests of the company along with him. Meer Cossim, however, was a man of a very different disposition from his father-in-law. As he knew that he had not been served by the English out of friendship, so he did not think of making any return out of gratitude ; but, instead of this, considered only how he could most easily break with such troublesome allies. For a while, however, it was necessary for him to take all the advantage he could of his alliance with them. By their assistance he cleared his dominions of invaders, and strengthened his frontiers, and he reduced the rajahs who had rebelled against his predecessor, obliging them to pay the usual tribute; by which means he repaired his finances, and thereby secured the fidelity of his troops. Having thus, by the assistance of the English, brought his government into subjection, he took the most effectual means of securing himself against their power. As the vicinity of his capital, Muxadabud, to Calcutta, gave the English factory there an opportunity of inspecting his actions, and interrupting his designs when they thought proper, he took up his residence at Mongheer, a place 200 miles farther up the Ganges, which he fortified in the best and most expeditious manner. Sensible of the advantages of the European discipline, he now resolved to new-model his army. For this purpose he collected all the Armenian, Persian, Tartar, and other soldiers of fortune, whose military characters might serve to raise the spirits of his Indian forces, and abate their natural timidity. He also collected all the wandering Europeans who had borne arms, and the sepoys who had been dismissed from the English service, and distributed them among his troops. He changed the fashion of the Indian muskets from matchlocks to firelocks; and, as their cannon were almost as deficient as their small arms, he procured a pattern of one from the English, by which he soon formed a train of artillery : having thus done every

thing in his power to enable himself to withstand the English by force of arms, he resolved also to free his court from their emis-saries, by imprisoning or putting to death every person of any consequence in his dominions who had shown any attachment to their interest. His next step was to free himself from those restraints which his predecessor Meer Jaffier, and even he himself, had been obliged to lay upon the Indian trade, to gratify the avarice of his European allies. At his accession, indeed, he had ceded to the company a tract of land worth no less than £700,000 annually, besides £70,000 a-year on other accounts. All this, however, was not sufficient; the immunities granted them in trade were of still worse consequence than even those vast concessions. He knew by experience the distress which these immunities had brought upon his predecessor, and therefore determined to put an end to them. In pursuance

of this resolution, he began in 1762 to subject the English traders every where to the payment of certain duties, and required that their disputes, if beyond the limits of their own jurisdiction, should be decided by his magistrates. This gave such alarm at Calcutta, that, in November

1762, the governor Mr. Vansittart waited on him in person at Mongheer, to expostulate with him upon the subject. The nabob answered his remonstrances by saying that if the servants of the English company were permitted to trade in all parts, and in all commodities, custom free, they must of course draw all the trade into their own hands, and his customs would be of little value. That he would sooner collect no customs, and so draw a number of merchants into the country and increase his revenues by encouraging the cultivation and manufacture of a large quantity of goods. By these intimations Mr. Vansittart was much disconcerted ; and under the circumstance thought proper to submit to certain regulations, by which the trade of the English was put under restrictions. This excited the utmost indignation at Calcutta. On the 17th of January,

1 763, the council passed a resolution, disavow-ing the treaty made by

the governor ; affirming that he assumed a right to which he was by no means authorised ; that the regulations proposed were dishonorable to them as Englishmen, and tended to the ruin of all public and private trade ; and that the president's issuing out regulations, independent of the council, was an absolute breach of their privileges. They sent orders therefore to all the factories, that no part of the agreement between the governor and nabob should be submitted to. Application was again made to Meer Cossim to persuade him to a third agreement ; but, before the success of this nego-tiation could be known, hostilities commenced on the part of the English. There was at that time in Patna (a city on the Ganges, about 300 miles above Calcutta), a fortified factory belonging to the East India Company, where were a a few European amd Indian soldiers. By this factory the city was suddenly attacked on the 25th of June 1763, and instantly taken, though it was defended by a strong garrison. The governor and garrison fled into the country on the first appearance of danger ; but, perceiving that the victors took no care to prevent a surprise, he suddenly returned with a reinforcement, retook the city, and drove all the English into their fort. Eventually the English left the fort with a design to retreat into the territories of a neighbouring nabob ; but being pursued by a superior force they were all either killed or taken. The nabob at the same time slaughtered the deputies who had been sent him by the council of Calcutta, to treat about a new agreement with regard to commercial affairs. These acts of treacherous hostility were soon followed by a formal declaration of war. Meer Jaffier, notwithstanding the crimes formerly alleged against him, was proclaimed nabob of Bengal, and the English army immediately took the field under the command of major Adams. The whole force, however, at first consisted only of one regiment of the king's troops, a few of the Company's, two troops of European cavalry, ten companies of sepoys, and

twelve pieces of cannon. These very soon came to action with the enemy ; and cleared the country of them as far as Cossimbuzar River, a branch of the Ganges which lay between Calcutta and Muxadabad, or Murshedabad, the capital of the province.

All the pains taken by Meer Cossim to discipline his troops had not made them able to cope with the Europeans. The English were suffered to pass the river without opposition ; but an army of 10,000 Indians was advantageously posted between the river and the city. These were entirely defeated, and major Adams pushed on directly for the capital. In his way he found the Indians again strongly posted with

entrenchments fifteen feet high, and defended by a numerous artillery. Tins strong post was taken by stratagem; a feint being made with a small body of troops against that part where the enemy had collected their greatest strength. In the mean time the greatest part of the British army had in the night marched round the Indian fortification, and by day break made a furious assault on a place where there was only a slight guard. These instantly fled ; the entrenchments were abandoned ; and the city fell into the hands of the conquerors. The British now penetrated into the heart of the province, crossed the numerous branches of the Ganges, and traversed morasses and forests in quest of the enemy. Meer Cossim, on the other hand, was not wanting in his defence ; but the utmost efforts he could use were totally insufficient to stop the career of an enemy so powerful and victorious. The two armies met on the banks of a river call-ed Nunas Nullas, on the second of August 1763. Cossim had chosen his post with great judgment, and his forces had much of the appearance of an European army, not only in their arms and accoutrements, but in their division into brigades, and even in their clothing. The battle was more obstinate than usual, being continued for four hours : but, though the Indian army consisted of no fewer than 20,000 horse and 8000 foot, the English proved in the end victorious, and the enemy were obliged to quit the field with the loss of all their cannon. From this time the Indians did not attempt any regular engagement with the British. They made a stand indeed at a place named Auda Nulla, which they had fortified in such a manner that it seemed proof against any sudden attack. But here also they suffered themselves to be deceived, and the place was taken with great slaughter. They now abandoned a vast tract of country, to the very gates of Mongheer. The next operation was the siege of Mongheer itself ; which, notwithstanding all the pains Meer Cossim had been at to fortify it, held out only nine days after the trenches were opened : so that nothing now remained to complete the conquest of Bengal but the reduction of the city of Patua. Meer Cossim, in the mean time, enraged at the progress of the English, vented his rage on the unhappy prisoners taken at Patna : all of whom, to the number of about 200, he caused to be inhumanly murdered. Dr. Fullarton was the only person who escaped, hav-ing received a pardon from the tyrant a few days before the massacre. This inhumanity was far

being of any service to the cause of Meer Cossim. Major Adams marched without delay from Mongheer to Patna ; and, as the place was indifferently fortified, it made but a feeble resistance. The cannon of the English soon made a practicable breach, and in eight days this great city was taken by storm. Thus the nabob was deprived of all his fortified places, his army was reduced to a small body, and himself obliged to fly to Sujah Dowla nabob of Oude, who acted as grand vizier to the Mogul. Here he was kind-ly received, and an asylum promised for his per-son ; but admittance was refused to his army, nor would the nabob consent to make his country a seat of war. The English were entire masters of Bengal ; for, though Meer Jaffier was proclaimed nabob, he had no authority but what they conferred on him. Major Adams did not long survive the conquest of Patna, which was taken on the 6th November 1763; he died in March 1764. Meer Cossim being thus driven out, an agent was sent from Calcutta to Sujah Dowla, proposing an alliance with him and the Mogul, and offering to asssist them against Meer Cossim or any other enemy who should attempt an invasion of their dominions; in return for which it was expected that they should declare themselves open enemies to Cossim, and use their utmost endeavours to seize and deliver him up with all his effects. This design was communicated to Major Adams on the 8th of December 1 763 ; but, as he was next day to resign the command of the army, major Carnac was desired to watch the motions of Meer Cossim, as well as to guard the dominions of Meer Jaffier against any hostilities which might be attempted. It soon appeared that the friendship of the English was not what Sujah Dowla desired. He considered them as usurpers, who, having obtained a footing in the country under pretence of commerce, could be satisfied with nothing less than the entire possession of it, to the ruin of the original inhabitants. In the beginning of February 1764, therefore, he had determined to assist Meer Cossim in attempting to recover Bengal, and the president and council of Calcutta determined to commence an immediate and offensive war against him. But difficulties occurred in carrying on a war at this time, arising from the death of major Adams, whose name had become formidable to the Indians, and the mutinous disposition of the army. The former was obviated by the appointment of colonel Hec-tor Munro, who, in military skill, was not inferior to his predecessor ; and a most severe example of the mutineers was made, twenty-four of whom were blown away from the mouths of cannon. Meer Cossim commenced hostilities by cutting off a small party of English troops, and sending their heads to the Mogul and Sujah

Dowlah. An army of 50,000 men was collected, with a mest formidable train of artillery. The hostile armies met on the 22nd of October, 1764, at Buxard, on the Carumnassa, about 100 miles above Patna. The event was similar to that of other engagements with the British. The allied Indian army was defeated with the loss of 6000 killed on the spot, 130 pieces of cannon, a proportionable quantity of military stores, and

all their tents; while, on the side of the conquerors, only thirty-two Europeans and 239 Indians were killed, and fifty-seven Europeans and 473 Indians wounded. The only place of strength now belonging to the allies on this side the river was a fort named Chanda Geer, which stood on the top of a high hill, or rather rock, situated on the bank of the Ganges, by which it could be constantly supplied with provisions; and as to military stores, it stood in little need of them, so long as stones could be found to pour down on the assailants. Notwithstanding these difficulties, however, colonel Munro advanced to attack it, but was repulsed ; and, though the attack was renewed next day, it was attended with no better success : on which the English commander proceeded to encamp with his army under the walls of Benares. Soon after this, colonel Munro being recalled, the command devolved on major Sir Robert Fletcher. The nabob in the mean time, instead of attacking the English army at once, contented himself with sending out parties of light horse to skirmish with its advanced posts, while the main body lay at the distance of about fifteen miles from Benares. On the 14th January 1765 Sir Robert ventured at midnight to break up his camp under the walls of Benares, and to march off towards the enemy. In three days he came up with the main body, who retreated before him ; on which he resolved to make another attempt on Chanda Geer, which he reduced ; or rather the garrison mutinied for want of pay, and obliged the commander to surrender. The reduction of Chanda Geer was followed by that of Eliabad, a large city on the Ganges, between sixty and seventy miles above Chanda Geer, defended by thick and high walls, and a strong fort. Sujah Dowla in the mean time had been abandoned by the Mogul, who concluded a treaty with the English soon after the battle of Buxard. He, however, gathered together the remains of his routed armies, and applied to the Mahrattas for assistance. This native people, though very formidable to the other nations of Hindostan, had never been able to cope with the English. On the 20th of May, 1765, general Carnac, having assembled his troops, marched immediately to attack them ; and, having gained a complete victory at a place called Calpi, obliged them to retreat with precipitation across the Yumna. Sujah

Dowla, now destitute of every resource, determined to throw himself on the clemency of the English. Previous to this, however, he allowed Meer Cossim and the assassin Somers to escape ; nor could any consideration ever prevail upon him to deliver them up. Three days after the battle of Capi, the nabob surrendered himself unconditionally to general Carnac.

In the beginning of February this year died Meer Jaffier AH Cawn, nominal nabob of Bengal. The succession was disputed betwixt his eldest surviving son Najem il Doula, a youth of about eighteen years of age, and a grandson by his eldest son Miran, at that time only seven years old. As the English were absolute sovereigns of the country, it was the council of Calcutta which had, in fact, to decide this question. The point being carried in favor of Najem, it

was next debated on what terms he should be admitted to the succession. The late nabob, among other impositions, had obliged himself to support an army of 12,000 horse, and as many foot. It was alleged that he had not fulfilled his engagement, and that he had disbanded most of the troops. It was, therefore, now judged ex pedient that the nabob should settle £800,000 annually on the company, to be paid out of the treasury; that he should also discard the prime minister Nuncomar, and receive in his place a person appointed by the council, who was to act in the double capacity of minister and governor. The council were also to have a negative upon the nomination of all the superintendants and principal officers employed in collecting or receiving of the revenues. With these extravagant requisitions the young nabob was obliged to comply, though he had discernment enough to perceive that he was now a mere slave to the council of Calcutta. Obliged by treaty to dismiss Nuncomar from the office of vizier, he still continued to show him the same favor, until at last he was charged with carrying on a treasonable correspondence with Sujah Dowla, for which the nabob was enjoined to send him to Calcutta to take his trial. The unfortunate prince used every method to deliver his favorite from the impending danger, but to no purpose : he

was obliged to submit to the mortification of having all his desires with regard to his release rejected, though the committee afterwards set him at liberty without trial. The extraordinary powers thus exerted by the council of Calcutta seem at last to have induced the company to desire some more efficient control over them. The great character which lord Clive had already gained in the east justly marked him out as a proper person for adjusting their affairs. On the 3rd of May 1765 he, therefore, arrived, with full powers as commander-in- chief, president, and governor of Bengal. An unlimited power was also committed to a select committee, consisting of his lordship and four gentlemen, to act and determine every thing themselves, without dependence on the council. It was, however, recommended in their instructions to consult the council in general ; but the sole power of determining all cases was left with them, until the troubles of Bengal should be entirely ended. By these gentlemen a plan of reformation was instantly set about : by which, however, violent disputes were occasioned ; but the committee, disregarding these, exerted their authority to the full extent, seldom even acquainting the council with their transactions, and never waiting for their opinion.

7. From the arrival of lord Clive, as president of Bengal, to the death of Hyder Aly. — Lord Clive found that the success of the British arms could be productive of nothing but wars ; that to ruin Sujah Dowla was to break down the strongest barrier which the Bengal provinces could have against the incursions of the Mahrattas and other native powers to the west, who had long desolated the northern provinces ; and that the Mogul, with whom the company had concluded a treaty, was utterly unable to support himself, and would require the whole British power in the east to

secure him in his dignity. He tnerefore concluded a treaty with Sujah Dowla. The Mogu' emperor was satisfied by obtaining a more ample revenue than he had for some time enjoyed, by which means he might be enabled to march an army to Delhi : for the company his lordship obtained the office of duan, or collector of revenues, for the province of Bengal and its dependencies. Thus Sujah Dowla was again put in possession of his dominions, excepting a small territory which was reserved to the Mogul, and estimated at twenty lacks of rupees, or £250,000 annually. The company were to pay twenty-six lacks of rupees, amounting to £325,000 sterling. They engaged also to pay to the nabob of Bengal an annual sum of fifty-three lacks, or £662,500 for the expenses of govenment, and the support of his dignity. The remainder of the revenues of Bengal were allotted to the company,

who, on their part, guaranteed the territories in possession of Sujah Dowla and the Mogul.

The East India Company had now acquired the sovereignty of a territory equal in extent to the most nourishing kingdom in Europe. By all this, however, they were so far from being enriched, that the disorder of their affairs attracted the attention of government, and gave the British ministry an opportunity at last of depriving them of their territorial possessions, and subjecting the province of Bengal to the authority of the crown. New misfortunes also occurred in the east, and the company found a most formidable enemy in Hyder Aly. This man had raised himself from the rank of a sepoy, to be one of the most considerable princes in Hindostan. Being sensible that the power of the English was an insuperable bar to his designs, he practised on the nizam of the Deccan ; and partly by promises, partly by threats, engaged him to renounce his alliance with the company, and to enter into a war against them. Having introduced the European discipline among his troops, he imagined that, with the advantage of numbers, he should be able to cope with his antagonists. In this, however, he was deceived ; for, on the 16th September 1767, his army was entirely defeated by colonel Smith near Trino-mally ; after which the nizam deserted his new ally, and concluded another treaty with the English. From the latter, however, he did not obtain peace, but at the expense of ceding to them the Duanny of the Balegat Carnatic, which includes the dominions of Hyder Aly and some petty princes. Hyder, thus deserted by his ally, transferred the seat of war to a mountainous country, where, during 1767, nothing decisive could be effected ; but his Indian cavalry was sometimes enabled to cut off the supplies, and interrupt the communications of the British. During these operations some ships were fitted out at Bombay, which conveyed 400 European soldiers, and about 800 sepoys to attack Mangalore, one of Hyder's principal sea-ports. This enterprise proved successful, and nine ships were broughtaway; but too small aganisonhaving been left in the place, it was almost immediately after retaken. In the mean time the appointment of field deputies to attend the army, and to control and superintend the conduct of the commander-Drawn birJ.W.T.Awh

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in-chief, greatly weakened the British operations. Hyder Aly had the prudence to avoid a general engagement, but frequently intercepted the convoys of the English, cut off their detached parties, and wearied them out with long and continual marches. The news of his success, against an enemy hitherto invincible by all the powers of India, so raised his reputation, that adventurers flocked to him from all parts ; by which means his cavalry soon increased to upwards of 90,000, to which, however, his infantry bore no proportion. Notwithstanding all his success, the forces of Hyder Aly were altogether unable to cope with those of Britain, even when there was the greatest imaginable disparity of numbers. A detachment of the company's forces had made an assault upon a fort called Mulwaggle, in which they were repulsed with some loss. This, with the small number of the detachment, encouraged Hyder to march, at the head of a great part of his army, to the protection of the fort. The commanding officer however, colonel Wood, did not hesitate, with only 460 Europeans and 2300 sepoys, to attack this army, consisting of 14,000 horse, 12,000 men 3rmed with matchlock guns, and six battalions of sepoys. The engagement lasted six hours ; when at last Hyder, notwithstanding his numbers, was obliged to retreat, leaving the field covered with dead bodies ; and the loss of the British was upwards of 300 killed and wounded. This engagement, however, was attended with no consequences affecting the war in general, which went on for some time in the same manner, and greatly to the disadvantage of the company. The divisions and discontents among the officers and council daily increased, the soldiers deserted, and every thing went to ruin. The revenues of the establishment of Madras being at Ian unequal to the expenses of the war, large remittances were made from Bengal to answer that purpose ; and, as these were made in a kind of base gold coin, the company is said by that means alone to have lost £40,000 in the difference of exchange. At last Hyder Aly suddenly appeared within a few miles of Madras, which occasioned such an alarm, that the presidency were induced to enter into a negociation with him. An offensive and defensive treaty was therefore concluded on the 3d of April 1769, on the simple condition that the forts and places taken on both sides should be restored, and each party sit down contented with their own expenses.

It was stipulated that, in case of either party being attacked by their enemies, the other should give them assistance : and in this case even the number of troops to be supplied by each was specified. It soon after appeared, however, that the presidency of Madras was resolved to pay very little regard to this engagement. Hyder Aly, being in a little time after involved in a war with the Mahrattas, applied for assistance ; but was refused by the presidency, who pretended that they themselves dreaded a quarrel with the Mahrattas. llyder now, therefore, found himself overmatched, and applied several times to the English for the assistance he had a right to expect ; but was constantly refused. This first

appears to have inclined him to apply to the French, and by their means he obtained military stores in the greatest abundance, a number of experienced officers and soldiers, and much ot the European discipline. Thus, in a short time, imagining himself a matcu for the Mahrattas, he renewed the war, and gaiaed such decisive advantages as quickly obliged them to conclude an advantageous treaty with him. It now appeared that the English had not much hesitation in quarrelling with the Mahrattas. These tribes were originally governed by princes called rajahs, who reigned at Setterah ; and, though in process of time they came to be divided into a number of petty states, yet they paid a nominal respect to the ram-rajah, who had a right to assemble the chiefs, and order out their troops on any emergency. By degrees the dignity of ram-rajah or sou-rajah (as he was also called) became merely titular, the administration being entirely possessed by the paishwa or chancellor. This office being usurped by one particular family, Nana-row, the reigning paishwa seized the ram-rajah, and confined him in a fortress. At his death he left two sons, Mada-row and Narain-row ; of whom the former, being the elder, succeeded him in the paishwaship. lonogee Boosla, or Bouncello, the immediate predecessor of Modagee Boosla, rajah of Berar, was one of the pretenders to the dignity of ram-rajah, as being the nearest of kin ; at the same time that Roga-nut-row, called also Ragobah, uncle to Mada-row himself, pretended to the paishwaship. On this account the latter was confined by Mada-row, but he imprudently released him a little before his death, and recommended to him in the most affectionate manner the care of his brother Narain-row, who was to succeed to the paishwaship. Rogonaut, notwithstanding this, murdered Narain-row, and then fled to Bombay, where, on promising a cession of territory, ho was protected and encouraged in his pretensions. The Mahrattas remonstrated against his behaviour ; but the English had determined to profit by the civil

dissentions of the Indian powers, and paid little regard to the justice or injustice of their cause. The Mahrattas therefore not only made up their differences with Hyder Aly, but became determined enemies to the English, at the same time that a confederacy was formed among the most powerful princes of India to expel from that part of the world these western intruders.

The resentment of Hyder Aly was particularly directed against the presidency of Madras ; he had also received fresh provocation by their causing a body of troops to march through his dominions without his leave, to the assistance of a prince for whom he had no friendship; as also by the capture of the French settlement of Mahie, on the coast of Malabar, which he said was within his dominions, and consequently that the French were under his protection. His troops were therefore assembled from every quarter, and the greatest preparations made for a powerful invasion. The presidency of Madras in the mean time spent their time in mutual altercations, neglecting even to secure the mountain passes, through which alone an invasion

could be made, until their active antagonist, having seized and guarded those passes, suddenly poured out through them 100,000 men, among whom was a large body of European troops under French officers, and commanded by colonel Lally, a man of great bravery and experience. The alarm was given on the 24th of July 1780, that Hyder Aly's horse were only nine miles from Madras. The inhabitants instantly deserted their houses, and fled into the fort ; while the unresisted barbarian burnt the villages, reduced the inferior forts, and prepared to lay siege to the capital. It being now absolutely necessary to make some resistance, measures were taken for assembling the troops ; in doing which, an express was sent to colonel Baillie, at that time at Gumeroponda, twenty-eight miles from Madras, to proceed thence directly to Conjeveram with the corps under his command. But the first regiment of cavalry posi-sively refused to move without money ; and, as they persisted in their resolution, were at last made prisoners, and sent to Madras. The main army, then consisting of 1500

Europeans, and 4200 sepoys, under Sir Hector Munro, with their train of artillery, proceeded towards Conjeveram. On their arrival they found the town in flames, great bodies of the enemy's cavalry advancing on both flanks, and no appearance of colonel Baillie's detachment. The march of this body had been impeded by a small river, swelled by a sudden fall of rain. Hyder Aly having now raised the siege of Arcot, in which he had been employed, marched towards Conjeveram ; in the neighbourhood of which he encamped, and in the course of several days, at different times, offered battle. On the 6th of September, he detached his son Tippoo Saib with the flower of his army to cut off the detachment under colonel Baillie, who was now at Perrambaukam, a small village distant about fifteen miles, he himself remaining in the neighbourhood of Conjeveram, to watch the motions of Sir Hector Munro. The detachment under Tippoo consisted of 30,000 horse, 8000 foot, and twelve pieces of cannon. Notwithstanding this superiority in number, however, they were bravely repulsed by colonel Baillie's troops ; and a junction was effected with a detachment under Sir Robert Fletcher, sent by Sir Hector Munro. This was on the 9th of September, and next morning orders were given for the whole army to march ; colonel Fletcher's detachment being dispersed in different parts of the line. About ten at night several guns began to open on the rear of the English, on which colonel Baillie detached captain Rum-ley with five companies of sepoy grenadiers to storm. This he could not accomplish, being interrupted by an unexpected torrent, which it was found impossible to ford. Next day Hyder Aly himself joined Tippoo, and suddenly opened on colonel Baillie's detachment the fire of from sixty to seventy' pieces of cannon, with an innumerable quantity of rockets ; and for a while Hyder's numerous cavalry, supported by his regular infantry and European troops, driven on by threats, encouraged by promises, and led on by his most distinguished officers, bore on our little army in different quarters, without, however, making

the least impression. Our men, both Europeans and sepoys, repeatedly presented and recoveied their fire-arms as if they had been manoeuvring on a parade. The enemy were repulsed in evety attack ; numbers of their best cavalry were killed, and many more were wounded; even their infantry were forced to give way : and Hyder would have ordered a retreat, had it not been for the advice of general Lally, who informed him that it was now too late, as general Munro was most probably advancing on their rear from Conjeveram ; for which reason nothing remained but to break the detachment by their artillery and cavalry. Tippoo Saib had by this time collected his party

together, and renewed the cannonade ; and, at the same time that the English were under the necessity of sustaining an attack both from the father and son, two of their tumbrils were blown up by Hyder's guns, and a large opening made in both lines. They had now no other ammunition than grape ; their guns discontinued firing : and in this dreadful situation, under a terrible fire not only of guns but rockets, losing great numbers of officers and men, they remained from half-past seven till nine o'clock. Hyder Aly, now perceiving that the guns were quite silenced, came with his whole army round their right flank. The cavalry charged them in distinct columns, and in the intervals between these the infantry poured in vollies of musketry with dreadful effect. Mhiar Saib, with the Mogul and Sanoor cavalry, made the first impression. These were followed by the elephants and the Mysorean cavalry, which completed the overthrow of the detachment. Colonel Baillie, though grievously wounded, rallied the Europeans, and once more formed them into a square, and with this handful of men he gained an eminence, where, without ammunition, and most of the people wounded, he resisted and repulsed thirteen separate attacks : but, fresh bodies of cavalry continually pouring in, they were broken without giving way. Many of our men, desperately wounded, raising themselves from the ground received the enemy on their bayonets. Captain Lucas's battalion of sepoys, at the time when our men moved up to a rising ground, was stationed to the right of the European grenadiers ; but that corps seeing the Europeans in motion, and misunderstanding perhaps this evolution for a retreat, broke in the utmost confusion. The Europeans, bravely sustaining their reputation, remained in this extremity of distress steady and undaunted, though surrounded by the French troops, and by Hyder's cavalry to the number of 40,000. They even expressed a desire, though their number did not exceed 400, of being led on to the attack. At length colonel Baillie, finding that there was no prospect of being relieved by general Munro, held up a flag of truce to one of the chiefs of Hyder's army. But this was treated with contempt, and the surdar endeavoured at the same time to cut off the colonel. A few minutes after; however, our men received orders to lay down their arms, with intimation that quarter would be given. This order was scarcely complied with, when the enemy rushed in upon them in the most sivage and brutal manner; and, but foi

the humane interposition of the French commanders, the gallant remains of our little army must have fallen a sacrifice to that savage thirst of blood with which the tyrant disgraced his victory. In this unfortunate action nearly 700 Europeans were killed on the spot: the loss on liyder Aly's part was so great, that he industriously concealed it; being enraged that the conquest of such an inconsiderable body should C'jst him so many of his bravest troops. Ever after he seemed to consider the English with an extreme degree of terror; insomuch that, notwithstanding his present exultation on account of this victory, he no sooner heard a report of Sir Hector Munro's march to attack him, than he left his camp in the utmost confusion, abandoning great part of his tents and baggage, and all the wounded.

On the news of colorel Baillie's disaster, the supreme council of Bengal requested Sir Eyre Coote to take upon him the management of the war ; and a large supply of men and money was instantly decreed. In the interim Sir Hector Munro had been greatly harassed on his march to Madras, whither he had retreated after colonel Baillie's disaster; the forces of Hyder Aly had infested all the places in that neighbourhood in such a manner, as in a great measure to cut off all supplies ; and Arcot, the capital of the most faithful ally the British ever had, was taken by storm. But no sooner had Sir Eyre Coote taken upon him the command, than his ?>ntagonist changed his plan of operations. He detached large parties of his numerous forces to lay siege *o the principal fortresses belonging to the company ; while, with the bravest and best disciplined part, he kept the field against the British commander. On the very first appearance of our army, however, his resolution failed, and he abandoned the siege of every place he had "nvested, retiring to a considerable distance on the other side of the Palaar, without even disputing the passage of it. The next operation was to secure Pondicherry, whose inhabitants had revolted. But they were easily disarmed, their magazines seized, and all the boats in their possession destroyed; in consequence of which precaution, a French squadron that soon after appeared off Pondicherry, was obliged to depart without being furnished with necessaries. But in the mean time Hyder Aly, having drawn large reinforcements from all parts of his dominions, resolved to try his fortune in a pitched battle. His army, it is said, amounted to 200,000 men, 40,000 of whom were cavalry, and 15,000 well disciplined sepoys. Still, however, he durst not openly attack the British army, but took a strong post, whence he might harass them on their march. Sir Eyre Coote, was not backward to

make the attack; and, on the other hand, Hyder Aly prepared to engage him with all possible advantage. The battle was fought on the 1st of July, 1781 ; and, notwithstanding the vast superiority of Hyder Aly's army, he was routed with great slaughter. The Indians, however, made a much more obstinate resistance than usual; the engagement lasted from 9 A. M. till 4 P. M. ; and the deficiency of the English in cavalry pre

vented them from pursuing the advantage they had gained.

Hydet Aly was soon encouraged to venture another battle. This was fought on the 27th of August the same year, on the very spot wheia colonel Baillie had been defeated. It was more obstinately contested than even the former, be-ing continued with great fury from 8 A. M. to near dusk. A number of brave officers and soldiers fell on the part of the British, owing chiefly to the terrible fire of the enemy's artillery, and the advantageous position of their troops. At last the Indian army was totally defeated, and driven from every post it had occupied ; though, from the obstinate resistance made at this time, Hyder began to enter tain hopes that his forces might, by a succession of such battles, be at last enabled to cope with the English. He therefore ventured a third battle some weeks after, but was defeated with greater loss than before. Undiscouraged by this bad success, however, he laid siege to Vellore ; and, expecting that the relief of it would be attempted, seized a strong pass through which he knew the British army must direct their march. The British commander accordingly advanced, and found the enemy in possession of some very strong grounds on both sides of a marsh, through which he was obliged to pass. Here he was attacked on all sides, but chiefly on the rear, the enemy directing their force principally against the baggage and provisions. But their utmost efforts, were unsuccessful, and Sir Eyre Coote forced his way to Vellore. , Hyder Aly did not fail to wait his return through the same pass ; and, having exerted his utmost skill in posting his troops, attacked him with vigor : but though the English were assaulted in front and in both flanks at once, and a heavy cannonade was kept up during the whole time of the engagement, the Indians were at last defeated with great slaughter. By these successes the presidency of Madras were now allowed so much respite, that an enterprise was planned against the Dutch settlement of Negapatam, situated to the south of Madras. A very inconsiderable force, however, could yet be spared for this purpose, as Hyder Aly, though so often defeated, was still extremely formidable. Sir Hector Munro had the management of the expedition : and so furious was the attack of the

British sailors, that the troops left to guard the avenues to the place were defeated at the very first onset. A regular siege ensued ; which was of a very short duration, a breach being soon made, and the garrison surrendering prisoners of war. The loss of Negapatam was quickly followed by that of Trincomale.

Admiral Hughes, who had conveyed Sir Hector Munro with the land forces to the former place, and assisted him with his sailors, immediately after iis surrender set sail for the latter, where he arrived about the middle of January 1782. Trincomale itself was quickly reduced; but the main strength of the settlement consisted in a fort named Ostenburgh, the principal place on the island, and by the capture of which the whole settlement could be reduced. The governor proving obstinate, this phce vs.s taken by storm,

with the loss of about sixty on the part of the British, and very little on that of the Dutch, the victors giving quarter the moment it was asked.

A more formidable enemy, however, now appeared on the coast of Coromandel. This was Suffrein the French admiral, who, setting out from France with eleven ships of the line and several stout frigates, had fallen in with the Hannibal of fifty guns, and taken her when separated from her consorts. This ship, along with three others, a seventy-four, a sixty-four, and a fifty, had been sent out to the assistance of Sir Ed-ward Hughes ; and the three last had the good fortune to join him before the arrival of Suffrein. The latter, supposing that he had not yet received this reinforcement, bore down upon the English squadron at Madras, to which place they had sailed immediately after the capture of Trincomale. Perceiving his mistake, however, he instantly bore away. The English admiral pursued, took six vessels, five of them English prizes, and the sixth a valuable transport laden with gunpowder and other military stores, besides having on board a number of land officers and about 300 regular troops. This brought on an engagement, in which M. Suffrein, perceiving the rear division of the British fleet unable to keep up with the .rest, directed his force principally against it. The ships of admiral

Hughes, himself and commodore King sustained the most violent efforts of the French, having two, and sometimes three, vessels to contend with. Thus the commodore's ship was reduced almost to a wreck; but about 6 P. M., the wind becoming more favorable to the English, the squadron of the enemy were obliged to draw ofL The loss of men on the part of the British amounted to little more than 130 killed and wounded, but, that of the French exceeded 250. After the battle Sir Edward returned to Madras; but hearing nothing of Suffrein there, he made the best of his way for Trincomale, being apprehensive of an attack upon that place, or of intercepting a convoy of stores and reinforcements then expected from England. Suffrein was actually at that time on his way to intercept it. This brought the hostile fleets again in sight of each other ; and, the British admiral having been reinforced by two ships of the line, a desperate battle ensued, which continued till towards night, when the ships on both sides were so much shattered, that neither could renew the engagement next day. Though these engagements were not decisive, they were nevertheless of the utmost prejudice to the affairs of Hyder Aly, who was thus prevented from receiving the succours he had been promised from France; and he was still farther mortified by the defeat of his forces before Tellicherry, which he had blocked up since the commencement of hostilities.

This misfortune was the more sensibly felt, as an open passage was now left for the English into those countries best affected to Hyder. His bad success, here, however, was in some measure compensated by the entire defeat of about 2000 English infantry and 300 cavalry under colonel Braithwaite, a brave and experienced officer. This detachment, consisting of chosen troops

from Sir Eyre Coote's army, lay encamped on the banks of the Coleroon, which forms the north boundary of Tanjour. Tippoo Saib, hav-ing procured exact intelligence of its situation, formed a design of attacking it, while no danger was suspected, on account of the distance of Hyder Aly's army. He set out on this design with an army of 15,000 horse and 5000 foot, accompanied by a body of French regulars; and, having crossed the Coleroon, suddenly surrounded the British forces. The colonel, perceiving his danger, formed his men into a square, distributing the artillery to the several fronts, and keeping his cavalry in the centre. He thus resisted for three days the utmost efforts of his numerous enemies, always compelling them to retreat with great loss. At last general Lally, rightly conjecturing that the strength of the English must be exhausted and their number thinned

by such desperate service, proposed that the infantry) which was fresh and entire, should attack one of the fronts of the square, while the forces of Tippoo should do the same with the other three. This proved successful; the British forces were broken with great slaughter, which however was stopped by the humanity of the French commander ; who even obtained from Tippoo Saib the care of the prisoners, and treated them with a degree of humanity which they certainly would not otherwise have experienced. A number of British officers, however, perished in the engagement, and only one remained unwounded.

In the mean time, the succours from France, so long expected by Hyder, arrived ; and, as soon as a junction was formed, they proceeded, under the command of M. Duchemin, to invest Cuddalore; which, not being in a situation to stand a siege, was surrendered on capitulation. Some other places of less consequence were also reduced, until at last, being joined by Hyder's numerous forces, they determined to lay siege to Vandervash, a place of great importance, and the loss of which would have been extremely detrimental to the English. This quickly brought Sir Eyre Coote with his army to its relief; but Hyder Aly, notwithstanding his being reinforced by the French, durst not yet venture a battle in the open field. On this the British commander proceeded to attack Arnee, the principal deposit of his warlike stores and necessaries. Thus the latter was obliged to quit his advantageous ground; but he did so with such secrecy and speed, that he came upon the British army unawares, while preparing for its last march to Ar-nee, now only five miles distant. Perceiving that the march of the British was thraugh low grounds, encompassed on most parts with high hills, he planted his cannon upon the latter ; from which he kept a continual and heavy fire on the troops below, while his numerous cavalry attacked them on every side. Notwithstanding all disadvantages, however, the British comman der at last closed in with the enemy ; and after an obstinate dispute completely routed them on the 2d of June 1782.

Still Sir Eyre Coote, wanting cavalry, in which the enemy abounded, was obliged to move rearer Madras; soon after which he was obliged, on

account of his bad state of health, to relinquish the command of the army to general Stuart. Hyder Aly, now perceiving that he was lil.ely to obtain no decided success by land, began to rest his hopes on the success of the French by sea. He therefore earnestly requested M. Suffrein, who possessed at that time a decisive superiority in the number of ships, to lose no time in attacking the British squadron before it could be joined by a reinforcement which was then on its way, and was reported to be very formidable. As the French commander was by no means deficient in courage a third engagement took place on the 5th of July 1783. At this time the British had the" advantage of the wind, the battle was much more close, and the victory more plainly on their side ; though it is said, that had not the wind fortunately shifted, a total defeat would have ensued. After the engagement, the French admiral proceeded to Cuddalore, having received intelligence that a large body of French troops in transports was arrived off the island of Ceylon, with three ships of the line. As this seemed to afford hopes of retaliation, he used such diligence in refilling hig ships, that the flee* was able to put to sea in the beginning of Au-gust, to make an attempt on Trincomale; and so well were his designs conducted, that Sir Edward Hughes received no intelligence of the danger till it was too late ; the place was not in a condition to resist a siege ; and, the French batteries having silenced those of the fort in two days, a capitulation took place on the 31st of August. Sir Edward did not arrive at Trincomale before the 2d of September, when he had the mortification to see the forts in the bands of the French, and Suffrein in the harbour with fifteen sail of the line, while he had only twelve. He ventured an engagement, but the issue of the battle was only shattering the fleets, and killing and wounding a number of men on both sides. The superiority of the English, however, was very manifest; and in entering the harbour of Trincomale the French lost a seventy-four gun ship. The loss of Trincomale was severely felt by the English ; for, while the French lay safely in the harbour refitting their squadron, the English were obliged, for that purpose, to sail to Madras. Here the fleet was assailed by one of the most dreadful storms ever known on that coast. Trading vessels, to the number of nearly 100, were wrecked, as well as those for Madras laden with rice, of which there was an extreme scarcity at that place. This now was 'augmented to a famine, which carried off vast numbers of the inhabitants, before supplies could arrive from Bengal. The continuance of the bad weather obliged Sir Edward, with his whole squadron, to sail to Bombay, where he arrived in the end of the year,

when his squadron was so much shattered, that, in order to repair it with proper expedition, he was obliged to distribute it between the dockyards of Bombay and the Portuguese settlement at Goa.

In the mean time Sir Richard Bickerton arrived at Bombay from England with five men of war, having on board 5000 troops. It was the intention of France to signalise the campaign of this year by an immense force both by sea and

land in India. The foices already on the coast of Coromandel were to be joined by 5000 regulars, from their islands on the African coast ; and Suffrein was to be reinforced by several ships of the line, when it was hoped that a decided superiority at sea would be obtained over the English. To oppose these designs it was deemed necessary by the presidency of Bombay to make a powerful diversion on the coast of Malabar. Here was situated the kingdom of Mysore, the sovereignty of which had been usurped by Hyder Aly under the title of Dayva. It is nearly in the same parallel with Arcot. On the north was Canara, the favorite possession of Hyder Aly. The expedition had been set on foot as early as the end of 1781 ; a strong body of forces under colonel Humberstone had taken the cities of Calicut and Panyan, besides others of less note, and penetrated into the inland country. Having made himself master of a place called Mongarry Cotta, which commanded the entrance into the inner parts of the country, he proceeded to attack Palatacherry, a considerable town some miles distant ; but, being suddenly environed with a numerous and hostile army, instead of making himself master of the place, it was with the utmost difficulty that he made his escape, after losing all his provisions and baggage. A force consisting of 20,000 foot and 10,000 horse, anaer Tippoo Saib, also advanced against him with such celerity, that the colonel had only time to retreat to Panyan, where he was superseded in the command by colonel Macleod, and soon after the place was invested by the forces of the enemy, among whom was general Lally ‘with a considerable body of French. Two British frigates, however, having come to the assistance of the place, rendered all the attempts of the enemy to reduce it abortive. At last Tippoo, impatient of delay, made a vigorous effort against the British lines ; but, though both the Indian and French commanders behaved with bravery, the attack not only proved unsuccessful, but they were repulsed with such loss as determined Tippoo to abandon the siege of the place, and retire beyond the Panyan. As soon as the presidency of Bombay were acquainted with the success of colonel Humberstone, general Matthews was despatched to his assistance with a powerful

reinforcement. This expedition, which began the campaign of 1783 in Canara, has been related with circumstances so disgraceful, and so exceedingly contrary to the usual behaviour of British troops, that we cannot account for them. ‘ In the story of the conquest and recovery of Canara,’ say the editors of the New Annual Register, ‘ the Spaniards may be said to be brought a second time upon the scene. The Spaniards of Britain were overtaken in the midst of their career; and he who is more of a man than an Englishman, will rejoice in the irregular and unmeasured, but at the same time the just and merited, vengeance that was inflicted upon them, by the prince whose dominions they were ravaging !’ In support of this exclamation the following account is given of the expedition : general Matthews had formed a design of carrying the war into the heart of Hyder Alv’s dominions For this purpose, the

English invested the city of Onore, about 300 miles south of Bombay, and one of the principal places in Cauara ‘ It was taken by assault,’ says Dr. Andrews, ‘ with great slaughter, and plundered with circumstances of avarice and rapine that disgraced the victors ; among whom, at the same time, great discontents arose concerning the division of the spoil.’ ‘ No quarter,’ say the editors of the Annual Register ‘ was given by the victorious English ; every man they met was put to the sword. ‘ The carnage,’ says one of the officers in a private letter, ‘ was great; we trampled thick on the bodies that were strewed in the way. It was rather shocking to humanity, but such are only secondary considerations, and to a soldier, whose bosom glows with heroic glory, they are thought only accidents of course : his zeal makes him aspire after farther victory.’ This part of the peninsula had hitherto been untouched by the barbarous and unsparing hands of Europeans, and, of consequence, was full of riches and splendor. In the fortress of Onore were found sums of money to an unknown amount, besides jewels and diamonds. A considerable part of this appears to have been secured as private plunder by general Matthews. The complaints of the military were loud; they thought, and naturally, that the acquisition of riches was the fair and reasonable consequence

of the perpetration of bloodshed. But their commander turned a deaf ear to their representations ; and hastened, by adding new laurels to his fame, to hide the slander that might otherwise rest upon him.' From Onore the army proceeded to the nearest fortresses on the sea coast, More and Cundapour. Here they were joined by a reinforcement from Bombay, under colonel Macleod and Humberstone, with positive orders to proceed for Bidnore. On this general Matthews marched for the Ghauts, mountains where there is a pass three miles in length, though only eight feet wide, which was then strongly fortified, and defended by a vast number of the natives. ' The English,' say our authors, ' however, had already obtained a considerable reputation by their executions ; and the use of the bayonet, the most fatal instrument of war, and which was employed by them on all occasions, created such an extreme terror in the enemy, as to enable them to surmount this otherwise impregnable defile.' The gaining of this pass laid open the way to Bidnore, the capital, to which a summons was now sent. An answer was returned, that the place was ready to submit, provided the inhabitants were not molested, and the governor was permitted to secure his property. The wealth of this city was undoubtedly great, but the estimates of its amount are very different. By the accounts of Bombay, it was stated only at £175,000, while the officers concerned in the expedition say that it was not less than £1,200,000 or even £1,920,000: and even this was only public property ; that seized upon by the soldiers, and which belonged to private persons, was undoubtedly very considerable also. This treasure was at first shown by the general to his officers, and declared to belong to the army ; *:ut he afterwards told them that it was all the property of the Mahommedan governor,

and had been secured to him by the terms of the surrender. It was therefore sent to Cundapour, under the convoy of lieutenant Matthews, brother to the general, to be thence transmitted to Bombay. The discontents of the army were now carried to the utmost height ; and the contest became so serious, that colonels Macleod, Humberstone, and Shaw, quitted the service altogether, and returned to Bombay. The officers charged their general with the most insatiable and shameful avarice; while he, in return, accused his whole army of doing every thing dis-respectful and injurious to him; of paying no regard to order and discipline, and of becoming loose and unfeeling as the most licentious freebooters. From Bidnore detachments were sent to reduce several fortresses, the principal of which was Annanpour, or Anantpore. Here orders were issued for a storm and no quarter. Every man in the place was put to death, except one horseman who made

his escape after being wounded in three places. ‘ The women, unwilling to be separated from their relations, or exposed to the brutal licentiousness of the soldiery, threw themselves in multitudes into the moats with which the fort was surrounded : 400 beautiful females, pierced with the bayonet, and 3xpiring in one another’s arms, were in this situation treated by the British with every kind of outrage.’ This exploit was succeeded by the reduction of Carwa and Mangalore, which completed the reduction of Canara, when general Matthews put his army into cantonments for the -•ainy season. This rapid success was owing to the death of Hyder Aly, which happened in the end of 1782.

8. India, from the accession of Tippoo Saib, to his death. His son, Tippoo Saib,however, having taken possession of the government, and settled his affairs as well as time would allow, instantly resumed his military operations. On the 7th of April, 1783, he appeared before Bidnore, so that general Matthews had scarcely time to collect a force of 2000 men, and to write to Bombay for a reinforcement. But the presidency were so much prejudiced against him by the reports of his officers, that they suspended him from his commission, appointing colonel Macleod to sue-ceed to the command of the army. Tippoo Saib now advanced with a vast army, supposed not to be fewer than 150,000 men, covering the hills on each side of the metropolis as far as the eye could reach. The army of general Matthews, unable to cope with such a force, were quickly driven from the town, and forced to take refuge in the citadel. Tippoo having cut off their retreat, by gaining possession of the Ghauts, laid close siege to the fortress; which in less than a fortnight was obliged to capitulate. The terms proposed were, that all public property should remain in the fort ; that the English should en-gage not to act against Tippoo for a stipulated time ; that they should march out with the honors of war ; that they should pile their arms, and have full liberty to proceed unmolested with their private property to theˆsea coast, from thence to embark for Bombay ; and in this capitulation the garrisons of Annanpour and other inland fortresses were also included. But all these terms

were afterwards disregarded by Tippoo, who said that the British had forfeited their title to liberty, by a breach of the articles of capitulation, in embezzling and secreting the public money, which was all, in good faith, to be delivered up. That this was really the case seems to be universally acknowledged. By this circumstance the fate of the garrison was decided. General Matthews was sent for next morning to a conference. He was not, however, admitted to the presence of Tippoo, but immediately thrown into chains. Most of the other principal officers were, on various pretences, separated from the army. The general and his companions were conducted to Seringapatam, the capital of My-sore ; and, after having experienced a variety of severities, were at last put to death by poison. We now proceed to give some account of the war with the Mahrattas, begun by reason of the protection afforded to the assassin Rogobah Row. This man had formerly obliged the Mo-gul to take shelter in the English factory at Bengal; but, losing his credit among his own countrymen, was expelled. On his arrival at Bombay an alliance was formed between him and the English government ; by which the latter engaged to replace him in the Mahratta regency, in consideration of some valuable cessions of territory. The supreme council of Bengal, however, disowned this treaty, aud concluded one with the Mahrattas in March 1776; by which it was agreed, that they should provide for Ragobah's subsistence according to his rank, on condition of his residing in their country. This being not at all agreeable to Ragobah, he fled once more to Bombay, where a new confederacy was entered into for . his restoration. The council of Bengal approved of this, on account of the approaching rupture with France ; and a detachment was, in February 1778, ordered to march across the continent of India. By some mismanagement in this expedition, the whole army was obliged to capitulate with the Mahratta general on the 9th of January 1779. One of the terms of the capitulation was, that a body of troops which were advancing on the other side should be obliged to return to Bengal. But general Goddard, the commander of these forces, denying the right of the council of Ben-gal to remand him, proceeded on his march, and arrived on the 18th of February. Here he received orders to conclude a new treaty, if it could be obtained on easier terms than that of the capitulation, by which it had been engaged to cede all our acquisitions in the country of the Mahrattas. Such flagrant disregard to any stipulations that could be made greatly provoked the Mahrattas, and induced them to join in the confederacy with Hyder Aly. The war, however, was successfully begun by general Goddard, in January 1780. In three months he reduced the whole province of Guzerat. Madajee Sindia, the Mahratta general, advanced to oppose him ; but, as he did not choose to venture a battle, the English general

stormed his camp, and totally routed him. Other exploits were performed in the course of this campaign ; during which Mr. Hastings, the governor-general, seeing no hopes of an accommodation, entered into a treaty with

the rajah of Gohud, and with his consent major Popham reduced a fortress in his dominions, named Guallior, garrisoned by the Mahrattas, and hitherto reckoned impregnable. These successes were followed by the dreadful incursions of Hyder Aly above related, which put a stop to the conquests of general Goddard ; all the forces he could spare being required to assist the army under Sir Eyre Coote. The last exploit of general Goddard was the reduction of the island of Sal-sette, and of a strong fortress near it, named Bassein. The army of Sindia, consisting of 30,000 men, was also defeated this year by colonel Carnac ; and the Mahrattas, disheartened by their losses, consented to a separate peace with the British.

The expenses incurred by these wars were so great, that Mr. Hastings was reduced to the greatest difficulties. All the treasure of Bengal was exhausted, and it was found necessary to draw extraordinary contributions from the British al-lies. One of the most remarkable results was the revolt of Benares. The rajah of this country had formerly put himself under the protection of the English, who, on their part, agreed to secure his dominions to him, on condition of his paying an annual subsidy to the nabob of Oude. In 1770 the rajah died, and was succeeded by his son Cheit Sing, who held the sovereignty at the time we speak of. On the death of the nabob, in 1 775, a new treaty was made with his successor, by which the sovereignty of Benares was transferred to the East India Company, an acquisition equivalent to £240,000 per annum ; at the same time that the subsidy paid by Suja Dowla, and which by lord Clive had been fixed at £36,000, and afterwards raised to £220,000, was now augmented to £312,000 per annum. On receiving intelligence, in July 1778, that war had actually commenced between France and Britain, Cheit Sing was required to pay £50,000 as his share of the public burdens. This de-mand was met with extreme reluctance by a prince who already contributed £240,000, and probably thought that an abundant equivalent for the protection he enjoyed. The same requisition, however, was made the two succeeding years, but with a promise that the de-mand should cease when peace was restored. A body of troops was also quartered upon him, and he was obliged to pay for their maintenance, lest he should not voluntarily pay the additional £50,000. In November 1780, in addition to these

requirements, he was also ordered to send into the field such a body of horse as he could spare ; but this was never complied with. In July 1781, Mr. Hastings having, it is said, received some intelligence that the oppressed rajah meditated rebellion, set out on a visit to the nabob of Oude, and in his way proposed to clear up the misunderstanding. The method by which he intended to do this was to lay a fine upon the prince of £400,000 or £500,000 ; and as a reason for doing so, it was alleged, that the late rajah had left £1,000,000 sterling in his treasury ; a sum which was continually increasing. Cheit Sing advanced to the borders of his territories to meet the governor-general, behaving with all imaginable submission; and, having received

private intelligence of what was meditated against him, offered to pay down £200,000. This was refused; and the governor-general, having reached the capital, forbid the rajah his presence, and by a letter acquainted him with his causes of complaint. Cheit Sing sent a respectful answer ; but, as he endeavoured to exculpate himself, Mr. Hastings was so far from being satisfied, that he put the prince under arrest. Such an unheard-of proceeding excited the utmost surprise and resentment, in subjects accustomed to regard their sovereign with a degree of reverence little short of adoration. On the very day of the arrest they assembled tumultuously, cut in ˆpieces the guard which had been set on the palace, and carried off their prince in triumph. It does not appear, however, that this was any other than a transi-tory tumult ; for, though they could easily have cut off the governor-general, they made no attempt against him. Cheit Sing protested his innocence, and made the most unlimited offers of submission, but all in vain. His government ‘vas declared vacant, and the zemindary bestowed on the next heir; while the annual subsidy to ihe government of Bengal was augmented from £240,000 to £400,000 annually. The miserable rajah was forced to fly his country ; and his mother, though promised leave to retire upon conditions, was attacked in her retreat, and plundered by the soldiers. After all his endeavours to procure money, however, Mr. Hastings found this

adventure turn out much less profitable than he had expected ; for the treasury of the fugitive prince was seized and retained by the soldiers.

With the nabob of Oude a new treaty was concluded ; the design of which was evidently to ease him of some of the burdens to which he was at that time subjected. Part of the British troops were therefore withdrawn from his dominions. As Fizulla Khan, the most prosperous of his dependents, had been called upon to furnish a body of 5000 horse to join the nabob's army, and had not complied with the requisition, the guarantee of his treaty with the nabob, formerly executed, was withdrawn ; but, it being afterwards discovered that his territory was not equivalent to the claims of the governor, the treaty was renewed on payment of a slight fine. As the widow of Sujah Dowlawas suspected of favoring the late rajah Cheit Sing, the reigning prince was allowed to reclaim the treasures of his father in her possession, and likewise to deprive her of a small province she had in possession, on condition of paying her a certain stipulated allowance annually. The treasures were seized as payment of the debts of the prince to the company.

Hostilities continued in India between the French and British, till the year 1783 was far advanced, and long after tranquillity had been restored in other parts of the world. In the beginning of the season for action, the governor and council of Bengal determined to send an ;unple supply to the presidency of Madras, that so they might be enabled to put an end to the war, which Tippoo seemed willing to prosecute with even more vigor than his father had done. For this purpose Sir Eyre Coote, who, for his

health, had gone to Bengal by sea, set sail once more for Madras, being entrusted with a large sum of money for the expenses of the war. In his passage he was chased for forty-eight hours by two French men of war. The solicitude and fatigue he underwent during this time, being almost constantly upon deck, occasioned a re-iapse, so that he died in two days after his arrival. The invasion of Tippoo's dominions having cal-led him off from the Carnatic, general Stuart took the opportunity of attacking him in another quarter. Colonel Full arton was despatched with a large body of troops to invade the province of Coimbatour. This he executed with great success. General Stuart,- however, having still greater designs in view, was obliged to recall this gentleman in the midst of it. The siege of the strong fortress or Luddalore was me operation which engaged his attention. It was now become the principal place of arms belonging to the French; was

strongly fortified, and garrisoned by a numerous body of the best troops of France, as well as a considerable number of Tippoo's choicest forces. The siege therefore proved so difficult, that, though the British displayed the utmost valor and military skill, they were not able to reduce the place until hostilities were interrupted by the news of a general pacification having taken place in Europe. In this siege a corps of sepoy grenadiers encountered and overcame the French troops opposed to them with fixed bayonets. For this remarkable instance of valor, they not only received the highest applause at the time, but provision was made for themselves and families by the presidencies to which they belonged. After the reduction of Hyder-nagur, and the destruction of the army under general Matthews, the British possessed only three places of consequence in the kingdom of Canara. These were Mangalore, Onore, and Carwa. The siege of all these places was undertaken at once. Mangalore, the principal port in the country, was defended by a very numerous garrison under major Campbell. Tippoo sat down before it on the 19th of May ; and the attack and defence were both conducted with the greatest spirit and activity. Notwithstanding the utmost efforts of the beseigers, however, and that the garrison were reduced to the last extremity for want of provisions, they held out in spite of every difficulty, until, peace being concluded, the place was afterwards delivered up. In other parts nothing more happened, than an indecisive engagement between M. Suffrein and admiral Hughes

A combination of various causes contributed to produce the war of 1789. The splendid embassy sent by Tippoo to the court of France, soon after the peace of Mangalore in 1784, had given reason to suspect that some plan was concerted between that court and the tyrant of My-sore, for the annoyance of Great Britain ; but this plan, whatever was its extent, was defeated by the French revolution. The Dutch were no less jealous of the increasing power of Tippoo, on account of the vicinity of their flourishing settlement at Cochin to the sultan's territories. They also possessed the forts oi Crangamore and Acottah in this vicinity. Tc

procure possession of these forts, Tipp oo marched a formidable force, in June 1789, towards Cran-ganore, of which the Dutch had taken possession, when in alliance with his father Hyder Aly. The Dutch afterwards sold them both to the rajah of Travancore, an ally of Britain ; and thus, with their usual policy, placed Britain as a barrier against Tippoo's encroachments on their settlement at Cochin. The rajah gave farther offence to the sultan, by purchasing some territory from the rajah of Cochin, a tributary of Tippoo, without consulting him. Tippoo, there-' fore, made a direct attack upon the lines of Travancore, on the 29th of December 1789 ; but, on receiving a remonstrance from the British government at Fort George, he desisted, sent back the prisoners, and affirmed as an apology, that the rajah's people had first fired on his troops. On the 1st of May, 1790, the rajah attacked Tippoo, who had continued quiet from December 29th. For this step the rajah alleged in excuse the hostile preparations of Tippoo, in erecting batteries, &c. This attack was expected by the British, and some say concerted with them. The grand Carnatic army was instantly assembled, under general Meadows, in the southern provinces, and a plan of operations agreed on, between him and general AbercromHe, who had the command of the Bombay army, and colonel Kelly of the centre army ; so named from its position between Madras and Mysore. The Ni-zam and the Poonah Mahrattas were appointed to penetrate into the territory of Tippoo across their respective frontiers, and Seringapatam was fixed on as the common centre. On the 24th of May general Meadows joined the grand army, and on the 15th of June entered Tippoo's dominions, when the fort of Carroor immediately surrendered. Seven days were spent in marching fifty-nine miles to Duraporum, where they found a supply of grain, and heard that Tippoo had ascended the Ghauts. On the 22d of July the army entered Coimbettore, which was evacuated, though it contained much grain and military stores. Several other forts were also reduced. In the end of August colonel Floyd reduced Sattimungalum, though garrisoned by a battalion, and well supplied with provisions. But on the 12th of September Tippoo began a smart cannonade ˚n this detachment, who retreated to Coimbettore on the 1 3th ; but, being closely pressed, repulsed the Mysorean troops on the 14th. On the 18th general Meadows marched to the east to offer Tippoo battle, but found he had retreated to Sattimungalum, on which he returned to Coimbettore.

On the 12th of October he heard that Tippoo had retaken Daraporum, and the British garrison arrived in camp on the 17th, speaking warmly of the honorable treatment they had received from Tippoo. General Meadows left Coimbettore on che 20th ; and the history of the grand army is nothing but a journal of its marches in pursuit of the enemy

till the 17th of November, when it formed a junction with the centre army at Poolamputty ; and on the 18th they came in sight of the rear of Tippoo's cavalry. From this period the united armies under general Meadows »>ok their course back toTrichinopoly to procure Vm,. XT.

supplies, but did not arrive till the 8th of December, the weather being bad. Here they learned that Tippoo had arrived at Munsurput, on the Coleroone, opposite Trichinopoly, on the 28th of November, where he continued encamped till the 6th of December, but without attacking that city. Meantime a detachment from the Bombay army, under lieutenant-colonel Hartley, rendered great service to the rajah of Travancore ; and on the 5th general Abercrombie, with the remainder of the forces from Bom-bay, arrived at Tellicherry. On the 14th Sir Ralph marched to attack Cannanore, which, with the garrison, surrendered on the 17th, and the troops engaged not to serve against the British during the war. About the same time colonel Hartley took Ferokabad, the capital of the Malabar coast. On the 27th Barragurry and Coo-tahpoor surrendered; so that<the whole coast, from the Billipatam to Cape Comorin, was now in possession of the British a«d their allies.

On the 15th of January, 1791, the army under general Meadows left Trichinopoly, and proceeded to Madras, where lord Cornwallis had arrived on the 13th of December. On the 29th his lordship joined the grand army at Vellont, which proceeded early in February to Vellore ; and, having deceived Tippoo by a feint, passed the Muglee on the 22d of February with all its stores and baggage. On the 24th lord Cornwallis proceeded for Bangalore. On the 6th March the town was stormed and taken, with the loss of 100 men. On the 12th batteries were opened on the fort, and on the 17th and 21st Tippoo drew out his army, but without effect. The fort was stormed on the evening of the 21st, with a dreadful carnage, though with little loss on the British side. Not less than 1000 fell, .t is supposed, by the bayonet, and 300, mostly wounded, were taken. The army remained at Bangalore till the 28th of March, when they proceeded towards Chinna-Balabaram ; and on the 7th of April were joined by 15,000 of the ni-zam's troops. On the 17th colonel Oldham joined them with 700 Europeans, 4500 Indians, and a supply of provisions.

On the 3d of May they set out for Seringapatam, and on the 13th arrived at Arakeery, whence they had a view of Tippoo's capital, nine miles distant, and observed the main body of his army crossing from the island to the north side of the Cavery. Mean time lord Cornwallis,

having received intelligence that general Abercrombie had ascended the Ghauts on the Malabar side, resolved to form a junction of their forces, but finding it impracticable to make a ford across the Cavery, determined to march round the ridge of mountains on the right. On the morning of the 15th the enemy's line was seen in a strong position. The British army was then formed into two divisions under colonel Maxwell and general Meadows. The former having successfully stormed a height occupied by Tippoo's troops, the action became general along the front. Colonel Maxwell then advanced rapidly to gain another height on the enemy's left flank, while the cavalry under colonel Floyd attacked their right ; on which Tippoo was forced to give way,

though his retreat was gradual and masterly. Four guns were taken, and the enemy were pursued, till the fire from the island batteries obliged the British to desist, and encamp partly on the field of battle. After destroying his battering train, and sending orders to general Abercrombie, who had obtained possession of Periapatam, to return with all speed, lord Cornwallis moved from his encampment to return to Bangalore : and on the 28th was joined by 30,000 Mahrattas, with a supply of provisions. In their route they took several forts, and on the 18th of July Ousoor, with the forts near it, submitted. On the 30th the combined troops encamped six miles from Bangalore. General Abercrombie, having also destroyed his battering train, was obliged to lead back a sick and dispirited army, over those almost impassable mountains they had so lately passed.

While the army lay encamped near Seringapatam, a present of fruit had been sent by Tip-poo to lord Cornwallis, with some overtures for a separate peace. The present, however, was returned, and the sultan assured, that no peace could be granted unless the allies were included. Tippoo next sent a vakeel with full powers to treat, but still the mission proved unsuccessful. During the winter months lord Cornwallis omitted nothing that tended to ensure the success of the

next campaign*. After reducing the hill forts north-east of Bangalore, Nundydroog, the capital of a large district, was besieged ; and, being built upon the top of a mountain 1700 feet high, three-fourths of which were inaccessible, it stood a siege from the 22d of September to the 18th of October, when a breach was made. The carnage which would have followed was prevented, partly by a number of the garrison escaping over a low part of the wall, but chiefly by the humane and laudable exertions of captain Robertson, who commanded the storming party. On the 31st of October colonel Maxwell took Fort Penagra by storm, but one half of the garrison was put to the sword. At Kistnaghery he met with a more serious resistance. The lower fort was easily reduced, but the garrison in the upper fort defended it with great obstinacy. Immense rocks and showers of stones were hurled down ; the scaling ladders were broken, and, after two hour* of vigorous assault, colonel Maxwell desisted from the attempt. In September Coimbettore was besieged by a detachment sent by Tippoo, and was so bravely defended by lieutenant Chalmers, that the Indians were obliged to raise the siege. But being again besieged by a fresh party sent by Tippoo, and a detachment sent to its relief by lord Cornwallis, under major Cuppage, being defeated by the Cawn, lieutenant Chalmers was obliged to capitulate on the 2d of November, and the garrison marched out with the honors of war.

On the 10th of December colonel Stewart encamped within three miles of the celebrated fortress of Severndroog, on the north side ; on the 17th he opened two batteries, at 700 and 1000 yards' distance; and on the 19th another within 250 yards, which, on the 2 1st, effected a breach at 11 A.M. when the assault was made, and in an hour the valor of the British

troops made them masters of a fortress hitherto deemed impregnable. On the 4th of December Outredroog, another fort twelve miles distant, was also taken by storm. Several other forts were now reduced, and Gumuncondah was blocked up by Hafez Jee, one of the nizam's best generals. It was relieved, however, by Hyder Saib, Tippoo's eldest son, who took Hafez Jee and great part of his troops prisoners. Early in November general Abercrombie returned to Tellicherry, and, on the 5th of the next month, he proceeded on his march through the Ghauts towards the Mysore country; while the Mahrattas, under Purseram Bhow, reduced several forts on the Tarn and the Budra, which gave them access to a fertile district, that afforded seasonable supplies. The grand object, the reduction of Tippoo's capital, was now to be

attempted. The allied armies on the 1st of February, 1792, commenced their march, and on the 5th arrived within sight of Serin gapatam, under the walls of which Tippoo was strongly posted. His front line was situated on the north side of the Cavery, behind a strong hedge, and defended by heavy cannon in the redoubts. In the front there were at least 100 pieces of cannon ; and in the fort and island which formed his se-cond line there were three times as many. The allies encamped six miles from Tippoo, in two divisions separated by the small river Lockarry. The British army formed the front line : the reserve was about a mile in the rear, where the armies of the nizam and Mahrattas were also posted at a further distance. On the 6th of February orders were issued to attack Tippoo's camp and lines at 7 P.M. The right division, consisting of 3300 infantry, was commanded by general Meadows ; the centre, consisting of 3700, by lord Cornwallis; and the left, of only 1700 men, by colonel Maxwell. At eight o'clock the whole body was under arms, the evening was serene, and the troops moved on in silence by the light of the moon. While tney were on their march colonel Duff's camp was struck, which gave the first notice of the intended at-tack to the allies, who were astonished when they found that lord Cornwallis had ventured on this desperate enterprise %vith only a part of his infantry unsupported by artillery, between ten and eleven at night ; the centre column, within a mile of the hedge, touched upon Tippoo's grand guard of cavalry, who were coming with rockets, &c., to disturb the British camp, but immediately galloped off to the lines. Finding* themselves thus discovered, the column advanced with the ut-most rapidity, and entered the enemy's lines within fifteen minutes after the news could have reached them. The right column, having met with more impediments, was later in reaching the hedge than the centre column ; but it entered the lines about eleven, when the battle became general; the enemy at last gave way, and at day-break general Meadows found himself complete master of the field. . The chief object of the centre column being to gain possession of the island, the front division dispersed the enemy, and passing Tippoo's tent, which had been abandoned, pressed forward to the river,' in two parties, The first under captain Monson

crossed the ford under the walls without opposition, and proceeded to the east gate of the city, but, finding it shut, marched to an extensive market-place, where they made a great slaughter of the enemy. They were followed by the other party, under colonel Knox, who proceeded to the rajah's garden, and thence to the suburb Shaher-Gangam, the gates of which they forced open, and drove the enemy from all their batteries. The centre division advanced to the sultan's redoubt, which they found abandoned, and afterwards cooperated with colonel Maxwell in defeating Tippoo's right wing. Lord Cornwallis, with the reserve, remained close by the hedge, where the column had first entered, and two hours before day-break was joined by captain Hunter's party ; soon after which they were attacked by a strong body of troops, part of Tip-poo's centre and left, who, being now recovered from their panic, rallied with redoubled resolution.

The conflict was carried on with inflexible courage on both sides, and it was near day-light, before the enemy was repulsed. Lord Cornwallis then retired to the Pagoda Hill, where he was met by general Meadows. Mean time the left division under colonel Maxwell, after ascending the Carighaut Hill, with little resistance, and marching down to the river, where they were much galled by the firing from Tippoo's right line, crossed the ford and joined the victorious parties, who had got possession of the east extremity of the island. The battle was continued in different parts during the whole of the 7th of February. The 7nost desperate conflict was at the sultan's redoubt, which was defended by a small party under colonel Kelly, against three vigorous attacks, seconded by a heavy cannonade from the forts. The enemy being driven from every post on the north side of the river, the camp was advanced as near to the hedge as the firing from the fort would permit ; and a chain of posts along the north and east faces of the fort was formed, so as to invest Seringapatam on its two principal sides. Thus pressed on every quarter, and his whole power reduced within the narrow limits of a citadel, the sultan became anxious to procure peace. He therefore released lieutenants Chalmers and Nash, who had been captured at Coimbettore, and had been well treated, presented the former with 500 rapees and two shawls, and sent a letter by him to lord Cornwallis, requesting he would return with the answer. On the 16th of February the Bom-bay army, under general Abercrombie, after a fatiguing march, wherein they were much harassed by detached parties of the enemy, joined lord Cornwallis, and afforded a reinforcement of about 2000 Europeans and 4000 natives. Vigorous preparations were therefore made to at-tack the fort on the north side ; where trenches were opened and batteries

constructed. Meantime, to draw off the attention of the enemy from these operations, major Dalryraple and captain Robertson, with the seventy-first regiment and thirteenth battalion of sepoys, were sent to attack his cavalry, encamped on the south side of the river. They entered the camp undiscovered, killed with the bayonet above 100

men and 200 horses, and returned without losing a man. On the night of the 19th a parallel and redoubt were completed near the walls of the fort, on the opposite side of the river ; which the sultan, next day, in vain attempted to overthrow. He then endeavoured to deprive the camp of water, by altering the course of a large canal, but in this attempt too he was disappointed, a party being despatched under captain Wahab, who soon dislodged the enemy and repaired the canal.

On the 1 9th the grand operation of the siege commenced by opening the trenches, and by a heavy discharge from all the batteries : in the mean time the Bombay army crossed the river to invest the west side of the capital. But, in consequence of the application through lieutenant Chalmers, lord Cornwallis agreed to receive Tippoo's envoys to treat of peace. On the 15th, 16th, 19th, and 21st, Sir J. Kennaway and Mr. Cherry, assisted by vakeels, or envoys, from the nizam and Hurry Punt the Mahratta chief, met with Tippoo's vakeels, to treat of peace, but little progress was made in the negociation. The siege continued without intermission, and general Abercrombie, on the 22nd, took possession of a redoubt and grove between his camp and the fort, but with the loss of 104 men. During the night of the 22nd and 23rd new batteries were erected, and Purseram Bhow, with 20,000 horse, several thousand foot, and thirty cannon, was daily expected. In the mean time, Tippoo had been obliged to send off all his cavalry and camp followers to Mysore, and was in want of every thing, while the British army was well supplied. In this hopeless situation, he was compelled to accept of any terms proposed by lord Cornwallis. These, all things considered, were moderate. Preliminaries of peace were signed on the 23rd of February, on the following terms : I. That Tippoo should cede one-half of his dominions to the allied powers ; 2. That he should pay three crores, and thirty lacks of rupees ; 3. That all prisoners should be restored , And, 4, That two of his eldest sons should be-come hostages for the performance of the treaty. On the 24th hostilities ceased, and on the 26th the two princes, Abdul Calick aged about ten, and Mooza Ud Deen about eight, mounted each on an elephant richly caparisoned, arrived in the British camp, and were received with kindness by lord Cornwaihs. On the 19th of March the definitive treaty was finally adjusted and signed.

For seven years the affairs of India continued in a state of doubtful tranquillity. But from 1796, the sultan of Mysore is accused of having constantly excited the jealousy of the British government. This was in no small degree increased by a proclamation of the French governor of the Isle of France in 1798, which openly mentioned an alliance formed between Tippoo and the French republic, for the destruction of the British power in India. It was also alleged, that Tippoo had sent an embassy to Zemaun Shah, to encourage him in his threatened invasion of Hindostan. Mean time Tippoo professed the most friendly intentions of preserving concord and harmony. The British governor-gene- ral, however, giving little credit to these profes—

bions, began to strengthen his alliances with the nizam and the paishwa, and in September concluded a subsidiary treaty with the former. In consequence of this, the French army at Hyderabad was surrounded by the English and the nizam's troops, the sepoys were disarmed, and the French officers sent prisoners to Bengal. Matters were in this state, when the news arrived of the French invasion of Egypt, and of lord Nelson's victory. The governor-general, on this, wrote a letter to Tippoo, dated 3rd of November, acquainting him of his knowledge of his connexion with the French republic, and proposing to send major Doveton to adjust all differences. On the 10th of December he sent another letter io the same purpose ; and on the 15th received a reply from the sultan, wherein he expressed the utmost surprise at the military preparations on foot, conscious as he was of having observed the treaty with the most inviolable fidelity. On the 25th he sent another letter to the governor, wherein he congratulates his lordship on the victory over the French ; explains the nature of the pretended embassy to the Isle of France, which he says was a mere mercantile adventure, and supposes the French had taken the advantage of it, to spread reports to disturb the union between the two states. To this letter the governor-gene- ral returned an answer, again proposing a negociation, and urging the sultan not to delay his

reply beyond one day. To this no answer was received till the 13th of February, when a letter without a date arrived, stating, that he was setting out on a hunting expedition, and begging his lordship to send major Doveton slightly attended. Meantime the governor-general, fearing the approach of the monsoon, had ordered lieutenant-general Harris to enter Mysore with his army, and, in his reply to Tippoo, informed him, that general Harris was now the only person authorised to receive his communications with a vif^w to the restoration of peace.

The reduction of the fort of Seringapatam was in fact the object of general Harris, whose first movement was on the llth of February. The nizam's contingent, consisting of 12,000 foot, and 6000 cavalry, joined the British army on the 18th, and next day general Harris forwarded the governor's letter to the sultan, published his lordship's declaration in name of the allies, and began hostilities by sending a detachment against the hill forts of Neeldurgum and Auchitty, which surrendered without resistance. On the 7th of March Odeadurgum surrendered to colonel Oliver, and next day Fort Ruttingheri wai taken after a slight resistance. The army under general Harris consisted of 31,000 men, besides the nizam's cavalry, all completely equipped. That under general Stuart, on the Malabar coast, was equally efficient. Between the 9th and the 14th of March the army under general Harris changed its positions from Kela-mungalum.to Callacondapilly, Anicul, and Bangalore ; near which last place about 4000 of Tippoo's horse appeared, but, after a few shots from the British field pieces, drew off. On the 16th the army took the rout of Cankanelli; and en the 20th and 21st encamped seven miles north of it. They now learned that Tippoo was

within fifteen miles ; and on the 23rd, as they approached Sultanpettah, a cloud of dust showed that he was in motion. He had in fact quitted his position on the bank of the Maddoor (where he might have disputed the passage) and encamped at Mallavelly. Instead of opposing the British in this quarter, he on the 6th of March passed his own frontier, and attacked a part of the Bombay army under general Stuart, not exceeding 6000 men ; who, notwithstanding Tippoo's force consisted of 11,800 of his best troops, repulsed him with considerable loss.

Upon this he retreated to "Seringapatam, and on the 14th advanced to meet general Harri?. On the 25th the British army encamped five miles east of Mallavelly ; and on the 27th came within sight of the sultan's. A general engagement took place, but was of short duration,

the enemy retiring with their guns to the next height. Their loss was estimated at about 1000, while that of the British did not exceed seventy. On the 3rd of April the army came within sight of Seringapatam, and took its position on the 5th about 3500 yards from the west face. That night an attack was made on the outposts, and on the 6th the principal ones were in possession of the British. On the 9th general Harris received a letter from Tippoo, declaring, that he adhered firmly to the treaties, and demanding the reason of the advance of the English army, and of the recurrence of hostilities? The general replied by referring to the marquis of Wellesley's letters. Matters continued in a state of mutual preparation from this period to the 13th, when suddenly a heavy fire commenced from the fort and batteries. Next day generals Floyd and Stuart arrived, and took their ground in the rear.

On the 16th the Bombay army crossed the Cauvery, which was almost dry, and took a strong position, which on the 22nd was attacked at all its posts by 6000 of the enemy's infantry, and Lally's corps of Frenchmen, who behaved with their usual bravery; but they were as bravely repulsed, and compelled to retire with the loss of about 700 men. On the 20th general Harris had received an overture of peace from Tippoo, and on the 22nd it was answered by a draft of preliminaries. The terms proposed were, To cede half his territories in perpetuity to the allies : to pay two crores of rupees ; to renounce the alliance of the French for ever ; to dismiss every native of France from his service ; to receive ambassadors from each of the allies ; and to give as hostages four of his sons and four of the principal officers. The enemy's guns on the west face were silenced on the 24th, as well as those of two round towers on the 26th. On the 28th Tippoo acknowledged the receipt of general Harris's proposals, and stated that the points in question were weighty and important, and without ambassadors could not be Bought to a conclusion ; that therefore he was aoout to send two gentlemen, who would explain themselves to him. The British general briefly replied, by referring to the terms in his last, as the only conditions of treating. On the 2nd of May, the works being completed, the British batteries began to open, and in the course of the day a breach was made in the fausserbraye wall ; the

main rampart was shattered ; and, to complete the misfortune of the besieged, a shot having struck their magazine, it blew up with a dreadful explosion. The breach being thought practicable, on the night of the 4th of May 4000 men were stationed in the trenches before day-break. The assault was led on by general Baird, and began at one o'clock. In six minutes the forlorn hope had reached the summit of the breach, where the British colors were instantly erected. In a few minutes the breach, which was 100 feet wide, was crowded with men. After a short conflict the panic became general in the fort ; thousands quitted it, and others laid dowji their arms. A flag of truce was soon after sent to the palace of the sultan, offenng protection to him and his friends upon surrendering unconditionally. The young prince surrendered to general Baird, but Tippoo was not to be found. After much entreaty, enforced even by threats, the killedar affirmed, that the sultan was not in the palace, but had been wounded during the assault, and lay in the gateway on the north face of the fort. There, among heaps of slain, the body of the unfortunate monarch was found, still warm, and covered with wounds.

His dominions were now partitioned among his conquerors, and the Mahrattas were admitted to a share, from motives of policy, though they had taken no part in the war. To the East India Company were allotted the districts of Comba-toor and Daraporum, the province of Canara, all the territory between the British possessions in the Carnatic and those of Malabar, with the forts and ports forming the heads of all the passes above the Ghauts on the Table Land, and the fort, city, and island of Seringapatam. To the nizam were assigned the districts of Gooty and Gurrumconda, together with a tract of country along the line of Chitteldroog, Sera, Nundidroog, and Colar. To the Mahrattas were given Har-ponelly, Chitteldroog, Soondo, Anagoondy, and a part of Biddenore, except the forts on the frontiers. A descendant of the ancient rajahs of Mysore, about five years old, was sought out and placed on the throne with great ceremony (under certain conditions) : and the sons and relations of Tippoo were removed into the Carnatic. Thus terminated one of the most important of our Indian wars with equal glory to the British arms, and advantage to the British interests in India; by securing them, at least for some time, against the reappearance of a formidable enemy.

9. Of British India during the wars with the Mahrattas and to the peace of 1805. — We have alluded to the rise and early form of the Mahratta power in India. In 1795 died the young peishwa Madhurow, and the government was for a length of time distracted by the internal

dissensions which followed this event — Bajeerow and Chimnajee, the surviving sons of Ilagobah, a fortunate usurper of the middle of the last century, being alternately raised to the throne. At this time the peishwa's authority extended no further than the Poonah Sail branch of the Mahratta state, comprising most of the original country of that tribe, but none of their conquests. Yet this branch was recognised as the head of the other Mahratta states. After many vicissitudes the eldest brother, Bajeerow, was at last fixed on *he throne by the assistance of Dowlet Row Scindia, who only, however, permitted him to enjoy a nominal sovereignty.

With the peishwa all the British treaties had been concluded without reference to any of the subordinate Mahratta chiefs. Neither Scindia, therefore, who held previously to this time the whole of Candeish, nor Bhoorsle, the rajah of Berar, were consulted with regard to them, and the former soon manifested a sense of his new importance ; in fact, while we were enriching their nominal chief with the spoils of our hard-earned conquest of Tippoo, several Mahratta chiefs were afterwards found to have corresponded with and assisted him to the last.

Under these circumstances the marquis Wellesley, in 1802, endeavoured by negociation to effect an improved system of alliance with the court or Poonah. It was at this time engaged in a war with Jeswunt Row Holkar, who possessed the fertile province of Malwa ; and on the 25th of October, 1802, the army of Dowlet Row Scindia, combined with that of the peishwa was totally defeated by Holkar near Poonah ; or. the same day he fled towards Severndroog, in the Concan, where he embarked for Bassein, which he reached on the 1st of December ; and on the 31st of that month a treaty of perpetual friendship and alliance was concluded between the peishwa and the British government; by the conditions of which the friends and enemies of the one were to be considered in the same relation to the other.

The peishwa now agreed to receive into his dominions a subsidiary force of 6000 infantry, with their usual proportion of field pieces and European artillerymen attached ; for the payment of which he assigned districts in the southern quarter of his country. Such was the treaty of Bassein, executed on the 31st of December, 1802, and formally ratified in the ensuing spring.

In the interim Holkar had occupied the capital of the peishwa, Poonah, and major-ge- neral Sir Arthur Wellesley, brother of the governor general, was directed in virtue of the late treaty to move on

that capital. When he had advanced within sixty miles of Poonah, he heard of the enemy's intention to plunder the city on his approach ; he therefore astonished all India by performing this journey at the head of his cavalry and over an almost impassable road in thirty-two hours, and was welcomed bj the city as a deliverer.

But Scindia proved a treacherous ally, and to general Wellesley was confided in the course of the summer full power to treat with or declare war against him and the rajah of Berar, as he should find them disposed. In the army of the former was a French officer of great experience, M. Perron, who had procured an important assignment of territory from Scindia, on the right bank of the Jumna; which he had in fact formed into a small French state. This was the period of the peace of Amiens, in virtue of which also Pondicherry became restored to France ; but lord Wellesley under the existing circumstances determined not to deliver it up,

and, before any enquiry could be instituted into his reasons, intelligence arrived of the renewal of the war between England and France.

It was now evident that three at least of the Mahratta chieftains were hostilely disposed to the British, and an extensive plan of warlike operations was combined, while negociations were for four months very steadily and earnestly entered upon with each of them. In the course of August the governor general put in motion in various parts of the British frontier 54,918 men. Sir Arthur Wellesley, finding no other alternative, took the field on the 8th of that month, and invested and carried in succession Ahmednughur and Aurungabad. He came up with the allied forces of Scindia and Bhoonsla on the 23rd of September, and, though not at this time at the head of more than 4500 men, he did not hesitate to attack the enemy, who mustered between 30,000 and 40,000, one-third of whom were comma'nded by European officers, and gained a most complete victory.

General Lake, the commander-iii-chief, attacked, near Coel, in the

Douab, that part of Scindia's army which was under the command of M. Perrori, who rapidly retreated before him, leaving Coel in our possession. The British also stormed and took the important fort of Ally Ghen on the 4th of September, in which were M. Perron and his grand depot of stores ; and immediately pushed forward to Secundra and Jehna Nullah, within six miles of Delhi. Here was fought the celebrated battle of Delhi, in which General Lake exhibited that union of talent, courage, and coolness, for which he was distinguished, and the immediate consequences of which were the possession of that ancient capital, and of the person of the unfortunate Shah Alum, the descendant and representative of the Moguls.

We cannot detail the less important operations. In Bundlecund the forces of Shumshere Bahadur, a chief nearly independent but nominally acknowledging the peishwa, were defeated by colonel Powell, and the whole province submitted to our arms. Agra was ultimately taken by general Lake, and Sir Arthur Wellesley followed up his recent victory, by chasing be-fore him Bhoonsla ; while colonel Stephenson took the important fortresses of Boorhampoor and Asseer Gheer. The battle of Laswaree followed on the part of general Lake, in which he engaged and defeated 9000 infantry and 5000 horse, and terminated the campaign. In December both Scindia and Boohnsla were anxious to make peace ; the former ceding the whole of the Douab, all his territories north of Jeypoor and Judpoer, Baroach in the Guzerat, and Ahmednughur in the Deccan : and the latter the province of Cuttack, including the fort and district of Balasore, to the British ; who thus, in a brilliant campaign of five months, dissolved a formidable confederacy of the native powers, and obtained every object of the war.

But military operations were continued against Holkar, who, in fact, was the soul and strength of the late confederacy. He was, on the peace above mentioned, offered the liberty of retiring unmolested to his own states ; but he immedi-

diately began to plunder the Jeynaghur territory. It was not until late in 1804, however, that active operations were commenced against hirn. On the 13th of November in that year general Eraser attacked and defeated a force of this chief's amounting to twenty-four battalions of infantry, a body of irregular horse, and \ 60 pieces of ordnance, but at the expense of the valuable life of the British general ; and lord Lake advanced upon the great body of Holkar 's cavalry, which was posted at Furruckabad, and totally defeated it ; Holkar

himself escaping with difficulty. At this period, however, a new treachery on the part of the British allies, that of the rajah of Bhurtpore, unexpectedly prolonged the war. This chief suddenly received and supplied Holkar with whatever of military power he possessed for further depredations, until in April, 1805, a separate peace was made with him, and Holkar fled.

Such was the situation of British India, at the period of the marquis Wellesley's return to Europe; he had conducted our affairs in this quarter of the globe with an oriental magnificence of design, and perhaps of expenditure ; but he seems fairly to claim the merit of having crushed in a most masterly manner the alarming combinations of Mahratta and French en-mity, and entirely to have laid the basis of the measures which lord Cornwallis only arrived in India to complete.

This was in July, 1805. Holkar was without ally or territory, but still in arms ; and Scindia, dissatisfied with the late peace, had imprisoned our resident, and was apparently only waiting an opportunity to break out into hostilities. The finances of the Indian government were also in great disorder.

Lord Cornwallis scarcely lived to act in his new and arduous office of fully restoring tranquillity and confidence. He had indeed taken a masterly view of the general state of affairs, suggested various retrenchments, and provided for the existing wants of the troops; but on travelling towards the army he only reached Gazypoor, in Benares, where lie died October the 5th. Sir George Barlow, the second in command, who had accompanied him, happily pursued his suggestions, and 22nd of November a satisfactory arrangement was made with Scindia, and on the 24th of the following month with Holkar.

10. British India from 1805 to the end of the Burmese war in 1826. — The peace, concluded under the directions of lord Cornwallis, lasted without any open rupture until the end of the year 1814.

The following year was occupied with the Nepaulese war, and several reverses at first attended the British operations in the hill country. But the perseverance of general Sir David Ochterlony soon brought this dispute to a close ; and obtained as the result the cession of the whole country from Kemaoon to the Sutlegc.

This year, at the opposite extremity of the peninsula, the king of Kandy was likewise made to submit to British prowess, and the whole of Ceylon became annexed to our Indian empire. See the article

In October 1815, and March 1816, two expeditions of the Pindarees, a predatory band of native robbers, disturbed the peace of the Madras presidency. They were a species of Cossack, or light cavalry, formerly attached to the native armies, and having their horses well trained to long marches and hard fare. Armed with a bamboo spear, from twelve to eighteen feet long, every fifteenth man carried a matchlock ; about 400 out of every 1000 were well mounted ; of the remaining 600, 400 were indifferently mounted, and the rest were slaves and camp-followers, keeping up with the corps as they best could. About the year 1814 these bands comprised about 40,000 horse, who subsisted wholly on plunder.

On the first of their present expeditions they crossed the Nerbuddah in a north-west direction, and, dividing into parties, penetrated to the Kishna. They were only deterred at this time from crossing into the presidency by the swollen state of the river; but, in their return along the line of the Godavery and the Wurda, they passed the British positions, making good their retreat with an immense booty.

The second expedition crossed the Nerbuddah, on the western frontier of the district of Masulipatam, under the Madras presidency, on the 10th of March. Next day they marched thirty-eight miles southward, plundering ninety-two villages, with almost unheard of cruelty, and, on the 12th, they marched thirty-eight miles, plundering fifty-four villages. By the middle of May they had all recrossed the Nerbuddah, loaded with spoil, and with very little loss. During twelve days, which they had remained within the British territories, it was found that 182 persons had been put to a cruel death, 505 were severely wounded, and 3603 had been put to various descriptions of torture. A defensive line of posts was now therefore extended along the Nerbuddah, and across the country for about 150 miles, and, when this was penetrated by new expeditions, a very different account was soon sent homeward. By the activity of the British corps employed, almost all of these expeditions were intercepted, and very few of the plunderers made

good their retreat.

It was resolved however, in the year 1817, to commence offensive operations — to hunt the enemy into their native holds, and either to exterminate them, or to drive them from the position which they occupied, in the very centre of India. By the end of the rainy season of that year a numerous army took the field for this purpose. The plan was, that the armies of the different presidencies should advance southward, and, gradually converging to a common centre, hem in, on every side, the territory of the robbers.

While the Indian government was occupied with this plan, their old enemies were not idle. Bajee llao, the existing peishwa of Poonah, made a fresh attempt on our forbearance. When all the British troops had moved southward, with the exception of a brigade, he first declared himself by attacking this small body. He was however repulsed at all points. This was on the 5th of November. On the 13th the brigade was

joined by general Smith's division, which had advanced on the Godavery. The enemy's camp was attacked next day, but it was found deserted, and that general had to undertake a sort of personal pursuit of the peishwa, who was hunted from place to place, until he at length surrendered — was deposed — and resigned the whole practical government of his dominions to the British.

Appa Saheb, the rajah of Nagpoor, and Holkar, pursued similar plans, and the result was the same. In November and December both were overcome; and placed their territories under British protection : nor was the main object of the British plans materially delayed by these occurrences ; the Pindarees were driven first out of the province of Malwa, and, retiring as the British advanced, were at length hemmed in, and the greater part of them destroyed. The rest were humbled to complete submission, and their three most influential chiefs surrendered, on condition of being spared a military execution.

We have noticed under the article BURMHAN EMPIRE our first dispute with that important native power. The late rupture was of a far more serious character. It arose in an unfounded claim of the court of Ava to the island of Shapu-ree ; in pursuit of which the Burmese chiefs in Arracan attacked and drove off the island a small party of British troops, stationed there for police purposes. An explanation being demanded and refused, and further agressions being made on

the states of Cachar and Jynteea, then under British protection, the governor-general declared hostilities to have commenced in the spring of 1824. Rangoon soon submitted to a British expedition; then the islands of Cheduba and Negreis; and before the close of the campaign we were masters of Tavoy and Mergui, the most valuable possessions of the Burmese on the Tenasserim coast. A slight check was experienced by our army, however, at Rameo, on the Chittagong frontier; and a mutiny took place among the native troops at Barrackpore, which at first excited considerable alarm. But the prompt and able measures of general Dalzel and his officers soon terminated this last interruption; twelve ringleaders of the mutiny were executed, and the regiment in which it occurred broke up. The general results of the war in 1824 were decidedly in our favor.

Throughout the year 1825 hostilities were continued against the Burmese, and with considerable, but not decisive success. The fort and pagoda of Syriam fell early in the year; then the defences of the enemy on the Lyng, Donabew, Prome, and the whole of Arracan. In September an armistice was concluded, and negociations for peace were opened, in the course of which the prisoners on each side were exchanged, and the armistice continued until the 2d of November. The Burmese had at this time an army of 60,000 men in the field ; and their system of laying waste the country subjected our troops to considerable difficulty in obtaining provisions.

In the terms of peace proposed, the ministers of the king of Ava principally objected to the cession of territory, and the indemnification in

money demanded by the British commanders . when his majesty of the Golden Foot, as the head of the Burmhan empire is styled, heard of these proposals, he is said to have broke out into the most furious burst of passion, and gave orders for the immediate renewal of hostilities. The whole Burmese army now advanced along the Irawaddy against Prome, which it gradually surrounded, and repulsed an advance of two brigades of native infantry, under colonel M'

Dowgal. On the 1st of December, however, Sir Archibald Campbell was prepared to commence operations on the immense but unorganised masses of the enemy ; and drove the whole of them before him to Melloone, on the right bank of the Irrawaddy. Here they concentrated, and again entered into negociations with the British, the result of which was the signature of a treaty ceding Arracan and the provinces of Mergui, Tavoy, and Zea, to the company, and agreeing that Assem, Cachar, Zeating, and Mun-nipoor, should be placed under princes to be nominated by the British. The court of Ava was further to pay to the company a crore of rupees by instalments, as an indemnification for the expenses of the war. This treaty was signed on the 3d of January 1826, and fifteen days were allowed for its ratification by the court; but it afterwards appeared that it never was sent thither, and the British army continued to advance on the capital. When it was within four days' march of that place the Burmese government appeared to think seriously that it must make these important concessions for a peace ; and Dr. Price, an American missionary, was the bearer of the first instalment of the money stipulated, and brought with him all the prisoners that had been detained at Ava. He also, after some further delay, produced the ratified treaty. On the 5th of March the troops who had so nobly maintained this unequal warfare, and marched from victory to victory into the very heart of an immense hostile empire, began their ie treat to Rangoon.

We believe the Burmese have since continued to pay, though with no small tokens of reluciance, the instalments specified.

This year was also signalised by the taking of the town and fortress of BHURTPORE (see that article)and the suppression of a revolt against the raj ah, who had placed himself under our protection.

INDIA COMPANY, EAST. It was not until the close of the sixteenth century, and after the Portuguese had been established for nearly 100 years in the east, that Great Britain appeared as her competitor in this part of the world. But in 1577 Sir Francis Drake sailed to India by Cape Horn, and returned by the Cape of Good Hope : he was succeeded by less celebrated adventurers, who all agreeing with him in the favorable accounts they brought home of the commerce and inhabitants, in 1599 the first regular company for trading hither was formed. In 1583 queen Elizabeth had given introductory letters to the princes of India to two adventurers, Newberry and Filch, and others in 1596 to Allot and Bromfield, all of whom proceeded to the court of the great Mogul by land, and were well received there.

The company we have mentioned subscribed a capital of £30,000 in 101 shares, varying in amount from £100 to £3000; and on the 30th of December the queen granted them letters patent as a Society of Merchants of London trading to the East Indies. They equipped a squadron, which arrived at Achen in 1602, and met with a favorable reception from the king : hence it proceeded to Java; established a factory at Bantam ; and, loading the ships with pepper, returned to England. Eight other successful voyages were performed between this period and 1613, yielding a profit of from 100 to 200 per cent.

The first English expeditions were entirely of a commercial nature, and the establishments they formed were with the ” consent of the native princes: such were Masulapatam and Calicut, where they had factories a few years after their first appearance in India. It was, however, soon found ‘that this pacific conduct would not permit them to compete with the Portuguese and Dutch, who possessed fortified places and secure ports, while we were dependent for the bare permission to trade on the caprice of the natives.

When our merchants endeavoured to obtain admission to Surat, in 1611, the Portuguese threatened to burn all the towns of that coast if they were received. The squadrons of the two nations met off Surat, and the English, under Middleton, were obliged to retire. The Hollowing year captain Brest, arriving off the same port with a stronger force, twice defeated the Portuguese fleet, though much superior; and in 1613 concluded a treaty of commerce with the Mogul, by which a free trade to all parts of his dominions was granted to the English. In the same year James I. sent an ambassador to Achen, who procured permission to establish a factory in that city, with considerable commercial privileges; and between 1613 and 1629 the English had also formed settlements at Priaman and Ticoo on the west coast of Sumatra ; while the Dutch had established factories at Padang, &c. But both nations were shortly after driven entirely from the island by the king of Achen, now grown jealous of the encroachments of those new visitors.

Though, during the reign of James I., the English Company received little support from the government, by activity, perseverance, and the prudent choice of its servants, it had gradually acquired strength and solidity in India; when the Dutch, feeling that dieir own success depended on the ruin of their rivals, attacked them in every part of India ; and, as they now possessed the same advantages over the English that the Portuguese did over them on their first arrival, it is

not to be wondered at if they were every where successful.

After the Indian seas had been dyed with the blood of both nations, the Dutch remained victorious ; and would probably have entirely driven the English from these seas had not the companies at home interposed. One of the chief objects of contention between the two nations was the commerce of the Spice Islands, of which the English claimed a share. The companies, in order to accommodate this difference, conclude 1 a treaty in 1619, by which the produce of thes.

islands was to be divided between them in the proportion of two-thirds to the Dutch and one-third to the English, each contributing a like proportion towards the expenses of the establishments. This treaty, however, did not satisfy the Dutch in India, and, on pretence that the English had formed a conspiracy against them, they seized all the persons of the English factory at Amboyna in 1622, and, after inflicting unparalleled tortures on them, put them publicly to death. It is impossible to see in this atrocious massacre any thing but the effect of avidity without bounds ; for it would be absurd to suppose that ten factors and eleven soldiers, the number of persons composing the English factory, should form a design to get possession of a fort garrisoned by 200 Dutch. The English king was, however, too deeply immersed in theological controversy to pay much attention to the rights of his subjects, and no vengeance was taken for the massacre of Amboyna, but the Dutch were permitted quietly to enjoy the fruits of their iniquity; and, in order to secure them more efficiently, they prevailed on the kings of Ternate and Tidor, the two most powerful princes of the Moluccas, in consideration of the payment of £3000 a year, to cause all the clove and nutmeg trees in their respective islands to be destroyed annually. By this means the culture of the clove was confined to Amboyna, and that of the nutmeg to the Banda Islands, of which the Dutch had the entire and undisputed possession.

The affairs of the English still continued to decline in India, and the civil wars which deluged the mother country with blood, during the latter part of the life of Charles I., accelerated their down-hill career,

so that, at the death of that illfated monarch, the East India Company was an empty shadow, and its trade reduced to insignificance.

Cromwell, irritated against the Dutch for assisting the unfortunate Stuarts, and affording an asylum to their proscribed adherents, commenced a maritime war against Holland, which was successful in every part of the world, and the republic was at length obliged to sue for peace. Though Cromwell might have dictated his own terms with respect to India, he contented himself with securing a free trade to the English, obliging the Dutch government to disavow the massacre of Amboyna, and to make some compensation to the descendants of the victims. The Island of Ron was also to be restored to the English ; but from this island, which is little better than a rock, and without any harbour, the Dutch had previously extirpated all the nut-meg trees ; nevertheless the English returned to it, but were again driven from it by their rivals in

1666.

The security of its trade, however, restored the affairs of the English Company, which went on successfully for some years, until it received a check from a rivalry to which that success had given rise. Charles II., whose sole object throughout his reiijn was to raise money for his dissolute pleasures, sold permission to private merchants to trade to India, in direct violation of the company's charter, while he at the same

time made the company pay for permission to prosecute the interlopers; the natural consequence was a kind of civil war for some years between the two parties in the Indian seas. The Dutch also still harassed the English whenever an opportunity presented itself; and in 1682, by their intrigues, they procured the monopoly of the pepper of Bantam, and obliged the English to withdraw their factory thence.

The English Company determined to revenge this aggression, and for that purpose fitted out a fleet of twenty-three vessels, on board which were embarked 8000 troops ; but, at the moment this formidable armament was on the point of sailing, the king directed its departure to be postponed. Charles doubtless expected to receive a large sum from the company to revoke his order ; but, being disappointed, he did not hesitate to sell the honor of the nation and the interests of his subjects to their enemies, and for the sum of £1,000,000 sterling, paid him by the Dutch, the expedition was ordered to be entirely laid aside.

The English, driven from Java, once more turned their views towards Sumatra, and in 1684 an envoy was sent from Madras to Achen, to demand permission to erect a fort there. This was, however, refused; but a free trade was granted them, and liberty to erect a wooden factory, which was immediately constructed.

While the English envoys were at Achen the rajahs of Priaman and other places on the west coast of Sumatra were there also, soliciting assistance of the Achenese against the Dutch, who had usurped their territories and otherwise injured them.

These chiefs, seizing the idea of opposing the two European nations to each other, offered the English envoys the monopoly of their pepper, and the liberty to build forts, provided they would rid them of the Dutch. On this condition a treaty was concluded between the Madras

government and the Sumatra chiefs in 1685, and vessels were immediately despatched to Sumatra, where the establishment of Bencoolen was formed. In spite of the intrigues of the Dutch, the English obtained a firm footing in the island while the influence of their rivals declined, and at the close of the seventeenth century was al-most entirely destroyed.

But, while the English were thus extending their establishments on the east, they had nearly lost one of their chief settlements on the west. The expenses of the fleet which the company had equipped to chastise the Dutch had so greatly exhausted its resources, that it was obliged to send its ships to India without funds, to procure cargoes on credit if possible, and, from the good faith which had hitherto marked its dealings, merchandise to the value of £280,000 was thus procured. The means resorted to, to acquit this debt, were disgraceful to the English name, and were nearly productive of the total destruction of the English commerce in Western India. It appears that Sir Josiah Child, the chairman of the court of directors, unknown to his colleagues, sent instructions to his brother, the governor of Bombay (which had been given to Charles II. as the marriage portion of his queen Catherine) to

make such demands of the Mogul government of Surat as he knew must be refused. These demands were accordingly made, and, as foreseen, were rejected with contempt, when Child, on pretence that this rejection was tantamount to a declaration of war, seized all the vessels belonging to the subjects of the Mogul, to an immense value. Aurungzebe, who then swayed the sceptre of Hindostan, lost no time in preparing to punish the authors of this unprovoked robbery. In 1689 his generals landed 20,000 men on the island of Bombay, defeated the English who opr posed them, and obliged them to shut themselves up in the citadel, where they were closely besieged. Child, now as cowardly as he had before been treacherous, despatched a deputation to the Mogul emperor, to demand grace, and the English envoys were led into his presence with their hands tied behind them.

The monarch, however, feeling the advantages that his subjects derived from their commerce with the English, was not inflexible, but after insisting on the dismission of Child, and on a compensation to his subjects who had been robbed, he restored to the English the privilege of a free trade throughout his dominions.

The loss sustained by the company, through this iniquity of its servants, was irretrievable, and the revolution and war that succeeded it accelerated the ruin of its affairs. A general outcry was at this time also raised against the injustice of monopolies, and against that of the East India Company in particular. The business was at last brought before parliament, in which it was determined that a new company should be established under its sanction, on advancing £2,000,000 to government at eight per cent, interest, and that the old company, which derived its privileges from the crown alone, should be permitted to continue its trade till the expiration of its charter, which was not far distant.

After the old and new companies had endeavoured to ruin each other for some time, they wisely put an end to hostilities by a union in 1702. In 1708 the company lent a farther sum of £1,200,000 to government without interest, which reduced the interest of the whole debt due to it to five per cent., and for this advance the charter was extended, and it received the title of the United Company of Merchants trading to the East Indies.

The English first sent ships to China in 1634, and in 1677 were permitted to establish a factory at Amoy, and to trade to Canton.

The company's charter, granted in 1708, was prolonged from time to time, and in 1730 it was renewed for thirty-three years, on consideration of the reduction of the interest of the debt due to it by government, from five to three per cent., by the means of another loan without interest. A twenty-one years' charter was ˆranted in 1813, and in 1834, the commercial character of the company was abandoned, the political retained, and the trade between England and China thrown open.

At this period we may date the first commencement of the British dominion in India, which now, like a mighty Colossus, rests either foot on the utmost limits of the East. As early

as the year 1640 the English received permission to build a factory at

Hoogly, but they were prohibited from fortifying it in any manner, and an ensign and thirty soldiers, as an honorary guard to the factors, was the only military force allowed them. Their defenceless situation exposing them to the exactions of the natives, in 1686 they attempted to establish a defensive post by force of arms, which entirely failed ; but in 1689 they received permission to establish a factory at Sootenutty, ten miles below Hoogly, and about the same time they were allowed a free trade, on payment of an annual sum in lieu of customs. In 1696 the petty princes on the west side of the Hoogly took up arms against the nabob of Ben-gal, and made a rapid progress, taking Hoogly, and other towns of consequence. On this occasion all the European factors in Bengal declared for the nabob, and, demanded permission to put their factories in a state of defence against the common enemy, and the nabob in general terms desiring them to provide for their own safety, they immediately fortified their own factories ; the Dutch at Chinsurah, the French at Chandernagore, and the English built Fort William, close to their factory at Sootenutty, to which they have given the name of Calcutta, and which, together with a small territory round it, they were permitted to purchase from the zemindar or Indian proprietor. Such was the slender foundation of the imnrense fabric of British dominion in India.

From the invasion of Nadir Shah in 1738, the Mogul empire was torn in pieces, as we have intimated, by different factions and pretenders to the crown, until it was at length reduced to a state of total debility in 1753. During these troubles we have also seen that both the French and English had gradually extended their influence on the continent, and in 1747 the latter had obtained the revenues of Bengal, Bahar, and Orissa. It was not to be expected that the rival European nations would long remain tranquil under the observation of each other's increasing power. In the war of 1756 Chandernagore and all its dependencies were taken from the French, the loss of Masulapatam, Mahe, and Carrical followed, while the French captured the English settlements on Sumatra. The adverse squadrons had also frequent but indecisive engagements, but the French were at last obliged to quit the Coromandel coast, and leave the English masters of the navigation of the Bay of Bengal. Pondicherry was taken in 1761, and at the same time all the natives of France found in the Carnatic were sent to Europe.

By the peace of 1763 all the French possessions in India were restored, on condition of constructing no fortification in Bengal ; but their power in India had received too severe a shock to be ever able to recover itself.

From the commencement of the eighteenth century, Holland being at peace, except during the latter part of the American war, the Dutch retained their possessions, and carried on their commerce in the Indian seas undisturbed, until the French revolution drew them into its vortex. The Cape of Good Hope, Ceylon, Malacca, and the Spice Islands, were captured by the English

in 1795, at the same time that they lost all the settlements on the continent of India. By the peace of Amiens their establishments were restored, except Ceylon, which was confirmed to the English. In the late war the Dutch again lost all their settlements in India, but recovered them, with the exception of the Cape of Good Hope, by the peace of Paris.

It is sufficient to observe further that, with the exception of the capture of Calcutta by the nabob Surajah Dowla, in 1756, but which was

recovered the following year, the progress of our territorial power in India has been uninterrupted , and that in 1765 we were quietly in possession of Bengal, Bahar, and Orissa, nominally indeed as tributaries to the Mogul, but who was a mere puppet in the hands of the British ; and that since that period the company has been engaged in almost continual wars with the native princes, from whom it has acquired the absolute dominion of above one-half of the peninsula. See HINDOSTAN.

IX’DIAX ARROW-ROOT, n. s. Latin maranta. A root. A sovereign remedy for the bite of wasps, and the poison of the manchineel tree. This root the Indians apply to extract the venom of their arrows. — Miller.

IN’DIAN CRESS, n. s. Lat. acriviola. A plant.

IN’DIAN FIG, n.s. Lat. opuntia. A plant.

IN’DIAN RED, n.s. Is a species of ochre; a very fine purple earth, and of a firm compact texture, and great weight.

INDIANA, one of the United States of North America, formed in 1816. It is bounded north by the north-west territory, Michigan Lake and territory; east by the state of Ohio; south by Ohio River, which separates it from Kentucky; and west by the state of Illinois. Long. 84° 42’ to 87°49’ W.,lat.37°45’to41°52’N. It is 284 miles long from north to south, and 155 from east to west; containing about 37,000 square miles. There are no slaves in this State. In 1810 it contained four counties and twenty-seven townships. The number of militia, in 1815, amounted to 15,171.

It now contains sixty-four counties, and a population of 341,582. The following table includes the chief counties, with their population and chief towns.

Counties.

Pop.

Chief Towns.

Clark Crawford

10,719 3184

Charlestown. Fredonia.

Dearbon Davis

14,573 4512

Lawrenceburg. Washington.

Dubois

1774

Portersville.

Franklin

10,199

Brookville.

Gibscn

5417

Princeton.

Harrison Jackson

10,288 4894

Corydon. Brownstown.

Jefferson Jennings Knox

11,465 3950 6557

Madison. Vernon. Vincennes.

Lawrence

9237

Bedford.

Monroe Orange Perry Posey Sullivan

6578 7909 3378 6883 4696

Bloomington. Paoli. Troy. Mount Vernon. Merom.

Switzerland Warwick

7111

2973

Vevay. Boonville.

Washington Wayne Warren

13,072 18,587 2854

Salem. Centerville. Williamsport.

Corydon is the seat of government, and Vincennes the largest town. The other most

considerable towns are Vevay, Brookville, Jef-fersonville, and Madison. All these, with the exception of Vincennes are new, and have risen suddenly into notice. There are many others recently established, some of which are very flourishing.

The legislature is composed of a senate and house of representatives. The representatives are elected annually, and the members of the senate once in three years. The governor and lieutenant-governor are elected for three years, and may be reelected once, The legislature meets on the first Monday in September.

The principal rivers are the Ohio, Wabash, White River, Whitewater, Tippecanoe, Illinois, Plein, Theakiki, St. Joseph's, and St. Mary's

There are no mountains in Indiana ; the country, however, is more hilly than the territory of Illinois, particularly towards Ohio River. A range of hills, called the Knobs, extends from the falls of the Ohio to the Wabash, in a south west direction, which in many places produces a broken and uneven surface. North of thes* hills lie the flat woods, seventy miles wid« Bordering on all the principal streams, except the Ohio, there are strips of bottom and prairif. land; both together from three to six miles in width. Between the Wabash and lake Michigan the country is mostly champaign, abounding alternately with woodlands, prairies, lakes, and swamps.

A range of hills runs parallel with the Ohio, from the mouth of the Great Miami to Blue River, alternately approaching to within a few rods, and receding to the distance of two miles. Immediately below Blue River the hills disappear, and there is presented to view an immense tract of level land, covered with a heavy growth of timber. North of the Wabash, between Tippecanoe and Ouitanan, the banks of the streams are high, abrupt, and broken, and the land, ex-cept the prairies, is well timbered. Between the Plein and Theakiki the country is flat, wet, and swampy, interspersed with prairies of an inferior soil. The sources of rivers are generally in swamps or lakes, and the country around them is low, and too wet for cultivation.

There are two kinds of prairies, the river and the upland prairies : the former are bottoms destitute of timber, and are said to exhibit vestiges of for-mer cultivation; the latter are from thirty to 100 feet more elevated, and are far more numerous and extensive. Some of them are not larger than a common field, while others extend farther than the eye can reach. They are usually bounded by heavy timbered forests,

and not unfrequentl y

adorned with copses of small trees. In spring and summer they are covered with a luxuriant growth of grass and fragrant flowers, from six to eight feet high. The soil of these plains is often as deep and fertile as the best bottoms. The prairies bordering on the Wabash are particularly rich. Wells have been dug in them, where the vegetable soil was twenty-two feet deep, under which was a stratum of fine white sand. The ordinary depth is from two to fire feet. The principal productions are wheat, Indian corn, rye, oats, barley, buckwheat, potatoes, pulse, beef, pork, butter, whiskey, and peach-brandy.

The climate is generally healthy and pleasant. The Wabash is frozen over in the winter, so that it may be safely crossed on the ice. More than one-half of the land in this state yet remains in the possession of the Indians. • Not far from Big Blue River there is a large cave, the entrance of which is on the side of a hill, that is about 400 feet high. Here are found great quantities of sulphate of magnesia, or Ep-som salt, and of nitre, &c.

IN’DICANT, adj. *} Fr. indication ; Lat.

indico. That which points out : indicate, to direct a point to : indication, mark ; token ; sign ; symptom ; discovery ; or explanation :

IN’DICATE, v. a.

INDICA’TION, n. s.

INDIC’ATIVE, adj.

INDIC’ATIVELY, adv.

INDIC'TION, n.s.

INDICT', v. a.

indicative, showing; informing: a certain modification of a verb, expressing affirmation or indication : indiction, declaration or proclamation. Indict. See INDITE.

These be the things that govern nature principally, and without which you cannot make any true analysis., and indication of the proceedings of nature.

Bacon's Natural History.

After a legation ad res repetendas, and a refusal, and a denunciation and indiction of a war, the war is left at large. Bacon.

These images, formed in the brain, are indicatirely of the same species with those of sense. Grew.

The frequent stops they make in the most convenient places, are a plain indication of their weariness.

Addison.

The verb is formed in a certain manner to affirm, deny, or interrogate ; which formation, from the principal use of it, is called the indicative mood.

Ciarhe't Latin Grammar.

We think that our successes are a plain indication of the divine favour towards us. Atterbury.

The depravation of the instruments of mastication is a natural indication of a liquid diet. Arbutlmut.

If a person that had a fair estate in reversion should be assured by some skilful physician, that he would inevitably fall into a disease that would totally deprive him of his understanding and memory ; if, I say, upon a certain belief of this indication, the man should appear overjoyed at the news, would not all that saw him conclude that the distemper had seized him ? Bentley.

Through the waved branches, o'er the greensward

glancing,

‘Midst other indications of festivity, Seeing a troop of his domestics dancing Like dervises who turn as on a pivot.

Byron. Don Juan.

As an accomplishment, therefore, and as an agreeable indication of youthful gaiety, it must no doubt be. considered. Canning’s Microcosm.

INDICATION, in medicine (indicatio; from in-dico, to show). An indication is that which demonstrates in a disease what ought to be doue. It is threefold; preservative, which preserves health ; curative, which expels a present disease ; and vital, which respects the powers and reasons of diet. The scope from which indications are taken, or determined, is comprehended in this distich :

Ars, aetas, regio, complexio, virtus,

Mos et symptoma, repletio, tempos, et usus.

The INDICTION, in chronology, instituted by Constantine the Great, is properly a cycle of tributes, orderly disposed, for fifteen years, and by it accounts of that kind were kept. Afterwards, in memory of the great victory obtained by Constantine over Mezentius, 8 Cal. October 312, by which an entire freedom was given to Christianity, the Council of Nice, for the honor of Corstantine, ordained that the accounts of years should be no longer kept by the Olympiads, which till that time had been done ; but that, instead thereof, the indiction should be made use of, by which to reckon and date their years, which hath its epocha A. D. 313, January 1.

INDICTMENT, in English law, is a written accusation of one or more persons of a crime or misdemeanor, preferred to, and presented upon oath by, a grand jury. ‘ To this end,’ says Blackstone, ‘ The sheriff of every county is bound to return to every session of the peace, and every commission of oyer and terminer, and of general gaol delivery, twenty-four good and lawful men of the county, some out of every hundred, to enquire, present, do, and execute all those things, which on the part of our lord the king shall then and there be commanded them. They ought to be freeholders; but to what amount is uncertain. As many as appear upon this pannel are sworn upon the grand jury, to the amount of twelve at the least, and not more than twenty-three ; that twelve may be a majority. Which number, as well as the constitution itself, we find exactly described so early as the laws of

king Ethelred : Exeant seniores duodecim Thani, et prsefectus cum eis, ut jurent super sanctuarium quod eis in manus datur, quod nolint ullum innocentem accusare, nee aliquem noxium celare. In the time of king Richard I. (according to Hoveden) the process of electing the grand jury, ordained by that prince, was as follows : — Four knights were to be taken from the county at large, who chose two more out of every hundred; which two associated to themselves ten other principal freemen, and those twelve were to answer concerning all particulars relative to their own district. This number was probably found too Isrge and inconvenient; but the traces of this institution still remain, in that some of the jury must be summoned out of every hundred. This grand jury are previously instructed in the articles of their enquiry by a charge from the judge who presides upon the bench. They then withdraw to sit and receive indictments, which are preferred to them in the name of the king, but at the suit of any private prosecutor ; and they are only to hear evidence on behalf of the pro-INDICTMENT.

secution : for the finding of an indictment is only in the nature of an enquiry or accusation, which is afterwards to be tried and determined ; and the grand jury are only to enquire upon their oaths, whether there be sufficient cause to call upon the party to answer it. A grand jury, however, ought to be thoroughly persuaded of the truth of an indictment, so far as their evidence goes ; and not to rest satisfied merely with remote probabilities : a doctrine that might be applied to very oppressive purposes. The grand jury are sworn to enquire only for the body of the county, pro corpore comitatus; and therefore they cannot regularly enquire of a fact done out of that county for which they are sworn, unless particularly enabled by act of parliament ; and to such a point was this anciently carried, that, where a man was wounded in one county and died in another, the offender was at common law indictable in neither, because no complete act of felony was done in any one of them : but by stat. 2 and 3 Edw. VI. he is now indictable in the county where the party died. And, by stat. 2 Geo. II., if the stroke or poisoning be in England, and the death upon the sea or out of England, or vice versa, the offenders and their accessories, may be indicted in the county where either the death, poisoning, or stroke, shall hap-pen. And so in some other cases ; as particularly where treason is committed out of the realm, it may be enquired of in any county within the realm, as the king shall direct, in pursuance of

statutes 26 Hen. VIII. and Edw. VI. And counterfeiters, washers, or minishers of the current coin, together with all manner of felons and their accessories, may, by stat. 26 Hen. VIII. (confirmed and explained by 34 and 35 Hen. VIII.), be indicted and tried for those offences, if committed in any part of Wales, before the justices of gaol delivery and of the peace, in the next adjoining county of England, where the king's writ runneth. Murders also, whether committed in England or in foreign parts, may, by virtue of the stat. 33 Hen. VIII., be enquired of and tried by the king's special commission in any shire or place in the kingdom. By stat. 10 and 11 W. III. all robberies and other capital crimes committed in Newfoundland may be enquired of and tried in any county of England. Offences against the black act, 9 Geo. I., may be enquired of and tried in any county of England, at the option of the prosecutor. So felonies, in destroying turnpikes, or works upon navigable rivers, erected by authority of parliament, may, by statutes 8 Geo. II. and 13 Geo. III., be enquired of and tried in any adjacent county. By stat. 26 Geo. II. plundering or stealing from any vessel in distress or wrecked, or breaking any ship contrary to stat. 12 Ann., maybe prosecuted either in the county where the fact is committed, or in any county next adjoining ; and, if committed in Wales, then in the next adjoining English county. Felonies committed out of the realm, in burning or destroying the king's ships, magazines, or stores, may, by stat. 12 Geo. III., be enquired of and tried in any county of England, or in the place where the offence is committed. By stat. 13 Geo. III. misdemeanors committed in India may be tried upon information or indictment in the court of king's bench in England ; and a mode is marked out for ex- , amining witnesses by commission, and transmitting their deposiiions to the court. But, in general, all offences must be enquired into, as well as tried, in the county where the fact is committed. Yet if larceny be committed in one county, and the goods carried into another, the offender may be indicted in either ; for the offence is complete in both. Or he may be indicted in England for larceny in Scotland, and carrying the goods with him into England, or vice versft; or for receiving in one part of the united kingdom goods that have been stolen in another. But for robbery, burglary, and the like, he can only be indicted where the fact was actually committed : for though the carrying away and keeping of the goods is a continuation of the original taking, and is therefore larceny in the second county, yet it is not a robbery or burglary in that jurisdiction. The grand jury are to find the whole of the bill or no part : they are in no manner to amend it.

When the grand jury have heard the evidence, if they think it a groundless accusation, they used formerly to indorse on the back of

the bill ignoramus; or we know nothing of it: intimating that, though the facts might possibly be true, that truth did not appear to them. But now they assert in English more absolutely, Not a true bill ; or Not found : and then the party is discharged without farther answer. But a fresh bill may afterwards be preferred to a subsequent grand jury. If they are satisfied of the truth of the accusation, they then endorse upon it, A true bill ; anciently, Billa vera. The indictment is then said to be found, and the party stands indicted. But, to find a bill, there must at least twelve of the jury agree; for so tender is the law of England of the lives of the subjects, that no man can be convicted at the suit of the king of any capital offence, unless by the unanimous voice of twenty-four of his equals and neighbours ;] that is, by twelve at least of the grand jury, in the first place, assenting to the accusation ; and afterwards by the whole petit jury, of twelve more, finding him guilty upon his trial. But if twelve of the grand jury assent it is a good presentment, though some of the rest disagree. And the indictment, when so found, is publicly delivered into court.

Indictments must have a precise and sufficient certainty. By stat. 1 Hen. V. all indictments must set forth the Christian name, surname, addition of the state and degree, mystery, town, or place, and the county of the offender; and all this to identify his person. The time and place are also to be ascertained, by naming the day and township in which the fact was committed : though a mistake in these points is in general not held to be material, provided the time be laid previous to the finding of the indictment, and the place to be within the jurisdiction of the court; unless where the place is laid, not merely as a venue, but as part of the description of the fact. But sometimes the time may be very material, where there is any limitation in point of time assigned for the prosecution of offenders ; as by the stat. 7 W. III., which enacts

that no prosecution shall be had for any of the treasons or misprisions therein mentioned (except an assassination designed or attempted on the person of the king), unless the bill of indictment be found within three years after the offence committed : and, in case of murder, the time of the death must be laid within a year and a day after the mortal stroke was given. The offence itself must also be set forth with clearness and certainty; and in some crimes particular words of art must be used, which are so appropriated by the law, to express the precise idea which it entertains of the offence, that no other words, however synonymous they may seem, are capable of doing it. Thus, in treason, the facts must be laid to be done ‘ treasonably, and against his allegiance; anciently, proditorie et contra ligean-tiae suae debitum;’ else the indictment is void. In indictments for murder it is necessary to say that the party indicted ‘ murdered,’ not ‘ killed or * slew,’ the other ; which, till the late statute, was expressed in Latin by the word murdravit. In all indictments for felonies the adverb ‘ feloniously,’ felonice, must be used; and for burglaries, also, burglariter, or, in English, ‘ burgla-riously :’ and all these to ascertain the intent. In rapes the word rapuit, or ‘ ravished,’ is necessary, and must not be expressed by any periphrasis, in order to render the crime certain. So in larcenies, also, the words felonice cepit et asportavit, ‘ feloniously took or carried away,’ are necessary to every indictment: for these only can express the very offence. Also, in indictments for murder, the length and depth of the wound should in general be expressed, in order that it may appear to the court to have been of a mortal nature : but, if it goes through the body, then its dimensions are immaterial ; for that is apparently sufficient to have been the cause of the death. Also, where a limb, or the like, is absolutely cut off, such description is needless. Lastly, in indictments, the value of the thing which is the subject or instrument of the offence must sometimes be expressed. In indictments for larcenies this is necessary, that it may appear whether it be grand or petit larceny ; and whether entitled or not to the benefit of clergy. In homicides of all sorts it is necessary ; as the weapon with which it is committed is forfeited to the king as a deodand.

INDIES, WEST, a denomination under which is comprehended a large chain of islands extended in a curve from the Florida shore on the northern peninsula of America to the gulf of Venezuela on the southern. Columbus gave this name to them under the notion that they formed part of the Indian continent, which it was his object in his first voyage to find. The following are the principal of these islands : — Curazao, Trinidad, Tobago, Grenada, St. Vincent, Barbadoes, Martinico, Dominica, Mary Galante, Guadaloupe, Antigua, Barbuda, St.

Christopher, St. Eustatius, St. Bartholomew, St. Martin, Anguilla, St. Thomas, Porto-Rico, St. Domingo, Jamaica, Cuba, and the Bahamas ; a full description of which will be found under their respective denominations. INDIFFERENCE, n. s.ˆ Fr. indifference ; INDIF'FERENCY, n. s. f Lat. in and differo. INUIF'FERENT, adj. f Neutrality ; cqui-INDIF'FF.RENTLY, adv. J poise from motives

on either side ; impartiality ; negligence ; unconcern : indifferent, not to have such difference as that the one is preferable to the other ; disinterested. Passable ; having mediocrity ; of a middling state ; neither good nor worst : this is an improper and colloquial use, especially when applied to persons. Indifferently, without distinction; not well; tolerably; passably; middlingly, &c.

Metcalfe was partial to none, but indifferent to all ; a master for the whole, and a father to every one.

Ascham.

The nature of things indifferent is neither to be commanded nor forbidden, but left free and arbitrary.

Hooker.

The choice is left to our discretion, except a principal bond of some higher duty remove the indifference that such things have in themselves : their indifference is removed, if we take away our own liberty.

Id.

Doth his majesty Incline to it or no ? — He seems indifferent. Shakspeaˆe. I am a most poor woman and a stranger, Born out of your dominions ; having here No judge indifferent, and no more assurance Of equal friendship and proceeding. Id.

Set honour in one eye, and death i' the' other, And I will look on death indifferently. Id.

I am myself indifferent honest ; but yet I could ac-cuse me of such things, that it were better that my mother had not born me. Id. Hamlet.

In choice of committees it is better to chuse indifferent persons, than

to make an indifferency by putting in those that are strong on both sides.

Bacon's Estayi.

Customs, which of themselves are indifferent in other kingdoms, became exceeding evil in this realm, by reason of the inconveniences which followed thereupon. Daviet.

There can hardly be an indifferent trial had between the king and the subject, or between party and party, by reason of this general kindred and consanguinity.

A moyle will draw indifferently well, and carry great burthens. Carew.

Some things admit of mediocrity : A counsellor, or pleader at the bar, May want Messala's powerful eloquence, Or be less read than deep Casselius ; Yet this indifferent lawyer is esteemed.

Roscommon.

One thing was all to you. and your fondness made you indifferent to every thing else. Temple.

They live too long, who happiness outlive !

For life and death and things indifferent,

Each to be chose as either brings content.

Dryden.

A perfect indifferency in the mind, not determinable by its last judgment, would be as great an imperfection as the want of indifferency to act, or not to act, till determined by the will.

Being indifferent, we should receive and embrace opinions according as evidence gives the attestation of truth. **•

This 1 mention only as my conjecture, it being indifferent to the matter which way the earned shal determine.

Though at first it was free, and in my choice, whether or no I should publish these discourses ; yet, tl.o publication being once resolved, the dedication wa-not so indifferent.

Smith.

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Let guilt or fear

Disturb man’s rest ; Cato knows neither of them : Indifferent in his choice to sleep or die. Addison. It was a law of Solon, that any person who in the civil commotions of the republick remained neuter, or an indifferent spectator of the contending parties, should be condemned to perpetual banishment.

Id. Freeholder.

Were pardon extended indifferently to all, which of them would think himself under any particular obligation? Addison.

There is not one of these subjects that would not sell a very indifferent paper, could I think of gratifying the publick by such mean and base methods.

Id.

I hope it may indifferently enteitain your lordship at an unbending hour. Howe.

This has obliged me to publish an indifferent collection of poems, for fear of being thought the author of a worse. Prior.

Whiteness is a mean between all colours, having itself indifferently to them all, so as with equal facility to be tinged with any of them. Newton.

But how indifferent soever man may be to eternal happiness, yet surely to eternal misery none can be indifferent. Rogers.

A place which we must pass through, not only with the indifference of strangers, but with the vigilance of those who travel through the country of an enamy. Id.

The people of England should be frighted with the French king and the pretender once a year ; the want of observing this necessary precept, has produced great indifference in the vulgar. Arbuthnot.

Indifference, clad in wisdom's guise, All fortitude of mind supplies ; For how can stony bowels melt, In those who never pity felt ? Swift.

He will Izt you know he has got a clap with as much indifferency as he would a piece of public news.

Id.

Messenger of grief

Perhaps to thousands, and of joy to some, To him indifferent whether grief or joy.

Cowper.

He speaks not — scarce regards me — not a word — Nor looks ; yet he was soft of voice and aspect, Indifferent not austere. Byron. Sardanapalus.

Besides these, a friend of mine, a great etymolo-gist, has assured me, that bombast and bombasin originally sprung from the same root ; and fustian, every body knows, is a term applied indifferently to passage." in poetry, or materials for a pair of breeches.

Canning.

IN'DIGENCE, n. s. ˆ Fr. indigence ; Lat. IN'DIGENCY, n. s. > indigentia. Penury; IN'DIGENT, adj.) poverty ; want : indigent, poor ; needy ; necessitous ; void ; empty ; in want, used with the particle of.

Herken what is the sentence of the wise, Bet is to dien than have indigence. Thy selve neighebour wol thee despise ; If thou be poure, farewel, thy reverence.

Chaucer. The Man of Lawes Tale. Such bodies have the tangible parts indigent of moisture. Bacon.

For ev'n that indigence, that brings me low, flakes me myself, and him above to know. Dryden.

Rejoice, O Albion, severed from the world, By nature's wise indulgence ; indigent Of nothing from without. Phillips.

Where there is happiness there must not be indigenˆy, or want of any due comforts of life.

Burnet's Theory.

Charity consists in relieving the indigent. Addison, Athens worshipped God with temples and sacrifices, as if he needed habitation and sustenance, and that the heathens had such an apprehension about the indigency of their gods, appears from Aristophanes and Lucian. Bentley.

How low, how little are the proud ; How indigene the great. Gray. Ode to Spring.

INDIG'ENOUS, adj. Fr. indigene ; Lat. in-digena. Native to a country; originally produced or born in a region.

Negroes were all transported from Africa, and arc not indigenous or proper natives of America. Browne.

It is wonderful to observe one creature, that is mankind, indigenous to so many climates. Arbuthnot.

INDIGEST, adj. ~\ Fr. indigeste ; Lat. indi-INDIGES'TED, adj. {gestus. Not separated INDIGES'TIBLE, adv. I into orders ; not ar-INDIGES'TION, n. s. 'ranged; not formed, shaped, or methodised ; not concocted in the stomach ; not brought to suppuration : indigestible, not capable of being digested ; not convertible to nutriment : indigestion, a morbid debility in the stomach ; want of concoctive power ; the state of meats unconcocted.

By irksome deformities, through endless and senseless effusions of undigested prayers, they oftentimes disgrace the worthiest part of Christian duty towards God. Hooker.

Hence, heap of wrath, foul indigested lump ; As crooked in thy manners as thy shape.

Shakipeare.

Set a form upon that indigest project, So shapeless and so rude. Id.

King John.

This mass, or indigeited matter, or chaos, created in the beginning, was without the proper form, which it afterwards acquired. Raleigh.

The fumes of indigestion may indispose men to thought, as well as to diseases of danger and pain.

Temple.

Before the seas, and this terrestrial ball, One was the face of nature, if a face j Rather a rude and indigested mass. Dryden.

Dreams are bred

From rising fumes of indigested food. Id.

Eggs are the most nourishing and exalted of all ani-mal food, and most indigestible : nobody can digest the same quantity of them as of other food.

Arbuthnot on Diet. His wound was indigested and inflamed.

Wiseman.

The political creed of the high-principled men sets the protestant succession upon a firmer foundation than all the indigested schemes of those who profess revolution principles. Swift.

And indigestion's grand multiplication Requires arithmetic beyond my forces.

Byron. Don Juan.

INDIG'ITATE, v. a. i Lat. indigito. To

INDIGITA'TION, n.s. 5 point out; to show by

the fingers : the act of pointing out or directing.

Antiquity expressed numbers by the fingers : the

depressing this finger, which in the left hand implied

but six, in the right hand indigitated six hundred.

Browne's Vulgar Errours,

As though there were a seminality of urine, we foolishly conceive we behold therein the anatomy of every particle, and can thereby indigitate their affections. Id. We are not to indigitate the parts transmittent.

Harvey.

Which things I conceive no obscure indigitation of providence. More against Atheism.

INDIGN', adj. ~\ Fr. indigne; Lat. IN-INDIGNANT, adj. {dignus, indignor. In-INDIGNA'TION, n. s. {dign, unworthy; unde-INDIG'NITY, » s. J serving; disgraceful: indignant, angry; raging with passion; a union of wrath and disdain : indignation, anger with contempt; the wrath of a superior being; the effect of anger: indignity, contumelious treatment ; violation of right, attended with insult.

There was great indignation against Israel.

2 Kings.

Wondering upon this thing, quaking for drede, She saide ' Lord !' indigne and unworthy Am I to thilke honour, that ye me bedie ; But as ye wol yourself right so wol I, And here I swere that never willingly In work ne thought I nill you disobeie. For to be ded, through me, were both to deie.

Chaucer. The Clerkes Tale. And Malebouche gan, first, the tale tel, To sclaunder Trouth of indignation.

Id. Complaint of the Blacke Knight. But he so full of indignation was, That to his prayer nought he would incline.

Spenser. Faerie Quecnc,

Bishops and prelates could not but have bleeding hearts to behold a person of so great place and worth constrained to endure so foul

indignities. Hooker.

If heavens have any grievous plague in store, Let them hurl down their indignation On thee thou troubler of the world. Shakspeare.

And all indign and base adversities Make head against my estimation. Id.

Where there is a kingdom that is altogether unable or indign to govern, is it just for another nation, that is civil or policed, to subdue them ? % Bacon.

No emotion of passion transported me, by the indignity of his carriage, to any thing unbeseeming my-self. King Charles.

From those officers, warm with indignation at the insolences of that vile rabble, came words of great contempt. Clarendon.

Man he made, and for him built Magnificent this world, and eartb his seat, Him lord pronounced ; and, O indignity! Subjected to his service angel-wings, And flaming ministers to watch and tend Their earthly charge. Milton,

He scourged with many a stroke the indignant waves. Id.

But keep this swelling indignation down, And let your cooler reason now prevail. Rows. What rage that hour did Albion's soul possess, Let chiefs imagine, and let lovers guess ! He strides indignant, and with haughty cries To single fight the fairy prince defies. Tickel.

The lustful monster fled, pursued by the valorous and indignant Martin. Arbuthnot to Pope.

He does not see how that mighty passion for the church, can well consist with those indignities and that contempt men bestow on the clergy. Swift.

The more the bold, the bustling, and the bad, Press to usurp the reins of power, the more Behoves it virtue with indignant zeal To check their combination. Thomson.

• ; even the oak

Thrives by the rude concussion of the storm :

He seems indeed indignant, and to feel

The impression of the blast with proud disdain,

Cowper.

Nor be thy generous indignation checked, Nor checked the tender tear to misery given j

From guilt's contagious power shall that protect,

This soften and refine the soul for heaven.

Beattie.

By leaving the quantity of beating indeterminate, he gives every reader the liberty to administer it, in exact proportion, to the sum of indignation which he may have conceived against his hero.

Canning. Microcosm.

IN'DIGO, n. s. Lat. Indicum. A plant, by the Americans called anil. In the middle of the flower is the style, which afterwards becomes a jointed pod, containing one cylindrical seed in one partition, from which indigo is made, which is used in dyeing for a blue color. — Miller.

INDIGO is a dye prepared from the leaves and small branches of the indigofera tinctoria. The plants when gathered are thrown into the steeping-vat, which is a large tub filled with water, in which they undergo a fermentation, which in twenty-four hours at furthest is completed. A cock is then turned, to let the water run into the mortar or pounding tub. The steeping vat is then cleaned out, that fresh plants may be thrown in : and thus the work is continued without interruption. The water which has run into the pounding tub is found impregnated with a very subtile earth, which constitutes the dregs or blue substance that is the object of this process, and which must be separated from the useless salt of the plant, because this makes the dregs swim on the surface. To effect this, the water is forcibly agitated with wooden buckets, full of holes, and fixed to a long handle. This part of the process requires great caution. If the agitation be discontinued too soon, the part that is used in dyeing, not being sufficiently separated from the salt, would be lost. If, on the other hand, the dye were to be agitated too long after the complete separation, the parts would be brought together again, and form a new combination ; and the salt, reacting on the dregs, would excite a

second fermentation, that would alter the dye, spoil its color, and make what is called burnt indigo. These accidents are prevented by a close attention to the least alterations that the dye undergoes, and by the precaution which the workmen take to draw out a little of it from time to time in a clean vessel. When they perceive that the colored particles collect by separating from the rest of the liquor, they leave off shaking the buckets, to allow time to the blue dregs to precipitate to the bottom of the tub, where they are left to settle till the water is quite clear. Holes made in the tub, at different heights, are then opened one after another, and thus useless water is let out. The blue dregs remaining at the bottom having acquired the conscience of a thick muddy liquid o>cks are then opened, which draw it off inU »ri«- settler. After it is still more cleared of mucu superfluous water, in its third and last tub, it is drained into sacks ; whence, when water no longer filters through the cloth, this matter, now become of a thicker consistence, is put into c bests, wher*- it entirely loses its moisture. In three months the indigo is fit for sale. It is used in washing, to give a bluish color to linen : painters also employ it in their water colors ; and dyers can not make fine blue without it. The ancients

procured it from the East Indies ; in modern times it has been transplanted into America and the West Indies. There are two kinds of indigo prepared in the East Indies, particularly on the coast of Coromandel, at Pondicherry, &c. Of these the worst kind is used for giving the body of color to the dyed substance, the other being employed only to give it a gloss afterwards.

Bergmann mixed one part of well pulverised indigo with eight parts of colorless sulphuric acid, of the specific gravity of 1-900, in a glass vessel slightly closed. The acid very quickly acted upon the indigo, and excited much heat. After a digestion of twenty-four hours the solution was effected; but the mixture was opaque and black. If the sulphuric acid be first diluted in water, it attacks only the earthy principle which is mixed with the indigo, and some of the mucilaginous parts. The fixed alkalies, saturated with carbonic acid,

separate a very fine Dlue powder from the solution of indigo, which is deposited very slowly. The concentrated nitric acid attacks indigo with so much activity as to set it on fire. The muriatic acid by digestion, and even boiling upon indigo, takes up only the earthy matter, the iron, and a little of the extractive matter, which gives it a brown color, but in no respect attacks the blue color. Pure or caustic fixed alkali dissolves some matters foreign to the coloring matter of the indigo, but acts very little on the coloring particles. Pure volatile alkali has nearly the same effect.

Bergmann concludes, from his analysis, that 100 parts of good indigo contain of mucilaginous matter 12, resinous matter 6, earthy matter 22, oxide of iron 13.

There remain forty-seven parts, which are the coloring matter, nearly in a state of purity, and afford by distillation carbonic acid 2, alkaline liquor 8, empyreumatic oil 9, coal 23.

M. Chevreul has given the following results of his very elaborate analysis of Guatimala indigo :

/•Ammonia • . .12

1 Disoxygenised indigo

j Green matter

v Bitter matter

f Green matter . . 30

< Red matter

C Indigo

… ., C Red matter Byraunaticacid J Carbonate oflime

Oxide of iron and alumina Silica . , .

Pure indigo .. • . .

By water

By alcohol

6 2

2

. 3 45

100

When commercial indigo is exposed to a heat of about 400° Fahrenheit, it evolves a beautiful crimson smoke, which may be condensed in crystalline needles, which are supposed to be pure indigo. The blue vat of the dyer contains indigo deoxidised by protoxide of iron, and rendered soluble in its yellow-green state by ame water. If a portion of this solution be exposed to the air, in a shallow vessel, the indigo will speedily absorb oxygen, and precipitate in its usual state of an insoluble blue powder. This, being dried and digested in a mixture of alcohol VOL. XI

and muriatic acid, becomes also pure indigo by the abstraction of all the resin ar.d lime. In this state it is a soft powdei, of an intensely deep blue, verging sometimes on purple. It is unchangeable by the air. If into the sulphate of indigo, above described, a few pieces of iron or zinc are put, the nascent hydrogen seizes its oxygen, and discolors it. Sulphuric acid, rendered smoking by a little sulphurous acid, is a • a better solvent of indigo than pure oil of vitriol. By boiling a little sulphur in this, its solvent power is improved.

In order to find the value of any sample ot indigo, Mr. Daltou directs us to take one grain, carefully weighed, from a mass finely pulverised. Put this-into a wine glass, and drop two or three grains of concentrated sulphuric acid upon it. Having triturated them well, pour in water, and transfer the colored liquid into a tall cylindrical jar, about one inch inside diameter. When the mixture is diluted with water, so as to show the flame of a candle through it, mix the liquid solution of oxymuriate of lime with it, agitating it slowly, and never putting any more in till the smell of the preceding portion has vanished. The liquid soon becomes transparent, and of a beautiful greenish-yellow appearance. After the dross has subsided, the clear

liquid may be passed off, and a little more water put into the sediment, with a few drops of oxymuriate of lime, and a drop of dilute sulphuric acid; if more yellow liquid is produced, it arises from particles of indigo which have escaped the action of the oxymuriate before, and must be added to the rest. The value of the indigo is in proportion to the quantity of real oxymuriate of lime necessary to destroy its color. The value may also be we}l estimated by the quantity and intensity of the amber-colored liquid which the indigo produces, independently of any valuation of the oxymuriate of lime.

Another method of trying the goodness of this substance is by fire ; for the pure indigo will be entirely consumed, while the extraneous particles will remain. The pounded indigo is much more subject to adulteration than such as is sold in cakes or tablets ; as the ashes or dirt with which it is mixed are very apt to separate from the pure coloring substance when standing in a liquid state, as it must always do before the moisture is evaporated : whence, on breaking indigo so adulterated, the extraneous matter will be perceived in strata of a different color.

Indigo is commonly divided, from the color which it exhibits upon breaking, into three kinds, copper-colored, purple, and blue. It is said that the dyers use chiefly the first, and the calico-printers the last. On what particular circumstances these different appearances depend, we know not ; nor is it ctrtainly known whether the real quality of the indigo has any connexion with them. The deepest and liveliest blue indigo, rubbed with the nail, appears like polished copper; and L'olutions of all the sorts, made in alkaline lixivia, assume alike a copper-colored skin upon the surface. See CHEMISTRY.

INDIGOFERA, the indigo plant, a genus of the decandria order, and diadelphia class of plants, natural order thirty -second, napilionacese :

CAL. patent : COB. carina, furnished with a tubulated patulous spur on each side ; the legume is linear. There are several species, the most remarkable is the

I. tiuctoria, a native of the warm parts of Asia, Africa, and America, and from which indigo is made. The root is three or four lines thick, and more than a foot long, of a faint smell something like parsley. From this root issues a single stem, nearly of the same thickness, about two feet high, straight, hard, almost woody, covered with, a bark slightly split, of a gray ash color towards the bottom, green in the middle, reddish at the extremity, and without appearance of pith in the inside. The leaves, ranged in pairs around the stalk, are of an oval form, smooth, soft to the touch, furrowed above, of a deep green on the under side, and connected by a very short peduncle. From about one-third of the stem to the extremity there are ears that are loaded with very small flowers, from twelve to fifteen, but destitute of sjnell. The pistil, which is in the midst of each flower, changes into a pod, in which the seeds are enclosed. This plant, says Mr. Loudon, is one of the most profitable articles of culture in Hindostan, because an immense extent of land being required to produce but a moderate bulk of the dye, few undertake to raise it but large capitalists, and because the whole manufacture may be carried on without even the aid of a house. The first step in the culture of the plant is to render the ground, which should be friable and rich, dry, and perfectly free from weeds. The seeds are then sown in shallow drills about a foot apart. The rainy season must be chosen for sowing, otherwise, if the seed is deposited in dry soil, it heats, corrupts, and is lost. The crop, being kept free from weeds, is fit for cutting in two or three months, and this may be repeated in rainy seasons every six weeks. The plants must not be allowed to come into flower, as the leaves in that case become dry and hard, and the indigo produced is of less value ; nor must they be cut in dry weather, as they would not spring again. A crop generally lasts two years. The indigo is, however, one of the most precarious of oriental crops; being liable to be destroyed by hail, which does comparatively little injury to the sugar-cane and other plants. As this plant soon exhausts the soil, because it does not absorb a sufficient quantity of air and dew to moisten the earth, the planter should have a vast space which may remain covered with trees, till it becomes necessary to fell them, to make room for the indigo.

INDIRECT , adj.-\ Fr. indirect ; Lat. in-INDJREC'TIOX, n.s. * directus. Not straight; not INDIRECT'LY, adv. i rectilinear ; not tending ISDIRECT'NESS, n. s. J otherwise than obliquely or consequentially to

a purpose ; as, an indirect accusation ; wrong ; improper ; not fair or ho-nest. Indirection, oblique means ; dishonest practice. Indirectly, obliquely; unfairly. Indirectness, fraudulent art.

Those things which they do know they may, upon sundry indirect considerations, let pass ; and although themselves do not err, yet may they deceive others.

Hooket .

And thus do we, of wisdom and of reach. With windlaces, and with essays of byas, By indirections find directions out.

Shakspeare, Hamlet The tender prince

Would fain have come with me to meet your grace ; But by his mother was per force with-held. — Fy, what an indirect and peevish course Is this of her's ? Id. Richard HI.

He bids you then resign Your crown and kingdom, indirectly held From him the true challenger. Id. Henry V.

I had rather coin my heart than wring From the hard hands of peasants their vile trash, By any indirection. Id. Julius Caesar.

Think you, that any means under the sun Can assecure so indirect a course ? Daniel.

He that takes any thing from his neighbour, which was justly forfeited, to satisfy his own revenge or avarice, is tied to repentance, but not to restitution ; because I took the forfeiture indirectly, I am answerable to God for my unhandsome, unjust, or uncharitable circumstances. Taylor.

O pity and shame ! that they who to live well Entered so fair, should turn aside, to tread Paths indirect. Milton.

Indirect dealing will be discovered one time or other, and then he loses his reputation. Tillotson.

Still she suppresses the name, which continues his doubts and hopes ; and at last she indirectly mentions it. Broome.

INDISCERNIBLE, adj. } Lat. in, de, cerno. INDISCERN'IBLY, adv. $ Not perceptible or discoverable : in a manner not to be perceived.

Speculation, which, to my dark soul, Deprived of reason, is as indiscernible As colours to my body, wanting sight. Denham.

INDISCERPTIBLE, adj.) Lat. and indit—

INDISCERPTIBIL'ITY, n. s. $ cerpo. Net to be separated ; incapable of being broken or destroyed.

INDISCOV'ERY, n. s. In and discovery. Fr. dccouvrir. The state of beiiig hidden. An unusual word.

The ground of this assertion was the magnifying esteem of the ancients, arising from the indiscovery of its head. Browne.

INDISCREET, adj. -\ Tfr.indiscret ; Lat. ia INDISCREET' LY, adv. ˆdiscretio; Greek SM-INDISCRE'TION, n. s. J icpwric-Imprudent;

incautious; inconsiderate; rash: want of due

foresight and prudence.

If thou be among the indiscreet, observe the time ; but be continually among men of understanding;.

Ecclesiastes.

Job on justice hath aspersions flung, And spoken indiscreetly with his tongue.

Sandys. Why then

Are mortal men so fond and indiscreet, So evil gold to seek unto their aid ; And having not complain, and having it upbraid ?

Spenser.

Indiscretion sometimes serves us well, When our deep plots do fail.

Shakspeare. Hamlet.

Let a great personage undertake an action passionately, let him manage it indiscreetly, and he shall have enough to flatter him. Taylor.

Loose papers have been obtained from us by the importunity and divulged by the indiscretion of friends, although restrained by promises. Swift.

Past indiscretion is a venial crime, And if the youth, unmellowed yet by time, Bore on his branch, luxuriant then and rude, Fruits of a blighted size, austere and crude.

Coteper.

INDISCRIMINATE, o$. } Latin, indis—

INDISCRIM'INATELY, adv. $criminatus. Un-distinguishable : not with any mark of distinction.

Liquors, strong of acid salts, destroy the blueness of the infusion of our wood ; and liquors indiscriminately, that abound with sulphureous salts, restore it.

Boyle.

Others use defamatory discourse purely for love of talk; whose speech, like a riowing current, bears away indiscriminately whatever lies in its way.

Government of the Tongue.

But I must not be understood to praise the whole indiscriminately. Beattie.

There are in Turkey a body of men, against whom universal contempt is indiscriminately, as well as undeservedly, directed \ and these are the worshipful company of Grocers. Canning. Microcosm.

INDISP EN'SABLE, adj. j Lat. in and dis—

INDISPEN'SABLENESS, n. s. \penso. Not to be

INDISPEX'SABLY, adv. j remitted ; not to

be spared; necessary state of not being to be

spared.

Every one must look upon himself as indispensably obliged to the practice of duty. Addison.

Rocks, mountains, and caverns, against which these exceptions are made, are of indispensable use and necessity, as well to earth as to man. Woodward.

The love of truth is natural to man ; and adherence to it his indispensable duty. Beattie.

INDISPOSE', v. a. ˆ Fr. indisposer ; Lat. INDISPO'SEDNESS, n. s. >i« and dispositus. To INDISPOSIT'ION, n. s. J place in an unfavorable position, with reference to something else : to make unfit ; to disincline ; disorder; disqualify. Indisposedness, a disordered state of mind. Indisposition, disorder of health; sickness; disinclination; dislike.

The indisposition of the church of Rome to reform herself, must be no stay unto us from performing our duty to God. Hooker.

The king did complain of a continual infirmity of body, yet rather as an indisposition in health than any set sickness. Hay ward.

It is not any innate harshness in piety that renders the first essays of it unpleasant ; that is owing only to the indisposedness of our own hearts.

Decay of Piety.

The king was sufficiently indisposed towards the persons or the principles of Calvin's disciples.

Clarendon.

The soul is not now hindered in its actings by the distemperature of indisposed organs. Glanvitte.

Though it weakened, yet it made him rather indisposed than sick, and did no ways disable him from studying. Walton.

I have known a great fleet lose great occasions, by an indisposition of

the admiral, while he was neither well enough to exercise, nor ill enough to leave the command. Temple.

Wisdom is still looking forward , from the first indispositions into the progress of the disease.

L' Estrange.

It has a strange, efficacy to indispose the heart to religion. South's Sermons.

His life seems to have been prolonged beyond its natural term, under those indispositions which hung upon the latter part of it. Addison's Freeholder.

The mind, by every degree of affected unbelief, contracts more and more of a general indisposition towards believing. Atterbury.

Nothing can be reckoned good or bad to us in this life, any farther than it prepares or indisposes us for the enjoyments of another. Id.

A mind unnerved, or indisposed to bear The weight of subjects worthiest of her care.

Cowper.

INDIS'PUTABLE, adj.-* Lat. in and dis—

INDIS'PUTABLENESS, n. s. \puto. Uncontrover—

INDIS'PUTABLY, adv. j tible; evident; certain: a state of actual certainty: without controversy or opposition.

They questioned a duty that had been indisputably granted to so many preceding kings. Howel.

The thing itself is questionable, nor is it indixputa-My certain what death she died. Browne.

There is no maxim in politicks more indisputable, than that a nation should have many honours to reserve for those who do national services. Addison.

The apostle asserts a clear indisputable conclusion, which could admit of no question. Rogers.

That it is a character drawn faithfully from nature, by the hand of a master, most accurately delineated, and most exquisitely finished, is indeed indisputable. Canning. Microcosm.

INDISSOL’ VABLE, adj. ˆ Lat. in and dis—

INDISSOL’UBILITY, n. s. I solvo ; Fr. indis—

INDIS’SOLUBLE, adj. p> soluble. Not sepa—

INDIS’SOLUBLENESS, re. s. i rable as to its

INDIS’SOLUBLY, adv. J parts ; obligatory ;

binding for ever. Indissolubility, resistance to a dissolving power; perpetuity of obligation. Indissolubly, in a manner resisting all separation.

Far more comfort it were for us, to be joined with you in bands of indissoluble love and unity, to live as if, our persons being many, our souls were but one.

Hooker.

There is the supreme and indissoluble consanguinity between men, of which the heathen poet saith we are all his generation. Bacon’s Holy War.

On they move

Indissolubly firm ; nor obvious hill,

Nor strait’ning vale, nor wood, nor stream divide

Their perfect ranks. Milton.

Adam, though consisting of a composition intrinsically dissolvable, might have held, by the Divine Will, a state of immortality and indissolubleness of his composition. Hale.

When common gold and lead are mingled, the lead may be severed almost unaltered ; yet if, instead of the gold, a tantillum of the red elixir be mingled with the saturn, their union will be so indissoluble, that there is no possible way of separating the diffused elixir from the fixed lead. Boyle

The remaining ashes, by a further degree of fire, may be indissolubly

united into glass. Id.

What hoops hold this mass of matter in so close a pressure together from whence steel has its firmness, and the parts of a diamond their hardness and indii-solubility ? Locke.

They might justly wonder, that men so taught, so obliged to be kind to all, should behave themselves so contrary to such heavenly instructions, such indissoluble obligations. South.

Metals, corroded with a little acid, turn into rust, which is an earth tasteless and indissolvable ;n water ,

anJ this earth, imbibed with more acid, becomes a .uetallick salt. Newton.

They willingly unite, IndimohMy firm : from Dubris south To northern Orcades. Phillips.

Deposition and degradation are without hope of any remission, antl therefore the law stiles them an indis-tolvable bond ; but a censure, a dissolvable bond.

Aylijfe's Parergon.

Wit, like every other power, has its boundaries. Its success depends on the aptitude of others to receive impressions ; and as some bodies, indissoluble by heat, can set the furnace and crucible at defiance, there are minds upon which the rays of fancy may be pointed without effect, and which no fire of sentiment can agitate or exalt. Johnion's Rambler.

INDISTINCT', adj. ˆ Fr. indistinct; Lat—

INDISTINC'TION, n.s. tinaiuAdistinguor. Con—

INDISTINCT'LY, adv. £ fused; not plainly

INDISTINCT'N ESS, n.s. * marked; not exactly discerning; having a character of illegibility: uncertainty; omission; obscurity; a want of clearness.

We throw out our eyes for brave Othello,

Even till we make the main and the aerial blue

An indistinct regard. Shakspeare.

That which is now a horse, even with a thought, The rack dislimns, and makes it indistinct As water is in water. Id.

Making trial thereof, both the liquors soaked indistinctly through the bowl. Browne's Vulgar Errours.

The indistinction of many of the same name, or the misapplication of the act of one unto another, hath made some doubt. LI.

She warbled in her throat, And tuned her voice to many a mery note : But indistinct, and neither sweet nor clear. Dryden.

An indistinction of all persons, or equality of all orders, is far from being agreeable to the will of God.

Sprat.

There is unevenness or indistinctness in the style of these places, concerning the origin and form of the earth. Burnet't Theory.

In its sides it -was bounded distinctly, but on its ends confusedly and indistinctly, the light there vanish-ing by degrees. Newton's Opticks.

Old age makes the cornea and coat of the chrysta-line humour grow flatter ; so that the light, for want of sufficient refraction, will not converge to the bot-tom of the eye, but beyond it, and by consequence paint in the bottom of the eye a confused picture ; and according to the indistinctness of this picture, the object will aopear confused. Newton.

When we speak of the infinite divisibility of matter, we keep a very clear and distinct idea of division and divisibility ; but when we come to parts too small for our senses, our ideas of these little bodies become obscure and indistinct. Witts.

INDISTUR’BANCE, n.s. In and disturo-Calmness : freedom from disturbance.

What is called by the Stoicks apathy, and by the Scepticks indisturbance , seems all but to mean, great tranquillity of mind. Temple.

INDIVID’UAL, adj. ~] Fr. individu ,• Lat.

INDIVIDUALITY, n. s. INDIVID’UALLY, adv. INDIVID’UATE, v. a.

in and divido. One person separate from all others : undivided;

INDIVIDUA’TION, n.s. (not to be disjoined:

INDIVIDU’ITY, n.s. INDIVISIBILITY, n. s. INDIVIS’IBLENF.SS, n. s. INDIVISIBLE, adj.

individuality, separate existence : individually, numerically ; incommuni-

to distinguish or make single : individuation, that which makes an individual : individuity, the state of being an individual : indivisible, what cannot be broken into parts ; so small as that it cannot be smaller ; having reached the last degree of divisibility : indi visibly, so as to be incapable of separation or division.

How should that subsist solitarily by itself, which hath no substance, but individually the very same whereby others subsist with it ? Hooker.

Neither is it enough to consult, secundum genera, what the kind and character of the person should be ; for the most judgment is shewn in the choice of individuals. Bacon.

I dare not pronounce him omniscious, that being an attribute individually proper to the godhead, and incommunicable to any created substance.

Hakeu-ill.

To give thee being, I lent Out of my side to thee, nearest my heart, Substantial life, to have thee by my side Henceforth an individual solace dear. Milton.

Long eternity shall greet our bliss With an individual kiss. Id.

Under his great vicegerent reign abide United, as one individual soul, For ever happy. Milton.

Here is but one indivisible point of time observed, but one action performed ; yet the eye cannot comprehend at once the whole object. Dryden.

They present us with images more perfect than the life in any individual. Id. Dvfrernoy.

No man is capable of translating poetry, who, besides a genius to that art, is not a master both of his author's language and of his own ; nor must we understand the language only of the poet, but his particular turn of thoughts and expression, which are the characters that distinguish and individuate him from all other writers. Dryden.

A pestle and mortar will as soon bring any patticle of matter to indivisibility as the acutest thought of a mathematician. Locke.

Must the whole man, amazing thought ! return To the cold marble, or contracted urn ! And never shall those particles agree, That were in life this individual he ? Prior.

He would tell his instructor, that all men were not ˆsingular ; that individuality could hardly be predicated of any man ; fot it was commonly said, that a man is not the same he was, and that madmen arc beside themselves. Arbuthnot.

We see each circumstance of art and individual of nature summoned together by the extent and fecundity of his imagination.'

Pope's Preface to the Iliad.

Know all the good that individuals find, Lies in three words, health,

peace, and competence.

Pope.

It would be wise in them, as individual and private mortals, to look back a little upon-the storms they have raised, as well as those they have escaped.

Swift.

What is the principle of individnation ? Or what is it that makes any one thing the same as it was before ?

Wattr.

The object of any particular idea is called an indi-idual : so Peter is an individual man, London is an

individual city.

Id.

INDIVIS'IBLY, adv. J cab.y : individuate,

It is long before we are convinced of the small proportion which every individual bears to the collective tody of mankind. Johnson.

IND

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An individual is a sacred mark, Not to be pierced in play, or in the dark.

Cowper.

There are certain forms and etiquettes in life, which, tnough the neglect of them does not amount to the commission of a crime, or the violation of a duty, are yet so established by example, and sanctioned by custom, as to pass into statutes, equally acknowledged by society, and almost equally binding to individuals, with the laws of the land, or the precepts of morality.

Beattie.

Just so at the beginning of the French Revolution : the first work of the reformers was to loosen every established political relation, every legal holding of man to men, to destroy every corporation, to dissolve every subsisting class of society, and to reduce the nation into individuals, in order, afterwards, to congregate them into mobs. Canning.

I say collectively, Sir, because individually we are allowed to have no existpnce ; the waggery of the world, judging nine weavers and nine taylors requisite to the formation of a man. Id. Microcosm.

INDIVISIBILITY OF MATTER. See MATTER.

INDOC'IBLE, adj. \ Fr. indocile ; Lat. in—

INDOC'II.E, adj. > docilis, in and doceo. Un—

INDOCIL'ITY, n. s. j teachable; insusceptible of instruction : refusal of instiuction.

These certainly are the fools in the text, indocil, in-tra-table fools, whose solidity can baffle all arguments, and is proof against demonstration itself.

Bentley's Sermons.

INDOCTRINATE, v. a. 3 Fr. endoctriner ;

INDOCTRINATION, n. s. 5 Lat. doctrina. To instruct in any science or opinion. Indoctrination, instruction or information.

Under a master that discoursed excellently, and took much delight in indoctrinating his young unexpe- ., rienced favourite, Buckingham had obtained a quick conception of speaking very gracefully and pertinently.

Clarendon.

They that never peeped beyond the common belief, in which their easy understandings were at first indoctrinated, are strongly assured of the truth of their conceptions. Glunville.

Although postulates are very accommodable unto junior indoctrination*, yet are these authorities not to bo embraced beyond the minority of our intellectuals.

Brotcne.

IN’DOLENCE, TI. j.-\ Fr. indolence; Lat. IN’DOLENCY, n. s. (inanddoleo. Freedom IN’DOLENT, adj. I from pain ; laziness ; iu—

IN’DOLENTLY, adv. ‘attention; ennui. Indolent, applicable to tumors ; free from pain, and in a chronic state; careless; listless; inattentive.

Let Epicurus give indolency as an attribute to his gods, and place it in the happiness of the blest ; the Divinity which we worship has given us not only a prscept against it, but his own example to the contrary.

Dryden.

As there must be indolency where there is happiness, so there must not be indigency. Burnet.

While lulled by sound, and undisturbed by wit, Calm and serene you indolently sit. Addison.

And thus in indolence she lies, A giddy wasp around her flies.

Gay’s Fables. I have ease, if it may not father be called indolence.

Hough. Ill fits a chief To waste long nights in indolent repose.

Pope’s Ili-.’< >.

IND

The Spanish nation, roused from their ancient inJa lence an; ignorance, sppm now to improve trade.

Boiingbrok’:.

Ah ! in what perils is vain life engaged ! What slight neglects, what trivial faults destroy The hardiest frame ! of indolence, of toil, We die j of want, of superfluity. Armstrong.

Indolence is therefore one of the vices from which those whom it once infects are seldom reformed.

Johnson's Rambler.

Flutters thy breath with fear, or pants for fame, Or pines, to indolence and spleen a prey, Or avarice a fiend more fierce than they ' Flee to the shade of Academus grove ; Where cares molest not, discord melts away In harmony, and the pure passions prove How sweet the words of Truth, breathed from the lips

of Love. Beattie.

Awake ! for shame ! or ere thy nobler sense Sink in the oblivious pool of Indolence. Canning.

INDORE, a city of the province of Malwah. Hindostan, capital of the dominion ot the Mahratta chief Mulhar Row Holkar. It is large but ill built, and stands in long. 76° 10' E., lat. 22° 51' N.

To INDOW, v. a. Lat. indoture. To portion, to enrich with gifts, whether of fortune or na-ture. See ENDOW.

IN'DRAUGHT, n. s. In and draught. An opening in-the laud into which the sea flows.

Ebbs and floods there could be none, when there were no indraughts, bays, or gulphs to receive a flood.

Raleiyh.

Inlet ; passage inwards.

Navigable rivers are indraughts to obtain wealth.

Bacon.

INDRE, a river of Trance, which rises N. N.W. of Boussac, in the department of the Creuse; passes by St. Severe, Chatre, Chateauroux, Chatillon (where it is navigable), Loches, Cormery, Array, &c., and joins the Loire at Iligny, between Tours and Saumur. It has a course of about ninety miles.

INDRE, a small department of France, sc named from the above river, which runs through it from south-east to north-west, comprehending part of the ci-devarit province of Berry. It is bounded on the north by the department of Loire and Cher ; east by that of Cher ; south by the Creuse and Upper Vienne ; and west by the departments of Vienue and Indre et Loire. It is fifty-four miles long from north to south, and forty-five broad from east to west. Chateauroux is the capital. Population 295,000.

INDRE-ET-LOIRE, a central department of France, consists of the whole of the former province of Touraine, and takes its name from the rivers Loire and Indre, which run through it ; the former flowing from east to west, and the latter from south-east to north-west. The principal place is Tours. It is divided into three arrondissements or subprefectures ; Tours containing 129,808 inhabitants; Chinon 94,194; and Loches 59,370 ; twenty-four justiciaries of the peace, or cantons ; and 302 communes : its total population is about 282,372. It yields a territorial revenue of 14,078,000 francs, and is a part of the fourth military division; it has a royal court at Orleans, and a bishopric at Tours It is divided into two electoral arrondissements,

and sends four members to the chamber of deputies.

This department is bounded on the north-east by that of the Loire et Chere; on the north-west by that of the Sarthi ; on the south-east by that of the Indre ; on the south-west by that of Vienne ; and on the west by that of the Maine et Loire. The soil is so agreeably varied, and the climate so mild and delightful, that this country has always been justly called the garden of France. It is, however, far from being equally fertile in all parts, nor does it produce sufficient corn for the consumption of its inhabitants; the valleys formed by the great rivers that cross it are indeed very fruitful, as well as the hills which

surround it ; but, as you recede from these valleys, you find a great quantity of land uncultivated. The part of the country situated between the Loire and the Cher, which is known by the name of Varennes, is covered with a sandy, light, and very fertile soil, which is always productive, owing to its continual culture and the labor and manuring that is bestowed on it ; so that it is generally considered as the best land in the department. The hills which skirt the banks of the Loire, containing a great number of habitations dug into the rock, as well as those which border the Cher, abound in vines, from which are made red and white wines of a tolerably good quality. The Loire, the Cher, the Indre, the Creuse, and the Vienne, which water and fertilise the most beautifcu plains and smiling meadows ; the great number of villages, chateaus, and country houses, built on both sides of the Loire ; the beauty of the heavens, the softness of the climate, all unite to make this part of France one of the most delightful residences that can be found. The land is mostly chalky, cultivated partly with horses, and partly with the hoe and the spade; there are about 73,605 hectars of forests of elm, ash, beech, oak, and chestnut-trees, and 36,000 hectars of vineyards, each hectar of cultivated ground producing on an average twenty-one francs eighteen centimes.

This country yields every species of corn, maize, millet, chestnuts ; excellent fruits, such as walnuts, almonds, and very choice prunes, which, when dried, are known by the name ot Tours prunes; vegetables, anise, coriander, liquorice, angelica, sengreen, hemp, mulberries, red and white wines of good quality, and a considerable quantity of wood. There are fine meadows, nurseries of fruit trees, great and small game, such as stags, roebucks, wild boars, hares, &c. ; fish in abundance, as shad, lampreys, salmon, pike, &c., silkworms, and bees. There are also some iron mines, quarries of calcareous freestone, mill stones, stones for lithographical purposes, brown freestone, marble fossils, and fullers' earth, potters' clay, pipe-clay, and sand.

In this department are carried on srme manufactures of coarse cloths, and silk furniture stuffs. Ribands, laces, homespun linen, silk, millinery, cotton, and floss silk are also made here ; as well as carpets, pipes, brandy, iron, steel, files, red-lead, and shots. There are also some factories for the spinning of woollen and

cotton yarn, refining houses for sugar and beet-root, starch manufactories, brass foundries, potteries, paper-mills, and tan-yards. Powder is also made and refined here. A considerable commerce is

carried on in corn, wine, dried fruits, prunes (for which it is much celebrated), dried herbs, melons, honey, wax, nut oil, wool, gauze, silk, coarse cloths, hemp, mill-stones, leather, iron, and steel.

The chief rivers that water this department are the Loire, the Vienne, the Cher, and the Creuse, which are navigable ; the Biennc, the Indre, the Indroye, and the Claise. Various great roads run through it from Poitiers, Chateauroux, Orleans, Chartres, le Mans, Bourbon, Vendee, and Nantes.

To INDRENCH', v. a. From drench. To soak ; to drown.

My hopes lie drowned ; in many fathoms Jeep They lie indrenched.

Shakspeare. Troilus and Cretsida.

INDU'BIOUS, adj.-x Lat. in, dubito, dubi—

INDU'BITABLE, adj. ttabilis. That is not,

INDU'BITABLY, adv. f and cannot be doubted ;

INDTJ'BITATE, adj. j not suspecting; unquestionable ; certain; apparent.

If he stood upon his own title of the house of Lancaster, he knew it was condemned by parliament, and tended directly to the disinh«-rison of the line of York, held then the indubitable heirs of the crown. Bacon's Henry VII.

I have been tempted to wonder how, among the jealousies of state and court, Edgar Atheling could subsist, being then the apparent and indubitate heir to the Saxon line. Wotton.

If we transport these proportions from audible to visible objects, there will indubitably result from either a graceful and harmonious contentment.

Id. Architecture.

Hence appears the vulgar vanity of reposing an indubious confidence in those antipestilential spirits.

Harvey.

The patriarchs were indubitably invested with both these authorities. Sprat.

I appeal to all sober judges, whether our souls may be only a mere echo from clashing atoms ; or rather indubitably must proceed from a spiritual substance.

Bentley.

When general observations are drawn from so many particulars as to become certain and indubitable, these are jewels of knowledge. Watts on the Mind.

To INDUCE', v. a. Fr. induire ; Lat. induco. To influence to any thing ; to persuade : of persons.

The self-same argument in this kind, which doth but induce the vulgar sort to like, may constrain the wiser to yield. Hooker.

Desire with thee still longer to converse

Induced me. Bacon.

This lady, albeit she was furnished with many excellent endowments, both of nature and education, yet would she never be induced to entertain marriage with any. Hay ward.

Let not the covetous design of growing rich induce you lo ruin yo-ir reputation, but rather satisfy yourself with a moderate fortune ; and let your thoughts be wholly taken up with acquiring to yourself a glorious name. Dryden.

To produce by persuasion or influence : of things.

Let the vanity of the times be restrained, which the neighbourhood of other nations have induced, and we strive apace to exceed our

pattern. Bacon.

As belief is absolutely necessary to all mankind, the evidence for inducing it must be of that nature as to accommodate itself to all species of men.

Forbes.

To offer by way of induction, or consequential reasoning.

They play much upon the simile, or illustrative argumentation, to induce their cnthymemes unto the people, and take up popular conceits. Browne.

To inculcate; to enforce.

This induces a general change of opinion, concerning the person or party like to be obeyed by the greatest or strongest part of the people. Temple.

To cause extrinsically ; to produce ; to effect.

Sour things induce a contraction in the nerves, placed in the mouth of the stomach, which is a great cause of appetite. Bacon.

Acidity, as it is not the natural state of the animal fluids, but induced by aliment, is to be cured by aliment with the contrary qualities. Arbuthnot.

To introduce ; to bring into view.

To exprobate their stupidity, he induceth the providence of storks : now, if the bird had been unknown, the illustration had been obscure, and the exprobra-tion not so proper. Browne.

The poet may be seen inducing his personages in the first Iliad, where he discovers their humours, interests, and designs. Pope.

To bring on; to superinduce; to effect gradually.

Now Night her course began, and over heaven Inducing darkness, graceful truce imposed, And silence on the odious din of war.

Milton. Paradise Lost.

Schism is marked out by the apostle as a kind of petrifying crime, which induces that induration to which the fearful expectation of

wrath is consequent.

Decay of Piety.

INDUCEMENT, n. s. From induce. Mo-tive to any thing; that which allures or persuades to any thing.

The former inducements do now much more prevail, when the very thing hath ministered further reason.

Hooker.

Many inducements, besides Scripture, may lead me to that, which if Scripture be against, they are of no value, yet otherwise are strongly effectual to persuade.

Id.

That moved me to't, Then mark the' inducement.

Shakspeare. Henry VIII. He lives

Higher degree of life : inducsment strong For us. Milton.

My inducement hither,

Was not at present here to find my son. Id. Instances occur of oppression, to which there appears no inducement from the circumstances of the actors. Rogers.

INDU'CER, n. s. From induce. A persuader ; one that influences.

INDUCT', v. a.) Fr. induction; Lat. in—

INDUC'TION, n. s. S ductus. To introduce ; to

INDUC'TIVE, adj. j put in actual possession of

a benefice : induction, introduction or entrance ;

in reasoning, induction is when, from several

particular propositions, we infer one general : as,

the doctrine of the Socinians cannot be proved

from the gospels, it cannot be proved from the acts of the apostles, it cannot be proved from the epistles, nor the book of revelation; therefore it cannot be proved from the New Testament. — Watts's Logic. The act of taking possession of a benefice : inductive, leading to ; persuasive ; capable to infer ; a produce ; proceeding, not by demonstration but by induction.

The ceremonies in the gathering were first inducted by the Venetians. Sandys' Travels.

These promises are fair, the parties sure,

And our induction full of prosperous hope.

Shakspeare.

The inquisition by induction is wonderful hard ; for the things reported are full of fables, and new experiments can hardly be made but with extreme caution.

Bacon.

Abatements may take away infallible concludency in these evidences of fact, yet they may be probable and inductive of credibility, though not of science.

Hole's Origin of Mankind. A irutish vice, Inductive mainly to the sin of Eve. Milton.

Mathematical things are only capable of clear demonstration : conclusions in natural philosophy ire proved by induction of experiments, things moral by moral arguments, and matters of fact by credible testimony. TiUotson.

Although the arguing from experiments and observations by induction be no demonstration of general conclusions, yet it is the best way of arguing which the nature of things admits of, and may be looked upon as so much the stronger by how much the induction is more general : and, if no exception occur from phenomena, the conclusion may be general.

Newton's Opticks.

If a person thus instituted, though not inducted, takes a second benefice, it shall make the first void. Ayliffe's Parergon.

He brought in a new way of arguing from induction, and that grounded upon observation and experiments. Batter.

INDUCTION, in ecclesiastical law. Induction is performed by a mandate from the bishop to the archdeacon, who usually issues out a precept to other clergymen to perform it for him. It is a form required by law, with intent to give all the parishioners due notice and sufficient certainty of their new minister, to whom their tythes are to be paid. The usual form of induction is as follows : — The inductor takes the clerk by the hand, and placing it on the key of the church, which must be then in the door, says, ‘ By virtue of this instrument, I induct you in the real, actual, and corporeal possession of the rectory or vicarage of A—, with all its fruits, profits, members, and appurtenances.’ This clone, he opens the door, puts the clerk in possession of the church, and shuts the door upon him ; who, after he has tolled a bell (if there be any), to give the parishioners due notice of their new minister, comes out, and desires the inductor to indorse a certificate of his induction on the archdeacon’s warrant, and all present signify it under their hands. Within two months after this the clerk must read the thirty-nine articles, in the parish church of his benefice, and in the time of common prayer, and declare his assent and consent : he must also then read the ordinary’s certificate, in which is the declaration of his conformity, and of all this he must have two or three good

witnesses, who must sign that they heard him do it, and be ready to attest it, viva voce, if required ; and, within six months after induction, he must also take the oaths of allegiance, supremacy, and abjuration, at the quarter-sessions, or in some one of the courts at Westminster Hall. This therefore is the investiture of the temporal part of the benefice, as institution is of the spiritual. And when a clerk is thus presented, instituted, and inducted into a rectory, he is then, and not before, in full and complete possession; and is called in law persona impersonata, or parson imparsonee.

INDUE’, v. a. Lat. induo. To invest; to clothe. It seems sometimes to

be, even by good writers, confounded with endow or indow, to furnish or enrich with any quality or excellence.

The angel, by whom God indued the waters of Bethesda with supernatural virtue was not seen ; yet the angel's presence was known by the waters.

Hooker. His powers, with dreadful strength indued.

Chapman.

One first matter all, Indued with various forms. Milton.

INDULGE', v. a. & v. n.-\ Latin indidgeo. INDU-L'GENCE, re. s. I To encourage by

INDUL'GENCY, n. s. > compliance ; to

INDTJL'GENT, adj. i fondle ; to favor ;

INDUL'GENTLY, adv. J to gratify with concession ; to foster. If the matter of indulgence be a single thing it has with before it ; if it be a habit it has in : as, he indulged himself with a draught of wine ; and, he indulged himself in shameful drunkenness. To grant, not of right but favor ; to be favorable : indulgence, fond ness ; forbearance : tenderness, favor granted ; grant of the charch of Rome to remit certain temporal penalties; indulgent; kind; gentle; mild; gratifying: indulgently, without severity; without censure or self-reproach.

He is wel worthy to have pardon and forgeve-nessse of his sinne, that excuseth not his sinnc, but knowlecheth and repenteth him, axing indulgence.

Chaucer. The Tale of Melibeus. Thou, that givest whores indulgencies to sin, 111 canvass thee. Shakspeare. Henry VI.

They err, that through indulgence to others, or fondness to any sin in themselves, substitute for repentance any thing less. Hammond on Fundamentals.

He that not only commits some act of sin, but lives indulgently in it, is never to be counted a regenerate man. Hammond.

Ancient privileges, indulged by former kings to their people, must not without high reason be revoked by their successors. Taylor.

In purgatory, indulgences, and supererogation, the asserters seem to

be unanimous in nothing but profit.

Decay of Piety. Restraint she will not brook, And left to herself, if evil thence ensue, She first his weak indulgence will accuse.

Milton.

Indulgences, dispenses, pardons, bulls, The sport of winds. Id.

Hereafter such in thy behalf shall be The indulgent censure of posterity. Waller.

The lazy glutton safe at home will keep ; Indulge his sloth, and fatten with his sleep.

Dry den.

The glories of our isle, Which yet like golden ore, unripe in beds, Expect the warm indulgency of heaven. Id.

The virgin entering bright, indulged the day To the brown cave, and brushed the dreams away.

Id.

But since a,mong mankind so few there are, Who will conform to philosophick fare, This much I will indulge thee for thy ease, And mingle something of our times to please.

Id.

A mother was wont to indulge her daughters with dogs, squirrels, or birds ; but then thpy must keep them well. Locke.

He must, by indulging to one sort of reprovable discourse himself, defeat his endeavours against the rest. Government of the Tongue.

Talk not of comfort, ‘tis for lighter ills ; I will indulge my sorrows, and give way To all the pangs and fury of despair.

Addison’s Cato.

God has done all for us that the most indulgent Creator could do for the work of his hands.

Rogers.

If all these gracious indulgencies are without any ef-fect on us, we must perish in our own folly Id.

Leo X. is deservedly infamous for his base prostitution of indulgencies. Alter bury.

To live like those that have their hope in another life, implies that we indulge ourselves in the gratifica-tions of this life very sparingly. Id.

In known images of life, I guess The labour greater, as the indu'yence less.

Pope.

My friend, indulge one labour more, And seek Atrides. Id. Odyssey.

Yet, ytt a moment, one dira ray of light Indulge, dread chaos and eternal night ! Pope.

Truth, goodness, harmony, and love, The richest bounty of indulgent Heaven.

Thomson. Beyond the sense

Of light reflection, at the genial board Indulge not often. Armstrong.

The desire of ease acts equally at ail hours, and the longer it is indulged is the more increase'!.

Johnson's Rambler.

That she is rigid in denouncing death On petty robbers, and indulges life And liberty, and ofttimes honour too, To peculators of the public gold. Cowper.

To indidge a pious emotion, to keep 'tin our minds, to meditate on its object, and with reverence and in due season to give i» vocal -cxj-ession, cannot fail to strengthen it. Beat tie,

They who have nothing more to fear may well Indulge a smile at that which once appalled, As children at discovered bugbears. Byron.

What gamester, who reduced himself from opulence to beggary, by the intemperate indulgence of a mad infatuation, does not after sitting down and venting his execrations for half an hour against his ill fortune and his folly, get up again greatly relieved by so happy an expedient. Canning. Microcosm.

INDULGENCE, in the Romish church, the remission of the punishment due to sins, granted by the church, and supposed to save the sinner from purgatory. According to the Romish doctrine, all the good works of the saints, over and above those which were necessary towards their own justification, are deposited, together with the infinite merits of Jesus Christ, in one inexhaustible treasurv. The keys of this were com-

mitted to St. Peter, and to his successors the popes, who may open it at pleasure, and by transferring a portion of this superabundant merit to any particular person, for a sum of money, may convey to him either the pardon of his own sins, or a release for any one in whom he is interested, from the pains of purgatory. Indulgences were first invented in the eleventh century, by Urban II., as a recompense for those who went in per-son upon the glorious enterprise of conquering the Holy Land. They were afterwards granted to those who hired a soldier for that purpose ; and, in process of time, were bestowed on such as gave money for accomplishing any pious work enjoined by the pope. This power of granting indulgences has been greatly abused. Pope Leo X., in order to carry on the magnificent structure of St. Peter's at Rome, published indulgences, and plenary remission, to all who should contribute money towards it. Finding the project take, he granted to Albert, elector of Mentz, and archbishop of Magdeburg, the benefit of the indulgences of Saxony and the neighbouring parts, and farmed out those of other countries to the highest bidders; who, to make the best of their bargain, procured the ablest preachers to cry up the value of the ware. The form of these indulgences was as follows : '

May our Lord Jesus Christ have mercy upon thee, and absolve thee by the merits of his most holy passion. And I, by his authority, that of his blessed apostles Peter and Paul, and of the most holy pope, granted and committed to me in these parts, do absolve thee, first from all ecclesiastical censures, in whatever manner they have been incurred ; then from all thy sins, transgressions, and excesses, how enormous soever they may be, even from such as are reserved for the cognizance of the holy see, and as far as the keys of the holy church extend, the crime of heresy excepted. I remit to you all punishment which you deserve in purgatory on their account; and I restore yon to the hoiy sacraments of the church, to the unity of the faithful, and to that innocence and purity which you possessed at baptism ; so that when you die the gates of punishment shall be shut, and the gates of the paradise or" delight shall be opened : and, if you shall not die at present, this grace shall remain in full force when you are at the point of death. In the name of the Father, and of the Son, and of the Holy Ghost.' The terms in which the re-tailers of indulgences described their benefits, and the necessity of purchasing them, are so extravagant, that they appear almost incredible.

' If any man,' said they, l purchases letters of indulgence, his soul may rest secure with respect to its salvation. The souls confined in purgatory, for whose redemption indulgences are purchased, as soon as the money tinkles in the chest, instantly escape from that place of torment, and ascend into heaven. That the efficacy of indulgences was so great, that the most heinous sins, even if one should violate (which was impossible) the mother of God, would be remitted and expiated by them, and the person be freed both from punishment and guilt. That this was the unspeakable gift of God, in order to reconcile men to himself. Lo ! the heavens

are open ; if you enter not now, when will you enter ? For twelve pence you may redeem the soul of your father out of purgatory ; and are you so ungrateful, that you will not rescue your parent from torment ? If you had but one coat, you ought to strip yourself instantly and sell it, in order to purchase such benefits, &c.' This monstrous abuse of indulgences contributed greatly to the reformation of religion in Germany, where Mar-tin Luther first began to declaim against the preachers of them, and afterwards against indulgences themselves. Since that period, the popes have been more sparing in the exercise of this power : however, they still carry on a great trade in them. ' Happy times for sinners,' says a mo-dern writer, 'their crimes were rated, and the remission of them set up by auction. The apostolic chamber taxed

sins at a pretty reasonable rate; it cost but ninety livres and a few ducats for crimes which people on this side the Alps punished with death.' The prices are specified in a book of rates called the tax-book of the holy apostolic chancery, first printed at Rome in the year 1514, and ascribed by some to pope Innocent VIII. From a correct edition of this book, printed by L. Banck, professor a Norkopin, in Gothland, in 1651, it appears that the price of absolution for fornication, attended with the most heionus circumstances, was six grossi or groats ; for a layman's murdering a lay-man five groats ; for laying violent hands on a priest, without shedding blood, nine groats; for committing incest five groats ; for a priest's keeping a concubine seven groats ; for forging the pope's handwriting seventeen or eighteen groats.

The following account of the existing mode of procuring indulgences in Spain, by the Rev. Joseph Blanco White, late a Catholic priesl in that country, will give to our readers a sufficient idea of their nature and effect : — ' The Spanish government,' says this respectable writer, ' has two or three paltry fortresses on the coast of Africa, which are employed as places of punishment for criminals. The existence of a few soldiers in these garrisons is construed into a perpetual war against the infidels, with whom, in the mean time, the king of Spain is mostly at peace, from inability to oppose to them an effectual resistance. The see of Rome, which wants but a slight pretext to spiritualise whatever may open a market for its wares, calls this state of things, between the Spaniards and the Africans, a perpetual war against the infidels; which being according to the principles of that see, a meritorious Christian act, deserves a pastoral encouragement. For this purpose every year are printed summaries of a papal bull, which the Spaniards purchase at different prices, according to their rank and wealth, in order to enjoy the indulgences and privileges granted by the pope in exchange for their alms. The benefits to be derived from the possession of one of these bulls are several plenary indulgences, and leave to eat, during Lent, milk, eggs, and butter, which are otherwise forbidden, under pain of mortal sin, at that season. The sale of these privileges having been found most valuable and extensive, a second, third, and even a fourth

bull, of a similar kind, were devised. The flesh bull, as it is called in Spain, allows the purchasers to eat meat during Lent every Sunday, Monday, Tuesday, and Thursday, except in passion week. The third bull is called the compounding bull. By possessing one of these documents, and giving a certain sum, at the discretion of any priest authorised to hear confessions, to the fund of the holy crusades ; any property may be kept which, having been obtained by robbery and extortion, cannot be traced to its right owners for restitution. This composition with the pope and the king is made by depositing the sum appointed by the confessor in an iron chest, fixed outside the doors of churches : a comfortable resource indeed for the tender consciences of peculators and extortioners, two very numerous classes in Spain. The fourth bull is to be purchased for the benefit of the deceased, and is called the defunct bull. The name of any dead person being entered ou the bull, a plenary indulgence is by this means believed to be conveyed to his soul, if suffering in purgatory. To secure, however, a double sale, the three latter bulls are made of no effect, unless the original summary of the crusade be possessed by the person who wishes to enjoy the dispensations and privileges therein set forth. It is also a very common practice to bury these bulls with the corpses of those whom they are intended to benefit.'

INDULT, or IDDUL'TO, n.s. Ital. and Fr. Privilege or exemption.

INDULT, in the church of Rome, is the power of presenting to benefices granted to certain persons by the pope. Of this kind is the indult of kings and sovereign princes in the Romish communion, and that of the parliament of Paris, granted by several popes. By the concordat for the abolition of the Pragmatic sanction, made between Francis I. and Leo X. in 1516, the French king hai the power of nominating to bishoprics, and other consistorial benefices, within his realm. At the same time, by a particular bull, the pope granted him the privilege of nominating to the churches of Brittany and Provence. In 1648 pope Alexander VIII., and in 1668 Clement IX., granted the king an indult for che bishopric of Metz, Toul, and Verdun, which had been yielded to him by the treaty of Mun-ster; and in 1668 the same pope Clement IX. granted him an indult for the benefices in the counties of Rousillon, Artois, and the Netherlands. The cardinals likewise have an indult granted them by agreement between pope

Paul IV. and the sacred college in 1555, which is al-ways confirmed by the popes at the time of their election. By this treaty the cardinals have the free disposal of all the benefices depending on them, and are empowered likewise to bestow a benefice in commendam.

IN'DURATE, v. a. & v. n.) Lat. induro. To

INDURA'TIOX, n. s. $ make hard; to

grow hard ; to harden, whether substances or

feelings ; to sear the conscience ; obduracy ;

hardness of heart.

Yet forgate I to maken rehersaile Of waters corosif, and of limailo ;

And of bodies mollification, And also of hir induration.

Chaucer. The Chanones Yemannes Talc.

Stones within the earth at first are but rude earth or clay; and so minerals come at first of juices concrete, which afterwards indurate.

Bacon's Natural History.

This is a notable instance of condensation and induration, by burial under earth, in caves for a Ion"1 time. Bacon.

That plants and ligneous bodies may indurate under water without approachment of air, we have experiments in coralines. Browne's Vulgar Errours.

INDUS, also known as the Nilab and Sinde, is an important river, having its source in a range of the mountains of Tartary, between 38° and 39° of N. lat. After passing Lahdack, in Thibet, it takes a south-westerly course through the mountains called the Hindoo Koh, and enters Hindostan in about 35° of N. lat. It has always been considered as the western barrier of Hindostan. Sixty miles from its source it is joined by the Cabul, when it is no longer fordable. It is confined by hills at the fort of Attock, and is here less than 300 yards wide, but both deep and rapid. In lat. 33° it enters the valley of Isa Kheel, and is divided by islands into several streams. In lat. 28° 20' it is joined by the Punjnud, and, declining to the south-east, it enters the province of Sinde, between 25° and 26° of lat. Here we find it again divided into

two considerable branches; the principal or western divides into numerous streams, which form a Delta similar to that of the Nile or Ganges : they are, however, very shallow, and only navigable by boats : although the tide en-ters with great violence, it does not run up above seventy miles. This river is said to be 1350 miles in length, and some parts of it are capable of bearing vessels of 200 tons. But there is very little commerce transported by it. Its wa-ter is very wholesome.

INDUSTRIOUS, ad/.} Fr. industrieux,

INDUS'TRIOUSLY, adv. > Span., Port., Italian)

IN'DUSTRV, n. s. J and Latin, industria—

Diligent, as opposed to slothful ; laborious ; designed ; done for the purpose. Industriously, in a diligent, assiduous, laborious manner ; designedly. Industry, habitual exertion.

Let our just censures Attend the true event, and put we on Industrious soldiership. Shakspeare.

Great Britain was never before united under one king, notwithstanding that the uniting had been industriously attempted both by war and peace. Bacon.

His thoughts were low : To vice industrious ; but to nobler deeds Timorous and slothful. Milton.

Frugal and industrious men are commonly friendly to the established government. Temple.

Rich industry sits smiling on the plains, And peace and plenty tell a Stuart reigns.

Pope. Windsor Forest.

1 am not under the necessity of declaring myself, and I industriously conceal my name, which wholly exempts me from any hopes and fears. Swift

Friends, books, a garden, and perhaps his per, Delightful indus'ry enjoyed at home. Confer.

True, thou art rich, art powerful — through thiue

isle

.Industrious Skill, contented Labour smile : Far seas are studded with thy countless sails ; What wind but wafts them, and what shore but hails ?

Canning.

INEBRIANT, in medicine is a term applied to any thirg that affects the nerves, so as through them to alter and disturb the functions of the mind, and produce intoxication. Inebriants are divided into natural and artificial ; the former chiefly in use among the oriental and other nations, the latter principally throughout Europe. Artificial inebriants are fermented liquors from farinaceous seeds, wines, and spirits, drawn by distillation. Natural inebriants are opium ; in use all over the East, and of which the Turks, through custom, swallow large quantities. Peganum harmala, Syrian rue. The seeds of which are sold in Turkey for this purpose; and with these, as Bel-lonius relates, the Turkish emperor Solyman kept himself in a continual state of intoxication. Maslac of the Turks, or bangue of the Persians, prepared from the dust of the male-flower of hemp, or from the leaves. Bangue of the Indians, from the leaves of the hibiscus sabda-riffa. Pinang, or betel of the Indians. Leaves of millfoil are used by the Dalecarlians to render their beer intoxicating. Tobacco, and several others less material, may also be enumerated in the list of natural inebriants.

INE’BRIATE, v. a. & v. n. 3 Lat. inebrio.

INEBRIA’TION, n. s. 5 To intoxicate ;

to make drunk ; to grow drunk ; a state of drunkenness or intoxication.

Fish, entering far in and meeting with the fresh wa-ter, as if

inebriated, turn up their bellies and are taken.

Sandys.

Wine sugared inebriateth less than wine pure ; sops in wine, quantity for quantity, inebriate more than wine of itself. Bacon.

That cornelians and bloodstones may be of virtue, experience will make us grant ; but not that an amethyst prevents inebriation. t Brotrne.

INEFF ABILITY, n. s. ˆ French ineffable ; INEF'FABLE, adj. > Span, inefable ; Lat.

INEF'FABLY, adv. j ineffabilis. Not to

be expressed in words ; unutterable : almost al-ways used in a good sense ; in a manner not to be expressed.

To whom the Son, with calm aspect, and clear, Light'ning divine, ineffable, serene ! Made answer. Milton.

He al\ his father full expressed, Ineffably into his face received. Id.

Reflect upon a clear, unblotted, acquitted conscience, and feed upon the ineffable comforts of the memorial of a conquered temptation. South.

But I lose Myself in Him, in light ineffable.

Thomson'* Seasons.

INEFFECTIVE, adj.] Tr.ineffectif,inef-INEFFEC'TUAL, adj. \fcace; Lat. ineffec-INEFFEC'TUALLY, adv. [tits, inefficax. That INEFFEC'TUALNESS, n.s. j can produce no INEFFICACIOUS, adj. \ effect, as weak ?.nd INEF'FICACY, n.s. J deficient in power;

•.unable to produce effects; weak; feeble. Ineffectual rather denotes an artnal failure; and inefficacious, an habitual impotence to any effect.

The publick reading of the Apocrypha they condemn as a thing effectual unto evil : the bare reading even of Scriptures themselves they mislike, as a thing ineffectual to do good. Hooker.

As the body, without blood, is a dead and lifeless trunk ; so is the

word of God, without the spirit, a dead and ineffective letter. Taylor.

He that assures himself he never errs, will always err ; and his presumptions will render all attempts to inform him ineffective. Glanville.

Is not that better than always to have the rod in hand, and, by frequent use, misapply and render inefficacious this useful remedy ? Locke.

Faint are his gleams, and ineffectual shoot

His straggling rays in horizontal lines

Through the thick air.

Thomson’s Seasons. Winter.

beauty, and are applicable to the motions of the body, the language, and the attire.

This very variety of sea and land, hill and dale, which is here reputed so inelegant and unbecoming, is indeed extremely charming and agreeable.

Woodward.

Modem criticks, having never read Homer, but in low and inelegant translations, impute the meanness of the translation to the poet. Broome.

INEL’OQUENT, adj. Lat. in and eloquent. Not persuasive ; not oratorical ; opposite to eloquent.

INEPT, adj. -) Lat. ineptus. Trifling ;

INEPT’LY, n. s. > foolish ; unfit for any pur—

INEP’TITUDE, adv. 5 pose : moj-e correctly in-aptitude, and then derived from Lat. in and apius.

All things were at first disposed by an omniscient intellect, that cannot contrive ineptly. Glanville.

The works of Nature, being neither useless nor inept, must be guided

by some principle of knowledge.

More. None of them are made foolishly or ineptly. Id.

When the upper and vegetative stratum was once washed off by rains, the hills would have become barren, the strata below yielding only mere sterile matter, such as was wholly inept and improper for the formation of vegetables. Woodward.

There is an ineptitude to motion from too great laxity, and an ineptitude to motion from too great tension. Arbuthnot.

INEQUALITY, n.s. Fr. inegalUi, from Lat. iniequalitas and intfqualis. Difference of comparative quantity.

The thridde houre inequal that Palamon Began to Venus temple for to gon, Up rose the sonne, and up rose Emilie.

Chaucer. The Knightes Tale.

There is so great an inequality in the lengih of our legs and arms, as makes it impossible for us to walk on all four. Ray.

Unevenness ; interchange of higher and lower parts.

The country is cut into so many hills and inequalities as renders it defensible. Addison on Italy.

The glass seemed well wrought ; yet, when it was quicksilvered, the reflexion discovered innumerable inequalities all over the glass. Newton t Opticks.

If there were no inequalities in the surface of the earth, nor in the seasons of the year, we should lose a considerable share of the vegetable kingdom.

Bentley.

INERRABIL'ITY, n. s.-x Lat. in and erro. INER'RABLE, adj. /Exemption from

INER'RABLENESS, n. *. \error ; infallibility : INER'RABLY, adv. iold words, now obINER'RINGLY, adv. .Jsolete.

INERT', adj.) Lat. inert. Dull ; sluggish ; INERT'LY, adv. $ without energy.

INESCATION, n. s. Lat. in and esca. The act of baiting.

INES DE CASTRO. Pedro, son of Alphonso IV.,' king of Portugal, after the death of his wife Constantia (1344), secretly married his mistress, Ines de Castro, who was descended from the royal line of Castile, from which Pedro was also descended on his mother's side. As he steadily rejected all propositions for a new marriage, his secret was suspected, and the envious rivals of the beautiful Ines were fearful that her brothers and family would gain a complete ascendancy over the future king. The old king was easily blinded by the intrigues of his artful counsellors, Diego Lopez Pacheco, Pedro Coelho, and Alvarez Gonsalvez. They persuaded him that this marriage would be prejudicial to the interests of his young grandson, Ferdinand (the son of Pedro by his deceased wife). Alphonso asked his son if he was married to Ines. Pedro dared not confess the truth to his father, much less would he comply with the command of the king, to renounce his mistress and unite himself to another. Alphonso again consulted his favorites, and it was resolved to put the unhappy Ines to death. The queen Beatrice, mother of the Infant, obtained intelligence of this cruel design, and gave her son notice of it. But Pedro neglected not only this information, but even the warning of the archbishop of Braga, as a rumour intended merely to terrify him. The first time that Pedro left Ines, to be absent several days on a hunting expedition, the king hastened to Coimbra, where she was living in the convent of St. Clara with her children. The arrival of Alphonso filled the unhappy lady with terror; but, suppressing her feelings, she appeared before the king, threw herself with her children at his feet, and begged for mercy with tears. Alphonso, softened by this sight, had not the heart to perpetrate the intended crime. But after he had retired, his evil counsellors succeeded in obliterating the impression which had been made on him, and obtained from him permission to commit the murder which had been resolved on. It was executed that very hour ; Ines expired under the daggers of her enemies. She was buried in the convent where she was murdered (1355). Pedro, frantic with grief and rage, took arms against his father, but the queen and the archbishop of Braga succeeded in reconciling the father and son. Pedro obtained

many privileges ; in return for which he promised on oath not to take vengeance on the murderers. Two years after king Alphonso died ; the three assassins had already left the kingdom by his ad-vice, and taken refuge in Castile, where Peter the Cruel then reigned, whose tyranny had diiven some noble Castilians into Portugal. Pedro agreed to exchange these fugitives for the

murderers of Ines. Having delivered them to their master, he received in return the persons of Pedro Coelho and Alvarez Gonsalvez; the third, Pacheco, escaped to Arragon. The two were then tortured in the presence of the kingr, in order to make them disclose their accomplices ; their hearts were torn out, their bodies burnt, and their ashes scafjred to the winds (1360). Two years afterwards he assembled the chief men of the kingdom at Cataneda, and solemnly declared on oath, that, after the death of his wife Cons'.antia, he had obtained the consent of the pope to his union with Ines de Cast-o, and that he had been married to her in the presence of the archbishop of Guarda and of an officer of his court, Stephen Lobato. He then went to Coimbra. The archbishop and Lobato confirmed the assertions of the king ; and the papal document, to which the king referred, was publicly exhibited. The king caused the body of his beloved Ines to be disinterred, and placed on a throne, adorned with the diadem and royal robes, and required all the nobility of the kingdom to approach and kiss the hem of her garment, rendering her when dead that homage which she had not received in her life. The body was then carried in a funeral car to Alcobaca. The king, the bishops, the nobles and knights of the kingdom, followed the carriage on foot; and the whole distance, from Coimbra to Alcobaca, was lined on both sides by many thousands of people, bearing burning torches. In Alcobaca a splendid monument of white marble was erected, on which was placed her statue, with a royal crown on her head. The history of the unhappy Ines has furnished many poets of different nations with materials for tragedies,— Lamothe, count von Soden, &c. ; but the Portuguese muse has immortalized her through the lips of Camoens, in whose celebrated Lutiade, the history of her love is one of the finest episodes.

INESTIMABLE, o$. Fr. inestimable ; Lat. inestimabilis. Too valuable to be rated ; trans-cending all price.

INEV'IDENT, adj. Fr. inevident. In and evident. Not plain; obscure. Not in use.

INEVITABILITY, n. s.ˆ Fr. Span, and

INEVITABLE, adj. > Port, inevitable ;

INEV'ITABLY, adv. j Ital. inevitubile ;

Lat. in, evito. Impossibility to be avoided ; certainty : without possibility of escape ; not to be shunned.

INEXCU'SABLE, adj. 1 Fr. inexcusable ;

INEXCL'SABLENESS, n. s.> Lat.in,ejT«so. Not

INEXCU'SABLY, adv.) to be excused or palliated by apology : enormity beyond forgiveness or palliation.

INEXHA'LABLE, adj. In and exhale. That which cannot evaporate.

INEXHAUS'TED, adj.) Lat. in, exhaustus.

INEXHAUST'IBLE, adj. > That cannot be emptied, or drawn away.

INEXIS'TENT, adj. \ Lat. in, existo. Not

INEXIS'TENC E, «. s. S having being: not to be found in nature ; existing in something else : not much used.

INEXO'RABLE, adj. Fr. and Span, inexorable ; Lat. inexorabili; Not to be intreated ; not to be moved by intreaty.

You are more inhuman, more inexorable, Oh ten times more, than tygers of Hyrcania !

Shakspeare. Inexorable dog ! Id. Merchant of Venice.

The scourge Inexorable calls to penance. Milton.

The guests invited came, And with the rest the' inexorable dame.

Dryden.

Behold the inexorable hour ac hand ! Behold the inexorable hour forgot : And to forget it, the chief aim of life, Though well to ponder it is life's chief end.

Young.

A weakness of the spirit — listless days, And nights inexorable to sweet sleep, Have come upon me. Byron.

INEXPEDIENT, n.s. \ Lat. in expedio—

INEXPE'DIENCE, n.s. >Want of fitness;

INEXPEDIENCY. j want of propriety ;

unsuitableness to time or place ; inconvenience.

It coucerneth superiors to look well to the expediency or inexpediency of what they enjoin in different likings. Sanderson.

We should be prepared not only with patience to bear, but to receive with thankfulness a repulse, if God should see them to be inexpedient. Smalridge.

INEXPE'RIENCE, n. s. ˆ Fr. inexperience ; INEXPE'RIENCED, adj. > Lat. in, cxpertus. INEXPERT', adj. j Want of experimental knowledge ; unskilful : not experienced : not having tried. Inexpert, not ready or apt at any thing.

The race elect advance

Through the wild desert ; not the readiest way, Lest, entering on the Canaanite alarmed, War terrify them inexpert. Milton.

Thy words at random argue thine inexperience.

Id.

In letters and in laws Not inexpert. Prior.

With all his canvas set, and inexpert, And therefore heedless, can

withstand thy power ?

Cowper.

(Through inexperience as we now perceive), We missed that happiness we might have found.

Id. Task.

INEX'PIABLE, adj. > Fr. inexpiabile ; La-INEX'PIABLY, adv. 5 tin in, expio. Not to be atoned or mollified by atonement : to a de-gree beyond reconciliation.

Love seeks to have love ;

My love how could'st thou hope, who took'st the way To raise in me inexpiable hate ? Milton's Agonutes.

Excursions are inexpiably bad, And 'tis much safer to leave out than add.

Roscommon.

INEXPLE'ABLY, adv. Lat. ire and ejpleo-Insatiably. A word not in use.

What were these harpies but flatterers, delators, and the inexpleably covetous ? Sandys' Travels.

INEX'PLICABLE, adj. i Fr. inexplicable ; INEXPLICABLY, adv. 3 Lat. in, explicit. Not to be disentangled, explained, or made intelligible.

What could such apprehensions breed, but, as their mature is, inexplicable passions of mind, desires abhorring what they embrace, and embracing what they bhor ? Hooker.

To me at least this seems inexplicable, if light bˆ nothing else than pression or motion propagated through ether. Newton.

None eludes sagacious reason more, Than this obscure inexplicable power. Blackmore.

There is a calm upon me — Inexplicable stillness. Byron.

INEXPRESSIBLE, adj. > Lat. in, erpresms. INEXPRESSIBLY, adv. $ Not to be told or uttered : beyond the power of language to state or

describe.

God will protect and reward all his faithful servant* in a manner and measure inexpressibly abundant.

Hammond. Thus when in orbs Of circuit inexpressible they stood,

Orb wi;hin orb. Miltfn's Paradise Lost. The true God had no certain name given to him for Father, and God, and Creator, are but titles arising from his works ; and God is not a name, but a notion ingrafted in human nature of an inexpressible being. Stillingfleet.

He began to play upon it : the sound was exceeding sweet, and wrought into a variety of tunes that were inexpressibly melodious. Addison's Spectator.

INEXPUG'NABLE, adj. Fr. inexpugnable ; Lat. inexpugnabilis. Impregnable ; not to be taken by assault; not to be subdued.

Why should there be implanted in each sex such a vehement and inexpugnable appetite of copulation?

Ray.

INEXTIN'GUISHABLE, adj. Fr. inextinguible ; Lat. in and extinguo. Unquench-able.

Pillars, statues, and other memorials, are a sort of shadow of an endless life, and show ail inextinguishable desire which all men have of it. Grew.

in his eye

The inextinguishable spark, which fires

The souls of patriots. Glover's Leonidas.

INEXTRICABLE, adj. j Fr. inextricable;

INEX'TRICABLY, adv. i Lat. in, extricabilis. Not to be disentangled ; not to be cleared ; not to be set free from obscurity or perplexity.

He that should tie inextricable knots, only to baffle the industry of those that should attempt to unloose them, would be thought not to have served his generation. Decay cf Piety.

Men are led into inextricable mazes by setting up themselves as judges

of the world. Sherlock.

In vain they strive ; the' intangling snares deny, Inextricably firm, the power to fly. Pope's Odyssey.

INEYE', v. n In and eye. To inoculate; to propagate trees by the insition of a bud into a foreign stock.

Let sage experience teach thee all the arts

Of grafting and ineyeing. Phillips.

INFALISTATIO, an ancient punishment of felons, by throwing them among the rocks and sands used in sea-port towns. Some think, that infalistatus implied some capital punishment, by exposing the malefactor upon the sands till the next tide carried him away ; of which custom it is said there is an old tradition. However, the penalty seems to take its name from the Norman falese, or falesia, which signified not the sands, but the rocks and cliffs impending on the sea-shore. Commisit feloniam, ob quam fuit sus-pensus, ut legatus, vel alio modo morti damna-tus, &c. x>el apud Dover infalistatus, apud Southampton submersus. &c.

INFAL'LIBLEN£SS , n. s. (^ infallible ; Ital. in—

ISJFAL'LIBLE, adj. ifallibile ; Lat. in,

INFAL'LIBLY, adv. s'fallor. Exemption

from error . privileged from error ; incapable of mistake; not to be misled or deceived; certain. Used both of persons and things. Infallibly, with certainty; without danger from deceit; sure in accomplishment.

Every cause admitteth not such infallible evidence of proof, as leaveth no possibility of doubt or scruple behind it. Hooker.

Believe my words ; For they are certain and infallible.

Shakspeare. Henry VI.

Infallibility is the highest perfection of the knowing faculty, and consequently the firmest degree of assent.

Tillotson.

The success is certain and infallible, and none ever yet miscarried in the attempt. South.

We cannot be as God, infallibly knowing good and evil. Smalridge's Sermons.

INFALLIBILITY OF THE POPE. See POPERY. INFAME', v.a. -\ Fr. infame; Ital. 4n-IN'FAMOUS, adj. ffama; Lat. in,fama. To IN'FAMOUSLT, adv. V represent to disadvan-IN'FAMOUSNESS, n.s. i tage; to defame; to IN'FAMY, n. s. J censure publicly; to

make infamous ; to brand. To defame is now used. Infamously, 'vith open reproach; wtih public notoriety ; shamefully ; scandalously : in-famy, notoriety of bad character.

Those that be near, and those that be far from thee, shall mock thee, which art infamous. . Ezek.

The noble isle doth want her proper limbs, Her face defaced with scars of infamy.

Shakspeare.

Livia is infamed for the poisoning of her husband.

Bacon.

Hitherto obscured, infamed, And thy fair fruit let hang, as to no end Created. Milton.

That poem was infamously bad.

Dry den's Dufresnoy. At fifty chides his infamous delay, Pushes his prudent purpose to resolve. Young. And to decline it when these motives urge Is infamy beneath a coward's baseness.

Hazard’s Regvlus.

Even in destruction’s depth, her foreign foes, From whom submission wrings an infamous repose.

Byron. Childe Harold.

His name is never pronounced by his relations but with disapprobation and disgust ; and his memory is consigned to infamy. Canning. Microcosm.

INFAMY, in law, is a term which extends to forgery, perjury, gross cheats, &c., by which a person is rendered incapable of being a witness or juror, though he is pardoned for his crimes. IN’FANCY, n. s. ˆ Fr. enfant, infanterie , IN’FANT, n. s. & adj. [Lat. inf’ans, infanticidi- INFAN’TA, n. s. [urn. The first part 01 INFAN’TICIDE, n. s. f life usually extended to IN’FANTILE, adj. \ seven years ; civil in- IN’FANTRY, n. s. } fancy or minority is extended toˆwenty-one years ; first age ; beginning or commencement of any thing. Infant, not mature ; early ; imperfect. Infanta, a princess descended from the royal blood of Spain. In-fanticide, the slaughter of infants. Infantile, per-

taining to an infant. Infantry, the foot soldiers of an army.

There shall be no more thence an infant of days, nor an old man thai hath not filled his days.

Isaiah Ixv. 20.

At length a shepheard, which thereby did keepe His fleecie flocke upon the playnes around, Led with the infants cry, that loude did weepe, Came to the place, where when he wrapped found The abandoned spoyle, he softly it unbound.

Spenser. Faerie Queene.

Dare we affirm it was ever his meaning, that unto their salvation, who even from thfiir tender infancy never knew any other faith or religion than only Christian, no kind of teaching can be available, saving that which was so needful for the first universal conversion of Gentiles, hating Christianity ?

Hooker.

It being a part of their virtuous education, serveth greatly both to nourish in them the fear of God, and to put us in continual remembrance of that powerful grace, which openeth the mouths of infants to sound his praise. Hooker

Within the infant rind of ‘his small flower Poison hath residence, and medicine power.

Shakspeare.

The principal strength of an army consisteth in the infantry or foot ; and to make good infantry it requireth men bred in some free and plentiful manner.

Bacon’s Henry VII.

But if you deign my ruder pipe to hear, (Rude pipe, unused, untuned, unworthy hearing) These infantile beginnings gently bear, Whose best desert and hope must be your bearing.

Fletcher. Purple Island. That small infantry Warred on by cranes. Milton,

Pirithous came t’ attend This worthy Theseus, his familiar friend : Their love in early infancy begat, And rose as childhood ripened into man.

Dryaen.

In their tender nonage, while they spread Their springing leaves and lift their infant head, Indulge their childhood. Id. Virgil.

In Spain our springs, like old men’s children, be Decayed and withered from their infancy. Dryden. Young mothers wildly stare, with fear possest, And strain their helpless infants to their breast.

Id. Mnetd.

The insensible impressions in oui tender infancies have very important and lasting consequences.

Locke.

The fly lies all the winter in these balls in its infantile state, and comes not to its maturity till the following spring. Derham.

The difference between the riches of Roman citizens in the infancy

and in the grandeur of Rome, will appear by comparing the first variation of estates with the estates afterwards possessed. Arbuthnot.

Let such as deem it glory to destroy, Rush into blood, the sack of cities seek, Unpierced, exulting in the widow's wail, The virgin's shriek, the infant's trembling cry.

Thonˆon.

Here first, at Fancy's fairy circled shrine Of daisies pyed this infant offering made.

Warton. A Monody.

And yet poor Edwin was no vulgar boy, Deep thought oft seemed to fix his infant eye ; Dainties he heeded not, nor gaude, nor toy, Save one short pipe of rudest minstrelsy.

Seattle's Minstrel.

INFANT.

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Both baby featured, and of infant size, Viewed from a distance, and with heedless eyes. Cowper. Progrett of Error.

Or must such minds be nourished in the wild Deep, in the uupruned forest, 'midst the roar Of cataracts, where nursing Nature smiled On infant Washington ? Has Earth no more Such seeds within her breast, or Europe no such store? Byron. Childe Harold.

INFANCY. Anatomy discovers to us, that dur-ing infancy there is much imperfection in the human frame; *e.g.* its parts are disproportioned, and its organs incapable of those functions which in future life they are designed to perform. The head is larger in proportion to the bulk of the body than that of an adult. The liver and pan-creas are much larger in proportion than in advanced life ; their secretions are more in quantity also. The bile is very inert ; the heart is stronger and larger than in future life ; the quantity of blood sent through the heart of an infant, in a given time, is also more in proportion than in adults.

Though these circumstances have their important usefulness, yet the imperfection attending them subjects this age to many injuries and dangers from which a more perfect state is exempted. Dr. Percival observes, that of all the children who are born alive, two-thirds do not live to be two years old.

INFA'NGTHEF, or HINGFANGTHEFT, or IN-FANGTHEOF, is compounded of three Saxon words : the preposition in, fang, or fong, to take or catch, and thef. It signifies a privilege or liberty granted unto lords of certain manors to judge any thief taken within their fee.

INFANT. See INFANCY. Infants, amongst the Jews, Greeks, and Romans, were swaddled as soon as they were born, in a manner similar to that practised by the moderns. The Jews circumcised and named their infant children on the eighth day from their birth. Upon the birth of a son, the Grecians crowned their doors with olive ; of a daughter, with wool. The infant was washed in warm water, and anointed with oil — by the Spartans with wine ; it was then dressed, and laid in a basket, or on a shield if the father was a warrior. At five days old they ran with it round the fire, and the mother's relations sent presents. The Greeks named their children on the tenth day, the Romans on the ninth. The naming was attended with sacrifices and other demonstrations of joy. The maternal office of suckling their children was never declined, when circumstances would permit. The names of children were registered both among the Greeks and Romans.

INFANT, in law, is a person under twenty-one years of age ; whose capacities and 'ncapacities, and privileges are various.

The ages of male and female are different for different purposes. A male at twelve years old may take the oath of allegiance ; at fourteen is at the years of discretion, and therefore may consent or disagree to marriage, may choose his guardian, and, if his discretion be actually proved, may make his testament of his personal estate ; at seventeen may be an executor ; and at twenty-one is at his own disposal, and may alien his lands, goods, and chattels. A female also at

seven years of age may be betrothed ; at nine is entitled to dower ; at twelve is at years of maturity, and therefore may consent or disagree to marriage, and, if proved to have sufficient discretion, may bequeath her personal estate ; at fourteen is at years of legal discretion, and may choose a guardian ; at seventeen may be an executrix ; and at

twenty-one may dispose of herself and her lands. So that full age in male or female is at twenty-one years, which age is completed on the day preceding the anniversary of a person's birth ; who till that time is an infant, and so styled in law. Among the ancient Greeks and Romans, women were never of age, but subject to perpetual guardianship, unless when married nisi convenissent in manum viri : and, when that perpetual tutelage wore away in process of time, we find that, in females as well as males, full age was not till twenty-five years. Thus, by the constitution of different kingdoms, this period, which is merely arbitrary, and juris positivi, is fixed at different times. Scotland agrees with England in this point ; both probably copying from the old Saxon constitutions on the continent, which extended the age of minority ad annum vigesimum primum, et eo usque juvenes sub tutelam reponunt; but in Naples persons are of full age at eighteen, and in Holland at twenty-five. The very disabilities of infants are privileges; in order to secure them from injuring themselves by their own improvident acts. An infant cannot be sued but under the protection, and joining the name of his guardian ; for he is to defend him against all attacks as well by law as otherwise ; but he may sue either by his guardian or prochein amy, his next friend who is not his guardian. This prochein amy may be any person who will undertake the in-fant's cause ; and it frequently happens that an infant, by his prochein amy, institutes a suit in equity against a fraudulent guardian. With re-gard to estates and civil property an infant has many privileges. In general, an infant shall lose nothing by nonclaim, or neglect of demanding his right ; nor shall any other laches or negligence be imputed to an infant, except in some very particular cases. It is generally true that an infant can neither alien his lands, nor do any legal act, nor make a deed, nor any manner of contract, that will bind him. But, although infants cannot alien their estates, yet infant-trustees, or mortgages, are enabled to convey, under the direction of the court of chancery or exchequer, or other courts of equity, the estates they hold in trust or mortgage, to such person as the court shall appoint. Also it is generally true that an infant can do no legal act : yet an infant, who has an advowson, may present to the benefice when it becomes void. For the law in this case dispenses with one rule, in order to maintain others of far greater consequence ; it permits an infant to present a clerk (who, if unfit, may be rejected by the bishop), rather than either suffer the church to be unserved [till he comes of age, or permit the infant to be debarred of his right by lapse to the bishop. An infant may also purchase lands, but his purchase is incomplete ; for, when he comes to age, he may either agree or disagree to it, as he thinks prudent or proper,

without alleging any reason ; and so may his heirs after him, if he dies without having completed his agreement. It is, farther, generally true, that an infants under twenty-one can make no deed but what is afterwards voidable : yet in some cases he may bind himself apprentice by deed indented, or indentures for seven years ; and he may by deed or will appoint a guardian to his children, if he has any. Lastly, it is generally true, that an infant can make no other contract that will bind him : yet he may bind himself to pay for his necessary meat, drink, apparel, physic, and such other necessaries ; and likewise for his good teaching and instruction, whereby he may profit himself afterwards.

The law of England does in some cases privilege an infant under the age of twenty-one, as to common misdemeanors ; so as to escape fine, imprisonment, and the like : and particularly in cases of omission, as not repairing a bridge, or a highway, and other similar offences ; for, not having the command of his fortune till the age of twenty-one, he wants the capacity to do those things which the law requires. But where there is any notorious breach of the peace, a riot, batterv, or the like (which infants when full grown are at least as liable as others to commit) ; for those an infant above the age of fourteen is equally liable to suffer, as a person of the full age of twenty-one. With regard to capital crimes, the law is still more minute and circumspect ; distinguishing with greater nicety the several degrees of age and discretion. By the ancient Saxon law, the age of twelve years was established for the age of possible discretion, when first the understanding might open ; and thence till the offender was fourteen, it was anas pubertati proxima, in which he might, or might not, be guilty of a crime according to his natural capacity or incapacity. This was the dubious stage of discretion; but, under twelve, it was held, that he could not be guilty in will, neither after fourteen could be supposed innocent of any capital crime which he in fact committed. But by the law as it now stands, and has stood at least ever since the time of Edward III., the capacity of doing ill, or contracting guilt, is not so much measured by years and days, as by the

strength of the delinquent's understanding and judgment. For one lad of eleven years old may have as much cunning as another of fourteen; and in these cases the maxim is, that malitia supplet aetatem. Under seven years of age, indeed, an infant cannot be guilty of felony ; for then a felonious discretion is almost an impossibility in nature : but at ei.,rht years old, he may be guilty of felony. Also, under fourteen, though an infant shall be prima facie adjudged to be doliin-capax, yet if it appear to the court and jury that he was doli capax, and could discern between good and evil, he may be convicted and suffer death. Thus a girl of thirteen has been executed for kill ing her mistress : and one boy of ten, and another of nine years old, who had killed their companions, have been sentenced to death, and he of ten years actually hanged ; because it appeared, upon their trials, that the one hid himself and the other hid the body he had killed ; which hiding manifested a consciousness of guilt, and a discretion to discern between good and evil. And there was an instance in the last century, where a boy of eight years old was tried at Abingdon for firing two barns, and it appearing that he had malice, revenge, and cunning, he was found guilty, condemned, and hanged accordingly. Thus also, in very modern times, a boy of ten years old was convicted on his own confession of murdering his bedfellow ; there appearing in his whole behaviour plain tokens of a mischievous disposition ; and as the sparing this boy merely on account of his tender years might be of dangerous consequence to the public, by propagating a notion that children might com-mit such atrocious crimes with impunity, it was unanimously agreed by all the judges, that he was a proper subject of capital punishment. But, in all such cases, the evidence of that malice, which is to supply age, ought to be , strong and clear beyond all doubt and contradiction.

INFANTA, and INFANTE, are titles given to all the sons and daughters of the kings of Spain and Portugal, except the eldest; the princes being called infantes, and the princesses infantas.

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A reader should tit down tu a book, especially of the mucellaneous kind, as a nell behaved visitor does to a banquet. The master of the feast exerts himself to satisfy his guests; but if, after all his care and pains, something should appear on the table that does not suit this or that person’s taste, they politely pas* it over without notice, and command other dishes, that they mar not distress a kind host. Tranriation.

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THR Subscribers to the London Encyclopaedia cannot but be gratified by the introduction of the following Article on INFIDELITY, from the pen of the late Rev. ROBERT HAI.L ; and its importance, (he publishers hope, will bea sufficient apology for giving it prominence, by placing it at the iegianing of this Part.

INFIDELITY is the joint offspring of an irreligious temper and unholy speculation, employed, not in examining the evidences of Christianity, but in detecting the vices and imperfections of professing Christians. It has passed through various stages, each distinguished by higher gradations of impiety; for when men arrogantly abandon their guide, and wilfully shut their eyes on the light of heaven, it is wisely ordained that their errors shall multiply at every step, until their extravagance confutes itself, and the mischief of their principles works its own antidote. That such has been the progress of infidelity will be obvious from a slight survey of its history.

Lord Herbert, the first and purest of our English free-thinkers, who flourished in the beginning of the reign of Charles I., did not so much impugn the doctrine or the morality of the Scriptures, as attempt to supersede their necessity, by endeavouring to show that the great principles of the unity of God, a moral government, and a future world, are taught with sufficient clearness by the light of nature. Bolingbroke, and others of his successors, advanced much farther, and attempted to invalidate the proofs of the moral character of the Deity, and, consequently, all expectations of rewards and punishments ; leaving the Supreme Being no other perfections than those which belong to a first cause, or Almighty contriver. After him, at a considerable distance, followed Hume, the most subtle, if not the most philosophical, of the Deists ; who, by perplexing the relations of cause and effect, boldly aimed to introduce an univetsal scepticism, and to pour more than Egyptian darkness into the whole region of morals.

Since his time sceptical writers have sprung up in abundance, and infidelity has allured multitudes to its standard : the young and superficial by its dextrous sophistry, the vain by the literary fame of its champions, and the profligate by the licentiousness of its principles. Atheism, the most undisguised, has at length began to make its appearance.

Animated by numbers, and emboldened by success at the commencement of the French revolution, infidels gave a new direction to their efforts, and impressed a new character on the ever-growing mass of their impious speculations.

By uniting more closely with each other, by giving a sprinkling of irreligion to all their literal y productions, they aimed to engross the formation of the public mind ; and, amidst the warmest professions of attachment to virtue, to effect an entire disruption of morality from religion. Pretending to be the teachers of virtue,

and the guides of life, they proposed to revolu-tionize the morals of mankind ; to regenerate the world, by a process entirely new ; and to rear the temple of virtue, not merely without the aid of leligion, but on the renunciation of its principles, and the derision of its sanctions.

With respect to the sceptical and religious systems, the inquiry at present is not so much which is the truest in speculation, as which is the most useful in practice ; or, in other words, whether morality will be best promoted by considering it as a part of a great and comprehensive law, emanating from the will of a supreme, omnipotent legislator, or as a mere expedient, adapted to our present situation, enforced by no other motives than those which arise from the prospects and interests of the present state.

The subject, viewed in this light, may be con- / sidered under two aspects ; the influence of the opposite systems on the principles of morals, and on the formation of character. The first may be styled their direct, the latter their equally important, but indirect consequence and tendency.

1. The sceptical, or irreligious, system subverts the whole foundation of morals. It may be assumed as a maxim that no person can be required to act contrary to his greatest good, or his highest interest, comprehensively viewed in relation to the whole duration of his being. It is often our duty to forego our own interest partially, to

sacrifice a smaller pleasure for the sake of a greater, to incur a present evil in pursuit of a distant good of more consequence. In a word, to arbitrate amongst interfering claims of inclination is the moral arithmetic of human life. But, to risk the happiness of the whole duration of our being in any case whatever, admitting it to be possible, would be foolish ; because the sacrifice must, by the nature of it, be so great as to preclude the possibility of compensation.

As the present world, on sceptical principles, is the only place of recompense, whenever the practice of virtue fails to promise the greatest sum of present good, cases which often occur in reality, and much oftener in appearance, every motive to virtuous conduct is superseded ; a deviation from rectitude becomes the part of wisdom ; and should the path of virtue, in addition to this, be obstructed by disgrace, torment, or death, to persevere would be madness and folly, and a violation of the first and most essential law of nature. Virtue, on these principles, being in numberless instances at war with self-preservation, never can or ought to become a fixed habit of the mind.

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INFIDELITY.

The system of infidelity is not only incapable of arming virtue for great and trying occasions, but leaves it unsupported on the most ordinary occurrences. In vain will its advocates appeal to a moral sense, to benevolence and sympathy. In vain will they expatiate on the tranquillity and pleasure attendant on a virtuous course ; for it is undeniable that these impulses maybe overcome ; and though you may remind the offender that in disregarding them he has violated his nature and that a conduct consistent with them is productive of much internal satisfaction ; yet, if he reply that his taste is of a different sort, that there are other gratifications which he values more, and that every man must choose his own pleasures, the argument is at an end.

Rewards and punishments, awarded by omnipotent power, afford a palpable and pressing motive, which can never be neglected without renouncing the character of a rational creature : but tastes and relishes are not to be proscribed. A motive in which the reason of man shall acquiesce, enforcing the practice of virtue at all times and seasons, enters into the very essence of moral obligation. Modern infidelity

supplies no such motives : it is therefore essentially and infallibly a system of enervation, turpitude, and vice.

This chasm in the construction of morals can only be supplied by the firm belief of a rewarding and avenging Deity, who binds duty and happiness, though they may seem distant, in an indissoluble chain, without which, whatever usurps the name of virtue, is not a principle, but a feeling ; not a determinate rule, but a fluctuating expedient, varying with the tastes of individuals, and changing with the scenes of life.

Nor is this the only way in which infidelity subverts the foundation of morals. All reasoning on morals presupposes a distinction between inclinations and duties, affections and rules. The former prompt, the latter prescribe. The former supply motives to action ; the latter regulate and control it. Hence it is evident, if virtue have any just claim to authority, it ‘must be under the latter of these notions, that is, under the character of a law. It is under this notion, in fact, that its dominion has ever been acknowledged to be paramount and supreme.

But, without the intervention of a superior will, it is impossible there should be any moral laws, except in the lax metaphorical sense in wliich we speak of the laws of matter and motion. Men being essentially equal, morality is, on these principles, only a stipulation, or silent compact, into which every individual is supposed to enter, as far as suits his convenience, and for the breach of which he is accountable to nothing but his own mind. His own mind is his law, his tribunal, and his judge !

Two consequences, the most disastrous to society, will inevitably follow the general prevalence of this system ; the frequent perpetration of great crimes, and the total absence of great virtues.

1. In those conjunctions which tempt avarice, or inflame ambition, when a crime flatters with the prospect of impunity, and the certainty of

immense advantage, what is to restrain an Atheist from its commission ? To say that remorse will deter him is absurd ; for remorse, as distinguished from pity, is the sole offspring of religious belief, the extinction of which is the great purpose of the infidel philosophy. The dread of punishment, or infamy, from his fellow-creatures, will be an equally ineffectual barrier, because crimes are only committed under

such circumstances as suggest the hope of concealment; not to say that crimes themselves will soon lose their infamy and their horror, under the influence of that system which destroys the sanctity of virtue, by converting it into a low calculation of worldly interest. Here the sense of an ever-present Ruler, and of an avenging Judge, is of the most awful and indispensable necessity ; as it is that alone which impresses on all crimes the character of folly, shows that duty and interest in every instance coincide, and that the most prosperous career of vice, the most brilliant successes of criminality, are but an accumulation of wrath against the day of wrath.

As the frequent perpetration of great crimes is an inevitable consequence of the diffusion of sceptical principles, so, to understand this consequence in its full extent, we must look beyond their immediate effects, and consider the 'disruption of social ties, the destruction of confidence, the terror, suspicion, and hatred, which must prevail in that state of society in which barbarous deeds are familiar. The tranquillity which pervades a well-ordered community, and the mutual good offices which bind its members together, is founded on an implied confidence in the indisposition to annoy; in the justice, humanity, and moderation of those among whom we dwell. So that the worst consequence of crimes is, that they impair the stock of public charity and general tenderness. The dread and hatred of our species would infallibly be grafted on a conviction that we were exposed every moment to the surges of an unbridled ferocity, and that nothing but the power of the magistrate stood between us and the daggers of assassins. In such a state, laws deriving no support from public manners are unequal to the task of curbing the fury of the passions, which, from being concentrated into selfishness, fear, and revenge, acquire new force. Terror and suspicion beget cruelty, and inflict injuries by way of prevention.

Pity is extinguisheJ in the stronger impulse of self-preservation. The tender and generous affections are crushed ; and nothing is seen but the retaliation of wrongs ; the fierce and unmi-tigated struggle for superiority. This is but a faint sketch of the incalculable calamities and horrors we must expect, should we be so unfortunate as ever to witness the triumph of modern infidelity.

2. This system is a soil as barren of great and sublime virtues as it is prolific in crimes. By great and sublime virtues are meant those which are called into action on great and trying occasions, which demand the sacrifice of the dearest interests and prospects of human life, and sometimes of life itself. The virtues, in a word, which, by their rarity and splendour, draw admiration, and have rendered illustrious the

char .c’ers of

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patriots, martyrs, and confessors. It requires Its influence on the formation of character re-but little reflection to perceive that whatever mains to be examined. The actions of men are veils a future world, and contracts the limits of oftener determined by their character than their existence within the present life, must tend, in interest: their conduct takes its colour more a proportionable degree, to diminish the gran-from their acquired taste, inclinations, and deur, and narrow the sphere of human agency, habits, than from a deliberate regard to their As well might you expect exalted sentiments greatest good. It is only on great occasions of justice from a professed gamester, as look for the mind awakes to take an extended survey noble principles in the man whose hopes and of her whole course, and that she suffers the fears are all suspended on the present moment, dictates of reason to impress a new bias upon and who stakes the whole happiness of his being her movements. The actions of each day are, on this vain and fleeting life. If he be ever for the most part, links which follow each other impelled to the performance of great achieve-in the chain of custom. Hence the great effort merits in a good cause, it must be solely by the of practical wisdom is to imbue the mind with hope of fame, a motive which, besides that it right tastes, affections, and habits ; the elements makes virtue the servant of opinion, usually of character, and masters of action, grows weaker at the approach of death, and I. The exclusion of a Supreme Being, and of which, however it may surmount the love of ex-a superintending Providence, tends directly to istence in the heat of battle, or in the moment of the destruction of moral taste. It robs the uni-public observation, can seldom be expected to verse of all finished and consummate excellence, operate with much force on the retired duties of even in idea. The admiration of perfect wisdom a private station. and goodness, for which we are formed, and

In affirming that infidelity is unfavorable to which kindles such unspeakable rapture in the the higher class of virtues, we are supported as soul, finding in the regions of scepticism nothing well by facts as by reasoning. We should be to which it corresponds, droops and languishes, sorry to load our adversaries with unmerited In a world which presents a fair spectacle of reproach, but to what history, to what record order and beauty, of a vast family nourished and will they appeal for the traits of moral greatness supported by an Almighty Parent, in a world exhibited by their disciples? Where shall we which

leads the devout mind, step by step, to look for the trophies of infidel magnanimity, or the contemplatiou of the first fair and the first atheistical virtue ? Not that we mean to accuse good, the sceptic is encompassed with nothing them of inactivity; they have recently filled the but obscurity, meanness, and disorder, world with the fame of their exploits ; exploits When we reflect on the manner in which the of a different kind, indeed, but of imperishable idea of Deity is formed, we must be convinced memory, and disastrous lustre. that such an idea, intimately present to the mind,

Though it is confessed great and splendid ac-must have a most powerful effect in refining the tions are not the ordinary employment of life, moral taste. Composed of the richest elements, but must, from their nature, be reserved for high it embraces, in the character of a beneficent and eminent occasions, yet that system is essen-Parent and Almighty Ruler, whatever is vener-tially defective which leaves no room for their able in wisdom, whatever is awful in authority, cultivation. They are important, both from whatever is touching in goodness. Human ex-their immediate advantage and their remoter cellence is blended with many imperfections, influence. They often save, and always illus-and seen under many limitations. It is beheld trate the age and nation in which they appear, only in detached and separate portions, nor ever They raise the standard of morals ; they arrest appears in any one character whole and entire, the progress of degeneracy ; they diffuse a lustre So that when, in imitation of the Stoics, we wish over the path of life ; monuments of the great-to form out of these fragments the notion of a ness of the human soul, they present to the perfectly wise and good man, we know it is a world the august image of virtue in her sub-mere fiction of the mind, without any real being limest form, from which streams of light and in whom it is embodied and realised. In the glory issue to remote times and ages, while their belief of a Deity, these conceptions are reduced commemoration, by the pen of historians and to reality ; the scattered rays of an ideal excel-poets, awakens in distant bosoms the sparks of lence are concentrated, and become the real kindred excellence. attributes of that Being with whom we stand in

Combine the frequent and familiar perpetra-the nearest relation, who sits supreme at the tion of atrocious deeds with the dearth of great head of the universe, is armed with infinite and generous actions, and you have the exact power, and pervades all nature with his pre-picture of that condition of society which com-sence.

pletes the degradation of the species — the fright-The efficacy of these sentiments in producing iul contrast of dwarfish virtues and gigantic

and augmenting a virtuous taste, will indeed be vices, where every thing good is mean and little, proportioned to the vividness with which they and every thing evil is rank and luxuriant. A are formed, and the frequency with which they dead and sickening uniformity prevails, broken recur; yet some benefit will not fail to result only at intervals by volcanic eruptions of anarchy from them, even in their lowest degree. The and crime. idea of the Supreme Being has this peculiar

II. Hitherto we have considered the influence property ; that as it admits of no substitute, so, of scepticism on the principles of virtue; and from the first moment it is impressed, it is capa-have endeavoured to show that it despoils it of ble of continual growth and enlargement. God its dignity, and lays its authority in the dust, himself is immutable ; but our conception of bis

character is continually receiving fresh acces-all superior powers, affords no standard at all. sions, is continually growing more extended and Human nature knows nothing bettei or higher refulgent, by having transferred upon it new than itself. All above and around it beinˆ perceptions of beauty and goodness ; by attract-shrouded in darkness, and the prospect confined ing to itself, as a centre, whatever bears the im-to the tame realities of life; virtue has no room press of dignity, order, or happiness. It borrows upwards to expand, nor are any excursions per-splendour from all that is fair; subordinates to mitted into that unseen world, the true element itself all that is great; and sits enthroned on the of the great and good, by which it is fortified riches of the universe. witn motives equally calculated to satisfy the

As the object of worship will always be, in a reason, to delight the fancy, and to impress the degree, the object of imitation, hence arises a heart.

fixed standard of moral excellence, by the con-2. Modern infidelity not only tends to cor-templation of which, the tendencies to corruption rupt the moral taste; it also promotes the growth are counteracted, the contagion of bad example of those vices which are the most hostile to is checked, and human nature arises above its social happiness. Of all

the vices incident to natural level. human nature, the most destructive to society

When the knowledge of God was lost in the are vanity, ferocity, and unbridled sensuality ; world, just ideas of virtue and moral obligation and these are precisely the vices which infidelity disappeared along with it. How is it to be is calculated to cherish.

otherwise accounted for, that in the polished That the love, fear, and habitual contempla-nations, and in the enlightened times of Pagan tion of a Being infinitely exalted, or in other antiquity, the most unnatural lusts and detest-words, devotion, is adapted to promote a sober able impurities were not only tolerated in private and moderate estimate of our own excellencies, life, but entered into religion, and formed a ma-is incontestible ; nor is it less evident that the terial part of public worship. While among the exclusion of such sentiments must be favorable Jews, a people so much inferior in every other to pride. The criminality of pride will, per-branch of knowledge, the same vices were re-haps, be less readily admitted ; for, though there garded with horror. is no vice so opposite to the spirit of Christianity,

The reason b this : the true character of God yet there is none which, even in the Christian was unknown to the former, which, by the light world, has, under various pretences, been treated of divine revelation was imparted to the latter, with so much indulgence. The former cast their deities in the mould of There is, it will be confessed, a delicate sen-their own imaginations, in consequence of which sibility to character, a sober desire of reputation, they partook of the vices and defects of their a wish to possess the esteem of the wise and worshippers. To the latter, no scope was left good, felt by the purest minds, and which is the for the wanderings of fancy, but a pure and per-farthest remove from arrogance and vanity. The feet model was prescribed. humility of a noble mind scarcely dares to ap-False and corrupt, however, as was the reli-prove of itself until it has secured the approba-gion of the Pagans (if it deserve the name), and tion of others. Very different is that restless defective, and often vicious, as was the character desire of distinction, that passion for theatrical of their imaginary deities, it was still better for display, which inflames the heart, and occupies the world for the void of knowledge to be filled the whole attention of vain rnen. This, of all with these, than abandoned to a total scepticism ; the passions, is the most unsocial ; avarice itself lor if both systems are equally false, they are is not excepted. The reason is plain. Property riot equally pernicious. When the fictions is a kind of good which may be more easily of Heathenism consecrated the memory of attained, and is capable of more minute

subdi-its legislators and heroes, it invested them for visions than fame. In the pursuit of wealth, the most part with those qualities which were men are led by an attention to their own interest in the greatest repute. They were supposed to to promote the welfare of each other; their ad-possess in the highest degree the virtues in which vantages are reciprocal ; the benefits which each it was most honorable to excel, and to be the is anxious to acquire for himself, he reaps in witnesses, approvers, and patrons of those per-the greatest abundance from the union and confections in others, by which their own character junction in society. The pursuits of vanity are was chiefly distinguished. Men saw, or rather quite contrary. The portion of time and at-fancied they saw, in these supposed deities, the tention mankind are willing to spare from their qualities they most admired, dilated to a larger avocations and pleasures, to devote to the admi-size, moving in a higher sphere, and associated ration of each other is so small, that every suc- •with the power, dignity, and happiness of supe-cessful adventurer is felt to have impaired the rior natures. With such ideal models before common stock. The success of one is the dis-them, and conceiving themselves continually appointment of multitudes. For though there acting under the eye of such spectators and be many rich, many virtuous, many wise men, judges, they felt a real elevation, their eloquence fame must necessarily be the portion of but few. became more impassioned, their patriotism inHence every vain man, every man in whom flamed, and their courage exalted. vanity is the ruling passion, regarding his rival

Revelation, by displaying the true character as his enemy, is strongly tempted to rejoice in of God, affords a pure and perfect standard of his miscarriage, and repine at his success, virtue : heathenism, one in many respects de-Besides, as the passions are seldom seen in a fective and vicious; the fashionable scepticism simple, unmixed state, so vanity, when it suc-of the present day, which excludes the belief of ceeds, degenerates into arrogance ; when it is

disappointed (and il is often disappointed) it is We have been so much accustomed to consider exasperated into malignity, and corrupted into extravagant self estimation merely as a ridiculout envy. In this stage the vain man commences a quality, that many will be surprised to find it determined misanthropist. He detests that extreated as a vice, pregnant with serious mischief cellence he cannot reach. He detests his spe-to society. But to form a judgment on its cies, and longs to be

revenged for the unpardon-influence on the manners and happiness of a able injustice he has sustained in their insensi-nation, it is necessary to look only at its effects bility to his merits. He lives upon the calamities in a family ; for bodies of men are only collec-of the world; the vices and miseries o/ men are tions of individuals, and the greatest nation is his element and his food. Virtue, talents, and nothing more than an aggregate of a number of genius, are his natural enemies, which he perse-families. Conceive of a domestic circle, in cutes with instinctive eagerness, and unremitting which each member is elated with a most extrn-hostility. There are who doubt the existence of vagant opinion of himself, and a proportionable such a disposition ; but it certainly issues out of contempt of every other ; is full of little con-the dregs of disappointed vanity ; a disease trivances to catch applause, and whenever he is which taints and vitiates the whole character not praised is sullen and disappointed. What wherever it prevails. It forms the heart to such a picture of disunion, disgust, and animosity a profound indifference to the welfare of oihers, would such a family present! How utterly that whatever appearances he may assume, or would domestic affection be extinguished, and however wide the circle of his seeming virtues all the purposes of domestic society be defeated ! mav extend, you will infallibly find the vain man The general prevalence of such dispositions is his own centre. Attentive only to himself, must be accompanied by an equal proportion absorbed in the contemplation of his own per-of general misery. The tendency of pride to fections, instead of feeling tenderness for his produce strife and hatred is sufficiently apparent fellow-creatures as members of the same family, from the pains men have been at to contract a as beings with whom he is appointed to act, to system of politeness, which is nothing more than suffer, and to sympathise; he considers life as a a sort of mimic humility, in which the sentiments stage on which he is performing a part, and of an offensive self-estimation are so far dis-mankind in no other light than spectators, guised and suppressed, as to make them com-Whether he smiles or frowns, whether his path patible with the spirit of society ; such a mode is adorned with rays of beneficence, or his steps of behaviour as would naturally result from an are dyed in blood, an attention to self is the attention to the apostolic injunction : ‘ Let spring of every movement, and the motive to nothing be done through strife or vain glory ; which every action is referred. but in lowliness of mind let each esteem others

His apparent good qualities lose all their better than themselves.’ But if the semblance worth, by losing all that is simple, genuine, and be of such importance, how much more usefu natural : they are even

pressed into the service the reality ! If the mere garb of humility be of of vanity, and become the means of enlarging such indispensable necessity, that without it its power. The truly good man is jealous over society could not subsist, how much better still himself, lest the notoriety of his best actions, by would the harmony of the world be preserved, blending itself with their motive, should dimi-were the condescension, deference, and respect, nish their value ; the vain man performs the so studiously displayed, a true picture of the same actions for the sake of that notoriety. The heart ?

good man quietly discharges his duty, and shuns The same restless and eager vanity which dis-ostsntation ; the vain man considers every good turbs a family, when it is permitted, in a great deed lost that is not publicly displayed. The national crisis, to mingle with political affairs, one is intent upon realities, the other upon sem-distracts a kingdom ; infusing into those intrusted blances : the one aims to be virtuous, the other with the enaction of laws, a spirit of rash inno-to appear so. Nor is a mind inflated with vanity vation and daring empiricism, a disdain of the more disqualified for right action than just spe-established usages of mankind, a foolish desire culation, or better disposed to the pursuit of to dazzle the world with new and untried sys-truth, than the practice of virtue. To such a terns of policy, in which the precedents of anti-mind the simplicity of truth is disgusting, quity, and the experience of ages are only Careless of the improvement of mankind, and consulted to be trodden under foot ; and into intent only upon astonishing with the appearance the executive department of government, a fierce of ‘novelty, the glare of paradox will be preferred contention for pre-eminence, an incessant strug-to the light of truth ; opinions will be embraced, gle to supplant and destroy, with a propensity not because they are just, but because they are to calumny and suspicion, proscription, and new ; the more flagitious, the more subversive massacre.

of morals, the more alarming to the wise and We shall suffer the most eventful season ever good, the more welcome to men who estimate witnessed in the affairs of men to pass over our their literary powers by the mischief they pro-heads to very little purpose, if we fail to learn duce, and who consider the anxiety and terror from it some awful lessons on the nature and they impress as the measure of their renown, progress of the passions. The true liijht in Truth is simple and uniform, while error may be which the French revolution ought to be con-infinitely varied ; and as it is one thing to start templated, is that of a grand experiment on paradoxes, and another to make discoveries, we human nature. Among the various passions need the less wonder at the prodigious increase which that revolution has so strikingly

displayed, ot modern philosophers. none is more conspicuous than vanity ; nor is it

less difficult, without adverting to the national character of the people, to account for its extraordinary predominance. Political power, the most seducing object of ambition, never before circulated through so many hands; the prospect of possession was never before presented to so many minds. Multitudes, who by their birth and education, and not unfrequently by their talents, seemed destined to perpetual obscurity, were, by the alternate rise and fall of parties, elevated into distinction, and shared in the functions of government. The short-lived forms of power and office glided with such rapidity through successive ranks of degradation, from the court to the very dregs of the populace, that they seemed rather to solicit acceptance, than to be a prize contended for.* Yet, as it was still impossible for all to possess authority, though none were willing to obey, a general impatience to break the ranks and rush into the foremost ground, maddened and infuriated the nation, and overwhelmed law, order, and civilization, with the violence of a torrent.

Jf such be the mischiefs both in public and private life resulting from an excessive self-es- timation, it remains next to be considered, whether Providence has supplied any medicine to correct it ; for the reflection on excellencies, whether real or imaginary, is always attended with pleasure to the possessor; it is a disease deeply seated in our nature.

Suppose there were a great and glorious Being always present with us, who had given existence, with numberless other blessings, and on whom we depended each instant, as well for every present enjoyment as for every future good : suppose again we had incurred the just displeasure of such a Being, by ingratitude and disobedience, yet that in great mercy he had not cast us off, but assured us he was willing to pardon and restore us on our humble entreaty and sincere repentance ; say, would not an habitual sense of the presence of this Being, self-reproach for having displeased him, and an anxiety to recover his favor, be the most effectual antidote to pride ? But such are the leading discoveries made by the Christian revelation, and such the dispositions which a practical belief of it inspires. Humility is the first-

fruit of religion. In the mouth of our Lord there is no maxim so frequent as the following: ‘ Whosoever exalteth himself shall be abased, and he that humbleth himself shall be exalted.’ Religion, and that alone, teaches absolute humility ; by which I mean a sense of our absolute nothingness in the view of infinite greatness and excellence. That sense of inferiority which results from the comparison of men with each other is often an unwelcome sentiment forced upon the mind, winch may rather embitter the temper than soften it : that which devotion impresses is southing and delightful. The devout man loves to lie low at the footstool of his Creator, because it is there he attains the most lively perceptions of the divine excellence, and the most tranquil confidence in the divine favor. In so august a presence he sees all distinctions lost, and all

‘/EqiiopuliatpcJcpauperumtabernas regurnque turrcs.

beings reduced to trie same level. He looks at his superiors without envy, and his inferiors without contempt; and when from this elevation he descends to mix in society, the conviction of superiority, which must in many instances be felt, is a calm inference of the understanding, and no longer a busy, importunate passion of the heart.

‘ The wicked (says the Psalmist) — through the pride of their countenance, will not seek after God : God is not in all their thoughts.” When we consider the incredible vanity of the atheistical sect, together with the settled malignity and unrelenting rancour with which they pursue every vestige of religion, is it uncandid to suppose that its humbling tendency is one principal cause of their emnity ; that they are eager to displace a Deity from the minds of men, that they may occupy the void ; to crumble the throne of the Eternal into dust, that they may elevate themselves on its ruins, and that as their licentiousness is impatient of restraint, so their pride disdains a superior ?

We mentioned a ferocity of character as one effect of sceptical impiety. It is an inconvenience attending a controversy with those with whom we have few principles in common, that we are often in danger of reasoning inconclusively, for the want ot its being clearly known and settled what our opponents admit and what they deny. The persons, for example, with whom we are at present engaged, have discarded humility and modesty from the catalogue of virtues; on which account, we have employed the more time in evincing their

importance : but, whatever may be thought of humility as a virtue, it surely will not be denied, that inhumanity is a most detestable vice ; a vice however, which scepticism has a most powerful tendency to inflame.

As we have already shown that pride hardens the heart, and that religion is the only effectual antidote — the connexion between irreligion and inhumanity is in this view obvious. But there is another light in which this part of the subject may be viewed, in our opinion, much more important, though seldom adverted to. The supposition that man is a moral and accountable being, destined to survive the stroke of death, and to live in a future world in a never ending state of happiness or misery, makes him a creature of incomparably more consequence than the opposite supposition. When we consider him placed here by an Almighty ruler, in a state of probation, and that the present life is his period of trial, the first link in a vast and interminable chain which stretches into eternity, he assumes a dignified character in our eyes. Every thing which relates to him becomes interesting ; and to trifle with his happiness is felt to be the most unpardonable levity. If such be the destination of man, it is evident that in the qualities which fit him for it his principal dignity consists: his moral greatness in his true greatness. Let the sceptical principles be admitted, which represent him, on the contrary, as the offspring of chance, connected with no superior power, and sinking into annihilation at death, and he is a contemptible creature, whose existence and

happiness are insignificant. The characteristic difference is lost between him and the brute creation, from which he is no longer distinguished, except by the vividness and multiplicity of his perceptions.

If we reflect on that part of our nature whicli disposes us to humanity, we shall find that, where we have no particular attachment, our sympathy witli the sufferings and concern for the destruction of sensitive beings, are in proportion to their supposed importance in the general scale ; or, in other words, to their supposed capacity of enjoyment. We feel, for example, much more at witnessing the destruction of a man, than of an inferior animal, because we consider

it as involving the extinction of a much greater sum of happiness. For the same reason he who could shudder at the slaughter of a large animal, will see a thousand insects perish without a pang. Our sympathy with the calamities of our fellow-creatures is adjusted to the same proportions; for we feel more powerfully affected with the distresses of fallen greatness than with equal or greater distresses sustained by persons of inferior rank; because, having been accustomed to associate with an elevated station, the idea of superior happiness, the loss appears the greater, and the wreck more extensive. But the disproportion in importance between man and the meanest insect, is not so great as that whicli subsists between man considered as mortal and immortal ; that is as between man as he is represented by the system of scepticism, and that of divine revelation : for the enjoyment of the meanest insect bears some proportion, though a very small one, to the present happiness of man ; but the happiness of time bears none at all to that of eternity. The sceptical system, therefore, sinks the importance of human existence to an inconceivable degree. From these principles result the following important inference — that to extinguish human life by the hand of violence, must be quite a different thing in the eyes of a sceptic, from what it is in the eyes of a Christian. With the sceptic it is nothing more than diverting the course of a little red fluid, called blood ; it is merely lessening the number by one of many millions of fugitive contemptible creatures. The Christian sees in the same event an accountable being tut off from a state of probation, and hurried, perhaps unprepared, into the presence of his Judge, to hear that final, that irrevocable sentence, which is to fix him for ever in an unal-terable condition of felicity or woe. The former perceives in death nothing but its physical circumstances; the latter is impressed with its moral consequences. It is the moral relation which man is supposed to bear to a superior power, the awful idea of accountability, the influence which his present dispositions and actions are conceived to have upon his eternal destiny, more than any superiority of intellectual powers abstracted from these considerations, which in-vest him with such mysterious grandeur, and constitute the firmest guard on the sanctuary of human life. This reasoning, it is true, serves more immediately to show how the disbelief of a future stale endangers the security of life; but,

though this be its direct consequence, it extends by analogy much further, since he who has learned to sport with the lives of his fellow-creatures will feel but little solicitude for their welfare in any other instance; but, as the greater includes the less, will easily pass from this to all the inferior gradations of barbarity.

As the advantage of the armed over the unarmed is not seen till the moment of attack, so in that tranquil state of society in which law and order maintain their ascendency, it is not perceived, perhaps not even suspected, to what an alarming degree the principles of modern infidelity leave us naked and defenceless. But let the state be convulsed, let the mounds of regular authority be once overflowed, and the still small voice of law drowned in the tempest of popular fury (events which recent experience shows to be possible^, it will then be seen that atheism is a school of ferocity ; and that having taught its disciples to consider mankind as little better than a nest of insects, they will be prepared in the fierce conflicts of party to tra nple upon them without pity, and extinguish them without remorse.

It was late before the atheism of Epicurus gained footing at Rome; but its prevalence was soon followed by such scenes of proscription, confiscation, and blood, as were then unparalleled in the history of the world ; from which the republic being never able to recover itself, after matiy unsuccessful struggles, exchanged liberty for repose, by submission to absolute power. Such were the effects of atheism at Rome. An attempt was made to establish a similar system in France, the consequences of which are too well known to render it requisite for us to shock your feelings by a recital. The only doubts that can arise is, whether the barbarities which stained the revolution in that unhappy country, are justly chargeable on the prevalence of atheism. Let those who doubt of this recollect that the men who by their activity and talents, prepared the minds of the people for that great change, Voltaire, D'Altmbert, Diderot, Rousseau, and others, were avowed enemies of revelation ; that in all their writings the diffusion of scepticism and revolutionary principles went hand in hand, that the fury of the most sanguinary parties was especially pointed against the Christian priesthood and religious institutions, without once pretending, like other persecutors, to execute the vengeance of God (whose name they never mentioned) upon his enemies; that their atrocities were committed with a wanton levity and brutal merriment ; that the reign of atheism was avowedly and expressly the reign of terror ; that in the full madness of their career, in the highest climax of their horrors, they shut up the temples of God, abolished his worship, aud proclaimed death to be an eternal sleep; as if by pointing to the silence of the sepulchre, and the sleep of the dead, these ferocious barbarians meant to apologize for leaving neither sleep, quiet, nor repose, to the living.

As the heathens fabled that Minerva issued full armed from the head of Juprter, so no sooner were the speculations of atheistical philo-

sophy matured, than they gave birth to a ferocity which converted the most polished people in Europe into a horde of assassins ; the seat of voluptuous refinement, of pleasure, and of arts, into a theatre of blood.

Having already shown that the principles of infidelity facilitate the commission of crimes, by removing the restraints of fear ; and that they foster the arrogance of the individual, while they inculcate the most despicable opinion of the species; the inevitable result is, that a haughty self-confidence, a contempt of mankind, together with a daring defiance of religious restraints, are the natural ingredients of the atheistical character; nor is it less evident that these are, of all others, the dispositions which most forcibly stimulate to violence and cruelty.

We may, therefore regard it as a maxim never to be effaced or forgotten, that atheism is an inhuman, bloody, ferocious system, equally hostile to every useful restraint, and to every virtuous affection ; that leaving nothing above us to excite awe, nor around us to awaken tenderness, it wages war with heaven and with earth ; its first object is to dethrone God, its next to destroy man.-

There is a third vice not less destructive to society than either of those which have been already mentioned, to which the system of modern infidelity is favourable; that is unbridled sensuality, the licentious and unrestrained indulgence of those passions which are essential to the continuation of the species. The magnitude of these passions, and their supreme importance to the existence as well as the peace and welfare of society, have rendered it one of the first objects of solicitude with every wise legislator, to restrain them by such laws, and to confine their indulgence within such limits as shall best promote the great ends for which they were implanted.

The benevolence and wisdom of the Author of Christianity, are eminently conspicuous in the laws he has enacted on this branch of morals; for while he authorizes marriage, he restrains the vagrancy

and caprice of the passions, by forbidding polygamy and divorce; and well know-‘ ing that offences against the laws of chastity usually spring from an ill-regulated imagination, he inculcates purity of heart. Among innumerable benefits which the world has derived from the Christian religion, a superior refinement in the sexual sentiments, a more equal and respectful treatment of women, greater dignity and permanence conferred on the institution of marriage, are not the least considerable ; in consequence of which, the purest affections, and the most sacred duties, are grafted on the slock of the strongest instincts.

The aim of all the leading champions of infidelity is to rob mankind of these benefits, and throw them back into a state of gross and brutal sensuality. In this spirit, Mr. Hume represents the private conduct of the profligate Charles, \vhnse debaucheries polluted the age, as a just subject of panegyric. A disciple in the same school had the unblushing effrontery to stigmatize marriage as the worst of aH monopolies; acd, in a narrative of his licentious

amours, made a formal apology for departing from his principles, by submitting to its restraints. The popular productions on the continent, which issue from the atheistical school, are incessantly directed to the same purpose.

Under every possible aspect in which infidelity can be viewed, it extends the dominion of sensuality : it repeals and abrogates every law by which divine revehition has, under such awful sanctions, restrained the indulgence of the passions. The disbelief of a supreme omniscient Being, which it inculcates, releases its disciples from an attention to the heart, from every care but the preservation of outward decorum ; and the exclusion of the devout affections, arid an unseen world, leaves the mind immersed in visible sensible objects.

There are two sorts of pleasures, corporeal and mental. Though we are indebted to the senses for all our perceptions originally, yet those which are at the furthest remove from their immediate impressions, confer the most elevation on the character, since in proportion as they are multiplied and augmented, the slavish subjection to the senses is subdued. Hence the true and only antidote to debasing sensuality, is the possession of a fund of’ that kind oj’ enjoyment which is independent of the corporeal appetites. Inferior in the perfection of several of his senses to different parts of the brute creation, the superiority of man over them all consists in his superior power of multiplying by new combinations his mental perceptions, and thereby

of creating to himself resources of happiness separate from external sensation.

In the scale of enjoyment, the first remove from sense are the pleasures of reason and society ; at the next are the pleasures of devotion and religion. The former, though totally distinct from those of sense, are yet less perfectly adapted to moderate their excesses than the last, as they are in a great measure conversant with visible objects. The religious affections and sentiments are, in fact, and were intended to be, the proper antagonist of sensuality ; the great deliverer from the thraldom of the appetites, by opening a spiritual world, and inspiring hopes and fears, and consolations and joys, which bear no relation to the material and sensible universe. The criminal indulgence of sensual passions admits but of two modes of prevention ; the establishment of such laws and maxims in society as shall render lewd profligacy impracticable or infamous, or the infusion of such principles and habits as shall render it distasteful. Human legislators have encountered the disease in the first, the truths and sanctions of revealed religion in the last, of these methods : to both of which the advocates of modern infidelity are equally hostile.

From the records of revelation, we learn that marriage, or the permanent union of the sexes, was ordained by God, and existed under different modifications in the early infancy of mankind, without which they could never have emerged from barbarism. For conceive only what eternal discord, jealousy, and violence would ensue, were the objects of the tendere.it affections secured to their possessor by no law

or tie of ‘moral obligation: were domestic enjoyments disturbed by incessant fear, and licentiousness inflamed by hope. Who could rind sum’cient tranquillity of mind to enable him to plan or execute any continued scheme of action, or what room for arts or sciences, or religion, or virtue, in that state in which the chief earthly happiness was exposed to every lawless invader ; wheieone was racked with an incessant anxiety to keep what the other was equally eager to acquire? It is not probable in itself, independent of the light of scripture, that the benevolent Author of the human race ever placed them in so wretched a condition at first; it is certain they could not remain in it

long without being exterminated. Marriage, by shutting out these evils, and enabling every man to rest secure in his en-ioyments, is the great civilizer of the world : with this security, the mind is at liberty to ex-pand in generous affections, has leasure to look abroad, and engage in the pursuits of knowledge, science, and virtue.

Nor is it in this way only that marriage institutions are essential to the welfare of mankind. They are sources of tenderness as well as the guardians of peace. Without the permanent union of the s.exes, there can be no permanent families : the dissolution of nuptial ties involves the dissolution of domestic society. But domestic society is the seminary of social affections, the cradle of sensibility, where the first elements are acquired of that tenderness and humanity which cement mankind together ; and which, were they entirely extinguished, the whole fabric of social institutions would be dissolved.

Families are so many centres of attraction, wliicit preserve mankind from being scattered and dissipated by the repulsive power of selfishness. The order of nature is evermore from particulars to generals. As in the operations of intellect we proceed from the contemplation of individuals to the formation of general abstrac-tions, so in the developement of the passions in like manner, we advance from private to public affections ; from the love of parents, brothers, aud sisters, to those more expanded regards which embrace the immense sqciety of human kind.

In order to render men benevolent, they must first be made tender: for benevolent affections are not the offspring of reasoning ; they result from that culture of the heart, from those early impressions of tenderness, gratitude, and sympathy, which the endearments of domestic life are sure to supply, and for the formation of which it is the best possible school.

The advocates of infidelity invert this eternal order of nature. Instead of inculcating the private affections, as a discipline by which the mind is prepared for those of a more public na-ture, they set them in direct opposition to each other, they propose to build general benevolence on the destruction of individual tenderness, and to make us love the whole species more, by loving every particular part of it less. In pursuit of this chimerical project, gratitude, humility, conjugal, parental, and iilia! affection, together with every other social disposition, are

reprobated — virtue is limited to a passionate attachment to the general good. It is natural to ask, when all the tenderness of life is extinguished, and all the bands of society are un-twisted, from whence this ardent affection for the general good is to spring ?

When this savage philosophy has completed its work, when it has taught its disciples to look with perfect indifference on the offspring of his body, and the wife of his bosom, to estrange himself from his friends, insult his benefactors, and silence the pleadings of gratitude and pity; will he, by thus divesting himself of all that is hu-man, be better prepared for the disinterested love of his species? Will he become a philanthropist only because he has ceased to be a man ? llather, in this total exemption from all the feelings which humanize and soften, in this chilling frost of universal indifference, may we not be certain selfishness unmingled and uncontrolled, will assume the empire of his heart; and that, under pretence of advancing the general good, an object to which the fancy may give innumerable shapes, he will be prepared for the violation of every duty, and the perpetration of every crime ? Extended benevolence is the last and most perfect fruit of the private affections; so that to expect to reap the former from the extinction of the latter, is to oppose the .means to the end ; is as absurd as to attempt to reach the summit of the highest mountain without passing through the intermediate spaces, or to hope to attain the heights of science by forgetting the first elements of knowledge. These absurdities have sprung, however, in the advocates of infidelity, from an ignorance of human nature, sufficient to disgrace even those who did not style themselves philosophers. Presuming, contrary to the experience of every moment, that the affections are awakened by reasoning, and perceiving that the general good is an incomparably greater object in itself than the ha-ppinessof any limited number of individuals, they inferred nothing more was necessary than to exhibit it in just dimensions, to draw the affections towards it, as though the fact of the superior populous-ness of China to Great Britain, needed but to be known to render us indifferent to our domestic concerns, and lead us to direct all our anxiety to the prosperity of that vast, but remote em-pire.

It is not the province of reason to awaken new passions, or open new sources of sensibility ; but to direct us in the attainment of those objects which nature has already rendered pleasing, or to determine among the interfe-ing inclinations and passions which sway the mind, which are the fittest to be preferred.

Is a regard to the general good, then you will reply, to be excluded from the motives of ac-tion ? Nothing is more remote from our

intention : but as the nature of this motive has in out opinion, been much misunderstood by some good men, and abused by others, of a different description, to the worst of purposes, permit us to declare in a few words, what appears to us, to be the truth on this subject.

The welfare of the whole system of being, must be allowed to be, in itself, the object of all

others the most worthy of being pursued ; so that could the mind distinctly embrace it and discern at every siep what action would infallibly promote it, we should be furnished with a sure criterion of right and wrong , an unerring guide, which would supersede the use and necessity of all inferior rules, laws, and principles.

But this being impossible, since the good of the whole is a motive so loose and indeterminate, and embraces such an infinity of relations, that before we could be certain what action it prescribed, the season of action would be past ; to weak, short-sighted, mortals, Providence has assigned a sphere of agency less grand, and extensive indeed, but better suited to their limited powers, by implanting certain affections which it is their duty to cultivate, and suggesting particular rules to which they are bound to conform. By these provisions the boundaries of virtue are easily ascertained, at the same time that its ultimate object, the good of the whole is secured ; for, since the happiness of the entire system results from the happiness of the several parts, the affections, which confine the attention immediately to the latter, conspire in the end to the promotion of the former ; as the labourer, whose industry is limited to a corner of a large building, performs his part towards rearing the structure much more effectually than if he extended his care to the whole.

As the interest, however, of any limited num-ber of persons may not only contribute, but, may possibly be directly opposed to the general good (the interest of a family, for example, to that of a province, or of a nation to that of the world), Providence has so ordered it, that in a well-regulated mind there springs up, as we have already seen, besides

particular attachments, an extended regard to the species, whose office is two-fold : not to destroy and extinguish the more private affections, which is mental parricide ; but first, as far as is consistent with the claims of those who are immediately committed to our care, to do good to all men ; secondly, to exercise a jurisdiction and control over the private affections, so as to prohibit their indulgence, whenever it would be attended with manifest detriment to the whole. Thus every part of our nature is brought into action; all the practical principles of the human heart find an element to move in, each in its different sort and manner conspiring, without mutual collisions, to maintain the harmony of the world, and the happiness of the universe.

Three circumstances attending the promulgation o-f m-odern infidelity, which at the time, •were equally new and alarming, are worthy of peculiar consideration.

1. It wa-s the first attempt ever witnessed on an extensive scale to establish the principles of Atheism ; the first effort which history has recorded to disannul and extinguish the belief of all superior powers; the consequence of which, had it succeeded, would have placed mankind Ji> a situation never before experienced, not even during the aees of Pagan darkness. The system of 1'olythism \vas as remote from modern infidelity as from true religion. Amidst thnt rubbish of superstition, the product of fear, ignorance,

and vice, which had been accumulating f</r ages, some faint embers of sacred truth re mained unextinguished ; the interposition of un-seen powers in the affairs of men was believed and revered, the sanctity of oaths was maintained, the idea of revelation send of tradition as a source of religious knowledge, was familiar; a useful persuasion of the existence of a future world was kept alive, and the greater gods were looked up to as the guardians of the public welfare, the patrons of those virtues which promote the prosperity of states, and the avengers of injustice, perfidy, and fraud.

Of whatever benefit superstition might for merly be productive, by Che scattered particles of truth which it contained, these advantages can now only be reaped from the soil of true religion ; nor is there any alternative left, than the belief of Christianity, or absolute Atheism. In the revolution of the human mind, exploded opinions are often revived, but an exploded su perstition never recovers its credit. The pretension to divine revelation is so august and commanding, that when its falsehood is once discerned, it is covered with all the

ignominy of detected imposture ; it falls from such a height, (to change the figure,) that it is inevitably crumbled into atoms. Religions, whether false or true, are not creatures of arbitrary institution. After discrediting the principles of piety, should our modern free-thinkers find it necessary, in or-der to restrain the excesses of ferocity, to seek for a substitute in some popular superstition ; it will prove a vain and impracticable attempt : they may recal the names, restore the altars, and revive the ceremonies, but to rekindle, the spirit of heathenism, will exceed their power ; because it is impossible to enact ignorance by law, or to repeal by legislative authority, the dictates of reason, and the light of science.

2. The efforts of infidels to diffuse the principles of infidelity among the common people is another alarming symptom peculiar to the present time. Hume, Bolingbroke, and Gibbon, addressed themselves solely to the more polished classes of the community, and would have thought their refined speculations debased by an attempt to enlist disciples from among the populace. Infidelity has lately grown condescend-ing : bred in the speculations of a daring philosophy, immured at first in the cloisters of the learned, and afterwards nursed in the lap of voluptuousness and of courts; having at length reached its full maturity, it boldly ventures to challenge the suffrages of the people, solicits the acquaintance of peasants and mechanics, and seeks to draw whole nations to its standard. It is not difficult to account for this new state of things: while infidelity was rare, it was employed as the instrument of literary vanity ; its wide diffusion having disqualified it for answering that purpose, it is now adopted as the organ of political convulsion. Literary distinction is conferred by the approbation of a few : but the total subversion and overthrow of society demands the concurrence of millions.

3. The infidels of the present day are the first sophists who have presumed to innovate in the very substance of morals. The disputes on

moral questions, hitherto agitated amongst philosophers, have respected the grounds of duty, not the nature of duty itself ; or they

have been merely metaphysical, and related to the history of moral sentiments in the mind, the sources and principles from which they were most easily deduced ; they never turned on the quality of those dispositions and actions which were to be denominated virtuous. In the firm persuasion that the love and fear of the Supreme Being, the sacred observation of promises and oaths, reverence to magistrates, obedience to parents, gratitude to benefactors, conjugal fidelity, and parental tenderness, were primary virtues, and the chief support of every commonwealth, they were unanimous. The curse denounced upon such as remove ancient land-marks, upon those who call good evil, and evil good, put light for darkness, and darkness for light, who employ their faculties to subvert the eternal distinctions of right and wrong, and thus to poison the streams of virtue at their source, falls with accumulated weight on the advocates of modern infidelity, and on them alone.

By permitting to a certain extent the prevalence of infidelity, Providence is preparing new triumphs for religion. In asserting its authority, the preachers of the gospel have hitherto found it necessary to weigh the prospects of immortality against the interests of time ; to strip the world of its charms, to insist on the deceitfulness of pleasure, the unsatisfying nature of riches, the emptiness of grandeur and the nothingness of a mere worldly life. Topics of this nature will always have their use; but it is not by such representations alone that the importance of religion is evinced. The prevalence of impiety has armed us with new weapons in its defence.

Religion being primarily intended to make men ‘ wise unto salvation,’ the support it ministers to social order, the stability it confers on government and laws, is a subordinate species of advantage which we should have continued to enjoy without reflecting on its cause, but for the developement of deistical principles, and the experiment which has been made of their effects in a neighbouring country. It had been the constant boast of infidels, that their system, more liberal and generous than Christianity, needed but to be tried to produce an immense accession to human happiness ; and Christian nations, careless and supine, retaining little of religion but the profession, and disgusted with its restraints, lent a favourable ear to these pretensions. God permitted the trial to be made. In one country, and that the centre of Christendom, revelation underwent a total eclipse, while atheism, performing on a darkened theatre its strange and fearful tragedy, confounded the first elements of society, blended every age, rank and sex, in indiscriminate proscription and massacre, and convulsed all E.urope to its centre ; that the imperishable memorial of these events might teach the last generations of mankind to consider

religion as the pillar of society — the safe-guard of nations — the parent of social order, which alone has power to curb the fury of the passions, and secure to every one his rights; to the laborious,

the reward of their industry — to the rich, the enjoyment of their wealth — to nobles, the preservation of their honors, and to princes, the stability of their thrones.

We might ask the patrons of infidelity, what fury impels them 1o attempt the subversion of Christianity. Is it that they have discovered a better system ? To what virtues are their principles favourable? Or is, there one which Christians have not carried to a higher perfection than any of which their party can boast? Have they discovered a more excellent rule of life, or a better hope in death than that which the scriptures suggest ? Above all, what are the pretensions on which they rest their claims to be the guides of mankind, or which embolden them to expect we should trample upon the experience of ages, and abandon a religion which has been attested by a train of miracles and prophecies, in which millions of our forefathers have found a refuge in every trouble, and consolation in the hour of death ; a religion which has been adorned with the highest sanctity of character," and splendour of talents, which enrols amongst its disciples the names of Bacon, Newton, and Locke, the glory of their species, and to which these illustrious men were proud to dedicate the last and best fruits of their immortal genius?

If the question at issue is to be decided by argument, nothing can be added to the triumph of Christianity ; if by an appeal to authority, what have our adversaries to oppose to these great names ? Where are the infidels of such pure, uncontaminated morals, unshaken probity, and extended benevolence, that we should be in dan-ger of being seduced into impiety by their example ? Into what obscure recesses of misery, into what dungeons have their philanthropists penetrated, to lighten the fetters and relieve the sorrows of the helpless captive ? What barbarous tribes have their Apostles visited ? What distant climes have they explored, encompassed with cold, nakedness, and want, to diffuse principles of virtue, and blessings of civilization ? Or will they rather choose to wave their pretensions to this extraordinary, and in their eyes, eccentric species of benevolence, (for infidels, we know, are sworn enemies to enthusiasm of every sort) and rest their character on their political exploits ; on their efforts to reanimate the virtue of a sinking stale, to restrain licentiousness to calm the tumults of popular fury ; and, by inculcating the spirit of justice, moderation

and pity for fallen greatness, to mitigate the inevitable horrors of revolution? Our adversaries will at least have the discretion, if not the modesty, to secede from the test.

More than all, their infatuated eagerness, their parricidal zeal to extinguish a sense of ‘Deity, must excite astonishment and horror. Is the idea of an Almighty and perfect Ruler un-friendly to any passion which is consistent with innocence, or an obstruction to any design which it is not shameful to avow. Eternal God ! on what are thine enemies intent ? What are those enterprizes of guilt and horror, that, for the safety of their performers, require to be enveloped in a darkness which the eye of heaven must not pierce ! Miserable men ! Proud of

being the offspring of chance; in love with universal disorder ; whose happiness is involved in the belief of there being no witness to their designs, and who are at ease only because they suppose themselves inhabitants of a forsaken and fatherless world

Having been led by the nature of the subject to consider chiefly the manner in which se-‘pti-cal impiety affects the welfare of states, it is the more requisite to warn you against that most fatal mistake of regarding religion as an engine of policy; and to recall to your recollection that the concern we have in it is much more as individuals than as collective bodies, and far less temporal than eternal. The happiness which it confers in the present life comprehends the blessings which it scatters by the way in its march to immortality. That future condition of being which it ascertains, and for which its promises and truths are meant to prepare us, is the ultimate end of human societies, the final scope and object of present existence ; in comparison of which all the revolutions of nations, and all the vicissitudes of time, are light and transitory. ‘ Godliness has, it is true, the promise of the life that now is ; but chiefly of that which is to come.’ Other acquisitions may be requisite to make men great ; but, be assured, the religion of Jesus is alone sufficient to make them good and happy. Powerful sources of consolation in sorrow, unshaken

fortitude amidst the changes and perturbations of the world, humility remote from meanness, and dignity unrestrained by pride, contentment in' every station, passions pure and calm, with habitual serenity, the full enjoyment of life, undisturbed by the dread of dissolution or the fear of an hereafter, are its invaluable gifts. To these enjoyments, however, you will necessarily continue strangers, unless you resign yourselves wholly to its power; for the consolations of religion are reserved to re-ward, to sweeten, and to stimulate obedience. INlany, without renouncing the profession of Christianity, without formally rejecting its distinguishing doctrines, live in such an habitual violation of its laws, and contradiction to its spirit, that, conscious they have more to fear than to hope from its truth, they are never able to contemplate it without terror. It haunts thsir imagination, instead of trafiquillizing their hearts, and hangs with depressing weight on all their enjoyments and pursuits. Their religion, instead of comforting them under their troubles, is itself their greatest trouble, from which they seek refuge in the dissipation and vanity of the world, until the throbs and tumults of conscience force them back upon religion. Thus suspended betwixt opposite powers, the sport of contradictory influences, they are disqualified for the happiness of both worlds ; and neither enjoy the pleasures of sin, nor the peace of piety. Is it surprising to find a mind thus bewildered in uncertainty, and dissatisfied with itself, courting deception and embracing with eagerness every pretext to mutilate the claims and enervate the authority of Chris'ianity ; forgetting that it is of the veiy essence of the religious principle to preside and control, and that it is impossible to ' se;ve God and mammon ?' It is this class of

professors who are chiefly in danger of being entangled in the snares of infidelity.

The champions of infidelity have much more reason to be ashamed than to boast of such converts. For what can be a stronger presumption of the falsehood of a system, than that it is the opiate of a restless conscience; that it prevails with minds of a certain description, not because they find it true, but because they feel it necessary ; and that in adopting it they consult less with their reason than with their vices and their fears ? It requirps but little sagacity to foresee that speculations which originate in guilt must end in ruin. Infidels are not themselves satisfied with the truth of their system : for had they any settled assurance of its principles, in consequence of calm dispassionate investigation, they would never disturb the quiet of the world by their attempts to proselyte; but would lament their own

infelicity, in not being able to perceive sufficient evidence for the truth of religion, which furnishes such incentives to virtue, and inspires such exalted hopes. Having nothing to substitute in the place of religion, it is absurd to suppose that, in opposition to the collective voice of every country, age, and time, proclaiming its necessity, solicitude for the welfare of mankind impels them to destroy it.

To very different motives must their conduct be imputed. More like conspirators than philosophers, in spite of the darkness with which they endeavour to surround themselves, some rays of unwelcome conviction will penetrate, some secret apprehensions that all is not right will make themselves felt, which they find nothing so effectual to quell as an attempt to enlist fresh disciples, who, in exchange for new principles, impart confidence, and diminish fear. For the same reason it is seldom they attack Christianity by argument : their favourite weapons are ridicule, obscenity, and blasphemy; as the most miserable outcasts of society are, of all men, found most to delight in vulgar merriment and senseless riot.

JESUS CHRIST seems to have ‘ his fan in his hand, to be thoroughly purging his floor ;’ and nominal Christians will probably be scattered like chaff. But has real Christianity any thing to fear ? Have not the degenerate manners and corrupt lives of multitudes in the visible church been, on the contrary, the principal occasion of scandal and offence ? Infidelity, without intending it, is gradually removing this reproach : possessing the property of attracting to itself the morbid humours which pervade the church, un-til the Christian profession, on the one hand, is reduced to a sound and healthy state, and scepticism, on the other, exhibits nothing but a mass of putridity and disease.

In a view of the final issue of the contest, we should find little cause to lament the astonishing prevalence of infidelity, but for a solicitude for the rising generation, to whom its principles are recommended by two motives, with young minds the most persuasive; the love of independence, and the love of pleasure. With respect to the first, we would earnestly entreat the young to remember that, by the unanimous consent of all ages, modesty, docility, and reverence to su-

perior years, and to parents above all, have been < considered as their appropriate virtues, a guard assigned by the immutable laws of God and nature on the inexperience of youth ; and with respect to the second, that Christianity prohibits oo pleasures that are innocent, lays no restraints that are capricious ; but that the sobriety and purity wliicli it enjoins, by strengthening the intellectual powers, and preserving the faculties of mind and body in undiminished vigour, lay the surest foundation of present peace and future eminence. At such a season as this, it becomes an urgent duty on parents, guardians, and tutors, to watch, not only over the morals, but the principles of those committed to their care; to make it appear that a concern for their eternal welfare is their chief concern ; and to imbue them early with that knowledge of the evidences of Christianity, and that profound reverence for the Scriptures, that, with the blessing of God (which, with submission, they may then expect), ‘ may keep them from this hour of temptation that has come upon all the world, to try them that dwell on the earth.’

To an attentive observer of the signs of the times it will appear one of the most extraordinary phenomena of this eventful crisis, that, amidst the ravages of atheism and infidelity, real religion is evidently on the increase. ‘ The kingdom of God,’ we know, ‘ cometh not with observation ;’ but still there are not wanting manifest tokens of its approrch. The personal appearance of the Son of God was announced by the shaking of nations; his spiritual kingdom, in all probability, will be established in the midst of similar convulsions and disorders. The blasphemous impiety of the enemies of God, as well as the zealous efforts of his sincere worshippers, will doubtless be overruled to accomplish the purposes of his unerring providence : while, in inflicting the chastisements of offended Deity on corrupt communities and nations, infidelity marks its progress by devastation and ruin, by the prostration of thrones and concussion of kingdoms ; thus appalling the inhabitants of the world, and compelling them to take refuge in the church of God, the true sanctuary ; the stream of divine knowledge, unobserved, is flowing in new channels, winding its course among humble valleys, refreshing thirsty deserts, and enriching with far other and higher blessings than those of commerce, the most distant climes and nations, until, agreeably to the prediction of prophecy, the ‘ knowledge of the Lord shall fill and cover the whole earth.’

Within the limits of this discourse it would be impracticable to exhibit the evidences of chris-tianiiy, nor is it my design; but there is one

consideration, resulting immediately from my text, which is entitled to great weight with all who believe in the one living and true God as the sole object of worship. The Ephesians, in common with other Gentiles, are described in the text as being, previous to their conversion, ‘ without God in the world ;’ that is, without any just and solid acquaintance with his character, destitute of the knowledge of his will, the institutes of his worship, and the hopes of his favour ; to the truth of which representation who-

ever possesses the slightest acquaintance with pagan antiquity must assent. Nor is it a fact less incontestable, that, while human philosophy was never able to abolish idolatry in a single village, the promulgation of the gospel overthrew it in a great part (and that the most enlightened) of the world. If our belief in the unity and perfections of God, together with his moral government, and exclusive right to the worship of mankind, be founded in truth, they cannot reasonably be denied to be truths of the first importance, and infinitely to outweigh the greatest discoveries in science; because they turn the hopes, (ears, and interests of man into a totally different channel from that in which they must otherwise flow. Wherever these principles are first admitted, there a new dominion is erected, and a new system of laws established.

But since all events are under divine direction, is it reasonable to suppose that the great Parent, after suffering his creatures to continue for ages ignorant of his true character, should at length, in the course of his providence, fix upon falsehood, and that alone, as the effectual method of making himself known ; and that what the virtuous exercise of reason in the best and wisest men was never permitted to accomplish, he should confer on fraud and delusion the honour of effecting? It ill comports with the majesty of truth, or the character of God, to believe that he has built the noblest superstructure on the weakest foundation ; or reduced mankind to the miserable alternative either of remaining destitute of the knowledge of himself, or of deriving it from the polluted source of impious imposture. We therefore feel ourselves justified on this occasion, in adopting the triumphant boast or’ the great apostle : ‘ Where is the wise, where is the scribe, where is the disputer of this world ? Hath not God made foolish the wisdom of this world ? For after that, in the wisdom of God, the world by wisdom knew not God, it pleased God by the foolishness of preaching to save them that believe.’ — R. HALL.

INFANTICIDE, the murder of infants, although one of the most

horrible and unnatural of crimes, has (to the disgrace of our species) been found to exist as a regular and systematic custom among whole tribes of the eastern nations. The exposure of deformed children among the Spartans, indeed, the sacrifices to Moloch among the Ammonites, the 300 young nobles to Saturn at Carthage, and various other similar occurrences, are abundant evidences of the existence of infanticide in the ancient world. But it was reserved for the discoveries of modern times to find tribes of human beings regularly destroying all their female children, the mothers themselves being generally their executioners.

Some years ago it was reported by Mr. Dun-can, then resident at Benares, that a sect of Hindoos in that neighbourhood, called Raj-kumars, were in the habit of destroying all their female infants. Mr. Duncan at length succeeded in persuading this deluded tribe to relinquish their barbarous habit ; and so effectually that no instance has since been discovered of an infringement of the written penal obligation that

the chiefs and other individuals of that “tribe then voluntarily entered into. As well as the Itaj-kumars, other sects of Hindoos, in the vicinity of Benares, were found to have been in similar habits, though to a less extent, and they executed a similar deed of renunciation.

Among the military tribe of Jarejahs infanticide was found so common, that a Jarejah female was very rarely seen or heard of. The men of this tribe procured wives from others who reared their daughters. The number of infants, thus sacrificed, amounted, by one computation, to 30,000 annually, in the peninsula of Guzerat alone : but this colonel Walker deemed an exaggeration. To render the deed more horrible, the mother was commonly the executioner of her own offspring ; for, although women of rank had attendants and slaves to perform the office, the far greater number executed it with their own hands. Colonel Walker at length, however, prevailed on this tribe formally to relinquish and renounce by deed the practice of infanticide.

INFANTRY. This word is said to take its origin from one of the infantas of Spain, who, finding that the army commanded by the king, her father, had been defeated by the Moors, assembled a body of foot soldiers, and with them engaged and totally routed the enemy. In

memory of this event, and to honor the foot soldiers, who were not before held in much consideration, they received the name of infantry. Dr. Robertson, however, well observes, in his View of the State of Europe prefixed to the History of Charles V., that it is to the Swiss discipline that Europe is indebted for the early establishment of infantry in her armies. The arms and discipline of the Swiss, he observes, were different from those of other European nations. During their long and violent struggles in defence of their liberties against the house of Austria, whose armies, like those of other considerable princes, consisted chiefly of heavy-armed cavalry, the Swiss found that their poverty, and the small number of gentlemen residing in their country, at that time barren and ill cultivated, put it out of their power to bring into the field any body of horse capable of facing the enemy. Necessity compelled them to place all their confidence in infantry ; and, in order to render it capable of withstanding the shock of cavalry, they gave the soldiers breast-plates and helmets, as defensive armour, together with long spears, halberts, and heavy swords, as weapons of offence. They formed them into large battalions, ranged in deep and close array, so that they might present on-every side a formidable front to the enemy. The men at arms could make no impression on the solid strength of such a body. It repulsed the Austrians in all their attempts to conquer Switzerland. It broke the Burgundian £end;irmerie, which was scarcely infeiior to that of France, either in number or reputation ; and, when first called to act in Italy, it bore down, by its irresistible force, every enemy that attempted to oppose it. These repeated proofs of the decisive effects of infantry, exhibited on such conspicuous occasions, restored that service to reputation, and gradually re-esta- blished the opinion which had been long ex-INF

ploded, of its superior importance in the operations of war. But the glory the Swiss had acquired having inspired them with such high ideas of their own prowess and consequence as frequently rendered them mutinous and insolent, the princes who employed them became weary of depending on the caprice of foreign mercenaries, and began to turn their attention towards the improvement of their national infantry.

The German powers, having the command of men whom nature has endowed with that steady courage and persevering strength which form them to be soldiers, soon modelled their troops in such a manner that they vied with the Swiss both in discipline and valor.

The French monarchs, though more slowly and with greater difficulty, accustomed the impetuous spirit of their people to subordination and discipline; and were at such pains to render their national infantry respectable, that, as early as the reign of Louis XII., several gentlemen of hisjii rank had so far abandoned their ancient ideas as to condescend to enter into their service.

The Spaniards, whose situation made it difficult to employ any other than their national troops in the southern parts of Italy, which was the chief scene of their operations in that country, not only adopted the Swiss discipline, but improved upon it, by mingling a proper number of soldiers, armed with heavy muskets, in their battalions ; and thus formed that famous body of infantry which, during a century and a half, was the admiration and terror of all Europe.

The Italian states gradually diminished the number of their cavalry, and, in imitation of their more powerful neighbours, brought the strength of their armies to consist in foot-soldiers. From this period the nations of Europe have carried on war with forces more adapted to every species of service, more capable of acting in every country, and better fitted both for making conquests, and for preserving them;

INFANTRY, HEAVY-ARMED, among the ancients, were such as wore a complete suit of ar-mour, and engaged with broad shields and long spears. They were the flower and strength of the Grecian armies, and had the highest rank of military honor.

INFANTRY, LIGHT, among the moderns, have only been in use since the middle of the seventeenth century. They have no camp equipage to carry, and their arms and accoutrements are much lighter than those of the infantry. Light infantry are the eyes of a general, and wherever there is found light cavalry, there should be light infantry. They should be accustomed to the pace of four miles an hour, as their usual marching pace, and be able to march at five miles an hour upon particular occasions. Every regiment has a company of light infantry, whose station is on the left of the regiment, the right being occupied by the grenadiers.

INFARCTION, n. s. Lat. in and farcio. Stuffing; constipation.

INFATUATE, adj. 1 Lat. infatuo, from in

INFATUA'TION, n. s. f and faiuus ; Fr. infatuer. To strike with folly ; to deprive of understanding; deprivation of reason.

INFAUSTING, n. s. Lat. infamtus. The

act of making unlucky. An odd and inelegant word.

INFEA'SIBLE, adj. In and feasible. Impracticable ; not to be done.

INFECT, v. a. ˆ Fr. infecter ; Lat.in—

INFEC'TION, n. s. feclut. To act upon

INFECTIOUS, adj. ˆby contagion ; to af—

INFEC'TIOUSLY, adv. Tfect with communi-INFF.C'TIOUSNESS, n. s. j cated qualities; to 'MPEC'TIVE, adj. J hurt by contagion;

to taint; to poison; to pollute; to fill with something contagious. Infection, taint ; poison ; morbid miasma. Infectious, influencing by communication. Infective, having the quality of acting by contagion.

INFECTION, in medicine. See CONTAGION. INFEC'UND, adj. > Lat. infcecundus. Un-INFECUN'DITY, n.s. J fruitful; unproductive; infertile.

INFELICITY, n. s. Fr. infelicitt ; Lat. infe-licitas. Unhappiness ; misery ; calamity. INFER', v. a. "} Fr. inferer ; Lat. infero. IN'FERENCE, n. s. ˆTo induce ; to bring on ; INFER'IBLE, adj. J to offer, or produce. Inference, a conclusion drawn from previous arguments. Inferible, deducible from the premises. INFERL&, sacrifices offered by the Greeks and Romans to the Dii manes, or the souls of deceased heroes (See MANES), or even any relation or person whose memory was held in veneration.

INFERIORITY n. s. ˆ Fr. inferieur ; Lat. INFE'RIOR, adj. & n. s. / inferior. Lower state INFER'NAL, adj. fof dignity, place, or

INFER'NAL-STONE, n.s. 3 value: lower in excellence ; subordinate ; inferior, one in a lower rank : infernal, hellish ; detestable. Infernal-stone, or the lunar caustic, is prepared from an evaporated solution of silver, or from crystals of silver: it is a very powerful caustic, eating away the flesh and even the bones to which it is applied. •••••

INFERNAL REGIONS. See ELYSIUM, HELL, and TARTARUS.

INFERTILE,«$. } Fr. infertile; Lat. in INFERTILITY, n. s. S and/erfifis. Unfruitful ; unproductive: want of fertility.

INFEST’, v. n. Fr. inf ester ; Lat. infetto. To harass; to disturb; to plague.

IN FESTIVITY, n. «. In and festivity. Mournfulness ; want of cheerfulness.

INFES’TRED, adj. In and fester. Hankling ; inveterate. Obsolete.

INFEUDATION, n. s. Lat. in mdfeudwn. The act of putting one in possession of a fee or estate.

IN’FIDEL, n. s. ˆ Fr. infidelle; Lat. infi-INFIDEL’ITY n.s. $ delis. An unbeliever; generally applied to one who rejects Christianity : infidelity, want of faith ; disbelief in revealed religion : treachery ; breach of contract or trust. See p. 1.

JN’FINITE, adj. ~\ Fr. infini ; Lat. in-

IN’FINITELT, adv. IN’FINITF.NESS, n. s. INFINITES’IMAL, adj. INFIN’ITIVE, adj. INFINITUDE, n. a. INFIN’ITY, n a j

finitus. Unbounded ; unlimited ; without ‘ end ; to a great degree. Infinitesimal, infinitely divided. Infinitive, in grammar, affirms or

intimates the intention of affirming, which is one use of the indicative ; but then it does not do it absolutely. — Clarke. Infinitude, infinity ; immensity ; boundlessness : used in an hyperboli-cal sense for an endless number.

INFINITF. signifies that which has neither beginning nor end ; in which sense God alone is infinite. Infinite is likewise applied to that which has had a beginning, but will have no end, as angels and human souls. This makes what the schoolmen call infinitum a parte post.

INFINITE QUANTITIES. The very idea of magnitudes infinitely great, or such as exceed any assignable quantities, does include a negation of limits ; yet if we nearly examine this notion, we shall find that such magnitudes are not equal among themselves, but that there are really, besides infinite length and infinite area, three several sorts of infinite

solidity ; all of which are quantitates sui generis, and that those of each species are in given proportions. Infinite lengih, or a line infinitely long, is to be considered either as beginning at a point, and so infinitely extended one way, or else both ways, from the same point; in which case the one, which is a beginning infinity, is the one-half of the whole, which is the sum of the beginning and ceasing infinity ; or, as may be said, of infinity a parte ante, and a parte post, which is analogous to eternity in time and duration, in which there is always as much to follow as is past, from any point or moment of time ; nor does the addition or sub-duction of infinite length, or space of time, alter the case either in infinity or eternity, since both the one and the other cannot be any part of the whole. INFINITESIMALS, n. s. Among mathematicians, are ‘defined to be infinitely small quantities. In the method of infinitesimals, the element by which any quantity increases or decreases, is supposed to be infinitely small ; and is generally expressed by two or more terms, some of which are infinitely less than the rest; which being neglected, as of no importance, the remaining terms form what is called the difference of the proposed quantity. The terms that are neglected in this manner, as less than the other terms of the elements, are the very same which arise in consequence of the acceleration or retardation of the generating motion during the infinitely small time in which the element is generated ; so that the remaining terms express the elements, that would have been produced in that time, if the generating motion had continued uniform : therefore those differences are accurately in the same ratio to each other, as the generating motions or fluxions. And hence, though in this method infinitesimal parts of the elements are neglected, the conclusions are accurately true, without even an infinitely small error, and agree precisely with those that are deduced by the method of fluxions. See FLUXIONS

INFIRM’, adj. & u. a. ~\ ft.infirme; Latin INFIRM’ARY, n. s. \infinms. Weak ; fee-INFIUM’ITY , n. s. i ble; disabled in body; INFIRM’NESS, n. s. “weak of mind; not stable or solid: to weaken, or enfeeble. Infirmary, a house for the reception of the sick. Infirmity, weakness of sex, age, or temper ; failing ; fault; disease or malady. Infirmness, weakness.

INFIX’, v. a. Lat. infixus. To drive in ; to set; to fasten.

INFLAME’, v, a. &v. n.>» Lat. inflammo.

In its literal sense, to kindle or set on

ˆ-fire: to heat the body morbidly;

I figuratively, to J kindle any pas-

Lat. in and Jiexi- (bilis. Stiffness ; ˆquality of resisting

INFLA’MER, n. s.

INFLAMMABIL’ITY, n. s.

INFLAM’MABLE, adj.

INFLAM’MABLENESS, n s.

INKLAMMA’TION, n. *.

INFLAM’MATOUY, udj.

sion ; to enrage; provoke; aggravate; to grow hot: an angry inflamer, the thing or person that inflames: inflammable, inflammability, having the quality of catching tire: inflammation, the act of setting on fire ; ihe state of being on fire ; fervor of mind : inflammatory, having the power of inflaming. In chirurgery inflammation is when the blood is obstructed so as to crowd in a greater quantity into any particular part, and give it a greater color and heat than usual. — Quincy.

INFLAMMATION, in medicine. See MEDICINE.

INFLATE’, v. a. I Lat. injiatus. To swell with

INFLA’TION, n. s. S wind; to fill with air; the state of being swelled with wind ; flatulence ; applied figuratively to a turgid style of composition.

INFLECT’, v. a. ˆ Lat. itiflecto. To bend ;

INFLKC’TION, n. s. Mo turn: to modulate the

INFLEC’TIVE, adj. J voice ; to vary a noun or verb in its terminations : inflective, having the power of bending or turning.

INFLEXIBILITY, n.*.} Fr. inflexibUM ;

INFLEX’IBLENESS, n. .

INFLEXIBLE, adj.

INFLEXIBLY, adv.

flexure; obstinacy: inflexible, unyielding; immoveable ; not to be turned or changed : inflexibly, inexorably ; without relaxation or intermission.

INFLEXION. Point of, in the theory of lines : that point in which the direction of the curve changes from concavity to convexity, and vice versa. It is particularly called punctual in-jlexionit, at the first turning, and punctum reg-nesswnisj when the curve returns. These points are of much interest in the theory of functions.

INFLICT’, v. a. -\ Fr. infliyer ; Lat. iiifligo.

INI LICT’ER, n. s. fTo impose as a punish—

INFLIC’TION, n. is. l ment : inflicter, he who

INFLIC’TIVE, adj. J puniihes : infliction, the act used; the punishment itself: inflictive, that imposes a pun shment.

IN’FLUENCE, n. s. & v. o.s Fr. influence ;

IN’FLUENT, adj. i Lat. iufiuo, in—

INFI UEN’TIAL, adj. .fluxvs. Power

IN’FLUX, n. s. i of the celestial

INFLUX’ i ous, adj. J aspects operating upon terrestrial bodies and affairs. Ascendant power; power of directing or modifying. It was anciently followed by into; now, less properly, by vpon. To act upon with directive or impulsive power; to modify to any purpose; to gu de or lead to any end. Influent, flowing in : influential, exerting power: influx, the act of flowing in; infusion; influence; power: influxions, influential: the force of influence, in its figurative sense, appears to

arise from the idea of something flowing in with irresistible force and carrying all before it.

INFOLD', T.a. In and fold. To involve; to inwrap; to inclose with involutions.

INFO'LIATE, v. a. Lat. in and/oKam. To cover with leaves. Not much used, but elegant. INFORM', v. a. & v. w.ˆ Fr. informer; Lat. INFOR'MAL, adj. I informo, in and/or—

INFOR'MANT, n. s. f ma. To animate ;

INFORMATION, n. *. /"to actuate by vital INFORM'ER, n. s. i powers ; to instruct ;

JNFOR'MITY, n. *. J to supply with new

INFOR'MOUS, adj. knowledge; to acquaint. Before the thing communicated was anciently put with ; now generally of ; sometimes in. It also signifies to offer an accusation to a magistrate; to give intelligence. Informal, without rule; irregular. Informant, informer, one who gives information or accusation ; a teacher. Information, intelligence given ; charge or accusation exhibited ; the act of informing. Informity, shapelessness. Informous, shapeless.

INFORMATION, in law, is nearly the same in the crown office as what in other courts is called a declaration. See PROSECUTION. Informations are of two sorts, first, those which are partly at the suit of the king and partly at that of a subject ; and secondly, such as are only in the name of the king. The former are usually brought upon penal statutes, which inflict a penalty upon conviction of the offender, one part to the use of the king, and another to the use of the informer. By the statute 31 Eliz. c. 5, no prosecution upon any penal statute, the suit and benefit whereof are limited in part to the king and in part to the prosecutor, can be bioughtby any common informer after one year is expired since the commission of the offence ; nor on be-lialf of the crown, after the lapse of two years longer ; nor, where the forfeiture is originally given only to the king, can such prosecution be had after the expiration of two years fr m the commission of the offence. The informations that are exhibited in the name of the king alone are also of two kinds : first, those which are truly and properly his own suits, and filed ex officio by his own immediate officer, the attorney-general ; second, those in which, though the kinj is the nominal prosecutor, yet it is at the relation of some private person or common informer ;

and they are filed by the king's coroner and attorney in the court of king's bench, usually called the master of the crown office, who is for this purpose the standing officer of the public. The objects of the king's own prosecution*, filed ex officio by his own attorney-general, are properly such enormous misdemeanors as peculiarly tend to disturb or endanger his government, or to molest or affront him in the regular discharge of his royal functions. For offences (says Blackstone) so high and dangerous, in the punishing or preventing of which a moment's delay would be fatal, .he law has given to the crown the power of an immediate prosecution, without waiting for any previous application to any otliei tribunal : which power is necessary, not only to the ea-e and safety, but even to the very existence, of the executive magistrate. The objects of the other species of informations, filed by the master of the crown office upon the complaint or relation of a private subject, are any gross and notorious misdemeanors, riots, batteries, libels, and other immoralities of an atrocious kind, not

peculiarly tending to disturb the government (for those are left to the care of the attorney-general), but which, on account of their magnitude or pernicious example, deserve the most public animadversion. And when an information is filed, either thus, or by the attorney-general ex-officio, it must be tried by a petit jury of the county where the offence arises : after which, if the defendant be found guilty, he must resort to the court for his punishment. See a history and vindication of this mode of prosecution in Blackstone's Commentary, vol. IV.

An IN FORMER, informator, in law, is a person \vho informs against, or prosecutes, in any of the king's courts, those that offend against any law or penal statute. See INFORMATION. Informers were very numerous both in Greece and Rome. Wicked princes rewarded and countenanced this mischievous tribe ; but Titus set on foot a most diligent search after them, and punished such as he found with death or banishment, Trajan also is praised by Pliny for a similar conduct. See SPY. INFOR'MIDABLE, adj. Lat. in and./bmi-dabilis. Not to be feared ; not to be dreaded.

IN FORTUNATE, adj. Fr. infortune ; Lat.

infortunatus. Unhappy. See UNFORTUNATE,

which is commonly used.

INFRACT', v. a. A Latin, infractvs, in—

INFKAC'TION, n. s. I frlngo. To break : the

INFRAN'GIBLE, adj. (act of breaking; a

INFRINGE', v. a. {breach or violation of

INFRINGEMENT, n.s. \ treaty. Infrangible, not

INFRIN'OER, n. s. J to be broken. Infringe

to violate; to destroy ; to hinder; to break laws

or contracts. Infringement, a breach. Infringer,

one who breaks engagements.

INFRE'QUENT, adj. > Latin, infrequentia. INFRE'QUENCY, n. s. J Uncommon : rarity. INFRIG'IDATE, v. a. Lat. in wtifrigidus. To chill ; to make cold.

INFU'RIATE, adj. Lat. in and/wria. Enraged ; raging.

INFUSCATION, n. s.. Lzt.infuscatus. The act of darkening or blackening.

INFUSE', v. a. ˆ Fr. in/user ; Lat. infusus. INFU'SIBLE, adj. (To pour in; to instil ; to INFU'SION, n. s. £pour into the mind ; to in-INFU'SIVE, adj. 'spire; to steep in any hot fluid without boiling ; to saturate with an infusion : infusible, that can be infused ; that is insoluble; not fusible; that cannot be melted: infusion, the act of pouring ; instilling a suggestion or whisper; the act of infusing. Infusive, an old word, having the power of infusion.

IN'GATE, ra. s. In and gate. Entrance ; passage in. An old word.

INGATH'ERING, n. s. In and gathering. The act of getting in the harvest.

INGEM'INATE, v. a. { Lat. igemino. To INGKMINA'TION, n. s. S double or repeat. Repetition or reduplication.

INGEN'DERER, n. s. From ingender. He that -jenerates. See ENGENDER.

INGEN’ERABLE, adj.} Lat. inyeneratus. INGEN’ERATE, adj. J Not to be produced

INGEN’ERATLD, adj. \or brought into being; inborn; innate; inbred; unbegotten.

INGENHOUZ (John), M.D., a celebrated Dutch natural philosopher, was born at Breda

in 1730, and brought up to the study of medicine in his native city. In 1767 he made a voyage to this country, to learn the Suttuiiian method of inoculation, and became acquainted with Sir John Pringle, president of the Royal Society, through whose recommendation he was employed in 1768 to inoculate the imperial family of Austria. His services on this occasion were rewarded with a pension of 600 florins. He afterwards engaged in medical practice neat London, and in various chemical and philosophical researches, accounts of which he inserted in the Philosophical Transactions, and other works of science. He was the author of Experiments on Vegetables, 8vo.; New Experiments and Observations on different Subjects relating to Natural Philosophy, 2 vols. 8vo. ; and an Essay on the Food of Plants. Dr. Ingenhouz died September 7th, 1799, at Bowood in Wiltshire, the seat of the marquis of Lansdowne.

INGE’NIOUS, adj. “] Fr. ingenicux ; Sp. INGE’NIOUSLY, adv. ‘ ingeniosu ; Latin, ingc-INGE’NIOUSNESS, n.s. , niu.ni, ingemius, in-INGENU’ITY, n. s. \ oenitas. Witty; invenIN’GENITE, adj.)>tive; possessed of

INGEN’UOUS, adj. . genius ; mental ; intel-INGEN’UOUSLY, adv. j lectual: ingeniousness, INGEN’UOUSNESS,ˆ. subtilty ; strength of IN’GENY, n. s. J genius : ingenuity,

openness ; candor; (more properly ingenuous-ness); wit; invention: ingenile, native; inge-nerate : ingenuous, fair ; candid ; open ; free-born ; not of servile extraction. Ingeny, genius; wit : not in use.

INGEST’, v.a-) Lat. ingestus. To throw INOES’TION, n.s. \ into the stomach. INGLIS (Sir James), a Scottish poet, who flourished in the sixteenth century. He was educated at St. Andrew’s, went to Paris, and

returned in the minority of James V, into whose favor he ingratiated himself by his poetry, having written sundry tragedies, comedies, and other poems, that were much applauded. He joined the French faction against the English ; and in some skirmishes preceding the fatal battle of Pinkie, so distinguished himself, that he was knighted on the field. After that battle he retired into Fife, and amused himself with his favorite studies; and in 1548 published at St. Andrew's his Complaint of Scotland. He appears from this poem to have read more of Greek and Latin authors than was usual at that period, and to have been well skilled in mathematics and philosophy. He died at Culross in

INGLIS ISLAND, an island on the north coast of New Holland, near the western entrance into the gulf of Carpentaria. It is twelve miles long, and from one to three miles in breadth, and of considerable elevation , the size and foliage of its trees indicate fertility.

INGLO'RIOUS, adj.) Lat. in and gloria. INGLO'RIOVSLY, adv. J Void of honor ; mean; with ignominy ; without gloiy.

INGOLSTADT, a town and fortress of the Bavarian states on the Danube. It has monuments of count Tilly, the Bavarian general in the war against Gustavus Adolphus ; and Eckius, the opponent of Luther. A university was founded C

here in 1472, and continued till 1800, when it was transferred to Landshut. The town li;is several privileges, but little trade ; its only manufacture of consequence is woollens Thirty-five miles south-west of Ratisbon, and forty-three north of Munich.

IN'GOT, n.s. Fr. lingot, from Ihe Span, in-gotte, prefixing the article, or from Dut. inye-goten, melted. A mass of metal.

INGRAFF, v. a.) Fr. greffer ; Greek

INGRAFT'MENT, n. s.] ypa<j><a. lo propagate trees by insition ; to plant the sprig Of one tree in the stock of another ; as, he ingrafted an apple upon a crab: to plant or introduce any thing not native ; to fix deep ; to settle : ingraftment, the act, or the thing ingrafted.

INGRAILED, in heraldry. See HERALDRY.

INGRATE’, adj.) Fr. ingrat; Lat. in—

INGRATE’FUL, adj.tgratus. Ingrate is pro—

INGRA’TIATE, v. a. C per, but ingrateful less

INGRAT’ITUDE, n.s.J proper than ungrateful; ungrateful ; unthankful ; unpleasing to the sense : ingratiate, to put in favor; to recommend to kindness. It has with before the person whose favour is sought : ingratitude, retribution of evil for good : unthankfully.

INGRE’DIENT, n. s. Fr. ingredient; Lat. ingrtdiens. Component part of a body consisting of different materials. It is commonly used of the simples of a medicine.

IN’GRESS, n. s.-) Lzl.ingressus. Entrance;

INGRES’SION, adj. j power of entrance ; ingression, the act of entering.

IN’GUINAL, adj. FT. inguinal; Lat. ingutrr. Belonging to the groin.

INGULF’, v. a. Fr. engolfer. To swallow up in an abyss ; to cast into a gulf.

INGULPHUS, abbot of Croyland, and author of the history of that abbey, was born in London, about A.D. 1030. He was educated at Westminster ; and when he visited his father, who belonged to the court of Edward the Confessor, his learning engaged the attention of queen Edgitha. From Westminster he went to Oxford, where he studied rhetoric, and the Aristotelian philosophy, in which he made greater proficiency than any of his contemporaries. When he was about the age of twenty-one he was introduced to William duke “of Normandy, who visited the court of England in 1051, appointed him his secretary, and carried him with him into his own dominions. He soon became his chief favorite, and the dispenser of all preferments. This excited the envy and hatred of the courtiers; to avoid the effects of which, he obtained leave to go in pilgrimage to the Holy Land. With a company of fifty horsemen he joined Sigifrid duke of Mentz, who, with many German nobles, clergy, &c., was preparing for a pilgrimage to Jerusalem. When all united, they formed a company of 7000 pilgrims. In their way they spent some time at Constantinople, performing their devotions in the several churches. In their passage through Lycia they were attacked by a tribe of Arabs, who killed, wounded, and plundered many of them of a prodigious mass of money. Those who escaped, after visiting Jerusalem, embarked on

board a Genoese fleet and returned to Rome ;

where, after the usual devotions, they separated, and returned each to his own country. Ingulphus now became a monk in the abbey of Fontenelle, in Normandy ; in which, after some years, he was advanced to the office of prior. When William was preparing for his expedition into England, in 1066, he was sent by his abbot with 100 merks of money, and twelve young men, nobly mounted, and completely armed, as a present from that abbey. He was very graciously received by the king, who made him governor of the rich abbey of Croyland in Lincolnshire, in 1076; in which he spent the last thirty-four years of his life, governing that society with great prudence, and protecting their possessions from the rapacity of the neighbouring barons by the royal favor. The lovers of English history and antiquities are much indebted to this learned abbot, for his excellent history of the abbey of Croyland, from its foundation, AD. 664, to 1091, into which he has introduced much of the general history cf the kingdom, nowhere else to be found. Ingulphus died of the gout, at his abbey, in 1109, aged seventy-nine.

INGUR'GITATE, v. a. > Lat. ingurgito.

INGURGITA'TION, n. s. 5 To swallow down: the act of swallowing.

INGUS'TABLE, adj. Lat. in and gusto. Not perceptible by the taste.

INHAB'ILE, adj. Fr. inhabile ; Lat. inhabt-lis. Unskilful ; unready ; unfit ; unqualified.

INHABIT, v. a. & v. n.~] Lat. in and habit o.

INHAB'ITABLE, adj.

INHAB'ITANCE, n. s.

INHABITANT, n. s.

INIIABITA'TION, n. s.

IXHAB'ITER, n. s. bitants ; uninhabitable tion, place of dwelling quantity of inhabitants : inhabiter, a dweller.

INHALE', v. a. Lat. inhalo. To draw in with air ; to inspire : opposed to

exhale or expire.

INHARMO’NIOUS, adj. In and harmo-Unmusical; not sweet of sound.

| To occupy ; to live { or dwell in : inhabit f able,incapable of af-j fording habitation; J incapable of inha-inhabitance, inhabita-the act of inhabiting ;

INHERE’, v.n. INHE’RENT, adj. INHER’IT, v. a INHTF/ITABLE, adj.

Lat. inhdro. To exist in something else so as to be inseparable from if. inborn, innate : in-

INHER’ITANCE, n. s.)>herit, to receive, pos-INHER’ITOR, n. s. sess, or hold, by inheri-INHER’ITRIX, n. s. tance : which is patri-INHER’ITRESS, n. s. mony ; hereditary pos-INHF/SION, n. *. J session ; the reception of possession : .inheritor, an heir; one who receives by succession : inheritrix, inheritress, a woman that inherits ; an heiress : inhesion, a state of existing’ in something else.

INHERITANCE, in English law, is an estate in lands or tenements, descending to a man and his heirs ; and the word inheritance is not only intended where a man has lands or tenements by descent of heritage ; but also every fee-simple or fee-tail, which a person has by purchase, may be said to be an inheritance, because his heirs may inherit it. Lit. sect. 9. One may also have inheritance by creation ; as in case of the king’s grant of peerage, by letters patent, &c See FEE SIMPLF.

INK

Inheritances are also corporeal or incorporeal. Corporeal inheritances relate to houses, lands, \t., which may be touched or handled; and incorporeal inheritances are rights issuing out of, annexed to, or exercised with, corporeal inheritances ; as advowsons, tithes, annuities, offices, commons, franchises, privileges, services, &c. 1 Inst. 9. 49.

There is also several inheritance, which is, where two or more hold lands severally ; if two men have lands given to them and the heirs of their two bodies, these have a joint estate during their lives; but their heirs have several inheritances. Without blood, none can inherit; therefore he who hath the whole and entire blood shall have an inheritance before him who hath but part of the blood of his ancestor. 3 Rep. 41. The law of inheritance prefers the first child before all others ; the male before the female ; and of males the first born, &c. And as to inheritances, if a man purchases lands in fee, and dies without issue, those of the blood of the father's side shall inherit, if there be any ; and, for want of such, the lands shall go to the heirs of the mother's side : but, if it come to the son by descent from the father, the heirs of the mother shall not inherit it. Plowd. 132. Lit. 4. 12. Goods and chattels cannot be turned into an inheritance. 3 Inst. 19. 126.

INHERSE', v. a. In and herse. To inclose in a funeral monument.

INHIBIT, v. a.) Yr.inhiber; Lat. t'nAi&eo. INHIBITION, n. s.] To restrain, hinder, im-pede, or check : a prohibition or embargo.

INHOLD', v. a. In and hold. To haTe inherent ; to contain in itself.

IN HOS'PITABLE, adj.-\ Fr. inhospitalite ; INHOS'PITABLY, adv. (in and hospes. Af-INHOS'PITABLENESS, n.s. £ ford ingno kindness INHOSPITA L'ITY, n. s. ' to strangers ; un-friendly ; uncourteous : want of hospitality. INHU'MAN, adj.) tr. inhuman ; Lat. in-INHUMAS'ITY, 7i. s. > humanus. Barbarous; INHU'MANLY, adv.J savage; cruel. Inhumanity, barbarity; savageness ; want of humanity. INHU'MATE, v. a. > Fr. inhumer ; Lat. hu-INHUME', v. a. 3 mo. To bury ; to inter.

INJECT, v. a.) Lat. injicio. To throw in ; INJECTION, n. s. } to dart in, Injection, the act of casting in : any medicine made to be injected by a syringe, or any other instrument, into any part of the body ; the act of filling the vessels with wax, or any other proper matter, to show their

shapes and ramifications, often done by anatomists.

INJECT'ION, in surgery, the throwing in some liquor or medicine into a vein opened by incision. See ANATOMY and SURGERY.

1NIMITABILTTY, n. s. } Lat. in and imi-INIM'ITABLE, adj. > tabilis-Not to be

INIM'ITABLY, adv.) imitated; not to be

copied; implying a degree of excellence above imitation, whether in manner, subject, or execution.

INJOIN', v. a. Fr. enjoindre ; Lat. injungo. To command ; to enforce by authority. See ENJOIN.

INIQ'UITOUS, adj. a Fr. inique ; Lat. ini-INIQ'UITY, n.s. $quitas, in aqnus. In-

justice; wickedness; crime; unrighteousness. INITIAL, adj. } Fr. initial, in—

INIT'IATE, v. a.,v. n. & adj. S itier ; Lat. ini-INITIA'TION, n. s. j Hum. Placed at

the beginning ; incipient; not complete. Initiate, to enter ; to instruct in the rudiments ; to place in a new state ; to perform the first rite. Initiation, the reception of a new comer into any art or state.

INJUCUN'DITY, n. s. In and jucundily. Unpleasantness.

INJ U'DIC ABLE, adj. ˆ Lat. in and judi-INJUDIC'IAL, adj. (cabilis. Not cogni—

INJUDIC'IOUS, adj. *zable by a judge : lNJUDic'iousLY,adi;*. .injudicial, not according to form of law : injudicious, void of judgment: injudiciously, unwisely.

INJUNCTION, n. s. Lat. injunctus, injunctio. From injoin. Command ; order; precept. INJUNCTION, in law, a writ generally grounded upon an interlocutory order or decree out of the court of chancery or exchequer, sometimes to give possession to the plaintiff, for want of the defendant's appearance; sometimes to the king's ordinary court, and sometimes to the court Christian, to stop proceedings in a cause, upon suggestion made that the rigor of the law, if it take place, is

against equity and conscience in that case, that the complainant is not able to make his defence in these courts, for want of witnesses, &c., or that they act erroneously, denying him some just advantage. The writ of injunction is directed, not only to the party himself, but to his counsellors, attorneys, and solicitors ; and if any attorney, after having been served with an injunction, proceeds contrary to it, the court of chancery will commit him to the Fleet for contempt. But if an injunction be granted by the court of chancery in a criminal matter, the court of king's bench may break it, and protect any that proceed in contempt of it. See CHANCERY.

IN'JURE, v.a. \ Fr. injurier ; Lat. IN'JURER, n. s. I in, privative, and jus.

INJU'RIOUS, adj. f To hurt unjustly ; to INJURIOUSLY, adv. V wrong; to annoy, or INJU'RIOUSNESS, n. s. I inconvenience. In-IN'JURY, n. s. ijurer, one who wrongs

INJUS'TICE, n. s. J another. Injurious, unjust; mischievous; detracting; wrongful; hurtful. Injury, any iniquity, wrong, mischief, or detriment; annoyance in word or deed. INK, n. s. & v. a. -\ Fr. encre ; Ital. inchiostro ; INK'HOUN, n. s. I Gr. tyxtw. The black liquor INK'MAKER, n. s. > with which we write. Ink INK'Y, adj. i is used for any liquor with

INK'STAND, n. s. J which persons write : as, red ink ; green ink. luk, to daub with ink : ink-horn, a portable case for the instruments of writing, made of horn : inky, consisting of, resembling, or black as, ink : ink-stand, the case which holds o: contains the ink.

INK is a name given to every pigment used for writing or printing. There are two kinds of common black ink, *viz.* writing ink and printers' ink ; besides the red and other colored inks, In-dian ink, and the sympathetic inks.

Prior to the invention of printing, when the entire literature of the world was deposited in

MSS., the manufacture of a black and durable ink must evidently have been of the first importance. Accordingly we find that the most ancient MSS. are the most beautiful for color even at the present day. We have in fact no ink equal to that of the ancients, as may be readily seen by comparing the rolls and records that have been written from the fifteenth century to the end of the seventeenth, with the writings we have remaining of various ages from the fifth to the twelfth centuries. Notwithstanding the superior antiquity of the latter, they are in excellent preservation ; but we frequently find the former, though of more modern date, so much defaced that they are scarcely legible. The ancient inks appear to have been solutions of gum and lampblack, whereas the modern inks are almost al-ways made of copperas and galls ; which produces nothing like so fine a color, though it obviates an objection to which lampblack inks are liable, *viz.* that they are easily discharged without destroying the paper. Besides their black inks, however, the ancients used various other colors, as red, gold, and silver, purple, &c. Green ink was frequently used in Latin MSS., especially in the latter ages ; and it was frequently employed in signatures by the guaidians of the Greek emperors, till their wards were of age. Blue or yellow ink was seldom used except in MSS. ; 4 but,' says Mr. Astle, ' the yellow has not been much in use, as far as we can learn, these 600 years.' Some kinds of characters, particularly the metallic, were burnished. Wax was used by the Latins and Greeks as a varnish, but especially by the former, and particularly in the ninth century.

A very excellent modern receipt for ink is the following : — Take one pound and a half of bruised Aleppo galls, and put them in six quarts of rain water ; add eight ounces of green copperas, eight ounces of gum-Arabic, and three ounces of roch alum ; mix them well together and shake them frequently, and in a fortnight the ink will be fit for use. It is, indeed, rather pale at first, but soon appears of a fine and durable black. The following method is recommended by Dr. Black in his lectures: — 'Take powdered galls three ounces: logwood shavings and vitriolated iron, of each one ounce ; water from two to three pints, according to the degree of strength required for the ink. Before the boiling is finished throw in half an ounce of gum-arabic, and when it is dissolved, strain the liquor.' As a means of preserving the ink from mould Dr. Black directs about a quarter of an ounce of spirit of wine

to be added, and likewise a little powdered cloves ground in a mortar with a little < >f the ink.

As the durability of records and other valuable writings depends much upon the goodness of the ink employed, some of the first chemists have thought the manufacture well worth their utmost attention. Of these Dr. Lewis and M. Ribau-court are the most celebrated. Dr. Lewis recommends that a decoction of logwood should be used instead of \vater, as it greatly improves 1 ;>th the beauty and deepness of the black, with- < >•!' disposing it to lade. He adds that the i .jtiun of -runi-anibic is not only useful, by

keeping the coloring matter suspended in the fluid, but also by preventing the ink from spreading, by which means a greater quantity of it is collected on each stroke of the pen. Sugar, which is sometimes added to ink, is found to be much less effectual than gums, and to have the inconvenience of preventing the drying of the ink. The color of ink is greatly injured by keeping the ink in vessels made of copper or lead, and probably cf any other metal, excepting iron. Dr.Lewis, therefore, recommends the following as the best proportions of the ingredientsfor ink. One part of green vitriol, one part of powdered logwood, and three parts of powdered galls. The best menstruum appears to be vinegar or white wine, though for common use water is sufficient. If the ink be required to be of a full color, a quart, or at most three pints, of liquor may be allowed to three ounces of galls, and to one ounce of each of the other two ingredients. Half an ounce of gum may be added to each pint of the liquor. The ingredients maybe all put together at once in a convenient vessel, and well shaken four or five times each day. In ten or twelve days the ink will be fit for use, though it will improve by remaining longer on the ingredients. Or it may be made more expeditiously, by add-ing the gum and vitriol to a decoction of galls and logwood in the menstruum. In some attempts made by the doctor to endow writing ink with the great durability of that of the ancients, as well as the properties which it has at present, he first mixed both lampblack and ivory-black with solution of gum-arabic, made of such consistence as just to flow sufficiently from the pen. The liquors wrote of a fine black color ; but, when dry, part of the color could be rubbed off, especially in moist weather, and a pencil dipped in water washed it away entirely. I tried, says he, solutions of the animal glues with the same effect. Though the oily mixtures answered bet-ter than those with simple gums or glues, it was apprehended that their being dischargeable by water would render them unfit for the purposes intended. The only way of

obviating this imperfection appeared to be, by using a paper which should admit the black liquid to sink a little into its substance. Accordingly I took some of the more sinking kinds of paper, and common paper made damp as for printing; and had the satisfaction to find, that neither the oily nor the simple gummy mixture spread upon them so much as might have been expected, and that the characters were as fixed as could be desired, for they could not be washed out without rubbing off part of the substance of the paper itself. But a further improvement may yet be made, namely, that of uniting the ancient and modern inks together ; or using the common vitriolic ink instead of water, for tempering the ancient mixture of gum and lampblack. By this method it should seem that the writings would have all the durability of those of former times, with all the advantage that results from the vitriolic ink fixing itself in the paper.

A durable ink may also, he says, be made by washing paper, parchment, &c., with the Prussic acid, which will not in the least injure either of these substances. The materials thus prepared,

may be written on with common ink, and a ground of Prussian blue will be formed beneath every stroke, which will remain long after the black has decayed by the influence of the air, or been destroyed by acids.

M. Itibaucourt gives these directions for the composition of good ink : —

Take eight ounces of powdered Aleppo galls ; four ounces of chip logwood ; four ounces of sulphate of iron ; three ounces of powdered gum-arabic ; one ounce of sulphate of copper; and one ounce of sugar-candy. Boil the galls and logwood together in twelve pounds of water for one hour, or till half the liquid has evaporated. Strain the

decoction through a hail sieve, or linen cloth, and then add the other ingredients. Stir the mixture till the whole is dissolved, more especially the gum ; after which, leave it to subside for twenty-four hours. Then decant the ink, and preserve it in bottles of glass or stone ware, well corked.

Van Mons applied the discoveries of Proust to the preparation of common writing ink. He found that the sulphate of iron, calcined to whiteness, always gives a most beautiful black precipitate. By the following mixture he obtained excellent ink : galls four ounces ; sulphate of iron, calcined to whiteness, two ounces and a half; and two pints of water. The whole must be left to macerate cold for twenty-four hours : then add gum-arabic ten drachms, and preserve it in a stone jar open, or covered merely with paper. Chaptal also employed the calcined sulphate, in connexion with the decoction of gall-nuts, and logwood.

Mr. Desormeaux, jun., an ink manufacturer in Spitnlfields, has given the following in the Philosophical Magazine : — Boil four ounces of logwood about an hour in six beer quarts of water, adding boiling water from time to time; strain while hot ; and, when cold, add water enough to make the liquor five quarts. Into this put one pound avoirdupois of blue galls coarsely bruised ; four ounces of sulphate of iron calcined to whiteness ; three ounces of coarse brown sugar ; six ounces of gum-arabic ; and a quarter of an ounce of acetate of copper, triturated with a little of the decoction to a paste, and then thoroughly mixed with the rest. This is to be kept in a bottle uncorked about a fortnight, shaking it twice a-day, after which it may be poured fiom the dregs, and corked up for use.

On many occasions it is of importance to em-ploy an ink indes.ructible by any process that will not equally destroy the material on which it is applied. Mr. Close has recommended for this purpose twenty-five grains of copal in pow-der dissolved in 200 grains of oil of lavender, by the assistance of gentle heat, and then mixed with two grains and a half of lampblack, and half a grain of indigo; or 120 grains of oil of lavender, seventeen grains of copal, and sixty grains of vermilion. A little oil of lavender, or of turpentine, may be added, if the ink be found too thick. Mr Sheldrake suggests, that a mixture of genuine asphaltum dissolved in oil of turpentine, amber varnish, and lampblack, would be superior.

Mr. liaussman has given some composition i/i/cs

for marking pieces of cotton or linen, previous to their beingbleached, which are capable of resisting every operation in the processes both of bleaching and dyeing, and, consequently, might be employed in marking linen for domestic purposes. One of these consists of asphaltum dissolved in about four parts of oil of turpentine, and-mixed with lampblack, so as to make an ink of a proper consistence for printing with types. Another is the blackish sulphate left after expelling oxygen gas from oxide of manganese with a moderate heat, being dissolved and filtered, the dark giey pasty oxide left on the filter is to be mixed with a very little solution of gum-tragacanth, and the cloth marked with this is to be dipped in a solution of potash or soda, mild or caustic, in about ten parts of water. Nitrate of silver for a surface impregnated with carbonate of soda, and muriate of gold for one impregnated with proto-muriate of tin, form good indelible inks.

The following is the receipt for the chemical indelible ink, sold for the purpose of marking linen : — The linen, that the black color may be produced and fixed, is first moistened with a solution of four drachms of soda in one ounce of soft water, with one grain of saffron, and fifteen grains of gum-arabic. The constituents of the ink are, one scruple of lunar caustic, one drachm and a half of distilled water, or, if com-mon soft water be used, two drops of nitrous acid should be added to the solution. The mordant with which the linen lias been moistened, being suffered perfectly to dry by a gentle heat, the part where the linen has been moistened is written upon with a clean pen dipped in the ink.

Good printers' ink is a black paint, smooth and uniform in its composition, of a firm black color, and possessing a singular aptitude to ad-here to paper impregnated with moisture.

The consistence and tenacity of the oil in this composition are greatly increased, and its greasi-ness diminished by means of fire. Linseed oil or nut oil is made choice of for this use. It is said that the other expressed oils cannot be sufficiently freed from this unctuous quality.

Ten or twelve gallons of the oil are set over the fire in an iron pot, capable of holding at least half as much more ; for the oil swells up greatly, and its boiling over into the fire would be very dangerous. When it boils it is kept stirring with an iron ladle; and, if it do not it-self take fire, it is kindled with a piece of flaming paper or wood ; for simple boiling, without the actual ascension of the oil, does not communicate a sufficient degree of the drying quality required. The oil is suffered to burn for half an hour or more, and the flame being then extinguished, by covering the vessel close, the boiling is

afterwards continued with a gentle heat, till the oil appears of a proper consistence, in which state it is called varnish. Several other additions are made to the oil during the boiling; such as crusts of bread, onions, and sometimes turpentine. These are kept secret by the pre-parers. The intention of them is more effectually to destroy part of the unctuous quality of oil, to give it more body to enable it to adhere better to the wetted paper, and to spread on types neatly and uniformly.

INK

Lampblack is the common material to give the black color, of which two ounces and a half are sufficient for sixteen ounces of the varnish. Vermilion is a good red. They are ground together on a stone with a muller, in the same manner as oil paints.

The ink used by copperplate printers differs in the oil, which is not so much boiled. This would render it less disposed to enter the cavities of the engraving, and more difficult either to be spread or wiped off. The black is likewise of a different kind. Instead of lampblack, the Frankfort black is used, which is a residual or denser charcoal, said to be made frokn vine twigs. This is softer and less gritty than the ivory or other blacks prepared among us, and it is said, that lampblack gives always a de-gree of toughness to the ink, which the Frankfort black does not ; but the goodness of the color seems to be the leading inducement for the use of the latter. A pale or brown black can be much more easily endured in a book, than in the impression of an engraving.

A strong decoction of Brasil wood, with as much alum as it can dissolve, and a little gum, forms a good red ink. These processes consist in forming a lake, and retarding its precipitation by the gum.

Red ink may be also made of vermilion, by beating together the glaire of four eggs, a tea-spoonful of white sugar, or sugar candy, powdered, and as much spirit of wine, till they be of the consistence of oil ; and then adding such a proportion of vermilion as will produce a red color of sufficient strength ; the mixture should be kept in a small phial, or well-stopped ink bottle, and well shaken before it be used. Gum-water is often used instead of the glaire of eggs ; but thin size made of isinglass, with a little honey, is much better for the purpose. A more durable red ink may be made by tempering the solution of copal with red sulphuret of mercury : e. g. take 120 grains of oil of lavender,

seventeen grains of powdered copal, and sixty grains of red sulphuret of mercury, dissolve the copal in the oil, and then mix the sulphnret with the solution upon a smooth surface.

Elite ink may be made by diffusing Prussian blue or indigo through strong gum-water. Yel-low ink may be made by a solution of gamboge in gum-water. Most of the common water-colored cakes, diffused in water, will make sufficiently good-colored inks for most purposes. Inks of other colors may be made from a strong decoction of the ingredients used in dyeing, mixed with a little alum and gum-water.

The Indian ink is used in China for writing with a brush, and for painting upon the soft flexible paper of Chinese manufacture. It is ascertained, as well from experiment as from information, that the cakes of this ink are made of lampblack and size, or animal glue, with the addition of perfumes or other substances not essential to its quality as an ink. The fine soot from the flame of a lamp or candle, received by holding a plate over it, mixed with clean size from shreds of parchment or glove leather not i!w:d, will make an ink equal to that imported.

.’::/:/>patfietic inks are those with which a p?r-

son may write, and yet nothing appear on the paper after it is dry, till some other means are used, such as holding the paper to the fire, rubbing it over with some other liquor, &c. These kinds of ink may be divided into seven classes, according to the means used to make them visible ; *viz.* 1. Such as become visible by passing another liquor over them, or by exposing them to the vapor of that liquor. 2. Those that do not appear so long as they are kept close, but soon become visible on being exposed to the air. 3. Those which become visible by being exposed to the fire. 4. Such as become visible by heat, but disappear again by.cold or the moisture of the air. 5. Those which become visible by being wetted with water. 6. Such as appear of various colors, red, yellow, blue, &c. I. The first class contains four kinds of ink, *viz.* solutions of lead, bismuth, gold, and green vitriol. The first two become visible in the same man-ner, *viz.* by the contact of sulphureous liquids or fumes. For the first a solution of common sugar of lead in water will answer as well as more troublesome preparations.

On writing with this solution with a clean pen, the writing when dry will be totally invisible; but if it be wetted with a solution of hepar sulphuris, or of ointment, dissolved by quicklime; or if it be exposed to the strong vapors of these solutions, but especially to the vapor of volatile tincture of sulphur; the writing will appear of a brown color, more or less deep according to the strength of the sulphureous fume. By the same means what is written with the solution of bismuth in spirit of nitre will appear of a deep black. The sympathetic ink prepared from gold depends on the property by which that metal precipitates from its solvent on the addition of a solution of tin. Write with a solution of gold in aqua regia, and let the paper dry gently in the shade, nothing will appear for the first seven or eight hours. Dip a pencil or a small fine sponge in the solution of tin, and, drawing it lightly over the invisible characters, they will immediately appear of a purple color. Characters written with a solution of green vitriol, carefully depurated, will likewise be invisible when the paper is dry ; but, if wetted with an infusion of galls, they will immediately appear as if written with common ink ; if, instead of this infusion, a solution of thephlogis-ticated alkali, impregnated with the coloring matter of Prussian blue, the writing will appear of a very deep blue. To the second class be-long the solutions of all those metals which were supposed to attract phlogiston from the air, such as lead, bismuth, silver, &c. The sympathetic ink of gold already mentioned belongs also to this class ; for, if the characters written with it are long exposed to the air, they become by degrees of a deep violet color, nearly approaching to black. In like manner a solution of silver in aqua fortis is invisible when newly dried, but when exposed to the sun appears of a grey color like slate. To this class also belong solutions of lead in vinegar ; copper in aquafortis ; tin in aqua regia; emery, and some kinds of pyrites, in spirit of salt ; mercury in aquafortis ; or iron in vinegar. Each of these has a particular color when exposed to the air; but they have the dis-INK

agreeable property of corroding the paper, so that after some time the characters appear like holes cut out of the paper. The third class, comprehending all those that become visible by being exposed to the fire, is very extensive, as it contains all those colorless liquors in which the matter dissolved is capable of being reduced, or of reducing the paper, into a sort of charcoal by a small heat. A very easily procured ink of this kind is oil of vitriol diluted with as much water as will prevent it from corroding the paper. Letters written with this fluid are perfectly invisible when dry, but instantly appear as black as if written with the finest ink on being held near the tire. Juice of lemons

or onions, a solution of sal ammoniac, green vitriol, &c-, will answer the same purpose, though not so easily, or with so little heat. The fourth class comprehends only solutions of regulus of cobalt in spirit of salt. The fifth class comprehends such inks as become visible when characters written with them are wetted with water. They are made of all such substances as deposit a copious sediment when mixed with water, dissolving only imperfectly in that fluid. Of this kind are dried alum, sugar of lead, vitriol, &c. Characters may be made to appear of a rine crimson, purple, or yellow, by writing on paper with solution of tin in aqua regia, and then passing over it a pencil dipt in a decoction of cochineal, Brasil-wood, logwood, yellow wood, &c. If a weak infusion of galls be used, the writing will be invisible till the paper be moistened with a weak solution of sulphate of iron. It then becomes black, because these ingredients form ink. If paper be soaked in a weak infusion of galls, and dried, a pen dipped in the solution of sulphate

of iron will write black on that paper, but colorless on any other paper. Diluted prussiate of potash affords blue letters when wetted with the solution of sulphate of iron. The solution of cobalt in aqua regia, when diluted, affords an ink which becomes green when held to the fire, but disappears again when suffered to cool. This has been used in fanciful drawings of trees, the green leaves of which appear when warm, and vanish again by cold. If the heat be continued too long after the letters appear, it renders them permanent. If oxide of cobalt be dissolved in acetic acid, and a little nitre added, the solution will exhibit a pale rose color when heated, which disappears on cooling. A solution of equal parts of sulphate of copper and muriate of ammonia, gives a yellow color when heated, that disappears when cold.

When writing with common ink has been effaced by means of aqueous chlorine, the vapor of sulphuret of ammonia, or immersion in water impregnated. with this sulphuret, will render it again legible. Or, if the paper that contained the writing be put into a weak solution of prussiate of potash, and when it is thoroughly wet a little sulphuric acid be added to the liquor, so as to render it slightly acidulous, the same purpose will be answered.

INK’LE, M. s. A kind of narrow fillet ; a tape.

INK'LING, n. s. This word is derived by Skinner from inklincken, to sound within. This sense is still retained in Scotland : as, I heard not an inkling. Hint; whisper; intimation.

IN'LAND, adj. & n. s. > Fr. lande ; Italian

IN'LANDER, n. s. $ landa ; Belgic landt.

Interior; lying remote from the sea; midland parts : one who dwells remote from the sea.

INLAND NAVIGATION.

NAVIGATION. The importance of this species of conveyance, as affording an easy and cheap means of transit for merchandise, and produce of every description, has long been admitted. Canals also promote the interests of agriculture in a very material degree ; and, by facilitating the intercourse between the various and remote parts of a country, give an increased impetus to civilisation and the arts ; and whilst thus dispensing benefits on every hand, to the various classes of the community, contribute, in the most essential manner, to national security. The importance of inland navigation seems to have been understood by the most flourishing nations of antiquity ; as well as in modern times ; — indeed canals were formed in various parts of the continent of Europe, long prior to their appearance in this country.

Herodotus relates that the Cnidians, a people of Caria in Asia Minor, designed to cut through the Isthmus which joins this peninsula to the continent ; but were superstitious enough to give up the undertaking because they were interdicted by an oracle. Several kings of Egypt attempted to join the lied Sea to the Mediterranean. Cleopatra was exceedingly fond of this project. Solyman II., emperor of the Turks, employed i6,000 men in this great work. The canal was

completed under the caliphate of Omar, but was afterwards allowed to fall into disrepair; so that it is now difficult to discover any traces of it. Both the Greeks and Romans intended to make a canal across the Isthmus of Corinth, which joins the Morea and Achaia, in order to make a navigable passage by the Ionian Sea into the Archipelago. Demetrius, Julius Caesar, Caligula, and Nero, made several

unsuccessful efforts to open this passage. But, as the ancients were entirely ignorant of the use of water-locks, their whole attention was employed in making level cuts, which is probably the principal reason why they so often failed in their attempts. Charlemagne formed a design of joining the Rhine and the D\nube, in order to make a communication between the ocean and the Black Sea, by a canal from the river Almutz, which discharges itself into the Danube, to the Reditz, which falls into the Maine ; and this last falls into the Rhine near Mayence : for this purpose he employed a prodigious number of workmen ; but he met with so many obstacles from different quarters, that he was obliged to give up the attempt.

Without, however, going further into the history of early canal navigation, we may in the first instance examine the best mode of cutting

a canal and passing barges from one level to another; as a reference to our treatise on HYDROSTATICS will show that the particles of which water is composed invariably tend to a state of equilibrium. The canal locks that we shall have occasion to describe combine advantages of a most important nature over the ordinary arrangements.

The particular operations necessary for making artificial canals depend upon a variety of circumstances. The situation of the ground, the vicinity or connexion with rivers, the ease or difficulty with which a proper quantity of water can be obtained ; these, and many other circumstances, necessarily produce great variety in the structure of these hydraulic works, and augment or diminish the labor and expense of executing them. When the ground is naturally level, and unconnected with rivers, the execution is easy, and the navigation is not liable to be disturbed by floods; but when the ground rises and falls, and cannot be reduced to a level, artificial methods of raising and lowering vessels must be employed ; which likewise vary according to circumstances.

Temporary sluices are sometimes employed for raising boats over falls

or shoals in rivers by a very simple operation. Two posts or pillars cf mason work, with grooves, are fixed, one on each bank of the river, at some distance below the shoal. The boat having passed these posts, planks are let down across the river by pulleys into the grooves, by which the water is dammed up to a proper height for allowing the boat to pass up the river over the shoal.

The Dutch and Flemings at this day sometimes (when obstructed by cascades) form an inclined plane or rolling bridge upon dry land, along which their vessels are drawn from the river below the cascade into the river above it. This, it is said, was the only method employed by the ancients, and is still used by the Chinese, who are said to be entirely ignorant of the nature and utility of locks. These rolling bridges consist of a number of cylindrical rollers which turn easily on pivots, and a mill is commonly built near by, so that the same machinery may serve the double purpose of working the mill and drawing up vessels.

A lock is a basin placed lengthways in a river or canal, lined with walls or masonry on each side, and terminated by two gates, placed where there is a natural fall ; and so constructed that, the basin being filled with water by an upper sluice to the level of the water above, a vessel may ascend through the upper gate ; or, the water in the lock being reduced to the level of the water at the bottom of the cascade, the vessel may descend through the lower gate; for, when the waters are brought to a level on either side, the cate on that side may be easily opened. But, as the lower gate is strained in proportion to the depth of water it supports, when the perpendicular height of the water exceeds twelve or thirteen reet, more locks than one become necessary. Th-.K, if the fall be twenty feet, two locks are required, eacli having eight feet and a half fall ; and, if the fall be twenty-six feet, three locks are necessary, each having eight feet eight inches

fall. The side walls of a lock ought to be very strong. Where the natural foundation is very bad, they should be founded on piles and platforms of wood : they should likewise slope outwards, in order to resist the pressure of the earth from behind.

We may now describe the double canal lock designed by Mr. Gower of Ipswich for the Regent's Canal Company, by means of which tv\ ice the facility of transit is obtained with only half the expenditure of water.

A and B, plate INLAND NAVIGATION, fig. 1, are locks having a communication by means of sluices W and x in the middle pier. Now admitting lock A shall be full, and lock B empty, at the same time that two barges shall arrive, the one going down and the other up the stream ; the barge going down will naturally enter the lock

A, which is ready for her reception ; while the other will enter B. The sluices and gates being now shut, let the middle pier sluices be opened, so that the water may flow from the lock A into

B, whereby the barge in A will be lowered, and the barge in B raised, till both are on a level ; at which time the barge in A will be half up, and the bary;e in B half down. Now shut the pier sluices W and J, and open the side sluices y and z, whereby lock A will continue to empty, and B to fill, till the water in each obtain the level of the lower and upper canal : the gates C and D being then opened, each barge is at liberty to depart the one up and the other down the stream ; the time employed to pass them being no more than the time employed in passing one barge through a single lock ; and, to perform this double duty, only one full lock of water has been withdrawn from the upper level of the canal. Figs. 2 and 3 are vertical and t'ransverse sections of the same lock.

We have now to examine a canal lock in which no waste of water occurs. The model is in the possession of Mr. Partington of the London Institution. It was originally suggested by Mr. Bogaerts, and consists of a double lock-pit and tank capable of displacing, and as such of elevating the water and barge in which it floats. It is represented at fig. 4. A B C D are the upper and lower water-levels. The plunger is shown separately at fig. 5. If we now suppose the plunger in its proper situation, and the end E depressed, the water will be forced along the under-ground communication beneath, and the barge will be raised from the lower to the upper level at D. The principal novelty in this contrivance remains to be noticed. The plunger, fig. 5, is hollow, and filled with water, and as soon as it is turned a little out of its horizontal direction, the water, as is shown at H, enters the side of the vessel that is then immersed, and forms an exact balance for the quantity that has been displaced in the lock-pit.

If. on the contrary, the navigator wishes to depress a barge, or carry it from a high to a low level, he has only to open the gates and admit the vessel, which will sink the moment the plunger is raised.

Mr. Woodhouse has a patent for improvements in canals. They are divided by the pa-tentee under four heads ; the first consists in the

application of certain contrivances for weighing boats, &c., whether they are laden or empty. An horizontal frame of timber is to be erected over a lock, of a sufficient height above the surface of the canal to admit boats to pass under it, and of competent strength to support the weight of the boats with their cargoes. Upon this frame weighing machines of the best construction are to be placed, such as are capable of sustaining the said boats, &c. Let the weighing machines be so arranged that chains or bars, depending from the short ends of levers, may form two parallel rows, at such a distance asunder as to admit the vessels intended to be weighed to pass between them. Across the bottom of the lock as many pieces of timber or iron are placed as there are pairs of chains or bars depending from the levers of the weighing-machines. If these cross-pieces be timber, they must be loaded with metal, so as just to sink in water. To each end of these cross-pieces a strong chain must be fastened, and each of the chains depending from the machines must terminate in a strong hook, and be furnished with an adjusting screw or wedge, capable of lengthening or shortening the bars or chains.

When a vessel is to be weighed, it must swim into the lock, and the cross-pieces drawn up by their chains until they come into contact with the bottom of the vessel. The chains of the cross-pieces are then to be hooked to the depending bars, and to be made tight by adjusting screws or wedges. A sufficient quantity of water is then let out of the lock into a side pond (where it is preserved), to leave the vessel suspended on the machines. To ascertain the whole weight sustained, the main levers must be connected by means of a bar, and weights suspended from it will give the result.

Secondly. The next object of this patent is that of conveying vessels from one level to another without locks. For this purpose the upper and lower levers are to be brought to within such a distance of each other as shall be somewhat more than the length of the vessel to be conveyed. Each of die levers are to terminate in two canals, wide enough to admit the boat ; and the space between the two levers must

be divided lengthways into two spaces by a partition of timber, of a sufficient strength, and carried with the ends and side walls a sufficient height above the top level, to fix the machinery upon, turning a proper arch or arches in the end wall next the lower canal, for the vessel to swim underneath. Each of these spaces must be sufficiently large to admit a water-tight vessel called a conductor, capacious enough to swim the vessel in. Each of the conductors must be furnished with a stop-gate or paddle at each end; and the ends of the upper and lower canals must also have stop-gates. The two conductors must be suspended by a competent number of ropes or chains, one end of each to be made fast to strong pieces of iron or timber fastened to the sides of the conductors, and meeting over the centre, and the other ends fastened to two drums or wheels upon horizontal shafts. A counterbalance to the weight of the ropes i« effected by their coiling-on the drums, and, the height of the

lift being given, the diameter of the drum to produce the effect is easily found.

The ends of the canals must be truly made and covered with leather, which is to be stuffed between the leather and wood, to form an elastic body ; so that when the ends of the conductors are forced against them, by a spring or any other contrivance, they may be water-tight. To pass a boat from the lower to the upper level, open the gate in the lower conductor, and the corresponding one in the lower canal, and swim the boat into the conductor, which will displace a quantity of water from it, equal in weight to the weight of the vessel and cargo ; so that the conductor with its contents is always of the same weight. When the vessel is in the conductor, and the gates shut, the apparatus is to be set in motion by a pinion acting in a wheel fixed on the axis of the drum, or by any other mechanical contrivance ; and the top conductor being, with the water in it, equal to the weight of the lower one, will descend, and the bottom conductor, with the vessel in it, will rise ; when it arrives at the upper level the top conductor will have descended to the lower level. Hence one vessel may be lowered in one conductor, while another is rising in the other, since the equilibrium is not destroyed by the vessel entering the conductor. It may be expedient to give the descending conductor more weight than the ascending one, to produce motion in the apparatus with more ease, which may be effected by not suffering the descending conductor to be quite so low as to bring the surface of he water in it to the level of the water in the lower canal, so that when the gates are opened a small quantity of water will run out of the

conductor into the lower canal. The strength of this apparatus, and number of ropes, will depend upon the weight of the vessel.

Thirdly. Another object of this patent is the application of a telegraph or signal to the purposes of canal navigation, which is intended to produce a very considerable saving of water in passing locks, when they are so far distant from each other that the lock-keepers caunot see the boats from one lock to another ; for it takes no more water to pass a given number of boats up the locks, and as many down, provided they pass alternately, than it would to pass them in succession, in either direction, by the assistance of the telegraph. The telegraph or signal may be a straight piece of timber, with a board framed into the upper end of it about eighteen inches Ions:, and one foot broad, having a round hole cut through it about eight inches in diameter, a frame being fixed in the ground to receive this piece of timber, when raised perpendicularly, and in which frame it will turn round ; therefore, when the first lock-keeper has a boat in view upon the canal, he turns the flat side ot the board towards the next lock, which informs the next lock-keeper that there is a boat coming in that direction : the middle lock-keepers are furnished with two telegraphs or signals to give information each way.

Fourthly. The last thing mentioned in the specification, is a method of raising a sunken vessel ; which is done by mooring two loaded

vessels alongside that which is sunk, with two or more pieces of timber, long enough to project over each side of the loaded boats, half the breadth of the boat, with a pulley or roller fixed at each end of the timbers, for one or more ropes or chains to pass over, one end to be fastened to the sunken boat, and the other to an empty boat on the outside of each of the loaded boats. When all the chains are made fast, by unloading the loaded boats into the empty ones, the sunken boat will thereby be raised.

Within the last fifty years a great number of canals have been cut in various parts of England, which have greatly contributed to the

improvement of the country, and the facilitating of commercial intercourse between the trading towns. The first of these, in point of date, is the Sankey Canal, the act of parliament for which was obtained in 1755. It was cut to convey coals from the coal-pits at St. Helen's to the River Mersey, and so to Liverpool, and is in length twelve miles.

But the canals of the late duke of Bridgewater, the great father of inland navigation in this country, are of much greater importance, both for the extent and the natural difficulties that were surmounted by the fertile genius of that extraordinary mechanic, Mr. Brindley. Of these great works the first was begun in 1758, at Worsley Mills, about seven miles from Manchester, where a basin is cut, containing a great body of water, which serves as a reservoir to the navigation. The canal runs through ahill,by a subterranean passage large enough for the admission of long fiat-bottomed boats, towed by hand-rails on each side, nearly three-quarters of a mile, to the duke's coal works. There the passage divides into two channels, one of which goes 500 yards to the right, and the other as many to the left. In some places the passage is cut through solid rock, in others arched over with brick. Air funnels, some of which are thirty-seven yards perpendicular, are cut out at certain distances through the rock to the top of the hill. At Bartonbridge, three miles from the basin, is an aqueduct, which, for upwards of 200 yards, conveys the canal across a valley, and the navigable river Irwell. There are three arches over this river, the centre one sixty-three feet wide, and thirty-eight feet high above the water, which will admit the largest barges to go through with masts and sails standing. The whole of the navigation is more than twenty-nine miles ; it falls ninety-five feet, and was finished in five years.

The Grand Trunk, or Staffordshire Canal, was begun in 1776, under the directions of Mr. Brindley, in order to form a communication between the Mersey and the Trent, and, in conse-qnence, between the Irish Sea and the German Ocean. It was completed in 1777, after the deatli of Mr. Brindley, who died in 1772, by his brother-in-law Mr. llenshall. Its length is twenty-two miles, it is twenty-nine feet broad at the top, twenty-six at the bottom, and five deep. It is carried over the river Dove by an aqueduct of twenty-three arches, and over the Trent by one of six. At the hill of Harecastle, in Staffordshire, it is conveyed through a tunnel more

than seventy yards below the surface of the ground, and 2880 yards in length. In the same neighbourhood there is another subterraneous

passage of 350 yards, and at Preston-on-the-Hill another, 1241 yards in length. From the neighbourhood of Stafford a branch goes off from this canal, and joins the Severn near Bewdley : two other branches go, the one to Birmingham, and the other to Worcester. The Braunston, or Grand Junction Canal (so called from its uniting the inland navigation of the central counties), extends from the Thames at Brentford to the Oxford Canal, at Braunston, in Northamptonshire.

The first part of the course of the Barnsley Canal is south, and the remainder west, about fifteen miles in length, in the West Riding of Yorkshire ; its western end is considerably elevated above the sea. The principal object of it seems to be the export of coals and paving-stones, and forming a short communication with Rotherham and Sheffield (by the Dearne and Dove Canal, with which it connects at Eyming Wood near Barnsley), and Leeds. Wakefield, Halifax, Manchester, Liverpool, &c. It commences in the lower part of the Calder River, or Ayr and Calder navigation, a little below Wakefield, makes a turn when it arrives at the Dearne River, and terminates at Barnby Bridge near Caw-thorn ; there is a branch of two miles and a half to Haigh Bridge, and railway branches to Barnsley Town, and to Silkstone. From the Calder to the junction of the Dearne and Dove Canal, about nine miles, is a rise of 120$ feet ; this is effected by three locks together, near Ag-bridge, having a low level or side cut brought up to near the upper pound, with a steam engine for pumping up the water again, which is let down by the lockage ; by thirteen other locks near Watton, and a long side-cut, from which engines pump up the water to supply the pound above these ; and near Bargh Bridge, by four other locks, a side cut and engine. On the Haigh Bridge branch there are also seven locks together, with a low side-cut, and a steam en-gine for pumping up the water required for lockage. At Eym is an aqueduct bridge.

The Basingstoke Canal was first proposed in 1772, as an extension of, or appendage to, the canal intended for shortening the course of the navigation of .the river Thames, between Reading and Maidenhead ; but it was some years before the first act for this was obtained in 1778. The general direction of this canal is nearly west, by rather a crooked course of thirty-seven miles in length, in the counties of Surrey and Hants ; the summit-pound thereof of twenty-two miles in length is upon a high level, nev the south-east branch of the grand ridge on its north side. The principal objects thereof seem the import of coals, and export of timber and agricultural produce, from and to the Thames. It commences in the Wey River at Westley, about two miles from its junction with the Thames, and terminates at Basingstoke. The first fifteen miles from the Wey River it has a rise of

195 feet by twenty-nine locks to Dadbrook, (the part at each lock being about seven feet), from whence to Basingstoke it is level. At Grewell is a tunnel,

part of which intersects the chalk strata about three-quarters of a mile in length.

The Glamorganshire Canal has for its objects the export of the produce of the immense iron, coal, and lime works in the neighbourhood of the Merthyr Tydvil, &c., and the supply of the rapidly increasing population thereof; at Eglwysila the Aberdare Canal joins, and the Cardiff and Merthyr railway runs by its side, and joins it at those two places. Its northern end is considerably elevated. Cardiff and Caerphilly are considerable towns on or near the line ; it commences in a sea-basin or dock, in the Severn, at the lower-layer near Cardiff, and terminates at Cyfartha, a little above Merthyr, where are the immense iron-works of Mr Crawshay; it has a railway branch from Merthyr to Dowlais and Penydarren iron-works. From the tide-way at Lower-layer to Merthyr is a rise of nearly 600 feet, and, during a part of this distance, the canal skirts precipitous mountains at the height of nearly 300 feet above the river Taaf, which it closely accompanies through its whole length. The floating-dock at Lower-layer is sixteen feet deep, in which a great number of ships, of 300 tons burden, can lie constantly afloat, and load or unload, either at the spacious warehouses on its banks, or from, or to, the boats belonging to this canal, or the trams used on the Cardiff and Merthyr rail-road, that here commences. There is a large aqueduct bridge over the Taaf at Gel-lygare. This company was authorised to raise £100,000, and to the powers for raising the last £10,000 this singular condition was annexed, *viz.* that the whole concern should be completed in two years, after which no further money should be applied, except for repairs. At Cyfartha there is a famous water-wheel, made of cast-iron, fifty feet in diameter; the water being conveyed thereto for a great distance in an iron aqueduct.

The general direction of the Brecknock and Abergavenny Canal is

about north-west, thirty-three miles in length, in the counties of Monmouth and Brecknock in South Wales ; it begins a few miles from the coast, and soon after comes near and follows the course of the Uske River, no part of it being very greatly elevated. Its objects are the exportation of coals, iron, and other mineral products of the country round Abergavenny, by means of the Monmouthshire Canal, and the supply of Pontypool, Abergavenny, Crickhowel, and Brecon towns, that are near its course. It commences in the Monmouthshire Canal, one mile from Pontypool, and terminates at Brecon : it has railway branches to Abergavenny, Wain Dew collieries, &c., and to Llan-groiney. From the Monmouthshire Canal, the first fourteen miles and a-half are level, to three miles above the Abergavenny branch, whence to Brecon is eighteen miles and a-half, with a rise of sixty-eight feet. Near its commencement it crosses the little river Avon, on an aqueduct, and shortly afterwards passes a tunnel of 220 yards in length.

The Derby Canal runs nearly north for about nine miles in the county of Derby ; it is not greatly elevated above the level of the sea. Its objects are the supply of Derby, and the export of coals and iron. It commences in the Trent

River at Swarkstone Bridge, crosses and intersects the Trent and Mersey Canal, and terminates at Little Eaton, nearly four miles above Derby, from which town a cut of eight miles and a-half goes off to a place between Sandiacre and Long Eaton, and there joins the Erewash Canal. The canal is forty-four feet wide at top, twenty-four at bottom, and five feet deep, except the upper level next Little Eaton, which is made six feet deep to retain the water of wet seasons like a reservoir : the locks are ninety feet long, and fifteen feet wide withinside.

The general direction of the Droitwich Canal is about north-east, for five miles and three-quarters, in the county of Worcester; it is not greatly elevated above the sea ; its objects are the export of salt and the import of coals, of which many thousand tons are annually imported, and used in the boiling of salt, except what the town of Droitwich consumes. It commences in the river Severn at Hawford, and terminates at Chapel Bridge in Droitwich ; it has a rise of fifty-nine feet and a half by eight locks. This canal was executed by Mr. Brindley, and it is said to prp-sent a pattern to canal-makers by the neatness and regularity of its curves, and the stability and excellency of all its works. The proprietors were authorised to raise £33,400, the amount of shares being £100. Owing to the overflowings of the

copious salt-springs near Droitwich, this canal presents the curious spectacle of a salt-water canal, in the interior of the country, in which no river-fish can live.

The Shrewsbury Canal commences in Castle Foregate basin, at Shrewsbury, and terminates in the Shropshire Canal above Wrockandire-wood plain near Oaken Gates. From Shrewsbury to Langdon, nearly twelve miles, is level ; thence to near Worn bridge, four miles and a quarter, is a rise of seventy-nine feet, by locks ; thence is an inclined plane of seventy-five feet rise, and nearly one-eighth of a mile in length, to the Ketley Canal ; thence to the Shropshire Canal, one mile and one-eighth, is level. The locks on this canal are contrived in two divisions by doors, which draw up, out of a recess formed for them below the locks, so that a long narrow canal boat of the usual construction, or two or four smaller and narrow flat-bottomed boats adapted to the inclined plane, can pass the same without unnecessary waste of water. Near Atcham is a tunnel of 970 yards in length, and ten feet wide, which has a towing path three feet wide through it, constructed of wood, and supported on bearers from the wall, so as not to diminish the water-way. At Long is a long embankment and aqueduct bridge, or rather trough of cast-iron, over the Tern River, sixty two yards long, and sixteen feet above the level meadows; at Roddington is another embankment and a common aqueduct bridge, twenty-one feet above the surface of the Roden River, over which the canal passes ; and at Pimley there is another embankment and aqueduct of less height and width than the former ones. At Wombridge there is a double inclined plane of 223 yards in length, and seventy-five feet perpendicular rise, up one of which empty or partly laden boats are drawn by the aid of a steam-engine, or by the descent of a loaded boot

at the same time on the other, as we have before described.

The general direction of the Grand Western Canal, is nearly north-east for about thirty-five miles, in the counties of Devon and Somerset : it crosses the south-western branch of the grand-ridge ; its objects being

a connexion between the southern coast and the Bristol Channel, the sup-ply of the country with coals, deals, &c., and the export of farming produce. It commences in the tide-way of the river Exe at the town of Top-sham, and terminates in the Tone River at Taunton Bridge ; it has a cut of about seven miles to Tiverton, and other short ones to Cullumpton and Wellington.

The Thames and Se.vern Canal commences in the Stroud water Canal at Wallbridge near Stroud, and terminates in the Thames and Isis Navigation at Lechlade: it has a branch of about one mile in length to the town of Cirencester. From the Stroud water Canal to Sapperton or Salpertpn, seven miles and three-eighths, is a rise of 243 feet by twenty-eight locks ; thence the summit pound continues through the tunnel, two miles and three-eighths, to near Coates, and level ; thence to the Thames and Isis navigation, twenty miles and three-eighths, is a fall of 134 feet by fourteen locks. The first four miles of this canal, from Stroud to Brinscomeport basin, is of the same width and depth as the Stroudwater Canal, and is navigated by the Severn boats ; the remainder of the line is forty-two feet wide at top, thirty at bottom, and five feet deep ; at Brinscombeport, goods going eastward are removed into barges eighty feet long and twelve wide, which carry seventy tons each. The famous tunnel on this canal at Sapperton is 4300 yards long, the arch being fifteen feet wide in the clear, and 250 feet beneath the highest point of the hill, which pro-ved to be hard rock, much of which required blasting, and some of it was so solid as to need no arch of masonry to support it ; the other parts are arched above, and have inverted arches in the bottom ; the cost of excavating this tunnel, in 1788, amounted to eight guineas per cubic yard. The general direction of the Peak Forest Canal and i ail-way is nearly south-east for twenty-one miles, in the counties of Chester and Derby ; its southern end is very considerably elevated, and terminates on, or very near to, the grand ridge ; its principal object is the export of the Peak-Forest lime, and of coals from the neighbourhood of this canal. It commences in the Manchester Ashton and Oldham Canal, at Duckenfield, and the canal terminates at the basin and limekilns in Chapel-Milton, whence a rail-road proceeds to Loadsknowl limestone quarries in the Peak. The line of the canal is fifteen miles in length, and of the railway six miles; there is a cut of half a mile to Whaley Bridge, and a railway branch of one mile and a half to Marple. Over the Mersey River, near Marple, is a grand aqueduct bridge of three arches, each sixty feet span and seventy-eisjht feet high, the whole height of the structure being nearly iOO feet, which was built in 1799. Mr. Outram was the engineer, and the works were completed on the 1st of May

The Oxford Canal commences in the Thames and Isis navit;ntion at Badcock's garden on the

west side of Oxford, and terminates in the Coventry Canal at Longford. At Hillmorton and at Napton are short cuts of about half a mile each, to the steam engines belonging to this com pany. From the Thames and Isis at Oxford t# Banbury, twenty-seven miles and a quarter, is rise of 1 18 feet by eighteen locks (including two weir-locks and an entrance lock from the Isis) thence to Claydon, seven miles and a quarter, is a rise of seventy-seven feet and one-third by twelve locks ; thence (through the Fenny Compton tunnel) the summit pound continues to Marston-doles wharf ten miles and three-quarters, and level ; thence to Napton on the hill, two miles, is a fall of fifty-five feet and a quarter by nine locks ; thence to Hillmorton, sixteen miles and three-quarters (in which the Warwick and Napton and the Grand-Junction join), is a level ; thence in half a mile is a fall of nineteen feet by three locks ; thence to the Coventry Canal at Longford, twenty-srx miles and a half, is level. This canal is twenty-eight feet wide at top, sixteen feet at bottom, and four feet and a half deep, except the summit-pound, which is made six feet deep in order to act as a reservoir ; the locks are seveuty-four feet and three-quarters long, and seven feet wide. The Fenny Compton tunnel is 1188 yards long, nine feet and one-third wide, and fifteen feet and a half high. At Newbold is a tunnel 125 yards long, made under the church yard and street, sixteen feet high, and twelve feet and a half wide, with a towing path through it. At Wolfnamcote, also, there is a short tunnel. At Pedlars Bridge near Brinklow is an aqueduct bridge of twelve arches, of twenty-two feet span each. At Cosford on the Swift RiVer, and at Clifton on the Avon, are others of two arches each ; at Wolfhamcote, Adderbury, and Hampton Gay, are other smaller aqueducts.

The general direction of the Dorset and Somerset Canal is nearly south for about forty miles in the counties of Wilts, Somerset, and Dorset : the middle part of it is on a high level, and crosses the south-western branch of the grand, ridge. Its principal objects are the supply of the manufacturing towns and neighbourhood through which it passes with coals, from the mines bordering on Mendip, and the opening of an inland communication between the Bristol Channel, the Severn, the Thames, and 'the southern coast of the island. The commencement is

in the Kennett and Avon Canal at Widbrook, near Bradford, and the termination in the Stour River near Gains-cross in Shillingstone-Okeford ; from near Frome a branch of about nine miles proceeds to Nettlebridge collieries in Midsummer-Norton.

The Hereford and Gloucester Canal has for its object the export of coals from the neighbourhood of Newent, and of the cyder and agricultural products of the country. It commences in the tide-way of the Severn River at Gloucester, crosses Alney Isle and another branch of the Severn to Lassington, and terminates near the Wye River at Byster's gate in Hereford : it has a short cut to Newent. From the Severn to Ledbury the distance is eighteen miles, with a rise of 195ˆ feet; thence to Monkhide is eight miles and a half on the summit level ; thence to With-ington Marsh it is three miles, with a fall of thirty feet ; and thence to Hereford, six miles, it

is level. Newent cut is level. On this line are three considerable tunnels, that at Oxenhal is 2 1 92 yards in length ; at Cannon-Frome is one of 1320 yards; and near Hereford another of 440 yards in length. Mr. Joseph Clowes was the engineer: in July, 1796, this canal was finished, from the Severn to Newent, and in March, 1798, the Oxenhal tunnel was finished, and the navigation extended to Ledbury, and coals were in consequence reduced in price at that town from 24s. to 13s. 6d. per ton.

The situation of the Coventry Canal is high, particularly the eastern part, which crosses the grand ridge near Bedworth, without a tunnel, and 'its Seeswood branch does the same. Its general objects are, the line of communication between London, Birmingham, Manchester, Liverpool, &c. ; the export of coals from the numerous mines near it; and the supply of Coventry. It commences in the Birmingham and Fazely Canal at Fazely, and terminates in the Oxford Canal at Longford ; its detached part, of five miles and a half in length, commences at the termination of the Birmingham and Fazely Canal at Whittington Brook, and terminates in the Trent and Mersey Canal at Fradley Heath; near to Whittington Brook it connects with the Wyrley

and Essington Canal, and at Marston Bridge the line is joined by the Ashby-de-la-Zouch Canal. There is a cut of about one mile in length to Griff collieries ; another to several collieries by different branches near Seeswood Pool and Bedworth, five or six miles in length : there is also a cut of half a mile from the line to Bedworth ; the branch to Coventry is four miles and three-quarters in length ; and there is a railway branch to Oldbury coal-works. The detached part is level with the Trent and Mersey Canal, which level continues (through five miles and a half of the Birmingham and Fazely) to the commencement of the line of this canal at Fazely ; thence to Atherstone, a distance of about ten miles, the rise is ninety-six feet, by means of thirteen locks ; thence to the Oxford Canal, about twelve miles, is level ; so is the cut to Coventry, and those to Griff, Seeswood Pool, Bedworth, &c. The last or highest level of this canal forms, with part of the Oxford and Ashby canals, the longest level that is to be found in Britain, being upwards of eighty-two miles, including side branches.

The objects of the Worcester and Birmingham Canal are the export of coals, and a more direct communication between Birmingham and the Severn. It commences in the Severn at Diglis, just below Worcester, and terminates in the old Birmingham and Fazely canals, at their junction at Farmer's Bridge at the upper end of Birmingham. From the Severn to Tardebig, fifteen miles, is a rise of 428 feet, by seventy-one locks ; thence to the Birmingham Canal, fourteen miles, is level. The width of the canal at top is forty-two feet, and the depth is six feet ; the locks are eighty feet long and fifteen feet wide. At Worcester there is a very fine basin for the canal boats. There are four or five principal, and several smaller culverts : the principal tunnel at West Heath is 2700 yards long, eighteen feet high, and eighteen feet and a half wide within the arch ; the depth of water therein is seven feet - and a half: at Tardebig is another of 500 yards in length ; at Shortwood is another of 400 yards in length; at Oddingley one of 120 yards ; and at Edgbaston another of 110 yards in length: four of these tunnels are upon the summit-pound.

The Warwick and Birmingham Canal commences in the Warwick and Napton Canal, in Budbrook parish near Warwick, and terminates in the Digbeth cut of the Birmingham and Fazely Canal at Digbeth near Birmingham. From the Warwick and Napton Canal, about half a mile, to near Budbrook Town, is level ; thence two miles and a half, to Hatton, is a rise of about twenty locks ; thence to the Stratford branch, about five miles, is level; thence to Knowle Common, about four miles and a half, is level ; thence to Knowle Wharf, one mile, is a fall of

about seven locks ; thence to near Deritend, about ten miles, is level ; thence to the Digbeth branch of Birmingham and Fazely, one mile and a half, is a rise of about five locks. At Haseley there is a run-nel of 300 yards in length ; at Henhood Wharf there is an aqueduct over the Blythe River ; near Flint Green another over the Cole River; and near its termination at Digbeth another over the Red River.

We may now furnish a list of the ascertained levels of the principal canals, in reference to the summit of the - Birmingham canal, between Wolverhampton and Smithwick.

Above summit of Birm.

Below summit of Birm.

Canal, j Canal.

1. Birmingham Canal Navigation; Commencement at Autherley … . .

Summit at Wolverhampton …….

Fall at Smethwick, and then level to Birmingham .

Junction of branch to Digbeth, lower end of the town . And junction with Warwick Canal … . .

Salford Bridge — Berwood Common ……

Curdworth — Dunton ……..

Fazely and Whittington Brook …….

2. Ashby-de-la-Zouch.

Commencement in Coventry Canal at Griff, and level to Hinckley and Ashby Wolds .

Feet. In

Feet. In.

| 132 0

0 0

19 10

j 100 3

. ˆ36 7

171 S

188 11

264 10

168 9

30

INLAND NAVIGATION.

Above

summit

of Birm.

Canal.

Feet, In.

Summit at Ashby-de-la-Zouch ….. Cloud Hill— Staunton— Ticknall

3. Aihton-under-Line. Junction with Rochdale Canal Clayton, and branch to Stockport level

Ashton-under-Line — Duckenneld Bridge ….

Branches to Fairbottom and Hollinwood …..

Werneth colliery branch

4. Avon River.

At Bath Old Bridge . …

At Bristol

5. Bradford Canal.

Junction with Leeds and Liverpool Canal at Windhill Bradford …

6. Bridgewater's (Duke of). Mersey at Runcorn, high water ……

Do. low water ……

Preston Brook — Manchester, and Leigh branch ….

7. Coventry. Fradley Heath, and Whittington Brook …..

Glascote, Grendon, and Polesworth ……

Atherstone, Nuneaton, Bedworth, and Coventry

8. Derby Canal.

Junction with Grand Trunk Canal .'•• Derby … . » .

Little Eaton ……

Branch to join Erewash Canal . .

9. Douglas (Lower).

Junction with Leeds and Liverpool Canal at Brier's Mill Ribble River, near Hasketh . • . »

10. Droitwich.

Severn at Hawford . . , , ‘ .

Droitwich … . ‘ .

11. Dudley. Junction with Worcester Canal at Lelly Oak, and level to Leasowes, and Blow—

ers's Green . •

Netherton … … •. .

Black Delph — Pensnett Chace …

Junction with Birmingham Canal at Tipton Green ‘. ‘ . . ,,

12. Grand Junction Canal.

Commencement in Oxford Canal at Braunston ” ‘,’ .

Junction of Grand Union Canal, and Dav entry branch . …

Junction of Northampton branch ……

Wolverton level, and junction of Buckingham branch

Junction of Aylesbury branch ……

Tring summit, and branch to Wendover …..

Bull's Bridge, and Paddington branch …..

High-water mark in the Thames at Brentford . .

Branch to Daventry rises … …

Branch to Northampton and New River there ….

Branch to Buckingham …. .

Branch to Aylesbury ……..

Branch to Wendover ……..

Branch to Paddington … … £

13. Grand Trunk. Duke of Bridgewater's Canal at Preston Brook ….

Summit of Canal at Etruria …….

Junction of Staffordshire and Worcestershire Canal at Heywood

.1 unction of Coventry Canal at Fradley Heath ….

Junction of Derby Canal . .

INLAND NAVIGATION.

31

River Trent at Shardlow and Wilden Ferry

Branch from summit to Uttoxeter, *viz.* to Leek and Stanley Moor Froghall (and Caldon railway, which rises 649 feet) . Uttoxeter . . « .

14. Grand Union and Union Canals. Junction with Grand Junction Canal near Long Buckby Summit .

Foxton, and junction with Union Canal … …

West Bridge, at Leicester ….>..

15. Huddersfield.

Junction with Ashton Canal at Duckeufield Bridge… . .

Summit at Saddleworth … . . , . 181 10

Huddersfield ……

16. Kennett and Avon Canal

River Avon at Bath … … , „. .

Sidney Gardens, Bath … … v ,,* .

Bradford, Wilts, and Semington Junction . * . . •

Foxhanger … … …

Devizes … . . * ^ « • •

Summit at Brimslade … . . • • . .

Crofton Engine … . . •’-•”•

Kennett River at Newbury . …. . . ‘»

17. Kennett River.

At Newbury, and Junction with Canal . : … .

Thames at Reading ……..

18. Leicester Navigation.

West Bridge, Leicester …

Junction of Melton Navigation .’…..

Mount Sorrel ……

Loughborough, and Loughborough Canal …..

To Thringston Bridge, Charnwood Forest, and to Barrow Hill (part by a railway).

19. Loughborough Navigation,

Junction with Leicester Navigation …

River Trent, near Sawley . .

20. Melton Navigation.

Junction with Leicester Navigation ….. Ratcliffe .

Melton Mowbray …..

21. North Wilts. Junction with Wilts and Berks Canal (at the summits)

Do. with Thames and Severn Canal, at Latton near Cricklade

22. Oxford Canal.

Junction with Coventry Canal at Longford …..

Hill Morton — Union of Grand Junction Canal at Braunston .

Summit at Claydon

Banbury

Aynho Wharf .

Heyford Warren

Hampton Gay .

Isis at Godstone

Oxford .

River Isis at Oxford

23. Peak Forest C<mal. Junction with the Ashton-under-line Canal Priestfield ……

Chapel Milton ….

24. Ramsden s Lanal.

Junction at Huddersfield ….

Rivei Calder, at Cooper’s Bridge

. 59 2

. 188 2

Below

summit

of Binn.

Canal.

— •

Feet. n.

50 182

113 10

59 7

134 7

294 7

152 10 254 1

439 11

373 5

363 5

307 5

68 5

35 5

74 5

245 5

245 5

387 5

294 7

316 1

329 11

344 7

159 7

344 7

385 7

316 1

300 2

245 2

162 11

221 11

168 9

149 10

94 7

171 11 207 8

231 10

262 10

282 9

286 5

289 11

152 10

254 1

310 10

32

INLAND NAVIGATION.

25. Staffbrdshirf and Worctster shire. Severn at Stourport ……

Kidderminster ……

Stewpony and Stourbridge Canal ….

Bumble Hole …….

Summit and junction with Birmingham Canal at Autherey Penkridge …….

Heywood i ……

26. Stourbridge.

Junction with Dudley Canal at Black Delph . Stourbridge … . * . •

Stewpony and junction of Staffordshire and Worcestershire Canal

27. Stratford.

Junction with Worcester Canal at King's Norton Cut to join the Warwick Canal … .

Preston, Wooton, Wawden, and Edstone Valley, Wilmcote Stratford …….

Surface water of the River Avon ….

28. Stroud.

Junction with Thames and Severn near Stroud Severn at Framilodd … .

29. Thames and Severn. Junction with Stroud Canal, near Stroud Summit, Siddington and Cirencester .

Cricklade ….;..

Lechlade and River Thames . . ;

30. Thames River.

At Lechlade …….

At Oxford … . … . .

At Abingdon and at Culham . ., .

At Reading …….

At Brentford … ˆ .

31. Warwick Canal.

Junction at Digbeth near Birmingham . - . . •

Summit at Bordesley and Knowle . <* • “. >•* &•’<

Hatton ……..

Warwick, and junction of Napton Canal

32. Warwick and Napton Canal.

Junction near Warwick … . ‘ . ‘ .

Leamington … . ;. .”’..’

Summit at Napton and Oxford Canals •. .

33 Western Junction proposed Canal.

Aylesbury branch of Grand Junction Canal …,

Thames at Culham, near Abingdon . ,-. . n • .

34. Wilts and Berks. Kennett and Avon Canal at Semington

Chippenham (a level branch) ….. Colne (ditto) …..

Summit, South Marston, and North Wilts Canal River Wantage ‘.

Abingdon and River Thames …..

35. Worcester.

Commencement at Birmingham — level to Tarˆby . * J” Lowesmere and Worcester . .

Severn at Diglis …

Branch to Droitwich .

36. Wyrlr md Evringtnn. t ommencement near Wolverhamptoi

Above

summit

of Birm

Canal.

Feet. In

0 0

INLAND NAVIGATION,

Above summit of Birm. Canal.

Junction with detached part of Coventry Canal, near Huddlesford
Branch to Wyrley bank …..

Bra.ich to Easington Collieries ….

37. Rochdale. Manchester — Knott Mill …..

Ashton Canal …….

Failsworth …. .

Rochdale …….

Summit at Dean Head …..

Dob Royal …….

Todmorden …….

Sowerby Wharf ……

River Calder …….

Feet. In.

36 60

130 0

33

Below

summit

of Birm.

Canal.

Feet. In.

264 10

390 11

315 4

134 11

14 11

32 11

56 11

217 11

227 11

The new Grand Ship canal from London to Portsmouth, suggested by Mr. Cundy, may be thus briefly described, though the advantages that are likely to be derived from its complete adoption are of so important a character as to place it, in point of national importance, far be-yond any of those that have hitherto been examined.

This canal, and the several works connected therewith, are intended to accommodate vessels of the largest dimensions, when fully loaded, so as to enable them to pass each other ; for this purpose twenty-eight feet depth of water will be required, and about 150 feet in width, with about four locks, 300 feet in length and. sixty-four in breadth, up to the summit level.

The canal will commence with two branches at Rotherhithe, nearly opposite the London and West India Docks, near the Victualling

Office, and will proceed from thence in a south-west direction, to Walworth Common, by the foot of Brixton Hill, to Streatham Common ; then between the towns of Mitcham and Tooting, to Maiden, Ewel, Epsom, Leatherhead, and Dorking, over Homewood Common, down the vale to Ockley, and the Roman turnpike gate, a little below Slinfold, Newbridge, Pulborough, by Hardham, Greatham, Amberley, Burkham, Arundel (and a small branch to Arundel Bay), and lastly to Chichester, Emsworth, Langston Harbour, South Sea Common, and Spithead.

From the river Thames, on the line of Maiden, the ground is remarkably level, and composed of stiff loam or brick earth ; from Maiden to Epsom there will be extra cutting through a chalky under-stratum to Leatherhead ; from Leatherhead to Dorking it is nearly a level, under the winding of the hills in Michelham Vale, through chalky under-stratum, and a stiff loamy soil ; in passing Dorking to Homewood Com-mon there will be considerable extra cutting, on the average from 120 to 130 feet deep, for about four miles, partly through a bed or deposit of sandstone, chalk, and strong brick earth ; from thence it will fall into the vale of the River Arun, by Bare Farm to Ockley Church, and then proceed to Newbridge and the tide-way at Pulborough ; from thence the ground is level, through a strong stiff clayey and sandstone soil, and will pass below Arundel, VOL. XII.

in a direct line to Chichester, Emsworth, and Spithead.

The line of canal is remarkably straight, and will take a direction so fortunately as not to deteriorate any town' or village in its course, running through a considerable portion of com-mon and open lands ; and thus rendering a work of this magnitude less objectionable than any similar plan hitherto projected.

It has not escaped the projectors, that such a measure might at first sight appear seriously inconvenient to public travelling ; care, however, has been taken to avoid that concurrence as much as possible, and, where it could not be prevented, arrangements are proposed which it is conceived will fully obviate this objection and secure the convenience of the traveller.

As this canal is intended to be cut through the general level of the earth, it will receive an abundant supply of water flowing from its innumerable springs and tributary streams, as feeders from the Mole, the Way, and the Arun, and which will overflow its banks at the

appropriate places provided for that purpose, at the summit level and on the line of canal.

The water will have no perceptible current in the canal ; yet it will be purified and changed every day by the flowing of the springs and other streams. No mill-stream, dam, or river will be obstructed by this canal, as they will be provided for by cast iron tunnels, passing under its bed, so that the rivers, &c., may continue their present course.

General Estimate of the Expense of the Ship Canal.

To the excavation of the canal at £30,000 per mile, seventy-eight miles, twenty-eight feet deep, and 150 feet wide £ *. d. top water 2,340,000 0 0

To excavating the basins, at the two extremities of the canal, with dock gates, brick and stone work, &c… . 100,000 0 0

To masons-, bricklayers, carpenters, smiths, foundry works to locks, bridges, tunnels, embankments, punts,

&c 474,000 0 0

D

To purchase of land, timber £. *. d.

bouses, goodwill, leases, &c. 250,000 0 0 To extra cutting from Dorking

toOckley 600,000 0 0

Contingencies, and for extra

cutting from Epsom to

Dorking, and from Arundel

to Chichester, and Spithead,

puddling, &,c 215,420 0 0

£3,979,420 0 0

A canal forming a junction between the rivers Forth and Clyde, was begun in 1768, and finished in 1790, when, on the 28th of July, a hogshead of the water of the Forth was poured into the Clyde as a symbol of their junction. This canal in its dimensions is much superior to any work of the same nature in England. It is thirty-five miles in length, in the course of which navigation the vessels are raised, by means ol twenty locks, to the height of 155 feet above the level-of the sea; proceeding afterwards on the summit of the country for eighteen miles, it then descends by nineteen other locks into the Clyde. It is carried over thirty-six rivers and rivulets, and two great roads, by thirty-eight aqueducts of hewn stone. By one of these, 400 feet in length, it passes the Kelvin, near Glasgow, at the height of 70 feet above the bed of the river in the valley below. It crosses the great road from Edinburgh to Glasgow by a fine aqueduct bridge, and is carried over the water of Logie by another aqueduct bridge, the arch of which is ninety feet broad. The great utility of this communication between the eastern and western seas to the trade of Great Britain and Ireland must be evident from the consideration that it shortens the distance between them by the shortest passage, that of the Pentland Firth, nearly 600 miles.

We have already entered so fully into the local history of canals in this country that our limits will permit but a brief notice of the great northern canal which unites the eastern and western oceans by Inverness and Fort-Wil- liam. In 1773 Mr. Watt was appointed by the trustees for certain forfeited estates in Scotland, to make a survey of the central highlands. Mr. Watt, in his report to that public body, recommended, amongst other improvements for the highlands, the formation of the Crinan Canal, which has long since been executed, and also of the Caledonian Canal, from Inverness to Fort-William.

In the Parliamentary Reports the Caledonian Canal is generally laid out in three districts, *viz.* the Clachnaharry or eastern district, comprehending the works from Loch Beauly to Fort-Augus- tus; the middle district, extending to the west end of Loch Lochy; and the Corpach orwestern district, from Loch Lochy to Loch Eil, or the western sea. With regard to the middle district, we observe that

hitherto the sum annually allowed for this work does not admit of every part being carried on with equal vigor. The works of this compartment have, therefore, been almost wholly confined to excavating the ground ;

it being of importance to have the eastern end opened to Loch Ness, and the western division to Loch Lochy, before much was done to the masonry of the central parts; in order to facilitate the transport of materials from the respective seas. This is now accomplished.

The extent of the navigation comprehended in the middle district is about twelve miles. The whole height, from the Beauly Firth or the east sea to Loch Oich, the summit level of the canal, is stated at about ninety-four feet ; and, as fifty-three feet of this has been overcome in rising to Lock Ness, it appears that about forty-one feet will form the' rise of the lockage of the middle district, while the fall on the western side to Loch Eil is only ninety feet. This is to be overcome by a chain of four locks at Fort-Augustus, and one at Callachie, nearly three miles westward, independently of the regulating lock within half a mile of Loch Oich. The lock at Callachie is curiously situate, being founded and built upon a dike or stratum of rock, called Grey Wacke by mineralogists, which runs across the moor, and is indeed the only piece of rock on this part of the line of the canal. It is just large enough for the site of the lock, and was preferred to a gravel as a foundation. This rock being very compact, it rendered an inverted arch for the lock unnecessary.

From Loch Lochy to Loch Eil the distance is about eight miles, on which the canal works may now be considered as finished, having kept pace with those of the eastern district. The works of this compartment, both in regard to masonry, excavation, and embankment, have been more expensive than those of the eastern division ; in particular, the deep cutting at Moy, Strone, and Muirshearlich, and excavating the sites of the locks and basin for shipping at Corpach iru rock. But, perhaps, if all the expense of the foundations and earth work on the Beanly Firth are taken into account, they may be found to have been as expensive, if not more so, than the blasting of rocks on the Corpach district.

In our progress towards the western sea-lock 'of Loch Eil, after passing through the aqueduct of the Lower Banavieburn, we reach the famous chain or suite consisting of eight locks, not unaptly termed 'Neptune's Staircase.' This majestic chain of locks was finished, excepting the

gates, in 1811. The cost of these locks may be stated at about £50,000. They occupy a range of 500 yards, and rise altogether about sixty feet perpendicular. The common void or cavity of the lock-chambers is forty feet in width, and the depth twenty feet ; the bottom, forming an inverted arch, gives the whole a very grand appearance, presenting the greatest mass of masonry any where to be found, as applicable to the purposes of a canal. After passing this interesting part of the work, the canal gets easily along Corpach Moss (to the House of Corpach, the former seat of the Camerons of Loch Eil). Here a doubled lock is situate, connected with a basin for shipping, measuring 250 yards in length by 100 yards in breadth, which joins the sea lock, and so communicates with the Western Ocean by two mounds projecting about

350 yards into Loch Eil, and completing the inland navigation of the Caledonian Canal from sea to sea.

It appears, from the the first report of the commissioners for making the Caledonian Canal, that the sum of £6052 10s. lOJd. had been expended in the preparatory measures for this great undertaking. In the session of parliament, 1801, another act was passed, entitled ‘An Act for making further Provision for making and maintaining an Inland Navigation, commonly called the Caledonian Canal, from the eastern to the western Sea, by Inverness and Fort William in Scotland.’ By this additional act a further provision of £50,000 was made for this undertaking. In the month of June,1804, the commissioners resolved that Mr. Jessop should again visit the line of the intended navigation in concert with Mr. Telford, that they might jointly inspect the progress of the works already commenced, and re-examine all the particulars of the former sur-vey ; that they might determine the position of each lock on the whole line of the canal, and, as far as possible, fix the situation, dimensions, and .construction of the bridges, culverts, and other necessary works ; and that they might take into consideration the manner in which it would be most convenient to connect the line of the canal with the several lochs or lakes forming

part of the intended navigation ; and also fijc and arrange the price of labor, and the mode in which the several works would be most advantageously let or contracted for.

During the year 1803 the operations were merely of a preparatory nature, and the number of workmen did not exceed 150. But in the year following they were increased to upwards of 900, when it became necessary to appoint resident engineers, particularly at the extremities of the line, to which the first works were entirely confined. For this highly important charge Mr. Matthew Davidson, who had acquired much experience at the works upon the Elsemere Canal, particularly at the great aqueduct of Ponty-cycelte in Denbighshire, was appointed to the eastern division, and Mr. John Telford took charge at the western end.

The Grand Canal, in Ireland, was commenced soon after the year 1753. The general direction of this canal is nearly west, for sixty-one miles and a half, through Dublin, Kildare, and King's counties : it passes a low part of the grand ridge of Ireland, on the Bog of Allen. Its objects are, the supply of Dublin with coals, &c. ; the varied produce of the banks of the Shannon ; and opening an inland communication through the country. It commences in a grand basin in Dublin (which connects with the Liffey River and the new docks), and terminates in the Shannon River at Tarmonbury, near Moy's Town ; it has collateral branches to the Boyne River at Edenderry, to the Barrow River at Monestraven, and also at PorUrlington ; there are also branches to Naastown and to Johnstown. This canal is five feet deep ; the locks are eighty feet long and sixteen wide in the clear, and are built of hewn stone. In the year 1770 this canal had proceeded from Dublin into the Bog of Allen, when,

owing to mismanagement, it stood still for several years; and it was not until the beginning of 1804 that the whole line was finished and opened. The sums of the public money which have been granted by the parliaments to aid this work are immense ; between 1753 and 1771 they amounted to £78,231.

The French at present have many fine canals : that of Briare was begun under Henry IV., and finished under the direction of cardinal Riche-lieu in the reign of Louis XIII. This canal makes a communication betwixt the Loire and the Seine by the river Loing. It extends eleven French great leagues from Briare to Montargis It enters the Loire a little above Briare, and terminates in the Loing at Cepoi.

There are forty-two locks on this canal.

The canal of Orleans, for making another communication between the Seine and the Loire, was begun in 1675, and finished by Philip of Orleans, regent of France, during the minority of Louis XV., and is furnished with twenty Jocks. It goes by the name of the 4 Canal of Orleans ; ‘ but it begins at the village of Combleux, which is a short French league from the town of Orleans.

But the greatest and most useful work of this kind is the junction of the ocean with the Mediterranean by the canal of Languedoc. It was proposed in the reigns of Francis I. and Henry IV., and was undertaken and finished under Louis XIV. It begins with a large reservoir 4000 paces in circumference, and twenty-four feet deep, which receives many springs from the mountain Noire. This canal is about sixty-four leagues in length, is supplied by a number of rivulets, and is furnished with 104 locks, of about eight feet rise each. In some places it passes over bridges of vast height ; and in others it cuts through solid rocks for 1000 paces. At one end it joins the river Garonne near Tholonse, and terminates at the other in the lake Tau, which extends to the port of Cette, It was planned by Francis Riquet in 1666, and finished before his death, which happened in 1680.

Of the canal of Languedoc, M. Say remarks in one of his recent works, that it cost £1,250,000 sterling, and that its annual returns at present do not exceed £15,000 ; that is, less than 1J per cent, on the capital expended.

In the Dutch, Austrian, and French Netherlands, there is a very great number of canals; that from Bruges to Ottcnd carries vessels of 200 tons.

The Chinese have also a great number of canals; that which runs from Canton to Pekin extends about 825 miles in length, and was executed about 800 years ago.

In Spain the canal at Zaragoza begins at Segovia sixteen leagues north of Madrid, and is separated from the southem canal by the chain of mountains at Guadazama. From Segovia, quitting the Eresma, it crosses the Pisuerga near Valladolid, at the junction of that river with the Duero ; then leaving Palencia, with the Carrion to the right, till it has crossed the nver below Herrera, it approaches once more the

Pisuerga; and near Herrera, twelve leagues of Heinosa, there is a fall of 1000 Spanish feet. At Reiuosa is the communication witn the canal of Arragon, which unites the Mediterranean to the Bay of Biscay; and from Reinosa to the Suanzes, which is three leagues, there is a fall of 3000 feet. Above Palencia is a branch going westward, through Beceril de Campos, Rio Seco, and Benevente, to Zamora, making this canal of Castille, in its whole extent, 140 leagues.

The Holstein Canal, which joins the Baltic to the German Ocean, is a most important national work. The idea of this junction was conceived' under Frederick IV., duke of Schleswig Holstein, but was not undertaken till the Russian government agreed to co-operate in promoting its success. It was begun in the spring of the year 1777, and was carried on by contractors, who engaged, for a certain yearly sum, to complete a certain portion of it. This canal, the whole length of which, from Kieler-Ford to Rcndsburg, is equal to 10,650 poles of sixteen feet each, proceeds on a level with the Baltic to the first lock at Holtenach, where it rises eight feet six inches. It then proceeds to the second lock at Knop, 745 poles distant from-Kieler- Ford, which has a rise of eight feet six inches, and then continues to near Suensdorf, where the third lock is situated, having a rise of the same height. Here the upper canal begins, and proceeds for the distance of 2413 poles, between Schwartenbec and Wittenbec to the fourth lock at the Upper Eyder, near Schinkel. This upper canal, which serves as a reservoir, has an influx of water from the neighbouring lakes sufficient for the purposes of navigation, and is twenty-five feet six inches higher than the level of the Bal-tic. At the fourth lock the canal falls seven feet four inches two lines ; proceeds 1438 poles in the Eyder to the fifth lock at Nedderholten, where there is also a fall of the same height ; and, having continued bySeestede to Steinwarp, 2901 poles, little more art is employed, because the Eyder between that place and Rendsburg has almost naturally the sufficient depth and breadth. A sixth lock is constructed at Rendsburg, as the tide flows up there in the Eyder, and makes, with the ebb, a difference of one foot seven inches. The breadth of this canal at the bottom is fifty-four feet, and at the surface of the water ninety feet. It is nine feet deep, and navigable for ships of from 150 to 160 tons burden. The locks, therefore, between the gates are 100 feet in length and twenty-seven feet in breadth. Along the banks there is a path ten feet broad, and another of twelve feet for the horses which are employed to draw the vessels.

Inland navigation has not been entirely unat- •tended to in Sweden. The canal of Trolhaetta has been worked with great labor, assisted by the powerful force of gunpowder, through the midst of rocks. The object was to open a communication between the North Sea and the Lake Wenner by forming a new channel where the Gotha is rendered unnavigable by cataracts. The length of this canal, in which there are nine locks, is nearly three miles, the width thirty-six feet, and

the depth in some places above fifty. ‘ It is not easy,’ says a late judicious traveller, ‘for any one to form any idea of the difficulties that were to be surmounted in the formation of this wonderful canal, unless he were an eye-witness. It was undertaken and begun by Charles Xtl.; formed part of a grand plan meditated by Gustavus Vasa, and attempted by some of his successors, for joining the Baltic from the North Sea, by means of a communication cut through the kingdom. If a canal should be extended by the Lake of Wenner, by Oerebo, to the Lake of Hielmar, the Swedes may then, by a conjunction of this lake with that of Maelar, through the sluices of Arboga, transport all kinds of merchandise in the same vessel from Gothenburg to Stockholm. Thus a passage would be opened between the North Sea and the Baltic; and, among other advantages, the duties of the Sound would be avoided. The canal of Trolhaetta may justly be considered as, in some respects, characteristical of the Swedish nation, for it represents them as they are, prone to the conception of grand enterprises, and distinguished by mechanical invention.

The Great American Canal was begun in 1817, and is the longest canal in existence, and though upon a small scale, as to breadth and depth, is, we believe, in point of pecuniary outlay, the greatest work of the kind ever executed. It is 335 miles in length, forty feet wide at the surface of the water, twenty-eight at the bottom, and four feet deep, and will cost about five millions of dollars (£1,100,000), or £3,000 per mile on an average. Such a vast undertaking, completed in the short period of seven years, by a state (New York) with 1,368,000 inhabitants, affords a striking proof of the energy and enterprise generated by free institutions. It is a work worth a thousand Escurials and Versailleses, because it creates wealth, while these only consume it ; and it is a monument of public spirit and national prosperity, while these are only monuments of idle magnificence, vain glory, and despotic oppression.

The canal, which extends from Black Rock, at the east end of Lake Erie, to Albany on the Hudson, will render their river the chief, almost

the sole outlet, and New York the great emporium of a fertile country extending along the lakes, much larger than the British Isles, and fast filling with inhabitants. Proceeding eastward from Lake Erie the canal rises forty-eight feet, and from the summit level falls 601 feet to the Hudson, making an aggregate rise and fall of 649 feet, which is effected by seventy-seven locks. Two levels or reaches extend over sixty-five and seventy miles without lockage, a circumstance, perhaps, without a parallel, except in China. The stimulus it gives to improvement is already seen in the villages and towns which are springing up with astonishing rapidity along its whole course. Passage-boats and batteaux already ply on the canal. The former, which are generally of a size to carry ninety passengers, travel at the rate of 100 miles in twenty-four hours, and the charge is but three halfpence or two pence per mile.

INLAP'IDATE, v. a. Lat. in and lapido. To make stony ; to turn to stone.

Some natural spring waters will inlapidate wood ; so that you shall see one piece of wood, whereof the part above the water shall continue wood, and the part under the water shall be turned into a kind of gravelly stone. Bacon.

fNLAY', v. a. & n. s. To diversify with different bodies inserted into the ground or substratum ; to variegate : inlay, wood formed for inlaying.

They are worthy To inlay heaven with stars.

Shakspeare. Cymbeline. Look, how the floor of heaven Is thick inlaid with patens of bright gold.

A sapphire throne, inlaid with pure Amber, and colours of the show'ry

arch.

Milton. Sea girt isles,

That like to rich and various gems inlay The unadorned bosom of the deep. Id.

Under foot the violet, Crocus, and hyacinth, with rich inlay Broidered the ground. Id.

Here clouded canes ‘midst heaps of toys are found, And inlaid tweezer-cases strow the ground. Gay.

This gorgeous arch, with golden worlds inlay’d, Built with divine ambition.

Young’s Night Thoughts.

INLAW, v. a. In and law. To clear of outlawry or attainder.

It should he a great incongruity to have them to make laws, who themselves are not inlawed.

Bacon.

IN’LET, n.s. In and let. Passage; place of ingress ; entrance.

Doors and windows, inlets of men and of light, I couple together ; I find their dimensions brought under one. Wotton.

She through the porch and inlet of each sense Dropt in ambrosial oils till she revived. Milton.

Inlets among the broken lands and islands.

Etta.

I desire any one to assign any simple idea, which is not received from one of these inlets.

Locke.

A fine bargain indeed, to part with all our commodious ports, which the greater the inlets are so much the better, for the imaginary pleasure of a straight shore. Bentley.

IN’LY, adj. & adv. 1 From in. Internal:

IN’MATE, n. s. ? within; secretly in the

IN’MOST, adj. J heart. Inmate, one who

dwells in the same house with others. Inmost,

deepest within ; remotest from the surface.

And they were inly glad to fille his purse, And maken him gret festes at the hale.

Chaucer. The Freres Tale. Her heart with joy unwonted inly swelled, As feeling wond’rous comfort in her weaker eld.

Spenser.

‘Tis you must dig with mattock and with spade, And pierce the inmost centre of the earth.

Shakspeare.

Did’st thou but know the inly touch of love Thou would’st as soon go kindle fire with snow, As seek to quench the fire of love with words.

fd.

I’ve inly wept,

Or should have spoke ere this. Id. Tempest. Inmates are those that be admitted to dwell for their money jointly with another man, though in

several rooms of his mansion-house, passing in and out by one door. Comet.

So spake the enemy of mankind, inclosed In serpent, inmate bad ! and toward Eve Addressed his way. Milton.

There he dies, and leaves his race Growing into a nation ; and now grown, Suspected to a sequent king, who seeks To stop their overgrowth as inmate guests Too numerous. Id. Paradise Lost.

Whereat he inly raged, and, as they talked, Smote him into the midriff with a stone, That beat out life. Id.

These growing thoughts, my mother soon perceiving By words at

times cast forth, inly rejoiced. Id.

Home is the sacred refuge of our life, Secured from all approaches but a wife : If thence we fly, the cause admits no doubt, None but an inmate foe could force us out.

Dry den.

The soldiers shout around with generous rage ; He praised their ardour : inly pleased to see His host. Id. Knight's Tale.

Rising sighs, and falling tears, That show too well the warm desires, That silent, slow, consuming fires, Which on my inmost vitals prey, And melt my very soul away.

Addison on Itoly.

Comparing the quantity of light reflected from the several rings, I found that it was most copious from the first or inmost, and in the exterior rings became less and less. Newton.

He sends a dreadful groan, the rocks around Through all their inmost hollow caves resound.

Pope.

I go into the inmost court. Gulliver's Travels. INN, n. s., v. n. & v. a.) Sax. inn ; Goth. INN'HOLDER, n. s. ˆinne. A house of en—

INN'KEEPER, n. s. j tertainment for travellers; a house where students are boarded and taught, whence we still call the colleges of com-mon law, inns of court ; anciently used for town houses where great men resided when they attended court : inn, to take or give a temporary lodging. Innholder and innkeeper, the person who has an inn and keeps lodgings and provisions for travellers.

Alia goth to his inne ; and, as him ought, Arraied foi this in every wise, As ferforth as hir coming may suffice.

Chaucer. The Man of Lawes Tale Palmer, quoth he, death is an equal doom To good and bad, the common inn of rest ;

But, after death, the trial is to come, When best shall be to them that lived best.

Faerie Queene. Now day is spent, Therefore with me ye may take up your inn.

Id.

The West, that glimmers with some streaks of day, Now spurs the lated traveller apace To gain the timely inn. Shakspeare. Macbeth.

Go some and pull down the Savoy ; others to the inns of court : down with them all. fd.

He that ears my land, spares my team, and gives me leave to inn the crop. Id.

Howsoever the laws made in that parliament did bear good fruit, yet the subsidy bare a fruit that proved harsh and bitter, all was inned at last into the kind's barn. ' Bacon's Henry Vlˆ

INNS.

In thyself dwell ; Inn any where : continuance inaketh hell.

Donne.

Clergymen must not keep a tavern, nor a judge be an innkeeper. Taylor's Rule of Holy Living.

How all this is but a fair inn, Of fairer guests, which dwell within.

Sidney.

Like pilgrims to the appointed place we tend ; The world's an inn, and death the journey's end.

Dry den.

One may learn more here in one day, than in a year's rambling from one inn to another. Locke.

Mow clover or rye-grass, and make it fit to inn.

Mortimer.

We were not so inquisitive about the iwn as the innkeeper ; and, provided our landlord's principles were sound, did not take any notice of the staleness of his provisions. Addison.

A factious innkeeper was hanged, drawn, and quartered. Id. Freeholder.

INNS arc licensed and regulated by justices of the peace, who oblige the landlord to enter into recognisances for keeping good order. If a per-son who keeps a common inn refuses to receive a traveller into his house as a guest, or to find him victuals and lodging on his tendering a reasonable price for them, he is liable to an ac-tion of damages, and may be indicted and fined at the king's suit. ' The rates of all commodities sold by innkeepers,' says Blackstone, ' according to our ancient laws, may be assessed ; and innkeepers not selling their hay, oats, beans, &c., and all manner of victuals, at reasonable prices, without taking any thing for litter, may be fined and imprisoned, &c., by 21 Jac. I. c. 21. Wher° an innkeeper harbours thieves, persons of infamous character, or suffers any disorders in his house, or sets up a new inn where there is no need of one, to the hindrance of ancient and well-governed inns, he is indictable and finable : and, by statute, such inn may be suppressed. Action upon the case lies against an innkeeper, if a theft he committed on his guest by a servant of the inn, or any other person not belonging to the guest; though it is otherwise where the guest is not a traveller, but one of the same town or village, for there the innkeeper is not chargeable; nor is the master of a private tavern answerable for a robbery committed on his guest : it is said that even though the travelling guest does not deliver his goods, &c., into the innkeeper's possession, yet, if they are stolen, ne is chargeable. An innkeeper is not answerable for any thing out of his inn, but only for such as are within it ; yet where he, of his own accord, puts the guest's horse to grass, and fhe horse is stolen, he is answerable, he not having the guest's orders for putting such horse to grass. The innkeeper may justify the stopping of the horse, or any thing of his guest, for his reckoning, and may retain the same till it be paid. Where a parson brings his horse to an inn, and leaves him in the stable, the innkeeper may detain him till such time as the owner pays for his keeping; and, if the horse eats out as much as he is worth, after a reasonable appraisement made, he may sell the horse and pay himself; but when a guest brings several horses to an inn, and afterwards takes them all away except one, this horse so left

may not be sold for payment of the debt for the others ; for every

horse is to be sold, only to make satisfaction for what is due for his own meat.

INNS also signify colleges of municipal or common law : the old English word for houses of noblemen, bishops, and others of extraordinary note, being of the same signification with the French word hotel.

INNS OF CHANCERY were probably so called because anciently inhabited by such clerks as chiefly studied the forming of writs, which regularly belonged to the cursitors, who are officers of chancery. The first of these is Thavie's Inn, begun in the reign of Edward III., and since purchased by the society of Lincoln's Inn. Besides this, there are New Inn, Symond's Inn, Clement's Inn, Clifford's Inn (anciently the house of lord Clifford), Staple Inn (belonging to the merchants of the staple), Lion's Inn (anciently a common inn with the sign of the lion), Furnival's Inn, and Bernard's Inn, These were formerly preparatory colleges for younger students ; and many were entered here before they were admitted into the inns of court. Now they are mostly taken up by attorneys, solicitors, &c. They all belong to some of the inns of court, who formerly used to send yearly some of their barristers to read to them.

INNS OF COURT are so called because the students there are to serve and attend the courts of judicature ; or because anciently these colleges received none but the sons of noblemen and gentlemen, who were to be qualified to serve the king in his court ; as Fortescue affirms. In his time, he says, there were about 2000 students in the inns of court and chancery, all of whom were filii nobilium, or gentlemen born. But this custom has gradually fallen into disuse ; so that, in the reign of queen Elizabeth, Sir Edward Coke does not reckon above 1000 students, and the number at present is considerably less ; for which judge Blackstone assigns the following reasons : \ . Because the inns of chancery, being now almost totally filled by the inferior branches of the profession, are neither commodious nor proper for the resort of gentlemen of any rank or figure ; so that there are very rarely any young students entered at the inns of chancery. 2. Because in the inns of court all sorts of regimen and academical superintendence, either with regard to morals or studies, are found impracticable, and therefore entirely neglected. 3. Because persons of birth and fortune, after having finished their usual courses at the universities, have seldom leisure or resolution sufficient to en-ter upon a new scheme of study at a new place of instruction ; wherefore few gentlemen now resort to the inns of court, but such for whom the knowledge of practice is absolutely necessary, that is, who are intended for the

profession. These inns of court, justly famed for the production of men of learning in the law, are governed by masters, principals, benchers, stewards, and other officers ; and have public halls for exercises, readings, &c., which the students are obliged to attend and perform for a certain number of years, before they can be admitted to plead at the bar. These societies have not, however, any judicial

authority over their members ; but instead of this they have certain orders among themselves, which have by consent tlic force of laws. For lighter offences persons are only excommoned,or put out of commons; for greater, they lose their chambers, and are expelled the college; and, when once expelled out of one society, they are never received by any of the others. The gentlemen in these societies may be divided into benchers, outer barristers, inner barristers, and students. The four principal inns of court are, the Inner Temple and Middle Temple, heretofore the dwelling of the knights templars, purchased by some professors of the common law about 200 years ago; Lincoln's Inn and Gray's Inn, anciently belonging to the earls of Lincoln and Gray. The other inns are the two Serjeants' Inns.

INN, a large river in the south of Germany. The course is chiefly in a north-east direction, having its source in the Swiss canton of the Grisons, where it forms the romantic valleys called the Upper and Lower Engadine. It enters the Tyrol at Martinsbruck,and in a course of 250 miles traverses that province from west to east, and forms for some distance the boundary between it and Bavaria; enters the Bavarian circle of the Iser, and afterwards receives the Salza on the borders of Upper Austria. Here it separates Austria and Bavaria, till its course terminates at Passau, in its junction with the Danube. At Passau it is nearly 900 feet wide.

INNATE', adj. -I Fr. inne. ; Lat. innatus.

INNA'TED, adj. > Inborn ; natural ; not su—

INNATE'NESS, n. s. j peradded. Innated is improper

The Drumian hath been cried up for an innated integrity, and accounted the uprightest dealer on earth. Howd.

I live,

But live to die ; and living see nothing

To make death hateful, save an innate clinging,

A loathsome yet all invincible

Instinct of life, which I abhor as I

Despise myself, yet cannot overcome —

And so I live. Milton.

With eloquence innate his tongue was armed ; Though harsh the precept, yet the people charmed.

Dry den.

Mutual gravitation, or spontaneous attraction, cannot possibly be innate and essential to matter.

Bentleij.

Yet well thy soul hath brooked the turning tide With that untaught innate philosophy, WThich, be it wisdom, coldness, or deep pride, Is gall and wormwood to an enemy,

Byron. Childe Harold.

INNAVIGABLE, adj. Lat. innavipabilis, Not to be passed by sailing.

If you so hard a toil will undertake, As twice to pass the innavigable lake.

Dryden.

IN’NER, adj. > From in. Interior; not IN’NERMOST, adj. $ outward ; remotest from the outward part : more correctly, inmost.

But th’ elfin knight with wonder all the way Did feed his eyes, and filled his inner thought.

S\ wiser .

This attracts the soul, Governs the inner man, the nobler part ; That other o'er the body only reigns. Milton

The kidney is a conglomerated gland, which is to be understood only of the outer part ; for the inner part, whereof the papillae are composed, is muscular.

Giew.

Many families are established in the West Indies, and some discovered in the inner parts of America. Addison's Spectator.

The reflected beam of light would be so broad at the distance of six feet from the speculum, where the rings appeared, as to obscure one or two of the innermost rings. Newton.

Thus, seized with sacred fear, the monarch prayed ; Then to his inner court the guests conveyed. Pope.

IN'NINGS, n. s. Lands recovered from the sea.

INNISFALLEN, an island of Ireland, in the lake of Killarney, county of Kerry, and province of Munster : in which are the ruins of a very ancient monastery, founded by St. Fiuian, the patron saint of these parts, to whom the cathedral of Aghadoe is also dedicated. The remains o. this abbey are very extensive, its situation romantic and retired. Upon the dissolution of religious houses its possessions were granted to captain Robert Collam. The island contains about twelve acres, is agreeably wooded, and has a number of fruit trees. There was formerly a chronicle kept in this abbey, which is often cited by Sir J. Ware and other antiquaries, under the title of the Annals of Innisfallen. Sir J. Ware had a copy of them, of which there is an imperfect transcript among the MSS. of the library of Trinity College, Dublin. Bishop Nicholson, in his Irish historical library, informs us that the duke of Chandos had a complete copy of them down to 1320 in his possession.

INNISIIANNON, a town of Ireland, in the county of Cork, Munster, 134 miles from Dublin ; situated on the Bandon, six miles from Kinsale. It has a charter school for above thirty boys. A considerable linen manufactory, particularly of bed-ticking for the English market, has of late years been established here, which has considerably increased the trade and population. The river is navigable to Collier's Quay, about half a mile below the town. On the west side of the town

is a stone bridge. This place was formerly walled, and of some note, as appears by the foundations of several castles and large buildings discovered in it. The town of Innishannon, together with its ferry, was granted to Philip de Barry by Henry V. by letters patent in 1412. It has two fairs.

INNISKILLING, a borough, market, and post town of Ireland, in the county of Fermanagh, Ulster, lying between three lakes. It is about twenty-four miles east of Ballyshannon, and one hundred north-west of Dublin. It sends one member to the British parliament. Its inhabitants distinguished themselves in several engagements in the wars of Ireland at the Revolution, out of which a regiment of dragoons, bearing the title of the Inniskilliners, was mostly formed. They form the sixth regiment of dragoons in the British army.

INN

INNOCENCE, n. 5 IN'NOCENCY, n. t. IN'NOCKM, adj. & n. $ TN'NOCENTLY, adv. INNOC'UOUS, adj. INNOC'UOUSLY, adv. INNOC'UOUSNESS, n. s. INNOX'IOUS, adj. INNOX'IOUSLY, n. *. INNOX'IOUSNESS, n.s. _

"^ French, innocence ;

\ Lat. m and noceo, innocens. Purity; un-tainted integrity ; freedon: from guilt; harmlessness ; simplicity of heart ; sometimes with some degree of weakness; without mis-

chievous intent. Innocent, one free from guilt or harm ; a natural ; an ideot. Innocuous, harmless iu its effects. Innoxious, pure from crimes ; free from mischievous effects ; without injurious tendency.

All that may confound Vertue and innocence thurgh thy malice Is bred in thee as nest of every vice.

Chaucer. The Man of Lames Tale. Grisildi of this (God wot) ful innocence, That for hire shapen was all this array, — To fetchen water at a well is went, And cometh home as sone as ever she may.

Id. The Clerkes Tale. And whan this Walter saw hire patience, Hire glad chere, and no Malice at all, And he so often hadde hire done offence, And she, ay, sade and constant as a wall, Continuing ever hire innocence over all, — This sturdy markis gan his herte dresse To rewe upon hire wifly stedefastnesse.

Chaucer. The Clerkes Tale. Innocent Paper ! whom too cruell hand Did make the matter to avenge her yre ;

And, ere she could thy cause well understand Did sacrifice unto the greedy fire.

Spenser. Sonnet. So pure an innocent as that same lamb.

Id. Faerie Queene. Innocents are excluded by natural defects.

Hooker.

It will help me nothing

To plead mine innocence ; for that dye is on me Which makes my whit'st part black. Shakspeare.

If truth and upright innocency fail me, I'll to the king my master. Id. Henry IV.

Thou hast killed the sweetest innocent, That e'er did lift up eye. Id. Othello.

If murthering innocents be executing, Why, then thou art an executioner.

Id. Hen-y VI. Something

You may deserve of him through me and wisdom, To offer up a weak, poor, innocent lamb, To appease an angry god. Id. Macbeth.

I urge this childhood proof, Because what follows is pure innocence.

Shakspeare.

Good madam, keep yourself within yourself : The man is innocent. Id. Antony and Cleopatra. The blow which shakes a wall, or beats it down, and kills men, hath a greater effect on the mind than that which penetrates into a mud wall, and doth little harm ; for that innocuovmeu of the effect makes, that, although in itself it be as great as the other, yet 'tis little observed. Digby on Bodies.

Innoxious flames are often seen on the hair of men's heads and horses' manes. Digby.

Balls at his feet lay innocently dead. Cowley.

Simplicity and spotless innocence. Milton.

Animals that can innoxiotisly digest these poisons, become antidotal to the poison digested.

Browne's Vulgar F.rroiirs

0 INN

We may safely use 'purgatives, they being benign, and of iniioiinus qualities. Id.

Whether quails, from any peculiarity of constitution, do innocently feed upon hellebore, or rather sometimes but medically use the same. Browne.

What comfort does overflow the devout soul, from a consciousness-of its own innocence and integrity !

Tillotson.

We laugh at the malice of apes, as well as at the innocence of children. Temple.

The peasant, innocent of all these ills,

With crooked ploughs the fertile fallows tills,

And the round year with daily labour fills.

Dry den.

The most dangerous poisons, skilfully managed, may be made not only innocuous, but of all other medicines the most effectual. Grew.

The air was calm and serene ; none of those tumultuary motions and conflicts of vapours, which the mountains and the winds cause in ours ; 'twas suited jto a golden age, and to the first innocency of nature. Burnet's Theory.

The humble and contented man pleases himself innocently and easily, while the ambitious man attempts to please others sinfully and difficultly.

South. The spear Sung innocent, and spent its force in air.

Pope.

Stranger to civil and religious rage, The good man walked innoxious through his age.

Id.

Sent by the better genius of the night, Innoxious gleaming on the horse's mane, The meteor sits. Thomson's Autumn.

Sweet harmonist ! and beautiful as sweet ! And young as beautiful ! and soft as young ! And gay as soft ! and innocent as gay !

Young's Night Tlioughts. Narcissa. Dear lovely bowers of innocence and ease. Seats of my youth, when every sport could please, How often have I loitered o'er thy green, When humble happiness endeared each scene !

Goldsmith's Deserted Village. But many a crime deemed innocent on earth Is registered in heaven, and these no doubt Have each a reward, with a cause annexed.

Cowper.

There he long had dwelt, There his worn bosom and keen eye could melt O'er the innocence of that sweet child. His only shrine of feelings undented.

Byron. Don Juan.

And girls of sixteen are thus far Socratic, But innocently so, as Socrates. Id.

INNOCENT I., was born in Albany, and elected Pope A. D. 402. He condemned the Novatians and Pelagians; and died at Ravenna in 417. Some of his Epistles are extant.

INNOCENT III., whose name was originally Lothario Conti, was of a noble family, and born at Anagni in 1161. His learning procured him a cardinalship ; and he was chosen pope in 1198. He encouraged the Crusades; persecuted the Albigenses ; put the kingdom of France

under an interdict ; and excommunicated John king of England. He died in 1216; andhis works were printed at Cologne in 1575.

INNOCENT V., a Dominican friar, was archbishop of Lyons, next a cardinal, and at last elected pope, in 1276, but died a few months after. His works on religion have been printed.

INNOCENT VI., a native of France, was bishop

of Ostia, and a cardinal ; and in 1352 was promoted to the papacy. He was esteemed a man of great wisdom and liberality. His letters have been printed. He died in 1362.

INNOCENTS' DAY, a festival of the Romish Church, observed on December 28th, in memory of the massacre of the innocent children by the command of Herod. The Greek church in their calendar, and the Abyssinians cf Ethiopia in their offices, commemorate 14,000 infants on this occasion.

It was anciently the custom to have dances in the churches on this day, wherein were children who represented bishops, by way of derision, as some suggest, of the episcopal dignity ; though others, with more probability, suppose it done in honor of the innocence of childhood.

By a canon of the council of Cognac, held in 1260, these were expressly forbidden; but they were not wholly suppresed in France before the year 1444, when the doctors of the Sorbonne addressed a spirited letter on this subject to all the bishops of the kingdom.

INNOMINATI, nameless, a title by which the academists of Parma distinguish themselves. Most cities in Italy have an academy, and each has its,' proper name. Thus those at Parma entitle themselves Gli innominati, as if it was their character to have no name at all.

IN'NOVATE, v. a. \ Fr. mnover ; Lat. m- ' INNOVA'TION, n. s. > novo. To bring in some—

INNOVA'TOR, n. s.) thing unknown before; to change by introducing novelties. Innovation, change. Innovator, an introducer of novelties.

The love of things ancient doth argue stayedness ; but levity and want

of experience maketh apt unto innovations. Hooker.

I attach thee as a traitorous innovator, A foe to the publick weal.

Shakspeare. Coriolanus.

He that will not apply new remedies, must expect new evils ; for time is the greatest innovator : and if time of course alter things to the worse, and wisdom and council shall not alter them to the better, what shall be the end 1 Bacon's Essays.

It were good that men in innovations would follow the example of time itself, which indeed innovateth greatly, but quietly and by degrees. Id.

Men pursue some few principles which they have chanced upon, and care not to innovate, which draws unknown inconveniences. Bacon.

Former things

Are set aside like abdicated kings ; And every moment alters what is done, And innovates some act till then unknown.

Dryden.

Every man cannot distinguish betwixt pedantry and poetry ; every man therefore is not fit to innovate. Id.

He counsels them to detest and persecute all innovators of divine worship. South.

From his attempts upon the civil power, he proceeds to innovate God's worship. Id.

Curse on the innovating hand attempts it, Remember him the villain righteous Heaven In thy great day of vengeance !

Rowe's Jane Shore.

Great changes may be made in a government, yet the form continue ; but large intervals of time must pass between every such innovation, enough to make it of a piece with the constitution. Swift.

INNUEN’DO, n. *. Lat. innuendo from tn-nuo. An oblique hint.

As if the commandments, that require obedience and forbid murder, were to be indicted for a libellous innuendo upon all the great men that come to be concerned. L’Estrange.

Mercury, though employed on a quite contrary er-rand, owns it a marriage by an innuendo. Dryden.

Pursue your trade of scandal-picking, Your hints that Stella is no chicken ; Your innuendoes when you tell us, That Stella loves to talk with fellows. Swift.

INNVIERTEL (i.e. the Quarter of the Inn), a district or circle of Upper Austria, comprising the territory lying between the Danube, the Inn, and the Salza. It was ceded to Austria by Bavaria in the treaty of Teschan in 1779; restored to Bavaria in 1810, but only retained till 1815. In that year also that part of the quarter of the Hausruck which Buonaparte had compelled Austria to cede to Bavaria was restored for an equivalent, and annexed to this circle ; so that at present its extent is 1270 square miles. The chief towns are Braunau and Scharding. The southern division, lying towards the duchy of Salzburg, is intersected by well-wooded chains of mountains ; and the tracts on the banks of the Danube and the Inn are fertile in wheat, barley, flax, and pasturage. Inhabitants about 200,000.

INNUMERABLE, adj. ~\ Fr. innumerable ;

INNUMERABLY, adv. >Lat. tnandnumma.

IN NUMEROUS, adj. j Not to be counted

for multitude ; without number.

Ther was ner tresour, of terrestial richesse,— Nor precious stones, rekened innumerabell, — To be of comparison to your high godenesse ; Above al cretures, to me most amiable.

Chaitcer. The Craft of Love’s. You have sent innumerable substance To furnish Rome, and to prepare the ways You have for dignities.

Shakspeare. Henry VIII

‘Twould be some solace yet, some little cheering, In this close dungeon of innumerous boughs.

Milton.

Cover me ye pines, Ye cedars with innumerable bougns Hide me, where I may never see them more.

Id.

Faithful found

Among the faithless, faithful only he, Among innumerable false, unmoved, Unshaken, unseduced, unterrifyed, His loyalty he kept, his love, his zeal. Id.

In lines, which appear of an equal length, one may be longer than the other by innumerable parts.

Locke.

I take the wood,

And in thick shelter of innumerous boughs, Enjoy the comfort gentle sleep allows.

Pope’s Odyssey.

INO, in fabulous history, a daughter of Cad-mus and Harmonia, who nursed Bacchus. She married Athamas king of Thebes, after he had divorced Nephele, by whom he had two children Phryxus and Ilelle. Ino became mother of Melicerta and Learchus : and soon conceived an implacable hatred against the children of Nephele, because they were to ascend the throne in preference to her own. Phryxus and Helle, inform-

ed of Ino's machinations, escaped to Colchis on a ram with a golden fleece. Juno, jealous of Ino's prosperity, sent the fury Tisiphone to the house of Athamas ; who so maddened him that, taking Inoto be a lioness and her children whelps, he pursued her and dashed her son Learchus against a wall. Ino, flying from his fury, threw herself ftom a high rock into the sea with Melicerta in her arms. Neptune pitied her fate, and made het a sea deity, afterwards called Leuco-thoe. Melicerta became also a sea god, worshipped by the name of Palemon.

INOA, festivals in memory of Ino, celebrated yearly with sports and sacrifices at Corinth, at Megara (where she was first worshipped), and in Laconia. It was usual at the celebration to throw cakes of flour into a pond, which, if they sunk, were presages of prosperity, but of adversity if they swam on the surface.

INOCARPUS, in botany : a genus of the monogynia order, and decandria class of plants. COR. funnel-shaped : CAL. bifid: the stamina are placed in a double series ; the fruit a monospermous plum. Species one only ; I. edulis a na-tive of the South Sea Islands and of Amboyna.

INOC'ULATE, v. n. & v. a.) Lat. in and ocu—

INOCULA'TION, n. s. > lus, innculatio.

INOC'ULATOR, n. s. f To propagate

any plant by inserting its bud into another stock ; to practise inoculation : inoculation is practised upon all sorts of stone fruit, and upon oranges and jasmines. The practice of transplanting the small-pox, by infusion of the matter from ripened pustules into the veins of »he uninfected, in hopes of procuring a milder sort than what frequently comes by infection. — Quincy. The communication of the cow-pock by inoculation is called vaccination : inoculator, one that practises inoculation of trees, or propagates small-pox or cow-pock by inoculation.

Virtue cannot so inoculate our old stock, but we «hall relish of it. Shakspeare. Hamlet.

Nor are the ways alike in all How tc ingraff, how to inoculate.

May's Virgil.

Thy stock is too much out of date, For tender plants t' inoculate. Cleaveland.

Where lilies, in a lovely brown, Inoculate carnation. Id.

In the stem of Klaiana they all met, and came to be ingrafted all upon one stock, most of them by inoculation. Howel.

But various are the ways to change the state, To plant, to bud, to graft, to inoculate. Dryden.

Now is the season for the budding of the orange-tree : inoculats therefore at the commencement of this month. Evelyn.

Had John a Gaddesden been now living, he would have been at the head of the inoculators. .

Friend's History of Physick.

It is evident, by inoculation, that the smallest quantity of the matter, mixed with the blood, produceth the disease. Arbuthnot.

INOCULATION, in gardening, is the art of inserting in the stocks of fruit trees, &c., the buds of others of the same kind. It is a sort of grafting often had recourse to in the summer season for raising particular kinds of stone fruit, and frequently succeeds better than the common method. See GRAFTING. The following are the direc-

tions for inoculating given I y Miller : — Choose a smooth part of the stock ; then with your knife make a horizontal cut across the rind of the stock, and from the middle of that cut make a slit downwards, about two inches in length, in the form of a T ; but be careful not to cut too deep, lest you wound the stock : then having cut off the leaf from the bud, leaving the foot-stalk remaining, make a cross cut about half an inch below the eye, and with your knife slit off the bud, with part of the wood to it. This done, with your knife pull off that part of the wood which was taken with the bud, observing whether the eye of the bud be left to it or not ; for all those buds which lose their eyes in stripping are good for nothing : then, raising the bark of the stock, thrust the bud therein, placing it smooth between the rind and the wood of the stock ; and so having exactly fitted the bud to the stock tie them closely round, taking care not to bind round the eye of the bud. When the buds above mentioned have been inoculated three or four weeks, and those which are fresh and plump are joined, loosen the bandage, which, if it be not done in time, will injure if not destroy the bud. In March following cut off the stock sloping, about three inches above the bud, and to what is left fasten the shoot which

proceeds from the bud : but this must continue no longer than one year; after which the stock must be cut off close above the bud. The time for inoculating is from the middle of June to the middle of August : but the most proper time is when the buds are formed at the extremity of the same year's shoot, which is a sign of their having finished their spring growth. The first sort commonly inoculated is the apricot ; and the last the orange tree, which should never be done till the end of August. In doing this, always make choice of cloudy weather ; for if it be done in the middle of the day, when the weather is hot, the shoots will perspire so fast, as to leave the buds destitute of moisture.

INOCULATION, in medicine, is a term generally applied to the practice of infusing the matter from ripened pustules in small-pox into uninfected persons, in order to give that disease in a mild form, and thus to protect from the natural attacks. As to the origin of the art of inoculating the small-pox, as well as the time and place in which it was performed, they are equally unknown to all by whom .the practice is adopted. Accident probably gave rise to it. Pylarini says, that among the Turks it was not attended to except among the meaner sort. No mention is made of it by any of the ancient Arabian medical writers that are known in Europe ; and the physicians who are natives in and about Arabia assert, that nothing is to be found regarding it in any of those of a more modern date. Until the beginning of the eighteenth century all the accounts we have of inoculating the small-pox are merely traditional. It is also remarkable that before Pylarini's letter to the Royal Society in 1701, and for several years after, this practice was not taken notice of by the most inquisitive travellers. The first accounts we have concerning inoculation are from two Italian physicians, *viz.* Pylarini and Timoni, whose letters on the subject may be seen in the

Philosophical Transact'ons. The first is dated A. I). 1701 ; the next A. I). 1713. Dr. Williams of Ihiverfordwest, however, who wrote upon inoculation in 1725, proved, that it had been practised iu Wales,

though in form somewhat different, for upwards of 200 years. In the Highlands of Scotland, and seme of the adjacent isles, Dr. Alexander Monro informs us, that the custom through ages past has been, to put their children to bed with those who labored under a favorable small-pox, and to tie worsted threads about their children's wrists, after having drawn them through variolous pustules. According to Dr. Kussel, the Arabians assert, that the inoculation of the small-pox has been the common custom of their ancestors, and that they have no doubt of its being as ancient as the disease itself. In 1717 lady Mary Wortley Montague had her son inoculated at Constantinople, at the age of six years ; he had but few pustules, and soon recovered. In April 1721 inoculation was successfully tried on seven condemned criminals in Lonaon. In 1721 Lady Mary Montague had a daughter of six years old inoculated in this is-land ; soon after which the children of the royal family that had not had the small-pox were inoculated with success : then followed some of the nobility, and the practice soon prevailed.

The practice of inoculation having obtained in every part of the world, it may be grateful, at least to curiosity, to have a general account of the different modes that are and have been adopted in that practice. Inoculation with the blood of variolous patients has been tried without effect : the variolous matter alone produces the disease. The application of the variolous matter takes place in a sensible part only ; the activity of the virus is such, that the smallest atom, though imperceptible to any of our senses, conveys the disease as well as the largest quantity. Hence the most obvious method is the prick of a needle or the point of a lancet dipped in the matter of a variolous pustule. Cotton or thread is used, that is previously rubbed with powdered variolous scabs ; this thread is drawn with a needle through the cutis, but not left in. This is t-he method in some parts of the East Indies. The Indians pass the thread on the outside of the hand, between any of the fingers, or between the forefinger and thumb. The Thessalian women inoculate in the forehead and chin. Some abrade the scarf-skin, and rub in the powdered dry scabs which fall from the pustules of patients with the small-pox. Many of the Greek women make an oblique puncture with a needle, on the middle of the top of the forehead, on each cheek, the chin, each metacarpus, and each metatarsus ; then drop in each a little of the pus just taken warm from a patient, and brought in a servant's bosom. Others make several little wounds with a needle in one, two, or more places in the skin, till some drops of blood ensue ; then the operator pours a drop of warm pus fresh from a pustule, and mixes it with the blood as it issues out ; then the wound is covered by some with a bandage, by others with half a

walnut shell placed with its concave side over each orifice. In some parts of Hindostan the person who intends to be inoculated, having found a house where there is a -good

sort of the small-pox, goes to the bed of the sick person, if he is old enough ; or if a child to one of his relations, and speaks to him as follows i ‘ I am come to buy the small-pox.’ The answer is, ‘ Buy if you please.’ A sum of money is accordingly given, and one, three, or five pustules, for the number must always be odd, and not exceeding five, are extracted whole,and full of matter. These are immediately rubbed on the skin of the outside of the hand between the forefinger and the thumb; and this suffices to produce the disease. The same custom obtains in Algiers, Tunis, Tripoli, and other countries. Very similar to this custom is that in Arabia, where ou some fleshy part they make several punctures with a needle imbrued in variolous matter, taken from pustules of a favorable kind. Here they buy the small-pox too, as follows : the child to be inoculated carries a few raisins, dates, sugar-plums, or such like : and, showing to the child from whom the matter is to be taken, asks how many pocks he will give in exchange ? The bargain being made, they proceed to the operation. The Arabs say that any fleshy part is proper ; but generally they insert the matter between the forefinger and thumb on the outside of the hand. The Georgians inser* the matter on the fore-arm. The Armenians introduce the matter on the two thighs. In Wales the practice may be termed infriction of the small-pox. There some of the dry pustules are procured by purchase, and are rubbed hard upon the naked arm or leg. The practice in some places is to prick the skin between some of the fingers, by means of two small needles joined to one another ; and, after having rubbed a little of the matter on the spot, a circle is made by means of several punctures of the bigness of a common pustule, and matter is again rubbed over it. The operation is finished by dressing the wound with lint. Incisions have been made in the arms and legs, and thread, cot-ton,- or lint, previously dipped in the variolous matter, was lodged in them. The practice of some is to bathe the feet in warm water, and then secure lint dipped in the variolous matter on the instep, or other part of the foot where the skin is thin. Others apply a small blistering plaster; and, when the scarf-skin is elevated and slipped off, the variolous matter is applied to the surface of the true skin, and confined there by a little lint or plaster. Scratching the skin with a pin or needle, and then rubbing the part with lint, previously dipped in variolous matter, is the custom in some places. The Highlanders rub some part of the skin with fresh matter, or dip worsted in variolous matter, and tie about the children’s wrists.

.They observe, that if fresh matter is applied a few days successively, the infection is more certain than by one application. Having thus given a brief history of the practice, we must refer the medical reader to the articles MEDICINE and SMALL-POX, where the comparative merits of inoculation will be brought forward in a more detailed manner.

INOCULATION, VACCINE. See VACCINATION and SMALL-POX.

INO’DORATE, adj. I Lat. in and odor.

INO’DOROUS, adj. S Having no scent; not perceptible by the nose.

Whites are more inodorate than flowers of the same kind coloured. Bacon’s Natural History.

The white of an egg is a viscous, unactive, insipid, inodorous liquor. Arbuthnot on Aliments. INOFFEN’SIVE, adj. } Lat. in and offensus. INOFFEN’SIVELY, adv > Giving no scandal, ISPFFEN’SIVENESS, n. s.) uneasiness, or displeasure; harmless; innocent; unembarrassed: in a manner free from injury; without stop or obstruction.

Whether the sun predominant in heaven Rise on the earth, or earth rise on the sun ; He from the East his flaming road begin, Or she from West her silent course advance With inoffensive pace that spinning sleeps On her soft axle. Milton. Paradise Lost.

From hence a passage broad, Smooth, easy, inoffensive, down to hell.

Milton.

For drink the grape

She crushes, inoffensive most. Id.

With whatever gall thou set’st thyself to write, Thy inoffensive satires never bite. Dryden.

Should infants have taken offence at any thing, mixing pleasant and agreeable appearances with it, must be used, ‘till it be grown inoffensive to them.

Locke.

Hark, how the cannon, inoffensive now, Gives signs of gratulation. Phillips.

A stranger, inoffensive, unprovoking.

I leetwood,

However inoffensive we may be in other parts of our conduct, if we are found wanting in this trial of our love, we shall be disowned by God as traitors.

Rogers.

To gratify an ambitious profligate, inoffensive nations are invaded, enslaved, or exterminated.

Eeattie.

INOFFICIOUS, adj. Lat. in and officium. Not civil ; not attentive to the accommodation of others.

INOP'INATE, adj. Fr. inopini ; Lat. inopi-natus. Not expected.

ˆ INOPPORTUNE', adj. Lat. inopportune. Unseasonable ; inconvenient.

INOR'DINACY, n. s.-\ Lat. in and ordinatus.

INOR'DINATE, adj.

INOR'DINATELY, adv.

INOR'DINATENESS, n.s.1

INORDINA'TION, n. s.

from right or order) : inordinate, irregular; intemperate; beyond prescribed limits.

These people were wisely brought to allegiance ; but, being straight left unto their own inordinate life, they forgot what before they were taught. Spenser.

As soon as a man desires any thing inordinately, he is presently disquieted in himself. Taylor.

From inordinate love and vain fear comes all unquietness of spirit. Id. Guide to Devotion.

Thence raise

At last distempered, discontented thoughts ;

Vain hopes, vain arms, inordinate desires,

Blown up with high conceits, engendering pride.

Milton. Reason in man obscured, or not obeyed,

Immediately inordinate desires

And upstart passions catch the government

From reason, and to servitude reduce

Man till then free. Id. Paradise Lost.

Schoolmen and casuists, having too much philosophy to clear a lye from that intnnsick inordination and deviation from right reason, inherent in the na-

Irregularity ; disor-

. der; (it is better to

use inordination,

which is a deviation

ture of it, held that a lye was absolutely and universally sinful. South.

They become very sinful by the excess, which were not so in their nature : that inordinacy sets them in opposition to God's designation.

Government of the Tongue.

INORGAN'ICAL, adj. In and organical. Void of organs or instrumental parts.

We come to the lowest and most inorganical parts of matter. Locke.

1NOSARCION, a name given by some of the ancient Greek and Roman authors to a peculiar species of emerald, called also the Chal-cedoniau emerald. The great distinction of this from the other species of this gem was, that it had thick veins in it, which gave peculiar refractions and reflections to the light ; and, though the stone was in itself green, yet when viewed in side lights these veins gave the stones all the various colors of the rainbow.

INOS'CULATE, v. n. i Lat. in and osculum.

INOSCITLA'TION, n. s. } To unite by conjunction of extremities.

The almost infinite ramifications and inosculations of all the several sorts of vessels may easily be detected by glasses. Kay.

This fifth conjugation of nerves is branched by inosculating with nerves.

Derham's Physico-Theology.

IN'QUEST, n, s. Fr. enqueste ; Lat. inquire. Judicial enquiry or examination ; inquiry ; search ; study. In law, the inquest of jurors, or by jury, is the most usual trial of all causes, both civil and criminal ; for in civil causes, after proof is made on either side, so much as each part thinks good for himself, if the doubt be in the fact, it is referred to the discretion of twelve indifferent men, impannelled by the sheriff; and as they bring in their verdict so judgment passes : for the judge saith the jury finds the facts thus; then is the law thus, and so we judge. — Cowel.

This is the laborious and vexatious inquest that the soul must make after science. South.

What confusion of face shall we be under, when that grand inquest begins ; when an account of our opportunities of doing good, and a particular of our use or misuse of them, is given in? Atterbury.

INQUEST. See CORONER.

INQUI'ETUDE, n.s. Fr. inquietude; Lat. inquietude, inquietus. Disturbed state ; want of quiet ; attack on the quiet.

Having had such experience of his fidelity and observance abroad, he found himself engaged in honour to support him at home from any

farther inquietude. Wotton.

Iron, that has stood long in a window, being thence taken, and by a cork balanced in water, where it may have a free mobility, will bewray a kind of inquietude and discontentment till it attain the former position .

Id. The youthful hero, with returning light,

Rose anxious from the' inquietudes of night.

Pope.

IN'QUINATE, v.a. > Latin mquino. To

INQUINA'TION, n. s. 5 pollute or corrupt.

Their causes and axioms are so full of imagination, and so infected with the old received theories, as they are mere inquinations of experience, and concoct it , not. PHIOOH

The middle action, which produceth such imperfect bodies, is fitly called by some of the ancients niquiiiatitni, or inconcoction, which is a kind of putrefaction. Id.

An old opinion it was, that the ibis feeding opon serpents, that venomous food so inquinated their oval conceptions, that they sometimes came forth in serpentine shapes. Browne.

INQUIRE', v. n. & v. a.} Fr. enquirer ; Lat.

I nii/iuro, inqmsitto. To ask about; to seek out; to call

p-by name: inquirer, one who interrogates or makes search: inquiry, an j interrogation ; a

INQUI'RABLE, adj.

INQUI'RER, n.s.

INQUI'RY, n.s.

INQUISIT'JON, n. s.

INQUIS'ITIVE, adj.

INQUISITIVELY, adv.

INQI I^'ITIVENESS, n. *.

INQUIS'ITOR, n. $.

search by question : inquisition, a judicial inquiry ; examination or discussion : in law, a manner of proceeding in criminal matters; the court established in some countries subject to the pope for the detection of heresy : inquisitive, curious; busy; active to pry into any thing: inquisitor, one who examines judicially ; an officer in the popish court of inquisition. Inquire is used with other words and has several meanings.

To ask questions ; to make search ; to exert curiosity on any occasion : with of before the person asked.

You have oft heard inquired

After the shepherd that complained of love.

Shakspeare.

We will call the damsel and inquire at her mouth.

Genesis Herod inquired of them diligently.

Matthew.

They began to inquire among themselves, which of them it was that

should do this thing.

Luke xxii. 23.

He sent Hadoram to king David, to inquire of his welfare. 1 Chron. xviii. 10.

It is a subject of a very noble inquiry, to inquire .rf the more subtile perceptions ; for it is another key to open nature, as well as the house. Bacon.

It is used with info when something is already imperfectly known.

The stepdame poison for the son prepares, The son inquires into his father's years.

Dry den.

It may deserve our best skill to inquire into those rules, by which we may guide our judgment.

South. Sometimes with of.

Under their grateful shade ˆEneas sat ; His left young Pallas kept, fixed to his side, And oft of winds inquired, and of the tide.

Dryden's £neid.

With o/"terwhen something is lost or missing; in which case for is likewise used.

Inquire for one Saul of Tarsus.

Acts ix. 11.

They are more in danger to go out of the way, who are marching under a guide that will mislead them, than he that is likelier to be prevailed on to inquire after the right way. Locke.

With about when fuller intelligence is desired.

To those who inquired about me, my lover would answer, that I was an old dependent upon his fa-mily. Su-ift.

To make examination.

Awful Rhadamanthus rules the state : He hears and judges each committed crime, Inquires into the manner, place, and time.

Dryden.

When inquisition was made of the matter, it was found out. Esth. ii. 23.

When he maketh inquisition for blood, he remem-bereth them : he forgetteth not the cry of the humble.

Psalm ix. 12.

The men which were sent from Cornelius had made inquiry for Simon's house, and stood before the gate. Acts.

An husboml shuld not been inquisitif.

Chaucer. Prologue to the Milleres Tale. Ne any then shall after it inquire Ne any mention shall thereof remaine,

But what this verse, that never shall expire, Shall to you purchase with her thankless pain.

Spenser. Sonnet.

Canute had his portion from the rest, The which he called Canutium, for his hire, Now Cantium, which Kent we commonly inquire.

Spenser.

My boy at eighteen years became inquisitive After his brother. Shakspeare. Comedy of Errours.

With much severity and strict inquisition, were punished the adherents and leaders of the late re-bels. Bacon's Henry VII.

In these particulars I have played myself the inquisitor, and find nothing contrary to religion or manners, but rather medicinable. Id. Essays.

We were willing to make a pattern or precedent of an exact inquisition. Id. Natural History.

This idleness, together with fear of imminent mischiefs, have been the cause that the Irish were ever the most inquisitive people after news of any nation in the world. Davies.

Though it may be impossible to recollect every failing, yet you are so far to exercise an inquisition upon yourself, as, by observing lesser particulars, you may the better discover what the corruption of your nature sways you to. Taylor.

What's good doth open to the inquirers stand, And itself offers to the accepting hand. Denham.

What satisfaction may be obtained from those violent disputers and eager inquirers into what day of the month the world began 1

Browne's Vulgar Errours.

Though he thought Inquisitiveness an uncomely guest, he could not but ask who she was. Sidney.

His old shaking sire, Inquisitive of fights, still longs in vain To find him in the number of the slain.

Dryden.

Then what the Gallick arms will do, Art anxiously inquisitive to know. Id.

Minos, the strict inquisitor appears, And lives and crimes with his assessors hears.

Id.

This is a question only of inquirers, not disputers, who neither affirm nor deny, but examine. Locke.

This exactness is absolutely necessary in inquiriet after philosophical knowledge, and in controversies about truth. «*•

Curiosity in children nature has provided, to re-move that ignorance they were born with ; which, without this busy inquisitiveness, will make them dull. . IdA Dutch ambassador, entertaining the king of Siam with the particularities of Holland, which he was inquisitive after, told him that the water would, in cold wea'.her, be so hard that men walked upon

il- *l*L

Judgment or opinion, in a remoter sense, may be

INQUISITION.

called invention : as when a judge or a physician makes an exact inq iini into any cause. Grew.

Providence, delivering great conclusions to us, designed to excite our curiosity and inquisitiveneu after •the methods by which things were brought to pass.

Burntt.

It can be no duty to write his heart upon his forehead, and to give all the inquisitive and malicious world a survey of those thoughts which it is the pre- •rogative of God only to know. South.

Heights that scorn our prospect, and depths in •which reason will never touch the bottom, yet surely the pleasure arising from thence is great and noble ; .for as much as they afford perpetual matter to the inqui&itiveiiess of human reason, and so are large enough for it to take its full scope and range in.

Id. Sfmons.

They cannot bear with the impertinent questions of a young inquisitive and sprightly genius.

Watts on the Mind.

The whole neighbourhood grew inquisitive after my name and character. Addison's Spectator.

When, strict inquiring from herself be found

She was the same, the daughter of his friend,

Of bountiful Acasto ; who can speak

The mingled passions that surprised his heart,

And through nis veins in shiv'ring transport ran ? Thomson's Autumn.

But if there is any writer whose genius can embellish impropriety, and whose authority can make error venerable, his works are the proper objects of critical inquisition. Johnson's Rambler.

The INQUISITION, called also, by a shocking misnomer, the Holy Office, is an ecclesiastical tribunal which has been established in modern times in several catholic countries and their dependencies, for the discovery and punishment of heretics and infidels, i. e. of all persons supposed to entertain opinions contrary to the decisions of the church of Rome.

The rise of this cruel institution is to be traced to those times when persecution was general throughout the civilised world. Some writers date its origin as early as the council of Verona, which was held in 1184, and in which pope Lu-cres commissioned the bishops to obtain all possible information of persons suspected of heresy, &c., and described similar degrees of this crime to those which the Holy Office afterwards acted upon. But it is more commonly dated from a persecution of the Waldenses in the beginning of the thirteenth century.

At this period (in 1203) Innocent III. had commissioned Peter de Castelnau, and Ralph, monks of the order of Citeaux, and of the monastery of Fortfroide, in Narbonnese Gaul, to preach against the heresies of that sect, and he shortly after named three pontifical legates ; empowering them to call on the French king Philip II. and all princes and nobles to prosecute and banish heretics wherever they were found. Among other ecclesiastical associates whom they selected was Dominic de Guzman, a canon of the order of St. Augustine ; ' a man,' says a Spanish writer, ' to whom we owe two most important blessings, the rosary and the holy office.'

But the Catholic bishops were from the first jealous of this mission, and several of the great feudal chiefs of Provence and Narbonne refused to obey the orders of the legates. Among the most refractory and most powerful of the latter

was Raymond VI. count of Toulouse, and in his dominions Peter de Castelnau was assassinated, as it is said, by the Albigenses, and beatified io 1208. The able and aspiring pontiff now called on all the neighbouring powers to assist him in pouring forth the vengeance of the church ; and to march into the heretical district. All obstinate heretics were placed at the disposal of Simon de Montfort, commander

of this crusade : the whole race of the Waldenses and Albigenses were ordered to be pursued with fire and sword ; neither sex, age, nor condition was spared ; the country became a wilderness, and the towns heaps of smoking ruins. Pardon and remission of sins were promised by the papal ball ‘ to all those who would take up arms to revenge the said murder ; and since we are not to keep faith with those who do not keep it with God,’ it added, ‘ we would have all to understand that every person who is bound to the said earl Raymond, by oath of allegiance or by any other way, is absolved by apostolical authority from such obligations, and it is lawful for any Roman Catholic to persecute the said earl and to seize upon his country, &c.’ ‘ W7e exhort you,’ continued this famous bull, ‘to destroy the wicked heresy of the Albigenses, and to do this with more rigor than you would use towards the Saracens themselves : persecute them with a strong hand.” The agents employed were worthy of their vigorous sovereign-head, the pontiff. ‘Spare none,’ said the abbot of Citeaux to those who required a mark to distinguish the Catholic from the heretic. ‘ Spare none ; God will be able to distinguish his own among the slain.’

Such was the era of the inquisition, and the objects in aid of which it was first established. Dominic was constituted the first inquisitor-general. Innocent III. had scarcely given this institution a formal existence before he was summoned to a higher tribunal. Dominic in fact had only proceeded to Thoulouse to decide upon the religious order which he would wish to associate with himself in the institution, when the pope died 16th of July 1216 : his choice of the Augustines was approved by Honorius on the 22nd of December of that year.

The emperor Frederic II. gave the constitution of the society the form of civil law at his coronation : and, in 1224, the inquisitors were busy at Padua ; but in Narbonne they had not succeeded to the expectation of the pope ; and Louis VIII. put himself at the head of an army against the Albigenses to expedite this holy work.

Gregory IX. gave the institution its final form ; and in 1233 it was fully established in France by St. Louis, and in the four Christian kingdoms of Spain.

The council held at Thoulouse, in the year 1229, by Romanus, cardinal of St. Angelo, and pope’s legate, had already erected in every city a council of inquisitors, consisting of one priest and three laymen.

The operations of a tribunal conducted by such men, and meeting with no effective opposition, were too rapid to last long. The

inquisition became useless at Thoulouse for want of heretics to condemn. In its infant essay it had strangled the serpents that surrounded its cradle ;

but the hydra of heresy (as the Romanists delight to call it) was growing up for its maturer labors. Its laws, rules, and devices, were laid up therefore as a part of the papal artillery. Pope Innocent IV. supported it as a favorite ally, and established permanent tribunals, on the plan of that of Thoulouse, over almost the whole of Italy except Naples, where it never gained admittance. It was early imported into the Spanish kingdom of Arragon, bordering on the province where it originated. Wherever the inquisitors were sent they created an alarm like that of an invading army; and, notwithstanding the bigotry and prostrate submission of the age, the cruelty, insulting arrogance, and intolerable oppression of these ghostly fathers, excited insurrection and tumult in almost every town which they garrisoned for the faith. The bishops, who saw in these establishments the ruin of their authority in matters of doctrine, remonstrated against their usurpation ; and the princes, who claimed the privilege of burning their own heretics, saw with pain an encroachment on their prerogative by the troops of the holy see. The spirit of Christendom was however pretty well subdued for two centuries ; and the inquisition had not much on their hands, from the extirpation of the Albigenses to the dawn of the Reformation and the persecution of the Moors and Jews in Spain.

Their Catholic majesties, Ferdinand and Isabella, now resolved that they would have none but Catholics in their dominions, and that it was necessary, for the glory of God and the prosperity of their reign, to make all their Jewish and Moorish subjects hypocrites, exiles, or martyrs. The respect paid by the queen to the counsels of Torquemada, makes us almost forget the assistance she lent to Columbus : yet on the whole she was certainly unwilling to be his instrument. It was e?sy by a perfidious and savage edict to drive these unhappy people into the church ; but it was not so easy to drive them out of their prejudices and habits. To save their lives, their fortunes,

and their families, they made an open profession of a religion which, disgraced and falsified as it was by its ministers, they abhorred ; but in secret they cherished their own faith, and practised their own rites. The mass, the cross, and the image, were the objects of their public veneration, but the stolen devotions of the mosque and the. synagogue had their hearts and affections. The Moor with his face towards Mecca pronounced the Ave Maria; and the Jew, while he fasted in Lent, was consoled by the consideration that it gave him an interval in which at least he was exempt from attesting his sincerity by devouring pork. It was necessary therefore to establish the inquisition,in order to take cognizance of these dangerous and daring apostates, in those parts of Spain where it did not before exist, and to inspire it with new activity and energy in those provinces whose faith was to be for ever under its protection.

Torquemada, a Dominican friar, and a fit successor of the preaching and persecuting founder of the order, confessor to the queen, the man by whose advice this measure was xmder-taken, obtained a bull from Sixtus IV., in the year 1483, appointing him inquisitor-general of

all Spain, and confirming the extension of the inquisition to Castile, where it had been established three, years before. The inquisitorial regulations still in force are principally those approved of by Torquemada, and a council of his nomination. Sixteen tribunals of the faith were established in the different provinces of Spain, subject to a supreme council at Madrid, in which the inquisitor-general presided ; and to these tribunals, beside the regular officers necessary to conduct their processes, were attached, as appeared in a subsequent reign, more than 20,000 constables or familiars, who, as a religious police, watched over the conduct, opinions, and expressions of all ranks of the people, and, together with numerous swarms of monks, priests, and confessors, acted as arms or feelers to these dreadful associations of intolerance. As the headstrong enthusiasm, the callous heart, required in an inquisition, are most consistent with a narrow capacity and limited information, so the grossest ignorance and most absurd fatuity appeared in the cruel and arbitrary proceedings of these ghostly fathers ; the opinions and sentiments of mankind were regulated by judges who could form no opinions of their own ; and many an orthodox believer suffered torture and death as the penalty of not being understood. The dungeons were soon filled with heretics, who after conversion had apostatised to Moses or Mahomet. Every one was commanded, under the penalty of excommunication, to confess his own errors, or to denounce those of others. No connexions of

blood, kindred, or friendship, were allowed to stand in the way of the sacred work ; and the merit of the impeachment was measured by the strength of those ties of nature which were broken for its sake. None who displeased the supporters of superstition could es-cape detection ; none who were detected could elude imprisonment; and few who were imprisoned could escape torture or the flames.

The first essay of the inquisition at Seville showed with what a ‘ fell swoop’ it could act. In the first six months 300 persons, accused of Tudaizing after conversion, were burnt, together with the bones and images of many whom death had happily rescued from its dominion. In the space of about forty years from its establishment in Seville there had been burned in that ‘diocese more than 4000 individuals; 5000 houses remained shut as after a pestilence, and consequently so many families had been exterminated: and 100,000 were condemned to wear the sanbenito, or banished, in the single province of Andalusia. ‘ I do not wish,’ says the chaplain of the inquisitor-general of that time, ‘to write any thing more concerning the mischiefs of this heretical pravity ; suffice it to say that since the fire is kindled it shall burn till no more wood can be found, and that it will be necessary for it to blaze till those who have Judaized are spent and dead, and not one remains.’ To such an extent did the exterminating spirit against the descendants of Abraham proceed, that it was a common saying with Lacero (inquisitor of Cor-dova soon after the establishment of the tribunal in that city), Da me un Judeo, dartelo he que-mado ; hand me a Jew, and I will return him to

you burnt to ashes. Many of this miserable people were condemned to the flames for frequenting the synagogues in borrowed shapes, and being carried to their nightly assemblies by the devil in the form of a he-goat. Witnesses were found to prove, to the satisfaction of the inquisitor, this miraculous mode of Judaizing, and to swear that they themselves were present at the ceremonies. The various tribunals were extremely active, each of them celebrating an auto once or ottener in the year. Extreme youth and hoary age; those who were too old to

change their opinions, and those who were too young to form any ; were seen burning in the same fire : poverty was defenceless, and riches invited plunder. In one day at Toledo sixty-seven females were delivered over to the flames, for relapsing into Jewish practices after conversion; and :this was only one of two autos that had been celebrated in the same month. Those that entered the church were liable to be burnt; and the contumacious were plundered and banished.

Thus did the furious real of the first inquisitor-general of Spain, operating upon the bigotry or terror of two Catholic princes, extirpate or ruin nearly 1,000,000 of their most wealthy, industrious, and enterprising subjects, who, notwithstanding the oppressions under which they labored, and the popular rage to which they were occasionally exposed, multiplied in Spain as in a second land of Egypt, and almost regarded it as a new Palestine. With this idea they looked upon their expulsion as a calamity similar to the dispersion of their tribes, or the final extinction of their political existence. The price which their fathers had paid for the blood of the Saviour, about fifteen centuries before, was now made a reason why no ransom should be received for their own. Torquemada, with the genuine inspiration of fanaticism, rushed into the royal presence, when the queen was deliberating on an offer of money made by the Jews for liberty of conscience, with a crucifix in his hand, and broke off the intended compro-mise for toleration or protection, by exclaiming, ‘ Behold the crucified Redeemer, who was sold formerly to the Jews for thirty pieces of silver by Judas ; sell him not again to his enemies for gold or silver like that traitor, or remember the traitor’s reward. I shall be no party to the impious bargain; I abdicate my office.’ This appeal was successful ; the proffered donation was refused ; the edict of banishment was confirmed on a whole people; excommunication was denounced against those who should either harbour them, or supply them with the least particle of subsistence, after the period assigned for their expatriation ; and the remnant of this miserable race, whose conscience would not allow them to adopt the religion of their persecutors, or who saw no safety within the pale of a church where the prison and the rack were placed below the altar, and where a new Christian had always before him the half-kindled faggots prepared for a heretic, were driven from the place of their birth and early recollections ; were stripped, plundered, and tormented with impunity; were reduced to slavery, chased into

solitudes, or pursued oˆer the country. Directing their course into all

the surrounding states, many of them were received in Portugal, France, and Italy ; many crowded the seaports and frontiers of the kingdom, and, having taken shipping for Africa, Naples, or the Levant, perished by storms, pirates, or barbarians ; and many of them, after experiencing every extremity of misfortune, were obliged to return to their native laud, and to receive the waters of baptism from the overflowing cup of their misery. Those who fled into Portugal found intolerance and fanaticism there before them ; and soon after their arrival saw the holy office established under the direction of more uncontrolled power, and a fiercer spirit of persecution, if possible, than in the country they had been obliged to relinquish.

The disciples of Mahomet could expect no better treatment than the adherents of Moses. Decrees of expulsion or conversion accordingly issued against them from the same counsels, and the holy office prepared its prisons for the relapsed and apostate. Not fewer than a million and a half of Moors were driven from Spain, from the conquest of Granada to their final banishment under Philip III., besides those destroyed in wars, massacres, and assassinations, tortured to death by the inquisitors, or delivered over to the hands of the executioner.

Nothing can be conceived more absurdly horrible lhan the treatment of these miserable men. If they adhered to the faith of their fathers they were robbed, plundered, and exiled as infidels ; if they renounced it, and became Christians, they were suspected as hypocrites and punished as heretics. Compelled to enter the church, to escape persecution, they found, when in the church, that their compulsory entrance was made an argument of their apostasy ; forced to violate their conscience, by denying a religion which they cherished, they experienced only the penalties of that which they embraced ; and, deprived of the glory of martyrdom for the one, they enjoyed none of the security expected in the other. By their conversion they were brought within the reach of the inquisitorial fires; and their baptism was like heathen libations poured on the head of the victim preparatory to the sacrifice.

When carried to the prisons of the holy office, it was equally vain for them to deny or to confess the crimes with which they were charged by bigotry, avarice, or malevolence ; if they denied, they were burnt as impenitent: if they confessed, they were burnt as relapsed. Torture was applied to force a declaration of what the inquisitor desired, and again inflicted to learn with what intention the acknowledged act was performed. Whatever became of the person of the heretic, whether condemned to capital punishment, or perpetual imprisonment, whether he came out with the penitential robe or to the stake, his

property remained in the treasury of the inquisition ; he brought forth with him none of his rights. Fidelity to their new profession, and even zeal in confirming or extending it, never ensured protection or commanded confidence, the character of a new Christian, being

marked with an indelible stain of infamy, exclusion from all offices, distinctions, or dignities; and this character was applied to all who were themselves converted from infidelity, or were descended from parents who had been such at any known period, however remote. No baptismal font could wash out such a disgrace. No antiquity of date could change the appellation : the Jewish blood was sufficient to taint the Christian profession ; St. Paul himself, with the title of a new Christian, would have found his preaching vain. There have been instances where a man's pedigree has been traced back eight or nine generations, through all its collateral branches, for the purpose of ascertaining his

medan abominations, if they abstain from drinking wine or eating swine's flesh, if they bathe at particular times, if they sing Arabian songs at their marriages, or play upon their native musical instruments. Abstinence from pork is not advanced in the edict as a charge of heresy against the Jews, though it is against the Moors, probably from a recollection of the peculiar difficulty that the ancestors of this people felt in swallowing this article of faith, when in a written engagement to be good Catholics, under the sanction of the most solemn oaths, and after a complete enumeration of the points they were required to abjure or embrace, they swore, ' by the Father, Son, and Holy Spirit, who 'is one in

genealogical guilt. The orthodoxy of his creed Trinity, and the true God, that whosoever of us

was to be estimated like that of an old coin, not by the purity of the metal, but the age of the inscription. While Jewish and Moorish extraction exposed to suspicion, arid gave credibility to the slightest proofs of apostasy, it was scarcely possible that these unhappy people, with all their old national prejudices and habits, had they been real converts, should not furnish to the vigilant eye of an enemy, a rival, or an inquisitorial devotee, sufficient grounds for denuncia-

shall be found a transgressor of all or any one of these things, he shall perish with flames or stones ;' but ' as to swine's flesh we promise to observe, if we cannot eat it possibly through custom, yet we will without contempt or horror take and eat things that are dressed with it.'

In other countries, however, and even in Spain itself, the inquisition which was established for the extirpation of two hated tribes, had soon to contend with more formidable heresies.

tion. The edict of faith' was published in every The new opinions and principles of the Refor-diocese of Spain once every year, whereby the mation, beginning in Germany, spread from state duty of accusing heretics, or those suspected of to state, as by the blaze of signal posts, and heresy, was enforced under the most awful every where appeared the beacons of war against sanctions ; three years' indulgence was offered ecclesiastical corruptions aud abuses. Mankind to those who should become informers or accu-looked about with amazement and indignation at sers; and excommunication was thundered the gulf of clerical oppression into which they against all who should conceal the acts or say-had been plunged, and at the emblems of craft, ings of a heretic, schismatic, or infidel. The deceit, and cruelty, with which they were sur-circumstances which all good Catholics were re-rounded. The Reformation spread into Spain, quired at this annual visitation to disclose, as which, although it had been for ages the strong indications of heretical pravity, were sufficiently hold of superstition, contained at that time the minute and particular to allow little chance of most active and enterprising people of Europe ; escape to disguised Israelites, or renegade Sara-but the dangerous light was received and buried cens. ' We, the inquisitors of heretical pravity, in the dungeons of the inquisition, and, before command all to whom this edict shall

be made it had enlightened any considerable portion of known, to speak and manifest to us if you know, the nation, expired like a lamp in a sepulchre, understand, or have seen, or previously found Charles V., after having fought against the out, that any living man or woman, present or protestants in Germany, and endeavoured, with-absent, or already dead, had made, published, out success, to establish the inqu'sition against said or spoken, any or more opinions or words, them in the Netherlands, employed preachers heretical, suspected, erroneous, rash, ill-sound- and zealous Catholics to convert those in whom ing, savouring of scandal, or any 'heretical bias-his arms could not work conviction ; but his phemy against God, his Catholic faith, and apostles themselves returned infected with the against that which our holy mother the Church contagion they were commissioned to eradicate, of Rome embraces, teaches, preaches, and Among those who had imbibed the reformed holds.' Then follows an enumeration of the doctrines were men of great learning and in heresies of the different enemies of the Catholic eminent situations. Cazalla the emperor's faith, and an injunction to declare and denounce preacher, Constantine Ponce Fuente, canon of them. Among these, as symptoms of Jewish the cathedral of Seville, and the emperor's chap-apostasy, the faithful are enjoined to make known lain, don Juan Ponce de Leon, son of the count to the holy office the cases of any individuals of of Baylen, and several others. Heresy, to use the Hebrew race who shall be detected 'in an illustration of a Spanish author, was spieading wearing a clean shirt, in using a clean table-like the yellow fever, when its progress was ar-cloth, or putting on clean sheets on the Sabbath; rested by the holy office. Seville and Vallado-or who, in honor of that day, shall use hand-lid, the former the most commercial city of the somer or holiday clothes, who shall steep their Spanish monarchy and the latter tlie capital of rneat in water to suck and draw out the blood, Castile, were the places where it broke out, and who shall sing the psalms of David without the where in the course of two years it was entirely Gloria Patri, who shall eat lettuce or parsley suppressed. In Seville 800 persons were appre-during the time of the paschal,' or be guilty of hended, imprisoned, and laid up for tortures or similar offences against the faith. The Saracens autos-de-fe in the year 1557. Many of them are to be denounced as suspected of Mahom-were burnt in successive executions of fifteen or VOL. XII E

twenty at a time. The most cruel tortures were applied for the purpose of forcing them to confess their associates, their connexions, their friends, their favorers, the nature of their books, their instructors, and the whole ramifications of that heretical conspiracy which the tribunal was determined to destroy, root and branch. By the extreme agony on the rack, Mary Bohorquia, a young lady of noble birth, who was burnt for being a Lutheran, was driven to confess that she had conversed on religious subjects with her sister Dona Juana Ponce de Leon, wife of lord de la'Heguera. This latter was immediately apprehended, confined in a loathsome dungeon though far gone in her pregnancy, and a few days after her delivery tortured with such diabolical rigor, that the ropes cut into the very bones of her arms, legs, and thighs. She died after this inhuman treatment, when the fiends who inflicted it, in order to make her atonement, or rather to deprive the reformation of the glory of such a martyr, pronounced her innocent of heresy. In May, 1559, an auto was celebrated at Valladolid which was attended by the regent of Spain (in the absence of Philip), prince Charles, and all the dignitaries and authorities of the state, when thirty persons were brought forth, fourteen of whom were committed to the flames. At the entrance of Philip into his capital, and into the active government of his kingdom in October of the same year, he was regaled by another sacrifice more splendid and imposing than the last, from the number of the victims (which amounted to forty, twenty of whom were burnt), from the greater attendance of guards, courtiers, grandees, and authorities, and from the more extensive and gorgeous diplay of inquisitonal pageantry. A protestant nobleman, don Carlos de Sesse", when passing to the stake, cried out to the king for mercy : ' No,' answered the bigot, with a stern countenance, ' I would bring wood to burn my own son were he such a wretch as you !' and continued to view the horrific ceremony with the greatest coolness. As part of the forms of this terrible day, the inquisitor-general demanded of the monarch the continuance of his protection to the tribunal, repeating the blasphemous words, Domine, ad-juva nos, and the king, standing and grasping his sword, half unsheathed it, in token of his zealous compliance.

Among other miseries which the new world experienced from its discoverers and conquerors, H was not to be exempted from this execrable scourge. Philip II. introduced it into his Western dominions in 1571 ; and such is the blindness of superstition, that the human sacrifices of the Mexicans, which excited such horror in Cortes and his

troops, were imitated by the pretended ministers of Christ. One bleeding limb of the monarchy still shook it off with convulsive violence, and rather bore to be severed from the trunk than to endure it. The people of the Netherlands, where heresy was stronger and authority weaker than in Spain, resisted its introduction; and the result of the struggle is well known. By a master stroke of flagitious policy, Philip extinguished the reformation in Spain, but the infatuation of his zeal

extended it in the north. In the one case his great engine, the holy office, had been established for more than half a century ; in the provinces it had not been able to gain a footing. When representations were made to him of the zeal and numbers of the protestants, he sent against them, as he would have done at home, a reinforcement of priests and ecclesiastics. Hearing that heresies had increased by the cruelties employed for their suppression, he ordered the prisons to be increased in proportion, more fires to be lighted, and more scaffolds to be erected. Informed by his sister that she could no longer govern on the maxims of massacre and extermination, he sent the furies and the duke of Alba. When the casuistical bigots who surrounded the throne, the turba minor diri capitis, began to doubt the success of their cruelty, the monarch fell down before the cross in a frenzy of fanaticism, and swore on that emblem of mercy an oath of blood and extermination against all but Catholics. The sanction of this tremendous oath survived to his successors, who seem to have taken his character as their model. The inquisition appears to have communicated to them all, whether of the family of Austria or ot Bourbon, certain repulsive features of resemblance. Established in an age of persecution and despotism, it, for centuries, defied all moral and political changes, creating its own atmos-sphere, assimilating all things in its neighbourhood, bending everything to its dominating genius, and, by the fascination of its fiery asspect, disarming its prey of all power of resis tance.

Such has been the wretched lot of Spaii.. Nowhere has religious intolerance risen so high in human esteem. In Spain it has placed cruelty among the virtues. In no country of the world have people been so plundered of their property, so bereaved of their rights, so duped in their understandings. Bigotry has for generations been seated on the throne, and the inquisitor-general has been regarded as its chief pillar. Under the shelter of this tribunal no deceit could be detected, no abuse denounced, no error disproved, no prejudice exploded, no aggression repelled, no mistake corrected, no injustice opposed.

Confidence and frankness were destroyed by the fear of finding every man an informer, in a society where friends were enjoined to accuse friends, on pain of excommunication ; no liberal opinion could be formed or expressed with impunity, where every such opinion might be visited with the punishment of heresy. The impudent and barefaced insults offered to the reason, common sense, and common feeling of the people, under such secure protection, are almost incredible.

While the inquisition prevented improvement, and cut off the springs of knowledge, it tended, by the form of process by which it was guided, and the tragedies it frequently exhibited, to pervert the sentiments of justice and to encourage hardened inhumanity. When denunciation was commanded under the sanction of the most formidable anathemas, the gratification of private malice became a religious duty. Revenue, when baffled in other quarters, might drag its prey to

me prisons of the holy office, and there, without the fear of detection, was always sure of ample vengeance. Condemned already was the man, on whom his enemy could contrive to attach such a suspicion of heresy as to excite the activity of the tribunal. He was seized in the silence of the night, and his house exchanged for a dungeon, on a charge which he had neither the means of knowing or disproving. The very suspicion of guilt was its punishment. His friends avoided him like a pestilence, because, without being able to assist him by their services, they might expose themselves to his fate by their interference. His family, though involved in his ruin by the sequestration of his property and by the collateral and transmissible infamy attached to his name, were not allowed to see him, to administer to him either consolation or advice. It might have been some relief to have seen his accuser, or to have been confronted with his witnesses, that he might answer the charges of the one, or disprove the testimony of the other ; but this also was denied him : he was fatally involved in the labyrinth of his mysterious guilt, without a consciousness of his crime, or a clue to escape. He descended to those

durissima regna without a friend, without an adviser, without a prosecutor, where he found only the inquisitor and his ministers,

regemque tremendum,

Nesciaque humanis precibus mansuescere corda :

where he found the gloom, the solemnity, the terrors of the poetic hell; in short all the preparations and attributes of the pagan's last judgment, except its justice. Here he was left, during the pauses of punishment, to conjecture by whom and for what he was accused and punished ; instead of hearing his accuser and witnesses named, he was obliged to name them himself under the torture ; and, if he failed in his conjecture, after ransacking his memory for every possible ground of charge, and every probable enemy, his condemnation was decreed. With the frightful prospect of death before them, and under the excruciating agony of the question, the wretched prisoners ran over crimes they never dreamt of committing, and gave a catalogue of persons whom they never suspected of enmity or heresy. A woman, whose fate is recorded, being required to mention her accomplices, informer, and witnesses, named 600 individuals ; but, as she did not fix upon the proper persons, she was condemned. On her way to the fire her daughter approached her, and particular-ised some relation which she thought her mother might have forgotten. ' Alas!' cried the devoted victim, ' I have already named all Portugal and Castile, but it would not avail.'

The culprit, after undergoing the torture and a long imprisonment, was at last handed over to the secular power as impenitent, contumacious, or relapsed, and the spectacle exhibited to the people was now still more cruel and terrible than that which the holy fathers enjoyed in their pitiless dungeons. The condemned were led forth to execution by burning (which is the most terrible death, says a Spanish author, for the most horrible of crimes) ; and of this display of sup-

pi iciary vengeance the most tremendous and awful solemity was made. Notice was given at the churches that on a particular day (generally a festival or Sunday), an act of the faith (which originally meant a sermon concerning the faith preached on such occasions) would be given at such a particular place, and an indulgence of forty days offered to all who should go to witness the transactions there to be performed, the torments and punishments of heretics. Great crowds of the faithful attended — the monasteries sent forth their tribes —

the clergy, from a considerable distance, poured towards the execution — the civil authorities of all classes were on duty — the greatest preparations were made — the bell of the cathedral tolled — the standard of the inquisition was unfurled — and the train of heretics, dressed in sackcloth painted with flames, devils, and monsters, and walking barefooted accompanied with cannibals which we have neither space nor desire to describe, proceeded, first, in procession from the prison to the holy office to hear a sermon, and then to the place of execution. The prisoners were frequently reserved till there was a sufficient accumulation of them for one grand tragedy. To this entertainment kings, princes, grandees, and courtiers, were invited, as to a magnificent bull-fight, a splendid display of fireworks, or a gorgeous theatrical exhibition. The effect of the pageant was not to be weakened by the emotions of pity. Philip II. enjoyed the sight with a countenance and a heart unmoved. Charles II. had the most pompous one that ever was exhibited, prescribed to him as a medicine. It will be seen, in accounts of these spectacles, with what unmoistened eyes and unruffled features even the ladies of the court beheld the writhings and convulsions of these suffering wretches, heard their horrible cries, and resisted their moving appeals. To have shed tears would have been a crime. They would as soon have wept over Satan on the burning lake. Philip III. is said to have expiated some natural tears shed by him on this occasion with his blood ; that is, with a drop ot his blood drawn by the inquisitor-general, and burnt by the hands of the common executioner as an emblem of the punishment such heretical sympathy deserved. The preacher who delivered the sermon of the faith, at the great auto, before Charles II. in 1680, where 120 prisoners were present, nineteen of whom were in an hour to be cast into the flames ; in the plenitude of his joy burst into an appropriation of the words of the Canticles : ‘ Ah ! thou holy tribunal !’ said he, ‘ for boundless ages mayest thou keep us firm in the faith, and promote the punishment of the enemies of God. Of thee I may say what the Holy Spirit said of the church, ‘ Thou art fair, my love, thou art fair as the tents of Kedar, as the sightly skins of Solomon.’ Of the infuriated conduct of the people on such occasions, the following account from Dr. Geddes will be a sufficient specimen. ‘At the place of execution, in Lisbon, there are so many stakes set up as there are prisoners to be burnt, with a good quantity of dry furze about them. The stakes of the professed are about four yards high, and have a small board within half a yard of the top.

The negative and relapsed being first strangled and burnt, the professed go up the ladder betwixt the two Jesuits who have attended them all ; and when they come up to the board they turn round to the people, and the Jesuits spend nearly a quarter of an hour in exhorting them to be reconciled to the church of Rome, which if they refuse to do, the Jesuits come down and the executioner ascends, and having turned the professed off the ladder upon the seat, and chained their bodies close to the stake, the Jesuits renew their exhortation, and, at parting, tell them that they leave them to the devil, who is standing at their elbow to carry their souls to hell as soon as they are out of their bodies.'

Scenes, at the description of which the flesh creeps and the heart is horror struck, were often presented at these spectacles. The prisoners frequently resisted with the greatest fury, struggling to free themselves from the stake, while the incarnate fiends allowed the fire to fall away, or added fuel as suited their purpose to heighten or prolong their torments. Sometimes the exultation of martyrdom was expressed in the defiance of despair. Francisco Botello, a Jew, when brought forth for execution was shown his wife, who, without his knowledge, made one of the same-auto ; ' but such was his shameful conduct,' says the Report, ' that he beheld her with as much joy as if it had been the happiest day of his life, animating a friend who was burning beside him to die in his own lame faith.' ' Francisco Lopez,' says another Report, ' who was burnt in an auto celebrated at Mexico in 1659, stood oti the platform of the staˆe in a most contumacious manner, and, resembling a demon, cast forth sparks from his eyes, and gave beforehand signs of his eternal condemnation.' Sometimes the sufferers, in their lingering torments, made the most pathetic appeals to the sympathy of the spectators, not for a release from their doom, but a more speedy dispatch of their agony. ' Of the five persons condemned,' says Mr. Wilcox, afterwards bishop of Gloucester, in a letter to Dr. Burnet, speaking of an auto celebrated at Lis-bon, on the 10th of December, 1705, ' there were but four burnt. Two were first strangled, two, a man and a woman, were burnt alive. The execution was very cruel — the woman was alive in the flames half an hour, and the man above an hour. The present king and his brother were seated

in a window so near as to be addressed in very moving terms by the man while he was burning. The favor he asked was only a few more faggots, yet he was unable to obtain it. Those who are burned here are seated on a bench twelve feet high, fastened to a pole, and above six feet higher than the faggots. The wind being a little fresh, the man's hinder parts were perfectly wasted, and as he turned himself his ribs opened before he left speaking ; the fire being recruited as it wasted, to keep it just in the same degree of heat. All his entreaties could not procure him a larger allowance of wood to shorten his misery.' The last instance of barbarity carried to the length of burning for heresy, was exhibited at Seville in 1781, on the person of a woman \lio had been guilty of licentious irregularities, and justified her conduct by special revelations from an angel.

The power of the inquisition was still considerable after its holocausts had ceased ; but it was exerted rather in encouraging petty vexations, enjoining ridiculous penances, and prohibiting useful books, than in serious acts of outrage. The rack was disused, as well as the faggot. The familiars became less officious, and the inquisitors were sometimes found to be men of worth and humanity. During the administration of the prince of peace, and for some time before, the holy office became a mere tool in the hands of the government, and was even in this point of view thought of so little service that the design was more than once entertained of abolishing it ; and he is said to have got the royal signature to a decree for that purpose in 1796, which by some accident was not carried into execution. The evidences of its former exploits still graced the walls of churches and convents ; the pictures and sentences of those whose persons it had burned, or whose property it had confiscated, still remained exposed for the edification of the faithful. A profligate monk or a licentious nun, for bringing scandal on their order, might be threatened with its vengeance ; it suppressed mason lodges, and political tracts ; and from the arbitrary nature of its proceedings, which re mained unchanged, it was still capable of doing much mischief, but it latterly made no approach to violence or rigor.

The last auto of any consequence that it celebrated was in 1781, and excited the ridicule of all Madrid. Ignacio Rodriguez, a common beggar, was condemned to wholesome penance for deserting his mendicant profession, turning sorcerer, and making -love-powders. During the time of the French revolution it was of course very active in preventing any importation of political or religious works from that infected country ; and many books of all kinds were inserted in its Index Expurgatorius, or laid up on its shelves under the protection of hosts of devils, cracking the bones of heretics. This leniency or

inefficiency does not seem to have proceeded from any improvement in the popular mind, but from the insensible influence of European liberality on the high classes, and from the want of opposition or provocation.

In this state of weakness was it when, in 1 808, Napoleon decreed its abolition, and the inquisitor-general joined the French party. In the troubles which followed the French invasion the functions of the different tribunals remained suspended, although several of them did not acknowledge the authority of the conqueror. The inquisition usurps the authority of the bishops, the ordinary judges of heretical pravity, by virtue of a papal commission, conferred on it through the medium of the inquisitor-general, in whom the election of subordinate officers is vested, and whose sanction is necessary to give validity to every sentence. Without him the courts can no more act than an army without a general ; without him their judges are no more judges of the faith, than ministers of finance ; and as the pope, whose bull is necessary to confer that commission, was in the hands of the enemy that dissolved it.

as well as the individual who formerly held it, no processes could be instituted or concluded. The inquisitors, thus dispersed, flocked from all quarters to Cadiz, besieging the government with petitions and memorials ; and while not a spot of the Peninsula remained unpolluted with the foot of the invader, except one city, while even the batteries of t'.ie enemy were endangering the safety of the existing authorities within the walls of that city, while their country was overrun with Catholic enemies, and defended alone by heretical friends, the most strenuous efforts were made by superstition for the restoration of its protecting judicature.

The liberal party perceived the advantage they had gained, and vigorously laid hold of it. They considered the inquisition as abolished, and they threw upon their opponents the burden of proving the necessity of its re-establishment : they gained the concurrence of the nation for a constitution, the articles of which, denning the judicial power and regulating its exercise, were inconsistent with its existence ; and thus its restoration became impracticable. They decreed that torture should be no longer employed, that trials should

be public, that witnesses should be confronted with those against whom they depose, that confiscation should no longer exist, that freedom of speech was the necessary privilege of a deputy. And having thus removed the fundamental principles of inquisitorial legislation, the very pillars and corner-stones on which it rested, they allowed it to drop on the heads of its supporters. The nation was asked if they would consent to reconstruct such a monument of barbarism ; if, after having sworn to defend the constitution, they were inclined to commit political perjury in destroying it; if they were prepared to erect a mausoleum for their liberty at the very hour of its birth. All the zeal and talent of the nation were employed in the controversy. Innumerable publications appeared on both sides. After receiving petitions from the inquisitors for the revival of the office, after hearing representations from bishops, towns, and ‘ provinces, on the same subject, the Cortes appointed a commission, of which Arguelles and several other able and enlightened men were members, to enquire whether the re-esta’olishment of the inquisition was consistent with the maintenance of the constitution ; and the result of their opinion was that the tribunal ought to be abolished. The eloquent, elaborate, and ingenious statement of the facts and reasonings which determined their judgment, is detailed in their report, presented to Congtess on the 8th of December, 1812. This was followed up with equal ability in the speeches of many of the members of that body ; the majority of which on the great question (ninety to sixty) came to a similar conclusion. The discussion on the different propositions connected with the subject continued •with some intervals from the end of December to the 22d of February. The speeches (most of them read and handed over to the printer) are now before us in a volume of 694 pages, and display sometimes a depth of research, and sometimes a power of eloquence, united with liberal views and sound reasoning, \hich it

would be difficult to match in any country but our own. But it must not be supposed, though the liberal party was triumphant in the Cortes, that the nation was unanimous in their support, that their opponents were few or insignificant, or that what has happened since is at all an anomaly. The greatest clamor was raised both in the national assembly and in the country ; and the cry that the church was in danger resounded en all sides. The priests and monks contrived to convince the people that the Catholic faith and the holy office were identified, that the inquisition ana religion were synonymous terms, and that every one who spoke and wrote against that tribunal was an enemy of devotion, an antichrist, a blasphemer of the glorious saints,

and of the blessed virgin. Doctrines such as these were preached in every village, before every convent, in almost every public square : handbills were posted up to the same effect, and every engine of delusion and falsehood was set at work. The ignorant were told that they could not hold their religion a day if they were deprived of the tribunal that protected it ; that they would all be obliged to become heathens, heretics, and Lutherans ; that they would have no mass, no pope, no purgatory, no rosaries ; that our Lady of the Pillar, and St. James of Compostella, would desert them ; that they must expect no longer the countenance of the saints ; that every miracle would cease ; that they would be exposed without protection to the visitations of earthquakes, storms, and bad harvests. In order to make them cling still closer to their religion, and that institution which by one fanatic was called the poniard of the faith, and by another its battering ram, they were told that they were the only nation hitherto uncontaminated with heresy ; that this pestilent distemper had been kept off from their shores by an inquistorial quarantine ; that they were the most Catholic people upon earth, the privileged monopolists of a pure apostolic worship, the champions of the virgin, and the favorites o heaven and its inhabitants. The nations around them were stigmatised as composed of men overrun with the plague of apostasy ; a revolting assemblage of atheists, sorcerers, and free-masons; the enemies of the pope and the sacraments; the contentious partisans of infuriated sects; and the devoted victims of divine vengeance. The steps by which they had arrived at such a deplorable state of corruption and infidelity were, the impunity allowed to heretics, the establishment of the principles of toleration, and the opposition made to the holy office. The Jews and Moors, with all their diabolical rites, had been expelled by the zeal of Catholic kings, or had fled from the just terrors of a sanbenito and a faggot ; but more insidious and dangerous enemies of the true faith threatened the Spanish church, if its natural bulwark were destroyed, in the professors of liberal ideas, the preachers of clerical reform, the pretenders to primitive purity, the antagonists of priestly and papal domination, the secret emissaries of heresy or protestantism, the bastard children of the church who, having no share of the inheritance of their father, were anxious to excite dissentions within the family of the faithful, the vipers who endea-INK

voured to destroy their mother by biting her in the most vital part, and infusing into her wound the deadly venom of error and incredulity. Argument, and reason, and authority, it was said, were weak obstacles to the design of such men ; the ordinary ministers of religion had not sufficient vigilance to detect their insidious arts, or sufficient power to repress their open attacks ; and nothing but a court, with a numerous and active body of officers spread through all parts of the country, interested in observing the least deviation from the faith, and capable of bringing the culprits to condign punishment, could afford the faithful security against their writings, their discourses, their example, and machinations. Such representations as these, the futility of which could only have been demonstrated by experience and by the steady wisdom of the new government, paved the way for the arbitrary measures of Ferdinand ; he has reinstated the inquisition ; but the light which the discussion has diffused will not be lost.

The inquisition was established in Portugal at the pressing solicitations of king John III. about the year 1536.

The power of the inquisition was very much limited at Venice, where it was introduced about the year 1289 ; the office consisting of secular and ecclesiastical persons, though the latter had been long endeavouring to bring it into their own hands, but could never prevail with the Venetian senate to agree to it. Indeed at Venice it seemed rather a political than a religious contrivance ; and served rather for the security of the state than that of the church. There are appeals from the subaltern inquisitions in Italy, to the congregation of the holy office residing at Rome.

The congregation was first formed by Paul III. in 1542, but finally established by Sixtus V. in 1588. The members of it, called supreme inquisitors, assemble thrice in the week, and every Thursday in the presence of the pope, who presides in it.

The best accounts of the inquisition and its practices are Limborch’s History, by Chandler. The Inquisition unmasked : being an Historical and Philosophical Account of that Tremendous Tribunal, founded on Authentic Documents, Written and Published at a Time when the National Congress of Spain was about to deliberate on this Important Measure. By D. Anto-nio Puigblanch. Translated from the Author’s

enlarged copy by W. Walton Esq. 2 vols. 8vo. Baldwin and Co., London, 1816. Llorente's History of the Inquisition, in Spanish, which extends, we believe, to 4 vols. 4to., and the English Translation and abridgment of it in 1 vol. 8vo.

IN RAIL', v. a. In and rail. To enclose with rails.

In things indifferent, what the whole church doth think convenient for the whole, the same if any part do wilfully violate, it may be reformed and inrailed again, by that general authority whereunto each particular is subject. Hooker.

Where famed St. Giles's ancient limits spread, An inrailed column rears its lofty head ; Here to seven streets seven dials count the day, Ami from each other catch the circling ray. day.

IN'ROAD, n. s. In and road. Incursion ; sudden and desultory invasion. Many hot inroads They make in Italy.

Shakspeare. Antony and Cleopatra. From Scotland we have had in former times some alarms and inroadt into the northern parts of this kingdom. Bacon.

'1 he loss of Shrewsbury exposed all North Wales to the daily inroads of the-enemy. Clarendon.

By proof we feel

Our power sufficient to disturb his heaven, And with perpetual inroads to alarm, Though inaccessible his fatal throne. Milton.

The country open lay without defence ; For poets frequent inroads there had made.

Dryden.

INSANE’, adj. Lat. insanus. Mad ; making mad.

Were such things here as we do speak about ? Or have we eaten of the insane root, That takes the reason prisoner? Shakspeare. Macbeth, INSATIABLE, adj. *] Lat. insatiabilis, in-INSA’TIABLENESS, «.* . j satiatus, insatisfacio INSA’TIABLY, adv [_ insaturabilis. Greedy INSA’TIATE, adj. .(beyond measure, so

INSATFSFAC’TION, n. *. as not to be satisfied : INSAT’URABLE, adj. j used in a literal and figurative sense. Insatisfaction, want; an unsatisfied state. Insatiable, not to be glutted or filled.

With hir vengeaunce insatiable, Now have thei hym giltlesse entreted so, That to reporte it is to lamentable.

Chaucer. Lamente of Mary Magdaleine. O cruel Destiny (quod she), O Fortune insacyable, O wavering world, rolling like a ball ! You are so wayward and so onstable That never any assurance can be in you at all.

G. Cavendish’s Metrical Visions. My mother went with child Of that insatiate Edward.

Shakspeare. Richard III.

It is a profound contemplation in nature, to consider of the emptiness or insatisfaction of several bo-dies, and of their appetite to take in others.

Bacon’s Natural History.

Some men’s hydropick insatiableness had learned to thirst the more, by how much more they drank.

King Charles. Insatiate to pursue Vain war with heaven. Milton.

Too oft has pride

And hellish discord, and insatiate thirst Of others' rights, our quiet discomposed.

Phillip*.

They were extremely ambitious, and insatiably covetous ; and therefore no impression, from argument or miracles, could reach them. South.

Insatiate archer ! could not one suffice ?

Young's Night Thoughts. Death. There, breathless, with his digging nails he clung Fast to the sand, lest the returning wave,

From whose reluctant roar his life he wrung, Should suck him back to her insatiate grave.

Byron. Don Juan.

INSCRIBE', ». a. * Fr. twain; Lat. in-INSCRIPTION,?!, s. jscribo. To write on any thing. It is generally applied to something written on a monument, or on the outside of something. It is therefore more frequently used with on than in. To mark any thing with writing; to assign to a patron without a formal dedication; to draw a figure within another: inscription,

soinetnmg written or engraved; a title. In law, an obligation made in writing, whereby the accuser binds himself to undergo the same punishment, if he shall not prove the crime which he objects to the party accused, in his accusatory libel. — Ayliffe's Parergon. Consignment of a book to a patron without a formal dedication.

In all you writ to Rome, or else To foreign princes, ego et rex meus \as

still inscribed.

Shakspeare. Henry VIII. In the circle inscribe a square.

Notes to Creeche's Manillas.

Connatural principles are in themselves highly reasonable, and deducible by a strong process of ratiocination to be most true ; and consequently the high exercise of ratiocination might evince their truth, though there were no such originally inscribed in the mind. Hate's Origin of Mankind.

Joubertus by the same title led our expectation, whereby we reaped no advantage, it answering scarce at all the promise of the inscription. Browne.

This avance of praise in time to come, Those long inscriptions crowded on the tomb.

Dryden.

One ode, which pleased me in the reading, I have attempted to translate in Pindarick verse . 'tis that which is inscribed to the present Earl of Rochester.

Id.

Ye weeping loves ! the stream with myrtles hide, And with your golden darts, now useless grown, Inscribe a verse on this relenting stone. Pope.

Inscribed above the portal from afar, Conspicuous as the brightness of a star.

Cowper. Truth.

A worthy moral, and a wise inscription, For a king to put up before his subjects.

Byron. Tragedy. Sardanapalus. An INSCRIPTION is a title or writing affixed to any thing to give some farther knowledge of it, or to transmit some important truth to posterity. Antiquaries are very curious in examining ancient inscriptions found on stones and other monuments of antiquity. It appears that the ancients engraved upon pillars the principles of sciences, as well as the history of the world. Those mentioned by Herodotus show, that this was the first way of

instructing people, and of transmitting histories and sciences to posterity. This is confirmed by Plato in his Hippias ; wherein he says, that Pisistratus engraved on stone pillars precepts useful for husbandmen. Pliny assures us, that the first public monuments were made of plates of lead ; and that the treaties of confederacy concluded between the Romans and the Jews were written upon plates of brass ; that, says he, the Jews might have something to put them in mind of the peace and confederacy concluded with the Romans. The Greeks and Romans were great dealers in inscriptions, and we find so many in those countries of ancient learning, that large volumes have been composed on them; as the collection of Gruter, &c. Since Grater's collection, Th. Reinesius has compiled another large volume on inscriptions. After all these Graevius published a complete collection of inscriptions, in 3 vols. folio.

INSCRUTABLE, adj. Fr. inscrutable ; Lat. inscrutabi/is. Unsearchable ; not to be traced out by enquiry or study.

O how inscrutable ! his equity Twins with his power. Sandys.

A jest unseen, inscrutable, invisible, As a weather-cock on a steeple. Shakspeare. This king had a large heart, inscrutable for good, and was wholly bent to make his kingdom and peo-ple happy. Bacon.

Hereunto they have recourse as unto the oracle of life, the great determination of virginity, conception, fertility, and the inscrutable infirmities of the whole body. Browne.

We should contemplate reverently the works of nature and grace, the inscrutable ways of Providence, and all the wonderful methods of God's dealing with men. Atterbury.

Baal himself

Ne'er fought more fiercely to win empire, than His silken son to save it : he defies All augury of foes or friends, and like The close and sultry summer's day, which bodes A twilight tempest, bursts forth in such thunder As sweeps the air and deluges the earth. The man's inscrutable. Byron. Sardanapalus.

INSCULP', v.a. 3 Lat. insculpo. To eir—

INSCULP'TURE, n. s. J grave, or cut: anything engraved.

A coin that bears the figure of an angle

Stamped in gold, but that insculpt upon.

Shakspeare. Timon is dead,

Entombed upon the very hem o' the sea :

And on the grave stone this insculpture, which

With wax I brought away. Id. Timon.

It was usual to wear rings on either hand ; but when precious gems and rich insculptures were added, the custom of wearing them was translated unto the left. Browne.

INSEAM', v. a. In and seam. To impress or mark by a seam or cicatrix.

Deep o'er his knee inseamed remained the scar.

Pope.

IN'SECT, w. s. -\ LaL insecta, insector.

INSECT A'TOR, n. s. * Insecta, and Gr. Xoyoc—

INSEC'TILE, adj. i Called insects from a

INSECTOL'OCER, n.s. J separation in the middle of their bodies, whereby they are cut, as it were, into two parts, as we see in wasps and common flies. See ENTOMOLOGY. Any thing small or contemptible : insectator, one that harasses by pursuing : insectile, having the nature of insects: insectologer, one who studies or describes insects ; a word without authority.

Insectile animals, for want of blood, run all out into legs. Bacon.

Beast, bird, insect, or worm, durst enter none.

Milton.

The new-formed insect on the water moves, The speckled trout the curious snare approves.

Gay's Kural Sports.

The insect itself is, according to modern insectologers, of the

ichneumon-fly kind. Derham.

In ancient times the sacred plough employed The kings, and awful fathers of mankind ; And some with whom compared, your insect tribes Are but the beings of a Summer's day. Thomson. Man, who madly deems himself the lord Of all, is nought but weakness and dependance. This sacred truth, by sure experience taught, Thou must have learnt, when wandering all alone, Each bird, each insect, flitting thro' the sky, Was more sufficient for itself than thou.

Id. Coriolanuf.

In the vast and the minute we see

The unambiguous footsteps of the God

Who gives its lustre to an inse -t's wing,

And wheels his throne upon the rolling worlds.

Cowper.

INSECTS. See ENTOMOLOGY.

INSECURE', adj. \ Lat. insecurus. Not se—

INSECU'RITY, n.s. J cure ; not confident of safety : insecurity is, uncertainty ; danger; hazard ; peril.

It may be easily perceived with what insecurity of truth we ascribe effects, depending upon the natural period of time, unto arbitrary calculations, and such as vary at pleasure. Browne.

The unreasonableness and presumption, the danger and desperate insecurity, of those that have not so much as a thought, all their lives long, to advance so far as attrition and contrition, sorrow, and resolution of amendment. Hammond.

He is liable to a great many inconveniences every moment of his life, and is continually insecure not only of the good things of this life, but even of life itself. Tillohon.

INSEMINATION, n. s. Fr. insemination ; Lat. inseminatio. The act of scattering seed on ground.

INSECUTION, n. «. Fr. insecution ; Lat. insecutio. Pursuit. Not in use.

Not the king's own horse got more before the

wheel Of his rich chariot, that might still the insecution

feel, With the extreme hairs of his tail.

Chapman's Iliad.

INSENSATE', adj. ~\ Fr. intense, insensi—

INSENSIBIL'ITY, n. s. ibilite; Ital. insensate;

INSEN'SIBLE, adj. *> Lat. in and sentio.

INSEN'SIBLENESS,TZ.S. i Stupid ; deficient in

INSEN'SIBLY, adv. J thought or sensibility : inability to perceive; torpor; dulness of corporal sense, or mental perception : insensible, imperceptible ; slow ; gradual ; void of feeling, emotion, or affection : insensibleness has the same meaning : insensibly, in such a man-ner as is not discovered by the senses; slowly; gradually.

What is that word honour ? Air ; a trim reckoning. Who hath it? He that died a Wednesday. Doth he feel it ? No. Doth he hear it ? No. Is it insensible then ? Yea, to the dead. But will it not live with the living ? No. Why? Detraction will not suffer it. Shakspeare.

Ye be reprobates ; obdurate insensate creatures.

Hammond.

Two small and almost insensible pricks were found upon Cleopatra's arm. Browne's Vulgar Errours. So fond are mortal men,

As their own ruin on themselves t' invite,

Insensate left, or to sense reprobate,

And with blindness internal struck.

Milton's Agonistes. Equal they were formed,

Save what sin hath impaired, which yet hath wrought

Insensibly. Milton.

Insensibility of slow motions may be thus accounted for : motion cannot be perceived without perception of the parts of space which it left, and those which it next acquires. Glanville.

You grow insensible to the conveniency of riches, the delights of honour and praise. Temple

You render mankind insensible to their beauties, and have destroyed the empire of love. Dryder.

They fall away,

And languish with insensible decay. Id. The insensibleness of the pain proceeds rather from the relaxation of the nerves than their obstruction.

Ray.

The hills rise insensibly, and leave the eye a vast uninterrupted prospect. Addison on Italy.

The dense and bright light of the circle will obscure the rare and weak light of these dark colours round about it, and render them almost insensible

Newton's Opticks.

Proposals agreeable to our passions will insentibly prevail upon our weakness. Roger$'s Sermon*.

Cadenus

Insensibly came on her side. Swift.

Insensible of truth's almighty charms, Starts at her first approach, and sounds to arms! Cowper's Hope.

Peace (if insensibility may claim A right to the meek honours of her name). Id. Thus Harold inly said, and passed along, Yet not insensibly to all which here Awoke the jocund birds to early song In glens which might have made even exile deai. Byron's Childe Harold.

INSEPARABILITY, n. s.-\ Lat. insepara—

INSEP'ARABLENESS, n. s. t bills. The qua—

INSEP'ARABLE, adj. £lity of not being

INSEPARABLY, adv. 3 divisible : not

to be disjoined : with indissoluble union. Lordship may not (of kinge nor emperour)

Reforme a thing whiche is nat reformable ;

Rust of defame, is inseparable.

Chaucer's Miscellanies.

Drowning of metals is, when the baser metal is so incorporate with the more rich as it cannot be separated ; as if silver should be inseparably incorporated with gold. Bacon.

Ancient times figure both the incorporation and inseparable conjunction of counsel with kings, and the wise and politic Use of counsel by kings. Id.

Thou, my shade

Inseparable, must with me along ; For death from sin no power can separate.

Milton.

Restlessness of mind seems inseparably annexed to human nature. Temple.

Care and toil came into the world with sin, and remain ever since inseparable from it. South.

Oh ! nothing now can please me.

Darkness, and solitude, and sighs, and tears,

And all the inseparable train of grief,

Attend my steps for ever. Dry den.

The parts of pure space are immoveable, which follows from their inseparability, motion being nothing but change of distance between any two things ; but this cannot be between parts that are inseparable. Locke.

No body feels pain, that he wishes not to be eased of, with a desire equal to that pain, and inseparable from it. Id.

Atheists must confess, that before that assigned period matter had existed eternally, inseparably en-dued with this principal of attraction ; and yet had never attracted nor convened before, during that infinite duration. Bentley.

Together out they fly,

Inseparable now the truth and lie ;

And this or that unmixt no mortal e'er shall find.

Pope.

INS

INSERT', v. a. > Fr. insertion; Lat. m-INSER'TION, n. s. > sero. To place in or

amongst other things; to interline : insertion, the

tiling so placed or inserted.

Those words were very weakly inserted, where they are so liable to misconstruction. Stillingjieet.

With the worthy gentleman's name I will insert it at length in one of my papers. Addison.

An ileus, commonly called the twisting of the guts, is either a circumvolution or insertion of one part of the gut within the other. Arbuthnot.

The great disadvantage our historians labour un-der is too tedious an interruption, by the insertion of records in their narration.

Felton on the Classics.

It is the editor's interest to insert what the author's judgment had rejected. Swift.

He softens the relation by such insertions, before he describes the event. Broome.

Poesy and oratory omit things not essential, and insert little beautiful digressions, in order to place every thing in the most affecting light. Watts.

INSERVE', v. a. 3 To be of use to an end :

INSER'VIENT, adj. 3 conducive of a use to an end.

The providence of God, which disposeth of no part in vain, where there is no digestion to be made, makes not any parts inservient to that intention.

Browne.

INSHELL', v. a. In and shell. To hide in a shell. Not used.

Aufidius, hearing of our Marcius' banishment Thrusts forth his horns again into the world, Which were inshetled when Marcius stood for Rome, And durst not once peep out.

Shakspeare. Coriolanus.

INSHIP', v. a. In and ship. To shut in a ship; to stow; to embark. Not used. We say simply to ship.

See them safely brought to Dover, where inshipped, Commit them to the fortune of the sea. Shakspeare.

INSHRINE', v. a. In and shrine. To enclose in a shrine or precious case. It is written equally enshrine.

Warlike and martial Talbot, Burgundy Inshrines thee in his heart.

Sliakspeare. Henry VI. Not Babylon, Equalled in all its glories, to inshrine Belus.

Milton.

IN'SIDE, n. s. In and side. Interior part ; part within. Opposed to the surface or outside.

Looked he o' the' inside of the paper ? — He did unseal them.

Shakspeare. Henry VIII.

Show the inside of your purse to the outside of his hand, and no more ado. Id. Winter's Tale.

Here are the outsides of the one, the insides of the other, and there's the moiety I promised ye.

L'Estrange.

As for the inside of their nest, none but themselves were concerned in it. Addison's Guardian.

INSIDE GUARD, in the broad sword exercise, a guard to secure the face and front of the body from a cut made at the inside of the position, above the wrist. See SWORD EXERCISE.

INSIDIATOR, n.s.ˆ Fr. insidieux ; Lat. INSID'IOUS, adj. > insidiosus. Sly; dili—

INSID'IOUSLY, adv. j gent to entrap; treacherous: with malicious artifice: by stealth or

in a deceitful manner : insidiator is one who lies in wait.

The castle of Cadmus was taken by Phebidas the Lacedemonian, insidiously and in violation of league.

Bacon.

Since men mark all our steps, and watch our halt-ings, let a sense of their insidious vigilance excite us so to behave ourselves, that they may find a conviction of the mighty power of Christianity towards regulating the passions. Atterbury.

They wing their course,

And dart on distant coasts, if some sharp rock, Or shoal insidious, breaks not their career.

Thomson.

Simeon and Levi spoke not only falsely but insidiously, nay hypocritically, abusing their proselytes and their religion, for the effecting their cruel designs.

Government of the Tongue. Against the head which innocence secures Insidious malice aims her darts in vain, Turned backward by the powerful breath of heaven.

Dr. Johnson's Irene. The palace has become a fortress Since that insidious hour.

Byron. Tragedy. Sardanapalus, act 5. sc. 1. Till worn by age, and mouldering to decay, The' insidious waters wash its base away.

Canning.

IN'SIGHT, n. s. But. insicht. This word had formerly the accent on the last syllable. Introspection ; deep view ; knowledge of the interior parts ; thorough skill in any thing.

For though the people have no gret insight

In vertue, he considered ful right

Hire bountee ; and disposed, that he wold

Wedde hire only, if ever he wedden shold.

Chaucer. The Clerkes Tale.

Straitway sent with careful diligence To fetch a leech, the which had great insight In that disease of grieved conscience, And well could cure the same ; his name was Patience. Spenser.

Now will be the right season of forming them to be able writers, when they shall be thus fraught with an universal insight into things. Milton.

Hardy shepherd, such as thy merits, such may be her insight justly to grant thee reward. Sidney.

The use of a little insight in those parts of knowledge, which are not a

man's proper business, is to accustom our minds to all sorts of ideas. Locke.

A garden gives us a great insight into the contrivance and wisdom of providence, and suggests innumerable subjects of meditation. Spectator.

Due consideration, and a deeper insight into things, would soon have made them sensible of their error. Woodward.

INSIGNIFICANCE, n. 5.-v Fr. uuigniji—

INSIGNIF'ICANCY, n. s. tcanee; Lat. in

INSIGNJF'ICANT, adj. I and significo.

INSIGNIFICANTLY, adv. J Want of meaning: unimportance. Unimportant; wanting weight ; ineffectual : this sense, though supported by authority, is not very proper. Insignificantly, in an unmeaning or trifling manner.

Birds are taught to use articulate words, yet they understand not their import, but use them insignificantly, as the organ pipe renders the tune, which it understands not. Hale.

To give an account of all the insigniftcancies and the verbal nothings of this philosophy, would be to transcribe it. Glanville.

All the arguments to a good life will be very in-

tignificant to a man that hath a mind to be wicked, when remission of sins may be had upon cheap terms.

Tillotson.

My annals are in mouldy mildews wrought, With easy insignificance of thought. Garth.

Calumny robs the publick of all that benefit that it may justly claim from the worth and virtue of particular persons, by rendering their virtue utterly insignificant. South.

As 1 was ruminating on that I had seen, I could not forbear reflecting on the insignificancy of human art, when set in comparison with the designs of Providence. Addison's Guardian.

Nothing can be more contemptible and insignificant than the scum of a people, instigated against a king. Addison.

'Till you can weight and gravity explain, These words are insignificant and vain.

Blackmore.

In a hemorrhage from the lungs, no remedy so proper as bleeding, often repeated : stypticks are often insignificant. Arbuthnot.

So language in the mouths of the adult, Witness its insignificant result.

Cowper. Conversation.

With a pride common to all Italians who have been masters, have not been persuaded to parade their insignificance. Byron's Notes on Childe Harold.

INSINCERE', adj. \ Lat. in and sincerus—

INSINCER'ITY, n. s. S Not what he appears;

dissembling; unfaithful, when used of a person;

not sound, when used of things : insincerity is

dissimulation ; want of truth or fidelity.

If men should always act under a mask, and in disguise, that indeed betrays design and insincerity. Broome on the Odyssey. Ah why, Penelope, this causeless fear, To render sleep's soft blessings insincere 1 Alike devote to sorrow's dire extreme, The day reflection, and the midnight dream.

Pope.

INSIN’E\V,r.fl. In and sinew. To strengthen ; to confirm. A word not used.

All members of our cause, That are insinewed to this action.

Shakspeare.

INSIN’UANT, adj. -v Fr. insinuer ; Lat. INSIN’UATE, v. a. kv.n.i insinuo. To intro-INSISUA’TION, n.s. sduce gently into the INSIN’UATIVE, adj. I bosom: figuratively INSIN’UATOR, n. $. J to gain favor by degrees; to hint; to instil ; to wheedle; to steal imperceptibly ; to enfold; enervate: insinuation, the power of stealing into favor : insinuative implies the disposition : insinuator, the person.

There is no particular evil which hath not some Appearance of goodness, whereby to insinuate itself.

Hooker.

I love no colours ; and, without all colour Of base insinuating flattery, I pluck this white rose with Plantagenet.

Shakspeare.

When the industry of one man hath settled the work, a new man, by insinuation or misinformation, may not supplant him without a just cause. Bacon.

Pestilential miasms insinuate into the humoral and consistent parts of the body. Harvey.

At the isle of Rhee he insinuated himself into the very good grace of the duke of Buckingham.

Clarendon.

He had a natural insinuation and address, which made him acceptable in the best company. Id.

Close the serpent sly Insinuating, of his fatal guile Gave proof unheeded. Milton.

All the art of rhetorick, besides order and clearness, are for nothing

else but to insinuate wrong ideas, move the passions, and thereby mislead the judgment. Locke.

Men not so quick perhaps of conceit as slow to passions, and commonly less inventive than judicious, howsoever prove very plausible, insinuant, and fortunate men. Wotton.

The water easily insinuates itself into and placidly distends the vessels of vegetables. Woodward.

And all the fictions bards pursue Do but insinuate what's true. Swift.

It is a strange insinuative power which example and custom have upon us.

Government of the Tongue. I scorn your coarse insinuation, And have most plentiful occasion To wish myself the rock I view, Or such another dolt as you. Cowper. The Poet, Oyster, and Sensitive Plant. Serene, accomplished, cheerful, but not loud ; Insinuating without insinuation. Byron. Don Juan.

INSIPID, adj. } Fr. insipide ; Lat. in-INSIPID'ITY, n. s. i sipidus. Without taste ; INSIP'IDNESS, n. s. \ wanting power of aflfect- INSIP'IDLY, adv. i ing the organs of taste ; INSIP'IENCE, n. s. J flat ; dull f heavy : folly : a want of understanding.

Some earths yield, by distillation, a liquor very far from being inodorous or insipid. Boyle.

The gods have made your noble mind for me, And her insipid soul for Ptolemy ; A heavy lump of earth without desire, A heap of ashes that o'erlays your fire.

Dryden's Cleomenes.

Some short excursions of a broken vow He made indeed, but flat insipid stuff. Dryden. One great reason why many children abandon themselves wholly to silly sports, and trifle away all their time insipidly, is because they have found their curiosity baulked. Locke.

Our fathers much admired their sauces sweet, And often called for sugar with their meat ; Insipid taste, old friend, to them that Paris knew, Where rocambole, shallot, and the rank garlick grew. King.

When liberty is gone Life grows insipid, and has lost its relish.

Addison’s Cato.

She lays some useful bile aside, To tinge the chyle’s insipid tide. Prior.

This chyle is the natural and alimentary pituita, which the ancients described as insipid.

Flayer on the Humours.

On these grounds, therefore, though there cannot be a more partial admirer of the work itself, I can-not hesitate a moment to consider that ‘ faultless monster,’ Sir Charles Grandison, whose insipid uniformity of goodness it is fashionable to decry, far the more preferable to be held up to a child as an ob-ject of imitation. Canning.

INSIST »>. a. -\ Lat. insisto. To stand or

INSIST’ENT, adj. >rest upon; not to recede;

JNSIS’TURE, n. s. J to persist ; to dwell upon

in discourse. Insistent, resting upon any thing :

constancy; regularity.

Upon such large terms, and so absolute, As our conditions shall insist upon Our peace shall stand firm as rocky mountains.

Shakspeai a -.

INS

The heavens themselves, the planets, and the

center,

Observe degree, priority, and place, Insixture, course, proportion, season, form, Office, and custom, in all line of order. Id.

Were there no other act of hostility but that which we have already insisted on, the intercepting of her supplies were irreparably injurious to her.

Decay of Piety.

The combs being double, the cells on each side the partition are so ordered, that the angles on one side insist upon the centers of the bottom of the cells on the other side. Ray—

The breadth of the substruction must be at least double to the insistent wall. Wotton.

Insist on, as if each were his own pope, Forgiveness, and the privilege of hope.

Cowper. Hope.

The diversities in point of correctness, and deli4 cacy which arose from their different ways of life, I do not now tHS/st-upon. Beattie.

INSiriENCY, n.s. Lat. in and sitio. Exemption from thirst.

W hat is more admirable than the totness of every creature for the use we make of him 1 The docility of an elephant, and the insitiency of a camel for travelling in desarts. Grew.

INSITION, n. s. Lat. insitio. The insertion or engraffment of one branch into another.

Without the use of these we could have nothing of culture or civility ; no tillage, grafting, or insition.

Ray.'

INSNARE', v. a.) Belg. insnaer. To catch

INSNA'RER, n. $. S in a trap, gin, or snare :

and hence figuratively to inveigle; to entangle

in difficulties or perplexities ; generally written

ENSNARE, which see.

That the hypocrite reign not, lest the people be ensnared. Job xxxvi. 30.

That which in a great part, in the weightiest causes belonging to this present controversy, hath instiared the judgments both of sundry good and of some well learned men, is the manifest truth of certain general principles, whereupon the ordinances that serve for usual practice in the church of God are grounded. Hooker.

Why strewest thou sugar on that bottled spider, Whose deadly web insnareth thee about.

Shakspeare. She ensnared

Mankind with her fair looks. Milton.

By long experience Durfey may no doubt Insnare a gudgeon, or perhaps a trout ; Though Dryden once exclaimed, in partial spite, He fish ! — because the man attempts to write.

Fenton. These

Insnare the wretched in the toils of law, Fomenting discord, and perplexing right, An iron-race. Thomson.

INSO’CIABLE, adj. Fr. intociaUe ; Lat. in-sociabilis. Averse from conversation ; incapable of connexion or union.

If this austere insociahle life Change not your offer made in heat of blood.

Shakspeare.

The lowest ledge or row must be merely of stone, closely laid, without mortar, which is a general caution for all parts in building that are contiguous to board or timber, because lime and wood are insociable. Wottmi’s Architecture.

INSOBRI’ETY,n.». In and sobriety. Drunkenness ; want of sobriety.

He whose conscience upbraids him with profaneness towards God, and insobriety towards himself, if he is just to his neighbour, he thinks he has quit scores. Decay of Piety.

IN’SOLATE, v. a.) Lat. in and sol. To dry in

INSOLA’TION, ». s. \ the sun ; to expose to the action of the sun.

We use these towers for insolation, refrigeration, conversation, and for the view of divers meteors.

Bacon.

If it have not a sufficient insolation it looketh pale, and attains not its laudable colour ; if it be sunned too long, it suffereth a torrefaction. Browne.

INSOLATION, in pharmacy, is a method of preparing fruits, drugs, &c., by exposing them to the heat of the sun's rays ; either to dry, to maturate, or to sharpen them.

IN'SOLENCE,n.s.&V.a.-v Fr. insolence;

IN'SOLENCY, n. s. f Lat. insoltntia.

IN'SOLENT, adj. £ Pride exerted in

IN'SOLENTLY, adv. J contemptuous

and overbearing treatment of others ; petulant contempt. Insolence, a word out of use ; to in-sult or treat with contempt : insolent, contemptuous; haughty; overbearing: insolently, rudely; haughtily.

Insolent is he that despiseth, in his jugement, all other folk as in regarde of his value, of his conning, of his speking, and of his bering.

Chaucer. The Persones Tale. They could not restrain the insolency of O'Neal, who, finding none now to withstand him, made himself lord of those people that remained. Spenser.

Such a nature,

Tickled with good success, disdains the shadow Which he treads on at noon ; but I do wonder His insolence can brook to be commanded Under Cominius. Shakspeare.

The bishops, who were first faulty, insolenced and assaulted. King Charles.

Blown with insolence and wine. Milton.

Fublick judgments are the banks and shores upon which God breaks the insolency of sinners, and stays their proud waves. Tillotson.

I warn thee thus, because I know thy temper Is insolent and haughty to superiors.

Dryden. Sebastian and Dorax. Not faction, when it shook thy regal seat, Not senates, insolently loud, Those echoes of a thoughtles crowd, Could warp thy soul to their unjust decree.

Dryden.

Judge me not ungentle, Of manners rude, and insolent of speech, If, when the public safety is in question, My zeal flows warm, and eager from my tongue.

Rove's Jane Shore.

We have not pillaged those rich provinces which we rescued : victory itself hath not made us insolent masters. Atterbury.

The steady tyrant man, Who with the thoughtless insolence of power, For sport alone, pursues the cruel chace.

Thomson.

The multitude unawed is insolent, Once seized with fear contemptible and vain.

Mallet.

Her women insolent and self caressed, By Vanity's unwearied finger dressed.

Cowper. Expostulation.

INSOL'VABLE, adj.^ Fr. insolvable ; Lat.

INSOL'UBLE, adj. tin and solvo. Not to

INSOLVENT, adj. £be solved or cleared;

INSOLVENCY, ». s. 3 inextricable ; inexplicable : insoluble, not to be resolved, cleared, or dissolved : insolvent, one who is unable to pay:

insolvency, inability to pay debts. An act of insolvency is a law by which imprisoned debtors are released without payment.

Admit this, and what shall the Scripture be but a snare and a torment to weak consciences, filling them with infinite scrupulosities, doubts insoluble, and extreme despair ? Hooker.

By public declaration he proclaimed himself insolvent of those vast sums he had taken upon credit.

Howel.

Stony matter may grow in any part of a human body ; for when any thing insoluble sticks in any part of the body, it gathers a crust about it.

Arbuthnot.

Spend a few thoughts on the puzzling enquiries concerning vacuums, the doctrine of infinities, indivisibles and incommensurables, wherein there appear some insolvable difficulties.

Watts on the Mind.

An insolvent is a man that cannot pay his debts.

Watts.

Insolvent tenant of incumbered space. Smart.

The foe of virtue has no claim to thee, But let insolvent innocence go free.

Cowper. Charity.

INSOMUCH', conj. In so much. So that to such a degree that.

To make, ground fertile, ashes excel ; insomuch as the countries about ˆEtna have amends made them for the mischiefs the eruptions do. Bacon.

Simonides was an excellent poet, insomuch that he made his fortune by it. L'Estrange.

They made the ground uneven about their nest, insomuch that the slate did not lie flat upon it, but left a free passage underneath. Addison.

INSPECT', v. a. ~\ Lat. iwpicio. To look

INSPEC'TION, n. s. >into by way of examina—

INSPEC'TOR, n. s. j tion : inspection, prying , examination ; close survey ; superintendence ; presiding care. In the first sense it should have into before the object, and in the second sense it may admit over ; but authors confound them: inspector, a prying examiner ; a superintendant. When ye unto this balade have inspeccion,

In my makyng holde me excusable ;

It is submitted unto your correccion.

Chaucer's Miscellanies. With their new light our bold inspectors press,

Like Cham, to shew their father's nakedness.

Denham. With narrow search, and with inspection deep,

Consider every creature. Milton.

We may safely conceal our good deeds, when they run no hazard of being diverted to improper ends, for want of our own inspection. Atterburt/.

The divine inspection into the affairs of the world doth necessarily follow from the nature and being of God ; and he that denies this, doth implicitly deny his existence. Bentley.

Young men may travel under a wise inspector or tutor to different parts, that they may bring home useful knowledge. Watts.

INSPECTION, TRIAL BY, OR BY EXAMINATION, is when, for the greater expedition of a cause, in some point or issue, being either the principal question, or arising collaterally out of it, but

being evidently the object of sense, the judges of the court, upon the testimony of their own senses shall decide the point in dispute. For, where the affirmative or negative of a question is matter of such obvious determination, it is not thought necessary to summon a jury to decide it ; who are properly called in to inform the conscience of the court of dubious facts : and therefore, when the fact, from its nature, must be evident to the court, either from ocular demonstration or other irrefragable proof, there the law departs from its usual resort,

the verdict of twelve men, and relies on the judgment of the court alone. As in case of a suit to reverse a fine for non-age of the cognizor, or to set aside a statute or cognizance entered into by an infant; here, and in other cases of the like sort, a writ shall issue to the sheriff, commanding him that he constrain the said party to appear, that it may be ascertained by the view of his body, by the king's justices, whether it be of full age or not : Utper aspectum corporissui constare poterit justiciariis nostris, si prjedictus an sit plenae setatis necne. If, however, the court has, upon inspection, any doubt of the age of the party (as may frequently be the case), it may proceed to take proofs of the party ; ard particularly may examine the in-fant himself upon an oath of voir dire, veritatem dicere ; that is, to make true answers to such questions as the court shall demand of him ; or ' the court may examine his mother, his godfather, or the like.

INSPECTING FIELD OFFICER, a military officer, selected from the line, and nominated by the war-office, to superintend and to vouch for tne faithful distribution of monies which are issued to officers acting on detachment, or on recruiting parties, within the limits of a certain appointed district. All district paymasters are strictly enjoined by the general regulations to have their muster-rolls and pay-lists duly authenticated before a justice of the peace, and to have them witnessed by the inspecting field-officer.

INSPECTOR, Heb. Jtn, hhazen, in the Jewish synagogue, an officer whose business consists particularly in inspecting the prayers and lessons, in preparing and showing them to the reader, and standing by him to see he reads right ; and, if he mistakes, to correct him.

INSPECTORS, in the Roman law, were such persons as examined the quality and value of lands and effects, in order to the adjusting or proportioning taxes and impositions to every man's estate.

INSPER'SION, n. s. Lat. inspersio. A sprinkling upon.

INSPHERE', v. a. In and sphere. To place in an orb and sphere.

Where those immortal shapes Of bright aerial spirits live insjihered, In regions mild of calm and serene air.

Milton.

INSPI'RABLE, adj.-\ Fr. impirer ; Lat.

INSPIRATION, n. s. i in and spiro. That

INSPIRE’, v. n. & v. a A may be drawn in

INSPI’RER, n. s. I with the breath : the

INSPIR’IT. n. s. * act of drawing in the

breath; the act of breathing into any thing ; infusion of ideas into the mind by a superior

power : inspire, to breathe into ; to infuse ; to animate ; to influence : inspirer, he that inspires: inspirit, to animate; actuate; invigorate, and encourage.

He knew not his Maker, and him that inspired into him an active soul, and breathed in a living spirit. Wisdom xv. 11.

For, when ye mildly looke with lovely hew, Then is my soule with life and love insjnred.

Spenser’s Sonnet.

I never spoke with her in all my life, — How can she then call us by our names, Unless it be by inspiration 1 Shakspeare.

Your father was ever virtuous, and holy men at their death have good inspirations. Id.

Great power of love ! with what commanding fire Post thou enflame the world’s wide regiment And kindly heat in every heart inspire ! Nothing is free from thy sweet government.

Fletcher’s Purple Island.

To these inspirable hurts, we may enumerate those they sustain from their expiration of fuliginous steams. Hartey.

We to his high inspiration owe, That what was done before the flood

we know.

Denham.

Sighs now breathed Unutterable, which the spirit of prayer Inspired, and winged for heaven with speedier

flight,

Than loudest oratory. Milton.

If the inspiring and expiring organ of any animal be stopt, it suddenly yields to nature, and dies.

Walton.

Erato, the poet's mind inspire, And fill his soul with thy celestial fire.

Dry den.

A discreet use of becoming ceremonies renders the service of the church solemn and affecting, inspirits the sluggish, and inflames even the devout worshipper. Atterbury.

The courage of Agamemnon is inspirited by love of empire and ambition.

Pope's Preface to the Iliad. Ye nine, descend and sing, The breathing instruments inspire. Pope.

Inspiration is when an overpowering impression of any proposition is made upon the mind by God himself, and gives a convincing and indubitable evidence of the truth and divinity of it : so were the prophets and apostles inspired. Watts.

Sure 'tis something more, 'Tis heaven directs, and stratagems inspire Beyond the short extent of human thought.

Somerville.

Whether the blossom blows, the Summer ray Russets the plain, inspiring Autumn gleams, Or Winter rises in the bleakening east.

Thomson's Seasons. How keen their looks whom liberty inspires.

Beattie.

That he who died below and reigns above, Inspires the song, and that his name is love.

Cowper. Table Talk.

— had none admired,

Would Pope have sung, or Horace been inspired 1 Byron. Don Juan.

INSPIRATION, among divines, implies the conveying of certain extraordinary and supernatural notices or motions into the soul, or any supernatural influence of God upon the mind of a rational creature, whereby he is formed to a degree of intellectual improvement to which he could not, or would not, in fact, have attained in

a natural way. Thus the prophets spoke by divine inspiration. Some authors reduce the inspiration of the sacred writers to a particular care of Providence, which prevented any thing they had said from failing or coming to nought; maintaining that they never were really inspired either with knowledge or expression. According to M. Si-mon, inspiralion is no more than a direction of the Holy Spirit, which never permitted the sacred writers to be mistaken. It is a common opinion that the inspiration of the Holy Spirit regards only the matter, not the style or words ; and this seems to fall in with M. Simon's doctrine of direction. Theological writers have enumerated several kinds of inspiration : such as, an inspiration of superintendency, in which God so influences and directs the mind of any person as to keep him more secure from error than he would have been merely by the use of his natural faculties; plenary superintendent inspiration, which excludes any mixture of error at all from the performance so superintended ; inspiration of elevation, where the faculties act in a regular, and, as it seems, in a common manner, yet are raised to an extraordinary degree, so thut the composer shall have more of the true sublime than natural genius could have given ; and inspiration of suggestion, when the use of the faculties is superseded, and God speaks directly to the mind, making such discoveries to it as it could not otherwise have obtained, and dictating the very words in which such discoveries are to be communicated, if they are designed as a message to others. It is generally allowed that the New Testament was written by a plenary superintendent inspiration ; for without this the discourses and doctrines of Christ could not have been faithfully recorded by the evangelists and apostles ; nor could they have assumed the authority

of speaking the words of Christ, and evinced this authority by the actual exercise of miraculous powers. Jerome, Grotius, Erasmus, Episcopius, and many others assert that the inspiration of the apostles was not plenary, in other words, that all their writings are not entirely free from error. But the emphatical manner in which our Lord speaks of the agency of the Spirit upon them, and in which they themselves speak of their own writings, will most undoubtedly justify our believing that their inspiration was free from all error. If we allow that there were some errors in the New Testament, as it came from the hands of the apostles, we shall indeed require the aid of some infallible church to decide what are errors and what are not — what are the words which the Holy Ghost teacheth and which may be relied on as true, and what are to be rejected as erroneous : and it is remarkable that the head of that sect at the greatest apparent distance from the church of Rome — Dr. Priestly — who tells us of the inconclusive reasoning of the apostle Paul, must in that very discovery be supposed (with those who admit it to be such) capable of reasoning better, and therefore of pronouncing, ex cathedra, upon what we ought to reject of the apostle's reasoning. But see THEOLOGY.

INSPIRATION, in physiology, is that action of the breast by which the air is admitted within the lungs ; in which sense inspiration is a branch

ot respiration, and stands opposed to expiration. This admission of the air depends immediately on its spring or elasticity, at the time when the cavity of the breast is enlarged by the elevation of the thorax and abdomen, particularly by the motion of the diaphragm downwards : so that the air does not enter the lungs, because they are dilated ; but these dilate because the air enters within them. See RESPIRATION.

INSPIS'SATE, v. a. > Lat. in and spissus.

INSPISSA'TION, ». s. >To thicken: the act of making any liquid thick.

Sugar doth inspissate the spirits of the wine, and niaketh them not so easy to resolve into vapour.

Bacon.

The effect is wrought by the inspiration of the air.

Id.

Recent urine will crystallize by inspissation, and afford a salt neither acid nor alkaline. Arbuthnot.

This oil farther inspissated by evaporation turns into balm. Id. on Aliments.

INSPISSATING, in pharmacy, an operation by which a liquor is brought to a thicker consistence, by evaporating the thinner parts. Thus ‘uices, as that of liquorice, are inspissated.

INSP11UCK, or YNNSBRUGG, a city of Germany, in Austria, the capital of the Tyrol, so named from the Inn, over which there is here a beautiful bridge : and near the town is the confluence of the Inn and Sill. It has a noble castle or palace, formerly the residence of the archdukes of Austria, with a cathedral where they are buried. The chapel erected by Maria Theresa to the memory of her husband is considered a building of considerable taste. In the church of the Franciscans are bronze statues of all the Ger-man emperors. The houses, though built in the German taste, are rather handsomer, and the streets, though narrow, remarkably well paved. The fortifications are trifling, but the natural fastnesses of the country form a barrier so perfectly inaccessible to an enemy, that Gustavus Adolphus, after having overrun the other parts of Germany, could never make any impression upon this. In 1672 the emperor Leopold I. converted the gymnasium of the Jesuits into a university, which was enriched by Maria Theresa with two valuable collections of books from the citadel at Ambras, and the imperial library at Vienna. The transit trade from Germany to Italy is here considerable ; but in manufactures the only establishment worth noticing is a large cotton-work. The Innthal, or valley in which Inspruck stands, is one of the largest of those formed by the northern Alps ; and is also the most picturesque. Its length is about thirty miles; its greatest breadth, as in the neighbourhood of Inspruck, about six miles. Here the Inn is bordered by fields in high cultivation, adorned with different kinds of forest trees, intermixed with villages, and graced at intervals with the ruins of an ancient castle The back ground is formed by mountains, hav-ing on their sides vast forests, while their tops terminate in a mass of precipitous and barren rocks. This was the scene of several heroic efforts of the Tyrolese against the French and Bavarians in 1809. Inspruck is sixty-two miles south of Munich, and eighty-four W. S.W. of Salzburg. Population about 10,000.

INSTABILITY, n. s. } Lat. inttabilis. In-INSTA'BLE, adj. 5 constancy ; fickleness ;

mutability of opinion or conduct. See UNSTABLE.

Instability of temper ought to be checked, when it disposes men to wander from one scheme of govern ment to another; such a fickleness cannot but be fatal to our country. Addison's Freeholder.

INSTALL', v. a. ~\ Fr. installer ; Lat. in-INSTALLA'TION, n.s. (sta. To advance to rank INSTAL'MENT, n. s. I or office byplacing in the INSTATE', v. a. J seat or stall proper to

that condition ; the act of giving visible possession : instalment, the act of installing, or the seat of one installed : instate, to place in a certain rank.

For his possessions,

Although by confiscation they are ours, \ e do instate and widow you withal.

Shakspeare.

Cranmer is returned with welcome, Installed archbishop of Canterbury. Id.

Is it not easy

To make lord William Hastings of our mind, For the instalment of this noble duke In the seat royal 1 Id. Richard III.

This kind of conquest does only instate the victor in these rights which the conquered prince had.

Hale.

The king chose him master of the horse ; after this he was installed of the most noble order. Wot ton.

Had this glistering monster been born to thy poverty, he could not have been so bad ; nor, perhaps, had thy birth instated thee in the same greatness, wouldst thou have been better. South.

Upon the election the bishop gives a mandate for this installation.

Ayliffe's Parergon.

There five-and-thirty years ago was I Installed.

Byron. Tragedy. Two Foscari, act 5. sc. 1. INSTALMENT is derived from the Latin in, and stallum, a term used for a seat in a church, in the choir, or a seat or bench in a court of justice, &c. Vossius is of opinion the word is of German origin. It is chiefly used for the induction of a dean, prebendary, or other ecclesiastical dignitary, into the possession of his stall, or proper seat, in the cathedral church to which he belongs : sometimes also called installation. It is likewise used for the ceremony by which the knights of the garter are placed in their rank, in the chapel of St. George at Windsor. See GAR-TER, KNIGHTS OF THE.

IN'STANCE, n. s. & v. n."| Fr. instance. Im-IN'STANCY, n. s. \ portunity; solici—

IN'STANT, adj. & n. s. Ration; motion; INSTANTA'NEOUS, adj. f process of a suit; INSTANTA'NEOUSLY, adv. (example; state of IN'STANTLY, adv. J any thing, occasion, or act : instance, to give as an example : instant, urgent; pressing; quick; without delay; a part of duration in which we perceive no succession ; a particular time ; a day of the present month : instantaneous, and instantaneously, done in an instant, or with the utmost speed : instantly, immediately; without the least delay.

His frendes sent he to, at his instance, And praied hem to don him that plesance That nastily they wolden to him come.

Chaucer. The Marchantes Tals.

There is scarce an instant between their flourishing and their not

being. Hooker,

Christian men should much better frame themselves to those heavenly precepts which our Lord and Saviour with so great instancy gave us concerning peace and unity, if we did concur to have the ancient councils renewed. Id.

The instances that second marriage move, Are base respects of thrift, but none of love.

Shakspeare.

Yet doth this accident, So far exceed all instance, all discourse, That I am ready to distrust mine eyes. Id. I can at any unseasonable instant of the night appoint her to look out at her lady's chamber window.

Id.

Sleep instantly fell on me. Milton.

Instant without disturb they took alarm. Id. These seem as if, in the time of Edward the First, they were drawn up into the form of a law in the first instance. Hale.

As to false citations, that the world may see how little he is to be trusted, I shall instance in two or three about which he makes the loudest clamour.

TUlatton,

What I had heard of the raining of frcgs came to my thoughts, there being reason to conclude that those came from the clouds, or were instantaneously generated. Derham.

This manner of the beginning or ceasing of the deluge doth not at all agree with the instantaneous actions of creation and annihilation.

Burnet's Theory.

On the twentieth instant it is my intention to erect a linn's head. Addison's Guardian,

The instance of a cause is said to be that judicial process which is made from the contestation of a suit, even to the time of pronouncing sentence in the cause, or till the end of three years. dylijfe.

The greatest saints are sometimes made the most remarkable instances

of suffering. Atterbury.

Suppose the earth should be removed nearer to the sun, and revolve for instance in the orbit of Mercury, the whole ocean would boil with heat. Bentley.

A soul supreme in each hard instance tried Above all pain, all anger, and all pride. Pope. Words are signs, not copies, of ideas. An idea, for instance, may be essentially changed ; and the sign that stood for it before may stand for it afterwards, without causing an immediate perception in the mind of this change. Bolingbroke.

The rapid radiance instantaneous strikes The' illumined mountain. Thomson.

The harvest's treasure all Now gather in, beyond the rage of storms Sure to the swain ; the circling fence shut up, And instant winter's utmost rage defied. Id.

Fair was the blossom, soft the vernal sky : Elate with hope we deemed no tempest nigh : \ hen lo ! a whirlwind's instantaneous gust Left all its beauties withering in the dust.

Beattie.

Your Commentaries had taught me, that, although the instance in which a penal law is exerted be particular, the laws themselves are general.

Junius's letters. So

He stood i' the temple ! Look upon him as Greece looked her last upon her best, the instant Ere Paris' arrow flew.

Byron. Deformed Transformed.

Granted at The instance of the elders of the council.

Id. Tragedy. Two Foscari.

INSTEAD' of, prep. 'From in and stead, or place. In room of; in place of.

They instead of fruit Chewed bitter ashes. Milton.

Vary the form of speech, and instead of the word church make it a question in politicks, whether the monument be in danger. Swift.

To gaze, instead of pavement, upon grass, And rise at nine in lieu of long eleven.

Byron. Don Juan. Equal to.

This very consideration to a wise man is instead of a thousand arguments, to satisfy him, that, in those times, no such thing was believed. Tillotson.

Instead is sometifnes used without of. In the place ; in the room.

He in derision sets

Upon their tongues a various spirit, to rase Quite out their native language, and instead To sow a jangling noise of tongues unknown.

Milton.

INSTEEP, v. a. In and steep. To soak ; to macerate in moisture. To lay under water.

Suffolk first died, and York, all haggled over, Comes to him where in gore he lay insteeped.

Shakspeare.

The guttered rocks, and congregated sands, Traitors insteeped to clog the guiltless keel. Id.

IN'STEP, n. s. In and step. The upper part of the foot where it joins to the leg.

The caliga was a military shoe with a very thick sole, tied above the instep with leather thongs.

Arbuthnot on Coin*.

Around, as princess of her father's land, A like gold bar above her instep rolled Announced her rank. Byron. Don Juan.

INSTERBURG, a town and circle of East Prussia, on the Angerap, in tie government of Gumbinnen. Its chief trade is in corn and lint-seed. The circle of this nan e is of great extent, comprehending a population tf 150,000. Part of it is covered with forests ; but the soil of the rest is

fertile, and the pastures are extensive : manufactures are hardly known here. It is fifty miles east of Konigsberg; and contains 5300 inhabitants.

IN'STIGATE, v. a. ˆ Fr. instiguer ; Lat. m—

INSTIGA'TION, n. s. /xtigo; Italian instigare.

INSTIG A'TOR, n. s. j To urge to ill ; to incite to the commission of crime. Instigation, impulse to vice or violence. Instigator, one who incites to evil.

Be it that thy wife be excellently gode, That none be bet of disposicion, —

In processe of time she might turn hire mode By some misse-livers instigacion.

Chaucer. Remedie of Love. Why, what need we

Commune with you of this ? But rather follow Our forceful instigation.

Shakspeare. Winter's Tale.

It was partly by the instigation of some factious malcontents that bare principal stroke amongst them.

Bacon.

The sea of blood is enough to drown in eternal misery the malicious author or instigator of its effusion. King Charles.

INSTIL' v.a. ˆ Fr. instiller ; Span.

INSTILLA'TION. > and Port, instillar ; Lat.

INSTIL'MENT, n. t.) instillo. To infuse by

drops; to insinuate; to teach. Instillation, the act of dropping or infusing gradually, whether in a literal or figurative sense. Instilment, the thing infused or instilled.

Though assemblies be had indeed for religion's sake, hurtful nevertheless they may easily prove, as well in regard of their fitness to serve the turn of hereticks, and such as privily will soonest adventure to instill their poison into men's minds. Hooker.

The leperous instalment. Shakspeare.

He from the well of life three drops instilled.

Milton.

They imbitter the cup of life by insensible instillations. Rambler.

Those heathens did in a particular manner instil the principle into their children of loving their country, which is far otherwise now-a-days. Swift.

How in the noon of night that pibroch thrills, Savage and shrill. But with the breath which fills Their mountain-pipe, so fill the mountaineers With the fierce native daring which instils The stirring memory of a thousand years, And Evan's, Donald's fame rings in each clansman's

ears. Byron. Chitde Harold.

IN'STINCT, adj. bn.s. ~\ French instinct ; INSTINCT'ED, adj. f Span, and Port.

INSTINC'TIVE, adj. fvutinto ; Lat. in—

INSTINC'TIVELY, adv.) stinctus. Moved; animated ; a word not in use. Instinct, desire or aversion acting in the mind without the intervention of reason or deliberation ; the power of determining the will of brutes. Instincted, impressed as au animated power. Instinctive, acting without the application of choice or rea-son ; rising in the mind without apparent cause. Instinctively, by instinct or call of nature.

Thou knowest I am as valiant as Hercules ; but beware instinct ; the lion will not touch the true prince : instinct is a great matter. I was a coward on instinct : I shall think the better of myself and thee, during my life ; I for a valiant lion, and thee for a true prince. Shakspeare. Henry IV.

The very rats , Instinctively had quit it. Id. Tempest.

Raised

By quick instinctive motion, I sprung up, As thitherward endeavouring. Milton.

What native unextinguishable beauty must be impressed and instincted through the whole, which the defedation of so many parts, by a bad printer and a worse editor, could not hinder from shining forth.

Benlley's Preface to Milton. Nature first pointed out my Portius to me, And easily taught me by her secret force To love thy person, ere I knew thy merit ; Till what was instinct grew up into friendship.

Addison.

The philosopher-avers,

That reason guides our deed, and instinct theirs. Instinct and reason how shall we divide 1 Prior.

Keason serves when pressed ; But honest instinct comes a volunteer. Pope. It will be natural that Ulysses' mi d should for-bode ; and it appears that the instinctive presage was a favourite opinion of Homer's. Broome.

Prompted by instinct's never-erring power, Each creature knows its proper aliment.

Armstrong.

And an immortal instinct which redeemed The frailties of a heart so soft yet bold.

Byron. Childe Harold.

INSTINCT. Instinct is defined, by Bishop Gleig, ' a certain power or disposition of mind,

by which, independent of all instruction or experience, without deliberation, and without having any end in view, animals are unerringly directed to do spontaneously whatever is necessary for the preservation of the individual or the continuation of the kind.' '

Instinct,' says the late lord Monboddo, in his Ancient Metaphysics, ' is a determination given by Almighty wisdom to the mind of the brute, to act in such or such a way, upon such or such an occasion, without intelligence, without knowledge of good or ill, and without knowing for what end or purpose he acts.' Such in the human species is the instinct of sucking exerted immediately after birth ; and such in the inferior creation is the instinct by which insects invariably deposit their eggs in situations most favorable for hatching and affording nourishment to their future progeny. These operations are necessary for the preservation of the individual and the continuation of the kind ; but neither the infant nor the insect knows that they are necessary ; they both act without having any end in view, and act uniformly without instruction and without experience.'

Many systems have been adopted to explain the principles which produce and direct the spontaneous actions of brutes. Some of the ancient philosophers ascribed to brutes an understanding different only in degree from that of man, and attributed their inferiority to the want ,of proper bodily organs. This system has been strenuously supported by M. Helvetius, De 1'Es-prit, torn. i. p. 2, &c. Cudworth endeavoured to explain the instinct of animals by a certain plastic nature. Des Cartes thought that all the actions of brutes might be explained by the simple laws of mechanism, and considered them as machines totally devoid of life and sentiment, but so curiously constructed by the Creator, that the mere impressions of light, sound, and other external agents on their organs, produced a series of motions in them, and caused them to execute those various operations, which had before been ascribed to an internal principle of life and spontaneity. But the actions and manners of brutes, .which are totally incompatible with the mere principles of mechanism, evince the absurdity of this opinion. Buffon adopts the opinion of Des Cartes in part, but allows them life, and the faculty of distinguishing between pleasure and pain, together .with a strong inclination to the former, and aversion from the latter. By these inclinations and aversions he undertakes to account for all, even the most striking operations of animals. The pre-established harmony of Leibnitz has also been applied to explain the actions of brutes. Others have considered Jhe actions of animals as produced by the constant and immediate influence of the divine energy, directing all their inclinations and motions : such appears to have been the opinion of Addison, in the second volume of the Spectator.

Concerning human instincts philosophers differ widely in opinion; some maintaining that man is endowed with a greater number of instincts than any species of brutes ; whilst others deny that in human

nature there is any power or propensity at all which c«n properly be called

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instinctive. ‘ Tliis diversity of opinion,’ says Dr. Gleig, ‘ may easily he traced to its source. There are not many original thinkers. The greater part of even those who are called philosophers implicitly adopt the opinions of certain masters whose authority they deem sufficient to supply the place of argument; and, having chosen their respective guides, each maintains with zeal what his master taught, or is supposed to have taught. When Locke so successfully attacked the doctrine of innate ideas, and innate principles of speculative truth, he was thought by many to have overturned at the same time all innate principles whatever; to have divested the human mind of every passion, affection, and instinct; and to have left in it nothing but the powers of sensation, memory, and intellect. Such, we are pursuaded, was not his intention; nor is there any thing in his immortal work which, when interpreted with candor, appears to have such a tendency. Great part of his Essay on Human Understanding has been very generally misunderstood. Much of its merit, however, was soon discovered ; and mankind, finding philosophy disencumbered of the barbarous jargon of the schools, and built upon a few self evident principles, implicitly embraced every opinion advanced, or which they supposed to be advanced, by that illustrious author ; especially if that opinion was contrary to any part of the scholastic system, which had so long been employed to perplex the understanding, and to veil absurdity. Hence arose many philosophers of eminence, both at home and abroad, who maintained, as they imagined, upon the principles of Locke, that in the human mind there are no instincts, but that every thing which had been usually called by that name is resolvable into association and habit. This doctrine was attacked by Lord Shaftesbury, who introduced into the theory of mind, as faculties derived from nature, a senˆe of beauty, a sense of honor, and a sense of ridicule : and these he considered as the tests of speculative truth and moral rectitude. His lordship’s principles were in part adopted by Mr. Hutchison of Glasgow, who published a system of moral philosophy, founded upon a sense of instinct, to which he gave the name of the moral sense ; and the undoubted merit of his work procured him many followers. — It being now discovered, or at least supposed, that the human mind is endowed with instinctive principles of action, a

sect of philosophers soon arose, who maintained, with much vehemence, that it is likewise endowed with instinctive principles of belief; and who built a system of metaphysics, if such it may be called, upon a number of innate, distinct, and independent senses. The rise of this sect is well known. Berkeley and Hume had adopted Locke's doctrine respecting the origin of our ideas; and had thence deduced consequences supposed to be dangerous in themselves, but which it was thought could not be denied without refusing the principles from which they were inferred. The foundation of the instinctive system being thus laid, the system itself was rapidly carried to a height far beyond what seems to have been the intention of its excellent author ; and reason was VOL. XII.

well nigh banished from the regions of philosophy. For such a proceeding it is not di(H-cult to assign the cause. The instinctive scheme requires much less labor of investigation than the systems of Locke and the ancients ; for upon the principles of it, when carried to its utmost extent, every phenomenon in human nature is thought to be sufficiently accounted for, by supposing it the effect of a particular instinct implanted in the mind for that very purpose. Hence, in some popular works of philosophy, we have a detail of so many distinct internal senses, that it requires no small strength of memory to re-tain their very names ; besides the moral sense, we have the sense of beauty, the sense of deformity, the sense of honor, the hoarding sense, and a number of others, which it is needless here to mention. This new system, which converts the philosophy of mind into mere history, or rather into a collection of facts and anecdotes, though it has made a rapid progress, is not yet universally received. It iias been opposed by many speculative men, and by none with greater skill than Dr. Priestley; who maintains, with the earliest admirers of Locke, that we have from nature no innate sense of truth, nor any instinctive principle of action; that even the action of sucking in new-born infants is to be accounted for upon principles of mechanism ; and that the desire of the sexes is merely associ* ation.*

Dr. Gleig proceeds to enquire, ' Whether or not there be instinctive principles in man ? ' ' But,' he adds, ' in order to proceed upon sure grounds, it will be proper to consider, first, such actions of the inferior animals as are generally allowed to be instinctive : for an attempt has been lately made to prove, that even these actions are the offspring of reason influenced by motives ; and that instinct, as above defined, is a mere imaginary principle, which has no existence either in man or brute. Caterpillars, it is said, when shaken off a tree in every direction,

instantly turn round towards the trunk and climb up, though they had never formerly been on the surface of the ground This is a striking instance of instinct. On the tree, and not upon the ground, the caterpillar finds its food. If, therefore, it did not turn and cl'mb up the trunk, it would inevitably perish ; but surely the caterpillar knows not that such an exertion is necessary to its preservation ; and therefore it acts not from motives, but from blind impulse. The bee and the beaver ar* > endowed with an instinct which has the appearance ot foresight. They build magazines, and fill them with provisions but the foresight is not theirs. Neither bees nor beavers know any thing of futurity. The solitary wasp digs holes in the sand, in each ot which she deposits an egg. Though she certainly knows not that an animal is to proceed from that egg, and still less, if possible, that this ani-mal must be nourished with other animals, she collects a few small green worms, which she rolls up in a circular form, and fixes in the hole in such a manner that they cannot move. \ hen the wasp-worm is hatched, it is amply stored with the food destined for its support. The green worms are devoured in succession; and

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the number deposited ;s exactly proportioned to the time necessary for the growth and transformation of the wasp-yvorm into a fly; when it issues from the hole, arid is capable of procuring its own nourishment. This instinct of the parent wasp is the more remarkable, that she feeds not upon flesh herself. Birds of the same species, unless restrained, uniformly build their nests of the same materials, and in the same form and situation, though they inhabit very different climates; and the form and situation are always suited to their nature, and calculated to afford them shelter and protection. When danger, or any other circumstance peculiar to certain countries, renders a deviation from the common form or situation of nests necessary, that deviation is made in an equal degree, and in the very same manner, by all the birds of one species ; and it is never found to extend beyond the limits of the country where alone it can serve any good purpose. When

removed by necessity from their eggs, birds return to them with haste and anxiety, and shift them so as to heat them equally ; and it is worthy of observation that their haste to return is always in proportion to the cold of the climate. But do birds reason, and all of the same species reason equally well, upon the nature and extent of danger, and upon the means by which it can be best avoided ? Have birds any notion of equality, or do they know that heat is necessary for incubation ? No: in all these operations men recognize the intentions of nature ; but they are hid from the animals themselves, and therefore cannot operate upon them as motives.

One instance of the mathematical skill displayed in the structure of a honeycomb, deserves to be mentioned. It is a curious mathematical problem, at what precise angle the three planes which compose the bottom of a cell ought to mset, in order to make the greatest possible saving of material and labor. This is one of those problems belonging to the higher parts of mathematics, which are called problems of maxima and minima. The celebrated M'Laurin resolved it by a fluxionary calculation, which is to be found in the Transactions of the Royal Society of London, and determined precisely the angle required. Upon the most exact mensura-tion which the subject could admit, he afterwards found, that it is the very angle in which the three planes in the bottom of the cell of a honey-comfr do actually meet. Shall we ask here, Who taught the bees the properties of solids, and to resolve problems of maxima and minima? If a honeycomb were a work of human art, every man of common sense would conclude, without hesitatation, that he who invented the construction must have understood the principles on which it was constructed. We need not say that bees know none of these things. They work mosl geometrically without any knowledge of geometry ; somewhat like a child, who, by turning the handle of an organ, makes srood music without any knowledge of music. The art is not in the child, but in him who made the organ. In like manner, when a bee makes its combs so geometrically, the geometry is not in the bee, but in that Groat Geometrician who made the bee, and

made all tilings in number, weight, and measure. On the whole, it is eviderJ, that the structure of a hone *-comb is an effect of instinct which can-not be confounded with the operations of reason. But, on the other hand, we agree vvit'a Mr. Locke, that ' if brutes have any ideas at all, and are not mere machines, as some would have them, we cannot deny them to have some rea-son/ Yet, that animals have no power of enlarging their ideas, is a position, of the truth of which, though advanced by Locke, we*

have great doubts. It is well known that crows feed upon several kinds of shell fish when within their reach ; and that they contrive to break the shell by raising the fish to a great height, and letting it drop upon a stone or a rock. This may perhaps be considered as pure instinct directing the animal to the proper means of acquiring its food. But what is to be thought of the following fact, which was communicated to the editors of the Encyclopaedia Britannica, by a gentleman whose veracity,' they say, * is unquestioned, and who, being totally unacquainted with the theories of philosophers, has of course no favorite hypothesis to support ? In spring, 1791, a pair of crows made their nest in a tree, of which there are several planted round his garden ; and in his morning walks he had often been amused by witnessing furious combats between them and a cat. One morning the battle raged more fiercely than usual, till at last the cat gave way and took shelter under a hedge, as if to wait a more favorable opportunity ot retreating to the house. The crows continued fora short time to make a threatening noise; but, perceiving that on the ground they could do nothing more than threaten, one of them lifted a stone from the middle of the garden, and perched with it on a tree planted in the hedge, where she sat watching the motions of the enemy of her young. As the cat crept along under the hedge, the crow accompanied her by flying from branch to branch, and from tree to tree : and when at last puss ventured to quit her hiding place, the crow, leaving the trees and hovering over her in the air, let the stone drop from on high on her back. That the crow, on this occasion, reasoned, is self-evident; and it seems to be little less -evident, that the ideas employed in her reasoning were enlarged beyond those which she had received from her senses. By her senses she might have perceived that the shell of a fish is broken by a fall : but could her senses inform her, that a cat would be wounded or driven oil the field by the fall of a stone ? No : from the effect of the one fall preserved in her memory, she must have inferred the other by her power of reasoning.'

Having, by the above and other arguments, proved that there is such a principle as instinct in the inferior animals, and that it is essentially different from human reason, Dr. Gleig returns to our own species, and enquires, ' Whether there be any occasions upon which man acts instinctively, and what those occasions are f This, says he, is a question of some difficulty, to which a complete and satisfactory answer wilj perhaps never be given. The principle of asso ciation (sec METAPHYSICS) operates so power-

fully in man, anil at so early a period of life, that in many cases it seems to be impossible to distinguish the effects of habit from the operations of nature. Yet there arc a Tew cases, immediately connected with the preservation of the individual and the propagation of the kind, in which, by a little attention, these things may be distinguished. We have already given an instance in the sucking of a child, which we beLeve to be an operation performed by instinct. Dr. Priestley, however, thinks differently ; the action of sucking, says he, I am confident, from my own observations, is not natural, but acquired. What observations they were which led him to this conclusion he has not told us, and we cannot imagine ; but every observation which we ourselves have made compels us to believe that an attempt to suck is natural to children. It has been observed, by Mr. Smellie, that the instinct of sucking is not excited by any smell peculiar to the mother, to milk, or to any other substance; for that infants suck indiscriminately every thing brought into contact with their mouths. He therefore infers, that the desire of sucking is innate, and co-eval with the appetite for air. The observation is certainly just : but a disciple'of Dr. Priestley's may object to the inference ; for ' in sucking and swallowing our food, and in many such instances, it is exceeding probable, says the Dr., that the actions of the muscles are originally automatic, having been so placed by our Maker, that at first they are stimulated, and contract mechanically whenever their action is requisite.' This is certainly the case with respect to the motion of the muscles in the action of breathing; and if that action be of the same kind, and proceed from the very same cause with the action of sucking, and if a child never show a desire to suck but when something is brought into contact with its mouth, Dr. Priestley's account of this operation appears to us much more satisfactory than that of the authors who attribute it to instinct. But the ections of breathing and sucking differ essentially in several particulars. They are indeed both performed by means of air ; but, in the former, a child for many months exerts no spontaneous effort, whilst a spontaneous effort seems to be absolutely necessary for the performance of the latter. Of this indeed we could not be certain, were it true that infants never exhibit symptoms of a wish to suck, but when something is actually in contact with their mouths ; for the mere act of sucking then might well be supposed to be automatic and the effect of irritation. But this is not the case. A healthy and vigorous infant,

within ten minutes of its birth, gives the plainest and most unequivocal evidence of a desire to suck, before any thing be brought into actual contact with its mouth. It stretches out its neck, and turns its head from side to side, apparently in quest of something; and that the object of its pursuit is something which it may suck, every man may satisfy himself by a very convincing experiment. When an infant is thus stretching out its neck and moving its head, if any thing be made to touch any part of its face, the little creature will instantly turn to the object, and endeavour by quick alternate

motions from side to side to seize it \vit!i its mouth, in the very same manner in which it always seizes the breast of its nurse, till, taught by experience to distinguish objects by the sense of sight, when these alternate motions, being no longer useful, are no longer employed. If this be not an instance of pure instinct, we know not what it is. It cannot be the result of association or mechanism ; for, when the stretching of the neck takes place, nothing is in contact with the child's mouth, and no association which includes the act of sucking can have been formed. Associations of ideas are the consequence of simultaneous impressions frequently repeated; but when the child first declares, as plainly as it could do were it possessed of language, its wish to suck, it has not received a single impression with which that wish can possibly be associated. The greater part of those actions, as well as of the apparently instinctive principles of belief, we have no doubt, are acquired ; but we are persuaded that a child sucks its nurse, as a bee builds its cell, by instinct; for upon no other hypothesis can we account for the spontaneous efforts exerted in both these operations ; and we think it no disgrace to our species, that in some few cases we should act from the same principle with the inferior creation, as nothing seems more true than that,

— Reason raise o'er instinct as we can ;

In this 'tis God that works, in that 'tis man.

IN'STITUTE, v. a. & n.s/\ Fr. instituer ; INSTITUTION, n. s. I Lat. imtituo. To

INSTITUTION ARY, adj. V fix ; establish ; set-IN'STITUTOR, n. s. tile or prescribe;

IN'STITUTIST, n. t. J to educate or instruct ; the leading idea is to build upon. Institute, established law ; settled order ; precept ; maxim

; example. Institution, act of establishing ; a positive law ; education. Institutionary, elementary; containing first principles. Institutor, an instructor ; one who establishes an institution. Institutist, a writer of elemental instructions.

The institution of God's law is described as being established by solemn injunction. Hooker.

Here let us breathe, and haply institute

A course of learning, and ingenuous studies.

Shakspeare

Green gall the institutists would persuade us to be ' an effect of an over-hot stomach.

Harvey on Consumption.

That it was not out of fashion Aristotle declareth in his politics, among the institutionary rules ot youth. Browne.

If children were early instituted, knowledge would insensibly insinuate itself. Decay of Piety.

It might have succeeded a little better, if it had pleased the institutors of the civil months of the sun to have ordained them alternately odd and even.

Holder on Time.

The theocracy of the Jews was instituted by God himself. Temple.

They quarrel sometimes with the execution of laws, and sometimes with the institution. Id.

This law, though custom now directs the course, As nature's institute, is yet in force, Uncancelled, though disused. Dryden.

It is a necessary piece of Providence in the i;i-slitaticn of ˆur children, to train them up to sorae—

what in their youth, that may honestly entertain them in their age. '-' is* range.

The holiness of the first fruits anil the lump is an holiness merely of institution, outward and nominal ; whereas the noliness of the root is an holiness of nature, inherent and real. Atterbury.

His learning was not the effect of precept or institution. Bentley.

To institute a court and country party without materials, would be a very new system in politics.

Swift.

The certain feasts are instituted now, Where Venus hears the lover's vow.

Cowper. Converse! lion. Our institutions and our strong belief • Have given me power to smooth the path from sin To highejr hope and better thoughts.

Byron s Manfred.

INSTITUTE, or INSTITUTION, in literature, is a torm applied to establishments for the promotion of science generally, and was first given to the French National Institute, founded in December 1 795. That nation, at the time of the Revolution, having conceived a hatred to every thing royal, abolished the seven Royal Academies, and substituted the National Institute. It was first opened the 7th of December, when Benezech, the then minister for the home department, attended, and the decree of foundation was read; which was to the following purport: — 'The Academy of Arts and Sciences belongs to the republic, and Paris is its place of residence. Its employment is to aim at bringing all arts and sciences to the utmost perfection of which they are capable. It is to notice every new attempt, and all new discoveries, and to keep up a correspondence with all foreign literary societies. And, by the particular orders of the Executive Directory, its first studies are to be directed to those subjects which more immediately tend to the reputation and advantage of the French republic.' The academy is to consist of 288 members, half of whom are to reside in Paris, the other half in the departments ; and to them is to be added a certain number of foreigners, as honorary members, confined at present to twenty-four. The academy is divided into three classes, each class into sections,

each section to contain twelve members. First class, mathematics and natural philosophy. This class is divided into ten sections. 1. Mathematics; 2. Mechanical arts ; 3. Astronomy ; 4. Experimental Philosophy; 5. Chemistry; 6. Natural history; 7. Bo-tany ; 8. Anatomy and animal history ; 9. Medicine and surgery; 10. Animal economy, and the veterinary science. Second class, morality and polities. This class consists of six sections. 1. Analysis of sensations and ideas; 2.* Morals; 3. I egislature ; 4. Political economy; 5. History; 6. Geography. Third class, literature and the fine arts. This class consists of eight sections. J. Universal grammar; 2. Ancient languages; 3. Poetry; 4. Antiquities; .5. Painting; 6. Sculp-ir.ro ; 7. Architecture; 8. Music. For each class a particular room in the Louvre is appropriated. No one can be a member of two classes at the .•-“iir.e time; but a member of one class may be : -iPM-‘nt at the meetings of any other. Each class is to print, yearly, an account of its transactions.

cur times a year ibere are to IIP public meetings.

On these occasions, the t!;ree clasps rpept together. At the end of eacli year, tlit-v are to give a circumstantial account to the legislative body of the progress made in that year in tlie arts and sciences. The prizes given yearly by each class are to be publicly notified at certain times. The sums requisite for the support of the institution are to be decreed yearly by tiie legislative body, upon a requisition made by the executive directory. The first forty-eight members were chosen by the executive directory, to whom the choice of the remaining members was confided. To the members residentiary in Paris is reserved the choice both of the department and the foreign members. On a vacancy in any class, three candidates are named by the class for the choice of the body at large. Each class is to have, at its place of meeting, a collection of the products, both of nature and art, and a library, according to its particular wants. The regulations of the institution, with respect to the times of meeting and its employments, are to be drawn up by the body at large, and laid be-fore the legislative assembly. O.n the restoration of the house of Bourbon, e”ery tiling royal was restored, and the National Institute was re-converted to a Royal Academy. Still, however, the same objects are pursued.

The French National Institute appears to have given rise to ‘The Royal Institution of Great Britain,’ founded in 1799 by the celebrated count Rumford, and which is situated in Albemarle Street, Piccadilly. The establishment is upon a magnificent plan, and the building adapted to the design. It comprises, a reading-room for English and foreign

newspapers ; a library for reference, and another for the reading of modern publications ; a museum of curiosities; a mechanical repository for machinery, &c. ; a chemical laboratory on a grand scale, the learned Mr. Brande being the chemical professor; and, lastly, a splendid amphitheatre for lectures, which will hold 700 persons, with a gallery capable of holding 200 more. The number of proprietors was 400, who are life-holders and subscribers. This society is incorporated, and prints its Transactions in a quarterly publication Its members are authorised to add to their names the initials M,R.I.

INSTITUTˆ, in Scottish law. vVhen by disposition or deed of entail a number of persons are called to the succession of an estate one after another, the person first named -s called the institute, the others substitutes.

INSTITUTES, in literary history, a book containing the elements of the Roman law. The institutes are divided into books ; and contain an abridgement of the whole body of the civil law, being designed for the use of students. See LAW.

INSTITUTION, LONDON. See LONDON.

INSTITUTION, AFRICAN. See AFRICAN INSTITUTION.

INSTITUTION, in the canon and common law, signifies the investing a clerk with the spiritualities of a rectory, &c., which is done by the bishop, who uses the following formula : — ‘ I institute you rector of such a church with the cure of souls, and receive vour cure and mine.’

Before the clerk is instituted he must subscribe the thirty-nine articles in the presence of the ordinary, or his substitute ; this subscription must also be without reserve, exception, or qualification; otherwise his institution is ipso facto, void and null, and the church still vacant. 13 Eliz. c. 12. At the same time the ordinaiy requires the clerk to subscribe the other two articles mentioned in the thirty-sixth canon about the king’s supremacy, and the lawfulness and use of the liturgy. Before institution he must also take the oaths mentioned in the first statute of William and Mary, c. 8, instead of the former oaths of allegiance and supremacy, required by stat. 1 Eliz. ; and then he must take the oath against simony, enjoined by the fortieth canon, and the oath of canonical obedience; and, if it is a vicarage, the oath of personal residence ; and he is to have certificates given him of his

subscribing the declaration contained in the act of uniformity, in English, in a distinct instrument, under the hand and seal of the bishop ; and of his other subscriptions and oaths, in Latin.

The church, by institution, is full against all persons but the king, but it is not full against the king, till induction ; and the clerk by it may enter upon the parsonage house and glebe, and take the tithes ; but he cannot let or grant them, nor sue for them, if they be refused to be paid, till he be inducted. See INDUCTION.

INSTOP', v. a. In and stop. To close up ; to stop.

With boiling pitch another neai at hand The seams iustops. Dryden's Ann. Mirab

INSTRUCT, D. a.-\ Fr. instruire ; Lat. INSTRUCTOR, n. s. (ˆinstruo. To teach; to INSTRUCTION, n. s. i form by precept; to in-IXSTRUC'TIVE, adj. J form authoritatively ; to educate ; to institute ; to direct. It has commonly in before the thing taught: instructor, a teacher ; one who imparts knowledge : iastruc-tion, the act of teaching ; information ; knowledge ; mandates : instructive, conveying knowledge.

Out of heaven he made thee to hear his voice, that he might instruct thee. Deuteronomy iv.'<J6. See this dispatched with all-the haste thou

can'st ; Anon I'll give thee more instruction. Shakspeare.

The father of the faithful there did dwell Who both their parent and instructor was.

Denham's Progress uf Learning. O thou, who future things can'st represent As present, heavenly instructor / Milton.

Instruct me, for thou knowest. Id.

Poets, the first instructors of mankind, Brought all things to their native proper useˆ

Roscommon.

With variety of instructive expressions by speech man alone is endowed. Holder.

They speak to the merits of a cause, afte: the proctor has prepared and instructed the same for a nearing before the judge. Ayliffe.

I would not laugh but to instruct ; or, if my mirth cea$es to be instructive, it shall never cease to be innocent. Addison.

Several instructors were disposed amongst this little helpless people. Id.

We have precepts of duty given us by our instructors. Rogers.

Emblem instruct irr of the virtuous man, Who keeps liis tempered mind serene and pure And every passion aptly harmonized, Amid a jarring world with vice inflamed.

Thomson.

fiistriftiie satire, true to virtue's cause ! Thou shining supplement of public laws.

Young.

Thy lips have shed instruction as the dew, Taught me what path to shun, and what pursue.

Cowper. Charity

INSTRUMENT, n. s. Fr. instrument ,

INSTRUMENTAL, adj. I Latin irutrumen INSTRUMENTALITY, n. s. V turn. A tool used INSTRUMEN'TALLY, adv. I for work ; a frame INSTRUMEN'TALNESS, n. s. } constructed for yielding harmonious sounds; a writing containing contract or order : used of persons, as aaeuts, and often in a bad sense : that by means of which something is done ; one who acts for another : instrumental, conducive to ; helpful ; not vocal : instrumentality, subordinate agency : instrumentally, in a manner conducive to an end : instni-mentalness, usefulness to a definite purpose.

If he smite him with an instrument of iron, so that he die, he is a murderer. Numbers xxxv. 16.

So ferforth this thing is went, That my will was his willes instrument ; That is to say, my will obeied his will In all things. Chaucer. The Squierts Tale. Thise olde gentil Bretons, in hir dayes, Of diverse aventures maden layes Rimeyed in hir firste Breton tonge ; Which

layes with hir instruments they songe. Or elles redea hem for hir plesance.

M. Prologue to the fr'rankeleines Tale;. The joyous birdes shrouded in chearefull shade Their notes unto the voice attempred sweet ; The angelical soft trembling voices made 1 o the' instruments divine respondence meet. The silver sounding instruments did meet With the base murmur of the water's fall ; The water's fall, with difference discreet. Now soft, now loud, unto the wird did call ; The gentle warbling wind low answered to all.

Spenser. Faerie Queene.

They which, under pretence of the law ceremonial abrogated, require the abrogation of iustrurrentul mu-sick, approving nevertheless the use of vccal melody to remain, must shew some reason, wherefore '.i:o one should bethought a legal ceremony and not the other. Hooker.

All the instruments which aided to expose the child, were even then lost when it was found.

Shakspeare.

If, haply, you my father do suspect, AD instrument of this your calling back, Lay not your blame on me. Id. Othello.

All second and instrumental causes, without that operative faculty which God gave them, would be-come altogether silent, virtueless, and dead.

Sˆrigf.

The instrumental/less of rk'hes to works of charity, has rendered it very political, in every Chiis-tian commonwealth, by laws to settle and secure property. Hammond.

Prayer, which is instrumental to every thing, h«iit a particular promise in this thing. TayUi

In solitary groves he makes his moan, Nor mixed in mirth, in youthful pleasure shares. But si°;hs when songs and iaitntmfntt lie huars.

Sweet voices, mixt with instrumental sounds, Ascend the vaulted roof, the vaulted roof rebounds.

Id.

In benefits, as well as injuries, it is the principal that we are to consider, not the instrument ; that which a man does by another is in truth his own act.

L'Estrange.

Box is useful for turners and instrument makers.

Mortimer.

Habitual preparation for the sacrament consists in a standing permanent habit, or principle of holiness, wrought chiefly by God's spirit, and instrv-mentally by his word, in the heart or soul of man.

South.

I discern some excellent final causes of conjunction of body and soul : but the instrumental I know not, nor what invisible bands and fetters unite them together. Bentley.

The Presbyterian merit is of little weight, when they allege themselves instrumental towards the restoration. Swift.

An instrument, whose chords upon the stretch, And strained to the last screw that he can bear, Yield only discord in his Maker's ear.

Cowper. Truth.

INSTRUMENTS, MUSICAL. See Mysic.

INSUBRES, INSUBRI, or ISOMBRES, the ancient inhabitants of Insubri*, a people of Gallic origin, who were conquered by the Romans, and their country made into a province.

INSUBRIA, or INSUBRIUM ACER, in ancient geography, a district of1 Gallia Transpadana ; situated between the Ticinus on the west, the Addua on the east, the Padus on the south, and the Orobii on the north.

INSUF'FERABLE, adj. > Lat. in and suf—

INSUF'FERABLY, adv. \fero. Not to be borne ; intolerable ; beyond endurance ; detestable; contemptible to an extreme degree: used both in a good and bad sense.

How shall we behold the face Henceforth of God or angel, erst with joy And rapture so oft beheld ? those heavenly shapes Will dazzle now this earthly with their blaze Insufferably bright. Hilton's Paradise Lost.

The one is oppressed with constant heat, the other with insufferable cold. Browne's Vulgar Errours. Eyes that confessed him bom for kingly sway,

So fierce, they flashed insufferable day. Dryden.

Though great light be insufferable to our eyes, yet the highest degree of darkness does not at all disease them ; because that, causing no disorderly motion, leaves that curious organ unharmed.' Locke.

There is no person remarkably ungrateful, who was not also insufferably proud. South.

INSUFF FCIENCE, ». s.-v Fr. insufficience ; INSUFFICIENCY, n. s. (ˆ Lat. in and sufficit. INSUFFICIENT, adj. i Inadequatenessto

INSUFFICIENTLY, adv. -/any end or purpose ; want of requisite value or power; used of things and persons : unequal to the task : want of proper ability : in an unskilful manner. Hold ye, then, me, or elles our covent To pray for you ben insufficient !

Clidwer. The Sompnoures Tale. The bishop, to whom they shall be presented, may justly reject them as incapable and insufficient.

Spenser.

The minister's aptness or insufficiency, otherwise than by reading to instruct tho flock, standeth in this place as .1 stranger, with whom our form of cr>m;:];in pvvov hath nothing: to i!o. Hooker.

We will give you sleepy crinks, that your senses, unintelligent of our intujflcience, may, though they cannot praise us, as little accuse us. Shakspeare.

Fasting kills by the bad state, or by the insufficient quantity of fluids.

Arbuthnot on Aliments.

We are weak, dependant creatures, insufficient to our own happiness, full of wants which of ourselves we cannot relieve, exposed to a numerous train of evils which we know not how to divert. Rogers.

INSUFFLATION, n. s. Lat. in and tufflo. The act of breathing upon.

Imposition of hands is a custom of parents in blessing their children, but taken up by the apostles instead of that divine insufflation which Christ used. Hammond's Fundamental!'.

IN'SULAR, adj. ˆ Fr. insulaire ; Lat. »nIN'SULARY, adj. >sula. Belonging to an isIN'SULATED, adj.j land: insulated, not contiguous on any side.

Druina, being surrounded by the sea, is hardly to be invaded, having many other insulary advantages. Howel.

Their loves, and feasts, and house, and dress, and

mode Of living in their insular abode.

Byron. Don Juan. Look again !

Two forms are slowly shadowed on my sight,

Two insulated phantoms of the brain.

Byron. Childe Harold.

INSULATED, in architecture, an appellation given to such columns as stand alone.

INSULATED, in electrical experiments. When any body is prevented from communicating with the earth, by the interposition of an electric body, it is said to be insulated. See ELECTRICITY.

INSULSE', adj. Lat. insulsus. Dull ; insipid ; heavy.

IN'SULT, n. s. & v. a. i Fr. insulter; Lat.

INSULT'ER, n. s. > insulto. The act of

INSULT'INGLY, adv. j leaping upon any thing. In this sense it has the accent on the last syllable : the sense is rare. An act or speech of insolence or contempt : • insult, to treat with insolence; sometimes

used with the preposition over ; to trample upon in triumph : insulter, one who acts insultingly, or in a contemptuous way.

The bulls insult at four she may sustain,

But after ten from nuptial rights refrain.

Dry den. Insultingly, he made your love his boast,

Gave me my life, and told me what it cost. Id. So ‘scapes the insulting fire his narrow jail,

And makes small outlets into open air. Id.

Even man, the merciless insulter man, Man, who rejoices in our sex’s weakness, Shall pity thee. Rowe’s Jane Shore.

The ruthless sneer that insult adds to grief.

Savage.

The poet makes his hero, after he was glutted by the death of Hector, and the honour he did hi» friend by insulting over his murderer, to be moved by the tears of king Priam. Pope.

Take the sentence seriously, because railleries are an insult on the unfortunate.

Broome on the Odyssey. Death ! was I not the sovereign of the state, Instilled ou his very throne, and made A mockery to the men who should obey me 1 .a Byron. Mur’u.o Faier*.

1 N S U 11 A N C E.

Were weighed i’ the balance, ‘gainst the foulest

stain,

The grossest insult, most contemptuous crime Of a rank, rash patrician — and found wanting ! Id.

INSUPERABILITY, n. s. -\ Lat. in and

INSU’PERABLE, adj. tsupero. That

INSU’PERABLENESS, n. s. t which cannot

INSU’PERABLV, adv. J be overcome or

surmounted : beyond the power of conquest.

This appears to be an insuperable objection, because of the evidence that sense seems to give it.

Dtgby on Bodies.

Much might be done, would we but endeavour ; nothing is insuperable to pains and patience. Ray.

Between the grain and the vein of a diamond

there is this difference, that the former furthers, the

latter, being so itisuperably hard, hinders the splitting

of it. Greg’s Museum.

And middle natures how they long to join,

Yet never pass the insuperable line. Pope.

INSUPPORTABLE, adj.) Lat. in subporto.

INSUPPOR’TABLENESS, n.s. >Not to be endur—

iNSUppoR’xABLYjrtrfu. j ed ; a state of suffering beyond endurance.,.

But safest he who stood aloof,

•Vhen insupportably his foot advanceJ,

In scorn of their proud arms, and warlike tools,

Spurned them to death by troops.

Milton’s Agonistes.

Then fell she to so pitiful a declaration of the insupportableness of her desires, that Dorus’s ears procured his eyes with tears to give testimony how much they suffered for her sufferings. Sidney.

The thought of being nothing after death is a bur-den insupportable to a virtuous man ; we naturally aim at happiness, and cannot bear to have it confined to our present being. Dryden.

The first day's audience sufficiently convinced me, that the poem was insupportably too long. Id.

A disgrace put upon a man in company is insupportable ; it is heightened according to the greatness and multiplied according to the number of the persons that hear. South.

To those that dwell under or near the equator, this spring would be a most pestilent and insupportable summer ; and, as for those countries that are nearer the poles, a perpetual spring will not do their business. Bentley.

Were it not for that rest which is appointed on the first day of the week, and the solemn meetings which then take place for the purposes of social worship and religious instruction, the labours of the common people, that is of the greatest part of mankind, would be insupportable. Beattie.

INSURANCE and ASSURANCE, in mercantile language, are terms used synonymously : under the latter we have treated of assurances on lives, and referred to MARINE INSURANCE for that important branch of mercantile affairs. It remains only for us to attend in this place to the subject of insurance against fire.

This is a mode of providing against what might otherwise prove a ruinous contingency of human life, peculiar, of course, to a state of high civilization. The period of its first introduction into this country has not been correctly ascertained : but our oldest, which are amongst the most respectable fire offices, bear date (with the exception of the Hand in Hand, which was incorporated in 1696) in the early part of the eighteenth century. The oldest fire office in Paris is said to have commenced business so late as 1745. In Holland, though these institutions are not unknown,

they are said to be little resorted to; and yet th number of fires in Amsterdam is represented as far less in proportion than in London.

In this metropolis, and in different parts of the kingdom, are various companies, each of which has a large capital funded, for the purpose of insuring from loss or damage by fire, buildings, furniture, goods in

trade, merchandise, farming stock, ships in port, harbour, or dock, the cargoes of such ships, ships building or repairing, vessels on rivers and canals, the goods on board such vessels, &c. These articles are commonly divided into three classes : — 1. Common assurances, which are effected at 2s. per cent, per annum, up to £1000; 2. Hazardous assurances, at 3s. per cent, per annum ; and, 3, doubly hazardous, at 5s. per cent, per annum. The mode of classification, and more detailed particulars, may be learnt from the proposals of the most respectable companies ; which are — Hand in Hand Fire Office, incorporated in 1696; Sun Fire Office, incorporated in 1706; Union Fire Office, incorporated in 1714; Westminster Fire Office, incorporated in 1717; Royal Exchange Assurance Company, incorporated in 1719; London Assurance, incorporated in 1719; Phcenix Fire Office, established in 1782; Imperial Insurance Company, 1803; Globe Insurance Office, 1803; Albion, 1805; Hope, 1807: Eagle, 1807; Atlas, 1808: besides various extensive companies in the country; as in Kent, Norfolk, &c.

In 1782 a duty of Is. 6d. was imposed on every £100 assured from loss by fire, which was increased in 1797 1o 2s. per cent., in 1804 to 2s. &d. pex cent., and since that period to 3s. From the pruihica of this duty an estimate has been formed of the tda! amount of property assured from fire in Great Britain, which appears to have been nearly as, follows : —

In 1785

1789 1793 1797 1801 1806 1810

£125,000,000

142,000,000 1 67,000,000 184,000,000 223,000,000 260,000,000 305,000,000

The duty paid in this last year was thus contributed by the different offices : —

Duty paid on Fire Insurance in

1810.

£. s. d.

Sun ….

93,867 16 10

Phcenix …

57,709 4 10

Royal Exchange .

45,067 12 10

Imperial

35,346 14 6

Globe ‘, V .;”

27,353 10 6

British

16,695 5 5

Hope ….

15,878 17 8

Albion

15,683 8 11

County . …

13,664 5 4

Westminster

12,054 13 10

Hand in Hand

11,505 12 9

Eagle . .

11,355 12 8

Atlas ….

9,815 9 6

London

9,312 17 4

Union ….

5,847 18 8

The legal effect of the contracts of these societies is altogether regulated by the terms of them respectively, and each person on entering becomes voluntarily a party to the rules of the society. Speaking generally, a very high feeling of honor and liberality pervade* the conduct of these bodies, who, we fear, are far more often ‘ sinned against than sinning,’ in respect to their business. But some curious cases of claims occur in the law books.

The Sun, inserting the terms ‘ civil commotion* as an exception to the cases of fire against which they insured, resisted the claim of Mr. Langdale, in 1780, for a fire occasioned by the riots of that year and

the court held them exempt from paying it. Yet there is a case where (2 Wils. 363.) the London Assurance paid a claim fora fire occasioned by a mob ; only they use the terms ‘ military or usurped power.’

In case of loss occuring the insured is bound by most of the proposals of the societies, and ought, in all cases, to give immediate notice of the event, and as particular an account of the value, &c., as the nature of the case will admit. He must also generally produce a certificate of the minister and church-wardens as to his character, their belief of the loss sustained, and the truth of what he advances. If a policy of insurance from fire refer to certain printed proposals, the proposals will be considered as part of the policy.

Insurance ‘ against all the damages which the plaintiffs should suffer by . fire, on stock and utensils in their regular built sugar-house,’ was held not to extend to damage done to the sugar by the heat of the usual fires employed in refining, being accumulated by the mismanagement of plaintiffs, who inadvertently kept the top of their chimney closed.’ Austin v. Drewe.

In insurances against fire, the loss may be either partial or total, and some of the offices, if not all, expressly undertake to allow all reasonable charges, attending the removal of goods in cases of fire, and to pay the sufferer’s loss, whether the goods are destroyed, lost, or damaged, by such removal. Park, 449. In a policy against fire from half year to half year, the assured agreed to pay the premium half yearly, ‘ as long as the insurers should agree to accept the same,’ within fifteen days after the expiration of the former half year, and it was also stipulated that no insurance should take place till the pre-‘ inium was actually paid ; a loss happened with-in fifteen days after the end of one half year, but ‘jefore the premium of the next was paid : held that the insurers were not liable though the assured tendered the premium before the end of fifteen days, but after the loss. Torle.ton v. Stanmfarth in Error, E. 36 Geo. 3.

VN ant of fairness in the statement of circum-fiances is very justly held to vitiate this obliga- *ion with most others. A plaintiff, Bufe. v. Tamer, having one of several warehouses next but one to a boat-builder’s shop which took fire ; 0:1 the same evening, after the fire was apparently extinguished, gave instructions by an extraordinary conveyance for insuring that warehouse, then hiving others uninsured, but without appris-ing the insurers of the recent neighbouring fire.

Though the terms of insurance did not expressly require the communication, it was held that the concealment of this fact avoided the policy. 6 W. P. Taunton, 338.

Contrary to what has been determined as to MARINE INSURANCES (see that article), fire policies are not, in their nature, assignable, nor can the interest in them be transferred without the consent of the office. It is provided, however, that, when any person dies, the interest shall re-main ta hi» heir, executor, or administrator, respectively, to whom the property insured belongs ; provided they procure their right to be endorsed on the policy, or the premium be paid in their name. Park, 549. It is necessary that the party injured should have an interest or property in the house insured, at the time the policy is made out, and at the time the fire happens.

For some interesting particulars as to the capitals of the principal Insurance Companies, see ENGLAND, vol. viii. p. 307.

INSURMOUNTABLE, adj. i Fr. turmon—

INSURMOUN'TABLY, adv. J ter ; Lat. in

super montem. Insuperable; unconquerable.

This difficulty is insurmountable, till I can make simplicity and variety the same. Locke.

Hope thinks nothing difficult ; despair tells us, that difficulty is insurmountable. Watts.

INSURRECTION, n. s. Lat. insurgo. A seditious rising ; a rebellious commotion.

This city of old time hath made instirrertion against kings, and that rebellion and sedition have been made therein. Ezra.

There shall be a great insurrection upon those that fear the Lord. 2 End. xvi. 70.

Between the acting of a dreadful thing,

And the first motion, all the interim is

Like a phantasrua, or a hideous dream :

The genius and the mortal instruments

Are then in council ; and the state of man,

Like to a little kingdom, suffers then

The nature of an insurrection.

SKaJttpean. Julius Ceesar.

Insurrections of base people are commonly more furious in their beginnings. Bacons Htnrii VII.

The trade of Kome had like to have suffered anothei great stroke by an insurrection in Kgypt.

Arliuthnot.

INTACTJE, in geometry, right lines which are continually approached by curves, and yet can never be touched by them. They are more usually called Asymptotes. See CONIC SEC-I TIONS.

INTACTIBLE, adj. Lat. in and tactum. Not perceptible to the touch.

INTAGL'IO, n. s. Italian. Any thing that has figures engraved on it.

We meet with the figures which Juvenal describes on antique intaglios and medals. Addison on Italy.

INTAGLIOS are precious stones on which are engraved the heads of great men, inscriptions, and the like. They are often set in rings, seals, &c.

JNTAPHERNES, one of the seven Persian lords, who conspired against Smerdis the Magian. See PERSIA. He was afterwards put to death by Darius for conspiring against him, together with his whole family, except two persons, *viz.* his wife and any other she should name;

thereupon preferred her brother to her husband and children, saying she might have another husband and more children, but, her parents being dead, she could never have another brother.

INTASTABLE, adj. In and taste. Not raising any sensations in the organs of taste. A word not elegant, nor used.

Something which is invisible, intastable, and intan-gible, as existing only in the fancy, may produce a pleasure superior to that of sense. Grew.

INTEGER, n. «.) Fr. integral; Lat.

IN'TEGRAL, adj. & n. s. > integer. The whole

INTEG'RITY, n. t. 3 of any thing: uninjured ; complete ; not defective ; not fractional : he whole, as made up of parts. Integrity, ho- •uesty; purity of manners; entireness ; genuineness of character.

Your dishonour

Mangles true judgment, and bereaves the state

Of that integrity which should become it.

Shakspeare. My robe

And my integrity to Heaven is all 1 dare now call my own. Id. Henry VIII.

A local motion keepeth bodies integral, and their parts together. Bacon's Natural History.

Language continued long in its purity and integrity. Hale.

Physicians, by the help of anatomical dissections, have searched into those various meanders of the veins, arteries, nerves, and integrals of the human body. Id.

No wonder if one remain speechless, though of integral principles, who, from an infant, should be bred up amongst mutes, and have no teaching.

Holder.

As not only signified a piece of money, but any integer ; from whence is derived the word ace, or unit. Arbuthnttt.

The libertine, instead of attempting to corrupt our integrity, will conceal and disguise his own vices.

Rogers.

Whoever has examined both parties cannot go far towards the

extremes of either, without violence-to his integrity or understanding. Sivift.

Take away this transformation, and there is no chasm, nor can it affect the integrity of the action.

Broome.

A mathematical whole is better called integral, when the several parts which make up the whole are distinct, and each may subsist apart. Watts.

I promised that when I possessed the power, I would use it with inflexible integrity. Johnson's Rasselas.

INTEGRAL, or INTEGRANT, in philosophy, appellations given to parts of bodies which are of a similar nature with the whole : thus filings of iron have the same nature and properties as bars of iron. Bodies may be reduced into their integrant parts by triture or grinding, limation or filing, solution, amalgamation, &c. Chemists distinguish between the integrant and constituent parts of bodies : thus when crude mercury is dissolved in nitric acid, though held imperceptibly in the menstruum ; yet when that menstruum is diluted with water, and a copperplate is suspended in it, the menstruum leaves the mercury, to work upon the copper, and the mercury subsides unaltered and in its own itatu-ial form ; the mercury, therefore, in this operation, was only divided into its integrant parts, 01 small parcels, by the same nature and proU INT

pertics as the whole ; but when cinnabar is resolved or divided into crude mercury and sulphur, neither of these is of the same nature and properties with the cinnabar, and they are not its integrant but its constituent parts.

INTEG'UMENT, ». *. Lat. integumcntum, intego. Any thii.g that covers or envelops another.

He could no more live without his frize coat than without his skin : it is not indeed so properly his coat, as what the anatomists call one of the integu-ments of the body. Addison. INTELLECT, n. t. ~\ Fr. intellect, INTELLEC'TION, n.t. intellectif, intelli-INTELLEC'TIVE, adj. gfnce, intetligi-INTELLEC'TUAL, adj. & n. s. ble ; Lat. inteui-INTEL'LIGENCE, n. t. go, intellectut, in-INTEL'LIGENCY, n. t. telligibilis. These INTEL'LIGENCER, n. . ˆ-*words vary in sig-INTEL'LIGENT, adj. nification thus : INTELLIGEN'TIAL, adj. Intellect is the INTELLIGIBILITY, n.* . faculty of under-INTEL'LIGIBLE, adj. standing ; iutel-INTEL'LIGIBLENESS, n.s. lection the act of

INTEL'LIOIBLY, adv. J understanding; intelligence, information conveyed ; intelligible-ness, perspicuity of the information conveyed. These are primary senses, from which the rest are derived. Intellective is having power to understand a subject. Intellectual, relating to the understanding; mental acts; ideal. Proposed as the object not of the senses but intellect : as, Cudworth names his book the Intellectual System of the Universe. Intellectual, the understanding : not used in this sense. Intelligence, commerce of acquaintance ; spirit; understanding. Intelligencer, one who conveys information or news ; a messenger. Intelligent, knowing ; skilful ; giv-ing information : it has of before the thing. Intelligential, consisting of unbodied mind. Intelligibility, possibility of being understood. Intelligible, easy to be comprehended; clear; perspicuous. Intelligibly, speaking or writing in a manner so as to be understood ; clearly ; plainly; without mystery or equivocation.

Right as a man hath sapiences three, Memorie, engine, and intellect also ; So, in o Being of Divinitee Three persons mowen ther, righte wel, be.

Chaucer. The Second Nonnet Tale. I write ; as he that none intelligence Of metres hath, ne floures of sentence.

Id. The Court of Love. Heaps of huge words, up hoarded hideously, They think t* be chief praise of poetry, And thereby wanting due intelligence, Have marred the face of goodly poesie. Spenser.

It was perceived there had not been in the catholicks so much foresight as to provide that true intelligence might pass between them of what was done.

Hooker.

Anaxagoras and Plato term the Maker of th« world an intellectual worker. Hooker.

Last night the very gods shewed me a vision : I fast and prayed for their intelligence.

Shakspeare'. Cymbeline.

How deep vou were within the books of heaven ! To us, the'" imagined voice of heaven itself; The very opener and intelligencer Between the grace and sanctities of heaven, And our dull workings. Id. Henry 11'.

A mankind witch ! hence with her, out of door! A most intelligrncy bawd ! Shakapeare.

Servants, who seem no less, \ hi. h are to France the spies and speculations Intelligent of our state. ˆ- K“‘g I’ear—

It is not only in order of nature for him to govern that is the more intelligent, as Aristotle would have it ; but there is no less required for government, courage to protect, and, above all, honesty.

Baton.

If they had instructions to that purpose, they, mi-lu I* the best intelligencen to the king of the true state of his whole kingdom. Id.

He keeps intelligence by thousand spies ; Argus to nim bequeathed his hundred eyes : So waking, still he sleeps, and sleeping, wakeful lies. Fletcher’i Purple Island.

Men’s hearts and faces are so far asunder That they hold no intelligence.

Beaumont and Fletcher’s Philasler.

The advertisements of neighbour princes are always to be regarded, for that they receive intelligence from better authors than persons of inferior note.

Hnyward.

Xoah sends out his intelligencfrt, the raven and the dove; whose wings in that vaporous air might easily descry further than his sight. Bp. Hall.

They are the best sort of intelligencers ; for .they have a way into the inmost closets of princes.

Howell.

Religion teaches us to present to God our bodies as well as our souls : if the body serves the soul in actions natural and civil, and intellectual, it must not be eased in the only offices of religion. Taylor.

Let all the passages Be well secured, that no intelligence May pass between the prince and them.

Denham.

He lived rather in a fair intelligence, than any friendship with the favourites. Clarendon.

In at his mouth

The devil entered ; and his brutal sense, His heart or head possessing, soon inspired With act intelligential. Milton's Paradise Lost.

Food alike those pure Intelligent ial substances require, As doth your rational. Jd.

Who would lose,

Though full of pain, this intellectual being, Those thoughts that wander through eternity I'o perish rather, swallowed up and lost, In the wide womb of uncreated night, Devoid of sense and motion ? Id.

How fully hast thou satisfied me, pure Intelligence of heaven, angel ! Id.

All heart they live, all head, all eye, all ear, All intellect, all sense. Id.

Intelligent of seasons, they set forth Their airy caravan. Id.

Her husband not nigh,

Whose higher intellectual more I shun. Id. There are divers ranks of created beings intermediate between the glorious God and man, as the glorious angels and created intelligence*. Hale.

If a man as intellect'ne be created, then either he

His eyes, being his diligent intelligencers, coalrf carry unto him no other news but discomfortable.

Sidtuy.

In a dark vision's intellectual scene, Beneath a bower for sorrow made, The melancholy Cowley lay. Cow > ey.

The genuine sense, intelligibly told, Shews a translator both discreet and bold.

Itoscommon.

They hoped to get the favour of the houses, and by the favour of the houses they hoped for that of the intelligences, and by their favour, for that of the supreme God. Stilling fleet.

Satan appearing like a cherub to Uriel, the intelligence of the sun circumvented him even in his own province. Dryden.

Something must be lost in all translations, but the sense will remain, which would otherwise be maimed when it is scarce intelligible. Id.

It is in our ideas, that both the Tightness of our knowledge, and the propriety or intelliyil/leness of our speaking, consists. Locke.

They have news-gatherers and intelligencers, who make them acquainted with the conversation of the whole kingdom. Spectator.

We shall give satisfaction to the mind, to shew it a fair and intelligible account of the deluge.

Bunift.

All those arts, rarities, and inventions, which vul-gar minds gaze at, and the ingenious pursue, are but the reliques of an intellect defaced with sin and time.

South.

To write of metals and minerals intelligibly, is a task more difficult than to write of animals.

Woodward i

They will say 'tis not the bulk or substance of the animal spirit, but its motion and agility, that produces intellection and sense. Bentley's

Sermons.

Those tales had been sung to lull children asleep, before ever ISerosus set up his intelligence office at Coos. Bentley.

A train of phantoms in wild order rose, And joined, this intellectual scene compose

Pope.

Intellect, the artificer, works lamely without his proper instrument, sense. Bolingbroke.

Logick is to teach us the right use of our reason, or intellectual powers. Watts.

Many natural duties relating to God, ourselves, and our neighbours, would be exceeding difficult for the bulk of mankind to find out by reason : therefore it has pleased God to express them in a plain manner, intelligible to souls of the lowest capacity. Id.

When a roast or ragout, And fish, and soup by some side dishes backed Can give us either pain or pleasure, who Would pique himself on intellects, whose use Depends so much upon the gastric juice.

Byron. Don Juan.

I'm a plain man, and in a single station, But — oh . ye lords of ladies intellectual, Inform us truly, have they not hen-pecked you all.

Id.

INTEM'PERAMENT, n. s. In and temperament. Bad constitution.

Some depend upon the intemperament of the par-

n-ans the whole man, or only that by which he is ulcerated, and otters upon the afflux of lacerative

iniMltrtiiv f»//tni'>fL, 1 *

Glanville.

‘I he fancies of most, like the index of a clock, are moved but by the inward springs of the corporeal machine ; which, even on the most sublimed intellec-tnal. is dangerously influential. Id. Scepsis.

Simple apprehension denote? t!~* soul’s naked in-teltsctifni of an object, without either composition or deduction. Id.

humours.

INTEM’PERANCE, n. s. INTEM’PERANCY, n. s. INTEM’PERATE, adj. INTEM’PEIIATELY, adv. INTEM’PERATENESS, n.s. INTEM’PEUATIJRE, n. s.

Harvey. intempe-

Fr. ranee ; L.at. in—

temperantla. (Want of mod ere I tion ; excess in J ineat or drink :

INT ;

intemperate, immoderate in appetite; passionate; hasty; ungovernable; excessive; exceeding a just mean ; and in this sense we say intemperate weather; an intemperate climate : intern perature, excess of some quality.

Use not thy mouth to intemperate swearing ; for therein is the word of sin. Ecctus. xxiii. 13.

You are more intemperate in your blood Than those pampered animals, That rage in savage sensuality. Shakspeare.

Boundless intemperance In nature is a tyranny. Id. Macbeth.

Another law of Lycurgus induced to intemperance, and all kinds of incontinency. Hukeuill.

More women should die than men, if the number of burials answered in proportion to that of sicknesses ; but men, being more intemperate

than wo-men, die as much by reason of their vices, as women do by the infirmity of their sex. Grawtt.

How grossly do many of us contradict the plain precepts of the Gospel, by living intemperately or unjustly. Tillotson.

Do uot too many believe no religion to be pure, but what is intemperatelit rigid ? Whereas no religion is true, that is not peaceable as well as pure.

Sprat.

The Lacedemonians trained up their children to hate drunkenness and intemperance, by bringing a drunken man into their company. Watts.

Free from the wayward bias bigots feel, From fancy's influence and intemperate zeal.

Cowper. Progress of Error.

.INTEN'ABLE, adj. In and tenable. Intenable, indefensible ; as, an intenable opinion; an intenable fortress.

I know I love in vain, strive against hope ; Yet in this captious and intenable sieve, I still pour in the waters of my love.

Shakspeare. Fr. entendement ; Lat. inlendo. To stretch out; to enforce ; to strain ; to regard, or

v. a. ~\

r,n.s. f :NT, n. s. (i NT, n. s. J i

INTEND', v. a.

INTEN'DANT. INTEXD'IMENT, INTEND'MENT,

take care off; to pay attention; to mean or de-sign : intendant, an officer of the highest class, who oversees any particular allotment of the public business : intendiment, intendment, old words which signify attention, intention, or de-sign

Thou art a prince yborne by thy discente ; And for to rule thy royall

dignite, I shall the given, first intendemente, Discrecion, prudence, in right jugement, Whiche in a prince is thing most covenable.

Chaucer's miscellanies.

They could not intend to the recovery of that country of the north. Spenser.

Be nought hereat dismayed 'Till well ye wot, by grave intendiment; What woman, and wherefore doth we upbraid.

Id.

The same advancing high above his head, With sharp intended sting so rude him smote,

That to the earth him drove, as stricken dead ; Ke living wight would have him life behot.

Faerie Queene. This they should carefully intend, and not, when

> INT

intendment, or brook such disgrace well as he shall ™™l< >' Shakspeare.

A either was there any who might share in the government, while the king intended his pleasure.

Bacon's Henry VII.

Having no children, she did with singular care and tenderness intend the education of Philip.

Bacon.

Go therefore, mighty powers ? intend at home, W hile here shall be our home, what best may ease The present misery. Mil ton' t Paradise Lost.

By this the lungs are intended or remitted.

Hale.

I he opinion she had of his wisdom was such as made her esteem

greatly of his words : but that the words themselves sounded so, as she could not imagine what they intended. Sidney. ˆ Their beauty they, and we our loves suspend ; Nought can our wishes, save thy health, intend.

Waller.

All that worship for fear, profit, or some other by-end, fall more or less within the intendment of this emblem. /.' Estrange.

Magnetism may be intended and remitted, and is found only in the magnet and in iron. Xeirtm. Nearchus, who commanded Alexander's fleet, and Onesicrates, his intendant general of marine, have both left relations of the Indies. Arbuthiwt.

Elegant phrase and figure formed to please Are qualities, that seem to comprehend Whatever parents, guardians, schools intend.

Cowper. Progress of Error. INTENDMENT OF CRIMES. In cases of trea son, intention proved by circumstances is punishable as if it were put in execution. So likewise, if a person forcibly enter a house in the night-time, with intent to commit burglary, it is felony : and an assault on the highway, with an intent to commit robbery, is felony, and punished with transportation.

INTEN'ERATE, v. a.) Lat. in and tener. INTENERA'TJON, n. s. \ To make tender, or soften.

In living creatures the noblest use of nourishment is for the prolongation of life, restoration of some degree of youth, and inteneratian of the parts.

Baton,

Autumn vigour gives, Equal, intenerating, milky grain.

PhUlipi.

INTENSE', adj. "j Lat. intensta, in and INTENSE'LY, adv. | tendo. Raised to a high INTENSE'NESS, n.s. [degree ; vehement; ar- INTEN'SION, n. s. (' dent ; kept on the INTENSIVE, adj. stretch ; anxiously atten-iNTEN'sivELYjflrfv.J tive : intensely, to an extreme degree : intension, the act of forcing or straining any thing: intensive, increased; in-tent ; unremitted : intensively, by increase of degree.

Sounds will be carried further with the wind than against the wind;

and likewise tc rise and fall with the intension or remission of the vind.

Bacon.

God and the good angels are more fr«e than we are, that is, intensively in the degree o’ freedom ;

A uia l|‘cy aiiuuiu. uaiciuii y imcitut emu nui , « licit « .7 • J r L. K” f

the sacrament is administered, imagine themselves but not extensively in the latitude of nUed only to walk up and down in a white and according to a liberty of exercise, but no’ot sp

i • J IT i *: R.-/7i>i/i/7// noautl itOOlltS.

ulnning garment. Hooker.

Out of my love to you, I came hither to acquaint you withal ; that cither vou might stay him from his

cation. Kramhall agaiitt

Faith differs from hope in the extension of its oV ject, and in the intension of degree.

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But in disparity

The one intrmr ; the other still remiss, Cannot well suit with either, but soon prove Tedious alike. Milton t Paradite /.-••’.

As his perfection is infinitely greater than the perfection of a man, so it is infinitely greater than the perfection of an angel ; and, were it not infinitely their own safety greater than the perfection of an angel, it could not be iannitelv greater than the perfection of a man, because the intentive distance between the perfection of an angel and of a man is but finite. Hale.

Sublime or low, unbended or intense, The sound is still a comment to

the sense.

Rotcommoii.

To observe the effects of a distillation, prosecuted with to intense and unusual a degree of heat we ventured to come near. Boyle.

If an Englishman considers our world, how intentely it is heated, he cannot suppose that it will cool again. Addison.

The water of springs and rivers, that sustains a diminution from the heat above, being evaporated more or less, in proportion to the greater or lesser i*tensenets of heat.]'oodicnrd.

Where sits the soul, intente collected cool, Bright as the skies, and as the season keen.

Thornton.

Not a sound is heard

To break the midnight air, though the raised ear, Intensely list’ning, drinks in ever)- breath.

Barbauld. Evening Meditation. The electric blood with which their arteries run Their body’s self turned soul with the intente Feeling of that which is.

Byron. Prophecy of Dante.

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greedy intention, that the appetite of her eye did seem to scorch me up like a burning-glass. Id. Where the object is fine and accurate, it conducetr much to have the sense intentive and erect.

Bacon’s Natural History.

Distractions in England made most men intent to eir own safety. King Charles.

If we insist passionately or so intently on the truth of our beliefs, as- not to proceed to as vigorous pursuit of all just, sober, and godly living.

Hammond.

When we use but those means which God hath laid before us, it is a good sign that we are rather intent upon God's-glory than our own conveniency.

Taylor.

The general himself had 1 > «en more intent upon his command. Clarendon.

They on their mirth and dance Intent. Milton.

I find in myself that this inward principle doth. exert many of its actions intentionally and purposely

Hale.

The naked relation, at least the intentive consideration of that, is able still, and at this disadvantage of time, to rend the hearts of pious contempla-tors. Browne's Vulgar Errours.

I wish others the same intention, anc

INTENT, «dj.&n.«0 INTEN'TIOS, n. t. INTEN'TION A L, adj. INTEN'TIONAU.Y, adv.

Fr. intention; Lat. intentus. Anxiously diligent : intent, a de-sign or purpose : to all

intents, in all senses,

INTEN'TIVE, adj.

INTEN'TIVELY, adv. | whatever be meant

INTENTLY, adv. See INTEND. Inten—

INTENT'NF.SS, n.i. } tional, designed in

will or action : intentive, diligently applied :

intently, with close attention or eager desire :

intentness, anxious and diligent application.

For his intent within short while Was to returne unto this yle That he came fro, and kepe his day ; For nothing would he be away.

Chaucer. Dreame.

burely, mv sonne ! then answered he againe, If happie ; then it is in this intent, That having small yet doe I not complaine Of want, no1 wish for more it to augment But doe myselfe, with that I hove content.

Spenter. Faerie Qneene. Although the Scripture of God be stored with in-

greater sue cesses. Temple.

Of action eager, and intent on thought, The chiefs your honourable danger sought.

Dry den.

This fury fit for her intent she chose ; One who delights in wars. Id. JEneid

He was miserable to all intents and purposes.

I.‘flstrange.

Were men as intent upon this as on things of lower concernment, there are none so enslaved to the necessities of life, who might not find many vacancies that might be husbanded to this advantage of their knowledge Locke.

Intention is when the mind with great earnestness, and of choice, fixes its view on any idea, considers it on every side, and will not be called off by the ordinary solicitation of other ideas. Id.

The Athenians sent their fleet to Sicily, upon pretence only to assist the Leontines ; but with an intent to make themselves masters of that island.

Grew.

In persons possessed with other notions of religion, the understanding cannot quit these but by great examination ; which cannot be done without some labour and intention of the mind, and the thoughts dwelling a considerable time upon the survey and discussion of each particular. South.

There is an incurable blindness caused by a resolution not to see ; and, to all intents and purposes, he who will not open his eyes is for the present as blind as he that cannot. Id.

The glory of God is the end which every intel-

1 • ˆ OWI«*U »•» I I 11 til-_. V ,/ ‘» *»MV • 1 IV. »» 11 H II t, » I I* I I I M I -

finite vanety of matter in all kinds, although it llˆent ˆing is bound to consult, by a direct and abound with all sorts of laws, yet the principal “lt*»t«»««f service. Holers.

intent of Scrintura U m <1ai;»<» »k« i-r j…:— Whenever I am wishing to write to you, I ‘shall

conclude you are intentionally doing so to me. _, Atterbury to Pv]>e.

1 he odd paintings of an Indian screen ‘may please ittle ; but, when you fix your eye intently upon them they appear so disproportioned that they give ajudunouseyepain. Atterbury.

Most part of chronical distempers proceed from txity of the fibres ; in which case the principal intention is to restore the tone of the solid parts, ‘n, r-L- Arbuthnot on Aliments.

I he (,hian medal seats him with a volume open anrl reading intently. pJL,

”’**• ,7*** HIC Ul 1 IM 1 UilL

•ntent of Scripture is to deliver the laws of duties supernatural. Hooker

Whereis commandment was given to destroy all place* wlere the Canaanites had served the gods, this precept had reference unto a

special intent and purpose, vhich was, that there should be but one | >lare whe-eunto the people might bring offerings.

I'll urge his hatred more to Clarence ; And, if I fail not in my deep intent, Clareice hath not another day to live.

Sfalctpmrv. *-lie did course o'er mv exteriors with such a

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Of darkness visible so much be lent, As half to shew, half veil the deep intent.

Id. DunciacL

lie is more disengaged from his intentness on affairs. SwiJ't.

Whilst they are intent on one particular part, of their theme, they bend ail their thoughts to prove or disprove some proposition that relates to that part, without attention to the consequences that may affect another. Watts.

Be intent and solicitous to take up the meaning of the speaker. Id.

Some, with hope replenished and rebuoyed, Return to whence they came — with like intent, A nd weave their web again.

Byron. Childe Harold. Jle lied with such a fervour of intent ion, There was no doubt he earned his laureat pension.

Id. Don Juan.

Some have been so good-natured as to cloak counsel under the garb of conjecture, and under pretence «f guessing my intentions have recommended their own favorite studies to my notice as fit objects for

my recommendation to the notice of my fellow citizens. Canning. Microcosm.

INTER', v. a. Fr. entetrer ; Lat. in and terra. To cover with earth ; to bury.

The evil that men do lives after them ; The good is oft interred with their bones.

Sliakspeare.

His body shall be royally interred, And the last funeral pomps adorn his herse.

Dry den. The best way is to inter them as you furrow pease.

Mortimer.

The ashes, in an old record of the convent, are said to have been interred between the very wall and the altar where they were taken up. Addison.

But let him

Inter his son before we press upon him This edict. Byron. Tragedy-. Two Fatcari. act. iv. sc. 1.

INTERAMNA, in ancient geography, a town of the Cisappennine Umbria; so called from its situation between rivers, or in an island in the river Nar, now called Terni. It was the birth-place of Tacitus the historian, and Tacitus the emperor. Pliny distinguishes the natives by the name of Interamnates Nartes.

INTERAMNA LIRINAS, a town and colony of the Volsci in Latium, on the confines of Samnium, at the confluence of the rivers Liris and Melpis, now in ruins.

INTERAMNA, or INTERAMNIA, Praetutianorum, a town in the territory of the Praetutiani, a part of Picemim ; now called Teramo, in the Abruzzo of Naples.

INTER'CALAR, adj. l Fr. intercalate ; Lat.

INTF.HCAL'ARY. J intcrcalaris. Inserted

out of the common order to preserve the equation of time ; as, the 29th of February in a leap year is an intercalary day.

INTERCALARY DAY, the odd day in leap year, so called from calare, to proclaim, it being proclaimed by the priests with a loud voice.

INTERCALATE, v. a. Fr. intercaler ; Lat intcrcato. To insert an extraordinary Hay.

1NTERCATIA, in ancient geography, a town of the Vaccsei in Hispania Citra. Here Scipio £auH*nas slew a champion of the barbarians in single co'nbat ; and was the first who mounted

the wall in taking the town. It was situated to the south-east of Asturica. and is now m ruins.

INTERCALATION, n. ,. Fr. intercalation ; Lat. intercalatio. Insertion of days out of the ordinary reckoning.

In sixty-three years there may be lost almost eighteen days, omitting the intercalation of one dav every fourth year, allowed for this quadrant, or six supernumeraries. Broun*.

INTERCEDE', v. «.N Fr. interceder ; lat. INTEKCED'ER, n.g. tintercetlo. To pass be-INTKKCES'SION, n. t. /tween; to mediate; to INTERCES'SOR, n. t. J act between two parties with a view of reconciling differences. It has with if only one part be named, and between if both be named. Interceder, more properly written intercessor, a mediator; an agent between two parties to procure reconciliation : intercession, mediation; interposition; agency in the cause of another, sometimes against him.

He bare the sin of many, and made intercession for the transgressors. Jsa. Hij. 12.

Pray not thou for this people, neither make intercession to me ; for I will not hear thee. Jer. vii. 16. He maketh intercession to God against Israel.

Rom. xi. 2.

So of thy grace and bountie special! To the King on hyghe be intercessor, In hevyn to crown hir a quene of honoure.

G. Cavendithe's Metrical Vitiont. The better course should be by planting of garrisons about him, which, whensoever he shall look forth, or be drawn out, shall be always ready to intercept his going or

coming. Spentrr.

Can you, when you pushed out of your gates the very defender of them, think to front his revenges with the palsied intercession of such a decayed dotaid as you seem to be. Shakspeare.

Behold the heavens ! thither thine eyesight bend ; Thy looks, sighs, tears, for intercettoun send.

Fairfax.

On man’s behalf, Patron or intercessour, none appeared. Milton.

Them the glad son

Presenting, thus to intercede began. id. He supposeth that a vast period interceded between that origination and the age wherein he lived.

Hale.

Loving, and therefore constant, he used still the intercession of diligence and faith, ever hoping, because he would not put himself into that hell to be hopeless.

Sidney.

Origen denies that any prayer is to be made to them, although it be only to intercede with God for us, but only the Son of God. Stillingjitet .

To pray to the saints, to obtain things by their merits and intercessions, is allowed and contended for by the Roman church. M.

I may restore myself into the good graces of my fair criticks, and your lordship may intercede irith them on my promise of amendment. flryden.

Your intercession now is needless grown ; Retire, and let me speak with her alone. Id, When we shall hear our eternal doom frora our intercessor rs, it will convince us, that a denial pf Christ is more than transitory words. South.

fracting densities.

AWton.

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Though for the first all Westminster should plead, And for the last all Gresham intercede. Young. INTERCEPT,ˆ a. > Lat. intercipio. To INTERCEP'TION, n. s. fstop and seize in the way; to obstruct; cut off, or stop from being communicated.

Who intercepts me in my expedition? — O, she that might have intercepted thee, By strangling thee. Shakspeare. Richard III. I then in London, keeper of the king, Mustered my soldiers, gathered flocks of friends, Marched towards St. Albans t' intercept the queen.

Shakf/ieare.

Your intercepted packets You writ to the pope. Id. Henry.

Fhough they cannot a swer my distress, Yet in some sort they're better than the tribunes ; For that they will not intercept my tale.

Shaksprare.

The word in Matthew doth not only signify suspension, but also suffocation, strangulation, or intercept i.m of breath. Browne.

On barbed steeds they rode in proud array, Thick as the college of the bees in May, When swarming o'er the dusky fields they fly, New to the flowers, and intercept the sky.

Dryden.

If we hope for things which are at too great a distance from us, it is possible that we may be intercepted by death in our progress towards them.

Addisnn's Spectator.

Behind the hole I fastened to the pasteboard, with pitch, the blade of a sharp knife, to intercept some part of the light which passed through the hole.

Newton's Opticks. The direful woes,

Which voyaging from Troy the victors bore, While storms vindictive intercept the shore.

Pope.

How dark the veil that intercepts the blaze Of Heaven's mysterious purposes and ways !

Cowper. Chanty.

INTERCHANGE', v. a. & n.s.} Fr. changer. INTERCHANGEABLE, adj. ˆTo put each

INTERCHANGEABLY, adv. i in the place of INTERCHANC'MENT, n. s. 'the other; to

INT

and counterrolments, running through the hands, and renting in the power of so many several persons, is sufficient to argue and convince all manner of falsehood. Bacon's Office of Alienation.

With what delights could I have walked thee

round !

If I could joy in ought ! sweet interchange Of hill and valley, rivers, woods, and plains.

Milton.

His faithful friend and brother Euarchus came so mightily to his succour, that, with some interchang-ing changes of fortune, they begat, of a just war, the best child peace. Sidney.

All along the history of the Old Testament we find the interchangeable providences of God towards the people of Israel, always suited to their manners.

TiUatttm.

Removes and interchanges would often happen in the first ages after the flood. Burnet's Theory.

After so vast an obligation, owned by so free an acknowledgment,

could any thing be expected but a continual interchange of kindnesses? South.

These articles were signed by our plenipotentiaries, and those of Holland ; but not by the French, although it ought to have been done interchangeably ; and the ministers here prevailed on the queen to execute a ratification of articles, which only one part had signed. Swift.

Too late and long

We may deplore and struggle with the coil, In wretched interchange of wrong for wrong ‘Midst a contentious world, striving where none are strong. Byron. Childe Harold.

Upon occasions of such trying exigency, as those which we have lately experienced, I hold it to be the very essence of our free and popular constitution, that an unreserved interchange of sentiment should take place between the representative and his constituents. Canning’s Speeches.

INTERCESSIO, INTERCESSION, was used in ancient Rome, for the act of a tribune of the people, or other magistrate, by which he inhibited the acts of other magistrates ; or even, in case of the tribunes, the decrees of the senate. Veto was the solemn word used by the tribunes, when they inhibited any decree of the senate,

exchange; to succeed alternately: commerce ; al- ,or law Pr°P°sed to *e people. The general

ternate succession; mutual donation and reception.

In these two things the East and West churches did interchangeably both confront the Jews and concur with them. Hooiter.

Let Diomedes bear him, And bring us Cressid hither. Good Diomed, Furnish you fairly for this interchange.

Shakspeare.

Farewell ; the leisure, and the fearful time, Cuts off the ceremonious vows of love, And ample interchange of sweet discourse. Id. Since

their more mature dignities made separation of their society, their encounters, though not personal, Lave been royally attornied with interchange of gifts.

Id.

I shall interchange

My wained state for Henry's regal crown. Id. A contract of eternal bond of love, Confirmed by mutual joinder of your hands,

Attested by the holy close of lips, Strengthened by interchangement of your rings. Id.

This in myself I boldly will defend, And intfrchingerilv hurl down my gage Upon this overweening traitor's foot. Id.

So many testimonies, interchangeable warrants,

law of these intercessions was, that any magistrate might inhibit the acts of his equal or inferior ; but the tribunes had the sole tive of controlling the acts of every other trate.

INTERCESSOR, in the Roman law, was the name of an officer, whom the governors of provinces appointed principally to raise taxes and other duties.

INTERCESSOR is also a term heretofore applied to such bishops as, during the vacancy of a see, administered the bishopric, till a successor to the deceased bishop had been elected. The third council of Carthage calls these interventors

INTERCIP'IENT, ~adj. & n. s. See INTERCEPT.

They commend repellents, but not with much astringency, unless as intercipients upon the parts above, lest the matter should thereby be impacted in the Part-Wiseman.

INTERCIS'ION,n.s. Lat. inter and eado. Interruption.

By cessation of oracles we may understand their interciiion not abscission, or consummate desolation.

Browne.

INTERCLUDE’, v.n. Lat. intercludo. To •shut from a place or course by something intervening ; to intercept.

The voice is sometimes interduaed by a hoarseness, or viscous phlegm cleaving to the aspera arteria.

Holder.

INTERCLU’SION, n. s. Lat. interdutus. Obstruction ; interception.

INTKRCOLUMNIATION, n. s. Lat. inter and columnu. The space between the pillars.

The distance of intercolumniation may be near four of Its own diameter, because the materials commonly laid over this pillar were rather of wood than stone.

Wotton.

INTERCOM’MON, v. n. Inter and com-mon. To feed at the same table

Wine is to be forborn in consumptions, for that the spirits of the wine do prey upon the roscid juice of the body, and intercommon with the spirits of the body, and so rob them of their nourishment.

Bacon’s Natural History.

INTERCOMMUNITY, n.s. Inter and community. A mutual communication or community ; a mutual freedom or exercise of religion.

INTERCOSTAL, adj. Fr. intercostal; Lat. inter and costa. Placed between the ribs.

The diaphragm seems the principal instrument of ordinary respiration, although to restrained respiration the intercostal muscles may concur. Boyle.

By the assistance of the inward intercostal muscles, in deep suspirations, we take large gulps of air.

More.

INTERCOURSE, n.s. Fr. entrecours. Commerce; exchange.

This sweet intercourse

Of looks, and smiles ; for smiles from reason flow, To brute denied, and are of love the food. Milton.

Communication : followed by with.

The choice of the place requireth many circumstances, as the situation near the sea, for the commodiousness of an intercourse with England. Bacon.

What an honor is it that God should admit us into such a participation of himself! That he should give us minds capable of such an intercourse with the Supreme Mind! AUerbury.

Alone amid the shades,

Still in harmonious intercourse they lived

The rural day, and talked with flowing heart,

Or sighed, and looked unutterable things.

Thomson.

INTERCUR'RENCE, n. s. From Lat. in-tercurro. Passage between.

Consider what fluidity saltpetre is capable of, without the intercurrence of a liquor. Boyle.

INTERCUR'RENT, adj. L*t intercurrens.

Running between.

If into a phial, filled with good spirit of nitre, you cast a piece of iron, the liquor, whose parts moved placidly before, meeting with particles

in the iron, altering the motion of its parts, and perhaps that of some very subtile intercurrent matter, those active parts presently begin to penetrate, and scatter abroad particles of the iron. Boyle.

ˆNTERDEAU, n. s. Inter and deal. Traffic; intercourse. Obsolete.

The Gaulish speech is the very British, which is yet retained of the Welchmen and Britons of France ; though the alteration of the trading and interdeal with other nations has greatly altered the dialect. Spenser.

INTERDICT, v. a. & „. ,. } Fr. interdire ; INTERDICTION, n.t. VLat. inter and

INTERDICTORY, adj. J dico. To forbid ; to prohibit: a prohibitory decree; a papal prohibition to the clergy to celebrate the holy offices : interdiction, a forbidding decree; papal anathema: interdictory, belonging to interdict.

Amongst his other fundamental laws, he did or-dain the interdicts and prohibitions touching entrance of strangers. Bacon.

The truest issue of thy throne, By his own interdiction stands accurst.

Sliaktpeare.

Sternly he pronounced The rigid interdiction, which resounds Yet dreadful in mine ear. Milton’s Paradise Loft.

Alone I passed, through ways That brought me on a sudden to the tree Of interdicted knowledge. ,.

Those are not fruits forbidden, no interdict Defends the touching of these viands pure ; Their taste no knowledge works, at least of evil.

Id. Paradue Regained. Had he lived to see her happy change, He would have cancelled that harsh interdict, And joined our hands himself.

Dryden’s Don Sebastian.

Nani carried himself meritoriously against the pope, in the time of the interdict, which held up his credit among the patriots. Walton.

An archbishop may not only excommunicate and interdict his

suffragans, but his vicar-general may do the same. Ayliffe.

By magick fenced, by spells encompassed round, No morta' touched this interdicted ground. Ticket.

INTERDICT, a censure inflicted by a pope, or bishop, suspending the priests from their functions, and depriving the people of the use of sacraments, divine service, and Christian burial. This punishment was but little practised till the time of Gregory VII. Afterwards indeed interdicts were often executed in France, Italy, and Germany ; and, in 1 170, pope Alexander III. put all England under an interdict, forbidding the clergy to perform any part of divine service, ex-cept baptising of infants, taking confessions, and giving absolution to dying penitents. In excommunicating a prince all his subjects, who retain their allegiance, are excommunicated, and the whole country is put under an interdic*. In the reign of king John the kingdom of England lay under a papal interdict for above six years together : it began A. D. 1208. In imitation of the popes, the bishops also soon began to interdict; and it became a common thing for a city, or town, to be excommunicated for the sake of a single person whom they undertook to shelter ; but this severity was found to have such ill effects, to promote libertinism and a neglect of religion, that the succeeding popes very seldom made use of it. There was also an interdict of persons, who were deprived of the benefit of attending on divine service. Particular persons were also anciently interdicted of fire and water, which signified a banishment for some particular offence : by their censure, no person was allowed to receive them, or allow them fire or water ; and, being thus wholly deprived of the two necessary elements of life, they were doubtless under a kind of civil death.

The following is the tormulaof an ancient interdict : —

« In the name of Christ, We, the bishop, in be-half of the Father, Son, and Holy < Jhost, and of

It is a sad life we lead, my dear, .o be so teazed ; paying interest for old debts, and still contracting new ones. Arbuthnot.

Wherever interest or power thinks fit to interfere, it little imports what principles the opposite parties Ton each other. Sv.ift.

this church, and all the chapels thereunto belonging that no roan from henceforth may have leave to say mass, or to hear it, or in any wise to administer any divine office, nor to receive God's tithes wiihout our leave; and whosoever shall presume to ting or hear mass, or perform any divine office, or to receive any tythes, contrary to this interdict, on the part of God the Father Almighty, and of the Son, and of the Holy Ghost, and on the behalf of St. Peter, and all the saints, let him be accursed and separated from all Christian society, and from entering into Holy Mother Church, where there is forgiveness of sins; and let him be anathema, ma-ranatha, for ever with the devils in hell. Fiat, fiat, fiat.' — Du Cangc.

\ NTE RD ICTS, in the Roman .aw, were certain formulae of words by which the praetor, when the possession of any property was contested between many, ordered or forbade something to be done with "it, till the right or property should be legally determined. Which formulas were called interdicts, because they related to the possession of the thing in the interim, or till the right was ascertained.

They had three kinds of interdicts, prohibitory, restitutory, and exhjbitory. Prohibitory were those by which the judges forbade any one to vex another in tlie possession of any thing legally belonging to him. Restitutory were those by which the judges appointed any one, who had been expelled out of his estate, to be repossessed, before his right was legally ascertained. Kxhibitory were those by which any thing in dispute was ordered to be exhibited ; as a testament, &c.

INTKRESS, t>.«. J Fr. interrs—

IN'TEREST, v. a., v. »., & «.*. f ter ; Lat. tn-terett . To concern ; to aflect, or give share in ; to affect or move with passion; to gain the affections: interest, concern, or advantage; influence over others; participation; regard to private gain ; usury ; surplus of advantage.

The mystical communion of all faithful men is such as makcth every one to be interesied in those precious blessings, which any one of them receiveth at God's hanus. Hooker.

Our joy,

A Ithough our last not least ; to whose young love, The vines of France and milk of Burgundy, Strive to be interested. Shakspeare. King Lear.

Did he take interest J

— No, not take interest ; not as you would say, Directly, interest. Shakspeare.

They, who had hitherto preserved them, had now lost the'r interest. Clarendon.

Divisions hinder the common interest and publirk good. Temple.

This was a goddess who used to interest herself in marriages. Addison on Medals.

Exert, great God, thy interest in the sky ; Gain each kind power, each guardian deity, That, conquered by the publirk vow, They bear the dismal mischief far awav. Prior.

to adjust the degrees of influence, that ieht have in producing the effect, and

Kndeavour

each cause might have in producing the proper agency and interest of each therein.

Watts.

What nation will you find whose annals prove So rich an interest in Almighty love t

Cowper. Expostulation.

She could repay each amatory look you lent '»Vith interest, and in turn was wont with rigour To exact of Cupid's bills the full amount. At sight, nor would permit you to discount. Byron.

God forbid, that there should not be modes of assembly by which every class of this great nation may be brought together to deliberate

on any matters connected with their interest and their freedom.

Canning.

INTEREST is the premium paid for the loan of money. See ARITHMETIC.

INTEREST, in commerce, is a sum paid for the loan, or for forbearance in demanding a sum of money, called the principal. It is usually estimated according to some rate or proportion ; in this country at a sum of money laid on, or considered as the aliquot part of £100.

The highest legal interest in England is 5 per cent, per annum, except, to the great injury of the poor, in the case of the pawnbrokers, who are allowed to take from 15 to 20 per cent.

Interest is either simple or compound.

Simple interest is that which is counted and illowed upon the principal only, for the whole time of the loan or forbearance.

The sum of the principal and interest is called the amount.

As the interest of any sum, for any time, is directly proportional to the principal sum and time, therefore the interest of £l for one year being multiplied by any proposed principal sum, and by the time of its forbearance, in years and oarts, will be its interest for that time. That is, if r zz the rate of interest of £l per annum, p zz any principal sum lent, t zz the time it is lent for, and a zz the amount, or sum of principal and interest. ; then is prt — the interest of the s'im p, for trie time t, at the rate r ; and consequently p •+• prt zz p x 1 + rt zz «, the amount of the same for that time. And, from this general theorem, other theorems can easily be deduced for finding any of the quantities above-mentioned ; which, collected all together, will be as follow: —

1st, a zz p + prt the amount

(i 2d, p zz r-^_— * the principal,

a — p 3d, r zz ~ the rate,

4th, t zz . :

_ a-p

the time.

pr

Tables of simple interest are so numerous, and attached to such a variety of publications, that we cannot think them needed in a work of science.

Compound Interest, called also Interest-upon-

Interest, is that which is counted not only upon the principal sum lent, but also for its interest, as it becomes due, at the end of each stated time of payment.

Although it is not lawful to lend money at compound interest, yet in purchasing annuities, pensions, &c., and taking leases in reversion, it is usual to allow compound interest to the purchaser for his ready money; and therefore it is necessary to understand the subject.

Besides the quantities concerned in simple interest, *viz.* the principal p, the rate or interest of £l for one year r, the amount a, and the time t, there is another quantity employed in compound interest, *viz.* the ratio of the rate of interest, which is the amount of £l for one time of payment, and which here let be denoted by R, *viz.* R — 1 -|- r. Then, the particular amounts for the several times may be thus computed, *viz.* As £l is to its amount for any time, so is any proposed principal sum to its amount for the same time ; i. e.

£l : R : : p : pR the 1st year's amount, £l : R : : p R : p R* the 2d year's amount, £l : R : : pR* : pR3 the 3d year's amount, and so on.

Therefore in general, p Re — a is the amount for the t year, or t time of payment. Whence tne following general theorems are deduced : —

INTEREST.

1st, a =: j>R« the amount, 2d, p — -j-the principal,

3d, r = V -the ratio,

,., . log. of a — log. ofp .

4th> * = j ~ £ the time.

log. of EL

From which any one of the quantities may be found, when the rest are given.

For example, suppose it were required to find in how many years any principal sum will double itself, at any rate of interest. In this case we must employ the 4th theorem, where a will be =. 2p, and then it is

f _ 1. ” — I-p .*2p* — .*p* jog. 2 log. R. ‘ log. R. ~~ log. R. So, if the rate of interest be 5 per cent, per an-num; then R = 1 + -05 = 1-05, and hence

log. 2. -3010300 ‘ = I^T05= ^0271893 = that is, any sum doubles in 14j years nearly, at the rate of 5 per cent, per annum compound interest.

Compound interest is also computed by means of such a table as the following; containing the amounts of £l from one year to forty, at various rates of interest : —

Nj

ft1

At 3 per

At 3| per

At 4 per

At 4£ per

At 5 per

At 6 per

.

Cent.

Cent.

Cent.

Cent.

Cent.

Cent.

1

1-03000

1-03500

1-04000

1-04500

1-05000

1 -06000

2

1-06090

1-07123

1-08160

1-09203

1-10250

1-12360

3

1-09273

1-10872

1-12486

1-14117

1-15763

1-19102

4

1-12551

1-14752

1-16986

1-19252

1-21551

1-26248

5

1-15927

1-18769

1-21665

1-24618

1-27628

1-33823

6

1-19405

1-22926

1-26532

1-30226

1-34010

1-41852

7

1-22987

1-27228

1-31593

1-36086

1-40710

1-50363

8

1-26677

1-31681

1-36857

1-42210

1-47746

1-59385

9

1-30477

1-36290

1-42331

1-48610

1-55133

1-68948

10

1-34392

1-41060

1-48024

1-55297

1-62890

1-79085

11

1-38423

1-45997

1-53945

1-62285

1-71034

1-89830

12

1-42576

1-51107

1-60103

1-69588

1-79586

2-01220

13

1-46853

1-56396

1-66507

1-77220

1-88565

2-13293

14

1-51259

1-61869

1-73168

1-85194

1-97993

2-26090

15

1-55797

1-67535

1-80094

1-93528

2-07893

2-39656

16

1-60471

1-73399

1-87298

2-02237

2-18287

2-54035

17

1-65285

1-79468

1-94790

2-11338

2-29202

2-69277

18

1-70243

1-85749

2-02582

2-20848

2-40662

2-85434

19

1-75351

1-92250

2-10685

2-30786

2-52695

3-02560

20

1-80611

1-98979

2-19112

2-41171

2-65330

3-20714

21

1-86029

2-05943

2-27877

2-52024

2-78596

3-39956

22

1-91610

2-13151

2-36992

2-6336/5

2-92526

3-60354

23

1-97359

2-20611

2-46472

2-75217

3-07152

3-81975

24

2-03279

2-28333

2-56330

2-87601

3-22510

4-04893

25

2-09378

2-36324

2-66584

3-00543

3-38635

4-29187

26

2-15659

2-44596

2-77247

3-14068

3-55567

4-54938

27

2-22129

2-53157

2-88337

3-28201

3-73346

4-82235

28

2-28793

2-62017

2-99870

3-42970

3-92013

5-11169

29

2-35657

2-71188

3-11865

3-58404

4-11614

5-41839

30

2-42726

2-80679

3-24340

3-74532

4-32194

5-74349

/OL. KIT. G

82

INTEREST.

<

At 3 per Cent.

At 3J per

Cent.

At 4 per Cent.

At 4J per

Cent.

At 5 per Cent.

At 6 per

Cent.

31 32 33 34 35

2-50008 2-57508 2-65234 273191 2-81386

2-90503 3-00671 3-11194 322086 3-33359

3-37313 3-50806 3-64838 3-79432 3-94609

3-91386 4-08998 4-27403 4-46636 4-66735

4-53804 4-76494 5-00319 5-25335 5-51602

6-08810 6-45339 6-84059 7-25103 7-68609

36 37 38

2-89828 2-98523 3-07478

3-45027 3-57103 3-69601

4-10393 4-26809 4-43881

4-87738 5-09686 5-32622

5-79182 6-08141 6-38548

8-14725 8‘63609 9-15425

39

3-16703

3-82537

4-61637

5-56590

6-70475

9-70351

40

3-26204

3-95926

4-80102

5-81636

7-03999

10-28572

With the aid of the foregoing table we may hazards, a door should be opened to fraud and

calculate the interest, or amount, of any princi-usury ; leaving specific hazards to be pro

pal sum for any time, not more than forty years, against by specific insurances, or by lc >on

For an example, take £523 for fifteen years, at respondent or bottomry. But, as to tt j rate 01

five per cent, per annum, compound interest. In legal interest, it has varied and decrease tor

the table on the line 15, and column 5 per cent. 200 years past, according as the quantity c

is the amount of £l viz.— . . 2-07893 specie in the kingdom has increased by acc<

This multiplied by the principal . 523 sions of trade, the introduction of paper credit,

. and other circumstances. The statute 37 Men.

gives the amount . . 1087-28039 VIII. c. 9, confined interest to ten per cent, and

or £1087 5*. 7K Therefore the interest is so did the statute 13 El iz. c. 8. But as, through

the encouragements given in her reign to com-

The lawfulness of taking any interest what-merce, the nation grew more wealthy ; so, under ever has been sometimes agitated; and the her successor, the statute 21 Jac. I. c. 17 re-school divines have stigmatised it as contrary to duced it to eight per cent. ; as did the statute the divine law both natural and revealed. But 12 Car. II. c. 13, to six: and lastly, by the sta-the Mosaical precept was clearly a branch of the tute 12 Ann. st. 2, c. 16, it was brought down jurisprudential or political law of the Jews, and to five per cent, yearly, which is now the extre-not a moral precept ; for while it prohibited the mity of legal interest that can be taken. But Jews from taking usury of their brethren, it in yet, if a contract which carries interest be made express words (Deut. xxiii. 20), permitted them in a foreign country, our courts will direct the to take it of a stranger, which proves that the payment of interest according to the law of that taking of moderate usury, as a reward for the country in which the contract was made. Thus use, for so the word signifies, is not malum in se ; Irish, American, Turkish, and Indian interest, since it was allowed where any but an Israelite have been allowed in our courts to the amount was concerned. As to the reason, deduced from of even twelve per cent. For the moderation the natural barrenness of money, ascribed to or exorbitance of interest depends upon local Aristotle, the same may with equal force be circumstances ; and the refusal to enforce such alleged of houses, which never breed houses ; contracts would put a stop to all foreign trade, and of various other things, which nobody doubts And, by statute 14 Geo. III. c. 79, all mort-it is lawful to let on hire. He who demands an gages and other securities upon estates or other exorbitant price for the accommodation wanted, property in Ireland or the plantations, bearing acts unjustly and immorally in either case ; but interest not exceeding six per cent., shall be there is no good cause for blaming him in the legal, though executed in the kingdom of Great one more than in the other. Britain : unless the money lent shall be known

Upon the two principles of inconvenience at the time to exceed the value of the thing in and hazard, compared together, different nations pledge ; in which case also, to prevent usurious have at different times established different rates contracts at home, under color of such

foreign of interest. The Romans at one time allowed securities, the borrower shall forfeit treble the centissimae, one per cent, monthly, or twelve per sum so borrowed.

cent, per annum, to be taken for common loans ; The only case, in which compound interest is but Justinian reduced it to trientes, or one-third allowed, by the laws of Great Britain, is that of of the as or centissimae, that is four per cent. ; annuities.

but allowed higher interest to be taken of mer-INTERFERE', v. n. Lat. inter and ferio. chants, because there the hazard is greater. Gro-To interpose; to intermeddle; to clash; to op-tius informs us, that in Holland the rate of in-pose each other. A horse is said to interfere, terest \vas then eight per cent, in common loans, when the side of one of his shoes strikes against out twelve to merchants. Our law establishes and hurts one of his fetlocks ; or the hitting one one standard for all alike, where the pledge or leg against another, and striking off the skin. sccunty itself is not put in jeopardy ; lest, under If each acts by an independent power, their com-the general pretence of vague and indeterminate mands may interfere. Smalridge's Sermons.

So cautious were our ancestors in conversation, as never to interfere with party disputes in the state.

Swift.

I made no wars, I added no new imposts I interfered not with their civic lives.

Byron. Tragedy. Surdanapalut. So firm is my reliance on the arbitration of chance, that I can assure my readers, many is the good paper for the subject of which they are indebted to tier interference. Canning. Microcosm.

INTER'FLUENT, adj. Latin interfluens. Flowing between.

Air may consist of any terrene or aqueous corpuscles, kept swimming in the interfluent celestial matter.

Boyle.

INTERFUL’GENT, adj. Lat. inter and fulgent. Shining between.

INTERFUSED’, o$. IAI. interftuiu. Poured or scattered between.

The ambient air wide interfused, Embracing round this florid earth. Milton.

INTERJA’CENCY, n. s.j . Lat. interjoceo.

INTERJA’CENT, adj. S The act of lying

INTERJEC’TIOX, n. s. 3 between ; the thing lying between; the state of being interposed: and thus interjection is a part of speech that discovers the mind to be seized or affected with some oassion : such as are in Englsh, O ! alas ! ah !

The sea itself must be very broad, and void of little islands interjacent, else will it yield plentiful argument of quarrel to the kingdoms which it serveth.

Raleigh.

Laughing causeth a continual expulsion of the breath, with the loud noise which maketh the interjection of laughing. Bacon.

England and Scotland is divided only by the interjacency of the Tweed and some desert ground.

Hale.

Their wild natural notes, when they would express their passions, are at the best but like natural interjec-tions, to discover their passions or impressions.

Id. Origin of Mankind.

Its fluctuations are but motions, which winds, storms, shores, and every interjacency irregulates.

Browne.

IN TERIM, n. s. Lat interim. Mean time ; intervening time.

I a heavy interim shall support, By his dear absence. Shakspeare. Othello. One bird happened to be foraging for her young ones, and in this interim comes a torrent that washes away nest, birds, and all. L'Estrange.

In this interim my women asked what I thought.

Tatler.

INTERIM, a name given to a formulary, or kind of confession of the articles of faith, obtruded upon the Protestants after Luther's death by the emperor Charles V., when he had defeated their forces ; so called because it was only to take place in the interim, till a general council should have decided all points in dispute between the Protestants and Romanists. It retained most of the doctrines and ceremonies of the Romanists, excepting that of marriage, which was allowed to the clergy, and communion to the laity under both kinds. Most of the Protestants rejected it. There were two other interims ; one of Leipsic, the other of Franconia.

INTER JOIN', v. a. Inter and join. To join mutually; to intermarry.

So fullest foes, Whose passions and whose plots have broke their

sleep,

To take the one the other, by some chance, Some trick not worth an egg, shall grow dear

friends, And interjoin their issues.

Shakespeare. Coriolanut, act iv. INTE'RIOR, adj. Lat. inferior ; Fr. interieur. Internal; inner; not outward; not superficial.

The fool-multitude, that chuse by show, Not learning more than the fond eye doth teach, Which pry not to the interiour. Shakspeare.

The grosser parts, thus sunk down, would harden, and constitute the interiour parts of the earth.

Burnet.

INTERKNOWL'EDGE, n. t. Inter and knowledge. Mutual knowledge.

All nations have interknowledge one of another, either by voyage into

foreign parts, or by strangers that come to them. Bacon.

INTERLACE', v. a. Fr. entrclasser. To intermix ; to put one thing within another.

Some are to be interlaced between the divine readings of the law and prophets. Hooker.

The ambassadors interlaced, in their conference, the purpose of their master to match with the daughter of Maximilian. Bacon.

They acknowledge what services he had dona for the commonwealth, yet interlacing some errors, wherewith they seemed to reproach him. Hayward.

INTERLAPSE', n. i. Inter and lapse. The flow of time between any two events.

These dregs are calcined into such salts, which, after a short interlapse of time, produce coughs.

Harvey.

INTERLARD', v. a. Fr. entrelarder. To mix meat with bacon, or fat; to diversify lean with fat : to interpose ; to insert between.

Jests should be interlarded, after the Persian cus-tom, by ages young and old. Cartu-.

To diversify by mixture.

The laws of Normandy were the defloration of the English laws, and a transcript of them, though mingled and interlarded with many particular laws of their own, which altered the features of the original. Hale'i Laws of England.

Phillips has used this word very harshly, and probably did not understand it.

They interlard their native drinks with choice Of strongest brandy. Phillips.

INTERLEAVE', v. a. Inter and leave. To chequer a book by the insertion of blank leaves.

INTERLINE', v. a. 3 Lat. inter and linea.

INTERLINEA’TION, n. ». 5 To write in alternate lines ; to correct by interposed lines.

When, by interlining Latin and English one with another, he has got a moderate knowledge of the La-tin tongue, he may then be advanced farther.

Locke.

Three things render a writing suspected : the per-son producing a false instrument, the person that frames it, and the interlining and rasing out of words contained in such instruments. Aylijfe’s Partrgon. The muse invoked, sit down to write,

Blot out, correct, and interline.

Many clergymen write in so diminutive a manner.

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are haidly able to go on without perpetual hesitations.

INTERLINK’, v.a. Inter and link. To connect chains one to another ; to join one in another.

The fair mixture in pictures causes us to enter into the subject which it imitates, and imprints it the more deeply into our imagination and our memory : these are two chains which are interlinked, which contain, and are at the same time contained.

• Dryden.

INTERLOCUTION, n. *. } Lat. inter and

INTERLOCU’TOR, n.s. > loquor. Dia—

INTERIOC’UTORY, «</;. > logue; alternate speech ; a preparatory proceeding in law, before fi;.al decision, is called an interlocution : a person who talks with another, an interlocutor : interlocutory, a mode

of speech which consists of dialogue.

The plainest and the most intelligible rehearsal of the psalms they favor not, because it is done by interlocution, and with a mutual return of sentences from side to side. Hooker.

When the minister by exhortation raiseth them up, and the people by protestation of their readiness declare he speaketh not in vain unto them ; these inter-bcHtnry forms of speech, what are they else but most effectual, partly testifications, and partly inflammations of all piety ? Id.

Some morose readers shall find fault with my hav-ing made the interlocutors compliment with one another. Boyle.

These things are called accidental, because some new incident in judicature may emerge upon them, on which the judge ought to proceed by interlocution. Ayliffe's Porergon.

INTERLOCUTORY DECREE, in English law. In a suit in equity, if any matter of fact be strongly controverted, the fact is usually directed to be tried at the bar of the court of king's bench, or at the assizes, upon a feigned issue. If a question of mere law arises in the course of a cause, it is the practice of the court of chancery to refer it to the opinion of the judges of the court of king's bench, upon a case stated for the purpose. In such cases, interlocutory decrees or orders are made.

INTERLOCUTORY JUDGMENTS are such as are given in the middle of a cause, upon some plea proceeding on default, which is only intermediate, and does not finally determine or complete the suit. But the interlocutory judgments most usually spoken of are those incomplete judgments whereby the right of the plaintiff is establish*^, but the quantum of damages sustained by him is not ascertained, which is the province of a jury. In such a case a writ of enquiry issues to the sheriff, who summons a jury, enquires of the damages, and returns to the court the inquisition so taken, whereupon the plaintiff's attorney taxes costs, and signs final judgment. Interlocutory order is that which decides not the cause, but only settles some intervening matter relating to the cause. As, where an or-der is made in chancery for the plaintiff to have an injunction, to quit possession till the hearing of the cause ; this order, not being final, is called interlocutory.

INTERLO'PER, n. «. > Lat. inter and Dut.

INTERLOPE’, v. n. 5 loopen. To ruo be-

out a proper license ; to forestall ; to anticipate irregularly : interloper, one who runs into business where he has no right; an officious intruder.

The swallow was a fly-catcher, and was no more an interloper upon the spider’s right, than the spider was upon the swallow’s. L’Estraiige.

The patron is desired to leave off this interloping trade, or admit the knights of the industry to their share. Tatter.

INTERLU’CENT, adj. Latin, interlucens. Shining between.

INTERLUDE, n. s. Lat. inter and Indus. Something played at the intervals of festivity ; a farce.

When there is a queen, and ladies of honor attending her, there must sometimes be masques, and revels, and interludes. Bacon.

Dreams are but interludes, which fancy makes ; When monarch reason sleeps, this mimick wakes.

Dryden.

INTERLU’ENCY, n. s. Latin, interluo-Water interposited ; interposition of a flood.

Those parts of Asia and America, which are now disjoined by the interluency of the sea, might have been formerly contiguous. Hate.

INTERLU’NAR, adj. } Lat. inter and luna.

INTERI.U’NARY, adj. 3 Belonging to the time when the moon, about the change, is invisible

The sun to me is dark, And silent as the moon, When she deserts the night, Hid in her vacant interlunar cave. Milton. We add the two Egyptian days in every month, the interlunary and plemlunary exemptions. Browne.

INTERMAR’RY, v. n. I Inter and marriage.

INTERMAR’RIA.GE, n. s. J Marriage between two families.

Because the alliances and intermarriages, among so small a people, might obstruct justice, they have a foreigner for judge of St. Marino. Addison.

About the middle of the fourth century from the building of Rome, it was declared lawful for nobles and plebeians to intermarry. Swift.

INTERMED'DLE, v. n. & v. a. > Fr. en—

INTERMED'DLER, n. s. 5 trenieler.

To interpose officiously ; to intermix, or mingle; perhaps for intermeHed : intermeddler, one who interferes in the business of others without right.

Many other adventures are intermeddled ; as the love of Britomert and the virtuousness of Belphaebe.

Spenser.

The practice of Spain hath been by war, and by conditions of treaty, to intermeddle with foreign states, and declare themselves protectors - general of Catholicks. Bacon.

There were no ladies who disposed themselves to intermeddle in business. Clarendon.

There's hardly a greater" pest to government and families, than officious tale-bearers, and busy intermeddlers. L'Estrange.

Shall strangers, saucy intermeddlers ! say, Thus far, and thus, are you allowed to punish ?

A. Phillips.

INTERMEDIARY, n. s.-\ Lat. inter and INTERME'DIAL, adj. [mediits. Interpo—

INTERME'DIATE, adj. (sition for good:

INTERME'DIATELY, adv. J intermedia!, lying between: intermediate, holding the middle

INTERMENT.

place between extremes : intermediately, by way of intervention.

The love of God makes a man temperate in the midst of feasts, and is active enough without any intermedial appetites. Taylor.

A gardener prepares the ground, and in all the intermedial spaces he is careful to dress it. Evelyn.

Do not the most refrangible rays excite the shortest vibrations for making a sensation of a deep violet, the least refrangible the largest for making a sensation of deep red, and the several intermediate sorts of rays, vibrations of several intermediate bignesses, to make sensations of the several intermediate colors 1 Newton's Opticks.

Those general natures, which stand between the nearest and most remote, are called intermediate.

Watts.

INTERMELL', v. a. Fr. entremeler. To mix; to mingle. Not in use.

By occasion hereof many other adventures are tn-termelted, but rather as accidents than intendments.

Spenser.

INTER'MENT, re. s. Fr. interment ; and from inter. Burial; sepulchre. See INTER.

By the ducal order To forward the preparatory rites For the late Foscari's interment.

Byron. Tragedy. Two Foscari.

INTERMENT is the act of burying or depositing a deceased person in the earth. Placing the body in a cave was probably the most ancient method of disposing of the dead ; and appears to have been propagated by the Phoenicians throughout the countries to which they sent colonies. When an ancient hero died or was killed in a foreign expedition, as his body was liable to corruption, and for that reason unfit to be transported entire, they fell on the expedient of burning, in

order to bring home the ashes, to oblige the manes to follow ; that so his country might not be destitute of the benefit of his tute-lage. Hence burning seems to have had its origin ; and by degrees it became common to all who could bear the expense of it, and took place of the ancient burying : thus catacombs became disused among the Romans, after they had borrowed the manner of burning from the Greeks, and then none but slaves were laid in the ground. See BURIAL, CATACOMBS, and FUNERAL RITES.

History records many traces of the respect which the Indians, Egyptians, and Syrians, paid to the dead. The Romans, in the infancy of their empire, paid little attention to their dead. Acilius Aviola, having fallen into a lethargic fit, was supposed to be dead; he was therefore carried to the funeral pile ; the fire was lighted up ; and, though he cried out he was still alive, he perished for want of speedy assistance. The Praetor Lamia met with the same fate. Tubero, who had been Praetor, was saved from the funeral pile. Diogenes Laertius tells us, that Em-pedocles, in the 84th Olympiad, restored to life Ponthia, a women of Agrigentum, when she was about to be interred. Asclepiades, a physician, who lived in the time of Pompey the Great about A. A. C. 120, returning from his country house, observed near the walls of Rome a grand convoy and a crowd of people, who

were in mourning assisting at a funeral. He approached tha supposed dead body, and, imagining that he perceived signs of life in it, he ordered the “bystanders to take away the flam-beaux, to extinguish the fire, and to pull down the funeral pile. A murmur on this arose among the company. Some said that they ought to believe the physician, %vhile others turned both him and his profession into ridicule. The relations, however, yielded to the remonstrances of Asclepiades ; they consented to defer the obsequies for a little; and the consequence was the restoration of the supposed dead person to life. These examples, and several others of the like nature, in-induced the Romans to delay funerals longer, and to enact laws to prevent precipitate inter-ments.

The Greeks also established laws for the protection of the dead. At Athens the law required that no person should be interred before the third day ; and in the greater part of the cities of Greece a funeral did not take place till the sixth or seventh. When a man appeared to have breathed his last, his body was generally washed by his nearest relations, with warm water mixed with wine. They afterwards anointed it with oil ; and covered it with a dress made of fine linen.

The body was afterwards laid upon a couch in the entry of the house, where it remained till the time of the funeral. At the magnificent obsequies with which Alexander honored Hephaes-tion the body was not burned till the tenth day. At Rome the nearest relations generally closed the eyes of the deceased; and the body was bathed with warm water, either to render it fitter for being anointed with oil, or to reanimate the principle of life, which might remain suspended without manifesting itself. On the second day, after the body had been washed a second time* it was anointed with oil and balm. On the third day the body was clothed according to its dignity and condition. On the fourth, the body was placed on a couch, and exposed in the vestibule of the house, with the face turned towards the entrance, and the feet near the door ; in this situation it remained till the end of the week. Near the couch were lighted wax-tapers, a small box in which perfumes were burnt, and a vessel full of water for purification, with which those who approached the body besprinkled themselves. On the eighth day the funeral rites were performed (see FUNERAL); but, to prevent the body from corrupting before that time, salt, wax, the resinous gum of the cedar, myrrh, honey, balm, gypsum, lime, asphaltes, or bitumen of Judea, and several other substances, were employed. The body was carried to the pile with the face uncovered, unless wounds or the nature of the disease had rendered it loathsome and disgusting. In such a case a mask was used, made of a kind of plaster. This method of concealment was employed by Nero, after having caused Germanicus to be poisoned : for the effect of the poison had become very visible, by livid spots and the blackness of the body; but a shower of rain happening to fall, it washed the plaister entirely away, and thus the norrid crime of fratricide was discovered. In the primitive church the dead were washed and then anointed ;

the body was wrapped up in linen, or clothed in a dress of more or less value according to circumstances, and it was not interred until

after being exposed and kept some days in the house. In Britain bodies generally remain unburied three or four days, often not so long. In many other places, and on many occasions in all places, too much precipitation attends this office ; or at least there is a great neglect of due precautions irj regard to the body. As soon as the semblance of death appears, the chamber of the sick is generally deserted by friends, relatives, and physicians ; and the apparently dead, though frequently living body, is committed to the management of an ignorant and unfeeling nurse, whose care extends no farther than laying the limbs straight, and securing her accustomed perquisites. The bed-clothes are immediately removed, and the body is exposed to the air. This, when cold, must extinguish any spark of life that may remain, and which, by a different treatment, might have been kindled into a flame ; or it may only continue to repress it, and the unhappy person afterwards revive amidst the horrors of the tomb.

The difficulty of distinguishing a person apparently dead from one who is really so, has, in all countries where bodies have been interred too precipitately, rendered it necessary for the law to interfere. At Geneva there are people appointed to inspect all dead bodies ; to examine whether the person be really dead, and whether one died naturally or by violence. In the north, as well as in Genoa, it is usual not to bury the dead till after three days. In Holland people carry their precautions much farther, and delay the funerals longer.

Not only the ordinary signs of death are very uncertain, but we may say the same of the stiffness of the limbs, which may be convulsive ; of the dilation of the pupil of the eye, which may proceed from the same cause. Haller, convinced of the uncertainty of all these signs, proposes a new one, which he considers as infallible. ‘ If the person,’ says he, ‘ be still in life, the mouth will immediately shut of itself, because the contraction of the muscles of the jaw will awaken their irritability.’ Life is preserved a long time in the passage of the intestines. The sign pointed out by Dr. Fothergill appears to deserve more attention. ‘ If the air blown into the mouth,’ says this physician, « passes freely through all the alimentary channel, it affords a strong presumption that the irritability of the internal sphincters is destroyed, and consequently that life is at an end.’ The Turks wash the bodies of their dead before interment. As their ablutions are complete, and no part of the body escapes their attention, they easily perceive whether one be dead or alive, by examining, among other things, whether the sphincter ani has lost its power of contraction. If this muscle still remains contracted, they warm the body and endeavour to recal it to life.

INTEKMIGRATION, n. ». Fr. intermigration; Lat. inter and migro. Act of removing from one place to another, so as that, of two parties removing, each takes the place of the other.

Men have a strange variety in colour, stature, and humour ; and all ansing from the climate, though the continent be but one, as to point of access, mu-tual intercourse, and possibility of intermigrations. Male's Origin of Mankind.

INTERMINABLE, adj. i Lat. in and ter-IVTER'MINATE, adj. [minus. Immense,

INTERMINA'TION, n. *. 5 without limit or

boundary : an intermination is a menace OP

threat, from Lat. intermino.

Within a thicket I reposed ; when round I ruffled up fallen leaves in heaps, and found, Let fall from heaven, a sleep interminate.

Chapman's Odyssey.

The threats and interminations of the Gospel, those terrors of the Lord, as goads may drive those brutish creatures who will not be attracted.

Decay of Piety.

As if they would confine the' interminable, And tie him to his own prescript.

Milton. Agonistes. What are ye 1 what Is this blue wilderness of interminable Air, where ye roll along, as I have seen The leaves along the limpid streams of Eden ?

Byron. Cain.

INTERMIN'GLE, v. a. Inter and mingle. To mingle ; to mix ; to put some things amongst others.

The church in her liturgies hath intermingled, with readings out of the New Testament, lessons taken out of the law and prophets. Hooker.

My lord shall never rest : I'll intermingle every thing he does With Cassio's suit. Shakspeare. Othello. Here sailing ships delight the

wandering eyes ; There trees and intermingled temples rise. Pope.

INTERMIS'SION, n. *.-\ Fr. intermission; INTERMIS'SIVE, adj. f Lat.mferandnntto. INTERMIT', v. a. £ Cessation for a

INTERMIT'TENT, adj. J time ; pause ; intervenient time ; the state of intermission : the space between the paroxysms of fever is an intermission: intermit, to come by fits; to deviate Torn regularity ; thus an intermittent pulse loses a beat at intervals ; to grow mild and free from fever when the paroxysm is over ; to cease from giving severe pain.

If nature should intermit her course, and leave altogether, though it were but for a-while, the observation of her own laws. Hooker.

Came a reeking post, Delivered letters, spight of intermission, Which presently they read.

Shakspeare. King Lear. Run to your houses, fall upon your knees ; Pray to the gods to intermit the plague That needs must light on this ingratitude.

Shakspeare.

I count intermission almost the same thing as change ; for that that hath been intermitted is after a sort new. Bacon.

Words borrowed of antiquity have the authority of years, and out of their intermission do win to themselves a kind of grace-like newness.

Ben Jonson.

Pleasure is nothing but the intermission of pain, the enjoying of something I am in great trouble for till I have it. Selden.

Rest or intermission none I find. Milton.

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Adam estranged in look and altered style, Speech intermitted thus to Eve renewed : Would thou hadst hearkened to my words and staid With me as 1 besought thee. Id. Paradise Lost.

As though there were any feriation in natuie, or justitiums imaginable in professions, whose subject is under no intermissive but constant way of mutation, this season is commonly termed the physicians' vacation. Browne's Vulgar L'rrours.

We are furnished with an armour from Heaven, but if we are remiss, or persuaded to lay by our arms, and intermit our guard, we may be surprised.

Rogers. But, as he had some lucid intermissions,

She next decided he was only bad,

Yet, when they asked her for her depositions,

No sort of explanation could be had. Byron.

INTERMIX', v.a. & v. n. > Lat. inter and

IMTERMIX'TURE, n. t. S misceo. To min-gle or mix together : intermixture, a mass formed by mingling bodies together; a mixture.

In this height of impiety there wanted not an intermixture of levity and folly. Bacon's Henry VI.

Her persuasions she intermixed with tears, affirming, that she would depart from him. Hay ward. Reveal

To Adam what shall come in future days,

As I shall thee enlighten : intermit

My covenant in the woman's seed renewed.

Milton.

I doubt not to perform the part of a just historian to my royal master, without intermixing with it any thing of the poet. Dryden.

INTERMUN'DANE, adj. Lat. inter and mundus. Subsisting between worlds, or between orb and orb.

The vast distances between these great bodies are called intermundane spaces ; in which, though there may be some fluid, yet it is so thin and subtile, that it is as much as nothing. Locke.

INTERMU'RAL, adj. Lat. inter, muralis, murus. Lying between walls.—

Ainsworth.

INTERMUTUAL, adj. Inter and mutual. Mutual ; interchanged. Inter before mutual is improper.

A solemn oath religiously they take, By intermutual vows protesting there, This never to reveal, nor to forsake So good a cause. Daniel's Civil War.

INTERN', adj. ˆ Fr. interne ; Lat. in-INTE'RNAL, adj. £ ternus. Inward ; intes-INTER'NALLY, adv. j tine ; intrinsic ; real : internally, within ; mentally ; intellectually.

The midland towns are most flourishing, which shews that her riches are intern and domestick.

Howel.

We are symbolically in the sacrament, and by faith and the spirit of God internally united to Christ. Taylor.

That ye shall be as gods, since I as man, Internal man, is but proportion meet. Milton. Myself, my conscience, and internal peace. Id. If we think most men's actions to be the interpreters of their thoughts, they have no such internal veneration for good rules. Locke.

For praise *oo dearly loved, or warmly sought, Enfeebles all internal strength of thought.

Goldsmith. Traveller.

But there is a wide distinction between her interial regulations and foreign aggressions upon her. Canning's Speeches.

INTERNECINE, <«#.{ Lat. intemecima.

INTERNE'CION, n. *. J Endeavouring mu-tual destruction : massacre ; slaughter.

That natural propension of self-love, and natural principle of self-preservation, will necessarily break out into wars and inteniecioiu.

Hale't Origin of Mankind. The Egyptians worshipped dogs, and for

Their faith made internecine war. Ilulibras.

INTERNUN'CIO, n. «. Lat. internunciut. Messenger between two parties.

INTERPELLATION, n.t. Fr. interpellation ; Lat. interpellate. A summons ; a call upon.

In all extracts judicial one citation, monition, or extrajudicial interpellation, is sufficient. Ay life.

INTERPOLATE,*. a.) Fr. interpoUr ;

INTERPOLA'TION, n. s. > Lat. interpolo. To

INTER'POLATOR, n. s. j put any thing into a place to which it does not belong ; to renew : interpolation is something added between the original matter.

This motion of the heavenly bodies themselves seems to be partly continued and unintermitted, as that motion of the first moveable, partly interpolated and interrupted. Hale.

I have changed the situation of some of the Latin verses, and made some interpolations.

Cromwell to Pope.

The Athenians were put in possession of Salamis by another law, which was cited by Solon, or, as some think, interpolated by him for that purpose. Pope.

You or your interpolator ought to hare considered.

Su-ift.

INTERPO'SAL, n. 5. -\ Fr. interpour ; Lat.

INTERPOSE', v. a. & v. n. * interpono. Agency

INTERPO'SER, n. s. f between two par—

INTERPOSIT'ION, n. s. J ties ; any thing coming between: to place between; to thrust in as an obstruction; to offer as a relief; to mediate or interrupt : interposition, any thing interposed ; a mediation, generally in a good sense.

I will make haste ; but, ‘till I come again,

No bed shall e’er be guilty of my stay ;

No rest be interposer ‘twixt us twain. Shakspeare.

The nights are so cold, fresh, and equal, by reason of the intire interposition of the earth, as I know of no other part of the world of better or equal temper.

Raleigh.

Some weeks the king did honourably interpose, both to give space to his brother’s intercession, and to show that he had a conflict with himself what he should do. &”»»•

A shelter, and a kind of shading cool

Interposition, as a summer’s cloud. Milton.

Our overshadowed souls may be emblemed by crusted globes, whose influential emissions are intercepted by the interposal of the benighting element. Glanville’s Scepsis.

The interposal of my lord of Canterbury’s command, for the publication of this mean discourse, may seem to take away my choice. South.

The town and abbey would have come to an open rupture, had it not been timely prevented by th« interposition of their common protectors. Addison.

There never was a time when the interposition 01 the magistrate was more necessary to secure the honour of religion.

Human frailty will too often interpose itself ; persons of the holiest function.

Suppose, unlocked for in a scene so rude, Long bid by interposing hill or wood. Covptr.

With regard to myself, as well as others, the rage An INTERREGNUM can only happen in an elec—

of despotism has been checked, and the triumphs of tive kingdom, or in those anarchical governments

tyranny interrupted, by the interposition of parental where the rules of succession to the throne are n. — :— M;~ˆ.ˆ«-

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authority.

INTER/FRET, v. a. INTER’PRETABLE, ad). INTERPRETATION, n.s. INTERPRETATIVE, adj. „ INTERP’RETATIVELY, adv. 1 expound : inter-INTER’PRETER, n. t. } pretable, capable

Canning. Microcosm. Fr. interpreter , j Latin interpreter. (To decipher; to [give a solution ; to

n(Jt gxe(j by law. Ill an hereditary monarchy, whether absolute like that of Spain, or limited like that of Great Britain, there can be no interregnum, as no vacancy occurs between the death of one monarch and the accession of another; unless in the case of a disputed succession-or a revolution, such as happened upon the abdication

of being expounded : interpretation, the act of and flight of James II. The interregnum on that interpreting ; the sense given ; the power of ex-occasion lasted two months longer in Scotland plaining:

interpretatively, as may be collected than in England. See ENGLAND.

by interpretation : interpreter, an expositor or translator.

Pharaoh told them his dreams : but there was none that could interpret them unto him.

Gen. xli. 8.

It it be obscure or uncertain what they meant, charity, I hope, constraineth no man, which standeth doubtful of their minds, to lean to the hardest and worst interpretation that their words can carry.

Hooker.

Look how we can, or sad, or merrily, Interpretation will misquote our looks. Shakspeare.

You should be women, And yet your beards forbid me to interpret That you are so. Id. Macbeth.

What we oft do best, By sick interpreters, or weak ones, is Not ours, or not allowed : what worst, as oft, Hitting a grosser quality, is cried up For our best act. Id. Henry VIII.

We beseech thee to prosper this great sign, and to give us the interpretation and use of it in mercy.

Bacon. Though the creed apostolick were sufficient, yet

INTERREX, a magistrate who governs during an interregnum, or in the interval between the death of a monarch and the election or inauguration of his successor. This magistrate was first established in ancient Rome, and was almost as old as the city itself. After the death of Romulus there was an interregnum of a year, during which the senators were each interrex in their turn, five days a-piece. After the establishment of consuls, and a commonwealth, although there were no kings, yet the name and functions of the interrex were still preserved ; for when the magistrates were absent, or when there was any irregularity in their election, or they had abdicated, so that the comitia could not be held, provided they were unwilling to create a dictator, they chose an interrex, whose office and authority were to

last five days. To the interrex was delegated all the regal and consular authority, and he performed all their functions. He assembled the senate, held comitia, or courts, and took care the election of magistrates was according to the rules.

when the church hath erected that additional bul-The patricians alone had the right of electing an

interrex.

INTERROGA’TE,v.7».&u.a.>) Fr. Jrzterro-INTERROGA’TION, n. s. \ gei”, Lat. inter

INTERROG’ATIVE, adj. Sc n.s. [and rogo. To INTERROG’ATIVELT, adv. \ examine; to INTERROGATOR, n. $. j question : the

INTERROGA’TORV, n.s. & adj.) act of question-ing: interrogatory, a sentence which contains a question : interrogatively, in a manner which expresses a question : interrogation, a note that marks a question : interrogator, the person enquiring : interrogative, a pronoun used in putting questions, as who ? or what ?

But all his fantasie Was turned for to lerne astrologie ; And coude a certain of conclusions To demen by interrogations, If that men asked him, in certain houres, Whan that men shulde have drought or elles shoures. Chaucer. The Mitleres Tale. Nor time, nor place, Will serve long interrogatories.

Shakspeare. Cymleline.

By his instructions, touching the queen of Naples, it seemeth he could interrogate touching beauty.

Bacon’s Henry VII.

His proof will be retorted by interrogating, shall the adulterer and the drunkard inherit the kingdom of God! Hammond.

lie with no more civility began in captious manner to put interrogatories unto him. Sidney.

The examination was summed up with one question, W hither he was prepared for death 1 The boy

wark against hereticks, the rejecting their additions may justly be deemed an interpretative siding with heresies. Hammond.

We think most men's actions to be the interpreters of their thoughts. Locke.

By this provision the Almighty interpretatively •peaks to him in this manner : I have now placed thee in a well-furnished world.

Ray on the Creation.

In the beginning the earth was without form and void ; a fluid, dark, confused mass, and so it is understood by interpreters, both Hebrew and Christian.

Burnet.

How shall any man, who hath a genius for history, undertake such a work with spirit, when he considers that in an age or two he shall hardly be understood without an interpreter. Swift.

Sacred interjiretrr of human thought, How few respect or use thee as they ought.

Covper. Conversation. Why, what other Interpretation should it bear ?

.Byron. Tragedy, Stirdanapalus. 1NTERPUNCTION, n. t. Fr. interpunction ; Lat. interpungo. Pointing between words or sentences.

INTERREIGN', n. *.) Lat. inter and rcg-INTERREG'NUM, n. t. S no. The time in which a throne is vacant between the death of a prince and accession of another.

The king knew there could not be any interreign or suspension of title. Bacon's Henry VII.

He would shew the queen my memorial, with the first opportunity, in order to have it done in this »«• tfrtviium or suspension of title. Swift.

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was frightened out of his wits by the last dreadful interrogatory. Addisun.

Pray you, spare me

Further interrogation, which boots nothing Except to turn a trial to debate.

Byron. Marino Faliero.

INTERROGATION, Gr. fpurnatf, erotesis, in rhetoric, is a figure in which the speaker introduces something by way of question, to make its truth more conspicuous. This figure is suited to express most passions and emotions of the mind ; it serves also to bear down an adversary, and generally adds force, and variety, to discourse.

INTERROGATORY, in law, is a particular question demanded of a witness examined in a cause, especially in the court of Chancery. These interrogatories must be exhibited by the parties in suit on each side ; which are either direct for the party that produces them, or counter, on behalf of the adverse party ; and generally both plaintiff and defendant may exhibit direct, and counter, or cross interrogatories. They must be pertinent, and only to the points necessary ; and either drawn or perused by counsel, and signed by them.

INTERRUPT, t;. a. & adj.~\ Fr. mterrom-INTERRUP'TEDLY, adv. \Pre/ Lat-inter

INTERRUP'TER, n. s. tandrumpo. To

INTERRUPTION, n. s. ./hinder, whether

persons or processes ; to rescind ; to divide : interrupt, containing a chasm : interruption, interposition ; hindrance ; intermission.

Answer not before thou hast heard the cause ; neither interrupt men in the midst of their talk.

Ecclus. xi. 8.

Bloody England into England gone, -fc-ˆaring interruption, spite of France.

Shakspeare. Rage doth rend

Like interrupted waters, and o’erbear What they are used to bear. Id.

Seest thou what rage

Transports our adversary, whom no bounds, Nor yet the main abyss wide interrupt, can hold ?

Milton.

Places severed from the continent by the interruption of the sea. Male’s Origin of Mankind.

This motion of the heavenly bodies seems partly uninterrupted, as that of the first moveable interpolated and interrupted. Hale.

The incident light that meets with a grosser liquor will have its beams either refracted or imbibed, or else reflected more or less interruptedly than they would be, if the body had been unmoistened.

Boyle on Colour*.

You are to touch the one as soon as you have given a stroke of the pencil to the other, lest the interruption of time cause you to lose the idea of one part. Dryden’t Dufresnoy.

Amidst the interruptions of his sorrow, seeing his penitent overwhelmed with grief, he was only able to Did her be comforted. Addison.

It suffers interruption and delay, And meets with hindrance in the smoothest way.

Cotrper. Progress of Error. INTERSCAP’ULAR, adj. Lat. inter and scapula. Placed between the shoulders.

To INTERSCIND’,».a. Lat. inter and sdndo. To cut off by interruption.

To INTERSCRIBE’, v. a. Lat. inter aud wifco. To write between.

INTERSE’CANT, adj.) Lat. mfcrand «c> INTERSECT’, v. a. 5c v. n. S

To divide each othet INTERSECTION, n. s.) mutually ; to cnt ; »•> meet and cross each other: intersection the point where lines cross each other.

Perfect and vivaporous quadrupeds so stand in their position of proneness, that the opposite joints of neighbour legs consist in the same plane ; and a line descending from their navel intersects at right angles the axis of the earth. Browne.

The first star of Aries, in the time of Melon the Athenian, was placed in the very intersection which is now elongated, and moved eastward twenty-eight degrees. 74.

The sagittal suture usually begins at that point where these lines intersect. Wiseman's Surgery.

Lands intersected by a narrow frith Abhor each other. Cowper't Task.

INTERSECTION, in mathematics, is the cutting of one line, or plane, by another; or the point or line wherein two lines, or two planes cut each other. The mutual intersection of two planes is a right line. The centre of a circle is in the intersection of two diameters. The central point of a regular or irregular figure of four sides, is the point of intersection of the two diagonals. INTERSERT>.a. { Lat. intersero. To INTERSER'TION, n. s. S put in between other things.

These two intersertions were clear explications of the apostle's old form, God the father, ruler of all, which contained an acknowledgment of the unity.

Hammond.

If I may intersert a short speculation, the depth of the sea is determined in Pliny to be fifteen furlongs.

Brereuwod.

INTERSPERSE', v.a. 3 Lat. interspersus.

INTERSPER'SION, n. s. > To scatter about here and there.

It is the editor's interest to insert what the au-thor's judgment had rejected ; and care is taken to intersperse these additions, so that scarceˆany book can be bought without purchasing something unworthy of the author. Swift.

For want of the interspersion of now and then an elegiac or a lyrick ode. Watts on the Mind.

Parks in which art preceptress Nature weds, Nor gardens interspersed with flowery beds.

Cowper. Retirement.

It would be an endless task to point out every latent beauty, every unnoticed elegance, with which these productions are interspersed.

Canning. Microcosm.

INTERSTEL'LAR, adj. Lat. inter and tttlla. Intervening between the stars.

The interstellar sky hath so much affinity with the star, that there is a rotation of that as well as of the star. Bacon.

INTERSTELLAR is used to express those parts of the universe, that are beyond the limits of our solar system. In the interstellar regions, it is supposed there are many other systems of planets moving round the fixed stars, as the centres of their respective motions. And as it is probable that each fixed star is thus a sun to a number of habitable orbs, or earths, that move round it, the interstellar world must be infinitely the greatest part of the universe. See ASTRONOMY.

INTER'STICE, n. s. I Fr. interstice; Lat. inter

INTERSTI'TIAL, adj. \ and slo. Space between one thine and another : containing interstices.

INTERVAL.

therefore, is properly the difference between the number of vibrations produced by one sonorous body of a certain magnitude and lexturt, and of those produced bj anotner of a different magnitude and texture in the same time.

Intervals are divided into consonant and

..—.. . f-r- dissonant. A consonant interval is that whose

equal to their interstice*, and seven teeth togeth. r extre or whose highest and lowest sounds, with their interttieet took up an inch.

tvewton.

INTERTEXTURE, n. *. Lat. intertexo. Diversification of things mingled or woven one among another.

INTERTIES, or INTERDUCES, in architecture,

In oiled papers, the wurititial division, being actuated by the accession of oil, becometh more transparent. . Brov > ne—

The sun shining through a large prism upon a comb placed immediately behind the prism, his light, which passed through the inierttices of the teeth, fell upon a white paper: the breadths of the teeth were

when simultaneously heard, coalesce in the ear, and produce an agreeable sensation, called by lord Kames a tertium quid. A dissonant interval, on the contrary, is that whose extremes, simultaneously heard, far from coalescing in the

small pieces of timber, which lie horizontally ear > an(j producing one agreeable sensation, are

between the summers, or between them and the cell or raising; plate.

INTERTWINE', ». a. ? Inter and twine, or INTERTWIST'. i twist. To unite by

twisting one in another.

Under some concourse of shades, Whose branching arms thick intertwined might shield From dews and damps of night his sheltered head.

Milton.

Tis sad to hack into the roots of things, They are so much intertwisted with the earth : So that the branch a goodly verdure flings, Freck not if an acorn gave it birth.

Byron. Don Jvan.

INTERVAL, n. «. Fr. intervalle : Lat. inter-vallum. Space between places; interstice; vacuity ; space unoccupied ; void place ; vacancy ; vacant space.

With any obstacle let all the light be now stopped which passes through any one interval of the teeth, co that the range of colours which comes from thence may be taken away, and you will see the light of the

each of them plainly distinguished from the other, produce a grating effect upon the sense, and repel each other with an irreconcileable hostility. In proportion to the vibrations of different sonorous bodies, or of the same given time, the chords are more or less perfect, and consequently the intervals more or less consonant. When these vibrations never coincide at all, in the same given time, the discord is consummate, and consequently the interval absolutely dissonant.

Intervals are not only divided according to their natures, but also with respect to their degrees. In this view they are either enharmonic, chromatic, or diatonic. Of these therefore in their order, from the least to the greatest. An enharmonic interval is what they call the eighth part of a tone, or the difference between a major and minor semitone, generally distinguished by the name of a comma. For a more minute disquisition of this matter, our readers may consult

rest of the ranges' to be expanded into the place of the article COMMA irˆthe Musical Dictionary,ˆ 01 the range taken away, and there to be coloured.

Newton's Opticks.

Time passing between two assignable points. The century and half following was a very busy period, the intervalt between every war being so short.

Swift.

These were the chief : each interval of Night Was graced with many an undulating light.

Cmper. Table Talk.

Short as the interval is since I last met you in this place on a similar occasion, the events which have filled up that interval have not been unimportant.

Cunning' i Speeches.

Remission of a delirium or distemper. Though he had a long illness, considering the great heat with which it raged, yet his intervals of sense being few and short, left but little room for the offices of devotion. Atterbury.

Some intervals of abstinence are sought To edge the appetite ; thou seekest none. Blair.

INTERVAL, in music. The distance between any given sound and another, strictly speaking,

the article Music in this work. A chromatic interval consists properly of a minor semitone, but may also admit the major. A diatonic interval consists of a semitone-major at least, but may consist of any number of tones within the octave. When an octave higher or lower is assumed, it is obvious that we enter into another scale which is either higher or lower, but still a repetition of the former degrees of sound.

Intervals again are either simple or compound. All the intervals within any one octave are simple ; such as the second major or minor, the third, the fourth, the fifth, the sixth, the seventh, &c.— Of these afterwards. All intervals whose extremes are contained in different octaves, such as the ninth, the tenth, the eleventh, the twelfth, the thirteenth, the fourteenth, the fifteenth, &c., may be termed compound intervals. The semitone either exactly or nearly divides the tone into two equal parts. In the theory of harmonical computation three kinds of semitones

is neither measured by any common standard of are recognised, *viz.* the greatest, the intermediate, extension nor duration ; but either by immediate and the smallest semitone. But in practice, to

which these explications are chiefly adapted, the semitone is only distinguished into major and The semitone major is the difference

sensation, or by computing the difference between the numbers of vibrations produced by two or more sonorous bodies, in the act of sounding during the same given time. As the vibrations are slower and fewer during the same instant, for example, the sound is proportionally lower or graver ; on the contrary, as during the same period the vibrations increase in number and velocity, the sounds are proportionably higher or more acute. An interval in music

minor.

between the third major and the fourth, as E F. Its ratio is as fifteen to sixteen, and it forms the least of all diatonic intervals. The semitone minor consists of the difference “between the third major and minor : it may be marked in the same degree by a sharp or a flat, and it only forms a chromatic interval ; its ratio

is as 24 to 25. Though some distinction cending; its ratio is as 3 to 5. The sixth minor is made between these semitones by the man-contains, three tones and two semitones major ner of marking them, yet on the organ and as from E to C ascending ; its ratio is as 5 to 8. harpsichord no distinction can be made ; nor The seventh, as a reduplication of the second, is is there any thing more common for us than a dissonance. When major, it consists diatoni-to say, that D sharp in rising is E flat in de-cally of five tones, three major, and two minor ; scending, and so through the whole diapason and a major semitone, as from C to B ascending ; above or below ; besides the semitone is some-its ratio is as 8 to 15. When minor, it consists times major and sometimes minor, sometimes of four tones, three major and one minor, and diatonic, and sometimes chromatic, according two major

semitones, as from E to D ascending ; to the different modes in which we compose or its ratio is as 5 to 9. The octave is the most practise ; yet in practice these are called semi-perfect of all chords, and in many cases hardly tones-minor, which are marked by sharps or flats, to be distinguished by the ear from a unison ; without changing the degree ; and semitones major are those which form the interval of a second. With respect to the three semitones

recognised in theory, the greatest semitone is As the vibrations of two strings in unison, during the difference between a tone major and a semi-ang given time, are precisely coincident ; so tone minor ; and its ratio is as 25 to 27. whilst the lowest extreme of the octave vibrates The intermediate semitone is the difference between a semitone major and a tone major ; and its ratio is as 128 to 135. In a word, the small semitone consists of the difference between the greatest and the intermediate semitone ; and its ratio is as 125 to 128. Of all these intervals, there is only the semitone major, which is sometimes admitted as a second in harmony. The interval of a tone which characterises the diatonic species of composition, is either major or minor. The former consists of the difference between the fourth and fifth ; and its ratio is as 8 to 9 ; and

that is to say, from that coincidence of sound produced by two musical strings, whose matter, lengths, diameters, and tensions are the same.

the latter, whose ratio is as 9 to 10, results from the difference between the third minor and the fourth. Seconds are distinguished into four kinds : two of which are not in practice suffici-

once, the highest vibrates twice ; and consequently its ratio is as 1 to 2, as from c to C ascending. It consists of six full tones and two semitones major. Its name is derived from the Latin octo, eight ; because that number likewise includes its extremes. It may likewise be divided into twelve semitones. It contains the whole diatonic scale ; and every series above or below consists only of the same returning sounds. From whence the natures, distances, and powers, of every interval greater than the octave, as the ninth, the tenth, the eleventh, the twelfth, the thirteenth, the fourteenth, the fifteenth, the triple

octave, &c., may easily be computed. The celebrated M. Rousseau has the following judicious observations on this subject : — ‘ We divide,’

ently momentous to be mentioned. The second says he, ‘ as did the ancients, intervals into con-major is synonymous with the intervals of atone; sonant and dissonant. The consonances are but, as that tone may be either major or minor, perfect or imperfect (See CHORD, and CONSO-its ratio may be either as 8 to 9, or as 9 to 10. NANCE,); dissonances are either such by nature The second minor consists of the distance from or become such by accident. There are only B to C, or from EF ; and its ratio is as 15 to two intervals naturally dissonant, *viz.* the second 1(5. The third is so called because it consists of and seventh, including their octaves or replica-two gradations, or three diatonic sounds, as from tions ; nay, still these two aaay be reduced to one G to B ascending, or from A to C, inclusive of alone, as the seventh is properly no more than the extremes ; of which the first is a third major, a replication cf the second ; for B, the seventh composed of two full tones, and its ratio as 4 to above the lowest C, where we have generally 5; the second, a third minor, consisting of a begun the scale, is really an octave above B,the tone and a semitone major, and its ratio as 5 to note immediately below that C : and conse-6. The fourth has by some been reckoned an quently the interval between these lower sounds imperfect, but more justly, by others, a perfect is no more than that of a second major, to which chord. It consists of three diatonic degrees, but all dissonances may therefore be ultimately retakes its name from the four different sounds of duced, whether considered as major or minor ;

which it is formed ; or, in other words, the num-ber by which it is denominated includes the

but even all the consonances may become dissonant by accident. (See DISCORD.) Besides,

extremes. It is composed of a tone major, a every interval is either simple or reduplicated,

tone minor, and a semitone major, as from C to Simple intervals are

such as the limits ot a

F ascending; its ratio as 3 to 4. The fifth, next single octave comprehend. Every interval which

to the octave, is perhaps the most perfect interval, surpasses this extent is reduplicated ; that 1 1 to

as least susceptible of alteration. The number say, compounded of one or more octaves, and

whence it assumes its name likewise includes its the simple interval whose replication it is.

extremes. It consists of two tones major, one pie intern Is are likewise divided

minor, and a semitone major, as from A to E as-inverted. Take any simple interval whaterei

cending ; its ratio is as 2 to 3. The sixth is not for a direct one ; the quantity which, added to

found among the natural order of consonances, itself, is required to complete the oct tve, win t

but only admitted by combination. It is not found an inverted interval ; and the same

here necessary to mention its various distinctions vation holds reciprocally true of such at a

and uses, as we only give an account of interverted. There are only six kinds

vals in general. The sixth major consists of four intervals ; of which three contain such

tones and a semitone major, as from G to E as-ties, as, added to the other three, are requir

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complete the octave; and of consequence likewise the one must be inversions of the other. II you take at first the smallest intervals, you

will have, in the order of direct intervals, the second, the .hird, and fourth ; for inverted the seventh, the sixth, and fifth. Suppose these to be direct, the others will be inverted ; every thing here is reciprocal. To find the name of any interval whatever, it is only necessary to add the denomination of unity to the degree which it contains. Thus the interval of one degree shall give & iecond; of two, a third; of three, a fourth ; of seven, an octave ; of nine a tenth ; &p. But this is not sufficient to determine an interval with accuracy ; for under the same name it may be either major or minor, true or false, diminished or redundant. The consonances which are imperfect, and the two natural dissonances, may be major or minor ; which, without changing their degree, occasions in the interval the difference of a semitone ; so that if, from a minor interval, we still deduce a semitone, it becomes an interval diminished ; if, by a semitone, we increase a major interval, it becomes an interval redundant. The perfect consonances are by their nature invariable. When their intervals are such as they ought to be, we call them just, true : and, if we dilate or contract this interval by a semitone, the consonance is termed false, and becomes a dissonance; redundant, if the semitone be added ; diminished, if it be abstracted. We improperly give the name of a false fifth to the fifth diminished ; this is taking the genus for the species; the fifth redundant is every jot as false as the diminished, it is even more so in every respect.' In Rousseau's Musical Dictionary ' (plate C, fig. 2) may be seen a table of all the simple intervals practicable in music, with their names, their degrees, their values, and their ratios. Having ascertained the distinction between major and minor intervals, it is only necessary to add, that these may be natural or artificial. Of the natural we have already given some account, by ascertaining the distances and ratios of such as have been mentioned. Of the artificial, we may observe, that they are such as change their position from what it naturally is in the diatonic scale, to what the conveniency of composition or transposition requires it to be. A note thus artificially heightened by a semitone, «ogether with the character which expresses that elevation, is called a sharp ; on the contrary, a note artificially depressed by a semitone, together with the character by which that depression is signified, is called a flat. The character which restores a note thus depressed or raised to its primary state, is called a natural. Major or minor intervals, as they prevail, characterise the major or minor mode. See MODE.

I NTERVENE', *. n. & n. *. } Latin, inter INTERVE'NIENT, adj.
>andwnio. To

iNTERvr.N'TioN, n. s. 3 come between

things or persons; to cross unexpectedly: intervention, agency between persons, or between antecedents and consecutives ; interposition.

Ihere tx> intenement in the rise of eight,.dn tones, two bemolls or half-notes. Bacon.

,2 INT

While so near each other thus all day Our task we chuse, what wonder, if so near, Looks intervene, and smiles 1 Milton.

Sound is shut out by the intervention of that lax membrane, and not suffered to pass into the inward ear. Holder.

God will judge the world in righteousness by the intervention of the man Christ Jesus, who is the Saviour, as well as the judge of the world.

Atterbury.

But Providence himself will intervene, To throw his dark displeasure o'er the scene.

Cowper. Table Talk. Even sad vicissitude amused his soul : And if a sigh would sometimes intervene, And down his cheek a tear of pity roll, A sigh, a tear, so sweet, he wished not to control.

Beattie. MinstreL

The swift Rhone cleaves his between Heights which appear as lovers who have parted In hate, whose mining depths so intervene That they can meet no more though brokeri-hearted.

Byron. Childe Harold.

INTERVERT, v. a. Lat. interverto. To turn to another course.

The duke interverted the bargain, and gave the poor widow of Erpinus for the books five hundred pounds. Wotton.

IN'TERVIEW, n. s. Fr. entrevue. Mutual sight ; sight of each other. It is commonly used for a formal, appointed, or important meeting or conference.

His fears were, that the interview betwixt England and France might,

through their amity, Breed him some prejudice.

Shakspeare. Henry VIII. Such happy interview, and fair event Of love, and youth not lost, songs, garlands, flowers, And charming symphonies, attached the heart Of Adam. Milton's Paradise Lost.

'• *• '. And he and I Must purchase by renewal of the rack The interview of husband and of wife, The holiest tie beneath the heavens.

JSi/ron. Tragedy. The Two Foscari. INTERVOLVE', v. a. Lat. intervolvo. To involve one within another.

Mystical dance ! which yonder starry sphere Of planets, and of fixed, in all her wheels Resembles nearest ; mazes intricate, Eccentrick, intervolved, yet regular, Then most, when most, irregular they seem.

Milton.

INTERWEAVE', v. a. Pret. interwove, part, pass, interwoven, interwove, or interweaved. Inter and weave. To mix one with another in a regular texture; to intermingle.

Then laid him down Under the hospitable covert nigh Of trees thick interwoven. Stilton,

At last

Words interwove with sighs found out their way.

Id.

I sat me down to watch upon a bank With ivy canopied and interwoven.

Milton's Comus.

The proud theatres disclose the scene, Which interwoven Britons seem to raise, And show the triumph which their shame displays.

Dry den.

He so interweaves truth with probable fiction, that he puts a pleasing fallacy upon us. Id.

It appeared a vast ocean planted with islands, ihat were covered with fruits and flowers, and intent-own

with a thousand little shining seas that ran among

them. Addison.

Are we not one ? are we not joined by heaven 1

Each interwoven with the other's fate 1 Howe.

The Supreme Infinite could not make intelligent creatures, without implanting in their natures a most ardent desire, mteru-ocen in the substance of their spiritual natures, of being reunited with himself.

Cheyne's Philosophical Principles. I do not altogether disapprove the interweaving texts of scripture through the style of your sermon.

Swift.

First, then, with regard to criticism ; to select a few examples from a multitude of others, are we not entertained in the works of Longinus, and the Gentleman's Magazine, with delectable dissertations on the weaving of plots and the interweaving of episodes ?

Canning.

INTERWISH', v. a. Inter and wish. To wish mutually to each other.

The venom of all stepdames, gamester's gall, \Yhat tyrants and their subjects interwish, All ill fall on that man. Donne.

INTES'TABLE, adj. > Fr. intestat ; LaL INTES'TATE, adj. J intestabiUs, intestatus.

Disqualified to make a will : intestate, dying without a will.

Why should calamity be full of words? — Windy attorneys to their client woes, Airy s-ucceeders to intestate joys, Poor breathing orators of miseries. Shakspeare. Present punishment pursues his maw, When surfeited and swelled, the peacock raw, He bears into the bath ; whence want of breath, Repletions, apoplex, intestate death. Dryden.

A person excommunicated is rendered infamous and intestable both actively and passively. Ayliffe.

Dying intestate, Juan was sole heir To a chancery suit, and messuages, and lands. Which, with a long minority and care, Promised to turn out well in proper hands. Byron. INTESTINAL, adj. t Fr. intestin ; Lat. INTES'TINE, adj. & n. s. > iatestinus. Belonging to the guts ; internal ; contained in the body : domestic, not foreign. I know not, says Dr. Johnson, whether the word be properly used in the following example of Shakspeare : perhaps for mortal and intestine should be read mortal internecine : intestine, the bowel ; most commonly used in the plural only.

Since the mortal and intestine jars 'Twixt thy seditious countrymen and us, It hath in solemn synods been decreed, T' admit no traffick to oar adverse towns.

Shakspeare.

At last they climb up to the castle's height ; From which they viewed the deeds of every knight And marked the doubtful end of this intestine fight. Fletcher's Purple Island.

Of these inward and intestine enemies to prayer there are our past sins to wound us, our present cares to distract us, our distempered passions to disorder us, and a whole swarm of loose and floating imaginations to molest us. Duppa.

Intestine stone, and ulcer, cholick pangs And moon-struck madness. Milton's Paradise Lost. But God, or Nature, while they thus contend, To these intestine discords put an end. Dryden. The intestines or guts may be inflamed by an acrid substance taken inwardly. Arbuthnot on Diet.

Intestine war no more our passions wage, Even giddy factions bear away their rage. Pope.

Instead of harmony, 'tis jar, And tumult, and intestine war. Cowper.

INTESTIHES. See ANATOMY. INTHRALL’, v. a. ic INTHRAL’MENT, n. t. \ See

What though I be inthraUed, he seems a knight, And will not any way dishonour me. Shakspeare. The Turk has sought to extinguish the ancient memory of those people which he has subjected and inthraUed. Raleigh.

These suburbs many call the Island’s face ; Whose charming beauty and bewitching grace, Oft times the prince himself inthrallt in fetters base

Fletcher’s Purple Itlam’. Moses and Aaron, sent from God to claim His people from enthralment, they return With glory and spoil back to their promised land.

Milton.

INTHR’ONE, v. a. In and throne. To raise to royalty; lo seat on a throne: com monly enthrone.

One chief, in gracious dignity inthroned, Shines o’er the rest. Thomson’s Seasons. Summer.

INTIMACY, n. t. ˆ Fr. intimtr ;

IN’TIMATE, adj., n.*.,& v.a. I Span, intimado;

IN’TIMATELY, adv. \Lat. intimut, inIN’TIMA’TION, n. s. I timare. The leadIN’TIME, adj. j ing idea is innermost ; and it is applied to friendship, as near and familiar : intimate, to hint ; to point out indirectly : intimately, closely ; nearly; inseparably: intimation, a hint : intime, inward ; an old obsolete word.

So both conspiring, gan to intimate.

Each others griefe with zeale affectionate,

And ‘twixt them twaine with equal care to cost

How to save whole her hazarded estate.

Spenser. Faerie Queene.

As to the composition or dissolution of mixed bodies, which is the chief work of elements, and requires an intime application of the agents, water hath the principality and excess over earth.

Digby on Bodies. They knew not

That what I mentioned was of God, I knew

From intimate impulse. Milton's Agonittet.

United by this sympathetick bond, You grow familiar, intimate, and fond. Rotcommon.

Alexander Van Suchten tells us, that, by a way he intimates, may be made a mercury of copper, not of the silver colour of other mercuries, but green.

Boyle.

Fear being so intimate to our natures, it is the strongest bond of laws. TUlotson.

The names of simple ideas and substances, with the abstract ideas in the mind, intimate some real existence, from which was derived their original pattern. Locke.

Let him strictly observe the first stirrings and intimations ; the first hints and whispers of good and evil that pass in his heart. South.

Moses was with him in the retirements of the Mount, received there his private instructions ; and, when the multitude were thundered away from any approach, he was honoured with an intimate and immediate admission. W—

Quality, as it regards the mind, has its rise from knowledge and virtue, and is that which is more essential to us, and more intimately united with us. Addison's Spectator.

It is in our power to confine our friendships and intimacies to men of virtue. Rogers.

I crown the king of intimate delights.

Fire-side enjoyments, home-born happiness.

Coirper.

But whene’er

H* hears the jarring of a distant door, Or ought that intimates a coming stop.

Byron. Tragedy. Marino Faliero. INTIM’IDATE, v. a. Fr. intimider; Latin, in and timidui. To make fearful ; to dastardise ; to make cowardly.

At that tribunal stands the writing tribe, Which nothing can intimidate or bribe ; Time is the judge. Young.

Now guilt, once harboured in the conscious breast, Jntimidatu the brave, degrades the great. Irene. INTIRE’, adj.) Fr. entier; LaL integer- INTIRE’NESS, n.i. J Whole; undiminished. See ENTIRE.

So shall all times find me the same ; You this intiren«u better may fulfil, Who have the pattern with you still.

Donne.

INTO, prep. In and to. Noting entrance with regard to place ; opposed to out of.

Upon a day befell that he for his disportis Went into the feldes to play.

Chaucer. Tale of Melibeus. Water introduces into vegetables the matter it bears along with it. Woodward’s Natural History.

Noting entrance of one thing into another.

If iron will acquire by mere continuance an habitual inclination to the site it held, how much more may education, being a constant plight and inurement, induce by custom good habits into a reasonable creature ! Wotton.

Noting penetration beyond the outside, or some action which reaches beyond the superficies or open part.

To look into letters already opened or dropt is held an ungenerous act. Pope.

Noting inclusion real or figurative.

They have denominated some herbs solar and some lunar, and such like toys put into great words.

Bacon.

Noting a new state to which any thing is brought by the agency of a cause.

Compound bodies may be resolved into other substances than such as they are divided into by the fire.

Boyle.

It concerns every man that would not trifle away his soul, and fool himself into irrecoverable misery, with the greatest seriousness to enquire into these matters. Tillotson.

A man roust sin himself into a love of other men's sins ; for a bare notion of this black art will not carry him so far. South.

He is not a frail being, that he should be tired into compliance by the force of assiduous application.

Smalridgt. That prodigy, Miss Anramirta Smith

(Who at sixteen translated ' Hercules Fureus'

Into as furious English) with her best look

Set dow his sayings in her common-place book.

Byron.

INTOL'ERABLfcl, adj.-\ lAUntolerabilis, in

INTOL'ERABLENESS, n. ». (and tolero ; Fr. into—

INTOI/ERABLY, adv. llerant. Insufferable ;

INTOL'ERANT, adj. J not to be endured ; not to be borne : having any quality in a degree too powerful to be endured : intolerant, not able to endure; these words are generally used to express extreme suffering ; a disliko.

This wo and anguish is intolerable If I bide here, life can I not sustain.

Chaucer. Lament of Mary Magdaleine. If we bring into one day's thoughts the evil of many, certain and uncertain, what will be and what will never be, our load will be as intolerable as it is unreasonable. Taylor.

Who would not rather get him gone Beyond the intolerablest zone, Or steer his passage through those seas That burn in flames, or those that freeze, Than see one nation go to school, And learn of another like a fool 1 Butler.

Intolerable, vanity ! your sex Was never in the right ! you're always false Or silly ! Otway's Orphan.

Too great moisture affects human bodies with one class of diseases, and too great dryness with another ; the powers of human bodies being limited and intolerant of excesses. Arbuthnot.

Religion harsh, intolerant, austere, Parent of manners like herself severe.

Cowper. Table Talk.

INTOMB', v. a. In and tomb. To enclose in a funeral monument ; to bury.

What commandment had the Jews for the ceremony of odours used about the bodies of the dead, after which custom notwithstanding our Lord was contented that his own most precious blood should be intombed? Hooker.

Is't night's predominance or the day's shame, That darkness does the face of earth intomb ?

Shakspeare.

INTO'NATE, v. a. Lat. intono. To thunder INTONATION, n.s. Fr. intonation, from intonate. The act of thundering.

INTONATION, in music, is the action of sounding the notes in the scale with the voice, or any other given order of musical tones. Intonation may be either true, or false, either too high or too low, either too sharp or too flat ; and then intonation, attended with an

epithet, must be understood concerning the manner of performing the notes. In executing an air, to form the sounds, and preserve the intervals as they are marked with justness and accuracy, is no inconsiderable difficulty, and scarcely practicable, but by the assistance of the common idea, to which, as to their ultimate test, these sounds and intervals must be referred : these common ideas are those of the key, and the mode in which the performer is engaged. We feel more difficulty in our intonation of such intervals as are greater or less than those of the diatonic order ; because, in the first case, the vocal organs are modified by gradations too large; or too complex in the second. INTONE', v. n. Fr. intonner, from Lat. intono, or rather from tone. To make a slow protracted noise.

So swells each windpipe ; ass intones to ass Harmonic twang. Pope's Dunciad.

INTORT, v. a. Lat. intortus. To twist ; to wreath; to wring.

The brain is a congeries of glands, that separate the finer parts of the blood, called animal spirits : and a gland is nothing but a canal variously intorted and wound up together. Arbuthnot,

With reverent hand the king presents the gold ; Which round the intorted horns the gilder rolled.

Pope.

INTOXICATE, v. a.) Ital. tosticare ; Lat.

INTOXICA'TION, n. s. Sin and toxicum. To

inebriate or make drunk : a state of drunkenness.

That king, being in amity with him, did so burn in hatred towards him, as to drink of the lees and dregs of Perkin's intoxication, who was every where else detected. Bacon.

The more a man drinketh of the world, the more it intojticateth ; and age doth profit rather in the powers of understanding, than in the virtues of the will and affections. Id.

As with new wine intoxicated both, They swim in mirth, and fancy that they feel Divinity within them breeding wings, Wherewith to scorn the earth. Milton.

Others, after having done fine things, yet spoil them by endeavouring to make them better ; and are so intoxicated with an earnest desire of being above all others, that they suffer themselves to be deceived.

Dryden's Dufresnoy.

King was a name too proud for man to wear With modesty and meekness, and the crown, So dazzling in their eyes who set it on, Was sure to' intoxicate the brows it bound.

Cowper's Task.

At which my soul aches to think, Intoxicated with Eternity 1 Byron. Cain.

INTOXICATION, or Drunkenness. The ancient Lacedemonians used to make their slaves drunk to give their children an aversion and horror for the vice. The Indians hold drunkenness a species of madness ; and, in their language, the same term that signifies drunkard, signifies also a mad person.

Drunkenness, by the English law, is considered as an aggravation rather than an excuse for any criminal behaviour. 'A drunkard,' says Sir Edward Coke, ' who is voluntarius daemon, has no privilege thereby ; but whatsoever he doth, his drunkenness doth aggravate it: nam omne crimen ebrietas et incendit et detergit.' In Greece, a law of Pittacus enacted, ' that he who committed a crime when drunk should receive a double punishment; one for the crime itself, and the other for the ebriety which prompted him to commit it. The Roman law indeed made great allowances for this vice; per vinum delapsis capitalis poena remittitur. But the law of England, considering how easy it is to counterfeit this ex-cuse, and how weak an excuse it is, though real, will not suffer any man thus to privilege one crime by another. For the offence of drunkenness a man may be punished in the

ecclesiastical court, as well as by justices of peace by statute. And by 4 Jac. I. c. 5, and 21 Jac. I. c. 7, if any person shall be convicted of drunkenness by a justice, oath of one witness, &c., he shall forfeit 5s. for the first offence, to be levied by distress and sale of his goods ; and, for want of a distress, shall sit m the stocks six hours : and, for the second offence, he is to be bound with two sureties in £10 each, to be of good behaviour, or to be committed. And he who is guilty of any crime, through his own voluntary drunkenness, shall be punished for it as if he had been sober. It has been held that drunkenness is a sufficient cause to remove a magistrate : and the prosecution for this offence, by the statute of 4 Jac. I. c. 5, was to be, and still may be, before justices of peace in their sessions by way of indictment, &c. Equity will not relieve against a

bond, &c., given by a man when drunk, unless the drunkenness is occasioned through the management or contrivance of him to whom the bond is given.

INTRACTABLE, adj. ˆ Fr. intraitabk;

INTRACT'ABLENESS, n. *. > Latin, intractabilii.

INTRACT'ABLY, adv. 3 Ungovernable ; furious ; not to be led or restrained : obstinacy ; perverseness.

To love them who love us is so natural a passion, that even the most intractable tempers obey its force.

Rogen.

By what means serpents, and other noxious and more intractable kinds, as well as the more innocent and useful, got together. Woodward.

INTRANQUIL'LITY, n. t. In and tranquillity. Unquietness ; want of rest.

Jactations were used for amusement, and allay in constant pains, and to relieve that intranquiUity which makes men impatient of lying in their beds.

Temple.

INTRAN'SITIVE, adj. Lat. intrantitiws. In grammar. A verb intransitive

is that which signifies an action not conceived as having an effect upon any object; as, curro, I run. — Clarke's Latin Grammar.

INTRANSMUTABLE, adj. In and transmutable. Unchangeable to any other substance.

Some of the most experienced chemists do affirm quicksilver to be intransmutable, and therefore call it liquor aeternus. Ray on the Creation.

INTREAS'URE, v. a. In and treasure. To lay up as in a treasury.

There is a history in all men's lives Figuring the nature of the times deceased ; The which observed, a man may prophesy, With a near aim, of the main chance of things. As yet not come to life, which in their seeds And weak beginnings he intrcasured. Shakspeart.

INTRENCH', n. a. & v. n. '. Fr. intrencher.

INTRENCH'ANT, adj. >To invade or en—

INTRENCH'MENT, n. *. 3 croach ; to break

with hollows ; to fortify with a trench, which is called intrenchment. See ENTRENCHMENT. This word (intrenchant), says Dr. Johnson, ' which is, I believe, found only in Shakspeare, is thus explained : the intrenchant air means the air which suddenly encroaches and closes upon the space left by any body which had passed through it. — Hanmer. I believe Shakspeare intended rather to express the idea of indivisibility or invulnerableness, and derived intrenchant from in privative, and trencher to cut ; intrenchant is in-deed, properly, not cutting, rather than not to be cut ; but this is not the only instance in which Shakspeare confounds words of active and passive signification.' Not to be divided ; not to be wounded; indivisible.

As easy mayest thou the intrenchant air With thy keen sword impress, as make me bleed.

Sliaki}>eare

Darkened so, yet shone Above them all the archangel : but his face Deep seeds of thunder had intrenched, and care Sat on his faded cheek, but under brows Of dauntless courage and considerate pride Boasting revenge. Milton.

Little I desire my sceptre should intrench on God's sovereignty, which

is the only king of men s consciences. King CharUi.

INTRENCHMEWT, in the military art, is any work that fortifies a post against an enemy. It is generally used for a ditch or trench with a parapet. Intrenchments are sometimes made of fascines with earth thrown over them, of gabions, hogsheads, or bags filled with earth, to cover the men from the enemy'* fire.

INTREPID, adj.) Fr. intrepide ; Lat. in

INTREPID'ITY, n. *. Sand trepitiut. Fearless;

IMTREP'IDLY, adv.) brave; daring: courage; boldnees.

I could not sufficiently wonder at the intrepidity of these diminutive mortals, who durst venture to walk upon my body, without trembling. Gulliver.

He takes the globe for the scene ; he launches forward intrepidly, like one to whom no place is new.

Pope.

Argyle

Calm and intrepid in the very throat

Of sulphurous war, on Tenier's dreadful field.

Thomson.

INTRICATE, adj. & v.a.-\ Fr. intrigue;

INTRICACY, n. t. f Lat. intricatus.

IN'TRICATELY, adv. { That which

IN'TRICATENESS, n. *. J hinders or entangles, perplexes, or obscures:

intricacy is a complication of facts or notions which obscure a subject: intricately, in an involved or confused manner. The meaning of these words is from tricae, hairs or feathers, which hinder chickens from running.

Much of that we are to speak may seem to a num-ber perhaps tedious, perhaps obscure, dark and intricate. Hooker.

He found such intricateness, that he could see no way to lead him out of the maze. Sidney.

That variety of factions into which we are so intricately engaged, gave occasion to this discourse.

Swift.

The part of Ulysses in Homer's Odyssey is much admired by Aristotle, as perplexing that fable with very agreeable plots and intricacies, by the many adventures in his voyage, and the subtifty of his behaviour. Addison.

His style was fit to convey the most intricate business to the understanding with the utmost clearness.

Id. The ways of Heaven are dark and intricate,

Puzzled in mazes, and perplexed with errors.

Addison's Cato. Contrivance intricate, expressed with ease,

Where unassisted sight no beauty sees.

Cowper. Retirement.

INTRIGUE', n.t. &v.n. I Fr. intrigue. A

INTRIU'UER, n. «. plot; a transac—

INTRIG'UINGLY, adv. tion or affair of

love, in which many are engaged ; intricacy ; t;ie complication, or artful involution of a tale or poem. Intriguer, one who busies himself in private transactions, or pursues women.

1 desire that intriguen will not make a pimp of my lion, and convey their thoughts to one another.

Addison.

As causes are the beginning of the action, the opposite designs against that of the hero are the middle of it, and form that difficulty or intrigue which makes up the greatest part of the poem. Pope.

The hero of a comedy is represented victorious in all his intrigues. Swift.

Now love is dwindled to intrigue, And marriape grown a money league. Id.

Are we not continually informed that the author unravels the web of his intrigue, or breaks the thread of his narration ? Canning.

INT

INTRIN'SICAL, adj.-\ Lat. intra, in, stcus.

INTRIN'SICALLY, adv. ˆInternal; solid; sub—

INTRIN'SIC, adj. i stantial ; intimate ;

INTRIN'SECATE, adj. J not depending on accident or collateral circumstances, but fixed in the nature of the thing. Intrinsicate, perplexed : not in use.

Such smiling rogues as these, Like rats, oft bite the holy cords in twain, Too intrinsecate to unloose.

Shakspeare. King Lear.

Intrinsick goodness consists in accordance, and sin in contrariety to the secret will of God, as well as to his revealed. Hammond't Fuiidamenta.lt.

The difference between worth and merit, strictly taken ; that is, a man's intrinsick : this, his current value. Grew.

A lye is a thing absolutely and intrinsecally evil.

South.

Every one of his pieces is an ingot of gold, intrinsecally and solidly valuable. Prior.

His fame, like gold, the more ‘tis tried, The more shall hs intrinsick worth proclaim.

Id.

He falls into intrinsecal society with Sir John Graham, who dissuaded him from marriage.

Wotton.

The near and intrinsecal, and convincing argument of the being of God, is from human nature itself. Bentley.

If once bereaved of motion, matter cannot of itself acquire it again ; nor till it be thrust by some other body from without, or intrinsecally moved by an immaterial self-active substance that can pervade it.

Id.

INTRODUCE’, v. a.-ˆ Lat. introduce, in—

INTRODU’CER, n.s. I troductio. To conduct

INTRODUC’TION, n. s. \ or usher into a place ;

INTRODUC’TIVE, adj. i to bring into notice ;

INTRODUCTORY, adj J to produce ; to bring into writing or discourse. Introducer, one who conducts another to a place or person, or brings him into notice : introduction, the act of introducing ; the preface to a book ; the exordium of a discourse : introductive, introductory, serving as a means to something else.

Thus maketh he his introduction To bringen folk to hir destruction.

Chaucer. The Chanones Yemannes Tale.

The introduction of noble inventions seems to hold by far the most excellent place among all human actions. Bacon.

This vulgar error whosoever is able to reclaim, he shall introduce a new way of cure, preserving by theory as well as practice.

Browne’s Vulgar Errourt.

This introductory discourse itself is to be but an essay, not a book. Boyle.

Mathematicians of advanced speculations may have other ways to introduce into their minds ideas of infinity. Locke.

The truth of Christ crucified, is the Christian's philosophy, and a good life is the Christian's logick that great instrumental introductive art, that must guide the mind into the former. South.

It is commonly charged upon the army, that the beastly vice of drinking to excess hath been lately, from their example, restored among us ; but whoever the intrpdudbrs were, they have succeeded to a miracle. Swift.

Here the twelfth Canto of our introduction Ends. When the body of the book's begun, You'll find it of a different construction.

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From what some people say 'twill be when done, The plan's at present simply in concoction.

Byron. D<m Juan.

INTROGRES'SION, n. i. Lat. introgressia. Entrance ; the act of entering.

INTROMISSION, n. s. Lat. intromissio. The act of sending in.

If sight be caused by intromission, or receiving in the form of that which is seen, contrary species or forms shall be received confusedly together, which Aristotle shews to be absurd. Peucham.

411 the reason that 1 could ever hear alledged by the chief factors for a general wlromlmon of all sects and persuasions into our communion, is, that those who separate from us are stiff and obstinate, and will not submit to the rules of our church, and that therefore they should be taken away. South.

In the Scotch law. The act of intermeddling with another's effects : as, he shall he brought to an account for his intromissions with such an

estate.

INTROMIT, v. a. Lat. intromitto. To send in; to let in; to admit; to allow to enter; to be the medium by which any thing enters.

Glass in the window intromits light without cold to those in the room. Holder.

Tinged bodies and liquors reflect some sorts of rays, and intromit or transmit other sorts. Newton.

INTROSPECT, v.a. Lat. introspectus. To take a view of the inside.

INTROSPECTION, n. s. From introspect. A view of the inside.

The actings of the mind or imagination itself, by way of reflection or introspection of themselves, are discernible by man. Hale.

INTROVE'NIENT,a(f/. Lat. intro and rente. Entering ; coming in.

Scarce any condition which is not exhausted and obscured, from the commixture of introvenient nations, either by commerce or conquest. Browne.

INTRUDE', v. n. & v. a.) Fr. intrusion ;

INTRU'DER, n. s. > Lat. intrudo. To

INTRI/SION, n. s. j come in as an unwelcome guest without invitation or permission ; to encroach ; to force in or infr- : intruder, an unwelcome visitor; an impertinent, officious fellow : intrusion, encroachment on any person or in any place ; uncalled undertaking.

Let no man beguile you of your reward, in a voluntary humility, and worshipping of angels, tn-iruding into those things which he hath not seen by his fleshly mind. Cot. ii. 18.

I think myself in better plight for a lender than you are, the which hath something emboldened me to this unseasoned intrusion : for they say, if money go before, all ways do lie open. Shakspeare.

Unn.annerly intruder as thou art ! Id.

Thy years want wit, thy wit wants edge

And manners to intrude where I am graced. Id.

They were but intruders upon the possession, during the minority of the heir : they knew those lands were the rightful inheritance of that young lady. Duties on Ireland.

Frogs, lice, and flies, must all this palace fill

With loathed intrusion. Milton's Paradise Lost.

Many excellent strains have been jostled off by the intrusions of poetical fictions. Browne.

Will you, a bold intruder, never learn

To know your basket, and your bread discern ?

Drifden. VOL. XII.

The separation 01 the parts of one body, upon the intrusion o<" another, and the change from rest to motion upon impulse, and -the like, seem to have some connection. Locke

The Jewish religion was yet in possession ; and therefore that this might so enter, as not to intrude, it was to bring its warrant from the same hand of omnipotence. South.

Forgive me fair one, if officious friendship Intrude* on your repose, and comes thus late To greet you with the tidings of success. Uotce.

how's this, my son? Why this intrusion? Were not my orders that I should be private ?

Addisou't Cato.

It will be said, I handle an art no way suitable either to my employment or fortune and so stand charged with intrusion and impertinency. If 'of ton.

Let me shake off the intrusti-e cares of dav, And lay the meddly senses all aside. Thomson.

But if perchance on some dull drizzling day, A thought intrude that says or seems to say.

Cowper. Hope.

There is a pleasure in the pathless woods, There is a rapture on the lonely shore, There is society where none intrude*, By the deep sea, and music in its roar.

Byron. Childe Harold.

INTRUST', v. a. In and trust. To treat with confidence ; to charge with any secret commission, or thing of value; as, we intrust another with something; or we intrust something to another.

His majesty had a solicitous care for the payment of his debts ; though in such a manner, that non« of the duke's officers were intrusted with the knowledge of it. Clarendon.

Receive my counsel, and securely move ; Intrust thy fortune to the powers above. Drydrn. Are not the lives of those, who draw the sword In Rome's defence, intrusted to our care ? Addiion.

Is duty a mere sport, or an employ? Life an intrusted talent, cr a toy ?

Cowper. Retirement.

INTUITION, n.s. j Fr. intuitif; Lat. in-lNTu'rnvE,a</7. ˆtueor, intuitus; Ital. in-INTU'ITIVELY, adv. j tuitio. The act of see-ing into; the insight into anything; obtaining knowledge not by deduction of reason, but instantaneously from the ideas which are its object: intuitive, seeing, rs opposed to believing; having the power of discovering truth without rcaso.iing: intuitively, in a manner implying insUru perception of the subject proposed. The rule of ghostly or immaterial natures, as spirits and angels, is their intuitive intellectual judgment, concering the amiable beauty and high good • ness of that object, which, with unspeakable joy and delight, doth set them on work. Hooker.

Faith, beginning here with a weak apprehension of things not seen, endeth with the intuitive vision of God in the world to come. . WThe soul receives

Discursive or intuitive. Mlllom.

All knowledge of causes is deductive ; for we know none by simple intuition, but through the mediation of their effects ; for the casualty itself is insensible.

GlamiUe.

He that single virtues did survey, By intuition in his own large breast. Drvden. Immediate perception of the agreement and disagreement of two ideas is when, by comparing them together in our minds, we see their agreement or disagreement ; this, therefore iscalled intuitive knowledge.

II

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Lofty flights of thought, and almost intuitive perception of abstruse

notions, or exalted discoveries of mathematical theorems, we sometimes see existent in one person. Bentley.

INTUMES'CENCE, n. s. > Fr. intumescence;

INTUMES'CENCY. 5 Lat. intumesco.

Swell; tumor; the act or state of swelling.

According to the temper of the terreous parts at the bottom, as they are more hardly or easily moved, they variously begin, continue, or end their intumescencies. Browne.

This subterranean heat causes a great rarefaction and intumescence of the water of the abyss, putting it into very great commotions, and occasions an earthquake. Woodward.

INTURGES'CENCE,n..<t. Lat. in and tur-getco. Swelling ; the act or state of swelling.

Not by attenuation of the upper part of the sea, but inturgescencies caused first at the bottom, and carrying the upper part of it before them. Browne.

INTUSE'.n. *. Lat. intwiis. Bruise.

She did search the swelling bruze, And having searched the infuse deep, She bound it with her scarf. Spenser.

INTWINE', v. a. In and twine. To twist, or •wreath together.

This opinion, though false, yet intwined with a true, that the souls of men do never perish, abated the fear of death in them. Hooker.

To be inserted by being wreathed or twisted.

The vest and veil divine,

Which wandering foliage and rich flowers intwine.

Dry den.

INVADE', v. a. -\ Lat. invado. To go in, or INVA'DER, n. j. (into; to make hostile en-INVA'SION, n. s. (trance; to attack or assault; INVA'SIVE, adj.) to violate by the first act of aggression : invader, one who enters with hostility ; an assailant, encroacher, or intruder : invasion, hostile entrance : invasive, opposed to defensive.

We made an mrnsfon upon the Cherethites.

1 Sam. xxx.

There shall be sedition among men, and invading one another ; they shall not regard their kings.

2 E»dra«. The thiefe

Lay sleeping soundly in the bushes shade, Whom Condon him counseld to invade Now all unwares, and take the spoyle away.

Spenser. Faerie Qneene.

Should he invade any part of their country, he would soon see that nation up in arms. Knolles. Thou thinkest ‘tis much, that this contentious

storm

Invades us to the skin ; so ‘tis to thee ; But, where the greater malady is fixed, The lesser is scarce felt. Shabspeare. King Lear.

The breath of Scotland the Spaniards could not endure ; neither durst they, as invaders, land in Ireland. Bacon.

That knowledge, like the coal from the altar, serves only to embroil and consume the sacrilegious invaders. Decay of Piety.

The substance was formerly comprised in that un-compounded style, but afterwards prudently enlarged for the repelling and pieventing heretical invaders.

Hammond.

Were he lost, the naked empire Would be a prey exposed to all inraden. Denhnm’s

Their piety

In sharp contest of battle found no aid Against ii,vaders. Milton’s Paradise Lost.

With dangerous expedition they invade Heaven, whose high walls fear no assault.

Id.

AVhen force invades the gift of nature, life, The eldest law of nature bids defend. Dryden. I must come closer to my purpose, and not make more invasive wars abroad, when, like Hannibal, I am called back to the defence of my country. Id.

The nations of the' Ausonian shore Shall hear the dreadful rumour from afar, Of armed invasion, and embrace the war.

Id. JEneid.

William the Conqueror invaded England about the year 1060, which means this ; that taking the duration from our Saviour's time 'till now, for one entire length of time, it shews at what distance this invasion was from the two extremes. Locke.

Reason finds a secret grief and remorse from every invasion that sin makes upon innocence, and that must render the first entrance and admission of sin uneasy. South.

Secure, by William's care, let Britain stand ; Nor dread the bold invader's hand. Prior.

What demonstrates the plague to be endemial to Egypt, is its invasion and going off at certain seasons.

Arbuthnot

Let other monarchs with invasive bands, Lessen their people, and extend their lands ; By gasping nations hated and obeyed, Lords of the desarts that their swords had made.

Id.

Esteem and judgment with strong fancy join, To call the fair invader in ; My darling favourite inclination, too, All, all conspiring with the foe. Granville—

The country about Attica was the most barren of any in Greece, through which means it happened that the natives were never expelled by the fury of invaders. Swift.

Knowest thou not yet, when love invades the soul That all her faculties receive her chains.

Dr. Johnson's Irene.

It is therefore idle to say that it is not in truth and in fact a foreign invasion. Canning's Speeches. INVA1,ES'CENCE, n. s. Lat. invalesco. Strength ; health : force.

INVALID, adj. -\ Fr. invalids; Lat. in

INVALIDATE, v. a. tmndvalidus. Weak; with—

INVALIDE', n.s. {out weight or cogency.

INVALIDITY, n.s.) Invalidate, to deprive of

force or efficacy. Invalide, one disabled by

sickness or injury. Invalidity, weakness ; want

of strength, bodily or mental.

But this I urge,

Admitting motion in the heavens, to shew Invalid, that which thee to doubt it moved.

Milton.

To invalidate such a consequence, some things might be speciously enough alledged. Boyle.

He ordered, that none who could work should b e idle, and that none who could not work by age, sickness, or inniliditii, should want. Temple.

Tell a man, passionately in love, that he is jilted, bring a score of witnesses of the falsehood of his mistress, and it is ten to one but three kind words of her's shall invalidate all their testimonies. Locke.

What beggar in the invalides, With lameness broke, with blindness smitten. Wished ever decently to die ? Prior.

INVAL'UABLE, adj. In and valuable. Precious above estimation ; inestimable.

The faith produced by terrour would not be so free an act as it ought, to which are annexed all the glorious and invaluable privileges of believing.

Alter bury.

INVA'RIABLE, adj. } Lat. in and varius.

I.NVA RtABLENESs, n.s. > Unchangeable ; im—

INVA'RIABLY, adv. j mutable : constantly.

Being not able to design times by days, months, or years, they thought best to determine these alterations by some known and invariable signs, and such did they conceive the rising and setting of the fixed stars. Browne.

The rule of good and evil would not appear uniform and invariable, but different, according to men's different complexions and inclinations. Atterbury.

He who steers his course invariably by this rule, takes the surest way to make all men praise him. Id.

INVECTIVE, n.s. &a$.-\ Lat. invehor.

INVEC'TIVEIY, adv. (To inveigh is to

INVEIGH, v. n. gutter censure or

INVEIGH'ER, n.s. 3 reproach, used

with against and at. Invective, a censure in speech or writing. Invectively, satirically; abusively. Inveigher, a railer or scorner. Thus most invectively he pierceth through

The body of the country, city, court,

Yea, and of this our life ; swearing that we

Are mere usurpers, tyrants. Shakspeare.

Casting off respect, he fell to bitter invectives againtt the French king. Bacon's Henry VII.

Whilst we condemn others, we may indeed be in the wrong ; and then all the invectives we make at their supposed errours fall back with a

rebounded force upon our own real ones. Decay of Piety.

Let him rail on : let his invective muse Have four and twenty letters to abuse.

Dryden.

I cannot blame him for inveighing so sharply against the vices of the clergy in his age. Id.

One of these inveighers against mercury, in seven weeks, could not cure one small herpes in the face.

Wiseman.

INVEI'GLE, v.a.) Fr.aveugler,enaveugler.

INVEIG'LER, n. s. J — Skinner and Junius. Italian invogliare. — Minsheu. To persuade to something bad or hurtful ; to wheedle ; to allure ; to seduce. Inveigler, a seducer to ill.

Being presented to the emperor for his admirable beauty, the prince clapt him up as his inveigUr.

Sandys.

Achilles hath inveigled his fool from him.

Shakspearr.

Yet have they many baits and guileful spells, To inveigle and invite the' unwary sense Of them that pass unweeting by the way. Milton.

Both right able To' inveigle and draw in the rabble.

Hudibran.

The inveigling a woman, before she is come to years of discretion, should be as criminal as the seducing of her before she is ten years old.

Spectator.

INVEGES (Augustin), a celebrated Jesuit and historian, a native of Siacca, in Sicily, was horn "i 1595. He quitted the Jesuit's society alter leaching philosophy and theology, and devoted himself to the composition of history. He died at Palermo in 1677. His works are,

The History of Palermo, 3 vols. folio ; History ot the Terrestrial Paradise, 4to. ; La Cartasir.e Ski- ‘iaiKi, 4to. ; and the History of Cascauui. In the

last work he meutions the Sicilian vespers as de-seivingthe applause of all historians.

French invtnter ; Lat. invenio, inven-torium. To come upon ; to discover; f to produce something not made be-

INVENT, v. a.

INVEN’TER, n. *.

INVEN’TION, n. «.

INVEN’TIVE, udj.

INVEN’TOR, n.s.

INVENTO’RIALLY, adv.

IN’VENTORY, n. s. &v.a. I fore”; to forge”;

INVEN’TRESS, n. *. J feign ; to meet with:

the person who thus acts is an inventer, inventor, or ir.ventress. Inventory, a catalogue of goods • to place in a catalogue. Inventorially, after the manner of an inventory.

Woe to them that invent to themselves instruments of musick.

The well and grounde of the firste invention To knowe, the ortographie we must derive.

Chaucer. The llemedie of Tˆaee. For my devocion and my hole entcnt Was gevyn to pleasure, such as I did invent Nowe I repent, therefore

my necligence to God, Who bathe me correcieci with his dyvyn rod.

G. Cavendish's Metrical Visions. How vainly then do ydle wits invent. That beau tie is nought else but mixture made

Of colours faire, and goodly temp'rament Of pure complexions that shall quickly fade.

Sfienser's Hymiic*.

The substance of the service of God, so far forth as it hath in it any thing more than the law of rea-son doth teach, may not be invented of men, but must be received from God himself. Hooker

We hear our bloody cousins, not confessing Their cruel parricide, filling their hearers With strange invention. Shakspeare. Macbeth.

In this upshot, purpose mistook. Fallen on the inventors' heads. Shakˆpeart. I would invent as bitter searching terms, With full as many signs of deadly hate, As lean-faced envy in her loathsome cave. Id.

1 found,

Forsooth, an inventory, thus importing, The several parcels of his plate. Shakspeare. To divide inventorially, would dizzy the arithmetic'* of memory. Id. Hamlet.

I will give out divers schedules of my beauty : it shall be inventoried, and every particle and utensil labelled. Shahsi > eare.

We have the statue of your Columbus, that discovered the West Indies, also the inventor of ships ; your Monk, that was the inventor of ordnance, and of gunpowder. Bacon.

Whoe'er looks,

For themselves dare not go, o'er Cheapside books, Shall find their wardrobe's inventory. Donne.

His eyes deep sunken been

With often thoughts, and never slacked intention : Yet he the fount of speedy apprehension, Father of wit, the well of arts, and quick invention. Fletcher's Purple hiand. Studious they appear Of arts that polish life ; inventors rare, Unmindful ot their maker.

Milton's Paradise Loft. We may invent

With what more forcible we may offend Our enemies.

The garden, a place not fairer in natural ornaments than artificial inventions. , Sidney.

By improving what was writ before, finention labours less, but judgment more.

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licit is a strange ftgure i«mitrc/, against the plain MUM of the words. StiUugM*.

At last divine Cecilia came, /n«ntr«M of the vocal frame.

Druden. Alexander i Feast. That inventive head Her fatal image from the temple drew, ‘1 he sleeping guardians of the castle slew.

Dryden .

Invention is a kind of muse, which, being possessed of the other advantages common to her sisters.

party shall, m the presence of two other commissioned officers, take an account of whatever effects he dies possessed of, above his regimental clothing, arms and accoutrements, and transmit the same to the office of the secretary at war. These effects are to he, accounted

for and paid to the representative of such deceased non-commissioned officer or soldier ; and in case any of the officers, so authorised to take care of the effects of deceased officers and soldiery should,

;*’ warded by the fire of Apollo, is raised before they have accounted to their representa-

‘J tives for the same, have occasion to leave the

higher than the rest.

As a translator, he was just ; as an mvmter, he was rich. Gar*h:

In Persia the daughters of Eve are reckoned in

regiment by preferment, or otherwise, they are ordered, before they be permitted to quit the same, to deposit in the hands of the command ing

the inventory of their goods and chatties ; and it is officerj or of the agent of the regiment, all the usual, when a man sells a bale of silk, to toss half a eflects of sucn deceased non-commissioned offi-

dozen women into the bargain

Addison.

cers and soldiers, in order that the same may be

Why are these positions charged upon me as their secured for> and

paid to, their respective repre-sole author and inventor, and the reader led into a sentat,ves. See Articles of War, sect. XIX. belief, that they were never before maintained by any person of virtue 1 Atterbury.

INVERARAY, or INVERARY, a royal borough of Scotland, in a parish of the same name, and The chief excellence of Virgil is judgment, of capitai of Argyllshire, pleasantly situated on a

Homer is invention. Pope.

Necessity may be the mother of lucrative invention but it is the death of poetical invention.

Shenstonc's Detached Thouyhtt. Sure my indention must be down at Zero, And I grown one of many ' wooden spoons' Of verse (the name with which we Cantabs please To dub the last of honours in degrees).

Byron. Dot* Juan.

An INVENTORY, in law, is a catalogue made

small bay formed by the junction of the Ary or Aoreidh with Loch Fyne, where the latter is a mile broad, and sixty fathoms deep. Here is a castle, the principal seat of the dukes of Argyll. It is a modern building of a quadrangular form, with a round tower at each corner ; and in the middle rises a square one glazed on every side to give light to the staircase and galleries, which has, from without, rather a heavy appearance.

of all a deceased person's goods and chattels, at This castle is built of a coarse lapis ollaris,

the time of his death, with their value appraised by indifferent persons, which every executor or administrator it obliged to exhibit to the ordinary at such times as he shall appoint. By 2 1

brought from the other side of LochPyne, of the same kind with that found in Norway, of which the king of Denmark's palace is built. The principal manufactures are linen, woollen, iron,

Hen. VIII. c. v. executors and administrators carpentry, &c. The planting around Inverary is are to delifer in upon oath, to the ordinary, in-extensive beyond conception, and admirably dented inventories, one part of which is to re-variegated ; every crevice, glen, and mountain,

main with the ordinary, and the other part with the executor or administrator ; this is required '^r the benefit of the creditors and legatees, that v..» executor or administrator may not conceal any part of the personal estate from them. The statute ordains, that the inventory shall be exhibited within three months after the person's decease : yet it may be done afterwards ; for the ordinary may dispense with the time, and even with its being ever exhibited, as in cases where the creditors are paid, and the will is executed.

In the British army when any commissioned officer happens to die, or is killed on service, it is directed by the Articles of War, that the major of the regiment, or the officer doing the major's duty in his absence, shall immediately secure all his effects or equipage then in camp or quarters ; and shall, before the next regimental court-mar- tial, make an inventory thereof, and forthwith transmit the same to the office of the secretary at war, to the end that the executors of such officer may, after payment of his regimental debts and quarters, and the expenses attending his interment, receive the overplus, if any be, to his or their use.

When any non-commissioned officer or private soldier happens to die, or is killed on service, tlie then commanding officer of the troop or corn-

displaying taste. One of the hills rises immediately from the house a great height, in the form of a pyramid, and is clothed to the summit with a thick wood of vigorous ornamenta. trees On this summit, duke Archibald built a Gothic tower, or observatory. The ascent by the road seems to be half a mile, and the perpendicular height about 800 feet. Inverary is forty-five miles north-west of Glasgow, and seventy-five of

Edinburgh.

INVERKEITHING, a royal borough of Fifeshire, on the north coast of the Frith of Forth. King William I. granted its first charter, and extended its liberties considerably, which were renewed and confirmed by James VI. in 1598. It has a provost, two bailies, dean of guild, treasurer, and an unlimited number of counsellors, who continue for life. It joins with Queens-ferry, Culross, Stirling, and Dunfermline, in electing a member of parliament. In the time of David I. it became a royal residence. The Moubrays had large possessions in this town, which were forfeited in the reign of Robert II. The Franciscans and Dominicans had convents in it. To this harbour ships of war sometimes come from Leith roads, to avoid the winter storms ; and merchant ships from the Mediterranean formerl-used to perform quarantine here.

The harbour itself is a small bay, at the mouth of which, on the west side, lies a floating lazaretto, where the infected goods were received and air-ed under the inspection of a proper officer. At the head of the bay is a quay, and a narrow channel has been cut further down to admit ships up to it. It has a considerable trade in coals and other articles. It lies eighteen miles north-west of Edinburgh.

INVERLOCHY CASTLE, an ancient castle near Fort William in Inverness-shire; adorned with large towers, which seem to have been the work of the English in the tir.ie of Edward I., who laid large fines on the Scottish barons for the purpose of erecting castles. The largest of these is called Cumin's Tower. ' The castle now stands alone in ancient magnificence, after hav-ing seen the river Lochy, that formerly filled its ditches, run in another course, and having out-lived all history, and all tradition of its own builder and age. It is a quadrangular building, with round towers at the angles, measuring thirty yards every way within the walls. The towers and ramparts are solidly built of stone and lime, nine feet thick at the bottom, and eight feet above. The towers are not entire, nor are they all equally high. The western is the highest and largest, and does not seem to have

been less than fifty feet when entire: the rampart between them, from twenty-five to thirty. — Ten or twelve yards without the walls the ditch begins, which surrounded the castle, from thirty to forty feet broad. The whole building covers about 1600 yards ; and within the outside of the ditch are 7000 square yards, nearly one acre and a half English. — The whole building would require from 500 to 600 men to defend it. — From the name of the western tower, it is probable this castle was occupied by the Cummings in the time of Edward I., and there is a tradition that this castle was once a royal residence, and that the famous league between Charles the Great of France, and Achaius kins* of Scots, had been signed there on the part of the Scotch monarch.' A. D. 790.

INVERNESS-SHIRE, an important county of Scotland, bounded on the north by Ross-shire, on the east by the shires of Nairne, Murray, and Aberdeen ; on the south by those of Perth and Argyll ; and on the west by the Atlantic Ocean. Its extent from north to south is above fifty miles, from east to west about ninety-four. A small insulated district between Banff and Moray is also annexed to it : and some of the He-br.des are politically attached to the county; i. e. Harris, North and South Uist, Benbecula, Sky, Barra, Eigg, and the smaller islets on the coast. The vale of Glenmore-nahalabin extends through the centre of the county from east to west, having a chain of lakes, Loch Ness, Loch Oich, Loch Lochy, and an arm of the sea called Lochiel, through which is cutting the navigable canal, to unite the eastern and western oceans ; on each side of this extensive vale the surface is wild, barren, and mountainous. Loch Ness, which is the largest of the lakes, is twenty-two miles in length, and from one to two in breadth. Its general depth is 116 or 120 fathoms; but in some parts is 13.) fathoms.

The banks of the lakes, and the valleys, have many tracts of good arable land, and the county is every where intersected by numerous rapid currents, which unite and form rivers, the whole of them abounding with trout and salmon. On the borders are several extensive tracts of fir wood, the evident remains of large forests.

The principal rivers are the Ness, the Lochy, the Beauly, and the Spey ; those of note are the Findhorn, the Nairne, and the Nevis, all of which are fed by numerous smaller streams. Of these may be mentioned the Foyers, noted for its tremendous cataract. Almost all the rivers have clear and rapid streams, and generally a rocky channel ; and those discharging into the Germao Ocean have longer courses than those which run into the Atlantic. Pure springs of water are everywhere

found. Mineral springs are rare; but sulphurous and chalybeate springs are found in various situations. The western shore is broken by numerous creeks and arms of the sea.

Among the mountains, Bennevis, near Fort William, is the most lofty elevation in Great Britain, being 4370 feet above the level of the sea; the summit is always covered with snow; a great part of it is composed of beautiful brown porphyry, among which is found green porphyry mixed with quartz : the red granite found in this mountain is the most beautiful of any known. There are several other mountains adjoining Bennevis, of nearly the same elevation.

Agriculture is conducted, on the eastern side of the county, with as much skill, spirit, and success, as in any tract northward of the Grampians. But in the interior, and on the western coast, it languishes under the obstructions of the soil and climate ; for along the whole of the western it is much more rainy than on the eastern side of the island ; it is seldom fair weather there, with a westerly wind ; they do not therefore depend on saving their corn in the open air ; drying-houses are contrived, where the sheaves hung single, each upon a peg, become fit in a few days, even of rain, to be built in a small stack, to make way on the pegs for the sheaves of another field. The crops, in a great degree uncertain, are inadequate to the support of the people : they are, almost without exception, restricted to oats, with the hairy-bearded husk, a light small kind of bear, and potatoe, which forms a great proportion of their vegetable diet. The principal employment of the farmer is the management of black cattle and sheep, and there are numerous herds of goats ; and the mountains and forests are inhabited by immense herds of red deer and roes : Alpine, and the common hares, with a variety of other game, are likewise found in abundance.

The exports of this county may be enumerated under the articles of cattle, wool, corn, the skins of goats, deer, roes, foxes, hares, and rabbits ; salmon, herring, some dry and salted fish, some fir timber, with the labors of the hempen and thread manufactures. The spinning of flax and wool is the occupation of the women over the whole county. A small proportion of the wool is manufactured into the home-spun stuffs.

Though the Erse is tlie lauguage of the country, very good English is spoken in the town of Inverness, and its neighbourhood, and also in the vicinity of the forts. The inhabitants were indebted for the introduction of the Knglish, and for several useful arts, to the soldiers under Oliver Cromwell, who were stationary here for a considerable time.

The military roads through this once impenetrable region, made by the soldiers under general Wade, never fail to excite the astonishment of travellers, being often carried over mountains, and extensive morasses. His object was to open a communication with the other parts of the country, so as to keep the Highlanderˆ in subjection, by connecting the two forts, Fort William and Fort George; for which purpose, he built another in the centre, which he called Fort Augustus. A material benefit which has been derived from these forts, and the roads connected with them, has been the civilisation of the Highlanders.

In the district of Glenelg, are the ruins of some of those circular towers, similar to what is met with iu the Western Isles ; they are round and tapering like glass-houses; within, horizontal galleries go quite round, connected by stairs which ascend quite to the top, the roof being open. Antiquaries have not decided for what purpose these towers were built ; by some they are thought to be Danish forts, by others Druidical temples. The vitrified fort on the summmit of Craig Phatric, near Inverness, is a Tery remarkable structure.

Near Fort William, in the bed of the river Nevis, is a singular vein of marble of a black ground, with a beautiful white flowering, like needle-work. Here are also veins of lead and iron, and one of silver has been wrought, but unsuccessfully. The want of coal, and indeed the scarcity of fuel of every description, is severely felt in this county.

Inverness-shire comprehends the districts of Badenoch, Lochaber, and Glenelg, which are subdivided into thirty-one parochial districts. The principal towns are Inverness, Fort William or Inverlochy, and Fort Augustus.

ISVER.NESS, a royal borough, and capital of the county of that name, finely seated on the south bank of the Ness, over vhich there is a stone bridge of seven arches. It is large, well built, and populous. Its first charter was granted by king Malcolm Canmore, and its last by James VI. From that period to ihe Revolution, in 1688, it had a great trade in skins, corn, and malt, Sec , but it afterwards declined. After the Rebellion in 1745 this town, however, revived, and is still enlarging in every direction. It has a plentiful market, and more money and business than could be expected in such a remote part of of the island. The salmon fishery in the Ness is very considerable, and is let to London-fish- mongers. The principal manufactures are those of hemp and flax. The first has been established about fifty years; and employs above 1000 persons in spinning, dressing, and weaving. The raw material is imported from the Baltic, and manufactured into sail-cloth and sacking. A white thread manufactory has been established

nearly forty years ; and employs in its various branches of heckling, spinning, twisting, bleaching, atid dyeing, no fewer than 10,000 individuals. The company have, in this and the neighbouring countries, several agents for the management of the spinning departments. The flax is also chiefly imported from the Baltic, and the greatest part of the thread sent to London. Tanneries, brick-works, chandleries, 8cc., are also carried on ; and, in consequence of the excellent military roads, there is a great proportion of inland trade. The harbour is safe and commodious, and is kepi in good repair. Vessels of 200 tons can unload at the quay, and those of 500 tons ride in safety in the Frith, within a mile of the town. The ships of the town are chiefly employed in carrying salmon and the manufactures of the country to London, and in bringing back various articles of haberdashery, and hardware. Inverness has several good schools, and an academy was erected in 1787, on an extensive scale, wherein all the usual branches of education are taught. There are two parish churches ; in the one sermons are delivered in English, and in the other in Gaelic, and, in the chapel of ease, in English and Gaelic alternately. There are also Episcopalian and Methodist chapels. Nearly in the centre of the town stands the court-house, connected with the tolbooth, a handsome modern building, with a fine tower, terminated by an elegant spire, which received considerable injury from the earthquake of 1816. The town is governed by a provost, four bailies, dean of guild, treasurer, and fifteen counsellors ; and has six incorporations, two of whose deacons, with their convener, are members of council. It has five fairs, and lies fifty miles north-east of Fort-William, and 106 north of Edinburgh.

INVERNESS, NEW, a town of Georgia, on the Alatamaha, erected in 1735 by a company of emigrants from the Highlands of Scotland. In 1738 they presented a most pathetic remonstrance to general Oglethorp against the introduction of slaves. It lies twenty miles from Fred erica.

INVERSE', adj. -\ Fr. inverse ; Lat. in—

INVER'SION, n. s. {verto. Inverted; reci—

INVERT', v. a. i procal : opposed to di—

INVER'TEDLY, adv. f rect. It is so called in

proportion, when the fourth term is so much

greater than the third, as the second is less than

the first; or so much less than the third as the

second is greater than the first : inversion, change

of order or time, so as that the last is first and

the first last; change of place: invert, to turn

upside down; to divert into another channel:

invertedly, in contrary or reversed order.

Solyman charged him bitterly with inverting his treasures to his own private use, and having secret intelligence with his enemies.

Knolles's History of the Turks.

If he speaks truth, it is upon a subtile inversion of the precept of God, to do good that evil may come of it. Browne.

With fate inverted, shall I humbly woo, And some proud prince, in wild Nurnidia born, Pray to accept me, and forget my scorn 1

Wall*

Ask not the cause why sullen Spring So long delays her flowers to bear, And Winter storms invert the year. Dryden. Every part of matter tends to every part of matter, with a force which is always in a direct proportion of the quantity of matter, and an inverse duplicate proportion of the distance. Garth.

Yes, every poet is a fool ; By demonstration Ned can shew it. Happy, could Xed's inverted rule rove every fool to be a poet. Prior.

Placing the forepart of the eye to the hole of the window of a darkened room, we have a pretty landskip of the objects abroad, invertedty painted on he paper, 01 the back of the eye. Derham.

And who but wishes to invert the laws Of order, sins against the Eternal Cause. Pope,

Oh Winter ! ruler of the inverted year, Thy scattered hair with sleet-like ashes filled.

Cowper.

INVERSE PROPORTION. See ARITHMETIC. INVERSE METHOD OF FLUXIONS is the method of finding fluents, from the fluxions being given; and is similar to the calculus integralis. See FLUXIONS.

INVERSE METHOD OF TANGENTS is the method of finding the curve belonging to a given tangent ; as opposed to the direct method, or the rinding the tangent to a given curve. As, to find a curve whose subtangent is a third proportioned to r — y and y, or whose subtangent is equal to the semiordinate, or whose subnormal is a constant quantity. The solution of this problem depends chiefly on the inverse method of fluxions.

INVERSION means also the act whereby any thing is turned backwards. Problems in geometry and arithmetic are often proved by inversion ; that is, by contrary rule or operation.

INVERSION, invertendo, or by Inversion, according to Euclid's fourteenth definition, lib. v., ia inverting the terms of a proportion, by changing the antecedents into consequents, and the consequents into antecedents. As in these a : b : : c : d, then by inversion b : a : : d : c.

INVERSION, in grammar, is where the words of a phrase are ranged in a manner not so natural as they might be ; e. g. ‘ Of all vices, the most abominable, and that which least becomes a man, is impurity.’ Here is an inversion ; the natural order being this ; Impurity is the most abominable of all vices, and that which least becomes a man. Inversions are very much used in Latin poetry.

INVERSION, in rhetoric, is a method of confutation, by which the orator shows that the reasons adduced by the opposite party are favorable to his cause. So when Caecilius urged that the province of accusing Verres ought to be granted to him in preference to Cicero, because he had been his treasurer in Sicily, at the time when the crimes were committed, and consequently was best acquainted with the whole affair, Cicero turns the argument against him, and shows, that, for that very reason, he was the most unfit of any man to be intrusted with his prosecution ; since, having been concerned with him in his crimes, he would certainly do all in his power to conceal «.>r lessen them.

INVERT up, in music, signifies a change in the

order of the notes which form a chord, or in tl,e parts which compose harmony : winch happens by substituting in the bass tiiose sounds whicli ought to have been in the upper purl : au operation not only rendered practicable, but greatly facilitated, by the resemblance which one note has to another in different octaves ; whence we derive the power of exchanging one octave for another with so much propriety and success, or by substituting in the extremes those which ought to have occupied the middle station : and vice versˆ. In every chord tnere must be a fundu-mental and natural order, which is the same witli that of its generation ; but the circumstances of succession, taste, expression, the beauty of me-lody, and variety, the approximation of harmony, frequently oblige the composer to change that order by inverting the chords, and consequently the disposition of the parts. See CHORD. Every time, therefore, when the fundamental bass is heard in the lowest parts, or if the fundamental bass be retrenched, every time when the natural order is preserved in the chords, the harmony is direct. As soon as that order is changed, or as soon as the fundamental sounds, without being in the lower parts, are heard in some of the others, the harmony is inverted. The perfect knowledge of inversion depends on art and study alone. See Music.

INVERURY, an ancient royal borough of Aberdeenshire, seated at the

conflux of the Don and the Ury, in the district of the Garioch, fourteen miles north-west of Aberdeen. It was made a royal burgh by king Robert I. upon his obtaining a signal victory near it, over Comyn earl of Buchan, Edward I's. general. Its charters being lost during the civil wars, Mary queen of Scots granted a new one. It is governed by a provost, three bailies, dean of guild, treasurer, and three counsellors. By the exertions of the earl of Kintore and Dr. Thorn, the provost, an elegant bridge was built over the Don in 1790, at the south end of the town, at an expense of £2000. It lies fifty-one miles N. N. E. of Dundee.

INVEST, v. a. -\ Fr. investir; Lat. in-ISVES'TIENT, adj. tvestio. To dress; to INVES'TITURE, n.s. (clothe; to array: it has INVESTMENT, n. t. J in or with before the thing superinduced or conferred. To place in possession of rank or office ; to adorn or grace ; to confer; to enclose ; to surround so as to intercept succours : investiture, the right of giving possession of any manor or benefice; the act of giving possession: investment, dress; clothes; habit.

When we sanctify or hallow churches, that which we do is only to testify that we make places of publick resort, that we invest God himself with them, and that we sever them from common uses.

Hooker.

Ophelia, do not believe his vows ; for they are

brokers, Not of that die which their investments shew.

Shaksprare.

Their gesture sad,

Invest in lank lean cheeks and war-worn coaU, Presented them unto the gazing moon, So many horrid ghosts. Id-anry V

He had refused to yield up to the pope the investiture of bishops, and collation of ecclesiastical dignities within nis dominions. Raleigh's Essays.

If there can be found such an inequality between man and man, as there is between man and beast ; or between soul and body, it inoetteth a right of government. Bacon.

Let thy eyes shine forth in their full lustre ; Invat them uith thy loveliest smiles, put on Thy choicest looks. Denham's Sophy.

After the death of the other archbishop, he was invested in that high dignity, and settled in his palace at Lambeth. Clarendon.

Some great potentate, Or of the thrones above ; such majesty Invests him coming. Milton.

The shells served as plasms or moulds to this sand, which, when consolidated and freed from its investient shell, is of the same shape as the cavity of the shell.

Wcodward.

The practice of all ages, and all countries, hath been to do honour to those who are invested with publick authority. Atterbury.

INVESTIGABLE, adj. 3 I-itin investigo. INVESTIGATE, v. a. / To be searched out :

INVESTIGATION, n.s. J to investigate is to

examine; to search for unknown truth; to find

out by rational disquisition.

In doing evil, we prefer a less good before a greater, »he greatness whereof is by reason investigate, and may be known. Hooker.

Investigate the variety of motions and figures made hy the organs for articulation. Holder on Speech.

From the present appearances investigate the powers nd forces of nature, and from these account for fu-ture observations. Cheyne.

Your travels I hear much of: my own shall never more be in a strange

land, but a diligent investigation of my own territories. Pope to Swift.

Not only the investigation of truth, but the communication of it also, is often practised in such a method as neither agrees precisely to synthetick or analytick. Watts.

INVESTITURE, in law, the giving livery of seisin, was anciently attended with a great variety of ceremonies. At first they were made by a certain form of words, and afterwards by such things, as had the greatest resemblance to the thing to he transferred : thus, where lands were intended to pass, a turf, &c., was delivered by the granter to the grantee. In the church it was customary for princes to make investiture of ecclesiastical benefices, by delivering to the person chosen a pastoral staff and a ring. The kings of England and France, the emperor of (Jermany, &c., had anciently this right ; so that on the death of a prelate, his clergy sent the Crosier, &c., to their sovereign, to be used at DC ceremony of investing his successor. It appears, indeed, that in the ninth century, the greater part of the European princes made no opposition to the right of electing the bishops, which was exercised by the clergy and the people. The first who disputed the right of investiture with the emperors was Gregory VII., who excommunicated the emperor Henry IV. ar,d forbade all ecclesiastics to receive investiture at the hands of secular princes. This occasioned a long and bloody war; the civil and ecclesiastical powers being divided into two great

‘.notions, of which one maintained the rights of of the clergy.

the emperor, while the other seconded the ambitious views of the pontiff. The laws of Gregory for the abolition of regal investitures were confirmed and renewed by Victor III. and Urban II. Pascal II. iu a council assembled at Home, A. D. 1102, renewed the decrees of his predecessors against investitures by secular princes, and the excommunications they had thundered out against Henry IV. Pascal, however, in 1 1 1 1, was obliged to confirm Henry V. in the right of giving investitures; but in 11 12 he assembled a council in the church at Lateran, which solemnly annulled his treaty with the emperor, who was excommunicated. At length, however, Calixtus II. engaged him to renounce his right of investing bishops, and peace was concluded between the emperor and the pope’s legates, at a general diet held at Worms, A. D. 1122. This was confirmed the following year in the

general council of Lateran, and remains still in force. INVET'ERACY, n.s. ~\ Fr. invetere ; Lat. IK VET'ERATE, adj. & v. a. ˆ in and vetus. Con-INVET'ERATENESS, n.s. i firmed obstinacy in INVETERA'TION, n. s. J any thing evil ; long continuance of a disease : inveterate, old ; long established ; obstinate by continuance : inveteration, the act of hardening, or confirming, by long continuance. These words are applicabla to any thing which derives strength from age.

The vulgar conceived, that now there was an end given, and a consummation to superstitious prophecies, and to an ancient tacit expectation, which had by tradition been infused and inveterated into men's minds. Bacon.

As time hath rendered him more perfect in the art, so hath the inveterateness of his malice made him more ready in the execution.

Browne's Vulgar Errours.

He who writes satire honestly is no more an ene-my to the offender, than the physician to the patient, when he prescribes harsh remedies to an inveterate disease. Dryden.

It is not every sinful violation of conscience that can quench the spirit; but it must be a long inveterate course and custom of sinning, that at length produces and ends in such a cursed effect. Smith.

The inveteracy of the people's prejudices compelled their rulers to make use of all means for reducing them. Adiliscn.

Let not Atheists lay the fault of their sins upon human nature, which have their prevalence from long custom and inveterated habit. Ocnttey.

Though Time hath taught My mind to meditate what then it learned, Yet such the inveteracy wrought By the impatience of my early thought, That, with the freshness wearing out before My mind could relish what it might have sought, If free to chuse, I cannot now restore Its health , but, what it then detested, still abhor.

Btiron. Childe Harold.

INVIDIOUS, adj. -) Lat. invidiosus. Envi—

INVID'IOUSLY, adv. ˆous, combined with ma—

INVID'IOIISNESS, n.s. j lignity ; likely to incur

hatred : invidiousness, quality of provoking envy.

I shall open to them the interior secrets of this

mysterious art, without imposture or invidious reserve.

Evelyn,

The clergy murmur against the privileges of the' laity; the ' '

Not to be further tedious, or rather inruiimts, these arc a few causes which have contributed to the ruin of our morals. Swift.

iNVIG'ORATE, v.a. a Lat. in and vigor.

INVIGORA'TJON, n. s. 5 To endue with vigor; to strengthen : the act or state of invigorating. Gentle warmth

Discloses well the earth's all-teeming womb,

Invigorating tender seeds. Phillips.

I find in myself an appetitive faculty, which is al-ways in the very height of activity and invigoratioii.

Narrit.

I have lived when the prince, instead of invigorating the laws, assumed a power of dispensing with them. Addison.

Christian graces and virtues they cannot be, un-less fed, invigorated, and animated by universal cha-nty. Atterbury.

INVIN'CIBLE, adj. } Fr. invinc ible ; Lat.

INVIN'CIBLENESS, n.s. Sm and vinco. Insupe—

INVIN'CIBLY, adv. j rable ; not to be conquered or subdued.

0 thou most rigorous Qucene Thamyris, invincible Upon the strong and hideous peple of citees reigning.

Chaucer. Tlie A ine Ladies Worthie.

1 would have thought her spirits had been invincible against all assaults of affection. Shaktpeare.

Neither invitations nor threats avail with those who are invincibly impeded, to apply them to their benefit.

Decay of Piety. The spirit remains invincible. Milton.

Ye have been fearless in his righteous cause ; And as ye have received, so have ye done Invincibly. Id.

That mistake, which is the consequence of invincible errour, scarce deserves the name of wrong judgment. Locke.

Who firmly stood, in a corrupted state, Against the rage of tyrants, single stood Invincible ! Thomson.

INVI'OLABLE, adj.-) Fr. invwlable; Lat-INVI'OI.ABLY, adv. >in and vialo. Not to INVI'OLATE, adj. J be profaned, injured,

or broken : inviolably, without breach or failure : inviolate, unhurt ; unpolluted ; unbroken ; applied both to persons and things.

What is the best dower That may be to a wife appropriate ? A clene life, was the clerkes answer, Without sinne, all chaste and inviolate, From all deceits and speeches inornate, .Or countenance which shall be to dispise: No fire make, and no smoke woll arise.

Chaucer. Goodlie Questions. See, see, they join, embrace, and seem to kiss, As if they vowed some league inviolable.

Shakspeare. His fortune of arms was still inviolate.

Bacon's Henry VII. But let inviolate truth be always dear To thee, even before friendship, truth prefer.

Denham.

Thou, be sure, shall give account To him who sent us, whose charge is to keep This place inviolable, and these from harm.

MUtm.

In vain did Nature’s wise command Divide the waters from the land, .If daring. ships, and men prophane, Invade the inviolable main ; Th’ eternal fences overleap, And pass at will the boundless deeo.

Dry den.

My love your claim inviolate, secures ; Tis writ in fate, I can be only youi*. Id. This birthright, when our author pleases, must and must not be sacred and inviolable. Locke.

The true profession of Christianity inviolably engages all its followers to do good to all men.

Sprat.

IN’VIOUS, adj. Lat. invius. Impassable; untrodden.

If nothing can oppugn his love, And virtue invious ways can prove. What may not he confide to do, That brings both love and virtue too t

Hudibrat.

INVISIBILITY, «.*. } French, invitibilite ; INVIS’IBLE, adj. VLat. invisibilis. The

INVIS’IBLY, adv. 3 state of being imperceptible to sight : not seen or visible.

The threaden sails,

Borne with the invisible and creeping wind, Drew the huge bottoms to the furrowed sea.

Shakspeare.

Age by degrees invisibly doth creep, Nor do we seem to die, but fall asleep.

Uifitham.

Hypocrisy, the only evil that walks Invirible except to God alone By his permissive will through heaven and earth.

Milton.

He was invisible that hurt me so ; And none invisible, but spirits, can go. Sidney. He that believes a God, believes such a being a* hath all perfections ; among which this is one, that he is a spirit, and consequently that he is invisible, and cannot be seen. Tillotson.

It seems easier to make one's self invisible to others, than to make another's thoughts visible to me, which are not visible to himself. Locke.

They may be demonstrated to be innumerable, substituting their small ness for the reason of their inviii-bility. Ray.

Still round him clung invisibly a chain, Which galled for ever, fettering though unseen, And heavy though it clanked not.

Byron. Childe Harold.

INVIS'CATE, v. a. Lat. in and viscut. To lime ; to entangle in glutinous matter.

The cameleon's food being flies, it hath in the tongue a mucous and slimy extremity, whereby, upon a sudden emission, it inviscates and entangleih those insects. Browne.

INVITATION, W.S.-N Fr. inviter ; Lat. in-INVI'TATORY, adj. i vito. The act of bid-INVITE', v. a. & v. nAding, or calling to any INVI'TER, n. s. i thing with ceremony or

INVI'TINGLY, adv. . J civility : to bid as to a feast ; to ask to one's house ; to allure, persuade, or induce ; to ask, or call to any thing pleasing. Inviter, invitingly, the person inviting, and the manner of an invitation.

If thou be invited of a mighty man, withdraw thyself. Ecclui.

A war upon the Turks is more worthy than upon any other Gentiles, though facility and hope of success might invite some other choice. Bacon.

Then you my peers, whose quiet expectation Seemeth my backward tale would fain incite, Deign gently hear this Purple Island's nation, A people never seen, yet still in sight.

Fletcher. Purple Island.

If he can but dress up a temptation to look in w'- tinglv, the business

is done. Decay of Piety.

That other answered with a lowly look, And soon the gracious imitation took. Dryden.

INU

10G

INV

Forbidding me to follow thec invites me. Id.

Wines and catr.s the tables grace, But most the kind iiuiter'i cheerful face.

Pˆie's Odyssey.

What beckoning ghost along the moonlight shade Invites my steps ana points to yonder glade ?

Id. LUgy to the Memory of an Unfortunate Lady. When much company is incited, then be as sparing as possible of your coals. Swift.

Here enthroned,

Celestial Venus, with divinest airs Incite! the soul to never-fading joy. Altenside.

Come, Myrrha, let us on to the Euphrates, The hour invites, the galley is prepared.

Bt/ron. Sardanapalus.

For my part I will not consent to take one step without knowing on what principle I am invited to take it, and (which is perhaps of more consequence), without declaring on what principle I will not consent that any step, however harmless, shall be taken. Canning's Speeches.

INULA, elecampane, a genus of the polygamia superflua order, and syngenesia class of plants ; natural order forty-ninth, compositae. The receptacle naked ; the pappus simple ; the anthera, at the base, ending in two bristles. There are thirty-seven species, of which the most remarkable is

I. helenium, or common elecampane. It is a native of Britain ; but is cultivated in gardens for the sake of the root, which is used in medicine. The root is perennial, thick, branching, and of a strong odor. The lower leaves are eight or nine inches long, and four broad in the middle, rough on the upper side, but downy on the under. The stalks rise about four feet high, and divide toward the top into several smaller branches, garnished with oblong oval leaves indented on their edges, ending in acute points. Each branch is crowned with one large yellow radiated flower, succeeded by narrow four-cor- nered seeds, covered with down. It may be propagated in autumn by seeds or offsets. The root, especially when dry, has an agreeable aromatic smell ; its taste, on chewing, is glutinous and somewhat rancid ; in a little time it discovers an aromatic bitterness, which by degrees becomes considerably acrid and pungent. It possesses the general virtues of alexipharmics, and is principally recommended for promoting expectoration in humoral asthmas and coughs.

In examining this plant, Mr. Rose discovered a new vegetable product to which the name of Inulin has been given. It is white and pulverulent like starch. When thrown on red-hot coal.« it melts, diffusing a white smoke, with a smell of burning sugar. It yields, on distillation in a retort, all the products furnished by gr.m. It dissolves readily in hot water; and precipitates almost entirely on cooling, in the form of a white powder ; but, before falling down, it gi”es the liquid a mucilaginous consis- .ence. It precipitates quickly on the addition rf alcohol. The above substance is obtained ly boiling the root of this plant in four times its weight of water, and leaving the liquid to settle. MM. Pelletier and Caventou have found the same starch-like matter in abundance in the root of rolchicum ; and M. Gautier in the root of pellitory. Starch and inulin combine, an$, when

the former is in excess, it is difficult to separate them. The only method is to pour infusion of galls into the decoction, and then to heat the liquid: if inulin be present, a precipitate will fall, which does not disappear till the temperature rises to upwards of 212° Fahrenheit.

INUM’BRATE, v. a. Lat. inumbro. To shade; to cover with shades.

INUNCTION, n. s. Lat. inungo, inunctia. The act of smearing or anointing.

The wise Author of Nature hath placed on tlic rump two glandules, which the bird catches ho'd upon with her bill, and squeezes out an oily lini-ment, fit for the inunction of the feathers, and causing their filaments to cohere. liau.

INUNDATION, n. s. Fr. inundation ; Lat. inundatio. The overflow of waters ; flood; de-luge. Inundation, says Cowley, implies less than deluge.

Many good towns through that inundation of the Irish were utterly wasted. Spenser.

Her father counts it dangerous. That she should give her sorrow so much sway ; And in his wisdom hastes our marriage, To stop the inundation of her tears. Shakspeare.

The next fair river all the rest exceeding, Topping the hill, breaks forth in fierce evasion, And sheds abroad his Nile-like inundation, So gives to all the Isle their food and vegetation. Fletcher's Purple Island. All fountains of the deep, Broke up, shall heave the ocean to usurp Beyond all bounds, 'till inundation rise Above the highest hills.

Milton's Paradise Lost. Your cares about your banks infers a fear Of threatening floods, and inundations near.

Dnjdcn.

One day as I was looking on the fields withering with heat, I felt in my mind a sudden wish that I could send rain on the southern mountains, and raise the Nile to an inundation. In the hurry of my imagination I commanded rain to fall, and, by comparing the time of my command with that of the inundation, I found that the clouds had listened to my lips Johnson's Rassslas.

IN'VOCATE, v.a.) Lat. in and voco. To INVOCATION, n. s. > invoke ; to call upon or INVOKE', v.a. J pray to: invocation, the

act of prayer ; the form of calling for aid, or for the presence of any being. Invoke, synonymous with invocate.

Is not the name of prayer usual to signify even all the service that ever we do unto God ? And that for no other cause, as I suppose, but to shew that there is in religion no acceptable duty, which devout

invocation of the name of God doth not either presup-pose or infer. Hooker.

My invocation is Hone'st and fair, and in his mistress' name.

Shaksjieare.

Poor key-cold figure of a holy king ! Be't lawful, that I invocate thy ghost, To hear the lamentations of poor Anne. Id. And over them triumphant death his dart Shook, but delayed to strike, though oft invoked With vows, as their chief good, and final hope.

Milton. The power I will invoke dwells in her eyes.

Sidney

The whole poem is a prayer to Fortune, and the invocation is divided between the two deities.

Addison on Italy. The skilful bard,

Striking the Thracian harp, invokes Apollo, To make his hero and himself immortal.

Prior.

He not in vain Invokes the gentle deity of dreams. Armstrong.

Where shall I seek thy presence 1 How unblamed invoke thy dread perfection ? Barbautd. A Summer Evening's Meditation.

INVOCATION, in divinity, the difference between the invocation of God and of the saints, as practised by the Papists, is thus explained in

the catechism of the council of Trent : — We beg of God, to give us good things, and to deliver us from evil ; but we pray to the saints, to intercede with God and obtain those things which we stand in need of. Hence we use different forms in praying to God and to the saints : to the former we say, hear us, have mercy on us ; to the latter we only say, pray for us. The council of Trent expressly teaches, that the saints who reign with Jesus Christ offer up their prayers to God for men; and condemn those who maintain the contrary doctrine. The Protestants reject this practice as contrary to Scripture, deny the truth of the fact, and think it absurd to suppose, that a limited finite being should be in a manner omnipresent, and at one and the same time hear and attend to prayers offered to him in England, China, and Peru. Hence they infer, that, if the saints cannot hear us, it is folly to pray to them.

IN'VOICE, n. s. This word is perhaps corrupted from the French word envoyez, send. A catalogue of the freight of a ship, or of the articles and price of goods sent by a factor.

INVOLVE', v. a.) Lat. involvo. To en-INVOLU'TION, n.s. jiwrap; to entwist; to im-ply or comprise ; to include ; to entangle ; to complicate or blend. Involution, the act of wrapping; the state of being entangled; that which is wrapped round any thing.

No man could miss his way to heaven for want of light ; and yet so vain arc they as to think they oblige the world by involving it in darkness.

Decay of Piety.

Leave a singed bottom all involved With stench and smoke. Milton.

He knows his end with mine involved. Id.

Great conceits are laised of the involution or membraneous covering called the silly-how, sometimes found about the heads of children.

Browne's Vulgar Errourt. In a cloud involved, he takes his flight, Where Greeks and Trojans mixed in mortal fight.

Dry den.

As obscure and imperfect ideas often involve our reason, so do dubious words puzzle men's reason.

Locke.

All things are mixed, and causes blended by mu-tual involutions. Glanville.

The gathering number, as it moves along, Involves a vast involuntary throng. Pope.

One death involves

Tyrants and slaves. Thomson's Summer. What involution ! what extent ! what swarms Of worlds that laugh at earth ! immensely great !

Young.

Now night's dim shades again involve the iky, Again the wanderers want a place to lie, Again they search and find a lodging nigh.

Parnell. Hermit. Much learned dust

Involves the combatants, each claiming truth And truth disclaiming both. ' Cowjer.

INVOL'UNTARILY, adv.) Fr. involon-INVOLUNTARY, adj. \ taire ; Lat. in and

volo. Not by choice : not having the power of choice ; not done willingly.

The forbearance of that action, consequent to such command of the mind, is called voluntary ; and whatsoever action is performed without such a thought of the mind, is called involuntary. Locke.

But why, ah tell me, ah too dear ? Steals down my cheek the' involuntary tear ?

Pope.

INURE', v. a. } Lat. in and uro. To INUUE'MENT, n. ». f accustom by practice ; to habituate ; it had anciently with before the thing practised : inurement, practice ; habit ; custom

That it may no painful work endure, It to strong labour can itself inure.

Hubberd's Tale.

Because they so proudly insult, we must a little inure their ears uith hearing how others, whom they more regard, are accustomed to use the self-same language with us. Hooker.

The forward hand, inured to wounds, makes way Upon the sharpest fronts of the most fierce. Daniel.

They, who had been most inured to business, had not in their lives ever undergone so great fatigue for twenty days together. Clarendon.

To inure Our prompt obedience. Milton. Paradise Lott.

If iron will acquire by mere continuance a secret appetite, and habitual inclination to the site it held, then how much more may education, being nothing else but a constant plight and inurement, induce by custom good habits mto a reasonable creature.

Wotton.

Sermons he read, and lectures he endurec And homilies, and lives of all the saints ; To Jerome and to Chrysostom inured, He did not take such studies for restraints.

Byron. Don Juan.

INURN', v. a. In and urn. To intomb; to bury.

The sepulchre

Wherein we saw thee quietly inurntd, Hath oped its ponderous and marble jaws To cast thee up again. Shakspeare. Hamlet. Amidst the tears of Trojan dames invmed, And by his loyal daughters truly mourned.

INUTILE, adj. > Fr. inutile, imttUite ; Lat.

INUTIL'ITY, n. s. $ inutilis, inutilitas. Useless; unprofitable : uselessness ; unprofitableness.

To refer to heat and cold is a compendious and inutile speculation. Bacon'* Natural History.

INVUL'NERABLE, adj. Fr. invulnerable ; Lat. invulnerabilis. Not to be woundi d ; secure from wound.

Our cannon's malice vainly shall he spent Against the' invulnerable clouds of heaven.

bhaksptarr.

Nor vainly hope

To be invulnerable in those bright arms, That mortal dint none can resist. Mr//i>*

INWALL', t>. a. In and wall. To enclose or fortify with a wall.

Three such towns in those places with the garrisons would be so augmented as they would be abl« with littte to inwall themselves strongly.

Spenser on Ireland.

IN'WARD, adv., adj. & n. t.~\ Sax. inpeajv». IN'WARDS, adv. f Within; with

IN'WARDLY, adv. 4 inflection or inIN'WARDNESS, n. *. J curvity into the

mind or thoughts : internal ; reflecting ; deeply thinking; intimate; familiar; seated in the mind : inward, an intimate acquaintance : inwardness, intimacy ; familiarity.

Mine bill now maketh finall mention, — That ye ben ladie, in myne inward thought.

Chaucer. The Court of Love. Hi* heart with vengeance inwardly did swell, And forth at last did break in speaches sharpe and

fell. Spenser. Faerie Queene.

Though the lord of the liberty do pain himself all he may to yield equal justice unto all, yet can there not but great abuses lurk in so inward and absolute a privilege. Spenser.

That which inwardly each man should be, the church outwardly ought to testify. Hooker.

Looking inward we were stricken dumb ; looking upward we speak and prevail. *(*.

You know my inwardness and love Is very much unto the prince and Claudio.

Shaktpeare.

Sir, I was an inward of his ; a sly fellow was the duke ; and I know the cause of his withdrawing.

Id.

The parts of living creatures that be more inwards, nourish more that the outward flesh.

Bacon's Natural History.

The medicine? which go to these magical ointments are so strong, that if they were used inwards they would kill ; and therefore they work potently, though outwards. Bacon.

Yet all these stars which deck this beauteous sky By force of the' inward sun both shine and move ; Throned in her heart sits love's high majesty ; In highest majesty the highest love.

Fletcher's Purple Islana. If of his outward -meanes, theeves make a prise ; Hee, more occasion hath to exercise His inward Riches: and they prove a wealth, More useful! and lesse lyable to stealth. G. Withers,

Nor can be easily

Repulsed, without much inward passion felt, And secret sting of amorous remorse.

Milton's Samson Agonistes.

He stretches out his arm in sign of peace, with his breast bending inward. Dryden's Dufresnoy.

They esteem them most profitable, because of the great quantity of fat upon their inwards. Mortimer.

Sickness, contributing no less than old age to the shaking down this scaffolding of the body, may discover the inward structure more plainly. Pope.

Darkness has more divinity to me ; Jt strikes thought inward. Youn<r.

I'pon her face there was a trait of grief, The settled shadow of an inward strife, And an unquiet drooping of the eye, As if its lid were charged with unshed tears.

Byron.

INWEAVE'. Preter. inwove or inweaved, part. pass, inwove, inwoven, or inweaved. In and weave.

To mix any thing in weaving, so that it forms part of the texture.

A fair border, wrought of sundry flowers, Inwoven with an ivy winding trail. Spenser.

Down they cast Their crowns, inwove with amaranth and gold.

Milton. To entertwine ; to complicate.

The roof

Of thickest covert was inwoven shade. Miltor. . IN WOOD', v.a. In and wood. To hide in a wood. Not used.

He got out of the river, inwooded himself so as the ladies lost the marking his sportfulness. Sidney.

INWRAP, v. a. In and wrap.

To cover by involution : to involve. And over them Arachne high did lift

Her cunning web, and spread her subtil net,

Inwrapped in foul smoak. Faerie Queene.

This, as an amber drop inn-raps a bee, Covering discovers your quick soul ; that we May in your through-shine front our heart's thoughts see. Donne.

To perplex ; to puzzle with difficulty or obscurity.

The case is no sooner made than resolved ; if it be made not in wrapped, but plainly and perspicuously.

Bacon.

It is doubtful whether the following examples should not be enrap or inrap, from Lat. in and rap, rapio, to ravish or transport.

This pearl she gave me I do feel't and see't : And though 'tis wonder that iiiwraps me thus, Yet 'tis not madness. Shakspeare.

For if such holy song Enwrap our fancy long Time will run back, and fetch the age of gold.

Miltm.

INWROUGHT', adj. In and wrought. Adorned with work.

Camus, reverend Sir, went footing slow, His mantle hairy, and his bonnet sedge,

Inwrought with figures dim, and on the edge Like to that sanguine flower inscribed with woe.

Milton.

INWREATHE', v. a. In and wreath. To surround as with a wreath.

Bind their resplendent locks inwreathed with

beams. Milton.

Nor less the palm of peace inwreathes thy brow.

Thomson.

IO, in fabulous history, the daughter of Ina-chus, or, according to others, of Jasus and Pirene, was priestess of Juno at Argos. Jupiter became enamoured of her ; but, Juno having surprised him in her

company, Jupiter changed lo into a beautiful heifer ; and the goddess, knowing the fraud, obtained from her husband the animal whose beauty she pretended to commend. Juno commanded the hundred-eyed Argus to watch the heifer; but Jupiter sent Mercury to destroy Argus, and restore lo to her liberty. Juno then sent one of the Furies to torment her. She wandered over the greatest part of the earth, and crossed over the sea, till at last she stopped on the banks of the Nile, still exposed to the torments of the Fury. Here Jupiter restored her to her natural form, after which she brought forth Epaphus. Afterwards she married Osiris, king of Egypt, and treated her sub-JOA

jects with sucli mildness, that after death she dered. Lewis, king of Hungary marched to was worsnipped under the name of Isis. Ac-avenge his brother's death, and compelled her cording to Herodotus, lo was carried away by to fly to Provence. Having afterwards recovered Phoenician merchants, who wished to make re-her kingdom, she married a third and fourth pr.sals for Europa, who had been stolen by the husband, but having no children adopted Charles Greeks-de Duras, who, at the instigation of the king of

JOAB, 3N1', Heb. i. e. Fatherhood, a brave Hungary, smothered her between two mattresses, general of the Israelites under king David, and the *n 1381.

son of Zeruiah, David's sister, and brother of JOAN (Pope), a fictitious character only wor-Abishai and Asahel. His defeat of the army thy of notice as having been the subject of under Abner, his capture of the fort of Zion considerable controversy. The fable asserted from the Jebusites, and his victories over the that, in the middle of the ninth century, a female Moabites, Philistines, Edomites, Syrians, Am-named Joan who had received an excellent edu-monites, and the rebels under Absalom and cation conceived a violent passion for a young Sheba; as well as his intercession for Absalom, monk at Mentz named Felda ; and, in order to and his judicious advice to David against obtain admittance to his monastery, assumed the mourning for his death, and against numbering male habit. The plan succeeded, and after the

people, are recorded in 2 Sam. ii — xxiv. having long indulged in their amours undisHe was a faithful adherent to his royal uncle, in turbed, they at length eloped, and travelled his adversity as well as in his prosperity. Joab's through many of the countries of Europe, en-greatest crimes appear to have been his treach-gaging the assistance of the best masters in the erously murdering ABNER and AM ASA ; see these sciences in the different cities through which articles, for there seems to have been nothing they passed. On the death of her lover, Joan criminal or treasonable in his joining the party repaired to Rome, still in the dress of a man ; of Adoni;ah, the heir apparent; and for these ar|d commenced the duties of professor, and murders he was justly put to death by Solomon's persons of the highest rank and most considerable talents enlisted in the number of her disciples. At length, on the death of pope Leo S. in 855, she was unanimously elected his successor to the pontifical throne. At length she confided her secret to a domestic whom she took to her bed, the consequence of which was her pregnancy, and she was taken in labor at one of the most solemn processions, delivered of a

order, A. A. C. 1014.

JOACHIM, a celebrated monk, born at Ce-lico, near Cosenza. He went on a pilgrimage to the Holy Land, and ou his return joined the Cistercians; became abbot of Flora in Calabria, and founded several other monasteries, which he governed with great discretion. He was regarded by his followers, see next article, as a prophet, and his predictions were printed in a work entitled The Everlasting Gospel. He wrote several other books, and died in 1202.

JOACHIMITES, in church history, the disciples of Joachim. They were particularly fond of certain ternaries : The Father, they said, operated from the beginning till the coming of the Son; the Son, from that time to theirs; A. D.

child in the street, and died on the spot. It is likewise said, that, to perpetuate the memory of the adventure, a statue was erected on the place where it happened ; that, in abhorrence of the crime, the succeeding popes in their annual processions from the Vatican to the Lateran have turned off from that street ; and that, to prevent a similar imposition, a custom was introduced

1260 ; and from that time the Holy Spirit was of examining each pope previously to his conse-to operate. They also divided every thing recration, in order to ascertain his sex. Such are lating to men, to doctrine, and the manner of the particulars of a story that seems not to have

living, into three classes, according to the three persons in the Trinity: The first ternary was that of men, of whom the first class was that of married men, which had lasted during the whole

been called in question till the time of Luther, but which the best informed historians usually abandon as fictitious. ‘ Till the reformation,’ says Gibbon, ‘ the tale was repeated and believed

period of the Father; the second was that of without offence, and Joan’s female statue long

clerks, which had lasted during the time of the Son ; and the last was that of the monks, in which there was to be an uncommon effusion of grace by the Holy Spirit : The second ternary was that of doctrine, *viz.* the Old Testament, the New, and the everlasting Gospel ; the first they ascribed to the Father, the second to the Son, and the third to the Holy Spirit : A third ternary consisted in the manner of living, *viz.* under the Father, men lived according to the flesh ; under the Son, they lived according to the flesh and the Spirit; and under the Holy

occupied her place among the popes in the cathedral of Sienna. She has been annihilated by two learned Protestants, Blondel and Bayle, but their brethren were scandalised by this equitable and generous criticism. Spanheim and L’Enrant attempted to save this poor engine of controversy ; and even Mosheim condescends to cherish some doubt and suspicion.’

JOAN OF ARC, commonly called the Maid of Orleans, was born of low

parentage at Domremi, a little village on the borders of Lorraine. She became servant at an inn and attended to

Ghost, they were to live according to the Spirit the horses. At this time the affairs of France

only. were in a deplorable state, and Orleans was so

JOAN I. queen of Naples, daughter of closely .beseiged by the duke of Bedford that

Charles king of Sicily, was born in 1326; and its capture appeared to be inevitable. In this

began to reign in 1345. She married Andrew exigency Joan pretended to have received :

king of Hungary, whom she murdered, to make divine commission to expel the invaders. On

room for another husband, whom she also mur-being introduced to the French king Charles V II.

she offered to conduct him to the market place of Orleans to raise the siege, and attend his coronation at Ilheims, then in possession of the English. Slie headed the French troops, and while «hey wero elated hy having, as they supposed, an Inspired leader, the English were proportionally dismayed. Joan entered Orleans in triumph, and the coronation at Kheims followed ; after which Charles caused a medal to be struck in honor of the heroine, and also ennobled her family. The town of Domremi, where she was born, was declared exempt from all

imposts for ever. After the coronation, Joan intimated that her mission was at an end, and that she should now retire to private life ; but Dunois persuaded her to remain with the army, to cheer the soldiers by her presence. This was to her fatal advice ; for being taken with the garrison of Compeigne, the English, to their great disgrace, caused her lobe burnt as a sorceress, in the nineteenth year of her age, 1431. Some doubts, however, have been raised against this part of the story ; and it has been even said, that so far from being put to death, she lived and was married. Some time after, when public commiseration had succeeded to vindictive bigotry, a woman appeared at Metz, who declared herself to be Joan of Arc. She was every where welcomed with zeal. At Orleans, especially, where Joan was well known, she was received with the honors due to the liberatress of their town. She was acknowledged by both her brothers, Jean and Pierre d' Arc. On their testimony she was married by a gentleman of the house of Amboise, in 1436. At their solicitation her sentence was annulled in 1456. (Hist, de la Pucelle, par I* Abbe" Lenglet. Me-langes Curieux Monstrelfct, &c.)

JOANNA, Anjuan, or llinzuan, one of the largest and best known of the Comora Islands, between the north end of Madagascar and the continent of Africa, has been governed about two centuries by a colony of Arabs. It is of a triangular shape, and rises in well wooded mountains to a peak in the centre : the whole island abounding with a calcined substance, and other volcanic appearances. The climate is healthy, and the land of the interior tolerably fertile ; but this is barren, and the whole neighbourhood has been of late greatly desolated by pirates. See COMORA.

The valleys, or glens, have each their rivulet descending from the mountains which bound them, and whose summits are covered with tim-ber trees, and their bases with cocoa nuts, ba-nanas, oranges, and lemons. The sugar-cane comes to perfection as well as the indigo plant. Thf f›ily wild animals known on the island are the makis and the common mouse; the domestic ones are small but well tasted; horned cattle with humps, and goats. The cattle are offered at about ten dollars each. The commonest birds are, Guinea fowl, doves, and quails. The population of the island in 1804 was not calcu-l.ited at more than 6000 or 7000 ; though it appears to have been formerly much greater. The natives seem to be a mixture of Arabs and ne-iiroes ; their religion is also a mixture of Mahommedanism and negro idolatry. They are good sailors, and have vessels, called trankys, of

some burden, in which t1 ey trade to Bombay and Surat with cocoa-nuts and cowries.

Anjuan is governed by a chief or sultan, who pretends to a superiority over the other islands. The people are divided into nobles and peasants ; the former are the only merchants, and mo-nopolize the trade of supplying" European vessels with fresh provisions, the only purpose for which they touch at this island.

The bay of Moochadon, on the north side of the island, is the place now usually visited by European ships : this bay occupies the whole of this side, the north-east and north-west points of the island being its limits. Off the former are some breakers, but it may be approached within half a mile ; and off the north-west point is a small island, called the Paps, united to the point by a reef. Several rivulets fall into this bay, so that watering is easy. The town called Sultan is a mere assemblage of miserable hovels, surrounded by a wall fifteen feet high, flanked with square towers. It is also defended by a kind of fort, on an elevation ; the ascent to which is by 300 or 400 steps, enclosed between two walls. There are also two villages on this bay, one on the east, and the other on the west. On a bay of the east side of the island was the town of Anjuan, formerly the usual anchorage of European vessels ; but the town was destroyed by the Madagasses, in 1790.

Captain Tomlinson, who was here in 1809, says ' the people of Johanna are the most courteous and inoffensive I have ever met ; tendering every assistance to strangers, and executing any commission entruste 1 to them with the greatest fidelity and care. They have lately been much reduced by the natives of Madagascar, who have annually invaded the islands for the purpose of carrying off slaves, which they sell to the French. The other islands, Comoro, Mohilla, and Ma-yotta, are nearly depopulated from the attacks of these marauders, and at this time Johanna, from twelve towns, is reduced to two.'

JOANNINA, a considerable city of European Turkey, the capital of Albania. The environs are extremely beautiful : on the one side is a fertile plain, of twelve or fourteen miles in length, covered with groves and plantations of the richest produce ; on the other a noble lake, with its well wooded islands, stretches out for a distance of several miles. The town is about two miles and a half in length, its breadth is nearly one. The principal street runs nearly the whole length of the town, and another crosses it at right angles : both, as well as several of the others, are well paved ; and the bazaar is large, and full of good shops. The dwelling-houses have generally a court yard planted with trees, or an adjoining garden. The ground-floor is

generally used for stables or warehouses, and the windows of the houses are small. On a peninsula, in the lake, and surrounded with walls and fortifications, was the palace of the late pacha. Some of the mosques and churches are worth notice.

The inhabitants, composed of Greeks and Albanians, and in a small proportion of Turks and Jews, neither wear the dress nor speak the lan-gnage of the surrounding country ; but the Ro-maic or modern Greek : in their manners they

resemble the Greeks of Morea. There are here two academies; one for boys, the other, called a gymnasium, for youths farther advanced : at the latter are taught the languages, history, geography and the elementary parts of philosophy. Many of the better class pass several years of their youth at Trieste, Venice, and Vienna.

There are hardly any manufactures in Joannina, except of Turkey leather ; hut works of embroi-dery are carried to great perfection. An annual fair is held about a mile from the town, which continues a fortnight, and where a variety of articles of European manufacture are displayed. Large flocks of sheep, and droves of cattle, are likewise brought down from the mountains for sale. The principal articles of import are woollens, glass, hardware, paper, and fire-arms : those of export are wool, corn, oil, tobacco, and cattle.

Joannina is said to have been founded in the fifteenth century : but at the beginning of the nineteenth century it grew into notice as the capital of the celebrated Ali Pacha, whose life we have given. It is the see of an archbishop, and stands seventy miles from Larissa, 115 south-west of Salonica, and 400 west by south of Constantinople. Inhabitants about 40,000

JOANPORE, a district of Allahabad, Hindostan, situated between the Gogra and the Ganges, and intersected by the Goomty. It is extremely fertile and very well cultivated. The inhabitants are Mahommedans and Hindoos, in about equal proportions. Of the latter, the Rajecoomars were much addicted to the inhuman practice of female infanticide. This district was once annexed to Benares, and came into possession of the British about 1780. Its chief towns are Azimgur and Joanpore ; and it is included in the collec-torship of Benares.

JOANPORE, a city of Hindostan, the chief town of the above-mentioned district, was formerly the capital of a principality. The fortress, built in 1370, by sultan Feroze III. of Delhi, was erected around the ruins of a celebrated Hindoo temple, called Kerarbeer. When the empire of Mahmoud was overturned, in the end of the fourteenth century, the governor of the eastern districts, named Khuaje Jehan, assumed the royal dignity, and made Joanpore his capital. He was succeeded by his son Mobarik Shah, and shortly after by sultan Ibrahim, who, during a reign of forty years, spared no pains to improve the fortress and city ; and several of his mosques and other pub-lic buildings still remain. In the next century Joanpore fell again to the empire of Delhi. It was often taken during the contest between the Afuhauns and Moguls; but, about the year 1570, it was thoroughly repaired, during the government of Monaim Khan, of the court of Akbar. During his government the celebrated bridge of Joanpore %vas built.

The town surrounds the fort on three sides, and contains a good bazaar ; but the vicinity for several miles is covered with tlie ruins of tombs and mosques. Of the latter, that of the Jamai Musjed is very handsome. It is said to have been erected by sultan Ibrahim, during seven years of famine, to give employment to the poor. The date on the great gateway is A II. 85:2.

Joanpore is the station of a civil establishment, of judge, &c., and of a battalion of native infantry.

JOAO DEL REY, a town and district of Bra-sil, .n the country of Minas Geraes. It is situated on the Rio das Mortes, which runs northwards into the Rio das Velhas. The neighbourhood a fertile, and produces excellent fruits.

JOASH, Heb. «w», i. e. the fire of the Lord, the son of Ahaziah, king of Judah, the only one of the blood royal who was preserved from his

grandmother's bloody massacre. See AIHALIAH. His preservation, coronation, relapse into idolatry, and ungrateful murder of his cousin Zechariah, the son of his benefactors, with his consequent misfortunes and merited death, A. M. 3165, and A. A. C. 839, are recorded in 2 Kings xi. xii. and 2 Chron. xxiii. xxiv.

JOASH, the son of Jehoaz, king of Israel. Though he copied the political idolatry of Jeroboam I. he seems to have had a great respect for Elishah. His last visit to that prophet, with his repeated victories over the Syrians, and over Amaziah king of Judah, with his pillage of Jerusalem, are recorded in 2 Kings xiii. xiv. and 2 Chron. xxv. He died A.M. 3197, and A.A.C. 810; and was succeeded by Jeroboam II.

JOB, n. «., v. a. & v. n.-\ ItaLgiofeo : etymology JOB'S-TEARS, n. *. f is doubtful. A piece JOB'BER, n. s. /of chance work; a

JOB'BERNOWL, n.t. J low mean lucrative affair ; a sudden stab with a sharp instrument : to strike suddenly, or drive in a pointed instrument ; to buy and sell as a broker : to work occasionally : Job's-tears, an herb : jobber, one who sells stock for others ; one who works occasionally : jobbernowl, most probably from Flem. jobbe , dull, and Sax. J>nol, a head, loggerhead ; blockhead.

And like the world, men's jobbernowlt Turn round upon their ears, the poles.

Hudibrai.

As an ass with a galled back was feeding in a meadow, a raven pitched upon him, and sat jobbing of the sore. L' Estrange.

The work would, where a small irregularity of stuff should happen, draw or job the edge into the stuff.

Moron.

He was now with his old friends, like an old favourite of a cunning minister after the job is over.

Arbuthnot.

The judge shall job, the bishop bite the town, And mighty dukes pack cards for half a crown.

Pope.

No cheek is known to blush, no heart to throb Save when they lose a question, or a job. Id.

So cast it in the southern seas. And view it through a jobber's bill ;

Put on what spectacles you please, Your guinea's but a guinea still. * Strift.

JOB, Heb. 3VK, i. e. patient, an ancient in habitant of the land of Uz, east of Gileaa, remarkable for his patience in the midst of the most accumulated and extreme adversity. Many authors have supposed, with the Jewish rabbies, that the character of Job is entirely parabolical, or fictitious ; but this is highly improbable, as not only the apostle James (ch. v. 11) mentions

Kim ns a real character, but the language applied to him by the Almighty himself in Ezekiel xiv. 14, 20, puts the matter beyond all possibility of doubt. In that passage he is ranked with Noah and Daniel (who we are sure were no fictitious characters). The period in which Job lived has also been much disputed ; but many passages ir the book of Job plainly show that he flourished in the patriarchal age. The allusions to the de-luge and the destruction of Sodom, and the total silence of Job and his friends with respect to the law (which is neve: once quoted), and to the departure of the Israelites out of Egypt, show that he must have lived between the former and the latter of these events. But what fixes the chronology of Job, almost to a certainty, is that his aged friend, F.liphaz the Temanite, is expressly recorded to have been the son of Esau, and the father of Teman (Gen. xxxvi. 10, 11), who is said to have built a city named after himself, in which his father resided, and was hence called a Temanite. Alstedius, in his Thesaurus Chronologiae, proceeding upon this probability, fixes the era of Job's sufferings in the years of the world 2330 and 2331;

and gives two genealogies of Job, by one of which he makes him the son of Uz, or lluz (mentioned Gen. xxii. 21), the eldest son of Nahor, Abraham's brother. The following is appended to the canonical book in the Greek, Arabic, and Vulgate, versions, and is supposed to have been copied frcm the old Syriac translation. It is therefore unquestionably of very high antiquity. 'Job dwelt in the Ausitis (land of Uz or Utz), on the confines of Idumea and Arabia. His name was at first Jobab. He married an Arabian woman, by whom he had a son called Ennon. He himself was the son of Zerah, of the posterity of Esau, and a native of Bozrah ; so that he was the fifth from Abraham. He reigned in Edom (Idumea), and the kings before and after him reigned in the following order : — Balak, the son of Beor, in the city of Dinhabah (often spelt Denaba) ; and next in succession Job, otherwise called Jobab. To Job succeeded Husham, prince of Teman. After him reigned Hadad the son of Bedad, who defeated the Midianites in the field of Moab. The name of his city was Arith, The friends of Job, who came to visit him, were Eliphaz, of the line of Esau, and king of Teman ; Bildad,king of the Shuhites; and Zophar the king of the Naa-mathites.' Dr. Watkins, in his Biographical and Historical Dictionary, fixes the birth of Job to about A.A.C. 1700. The de-cent of Elihu also (mentioned in ch. xxxii. ver. 2) from Buz, the second son of Nahor (Gen. xxii. 2i)» is an additional confirmation that Job lived about this period.

Jon, a canonical book of the Old Tes ament, contains & narrative of Job's misfortunes, the uncharitable surmises of his friends, and his final restoration to prosperity. Those who have supposed Job to be a fictitious character have fancied the book of Job to be dramatic. But this book will be read with most instruct on by those who consider it as a simple narrative of facts, left on record to remind us that though ' Man is born to trouble,' and although many trials and difficulties frequently embitter the cup of moitals, yet the design of the Almighty, in permitting these afflic-

tions, is for our ultimate profit and welfare, in the account we have of the ' Sons of God presenting themselves,' &c., and the agency by which Job was tried and afflicted, the attentive student of Scripture will find interesting information as to the nature and operation of that Evil Spirit distinguished by the name Satan. The style of this book is highly poetical, and it abounds with sublime imagery.

Bishop Warburton is of opinion that this book is an allegorical dramatic poem, written by Ezra, some time between the return of the

Jews from the captivity of Babylon, and their thorough settlement in their own country : thus Job is designed to personate the Jewish people ; his three friends, the three great enemies of the Jews, Sanballat, Tobiah, and Geshem. Job's wife was intended by the poet to represent the idolatrous wives which many of the Jews had taken, contrary to the law. Le Clerc also supposes that the book of Job was written after the Jews were carried into Babylon, and mentions, in proof of this, the frequent Chaldaisms that occur in it.

Grotius apprehends that this book contains a true history ; that the events recorded in it happened in Arabia, whilst the Israelites wandered in the desert ; and that the writer, who was a Hebrew, lived before the time of Ezekiel, but af-ter David and Solomon ; and that it was written for the use of the Edomites transported to Babylon, to confirm them in the worship of the true God, and to teach them patience in adversity. Schultens ascribes the poetical part of this book, the style of which, he says, has all the marks of the most venerable and remote antiquity, to Job himself; the rest he supposes to be the work of some Hebrew collector. Most of the Jewish doctors believe that Moses was the writer of this book ; and M. Huet supposes that it was written by Moses in his exile in the land of Midian.

Dr. Mason Good also inclines to believe that Moses was the writer, and that the last two vefses were added by some transcriber. See Dr. Good's Translation of Job.

JOB, or AYUB (Solomon), an African prince, son of the king of Bondou, in Senegambia, w.*?:sent in 1730 by his father tc the sea-coast to treat with the English traders, but, being taken prisoner by the Mandingoes, was himself sold as a slave to them. He was taken to Maryland, and employed as a field laborer • but having fle«l from his master, and excited curiosity, he was ransomed by general Oglethorpe and some other gentlemen, and sent, April 1733, to England. Here he translated, for Sir Hans Sioane, some Arabic MSS., was presented at court, and, having been furnished with valuable presents, set sail for Africa. He reached Fort James, on the Senegal, the 8th of August 1734 ; but, while preparing to proceed for Bondou, he learnt that his father was dead : his future fate was never known in this country. While in England he wrote three co-pies of the Koran, from memory.

JOBERT (Lewis), a pious and learned Jesuit, born at Paris in 1647. He distinguished himself as a preacher ; and wrote a treatise, entitled La Science des Medaille?, which is much esteemed, with several othertracts. He died in 1719: the best edition of this work is that of Paris in 173'.), 2 vo!s. 12mo.

JOCASTA, in fabulous history, the daughter of Menoeceus, and wife of Laius king of Thebes, by whom she had (Edipus. Having afterwards married (Edipus, without knowing him, when she discovered that she had been guilty of incest she hanged herself in despair. She is called Epicasta by some mythologists. See CEmpus.

JOCK'EY, n.s. & v. a. From Jack, the diminutive of John, conies Jackey, or, as the Scotch, jockey, used for any boy, and particularly for a boy that rides racehorses; a man that deals in horses; a cheat: jockey, to justle by riding against any one ; to cheat or trick.

These were the wise ancients, who heaped up greater honours on Pindar's jockies than on the poet himself. Addisun.

JOCOSE'LV, adv. Lat. jocosus and jocu—

JOCOSE'NESS, n. s. \laris. Merry; waggish: JOCOS'ITY, n. s. I in jest or sport : merri-JOC'ULAR, adj. Tment; jesting; used both JOCULAR'ITY, n. s. of men and things : jo-JOC'CND, adj. cund, gay; airy; lively.

JOC'UNDLY, adv. }

Then said our hoste ; "certain it woulde seeme Thy lord were wise, and so 1 may wel deme ; He is ful jocunde, also dare I leye. Chaucer. Prologue to the Chanones Yemamnes Tale. There's comfort yet ; then be thou jocund.

Shakspeare.

A laugh there is of contempt or indignation, as well as of mirth or jocosity.

Browne's Vulgar Errours. They on their mirth and dance Intent, with jocund musick charm his ear.

Milton.

The satire is a dramatick poem ; the stile is partly seiious, and partly jocular. Dryden.

He has no power of himself to leave it ; but he is ruined jocundly and pleasantly, and damned according to his heart's desire. South.

Fair nature seems revived, and even my heart Sits light and jocund at the day's return.

Howe's Royal Convert.

If the subject be sacred all ludicrous turns, and jocose or cortical airs, sf.oma oe excluded, lest young minds learn '.* Trifle «'ilh me aw»ui solemnities of religion. Watts.

K<Jw j'ocufM did they drive their teams afield How bowed the woods beneath tneir sturdy stroke.

Gray's Elegy.

I/ i must make a prison of our palace, At ieast we'll wear our fetters jocundly.

Byron.

JODE (Peter de), an engraver of some note, born in Antwerp. He received his first instructions from Henry Goltzius : and afterwards went to Italy, where he engraved plates from different painters; and returned to Antwerp about 1601, where he resided till his death, A. D. 1634. His works are numerous, and possess considerable merit.

JODE (Peter de), the younger son to the former, was born in 1 606. He learned the art of engraving from his father, and surpassed him in taste and the facility of handling the graver; but can hardly be said to have equalled him in correctness of drawing the naked parts of the human figure. They went together to Paris, where they engraved conjointly a considerable number of plates. The son's finest performances are from VOL. XII.

Rubens and Vandyck. Basan says of him, that in several of his engravings he has 'equalled the best engravers, and in others he has sunk below himself.' His son, Arnold, was also an engraver, but of

very inferior merit.

JODELLE (Stephen), lord of Limodin, was born at Paris in t532; and distinguished himself so greatly, by his poetical talents, that he was reckoned one of the Pleiades, celebrated by Ronsard. He is said to have been the first Frenchman who wrote plays in his own language according to the ancient style. In his younger years he embraced the reformed religion, and wrote a satire on the mass in 100 Latin verses; but afterwards returned to the Roman Catholic faith. He died in 1579, very poor.

IODINE, in chemistry, a peculiar undecompounded principle so called from the Greek faStif, violet-colored, on account of the violet color of its vapor. Gay Lussac gave it the appellation of lone from iov the violet : but Sir H. Davy conceiving that this term, in consequence of its derivatives Ionic and Ionian, would lead to ambiguity, suggested iodine, which is now universally adopted. It is preferable to iode ; because more analogous to oxygen and chlorine the names of the only other two supporters of chemical combustion at present discovered. The investigation of this singular substance will always be regarded as an sera of the first importance in chemistry, as it was then that chemical philosophers first generally felt the necessity of abandoning Lavoisier's hypothesis of oxygenation. In 1812 iodine was accidently discovered by M. de Courtois, a manufacturer of saltpetre at Paris. In his processes for procuring soda from kelp, he found the metallic vessels much corroded ; and, in searching for the cause of the corrosion, he made this important discovery. Finding that the cares of his manufactory would not allow him the leisure requisite for the investigation of the properties of this new substance, he communicated the se-cret to M. Clement, presented him with a quantity of iodine, and requested him to determine its nature. M. Clement accordingly made a num-ber of experiments upon the subject, the results of which were communicated to the French Institute about the end of the year 1813, and afterwards published in the Annalesde Chimie. He stated its specific gravity to be about 4 ; that it became a violet-colored gas at a temperature be-low that of boiling water ; that it combined with the metals, and with phosphorus and sulphur, and likewise with alkalies and metallic oxides ; that it formed a detonating compound with ammonia ; that it was soluble in alcohol, and still more soluble in ether; and tt.at by its action upon phosphorus, and upon hydrogen, a substance having the characters of muriatic acid was formed. In this communication he offered no decided opinion respecting its nature. M. Gay Lussac next undertook the examination of this interesting substance, and published his remarks on it under the title of Memoir sur 1'Iode. Meanwhile M. Ampere having

presented Sir H. Davy, who was then in Paris, with a quantity of iodine, he subjected it likewise to experiment, and drew similar conclusions with tnose of Gajr Lussac. He j ublished a paper on the sm.jeot

.n the Philosopliical Transactions for 1814, and has since prosecuted his investigation in several oilier papers published in subsequent volumes of the same work.

Iodine has been found in the following sea-weeds, the algse aquaticae of Linnaeus : —

Fucus cartilaginous, Fucus palmatus,

merobranaceus, filum,

filamentosus, digitatus,

rubens, saccharinus,

nodosus, Ulva umbilicalis,

serratus, pavonia,

siliquosus, linza, and in sponge.

Dr. Fyfe has shown, in an ingenious paper, published in the first volume of the Edinburgh Philosophical Journal, that on adding sulphuric acid to a concentrated viscid infusion of these algae in hot water, the vapor of iodine is exhaled. But it is from the incinerated sea-weed, or kelp, that iodine in quantities is to be obtained. Dr. Wollaston first communicated a precise formula for extracting it. Dissolve the soluble part of kelp in water. Concentrate the liquid by evaporation, and separate all the crystals that can be obtained. Pour the remaining liquid into a clean vessel, and mix with it an excess of sulphuric acid. Boil this liquid for some time. Sulphur is precipitated, and muriatic acid driven off. Decant off the clear liquid, and strain it

through wool. Put it into a small flask, and mix it with as much black oxide of manganese as we used before of sulphuric acid. Apply to the top of the flask a glass tube, shut at one end. Then heat the mixture in the flask. The iodine sublimes into the glass tube. According to Dr. Fyfe no vestiges of iodine can be discovered in sea-water.

The common method of procuring muriatic acid from the saline matter of sea-water, by the addition of sulphuric acid, convinced me, says Dr. Fyfe, that, if this substance contained iodine, it could not in this way be got from it. I was therefore obliged to have recourse to other means. When sea-water is subjected to galvanism in a gold cup, a small quantity of a black powder is formed ; this, it is supposed by Sir H. Davy, might be a compound of iodine and gold. To ascertain if this was the case, a quantity of sea-water, concentrated by evaporation, was put into a silver vessel, attached to one end of a galvanic battery ; a gold wire from the other end was introduced into the fluid. The silver in a short time acquired a dark coating, and a minute portion of a black powder was formed. This was subjected to the action of fused potassa, and then to sulphuric acid, but without any appearance of iodine. During the preparation of kelp, from which iodine is procured, the vegetable matter is subjected to a high temperature Conceiving that, perhaps, the iodine might be a product of the combustion, some of the residue of the evaporation of sea-water was mixed with charcoal in powder, and a high heat applied to it. When cold, the mixture was treated with sulphuric acid, but without obtaining any iodine. The sa-l-.ne matter of sea-water was subjected to various other trials, but uniformly with the same result.

Iodine is, however, found in various marine molluscous animals, as the doris, Venus, Ostrea, &c., and even in sponges and Gorgonia. Very lately, this curious substance has been detected by Vauquelin in combination with silver, in some specimens brought from America.

Iodine, however produced, is a solid, of a grayish-black color and metallic lustre. It is often in scales similar to those of micaceous iron ore, sometimes in rhomboidal plates, very large and very brilliant. It has been obtained in elongated octohedrons, nearly half an inch in length; the axes of which were shown by Dr. Wollaston to be to each other, as the numbers two, three, and four, at least so nearly, that, in a body so volatile, it is scarcely possible to detect an error in this estimate, by the reflective goniometer. Its fracture is lamellated, and it is soft and friable to the touch. Its taste is very acrid, though it is very sparingly soluble in water. It is a deadly poison.

Mr. Orfila swallowed six grains of it. The consequence was a most horrible taste, saliva-tion, epigastralgia, colic, nausea, and violent sickness. In ten minutes he had copious bilious vomitings, and slight colic pains. His pulse rose from seventy to about ninety beats in the minute. By swallowing large quantities of mucilage, and emollient clysters, he recovered, and felt nothing next day but slight fatigue. When given to dogs, in the quantity of seventy-two grains or more, it generally produces speedy vomiting, by which means it is thrown out of the system, and the animal saved. But if vomiting does not take place, or if it be prevented by tying the oesophagus, death ensues in the course of three or four days. Iodine, in open vessels, readily evaporates, even at the usual atmospheric heats. When it is spread on a plate of glass, if the eye be placed in the same plane, the violet vapor becomes very obvious at the temperature of 100° Fahrenheit. If left in the open air it will speedily fume away, even at 50° or 60°. When kept in a phial, stopped with a common cork, the iodine also disappears, while the cork becomes friable in its texture, and of a brownish-yellow color. It gives a deep brown stain to the skin, which, however, soon vanishes. In odor, and power of destroying vegetable colors, it somewhat resembles very dilute aqueous chlorine. The specific gravity of iodine at 02U 30’ is 4-948. It dissolves in 7000 parts of water. The solution is of an orange-yellow color, and in small quantity tinges raw starch of a purple hue. It melts, according to M. Gay Lussac, at 227° Fahrenheit, and is volatilised under the common pressure of the atmosphere, at the temperature of 350°. Boiling water aids its sublimation.

The specific gravity of its violet vapor is 8 678. It is a non-conductor of electricity, and is incombustible, but with azote it forms a curious detonating compound ; and, in combining with several bodies, the intensity of mutual action is such as to produce combustion. See CHEMISTRY.

With a view of determining whether it was a simple or compound form of matter, Sir H. Davy exposed it to the action of the highl)

inflammable metals. When its vapor is passed over potassium, heated in a glass tube, inflammation takes place, and the potassium burns slowly with a pale blue light. There was no gas disengaged when the experiment was repeated in a mercurial apparatus. The iodide of potassium is white, fusible at a red heat, and soluble in water. It has a peculiar acrid taste. When acted on by sulphuric acid it effervesces, and iodine appears. It is evident that, in this experiment, there had been no decomposition ; the result depending merely on the combination of iodine with potassium.

If iodine be put into a glass tube closed at one end, and a piece of phosphorus be dropped in, a violent action immediately takes place, accompanied with the evolution of heat. The phosphorus melts, and an iodide of phosphorus is formed.

The color of this substance is grayish-black, its texture is crystalline, and it easily melts when heated. The combination takes place whatever proportion of phosphorus and iodine be employed. But in one particular proportion there is no redundancy of either of the constituents. This, according to Gay Lussac, takes place when we mix one part by weight of phosphorus with eight parts of iodine. The iodide thus formed is soluble in water. The solution is colorless. When the iodide is dropped into water a kind of effervescence takes place, and a strong odor is exhaled similar to that of muriatic acid. Both the iodine and the phosphorus are converted into acids. The water is decomposed, its oxygen uniting to the phosphorus constitutes phosphorus acid, while the hydrogen, uniting to the iodine, constitutes hydriodicacid. Thenard asserts, that, in tin; union of iodine and phosphorus, not only caloric, but light is extricated. But Sir H. Davy states that no light is evolved in this process. Repeated experiments have convinced me, says Dr. Traill, of the accuracy of the observation of the British chemist ; but it is only justice to M. Thenard to state, that, in the action between these substances, the evolution of light, as well as of caloric, may be shown, according to the mode of making the experiment. If a small piece of dry phosphorus be dropt into a test-tube, and a quantity of iodine, in its usual scaly form, sufficient to cover the phosphorus, be quickly added, an immediate action ensues ; the tube becomes hot; fumes of iodine are disengaged; and a deep violet-brown liquid is formed, without the evolution of light, even when the experiment is made in a darkened room. But if the proportion of the phosphorus to the iodine be large, and the latter insufficient to cover the former, the action is accompanied by a momentary flash, which 1 attribute to the combustion of the uncovered portion of the phosphorus in the scanty portion of atmospheric air in the tube. By varying the proportions of the two

substances, I can produce the union with or without the extrication of light at pleasure.

Iodine and sulphur do not unite by simple contact ; but if they be mixed in a glass tube, and gently heated, the combination takes place very readily. The color of this compound i? grayish-black, and its texture is radiated like

that of sulphuret of antimony. This iodide appears to be composed of one part sulphur and 7-8 iodine. It does not appear to be immediately decomposed by water. But, according to Gay Lussac, the iodine is separated, if this iodide be distilled with water. This iodide is of a more permanent nature than the chloride of sulphur, which is decomposed, and the sulphur deposited the instant it comes in contact with water. According to Van Mons, if we dissolve iodine in muriatic acid, and pour ammonia over the solution, so that the two liquids do not mix, the iodine will, in a short time, crystallise between the two liquids, in fine pyramids, having their bases turned towards the surface of the liquid. 'Hydrogen, whether dry or moist, did not seem,' says M. Gay ' Lussac, to have any action on iodine at the ordinary temperature; but if, as was done by M. Clement in an experiment at which I was present, we expose a mixture of hydrogen and iodine to a red heat in the tube, they unite together, and hydriodic acid is produced, which gives a reddish-brown color to water.'

There are various ways of obtaining this acid. The first method practised was to pour water over the iodide of phosphorus, and expose the mixture to heat. The gaseous acid was expelled, and received in proper vessels. Gay Lussac pointed out a still easier method of obtaining this acid in a state of purity. Put a quantity of iodine and water into a glass vessel, and cause a current of sulphureted hydrogen gas to pass through it. The iodine speedily dissolves. When that has taken place stop the process, and expose the liquid to heat to drive off the excess of sulphureted hydrogen. The residual liquid is a solution of pure hydriodic acid in water. During this process the sulphureted hydrogen is decomposed. Its hydrogen unites to the iodine while its sulphur is precipitated, and is separated from the liquid by filtration. Hydriodic acid thus prepared is a colorless liquid, having an odor very similar to that of muriatic acid, and a sharp acid taste, leaving behind it a sensation of astringency. By heat it may be driven off in the gaseous form and collected in proper vessels.

Hydriodic acid gas is colorless, and possesses the peculiar taste and

smell of the liquid acid . Its specific gravity, according to the experiments of Gay Lussac, is 4-443, that of common air being 1. So that it is by far the heaviest gaseous body at present known. When it comes in contact of mercurv, it is immediately decomposed by the action of that metal. The mercury unites with the iodine, and forms an iodide; while the hydrogen gas, the other constituent, is left in the gaseous state. It occupies exactly one-half of the volume of the hydriodic acid. Hence it follows, that hydriodic acid gas is compose-! of one volume of iodine in the state of vapor, and one volume of hydrogen gas, constituting together two volumes. Liquid hydriodic acid, when as much concentrated as possible, is of the specifi < gravity 1-7. It smokes like muriatic acid, though not so perceptibly. But if a vessel containing it be placed beside another containing chlorine (supposing both open) a purple-colored atmosphere is' formed between them, showing verv

I 2

sulphurous acid is produced. The solution is a hydriodale of oxide of zinc. When iodine and zinc are made to act on each other under water, in vessels hermetically sealed, on

U Complete" if~ˆher hydriodic acid gas be mixed the application of a .l.Sht heat the water as—

with oxygen gas. In that case water is formed sumes a deep reddish-brown color, because, as

and iodine set at liberty. From this experiment

it seems to follow that iodine is incapable of de-

••vidently »he volatility of the hydriodic acid. This acid boils at 2624°. When hydriodic acid gas is passed through a red hot tube, it is

decomposed at least partially. The decomposition

soon as hydriodic acid is produced, it dissolves iodine in abundance. But by degrees the zinc

composing water. Accordingly, if the vapors of supposed to be in excess, combines with the

iodine and water be passed together through a ™'-~' :«~ "»1 **»> -1""™ hp™mps "»>«ri*«

red hot tube, no oxygen gas is disengaged ; yet

if water holding iodine in solution is exposed to

the solar light, or if it be heated, its peculiar zinc .

whole iodine, and the solution becomes colorless like water.

Iron is acted on by iodine in the same way as and a brown iodide results, which is fusible

color disappears, and the iodine is converted at a red heat. It dissolves in water, forming a partly into hydriodic and partly into iodic acid, light green solution, like that^of nuinate of iron. Now this last acid is a compound of iodine and oxygen ; so that in this case water must be de-

When the dry iodide was heated, by Sir. II. Davy, in a small retort containing pure ammoniacal gas, it combined with the ammonia, and

to the formation of hydriodic, and the other to formed a compound which volatilised without

that of iodic acid. Liquid hydriodic acid very leaving any oxide.

readily dissolves iodine, and acquires a brown

composed, and one of its constituents must go

The’iodide of tin is very fusible. When in

color. Even exposing the liquid acid to the at-powder, its color is a ˆdirty orange-yellow, not mosphere gives it this color ; because the oxygen

unlike that of glass of antimony. When put

of the atmosphere decomposes a portion of the into a considerable quantity of water, it is com-T . • « • i i TT i ‘J:_ ;J ;, r._ ~A

hydriodic acid uniting with its hydrogen, and setting the iodine at liberty, which is immedi-

pletely decomposed. Hydriodic acid is formed, which remains in solution in the water, and the

ately dissolved by the undecomposed portion of oxide of tin precipitates in white flocculi. H the acid. All the hydriodates have the property the quantity of water be small, the acid, being

more concentrated, retains a portion of oxide or tin, and forms a silky orange-colored salt, which may be almost entirely decomposed by water. Iodine and tin act very well on each other, in water of the temperature of 212°.

There are two iodides of mercury ; the one

of dissolving iodine, and of acquiring a deep reddish-brown color; but the iodine is easily separated again, either by boiling the liquid or by exposing it to the air. See HYDRIODIC ACID and CHEMISTRY.

When iodine is sublimed in chlorine gas it

absorbs a considerable quantity of that elastic yellow, the other red : both are fusible and vola-fluid, and forms a compound of a bright yellow tile. The yellow, or protiodide, contains one half

less iodine than the deutiodide. The latter, when crystallised, is a bright crimson. All the iodides are decomposed by concentrated sulphuric and nitric acids. The metal is converted into an oxide, and iodine is disengaged. They are likewise decomposed by oxygen at a red heat, if we except the iodides of potassium, so-dium, lead, and bismuth. Chlorine likewise se-

color. When fused it becomes of a deep orange ; and in the state of vapor from the action of heat, it has likewise a deep orange color. Sir Humphry Davy, to whom we are indebted for our knowledge of this compound, has given it the name of chlorionic acid. In one experiment he found that eight grains of iodine absorbed five cubic inches and a quarter of chlorine

gas. In another experiment twenty grains of parates iodine from all the iodides ; but iodine,

iodine absorbed 9-6 cubic inches of chlorine gas. These two experiments do not agree with each other; but in the first a little water was admitted into the retort, in order to dissolve the chlorionic acid formed ; while no water was admitted in the second experiment. This liquid doubtless facilitated the absorption of the chlorine gas. See CHLORIODIC ACID and CHEMISTRY.

Iodine readily combines with most of the metals. If silver foil is heated nearly to redness, and the vapor of iodine passed over it, an iodide

on the other hand, decomposes most of the sulphurets and phosphurets.

When iodine and oxides act upon each other in contact with water, very different results take place from those above described. The water is decomposed ; its hydrogen unites with iodine to form hydriodic acid ; while its oxygen, on the otherhand, produces,with iodine, iodic acid. AH the oxides, however, do not give the same results. We obtain them only with potassa, soda, barytes, strontian, lime, and magnesia. The oxide

is formed which has a red color, and melts when of zinc, precipitated by ammonia from its solution

in sulphuric acid, and well washed, gives no trace of iodate and hydriodate.

The iodides of lead, copper, bismuth, silver, and mercury, are insoluble in water, while the iodides of the very oxidisable metals are soluble in that liquid. If we mix a hydriodate with the metallic solutions, all the metals which do not decompose water will give precipitates, while those which decompose that liquid will give none. This is at least the case with the above mentioned metals.

From all the above recited facts, we are warranting in concluding iodine to be on undecom

exposed to a low red heat. When this substance is heated with hydrate of potassa it is decomposed, and hydriodic acid and oxide of silver are formed. This iodide is composed of one part by weight of silver and 1*13 of iodine. The iodide of zinc is white, melts readily, and is sublimed in the state of fine acicular four-sided prisms. It rapidly deliquesces in the air, and dissolves in water, without the evolution of any iras. The solution is slightly acid, and does not crystallise. The alkalies precipitate from it white cxkle of zinc ; while concentrated sulphuricacid disengages hydrindic acid and iodine, because

pounded body. In its specific gravity, lustre, and magnitude of its prime equivalent, it resembles the metals: but in ail its chemical agencies it is analogous to oxygen and chlorine. It is a non-conductor of electricity, and possesses, like these two bodies, the negative electrical energy with regard to metals, inflammable uud alkaline sabstances; and hence, when combined with these substances in aqueous solution, and electrised in the voltaic circuit, it separates at the positive surface. But it has a positive energy with respect to chlorine ; for when united to chlorine, in the chloriodic acid, it separates at the negative surface. This likewise corresponds with their relative attractive energy, since chlorine expels iodine from all its combinations.

It now only remains to mention the different methods that have been contrived to detect the presence of iodine when present in small quantity in saline solutions. It has the property of corroding metals, and especially of blackening silver more powerfully than any other body at present known. It was this property that led to its orignal discovery in kelp. Sir Humphry Davy employed its property of blackening silver as a method of detecting it in the solutions of the ashes of different sea-weeds.

When sulphuric acid is poured upon a dry salt containing iodine, a reddish brown liquid is obtained. This is a good method of detecting the presence of iodine in salts.

But the most delicate re-agent for iodine, according to Stromeyer, is starch. When this substance is put into a liquid containing iodine in a state of liberty, it detects the presence of so small a quantity as jsmn Part> by the blue color vlncli it forms.

Dr. Coindet of Geneva has recommended the use of iodine in the form of tincture, and also liydriodate of potassa or soda, as an efficacious remedy for the cure of glandular swellings, of the goitrous and scrofulous kind. An ointment composed of one ounce of hog’s lard, and one drachm of iodide of zinc, has been found to be a powerful external application in such cases. About a drachm of this ointment should be used in friction on the swelling once or twice a day.

For additional remarks on this important subject, see our articles

CHEMISTRY, CHLORIODIC ACID, HYDRIODIC ACID, IODIC ACID, and MEDICINE.

1ODIC ACID, in chemistry, or oxiodic acid, is thus obtained. When barytes water is made to act on iodine, a soluble hydriodate, and an insoluble iodate of barytes are formed. On the latter, well washed, pour sulphuric acid equivalent to the barytes present, diluled with twice its weight of water, and heat the mixture. The iodic acid quickly abandons a portion of its base, and combines with the water ; but, though even less than the equivalent proportion of sulphuric acid has been used, a little of it will be found mixed with the liquid acid. If we endeavour to separate this portion, by adding barytes water, the two acids precipitate together.

Iodic acid has a strong acido-astringent taste, but no smell. Its density is considerably greater than that of sulphuric acid, in which it rapidly sinks. It melts, and is decomposed in o iodine

and oxygen, at a temperature of about 620°. A grain of iodic acid gives out 176-1 grain measure of oxygen gas. It would appear from this, that iodic acid consists of 15-5° iodine, to 5 oxygen.

Iodic acid deliquesces in the air, and is of course very soluble in water. It first reddens and then destroys the blues of vegetable infusions. It blanches other vegetable colors. When a mixture of it, with charcoal, sulphur, resin, sugar, or the combustible metals, in a finely divided state, is heated, detonations are produced ; and its solution rapidly corrodes all the metals to which Sir H. Davy exposed it, both gold and platinum, but much more intensely the first of these metals.

It appears to form combinations with all the fluid or solid acids which it does not decompose. See CHEMISTRY, Index.

‘JOEL, the son of Pethuel, the second of the twelve minor prophets. In his prophecy he upbraids the Israelites for their idolatry, and foretels the calamities they should suffer as the punishment of that sin ; but endeavours to support them with the comfort that their miseries should have an end upon their reformation and repentance. Most writers, inferring the order of time in which the minor prophets lived from the order in which they are placed in the Hebrew copies, conclude that Joel prophesied before Amos, who was contemporary with Uzziah, king of Judah. Archbishop Usher infers this from Joel’s foretelling that drought, ch. i., which Amos mentions as having

happened, ch. iv. 7”,

8,9.

Archbishop Newcome is inclined to favor the conjecture of Drusius : *viz.* that Joel prophesied under the long reign of Manasseh, and before his conversion, that is, some time from B. C. 697 to (suppose) 660.

JOFFRID, an abbot of Croyland, in Lincolnshire, in the twelfth century. According to Peter of Blois, this ecclesiastic -was the founder of the university of Cambridge. He sent, he says, a deputation of three learned Norman monks, named Odo, Terrick, and William, to his manor of Cottenham, near Cambridge, to teach the people in that neighbourhood grammar, logic; and rhetoric. This produced journeys of these monks to Cambridge, where they at first hired a barn, and taught those sciences to a great num-ber of scholars from the surrounding country. JOG, v. a., v. n. & n. t.) Dui.schocken. To JOG’GER, n. s. > push; to give asud—

JOC’GLE, v. n. J den push ; to move

with small shocks, like those of a low trot ; to travel idly and heavily : a push or slight shake; an irregular motion : jogger, one who moves heavily along: joggle, to shake.

Jog on, jog on the foot-path waj And merrily heat the stile-a,

A merry heart goes all the day, Your sad tires in a mile-a.

Shuksprare. Winters Talt. Now leaps he upright, jogs me and cries, Do you

see Yonder well-favoured youth »

This said, \ejogged his good steed nigher, And steered him gently toward the squire.

Hndibrax.

JOH

Thus they;o<7 on, still tricking, never thriving, And murd ring plays, wLich they miscal reviving.

Drydeti.

As a leopard was valuing himself upon his party-coloured skin, .a fox gave him a jog, and whispered, that the beauty of the mind was above that of a painted outside. L' Estrange.

Sudden I jogged Ulysses, who was laid Fast by my side. Pope's Odyssey.

JOGHIS, a sect 6f heathen religious, in the East Indies, who never marry, nor hold any thing in private property ; but live on alms, and practise strange severities on themselves. They are subject to a general, who sends them from one country to another to preach. They are, properly, a kind ol penitent pilgrims ; and are supposed to be a branch of the ancient Gymno-sophists. They frequent principally such places as are consecrated by the devotion of the people, and pretend to live several days together without eating or drinking. After having gone through a course of discipline for a certain time, they look on themselves as impeccable, and privileged to do any thing ; upon which they give a loose to their passions, and run into all kinds of debauchery.

JOGUES, or YOOGS. See YOOGS.

JOHAN, or ST. JOHAN, the name of six towns in Germany, *viz.*

JOHAN (St.), in the circle of Bavaria, and archbishopric of Salzborg, eleven miles W. N.W. of Radstadt, and thirty S.S.E. of Salzburg.

JOHAN (St.), in the ci-devant principality of Nassau Saarbruck, now included in the French republic, and department of Mont Tonnere ; seated on the Saar, opposite Saarbruck, with which it is connected by a bridge.

JOHAN (St.), in the late county of Sponheim, now included in the

French empire, and department of the Rhine and Moselle ; nine miles east of Creutznach, and fourteen south-west of Mentz.

JOHAN (St.), three towns in the duchy of Stiria : *viz.* 1. eight miles E. S. E. of Land-sperg : 2. seven miles W. N. W. of Pettaw : and, 3. five miles N. N. W. of Windisch Gratz.

JOHAN-GEORGEN-STADT, a town of Upper Saxony, in Erzgeburg, founded in 1654, by the Piotestant miners, who were driven out of Bohemia, and named after the elector John-George I. The mines afford silver, copper, tin, emery, and other minerals. It lies seven miles south of Schwartzenberg.

JOHANNESBERG, or Bischofsberg, a town of Germany, lately in the electorate of Mentz, now annexed to France, and by the division of 1797 included in the department of the Rhine and Nahe ; but now, by the last division in 1801, in that of Mont Tonnere. It lies sixteen miles west of Mentz.

JOHN, Heb. TJPP, i. e. God's grace, the name of many kings, emperors, saints, popes, and other sovereign princes ; and the most universal name among subjects in modern Europe.

JOHN, king of Bohemia, a brave but unfortunate monarch, the son of the emperor Henry VII. He was elected king in 1309, when he was only fourteen ; and, after defeating the Lithuanians, he

assumed the title of king of Poland. He was wounded in the eye in that expedition, and, upon consulting the physicians to restore the sight of it, a Jewish doctor blinded him entirely. Still, however, his military ardor remained undaunted; he accompanied Philip VI. of France, guided by two knights, to the battle of Cressy, where he fell in 1346. See CRESSY.

JOHN, king of England. See ENGLAND.

JOHN, king of France. See FRANCE.

JOHN SOBIESKI, one of the greatest warriors in the seventeenth century. In 1665 he was made grand marshal of the crown; and, in 1667 grand general of the kingdom. His victories over the Tartars and the Turks procured him the crown, to which he was elected in 1674. He was an encourager of the arts and sciences, and the protector of learned men. He died in 1696, aged seventy-two.

JOHN XXII. a native of Cahors, before called James d'Euse, was skilled in the civil and canon law ; and was elected pope after the death of Clement V. on the 7th of August 1316. He published the constitutions called Clementines, which were made by his predecessor; and drew up the other constitutions called Extravagantes. Lewis of Bavaria being elected emperor, John opposed him, which made much noise, and was attended with fatal consequences. That prince, in 1329, caused the antipope Peter de Coribero, a cordelier, to be elected, who took the name of Nicholas V. and was supported by Michael de Cesenne, general of his order ; but that antipope was the following year taken and carried to Avignon, where he begged pardon of the pope with a rope about his neck, and died in prison two or three years after. Under this pope arose the famous question among the cordeliers, called the bread of the cordeliers ; which was. Whether those monks had the property of the things given them, at the time they were making use of them ? for example, Whether the bread belonged to them when they were eating it, or to the pope, or to the Roman church ? This frivolous question gave great employment to the pope ; as well as those which turned upon the color, form, and stuff, of their habits, whether they ought to be white, gray, or black? Whether the cowl ought to be pointed or round, large or small? Whether their robes ought to be full, short, or long ; of cloth, or of serge, &c.? The disputes on all these minute trifles were carried so far between the minor brothers, that some of them were burnt. John died at Avignon in 1334, aged ninety.

JOHN MARK, the nephew of St. Barnabas. See BARNABAS and MARK.

JOHN (St.), of Beverley.

JOHN OF GAUNT, duke of Lancaster, a renowned general, father of Henry IV. king of England, died in 1438.

JOHN OF SALISBURY, bishop of Chartres in France, was born at Salisbury in Wiltshire, in the beginning of the twelfth century. In 1136 he was sent to Paris, where he studied under several eminent professors, and acquired considerable fame for his proficiency in rhetoric, poetry, divinity, and the learned languages. Thence he travelled to Italy ; and, during his residence at Romp, was in favor with popes

Eugene III. and Adrian IV. After his return to England, he became the intimate friend and companion of the famous Becket, archbishop of Canterbury, whom he attended in his exile, and lie is said to have been present when he was murdered in his cathedral. In 1176 he was promoted by Henry II. to the bishopric of Chartres, where he died in 1182. He was one of the first restorers of the Greek and Latin languages in Europe, and an elegant Latin poet. He wrote several books ; the principal of which are, his Life of St. Thomas of Canterbury, a collection of letters, and Polycraticon.

JOHN (St.), THE BAPTIST, the fore-runner of Jesus Christ, was the son of Zacharias and Elizabeth. He retired into a desert, where he lived on locusts and wild honey; and about the year A.D. 29 began to preach repentance, and to declare the coming of the Messiah. He baptised his disciples, and the following year Christ himself was baptised by him in the Jordan. Some time after, having reproved Herod Antipas for his adultery and incest, he was cast into pri-son, where he was beheaded. See HEROD. His head was brought to Herodias, who, according to St. Jerome, pierced his tongue with a bodkin in revenge for his reproof.

JOHN (St.), THE' EVANGELIST, and apostle, was the son of Zebedee, and brother of St. James the Great. He quitted the business of fishing to follow Jesus, and was his beloved disciple. He was witness to the actions and miracles of his master ; was present at his transfiguration, and was with him in the garden of Olives. He was the only apostle who followed him to the cross; and to him Jesus left the care of his mother. He was also the first apostle who knew him again after his resurrection. He preached the faith in Asia; and principally resided at Ephesus, where he maintained the mother of our Lord. He is said to have founded the churches of Smyrna, Pergamus, Thyatira, Sardis, Philadelphia, and Laodicea. He is also said to have preached the gospel among the Parthians, and to have addressed his first epistle to that people. It is related, that, when at Rome, the emperor Domitian caused him to be thrown into a caul-dron of boiling oil, when he came out unhurt; on which he was banished to the isle of Patmos, where he

wrote his Apocalypse. After the death of Domitian, he returned to Ephesus, where he composed his Gospel, about the year 96; and died there, in the reign of Trajan, about the year 100, aged ninety-four.

JOHN (St.), THE GOSPEL OF, a canonical book of the New Testament, contains a recital of the life, actiors, doctrine, and death, of our Saviour Jesus Christ, written by St. John the apostle, at Ephesus, after his return from Patmos, at the desire of the Christians of Asia. St. Jerome says, he would not undertake it, but on condition that they should appoint a public fast to implore the assistance of God ; and that, the fast being ended, St. John, filled with the Holy Ghost, broke out into these words, ‘ In the beginning was the Word,’ Sec. The ancients assign two reasons for the undertaking; the first was, because, in the other throe Gospels, there was wanting the history of the beginning of Jesus

Hirst’s preaching, till the imprisonment of John the Baptist, which, he applied himself particularly to relate. The second was to remove the er-rors of the Cerinthians, Ebionites, and other sects. JOHN O’GROAT’S HOUSE, an ancient house, in Caithness-shire, seated on Dungis-bay, or Dun-can’s Bay Head, and remarkable for being the most northerly point in Great Britain ; on which account it has been often visited by travellers. But, if it has acquired fame from its peculiar local situation, it merits no less celebrity on account of its origin. In the reign of James IV. Malcolm, Gavin, and John de Groat, supposed to have been brothers, and originally from Holland, arrived in Caithness, from the south of Scotland, bringing with them a letter written in Latin by that prince, recommending them to the countenance and protection of his loving subjects in the county of Caithness. They purchased or got possession of the lands of Warse and Dun-gisbay, in the parish of Canisbay, on the Pent-la/id frith, and each of them obtained an equal share of the property they acquired. In process of time their families increased, and there came to be eight different proprietors of the name of Groat. These eight families, having lived comfortably in their possessions for many years, established an annual meeting to celebrate the anniversary of the arrival of their ancestors on that coast. In the course of their festivity on one of these occasions, a question arose respecting the right of taking the door and sitting at the head of the table, and such like points of precedency, each contending for the seniority and chieftain-ship of the clan ; which increased to such a height as would probably have proved fatal to some, if not to all of them, had not John de Groat, who was proprietor of the ferry, interposed. He, having

procured silence, expatiated on the happiness they had hitherto enjoyed, owing to the harmony which had subsisted among them. He assured them, that, as soon as they appeared to quarrel among themselves, their neighbours would fall upon them, take their property, and expel them from the county. He therefore conjured them, by the ties of blood, and their mutual safety, to return quietly that night to their homes ; and pledged himself thai he would satisfy them all with respect to precedency, and prevent the possibility of such disputes among them at their future anniversary meetings. They all acquiesced, and departed io peace. In due time John de Groat built a room, distinct by itself, of an octogon shape, with eigh' doors and windows in it ; and, having placed ic the middle a table of oak, of the same shape, when the next anniversary took place, he desired each of them to enter at his own door, and sit at the head of the table, he himself taking the seat that was left unoccupied. By this ingenious contrivance, any dispute, in regard to rank, was prevented, as they all found themselves on a footing of equality, and their former harmony and good humor were restored. That building was then named John O'Groat's House; and, though the house is totally gone, the place where it stood still retains the name, and the oak table remained in the possession of John Sutherland of Wester in the year 1720.

J O II N S O N.

JOHN'S (St.), an important island in the gulf ot St. Lawrence, near the northern coast of Nova Scotia, to which it is politically annexed. It is 117 miles in length from north-east to south-west. The medium breadth is twenty miles ; between Richmond Bay, however, on the north, and Halifax Bay on the south, it is not above three miles broad. The coasts both north and south are every where indented with bays ; and it has several fine rivers, and a rich soil. The rivers abound with trout, salmon, and eels ; and the surrounding sea affords plenty of sturgeon, plaice, and shell-fish. The capital is Charlotte Town. Upon the reduction of Cape Breton, in 1745, the inhabitants submitted to the British. When taken, it had 10,000 head of black cattle upon it, and the farmers raised 12,000 bushels of corn annually. ˆ The island is divided into three counties, *viz.* King's, Queen's, and Prince's ; which

are subdivided into fourteen parishes, consisting of twenty-seven townships, which in all make 1, 363ˆ400 acres, the contents of the island. Besides the capital, the chief towns are George TOWP, and Prince's Town : besides which are Hillsborough Town, Pownal Town, Maryborough Town, &c. It lies between 45° 46' and 47° 10' N. lat., and between 44° 22' and 46° 32' W. long.

JOHN'S (St.), one of the Virgin Islands, about twelve leagues east of Porto Rico.

JOHN'S LAKE (St.), a large lake of Canada, which receives rivers in every direction, and sends its waters through the Saguenay into the St. Lawrence. It is about twenty-five miles every way, and its nearest part is thirty-six leagues N.N.W. of Quetec. Long. 72° 25' W., lat. 48° 25' N.

JOHN'APPLE, n. s.

A johnapple is a good relished sharp apple the Spring following, when most other fruit is spent : they are fit for the cyder plantations. Mortimer.

JOHNSON (Martin), an eminent landscape painter, who flourished in the reign of James II. His views in England are very scarce and valuable, being only to be found in the collections of connoisseurs.

JOHNSON (Thomas), a celebrated classical scholar, of Oxfordshire, was educated at Magdalen College, Cambridge, of which he was a fellow, and where he took the degree of MIA. in 1 692, after which he left the university and was a school assistant at Eton and Ipswich ; he himself kept a school at Brentford and other places ; but neither the time of his birth nor of his death is known. His character is said to have been loose ; but he was a very superior scholar. He is known as the editor of Sophoe'.es, Oxford and London, 1705 and 1746, 3 VD!S. ; Gratius de Venatione, cum notis ; Cebetis Tabula ; Graeco-rum Kpigrammatum delectus ; Quaestiones Phi-lusophicae; An Essay on Moral Obligations. He was also an editor of Stephens's Thesaurus Linguae Latins.

JOHNSON (Maurice), an English antiquary, born at Spulding in Lincolnshire, and bred to the .aw. lie established a literary society at Spal-ding, and was one of the founders of the Anti-quarhn Society, to which he sent numerous contributions. IJf died in 1755.

JOHNSON (Samuel), an English divine, remarkable for his learning,

and steadiness in suffering for the principles of the Revolution in 1688. He was born in 1649, and, entering into orders, obtained, in 1670, the rectory of Corringham in Essex, worth £80 a year. The air of this place not agreeing with him, he was obliged to place a curate on the spot, at the expense of half his in-come, while he settled in London. The times were turbulent ; the duke of York declared himself, a papist ; his succession to the crown began to be warmly opposed ; and Mr. Johnson, being made chaplain to lord William Russel, engaged Dr. Hicks, the ecclesiastical champion for passive obedience, in a treatise entitled Julian the Apostate, &c., published in 1683. He was answered by Dr. Hicks, in a piece entitled Jovian, &c. To which he drew up, and printed, a reply., under the title of Julian's Arts to Undermine and Extirpate Christianity, &c. ; but by the advice of his friends suppressed the publication. For this unpublished work he was committed to prison; but, not being able to procure a copy, the court prosecuted him for writing the first tract, condemned him to pay a fine of 500 merks, an'd to lie in prison till it was paid. By the assistance of Mr. Hampden, who was his fellow-prisoner, he was enabled, on the encamp-ment of the army on Hounslow-heath, in 1686, to print and disperse, A Humble and Hearty Address to all the Protestants in the present Army ; for this he was sentenced to pay a second fine of 500 merks, to be degraded from the priesthood, to stand twice in the pillory, and to be whipped from Newgate to Tyburn. It happened, that, in the degradation, they omitted to strip him of his cassock ; which rendered his degradation imperfect, and preserved his living. Intercession was made to get the whipping omitted : but James replied, ' That, since Mr. Johnson had the spirit of martyrdom, it was fit he should suffer :' and he bore it with firmness, and even alacrity. On the Revolution, the parliament resolved the proceedings against him to be null and illegal ; and recommended him to the king, who offered him the rich deanery of Durham : but this he refused as inadequate to his services and sufferings, which he thought merited a bishopric. Through Dr. Tillotson he obtained a pension of £300 a year, with some other gratifications; notwithstanding which, he wrote against a standing army, and the great favor shown to the Dutch. He died in 1703, and his works were afterwards collected in one vol. folio.

JOHNSON (Samuel), LL.D. the celebrated lexicographer, and one of the brightest ornaments of the eighteenth century, was born at Litchfield in Staffordshire, on the 18th of September, new style 1709. His father Michael Johnson was a bookseller, and more than once bore the office of chief magistrate ; though he was zealously attached to the exiled family, and instilled the same principles into his son. But

political prejudices were not the only evils which Dr. Johnson inherited from his father: he derived from him also a morbid melancholy, which, though it neither depressed his imagination, not clouded his jwpicacity, filled him with dreadful uppre

hensions of insanity, and rendered him wretched through life. From his nurse he is said to have compacted the king's evil, which disfigured a face naturally well formed, and deprived him of the siˆht of one of his eyes. When arrived at a proper age for grammatical instruction, he was placed in the free school of Litchfield, of which one Hunter was then master : a man whom his illustrious pupil thought wrong-headedly severe. At the age of fifteen, Johnson was sent to the school of Stourbridge in Worcestershire, at which

disgusted at the treatment which he received from the patron of the school, he relinquished in a few months a situation which he ever aftei-wards recollected with horror. Being thus again without any fixed employment, and with very little money, he translated Lobo's Voyage to Abyssinia, for the sum of five guineas, for a bookseller in Birmingham. This was the first attempt -which he made to procure pecuniary assistance hy means of his pen. In 1735, being then in his twenty-sixth year, he married Mrs.

he remained little more than a year, and then rePorter, the widow" of a mercer in Birmingham •

turned home ; in his nineteenth year, he was en-whose age was almost double his ; whose extered a commoner of Pembroke College, Oxford, ternal form, according to Garrick and others

and his mind was stored with such a variety of had never been captivating ; but whose fortune

knowledge as is seldom acquired in universities. He had given very early proofs of his poetical genius both in his school exercises and in other occasional compositions ; but what is more remarkable, as it shows that he must have thought much on a subject, on which other boys at that age seldom think at all, he had before he was fourteen entertained doubts of the truth of revelation. From the melancholy of his temper,

amounted to £800. That she had a superiority of understanding and talents is extremely probable, both because she inspired him with a more than ordinary passion, and because she •was herself so delighted with his conversation as to overlook his external disadvantages. He now commenced a private academy ; for which purpose he hired a large house near his native city ; but the undertaking did not succeed. The orilv

these naturally preyed upon his spirits, and gave pupils who are known to have been placed unde'r him great uneasiness ; but they were happily re-his care, were the celebrated David Garrick, his moved by a proper course of reading ; for his

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studies, being honest, ended in conviction. He found that religion is true : and what he had leariied, he ever afterwards endeavoured to teach. This account Mr. Boswell affects to "idicule, as if it were impossible, that a boy should have any religious scruples. But Boswell is mistaken. Sir J. Hawkins and Mr. Boswell differ in their accounts of Johnson's studies at the university. According to the former, the time of his continuance at Oxford is divisible into two periods : Mr. Boswell represents it as only one period, with the usual interval of a long vacation. Sir John says, that he was supported at college by Mr. Andrew Corbet, in quality of assistant in the studies of his son : Mr. Boswell assures us, that though he was promised pecuniary aid by Mr. Corbet, that promise was not in any degree fulfilled ; and adds, that Johnson, though his father was unable to support him, continued three years at college, and was then driven from it by extreme poverty. For some transgression or absence, his tutor imposed upon

him as a Christmas exercise the task of translating into Latin verse Pope's Messiah ; which, being shown to Mr. Pope, was returned with this encomium, ' The writer of this poem will leave it a question for posterity, whether his or mine be the original.' At this period he read much, but his mode of study was never regular, and at all times he thought more than he read. He informed Mr. Boswell, that what he read so-brother George Garrick, and a young gentleman of fortune, whose name was Offely. He kept his academy only a year and a half; and during that time he wrote a great part of his tragedy of Irene. The respectable character of his parents and his own merit, however, had secured him a kind reception in the best families at Litchfield ; and he was particularly distinguished by Mr. Walmsley, register of the ecclesiastical court. That gentleman, upon hearing part of Irene read, thought so highly of Johnson's abilities, that he advised him by all means to finish the tragedy and produce it on the stage. Flattered with this suggestion, he set out some time in 1737 with his pupil David Garrick for London, leaving Mrs. Johnson to take care of the house and the wreck of her fortune. The two adventurers carried with them from Walmsley an earnest recommendation to the Rev. Mr. Colson, then master of an academy, and afterwards Lucasian professor of mathematics in the university of Cambridge ; but from that gentleman it does nut appear that Johnson found either protw;tion or encouragement. His tragedy was refused by the managers, and for some years the Gentleman's Magazine seems to have been his principal resource for employment and support. To enumerate his various communications to that far-famed mis-cellany, would extend this article beyond all due limits. Suffice it to say, that his connexion with Cave the proprietor became very close; that he wrote prefaces, essays, reviews of books, and

lidly at Oxford was Greek, and that the study of poems; and occasionally corrected the papers

which he was most fond was metaphysics. In written by other correspondents. When the

1731 Johnson left the university without a de-complaints of the nation against the administra—

pree ; and as his father, who died in December tion of Sir Robert Wai pole became loud, and a

that year, had suffered great misfortunes in trade, he was excluded from the regular modes of profit and prosperity. Having therefore not only a profession, but the means of subsistence to seek, he accepted, in March 173‘2, an invitation

motion was made on the 13th of February, 1740-1, to remove him from his majesty’s counsels for ever, Johnson was selected by Cave to write what was in the magazine entitled Debates in the Senate of Lilliput, but was known to be

to the office of under master of a’ free school at the speeches of the most eminent members m Market-Bosworth in Leicestershire : but, being both houses of parliament. These orations

which induced Voltaire to compare British with ancient eloquence, were hastily sketched by Johnson while lie was not thirty-two years old, while he was little acquainted with life, and while he was struggling not for distinction but for existence. Perhaps in none of his writings has he given a more conspicuous proof of a mind prompt and vigorous almost beyond conception : for they were composed from scanty notes taken by illiterate persons employed to attend in both houses; and sometimes he had nothing communicated to him but the names of the several speakers, and the part which they took in the debate. His separate publications which at this time attracted the greatest notice, were, London, a Poem in imitation of Juvenal’s third Satire; Marmor Norfolciense, or an Essay on an ancient Prophetical Inscription in Monkish Rhyme, lately discovered near Lynne in Norfolk ; and a complete Vindication of the Licensers of the Stage, from the malicious and scandalous aspersions of Mr. Brook, author of Gusiavus Vasa. The poem, published in 1738 by Dodsley, is universally known and admired, as the most spirited instance in the English language of ancient sentiments adapted to modern topics.

Pope, who then filled the poetical throne without a rival, being informed that the author's name was Johnson, and that he was an obscure person, replied, ' he will soon be deterre ;' i. e. dug out of the ground. The other two pamphlets, which were published in 1739, are filled with keen satire on the government : and though Sir John Hawkins asserts, that they display neither learning nor wit, Pope was of a different opinion : for in a note of his, preserved by Mr. Boswell, he says, that the whole of the Norfolk prophecy is very humorous.

Mrs. Johnson, who went to London soon after her husband, now lived sometimes in one place and sometimes in another, sometimes in the city and sometimes at Greenwich : but Johnson himself was oftener to be found at St. John's Gate, where the Gentleman's Magazine was published, than in his own lodgings. There he became acquainted with Savage, with whom he was induced, probably by the similarity of their circumstances, to contract a very close friendship ; and such were their extreme necessities, that they have often wandered whole nights in the street for want of money. In 1744 he published the life of his unfortunate companion ; a work which, had he never written any thing else, would have placed him very high in the rank of authors. His narrative is remarkably smooth and well disposed, his observations just, and his reflections disclose the inmost recesses of the human heart.

In 1749, when Drury Lane theatre was opened under the management of Garrick, Johnson wrote a prologue for the occasion ; which, for just dramatic criticism on the English stage, as well as for poetical excellence, is confessedly unrivalled. This year is also distinguished as the epoch when his arduous and important work, the Dictionary of the English Language, was announced to the world, by the publication of its plan or prospectus, addressed to the earl of Chesterfield. From that nobleman

Johnson was certainly led to expect patronage and encouragement; and it seems to be equally certain that, without affording either, his lordship expected, when the book should be published, to be honoured with the dedication. The expectations of both were disappointed. Lord Chesterfield, after seeing the lexicographer once or twice, suffered him to be repulsed from his door; but afterwards, thinking to conciliate him when the work was upon the eve of publication, he wrote two papers in The World, warmly recommending it to the public. This artifice was seen through ; and Johnson, in very polite language, rejected his lordship's advances,

letting him know that he was unwilling the public should consider him as owing to a patron, that which Providence had enabled him to do for himself. This great and laborious work its author expected to complete in three years ; but he was employed upon it seven ; for, it was begun in 1747, and the last sheet was sent to the press in the end of 1 754. The ‘ sorrow’ to which he alludes, in his celebrated preface, is probably that which he felt for the loss of his wife, who died on the 17th of March, O. S., 1752, and whom he continued to lament as long as he lived. The Dictionary did not occupy his whole time : for, while he was pushing it forward, he fitted his tragedy for the stage ; wrote the lives of several eminent men for the Gentleman’s Magazine ; published an Imitation of the tenth Satire of Juvenal, entitled The Vanity of Human Wishes; and began and finished The Rambler. This last work was published twice a-week, from the 20th of March 1750, to the 14th of March 1752, inclusive. Notwithstanding the severity of his other labors, all the assistance which he received in this work did not amount to five papers ; and many of the most masterly of his unequalled essays were written on the spur of the occasion, and never seen entire by the author till they returned to him from the press. Soon after the Rambler was concluded, Dr. Hawkesworth projected The Adventurer upon a similar plan ; and, by the assistance of friends, he was enabled to carry it on with almost equal merit. For a short time, indeed, it was the most popular work of the two ; and the papers with the signature T, which are confessedly the most splendid in the whole collection, are now known to have been communicated by Johnson, who received for each the sum of two guineas.

This was double the price for which he sold sermons, to such clergymen as either would not or could not compose their own discourses. Though he had exhausted, during the time that he was employed on the Dictionary, more than the sum for which the booksellers had bargained for the copy ; yet, by means of the Rambler, Adventurer, sermons, and other productions of his pen, he now found himself in affluence ; and as the powers of his mind, distended by long and severe exercise, required relaxation, he appears to have done little or nothing from the closing of the Adventurer till 1756, when he accepted the office of reviewer in the Literary Magazine. Of his reviews, by far the most valuable is that of Soame Jenyns’s Free Enquiry into th-»’ Nature and Origin of Evil. But the furnishing of

magazines, reviews, and newspapers, with literary intelligence, and authors of books with dedications and prefaces, was considered as an employment unworthy of Johnson. It was therefore proposed by the booksellers, that he should give a new edition of the dramas of Shakspeare ; a work which he had projected many years before, and of which he had published a specimen, which was commended by Warburton. When one of his friends expressed a hope that this employment would furnish him with amusement, and add to his fame, he replied, ‘ I look upon it as I did upon the Dictionary; it is all work; and my inducement to it is not love or desire of fame, but the want of money, which is the only motive to writing that I know of.’ He issued proposals, however, of considerable length ; in which he showed, that he knew perfectly what a variety of research such an undertaking required : but his indolence prevented him from pursuing it with diligence, and it was not published till many years afterwards. On the 15th of April, 1758, he began a new periodical paper, entitled the Idler, which came out every Saturday in a weekly newspaper, called the Universal Chronicle, or Weekly Gazette, published by Newberry. Of these essays, which were continued till the 5th of April 1760, many were written as hastily as an ordinary letter; and one in particular, composed at Oxford, was begun only half an hour before the departure of the post which carried it to London. About this time he had the offer of a living, of which he might have rendered himself capable by entering into orders. It was a rectory in a pleasant country, of such yearly value as would have been an object to one in much better circumstances; but, sensible of the asperity of his tem-per, he declined it, saying, ‘ I have not the requisites for the office, and I cannot in my conscience shear the flock which I am unable to feed.’

In January, 1759, his mother died at the great age of ninety; an event which deeply affected him, and gave birth to the forty-first Idler, in which he laments, that ‘ the life which made his own life pleasant was at an end, and that the gate of death was shut upon his prospects.’ Soon afterwards he wrote his Rasselas Prince of Abyssinia ; that with the profits he might defray the expense of his mother’s funeral, and pay some debts which she had left. He told a friend, that he received for the copy £100, and £25 more when it came to a second edition ; that he wrote it in the evenings of one week, sent it to the press in portions as it was written, and had never since read it over. Having been early in 1762 represented to the king as a learned and excellent man without any certain provision, his majesty was pleased to grant

him a pension, which lord Bute, then first minister, assured him . ‘ was not given for any thing which he was to do, but for what he had already done.’ A fixed annuity of £300 a year, if it diminished his distress, increased his indolence; for, as he constantly avowed that he had no other motive for writing than to gain money, as he had now what was abundantly sufficient for all his purposes, as he delighted in conversation, and was visited and

admired by the witty, the elegant, and the learned, very little of his time was passed in study. Solitude was indeed his aversion ; and, that he might avoid it as much as possible, Sir Joshua Reynolds and he, in 1764, instituted a club, afterwards known by the title of the Literary Club. It consisted of some of the most enlightened men of the age, who met weekly at the Turk’s Head in Gerard Street, Soho, at seven, and till a late hour enjoyed

‘ The feast of reason and the flow of soul.’

In February, 1765, Johnson had the honor of a conversation with the king in the library of Buckingham House ; and this year, when he was more than usually oppressed with melancholy, he was fortunately introduced into the family of Mr. Thrale, one of the most eminent brewers in England, and M. P. for Southwark. In October, 1765, he published his edition of Shakspeare, which is chiefly valuable for the preface, where the excellencies and defects of that immortal bard are impartially displayed. In 1769, upon the establishment of the royal academy of painting, sculpture, 4tc., he was nominated professor of ancient literature ; an office merely honorary, and conferred on him at the recommendation of his friend the president. In the variety of subjects on which he had hitherto exercised his pen, he had forborne, since the administration of Sir Robert Wai pole, to meddle with the disputes of contending factions; but having seen with indignation the methods which, in the business of Mr. Wilkes, were taken to work upon the populace, he published in 1770 a pamphlet entitled The False Alarm; in which he asserts, and labors to prove, by a variety of arguments, that the expulsion of a member of the house of commons is equivalent to exclusion, and that no such calamity as the subversion of the constitution was to be feared from an act warranted by usage. Whatever may be thought of the principles maintained in this publication, it unquestionably contains much wit and argument, expressed in the author’s best style of composition ; and is known to have been written between eight o’clock on Wednesday night and twelve on Thursday night, when it was read to Mr. Thrale upon his

coming from the house of commons. In 1771 he published another political pamphlet, entitled Thoughts on the late Transactions respecting Falkland's Islands; in which he attacked Junius.

In 1773 he visited with Mr. Boswell some of the most considerable of the Hebrides, and published an account of his journey in a volume which abounds in extensive philosophical views of society, ingenious sentiments, and lively description ; but which offended many persons, by the violent attack which it made on the authenticity of the poems attributed toOssian. In 1774, parliament being dissolved, he addressed to the electors of Great Britain a pamphlet, entitled The Patriot ; of which the design was to guard them from imposition, and teach them to distinguish true from false patriotism. In 1775 he published Taxation no Tyranny ; in answer to the Resolutions and Address of the American Congress. These essays drew upon him nume-124

TOMS attacks, all of which he despised ; for though it has been supposed that A Letter addressed to Dr. Samuel Johnson, occasioned by his political publications, gave him great uneasiness, the contrary is manifest, from his having, after the appearance of that letter, collected them into a volume, with the title of Political Tracts by the author of the Rambler. In 1765 Trinity College, Dublin, had created him LL. D. by diploma, and he now received the same honor from the University of Oxford ; with which he was highly gratified. In 1777 he was induced, by an extraordinary case, to exercise that humanity which in him was obedient to every call. Dr. Dodd, then under sentence of death for forgery, procured from him two of the most energetic compositions of the kind ever seen; the one a petition from himself to the king, the other a like address from his wife to the queen. These petitions, however, failed of success. The principal booksellers in London having determined to publish a body of English poetry, Johnson was now prevailed upon to write the lives of the poets, and give a character of the •works of each. This his last task he undertook with alacrity, and executed it in a manner worthy his fame. The work was first published in ten small volumes, of which the first four came forth in 1778, and the others in 1781. At last, at the age of seventy-two, and when laboring under a complication of diseases, death deprived him of Mr. Thrale, in whose house he had enjoyed the most comfortable hours of his life; but it abated not in Johnson that care for

the interests of those whom his friend had left behind him. On this account his visits to Streatham, Mr. Thrale's villa, were for some time after his death regularly made on Monday and protracted till Saturday, as they had been during his life ; but they soon became less and less frequent, upon the prospect of Mrs. Thrale's marriage with Mr. Piozzi, when he studiously avoided the mention of the place or the family. In June 1783 his constitution sustained a shock by a stroke of the palsy, so sudden and violent that it awoke him out of a sound sleep, and rendered him for some time speechless. As usual, his recourse was to piety. He tried to repeat the Lord's Prayer, first in Knglish, then in Latin, and afterwards in Greek ; but succeeded only in the last. From this alarming attack he soon recovered, but it left presages of an hydropic affection ; and he •was not long afterwards seized with a spasmodic asthma, so violent that it confined him to the house in great pain, while his dropsy increased. He had, however, such an interval of ease as enabled him in the summer of 1784 to visit his friends at Oxford, Litchfield, and Ashbourne. His constant dread of death was so great, that it astonished all who had access to know the piety of liis mind. This, however, was the case only while it was at some distance. From the time th.it lie was certain that it was near, his fears •were calmed; and he died on the 13th of December, 1784, full of resignation, faith, and hope. Bishop Gleisc sums up the character of this great man in the following words : — ' Without claiming for him the highest place among his contemporaries, in any single department of literature,

we may use one of his own expressions, ' tlut he brought more mind to every subject, and had a greater variety of knowledge ready for all occasions, than almost any other man.' Though religious to superstition, he was in every other respect so remarkably incredulous, that Hogarth said, while Johnson firmly believed the Bible, he seemed determined to believe nothing else. The same energy which was displayed in his literary productions was exhibited also in his conversation, which was various, striking, and instructive : like the sage in Rasselas, he spoke, and attention watched his lips; he reasoned, and conviction closed his periods : when he pleased, he could be the greatest sophist that ever contended in the lists of declamation ; and perhaps no man ever equalled him in nervous and pointed repartees. But he had a roughness in his manner which subdued the saucy, and terrified the meek ; it was only however in his manner ; for no man was more loved than Johnson was by those who knew him ; and his works will be read with veneration for thetr author, as long as the language in which they are written shall be

understood.’

JOHNSON, in geography, a county of North Carolina, in Newbern district; bounded by those of Franklin, Wayne, Glasgow, and Samson.

JOHNSONIA, or callicarpa, in botany, a genus of the monogynia order, and tetrandria class of plants. Its characters are these : the flower has an empalement of one leaf, cut at the brim into four short segments : it has one tubulous petal divided into four parts at the brim, and four slender stamina, which are longer than the petal. In the centre is a roundish ger-men, which afterwards becomes a smooth globular berry, enclosing four hard oblong seeds. Linnaeus mentions two species, but Miller reckons only one, a native of South Carolina; the leaves of which were used by Dr. Dale in drop-sical cases with advantage.

JOHN’S RIVER, LITTLE (St.), a river of West Florida, which falls into Apalache Bay, ten miles east of the Apalache. It is 200 yards broad, and is said to contain the clearest and purest water of any river in America.

JOHN’S RIVER (St.), a river of North America, which rises in the heart of East Florida, and runs a north course, in a broad navigable stream, which, in different places, spreads into broad lakes, of which Lake George is the chief. The bar at the mouth, which is thirty-one miles and a half north of St. Augustine, is liable to shift.

JOHN’S RIVER (St.), a river of North America, which forms the boundary between Canada and Labrador, and runs into the St. Lawrence, in long. 64° 10’ W., lat. 50° 20’ N.

JOHNSTON (Dr. Arthur), was born at Cas-kieben, near Aberdeen. He studied physic, and travelled to improve himself in that science. He was twice at Rome ; but he chiefly resided at Padua, in which University the degree of M. D. was conferred on him in 1610. After leaving Padua, he travelled through the rest of Italy, and over Germany, Denmark, England, and Holland, and at length settled in France, where he met with great applause as a Latin poet. He lived there upwards of twenty years, and did

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not return to Scotland till 1632. In 1633 he began his Psalmorum Davidis Paraphrasis Poetica ; a specimen of winch, priuted at Lon-don,

was dedicated to bishop Laud. To perfect the whole, took him four years ; and the two first editions complete were published at Aberdeen and London in 1637. In 1641 Dr. Johnston, being at Oxford, was seized with a violent diarrhoea, of which he died in a few days, in the fifty-fourth year of his age. Dr. Johnston was made physician to the king about 1633, when he translated Solomon's Song into Latin elegiac verse, and dedicated it to his majesty. His Psalms were reprinted at M.ddleburgh, 1642; London, 1657; Cambridge, ; Amsterdam, 1706; Edinburgh, by \illiam Lauder, 1739; and lastly, on the plan of the Delphini classics in London, 1741, 8vo., at the expense of auditor Benson, who dedicated them to king George II. His translations of the Te Deum, Cieed, Decalogue, &c., were subjoined to the Psalms. His other poetical works are his Epigrams; his Parerga ; and his Musae Anˆlicae, or commendatory Verses upon persons of rank in cliurch and state at that time.

JOHNSTON (John), a learned divine, born in 1662. He was zealous for the Revolution, and preached a noted sermon at Feversham on the occasion, in 1689, from the words, ' Remember Lot's wife ; ', wherein he set forth the great dan-ger of looking back, and vindicated the liturgy against Baxter and others. He published The Clergyman's Vade Mecum, and A Collection of Ecclesiastical Laws, as a continuation of it ; but, catching the infection spread by Dr. Sacheverel, he, on the accession of George I., to the amazement nt' all his old friends, entertained unfavorable thoughts of the Protestant succession, and refused to read the usual prayers for the king. Being prosecuted, however, he submitted; and died vicar of Cranbrook in Kent, in 1725. He published also a work on the Holy Eucharist, called the Unbloody Sacrifice ; and 2 vols. of Discourses on various subjects were printed after his death.

JOHNSTON'S STRAITS, a channel of the Pacific Ocean, branching off from the northern part of the gulf of Georgia, from Point Chatham to the west, between the island of Quadra and Vancouver, and the west coast of North America. It is about sixty miles in length, the breadth being from two to four. Long. 233° to 234° 46' E., lat. 50° 20' to 50° 35' N.

JOHNSTON E or JOHNSON (Charles), an ingenious writer of Ireland, descended from the Johnstons of Annandale, was born in the early part of the last century, and called to the bar. He came over to England, but, being deaf, could only practice as a chamber counsel. His first literary attempt was the celebrated Chrysal, orthe Adventures of a Guinea, 2 vols. I2mo., a work which attracted so much attention, that the au-thor was induced to add two other volumes to his work.

The secret springs of some intrigues on the continent were said to be unfolded in this publication. His exposure of the orgies of a club of fashionable profligates, held at the seat of a nobleman in Buckinghamshire, produced no small sensation. He wrote also The Reverie, or a

Flight to the Paradise of Fools, 1762. 2 vols. 12mo.; Arsaces, Prince of Beths, 1774, 2 vols. j The Pilgrim, or a Picture of Life, 1775, 2 vols. ; and the History of John Juniper, esq.; alias Juniper Jack, 1781, 3 vols. In 1782 he went to India, where he first employed himself in writing essays for the Bengal newspapers, and finally obtained a good property. He died at Calcutta about 1800.

T JOHNSTOWN, a township and village of New York, in Montgomery county. The village is situated on a handsome plain, four miles north of the Mohawk River. It consists of 1 20 houses, the County buildings, an academy, an Episcopal and Presbyterian church. Population of the township, in 1810, 6225. Forty-two miles north-west of Albany.

JOHORE, a town -of Malacca, near the southern extremity of that peninsula. It was founded in 1511 by the inhabitants of Malacca, who fled thither from the Portuguese. In 1603 Johore was also taken by the Portuguese, and rebuilt higher up the river. The country produces tin, gold, pepper, sago, and elephants' teeth.

.JOIGNY, a town of Champagne, in France, in the department of the Yonne, and near that river. It is situated on the slope of a rocky elevation. The river is bordered by a handsome quay ; but the town is irregular and ill built. It is surrounded by a thick wall, and has a castle and barracks for cavalry. Also some manufactures of woollen and leather, and a trade in wood ; but the culture of the vine is the principal object. Population 5400. Thirty-four miles south-west of Troyes.

JOIN', v. a. Yr.joindre.

To add one to another in contiguity. The leading idea is union, whether applied to persons or things.

Woe unto them that join house to house, that lay field to field. luiah Iviii.

To couple; to combine.

In this faculty, repeating and joining together its ideas, the mind has great power. Locke.

To unite in league or marriage.

One only daughter heirs my crown and state, Whom not our oracles, nor heaven, nor fate, Nor frequent prodigies permit to join With any native of the Ausonian line.

Dryden’s JEneid.

To dash together ; to collide ; to encounter : this sense is to be found in the phrase to join battle, in which, battle seems not to signify fight, but troops in array, committere exercitus, though it may likewise mean fight, as, committere pne-lium.

When they joined battle, Israel was smitten.

1 Sam. \v. 2.

They should with resolute minds endure, until they might join battle with their enemies. Knollu.

To associate.

Go near, and join thyself to this chariot.

To unite in one act.

Our best notes are treason to his fame, Joined with the loud applause of pubhck vo

Thy tuneful voice with numbers join, Thy words will more prevail than mine

Unconscious nature, all that he surveys, Hocks, groves, and streams, must join him in their praise. Cotcper. Hope.

To unite in concord.

Be perfectly joined together in the same mind.

1 Cor.

To act in concert with.

Know your own interest, Sir, where'er you lead, We jointly vow to join no other head.

Dryden's Aurengzebe.

JOIN, v. n.

To grow to ; to adhere ; to be contiguous.

Justus's house joined hard to the synagogue. Acts.

The grete tour that was so thikke Which of the castel was the chef dongeon, (Wher as these knightes weren in prison, Of which I tolde, and tellen shal) Was even joignant to the gardin wall.

Chaucer. The Knightes Tale.

To close; to clash.

Look you, all you that kiss my lady peace at home> that our armies join not in a hot day.

Shakspeare. Henry IV.

To unite with in marriage, or any other league.

Should we again break thy commandments, and join in affinity with the people 1 Ezra.

To become confederate.

Ere yet they brought their journey to an end, A stranger joined them, courteous as a friend,

And asked them with a kind engaging air, What their affliction was,

and begged a share.

Cawper. Conversation.

Any other may join with him that is injured, and assist him in recovering satisfaction. Locke.

Vet the avenger stops,

And doubt and discord step ‘twixt thine and thee, And join their strength to that which with thee copes.

Byron. PropJiecy of Dante. JOIN’DER, n.s. From join. Conjunction; joining. Not used.

A contract of eternal bond of love, Confirmed by mutual joinder of your hands.

Shakspeare.

JOIN’ER, n. s. From join. One whose trade is to make utensils of wood compacted.

The people wherewith you plant ought to be smiths, carpenters, and joiners. Bacon’s Essays.

It is counted good workmanship in a joiner, to bear his hand curiously even.

Moron’s Mechanical Exercise*.

JOINERS’ COMPANY, in heraldry, was incorporated in London in 1572. Their arms are gules, a chevron argent, between two pair of compasses above and a sphere in base or ; on a chief of the third, two roses of the first, and between them a pale sable, charged with an escallop shell of the second.

JOINERY.

JOIN’ERY, n. s. From joiner.

Joinery is an art whereby several pieces of wood are so fitted and joined together by straight lines, squares, mitres, or any bevel, that

they shall seem one entire piece. Moron.

JOINERY, as an art, comprises the various species of ornamental work which are usually resorted to in the completion of the labors of the carpenter. Carpentry and joinery may, therefore, very properly be considered separately, though they are frequently combined in the same artisan. The first has already been pretty fully examined under its proper head, and we may now proceed to enumerate the various branches of the second art.

All kinds of surfaces are first formed in the rough, and finally brought to exact forms by means of tools adapted for the purpose.

Grooving consists in taking away a part of a rectangular section from a piece of wood, so as to form a channel of equal breadth throughout, with three surfaces, one being parallel, and the other two perpendicular to the surface of the wood, from which the channel is recessed : the channel thus formed is called a groove.

Rebating consists in taking away a part from a piece of wood of a rectangular section, so as to leave only two sides, each of a parallel breadth, the one side being perpendicular to the surface of the wood, and the other parallel to it: the cavity thus formed is called a rebate. From this definition it is manifest, that a rebate can only be formed by reducing the piece of wood to be

rebated at the angle itself, and may therefore be looked upon as a half groove.

A mortise is a cavity recessed within the surface of a piece of wood, with four sides perpendicular to that surface, and likewise to each other; the act of making a mortise is called mortising.

A tenon is a projection formed on the end of a piece of wood with four plane sides, at right angles to each other, and to a plane, from which it projects ; and this plane is called the shoulder of the tenon.

In the following observations, all pieces of wood whatever are supposed to be rectangular prisms, and the length in the direction of the fibres ; two of the sides of every mortise to be perpendicular, and the other two sides parallel to the fibres ; the four sides of every tenon in the direction of the fibres, unless otherwise stated : likewise, if two of the surfaces of a piece of wood be of greater breadth than the other two, these are called the edˆ,es, and those the sides ; and each line of

concourse, formed by two adjacent sides, is called an arris.

Moulding consists in forming the surface of a piece by curved or plane surfaces, or by both, in such a manner, that all parallel sections will be similar figures, that is, their boundaries will be made all to coincide.

The first thing to be done in joinery is, to select the stuff or boards, which ought for every purpose to be well seasoned, and then line it out; and if the stuff is not already at the size as

M most frequently the case, it must be ripped out with the ripping-saw, or cross-cut with the hand-saw, or Doth, us may be required. The next thing is the planing of the stuff, first upon the sides, then the edge squared, and then gauged to a breadth and thickness, should either or both be found necessary.

Two or more pieces of stuff may be fastened together in various ways by pins of wood or by nails, but, in work prepared by the joiner for the use of building, pieces are more frequently joined together by making their surfaces coincide, and then covering them over with a hot tenacious liquid called glue, and afterwards rubbing the surfaces until the glue has been almost rubbed out, and the one piece brought to its situation with respect to the other. The best work is always joined by this method.

When boards are required of greater breadth than common, several boards must be fastened together edge to edge, either by nailing them to pieces extending across the breadth, or glueing them edge to edge, or by joining pieces transversely together with small boards, tongued and grooved into the interstices.

Two pieces of stuff are joined together at right or oblique angles by a mortise and tenon adapted to each other, and fastened together with glue. When a frame consisting of several pieces is required, the mortises and tenons are fitted together, and the joints glued all at one time, then entered to their places, and forced together by means of an

instrument called a cramp.

To join any number of planks together, so as to form a board of a determinate breadth, the fibres of each running longitudinal to those of any other, shoot the two edges that are to be joined ; turn the sides of the boards towards each other, so that the edges that are shot may be both uppermost ; spread these edges over with strong glue of a proper consistence, made very hot ; one of the boards being fixed, turn the other upon it, so that the two edges may coincide, and that the faces may be both in the same plane ; let these dry for a few hours ; then proceed to make another joint ; continue to join as many boards or planks in the same manner, till the whole intended breadth be made out. If the boards or planks of which the board is to be composed are very long, the edges that are to be united would require to be warmed before a fire; and, for rubbing and keeping the joints fair to each other, three men would be found necessary, one at each extremity, and one at the middle. Boards glued together with this kind of cement, will stand as long as the substance of the deals or planks composing them, if not exposed to rain or intense heat, provided that the wood has been well-seasoned before hand, and that the grain be free and straight, uninterrupted with few or no knots. When a board which is to be exposed to the weather is to be made of several boards or planks, the cement to be used for uniting them should not be of skin glue, but of white lead ground up with linseed oil. so thin that the color may be sensibly changed into a whitish cast : this kind of glue will require a much greater time to dry than skin-glue. Boards

to be exposed to the weather, when their thickness will admit, are frequently tongued together; that is, the edges of both boards are grooved to an equal distance from the faces, and to an equal depth; and a slip of wood is made to fit the cavity made in both: this slip should be made to fill the grooves, but ought not to be so tight as to prevent the joint from being rubbed with proper cement.

The first tools used by joiners are bench-planet, which generally consist of a jack-plane, for taking away the rough of the saw, and the superfluous wood, only leaving so much as is sufficient to smooth the surface ; the trying-plane to smooth or reduce the ridges left by the jack-plane, and to straighten or regulate the surface, whether it be plane or convex ; the long plane, when the surface is required to be very straight ; and the smoothing-plane in smoothing, as its name implies, and giving the last finish to the work. Besides the bench-planes there are others fot forming any kind of prismatic surfaces

whatever, as rebating-planes, grooving-planes, and moulding-planes.

The tools employed in boring cylindric holes are, a stock, with bits of various descriptions and sizes ; gimblets ; and brad-awls of several diameters.

The tools used in paring the wood obliquely, or across the fibres, and for cutting rectangular prismatic cavities, are in general denominated chisels : those for paring the wood across the fibres are called firmers, or paring-chisels, and those for cutting rectangular prismatic cavities are called mortise-chisels, the rectangular cavities themselves being called mortises when made to receive a projection of the same form and size, an J by this means to fasten two pieces of wood together at any angle. The bides of all chisels, in a direction of their length, are straight, and the side of a chisel which contains the cutting edge at the end is steel. The best paring-chisels are made entirely of cast steel. Chisels for parins concave surfaces are denominated gouges.

Dividing wood, by cutting away a very thin portion of the material of equal thickness throughout, to any required extent, by means of a thin plate of steel, with a toothed edge, is called sawing : the instruments used are of several kinds, as the ripping-saw, for dividing boards into separate pieces in a direction of the fibres ; the hand-saw, for cross-cutting and saw-ing thin pieces in a direction of the grain ; the pannel-saw, either for cross-cutting or cutting very thin boards longitudinally; the tenon-saw, with a thick iron back, for making an incision of any depth below the surface of the wood, and for cutting pieces entirely through, not exceeding the breadth of that part of the plate without the iron back ; likewise a sash-saw, and a dovetail-saw, used much in the same way as the tenon-saw. From the thinness of the plates of these three last saws, it is necessary to stiffen them by a strong piece of metal called the back, which is grooved to receive the upper edge of the plate that is fixed to the back, and which is thereby secured and prevented from buckling. When it is required to divide boards into curved pieces, a very narrow saw without a back, called a

compass-saw, is used, and in cutting a very small hole a saw of a similar description, called a keyhole saw, is employed. All these* saws have their plates longer and thinner, and their teeth finer, as they

succeed each other in the order here mentioned, excepting the two last, which have thicker plates and coarser teeth than either the sash or dovetail-saw. The external and internal angles of the teeth of all saws are generally formed at an angle of 60°, and the front edge teeth slope backward in a small degree, but incline to or recline from the straight line drawn from the interior angle perpendicular to the edge in the plane of the plate, as the saw may be employed in ripping or in cross-cutting, or cutting perpendicular to the fibres. The teeth of all saws, except turning and keyhole saws, are bent on contrary sides of the plate, each two teeth succeeding each other, being alike bent on the different sides of the plate ; *viz.* the one as much to the one side as the other is to the other side, and consequently all the teeth on the same side alike bent throughout the length of the plate, for the purpose of clearing the sides of the cut which it makes in the wood.

Of all cutting tools whatever, the saw is most useful to the joiner, as the timber or wood which he employs can be divided into slips or bars of any size, with no more waste of stuff than a slice, the breadth of which is equal to the depth of the piece to be cut through, and the thickness equal to the distance of the teeth between their extreme points on the alternate sides of the saw measured on a line perpendicular to the said sides; whereas, without the use of the saw, cylindrical trees could only be reduced to the intended size by means of the axe ; in the use of which there would not only be an immense consumption of stuff, but also much greater labor would be required to straighten it.

Joiners use a small axe, called a hatchet, for cutting off the superfluous wood from the edge of a piece of a board, when the waste is not of sufficient consequence to be sawn.

The above are what are commonly denominated edge tools, but there are others required to regulate the forms. All angles whatever are formed by other reversed angles of the same number of degrees as an exterior angle by an interior one, and the contrary. The instrument for trying right angles is called a square, and those for try-ing oblique angles are called bevels. The two sides which form the edge of a square are always stationary, but those of bevels are generally moveable one leg upon the other round a joint. In some cases, where a great number of pieces are required to be worked to the same angle, a stationary bevel, called a joint hook, is used.

When it is required to reduce a piece of stuff to a parallel breadth, an instrument called agauge is used for the purpose. The gauge consists generally of a square piece with a square mortise, through which a bar

at right angles thereto is fitted and made to slide. The bar, which is called the stem, has a sharp point, cutter, or tooth, at one extremity, projecting a little from the surface, so that when the side of the gauge, next to the end which has the point, is applied upon the vertical surface of the wood, with the

flat side of the stem which has the tooth upon the horizontal surface, and pushed and drawn alternately by the workman from and towards him, the cutter will make an incision from the surface into the wood, at a parallel distance from the upper edge of the vertical side on the right hand. This line, so drawn, will mark out with precision, and show the superfluous stuff to be taken away.

When a mortise is required to be cut in a piece of wood, a gauge with two teeth is used. The construction of this instrument is the same as the common gauge ; but in addition to this instrument, the stem has a longitudinal slider with a tooth projecting from the end of the slider, so that the two teeth may be brought nearer, or to any remote distance from each other, at pleasure ; and also to any distance from the face of the head or guide within the reach of the stem.

When wood has been planed, and required to be sawn across the fibres, and as it is necessary to be kept stationary while sawing, in order to prevent the sides or the edges from being bruised, joiners use a flat piece of wood with two projecting knobs on the opposite sides, one at each end, called a side hook. The vertical side of the interior angle of one of the knobs is placed close to the vertical side, and the under side upon the top of the bench ; then the wood is pressed against the knob which projects from the upper surface while it is cutting with the saw ; but the use of two side hooks is better, as they keep the piece of wood to be sawn more steady.

When it is required to cut a piece of wood to a mitre with one side ; that is, to half a right angle, joiners use a trunk of wood with three sides, like a box without ends, or a top, the sides and bottom being parallel pieces, and the sides of equal heights : through each of the opposite sides is cut a kerf in a plane, perpendicular to the bottom, at oblique angles of 45° and 1 35°, with the planes of the sides ; and another kerf is made-in the same manner, so as to have its plane at right angles to the former. The trunk th.is constructed is called a mitre-box. When the wood is to be cut, the mitre-box is fixed steadily against two side hooks, and the piece, which is always less than the interior breadth of the mitre-box, is laid within, and pressed against

the farther interior angle of the mitre-box with the side downwards, to which the saw-kerf is intended to be perpendicular, and in this position it is to be cut. The two kerfs in the sides of the mitre-box are requisite, in order to form the acute angle on the right 01 lˆft hand side of the piece, as may be required.

When it is required to make a piece of wood straight in one direction, joiners use a slip of wood straightened on one edge, from which the slip of wood itself is called a straight-edge. Its use is obvious ; by its application it will be seen whether there is a coincidence between the straight-edge and surface.

When it is required to know whether the surface of a piece of wood is in the same plane joiners use two slips of wood straightened each on one edge with the opposite edge parallel, and both pieces of the same breadth between the parallel edges : each piece has therefore twr

straight edges. Suppose it were required to know whether a board is twisted or its surface in a plane, the workman lays one of the slips across the one end, and the other across the other end of the hoard, with one of the straight edges of each upon the surface; then he looks in the longitudinal direction of the board, over the upper edges of the two slips, until his eye and the two upper edges of the slips are in one plane; or otherwise the intersection of the plane, passing through the eye and the upper edge of the nearest slip, intersect the upper edge of the farther slip. If it happen as in the former case, the ends of the wood under the slips are in the same plane ; but should it happen as in the latter, they are not. In this last case the surface is said to wind ; and when the surface is so reduced that every two lines are in one plane, it is said to be out of winding, which implies its being an entire plane : from the use of these slips they are denominated winding sticks.

We may now direct the attention of our readers to the formation of doors, columns, and staircases.

In forming the apertures of doors, whether arched or quadrangular, the height should, in general, be about their breadth, or a little more. It was necessity, most probably, that gave birth to this proportion, which habit has confirmed and rendered absolute. The disposition of doors and windows, and assigning to them their pro-per dimensions, according to the purposes for which they are intended, are not the business of the joiner, but of the architect ; for which reason we shall here advert only to the common method of decorating doors and windows, the former of which have an architrave around the sides and top of the aperture, with a regular frieze and cornice upon it. In some cases, the cornice is supported by a console on each side of the door, and sometimes, besides an architrave, the aperture is adorned with columns, pilasters, &c., which support a regular entablature, with a. pediment, or with some other termination, either in architecture or sculpture. Front doors, intended to be ornamented with any of the orders, should not be less than three feet six inches wide; the height should be twice the width and one-sixth part more, which might also be the height of the column ; the abacus may be then taken out of that dimension, in order to separate the door from the fan light. The windows of the principal floor are generally most enriched. The simplest method of adorning them is with an architrave surrounding the aperture, and crowned with a frieze or cornice. The windows of the ground floor are sometimes left entirely destitute of any ornament ; at other times are surrounded with rustics, or a regular architrave hav-ing a frieze or cornice. The windows of the second floor have generally an architrave carried entirely round the aperture ; and the same me-thod is adopted in adorning attic and mezzanine windows : but the two latter seldom possess either frieze or cornice ; while the windows of the second floor are sometimes crowned with both.

With regard to the hanging of doors, shutters, or flaps with hinges, care should always be taken VOL. XII.

to place the centre of the hinge in th« middle of the joint ; but, as in many cases there is a necessity for throwing back a flap to some distance from the joint, the distance between the joint and the intended point must be divided into two equal parts, which point of division will denote the situation of the centre of the hinge. Sometimes doors are required to be hung in such a manner, that, when folded back, they shall be at a certain distance from each other, as is frequently desirable in churches and chapels ; this may be easily effected by hinges, with knees projecting to half that distance.

In all elegant rooms, it is necessary to contrive that the doors, when opened, should pass clear over the carpet; now, it is evident, that this can-not be the case, if the jamb on which the door hangs is truly perpendicular, and the bottom of the door is close to the floor, as the bottom of doors commonly are. An inconsiderate observer might recommend a part of the bottom of the door to be cut off, in order to permit its free passage over the carpet, but still, when the door is shut, an open space will intervene between it and the floor, unless, as in some cases, the carpet is continued through the opening to an adjoining passage or room. When this is not the case, the room will be rendered cold and uncomfortable ; and the necessity of contriving some method to remedy the defect becomes immediately obvious. This remedy may always be found by hanging the door with rising hinges, constructed for the purpose, with a spiral groove, which, winding round the knuckle as the door opens, gives it a free passage over the carpet. Hinges, however, thus constructed, require that the door should be bevelled at the top next to the ledge or door catch, in proportion to their rise at one quarter of their revolution.

This is an effectual mode of enabling a door to clear the carpet; but a combination of tlu following modes recommended by Nicholson arc less objectionable. Raise the floor under the door, as much as the thickness of the carpet might require. Make the knuckle of the bottom hinge project an eighth of an inch beyond the perpendicular direction of the top hinge,— fix the jamb to which the door might be hung about the eighth of an inch out of the perpendicular ; and place a common butt hinge at the top, and one with a projecting knee at the bottom.

The introduction of rising hinges requires ? notch to be cut out of the door where the hinged edge and the top edge meet, and, since this can-not be concealed on both sides of the door, this method is considered as defective; besides the hinges are liable to get out of order.

A gib door is one which is intended to be concealed in the side of a room, and therefore partakes of the same surface and finish as the wall in which it is inserted. Therefore, the face of a gib door, and the face of the wall from which the aperture is made to receive the gib door, are in the same surface.

Fig. 1, plate I, JOINERY, exhibits the elevation of a gib door, having the same moulding as tl base and surbase of the room. A is a secti of the base moulding to a large scale, and J of the surbase to the same scale. A portio

the plan of the door and of the surbase, as also a part of the jamb, is shown at fig. 2.

In order to make the most perfect work, the door should be hung with centres, and not with hinges, and the centres should be inserted within the solid of the jamb lining. Let O be the centre of the hinge O D, a portion of the inner edge of the surbase in contact with the door, and C B a portion of the outer edge ; let C be some point on the outside of the perpendicular O B opposite the jamb. Join OC, and draw CD perpendicular to OC; then C D will be the plan of the joint, in order that it may be a vertical plane. Though there is no absolute necessity, it is usual to make the distance BC equal to BO. The object of this is, to make the distance O D the least possible, so that the strength of the jamb may not be impaired by cutting away more wood than is necessary to effect the purpose.

Palladio, after observing that ‘great care ought to be taken in the placing of staircases,” so ‘ that they may not obstruct other places, nor be obstructed by them,’ says that ‘ three openings are required in staircases ; the first is the door through which one goes up to the staircase, which, the less it is hid to those that enter into the house, so much the more it is to be commended. And it would please one much if it was in a place where, before that one comes to it, the most beautiful part of the house was seen; because it makes the house (although it should be little) seem very large ; but, however, let it be manifest, and easily found.

‘ The second opening is the windows that are necessary to give light to the steps ; they ought to be in the middle, and high, that the light may be spread equally, every where alike.

‘ The third is the opening through which one enters into the floor above ; this ought to lead us into ample, beautiful, and adorned places.’

Staircases ought to be proportioned in width and commodiousness to the dimensions and use of the building in which they may be placed. The height of a step ought not to exceed seven inches, nor in any case should be less than four ; but six inches is a general height. The breadth of the steps should not be less than twelve inches, if it can possibly be avoided ; nor should they ever be more than eighteen ; and, to render the ascent free from the interruption of persons descending, their length should not exceed twelve, nor be less than four, except in common and small buildings, whose area will not admit of a staircase of more than three feet. That the as-cent may be both safe and agreeable, it is requisite also to introduce some convenient aperture for light, which ought to be as nearly opposite to the first entrance to the stairs as the nature of the building will permit. An equal distribution of light to each flight of stairs ought to be particularly regarded; for which reason the apertures or windows are commonly placed at the landings or half spaces ; though sometimes the whole is lighted from a dome. Staircases are of various kinds ; some wind round a newel in the middle, while the risers of the steps are straight, and sometimes curved; others are of a circular plan, but form a well in the centre. The same may be observed of those whose plan? are elliptical ;

the most common, however, arc those w!»ose plans form a square or parellelogram.

The ancients entertained a singular notion, that the number of steps ought to be uneven, in order that, when the right foot was placed on the first stair in ascending, the ascent might terminate with the same foot. This was considered as a favorable omen on most occasions, and they imagined that, when they entered a temple in this way, it produced greater and more sincere devotion.

Palladio, apparently actuated by this superstitious motive, allows the staircase of a dwelling-house eleven or thirteen steps to each flight. When a staircase “winds round a newel or co-lumn, whether its plan be circular or elliptical, the diameter is divided into three parts, two of which are set apart for the steps and one for the column. But in circular or elliptical staircases which are open, or form a well in the middle, the diameter is divided into four equal parts ; two of which are assigned for the steps, and two for the well or void space in the centre. Modern staircases, however, have often a kind of well of a mixed form ; straight on each side, and circular at the returns of each flight. The openings of these wells vary in the point of width, but

seldom exceed eighteen or twenty inches.

To most staircases it is absolutely necessary, both for convenience and ornament, to affix hand-rails ; these generally begin from the ground by a twisted scroll, which produces a very good effect.

Balustrades are sometimes of real use in buildings, and at other times they are only ornamental. Such as are intended for use, as when they are employed in staircases, before windows, or to enclose terraces, &c., must always be nearly of the same height ; never exceeding three feet and a half, nor ever less than three. But those that are principally designed for ornament, as when they finish a building, should be proportioned to the architecture they accompany : and their height ought never to exceed four-fifths of the height of the entablature on which they are placed ; nor should it ever be less than two-thirds thereof, without counting the zocholo, or plinth, the height of which must be sufficient to leave the whole balustrade exposed to view.

The best proportion for balustrades is to divide the whole given height into thirteen equal parts; eight of these for the height of the baluster, three for the base, and two for the cornice or rail ; or into fourteen (if it be required to make the baluster less), giving eight part? to the baluster, four to the base, and two to the rail. One of these parts maybe called a module; and, being divided into nine minutes, may serve to determine the dimensions of the particuKr members.

In balustrades, the distance between two balusters should not exceed half the diameter of the baluster measured in its thickest part, nor be less than one-third of it.

The breadth of the pedestals, when they are placed on columns or pilasters, is regulated by them ; the dye never being made broader than the top of the shaft, nor much narrower ; and, when there are neither columns nor pilasters on the front, the dye should not be much lower than

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a square, and seldom higher. On stairs, or any other inclined planes, the same proportions are to be observed as on horizontal ones.

A column will next occupy out attention.

To each order of architecture belongs a particular kind of base, and. the first operation required is that of glueing up the base.

The shaft of a column should be glued up in eight or more staves, according to its intended dimensions ; but care should be always taken to have the joint in the middle of a fillet, and not in a flute, which would impair its strength very much.

Figs. 3 and 4 show a plan of the upper and lower ends, or the horizontal section at top and bottom. If eight pieces are sufficient to form the column, let an octagon be described round the ends, and let lines be drawn from each angle of the octagon to the centre ; when the bevel of the edges of the staves will be given for the joints, which must be quite straight from top to bottom, though the staves be narrower at the top, as shown in fig. 3. These staves must be of sufficient thickness, because their outsides have to assume a curvature proportioned to the swell of the column by means of a diminishing rule ; next glue the pieces together .one after the other as the glue dries ; block them well at the corners in the inside, which will greatly strengthen the joints; and proceed in this man-ner to the last stave ; but all the blocks must be glued on and dried, before the last stave can be fastened. Pieces, however, may be glued quite across for the last stave, and fixed to the inside of the two adjoining staves, or they may be fixed by screws to each stave, in which case the under side of the last stave must be planed so as to rub well on the cross pieces.

When the stave is put in, and glued upon the cross pieces, it may be driven tight home, like a wedge, and the whole will be firm and substantial throughout, great care, nevertheless, ought to be taken as to preparing the staves and blocks out of wood thoroughly dry, because, after the lapse of some time, if the wood be moist, the column will be in danger of falling to pieces at the joints. It will be necessary also to make each piece according to the plan, for a trifling error in any one piece will make a very material difference in the column after glueing. When the glue used in combining the column is dry, the angles must be regularly worked off all round : and the column will then have double the number of sides, or cants, bearing a proportionable regularity to each other. Proceed in a similar manner to work off the angles as before, so as to make the sides, or cant of the column, quite regular. Lastly, let a plane be formed, in order to fit the curve of the column at the bottom, or render it rather natter; then round off all the angles, until the surface of the column is perfectly smooth. One thing to be observed, with respect to the moulds employed in jointing the staves together, is, that they cannot be considered as exactly true when applied in a direction perpendicular to the joint. The most correct mode is that made use of in finding the backing of a hip rafter ; but this exactness, nevertheless, is not always attended to, in consequence of the difficulty of

discerning the deviation in some instances. When the column is quite finished, it should be we.l painted, by way of protection from the effects of the weather.

Sometimes columns are glued up in two halves in which cases those two halves are glued tog&! ther, and the blockings are introduced a considerable way by hand ; but, if the column be too long, a rod of sufficient length may be used. Both these methods have some inconveniences, which cannot be avoided ; by the former method, the last joints cannot be rubbed together from the obstacle presented by the tapering of the stave, but if this be glued quickly it will be pretty sound; by the latter method there will be an uncertainty of the blockings being sound. In all cases, however, care should be taken to place the grain of the blocking piece in the same direction as the grain of the column, so as that they may both expand and shrink alike, when affected by the weather.

Fig. 5 represents the mode practised in gluing up a capital. The parts denoted by B B, &c., are triangular blocks of wood, glued upon the front, in order to complete the angular square : upon them the pieces

A, A, A, &c. are glued, and this is considered the best method of gluing up the capital. Another method is, to glue the triangular blocks C C, at the angle of the abacus; then the four sides of the abacus as D, E, F, may be made of one entire length, and mitred at the horns, or they may have a joint in the middle of the abacus, where the rose is placed, as the workmnn shall think fit : this method wilj do either for a column or a pilaster.

Fig. 6 exhibits the method of glueing up the base of a column.

The mode of mitring the bottom course together, which must be effected on a perfectly flat board, and by fitting all the joints as close as possible. When the course has been well glued together, and secured on the inside with blocks at the several angles, the top of the course must be planed quite smooth and out of winding ; after this, the next course must be glued on, and the joint must be broken in the middle of the under course (as shown by the dotted lines in the plate), by which means as many courses can be glued down as may be required. When the whole is thoroughly dry, the operations of the turner may commence.

A pediment is a triangular cornice, of which one of the sides is horizontal, and the other two inclined, and of equal length, such as fig. 1 plate II., or a pediment is a segment of a circle fig. 2, with a circular and straight cornice.

As no pediment can be conveniently executed without two kinds of cornices, to give each of the cymas such & shape or curve as shall agree in their mitre, we must first describe the levf 1 cornice a bcde, figs. 3 and 4, and through the points a, b, c, </, e, draw lines ag, b li, c i, dk, el, agreeable to the rake or angle which one of the inclined sides makes with the horizon, or from i centre agreeable to the arc required to form iht segment.

Draw fo’ perpendicular to ag, and draw o’ p perpendicular to fo’. From the points a, 6, c, d, e, draw lines perpendicular to a q, to meet the line

K 2

mn, and from o', in o'p, set off distances equal to the distances from m, in the line m n, where perpendiculars meet it, and draw perpendiculars from the points in o'p, and let these perpendiculars intersect the lines a g, bh,ci, &c., in the points /, o,p, q, r ; then the curve fop qris the section of the inclined moulding. In like man-ner draw g s, perpendicular to a q; from s, in the line s t, set off the several distances from m, in the line m n, and draw lines from the points of division parallel to sq, to meet the lines parallel to ag, in the points g,h,i,k,l; then ghikl is the section of a moulding, returning parallel to the moulding of which ab cde is the section.

Figs. 5 and 6 are described in a similar manner as is evident.

Fig. 7 shows the manner of drawing angle bars for shop fronts, supposing the angle bars to be the sartie thickness as the intermediate vertical and horizontal bars. These bars being duly placed according to the plan of the windows, tuv, through c draw ca, meeting rsina, and the side of the angle bar in 6 : from c, with the distance 6 a, describe an arc intersecting p q in d. Draw e i, fk, parallel to u t, meeting r s in i, k, and draw eg,fh, parallel to cd, meeting pq in g and h. Make it, km, &c., equal to e.g, fh, &c., finding a sufficient number of points ; in the same manner draw the curves and complete the angle bar as required.

We have hitherto confined our remarks to that part of joinery which is performed at the bench ; but by far the most important part remains to be considered. For, however well a piece of work may have been prepared, if it be not properly fixed, it cannot fulfil its intended purpose. As in the preceding part, we shall state the general principles that ought to be made the basis of practice, and illustrate those principles by particular examples.

lithe part to be fixed consist of boards joined together, but not framed, it should be fixed so that it may shrink, or swell, without splitting. The nature of the work will generally determine how this may be effected. Let us suppose that a plane back of a window is to be fixed. Fig. 8 is a section showing B the back of the window, A the window sill, D the floor, and C the skirting. Now let the back be firmly nailed to the window sill A, and let a narrow piece d, with a groove and cross tongue in its upper edge, be fixed to the bond timbers or plugs in the wall; the tongue being inserted also into a corresponding groove in the

lower edge of the back B. It is obvious that, the toneue being loose, the back B may contract or expand, as a pannel in a frame. The dado of a room should be fixed in the same manner. In the principal rooms of a house the skirting C is usually grooved into the floor D, and fixed only to the narrow piece d, which is called a ground. By fixing, in this manner, the skirting covers the joint, which would, otherwise, soon be open by the shrinking of the back; and from the skirting being grooved into the floor, but not fastened to it, there cannot be an open joint between the skirting and floor. When it is considered that an open joint in such a situation must become a receptacle for dust,

and a harbour for insects, the importance of adopting this method of fii ing skirting will be apparent.

In fixing any board above five or six inches wide, similar precautions are necessary ; otherwise it is certain to split when the house becomes inhabited. We may, in general, either fix one edge, and groove the other, so as to leave it at liberty, or fix it in the middle, and leave both edges at liberty.

Sometimes a wide board, or a piece consisting of several boards, may be fixed by means of buttons screwed to the back, which turn into grooves in the framing, bearers, or joists, to which it is to be fixed. If any shrinking takes place, the buttons slide in the grooves. In this manner the landings of stairs are fixed, and it is much the best mode of fixing the top of a table to its frame.

We must not omit to notice an ingenious machine for bending sash bars, &c. A A, plate 2, fig. 9, represents the bed of the machine, which may be a plank suitable on the articles to be bent ; f,f,f,f, represents bearers screwed to the bed, and likewise screwed down to a work bench, as shown at the section to the right hand : M M represents the heads of the screws ; B shows a templet (commonly called a cylinder by workmen), the centre of which is at d, d, and is supposed to be employed bending a sash .style and bead at the same time, as shown in the section.

Suppose the style intended to be bent to be worked to its proper rabbet and mouldings, and the templet rabbeted to receive it and the bead also ; then suppose the style to be fastened to the straight part of the templet by means of small cramps, as represented at K K. n, n, n, n, represents a piece of iron hoop which is pressed close to the templet by means of the wheel i i, and the screw g g ; the cylinder is supposed

to be in the act of being moved round by means of the lever c c, and, when brought far enough round, may be confined by cramps as on the other side.

We may now notice, though it must be but briefly, the best mode of selecting and seasoning the materials employed by the joiner. It is well known that wood contracts less in proportion, in diameter than it does in circumference ; hence a whole tree always splits in drying. Mr. Knight has shown that, in consequence of this irregular contraction, a board may be cut from a tree, that can scarcely be made, by any means, to retain the same form and position when subjected to various degrees of heat and moisture. From the ash and the beech he cut some thin boards, in different directions relatively to their transverse septa, so that the septa crossed the middle of some of the boards at right angles, and lay nearly parallel with the surfaces of others. Both kinds were placed in a warm room, under perfectly similar circumstances. Those which had been formed by cutting across the transverse septa, as at A, fig. 10, plate 2, soon changed their form very considerably, the one side becoming hollow, and the other round ; and in drying they contracted nearly fourteen per cent, in width.

The other kind in which the septa were nearly parallel to the surfaces of the boards, as at B, re-

tained, with very little variation, their primary form, and did not contract in drying more than three and a half per cent, in width.

As Mr. Knight had not tried resinous woods, two specimens were cut from a piece of Memel timber, and, to fully explain the matter, we may conceive the figure to represent the section of a tree, the annual rings being shown by circles. B D represents the manner in which one of the pieces was cut, and A C the other. The board A C contracted 3‘75 per cent, in width, and be-came hollow on the side marked b. The board B D retained its original straightness, and contracted only 0‘7 per cent. The difference in the quantity of construction is still greater than in hard woods.

From these experiments the advantages to he obtained, merely by a proper attention in cutting out boards for pannels, &c., will be obvious ; and it will also be found that pannels, cut so that the septa are nearly parallel to their faces, will appear of a finer and more even grain, and

require less labor to make their surfaces even and smooth.

The results of these experiments are not less interesting to cabinet-makers, particularly in the construction of billiard-tables, card-tables, and indeed every kind of table in use. For such purposes >the plark should be cut so as to cross the rings as near'y in the direction B D as possible. We have no doubt that it is the knowledge of this property of wood, that renders the billiard-tables of some makers so far superior to those of others.

In wood that has the larger transverse septa, as the oak, for example, boards cut as B D will be figured, while those cut as A C will be plain.

There is another kind of contraction in wood whilst drying, which causes it to become curved in the direction of its length. In the long stiles of framing we have often observed it ; indeed on this account it is difficult to prevent tne stilt

of a door, hung with centre*, from curring, to as to rub against the jamb. A very satisfactory reason has been given by Mr. Knight, whica also points out the ma»ner of cutting out wood, so as to be less subject to this defect, which it is most desirable to avoid. The interior layers of wood, being older, are more compact and solid than the exterior layers of the same tree ; consequently, in drying, the latter contract more in length than the former. This irregularity of contraction causes the wood to curve, in the directic of its length, and it may be avoided by cutting the wood so that the parts of each piece shall be as nearly of the same age as possible.

Besides the contraction which takes place in drying, wood undergoes a considerable change in bulk with the variations of the atmosphere. In straight-grained woods the change in length is nearly insensible, hence they are sometimes employed for pendulum rods; but the lateral dimensions vary so much that a wide piece of wood will serve as a rude hygrometer. .The ex-tent of variation decreases in a few seasons, but it is of some importance to the joiner to be aware, that, even in very old wood, when the surface is removed, the extent of variation is nearly the same as in new wood.

It appears, from Rondelet's experiments, that, in wood of a mean degree of dryness, the extent of contraction and expansion, produced by the usual changes in the state of the atmosphere, was, in fir wood,

from ˆ to ˆ part of its width ; and in oak, from ˆ to ˆ part of its width. Consequently the mean extent of variation in fir is Tˆ, and in oak ˆ ; and at this mean rate, in a fir board about twelve inches and a half wide, the difference in width would be ˆ of an inch. This will show the importance of attending to the maxims of construction ; for, if a board of that width should be fixed at both edges, it must unavoidably split from one end to the other.

JOINT, n. s. Lat. junctura ; French jointure.

Articulation of limbs ; juncture of moveable bones in animal bodies.

Dropsies and asthmas, and joint racking rheums.

Milton, I felt the same pain in the same joint. Temple.

Hinge ; junctures which admit motion of the parts.

The coach, the cover whereof was made with such jointi that as they might, to avoid the weather, pull it up close when they listed ; so when they would, they might remain as discovered and open-sighted as on horseback. Sidney.

In joinery ; Fr. jointe.

Straight line, sin joiners' language, is called a joint ; that is, two pieces of wood are shot, that is, plained.

Moion.

A knot or commissure in a plant.

One of the limbs of an animal cut up by the butcher.

In bringing a joint of meat, it falls ont of your hand. Swift.

Out of joint. Luxated ; slipped from the socket, or correspondent part where it naturally moves.

My head and whole body was sore hurt, and also one of my arms and legs put out of joint. Herbert.

Out of joint. Thrown into confusion and disorder; confused; full of

disturbance.

The time is out of joint, oh cursed spight ! That ever I was born to set it right. Shahpeart. JOINT, adj. Shared among many.

Entertain no more of it, Than a. joint burthen laid upon us all. Shoktpeare.

United in the same possession : as we say, joi-heirsnt or coheirs, joint-heiresses or cohei-resses.

The sun and man did strive, Joint tenants of the world, who should survive.

Don**.

Combined ; acting together in consort.

On your joint vigour now My hold of this new kingdom all depends. Milton.

JOINT, v. a. From the noun.

To form in articulations.

The fingers are jointed together for motion, and furnished with several muscles. Ray on the Creation.

To form many parts into one.

Against the steed he threw His forceful spear, which, hissing as it flew, Pierced through the yielding planks of jointed wood.

To join together in confederacy. Not used.

The times

Made friends of them, jointing their force ‘gainst

Cxsar. Shakspeare.

To divide a joint; to cut or quarter into joints.

He joints the neck. ; and with a stroke so strong The helm flies off; and bears the head along.

Dryden.

The JOINTS of the human body are called by anatomists articulations. See ANATOMY. The suppleness to which the joints may be brought by long practice from infancy is very surprising. One of the most wonderful instances was a per-son of the name of Clark, and famous for it in London, where he was commonly known by the name of Clark the posture-master. This man, by long practice, distorted many of the bones, of which nobody before had ever thought it possible to alter the position. He bad such an absolute command of his muscles and joints, that he could almost disjoint his whole body ; so that he once imposed on the famous Mullens by his distortions, in such a manner, that he refused to undertake his cure : but, to the amazement of the physician, no sooner had he given over his patient, than he saw him restore himself to the figure and condition of a proper man, with no distortion about him.

JOINTED, adj. From joint. Full of joints, knots, or commissures.

Three cubits high

The jointed herbage shoots. Phillips.

JOINTER, n.s. From joint. A sort of plane.

The jointer is somewhat longer thau (he foreplane, and hath its sole perfectly straight : its office is to fol-low the foreplane, and shoot an edge perfectly straight, when a joint is to be shot. Moxon.

JOINT’LY, adv. From joint.

Together ; not separately.

I began a combat first with him particularly, and after his death with the others jointly. Sidney.

Because all that are of the church cannot jointly and equally work ; the first thing in polity required is a difference of persons in the church. Hooker.

In a state of union or co-operation.

1 1 is name a great example stands, to shew How strangely high endeavours may be blest, Where piety and valor jointly go. Dryden.

JOINTRESS, n. s. From jointure. One who holds any thing in jointure.

Our queen,

The imperial jointress of this warlike state, \VVve taken now to wife. Shakspeare. Hamlet. JOINTSTOOL', n.s. Joint and stool. A stool made not merely by insertion of the feet, but by inserting one part in another.

He rides the wild mare with the boys, and jumps \iponjointstooli, and wears his boot very smooth like unto the sign of the leg. Shakspeare.

Could that be eternal which they had seen a rude trunk, and perhaps the other piece of it zjointstool ?

South.

JOINTURE, 71. s. Fr. jointure. Estate settled on a wife to be enjoyed after her husband's decease

The jointure that your king must make, With her dowry shall be counterpoised.

Shakspeare.

The old countess of Desmond, who lived in 1589. and many years since, was married in Edward the Fourth's time, and held her jointure from all the earls of Desmond since then.

Raleigh's History of the World. There's a civil question used of late, Where lies my jointure, where your own estate 1

Dry. fen.

JOINTURE. See DOWER. To enjoy her jointure, the widow must have been the wife of the party at his decease; not divorced a vinculo

matrimonii : nor, if she has eloped from her husband, and lived with an adulterer, shall she be entitled to dower, unless her husband be voluntarily reconciled to her. The widows of traitors are also barred of their dower by 5 and 6 Edw. VI. cap. 11, but not the widows of felons. An alien cannot be endowed, unless she be queen consort. If a woman levies a fine with her husband, or if a common recovery be had with the husband and wife of the husband's lands, she is barred of her dower. A widow, clear of these impediments, is by law entitled to be endowed of all lands and tenements, of which her husband was seised in fee-simple or fee-tail at any time during the coverture; and of which any issue she might have had might by possibility have been heir.

JOINVILLE (John Sire de), an eminent French statesman of the thirteenth century, who was seneschal, or high steward of Champagne, and one of the principal lords of the court of Louis IX. He attended that monarch in all his expeditions; and all matters of justice in the palace were referred to his decision. He wrote the History of St. Louis in French, which is a very curious and interesting piece; and died about 1318. The best edition of this work is that of Du Cange, in folio, with notes.

JOINVILLE, an ancient town of France, in the department of Upper Marne, and late province of Champagne, with a large magnificent castle, situated on the Marne, fifteen miles south-east of St. Dizier, 125 of Paris, and twenty-five south-west of Bar le Due.

JOIN US, or JAINS as they are sometimes called, a sect or race of Hindoos, found in considerable numbers in the southern peninsula of India. They are dissenters from the established faith of Brahminism, deny the authority of the Vedas, and all the grand objects of Hindoo veneration. They have adopted opinions concerning the origin of the world, which seem to partake of the character of atheism. The material world, as well as the minds of all men and animals, are by them held to be eternal, and they refuse to acknowledge any thing which is not, or has not been, the object of the sei.ses. Upon this principle they deny the existence of any beings superior to man, and have no cbjects of worship except men who have raised themselves to the rank of divinities. They, however, set no bounds to the perfection which the human soul may ar-rive at.

They have three ranks of ascetics, or Yatis. The first, called Anuvrata, is attained by him who forsakes his family, entirely cuts off his

hair, holds always in his hand a bundle of peacock's feathers, and an earthen pot, and wears clothes of a tawny color. The second rank, Mahavrata, requires that all dress should be abandoned, except a mere rag to cover nakedness, and that the hair should be pulled out by the roots. He who aspires to attain the third de-gree, or Nirvana, throws aside even rags, remains entirely naked, and eats nothing but rice once in two days. He is held in nearly equal veneration with the priests and rajas, whose images are worshipped in the temples.

At Billicull, or Belligola, is the residence of their high :priest, and a gigantic image of Go-mat Iswara Swami, one of their chiefs, the foot of which is nine feet in length, so that the height of the entire statue cannot be less than fifty-four feet : there is a similar one at Kurcul", near Mangalore. Samana and Gaud ma, the main objects of Boodh veneration, are also enumerated by the Jains among the earliest of their priests. On the other hand they differ from the Boodhists in being divided into four castes. The Jains observe similar penances with otherHindoos, only carrying them to a greater extreme. They are also scrupulous to a still greater degree as to causing the death of any living thing. To guard against this the strict Jains do not eat after sunset ; they have always a small broom to sweep the ground before them, and never drink water unless strained through a cloth. Like the other Hindoos, they consider it unlawful for the widow to marry again ; but discourage the practice of sacrificing her on the body of the husband. They have a system of their own with regard to history, chronology, and physics, still more absurd than that of the Vedas.

JOIST, n s. From Fr. joindre. The secondary beam of a floor.

Some wood is not good to use for beams or joists, because of the brittleness. Mortimer's Husbandry.

The kettle to the top was hoist, And there stood fastened to a joist. Swift. JOIST, v. a. From the noun. To fit in the smaller beams of a flooring.

JOKE, n. s. 8c v. n. (Lat. jocus. A jest ; JO'KER, n. s. S something not serious :

jest or be merry : a jester ; a merry fellow. Thou madest thy first appearance in the world like a diy joker, buffoon, or jack pudding. Dennis.

Link towns to towns with avenues of oak Inclose whole downs in walls, 'tis all a. joke ! Inexorable death shall level all. Pope.

Why should publick mockery in print, or a merry ioke upon a stage, be a better test of truth than publick persecutions ? Watts.

There's little talking, and no wit ;" It is no time to joke. Cowper. Yearly Distress. JOKTAN, the son of Heber, brother of Peleg, and father of thirteen sons (Gen. x. 25 ; 1 Chron. i. 19), the progenitors of thirteen nations or tribes of Arabs ; who inhabited Arabia Felix, from Mount Sephar, in the south-east of Arabia, to Meshna, or Mecca, on the east of the Red Sea. See PELEG.

IOLAIA, a festival at Thebes, called also Heracleia. It was instituted in honor of Hercules and his friend lolas, who assisted him in conquering the hydra. It continued during several days, on the first of which were offered

solemn sacrifices. The next day horse races and athletic exercises were exhibited. The following day was set apart for wrestling, the victors were crowned with garlands of myrtle, generally used at funeral solemnities. They were sometimes rewarded with tripods of brass. The place where the exercises were exhibited was called lolaion ; where there were to be seen the monument of Amphitryon, and the cenotaph of lolas, who was buried in Sardinia. These monuments were strewed with garlands and flowers on the day of the festival.

1OLAS, or IOLAUS, in fabulous history, a son of Iphiclus, king of Thessaly, who assisted Hercules in conquering the hydra, and burnt with a hot iron the wound where the heads had been cut off, to prevent the growth of others. He was restored to his youth and vigor by Hebe, at the request of his friend Hercules. Some time afterwards lolas assisted the Heraclidae against Eurystheus, and killed the tyrant with his own hand. Plutarch says, lolas had a monument in Bceotia and Phocis, where lovers used to bind themselves by solemn oaths of fidelity, considering the place as sacred to love and friendship. According to Diodorus and Pausanias, lolas died, and was buried in Sardinia, whither he went to make a settlement at the head of the sons of Hercules by the fifty daughters of Thespius.

JOLE, n. s. ") Fr. gueule, joli ; Lat.

JOLL, v. a. jovialis. Jole, the face or

JOL'LILY, adv. \ cheek. Joli, to beat the

JOL’LIMENT, n. *. V-head against any thing.

JOL’LINESS, n.s. 1 Jolly, gay; merry; plump

JOL’LITY, n. s. | as in high health : noisy

JOL’LY, adj.) mirth and merriment is

called jollity or jolliment. The definition of

these words is somewhat doubtful.

This Phebus, which that thought upon no guile, Disceived was for all his jolitee.

Chaucerˆ The Manciple* TaU. Most like Alcyon seeming at a glance ; Alcyon he, the iollie shepheard swaine, That wont full merrilie to pipe and daunce, And fill with pleasance every wood and plaine.

Spenser. Daphnaida. Upon our way to which we weren bent We chaunst to come foreby a covert glade Within a wood, whereas a ladie gent • Sate with a knight in joyous iolliment.

Id. Faerie Queene. With joyance bring her, and withjoMiry.

Sperutrv

There shall these pairs of faithful lovers be Wedded, with Theseus, all in jollity.

Shakipeare.

Follow ! nay, I’ll go with thee cheek by jolt. Id. Howsoe’er their hearts are severed in religion, their heads are both one: they may jail horns together. *••

Like a jolly troop of huntsmen, come Our lusty English. Id. King John.

All my griefs to this are jolly, Nought so sad as Melancholy. Burton. The brazen throat of war had ceased to roar ; All now was turned to jollity and game, To luxury and riot, feast and dance.

O nightingale !

Thou with fresh hope the lover’s heart dost fill, While the jollu hours lead on propitious May.

Id.

ION

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JON

He with a proud jollity commanded him to leave that quarrel only for him, who was only worthy to enter into it. Sidney.

Your wan complexion, and your thin joles, father.

Dryden.

This gentle knight, inspired by jolly May, Forsook his easy couch at early day. Id.

The goodly empress, jollily inclined, Is to the welcome bearer wondrous kind.

Id. Perseus.

The tortoises envied the easiness of the frogs, ‘till they saw them jolled to pieces and devoured for want of a buckler. L’Estrange.

He catches at an apple of Sodom, which though it may entertain his eye with a florid, jolly white and red, yet, upon the touch, it shall fill his hand only with stench and foulness. South.

Good men are never so surprised as in the midst of their jollities, nor so fatally overtaken and caught as when the table is made the snare. Id.

Crown we the goblet then, and call on Bacchus, Bacchus ! the jolly god of laughing pleasures.

Howe’s Ulysses.

My heart was filled with melancholy to see several dropping in the midst of mirth and jollity.

Addison's Spectator.

A shepherd now along the plain he roves, And with his jolly pipe delights the groves.

Prior.

Red-speckled trouts, the salmon's silver jole, The jointed lobster, and unscaly soale.

Gay's Trivia.

A salmon's belly, Helluo, was thy fate : The doctor called, declares all help too late : Mercy ! cries Helluo, mercy on my soul ! Is there no hope 1 alas ! then bring the jowl.

ˆ Pope.

JOLT, or JOLY (Claudius), was born at Paris in 1607. He applied first to the law, but afterwards entered into orders, and in 1631 obtained a canonry in the cathedral of Notre Dame at Paris. His diplomatic talents attracting the attention of the duke of Longueville, the French plenipotentiary for negociating a general peace, he took him with him to Munster, where he proved a good assistant. On his return, in 1671, he was made precentor and official of Paris. He wrote many works, particularly Maxims for the Education of a Prince ; which, giving offence to the despotic court of France, was burnt by the hangman in 1665. He died in 1700, aged ninety-three.

JOLI (Guy), king's counsellor to the Chatelet, and syndic of the revenues of the Hotel deVille at Paris, attached himself for a long time to cardinal de Retz, in the capacity of secretary. Besides other tracts, he wrote Memoirs from 1648 to 1665, including those of Cardinal de Retz ; a translation of which into English was published in 1755.

JOLT, v. a., v. n. & n. s. \ Fr. joute, or pos—

JOLT'HEAD, J sibly from jostle, a

frequentative of joust. To shake as a carriage:

jolt, any shock or violent agitation: jolthead, a

great head ; a dolt ; a blockhead.

Fie on thee, jolthead, thou can’st not read !

Shakspeare.

Every little unevenness of the ground will cause such a jolting of the chariot as to hinder the motion of its sails. Wilkins.

Had man been a dwarf, he had scarce been a reasonable creature ; for he must then have either had a jolthead, and so there would not have been body and blood enough to supply his brain with spirits ; or he must have had a small head, and so there would not have been brain enough for his business.

Grew.

The symptoms are, bloody water upon a sudden jolt or violent motion. Arbuthnot on Diet.

The first jolt had like to have shaken me out ; but afterwards the motion was easy. Swift.

ION, in fabulous history, a son of Xuthus and Creusa, daughter of Erechtheus, who married Helice, the daughter of Selinus, king of ./ Egiale. He succeeded to the throne of his father-in-law ; and built a city, which he called Helice after his wife. His subjects from him received the name of lonians, and the country that of Ionia. See IONIA.

ION, a tragic poet of Chios, who flourished about the eighty-second Olympiad. His tragedies were represented at Athens, where they met with universal applause. He is greatly commended by Aristophanes and Athenaeus, &c.

IONA, JONA, or ICOLMKILL, one of the Hebrides. See ICOLMKILL. The east side of lona is mostly flat ; the middle rises into small hills ; and the west side is very rude and rocky ; the whole forming a singular mixture of rocky and fertile ground. There is in the island only one town or village, consisting of about sixty houses. Near it is the Bay of Martyrs, so named from those slain by the Danes. Beyond the town are niins of the nunnery of Austin canonesses, dedicated to St. Oran, and said to have been founded by St. Columba : the church was fifty-eight feet by twenty, and the east r6of is entire. On the floor is the tomb of the last prioress, with her figure praying to the Virgin Mary, and this inscription on the ledge : — Hie jacetdomina Anna

Donaldi Terleti filia, quondam priorissa de Jona, quae obiit an'o M.D.XI.mo ejus animam Altissimo commendamus. A broad paved way leads hence to the cathedral ; and on this way is a large handsome cross called Macleane's, the only one that remains of 360, which were demolished at the Reformation. Reilig Ouran, or the burying place of Oran, is the large enclosure where the kings of Scotland, Ireland, and of the isles, and their descendants, were buried in three several chapels. The dean of the isles, who travelled over them in 1549, says, that in his time, on one of these chapels (or 'tombes of stain, formit like little chapels with ane braid gray marble or quhin stain on the gavil of ilk ane of the tombes'), containing the remains of forty-eight Scotch monarchs, from Fergus II. to Macbeth, was insciibed, Tumulus regum Sco-tiae ; the next was inscribed, Tumulus regum Hiberniae, and contained four Irish monarchs ; and the third, Tumulus regum Nonvegiae, contained eight Norwegian viceroys of the Hebrides, while they were subject to the crown of Nor-way. Boece says, that Fergus founded this abbey for the burial place of his successors. Here also stands the chapel of St. Oran, the first building begun by Columba, and Orati's red grave-stone is near the door. In this chapel are tombs of several chiefs, &c. A little north of this enclosure stands the cathedral, built in form

ot a cross, 115 feet long by twenty-three, the tra-isept seventy feet : the pillars of the choir have their capitals charged with sculpture and other histories. This church is ascribed to Maldwin in the seventh century ; but the present structure is far too magnificent for that age. Most of the walls are built of red granite from the Nun's Island in the Sound. Two parallel walls of a covered way about twelve feet high, and ten wide, reach from the south-east corner to the sea. In the churchyard is a fine cross of a single piece of red granite, fourteen feet high, twenty-two broad, and ten inches thick. The monastery is behind the chapel ; of which only a piece of the cloister remains, and some sacred black stones in a corner, on which contracts and alliances were made, and oaths sworn. In former times, this island was the place where the archives of Scotland and many valuable old MSS. were

kept. Most of these are supposed to have been destroyed at the Reformation ; but many, it is said, were carried to the Scotch college at Douay in France. This once illustrious seat of learning and piety has now no school for education, no temple for worship, no instructor in religion, except when visited once a quarter by the parish minister of Kilfinichen.

JONAH, Heb. njrn, *i.e.* a dove, the son of Amittai, one of the twelve minor prophets, and author of the canonical book of the Old Testament bearing his name ; in which are recorded, his mission to the Ninevites, his foolish attempt to fly from the presence of the Almighty, his punishment, and miraculous deliverance from the belly of the fish, with his prophecy, discontent, and final reproof afterwards. Some of the rabbies suppose Jonah to have been the son of the widow of Sarepta, restored to life by Elijah ; others the son of the Shunammite, restored by Elisha ; but the chronology renders at least the first of these opinions improbable, as he prophesied under Joash king of Israel, about A. A. C. 771 ; and perhaps lived to see his prophecy of relief to the Israelites (2 Kings xiv. 25) fulfilled by Jeroboam II. Alstedius says he prophesied about A.M. 3124; about the time of Sardanapalus, the last king of Assyria, who perished with his capital Nineveh, about forty years, or forty prophetic days, after Jonah had foretold its destruction, and which the prophet himself supposed to mean forty natural days.

JONAS ARNAGRIMUS, a learned Icelander, who acquired great reputation by his skill in the sciences, and particularly in astronomy. He was coadjutor to Gundebran de Thorlac, bishop of Hola in Iceland. He refused that bishopric after the death of Gundebran ; and died in 1649. He wrote several, works, the principal of which are, Idea verae Magistratus, and the History and Description of Iceland.

JONATHAN MACCABEUS, orother of Judas, a renowned general of the Jews. He forced Bacchides, the Syrian general, who made war with the Jews, to accept a peace; conquered Demetrius Soter, and afterwards Apollonius, that prince’s general ; but being ensnared by Tryphon, was put to death 144 B.C. See JEWS.

JONES (Inigo), a celebrated English architect, the son of a cloth-worker of London, born in 1572. He was at first put apprentice to a joiner; but early distinguished himself by his inclination to drawing and landscape painting. This recommended him to the favor of William, earl of Pembroke, who sent him abroad with a handsome

allowance to perfect himself in that art. He was, however, no sooner at Rome, than he found himself in his proper sphere; he felt that nature had not formed him to decorate cabinets, but to design palaces. He laid aside the pencil, and devoted himself entirely to the study of architecture. He soon acquired fame, and, from his reputation at Venice, Christian IV. invited him to Denmark, and appointed him his architect. James I. met him at Copenhagen, and his queen took him, as her architect, to Scotland. He served prince Henry in the same capacity, and the place of surveyor-general of the works was granted to him in reversion. On the death of that prince Jones travelled once more into Italy, in order to perfect his taste. The surveyor's place became vacant, and he returned to England, but with great disinterestedness gave up the profits of his office, which he found extremely in debt ; and prevailed upon the comptroller and paymaster to imitate his example, till the whole arrears were cleared off. In 1620 he was appointed one of the eommissioners for repairing St. Paul's ; but this was not commenced till 1633, when Laud, then bishop of London, laid the first stone, and Inigo the fourth. The Banqueting House, according to Nicholas Stone,' was begun in 1619, and finished in two years — a small part of the pile designed for the palace~of our kings ; but so complete in itself, that it stands a model of the most pure and beautiful taste. Several plates of the intended palace at Whitehall have been given; but Mr. Walpole thinks from uo finished design. In 1623 he was employed at Somerset House, where a chapel was fitted up for the infanta, the intended bride of the prince. On the accession of Charles I. Jones was continued in his post. His fee as surveyor was 8*. 4d. a day, with an allowance of £46 a year for house-rent, besides a clerkˆand incidental expenses. During the prosperous state of the king's affairs the pleasures of the court were carried on with much taste and magnificence. Lord Burlington had a folio of the designs for these solemnities, by Inigo's own hand, consisting of habits, masks, scenes, &c. The works of Inigo Jones are not scarce ; Surgeon's Hall is one of his best works. One of the most beautiful of his works is the queen's house at Greenwich. Inigo early shared the misfortunes of his royal master. He was not only a favorite but a Roman Catholic: in 1646 he paid £544 for his delinquency and sequestration. Grief, misfortunes, and age, put an end to Jones's life at Somerset-house, July 21st, 1651 - Several of his designs have been published. He left in MS. some curious notes on Palladia's architecture, which are inserted in an edition published in 1714.

JONES (Richards), a Welsh author of the seventeenth century, who wrote in his native language a curious work, entitled Gemma Cambricum, containing all the books and chapters of

the Bible. He was matriculated at Jesus College, Oxfcrd, in 1621, and died in Ireland.

JONES (William), F. R. S., an eminent mathematician, born in Anglesea in 1675. He taught mathematics in London, and was intimate with Newton. He wrote A Compendium of Navigation, 8vo. 1702 ; Synopsis Matheseos, 8vo. 1706; Analysis per Quantitatem Series, &c. He died rich in 1749.

JONES (Ilev. William), a modern divine of the church of England, was born at Lowick in Northamptonshire, July 30th, 1726, and educated at the Charter House. Hence he removed to University College, Oxford, where he contracted a friendship with Mr. Home, afterwards bishop of Norwich. He became, on leaving the university, curate of Finedon, then of Wadenhoe, Northamptonshire, where he wrote his Catholic doctrine of the Trinity. In 1762 he published An Essay on the First Principles of Natural Philosophy, which much pleased lord Bute ; and, in 1764, the archbishop of Canterbury gave him the vicarage of Bethersden, in Kent, to which was afterwards added the rectory of Pluckley. He next obtained the perpetual curacy of Nayland, in Suffolk ; soon after which he exchanged Pluckley for Paston, in Northamptonshire. On the breaking out of the French revolution, Mr. Jones printed A Letter from Thomas Bull to his brother John, which had considerable effect. He was also concerned in establishing the British Critic ; and published The Scholar armed against the Errors of the Times. On the death of his friend, bishop Horne, he paid an affectionate tribute to his me-mory in an account of his life. In 1798 archbishop Cornwallis presented him to the sinecure rectory of Hollingbourne, Kent, which he did not long enjoy ; for the loss of his wife was followed by a paralytic stroke, of which he died February 6th, 1800. His works have been published in 12 vols. 8vo.

JONES (Paul), a naval officer in the service of the United States of America, during the war of independence. He was born in 1736 at Selkirk, in Scotland, and in 1775 obtained a commission from the congress, on which he sailed in a squadron commanded by

commodore Hopkins, destined against New York. Here he obtained the rank of captain, and was appointed to the command of a frigate of thirty-six guns. In 1777 he made a descent at Whitehaven, where he destroyed the shipping in the harbour ; and afterwards, landing in Scotland, attacked the mansion of lord Selkirk, and carried off the plate and furniture. It is said, however, that he afterwards restored the property to his lordship, whose person was the object of this attack. After taking the Drake sloop of war, off Carrickfergus, lie sailed for Brest, and, obtaining a reinforcement of three ships, scoured the English seas. Near Flamborough Head he fell in with the Baltic fleet, convoyed by the Serapis frigate and the Countess of Scarborough, when a severe action took place, in which he was victorious, and captured the Serapis. Arriving at L'Orient in February 1780, he was invited to Paris, and presented, by Louis XVI. with a valuable sword. He returned to America in 1781, when the congress voted him a medal of gold, and appointed him to the command of a seventy-four. He afterwards served under d'Estaing against Jamaica, and in 1792 offered his services to the French government, but they were declined. He died at Paris in July 1792.

JONES (Griffith), a miscellaneous writer, was born in 1726, and was a coadjutor with Dr. Johnson for some years in the Literary Magazine ; and with Smollett and Goldsmith in the British. He also translated and published anonymous works from the French, and was the author of several publications for the use of children, published by Mr. Newbury. He died in 1786.

JONES (Sir William), the son of Wm. Jones, F. R. S., was born September 28th, 1746, and educated at Harrow, under the celebrated Dr. Sum-ner, who early observed his superior abilities. He was thence removed to University College, Ox-ford, where the rapidity of his literary acquisitions excited general admiration ; while his generous disposition and irreproachable morals procured him universal esteem. In 1769 he made a tour through France, and resided some time at Nice, where he employed himself in investigating the influence of the various forms of government on mankind. His first publication was a translation into French of a Persian MS., entitled The history of Nadir Shah, known by the name of Thamas Kouli Khan, Emperor of Persia. In 1771 he met with an additional disappointment by the death of his friend and preceptor, Dr. Sumner, upon whom he wrote an elegant Latin elegy. This year he published Dissertation sur la Literature Orientale, 8vo. A Grammar of the Persian Language, in 4to., and

Lettre a M. A du P , dans laquelle estcom—

pris 1'Examen de sa Traduction des Livres at-tribue's & Zoroastre, 8vo. ; containing a spirited vindication of the University of Oxford, from the scurrilous reproaches of the translator of Zoroaster's supposed works. In 1772 he published Poems, chiefly translated from the Asiatic languages; with Two Essays subjoined on the Eastern Poetry, and on the Imitative Arts. In 1773 he took the degree of M. A., and published an English translation of his first work, the History of Nadir Shah, with an introduction, containing A Description of Asia, according to the Oriental Geographers. A Short History of Per-sia, from the Earliest Times to the present ; and an Appendix containing an Essay on Asiatic Poetry, and the History of the Persian Language, &c., 8vo. In 1774 he published Poeseos Asia-ticae Commentariorum, Libri Sex,cum Appendice, &c., 8vo. From 1773 he pursued the study of the law, and, being called to the bar about 1779, was appointed a •ommissioner of bankrupts by lord Bathurst. In 1779 he published the Speeches of Isaeus in causes concerning the Law of Succession to Property at Athens ; with a preparatory discourse, notes, and a commentary; dedicated to lord Bathurst, 4to. The disgraceful riots this year in London led him to publish An Enquiry concerning the Legal Mode of Suppressing Riots, with a Constitutional Plan of Future Defence, 8vo. ; and in 1781 An Essay on the Law of Bailments ; a masterly treatise. About this time Mr. Jones became a zealous member of the Constitutional Society, as he did

not approve of the measures then carrying on by the ministry. In 1782 he published The Ma-horarnedan Law of Succession to the Property of Intestates, in Arabic, with a Verbal Translation and Explanatory Notes, 4to. On the 4th March 1783 he was appointed judge of the Supreme Court of Bengal, and was knighted on the 20th. On the 8th of April he married Miss Shipley, eldest daughter of the bishop of St. Asaph, and soon after embarked for India ; but previously published the Moallakat, or Seven Arabian Poems, which were suspended on the temple at Mecca, with a translation and arguments, 4to. He left with his brother-in-law, the dean of St. Asaph, a small tract in MS., entitled The Principles of Government, in a Dialogue between a Scholar and a

Peasant; which being afterwards published by the dean, and widely circulated by the society for constitutional information, the dean was prosecuted for a libel, and found guilty. Sir William, during his voyage, formed the plan of the Asiatic Society, afterwards established at Calcutta, of which he became the active president, and of whose transactions several volumes have since been published, replete with much useful information. His conduct as a judge was most exemplary, and, while his literary researches continued indefatigable, his integrity remained unimpeachable. After residing fifteen years in India, he was preparing to return to his native country, when he died April 27th 1794, in the forty-eighth year of his age. ‘ It is to the shame of scepticism,’ says one of his biographers, ‘ to the encouragement of hope, and to the honor of genius, that this great man was a sincere believer in the doctrines of Christianity, and that he was found dead in his closet, in the attitude of addressing his prayer to God.’ Sir John Shore, bart., now lord Teignmouth, delivered an elegant funeral oration at a meeting of the Asiatic Society on Sir William. ‘ His capa-pacity for the acquisition of languages,’ said he, ‘has never been excelled. In Greek and Roman literature his early proficiency was the subject of admiration. — The French, the Spanish, and Italian, he spoke and wrote with fluency and precision, and the German andPortuguese were familiar to him. At an early period of life his application to oriental literature commenced. He studied the Hebrew with ease and success ; and many of the most learned Asiatics avow, that his knowledge of Arabic and Persian was as accurate and extensive as their own. He was also con-veisant in the Turkish idiom, and the Chinese had ever attracted his notice so far as to learn the radical characters of that language. It was to be expected after his arrival in India, that he would make himself master of the Sanscrit ; and the most enlightened professors of the doctrines of Brahma confessing that his knowledge of that sacred dialect was most critically correct and profound, could not suppress their tears for his loss, nor find terms to express their admiration at the wonderful progress he had made in their sciences. But Sir William was too discerning to consider language in any other light than as the key of science. He was led to study the works of Menu, reputed by the Hindoos the oldest and holiest of legislators;

and finding them to comprise a system of laws, so comprehensive and minutely exact, that it might be considered as the Institutes of Hindu Law, he presented a translation of them to the government of Bengal. During the same period he gave the public an English version of the Sirajiyah, or Mahommedan Law of Inheritance, with a commentary.

The latter was published at his own expense, and sold for the benefit of insolvent debtors ; as well as a former work on the same subject in London.

The following is an Epitaph which he wrote for himself while in Asia: —

Here was deposited

the mortal part of a man

who feared God but not Death,

and maintained independence

but sought not riches ;

who thought

none below him but the base and unjust, none above him but the wise and virtuous ;

who loved his parents, kindred, friends, and country,

with an ardour

which was the chief source of

all his pleasures and all his pains ;

and who, having devoted

his life to their service,

and to the improvement of his mind,

resigned it calmly,

giving glory to his Creator,

wishing peace on earth,

and with

good will to all creatures, on the [Twenty-seventh] day of [April]

in the year of oui blessed Redeemer One thousand seven hundred [and ninety-four].

JONES (Owen), a respectable tradesman and antiquary of the metropolis. He carried on for many years the trade of a furrier in Thames-street, where he died in 1814, aged seventy-four. He was a native of Denbighshire, and enthusi-astically attached to the antiquities of the principality. He published, at his own expense, The Archaeology of Wales, 3 vols. 4to. ; and the entire works of the celebrated Cambrian bard, Dafydd ab Gwilym. He also procured copies of the unpublished Welsh poetry anterior to the end of the seventeenth century, forming about <50 vols. 4to. Mr. Jones, in 1772, succeeded in forming the Gwyneddigion (or Cambrian) Society, for the purpose of patronising the Welsh bards, and promoting the study of the ancient British language, and music.

JONES, in geography, a county of north Carolina, in Newbern, bounded on the north by Craven, east by Carteret, south by Onslow, and north-west by Lenoire counties : containing 3141 citizens, and 1681 slaves, in 1795. watered by the Trent, and the chief town is Trenton.

IONESIA, a genus of plants first discover* at Calcutta, and belonging to the class]>eptan-dria, order monogynia. It was so named by th Asiatic Society, in honor of Sir W.Jones. Dr. Roxburgh, a member of the society, thus scribes it : « CAL. two-leaved : COR. one petalled, pistal bearing; base of the tube impervious ens *ong, ascending, inserted into the margin

of a glandulous nectarial ring, which crowns the mouth of the tube, the uppermost two of which more distant; style declining: legume turgid: trunk erect, though not straight : bark dark brown, pretty smooth : branches numerous, spreading in every direction, so as to form a most elegant shady head : leaves alternate, abruptly feathered, sessile, more than a foot long, when young, pendulous, and colored : leaflets opposite, from four to six pairs, the lowermost broad lanced, the upper lanced ; smooth, shining, firm, a little waved, from four to eight inches long : petiole common, round, and smooth : stipule axillary, solitary, a process from the base of the petiole : umbels

terminal and axillary ; between the • stipule and branchlet, globular, crowded, subsessile, erect : bracts, a small-hearted one under each division of the umbel : peduncle and pedicles, smooth, colored : flowers very numerous, pretty large; when they first expand they are of a beautiful orange color, gradually changing to red, forming a variety of lovely shades; fragrant during night: SEEDS generally from four to eight, smooth, gray, size of a large chestnut.' The lonesia flowers at the beginning of the hot season, and its seeds ripen during the rains. The plants and seeds were brought to Calcutta from the interior parts of the country, where it is indigenous.

IONIA, a country of Asia Minor, bounded on the north by ˆEolia, on the west by the ˆgean and Icarian seas, on the south by Caria, and on the east by Lydia and part of Caria. It was founded by colonies from Greece, and particularly Attica, by subjects of Ion. Ionia was divided into twelve small states, which formed a celebrated confederacy often mentioned by the ancients. These twelve states were Priene, Miletus, Colophon, Clazomenafc, Ephesus, Lebe-dos, Teos, Phocaea, Erythrae, Smyrna, and the capitals of Samos and Chios. The inhabitants of Ionia built a temple which they called Pan Ionium, i. e. all Ionia, from the concourse of people that flocked there from every part of Ionia.

The IOKIAN ISLANDS are situated in the Ionian Sea, near the coasts of South Albania and the Morea, and consist of Corfu, Cephalonia, Zante, Santa Maura, Ithaca, or Thiaki, Cerigo, and Paxo, and a number of smaller islands. Corfu is the most northerly, and lies opposite to Albania ; Paxo, Santa Maura, Ithaca, Cephalonia, and Zante, follow each other in succession to the southward, lying along the coasts of Albania and the ancient Elis : Cerigo is detached, being 150 miles to the south-east of Zante and opposite to the coast of Laconia. The territorial extent of this small state is estimated at about 1500 square miles, and the population, by a return made in 1807, is 206,000. The islands extend from 19° 30' to 23° 10' E. long.

Prior to the French revolution these islands were subject to Venice, but were ceded to France by the treaty of Campo Formic (1797). In 1799 they were taken by a Russian and Turkish fleet, and were erected into an independent republic by the name of the Seven Islands (Cerigo being included) and acknowledged as such by the different powers, at the general peace of Amiens. During the succeeding wars these islands were occupied by the different belli-

gerents in succession ; and France long succeeded in keeping

possession of Corfu wun a strong garrison. In the arrangements at the congress of Vienna in 1815, it was agreed that the Ionian republic should be put under the protection, not of Turkey, which was too near a neighbour, nor of Russia, whose hostility to Turkey would have kept alive the flame of war, but of Great Britain, a power which might derive advantage from the naval stations and commercial resources of the islands, without indulging schemes of aggrandisement on the adjacent continent. A constitution for this small state was soon after drawn up and ratified by the British government in July, 1817.

These islands will be each found described in their alphabetical places. We may here observe of them generally, that their coasts are rugged and difficult of access, and their harbours insecure, with the exception of those of Ithaca and Cephalonia. The climate is in general mild, but the transitions from heat to cold are sudden : hot and scorching winds are sometimes destructive to vegetation ; and at certain seasons there are violent rains and thunder. They are all subject to slight earthquakes, which are sometimes confined to a single island. The soil in the plains and valleys is fertile in vines, corn, olives, currants, cotton, honey, wax, &c. But of corn the quantity is not adequate to the consumption. Vines and olives are the chief objects of agriculture. Cotton also is raised in large quantities ; and advantage is taken of the smallest portions of soil; but the general ruggedness of the surface leaves little scope for agricultural improvement. Pasturage is in general scanty ; goats and sheep are reared in considerable number ; but horses and cattle are brought from the continent. The wild animals are foxes, hares, and rabbits. Fishing is prosecuted on the coasts. Salt is the only extensive manufacture : next to it is olive oil. Wine, brandy, and various kinds of liquors, are likewise made in quantity. The imports are salt fish (which sells largely for diet during the holy-days of the Greek church) ; next sugar and drugs ; also a limited quantity of woollen, liner, and hardware. Thousands of laborers annually cross from Zante to the Morea, to assist in getting in the harvest, and are paid for their service in corn, which they bring back, and keep as a family stock.

The constitution alluded to vests the legislative power of this republic in a senate of twenty-nine representatives, named as follows • —

Population.

Representatives.

Corfu

60,000

7

Cephalonia

60,000

8

Zante

40,000

7

Santa Maura .

20,000

4

Cerigo

10,000

1

Ithaca

8,000

1

Paxo, (a very small

island) . ‘

8,000

1

206,000

29

1 O N I A N S.

141

No person can be a member of this body, or hold a public office of any consequence, without belonging to the class of gentry. Many British settlers have of late resorted hither ; particularly to Zante.

ION LANS, in ancient history, a celebrated colony of Greeks, who settled in Asia Minor. They were originally descended from the Hellenes, and inhabited at first the upper part of Attica. Upon the death of Codrus the monarchical government was abolished in Athens, and succeeded by the administration of Archous-Neleus and Androclus ; the younger sons of Co-drus, being dissatisfied with this arrangement, collected a number of friends, and, complaining that

Attica was too narrow for the increasing number of its inhabitants, set sail for the Asiatic coast. Here they attacked and drove out the ancient inhabitants, and by degrees spread themselves over the central and most beautiful parts of the coast from the promontory of Posideion to the banks of the Hermus. They afterwards obtained possession of Chios and Samos, and all these countries were united under the common name of Ionia, as the lonians were the most numerous of the emigrants. Thus they established themselves in a beautiful and fertile country, enjoying, the most delicious climate, and peculiarly adapted to a commercial intercourse with the most civilised nations of antiquity. Thus favored, they silently flourished in peace and prosperity, till their growing numbers and wealth excited the avarice and jealousy of the powers of Asia.

In process of time, possessing the delightful country above-mentioned, together with the mouths of great rivers, having before them convenient and capacious harbours, and behind wealthy and populous nations, whose commerce they enjoyed and engrossed, they attained such early and rapid proficiency in the arts of navigation and traffic, as raised the cities of Miletus, Colophon, and Phocaea, to an extraordinary pitch of opulence and grandeur. Having obtained footing in Egypt, about 850 B. C., they acquired, and henceforth preserved, the exclusive commerce of that ancient and powerful kingdom. Their territories, though in their greatest breadth compressed between the sea and the dominions of Lydia to the extent of scarcely forty miles, became not only flourishing in peace, but formidable in war. Thus they remained in the full enjoyment of their liberties from the time of their migration till the reign of Croesus, king of Lydia, to whom they were compelled to submit after having baffled all the attempts of his predecessors to subdue them for upwards of 500 years. Before Cyrus invaded Lower Asia, he earnestly intreated the lonians to share the glory of his arms ; but, having lived at ease under the mild government of Crcesus, they preferred their allegiance to him to the friendship of an unknown master. Accordingly they opposed him when he first invaded Lydia. But they were finally subdued by his lieutenant, Harpagus. In the reign of Darius Hystaspis they made an attempt to recover their ancient liberty, and maintained a war against the whole power of the Persian monarchy for six years : but they were

compelled to submit, and punished with great severity. The lonians assisted Xerxes in his expedition against Athens with 100 ships; but they were persuaded by Themistocles to abandon the Persians, and their flight contributed not a little to the famous victory gained by the

Athenians at Salamis. A similar expedient was recurred to at Mycale, so that few Persians escaped slaughter. On the conclusion of the peace between the Greeks and Persians, which happened in the reign of Artaxerxes, one of the articles sworn to by both parties was, that all the Greek states of Asia should be made free, and allowed to live according to their own laws. The lonians, thus delivered from the Persian yoke, formed an alliance with the Athenians; but were treated by them rather like subjects than allies. Their fortune was various ; at one time subject to the Persians, and at another time revolting from them, till they were at length delivered byAlex-andei, who restored all the Greeks in Asia to the enjoyment of their ancient rights and privileges. After the death of Alexander, they fell under the power of the king of Syria, till the Romans obliged Antiochus III., surnamed the Great, to grant the same liberty to the Greek colonies in Asia, which they had procured for the Greek states in Europe. On this occasion most of the free cities entered into an alliance with Rome, till they were again, brought into subjection by Mithridates, king of Pontus; by whose orders they massacred, without distinction, all the Ro-mans and Italians whom trade, or the salubrity of the climate, had drawn into Asia, Upon Sylla's arrival in Asia they abandoned Mithridates, and declared for the Romans. Sylla, having routed the armies of Mithridates, revenged on the Asiatics the death of the Romans, by depriving them of their liberty, and laying such heavy taxes and fines on their cities as reduced them to beggary. This was a most fatal blow to Asia ; nor did the inhabitants ever after recover their ancient splendor, notwithstanding the favor shown them by many of the emperors, under whose protection they enjoyed some show of liberty. See GREECE.

The IONIC SECT was the first of the anc.ent sects of philosophers; the others were the Italic and Eleatic. The founder of this sect was Thales, who, being a native of Miletus in Ionia, occasioned his followers to assume the appellation of Ionic : Thales was succeeded by Anaximan-der, and he by Anaximenes, both natives of Miletus; Anaxagoras Clazomenius succeeded them, and removed his school from Asia u> Athens, where Socrates was his scholar. It vn-s the distinguishing tenet of this sect, that wale . was the principle of all natural things.

IONIUM MARE, a part of the Mediterranean Sea, at the bottom of the Adriatic. It lies between Sicily and Greece. That part of the jEgean Sea which lies on the coasts of Ionia in Asia, is called the Sea of Ionia, and not the Ionian Sea. According to some authors, the Ionian Sea receives its name from lo, who swam across it, after her metamorphosis. See lo.

JONK, or JONQUE, in naval affairs, a kind of small ship, very common

in the Kast Indies.

These vessels are about the size of our fly-boats ; and differ in form of their building, according to the different methods of naval architecture used by the nations to which they belong. Their sails are frequently made of mats, and their anchors are made of wood.

JONQUILLE’, n. *. Fr. jonquille. A species of daffodil. The flowers of this plant are greatly esteemed for their strong sweet scent. Nor gradual bloom is wanting,

Nor hyacinths of purest virgin white,

Low bent, and blushing inward ; nor jonquilles

Of potent fragrance. Thomson’s Spring.

Is such a life, so tediously the same, So void of all utility or aim, That poor Jonquil, with almost every breath Sighs for his exit, vulgarly called death.

Cowper. Hope.

JONQUILLE. See NARCISSUS.

JONSAC, a town of France, in the department of the Lower Charente, nine miles S. S. E. of Pons, and thirteen miles and one-third N. N. W. of Montlieu.

JONSIUS (John), a learned author of the seventeenth century, born at Holstein, and educated at Frankfort on the Maine, where he died young in 1659. He wrote a work, entitled De Scriptoribus Historiac Philosophic, which is esteemed.

JONSON (Ben), one of the most considerable dramatic poets of the seventeenth century, was born in Westminster in 1 574, and educated at the public school under the great Camden. He was descended from a Scottish family ; and his father, whose estate was confiscated by the regent Murray, dying before he was born, and his mo-ther marrying a bricklayer, Ben was taken from school to work at his step-father's trade. Not being fond of this employment, he went into the Low Countries, and distinguished himself in a military capacity. On his return to England, he entered at St. John's College, Cambridge; and, having killed a person in a duel, was condemned, and narrowly escaped execution. After this he turned actor ; and Shakspeare is said to have first introduced him to the world, by recommending a play of his to the stage, after it had been rejected. His Alchymist gained him such reputation, that in 1619 he was, at the death of Mr. Daniel, made poet laureat to king James I. and M. A. of Oxford. But, being no economist, we find him after this petitioning king Charles 1., on his accession, to enlarge his father's allowance of 100 merks into pounds. He died in August 1637, aged sixty-three, and was buried in Westminster Abbey ; and on his grave stone is inscribed ' O rare Ben Jonson.' The most complete edition of his works was printed in 1756, in 7 vols. 8vo.

JOPPA, a seaport town of Palestine, lying south of Cesarea ; and anciently the only port to Jerusalem, whence all the materials sent from Tyre towards the building of Solomon's temple were brought hither and landed. 2 Chr. ii. 16. It is said to have been built by Japhet, and from him to have taken its name Japho, afterwards moulded into Joppa ; and even the heathen geographers speak of it as built before the flood. It is now called Jaffa, somewhat nearer to its first appellation. See JAFFA

JORDAN (Camille), a modern French statesman, was born at Lyons in 1771 ; and, becoming a member of the convention, defended his na-tive city when it was denounced as a focus of counter-revolution. This effort of his zeal obliged him to retire to Switzerland, and afterwards to England. Returning to France, he was, in March 1797, elected by the department of the Rhone to the council of Five Hundred: but the change of the 8th of Fructidor rendered him again an exile, when he retired to Weimar. On Buonaparte succeeding to the power of the directory, Jordan returned home, and in 1802 published a tract, entitled Vrai sens du Vote National sur le Consulat a vie. Under the empire of Napoleon he remained a private citizen. But in 1814 he received from the Bourbons letters of nobility, and was decorated witii

the order of the legion of honor. He died at Paris, May 19th, 1871. Besides many political pieces, he was the author of various biographical eulogies.

JORDAN, nˆV, Heb. i. e. the river of judgment, or, as others translate it, the river of Dan, a river of Judaea, so named from the people where it has its source,- which is a lake called Phiala, from its round figure, to the north of its apparent rising from the mountain Panium or Paneum, as was discovered by Philip, te-trarch of Trachonitis; for, on throwing light bodies into the Phiala, he found them emerge again at Paneum. Josephus. From Paneum it runs in a direct course to a lake called Samachonites ; as far as which it is called Jordan the Less ; and thence to the Lake of Gennesareth, or of Tiberias, where it comes increased by the lake Samachonites and its springs, and is called the Greater Jordan ; continuing its direct course southwards, till it falls into the Asphaltites, or Dead Sea. Near Jericho the Jordan is found deep, and rapid, wider than the Tiber at Rome, and nearly equal to the Thames at Windsor. The banks are steep, and about fifteen feet high. The soil around is deeply impregnated with salt, and covered with efflorescenses of that mineral.

JORDANO (Luca), or LUKE GIORDANO, an eminent Italian painter, born at Naples in 1632. He became very early a disciple of Joseph Ribera; but, going afterwards to Rome, he adopted the manner of Pietro de Cortona, whom he assisted in his larger works. Some of his pictures being seen by Charles II., king of Spain, he engaged him in painting the Escurial. The king showed him a picture of Bassani, expressing a concern that he had not a companior for it : Luca painted one so exactly in Bassani’s manner, that it was taken for a performance of that master. For this service he was knighted, and rewarded with several honorable employments. The great works he executed in Spain gave him still greater reputation, when he returned to Naples ; so that, though he was a verj quick workman, he could not supply the eager demands of the citizens. No one ever painted so much as Jordano ; and he often presented altar-pieces to churches that were not able to purchase them. He died in 1705, and left » large fortune to his family.

JOS

JORDANS (James), one of the most eminent painters of the Flemish school, was born at Antwerp in 1593. He learned the principles of his art from Adam Van Ort, whose daughter he married; which connexion hindered him from visiting Italy. He improved most under Ru-bens ; for whom he worked, and from whom he learned his best principles: his taste directed' him to large pieces ; and his manner was strong and true. A great number of altar-pieces painted by him are preserved in the churches in the Netherlands, which maintain the reputation of this artist. He died in 1678.

JOR'DEN, n. s. Sax. joji, stercus, and t>en, receptaculum. A pot.

They will allow us ne'er a jorden, and then we leak in your chimney ; and your chamberlye breeds fleas like a loach. Shakspeare.

This Chinajordere let the chief o'ercome

Replenish, not ingloriously at home.

Pope'i Dunciad.

The copper pot can boil milk, heat porridge, hold small beer, or, in case of necessity, serve for a. jorden.

Swift.

JORTIN (John), D. D., a learned English clergyman, born in the parish of St. Giles, Middlesex, October 23d, 1698. His father Renatus Jortin was a native of Bretagne, and came to England in 1685, upon the revocation of the edict of Nantes. He was gentleman of the bed-chamber to king William HI. in 1691, and afterwards secretary to admiral Russel, Sir G. Rooke, and Sir Cloudesley Shovel; but was shipwrecked with the latter, October 22d, 1707. Young Jortin completed his education at Cambridge; and assisted Pope in his translation of the Iliad, in his eighteenth year. In 1738 lord Winchester gave him the living of Eastwell in Kent ; but, the place not agreeing with his health, he soon resigned it. Archbishop Herring, about 1751, presented him to the rectory of St. Dun-Stan's in the east ; and bishop Osbaldiston in 1762 gave him that of Kensington, with a prebend in St. Paul's cathedral, and made him archdeacon of London.

His temper, as well as his aspect, was rather morose and saturnine. His sermons were sensible and argumentative : but he appeared to greater advantage as a writer. His Remarks on Ecclesiastical History, his Six Dissertations, his Life of Erasmus, and his Sermons, were extremely well received by the public, and have undergone several editions. He died in 1770.

JOSEPH, *jD!% Heb. i. e. increase, the eldest son of Jacob by Rachel. The very affecting narrative of his life, of his father's partiality for him, his brethren's envy, his prophetic dreams, his faithful services when sold as a slave, his extraordinary chastity, his unjust imprisonment, his promotion to be prime minister of Egypt, and his preservation of the people, as well as of his father's family, from famine, are recorded in Gen. xxxvii — xlvii.

JOSEPH II., a modern emperor of Germany, was the son of Francis of Lorraine, and Maria Theresa : he was born at Vienna in March 1741, and brought up by his mother with great religious strictness. At the early age of nineteen he was married to an accomplished

princess, Isabella of Parma. Though chosen emperor on the death of his father, in 1765, be possessed but little real power : hig mother reigned in her own right, queen of Hungary and Bohemia, and sovereign of Austria and the Low Countries. The young emperor was however distingu.shed by the simplicity and urbanity of his manners, and his ardent desire of information. In 1769 he made the tour of Italy, and on his return paid a visit to the king of Prussia, the consequence of which appeared in the partition of Poland between Austria, Russia, and Prussia in 1772.

In 1777 he was involved in a war with Sax-ony and Prussia, in consequence of his claims upon Bavaria; but in these hostilities nothing decisive took place in the field, and they terminated under the mediation of France and Russia. In 1780 he had un interview with the empress Catharine in Lithuania, and accompanied her to St. Petersburgh. In the same year the death of his mother left him at liberty to pursue his ecclesiastical and other reforms with less opposition. Some strong edicts followed, regulating the intercourse with the court of Rome, and one granting full toleration to the Protestants, and the privilege of subjects to the Jews. He also sold the church lands for the benefit of the clergy. In 1781 he travelled into Holland and the Netherlands, and resumed a former project respecting the line of fortresses, called the Dutch barrier. On his return to Vienna

he still more decidedly attacked the power of the church. He disclaimed all subordination in secular affairs to the Roman see, sup pressed numerous religious houses, and induced Pius VI. to seek by a visit to Vienna to avert for a while various other similar changes. But although the pontiff was treated respectfully, he could produce little alteration in the emperor's plans. In 1784 he claimed of the united provinces the town of Maestricht, and a free navigation of the Scheldt. Sending in October in that year a vessel from Antwerp, with orders to refuse being searched by the Dutch guard-ships, the interference of France alone prevented a war. The Dutch, however, were obliged to send a deputation to apologise for firing on his vessel. A new code of laws now engaged his attention. It abolished the indiscriminate forfeiture of life, but substituted some punishments which were even more appalling, and upon the whole exhibited little legislative ability. In 1787 he had a violent contest with his subjects in the Low Countries, owing to his determination to introduce the same reforms of an ecclesiast cal kind as he had enforced in the rest of his dominions. It resulted in an open re-volt. At the close of his life he engaged in a war with Turkey, at the instigation of Catharine, and obtained several considerable successes ; but his death-bed was disturbed with the remonstrances of his subjects against his rash innovations. He died in 1790, and was succeeded by his brother Leopold. See GERMANY.

JOSEPH'S BAY (St.), a bay of West Florida, of the figure of a horse-shoe, being about t< miles in length, and seven across where b est. The ba/is narrow; and immediately w is from four to six fathoms and a half soft ground.

The best anchorage is within the peninsula, opposite to some ruins that remain of the village of St. Joseph. The peninsula opposite St. Joseph's is very narrow.

JOSEPHINE ROSE TACHIER, the late wife of Napoleon Buonaparte, and empress of France, was born at Martinique, June 24th, 1763. Her maiden name was Rose Tachier de la Pagene\ Being brought to France early in life by her fa-ther, and distinguished for her beauty, she was married in that country to M. de Beauharnois, governor of the Antilles. About the year 1787 she returned to Martinique on a visit to her mother, and remained with her three years, when the revolutionary events of that colony induced her to take refuge in France. She was now imprisoned with her husband by Robespierre, to whose tyranny M. Beauharnois fell a victim : M. Tallien procured the liberty of Josephine, a benefit she afterwards acknowledged by allowing him a pension. Barras, afterwards a director, procured her the restoration of her husband's property. Soon after she became acquainted with Buonaparte, to whom she was married in 1796. He was then placed in command of the army ot Italy, whither she accompanied him. On his embarking for Egypt, she retired to Malmaison, and employed her leisure in forming a museum, and commencing a collection of plants. When he obtained the station of first consul, she exerted her great influence, it is said, in behalf of many exiles, and was universally regarded as the friend of the distressed. Buonaparte said to her at this period : — ' Si je gagne les batailles, c'est vous qui gagnes les cceurs.' When he assumed the imperial title and authority, a divorce was proposed by some of his partizans, on the same plea of their want of issue, which afterwards prevailed with him. But he then rejected this counsel, and Josephine was crowned" empress at Paris, and queen of Italy. Her son was subsequently married to the princess of Bavaria ; and her daughter Hortensia to Lewis Buonaparte, king of Holland. At length she was destined to descend from her exalted station, to make way for the adulterous marriage of her husband with the princess Maria Louisa of Austria. Malmaison now became her principal residence, and here she amused her leisure with botanical studies, retaining, it is said, a strong affection for Napoleon, and receiving marked attentions from the emperor Alexander and the king of Prussia, when they entered France : but she was at this period laboring under her last illness, and died much respected 29th May, 1814.

Sir Walter Scott speaks of her influence over Napoleon as very important to his interests on various occasions. It is remarkable that among the just awards of Providence, on the later life of this unprincipled adventurer, he was as harshly separated from her who had then become his lawful wife, as he had formerly separated himself from this amiable woman.

JOSEPIIUS, the celebrated historian of the Jews, was of noble birth ;

his father Mattathias being descended from the high priests, and his mother of the blood royal of the Maccabees. Me was born A. D. 37, uider Caligula, and

lived under Domitian. At sixteen years of age he joined the sect of the Essenes, and then the Pharisees; and having been successful in a journey to Rome, upon his return to Judea was made captain-general of the Galileans. Being taken prisoner by Vespasian, he foretold his coming to the empire, and, his own deliverance by his means. He accompanied Titus at the siege of Jerusalem, and wrote his Wars of the Jews, which Titus ordered to be put in the public library. He afterwards lived at Rome, where he enjoyed the privileges of a Roman citizen, and where the emperors loaded him with favors, and granted him large pensions. Besides the above work, he Wrote, 1. Twenty books of Jewish Antiquities, which he finished under Domitian. 2. Two books against Appian. 3. A Discourse on the Martyrdom of the Maccabees. 4. His own Life. These works are written in Greek.

JOSHUA, Heb. pttnpp, i-e. a Saviour, the renowned general of the Jews, who conducted them through the wilderness, &c., died in 1443, B.C., aged 110.

JOSHUA, a canonical book of the Old Testament, containing a history of the wars and transactions of the person whose name it bears. This book may be divided into three parts : the first is a history of the conquest of the land of Canaan ; the second, which begins at the twelfth chapter, is a description of that country, and the division of it among the tribes ; and the third, comprised in the last two chapters, contains the renewal of the covenant he caused the Israelites to make, and the death of their victorious leader and governor. The whole comprehends a term of seventeen, or, according to others, of twenty-seven years.

JOSTLE, «. a. Fr.jouster. To rush against. See JOLT.

JOT, ». /. Gr. iura. A point ; a tittle ; the least quantity assignable.

As superfluous flesh did rot Amendment ready still at hand did wait, To pluck it out with pincers fiery hot, That soon in him was left no one corrupt jot.

Faerie Queene.

Go, Eros, send his treasure after, do it ;

Detain no Jot, I charge thee. Shakspeare.

Let me not stay a jot from dinner ; go, get it ready.

Id.

This bond doth give thee here no jot of blood; The words expressly are a pound of flesh. Jd.

This nor hurts him nor profits you a jot ; Forbear it therefore ; give your cause to Heaven.

tit

I argue not

Against Heaven's hand, or will ; nor bate one jot Of heart or hope ; but still bear up and steer Right onwards. Milton.

You might, with every jot as much justice, hang me up because I'm old, as beat me because I'm impotent. L'Estrange.

The final event will not be one jot less the consequence of our own choice and actions, for God's having from all eternity foreseen and determined what that event shall be. Rogers.

JOTAPATA, in ancient geography, a town of the Lower Galilee, distant forty stadia from Ga-

bara: a very strong place, situated on a rock, walled round, and encompassed on all hands with mountains, so as not to be seen but by

those who come very near. It was with great difficulty taken by Vespasian, being defended by Josephus, who commanded in it; when taken it was ordered to be razed.

JOUBERT (Lawrence), counsellor and physician to the king of France, chancellor and judge of the university of Montpelier, was born at Valance in Dauphiny, in 1530. lie became the disciple of Rondelet at Montpelier ; and at his death succeeded to the regius professorship of that university, where he had given abundant proofs of his merit, and strengthened his reputation by the lectures he read in that capacity, as well as by the works he published. Henry III., who passionately wished to have children, sent for him to Paris, in hopes, by his assistance, to ren-der his marriage fruitful ; when much offence was taken at an indelicate piece he published, under the title of Vulgar Errors. He died in 1582; and his son Isaac translated some of his Latin paradoxes into French.

JOUBERT (Bartholomew Catherine), a French revolutionary general, was a native of Pont-de- Vaux, in Bresse, and born in 1769. He was destined for the bar, but at the age of fifteen forsook his studies, and entered a regiment of artillery. His discharge being obtained by his friends, he was sent to Lyons to continue his education, and at the beginning of the Revolution he was a student at Dijon. He enlisted in December, 1791, as a volunteer, and served as a Serjeant in the army of the Rhine. In April, 1792, he was made a sub-lieutenant, and displayed great courage and activity in the campaign against the Austrians and Sardinians. In September, 1793, Joubert was taken prisoner by the latter; and, on his return home, distinguished himself by opposing the Jacobins, who were tyrannising in the neighbourhood of his native place. In 1795, at the battle of Loano, under Kellerman, he was made general of brigade on the field of battle. In 1796 he attracted notice at Montenotte, as well as at Millesimo, Cava, Montebaldo, Rivoli, and above all in the Tyrol, where, though opposed by a warlike people, he succeeded in penetrating Inspruck, and was afterwards opposed to the Russian general Su-warrow. Joubert was killed at the battle of Novi, 1799.

JOUDPORE,orMARWAR, a city and principality of Hindostan, in the province of Ajmeer. The territories of Joudpore are intermixed with those of Odeypore and Jyepore, and are said to touch the Indus on the west, and the province of Gujerat on the south. The southern and eastern parts yield sugar, cotton, and all the grains of India. The western portion is chiefly desert or pasture lands. But here is a hardy race of camels, horses, and cattle. The cultivators of the soil are Jauts, and the rest of the inhabitants of the tribe of Rajpoots. The rajahs of

Odeypore, Jyepore, and Joudpore, were formerly of great consequence. The capital is situated on a hill, and is chiefly built of stone It carries on a good trade witli Guzerat and the Deccan. The rajah of this province is ˆn ally of the British. VOL. XII.

Fr. jorial, jryi ;

Lat.jocialit ; Italian giogia. Under the influence of Jupiter ;

‘,gay; airy; merry!

I mirth and pleasan—

Jtry ; happiness ; felicity. Joy, to rejoice; to congratulate, gladden, orex-

JO’VIALLY, adv.

Jo’viALNESS, n, t.

JOY, n. s., v. n. & v. a. JOY’ANCE, n. s. JOY’FUL, adj. • JOY’FULLY, adv. JOY’FULKESS, n. s. JOY’LESS, adj. JOY’OUS, adj.

hilarate ; to enjoy ; to have possession. Joyance, gaiety. Joyful, full of joy. Joyless, void of joy; feeling no pleasure; giving no pleasure. Joyous, blithesome ; cheerful ; light of heart.

Long thus / toyed in my happinesse And well did hope my ioy would have no end.

Spetuer. Daphnaida.

Bring home with you the glory of her gain ; With joyance bring her, and with jollity. Spenter.

My lord Bassanio, and my gentle lady, I wish you all the joy that you can wish.

Shakspeare. Let us hence, And let her joy her raven-coloured love.

(. Titus Amlroniciiy. My lord, sleek o’er your rugged looks, Be bright and jovial among your guests.

Simla feare.

I cannot joy, until I be resolved Where our right valiant father is become.

Id. Henry l'I.

Some men, of an ill and melancholy nature, incline the company, into which they come, to be sad and ill-disposed ; and contrariwise, others of a jovial nature dispose the company to be merry and cheerful. Bacon's Xatural H'utorv.

No man imparteth his joys to his friend, but he joyeth the more; and no man imparteth his griefs, but he grieveth the less. Id. Estays.

They laugh, we weep ; they jo y while we lament.

Fairfai.

Their cheerful age with honour youth attends, Joyed that from pleasure's slavery they are free.

Denham.

I might have lived, and joyed immortal bliss, Yet willingly chose rather death with thee.

Milt<m

I cannot speak, tears so obstruct my words And choak me with unutterable joy. Otieay.

The' usurper Joyed not long His ill-got crown. Dryden't Spaniih Friar.

Almeyda smiling came, Attended with a train of all her race, Whom in the rage of empire I had murdered ; But now, no longer foes, they gave me joy. Of my new conquest. Id. Doit Sebattia*.

The roofs with jo v resound ; And hymen, io hymen, rung around. Drydtn.

Like us they love or hate, like us they know To jov the friend, or grapple with the foe. I'rwr-Perhaps the jest that charmed the sprightly crowd. And made the jovial table laugh so loud, To some false notion owed its poor pretence. <.

And jovial youth of lightsome vacant heart, Whose every day was

made of melody Hears not the voice of mirth.

Hail to the joyout day ! with purple clouds The whole horizon glows.

Think, ye masters iron-hearted, Lolling at your jovial boards ; Think how many backs have smarted For the sweets your cane affords.

Cowper. Nrgrti't Lompiatnt. I.

Away with these vain thoughts, I will be joyous— And here comes Joy's true herald.

Byron. Sardunapalus. I have endured as much in giving life To those who will succeed them, as they can In leaving it : but mine were joyful pangs.

Id. Two Foscari. There are, to whom (their taste such pleasures

cloy),

No light — thy wisdom yields, thy wit no joy. Peace to their heavy heads, and callous hearts, Peace — such as sloth, as ignorance imparts.

Canning. New Morality.

JOVIAN, the Roman emperor, was elected by the army, after the death of Julian the apostate, in 363. He at first refused, saying he would not command idolatrous soldiers ; but, upon an assurance that they would embrace Christianity, he accepted the throne, and immediately shut all the pagan temples, and forbade their sacrifices. But he did not long enjoy the dignity to which his merit had raised him ; being suffocated in his bed by the fumes of a fire that had been made to dry the

chamber, in the thirty-third year of his age, and the eighth month of his reign.

JOU'ISANCE, n. s. Fr. rejouissance. Jollity; merriment; festivity. Obsolete.

Colin, my dear, when shall it please thee sing, As thou wert wont, songs of somejouisance ?

Thy muse too long slumbereth in sorrowing, Lulled asleep through love's misgovernance.

Spenser.

JOVIUS (Paul), or Paulo Govio, a celebrated historian, born at Como in Italy, in 1483. As his father died in his infancy, he was educated by his eldest brother, Benedict Jovius, under whom he became well skilled in classical learning ; and then went to Rome for the sake of enjoying the benefit of the Vatican library. He there wrote his first piece, De piscibus Romanis, which he dedicated to Cardinal Lewis of Bourbon. He received a pension of 500 crowns for many years from Francis I. king of France, whose favor he secured by his flattery. But, in the following reign, having disgusted the constable Montmorency, his name was struck out of the list of pensioners. But Jovius had obtained a high reputation by his writings ; and having always showed great respect to the house of Medicis, on whose praises he had expatiated in his works, he applied to Clement VII. and obtained the bishopric of Nocera. His principal piece is his history, which is that of his own time throughout the world, beginning with 1494, and extending to 1544. This was the chief business of his life; for he formed the plan of it in 1515, and continued upon it till his death, which happened at Florence in 1552. It is printed in 3 vols. folio.

.TOUR'NAL, adj. & n. s.-v Fr. journal, jaur-JOUR'NALIST, n. s. j nee ; Ital. giomale ;

JOUR'NEY, n. s. & v. n. y > Span. jornal, jor-JOUR'NEYMAN, n s. inarffl. Daily: an JOUR'NEYWORK, n. s. 3 account of daily transactions ; any daily paper : journalist, a writer of journals : journey, the travel of a day ; travel by land distinguished from a voyage by sea; passage from place to place ; to travel : journey-man, a workman hired by the day : journeywork, work done by the day ; hired labor.

We are journeying unto the place, of which the Lord said, I will give it you. Numbert

And was concluded, that the knight Departen shuld, the same night ; And forthwith there take his voiage, To journey for his marriage; And returnen with such an host, That wedded might be lest and most.

Chaucer. Dreamt.

Ere twice the sun has made his journal greeting To the under generation, you shall find Your safety manifested.

Shakspeare. Measure for Measure. When Duncan is asleep,

Whereto the rather shall this day's hard journey Soundly invite him. Id. Macbeth.

Players have so strutted and bellowed, that I have thought some of Nature's journeymen had made men, and not made them well. Id. Hamlet.

So are the horses of the enemy, In general journal bated and brought low.

Shakspeare.

I have journeyed this morning, and it is now the heat of the day ; therefore your lordship's discourses had need content my ears very well, to make them intreat my eyes to keep open. Bacon.

Edward kept a most judicious journal of all the principal passages of the affairs of his estate.

Hay ward on Edward VI. Since such love's natural station is, may still My love descend, and journey down the hill ; Not panting after growing beauties, so I shall ebb on with them who homeward go.

Donne.

Scarce the sun Hath finished half his journey. Milton.

Did no committee sit, where he Might cut out journeywork for thee 1 And set thee a task with subornation, To stitch up sale and sequestration.

Hudibras.

I intend to work for the court myself, and will have journeymen under me to furnish the rest of the nation. Addison.

Her family she was forced to hire out at journeywork to her neighbours. Arbuthnot's John Bull. Having heated his body by journey ing, he took cold upon the ground. Wiseman's Surgery.

He for the promised journey bids prepare The smooth-haired horses and the rapid car.

Pope.

What a strange moment must it be when near Thy journey's end thou hast the gulph in view !

Blair.

In that tale I find The furrows of long thought, and dried-up tears,

Which, ebbing, leave a sterile track behind, O'er which all heavily the journeying years Plot the last sands of life, where not a flower appears.

Byron. Childe Harold. JOURNAL. See DIARY. JOURNAL, in merchants' accounts. See BOOK-KEEPING.

JOURNAL, in navigation, a sort of diary, or daily register of the ship's course, winds, and weather, together with a general account of whatever fs material to be remarked in the pe-riod of a sea voyage. In all sea-journals, the day, or what is called the twenty-four hours, terminates at noon, because the errors of the dead reckoning are at that period generally corrected by a solar observation. The daily account usually contains the state of the weather ; the variation, increase, or diminution of the wind ;

and the suitable shifting, reducing, or enlarging the quantity of sail extended ; as also the most material incidents of the voyage, and the condition of the ship and her crew, together with the discovery of other ships or fleets, “land, shoals, breakers, soundings, &c.

JOUST, n. s. & v. a. Fr, joust. Tilt ; tournament ; mock fight : to run in the tilt. It is now written, less properly, just.

Come se the yle and hem disport, Where should be joustis and turnaies, And amnes done in other waies. Chaucer. Dreamt.

Thus praied the quene, and everichone And for there should ne be no nay, They stinten justing, all, a day, To pray my lady, and requere, To be content and out of fere. Chaucer.

And every knight turned his horses hede To his felow, and lightly laid a spere Into the rest ; and so justes began, On every part abouten, here and there. Some brake his spere ; some threw down horse and

man About tne felde, astray, the stedes ran.

And the justing alle was left off dene And fro hire horse the nine alight anon.

Chaucer. The Fleure and the Leafe. Am I that Endymion, who was wont in court to lead my life, and in justt, tourneys, and arms, to ex-exercise my youth ? Am I that Lndymion ?

Lyly. Midas and Endymion. Bases, and tinsel trappings, gorgeous knights At joust and tournament. Milton’s Paradise Lost.

JOUVENET (John), a celebrated French painter, born at Rouen in 1644; his father, who was also a painter, educated him for his own profession ; but his greatest improvement was derived from the instructions of Nicholas Poussin. He acquired a sufficient knowledge of design to qualify him for employment in several grand works in the palaces at Paris and Trianon ; in many of the churches and convents ; and in the hospital of invalids, where he painted the twelve apostles, each figure being fourteen feet high. He was esteemed to have a ready invention, to be correct in his designs, and grand in his compositions. Being deprived of the use of his right hand, by a paralytic disorder, he continued to paint with his left. - He died in 1717.

JOUX, a valley and lake of Switzerland, in the canton of Vaud, in the

Jura chain of the Alps. The valley contains several large villages, and about 3000 inhabitants. The lake is about five miles long, and more than one broad ; its greatest depth is about 1 50 feet.

JOWA,a river of the Missouri, United States, which enters the Mississippi on the right bank. It is 150 yards wide at its mouth, and is navigable for boats nearly 300 miles. Thirty-six miles from its mouth it divides into two branches, of which the right is called the Red Cedar River, from the quantity of that wood on its borders.

JOWLER, n. s. Perhaps corrupted from howler, as making a hideous noise after the game, whom the rest of the pack follow as their leader. The name of a hunting dog or beagle.

See him drag his feeble legs about,

Like hounds ill-coupled : joirler lugs him still

Through hedges, ditches, and through all this ill.

JOWTER, n.i. Perhaps corrupted from jolter.

Plenty of fish is vented to the fish drivers, whom we call jowters. Carew,

JOYCE (Jeremiah), an ingenious writer on general science. He became first known to the public as a member of the corresponding Society, and as being included in a state prosecution with Hardy, HorneTooke,Thelwall,8cc. He had, formerly, been domestic tutor to the sons of earl Stanhope, who gave a splendid entertainment on the return of Mr. Joyce to his seat atChevening, in Kent. Not long after, he settled in London and devoted himself to writing for the press. One of his first employments was as coadjutor with Dr. George Gregory, in the compilation of the Cyclopaedia, which was published under the name of the latter. The success of this undertaking gave rise to another work on a similar plan, which bore in the title-page the name of Mr. William Nicholson. Mr. Joyce is said to have been the principal writer. He subsequently composed Scientific Dialogues ; Dialogues on Chemistry ; Letters on Natural Philosophy ; &c. Mr. Joyce, was a protestant dissenter, and, we believe, occasionally preached. He died at Highgate, near London, in 1816.

IPECACUAN’HA, n. s. An Indian plant.

Ipecacuanha is a small irregularly contorted root, rough, dense, and firm. One sort is of a dusky greyish colour on the surface, and of a paler grey when broken, brought from Peru : the other sort is a smaller root, resembling the former ; but it is of a deep dusky brown on the outside, and white when broken, brought from the Brasils. The grey ought to be preferred, because the brown is apt to operate more roughly. Hill's Materia Medica.

IPECACUANHA, in the materia medica, a West . Indian root, of which there are principally two kinds, distinguished by their color, and brought from different places; but both possessing the same virtue, though in a different degree. The one is ash-colored or gray, and brought from Peru ; the other is brown, and is brought from the Brasils ; and these are indifferently sent into Europe under the general name of ipecacuanha. The plant they belong to is a species of Psychotria. The ash-colored ipecacuan is a small wrinkled root, bent and contorted into a great variety of figures, brought over in short pieces full of wrinkles and deep circular fissures, quite down to a small white .woody fibre that runs in the middle of each piece : the cortical part is compact, brittle, looks smooth and resinous upon breaking ; it has very little smell : the taste is bitterish and subacrid, covering the tongue as it were with a kind of mucilage. The brown sort is small, and somewhat more wrinkled than the foregoing ; of a brown or blackish color without, and white within. The first sort, the ash-colored or gray ipecacuan, is that usually preferred for medicinal use. The brown has been sometimes observed, even in a small dose, to produce violent effects. A third sort, called the white, from its color, has also been distinguished, is woody, has no wrinkles, and no perceptil bitterness in taste. This, though taken in a lar-e dose, has scarcely any effect at all. It is supposed to belong to a species of viola Mr. Geol

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-calls this sort bastard ipecacuan, and complains that it is an imposition upon the public. Ipecacuan was first brought into Europe about the middle of the seventeenth century, and an account of it published about the same time by Piso ; but it did not come into general use till about 1686, when Helvetius, under the patronage of Louis XIV., introduced it into practice. This root is one of the mildest and safest emetics with which we are acquainted ; and has this peculiar advantage, that, if it should not operate by vomit, it passes off by the other emunctories. It was first introduced with the character of an almost infallible remedy of dysenteries, and other inveterate fluxes, as menorrhagia and leucorrhcea, and also in disorders proceeding from obstructions of long standing. In dysenteries, it almost always produces happy effects, and often performs a cure in a very short space of time. In other fluxes of the belly, or where the patient breathes a tainted air, it has been found equally successful : in these cases it is necessary to continue the use of this medicine for several days, and to join with it opiates, diaphoretics, and the like. This root, given in substance, is as effectual, if not more so, than any of the preparations of it ; the pure resin acts as a strong irritating emetic, but it is of little service in dysenteries ; while an extract prepared with water is almost of equal service in these cases with the root itself, though it has little effect as an emetic. Hence Geoffrey concludes, that the chief virtue of ipecacuan in dysenteries depends upon its gummy substance, which lining the intestines with a soft mucilage, when their own mucus has been abrad-ded, occasions their exulcerations to heal, and defends them from the acrimony of the juices; and that the resinous part, in which the emetic quality resides, is required, where the morbific matter is lodged in the glands of the stomach and intestines. But if the virtues of this root were entirely owing to its mucilaginous or gummy part, pure gums, or mucilages, might be employed to equal advantage. Water, assisted by a boiling heat, takes up from all vegetables a considerable portion of resinous along with the gummy matter : if the ipecacuan remaining after the action of water -be digested with pure spirit, it will not yield half so much resin as at first : so that the aqueous extract differs from the crude root only in degree, bein? proportionably less resinous, and having less effect, both as an emetic and in the cure of dysenteries. The virtues of ipecacuan in this disorder, depend upon its promoting perspiration, the freedom of which is of the utmost importance, and an increase of which, even in healthful persons, is generally observed to suppress the evacuation by stool. In dysenteries, the skin is for the most part dry and tense, and perspiration obstructed : the common diaphoretics pass off without effect through the intestinal canal ; but ipecacuan brings on a plentiful perspiration. After the removal of the

dysentery, :-t is necessary to continue the use of the medicine for some time longer, to prevent a relapse; for this purpose, a few grains divided into several doses, so as not to occasion any sensible evacuation, may be exhibited every ctay, whereby the cure is effectual!” established. And indeed

small doses given, even from the beginning, have been often found to have better effects in the cure of this disease than large ones. The only officinal preparation of this root is a tinctu made in wine, which accordingly has now tr appellation of vinum ipecacuanhas, both in ths London and Edinburgh pharmacopeias. Ipecacuan, in the state of powder, is now advantageously employed in almost every disease in which vomiting is indicated ; and when combined with opium, under the form of the pulvis sudorificus, it furnishes the most useful and active sweating medicine which we possess. It is also given with advantage in very small doses, so as neither to operate by vomiting, purging, nor sweating.’ The full dose of the powder is a scruple or half a drachm, and double that in form of watery infusion. The full dose is recommended in the paroxysm of spasmodic asthma, and a dose of three or four grains every morning in habitual asthmatic indisposition. A dose of one-third or half grain rubbed with sugar, and given every four hours or oftener, is recommended in uterine hsemorhagy, cough, pleurisy, haemoptoe, &c., and has often been found highly serviceable. For a chemical account of the basis of this root see EMETIC and CHEMISTRY.

IPHICRATES, general of the Athenians, had that command conferred upon him at twenty years of age, and became famous for the exactness of his military discipline. He made war on the Thracians; and restored Senthes, who was an ally of the Athenians ; ‘attacked the Lacedemonians; and, on many other occasions, gave signal proofs of his conduct and courage. Many ingenious repartees have been mentioned of this general : a man of good family, with no other merit than his nobility, reproaching him one day for the meanness of his birth, he replied, ‘ I shall be the first of my race, and thou the last of thine.’ He died A. A. C. 380.

IPHIGENIA, daughter of Agamemnon and Clytemnestra. When the Greeks, going to the Trojan war, were detained by contrary winds at Aulis, they were informed by Calchas, that to appease the gods they must sacrifice Iphigenia, Agamemnon’s daughter, to Diana. The father, who had provoked the goddess by killing her favorite stag, heard this with the greatest horror and indignation; and, rather than shed the

blood of his daughter, he commanded one of his heralds as chief of the Grecian forces, to order all the assembly to depart each to his respective home. Ulyssus and the other generals interfered, and Agamemnon consented to immolate his daughter for the common cause of Greece. As Iphigenia was tenderly loved by her mother, the Greeks sent for her on pretence of giving her in marriage to Achilles. Clvtemnestra gladly permitted her departure, and Iphigenia came to Aulis. Here she saw the bloody preparations for the sacrifice. She implored the forgiveness and protection of her father; but tears and intreaties were unavailing. Calchas took the knife in his hand ; and, as he was going to strike the fatal blow, Diana relented, caught away Iphigenia, who suddenly disappeared, anil a goat of uncommon size and beauty was found in her place for the sacrifice. This supernatural change aniI P S A M B U L.

mated the Greeks, »he wind suddenly became favorable, ind the combined fleet set sail from Au 1 is.

JPGMCEA, quamoclit, or scarlet convolvulus : a genus of the monogynia order, and pentandria class of plants : natural ordˆr twenty-ninth, cam-panaceae. COR. funnel-shaped : the stigma round-headed : CAPS, trilocular. There are several species ; but the only one cultivated in our garden is the

I. coccinea. It has long, slender, twining stalks, rising upon supports six or seven feet high. The leaves are heartshaped, pointed, and angulated at the base, and from the sides of the stalk and branches arise many slender foot-stalks ; each supporting several large and beautiful funnel-shaped and scarlet flowers. There is a variety with orange-colored flowers. Both are annuals, rising from seed in spring, flowering in July and August, ripening their seeds in September and October, and totally perishing soon after. They are tender, and must be brought up in a hot-bed till the end of May, or beginning of June, when they may be planted out to adorn the borders, or in pots to move occasionally to any particular place ; but, in either case, there must be sticks for them to twine upon.

IPSAMBUL, in antiquities, is the name of a celebrated temple excavated out of the solid rock on the banks of the Nile. Thesideofthe

riverhere is formed of sandstone rock in which this temple is cut. The bank runs in a steep ascent, from the river to the desert, until the sand becomes so high as to be on a level with the summit of the rock.

The sand drifting downwards, towards the river, had entered the temple and completely blocked up its entrance to many feet above the architrave, so as to conceal the greater part of the stupendous figures, of which a very considerable portion is now visible. The sand is now barred out by palm trunks and large stones, but, unless some more effectual defence is provided, there is rea-son to fear that the curious traveller will not long be gratified with the sight of a superb monument, which till discovered by Salt in 1817 had remained concealed and buried probably for many ages. We owe the removal of the sand, the uncovering of the facade, and the entrance to the temple, to the exertions of Messrs. Belzoni and Beechey, employed for this purpose by the British consul Mr. Salt. The following account of this curious monument of antiquity is given by lieutenant-colonel Stratton, who visited it in 1820. The sand which drifts against the entrance, says colonel Stratton, is so fine as to resemble a fluid. — While we were ascending our footsteps occasioned such a current of it as to give us great reason to apprehend that the entrance would soon again be blocked up.

Commencing at the south end of the facade, there is a sloping projection of thirty feet. At four feet seven inches is the arm of the first colossal figure cut out of, and projecting from, the facade, between which and the figure there is a connecting block of three feet thick. These figures cannot be styled alto relievos ; they are in fact statues ; they measure twenty-five feet five inches across the shoulders, and four of them

occupy the facade, which measures 127 feet. The left shoulder of the first touches the right shoulder of the second, and so on. The rock is brownish and soft, and easily cut by the chisel. The part out of which the statues are formed is whitish, which adds to the effect. They are beautifully cut, and the proportions, notwithstanding their magnitude, and consequent want of models, are so perfectly just, that no feature predominates, and every part appears small, symmetrical, and graceful.

The statue to the north, or right hand of the portal, is visible to the elbow : that immediately to the left, or south of the door, is somewhat mutilated : the statue beyond it is visible to below the shoulder ; while

the second 10 the north is buried to nearly the forehead. The statues have the high mitred cap, with the serpent or good genius on the forehead. The nose, mouth, and chin, are of the most delicate proportions. The corners of the mouth, almost approaching a smile, give an expression of mildness, while the other features bear a character of firmness. The neck and shoulders are admirably formed, and the muscles of the chest and abdomen are in the happiest repose. The statues are supposed to be naked to the middle, where we perceive a handsome ceinture in zigzag lines, and a dress beneath, striped perpendicularly.

Over the architrave of the portal, is an alto relievo of Osiris Hierax, placed in a niche, and measuring twenty-three feet two inches. He holds in both hands the sacred tor, or crux ansata, and has a crown on his head : under his left hand is a female figure in alto relievo, measuring five feet one inch ; and under the right a staff, with a fox's head at the top. The deception, arising from the correctness of the proportions, is such, that these figures do not appear one-half of their real height,

Two heroes in sculpture, having the bird with expanded wings over them, present to Osiris, with one hand, a figure resembling a monkey, and hold up the other hand.

On the entablature are sculptured bulls, geese, hawks, grass-hoppers, anubis's, hieroglyphics, &c. &c. On the summit of the cornice are seated figures of monkeys, or possibly of typhous, indifferently executed. The cornice bears sculptures of serpents, surmounted by globes. From the cornice to the architrave, the space measures sixty-five feet : the height of the fd9ade may be 100 feet.

We enter the temple through a small hole made in the sand, under the architrave, part of which has been chipped off to facilitate the entrance, which is much choked up by the sand. The facade, as well as the entrance and interior of the temple, are all cut out of the rock, and the great colossal figures, though projecting so considerably, form a part of the same rock.

The first chamber has eight square pillars resting on pedestals, which do not appear in the plan, but which are merely square projection.', extending six inches or so beyond the pillars. Each of these pillars has on its front a huge colossal statue of the same block with the pillai. These statues, which are about twenty-two feet high, have their arms crossed, holding the crooks

and flagellum : they wear the mitred cap, and are, in all respects, well formed ; the pupil of the eye is painted black ; and also the eyebrow, which, beyond the natural arch, is extended artificially by a straight line in black. They are naked to the ceinture, which is fastened by a clasp ; below it is a close-fitting dress, reaching nearly to the knee, bearing an ornament or pouch in front, not unlike that of the present Highlanders of Scotland. These statues are covered with stucco, painted in rich and variegated colors : their noses are slightly aquiline ; the under lip projects a little ; the corners of the mouth express a smile ; the chin is finely formed ; the eye large and full ; the eyebrow well arched ; and the face very handsome. The expression is serene and benignant, and they resemble much the Jupiter mansuetus of the Romans. The ceiling is painted in blue and red, having a rich border, with large expanded wings.

The paintings on the wall represent the hero in his car : he is in the act of discharging an arrow from his bow ; his aim is sure ; his mien determined ; he wears a helmeted cap ; his face and arms are naked ; and he has bracelets, arm-lets, and collar. His dress reaches below his knee : he has a girdle, and the reins are fastened round his body. On the side of the car, which is painted blue, yellow, and red, is a quiver. The horses in the car have their nostrils open. They are rampant, snorting, and covered with rich trappings, and plumes on their heads. They are stallions, with long tails, and their eyes partly covered with blinkers. They have no bits, but are restrained by a nose band. The hero is followed by three comparatively small chariots, each containing two persons, one of whom drives, while the other carries a bow, arrows, and a shield covered with a leopard’s skin.

The hero and his people are in the act of storming a fortress, and the artist has seized the moment of surrender. The fortress consists of two stories, From the first we see some of the enemy tumbling headlong; others transfixed with darts ; others at the base on their knees, with their bodies bent in supplication. One has a dart sticking under his eye ; another is pulling one from his head ; and many have their hands raised in token of surrender.

In a second row are placed the old men, as being unfit for the first ranks : their countenances are impressed with grief and despair, and their hands are raised. In the upper story, two men hold out a censer of burning incense, and behind are two females supplicating mercy with extended hands, — but the unerring darts of the hero have already transfixed them

Under the walls is seen a peasant running away, and casting a scared look behind him. He is endeavouring to drive before him five oxen, who, in scampering off, seem, by their tails fly-ing in the air, to participate in the general panic.

The hero appears transfixing with a spear a prisoner of distinction, trampling others under foot, holding a number by the hair of the head with liis left hand, while he prepares to strike off tlioii he?ds with the right. A mulatto is seen, driving het'ore him a group of prisoners, four 'of v.liorn are black, four tawny, and four white.

The features are characteristic of the different climates, and show that the conquests of the hero had extended over various parts of the globe.

From the different dimensions of the figures, we may infer that the ancient Egyptians expressed strength and power by comparative size. Thus, the hero is immensely colossal, the chief of the enemy is very large, and the person who conducts the prisoners is large, while the prisoners themselves are pygmies.

On another wall, the hero, grateful for his victories, makes offerings to a male deity painted black ; and to Isis Lunata he offers incense, in token of his farther gratitude to Osiris Hierax. On the adjoining wall are rejoicings, chariot races, processions, &c. The hero and his people are distinguished from the enemy by the difference of costume, of chariots, of shields, &c. The hero is throughout a portrait, though his dresses are various. Sometimes he has the short warlike dress and helmet, and at other times the long loose robe of ceremony, and high cap.

On another pannel we observed a chariot fight. The horses appear tumbling and confounded with men. Some horses are struck in the chest, others in the head, writhing in pain, — the equi exanimes ; — seven chariots on each side, two men and two horses to each. These representations are followed by presentations to Priapus, who is

painted black. The hero is ultimately received among the gods, Osiris, Sothis, Isis Lunata, &c., and this apotheosis is represented both in statuary and in painting. Annexed is a ground plan of this noble temple : —

IPSWICH, the capital of the county of Suffolk, in England. Its name comes from the Saxon Cyppewic, being situated where the river Gipping empties itself into tlu Orwell. It is a

town of considerable antiquity, and was twice plundered by the Danes in 991 and 1000. It had the privilege of a mint in the time of the Saxon heptarchy, and had several charters granted to it, the first by king John, and the last by Charles II. It is celebrated as being the birth place of cardinal Wolsey. It has twelve churches, several meeting houses, a town hall, an excellent market, a hall for county sessions, a free school founded in the time of queen Elizabeth, and several charity schools. It has a market on Wednesdays and Saturdays, and five chartered fairs for cattle, &c. It had formerly a considerable manufactory for baize, which has long since been discontinued. Its chief trade is in corn, which is exported to London, Liverpool, &c., and in foreign timber. It is governed by a high steward, a recorder, two bailiffs, twelve portmen, two coroners, a town clerk, and twenty-four common-council-men ; sends two representatives to parliament, and gives the title of viscount to the duke of Grafton.

IQUEIQUY, or IQUIQUE, an island in the Pacific Ocean, near the coast of Peru, about a mile in circumference, situated in a small gulf, which affords shelter for vessels, but no fresh water. It is inhabited by Indians and slaves belonging to the Spaniards, who are employed in collecting a yellow earth, formed by the dung . of birds, as manure for

vines, and with which eight or ten ships have been loaded annually for a century. S. lat 20° 20’.

IQUISENQUI, one of the islands of Japan, situated near the south-east coast of the island of Ximo. This island is very small. Lat. 32° N., long 132° 40’ E.

IRAK, the most extensive province of Per-sia, occupying the greater part of the ancient Media, is bounded on the south by Fars and Khuzistan, on the east by Khorassan and the Great Salt desert, on the west by Kurdistan, and on the north by Azerbijan, Ghilan, and Mazanderan. It is chiefly covered with chains of barren mountains, separated from each other by long valleys about ten or twelve miles in breadth. They are generally devoid of any timber, and even the valleys are for the most part uncultivated. The land is, pephaps, in general good, and capable of yielding corn ; but want of security of property, and a deficiency of population, have been the causes of the present desolate appearance of these plains. It is divided into five districts, i. e. Ispahan, Tehraun, Naen, Mullager, and Kermanshaw.

IRAS’CIBLE, adj.ˆ Lat. ira, irascibilis. IRE’, n. s. i Partaking of the nature

IRE’FUL, adj. s of anger: ire, anger it—

IRE’FULLY, adv. i self; rage ; passion : ire-I’ROUS, adj. J ful, raging; furious : irefully, in a wrathful manner : irous, angry ; wrathful. An old word.

I could say of ire so mochel sorwe, My tale shulde lasten til to morwe ; And therfore pray I God both day and night, An irious man God send him litel might. It is gret harm, and cestes gret pitee, To sette an irons man in high degree.

Chaucer. The Sompnoures Tale.

The ireful bastard Orleans, that drew blood From thee, my boy, I soon encountered.

Shaktptart,

By many hands your father was subdued ; But only slaughtered by the ireful arm Of unrelenting Clifford. Id. Henry VI.

If I digged up thy forefathers graves, And hung their rotten coffins up in chains, I could not slake mine ire, nor ease my heart.

Id.

There learned this maid of arms the ireful guise.

Fairfax.

The sentence from thy head removed, may light On me, sole cause to thee of all this woe ; Me ! me ! only just object of his ire. Milton.

Or Neptune's ire, or Juno's, that so long Perplexed the Greek and Cytherea's son. Id.

Heard you not late, with what loud trumpets'

sound, Her breath awaked her father's sleeping ire 1

Fletcher. Purple Island.

The irascible passions follow the temper of th« heart, and the concupiscible distractions on the crasis of the liver. Browne.

She liked not his desire ; Fain would be free, but dreaded parents' in.

Sidney.

For this the' avenging power employs his darts, And empties all his quiver in our hearts : Thus will persist, relentless in his ire, Till the fair slave be rendered to his sire. Drydm.

We are here in the country surrounded with blessings and pleasures, without any occasion of exercising our irascible faculties. Digby to Pope.

I know more than one instance of irascible passions subdued by a vegetable diet. Arbuthnot on Aliments.

IRASCIBLE, in the old philosophy, was applied to an appetite of the soul, where anger, and the other passions which animate us against things difficult or odious, were supposed to reside. Of the eleven kinds of passions attributed to the soul, philosophers ascribe five to the irascible appetite, *viz.* wrath, boldness, fear, hope, and despair ; the other six are charged on the concupiscible appetite, *viz.* pleasure, pain, desire, aversion, love, and hatred. Plato divided the soul into three parts ; the reasonable, irascible, and concupiscible parts. The last two,

according to that philosopher, are the corporeal and mortal parts of the soul, which give rise to our passions. He fixed the seat of the irascible appetite in the heart, and of the concupiscible in the liver, as the two sources of blood and spirits, which alone affect the mind.

IRBIT, or IRBITSKAIA, a town of Russia, in the government of Perm, on the river Irbit, and the frontiers of Siberia. It contains about 3400 inhabitants, and is noted for a yearly market held in January, the season for travelling on the ice, and frequented not only by Russians Siberians, but by Tartars, Armenians, and Oreel This town is consequently an entrepot for . nan furs, and other Asiatic merchandise passing into Europe. Near it is a large iron-work, which yields nearly 2000 tons of iron a year. 142 miles north-east of Ekaterinenburg. Long 62° 50’ E., lat. 57° 35’ N.

IRELAND.

IRELAND, the second in magnitude of the British Isles, is situated to the west of Great Britain, in the Atlantic Ocean. It is bounded on the north-west and south by the Atlantic, and on the east by the North Channel, the Irish Sea, and St. George’s Channel, which separate it from England. Its greatest length, i. e. from Fair-Head in the north, to Mizen-Head in the south, measures about 300 miles, and its maximum breadth, which is between Carnsore in Wexford, and Emlagh Rash, in Mayo, about 110 miles.’ The. superficial contents are said to amount to 19,436,000 English acres, but this rests solely on the authority of Dr. Beauford, who derived the amount principally from a measurement of the county maps — documents, with few exceptions, lamentably incorrect : of some counties, indeed, no maps whatever have yet been published. Mr. Wakefield’s return of the acreable contents of Ireland must be even more inaccurate; for, since he differs from Dr. Beauford, he must have departed from his mode of forming an estimate, and there was no other ex-cept by an actual survey, which it is needless to say he did not execute.

The eastern coast is but little indented with harbours ; but the south and west possess many sinuosities, affording numerous basins fit for the reception and safe-accommodation of shipping. The cove of Cork

is quite unrivalled as a natural asylum; Bantry Bay, the Killeries, and others on the west, are almost equally safe and sheltered ; while Loughs Swilly and Foyle, on the north, though not perfectly free from danger, afford great commercial advantages, and are valuable auxiliaries to extensive inland navigation.

Such are the superficies and general character of the coast of the island, but a more minute detail of the topography and present state of Ireland, will be found at the close of this article, as well as some suggestions for rendering its natural resources available for the amelioration of the present depressed condition of its peasantry.

PART I. THE HISTORY OF IRELAND.

The history of Ireland may be divided into the four following periods: — the first, or remote part, calleil the Scythian; the. second, or Milesian; the third, or Christian tera; and the fourth, or since the English invasion.

1 . Of the Scythian <era of Irish history. — The Irish are attached, like other nations, to that dignity which belongs to antiquity : its venerated name for them, appears to possess qualities of a peculiarly attractive character, and it is to this fondness and devotion to the preservation and recovery of their ancient records, that the distrust of foreign histprians in Irish chronicles is perhaps attributable. Zeal to restore, and anxiety to obtain belief, have excited a suspicion which the foreigner does not care to take the trouble of removing. The early history of Ireland is not more deeply sunk in uncertainty, or more intimately involved in fable and romance, than other e.irly record*. The histor of ancient Greece is

a tissue of absurdities; the story of ancient Rome consists of a series of agreeable fables — tales suited to the anxiously inquisitive ear o infancy. But these initial fictions do not appear to have cast discredit on the subsequent page* of these histories — the chaff has been separated from the wheat — the dross from the pure metal — by the discernment of the classical writer ; and his judgment has been exercised in the appropriation of his belief. This principle is a wise and necessary one — one which must always be admitted when the objects to be described are separated from us, not by centuries of time only but by millenia ; when records have become illegible, unintelligible, or obsolete; when they have been carried away by the literary spoliator, or, from the perishable nature of their materials,

have yielded to decay. Ireland still boasts the possession of her bardic records, the psalters of her great religious institutions, the traditions of her children, and her perdurable monuments of stone, all which exhibit to the inquiring eye liv-ing testimony of her ancient learning, sanctity, and civilisation. These internal evidences are supported and confirmed by the concurrent testimony of accredited historians in all cases where collateral testimony can be expected.

This being admitted, we at least place the ancient Irish history upon as sound and as solid a pedestal, as the historians of other countries have raised for the fabled deities of their early ages; and the following sketch is submitted as an abbreviation of its earlier records.

From Magog, the son of Japhet, the son of Noah (though after an interval of several generations), was sprung Phenius, who became king of one of the Scythias, and was a contemporary of the lawgiver Moses. The sons of Magog are not named by Moses, but .Tosephus (who acknowledges this fact) calls the Phenicians Magogians, adding, that they styled themselves Scythians. The Spanish authorities place the Irish Scythians between the Caspian and Euxine seas (probably in the ancient lueria) ; but, as there were upwards of fifty districts bearing the appellation of Scythia, an attempt at local accuracy, in this instance, would be vain. Sir Walter Raleigh has, satisfactorily enough, pointed out the country of the Magogians, which he places on the northern* boundary of the present Phoenicia. So, also, Ezekiel, chap, xxxviii., fully refutes the Spanish antiquarians, as far as relates to the exact position which they have assigned to the Irish Scythians. Josephus, again, seems disposed to establish the Magogians in a country still more northerly, and assures us, that Tyre was actually founded by Tyras, the brother of Magog, in the country since denominated Phoenicia; and that, subsequently, upon the migration, or flight, of the Erythrea:.s, and their reception in this country, it received the name of Phoenicia, which, in the Scythian tongue, is synonymous with Erythrea. Some, however, derive this name from ijiotvusff, palm trees, with which that province abounded; while others think the origin of the title to have been Phcenix, the brother of

Cadmus, and king of that country. Our theory, existence of such a country was a circumstance which is not contradictory, bestows the honor of totally unknown to the Romans, although the the nomination upon Phenius (in all probability Greeks, as we have shown, wrote its name 500 identical with Phoenix), the reigning monarch, at years before. It is true the old Irish language the period of the emigration of the ancestors of is very similar to the Carthaginian, as is plain the ancient Irish. These facts, then, would fix from the well-known passages in the llimilcoof the date of the Phoenician wanderers about two Plautus; but Carthage herself was but a daughter generations antecedent to the age of Moses, of Phoenicia. Had the Carthaginians colonised Niul is said to have conducted the first colony Ireland, that colonisation would have been of a of emigrants; who, passing over into Egypt, date much later than we have shown: it has planted his followers on the borders of the Red therefore with much probability been concluded Sea, where they are known to have dwelt at the that the existing reliques of eastern antiquity in time of the crossing of the Israelites. In this Ireland are, though resembling the Carthaginian, statement the Irish records are supported by the wholly and purely of Phoenician origin ; for in-concurrent testimony of the rabbi Simon. After stance the brazen swords, found in the Irish bogs

no long residence in this position, the Phoenician colonists were expelled by Caperchiroth, the grandson of Pharaoh, upon which they returned to the mother country ; but, a spiritof wandering haying now possessed them, they resolved upon once more seeking their fortunes, and sailed to Gades, in Spain, where they were permitted to possess themselves of a maritime position.

which are precisely similar to the swords of the Carthaginians found in the field of Cannae, and now preserved in the British Museum. The letters, language, and customs of the ancient Irish were doubtless Phoenician. The Phoenician letters or characters are found in the ancient Irish MSS. The identity of the languages has been established for us by Plautus; and the

Hence their posterity embarked for Ireland, of Irish Druids used an

alphabet, called the ‘ Bobo-

which country these emigrants have long enjoyed the merit of being the discoverers.

Now to establish, in some degree, our delineation of tin’s very remote period of history, the following observations may be advanced with tolerable confidence. In the first place there exists the negative argument, *viz.* that this statement is not contradicted by the authentic or accredited records of other countries : next, the few Phoenician annals, that do exist could hardly be expected to contain matter so remote in time, and so long disconnected with their own history, nothing but a few fragments being preserved, which Josephus, Theophilus, and Sanchoniatho

leth Character, exactly resembling the Phoenician, Egyptian, and Carthaginian letters. The ancient Irish too had a sacred character called Agharn, the existence of which is proved by the stone pillars scattered on the face of the kingdom, bearing-inscriptions in that letter, resembling the character now found in the ruins of Persepolis. To return to our narrative : — The Partholani landed in Ireland A.M. 1956, and after a reign of thirty years left the -government to their posterity, who maintained it for 300 years after. To the descendants of the Partholani succeeded the Neimhedians, of the family of the Partholani ; a colony from Greece, who landing

have collected. But, besides this, positive proof in Ireland, and suffering great difficulties, most exists, that Ireland was not unknown, by name of them were compelled to abandon it again ; at least, to the ancient Greeks in the works of the remnants of these invaders, however, possessed some authority for upwards of two centuries. These again were succeeded by the I’irbolgs, or Bogmen, a sort of Helotes, descended from the expelled Neimhedians, who had returned to Greece. After a reign of about half a century

their earliest writers, Orpheus, Herodotus, and Aristotle, &c. Nor should this very early acquaintance with Ireland on their part excite surprise, when it is recollected that the Greeks had this knowledge

from the Phoenicians. These

primeval mariners are supposed to have con-the Belgian or Firbolgian government termi-

fined their nautical skill, like a secret charm of which they would envy others the possession, to their own countrymen solely : and, passing by Greece and other countries extended their voyages into the great Atlantic, and so reached the island of Ireland.

Here they were induced to plant a colony, being attracted by the rich mines of lead and copper which they discovered and worked. The first who is represented as having brought lead from Ireland was Midicratus, which Bochart, and after him Sir Isaac Newton, thinks should l>e written Melicartus, the Phoenician Hercules. From him then could Orpheus, and the Grecians, have heard the name of Ireland. It has been

nated with the death of Eochaidh, who had been united in marriage to Tailte, a royal princess of Spain. In the tenth year of the reign of the last prince, and A.M. 2541, the tranquillity of the island was disturbed by a new set of adventurers, called Damnonii, or ‘ Tuatha de Danons.’ These intruders were also descended from the race of Neimhedius, and had, like the Firbolgs, been enduring a life of much slavery in Greece. These Damnonii expelled the Firbolgs (who fled for shelter to the islands of Arran and the Hebrides), and assumed the government in their stead, ruling unmolested for nearly two centuries, when they in turn were driven out by the sons of Mile-who ruled, as the Chronicles say, with

nave neaiu me name 01 iieiaiiu. 11 nas ueen oiuj, r »•

said that the first Irish colonists were Carthagi-great glory for 2400 years, giving t

nians and not Phoenicians. But, had the former 171 princes. The nameTuath-de-danan, appe

ever visited Ireland, the recollection of its exist-to be derived from Tuath, a lord

ence would huve been preserved, either by his-and Dan, a hymn : for these people we

tory or tradition, by which the Romans would into three classes, the nobility, tfi

have obtained the knowledge of it : whereas we Druids, and the people who chaunfxl

know that, until ihe time of Julius Caesar, the oi the Supreme.

These foreigners, who passed some time also in Denmark (whence possibly another reason for their name may be derived), are supposed to have introduced thence Druidism, and some learning into Ireland : they also brought with them the famous Liagh Fail, or stone of destiny, on which all succeeding kings of that race were crowned. Fergus the Great borrowed the Liagh Fail to be crowned on, after his invasion of North Britain ; and, being deposited in the abbey of Scone, it continued there until the reign of Edward I., who had it conveyed to Westminster Abbey, where it is now placed beneath the inauguration chair, having its name changed for that of ‘ Jacob’s stone.’ Its value appears to rest upon the destiny contained in a very ancient Scythian or Irish verse, the purport of which is, ‘ that where the Stone of Destiny is preserved, there a prince of the Irish race should govern.’ Toland calls this ‘ the ancientest respected monument in the world.’ See our article CORONATION.

2. Ith, a Milesian prince, descended from Phenius, whose history has been already given, sailing from Galicia in Spain, landed near Derry, in the north of Ireland. Understanding that the governors of the Damnonians were at variance, he undertook to arbitrate, and mediated satisfactorily and successfully. This introduction afforded him so great an insight into the condition and resources of the

kingdom, that the Damnonian prince resolved to cut him off, on his way back to his ship, apprehensive of a second descent, accompanied by a more powerful armament. In this design they had nearly succeeded, Ith not escaping to his vessel until he had received a mortal wound. The treacherous conduct of the Damnonian chiefs, strengthened by the prospect of new conquests, soon raised up a numerous body of avenging warriors, amongst the Milesian kindred of the departed prince, Ith. An expedition was now prepared, of which the sons of Milesius were to be the conductors ; of this the chief commanders were Heber, Heremon, and Amerghin.

The first descent was made on the coast of Kerry, by Heber, while Heremon agreed to sail round by the coast of Leinster, and so distract and divide the efforts of the invaded. Having disembarked their forces, Amerghin, one of the sons of Milesius, went in person to the king of the Tuatha-de-Danans, and demanded compensation for the treacherous murder of his kinsman. The result of this negociation was rather singular : the king of the Damnonians complained of dis-honorable conduct, on the part of the Milesians, in so sudden and unexpected an invasion, and in presenting a challenge to battle, without allowing him time for preparation. The Milesians, acknowledging the justice of his complaint, are said to have consented to re-embark, and attempt a second landing ; which if they should be able *o effect, the invasion would be acknowledged equitable, and then the Damnonians would sub-mit or oppose, as seemed to them most advisable. The Milesians withdrew to their ships, and cleared nut to sea, once more : but, a violent storm en-sniiiir, many of their galleys suffered shipwreck, ;ui(l five of the sons of Milesius perished in the calamity.

Ir, from whom the name Ireland is said to be deduced, was cast away on the coast of Desmond, and all his retinue lost. Notwithstanding these dreadful misfortunes, misfortunes consequent upon a chivalrous spirit of honorable warfare, Heber accomplished a second landing at Bantry Bay, and Heremon and his squadron happily secured their disembarkation at Colpa Inbher, now Drogheda, on the coast of Leinster. Having accomplished a safe landing, Heber engaged the Damnonians, in a bloody conflict, at a place called Sliebh-mis, in which he was completely successful, and then, directing his march eastward, united his forces with those of Heremon at Colpa Inbher. The Milesian princes now strengthened in numbers, sent a deputation to Cearmada, to desire the surrender of his territories, or bring the contest to the decision of the sword : the latter alternative was

immediately embraced, and the opposing armies met in the plain of Tailten in Meath. The Milesians animated by their recent conquests, anxious for the enjoyment of possessions now almost within their grasp, and encouraged by the presence and example of their courageous princes,. rushed eagerly to the onset. The Damnonians, on the other hand, had aH those innate causes of excitation in which country, prosperity, domestic happiness, and life itself are involved. Under the influence of such motives, with equal courage, nearly equal numbers, but unequal military skill, these two great armies hurried forward to decide the fate of a great kingdom. An obstinate and death-dealing scene succeeded, for many hours; at length the destiny of Ireland, like that of ancient Rome, hung upon the swords of three royal princes engaged on either side. The Milesians' fortune still attended them, and the three sons of king Cearmada fell by the swords of Heber, Heremon, and Amerghin.

Heber and Heremon, now seated on the throne, gave a race of 171 kings to Ireland. Imitating, or infected by, the example of their founders, they did not long continue to rule ip amity. The Milesian kings always held t\ut'.- sceptre with a blood-stained hand, few ot their line either dying a natural death, 01 enjoying a peaceful reign : deposition and assassination mark the progress of their government for nearly 2000 years. But amidst this sanguinary history some peaceful reigns and salutary examples are to be found. The first great man deserving of particular historic notice is Ollam Fodhla, of the race of Ir, a man distinguished by many amiable qualities, above all, by his wisdom and learning. He collected the ancient records of his country, and drew up many wise and necessary laws. The gentle character of his reign resembled that of Numa ; and he was considered the Solon of his age. He is said to have introduced armorial bearings on the chieftains' shields, and to have instituted the celebrated triennial meeting of the Irish kings and princes, at Teamor or Tarah, for the establishment of laws, and regulation of government. From the decease of Ollam Fodhla to the accession of Khnbach and Macha, an interval of 260 years, history furnishes little more than a genealogical table of thirty-one kings, most of whom were cut off by violent

deaths, and their thrones usurped by the assassins. Kimbach is acknowledged to have possessed considerable abilities for governing : he revived the laws and regulations of Ollam Fodhla, which had for some time lain dormant, and built a splendid palace in Eamania near Armagh. He died a natural death, and left his queen Macha in peaceable possession of the government. Ireland was then divided into five dynasties, four of which usually conspired to harass and oppose the best efforts of the fifth. Hugony, an immediate successor to Kimbach, who still acted the part of a reformer in morals, to break their coalition, divided the island into twenty-five districts, and bound each by a solemn oath not to accept a governor unless of his own family. Nor were these bonds of sufficient strength ; for, not only did Hugony perish by the hand of an assassin, but for ages after his successors, without one exception, were removed by violent deaths. About a century previous to the Christian era, the pentarchal form of government was restored, which was attended by a political revolution of much importance. The Fileas, or Irish Bards, had for ages been the guardians, interpreters, and dispensers of the law. Their honors were considerable, their numbers burdensome, and, from too much indulgence, they be-came abusers of their trust and power. The result of this abuse was naturally a resistance on the part of the governed, and to such a pitch of violence was the popular opposition urged, that nothing short of the total extermination of the order of Fileas could satisfy the rage of party. In this extremity the order turned their attention to the only power able or disposed to shield them ; this was Concovar Mac-Nessa. Nor was their application vain, for he undertook to procure their pardon, upon a solemn pledge from them of future amendment. He caused the wisest and most learned of their body to be assembled, and to them he entrusted the task of compiling a clear and equitable code of laws : these, disencumbered of the studied technicality in which the Fileas had formerly involved the statutes, were hailed with joy by the multitude, and called, in the enthusiasm consequent upon their liberation from the thraldom of Fileasm, the celestial decisions. Again the page of our history is stained with sanguinary deeds of the blackest dye, until the times of Crimthan, the history of whose achievements is another bright spot in the clouded sky. He it was, the terror of whose name defended his country from a Roman invasion ; and from him the Picts derived that assistance which enabled them to make many and successful irruptions into the Roman province. Upon the decease of that monarch, the Milesian line of Heremon was suspended, and the ancient Firbolgs, now grown powerful and factious, seized the reins of

government, and placed a king, from their own race, upon the Irish throne. This was the occasion of the servile commotion usually called the plebeian or Attacotic war. This usurpation, which was but of short continuance, was interrupted by Tuathal, a prince of Milesian blood, who had gathered some auxiliaries amongst the Picts of North Britain, ancient allies of his family, and

returned to vindicate the honor and recover the throne of his ancestors.

Being seated on the throne of his father he restored their institutions, assembled the states at Tarah, where his supremacy was acknowledged; selected Meath for the chief royal appanage; and instituted games, of a character r*. sembling the ancient Olympian. Here the happiness and prosperity of Tuathal's government were interrupted by a circumstance remarkable for its baseness, perfidy, and infamy. The king of Leinster had, some time before,' espoused a daughter of the monarch Tuathal ; but, conceiving an unlawful passion for her sister! he concealed his queen, and represented himself, at the monarch's court, as a widower and suitor of the surviving princess. This base design he unluckily effected, and returned with his bride to his palace in Leinster, where the two princesses, shortly after, accidentally met each other. The consequence may readily be conceived; grief and treachery broke their hearts. Tuathal, enraged at the perfidy of his son-in-law, invaded Leinster, and stayed his desolating sword, only upon the concession of a grievous tribute, to which the Lagenians were necessitated to sub-mit. This tax, called the Boroma.-an tribute, was the foundation of all the civil discords and distractions that rent the land, and shook it to iu centre for ages after. It was in resisting this oppressive tribute that Conn, of the hundred battles, won all his fame, and lost for a season all his possessions: this great warrior was assassinated by a band of ruffians, habited as females. Cormac Mac Conn, the grandson of Conn of the hundred battles, is celebrated as the most illustrious of all the Pagan kings, both in respect to the splendor of his court and the . glory of his arms, for the latter of which he is indebted to his general, the heroic Fian Mac Cumhal, father of Ossian the celebrated Irish bard. The fate of many succeeding monarch.-, who are acknowledged to have possessed considerable talents and learning, is of the most deplorable character. Crimthan, who invaded Gaul and Britain, was destroyed by poison : and the brave Nial of the nine hostages, who had with so much spirit supported the Albanian Dal-raidans, and carried his victorious arms into Armorica, fell by the hand of an

assassin. Dathy, his successor, and the last of the Pagan line, was permitted to enjoy a long and peaceful reign, till at length, embarking in foreign wars, he was killed by lightning at the foot of the Alps.

3. To Nial succeeded Laogary, in whose reign Christianity is said to have been established in Ireland by St. Patrick, although it had been introduced there before this time. Palladius appears to have preceded St. Patrick, and to have founded three religious houses in Leinster. But for the latter was reserved the great honor of converting the whole kingdom to the Christian faith. Patrick had been carried from Armorica into Ireland at the age of sixteen years, by king Nial, along with 200 captives, and by this means had an opportunity of obtaining a knowledge of that country, which must have proved, in the highest decree, auxiliary to his subsequent labors there Upon his second visit to Ireland he met with

hut little opposition from the Druids, for that wily order of men had been brought into contempt by the philosophic monarch Cormac Mac-Conn, who taught his subjects to despise paganism. St. Patrick converted the king and court at Tarah, founded various bishoprics, was submitted to, and acknowledged primate, by the Romish clergy, and acted, in all respects, as patron and patriarch of his own church, without admitting any interference from the pope. The Irish church continued on this independent ground, consecrating their own bishops, and appointing no archbishops, for 700 years, until Eugenius III., A.D. 1511, sent four bulls into Ireland. St. Patrick afterwards visited Rome; and, returning, died on his way to Armagh, and was interred at Dovvn-patrick, in the county of Down.

Laogary, the monarch of Ireland, was continually engaged in wars, endeavouring to res st and obliterate the Boromcean tribute; but he was subjected to many and great vicissitudes, and tarnished his new title of Christian king by the violation of a treaty which he had taken a solemn oath to observe. After an interval of about half a century, Hugh, of the Heremonian line, ascended the throne, and reigned twenty-seven years. This prince had resolved upon redressing many

abuses, and, for that purpose, called an assembly at Dromkeat : his first intention was, either to reduce and limit the number of Fileas or Bards, or to banish them totally from the kingdom. But, at the intercession of St. Columb-Kill, the latter part of his purpose was abandoned, and the number of the Fileas reduced. This wise prince fell, like many of his predecessors, in asserting his claim to the Boromoean tribute. About the year 800, in the reign of Hugh the Vth, the Danes, with a great fleet, made descents upon various parts of the Irish coast, whose example was quickly imitated by the Norwegians. Their attempts met much and spirited opposition, until at last Turgesius, a Norwegian prince, with a large fleet, arriving in Ireland, was joined by the different parties of Danes and Norwegians, who had secured themselves on the island, and laid the foundation of many years of slavery and subjection to a savage yoke.

A.D. 833, when Nial reigned, the Normans arrived with two great fleets, one of which entered the river Boyne, and the other the river Liffey. These intruders excited the active jealousy of the Danes, by whom, shortly after, they were completely expelled the kingdom, the Irish continuing passive spectators of their sanguinary conflicts. After twelve years of inactivity the Irish kings began once more to assert their prerogative, while the Danes continued to call Furgesius monarch of Ireland. Many engagements took place between them, and with alternating success. The Danes, however, fortified several towns, kept possession of the sea coast, and destroyed all remnants of civilisation and learning on which they could lay their ferocious and barbarous hands. At this period an accident liberated the Irish for a time from the dominion of their savage invaders. Fursjesius having built a palace near to that of Malachy, king of

Meath, and paying occasional visits of ceremony to that prince, became violently enamoured of one of the young princesses. Malachy, having observed his growing passion, resolved to convert this accident into an opportunity of liberating his country. The barbarous Dane's proposal to have the princess granted to him, not as a wife, but a mistress, was received by Malachy with all the appearance of an honor conferred, rather than of an indignity offered to him, and a day was appointed when the beautiful young princess, accompanied by fifteen female attendants, was to be delivered up to him and his retinue. Furgesius had prepared his banquet hall, with becoming elegance, to receive the tender charge, and admission was accordingly forbidden to all his household, except to his fifteen companions, who were to be presented to the Irish maids, the attendants of the princess. The party

were but just seated at the table, when the Dane perceived the stratagem that had been adopted, but too late, for the supposed maidens rose at a signal, and with the strength of manhood, augmented by a deep-seated spirit of vengeance, plunged their daggers in the hearts of the unhappy Danes. Furgesius was reserved for the more perfect gratification of Malachy ‘s revenge.

A short time only, however, was Ireland freed from this barbarous tribe, both Danes and Norwegians returning again before the death of Malachy ; but they never recovered their former strength in that country. About this time, A. D. 900, flourished Coomac Mac Cuillenar, surnamed the Holy, king of Munster, and archbishop of Cashell ; who, despite his sacred character, embroiled his country in civil wars, and fell, afterwards, in the field of battle, where a prophecy had warned him not to appear. Nial the IVth was king of Ireland when the Danes recovered their wonted ferocity, and acquired great accession to their strength under the dominion of Sitric, the Danish king of Dublin. This king, possessed of both courage and treachery, contrived to ensnare Callachan, prince of Munstei, into his power ; and, not being able to induce that proud monarch to resign his chief towns into his hands, detained him captive. This treacherous conduct called the Irish once more into arms against the Danes. The battle of Dundalk, in which the king of Desmond, king Sitric’s brother, and Sitric himself, fell ; the last of whom Fingal, seizing in his arms, leaped with him into the sea, where they .both perished. Callachan was thus restored to his crown ; and, though he lived and reigned in troubles and calamities, he descended to his grave full of years and honors.

About the year 950, when Congall II. was monarch of Ireland, Brian Boiromhe, succeeded his brother Mahon in the crown of Munster, reduced the Irish Danes to obedience, and nearly exterminated the Danes themselves. The Irish nobles, reflecting upon the services rendered to Ireland by the exploits of Brian, required Malachy II., who then held the sceptre of Ireland, to resign it to that brave hero. To this proposition Malachy consented, and Brian Boiromhe was proclaimed sovereign, and crowned

at Tarah, amidst the acclamations of the Irish nation. Once more we find the Danes infesting the coast of Ireland, being invited thither by a

traitorous and dastardly prince ; but, the battle of Clontarf, in which fell the Danish king, and Mortough the Irish general and son of Brian, and where Brian himself lost his life, finally terminated the power of the Danes in Ireland. Upon the death of Brian, Donagh, his son, returned with his brave band into Munster, and Malachy II., the deposed monarch, resumed the reins of government. Civil broils, which for so many ages wasted the Island, proved too strong for Donagh ; and, retiring to Rome, he laid his crown at the pope's feet, assumed a religious habit, and retired to the abbey of St. Stephen. To Malachy succeeded two rival princes, one the great grandson of the brave Brian Boirorahe, the other Donald, of the Heremonian line ; their claims were at length adjusted by that partition of the kingdom called Leith Conn, and Leith Mag-hall. After some years Roderic O'Connor, king of Connaught, was crowned with much pomp in Dublin, and exhibited proofs of ability for government; but the Irish were not in a condition to be ruled by wisdom, unassisted by strength, so his ordinances did not prove very effective.

At this period there were five sovereignties in Ireland, those of Munster, Leinster, Meath, Ulster, and Connaught; the Irish were fully converted to Christianity, but had never recognised the authority of the see of Rome. In the year 1156, therefore, Adrian granted a bull to Henry II. for the total subjugation of Ireland, and a reduction of the authority of the Romish church, imposing an obligation of one penny per house, for the support of that see : but continental negociations occupied Henry so much, that this bull was neglected, and he awaited a more favorable moment for bringing the Irish under the English yoke.

4. Ireland since the English invasion. — A licentious tyrant, Dermot Macmorrogh, king of Leinster,had now conceived an unlawful passion for Donergilda, the wife of Ororic, king of Bref-fing; taking advantage of that prince's absence, he invaded his palace, and carried his queen away. This act of infamy called all the latent dislike of the Irish into light; and Ororic, assisted by Roderic of Connaught, invaded Macmorrogh's territories, and drove him from his kingdom. The exiled prince applied to Henry II., then at Guienne, for aid in recovering his kingdom, which henceforward he consented to hold in vassalage to the English crown. Henry, then unable to assist him farther, granted letters patent, empowering all his subjects to aid the Irish exile in the recovery of his dominions. Reaching Bristol, Dermot at length formed a treaty with Richard, surnamed Strongbow, earl of Strigul, and of the house of Clare ; the conditions of which were, that Strongbow should espouse Eva, Dermot's daughter, and be declared heir to all his dominions. He also engaged Fitz-Stephen, constable of Aberdovey, and

Maurice Fitzgerald of Wales, in his cause. Fitz-Stephen was the first who landed in Ireland, with 300 men, to whom Fitzgerald, with 100, soon succeeded. These so far assisted Dermot as to place him once again upon his throne. Having

recovered with his ancient dignity his former in science, Dermot cast his eyes towards the crown of Connaught. And, to further this object, sent his ambassador to remind S.rongbow of his former treaty, and to offer him additional induce-ments. Strongbow had been preceded by one of his retinue, Raymond, who, with .1 small band, landed near Waterford, and, proceeding to Dub-lin, made himself master of that place. ° But the earl himself now fulfilled his promise, by celebrating his nuptials with Eva; and, Dermot dying shortly after, he succeeded without opposition to the crown of Leinster, of winch, after some severe engagements with the king of Connaught, he was able to keep the possession.

Henry, who had been a silent observer of Strongbow's successes, now thought it full time to demand his submission, and, accordingly, landing in Ireland with 500 knights, he received the homage of his new subjects, bestowed some lands on the English adventurers, and appointed Strongbow seneschal of Ireland. By these mere ceremonies, important in their consequences, was Ireland annexed to the crown of England.

The government of Ireland was now settled by Henry upon a more definite and satisfactory footing: shires or counties were introduced, ane a chief governor was appointed. But Strongbow had much to encounter in his new govern ment, from the machinations of his enemies a; court, and the eternal and harassing opposition, of Roderic, king of Connaught, aided bv Donald Cavanagh, son of the late king of Leinster. It was at this season that he recalled Raymond from Wales to assist in the command of the army, and gave him his sister, the lady Basilia, in marriage, besides extensive lands in Ireland, as a dower. The king of Counaught, appearing in the field shortly after, was routed by Raymond, with great loss, and Donald Cavanagh was slain, while Thomond, who made a brave defence, was besieged in Limerick and obliged to fly.

Roderic, finding the faithlessness of his countrymen as allies, applied to king Henry, at Windsor, for leave to do homage for his kingdom of Connaught ; and king Henry's jealousy was now excited by the coalition of his English ba-rons in Ireland. We have already seen how

Raymond and earl Richard became connected : Mountmorres at this time married the daughter of Fitzgerald and cousin of Raymond, and one of the house of Fitzgerald had espoused a daughter of earl Richard. In this crisis Henry despatched commissioners to desire Raymond's attendance at court, and also to inspect closely the conduct of Strongbow ; but Raymond's attendance was delayed by insurrections in the south, where his presence was required at the head of the army, and Strongbow's death rendered' farther surveil-lance unnecessary. Fitz-Andelm, a nobleman allied by blood to king Henry, was appointed to succeed the brave Strongbow ; and, upon his mr-rival at Waterford, the bulls of popes Alexander and Adrian, asserting the king's title, were solemnly promulged. But these efforts did not produce the least effect upon the turbulent Irish: the new governor was withdrawn, and a second appointed with no better success, until Henry ap pointed the prince John to the lordslxp of Ireland.

In 1185 John, attended by a train of dissipated young noblemen, having however two sage advisers, a lawyer named Glanville and the historian Cambrensis, landed in Waterford, and was received with every mark of respect by the Irish chieftains : but their attentions were returned by his followers with the greatest insolence, and even with personal indignity. Eight months was a weak system of government administered by this young prince, when Henry, alarmed at the situation of the kingdom, withdrew him from Ireland and appointed De Courcy his successor. This dauntless commander was put to a severe trial of his courage - and military skill, by the confederate armies of Connaught and of Thomond, from which with great difficulty he effected his retreat in Connaught. He was more successful in his campaign in Ulster, the dissensions of the Irish weakening their efforts, and De Courcy's vigorous proceedings still maintaining the authority of the English.

The Lacys and De Courcys succeeded to the chief part of the administration upon the accession of John, the lord of Ireland, to the

English throne ; and, from the great neglect of that king towards all the affairs of his Irish dominions, these turbulent nobles assumed an independence which was productive of dangerous consequences by the force of example. De Courcy's disobedient conduct obliged John to summon him into England, where he was thrown into prison, and lay unnoticed, until the following accidental occurrence not only procured him liberty, but added to his former honors. A champion from Philip II. of France asserted his master's claim to Normandy, and proposed to prove it in single combat. No English champion accepting the challenge, John yielded to De Courcy's brave offer of vindicating the honor of his country. Upon the appointed day the French champion first presented himself, in all the confident assurance of an easy victory : but, upon the appearance of De Courcy, his stern aspect and gigantic stature struck such a terror into his opponent, that he declined the combat and withdrew into Spain. The two kings, who were witnesses to De Courcy's triumph, requested some test of that strength for which he had been celebrated, whereupon he ordered a post to be erected, and a coat of mail and helmet to be placed thereon, and, raising his trusty Irish sword, struck through the helmet and armour so deep that no one but himself could extract the sword. The success of De Courcy so gratified his prince, that to the reward of freedom was added the honor of appearing covered in the first audience with the kings of England, which honor was made hereditary. John now visited Ireland a second time, but did little more than assign boundaries to a few more shires.

On the accession-of Henry III. the English power was much strengthened by the alliance of O'Neal, the bold chieftain of the north, and of Donald O'Brien, who obtained a grant of his own kingdom of Thomond from the king. During this reign, and that of Richard I., Ireland presented *. scene of singular anarchy, from the contentions of the English-Irish, who seized upon the lands of every deceased noble, and as-

serted a species of right derived from strength solely. The Geraldines were the most turbulent as well as the most successful disturbers of every act of settlement. The Irish were treated with much severity during these commotions, and were obliged to sue for charters of denization. On the accession of Edward II. his favorite, Gaveston, was appointed chief govenior, who drove the septs from their strong holds, and was proceeding vigorously to a more perfect conquest of the kingdom, when the jealousy of the nobles procured his recall. It was about this period that Edward Bruce, brother to the famous Robert

Bruce of Scotland, invaded Ulster, and, prompted by the prospect of a crown, advanced into the province of Leinster. Being joined by O'Neal, and other discontented chieftains, he obtained many signal successes, and was solemnly crowned king of Ireland at Dundalk, in the county of Louth. The new monarch now advanced towards Dublin, where he was vigorously resisted by the citizens, who set on fire great part of their city : but, passing on to the south, he continued to spread havoc and destruction every where, until checked by the courage and power of the Geraldines, near Kilkenny. The English interest seemed once more to . revive. Bruce withdrew to Dundalk, and set his crown upon the hazard of an engagement ; in which his allied army was totally defeated, and himself slain by an English knight named Maupas, whose body was found lying upon that of Bruce after the battle was concluded. Robert Bruce had actually landed in Ireland, when he heard of the melancholy fate of his ambitious brother, upon which he immediately returned to his own kingdom, without waiting to strike a single blow in vengeance.

In 1327 the unhappy Irish again petitioned king Edward III. to he admitted to the privileges of English subjects : but this address met only the usual fate, and insubordination and insurrection continued to be cherished by the very government itself. The noble families of Thomond, Desmond, Ormond, and Kildare, were alternately supporters and opponents of the English, being driven into the latter character by an undue preference given by Edward to the English lords who migrated into Ireland in his reign. To aggravate these miserable disturbances^ lord Lionel, the king's second son, who had been affianced to Elizabeth, heiress of Ulster, and claimed in right of his wife that earldom, and also the lordship of Connaught, was appointed to the government of Ireland. This prince, filled with hateful prejudices, forbade the old English, and all Irish by birth, from approaching his camp, which so irritated and disgusted the most honorable as well as the most powerful subjects, in the kingdom, that, being left by them to wage an ineffectual war, he was soon recalled ; bequeathing to Ireland much more dissension than he found, together with the odious distinction of ' English by birth and English by descent.' Severe laws were now enacted against the Irish, declaring intermarriage, and all close intercourse with the Irish, to be high treason ; all which were ratified in the great convention of Kilkenny.

A period seemed to arrive, not long after, when ths distresses af the nation were likely to be terminated : this was the visit of Richard II. to Ireland. In the month of October, 1394, king Richard landed at Waterford, accompanied by a train of nobles, and at the head of an army of 4000 men at arms and 30,000 archers. The magnitude of this force rendered all attempts at opposition vain, and accordingly the insurgents of Thomond and Ulster made ready submission, in which they were imitated by no less a number than seventy-five Irish lords. The king received them kindly, treated all with condescension and hospitality, and studied to reconcile them to English customs. After a residence of nine months, amongst his Irish subjects, he embarked for England, leaving Mortimer, earl of Marche, his vicegerent. The government of Mortimer proved unhappy, and, in attempting to suppress the Byrnes of Wicklovv, he was unfortunately surprised, defeated, and slain. To revenge the death of this brave, but incautious, nobleman, Richard resolved to make a second voyage to Ireland, and, embarking at Bristol, arrived at Waterford on the 13th of May 1393. After a delay of some weeks he led his forces against Mac-Murchard and a body of Irish insurgents, but was not allowed the opportunity of coming to a battle, the Irish retreating continually to their woods, where they enjoyed shelter from the enemy's darts, and were able to harass and annoy the king's troops. It was upon this expedition that the young lord Henry of Lancaster gave the first proofs of that distinguished valor which marked his after years. While Richard continued a treaty \vith the Irish chieftain he was not aware that his own crown was tottering to its fall : but at length those tidings of his deposition in England arrived which obliged him to return immediately, and leave Ireland once more to confusion and insurrection.

The vicegerency of the duke of Lancaster brought some tranquillity to the kingdom, although in this time was established the ' Black rent,' which Borderers were necessitated to pay to the Irish chieftains, to purchase their protection. The earl of Ormond was appointed to succeed to the lieutenancy, and found nine counties of Ireland completely subdued by the Irish chieftains, little more remaining to be governed by him than Dublin and ils vicinity.

Hitherto the Kildares and Desmonds attracted little notice, while the earl of Ormond was the only Irish nobleman in whom the crown appeared to repose confidence. The consequences of this preference

were jealousy and animosity, which scarcely subsided but with the extinction of one of those noble houses. Desmond becoming insolent, Ormond led the king's forces against him, but was compelled to make conditions with him, as an independent monarch ; for which he was soon after removed from his authority. In the tumultuous state of things, which now resulted from the disputes of the houses of York and Lancaster, Kildare, having espoused the cause of the former, was appointed lord chief justice : while the noble earl of Or-mond was brought to the scaffold by the same party. The animosities of these great families

increased to their greatest height. Attempts were made, in a parliament assembled in Dub-lin, to attaint the earls of Desmond and Kildare of treason; and an act wa$ passed ordering the tallage, called Black-rent, to be henceforth paid to the king's deputy for the support of the army, thereby reflecting upon the treaties lately made by Desmond. The parliament was then removed to Drogheda, where the enemies of the Geraldines felt more secure in urging their false accusations.

Desmond, in the confidence of a guiltless conscience, repaired thither to justify his conduct, when, to the astonishment of all, he was instantly brought to the scaffold and beheaded. Kildare meanwhile escaped to England, where he represented the cruelty and injustice of the sentence executed upon earl Desmond; and such was the effect of his appeal, that Tiptoft, who was recalled, suffered the like punishment as he had inflicted upon Desmond, while Kildare was made deputy in his stead, a rank which his family continued to retain for a length of time, almost in opposition to the authority of the crown. The improvidence of Henry, in intrusting the government of Ireland to such zealous adherents of the house of York, became now but too apparent, for, upon the breaking out of Simnel's insurrection, the impostor found a large body of supporters in Dublin, whither he instantly repaired, and was crowned in Christ Church, in that city, by the style and title of Edward VI.

The lords Thomas and Maurice Fitzgerald, with Plunket and other Irishmen of rank, accompanied the impostor to England, and all fell in the battle of Stoke, bravely fighting by his side. Kildare, who still governed Ireland more like an independent prince than a vicegerent, sent an acknowledgement of his error, with a confession of allegiance to the king: notwithstanding which Henry deemed it prudent to send his ambassador to witness Kildare's conduct and obtain some pledge

for his future loyalty. For this purpose Sir Richard Edgecumbe was despatched, with a troop of 500 men ; but, arriving at Kinsale, he appeared apprehensive of landing, and received the homage of Barry on board his ship. Sailing thence, by Waterford, to Dublin, he landed and was presented with the submission of the citizens, and, after a tedious negociation with Kildare, received that proud nobleman's homage and fealty, which were performed publicly. This ceremony was considered a sufficient guarantee for his future allegiance, whereupon he was absolved from the sentence of excommunication, and presented with a chain of gold, from the king, in token of perfect reconciliation. In 1494 the violent feuds of the Butlers and Geraldines, obliged the king to withdraw his delegated power from their hands, and commit the deputyship of Ireland to Edward Poynings. This wise governor summoned a parliament at Drogheda, where many valuable acts were passed, tending to diminish the power of the great Irish nobles. The most famous in its consequences, and one which still bears the enactor's name, is that which declares ' that no bill shall be introduced in Irel ind until

i: has previously received the sanction of the English council,' by which the English authority was ever after fully established in that country. Foynings returned to England, and had the honor of the order of the Garter conferred upon him in token of his services.

The Geraldines being now once more restored to favor, ruled Ireland with haughtiness and rigor, the adherents of their rivals the Ormonds being treated with all possible severity. At length the Ormonds obtained the attentive ear of Cardinal Wolsey, and, improving this opportunity, turned it to the ultimate ruin of their rivals. Every art of the Geraldines was henceforward viewed with suspicion, the earl was called over to London to answer charges of an unknown informer, but was allowed to return. A second time he was summoned, but with less good fortune, for he was detained and thrown into confinement. The intercourse between the two countries was of an irregular and tedious nature, which left the Irish in a state of distracting suspense as to the

fate of their late master : a suspense which the rashness of his son and deputy, lord Thomas, did not permit him to endure, and, without waiting ,to learn his noble father's fate, he broke out into open rebellion and bid defiance to the crown. This young nobleman, but twenty-two years of age, was spirited, generous, and humane: he possessed the ardent love of his followers and kinsmen, and gave very early promise of future greatness. Being now a declared enemy he collected his forces and laid siege to Dublin, but was opposed by the citizens. He continued to wage a desultory war for some short time, when, being betrayed by some of his followers and deserted by others, he found himself compelled to make conditions with lord Grey, which were, ' that upon the final dismissal of his troops, he should be received into the king's pardon.'

Lord Thomas, assured of pardon, readily consented to repair to London and throw himself at Henry's feet. But the violence of this unfeeling monarch's temper overcame his regard for his honor; and lord Thomas, and his five uncles, who were seized at a banquet in Dublin, were ignominiously put to death. The unhappy youth had the mortification to learn, before his death, that he had been driven into all his wild opposition by false rumors, for that his father was still alive, and sinking into the grave from sor-row for his son's fortunes and fate. The relentless Henry, though he well knew that two of the Geraldines, whom he had executed, were opponents of the late rebellion, still continued to persecute the race, and sought to exterminate the name. A youth of twelve years of age, the brother of lord Thomas, was now sought out, as an enemy to the crown that could not be permitted to survive. The widow of Mac Arthy, and aunt of the young lord, at first un-deitook the guardianship of his person, but, finding Henry thirsting for his blood, she consented to a marriage with a powerful chieftain. O'Donnel, on the express condition, that he should protect her nephew. O'Donnel's sincerity appearing doubtful, the king of France was induced to protect that youth and innocence, which

could not plead with the heartless Henry ; and, when the English monarch had the meanness to demand the boy, as a rebel subject, the king of France favored his escape into Flanders. A similar demand was now made to the emperor; but with no better success. Finally he was permitted to seek the protection of cardinal Pole, who received him as his kinsman, and preserved him to regain the honors of the family of Kildare.

Daring these transactions in Ireland the course of events in Europe was undergoing a total revolution, by the introduction of the reformed religion and the doctrines of Luther. The wantonness and severity of Henry's natural temperament involved him more than other princes in the great religious change that now-occurred ; and probably he no where found the task of reformation more difficult than in Ireland. However Browne, who had been provincial of the friars of St. Augustine, a man. also remarkable for the liberality of his religious opinions, after his elevation to the archdiocese of Dublin, led the way in the new reformation, and read the reformed service in Christ Church Dublin. Parliament also acknowledged the king's supremacy in spiritual matters, and confirmed and annulled his marriages, as often as his lust or his cruelty prompted him to select a new queen, or to cut off the unhappy partner of his throne and bed. In addition to the violent opposition of the clergy, who, secretly encouraged by the pope's legate, resigned their benefices, Henry found a new and troublesome enemy in O'Nial, of the north, who formed a confederacy for the suppression of heresy : but, by the activity of lord Leonard Grey, the confederates were defeated and scattered. Lord Grey was soon after recalled, and rewarded, by his royal master with a death upon the scaffold. The discomfiture of O'Nial, followed by the most complete overthrow of the Irish, under O'Brien, in Munster, threw the king's enemies into the greatest despair: many monasteries were surrendered to the crown, and their constitutions re-modelled : while the chief youths of the kingdom were obliged to consent to be educated after the English manner.

A change was now made in the executive, which assumed a more dignified character, the style of lord of Ireland, with which the English monarchs had hitherto been contented, being relinquished for that of king. During the reign of Mary, O'Nial continued to resist the authority of the English ; while the inhabitants of Seix and O'Fally could not patiently resign their claims and possessions to the new settlers; and, taking up arms, they were either cut off in the field, or suffered death by martial law. But the changes consequent upon the return of a queen of the reformed religion, to the British throne, revived all former feuds, both of a civil and religious character. Sidney was now entrusted with the government of Ireland, and the most sanguine hopes were entertained of beneficial results likely to arise from it. O'Nial had now grown into the pride of sovereignty, he razed the castles on the borders of the Pale, burned the cathedral of Armagh, and sent ambassadors in his own

name to Spain and to Rome. But the discernment of Sidney proved too much for the rashness of O'Nial, and, when the latter thought himself surrounded by faithful allies, he was in the midst of nobles, whom he had formerly, perhaps, treated with some degree of haughtiness, and who now listened to the overtures of the deputy, in order to gratify petty jealousies and vengeance. Thus surrounded by enemies O'Nial at last resolved to relinquish so unequal a contest : and, being induced to capitulate, was invited to a banquet, where the terms were to be agreed upon ; but here a quarrel was purposely raised, and O'Nial and his followers treacherously assassinated. The author of this cowardly stratagem was an English officer named Piers, who received 1000 marks as his reward.

The province of Munster was now in a state of great insubordination, nor were the best exertions of Sydney capable of subduing the insurgents. To effect this, Sir John Perrott, an austere and vigorous officer, and a natural son of Henry VIII., was appointed president of that province. Perrott's conduct did not disappoint expectation : he pursued the Irish with unabated fury, nor ceased until he had driven them from every haunt, and no alternative remained but submission to the queen's mercy. The next interruption to the repose of the country was derived from an invasion of the Spaniards on the south-west coast. They brought with them arms and ammunition for 5000 men, and a sum of money to be delivered to earl Desmond. Effecting a landing at Smerwick, they entrenched themselves at Golden Fort, and proclaimed their determination to hold out to the last in the glorious cause of the extirpation of heresy, and the assertion of their master's right to the kingdom of Ireland. In this position they were attacked by lord Grey, and, after an obstinate resistance, obliged to surrender at discretion. The Irish rebels found in the fort were executed by martial law ; and to Sir Walter Raleigh was committed the odious service of putting the unarmed garrison to the sword.

The unhappy earl of Desmond now sued for pardon, but in vain ; his co-operation with the Spaniards her majesty could not forgive. In thrs deplorable situation he was hunted from one miserable hiding-place to another, disguised in a dress resembling that of the meanest of his

followers, and a price was set upon his head ; until, overtaken in a hut by a few soldiers commanded by Kelly of Moriesta, he called to him for mercy, saying, ‘ Spare me, for I am the earl of Desmond ;’ but Kelly smote off the aged nobleman’s head, and sent it to Ormond. It was afterwards conveyed to the queen, and impaled upon London bridge. Such was the melancholy extinction of a family which had existed for four centuries, in rude magnificence, and had proved too powerful to be governed.

The government of Perrott, which left a lasting impression upcfn the peaceable part of the Irish, was shortened by the private slander and calumnies of his enemies at court. Perrott had laid the foundation of a peaceful reign for his mistress in this part of her dominions, and gained a favorable juncture for the introduction VOL. XII.

of civilising institutions. Many attempt-; had been previously made to establish a college in Ireland, but with no success. So far back as 1311 archbishop Leek had procured a bull from the pope for the erection of a university in Dublin, but the project ended with that prelate’s death. A second attempt was made by his successor Bicknor, in the reign of Edward II. : and in the reign of Edward IV. an act actually passed the Irish parliament for the foundation of a university in the town of Drogheda, which also was neglected. For the reign of Elizabeth it was reserved to establish the sources of light, humanity and civilisation, in a country darkened by ignorance, and ferocious from persecution.

The rebellion of Tyrone now again burst out, and raged like a destructive conflagration through a great part of Ireland. Essex, the queen’s favorite, was appointed to oppose him with a newly raised force, and with the style and title of lord-lieutenant of Ireland ; whereby hi* powers were increased, and authority granted him of pardoning offenders, even those guilty of treason against the queen. Essex’s campaigns were not successful, much treasure and many lives being expended in fruitless attempts to reduce Tyrone; and the lord-lieutenant found himself at last only in a situation to make terms and offer pardon. The cautious and crafty chieftain obtained such conditions as were displeasing to her majesty ; and Essex, fearing the secret whispers of his court rivals, returned to England to justify his conduct. Lord Mountjoy, Sir George Carew, and others, were now appointed to different commands in Ireland, and executed them with better fortune. Tyrone and O’Donnell were reduced to extremities, and must have surrendered to the English power, if assistance had not appeared from an unexpected quarter. A Spanish fleet anchored in the

harbour of Kinsale, under the command of Don Juan D'Aquila, and the forces on board, having effected an undisturbed landing, possessed themselves of the towns of Kinsale, Castlehaveo, and Baltimore, which they strongly entrenched. The rebellious chieftains of the north soon joined them, and a general engagement followed, in which, to the amazement of the Spanish general, they were defeated almost instantly, and fled with precipitation from the field of battle. Disgusted at this contemptible conduct of his Irish allies, Don Juan resolved upon sparing the lives of his own countrymen, and accordingly surrendered upon honorable conditions.

Tyrone withdrew to the north, and renewed hostilities against the English ; but being cut off from his own territories, by the skilful manoeuvres of the English general, the miseries and priva-tions of his followers determined him to sue for pardon and amity. Mountjoy, dreading a repetition of a Spanish war, and fearing the expense and tediousness of a new rebellion, accepted Tyrone's conditions, particularly as, when pending the negociations with Tyrone, private accounts of the queen's death were brought to him. He, on this, instantly despatched Sir W. Godolphin to Tyrone with a safe conduct, and renewed assurances of his pardon. The earl immediately

-accompanied the envoy to Mellifont, and at Dublin publicly renewed his submission to the queen, which he had scarcely made when he learned the tidings of her death. Upon the receipt of this intelligence he is said to have burst into a flood of tears, which he explained to be an excess of grief at the loss of so merciful and tender a mistress, but historians have sometimes otherwise interpreted his sorrow.

After an unceasing struggle of 440 years, the enemies of the English crown were entirely subdued in this island, and an opportunity was presented for the introduction of wholesome laws. During the short administration of Carew, sheriffs were sent into the counties of Tyrconnel and Tyrone, and itinerant judges through all the northern counties. The old Irish customs of tanistry and gavelkind were abolished by judgment in the king's bench, and Irish estates made

descendible, according to the course of the common law of England. While these improvements were in progress, a letter, dropped in the privy council chamber, intimated that Tyrone and Tyrconnel were once more in league with Spain; and these noblemen fled to the continent, abandoning their extensive possessions in Ulster to the crown. James considered the hasty flight of these traitors as a fortunate issue, and proceeded forthwith to partition their vast domains amongst Scotch and English settlers. He also conferred large grants of land, and several valuable church livings, upon the university of Dublin. By which measures a number of loyal and industrious inhabitants were substituted for free-booters and ungovernable subjects: many towns were built, and some of them incorporated, and obtained the right of representation in parliament. The repose and calm, which Ireland would otherwise have enjoyed, were disturbed and ruffled by the continued applications to the crown, of the recusants. Finding their prayers neglected, they are said to have had recourse to pecuniary arguments, by which they found themselves more likely to be secured. And, indeed, their feelings were inflamed and their passions constantly roused by the Roman pontiff, who besought them to lose their lives rather than submit to the pestilent oath of supremacy, which wrested the dominion of the church from the Vicar of God Almighty. The result of their perseverance, however, was the enaction of many beneficial regulations, some relaxation in the laws concerning recusants, and a general act of pardon.

The religious feelings of the Irish were now put into a state of great fermention, by the public preaching of a fraternity of Carmelites who appeared in Dublin, and resisted the interference of the law. In this crisis a lord deputy was chosen, by king Charles, possessed of great cunning and activity of mind, and a haughty and commanding demeanour ; this was lord viscount Wentworth. He resolved, in the first moment of his authority, upon an extensive plantation of Connaught, by the annihilation of the title to every estate in the province. He summoned and dissolved the parliament at pleasure ; treated the remonstrances cf the lords with contempt; issued order for the reparation of churches, and compelled a restitution of the rights of the

clergy by the landholders. To him, however, is due the praise of uniting the churches of England and Ireland, a task of considerable difficulty at that precise moment, when the primate Usher had just drawn up distinct canons for the Irish church. The lord deputy escaped the danger of an encounter with a man of such learning and

piety, by ordering that there should be a selection only from the English canons adopted in Ireland. Shortly after a high commission court was established, after the model of that in England.

Wentworth's severity to the inhabitants of Connaught, who did not acknowledge the king's title, occasioned strong representations to be made against him at court. In addition to this, the trial and condemnation of lord Mountmorres, by the deputy and a court martial, were warmly urged by his numerous enemies. But the at tachment and confidence of his royal master were, at this time, too entire to be shaken. Wentworth had soon an opportunity of showing his gratitude to Charles, which he did not hesitate to embrace. On the first alarm of the Scottish insurrection, he remitted £30,000 from the Irish exchequer to the king, and added a noble donation from his own private fortune. He transmitted, besides, a body of 500 well disciplined men under the command of Willoughby, an experienced officer, to establish a garrison at Carlisle. Upon which the king confirmed him in his government by the more honorable title of lord-lieutenant, advanced him to the dignity of an earl, by the title of Stafford, and created him a knight of the garter. The state of England, as well as the dissensions between the Romish and Puritan parties, now rendered the administration of Ireland a service of no small danger. Lord deputy Wandesford's sudden death was imputed to the vexations of his government, and the prosecution of his predecessor Strafford : a prosecution followed by his attainder and death. ;: An unnatural and bloody insurrection burst forti at this time, the flames of which were kindled by one Roger Moore, and kept alive by •Macguire the lord of Enniskillen. The design of this conspiracy was the subversion of all the late establishments of property, by acts of settlement or otherwise; the restoration of the native Irish to all that they had lost, either by the rebellions of their ancestors or by decisions at law ; and the complete re-establishment of the Romish religion. The inactivity of the lords justices has never been satisfactorily explained : it appears not merely blameable but suspicious ; for little doubt exists that the nefarious conspiracy could have been smothered in its very cradle, had their lordships not wilfully disregarded the information laid before them. At first it was confined to Ulster : here Sir Phelim O'Neil ordered his followers to massacre all the Protestants of those parishes where he had been previously defeated. Lord Caulfield was basely murdered in one of O'Neil's houses, whither he had been conveyed as a prisoner. The miserable Protestants and settlers were driven from town to town, like beasts, at the point of the bayonet : sometimes they were forced into the nearest house, which was then set on fire, while their inhuman

persecutors stood around enjoying their

tortures and cries. At the bridge of Portadown 190 were precipitated into the stream, while their murderers ran to the river side, and there plunged their bayonets into the unhappy beings who approached the shore struggling for life. Women are said to have been driven, in a state of absolute nudity, along the highway, by those of their own sex ; and children were torn untimely from the womb. All which scenes of blood and torture, Sir William Temple assures us, were performed or encouraged by Irish ecclesiastics. After the trial and execution of lord Macguire and his confederates, and notwithstanding the culpable indifference of Balase and his coadjutor Parsons, this insurrection was terminated by the defeat of the rebels at Kilrush. The instrument of this deliverance was the earl of Ormond, whose signal services, during this disgraceful civil .war, were rewarded by a jewel of £500 value voted to him by the parliament, and the order of the garter bestowed on him by his royal master.

The commotions that followed for some years were comparatively trifling. In the north Ro-bert Monro, a severe Scottish general, preserved tolerable tranquillity, and by crafty negociations occupied the attention of the rebel leader, while lord Ormond, by his great military and diplomatic abilites, both suppressed violence, and treated for a peace with the Roman Catholic confederates. The conditions proposed by him appeared to the confederates so satisfactory, that the blessings of peace were about to be restored, when Rinuncini, the pope's nuncio, presented himself and insisted upon a magnificent establishment for the Romish clergy : this so much embarrassed the proceedings that the treaty was instantly broken off. But the attachment of Ormond to his unhappy master would not per-mit him to abandon the prospect of attaching so many faithful adherents to his cause ; and having renewed his proposals, with some little alterations, they were received and approved by the confederates. Meanwhile Rinuncini addressed himself to Owen O'Nial and his band of rovers, and besought him to assist in enforcing the command of his holiness to re-establish the Romish church throughout the kingdom. Owen gladly embraced an occupation that might lead to plunder (his only mode of subsistence), and, advancing towards a place called Benburb, engaged the English army commanded by Monro. Owen was

successful, having killed upwards of 3000 of the British, with the loss only of seventy on his part. In this battle also fell that gallant officer, lord Blayney. The consequences of this victory might have been fatal to the English in Ulster, had Owen pursued the advantage gained, but he was suddenly called into Leinster, by the meddling nuncio, to oppose the peace with the confederates.

Ormond found himseif now surrounded by difficulties and dangers : the interference of Rinuncini with the confederates, and his threats of excommunication against the moderate of his party: the increased violence of O'Nial, from his late victory at Benburb, and the treachery of Preston, who had yielded to the conditions of peace, contributed so much to harass and dis-

tract him, that he at at last resolved upon resigning the lieutenancy of Ireland ; and brought home with him the regalia.

Landing at Bristol he proceeded to London, to assist and advise his royal master ; but, finding his liberty threatened, he withdrew to St. Ger-mains. The Irish now addressed the queen when conditions of peace were by the prudent counsel of Ormond obtained : and the immediate consequence was the return of Ormond to Ireland. Here he soon after learned the bloody death of his affectionate master, arrd instantly caused the prince of Wales to be proclaimed king. His exertions in the royal cause from this date were less fortunate than well designed ; and at last arrived Cromwell, against whos? power and cruelty Ormond's means and provisions were of little effect. Well supplied with all the necessaries of war, Cromwell landed in Dublin, and advancing to Drogheda besieged that town, where he put all the inhabitants to the sword, thirty excepted, who were transported to Barbadoes. Wexford and Ross shortly after shared the fate of Drogbeda ; but a strong detachment commanded by Ireton was unable to make any impression upon the fort of Duncan-non : Wogan, the governor, having repulsed them from the walls by a brave and vigorous sally. Waterford was next the object of Cromwell, but here the superior skill of Ormond frustrated his plans, and the petty quarrels of the corporators, who refused to supply boats to ferry the troops across, probably saved him the hazard of a final engagement. Cromwell, escaping from Waterford, continued both personally and by his officers, the subjugation of Ireland to the parliament of London. In the north, every town was in his power, Charlemont and Enniskillen excepted ; and Kilkenny was surrendered into his hands, when Cromwell resigned his command to Ireton and returned to England.

Ormond, meanwhile, surrounded by the most distressing difficulties, preserved his attachment to the royal family, and used his ablest exertions to keep together his small body of troops. In his opposition to the English parliament be was but little supported by the confederates, as he never entirely yielded to the conditions they required : and at length, finding the demands of the Romish clergy too exorbitant, he entrusted his commission to the marquis of Clanricarde, and, embarking at Galway, after a tempestuous voyage arrived in France.

Clanricarde, anxious to preserve the king's authority, was at the same time unwilling to offend the church. The Irish in this difficulty addressed themselves to the duke of Lorrain, who for a short time hearkened to their representation, and advanced funds for supplying arms; but whatever were his designs he soon found they were not likely to be promoted by any treaty with the Irish, and accordingly withdrew his agents.

Ireton continued to reduce Ireland to tl authority of parliament: Limerick was soon besieged and admitted to a surrender: and O'Brien, the popish bishop of Emly, together with Fennel and Geoftery Browne, suffered by

the hands of the executioner : this severity procured the surrender of Galway without much delay.

The restoration of Charles II. excited various emotions in the different parties of the Irish nation. Some were impatient to be restored to their ancient possessions ; others to be continued in their new acquisitions : some were solicitous to be pardoned for their delinquency; and others to be rewarded for their services. To allay these disorders, a bill of indemnity was first prepared by which the Romish party was effectually excluded from power : but, this measure not proving satisfactory, the famous declaration for the settlement of Ireland was

published. By this declaration adventurers in possession of lands or tenements, on 7th of May 1659, were confirmed in the same: soldiers, to whom lands had been allotted for their pay, were allowed to retain them, with some exceptions: officers who had served previous to June 1640] were to be paid in houses and lands allotted for the purpose: Protestants, whose estates had been given to adventurers, were to have the same restored : and innocent papists, though they had taken lands in Connaught, were to be restored to tlieir estates. But those whose estates lay within corporate towns were to be indemnified. Though a meeting of parliament shortly after confirmed this act of settlement, the injured Roman Catholics, and the ejected adventurers, appealed to the king and the English parliament for redress.

The arrival of the duke of Ormond was now looked to, by all parties, as the only thing likely to relieve the nation from its embarrassment, and parliament voted him a sum of £30,000. But the wisdom and integrity of Ormond, who had relinquished his own rights to facilitate a general accommodation, were not able to allay the irritated feelings, or satisfy the numerous demands, of the claimants. He returned to London, and there framed a bill of explanation, by which one-third of the king's grants was retrenched, and twenty persons added to the list of nominees, whom the king was to restore to their estates. The disorders of Ireland had just been brought to a termination, by the last prudent and moderate act, when they were again renewed by a measure originating with the English commons. In a parliament held at Oxford, 1 665, a bill was brought in for the ' perpetual prohibition of importing cattle from Ireland, dead or alive;' and, though it passed the commons, it met opposit'on in the lords, and caused the prorogation of parliament. The commons foolishly supposed that the importation of cattle from Ireland was the occasion of the greatly diminished rental of English estates at this pe-riod, their total value amounting to but £200,000 annually: whereas the real causes were, the expulsion of so many industrious Puritans, who fled to Holland : a diminution in the trade of the kingdom, arising from the French and Spanish wars : and the plague which had lessened the consumption of provisions. Orr.iond, being removed and restored again, was ultimately and indecently dismissed from the lieutenancy, upon the accession of James II. His age and infirmities were assigned as the reasons for this, and he affected to believe they were the real cause. But the speedy disarming of the Protestants soon established the fact, that the eagerness of the Romish party for ascendancy was the real motive. The history of Ireland from this period is intimately conuected with that of England. Some facts, however, are so entirely Irish, that they may with propriety be added.

The violent conduct of James extended to Ireland, perhaps with more calamitous consequences than elsewhere. The zealous Romish advocate, lord Tyrconnel, continued to aggravate the mischiefs James was desirous of inflicting upon Protestants : at his instance three judges were removed without cause, and an equal number of Roman Catholics substituted, some of whom were themselves aware of their unfit ness and declined the honor. The Irish seals were suddenly taken from primate Boyle, and handed to Porter, a submissive retainer about the court. The king refused to fill the vacant see of Cashel, appointed his trusty Tyrconnel lord deputy, and formed his Irish army almost exclusively of papists,. • A king's letter now reached Dub-lin, appointing Green, a Roman Catholic, to the professorship of Irish, an office which did not exist in the university : this was but the commencement of the spoliations meditated by James upon that institution. Their plate was next seized upon and lodged in the king's stores ; and Doyle, a profligate ignorant person, was appointed to a fellowship by a king's letter. Such was the entire transition to a Romish establishment in progress in Ireland, when the prince of Orange effected a landing in England.

Tyrconnel's zeal frequently blinded his judgment, particularly in the rash act of withdrawing the garrison from Derry. But, as soon as he perceived his error, he detached thither the earl of Antrim's regiment, composed entirely of Papists, Irish, and Highlanders. Upon the approach of this body of men, the inhabitants, urged on by nine spirited youths who seized the keys of the city, raised the drawbridge, and locked the ferry-gate. Philip Timavady, who had chiefly encouraged them to this enterprize, was chosen governor, and an account of their situation, accompanied by a solicitation for protection, was instantly transmitted to the prince of Orange. Tyrconnel, finding the citizens resolute in their refusal to admit the Antrim regiment, sent thither a detachmentof six companies, under the command of lord Mountjoy, a Protestant nobleman, and highly acceptable to the inhabitants. Mountjoy was readily admitted upon conditions, and assumed the command of the city as a friend and associate.

The state of the prince's affairs in England left him but little time to reflect upon the cruel government of the Irish deputy, and Mountjoy, finding his services elsewhere might be more beneficial to his party, withdrew from Derry, having entrusted the command to Lundy, a man who affected great attachment to the Protestant cause. A commission being now sent to Lundy, he refused to take the oaths in public, which raised suspicions of his integ-ity amongst the

citizens ; suspicions afterwards too strongly confirmed. Upon the landing of James in Ireland, Derry presented the most formidable prospect of resistance : thither the Protestants of the north hac' been driven, by the ferocity and rashness of Tyrconnel, and there the little assemblage of heroes led on by George Walker, a Protestant clergyman, were prepared to resist, to the Fast, the partizans of the abdicated king. Lundy alone proved himself, not only deserving of the suspicion he was held in, but also a base coward, having fled from, the field and hid himself within the walls of Derry. Nor was this the only baseness he was guilty of; for, upon the approach of James, he advised the surrender of the city, assuring the garrison that it was untenable : but the heroic temperament of the towns-men was rather kindled into a spirit of resentment, than overwhelmed by any feelings of despair ; and in the enthusiasm of the moment they rushed to the walls, and pointing their cannon, fired upon the advanced' guard of James, who was approaching in the confident assurance of taking a quiet possession of the place. The siege now became formal, the timid were allowed to retire, while Lundy escaped, from the confinement of his own house, on shipboard, and James sat down before the walls for eleven days. But, impatient of disappointment, the king returned to Dublin, leaving Derry closely invested. The inhabitants became at length straightened for provisions, and famine and disease made equal and continued ravages in the garrison. Meanwhile, an unfortunate multitude of Protestants, of all ages and conditions, were goaded on by the king's army to the very walls, and there suffered to perish miserably in the presence of the besieged.

The most powerful antipathies of nature were overcome by the invincible horror, now conceived by the besieged, of their relentless enemy. The flesh of horses, dogs, and vermin, purchased at extravagant prices, were eagerly devoured by the wretched citizens, who, nevertheless, continued to persevere in a most heroic defence, and sometimes made successful sallies on the besieging army. In the midst of these calamities, death, famine, and disease, two vessels, laden with provisions and convoyed by a frigate, advanced in view

both of the garrison and of the king's troops ; the enemy thundered furiously upon them, from their batteries, which fire was returned with equal spirit. The foremost of the victuallers struck forcibly against the boom, which had been stretched across the river, and snapped it: but, rebounding with violence, ran aground. The enemy, exulting in loud acclamations, prepared to board her, while the garrison on the walls remained stupified with despair. At this critical moment the vessel fired her guns, was extricated by the shock, and almost instantly floated. Passing the boom, she was followed by the other vessels : and, the town being thus relieved, the enemy abandoned the siege.

During the course of this siesje James's troops were much embarrassed by the operations of the Enniskillen men. A brave band of Protestants who had confederated, chose one (justavus Hamilton for the governor, and proclaimed William and Mary. This small body was en-

closed by three great armies under the separate commands of Macarthy, Sarsfield, and the duke of Berwick. But, by a peculiarity of fortune ignorance of danger procured their deliverance for, knowing of but one enemy, they advanced and defeated him, which caused the others to retire; not, however, without suffering in their retreat from the Enniskilleners, who at length detected their danger, and were become more familiar with it.

James's disappointments increased his follies and extravagancies : he assembled a parliament in Dublin, and there passed acts, by which the personal estates of all absentees were vested in the king : also an act declaring that the parliament of England cannot bind Ireland : against writs and appeals to England : an act for liberty of conscience : an abolition of the provision made for ministers in corporate towns : and an act entitling the Romish clergy to all tythes payable by those of their own communion. His arbitrary conduct was also strongly marked by his assumption of the right of copper coinage, and his conversion of old cannon, broken bells, and such like materials, into pieces of money valued at £5, the intrinsic value not exceeding 4rf. Ireland was in this deplorable situation when Schomberg arrived near Bangor, in the county of Down, and laying siege to Carrickfergus speedily reduced that fortress ; but being much pressed by the sickly nature of the climate, and difficulty of crossing the country, he was contented with a defens.ve warfare, until the arrival of king William, on the 14th of June 1690, near Carrickfergus ; a measure which brought the cause of the abdicated monarch to a speedy issup Upon the intelligence of

William's landing, James, contrary to the advice of his council, resolved to take the chance of an engagement. And meeting on the banks of the river Boyne, on the last day of June, both armies prepared for an engagement, and the following day William crossed the river, by the ford of Oldbridge, and engaging James totally routed and defeated him. See BOYNE. William received a slight wound in the shoulder previous to the battle, and the brave Schomberg, and Caillemote commander of the Huguenots, fell in attempting to ford the river: the celebrated Walker, the defender of Derry, whose military ardor had led him to follow William, also received a wound of which he shortly after died. This battle determined finally the conquest for the crown, and closed the hopes of the Romish party in Ireland : the pusillanimous James fled to France, and left his infatuated followers to the vengeance or the mercy of the conqueror. Some few fortresses held out for James, but the arms of Marlborough soon reduced them : and the distinctions of English and Irish, Protestant and Papist, were almost annihilated by the abdication of the Stuarts, and by the articles agreed upon at the surrender of Limerick, upon the 3d of C tober 1691.

PART II.

STATISTICS OF IRELAND. Topography. — Ireland contains about 20,000,000 of English acres, and is on the whole of a mountainous character: the highest land.

M'Gillicuddy's reeks, reaching an elevation of 3410 feet. The soil, which is remarkable for its fertility, rests principally upon a substratum of limestone, to which circumstance, in all probability, its fertility is mainly attributable. This valuable species of stone occupies the central district of the island, extending from Lough Erne, in Fermanagh, to the county of Cork, and from Dublin in the east, to Galway in the west coast : supporting and nourishing nearly two-thirds of the whole area of the kingdom : even the flat bogs of the country rest upon limestone. In the lower beds of the great central limestone district very beautiful black marble occurs, which is worked

into forms for domestic purposes, and made an article of export. A more beautiful species of brown marble, totally unknown beyond the limits of the barony in whicli it is raised, occurs in Fermanagh, where it is worked into chimney pieces and other useful articles. Statuary marble of excellent quality is found in the primary regions of Donegal and Galway, besides some beautiful rose marble. The granite regions are, the Donegal or Northern, Conna\ight. or Western, the Down, and the Leinster.

These great primary fields abound in mineral riches. Donegal contains gray granite and sie-nite, or sienitic granite, exactly resembling the Egyptian ; besides rich veins of statuary marble, and valuable mines of lead. The Connaught range is beautified and enriched by inexhaustible stores of green serpentine, of the most exquisite colors, and capable of being raised in slabs and blocks of great magnitude. Two quarries are now worked, one called Darcy's and the other Martin's quarry, and supply a brisk export trade. The Leinster granite field abounds in mines of lead and copper, and alluvial gold in small quantities has been found in the county of Wicklow, near to the centre of the region. The Down district has not unfolded its treasures with equal benefit to speculators, but it has been less subjected to trial. In the superficial blocks of granite, beryls of a bright green are frequently found, which bring a good price in the London and Edinburgh markets. The most durable granite in Europe, superior even to that of Aberdeen, occurs in the primary county of Leinster. It was not long since submitted to a test, together with the granite of Dartmoor and Aberdeen, the result of which established the high state of crystallisation of the felspar in the Killiney granite ; on which the durability of this species of rock depends. In these districts, besides valuable mines, large beds of felspar, i. e. disintegrated granite, equal to that of St. Stephen's in Cornwall, constantly occur; chiefly in Wicklow. This has been tried and found to be superv» potters' clay.

There are in Ireland eight principal coal fields ; these are called the Antrim, Tyrone, Fermanagh, Connaught (in several counties), Monaghan, Leinster, Tipperary, and Munster. The first is thought to have been worked previous to the discovery of coals in England. Fermanagh coal field remains still totally unexplored. The Connaught coal district has been known to contain a valuable bed of coal, and has been worked with

success for many years. An inexhaustible sup-ply of iron stone is found near Arigna, contiguous to the Connaught coal district, which i<

acknowledged to be superior to any used in the British iron works. Owing to the improved navigation of the Shannon, aided by the canal from Tarmonbury, both coals and iron can be conveyed to Dublin with great facility, and at a small expense ; but, though the iron would amply repay the manufacture, lord Lonsdale can always afford to undersell the coal merchant. The coal of the Leinster district has also been long known, and profitably worked ; but the coal is of the non-flaming kind.

The Munster district, though of later discovery, is now conferring employment, and thereby happiness and tranquillity, upon the central district of the county of Cork (See article CORK), where potteries and other useful establishments have been formed, and are conducted with a success corresponding to the wisdom with which they were instituted by Mr. Leader at Dromagh. But the coals here are of the same character as those of the Leinster or Kilkenny region ; and, generally, the coal fields of Ireland may be divided by an imaginary line drawn from Galway to Dublin, the coal fields to the north of which contain bituminous coal, while all those to the south contain non-flaming or stone coal. The flaming coal of Ireland, generally, is of a medium quality between the swift burning coal of Scotland and the caking coal of Whitehaven, and equals any in Europe, for either culinary or manufacturing purposes.

In the county of Antrim, north-east of Ireland, is found the most extensive range of basalt in Europe. Here is the famous stratum of columnar basalt, called the Giants' Causeway, forty-five feet in thickness, which dips into the sea, and appears again, though less beautifully and minutely articulated, on the coast of Scotland, amongst the Hebrides. Greenstone oc-curs in this county, in masses rudely columnar, and often feet diameter; the perpendicular cliffs in this part rising to 400 feet, and the whole basaltic region dipping towards the land. The limestone of this district is magnesian or lias, which occurs less frequently in other parts of Ireland, and contains nodules of flint imbedded in rude holders as well as in continuous beds. This region is separated from the granitic by a vein of red sand stone, dividing the counties of Antrim and Deny, being exactly analogous to that of Cheshire, in England.

The mines of Ireland, though known in the very remotest ages, were allowed to slumber in their deep retirement undisturbed, until the late speculative season, so ruinous to other societies, called the mining associations into a more propitious existence. The companies lately formed are, nearly all of them, eminently successful, and shares of the Hibernian Mining Company, which the calamitous fate of so many

Joint Stock Companies had reduced to peifect worthlessness, are now at a premium in the Lon-don market. The localities of Irish mines, generally, are analogous to those in the neighbouring island of Great Britain, being placed mostly at the junction or rather separation of two different

geological regions ; and, with the exception of those contained in the Sliebh Bloom, and Galtee regions, are all found to be at convenient distances from the sea coast ; a circumstance of paramount importance, not only as regards the exportation of ore, but also with respect to the importation of fuel. The mining company of Ireland have collieries at work" in Roscommon; at Sliebhardagh in Tipperary, and at Surgabucy in Tyrone, at the latter of which there is always a good store bank for the supply of the vicinity. The same company are working the rich and valuable Audley copper Mines in Cork county, and a second vein of copper in the county of Waterford. At Bally Corus in the county of Dublin, the company are now applying their machinery to rolling lead and making pipes ; hav-ing a smelting house at that place, and finding some difficulty of disposing of lead in pigs, with sufficient despatch.

In the royalty of Glendalough, in the county of Wicklow, belonging to the archbishop of Dublin, are two veins of rich lead ore, at one of which, the Hero mine, lead is raised at an expense of £l 5s. per ton, and within twelve fathoms two parallel veins have been this year (1827) discovered, equally rich, and capable of profiting so much by the adits now forming, that they can be unwatered at a very trifling and light expense ; the produce of this mine affords an average of two tons per fathom. The same company have a profitable lead mine at Kildrun, in the county of Donegal, where galena is raised in great quantities, yielding an average produce of one ton and a quarter per fathom ; large shipments from this mine are annually sent to the London market, where it merits a preference. The slate quarries at Killaloe in the county of Tipperary, so conveniently situated for water carriage by the Shannon and by two great canals, are composed of

very superior metal, resembling that worked in the quarries of Llanberris in North Wales. The baneful spirit of combination, which made its appearance at these works, rendered their suspension necessary for awhile, but they are again resumed, and must, if prudently and skilfully conducted, be successful. The shipments of the company in the month of August 1827 were, 240 tons of copper ore, 260 tons of lead ore, producing seventy-five per cent, of lead with 600 pigs of lead, independent of . their Irish sales.

The Hibernian Mining Company are not less successful. Their copper mine at Ross Island, on the beautiful lakes of Killarney, yields a produce of 100 tons of ore per month; this mine, formerly worked by the Danes (as is evident from the discovery of the stone hammers, and other rude mining implements belonging to that peo-ple, constantly found on the 'island), was abandoned, from the great difficulty of freeing it from water ; but the application of the steam engine, and the very great ingenuity of the superintendant engineer Mr. Weaver, an experienced practical miner, have overcome these obstacles, and obtained the singularly abundant produce already mentioned. To this company also belongs the slate quarry at Valentia Island, in the county of Kern', which is at full work, the slates

raised there finding immediate sale in the adjacent country. At Killery harbour is a good slate quarry, admirably placed for exportation. There is but one mine of antimony, as yet, worked in Ireland, that is, at Tullybuck in the county of Monaghan; and at Inveran Castle, in the county of Galway, occurs the only vein of molybdena, hitherto discovered in this kingdom. At the copper mines of Beerhaven areˆten great con-temporaneous veins of copper," sixty-six feet broad, in a matrix of quartz ; and so rapidly is the ore raised, in bunches, as it is always found, that the mere breaking of it occupies upwards of 500 hands. The famous silver mines of Tipperary still remain neglected : they were clumsily wrought in the reign of queen Anne, by lord Abercom's agent, Mr. Hamilton. The working would certainly be attended with difficulty, the matrix being iron ochre, and the vein very irregular: the works were never extended farther than eighteen fathoms. In CroghanKinshelagh, in the county of Wicklow, alluvial gold was found, and stream works erected on the Ballin-vally rivulet, when 2666 ounces of pure gold were gathered, worth about £10,000: but, after a scientific test and careful analysis of the contents of the mountain mass, the Wicklow gold mines were abandoned by government, in whose hands they had been for two years. The mines of Ireland appeared to deserve this notice here, because hitherto no

geological chart, ‘or mineralogical essay upon the construction and internal contents of that country, has been published.

The waste lands of Ireland attracted the attention of the Irish parliament in 1715, when an act was passed to render the rivers of this kingdom navigable, thirty-two of which had been surveyed with a view to that object. In 1726 a bill enabled the bishops to lease bogs for sixty years; and in 1732 was passed the barren land act, empowering the court of chancery to issue commissions for ascertaining the interests of persons claiming portions of these lands, and for obliging them to contribute to the drainage thereof, in proportion to such their interest, with this stipulation, that no greater sum than £10 should be le-ried in one year upon any proprietor. In 1 742 the Dublin society applied part of their funds to further the reclamation of bogs, and continued their useful exertions for thirty-three years ; and in 1743 pecuniary and honorary rewards were awarded for the reclamation of 760 acres of bog in Queen’s county Westmeath, Tipperary, and Limerick, and much land was brought under tillage, at the same time, for which no premium was sought. The extent of bog in Ireland is calculated at nearly 3,000,000 of English acres, one half the flat red bog, convertible to the general purposes of agriculture, the remainder mountain land, covered by a thin peat, convertible pasture, or applicable to the growth of timber. These returns were made by commissioners pointed, in the year 1809, to enquire into nature and extent of the bogs in Ireland ; b their report does not embrace all the bog a waste land in the kingdom. Numerous adv; tages would result to the public, from the i mation of the Irish bogs, such as an improvement of climate, increase of public wealth,

employment for a dense and starving population, besides obvious and considerable individual benefit to the proprietors. In addition to the bog returned in 1812 as unprofitable, there are about 300,000 acres covered by the expansions of lakes and rivers, arising from obstructions both natural and artificial, which are daily accumulating : if these bogs and flooded lands were rendered available to agriculture,

by reclamation, Ireland v/ould yield about £10,000,000 worth per annum of additional agricultural produce to be disposed of, being nearly the amount yearly expended by England (exclusive of what she now pays to Ireland), upon agricultural importations from foreign countries. Hence it follows, that a market is already provided for this greatly increased product, without in the least deteriorating the present value of arable land.

The Irish red bog consists of a porous, spongy, undulating moss, generated by the capillary attraction of aquatic plants, resting on retentive argillaceous strata called lacklea; impervious to water and favorable to the growth of aquatic plants. The general plan recommended for the reclamation of the Irish bogs, and recovery of flooded lands, is to deepen and widen the bog-streams, and also to deepen, widen, and render navigable, the rivers into which those streams fall ; for lowering the beds of the rivers would not only drain the great expansions of lakes and large rivers, but withdraw the water from the hogs also, which bogs have actually been created by the obstructions to the discharge of their superfluous waters. Many of the rivers in Ireland now roll in beds twenty feet above their ancient channel?, nor has this change been noticed, because the peaty soil upon their banks has risen pari passu. To reclaim the red bog, then, either the bog-stream must be deepened, or a water-course cut of a depth sufficient for the purpose : but this would be useless if the beds of the rivers were previously restored to their former levels. In confirmation of the fact, that the beds of the rivers have risen, the following well authenticated cases may be quoted. The bed of the Inny, in the county of Longford, was ascertained to have risen precisely three feet within the last forty years. At Moninea, in Roscommon, it was fully ascertained that the bed of the bog-stream had risen twenty feet in 120 years, but that did not attract observation, because the elevation of the bog surface was in a like ratio •with that of the river's bed. The river Banow also exhibits an irregularity not less remarkable, having altered its course, deserted its ancient channel, and wandered to a distance of three miles from its original bed: and, by another aberration, part of this river has migrated from tiie county through which it passed in the fifteenth century. The bottoms of many rivers have been proved, by boring, to be superinduced over earlier beds of a totally different formation. A very singular and equally satisfactory case is that of the river Liffey in the city of Dublin. In 1816, in sinking fora foundation for Whitworth Bridge, coins, boats, and various articles, supposed to belong to the early part of the fifteenth century, \ere discovered at a depth of ten feet bfi'-.w the present bed of the river.

From the same cause, *viz.* river obstructions, the lakes in Ireland are rising above their ancient levels, and inundating the adjacent country. In the vicinity of Lough Neagh 10,000 acres of land am flooded for nine months in each year, exclusive of which 60,000 are under bog and waste. Lough Mask now stands fifty feet above the level of Galway town, and the inhabitants are only protected against its annual threats of inundation, by a great dyke or embankment. The obstructions in this case are, it is true, partly artificial, arising from mill-dams : but thus, not ouly are the inhabitants of a large town held in continual peril, but 100,000 acres of rich land are totally sacrificed, and an inland navigation of 200 miles completely destroyed. On the banks of the river Boyne there are 4000 acres of land under water for six months in each year; and in the Barrow district there are 7500 ; while the river Black water in the south, which is now only navigable to Capoquin, lord Orrery mentions to have been navigable as far as Mallow, forty miles, in his younger days. Enough has now been said to prove the fact, that bogs have originated from river obstructions : that the quantity of flooded land which is estimated as equal to one-tenth of the bog land, is increasing and must continue to do so until channels shall be cut to withdraw the superfluous water; and that, by lowering the beds of the principal rivers, these gieat evils would be materially mitigated. This then, our first position, being established, the detail of reclamation is but brief in theory. Drainage can be effected either by cutting a deep trench in the bog, or, in preference, by deepening the bog stream. The masses of matter raised, in cleansing the bottom, will be found in many cases to be the most valuable manure for the reclamation of the bog surface, the central bogs of Ireland flowing over soft calcareous bottoms. But to effect this the levels of the adjacent rivers must be lowered, by which depression it is an acknowledged fact that many of them, such as the Inny, the Brusna, and others, would then be rendered important lines of inland navigation. Besides drainage, gravelling is recommended; but this and other directions are of minor importance in a view such as the present is intended to be, being more properly practical considerations. Where bog streams cannot be made available, deep canals should be cut, which may sometimes repay the expense of constructing by the sale of the fuel so raised. The town of Pap-pinheim, in Germany, was built by the sale of turf raised in cutting a canal from a noisome bog to the river Ems, and now exists by that trade.

For the accomplishment of so desirable an end, one which a century ago engaged the attention of parliament, great means it is true will be required. The legislation have done much already to foward that end,

by the survey of the bogs presented to the public in 1812 ; what remains for them now to accomplish is the public measure already alluded to, *viz.* of rendering the great rivers of Ireland navigable, by deepening and widening their channels, thereby enabling private speculation and joint companies to carry their bog streams to a sufficient depth for the dis-

charge of all superfluous wa’er. How far the Board of Inland Navigation, with considerable powers and funds at their control, might facilitate the object, it is not so easy to conclude : but surely when there is a fair prospect of converting 2,000,000 of unemployed, and therefore dissatisfied persons, into industrious subjects — of retaining in England, or, what is preferable, transferring to Ireland, £9,000,000 sterling, now expended among strangers in foreign climates, upon corn, hemp, flax, rape, rye, and wool, all necessary for the manufacture and consumption of England, and when produce to this amount in value, could be raised upon the bog and waste lands of Ireland ; when such consequences appear likely to result, the legislature should at least stand the hazard of the die.

RIVERS. — There are but few rivers in Ireland navigable to any extent : the principal is the Shannon, which nearly divides Connaught from the rest of Ireland. This noble body of water takes its rise from a spring at the foot of Culhagh Mountain in the county of Cavan, 275 feet above sea level. From this well, which is twenty feet in diameter and of great depth, a considerable volume of water descends, by a fall of 1 1 5 feet, to Lough Allen in the county of Leitrim, whence, in a distance of 250 miles, its descent is only 160 feet. In the lengthened course of this sluggish river it expands itself into several large lakes, the principal of which, Lough Ree and Lough Davy, vary from two to six miles in breadth, and, until the introduction of the steam boats for towing, their navigation was rather dangerous and extremely tedious. The navigation of this river is now completed by adju-tory cuts in various places, and it is now rendered a source of improvement to the interior of the kingdom, affords a safe and sufficiently expeditious

mode of communication, and engenders a spirit of commerce amongst the dense population inhabiting its banks. The Bann, the Boyne, the Lee, the Glaney, the Blackwater, Inny, Brusna, and others, are only navigable for short distances, but are capable of improvement by the means already suggested. The Suire at Waterford is a noble river, and navigable by large boˆts up to Clonmel. The Nore pours along agreatbody of water; b-t its rapidity,and sudden swell and subsidence, have hitherto resisted all attempts at confinement or government. The Liffey, on which Dublin is seated, is only navigable to a distance of one mile from its embouchure : at high water boats pass up two miles farther, but, as it is not connected at that point with any other navigation, this capability is of no advantage.

CANALS, and INLAND NAVIGATION. — Great facilities for inland navigation, exist in Ireland. The chief canals that have been completed are the Grand and Royal Canals, both originating in Dublin, the one at the north the other at the south side of the city, and both terminating in the river Shannon ; the one at Tarmonbury in Longford, the other at Banagher in King's County. The length of the main trunk of the Grand Canal from Dublin to Banagher is eighty-seven English miles, but it throws out several branches at Lowtown, near the nineteenth lock, a

branch of twenty-sever, miles extends to Athy, passing Rathangan, Monasterevan and Vicanw town. There is also a branch of one mile at Edenderry. The summit level of the great tnmk is 264 feet above sea level, and 160 above the Shannon; its width at bottom is twenty-five feet, and at top forty ; its average depth on the sills is five feet, and in the canal six. The summit level of this canal should be lowered sixteen feet, which would save much lockage, and cause a subsidence in the bog countryˆ from the deep cutting necessary to accomplish this depression. The Royal Canal, from Dublin to Tarmonbury, extends eighty-six English mdes and a half, ascending to an elevation of 307 feet above the sea level, and 191 above the Shannon. There are likewise several branches issuing from the main trunk, one from the Broad-stone near Dublin, others to Trim, Kell, Castletown, De-loin, &c. The average deptii of water in the Royal Canal is six feet, the width at bottom being twenty-four, and at the surface forty-four. On these great works £2,500,000 of public and private money have been expended, and that they have not realised expectation is attributable to the inactivity of the proprietors of bog land, in the various counties through which this navigation passes, not less than 300,000 acres of waste land lying wholly unproductive, on the banks and in the vicinity of these noble canals, though the navigation has been complete above

half a century. Many minor branches of inland navigation, besides those mentioned, are either completed or in progress. The Barrow and Boyne navigation (the latter of which would multiply its revenue ten fold, if the harbour and . river of Drogheda were improved, see DROG-HEDA), have long been in full operation. Anew branch from the Grand Canal, between Monasterevan and Mountmellick will be opened in the course of the next ye?r (1828). A useful line is also in progress from Shannon Harbour to Balli-nasloe ; and a cut of four miles in length, from the town of Longford to the Royal Canal, has been for some time in contemplation.

In the northern counties it has been proposed to open a communication between the grpat inlets called Lough Foyle and Lough Swilley, an object which could be very readily accomplished and at small expense. A second and more useful line, forty four miles in length, has been contemplated, and the country surveyed and reported on by an eminent engineer, *viz.* from Derryor Lough Foyle to Ballycassioly or Lough Erne, four miles from the town of Enniskillen in the county of Fermanagh ; the lake being navigable, this canal would thereby form a water communication from Derry to Beltuchet on the south-east, and to Belleek, within four miles of Ballyshannon, on the west. In the same province a bold and valuable design in inland navigation has also been recommended, and carries such strong characters of utility along with it, that it cannot long remain unexecuted ; that is, the Junction Canal between Lough Neagh and Loush Erne. This line passes through a thickly peopled and manufacturing district, close to the towns of Monaghan, Caledon, Cloves, and Lou-ghall. The length of the entire navigation re-170

quired is forty-six miles and a half, and the number of locks necessary amounts to twenty-two in the distance, i. e. from Wattle Bridge to Portadown. This admirably chosen line is to be called the Ulster Canal, and the expense of its construction is estimated at £147,738 sterling. For the furtherance of this object the exchequer bill loan commissioners have appropriated £100,000, and many great land holders in Ulster have subscribed to the undertaking. There are, in the same province, the Newry and the Lagan navigations, both important lines, but both much in want of improvement.

There is one more project, which is of such magnitude, and of such obvious utility, connected more properly with the inland navigation of Great Britain, which has lately been suggested, and to which it is supposed the legislature is decidedly favorable ; this is the plan of uniting Galway Bay with Kingstown asylum in Dublin Bay, by a great trunk, which the projectors are anxious to have honored with the title of The Royal Ship Canal. The advantages of this design to England would be an abridgment of one-third in the duration of the voyage from America and the West Indies, while the tedious and perilous voyage of the Channel would be avoided. If this great plan be considered in conjunction with the similar projects of England, of ship canals from Bristol to the British Channel, and from Portsmouth to London, it must be acknowledged the noblest succession of inland navigation in the world ; a plan which, from the introduction of steam navigation, would render the intercourse between the old and new worlds proportionately as expeditious and just as secure as that now established between town and town in England. The vein of country between Dublin and Galway is peculiarly calculated to facilitate this undertaking. The distance b 133 miles, ninety of which are already cut through by a boat canal from Dublin to Balli-nasloe ; forty feet wide at the surface. All the central region of Ireland, through which the proposed canal should pass, is nearly a champaign country, the highest level being only 270 feet above the sea; and, by deep cutting, this level could be most readily lowered, whereby nearly 500,000 acres of bog would be effectually drained, and the produce rapidly conveyed to the English market. Whatever funds, subscriptions, or parliamentary grants may afford, would be returned with more certainty, expedition, and pro-fit, than any other improvement, deriving its revenue solely from Ireland, could possibly be expected to do.

HARBOURS. — Few countries in Europe possess either a greater number or more safe and extensive asylums for shipping than Ireland. The harbours on its western and southern coasts have long been proverbial for depth of water, capacity for anchorage, shelter against weather, and facility of ingress and egress. The most remarkable are upon the coast of Connaught, one of which, the Killeries, stretches nine miles inland, is but five furlongs broad in the widest, and sixty perches in the narrowest parts, having water to float a first rate man of war at all times of tide. By a reference to M'Kenzie's Chart (the only ge-

neral one of !the Irish coast yet in existence) the capabilities of the

Connaught Harbours, may be readily seen ; but by an inspection of Mr. Ninno's beautiful charts, executed for the Fishery Board, a still more correct idea may be formed of them. M'Kenzie's charts are in many points extremely erroneous; two remarkable instances may be here mentioned : first, they represent Strangford, on the east of Ireland, as a Bar-Harbour, with twelve feet water, while no such thing exists ; on the contrary there is a depth of thirty feet across ; secondly, the Burford Bank, in Dublin Bay, is totally omitted. If, however, the exertions of the Fishery Board be continued, the naval world will soon be furnished with faithful and correct charts of the Irish coast, which, as specimens of the excellence to which the hydrographic art has been carried, are extremely interesting and honorable to the age. Bantry Bay is one of the noblest basins in the world, capable of containing the shipping of Great Britain. Cove, the harbour of Cork, is completely landlocked ; has deep water at all times, and safe anchorage ; nor is it interrupted by any bar or other impediment. Its position as a naval station was acknowledged and experienced during the late French war.

To the swelling tide of the Atlantic the west of Ireland is indebted for her bold and beautiful shores, as well as for her deep-water harbours ; the west winds, which blow for nine months in the year, continually rolling in a sea which washes away the alluvial matter, and deepens the rocky basins in its retreat. The heavy sea on this coast appears to have hitherto rendered the western harbours less inviting to the mariner than the dangerous shallows and exposed harbours on the coast opposed to England. Even from this objection, though it is not a substantial one, the harbour of Cove is exempt. The eastern coast possesses but few safe natural asylums for shipping. At Dunmore, near Waterford, a pier is erected, and a packet station established (see DUNMORE) ; at Courtoun, midway between Dub-lin and Waterford, a small harbour has been constructed; and an extensive asylum of 226 acres has been enclosed at Kingstown near Dublin. Other harbours of less consequence have been formed along this line of coast, mostly under the direction of the Fishery Board, who have already given sixty asylums to the boats engaged in fishing, some of them capable of floating vessels of large burden. The north-east coast is still a cheerless prospect to the navigator of the dangerous and rapid-flowing sea between Scotland and Ireland ; nor would the construction of useful harbours on this litorale be a work of moderate difficulty or expense.

FISHERIES. — Connected with the harbours of Ireland are its fisheries. This profitable and desirable mode of occupation attracted the attention, and has been favored by the protection, of the legislature, since the year 1819, when the Fishery Board held its first meeting in

Dublin. For the better regulation of their works they divided the whole coast into fourteen districts, and appointed local inspectors. The engineer, who was appointed by the lord-lieutenant, '..as already surveyed the greater part of the coast, and

his valuable reports and coarts a:e now before the public.

To this board is due the merit of giving permanent employment to about 100,000 hands, whose labors support about 400,000 dependents. Besides the erection of piers, formation of harbours, building of breakwaters, &c., this Board have opened new lines of road through the kingdom, the primary object of which was to open the markets to the fishermen on the sea-side : but in this advantage the population generally have also participated. Schools connected with the Board, for the manufacture of nets, building of boats, and where navigation, upon popular principles, might be taught, would possibly be a great auxiliary to the agricultural and horticultural seminaries already mentioned.

ROAD-MAKING, RAILWAYS, &c. — Besides the encouragement of the fisheries as a means of support, an article of export for English consumption, a source of wealth and employment to the impoverished inhabitants of the coasts, and a nursery for the British navy, whenever their services may be required, there are other and equally important objects claiming public attention, as ministering to the amelioration of the condition of the Irish peasantry. Road-making has been introduced with much advantage: it affords present employment, opens districts be-fore secluded from the world, admits and occasions intercourse, and renders the market accessible to the farmer of the former desolate region. The employment of a few able civil engineers, for some years back, has accomplished much in this way. In Connaught, where roads have been opened through districts thirty miles in length, where no wheeled vehicle had ever been seen, where no communication by post existed, and where it is wonderful the name of England continued to be known, this has more particularly occurred. Towns and villages have suddenly arisen, commerce has raised her drooping banners from

the harbours of Connemara; and the town of Clifden, since its birth, just four short years ago, now carries on a direct commercial intercourse with Liverpool. Perhaps there is no part of Ireland in a more rapidly progressive state of improvement than the province of Connaught, all which is attributable to the opening of its recesses by the construction of roads.

The remote parts of Cork and Kerry, unknown until the operations of the Bog Commissioners introduced their engineers to a knowledge of their importance and value, are now thrown open ; new and improved lines of road are constructed from Tralee to Dingle, to Cahirzeveen and Valentia, to Kenmare by the lakes of Killarney, and from Bantry to Bear Haven and Island, which places are the most westerly points of land in Ireland, serving as useful land-marks to the mariner, but hardly known as the haunts of man. Since the employment of civil engineers the Irish roads have improved more rapidly than those in England ; for the great abundance of the best materials renders the task more easy and less expensive to perform ; then the skill of the engineer was the only thing required, to select the most judicious line, and to

direct the disposition of the materials. The introduction of railways into Ireland has been but of slow operation ; the extent of her manufactures not demanding their adoption. In one line of country, however, a considerable commercial intercourse, now conducted by a circuitous and difficult navigation, might be advantageously and profitably carried on by this mode of transportation. For this purpose a railway is proposed to connect Limerick and Waterford, two of the most prosperous trading towns in Ireland, extensively occupied in the provision trade. The length of the principal line is seventy-six miles, having an ascent to its sum-mit level of 279 feet eight inches ; and the estimated expense is £165,000. Collateral branches are also intended to Cashel, Killenaule, and Thurles. Funds, to the amount of £45,000, have already been advanced by government, to assist this great provincial undertaking.

A second railway has been suggested, but not of equal length, though likely to yield a high rate of interest to subscribers ; this line is to run from Mallow to Cork. In speaking of the present state of Ireland, although it may appear that existing institutions only should be described, yet would it not be unfair to pass by those which, now in embryo, will speedily start into life, and whose infancy will require some fostering care ‘ Such are the Ulster Canal, The Royal Ship Canal,

and Waterford Railway ; and such also is the proposed Valentia Steam-Navigation Company. There is in the south-west of Ireland an island, called by a Spanish name Valentia, so attractive by the commodious harbour and safe lying between it and the mainland, for ‘ Insula efficit portum,’ in a channel but half a mile wide, that Oliver Cromwell erected forts at each end of the channel, duly estimating the security within ; and, in queen Anne’s wars, the French privateers, no incompetent judges, selected this channel as their safe retreat. The American and Colonial Steam Navigation Company contemplate establishing a packet station here, to communicate, by regular monthly voyages, with Nova Scotia; the passage could be made, with tolerable certainty, in one fortnight, and coals could be stored at Valentia, while an ample supply exists on the American side. For •the furtherance of the objects of this company two acts of parliament have already been obtained.

THE IRISH CHURCH.— Church property, in Ireland, appears unequally and injuriously disposed : its better arrangement should be made the subject of serious consideration. Church property should be, at least, as sacred as any other ; therefore it is not meant that the quantity should be infringed upon; but, if its present partition be injurious to the interests of the church, and not beneficial to the condition of society, and the improvement of the country generally, another disposition should be made. As to the collection of tithes, the cause of so many unhappy disturbances, Mr. Goulbourn’s bill, like the wand of the Irish Saint, has banished the serpent from the land. The tithe proctor is now almost unknown ; deeds of blood have been succeeded by a friendly intercourse between the

pastor and his parish ; and the plough of the husbandman goes prosperously and peacefully forward. Of about 2500 parishes, 1000 had compounded for their tithes in September 1827, and others were in progress of composition (a sufficiently convincing proof of the utility of the bill) ; and perhaps the returning appearance of tranquillity to the disturbed counties at the same *»eriod may not be

altogether disconnected with its operation. When disproportionate arrangements of church property are mentioned, parochial glebe or property alone is alluded to. In the four dioceses of Fuam, Killalla, Elphin, and Clonfort, that is, in the whole province of Connaught, parochial glebe does not amount to 2000 acres ; and, in the province of Munster, it amounts only to 7000: while, in Ulster, the quantity of parochial glebe is not less than 72,000 acres. Now the system at present adopted by the heads of the church, and one which cannot be too highly applauded, is to sever the different unions of parishes, upon their vacations by death or preferment ; but, the question naturally suggests itself, how are the incumbents of the different members into which the u-nion has been separated to be provided for? perhaps the following suggestions may lead to a satisfactory answer.

Much of the rectorial tithes is now in the hands of laymen, of bishops, and of other church dignitaries. Many of the laymen contribute nothing whatever to the support of the parochial clergy; many more grant a miserable stipend ; while the churchmen allow only the sum enforced by the law ; although a case has lately occurred in which a learned dignitary, upon his eltvation to a mitre, voluntarily raised the salaries of the curates, vicars, &c., of those parishes, the rectorial tithes of which were in his own possession. As to the lay proprietors, it is but reasonable that they be compelled to allow a salary, at least equal to that which the clerical ruler is obliged by law to grant, for the performance of the duty of his parish: whereas we find in many cases no allowance whatever made to the vicar; and one case, laid before the public in 1810, and not noticed since, states that the lay lord formerly allowed £4 per annum, out of bis rectorial tithes, for the performance of his parochial duties, but had then withdrawn even that sum. In many dioceses a great proportion of the episcopal income is derived from tithes ; but, in this case, the remedy is suggested, and has been applied by the learned and liberal dignitary mentioned above, whose example, no doubt, will instruct his brethren.

Thus the church establishment appears capable of much improvement, at the same time that any additional burden for its support can be totally avoided by the partial restoration of the rectorial tithes to the parochial clergy, which can be made without the least private grievance, or injustice. Nor is precedent wanted for such a step : on 28th May, 1824, amongst other matters, parliament resolved that the rectorial tithes then vested in the chancellor, archdeacon, and precentor, of the chapter of Connor (in the county of Antrim), should, on the decease of the incumbent dignitaries, be re-annexed and

restored to the vicarages, or vicarial parishes, to which they formerly belonged. In this way then it is possible, that, upon the dissolution of the great church unions, and erection of new churches, adequate support might be provided for the curates and vicars of the subdivisions.

In fine, then, the natural soil of Ireland is abundantly rich, the internal mineral wealth is considerable, the population great, and the climate healthy. The arable land yields its fair proportion to the support of the population, and of legal institutions: — and the landed proprietors of the bogs and waste lands are the principal .persons, in whose power it lies to give immediate and permanent employment to the peasantry, in the reclamation and subsequent cultivation of the bogs, whereby, possibly, poor rates may be avoided.

The mines are now beginning to repay the subscribers, and give constant occupation to thousands. And although the coal mines of England have always given her a manufacturing advantage, particularly since the introduction of steam, yet even in this point Ireland possesses an equivalent in the great power of her rivers : the daily waste of water power at one fall, on the ‘ river Shannon, being equal to the sum of the united powers of all the steam engines in England ; i. e. to the power of about 300,000 horses : and, the fall of Lough Erne, at Belleek, being equal to half that quantity. Such extensive tracts of land, amounting in flooded, waste, and bog lands, to 5,000,000; — such powers as those of the Irish rivers, exceeding that of all the machinery in Europe, cannot remain much longer inactive ; — and such a population as the Irish cannot continue without exertion. Certainly the employment of the peasantry, at home, should be attempted, by the legislature, previously to the establishment of any systematic plan of emigration ; for,

‘ A bold peasantry, their country’s pride, If once destroyed, can never be supplied.’

IRELAND, NEW, a long narrow island of the eastern seas, first visited by Carteret, -who discovered its separation from New Britain by a channel, named by him St. George. Sailing alof g the south coast, for eighty leagues, he observed ;t to be in general elevated. His Gower Harbour is the port Praslin of Bougainville, where the latter navigator discovered the pepper plant. Near Carteret Harbour Labillardiere observed mountains partly composed of marine substances, and one of whose inland summits

has an elevation of 8000 feet. Here were met the enormous bat named vespertilio vampyrus, and the bread-fruit tree ; and on Cocoa-nut Island of Carteret, which forms the harbour, and which is a mass of calcareous rock, were found the borringtonia speciosa; the pandanus, a species of areca palm, 140 feet high, with a very slender stem ; a very large species of solanum ; the teak ; and several gum-trees. The sago palm and bastard nutmeg were also noticed on the shores of this harbour.

I R I D I U M.

The natives are Papuas, who go entirely naked, smearing their faces, and powdering their heads with white clay : their ornaments are strings of shells and teeth ; their arms bows and arrows, spears, clubs, and shields; their huts have only an opening to crawl in on their hands and knees. Their canoes, however, are neatly formed of a single tree, sometimes ninety feet long, and furnished with outriggers.

IRELAND (John), a modern writer on works of art, was a native of Shropshire, and originally a watchmaker in the metropolis. Here he became a print and picture-dealer. He died at or near Birmingham in 1808. His publications are, The Emigrant, a poem, 1785, 4to. ; Letters and Poems, by John Henderson, with Anecdotes of his Life, 1786, 8vo. ; and Hogarth illustrated, 1791, 3 vols. 8vo.

IRELAND (Samuel), a silk-manufacturer in Spitalfields, became a speculator in scarce books, prints, &c., and published a multitude of picturesque tours, in England and on the Continent, embellished with aquatint engravings; but his chief claim to notice arises from his bringing forward the publication entitled Miscellaneous Papers and Legal Instruments, under the hand and seal of William Shakspeare, including the Tragedy of King Lear, and a small fragment of Hamlet, from the original MSS. London, 1796, folio. Of a wilful share in this experiment on the credulity of the public he was acquitted, by the declaration of the acknowledged forger of these papers, his sou, in an Authentic Account of the Shakspeare MSS., which appeared in 1796,

8vo. ; and in a subsequent account of the fabrication of the MSS., published under the title of Confessions, in 1805, 8vo. Samuel Ireland died in 1800.

IREN./EUS (St.), bishop of Lyons, was born in Greece about A. D. 120. He was the disciple of Papias and St. Polycarp, by whom, it is said, he was sent into Gaul in 157. He stopped at Lyons, where he performed the office of a priest ; and in 178 was sent to Rome, where he disputed with Valentinus, and his two disciples Florinus and Blastus. On his return to Lyons he succeeded Photinus, bishop of that city ; and suffered martyrdom in 202, under Severus. He wrote many works in Greek, of which there remains only a barbarous Latin version of his five books against heretics, some Greek fragments in different authors, and Pope Victor's letter mentioned by Eusebius. The best editions of his works are those of Erasmus, in 1526 ; of Grabe, in 1702 ; and of F. Massuet, in 1710. St. Irenaeus's style is close, clear, and strong, but plain and simple. Dodwell wrote six curious dissertations on the works of St. Irenreus.

IRENAHJS (St.), a deacon, who, in 275, suf-ferred martyrdom in Tuscany, under the reign of Aurelian.

IRENˆUS (St.), bishop of Sirmich, suffered martyrdom on the 25th of March 304, during the persecution of Dioclesian and Maximanus.

IRESINE, in botany, a genus of the pentandria order, and dioecia class of plants; natural order fifty-fourth, miscellaneae. Male CAL. diphylious . COR pentapetalous ; nectaria five. Fema.e ˆA~ diphyllous: COR. pentapetalous;

there are two sessile stigmata : CAPS, with flockr seeds. Species one only, a native of the West Indies.

IRIDESCENT, from Iris, Lat., in mineralogy, optics, &c., exhibiting the colors of the rainbow.

IIIIDIUM, in chemistry, from »ptj, the rainbow, a name given by Mr.Tennaut,to a metallic substance he discovered in the dross of platina, on account of the striking variety of prismatic colors it exhibits while dissolving in muriatic acid. Mr. Tennant, on closely analysing the black powder left after dissolving platina in nitro-muriatic acid, which had been supposed to consist chiefly of plumbago, found ii to contain two distinct metals, never before noticed, which he named iridium and osmium. To analyse the black

powder, Mr. Tennant put it into a silver crucible, with a large proportion of pure dry soda, and fused the mixture for some time. The alkaline mass being then dissolved in water, it had acquired a deep orange or brownish-yellow color, but much of the powder remained undissolved. This, on being digested inmuiiaticacid, afforded a dark-blue solution, which afterwards became of a dusky olive-green; and finally, by continuing the heat, of a deep red color. The residuum, being treated as before, with alkali and the acid alternately, the whole appeared capable of solution. As some silex continued to be taken up by the alkali, till the whole of the metal was dissolved, it seems to have been chemically combined with it. The alkaline solution contains oxide of osmium. The acid solution contains both the metals, but chiefly iridium. By slow evaporation it affords an imperfectly crystallised mass; which, being dried on blotting paper, and dissolved in water, gives by evaporation distinct colorless octohedral crystals. The iridium may be obtained pure, by exposing these crystals to heat, which expels the oxygen and muriatic acid. The metal itself is white, and could not be melted by any heat Mr. Tennant could employ. It does not easily combine with sulphur, or with arsenic. Lead unites with it easily, but is separated by cupellation, leaving the iridium on the cupel in the form of a coarse black powder. Copper forms with it a very malleable alloy, which, after cupellation, with the addition of lead, leaves a small proportion of the iridium. Silver forms with it a perfectly malleable compound, the surface of which is merely tarnished by cupellation. Gold remains malleable, and little altered in color, though alloyed with a considerable proportion ; nor is it separable either by cupellation or quartation. If the gold or silver be dissolved, the iridium is left as a black powder. The French chemists observe, that this new metal gives a red color to the triple salt of platioa and sal ammoniac, is not altered by muriate of tin, and is precipitated of a dark brown by caustic alkali. Vauquelin has succeeded in forming sulphuret of iridium, by heating a mixture of ammonia, muriate of iridium, and sulphur. It is a black powder consisting of 100 iridium + 33‘3 sulphur; whence, supposing it a neutral compound, the prime equivalent iridium would be 6‘0. In the year li Dr. Wollaston discovered a native ore of indium,

composed of that metal and osmium alloyed together; it occurs in alluvial soil in South America, in the form of small white grains along with the ore of* platinum. It is heavier than crude platinum, having a specific gravity of 19-25, whereas the native ore of platinum has a specific gravity seldom exceeding that of 17‘6.

1’RIS, n. s. Gr. iptc-The rainbow ; any appearance of light which resembles it ; the circle round the pupil of the eye; the fleur-de-lis.

Iris all hues; roses and jessamine. Milton.

Beside the solary iris, which God shewed unto Noah, there is another lunary, whose efficient is the moon. Browne.

When both bows appeared more distinct, I measured the breadth of the interior irii 2 gr. 107 ; and the breadth of the red, yellow, and green in the exterior i>is, was to the breadth of the same colours in the interior as three to two. Newton’s Opticks.

Those who weep not for kings shall weep for thee, And Freedom’s heart, grown heavy, cease to hoard Her many griefs for one ; for she had poured Her orisons for thee, and o’er thy head Beheld her Iris. Byron. Childe Harold.

IRIS, in botany, the fleur-de-lis, or flag flower, &c., a genus of the monogynia order, and triandria class of plants, natural order sixth, ensatae : COR. divided into six parts; the petals alternately reflexed; the stigmata resembling petals. There are fifty-six species, all herbaceous flowering perennials, both of the fibrous, tuberous, and bulbous rooted kinds, producing thick annual stalks from three or four inches to a yard high, terminated by large hexapetalous flowers, having three of the petals reflexed quite back and three erect ; most of which are very ornamental, appearing in May, June, and July. All the species are easily propagated by offsets from the roots, which should be planted in September, October, or November, though almost any time from September to March will do. They may also be raised from seed, which is the best method for procuring varieties. It is to be sown in autumn, soon after it ripens, in a bed or bor-der of common earth, and rakecl in. The plants rise in spring, and are transplanted next autumn. The roots of the Florentine white iris, when dry, are supposed to have a pectoral virtue. They have an agreeable smell, resembling that ol violets ; and hence are used in perfumes, and in flavoring liqueurs. When recent, they have a bitter, acrid, and nauseous taste ;

and when taken prove strongly cathartic ; on which account they have been recommended in dropsies, in the dose of three or four scruples. The juice of the species called bastard acorus, or yellow flag flower, is also very acrid, and has been found to produce plentiful evacuations from the bowels when other means had failed. For this purpose, it may be given in doses of eighty drops every hour or two ; but the degree of its acrimony is so uncertain, that it car. hardly ever come into general use. Goats eat the leaves when fresh ; but cows, horses, and swine refuse them. Cows will eat them when dry. The roots are used in the island of Jura for dyeing black. The roots or bulbs of a species growing at the Cape are roasted in the ashes, and used as food by the natives : they are called oenkjes, and have nearly

the same taste with potatoes. The Hottentots use the word oenkjes in the same sense in which Virgil used aristae, i. e. for reckoning of time ; always beginning the new year whenever the oenkjes push out of the ground, and marking their age and other events by the number of times in which in a certain period this vegetable has made its appearance. The Siberians cure the venereal disease by a decoction of the root of the Iris Siberiea, which acts by purging and vomiting. They keep the patient three days in a stove, and place him in a bed of the leaves of the arctium lappa, or common burdock which they frequently change till the cure is effected.

IRIS is also applied to those changeable colors which sometimes appear in the glasses of telescopes, microscopes, &c., so called from their similitude to a rainbow. The same appellation is also given to that colored spectrum, which a triangular prismatic glass will project on a wall, when placed at a due angle in the sunbeams.

IRIS, in mythology, the daughter of Thaumus and Electra, one of the Oceanides, the goddess of the rainbow, and messenger ‘if Juno, whom she attended. She was supposed to supply the clouds with water, colors, &c.

IRISH BIBLE. Our article BIBLE will be found to contain an account of the formation and preservation of the sacred canon.’ The efforts of piety and benevolence in supplying the sister island of Ireland with the Scriptures, in the vernacular tongue, we have deemed worthy distinct treatment. Some scattered passages of Scripture in the Irish language are found in those celebrated Irish records (Leabhar Breac and Leabhar Leacan) to which the learned O’Brien often refers in his Irish Dictionary. The style of these fragments is very ancient; but their

exact date is unknown. In 1577 Nicholas Walsh, chancellor of St. Patrick's Dublin, was created bishop of Ossory. Soon after his appointment he commenced the translation of the New Testament ; and procured the assistance of Nehemiah Donellan, and John Kearney treasurer of St Patrick's. They had made some progress in the work ; but the completion of this noble design was prevented by the murder of the bishop in 1585. See Ware's Irish Bishops of Ossory.

~ Fifteen years after W. Daniel (or O'Donnel), fellow of Trinity College, and afterwards archbishop of Tuam, with the help of other learned men, translated the New Testament and the book of common prayer. O'Donnel was particularly qualified for this undertaking by his profound knowledge of the Hebrew, Greek, Latin, and Irish languages. The work was completed and published in 1602, Sir W. Usher (clerk of the council) bearing the expense of printing. See Valiancy's Collectanea, vol. iii., and Ware's Archbishops of Tuam.

It is only to be regretted that this excellent scholar did not extend his labors to the Old Testament. He seems, unfortunately for Ireland, to have been the only translator who has hitherto attempted to render the Scriptures into the vernacular tongue direct from the inspired originals.

The nex'. laborer in this field was Dr. William Bedell, appointed bishop of Kilmore in 1629. He undertook the arduous task of translating the Old Testament. And, although he understood the Irish language very well, yet, as it was not his native language, he chose for his assistant (by the advice of the primate) one King (who had been converted from the Roman Catholic Religion some years before), ordained him, and gave him a living. King was a good scholar, but did not understand Hebrew (Acta Erud. Leipsic, 1686): and is said to have been the best Irish writer of his time ; but bishop Bedell, unwilling to

entrust [so important a work entirely to the care of one man, tasked himself to read a chapter of the translation every day, comparing it with the English, the Septuagint, the Italian translation of Diodati, and the Hebrew. But neither his learning nor his piety could save bishop Bedell from the malice of his enemies ; he was persecuted ; King was degraded, fined, and imprisoned ; and the translation, which they had finished, lay neglected in MS. for many years. Burnet's Life of Bedell, third edition, p. 91—107.

The celebrated Robert Boyle, son of the earl of Cork, first effected the printing of this work. He caused a set of Irish types to be cast, and a printer to be taught the characters and mode of printing in that language. The New Testament was executed at his sole cost : it was published in 1681, and 500 copies given to the poor. He began a subscription for printing the Old Testament, by a donation of £50, and used all his influence to get it completed, which was accomplished in 1685. By what means he procured the MS. may be seen in his letters.

For the use of the Scotch, the Old and New Testaments were printed in the Roman character, and published in 1690. It appears, by comparison, that the editor (R. Kirk) copied Boyle's edition closely; not a single alteration of importance is to be found. Kirk, however, added contents to the chapters, and a short Vocabulary.

Such is the history of the existing translations of the Irish Scriptures.

Early in its career the British and Foreign Bible Society was anxious to extend the benefits of its labors to this benighted part of the em-pn-e ; and opened a correspondence, upon the subject of reprinting the Irish New Testament, with various intelligent persons in Ireland, from many of whom the proposal met with marked discouragement; the result, however, was that they proceeded to print, in the year 1810, the Irish New Testament in the Roman character, from the edition published under the patronage of Mr. Boyle. The Society having procured a competent Irish scholar to edit the work, it was stereotyped, and six new editions of it have been published, amounting in the whole to 17,000 copies.

In the year 1816 the same Society printed the Irish Bible, from the version of Bishop Be-dell, which was also in the Roman character, consisting of 5000 copies.

Subsequently to the pubacation of the above works, as the number of readers was rapidly

increasing m those parts of Ireland where th« Irish is currently spoken, the Anglo-Hibernian* began to encourage the people to read their native language, and unitedly urged upon the Society the necessity of printing the Scriptures in ,the ancient Irish character ; In consequence of which the New Testament of the same version was stereotyped in that character in the year 1818, and has gone through six editions, amounting in the whole to 25,000 copies.

The British and Foreign Bible Society has also in the press an edition of Bedell's Irish Bible, in the ancient Irish character, consisting of 5000 copies, which is nearly completed, and which it is expected will be much in demand. A Committee of revision has been for some time engaged in carefully examining and correcting

The Hibernian Bible Society in Dublin are also printing a pocket edition of the Irish Bible, which is stereotyped. In aid of this work the British and Foreign Bible Society granted to that Society the sum of £300.

IRK', v. a. ˆ Id-yrk, work. This

IRK/SOME, adj. \ word is used only iru—

IRK'SOMENESS, n.s. J personally, it irks me; mihi paene est, it gives me pain ; or, I am weary of it. Thus the authors of the accidence say, taedet, it irketh : irksome, tedious ; troublesome : irksomeness, wearisomeness.

Come, shall we go and kill us venison ? And yet it irks me the poor dappled fools Should in their own confines, with forked heads. Have their round haunches gored. Shaktpeare.

It irk* his heart he cannot be revenged. Id.

IRKOUTSK, a government of Russia, comprising all the eastern part of Siberia. The empress Catherine gave it the privileges of a state, and divided it .into four separate oblasti or districts, Irkoutsk Proper, Nertschink, Yakoutsk, and Okhotsk. The two first comprehend the fertile districts round the lake Baikal, and near the sources of the Lena. Yakoutsk consists chiefly of those vast and frozen plains which extend northwards to the Arctic Ocean. Okhotsk extends along the eastern shore of Asia, and includes Kamschatka, and the Aleutian and JKurile islands. The government of Irkoutsk is thus bounded on the east by the Pacific Ocean, or more properly by its gulf, called the seas

of Kamschatka, Okhotsk, and Anadyr ; on the north by the Frozen Ocean ; on the west by Tobolsk; and on the south by vast chains of mountains, continued from the Altay, under the appellations of the Sayanskie, Yablonoy, and Slanavoy mountains, which separate it from the vast regions of Chinese Tartary. It extends about twenty-eight degrees from east to west, and twenty-five from north to south, and comprises 126,460 square geographical miles. The only large river is the Lena, which traverses it in its whole extent from north to south. The Olo-nek, the Indigirka, and the Kovyma, are rivers which fall into the Icy Sea.

A considerable proportion of the inhabitants are Russians and Cossacs, who are colonists, or merchants, or employed in the military and civil service. In the southern parts are several Mongol tribes. Of the natives, the most numer

ous ar. ihe Tunguscs, who are divided into pastoral, h mting, and fishing tribes.

The Aleutian and Kurile islands have races peculiar to themselves. The expenses of the civil government of this territory amount to 275,000 rubles, besides 7200 which are spent in maintaining the intercourse with China. There is an archbishop of Irkoutsk ; and in the govern ment 101 churches, and ten convents. Inhabitants about 400,000.

IRKOUTSK Proper (the circle or district of), has the Baikal Sea and the Mongolian Mountains on the east and south, the province of Tobolsk on the west and north. It is nearly encircled by mountains, and the land low and swampy. A great part of it, however, is extremely fertile, and fit for all the purposes of agriculture. It is

traversed by numerous rivers, the Angara, tha Oka, the Irkut, the Hun, and others, which flow from the Baikal and the surrounding mountains The country is subject to earthquakes.

IRKOUTSK, a city of Russia, the capital of the above government, is situated on the right bank of the Angara. Of 1500 houses, it has only two of stone, the rest being of wood : the streets are unpaved. It contains two cloisters and thirty-three churches. Here is a seminary, a popular school, and since 1762 a school for the Japanese language and for navigation: also an hospital for the small-pox. Irkoutsk possesses great commercial importance, from its being the centre of the trade between Russia and China. It appears half a Chinese Town. Population 13,000. Long. 103° 30’ E., lat. 52° 16’ 41’ N.

IRON.

I’RON, n. s., adj. & v. a.~\ Sax. iren; Fr.

I’RONMONC.ER, n. s. Ifer ; Lat. ferrum ;

I’RONWOOD, n. s. > Span, hierro. A

I’RON-WORT, n. s. i metal common to

I’RONY, adj. Jail parts of the

world ; considerably the hardest, and, except tin, the lightest, and when pure naturally mall able. See below. An instrument made of iron, as a flat iron, box iron, smoothing iron ; in this sense it has a plural : a chain ; a manacle ; as, he was put in irons : iron, made of iron ; resembling iron: figuratively, harsh; severe; rigid; miserable ; calamitous : as, the iron age, for an age of hardship and wickedness. These ideas may be found more or less in all the following examples. Indissoluble; impenetrable : iron, to smooth with an iron, or to shackle with irons : ironmonger, one who deals in iron articles : ironwood, a kind of wood extremely hard, and so ponderous as to sink in water. It grows in America. — Robinson Crusoe. Irony, made of or partaking of iron.

If he smite him with an instrument of iron, so that he die, he is a murderer. Numbers xxxv. 16.

Cans’t thou fill his skin with barbed irons, or his head with fishspears 1 Job xli. 7.

His feet they hurt with fetters : he was laid in irons.

Psalms.

This noble ensample to his shepe he yof, — That first, he wrought ; and, afterward, he taught, Out of the gospel he the wordes caught, And this figure he added yet thereto, That if golde ruste, what shuld iren do ? For if a preest be foule, on whom we trust, No wonder is a lewed man to rust.

Chaucer. Prologue to Canterbury Tales. I will converse with iron wilted fools, And unrespective boys : none are for me, That look, into me with considerate eyes.

Shakspeare,

In iron walls they deemed me not secure. Id.

The force they are under is real, and that of their fate but imaginary : it is not strange if the ironi, chains have more solidity that the contemplative.

Hammond's Fundamentals. 0 sad virgin, that thy power

Might bid the soul of Orpheus sing

Sach notes as warbled to the string,

Drew !> < >.'! tears from Pluto's cheek,

And made hell "rant tvhat love did seek. Milton

The power of drawing iron is one of the ideas of a loadstone, and to be so drawn is a part of that of iron. Locke.

Rash Elpenor, in an evil hour, Dryed an immeasurable bowl, and thought T' exhale his surfeit by irriguous sleep, Imprudent ; him death's iron sleep opprest.

Phillips.

In all my iron years of wars and dangers, From blooming youth down to decaying age, My fame ne'er knew a stain of dishonour.

Rowe.

Some springs of Hungary, highly impregnated with vitriolic salts,

dissolve the body of one metal, suppose iron, put into the spring ; and deposit, in lieu of the irony particles carried off, coppery particles. Woodward on Fossils.

Some of them are of an iron red, and very bright.

Id.

A piece of stone of a dark iron grey colour, but in some parts of a ferruginous colour. Woodward.

In a piece of iron ore, of a ferruginous colour, are several thin plates, placed parallel to each other.

Id*

Jove crush the nations with an iron rod, And every monarch be the scourge' of God.

Pope.

Till at death's toll, whose restless iron tongue Calls daily for his millions at a meal, Starting, I woke, and found myself undone.

Young's Night Thoughts, These limbs

Will yield with age to crushing iron ; but There's that within my heart shall strain your engines. Byron.

IRON, in chemistry and mineralogy, is the most abundant as well as the most useful of the metals. It is very generally diffused throughout .he globe, being found mixed with all kinds of •sand, clay, chalk, or stone, in the ashes of vegetables, and the blood of animals. Its color is a livid white, approaching to gray, and when broken it appears to be composed of small facets. It is susceptible of a very fine polish, and next to platina of all metals the most difficult of fusion. In some states it is superior both in elasticity and hardness to all other metals, and it has the additional advantage of suffering this hardness to be increased or diminished at

pleasure by certain cliemical processes. Its tenacity is greater than that of any other metal, except gold : an iron wire, the tenth part of an inch in diameter, has been found capable of sustaining more than 500 Ibs. without breaking. Its ductility is such as to allow it to be drawn into wire as fine as hair. But these and other properties of this metal vary with the method of preparing it, the ore from which it is obtained, and the degree of purity to which it is brought.

In this article, however, it is our intention to confine ourselves to the mineralogical and chemical properties of this metal; under the title IRON MANUFACTURE giving a description of the usual mechanical methods of obtaining it from its various ores ; and of the principal u>es to which iron is applied ; while the reader is referred to STEEL for the various branches of that manufacture, t

In this paper we shall first notice the ores of iron, following the arrangement of Kirwan, and then detail its chemical combinations. Native iron, formerly supposed not to exist any where, is now known to have been met with in several places. It is, however, by no means common, but occurs sometimes in iron mines. Margraff found a fibrous kind of it at Eibenstock in Saxony, and Dr. Pallas found a mass in Siberia, weighing 1600 Ibs. Mr. Adanson likewise informs us, that native iron is common about Senegal ; but some naturalists are of opinion that these pieces, which have been taken for native iron, are in reality artificial, and have been accidentally buried in the earth. The large piece mentioned by Dr. Pallas is of that species called red short, which is malleable when cold, but brittle when red-hot. A mass of a similar nature was found in South America, in the district of St. Jago del Estero, in a wide extended plain. Some private persons visited this mass, and sent a specimen of the metal to Lima and Madrid, where it was found to be very pure soft iron. As it was reported that this mass was only the extremity of an immense vein of the metal, a commission was given to Don Michael Rubin de Celis to examine the spot ; and the following is an abstract of his account :— ‘ The place is called Otumpa, in lat. 27° 28’ S. and the mass was found almost buried in pure clay and ashes. Externally it had the appearance of very compact iron; but internally was full of cavities ; as if the whole had been formerly in a liquid state. I was confirmed in this idea, says our author, by observing, on the surface of it, the impression of human feet and hands of a large size, as well as of the feet of large birds which are common in this country. Though these impressions seem very perfect, yet I am persuaded, that they are either a lusus naturae, or that impressions of this kind were previously

upon the ground, and that the liquid mass of iron falling upon it received them. It resembled nothing so much as a mass of dougli ; which having been stamped with impressions of hands and feet, and marked with a finger, had afterwards been converted into iron. On digging-round the mass, the under surface was found covered with a coat of scorise from four to six inches thick, undoubtedly occasioned by the VOL. XII.

moisture of the earth, because the upper surface was clean. No appearance of generation was observed in the earth below or round it to a great distance. Its weight might be estimated at about 300 quintals. It is likewise an undoubted fact, that in these forests there exists a mass of pure iron in the shape of a tree with iu branches.'

In the reign of the emperor Ichaugire,a similar mass fell in India : a violent explosion was heard at a village in the Punjaub, and at the same time a luminous body fell through the air on the earth. The officer of the district immediately repaired to the spot where it was said the body fell, and, having found the place to be hot, he caused it to be digged, on which he found the heat kept increasing till they reached a lump of iron violently hot. This was sent to court, where the emperor had it weighed in his presence, and ordered it to be forged into a sabre, a knife, and a dagger ; the workmen reported it was not malleable, but shivered under the ham-mer; and that it required to be mixed with one-third part of common iron, after which the mass was found to make excellent blades. A piece of native iron, of two pounds weight, has been also met with at Kamsdorf, in the territories of Neustadt, which is still preserved there. These masses evidently did not originate in the places where they were found. The native iron said to have been found about Senegal has a cubical form ; and out of this the black inhabitants make different kinds of vessels for their own use. Some masses have been found in a polyhedral granulated form, and of a bright yellow color; but which, on being polished, show the proper color of the metal.

The following description and analysis of some similar masses is given by Boussingault : — ' On our arrival at Santa Rosa, a village on the road from Pamplona to Bogota, says this writer, we were told that an iron mine hud been discovered in its vicinity, and that a specimen of the mineral was serving as an anvil to a blacksmith. On inspection, we were agreeably surprised to find that this specimen possessed all the characters of meteoric iron. This mass was found upon the hill of Tocavita, at the distance of a quarter of a Spanish league to the east of

the village in 1810, by a native of the place. We went to examine the hill, where we still saw the cavity which was made at the time the mass was taken out, and which, when found, was nearly buried, and only visible to the extent of a few inches. The formation of the hill of Tocavita belongs, like that of Santa Rosa, to a secondary sandstone, and is observed to a considerable extent. The latitude of Santa Rosa is 5° 40’ N., and the longitude 75° 40* W. of Paris ; its height above the level of the sea is 2744 metres. The inhabitants joined in getting this mass to the village, where it was deposited at the town-house for seven years ; and seven years after that, till our arrival, it was used by the blacksmith. This iron contains cavities, but we have found no vitrified traces in them ; it is malleable, and can be cut ; its structure is granular, its lustre of a silver white, and the specific gravity 7-3. The weight of this maw i N

was much exaggerated by our informants ; but, judging from its diameter, notwithstanding the irregularity of the surface, it will be found that its volume is nearly 102 cubic decimetres, and consequently its weight must approach 1580 pounds.

By analysis this iron gave, in a mass of 7‘18 grains, oxide of iron 9-46, oxide of nickel 0-75, residue insoluble in nitric acid 0-02 : 100 parts gave iron 91-23, nickel 8-21, residue 0-28. The residue is insoluble in the nitric acid, and is hardly acted upon by the nitro-muriatic acid even in a state of ebullition. It seems to be composed of nickel and iron, and perhaps may contain a little chrome. Another mass weighing 561 grammes, also found near Santa Rosa in the year 1810, is of a porous structure, malleable, very hard to file, with the metallic silvery lustre, and its grain similar to that of fused steel : 1‘98 grains gave oxide of iron 2‘62, oxide of nickel 0-16 : 100 parts, iron 91 ‘76, nickel 6-36. The nickel may be traced in many other specimens, which were found with the preceding about the same time, in the vicinity of Santa Rosa; the largest weighed 145 grammes. But it is not only in the neighbourhood of Santa Rosa that iron has been met with in a metallic state : we shall therefore still mention two masses, which were

discovered at some distance from the salt-mine of Zipaquira, at a spot named Rasgata. The one weighs forty-one kiliogrammes, is without traces of cavities, very malleable, of a structure composed of very minute planes, yielding with difficulty to the file, of a metallic lustre, and having its specific gravity — 7‘6. 4 grains gave oxide of iron 5-23, oxide of nickel 0-40 : 100 parts gave iron 90‘76, nickel 7‘87. The other mass weighs twenty-two kiliogrammes, is very porous, almost spheroidal, a very malleable iron, of a foliated texture, and its silvery lustre gives it the aspect of certain irons, glossed with white. It seemed to contain from seven to eight per cent, of nickel. Zipaquira, in the limits of which these last masses were found, is in lat. 4° 5T N., and long. 76° 33’ W. of Paris. Its elevation above the level of the sea is 2650 metres.

The following are M. John’s analyses of meteoric iron : —

Iron of	Pallas.	Elbogen.	Humboldt.
Iron	90-0	87-5	91-5
Nickel	7-5	8-75	6-5

Cobalt

2-5

1-85

2-0

Chromium

trace.

o-o

trace.

Manganese

o-o

1-9

o-o

100-0

100-0

100-0

The subjoined list contains, we believe, all the principal masses of native meteoric iron at present known.

SECT. I. — Spongy or cellular masses containing •nickel. — 1. The

mass found by Pallas in Siberia, to which ttie Tartars ascribe a meteoric orgin. Voyages de Pallas, torn. iv. p. 545, Paris 1793. 2. A fragment found between Eibenstcck and

Johanngeorgenstadt. 3. A fragment probublv from Norway, and in the imperial cabinet of Vienne. 4. A small mass weighing some pounds, and now at Gotha. 5. Two masses in Greenland, out of which the knives of the Esquimaux were made.

SECT. II. — Solid masses where the iron exists in rhomboids or octahedrons, composed of strata, and containing nickel. — 1 . The only fall of iron of this kind is that which took place at Agram in 1751. 2. A mass of the same kind has been found on the right bank of the Senegal. — Com-pagnon, Forster, Goldberry. 3. At the Cupe of Good Hope; Stromeyer has lately detected cobalt in this mass. — Van Marum and Dankel-man ; Brande's Journal, vol. vi. 162. 4. In different parts of Mexico. Sonneschmidt, Humboldt, and the Gazette de Mexico, torn i. and v. 5. In the province of Bahia in Brasil. It is seven feet long, four feet wide, and two feet thick, and its weight about 14,000 Ibs. — Mornay and Wollaston, Philosophical Transactions, 1816. 6. In the jurisdiction of San Jago del Estera. — Rubin de Calis, in the Philosophical Transactions 1788, vol. Ixxviii. p. 37. 7. At Elbogen in Bohemia. — Gilbert's Annal. xlii. and xliv. 8. Near Lenarto in Hungary. Gilbert's Annal. xlix.

Native iron is not, however, necessarily meteoric, it has been discovered in mines in Saxony and France. A specimen from a mine near Kamsdarf, in Saxony, yielded, according to Klaproth,

Iron … 92-5 Lead … 6-0 Copper … 1-5

Of the ores of iron, properly so called, the first species is the common magnetic iron stone ; gemeiner magnetischer Eisenstein of Werner. Color dark iron, or bluish-gray, inclining to steel gray, sometimes to the cochineal red in its fresh fracture, but its surface is generally brownish-black. Found massive, or disseminated, foliaceous, globular, or crystallised in four sided prisms, or double quadrangular pyramids joined base to bsve, and thus forming octohedrons ; or in short hexahedral prisms, terminated with three quadrangular faces, &c., or in cubes. External lustre 2, of the crystallised ; internal 3. Of the massive 1 or 1-5 metallic. Transparency 0. Fracture generally fine grained, uneven, or intermediate between that and the fine grained conchoidal. Streak black. Harder than apatite. Brittle. Specific gravity 4-8 to 5”-2. Highly magnetic, with polarity. Before the blowpipe it becomes brown, and does not melt with borax ; it gives a glass of a dark green color. Its constituents, according to Berzelius, are peroxide of iron 69, protoxide of iron 31. It occurs in beds of great magnitude, in primitive rocks at Unst ; at St. Just in Cornwall ; at Arendal in Norway, &c. It affords excellent bar iron.

Most of the Swedish ores are of this family ; all are magnetic, and rather gain than lose weight by calcination. The magnet itself belongs to this family, and differs from other ores

only in being actively, as they are passively magnetic ; it commonly betrays some tendency 10 the octohedral form. Mr. Rinman observes, that all the magnetic ores give red short iron, but that this is easily remedied by a second fusion. Another variety or family of this species is the magnetic iron sand ; magnetischer eisen-sund of Werner. Color deep iron black, which passes sometimes to ash-gray. Occurs in angular or roundish grains ; and also in small octohedral crystals. Surface rough and feebly glimmering. Internal lustre shining, metallic.

Fracture perfect, conchoidal. Fragments indeterminate, sharp-edged. Streak grayish-black. Semihard, brittle, easily frangible, and heavy. Specific gravity 4‘6 to 4*8. Magnetical with polarity. Its constituents, according to Klaproth, are oxide of iron 85-5, oxide of titanium 14, oxide of manganese 0‘5. It occurs imbedded in basalt, &c., in the river Elbe near Schandau in Saxony, imbedded in floetz trappe in Bohemia, and is also found in St. Domingo, Guadaloupe, in Norway, France, the Tyrol, Greenland, and the isle of Skye.

Second species, specular iron ore: Gemeiner eiscn glanz of Werner, fer oligeste of the French. Color light or dark steel gray, or of tarnished azure blue, or gold yellow. Massive, diseminated or crystallised in cubes, either perfect or with their edges truncated or in octohedrons or double three-sided pyramids or tabular in flat hexahedral “masses, regularly accumulated or lenticular in thin sharp plates. Primitive form a rhomboid in which the angles are 87° 9, and 92° 51’. Lustre, 3, 4. Splendent metallic. Transparency, 0. Fracture, fine or coarse grained, uneven, or minute conchoidal, presenting granular, columnar, plain or curved lamellar distinct concretions, sometimes inclining to the broad striated, very rarely slaty. Hardness from 9 to 10, between felspar and quartz. Specific gravity from 4-939 to 5-218, Brisson, or 4-158, Gellert. Its streak is grayish-red, or cherry-red, seldom black. Nitrous acid does not affect this species. But marine acid, especially when heated, attacks it, and acquires a light or deep orange-yellow color, according to the proportion it has dissolved. The highest specific gravity of this ore is very remarkable, and shows its particles must be very intimately united. The blowpipe has but little effect on it ; to borax it gives an obscure yellow tinge. Its constituents are, according to Hisinger, reddish-brown oxide of iron 94-38, phosphate of lime 2-75, magnesia 0-16, mineral oil 1-25. It occurs in beds in primitive mountains. It is found at Cumberhead in Lanarkshire ; at Norberg in Westmannland, in Norway, &c. It affords an excellent malleable iron.

Third species. — Brown Htsmatites, Brauner Glasskopf of Werner. — Color, externally, brown or black, or bluish-black, occasionally, of a mid-dle color between the yellow and nut-brown ; sometimes iridescently variegated yellow and red. Internally nut-brown. Found massive, or in nodules of various sizes, or globular, tabular, cellular, stalactitic, or crystallised in hollow secondary sharp-angled hexahedral pyramids, or in pentagonal pyramids. External lustre 2,

3. Internal 2,1. Common, but the variegated looks metallic.

Transparency 0. Fracture, delicately fibrous, straight, curved or diverging, often presenting fine or coarse grained curved lamellar distinct concretions turned outwards. Fragments 3. Hardness from 8 te 10. Brittle. Specific gravity 3-789. Gellert. Streak yellowish or reddish-brown. Its powder is also red. Not magnetic till calcined. Before the blowpipe it blackens and give to borax a dirty yellow tint with some effervescence. According to the analysis of M. D'Aubuisson its constituent parts are,

From

Bergzabern.

From Vicdessos.

Peroxide of iron

79

82

Peroxide of manganese

2

2

Silex

3

1

Volatile matter

15

14

Loss

1

1

! 100

100

The specific gravity of the former was 3-8, and of the latter 3-9. The specimen from Vicdessos afforded a slight trace of alumine. This species, which is so very abundantly distributed in the German states, is of rare occurence either in Sweden, Russia, Norway, or England. In the former it furnishes materials for very extensive iron-works ; and the wrought-iron produced from it is very valuable.

Fourth species. — Compact brown ironstone. Dichter braun eisen stein of Werner. Mine defer hepatique of the French. Light or deep nut-brown, or brownish-black. Found massive, disseminated, stalactitic, cellular, nodular, or crystallised in rhombs, as secondary crystals, &c. External lustre casual. Internal lustre 0, 1. Metallic, or nearly so. Transparency 0. Fracture sometimes passing into the earthy or fine grained uneven, or gross conchoidal, when mixed with brown hsematites. Fragments 2, rarely presents columnar or lamellar distinct concretions. Hardness from 6 to 8, rarely 9. Brittle. Specific gravity from 3-4771 to 3-5027. Brisson. Streak reddish, or yellowish, dark brown. When heated this ore becomes magnetic and blackens, to borax it gives an olive-green color. The proportion of its ingredients, as stated by M. D'Aubuisson, in the seventy-fifth volume of the Annales de Chimie, is as follows : —

From

From

From

Bergza—

Vicdes-

Voighto—

bern.

sos.

berg.

Peroxide of iron

84

81

69

Peroxide of manganese . Silex

1 2

4

3 10

Alumine

3

Volatile matter

11

12

13

Loss

2

3

2

100

110 <

100

180

IRON

The specific gravity of the specimen from Vicdessos was 3‘4.

Fifth species. — Brown scaly iron ore. Braun eisen ram of Werner. — Its color is intermediate between the tomback or nut-brown, and steel-gray. Generally found incumbent on other fossils, sometimes detached, imperfectly rounded or branchy. Lustre from 1 to 2. Metallic. Fracture seems fine-foliated or scaly, passing into the even. Fragments 1, 2. Hardness from 3 to 5. Brittle ; light, so as often to float on water. Stains the fingers, or marks strongly, feels somewhat unctuous. From its lightness some have called it eisen bluthe. Before the blowpipe it blackens, and gives to borax a greenish-yellow color.

Sixth species. — Brown iron ochre. Ockriger braun eisen stein of Werner. — Its colors extend from the nut-brown to the ochre-yellow, and orange. Found massive and disseminated. Transparency 0. Lustre 0. Fracture earthy. Hardness from 3 to 4. Strongly stains the fingers. When slightly heated it reddens. Be-fore the blowpipe it blackens, and gives borax a yellowish or olive-green color.

Seventh species. — Red hematites rother glass kopf of Werner. — Color between brownish-red and dark stell-gray. Massive, imitative, and in supposititious double six-sided pyramids from calcareous spar. Glistening, semi-metallic. Opaque. Streak blood-red. Brittle. Specific gravity 4*74. Its constituents, according to D'Aubuisson, are 90 oxide of iron, silica 2, lime 1, water 3. It affords excellent malleable and cast iron. Its powder is used for polishing tin, silver, and gold vessels ; and for coloring iron brown. Baron Born assures us, it is often mixed with calcareous earth, and then effervesces with acids. The baron and Bergman also mention a yellow haematites, which differs from this only in presenting a yellow powder when pulverised.

Eighth species. — Compact red iron stone, Dichter roth eisen stein of Werner. — Color between dark steel-gray and blood -red. Massive, and in supposititious crystals; which are an acute double six-sided pyramid from calcareous spar ; and a cube from fluor spar and iron pyrites. Lustre metallic. Fracture even. Streak pale blood red. Easily frangible. Specific gravity 4-232. When pure it does not affect the mag-net. Its constituents are, oxide of iron 70-5, oxygen 29-5. Of this sort is the Lancashire ore, sometimes used at Carron, in Scotland. Externally it is invested with a rosy red ochre ; internally its color is a purplish-gray.

Ninth species. — Red ochre, ockrigerroth eisen stein of Werner. — Its color Uood-red, more or less dark. It is found sometimes loose, sometimes indurated. Lustre 0. Fracture earthy, sometimes slaty. Hardness from 3 to 4. Brittle. Rarely 5. Stains the fingers. Heated, it blackens. It does not effervesce with acids, unless mixed with mild calx, as it often is in England. Specific gravity 2'947. It occurs in veins, with the preceding ore. It melts more easily than any of the other ores of this metal, and affords excellent malleable iron.

Tenth species. — lied scaly iron ore, Rother fisen ram o; Werner. — Color dark steel-gray to

brownish-red. Friable, and consists of semi metallic shining scaly

parts, which are sometimes translucent and soil strongly Its constituents are, iron 66, oxygen 28-5, silica 4-25, alumina 1‘25. But Bucholz found it be a pure red oxide of iron, mixed with a little quartz sand. Harry asserts that it consists of

Iron . Oxygen Silex Alumine

66-28-5 4-25 1-25

100-

It occurs generally in veins in primitive and transition mountains, accompanied with other ores of iron, copper, pyrites, quartz, barytic spar, &c. Although a rare variety of this metal, it is found rather plentifully in the neighbourhood of Ulverston, Lancashire, and is also met with in Cornwall. It occurs too in Norway, the Hartz, Saxony, Silesia, Salzburg, Hungary, and South America.

Eleventh species. — Upland argillaceous iron ore. Gemeiner thonartiger eisen stein of Wer-ner.— Color, steel, reddish or yellowish-gray, or yellowish and dark nut brown, or dark brick-red, or dark ochre yellow. The gray becomes blacker by exposure to the air.

On an ore of this kind, the celebrated iron foundries of Carron in Scotland are principally founded. Its color is partly light, partly dark bluish gray : some specimens are also of a light, or whitish purple externally, but internally dark ochre yellow. It is found in masses, apparently slaty, and in nodules in an adjacent coal mine, of which it sometimes forms the roof. Lustre O’l. Transparency 0. Cross fracture, compact, uneven, or imperfectly conchoidal, longitudinal, even. Fragments 2. Hardness from 5 to 6. Specific gravity of light gray, found by Dr. Rotheram, before calcination, 3-434 ; after calcination, 3‘652. Of the dark tray, before calcination, 3-205 ; after calcination 4-190. Of the yellowish, before calcination, 3-357. Streak of the light gray, dark red. Of the yellowish, yellow. It gives out no smell when breathed on. It affords about thirty per cent, of cast iron.

Some specimens of the mineral yield as much as forty per cent, of oxide of iron, whilst others do not afford more than twenty per cent., and many even less than that. The following are the results of some

analyses by Richter and Lampadius : —

Oxide of iron

20-1

33-9

39-0

425

Oxide of manganese Silex

1-0 19-9

1-1

23-9

5-0

3-0 13-8

Alumine

30-2

13-0

40-0

13-6

Magnesia . Carbonic acid

28-8

28-1

6-0

27-1

Water

9-0

Sulphur

1-0

100

100

100

100

IRON.

181

This ore is found very plentifully in different parts of England and Scotland ; and is also met with in Westphalia, Bohemia, Silesia, the

Upper Palatinate, Poland, Russia, Siberia, Italy, and Norway.

Twelfth species.— Scalpiform or columnar iron ore. Stanglich thonartiger eisen ttein of Wer-ner. Color dark brownish-red, or intermediate between that and cherry red, formed of slender columns adhering to each other, but easily separable, commonly incurvated with a rough surface. Lustre 0. Transparency 0. Fracture even, or earthy, inclining to the small conchoidal. Hardness from 4 to 5. Brittle. Streak dark red. Slightly staining the fingers, and adhering strongly to the tongue. Sounding hollow when struck. Before the blowpipe it blackens, with borax it effervesces, giving it an olive green and blackish tinge. This ore frequently affords thirty per cent, of metal.

Thirteenth species. — Nodular or kidney-form ore, eisen niere of Werner. ˆElites or eagle stone. Color externally yellowish-brown; internally lighter ; it has often a kernel whose color is mostly ocre yellow. Its forni is generally that of a rounded nob or kidney, but occasionally quadrangular. The masses are often the size of a man's head, with a rough surface, and are generally found imbedded in clay or shale. Fracture towards the surface even ; in the interior fine earthy. Fragments shar-p-edged. Internal lustre dull : external glim Tiering, semi-metallic. External layers soft ; those of the centre very soft ; brittle ; easily frangible ; adhering to the tongue, meagre to the touch, and moderately heavy. Specific gravity 2'574. It does not melt before the blowpipe, when heated alone ; but fuses with borax, and communicates to it a dirty yellow color.

Occurs in the newest floetz rocks, imbedded in the argillaceous strata that are incumbent on coal. It is found abundantly in Derbyshire, and some of the neighbouring counties ; in Scotland, Norway, Denmark, Bohemia, Silesia, Transylvania, France, and Siberia.

Fourteenth species — Pisiform or granular iron ore. Bohnerz of Werner. Its color is generally brown, or dark yellowish, and blackish brown. Occurs in rounded masses or grains, from the size of a pea to that of a nut, with a rough surface. External lustre casual. Internal 1, 1-5, 0. Transparency 0. Fracture even, earthy, or flat conchoidal. Fragments 2. Presents concentric lamellar distinct concretions. Hardness from 5 to 6. Brittle. Streak yellowish brown. Of this sort is the Oolitic ore, found at Creusot, near Mount Cenis. It is said to contain fifty per cent, of calx, twenty argill, and thirty of iron. Vauquelin's analysis gives iron 30, oxygen 18, alumine 31, silex 15, water 6. This ore is principally found in France and Switzerland.

Fifteenth species. — Meadow or conchoidal bog ore. Wiesenerz of Werner. Color blackish-brown. Massive, and tube rose. Glistening. Fracture small conchoidal. Streak yellowish-gray. Soft. Specific gravity 2‘6. Its constituents are, according to Klaproth, oxide of iron 66, oxide of manganese 1 -5, phosphoric acid 8, water 23. By Vauquelin’s experiments it seems to

contain also chrome, magnesia, silica, alumina, and lime ; zinc and lead are likewise occasionally present. It is found in the Highlands of Scotland, in Saxony, &c. The latter is most easily reduced, and affords the best iron.

According to D’Aubuisson’s analysis th is ore contains,

Peroxide of iron . . 61‘0

Peroxide of manganese . 7-0

Silex . ‘. . 6-0

Alumine … 2-0

Volatile matter . . 19-0

Phosphoric acid . , 2-5

Lime, sulphur, and loss 2*5

Sixteenth species. — Swamp or bog ore. Sump-ferx of Werner. Color dark nut brown, sometimes nearly black. Found in amorphous lumps or grains, mostly corroded and mixed with sand. Lustre 0 where the color is light 1 to 1‘5. Fracture compact, earthy, sometimes though rarely conchoidal. Hardness from 3 to 4. Brittle. Specific gravity 2‘94. Streak yellowish-brown. Often containing thirty-six per cent, of metal.

Seventeenth species. — Iron mica orplumbaginoui ore. Eisen glimmer of Werner. Its color is bright iron gray, sometimes bluish-gray, nearly black. Found in amorphous masses, or disseminated, or crystallised, generally in thin, minute, htxahe-dral lamellae, and in botryoidal

groups. Lustre 2-3, Metallic. Transparency 0, yet the single scales are somewhat transparent, and transmit a reddish light. Fracture foliated, generally curved, sometimes plain, presenting thick or thin, coarse or fine, broad or narrow, distinct lamellar concretions, rarely granular ; sometimes none. Hardness from 5 to 7. Brittle. Specific gravity from 4-50 to 5‘07. Streak bluish gray; some say cherry red. Slightly magnetic. Feels somewhat greasy : does not stain the fingers. Before the blowpipe it is infusible, and communicates to borax a brown and somewhat olive-green tinge.

Eighteenth species. — Blue martial earth. Blau eisenarde of Werner, Le fer terreux bleu of the French. Its color, after having been exposed to the air for some time, is a deep blue, seldom, however, smalt blue. In its native situation it is often white, sometimes brown and green, and is found in large massy lumps. Lustre 0, moderately compact, somewhat dusty. Fracture earthy. It stains the fingers, and feels dry ; its weight is inconsiderable. Readily diffusible in water. ˆGenerally found in bogs, sometimes in secondary stratified mountains, and always some feet under the surface, as in Saxony ; sometimes in the vicinity of rivers, as that found near Neu-illy, by Morand.

Soluble both in acids and alkalies, but preci-table from either, by the other. In water it preserves its color, but blackens in oils. Heated on a red hot coal it inflames, and leaves a « powder, which is in some degree magnetic. Be-fore the blowpipe it instantly becomes reddish brown, and melts into a black bead. To borax it gives a dark yellow tinge.

It occurs in nests in clay beds, amongst bog iron ore, and incrusting turf and peat. It is found, under the latter circumstances, in the Shetland Islands; it also appears in Iceland, Sax-ony, Silesia, Suabia, Bavaria, Poland, Siberia, Russia, and Sweden.

Nineteenth species. — Green martial earth. Grune eisenerde of Werner. Color light or dark canary green, and thence passing into the olive green or yellow. Commonly found investing, or incumbent.

Friable : seldom indurated. Lustre 0. Fracture nearly even. Hardness from 3 to 6. Strongly marks the fingers. Not remarkable heavy. Streak gray. Difficultly soluble in acids. When strongly heated it loses its weight, and blackens. With borax it easily melts into a yellowish brown opaque glass, with black spots.

No exact analysis has been made of this species ; but it is supposed by Werner to have iron and phosphoric acid for its principal ingredients.

It is a rare mineral, and has hitherto been only found at Braunsdorf and Schneiberg, in Saxony, where it occurs in veins : in the former place accompanied with quartz and pyrites, and in the latter with quartz and native bismuth.

Twentieth species. — Common pyrites. Gemeiner sulphur kiess of Werner : color bronze yellow inclining sometimes to gold-yellow : occurs massive and disseminated in minute cubes, octohedrons, dodecahedrons, and sometimes though very rarely icosahedrons are met with. External lustre 4-3. Internal 2. Metallic. Transparency 0. Fracture uneven: fine or coarse grained. Hardness 10, brittle. Specific gravity from 2‘9 to 4-6. It is not magnetic, and if rubbed yields a sulphureous smell. It decrepitates, and, when heated red hot, loses its fine yellow color and becomes of an iron gray and partly of a bright red. At 102, of Wedgewood’s pyrometer, it melts in a covered crucible into a bluish-gray slagg, somewhat porous internally. Before the blowpipe it emits a strong sulphureous smell, burns at first with a blue flame, and leaves a brownish bead, which tinges borax of a smutty green : otherwise, if further heated, it reddens. Its occurrence is almost universal, both with respect to geographic arrangements, and the numeral formations in which it is presented.

Twenty-first species. — Striated pyrites : strahl kiess of Werner. Color when fresh broken similar to those of the former variety, but more liable to be tarnished, passing into variegations resembling those of a peacock’s tail. Found reniform, stalactitic, or crystallised in small cubes, or pyramids united in a common basis, generally grouped together, and implicated in each other. External lustre, when undecayed, 3-4. Metallic. Internal 2. Transparency 0. Fracture sometimes coarse and broad, sometimes fine and striated. Fragments present curved lamellar distinct concretions turned inwards. Hardness 10. Brittle. Specific gravity from 3-44 to 4-1. Brisson. Before the blowpipe it exhibits the same appearances as common pyrites, and is constituted of about fifty-four parts of sulphur, and forty-six of iron.

It is considerably more rare than the preceding and is found in veins, particularly those which contain lead or silver.

The chief places of its occurrence are, Cornwall and Derbyshire, in England ; Arendal, in Norway ; and in various districts of Suabia, Saxony, and Bohemia.

Twenty-second species. — Capillary pyrites, haarkiess of Werner. Its color generally steel gray, or intermediate between that and the pale yellow. Found in hexangular, or octangular, acicular crystals, either parallel or diverging from a common centre, or capillary and woolly, or interwoven. Lustre 3. Metallic. Transparency 0. This variety is the least common of the pyrites. Hydro-oxide of iron.

Twenty-third species. — Magnetic pyrites : niag-netischer eisen kiess of Werner. Color intermediate between the tombac brown, and brass yellow. Often iridescently tarnished. Found disseminated and massive. Lustre 2. Metallic. Transparency 0. Fracture compact, inclining to the small conchoidal and uneven. Fragments 2. Hardness 8-9. Brittle. Specific gravity exceeds 3. Slightly magnetic : when treated with the blowpipe, it does not give out so strong a smell of sulphur, but melts into a grayish-black bead, which is also magnetic ; with borax it effervesces, and gives it a black tinge. It is composed of 63-5 sulphur and 36‘5 iron.

Twenty-third species. — Hepatic pyrites. Leber pyrites of Werner. Wasser kiess of others. Color steel gray or intermediate between steel gray and pale yellow, sometimes variously tarnished by exposure to the air. It occurs massive or disseminated, or stalactitic, reniform, cellular, orbicular, tabular, &c. Its surface often striated. External lustre 2. Internal 1. Metallic. Transparency 0. Fracture even, uneven, or inclining to the conchoidal. Hardness from 9 to 10. Specific gravity from 3477 to 3502. Lustre of its streak 2‘3. Exposed to air and moistened, it does not effloresce.

Twenty -fourth species. — Calcareous or sparry iron ore. Spath eisin stein of Werner. — Color nearly white, passing into yellowish-brown, and blackish-browu. It tarnishes on exposure either to the air or heat, and then becomes brown or black, and sometimes iridescent. It is found massive, disseminated, and crystallised. Its crystals are either rhombs, octahedrons, or dodecahedrons. They are seldom large ; commonly middle-sized and small. Their surface is generally smooth. Internally it varies from splendent to glimmering. Lustre pearly. Fracture foliated. Cleavage triple. Fragments rhomboidal. The light-colored varieties are translucent, especially on the edges; but the dark-

colored, opaque. The former give a grayish-white streak ; the latter a yellowish-brown. It is semi-hard, inclining sometimes to soft. Rather brittle. Easily frangible, and moderately heavy. Specific gravity 3-300 to 3‘810. Not magnetic. Carbonate of iron.

It blackens before the blowpipe, and enters into ebullition with borax, to which it communicates a dirty yellow color. It always effervesces more or less with acids. According to Bergman, it is composed of

Oxide of iron . Oxide of manganese Lime

Carbonic acid . Water

38 24 19 10 9

100

out it is liable to great variation in the proportion of its ingredients. In an examination by Descotils, the following result was afforded : — Quartz …. 9-58

Oxide of iron … 48-45 Oxide of manganese . . 1-80 Liine …. ‘52

Magnesia . 1-98

Carbonic acid, water, and loss 44-67

This is generally looked upon as the best of the iron ores, as it affords the finest iron for the nicer purposes, the best steel in greatest plenty, and with the greatest ease and least expense. Hence it is generally called steel ore.

Twenty-fifth species. — Cube ore, wurfelerz of Werner. — Color olive

green, of different degrees of intensity. It is found massive, disseminated, and crystallised in small cubes, which are sometimes truncated at the angles. Planes of the crystals smooth and splendent. Internally it is glistening, and its lustre between pearly and adamantine. Fracture imperfect foliated. It is translucent, soft, brittle, and gives a streak of a straw-yellow color. Specific gravity 3-000. It appears sometimes in the form of a reddish-yellow powder, which is thinly distributed over the surface. Before the blowpipe it swells up, and emits an arsenical odor; melting afterwards into a gray metallic globule, slightly tinged with yellow. From the analysis of Chenevix, it appears to be composed of

Arsenic acid … 31*

Oxide of iron . . 45*5

Oxide of copper . . 9—

Silex …. 4—

Water of crystallisation 10-5

It occurs in veins, accompanied with some ores of copper, quartz, mica, and feldspar. The only places that have hitherto afforded it, are the mines of Carrarach and Muttrel!, in Cornwall.

These are all the principal species of iron ore, some of which are by Jamieson and Kirwan divided into families too numerous to distinguish in a treatise of this description. Some that are retained as important by Kirwan, are, however, omitted, the improved analysis of the present day having shown that their proportion of iron is too small to rank them as iron ores. Smyris Emery, for example, contains but from four to five per cent, of this metal.

It is now our task to notice the various chemical combinations of iron ; in performing which we shall pretty freely abstract Dr. lire’s remarks on that important mineral.

This metal, observes Dr. Ure, is easily oxidised. A piece of iron wire, immersed in a jar of oxygen gas, being ignited at one end, will be

entirely consumed by the successive combus-

tion of its parts. It requires, however, a very intense heat to melt it ; on which account it can only be brought into the shape of tools and utensils by hammering. This high degree of infusibility would deprive it of one of the most valuable qualities of metals, namely, the uniting of smaller masses into one, if it did not possess a property found in no other metal except platina, namely, that of welding. In a white heat, iron appears as if covered with a kind of varnish; and in this state if two pieces be applied together, they will adhere, and may bt perfectly united by hammering.

When iron is exposed to the action of moist air or water, it acquires weight by gradual oxidation, and hydrogen gas escapes : if steam be made to pass through a red-hot gun barrel, or through an ignited copper or glass tube, containing iron wire, the iron becomes converted into an oxide, while hydrogen gas passes out at the other end of the barrel. The yellow rust, formed when iron is long exposed to damp air, contains a portion of carbonic acid. The concentrated sulphuric acid scarcely acts on iron, unless it is boiling. If the acid be diluted with two or three parts of water, it dissolves iron readily, without the assistance of heat. During this solution, hydrogen escapes in large quantities. The green sulphate of iron is much more soluble in hot than cold water ; and therefore crystallises by cooling as well as by evaporation. The crystals are efflorescent, and fall into a white powder by exposure to a dry air, the iron becoming more oxidised than before. A solution of sulphate of iron, exposed to the air, imbibes oxygen ; and a portion of the iron becoming peroxidised, falls to the bottom. Sulphate of iron is not made in the direct way, because it can be obtained at less charge from the decomposition of martial pyrites. It exists in two states, one containing oxide of iron, with 0-22 of oxygen, which is of a pale green, not altered by gallic acid, and giving a white precipitate with prussiate of potassa. The other, in which the iron is combined with 0‘30 of oxygen, is red, not crystallisable, and gives a black precipitate with gallic acid, and a blue with prussiate of potassa. In the common sulphate, these two are often mixed in various proportions. Sulphate of iron is decomposed by alkalies and by lime. Caustic fixed alkali precipitates the iron in deep green flocks, which are dissolved by the addition of more alkali, and form a red tincture. Vegetable astringent matters, such as nutgalls, logwood, &c., which contain tannin and gallic acid, precipitate a fine black fecula from sulphate of iron, which remains suspended for a considerable time in the fluid, by the addition of gum-arabic. This fluid is well known by

the name of ink. See INK. The beautiful pigment well known in the arts by the name of prussian blue, is likewise a precipitate afforded by sulphate of iron.

Concentrated nitric acid acts very strongly upon iron filings, inuch nitrous gas being disengaged at the same time. The solution is of a reddish-brown, and deposits the oxide of iron after a certain time ; more especially if the ves-sel be left exposed to the air. A diluted nilric

acid affcrcls a more permanent solution of iron, oi' a greenish color, or sometimes of a yellow color. Neither of the solutions affords crystals, but both deposit the oxide of iron by boiling, at the same time that the fluid assumes a gelatinous appearance.

Diluted muriatic acid rapidly dissolves iron at the same time that a large quantity of hydrogen is disengaged, and the mixture becomes hot. If iron filings be triturated with muriate of ammonia, moistening the mixture; then drying, powdering, and again triturating; and lastly subliming with a heat quickly raised ; yellow or orange-colored flowers will rise, consisting of a mixture of muriate of ammonia, with more or less of muriate of iron. These, which were called flowers of steel, and still more improperly ens veneris, were once mucli esteemed ; but are now little used, as they are nauseous in solution, and cannot very conveniently be given in any other form. Carbonic acid, dissolved in water, combines with a considerable quantity of iron, in proportion to its mass. Phosphoric acid unites with iron, but very slowly. The union is best effected by adding an alkaline phosphate to a solution of one of the salts of iron, when it will fall down in a white precipitate. This acid is found combined with iron in the bog ores, and, being at first taken for a peculiar metal, was called siderite by Bergmann. Liquid fluo-ric acid attacks iron with violence : the solution is not crystallisable, but thickens to a jelly, which maybe rendered solid by continuing the heat. The acid may be expelled by heating it strongly, leaving a fine red oxide. Borate of iron may be obtained by precipitating a solution of the sulphate with neutral borate of soda. Arsenic acid likewise unites with iron, Tin's arseniate is found native.

Chromate of iron has been found in the department of Var in France, and elsewhere. Sulphur combines very readily with iron. A mixture of iron filings and flowers of sulphur being moistened, or made into a paste with water, becomes hot, swells, adheres together, breaks, and emits watery vapors of an hepatic smell. If the mixture be considerable in quantity, as for example 100 Ibs., it takes fire in twenty or thirty hours, as soon as the aqueous vapors cease. By fusion with iron, sulphur produces a compound of the same nature as the pyrites, and exhibiting; the same radiated structure when broken. If a bar of iron be heated to whiteness, and then touched with a roll of sulphur, the two substances combine, and drop down together in a fluid state. Mr. Hatchett found, that tFie magnet ical pyrites contain the same proportion as the artificial sulphuret. Phosphorus may be combined with iron by ad clino; it, cut into small pieces, to fine iron wire heated moderately red in a crucible ; or by fus-ing six parts of iron clippings, with six of glacial phosphoric acid, and one of charcoal powder. This phosphuret is magnetic ; and Mr. Hatchett remarks, that iron, which in its soft or pure state cannot retain magnetism, is enabled to do so when hardened by carbon, sulphur, or phosphorus, unless the dose be so great as to destroy the magnetic property, as in most of the natural pyiites and plumbago. Iron unites with £old,

silver, and platina. When heated to a white heat, and plunged in mercury, it becomes co vered with a coating of that metal. Mr. A. Aikin unites an amalgam of zinc and mercury with iron filings, and then adds muriate of iron, when a decomposition takes place, the muriatic acid combining with the zinc, and the amalgam of iron and mercury assuming the metallic lustre by kneading, assisted with heat. Iron and tin very readily unite together. Iron does not unite easily with bismuth, at least in the direct way. This alloy is brittle and attractible by the mag-net, even with three-fourths of bismuth. As nickel cannot be purified from iron without the greatest difficulty, it may be presumed that these substances readily unite. Arsenic forms a brittle substance in its combination with iron. Cobalt forms a hard mixture with iron, which is not easily broken. Manganese is almost always united with iron in the native state. Tungsten forms a brittle, whitish-brown, hard alloy, of a compact texture, when fused with white crude iron. The habitudes of iron with molybdena are not known.

Dr. Wollaston first showed, that the forms in which native iron is disposed to break are those of the regular octohedron and tetrahedron, or rhomboid, consisting of these forms combined. In a specimen

possessed by this philosopher the crystalline surfaces appear to have been the re-sult of a process of oxidation which has penetrated the mass to a considerable depth in the direction of its laminae ; but, in the specimen which is in the possession of the Geological Society, the brilliant surfaces that have been occasioned by forcible separation from the original mass exhibit also the same configurations as are usual in the fracture of octohedral crystals, and are found in many simple metals. This spontaneous decomposition of the metal in the direction of its crystalline laminae is a new and valuable fact. From Mr. Daniell's ingenious experiments on the mechanical structure of iron, developed by solution, we learn, that a mass of bar-iron which had undergone all the operations of puddling and rolling, after being left in liquid muriatic acid till saturation, presented the appearance of a bundle of fasces, wfiose fibres run parallel through its whole length. At its two ends, the points were perfectly detached from each other, and the rods were altogether so distinct, as to ap-pear to the eye to be but loosely compacted.

Compounds of iron.

1. Oxides; of which there are two, or perhaps three. 1st. The oxide obtained either by digesting an excess of iron filings in water, by the combustion of iron wire in oxygen, or by adding pure ammonia to solution of green copperas, and drying the precipitate out of contact of air, is of a black color, becoming white by its union with water, in the hydrate, attractible by the magnet, but more feebly than iron. By a mean of the experiments of several chemists, its composition seems to be,

Iron 100 7782 3‘5 Oxygen 28‘5 22-18 1-0

Whence the prime equivalent of iron comes out, we perceive, 3-5. Sir H. Davy's number, re-

duced to the oxygen scale, is 6-86, one-half of which, 3-43, is very nearly the determination of Berzelius. But Mr. Porrett, in an ingenious

paper published in the Annals of Philosophy for October 1819, conceives, that, to make the theoretical proportions relative to iron harmonize with the experimental results, we must consider 1-75, or the half of 3-5, as its true prime equivalent, or lowest term of combination. The protoxide will then consist of two primes of iron t o one of oxygen. M. Thenard, in his Traite", vol. ii. p. 73, says, ‘ The above oxide, obtained by decomposing protosulphate of iron by potash or soda, and washing the precipitate in close vessels with water deprived of its air, consists, according to M. Gay Lussac, of 100 parts of iron, and 25 of oxygen. This determination would make the atom of iron 4-0 ; and is probably incorrect. This proportion is proved,’ he adds, ‘ by dissolving a certain quantity of iron in dilute sulphuric acid, and collecting the evolved hydrogen. Now by tins method extreme precision should be ensured.’ 2d. Deutoxide ofM. Gay Lussac. He forms it by exposing a coil of fine iron wire, placed in an ignited porcelain tube, to a current of steam, as long as any hydrogen comes over. There is no danger, he says, of generating peroxide in this experiment, because iron once in the state of deutoxide has no such affinity for oxygen as to enable it to decompose water. It may also, he states, be procured by calcining strongly a mixture of one part of iron and three parts of the red oxide in a stone-ware crucible, to the neck of which a tube is adapted to cut off the contact of air. But this process is less certain than the first, because a portion of peroxide may escape the reaction of the iron. ‘ But we may dispense with the trouble of making it,’ adds M. Thenard, ‘ because it is found abundantly in nature.’ He refers to this oxide, the crystallised specular iron ore of Elba, Corsica, Dalecarlia, and Sweden. He also classes under this oxide all the magnetic iron ores ; and says, that the above-described protoxide does not exist in nature. From the synthesis of this oxide by steam, M. Gay Lussac has determined its composition to be,

Iron . . 100 72-72 Oxygen . 37‘5 27-28

which Mr. Porrett reconciles to theory, by representing it as consisting of

3 primes iron . . 5-25 72-5 100 2 primes oxygen . . 2‘00 27-5 38

3d. The red oxide. It tray be obtained by igniting the nitrate, or carbonate ; by-calcining iron in open vessels ; or simply by treating the metal with strong nitric acid, then washing and drying the residuum. Colcothar of vitriol, or thorough calcined copperas, may be considered as peroxide of iron. It exists abundantly native in the red iron ores. It seems to be a compound of, according to Mr. Porrett,

Iron … 100 70 — 4 primes.

Oxygen … 43 30 = 3 primes.

2. Chlorides of iron ; of which there are two, first examined in detail by Dr. John Davy. The protochlorule may be procured by heating to

redness, in a glass tube with a very small orifice, the residue which is obtained by evaporating to dry ness the green muriate of iron. It is a fixed substance, requiring a red heat for its fusion. It has a grayish variegated color, a metallic splendor, and a lamellar texture. It absorbs chlorine when heated in this gas, and becomes entirely converted into the volatile deutochloride. It consists, according to Dr. Davy, of Iron . . 46-57

Chlorine … 53*43 According to Mr. Porrett.

2 primes iron . . 3-5 43-75 100*0

1 prime chlorine . 4-5 56-25 128-7

The deutochloride may be formed by the combustion of iron wire in chlorine gas, or by gently heating the green muriate in a glass tube. It is the volatile compound described by Sir H. Davy in his celebrated Bakerian lecture on oxymuriatic acid. It condenses after sublimation, in the form of small brilliant iridescent plates.

It consists, according to Dr. Davy, of

Iron . …. 35-1

Chlorine …. 64‘9 By Mr. Porrett

4 primes iron . 7‘0 34-14 100*00

3 primes chlorine . 13-5 65-86 192-85

3. For the iodide of iron, see IODINE.

4. Sulphurets of iron ; of which, according to Mr. Porrett, there are four, though only two are usually described, his protosulphuret and persulphuret.

The persulphuret of iron exists in nature. It has the metallic appearance of bronze, but its powder is blackish-gray. It is in fact the

magnetic pyrites of mineralogy, which see among the ORES of IRON. By the analysis of Mr. Hatchett, and Professor Proust, it seems to consist of iron 63

sulphur 37

Mr. Porrett represents it as composed of

2 primes iron . . — 3-5 63-75 100 1 prime sulphur . 2‘0 36‘25 57 His deutosulj.hate and tritosulphate are as

follows : —

Deutos. 3 primes iron . 5-25 57 100

2 primes sulphur 4-00 43 76 Tritos. 4 primes iron . 7‘0 54 100

3 primes sulphur 6‘0 46 86 He conceives, that in Proust’s experiments, as

related in the first volume of Nicholson’s 8vo. Journal, descriptions of compounds corresponding to those two sulphurets are given.

The persulphuret is the cubic iron pyrites of the mineralogist. It consists, according to Mr. Porrett, of

1 prime iron . .1-75 46-5 lOO’O 1 prime sulphur .2-00 53‘5 114-2; the mean of Mr. Hatchett’s celebrated expen ments on pyrites, published in the Philosophical Transactions for 1804, gives of iron

sulphur lla

5. Carburets of iron. These compounds form steel, and probably cast-iron; though the lat-ter contains also some other ingredients.

latest practical researches on the constitution of these carburets, are those of Mr. Daniell, above quoted.

We annex Mr. Mushet's table of the proportions of carbon corresponding to different carburets of iron.

Tig Soft cast-steel.

ifo, Common cast-steel

58 The same, but harder.

•jjj The same too hard for drawing.

5J5 White cast-iron.

jjj Mottled cast-iron.

15 Black cast-iron.

Graphite or plumbago is also a carburet of iron, containing about ten per cent, of metal, vrhich, calling the prime of iron 1-75, makes it a compound of twenty-one primes of carbon to one of metal.

Salts of iron. These salts have the following general characters : —

1. Most of them are soluble in water; those with the protoxide for a base are generally crystallisable; those with the peroxide are generally not ; the former are insoluble, the latter soluble in alcohol. 2. Ferroprussiate of potash throws down a blue precipitate, or one becoming blue in the air. 3. Infusion of galls gives a dark purple precipitate, or one becoming so in the air. 4. Hydrosulphuret of potash or ammonia gives a black precipitate ; but sulphureted hydrogen merely deprives the solutions of iron of their yellow-brown color. 5. Phosphate of soda gives a whitish precipitate. 6. Benzoate of ammonia, yellow. 7. Succinate of ammonia, flesh-colored with the peroxide. Protacetate of iron forms small prismatic crystals, of a green color, a sweetish styptic taste, and a specific gravity 1*368.

Peracetate of iron forms a reddish-brown uncrystallisable solution much used by the calico printers, and prepared by keeping iron turnings, or pieces of old iron, for six months immersed in redistilled pyrolignous acid.

Protarseniate of iron exists native in crystals, and may be formed in a pulverulent state, by pouring arseniate of ammonia into sulphate of iron. It is insoluble, and consists, according to Chenevix, of 38 acid, 43 oxide, and 19 water, in 100 parts.

Perarseniate of iron may be formed by pouring arseniate of ammonia into peracetate of iron ; or by boiling nitric acid on the protarseniate. It is insoluble.

Antimoniate of iron is white, becoming yellow, insoluble.

Borate, pale yellow, insoluble.

Benzoate, yellow, insoluble.

Protocarbonate, greenish, soluble.

Percarbonate, brown, insoluble.

Chromate, blackish, insoluble.

Protocitrate, brown crystals, soluble.

Protoferroprussiate, white, insoluble.

Perferroprussiate, white, insoluble.

Tliis constitutes a very peculiar chemical pigment. When exposed to a heat of about 4003 it takes fire in the open air; but in close /essels it is decomposed, apparently, into carbureted hydrogen, water, and hydrocyanate of

ammonia, which come over ; while a mixture of charcoal and oxide of iron remains in the state of pulverulent pyrophorus, ready to become inflamed with contact of air. See PRUSSIC ACID.

Protogallate, colorless, soluble.

Pergallate, purple, insoluble.

Protomuriate, green crystals, very soluble.

Permuriate, brown, uncrystallisable, very soluble. See the chlorides of iron previously described.

Protonitrate, pale green, soluble.

Pernitrate, brown, soluble.

Protoxalate, green prisms, soluble.

Peroxalate, yellow, scarcely soluble.

Protophosphate, blue, insoluble.

Perphosphate, white, insoluble.

Protosuccinate, brown crystals, soluble.

Persuccinate, brownish-red, insoluble.

Protosulphate, green vitriol, or copperas. It is generally formed by exposing native pyrites to air and moisture, when the sulphur and iron both absorb oxygen, and form the salt. There is, however, an excess of sulphuric acid, which must be saturated by digesting the lixivium of the decomposed pyrites with a quantity of iron plates or turnings.

It forms beautiful green crystals, which are transparent rhomboidal prisms, whose faces are rhombs with angles of 79° 50' and 100° 10', inclined to each other at angles of 98° 37' and 81° 23'. Specific gravity 1'84. Its taste is harsh and styptic. It reddens vegetable blues. Two parts of cold and three-fourths of boiling water dissolve it. It does not dissolve in alcohol. Exposure to air converts the surface of the crystals into a red by separating the water of crystallisation, and a stronger heat drives off the sulphuric acid. Its constituents are 28'9 acid, 28-3 protoxide, and 45 water, according to Berzelius : consisting, according to Mr. Porrett's views, of 1 prime acid -f-2 oxide + 7 water.

Persulphate. Of this salt there seems to be four or more varieties, having a ferreous base, which consists, by Mr. Porrett, of 4 primes iron + 3 oxygen ~ 10 in weight, from which their constitution may be learned.

The tartrate and pertartrate of iron may also be formed ; or, by digesting cream of tartar with water on iron filings, a triple salt may be obtained, formerly called tartarised tincture of Mars.

Iron is one of the most valuable articles of the materia medica. The protoxide acts as a genial stimulant and tonic, in all cases of chronic debility not connected with organic congestion or inflammation. It is peculiarly efficacious in chlorosis. It appears to me, says Dr. Ure, that the peroxide and its combinations are almost uniformly irritating, causing heartburn, febrile heat, and quickness of pulse. Many chalybeate mineral waters contain an exceedingly minute quantity of protocarbonate of iron, and yet exercise an astonishing power in recruiting the exhausted frame. I believe their virtue to be derived simply from the metal being oxidized to a minimum, and diffused by

the agency of a mild acid through agreatbody of water, in which state it is rapidly taken up by the lacteals, and speedily imparts a ruddy hue to the wan countenance. I find that these qualities may be imitated exactly, by dissolving three grains of

sulphate of iron, and sixty of bicarbonate of potash, in a quart of cool water, with agitation in a close vessel.

IROM BRIDGES, in modern engineering, are an invention exclusively British ; and one of which the metropolis of this country contains two of the most complete specimens.

The first iron bridge erected was that of cast iron over the Severn, about two miles below Colebrook Dale, Shropshire, between the villages of Brosely and Madeley. It consists of five ribs forming the segment of a circle ; and having its chord line 100 feet in length, and its versed sine forty-five feet ; making its curve almost a semi-circle. The arch springs at about ten feet from low water mark, which makes the entire height from the water to the vertex of the soffit fifty-five feet On the arch-shaped ribs the roadway is formed by pieces of cast iron and plates which carry the road. This bridge was cast at the Colbrooke Dale foundries by Mr. Abiah Darby, and erected in 1777. The curvature of the exterior concentric arches, which assist in supporting th» ‘iadway, though somewhat too great for the most favorable exertion of their resistance, leaves them still sufficiently strong for the purpose intended ; and the partial failure, which accidentally occurred, bears testimony rather to the merits than to the faults of the bridge, as they would be estimated in any other situation : for the lateral thrust, which it is desirable to re-duce as much as possible, was here actually too small, and the abutments were forced inwards, by the pressure of the loose external materials, forming the banks, against which the abutments pressed.

On the whole, if not so elegant a structure as some that have succeeded it, this is a most respectable and scientific edifice: we subjoin a sketch of it.

Colebrook Dak Bridge.

The next cast iron bridge seen in this country was designed by the celebrated Thomas Paine : it was intended to be erected in America, and was an imitation of a catenarian curve : the Messrs. Walkers of Rotherham were the founders. Paine, however, became involved in his circumstances, and the bridge, after being exhibited at Pancras, was taken to pieces and the materials used in the bridge at Wearmouth, erected under the direction of R. Burdon, esq. and Mr. Tho-mas Wilson, and which was completed in 1796. It is near Sunderland, and is often called by the name of that place. This beautiful edifice springs seventy feet above low water mark ; and the arch rises thirty feet, leaving a height of 100 feet in the whole for the passage ˆ.” ships in the middle

of the stream : the span is 240. The abutments rest on a solid rock, but their own internal solidity appears to be doubtful. The weight of iron in it is 250 tons; 210 of them being of cast, and forty of wrought iron.

In the same year a bridge was erected at Buildwas, near Colebrook Dale by Mr. Telford ; 130 feet in span, weighing 174 tons ; and rising only seventeen feet in the roadway, but furnished on each side with a stronger arch, of about twice the depth. This indeed extends to the top of the railing, and assists both in suspending the part of the road which is below it by means of king-posts, and supporting the part nearer the abutments by braces and shores. The breadth is eighteen feet ; and the construction would not be so easily applicable to a wider bridge.

Another iron bridge was erected in 1796 on the Parrot at Bridgewater, by the Colebrook Dale Company, consisting of an elliptic arch of seventy-five feet span, and twenty-three feet height, and resembling the bridge at Wearmouth in the mode of filling the haunches with circular rings.

Even failures may be useful to record as warnings. Two occurred at this time, one at Yarn in Staffordshire, and another in Herefordshire. The former was in a bridge of 180 feet span over the Tees ; and the latter on a similar erection on the Tame : both fell to pieces on the removal of their centres.

In 1803 an,’ iron bridge of 181 feet span, and sixteen and a half rise,

was completed at Stainet, on the general model of that at VVearmouih,but its parts were connected somewhat differently. It began to sink, and some of the transverse pieces broke in a short time after it was finished, when upon examination it was found that one of the abutments had failed : and when this was repaired the other gave way in a similar manner. It was pushed outwards horizontally ; and the architect seems to have trusted to the firmness of the iron, and the excellence of the workmanship, neglecting the calculation of the lateral thrust. The derangement, however, was not material.

Mr. Rennie's beautiful bridge over the Witham at Boston in Lincolnshire, we believe, was next in order of time. There is not a more elegant structure of this kind in the kingdom. The span is eighty-six feet, and the rise five and a half only ; but the abutments are well constructed, and it has stood securely, notwithstanding the fracture of some of the cross pieces of the frames, which had been weakened by the unequal contraction of the metal in cooling.

Messrs. Jessop have erected two iron bndges at Bristol, of 100 feet span, rising fifteen; each of them contains 150 tons of gray iron : the expense of each was about £4000. The chords of their arches are segments of circles, of 1 in dimension, their versed sine fifteen; the diameter of the complete circle, of which the arch is a segment, 1 82 feet ; and the height of the frame work of the arch at the vertex, two feet four. » plate BRIDGES.

In 1803 ? light iron bridge, for foot pass* <rers only, was thrown across the Seine, opposite To the Sate of the Louvre. Narrow stone piers, leaving the lateral thrust uncompensated, are its

supporters, and there is great apparent deficiency in strength ; but it is improbable than any failure should occur in such a situation, supposing the construction of the bridge itself to be sound. See plate BRIDGES.

In 1811 Mr. Telford threw an iron bridge over an arm of the sea, at

Bonar in Sutherland-shire, Scotland. It consists of an arch whose chord is 150 feet, versed sine twenty feet, diameter of the circle, of which the arch is an ab-scissa, 301 feet, and the height of the frame-work of the arch at the vertex three feet.

But the two noble erections of this kind on the Thames have attracted the principal attention of engineers. Vauxhall Bridge, the first of them, was opened in August 1816: it consists of nine arches of cast iron, each of seventy-eight feet span, and between eleven and twelve feet rise. The architect was Mr. Walker. The breadth of

the roadway is thirty-six feet clear. The arches resemble those of Messrs. Jessop's bridges at Bristol ; but the bridge has, on the whole, a lighter appearance, while the abutments are more compact and solid.

The Southwark, or Trafalgar Bridge, at the bottom of Queen Street, Cheapside, has been considered the finest iron bridge in the world. It consists of three magnificent arches, resting on granite piers and abutments. Mr. Rennie was the architect : and the arches were cast by Messrs . Walker and Yates, late of Rotherham in Yorkshire. The chord of the middle arch is 240 feet. Its curve is the segment of a circle of 624 feet diameter ; its versed sine twenty-four feet ; and the height of the frame-work of the arch at the vertex, six feet. See BRIDGES.

The following is the weight of half of the middle arch of this bridge : —

ft TII v ˆ Oblique Cross Stays. Frames.

Crosses. Spandrils.

Total.

t. cwt.

t.

cwt.

c.

cwt.

t. cwt. t.

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13

10

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83 32

16

108

10

4 51 3

2

11

9

17

23

14

87

6

5 50 17

2

13

9

15

32

14

95

19

6 51 2

2

13

9

15

24

15

88

6

half 7 25 12

2

12

20

7

48

12

152

0

Cornice and palisades

.

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…

77

5

Road way and pavement

650

0

Whole weight . . ,.••;.- • Springing plate . …-‘• . Abutment …..

Span 240 feet. Rise twenty-four, crown six feet; at the pier eight feet.

We may notice that a still more splendid iron bridge of one arch was projected by Mr. Telford, and for some time under the consideration of a committee of the house of commons, as a substitute for London Bridge. The chord of the arch was to be 600 feet ; and it was to have its centre not less than sixty-five feet high in the clear : but the opinions of respectable architects were so divided as to its merits that the plan was relinquished.

Minor erections of this kind are now common, and Mr. Telford has erected several aqueduct bridges on a large scale. One of these, near Wellington in Shropshire, cast by Messrs. Reynolds, was completed in 1796. It is 180 feet long, and twenty feet above the water of the river, being* supported on iron pillars.

A large one was cast by Mr. Hazledine, for carrying the Ellesmere Canal over the river Dee, at Pontcysylte near Llangollen. It is supported 12G feet above the surface of the river, by twenty stone pillars, and is 1020 feet in length and twelve feet wide. See plate II. fig. 4.

IRON FOUNDRY. See IRON MANUFACTURE.

IRON MANUFACTURE. This important branch of our manufactures has tended most materially towards establishing the commercial superiority of Great Britain over every other competitor. It is true that there are many parts of Europe that excel us both in the richness and quantity

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Depth of the blocks or plates at the

of their iron ores ; and we remember one instance in which a large mountain of pure metallic iron was found in an extensive mineralogical district in Sweden. But, generally speaking, the excellence and abundance of our fuel, with the vast capitals employed by British iron masters, have enabled us to materially improve the foundry process.

We may commence our examination of this subject by a reference to the process employed by the Romans.

The ancient mode of reducing the ores of iron is thus described by Agricola. A mass of brick-work was raised five feet in length and breadth and three feet and a half high, resembling a smith's hearth, except that in the middle of this was sunk a cup-shaped cavity or crucible, one foot in depth and half a foot wide, in the upper part of which was made a hole opening into a channel through the brick-work. This hole being closed with clay, the crucible was filled with lighted charcoal, heaped up so as to be above the level of the hearth ; a blast of aii was then admitted through a pipe let into the wall in the same manner as a smith's forge, and so contrived that the focus of the

blast should be just above the centre of the crucible. Charcoal alone was added from time to time, till the heap became thoroughly hot, and then, at the discretion of the workmen, the ore, in very small

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pieces, unroasted, but mixed with unslaked quicklime, was laid on alternately with the charcoal. As soon as it had descended low enough to be within the immediate influence of the blast (which in a furnace of this construction would be in a few minutes) the lime and earthy part of the ore become fused into a slag, and enveloping the iron, now in a metallic state, sunk down into the crucible, displacing the charcoal with which it had been at first charged. The matter remaining at rest in the crucible gave an opportunity to the particles of iron to sink to the bottom, which they did in greater or less proportion according to the fluidity of the slag and the completely metallic state of the iron. After this process had been going on for the space of from eight to twelve hours, the crucible became filled with melted matter : at this time the hole which had been at first stopped up with clay was opened by means of an iron bar introduced through the channel in the brick-work, and the scoriae immediately flowed out, leaving the iron behind covered with hot charcoal. The blast being stopped, the furnace soon got sufficiently cool to allow the

workmen to take out the iron, which was found imperfectly concreted together into a mass nearly of the shape of a wooden bowl : this being transferred to an anvil was first carefully hammered with wooden mallets to break off the encrusting scoriae and render it sufficiently compact to bear the tilt hammer, to which it was next subjected ; being then divided into five or six pieces, each was separately forged into a bar, and thus the operation was finished. The iron thus obtained was extremely tough and hard, but difficult to work, and was in great request for helmets and ather articles of defensive armour, and in general for all purposes where toughness and hardness united were particularly required. The rich quality of the ore, and the circumstances under which it was reduced, were probably the chief causes of the excellence of this kind of iron ; a peculiarity however in the method of forging it may also have somewhat contributed to this ; for, while it was under the tilt hammer, an assistant stood by with a ladle of water, with which he sprinkled the bar as often as it was struck by the hammer.

The poorer ores, which were incapable of being smelted in the above method, were first picked, washed, and roasted, then reduced ,to pieces no larger than hazle-nuts, and reduced (no doubt with the addition of lime) in blast furnaces from seven to eight feet high and shaped like a chimney. In these a considerably greater heat could be produced than in the former, but it does not appear that the metal when taken out of the furnace was in the state of cast iron ; certain it is that it was always allowed to cool there, and was never run into pigs as is the modern practice.

However simple this process may at first view appear, it is attended with some very serious practical difficulties, and we may now describe another method by which the richer veins of iron ore may be worked. The ore being broken into small pieces is heaped upon a bed of charcoal in a very simple reverberatory furnace.

When the whole has been glowing hot for sorr.a time, the pieces, being now soft and at a welding heat, are by the dextrous management of the workmen brought in close contact with each other by means of an iron bar; they are then lightly hammered while still in the furnace, and thus the whole mass acquires sufficient compact-ness to be removed to the anvil without falling to pieces; it is now hammered with a gradually increasing force, the earthy impurities are thrown off, together with the scales of black oxide ; the lump is divided into pieces of a convenient siie, which by repeated heating

and hammering are drawn into bars. The rich red haematite, as appears from an experiment of Mr. Mushet, is capable of being manufactured in the same way.

These ancient methods have fallen into disuse, not because the quality of the iron thus produced was objected to, but because the time and fuel consumed were enormous, and the iron that remained in the scoriae amounted at least to one-half of the original metallic contents of the ore.

When ironstones are said to contain good or bad iron, the expression ought to be understood as a comparative assertion, confined to local rules, and judged by certain fixed local standards; into the account of which many things must be taken, which are frequently overlooked. At every iron-work, a certain portion of fuel, coke or charcoal, by weight, is understood to be sufficient to smelt and manufacture a determinate weight and quality of ironstones combined together, in order that a certain quality of crude iron may be produced. In this case, should a new ironstone be substituted for one whose quality and effects are already known, and should its application be productive of iron less carbonated than formerly, it would instantly be denominated a bad ironstone, or an ironstone containing bad iron ; an assertion only true comparatively so far as it would affect the interest of the manufacturer, unless corrected by an addition of fuel, a change of the mixture of ores, or a varied application of the limestone used as a solvent or flux. But this is no proof that the quality of iron, as it exists in the ore, is bad, since a larger proportion of coke, or a change of mixture, which incurs no additional expense, can correct the evil. It rather furnishes a demonstration that the iron in all ores is the same ; but that, in calling it into a metallic form, the quality is affected chiefly by the reduction of those mixtures originally united with it.

Taking as a general principle that the crude iron contained in all ironstones is the same, and that it can be called into existence as a metal of all the various degrees of carbonation, by regulating the proportion of fuel and of the solvent, we shall proceed to mention those mixtures which determine the future quality of the crude iron.

1. Argillaceous ironstone having fine clay a-its chief°componem earth, lime in the next proportion, and both these nearly destitute of san-i : which, when properly torrefied, exhibits fibres on its internal surface, of a brown, dark brown, or claret color, running either in streaks or ra-

diated, and adhering tenaciously to the tongue, will afford, with a moderate proportion of cokes and limestone, iron of the finest quality, possessing strength conjoined with an intimate de-gree of fusihility.

2. Calcareous ironstone, that which contains

different degrees of fusibility and strength. Is it not obvious, since the qualities of crude iron depend upon the mixtures and their kinds composing the stones, that, if nature be assisted by adding or subtracting from them in the blastfurnace, every quality of crude iron may be

lime as its principal earthy mixture ; holding produced from the same ironstone ? clay in the next proportion, and both these com-The usual criterions by which ironstone is paratively unalloyed (totally they never are) judged, whether it be sufficiently rich in iron for with sand ; which, when regularly torrefied, as-the purpose of smelting, are the following : —

1. The degree of tenacity with which it adheres to the tongue after torrefaction. 2. Its color. 3. The obedience to the magnet when pulverised. 4. By depriving of its iron a given weight of the ore, in contact with charcoal and

sumes a variety of shades generally lighter in the color than the former class, which sometimes, and sometimes not, presents internal fibres, and which adheres less tenaciously to the tongue; always contains iron which can be revived, richly carbonated with a comparatively small

fusible earths in the assay furnace.

quantity of cokes, and with a trifling addition of The first and third of these methods are liable

lime. Under this class of ironstones are found to great error. The adhesion to the tongue will

those which produce iron of a fusible nature, be more in proportion to the quantity of clay

seldom connected with strength, but valuable for and its kind contained in the stone, than to its

its utility in fine castings, which require orna-real contents in iron. Ironstone may also be

ment more than durability. torrefied in such a manner as to deprive its

3. Those ironstones whose component parts internal surface of this property; as it is only

are nearly an equalised mixture of clay, lime, peculiar to the stone at a certain stage of torre—

and sand, which torrefy with a slight degree of faction.

adhesion to the tongue, assuming a darkened or The influence which the magnet possesses

brownish color, void of every internal fibre, over some ores of iron is no direct proof of the always afford, with the local proportion of fuel, iron of an intermediate quality for fusibility and softness, but generally possessing strength in an eminent degree. Such iron is excellently adapted for the manufacture of great guns, mortars, and

the large species of machinery. Its application to the purpose of bar-iron making would also be attended with the most beneficial effects,

quantity of iron contained, as some ores which contain fifteen parts in 1 00 are completely magnetic, while others again that contain sixty to seventy parts of iron in 100 are not in the smallest degree affected with this property. The magnetic test is more used to ascertain the existent state of the metal, whether mineralised with an acid, combined with sulphur or with

possessing neither the extreme of fusibility nor oxygen, or existing in a disengaged state more

of infusibility : it would greatly prevent, in the or less metallic. No ironstones, which in their

manufacturing, a tendency, which iron possessed native state contain their iron mineralised with

of these extremes has, to become red or cold oxygen, or in the state of an oxide, completely

short. dispersed through an intimate combination of

4. Ironstones which unite a large proportion clay, lime, and silex, containing water, carbonic

of sand with sparing portions of clay and lime, acid, and sometimes concrete sulphur, are obe—

which, upon being slightly exposed to heat, ex-dient to the magnet till such time as torrefaction hibit masses of semivitrification, neither obedient to the magnet, nor adhesive to the tongue,

has passed upon them, either exposed to open air, or in contact with charcoal in close vessels.

having a refractory disposition to part, and pos-If this process is continued for a short time, the sessing a dark blue or blue color, always afford, whole mass will become obedient; but this af-with the usual proportion of fuel, crude iron of fection will still depend upon the relative quan-the worst quality, either as to strength or fusi-tity of concrete oxygen fixed with the iron, bility. Such metal is commonly highly oxygen-Individually, however, ironstones are affected ated and brittle ; incapable” of being used alone by the proportion of heat conveyed to them for any melting purpose ; and, when applied to while torrefying. If the quantity communicated the use of the forge, affords malleable iron, which has been sparing, so as not to have carried off possesses the cold short quality. all the water, carbonic acid, &c., the magnetic

These are the four principal classes under virtue will also be proportionally absent ; if the which Mr. Mushet has arranged his ironstones, dissipation of these substances has been com-with regard to their tendency to afford their iron carbonated, possessing strength, or otherwise, when smelted in the brass furnace with a determinate quantity of fuel. As this classification is exactly analogous to the results obtained in the large way, it may serve as a groundwork to

plete, the magnet will possess an influence in the exact ratio of the quantity of oxygen which remains combined with the metal. Should it happen that a degree of heat, capable of exciting fusion, is applied, the mass will then rapidly lose its magnetic obedience by an extra-fixation

those who may wish to attain a practical know-of oxygen ; if driven so far as to make it ex-ores, so far as it relates to their hibit a semivitrified appearance, this principle

would be found to be entirely annihilated. Although the color which ironstones assume

of these manufacture.

It is, however, easy to counteract the natural

tendency which every ironstone has in this case, in torrefying intimately depends upon the de-to afford its iron of a certain quality, and to gree of heat presented to them in the operation make each of them yield crude iron of all the of burning, yet, by regulating this agent in a

proper manner, an accurate knowledge may be formed, not only of the probable quantity of iron, but even of its tendency to become carbonated in smelting. The expulsion of the water and acid leaves the combined earths more exposed to determination. The small specula of silex are distinctly discerned ; adhesion to the tongue developes the presence of clay ; and lime is indicated by its assuming a whitish color, either striated or disseminated, approaching towards the surface of the stone.

The last method mentioned, namely, that of depriving a given portion of ore of its iron, is the most consonant to truth and to the ideas of the manufacturer. Acids may be used as a check upon the assay by fusion ; but this intricate, or rather this slow process, is chiefly resorted to by chemists, and seldom goes beyond the bounds of the laboratory. In assaying by fusion, not only the quantity of iron may with precision be ascertained, but also the quality of crude iron likely to be produced from the ore, with the local proportions of fuel in the large way. The earths formerly united with the iron now become fused with those added for solvents. These float upon the surface of the extracted metal, and, when cold, may afford information, from their color and transparency, concerning the regulation of future proportions upon a more extended scale.

The art of roasting ironstone (technically called its calcination) has by some been consi-

dered as an operation in which, for the first time the ironstone unites with a portion of oxygen' and in so far as this requires to be again reˆ moved in the smelting furnace, previous to separation, it has been deprecated or thought unnecessary. Practice, however, has more clearly in this, than in any other metallurgical operation, determined the utility and necessity of roasting the ores, previous to their beinz smelted.

Ironstones in general, in roasting, lose from thirty to thirty-five per cent, of their weight. Torrefaction commences with a change of color upon the surface, which keeps penetrating as the process advances. When the ironstone is of one uniform color throughout, the operation may then be considered as perfect ; if a mass of the ironstone be broken in the interim, the unroasted part will be found occupying the centre, and of a blackish color. Some hours are necessary to roast thoroughly, even a small piece of ironstone ; the same effects however may be produced in two minutes, by exposing ironstone, finely pounded, upon a red-hot plate. The change of color in this case is rapid ; it almost instantly becomes brown, then black, though in cooling it usually returns to a brownish-red, or dirty-purple color.

An ironstone, that had lost thirty-two per cent, in roasting, was pounded very small, fused, and yielded as follows : —

400 grains of ironstone, > ., 0~ . , .

50 |rains of finely-pulverised coke, 5 139 *raiDS of iron = 33* Per cenu
600 grains of ironstone, > . „ . ,. -

60 grains of finely-pulverised coke, 5 123 &™ns °f iron = 41* Per Cent
300 grains of ironstone, } < on • e •

75 grains of finely-pulverised coke, \ 132 ˆms °f ir°n = 44 *** cent

The last reduction may be considered as nearly a perfect assay of the ore, which in many cases, where the earthy matters are nearly in equal proportions, may be accurately performed without the addition of any flux.

Some masses of the same substance not previously roasted, weighing 6024 grains, were put into a crucible along with coke-dust, and a pyrometec roll filled at 1°. After an exposure of ten hours to a bright heat, the pyrometer was found to indicate 28°, and the ironstone had lost in weight forty-two per cent., or ten per cent, more than when roasted in the common way. This may be attributed to the loss of oxygen, in consequence of the metallic particles being exposed in contact with carbonaceous matter. The ironstone, when washed, and perfectly freed from this substance, was of a grayish-blue color, adhesive to the tongue, possessed of a metallic taste, and, when pulverised, deflagrated in flame.

400 grains of the common roasted ironstone, for the sake of comparison, were fused alone, and afforded a dense, shining, opaque glass, without any metallic separation.

400 grains of the cemented deoxidated ore were reduced to the same size, and fused under the same circumstances, from which resulted a prismatic colored button of iron, weighing 120 grains, or thirty per cent.

In another experiment 4281 grains of the same ironstone, in pieces, were exposed for twenty-four hours, in contact with coke-dust, to a heat that, by the pyrometer, indicated 69° of Wedgewood; loss in weight equal to forty-three per cent., so that fourteen hours of longer exposure, and double the temperature, had only produced a further deoxidation of one per cent, beyond that obtained in the first

cementation. The pieces of ironstone were now completely metallic, compact, and brightened under the file.

300 grains of this deoxidated ironstone yielded by fusion, per se, a mass of soft malleable iron, weighing 113 grains, or thirty-seven and two-thirds per cent.

300 grains, to which were added fifteen of coke-dust, yielded by fusion 163 of iron, or fifty-four and one-third per cent. ; five grains of coke were found in the crucible unacted upon, so that ten grains of coke were employed in reviving the additional fifty grains of iron.

200 grains of roasted ironstone were fused, per se, in a black-lead crucible : forty-nine grains of iron, or twenty-four and a half per cent., was the result.

200 grains of ironstone, deoxidated at 69°, were similarly exposed and fused, from which resulted ninety-two grains of iron, or forty-six per cent.

The ironstone subjected to the foregoing experiments, when roasted, yielded forty-four per cent, of iron, and lost in roasting thirty-two per cent. ; so that the ore in its native state contained thirty-three per cent, of iron. After the rate of forty per cent, this would furnish us with a quantity of oxygen equal to 13-2 per cent, united originally with the iron. Now the ponderable matter got rid of by the cementation, in the experiments at 28° of Wedgewood, was the difference between thirty-two and forty-two, or ten, and in that of 69° the difference was equal to 11°; a coincidence sufficiently near to warrant the conclusion, that the iron of our ironstone is not only in the state of an oxide, but that the dose amounts to forty per cent, at least ; for it cannot for a moment be supposed that any process of cementation, confined to an inferior range of temperature, could separate from the ore the last portions of oxygen, which it is even probable resist the higher temperature, and more perfect operation of the smelting furnace.

In the process of smelting, two things are absolutely essential to the separation of the iron. First, the metal itself must be rendered fluid, which will then, by its great specific gravity, descend to the lowest parts of the furnace, and some other compound must, at the same time, be separated in a liquid form, so as to float upon its surface, and defend itself from the influence of the blast. If the ore consisted of iron and oxygen alone, the carbon of the coke would combine with the oxygen ; and an excess of carbon would also unite with the iron to render it liquid at that temperature ; but here would be a deficiency of the fluid vitreous matter necessary to the defence of the iron from the oxygen of the blast. Hence it will be necessary to employ some substance, with such iron ore, which shall Ke capable of forming a liquid scoria, or cinder, for the preservation of the carbonated iron when once obtained. So far as observation has dictated, it would seem that the cinder cannot be too perfectly fluid. The principles on which the fusibility of the cinder depends are not simply confined to the materials used in the smelting of iron, but refer to all compound fusible matter with which we are acquainted. It may be observed in general, and indeed almost without exception, that an alloy of two metals is fusible at a temperature much less than the arithmetical mean between the fusing points of the metals. For instance, an alloy of lead and tin is more fusible than either of the metals composing it, and a similar mixture of copper and silver may be used as a solder for either silver or copper separately. This property is not less conspicuous in the earths ; none of them in their pure state can be fused in our hottest furnaces, nor scarcely with a stream of oxygen gas ; al-thouuh certain proportions of them are. together, fusible at the heat of a moderate air-furnace. Lime and clay, when separately taken, may be considered as incapable of fusion at any degree of heat yet produced in furnaces ; and still, in certain proportions, they are too fusible to be made into even bricks or crucibles. It will ap-pear, from these facts, that the iron-master can-not pay too much attention to tlie subject of the

relative fusibility of the earths in different proportions. Most of the iron ores of this country are argillaceous ; that is, consist, besides oxide of iron, of a small quantity of silex or flint, and a large proportion of clay. Limestome has always been employed for such ores, and by combining with the clay and flint, as well as with a small portion of oxide of iron, forms a scoria or cinder easily capable of fusion.

Lancashire ore, when reduced to a small size, and heated on an iron-

plate till it becomes of a black color, loses only from four to five per cent, of its weight ; ironstone, in the same time, would lose from twenty-five to thirty-five per cent. ; as the ore cools, the black passes off, and the native red color returns. In this state it has acquired a slight, though perceptible, obedience to the magnet. If the ore is heated for two hours, it loses in all from six to seven per cent., and is then strongly magnetic, rendering it probable that the magnetic force in this case is more the result of a new arrangement of the metallic particles, than of the expulsion of so small a quantity of water.

If the exposure of this ore be still further continued, and particularly with an increase of temperature, it will regain its lost weight, as-sume a vitreous sort of fracture, and lose its obedience to the magnet; such increase of weight being undoubtedly owing to a farther dose of oxygen uniting with the iron, which is never found to exceed that of the water expelled in the more moderate temperature; and it may sometimes happen, in experiments of this nature, that the ore, after being roasted for eight or ten hours, will weigh as much as when first introduced into the furnace ; though, had it retired at an earlier stage of the operation, the deficiency of weight would have been as before stated.

In general, when Lancashire ores (according to the sorts) are cemented in contact with carbonaceous matter, a loss of weight is sustained of from twenty-five to thirty-five per cent. : from which is to be deducted that weight, consisting of water, which the ore would have lost by being exposed to a low red heat, leaving the difference to express the. quantity of oxygen removed from the ore during the operation. The following may be considered as a near approach to the constituent parts of the richest and densest spe cies of the Lancashire hematites : —

Iron 64-0

Oxygen united with iron . 24‘5

Earthy matter …. 5‘0

Water 6-5

The proportion of oxygen united in this analysis is under. forty per cent.

When the ore has been roasted it is taken to the smelting or blast furnace, the lower part of which is filled with either charcoal or coke ; the coke is always a fixed quantity, and the proportion of limestone added to the ore is accoiding to the quantity of heterogeneous matter with which the metal is combined.

A section of the blastfurnace is represented in fig. 1, plate IRON MANUFACTURE. A, at the top

of the furnace, is an opening for the introduction of the materials ; B the body of the furnace ; C the place where the blast is introduced ; and D a cavity to receive the metal when released from the earthy matter. The materials in the furnace are, previously to the introduction of the blast, heated simply by the draught of the atmosphere ; the coke and limestone to a bright red or white heat, and the iron ore to a melting heat. When the blast is introduced, the metal immediately above it is brought into a state of fusion, and penetrates through the fuel into the cavity D. The ore and fuel that were above it sink down to fill up the space left by the ore melted and the fuel consumed. This next comes under the operation of the blast, and is similarly reduced. The men who attend the furnace keep adding fuel, ore, and limestone, through the opening A, at the top, and the operation of smelting goes on, until the melted iron, in the cavity D, rises nearly to a level with the tuyere irons, or blast pipes. The melted iron is then tapped, by driving a round-pointed bar into a sort of loam, with which the hole is stopped, and runs into moulds made in sand ; in this state it is called pig or cast iron. When the slag, in smelting, has a greenish-gray appearance, it is a certain sign that the furnace is in excellent order.

Many methods have been adopted to obtain a regular and uniform blast. The first of these has already been noticed under the article BLOWING MACHINE; but, as this method of regulating the blast has

been found to be far from perfect, other means have been resorted to with a view of obtaining the desired end. The one called the water-regulator consists of a large cistern, in which another of less area and capacity is inverted. Through the bottom of the smaller cylinder, which is, from its being inverted, uppermost, a pipe communicates with the blowing cylinder. This inner cistern is filled with water, as is also the space between the inner and the outer cistern to the same level. Now, supposing the air to be forced from the blowing cylinders through the above-mentioned pipe into the inner cistern, the water, being displaced by the air, will descend in the inner cistern, and rise up between the two vessels till the column of water on the outside is equal to the required force of the blast ; this column would be about four pounds upon a square inch, and about nine feet. Another pipe proceeds from the same cavity in the inner vessel to the furnace, and communicates nearly a uniform blast, varying only with the outer column of water, which will he less as the outer surface of the water is greater. This contrivance, though for some time considered an important discovery, has, in many instances, been abandoned, owing to its carrying water, both in a state of spray, produced by the agitation, and ir a state of vapor, into the furnace, by which both the quantity and the quality of the iron was materially affected.

Another mode has been attempted to equalise the blast, called the air vault. The first experiment of this nature was tried at the Clyde iron-works, by excavating a large cavity in a rock ; but the trial was unattended by success, partly from the vault not being air-tight, and partly from the

moisture which exuded from the rock mixing with the air.

A more successful experiment was made at the Carron works. An air-vault of wrought iron plate has been employed in one of the furnaces at Bradley, in Staffordshire, which appears to answer very well. Its form is a cylinder, about ten or twelve feet diameter, and fifty or sixty feet long.

According to an average deduced from a series of experiments made by Mr. Mushett, it appears, that, when the outer air was from 63° to 68°, the air, immediately after its escape from the blowing cylinders into a receiving vessel, was increased from 63° to 90°, and from 68° to 99*°. In an average of thirty experiments the air in the act of condensing was raised 30°. This would have the effect of increasing its volume not less than one thirty-eighth of the whole, and the increased

pressure of the blast, by this cause alone, would be nearly half a pound upon an inch. Or, in other words, if the air were introduced into the furnace at 60°, the same quantity would be admitted with half a pound less pressure upon an inch than if it were 90°. Hence any means of cooling the air after its condensation, in all seasons of the year, must be attended with beneficial consequences. If the air-vault were made of wrought iron, and its surface constantly Kept wet, the evaporation from so great a surface, if freely exposed on all sides to the air, would cool the air very considerably. Indeed, without the aid of the moisture, the effect would be such as to recommend its adoption. It was supposed, that in the summer season there would be some advantage in bringing the air under ground for a considerable distance before it entered the blowing machine ; but the resistance arising from the friction on the sides of the channels through which it must pass has been found an insurmountable obstacle.

The puddling furnace was originally invented by Mr. Cort, and is a most important append age to the iron works. In its general form it nearly resembles the ordinary air furnace. It is heated by means of pit-coal, on a grate; and has a chimney of considerable height, in which there is a damper to regulate the degree of heat while puddling. A considerable portion of the space between the grates and the chimney is formed flat, and covered with a peculiar sand, possessing the properties, when heated, of becoming very hard and infusible. On this space is placed three or three and a half hundred weight of finers* metal, and the flame allowed to pass over it with the full force of the fire. In twenty minutes the iron assumes a yellowish-white color, and marks of fusion appear on the angles of the pieces ; the puddler then turns up new surfaces to the flame, and keeps breaking those which have reached a softened state. This he continues, at intervals, till the charge has subsided into a thick clotted sort of fusion. The furnace, at this period, is reduced to its lowest temperature ; part of the furnace bars and fire are withdrawn, and the damper nearly shut; the puddler keeps stirring and rrioving the iron backwards and forwards, which now begins to ferment and emit flashes of a bluish colored flame. This operat.on is conti-O

nued till these appearances fall off, and till the iron becomes less clotted, and begins, in the language of the workman, to dry. His exertions are redoubled, and soon the whole charge is reduced to the state of the finest saw-dust ; it is now said to be dry, and so totally free from cohesion that it may be moved about like as much sand.

At this stage of the operation the grate bars are replaced, the fire repaired, the damper elevated, and the heat is in consequence increased, though gradually. The grains of iron become tipt with a snowy whiteness, resembling the welding of iron ; they no longer repel each other, but begin to adhere in small masses ; these increase in size as the temperature of the furnace is raised. When the charge begins to work heavy, the puddler selects a nucleus, and rolls it over and over upon the coalescing masses, till he has got it of the weight of sixty or seventy pounds ; he then places this on the flame side of the furnace, and begins anew the operation of balling; repeating this till the whole charge is balled up.

A heavy iron instrument, called a dolly, is then introduced into the furnace, and with this the balls are in succession beaten to give them more cohesion in rolling. When properly heated, they are removed by tongs from the furnace, and slid along iron plates to the rolling machine. Here the lumps or balls are each, in succession, passed through rollers, grooved diagonally, acquiring as they pass additional cohesion and firmness, and assuming the form of a bloom. This is then presented to another pair of rollers, with flat openings or grooves, and rolled into a bar of three or four inches in breadth, and from half an inch to three-fourths of an inch in thickness.

The whole operation of rolling one of the balls is performed in a minute and a half, and pleases while it astonishes the observer, by the rapid change which is thus passed upon matter the itost unshapely and refractory. The whole time taken up to complete a charge from the puddling furnace is only from two to two and half hours ; the loss sustained is from ten to twelve per cent. One furnace will discharge five or ‘six heats in twelve hours, and make in one week from ten to twelve tons of rough bars. A set of rollers, moved by a thirty horse power engine, will rough down in a week 200 tons of such iron, and keep twenty puddling furnaces at work, for which three or four refineries or running out fires will be necessary. The material thus produced is called mill-bars, which require another operation before they are finished. For this purpose they are carried to a pair of large steel shears, and cut into regular lengths, proportionate to the bar

ultimately intended to be made. These pieces are then piled on each other in reference to the required thickness, as the cutting was to the requisite lengths, and are introduced into the reheating furnace. A welding heat by the flame of pit coal is here made to operate for the space of twenty minutes ; they are then, one by one, taken to another set of rollers similar to the first, and each pile is brought down in the diagonal grooves to a certain size, they are then put into the finishing rollers and rapidly formed into

bars of the most perfect form and accurate dimensions.

The tilt-hammer is a most important appendage to the iron manufacturer. It differs from the common forge, however, by being poised on a centre of motion, about the middle, or two-thirds of the length of the helve from the head, and from receiving its motion from cogs acting upon the tail of the helve. In some few cases the .ash spring is placed over the head of the hammer, but in general, the tail of the helve is made to strike against a fixed floor, and the ham-mer, from the force it has received, continuing to rise after the tail strikes the floor, the helve bends, and by its elasticity causes the hammer to descend with greater force upon the anvil.

The tilt-hammer is represented in figure 2. It is taken from a tilt-mill made at the Carron iron-works in Scotland, after designs of the celebrated Mr. Smeaton. It is adapted for forging iron into bars. In this apparatus e represents the iron head of the hammer,y its centre of motion, and d the tail or extreme end, upon which the cogs of the wheel act, and which is plated with iron on the upper side, to prevent it from wearing. P is the anvil-block, which must be placed on a very firm foundation, to resist the incessant shocks to which it is subjected : the centre J\ or axis of the hammer, is supported in a cast-iron frame gh, called the hirst. When the cogs of the wheel strike the tail of the hammer suddenly down, and raise the head, the lower side of the tail of the hammer strikes upon a support n, which acts to stop the ascent of the head of the hammer e, when it arrives at the desired height ; but, as the hammer is thrown up with a considerable velocity as well as force, the effort of the head to continue its motion, after the tail strikes the top n, acts to bend the helve L of the ham-mer, and the elasticity of the helve recoils the hammer down upon the anvil with a redoubled force and velocity to that which it would acquire from the action of gravity alone.

To obtain this action of recoil, the hirst gh must be held down as

firmly as possible; and, for this purpose, four strong iron bolts are tarried down from the four angles of the bottom plate h, and made fast to the solid basis of stone R R, upon which the whole rests ; upon this base are placed four layers of timber i, k, I, m, which are laid one upon another, and the timbers of each layer are laid crossways over the others. Each layer consists of several pieces laid side by side, and they are slightly tree-nailed together, to form a platform. Each platform is ra'.her less than that upon which it rests, so as to form a pillar of solid timber; on the top of which the hirst-frame gh is placed, and firmly held down by the four bolts, which descend through all the platforms, and have secure fastenings in the solid masonry beneath.

The stop n is supported by a similar pillar, but smaller, and composed of three layers : the upper-piece n, which is seen crossways, is about three feet long, and the under side is hollowed, so that the piece bears only upon the two ends, leaving a vacancy beneath it, which occasions it to bend or spring every time the tail d of the hammer strikes upon it, and this aids the recoiling action very much.

The axis on which the hammer moves is formed by a ring of cast iron, through which the helve of the hammer is put, and held fast by wedging round it. The ring has a projecting trunnion on each side, ending in an obtuse conical point, which is received in a socket firmly fixed in the hirst-frame g h, by screws and wedges, one of which is seen at r. These two sockets are thus capable of adjustment, so as to make the hammer-face fall flat upon the anvil.

In the Carron iron-works three hammers are worked from the same shaft. In such case it is necessary to have the three wheels that communicate motion to their respective hammers of different sizes and numbers of cogs, to produce that velocity in each hammer which is best adapted for the work it is to perform ; thus the wheel for the hammer, which is represented in fig. 3, has eight cogs, and therefore produces eight blows of the hammer for each revolution of the ˆfly-wheel ; the wheel for the middle ham-mer has twelve cogs ; and the wheel for the smaller hammer sixteen ; the latter will therefore make

two strokes for every one of the great hammers. In fixing the three wheels upon the great shaft, care is taken that they shall produce the blows of the different hammers in regular succession, and equalise as much as possible the force which the water-wheel must exert. The wheels are fixed on the shaft by means of a wedging of ,hard wood, driven in all round; the wood being capable of yielding a little to the shocks occasioned by the cogs meeting the tails of the hammers, renders the concussions less violent.

The following are the principal dimensions : — The head of the great hammer weighs 3J cwt., and it is intended to make 150 blows per minute ; it is lifted seventeen inches from the anvil at every blow.

The middle hammer is 2 cwt., and makes 225 blows per minute; it is lifted fourteen inches each time.

The small hammer weighs 1 J cwt., and makes 300 blows per minute ; it is lifted only twelve inches.

To produce these velocities, the great axis upon which the cog-wheels are fixed must make 18| turns per minute and the pinion upon this axis being in proportion with the cog-wheel upon the shaft of the water-wheel as 1 is to 3, the water-wheel must make 6J revolutions per mi-nute ; the water-wheel being 18 feet diameter, its circumference will be 18 x 3‘1416~56‘54, or 56ˆ feet; this multiplied by 6‘25 is about 353 feet motion .per minute, or divided by 60— 5*9 feet motion per second for the circumference of the water-wheel.

In making the most highly carbonised iron, or what is called No. 1, it sometimes happens that a portion of the iron unites with a great excess of carbon, forming a substance which, when cold, appears in bright shining scales It is found to possess most of th< > properties of plumbago, differing from that substance only in containing less carbon. This carburet is no doubt in the liquid form in the furnace, ant], being of much less specific gravity than the iron, floats upon its Mirface. It is so much more infusible than the

metal, that, before the iron enters the moulds of the pig-bed, it is seen swimming at tlie top in the scaly form as before-mentioned.

This substance is called by the workmen kish; and, whenever it appears, it is a certain sun that the furnace is working on tht best sort of iror.. So surely, indeed, is it the case, that No. 1, or the most highly carbureted metal, has received the epithet of kishy, because kish is the

common attendant on its production.

Heated air has been very successfully applied to blast furnaces at the Clyde iron works. It is now completely ascertained that iron may be smelted by heated uir with three-fourths of the quantity of coals required with cold air, that is, air not artificially heated; while the produce of the furnace in iron is at the same time greatly increased. All the furnaces at the Clyde iron works are now blown with it. At these works the air, before it is thrown into the blast furnaces, .s heated to 220° Fahrenheit, in cast iron vessels placed on furnaces, similar to those of steam-engine boilers. It is expected that a higher temperature than 220° will be productive of a proportionally increased effect; but this is still the subject of experiment. It is calculated that this improvement will accomplish a saving in the cost of the iron smelted in Great Britain to the amount of at least £200,000 a-year. The fact, that heated air is better adapted than cold air to promote combustion is now incontestably established by experiment. No argument to the contrary is afforded by what is also a fact, that a fire burns better in cold than in warm weather. The fire burns better in the former than in tne latter case, not because the air is cold, but because it is dry. Let cold air be artificially heated, and its superiority in promoting combustion, over air naturally of the same temperature, but not artificially heated, will be apparent. It lias bee" attempted to account for this fact in various ways. The most simple theory seems to be, that air is not fitted to promote combustion, till it reach a high temperature, and that a quantity of fuel is expended in raising it to this temperature, before it can be of any use in promoting combustion. The question, therefore, resolves itself into this: whether it is more economical, in respect of fuel, to heat the air in the smelting furnace, where it comes into contact with the coke, and carries it off. in the form of carbonic acid gas, or to heat it previously in a separate furnace. The experiments at the Clyde iron works show that it is heated in the separate furnace with one-eleventh part of the fuel that is required to heat it in the smelting furnace, when allowed to come into contact with ihe coke. One reaso-i why that should be the case is very obvious: in the smelting furnace the air is heated with coke, in the separate furnace with coals. These observations do not apply to the mode of heating the air in a close vessel, by means of the smelting furnace itself, before it is allowed to come into contact with the coke. The experiments with respect to this mode of healing air are still in progress.

Pig-iron, when divested of its carbon, becomes malleable, and we have in this country many extensive manufactories for the express pur—

pose of converting articles made of cast-iron, such as nails, cutlery, &c., into iron perfectly malleable, without altering in the slightest degree the figure given to them in the casting. We have even seen nails made in this way welded together, and when cold bent at right-angles in a vice

The method of releasing the pig-iron of its carbon, or of converting it into what is called wrought or malleable iron, is by placing it in an open furnace, termed a refinery, and by some a run-out furnace, heated by cokes, and subjected to the operation of a very powerful blast. The pig-iron is laid upon the cokes, and is soon melted, leaving much of its impurity behind. This is termed refining it. The metal when melted is run into plates, about four inches thick, and, as soon as it becomes set, is thrown

into water, which makes it mor frangible, and easier to be broken.

The refining furnace is represented in figs. 4, and 5. A is a recess or trough, made of cast metal, having a bottom of fire-stone or brick. This recess is surrounded on three sides by a cavity, through which water is constantly passing from the cistern C; p,p, are two pipes connected with the blowing machine, and entering into conical openings in the refining furnace. These pipes are kept cool by water from the pipe d, which runs off at the pipe bcc. B is a shallow recess, about four inches deep, to receive the melted mass.

We may now furnish a table of the average weight of iron bars, each bar being ten feet in length : —

Inches.

Cwt. qi. Ib.

Inches.

Cwt. qr. Ib.

Inches.

Cwt. qr. Ib.

6 X f

1 I 15

3* X *

0 3 12

2i X I

0 1 23

1

1 0 13

i

0 2 24

i

0 1 10

ft

0 3 19

i

028

f

Oil

$i x f

1 1 1

I

0 1 20

2* X ‘f

022

i

1 0 6

3i X i

035

1

0 1 18

1

0 3 10

f

0 2 18

ft

0 1 14

5X1

1 0 13

ft

024

i

019

1

0 3 23

f

0 1 16

f

010

i

032

3* X i

0 2 27

2 X J

0 1 24

45 x f

1 0 10

*

0 2 14

*

0 1 15

I

0 3 19

I

0 1 27

ft

0 1 11

i

0 2 25

*

0 1 14

i

016

1

025

3 X f

0 2 22

f

0 0 26

4i X i

104

1

028

1* X i

0 1 20

t

0 3 13

i

0 1 23

1

0 1 12

i

0 2 21

1

0 1 10

ft

019

i

0 2 11

2f X i

0 2 14

4

015

4* X *

0 3 25

f

022

t

0 0 24

f

037

i

0 1 20

U x J

0 1 17

i

0 2 17

1

Oj 1 7

1

0 1 10

i

020

2i X i

028

ft

0 1 5

4 X t

0 3 19

4

0 1 25

i -

0 1 2

1

031

i

3

0 1 15

i

0 0 23

*

0 2 12

f

014

U x t

0 1 11

f

0 1 24

tf*

2i X f

IRON-MOULDS, and spots of ink in linen, may be taken out by dipping the stained part in water, sprinkling it with a little of the powdered essential salt of wood-sorrel, then rubbing on a plate, and washing the spot out with warm water.

IRON MOUNTAINS, The Great, in the territory of the United States, extend from the river Tennessee to that of the French Broad, from south-west to north-east ; farther to the north-east, the range has the name of Bald Mountains; and beyond the Nolachucky, that of Iron Mountains. This range constitutes the boundary between the state of Tennessee and North Carolina, and extends from near the lead mines on the Kanhaway, through the Cherokee country, to the south of Chota, and terminates near the sources of the Mobile. The caverns and cascades are innumerable.

IRON-SICK, in the sea language, is applied to a ship or boat, when-her bolts or nails are so eaten with rust, and so worn away, that they occasion hollows in the planks, whereby the vessel is rendered leaky.

IRONWOOD, in botany. See SIDEROXYLON.

IRON-WORT, in botany. See SIDERITIS.

I'RONY, n. s. ˆ Gr. tipuviia ', Fr. ironie.

IRON'ICAL, adj. >A mode of speech in

IRON'ICALLY, adv. j which the meaning is contrary to the words, used in joke or derision: ironical, sarcastic ; playful ; speaking by contraries : ironically, by the use of irony. The address of Elijah to the worshippers of Baal is a fine example of this mode of address, wherein he says, ' Cry aloud, for he is a god,' &c.

Socrates was pronounced by the oracle of Del-phos to be the wisest man of Greece, which he would turn from himself ironically, saying,

nothing in him to verify the oracle, except this, that he was not wise, and knew it ; and others were not wise, and knew it not. Bacon.

In this fallacy may be comprised all ironical mistakes, or expressions receiving inverted significations.

Browne.

The dean, ironically grave, Still shunned the fool, and lashed the knave.

Swift.

So grave a body upon so solemn an occasion, should deal in irony, or explain their meaning by contraries. Id.

IRONY, in rhetoric, is when a person speaks contrary to his thoughts, in order to add force to his discourse ; whence Quintilian calls it diversi-loquium. Thus, when a notorious villain is scornfully complimented with the titles of a very honest and excellent person ; the character of the person commended, the air of contempt that appears in the speaker, and the exorbitancy of the commendations, sufficiently discover the irony. Ironical exhortation is a very agreeable kind of trope ; which, after having set the inconveniencies of a thing in the clearest light, concludes with a feigned encouragement to pursue it. Such is that of Horace, when, having beautifully described the noise and tumults of Rome, he adds .ironically,

‘ Go now, and study tuneful verse at Rome !’ IROQUOIS, the name of six nations in North America, in alliance with the British colonies. Their country is bounded by Canada on the north, by New York and

Pennsylvania on the east and south, and by lake Ontario on the west. In the American war they were allies of Great Britain; and had all their towns destroyed. They have since lived on grounds called the State Reservations, which are settled on all sides by white people, by whose industry the boundaries of the desert are continually encroached upon. The number of inhabitants in all the six nations was, in 1796, 4058. The Stockbridge and Bro-therton Indians, who now live among them, add-ed, make the number 4508, of whom 760 live in Canada, the rest in the United States. IRRA'DIANCE, n. s.-\ Lat. irradio. From IRRA'DJANCY, n. s. { in and radius. Emis-IRRA'DIATE, v. a. f'sion of rays or beams IRRADIA'TION, n.s. J of light: to adorn by the streaming forth of rays of light ; to enlighten ; to animate ; to decorate by shining ornaments : irradiation, the act of emitting rays of light, material or intellectual.

If light were a body, it should drive away the air, •whch is likewise a body, wherever it is admitted , for, within the whole sphere of the irradiation of it, there is no point but light is found.

Digbif on Bodies. Celestial light

Shine inward, and the mind through all her powers Irradiate ; there plant eyes ; all mist from thence Purge and disperse. Milton's Paradise Lost.

Love not the heav'nly spirits 1 Or do they mix trradiance virtual, or immediate touch? Milton.

Ethereal or solar heat must digest, influence, ir- •vdiate, and put those n-are simple parts of matter into motion Hale.

Th? means of immediate union of these intelligible objects to the understanding, are sometimes

divine and supernatural, as by immediate irradiation or revelation. jˆ

The principal affection is its translucency : the irradiancy and sparkling, found in many gems, ig not discoverable in this. Browne's Vulgar Lrrours.

It is not a converting but a crowning grace ; such an one as irradiates and puts a circle of glory about the head of him upon whom it descends. South.

No weeping orphan saw his father's store Our shrines irradiate, or imblaze the floor. Fope. IRRATIONAL, adj. j Lat. in and ratit IRRA'TIONALITY, n. s. > Void of reason or un-IRRA'TIONALLY, adv. 3 derstanding ; absurd ; contrary to reason.

Since the brain is only a transmittent, and that humours oft are precipitated to the lungs before they arrive to the brain, no kind of benefit can be effected from so irrational an application.

Harvey on Consumption*. Thus began

Outrage from lifeless things ; but discord first, Daughter of sin, among the irrational Death introduced. Milton's Paradise Lost.

IRRAWADDY, or IRAVATI, a large river in the Burmhan empire, having its source in the eastern part of Thibet. It is not navigable even for flat-bottomed boats farther than the mountains which divide Ava from China. It enters the Burmhan dominions in or about 25° N. lat. At old Ava, in the rainy season, it may be a mile broad, and very deep; but during the remainder of the year it is not more than half a mile in breadth and eight feet deep. In lat. 17° 50' it divides into two branches ; one of which, running to the south-west, passes the town of Persaim or Bassien ; the other, running to the south-east, passes Rangoon ; but these branches again subdivide into many streams which are met by the tide. The intermediate space is formed into a Delta, covered with trees and long grass, and chiefly inhabited by buffaloes, deer, and tigers. The teak timber does not grow on the banks of this river, but in the mountains, from thirty to sixty miles inland. During the rainy season it is floated down the rivulets, then formed into rafts, and thus conveyed to Rangoon. This river formed the principal theatre for naval hostilitiea during the late Burmhan war. It may be estimated at 600 miles in length, and is of incalcu lable advantage to the country.

IRRECLAIM'ABLE, adj. In, re, and claimable. Not to be reclaimed ; not to be changed to the better ; shameless ; incorrigible.

As for obstinate, irreclaimable, professed enemies, we must expect their calumnies will continue.

Addison't Freeholder.

IRRECONCIL'ABLE,«#.-x Lat tn and IRRECONCIL'ABLENESS, n. s. {reconcilior. Not IRRECONCIL'ABLY, adv. i to be appeased IRREC'ONCILED, adj. 3 by kindness;

not to be set at one again ; not to be made consistent : irreconciled,

still at variance ; rot atoned ; which two words appear exactly to express the meaning of irreconciled.

A servant dies in many irreconciltd iniquities.

Shakspeare.

Wage eternal war,

Imcotfilttble to our grand foe. Milton.

A weak unequal I'aciion may animate a government ; but when it grows equal in strength, ant! if-

recmr.Oabk oy animosity, It cannot end without some crisis. Temple.

There are no factions, though irreconcilable to one another, that are not united in their affection to you.

Drijden.

Since the sense I oppose is attended with such gross irreconcilable absurdities, I presume I need not offer any thing farther in support of the one, or in disproof of the other. Rogers.

This essential power of gravitation or attraction is irreconcilable with the Atheist's own doctrine of a chaos. Bentley.

IRRECOVERABLE, adj. > Lat. in and

IRRECOV'ERABLY, adv.)recupero. Not to be regained, restored, or remedied; hopeless, and helpless, as to condition.

The irrecoverable loss of so many livings of principal value. Hooker.

O dark, dark, dark amid' the blaze of noon ; Irrecoverably dark, total eclipse, Without all hope of day. Milton's Agonistes.

It concerns every man, that would not trifle away his soul, and fool himself into irrecoverable misery, with the greatest seriousness to enquire. Tillotson.

The credit of the Exchequer is irrecoverably lost by the last breach with the bankers. Temple.

Time, in a natural sense, is irrecoverable : the moment just fled by us, it is impossible to recall.

Rogers.

He loathes the world, — or with reflection sad Concludes it irrecoverably mad.

Canning's New Morality.

IRREDU'CIBLE, adj. In and reducible. Lat. in and reduco. Not to be brought or reduced.

These observations seem to argue the corpuscles of air to be irreducible into water. Boyle.

IRREFRAGABIL'ITY, n. *.} Lat. in, re, IRREF'RAGABLE, adj. >frango. Not

IRREF'RAGABLY, adv. j to be confuted or overthrown by argument.

Strong and irrefragable the evidences of Christianity must be : thej who resisted them would resist every thing. Atterbury's Sermons.

That they denied a future slate is evident from St. Paul's reasonings, which are of no force but only on that supposition, as Origen largely and irrefragably proves. Atterbury..

The danger of introducing unexperienced men was urged as an irrefragable reason for working by slow degrees. Swift.

IRREG'ULAR, adj.-\ Lat. in and regula.

IIIREGULAR'ITY, n. s. f Deviating from rule,

IRREG'ULARLY, adv. £ custom, or nature; im—

IRREG’ULATE, v. a. J methodical : a soft word for vice : irregulate, to make irregular or disorderly: verbs are called irregular which deviate from general rules.

This motion seems excentrique and irregular, yet not well to be resisted or quieted. King Charles.

The numbers of pindariques are wild and irregular, and sometimes seem harsh and uncouth. Cowley. Regular

Then most, when most irregular they seem.

Milton.

Tins irregularity of its unruly and tumultuous motion might afford a beginning unto the common opinion. Browne.

Its fluctuations are but motions subservient, which winds, shelves, and every interjacency irregulutes.

Id.

Your’s is a soul irregularly great. Which, wanting temper, yet abounds with heat.

Dryden.

It may give some light to those whose concerns for their little ones makes them so irregularly bold as to consult their own reason in the education of their children, rather than to rely upon old custom.

Locke.

Religion is somewhat less in danger of corruption, while the sinner acknowledges the obligations of his duty, and is ashamed of his irregularities.

Rogers.

O’er the irregulars in lust or gore, Who do not give professional attendance.

Byron. Don Juan.

IRREL’ATIVE, adj. Lat. in and relatima. Having no reference to any

thing ; single ; unconnected.

Separated by the voice of God, things in their species came out in uncommunicated varieties, and irrelative seminalities. Browne's Vulgar Errours.

IRRELIGIOUS, adj. ˆ Fr. trreligion ; Lat IRRELIG'ION, n. s. >m anc' religio. Not IRRET.IG'IOUSLY, adv. j acknowledging dependence upon, and obligation to, the deity; impious ; profane : contempt of relisrion ; acting in opposition to the dictates of piety : irreligiously, carelessly with respect to God; irreverently in holy services.

Religion's blot, but irreligion's paint ; A saint abroad, at home a fiend.

Fletcher's Purple Island. And the priest

Was not behind, but ever at my ear, Preaching how meritorious with the gods It would be to ensnare an irreligious Dishonorer of Dagon.

Milton. Samson Agonistes.

The weapons with which I combat irreligion ar$ already consecrated. Dryden.

Shame and reproach is generally the portion of the impious and irreligious. South.

We behold every instance of prophaneness and irreligion, not only committed, but defended and gloried in. Rogert.

Might not the queen's domesticks be obliged to avoid swearing and irreligious profane discourse ?

Swift.

IRRE'MEABLE, adj. Latin, irremeabilit. Admitting no return.

The keeper charmed, the chief without delay Passed on, and took the irremeable way. Dryden.

IRREME'DIABLE, adj. 3 ¥T. irremediable ;

IRREME'DIABLY, zav. $ Lat. ?> and reme-dium. Admitting no cure; not to be remedied.

They content themselves with that which was the irremediable error of former times, or the necessity of the present hath cas* upon them.

Hooker.

It happens to us irremediably and inevitably, that we may perceive these accidents are not the fruits of our labour, but gifts of God.

Taylor's Worthy Communicant.

Whatever he consults you about, unless it lead to some fatal and irremediable mischief, be sure you ad-vise only as a friend. Locke.

IRREMIS'SIBLE, adj. 1 Lat. in and remil-IRREMIS'SIBLENESS, n. s. S to. Not to be pardoned ; beyond the reach of forgiveness.

Thence arises the aggravation and irremissibienest of the sin. Hammond on Fundamentals.

IRREMOVABLE, adj. Lat. in and remo-vco. Not to be removed ; not to be changed.

He is irremovable, Resolved for flight. Shakspeare. Winter's Tale.

IRRENOWNED', adj. Fr. in and renommc; Lat. in, re, nomen. Void of honor. We now say unrenowned.

For all he did was to deceive good knights,

And draw them from pursuit of praise and fame To sluggish sloth and sensual delights,

And end their day.s with irrenowned shame.

Faerie Queene.

IRREP'ARABLE, adj.) Lat. in and reparo.

IUREP’ARABLV, adv. S Not to be recovered or repaired: without amends or reparation.

Irreparable is the loss, and Patience says it is not past her cure. Shakspeare. Tempest.

The cutting off that time, industry and gifts, whereby she should be nourished, were irreparably injurious to her. Decay of Piety.

Toiled with loss irreparable. Milton.

It is an irreparahle injustice we are guilty of, when we are prejudiced by the looks of those whom we do not know. Addison.

IRREPLEVIABLE, adj. Lat. in and repleo. Not to be redeemed ; a law term.

IRREPREHEN’SIBLE, adj. i Lat. in and

IRREPREHEN’SIBLY, adv. S reprehendo.

Not to be censured ; without blame.

IRREPRESENT/ABLE, adj. Lat. in, re, present. Not to be figured by any representation.

God’s irrepresentable nature doth hold against mak-ing images of God. StMingfleet.

IRREPROACH’ABLE, adj. J Tr.reprocher;

IRREPROACH’ABLY, adv. } Lat. in and op—

probium. Free from reproach : without censure.

He was a serious sincere Christian, of an innocent, irreproachable, nay, exemplary life. Atterbury.

Their prayer may be, that they may raise up and breed as irreproachable a young family as their parents Lave done. Pupe.

IRREPROV’EABLE, adj. Lat. in and re- ?)/W«>. Not to be blamed ; irreproachable.

IRRESISTIBILITY, n. s.-v Lat. in and re—

IRRESIST’IBLE, adj. t sisto. Power

IRRESIS’TIBLY, adv. £ above effectual

IRRESIST’LESS, adj. J opposition : superior to opposition : irresistless, a bad word, compounded of two negatives, meaning resistless.

Fear doth grow from an apprehension of the Deity, indued with irresistible power to hurt ; and is of all affections, anger excepted, the unaptest to admit conference with reason. Hooker.

The doctrine of irresistibility of grace, if it be acknowledged, there is nothing to be affixt to gratitude.

Hammond. In mighty quadrate joined

Of union irreiislible. Milten.

Those radiant eyes, whose irresistless flame

Strikes Envy dumb, and keeps Sedition tame,

They can to gazing multitudes give law,

Convert the factious, and the rebel awe.

Glanville.

God irresistibly sways all manner of events on earth.

Dry den.

There can be no difference in the subjects, where the application is almighty and irresistible, as in creation. Rogers.

Fond of pleasing and endearing ourselves to those we esteem, we are irresistibly led into the same inclinations and aversions with them. Id.

Won by the charm

Of goodness irresistible, and all

In sweet disorder lost, she blushed consent.

Thomson.

IRRES’OLUBLE, adj. ~} Lat. in and resol—

IKRES’OLITBLENESS, n. s. vo ; Fr. irrtsolii.

IRRESOLV’EDLY, adv. jˆThese woTds have

IRRES’OLUTE, adj. f opposite meanings :

IRRES’OUJTELY, adv. I the two first imply

IURESOLTJ’TIOX, n.s. Ja state not to be broken or dissolved, the others signify inconstancy ; want of courage or determination ; without firmness of mind or determined purpose.

Were he evil-used, he would outgo His father, by as much as a performance Does an irresolute purpose. Shakspeare. Henry VIII.

It hath most force upon things that have the lightest motion, and therefore upon the spirits of men, and in them upon such affections as move lightest; as upon men in fear, or men in irresolution.

Bacotis Natural History.

Divers of my friends have thought it strange to hear me speak so irresohedly concerning those things, which some take to be the elements, and others the principles of all mixed bodies. Boyle.

In factitious sal ammoniac the common and urinous salts are so well mingled, that both in the open fire and in subliming vessels they rise together as one salt, which seems in such vessels irresoluble by fire alone. Id.

Quercetanus has this confession of the irretoluble-ness of diamonds. Id.

So Myrrha’s mind, impelled on either side,

Takes every bent but cannot long abide ;

Irresolute on which she should rely,

At last, unfixed in all, is only fixed to die.

Dryden.

Irresolution on the schemes of life, which offer themselves to our choice, and inconstancy in pursuing them, are the greatest causes of all our unhappiness. Addison.

IRRESPECTIVE,^', i Lat. in respecto.

IRRESPECTIVELY, adv. $ Having no regard to circumstances.

He is convinced, that all the promises belong to him absolutely and irrespectively. Hammond.

Thus did the Jew, by persuading himself of his particular irrespective election, think it safe to run into all sins ! Id.

According to this doctrine, it must be resolved wholly into the absolute irrespective will of God.

Rogert.

IRRETRIEVABLE, o<# } Fr. in retrouver.

IRRETRIEVABLY, adv. i Not to be regained or recovered.

It would not defray the charge of the extraction, and 'herefore must have been all irretrievably lost, and useless to mankind, was it not by this means collected. Woodward.

IRREVERENCE, n. $. } Lat. in revereor.

IRREV'ERENT, adj. > Want of due ve—

IRREV'ERENTLY, adv. J neration or respect; state of being disregarded : these words are generally applied to the demeanor as irreverent; or language or manner, as not yielding due homage.

Irreverence is, whan man doth not honour ther as him ought to do and waitheth to be reverenced.

Chaucer. The Personet Tale.

As our fear excludeth not that boldness which becometh saints, so, if our familiarity with God do not savour of fear, it draweth too near that irreverent confidence wherewith true humility can never stand.

Hwktr.

Having seen our scandalous irreverence towards Cod's worship .n general, 'tis easy to make application to the several parts of it. Decay of Piety.

The concurrence of the house of peers in that fury can be imputed to no one thing more than to the irreverence and scorn the judges were justly in, who had been always looked upon there as the oracles of the law. Clarendon.

Witness the irreverent son Of him who built the ark ; who, for the shame Done to his father, heard his heavy curse, Servant of servants, on his vicious race. Milton.

If an irreverent expression or thought too wanton are crept into my verses, through my inadvertency, let their authors be answerable for them. Dryden.

They were a sort of attiibutes, with which it was a matter of religion to salute them on all occasions, and which it was an irreverence to omit. Pope.

IRREVERSIBLE, adj. i Lat. in reverto.

IRREVER'SIBLY, adv. 5 Not to be recalled or changed.

The title of fundamentals, being ordinarily confined to the doctrines of faith, hath occasioned that great scandal in the church, at wuich so many myriads of solifidians have stumbled, and fallen irre-versibly, by conceiving heaven a reward of true opinions. Hammond on Fundamentals.

The sins of his chamber and his closet shall be produced before men and angels, and an eternal irre-versible sentence be pronounced. Rogen.

IRREVOCABLE, adj.) Fr. irrevocable ; IRREVOCABLY, adv. S Lat. in revoco. Not

to be recalled ; not to be brought back ; not to

be reversed.

But sith that he his gone irrevocable, Please it you, Ladie, to us to

aread What cause could make him so dishonourable To drive yon on foot, unfit to tread, And lackey by him, gainst all woman head.

Spenser's Faerie Queene.

Give thy hand to Warwick, And, with thy hand, thy faith irrevocable, That only Warwick's daughter shall be thine.

Shakspeare. Firm and irrevocable is my doom.

Id. As You Like It.

That which is past is gone and irrevocable, therefore they do but trifle, that labour in past matters.

Bacon'* Essays

The second, both for piety renowned, And puissant deeds, a promise shall receive Irrevocable, that his regal throne For ever shall endure. Milton's Paradise Loit. If air were kept out four or five minutes, the fire would be irrevocably extinguished. Boyle.

By her irrevocable fate,

War shall the country waste, and change the state,

Dry den.

IR'RIGATE, v. a.-j Lat. irrigo. To wet ; IRRIGATION, n. s. Mo moisten with water: IRRIG'UOUS, adj. j the act of" watering or moistening. Irriguous, watery ; dewy ; moist. Help of ground is by watering and irrigation.

Bacon.

The flowery lap

Of some irrigitous valley spread her store Flowers of all hue, and without thorns the rose.

Milton.

The heart, which is one of the principal parts of the body, doth continually irrigate, nourish, keep hot, ;IP<! supple all the members.

I?au on the Creation,

Hash Elepenor

Dried an immeasurable bowl, and thought To' exhale his surfeit by irriguous sleep : Imprudent ! him death's iron sleep opprest.

Phillip:.

IRRIGATION, as a mode of agriculture, has been slightly adverted to under the article ot the latter name. See AGRICULTURE, Index. Its early use, its great importance in the east, and the strong partiality of some modern European agriculturists, will justify some further observations upon the subject.

The Romans applied watering on a large scale, both to arable and grass lands, particularly the latter. ' As much as in your power,' says Cato, * make watered meadows.' Virgil (Georg. 1, c. 104 — 118) advises to

Call the floods from high, to rush amain With pregnant streams, to swell the turning grain. Then, when the fiery suns too fiercely play, And shrivelled herbs on withering stems decay, The wary ploughman on the mountain's brow Undams his watery stores — huge torrents flow, And rattling down the rocks large moisture yield, Tempering the thirsty fever of the field.

' Neither a low field,' says Columella, ' with hollows, nor a field broken with steep rising grounds, is proper for water meadows. The first because it contains too long the water collected in the hollows ; the last, because it makes the, water to run too quickly over it. A field, however, that has a moderate descent, may be made a meadow, whether it is rich or poor, if so situated as to be watered. But the best situation is, where the surface is smooth, and the descent so gentle as to prevent either showers, or the rivers that overflow it, from remaining long ; and, on the other hand, to allow the water that comes over it gently to glide off. Therefore, if, in any part of a field intended for a meadow, a pool of water should stand, it must be let off by drains ; for the loss is equal, either from too much water or too little grass.' (Col. lib. ii. cap. 17). Watering, Pliny states, was commenced immediately after the equinox, and restrained when the grass sent up flower stalks; it was recommenced in mowing grounds, after the hay season, and in pasture lands at intervals.

In Hindostan to this day the operation of conveying water to and from the fields is one of the most expensive and troublesome in their

agricultural system ; particularly in Ihe higher districts. In the Monghere district of Bengal a deep well is dug in the highest part of the field, which, being ploughed, is divided into little square plots, resembling the chequers of a chess board. Each square is surrounded with a border, four inches high, capable of containing water : while, between the chequers thus constructed, small dykes are formed for conveying a rivulet over the whole field. As soon as the water has stood a sufficient time in one square for it to imbibe moisture, it is let off into the next by opening a small outlet through the dyke. Thus one square after another is irrigated, till the whole field is gone over. The water is raised in leathern bags by two bullocks, yoked to a rope ; the cattle retiring from the well, and returning

tc its mouth, according as the bag is meant to be raised, or to descend. The rope is kept per-nendicular in the pit by a pulley, over which it runs; and, from the mouth of the well thus placed the rivulets are formed. In Patna the leatnern bags are raised by long bamboo levers, as buckets are in this country.

Dr. Davy gives an interesting account of the prevalence of this practice at Ceylon. The cultivation in the interior of that country, he says, is of two kinds, the dry and the wet. The for-mer consists in cutting down and grubbing up the wood on the sides of hills, where particular varieties of rice and Indian corn are afterwards sown : the latter, by far the most general mode, is carried on wherever water can be obtained for irrigation. ‘ Most of the operations in the cultivation of paddy] he states, ‘ are connected with or have some relation to the element on which its success depends. The farmer commences with repairing the banks of the paddy-field. He then admits water in sufficient quantity to be an inch or two deep over the whole surface. After the ground has been well macerated and softened, he ploughs it, still under water. After farther maceration it is ploughed again, or merely trampled over by buffaloes, till reduced to the state of mud. Its surface is now levelled and smoothed. The water is drawn off, and the paddy, having been previously steeped in water till it has begun to

germinate, is sown with the hand, and is scattered as equally as possible over the moist surface of mud. When the seed has taken root, and before the mud has had time to dry, the openings through which the water was drawn off are closed, and the field is again inundated. When the paddy is two or three inches high, it is weeded ; and, where the seed has failed, the vacant spots are planted from those parts which are too thick and require thinning. The irrigation is continued till the paddy is nearly full-grown and about to ripen, when the openings are made in the banks and the field is drained. As soon as ripe, the paddy is cut with reaping-hooks, and immediately carried to the threshing-floor, where the grain is trampled out by buffaloes. From the moment the seed is sown, till the period of harvest, the paddy-field, like the chenas, requires constant nightly watching to protect it from the depredations of its wild enemies. In the low country, where the cultivation of paddy is in a great measure dependent on the rainy reason and on artificial reservoirs for a farther supply of water, only one crop is procured annually ; but amongst the mountains, in situations where perpetual irrigation is at command, the seasons are less concerned ; the farmer can sow when he pleases, and from good ground annually obtain two, and I have heard even three crops. The hilly and mountainous districts, in consequence of being well supplied with water, are thus particularly favorable for the cultivation of this important grain : and it is a most fortunate circumstance that they are so ; otherwise the coolest, most salubrious, and most beautiful parts of the interior would, instead of being cultivated to a certain extent, be quite neglected and deserted. In the low country the paddy-fields are generally of a

large size, and apparently quite flat ; and every crop being in the same stage of vegetation, or nearly so, the whole exhibits very little variety of surface. Amongst the mountains it is quite different; — paddy-fields there are a succession of terraces or flights of steps ; and in each field the crop may be in different stages of growth,— in some just vegetating, in others full-grown, ripening, or ripe ; there at the same time you may see the laborers at all their different operations,— banking, ploughing, sowing, weeding, reaping, and treading out the grain. I do not know any scene more interesting than a highland ralley thus cultivated, or more beautiful, when (as it generally is) it is surrounded by the bold, wild, and frequently savage scenery of untamed nature. In the low lands the labor and skill required to cultivate paddy are less than are necessary in the high lands. In cutting terraces in the sides of hills, the perseverance and industry of the mountaineer are often in a striking manner displayed. Many of his beds are actually

walled up, and many of them are not four feet wide, and though generally long, occasionally they are so short, from the nature of the ground, as well as narrow, that one would not suppose they were worth the labor of keeping in repair and much less of making. In bringing water to his fields, and insuring them a constant supply, the judgment and skill of the cultivator are most exercised. Sometimes it is conducted two or three miles along the side of a hill, and occasionally it is even carried from one side of a mountain to another by means of wooden pipes.'

' In surface irrigation,' says Mr. Loudon, ' the water is conveyed in a system of open channels, which require to be most numerous in such grounds as are under drilled annual crops, and least so in such as are sown in breadths, beds, or ridges, under perennial crops. This mode of watering has existed from time immemorial. The children of Israel are represented as sowing their seed and watering it with their foot ; that is, as Calmet explains it, raising the water from the Nile by a machine worked by the feet, from which it was conducted in such channels as we have been describing. It is general in the south ot France and Italy; but less required in Britain.

' Subterraneous irrigation may be effected by a system of drains or covered gutters in the subsoil, which, proceeding from a main conduit, or other supply, can be charged with water at pleasure. For grounds under the culture of annual plants, this mode would be more convenient, and for all others more economical as to the use of water, than surface irrigation. Where the under stratum is gravelly, and rests on a retentive stratum, this mode of watering may take place without drains, as it may also on perfectly flat lands, by filling to the brim, and keeping full for several days, surrounding trenches ; but the beds or fields between the trenches must not be of great extent. This practice is used in Lombardy on the alluvial lands near the embouchures of the Po. In Lincolnshire the same mode is practised by shutting up the flood gates of the mouths of the great drains in the dry seasons, and thus damming up the water through all the ramifications of the drainage from the sea

to their source. This was first suggested by G. Kennie and Sir Joseph Banks, after the drainage round Boston, completed about 1810. A similar plan, on a smaller scale, had been practised in Scotland, where deep mosses had been drained and cultivated on the surface, but where, in sum-mer, vegetation failed from deficiency of moisture. It was first adopted by J. Smith (see Essay on the Improvement of Peat-Moss, 1 795), on a farm in Ayrshire, and has .subsequently been brought into notice by J. 5ohnston, the first delineator and professor of Elkinton's sys-tem of draining.

' Irrigation with a view to conveying additions to the soil (or for manuring it in fact), has long been practised, and is an evident imitation of the overflowing of alluvial lands, whether in meadow or aration. In the former case it is called irrigation or flooding, and in the latter warping. Warping is used chiefly as a mode of enriching the soil by an increase of the alluvial depositions, or warp of rivers, during winter, where the surface is not under crop, and is common on the banks of the Ouse.

' Subterraneous irrigation appears to have been first practised in Lombardy, and first treated of by professor Thouin. (Annales de Musee", &c.) It consists in saturating a soil with water from below, instead of from the surface, and is effected by surrounding a piece of ground by an open drain or main, and intersecting it by covered drains communicating with this main. If the field is on a level, as in most cases where the practice is adopted in Lombardy, all that is necessary is to fill the main and keep it full till the lands have been sufficiently soaked. But, if .it lies on a slope, then the lower ends of the drains must be closely stopped, and the water admitted only into the main on the upper side : this main must be kept full till the land is soaked, when the mouths of the lower drains may be opened to carry off the superfluous water. The practice is applicable either to pasture or arable lands. In Britain, subterraneous irrigation has been applied in a very simple manner io drained bogs and morasses, and to fen lands. All that is necessary is to build a sluice in the lower part of the main drain where it quits the drained grounds, and in dry weather to shut down this sluice, so as to dam ap the water and throw it back into all the mi-nor open drains, and also the covered drains. This plan has been adopted with success, first, as we believe, by Smith, of Swineridge Muir, in Ayrshire, and subsequently by Johnson, in the case of several bog drainages executed by him in Scotland. It is also practised in Lincolnshire, where it was introduced by the advice of the late engineer Rennie, after the completion of a public drainage at

Boston.'

' In general in nature the Operation of water,' says Sir II. Davy, ' is to bring earthy substances into an extreme state of division. But, in the artificial watering of meadows, the beneficial effects depend upon many different causes, some chemical, some mechanical. Water is absolutely essential to vegetation ; and when land has been covered by water in the winter, or in the beginning of spring, the moisture that has penetrated deep into the soil, and even the subsoil, becomes

a source of nourishment to the roots of the plants in the summer, and prevents those Lad effects that often happen in lands in their natural state, from a long contmuanoe of dry weather. When the water used in irrigation has flowed over a calcareous country, it is generally found impregnated with carbonate of lime ; and in this state it tends, in many instances, to ameliorate the soil. Common river water also generally contains a certain portion of organisable matter, which is much greater after rains that at other times; or which exists in the largest quantity when the stream rises in a cultivated country. Even in cases when the water used for flooding is pure, and free from animal or vegetable substances, it acts by causing a more equable diffusion of nutritive matter existing in the land ; and in very cold seasons it preserves the tender roots and leaves of the grass from being affected by frost. Water is of greater specific gravity at 42° Fahrenheit than at 32°, the freezing point; and hence, in a meadow irrigated in winter, the water immediately in contact with the grass is rarely below 40°, a degree of temperature not at all prejudicial to the living organs of plants. In 1804, in the month of March, the temperature in a water meadow near Hungerford was examined by a very delicate thermometer. The temperature of the air at seven in the morning was 29°. The water was frozen above the grass. The temperature of the soil below the water, in which the roots of the grass were fixed, was 43°. Water may also operate usefully in warm seasons by moderating temperature, and thus retarding the over-rapid progress of vegetation. The consequence of this retardation will be greater magnitude and improved texture of the grosser parts of plants, a more-perfect and ample develop-ment of their finer parts, and, above all, an increase in the size of their fruits and seeds. We apprehend this to be one of the principal uses of flooding rice-grounds in the east; for it is ascertained that the rice-plant will perfect its seedi in Europe, and even in this country, without any water beyond what is furnished by the weather, and the natural moisture of a well constituted soil. It is a general principle, that waters containing ferruginous impregnation, though

possessed of fertilising effects when applied to a calcareous soil, are injurious on soils that do not effervesce with acids ; and that calcareous waters, which are known by the earthy deposit they afford when boiled, are of most use on siliceous soils, or other soils containing no remarkable quantity of carbonate of lime.'

IRRIS'ION, n. s. ft. irrision; Lat. irrisio. The act of laughing at another.

Ham, by his indiscreet and unnatural irrision, and exposing of his father, incurs his curse. Woodward.

IR'RITATE, v. a. 3 Fr. irritt r ; Lat. irrito.

IRRITA'TION, n. s. $To provoke, teaze, or exasperate ; to fret, stimulate, or vesicate : the original meaning appears to be, to rub against. Irritation, provocation; stimulation; vesication.

Air, if very cold, irritateth the flame, and maketh it burn more fiercely, as fire scorcheth in frosty weather. Bacon.

When they are collected, the heat becometh more violent and ii-ritate, and thereby expelleth sweat.

Hacon'i Natural History.

Violent affections and irritations of the nerves, in any part of the body are caused by something acrimonious. Arbuthnot.

Roused

By dash of clouds, or irritating war Of fighting winds, while all is calm below, They furious spring. Thornton's Summer.

IRRITABILITY, in anatomy and medicine* a term first invented by Glisson, and adopted by Dr. Haller, to denote an essential property of all animal bodie? , which, he says, exists independently of and in contradistinction to sensibility. This ingenious author calls that part of

the hu-man body irritable which becomes shorter upon being touched ; very irritable, if it contracts upon a slight touch ; and the contrary, if by a violent touch it contracts but little. He calls that a sensible part of the human body which upon being touched transmits the impression of it to the soul ; and in brutes, he calls those parts sensible, the irritation of which occasions evident signs of pain and disquiet in the animal. On the contrary, he calls that insensible which being burnt, torn, pricked, or cut till it is quite destroyed, occasions no sign of pain nor convulsion, nor any sort of change in the situation of the body. From the result of many cruel experiments he concludes, that the epidermis is insensible; that the skin is sensible in a greater degree than any other part of the body ; that the fat and cellular membrane are insensible; and the muscular flesh sensible, the sensibility of which he ascribes rather to the nerves than to the flesh itself. The tendons, he says, having no nerves dismbuted to them, are insensible. The ligaments and capsulse of the articulations are also concluded to be insensible ; whence Dr. Haller infers, that the sharp pains of the gout are not seated in the capsulae of the joint, but in the skin, and in the nerves which creep upon its external surface. The bones are all insensible, says Dr. Haller, except the teeth ; and likewise the marrow. The arteries and veins are held susceptible of little or no sensation, except the carotid, the lingual, temporal, pharyngal, labial, thyroidal, and the aorta near the heart ; the sensibility of which is ascribed to the nerves that accompany them. Sensibility is allowed to the internal membranes of the stomach, intestines, bladder, ureters, va-gina, and womb, on account of their being of the same nature with the skin : the heart is also admitted to be sensible ; but the lungs, liver, spleen, and kidneys, are possessed of a very imperfect, if any sensation. The glands, having few nerves, are endowed with only an obtuse sensation. Some sensibility is allowed to the tunica choroi-dis and the iris, though in a less degree than the retina ; but none to the cornea. Dr. Haller concludes, in general, that the nerves alone are sensible of themselves ; and that, in proportion to the number of nerves apparently distributed to particular parts, such parts possess a greater or less degree of sensibility. Irritability, he says, is so different from sensibility, that the most irritable parts are not at all sensible, and vice versa. He alleges facts to prove this position, and also to demonstrate, that irritability does not depend upon the nerves, which are not irritable, but upon the original formation of the

pails which are susceptible of it. Irritability, he says, is not proportioned to sensibility; in proof of which, he observes, that the intestines, though rather less sensible than the stomach, are more

irritable ; and that the heart is very irritable, though it has but a small degree of sensation. Irritability, according to Dr. Haller, is the distinguishing characteristic between the muscular and cellular fibres; whence he determines the ligaments, periosteum, meninges of the brain, and all the membranes composed of the cellular substance, to be void of irritability. The tendons are unirritable; and, though he does not absolutely deny irritability to the arteries, yet his experiments on the aorta produced no contraction. The veins and excretory ducts are in a small degree irritable, and the gall bladder, the ductus chole-dochus, the ureters and urethra, are only affected by a very acrid corrosive ; but the lacteal vessels are considerably irritable. The glauds and mucous sinuses, the uterus in quadrupeds, the humatrix, and the genitals, are all irritable ; as are also the muscles, particularly the diaphragm. The oesophagus, stomach, and intestines, are irritable : but of all the animal or-gans the heart is endued with the greatest irritability. In general, there is nothing irritable in the animal body but the muscular fibres ; and the vital parts are the most irritable. This power of motion, arising from irritations, is supposed to be different from all other properties of bodies, and probably resides in the glutinous mucus of the muscular fibres, altogether independent of the influence of the soul. The irritability of the muscles is said to be destroyed by drying of the fibres, congealing of the fat, and more especially by the use of opium in living animals. The physiological system, of which an abstract has been now given, has been adopted and confirmed by Castell and Zimmermann, and also by Dr. Brocklesby, who suggests, that irritability, as distinguished from sensibility, may depend upon a series of nerves different from such as serve either for voluntary motion or sensation. This doctrine, however, has been controverted by M. le Cat ; by Dr. Whytt in his Physiological Essays ; and by Dr. Monro. See ANATOMY.

IRROGATIO, a law term amongst the Ro-mans, signifying the instrument, in which were put down the punishments which the law provided against such offences as any person was accused of by a magistrate before the people. These punishments were first proclaimed viv& voce by the accuser, and this was called Inquisitio : the same being immediately after expressed in writing, took the name of Rogatio, in respect of the people, who were to be consulted or asked about it ; and was called Irroga-tio, in respect of the criminal, as it imported the mulct of punishment assigned him by the accuser.

IRROMANGO, orERRAMANGo, one of the New Hebrides, is about twenty-four or twenty-five leagues in circuit ; the inhabitants are middle-sized, and have a good shape and tolerabfc features. Their

color is very dark ; and they paint their faces, some of them with black, and others with red pigment : their hair is curly

crisp, and somewhat woolly. Few women were seen, and those very ugly : they xvore a petticoat made of the leaves of some plant. The men were quite naked, excepting a belt tied about the waist, and a piece of cloth, or a leaf, used for a wrapper. They live in houses covered with thatch : and their plantations are laid out by line, and fenced round. An unluckly scuffle between the British sailors and these people, in which four of the latter were desperately wounded, prevented captain Cook from procuring any particular information concerning the produce, &c. See COOK. The middle of this island lies in long. 169° 19’ E., lat. 18° 54’ S.

IRRUPTION, n. s. Fr. irruption ; Lat. ir-rttptio. The act of forcing an entrance ; the burst of invaders into any place.

A full and sudden irruption of thick melancholick blood into the heart puts a stop to its pulsation.

Harvey. I refrain, too suddenly,

To utter what will come at last too soon ;

Lest evil tidings, with too rude irruption,

Hitting thy aged ear, should pierce too deep.

Milton.

There are frequent inundations made in maritime tountries by the irruption of the sea. Burnet.

Notwithstanding the irruptious of the barbarous •rations, one can scarce imagine how so plentiful a soil should become so miserably unpeopled.

Addison.

IRTIS, or IRTISCH, a large river of Asia, in Siberia, which rises among the hills of the country of the Kalmucks, and, running north-east falls into the Oby near Tobolsk. It abounds with fish, particularly sturgeon, and delicate salmon.

IRVINE, a river of Scotland in Ayrshire, which rises in the parish of Louden on the east of Louden Hill, and passing by Derval, New-mills, Glaston, and Riccarton, falls into the Frith of Clyde below Irvine.

IRVINE, or IRWINE, a seaport and royal burgh, in Ayrshire, and bailiwic of Cunningham, seated at the mouth of the river of the same name. This port had formerly several bus-ses in the herring fishery. At present the inhabitants employ a number of brigs in the coal trade to Ireland. Irvine has a dockyard for ship-building, a tan-work, ropery, and bleachfield. Its commerce had greatly increased be-fore the war. About 24,000 tons of coals are exported annually ; besides great quantities of carpets, muslins, linens, silk, lawns, gauzes, &c. The imports are hemp, iron, wood, hides, and corn. Irvine lies fifteen miles east of the isle of A-ran, and sixty west by south of Edinburgh.

IS. ‘jax. ij-. See To BE. The third person singular of to be: I am, thou art, he is : it is sometimes expressed thus ‘s.

Be not afraid of them, for they cannot do evil > neither is it in them to do good. ‘ Jer. x. 5.

He that is of God, heareth God’s words.

John viii. 47.

Here is the Quene of Faerie, With harpe, and pipe, and simpnonie, Dwelling in this place !

Chaucer. The Rime of Sire TTtopas. Yon is (thought I) some spirite or some elfe, Kis sole, image in so curious.

Id. The Ccurt flf Love.

Such is the state of men ! thus enter we

Into this life with woe and end in miseree.

Spenser. Faerie Queene.

There's some among you have beheld me fighting.

Sltakspeare.

My thought, whose murther yet is but fantastical, Shakes so my single state of man, that function Is smothered in surmise ; and nothing is, But what it not. Id. Macbeth.

That our condition is the worst And with such misfortunes curst As all comparison defy Was late the universal cry. Beattie.

And should the ceaseless vultures cease to prey On self condemning bosoms, it were here, Where Nature, nor too sombre or too gay, Wild but not rude, awful yet not austere, Is to the mellow Earth as Autumn to the year.

Byron. Childe Harold.

ISAAC, in sacred history, the only son of Abraham and Sarah ; the progenitor of the Edomites by his eldest son, and of the Israelites by his youngest. His history is recorded in Genesis xxi— xxx. He died A. A. C. 1716, aged 180.

ISABELLA, POINT, a port and cape of His-paniola, on the north side of the island, the place where Columbus established the first settlement, which he named after his patroness queen Isabella. It is about eighty-seven miles east by north of Cape Francois. Lat. 19° 59' 10' N.

IS.&US, a Greek orator born at Colchis, in Syria, was the disciple of Lysias, and the master of Demosthenes; and taught eloquence at Athens, about 344 A. A. C. Sixty-four orations are attributed to him ; but he composed no more than fifty, of which only ten are now remaining. He was the first who applied eloquence to politics, in which he was followed by his disciple Demosthenes.

Isˆus was also the name of another celebrated orator, who lived at Rome in the time of Pliny the Younger, about A. D. 97.

ISAIAH, the first of the four greater prophets, was of the royal blood, his father Amos being brother to Uzziah king of Judah. The first five

chapters of his prophecy relate to the reign of Uzziah ; the vision in the sixth chapter happened in the time of Jotham : the next nine chapters, to the fifteenth, include his prophecies under Ahaz ; and those that were made under Hezekiah and Manasseh are related in the next chapters to the end. Isaiah foretold the deliverance of the Jews from their captivity in Babylon by Cyrus, 100 years before it came to pass. But the most remarkable of his predictions are those concerning the Messiah, which describe not only his descent, but all the principal circumstances of his life and death, so partioularl;', that he is justly styled the evangelical prophet, His style is noble, nervous, and sublime. Grotius calls him the Demosthenes of the Hebrews. He also wrote a history of king Uzziah's reign (2 Chron. xxvi. 22) which is not extant. During the persecution under Manasseh he is said to have been sawn asunder, about A. M. 3180; after having prophesied ninety-six years, from the twenty-eighth of Uzziah to the twelfth of Manasseh.

ISATIS, in botany, woad, a genus of the siliquosa order, tetradynamia class of plants ; na-

tural oiuer thirty-ninth, siliquosa. The siliqua is lanceolated, unilocular, mouospermous, bivalved, and deciduous ; the valves navicular or canoe-shaped. There are five species ; but the only one worthy of notice is

1. tinctoria, or common woad, which is cultivated in several parts of Britain for dyeing ; being used as a foundation for many of the dark colors. The plant is biennial ; the lower leaves are of an oblong oval figure, and pretty thick consistence, ending in obtuse roundish points ; they are entire on their hedges, and of a lucid green. The stalks rise four feet high, dividing into several branches, garnished with arrow-shaped leaves sitting close to the stalks ; the branches are terminated by small yellow flowers, in very close clusters, composed of four small

petals in form of a cross, which are succeeded by pods shaped like a bird's tongue, which, when ripe, turn black, and open with two valves, having one cell, in which is situated a single seed. This plant is never cultivated long in the some spot : for the best ground will not admit of being sown with woad more than twice; if oftener repeated, the crop seldom pays the charges. As the goodness of woad consists in the size and fatness or thickness of the leaves, the only method to obtain this, is by sowing the seed upon ground at a proper season ; allowing the plants proper room to grow; and keeping them clean from weeds, which, if permitted to grow, rob the plants of their nourishment. After having chosen a proper spot of land, which should not be too light and sandy, nor over stiff and moist, but rather a gentle hazel loam, whose parts easily separate, plough this up just before winter, laying it in narrow high ridges, that the frost may penetrate through the ridges to mellow and soften the clods ; then in spring plough it again crosswise, laying it in narrow ridges. After it has lain for some time, and the weeds begin to grow, it should be well harrowed to destroy them : this should be repeated twice while the weeds are young ; and, if there be any roots of large perennial weeds, they must be harrowed out, and carried off the ground. In June the ground should be ploughed a third time, when the furrows should be narrow, and the ground stirred as deep as the plough will go, that the parts may be as well separated as possible ; and, when the weeds appear again, the ground should be well harrowed to destroy them. Toward the end of July, or the beginning of August, it should be ploughed the last time, when the land should be laid smooth ; and when there is a prospect of showers the ground must be harrowed to receive the seeds, which should be sown in rows with the drill-plough, or in broad-cast after the common me-thod ; but it will be proper to steep the seeds one night in water before they are sown, which will prepare them for vegetation : if the seeds are sown in drills they will be covered with an instrument fixed to the plough for that purpose, but those which are sown broad cast in the common way must be well harrowed in. If the seeds are good, and the season favorable, the plants will appear in a fortnight, and in four or five weeks will be fit to hoe ; for the sooner this is performed, when the plants are distinguishable, the better they will thrive, and the weeds being then

young will be soon destroyed. The method of hoeing these plants is the same as for turnips, with this difference only, that these plants need not be thinned so much ; for at the first hoeing, if they are separated four inches, and at the last six inches, it will be space enough for growth ; and if this be carefally performed, in dry weather,

most of the weeds will be destroyed. If the land, in which this seed is sown, should have been in culture before for other crops, it will require dressing before it is sown, in which case rotten stable dung is preferable to any other ; but this should not be laid on till the last ploughing, just before the seeds are sown, and not spread till the land is ploughed, that the sun may not exhale the goodness of it, which in summer is soon lost when spread on the ground. The quantity should not be less than twenty loads to each acre, which will keep the ground good till" the crop of woad is entirely spent. The time for gathering the crop is according to the season ; but it should be performed as soon as the leaves are fully grown, while they are perfectly green ; for, when they begin to grow pale, great part of their goodness is over, for the quantity will be less, and the quality greatly diminished. If the land is good, and the crop well husbanded, it will produce three or four gatherings ; but the first two are the best. These are commonly mixed together in the manufacturing; but the after crops are always kept separate ; for, if these are mixed with the other, the whole will be of little value. An acre of land will produce a ton of woad, and in good seasons nearly a ton and a half. When the planters intend to save the seeds, they cut three crops of the leaves, and then let the plants stand till the next year for seed ; but if only one crop is cut, and that only of the outer leaves, letting all the middle leaves stand to nourish the stalks, the plants will grow stronger, and produce a much greater quantity of seeds. These seeds ate often kept two years, but it is best to sow new seeds when they can be obtained. The seeds ripen in August; and, when the pods turn to a dark color, the seeds should be gathered. It is best done by reaping the stalks in the same manner as wheat, spreading them in rows upon the ground : in four or five days the seeds will be fit to thresh out, if the weather is dry ; for if it lies long the pods will open and let out the seeds.

ISATIS, in zoology. See CAN is.

1SAURA, or ISAURUS, in ancient geography, a strong city at Mount Tauius, in Isauria, twice demolished ; first by Perdiccas, or rather by the inhabitants, who, through despair, burned the city and themselves, rather than fall into the hands of the enemy ; again by Servilius, who thence took the surname Isauricus.

ISAURIA, a country bordering on Pamphy-lia and Cilicia on the north, and rugged and mountainous, situated almost in Mount Taurus, and taking its name from Isaura; according to some, extending to the Mediterranean by a narrow slip.

ISCA DUMNIORUM, an ancient town of Britain, now named Exeter,

capital of Devonshire ; and called Caer Isk in Br.tish.

ISCA SILUEUM, the station of the Legio II.. Augusta, in Britain, now called Caerleon, a town of Monmouthshire.

ISCHˆMUM, in botany, a genus of the monoecia order, and polygamia class of plants : natural order fourth, gramina; hermaphrodite CAL. a b'florous glume: COR. bivalved; there are three stamina, two styles, and one seed. Male CAL. and COR. as in the former, with three stamina. Species eight, all natives of the East Indies.

ISCHIA, an island of Naples, thirteen miles in circumference, and three from the coast of Terra di Lavoro ; full of agreeable valleys and mountains, which produce excellent fruits and vines; and abounding with fountains, rivulets, and fine gardens. This island was taken by the British troops under Sir John Stuart in 1809, but soon after evacuated.

ISCHIA, the capital of the above island, with a bishop's see and a strong fort. Both the city and fort stand upon a rock, which is joined to the island by a strong bridge ; the rock is about seven furlongs in circumference. The city is like a pyramid of houses piled upon one another, which makes a very singular and striking appearance. At the end of the bridge next the city are iron grates, which open into a subterraneous passage through which they enter the city. They are always guarded by soldiers who are natives of the island. Long. 13° 55' E., lat. 40° 30' N.

ISCHIA'DIC, adj. Fr. ischiadique ; Gr. I<TXIOV, iffxtatiiKoc-In anatomy, an epithet given to the crural vein; in pathology, the ischiadic passion is the gout in the hip, or the sciatica.

ISCHIM, a river and circle of Siberia, in the government of Tobolsk.

The river rises in the country of the Kirghises, and flowing north-east, after a course of some length, falls into the Irtysch. Many ancient graves are found along its banks. The circle extends about 250 miles from east to west, and 140 from north to south, on the left of the Irtysch, and along the Ischim. The western part composes the Steppe of Ischim, consisting of a vast barren plain, filled with small lakes and marshes, salt and fresh. Cattle are here the only product ; and these, from the bad quality of the air and water, thrive very poorly. The eastern part is fertile, abounding in wood, water, and pasturage. The capital is also called Ischim ; it is situated on the left bank of the Ischim, and contains about 1000 inhabitants.

ISCIIIUM, in anatomy, one of the bones of the pelvis. See ANATOMY.

ISCHURIA (i<Tx»pia, from ttrˆw, I stop, and «pov, urine), in physic, a disease consisting in an entire suppression of urine. See MEDICINE. It is occasioned by some obstruction in the passages of the reins, ureters, or the neck of the bladder, as sand, stone, mucus, &c. It may also arise from an obstruction of the nerves which pass to the reins or bladder, as it does in a palsy of the parts below the diaphragm. The too great distension of the bladder may also produce the same effect ; whence it is that persons who have retained their urine for a long time, find great difficulty in discharging it.

IS'CIIURY, n. s. I Fr. ischurie; Lat. ischu—

IS'CHURETIC, n. s. $ ria ; Gr. (ˆapia, KTX«J, and ttpov, urine. A stoppage of urine, whether by gravel or other cause, ischuretics are medicines givfii to remove obstructions of this nature.

1SELASTICS, a kind of games, or combats,

celebrated in Greece and Asia, under the Roman emperors. The victor had very considerable privileges conferred on him, after the example of Augustus and the Athenians, who had thus honored conquerors at the Olympic, Pythian, and Isthmian games. They were crowned on the spot immediately after their victory, had pensions allowed them, were furnished with provisions at the public cost, and were carried in triumph to their own country.

ISER, or ISAR, a river of Bavaria, which has its source in the Tyrolese Alps, near little See-feld, and flowing in a curved direction, nearly N. N. E., passes by Munich. After crossing the whole of the circle to which it gives name, and part of that of the Lower Danube, it joins the

Danube at Deckendorf. Gold in small quantities is found in its sands.

ISER, or ISAR, is one of the largest circles of the kingdom of Bavaria. It lies between 10° 46’ and 12° 21’ of E. long., and 47° 29’ and 49° 46’ of N. lat., and is bounded partly by the Bavarian circles of the Regen and the Upper Da-nube, partly by the Austrian states. In the course of the political events which took place between 1808 and 1816, its area was finally settled at about 5900 square miles, with a population of 503,000. It comprises most of the southern part of the old duchy of Bavaria, and is divided into twenty-six districts ; its chief town, Munich, being the capital of the kingdom. The Tyrolese Alps penetrate into the south, which is consequently cold : the north of the circle forms a large plain, with few elevations, possessing great fertility. The rivers are numerous ; comprising the Inn, the Iser, and the Lech.

ISERE, an important department of France, and part of the former province of Dauphine, derives its name from the river Isere, which flows through it from east to west. The principal place of this prefecture is Grenoble, and it consists of four arrondissements or subprefectures; Grenoble, containing 187,417 inhabitants; Saint Marcellin, 78,030; Latour Duphin, 115,645; and Vienne, 124,493 : its total population being 505,585 souls. It has forty-four justiciaries of the peace, 558 communes, and extends over a surface of 2374 square miles, yielding a revenue of 24,134,000 francs, and is included in the seventh military division. It is divided into four electoral arrondissements, sending six members to the chamber of deputies, and has a royal court and bishopric at Grenoble.

The department of the Isere is bounded on the north by the department of Ain ; on the east by Piedmont ; on the south by the department of the Upper Alps ; on the south-west by that of the Drome, and on the west by that of the Rhone. It is bordered by a chain of mountains, which joins the Alps of Savoy and Piedmont. In the more elevated regions, where the ground is chiefly rocky, a little corn and a few vegetables only are cultivated ; the earth is covered with snow during a long winter, and on the summits of the mountains there are even glaciers and perpetual snows. Vast forests of fir cover the sides of these mountains, interspersed with villages surrounded with fine pastures, feeding numerous herds of horned cattle and sheep : a great quantity of cheese is also

.made here. This country abounds in game of all kinds ; great multitudes of chamois bound from rock to rock, and the eagle and the vulture hover over the frightful precipices, which are to be met with in every direction. The hills are covered with fruit trees and vines ; the valleys are fruitful in wheat, different sorts of grain, hemp, and fruits of all kinds; there are also to be found some dry and *andy plains, and some rather extensive marshes. Picturesque scenes are multiplied almost to infinity in this mountainous country; on all sides are to be seen rocks, valleys, passes and defiles, dark forests, torrents and water-falls, grottoes, and fertile and barren plots, separated sometimes by a space of 1000 feet. That part known by the name of the Grand Chartreuse particularly deserves attention for its magnificent woods, its romantic situations, and its wild mountains, furrowed with numerous torrents that dash with impetuosity from fall to fall, and with thundering sound bury their waters in the depths of horrible abysses. One cannot view without emotion the savage beauties presented by this vast and dreary solitude, which is singularly contrasted with the delightful valley of Gesivauddau, one of the finest in the world.

The inhabitants make the greatest advantage of so diversified a territory ; in the hilly parts their industry is above all praise; they raise terraces on the mountains, one above another, supported by walls of loose stones; convey thither the soil, and open little canals to conduct the water into these naturally barren fields. There are many lakes, which are generally very deep and abound with fish, but none of them are very considerable in size. Great numbers of plants grow on the mountains, which are much used in medicine. The air of this department is very healthy, but the climate in general is rather cold than temperate, which is no doubt owing to its extremely mountainous situation. Although the winters are long, the fruits come to perfect maturity, because the heats are commonly very intense. Being a mountainous country, it is cultivated mostly by oxen and mules, and yields a considerable harvest ; it contains 130,700 hectars of forests, consisting of oaks, beech and fir-trees, and 22,000 hectars

of vineyards ; producing on an average twenty-four francs forty-five centimes, from each hectar of cultivated land. Its productions are wheat, rye, barley, maize, buckwheat, vegetables, potatoes, fruits of all kinds, walnuts, chestnuts, almonds, wines of excellent quality, wood, medicinal plants, good pasturage in the mountains, feeding llocks of wild animals, and numerous artificial meadows. They have a fine race of mules, and numbers of black cattle, great and small game, such as wild goats, chamois, bears, red and white partridges, ortolans, &c., with fish in the rivers and lakes, otters, beavers, and tortoises. Watering canals are made in all places, where the waters can be thus conveyed. There is a botanic garden at Grenoble, and also a royal depot of standard measures. Mines of iron, lead, and silver, are worked ; -md the earth yields some gold, copper, antimony, cobalt, rock crystal, pit-coal, vitriol, and sulphur; there ate also

quarries of granite, porphyry, gypsum, white and brown freestone, slate, and plaster, which last serves to manure the land. At linage there is an establishment of mineral waters.

Important manufactures are carried on in this department, of cloths for cloaks and packing cloths ; its leather gloves, known by the name of Grenoble gloves, are held in great estimation ; cloths for soldiers' and negroes' dresses are also manufactured here, as well as mineral acids, fine liqueurs, cannons, iron, steel, paper, and nails. There are likewise extensive factories for dyeing, glass-blowing, the making of earthenware, the forging of copper, and the sawing of marble. The inhabitants have a considerable trade in grain, wines, chestnuts, liqueurs, leather, cloths, skins, gloves, organzine silk, turpentine, wool, hemp, Oysan and Sassenage cheese, walnut oil, lead, and sheet copper.

The chief rivers which water the country are the Rhone and the Isere navigable, the Drac, the Ilomanche, the Bourbre, and the Veronne. It is crossed by the great roads of Gap, Valence, Lyons, and Chambery.

ISERTIA, in botany, a genus of the hexandria class, and monogynia order: CAL. superior six-toothed : COR. funnel-formed, six-cleft, monospermous. Species two, one a Cayenne tree that yields beautiful wood.

ISH. Sax. ij-c. A termination added to an adjective to express diminution ; a small degree, or incipient state of any quality: as, bluish, tending to blue; brightish, somewhat bright. It is likewise

sometimes the termination of a genitive or possessive adjective: as, Swedish, Danish ; the Danish territories, or territories of the Danes. It likewise notes participation of the qualities of the substantive to which it is added ; as, fool, foolish ; man, mannish ; rogue, roguish.

ISHMAEL, from Heb. J7Bff% and “?K i. e. God hath heard. The son of Abraham by Hagar, the progenitor of the Arabs, Hagarenes,Ishmaelites, &c.

ISHMAELITES,the descendants of Ishmael, who dwelt from Havila to the wilderness of Sur, towards Egypt, and thus overspread Arabia Petraea. All ancient authors, as well as Josephus, agree that Ishmael was the father of the Arabs. The Ishmaelites, as well as the Jews, afford a living and striking evidence of the truth of divine revelation. The prophecies of the innumerable multitudes, the wild and roving manner of liv-ing, and the free, independent, and unconquered state of the Ishmaelites (Gen. xvi. 10, 12 ; xvii. 20; xxi. 18), have been, and still are, literally and visibly fulfilled in their posterity, the Arabs. See ARABIANS and BEDOUINS.

ISIA, Gr. Ifftia, feasts and sacrifices anciently solemnised in honor of the goddess Isis. They were full of the most abominable impurities, and therefore those who were initiated into them were obliged to take an oath of secrecy. They were held for nine days successively, but became so scandalous, that the senate abolished them at Rome, under the consulate of Piso and Gabinius. They were re-established by Augustus, and the emperor Commodus assisted at them, appearing among the priests of that goddess with his head shaven, and carrying the anubis. Dioscorides

tells us, that priests of the goddess, called Isiaci, bore a branch of sea-wormwood in their hands instead of olives. They sung the praises of

the goddess twice a-day, *viz.* at the rising of the sun, when they opened her temple, and at night, when they repeated heir orisons, and shut up the temple. They begged alms all day. They never covered their feet with any thing but the thin bark of the plant papyrus, and wore no garments but linen, because Isis was the first who taught the culture of this commodity. They were obliged to observe perpetual chastity, and their heads were closely shaved. They were forbidden to eat onions, salt, or the flesh of sheep and hogs.

ISIAC TABLE, one of the most considerable monuments of antiquity, being a plate of copper or brass discovered at Rome in 1525, and supposed, by the various figures in bass relief upon it, to represent the feasts of Isis, and other Egyptian deities. When, in the year 1525, the constable de Bourbon took the city of Rome, a locksmith bought it of a soldier, and afterward sold it to cardinal Bembo, upon whose death it came into the hands of the duke of Mantua, and was kept in that family till the taking of that city by the imperialists in the year 1630, since which it has never been heard of. It had, however, been engraved with all possible exactness by ./Eneas Vico of Parma. It was divided into three horizontal compartments, in each of which were different scenes, containing different actions. Those compartments are, as it were, different cartouches, distinguished sometimes by single strokes only, but oftener by a very large fascia, which is full of hieroglyphics. The four sides of the table were enclosed with a border, filled up, like the ground, with several figures of the Egyptian gods, and with a great number of hieroglyphics. There have been various opinions as to the antiquity of this monument : some have supposed that it was engraved long before the time when the Egyptians worshipped the figures of men and women. Others, among whom is bishop Warburton, apprehend that it was made at Rome, by persons attached to the worship of Isis. Dr. Warburton considers it as one of the most modern of the Egyptian monuments, on account of the great mixture of hieroglyphic characters which it bears.

I'SICLE, n. s. Sax. ir-j-. More properly icicle, from ice ; but ice should rathev be written ise. A pendent shoot of ice.

Do you know this lady ? — The moon of Rome ; chaste as the isicle That's curdled by the frost from purest snow Hanging on Dian's temple. Shakspeare.

The frosts and snows her tender body spare ; Those are not limbs for isicles to tear. Dryden.

ISIDORUS (St.), named Damiatensis, orPe-lusiota, from his living in a

solitude near Pelu-sium, was the most famous of all St. Chrysostom's disciples, and flourished in the time of the general council held in 421. There are extant 2012 of his epistles in five books. They are short, but well written in Greek. The besteditionis that of Paris, in Greek and Latin, printed in 1638, infol.

1'SINGLASS n. s. Lat. ichthyocolla. From ice, or ise, and glass.

Some make it clear by reiterated fermentations, and others by additions, as isinglass. Mortimer.

The cure of putrefaction requires an incrassating diet, as all viscid broths, hartshorn, ivory, and isinglass. t'ioyer.

'• Isinglass is a tough, firm, and light substance, of a whitish colour, and in some degree transparent, much resembling glue. The fish from which isinglass is prepared is one of the cartilaginous kind : it grows to eighteen and twenty feet in length, and greatly resembles the sturgeon. It is frequent in the JJanube, the Boristhenes, the Volga, and the larger rivers of Europe, From the intestines of this fish the isinglass is prepared by boiling. Hill.

ISINGLASS. See ICHTHYOCOLLA.

I'SINGLASS STONE, n. s. A fossil which is one of the purest and simplest of the natural bodies

ISIS, a celebrated deity of the Egyptians, daughter of Saturn and Rhea, according to Diodorus of Sicily. Some suppose her to be the same with lo. See lo. Plutarch says Isis married her brother Osiris, and mentions some other absurd traditions respecting her. Isis was the Venus of Cyprus, the Minerva of Athens, the Cybele of the Phrygians, the Ceres of Eleusis, the Proserpine of Sicily, the Diana of Crete, the Bellona of the Romans, &c. Osiris and Isis reigned jointly in Egypt, but Typhon, the brother of Osiris, rebelled and murdered him. The ox and the cow were the symbols of Osiris and Isis ; because, while on earth, they had diligently applied themselves to agriculture. Isis was supposed to be the moon, and Osiris the sun ; she was represented as holding a elobe in her hand, with a vessel full of ears of corn. The Egyptians believed that the inundations of the Nile proceeded from the tears which Isis shed for the murder of Osiris. Notwithstanding the attempts of the Greeks to identify Isis with their lo, Plutarch and Diodorus Siculus assert that this princess was born in Egypt, and married to Osiris, that they lived together in harmony, and concurred in their endeavours to

civilise their subjects, teaching them agriculture. Diodorus adds, that Osiris, determining on an expedition to India, made Isis regent of his kingdom. On his return, he found that his brother Tvphon had formed a formidable party against the government, and, under a pretence of hospitality, he confined Osiris in a chest exquisitely wrought, and threw it into the Nile. When Isis heard of her husband's death, she made diligent search forthe corpse, and, having found it in Phoenicia, returned with it to Egypt, where she caused it to be interred at Abydos. In the mean time, Ty-phon was endeavouring to secure his new empire, but Isis, being at length recovered from her distress, collected her troops, and placed them under the conduct of Orus, her son, who pursued the tyrant, and vanquished him in two pitched battles. Isis having died some time after her son's victory over Typhon, the Egyptians paid adoration to her, together with her husband Osiris, as to divinities ; and, because they had applied themselves to agriculture, the ox and the cow became their symbols. Diodorus Siculus has recorded the follow. n<j inscription on an ancient monument, by which Isis was characterised : — ' I, Isis, am the queen of this country,

And I had Mercury for my prime minister. None had power to hinder the execution of my orders. I am the eldest daughter of Saturn, the youngest of the gods. I am the sister and the wife of king Osiris. I am the mother of king Orus. I am she who resides in the dog-star. The city of Bubastis was built in honor to me. Rejoice, O Egypt, thou that hast been to me instead of a nurse and mother.' We have a statue of Isis habited like a Roman matron, having a half moon on the top of her head, her right hand turned towards heaven, and her left towards the earth, to inform us, that she receives the influence of heaven. We have also a medal of the emperor Commodus, where Isis is represented with a half moon, holding a sphere with her right hand, and a vessel full of fruits with her left. The sphere denotes astrology, wherein the

Egyptians excelled, and the fruits, the,fecundity of Egypt. Her worship was universal in Egypt.

Isis, a river that rises in Gloucestershire, and flows through a part of Wiltshire. It begins to be navigable for boats at Cricklade, and, after running a serpentine course of about four miles, it leaves Gloucestershire, at a village called Castle Eaton, and falls into the Thame. See THAME.

ISLA (Joseph Francis de), a learneo Spanish Jesuit, who, on the suppression of the order, retired to Bologna, where he died in 1781 . He was the author of Historia del Fra Gerundio de Campazas, alias Zotes, Madrid, 1758, tome I. the history of which work is curious. It appeared under the assumed name of Francisco Loben de Salazer, minister of the parish of St. Peter, in Villagarcia, and was a severe satire upon the fanaticism and ignorance of the Spanish monks : but, in the first instance, it was approved by the inquisition, until the jealousy of the Dominicans and mendicant orders induced the council of Castile to suppress it, and forbade the publication of the second part. The author now presented it to Mr. Baretti, by whose means it was printed entire in English in 1771, and afterwards in German. Isla is said to be regarded by his countrymen as a second Cer-vantes.

ISLA DE LA GENTE HERMOGA, or Island of •he Handsome People, called also Isla de Monterey, from the name of a viceroy of Mexico, an island in the Pacific Ocean, discovered by Men-dana. It is about six leagues in circumference ; and, when the boats with difficulty landed, the Spaniards found the island inhabited by a people that opposed them in every enterprise ; so that after some unsuccessful attempts they were obliged to abandon this island without obtaining refreshments. The Spaniards, they say, had never seen men so handsome, or met with enemies so formidable ; they speak with enthusiasm of the beauty, fairness, and studied dress of the females, who, according to their accounts, surpassed even the fairest ladies of their own country, both in grace and beauty. Long. 175° 10’ W., lat. 10° S.

ISLAM, the true Mahommedan faith. See MAHOMMF.DAMSM.

ISLAMABAD, an old town of Bengal, the Vor, XII.

capital of the district of Chittagong, stands on the western bank of the river Currumpooly, at the distance of about ten miles from the sea. It

is the residence of the judge and civil establishment ; and has a cantonment for a battalion of native infantry. Ships are built here, and sent to Calcutta for sale : the commerce is also considerable. This town was called by the Portuguese Porto Grando, and alternately belonged to the Afghaun kings of Bengal, and the rajah of Arracan. It was taken from the latter by the Moguls in the vear 1666, and was at that period well fortified, mounting 1223 cannon. The Delhi emperor changed its name from Chittagong to Islamabad. In 1689 the English failed in an attack on it; but in 1760 it was ceded to us, with the district, by Jaffeir Ali Khan. The entrance to the river is dangerous without a pilot. I'SLAND, n. s. \ Lat. inxulu ; Ital. isoUi ; I'SLANDER,n. s. £ Fr. isle ; Erse, ealand ; Sp. ISLE, n. s. jysl-a. A tract of iand surrounded by water : an islander is an inhabitant of an island : isle is synonymous with island, written, perhaps, corruptly for oi/e, from Fr. aile, from Lat. a/a : the aile being probably at first only a wing or side walk. Or it may come from Fr. alike, a walk. A long walk in a church, or public ouilding.

To see you here, us thinke marvaile, And how withouten bote or saile, By any subtilty or wyle, Ye, get, have, entre in this yle.

Chaucer's Dreame.

W thin a wandering island, that doth ronne And stray in perilous gulfe her dwelling is : Fayre Sir if ever there ye travell, slionne The cursed land where many wend amis, And know it by the name, it hight the Bowre of Blis.

Spenser. Faerie Queene.

He will carry this viand home in his pocket, and give it his son for an apple. And, sowing the kernels of it in the sea, bring forth more islands.

Shakspeare. Tempest. Your dinner, and the generous islanders By you invited, do attend your presence.

Shakspeare.

The instalment of this noble duke In the seat royal of this famous isle. Id.

We, as all islanders, are lunares, or the moon's men . Camden .

Hark then, ah, hark ! ye gentle shepherd crew ; \n isle I fain would sing an island fair ; A place too seldom viewed yet still in view Near as

ourselves, yet farthest from our care.

Fletcher's Purple Island.

What the ocean binds is by the bishops rent, As seas make islands in the continent ; One king, one faith, one language, and one ide, English and Scotch 'tis all but cross and pile.

MarveU.

There are many bittei sayings against islanders in general, representing them as fierce, treacherous, and unhospitable : those who live on the continent have such frequent intercourse with men of different religions and languages, that they become more kind than those who are the inhabitants of an island.

Addison's Freeholder.

O'er the twilight groves and dusky caves, Long sounding isles and intermingled graves, Black Melancholy sits. p<7*-

hland of bliss ! amid' the subject seas.

Thomson.

1'

ISLANDS.

I've seen thee smile,

When the clear sky shewed Ariadne's isle, Which I have pointed from these cliffs.

Byron. Corsair.

ISLAND, or ICELAND CRYSTAL. See ICELAND CRYSTAL. •>

ISLANDS from their situation derive many advantages, among which one of the most considerable is that the climate is generally mild and salubrious from the vapors of the surrounding sea, which, according to the latitude, abates the violence of heat, and moderates the rigor of cold, both of which are sensibly and constantly less than on continents under the same elevation of the pole. We have a remarkable instance of this in the islands called anciently Stoehades, by as the Hieres. They are three in number, lying in lat. 43° N. before Toulon. In them the fruits of France and Italy arrive at the highest perfection, and all the medical herbs of Italy, Greece, and Egypt, grow wild. Yet the climate is temperate and pleasant in all seasons. A considerable advantage arises from accessibility on every side, by which islands are open to receive supplies from other countries, and have the conveniency of exporting their commodities and manufactures to all markets, and, in comparison of the continent, at all seasons. The opposite sides of an island may, in regard to commerce, be considered as two countries ; each has its ports, its proper commodities, its proper correspondences; in consequence of which it promotes the cultivation, and procures vent for the manufactures, of a large district behind it ; while the intermediate midland space finds a profit in that inland trade which these two districts sup-ply. The winds contrary on one side are favorable on the other ; and the sea, the common road to both coasts, is continually ploughed by vessels outward and homeward bound, which keeps up that active and enterprising spirit which characterises islanders. An island has the most extensive and the most effectual frontier on all sides, subsisting for ever, without repairs, and without expense : and, which is still more, derives from this very frontier a great part of the subsistence of its inhabitants, and a valuable article in its commerce, from its fisheries. It is commonly said the sea is a mine, hut its treasures are more lasting and more certain, procured by labor solely, and fit for use or for sale as soon as procured, quickly consumed, and thereby the source of continual employment to a stout, hardy, laborious race of men, who likewise find employment for numbers, and are in various respects otherwise beneficial members of the community.

Respecting the formation of islands while some raturalists are of opinion, that the islands were formed at “the deluge ; others observe that there have been new islands formed by the casting np of vast heaps of clay, mud, sand, &c. ; others think they have been separated from the continent by violent storms, inundations, and earthquakes. These last have observed that the East Indies, which abound in islands more than «ny other part of the world, are likewise more annoyed with earthquakes, tempests, lightnings, volcanoes, &c., than any other

part. Others

again conclude that islands are as ancient as the world, and that there were some at the beginning ; and, among other arguments, support their opinion from Gen. x. 5, and other passages of Scripture. Varenius thinks that there have been islands produced each of these ways. St. Helena, Ascension, and other steep rocky islands, he supposes to have become so by the sea overflowing their neighbouring champaigns: by the heaping up huge quantities of sand, and other terrestrial matter, he thinks the islands of Zealand, Japau, &c., were formed. Sumatra and Ceylon, and most of the East India islands, he supposes were rent off from the main land; and concludes that the islands of the Archipelago were formed in the same way, imag.ning it probable that Deucalion's flood might contribute towards it. The ancients had a notion that Delos, and a few other islands, rose from the bottom of the sea; which, how fabulous soever it may appear, agrees with later observations. Seneca takes notice that the islands Therasia rose thus out of the TEgean Sea in his time, of which the mariners were eye-witnesses. It is indeed very probable that many islands have existed* not only from the deluge, but from the creation of the world ; and we have undoubted proofs of the formation of islands in all the different ways above mentioned. Another way, however, in which islands are frequently formed in the South Sea, is by the coralline insects. ' These islands are generally long and narrow; they are formed by a narrow bar of land, enclosing the sea within it ; generally, perhaps always, with some ingress at least to the tide; commonly with an opening capable of receiving a canoe, and frequently sufficient to admit even larger vessels. The origin of these islands will explain their nature. These islands being covered to the west by Borneo, the winds from that quarter do not attack them with vio-lenee. But the north-east winds, tumbling in the billows from a wide ocean, heap up the coral with which those seas are filled. This, obvious after storms, is perhaps at all other times imperceptibly effected. The coral banks, raised in the same manner, become dry. These banks are found of all depths, at all distances from shore, entirely unconnected with the land, and detached from each other : although it often happens that they are divided by a narrow gut without bottom. Coral banks also grow, by a quick progression, towards the surface : but the winds, heaping up the coral from deeper water, chiefly accelerate the formation of these into islands. They be-come gradually shallower ; and, when once the sea meets with resistance, the coral is quickly thrown up by the force of the waves breaking against the bank ; and hence, in the open sea, there is scarcely an instance ofacoral bank having so little water that a

large ship cannot pass over, but it is also so shallow that a boat would ground on it. These coral banks may be seen in all the stages ; some in deep water, others with few rocks appearing above the surface ; some just formed into islands, without the least appearance of vegetation ; and others from such as have a few weeds on the highest part, to those which are covered with large timber, with a bottomless sea at a pistol-shot distance. The loose coral,

rolled inward by the billows in large pieces, will ground : and, the .reflux being unable to carry them away, they become a bar to coagulate the sand, always found intermixed with coral ; which sand, being easiest raised, will be lodged at top. When the sand-bank is raised by violent storms beyond the reach of common waves, it becomes a resting place to vagrant birds, whom the search of prey draws thither. The dung, feathers, &c., increase the soil, and prepare it for the reception of accidental roots, branches, and seed, cast up by the waves, or brought thither by birds. Thus islands are formed; the leaves and rotten branches, intermixing with the sand, form in time a black mould, of which in general these islands consist ; more sandy and less woody ; and, when full of large trees, with a greater proportion of mould. Cocoa nuts, continuing long in the sea without losing their vegetative powers, are commonly to be found in such islands ; particularly as they are adapted to all soils, whether sandy, rich, or rocky. The violence of the waves with-in the tropics must generally be directed to two points, according to the monsoons. Hence the island formed from coral banks must be long and narrow, and lie nearly in a meridional direction. For even supposing the banks to be round, as they seldom are when large, the sea, meeting-most resistance in the middle, mnst heave up the matter in greater quantities there than towards the extremities ; and, by the same rule, the ends will generally be open, or at least lowest. They will also commonly have soundings there, as the remains of the bank, not accumulated, will be under water. Where the coral banks are not exposed to the common monsoon, they will alter their direction ; and be either round, extending the parallel, or be of irregular forms,

according to accidental circumstances. The interior parts of these islands being sea, sometimes form harbours capable of receiving vessels of some bur-den, and always abound greatly with fish. It need not be repeated, that the ends of those islands only are the places to expect soundings ; and they commonly have a shallow spit running out from each point. Abdul Roobin's observation points out another circumstance, which may be useful to navigators ; by consideration of the winds to which any islands are most exposed to form a probable conjecture which side has deepest water ; and from a view which side has the shoals an idea may be formed which winds rage with most violence. See CORAL.

To the above we have only to add, that the common foundation of all those clusters of islands which modern navigators have discovered in the Pacific Ocean, and to which the name of Polynesia has been given, as well as of those which belong to Australasia or New South Wales and perhaps of New South Wales itself, is evidently of coral structure ; immense reefs of which shoot out in every direction. And it is a circumstance peculiarly worth notice, that, notwithstanding this prodigious quantity of lime in the form of coral, not a single bed, and scarcely a particle of chalk, has hitherto been met with either in the islands or on the continent.

There are other islands which are occasionally raised by the viˆent agency of the subterraneous

volcanoes. These, however, are comparatively but few in number, and in mass of matter bear no proportion to those which we have reason to believe are perpetually forming by the silent but persevering efforts of the sea-worms we are now more immediately adverting to ; and, as we have already given instances of such occasional disruptions from the bowels of the earth, we need not enlarge upon them in the present place.

The island of Acroteri, of no mean fame in ancient history, appears to have its surface composed of pumice-stone, encrusted with a surface of fertile earth, and the ancients represent it as rising, in a violent earthquake, out of the sea. Four neighbouring islands have had a similar origin, and yet the sea is here of such a depth as to be unfathomable by any sounding line. These arose at different times ; the first long before the commencement of the Christian era, the second in the first century, the third in the eighth, and the fourth in 1573. Similar eruptions of islands have occurred in the group of the

Azores. Thus, in December 1720, a violent earthquake was felt on the island of Tercera. In the night and the next morning the top of a new island appeared, which ejected a huge column of smoke. The pilot of a ship, who attempted to approach it, sounded on one side of the new formed island, with a line of sixty fathoms, but could find no bottom. On the opposite side, the sea was deeply tinged with various colors, white, blue, and green, and was very shallow. This island was larger on its first appearance than at some distance of time afterwards; it at length sunk below the level of the sea, and now is no more to be found.

The following is a more detailed description of a similar phenomenon occurring in the same quarter, though of much later date. We copy it from captain Tillard's narrative, communicated to the Royal Society. ' Approaching,' says he, 'the island of St. Michael's, on Sunday, June 12th, 1811, in his majesty's sloop Sabrina under my command, we occasionally observed, rising in the horizon, two or three columns of smoke, such as would have been occasioned by an action between two ships, to which cause we universally attributed its origin. This opinion was, however, in a very short time changed, from the smoke increasing and ascending in much larger bodies than could possibly have been produced by such an event ; and having heard an account, prior to our sailing from Lisbon, that in the preceding January or February a volcano had burst out within the sea near St. Michael's, we immediately concluded that the smoke we saw proceeded from that cause, and, on our anchoring next morning in the road of Ponta del Gada, we found this conjecture correct as to the cause, but not to the time ; the eruption of January having totally subsided, and the present one having only burst forth two days prior to our approach, and about three miles distant from the one before alluded to.

' Desirous of examining as minutely as possible a contention so extraordinary between two such powerful elements, I set off from the city of Ponta del Gada on the morning of the 14th, in com pany with Mr. Read, the consul general of the 1 P2

Azores, and two other gentlemen. After riding about twenty miles across the north-west end of the island of St. Michael's, we came to the edge of a cliff whence the volcano burst suddenly upon our view in the most terrific and awful grandeur. It was only a short mile from the base of the cliff, which was nearly perpendicular and formed the margin of the sea: this cliff being as nearly as I could judge from 300 to 400 feet high. To give you an adequate idea of the scene by description is far beyond my powers ; but for your satisfaction I shall attempt it

' Imagine an immense body of smoke rising from the sea, the surface of which was marked by the silvery rippling of the waves, occasioned by the light and steady breezes incidental to those climates in summer. In a quiescent state it had the appearance of a circular cloud revolving on the water like an horizontal wheel, in various and irregular involutions, expanding itself gradually on the lee side, when suddenly a column of the blackest cinders, ashes, and stones would shoot up in form of a spire at an angle of from 10° to 20° front a perpendicular line, the angle of inclination being universally to windward : this was rapidly succeeded by a second, third, and fourth, each acquiring greater velocity, and overtopping the other till they had attained an altitude as much above the level of our eye, as the sea was below it. As the impetus with which the columns were severally propelled diminished, and their ascending motion had nearly ceased, they broke into various branches resembling a group of pines, these again forming themselves into festoons of white feathery smoke in the most fanciful manner imaginable, intermixed with the finest particles of falling ashes, which at one time assumed the appearance of innumerable plumes of black and white ostrich feathers surmounting each other ; at another, that of the light wavy branches of a weeping willow. During these bursts the most vivid flashes of lightning continually issued from the densest part of the volcano ; and the cloud of smoke, now ascending to an altitude much above the highest point to which the ashes were projected, rolled off in large masses of fleecy clouds, gradually expanding themselves before the wind in a direction nearly horizontal, and drawing up to them a quantity of water-spouts, which formed a most beautiful and striking addition to the general appearance of the scene.

' That part of the sea where the volcano was situated was upwards of thirty fathoms deep, and at the time of our viewing it the volcano was only four days old. Soon after our arrival on the cliff, a peasant observed he could discern a I eak above the water : we looked, but could not •ee it ; however, in less than half an hour it was plainly visible, and before we quitted the place, which -was about three hours

from the time of our arrival, a complete crater was formed above the water, not less than twenty feet high on the side where the greatest quantity of ashes fell ; the diameter of the crater being apparently about 400 or 500 feet.

‘ The great eruptions were generally attended wit!) ˆ noisn like the continued firino; of cannon

and musquetry intermixed, as also with slight shocks of earthquakes”, several of which having been felt by my companions, but none by myself, I had become half sceptical and thought their opinion rose merely from the force of imagination ; but while we were sitting within five or six yards of the edge of the cliff, partaking of a slight repast which had been brought with us, and were all busily engaged, one of the most magnificent bursts took place which we had yet witnessed, accompanied by a very severe shock of an earthquake. The instantaneous and involuntary movement of each was to spring upon his feet, and I said, ‘This admits of no doubt.’ The words had scarcely passed my lips, before we observed a large portion of the face of the cliff, about fifty yards on our left, falling, which it did with a violent crash. So soon as our first consternation had a little subsided, we removed about ten or a dozen yards further from the edge of the cliff, and finished our dinner.

‘ On opening the volcano clear of the north-west part of the island, after dark on the 16th, we witnessed one or two eruptions that, had the ship been near enough, would have been awfully grand. It appeared one continued blaze of lightning ; but the distance which it was at from the ship, upwards of twenty miles, prevented our seeing it with effect. Returning again towards St. Michael’s on the 4th of July, I was obliged, by the state of the wind, to pass with the ship very close to the island, which was now completely formed by the volcano, being nearly the height of Matlock High Tor, about eighty yards above the sea. At this time it was perfectly tranquil ; which circumstance determined me to land, and explore it more narrowly.

‘ I left the ship in one of the boats, accompanied by some of the officers. As we approached, we perceived that it was still smoking in many parts, and upon our reaching the island found the surf on the beach very high. Rowing round to the lee side, with some little difficulty, by the aid of an oar, as a pole, I jumped on shore, and was followed by the other officers. We found a narrow beach of black ashes, from which the side of the island rose in general too steep to

admit of ourascending; and, where we could have clam-bered up, the mass of matter was much too hot to allow our proceeding more than a few yards in the ascent. The declivity below the surface of the sea was equally steep, having seven fathoms water scarce the boat's length from the shore, and at the distance of twenty or thirty yards we sounded twenty-five fathoms.

‘ From walking round it in about twelve minutes, 1 should judge that it was something less than a mile in circumference; but the most extraordinary part was the crater, the mouth of which, on the side facing St Michael's, was nearly level with the sea. It was filled with water, at that time boiling, and was emptying itself into the “sea by a small stream about six yards over, and by which I should suppose it was continually filled again at hi<:h water. This stream, close to the edge of the sea, was so hot, as only to admit the finger to be dipped suddenly in, and taken out again immediately. It appeared evklf nt, by the formation of this part of the island, that the

sea had, during the eruptions, broken into the crater in two places, as the east side of the small stream was bounded by a precipice, a cliff between twenty and thirty feet high forming a peninsula of about the same dimensions in width and from fifty to sixty feet long, connected with the other part of the island by a narrow ridge of cinders and lava, as an isthmus of from forty to fifty feet in length, from which the crater rose in the form of an amphitheatre.’

ISLANDS, FLOATING. History abounds with accounts of floating islands ; but the greatest part of them are either false or exaggerated. What we generally see of this kind is no more than the concretion of the lighter matter floating on the surface of the water in cakes ; and, with the roots of the plants, forming congeries of different sizes, which, not being fixed to the shore in any part, are blown about by the winds and float on the surface. These are generally found in lakes, where they are confined, and, in process of time, some of them acquire a considerable size. Seneca tells us of many of these floating islands in Italy; and some later writers have described not a few of them in other places. But however true these accounts might have been, at the time when they were written, very few proofs of their authenticity are now to be found ; the floating islands having either

disappeared, or been so fixed to the sides as to make a part of the shore. Pliny tells us of a great island which at one time floated about in the lake Cutilia in the country of Reatinum, which was discovered to the old Romans by a miracle ; and Pomponius tells us, that in Lydia there were several islands so loose in their foundations that every little accident shook and removed them.

ISLE OF DOGS. See DOGS.

ISLE OF FRANCE, one of the twelve ci-devant governments of France. It was bounded on the north by Picardy, west by Normandy, south by the Orleannois, and east by Champagne. It was about ninety miles in length and breadth. The air is temperate, and the soil fertile ; and it abounds in wine, corn, and fruits.

ISLE OF FRANCE. See MAURITIUS.

ISLE OF WIGHT. It has been conjectured that this island was originally connected with the main land, but that the violence of the sea has gradually disjoined it from the neighbouring shore. This conjecture is strengthened by the circumstance of its having been called by the British Guith or Guich, signifying the divorced or separated; hence arose the appellation of Vectis, or the separated region. It belongs to the county of Southampton or Hants, already described ; and the general outline of its early history will apply to both districts.

This islp is separated from the beautiful coast of Hampshire by a channel, varying in breadth from two to seven miles. It is nearly surrounded on the south by the English Channel, having Hampshire on the north. Its form is that of an irregular lozenge. The face of the country is richly diversified : hill and dale, the swelling promontory, and the lowly glen, appear in quick succession to animate and give interest to the prospects. The land is in some parts very high, particularly on the south, or back of the island,

as it is commonly termed. Here the clifi's are very steep, and vast fragments of rock, which the waves have undermined, lie scattered along the shore. On the northern side the ground slopes to the water in easy declivities, excepting towards the Needles, or western point, where the rocks are bare, broken, and precipitous. The height of the cliffs, of which the Needles form the extreme point, is in some places 600 feet above the level of the sea ; and, when viewed from the distance of about a quarter of a mile, has a very sublime and

stupendous effect. These cliffs are in some places perpendicular, in others they project and hang over in a tremendous man-ner. Here are many caverns and deep chasms that seem to enter a great way into the rocks ; and in many places the issuing of springs forms small cascades of rippling water down to the sea.

The rocks called the Needles obtained their name from a lofty pointed one, resembling a needle in shape, which had been disjoined with the others from the main land by the force of the waves. This was 120 feet above low water mark ; but about fifty years ago it fell, and totally disappeared, its base having been undermined by the sea. All the higher parts of the isle are composed of an immense mass of calcareous matter, of a chalky nature, incumbent on schistus, which runs under the whole isle, and appears at low water mark on the coast near Mattison. This becomes so indurated, by exposure to the air, as to make very good whetstones. The limestone is burnt for manure ; and in the pits where it is dug for that purpose are found numerous echini, sharks' teeth, and ammoniae. These fossils are particularly abundant in the range of cliffs which forms the southern shore, together with bivalve and turbinated shells of various descriptions. The cornua ammonis are of all sizes, from one inch to a foot and a halt in diameter. — This isle extends from the eastern to the western angle nearly twenty-three miles ; and from the northern to the southern about thirteen. There are two hundreds, East and West Medina, containing thirty parishes, and three market and borough towns. Its superficies is supposed to include 105,000 acres.

The southern division of this island is much exposed to the fury of the westerly winds, whilst that looking to the north, though in a great measure exempt from this turbulence of weather, is still not so forward in its seasons by ten days or a fortnight. In the absence of tha south-westerly gales nothing can exceed the mildness and salubrity of the climate on the south side. The northerly winds seem little to affect this situation, as their force and height are much abated by the elevated ridge of down and forest land, which extends-nearly east and west through the middle of the island. The north-easterly winds prove extremely hurtful in the northern parts, by retarding vegetation in the spring of the year, and by the mischief they produce among the early fruit and apples. Mr. Vancouver describes the "soil of the north and south borders as a rough, strong clay, of argillaceous and calcareous marie. On the western quarter of the northern division the soil appears much varied, which in

some places may be more aptly referred to the treatment it may have undergone, than to ‘any specific difference in its native quality. From Yarmouth, extending easterly along the northern coast of the island towards Cowes, bounded southwardly by the King’s, or Carisbrook Forest, and returning thence westwardly, at ‘an average distance of about a mile from the coast, the soil of the country is composed of a strong gravelly loam, upon a brown and yellow clay, which is generally found to terminate in a deep bed of gray and a bluish argillaceous marie. A strong, brown, tough clay, without stones, and lying on a purple, red, blue, and yellow clay, forms the other character of soil and substrata composing this district ; but in which, and in addition to the argillaceous marie, a pure white shell marie is found to occur, in veins of various thickness, through the parishes of Thor-ley, Shalfleet, Swainston, and under the western parts of Carisbrook Forest. The western part of the southern division of this isle comprises parts of the parishes of Brook, Molteston, Brixton, Kingston,. Chale, and the west side of St. Catherine’s Hill. These all bind upon the southern coast of the island, and the stony land extends to an average width of about half a mile northwardly from the cliffs, and is composed of all the variety of soil and substrata above mentioned. Although the north-east quarter of the isle contains a greater variety of soil than can possibly be traced in its preceding sections, still the greater prevalence of stony land requires that it should be included within this district of the county to which the Isle of Wight belongs. Proceeding, therefore, through the northern parts of the parish of St. Helen’s, and continuing our examination westwardly, between the foot of the Chalk-down and the north-east shore of the island, after leaving the sand and gravelly loams which compose the soil in the eastern extremity of the island, we enter a country abounding with much variety of soil and substrata, but which may be generally characterised as oak-tree or sour woodland tlay. The sand and gravelly veins, which intersect the clay lands in various directions, seem only remarkable for affording in their vicinity slight modifications of the stronger clay. A strong clay loam forms the upper covering of the northern extremity of the island. This is frequently found to cover a stratum of argillaceous marie, below which is irenerally found a body of freestone rock. A sand and gravelly loam

very frequently occurs to break the continuation of the stronger lands in the parishes of East and West Cowes, North-wood, and Whippingham ; but these often occasion springs, and on the sides of the hills much wet and weeping land.

The principal rivers are the Medina, the Yar, and the Wootom. The Medina, anciently .called the Mede, rises near the bottom of St. Catherine's Down, and, flowing directly northward, divides the island into two equal parts : gradually widening in its course, it passes to the east of Newport, and in Cowes harbour unites its waters with the ocean. Numerous smaller streams also exist, and various creeks and bays run up from the sea. Several chalybeate springs have been

found in different parts of the island ; one of vhem, at Black Gang, under Chale Cliff, is very strong. About half a mile from this, at Pitland, is a spring impregnated with sulphur ; and at Shanklin is a spring whose waters are slightly tinctured with alum. The springs of clear water are very numerous, and in general extremely pure and transparent, from the natural percola-tion which they undergo through the lime-stoi:e strata. Cowes is a favorite watering place, and it is delightfully situated. The aluminous chalybeate waters discovered at Sand Rocks, in the parish of Chale, have been recommended in all asthenic cases arising from a lax fibre and languid circulation. Some of the fossil productions of this highly-favored isle have been already mentioned.

A stratum of coal discovers itself at the foot of Brimbridge Cliff, and runs through the southern parts of the isle, appearing again at Warden Lodge, in Freshwater parish. On the north side of this lies a vein of white sand, and another of fullers' earth ; and on the south side is another of red ochre. Freestones of several descriptions are found here, but none of -superior quality. Copperas-stones and pipe-clay are also very plentiful in this isle.

Fish are abundant on the coast ; those of the crustaceous kind are particularly numerous on the southern shores. The lobster and crab are of uncommon size, and extremely fine. Some of the former are upwards of six pounds in weight ; the latter is so abundant on a particular part of the coast, that a neighbouring village has obtained the name of Crab-Niton from this 'circumstance. The Isle of Wight cockles are very celebrated , the sand-eel is also very plentiful ; the cuttle-fish is cccasionally taken.

The agricultural produce of this isle has nothing peculiar, except the breed of hogs may be so termed, which are very tall and large, and make excellent bacon. This island, however, has been styled the garden of England: an appellation well justified by the innumerable plants and flowers which grow every where in wild luxuriance ; among which are the opkrys api-tera, or bee-orchis, the digitalis, or fox-glove, and the orithmunxinarifimum, or rock-samphire. Domestic fowls and poultry are very numerous; and game is still pretty plentiful, notwithstanding the ravages which war, that bane of all comfort and enjoyment, has made here, by the numerous soldiers which have almost at all times been stationed on the island.

This island sends six members to parliament : *viz.* two for Newport; (this borough had the honor of being represented in the year 1807 by the duke of Wellington, then Sir Arthur Wellesley ;) two for Yarmouth ; and two for Newton. Dr. Thomas James, a learned divine and antiquary, was born at Newport, about the yeai 1571. He was so celebrated for his erudition as to be termed a living library. He died in 1629. — Admiral Hobson, a gallant commander in the reign of queen Anne, was born at Bon-church in this isle. — Dr. Robert Hooke, a learned philosopher, and author of Micrographia, or Philosophical Descriptions of Minute Bodies, &c.. was born at Freshwater in 1 635. He died in

1702. — Sir R. Worsley, an ingenious antiquary, and author of a History of the Isle of Wight was ilso a native of the island.

The trade of this island is flourishing. The harbour of Cowes is particularly convenient for shipping and unshipping merchandise. The chief imports are coals, timber, deals, iron, wine, herap, and fruits ; the principal exports wheat, flour, barley, malt, and salt. The chief manufactures are those of starch, hair-powder, and salt; and the

making of woollens, sacks, &c. These are chiefly carried on in the House of Industry near Newport.

ISLEBIANS, in ecclesiastical history, a name given to those who adopted the sentiments of a Lutheran divine of Saxony, called John Agricola, a disciple and companion of Luther, a native of Isleb, whence the name; who, interpreting literally some of the precepts of St. Paul with regard to the Jewish law, declaimed against the law and the necessity of good works.

ISLEIF, an Islandic historian, who flourished early in the eleventh century. He was sent into Germany by his father Gysser, who had assisted in converting'Iceland to Christianity ; and, having finished his studies there, he went to Rome, and was ordained in 1056. In his journey he visited the emperor, and conciliated his patronage by making him a present of a bear. Returning in 1057, he founaed the see and school of. Seal-holt, .where several prelates of Iceland received their education. Our bishop afterwards wrote Annals of that country, a History of Norway, and the Lives of Harold Fairfax and his successors, including an account of all the Norwegian families who had arrived in Iceland in that prince's reign. Isleif was married, and had a son named Gysser, who published some historical translations. His father died in 1080.

ISLEWORTH, a large parish and village in Middlesex, nine miles west of London, on the Thames. Sion House, the magnificent seat of the duke of Northumberland, and several handsome villas, are in this parish.

ISLINGTON, a village of Middlesex, on the north side of London, to which it is almost contiguous. It appears to be of Saxon origin; and in the Conqueror's time was written Isledon, or Isendon. The church is one of the prebends of St. Paul's ; to the dean and chapter of which a certain precinct belongs, for the probate of wills, and granting administrations. The church was a Gothic structure, erected in 1503, and stood till 1751, when the inhabitants applied to parliament for leave to rebuild it, and soon after erected the present structure, which is a very substantial brick edifice. The White Conduit House has handsome gardens with good walks, and two large rooms for the entertainment of company. In the south-west part of this village is that noble reservoir, improperly called New-river Head ; though they are only two basins which receive that river from Hertfordshire, and whence the water is thrown by an engine into the company's pipes for the supply of London. In this parish are two charity-schools ; one founded in 1613 by dame Alice Owen, for educating thirty children.

This foundation, with a row of alms-houses, is under the care of the

brewers' company. Here is an hospital with u* chapel, and a workhouse for the poor. There is a spring of chalybeate water, in a very pleasant garden, which for some years was constantly attended by the princess Amelia. Near this is Sadler's Wells, where, during the summer season, people are amused with rope-dancing, tumbling, pantomimes, &c.

ISLIP, a town of Oxfordshire, fifty-six miles from London, noted for the birth and baptism of Edward the Confessor. By the inland navigation, it has communication with the rivers Mersey, Dee, Ribble, Ouse, Trent, Derwent, Severn, Humber, Thames, Avon, &c., and the counties of Lincoln, Nottingham, York, Lancaster, Westmoreland, Chester, Stafford, Warwick Leicester, Oxford, Worcester, &c. It has a good market for sheep, and some remains of an ancient palace, said to have been king Ethelred's. Here is a charity-school. The chapel wherein Edward was baptised standing at a small distance north from the church, and still called the king's chapel, was entirely desecrated during Cromwell's usurpation, and converted to the meanest uses of a farm-yard. It is built of stone, fifteen yards long and seven broad, and retains traces of the arches of an oblong window at the east end. This ma-nor was given by Edward the Confessor to Westminster Abbey, to which it still belongs.

ISMAEL, or ISMAIL, a strong town of Tur-key in Europe, in Bessarabia. It was taken by storm, by the Russians, on the 22d of December, 1790; and it is said that the long siege, and the capture, did not cost them less than 10,000 men. The most shocking part of the transaction is, that the garrison, whose bravery merited, and would have received from a generous foe, the highest honors, were massacred in cold blood by the merciless Russians, to the amount, by their own account, of 30,000 men : and the place was abandoned to the fury of the brutal soldiery. Ismail is seated on the north side of the Danube, 140 miles south by west of Bender. Long. 29° 30' E., lat. 45° 11' N.

ISMARUS, a town of the Cicones, in Thrace, giving name to a lake. By Virgil it is called Ismara. Servius supposes it to be the mountain of Thrace, on which Orpheus dwelt.

1SMID, the ancient Nicomedia, a town of Asia Minor, capital of Bithynia. There are no traces remaining of its former greatness, except an inferior church. It stands on the side of a hill overlooking the golf

of Nicomedia, and contains 750 families. Long. 29° 34’ E., lat. 40° 39’ N.

ISNARDIA, in botany, a genus of the monogynia order, and tetrandria class of plants ; natural ordrr seventeenth, calycanthemae : COR. none: CAL. quadrifid : CAPS, quadrilocular, and girt with the calyx. Species one only, an aquatic annual plant common in Europe and America.

ISNIK, the ancient Nice, a town of Asia Mi-nor, and for a short time the capital of Bithynia, is famous in ecclesiastical history as the seat of the two councils of 325 and 787. See NICE. It contains at present scarcely 300 houses, yet has many monuments of its former grandeur. The walls may still be traced over a circumference of four miles ; and the palace of Theodore

Lascaris forms a most stupendous mass of masonry. The town is situated on a lake communicating with the sea of Marmora, and has a trade in silk. Long. 29° 50’ E., lat. 40° 16’ N.

ISOCLlllONAL, is applied to such vibrations of a pendulum as are performed in the same space of time ; as all the vibrations or swings of the same pendulum are, whether the arches it describes are shorter or longer.

ISOCHRONAL LINE, that in which a heavy body is supposed to descend without any acceleration.

ISOCRATES one of the greatest orators of Greece, was born at Athens, A. A. C 436. He was the son of Theodorus, who had enriched himself by making musical instruments, and who gave his son a liberal education. He was the disciple of Prodicus Gorgias, and other great orators. He endeavoured at first to declaim in public, but without success ; he therefore contented himself with instructing his scholars, and making private orations; -and, being informed of the loss of the battle of Cheronea, he abstained four days from eating, and died in consequence at the age of ninety-eight. There are still extant twenty-

one orations, which are much admired, and have been translated from the Greek into Latin by Wolfius. It is recorded, to his praise, that he never, by writing or accusation, injured a single individual. A statue of bronze was raised to his memory by Timotheus, and another by his adopted son Aphareus. The style of Isocrates is pure, sweet and flowing : he was extremely attentive to the harmony of his periods, and he is reckoned by Cicero as the first who introduced into Greek prose that melody of which it is susceptible. He spent much time in polishing his compositions : his panegyric on Athens is said to have cost him ten years' labor. There are also nine letters attributed to him.

ISOETES, in botany, a genus of the natural order of filices, and the cryptogamia class of plants. The antherae of the male flower are within the base of the frons or leaf. The CAPS. of the female flower is bilocular, and within the base of the leaf There are but two species, of which one, I. lacastrix, is common to England.

ISOPERIMET'RICAL, n. s. Gr. «roC, Trtpt, and fitrpov. In geometry, are such figures as have equal perimeters or circumferences, of which the circle is the greatest.

ISOPYRUM, in botany, a genus of the polygynia order, and polyandria class of plants; and in the natural method ranking under the twenty-sixth order, multisiliquafc : CAI.. none : pe-tals five: the nectaria trifid and tubular: CAPS. recurved and polyspermous. Species three ; one of Siberia, the other two of the Alps.

ISOS'CELES, M.S. Fr. isoscele, or equiangular triangle. That which has only two sides equal.

ISPAHAN, an elevated district of the province of Irak, in Persia, consisting principally of clusters of villages connected with each other by narrow valleys and defiles of the mountains. One of these valleys, however, is forty miles in breadth, and from sixty-five to seventy miles long. It i.j calk.-d the Uallook of Sinjan, and contains seviTa.1 distinct villages: the Zenderout or its Lena's \ateriiig the whole. There is not per-

haps a more fertile spot in Persia : but the Afghauns have ravaged it in modern limes, and the whole district will be long ere it recovers entirely from the effects of their depredations. Pigeons are kept here in large quantities for the sake of their dung, to which, used as a manure, the fineness of the melons of this neighbourhood has been

attributed. The chief towns besides Ispahan are Isfeijan and Yezdikhaust.

ISPAHAN, SEPAHAN, or SPANHAUN (i. e. a ren-dezvous), a city of Persia, in the above district, and long the capital of the Persian monarchy. It stands on the river Zeinderood, which is afterwards lost in the desert. It is supposed to be the Aspadana of Ptolemy ; but it was then, as indeed now, a place of not 'much consequence. Previously to the days of Timour it had risen into considerable notice, and was taken by that conqueror in 1387, when 70,000 of its inhabitants are said to have been massacred, and their heads piled in heaps upon the walls. The early Sophis made it the seat of their empire ; and Shah Abbas employed all his power and wealth to beautify it as his capital. His palace and gardens extended five miles in circuit. Many of its walls remain entire. When visited by Chardin, in the early part of the eighteenth century, it was at the height of its splendor, and, according to his estimate, was twenty-four miles in circuit, and included nearly 1,000,000 of inhabitants, 172 mosques, forty-eight colleges, 1 800 caravanseras, and 273 public baths. The Afghauns ravaged and almost reduced it to ruins in 1722, and in this state much of it remains. Modern travellers say that a person may ride for miles amidst the ruins of this immense capital, and that yet it boasts a population of more than 200,000 inhabitants. To Hajee Mahomed Hus-sein Khan, second minister to the king of Persia, who was a great while governor of Ispahan., aiid born here, it is said to owe much of its late revival. He informed Mr. Morier that it contained 80,000 families, or 400,000 individuals. According to Mr. Kinnier, the first view which the traveller has, on coming from Shiraz, of this great metropolis, is from an eminei.ce about five miles from the city, when it bursts at once upon his sight, and is, perhaps, one of the grandest prospects in the universe. Its ruinous condition is not observable at a distance, all defects being hid by high trees and lofty buildings ; and palaces, colleges, mosques, minarets, and shady groves, are the only objects that meet the eye. Ispahan he still regards as the first commercial city in Persia, being the emporium of the foreign trade between India and Persia, Turkey and Cabul. Its manufactures are various; but in that of gold brocade it has attained unrivalled excellence. The Meyclau, or great square, is one-third of a mile in length, and about half that breadth. It was once encircled by a canal, bordered by fine plane trees ; but no vestiges of either remain. Here Shah Abbas displayed the horsemanship and military exercises of his court; but it is now devoted to commercial purposes; being surrounded by the finest shops of the city. In the middle is held the market for horses and cattle. There are | some fine mosques in the whole circuit of it; but the

palace, forming one of the sides, is the chief ornament. Another object worth notice is the Chaur Baug (or Four Gardens) : a name given to an avenue of more than a mile, reaching from the Meydan to the mountains east of Ispahan. It is composed of four rows of very large plane-trees ; and is about 300 feet broad : the alleys on both sides are raised, and covered with fruits and flowers. Fountains and canals, communicating with the Zeinderood, abound throughout its whole extent. In the garden of the Huzar Jareeb, a noble edifice destroyed by theAfghauns, the finest fruits of Persia are to be found, it is at the east end of this avenue.

Ispahan has also several handsome bridges over the Zeinderood and its canals: that which joins the Chaur Baug with the suburb of Julfa is upwards of 1000 feet long, with thirty-four very large arches.

ISRAEL, from Heb, PlTtf, and ˆK, i. e. prevailing in the Lord. The name which the angel gave Jacob after having wrestled with him all night at Mahanaim or Penuel. Gen. xxxii. 1, 2, and 28, 29, 30, and Hosea xii. 3.

ISRAEL is also used for the people of Israel, or the whole descendants of Jacob, as well as for the kingdom of Israel, or of the ten tribes distinct from the kingdom of Judah. In both these senses it is used in the following brief chronolo-gical lists of the judges and kings of Israel. The Israelites had no king of their nation till Saul, except the short lived usurper Abimelech. Be-fore that they were governed, at first by elders, as in Egypt; then by princes of God’s appointment, ns Moses and Joshua; then by judges, and last of all by kings.

A CHRONOLOGICAL LIST OF THE JUDGES AND SERVITUDES OF ISRAEL.

A. M.

2453. Moses led the Israelites out of Egypt.

2493. Moses died, aged 120.

2510. Joshua died, after judging Israel seventeen years, aged 110.

2525. The elders governed for about fifteen years.

2532. An anarchy of about seven years, during which the history of Micah, the conquest of Laish, by the Danites, and the civil war between the eleven tribes and Benjamin took place.

2531. The first servitude under Cushan-risha- thaim, king of Mesopotamia, which lasted eight years.

2539. Othniel delivered Israel in the fortieth year after peace was established by Joshua.

2579. A peace of about forty years, from the deliverance of Othniel.

2597. The second servitude, under Eglon king of the Moabites, lasted eighteen years.

2597. Ehud delivers Israel, and governs sixty years.

2657. Shamgar governed Israel, and the land had peace till the eightieth year after the deliverance by Ehud.

2677. The third servitude, under the Canaanites, began, and lasted twenty years.

2697. Deborah and Barak deliver the Israelites, and govern forty years.

A. M.

2737, 2744

2784, 2787. 2788, 2811, 2815,

2833 2833

2839, 2839.

2846. 2856. 2864.

2864.

The fourth servitude under the Midianites, which lasted seven years. Gideon delivers Israel, and governs forty years.

Abimelech made king by the Shechemites. He is killed at the siege of Thebez. Tola governs .twenty-three years. Jair governs twenty-two years. The fifth servitude under the Philistines and Ammonites, which lasted eighteen years.

The death of Jair.

Jephthah chosen head of the Israelites, defeats {he Ammonites, and governs six years.

Jephthah dies.

Ihzan of Bethelem, by the Rabbies reckoned the same with Boaz, governs seven years.

Elon governs ten years. Abdon judges Israel eight years. The sixth servitude, under the Philistines, began, which lasted forty years. Eli the high priest governed twenty-four years, during the time of the servitude under the Philistines. Sampson defends and judges Israel twenty years.

The death of Sampson, who judged Israel during the judicature of Eli the high priest, according to some ; but AJstedius and others make Eli the successor of Sampson.

The death of Eli, and beginning of Samuel's government. Saul elected king.

2867. 2887.

2888.

2909.

A CHRONOLOGICAL LIST OF THE KINGS OF ISRAEL.

2909. Saul, the first king of the Israelites, reigned forty years.

2949. Ishbosheth, his son, succeeded, and reigned seven years over part of Israel.

2934. David was anointed king by Samuel, but did not enjoy the regal power till the death of Saul in 2949, and was not acknowledged king of all Israel till after the death of Ishbosheth, in 2956.

2990. David died, aged seventy.

2990. Solomon succeeded. He had received the royal unction in 2989.

3029. Solomon died, after reigning forty years. After his death the kingdom was divided, and, the ten tribes having chosen Jeroboam for their king, Rehoboam reigned only over the tribes of Judah and Benjamin. See JUDAH.

3051. Jeroboam I. died, after reigning twenty-two years.

3051. Nadab reigned two years.

3053. Baasha twenty-four years.

3077. Elah two years.

Zimii seven days.

3079. Omri reigned twelve years. He had a competitor, Tibni, whom he defeated and killed.

3091 . Ahab reigned twenty-two years.

3113. Ahaziah, his son, two years.

A. 11.

3115. Jehoram succeeded his brother, reigned twelve years, and was killed in 3127.

3127. Jehu reigned twenty-eight years.

3155. Jehoahaz reigned seventeen years.

3172. Joash reigned sixteen years.

3188. Jeroboam II. forty-one years.

3229. Zachariah six months.

3229. Shallum reigned one month.

3229. Menahem ten years.

3239. Pekahiah two years.

3241. Pekah twenty years, from 3241 to 3261.

3261. Hoshea reigned nine years, after which the kings of Assyria carried Israel away captive, from 3261 to 3270. See Kinas xvii. 6.

ISRAELITES, the descendants of Israel, who were at first called Hebrews, from Heber, one of their ancestors (see HEBER), or from Abraham, who came from the other side of the Euphrates ; afterwards Israelites, from Israel the patriarch ; and lastly Jews, after their return from the captivity of Babylon, because the tribe of Judah was then much stronger and more numerous than the other tribes. See JEWS.

ISSACHAR, from Heb. -pff, i. e. he hired, or wages, the fifth son of Jacob by Leah, and the progenitor of the tribe so named from him. Tolah, one of the judges, and Baasha, one of the kings of Israel, were of this tribe.

ISSACHAR, one of the divisions of Palestine by tribes, lying south of Zabulon, so as by a narrow slip to reach the Jordan, between Zabulon and Manasseh, Joshua xix. But whether it reached the sea is a

question : some holding that it did. But Joshua makes no mention of the sea in this, tribe, nor does Josephus extend it farther than to Mount Carmel; and, in Joshua xvii. 10, Asher is said to touch Manasseh on the north, which could not be if Issachar extended to the sea.

ISSOIRE, a fortified town in the department of the Puy de Dome, France, on the small river Couze. A large street surrounds it, occupying the ground of the old ramparts. Population upwards of 5000. Nineteen miles south by east of Clermont, and 300 S. S. E of Paris.

ISSOUDUN, a considerable town and arrondissement of France, in the department of Indre, and late province of Berry. It carries on a great trade in wood, cattle, cloth, hats, and stockings, and is seated partly on a plane, and partly on an eminence. Inhabitants 10,000. It is eighteen miles south-west of Bourges.

IS’SUE, n. s., v. n. & v. a. > Fr. issue. Is-IS’SUELESS, adj. S suelessis without

offspring or descendants : the substantive and the verbs have a great variety of meanings as under. In law. Issue has divers applications in the common law : sometimes used for the children begotten between a man and his wife ; sometimes for profits growing from an amercement, fine, or expenses of suit ; sometimes for profits of lands or tenements; sometimes for that point of matter depending in suit, whereupon the parties join and put their cause to the trial of the jury. Issue is either general or special : general iss-ue seemeth to be that whereby it is referred to the jury to bring in their verdict, whether the defendant have done any such thing

as the plaintiff layeth to his charge. The special issue then must be that, where special matter being alleged by the defendant for his defence, both the parties join thereupon, and so grow rather to a demurrer, if it be qusestio juris, or to trial by the jury, if it be qusestio facti.

IS’SUE. The act of passing out ; exit ; egress ; or passage out.

Unto the Lord belong the issues of death.

Ptalms.

Let us examine what bodies touch a moveable whilst in motion, as the only means to find an issue out of this difficulty. Digby on Bodies.

We might have easily prevented those great returns of money to France ; and, if it be true the French are so impoverished, in what condition must they have been, if that issue of wealth had been stopped 1 Swift.

Event ; consequence.

Spirits are not finely touched, But to fine issues.

Shakspeare. Measure for Measure. If I were ever fearful To do a thing, where I the issue doubted, Whereof the execution did cry out Against the non-performance, ‘twas a fear Which oft infects the wisest.

Id. Winter’s Tale.

But let the issue correspondent prove To good beginnings of each enterprize.

Fairfax.

If things were cast upon this issue, that God should never prevent sin till man deserved it, the best would sin, and sin for ever. South.

The wittiest sayings and sentences will be found the ins lies of chance, and nothing else but so many lucky hits of a -roving fancy. Id.

Our present condition is better for us in the issue, than that uninterrupted health and security that the Atheist desires. Benlley.

Termination ; conclusion. He hath preserved Argalus alive, under pretence of having him publickly executed after these wars, of which they hope for a soon and prosperous issue.

Sidney.

What ittue of my love remains for me ! How wild a passion works within my breast ! With what prodigious flames am I possest !

Dryden,

Homer, at a loss to bring difficult matters to an issue, lays his hero asleep, and this solves the difficulty. Broome. Sequel deduced from premises.

I am to pray you not to strain my speech To grosser issues, nor to larger reach, Than to suspicion. Shakspeare. Othello.

A fontanel ; a vent made in a muscle for the discharge of humors.

This tumour in his left arm was caused by stric binding of his issue. Wiseman

Evacuation. A woman was diseased with an issue of blood.

Matt. ix. 2. Progeny ; offspring. This good king shortly without issue dide, Whereof great trouble in this kingdome grew That did herselfe in sondry parts divide. And with her powre her own selfe overthrew.

Spenser. Faerie Queene. O nation miserable !

Since that the truest issue of thy throne, By his own interdiction stands accurst.

Shakspeare. Mwileth.

Nor where Abassin kings their itsue guard, .Mount Amara, though this by some supposed True Paradise, under the /Ethiop line By Nilus' head. Milton's Paradise Lost.

This old peaceful prince, as Heaven decreed, Was blessed with no male Usue to succeed.

Dryden's Mneid,

The frequent productions of monsters, in all the species of animals, and strange istues of human birth, carry with them difficulties, not possible to consist with this hypothesis. Locke.

IS’SUE, v. n. From the noun; Fr. issue; Ital-uscire.

To come out ; to pass out of any place. Waters issued out from under the threshold of the house. E*ek.

From the utmost end of the head branches there issueth out a gummy juice. Raleigh’s History.

Waters issued from a cave. Milton.

Wild shrieks have issued from the hollow tombs ; Dead men have come again and walked about.

Blair’s Grave.

Ere Pallas issued from the thunderer*s head, Dulness o’er all possessed her ancient right.

Pope.

To make an eruption ; to break out. Three of master Ford’s brothers watch the doors with pistols, that none should issue out, otherwise you might slip away. Shakspeare.

See that none hence issue forth a spy. Milton.

Haste, arm your Ardeans, issue to the plain ; With faith to friend, asault the Trojan train.

Dry den.

At length there issued from the grove behind, A fair assembly of the female kind. Id.

A buzzing noise of bees his ears alarms ; Straight issue through the sides assembling swarms.

Id.

Full for the port the Ithacensians stand, And furl their sails, and issue on the land.

Pope’s Odyssey.

Then issues forth the storm with sudden burst, And hurls the whole precipitated air Down in a torrent. Thomson.

To proceed as an offspring.

Of thy sons that shall issue from thee, which thou shall beget, shall they take away. 2 Kings xx. 18.

To be produced by any fund.

These alterages issued out of the offerings made to the altar, and were payable to the priesthood.

Ay life's Parergon.

To run out in lines.

Pipes made with a belly towards the lower end, and then issuing into a straight concave again.

Bacon.

IS'SUE, v. a.

To send out ; to send forth.

A weak degree of heat is not able either to digest the parts or to issue the spirits.

Bacon's Natural History.

The commissioners should issue money out to no other use. Temple.

To send out judicially or authoritatively.

This is the more frequent sense. It is commonly followed by a partide, out or forth.

If the council issued out any order against them, or if the king sent a proclamation for their repair to their houses, some noblemen published a protestation.

Clarendon. Deep in a rocky cave he makes abode,

A mansion proper for a mourning god :

Here he gives audience, issuing out decrees

To rivers, his dependent deities. Dryden .

In vain the master issues out commands, In vain the trembling sailors ply their hands : The tempest unforeseen prevents their care. Id. They constantly wait in court to make a due re-turn of what they have done, and to receive such other commands as the judge shall issue forth.

Aylijfe's Parergon.

ISSUES, in surgery, are small ulcers made designedly by the surgeon in various parts of the body, and kept open by the patient, for the preservation and recovery of his health.

IS'SUELESS,

I have dona sin,

For which the Heavens, taking angry note,

Have left me issueless. Shakspeare. Winter'* Tale.

Carew, by virtue of this entail, succeeded to Hugh's portion, as dying issueless.

Carew's Survey of Cornwall.

ISSUS, a town of Cilicia in Natolia, now called Ajazzo, with a harbour on the Levant Sea, a little north of Scanderoon. Near this place, in a difficult pass between the mountains and the sea, Alexander the Great fought his second great battle with Darius. The great cause of the defeat which the Persians here received was the bad generalship of their monarch, who led his numerous forces into a narrow place, where they had not room to act. Alexander was so much surprised when he first received the news that Darius was behind him, that he could scarcely believe it to be true ; but when he was thoroughly satisfied of the fact, and that Darius had again passed the river Pinarus, he called a council of war, wherein he exhorted them to remember their former victories ; and that they, who were always conquerors, were about to contend with a nation accustomed to defeat. He further observed that Darius seemed to be infatuated, since he had with such expedition quitted an open and champaign country, where his numbers might hare acted with advantage, to fight in a place enclosed, where the Macedonian phalanx might be well drawn up, and where his numbers could only incommode him. He then made the necessary dispositions for repaeeing the mountains, posted guards where he found them necessary, and then commanded his troops to refresh themselves, and to take their rest till morning. At break of day he began to repass the

mountains, obliging his forces to move in close order where the road was narrow, and to extend themselves as they had more room, the right wing keeping always close to the mountain, and the left to the sea-shore. On the right there was a battalion of heavy armed troops, besides the targeteers under the command of Nicanor the son of Parmenio. Next these, extending to the phalanx, were the corps of Coenus and Perdiccas; and on the left the respective bodies commanded by Amyntas, Ptolemy, and Meleager. The foot appointed to support them were commanded by Craterus ; but the whole left wing was committed to Parmenio, with strict orders not to decline from the sea-shore, lest the Persians should surround them. Darius ordered 20,000 foot, and 30,000 horse to retire, finding that he already wanted room to draw up the rest. His first line consisted of 30,000 Greek mercenaries, having on their right and left 60,000 heavy-armed troops,

being the utmost the ground would allow On the left, towards the mountain, he posted 20,000 men, which, from the hollow situation of the place, were brought quite behind Alexander's right wing. The rest of his troops were formed into close and useless lines behind the Greek mercenaries, to the number in all of 600,000 men. When this was done he suddenly recalled the horse who had retired, sending part of them to take post on his right against the Macedonians commanded by Parmenio ; and the rest he ordered to the left towards the mountain : but, finding them unserviceable there, he sent the greatest part of them to the right ; and then took upon himself, according to the custom of the Persian kings, the command of the main body! As soon as Alexander perceived that the weight of the Persian horse was disposed against his left wing, he despatched the Thessalian cavalry thither, and supplied their place on the right by some brigades of horse from the van and light-armed troops. He also made such dispositions, that, notwithstanding the advantage of the hollow mountain, the Persians could not surround him. But, as these precautions had considerably weakened the centre of his army, he ordered those advanced posts on the enemy's left, of wViich he was

most apprehensive, to be attacked at the very beginning of the combat ; and, when they were easily driven from them, he recalled as many troops as were necessary to strengthen his centre. When all things were in order, Alexander gave strict command that his army should march very slowly. As for Darius, he kept his troops fixed in their posts, and in some places threw up ramparts ; whence the Macedonians rightly observed, that he thought himself already a prisoner. Alexander, at the head of the right wing, engaged first, and, without any difficulty, broke and defeated the left wing of Darius. But, endeavouring to pass the Pinarus after them, his troops in some measure losing their order, the Greek mercenaries fell upon them in flank, and Ptolemy, the son of Seleucus, and 120 Macedonians of rank, were killed on the spot. But the foot next to Alexander's right wing coming in seasonably to its relief, fell upon the mercenaries in flank, amongst whom a dreadful car-nage was made ; they being in a manner surrounded by the horse and light-armed troops, whicli at first pursued the left wing, and the foot that now passed the river. The Persian horse on the right still fought gallantly ; but when they were informed of the rout of their left wing and of the destruction of the Greek mercenaries, and that Darius himself had fled, they began to break, and betake themselves to flight also. The Thessalian cavalry pursued them close at their heels ; and, the narrow craggy roads incommoding them exceedingly, vast numbers perished. Darius fled, soon after the left wing was broken, in a chariot with a few of his favorites ; but, the road becoming rocky and narrow, he quitted it, and, mounting a horse, rode all night : his chariot, in which were his cloak and his bow, fell into the hands of Alexander, who carried them back to his camp. Diodorus informs us, that Alexander looked every where about for Darius; and, as soon as he discovered him, with

his handful of guards attacked him and the flower of the Persian army that was about him ; being as desirous of obtaining this victory by his personal valor, as of subduing the Persian empire by the courage of his soldiers. But when Ox-athres, the brother of Darius, saw Alexander's design, and how fiercely he fought to accomplish it, he threw himself, with the horse who were about him, between his brother's chariot and the enemy, where an obstinate fight was maintained till the dead bodies appeared like an entrenchment about the chariot of Darius. Many of the Persian nobility were slain, and Alexander himself was wounded iu the thigh. At last the horses in the chariot of Darius started, and be-came so unruly, that the king himself was forced to take the reins ; the enemy, however, pressed so hard upon him, that he was constrained to call for another chariot, and

mounted it in great danger. This was the beginning of the rout, which soon after became general. According to this author, the Persians lost 200,000 foot, and 10,000 horse; the Macedonians 300 foot and 150 horse. Justin informs us that the Persian army consisted of 400,000 foot, and 100,000 horse. He says that both the kings were wounded ; and that the Persians still fought gallantly when their king fled, but that they afterwards were speedily and totally routed: he is very particular as to their loss, which, he says, amounted to 61,000 foot, 10,000 horse, and 40,000 taken prisoners ; of the Macedonians, he says, there fell no more than 130 foot and 150 horse. Curtius says that of the Persians there fell 100,000 foot, and 10,000 horse; that of Alexander's army 504 wore wounded ; thirty-two foot and 150 horse killed. He adds, Tan-tulo impendio ingens victoria stetit, ' So small was the cost of so great a victory.'

ISTIIMIA, or the ISTHMIAN GAMES, one of the four solemn games which were celebrated every fifth year in Greece. They had their name from the isthmus of Corinth, where they were celebrated. In their first institution, according to Pausanias, they consisted only of funeral rites and ceremonies in honor of Melicertes : but Theseus afterwards, as Plutarch informs us, in emulation of Hercules, who had appointed games at Olympia in honor of Jupiter, dedicated those to Neptune, his reputed father, who was regarded as the particular protector of the isthmus and commerce of Corinth. The same trials of skill were exhibited here as at the other three sacred games ; and particularly those of music and po-etry. These games, in which the victors, were only rewarded with garlands of pine-leaves, were celebrated with great magnificence and splendor as long as paganism continued to be the established religion of Greece ; nor were they omitted even when Corinth was sacked and burnt by Mummius the Roman general ; at which time the care of them was tiansferred to the Sicyonians, but was restored to the Corinthians when their city was rebuilt.

IST'HMUS, n. s. Lat. isthmus. A neck of land joining a peninsula to the continent.

There is a castle strongly seated on a high rock, which joineth by an isthmus to the land, and is im-pregnably fortified . Sandy is Travels .

IT

IT

The Assyrian empire stretcheth northward to that Mtkmus between the Euxine an.l the Caspian seas. Brerewood on Languages.

The foremost of the base half blind appears ; And where his broad way in an isthmus ends, There he examines all his passengers, And those who ought not ”scape he backward sends. Fletcher’s Purple Island.

O life, thou nothing’s younger brother ! Thou weak-built isthmus, that dost proudly rise Up betwixt two eternities, Yet can’st not wave nor wind sustain ; But broken and o’erwhelmed the ocean meets again.

Cowley.

Cleomenes thinking it more advisable to fortify, not the isthmus, but the mountains, put his design in execution. Creech.

Our church of England stands as Corinth between two seas, and there are some busy in cutting the isth-nus, to let in both at once upon it. Stillingfleet. Placed on this isthmus of a middle state,

A being darkly wise, and rudely great. Pope.

An ISTHMUS is a narrow neck which joins two continents, or separates two seas. See PENINSULA. The most celebrated isthmuses are, that of Panama or Darien, which joins North and South America ; that of Suez, which connects Asia and Africa ; that of Corinth, or Peloponnesus, in the Morea ; that of Crim Tartary, otherwise called Taurica Chersonesus ; that of the peninsula Romania, and Erisso, or the isthmus of the Thracian Chersonesus, twelve furlongs broad, being that which Xerxes undertook to cut through. The ancients had several designs of cutting the isthmus of Corinth, which is a rocky hillock, about ten miles over ; but they were all in vain, Ihe invention of sluices being not then known. There have been attempts too for cutting the isthmus of Suez, to make a communication between the Red Sea and the Mediterranean: but these also failed: and, in one of them, a king of Egypt is said to have lost 120,000 men.

ISTBJA, a peninsula of Austrian Illyria, constituting its southern division; formed by the gulfs of Trieste and Fiume, and bounded on the north by Carniola. It is situated between the forty-fifth and forty-sixth degrees of latitude, and was formerly divided into Venetian and Austrian Istria ; but, at the peace of Campo Formio, the whole was given to the empire. It was afterwards indeed, during some years," in the hands of Buonaparte ; but was restored to Austria in 1814. It comprises the districts of Cape d'Istria and Rovigne in the circle of Trieste, and of Istria in the circle of Fiume.

The territorial extent of Istria is about 1600 square miles, of rich fertile country. The oil is accounted superior to that of Spain and Sicily ; and the fisheries of tunnies and anchovies are highly productive; but the supply of. salt is inadequate, and quantities of the fish are allowed to putrefy along the coast. The marble and stcne of Istria are much prized for building in the north-east of Italy. Population about 140,000. The chief town is Rovigno. See ILLYRIA.

IT, pronoun. Sax. }>it.

The neutral demonstrative. Used in speaking of things. For it, our ancestors used he, as the neutral pronoun ; and for its they used his. Thus,

in the accidence, a noun adjective is that which cannot stand by himself, but requireth another word to be joined with him to show his signification.

Nothing can give that to another which it hath not itself. Dramhult against Hubbes.

Will our great anger learn to stoop so low ? I know it cannot. Cowley.

Tell me, O tell, what kind of thing is wit,

Thou who master art of it. Id.

His son, it may be, dreads no harm ;

But kindly waits his father's coming home.

Flatmore.

The time will come, it will, when you shall know The rage of love.

Dryden.

How can I speak 1 or how, sir, can you hear ? Imagine that which you would most deplore, And that which I would speak, is it or more. Id.

A mind so furnished, what reason has it to acquiesce in its conclusions ? Locke.

The glory which encompassed them covered the place, and darted its rays with so much strength, that the whole fabrick began to melt. Add'uon.

If we find a greater good in the present constitution, than would have accrued either from the total privation of it, or from other frames and structures, we may then reasonably conclude, that the present constitution proceeded from an intelligent and good being, that formed it that particular way out of choice.

Benlley.

The design, it seems, is to avoid the dreadful imputation of pedantry. Swift.

It is used absolutely for the state of a person or affair.

I wolde have caught it up anone : It fled ; and fro me was ygone. As I folowed, and it forth went, Downe by a floury greene it went, Ful thicke of grasse.

Chaucer. Boke of the Duchesst How is it with our general 1 — Even so

As with a man by his own alms impoisoneu, And with his charity slain.

Shakspeare. Coriolanus. What say you — a pasty, it shall and it must, And my wife little Kitty is famous for crust.

Goldsmith.

Hues which have words, and speak to ye of heaven. Float o'er this vast and wondrous monument. And shadow forth its glory. Byron. Chitde Harold.

It is used for the thing; the matter; the affair.

It's come to pass,

That tractable obedience is a slave To each incensed will. Shakspeare. Henry VIII.

It is sometimes expressed by ‘t. He rallied, and again fell to ‘t ; For catching foe by nearer foot, He lifted with such might and strength, As would have hurled him thrice his length.

fludibras.

It is used ludicrously after neutral verbs, to give an emphasis.

If Abraham brought all with him, it is not probable that he meant to walk it back again for his pleasure. Ualeigh.

The Lacedemonians, at the straits of Thermo-pyl*, when their arms failed them, fought it out with their nails and teeth. Dryilen.

I have often seen people lavish it profusely in tricking up theirchildren, and yet starve their minds.

f.-rfc..

The mole courses it not on the ground, like the rat or mouse, but lives under the earth. Addison.

Whether the charmer sinner it, or saint it. If folly grows romantick, I must paint it. Pope. Sometimes applied familiarly, ludicrously, or -udely to persons.

Let us after him,

Whose care is gone before to bid us welcome : It is a peerless kinsman. Shakspeare. Macbeth.

Do, child, go to itt grandam, child : Give grandam kingdom, and its grandam will Give it up to him. Id. King John.

It is sometimes used of the first or second person, sometimes of more. This mode of speech, though used by good authors, and supported by the it y a of the French, has yet an appearance of barbarism.

Who was't came by 1

— Tis two or three, my lord, that bring you word Macduff is fled to England. Shakspeare. Macbeth.

City,

Tis I, that made thy widows. Id. Coriolanui,.

'Tis these that early taint the female soul. Pope.

ITALIAN LANGUAGE, the language spoken in Italy. See LANGUAGE. This is derived principally from the Latin ; and, of all the languages formed from it, there is none which carries with it more visible marks of its original than the Italian. It is accounted one of the most perfect among the modern tongues. It is complained, indeed, that is has too many diminutives and superlatives, or rather augmentatives, but without any great reason ; for if those words convey nothing farther to the mind than the just idea of things, they are no more faulty than our pleonasms and hyperboles. The language corresponds to the genius of the people, who are slow and thoughtful : accordingly, their language runs heavily, though smoothly; and many of their words are lengthened out to a great degree. They have a great taste for music ; and, to gratify their passion this way, have altered many of their primitive words ; leaving out consonants, taking in vowels, softening and lengthening out their terminations, for the sake of the cadence. Hence the language Is rendered extremely musical, and succeeds better than any other in operas and some parts of poetry : but it fails in strength and nervousness ; and a great part of its words, borrowed from the Latin, become so far disguised, that they are not easily known. The great number of states into which Italy was (till of late divided, has given rise to a great number of different dialects in the language; the Tuscan is usually preferred to the other dialects, and the Roman pronunciation to that of the other cities ; whence the Italian proverb, ' Lingua Toscana in bocca Romana.' The Italian is generally pretty weli understood throughout Europe ; and is frequently spoken in Germany, Poland, and Hungary. At Constantinople, in Greece, and in the ports of the Levant, the Italian is used as commonly as the language of the country : in-deed, in those places it is not spoken so pure as in Tuscany, but is corrupted with many of the proper words and idioms of the place ; whence it takes a new name, and is called

Frank Italian.

ITALIAN REPUBLIC, a name given by Buonaparte and the deputies from the Cisalpine Consulta, who met with him at Lyons in 1801, to that part of Italy which, in October 1797, was erected into a democratic state, under the title of the Cisalpine Republic, and which was acknowledged as an independent state by the emperor at the treaties of Campo Formio and Luneville, as well as by most other European powers since. Some additions of territory were afterwards made to the Cisalpine republic, particularly the Valteline, Chiavenna, and Bormio, annexed in November 1797 ; the four Italian bailiwics ; that part of the Veronese which by the treaty of Campo Formio had been ceded to the emperor, whereby the whole of the Veronese became included in the Cisalpine republic ; and the ci-devant dominions of the prince of Parma; but all these additional territories were by no means sufficient to justify the title given to it of an Italian Republic. When Buonaparte fell, this republic felt with him.

ITALICA, in ancient geography, a town of Boetica, in Spain, built by ScipioAfricanus, after finishing the Spanish war, for the reception of the wounded soldiers. At first it was a muni-cipium ; afterwards a colony. It was the birth-place of the emperors Trajan and Adrian, and of the poet Silius Italicus.

ITALUS, an Arcadian prince, who erected a kingdom in Italy to which he gave name, and was deified after his death. ./Eneas invokes him among the Italian deities. Virg. ./En. rii. 178.

ITALY.

ITALY, one of the finest and most celebrated countries of Europe, lying between 7° and 10° E. long., and between 37° and 46° lat. N. On the N.N.W., and north-east, it is bounded by France, Switzerland, the country of the Grisons, and Germany ; on the east by the Adriatic Sea ; and on the south and west by the Mediterranean ; its figure bearing some resemblance to a boot. Its length from Aosta at the foot of the Alps in Savoy, to the utmost verge of Calabria, is about 600 miles ; but its breadth is very unequal, being in some places nearly 400 milˆs, in others not above twenty-five or thirty.

1. Of ancient Italy. — This country, like most

others, was anciently divided into a great num-ber of petty states and kingdoms. Afterwards when the Gauls settled in the western, and many Greek colonies in the eastern parts, it was divided, with respect to its inhabitants, into three great parts, *viz.* Gallia Cisalpina, Italy properly so called, and Magna Graecia. The most western and northern parts of Italy were in great part possessed by the Gauls, and hence took the name of Gallia, wit-i the epithets of Cisalpina and Citerior, because they lay on the side of the Alps next to Rome ; and Togata, with relation to the Roman gown or dress which the inhabitants used ; hut this last epithet is of a n>» ch later

date than the former. This appellation was antiquated in the reign of Augustus, when the division of Italy into eleven provinces, introduced by him, took place. Hence the name of Cisalpine Gaul frequently occurs in authors who flourished before, and scarce ever in those who wrote after his reign. This country extended from the Alps and the river Varus, parting it from Transalpine Gaul to the river Aesus ; or, as Pliny has it, to Ancona, in the ancient Picenum. On the north it was divided from Rhxtia by the Alpes Rhaeticae ; and from Illyricum by the river Formio : but on this side the borders of Italy were, in Pliny's time, extended to the river Arsia in Istria. On the south it reached to the Ligustic Sea, and the Appennines parting it fromEtruria; so that under the common name of Cisalpine Gaul were comprehended the countries lying at the foot of the Alps, called by Pliny and Strabo the Subalpine countries, Liguria, G alia Cispa-dana, and Transpadana. Italy, properly so called, extended, on the coast of the Adriatic, from the city of Ancona to the river Trento, now the Fortore; and on the Mediterranean, from the Marca to the Silarus, now the Sele. Magna Graecia comprised Apulia, Lucania, and the country of the Brutii. ft was called Greece, because most of the cities on the coast were Greek colonies. The inhabitants gave it the name of Great, not as if it was 'arger than Greece, but merely out of ostentation, as Pliny informs us.

All these countries were inhabited by a great number of different

nations settled at different times, and from many different parts. The names of the most remarkable of them were the Aborigines, or those whose origin was utterly unknown, and consequently were thought to have none ; the SABINES, HETRURIANS or TUSCANS, thetlMBRi, SAMNITES, CAMPANI, APULI, CALA-BRI,LUCANI, the BRUTII, and the LATINS. From a colony of the latter proceeded the Romans, who gradually subdued all these nations, one after another, and held them in subjection for upwards of 700 years. See ROME, and the above articles in their order.

Italy was anciently known by the names of Saturnia, Oenotria, Hesperia, and Ausonia. It was called Saturnia from Saturn; who, being driven out of Crete by his son Jupiter, is supposed to have taken refuge here. The names of Oenotria and Ausonia are borrowed from its ancient inhabitants the Oenotrians and Ausones, and that of Hesperia, or Western, was given it by the Greeks, from its situation with respect to Greece. The name of Italia or Italy, which in process of time prevailed over all the rest, is by some derived from Italus, a king of the Siculi ; by others from the Greek word IraXoc, an ox ; this country abounding, by reason of its rich pastures, with oxen of an extraordinary size and beauty. All these names were originally peculiar to particular provinces of Italy, but afterwards applied to the whole country.

2. Italy, from the time of Odoacer until the death of Theodoric. — The nations of Italy were originally brave, hardy, temperate, and well skilled in the art of war ; and the Romans much more so than the rest. Their subjection to Rome,

however, inured them to slavery; and the vast wealth which was poured into the country from all parts of the world, during the time of the Roman prosperity, corrupted their manners, and made them degenerate from their former valor. Of this degeneracy the barbarous nations of the north took advantage, and invaded the empire in innumerable multitudes. Though often repelled, they constantly returned; and it was found necessary to take great numbers of them into the Roman service, in order to defend the empire against the rest of their countrymen. In the year 476 the Heruli, presuming on the services they had done the empire, demanded a third part of the lands of Italy; arid, being refused, chose Odoacer, a man of low birth, but of great valor and experience, for their king ; and, having totally destroyed the remains of the Roman empire, proclaimed Odoacer king of Italy. The new monarch, however, did not think proper to alter the

Roman form of government, but suffered the people to be governed by the senate, consuls, &c., as before.

Odoacer enjoyed his dignity in peace till 488, when Zeno, emperor of Constantinople, being pressed by Theodoric king of the Ostrogoths, advised him to turn his arms against Odoacer, whom he could easily overcome, and thus make himself sovereign of one of the finest countries in the world. Theodoric now, therefore, set out for Italy, attended by an immense number of people, carrying with them their wives,children, and effects, on waggons. Several Romans of great distinction attended him, while many of his countrymen chose to remain in Thrace, where they became a separate nation. The Goths, being destitute of shipping, were obliged to go round the Adriatic. This march was performed in the depth of winter; and, during the whole time, a violent famine and plague raged among them. They were also opposed by the Gepidae and Sarmatians ; but at last, having defeated these enemies, and overcome every other obstacle, they arrived in Italy in 489. Theodoric advanced to the river Sontius (now Zonzo), near Aquileia, where he halted to refresh his troops. Here he was met by Odoacer at the head of a very numerous army, but composed of many different nations commanded by their respective chiefs, and without sufficient zeal for the common cause. Theodoric, therefore, gained an easy victory, and took their camp. Odoacer on this retired to the plains of Verona, and encamped at a small distance from the city ; but Theodoric pursued him closely, and soon forced him to a second engagement. The Goths obtained another victory ; but it cost them dear. Odoacer's mei. made a much firmer resistance than before, and great numbers fell on both sides. The victory, however, was so far decisive, that Odoacer was obliged to shut himself up in Ravenna ; so that Theodoric, having now no enemy to oppose him in the field, besieged and took several important places, and, among the rest, Milan and Pavia. At the same time Tufa, commander of Odoacer's forces, deserted to the enemy with the greatest part of his troops, and was immediately employed in conjunction with a Gothic officer in pursuit of his sovereign.

Odoacer had left Ravenna, and was advanced as far as Faenza, when he was closely besieged by Tufa ; but the traitor, declaring again for his old master, joined him with all his troops, and delivered up several officers that had been appointed by Theodoric to serve under him. These were sent in irons to Ravenna; and Odoacer, being joined by Frederic, one of Theodoric's allies, with a considerable body of troops, once more advanced against his enemies. He recovered all Liguria, took the city of Milan, and at last besieged Theodoric himself in Pavia. The Goths, having brought all their families and effects along with them, were greatly distressed for want of room ; and must have undoubtedly submitted, if their enemies had continued to agree among themselves. But the quarrels of his followers proved the ruin of Odoacer. Theodoric, finding that the enemy remitted the vigor of their operations, applied for succours to Alaric, king of the Visigoths, who had settled in Gaul. As the Visigoths and Ostrogoths were originally one nation, and the Visigoths had received among them some years before a great number of Ostrogoths under the conduct of Videmer cousin-german to Theodoric, the supplies were readily granted. The inaction of the enemy gave these succours time to arrive ; upon which Theodoric instantly joined them, and marchingagainst his enemies, gave them a total overthrow. Odoacer again took refuge at Ravenna, but was closely besieged by Theodoric in 490. The siege lasted three years, during which Odoacer defended himself with great bravery, and greatly annoyed the besiegers. Theodoric, however, impatient of delay, leaving part of his army to blockade the city, marched with the rest against the strong holds which Odoacer had garrisoned. All these he reduced with little difficulty; and in 492 returned to the siege of Ravenna. The besieged were now reduced to great straits, both by the enemy without, and a famine within, the price of wheat having risen to six pieces of gold per bushel. On the other hand the Goths were worn out with the fatigues of such a long siege; so that both parties being willing to put an end to the war, Odoacer sent John, bishop of Ravenna, to Theodoric with ttrms of accommodation. Jornandas informs us, that Odoacer only begrged his life ; which Theodoric bound himself, by a solemn oath, to grant him : but Procopius says that they agreed to live together on equal terms. This last seems very improbable : but, whatever were the terms-of the agreement, it is certain that Theodoric did not keep them ; for, having a few days after invited Odoacer to a banquet, he despatched him with his own hand. All his servants and relations were massacred at the same time • except his brother Arnulphus, and a few others, who had the good fortune to make their escape, and retire beyond the Danube.

By the murder of Odoacer, Tht.i.loric, becoming master of all Italy,

assumed the title of king of that country, as Odoacer had done ; though, with a pretended deference to the emperor of Constantinople, he sent messengers asking liberty to assume that title, after he had actually taken it. Having secured his new kingdom, by foreign alliances, Theodoric applied himself to legislation, ard enacted many salutary laws.

To stop the incursions of the barbarians, he chose Ravenna for his chief residence, and the provinces were governed by the same magistrates that had presided over them in the times of the emperors, *viz.* the consulares, correctores, and presides. He also sent, according to the custom of the Goth?, ui&rior judges, distinguished by the name of counts, to each city, to administer justice, and decide disputes. Besides these officers, he also appointed not only in the principal cities, but in every small town and village, inferior magistrates of known integrity ; no appeals to distant tribunals being allowed but in matters of great importance. Under Theodoric Italy enjoyed as great happiness as had been experienced under the very best emperor*. He contented himself with the same tributes and taxes that had been levied by the emperors ; but, on all occasions of public calamity, was much more ready to remit them than they had been. Nor did he treat the natives as those of the other Roman provinces were treated by the barbarians who conquered them. These stripped the ancient proprietors of their lands, estates, and possessions, dividing them among their chiefs ; and giving to one a province with the title of duke, to another a frontier district with the title of marquis : to some a city with that of count ; to others a castle or village with the title of baron. But Theodoric, who piqued himself upon governing after the Roman manner, and observing the Roman laws arid institutions, left every one in the full enjoyment of his ancient property. As to religion, though himself an Ariair, he allowed his subjects to profess the orthodox doctrine without molestation. In short, his many virtues, and the happiness of his subjects, are celebrated by all the historians. The end of his reign, however, was sullied by the death of the celebrated philosopher Boethius, and his father-in-law Symmachus. They were both beheaded in Pavia, on an unjust charge of treason ; and scarce was the sentence executed when the king repented, and abandoned himself to the most pungent sorrow. The excess of his grief is said to have affected his brain ; for not long after, the head of a large fish being served up to supper, he fancied it to be that of Symmachus threatening him in a most ghastlv manner. Seized with horror and amazement, he was carried to his bed-chamber, where he died in a few days, on the 2d of September, 526.

2. Italy, from the. death of Theodoric to the capture of Rome by Totila. — After the death of Theodoric the kingdom devolved to Athalaric his grandson, who being only eight years of age, his mother Amalasunlha took upon her the regency. Her administration was equally upright with that of Theodoric; but the barbarians, of whom her court was composed, finding fault with the encouragement she gave to learning, forced her to abandon the education of her son. The latter thereupon plunged into every vice, and behaved to his mother with the greatest arrogance, until he at last com nanded her to retire from court. Amalasuntha on this exerting her authority, seized three of the ringleaders of the sedition, whom she confined in the most remote parts of Italy, and wrote to the emperor Justinian, asking leave to take refuge in his dominions. The emperor

readily complied with her request, offering her a palace at Durazzo; but the queen having in the meantime caused the chiefs of the revolt to be put o death, and no new disturbances arising, she declined the emperor's offer. In 533, Athalanc having ruined his health by his debaucheries, Amalasuntha,to avoid the calamities with which Italy was threatened in case of his death, formed

design of delivering it up to Justinian : but \iefore this scheme was ripe for execution, her grandson died ; upon which the queen took for her colleague Theodotus her cousin; obliging him, however, to swear that he would suffer her to enjoy and exercise her former power. This he readily did, but soon forgot the contract; and, when she took the liberty to remind him of it, caused her to be seized and confined in an island of the lake Bolsena. Fearing,however,that this violence would be resented by Justinian, he obliged her to write to him that no injury or injustice had been done her, and sent with this letter one written by himself to the emperor, filled with heavy complaints against Amalasuntha. But Justinian, far from giving credit to what Theodotus urged against her, openly espoused her cause, and assured her of his protection. Before his letter could reach her, she was strangled in a bath ; on hearing of which Justinian resolved upon an immediate war

with the Goths. To facilitate the enterprise he bribed the Franks, to assist him with a large sum of money, and they promised the emperor great exertions in return. But while Justinian's arms were employed against the Goths, Thierri, the eldest son of Clovis, seized on several cities of Liguria, the Alpes Cottiae, and great part of the late territory of Venice for himself. Justinian, however, found sufficient resources in the valor of Belisarius, notwithstanding the defection of his treacherous allies. This celebrated general was vested with supreme military command, and an absolute civil authority. His instructions were, to pretend a voyage to Carthage, but to make an attempt upon Sicily ; and, if he thought he could succeed, to land there ; otherwise to sail for Africa. Mundus, commander of the troops in Illyricum, was ordered to march into Dalmatia, which was subject to the Goths, and attempt the reduction of Salonae. This he accomplished without difficulty, and Belisarius made himself master of Sicily sooner than he himself had expected. The island was reduced on the 31st of December 535 ; upon which Belisarius passed over to Reggio and Rome ; the provinces of Abrutiura, Lucania, Puglia, Calabria, and Samnium readily submitting to him. Naples stood a siege ; but Belisarius entered through an aqueduct, and gave it up to be plundered.

Theodotus, having neither capacity nor inclination to carry on the war, now sent ambassadors to Justinian with proposals of peace. He agreed to renounce all pretensions to Sicily ; to send the emperor yearly a crown of gold weighing SOOlbs., and to supply him with 3000 men whenever he should demand them. Several other articles, contained in the proposal, amounted to the owning of Justinian for his lord, and that he held the crown of Italy through his favor. As he apprehended, however that these offer* might VOL. XI [

not yet be satisfactory, his ambassadors were desired to inform Justinian, that he was willing to resign the kingdom, and content himself with a suitable pension. But he obliged them by an oath not to mention this proposal, till they found that the emperor would not accept of the other. The first proposals were accordingly rejected, as they had supposed ; upon which the amoassadors produced the second, signed by Theodotus himself, who, in his letter to the emperor, told him, among other things, that being unacquainted with war, and addicted to the study of philosophy, he preferred his quiet to a kingdom. Justinian transported with joy, and imagining the war already finished, answered the king in a most obliging manner, extolling his wisdom, and giving him, besides what he demanded, the

greatest honors of the empire. The agreement being confirmed by mutual oaths, lands were assigned to Theodotus, and orders were despatched to Belisarius to take possession of Italy in his name.

In the mean time a body of Goths having entered Dalmatia, with a design to recover the city of Salonae, were encountered by an inferior army of Romans, commanded by the son of Mundus. The Goths proved victorious, the young Roman general was killed, and most of his army cut in pieces. Mundus marched against the enemy to revenge the death of his son ; bu» met with no better success, his troops being defeated, and himself killed in the engagement. Upon this the Romans abandoned Salonae and all Dalmatia : and Theodotus, elated with his success, refused to fulfil the articles of the treaty. Justinian despatched Constantianus, an officer of great valor and experience, into Illyricum, with orders to raise forces there, and to enter Dalmatia ; at the same time he wrote to Belisarius to pursue the war with the utmost vigor. The Goths were now reduced to the greatest straits. Constantianus drove them out of Dalmatia ; and Belisarius, having reduced all the provinces which compose the kingdom of Naples, advanced towards Rome. The chief men of the nation, finding their king incapable of preventing the impending ruin, iissembled without his consent, and despatched ambassadors to Belisarius with proposals of peace. These proposals were rejected ; and Belisarius returned for answer, that he would not hearken to terms, nor sheath his sword, till Italy was re-annexed to the empire to which it belonged. The Goths, finding Theodotus still inactive, unanimously deposed him, and chose for their leader one Vitiges, a brave man, but of mean descent. Theodotus fled to Ravenna ; but the new king despatched a messenger after him, who overtook him, and cut off his head.

Vitiges commenced his government by writing a circular letter, in which he exhorted his'countrymen to exert their ancient courage in defence of their lives and liberties. He then marched, with what forces he could collect towards Rome ; but, thinking himself unable to defend that city, abandoned it to Belisarius, and, arriving at Ravenna, was joined by the Goths from all parts. Belisarius in the mean time entered Rome with-ont opposition on the 10th of December 537 :

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the Gothic garrison retiring by the Porta Flaminia, while he entered by the Porta Asinaria. Leudaris, governor of the city, who staid behind, was sent with the keys to the emperor. Belisarius gave orders to repair the walls and fortifications ; filled the granaries with corn from Sicily, and stored the place with provisions, as if he had been preparing for a siege. Mean time Benevento, with great part of the territory of Samnium, was delivered up to him ; and the cities of Narnia, Spoleto, and Perusia, revolting from the Goths, received Roman garrisons ; as did most of the cities of Tuscany. Vitiges, however, having collected an army of 150,000 men, now resolved to march directly to Rome, and engage Belisarius ; or lay siege to the city. Apprehending, however, that the Franks might fill upon him, he sent ambassadors to them, with offers of all the Gothic possessions in Gaul, and a considerable sum of money, provided they joined him against the emperor. The Franks, with their usual treachery, consented to the proposal, received the money and the territories agreed on, and then refused to fulfil the treaty. In the mean time Vitiges began his march to Rome, leaving behind him, in a state of hostility, all the fortified towns on the road. Belisarius, whose army, reduced by the many towns he had garrisoned, did not now amount to above 5000 men, despatched messengers to Constantianus in Tuscany; and to Bessas, a Goth, of the emperor's party, in Umbria, with orders to join him with all possible expedition; writing at the same time to the emperor himself, in the most pressing manner, for supplies. Constantianus joined him pursuant to his orders ; and soon after Bessas, falling in with part of the enemy's van-guard, killed a considerable number of them, and put the rest to flight. Belisarius had built a fort upon a bridge about a mile from Roir.e, and placed a strong garrison in it to dispute the passage with the enemy ; but the garrison, seized with a panic at the approach of the Goths, abandoned their post in the night, and fled into Campania. Early in the morning Vitiges passed over great part of his army, and marched on till he was met by Belisarius, who, knowing nothing of what had happened, came with 1000 horse to view the ground about the bridge. Greatly surprised when he found himself in the presence of the enemy, he yet nobly stood his ground, exposing himself at every part of his brave line, without his usual prudence and discretion. Being Known by some fugitives, and discovered to the enemy, the whole contest was for some time for the possession of his person. At last the Goths were driven back to their camp, which the Ro-mans with great temerity attempted to force. In this attempt, however, they met with such a vigorous resistance, that

they soon abandoned the enterprise, and retired to a neighbouring eminence ; whence they were forced down by the enemy, put to flight, and pursued to the gates of the city. Here they had greater danger to meet still ; for those within, fearing that the enemy might enter, refused to open the gates ; and in vain did Belisarius exhibit himself, and demand admittance. They had been informed by those first fled, that he was slain, and could not, it is

said, distinguish him on account of the blood and dust with which his face was covered. In this extremity, having encouraged his men to make a last effort, he put himself at their head, and attacked the enemy with such fury, that the Goths, imagining fresh troops had sallied out, began to give ground, and at last retired to their camp. The Roman general did not pursue them ; but entered the city, where he was received with loud acclamations.

A few days after, Rome was closely invested by Vitiges, who destroyed the aqueducts by which water was conveyed into the city, and which had been built at an immense charge by the emperors. Belisarius, on his part, omitted nothing for his defence; until the cowardly citizens assembled in a tumultuous manner, and railed at his alleged temerity : Vitiges, to encourage this mutinous disposition, despatched ambassadors to the senate with proposals of peace. These ambassadors, hbwever, were dismissed without any answer, and the siege was commenced with great vigor. Belisarius made a gallant defence ; and in seven months is said to have destroyed 40,000 of the Goths. About this time he received a supply of 16,000 archers from the emperor. Elated with their successes, the Romans now became impatient for an engagement; and at last, notwithstanding the remonstrances of their general, forced him to lead them out against the enemy. The issue was as he anticipated. The Romans were defeated with the loss of some of their bravest officers and troops; after which they contented themselves with sallying out in small parties, which they commonly did with the greatest success. But, though the Romans had the satisfaction of thus cutting off their enemies, they were at this time grievously afflicted with a famine and plague ; insomuch that the inhabitants, no longer able to bear their calamities, were on the point of forcing Belisarius to venture a second battle, when a seasonable supply of 3000 Isaurians, 800 Thracian horse, and 1300 horse of other nations, together with 500 Italians who joined them by the way, arrived at Rome. Belisarius immediately sallied out by the Flaminian gate, and fell upon the Goths, in order to give his allies time to enter by the opposite side of the city, which

they did without the loss of a man. The Goths, hearing of the arrival of these troops, began to despair of becoming masters of the city ; especially as the famine and plague raged with great violence in their camp. Ambassadors were therefore despatched to Belisarius with proposals of peace : but the only thing they could obtain was a cessation of arms for three months, during which time they might send ambassadors to the emperor. These negociations, however, proved unsuccessful ; and the siege was pursued with great vigor, till Vitiges received the news of the taking of Rimini by the Romans. As this city was but a day's journey from Ravenna, the Goths were so much alarmed, that they immediately raised the siege of Rome, after it had continued a year and nine days : Belisarius attacking their rear as they passed the bridge of the Tiber, and cutting great numbers of them in pieces, while others, struck with a panic, threw

themselves into the river and were drowned. Vitiges now made an attempt upon Rimini : but, while he was employed in tins siege, the Ro-mans became masters of Milan; upon which the Gothic general Uraia, was despatched with a powerful army to retake it. In the mean time, however, a supply of 7000 Roman troops arrived from the emperor, under the command of Narses, a celebrated general. The immediate consequence of this was the raising of the siege of Rimini ; for Vitiges perceiving the two Roman armies coming against him, and concluding from the many fires they made that they were much more numerous than they were, fled in such haste, that he left the greatest part of his baggage behind. The success of the Romans, however, was now retarded by some misunder-standing between the two generals ; so that though Belisarius made himself master of Urbi-num and Urbiventum, while Narses reduced some other places, yet the important city of Milan was suffered to fall into the hands of the enemy, who massacred all the inhabitants that were able to bear arms, to the number of 300,000, and sold the women for slaves. The city was also totally demolished. This disaster made such an impression on the mind of Justinian that he immediately recalled Narses, and gave the command of his troops to Belisarius.

Vitiges, who had expected great advantages from the disagreement of the two generals, was much disappointed by the recal of Narses ; and dreading the vigor of Belisarius, at the head of a formidable army, thought of engaging in alliance with some foreign prince. He applied therefore to the Lombards ; but, though tempted by the offer of a large sum of money, they continued inviolably attached to the Roman interest. At last he persuaded Chosroes king of Persia to make war upon Justinian. But the Roman general pushed on the war, while the treacherous Franks, thinking both nations sufficiently weakened by their mutual hostilities, resolved to attack both, and seize upon the country for which they contended. Accordingly, Theodobert, unmindful of the oaths he had taken both to the Goths and Romans, passed the Alps at the head of 1 50,000, or as some writers state at the head of 200,000 men, and entered Liguria. No hostilities being committed by them on their march, the Goths concluded that they were come to their assistance ; and therefore supplied them with provisions. They thus crossed the Po without opposition ; and, having secured the bridge, marched towards the place where a body of Goths were encamped ; who admitted them without hesitation. But they were soon convinced of their mistake ; for the Franks, falling unexpectedly upon them, drove them from their entrenchments with great slaughter, and seized on their baggage and provisions. A body of Romans that lay at a small distance from the Goths, concluding that they had been defeated by Belisarius, advanced with great joy to meet him as they imagined ; but the Franks, falling unawares upon them, treated them as they had done the Goths, anil became masters of their camp also. Thus they acquired a very considerable booty ; but their provisions being soon consumed, and the country quite exhausted, '-ast numbers of them perished ; so that Theodobe. at last was obliged to return. In his way he destroyed Genoa and several other places, and arrived in his own dominions loaded with spoil.

In the mean time Belisarius was making great progress. He took the cities of Auximum and Faesulae after an obstinate siege, and invested Ravenna, the capital of the Gothic dominions in Italy. The place was defended by a numerous garrison, commanded by the king ; but the siege was pushed with such vigor, that it was evident the city must at last submit; and the great successes of the Romans began to give jealousy to the neighbouring potentates. Theodobert, king of the Franks, offered to assist Vitiges with an army of 500,000 men; but Belisarius, being informed of the negociation, sent ambassadors to the latter, reminding him of the treachery of the Franks, and assuring him that the emperor was ready to grant him honorable terms. The king on this sent ambassadors to Constantinople; but in the mean time

Belisarius, to bring the citizens to terms, bribed one of them to set fire to a magazine of corn, which soon straitened them for want of provisions. But, notwithstanding this disaster, they continued to hold out, till the arrival of the ambassadors from Constantinople, who brought Vitiges very favorable terms. These were, that the country beyond the Po, with respect to Rome, should remain to the Goths ; but that the rest of Italy should be yielded to the emperor, and the royal treasure of the Goths be equally divided between him and the king. To these conditions, however, Belisarius positively refused to assent. He therefore pursued the siege with increased vigor, and obliged such of his officers as were of opinion that the town could not be taken, to express their opinion in writing. The Goths were as weary of the siege as the Romans ; but, fearing lest Justinian should transplant them to Thrace, formed a resolution, without the consent of the king, of surrendering to Belisarius himself, and declaring him emperor of the west. To this they were encouraged by the refusal of Belisarius to agree to the terms proposed by the emperor; whence they falsely imagined that he designed to revolt, and make himself emperor of Italy. Belisarius had no such design, but thought proper to accept of the title, to accelerate the surrender of the city; and when Vitiges discovered the plot, finding himself in no condition to oppose it, he not only commended the resolution of his people, but wrote to Belisarius, advising him to take upon him the title of king, and assuring him of his assistance. On this” Belisarius pressed the Goths to surrender ; which, however, they refused, till he had taken an oath that he would treat them with humanity, and maintain them in the possession of all their rights and privileges. He was then admitted into the city, where he behaved with great moderation towards the Goths ; but seized on the royal treasure, and secured the person of the king. The Roman army, when it entered, appeared so very inconsiderable, that the Gothic women, on beholding it, are said to have spit in

the faces of their husbands, and to have reviled them as cowards

But the captivity of Vitiijes, and the taking of Ravenna, did not put an end to the war. Belisarius was soon after recalled to take the command of the army in the east. The Goths were greatly surprised that he should leave his new kingdom out of regard to the orders of the emperor; but after his departure chose Ilde-bald, a chief of great experience both civil and military, for their king. He revived the drooping spirits of his countrymen, defeated the Romans, and reduced all the province of Venetia ; but was in a short time murdered, and Eraric, a Rugian, succeeded to the throne. Scarcely, however, was he invested with the sovereignty, when his subjects began to think of deposing him, and offered Totila the throne, which he accepted, upon condition that they previously despatched Eraric. This was accordingly done; after which Totila was proclaimed king of Italy in the year 542. The new monarch proved a very formidable enemy to the Romans, who every where now lost ground. They made an attempt on the city of Verona ; in which they miscarried through their own avarice, having disputed about the division of the plunder till the opportunity of taking the town was lost. They were next defeated in two bloody engagements, in consequence of which the Goths made themselves masters of all the strong places in Tuscany. Thence marching into Campania and Samnium, they reduced Benevento and besieged Naples. During this last siege several detachments were sent from the king's army, which took Cumae, and recovered all Brutium, Lucania, Apulia, and Calabria, where they found considerable sums which had been gathered for the emperor's use. The Roman troops, in the mean time, disheartened by their losses, and deprived of those sums which should have paid their wages, refused to take the field. A considerable fleet was therefore sent by Justinian to relieve Naples; but Totila, having timely notice, manned, with incredible expedition, a great number of light vessels; which, falling unexpectedly on the emperor's fleet, took or sunk every ship, and made prisoners of almost all on board. A similar fate attended another fleet despatched from Sicily. It put to sea in the depth of winter ; and, meeting with a violent storm, was driven ashore near the enemy's camp, who sunk the ships, and put the seamen and soldiers to the sword. Upon this second disaster, the Neapolitans, despairing of further relief, submitted to Totila; who granted them honorable terms, and treated them with humanity, particularly the garrison. He at first supplied them with ships to carry them to Constantinople ; but having discovered their design to sail to Rome, to reinforce the garrison of that city (which they knew he was soon to besiege), he was so far from punishing them as they expected, that he furnished them with horses, waggons, and provisions, and ordered a body of Goths to escort them thither by land. Having thus become master of Naples, and most of the other Italian i'ortresses,

Totila began to think of reducing

Rome also. lie first attempted to persuade tne citizens to surrender ; but, finding this ineffectual, he sent a detachment of his army to reduce Otranto, and marched with the rest of his forces against the towns in the neighbourhood or ‘ the eternal city.’ Tiber, now Tivoli, about eighteen miles from Rome, was betrayed t’ him; and all the inhabitants, with their bishop, were put to the sword. Several other strong holds in the vicinity he took by storm ; so that Rome was in a manner blocked up by land.

Justinian, greatly perplexed by this news, recalled Belisarius from Persia. To save Rome, however, was now impossible. As soon as Belisarius arrived in Italy, finding himself unable either to relieve the towns which were besieged, or to stop the progress of the Goths, he despatched letters to Justinian, informing him, that it was impossible for him to prosecute the war : upon which the emperor ordered new levies to be made ; all the veterans being engaged in Persia In the mean time Totila pursued his good fortune; took the cities of Firmum, Asculum, Auximum, Spoletum, &c.’, and at length invested Rome on all sides. As he drew near the city two officers, whom Belisarius had sent into it, ventured to make a sally, thinking they should surprise the Goths ; but they were themselves taken in an ambuscade, and most of their men cut in pieces. Belisarius made several unsuccessful attempts to relieve the city, and suffered so much from anxiety that he fell into a fever, and was for some time in danger of his life. The city was soon reduced to great straits; a dreadful famine ensued; and the unhappy citizens having consumed every thing that could be supposed to give them nourishment, even the grass that grew near the walls, were obliged, it is said, to feed on excrements. Many committed suicide in order to free themselves from the intolerable calamities they suffered. The rest addressed their governor Bessas, entreating him to supply them with food ; or, if that was not in his power, either to give them leave to quit the city, or to terminate their miseries by putting them to death. Bessas replied, that to supply them with food was impossible; to let them go, unsafe; and to kill them impious. In the end, however, he suffered those who were so disposed to retire, upon pay-ing him a sum of money; but most of them either died on the road, or were cut in pieces by the enemy. At last the besieged, unable to beat their accumulated miseries, began to mutiny, and four of the Isaurians, who guarded one ci the gates, went privately to the camp of Totila, and offered to admit him into the city. The king received this proposal with great joy ; and, sending forward four Goths of great

strength and intrepidity, silently approached the gates in the night with his whole army. They were opened by the Isaurians, as they had promised ; and upon the first alarm Bessas, with most of the soldiers and officers, fled. The inhabitants took sanctuary in the churches ; and only sixty of them and twenty-six soldiers were killed alter the city was taken. Totila, however, gave hii soldiers ftHl liberty to plunder the inhabitants, for several days together; and they left iittle in

the houses but naked walls. In the house of Bessas was found an immense treasure, which he had amassed during the siege, by selling to the people, at an exorbitant price, the corn which had been stored up for the garrison.

3. Italy, from the plundering of Rome by Totila, to the overthrow of the Lombard kingdom by Charlemagne. — Totila, thus become master of Italy, sent ambassadors to Justinian with respectful letters, desiring to live on the same terms with him that Theodoric had done with his predecessor Anastasius ; promising in that case to respect him as his father, and to assist him when he pleased with all his forces. On the contrary, if the emperor rejected his offers, he threatened to level Rome with the ground, to put the whole senate to the sword, and to carry the war into Illyricum. The emperor returned no other answer than that he referred the whole to Belisarius, who had full power to negotiate. Upon this Totila resolved to destroy the city ; and had actually thrown down a third part of the wall, when he received a letter from Belisarius, dissuading him from his intention. Having considered this letter, Totila thought proper to alter his resolution with regard to the destruction of Rome ; but sent its inhabitants into Lucania, without the exception of a single person. Belisarius hearing of this immediately returned to the capital, and undertook to re-people and repair it. He cleared the ditch which had been filled by Totila, but was for the present obliged to fill up the breaches in the walls with loose stones ; and in this situation the city was again attacked by the Goths. Belisarius, however, had taken care to supply the inhabitants with provisions, so that they were now in no danger of

suffering by famine ; and the assaults of the enemy were vigorously repelled, so that Totila at last abandoned the enterprise. In the mean time the Persians gained great advantages over the Romans in the east, so that there was a necessity for recalling Belisarius. On this Totila renewed his efforts with greater vigor than ever ; and the Franks, concluding that both Romans and Goths would be much weakened by such a destructive war, seized upon Venetia, which belonged to both, and made it a province of the French empire.

Totila did not oppose them ; but, having obtained a reinforcement of 6000 Lombards, returned immediately to the neighbourhood of Rome, fully intent on making himself master of that metropolis. Having closely invested it by sea and land, he hoped again to reduce it by famine ; but against this the governor had provided, by causing corn to be sown within the walls. The city, however, was again betrayed by the Isaurians, who opened one of the gates and admitted the enemy. Thus the empire of the Goths was a third time established in Italy ; and Totila once more despatched ambassadors to Justinian, offering to assist him as a faithful ally, provided he would allow him the quiet possession of that country. But Justinian would not admit the ambassadors into his presence : upon which Totila resolved to pursue the war with the utmost vigor, and to make himself master of all the places which the Romans

possessed in Italy, and in Sicily. This he fully accomplished ; when Narses, who had formerly been joined in the command with Belisanus, was re-appointed general. But, while he was making preparations for an expedition, Totila, having equipped a fleet of 300 galleys, sent them to pillage the coasts of Greece. They made a descent on the island of Corfu; and, having laid it waste, sailed to Epirus, where they surprised and plundered the cities of Nicopolis and Anchialus, taking many ships on the coast, among which were some laden with provisions for the, army of Narses. After these successes they laid siege to Ancona in Dalmatia. Being defeated, however, both by sea and land, Totila once more sent ambassadors to Constantinople, offering to yield Sicily and Dalmatia, to pay an annual tribute for Italy, and to assist the Ro-mans as a faithful ally in all their wars; but Justinian, bent upon driving the Goths out of Italy, again refused to admit the ambassadors. Totila, rinding therefore that no terms could be obtained, began to levy new forces, and to make great preparations by sea and land. He soon reduced the islands of Corsica and Sardinia (but this was the last of his successes. Narsc* arrived in Italy with a formidable army, and a»* immense treasure to pay the troops their

arreais He immediately took the road to Rome ; while Totila assembled his forces, in order to decide the fate of Italy by a general engagement. The battle proved obstinate ; but at last the Gothic cavalry being put to the rout, and retiring in great confusion among the infantry, the latter were thereby thrown into such disorder, that they could never afterwards rally. Narses, observing their confusion, encouraged his men to make a last effort ; which the Goths not being able to withstand, betook themselves to flight, with the loss of 6000 men. Totila, finding the day lost, fled with only five horsemen ; but was pursued and mortally wounded by a barbarian commander, who followed Narses. He continued his flight, however, for some time ; but was at last obliged to halt to have his wound dressed, soon after which he expired.

This disaster did not yet entirely break the spirit of the Goths. They chose for their king one Teia, esteemed one of the most valiant men of their nation. The present progress of the Romans, however, was not to be arrested. Narses made himself master of a great number ot towns, and of Rome itself, before the Goths could assemble their forces. The Roman general next proceeded to invest Cumae ; which Teia determined at all events to relieve, as the royal treasure was lodged in that city. This brought on an engagement, which, Procopius says, proved one of the most bloody that ever was fought. The Roman array consisted of vast multitudes of different nations; the Goths were few in comparison ; but, animated by despair, and knowing that all that was at stake, they fought with the utmost fury. Their king placed himself in the first rank, to encourage his men by his example ; and is said to have exhibited equal valor and talent. The Romans discovering him, and knowing that his death would probably put an end to the battle, if not to the war, directed their whole

force against his person. Teia maintained his ground with great intrepidity, received the mis-

distinguished by the title of duke. Padua and some other cities Alboinus did not attempt to re-

sive weapons on his shield, and killing a great duce. In 570 he entered Liguria. The inhabi-number of the enemy with his own hand. When tants were so terrified at his approach, that they his shield was so loaded with darts that he could abandoned their habitations, with such of their not easily wield it, he called for another. Thus effects as they could carry off, and fled into the he shifted his shield three times ; but as he at-mountainous parts of the country. Brescia, Ber-tempted again to change it, his breast being ne-gamo, Lodi, Como, and other cities, being thus cessarily exposed for a moment, a dart struck left almost without inhabitants, submitted ; after him with fatal force, and he fell down dead in which he reduced Milan, and was proclaimed the place where he had stood from the beginning king of Italy. But, though the Lombards had of the battle. The Romans now cut off his head thus conferred that title on Alboinus, he was by and exposed it to the Goths, not doubting but no means possessed of the whole country, nor they would immediately retire. In this, how-indeed was it eˆer in the power of the Lombards, ever, they were disappointed. The Goths main-Having made himself master of Venetia, Liguria, tained the fight with great vigor, till night and ˆEmilia, Hetruria, and Umbria, Alboinus applied the whole of the next day. On the third day, himself to legislation and the civilisation of his despairing of being able to overcome an enemy subjects. But, before he could make any pro-so much superior, they sent deputies to Narses, gress in this work, he was taken off by the offering to lay down their arms, provided such of treachery of his wife; and Clephis, one of the them as chose to remain in Italy were allowed nobles, chosen king. This monarch rebuilt some to enjoy their possessions as subjects of the em-cities which had been ruined during the wars pire ; and those who were willing to retire else-between the Goths and Romans, and extended where were suffered to carry with them their his conquests to the gates of Rome; but he was effects. To these terms Narses assented ; and murdered after a reign of eighteen months. His thus the empire of the Goths in Italy was finally cruelty gave the Lombards such an aversion to

destroyed.

regal power, that they now determined to divide

Narses had been assisted in this conquest by the supreme authority among their dukes ; and

many barbarous nations, among whom were the this scheme of government was adopted for ten

Lombards, at that time settled in Pannonia. On years. During this period they proved succes—

the conclusion of the war they were dismissed ful in their wars with the Romans ; but, perceiv—

with presents, and the nation for some time con-ing that thus divided they could not long sub—

tinued faithful allies to the Romans. In the sist, they resolved once more to submit to the

mean time, Justinian dying, Narses, who govern-authority of a single chief ; and accordingly, in

ed Italy, was accused to the emperor Justin II., 585, Antharis was chosen king. The great ob—

and the empress Sophia, of aspiring to the sove-ject of ambition to the new race of Lombard

reignty of that country. Hereupon he was re-monarchs was the conquest of all Italy; and this

called, and Longinus sent to succeed him. proved at last the ruin of their empire by

Narses being a eunuch, the empress is reported Charles the Great, as related under the article

to have said, that his employment at Constant!- FRANCE.

nople should be to distribute in the apartments 4. Italy from the overthrow of the Lombard of her women the portion of wool which each kingdom, to the extirpation of the Saracens. — As was to spin. Enraged at this sarcasm, Narses the Lombards had not been possessed of the replied, that he would himself begin such a web whole territory

of Italy, so the whole of it never as she should never be able to finish ; and imme-came into the possession of Charlemagne : nei-diately despatched messengers to Alboinus king ther, since the time of the Ostrogoths, has the of the Lombards, inviting them into Italy. In whole of this country been under the dominion the month of April 568, therefore, that prince set of any single state. Some of the southern pro-out with his whole nation, men, women, and vinces were still possessed by the emperors of children, and all their moveable property. This Constantinople; and the liberal grants of Pepin multitude, arriving by the way of Istria, found and Charlemagne himself to the pope, had in-the whole country abandoned, the inhabitants vested him with a considerable share of temporal having fled to the neighbouring islands of the power. The territories of the pope indeed were Adriatic. The gates of Aquileia were opened supposed to be held in. vassalage from France; by the few inhabitants who had courage to stay : most of them, however, had fled with their valu-but this the popes themselves always denied. The undisputed territory of Charlemagne, in Italy, able effects; and among the rest the patriarch therefore, was lestricted to Piedmont, the Mi

Paulinus, who had carried with him all thesacred lanese, the Mantuan, the territories of Genoa, vessels of the churches. From Aquileia, Alboi-Parmaˆ Modena, Tuscany, Bologna, the duke-nus proceeded to Forum Julii, of which he like-doms of Friuli, Spoleto, and Benevento : the

wise became master without opposition.

last of which contained .‘he greatest part of the

Here lie spent the winter; during which time present kingdom of Naples. The feudal govern-he erected I’riuli into a dukedom, which conti-ment, which the Lombards had introduced into nuecl till the year 1797 when it became a pro-Italy, naturally produced revolts and commo-

vince of Maritime Austria. See FRIULT. In .569 he made himself

master of Trivigi, Oderzo, Monte Selcc, Wenza, Verona, and Trent ; in each of which he left a strong garrison of Lombards under the command of an officer, whom he

lions, as the different dukes inclined either to change their masters or to set up for themselves. Several revolts indeed happened during the life of Charlemagne; which, however, he always found means to crush ; but, after his death, the

sovereignty of Italy became an object of contention between the kings of France and the emperors of Germany. That great monarch had divided his extensive dominions among his children ; but they all died during his lifetime, ex-cept Louis, whom he associated in the empire, and who succeeded to all his dominions after his death. From this time we may date the troubles with which Italy was so long overwhelmed ; and of which, as they proceeded from the ambition of those called kings of Italy and their nobles, of the kings of France, and of the empe-rois of Germany, it is difficult to have any clear idea. The following short sketch, however, may perhaps give some satisfaction on this perplexed subject

When Louis the son of Charlemagne was declared emperor of the West, Italy was held by Bernard the son of Pepin, brother to Lords; but, though Bernard bore the title of king, he was only accounted a vassal of the emperor. His ambition, however, soon prompted him to rebel against his uncle ; but, being abandoned by his troops, he was taken prisoner, had his eyes put out, and died three days after. As the disturbances still continued, and the nobles of Lombardy were yet very refractory, Lothaire, eldest son to the emperor, was in 823 sent into Italy ; of which country he was first crowned king at Rome, and afterwards emperor of the West, during his father's lifetime. His unbounded ambition now prompted him to engage in rebellion against his father ; whom he more than once took prisoner, though in the end he was obliged to submit, and ask pardon for his offences,

which was obtained only on condition of his not passing the Alps without leave obtained from that prince. In the mean time the Saracens, taking advantage of these intestine wars, landed on the coasts of Italy, and committed such ravages, that even the bishops were obliged to arm for the defence of the country. Lothaire, however, after returning from his unnatural war with his father, was so far from attempting to put an end to these ravages, or to restore tranquillity, that he seized on some places belonging to the see of Rome, under pretence that they were part of his kingdom of Lombardy. After having embroiled himself, and almost lost all his dominions, in a war with his brothers after the death of Louis, and declared his son Louis king of Italy, this ambitious prince died, leaving to his son the title of emperor as well as that of king of Italy, with which he had before invested him.

The new emperor applied himself to the restoration of tranquillity in his dominions, and driving out the Saracens from those places which they had seized in Italy. This he fully accomplished, and obliged the infidels to retire into Africa; but in 875 he died without naming any successor. After his death some of the Italian nobles, head-ed by the duke of Tuscany, represented to the pope, that, as Louis had left no successor, the regal dignity, which had so long been usurped by foreigners, ought now to return to the Italians. The pope, however, finding that Charles the Bald, of France, was determined to obtain the imperial crown, resolved to gratify him, though at as high a price as possible. He accordingly crowned

him emperor and king of Lombardy, on cond i-tion of his owning the independency of Rome, and that he himself only held the empire by gift of the pope. This produced a conspiracy among the discontented nobles ; and at the same time the Saracens, renewing their incursions, threatened the ecclesiastical territories with the utmost danger. The pope solicited the emperor's assistance, but the latter died before any thing effectual could be done : after which, being distressed by the Saracens on one hand, and the Lombard nobles on the other, the unhappy pontiff was forced to fly into France. Italy now fell into the utmost confusion and anarchy ; during which time many of the nobles and states of Lombardy assumed an independence, which they retained till the Revolution in 1796. In 879 the pope was reconducted to Italy with an army by Boson, son-in-law to Louis II., of France ; but, though he inclined very much to have raised this prince to the dignity of king of Italy, he found his interest insufficient, and matters remained in their former situation. The nobles, who had driven out

the pope, were now indeed reconciled to him, but the state of the country was worse than ever; the great men renouncing the authority of any superior, and every one claiming to be sovereign in his own territories. To add to the calamities which ensued, through the ambition of these despots, the Saracens committed every where the most terrible ravages ; till at last the Italian no-bles despising the kings of the Carlovingian race, who had weakened themselves by their mutual dissentions, began to think of throwing off even all nominal submission to a foreign yoke, and retaining the imperial dignity among themselves.

Accordingly in 885 they went to pope Adrian ; and, requesting him to join them in asserting the independency of Italy, obtained the two following decrees, *viz.* That the popes, after their election, might be consecrated without waiting for the preser.ce of the king or his ambassadors ; and 2. That, if Charles the Gross died without sons, the kingdom of Italy, with the title of emperor, should be conferred on some of the Italian nobles. These decrees were productive of the worst consequences. The emperor complained of being deprived of his right , and the dissentions among the Italian nobles became more fatal than ever. The two most powerful of these, Berengarius duke of Friuli, and Vido, or Guido, duke of Spoleto, entered into an agreement,that on the death of the emperor the former should seize on the kingdom of Italy, and the latter on that of France. Berengarius succeeded without opposition ; but Vido was disappointed, the French having chosen Eudes or Otho for their king. Upon this he returned to Italy, and turned his arms against Berengarius. Vido proved victorious, and drove his rival into Germany ; where he sought the assistance of Arnolphus, who had succeeded on the death of Charles. Having thus obtained the kingdom of Italy, Vido employed his time in reforming the abuses of the state, and confirming the grants formerly made to the pope, out of gratitude for his having sanctified his usurpation. This tranquillity, however, was of short

duration Arnolphus sent an army into Italy ; the Saracens from Spain

ravaged the northern parts of the country, and, getting possession of a castle near the Alps, held it for many years ; at the same time Benevento was besieged and taken by the forces of the eastern emperor, so that Vido found his empire very considerably circumscribed. The new king, distressed by so many enemies, associated his son Lambert in the government, and bribed the Germans to return to their own country. In 893, however, they again invaded Italy ; but were obliged to leave the country, after having put Berengarius in possession of Pavia. In the mean time Vido died, and Lambert drove out Berengarius ; but having joined a faction, headed by one Sergius, against pope Formosus, the latter offered the kingdom of Italy to Arnolphus ; who, entering the country with an army, besieged and took Rome, massacring the faction of Sergius with unrelenting cruelty.

Arnolphus, thus master of Italy, and crowned emperor by the pope, began to form schemes of strengthening himself in his new acquisitions by putting out the eyes of Berengarius : but the latter, having timely notice of his treachery, fled to Verona ; and the Italians were so provoked at this and the other cruelties of Arnolphus, that they drove him out of the country. His departure occasioned the greatest confusion at Rome. Formosus died soon after ; and the successors to the papal dignity, having now no army to fear, pursued the projects of their ambition unrestrained. The body of Formosus was dug up and thrown into the Tiber by one pope ; after which the pontiff himself was strangled, and Formosus's body buried in the Vatican. At last the coronation of Arnolphus was declared void, the Sergian faction entirely overthrown, and the decrees of Adrian annulled ; it being now determined that the popes should not be consecrated but in presence of the emperor or his ambassadors. During these tumults Lambert enjoyed th* kingdom of Italy in quiet ; but the nobles, hating him on account of his tyrannical disposition, offered the crown to Louis king of Aries. This new competitor entered Italy with an army in 899; but was forced by Berengarius to renounce his claim upon oath, and to swear that he would never again enter Italy. This oath, however, was soon forgotten. Louis readily accepted of another invitation, and was crowned king of Italy at Pavia in 901.

In 902 he forced Berengarius to fly into Bavaria ; but, having unadvisedly disbanded his army, Berengarius surprised him at Verona, and put out his eyes. Thus at last Berengarius became king of Italy without a rival ; and held his kingdom for twenty years. He was not, however, without troubles. The Hungarians invaded Italy with a formidable army, and advanced within a small distance of Pavia, when Berengarius armed the whole force of his dominions ; and the

invaders retired without venturing an engagement. Many of them were lost in passing -a river : upon which they sent deputies to Berengarius ; offering to restore their booty, and never to come asain into Italy, provided they were allowed a safe retreat. These conditions were imprudently refused ; upon which the Hungarians

attacked the army of Berengarius in despair, and defeated it with great slaughter. They now over-ran the whole country, plundering the towns of Treviso, Vicenza, and Padua, without resistance,and occasioned the greatest devastations for two years ; nor could their departure be procured without paying them a large sum of money. Scarcely were these invaders departed, when the Saracens, who had settled at the foot of the Alps, invaded Apulia and Calabria, ant* made an irruption as far as Acqui in the neighbourhood of Pavia ; while the inhabitants, instead of opposing them, fled to some forts which had been erected in the time of the first eruption of the Hungarians. In 912, however, John, presbyter of Ravenna, having obtained the papal dignity by means of Theodora wife of the count of Tuscany, applied himself to regulate the affairs of the church, and to repress the insults of the Saracens. While he was considering of the most proper methods of effecting this, one of them, who had received an injury from his countrymen, fled to Rome and offered to deliver the Italians from their invasions, if the pope would but allow him a small body of men. His proposals being accepted, sixty young men were chosen, all well armed ; who, being conducted by the Saracen into by-paths, attacked the infidels as they were returning from their inroads, and several times defeated large parties. These losses destroying the self-confidence of the Saracens, a general alliance was concluded amongst all their cities ; and, having fortified a town on the Garigliano, they abandoned the rest, and retired thither. Thus they became much more formidable than before ; which alarming the pope, he consulted with Arnolphus prince of Benevento and Capua, sending at the same time ambassadors to Constantine the Greek emperor, inviting him to an alliance against the infidels. The Saracens, un-able to withstand such a powerful combination, were besieged in their city : where being reduced to great straits, they at last set fire to it, and sallied out into the woods ; but, being pursued by the Italians, they were all cut off to a man, A. D. 915.

5. Italy, from the extirpation of the Saracens to the pontificate of Gregory VII. — In this expedition Berengarius seems to have given great assistance ; and this year he was crowned emperor by the pope. This gave displeasure to many of the ambitious nobles ; conspiracies

were repeatedly formed against him; in 922 Rodolphus king of Burgundy was crowned also king of Italy ; and in 924 Berengarius was treacherously assassinated at Verona; of which disturbances the Hungarians taking advantage, plundered the cities of Mantua, Brescia, and Bergamo. Marching afterwards to Pavia, they invested it closely on all sides ; and about the middle of March 925 set fire to the houses next the walls, and during the confusion broke open the gates, and treated the inhabitants with the greatest barbarity. Having burnt the capital, they next proceeded to Placenza, where they plundered the suburbs ; and then returned to Pannouia laden with booty. The affairs of Italy now fell into the utmost confusion. A faction was formed against Rodol-plius in favor of Hugh, count of Aries. The

latter prevailed, and was crowned king at Pavia in 927. The Italians, however, soon repented of theii' choice. The Romans first invited him to be their governor, and then drove him out with disgrace ; at the same time choosing a con-sul, tribunes, &c., as if they had designed to assert their ancient liberty. One faction, in the mean time, offered the crown to Kodolphus, and the other to Arnold duke of Bavaria, while a fresh body of Saracens took this opportunity to plunder the city of Genoa. Hugh, in the mean time, having collected an army, marched against Arnold, and defeated him. Rodolphus entered into an alliance with him, and gave his daughter Adelaide in marriage to Lotharius, Hugh's son. Being thus free from all danger from foreign enemies, he marched against the Romans; but with them he also came to an agreement, and even gave his daughter in marriage to Alberic, whom they had chosen consul. But the country was still infested by the Hungarians and Saracens, and at the same time depopulated by a plague. Endless conspiracies were formed against Hugh himself ; and at last, in 947, he was deprived of the regal power by Berengarius II. grandson to Berengarius I. ; soon after which he retired into Burgundy, and became a monk.

Though Berengarius was thus possessed of the supreme power, he did not assume the title of king till after the death of Lotharius, which happened in 950 ; but in the mean time Italy was invaded by Henry duke of Bavaria, and the Hungarians. The former took and plundered Aquileia, and ravaged the neighbouring country; after which he returned without molestation into Germany : the latter made a furious

irruption ; and Berengarius, being unable to oppose him, was at last obliged to purchase his departure. In raising the sum agreed upon, however, Berengarius is said to have been more oppressive than even the Hungarians. The churches were robbed ; by which means the king raised an immense sum of money, ten bushels of which he is said to have given to the Hungarians, but kept a much greater part to himself. Berengarius, not yet satisfied, wished to be put in possession at Paris, which was held by Adelaide the widow of Lotharius. To obtain his purpose, he proposed a marriage between her and his son Adelbert. This being rejected, Berengarius besieged and took the city. The queen was confined in a neighbouring castle, from whence she made her escape by a contrivance of her confessor. With him and one female attendant she concealed herself for some days in a wood ; but, being obliged to remove thence rbr want of food, she applied for protection to Adelard bishop of Reggio. This person recommended her to his uncle Otho, who had a strong ..visile in the neighbourhood of Canoza. Here -.•ha was besieged by Berengarius ; upon which messengers were sent to Otho king of Germany, informing him, that, by expelling Berengarius, and marrying Adelaide, he might easily obtain the kingdom of Italy.

This proposal he readily accepted, and married Adelaide; but allowed Berensjarius to retain the greatest part of his dominions, upon condition of his doing homage for them to the kings

of Germany. He deprived him, however, of the dukedom of Fnuli and marquisate of Ve-rona, which he gave to Henry duke of Bavaria, Berengarius, thus freed from all apprehensions not only oppressed his subjects in a most tyrannical manner, but revolted against Otho himself; which at last procured his ruin : for in 96 1 Otho returned with an army into Italy, where he was crowned king by the archbishop of Milan. In 962 he was crowned emperor by the pope. On this last occasion he received the imperial crown from his holiness, and kissed his feet with great humility : after which they both went to the altar of St. Peter, and bound themselves by a solemn oath, the pope to be always faithful to the emperor, and to give no assistance to Berengarius or Adelbert his enemies ; and Otho to consult the welfare of the church, and to restore to it all its patrimony granted by for-mer emperors. Otho, besides this, bestowed very rich presents on the papal see. He ordained that the election of popes should be according to the canons ; that the pope should not be consecrated till he had publicly promised.in presence of the imperial commissaries, to respect the rights of the emperors : that these commissaries should constantly

reside at Rome, and make a report every year how justice was administered there; and, in case of any complaints, lay them before the pope ; but, if he neglected, then the commissaries might proceed with the causes. Thus Otho, however much he might allow the pope's supremacy in spiritual matters, plainly assumed the sovereignty in temporals ; and thus Italy was for upwards of 300 years accounted a part of the German empire.

The popes, however, by no means approved of this superiority of the emperor. The latter was hardly departed, when John XII. broke the oath which he had just sworn ; and entered first into an alliance with Adelbert count of Tuscany to expel the Germans, and then solicited the Hungarians to invade Italy. This treachery was soon punished. Otho returned with part of his army, and assembled a council of bishops, and as the pope did not appear, at which Otho pretended great concern, the bishops said that consciousness of guilt made him afraid to show himself. The emperor then enquired particularly into his crimes; upon which the bishops accused him of filling the palace with lewd women, of ordaining a bishop in a stable, drinking the devil's health, &c. As the pope still refused to appear to justify himself, he was formally deposed ; and Leo the chief secretary, though a layman, elected in his stead. The new pope, in compliment to the emperor, granted a bull, by which it was ordained that Otho and his successors should have a riyht of appointing the popes and investing archbishops and bishops ; and that none should dare to consecrate a bishop without leave obtained of the emperor. Thus were the affairs of Italy still kept in the utmost confusion, even during the reign of Otho I., who appears to have been a wise and active prince. He was no sooner gone than the new pope was deposed, all his decrees annulled, and John replaced. The party of Leo was now treated with great cruelty : but John soon finished his career; for

about the middle of May, 964, the same year in which he had been restored, being surprised in bed with a Roman lady, he received a blow on the head from the devil, according to the authors of those

times, of which he died eight days after. A cardinal deacon, named Benedict, was then elected by the Romans, but deposed by Otho, and banished to Hamburgh. The emperor was scarcely returned to Germany, when his fickle Italians revolted, and sent for Adelbert, who had fled to Corsica. But, being soon reduced, they continued quiet for about a year; after which they revolted again, and imprisoned the pope. Otho, however, provoked at their refractory disposition, soon returned, and punished the rebels with great severity : after which he made several laws for the better regulation of the cities of Rome and Venice, and caused his son Otho, then only thirteen years of age, to be crowned emperor. This ceremony being over, Otho despatched an ambassador to Nicephorus, emperor of Constantinople, demanding his step-daughter Theophania in marriage for the young emperor : upon this alliance being rejected, with circumstances of atrocious perfidy, Otho instantly invaded the countries of Apulia and Calabria, and entirely defeated the Greek army. In the mean time, Nicephorus being killed, and his throne usurped by John Zimisces, Otho entered into an alliance with the latter, and easily obtained Theophania for his son.

She was crowned with great solemnity on the 8th of April 969 : at the same time, it is pretended by some authors, that the Greeks renounced their rights to Calabria and Apulia. After the celebration of this marriage, the emperor undertook an expedition against the Saracens, who still resided at the foot of the Alps; but, being informed of the death of several German nobles, he thought proper to return thither, where he died of an apoplexy in 973. At the time of Otho's death Italy was divided into the provinces of Apulia, Calabria, the dukedom of Benevento, Campania, Terra Romana, the dukedom of Spoleto, Tuscany, Romagna, Lombardy, and the marquisates of Ancona, Verona, Friuli, Treviso, and Genoa. Apulia and Calabria were still claimed by the Greeks; but all the rest were either immediately subject to, or held of, the kings of Italy. Otho conferred Benevento, including the ancient Samnium, on the duke of that name. Campania and Lucania he gave to the dukes of Capua, Naples, and Salerno. Rome with its territory, Ravenna with-the exar-chate, the dukedom of Spoleto, with Tuscany, and the marquisate of Ancona, he granted to the pope ; and retained the rest of Italy under the form of a kingdom. Some of the cities were left free, but all tributary. He appointed several hereditary marquisates and counties, but reserved to himself the sovereign jurisdiction in their territories. The liberty of the cities consisted in a freedom to choose their own magistrates, to be judged by their own laws, and to dispose of their own revenues; on condition that they took the oath of allegiance to the king, and paid the customary tribute. The cities that were not free were governed by the

commissaries or lieutenants of the emperor: but the

free cities were governed by two or more consuls, afterwards called potentates, chosen annually, who took the oath of allegiance to the emperor before the bishop of the city or the emperor's commissary. The tribute exacted was called foderum, parata, and mansionaticum. By the foderum was meant a certain quantity of corn, which the cities were obliged to furnish to the king, when marching with an army, or making a progress through the country ; though the value of this was frequently paid in money. By the parata was understood the expense laid out in keeping the public roads and bridges in repair; and the mansionaticum included those expenses which were required for lodging troops or accommodating them in their camp. Under pretence of this last article the inhabitants were sometimes stripped of all they possessed except their oxen and seed. Besides regulating what regarded the cities, Otho distributed honors and possessions to those who had served him faithfully. The honors consisted in the titles of duke, marquis, count, captain, valvasor, and valvasin ; the possessions were, besides land, the duties arising from the harbours, ferries, roads, fish-ponds, mills, salt-pits, the uses of rivers, &c. &c. The dukes, marquises, and counts, were those who received dukedoms, marquisates, and counties, from the king in fiefs ; the captains had the command of a certain number of men by a grant from the king, duke, marquis, or count ; the valvasors were subordinate to the captains, and the valvasins to them.

No sooner was the death of Otho I. known in Italy, than, as if they had been now freed from all restraint, the nobles declared war against each other : some cities revolted, and chose to themselves consuls; while the dominions of others were seized by the nobles, who strengthened themselves by erecting citadels. Rome especially was harassed by tumults, occasioned chiefly by the seditious practices of one Cincius, who pressed his fellow-citizens to restore the ancient republic. As the pope continued firm in the interests of the emperor, Cincius caused him to be strangled by Franco, a cardinal dea-con ; who was soon rewarded with the pontificate, and took upon him the name of Boniface VII. Another pope was chosen by the faction of th'e count of Tuscany; who, being approved by the emperor, drove Cincius and Boniface out of the city. Disturbances of a similar kind took place in other cities ; but Milan continued quiet and loyal. In the mean time Boniface fled for refuge to Constantinople, where he excited the emperor to make war against Otho II. In 979 an army was accordingly sent into Italy which conquered Apulia and Calabria ; but the next

year Otho entered Italy with a formidable army ; and, having taken a severe revenge on the authors of the disturbances, drove the Greeks entirely out of the provinces they had seized. Having then caused his son Otho III., at that time a boy of ten years of age, to be proclaimed emperor, he died at Rome in the year 983. Among the regulations made by this emperor one is very remarkable, and gives a strange idea of the inhabitants of Italy at that time. He made a law, that no Italian should be believed

upon his oath ; and that, in any dispute which could not be decided otherwise than by witnesses, the parties should have recourse to a duel. Otho III. succeeded to the empire at twelve years of age ; and during his minority, the disturbances in Italy revived. Cincius, called also Crescentius, renewed his scheme of restoring the republic. Pope John XV., opposing this, was driven out of the city ; but was soon after recalled, on its being known that he had applied to the emperor for assistance. A few years after Crescentius again revolted, and expelled Gregory V. the successor of John XV. ; raising to the papal dignity a creature of his own, under the name of John XVI. Otho, enraged at this insult, returned to Rome with a powerful army in 998, besieged and took it by assault ; after which he caused Crescentius to be beheaded, and the pope he had set up, after having his eyes pulled out and his nose cut off, to be thrown headlong from the castle of St. Angelo. Four years after he himself died of the small pox ; or, according to some, was poisoned by the widow of Crescentius, whom he had debauched under a promise of marriage.

Otho was succeeded in the imperial throne by Henry duke of Bavaria, and grandson to Otho II., who had no sooner settled the affairs of Germany, than he found it necessary to march into Italy against Ardouin marquis of Ivrea, who had assumed the title of king of Italy. Him he defeated in an engagement, and was himself crowned king of Italy at Pavia in 1005; but a few years after a new contest arose about the papal chair, which again required the presence of the emperor. Before he arrived, however, one of the competitors, Benedict VIII., had

overpowered his rival, and both Henry and his queen received the imperial crown from his hands. Before the emperor entered the church, the pope enquired of him, ‘ Will you observe your fidelity to me and my successors in every thing?’ To which he answered in the affirmative; and, after his coronation, confirmed and added to the privileges bestowed on the Roman see by his predecessors. Having repelled the incursions of the Saracens, and reduced the greatest part of Apulia and Calabria, he died in 1024. The death of this emperor was, as usual, followed by a competition for the crown. Conrad, being chosen emperor of Germany, was declared king of Italy by the archbishop of Milan; while a party of the nobles offered the crown to Robert king of France, or his son Hush. But this offer being declined, and another likewise made to William duke of Guienne, Conrad enjoyed the dignity conferred on him by the archbishop. He was crowned king of Italy at Monza in 1026; and the next year he received the imperial crown from pope John XX., in presence of Canute the Great, king of England, and Rodolph III. king of Burgundy. His reign was similar to that of his predecessors. The Italians revolted, the pope was expelled, malcontents were subdued, and the pope restored : after which the emperor returned to Germany, and died in 1039. Under Henry III., who succeeded Con-rad, the disturbances were prodigiously augmented. Pope Sylvester II. was driven out by

Benedict; who in his turn was expelled by John bishop of Sabinum, who assumed the title of Sylvester III. Three months after Benedict was restored, and excommunicated his rivals ; but soon after resigned, or rather sold the pontificate for a sum of money. In a short time he reclaimed it; and thus there were at once three popes, each of whom was supported on a branch of-the papal revenue, while all of them made themselves odious by their scandalous lives. At last a priest called Gratian put an end to this triumvirate. Partly by artifice, and partly by presents, he persuaded all the three to renounce their pretensions ; and the people of Rome, out of gratitude for so signal a service to the church, chose him pope, under the name of Gregory VI. Henry III. took umbrage at this election, in which he had not been consulted, and, marching an army into Italy, deposed Gregory for simony : the vacant papal chair was filled by his own chancellor Heidiger, bishop of Bamberg, who assumed the name of Clement II., and afterwards consecrated Henry and the empress Agnes. The Romans now swore never to elect a pope without the approbation of the reigning emperor ; and Henry proceeded to Capua, where he was visited by Drago, Rainulphus, and other Norman adventurers, who had made themselves masters of great part of Apulia and Calabria, at

the expense of the Greeks and Saracens. Henry not only solemnly invested them with those territories which they had acquired by conquest, but prevailed on the pope to excommunicate the Beneventines, who had refused to open their gates to him, and bestowed that city and its dependencies, as fiefs of the empire, upon the Normans. The emperor was scarcely returned to Germany when he received intelligence of the death of Clement II. He was succeeded in the apostolic see by Damascus II. ; who also dying, soon after his elevation, Henry nominated Bruno bishop of Toul to the vacant chair. This Bruno, who was the emperor's relation, immediately assumed the pontifical attire ; but, being a modest and pious prelate, threw it off on his journey, by the persuasion of a monk of Cluny, named Hildebrand, afterwards the famous Gregory VII., and entered Rome as a private person. ' The emperor alone, said Hildebrand, has no right to create a pope.' He accompanied Bruno, and secretly retarded his election, that he might arro-gate to himself the merit of obtaining it. The scheme succeeded : Bruno, who took the name of Leo IX., believing himself indebted to Hildebrand for the pontificate, favored him with his particular friendship and confidence ; and hence originated the power of this enterprising monk, of obscure birth, but boundless ambition, who governed Rome so long, and whose zeal for the exaltation of the church occasioned so many disasters to Europe. Leo soon after his elevation waited on the emperor at Worms, to ask assistance against the Norman princes, who were become the terror of Italy. Henry furnished his holiness with an army ; at the head of which he marched against the Normans, after having excommunicated them ; accompanied by a great number of bishops and other ecclesiastics, who

were all either killed or taken prisoners, the Germans and Italians being totally routed. Leo himself was led captive to Benevento, of which the Normans were now masters, but which Henry had granted to the pope in exchange for the fief of Bamberg in Germany. Here he was treated with so much respect by the conquerors, that he revoked the sentence of excommunication, and joined his sanction to the

imperial investiture for the lands which they held in Apulia and Calabria. Leo died soon after his release ; and the emperor about the same time caused his infant son, afterwards the famous Henry IV., to be declared king of the Romans. Gebehard, a German bishop, was elected pope, under the name of Victor II., and confirmed by the address of Hildebrand, who waited on the emperor in person for that purpose, though he disdained to consult him beforehand. Perhaps Hildebrand would not have found his task so easy, had not Henry been involved in a war with the Hungarians. As soon as the emperor had finished this war he marched into Italy to inspect the conduct of his sister Beatrice, widow of Boniface marquis of Mantua, and made her prisoner. She had married Gozelo, duke of Lorrain, without his consent ; and contracted Matilda, her daughter by the marquis, to Godfrey duke of Spoleto and Tuscany, Gozelo's son by a former marriage. This formidable alliance justly alarmed Henry ; he therefore attempted to dissolve it, by carrying his sister into Germany ; where he died soon after his return, in the thirty-ninth year of his age, and the sixteenth of his reign.

This emperor, in his last journey to Italy, concluded an alliance with Contarini, doge of Venice. That republic was already rich and powerful, though it had only been enfranchised in 998, from the tribute of a mantle of cloth of gold, which it formerly paid, as a mark of subjection to the emperors of Constantinople. Ge-noa was the rival of Venice in power and in commerce, and was already in possession of the island of Corsica, which it had taken from the Saracens. These two cities engrossed at this time almost all the trade of Europe. Henry IV. was only five years old at his father's death, and the popes made use of the respite given them by his minority to shake off their dependence upon the emperors. After various contests about the pontificate, Nicholas II., a creature of Hildebrand's, was elected ; who passed the following celebrated decree, *viz.* that for the future the cardinals only should elect the pope ; and that the election should afterwards be confirmed by the rest of the clergy and the people, ' saving the honor,' adds he, ' due to our dear son Henry now king ; and who, if it please God, shall be one day emperor, according to the right which we have already conferred upon him.' After this he entered into a treaty with the Norman princes, who, though they had lately sworn to hold their possessions from the emperor, now stipulated to hold them from the pope ; and hence arose the pope's claim of sovereignty over the kingdoms of Naples and Sicily. Henry having assumed the government into his own hands in 1072, beinsr then twenty-two years of age, was summoned by Alexander II. to appear before

the tribunal of the holy see, on account of \.s loose life, and to answer the charge of having exposed the investiture of the bishops to sale ; at the same time that the pope excited his German subjects to rebel against him. The re-bels, however, were defeated, and peace was restored to Germany : but soon after, Hildebrand himself being elected to the pontificate, under the name of Gregory VII., he openly assumed the superiority over every earthly monarch. 6. Italy during the eleventh and twelfth centuries, and to the disputes of the Guelphs and Gibelines. — Gregory began his pontificate with excommunicating every ecclesiastic who should receive a benefice from the hands of a layman, and every layman who should take upon him to confer such a benefice. The emperor, instead of resenting this insolence, submitted, and wrote a penitential letter to the pope ; who, upon this, condescended to take him into favor, after having severely reprimanded him for his licentious life. The quarrel between the church and the emperor was, however, soon revived and brought to a crisis. Solomon, king of Hungary, being deposed by his brother Geysa, had fled to Henry for protection, and renewed the homage of Hun'-gary to the empire. Gregory, who favored Geysa, exclaimed against this act of submission ; and said, in a letter to Solomon, ' You ought to know that the kingdom of Hungary belongs to the Roman church ; and learn that you will incur the indignation of the holy see, if you do not acknowledge that you hold your dominions of the pope and not of the emperor.' Henry, though highly provoked at this declaration, thought proper to treat it with neglect ; upon which Gregory resumed the dispute about investitures. The predecessors of Henry had in common with almost all princes enjoyed the right of nominating bishops and abbots, and of giving them investiture by the cross and the ring. The popes had been accustomed, on their part, to send legates to the emperors, in order to entreat their assistance in filling up the sees, &c. and, to obtain their confirmation. Gregory, however, sent two legates to summon Henry to appear before him as a delinquent, because he continued to bestow investitures, notwithstanding the recent apostolic decree to the contrary; adding that, if he should fail to yield obedience to the church, he must expect to be excommunicated and dethroned. Incensed at this arrogant message, from one whom he considered as his vassal, Henry dismissed the legates with very little ceremony, and in 1 106 convoked an assembly of all the princes and dignified ecclesiastics at Worms ; where, after mature deliberation, they concluded that Gregory, having usurped the chair of St. Peter by indirect means, infected the church of God with many novelties and abuses, and deviated from his duty to his sovereign in several scandalous attempts, the emperor, by that supreme authority derived from his predecessors, ought to divest him of his dignity, and appoint

another in his place. In consequence of this determination, Henry sent an ambassador to Rome, with a formal deprivation of Gregory ; who, in his turn, convoked a council, at which were present 110 bishops, who unanimously

agreed that the pope had just cause to depose Henry, to dissolve the oath of allegiance which the princes and states had taken in his favor, and to prohibit them from holding any correspondence with him, on pain of excommunication; which was immediately fulminated against the emperor ;iiid his adherents. ‘ In the name of Almighty God, and by our authority,’ said Gregory, ‘ I prohibit Henry, the son of our emperor Henry, from governing the Teutonic kingdom and Italy : I release all Christians from their oath of allegiance to him ; and strictly forbid all persons from serving or attending him as king !’ The circular letters written by this pontiff breathe the same spirit with his sentence of deposition. He there repeats several times, ‘ that bishops are superior to kings, and made to judge them !’ expressions alike artful and presumptuous, and calculated for bringing in all the churchmen to his standard. Gregory knew well what consequences would follow the thunder of the church. The German bishops came immediately over to his party, with many of the nobles : the torch of civil war still lay smothering, and a bull properly directed was sufficient to set it in a blaze. The Saxons, Henry’s old enemies, made use of the papal displeasure for rebelling against him. Even Guelph, to whom the emperor had given the duchy of Bavaria, supported the malcontents with that power which he owed to his sovereign’s bounty : nay, those very princes and prelates who had assisted in deposing Gregory gave up their monarch to be tried by the pope ; and his holiness was solicited to come to Augsburg for that purpose. Willing to prevent this odious proceeding, Henry took the unaccountable resolution of suddenly passing the Alpˆ, accompanied only by a few domestics, to ask absolution of the pope, who was then in Canoza, on the Appennine Mountains, a fortress belonging to the countess or duchess Matilda. At the gates of this place the emperor presented himself as an humble penitent. He alone was admitted without the outer court;

where, being stripped of his robes, and wrapped in sackcloth, he was obliged to remain three days in the month of January, barefooted and fasting, before he was permitted to kiss the feet of his holiness ; who was all that time shut up with the devout Matilda. Her attachment to Gregory, which some historians represent as licentious, and her hatred to the Germans, were so great, that she made over all her estates to the apostolic see : a donation which was the cause of numerous wars, which since that period have raged between the emperors and the popes. She possessed in her own right great part of Tuscany, Mantua, Parma, Reggio, Placentia, Ferrara, Modena, Verona, and almost the whole of what was called the Patrimony of St. Peter, from Viterbo to Orvieto ; together with part of Umbria, Spoleto, and the Marche of Ancona. The emperor was at length permitted to throw himself at the pontiff's feet, who condescended to grant him absolution, after he had sworn obedience to him in all things, and promised to submit to his solemn decision at Augsburg: so that Henry obtained nothing but disgrace by his journey; while Gregory, elated by his triumph, and now looking upon himself

(not altogether without reason) as the lord and master of all the crowned heads in Christendom, said in several of his letters that ' it was his duty to pull down the pride of kings.'

This extraordinary conduct of Henry gave much disgust to the princes of Italy. They never could forgive the insolence of the pope, nor the abject humility of the emperor. Happily, however, for the latter, their indignation at Gregory's arrogance overbalanced their detestation of his meanness. He took advantage of this : and, by a change of fortune hitherto unknown to the German emperors, he found a strong party in Italy when abandoned in Germany. All Lombardy took up arms against the pope, while he was raising all Germany against the emperor. Gregory made use of every art to get another emperor elected in Germany; and Henry, on his part, left nothing undone to persuade the Italians to elect another pope. The Germans chose Rodolph, duke of Suabia, who was solemnly crowned at Mentz ; and Gregory, hesitating on this occasion, behaved truly like the supreme judge of kings. He had deposed Henry, but still it was in his power to pardon him : he therefore affected to be displeased that Rodolph was consecrated without his order ; and declared that he would acknowledge, as emperor and king of Germany, him of the two competitors who should be most submissive to the holy see. Henry, however, trusting more to the valor of his troops than to the generosity of the pope, set out immediately for Germany, where he

defeated his enemies in several engagements; and Gregory, seeing no hopes of submission, thundered out a second excommunication against him, confirming at the same time the election of Rodolph, to whom he sent a golden crown, on which the following verse, equally haughty and puerile, was engraved : —

Petra dealt Petro, Petrus diaderaa Rodolpho.

This donation was also accompanied with a most enthusiastic anathema against Henry. After depriving him of strength in combat, and condemning him never to be victorious, it concludes with the following remarkable apostrophe to St. Peter and St. Paul:— 'Make all men sensible that, as you can bind and loose every thing in heaven, you can also upon earth take from or give to every one, according to his deserts, empires, kingdoms, principalities — let the kings and princes of the age then instantly feel your power, that they may not dare to despise the orders of your church ; let your justice be so speedily executed upon Henry, that nobody may doubt but he falls by your means and not by chance.' To avoid the effects of this second excommunication, Henry assembled at Brixen, in the Tyrol, about twenty German bishops, who, acting also for the bishops of Lombardy, unanimously resolved, that the pope, instead of having power over the emperor, owed him obedience and allegiance; and that Gregory VII., having rendered himself unworthy of the papal chair by his conduct and rebellion, ought to be deposed from a di°nity he so little deserved. They accordingly deeraded Hildehrand ; and elected in his room GniUf-rt archbishop of Havennn, a person of un-238

doubted merit, who took the name of Clement III. Henry promised to put the new pope in possession of Rome, but was obliged in the mean time to employ all his forces against Rodolph, who had re-assembled a large body of troops in Saxony. The two armies met near Mersburg, and both fought with great fury ; but the fortune of the day seemed inclined to Rodolph, when his hand was cut off by the famous Godfrey of Bouillon, then in the service of Henry, and afterwards renowned for his conquest of Jerusalem. Discouraged by the misfortune of their chief, the rebels gave way; and Rodolph, perceiving his end approaching, ordered the hand that was cut off to be brought him, and made a speech to his officers on the occasion which could not fail to

have an influence on the emperor's affairs : — ' Behold,' said he, * the hand with which I took the oath of allegiance to Henry ; and which, at the instigation of Rome, I have violated, in perfidiously aspiring at an honor that was not my due,'

Thus delivered from this formidable antagonist, Henry soon dispersed the rest of his enemies in Germany, and set out for Italy to settle Clement in the papal chair. But, the gates of Rome being shut against him, he was obliged to attack it in form. The siege continued upwards of two years ; Henry, during that time, being obliged to quell some insurrections in Germany. The city was at length carried by assault, and with difficulty saved from being pillaged ; but Gregory was not taken : he retired into the castle of St. Angelo, and thence defied and excommunicated the conqueror. The new pope was, however, consecrated with the usual ceremonies ; and expressed his gratitude by crowning Henry, with the concurrence of the Roman senate and people. Meanwhile the siege of St. Angelo was going on ; but, the emperor being called into Lombardy, Robert Guiscard released Gregory, who died soon after at Salerno. His last words, borrowed from Scripture, were worthy of a better cause : ' I have loved justice and hated iniquity; therefore I die in exile!' Henry, however, did not enjoy all the advantages that might have been expected from the death of Gregory. In 1101 Pascal II. excited his son to rebel against him. The young prince persisted in his rebellion : and at last, having by feigned submissions prevailed on the emperor to disband his army, he treacherously seized and confined him. Henry, however, found means to escape from his confinement, and attempted to engage all the sovereigns of Europe in his quarrel ; but, before any thing effectual could be done, he died at Liege in

1106.

Mr. Leckie, in his History of the Balance of Power in Europe, has some excellent reflections on the extraordinary success of Gregory in his attempts to aggrandise the papal see. ‘ By degrees,’ he observes, ‘ the popes extended themselves : like the jacobins of the French revolution, their policy was to excite sedition in all countries, and to establish their own influence every where. Gregory knew so well how to cover his ambition under the mask of religion, that he found means to engage every prince in ‘ MI rope to acknowledge him as liege lord.

William the Conqueror was the only one who flatly refused his protection ; but the successors of that prince had neither the power nor the firmness to reject this shameful servitude. The causes which operated to favor the growth of this extraordinary power were the barbarism and ignorance of the times, with its concomitant superstition. The pontiffs of those miserable times were almost adored as gods on earth. The rebellious and ambitious barons, in order to raise themselves and to humble their respective sovereigns, gave in to these impostures : and this is the source whence the electors, dukes, landgraves, margraves, &c., of Germany, have procured the sovereign authority which they now enjoy. They encouraged the priests in the dispute about investures, in which the emperors were forced to yield ; while the clergy fomented the refractory spirit of the nobility. This is the true origin of the weakness of Germany in our days, which has made it a hot-bed of dissention and cabal, and keeps the whole of that extensive country in disorder or war. When these little impotent princes lose a part of their territory they appeal to justice for the violence they have suffered : and an outcry is raised, because the little miserable duke of Saxony is obliged to cede a part of his territory to increase the stability of the whole European system.

‘ The emperor,’ he continues, ‘ being obliged to give up the patronage of the church to the pontiffs, tarnished the lustre of the imperial crown : and the subsequent cession of the sovereignty of Rome to the popes, by the house of Hapsburg, has completed the elevation of this non-descript and monstrous authority. How far justice was concerned in restoring this charlatan government in our days is a question which posterity will decide. It never did any thing but mischief as long as it had the means, and now that it is a cypher in the affairs of Europe it can do no good : by its existence it only fosters bigotry and ignorance.

If the sovereigns flatter themselves that, by supporting its authority at the expense of human improvement, they will secure their own, they will be mistaken ; if it be allowed to regain its influence on the vulgar it will again attempt to turn that very influence on their heads ; it will renew all the impudent pretensions of past times, and teach the unlettered peo-ple to look to it for authority and protection.'

The dispute about investitures was not terminated by the deposition and death of Henry IV. His son Henry V. pursued the very same conduct for which he had deposed his father. Pas-cal opposed him with violence; upon which Henry gave him an invitation into Germany, to end the dispute in an amicable manner. Pascal did not accept of this invitation ; but put himself under the protection of Philip I. of France, who undertook to mediate between the contending parties. This, however, proved ineffectual, and Henry was prevented by wars in Hungary and Poland from paying any further attention to the affair of investitures. At last, having settled the jarring interests of Germany, he resolved to goto Rome, to adjust the dispute personally with the pope. To give his arguments the greater weight, however he marched at the head of an army of

80,000 men. Pascal received him with great appearance of friendship, but would not renounce the claim of investitures ; and Henry ordered the pope to be seized. The consul put the citizens in arms to defend the pj pe, and a battle was fought within the walls of Rome. The slaughter-was so great that the waters of the Tiber were tinged with blood. The Romans were defeated, and Pascal was taken prisoner. The latter now renounced his right of investiture ; solemnly swore never to resume it, and broke his oath as soon as Henry was gone, by fulminating the sentence of excommunication against him. In 1114 died the countess Matilda, who had bequeathed all her dominions to the pope; but, Henry thinking himself the only lawful heir, alleged, that it was not in Matilda's power to alienate her estates, which depended immediately on the empire. He therefore set out for Lombardy, and sent ambassadors to the pope, beseeching him to re-

voke the sentence of excommunication. Pascal, however, would not even favor the ambassadors with an audience ; but, dreading the approach of Henry, he took refuge among the Norman princes in Apulia. The emperor arrived at Rome in 1117; but being soon after obliged to leave it, to settle some affairs in Tuscany, the pope returned to Rome, but died in a few days. On the third day after his decease, cardinal Cajetan was elected his successor and took the name of Gelasius II., but was instantly deposed by Henry ; who set up the archbishop of Prague, as Gregory VIII. Gelasius, though supported by the Norman princes, was obliged to take refuge in France, where he died : and the archbishop of Vienna was elected by the cardinals then present under the name of Calixtus II.

This new pope attempted an accommodation with Henry ; but, not succeeding, he excommunicated the emperor, the antipope, and his adherents. He next set out for Rome, where he was honorably received ; and Gregory VIII. was forced to retire to Sutri, a strong town garrisoned by the emperor's troops. Here he was besieged by Calixtus and the Norman princes. The city was soon taken, and Gregory thrown into prison by his competitor; but at last, the states of the empire being wearied out with such a long quarrel, unanimously supplicated Henry for peace. He referred matters entirely to their decision ; and, a diet being assembled at Wurtzburgh, it was decreed that an embassy should be immediately sent to the pope, desiring that he would convoke a general council at Rome, by which all disputes might be determined. This was accordingly done, and the affair of investitures at length regulated in the following manner, *viz.* That the emperor should leare the communities and chapters at liberty to fill up their own vacancies, without bestowing investitures with the cross and ring ; that he should restore all that he had unjustly taken from the church ; that all elections should be made in a canonical manner, in presence of the emperor or his commissaries; and whatever disputes might happen, should be referred to the decision of the emperor, assisted by the metropolitan and his suffragans ; that the person elected should receive from the emperor the investiture of the fiefs and secular

rights, not with the cross, bat with the sceptre ; and should pay allegiance to him for these rights only. After the death of Henry V. the usual disorders took place in Italy: during which Roger, duke of Apulia, conquered Sicily, and assumed the right of creating popes, of whom there were two at that time, *viz.* Innocent II. and Anacletus. Roger drove out the former, and Lothario emperor of Germany the

latter, forcing Roger himself at the same time to retire into Sicily. The emperor then conducted Innocent back to Rome in triumph ; and having subdued all Apulia, Calabria, and the rest of Roger's Italian dominions, erected them into a principality, and bestowed it, with the title of 'duke, upon Renaud a German prince, and one of his own relations. In the reign of Com ad III., who succeeded Lothario, the celebrated factions called the Guelphs and Gibelines arose, which for many years deluged the cities of Italy with blood. See CONRAD III., GERMANY, and GCELPHS. They took their origin during a civil war in Germany, when the emperor's enemies were styled Guelphs, and his friends Gibelines; and these names were quickly received into Italy and other parts of the emperor's dominions.

7. From the time of Cojtrad III. to the expedition of Henry VII. — Of this civil war many of the cities of Italy took the advantage to as-sert their independence ; neither was it in the power of Conrad, who during his whole reign was employed in unsuccessful crusades, to re-duce them; but in 1158 Frederick Barbarossa, successor to Conrad, entered Italy at the head of a very numerous and well-disciplined army. It was divided into several columns, for the conveniency of entering the country by as many different routes. Having passed the Alps, he reduced the town of Brescia ; and, continuing to advance, besieged Milan, which surrendered at discretion. He was crowned king of Lombardy at Monza; and, having made himself master of all the other cities of that country, he ordered a minute enquiry to be set on foot concerning the rights of the empire, exacting homage of all those who held of it, without excepting even the bishops. Grievances were redressed ; magistracies reformed ; the rights of regality discussed and ascertained ; new laws enacted for the maintenance of public tranquillity and the encouragement of learning, which now began to revive in the school of Bologna : above all, subvassals were not only prohibited from alienating their lands, but also compelled, in their oath to their lords paramount, to except the emperor by name, when they swore to serve and assist them against all their enemies. The pope took umbrage at this behaviour towards the ecclesiastics : but Frederick justified what he had done, telling his deputies that Jesus Christ himself, though the lord of all the sovereigns upon earth, had deigned to pay for himself and St. Peter the trir bute which was due to Caesar. But, Frederick having sent commissaries to superintend the election of new magistrates at Milan, the inhabitants were so much provoked at this infringement of their old privileges, that they insulted the imperialists, revolted, and refused to appear before the emperor's tribunal. This he highly resented, and resolved to chastise them : for which pur

pose he sent for a reinforcement to Germany, which soon after arrived with the empress ; while he himself ravaged Liguria, declared the Milanese rebels to the empire, and plundered and burnt the city of Crema, which was in alliance with Milan. In the mean time, Adrian 1 \r. dying, two opposite factions elected two new popes, known by the names of Victor II. and Alexander III. The emperor's allies necessarily acknowledged the pope chosen by him ; and those princes who were jealous of the emperor acknowledged the other. The bulls of Victor II., Frederick's pope, were received iu Germany, Bohemia, and one half of Italy, while the rest submitted to Alexander III. The emperor took a severe revenge on his enemies ; Milan was razed from its foundation, and salt strewed on its ruins ; Brescia and Placentia were dismantled ; and the other cities which had taken part with them were deprived of their privileges. Alexanderlll., however, who had excited the re-volt, returned to Rome after his rival's death ; and the civil war was renewed. The emperor caused another pope, and after his death a third, to be elected. Alexander then fled to France, the common asylum of the popes when oppressed by the emperors ; hut the flames of civil discord which he had raised continued daily to spread. In 1168 the cities of Italy, supported by the Greek emperor and the king of Sicily, entered into an association for the defence of their liberties ; and the pope's party prevailed. In 1176 the imperial army, worn out by fatigues and diseases, was defeated by the confederates, and Frederick himself narrowly escaped. About the same time he was defeated at sea by the Venetians ; and his eldest son Henry, who commanded his fleet, fell into the hands of the enemy. The pope, in honor of this victory, sailed out into the open sea, accompanied by the whole senate; and, after having pronounced a thousand benedictions on that element, threw into it a ring as a mark of his gratitude and affection. Hence the origin of that ceremony which was annually performed by the doge of Venice, under the notion of espousing the Adriatic. These misfortunes disposed the emperor to a reconciliation with the pope ; but, considering it below his dignity to make an advance, he rallied his troops, and exerted himself with so much vigor in repairing his losses, that the confede-lates were defeated : after which he made proposals of peace, which were joyfully accepted, and Venice was appointed for the place of reconciliation. Here the emperor, the pope, and many princes and cardinals, attended ; and the emperor put an end to the dispute, by acknowledging the pope,

kissing his feet, and holding his stirrup while he mounted his mule. This reconciliation was attended with the submission of all the towns of Italy which had entered into an association for their mutual defence. They obtained a general pardon, and were left at liberty to use their own laws and forms of government, but were obliged to take the oath of allegiance to the emperor as their superior lord. Calixtus, the antipope, finding himself abandoned by the emperor, made also his submission to Alexander, who received him with great humanity ; and to prevent for the future similar disturbances from

attending the elections of the popes, he called a general council, in which it was decreed, that no

Eope should be deemed duly elected without aving two-thirds of the votes in his favor. The affairs of Italy being thus settled, Barbarossa returned to Germany, and, having quieted some disturbances which had arisen during his absence in Italy, at last undertook an expedition into the Holy Land; where in the year 1190, he war-drowned as he was swimming in the Cydnus.

He was succeeded by his son Henry VI. who at the same time became heir to the dominions of Sicily in right of his wife, daughter of William king of that country. After settling the affairs of Germany, the new emperor marched with an army into Italy, to be crowned by the pope, and to recover the succession of Sicily, which was usurped by Tancred, his wife's brother. For this purpose, he endeavoured to conciliate the affections of the Lombards, by enlarging the privileges of -Genoa, Pisa, and other cities, in his way to Rome ; where the ceremony of the coronation was performed by Celestin III. on the day after Easter in 1191. The pope, then in the eighty-sixth year of his age, had no sooner placed the crown upon Henry's head than he struck it off again, it is said, with his foot, as a testimony of the power residing in the sovereign pontiff to make and unmake emperors at his pleasure. The coronation being over, Henry prepared for the conquest of Naples and Sicily; but in this he was opposed by the pope ; for though Celestin considered Tancred as a usurper, and desired to see him deprived of the crown of Sicily, which he claimed as a fief of the holy see, yet he was much more averse to the emperor's being put in possession of it, as that would render him too powerful in Italy. Henry, however, without regarding the threats or remonstrances of his holiness, took almost all the towns of Campania, Calabria, and Apulia ; invested the city of Naples ; and sent for the Genoese fleet, which he had before engaged, to come and form the blockade by sea ; but,

before its arrival, he was obliged to raise the siege, in consequence of a dreadful mortality among his troops : and all his future attempts upon Sicily were, during the life of Tancred, ineffectual. The whole reign of Henry from this time seems to have been a continued train of the most abominable perfidies and cruelties. Having treacherously seized and imprisoned Richard I. of ENGLAND (see that article), he had no sooner received the ransom paid for his royal captive, than he made new preparations for the conquest of Sicily. As Tancred died about this time, the emperor, with, the assistance of the Genoese, accomplished his purpose. The queen dowager surrendered Salerno, and her right to the crown, on condition that her son William should possess the principality of Tarentum ; but Henry no sooner found himself master of the place, than he ordered the infant king to be castrated, to be confined in a dungeon, and to have his eyes put out. The royal treasure was transported to Germany, and the queen and her daughter confined in a convent.

In the mean time the empress, though near the age of fifty, was delivered of a son, named Frederick ; and Henry soon after assembled a

diet of the princes of Germany, to whom he proposed renderingthe imperial crown hereditary, to prevent those disturbances which usually attended the election of emperors. A decree passed for this purpose ; and Frederick, yet in his cradle, was declared king of the Romans. Soon after, the emperor, being solicited to undertake a crusade, obeyed the injunctions of the pope, but in such a manner as to make it turn out to his own advantage. He convoked a general diet at Worms; where solemnly declaring his resolution of employing his whole power, and even of hazarding his life for the accomplishment of so holy an enterprise, he expatiated upon the subject with so much eloquence, that almost the whole assembly took the cross. Nay, such multitudes from all the provinces of the empire enlisted, that Henry divided them into three large armies ; one of which, under the bishop of Mentz, took the route of Hungary, where it was joined by Margaret,

queen of that country, who entered herself in this pious expedition, and actually ended her days in Palestine : the second was assembled in Lower Saxony, and embarked in a fleet furnished by the inhabitants of Lubec, Hamburg, Holstein, and Friezland ; and the emperor conducted the third into Italy, to take vengeance on the Normans in Naples and Sicily, who had risen against his government. The re-bels were humbled ; and their chiefs were condemned to perish by the most excruciating tortures. One Jornandi, of the house of the Norman princes, was tied naked on a chair of red hot iron, and crowned with a coronet of the same burning metal, which was nailed to his head. The empress Constantia, shocked at such cruelty, renounced her faith to her husband, and encouraged her countrymen to recover their liberties. Resolution sprung from despair. The inhabitants took arms ; the empress headed them ; and Henry, having dismissed his troops, no longer necessary to his bloody purposes, and sent them to pursue their expedition to the Holy Land, was obliged to submit to his wife, and to the conditions which she imposed on him in favor of the Sicilians. He died at Messina in 1197; and, as was supposed, of poison administered by the empress.

Henry's son, Frederick II., having been declared king of the Romans, became emperor on the death of his father ; but as he was yet a minor the administration was committed to his uncle Philip, duke of Suabia, both by the will of Henry and by an assembly of the German princes. Other princes, however, incensed to see an elective empire become hereditary, held a new diet at Cologne, and chose Otho, duke of Brunswick, son of Henry the Lion. Frederick's title was confirmed in a third assembly, at Arnsburg ; and his uncle Philip was elected king of the Romans, to give greater weight to his administration. These elections divided the empire into two powerful factions, and involved all Germany in ruin and desolation. Innocent III., who had succeeded Celestin in the papal chair, favored Otho, and excommunicated Philip and all his adherents. This able and ambitious pontiff was a sworn enemy of the house of Suabia ; not from anv personal animosity, but out of a principle VOL. Ml-of policy. That house had lont: been terrible to the popes, by its continual possession of the imperial crown ; and the accession of the kingdom of Naples and Sicily made it still more to be dreaded : Innocent III., therefore, gladly seized the favorable opportunity for divesting it of the empire, by supporting the election of Otho, and sowing divisions among the Suabian party. Otho was also patronised by his uncle the king of England ; which naturally inclined the king of France to the side of his rival. Faction clashed with faction ; friendship with interest; caprice, ambition, or resentment, gave the sway ; and nothing was beheld on all hands but

the horrors and the miseries of civil wars. Meanwhile the empress Constantia remained in Sicily, where all was peace, as regent and guardian'for her infant son, Frederick II., who had been crowned king of that island, with the consent of pope Celestin III. But she also had her troubles. A new investiture from the holy see being necessary, on the death of Celestin III. Innocent III., his successor, took advantage of the critical situation of affairs for aggrandizing the papacy, at the expense of the kings of Sicily. They possessed the privilege of filling up vacant benefices, and of judging all ecclesiastical causes in the last appeal ; they were really popes in their own island, though vassals of his holiness. Innocent pretended that these powers had been surreptitiously obtained; and demanded that Constantia should renounce them in the name of her son, and do homage for Sicily. But before any thing was settled the empress died, leaving the regency to the pope ; so that h»- was enabled to prescribe his own conditions to young Frederick. The troubles of Germany still continued ; and the pope redoubled his efforts to detach the princes and prelates from the cause of Philip, notwithstanding the remonstrances of the king of France, to whom he proudly replied, ' Either Philip must lose the empire, or I the papacy.' But all these dissensions and troubles in Europe did not prevent the formation of another crusade, for the recovery of the Holy Land.

Those who took the cross were principally French and Germans : Baldwin, count of Flanders, was their commander ; and the Venetians, as greedy of wealth and power as the ancient Carthaginians, furnished them with ships, for which they took care to be amply paid both in money and territory. The Christian city of Zara, in Dalmatia, had withdrawn itself Irorn the government of the republic : the army of the cross undertook to reduce it to obedience; and it was besieged and taken, notwithstanding the threats and excommunications of the pope. While the crusaders were spreading desolation through the east, Philip and Otho were desolating the west. At length Philip prevailed ; and Otho, obliged to abandon Germany, took refuge in England. Philip confirmed his election by a second coronation, and proposed an accommodation with the pope ; but, before this could be brought about, he fell a sacrifice to private revenge, being assassinated by the count Palatine of Bavaria, whose daughter he had promised to marrv. but afterwards rejected. Otho returned

to Germany on the death of Philip ; married that prince's daughter, and was crowned at Rome by pope Innocent HI., after yielding to the holy see the long disputed inheritance of the countess Matilda, and confirming the rights arid privileges of the Italian cities. But these concessions were only a sacrifice to present policy : Otho, therefore, no sooner found himself in a condition to act offensively, than he resumed his grant; and in 1210 not only recovered the possessions of the empire, but made hostile incursions into Apulia, ravaging the dominions of young Frederick, king of Sicily, who was under the protection of the holy see. For this reason he was excommunicated by Innocent; and Frederick, now seventeen years of age, was elected emperor by the diet. Otho, however, on his return to Germany, finding his party still considerable, and not doubting that he should be able to humble his rival by means of his superior force, entered into an alliance with his uncle John, king of England, against Philip Augustus of France, A. D. 1213. The unfortunate battle of Bouvines, where the confederates were defeated, completed the fate of Otho IV. He attempted to retreat into Germany, but was prevented by young Frederick ; who had marched into the empire at the head of a powerful army, and was every where received with open arms. Thus abandoned by all the princes of Germany, and altogether without resource, Otho retired to Brunswick, where he lived four years as a private man, dedicating his time to religion.

Frederick II., being now universally acknowledged emperor, was crowned at Aix-la-Chapelle in 1215, with great magnificence ; when, to preserve the favor of the pope, he added to the other solemnities of his coronation, a vow to go in per-son to the Holy Land. The bad success of this expedition is taken notice of under the article CRUSADE. The emperor had, on various pretences, refused to go into the east; and, in 1225, the pope, incensed at the loss of Damietta, wrote a severe letter to him, taxing him with having sacrificed tho interests of Christianity, by delaying so long the performance of his vow, and threatening him with excommunication if he did not instantly depart with an army into Asia. Frederick, exasperated at these reproaches, renounced all correspondence with the court of Rome ; renewed his ecclesiastical jurisdiction in Sicily ; filled up vacant sees and benefices ; and expelled some bishops, who were creatures of the pope. The pope at first threatened the emperor with

the thunder of the church, for presuming to lift up his hand against the sanctuary; but, finding Frederick not to be intimidated, he became sensible of his own imprudence in wantonly incurring the resentment of so powerful a prince, and tried to soothe him by submissive apologies. They were accordingly reconciled, and conferred together at Veroli in 1 226 ; where the emperor, as a proof of his sincere attachment to the holy see, published some severe edicts against heresy. A solemn assembly was afterwards held at Ferentino, where both the pope and the emperor were present, together with John cle Brienne, titular kinˆ of Jerusalem, who \vas come to Europe to demand succours against

the sultan of Egypt. John had an only daugn. ter named Yolanda, whom he proposed as a wife to the emperor, with the kingdom of Jerusalem as her dower, on condition that Frederick should within two years perform the vow he had made to lead an army into the Holy Land. Frederick married her on these terms, and since that time the kings of Sicily Lave taken the title of king of Jerusalem : but he was in no hurry to conquer his wife's portion. The chief cities of Lombardy had entered into a secret league to renounce his authority. He convoked a diet at Cremona, where all the German and Italian noblemen were summoned to attend. A variety of subjects were there discussed ; but nothing of consequence was settled. An accommodation, however, was soon after brought about by the mediation of the pope; who, as umpire of the dispute, decreed, that the emperor should lay aside his resentment against the confederate towns, and that they should furnish and maintain 400 knights for the relief of the Holy Land. Peace being thus concluded, Honorius reminded the emperor of his vow ; Frederick promised compliance: but his holiness died before he could see the execution of it. He was succeeded by Gregory IX. brother of Innocent III.; who, pursuing the same line of policy, urged the departure of Frederick for the Holy Land , and, finding the emperor backward, declared him incapable of the imperial dignity, as having incurred the sentence of excommunication. Frederick, incensed at such insolence, ravaged the patimony of St. Peter, and was actually excommunicated. The animosity between the Guelphs and Gibelines revived; the pope was obliged to quit Rome ; and Italy became a scene of war and desolation, or rather of a hundred civil wars ; which, by inflaming the minds and exciting the resentment of the Italian princes, accustomed them to the horrid practices of poisoning and assassination. During these transactions, Frederick, to remove the cause of all these troubles, and gratify the prejudices of a superstitious age, by the advice of his

friends resolved to perform his vow : and he accordingly-embarked for the Holy Land, leaving the affairs of Italy to the management of Renaldo, duke of Spoleto.

The pope, however, prohibited the emperor's departure before he should be absolved from the censures of the church ; but Frederick went in contempt of the church, and succeeded better than any person who had gone before him. He did not indeed desolate Asia, and gratify the barbarous zeal of the times by spilling the blood of infidels ; but he concluded a treaty with Miliden, soldau of Egypt and master of Syria; by which the end of his expedition seemed fully answered. The soldau ceded to him Jerusalem and its territory as far as Joppa; Bethlehem, Nazareth, and all the country between Jerusalem and Ptolemais ; Tyre, Sidon, and the neighbouring territories : in return for which, the emperor granted the Saracens a truce of ten years ; and in 1230 returned to Italy. Frederick's reign, after his return from the east, was one continued quarrel with the popes. The cities of Lombardy had revolted during his absence, at the instiga

tion of Gregory IX. ; and, before tney could be reduced, he excited the emperor's son Henry, who had been elected king of the Romans, to rebel against his father. The rebellion was suppressed, the prince was confined, and the empsror obtained a complete victory over the associated towns. But his troubles were not yet ended. The pope excommunicated him anew, and sent a bull, filled with the most absurd and ridiculous language, into Germany, in order to sow division between Frederick and the princes of the empire. Frederick retorted in the same strain, in his apology to the princes of Germany, calling Gregory the Great Dragon, the Antichrist, &.c. The emperor's apology was sustained in Germany ; and, finding he had nothing to fear from that quarter, he resolved to take ample vengeance on the pope and his associates. For that purpose he marched to Rome, where he thought his party was strong enough to procure him admission ; but his favorite scheme was defeated by the activity of Gregory, who ordered a crusade to be preached against the emperor, as an enemy of

the Christian faith ; a step which incensed Frederick so much, that he ordered all his prisoners, who wore the cross, to be exposed to the most cruel tortures. The two factions of the Guelphs and Gibelines continued to rage with greater violence than ever, involving cities, districts, and even private families, in divisions and butchery ; no quarter being given on either side. Meanwhile Gregory IX. died, and was succeeded in the see of Rome by Celestin IV., and afterwards by Innocent IV., formerly cardinal Fiesque, who had always expressed the greatest regard for the emperor and his interest. Frederick was accordingly congratulated upon this occasion : but, having more penetration than those about him, he replied, ‘ I see little reason to rejoice ; the cardinal was my friend, but the pope will be my enemy.’ Innocent soon proved the justice of this conjecture. He attempted to negociate a peace for Italy ; but not being able to obtain from Frederick his exorbitant demands, and in fear for the safety of his own person, he fled into France, assembled a general council at Lyons, and in 1 245 deposed the emperor. Conrad, the emperor’s second son, had already been declared king of the Romans, on the death of his brother Henry, which soon followed his confinement : but, the empire being now declared vacant by the pope, the German bishops (for none of the princes were present), at the instigation of his holiness, proceeded to the election of a new emperor ; and they chose Henry, landgrave of Thuringia, who was styled, in derision, the king of priests. Innocent now renewed the crusade against Frederick. It was proclaimed by the preaching friars, since called Dominicans, and the minor friars, known by the name of Cordeliers or Franciscans. The pope, however, did not confine himself to these measures only, but engaged in conspiracies against the life of an emperor who had dared to resist the decree of a council, and oppose the whole body of the monks and zealots. Frederick’s life was several times in danger from plots, poisonings, and assassination ; which induced him, it is said, to make choice of Mahommedan guards, who, he was certain, would

not oe under me influence of tne prevailing superstition. About this time the landgrave of Thuringia dying, the same prelates who had taken the liberty of creating one emperor made another; namely, William, count of Holland, a young nobleman of twenty years of age, who bore the same contemptuous title with his predecessor. Fortune, which had hitherto favored Frederick, seemed now to desert him. He was defeated before Parma, which he had long besieged ; and, to complete his misfortune, he soon after learned that his natural son Entius, whom he had made king of Sardinia, was defeated and taken prisoner by the Bologuese In this extremity Frederick retired to his

kingdom of Naples, to recruit his army ; and there died of a fever in the year 1250.

The affairs of Germany now fell into the ut-most confusion, and Italy continued long in the same distracted state in which he had left it. The clergy took arms against the laity ; the weak were oppressed by the strong ; and all laws, di-vine and human, were disregarded. After the death of Frederick's son Conrad, who had assumed the imperial dignity as successor to his father, and the death of his competitor William of Holland, a variety of candidates appeared for the empire, and several were elected by different factions; among whom was Richard, earl of Cornwall, brother to Henry II. king of England ; but no emperor was properly acknowledged till the year 1273, when Rodolph, count of Haps-burgh, was unanimously raised to the vacant throne. During the interregnum which preceded the election of Rodolph, Denmark, Holland, and Hungary, entirely freed themselves from the homage they were wont to pay to the empire ; and much about the same time several German cities erected a municipal form of government, which still continues. Lubec, Cologne, Brunswick, and Dantzic, united for their mutual defence against the encroachments of the great lords, by a famous association, called the Hanse-atic league : these towns were afterwards joined by eighty others, belonging to different states, which formed a kind of commercial republic. See HANSE. Italy also, during this period, assumed a new plan of government. That freedom for which the cities of Lombardy had so long struggled was confirmed to them for a sum of money : they were emancipated by the fruits of their industry. Sicily likewise changed its government and its prince. See SiriLY. From the time of Frederick II. we may date the ruin of the German power in Italy. The Florentines, the Pisans, flie Genoese, the Luccans, &c., be-came independent, and could not again be reduced. The power of the emperor, in short, was in a manner annihilated, when Henry VII. undertook to restore it in the beginning of the fourteenth century. For this purpose a diet was held at Frankfort, where proper supplies being granted for the emperor's journey, well known by the name of the Roman expedition, he set out for Italy, accompanied by the dukes of Austria and Bavaria, the archbishop of Triers, the bishop of Liege, the counts of Savoy and Flanders, and other nobfemen, together with the militia of all the imperial towns.

It 0

8. Italy, from the pontificate of Clement V. tothe present period. — Italy was still divided by the factions ot' the Guelphs and Gibelmes, who butchered one another without humanity or remorse. But their contest was no longer the same ; it was not now a struggle between the empire and the priesthood, but between faction and faction, in-flune.l by mutual jealousies and animosities. Pope Clement V. had been obliged to leave Rome, which was in the anarchy of popular government. The Colonnas, the Ursini, and the Roman barons, divided the city; and this division was the cause of a long abode of the popes in France, so that Rome seemed equally lost to the popes and the emperors. Sicily was in the possession of the house of Arragon, in consequence of the horrid massacre called the Sicilian vespers, by which that island was delivered from tiie tyranny of the French. See SICILY. Caro-bert, king of Hungary, disputed th6 kingdom of Naples with his uncle Robert, son of Charles II. The house of Este had established itself at Ferrara; and the Venetians wanted to make themselves masters of that country. The old league of the Italian cities no longer existed. It had been formed with no other view than to op-pose the emperors ; and, since they had neglected Italy, the cities were wholly employed in ag-jrrandising themselves, at the expense of each other. The Florentines and the Genoese made war upon the republic of Pisa. Every city was also divided into factions within itself. In the midst of these troubles Henry VII. appeared in Italy in 131 1, and caused himself to be crowned king of Lombardy at Milan. But the Guelphs had concealed the old iron crown of the Lombard kings, as if the right of reigning there was attached to a small circlet of metal.

Henry ordered a new crown to be made, with which the ceremony of inaugurat on was performed. Cremona was the first place that ventured to oppose the emperor. He reduced it by force, and laid it under heavy contributions. Parma, Vicenza, and Placentia, made peace with him on reasonable conditions. Padua paid 100,000 crowns, and received an imperial officer as governor. The Venetians presented Henry with a large sum of money, an imperial crown of gold enriched with diamonds, and a chain of very curious workmanship. Brescia made a desperate resistance, and sustained a severe siege ; in the course of which the emperor's brother was slain, and his army diminished to such a degree that the inhabitants marched out under the command of their prefect Thibault !e Drussati, and gave him

battle; but they were repulsed with great loss, after an obstinate engagement ; and at last obliged to submit, and the;r city was dismantled. From Brescia Henry marched to Genoa, where he was received with expressions of joy, and splendidly entertained, lie next proceeded to Rome; where, after much bloodshed, he received the imperial crown from the hands of the cardinals. Clement V , who had originally invited Henry into Italy, prowing jealous of his success, had leagued with Robert king of Naples and the Ursini faction, to oppose his entrance into Rome. He entered it in spite of them by the assistance of the Colonnas. Now master of that ancient city, Henry appointed a governor ; arid ordered, that all the cities and states of Italy should pay him an an-nual tribute. In this order he comprehended the kingdom of Naples, to which he was going to make good his claim of superiority by arms when he died at Benevento in 1313, as is commonly supposed of poison, given him by a domi-nican friar in the consecrated wine of the sacrament.

The efforts of iienry VII. were unable to restore the imperial power to Italy. From this time the authority of the emperor in that country consisted in a great measure in the conveniency which the Gibelines found in opposing their enemies under the sanction of his name. The power of the pope was much of the same nature. He was less regarded in Italy than in any other country in Christendom. There was indeed a great party who called themselves Guelphs ; but they affected this distinction only to keep themselves independent of the imperialists ; and they paid little more acknowledgment to his holiness than sheltering themselves under his name and authority. The most desperate wars were carried on by the different cities against each other ; in which Castruccio Castracciani, and Sir John Hawkwood, an Englishman, are celebrated as heroes. A detail of these transactions would furnish materials for many volumes ; and is yet of little importance, as nothing material was effected by the utmost efforts of valor, and the belligerent states were commonly obliged to make peace without any advantage on either side. By degrees, however, this martial spirit subsided; and, in the year 1492, the Italians were so little capable of resisting an enemy, that Charles VIII., of France conquered the whole kingdom of Naples in six weeks, and might easily have subdued the whole country, had it not been for his own imprudence. Other attempts on Italy were made by Louis XII., and Francis I. See FRANCE.

In the reigns of Louis XIII. and XIV. an obstinate war was carried on between the French and Spaniards, in which the Italian states bore a considerable share. The war concluded iu 1660, with very little advantage to the French, who have been often unsuccessful in their

Italian wars. The same ill success attended them in that part of the world, in the war which commenced between Britain and Spain in 1740. But the particulars of these wars, with regard to the different states of Italy, fall to be considered under the history of those states into which this country has been divided in modern times, *viz.* SARDINIA, MILAN, GENOA, VENICE, TUSCANY, LUCCA, St. MARINO, PARMA, MANTUA, MODENA, ROME, and NAPLES. No period of the history of Italy, it may be here added, however, has been of more importance, or afforded a more rapid succession of astonishing events, since the fall of the Ro-man empire, than that which has elapsed since the revolution of France. The whole of the independent states have been repeatedly changed into republics and monarchies of various extent and denomination, and have been parcelled out in such forms and magnitudes as suited the caprice of Napoleon, or the allied powers

9. Italy. Its modern divisions and statistics. — \t the period of the French revolution Lombardy contained seven duchies; *viz.* Savoy, Piedmont, Montserrat, Milan, Mantua, Modena, Parma, and Placentia. The first three, and part of the fourth, belonged to Sardinia; the rest to the emperor of Germany. In 1797 Buonaparte formed the Austrian, with part of the Venetian and the ecclesiastical states, into the Cisalpine republic, which comprised twelve departments. In northern Italy, at this time, were also the republics of Genoa and Lucca.

Central Italy was occupied by the papal states ; the small republic of Marino, under the pope’s protection ; part of the Venetian territory, istria, Dalmatia Ragusa, and Tuscany. The short-lived kingdom of Etruria was formed out of the last-mentioned dukedom, Parma, Placentia, and Guastalla. Naples occupied then, as now, the southern division of Italy. By the arrangements of the congress of Vienna, the king of Sardinia was reinstated in his dominions nearly as they existed in 1792. To the emperor of Austria were assigned the Venetian states, the territory between the Tessino, the Po, and the Adriatic, with the valleys of Valteline, Bormio, and Chiavenna. The archduke, Francis

D’Est, was created grand duke of Modena ; and the arch-duchess, Maria Beautricfc D’Est, became hereditary sovereign of the duchy of Massa, and the principal city of Carran», with the Imperial . Fiefs in La Lunigiana. The arch-duchess Maria Louisa, late empress of France, was made sovereign of the duchies of Parma, Placentia, and Guastalla. The archduke Ferdinand of Austria regained the grand duchy of Tuscany, and the principality of Piombino, with that part of Elba which belonged tt> the king of the two Sicilies. The pope acquired the Marshes with their dependencies ; and Ferdinand IV., king of the two Sicilies, returned to the throne of Naples. The following table exhibits the existing politi-rnl divisions of Italy, with their respective populations, not subject to Foreign Powers.

Governments.

Sq. miles.

Population.

I.

Lombardo - Venetian

kingdom … .

18,660

4,930,000

t.

Kingdom of Sardinia

27,400

3,300,000

1.

Stales of the Church, or

Pope’s Dominions .

14,500

2,590,000

4.

Kingdom of the Two

Sicilies … .

43,500

7,420,000

5.

Grand DuchyofTuscany

9,270

1,275,000

(}.

States of Modena . .

2,480

379,000

7.

States of Pama …

2,300

440,000

s.

Duchy of Lucca . .

430

143,000

9.

Republic of San Marino

40

7,000

10

Pnncip. Monaco . .

38

6,500

11R610

•20.920,500

The Alps and Appennines diversify this peninsula with almost every possible combination of hill and valley, rivers, lakes, and romantic scenery. Northern Italy is broken into bold and ruuged acclivities by the former; from the southern face of which descend the streams thru form the Po and various other classical rivers.

At the head of the gulf of Genoa the latter spring1 and extending through the whole of the centre, and the south of this delightful region, yield the sources of the Arne and the Tiber on the west, and numerous smaller, but equally beautiful streams, which flow into the Adriatic. Towards the southern extremity of Italy, the Appennines diverge into two branches, one of which advances eastward to Capo de Leuca, and the other southward to the straits of Messina. Several detached mountains, among which is the celebrated Vesuvius, here overhang the gulf of Naples, and discharge their liquid tires into its waters. The Appennines are, in many parts, clothed with trees to their summits; in other places they are more precipitous, and attain the altitude of ice and snow. This range receives a variety of different names in the regions through which it passes. But see our articles ALPS and APPENNINES. The other large rivers of Italy are the Adige, the Brenta, the Piave, and the Tagha-mento, all flowing southward from the Alps, in the narrow centre, or south of Italy, no great river can be expected to arise. In Naples, the only streams which deserve the name of rivers are the Vulturno, the Garigliano, anciently the Liris, and the Ofanto, formerly the Autidus, which flows past Cannae. Tue rivers which descend from the Appennines are apt, like other mountain currents, to swell suddenly, and to cause inundation in the level parts of the country, particularly towards the mouth of the Po. Here, therefore, large dykes or embankments abound.

The principal lakes of Italy northward are those of Garda, Maggiore, or Lucarno, Lugano, Como, Lecca, and Iseo. In the centre and south are Perugia, the ancient Thrasimene, Bolsena, Castel Gondolfo, Bracciano, Celano, Va-rano, and Averno. They add to the beauty of the scenes around them in a manner indescribably enchanting.

Italy, as to climate, has been divided into four separate regions. The first of these embraces the basin of the Po, extending about 260 miles in length, and 150 in its greatest breadth; being bounded by the Alps

and Appennines on the north-west and south, and open to the Adriatic on the east. Here the atmosphere is uniformly serene and bright; and, being tempered by re- ‘reshing breezes from the adjacent heights, the climate is altogether one of the most salubrious and delightful in the whole world. The second region includes the Tuscan and Roman territories, being screened on the north by the Appennines, and more exposed to the heats of summer than to the rigors of winter. Frost and snow are here experienced ; but the temperature is sufficient to mature the orange, the fig, and similar fruits. The thirii district contains Lampania Felix, and its dependencies, where the vegetable treasures of nature are also found in the greatest perfection, the air uniformly mild and serene, and a peculiar glow of beauty pervades the landscape. The fourth division extends from the Appennines to the Adriatic, and embraces the southern districts of the peninsula. Warmer than any of the others, it yields the aloe, the palm, and other productions of a southern climate; but liere, when the sirocco blows, the heats are overcoming

to a stranger from almost any other part of Europe. The climate of Italy also experiences much diversity from elevation and local circumstances. Generally the sea breeze, which rises about eight in the morning and continues till four in the afternoon, prevents even the hottest months from being oppressive.

Rain does not fall frequently in Italy during the summer months, but in autumn the showers are regular and heavy, succeeded by the inundations of the winter. In the summer and autumn months several districts are, notwithstanding the general salubrity, unhealthy; particularly the quarter called the Maremma, extending all the way from Leghorn to Terracina, on the Neapolitan frontier, a distance of 200 miles, and having its greatest breadth, about forty miles, in the Campagna di Roma. The prevailing disorder is an intermitting fever of the worst kind ; the cause of which has not been accurately ascertained, but is, perhaps, to be sought in the pestilential air of the stagnant marshes. The most important productions of Italy are its

vines and olives; other delicious fruit is also yielded in great variety ; but corn is not so generally grown as in the more northern countries of Europe ; pulse and other vegetables, however, abound; and cotton and silk are largely cultivated. Lombardy is the best corn country ; in the Genoese and Tuscan territories the culture of fruit predominates; while the unhealthy district of the western coast from Leghorn to Terracina, and reaching inland to the first chain of the Appennines, remains chiefly in a state of pasture. Skilful agriculture is confined to the north. In this direction, and towards the German frontier, as well as in the Venetian and Genoese territory, and Tuscany, there are quarries cf beautiful marble ; caverns of stalactites are often met with in other parts. In the Appennines are found agate, alabaster, jasper, chalcedony, rock-crystal, crysolite, lapis lazuli, and other valuable stones; these mountains also abound in basalt, dried lava, pozzolana sand, sulphur, and volcanic matter. Other mineral productions of Italy are alum, copper, and iron. Piedmont is the richest mineralogical region in Italy, and next to it the Milanese. Sicily abounds in valuable minerals, and Sardinia is understood to have mines of gold and silver; but they are little known. Mineral springs, both cold and hot, are found in various parts. Herds of black cattle, sheep, and goats, stock the pastures. But few horses appear, and the breed is of little estimation. Mules are more common, being better adapted to the bad and mountainous roads. The operations of agriculture are extensively performed by oxen ; and here the buffalo is found, though hardly in any other part of Europe. Swine are fed in large herds in Calabria ; and the mountains and woods contain a number of wild animals.

Silks and velvets are the staple manufactures of Italy : in Tarento they make a coarse muslin; and at Terarno, in Abruzzo, are some celebrated potteries. In the southern provinces of Sorrento and Otranto cotton is manufactured : and at Nardo and Gallatona coverlets are made, which are exported to all parts. The porcelain of Naples is also superior. Besides these, there

are woollen and silk manufactures at Florence , and a considerable number of artisans, who live by making vases, statues, and other models of the fine arts. At Venice the chief manufactures are silk, velvets, glass, and beads. Its commerce, however, is now almost annihilated. In the Veronese, it is computed, they make 100,000 ounces of silk annually.

The value of the silk produced in the Milm-ese is computed at not less than £300,000 annually, a considerable part of which is exported.

Considerable manufactures of mosaic, china, and other ornaments, are also found at Milan. Bergamo had a woollen manufacture of great antiquity, and it is not yet entirely decayed ; its export of silk sometimes amounts to £300,000 annually. It, as well as Brescia, has a manufactory of iron and steel. In the states of the church a manufacture of mosaics, cameos, necklaces, &c., is carried on, especially at Rome ; and Bologna employs 7000 or 8000 persons in crapes and gauzes, which are very beautiful. Piedmont exports unwrought silk annually to the amount of 17,000,000 livres, or £748,000 sterling, and about £30,000 worth of damasks. The velvets and damasks of Genoa also preserve their ancient reputation ; and beautiful silk stuffs are manufactured at Lucca. The articles most frequently shipped from England to Italy are coffee, sugar, and colonial produce ; woollens, muslins, linens, calicoes, hardware, and dye-stuffs : also fish, dried and salted. The average value of imports from England and her colonies is necessarily fluctuating, but seldom amounts to £1,000,000 sterling. The principal commercial towns are Naples, Venice, Genoa, Leghorn, Milan, Verona, Bologna, Florence, Civita Vecchia,An-cona, Lucca, and in Sicily, Messina and Palermo.

‘ To the ancient Italians,’ says Mr. Eus-tace, ‘we owe the plainest, the noblest, the most majestic language ever spoken ; to the modern we are indebted for the softest and sweetest dialect which human lips ever uttered. The ancient Romans raised the Pantheon, the modern erected the Vatican. The former boast of the age of Augustus, the latter glory in that of Leo. The former have given us Virgil, the latter Tasso. In which of these respects are the modern Italians unworthy of their ancestors?’ If our estimate of modern Italy is not so flattering as this comparison appears, that it has produced many elegant writers in natural and general history, antiquities, political economy, and various branches of literature, cannot be denied. The memoirs of the academies of Man-tua, Milan, Turin, and particularly of Verona, contain most valuable papers. Those of Bologna and Florence have also been distinguished for their scientific researches ; and the Royal Institute at Naples has produced many excellent mathematical treatises. No country of modern Europe in fine has surpassed Italy in the num- •ber of her eminent men in literature, and th* fine arts. Nor does ˆny exceed her in the num-ber of universities aiid learned societies; the chief of which are those of Rome, Venice, Florence, Mantua, Padua, Parma, Verona, Milan, Pavia. Bologna, Ferrara, Pisa, Naples, Salerno, and Perusia. The various schools of painters,

sculptors, and architects, which owe their origin to Italy, are the admiration of the world.

While the established religion throughout Italy is the Roman Catholic, all other sects are now tolerated : the number of archbishops in the whole country is thirty-eight ; that of the suffragans indefinite, as may be truly added of the inferior ecclesiastics. They consist of two great divisions, the parochial clergy, and the monastic orders. The former are often the teachers of their respective parishes, but the latter, originally their assistants, have become, in the lapse of ages, more numerous than their principals, and may now be divided into those of settled income, and those who live on alms.

Italy contains an extraordinary number of hospitals, erected, and in general provided for, by the piety or superstition of former ages. 'It may perhaps be asked,' says the elegant writer we have quoted above, ' why, with the same talents and the same virtues, the Italians do not now make the same figure in the history of the world as their ancestors ? The answer appears to me obvious. To induce man to shake off his natural indolence, and exert all his energies, either urgent pressure or glorious rewards are necessary. Now the ancient Romans fought first for their safety and very existence, and afterwards, when imminent danger was removed from their city, they entered the lists of fame, and combated for the empire of the universe. In both cases, all their powers and all their virtues were called into action, either to save their country, or to crown it with immortal glory. The modern Italian has neither of these motives to arouse his natural magnanimity. His person, his property, his city even, is safe, whatever may be the issue of the contests of which his country is either the object or the theatre. Whether the French or Russians, the Germans or Spaniards, gain the victory, the Italian is doomed still to bear a foreign yoke. His inactivity and indifference in the struggle an, Aerefore excusable, because prudent. Quid .nterest cui serviam, clitellas dum portem nuas. As for glory and empire, to them, Italy divided and subdivided as she is, and kept in a state of political palsy by the intrigues or the preponderating power of her transalpine enemies, to them Italy can have no pretension. But if some happy combination of events should deliver her from foreign influence, and unite her many states once more under one head, or at least in one common cause, and that the cause of independence and of liberty, then Europe might confidently expect to see the spirit and glory of

Rome again revive, and the valor and perseverance which subdued the Gauls, and routed the Cimbri and Teutones, again, displayed in chastising the insolence of the French, and in checking the incursions of the Germans. She would even rise higher, and assuming the character which her situation, her fertility, and her population naturally give her, of the empire of the south, she might unite with Great Britain, the rival and the enemy of France, in restoring and in supporting that equilibrium of power so essential to the freedom and to the happiness of Europe But whether Italy be destined to re-assume her honors, and to enjoy once more an age of glory and of empire ; or whether she has exhausted her portion of felicity, and is doomed to a state of hopeless bondage and dependence, it is not for man to discover. In the mean time, deprived of that sceptre of em-pire which Heaven once entrusted to her hands, to humble the pride of tyrants, and to protect oppressed nations, to portion out kingdoms and provinces, and to sway at pleasure the dominion of the universe, she has assumed the milder but more useful sovereignty of the intellectual world, and reigns the acknowledged queen of poetry and of music, of painting and of architecture, the parent of all the sciences that enlighten, and all the arts that embellish human life.'

ITALY, AUSTRIAN, a kingdom of Upper Italy, belonging to the house of Austria, and erected by an edict of the emperor, dated 7th of April, 1815, is situated between 44° 54' and 46° 40' N. lat., and 8° 31' and 13° 30' E. long. It is bounded on the north by Switzerland and Austria, on the east by Illyria, on the south-east by the Adriatic ; on the south by the states of the church, Modena and Parma ; and on the west by Piedmont. The line laid down by the congress of Vienna is, 1st. On the side of Piedmont, the Lago Maggiore, and the course of the Ticino ; 2d. On the side of Parma, Placentia, and Guastalla, the course of the Po ; 3d. On the side of Modena, the same boundary as on the 1st of January, 1792; 4th. On the side of the papal states, the course of the Po as far as the embouchure of the Goro; and 5th. On the side of Switzerland, the former frontier of Lombardy, along with the line which separates the valleys of the Valteline, Bormio, and Chiavenna, from the cantons of the Grisons, and Ticino. The name given to this region, in treaties and other public acts, is the Lombardo-Venetian kingdom, from its two crreat component parts, which are separated from each other by the river Mincio

that on the right of the river, is called the government of Milan, and

that on the left the government of Venice. The former has nine provinces or delegations, and the latter eight : each delegation is subdivided into districts, aad each district into communes or parishes. The following is a tabular view of the extent and population of each : —

I. — GOVERNMENT OF MILAN.

Delegations.

Extent in Sq. Miles.

Population.

1. Milan

670

427,000

2. Como

1230

299,000

3. Pavia

320

117,000

4. Lodi

390

141.000

5. Cremona .

680

205,000

6. Mantua

880

214,000

7. Brescia

1200

306,000

8. Bersamo .

1700

292,000

9. Sondrio

1270

81,000

Entire extent and) population S

8340

2,082,000 1

1TA

II. — GOVERNMENT OF VENICE.

Delegations.

Extent in Sq. Miles.

Population.

1. Venice 2. Padua 3. Verona 4. Vicenza 5. Treviso « 6. Udina 7. Belluno 8. Rovigo

Entire extent and } population } Milan .

Entire extent and \ population of Austrian Italy j

620 860 1330 950 1310 2880 1460 540

314,000 270,000 285,000 311,000 295,000 269,000 125,000 63,000

9950 8340

1,932,000 2,082,000

18,290

4,014,000

The inhabitants are chiefly Italians, without any admixture, except of a few Greeks and Jews, and the German occupants of the mountains and northern district. Its climate, productions, &c., are fully detailed as those of Northern ITALY in the foregoing article. The Austrian viceroy resides at Milan.

ITAMACA, a narrow river of Guiana, South America, which rises in the mountains about 100 miles from the coast, and falls into the Orinoco, near its mouth. It has from sixteen to eighteen feet water in its channel.

ITAMARCA, a fertile province of Brasil, bounded on the north by the province of Paraiba, south by that of Parnambuco, east by the sea, and west by the country of theTapuyos Indians. It is of a hot climate, and grows tobacco, cotton, Brasil wood, and sugar canes.

ITAMARCA, an island of Brasil, in Pernambu-co, about three leagues in length, and two in breadth, situated eight leagues northward of Recif; and separated from the main land by a channel from half a mile to a league in breadth. It contains no stream ; but water flows from a hill in the neighbourhood of the town whenever it is dug for. It contains some sugar-mills and salt-works, and the shores are planted with cocoa trees, among which are scattered the straw cottages of the fishermen. The salt works are formed upon the sands, which are overflowed by the tide.

ITAMARCA, having the title of Nuestra Senora de la Conception, is the capital of the above island, and situated on the south-east side. It once contained 200 houses ; but has now a neglected and decayed appearance. There is a square and a street branching from it formed of small huts, closed at the end by a church. The harbour is good, and commanded by an old fort. Long. 35° 6’ W., lat. 8°0’S.

ITATA, a fertile province of Chili, bounded on the north by Maule, by Chilian on the east, the Pacific Ocean on the west, and Puchacay on the soutli. It is about twenty leagues in length from east lowest, and eleven from north to south. It produces the best wine in Chili, called Con-

ception, from its being made in the vicinity of that city. Gold is found in the mountains, and in the sands of the rivers. The chief town is Coulemu, situated in lat. 36° 2’ S.

ITATA, a river of the above province, which rises in »he Chilian Andes, and runs north-east of the city of Conception. It is generally crossed on rafts, and enters the sea in lat. 36° S.

ITCH, n. s. &v.n. ? Sax. jicfia. A cuta-ITCH’Y, adj. 5 neous disease, extremely

contagious, which overspreads the body with small pustules filled with a thin serum, and raised, as microscopes have discovered, by a small animal. It is cured by sulphur. A sensation of tickling uneasiness in the skin: figuratively, a teasing desire; ?. constant restless curiosity : itch, to feel uneasiness from tickling irritation ; to desire, or long, for any thing : itchy, infected with the itch.

The Lord will smite thee with the scab and with the itch, whereof thou canst not be healed.

Deut. xxviii. 27,

In grete mischefe than shall thou be, For than againe shal come to thee Sighes and plaintes, with newe wo, That no itching pricketh the so.

Chaucer. Romaunt of the Rose. Master Shallow, you have yourself been a great fighter, though now a man of peace. — Mr. Page, though now 1 be old, and of the peace, if I see a sword out, my finger itches to make one.

Shakspeare.

Cassius, you yourself,

Are much condemned to have an itching palm, To sell and mart your offices for gold. Id.

Lust and liberty

Creep in the minds and marrows of our youths, That ‘gainst the stream of virtue they may strive. And drown themselves in riot, itches, blains. Id. Ah, powerful weapon ! how dost thou bewitch, Great, but base

minds, and spottest with leprous

itch, That never are in thought, nor ever can be rich.

Fletcher. Purple Island.

The itching ears, being an epidemick disease, gave fair opportunity to every mountebank.

Decay of Piety. As if divinity had catched The itch on purpose to be scratched.

Hudibras

My right eye itches ; some good luck is near ; Perhaps my Amaryllis may appear. Dryden.

He nad still pedigree in his head, and an itch of being thought a divine king. Id.

A certain itch of meddling with other people's matters, puts us upon shifting. L'Estrange.

From servants' company a child is to be kept, not by prohibitions, for that will but give him an itch after it, but by other ways. Locke.

A troublesome itching of the part was occasioned by want of transpiration. Wiseman's Surgery.

When universal homage Umbra pays, All see 'tis vice, and itch of vulgar praise.

Pope.

All such have still an itching to deride, And fain would be upon the laughing side, Id. ITEA, in botany, a genus of the monogynia order and pentandria class of plants. The petals are long, and inserted into the calyx : CAPS, unilocular and bivalved. There is but one species, a native of North America. It grows by the sides of rivers, and in other parts where the ground is

moist. It rises to the height of eight or ten feet, sending out many branches garnished with spear-shaped leaves placed alternately, of a light green color. At the extremity of the branches are produced fine spikes of white flowers, three or four inches long, standing erect. When these shrubs are in vigor, they will be entirely covered with flowers, so that they make a beautiful appearance during the flowering season, which is in July. They are propagated by layers, and are not injured by the cold of this climate ; but are apt to die in summer, if planted on a dry gravelly soil. The shoots should be laid down in autumn, and will be rooted in one year.

ITEM, adv. & n. s. Lat. Also ; a word ‘ised when any article is added to the former ; a new article; a hint or innuendo.

I could have looked on him without the help of

admiration, though the catalogue of his endowments

had been tabled by his side, and I to peruse him by

items. Shakspeare.

If this discourse have not concluded our weakness,

I have one item more of mine : if knowledge can be

found, I must lose that which I thought I had, that

there is none. Glanville.

ITERATE, v. a. -\ Lat. iter, itero,

IT’ERANT, adj. j itinerarium. To reITERA’TION, n. s. Vpeat ; utter again,

ITIN’ERANT, adj. i or inculcate by fre—

ITTN’ERARY, n. s. & adj.J quent mention ; to

do over again : iteration, repetition • itinerant,

wandering; unsettled : itinerary, a book of

travels: travelling; done on a journey.

To unrestie bothe reste and remedie ;

Fruitfull to all tho that in hire affie

To hem that rennen thou are itinerarie. Cliaucer.

We covet to make the psalms especially familiar unto ail : this is the very cause why we iterate the psalms oftener than any other part of Scripture besides ; the cause wherefore we inure the people together with their minister, and not the minister alone to read them, as other parts of Scripture he doth.

Hooker. Truth tir'd with iteration

As true as steel, as plantage to the moon.

Shakspeare.

There be two kinds of reflections of sounds ; the one at distance, which is the echo, wherein the original is heard distinctly, and the reflection also distinctly : the other in concurrence, when the sound returneth immediately upon the original, and so iterateth it not, but amplifieth it. Bacon.

Iterations are commonly loss of time, but there is no such gain of time, as to iterate often the state of the question ; for it chaseth away many a frivolous speech. Bacon's Essays.

Waters being near, make a current echo ; but being farther off, they make an iterant echo.

Bacon's Natural History.

He did make a progress from Lincoln to the northern parts, though it was rather an itinerary circuit of justice than a progress. Id. Henry VII.

In all these respects it hath a peculiar property to engage the receiver to persevere in all piety, and is farther improved by the frequent iteration and repetition. Hammond.

Ashes burnt, and well reverberated by fire, after the salt thereof hath

been drawn out by iterated decoction. Browne.

Adam took no thought, Eating his fill ; nor Eve to iterate Her former trespass feared, the more to sooth Him with her loved society. Milton's Paradise Lott.

It should be my care to sweeten and mellow the voices of itinerant tradesmen, as also to accommodate their cries to their respective wares.

Addison's Spectator.

The clergy are sufficiently reproached, in most itineraries, for the universal poverty one meets with in this plentiful kingdom. Additon on Italy.

Which [law] denies to an itinerant havker of grievances the power of stamping their names upon his wares. Canning's Speeches.

ITHACA, in ancient geography, an island in the Ionian Sea, on the coast of Epirus ; the country and the kingdom of Ulysses, near Dulichium, with a town and port situated at the foot of mountNeius. v Pliny speaks of it as about twenty five miles in compass; Artemidorus makes it only ten. It consists merely of a narrow ridge of limestone, seventeen miles long, and four in extreme breadth, rising into rugged eminences, with scarcely a hundred yards of continuous level surface. Near the middle it is intersected by a deep bay, which penetrates nearly across it. Upon this bay the town of Vathi, the capital, is situated, containing 2000 inhabitants. The chief produce of the island is currants ; but it yields also a small quantity of oil and excellent wine. Grain is raised for about one-fourth of the consumption. On a hill near Vathi are some massive ruins of walls, with a number of sepulchres, which are supposed to mark the site of the capital of Ulysses. Near the south-east end of the island is the cliff still called Koraka, and supposed to be the rock Korax of the Odyssey. Under it, in a secluded spot, is a fountain, conceived to be that of Arethusa. The island is called Ithaca by the more intelligent natives, which is corrupted into Theaki by the lower classes. Between Ithaca, Santa Maura, and the continent, are situated Meganisi, Calamo, Atako, and Carlo, four small rocky isles, besides several minute islets. Its population may be taken, according to Mr. Williams, at 9400.

ITHOMAIA, a festival held at Ithome, in honor of Jupiter, hence called Ithomates, in which musicians contended.

ITHOME, a town of Messenia, which stood a ten years' siege by the Spartans, but at last surrendered, A.A.C. 724.

An ITINERARY, itinerarium, a journal, or an account of the distance of places. The most re markable is that which goes under the names of Antoninus and ALthious, or, as Barthius found in his copy, Antoninus JEthicus; a Christian writoi, posterior to the times of Constantine Another, called Hierosolymitanum, from Bourdeaux to Jerusalem, and from Hieraclea through Aulona and Rome to Milan, under Constantine. The itinerary of Antonine shows all the grand Roman roads in the empire, and all the stations of the Roman army. It was drawn up by order of the emperor Antoninus Pius ; but is now very defective, having suffered much under the hands of the copyists and editors. Itinerarium denotes a day's march.

ITIQUIRA, an interior river of Brasil, which falls into the Porruclos, an arm of the La Plata, and has a course of 500 miles, in nearly all of which it is navigable.

ITIUS PORTUS, in ancient geography, styled the crux geoˆrapliorum, or cross of geographers,

from [the difficulty of ascertaining its position. It would be endless to recite the different opinions concerning it, with the various reasons advanced in support of them. Three ports are mentioned by Caesar ; two without any particular name, *viz.* the Higher and the Lower, with respect to the Portus Itius. Calais, Boulogne, St. Omer, and Whitsand, have each in their turn had their advocates. Caesar gives two distinctive characters or marks which seem to agree equally to Boulogne and Whitsand ; namely the shortness of the passage, and the situation between two other ports ; therefore nothing can with certainty be determined about its situation.

ITSELF’, pron. It and self. The neutral reciprocal pronoun, applied to things.

Who then shall blame His pestered senses, to recoil and start, When all that is within him does condemn Itself for being there 1 Shakspeare. Macbeth.

Up to the bridge contagious terror struck The tower itself with the near danger shook.

Marvell.

Borrowing of foreigners, in itself makes not the kingdom rich or poor. Locke.

ITTIGIUS (Thomas), a learned professor of divinity at Leipsic, son of John Ittigius, professor of physic in the same university. He first published A Treatise upon Burning Mountains; after which he became a minister, and exercised that function in various churches there. He furnished several papers in the Leipsic acts, besides publishing some historical works and dissertations. He died in 1710.

ITURBIDE ( ), a modern Mexican chief

and emperor, was born at Valladolid in Mexico, in 1790, and was the son of a native Spaniard, who married a Creole lady of fortune. Our hero was bred a farmer, and entered early into the militia of his native province. In 1810 he was a lieutenant, and the part he took in suppressing the insurrection of Morales induced the Mexican government to give him the rank of colonel. He was also made for a time commander of Ba-hia ; but seems to have been offended with the public authorities at being deprived of that post. In the latter part of 1819 he was invited to take the command of an army destined to the south, and marched to Acapulco, where he matured a plan for rendering Mexico independent, and the extension of freedom to all classes of the people. In the summer of 1820 he was declared emperor of Mexico ; and for a short period there appeared a prospect that the convulsions of that country would be terminated under this new and able sovereign. But he was incapable of maintaining his authority against cabal : in the beginning of 1823 he found himself obliged to leave the Mexican territory; and came to this country. Still he retained a strong party in Mexico ; and, after his abdication, the province of Guadalaxara or Jalisco became the scene of several of their plots and machinations. An expedition was accordingly despatched thither by the federal trovernment to crush the incipient conspiracy. Just at the

period this had been effected, Iturbide sailed from England, and landed in dis-cuise on the Mexican coast near Soto la Marina. He was accompanied by his friend Beueski,

who applied to general Garza, the comrrander of the province of New Santander, for passports, •which that officer granted to the applicant, but refused to grant another till he should see the person for whom it was wanted. The next day, being informed that Beneski had again landed with two other persons, he sent a party after them, and Iturbide was immediately recognized. The decree issued by the congress, declaring him a traitor if he should land on the Mexican territory, was then read to him ; and Garza sent him as a prisoner towards Mexico, to await the decision of that body. This was but a short time delayed, for the congress ordered his immediate execution; and he was accordingly shot on the evening of his reaching Padillo. On his abdication the federal government had settled on him a considerable pension, on condition of his residing in Italy, and after his catastrophe 8000 dollars were granted to his widow.

ITYS, in fabulous history, a son of Tereus king of Thrace, by Procne daughter of Pandion king of Athens. He was killed by his mother when he was about six years old, and served up before his father. He was changed into a pheasant, his mother into a swallow, and his father into au owl.

ITZEHOA, an ancient and handsome town of Germany, in the duchy of Holstein, belonging to Denmark, seated on the Stoer. Long. 9° 25’ E., lat. 54° 8* N.

IVA, in botany, a genus of the pentandria order, and moncecia class of plants ; natural order fortj*-ninth, composite. Male CAL. com-mon and triphyllous; the florets of the disc monopetalous and quinquefid; the receptacle divided by small hairs. Female five florets in the radius ; two long styles ; and one naked and obtuse seed. Species two, natives of South America.

JUAN (St.), a city of South America, in the province of Cuyo, Buenos Ayres. It has a parish church, with three chapels ; also several convents.

JUAN GUYA, PUNTA DE,” a cape on the coast of Terra Firma, in long. 73° 36’ W., lat. 11° 36’ N.

JOAN (St.), DE BAPTISTA, a town of Mexico, in the province of

Sonora, situated between the sources of the two rivers Hiaqui and Sonora.

JUAN (St.), a river of Guatimala, South America, navigable for large vessels, and having a fort at its entrance. This is the name of several rivers in South America, and two in St. Domingo. Also of a considerable river of Florida : and a lake of South America, in the kingdom of Grenada.

JUAN FERNANDEZ. See FERNANDEZ.

JUAN RODRIGUEZ CABRILLO, an island on the coast of New California, in long. 120° 31' W., lat. 34° N.

JUAN DEL Rio, SAN, a town in the intendancy of Mexico, 6489 feet above the level of the sea': it is surrounded with gardens, adorned with vines and aroma. It is 100 miles south of Mexico.

JUAN DEL Rio, SAN, a considerable town of Mexico, in the intendancy of Durango, south-west of the lake of Parras. Inhabitants 10,200.

JUAXA (St.), an island and fortress of Chili, in the river Biobio.

JUAN DE ULUA, i. e. The Island of Sacrifices, an island in the bay of Vera Cruz, on the coast of Mexico. It was first visited by Grijalva in 1518, who gave it this name from having seen the remains of some human sacrifices, which the natives told him they were in the habit of offering. The interpreters, who only spoke the language of Yucatan, believed that Acolhua or Ulua was the name of the island. A strong fortress, called the castle of St. Juan d'Ulua, now covers nearly the whole rock, in the form of an irregular square. The expense of finishing it is said to have been upwards of £8,000,000 British sterling. It contains barracks, cisterns, and a newly erected lighthouse.

JUBA I. a king of Numidia and Mauritania. He succeeded his father Hiempsal, and favored the cause of Pompey against Julius Caesar. He defeated Curio, whom Csesar had sent to Africa, and after the battle of Pharsalia he joined his forces to those of Scipio. He was conquered in a battle at Thapsus, and totally abandoned by his subjects. He killed himself with Petreus,Jwho had shared his good fortune and his adversity, A.U.C. 707. His kingdom became a Roman province, of which Sallust was the first governor.

JUBA II., the son of the former, was led captive to Rome to adorn the triumph of Caesar. His captivity was the source of the greatest honors, and his application to study procured him more glory than he would have obtained from the inheritance of a kingdom. He gained the affections of the Romans by the courteousness of his manners; and Augustus rewarded his fidelity by giying him in marriage Cleopatra the daughter of Antony, conferring upon him the title of king, and making him master of all the territories which his father once possessed, A.U.C. 723. His popularity was so great, that the Mauritanians deified him; the Athenians raised him a statue, and the A'.tliiopians worshipped him. Juba wrote a History of Rome in Greek, which is often quoted and commended by the ancients. Of it only a few fragments remain. He also wrote on the History of Arabia, and the Antiquities of Assyria, chiefly collected from Berosus. He also composed some treatises upon the dra-ma, Roman antiquities, the nature of animals, painting, grammar, &c., now lost.

JU'BILANT, adj.-\ Yr.jubile; La.t.jubilo.

JUBILA'TION, n. s. /Uttering songs of tri—

JU'BILEE, n. s. { umph : jubilation, the act

JU'BILATE, n. s. J of declaring triumph : jubilee, a public festivity ; a season of peculiar joy : jubilate, a song of triumph.

They may now God be thanked of his lone,

Maken hir jubilee and walk alone.

Chaucer. The Sompnoures Tale. 'Nowe jubilate sang ! what meneth this V

Said than the lynet — ' Welcome lord of blisse. Id. The Court of Love.

Angels utt'ring joy, heaven rung With jubilee, and loud hosannas filled The eternal regions. Milton's Paradise Lost.

The planets list' ning stood, While the bright pomp ascended jubilant.

Milton.

The town was all a. jubilee of feasts. Dryden. Joy was then a masculine and a severe thing, the recreation of the judgment, or rejoicing the jubilee of reason. South.

All monarchs in their mansions Now swarm forth in rebellion, and demand His death, who made their lives a jubilee.

Byron. Sardanapoliu,

JUBILEE, among the Jews, denotes every fiftieth year; being that following the revolution of seven weeks of years ; at which time all the slaves were made free, and all lands reverted to their ancient owners. The jubilees were not observed after the Babylonish captivity. The learned are divided about the year of jubilee ; some maintaining that it was every forty-ninth, and others that it was every fiftieth year. The ground of the former opinion is chiefly this, that the forty-ninth year, being of course a sabbatical year, if the jubilee had been kept on the fiftieth, the land must have had two sabbaths, or have lain fallow two years, which, without a miracle, would have produced a dearth. On the other hand it is alleged, that the scripture expressly declares for the fiftieth year, Lev. xxv. 10, 11. And besides, if the jubilee and sabbatical year had been the same, there would have been no need of a'prohibition to sow, reap, &c., because this kind of labor was prohibited by the law of the sabbatical year. Lev. xxv. 4, 5. The authors of the Universal History, book i. chap. 7, note R, endeavour to reconcile these opinions, by observing, that as the jubilee began in the first month of the civil year, which was the seventh of the ecclesiastical, it might be said to be either the forty-ninth or fiftieth, according as one or other of these computations was followed. Learned critics have made a calculation thought by others to be tolerably exact, that if the Jews had still observed the jubilees, the fiftieth year of Tiberius, when John the Baptist first began to Breach ' the acceptable year of the Lord' would nave been a jubilee, and consequently the last; since, fifty years after, the Jewish commonwealth was no longer in being. This agrees with the tradition of the Jews, who assert, that the son of David will come during the last jubilee. The political design of the law of the jubilee was to prevent the too great oppressions of the poor, as well as their being liable to perpetual slavery. A kind of equality was thus preserved

through all the families of Israel, and the distinction of tribes was also preserved, that they might be able, when there was occasion, on the jubilee year, to prove their right to the inheritance of their ancestors. It served also, like the Olympiads of the Greeks, and the Lustra of the Ro-mans, for the readier computation of time. The jubilee has also been supposed to be typical of the gospel state and dispensation, described by Isaiah Ixi. 1, 2, in reference to this period, as ‘ the acceptable year of the Lord.’

JUBILEE, in a modern sense, denotes a grand church festivity, celebrated at Rome, wherein the pope grants a plenary indulgence to all sinners ; at least to as many as visit the churches of St. Peter and St. Paul at Rome. The jubilee was first established by Bonifice VII. in 1300, in favor of those who should go ad limina aposto-

lorura; and it was only to return every 100 years. But the first celebration brought in such store of wealth to Rome, that the Germans called this the golden year, which occasioned Clement VI., in 1343> to reduce the period of the jubilee to fifty years. Urban VI., in 1389, af pointed i* to be held every thirty-nvt years, that being the age of our Saviour; and Paul II. and Sex.tus IV., in 1475, brought it down to every twenty -five, that every person might have the benefit of it once in his life. Boniface IX. granted the privilege of holding jubilees to several princes and monasteries : for instance, to the monks of Canterbury, who had a jubilee every fifty years; when people flocked from all parts to visit the tomb of St. Thomas a Becket. There is now usually one at the inauguration of a new pope. To be entitled to the privileges of the jubilee, the bull enjoins fastings, alms, and prayers. It gives the priests a full power to absolve in all cases, even those otherwise reserved to the pope : to make commutations of vows, &c., in which it differs from a plenary indulgence. During the time of jubilee, all other indulgences are suspended. There are particular jubilees in certain cities, when several of their feasts fall on the same day : at Puey en Velay, for instance, when the feast of the Annunciation happens on Good Friday ; and at Lyons when the feast

of St. John Baptist concurs with the feast of Corpus Christi. In 1640 the Jesuits celebrated a solemn jubilee at Rome ; that being the centenary or 100th year from their institution, and the same ceremony was observed in all their establishments throughout the world.

JUBILEE is also used for any solemnity or festival, appointed or repeated at a distant period. Thus Edward III. caused his birth-day to be observed in manner of a jubilee, in the fiftieth year of his reign. This he did, by releasing prisoners, pardoning all offences except treason, making good laws, and granting many privileges to the people. A jubilee was also celebrated throughout Great Britain and Ireland, on the 25th of October 1809; the late King George III. entering on the fiftieth year of his reign. A grand jubilee was "held at Stratford-upon-Avon, on the 23rd of April 1764, in honor of Shakspeare, being the second centenary of the birth-day of that unparalleled dramatic poet; whose unrivalled merits will induce posterity to repeat it, as long as the drama is admired, or the English language understood. The celebrated Garrick was the principal planner and conductor of the entertainment, and wrote most of the songs for the occasion.

JUCUN'DITY, TJ. s. Lat. jueunditat, jucun-dus. Pleasantness ; agreeableness.

The new or unexpected jucundities, which present themselves, will have activity enough to excite the earthiest soul, and raise a smile from the most composed tempers. Browne.

JUD/EA, in ancient geography, taken largely, either denotes all Palestine, or the greater part of it ; and thus it is generally taken in the Roman history : Ptolemy, Rutilinus, Jerome, Origen, and Eusebius, take it for the whole of Palestine. It has also been considered as the third part of :t, on this side the Jordan ; and that the south

part is distinct from Samaria and Galilee; in which sense it is often taken, not only m Jose phus, but also in the New Testament. Thus regarded it contained four tribes ; Judah, Benjamin, Dan, and Simeon, together with Phihstia and Idumea ; so as to be comprised between Samaria on the north and Arabia Petraea on the south, and bounded by the Mediterranean on the west, and by the lake Asphaltites, with part of the Jordan, on the east. Josephus divides it into eleven toparchies ; Pliny into ten ; by vfh'ch it has a somewhat greater extent than that just mentioned. See PALESTINE.

While we thus refer for modern geographical particulars of this land to its more general appellation, our biblical readers will recollect the origin of the name Judaea, as connecting it with the royal tribe of the house of Israel, i. e. Judah, and as calculated from that circumstance to point the Jews and all mankind to the fulfilment of those prophecies which regarded the appearance of the Messiah in that tribe. The only two tribes whose distinct genealogy was connected with the ‘ service of God and the promises’ were Levi and Judah : these, therefore, we find preserved more distinctly throughout and after the captivity in Babylon than any other ; and, while the former yielded some of the most distinguished ornaments of the sacerdotal race, the very name of Judah was transferred, after this event, to the land and to the people in the coguomina Judaa and Jews.

Since the appearance of the true Messiah in this land, although a large portion of the Jewish nation has been preserved unmixed with the other nations of the earth, the distinction of the tribes is lost. Judah is not known from Ephraim : Levi cannot be distinguished from Simeon or Dan.

Palestine is therefore no longer Judsea, *i.e.* the land emphatically of Judah : it is no longer the peculiar inheritance of the Jews. Hence it is remarkable that none of the passages in the New Testament, which advert to the future conversion of that people to the Christian faith, ever mention their return to that land. ‘ They are beloved for the fathers’ sakes’ — ‘ they shall obtain mer-cy,’ we are told : the ‘ receiving of them again’ into God’s church shall ‘ be as life from the dead.’ But nothing is suggested as to their locality. It is not mentioned as a part of their ‘ mercy’ or deliverance that they shall return again to Judaea.

It is the absence of any thing like even an allusion to such a circumstance in the New Testament, that has led many modern critics wholly to doubt that construction of certain prophecies of the ancient Scriptures which have been thought still to hold out such an expectation. As the subject has been brought into considerable discussion of late, and much of the entire system of modern writers on prophecy rests on this view of it, we are disposed to record briefly th? arguments on each side of the question.

It strictly consists of two parts, suggesting these two enquiries : 1. Will the Jews ever be re-gather- ed as a nation ? And, 2, Will they as such ever re-possess Palestine? Neither of these questions should be confounded with the expectation of their future general conversion, which various

Christians entertain cordially, who are disposed to consider the foregoing as at least very doubtful matters.

In proof of the affirmative of both the two questions, thus suggested, Dr.Doddridge, in his Lectures as edited by Kippis, quotes Isa. xxvii. 12, 13; Ezek. xi. 17 — 21 ; xxxvi. 24 — 28 ; xxxvii. 21 — 28; xxxix. 25 — 29; Hosea i. 10, 11 ; Amos ix. 14, 15; Zech xiv. 10, 11. 21. He adds other passages in collateral proof of these points, i. e. Isa. Ixvi. 16. 24 ; Ezek. xxxviii. 19, Joel iii. 9 — 14 ; Zech. xiv. 1— 15 ; Rev. xx. 8— 10 ; Isa. lix. 19; Micah iv. 11. 13; Zeph. iii. 8. At least, these last passages are brought forward to prove, that ‘ on their settlement in their own land some enemies shall make an assault upon them , [the Jews], and some celebrated victory over such enemies is foretold.’

The next respectable commentator whom we shall quote on this side of the question is Whitby. He adduces, in his Commentary on Isaiah xi. 11, the following passages, to prove ‘ the restoration of the Jewish nation, when they shall embrace the Gospel, and be restored to their own country.’ Deut. xxx. 3 — 5; xxxii. 43; Isa. xxvii. 12, 13 ; xiv. 17, &c. ; xlix. 6, &c.; liv. lix. 20; lx.,lxi.,lxii., lxv.,lxvi.; Jer. xxiii.8;xxx. 8— 10; xxxi. 36—40; 1. 4; Ezek. xi. 17, &c. ; xx. 34, &c.; xxxiv. 13; xxxvi. 24, &c. ; xxxvii. 21 ; Hosea i. 11 ; iii. 5; Joel iii. 1, &c. ; Amos ix. 14, 15; Obad. v. 17; Micah vii. 14, 15; Zech. viii. 7, 13; x. 6, &c; xii. 10; xiv. 8, &c.; Rom. xi. 25,26; 2 Cor. iii. 10.

Certainly if a tenth part of these passages spoke unequivocally of such events as the national re-gathering of the Jews, and their literal return to Palestine, we should be bound to admit the propriety of expecting them. We do not advert to other writers on this subject, because all the chief passages ever quoted are contained in the foregoing lists, or are of a similar class with those quoted.

Those who consider these events as not predicted in Scripture remark, as we have intimated, on the paucity of the attempted proof of them from the New Testament. The only passages quoted by the above able commentators are Rev. xx. 8; Rom. xi. 25, 26; and 2 Cor. iii. 10; in not

one of which are either of those two subjects distinctly mentioned at all. The quotation from St. Paul's epistle to the Romans we have already adverted to, in this paper, as predicting the fu-ture conversion of the Jews simply. The chapter contains no allusion to their national character, or to their land. They are represented as being broken off from their ancient privileges as a church, into which the Gentiles are grafted (the latter clearly were never grafted into the Jewish nation), and are promised a restoration to similar or superior privileges on their believing the Gospel. But not a hint is given of their acquiring, any temporal or local advantages in consequence : no other advantages are promised them, and they can receive no greater, than those into which the Gentiles are grafted. 2 Cor. iii. 10 speaks of the glory of the Gospel as superior to that of the law : the Jew, of course, shall partake it, on his conversion, but after ar evangelical or Gospel manner: not returning back to that dispensation,

or its peculiarities, ' which' in this very place is said to have ' had no glory, by reason of Uic glory that excelleth.' Rev. xx. 8 predicts a conflict, transpiring a thousand years after a ' first resurrection,' and the assembling of an army gathered together from * the four quarters of the earth:' all its nations seem to constitute the bands described under their leaders Gog and Magog ; they are said in the ninth verse to ' encompass the camp of the saints and the beloved city ;' but the nation of the Jews is named in no part of the connexion, nor Judaea, nor Jerusalem. If a literal resurrection be not intended then the whole chapter is an allegory, and a literal camp and city cannot be intended : if a literal resurrection of God's people be, as some suppose, really meant, then neither the camp nor the city, can intend Jews exclusively, or h:s people of any one nation. Such are the remarks of those who oppose the opinion of a literal re-turn of the Jews, on the few passages of the New Testament above quoted on the point.

Onr space will not permit a similar examination of the passages quoted from the Old Testament. Before the reader can justly estimate their bearing, if they have any, on these points, they require to be arranged in the order of Mme in which they were written : ' the former' must be separated from ' the latter' prophets. This is most important; for it will appear that, out of forty-nine passages thus accumulated, thirty-nine are the production of prophets living before or in the captivity in Babylon ; and the term ' captivity/ and the promises of restoration as far as they are literal, may apply wholly therefore to that calamity, and the return from it. Prophecies of a literal return, from a later captivity, may be expected to occur after

the return from the former ; or, if two captivities were contemplated by earlier writers, such an important fact should be made to appear.

The passages quoted from the later prophets, i. e. from those who delivered their predictions subsequent to the return from Babylon, are at best, as supposed to bear on these topics, remarkably obscure. They are wholly taken from one prophet, Zechariah, his eighth, his tenth, his twelfth, and fourteenth chapters. A popular advocate of the national restoration has pronounced the first of these the strongest of all the passages in its favor. But it will be seen to al-lude, at least principally, to events passing in the time of the prophet. We are to recollect the specific object of his mission, in common with that of Haggai, was to encourage the building of the second temple, and toward this great work the whole chapter bears an aspect. Its language is, ‘ J am returned unto Zior !’ ‘ Let your hands be strong that hear in these days these words. ‘ Again have I thought in these days to do well unto Jerusalem.’ It promises a more complete return from the east and west ; but it expressly declares that the existing ‘ remnant shall possess all these things.’ And it is a well known fact that parties of the Jews kept returning to Jerusalem as she gradually lifted up her head; and that the small number of between 40,000 and 50,000, which first returned, was increased many fold in the time of the Asmonean princes. A»

.he period of their dispersion by the Romans, the Jews were probably as numerous as at present. Writers who reject the national restoration can find nothing in this eighth chapter of Zechariah, with regard to the prosperity of the Jews, that may not be included in the ‘encouragement* which this prophet was sent to afford his own generation, and that was not fulfilled before the advent of the Messiah. The twentieth to the twenty-third verse probably relates to the conversion of the Gentiles by the means of the Jewish apostles : nor must we forget that our Saviour was ‘ a Jew.’ At any rate these verses respect * many people’ and other ‘ nations.’ Similar remarks are made by these writers on the tenth chapter. Dr. Whitby himself

considers the ‘ riders on horses,’ and the ‘ mighty men who tread down their enemies,’ of the fifth verse, to allude to the victorious efforts of the Maccabees. Never had the Jews braver commanders, nor more decided Divine interpositions in their favor, than in their time. The pride of Assyria and Egypt being brought down (1 1th verse) seems the consummation of the national deliverances promised. Zechariah xii. 10 predicts, we know, upon unquestionable authority (John xix. 37), the peculiar manner of the death of Jesus Christ: it is perfectly clear that there was a great mourning in Jerusalem, when the first Christian church was gathered in that memorable scene of the Messiah’s murder, and from amongst the ranks of his immediate murderers. The verse was then literally fulfilled in a sense it never can again be ; and in that individual repentance of thousands of converted Jews (among whom a great company of the ‘ priests’ are specified, Acts vi. 7), the families of Levi, David, Sic., could be distinguished ‘ apart, and their wives apart.’ But the former is, as was seen, no longer possible ; and never can again be but by a miraculous restoration of the genealogies of the tribes. Zech. xiv. 8 must be as clearly a symbolical, and not a literal prediction : the living or springing waters are not a literal river; ‘the whole land being turned into a plain’ (ver. 10) would be a literal curse in that country. Every plain in such countries is, as Humboldt somewhere remarks, a desert. It is the well known symbol of Ezek. xlvii. 1, Rev. xxii. 1, and of our Lord himself (John vii. 38), for the spiritual blessings of the gospel ; and speaks of their diffusion from a spiritual Jerusalem.

Bonus tuxtuurius est bonus theologus. The writers who quote so largely the ‘ former’ prophets on this «ubject cannot have closely examined the context of the passages commonly accumulated, and the infallible explanation of many of them in the New Testament. Amos is the earliest prophet they quote ; and particularly his ixth chap. 1 1 — 15. But the ‘ raising up of the tabernacle of David,’ here promised, is expressly ap-lied (Acts xv. 16) to the establishment of the gospel in the hands of the Messiah; upon a principle of its ‘ agreeing* with the words of other ‘ prophe s ;’ and thus the symbols of the 13th and 14th verses ‘ agree’ with Joel iii. 18, and Isa. Ixi. 4: — the verses immediately preceding this last passage being quoted and applied to his own preaching by our Lord. Hosea i. 10, 11 ;

Isa. xi. 10;liv. 13;!ix. 20; Ixi. 1— 3; Ixv. 1, 2, Ixvi. 24 ; are also directly quoted and explained in the New Testament, as the margin of any Bible with references will show. The can, nexion of Joel iii. 1 is largely explained in St. Peter’s quotation of the last verse of the

preceding chapter, Acts ii. Jer. xxxi. 31—34 is likewise quoted (Heb. viii. 6 — 11) as a ‘ promise’ upon which the entire Christian dispensation is established. Such numerous quotations out of the above lists of passages, say the parties whose opinions we are now exhibiting, may establish a principle of explanation for the whole : many of them are quoted, not by way of accommodation, but in strict argument, and by way of proof that the events to which they are applied were of old predicted. If the quotation be not correct the proof will fail ; if it be, we have at least one good and sound exposition cf the passages quoted in the final dispensation of God’s will.

In brief, these parties say, 1. Extract from these lists passages explained in the New Testament, and you have very few, except exactly similar ones, left upon the subject. 2. Examine closely the connexion of the remaining passages (of the prophets), and the greater part of them refer, in express terms, to calamities existing, or threatened to come immediately. They are passages, for instance, from Isaiah, Joel, Jeremiah, and Ezekiel (almost entirely), who lived just before or in the Assyrian and Babylonian captivities. Many of them describe by name, tense, and mood, those captivities ; and cannot, without an utter disregard of grammatical construction, be applied to any other : for instance, Isa. xxvii. 12, 13, ‘ Assyria and Egypt.’ Jer. xxx., following xxix. 10 (‘After seventy years be accomplished at Babylon I will visit you’), says, ‘Write all / have spoken in a book, for I will bring again the captivity,’ &c., the passage quoted by Whitby. So again Ezek.xxxvii. 21, much depended on by some writers, is closely connected with the preceding vision of the dry bones — which are explained to be the whole house of Israel who were in their graves, and who expressly complain of an existing calamity under that figure (ver. 11); i. e. the grave of their captivity in Chaldea, where Ezekiel prophecied. But we cannot go into further details. 3. With regard to the quotations from the Pentateuch, and particularly Deut. xxx. 3 — 5, these parties contend that numerous passages of this kind are to be found entirely conditional on the obedience of the Jews while they were a nation : that when God found them an unworthy and a rebellious people, his faithfulness was concerned to fulfil on the other hand his threatening of taking his church or kingdom from them ; that such passages must be construed under the new circun - stances and entire change of dispensation in which we are placed by the gospel, &c. 4. They add, that while, in their view, it has been an in-operative mistake in the creed of many good men, to suppose that any future literal distinction is in reserve for the Jews, — if it be in reality a mistake, an,d at the same time be exhibited as an important part of God’s revealed will that this extraordinary people shall be brought to

great temporal honor, it may have the unhappy ten-J U D A II.

dency of inflating their pride — delaying their conversion— and calling off the attention of all •who advocate it from matters of infinitely greater moment.

JUDAH, Heb. mi»V, i. e. Praise, or Confession, the fourth son of Jacob, and father of the chief tribe of the Jews, distinguished by his name. Died 1636 B.C.

JUDAH is also used for the people of Judah, including not only the whole people of that tribe, but those of the tribe of Benjamin, the majority of the Levites, and many individuals from all the other tribes, who adhered to the house of David, to avoid the idolatrous worship established by Jeroboam I. Many other individuals from the dispersed tribes are also supposed to have joined them after the Babylonish captivity, when they were called Jews. See JEWS.

CHRONOLOGICAL SERIES OF THE KINGS OF JUDAH.

A. M.

3029. Rehoboam succeeded his father Solomon, and reigned seventeen years, to 3046.

3046. Abijam, three years, to 3049.

3049. Asa, forty-one years, to 3090.

3090. Jehoshaphat, twenty-five years, to 3115.

3115. Jehoram, four years along with his father, and four alone, to 3119.

3119. Ahaziah, one year.

3120. Athaliah, his mother, usurped the crown,

murdered the royal family, and reigned six years, to 3126.

3126. Joash was raised to the throne by Jehoi-ada; and reigned forty years, to 3165.

3165. Amaziah, twenty-nine years, to 3194.

3194. Uzziah, or Azariah, reigned twenty -seven years, to 3221; when, attempting to offer incense in the temple, he was struck with a leprosy, and obliged to quit the government. He lived after this twenty-five years, and died in 3246.

3221. Jotham,his son, took upon him the government, and reigned twenty-five years dur-ing his father's life, and sixteen alone. He died in 3262.

3262. Ahaz reigned sixteen years, to 3278.

3278. Hezekiah, twenty-nine years, to 3307.

3307. Manasseh, fifty-five years, to 3362.

3362. Amon, two years, to 3364.

3364. Josiah, thirty-one years, to 3395.

3395. Jehoahaz, three months.

3395. Ehakim, or Jehoiakim, eleven years, to

3406.

3406. Jehoiachin, or Jeconiah, three months and ten days.

3406. Mattaniah, or Zedekiah, reigned eleven years, to 3417; when Jerusalem was taken, the temple burnt, and the people carried captives to Babylon.

CHRONOLOGICAL SERIES OF THE PRINCES OF JUDAH, AFTER THE CAPTIVITY.

The following list is given by Alstedius in his Thesaurus Chronologiae. 3421. Zorobabel governed thirty-two years after

the captivity.

3453. Resa Mesullam, forty-six years. 3499. John, the &on of Resa, forty years.

A. M.

3539. Judas Hircanus, fourteen.

3553. Joseph I., seven.

3560. Shimei, eleven.

3571. Mattathias, or Eli, twelre.

3583. Maath, or Asarmath, nine.

3592. Nagge, or nanges, ten.

3602. Heli, or Eli, eight.

3610. Nahum, seven.

3617. Amos Sirach, fourteen.

3631. Matthias, ten.

3641. Joseph II., sixty.

3701. John Hircanus, seventeen. This was the last prince of the Jews,

of the royal fa-mily of David, and a progenitor of Jesus Christ (tritavus) in the seventh degree.

3718. An interregnum of sixty-two years.

3780. Mattathias Asmonoeus, or Maccabaeus, governed three years.

3783. Judas Maccabseus, six.

3789. Jonathan Maccabaeus, eighteen.

3807. Simon Maccabaeus, eight.

3815. John Hircanus I. thirty.

3845. Aristobulus I., king and high-priest; the

first king of the Jews since Zedekiah, one year.

3846. Alexander Jannseus, twenty-seven. 3873. Queen Alexandra, nine.

3882. Hircanus II., three months.

3882. Aristobolus II., five years.

3887. Hircanus II., restored, twenty-three.

3909. Antigonus, one year.

3910. Herod the Great, thirty-eight. 3948. Archelaus, nine.

3957. Herod Antipas, twenty-five. 3983. Herod Agrippa I., seven. 3990. Herod Agrippa II., twenty-six.

The kingdom of Judah was ot small extent compared with that of the kingdom of Israel ; consisting only of two tribes, Benjamin and Judah : and being bounded on the east by the Jordan; on the west by the Mediterranean, in common with the Danites, except some places recovered by the Philistines, and others taken by the kings of Israel; on the south its limits seem to have been contracted by Hadad. 1 Kings xi.

15.

The tribe of Judah was one of the twelve divisions of Palestine by tribes (Josh, xv.), having Idumea on the south from the extremity of the Lacus Asphaltites, also the Wilderness of Zin, Cadesbarnea, and the brook or river of Egypt ; on the east the said lake ; on the west the Mediterranean ; and on the north the mouth of the said lake ; where it receives the Jordan, Bethsemes, Thimna, quite to Ekron on the sea.

JUDAH HAKKADOSH, or the saint, a rabbi celebrated for his learning and riches, lived in the time of the emperor Antoninus, and was the friend and preceptor of that prince. Leo of Modena, a rabbi of Venice, tells us, that rabbi Judah, who was veiy rich, collected, about twenty-six years after the destruction of the tem-ple, in a book which he called the Mishna, the constitutions and traditions of the Jewish magistrates who preceded him. See MISHNA and TALMUD.

JU'DAIZE, v. n. Fr. jitdaiser ; low Latin

iudaizo. To conform to the manner of the .iev«s.

Paul judaised with the Jews, was all to all

Sandyt*

JUDAS MACCABJEUS, a celebrated general of the Jews, renowned for his many victories over his enemies, at last slain in battle, 261 B. C. See JEWS,

JUDAS TREE, n.t. Lat. siliguastrum. A plant.

Judas tree yields a fine purplish, bright red blos-so-n in the Spring, and is increased by layers.

Mortimer's Husbandry.

JUDE (St.), or JUDAS, called also Lebbseus and Thaddaeus, the son of Joseph, and brother of St James the younger. Matt. xiii. 55. He preached in Mesopotamia, Arabia, Syria, Idu-mea ; and died in Berytus for the confession of Christ. He wrote that epistle which goes under his name, after the death of most of the apostles. He was cruelly put to death for reproving the superstition of the Magi.

JUDEA. SeJuoJEA.

JUDENBURG, a town and circle of Upper Styria, situated on the left bank of the Muhr, and the next place in the duchy to Gratz. The town has not, however, above 2000 inhabitants, and had hardly recovered from a dreadful fire which took place in 1807, when, on 18th of June 1818, another fire consumed the whole, except thirty houses. It was taken by the French in April 1797. It is thirty-eight miles west by north of Gratz, and 108 south-west of Vienna.

The CIRCLE OF JUDENBURG comprehends the western part of Upper Styria, and has a territorial extent of 2250 square miles. Inhabitants 95,000, of whom a large number are Lutherans. It is hilly, and sterile, but abounds in iron mines and works. Silver, lead, and nitre, are found here, though in smaller quanties; and at Aussee there are fine salt mines.

JUDEX (Matthew), one of the principal writers of the Centuries of Magdeburg, was born at Tippleswolde, in Misnia, in 1528. He taught theology with great reputation ; but met with many disturbances in tht exercise of his ministry from party feuds. He wrote several works, and died in 1564.

JUDGE, n. s. &v.a.

JUDG'ER, n. s.

Ju'oiCATORY, n S. JUDICATURE, n. S.

JUDIC'IAL, adj.

JUDICIALLY, adv.

JUDIC'IARY, adj.

JUDIC'IOUS, adj.

JUDIC'IOUSLY, adv. or justice : one who has skill to determine upon the merit of any proposed subject of enquiry : judge, to decide; pass sentence ; give an opinion; discern or distinguish, pass severe censure or doom, when used in scripture : judger, an old word for judge : judicatory, distribution of justice: a court of justice: judicature, power or authority to administer justice ; also a court of justice : judicial, practised in the administration of justice; inri.cted as a penalty: judicially, according to forms of justice : judiciary, passing judgment: judicious, prudent ; wise ; skilful in deter-

Lnt. jus, judex, ju-dico. 'lliese words are all derived from jus, right, equity : judge is one invested with authority to de-cide any question or cause; one who presides in a court of law

mining : judiciously, in a wise and discriminating manner.

Shall not the judge of all the earth do right !

Genesis.

Judge in yourselves : is it comely that a woman pray unto God uncovered ? 1 Cor. xi. 13.

How doth God know 1 Can he judge through the dark cloud? Job xxii. 13. .

Your cours is don, your faith han he conserved ; Goth to the croune of lif that may not faille ; The rightful juge, which that ye han served, Shal yeve it you, as ye han it deserved.

Chaucer. The Second N<mnes Tale. For your husband,

He's noble, wise, judicious, and best knows The fits o' the season. Shakspeare. Jlfa-beth.

Beshrew me, but I love her heartily ; For she is wise, if I can judge aright.

Skalaptart,

My lord Bassanio gave his ring away Unto the judge that begged it.

Id. Merchant of Veniee.

The honour of the judges in their judicature is the king's honour. Bacon's Advice to ViUiers.

No such crime appeared as the lords, the supreme court of judicatoru, would judge worthy of death.

Clarendon. Thou art judge Of all things made, and judgest only right. Milton.

Love hath his seat

In reason, and is judicious. Id.

To each savour meaning we apply ; And palate call judicious. Id.

Authors to themselves, Both what they judge and what they chuse. Id.

His zeal

None seconded, as out of reason judged Siugular and rash. Id.

Before weight be laid upon judiciary astrologers, he influence of constellations ought to be made out.

Boyle.

How dares your pride, As in a listed field to fight your cause, Unasked the royal grant ; nor marshal by, As knightly rites require, nor judge to try.

Drydtn,

So bold, yet so judiciously you dare, That your least praise is to be regular. Id. Then those, whom form of laws Condemned to die, when traitors judged their cause.

Id.

We are beholden to judicious writers of all ages for those discoveries they have left behind them.

Locke.

Whether it be a divine revelation or no, reason must judge, which can never permit the mind to reject a greater evidence, to embrace what is

less evident. Id.

It will behove us to think that we see God still looking on, and weighing all our thoughts, words, and actions in the balance of infallible justice, and passing the same judgment which he intends hereafter judicially to declare. Grew.

In judicatures, to take away the trumpet, the scarlet, the attendance, makes justice naked as well as blind. South.

The resistance of those will cause a judicial hardness. Id.

Her very judges wrung their hands for pity ; Their old hearts *nelted in ‘em as she spoke And tears ran down their silver beards.

Rou-e’s Lady Jane Grey.

How properly the tories may be railed the whole body of the British nation, I lea\c to any one’s judging. . Addison.

One court there is in which he who knows the secrets of every heart will sit judge himself.

Sherlock.

Human judicatories give sentence on matters of right and wrong but inquire not into bounty and beneficence. Atterbury.

What government can be without judicial proceedings ? And what judicature without a religious oath ?

Bentley.

A perfect judge will read each piece of wit, With the same spirit that its author writ. Pope.

We wisely strip the steed we mean to buy ; Judge we in their caparisons of men. Young.

Their judge-was conscience, and her rule their law, That rule, pursued with reverence and with awe, Led them, however faltering, faint, and slow, From what they knew, to what they wished to know.

Cowper. Truth.

A tale should be judicious, clear, succinct, The language plain, and incidents well linked ; Tell not as new what every body knows, A nd, new or old, still hasten to a close.

Id. Conversation. I judge thee by thy mates ;

It is for God to judge thee as thou art.

Byron. Deformed Transformed.

Even so. I judged it fitting for their safety, That, ere the dawn, she sets forth with her children For Paphlagonia, where our kinsman Cotta Governs. Id. Sardanapalus.

JUDGES. See JUSTICE.

JUDGES, in Jewish antiquity, supreme magistrates who governed the Israelites from the time of Joshua till the reign of Saul. They continued during the whole time of the republic of Israel ; being a space of about 339 years. See ISRAEL.

JUDGES, for ordinary affairs, civil and religious, were appointed by Moses in every city to terminate differences ; in affairs of greater Consequence, the differences were referred to the priests of Aaron's family, and the judge of the people or prince at that time established. Moses likewise set up two courts in all the cities, one consisting of priests and Levites, to determine points concerning the law and religion ; the other consisting of heads of families, to decide in civil matters.

JUDGES, BOOK OF, a canonical book of the Old Testament, so called from its relating the state of the Israelites under the administration of many illustrious persons who were called judges, from being both the civil and military governors of the people, and who were raised up by

God upon special occasions, after the death of Joshua, till the time of their choosing a king.

JUDGES, SELECT, judices selecti, in antiquity, were persons summoned by the praetor to give their verdict in criminal matters in the Roman courts, as juries do in ours. No person could be regularly admitted into this number till he was twenty-five years of age. The sortitio ju-dicum, or impanneling the jury, was the office of the judex questionis, and was performed after both parties were come into court, for each liad a right to reject or challenge whom they pleased, others being substituted in their room. The number of the judices selecti varied according to the nature of the charge. When the proper number appeared, they were sworn, took their places in the snbsellia, and heard the cause. VOL. XII.

JUDG'MENT, n. t. Frenchwomen* Th« power of discerning the relations between on« term or one proposition and another.

O judgment ! thou art fled to brutish oeasts, And men have lost their reason.

Shakspeare. Julius Ccesar.

The faculty, which God has given man to supply the want of certain knowledge, is judgment, whereby the mind takes any proposition to be true or false, without perceiving a demonstrative evidence in the proofs. Locke.

Judgment is that whereby we join ideas together by affirmation or negation ; so, this tree is high.

Wfttt,

And judgment drunk, and bribed to lose his way, Winks hard, and talks of darkness at noon day.

Cowper. Progress of Error.

Doom; the right or power of passing judgment.

If my suspect be false, forgive me God ;

for judgment only doth belong to thee.

Shalapeare..

The act of exercising judicature ; judicatory.

They gave judgment upon him. 2 Kings.

When thou, O Lord, shalt stand disclosed In majesty severe.

And sit in judgmtnt <ra my soul, O how shall I appear? Addhoni Spectator.

Determination ; decision.

Where distinctions or identities are purely material, the judgment is made by the imagination, otherwise by the understanding. Glanville's Scepsis.

We shall make a certain judgment what kind of dissolution that earth was capable of.

Burnet's Theory.

Reason ought to accompany the exercise of our senses, whenever we would form a just judgment of things proposed to our inquiry. Watts.

The quality of distinguishing propriety and impropriety; criticism.

Judgment, a cool and slow faculty, attends not a man in the rapture of poetical composition.

Dennis.

'Tis with OUT judgments as our watches, none Go just like ; yet each believes his own. Pope.

You must not every worm promiscuous use, Judgment will tell the proper bait to choose. *

Gay's Rural Sports.

Opinion; notion.

I see men's judgments are

A parcel of their fortunes, and things outward

Draw the inward quality after them,

To suffer all alike.

Shakspeare. Antony and Cleopatra.

WThen she did think my master loved her well, She, in my judgment, was as fair as you.

Shakspeare.

Sentence against a criminal.

The chief priests informed me, desiring to hava judgment against him. Acts xxv. 15.

When he was brought again to the' bar, to hear His knell rung out, his judgment, he was stirred With agony. Shakspeare. Henry VIII.

On Adam last this judgment he pronounced.

Milton.

Condemnation. This is a theological use.

The judgment was by one to condemnation; but the free gift is of many offences unto justification.

Rom. v. 16.

The precepts, promises, and threatenings of the Gospel will rise up in judgment against us, and the articles of our faith will be so many articles of accusation TillvtiOH.

s

J U 1) G M E N T.

Punishment inflicted by providence, with reference to some particular crime.

What man henceforth that breatheth vitall aire Will honour heaven, or heavenly powers adore, Which so unjustly doth their iudgments share,

‘.Mongst earthly wights, as to afflict so sore The innocent, as those which do transgresse, And doe not spare the best or fairest more Than worst or foulest, but doe both oppresse ?

Spenser. Daphnaida.

This judgment of the heavens, that makes us tremble, Touches us not with pity. Shakspeare. King Lear.

We cannot be guilty of greater uncharitableness than to interpret afflictions as punishment and judg-nents: it aggravates the evil to him who suffers, when he looks upon himself as the mark of divine vengeance. Addison’s Spectator.

Distribution of justice.

The Jews made insurrection against Paul, and brought him to the judgment seat. Acts xviii. 12.

This false knight was siaine for his untrouthe, By jugement of Alia hastily.

Chaucer. The Man of Lowes Tale. Your dishonour

Mangles true judgment, and bereaves the estate Of that integrity which should become it.

Shakspeare. Justiciary law.

I am charged to tell his highness that the court - Has passed its resolution, and that, soon As the due forms of judgment are gone through, The sentence will be sent up to the Doge.

Byron. Marino Faliero. The last doom.

At every time that me remembreth of the day of dome, I quake ; for whan I ete or drinke, or do what so I do, ever semeth me that the trompe sowneth in mine eres, riseth ye up that bended and cometh to the jugement. O good God ! moche ought a man to drede swiche a. jugement ther as we shul be alle, as Seint Poule sayth, before the streit jvgment of oure Lord Jesu Crist, wheras he shal make a general congregation, wheras no man may be absent.

Chaucer. The Persones Tale.

JUDGMENT, among logicians, a faculty, or rather act of the human soul, whereby it compares its ideas, and perceives their agreement or

disagreement. See LOGIC, and METAPHYSICS.

JUDGMENT, in law, is the sentence pronounced by the court upon the matter contained in the record. Judgments are of four sorts. First, where the facts are confessed by the parties, and the law determined by the court ; as in the case of judgment upon demurrer: secondly, where the law is admitted by the parties, and the facts disputed ; as in the case of judgment on verdict; thirdly, where both the fact and the law arising thereon are admitted by the defendant; which is the case of judgments by confession or default : or, lastly, where the plaintiff is convinced that either fact, or law, or both, are insufficient to support his action, and therefore abandons or withdraws his prosecution; which is the case in judgments upon a nonsuit or retraxit. The judgment, though pronounced or awarded by the judges, is not their determination or sentence, but the determination and sentence of the law ; it is the remedy prescribed by law for the redress of injuries ; and the suit or action is the vehicle or means of administering it. What that re sr.' dy may be, it is indeed the result of deliberation and study to point out; and therefore the style of the judgment is not that it is decreed or resolved by the court, for then the judgment might appear to be their own ; but ' it is considered,' consideratum est per curiam, that the plaintiff do recover his damages, his debt, his possession, and the like : which implies that the judgment is none of their own ; but the act of law, pronounced and declared by the court, after due deliberation and enquiry. See Bluckstone's Comment.

JUDGMENT, in criminal cases, is the next stage of prosecution, after trial and conviction are past. For when, upon a capital charge, the jury have brought in their verdict guilty, in the presence of the prisoner, he is either immediately, or at a convenient time soon after, asked by the court, if he has any thing to offer why judgment should not be awarded against him. And in case the defendant be found guilty of a misdemeanor (the trial of which may, and does usually, hap-pen in his absence, after he has once appeared), a capias is awarded and issued, to bring him in to receive his judgment; and, if he absconds, he may be prosecuted even to outlawry. But whenever he appears in person, upon either a capital or inferior conviction, he may at this period, as well as at his arraignment, offer any exceptions to the indictment, in arrest or stay of judgment : as for want of sufficient certainty in setting forth either the person, the time, the place, or the offence. And, if the objections be valid, the whole proceedings shall be set aside. A pardon also may be pleaded in arrest of judgment : and it is the same when pleaded here as when upon arraignment; *viz.* the saving the attainder, and, of course, the corruption of blood : which nothing can restore but parliament, when a pardon is not pleaded till

after sentence. And certainly, upon all accounts, when a man has obtained a pardon, he is in the right to plead it as soon as possible. Praying the benefit of clergy may also be ranked among the motions in arrest of judgment. See CLERGY. If all these resources fail, the court must pronounce that judgment which the law has annexed to the crime. Of these some are capital, which extend to the life of the offender, and consist generally in being hanged by the neck till dead ; though, in very atrocious crimes, other circumstances of terror, pain, or disgrace, are superadded : as, in treasons of all kinds, being drawn or dragged to the place of execution; in high treason affecting the king's person or government, beheading ; and, in murder, a public dissection. But the humanity of the English nation has authorised, by tacit consent, an almost general mitigation of such judgments as favor torture or cruelty : a sledge or hurdle being usually allowed to such traitors as are condemned to be drawn. Some punishments consist in exile or banishment, by abjuration of the realm, or transportation to New-South Wales: others in loss of liberty, by perpetual or temporary imprisonment. Some ex— tend to confiscation, by forfeiture of lands, or moveables, or both ; or of the profits of lands for life: others induce a disability of.holding offices or employments, of being heirs, executors, and the like. Some are merely pecuniary, by stated

or discretionary fines : and, lastly, there are others that consist principally in their ignominy, thougn most of them are mixed with some degree of corporeal pain ; and these are inflicted chiefly for such crimes as either arise from indigence, or render even opulence disgraceful : such as whipping, hard labor in the house of correction, and the stocks. Disgusting as this catalogue may seem, it will afford pleasure to a British reader, and do honor to the British laws, to compare it with that shocking apparatus of death and torment to be met with in the criminal codes of almost every other nation in Europe. And it is moreover one of the glories of our law, that the nature,

though not always the quantity or degree of punishment, is ascertained for every offence ; and that it is not left in the breast of any judge, nor even of a jury, to alter that judgment which the law has beforehand ordained for every subject alike, without respect of persons.

JUDICIA CENTUMVIRALIA, in Roman antiquity, were trials before the centumviri, to whom the praetor committed the decision of certain questions of inferior nature, like our justices of peace at the quarter sessions. During these trials, a spear was stuck up in the forum, to signify that the court was sitting.

JUDICIUM CALUMNI.C, was an action brought against the plaintiff for false accusation. The punishment, upon conviction, was inustio frontis, or branding in the forehead. See INIS-TIO,

JUDICIUM DEI, judgment of God, was a term anciently applied to all extraordinary trials of secret crimes ; as those by arms, and single com-bat, and the ordeals ; or those by fire, or red hot plough-shares ; by plunging the arm in boiling water, or the whole body in cold water ; in hopes God would work a miracle, rather than suffer truth and innocence to perish. These customs were long kept up even among Christians. See BATTLE, ORDEAL, &c.

JUDICIUM PRJEVARICATIONIS was an action brought against the prosecutor, after the criminal was acquitted, for suppressing the evidence of, or extenuating his guilt, rather than urging it home, and bringing it to light.

JUDITH, Heb. nHIPP, i. e. praising, the daughter of Merari, a Jewish heroine, whose history is related in the apocryphal book which bears her name. See APOCRYPHA and HOLO-FERJ.ES.

JUDITH'S RIVER, a river of North America, which has its source in the Rocky Mountains, near that of the Muscleshell and the Yellow-stone River. Its entrance is 100 yards wide from bank to bank, the water occupying about seventy-five yards. It is a clear fine stream : the bed being composed entirely of gravel and mud with some sand. The low grounds in the vicinity are wide and woody, and here is abundance of the large horned animals. In its waters are a great number of beavers.

IUERNUS, in ancient geography, a town in the south-west of Ireland : now called Dunke-ram (Camden): called Donekyne by the natives, situated on the Maire, in the province of Munster.

IUERNUS, or IERNUS, a river in the south-west

of Ireland, now called the Maire, or Kenmare, running frcm east to west in the province of Munster.

IVES, or YVES (St.), a celebrated bishop of Chartres, born in the territory of Beauvais, in the year 1035. His merit procured his election to the see of Chartres in 1092, or 1093, under the pontificate of Urban II., who had deposed Geoffrey his predecessor. He compiled a Collection of Decrees, and wrote twenty-two sermons, published in 1647, in folio lie died A. D. 1115.

IVES (John), F. R. S. and F. A. S., a late celebrated antiquarian, born at Yarmouth in 1751. He published Select Papers, 1773: Remarks on the Garianonum of the Romans, 12mo. 1774 and died in 1776.

IVES (St.), a borough and seaport town o Cornwall, seated on a bay of the same name; its harbour having been almost choked up by the vast shoals of sand driven upon this coast by the north-west winds, the magistrates and trustees of the port, in 1816, resolved to extend the pier, and to construct a breakwater, to shelter the port, by which means it is calculated that the harbour will accommodate 200 sail of large vessels at spring-tides, and the town be highly benefited. The rocks here are streaked with a. resemblance of copper, of which there are some mines in the neighbourhood. It is a custom of the manor here, that, on the death of every per-t son worth ten pounds, ten shillings shall be paid to the vicar. By the pilchard trade, and that of Cornish slates, this town has thriven greatly, and twenty or thirty sail of ships belong to it. It is a corporation, governed by a mayor, thirty-six burgesses, a recorder, town-clerk, &c., and sends two members to parliament. It has a spacious church, which is often washed by the sea.

IVES (St.), a market town in Huntingdonshire, sixty-four miles from London. It has a fine stone bridge over the Ouse, had in the ninth century a mint, and was noted for its medicinal water. It has a good market on Monday for fatted cattle brought from the north; and two fairs. Here Oliver Cromwell rented a farm be-fore he was chosen a burgess for Cambridge.

JUG, n. s. Dan. jugge ; Lat. jugulum. A large drinking vessel with a gibbous or swelling belly.. . • :,’•»«’

You’d rail upon the hostess of the house, Because she bought stone jugs and no sealed quarts.

Shakspeare. He fetched ‘em drink,

Filled a large jug up to the brink. Swift.

JUGERUM, in Roman antiquity, a square of 120 Roman feet; its proportion to the English acre being as 10-000 to 16-097.

JUGGERNATH, or JAGATNATHA, (i.e. the Lord of the world), a temple and place of Hindoo worship, on the sea coast of Orissa, near the town of Pursotem, esteemed by its wretched votaries the most sacred of their establishments. From a distance it seems a shapeless mass of building, forming an excellent land-mark for navigators. On approaching it several courts or enclosures are found to surround the interior, where no European is admitted. At the outer gate are two large statues of an imaginary animal, nearly

«s large as an elephant. JugˆernHth, the idol, is made of dark wood, with a distended mouth, and frightful visage. At his side are seated two oilier images, one painted white, the other yel-iow : the first is said to be that of his sister Sliubudra, the other his brother Balaram. These images on particular festivals are dressed, and placed on an immense carriage or moving tower, culled a rutkh, which is drawn by the pilgrims attending the place. During the procession devotees sacrifice themselves, by falling under the wheels of this carriage. Juggernath is accounted one of the incarnations of Vishnu, and the tem-ple here is known to have existed above 800 years. Between the years 1720 and 1730 the rajah of Persotem removed the image to the mountains on the western border of Orissa, which injured the revenues ; but the nabob Alaverdy Khan made him restore it. The concourse of pilgrims to this place is so immense, that the revenue

which the East India Company derived from them amounts it is said, to £l 2,000 annually. A road has been lately made from Calcutta to Juggernath, at the expense principally of a rich Hindoo.

JUG'GLE, v. n. Stn.s. ˆ Tr.jongler ; Lat. JUG'GLER, n. s. \joculor. To play

JWG'GLINGLY, adv. j tricks by slight of

hand ; to practice artifice or imposture: juggle, a trick of legerdemain ; an imposture, or deception : juggler, one who practises slight of hand ; a cheat, a trickish fellow : jugglingly, after the manner of a cheat.

Aristaeus was a famous poet, that flourished in the days of Croesus, and a notable juggler. Sandys.

They say this town is full of cozenage, As nimble jugglers that deceive the eye, Drug-working sorcerers that change the mind, Disguised cheaters, prating mountebanks, And many such like libertines of sin. Shakspeare. Is't possible the spells of France should juggle Men into such strange mockeries ? Id.

0 me, you juggler ; oh, you canker blossom, You thief of love ; what, have you come by night And stolen my love's heart from him? Id.

Be these juggling fiends no more believed, That palter with us in a double sense.

Id. Macbeth.

1 saw a juggler that had a pair of cards, and would tell a man what card he thought. Bacon.

1 sing no harm

To officer, juggler, or justice of peace. Donne. The ancient miracle of Memnon's statue seems to j>e a juggling of the Ethiopian priests. Digby.

They ne'er forswore themselves, nor lied, Disdained to stay for friends consents ; ROT juggled about settlements. Hudibras.

Fortune-tellers, jugglers, and impostors, do daily delude them. Browne's Vulgar Errours.

The notion was not the invention of politicians, and a juggle of state to cozen the people into obedience. Tillotson.

The juggler which another's slight can shew, But teaches how the world his own may know.

Garth.

One who is managed by a juggler fancies he has money in hand; but, let him grasp it never so carefully, upon a word or two it increases or dwindles. Addhon's Freeholder. What magick makes our money rise, When dropt into the southern main ; Or »lo the*-*; iugglers cheat our eyes ? Swift.

Let all my soldiers quaff That generous juice, by juggling priests denied.

Darcy's Love and Ambition. Keep thy smooth words and juggling homilies For those who know thee not.

Byron. Sardanapalus.

JUGLANS, in botany, a genus of the monoecia orde"r, and polyandria class of plants ; na tural order fiftieth, amentaceae. Male CAL. monophyllous and squamiform : COR. divided into six parts ; there are eighteen filaments. Female CAL. quadrifid, superior : COR. quadripartite ; there are two styles, and the fruit a plum with a furrowed kernel. There are five species.

1. J. alba, the white, and

2. J. nigra, the black Virginia walnut, are cultivated in this country, though, having very small kernels, they are less proper for fruit than the

3. J. regia, the common walnut. This tree rises fifty feet high or more, with a large upright trunk, branching into a very large spreading head, with large pinnated leaves, of two or three pairs of oval, smooth, somewhat serrated lobes, terminated by an odd one; and monoecious flowers, succeeded by clusters of large green fruit enclosing furrowed nuts of different shapes and sizes. All the sorts are propagated by planting their nuts, which will grow in any common soil. The nuts being procured in the proper season, in their outer covers or husks if possible, they should be preserved in dry sand until February, and then planted. After two years' growth in the seed-bed, they are to be taken out, and planted in the nursery, where they must remain till grown five or six feet high, when they must be transplanted

where they are to remain ; but, if intended for timber as well as fruit trees, they ought to be finally transplanted when they have attained the height of three or four feet. The fruit is used at two different stages of growth ; when green to pickle, and when ripe to eat raw. Walnuts are ready for pickling in July and August, and are fully ripe in September and October. As soon as gathered, lay them in heaps a few days to heat and sweat, to cause their outer husks, which adhere closely, to separate from the shell of the nut ; then clean them from the rubbish, and deposit them in some dry room for use, covering them over closely with dry straw half a foot thick, and they will keep three or four months. The wood of the walnut tree is also very valuable ; cabinet-makers esteem it highly for several sorts of furniture and light works ; for, being beautifully veined, it takes a fine polish, and the more knotty it is, the more it is valued. Walnut trees are also well adapted for planting round the borders of orchards, where, by their large spreading heads, they guard the smaller fruit trees from boisterous winds. The kernels are similar in quality to almonds, but are not, like them, used in medicine.

JUGLER (John Frederick), a Saxon philolo-gical writer, was born near Naumburgh, in 1714. Having been for some time employed in teaching youth, he was nominated counsellor to the king of England, and Inspector of the Equestrian Academy of Lunenburg. lie died in 1791 His principal literary work is Bibliothcca Historic

Literariae Selccta, 3 vols. 8vo. founded on Struve's Introduction to the History of Literature. He was the author likewise of Memoirs of Eminent European Statesmen and Lawyers, 6 vols. 8vo. ; a Dissertation on the Use of Libraries, &c.

JU'GULAR, adj. & n. s. Lat. jugulum. Belonging to the throat : a vein of the neck.

A gentleman was wounded into the internal jugular, through his neck. Wiseman's Surgery. He died as born, a Catholic in faith,

Like most in the belief in which they're bred,

And first a little crucifix he kissed,

And then held out his jugular and wrist.

Byron. Don Juan.

JUGULAR, among anatomists, is applied to certain veins and glands of the neck. See ANATOMY.

JUGULARES, in the Linnsean system, an order or division of fish, the general character of which is, that they have ventral fins before the pectoral fins. See the article PISCES.

JUGUM, the yoke, a disgrace inflicted by the Romans upon their vanquished enemies, by making them pass singly between two spears, with a third laid over the top of them.

JUGURTHA, the illegitimate son of Manas-tabal, the brother of Micipsa, sons of Masinissa, king of Numidia. Micipsa, who inherited his father's kingdom, educated his nephew with his two sons Adherbal and Hiempsal ; but, as he saw that the former was of an aspiring disposition, he sent him with a body of troops to the assistance of Scipio, who was besieging Numantia, hoping thus to get rid of a youth whose ambition seemed to threaten the tranquillity of his children. His hopes were frustrated ; Jugurtha showed himself brave and active, and endeared himself to the Roman general. Micipsa appointed, him successor to his kingdom along with his sons ; but the kindness of the father proved fatal to the children. Jugurtha destroyed HLmpsal, and stripped Adherbal of his possessions, and obliged him to fly to Rome. The Romans listened to the well-grounded complaints of Adherbal ; but Jugurtha's gold prevailed among the senators, and the supplicant monarch, forsaken in his distress, perished by the snares of his enemy. Caecilius Metellus was at last sent against Jugurtha ; and his firmness find success soon reduced the crafty Numidian, obliging him to fly among his savage neighbours for support. Marius and Sylla succeeded Metellus, and fought with equal success. Jugurtha was at last betrayed by his father-in-law Bocchus, and delivered up to Sylla, A. A. C. 106. He was exposed to the view of the Roman people, and dragged in chains to adorn the triumph of Marius. He was afterwards thrown into prison, and suffered to perish of hunger.

IVICA, or YVICA. See YVICA.

JUICE, n.s. -\ Lat. jus; Fr. jus; Dut.

JUICE'LESS, adj. (juys. The sap of plants and . JUI'CINESS, n.s. £ fruits; formerly the fluids

JUI'CY, adj. j of animal bodies were so called : juiceless, without moisture, or fluidity : juicy, moist; full of juice; succulent.

Earth being taken out of watery woods, will put forth herbs of a fat and juicy substance. Bacon.

Each plant and juiciest gourd will pluck. Milton.

Julie m language is less than blood ; for if the •words be but becoming and signifying, and the sens*

gentle, there is juice ; but wuere that wtntoth, tht language is thin, scarce covering the bone.

Ben Jonson's Discoveries

The musk's surpassing worth ! that in its youth. Its tender nonage, loads the spreading boughs With large and juicy offspring. Phillip*.

U hen boreas' spirit blusters sore, Beware the inclement heavens ; now let thy hearth Crackle whhjutceless boughs. Id.

An animal whose juices are unsound can never bo nourished : unsound juicet can never repair the fluids.

A ••tiuthiwt,

If I define wine, I must say, wine is a. juice not liquid, or wine is a substance; for juice includes both substance and liquid. Wattt.

Unnumbered fruits,

A friendly juice to cool thirst's rage contain.

Thomson. Pleasure admitted in undue degree

Enslaves the will, nor leaves the judgment fre«.

‘Tis not ‘alone the grape’s enticing juice

Unnerves the moral powers, and mars their use. Cowper. Progress of Error.

The grapes gay juice thy bosom never cheers— Thou — more than Moslem — when the cup appears—- Think not I mean to chide — for I rejoice What others deem a penance is thy choice.

Byron. Cortair.

The JUICES OF PLANTS, for medicinal purposes, are expressed to obtain their essential salts, either to be used without preparation, or to be made into syrups and extracts. Ti;e general method is, by pounding the plant in a marble mortar, and then by putting it into a press. In this manner is obtained a muddy, green liquor, which generally requires to be clarified. All juices are not extracted with equal ease. Some plants, even when fresh, contain so little juice, that water must be added. Others, which contain a considerable quantity of juice, furnish but a small quantity of it by expression, because they contain also much mucilage, which renders the juice so Tiscid that it cannot flow.— Water must also be added to these plants to ob-tain their juice. The juices thus obtained are not, properly speaking, one of their principles, but a collection of all the proximate principles of plants soluble in water. The juice contains also some part of the resinous substance, and the .green coloring matter, which in almost all vegetables is of a resinous nature. Juices which are acid, and not very mucilaginous, are spontaneously clarified by rest and gentle heat. The juices .of most antiscorbutic plants, abounding in saline volatile principles, may he disposed to filtration merely by immersion in boiling water; and as tl’.ey may be contained in closed bottles, while they are thus heated in a water bath, their saline volatile part, in which their medicinal qualities chiefly consist, may thus be pieserved. The most general method of clarification, for those juices which contain much mucilage, is boiling with the white of an egg. The juices, especially before they are clarified, contain almost all the same principles as the plant itself; because, in the operation by which they are extracted, no decomposition happens, but every tiling remains, as to its nature, in the same state as in ihe plant. The principles contained in the juice are only separated from the grosser, oily, earthy, and resinous part, which compose the solid matter that remains under the press. Thcs«

juices, when well prepared, have therefore the same medicinal qualities as the plants from which they are obtained. Different parts of the same plant, yield different juices. The same veins in their course through the different parts of the plant, “yield juices of a different appearance. Thus the juice in the root of the cow parsnip is of a brimstone color; but in the stalk it is white.

JU’JUB, K. s.) Lat. zizyphus. A plant

JU’JUBES, n. s. J whose flower consists of several leaves, which are placed circularly and ex-pand in form of a rose. The fruit is like a small plum, -but it has little flesh upon the stone. — Miller.

JUKE, v. n. Fi.jucher.

To perch upon any thing as birds.

Juking, in Scotland, denotes still any complaisance by bending of the head.

Two asses travelled ; the one laden with oats, the other with money : the money-merchant was so proud of his trust, that he weatjuhmg and tossing of his head. L’Estmngn.

JUL, or JOL, a Gothic word signifying a sumptuous feast ; and particularly applied to a religious festival, first among the heathens and afterwards Christians. By the latter it was given to Christmas; which is still known under the name lul, lule, or Yool, and hence too January was by the Saxons styled Giuli, i. e. the Festival. As this feast had originally been dedicated by our heathen ancestors to the sun, their supreme deity ; so the Christians, for the purpose of engaging the minds of their Gentile brethren, ordered it should be celebrated in memory of the birth of Christ : and thus it has been through ages a feast of joy and entertainment.

JULAMERICK, an elevated district in the east of Kurdistan, having the pachalic of Bag-dad on the south, and Armenia on the north. It produces in some places a quantity of corn, and abundance of pasturage every where. There is a great number of villages, but only one town in the province, called also Julamerick. It is on the banks of the Hakiar, and has a citadel built of stone. Inhabitants 1000 : 120 miles E. S. E. of Betlis.

JU'LAP, n. s. A word-of Arabic original; Low Lat. julapium ; Fr. julep. Behold this cordial julap here,

That flames and dances in his crystal bounds

With spirits of balm and fragrant syrups mixt.

Milton.

Julap is an extemporaneous form of medicine, made of simple and compound water sweetened, and serves for a vehicle to other forms not so convenient to take alone. Quincy.

If any part of the after-birth be left, endeavour the bringing that away ; and by good sudorificks and cordials expel the venom, and contemperate the heat and acrimony by julaps and emulsions.

Wiseman's Surgery. Here tire great masters of the healing art,

These mighty mock-defrauders of the tomb,

Spite of their julaps and catholicons

Resign to fate ! Blair's G~ave.

JULAP, or JULEP. See PHARMACY.

JULIA, the daughter of Augustus, was fa-mous for her accomplishments, and infamous for her lewdness, for which her father banished her. She married Metellus, Agrippa, and lastly Tiberius ; who suffered her to perish for want.

JULIA LEX, in Roman antiquity, a law made by Julius Caesar, A. U. C. 691 ; confirming the privileges of all Greece ; and ordaining that the Roman magistrates should act there as judges, &c. There were nine other Juliae Leges enacted in the reign of Augustus ; one of which punished adultery with death ; and another, de mari-tandis ordinibus,

proposed rewards to such, of a certain description, as married, and punished celibacy. It also permitted patricians, senators excepted, to intermarry with libertmi.

JULIAN, a celebrated Roman emperor, styled the Apostate, because, though he professed the Christian religion before he ascended the throne, he afterwards openly embraced Paganism, and endeavoured to abolish Christianity. He made no use of violence, however, for this purpose; but behaved with a politic mildness to the Christians ; recalled all who had been banished on account of religion under Constantius : but he prohibited Christians to plead before courts of justice, or to enjoy any public employments. He even prohibited their teaching polite literature ; well knowing the great advantages they drew from profane authors in their attacks upon Paganism and irreligion. Though he on all occasions showed a sovereign contempt for the Christians, whom he called Galileans, yet he was sensible of the advantage they obtained by their virtue and the purity of their manners; and therefore incessantly proposed their example to the Pagan priests. At last, however, when he found that all other methods failed, he gave public employments to the most cruel enemies of the Christians, when the cities in most of the provinces were filled with tumults and seditions, and many of them were put to death. Historians mention, that Julian attempted to prove the falsehood of our Lord's prediction with respect to the temple of Jerusalem, by rebuilding it; hut that all his endeavours served only the more perfectly to verify it. See JERUSALEM. Julian being mortally wounded, in a battle with the Persians, it is said that he caught in his hand some of the blood which flowed from his wound, and throwing it towards heaven, cried, ' Thou Galilean hast conquered.' But Theodoret relates, that Julian discovered a different disposition, and employed his last moments in conversing with Maximus the philosopher, on the dignity of the soul. He died the following night, aged thirty-two. For an account of his reign and exploits, see WESTERN EMPIRE. No prince was ever more variously represented by different authors ; on which account it is difficult to form a true judgment of his character. It must, however, be acknowledged, that he was learned, liberal, temperate, brave, vigilant, and a lover of justice : but, on the other hand, he had apostatised to Paganism ; was an enemy to the Christian religion ; and was, in fact, a persecutor, though not of the most sanguinary class. We have several of his discourses or orations ; some of his letters ; a treatise entitled Misopo-gon, which is a satire on the inhabitants of Antioch ; and some other pieces, all written in an elegant style. They were published in Greek and Latin by father Petau in 1630, in 4to., arty Spanhemius gave a fine edition of them n

folio in 1696. His most famous work was that composed against the Christians, of which some fragments are preserred in Cyril's refutation of it.

JULIAN ALPS, an extensive chain of mountains in Maritime Austria, between Italy and Germany, chiefly in the province of Friuli.

JULIAN CALENDAR, that depending on and connected with the Julian year. See KALENDAR.

JULIAN EPOCH, the era of the institution of the Julian reformation of the calendar, which began A. A. C. 46.

JULIAN PERIOD, in chronology, a period so called, as being adapted to the Julian year. See CHRONOLOGY, Index. It is made to commence befove the creation. Its principal advantage is, that the same years of the cycles of the sun, moon, and indiction, of which three cycles it was made to consist by Joseph Scaliger in 1580, belonging to any year of this period, will never fall together again till after the expiration of 7980 years. There is taken for the first year of this period that which has the first of the cycle of the sun, the first of the cycle of the moon, and the first of the indiction cycle, and so reckoning on. The first year of the Christian era is always, in our systems of chronology, the 4714th of the Julian period. To find what year of the Julian period any given year of Christ answers to : to the given year of Christ add 4713, because so many years of the Julian period were expired A. D. 1.; and the sum gives the year of the Julian period sought.

JULIEN (Pierre), one of the most eminent of modern sculptors, was born in 1731, at Pau-lien in France, and applied himself to the study of the art at Lyons, where he obtained an academical prize. He then went to Paris, and placed himself under Coustou ; visited Rome in

1768; and left behind him several admirable specimens which he there executed. Ten years afterwards appeared his principal production, The Dying Gladiator. This gained him a seat in the French Academy, and his best works still excite the admiration of connoisseurs. He died in 1804.

JULIERS, a fertile duchy of Westphalia, now annexed to Prussia, and included in the government of Aix-la-Cnapelle. It is seated between the Maese and the Rhine, and bounded by Prussian Guelderland on the north, by Cologne on the east, and by the Netherlands on the west. It contains a superficial area of about 1600 miles, and yields an annual revenue of £100,000. Its horses and flax are much esteemed, and form large articles of trade. Fine linen is also manufactured and sent to Holland. The duchy belonged for a considerable time to the sovereigns of Cleves; but, the reigning family becoming extinct in 1609, the succession was disputed during the long war, terminated ny the peace of Westpnalia in 1642. By that treaty, Juliers was allotted to the palatine of Neuberg, and belonged to that family, and to the elector palatine, till the peace of Luneville, when it was ceded to France: in 1815 it was first transferred to Prussia.

JUUERS, or JULICII, is a small stronc town

in the government of Aix-la-Chapelle, the capital of the above duchy. It stands near the Ruht, and has manufactures of vinegar and leather. It was taken by prince Maurice ot Nassau in 1610, and by the Spaniards in 1622. It was surrendered at discretion to the French under Pichegru on the 9th of October, 1794, after a battle fought near it on the 6th, wherein the Austrians lost above 4000 men killed and wounded, and 800 prisoners. There were six pieces of cannon, and 50,000 Ibs. of powder in the arsenal. Inhabitants 2150: twenty-two miles west of Cologne, a»d fifteen north-east of Dusseldorf,

JULIS, a town of the isle of Coos, famous for being the birth place of Simonides. Its walls were of marble (Plin. iv. c. 12), and there are still parts of these monuments of its ancient splendor remaining entire, above twelve feet high.

JULIUS, the surname of a celebrated patrician family in Rome, who claimed their descent from lulus, the son of .&neas. They were brought to Rome by Romulus, where they soon enjoyed the highest offices in the republic, which was at last overturned by one of them. The Caesars were a branch of the Julian family.

JULIUS C.ESAR. See CJESAR.

Junus I., pope of Rome, succeeded Mark, A. D. 337. He was a man of great learning and piety. Some of his letters are extant. He sent legates to the council of Sardis, and supported the cause of Athanasius. He died in

JULIUS II. (Julian de la Rovere), pope, remarkable for his warlike disposition : he engaged the principal powers of Europe to league with him against the republic of Venice, called the League of Cambray, in 1508. The Venetians having purchased peace, by the cession of part of Romania, Julius turned his arms against Louis XII. king of France, and appeared in person, armed cap-a-pee, at the siege of Miran-dola; which he took by assault in 1511. But, proceeding to excommunicate Louis, the king wisely turned his own weapons against him, by calling a general coiincil at Pisa ; at which the pope, refusing to appear, was declared to be suspended from the holy see ; and thus Louis, in his turn, excommunicated the pope, who died soon after in 1512. He built the famous church of St. Peter at Rome, and was a patron of the polite arts.

JULIUS Vicus, in ancient geography, a town of the Nemetes in Gallia Belgica, situated between the Tres Tabernae, and Noviomagus, now called GERMERSHEIM, which see.

JULLIE, a town of France in the department of Rhone and Loire, five miles north of Ville-franche.

IULUS, a name of Ascanius.

IULUS, a son of Ascanius, born in Lavinium. In the succession of the kingdom of Alba, ˆEnius Sylvius, the son of ./Eneas and Lavinia, was preferred to him. He was, however, made chief priest.

IULUS, in entomology, a genus of insects of the order aptera. The feet are very numerous, being on each side twice as manv as the setc-

ments of the body ; the antenna are moniliform; there are two articulated palpi ; and the body is of a semicylindrical form. There are

several species.

1. I. sabulosus, is of an ashen color, smooth, and sometimes has two longitudinal bands of a dun-color upon its back. The body is composed of about sixty segments, which appear double; one part of the segment being quite smooth, the other charged with longitudinal striae, set very close together, which causes the cylindric body of the inject to appear intersected alternately with smooth and striated segments. Each segment gives rise to two pairs of feet, which makes 240, or 120 feet on each side. These feet are slender, short, and white. The antennae are very short, and consist of five rings. The insect, when touched, rolls itself up into a spiral form ; so that its feet are inwards, but yet turned towards the ground. It is found together with the following species, to which it bears a resemblance, though it is much larger.

2. I. terrestris, is a small species, having on each side 100 very short closely set feet. The body is cylindrically round, consisting of fifty segments, each of which gives rise to two pairs of feet ; by which means the feet stand two and two by the side of each other, so that between every two there is a little more space. Its color is blackish, and the animal is very smooth. It is met with under stones, and in the earth. See ENTOMOLOGY.

JU'LUS, n. «. July flower.

Julus, i«\oc, among botanists, denotes those long worm-like tufts or palms, as they are called in willows, which at the beginning of the year grow out, and hang pendular down from hazels, walnut-trees, &c. — Miller.

JULY', n.s. Lat. Julius; fj. juillet. The month anciently called quintilis, or the fifth from March, named July in honor of Julius Caesar; the seventh month from January.

Then came hot July, boiling like to fire, That all his garments he had cast away Upon a lion raging yet with ire, He boldly rode and bade him to obay.

Spenser. Faerie Queene.

July I would have drawn in a jacket of light yel" low, eating cherries, with his face and bosom sun-burnt. Pi'ncham.

Tight boxes, neatly sashed, and in a blaze, With all a July sun's collected rays, Delights the citizen, who gasping there, Breathes clouds

of dust, and calls it country air. Cowper. Retirement,

JULY, the month during which the sun enters the sign Leo. Mark Antony first gave this month the name of Julius, after Julius Casar, who was born in it. On the 19th day of this month the dog-days are commonly supposed to beˆin ; when, according to Hippocrates and Pliny, ‘ the sea boils, wine turns sour, dogs go mad, the bile is increased and irritated, and all animals decline and languish.’

JU’MART, n. *. Fr.

Mules and jumarts, the one from the mixture of an ass and a mare, the other from a mixture of a bulj and a mwe, are frequent. Locke.

JUM’BLE, v. a.y v. n., Sc n. s. lu Chaucer jomltre, from Fr. combler. — Skinner. To m:x violently and confusedly together : to be agitated together : jumble, confused mixture ; a mass of incongruous articles.

j\e jombre no discardant thing ifere,

As thus, to usen termes of phisicke ;

In loves termes holde of thy matere

The forme alwaie ; and doe that it be lik ;

For if a painter would ypaint a pike

With asses feete, and hedded as an ape,

It cordeth not ; so were it but a jape !

Chaucer. Troilus and Creseide.

Had the world been coagmented from that supposed fortuitous jumble, this hypothesis had been tolerable. Glanville. How tragedy and comedy embrace,

How farce and epick get a. jumbled race. Pope.

Persons and humours may be jumbled and disguised; but nature, like quicksilver, will never be killed. L’Estrange.

A verbal concordance leads not always to texts of the same meaning : and one may observe, how apt that is to jumble together passages of

Scripture, and thereby disturb the true meaning of holy Scripture.

Locke. Writing is but just like dice,

And lucky mains make people wise ;

And jumbled words, if fortune throw them,

Shall, well as Dryden, form a poem. Prior.

Is it not a firmer foundation for tranquillity, to believe that all things were created, and are ordered for the best, than that the universe is mere bungling and blundering ; all ill-favoredly cobbled and jumbled together by the unguided agitation and rude shuffles of matter? Bent ley

They will all meet and jumble together into a perfect harmony. Swift.

What jumble here is made of ecclesiastical revenues, as if they were all alienated with equal justice.

Id.

JUMBOO, or JUMNOO, an independent district of Hindostan, on the east side of the Aco-sines, or Chunab River, and in about the thirty-third degree of northern latitude. It is governed by a Hindoo chief, and is considered one of the most flourishing of the native districts.

Jumboo, the capital, is situated on the side of a hill, on the banks of a small river which falls into the Chunab, on the high road from Cashmere to Delhi. The traffic of Cashmere, which formerly passed through Lahore, has, since that country has fallen into the hands of the Seiks, been turned into this channel. Several water-mills have been erected in the neighbourhood.

JU'MENT, n.s. fi.jument; Lat. jumentum. Beast of burden.

Juments, as horses, oxen, and asses, have no eruc-tation, or belching. Browne's Vulgar Errours.

JUMNA, or YUMNA, a river of Hindostan* which has its source in the Himmaleh Mountains-Before it reaches the thirtieth degree of northern latitude, it is between 200 and 300 yards broad ; and, on entering the province of Delhi, directs its course, at the distance of from fifty to seventy miles, in a parallel line to that of the Ganges. Passing Delhi and Agra it now falls into the Ganges at Allahabad. Its

length may be estimated at 780 miles ; but above its junction with the Chumbul, that is, ten miles below the fort of Etayeh, it is fordable from the month of October

till June. In tne rainy season, however, it may be navigated by flat-bottomed boats of considerable burden. The country between the Jumna and Ganges is called by the Hindoos Anterbede, and by the Mahommedans, Dooab.

In the year 1815 Mr. James BaillieFraser explored a portion of that unknown and interesting region, which lies in the bosom of the Himalaya Mountains, and gives birth to several of the greatest rivers in India. He proceeded from Delhi to Nahn, and thence through the districts of Sirmoor, Joobul, and Bischur to the Sutledge. Returning to the banks of the Jumna, he penetrated to the very sources of that river, and viewed it collecting from numerous small streams formed by the melting of the snow. From Jumnatree he crossed the snowy range to the Baghirtuee, the greatest and most sacred branch of the Ganges, and, following up the course of this river, he reached Gangootree. Mr. Eraser’s observations made at this spot, beyond which he found it impracticable to penetrate, tend to confirm the prevailing belief of the Hindoos, and the accounts of the ancient Shasters, that this magnificent river, equally an object of veneration, and a source of fertility, plenty, and opulence to Hindostan, rises within five miles due east of Gangootree ; and that the Ganges finds its origin in a vast basin of snow, confined within the five mighty peaks of Roodroo Himala. This mountain, reckoned the loftiest and largest of the snowy range in this quarter, and probably yielding to none in the whole Himalaya range, is supposed to be the throne or residence of Ma-hadeo. It has five principal peaks called Roo-dioo Himala, Burrumpoore, Bissempoore, Ood-gurreekanta, and Sooryarounee. These form a semicircular hollow of a very considerable extent, filled with eternal snow ; from the gradual dissolution of which the principal part of the stream is generated. Mr. Eraser’s journal embraces a full account of the very singular state of

society which is found among the inhabitants of these lofty regions : copious extracts were read in the Royal Society at Edinburgh in

Captain Hodgson's journey to these regions, however, has thrown still more light on this interesting subject. * In the maps published ten years ago,' he says (Asiatic Researches, vol. xiv.), 'the Jumna is laid down as having a very long course from the latitude of 34° 30'. It was not known, until the year 1814, that the Jumna, properly so called, was a comparatively small river above its junction with the Tonse in the Dun, and I believe the existence of the latter river, though fully treble the size of the Jumna, was unknown to Europeans.

' The junction of the Tonse and Jumna takes place at the north-west end of the Dun valley, in lat. 30° 30', where the large river loses its name in that of the small one, and the united stream is called the Jumna. The course of the Jumna from Jumnotri, which is in lat. 30° 59', is generally south 50° west. It is fordable above the confluence, but the Tonse is not. Not having yet visited the sources of the Tonse, I am not certain whether it rises within the Himalaya, as the B'hagirathi does, or at its south-

west, or exterior base, like the Jumna ; but the latter I believe to be the case. I apprehend thai three considerable streams, which, like the Jumna, originate from the south faces of the Himalaya, in the districts of Barasa, Leuiowari, and Deo-dara Kowarra, join to form the Tonse ; and it receives a considerable accession of water from the Paber River, which I imagine to be equal in size to any of the three above mentioned feeders. Respecting them, I have at present only native information to guide me, but of the Paber I can speak with more confidence; for when, in June 1816, I penetrated within the Himalaya, by the course of the Setlej, I found that the north bases of many of the snowy peaks, seen from the plains of Hindostan, were washed by that river; its course, in the province of Kunaur, in lat. 31° 31', and long. 78° 18', being from east 25° south, to 25° to the north of west. In this position, the Setlej is bounded both to the north and south by high and rugged snowy mountains, from which many torrents descend, and increase its bulk. Leaving the left bank, and bed of the river, I ascended the snowy range, of which it washes the north base, and crossed over it on the 21st of June, 1816, at forty minutes past eleven o'clock in the forenoon, during a heavy fall of snow, being the first European who effected a passage over the grand Himalaya ridge in that direction.

‘ On surmounting the crest of the pass, I found that the Indravati River, which is a principal branch of the Paber, originated from the snows, on which I descended, on the south-west, or hither side of the ridge ; and I followed its channel to the place where it joins the Paber, which river must have its beginning, in like manner, on the same side of the ridge, as I was informed by the people of the country it had, and I am nearly certain it is the case ; and it is most probable, that all the streams which form the Tonse do, in like manner, descend from the south-west side of the fronting snowy range, the north-east base of which is washed by the Setlej, as above mentioned.’

He says afterwards, ‘The Camaulda is the largest riyer which the Jumna receives above the confluence of the Tonse ; its course is from north 10° west, down the Rama Serai district, which is a small valley, and is reported to be in some places a mile wide, but it is now overrun with jungles, full of wild beasts. The Camaulda, now swollen by the rain, is about seventy feet wide, and two feet and a half deep, and rery rapid. Immediately on crossing it, the country up the Jumna assumes a more pleasing appearance ; the mountains which bound it, though very lofty, do not rise so abruptly, and several small villages are seen on their lower slopes. On the right bank of the river there is a slip of level ground 300 to 500 yards wide. The summits of the mountains are covered by cedars and other pines, and the snow yet lies on them.’

On the 21st of April captain Hodgson went from Cursali to Jumnotri, a distance of two miles seven furlongs. He ascended at Bhairo-Ghati, the steepest ascent he ever met with, by cutting steps in the snow with spades. lie then

descended a steep path, by steps cut in the snow, to the Jumna, where a cascade of the stream cuts through the snow, and falls from a rock about fifty feet high. Excepting where the stream is visible for a few yards, through a hole in the snow, the snow-bed is about 100 yards wide, and bounded by high precipices, from which masses of rock of forty feet in length have recently fallen.

* At Juinnotri, the snow which covers and conceals the stream is about sixty yards wide, and is bounded to the right and left by mural precipices of granite; it is forty feet five inches and a half thick, and has fallen from the precipices above. In front, at the distance of about 500 yards, part of the base of the great Jumnotri Mountain rises abruptly, cased in snow and ice, and shutting up and totally terminating the head of this defile, in which the Jumna originates. I was able to measure the thickness of the bed of snow over the stream very exactly, by means of a plumb-line let down, through one of the holes in it, which are caused by the steam of a great number of boiling springs which are at the border of the Jumna. The snow is very solid and hard frozen; but we found means to descend through it to the Jumna, by an exceedingly steep and narrow dark hole made by the steam, and witnessed a very extraordinary scene, for which I was indebted to the earliness of the season, and the unusual quantity of snow which has fallen this year. When I got footing at the stream (here only a large pace wide), it was some time before I could discern any thing, on account of the darkness of the place, made more so by the thick steam ; but, having some white lights with me, I fired them, and, by their glare was able to see and admire the curious domes of snow over head ; these are caused by the hot steam melting the snow over it. Some of these excavations are very spacious, resembling vaulted roofs of marble ; and the snow, as it melts, falls in showers, like heavy rain, to the steam which appears to owe its origin in a great measure to these supplies. Having only a short-scaled thermometer with me, I could not ascertain the precise heat of the spring, but it was too hot to keep the finger in it for more than two seconds, and must be near the boiling point. Rice boiled in it but imperfectly. The range of springs is very extensive, but I could not visit them all, as the rest are in dark recesses and snow caverns. The water of them rises up with great ebullition through crevices of the granite rock, and deposits a ferruginous sediment, of which I collected some. It is tasteless, and I did not perceive any peculiar smell. Hot springs are frequent in the Himalaya : perhaps they may be a provision of nature, to ensure a supply of water to the heads of the rivers in the winter season, when the sun can have little or no power of melting the snows in those deep defiles.

‘ From near this place, the line of the course of the Jumna is perceptible downward to near Lak’ha Mandel, and is 55° 40’ south-west. From the place called Bhairo Ghati the bed of the river is overlaid with snow to the depth of from fifteen to forty feet, except at one or t\vo places, wliere it shows itself through deep holes in the

JUMP, v. n., v.a.j adv., & n. s. Dut.gumpenf Lat. junctus. To leap or skip ; to leap suddenly ; to jolt to a degree; tally, or join: to pass by a leap ; to pass over carelessly : exactly, nicely • jump, the act of skipping; a lucky chan e. From jupe, a waistcoat, a kind of loose or limber stays worn by sickly ladies.

Otherwise one man could not excel another, but all should be either absolutely good, as hittine jump that indivisible point or center wherein goodness cou-sisteth ; or else missing it, they should be excluded out of the number 6f well-doers. Hooker.

In some sort it jumps with my humour.

Sliakspeure .

Do not embrace me till each circumstance Of place, time, fortune do cohere and jump That 1 am Viola. Id. Twelfth Night.

But since so jump upon this bloody question, You from the Polack wars, and you from England, Are here arrived. Id. hamlet.

Herein perchance he jumps not with Lipsius.

Hakewill.

Never did trusty squire with knight, Or knight with squire, e'er jump more right ; Their arms and equipage did fit, As well as virtues, parts, and wit. Hudibrat.

This shews how perfectly the rump And commonwealth in nature jump. Id.

The herd come jumping by me, And fearless, quench their thirst, while I look on, And take me for their fellow-citizen. Dryden.

Good now, how your devotions jump with mine.

Id.

The surest way for a learner is, not to advance by jumps and large strides ; let that, which he sets himself to learn next, be as nearly conjoined with what he knows already, as is possible. Locke.

We see a little, presume a great deal, and so jump to the conclusion. Addison. Spectator.

So have I seen from Severn's brink, A flock of geese Jump down

together,

Swim where the bird of Jove would sink, And swimming never wet a feather. Swift.

Candidates petition the emperor to entertain the court with a dance on the rope; and whoever jump* the highest succeeds in the office. Gulliver's Travels.

- 1 am happier for finding our judgments jump in the notion. Pope to Swift.

Flings at your head conviction in the lump, And gains remote conclusions at a jump.

Cowper. Conversation.

JUN'CATE, n. $. i Fr. juncade ; Ital. gion-JUN'KET, v.n. \cata. Cheesecake; a kind of sweetmeat of curds and sugar; any delicacy; a furtive or private entertainment. It is now improperly written junket in this sense, which alone remains much in use : sometimes written junket, to feast secretly.

Was it a dreame or did I see it playne ; A goodly table of pure yvory

All spread with juncats, fit to entertayne The greatest prince with pompous royalty.

Spenser's Sonnets.

You know, there wants no junkets at the feast.

Shakspeare.

With stories told ef many a feat, How fairly Mab the jimcates eat. Milton.

The apostle would have no revelling or junketing.

Sjmtl'.

Whatever good bits you can pilfer i i the day, save them io junket with your fellow servants at night.

Swift.

She taught him, however, very early to inspect the steward's accounts, to dog the butler from the cellar, and to catch the servants at a. junket!

Johnson. Rambler.

JUN'COUS, adj. Lat.junceus. Full of bull-rushes.

JUNCTION, n. s. \ Lat. jungo. Union ;

JUXC'TURE, ». s. i coalition. Juncture, the line at which things are united ; a joint; union; amity ; a critical point of time.

Nor are the soberest of them so apt for that devo-tional compliance and juncture of hearts, which I desire to bear in those holy offices to be performed with me. K'»!J Charles.

All other animals have transverse bodies ; and, though some do raise themselves upon their hinder legs to an upright posture, yet they cannot endure it long, neither are the figures or junctures, or order of their bones, fitted to such a posture. Hale.

She has made the backbone of several vertebra, as being less in danger of breaking than if they were all one entire bone without those gristly junctures.

More.

Besides those grosser elements of bodies, salt, sulphur, and mercury, there may be ingredients of a more subtile nature, which, being extremely little, may escape unheeded at the junctures of the distil-latory vessels, though never so carefully luted.

Boyle.

Upon the junction of the two corps, our spies discovered a great cloud of dust. Addison.

By this profession in that juncture of time, they bid farewell to all the pleasures of this life. Id.

When any law does not conduce to the publick safety, but in some extraordinary junctures, the very-observation of it would endanger the community, that law ought to be laid asleep. Id.

Fly, then, and tell him, ‘twas my last request

That Zames take my post until the junction

So hoped for, yet delayed by Ofratanes,

Satrap of Susa. Byron. Sardanapalus.

JUNCTURE. See JOINT.

JUNCTURE, in oratory, is a part of composition, particularly recommended by Quintilian, and denotes such an attention to the nature of the vowels, consonants, and syllables, in the connection of words, with regard to their sound, as will render the pronunciation most easy and pleasant, and best promote the harmony of the sentence. Thus the coalition of two vowels, occasioning a hollow and obscure sound, and likewise of some consonants, rendering it harsh and rough, should be avoided : nor should the same syllable be repeated at the beginning and end of words, because the sound becomes hereby harsh and unpleasant. The following verse in Virgil’s /Eneid is an example :

Arma virumque cano, Trojae qui primus ab oris.

JUNCUS, the rush, in botany : a genus of the monogynia order and hexandria class of plants . natural order fifth, tripelatoideae : COR. none : CAL. hexaphyllous : CAPS, unilocular. There are many species, which are universally known, being very troublesome weeds, and, difficult to be eradicated.

1. J. aculus, the marine rush, and

2. J. conglomerate, the round-headed rush, are planted with great care on the banks of the

sea in Holland, to prevent the water from washing away the earth ; which would otherwise oe removed every tide, if it were not for the roots of those rushes, which - fasten very deep in the ground, and mat themselves near the surface, in such a manner as to hold the earth closely together. Therefore, whenever the inhabitants perceive that the roots of these rushes are destroyed, they are very assiduous in repairing them. In summer, when the rushes are fully grown, they are cut and tied up in bundles, which are dried, and afterwards carried into the larger towns and cities, where they are wrought into baskets. These species do not grow so strong in this country as on the Maese, where they sometimes arrive at the height of four feet and upwards.

3. J. effusus, the soft rush. The pith of this species and the conglomeratus is used for wicks to rush-lights.

4. J. odoratus, sweet rush, or camel's hay, is sometimes brought from Turkey and Arabia, tied up in bundles about a foot long. The stalk, in shape and color, somewhat resembles a barley-straw ; it is full of fungous pith, like that of our common rushes : the leaves are like those of wheat, and surround the stalk with several coats, as in the reed. The flowers are of a carnation color, striped with a lighter purple. The whole plant, when in perfection, has a hot bitterish, not unpleasant, aromatic taste, and a very fragrant smell : by long keeping it loses greatly its aromatic flavor. Distilled with water, it yields a considerable quantity of essential oil. It was formerly often used in medicine as an aromatic, and in obstructions of the viscera, &c., but is very little employed at present.

JUNE, n. s. Fr. Juin ; Lat. Junius. The sixth month from January.

And after her came iollie June, arrayd All in greene leaves, as he a player were, Yet in his time he wrought as well as playd That by his plough-yrons mote right well appeare. Spenser. Faerie Queene. June is drawn in a mantle of dark green.

Peacham.

JUNE, Lat. Junius, is derived by some from Juno. Ovid, in the sixth book of his Fasti, makes the goddess say,

Junius a nostro nomine nomen habet.

Others rather derive it a junioribus, this being for young people as the month of May was for old ones :

Junius est juvenum ; qui fuit ante sen urn. In this month is the summer solstice, and the sun enters Cancer.

JUNGERMANNIA, in botany: a genus of the natural order of algce, in the cryptogamia class of plants. Male flower pedun ciliated, and naked ; the anthera quadrivalved. Female flower is sessile, naked, with roundish seeds. There are numerous species, natives of Britain, growing in woods and shady places, by the sides of ditches. &c. Many of them are beautiful objects for the microscope.

JUNGIA, in botany, a genus of the polygamia segregate order, and syngenesia class of plants ; the common receptacle is chaffy ; the perianth three flowered : the florets tubular

nvo lipped : the exterior lip ligulate : the inte-lor one bipartite. Species one only : a native of North Granada.

IUGIPORE, a town of Bengal, in the district of Raujeshy, on the eastern bank of the Bhagerutty River. It contains the principal silk establishment of the East India Company, which was erected in 1773, and employs 3000 persons; principally women and children. The Company nave endeavoured with great success to introduce here the Italian and particularly the Novi mode of spinning silk.

JUNGHAH, a town and lordship of Suabia, belonging to the prince of Furstenburg, fourteen miles west of Buchan, and forty south of Stuttgard.

JUNIA LEX SACK ATA, a law made by Lucius Junius Brutus, the first tribune of the people, A.U. C. 260, that the persons of the tribunes should be inviolable; that an appeal might be made from the consuls to the tribunes : and that no senator should exercise the office of a tribune.

JUNIATTA, a river of Pennsylvania, United States, which has its rise in the Alleghany Mountains, and, after a course of 180 miles, unites,

with the Susquehanna, about fifteen miles above Harrisburg. It is navigable from Bedford to its mouth, or about 150 miles.

JUNIEN (St.), a town in the department of the Upper Vienne, France, between the Vienne and the Glane. It has considerable manufactures of woollen, leather, and hats, and is twen-ty miles west of Limoges. Population 6000.

JU'NIOR, adj. Lat. junior. One younger than another.

According to the nature of men of years, I was repining at the rise of my juniors, and unequal distribution of wealth. Tatler.

The fools, my juniors, hy a year, Are tortured with suspense and fear, Who wisely thought my age a screen, When death approached to stand between.

Suift.

With mattock in his hand

Digs through whole rows of kindred and acquaintance

By far his juniors. Blair's Grave.

But with all this, in their aspects — At least in some, the juniors of the number — A searching eye, an eye like yours, Vincenzo, Would read the sentence ere it was pronounced. Byron. Marino Faliero.

JU'NIPER, n. i. Lut.juniperus. A tree. Sweet is the Rose, but grows upon a brere ;

Sweet is the Junipeer, but sharpe his bough ;

Sweet is the Eglantine, but pricketh near ;

And sweet is Moly, but his root is ill ;

So every sweet with soure is tempered still.

Spenser. Sonnets.

A clyster may be made of the common decoctions, or of mallows, bay, and juniper berries, with oil of linseed. Wiseman.

JUNIPER TREE, juniperus, a genus of the monadelphia order, and monoecia class of plants : natural order fifty-first, conifers. Male

AMENTUM a calyx of scales : COR. none : three stamina : female CAL. tripartite : petals three, and as many styles : berry trispermous, and equal by means of three tubercles of the indurated calyx adhering to it.

J. Bermudiana, the Bermudian cedar, grows twenty or thirty feet high, has small acute leaves by threes below, the upper ones awl-shaped, acute, and decurrent, by pairs or fours, spreading outward, and dioecious flowers, succeeded by purplish berries. It is a native of Bermudas.

J. Chinensis, has leaves decurrent, imbricate, expanding, crowded, the stem leaves threefold, the branch leaves fourfold.

J. communis, the common juniper, grows naturally in many parts of Britain upon dry barren commons, where it seldom rises above the height of a low shrub. Those who have been used to see it in its wild state, on sandy barren commons, &c., will have little inducement to plant it ; as there they will see it procumbent, seldom showing a tendency to aspire : but, when planted in a good soil, it will rise to the height of fifteen or sixteen feet, and produce numerous branches from the bottom to the top, forming a well looking bushy plant. These branches are exceedingly tough, and covered with a smooth bark of a reddish color, having a tinge of purple. The leaves are narrow and sharp-pointed, growing by threes on the branches ; their upper surface has a grayish streak down the middle ; but the under one is of a fine green color. The flowers are small, and of a yellowish color. They are succeeded by the berries, which are of a bluish color when ripe. Of this species there is a variety called Swedish juniper, which grows ten or twelve feet high, very branchy the whole length, with the branches growing erect. But Mr. Miller says, the Swedish juniper is a distinct species. A prostrate but very dwarfish variety is mentioned by Lightfoot, under the name of dwarf Alpine juniper. It is frequently found in the Highland hills, and has broader and thicker leaves than the former; the berries are also larger, and more oval than spherical.

J. lycia, lycian cedar, or olibanum tree, grows twenty feet high, branching erect ; garnished with small obtuse oval leaves, every where imbricated ; having dioecious flowers succeeded by large oval brown berries. It is a native of Spain and Italy.

J. oxycedrus, the Spanish juniper, rises from ten to fifteen feet high, closely branched from the bottom to top; having short, awl-shaped,

spreading leaves by threes, and small dioecious flowers, succeded by large reddish-brown berries.

J. the Phoenician cedar, grows about twenty feet high, branching pyramidally ; adorned with ternate and imbricated obtuse leaves; and direcious flowers, succeeded by small yellowish berries. It is a native of Portugal.

J. sabina, or savin tree ; of which there are the following varieties, *viz.* spreading, upright, and variegated savin. The first grows three or four feet high, with horizontal and very spreading branches ; with short, pointed, decurrent, erect, opposite leaves ; and dioacious flowers, succeeded by bluish berries, but very rarely producing either flowers or fruit. The second grows eight or ten feet high, with upright branches, dark-green leaves like the former, and dioecious flowers, succeeded by plenty of berries. The third has the ends of many of the shoots and younc; branches variegated with white, and the

leaves finely striped ; so thai it makes a beautiful appearance.

J. thurifera, or blue-berried Spanish juniper, ˆrows twenty feet high or more, branching in a conic form, with acute imbricated leaves, growing by fours, and small dioecious flowers, succeeded by large blue berries.

J. Virginiana, the Virginia cedar, grows thirty or forty feet high, branching from bottom to top in a conic manner, small leaves by threes adhering at their base ; the younger ones imbricated, and the old ones spreading, with dioecious flowers, succeeded by small blue berries.

All the junipers are propagated by seeds, and the savins by layers and cuttings ; but these last may also be raised from the berries, if they can be procured. They may all be sown in beds of common light earth ; except the cedar of Bermudas, which must be sown in pots for shelter in winter. When the hardy kinds have had two or three years' growth,

in the seed-bed, they may be planted out in autumn, or in spring, in nursery rows two feet asunder, to remain till of due size for final transplantation into the shrubbery. The Bermudas cedar must be sheltered under a frame for the/first year or two ; when they must be separated into small pots, to be sheltered also in winter for three or four years, till they have acquired some size and strength; then turned out into pots in the full ground, where they are to remain in a warm situation; though a shelter of mats for the first winter or two during hard frosts will be of great service. The season for transplanting all the species is either in autumn, October, or November, or m March, and early in April.

Juniper berries have a strong, not disagreeable smell ; and a warm, pungent, sweet taste ; which, if they are long chewed, or previously well bruised, is followed by a bitter one. The fresh berries yield, on expression, a rich, sweet, honey-like, aromatic juice ; if previously pounded, so as to break the seeds, the juice proves tart and bitter. — These berries are useful carminatives and stomachics ; for these purposes, a spirituous water and essential oil are prepared from them, and they are also ingredients in various medicines. The liquor remaining after the distillation of the oil, passed through a strainer, and gently exhaled to the consistence of a rob, proves likewise a medicine of great utility, and in many cases is perhaps preferable to the oil or the berry itself. This rob is of a dark brownish-yellow color, a balsamic sweet taste, with a little of the bitter. But one of the best forms under which they can be used is that of a simple watery infusion, which, with the addition of a little gin, is very useful for hydropic patients. An infusion of the tops has also been advantageously employed in the same manner. The wood when burnt emits a fragrant odor like incense. It is of a reddish color, very hard and durable ; and, when large enough, is used in marquetry and veneering, and in making cups, cabinets, &c. The oil of juniper mixed with that of nuts makes an excellent varnish for pictures, wood-work, and preserving iron from rusting. The resin, powdered and rubbed into paper, prevents the ink from sinking through it, for which it is frequently used under

the name of pounce. — The charcoal made from this wood endures longer than any other, insomuch that live embers are said to have been found in the ashes after being a year covered. Hence the Scriptural expression for a durable fire, ‘coals of juniper.’

JUNIUS, the family surname of several eminent Romans, remarkable

for their attachment to liberty. See BRUTUS, and ROUE.

JUNIUS (Adrian), one of the most learned men. of his age, was born at Hoorn in Holland, in 1511. He travelled into all parts of Europe, and practised physic with reputation in England ; where, among other works, he composed a Greek and Latin Lexicon; an Epithalamium on the marriage of queen Mary I. with Philip II. of Spain ; and Animad versa et de Coma Commen-tarius, which is the most applauded of all his works. He died in 1575.

JUNIUS (Francis), professor of divinity at Ley-den, was bom at Bourges in 1545, of a noble family, and studied at Lyons, under Bartholomew Aneau, principal of the college. He was employed in public affairs by Henry IV., and at last was invited to Leyden to be professor of divinity, which employment he discharged with honor, till he died of the plague, in 1602. Du Pin says, he was a learned and judicious critic. He wrote, in conjunction with Emmanuel Tre-mellius, a Latin version of the Hebrew text of the Bible. He also published Commentaries on a great part of the Holy Scriptures; and many other works, all in Latin.

JUNIUS (Francis), or Francis du Jon, the son of the professor, was born at Heidelberg in 1589. He came to England in 1620, and lived thirty years in the earl of Arundel's family. He was greatly esteemed for his profound erudition. In 1676 he went to Windsor, to visit Vossius, at whose house he died in 1677. The University of Oxford, to which he bequeathed his MSS., erected a handsome monument to his memory. He wrote, 1. De Pictursi Veterum, which is admired ; the best edition is that of Rotterdam in 1694. He published the same work at London in English. 2. An Explication of the old Gothic MS. called the silver MS. This was published with notes by Thomas Mareschal. 3. A large Commentary on the Harmony of the four Gospels, still in MS. 4. A Glossary in five languages, i; which he explains the origin of the Northern languages; published at Oxford in 1745, in folio, by Mr. Edward Lee.

JUNIUS. The letters of a distinguished wri-ter who assumed this appellation, in the middle of the last century, have become classical authority in our own language; and will long be connected with the history of the early part of the reign of George III. This is doubtless owing, for the greater part, to their intrinsic excellence, especially in point of style ; but the well sustained shadow under which he concealed himself— the truth of his motto Slat nominis umbra — has also largely contributed to keep alive the public interest in his works. To Mr. Woodfall, the son of his original printer, we were a few years

ago indebted for a new and valuable edition of these celebrated letters, accompanied with some few private communications

of the author to his father. At the same period appeared a new, and in the judgment of some able critics (at the head of whom stood the Edinburgh Reviewers), a more plausible attempt to identify the author or rather authors of the whole. They have been attributed it is well known to lord Chatham, Burke, Mr. secretary Hamilton, Boyd, Almon, and various inferior writers ; this writer attempts to solve ‘ this most important se-cret of our times,’ by ascribing them to Dr. Francis, the elegant translator of Horace, and his son Sir Philip Francis.

He first considers the circumstances of time and place, and shows that Dr. Francis and his . son were in the metropolis or its immediate neighbourhood during the period in which the letters were written, and in situations favorable for obtaining the information which Junius was so remarkable for possessing. The miscellaneous letters of Junius, according to Mr. Woodfall’s last edition, extend from April 28th, 1767, to May 12th, 1772 ; the letters signed Junius, from January 21st, 1769, to January 21st, 1772; the private letters to Mr. Wilkes, from August 21st, to November 9th, 1771 : and the private letters to Woodfall commence on April 20th, 1769, and close on January 1773.

Thus the whole of the letters were written between the dates of April 28th, 1767, and January 19th 1773. Now Dr. Franc is died at Bath on the 5th of March, 1773. For several years previous to his death he had resided in or near London. His son was born about the year 1748. In 1773 he was appointed one of the Commissioners for the government of India. He sailed from England in the spring of 1774.

‘ There is nothing, therefore,’ says this writer, ‘ in the time when these letters were written that opposes the opinion we have expressed. Dr. ˆ —Francis lived three months after the date of the last private communication of Junius, and ten months after the appearance of his last miscellaneous letter. The latest of the acknowledged letters of Junius was published fourteen months before his death. Sir Philip

Francis did not leave England until a twelvemonth after the date of the last communication, of any description, that can be traced to Junius.'

' Had Junius written after the death of Dr. Francis, and the departure of Sir Philip, there would be an end of our present enquiry. Or if Sir Philip had continued in England, and Dr. Francis had lived any considerable time after Junius had ceased to write, appearances would not have been so strongly in our favor. Under all the circumstances, we may certainly consider the time and place as affording some proofs of the correctness of our suggestion.'

Mr. Woodfall's Preliminary Essay certainly confirms this reasoning. < From January, 1769, to January 1772, he (Junius) uniformly,' he says, ' resided in London, or its immediate vicinity, and never quitted his stated habitation for a longer period than a few weeks.'

Lord Harrington, Sir Philip's patron, was appointed secretary at war in 1765. As Sir Philip was introduced into the war-office at an early period of life, it probably took place soon after the appointment of his patron, at which time he

was seventeen years of age. He continued in this department until he was expelled by lora Harrington in March 1772. — Junius, v. iii. p. 445.

There is reason then to conclude, that so lonjf as Junius was known to be confined to London, or its immediate vicinity, Mr. Philip Francis held a situation at the war-office, which necessarily required his constant residence in town. When the latter was released from this constraint, the letters of Junius immediately evince that he himself indulged in a correspondent relaxation. So completely, indeed, does the parallel hold between the situation and peculiar circumstances of Junius and Mr. Philip Francis, as our au-thor contends, that, when the latter finally quitted the war-office, the former entirely gave up his political lucubrations.

The connexion of Sir Philip with the war-office affords, it is alleged, still stronger evidence of its truth. Junius was distinguished for his particular knowledge of the minor concerns of the army. Malone mentions as a reason why Mr. secretary Hamilton could not have been the author of the letters, that he had none of that minute commissarial knowledge of petty military matters which is displayed in some of the

earlier papers of Junius. — Preliminary Essay, p. 117.

4 These expressions very happily designate that species of knowledge which a chief clerk in the war-office would naturally acquire. Let us see how this applies to the letters of Junius. In his first letter, Junius animadverts on the conduct of the commander-in-chief, for neglecting the merit and services of the rest of the army to heap promotions upon his favorites and dependents.'— ' If the discipline of the army be in any degree preserved, what thanks, he asks, are due to a man, whose cares, notoriously confined to filling up vacancies, have degraded the office ot commander-in-chief to a broker of commissions ?'

In reply to Sir William Draper s vindication of lord Granby, the second letter of Junius contains the following passages : — ' You say he has acquired nothing but honor in the field. Is the ordnance nothing ? Are the blues nothing? Is the command of the army, with all the patronage annexed to it, nothing? Where he got these nothings I know not ; but you at least ought to have told us when he deserved them,' &c.

' The last charge of the neglect of the army, is indeed the most material of all. I am sorry to tell you. Sir William, that in this article your first fact is false : and, as there is nothing more painful to me than to give a direct contradiction to a gentleman of your appearance, I could wish that, in your future publications, you would pay a greater attention to the truth of your premises, before you suffer your genius to hurry you to a conclusion. Lord Ligonier did not deliver the army (which you, in classical language, are pleased to call a palladium) into lord Granby's hands. It was taken from him much against his inclination, some two or three years before lord Granby was commander in chief. As to the state of the army, I should be glad to know where you have received your intelligence. Was it in' the rooms at Bath, or at your retreat at Clifton?'

J U N I U S.

The other letters of Junius to Sir William Draper display many more proofs of this minute commissarial knowle !ge.

On the subject of the rescue of major-general Gansel, Junius displays the same minute knowledge of military matters: and, indeed, details the affair with a minuteness that groves he was an eye-witness of it. Every little circumstance is marked in his account with the precision of a picture painted on the spot.

We cannot follow this ingenious writer far into these details ; but are struck with those relating to the appointment of colonel Luttrell to the adjutant-generalship of the army of Ireland.

‘ This infamous transaction,’ he said, ‘ ought to be explained to the public. Colonel Gisborne was quarter-master-, eneral in Ireland. Lord Townshend persuades him to resign to a Scotch officer, one Fraser,and gives him the government of Kinsale. Colonel Cunninghame was adjutant-general in Ireland. Lord Townshend offers him a pension to induce him to resign to Luttrell. Cunuinghame treats the offer with contempt. What’s to be done ? poor Gisborne must move once more. He accepts of a pension of £500 a year, until a government of greater value shall become vacant. Colonel Cunninghame is made governor of Kinsale, and Luttrell at last, for whom the whole machinery is put in motion, becomes adjutant-general, and, in effect, takes the command of the army in Ireland.’ Ju-nius, vol. ii. p. 156.

But Junius, though he had obtained a knowledge of this appointment before it had obta’ned the royal sanction, prematurely anticipated colonel Luttrell’s acceptance of it, and was a few days after compelled to announce that the minister had ‘ meanly rescinded this detestable promotion.’ Yet he is still determined the design shall not be forgotten. ‘ As very few forms concurred to this appointment,’ he says, ‘ except private commissions to a lord-lieutenant, we shall not be surprised at that effrontery which may hereafter deny the whole transaction ; it is not, however, lost in igorance, because the royal fiat had purposely delayed its progress through the offices of the secretaries of state. It never, perhaps, was intended that this circumstance should have been made public, till the destruction of our rights had been at least more easily to be accomplished than it is at present.’ Vol. ii. p. 158.

But he relies mainly for proof of its connexion of Junius with the war-office, and of his identity or connexion with Sir Philip Francis on the letters addressed to lord Barrington. In one of them he says, ‘ Let us suppose a case, which every man acquainted with the war-office will admit to be very probable.’ In the second,’ By garbling and new modelling the war-office, you think you have reduced the army to subjection. — Walk in, Gentlemen, business done by Chamier and Co.

— To make yonr office complete, you want nothing now but a paper lantern at the door, and the scheme of a lottery pasted upon the window. With all your folly and obstinacy, I am at a loss to conceive what countenance you assumed, when you told your royal master that you had taken a little Frenchified broker from Change Alley, to intrust with the management

of all the affairs of his army. Did the following dialogue leave no impression upon your disordered imagination? You know where it passed.

‘ K. Pray, my lord, whom have you appointed to succeed Mr. D’Oyly ?

‘ B. Please your M , I believe I have

made a choice that will be highly acceptable to the public and to the a.-my.

« K. Who is it ?

‘ C. Sire, il s’appelle Ragosin. Born and educated in Change Alley, he glories in the name of broker : and, to say nothing of lord Sandwich’s friendship, I can assure your M he

has always kept the best company at Jonathan’s.

‘ K. My lord, I never interfere iu these matters; but I cannot help telling your lordship, that you might have consulted my honor and the credit of my army a little better. Your appointment of so mean a person, though he may be a very honest man in the mystery he was bred to, casts a reflection upon me, and is an insult to the army. At all events, I desire it may be understood that I have no concern in this ill-judged, indecent measure, and that I do not approve of it.’

‘ I suppose, my lord, you thought this conversation might be sunk upon the public. It does honor to his majesty, and therefore you concealed it. — In my next I propose to show what a faithful friend you have been to the army, particularly to old worn-out officers.’ Junius, vol. iii. p. 430, &c.

Another ‘ Scene. The war-office,’ adorns his third letter. The writer had threatened lord Barrington with sixteen letters (Junius v. iii. p. 427) being, however, dismissed at the period of the date of his fourth, this concludes the series ; and now he says, that lord Barrington

expelled Mr. Francis, ‘ because his honor and integrity were a check upon his lordship’s dark proceedings; because men who do their duty with credit and ability are not proper instruments for lord Barrington to work with; they cannot be brought to connive at his jobs and underhand dealings ; and, among other reasons, because lord Barrington feels himself uneasy while men with such quali-cations are about him.’

It is still, however, the opinion of this writer, that these letters were concocted jointly with Dr. Francis, whose Hibernicisms he traces; his intimacy with lord Holland, and his remarkable tenderness towards that nobleman’s reputation : he also ingeniously accounts for Junius’s dread of Garrick s enquiries, by showing that Dr. Francis and he were in the habit of meeting at the houses of lord Holland and Foote. Under the head of internal evidence he then ably considers the peculiar expressions and style of composition, and secondly, the general opinions and principles of the writers. But we have already penetrated these arcana sufficiently to exc.te the attention of such of our readers as feel interested in the question, and must refer for their more complete satisfaction to the work (of, we believe, Mr. Taylor) itself. It is at least the best of all the guesses at Junius.

JUNK, M.S. Probably an Indian worJ. A small ship of China.

America, which have now but junks and canoes, Abounded then in tall ships. Bacon’s Hew Atlantis,

Pieces of old cable.

JUNKSEYLON, a considerable island near the western coast of the Malay peninsula, in the south-east portion of the bay of Bengal. It is separated from the main land by a shallow channel, of about a mile in

breadth : the centre of the island being in 8° N. lat. It is fifty-four miles long, by fifteen broad. The harbour, Popra, has a mud bar, which however may be passed in spring tides by vessels drawing twenty feet. Here are some valuable tin mines. The inhabitants, a mixture of Chinese, Malays, Siamese, and Birmans, are subject to the latter, and are governed by a mayoon, sent from Ummerapoora. This island was conquered from the Siamese in

JUNO, in pagan mythology, the daughter of Saturn and Rhea, the sister and wife of Jupiter, and the goddess of kingdoms and riches. She was styled the queen of heaven, and presided over marriage and child-birth. She married Jupiter; but, according to Homer, that god was sometimes obliged to use all his authority to keep her in subjection ; and, on her entering into a conspiracy against him, he punished her by suspending her in the air with two anvils fastened to her feet, and golden manacles on her hands, while all the other deities looked on without being able to help her. Being jealous, she often interrupted her husband in his amours ; and punished with unrelenting fury Europa, Semele, lo, Latona, and others of his mistresses. Jupiter himself having conceived Minerva, without any commerce with a female, Juno, in imitation, conceived Vulcan by the wind, Mars by touching a flower pointed out to her by Flora, and Hebe by eating lettuces. Juno, as the queen of heaven, preserved great state ; her usual attendants were Terrorand Boldness, Castor, Pollux, and fourteen nymphs ; but her most faithful attendant was the beautiful Iris. Homer describes her in a chariot adorned with precious stones, the wheels of which were of ebony, and which was drawn by horses with reins of gold. But she is more commonly painted drawn by peacocks. She was represented in her temple at Corinth, seated on a throne, with a crown on her head, a pomegranate in one hand, and in the other a sceptre with a cuckoo on its top. This statue was of gold and ivory. Some suppose that Juno signifies the air; others that she was the Egyptian Isis.

JUNONALIA, a festival observed by the Ro-mans in honor of Junt. It was instituted on account of certain prodigies that happened in Italy, and was celebrated by matrons. In the solemnity two white cows were led from the temple of Apollo in the city through the gate called Car-mentalis, and two images of Juno, made of cypress, were carried in procession. Then marched twenty-seven girls, habited in long robes, singing a hymn to the goddess ; then came the Decemviri, crowned with laurel, in vestments edged with purple. This pompous train, goingthrough the Yicus Jugarius, danced in the great field of Rome; thence they proceeded through the Fo-rum Boariun to the temple of Juno, where the victims were sacrificed by the Decemviri, and the

cypress images were left standing. This festival is fully described by

Livy, lib. 7.

JUNOT (Andoche), a modern French general of eminence, was born in low Hfc, in 1771, and entered at the age of twenty into the army. When only a lieutenant he was noticed by Buonaparte ; who placed him on his staff, and he became a great favorite of that general in his Egyptian expedition. He was made lieutenant-general, in 1806 governor of Paris, and colonel-general of hussars. The next year he was sent as ambassador to Lisbon, with orders to take possession of Portugal. Here he remained two years, and was further honored with the title of duke of Abrantes. The battle of Vimiera, in which he was opposed to Sir A. Wellesley, put an end to his authority ; but Buonaparte afterwards appointed him captain-general and governor of the Illyrian provinces. He died in 1813, having collected a valuable library.

JUN'TO, n. s. Ital.; Lat. junctut. A cabal; a number of men combined in any secret design.

Would men have spent toilsome days and watchful nights in the laborious quest of knowledge preparative to this work, at length come and dance attendance for approbation upon a junta of petty tyrants, acted by party and prejudice, who denied fitness from learning, and grace from morality ?

South.

From this time began an intrigue between his majesty and a junto of ministers, which had like to have ended in my destruction. Gulliver's Travels, Unblest by nature, government a league

Becomes a circling junto of the great,

To rob by law. Thomson's Liberty.

JUNTO, in matters of government, denotes a select council for taking cognizance of affairs of great consequence, which require secrecy. In Spain and Portugal it signifies much the same as convention, assembly, or board among us; thus they have the junto of the three estates, of commerce, of tobacco, &c. See BOARD.

I'VORY, n. s. Fr. ivoire ; Lat. ebur.

The ches was all of ivory, the meyne fresh and

new, Upulsshed and ypiked of white asure and blew.

Chaucer. The Af'.rchantes Second Tale. Hire throte, as I have nowe memoire, Seemed as a round tour of unrire, Of gode gretnesse, and not to grete.

Id. Bohe of the Duchesse.

There is more difference between thy flesh and ners, than between jet and ivory. Sltakspeare.

Draw Erato with a sweet and lovely countenance, bearing a heart with an ivory key. Peacham.

Upon her forehead thousand cheerful graces, Seated on thrones of spotless iron/ ; There gentle Love his armed hand unbraces '_ His bow unbent disclaims all tyranny.

Fletcher. Purple Island. From their ivory port the cherubim Forth issued. Milton.

Two gates the silent house of sleep adorn, Of polished ivory this, that of transparent horn : True visions through transparent horn arise, Through polished ivory pass deluding lies.

Dryden.

Ivory is a hard, solid, and firm substance, of a fine white colour : it is the dens exertus of the elephant,

who canies on each side of his jaws a tooth of six or seven feet in length ; the two sometimes weighing three hundred and thirty pounds ; these ivory tusks are hollow from the. base to a certain height, and the cavity is filled with a compact medullary substance.

HM

Necks whiter than the iron/ arm bestowed By Jove on i'elops, 01 the milky road.

Cowper. Elegy.

IVORT. The tusk, or tooth of defence of the male elephant. It is an intermediate substance oetween bone and horn, not capable of being softened by fire, nor altogether so hard and brittle as bone. Sometimes it grows to an enormous size, so as to weigh nearly 200 pounds.

The entire tooth is of a yellowish, brownish, and sometimes a dark brown color on the outside ; internally white, hollow towards the root, and, so far as was inserted into the jaw, of a blackish-brown color. The finest, whitest, smoothest, and most compact ivory comes from the island of Ceylon. The grand consumption of this commodity is for making ornamental utensils, mathematical instruments, cases, boxes, balls, combs, dice, and an infinity of toys. The workmen have methods also of tinging it of a variety of colors. Merat Guillot obtained from 100 parts of ivory 24 gelatin, 64 phosphate of lime, and O'l carbonate of lime. The coal of ivory is used in the arts under the denomination of ivory-black. Particular vessels are used in the manufactory of this pigment, for the purpose of rendering it perfectly black. Some travellers speak of the tooth of the sea-horse as an excellent ivory ; but it is too hard to be sawed or wrought like ivory , Ii is used for making artificial teeth.

IVORY COAST, a country of Africa, in Guinea, on the coast of the Atlantic, which, along with the Grain Coast, extends about 500 miles. See GUINEA, and MALAGUETTA. It is seated between Cape Apollonia and Cape Palmas, and contains several towns. The interior part of the country is little known ; the natives not allowing the Europeans to build settlements among them and hardly even to trade with them, except by means of the coast negroes, and even then with the most circumspect caution, for which they hove but too just cause. The chief articles of commerce are gold, ivory, and slaves ; the for-mer in the greatest plenty. The soil is in general fertile, producing abundance of rice and roots ; indigo and cotton thrive without cultivation, and tobacco would be excellent if carefully manufactured : they have fish in plenty : their flocks greatly increase ; and their trees are loaded with fruit. They make a cotton cloth, which sells well on the coast. In a word, the country is rich, and the commerce advantageous, and might be greatly augmented by such as would cultivate the friendship of the natives. These are represented hy interested writers as a rude, treacherous people ; but authors of credit e;ive them a very different character, describing them as sensible, courteous, and the fairest traders of the coast of Guinea, &c. They are said to be averse to drinking to excess, and such as do so are severely punished. Though they are naturally inclined to be kind to strangers, with whom they

are fond of trading, yet the frequent injuries done VOL. XII.

them by Europeans have occasioned their being suspicious and shy ; and have even made them sometimes treat strangers ill, who have attempted to trade with them. The trade is carried on by signals from the ships, on the appearance of which the natives usually come on board in their canoes, bringing their gold dust, ivory, &c., which has given opportunity to some villainous Europeans to carry them off with their effects, or retain them on board till a ransom was paid. The mistrust at one time was so great, that it is very difficult to prevail on them to come on board, Great Britain is now happily relieved from the great odium of stimulating and rewarding this cruel conduct : but the slave trade is yet surreptitiously carried on here to a great ex-tent.

JUPITER, the sovereign deity of the ancient Pagans. The theologist*, according to Cicero, reckoned up three Jupiters ; the first and second of whom were bora in Arcadia; of these two, the one sprang from / Ether, the other from Coelus. The third Jupiter was the son of Saturn, and born in Crete, where they pretended to show his sepulchre. Cicero in other places speaks of several Jupiters who reigned in different countries. The Jupiter, by whom the poets and divines understand the supreme god, was the son of Saturn, king of Crete. He would have been devoured by his father as soon as born, had not his mother Rhea substituted a stone instead of the child, which Saturn immediately swallowed. Saturn took this method to destroy all his ma'e children, because it had been foretold by Ca-lus and Terra, that one of his «ons should deprive him of his kingdom. Jupiter, being thus saved from his father, was brought up by the Curetes in a den on Mount Ida. Virgil tells us that he was fed by the bees ; out of gratitude for which he changed their color from that of iron to gold. Some say, that his nurses were Amalthaea and Melissa, who gave him goat's milk and honey ; and others, that Amalthaea was the name of the goat which nourished him, and which, as a re-ward for her great services, was changed into a constellation. According to others, he was fed by wild pigeons, who brought him ambrosia from Oceanus ; and by an eagle, who carried nectar in his beak from a steep rock ; for which he rewarded the former, by making them the foretellers of winter and summer; and the latter by giving him immortality, and making him his thunder-bearer. When grown up, he drove his father out of heaven, and divided the empire of the world with his brothers. For himself, he hau heaven and earth ; Neptune had the sea ana waters; and Pluto hell. The Titans attempted to dethrone Jupiter, as he had done his father These Titans were giants, the sons of Titan an<* Terra. They

declared war against Jupiter, aiv heaped mountains upon mountains, ;n order to scale heaven : but their efforts were unsuccessful. Jupiter overthrew them with his thunder, and shut them up under the waters and mountain*, from which they were not able to get out. Jupiter had several wives : the first of whom, named Metis, he is said to have devoured when bif with child, by which he himself became preg nant ; and Minerva issued out of his head, com-T

pletely armed and fully grown. His second was Themis ; the name of his third is not known ; his fourth was the celebrated Juno, whom he deceived under the form of a cuckoo, which, to shun the violence of the storm, fled for shelter to her lap. He was the father of the Muses and Graces; and had a prodigious number of children by his mistresses. He metamorphosed himself into a satyr to enjoy Antiope ; into a bull, to carry off Europa ; into a swan, to abuse Leda ; a shower of gold, to corrupt Danae; and into several other forms to gratify his passions. He had Bacchus by Semele, Diana and Apollo by Latona, Mercury by Maia, and Hercules by Alc-mena, &c. The wiser part of the heathens believed that there was but one supreme God ; but it is certain that the great body of the people believed in a plurality of gods, endued with different powers and attributes, and all of them influenced by human passions and vices. It is in vain to attempt to exculpate them from this folly. The whole history of ancient Greece, Rome, Egypt, &c., with their routine of superstitious ceremonies, prove that they believed all the ridiculous fables of the mythology. They even used different representations of the same deity, and, if they did not consider them as so many different persons, at least regarded each of them in different views : e. g. The Jupiter that showered down blessings was called the Kind Jupiter; and, when punishing, the Terrible Jupiter. There was not only one Jupiter for Europe and another for Africa; but in Europe there was one J upiter who was the particular friend of the Athenians, and another who was the special protector of the Romans : nay, there was scarcely a town in Italy, that had not a Jupiter of its own ; and the Jupiter of Terracina, or Jupiter Anxur, represented in medals as young and beardless, with

rays round his head, more resembled Apollo than the great Jupiter of the capitol. In this way Jupiter at length had temples and dif-terent characters almost every where; in Carthage he was called Ammon ; in Egypt, Serapis ; at Athens, the great Jupiter was the Olympian Jupiter ; and at Rome, the greatest Jupiter was the Capitoline Jupiter, who was the guardian and benefactor of the Romans, and whom they called Jupiter optimus maximus, This Jupiter was represented in his chief temple, on the Capitoline hill, as sitting on a curule chair, with the fulmen, i. e. thunder, or rather lightning, in one hand, and a sceptre in the other. This fulmen in the figures of the old artists was always adapted to the character under which they were to represent Jupiter. If his appearance was to be mild and calm, they gave him the conic fulmen, or bundle of flames wreathed closely together, held down in his hand : when punishing, he held up the same figure, with two transverse darts ot lightning, sometimes with wings added to each side of it, to denote its swiftness ; this was called by the poets the three-forked bolt of Jove: and, when he was going to do some exemplary execution, they put in his hand a handful of flames, all let loose in their utmost fury ; and sometimes filled both his hands with flames. The superiority of Jupiter was principally manifested in that air of majesty which the ancient

artists endeavoured to express in his countenance : particular attention was paid to the head of hair, the eyebrows, and the beard. There are several heads of the mild Jupiter on ancient seals; where his face has a mixture of dignity and ease in it, admirably described by Virgil, ./En. i. v. 256. The statues of the Terrible Jupiter were generally of black marble, as those of the former were of white : the one sitting with an air of tranquillity ; the other standing, more or less disturbed. The face of the one is pacific and se-rene ; of the other, angry and clouded. On the heads of the one the hair is regular and composed ; in the other it is so discomposed, that it falls half way down the forehead. The face of the Jupiter Tonans resembles that of the Terrible Jupiter ; he is represented on gems and medals as holding up the triple bolt in his right hand, and standing in a chariot, which seems to be whirled • on impetuously by four horses. Thus he is also described by the poets. Ovid. Deian. Here. v. 28. Horace, lib i. od. 4, v. 8. Jupiter, as the intelligence presiding over a single planet, is represented only in a chariot and pair : on all other occasions, if represented in a chariot, he is always drawn by four horses. Jupiter was the chief ruler of the air, and directed the rains, the thunders, and the lightnings. As the dispenser of rain, he was called Jupiter Pluvius ; and was exhibited seated in the clouds, holding up his right hand, or

extending his arms almost in a straight line each way, and pouring a stream of hail and rain from his right hand upon the earth ; whilst the fulmen is held down in nis left. The wings that are given him relate to his character of presiding over the air : his hair and beard in the Antonine pillar are all spread down by the rain, which descends in a sheet from him, and falls for the refreshment of the Romans ; whilst their enemies are represented as struck with the lightnings, and lying dead at their feet. Some consider a part of the fable of Jupiter to include the history of Noah and his three sons ; and that Saturn is Noah, who saw all mankind perish in the waters of the deluge; and who, in some sort, swallowed them up, by not receiving them into the ark: Jupiter is Ham; Neptune, Japheth; and Shem, Pluto. The Titans, it is thought, represent the old giants, or first tyrants, who built the tower of Babel, and whose pride and presumption God had confounded, by changing their language, and pouring out the spirit of discord and division among them. The name of Jupiter, or Jovis Pater, is thought to be derived from Jehovah, pronounced with the Latin termination Jovis instead of Jova; and in medals we meet with Jovis in the nominative, as well as oblique cases : for example, Jovis custos, Jovis propugnator, Jovis stator. To the name Jovis was added pater; and afterwards, instead of Jovis pater, Jupiter was used by abbreviation. The name Jupiter was not known to the Hebrews till the reign of Alexander the Great. Antiochus Epiphanes commanded the idol of Jupiter Olympius to be placed in the temple at Jerusalem; and that of Jupiter, the defender of strangers, in the temple on mount Gerizim. 2 Mace. v. 2.

JUPITER, If., in astronomy, one of the superior

planets, and remarkable as being the brightest of them all, except Venus. Jupiter is situated between Mars and Saturn, being the fifth in order of the primary planets from the sun. His diameter is 89,170 miles. He turns round his axis in nine hours and fifty-six minutes ; and performs his periodical revolution in eleven years, 315 d;iys, fourteen hours, and thirty nine minutes, at the distance of 490 millions of miles

from the sun. The figure of Jupiter is evidently an ob-late spheroid, the equatorial being to the polar diameter as fourteen to thirteen. This result was obtained from the accurate observations of Dr. Herschel; and it is a remarkable coincidence between theory and observation, that, from the influence of the equatorial parts of Jupiter upon the motion of the nodes of his satellites, La Place has found the proportion between his equatorial ?nd polar diameters to be as 10,000,000 to 9,286,992 ; a result which differs only a little from the ratio of fourteen to thirteen, and which should be regarded as the more accurate of the two. According to Cassini, the difference of Jupiter's diameters is ˆ; Pound made it n-3i'> Short -fa; and Newton ˆ When we look at Jupiter through a good telescope we perceive several belts or bands extending across his disc, in lines parallel to his equator. These appearances were first observed by two Jesuits, Zuppi and Bartoli. They were afterwards examined in 1633, by Fontana, Bheita, Riccioli, Grimaldi, and Campani ; the latter of whom, on the 1st of July 1664, perceived four dark belts, and two white ones. These belts are variable, both in number, distance, and position. Sometimes seven or eight belts have been observed; and, on the 28th of May, 1780, Dr. Herschel perceived the whole disc of Jupiter covered with small curved belts, or rather lines, that were not continuous across his disc. The parallel belts, however, are most common, and in clear weather may be seen by a good achro-matic telescope, with a magnifying power of forty. See ASTRONOMY.

J UP'PON, n. s. Fr. juppon. A short close coat.

Some wore a breast-plate and a light jvppon Their horses clothed with rich caparison. Dryden*

JURA, one of the Western Islands of Scotland , lying opposite to Rnapdale in Argyleshire, is supposed to be about thirty miles long and seven broad. The name is derived by some from Gael. Juar, i. e. yew, as abounding in yew trees : but Buchanan, with more probability, derives it from the Gothic, Dera, or Gael. Diura, a deer, as it formerly abounded with these animals, and there are still a few on the island. It is the most rug-ged of all the Hebrides; and is composed chiefly of vast mountains, naked, and incapable of cultivation. Some on the south and west sides only are improvable, and in good seasons as much barley and oats are raised as will maintain the inhabitants. Barley produces four or five fold. Sloes are the only fruits of the island. An acid for punch is here made from the berries of the mountain ash ; and a kind of spirit is also distilled fro.n them. Necessity has instructed the inhabitants in the use of native dyes. Thus the juice of the tops of heath boiled supplies them with a yellow; the roots of the

with a dark brown ; these of the yellow water iris with a black, and the galum veruin, rue of the islanders, with a very fine red, not inferior to madder. On the hills is pasture for cattle. There are now in Jura about 100 stags; though these must formerly have been much more numerous, as the original name of the island was Deir ay, or the isle of deer, so called by the Norwegians on account of the abundance of deer found in it. Between the north end of Jura and the small isle of Skarba there is a famous whirlpool, called Cory-vrekan, from Brecan, son of a king of Denmark, who perished in this gulph. See CORY-VKEKAN. His body being cast ashore on the north side of Jura, was buried in a cave, and his grave is still distinguished by a tomb-stone and altar. Jura has many rivulets and springs of excellent water, and the air is remarkably healthy; its salubrity being increased by the high situation, perpetually fanned by breezes.

JURA, or JURA and COLOKSAY, a parish of Scotland, in Argyleshire, consisting of the above island which forms by far the greatest part of it, and of other eight islands. Of these nine islands, six are inhabited ; Colonsay and Oron-say form the west division of the parish ; and Skarba, Lunga, and Balnahuaigh, with three uninhabited isles, lie on the north of Jura. The whole parish, including the intervening arms of the sea, is fifty miles long and thirty broad.

JURA, THE DEPARTMENT OF, in France is formed of part of the former province of Franche-Comte", and derives its name from a chain of mountains, parallel with the Alps, whicˆextends from the southern extremity of the department of Ain, as far as that of the Upper Rhine, separating Switzerland from France. The chief place of this prefecture is Lons-le-Saulnier ; it consists of four arrondissements or subprefectures ; Lons-le-Saulnier containing 107,993 inhabitants; Dole, 69,792 ; Poligny, 73,559 ; and St. Claude 50,404 ; making a total population of 301,748 souls, having thirty-two justiciaries of the peace, or cantons ; 675 communes ; and a surface of 2304 square miles. Its revenue amounts to 15,351,000 francs. It is in the sixth military division, has a royal court and bishopric at Besancon, and is divided into two electoral arrondissements, sending three members to the chamber of deputies.

The department of Jura is bounded on the north by that of the Upper Saone; on the north-east by that of Doubs ; on the east by that of the Ain ; and on the west by those of Saone et Loire, and Cote d'Or. It is

intersected by mountains, plains, and marshes; and its productions are consequently very different on account of the nature of the soil. Two-thirds of the whole country lie in that part of the Alps which bears the narre of Jura, of which the highest summits rise to 5200 feet. On the east these heights are very accessible, and have many deep valleys between them. The soil is generally rocky, light, of very little depth, and by no means fertile. The harvest, though tolerably abundant in the plains, is by no means sufficient for the support of the inhabitants; the mountains produce nothing but the inferior grains ; they are, however, rich in pasturage, which feeds during the

summer great numbers of black catile and excellent horses. During this season the cheesy-houses, erected on the heights, serve as habitations for the herdsmen, and stables for the horned cattle ; and they make here great quantities of butter and cheese for exportation. At the beginning of October, the herdsir.tn descend with their flocks into the lower regions. Vines are very numerous in Jura; they extend over the sides of the hills to a distance of sixty miles, and yield most excellent wines ; those of Ar-bois, Salins, and Lons-le-Saulnier, are the most celebrated. The yiofent winds, which prevail in these countries, render tlie winters long and severe ; so that the snow continues on the mountains for some months in the year. A great part of the country is covered with forests of fir and box trees, the wood of which is worked within the department; grottoes also are found, adorned with stalactites and curious petrifactions, with fine cascades, and most beautiful scenes along the course of the Am, the Limon, ‘he Langonnet and the Seille. This department likewise possesses fine salt springs, which yield annually about 60,000 quintals of salt. The soil being rocky, it is mostly cultivated by oxen, and the produce is not very abundant. There are 135,053 hectars of forests (oak, beech, *nd green wood), and 16,060 hectars of vineyards, producing on an average seventeen francs, twenty-four centimes the hectar.

The productions of this country consist of wheat, rye, barley, oats,

maize, buckwheat, hemp, rape-seed, walnuts, fruits, fine wines, wood, excellent pasturage, medicinal plants, and plants for dyeing in great abundance. There is also plenty of great and small game, such as deer, wild cats, squirrels, heath-cocks, redbreasts, and a small kind of eagles. The rivers and lakes produce great quantities of fish, particularly salmon trout, and crabs. They have large herds of horses, mules, horned cattle, and many fowls; numberless swarms of bees; mines abounding in iron and pit-coal; and quarries of various kinds of marble, beautifully white alabaster, very fine plaster, mill-stones, limestone, and inflammable schistus. At Salins and Lons-le- Saulnier there are springs impregnated with salt.

This department is famous for large manufactures of works in horn, bone, ivory, mother of pearl, box and other woods, wooden clocks, copper, iron, and steel. The inhabitants also make quantities of coarse cloth, linens, handkerchiefs, mineral acids, salt, casks, axes, and scythes ; they have forges, foundries, nail manufactories, tile-kilns, paper-mills, and celebrated tanneries. They deal largely in the preparation of natural and artificial stones, and make cheeses in the mountains, something like that of Gruyere and Sept Moncel. A considerable number of workmen are continually emigrating; and carriers, with their little carts harnessed to a single horse, travel about into the interior of the kingdom, selling their cheese in great abundance. A considerable trade is carried on in corn, wine, brandy, fowls, honey, deals, hˆmp, rape, oil, turnery, toys, and clocks and watches of Franche Cornte".

Tlie principal rivers in this department are the

Doubs, tlie Ain, the Clause, the Louve, the Grossane, and the Tacon. In it also is the grand canal ; and, it is crossed by the great roads of Lyons, Digon, Besanfon, and Geneva.

JURA, a chain of mountains in Switzerland, beginning in the canton of Zurich, extending from thence along the Rhine into the canton of Basle, stretching into that of Soleure and the territory of Neufchatel, and branching out towards the Pays de Vaud ; separating that county from the ci-devant Franche Comte" and Burgundy, and continued beyond the late Genevan territories as far as the Rhone. Many elevated valleys are formed by different parts of this chain in the Pays de Vaud ; among which one of the most remarkable is the valley of the lake of Joux, on the top of that part of the chain named Mount Joux. It contains several populous villages, and is beautifully

diversified with wood, arable land, and pasture. It is watered by two lakes; the largest of which is that of Joux. This has one shore of a high rock covered with wood; the opposite banks forming a gentle ascent, fertile, and well cultivated ; behind which is a ridge covered with pines, beech, and oak wood. The smaller lake, named Brenet, is bordered with fine corn fields and villages ; and the stream which issues from it is lost in a gulf named Entonnoir, or the Funnel, where several mills are turned by the falling current. The Orbe issues from the other side of the mountain, about two miles from this place ; and probably owes its origin to the subterraneous stream just mentioned. The largest lake is supplied by a rivulet which issues from the bottom of a rock, and loses itself in it. The valley contains about 3000 inhabitants, remarkable for their industry in making watches and jewellery. The country is much infested with bears and wolves. In ascending to this place there is a very extensive prospect of great part of the Pays de Vaud, the lake of Geneva, and that of Neufchatel, which from that high point of view appears to be nearly on a level ; though M. de Luc found the latter to be 1 59 feet above the level of the lake of Ge-neva. The Jura mountains are mentioned by Caesar, Pliny, Strabo, and Ptolemy. In Switzerland they bear the different names of the La-gerberg, the Batsberg, Hauenstein, Freyberg, &c. The most elevated peaks are the Reculet, the Dole, and the Montendre, the respective heights of which are 5200, 5178, and 5170 feet above the level of the sea. These, however, are much lower than the summits of the Alps, nor are there here perpetual snows, or the sources of any great rivers.

JU’RAT, 7i. s. JU’RATORY, adj. JURID’ICAL, adj. JURIDICALLY, adv. JURISCON’SULT, n. s. JURISDICTION, n. s. JURISPRUDENCE, n. s. JU’RIST, n.s. JU’ROR, n. s. JU’RY, n.s.

~\ Jurat is from Lat. juratus. A magistrate in some corporations. Juratory, comprising an oath. Juridical, >Lat. JKS and ch’co,act-ing in the distribution of justice; useu in courts of justice : juridically, according

) to the law or forms

JU’RYMAN, n.s.

of justice. Jurisconsult, Lat. jwrwand consultim, one who gives legal opinions. Jurisdiction, Lat.

jus and dico, legal authority in the district to which it extends : jurisprudence, Lat. juris and prudentia, the science of law : jurist, a civil lawyer : juror, one that serves on the jury: jury, a body of sworn men : juryman, one who is em-panelled on a jury.

Than had he, thnrgh his jurisdiction, • Power to don ou hem correction. Chaucer.

You wrought to be a legate ; by which power You maimed the jurisdiction of all bishops. Shaks.

This is not to be measured by the principles of jurists. Bacon.

As Adam had no such power as gave him sovereign jurisdiction over mankind. Locke.

According to a juridical account and legal signification, time within memory, by the statute of Westminster, was settled in the beginning of the reign of king Richard the First. Hale.

A contumacious person may be compelled to give juratory caution de parendo juri. Ayliffe.

There is mention made in a decision of thej'am-consult Javolemus, of a Britannick fleet. Arbuthnot. The hungry judges soon the sentence sign,

And wretches hang that jurymen may dine. Pope.

JURIEU (Peter), a French Protestant divine, born in 1637, was educated in England under his maternal uncle Peter du Moulin, and took orders in the English church ; but returning to succeed his father as pastor to a reformed congregation at]NIer, in the diocese of Blois, he was made professor of divinity and Hebrew at Sedan, where he gained great reputation. This university being taken from the Protestants, a professorship of divinity was founded at Rotterdam ; where he was also appointed minister of the Walloon church. He died in 1713; and left a great number of esteemed works behind him, particularly a History of Calvinism, and a Commentary on the

Revelations.

JURIN(Dr. James), a secretary of the Royal Society in London, as well as president of the College of Physicians there. He had great disputes with Michellotti upon the motion of running water, with Robins upon distinct vision, and with the partizans of Leibnitz upon moving bodies. His Essay upon Distinct and Indistinct Vision is printed in Smith's Optics ; and seventeen of his papers on various subjects (of which Dr. H .itton gives a list in his Math. Diet.) are inserted in the Philosophical Transactions. He died in 1750.

JURISCONSULT, jurisconsultus, commonly contratced into Ictus, among the Romans, denoted a person learned in the law ; a master of the Roman jurisprudence, who was consulted on the interpretation of the laws and customs, and on the difficult points in lawsuits. The fifteen books of the Digests were compiled wholly from the reports of the ancient jurisconsulti. The jurisconsult! seem to have been a kind of chamber counsellors, who arrived at the honor of being consulted through age and experience, but never pleaded at the bar. Their pleading advocates or lawyers never became jurisconsulti. See ADVOCATE. . In the times of the republic, the advocati had by much the more honorable employment, as being in the ready way to attain the highest preferments. They then despised the jurisconsulti, calling them in derision formulani and legulei, as having invented certain forms and

monosyllables, to give their answers the greater appearance of gravity and mystery. But in process of time they became so much esteemed, that they were called prudentes and sapientes, and the emperors commanded the judges to iollow their advice. Augustus advanced them to tho public offices of the empire.

JURISDICTION is a power which a man has to do justice in cases of complaint made before him. There are two kinds of jurisdiction, the one ecclesiastical, tlie other secular. Ecclesiastical jurisdiction belongs to bishops and their deputies. Bishops, &c., have two kinds of jurisdiction ; the one internal, which is exercised over tlie conscience in things purely spiritual ; and this they are supposed to hold immediately of God. The other is contentious, which is a privilege some princes have given them in terminating disputes between ecclesiastics and lay-men. Secular jurisdiction belongs to the king and

his justices or delegates. The courts and judges at Westminster have jurisdiction all over England ; but all other courts are confined to their particular jurisdictions. There are three sorts of inferior jurisdictions ; the first is tenere placita, to hold pleas, and the plaintiff may sue either there or in the king's courts. The second is the conusance of pleas, where a right is invested in the lord of the franchise to hold pleas: and he is the only person that can take advantage of it, by claiming his franchise. The third sort is an exempt jurisdiction, as where the king grants to some city that the inhabitants shall be sued within their city, and not elsewhere ; though there is no jurisdiction that can withstand a cer tiorari to the superior courts.

JURISDICTIONS, HEREDITARY, an heriditary right or power, enjoyed for ages by many of the nobility and gentry of Scotland, more especially by those in the Highlands, of exercising the rights of judges in criminal cases, over all the people who resided on their estates. This power extended even to trials for capital crimes, or, what amounted to the same thing, crimes deemed worthy of capital punishment by the chieftain against whom, or within whose jurisdiction, they were committed ; and who thus generally monopolised, in his own character, the discordant privileges of prosecutor, judge, and jury, without being amenable to the supreme court in the kingdom. Such an unlimited power of pit and <rallows, as it was called, in the hands of even the most enlightened subjects, was liable to be grossly abused ; and accordingly there are still two proverbial expressions currently used in Scotland, of Cupar justice, and Jedburgh justice, founded upon traditions, that at these places men had actually been first hanged, and afterwards tried ! The natural consequence of such powers was, that every chieftain was an arbitrary sovereign within the jurisdiction of his own property, and could call forth his tenants and other dependents by hundreds, to fight against any neighbouring chieftain. This power of the chieftains was peculiarly serviceable to the cause of the rebels in 1714 and 1745; but it was not till after the last of these rebellions that the British government began to think of abolishing it. The combination of their clans, says

Mr. Heron, llicir attachments to their chieftains, and the advantages of power, which these chiefs were understood to derive from the union of hereditary civil jurisdictions with patriarchal authority, and with the property of the soil ; seemed to be the principal means,, or cause, which rendered Highlanders so averse from owning the full authority of the national government ; which made them terrihle, and perpetuated their Jaeobitism. The hereditary jurisdictions were, therefore, by a compulsive sale, and for a stipulated price, purchased from all those of the Scottish gentry and nobles whose families enjoyed such jurisdictions. Hist, of Scotland, vol. v. p. 1233—4. The act was passed in 1748. See CLANS.

JURISPRUDENCE is, strictly, the science of right, and is a term that has been applied to the study of all the laws, statutes, and customs which have been adopted in different nations for securing the personal and social rights of their members. When we find it qualified by the adjective civil, it is synonymous with the term civil law, which (see our article LAW) has been entirely moulded in modern nations by that of the Romans ; feudal jurisprudence is a term that has been used to comprehend all the feudal institutions; canonical jurisprudence is that of the canon law.

We must avoid, as Hooker has well said, ‘ the measuring by one kind of law all the actions of men :’ this were to confound, as he afterwards observes, what God has made ‘distinct in nature as in degree :’ yet the basis of all just legislation for man must be found in certain principles of civil government applicable to all states and stages of society, while it is perfectly clear that what is abstractedly just and perfectly proper for one stage of advancement in the social system, would in mmTy in stances be at once unintelligible and unjust, applied to mankind in other stages or degrees of progress. The study of jurisprudence must, therefore, be historical. At one period of the emergence of a nation from barbarism (as in the existing state of the South Sea Islanders), it must be a question mixed up with all the various sanctions and sources of law, divine and human ; at another, as in the history of the United States of America, since their independence, it has been held essential to distinguish, and even to separate entirely, questions of a religious and spiritual, from those of a civil and temporal kind. It is singular to observe the missionaries of these very states, however, of necessity engaged in a sort of universal legislation, owing its chief sanctions to religion, for the South Sea Islanders.

Perhaps the greatest question of modern jurisprudence has been thus enunciated — the de-gree to which religious sanctions must be made to enter directly and permanently into the authority of human laws. Oaths, and all ecclesiastical benefits bestowed by a state, are of this kind : every civilised nation has adopted the former ; yet our own legal indulgence in this matter to the Friends or Quakers, and the example of the United States in the latter (to say nothing of the recent admission of all Christian sects to political power in this country), would seem to suggest the possibility of preserving a greater distinctness

in the divine and human sanctions of .aw, than entered into the conception of our forefathers. But we have already stated the main outlines of the various codes that have been hitherto adopted in the article referred to : and it is the duty of an encyclopaediast, we conceive, to be historical, rather than speculative, upon any of these points.

JURY, in English law. Junes are, in these kingdoms, the supreme judges in all courts and in all ordinary causes, in which either the life, reputation, or property, of any man is concerned ; this is the distinguishing privilege of every Briton, and one of the most glorious advantages of the British constitution ; for, as every one is tried by his peers, the meanest subject is as safe and as free as the greatest.

JU'RYMAST, n. s. It seems to be properly duree mast, mail de duree, a mast made to last for the present occasion. So the seamen call whatever they set up in the room of a mast lost in a fight or by a storm.

For they were forced with steering to dispense, And never hap as yet a quiet day On which they might repose, or e'en commence A jurysnatt or rudder, or could say The ship would swim an hour. Byron.

JUS CIVILE, amongst the Romans, signified no more than the interpretation given by the learned of* the laws of the XII Tables, though the phrase now extends to the whole system of the Roman laws.

Jus CIVITATIS signifies freedom of the city of Rome, which entitled those persons who had obtained it to most of the privileges of the Roman citizens; yet it differs from jus quiritum, which extended to all the advantages to which a free native of Rome was entitled. The

difference is much the same as betwixt denization and naturalisation with us.

Jus IMAGINIS was the right of using pictures and statues in funeral processions, &c., amongst the Romans, and had some resemblance to the right of bearing a coat of arms in modern times. This honor was allowed to none but those whose ancestors or themselves had borne some curule office. See IMAGE.

Jus PAPIRI ANUM, the laws of Romulus, Numa, and other kings of Rome, collected into a body by Sextus Papirius, who lived in the time of Tarquin the Proud.

Jus PATRONATUS is a commission granted by the bishop, to enquire who is the rightful patron of a church. If two patrons present their clerks, the bishop shall determine who shall be admitted by right of patronage, on commission of enquiry by six clergymen and six laymen, living near the church ; who are to enquire on articles as a jury. The awarding a jus patronatus is not of necessity, but at the pleasure of the ordinary for his better information who has the right of patronage : for, if he will at his peril take notice of the right, he may admit the clerk (if either of the patrons, without a jus patronatus

Jus TUIUM LIBERORUM was a privilege granted to such persons in the city of Rome as had three children, by which they were exempted from all troublesome offices. The same exemption was granted to any persons who lived in other parts of Italy, having four children ; arid

those that lived in the provinces, provided they had five, or as some say seven, children, were entitled to the same immunities.

JUSS1CA, in botany, a genus of the monogynia order, and decandria

class of plants ; natural order seventeenth, calycanthemae : CAL. quadripartite or quinquepartite superior ; petals four or five : CAPS, quadrilocular or quinquelocular, oblong, opening at the angles ; the seeds numerous and small.

JUSSIEU (Anthony de), a celebrated French botanist and physician, bom at Lyons, in 1686. After travelling through various parts of Europe, he settled in Paris, and published many works on natural history. He died in 1758.

JUSSJEU (Bernard de), brother of Anthony, whom he resembled in his scientific as well as professional pursuits. He was curator of plants in the royal gardens at Paris and Trianon. He died in 1777.

JUSSIEU (Joseph de), M. D., another learned botanist of the same family with the two preceding, was born at Lyons, in 1704. He accompanied the academicians who were sent to Peru, to measure a degree, as a botanist. He returned to France in bad health, after residing in Peru thirty-six years, and died in 1779.

JUST, adj. Fr. juste; La.t.justu$. Upright; incorrupt; equitable in the distribution of justice.

Men are commonly so just to virtue and goodness, as to praise it in others, even when they do not practice it themselves. Tillotson

Honest ; without crime in dealing with others.

Just balances, just weights, and a just ephah.

Lev. xix.

It is uncertain whether just of has any other authority.

Just of thy word, in every thought sincere, Who knew no wish but what the world might hear.

Pope.

Exact; proper; accurate.

Boileau’s numbers are excellent, his expressions noble, his thoughts just, his language pure, and his sense close. Dryden.

These scenes were wrought,

Embellished with good morals and just thought.

Granville.

Jutt precepts thus from great examples given, She drew from them what they derived from Heaven.

Pope. Just to the tale, as present at the fray,

Or taught the labours of the dreadful way. Id.

Once on a time La Mancha's knight, they say, A certain bard encountering on the way, Discoursed in terms as just, with looks as sage, As ere could Dennis of the laws o' the stage. Id.

Though the syllogism be irregular, yet the inferences are just and true. Wattt's Logick.

You bear a Just resemblance of my fortune, And suit the gloomy habit of my soul. Young.

Virtuous; innocent; pure.

How should man be just with God 7 Job.

A just man falleth seven times and riseth.

Prov.

He shall be recompensed at the resurrection of the just. Matt.

The just the unjust to serve. Milton.

True ; not forged.

Crimes were laid to his charge too many, the least whereof, being just, had bereaved him of estimation and credit. Hooker.

Grounded on principles of justice ; rightful.

Me though just right Did first create your leader. Stilton.

Equally retributed. | He received a just recompense of reward.

Heb. ii. 2.

Whose damnation is just. Rom. iii. 8.

As Hesiod sings, spread water o'er thy fields, And a most j«st and glad increase it yields.

•Denham.

I would not shrink

From just infliction of due punishment On those who seek your life : wer't otherwise I should not merit mine. Byron. Sardanapalus. Complete without superfluity or defect. He was a comely personage, a little above just stature, well and straight limbed, but slender.

Bacon's Henry VII. Regular; orderly.

When all

The war shall stand ranged in its just array, And dreadful pomp, then will I think on thee.

Addison

Exactly proportioned.

The prince is here at hand : pleaseth your lordship To meet his grace, just distance 'tween our armies 1

Shakspeare.

Full ; of full dimensions. His soldiers had skirmishes with the Numidians, so that once the skirmish was like to have come to a just battle. Knolles's History.

There is not any one particular above mentioned, but would take up the business of a just volume.

Hale's Origin of Mankind.

There seldom appeared a just army in the civil wars. Dutches* of Newcastle.

JUST, adv.

Exactly ; nicely ; accurately. They go about to make us believe that they are just of the same opinion, and that they only think such ceremonies are not to be used when they are unprofitable, or when as good or better may be esr tablished. Hooker. .

There, even just there he stood ; and as she spoke, Where last the sceptic was, she cast her look.

Dryden .

The god Pan guided my hand just to the heart of the beast. Sidney.

A few understand him right ; just as when our Saviour said, in an allegorical sense, Except ye eat the flesh of the son of man, and drink his blood, ye have no life in you. Bentley.

‘Tis with our judgments as our watches, none Go just alike ; yet each believes his own. Pope.

The diadem, with mighty projects lined To catch renown by ruining mankind ; Is worth, with all its gold and glittering store, Just what the toy will sell for, and no more.

Copper. Table Talk. Merely ;• barely.

The Nereids swam before To smooth the seas ; a soft Etesian gale But just inspired and gently swelled the sail.

Dryden.

Give me, ye gods, the product of one field, That so 1 neither may be rich nor poor ; And having Jus* enough, not covet more. Id.

It is the humour of weak and trifling men to value themselves upon jutt nothing at all.

L’ Estrange.

On drooping pinions of ambition lowered Jurt skira earth’s surface, ere we break it uj>

JUS

O’ttr putnd earth to scratch a little d.st

A.nd save the world a nuisance. i ouny.

Nearly ; almost ; tantum non.

Being spent with age, and just at the point of death, Democritus called for loaves of new bread to be brought, and with the steam of them under his nose prolonged his life. Temple.

Why art thou here! There was an hovering

angel

Just lighting on my heart, and thou hast scared it. Maturin. Bertram.

JUST, n. s. & v. n. Fr. jouste. Mock encounter on horseback; tilt; tournament: joust more proper : to engage in a mock fight ; to push, drive, or justle. See JOUST.

Vhat news 1 hold those justs and triumphs ?

Shakspeare.

None was either more grateful to the beholders, or more noble in itself, than justs, both with sword and launce. Sidney.

Among themselves the tourney they divide, In equal squadrons ranged on either side ; Then turned their horses' heads, and man to man, And steed to steed opposed, the justs began.

Dryden,

JUSTS were a sportive kind of combat on horseback, man against man, armed with lances. The word is by some derived from jousti, French, of juxta, Latin, because the combatants fought near each other : others from the modern Greek T&jrpo. Others from justa, which, in the corrupt age of the Latin tongue, was used for this exercise, as it was supposed a more just and equal combat than the tournament. The difference between justs and tournaments consists in this, that the tournament was frequently performed by a number of cavaliers, who fought in a body : the just was a single combat of one man against another. Though the justs were usually made in tournaments after a general rencounter of all the cavaliers, yet they were sometimes singly, and independent of any tournament. Under the title TOURNAMENT it is our intention more particularly to refer to these manly games of ancient chivalry.

JUSTEL (Christopher), a learned counsellor, and secretary to the French king, was born at Paris in 1580, and studied ecclesiastical history. He maintained a correspondence with archbishop Usher, Sir Henry Spelman, and other of the literati of his age, till his death

which happened in 1649. He wrote 1. The Code of the Canons of the Church Universal, and the Councils of Africa, with notes ; 2. A Genealogical History of the house of Auvergne ; and 3. Collections of Greek and Latin Canons, from several MSS., which formed the Bibliotheca Juris Canonici Veteris, published in 2 vols. folio, by William Voet ?nd our author's son.

JTSTEL (Henry), son of Christopher, was born at Paris in 1620. He became secretary and counsellor to the king ; and was as distinguished for his own learning as for patronising it in others. He came to London in 1681, on the persecution jf the Protestants ; and was made keeper of the royal library at St. James's : which office he held till his death in 1693, when he was succeeded by the celebrated Dr. Bentley. He wrote seveial works, the titles of which may be seen in the catalogue of the Bodleian library.

JUSTICE, n. *. & v. a.~\ Fr. justice ; Lat. . US'TICEMENT, n. s. j justitia. The virtue .. US'TICER, n. s. ˆ> by which we give to

JUS'TICESHIP, n. s. I every man what is

JUSTICIABLE, adj. J his due ; opposed to injury or wrong. It is either distributive, belonging to magistrates ; or commutative, respecting common transactions between men : equity; retributive punishment ; assertion of right ; a magistrate ; a judge, of which there are several orders, as specified below: justice, to administer justice : justicement, procedure in courts : justicer, an administrator of law : justiceship, the magisterial office : justiciable, proper to be examined in courts of justice.

He executed the justice of the Lord. Dent O that I were a judge, I would do justice.

25am.

Let justice overtake us. ha. lix. 9.

And thou, Esdras, ordain judges and justices, that they may judge in all Syria. 1 Esdras.

But mercy, Lady ! — at the gret assise, When we shall come before the high justite, So little frent shal then in one ben found, That but thou,

or that day, correcten me, — Of very right, mine werke will be confound.

Chaucer's A, B, C. The justice,

In fair round belly with good capon lined, With eyes severe, and beard of formal cut, Full of wise saws and modern instances ; And so he plays his part.

Shakspeare. As You Like It. Draw thy sword,

That if my speech offend a noble heart, Thy arm may do thee justice. Id. King Lear. The justices of peace are of great use ; anciently they were conservators of the peace ; these are the same, saving that several acts of parliament have enlarged their jurisdiction. Bacon.

As for the title of proscription, wherein the emperor hath been judge and party, and hath justiced himself, God forbid but that it should endure an ap-peal to a war. Bacon.

Examples of justice must be made, for terror to some ; examples of mercy, for comfort to others.

Bacon's Advice to Villiers.

He was a singular good justicer ; and, if he had not died in the second year of his government, was the likeliest person to have reformed the English colonies. Decay on Ireland.

Whereas one Styward, a Scot, was apprehended for intending to poison the young queen of Scots ; the king delivered him to the French king, to be justiced by him at his pleasure. Hayward.

The nature and office of justice being to dispose the mind to a constant and perpetual readiness to render to every man his due, it is evident, that, if gratitude be a part of justice, it must be conversant about something that is due to another. Locke.

True fortitude is seen in great exploits That justice warrants, and that wisdom guides, All else is towering frenzy and distraction.

Addison.

And never meant the rule should be applied To him that fights with justice on his side.

Cowper. Table Talk. There is no future pang Can deal that justice on

the self-condemned, He deals on his own soul. Byron.

Were I to profane these by impertinent criticism, I might with justice be accused of avowed enmity to wit; of open apostasy from true feeling, and true taste. Canning. Microcosm.

JUSTICE.

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JUSTICE is one of the four cardinal virtues. Civilians distinguish justice into two kinds ; communicative and distributive.

1. Communicative justice establishes fair dealing in the mutual commerce between man and man : and includes sincerity in our discourse, and integrity in our dealings. The effect of sincerity is mutual confidence, so necessary among the members of the same community ; and this mutual confidence is sustained and preserved by integrity of conduct. But there seems to be an essential ingredient in communicative or private justice, which is seldom taken notice of by writers on ethics ; we mean mercy. In the present state of human nature strict justice, such as the ut-most rigor of law allows, frequently becomes injustice. This truth we often find exemplified in private life, by rigorous creditors against unfortunate debtors. A striking instance of this kind of justice is recorded of Joseph, the husband of the blessed Virgin, in Matt. i. 19, where he is expressly styled a just man, because he would not go to the utmost rigor even of the Divine Law.

2. Distributive justice is that by which the differences of mankind are decided, according to the rules of equity. This is the justice of princes and magistrates. Among the numerous examples of this virtue, which might be given from various authors, we shall only call the attention of the reader to two instances recorded of Aristides, who, though in low circumstances, and of mean extraction, obtained the glorious surname of the Just ; a title, says Plutarch, truly royal, or rather truly divine : but of which princes are seldom ambitious, because generally ignorant of its beauty and excellence. These are inserted under the article ATTICA ; and the first of them reflects the highest honor, not only upon Aristides, but, upon the Athenians, who by his advice rejected the measure which would have aggrandised their republic to

a decided superiority over all the rest of Greece, merely because it would have been unjust.

JUSTICE. In English law, according to Cowel, we have, I. A Justice of the common pleas (justitiarius communium placitorum). He is a lord by his office, and is called dominus justiciarius communium placitorum. He with his assistants originally did hear and determine all causes at the common law ; that is, all civil causes between common persons, as well personal as real ; for which cause it was called the court of common pleas, in opposition to the pleas of the crown, or the king's pleas, which are special, and appertain to him only. 2. Justice of the forest (justiciarius forestae), is a lord by his office, and has the hearing and determining of all offences within the king's forest, committed against venison or vert : of these there are two, whereof the one has jurisdiction over all the forests on this side Trent, and the other of all beyond. 3. Justices of assize fjustitiarii ad capiendas assisas) are such as were wont, by special commission, to be sent into this or that country to take assises ; the ground of which policy was the ease of the subjects ; for, whereas these actions pass always by jury, so many men might not, without great hindrance te brought to London ; and therefore

justices for this purpose, were by commission particularly authorised and sent down to them. 4. Justices in eyre (justiciarii itinerantes) are so termed of the French errer. The use of these, in ancient time, was to send them with commission into divers counties, to hear such causes especially as were termed the pleas of the crown, and therefore I must imagine they were sent abroad for the ease of the subjects, who must else hare been hurried to the king's bench, rf the case were too high for the country court. They differed irom the justices of oyer and terminer, because they were sent upon some one or few especial cases, and to one place; whereas the justices in eyre were sent through the provinces and countries of the land, with more indefinite and general commission. 5. Justices of gaol delivery (justitiarii ad gaolas deliberan-das) are such as are sent with commission to hear and determine all causes appertaining to such as for any offence are cast into gaol, part of whose authority is to punish such as let to main-prise those prisoners that by law are not bailable. These by likelihood, in ancient time, were sent to counties upon several occasions ; but afterwards justices of assise were likewise authorised to this. 6. Justices of nisi prius are all one now a-days with justices of assise ; for it is a common adjournment of a cause, in the common pleas, to put it off to such a day : nisi prius justitiarii venerint ad eas partes ad

capiendas assisas ; and upon this clause of adjournment they are called justices of nisi prius, as well as juitices of as-sise, by reason of the writ or action that they have to deal in. 7. Justices of peace (justitiarii ad pacem) are they that are appointed by the king's commission, with others, to attend the peace of the country where they dwell ; of whom some, upon especial respect, are made of the quorum, because business of importance may not be dealt in without the presence of them, or one of them.

A JUSTICE, in English law, is a person deputed to administer justice, whose authority arises from his majesty's deputation, and not by right of magistracy. Of these justices there are various kinds in England : *viz.*

1. Chief justice of the common pleas, see the preceding article.

2. Chief justice of the king's bench, the capital justice of Great Britain. This officer was formerly not only chief justice, but also chief baron of the exchequer, and master of the court of wards. He usually sat in the king's palace, and there executed that office, formerly performed per comitem palatii ; he there determined all differences between the barons and other great men. He was vicegerent of the kingdom when the king went beyond sea, and was usually chosen to that office out of the prime nobility ; but his power was reduced by king Richard I. and Edward I. His office is now divided, and his title changed to capitalis justitiarius ad placita, coram rege tenenda, or capitalis justitiarius banci regii.

To the preceding description of our great legal officers from Cowel, may be added that of

Justices of assise. Those pass the circuit by two two twice every year thrc.ugh all England, ex-

cept the four northern counties, where they go only once, despatching their several businesses by several commissions ; for they have one

commission to take assises, another to deliver gaols, and another of oyer and terminer. In London and Middlesex a court of general gaol-delivery is held eight times a year. All the justices of peace of any county wherein the assises are held are bound by law to attend them, or else are liable to a fine, in order to return recognizances, &c., and to assist the judges in such matters as lie within their knowledge and jurisdiction, and in which some of them have been probably concerned, by way of previous examination. See ASSISE and JURY.

Justi-es of gaol-delivery are empowered by the common law to proceed upon indictments of felony, trespass, &c. ; to order execution or reprieve ; and to discharge such prisoners as upon their trials shall be acquitted; with all such against whom, on proclamation being made, no evidence appears to indict ; which justices of oyei and terminer, &c., may not do. 2 Hawk. 24, 25. But these justices have nothing to do with any person not in the custody of the prison, ex-cept in some special cases ; as if some of the accomplices to a felony may be in such prison, and some of them out of it, the justices may receive an appeal against those who are out of the prison as well as those who are in it; which appeal, after the trial of such prisoners, shall be removed into B. R. and process issue from them against the rest. But if those out of prison be omitted in the appeal, they can never be put into any other ; because there can be but one appeal for one felony. In this way the gaols are cleared and all offenders tried, punished, or delivered, in every year. Their commission is now turned over to the justices of assise. Justices of oyer and terminer were justices deputed on some special occasions to hear and determine particular causes. The commission is directed to certain persons upon any insurrection, heinous demeanor, or trespass committed, who must first enquire, by means of the grand jury or inquest, before they are empowered to hear and determine by the help of the petitjury. It was formerly held, that no judge or other law-yer could act in the commission of oyer and terminer, or in that of gaol delivery, within the county where he was born or inhabited : but it was thought proper, by 12 Geo. II. c. 27, to allow any man to be a justice of oyer and terminer and general gaol-delivery, within any county of England.

Justices of the peace. Of these some for special respect are made of the quorum, so as no business of importance may be despatched without the presence or assent of them or one of them. However, every justice of peace has a separate power, and his office is to call before him, examine, and issue warrants for apprehending, and commit to prison, all thieves, murderers, wandering rogues ; those that hold conspiracies, riots, and almost all delinquents, which may occasion the breach of the peace and quiet of the subject; to commit to prison such

as cannot find bail, and to see them brought forth in ‘hie time to trial ; and bind over the prosecu-

tors to the assises. And if they neglect to cer-tify examinations and informations to the next gaol-delivery, or do not bind over prosecutors, they shall be fined. A justice may commit a person that doth a felony in his own view without warrant ; but, if on the information of another, he must make a warrant under hand and seal for that purpose. If complaint and oath be made before a justice of goods stolen, and the informer, suspecting that they are in a particular house, shows the cause of his suspicion, the Justice may grant a warrant to the constable, &c., to search in the place suspected, to seize the goods and person in whose custody they are found, and bring them before him or some other justice. The search on these warrants ought to be in the day-time, and doors may be broken open by constables to take the goods. Justices of peace may make and persuade an agreement in petty quarrels and breaches of the peace, where the king is not entitled to a fine, though they may not compound offences or take money for making agreements. A justice has a discretionary power of binding to good behaviour; and may require a recognizance, with a great penalty of one, for his keeping of the peace, where the party found is a dangerous person, and likely to break the peace, and do much mischief; and for default of sureties he may be committed to gaol. But a man giving security for keeping the peace in the king’s bench or chancery, may have a supersedeas to the justices in the county not to take security ; and also by giving surety of the peace to any other justice. If one make an assault upon a justice of peace, he may apprehend the offender, and commit him to gaol till he find sureties for the peace : and a justice may record a forcible entry on his possession ; in other cases he cannot judge in his own cause. Contempts against justices are punishable by indictment and fine at the sessions. Justices shall not be regularly punished for any thing done by them in sessions as judges; and, if a justice be tr ed for any thing done in his office, he may plead the general issue, and give the special matter in evidence ; and if a verdict is given for him, or the plaintiff be nonsuited, he shall have double costs, and such action shall only be laid in the county where the offence was committed. 7 Jac. c. 5 ; 21 Jac. c. 12. But, if they are guilty of any misdemeanor in office, information lies against them in the king’s bench, where they shall be punished by a fine and imprisonment ; and all persons who recover a verdict against a justice for any wilful or malicious injury are entitled to double costs. By 24 Geo. II., c. 44, no writ shall be sued out against any justice of peace, for any thing done by him in the

execution of his office, until notice in writing shall be delivered to him one month before the suing out of the same, containing the cause of action, &c., within which month he may tender amends; and, if the tender be found sufficient, he shall have a verdict, &c. Nor shall any action be brought against a justice for any thing done in the execution of his office, unless commenced within six months after the act committed. A justice is to exercise his authority only within the county where he is appointed by his commission.

not in any city which is a county of itself, or town corporate, having their proper justices, &c., hut in other towns and liberties he may. The power and office of justices terminate in six months after the demise of the crown, by an express writ of discharge under the greal seal, by writ of supersedeas, by a new commission, and by accession of the office of sheriff or coroner. The origin of justices of the peace is referred to the fourth year of Edward III. They were first called conservators, or wardens of the peace, elected by the county, upon a writ directed to the sheriff; but the power of appointing them was transferred by statute from the people to the king ; and under this appellation appointed by 1 Edw. III. c. 16. Afterwards the statute 34 Edw. III., c. 1, gave them the power of trying felonies, and they acquired the appellation of justices. They are appointed by the king's special commission under the great seal, the form of which was settled by all the judges A. D. 1590 ; and the king may appoint as many as he shall think fit in every county in England and Wales, though they are generally made at the discretion of the lord chancellor by the king's leave. At first the number of justices was not above two or three in a county, 18 Edw. III. c. 2. Then it was provided, by 34 Edw. III. c. 1, that one lord, and three or four of the most worthy men in the county, with some learned in the law, should be made justices in every county. The number was afterwards restrained first to six, and then to eight in every county, by 12 Rich. II. c. 10, and 14 Rich II. c. 11. But their number has greatly increased since their first institution. As to their qualifications, the statutes just cited di-rect them to be of the oest reputation, and most worthy men in the county; and the statute

13 Rich. II. c. 7, orders them to be of the most sufficient knights, esquires, and gentlemen of the law; and by Hen. V. stat. 1, c. 4. and stat. 2, c. 1, they must be resident in their several counties. And, by 18 Hen. VI. c. 11, no justice was to be put in commission, if he had not lands to the value of £20 per annum. It is now enacted, by 5 Geo. II. c. 11, that every justice shall have £100 per annum, clear of all deductions: of which he must make oath by 18 Geo. II. c. 20. And if he acts without such qualifications he shall forfeit £100. It is also provided by 5 Geo. II. that no practising attorney, solicitor, or proctor, shall be capable of acting as a justice of the peace.

Justices of the peace within liberties are justices who have the same authority in cities or other corporate towns, as the others have in counties ; and their power is the same ; only that these have the assise of ale and beer, and wood and victuals, &c. Justices of cities and corporations are not within the qualification act, 5 Geo. II. c. 18.

In addition to what we have thus derived from the usual authorities, we may notice;

By 39 Geo. III., c. 110, certain judges' salaries were made up to the following amount in the whole, *viz.* master of the rolls and chief baron to £4000 ; puisne judges and barons £3000. By 49 Geo. III., c. 127, the salary of the chief baron was increased to £5000 ; and that of the puisne judges and .barons to £4000.

Pensions may be granted (39 Geo. III. c. 110) by his majesty to the judges in England on resignation. To the lord chancellor £4000 ; chief justice of king's bench £3000; master of the rolls, chief justice of common pleas, and chiet baron, £2500; puisne judges £2000. And, by 53 Geo. III. c. 153, £800 a year additional may be granted to the chief justices and chief barons, and master of the rolls : and £600 additional to the puisne judges and barons. Such judges (except the chancellor) must have continued in office fifteen years, unless prevented by ill health.

By 50 Geo. III., c. 31, the salaries of the Scotch judges were increased to the following amount, *viz.* the lord president of the court of session £4300 ; lords of session £2000 ; lord justice clerk £4000; lords of session, being commissioners of justiciary, £2600 ; lord chief baron £4000 ; puisne barons £2000.

The salaries and allowances of the judges in Ireland are ascertained by

the Irish acts, 36 Geo. III. c. 26, and 40 Geo. III. c. 69. And by statutes 41 Geo. III. c. 25 ; 42 Geo. III. c. 105; 50 Geo. III. c. 31, § 3,4; 54 Geo. III. c. 95; and 55 Geo. III. c. 114.

The salary of the lord chancellor is, by 42 Geo. III. c. 105, fixed at £10,000: and by 41 Geo. III. c. 25 ; 55 Geo. III. c. 114 ; that of the master of the rolls at £4300. By 36 Geo. III., c. 26, the salary of the chief justice of king's bench is increased to £4000 a year; that of the chief justice of common pleas, and the chief baron, to £3500 ; and those of the puisne judges and barons to £2500. By 50 Geo. III. c. 31, § 3, £650 are added to the puisne judges and barons.

40 Geo. III., c. 69, further regulates the allowances to the judges on resignation. Lord chancellor £4000 a year ; chief justice of king's bench £3000 ; master of the rolls £2700 ; chief iustice of common pleas, and chief baron of exchequer, £2700; puisne judges and barons £2000. By 54 Geo. III., c. 95, the following sums are added, *viz.* to the chief justice of king's bench £800; to the chief justice of common pleas, and chief baron, £600 ; puisne judges and barons £600. And by 55 Geo. III., c. 114, £600 are added to the allowance to the master of the rolls, on resignation.

The king is considered, in this realm, as the fountain of justice, and general conservator of the peace. The original power of judicature, by the fundamental principles of society, is lodged in the society at large ; but, as it would be impracticable to render complete justice to every individual by the people in their collective capacity, every nation has committed that power to certain select magistrates, who, with more ease and expedition, can hear and determine complaints ; and, in this kingdom, this authority has immemorially been exercised by the king or his substitutes. He, therefore, has alone the right of erecting courts of judicature; for, though the constitution of the kingdom has entrusted him with the whole executive power of the laws, it is impossible, as well as improper, that he should personally carry into execution this great and extensive trust; it is consequently necessary

that courts should be erected, to assist him in executing this power ; and equally necessary that, if erected, they should be erected by his authority. And hence it is that all jurisdictions of courts are, either

mediately or immediately, derived from the crown; their proceedings run generally in the king's name, they pass under his seal, and are executed by his officers.

Before the constitution arrived at its full perfection our kings, in person, often heard and determined causes. But at present, by the long and uniform usage of many ages, the king has delegated his whole judicial power to the judges of his several courts; which are the grand depositories of the fundamental laws of the kingdom, and have gained a known and stated jurisdiction, regulated by certain and established rules, which the crown itself cannot alter, but by act of parliament.

The king in all cases doth judge by his judges; who ought to be of counsel with prisoners : and if they are doubtful or mistaken in matter of Jaw, a stander-by may be allowed to inform the court, as amicus curiae. 2 Inst. 178. Our judges are to execute their offices in proper per-son, and cannot act by deputy, or transfer their power to others ; as the judges of ecclesiastical courts may. 1 llol. Abr. 382. Bro. Judges, 11. Yet, where there are divers judges of a court of record, the act of any one of them is effectual ; especially if their commissions do not expressly require more. 2 Hawk. P. C. c. 1. Though what a majority rules when present, is the act of the court ; if on a demurrer, or special verdict, the judges are divided in opinion, two against two, the cause must be adjourned into the exchequer chamber. 3 Mod. 156. And a rule is to be made for this purpose, and the record certified, &c. 5 Mod. 335. In fines levied, all the judges of the king's bench ought to be particularly named : except when writs of certiorari to remove records out of that court, &c., are directed to the chief justice, without naming his companions. 1 Henry VII. 27 ; Jenk. Cent. 167. When a record is before the judges, they ought ex officio to try it; but no judge is compellable to declare opinion of a cause before it comes on.

It is enacted, by the statute 13 Will. III., c. 2, that the commissions of the judges shall be made (not, as formerly, durante bene placito, but)quam < liu se bene gesserint, and their salaries ascertained and established; but that it may be lawful to remove them on the address of both houses of parliament. And by the improvements of that law in the statute of 1 Geo. III., c. 23, enacted at the earnest recommendation of king George III. himself, from the throne, the judges are continued in their offices during their good behaviour, notwithstanding any de-mise of the crown (which was formerly held immediately to vacate their seats); and their full .salaries are secured to them during the continuance of their commissions.

In criminal proceedings, or prosecutions for offences, it would be a

still higher absurdity, if the kins:, personally, sat in judgment; because, in regard to these, he appears in another capacity, that of prosecutor. All offences are either

against the king's peace, or his crown and dignity ; and are so laid in every indictment. For, though in their consequences they generally seem (except in the case of treason, and a very few others) to be rather offences against the kingdom than against the king, yet, as the pub-lic, which is an invisible body, has delegated all its power and rights, with regard to the execution of the laws, to one visible magistrate, all affronts to that power, and breaches of those rights, are immediately offences against him, to whom they are so delegated by the public. Hence also arises the most mild and enviable branch of the prerogative, that of pardoning offences.

In this distinct and separate existence of the judicial power in a peculiar body of men, nominated indeed, but not removeable at pleasure by the crown, consists one main preservative of the public liberty ; which cannot subsist long in any state, unless the administration of common justice be, in some degree, separated both from the legislative and also from the executive power. Were it joined with the legislative, the life, liberty, and property of the subject would be in the hands of arbitrary judges, whose decisions would be then regulated only by their own opinions, and not by any fundamental principles of law ; which, though legislators may depart from it, yet judges are bound to observe. Were it joined with the executive, this union might soon be an overbalance for the legislative. For which reason, by statute 16 Car. I., c. 10, which abolished the court of star-chamber, effectual care is taken to remove all judicial power out of the hands of the king's privy council. See 1 Comm. 266—269. c. 7.

It is a species of treason under statute 25 Edw. III., c. 2, ' if a man slay the chancellor, treasurer, or the king's justices of the one bench or the other, justices in eyre, or justices of assise, and all other justices assigned to hear and determine, being in their places doing their offices.' But this statute extends only to the actually killing, not to wounding or attempting to kill them. It extends also only to the officers specified ; and therefore, the barons of the exchequer, as such, are not within the protection of the act. 1 Hal. P. C. 231. But the lord chancellor and keeper of the great seal seem to be comprehended by 5 Eliz. c. 18, and 1 Will. & Mary, c. 21. See LAW.

All the judges of courts of record are freed from prosecutions, and can

only be punished in parliament for any thing done by them in such courts as judges ; but if a judge so far forget the dignity and honor of his post as to turn solicitor in a cause which he is to judge, and privately and extrajudicially tamper with witnesses, or labor jurors, he may be dealt with according to the capacity to which he so basely degrades himself. 12 Rep. 24. Vaugh. 138. S. P. C. 173. Judges are not in any way punishable for a mere error of judgment.

A judge on his creation swears, 'That he will serve the king, and indifferently administer justice to all men, without respect of persons, take no bribe, give no counsel where he is a party, nor deny right to any, though the king, or any

other, by letters, or by express words, command the contrary, &c. ; and in default of duty, to be answerable to the king in body, land, and goods.' Statute 18 Edw. III., statute 4. See also statute 20 Edw. III., c. 1, 2.

The judges have been said to have a private knowledge, and a judicial knowledge, and though they cannot judge of their own private knowledge, they may use their discretion : but where a judge has a judicial knowledge, he shall give ju. lament according to it. King Henry IV. asked judge Gascoign, If he saw one in his presence kill A. B., and another person, who was not culpable, should be indicted of this, and found guilty before him, what he would do in this case; to which he answered That he ought to respite the judgment against him, and relate t'.ie matter to the king, in order to procure him a pardon : for there he cannot acquit him, and give judgment according to his private knowledge.—Flowd. 82.

A judge ought not to judge in his own cause, or in pleas where he is party. If a fine be le-vied to a justice of bank, he cannot take the

conusance; for he cannot be his own judge. 8 Henry VI., 21. Br. Patents, pi. 15, cites S. C. per Martin. If a fine be levied by or to a justice in bank, his name shall not be in the fine. 11 Henry VI. 49, b. So if a justice of !>ank be sued in bank he cannot record it; it shall be recorded by the other justices. Ibid. If the chief justice of bank be to sue a writ there, the writ shall not be in his r*ame, but in the came of the secondary. 8 Henry VI., 19, b.

Judgment given by a judge, who is party in the suit with another, and so entered of record, is error, although several other judges sit there, and give judgment for the judge who is party. Jenk. 90, pi. 74, And judges are punishable for wilful offences against the duty of their situation; instances of which happily, however, live only in history. A justice cannot rase a record, or embezzle it, nor file an indictment which is not found, nor give judgment of death where the law does not give it; if he does, it is misprision, he shall lose his office, and make fine for misprision : but it is not felony.

By ISGeo. III., c. 31, offenders against whom warrants are issued by any justice of peace in England, escaping into Scotland, the justices in Scotland may indorse the warrant, and the offender shall be conveyed to the adjacent county of England, and the justices there shall (if that is not the county where the offence was committed) indorse the warrant, 5cc., according to the directions of stat. 24 Geo II., c. 55 : and by 54 Geo. III., c. 186, the provisions of the act 13 Geo. III., c. 31, are extended to the cases of all warrants issued in England, Scotland, or Ireland, respectively.

JUSTICI A, Malabar nut, a genus of the monogynia order, and diandria class of plants ; natural order fortieth, personatce: COB. ringent : CAPS. bilocular, parting with an elastic spring at the heel ; the stamina have only one anthera. There are thirty species, all natives of the East Indies, growing many feet high ; some adorned with fine large leaves, others with small narrow ones,

and all of them with monopetalous ringent flowers. Only two species are cultivated in our gardens, *viz.*

1. J. adhati-da tne common Malabar nut. It grows ten or twelve feet high, with a strong woody stem, branching out widely all around ; having large, lanceolate, oval leaves, placed opposite, and from the ends of the branches short spikes of white flowers, with dark spots, having the helmet of the corolla concave.

2. J. hyssopifolia, the snap-tree. It has a shrubby stem, branching from the bottom pyramidally, three or four feet high ; spear-shaped, narrow entire leaves, growing opposite ; and white flowers, commonly by threes, from the sides of the branches ; succeeded by capsules, which burst open with elastic force for the discharge of the seeds : whence the name of snap-tree. Both species flower here in summer, but never produce any fruit. They are propagated by layers and cuttings, and require the same treatment with other tender exotics.

JUSTICIAR, in the old English laws, an officer instituted by William the Conqueror, as the chief officer of state, who principally determined in all cases civil and criminal. He was called in Latin capitalis justitiarius totius Angliae.

JUSTIFIABLE, adj. ~} Fr. justifier ; \ovr JUSTIFI'ABLENESS, n. *. Lat. justified. To JUSTIFIABLY, adv. justify is to clear

ˆ•from imputed guilt ; to maintain, defend, or vindicate ; to ab-J solve from obligation

JUSTIFICATION, n. s.

JCSTIFICA'TOR, n. t.

JUSTIFI'ER, n. s.

JUS'TIFY, v. a.

to punishment. Justifiable, defensible by law or reason: justifiableness, rectitude; defensi-bility : justifiably, rightly, so as to be clear from blame : justification, absolution ; proof of innocence; defence; vindication; deliverance by pardon from past transgression : justificator and justifier, one who justifies, absolves, defends, or acquits.

How can man be justified with God] Or how can he be clean that is born of a woman 1 Job.

They say, Behold a man gluttonous, a friend of publicans and sinners ; but wisdom is juitified of her children. Matthew.

By him all that believe are justified from all things, from which ye

could not be jusiijied by the law of Moses. Acts.

That he might be just, and the justifier of him which believeth in Jesus. Rom. iii. 26.

There is an exquisite subtilty, and the same is unjust ; and there is a man that justifieth in judgment. Ecclus.

I hope, for my brother's justification, he wrote this but as an essay of my virtue. Shctkspeare.

The law hath judged thee, Eleanor ; I cannot justify whom law condemns. '.

Men, jealous of tiiejustifiableness of their doings before God, never think they have human strength enough. Ktng Charles*

'Tis the consummation of that former act of faith by this latter, or, in the words of St. Paul and St. James, the corsummation of faith by charity and good works, that God accepteth in Christ to juxtifi-

cation, aud not the hare aptness of faith to bring forth works, if those works, by the fault of a rebellious infidel, will not be brought forth. Hammond.

My unwilling flight the gods inforce, And that must justify our sad divorce.

Denham.

What she did, whatever in itself, Her doing seemed to justify the deed.

Milton.

Just are the ways of God, And justifiable to men. Id. Agonistes.

In such righteousness, To them by faith imputed, they may find Justification towards God, and peace Of conscience. Id. Paradise Lost.

Although some animals in the water do carry a justifiable resemblance to some at land, yet are the major part which bear their names unlike.

Browne's Vulgar Errours.

When we began in courteous manner to lay his unkindness unto him, he seeing himself confronted by so many, like a resolute orator, went not to de-nial, but to justify his cruel falsehood. Sidney.

You're neither justified, nor yet accused.

Dryden.

Yet still thy fools shall stand in thy defence, And justify their author's want of sense. Id. A man may more justifiably throw cross and pile for his opinions, than take them up by such measures.

Locke.

Let others justify their missions as they can, we are sure we can justify that of our fathers by an uninterrupted succession. Atterbnry.

Sins may be forgiven through repentance, but no act or writ of man will ever justify them.

Sherlock.

Among theological arguments, in justification of absolute obedience, was one of a singular nature.

Swift.

There stand, and justify the foul abuse Of sabbath hours with plausible excuse.

Cowper. Progress of Error.

Who, when occasion justified its use, Had wit as bright as ready to produce.

Id. Conversation. It is a foible which

Was not of mine, but more excuses you, Inasmuch as it shows that I approach A dotage which may justify this deed Of yours, although the law does not, nor will.

Byron. Two Foscari.

An amendment has been made, and it has been justified by a declaration which I made some years ago, when I stated, that it would be exceedingly onerous for this country to engage in war.

Canning's Speeches.

JUSTIFICATION, in theology, that act of grace which renders a man free from sin in the sight of God. See THEOLOGY. Protestants contend for justification by faith alone ; the Romanists by good works.

JUSTIN I., emperor of the east, rose gradually from being a swine-herd to the rank of general, and finally became emperor on the death of Anastasius I. in 518. He recalled the orthodox bishops, and published some severe edicts against the Arians. He died A. D. 527, aged fifty-seven.

JUSTIN MARTYR, or Si. JTTSTIN-, one of the

earliest and most learned writers of the eastern church, was born at Neapolis, the ancient Shechem of Palestine. His father Priscus, a Gentile Greek, brought him up in h.s own religion, and had him educated in all the Grecian learning. To complete his studies he travelled to Egypt ; and followed the sect of Plato, with whose philosophy be was much pleased. But one day walking by ihe sea-side, wrapt in contemplation, he was met by a grave old man of a venerable aspect ; who, falling into discourse with him, turned tr.e conversation by degrees from the excellence of Platonism to the merits of Christianity, and thus created in Justin an ardent curiosity to enquire into that religion ; in consequence of which enquiry he was converted about A. D. 132. On his embracing Christianity he quitted neither the profession nor the habit of a philosopher ; but, a persecution breaking out under Antoninus, he composed An Apology for the Christians; and afterwards presented another to Marcus Aurelius, in which he vindicated the innocence and holiness of the Christian religion against Crescens, a Cynic philosopher, and other calumniators. He did honor to Christianity by his learning and the purity of his manners; and suffered martyrdom in 167. Besides his two Apologies, there are still extant his Dialogue with Trypho, a Jew; two treatises addressed to the

Gentiles, aud another on The Unity of God. Other works are also ascribed to him. The best editions of St. Justin are those of Robert Stephens, in 1551 and 1571, in Greek and Latin ; that of Morel, in Greek and Latin, in 1656 ; and that of Don Prudentius Morandus, a learned Benedictine, in 1742, in folio. His style is plain, and void of all ornament.

JUSTTNGEN, a town of Suabia, capital of a lordship, purchased in 1715 by the duke of Wurtemburgh, for 300,000 florins. It gives him a seat and vote at the imperial diets. It is sixteen miles N. N. E. of Buchau, and thirty south-east of Stutgard.

JUSTINIAN I., son of Justin I., was made Caesar and Augustus in 527, and soon after emperor. He conquered the Persians by Belisarius his general, and exterminated the Vandals ; regained Africa ; subdued the Goths in Italy ; defeated the Moors ; and restored the Roman empire to its primitive glory. He appointed ten able lawyers to collect the whole Roman laws into one body, entitled Codex Justinianus, or the Justinian Code ; which may be called the statute law, as containing the rescripts of the emperors; and reduced the decisions of the judges and other magistrates, which were scattered in 2000 volumes, to the limits of fifty, which were entitled Digests or Pandects, and completed in 555. He also ordered four books of Institutes to be drawn up, containing an abstract of all the ancient laws; and in 541 compiled an abstract of the modern laws undei the title of Novelise, or the New Code. He died in 565, aged eighty-three, in the thirty-ninth year of his reign. He founded the church of Santa Sophia at Constantinople, which is esteemed a masterpiece of architecture. See WESTERN EMPIRE.

JUSTINIANI (Augustin), bishop of Nebo, one of the most learned men of his time, was descended of a noble family, and born at Genoa in

1480. He assisted at the fifth council of Lateran, where he opposed some articles of the concordat between France and the court of Rome. Francis I. of France made him his almoner; and he was for five years regius professor of Hebrew at Paris. He returned to Genoa in 1522, where he discharged the duties of his episcopal office till his death ; and learning and piety flourished in his diocese. He perished at sea, in his passage from Genoa to Nehbio, in 1536. He composed several pieces, the most considerable of which is, Psalterium Hebraum, Grsecum, Arabicum, et Chaldaeum, cum tribus Latinis interpretationibus et glossis. He is also said to have translated Maimonides's More Nevochim.

JUSTIXIAM (Bernard), was born at Venice in 1408. He obtained the senator's robe at the age of nineteen, served the republic in several embassies, and was elected procurator of St. Mark in 1474. He was a learned man, and wrote the History of Venice, with some other works of considerable merit; and died in 1498.

JUSTINUS (Marcus Junianus), a celebrated historian, who lived, according to the most probable opinion, in the second century, under Antoninus Pius. He wrote, in elegant Latin, An Abridgment of the History of Trogus Pompeius ; containing the actions of almost all nations, from Ninus the founder of the Assyrian empire to Augustus. The original work of Trogus, to the regret of the learned, is lost. The best editions of Justinus are Ad usum Delphini, in 4to ; and Cum notis Vario"rum et Gronovii, in 8vo.

JUSTLE, v. n. & v. a. Fr. jouster. To encounter, or rush against each other ; to push, drive, or force : commonly used with the particle out or off".

The chariots shall rage in the streets, they shall jostle one against another in the broad ways.

Nah. ii. 4.

While injury of chance Puts back leave taking, justtes roughly by All time of pause, rudely beguiles our lips Of all rejoinder.

Shakspeare. Troilus and Cre*sida.

Private and single abilities should not justle out and deprive the church of the joint abilities of many learned and godly men. King Charlei.

Argo passed Through Bosphorus, betwixt the jvstling rocks.

Milton.

Late the clouds

Justling, or p ished with winds, rude in their shock Tine the slant lightning. Id. Paradise Lost.

Many excellent strains have been justled off" by .heir intmsions. Brantie's I'ulgar Errours.

Not one starry spark. But gods met gods, and justle in the dark.

Lee.

It is not to be imagined that the incongruous alphabets and abuses of writing can ever be justled cvt of their possession of all libraries. Holder.

Courtiers therefore justle for a grant ; And, when they break their friendship, plead their

want. Drydet.

The more remote run stumbling with their fear, And, in the dark, men justle as they meet. Id.

When elephant 'gainst elephant did rear His trunk, and castles justled in the air, My sword the way to victory had shown. Id.

The surly commons shall respect deny, And justle peerage out with property. Id. Absent good, though thought on, not making any part of unhappiness in its absence, is justled out to make way for the removal of those uneasinesses we feel. Locke.

We justled one another out, and disputed the post for a great while. Addison's Guardian.

I thought the dean had been too proud To justle here among a crowd. Sirift.

JUSTLY, adv. \ Uprightly ; honestly ; pro-JUST'KESS, n. s. S perly ; exactly : justness, reasonableness ; equity ; accuracy ; propriety of adjustment : justness is properly applied to things, and justice to persons; though we now say the justice of a cause, as well as of a judge.

It maketh unto the right of the war against him, whose success useth commonly to be according to the justness of the cause for which it is made.

- Spenser on Ireland. We may not think the justness of each act

Such and no other than event doth form it.

Shakspeare ,

With ignominy scourged, in open sight : Next view the Tarquin kings ; the avenging sword Of Brutus justly drawn, and Rome restored.

Dry ilen.

Their artful hands instruct the lute to sound, Their feet assist their hands, and justly beat the ground. Id.

I value the satisfaction I had in seeing it represented with all the justness and gracefulness of ac-tion. Id.

Nothing can justly be despised that cannot justly be blamed : where there is no choice, there can be no blame. South.

I appeal to the people, was the usual saying of a very excellent dramatick poet, when he had any dispute with particular persons about the justness and regularity of his productions. Add-on.

The goddess, studious of her Grecians' fate, Taught them in laws and letters to excel, In acting justly, and in writing well. Prior.

They thought him, and they justly thought him,

one Sent to do more than he appeared to have done.

Cowper, Conversation. Tears flow, and cease not, where the good man

lies,

Till all who knew him follow to the skies. Tears therefore fall where Chester's ashes sleep ; Him wife, friends, brothers, childien, servants, weep ; And justly, few shall ever him transcend As husband, parent, brother, master, friend.

Cowper. Epitaph on Mr. Chester

JUSTUS (Jonas), a Protestant divine, born at North Hausen, in

Thuringia, in 1493. He was one of Luther's most zealous disciples. He contracted a strict friendship with Melancthon ; be-

came principal of the college of Wittemburg, and afterwards dean of the university of that city. He wrote a treatise in favor of the marriage of priests, and other works; and died in 1555. JUT, v. n.) A word supposed to be cor-JUT'TY.V.O. Erupted from jet, perhaps from shoot. To push or shoot into prominences ; to come out beyond the main bulk.

Then lend the eye a terrible aspect ; Let it pry through the portage of the head Like a brass cannon : let the brow o'erwhelm it As fearfully as doth a galled rock O'erhang and jutty his confounded base, Swilled with the wild and wasteful ocean.

Shakspeare.

Insulting tyranny begins to jut Upon the innocent and awless throne. Id.

All the projected or jutting parts should be very modei ate, especially the cornices of the lower orders.

Wotton.

Tbc land, if not restrained, had met your way, Projected out a ueck, and jutted to the sea.

Dry den.

Broke by the jutting land on either side ; In double streams the briny waters glide. Id. It seems to jut out of the structure of the poem, and be independent of it. Broome.

Day after day

Sad on the jutting eminence he sits And views the main that ever toils below.

Thomson.

JUTES, in ancient history, were a tribe of the Gets-, the conquerors of various countries : the Jutes inhabited the extremity of the Cimbric Chersonesus, which from them is still called Jutland.

JUTLAND, a peninsula of northern Europe, belonging to Denmark, the ancient Cimbria, and Chersonesus Cimbricus, bounded on the east by the Scaggerac, the Little Belt, and the Baltic; on the south by the duchy of Holstein ; and on the west and north by the Northern Sea. It is about 200 miles long, and ninety-five broad, and generally divided into North Jutland or Jutland Proper, and South Jutland, also called the duchy of SLESWICK, which see.

JUTLAND, or NORTH JUTLAND, bounded on all sides by the sea, except towards the south, where its boundary is the duchy of Sleswick, is about 150 miles long, and from sixty to eighty broad. Of all the Danish territories it is the largest, and yields the greatest revenue. The middle part consists of heaths and moors, intermixed with arable land ; but these afford good pasture for oxen, sheep, and goats. The other parts, of greater extent, are very fertile, and yield large crops of grain, annually exported to Sweden, Norway, and Holland. The inhabitants also derive considerable trade from their oxen, horses, and hogs. Jutland is commonly called ‘ the land” of bacon and rye bread.’ It is also well supplied with fresh water and sea fish. On the east it has fine woods of oak, beech, fir, &c. but on the west side the inhabitants are obliged to use their heath and turf for fuel. Jutland abounds likewise with £ame. The air is cold, especially towards the North Sea : but the inhabitants are

vigorous and robust, and seem to have gained a great degree of practical freedom. Many of them have freeholds, for which they pay a small acknowledgment to the lord of the manor. The Danish language is spoken here with a particular accent. North Jutland is composed of four Lutheran dioceses, or governments, each of which has its bishop and general-governor; and they derive their names from those of their chief cities, *viz.* Aalbourg, Wibourg, Arrhuus, and Ripen. The population of these four dioceses is stated by Mr. Coxe at 358,136

persons. Jutland yields tripoly and fuller's earth, alum and vitriol.

JUTURNA, in fabulous history, a sister of Turnus, king of the Rutuli. She was ravished by Jupiter, made immortal by him, and afterwards turned into a fountain, the waters of which cured all diseases, and were used in the sacrifices of Vesta.

JUVENAL (Decius Junius), the celebrated Roman satirist, was born about the beginning of the emperor Claudian's reign, at Aquinum in Campania. He was educated for an orator, studied under Quintilian, and made a distinguished figure at the bar in Rome, where he acquired a considerable fortune before he commenced poet. It is said he was above forty years of age when he recited his first essay to a small audience of his friends : but, being encouraged by their applause, he ventured a larger publication, which reaching the ears of Paris, Domitian's favorite at that time, though but a pantomime player, whom our satirist had severely insulted, that minion complained to the emperor, who banished him by giving him the command of a cohort in the army, at Pentapolis. After Domitian's death Juvenal returned to Rome, sufficiently cautioned against attacking living characters and people in power under arbitrary princes; and therefore he thus concludes his first satire : —

Experiar quid concedatur in illos Quorum Flaminia tegitur cinis atque Latini.

' I will try what liberties I may be allowed with those whose ashes lie under the Flaminian and Latin ways,' along each side of which the Romans of the first rank used to be buried. It is believed that he lived till the reign of Adrian in 128. There are still extant sixteen of his satires, in which he discovers great wit, strength, and keenness, in his language : but his style is not perfectly natvral ; and the obscenities with which these satires abound render them improper to be put into the hands of youth.

JUVENAL DE CAVENCAS (Felix), an ingenious writer, born at Pezena in 1679. He wrote, 1. The Principles of History. 2. Essays on the History of the Sciences, the Belles Lettres, and the Arts. He died in 1760.

JU'VENILE, adj.) lAt. juvenilis. Young JUVENIL'ITY, n. s.] youthful; youthfulness light and careless in air or manner.

Learning hath its infancy when it is almost childish ; then its youth, when it is luxuriant and juvenile ; then its strength of years, when it is

solid ;

and lastly, its old age, when it waxeth dry and exhausts. Bacon'* Estays.

Customary strains and abstracted juvenilities have made it difficult to commend and speak credibly in dedications. Glanvllle.

The restoration of grey hairs to juvenility, and renewing exhausted marrow, may be effected without a miracle. Id.

JWENTAS, in Roman mythology, the goddess who presided over youth. This goddess was long honored in the Capitol, where Servius Tullius erected her statue. Near the chapel of Minerva there was an altar to Juventas—

JUXON (Dr. William), was born at Chichester in 1682, and elected into St. John's College, Oxford, of which he became president. King Charles I. made him bishop of London ; and in 1635 lord high treasurer of England. The whole nation, and especially the nobility, were greatly offended at this high office being given to a clergyman ; but his conduct soon extinguished all clamor. On the 17th of May 1641, however, he prudently resigned the staff, to avoid the storm which then threatened the court and the clergy. During the civil wars he resided at his palace at Fulham, where his meek, inoffensive, and gentle behaviour, though he continued steady in his loyalty to the king, procured him the respect even of the opposite party. In 1648 he waited on king Charles in the treaty of the Isle of Wight; and, by his particular desire, attended him at Westminster, after tne commencement of his trial. He likewise attended him on the scaffold, where the king taking off his cloak and George, gave him the latter. After the execution the bishop took care of the body, which he

accompanied to the royal chapel at Windsor, but was prevented performing the last offices by colonel Whichcot, governor of the castle. He was now thrown into prison for refusing to disclose the particulars of his last conversations with the king; but soon released, and continued in the quiet possession of Fulham palace till 1649, when he was deprived ; having been spared longer than any of his brethren. He then retired to his own estate in Gloucestershire, where he lived in privacy till the Restoration, when he was presented to the see of Canterbury ; and, in the short time he enjoyed it, expended in buildings and reparations at Lambeth Palace and Croydon House near £l 5,000. He died in 1663, having bequeathed £7000 to St. John's College, and to other charitable uses near £5000. He published A Sermon on Luke xviii. 31, and Some Considerations upon the Act of Uniformity.

JUXTAPOSITION, n. s. Fr. juxtaposition ; Lai jujcta and positio. Apposition ; the state of being placed by each other.

Nor can it be a difference, that the parts of solid bodies are held together by hooks, since the coherence of these will be of difficult conception ; and we must either suppose an infinite number of them holding together, or at last come to parts that are united by a mere juxtaposition. GUinville.

JUXTAPOSITION is used by .philosophers to denote that species of growth which is performed by the apposition of new matter to the surface Vol.. \H.

or outside of old : in which sense it stands opposed to introsusception, where the growth of a body is performed by the reception of a juice within it diffused through its canals.

I'VY, n. $. Sax. iriij. A plant.

But, Troilus ! thou maiest now Est and West, Pipe in an ivie lefe, if that the lest.

Chaucer. Ti oilut and Creteide.

I have seen them

Like boding owls, creep into tods of ioy And hoot their fears to one another nightly.

Beaumont'i Bonduca. A gown made of the finest wool ; A belt of straw, and ivy buds, With coral clasps and amber studs ; And, if these pleasures may thee move, Come live with me and be my love.

Raleigh. Direct the clasping ivy where to climb.

Milton.

Wilds horrid and dark with o'ershadowing trees, Rocks that ivy and briars unfold, Scenes nature with dread and astonishment sees, But I with a pleasure untold.

Cowper. Scenes favorable to, Sfe.

Where the Caesars dwelt, And dwell the tuneless birds of night, amidst A grove which springs through levelled battlements, And twines its roots with the imperial hearths, Ivy usurps the laurel s place of growth.

Byron. Manfred.

Ivy, in botany. See HEDERA.

IWAN BASILOWITZ I., surnamed the Great, czar of Muscovy, was born in 1438, and succeeded his father in 1462. Russia was then divided into a number of petty principalities, some of them nominally subject to the czar, or grand duke ; and tributary, together with himself, to the Mogul Tartars. Iwan rendered the petty chiefs dependent on his own power, and emancipated himself from the yoke of the Moguls. During his reign ambassadors arrived at Moscow from the emperor of Germany, the pope, the grand seignior, and most of the other European powers. This prince, who is indeed considered as the founder of the Russian empire, died in 1505.

IWAN BASILOWITZ II., grandson of Iwan I., was born in 1530, and reigned from 1533 to 1584 He was an enlightened prince, but cruel and arbitrary ; in a fit of passion he killed his own son. The Tartar province of Kasan was conquered by him in 1552, and that of Astracan in 1554. In 1582 he established the first printing-press at Moscow, and in his reign Thomas Chancellor, an English navigator, visited the Russian port of Archangel, when the czar sent an embassy to queen Elizabeth. The discovery of Siberia also took place in the reign of this sovereign.

IXIA, in botany, a genus of the monogynia order, and triandria class of plants : natural or-der sixth, ensatae : COR. hexapetalous, patent, and

equal : there are three stigmata, a little upright and petalous. There are several species, consisting of herbaceous, tuberous, and buibous-rooted flowery perennials, from one to two feet high, terminated by hexapetalous flowers of dif-

ferent colors. They are propagated by offsets, which should be taken off in summer at the de-cay of the leaves : but, as all the plants of this genus are natives of warm climates, few of them can bear the open air of this country in winter.

IXION, in fabulous history, king of the Lapi-thae, married Dia the daughter of Deionius, to whom he refused to give the customary nuptial presents. Deionius, in revenge, took from him his horses ; when Ixion, dissembling his resentment, invited his father-in-law to a feast, and made him fall through a trap-door into a burning furnace, in which he was immediately consumed. Ixion, being afterwards stung with remorse forhis cruelty, went mad ; on which Jupiter, in compassion, not only forgave him, but took him up into heaven, where he had the impiety to endeavour to corrupt Juno. Jupiter, to be the better assured of his guilt, formed a cloud in the resemblance of the goddess, upon which Ixion begat the Centaurs; but, boasting of his happiness, Jove hurled him down to Tartarus, where he lay fixed on a wheel encompassed with serpents, which turns without ceasing.

IXORA, in botany, a genus of the monogynia order, and tetrandria class of plants; natural order forty-seventh, stellatae : COR. monopetalous, funnel-shaped, and long, superior : the stamina above the throat : the berry tetraspermous. Species twelve ; found in both East and West Indies.

JYENAGUR, or JYEPORE, a fertile and populous principality and city of Hindostan, situated between the twenty-fifth and twenty-ninth

degrees of northern latitude, and in the eastern extremity of the province of Ajmeer. It may be estimated at 150 miles in length, by seventy in breadth. This territory produces sugar, cotton, tobacco, and all the grains of the East. It has also a salt-water lake,which produces large portions of that article. It contains the strong fortresses of Rantampore and Jyenagur, and under the title of Ambeer, or Abnir, is said to have existed as a state for nearly 1200 years. Its princes were, however, compelled to unite their daughters in marriage with the Mahommedan princes, and to serve in the armies of the Mogul empire. The inhabitants are of the Rajpoot tribe.

JYENAGUR, the capital, was founded in the end of the seventeenth, or beginning of the eighteenth century, by rajah Jyesing, celebrated for his encouragement of the arts and sciences. He built an observatory here, and formed a set of astronomical tables, still known by his name. This is reckoned one of the handsomest and most regu-

lar towns of India ; being chiefly built of stone : the streets, which are large and spacious, intersect each other at right angles. The fortifications are carried round the whole city, a distance of nearly four miles, and are crowned by a citadel on a steep rock. The place is a great mart for horses, and carries oa a considerable traffic with all parts of India.

JY'MOLD, adj. See GIMAL.

Their poor jades

Lob down their heads, dropping the hide and hips, And in their pale dull mouths the jymold bit Lies, foul with chewed grass, still and motionless.

Shakipeare.

JYNX, in ornithology, a genus of birds belonging to the order of picae ; the characters of which are, that the bill is slender, round, and pointed ; the nostrils are concave and naked ; the tongue is very long, very slender, cylindric, and terminated by a hard point; and the feet are formed for climbing. There is only one speciss, *viz.*

J. torquilla. The colors of this bird are elegantly pencilled, though its plumage is marked with the plainest kinds : a line of black and ferruginous strokes divides the top of the head and back ; the sides of the head and neck are ash-colored, and beautifully traversed with fine

lines of black and reddish-brown ; the quill-feathers are dusky, but each web is marked with rust-color- ed spots ; the chin and breast are of a light and yellowish brown, adorned with sharp-pointed bars of black ; the tail consists of ten feathers, broad at their ends and weak, of a pale ash-color powdered with black and red, and marked with four equidistant bars of black; the irides are of a yellowish color. The wry-neck, Mr. Pennant apprehends, is a bird of passage, appearing with us in the spring before the cuckoo. Its note is like that of the kestril, a quick repeated squeak; its eggs are white, with a very thin shell ; it builds in the hollows oftrees,m?.kingitsnestofdry grass. It has a very whimsical way of turning and twisting its neck about, and bringing its head over its shoulders, whence it had its Latin name torquilla, and its English one of wry-neck : it has also the faculty of erecting the feathers of the head like those of the jay. It feeds on ants, which it very dexterously tranfixes with the bony and sharp end of its tongue, and then draws them into its mouth ; and, while the female is sitting, the male has been observed to carry these insects to her. These birds inhabit Russia, Sweden, Lapland, Greece, Italy, Babylon, and Bengal.

K.

KAF

K, A letter borrowed by the English from the Greek alphabet. It has before all the vowels one invariable sound : as, keen, ken, kill. It is used after c at the end of words ; as, knock, clock, crack, back, brick, stick, pluck, check, which were written anciently with e final : as, clocke, checke, tricke. It is also in use between a vowel and the silent e final : as, cloke, broke, brake, pike, duke, eke. It likewise ends a word after a diphthong : as, look, break, shook, leek. K is silent before n ; as, knife, knee, knell.

K is the tenth letter of our alphabet, and the seventh consonant. It is formed by the voice, by a guttural expression of the breath through the mouth, together with a depression of the lower jaw and opening of

the teeth. K, borrowed from the Greek kappa, was but little used among the Latins : Priscian says, it was never used except in words borrowed from the Greek. Dausquius, after Sallust, says, it was unknown to the ancient Romans. — Indeed we seldom find it in any Latin authors, excepting in the word ka-leudae, where it sometimes stands in lieu of c. — Carthage, however, is often spelt on medals with a K : SALV. AUG. ET CAES. FEL. KART. and sometimes in poetry, as in this line, which contains all the letters of the alphabet : Gazifrequens Lybicos duxit Karthago triumphos.

See C. Lipsius observes that K was a stigma anciently marked on the foreheads of criminals with a red hot iron. The French never use k, excepting in a few terms of art, and proper names, borrowed from other countries. As an abbreviation K has various significations in old charters and diplomas ; e. g. K R. stood for chorus, K R. C. for cara civitas, K R M. for carmen, KR. AM. N. carus amicus noster, K S. chaos, K. T. capite tonsus, &c. Sometimes K alone stood for Carthage. — M. Berber observes, that a capital K, on the reverse of the medals of the eastern emperors, signified Ronstantinus ; and on the Greek medals he considers it to signify KOIAH 2VPIA, Ccelesyria. K on the ci-devant French coin denoted money coined at Bourdeaux. K as a numeral signified 250, according to the verse ; ‘ K quoque ducentos et quinquaginta tenebit.’ When it had a stroke at top (K) i* stood for 250,000.

KAARTA, a considerable kingdom of Western Africa, bounded on the east by Bambarra ; on the south by the Ba Woolima, which separates it frotn Fooladoo ; on the west by Kasson ; and on the south by Ludamar. It produces the lotus in great abundance ; and is in extent about 200 miles long, by eighty broad. Kemmoo is the capital ; but the chief fortresses are Joko and Gedingooma.

KABARDA, a territory of the Caucasus, in Asiatic Russia, extending along the southern bank of the Terek.

KABRUANG, a well cultivated island in the Eastern seas, about eighteen miles in circumference. It may seen about eighteen leagues off,

being remarkable for a peaked hill. It lies to the south-east of Salibabo Island, from which it is separated by a strait about four miles wide ; in long. 126° 30’ E., lat. 3° 50’ N.

KADESH, KADESH-BARNEA, or En-Mishpat, in ancient geography, a city in the wilderness of Zin, where Miriam the sister of Moses died (Num. xx. 1), and where Moses and Aaron dis-obeyinj the Lord, when they smote the rock at the waters of strife, were condemned to die without entering the promised land (xxvii. 14).

The king of Kadesh was one of the princes killed by Joshua (xii. 22). This city was given to the tribe of Judah, and was situated about eight leagues from Hebron on the south. This Kadesh appears to have been a different place from Kadesh-barnea in the wilderness of Par-ran.

KADMON2EI, or CADMONˆI, an ancient people of Palestine, said to dwell at the foot of mount Hermon ; which lies east with respect to Libanus, Phoenicia, and the north parts of Palestine ; called also Hevaei.

K./EMPFERIA, zedoary, in botany, a genus of themonogynia order and monandria class of plants ; natural order, eighth, scitamineae : COR sexpartite, with three of the segments larger than the rest, patulous ; and one only bipartite.

1. K. galanga, common galangal, or long zedoary, has tuberous, thick, oblong, fleshy roots ; crowned with oval, close sitting, leaves, by pairs, four or five inches long, without foot-stalks ; and between them close sitting white flowers, with purple bottoms, growing singly.

2. K. rotunda, the round zedoary, has thick, fleshy, swelling, roundish, clustering roots, sending up spear-shaped leaves, six or eight inches long, near half as broad, on upright foot-stalks ; and between them, immediately from the roots, rise whitish flowers, tinged with green, red, yel-low, and purple centres. Both these are perennial roots ; but the leaves rise annually in spring, and decay in winter. They flower in summer : each flower is of one petal, tubulous below, but plain above, and divided into six parts; they continue three or four weeks in beauty, but are never succeeded by seeds in this country. Beth these species must be potted in light rich mould, and always kept in the hot-house, giving plenty of water in summer, but more sparingly in winter. They are propagated by parting the roots in the spring, just before they begin to push forth new leaves. They are cultivated with great care by the inhabitants of Siam for the sake of the roots ; the use of which, says Kaempfer, is to remove obstructions of the hypochondria, to warm the stomach, discuss flatulencies, and to strengthen the bowels and the whole nervous system. The root was formerly used in this country in bitter infusions; but is now laid aside, on account of its flavor being disagreeable.

KAFFRARIA and KAFFER. See CAFFPA

RIA.

U 2

KAL

KAHLEN-GEBIRGE,a branch of theNoric Alps, commencing near Kloster-Neuberg, on the Danube, a few miles above Vienna, and extending, under a variety of names, as far as Wip-pach, in Carniola. It was the Mons Cetius of the ancients, which separated the provinces of Noricum from Pannonia, and includes the rug-ged track called the Forest of Vienna. Its basis is calcareous rock.

KAHLORE, the name of two towns in the province of Lahore, Hindostan, which belong to the Seiks.

KAIN (Henry Lewis le), a modern French actor of eminence, was born at Paris April 14th, 1728, and originally a maker of surgeons' instruments. Voltaire, struck with his talents for the stage, drew him from his shop, and gave him important advice and instruction ; but never saw him perform in public. Le Kain made his debut in the character of Brutus, September 4th, 1750, while the poet was in Prussia, and succeeded admirably in exhibiting the more violent emotions of the mind. He was, however, addicted to those vicious indulgences, which destroyed "his respectability and his constitution, and at length occasioned his death, by inflammation of the bowels, in 1778, at the age of forty-nine. He is said to have left behind him 100,000 crowns.

KAIRWAN, or KAIROAN, a city of Africa in the kingdom of Tunis, second only to the capital. Its name is probably derived from the extensive inland commerce by caravans, of which it is the centre. The great mosque Dr. Shaw was not allowed to enter, but was told that the pillars of granite by which it was supported were not less than 500 in number, and considers it in trie great variety of its ancient materials the most magnificent structure of Northern Africa ; but a single inscription could not be discovered. It is supposed to be the Vicus Augusti of the ancients, and lies in a sandy and barren district, supplied with water only by rain collected in a large pond. It often suffers severely from drought. Long. 9° 57' E., lat. 35° 36' N.

KAISARIEH, a city of Asia Minor, the ancient Cssarea and capital of

Cappadocia. It stands on the south side of a long fertile plain, at the foot of the high mountain called Argish. Two branches of this ridge advance a short distance into the plain, and form a small recess, in which the city stands. The houses, though built of stone, are mean in appearance ; but the place is the emporium of an extensive trade with all parts of Asia Minor and Syria. Cotton is here cultivated in great quantities, and sold both as a raw material and manufactured into cloth. The inhabitants who, amount to 25,000, consist of Armenians, Greeks, and Jews. About a quarter of a mile eastward is Eski Shehr, or the Old Town, which contains a number of ruined structures, and gateways, mingled and covered with modern buildings. It is remarkable for its filth and stench. Near it is a castle, falling into decay. Long. 35° 18' E., lat. 38° 4l'N.

KAISERSL/VHTERN, or LAUTERN, a fortified town of the Bavarian province on the Rhine, in the IAJWUT Palatinate. It has on one side a

marsh, formed by the Lauter ; on tne other a wood. It is the chief placfc of a district; and the seat of one of the three lyceums or provincial schools lately erected in the circle of the Rhine ; commanding the passage of the Vosges both to Mentz and Landau. In 1792 and 1793 it was the scene of much hard fighting, and suffered severely. Inhabitants 2360. Thirty-four miles W. N. W. of Spire, and forty-two S. S. W. of Mentz.

KAJAAGA, a kingdom of Africa, called also Gallam, bounded on the south and south-east by Bambouk, north by the Senegal, and west by Bon-dou and Foota Torra. Mr. Park says, the air is more pure and salubrious than at any settlement on the coast, and the surface is beautiful and picturesque. The inhabitants are called Serawoollies, or Seracolets, and carry on trade in slaves with the factors on the Gambia.

KAKETI, the most easterly and mountainous province of Georgia, now subject to Russia. It has been exposed to numerous wars; and the country is covered with ruins. The Russians, however, have lately exerted themselves to restore its population and fertility.

KAKUNDY, a town of Western Africa, neat the head of the Rio Nunez, bordering on the Foulah kingdom of Foota Jallo. It was fatal to the

British expedition destined to explore the Niger, both major Peddie and captain Campbell dying here. It is 1 60 miles north of Sierra Leone.

KALEIDOSCOPE (of Gr. icaXoc, beautiful, and iidof, form or likeness), an optical instrument, the invention of Dr. Brewster of Edinburgh, which, combining mirrors in a particular manner, produces a symmetrical reflection of beautiful images, which may be varied indefinitely.

Some earlier philosophers have suggested polygonal speculums, particularly B. Porta and Kircher ; but the practical application of the principle to reflectors inclined towards each other at small angles was wholly a suggestion of Dr. Brewster's. It first occurred to him in 1814, in the course of his examinat on into the polarisation of light. Repeating, at a later period, some experiments of Mr. Biot on 'that subject, and extending them to some other fluids, Dr. Brewster, for his greater convenience, placed them in a triangular trough, formed by two plates of glass, cemented together at their sides, so as to form an acutn angle. The ends being closed up with plate glass, cemented to the other plates, the trough for the reception of the fluids was fixed horizontally : and his eye being now placed at one end without the trough, some of the cement which had been pressed through between the plates at the object end, appeared to be arranged in a remarkably regular and striking manner. This led him to form an instrument with a view to producing this effect, which he showed, with more of the liberality of science than the prudence of this world, to several members of the Royal Society of Edinburgh. The result was, that the instrument became known in London, before he could avail himself of a patent for it ; and, being simple in principle, it was at once largely manufactured.

Dr. Brewster calculates that in London and

Paris together, hot less than 200.000 were sold in three months : though, out of this immense number, there was perhaps not 1000, he

adds, constructed upon scienii tic princi pies, or capable of giving any thing like a correct idea of the power of the kaleidoscope ; and of the millions who have witnessed its effects, there are perhaps not 100 who have any idea of the principles upon which it is constructed, and of the mode in which those effects are produced. For these principles we must refer, according to our plan, to the article OPTICS.

KA'LENDAR, n. s. Lat. calend < e. Now written calendar. An account of time.

A KALENDAR is a distribution of time, accommodated to the uses of life ; or a table or almanac, containing the order of days, weeks, months, feasts, &c. happening throughout the year. See CHRONOLOGY, MONTH, YEAR, See. It is called kalendar, from the word kalendae, anciently written in large characters at the head of each month. See KALENDS. The days in kalendars were originally divided into octoades, or eights ; but afterwards, in imitation of the Jews, into hebdomades, or sevens; which cus-tom, Scaliger observes, was not introduced among the Romans till after the time of Theodosius. There are divers kalendars, according to the different forms of the year and distributions of time established in different countries. The Jewish kalendar was fixed by rabbi Hillel about the year 360, from which time the days of their year may be reduced to those of the Julian kalendar. The Gregorian kalendar is that which, by means of epacts, rightly disposed through the several months, determines the new and full moons, and the time of Easter, with the moveable feasts depending thereon, in the Gregorian year. The Gregorian kalendar, therefore, differs from the Julian, both in the form of the year, and in that epacts are substituted in lieu of golden numbers : for the use and disposition whereof see EPACT. Though the Gregorian kalendar is far preferable to the Julian, yet it is not without its defects. For, first, according to the Gregorian intercalation, the equinox sometimes comes after the 21st of March as far as the 23d ; and sometimes anticipates it, falling on the 19th; and the full moon, which falls on the 20th of March, is sometimes the paschal ; yet not so accounted by the Gregorians. On the other hand, the Grejrorians account the full moon of the 22d of March the paschal ; which yet, falling before the equinox, is not paschal. In the first case, therefore, Easter is celebrated in an irregular month ; in the latter there are two Easters in the same ecclesiastical year. In like manner, the cyclical computation being founded on mean full moons, which yet may precede or follow the true ones by some hours, the paschal full moon may fall on Saturday, which is yet referred by the cycle to Sunday : whence, in the first case, Easter is celebrated eight days later than it should be ; in the other, it is celebrated on the very day of the full

moon, with the Jews and Quartodeciman heretics ; con-rary to the decree of the council of Nice. Scaliger and Calvisius show other faults in the

Gregorian kalendar, arising from the negligence and inadvertency of the authors ; yet this kalendar is adhered to by the Romanists throughout Europe, &c., and used wherever tie Roman breviary is used.

The Roman kalendar owed its origin to Romulus; who only divided the year into ten months, making it begin in the spring, on the 1st of March; imagining the sun made his course through all the seasons in 304 days. Romulus's kalendar was reformed by Numa, who added two months more, January and February; placing them before March : so that his year consisted of 355 days, and began on the 1st of January. He chose, however, in imitation of the Greeks, to make an intercalation of 45 days, which he divided into two parts ; intercalating a month of twenty-two days at the end of each two years ; and, at the end of each two years more, another of twenty-three days ; which month, thus interposed, he called Marcedonius, or the intercalary February. But these intercalations being ill observed by the pontiffs, to whom Numa committed the care of them, occasioned great di' orders in the constitution of the year ; which Caesar, when sovereign pontiff, endeavoured to remedy. To this end, he consulted Sosigenes, a celebrated astronomer of those times; who found, that the dispensation of time in the kalendar could never be settled on any sure footing without having regard to the annual course of the sun. Accordingly, as the sun's yearly course is performed in 365 days, six hours, he reduced the year to the same number of days : the year of this correction of the kalendar was a year of confusion ; they being obliged, in order to swallow up the sixty-five days that had been imprudently added, and which occasioned the confusion, to add two months besides the Marcedonius, which chanced to fall out that year : so that th;s year consisted of fifteen months, or 445 days. This reformation was made A. U. C. 708, and A. A.C. 42, or 43.

The Roman kalendar, called Julian, from its reformer Julius Caesar, is disposed into quadn-ennial periods; whereof the first three years, which he called, communes, consist of 365 days ; and the fourth, bissextile, of 366 ; by reason of the six hours, which in four years make a day, or somewhat less, for in 134 years an intercalary day is to be retrenched. On this account pope Gregory XIII., with the advice of Clavius and Ciaconius, appointed that the hundredth year of each

century snould have no bissextile, excepting in each fourth century : that is, a subtraction is made of three bissextile days in the space of four centuries, by reason of the eleven minutes wanting in the six hours whereof the bissextile consists. The reformation of the kalendar, or the new style, commenced on the 4th of October 1582, when ten days were thrown out at once, so many having been introduced into the computation since the time of the council of Nice in 325, by the defect of eleven minutes.

The following table exhibits a view of the Roman Kalendar, with an account of the deities to which the several days are consecrated i—

CALENDAR.

Januarius.

Februarius.

1

Kal.

Junoni, Jano, Jovi, /Esculapio.

1

Kal.

Lucaria. Junoni.

2

IV.

Non.

2

IV.

Non

3

III.

Non.

3

III.

Non

4

Prid.

Non.

4

Prid.

Non

5

Nonae.

5

Nonae.

6

VIII.

Id.

6

VIII.

Id.

7

VII.

Id.

7

VII.

Id.

8

VI.

Id.

8

VI.

Id.

9

V.

Id.

Agonalia.

9

V.

Id.

10

IV.

Id.

10

IV.

Id.

.11

III.

Id.

Carmen talia.

11

III.

Id.

12

Prid.

Id.

Com pi tali a.

12

Prid.

Id.

13

Idas,

Jovi Statori.

13

Idus,

Fauni Fest. et Jov.

14

XIX.

Kal.

F.

14

XVI.

Kal.

M.

15

XVIII.

Kal.

15

XV.

Kal.

Lupercalia.

16

XVII.

Kal.

16

XIV.

Kal.

17

XVI.

Kal.

17

XIII.

Kal.

Quirinalia, Fornacalia. Diis

18

XV.

Kal.

manibus sacra feraiia.

19

XIV.

Kal.

18

XII.

Kal.

20

XIII.

Kal.

19

XI.

Kal.

Deae Mutae.

21

XII.

Kal.

20

X.

Kal.

Charistia.

22

XI.

Kal.

21

IX.

Kal.

Terminalia.

23

X.

Kal.

Sementinae feriae.

22

VIII.

Kal.

24

IX.

Kal.

23

VII.

Kal.

Regifugium

25

VIII.

Kal.

24

VI.

Kal.

26

VII.

Kal.

25

V.

Kal.

27

VI.

Kal.

Castori et Polluxi.

26

IV.

Kal.

28

V.

Kal.

27

III.

Kal.

Equiria.

29

IV.

Kal.

Equiria.

28

Prid.

Kal.

30

III.

Kal.

Paci.

31

Prid.

Kal.

Diis Penatibus.

i Martius.

.

Aprilis.

1

Kal

Matronalia Junonis Lueiniae.

1

Kal.

Veneri et Fortunae virili.

Ancylia Martis.

2

IV.

Non

2

VI.

Non

3

III.

Non

3

V.

Non

4

Prid.

Non

*

4

IV.

Non.

5

Nonae.

Megalesia.

5

III.

Non.

6

VIII.

Id.

Fortunae publicae. Dinae na-

6

Prid.

Non.

Vests.

talis.

7

Nonae.

7

VII.

Id.

Natalis Apol.

8

VIII.

Id.

8

VI.

Id.

9

VII.

Id.

9

V.

Id.

Cerealia, Ludi Circenses.

10

VI.

Id.

10

IV.

Id.

11

V.

Id.

11

III.

Id.

-

12

IV.

Id.

12

Prid.

Id.

Magna Mater Romam ad-

13

III.

Id.

ducta.

14

Prid.

Id. Equiria altera;

13

Idus,

Jovi Victori, et Libertati.

15

Idus.

Annao Perenna.

14

XVIII.

Kal.

M.

16

XVII.

Kal.

A.

15

XVII.

Kal.

Fordicidia.

17

XVI.

Kal.

Liberal ia, Agonia.

16

XVI.

Kal.

18

XV.

Kal.

17

XV.

Kal.

19

XIV.

Kal.

Quinquatria Minerva.

18

XIV.

Kal.

Equiria in Cir. Max.

20

XIII.

Kal.

19

XIII.

Kal.

21

XII.

Kal.

20

XII.

Kal.

22

XI.

Kal.

21

XI.

Kal.

Palilia, Agonalia, Romae na-

23

X.

Kal.

Tubilustrium.

talis.

24

IX.

Kal.

22

X.

Kal.

25

VIII.

Kal.

Hilaria. Matris Deum Festa.

23

IX.

Kal.

Vinalia. Jori et Veneri.

26

VII.

Kal.

24

VIII.

Kal.

27

VI.

Kal.

25

VII.

Kal.

Robigalia.

28

V.

Kal.

Megalesia.

26

VI.

Kal.

Latinae Feriae.

29

IV.

Kal.

27

V.

Kal.

30

III.

Kal.

Jano, Concord ia?, Saluti, Paci.

28

IV.

Kal.

Floralia.

31

Prid.

Kal.

Dianae.

29

III.

Kal.

30

Prid.

Kal.

Vesta» Palatine.

*v A L E N D /t .

295

Maius.

Junius.

1

Kal.

Bonas Dene. Laribus praestitibus

1

Kal.

Marti. Carnae Deae.

ara posita.

2

IV.

Non.

2

VI.

Non.

3

III.

Non. Bellonas.

3

V.

Non.

4

Prid.

Non.

4

IV.

Non.

5

Nonae.

.5

III.

Non.

6

VIII.

Id. Sponsoris Jovis.

6

Prid.

Non.

7

VII.

Id. Ludi piscatorii.

7

Nona*.

^

8

VI.

Id.

8

VIII.

Id.

9

V.

Id. Vestas, Asinus Coronatur.

9

VII.

Id. Lemuria.

10

IV.

Id. Matralia.

10

VI.

Id.

11

III.

Id. Forti Fortunes.

11

V.

Id.

12

Prid.

Id. Matris Matutae.

12

IV.

Id. Marti s bisultoris.

13

Idus,

Jovis invicti. Quinquatrus ini-

13

III.

Id.

nusculae.

14

Prid.

Id.

14

XVIII.

Kal. J.

15

Idus,

Mercurii natalis. Mercatorum

15

XVII.

Kal.

dies festus.

16

XVI.

Kal.

lo

xv:i.

Kal. J.

17

XV.

Kal.

17

XVI.

Kal.

18

XIV.

Kal.

18

XV.

Kal.

19

XIII.

Kal. Minervae in Avent.

19

XIV.

Kal.

20

XII.

Kal. Summanalia.

20

XIII.

Kal.

21

XL

Kal.

21

XII.

Kal. Agonalia Vejovi.

22

X.

Kal.

22

XL

Kal.

23

IX.

Kal.

23

X.

Kal. Vulcano.Maiae.Tubilustrium.

24

VIII.

Kal. Fortis Fortunae.

24

IX.

Kal. Regifugium Alterum.

25

VII.

Kal.

25

VIII.

Kal.

26

VI.

Kal.

26

VII.

Kal.

27

V.

Jovis Statoris, et Laris.

27

VI.

Kal.

28

IV.

Kal.

28

V.

Kal.

29

III.

Kal.

29

IV.

Kal.

30

Prid.

Kal. Herculis et Musarura.

30

III.

Kal.

31

Prid.

Kal.

Julius.

Augustus.

1

Kal.

1

Kal.

Spei.

2

VI.

Non.

2

IV.

Non.

3

V.

Non.

3

III.

Non.

t

IV.

Non.

4

Prid.

Non.

5

III.

Non. Populifugium.

5

Nonas.

Saluti.

6

Prid.

Non.

6

VIII.

Id.

7

Nona.

Caprotinae. Ancillarum fes-

7

VII.

Id.

tum.

8

VI.

Id. Soli Indigeti.

8

VIII.

Id.

9

V.

Id.

9

VII.

Id.

10

IV.

Id. Opi et Cereri.

10

VI.

Id.

11

III.

Id. Herculi magno custodi.

11

V.

Id. Ludi Apollinares.

12

Prid.

Id.

12

IV.

Id. Fortunes muliebris.

13

Idus,

Dianas, Vertumno.

13

III.

Id.

14

XIX.

Kal. S.

14

Prid.

Id.

15

XVIII.

Kal.

15

Idus,

Castoris et Pollucis.

16

XVII.

Kal.

16

XVII.

Kal. A.

17

XVI.

Kal. Portumnalia.

17

XVI.

Kal. Alliensis dies atra.

18

XV.

Kal. Consualia. Sabinarum raptus.

18

XV.

Kal.

19

XIV.

Kal.

19

XIV.

Kal.

20

XIII.

Kal. Vinalia secunda.

20

XIII.

Kal.

21

XII.

Kal. Vinalia rustica.

21

XII.

Kal.

22

XI.

Kal.

22

XL

Kal.

23

X.

Kal. Vulcanalia.

23

X.

Kal.

24

IX.

Kal.

24

IX.

Kal.

25

VIII.

Kal. Opi Consivo?.

25

VIII.

Kal. Furinalia.

26

VII.

Kal.

26

VII.

Kal.

27

VI.

Kal.

27

VI.

Kal.

28

V.

Kal. Arae Victoria?.

28

V.

Kal. Neptunalia.

29

IV.

Kal.

29

IV.

Kal.

30

III.

Kal.

30

III.

Kal.

31

Prid.

Kal.

31

Prid.

Kal.

KALENDAR.

September.

October.

1 Kal. Vulcani tutela Septemb.

1

Kal. Martis tutela Oct.

2 IV. Non.

2

VI. Non.

3 III. Nun. Dionysia.

3

V. Non.

4 Prid. Non.

4

IV. Non.

5 Nonas.

5

III. Non.

6 VIII. Id. Erebo.

6

Prid. Non.

7 VII. Id.

7

Nonas.

8 VI. Id.

8

VIII. Id. Pyaenepsia Apoll.

9 V. Id

9

VII. Id.

10 IV. Id

10

VI. Id. Oscophoria.

It III. Id

11

V. Id.

12 Prid. Id.

12

IV. Id. Augustalia.

13 Id us, Jovi Capitolii Dedic. Praetor

13

III. Id. Fontinalia.

Clavum pangit

14

Prid. Id.

14 XVIII. Kal.

15

Idus, Mercuric Mercatores sacr.

15 XVII. Kal. Ludi Roman! sive Magni per

16

XVII. Kal.

4 dies.

17

XVI. Kal.

16 XVI. Kal.

18

XV. Kal. Jovi Liberatori. ‘

17 XV. Kal.

19

XIV. Kal. Armilustrium.

18 XIV. Kal.

20

XIII. Kal.

19 XIII. Kal.

21

XII. Kal.

20 XII. Kal. Romuli natalis.

22

XI. Kal.

21 XI. Kal.

23

X. Kal. Hoc mense Libero sacr. fiebat.

22 X. Kal

24

IX. Kal.

23 IX. Kal

25

VIII. Kal. Vertumni feriae.

24 VIII. Kal.

26

VII. Kal.

25 VII. Kal. Veneri. Saturno. Maniac.

27

VI. Kal. Ludi Victoria.

26 VI. Kal.

28

V. Kal.

27 V. Kal. Fortunse reduci.

29

IV. Kal.

28 IV. Kal

30

III. Kal.

29 III. Kal.

31

Prid. Kal.

30 Prid. Kal. Meditrinalia, Epulum Minervae.

November.

December.

1 Kal. Dianae tutela hie mensis.

1

Kal. Fortunse Muliebris festum.

2 IV. Non.

2

IV. Non.

3 III. Non.

3

III. Non. Neptuno et Minervae.

4 Prid. Non. Jo vis epulum.

4

Prid. Non.

5 Nonae. Neptunalia.

5

Nonae. Faunalia.

6 VIII. Id.

6

VIII. Id.

7 VII. Id.

7

VII. Id. Junoni Jugali.

8 VI. Id.

8

VI. Id.

9 V. Id.

9

V. Id.

10 IV. Id.

10

IV. Id. Agonalia.

11 III. Id. Maria clauduntur usque ad

11

III. Alcyonii dies.

VI. Id. Mart.

12

Prid. Id. Equiria.

12 Prid. Id.

13

Idus,

13 Id us, Pithaegia, Lectisternia.

14

XIX. Kal. Brumalia.

14 XVIII. Kal.

15

XVIII. Kal.

15 XVII. Kal. Ludi Plebeii.

16

XVII. Kal.

16 XVI. Kal.

17

XVI. Kal. Saturnalia.

17 XV. Kal.

18

XV. Kal.

18 XIV. Kal.

19

XIV. Kal. Opalia.

19 XIII. Kal. Casna Pontificum in honorem

20

XIII. Kal. Sigillaria.

Magnae Mams.

21

XII. Kal. Angeronalia. Herculi et

20 XII. Kal.

Cereri.

21 XI. Kal.

22

XI. Kal. Feriffi diet. Compitalia.

22 X. Kal. Plutoni ct Proserpina. 23 IX. Kal.

23 24

X. Kal. Feriae Jovis. Laurentinalia. IX. Kal. Juvenalis dies.

24 VIII. Kal. Brumal ia.

25

VIII. Kal.

25 VII. Kal.

26

VII. Kal.

26 VI. Kal.

27

VI. Kal.

27 V. Kal.

28

V. Kal. Hie mensis Saturno sacer.

•28 TV. Kal.

29

IV. Kal. Yestae vero tutela.

29 IJI. Kal.

30

III. Kal.

30 T’rid. Kal.

KALENDAR is also applied to divers other compositions respecting the twelve months of the year. In this sense Spencer has given the Shepherd's Kalendar ; Evelyn and Miller the Gardener's Kalendar, &c.

KALENDAR, kalendarium, originally denoted, among the Romans, a book containing an account of moneys at interest, which became due on the kalends of January, the usual time when the Roman usurers let out their money.

KALENDARIUM FESTOM, a festival among the ancient Romans, held on the kalends of January, or new year's day. The Christians retained much of the ceremony and wantonness of this feast, which for many ages was celebrated by the clergy, under the names of festum kalendarium, or hypodiaconorum, or stultorum, that is, the feast of fools ; sometimes also libertas de-cembrica. The people met masked in the church ; and in a ludicrous way proceeded to the election of a mock pope, or bishop, who exercised a jurisdiction over them suitable to the festivity of the occasion. Fathers, councils, and popes, long labored to restrain this license to little purpose. The feast of the kalends •was in use as late as the close of the fifteenth century.

KAL'ENDS, n.t. The first day of every month amongst the Romans; more correctly written Calends.

And wotest well that Calender is she To any woman that wol lover be For she taught all the craft of trewe living. Chaucer. Prologue to the Legende of Good Women.

This se, clepe I the tempestuous matere Of depe dispaire, that Troilus was in ; But now of hope the kalendes begin.

Id. Troilus and Creseide. Let this pernicious hour Stand as accursed in the ./calender.

Shakspeare. Macbeth.

KALENDS, KALENDJE, or CALENDS, in the Roman chronology, the first day of every month. The word is formed from KaXtu, I call or proclaim ; because, before the publication of the Roman fasti, it was an office of the pontifices to watch the appearance of the new moon, and give notice thereof to the rex sacrificulus ; upon which a sacrifice being offered, the pontiff summoned the people together in the Capitol, and there with a loud voice proclaimed the number of kalends, or the day whereon the nones would be ; which he did by repeating this formula as often as there were days of kalends, Calo Juno Novella. Whence the name calendae, from cale, calare. This is Varro's account. Others derive the appellation hence, that the people being convened on this day, the pontifex proclaimed the several feasts or holidays in the month; a cus-tom which continued till A. U. C. 450, when C. Flavius, the curule aedile, ordered the fasti or kalendar to be set up in public places, that every body might know the difference of times, and the return of the festivals. The kalends were reckoned backwards, or in a retrograde order. Thus, e. g. the first of May being the kalends of May, the last or the 30th of April was the pridie kalendaram, or 2d of the kalends of May; the 29th of April, the 3d of the kalends,

or before the kalends ; and so back to the 13th, where the ides commence : which are likewise numbered invertedly to the fifth, where the nones begin ; which are numbered after the same man-ner to the first day of the month, which is the kalends of April. See IDES and NONES. The rules of computation by kalends, nones, and ides, are contained in the following verses :

Prima dies mensis cuj usque est dicta kalends. Sex Maius nonas, October, Julius, et Mars ; Quatuor at reliqui : habet idus quilibet octo. Inde dies reliquos omnes die esse kalendas ; Quas retro numerans dices a mense sequente.

KALENDS are also used in church history to denote conferences anciently held by the clergy of each deanery, on the first day of every

month, concerning their duty and conduct, especially with regard to the imposition of penance.

KALENDS OF JANUARY, in Roman antiquity, a solemn festival consecrated to Juno and Janus ; wherein the Romans offered vows and sacrifices to those deities, and exchanged presents among themselves as a token of friendship. But it was a melancholy day to debtors, who were then obliged to pay their interest, &c. Hence Horace calls it tristes kalends.

KA'LI, n. s. An Arabic word. Sea-weed, of the ashes of which glass was made ; whence the word alkali.

The ashes of the weed kali are sold to the Venetians for their glass works. Bacon.

KALM (Peter), a celebrated naturalist, and pupil of Linnaeus. He was a native of Finland, and was born in the year 1715. Having imbibed a taste for the study of natural history, he pursued his inclination with much zeal and industry. His first researches were rewarded by the discovery of nany new plants in Sweden, of which he gave some account to the botanical world between the years 1742 and 1746. He was particularly anxious to explore the properties of 'plants, both with respect to their uses in medicine, and in the useful arts ; so that planting and agriculture occupied some portion of his attention. His reputation as a naturalist caused him to be appointed professor at Abo, and in October, 1747, he set out upon his travels, sailing from Gottenburg for Amenca ; but on account of a violent hurricane was obliged to take shelter in a port of Norway, whence he could not depart till the ensuing February, when he proceeded immediately for London. From hence he went to North America, as we learn from his book ; and, having spent two or three years in exploring whatever was worthy of observation in that country, he returned to his professorship at Abo in 1 751 . The expenses of this undertaking appear to have exceeded what was allowed him by the Academy of Sciences, so that our author was obliged to live rather penuriously upon his return. Yet he found means to cultivate, in a small garden of his own, several hundred plants, for the use of the university, as there was no public botanical garden at Abo.

His discoveries in botany very materially enriched th» Species Plantarum of his great master, and the Linnaean Herbarium abounds with speci-

mens brought home by him, distinguished by the stylus and twelve stamina ; which, when the letter K. Haller enumerates a long list of tracts flower first opens, appear lying close to the published by Kalm, and his inaugural disserta-sides of the cup at equal distances, their apices tion appeared in the Amaenitates Academics of being lodged in ten little hollow cells, which, Linnˆus. He was originally intended for the being prominent on the outside, appear as so ecclesiastical profession, but was drawn aside many little tubercles. The flowers are succeeded from this pursuit by attending the lectures of by small round capsules; which when ripe open Linnaeus on natural history, given in the uni-in five parts, and discharge their small dust like

seeds. This species is a native of Carolina, Virginia, and other parts of the northern continent of America

versity of Upsal. Indeed, it was through the recommendation of Linnseus that professor Kalm was fixed upon to undertake the voyage to North America. He afterwards made, at his own expense, a very extensive tour into Russia, the history of which never appeared in print, but which is supposed to have furnished considerable mat-ter for the work of a Swedish writer, who published a book of travels in that kingdom. Kalm was a member of the Royal Swedish Academy of Sciences, and departed this life in the year 1779, aged sixty-four.

KALMIA, in botany, a genus of the monogynia order, and decandria class of plants ; natural order eighteenth, bicornes : CAL. quinquepartite : COR. salver-shaped, formed with five nectariferous horns on the under or outer side ; CAP. quinquelocular. Of this genus there are two species, *viz.*

1. K. angustifolia, which rises to about sixteen feet, producing evergreen leaves, in shape like the lauro-cerasus, but small, and of a shining dark green. The flowers grow in clusters, the buds of which appear in autumn wrapped up in a conic scaly perianthium, on which is lodged a viscous matter, which protects them from the severe cold in winter. These buds, dilating in the following spring, break forth

into twenty or more monopetalous flowers, divided into five segments, and set singly on pedicles half an inch long. These flowers, when blown, appear white : but on a near view are of a faint bluish color, which, as the flower decays, grow paler. One of the five petals is longer and more concave than the rest, and is blended with purple, green, and yellow specks, being a viscous matter on the extremities of very fine hairs. The convex side of the same petal is also speckled with yellowish green. The pointal rises from the centre of the flower, and has its head adorned with scarlet, and surrounded by ten stamina, whereof three are long and seven short, whose farina issues out at a small round hole at its top. This elegant tree adorns the western and remote parts of Pennsylvania, always growing in the most sterile soil, or on the rocky declivities of hills and river banks, in shady moist places.

3. K. latifolia, a most beautiful shrub, rises usually to five or six feet, and sometimes twice that height in its native places. The stems of some are as big as the small of a man's leg, and covered with a brown rough bark. The wood is very close grained, heavy, and hard like box. The limbs in general are crooked, and grow irregular ; but are thickly clothed with stiff smooth leaves of a shining bright green. The flowers grow in bunches on the tops of the brandies to foot-stalks of three inches long : they are white, stained with purplish-red, consisting of one leaf in form of a cup, divided at the verse into five sections ; in the middle is a

yet it is not common, but found only in particular places; it grows on rocks hanging over rivulets and running streams, and on the sides of barren hills. It blossoms in May, and continues in flower the greatest part of the summer.

KALMUCS. a tribe of Tartars, called also Eluths, inhabiting the larger half of what the Europeans call Western Tartary. See TAUT ART. They are in general, says professor Pallas, of a middle size, and it is even rare to see among them a person that is tall ; the women especially are of low stature, and have very agreeable features. Their limbs are neatly turned, and very few have any defects contracted in infancy. Their education, being left solely to nature, procures for them a well formed body and sound constitution. Their skin is pretty fair, especially when young; but the lower sort allow their male children to go quite naked, both in the heat of the sun and in the smoky atmosphere of their felt huts; the men too sleep naked, covered only with their drawers ; and thus they acquire that yellowish-brown color

which characterises them. The women, on the contrary, have a very delicate complexion ; among those of a certain rank are found some with the most beautiful faces, the whiteness of which is set off by the fine black of their hair : and in this as well as in their features they perfectly resemble the figures in Chinese paintings. The physiognomy of the Kalmucs is peculiar. Strangers are made to believe that it' is frightfully deformed ; and, though indeed there are very ugly men to be found, yet, in general, their countenance has an openness that bespeaks a mild, frank, and social disposition. In many it is of a roundish shape, and exceedingly agreeable; among the women some would be thought beauties even in those European cities where the taste is most scrupulous. The characteristic features of a Kalmuc or Mongul countenance are the following: — the interior angle of the eye is placed obliquely downwards towards the nose, and is acute and fleshy ; the eyebrows are black, narrow, and much arched ; the nose is of a structure quite singular, being generally flat and broken towards the forehead ; the cheek-bone is high, the head and face very round ; the eye is dark, the lips thick and fleshy, the chin short, and the teeth exceeding white, continuing so to old age ; the ears are of an enormous size, standing out from the head. These characters are more or less visible in each individual ; but the person that possesses them all in the highest degree is considered as the most beautifully formed. Among all the Mongul nations the men have much less beard than in our European countries, and among the Tartars it appears much later. The Kalmucs

have most of it; and yet even with them the beard is very scanty and thin, and few have much hair on any other part of the body. They enjoy the bodily senses in the greatest perfection. They find the subtilty of their sense of smell very useful in their military expeditions ; by it they perceive at a great distance the smoke of a fire, or the smell of a camp. Many of them can tell by applying the nose to the hole of a fox, or any other quadruped, if the animal be within or not. They hear at a great distance the trampling of horses, the noise of an enemy, of a flock of sheep, or strayed cattle ; they have only to stretch

themselves on the ground, and to apply their ear close to the turf. But nothing is more astonishing than the acuteness of their sight, and the extraordinary distance at which they often perceive very minute objects, such as the dust raised by cattle or horses, and this from places very little elevated, in immense level deserts, though the particular inequalities of the surface, and the vapors which in fine weather are seen to undulate over the soil in great heats, considerably increase the difficulty. They are also accustomed to trace the print of a foot in these deserts by the sight alone. The Kalmucs possess many good qualities, which give them a very great superiority over the wandering Tartars. A certain natural sagacity, a social disposition, hospitality, eagerness to oblige, fidelity to their chiefs, much curiosity, and a certain viva-city accompanied with good humor, which hardly ever forsakes even the most wretched among them, form the fair side of their character. On the other hand, they are careless, superficial, and want true courage ; they are credulous, and yet cunning and distrustful ; and they have a great inclination, authorised by custom, for drunkenness and debauchery. They are less indolent than most other Asiatics. Those among them who exercise any trade, or who hire themselves to the Russians for labor or for fishing, are very assiduous and indefatigable. They sleep but little, going to rest late and rising with the sun. But their extreme dirtiness can neither be disguised nor justified, and proceeds much more from their education. With regard to their intellectual faculties, notwithstanding their want of instruction and information, they possess good natural parts, an excellent memory, and a strong desire to learn. They acquire the Russian language with facility, and pronounce it well ; in which last article they very much surpass the Chinese. Though generally of a sanguine and choleric temperament, they live more amicably together than could be expected in a people that lead so independent a life. They seldom come to blows even over their cups, and their quarrels are hardly ever bloody. A murder very rarely happens, though their anger has something in it exceedingly fierce. The Kalmucs are very affable ; and of so social a disposition, that they will go several miles to salute a traveller, and to enquire into the object of his journey. When a troop of Kalmucs perceive any person at a distance, it is customary for them to detach one of their number to the next eminence, whence he makes a signal with his cap for the person to draw near; if this

signal is not obeyed, the person is considered as an enemy or a robber, and is often pursued as such. They enter willingly into friendships • but these connexions are not quite disinterested ; for to give and to receive presents are with them essential articles. A mere trifle,

however, is sufficient to induce them to do you all mannei of service ; and they are never ungrateful as far as they are able. Adversity cannot deprive them of courage, nor alter their good humor. A Kalmuc will never beg if he be in the ex-tremest misery, but rather endeavour to acquire a subsistence by labor, or even by robbery. But they are very hospitable. A Kalmuc provided with a horse, arms, and equipage, may ramble through the country for months together, without taking with him either money or provisions. Wherever he comes he finds friends, from whom he meets with the kindest reception, and is entertained in the best manner their circumstances afford. His wants are supplied with the most affectionate cordiality. Every stranger, of whatsoever nation, is well received by a Kalmuc; and he may depend upon having his effects in the greatest security the moment he has put himself under the protection of his host: for to rob a guest is considered by the Kalmucs as the worst of crimes. When the master of the house sits down to meat, in company with others of inferior rank, he begins indeed by serving himself and his family, but whatever remains is distributed among all present. When any one receives a present of meat or drink, he divides it faithfully with his companions, even though of inferior rank. But they are much more niggardly of their other effects, and especially of their cattle, and do not willingly give these away, un-less a friend has accidentally suffered the loss of his flocks, when he is sure to be most willingly assisted. Perhaps too it may be related, as an article of their hospitality, that they abandon their wives to their friends with the greatest facility, and in general are very little inclined to jealousy. Their robberies are never committed upon their equals, and even the greater part of the rapine exercised on other tribes is founded on hatred or national quarrels : neither do they willingly attempt this by open force, but prefer the machinations of cunning. It -must also be confessed, that it is only those that live with princes, and in camps where these hold their courts, or their priests, that are most addicted to these practice? ; while the common people, satisfied with the pleasures of the pastoral life, spend their days in innocent simplicity, and never attack the property of another till forced by necessity, or led by their superiors, who show them the-example. The Kalmucs are very faithful to their princes; they endure every sort of oppression, and yet are with difficulty induced to revolt : but, if they belong to a prince who has not become so by right of succession, they very easily rebel. They honor old age. When young men travel with such as are older than themselves, they take upon them the whole care of the cattle, as well as of the feast. They are exceedingly prudent in matters that relate to their sovereign or their nation, or which are recommended to their direction by the priests, to

whom they yield an unreserved obedience. The moveable habitations of the Kalmucs are those felt huts with a conical roof in use among all the roaming Asiatics. The truly ingenious invention of these tents was undoubtedly conceived in the eastern parts of Asia, and most probably by the Mongul nations. As they can be entirely taken to pieces, and folded in a small compass, they are very useful, and perfectly agree with the migratory life of these people, who are ignorant of the use of carriages. The frame of these huts, and the felt they are covered with, though made as light as possible, yet are a sufficient load for a camel or two oxen. But the capacity of these huts, their warmth in winter, their strength in resisting tempests and excluding rain, abundantly compensate for this inconvenience. The wood endures many years; and though the felt begins to break into holes in the second year, yet, as they do not consider it disgraceful to have them patched, they make them serve a good deal longer. The huts are in general use from the prince down to the meanest Kalmuc, differing only in size and in the embellishments within. In winter they are warm, even when heated with the dried excrements of their cattle, to which they are often obliged to have recourse, for want of other combustibles, in mai \y places of the deserts which are destitute of wood. In summer they remove the felt to enjoy the fresh air. The master of the tent has his bed placed opposite to the door behind the fire-place. The bedsteads are low and made of wood. The rich adorn their beds with curtains, and spread carpets of felt upon the ground. When a Kalmuc possesses an idol, he places it near the head of his bed, and sets before it several small consecrated cups full of water, milk, or other food. On festivals the idol is decorated, the lamps are lighted, and perfumes burnt before it. The riches of the Kalmucs, and their whole means of subsistence, depend on their flocks, which many of them reckon by hundreds and even by thousands. A man is thought capable of living on his possessions when he is master of ten cows with a bull, eight mares with a stallion. The animals they have in greatest abundance are horses, horned cattle, and sheep. Camels, which require time and pains to rear, cannot multiply much with them i they are besides too delicate ; and it is only the rich or the priests who possess any of

them. Their horses are small, too weak for the draught, and too wild ; but they are very swift, and support with ease the weight of a man. They may be made to gallop for several hours successively without injury ; and can pass two days without drinking. They have a little hoof, but very hard ; and may be used at all times without being shod. They perpetuate their species without any assistance from man. The Kalmucs castrate the greater part of their male foals, and slit tlieir nostrils, that they may breathe more freely wnen they run. The stallions are never separated from their mares, that there may always be plenty of milk. Their horned cattle are of a beautiful shape, they keep more bulls than are necessary for the cows, and employ a great number of them as beasts of burden for carrying their houses and furniture from place to place. They think a bull equal to fifty cows. Their sheep have large tails, exceedingly fat, and which furnish a suet as soft as butter. They have also large pendant ears, and their heads are much arched. Their wool is coarse, and the ewes seldom have horns : one ram is sufficient for 100 ewes : the wool is only fit to make felt for tents. Many sheep die during winter, and a greater number still of the early lambs ; the skins of which are wrought into those fine furs so much esteemed in Russia and foreign parts. The rich Kalmucs only have camels ; for they are very dear, multiply slowly, and are subject to many diseases. They are guarded with much care in winter, yet many of them die of consumptions and diarrhoea, occasioned probably by the moisture of their pasture. No animal is so much tormented with insects ; and they often die in summer of those they swallow in eating the leaves of the oak and birch. The meloe proscarabaeus, which covers all the plants in many places where they feed, is generally fatal to them. In spring, when they cast their hair, and which falls at once from every part of their body, they are exposed to the bite of the spider scorpion, whose wound is so venomous, that the camel dies of it in less than eight days, sometimes in three. Camels' milk is thick, unctuous, and of a saltish taste, and this last property makes the Kalmucs fond of it to tea. They use the hair for stuffing cushions, and for making ropes, pack-thread, felt, and very beautiful camlets. The camels with two bunches afford a very uneasy seat to the person who rides them ; their trot is so heavy, and even their walk so rude, that he receives the most violent shocks at every step. When a Kalmuc horde intends to remove in search of fresh pasture, which in summer happens every four, six, or eight days, people are despatched to reconnoitre the best place for the khan or prince, for the lama, and for the hut containing the idols. These begin the march, and are followed by the whole troop. On these days the women paint and dress themselves in their best clothes. The Kalmucs are supplied by their flocks with milk, cheese, but-ter, and flesh,

which are their chief articles of food. They also eat the roots and stalks of many wild plants ; such as the bulbous-rooted chervil, dandelion, &c. Their ordinary drink is the milk of mares or cows. The former when fresh has a disagreeable taste of garlic ; but it takes, as it grows sour, a very agreeable vinous flavor ; it neither yields cream nor curd, but furnishes a very wholesome refreshing beverage, which inebriates when taken to excess. They never use new miFk, nor milk or water that has not been boiled. Their milk is boiled as soon as it is taken from the animal ; when cold it is poured into a large leathern bag, in which there remains as much of the old milk as is sufficient to turn the new sour. Thia communicates to the milk a vinous fermentation. As often as the Kalmucs procure much milk from their flocks, they intoxicate themselves with the spirituous liquor which they distil from it. Mares' milk is the most spirituous ; and the quantity meant to be distilled remains twenty-four hours in summer, and three or four

days in winter, in those corrupted bags, to prepare it for tlie operation. Cows' milk yields one-thirtieth part, and mares' milk one-fifteenth of spirit. This liquor is limpid and very watery, and consequently does not take fire, but is capable of being long kept in glass-bottles. The rich Kalmucs increase its strength by a second distillation. These people are exceedingly fond of tea and tobacco. The former is so dear, as it comes to them from China by the way of Russia, that the poor people supply its place with various wild plants ; such as liquorice, the seed of the sharp-leaved dock, and Tartarian maple, the roots of wild angelica, &c. The Kalmucs are excellent horsemen. Their arms are lances, bows and arrows, poniards, and crooked sabres; the rich have fire-arms. They wear, when at war, coats of mail, and their helmets are gilt at top. Falconry and hunting are their chief amusements. Their passion for play, especially cards, is carried to as great excess as in any nation. The greater part of their

time is spent in diversions; and however miserable their manner of life may seem to us, they are quite happy with it. They cannot endure for any time the air of a close room; and think our custom of living in houses insupportable. The greatest part of them arrive at a vigorous old age; their diseases are neither frequent nor dangerous. Men of eighty or 100 years old are not uncommon ; and at that age they can still endure the exercise of riding. Simple food, free air, a hardy constitution, continual exercise, and a mind free from care, are the causes of their health and longevity. It is remarkable, that a migratory people, whose manner of life seems so congruous to the natural liberty of mankind, should have been subjected from time immemorial to the unlimited authority of an absolute sovereign. Neither written records nor traditions have preserved any trace of their ever having enjoyed a state of independence. On the contrary, they say, they have always been subject to khans, whose authority has been transmitted to them by succession, and is considered as a right perfectly sacred and divine.

KALUGA, a large and fertile government of the Russian empire, formerly a province of Moscow, containing twelve districts. It is bounded by the governments of Moscow, Smo-lensko, Tula, and Orel, lying between 35° 48’ and 37° 52’ of E. long., and 51° and 54° 30’ of N. lat. Its territorial extent is 8500 square miles. The chief rivers are the Oka, the Upa, and the Schisdra. The climate is healthy, the soil is a mixture of sand and loam, and in part ablack rich mould. The products are corn, hemp, and flax. It also contains iron mines ; and the manufactures are important for Russia, the larger establishments being nearly fifty in number, and the capital employed being estimated at £1,000,000 sterling. The population is about 860,000 Russians of the Greek church. The exports consist of lamb-skins, Russia leather, hemp, c-nvas, wax, and honey.

KALUGA, the capital of the foregoing government, lies on the Oka, and has some respectable public buildings, such as the government house, the high church, &c. ; but is irregularly built ;

and most of the houses are of wood. The population amounts to 17,000, employed largely in manufacturing woollen, canvas, cotton, hats, paper, and leather. It is 107 miles south-west of Moscow, and 437 south-east of St. Petersburg.

KAM, adj. Crooked. Fr. cam; in Erse hum is squint eyed, and applied to any thing awry: clean kam signifies crooked, athwart, awry, across from the purpose. Ital. a-tchembo : hence our English, a-kimbo Clean

kam is, by vulgar pronunciation, brought to kim, kam. This is clean kam ; merely awry.

Shdkspeare.

KAMA, in Hindoo mythology, is the god of love. ‘ The Hindoo god,’ says Sir W. Jones, ‘ appears evidently the same with the Grecian Eros, and the Roman Cupid ; but the Indian description of his person and arms, his family, attendants, and attributes, has new and peculiar beauties. According to the mythology of Hindostan, he was the son of Maya, or the general attracting power, and married to Reti, or Affection ; and his bosom friend is Vasanta, or Spring. He is represented as a beautiful youth, sometimes conversing with his mother and consort in the midst of his gardens and temples; and sometimes riding by moonlight on a parrot, or luri, and attended by dancing girls or nymphs, the former of whom bear his colors, which are a fish on a red ground. His favorite place of resort is a tract of country round Agra, and principally. the plains of Matra; where Krishna also and the nine Gopea, who are clearly the Apollo and Muses of the Greeks, usually spend the night, in music and dancing. His bow of sugar-cane or flowers, with a string formed of bees, and his five arrows, each pointed with an Indian blossom of a heating quality, are equally new and beautiful. He has more than twenty names; that of Kam, or Kama, signifies desire, a sense which it also bears in ancient and modern Persian.’ Kandeo is a more popular way of expressing his name. He is also called Maka-ra-ketu, alluding to the fish in his banner, which is said to be the name of the horned shark ; Makara is also the zodiacal sign Capricorn : Kan-durpa, meaning love, is another of his names ; and Pushpa-danva, or with a bow of flowers. Mara is another. Ananga means the incorporeal, derived from a very popular fable of Kama having been reduced to a mental essence by Siva ; thus related in the Ramayana, book i. sect. 22. ‘ Kandarpa, the wily one, wounding St’hanu, the lord of the gods, while, with uplifted arm, he was engaged in sacred austerities, met the desert of his crime from the eye of the great Rudra ; all his members being scorched with fire, fell from his body; he was thence called Ananga, bodiless, and the place where it happened Kama, desire.’ His name of Smara, the ideal, may refer to his mother Maya, meaning illusion. Madan, Madamat, and Makada-mat, major Moor, from whose Hindoo Pantheon this article is taken, deems derived from a root signifying sweetness and intoxication, or pleasurable merriment, but not approaching to drunkenness. Kama is said to have been the son ((Krishna and Rukmeni, that is, incarnated in ;» son of theirs.

KAMINIECK, a strong old town of Poland, the capital of Podolia, with a castle and a bi-shop's see. It was taken by the Turks in 1672, who restored it in 1690, after the treaty of Car-lowitz. When the Russians forcibly seized part of the Polish territories, in the beginning of 1793, this fortress held out a long time, but at last surrendered. The castle is seated on a craggy rock, 110 miles west of Bracklau, and 120 south-east of Lemburg.

KAMIS, or CAMIS, in the Japanese theology, denotes deified souls of ancient heroes, who are supposed still to interest themselves in the welfare of the people over whom they anciently commanded. The principal one is Tensio Dai Sim, the common father of Japan, to whom are paid extraordinary devotions and pilgrimages.

KAMP FIGHT, in old law writers, denotes the trial of a cause by duel, or a legal combat of two champions in the field, for decision of some controversy. In this mode of trial the person challenged must either accept, or acknowledge h.mself guilty of the crime whereof he was accused. If it was a crime deserving death, the camp fight was for life and death : if the offence deserved only imprisonment, the camp fight was accomplished when one combatant had subdued the other, so as either to make him yield or take him prisoner. The accused had liberty to choose another to fight in his stead, but the accuser was obliged to perform it in his own person, and with equality of weapons. No women were permitted to be spectators, nor men under the age of thirteen. The priest and the people, who looked on, were engaged silently in prayer, that the victory might fall to him who had right. None might cry, shriek, or give the least sign ; which in some places was executed with so much strictness, that the executioner stood ready with an axe to cut off the right hand or foot of the party that should offend herein. He that, being wounded, yielded himself, was at the other's mercy to be killed or suffered to live. But if life was granted he was declared infamous by the judge, and disabled from ever bearing arms, or riding on horseback. See BATTEL.

KAMTSCHATKA, or KAMPTCHATKA is a peninsula of an irregular elliptical figure, at the south-east extremity of Siberia. It forms a part

of the Russian government of Irkoutsk, and district of Okhotsk, extending from 51° to 62° N. Int., and from 155° to 165° E. long. It is bounded west by the sea of Okhotsk ; east and south by the Pacific Ocean ; and north by the Kor.ak country.

A chain of mountains traverses this peninsula from north to south, and many traces of volcanoes have been observed. One in particular, of which remarkable eruptions are recorded in 1737, 1762 and 1767; is said to be still active. It is called the Nijni Kamtschatsk, and can be seen at a distance of 180 miles. Its eruption lasts sometimes for a fortnight, and covers the •vhole country for thirty miles with ashes to the depth of several inches. The climate is remarkably cold for the latitude : having but three months of imperfect summer.

Here is but one navigable river, called the Kamtschatka. It has a long north and north-east course, and falls into the Eastern Ocean in lat. 56° 30’ N. Vessels of 100 tons may navigate it 150 miles: but the lakes are numerous; and form, in their frozen state, the chief means of in tercourse between the inhabitants.

Timber for ship-building is amongst the most valuable of the products of Kamtschatka: itprin cipally consists of beach and dwarf pine. Here also are found the willow and cedar. Corn and vegetables seldom arrive to any perfection.

Furs and skins are the chief articles of trade : the sable is common, but not so beautiful as in the northern parts of Siberia ; several varieties of the Arctic fox are also found. The bear is the most formidable wild animal: to hunt which is a chief pursuit, and to imitate his gambols the chief amusement of the Kamtschatdales. The coast and rivers swarm with fish ; among which the salmon, shell fish, and herrings, are all excellent. Woodcocks, snipe, grousp, and wild ducks and geese are also plentiful ; the natives preserve the eggs of the last in the fat of their fish.

Beautiful shrubs are occasionally seen : such as the mountain ash, wild rose, and raspberry ; there is also a variety of berries : but the most valuable common production is a wild root called saranne, which generally supplies the place of bread : to which may be added a plant called sweet grass, used in various preparations of cookery, and capable of yielding a strong distilled liquor. Sulphur abounds; and many mineral sources are found in the mountains; but no mines have been worked, except one small iron one.

The natives are considered a different race from the other inhabitants of Siberia : they are short and broad, but with slender arms and legs, black hair, round face, high check bones, and sunken eyes. The population has diminished under the Russian government from 12,000 or 15,000 to less than half that number. Epidemic disorders are frequent, and commit great devastations. The number of real Kamtschatdales, retaining their ancient usages, do not amount to 4000, and are chiefly scattered on the northern coast. Their character is mild and hospitable, and they live together in great harmony,, and to a good old age. But they are very indolent and sensual. Formerly they carried on frequent wars ; never indeed engaging in regular battle, but attacking at night, and by ambuscade. Sometimes a party thus surprised would kill first their women, and then themselves, rather than, fall into the hands of the ene-my ; for the women were generally carried off. Their arms were clubs, lances, and arrows, pointed with bone : but, since they have been subject to Russia, these wars are no longer permitted.

In winter their habitations are sunk into the ground. They dig a hole five feet deep, the breadth and length proportioned to the number of its inhabitants, and in the middle fix four or five thick wooden pillars; over these they lay balks, upon which they form the ceiling, leaving in the middle an oblong square. The fire is in one of the long sides of this square : between the pillars round the walls they make benches,

upon which eacl .amily lies separately ; but on that side opposite tc the fire there are no benches, it being designed for their kitchen, in which they dress their victuals. They adorn the walls with mats made of grass. The entrance is by ladders, placed near the fire hearth ; so that, when they are heating their huts, the steps of the ladder be-come so hot, and the smoke so thick, that it is almost impossible for a stranger to go up or down.

Their summer dwellings are reared on eight or nine pillars, about two fathoms long, or more, fixed in the ground, and bound together with balks laid over them, which they cover with rods and grass : fastening

spars and a round sharp roof at top, which they cover with brambles. They fasten the lower ends of the spars to the balks with ropes and thongs, and have a door on each side directly opposite to each other. The fine southern Kamtschatkans build their villages in thick woods and other places which are naturally strong, twenty versts from the sea; their summer habitations are near the mouths of the rivers.

They generally make their boats of poplar ; but the Kuriles, not having any wood of their own, make use of what is thrown on shore by the sea. The northern inhabitants of Kamtschatka also make boats of the skins of sea-animals, which they sew together with whales' beards, and caulk them with moss or nettles beaten small. These boats hold two persons ; one of whom sits in the prow, and the other in the stern. They push them against the stream by poles : when the current is strong they can scarcely advance two feet in ten minutes : notwithstanding which they will carry these boats, fully loaded, sometimes twenty, and, when the stream is not very strong, even thirty or forty versts. When the goods are not very heavy, they lay them upon a float or bridge resting upon two boats joined together.

Their principal food is fish, which they devour without many scruples as to cleanliness or delicacy. Having caught a fish, they begin with tearing out the gills, which they suck ; they cut out, at the same time, some slices of the fish, which they devour raw ; the fish being then gutted, and the entrails given to the dogs, the rest is dried, and afterwards eaten, sometimes dressed, but more commonly raw. The dish, however, which is reckoned most delicious, is salmon, dressed in a peculiar manner, called tchaouitcha. As soon as it is caught, they bury it in a hole in the ground, where it remains till it is sour ; or, in fact, becomes perfectly putrid. In this state, when a European would scarcely approach, the Kamtschatdale feeds upon it, as upon the most delicious morsel. Their plates are never washed, and serve both the dogs and their masters : ablution, in like manner, is never practised upon the face, hands, or any part of their persons.

Their manners are cheerful : they possess the talent of mimicry in a remarkable degree, and have songs full of gay images. They are passionately fond of dancing, and imitate the motions of the bear to the life. At a particular season the women go out to collect roots and vegetables for winter consumption. This is high holiday

with them ; and they celebrate it with unbounded license.

The Kamtscbatdales commonly travel in sledges drawn by dogs. The animals used for this purpose are of a middling size, of various colors, though most are white, black, or gray. In travelling they make use of those that are castrated, and generally yoke four to a sledge. They drive and direct their dogs with a crooked stick about four feet long, which they sometimes adorn with different colored thongs. They drive their sledge sitting upon their right side, with their feet hanging down ; for it would be looked upon as a disgrace for a man to sit down at the bottom of the sledge, or to allow any person to drive him. It is very difficult to travel in these sledges; for, unless a man keeps an exact balance, he is liable every moment, from the height and narrowness of them, to be overturned. The highest achievement is to drive standing on one foot. In a rugged road this would be very dangerous, as the dogs never stop till they come to some house, or are entangled by something upon the road : in descending any great declivity they unyoke all the dogs except one, and lead them softly down. They walk up hills ; for it is as much as the dogs can do to drag up the sledge empty. After a deep snow, before it has been hardened by a frost, a man goes before upon snow shoes, whom they call brodovskika. The snow shoes are made of two thin boards, separated in the middle, bound together at the ends, and with the fore part bent a little upwards. The brodovskika, having one of these shoes upon each foot, leaves the dogs and sledge, and going on clears part of the road ; then returning, leads forward the dogs and sledge so far as the road is made. When a storm of driven snow surprises them, they take the shelter of some wood, and stay there as long as the tempest lasts. If they are a large company, they dig a place for themselves under the snow, and cover the entry with wood or brambles. Sometimes they hide themselves in caves or holes, wrapping themselves up in their furs ; and, when thus covered, lie as warm as in their huts ; they only require a breathing place, and their clothes not to be tight about them ; for then the cold is insufferable. The best travelling is in March or April, when the snow is hard or frozen a little at top ; however, there is still this inconvenience, that travellers are sometimes obliged to lodge two or three nights in desert places ; and it is difficult to prevail upon the Kamtschatkans to make a fire either for warming themselves or dressing victuals, as they and their dogs eat dried fish, and find themselves as warm wrapped in their furs, and sleep in the open air as sound, as others in a warm bed. In summer, when the services of their dogs are not required, they are left to provide for themselves, by ranging over the country : at the approach of winter they re-turn home in the most punctual manner.

Kamtschatka is said to have been discovered by a body of Cossacks in

1696; it was finally subdued by the Russians in 1711, but did not attract much attention until the discovery of the Aleutian, and Fox Islands. It is divided into the four districts of Bolcheretsk, Tiguilok, Nijni

Kamtschatk, and Versck nei Kamtsohatk, all of which are said to he protected by a force of 500 men. The Russian settlements are small. St. Peter and St. Paul's, which is the chief, containing only about thirty houses. It stands in lat. 53° 0' 15* N., and in long. 158° 4' 9' E.

The introduction of ardent spirits, their eagerness for which knows no bounds, has been here productive of the most pernicious effects. The Russian traders, who are well aware of this, sell it at an extravagant price, and inveigle from them their most valuable effects in exchange. The trade with Russia chiefly flows through Okhotsk.

KANDAHAR, a considerable province of AFGHAUN ISTAUN, which see. It lies between 31° and 34° of N. lat. and 64° and 68° of E. long., being inhabited by Nomade tribes, and having few towns. Perhaps the inhabitants amount to 50,000, who are chiefly Douranies, or of the sovereign's tribe : but Hindoo shopkeepers and bankers reside among them. In the summer they reside in the mountains and during winter in the plains ; living in tents of black woollen cloth (Kiyhdes) about twenty-five feet long by twelve broad and eight feet high, supported generally by three poles and divided in the middle. At the west of their encamp-ment, which consists of from fifty to 100 of these tents, a space is marked out with stones for a mosque ; and at a little distance is a tent for the reception of strangers. Hyenas, leopards, bears, wolves, jackals, boars, foxes, deer, hares, and the wild ass, abound on these mountains. The tame animals are camels, horses, mules, cattle, asses, sheep, goats, dogs, and cats ; and a few buffaloes. Their grapes and melons are fine ; but they have no mines, or

manufactures. The road from India to Persia however insures here a considerable transit trade. The province is governed by a prince or noble, deputed by the king of the Afghanns. In former times this province was alternately subject to Persia and Hindostan. The rivers Helmund and Argan-dab traverse this province ; the principal town of which, beside Kandahar, is Suffa, or Sufta; it has also innumerable castles or fortresses. Kandahar was long thought in Europe to be generally a mountainous province, and a complete barrier on the side of Persia. But it is now known to be comparatively level, and easily entered from the west.

KANDAHAR, a celebrated fortress and town, the capital of the above province, stands in lat. 39° 20' N., long. 65° 30' E. The fortress is two miles north of the city, on the top of a precipitous rock. In early times it was the residence of a Hindoo prince, and in the beginning of the eleventh century is said to have been in possession of the Afghaun tribe of Khilfgee, or Ghiljee. It was taken by the emperor Baber in 1507, who found in it considerable wealth; but it was shortly after recovered by the Afghauns. In the year 1521 Baber regained possession of it, after a long siege, and of all the district of (iurmseir, to the govfrnment of which he appointed his son Kamran. When Homayon, another son of Baber, about the middle of the sixteenth century, was driven from the1 throne of

Hindostan, into Persia, he agreed, in return for the assistance given him by Shah Tahmasp, to make over the fort and district of Kandahar to him ; but forgot or repented of his promise, and afterwards took possession of the fortress. It remained an appendage of Hindostan till 1625, when it was taken by Shah Abbas. Twelve years subsequently, Aly Murdan Khan, the governor of Kandahar, delivered it up to Shah Jehan. Since this event it has often been the cause of a war with Persia. In 1649 Shah Abbas II., succeeded in again getting possession of it, and garrisoned it with 10,000 musqueteers and artillery-men, who defended it against the prince Aurungzebe, with an [army of 50,000 men, for several months, and till winter obliged him to raise the siege. Three years after Aurungzebe renewed the siege ; but was compelled again to retreat from it, and the fort remained in the quiet possession of the Persians, till, in 1709, it was taken by Meer Veis, of the Afghaun tribe of Ghiljee. Nadir Shah invested Kandahar with 80,000 men, and after a siege of nearly two years succeeded in carrying it: but on his assassination, in 1747, Ahmed, the chief of the Abdallies, surprised it, and thus laid the foundation of the present kingdom of Afghaunistaun. During his reign it continued the capital ;

but his son Timour Shah, being dissatisfied with the Dourany tribe, removed his residence in 1774 to Cahul. It is at this time about three miles in circumference; and is said to be a flourishing and populous place, chiefly inhabited by persons of Persian or Hindoo descent; but the nat.ves of all countries of the east are to be met with here. It stands on the great road into Persia, and is in general govc rned by one of the king's sons. The environs are well cultivated, and abound with gardens and orchards. At a short distance are the ruins of a large city, said to be the native place of the Ghorian sovereigns.

KANGRAH, a district and fortress of the province of Lahore, Hindostan, situated about the thirty-second degree of north latitude. The modern territory is limited on the north and north-west by Hurreepoor ; on the east by Cham-bay ; on the south by Calowr; and on the west by Punjab. In 1783 its revenue was estimated at seven lacks of rupees. On the conquest of Serinagur by the Nepaulese, in 1803, their army was stopped in its progress to Nepaul by this fortress, which then belonged to Rajah Sansar Chund. It is situated on a steep mountain, about thirty miles to the west of tne Beyah, and is well supplied with water : the ground it contains, it is said, will subsist a garrison of 3000 or 4000 men. It now belongs, we believe, to the Seiks. In the vicinity of this fortress, upon a lofty mountain, Abul Fazel describes a place called Maham-ey, ' which they (the Hindoos) consider as one of the works of the divinity, and come in pilgrimages to it from great distances, thereby obtaining the accomplishment of their wishes. It is most wonderful,' he says, that, in order to effect this, they cut out their toneues, which grow acain in the course of two or three days, and sometimes in a few hours. Physicians believe, that when the tongue js cut

it will grow again ; but nothing except a miracle can effect it so speedily as is here mentioned !'

KANKHO, or KANKIANGHO, a considerable river of China, flowing from north to south, in the province of Kiangsee, and falling into the Poyang Lake. It forms the termination of the great water

communication from Pekin southwards : and its waters are clear, its bed rocky, and the navigation sometimes dangerous.

KANGAROO ISLAND, an island on the south coast of New Holland, discovered and named by captain Flinders, who found a great number of kangaroos here. They were so tame that they suffered themselves to be shot in the eyes with small shot, and, in some cases, to be knocked on the head with spikes: there is little doubt that they had never before seen any of the human species. All that part of the island visible from the ship was covered with a thick •wood ; and captain Flinders examined a part of the soil which he thought very superior to that of the neighbouring islands. The cliffs and the loose stones scattered over the surface of Kangaroo Head had the appearance of being calcareous. But the basis seemed to be brown slate. Long, of Kangaroo Head, 137° 58′ 31″ E., lat. 35° 43′ 0″ S.

KANSAS, or KANZAS, or KANSEZ, a river of North America, which rises in the Rocky Mountains, and, after an easterly course of about 1200 miles, unites with the Missouri, 340 miles from the Mississippi, in long. 94° 20’ W., lat. 38° 31’ N.

KANT (Immanuel), the celebrated metaphysician, was born the 22d of April 1724 at Konigsberg, in Prussia. His parents held a respec-able, though not high, rank in life, his father being a saddler, of the name of John George Kant, and originally descended from a Scotch family, who spelt their names with C. His fa-ther died in 1746.

Of the first years of Kant’s life little is known. From his mother, a woman of sense and uncommon piety, he is said to have imbibed warm sentiments of devotion, which left most reverential impressions of her memory upon his mind. He received his first instruction in reading and writing at the free school of his parish ; and his early indications of talent induced a materaal uncle, named Richter, to defray the expense of his farther education at the college Fridericianum, un-der the well known puritan, Schiffert. Here he contracted his intimacy with Rhunken. In the year 1740 he entered the University of Konigsberg. Here his first tutor was Martin Knutzen, then in high repute, who devoted himself with zeal to the instruction of his pupil, and contributed very greatly to the unfolding of his talents. He attended also the lectures of Teske, on philosophy and the mathematics, and those of Dr. Schultz, another famous puritan, on theology. On the completion of his studies he accepted a situation as tutor in a clergyman’s family, some distance from Konigsberg, and afterwards a similar one in the house of count de Hulleson, in Armsdorf. He fulfilled his duty as a tutor, by no means to his own

satisfaction He was too much occupied, he tel's ˆs. with acquiring and
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digesting knowlege in his own mind, to be ablt to communicate the rudiments of it to others. After being thus engaged for nine years, he returned to Konigsberg, and maintained himself by private tuition, ready to embrace the first opportunity that offered of re-entering the university. In 1746, when only twenty-two years of age, he began his literary career with Thoughts on the Estimation of the Animal Powers, containing strictures on the proofs advanced by Leibnitz and other mathematicians on this point ; to which were annexed various reflections on the powers of bodies in general. He sets out with maintaining and justifying his right of opinion as an independent thinking being, and follows up this principle with differing from Leibnitz, Wolf, Hermann, Bulfinger, &c., on this particular. In 1754 appeared An Examination of the Prize Question of the Berlin Society — whether the earth, in turning round its axis, by which the succession of day and night was produced, had undergone any change since its origin ? what could be the causes of it ? and how we could be assured of it? The judicious treatment of these two subjects gained him the reputation of a philosopher, and paved the way to his long desired promotion to a degree. In 1755, and at the age of thirty, he was chosen M. A. and entered upon the task of lecturing before crowded audiences. He continued, during fifteen years, to publish every year something on the abstruse branches of science. These works were, in the year 1755, An Examination of the Question — whether the earth has decayed ? A universal Natural History and Theory of the Heavens ; or, an Essay on the Constitution and Mechanical Structure of the whole Globe, according to the Newtonian Sys-tem. It was the singular fate of this work, which was dedicated to his Prussian majesty, never to come before the public or his majesty ; the publisher failing at the period of its publication, and all his MSS. and effects being put under seal ; in consequence of which, six years after, the famous Lambert unintentionally plucked the laurels of invention from the brow of our philosopher, by advancing the very same principles, and having the credit of originality. The justness of Kant's theory was, thirty years afterwards, evinced by the practical investigation of Herschel.

In 1756 appeared Principiorum primorum Cognitionis Metaphysics nova Dilucidatio ; History and philosophical description of the earthquake in the year 1755; and in another work, farther considerations on this subject. Monado-logia, Physica, Metaphysica

cum Geometries Junctae usus in Philosophise Natu'rali Specimen Primum, an academical piece. Remarks for the Elucidation of the Theory of the Winds. In 1757 Sketch and Annunciation of Lectures on Physical Geography. In 1758 New Principles of Motion and Rest, and the results connected with them in the fundamentals of Natural Philosophy ; to which an Annunciation of Lectures on those subjects is affixed : a small work which, at the time, excited great notice, and was afterwards inserted more at large in his later writings. In 1759 Considerations on Optimism, with which likewise Lectures were announced. In : 760 Thoughts on the early death of Mr. John

Frederic Von Funk, in a letter to his mother. A Trial to introduce the Idea of Negative Sizes in Philosophy, the only possible grounds for the Demonstration of a Deity.

Kant wished, in this latter work, to show, that without presupposing the independent existence of ourselves, or that of oilier spirits, something is possible ; and on that proof alone rests the grounds by which to demonstrate the existence of a Deity. It contributed as much as any work to establish his literary character. In 1764 Reflexions on an adventurer named Jan Pawlis Rowiez Idomozyrskich Komonoraki. This was a fanatic, who was then deluding the country people by pretences to a prophetic spirit. Kant was a decided but rational enemy to all fanaticism. In another pamphlet, entitled An Essay on the Disorders of the Head, he examined this subject philosophically. Soon after which, in the same year, appeared his Observations on the Sublime and Beautiful, which acquired him the title of the German Bruyere ; also, A Treatise on Evidence in Metaphysical Sciences, which obtained the accessit of the Royal Academy in Berlin.

' In this treatise he points out the principles of certainty which the mathematical and philosophical sciences have in common with each other, and those which are peculiar to them. He strikes out a new path for himself in metaphysics, and often criticises the usual philosophical methods of argumentation. His ideas are here often similar to those of Mendelsohn, but he no less frequently elucidates with great

originality. In 1765 he published, under the simple title of Intelligence respecting the Arrangement of Lectures for the Winter Half-year, a beautiful and striking system of metaphysics, logic, and ethics; and, in 1766, attacks Swedenberg, who pretended to converse with spirits, in his Dreams of a Ghostseer, illustrated by the Dreams of Metaphysics. He here defines what he understands by metaphysics, as a science resulting from the exercise of human reason, totally unconnected with any thing immaterial. In this same year he obtained the second place of Inspector to the Royal Library in the palace. He undertook also the management of the beautiful collection of natural curiosities, and cabinet of arts, belonging to Mr. Saturgus, minister of the commercial department, which afforded him an opportunity of studying mineralogy. He however gave up both these situations some years after.

Kant's reputation and literary productions did not long remain unknown to the Prussian monarch, who had made him repeated offers of a professorship in the Universities in Jena, Erlan-gen, Mitau, and Halle, and invested him with the character of privy-counsellor. But he declined all these honors, from an attachment to his native place. He might indeed have received the professorship for poetry in his own university much sooner; but, not thinking himself adequate to the task, he would not accept of it, and waited patiently till 1770, when the situation of professor for the metaphysical department became vacant, and was immediately bestowed on him.

On the 31st of March this year he entered upon his new arid long wished-for office, by an inaugura-

tive disputation, which he afterwards publish* cl under the title of De Mundi sensibilis atque m-telligibilis Forma ct Principiis ; in which he maintained his favorite principle of purifying metaphysics from confounding the sensual with the spiritual, by prescribing the limits of each. Thus, for example, when speaking of time and space, he traces their origin, not from the sense, but the soul. He maintains, ' they are not any thing objective and real ; neither substances, accidents, and relations, but a necessary qualification flowing out of the nature of our souls.'

His situation now called his whole attention to metaphysical subjects, and he pursued them with the most unremitting ardor, in order to unfold the rational powers of man, and deduce thence his moral duties. In 1775 appeared his Tract on the various sorts of Human Beings. In

1780 he became a member of the Academical Senate. In 1781, besides his Correspondence with Lambert, he published his Criticism on Pure Reason, in which he maintains that the doctrine of materialism was limited by external objects. This publication, which subjected him to much misinterpretation, occasioned a second pait in 1783, entitled Prolegomena, for future Metaphysics, which are to be considered as a science ; in this he illustrated his former doctrine, and entirely abstracted from the definition of metaphysics any thing supernatural. In 1784 he wrote the tracts entitled Considerations on the Origin of Powers, and the Methods of Judging tliem. Ideas on a Universal History, as a Citizen of the World. Answer to the question, what is Illumination? On Volcanoes in the Moon. A Definition of the Idea of a Race of Men. On the Injustice of Pirating Books. Elements of Metaphysics and Morals; all of which went off so rapidly that a second edition was printed in the following year. In 1786 the three following : Supposed Commencement of the Human Race. What he understood by representing to one's self the Nature and Qualities o? Things. Metaphysical Elements of Natural Philosophy ; in which latter work he entered at large into the exercise of the reasoning powers with regard to material objects. In the same year he was appointed rector of the university.

During his first tectorate he had the task of addressing, in the name of the university, Frederick II. The king replied in a manner which did the philosopher and the monarch equal ho-nor. Not long after this, without any solicitation on his part, he received a considerable addition to his salary from the foundation of the upper college. In 1787 he roused the public curiosity by his Criticism on Practical Reason, in which he enlarged on the moral, as he had done before on the metaphysical, principles of his philosophy. In the summer of 1788 he was chosen rector of the university a second time, and, after a short space, senior of the philosophical faculty.

Though now advanced in life, Kant presented the public with several useful publications; as in 1793, Religion within the bounds of Plain Rea-son ; wherein he endeavours to show the cc nsistency between reason and revelation. On the common proverb, what may be good in Theory is bad in Practice. In 1794 Something respect-

ing the influence of the Moon on the Weather. In 1795 The end of all Things. An Eternal Peace. A Philosophical Sketch, elucidating his Free Sentiments on Politics. In 1796 To Summering on the Organ of the Soul. On the Mo-dern High Tone in Philosophy. Metaphysical Elements of the Civil Law. In 1797 Upon the Justification of Lying from Good Motives. Metaphysical Elements of the Moral Law. Declaration upon Mr. Schlettwine's Challenge in a Letter from Griefswalde. On the Power of the Mind in Subduing the Sensations of Pain. In 1798, On Book-making, in two Letters to Mr. Frederick Nicolai, &c. Explanatory Observations on the Civil Law, for the possessors of the first edition, and The Dispute of the Faculties.

At last, in A Pragmatical View of Anthropo-logy, he takes leave of the public as an author, consigning his papers over to the revision of others. After which he gave up all his official situations, and, amidst growing infirmities, retired into solitude. He afterwards, however, collected from his papers (in 1801), Logic, or, a Guide to Lecturing. (1802), Physical Geography. (1803), On Giving Instruction. (1804) Upon the Prize Question of the Royal Academy at Berlin, What is the Actual Progress made in Metaphysical Sciences since Leibnitz and Wolf? Kant had enjoyed for seventy years an almost uninterruptedly good state of health, but, early in May 1800, he was confined to his room in consequence of a fall he had received ; and in the winter was unable to leave his bed-chamber. Shortly after he experienced a fit of the apoplexy; and towards twelve at noon, on the 12th of February 1804, tranquilly breathed his last.

Kant's intellectual qualifications were of no ordinary stamp. He possessed a prodigious memory, and often cited long passages f-om ancient and modern writers, particularly his favorite poets, Horace and Virgil, Hagedorn and Burger. He could describe objects that he had read of in hooks even better than many who had seen them ; thus, for example, he once gave a description, in the presence of an Englishman, of Westminster Bridge, its form and structure, length, breadth, height, and dimensions of all its parts, so that his auditor enquired how many years he had been in London, and whether he had dedicated himself to architecture ; upon which he was assured that

Kant had never passed the boundaries of Prussia. A similar question was put to him by Brydone, to whom he unfolded in conversation all the relative situations of Italy. — A consequence of having such a memory was, that he set no value on an extensive library. The contents of books were his only object of desire ; and he acquired them by once or twice reading. The books themselves were then rather burdensome to him than otherwise. He accordingly made a contract with the bookseller, Nicolovius, in this town, to send all new books in sheets, which he read in that form, and generally returned afterwards. But the most prominent feature in Kant's intellectual character was the accuracy with which he analysed the most complex ideas. Nothin? escaped the scrutiny of his intellectual eye. He discovered at once the incongruities of other men's sentiments, and

traced, with unspeakable precision, their t'trors to their true source. — He had likewise an astonishing faculty of unfolding the most abstrus* > principles, and digesting single and individual sentiments into a systematic order. Herein consisted the originality of his mind. Ail his ph losophical conceptions flowed from the inexhaustible source of his own reason. The facility with which he deduced every thing from h.s o*vn reflexions gave him at length such an -habitual familiarity with himself, that he could not properly enter into the sentiments of others. He found all in his own mind which answered his purpose, and had therefore no occasion for foreign resources. No task was so harJ for him as to leave the cun?nt of his own thought, in order to follow the chain of another's reasoning ; and, when compelled to investigate the argument ot his adversaries, he frequently begged of his friends to compare the sentiments of the former with his, and communicate the results to him, or even to undertake the defer ce of his doctrines instead of himself.

With all this depth of reflection, Kant was notwithstanding a wit. He had frequent and sudden strokes of repartee at hand, and was a general admirer of all that polishes and beautifies the graver topics. On moral subjects he could move his audience to tears. He united, in the happiest degree, the greatest acuteness of reasoning with the polish of the gentleman. His charities, particularly to indigent scholars, were unbounded. Kant was never married ; was of a remarkably slender and delicate make ; and had so little flesh, that his clothes could never be made to fit by artificial means. His nervous and muscular system was no less tender. His face, when young, must have been handsome ; he had a fresh color, and fine large blue eyes, as expressive of goodness as talent.

KAN-TCHEOU, or KAN-CHOO-FOO, a flourishing town of China, in the province of Kiang-si. Its rivers, port, riches, and population, all contribute to attract strangers. A day's journey from this city there is a very rapid cunent, almost twenty leagues in length, which flows with great impetuosity over a number of scattered rocks that are level with the water. Travellers here are in great danger of being lost, unless conducted by a gu de. Near the walls of the city there is a very long bridge, composed of 130 boats joined together by strong iron chains. The custom-house is upon this bridge, where a receiver constantly resides to visit all barks. Two or three moveable boats are so placed that by their means the bridge can be opened or shut, at pleasure. In the territory belonging to this city a great number of those valuable trees grow, from which varnish distils. Its district is extensive, and contains twelve cities of the third class. It seems to be the Campion of Marco Paulo

KAOLIN, an earth which is used as one of the two ingredients in oriental porcelain. Some of this earth was brought from China, and examined by Mr. Reaumur. He found that it was perfectly infusible by fire, and believed that it is a talc earth ; but M. Macquer observes, that it is more probably of an argillaceous nature,

from its forming a tenacious paste with the other ingredient called petuntse, which has no tenacity. Mr. Bomare says, that by analysing some Chinese kaolin, he found it was a compound earth, consisting of clay, to which it owed its tenacity; of calcareous earth, which gave it a mealy appearance ; of sparkling crystals of mica ; and of small giavel, or particles of quartz crystals. lie says, that be has found a similar earth upon a stratum of granite, and conjectures that it may he a decomposed granite. This con-jectuie is the more probable, as kaolins

are frequently found in the neighbourhood of granites. See PORCELAIN.

KAO, called also Aghao, or Oghao, and Kay-bay, one of the Friendly Islands in the South Pacific. It is a mountainous conical rock, and about two miles in diameter at the base, and was discovered by the Dutch navigator Tasman. It is two miles north-east of Toofoa, and uninhabited.

KAOTCHEOUFOU, a city of the first rank in China, in the province of Quangtong. It is thirty-six miles from' the sea, and situated on a navigable river. The surrounding district is fertile, and produces a figured marble or jasper, 200 miles E. S. E. of Canton.

KARAITES, or CARAITES, an ancient religious sect among the Jews, whereof there are still some subsisting in Poland, Russia, Cairo, and other parts of the Levant; whose distinguishing tenet is, to adhere closely to the letter of the scripture, exclusive of allegories, traditions, and the like. Aben Ezra, and some other rabbies, treat the Karaites as Sadducees ; but Leo de Juda calls them, Sadducees reformed ; because they believe the immortality of the soul, paradise, hell, resurrection, &c., which the ancient Sadducees denied. But he adds, however, that they were doubtless originally real Sadducees. Josephus and Philo make no mention of them ; which shows them to be more modern than either of those authors. This sect was probably not formed till after the collection of the second part of the Talmud, or the Gemara ; perhaps not till after the compiling of the Mischna in the third century. The Karaites themselves pretend to be the remains of the ten tribes. Wolfius, from the Memoirs of Mardocheus, a Karaite, refers their origin to a massacre among the Jewish doctors, under Alexander Jannaeus, about A. A. C. 100; when Simeon, son of Schetach, the queen's brother, making his escape into Egypt, there forged his pretended traditions; and, at his return to Jerusalem, published his visions ; interpolating the law after his own fancy. He Rained many followers, and was opposed by others, who maintained, that all which God had revealed to Moses was written. Hence the Jews became divided into Karaites and Traditionaries : among the first, Judah, son of Tabbai, distinguished himself; among the latter, Hillel. The Karaites are little known ; their works being in very few hands, even among the greatest Hebra-ists. Selden, who is very express on this point, in bis Uxor Hebraica, observes, that besides the in on? text, they have certain interpretations, n-!iir'i thev rnl! hereditary, and which are pmner iraditii-ii*. CaVb, a Karaite, red m-os the difference between them and the rabbinists to three points. I. They deny the oral law to come from Moses, and reject the Cabbala. 2. They abhor the Talmud.

3. They observe the feasts, the sabbaths, &c., much more rigorously than the rabbins do. To this may be added, that they greatly extend the degrees of affinity, wherein marriage is prohibited.

KARAK, an island of the Persian Gulf, containing about, twelve or thirteen square miles, and affording a safe anchorage at all seasons, but more particularly during the gales which blow here from the north-west. The eastern side alone is capable of being cultivated. Sir John Malcolm, in 1808, recommended the British to occupy and fortify Karak, as a defensive position, and the Dutch aie said at one time to have increased its inhabitants to 2000 or 3000. At present it is in the possession of the Persians. The best pilots for Bassorah may be procured here, and there is a good supply of water. Lat. 29° 14' N.

KARAMAN, or CARAMAN, a town of considerable size, but decayed appearance in Cara-mania, and standing at the foot of the Bedlerin Dag mountains, a branch of Mount Taurus. It was formeily defended by a castle, now in ruins ; and the population is said to amount to 3000 families of Turks, Turkmans, Armenians, and Greek. The water is good and plentiful, and the climate healthy. It trades with Caesarea, Smyrna, and Tarsus, and has an extensive manufacture of blue cotton cloth. There are in the city twenty-two khans, a number of mosques, and six public baths. Fifty-five miles south of Konich. See CARAMANIA.

KARANG SAMBONG, a large inland town of Java, situated on a fine navigable river, which runs through Indramayo into the sea. The Dutch had a large factory at this place, and a shorter inland communication to Batavia is now establishing from hence by means of a new road, by the way of Crawang. It is 1 68 miles south-east of Batavia.

KARAVANSERA, or more commonly CARAVANSERA, a place in the East appointed for receiving the caravans. It is commonly a large square building, in the middle of which there is a very spacious court; and under the arches or piazzas that surround it there runs a bank, raised some feet above the ground, where the merchants, and those who travel with them in any capacity, take up their lodgings ; the beasts of burden being tied to the foot of the bank. Over the gates that lead into the court there are sometimes little rooms, which the keepers of the karavanseras let out at a very high price to such as wish to be private. The karavanseras in the east are something of the nature of the inns in Europe; only that you meet with little accommodation either for man or beast, but are obliged to carry almost every thing with you. Every karavansera has a well. These buildings are chiefly

owing to the charity of the Mahommedans; they are esteemed sacred dwellings, where it is not permitted to insult any person, or to pillage any of the effects that are deposited there. There are also karavanseras where most things may be had for money ; and, as the profits

of these are considerable, the magistrates of the cities to whose jurisdiction they belong, take care to store them well. There is an inspector, who, at the departure of each caravan, fixes the price of the night's lodging, from which there is no appeal.

KARLE, a Saxon word used in English law, sometimes simply for a man ; and sometimes, with an addition, for a servant or clown. Thus the Saxons call a seaman buscarli, and a domestic servant buscarle. Hence the modern word churl.

KARLSBURGH, called also Lower Weis-senberg, a palatinate of Transylvania, belonging to Hungary, and lying along the Marosch and the Kockel. Its area is about 1800 square miles, chiefly pasturage, but producing also corn and wine. Its minerals are salt, mercury, and silver ; gold also is found, and its forests are extensive. Population 100,000.

KARLSBURG ALBA CAROLINA, or BELGRAD, a town of Transylvania, on the Marosch, the chiei town of the palatinate of Karlsburg, and the former residence of the princes of Tiansylvania. It stands at the foot of a chain of mountains, bounded by a fertile valley on the east, and is the only regular fortress of the country. The principal gate of the town is handsome, and the cathedral, for it is a bishop's see, is a majestic edifice, containing the tombs of John Corvinus, his son Ladislaus, queen Isabella, and duke Sigismond. The episcopal palace, the residence of the chapter, the barracks, the arsenal, the mint, and observatory, are also worth notice : the church of Bathory contains a

splendid mausoleum, erected by the king of Poland of that name, to his brother, a prince of Transylvania. Karlsburg has a Calvinist and a Lutheran church, and two Greek churches, and two synagogues. It was a Roman colony of the names of Apulum and Alba Julia, and stands thirty-two miles north-west of Hermanstadt, and forty-nine south by west of Clausenburg.

KARLSRUHE, or CARLSRUHE, a handsome town of Germany, in Suabia, in the territory of Baden Durlach, having a magnificent palace. The town is built on a regular plan, and the houses are all uniform. It is twelve miles north by east of Baden.

KARLSTADT, a government of Sweden, comprising almost the whole of the ancient province of Warmeland. Its superficial extent is 4267 square miles, with 140,000 inhabitants The capital is Carlstadt. See WARMELAND.

KARNATA, an ancient Hindoo kingdom, which comprehended all the high table land in the south of India, above the Ghauts. The principal rivers of this part of the country have their sources in this region ; and it was governed by the Balala rajahs, whose capital was Balgami, in the district of Mysore.

KAROULY, a town, citadel, and district of Agra, Hindostan, situated on the banks of the Putchpuree. The rajah is of the military tribe of the Rajpoots, and his ancestors formerly reigned at Biana ; but they have been stripped of their possessions by the Afghauns, Moguls, and Mahrattas ; their revenues are now not above £15,000 per annum.

KARSHAGNI, in Hindoo mythology, a fiery kind of expiation of sin among that people ; the following account of which is given in Moor's Hindoo Pantheon : — ' Cow-dung is a great purifier on several occasions. It is related in the Agni-purana, that a most wicked person, named Chanyaka, had exceeded every known possibility of salvation. At the court of Indra were assembled gods and holy men ; and, as they were discoursing on such enormities, Indra, in answer to a pointed question, said that nothing certainly could expiate them except the karshagni. It happened that a crow, named, from her friendly disposition, Mitra-kaka, was present; and she immediately flew and imparted the welcome news to the despairing sinner, who immediately performed the karshagni, and went to heaven. This expiation consists in the victim covering his whole body with a thick coat of cow-dung, which, when dry, is set on fire, and consumes both

sin and sinner. Until revealed by the crow, this potent expiation was unknown ; and it has since been occasionally resorted to, particularly by the famous Sankara-Charya. The friendly crow was punished for her indiscretion ; and forbidden, and all her tribe, ascension to heaven, and was doomed on earth to live on carrion.'

KASAN, a large country of the Russian em-pire, lying on both sides of the Volga, or between 46° 20' and 49° 40* E. long., and 54° and 57° N. lat. It was formerly an independent kingdom, subject to the Kalmuc Tartars, to whom the great dukes of Muscovy, with the other petty princes of Russia, were tributary. But John Basiliowitz I., the founder of the Russian greatness, about the end of the fifteenth century, rescued his country from the Tartar yoke ; and in 1552 John II. conquered Kasan, which now comprises a territorial extent of 22,000 square miles. It is divided into twelve circles, and watered by the Wolga, Sura, Viatka, and Ka-sarka rivers, besides smaller streams. The country is flat, except towards the east, where a branch of the Ural Mountains diversifies its appearance. The soil, a clay or black mould of considerable fertility, is ill cultivated and chiefly occupied with the breeding of cattle ; but corn, hemp, hops, and fruit, are grown. In the towns are a few manufactures of cloth, soap, and leather. The climate is temperate for the latitude, the rivers not free?ing before November, and being open again about April.

KASAN, a city of Russia, long the capital of the old kingdom of Kasan, is situated on the Kasanka, about four miles above its junction with the Wolga, on elevated ground. The streets are wide but irregular. The town consists of three parts ; an antique Tartar fortress, the town proper, and the villages or suburbs around. The fort only is built of stone, the rest of wood. It is a bishop's see, and the seat of a small university, founded in 1803. It has also a theological seminary, two gymnasia, a school for the children of Tartar converts, and one for those of soldiers. It has manufactures of woollen, cot-ton, lace, and earthenware, and large soap-works and tanneries. In these articles, and corn, wax, honey, skins, tallow, &c., it carries

on an active trade with St. Peiershurgh, Archangel, Tobolsk, Orenburg, and Moscow. The great fair of Macariev is an important channel for the merchandise of this place. At a little distance is a new admira'ty establishment, with a navigation school, magazines, and dockyard. 208 miles east, by south of Niznei-Novgorod, and 345 E. S. E. of Kostroma. Inhabitants

18,000.

KASKASKIA, a river of Illinois, which runs soutli-west into the Mississippi, below the town of Kaskaskia, sixty-three miles below the Missouri. It is navigable for boats 150 miles. Its general course is south-west and south. It flows through a very fertile country, abounding in natural meadows. There are high banks through a part of its course, on the east side, composed of limestone and freestone ; in some places from 100 to 150 feet. The land on the west side of this river is described as the best in the whole of Illinois.

KASSON, a kingdom of Central Africa, on the Senegal, having Kaarta on the east, and Kajaaˆa on the west. It is fifty miles from north to south, and about the same from east to west ; a beautiful level country, surpassing in population and culture any which Park saw in coming from the coast : Kooniakarg is the cap tal.

KATADEN, or KATAHDIN, Mountain Maine, North America, seventy miles north of Bangor. It is situated east of Chesuncook Lake, between the eastern and western branches of the Penobscot, and is the highest and southernmost of a cluster of eight or ten mountains: it may be seen in a clear day at Bangor, and also at Dix-mont, eighty miles distant. In August, 1805, a party of eleven persons ascended this mountain. They had no means of ascertaining its height, but estimated it at 13,000 feet. They describe the prospect from the top as very enchanting, affording a view of sixty-three lakes of various extent, and all the mountains between Maine and Canada.

KATTEGATE, or CATEGATE, a noted sea lying between part of Jutland and the coast of Sweden, towards the latter, interspersed with a great number of isles. It is almost closed at the extremity by the low Danish islands of Zealand and Funen, which had in old times been (with Sweden) the seat of the Suiones. Between the first and the coast of

Sweden is the famous Sound, the passage tributary to the Danes by thousands of ships. These islands were called Codnnonia, and gave to the Kattegate the name of Sums Codanus. Its greatest depth is thirty-five fathoms. It decreases as it approaches the sound ; which begins with sixteen fathoms, and near Copenhngen becomes shallow to even four. The Roman fleet, under the command of Germanicus, sailed, according to Pliny, round Germany, and even doubled the Cimbricum Pro-montcrium, and arrived at the islands which fill the bottom of the Kattegate; either by observation or information, the Romans were acquainted with twenty-three. One they called Glessaria, from its amber, a fossil abundant to this day on part of the south side of the Baltic. A Roman knight was employed by Nero's master of the gladiators to collect in these parts that precious

production, by which he became perfectly acquainted with this country.

KAUI-TMAN (Mary Angelica), a lady who possessed the talents and taste of a painter in a degree very unusual among her sex. She was a native of Coire, the capital of the Grisons, and born in 1740. Her father was an artist, who, perceiving the extraordinary talents of his daughter, conducted her, at the age of fourteen, to Milan, and afterwards to Rome; where her talents and accomplishments soon acquired her the most distinguished attention. It was the happy lot of lady Wentworth, the wife of the British resident at Venice, to be the instrument of conveying Angelica to England in the year 1764. Here she was received in a very flattering manner; her works eagerly sought for; and her company solicited by the learned, the great, and the polite. She was honored with royal attentions, and was esteemed and courted by artists of the first reputation. She was very industrious, and painted the lighter scenes of poetry with a grace and taste entirely her own ; and happily formed to meet that of an engraver (Bartolozzi) whose labors highly contributed to the growth and perpetuity of her fame; and who almost entirely devoted his talents between Angelica and Cipriani. After some years residence here, she was unhappily deceived by a footman of a German count, who, coming to England, personated his master, contrived to be presented at court, and persuaded Angelica to marry him. The cheat was soon discovered, and the villain had not the humanity to endeavour to soothe her disappointment by kindness, but treated her very ill. At last, however, by a payment made to him of £300, he was induced to return to Germany, and bind himself never to molest her any more. He kept his engagement : and the lady not hearing of him for seven years, and

concluding him dead, then married an Italian painter of the name of Zucchi, and, having spent seventeen years in England, returned with him to her native country, and thence to Rome ; where her house became the resort of genius and taste ; all artists and cognoscenti taking pleasure in being admitted to her conversazioni ; while amateurs, endowed with rank and wealth, were happy in finding employment for her talents. She lived to the age of sixty-seven, and then fell by a gradual decay, under that dominion which is alike regardless of the great, the learned, the virtuous, and the profligate. She died in 1807, universally regretted, and was honored by splendid public obsequies. The talents of this lady were of a pleasing rather than of a splendid kind. She excelled most in the representation of female characters. Her figures of men want form and energy, and their faces and characters are all of the same mould. Grace, ease, and suavity of expression, generally mark her women ; and to single figures, such as Calypso watching the Departure of Ulysses, or Penelope weeping over his Bow, she imparted the true interest of the story.

KAURZIM, a circle of Bohemia, belonging to Austria, and lying between the Elbe and the Muldau. It is traversed by the Sazawa, and is 1030 square miles in extent. It is in general

level ; and, though partly covered with forests, is fertile in corn and fruit. The breeding of cattle is also followed up with attention. Some gold mines were formerly wrought, but appear to be exhausted. Population 142,000. The capital is Kaurzim, an old and inconsiderable town, having a population of 1550. Twenty-eight miles E. S. E. of Prague, and forty-three W.S.W. of Konigingratz.

KA\V, v. n. & n. s. Teut. kaw; Belg. kaauw. From the sound, probably. To cry as a raven, crow, or rook.

The dastard crow that to the wood made wing, \Vith her loud foitrs her raven kind doth bring, Who, safe in numbers, cuff the noble bird.

Dry den.

Jack-daws hawing and fluttering about the nests, set all their young ones a-gaping : but, having nothing in their mouths but air, leave them as hungry as before. Locke.

KAYE, KEYE, or CAIUS (Dr. John), the founder of Caius College in Cambridge, was born at Norwich in 1510. He was admitted very young a student at Gonville Hall, and at twenty-one translated into English Erasmus's Paraphrase on Jude, &c. He travelled to Italy, and at Padua studied physic under Montanus. In 1543 he travelled through part of Italy, Germany, and France ; and, returning to England, commenced M. D. at Cambridge. He practised first at Shrewsbury and afterwards at Norwich ; but, removing to London in 1547, he was admitted fellow of the college of physicians, of which he was several years president. In 1557, being physician to queen Mary I. (as he was to Ed-ward VI. and queen Elizabeth), be obtained a license to advance Gonville Hall into a college ; whj.ch he endowed with several considerable estates, adding an entire new square at the expense of £1834. Of this college he was master till near his death. He died in July, 1573, aged sixty-three ; and was buried in the chapel of his own college. In 1557 Dr. Kaye erected a monument in St. Paul's to the memory of the famous Linacre. He wrote, 1. Annals of the College from 1555 to 1572. 2. Translation of several of Galen's Works ; printed abroad. 3. Hippocrates de Medicamentis, first discovered and published by our author; also De ratione vic-tus, Lov. 1556, 8vo. 4. De Medendi Methodo, Basil, 1554 ; London, 1556, 8vo. 5. Account of the sweating sickness in England, entitled De Ephemera Britannica, London, 1556, 1721. 6. History of the University of Cambridge, London, 1568, 8vo. ; 1574, 4to. in Latin. 7. DeThermis Britaunicis. 8. Of some rare Plants and Animals, London, 1570. 9. De Canibus Britannicis, 1570, 1729. 10. De Pronunciatione Graecae et Latinae Linguje, London, 1574. 11. De Libris Propriis, London, 1570.

KAYE'S, or KAY'S ISLAND, an island in the North Pacific Ocean, whose south-west point is a naked rock, considerably elevated above the land within it. Some parts of the shore are interrupted by small valleys filled with pine trees, which also abound in other parts of the island. It was discovered by captain Cook in 1778, who found the inhabitants possessed of iron. Water-fowls, humming-birds, and beautiful kingfishers

tbound in it. Long. 216° 4ff W., lat. 59° 50' N.

KAYLE, n. s. Dan. keyle; Swed. htyla; Fr. quille. Ninepin ; kettlepins, of which skit- !:es seems a corruption; a kind of play very common in Scotland.

KAZEROON, a town of Farsistan, in Persia, situated in a valley about thirty miles long, and seven or eight broad, bounded on the north by a salt lake. It has a well watered neighbourhood, and its crops are therefore abundant, unless when destroyed by locusts, to which Persia is much subject. Its inhabitants do not at present exceed 3000 or 4000.

KEAN, Edmund, a celebrated English tragedian, born in London, 1787, died at Richmond in 1 833. He possessed a hi*h order of ability for the profession he adopted, has been compared with Garrick, and attained such excellence in Shylock, Sir Giles Overreach, and Richard III., as no actor ever exceeded. In private, he was benevolent, but given to habits of irregularity which occasioned his early death.

KAZY, in the East Indies, a Mahommedar judge or magistrate, appointed originally by the court of Delhi to administer justice according to their written law; but particularly in matters relative to marriages, the sales of houses, and transgressions of the Koran. He attests or authenticates writings, which, under his seal, are admitted as the originals in proof.

KEACH (Benjamin), a Baptist minister, was born at Stoke Hammond, Buckinghamshire, in 1640. He was sentenced, in 1664, to stand in the pillory for the publication of the Child's Instructor, after which he was chosen pastor of a Baptist congregation in Southwark. He died in 1704. Other two of his works were entitled The Travels of Godliness, and The Travels of Ungodliness. He is best known, however, by his Tropologia, or Key to open Scripture Metaphors, folio, 1682, reprinted in 1778; and his Exposition of Parables.

KEATE (George), esq., F.R.S. and F. A.S., a celebrated English writer, born at Trowbridge, Wilts, in 1729, and educated at Kingston. After completing his education he travelled through France and Italy, and resided some years at Geneva, where he contracted an intimacy with the celebrated Voltaire. Having finished the tour of Europe, he commenced student in the Inner Temple, was called to the bar, and sometimes attended Westminster Hall, but did not practise. His first literary performance was Ancient and Modem Rome, a poem, written at Rome, in 1755, and published in 1760 with merited applause. Soon after he printed A short Account of the Ancient History, present Government, and Laws, of the Republic of Geneva; dedicated to Voltaire. In 1762 he produced an Epistle from Lady Jane Grey to Lord Guildford Dudley; and, in 1763, The Alps, a Poem, which, for truth of description, elegance of versification, and vigor of imagination, greatly surpasses all his other poetical productions. In 1764 he

produced Netley Abbey; and, in 1765, The Temple Student, an Epistle to a Friend ; in which he smartly and agreeably rallies his own want of application in the study of the law, and intimates his irresistible penchant for the Belles Lettres. In 1769 he published l-‘erney, an epistle to

M. Voltaire, in which he introduced a fine eulo-gium on Shakspeare, which procured him, soon after, the compliment, from the mayor and burgesses of Stratford, of a standish mounted with silver, made out of the mulberry tree planted by that illustrious bard. In 1773 he published The Monument in Arcadia, a dramatic poem, founded on a picture of Poussin. In 1781 he collected his poetical works into 2 volumes, with a dedication to Dr. Heberden, including a num-ber of new pieces, and an excellent portrait of himself. In 1781 he published An Epistle to Angelica Kauffman. Having been engaged in a tedious and vexatious lawsuit, he, in 1787, laid the principal circumstances of his case before the public, in a performance entitled The Distressed Poet, a serio-comic poem, in three cantos.

KECK’SY, n. s. Commonly kex; FT. cigue, Lat cicuta, Skinner. Skinner seems to think kecksy or kex the same as hemlock. It is used in many parts of England both for hemlock, and any other hollow-jointed plant

Nothing teems But hateful docks, rough thistles, kechtiet, burs,

Losing both beauty and utility.

Shakspeare. Henry V.

KECK’Y, adj. From kex. Resembling a

An Indian sceptre, made of a sort of cane, without any joint, and perfectly round, consisteth of hard and blackish cylinders, mixed with a soft kecky body ; so as at the end cut transversely, it looks a* a bundle of wires. Grew.

KEDAR, in ancient geography, a district in

The

last, and perhaps best, of all his compositions, the desert of the Saracens, on the north of Aiabia

was the Account of the Pelew Islands, which he Felix; so called, according to Jerome, from Kedar,

drew up and published in 1788, from the papers the son of Ishmael.

of captain Wilson. His life passed without any KEDARENI, the people of Kedar, who dwelt

great changes of fortune, as he inherited a large ‘n tents like the other Scenites (Psal. cxx.), were

patrimonial estate. He died June 27th, 1797. rich in cattle (Isaiah lx.), of a swarthy complexion

KEATS (John), a young English poet, of (Canticles i.), and excellent at the bow (Isaiah

humble origin, was born October 29th, 1796, at **’•_).

a livery-stable, kept by his grandfather, in Moor-KEDES, in ancient geography, a city of re-fields. He was sent to Mi. Clarke’s school at fu? e> ar»d Levitical city in the tribe of Naphthali, En field, where he remained till the age of fifteen, on the confines of Tyre and Galilee. Jerome and was then bound apprentice to a surgeon, in ca”s it a sacerdotal city on a mountain, twenty Church Street, Edmonton. On leaving this situa-miles from Tyre, near Paneas, and called Cidis-tion, he attended St. Thomas’s Hospital ; but his sus> taken by the king of Assyria, inclination to poetry having been cultivated by KEDGE, w. a. & n. s. Belg. kaghe, a small his teachers, and meeting when he came out in vessel : kedger, a small anchor used in a river, the world with encouragement, he gave way en-In bringing a ship up or down a narrow river, tirely to the passion of becoming a great poet, when the

wind is contrary to the tide, they set the He was introduced to Mr. Leigh Hunt, who was foresail, or foretop-sail and mizen, and so let her struck with admiration at the specimens of his ˆri\e with the tide. The sails are to flat her about, genius, and took him into his house for a time. if she comes to° ‘ ear the shore-They also canT Keats’s first volume of poems made its appearance °ut an anch°r m ‘he £ead of ˆ boat- “** a,hawis«r

in 1817, when he was in his twenty-first year, that co™s from ,the *hlP ; ,whic,h an’hor’ l.f the shlP

e n j u T7 j • n .• -n comes too near the shore, they let fall in the stream,

and was followed by Endymion a Poetic Ro-and so wind her head ‘^ h then wei h th;

mance, in 1818; m the year 1820 he published anchor ^^ when she is about> which is called

>

his last and best work. Lamia, Isabella, and other kedging, and from this use the anchor a kedger. poems. After languishing for some time under Harris.

a pulmonary attack he was prevailed upon to KEDG£ a small apchor used to keep a ship

try the climate of Italy, where he arrived m the steady whilst she rides in a harbour £r rive£

month of November, 1820, accompanied by Mr. particularly at the turn of the tide, when she

Severn a young artist ; and in Rome, on the might otherwise drive over her principal anchor,

27th of December following, m the arms of this and enta le the stock or fluk/s witlf her slack

gentleman, who attended him with undeviaUng cabl so » to loosen it from the d> This

zeal, he expired, completely worn out. The is accordingiy prevented

by a kcdge-rope that

fragment of Hyperion, which was his last per-hinders her from approaching it. The kedges are

formance and extorted the admiration of lord particularly useful in transporting a ship; *i.e.*

Byron, has been compared to those bones of Kmo»iag her from one part of the harbour to

enormous creatures which are occasionally dug another, by means of ropes, which are fastened

up, and remind us of extraordinary and gigantic to these aˆchors. They are generally furnished

with an iron stock, which is easily displaced for

,

KEBLA an appellation given by the Mahom-the convenience of stowing them.

nrla no tr» r ho t r'i rr / if tkˆ ••VˆˆMM mV\ A*A *V*-.« ,,,ˆ-,

medans to that part of the world where the tem-ple of Mecca is situated, towards which they are obliged to turn their faces when they pray.

KECK, v.n. Teut. kecken ; Belg. kucken. To heave the stomach ; to reach at vomiting.

All those diets do dry up humours and rheums, which they rirst attenuate, and while the humour is attenuated it troubleth the body a great deal more ; and therefore patients must not keck at them at the first. Bacon’s Natural History.

The faction, is it not notorious ? heck at the memory of glorious. Sirj/ lt.

KEDINGEN, a small fertile district 01 Hanover, in the province of Bremen, on the Elbe. It consists of a rich track of alluvial marsh-land, and produces abundance of corn and pasturage. The inhabitants are also employed in navigation and fishing. Population 6500.

KEDRON, or CEDRON, in ancient geography, a town which, from the defeat and pursuit of the Syrians (1 Mac. xvi.), appears to have stood on the road which led from the Higher India to Azotus : in this war it was burnt by the Jews.

KEDRON, or CEDRON, in ancient geography, H. brook or rivulet of Judaea, between Jerusalem and Mount Olivet, on the east. St. John calls it a brook, but Josephus a deep valley. Maundrel says it was a brook only in winter, or in rainy weather.

KEE. A provincial plural of cow, properly kine. A lass that Cicely hight had won his heart, Cicely the western lass that tends the kee. Gay. KEEL, n. *. & t>. a. N Saxon caele, coelan ; KEELS, n. s. j Dut. kiel ; Fr. quille.

KEEL'FAT, \The bottom of a ship :

KEEL'SON, n. s. i keels, see KAVLE. Keel : KEEL'HALE, v. a. J this word, which is preserved in Shakspeare, IJanmer explains thus : to keel seems to mean to drink so deep, as to turn up the bottom of the pot, like turning up the keel of a ship. In Ireland, to keel the pot is to scum it : keelfat, Sax. coelan, to cool, and fat or vat, a vessel. Keelfat, tub in which liquor is set to cool : keelson, the next piece of timber in a ship to her keel, lying right over it next above the floor timber : keelhale, to punish in the seamen's way, by dragging the criminal

under water on one side of the ship and up again on the other.

And down on knees full humbly gan I knele, Besechyng hire my fervent wo to kele.

Chaucer. The Court nf Love. He hearkned, and his armes about him tooke The while the nimble bote so well her sped, That with her crooked keele she strooke.

Spenser. Faerie Queene. While greasy Joan doth keel the pot. Shakspeare.

Portunus

Heaved up his lightened keel, and sunk the sand, And steered the sacred vessel. Dryden.

Her sharp bill serves for a keel to cut the air be-fore her, her tail she useth as a rudder. Grew.

Your cables burst, and you must quickly feel The waves impetuous entering at your keel. Swift. .

With cheerful sound of exhortation soon Their voyage they begin ; the pitchy keel Slides through the gentle deep, the quiet stream Admires the unwonted burthen that it bears, Well polished arms, and vessels painted gay.

Cowper. Translation, &c. Under the vessel's keel the sail was past, And tor the moment it had some effect ;

But with a leak, and not a stick of mast, Nor rag of canvas, what could they expect ?

Byron. Don Juan.

A KEEL is the principal piece of timber in a ship, which is usually first laid on the blocks in building. If we compare the carcase of a ship to a skeleton, the keel may be considered as the backbone, and the timbers as the ribs. It therefore supports and unites the whole fabric, since the stem and stern-post, which are elevated on its ends, are in some measure a continuation of the keel, and serve to connect and inclose the extremities of the sides by transoms ; as the keel forms and unites the bottom by timbers. The keel is generally composed of several thick pieces placed lengthways, which, after being scarfed together, are bolted, and clenched upo-i the upper side. When these pieces cannot

be procured large enough to afford a sufficient depth to the keel, there is a strong thick piec« of timber nolted to the bottom thereof, called the false ktel, which is also very useful in preserving the lower

side of the main keel. In our largest ships of war, the false keel is generally composed of two pieces, which are called the upper and the lower false keels. See NAVAL ARCHITECTURE. The lowest plank in a ship's bottom, called the garboard-streak, has its inner edge let into a groove or channel cut longitudinally on the sid" of the keel : the depth of this channel is therefore regulated by the thickness of the garboard-streak.

KEEL is also a name given to a low flat-bottomed vessel, used in the river Tyne to bring the coals down from Newcastle and the adjacent parts, in order to load the colliers for transportation.

KEEL-HAULING, a punishment formerly inflicted for various offences in the Dutch navy. It is performed by plunging the delinquent repeatedly under the ship's bottom on one side, and hoisting him up on the other, after having passed under the keel. The blocks or pulleys by which he is suspended are fastened to the opposite extremities of the main-yard, and a weight of lead or iron is hung upon his legs, to sink him to a competent depth. By this apparatus he is drawn close up to the yard-arm, and thence let fall suddenly into the sea, where, passing under the ship's bottom, he is hoisted up on the opposite side of the vessel. As this extraordinary sentence is executed with a serenity of temper peculiar to the Dutch, the culprit is allowed sufficient intervals to recover the sense of pain, of which indeed he is frequently deprived during the operation. This punishment is peculiarly se-vere in winter, whilst the flakes of ice are floating on the stream ; and it is continued till the culprit is almost suffocated for want of air, benumbed with the cold of the water, or stunned with blows by his head striking the ship's bottom.

KEELSON, in ship-building, may be properly defined the interior or counter part of the keel ; as it is laid upon the middle of the floor-timbers, immediately over the keel, and like it composed of several pieces scarfed together. To sit with more security upon the floor-timbers and crotches, it is notched about an inch and a half deep, opposite to each of those pieces, and thereby firmly scored down upon them to that depth, where it is secured by spike nails. The pieces of which it is formed are only half the breadth and thickness of those of the keel. It serves to bind the floor-timbers to the keel ; and is fixed to

it by long bolts, which, being driven from without through several of the timbers, are clenched upon rings on the upper side of the keelson.

KEEN, adj. & v. a. ˆ Sax. cei.e ; Ger—

KEEN’LY, adv. > man kuhn ; Belgic koen.

KEEN’NESS, n. s.) Sharp ; well edged ;

not blunt. We say keen of an edge, and sharp

either of edge or point ; severe ; piercing ; eager ;

vehement ; acrimonious. Keen, to sharpen, an

unauthorised word. Keenly, sharply. Keenness,

sharpness ; rigor : asperity.

And thus I am, only for my trouth, alas, Murdered and slayn, with wordes sharpe and kene Although gyltelesse, God wote, of al trespas — And lye, and blede, upon this colde grene.

Chaucer. Complaint of the Blache Knighte. Never had shepheard so heene a cur, Thatwaketh and if but a leafe stur.

Spenser. Shepheard’s Calender.

Here is my foen-edged sword, Decked with fine flower-de-luces on each side.

Shakspeare. Never did I know

A creature, that did bear the shape of man, So keen and greedy to

confound a man. Id.

Come, thick night, That my keen knife sse not the wound it makes.

Id.

Good father cardinal, cry thou, Amen, To thy keen curses. Id. King John.

No, not the hangman's ax bears half the keenness Of my sharp envy. Id. Merchant of Venice.

That they might keep up the keenness against the court, his lordship furnished them with informations, to the king's disadvantage. Clarendon.

The winds

Blow moist, and keen, shattering the graceful locks Of these fair spreading trees, which bids us seek Some better shroud. Milton's Paradise Lost.

Keen dispatch of real hunger. Milton.

To me the cries of fighting fields are charms, Keen be my sabre, and of proof my arms. Dryden.

A sword Aeen-edged within his right he held, The warlike emblem of the conquered field. Id.

The sheep were so keen upon the acorns, that they gobbled up a piece of the coat. L'Estrange.

Those curs are so extremely hungry, that they are too keen at the sport, and worry their game. Taller. The sting of every reproachful speech is th« truth of it ; and to be conscious is that which gives an edge, and keenness to the invective. South.

I have known some of these absent officers as keen against Ireland, as if they had never been indebted to her. Swift.

This was a prospect so very inviting, that it could not be easily withstood by any who have so keen an appetite for wealth. Id.

i\or when cold Winter keens the brightening flood, Would I weak shivering linger on the brink.

Thomson.

So ,vhen remote futurity is brought Before the keen inquiry of her thought A terrible sagacity informs The poet's heart ; he looks to distant storms.

Cowper. Table Talk.

KEEN, or KAYNDUEM, a considerable river, the second in the Birman empire in point ot size, is supposed to have its source in the mountains which divide Assam from Ava. It enters the latter country from the north-west, and falls into the Irrawaddy at Miondap, ip lat. 21° 45 N. Its mouth is obstructed by sand, which is covered with long grass and reeds, except in the rainy season. It is only navigable therefore for flat-bottomed boats. On its banks are a rude but inoffensive tribe, called Kayns, who speak a different dialect from the Birmans. This country is mountainous, and covered with wood ; but it has never been fully explored.

KEEP, v. a. Sax. cepan ; old Dutch kepen. To retain ; not to lose.

Keep in memory what I preached unto you.

1 Corinthians.

We have examples in the primitive church of such as by fear being compelled to sacrifice to strange pods, repented, and kept still the office of preaching the gospel. Whitgifte.

This charge I keep till my appointed day Of rendering up. ˆWilton.

His loyalty \ekept, his love, his zeal. Id.

I kept the field with the death of some, and the flight of others. Sidney.

You have lost a child ; but you have kept one child, and are likely to do so long. Temple,

If we would weigh and keep in our minds, what we are considering, that would instruct us when we should, or should not, branch into distinctions.

I.iicke. They warn and teach the proudest would they

learn, Keep wisdom, or meet vengeance in your turn.

Cowper. Expostulation. To have in custody.

The crown of Stephanus, first king of Hungary, was always kept in the castle of Vicegrade. Knolles. She kept the fatal key. Milton.

To preserve; not to let go. The Lord God merciful and gracious, keeping mercy for thousands, forgiving iniquity.

Exod. xxxiv. 7.

I have spared it greatly, and have kept me a grape of the cluster, and a plant of a great people.

2 Esdr.ix. 21.

To preserve in a state of security. We passed by where the duke keept his gallies.

Addison.

To protect ; to guard. Behold I am with thee to keep thee. Gen. xxviii.

To restrain from flight.

Paul dwelt with a soldier that kept him.

Actsxrriii.

To detain ; to hold as a motive. But what's the cause that keeps you here with me": — That I may know what keeps me here with you.

Dryden.

To hold for another. A man delivers money or stuff to keep.

Ercd. xxii. 7.

Reserved from night, and kept for thee in sto:e.

Mitt nn.

To tend ; to have care of.

God put him in the garden of Eden to keep it.

Gen. ii. 15.

While in her girlish age she kept sheep on the moor, it chanced that a merchant saw and liked her.

Careio.

Count it thine To till and keep, and of the fruit to eat. Hilton.

To preserve in the same tenor or state. To know the true state, I will keep this order.

Bacon.

Take this at least, this last advice, my son, Keep a stiff rein, and move but gently, on : The coursers of themselves will run too fast, Your art must be to moderate their haste.

Addison.

To regard ; to attend. While the stars and course of heaven I keep, My weary'd eyes were seized with fatal sleep.

Dryden.

To not suffer to fail. My mercy will I keep for him for ever.

Psalm Ixxxix. To hold in any state.

Ingenuous shame, and the apprehensions of displeasure, are the only true restraints : these alone ought to hold the reins, and keep the child in order. Locke on Education.

Men are guilty of many faults in the exercise ol this faculty of the mind, which keep them in ignorance. Locke.

Happy souls ! who keep such a sacred dominion over their inferior and animal powers, that the sensitive tumults never rise to disturb the superior and better operati.ms of the reasoning mind. Watts.

With all my soul ! Keep a firm rein upon these bursts of passion.

Byron. Marino Faliero.

To retain by some degree of force in any place or state. It is often

followed in this sense by particles ; as, dmvn, under, in, off.

My sone beware and be not auctour newe Of tidings, whether they ben false or trewe ; Wher so thou come, amonges high or lowe Kepe wel thy tonge, and tliinke upon the crowe.

Chaucer. The Manciple! Tale. It is hardly to be thought that any governor should so much malign his successor, as to suffer an evil to grow up which he might timely have kept under ; or perhaps nourish it with coloured countenance of such sinister means. Spenser.

What ! old acquaintance ! could not all this flesh Keep in a little life f Poor Jack, farewel.

Shakfpeare.

The Chinese sail where they will ; which sheweth that their law of keeping out strangers is a law of pusillanimity and fear. Bacon.

Venus took the guard of noble Hector's corse, And kept the dogs off : night and day applying sovereign force Of rosy balms, that to the dogs were horrible in taste.

Chapman's Iliad.

And those that cannot live from him asunder, Ungratefully shall strive to keep him under. Milton.

This wickedness is found by thee ; no good deeds of mine have been able to keep it down in thee.

Sidney.

If any ask me what would satisfy, To make life easy, thus I would reply : As much as keeps out hunger, thirst, and cold.

Dry den.

Matters, recommended by our passions, take possession of our minds, and will not be kept out.

Locke.

Prohibited commodities should be kept out, and useless ones impoverish us by being brought in. Id.

An officer with one of these unbecoming qualities is looked upon as a

proper person to keep off impertinence and solicitation from his superior.

Addison's Spectator, And if two boots keep out the weather, What need you have two hides of leather ?

Prior.

We have it in our power to keep in our breaths, and to suspend the efficacy of this natural function.

Cheyne.

How much a dunce that has been sent to roam, Excels a dunce, that has been kept at home.

Cowper. Progress of Error.

To continue any state or action. Men gave ear, waited, and kept silence at my counsel. Job \\. 21.

Auria made no stay, but still kept on his> course.

Knolles.

It was then such a calm, that the ships were not able to keep way with the gallies. Id.

The moon that distance keeps till night. Milton. An heap of ants on a hillock will more easily be kept to an uniformity in motion than these.

Glanville's Scepsis. He dyed in fight ;

Fought next my person ; as in consort fought : Kept pace for pace, and blow for blow. Dryden.

He, being come to the estate, keeps on a very busy family ; the markets are weekly frequented, and the commodities of his farm carried out and sold.

Locke.

Invading foes without resistance, With ease I make to keep their distance. Swift.

To preserve in any state.

My son, keep the flower of thine age sound.

Eccliu. xxvi.

To practise ; to use habitually. I rule the family very ill, and keep bad hours. Pope. Tc copy carefully.

Her servant's eyes were fixed upon her face, And as she moved or turned, her motions viewed, Her measures kept, and step by step pursued.

Dryden.

To observe or solemnise any time. This shall be for a memorial, and you shall keep it a feast to the Lord. Exod. jci. 14.

That day was not in silence holy kept. Milton. To observe ; not to violate. Lord God, there is none like thee : who keepest covenant and mercy with thy servants.

1 Kings viii. 23.

Lord God of Israel, keep with thy servant that thou promisedst him. Id. 25

It cannot be,

The king should keep his word in loving us ; He will suspect us still, and find a time To punish this offence in other faults. Shakspeare. Sworn for three years term to live with me, My fellow-scholars ; and to keep those statutes That are recorded in this schedule here. Id.

Obey and keep his great command. Milton.

His promise Palamon accepts ; but prayed To keep it better than the first he made. Dryden.

My debtors do not keep their day, Deny their hands and then refuse to pay. Id

My wishes are,

That Ptolemy may keep his royal word. Id.

To maintain; to support with necessaries of life.

Much more affliction than already felt They cannot well impose, nor I sustain, If they intend advantage to my labours, The work of many hands, which earns my keeping.

Milton.

To have in the house.

Base tyke, call'st thou me host ? I scorn the term nor shall my Nell keep lodgers

Shakspeare. Henry V. Not to intermit.

Keep a sure watch over a shameless daughter, lest she make thee a laughing-stock to thine enemies, and a bye-word in the city. Ecctus. xli. 1 1

Not keeping strictest watch as she was warned.

Milton. To maintain ; to hold.

Some say that laughter here

Keeps residence ; but laughter fits not there, Where darkness ever dwells, and melancholy fear. Fletcher's Purple Island.

They were honourably brought to London, where every one of them kept house by himself.

Hayward.

Twelve Spartan virgins, noble, young, and fair, To the pompous palace did resort, Where Menelaus kept his royal court. Dryden. To remain in ; not to leave a place. I pr'ythee tell me, doth he keep his bed t

Shakspeare.

Not to reveal ; not to betray.

A fool cannot keep counsel. Ecclu*. viii. 17.

Great are thy virtues, though kept from man.

Milton.

If he were wise, he would keep all this to himself.

TUlotton. To restrain; to withhold.

He that me kepte fro the false blame, While I was in the lond amonges you,

KEF,

KEE

He can me kepe fro hannc and eke fro shame In the salt see, although I se not how.

Chaucer. Tlie Man of Laweg Tale. If any rebel or vain spirit of mine Did with the least affection of a welcome, Give entertainment to the might of it, Let heaven for ever keep it from my head.

Shakspeare.

Some obscure passages in the inspired volume keep from the knowledge of divine mysteries. Boyle.

If the god of this world did not blind their eyes, it would be impossible, so long as men love themselves, to keep them from being religious. Titlotson.

There is no virtue children should be excited to, nor fault they should be kept from, which they may not be convinced of by reasons.

Locke on Education.

If a child be constantly kept from drinking cold li-quor whilst he is hot, the custom of forbearing will preserve him. Locke.

By this they may keep them from little faults.

Id.

To debar from any place. Ill fenced for heaven to keep out such a foe.

Milton.

To keep back. To reserve ; to withhold. Whatsoever the Lord shall answer, I will declare ; I will keep nothing back from you. Jer. xlii. 4.

Some are so close and reserved, as they will not shew their wares but by a dark light, and seem al-ways to keep back somewhat. Bacon's Essays. To keep back. To withhold ; to restrain. Keep back thy servant from presumptuous sins.

Psalm xix.

To keep company. To frequent any one ; to accompany.

Heaven doth know, so shall the world perceive, That I have turned away my former self, So will I those that kept me company. Shakspeare. Why should he call her whore 1 Who keeps her

company 1

What place? what time? Id. Othello.

What mean'st thou, bride ! this company to keep1.

To sit up, till thou fain would sleep ? Donne.

Neither will I wretched thee In death forsake, but keep thee company.

Dry den.

To keep company with. To have familiar intercourse.

A virtuous woman is obliged not only to avoid immodesty, but the appearance of it ; and she could not approve of a young woman keeping company with men, without the permission of father or mother.

Broome on the Odyssey. To keep in. To conceal ; not to tell. I perceive in you so excellent a touch of modesty, that you will not extort from me what I am willing to keep in. Shakspeare.

Syphax, your zeal becomes importunate ; I have hitherto permitted it to rave, And talk at large ; but learn to keep it in, Lest it should take

more freedom than I'll give it.

Addison.

To keep in. To restrain ; to curb. If thy daughter be shameless, keep her in straitly, lest she abuse herself through overmuch liberty.

Ecclesiaiticus.

It will teach them to keep in, and so master their inclinations. Locke on Education.

To keep cff. To bear to distance ; not to ad-mit.

Then came old January, wrapped well In many weeds to keep the cold away.

Spenser's Fa fie Qiieene.

To keep off. To hinder.

A superficial reading, accompanied with the com - mon opinion of his invincible obscurity, has kept off some from seeking in him the roherence of his discourse. Locke. To keep up To maintain without abatement.

Land kept up its price, and sold for more years purchase than corresponded to the interest of money

Locke.

This restraint of their tongues will keep up in them the respect and reverence due to their parents. Id.

Albano keeps up its credit still for wine. Addison.

This dangerous dissension among us we kefp vf and cherish with much pains. Id. Freeholder.

The ancients were careful to coin money in due weight and fineness, and keep it up to the standard.

Arbuthnot.

To keep up. To continue ; to hinder from ceasing.

You have enough to keep you alive, and to keep up and improve your hopes of heaven. Taylor.

In joy, that which keeps up the action is the desire to continue it. Istcke.

Young heirs, from their own reflecting upon the estates they are born to, are of no use but to keep up their families, and transmit their lands and houses in a line to posterity. Adduon.

During his studies and travels he kept up a punctual correspondence with Eudoxus. Id.

To keep under. To oppress ; to subdue.

O happy mixture ! whereby things contrary do so qualify and correct the one the danger of the other's excess, that neither boldness can make us presume, as long as we are kept under with the sense of our own wretchedness ; nor, while we trust in the mercy of God through Christ Jesus, fear be able to tyran-nize over us. Hooker.

Truth may be smothered a long time, and kept un-der by violence ; but it will break out at last.

Stillingfleet.

To live like those that have their hope in another life, implies that we keep under our appetites, and do not let them loose into the enjoyments of sense.

Atterbury.

KEEP, v. n. To remain by some labor or ef-fort in a certain state.

With all our force we kept aloof to sea, And gained the island where our vessels lay.

Pope's Odyssey.

To continue in any place or state ; to stay. Thou shall keep fast by my young men, until they have ended. Ruth ii. 21.

What ! keep a week away ? seven days and nights? Eightscore eight hours ? and lovers' absent hours, More tedious than the dial eightscore times ? O weary reckoning ! Shakspeare. Othello.

I think, it is our way, If we will keep in favour with the king, To be

her men, and wear her livery.

Shakspeare.

She would give her a lesson for walking so late, that should make her keep within doors for one fortnight. Sidney.

The necessity of keeping well with the maritime powers, will persuade them to follow our measures.

Temple.

On my better hand Ascanius hung, And with unequal paces tript along : Creusa kept behind. Drijden's JEneid.

The goddess born in secret pined ; N'or visited the camp, nor in the council joined ; But keeping close, his gnawing heart he fed With hones of vengeance. Id. Homer.

And while it keeps there, it kerpt within our au-thor's limitation. Locke.

A man that cannot fence will keep out of bullies, and gamesters' company. Id. On Education.

There are cases in which a man must guard, if he intends to keep fair with the world, and turn the penny. Collier.

The endeavours Achilles used to meet with Hector, the contrary endeavours of the Trojan to keep out of reach, arc the intrigue.

Pope's View of Epic Poetry.

Deep loneliness hath wrought this mood in thee, For like a cloistered votaress, thou hast kept, Thy damsels till me, this lone turret's bound.

Maturin'i Bertram.

To remain unhurt ; to last ; to be durable.

Grapes will keep in a vessel half full of wine, so that the grapes touch not the wine. Bacon.

Disdain me not, although I be not fair :

Doth beauty keep which never sun can burn,

Nor storms do turn ! Sidney.

If the malt be not thoroughly dried, the ale it makes will not keep. Mortimer's Husbandry.

To dwell: to live constantly.

A breath thou art, Servile to all the skiey influences, That do this habitation, where thou keepest, Hourly afflict.

Shakspeare. Measure for Measure. Knock at the study, where, they say, he keeps, To ruminate strange plots of dire revenge.

Shakspeare.

To adhere strictly ; with to. Did they keep to one constant diess they would sometimes be in fashion, which they never are.

4ddison's Spectator.

It is so whilst we keep to our rule ; but when we forsake that we go astray. Baker on Learning.

To keep on. To go forward.

So chearfully he took the doom ; Nor shrunk, nor slept from death, But with unaltered pace kept on. Dryden.

To keep vp. To continue unsubdued. He grew sick of a consumption ; yet he still kept tip, that he might free his country.

Life of Cleomenes.

The general idea of this word is care, continuance, or duration, sometimes with an intimation of cogency or coercion.

KEEP, n. s. From the verb. Custody ; guard.

Pan, thou god of shepherds all, Which of our lambkins takest keep. Spenser.

The prison strong,

Within whose keep the captive knights were laid : Was one partition of the palace-wall. Dryden.

Guardianship ; restraint.

Youth is least looked into when they stand in most iced of good keep and regard. Ascham.

KEEPER, n. s. From keep. One who holds any thing for the use of another.

The good old man, having neither reason to dissuade nor hopes to persuade, received the things with the mind of a keeper, not of an owner. Sidney.

One who has prisoners in custody.

The keeper of the prison, call to him. Shakspeare. 16 now

With horns exalted stands, and seems to lowe :

A noble charge' ; her keeper by her side

To watch ricr walks his hundred eyes applied

Dryden .

A pleasant leverage he prepared before Of wine and water mixed, with added store < »f opium ; to his keeper this he brought, Who swtiliowed unaware the sleepy draught. Id

Am 1 then

My brother's keeper 1 Byrcn. Cain.

One who has the care of parks, or beasts of chace.

There is an old tale goes, that Herne the hunter, Sometime a keeper here in Windsor foiest, Doth all the Winter-time, at still of midnight, Walk round about an oak with ragged horns.

Shakspeaie.

The first fat buck of all the season's sent, And keeper takes no fee in compliment. Dryden.

One that has the superintendance or care of any thing.

Hilkiah went unto Ilildah, keeper of the wardrobe.

2 Kingt.

The KEEPER OF THE PRIVY SEAL is a lord by office, through whose hands all grants, pardons, &c. pass before they come to the great seal ; and even some things pass his hands which do not pass the great seal at all. He is also one of the privy council, and. was anciently called clerk of the privy seal. His duty is to put the seal to no grant, &c. without a proper warrant ; nor with warrant where it is against law, or inconvenient, but shall first acquaint the king therewith.

KEEP'ERSUIP, n. s. From keeper. Office of a keeper.

The gaol of the shire is kept at Launceston : this keeperthip is annexed to the constableship of the rastle. Carew.

KEEPING, in painting, denotes the representation of objects as a whole, in the same proportions in which they appear to the eye at different distances from it. The famous Raphael twice transgressed these rules; in one of his cartoons, representing the miraculous draught of fishes, the men in each of the boats appearing of a full size, while the boats are represented so small, and the men so big, that any of the fishermen appears sufficient to sink either of the boats by his weight. The other instance occurs in his picture of our Saviour's transfiguration on the Mount ; where he is represented with Moses and Elias, &c., almost as large as the rest of his disciples at the foot of the mount, with the father and the mother of a boy whom they brought to be cured ; and the mother, though on her knees, is more than half as tall as the mount is high. So that the mount appears only of the size of a little hay-rick, with a few people on its top, and a greater number at its bottom on the ground. See PAINTING.

KEFF, an important town of Tunis, anciently called Sicca, or Sicca Veneria, on the eastern bank of the river Mejerdah. It stands, as its name imports, on the declivity of a hill, in the centre of which is a plentiful spring. In the civil wars of the eighteenth century, the greater part of the citadel was blown up, but it was afterwards rebuilt, with augmented strength. In digging for materials two statues were found,

of Venus and Marcus Antoninus. It is seventy miles W.S.W. of Tunis.

KEG, n. x. Fr. eaatie . A small barrel, commonly used for a fish-barrel.

Their stock was damaged by the weather's stress. Two casks of biscuits, and a tteg of butter, Were all that could be thrown into the cutter.

Ryron. Don Juan.

KEHL, or KEIL, an important fortress of Germany, now belonging to Baden. It was originally a fort and village on the east side of the Rhine, which, in 1678, were taken by storm and rased by the French. The village was then removed, and the fort built at the influx of the Kinzig into the Rhine, on the west side of that river, one mile and a half from Strasburgh. The French took possession of it in 1684, and fortified it very strongly after the designs of M. Vauban. In 1697 it was declared imperial, being ceded to the empire at the peace of Ryswick; when the emperor consigned it to the house of Baden, reserving to himself, however, the right of a garrison. In 1733 it was again taken by the French, but restored at the peace. But, upon the commencement of the late wars, the fortifications were made stronger than ever; notwithstanding which it was taken by the French republicans under general Moreau in 1796; but retaken in December by the Austrians after a long siege. In 1797 the French recovered it, but in May 1799 it was again taken by the Austrians. The French afterwards recovered it, but evacuated it on the 21st of May 1801 ; when the fort was dismantled, as well as those of Old Brisach, Cassel, Ehrenbreitsten, and Dusseldorf. The French, on resuming the offensive, retook this fort, and continued to possess it till 1814, when it was restored to the grand duke of Baden ; at present the bridge here thrown across the Rhine belongs partly to France, and partly to Baden.

KEJ, an important trading town of Persia, the capital of the province of Mekran. It is on the high road from Candahar, Kelat, and other towns on the-north, to the seaports of Guatter and Chobar, and encircles a fort built on a high precipice, with a river running beneath. It has maintained a garrison of 5000 men. The vicinity is arid and barren. Long. 62° 30’ E., lat. 265 10’ N.

KE ILL (James), M.D., an eminent physician, was born in Scotland about 1673; and having travelled abroad, read lectures on anatomy with sjreat applause in the Universities of Oxford and Cambridge, from the latter of which he received the degree of M.D. In 1700 he settled at Northampton, where he had considerable practice as a physician; and died there, of a cancer in his n.out!i, in 1719. He published, 1. An English translation of Lemery’s Chemistry. 2. An Account of Animal Secretion, the Quantity of Blood in the Human Body, and MuscularMotion. 3. A Treatise on Anatomy ; and 4, Several pieces in the Philosophical Transactions.

KEILL (John), M.D., elder brother to Dr. James, a celebrated astronomer and mathematician, born in Edinburgh in 1671. He studied in the university of that city, and in 1694 went to Oxford; where, being admitted of Baliol College, he read lectures on the Newtonian system, in his private chamber in that college. He is said to have been the first who tausht Sir Isaac Newton’s principles by the experiment on which they are founded. This he did by an apparatus

of instruments of his own providing, by which he acquired great reputation in the university. The firs; specimen he ga\e the public of his skill in mathematical and philosophical knowledge, was his Examination of Dr. Burnet’s Theory of the Earth, with Remarks on Mr. Winston’s Theo-ry: and these theories being defended by their respective inventors, drew from Mr. Keill An Examination of the Reflections on the Theory of the Earth, together with A Defence of the Remarks on Mr. Whiston’s New Theory. In 1701 he published his celebrated treatise intitled, Introductio ad Veram Physicam, which contains fourteen lectures; but in ihe following editions he added two more. This work has been translated into English, under the title of an An Introduction to Natural Philosophy. Afterwards, being made F.R. S., he published, in the Philosophical Transactions, a paper on the laws of attraction ; and, being offended at a passage in the Acta Eruditorum of Leipsic, warmly vindicated, against Mr. Leibnitz, Sir Isaac Newton’s right to the honor of the first invention of his method of fluxions. In 1709 he went to New England as treasurer of the

Palatines. About 171 1 objections being urged against Newton's philosophy, in support of Des Cartes's notions of a plenum, Mr. Keill published a paper in the Philosophical Transactions on the rarity of matter, and the tenuity of its composition. While he was engaged in this dispute, queen Anne appointed him her decypherer; and he continued in that place till 1716. He had also the degree of M.D. conferred on him by the University of Oxford in 1713. He died in 1721. He published also Introductio ad veram Astronomiam, which he translated into English ; and an edition of Commandinus's Euclid, with additions of his own.

KEITH (James Francis Edward), field-mar- shal in the Prussian service, was the younger son of William Keith, earl marshal of Scotland ; and was born at Inverugie in 1696. He was designed by his friends for the law ; but his inclination led him to arms. When the rebellion broke out in Scotland, in 1715, through the instigation of his mother, lie joined James's party ; was wounded at the battle of Sheriff-muir, and made his escape to France. Here he applied himself to military studies; and going to Madrid, by the interest of the duke of Liria, obtained a commission in the Irish brigades, then commanded by the duke of Ormond. He afterwards attended the duke of Liria, when he went ambassador to Muscovy; and, being by him recommended to the empress Catharine I., was promoted to the rank of lieutenant-general, and invested with the order of the black eagle. He distinguished himself by his valor and conduct in the Russian service, and had no inconsiderable share in the revolution that raised Elizabeth, the daughter of Peter the Great, to the throne; he also served in several embassies; but findingthe honours of that country but a splendid kind of slavery, he left that court and entered the Prussian service. The king of Prussia made him field-marshal of the Prussian armies, and governor of Berlin; and distinguished him so far by his confidence, as to travel in disguise with him over P

great part of Germany, Poland, and Hungary. In business he made him. his chief counsellor; in his diversions, his chief companion. The king was much pleased with an amusement which the marshal invented in imitation of the game at chess. He ordered several thousand small statues of men in armor to be cast by a founder ; these he would set opposite to each other, and ranged them in battalia, as if he had been drawing up an army; would bring out a party from the wings or centre, and show the advantage or disadvantage resulting from the different movements. This brave and experienced general, after many important services in the various wars of that illustrious monarch, was killed at the fatal battle of Hochkirchen, on the 14th of October, 1758.

KEITH (Thomas), a celebrated mathematician and author of many distinguished works, was a native of Brandsburton, near Beverley, in Yorkshire, and born on the 22d of September, 1759. He received the rudiments of his education in the free school at that place. At the age of fourteen years, his parents dying, leaving hˆm wit'i but slender pecuniary means, he was compelled to engage himself as tutor in a private family, in which situation he had frequent opportunities of pursuing his mathematical studies. In the year 1781 he quitted the country, and settled in Lon-don. In 1789 he published his first volume, An Introduction to the Science of Geography. In 1796 was published his New Schoolmaster's Assistant, which, after passing through two editions, was suppressed to make room in 1799 for The Complete Practical Arithmetician. To this work a key was afterwards published for the use of tutors. Besides the works already mentioned, Mr. Keith published, in 1801, An Introduction to the Theory and Practice of Plane and Spherical Trigonometry; in 1805, a Treatise on the Use of the Globes; and, in 1814, The Elements of Geometry. He also superintended several editions of Paterson's Book of Roads, and of Hawney's Complete Measurer, and was the contributor of valuable papers to the various mathematical periodicals. Mr. Keith declined accepting any public mathematical situation, but in his capacity as a private tutor contributed largely to the public good by the application of his knowledge and acquirements to works of practical utility. He was, however, accountant to the British Museum, and for many years secretary to the master of his late majesty's household. In 1810, with the approbation of her majesty queen Charlotte and the prince regent, he was appointed professor of geography and the sciences to the late lamented princess Charlotte of Wales, from whom, and from her royal highness the princess Sophia Matilda (who with many other distinguished personages received the benefit of his scientific acquirements), he received many flattering marks of attention and

respect. In the month of November, 1822, he was afflicted with an internal disorder, which ultimately caused his death. He ended his life on the 29th of June 1824, with the most perfect composure and resignation, and retained, almost . to the last hour of his existence, the exercise of those strong mental faculties, and of those kind

and gentle manners which so much endeared him to his family, his friends, and his acquaintances. Up to the period of his death he was engaged in writing a new work on the Science of Geography, which his friends have recently completed and published.

KELAT, the capital of Baloochistan, and residence of its sovereign Mahmoud Khan. See BALOOCHISTAN. It stands on a high hill surrounded by a mud wall ; the houses are built of half-burnt brick ; the upper stories nearly joining across the streets ; which are narrow and ill-paved. It is notwithstanding populous, and contains 4000 houses, several good bazaars, and some fine gardens. The inhabitants are a mixture of Afghauns, Balouches, and Hindoos. The last are the principal merchants. Long. 67° 57’ E., lat. 29° 6’ N.

KELL, n. s. The omentum ; that which en-wraps the guts.

The very weight of bowels and hell, in fat people, is the occasion of a rupture. Wiseman’ t Surgery,

KELLERMAN (Francis Christopher), duke de Valmy, peer and marshal of France, &c., was born at Strasburgh in 1735, and entered into the army at the age of seventeen. Having given various proofs of his talents and courage, in the seven years’ war, he was rapidly promoted, till in 1788 he was made quarter-master-general. Adopting the principles of the revolution, he was in 1792 appointed commander of the army of Moselle, and then effected a. junction with Dumourier, on the plain of Champagne. On the 17th of September he distinguished himself by his defence of the position of Valmy. He next served under Custine, who denounced him to the Convention; and, though he justified himself against the accusation, similar attacks followed him, and he was arrested and confined in the military prison of the abbey. On his trial, after the expiration of the reign of terror, he was fully acquitted, and in 1795 took the command of the army of the Alps and Italy ; in which he was superseded by Buonaparte. ;In 1798 he was nominated a member of the military board, and in 1801 was president of the conservative senate, and the following year a marshal of the empire. Under Napoleon he served in Germany and Prussia; and,

having in 1814 voted for the restoration of royalty, was employed under the Bourbons till his death in 1820.

KELLISON (Matthew), a celebrated Roman Catholic divine, was born in Northamptonshire in 1560, and took his doctor's degree at Ilheims, where he was rector of the university. Hence he removed Douay, and became president of the English college. He died in 1641. His works are — 1. Survey of the New Religion; 2. Reply to Sutcliffe ; 3. Oratio coram Henrico IV. rege Christianissimo ; 4. The Gagg of the Reformed Gospel; 5. Examen Rpformationis : 6. The Right and Jurisdiction of the Prince and Prelate; 7. A Treatise on the Hierarchy of the Church ; 8. A Brief and Necessary Instruction for the Catholics of England ; 9. Comment, in tertiam partem Summae Sancti Thomae.

KELLS, a Market town of Ireland, in the county of Meath, Leinster, thirty-one miles from Dublin. This town is pleasantly situated on the

Blackwater, and has four fairs. It was anciently called Kenanus, afterwards Kenlis, and was one of the most famous cities in the kingdom. On the arrival of the English, it was wailed and fortified with towers. In 1178 a castle was erected •where the market-place now is ; and opposite to it was a cross of one entire stooe, ornamented with bas-relief figures, and many curious inscriptions in the ancient Irish character. Near it was the church of St. Senan ; and on the south of the churchyard is a round tower which measures ninety-nine feet from the ground, the roof ending in a point. A celebrated monastery, founded here in 550 for regular canons, was dedicated to the Virgin. It owed its origin to St. Columba, to whom the site of the abbey was granted by Dermod king of Ireland.

KELLS, an ancient town of Ireland, in Kil-keriny, seventy-five miles from Dublin, seated on King's River; and noted for a priory of

Augustines, built and richly endowed by Geoffrey Fitz Roberts, who came over from Wales with Strongbow. The prior sat as one of the lords spiritual in the house of peers before the Refor mation. The ruins only of this abbey now re-main : a synod was held in it in 1152, when John Paparo, legate from Rome, was one of the bishops that were convened there to settle the affairs of the church. The present church is built in the Gothic manner. Fair held 13th of July.

KELLS is also the name of a town of Antrim, one hundred and five miles from Dublin, principally celebrated for the ruins of Tenv plemoge Abbey, which are supposed to have had a mural communication with the ancient remains of Connor. The beautiful moat of Kells is situated on a height recently planted above Kells-water. a rapid but generally shallow mountain stream which is a chalybeate water, containing excellent trout.

KELLY (Michael), the son of a wine merchant of Dublin, who for many years acted, as master of the ceremonies at the Vice-regal castle. He was born in 1762, and at an early age gave proofs of a genius for music, which induced his father to place him under Rauzzini, at this time in Dublin, who prevailed on his friends to send him to Naples, where he arrived in his sixteenth year Here he was much patronised by Sir William Hamilton, the British minister, and studied under Fineroli, at the Conservatorio La Madona della Loretto. He also received lessons from Aprili, the first singing master of his day, who procured him an engagement at Leghorn. He subsequently performed at most of the Italian theatres, and in Germany ; and contracted a close intimacy during his stay at Vienna with the celebrated Mozart. The emperor Joseph became his patron : but having obtained permission for a year's absence, in order to visit his friends in Ireland, he settled in London. In April 1787 he made his first appearance at Drury Lane Theatre as Lionel, in the opera of Lionel and Clarissa, and retained his situation as first-singer at that theatre, till his final retirement from the stage. He furnished, in 1797, the music to A Friend in Need; The Castle Spectre; &c. ; which in the succeeding year he followed up by

the most popular of his compositions, the airs marches, &c., in Colman's musical romance of Bluebeard. From this period till 1819 he wrote upwards of sixty successful ;pieces. He wrote also an amusing work entitled Reminiscences, 2 vols. 8vo. His death took place at Ramsgate on the 15th of October, 1826.

KELP, n. s. Perhaps from kali. A salt produced from calcined sea-weed,

In making alum, the workmen use the ashes of a sea-weed called kelp, and urine. Boyle on Colourt.

KELP, in the glass trade, the name of a sort of potassa made use of in many of the glass works, particularly for the green glass. It is the calcined ashes of a plant called by the same name; and in some places of sea thongs, a sort of thick-leaved fucus, or sea wrack. See Fucus. The process of making it is this : the rocks, which are dry at low water, are the beds of great quantities of sea-weed ; which is cut, carried to the beach, and dried ; and a hollow is dug in the ground three or four feet wide; round its margin is laid a row of stones, on which the sea-weed is placed, and set on fire within ; and, quantities of this fuel being continually heaped upon the circle, there is in the centre a perpetual flame, from which a liquid-like melted metal drops into the hollow beneath : when it is full, as it commonly is ere the close of day, ail heterogeneous matter being removed, the kelp is wrought with iron rakes, and brought to a uniform consistence in a state of fusion. When cool, it consolidates into a heavy dark-colored alkaline substance, which undergoes in the glass houses a second vitrification, and assumes a perfect transparency. See GLASS.

KELSO, a town in the county of Roxburgh, pleasantly situated on the Tweed. It is built much after the manner of a Flemish town, with a square and town-house. It has a very considerable market, wherein great quantities of corn are sold weekly. The abbey of the Tyronensians was a vast pile, and, to judge by the remains, of venerable magnificence. The walls are ornamented with false round arches, intersecting each other in the form of a true Gothic arch. The steeple of the church is a vast tower. This house was founded by David I. when earl of Cumberland. He first placed it at Selkirk, then removed it to Roxburgh, and finally, when he came to the crown, fixed it here in 1128. Its revenues were in money about £2000 Scots a year. The abbot was allowed to wear a mitre and pontifical robes, to be exempt from episcopal jurisdiction, and to be present at all general councils. The environs of Kelso are very fine ; the lands consist of gentle risings, enclosed with hedges, and extremely fertile. From the Chalkheugh is a fine view of the forks of the rivers, Roxburgh hill, and in the distance Fleurus. Much wheat is raised in the neighbourhood, part of which is sent up the Frith of Forth, and pˆrt into England. The fleeces are very fine. The wool is sent into Yorkshire, to Linlithgow, or into Aberdeenshire, for the stocking manufacture; and some is woven here into a cloth called plains, and sold into England to be dressed. Here is also a considerable manufacture of white leather, chiefly sent to

Edinburgh. At Kelso there was

a fine stone bridge of six arches over the Tweed, near its confluence with the Teviot ; which was carried away by a flood in 1798, but has since been rebuilt. There are two fairs and a weekly market, besides twelve high market days in the year. Kelso is twenty miles west of Berwick, and 256 N.N.W. of London.

KELSON, n. s. More properly keelson. The wood next the keel.

We have added close pillars in the royal ships, which, being fastened from the kelnon to the beams of the second deck, keep them from settling, or giving way. Raleigh.

KELTER, n. s. He is not in kelter, that is, he is not ready ; from Dan. kilter to gird.

KEMAON, a district of Hmdostan, subject to Nepaul and the Bri'ish, situated principally between 29° and 30° N. lat., and 79° and 81° o'f E. long. The northern or mountainous part of this country belongs to the rajah : the southern, or flat part, is now attached to the British territory of Bareilly. It is mostly a hilly country ; composed of a fine rich soil, covered with verdure, and forest trees The valleys are alsj productive and watered by numerous rivers. The chief town is Almora.

To KEJMB, v. a. Saxon cojmban ; German kammen : now written, perhaps less properly, to comb. To separate or disentangle by a denticu-lated instrument.

Yet are the men more loose than they, More kembed and bathed, and rubbed and trimmed, -More sleek. Ben Jonson.

Thy head and hair are sleek ; And then thou kemb'st the times on thy cheek.

Drydrn.

KEMBLE (John Philip), one of the most celebrated of English tragedians, was the eldest son of Mr. Rcger Kemble, the manager of a company of comedians in the north of England, and born at Prescot in Lancashire, February 1st 1 757. He received his early education at the Roman Catholic Seminary of Sedgley-park, Staffordshire, whence he proceeded to Douay, with a view to the clerical profession. Here he evinced an early attachment to elocution; but preferring the stage to other pursuits he entered upon that line at Liverpool. After performing in the country with great reputation ; he appear-on the boards of Drury Lane, September 30th 1783, in the character of Hamlet. From that time he maintained the character of the first English tragedian of his age. On the secession of Mr. King, he became manager of Drury Lane. In 1802 he visited the French and Spanish theatres, with a view to the improvement of his own : and on his return became ma-r.ager of Covent Garden, where he continued till 1809, when that building was destroyed by fire. On its restoration Mr. Kemble was involved in a series of disputes with the public, called the O. P. riots, and at length worsted in his attempts to raise the prices. Mr. Kemble took farewell of the stage on the 23rd of July 1817, on which occasion he was complimented with a public dinner. lie shortly after retired to the continent where lie died at Lausanne in Switzerland,

February 26th, 1823, of a paralytic ut'.ack, a few hours' illness.

K EM MOO, a town of Western Africa, the capital of the state of Kaarta, situated in an open plain. Park was here well received by the king, who was not to be distinguished from his subjects by his dress. A bank of earth, about two feet high, with a leopard's skin spread over it, being the only badge of royalty. Long. 7° 46' W., lat. 14° 20' N.

KEMP (Joseph), Mus. D., a musical composer of considerable celebrity, was born at Exeter in 1778, and educated there by Jackson. In 1802 he was organist at Bristol cathedral ; and in 1809 proceeded to the degree of Mus. D. at Cambridge; when his exercise entitled The Crucifixion was performed and much admired. He now became a lecturer at several institutions of the metropolis, and invented a new mode of teaching the science. In 1818 he visited the continent, and on his return went to reside in his native city. In April 1824 he came back to London, and died there on the 22nd of the following month. His works are; 1. A new System of Musical Education, being a Self-Instructor ; 2. Twenty -Psalmodical Melodies : 3. The Jubilee, a Patriotic Entertainment ; 4. The Siege of Isca, an opera ; 5. The Vocal Magazine ; 6. Songs, Glees, Duets, &c.

KEMPELEN (Wolftgang de), an ingenious Hungarian gentleman and mechanic, the inventor of the celebrated automaton chess-player, was born at Presburg, and became first known to the public by the announcement of that invention in 1769. He was at that time aulic counsellor of the royal chamber of Hungary to the empress Maria Theresa. See our article AUTOMATON.

In that article we have given the statement of a gentleman who took great personal pains to investigate the mystery of the chess-player of Kempelen ; and who nearly satisfied himself and us that, in point of fact, it is an imposition on the public. We have since had an opportunity of examining more accurately the pamphlet alluded to in the close of our article : and remembering that Dr. Hutton has denominated this, if altogether a mechanical contrivance, 'the greatest masterpiece of mechanics that ever appeared in the world,' think the reader may be gratified by a reference to figures, and the following further explanation of the possible concealment of a living person : — Fig. 1, plate KEMPELEN'S CHESS-PLAYER. A

perspective view of the automaton, seen in

front, with all the doors thrown open. Fig. 2. An elevation of the back of the automaton. Fig. 3. An elevation of the front of the chest,

the dotted lines representing the player in the

first position. Fig. 4. A side elevation, showing the player in

the same position. Ficr. 5. A front elevation, showing the second

position. Fig. 6. An horizontal section through the line

WW,fig. 5. Fig. 7. A front elevation, showing the tviird f«.-

sition.

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K E M P E L E N.

Fig. 8. A side elevation of the same position. Fig. 9. A vertical section through the line X X,

fig. 8. Fig. 10. A vertical section through the line Y Y,

fig. 7, showing the false back closed. Fig.” 11. A similar section, showing the false

back raised

The following letters of reference are employed

in all the figures.

A Front door of the small cupboard. B Back door of ditto. CC Front doors of large cupboard. D Back door of ditto. E Door of ditto. F Door in the thigh. GG The drawer.

H Machinery in front of the small cupboard. I Screen behind the machinery. K Opening caused by the removal of part of

the floor of the small cupboard. L A box which serves to conceal an opening

in the floor of the large cupboard, made to

facilitate the first position ; and which also

serves as a seat for the third position. M A similar box to receive the toes of the

player in the first position. N The inner chest, filling up part of the

trunk.

O The space behind the drawer. PQ The false back turning on a joint at Q. R Part of the partition formed of cloth

stretched tight, which is carried up by the

false back, to form the opening between the

chambers.

S The opening between the chambers. T The opening connecting the trunk and

chest, which is partly concealed by the false

back. U Panel which is slipped aside to admit the

player.

‘ The exhibitor, in order to show the mechanism, as he informs the spectators, unlocks the door A, fig. 1, of the chest, which exposes to view a small cupboard, lined with black or dark colored cloth, and containing different pieces of machinery, which seem to occupy the whole space. He next opens the door, B, fig. 2 at the back of the same cupboard, and holding a lighted candle at the opening, still further exposes the machinery within. The candle being withdrawn, the door B is then locked. The drawer, G G, fiz. 1, in the front of the chest, is then opened, and a set of chess men, a small box of counters, and ‘a cushion for the support of the automaton’s arm are taken out of it. The exhibitor now opens the two front doors, C C, fig. 1, of the large cupboard, and the back door D, fig. 2, of the same, and applies a candle, as in the former case. This cupboard is lined with cloth like the other, but it contains only a few pieces of machinery. The chest is now wheeled round, the garments of the figure lifted up, and the door E, fig. 2, in the trunk, and another, F, in the thigh, are opened. But it must be observed, that the doors, B and D, are closed. The chest is now restored to its forrner position on the floor ; the doors in front, and the drawer, are dosed and locked ; and the exhibitor, after he

has occupied some time at the back of the chest, in apparently adjusting the machinery, removes the pipe from the hand of the figure, winds up the works, and the automaton begins to move.

Our author after pointing out the extreme difficulty of executing the movements of the chess player by machinery alone, and the regular and undeviatmg mode of disclosing the interior of the chest ; shows that the various facts which have been observed respecting the winding up of the machine, ‘ afford positive proof that the axis turned by the key is quite free and unconnected either with a spring or a weight, or any system of machinery.’ He then suggests a me-thod by which any person well skilled in the game, and not exceeding the ordinary stature, may secretly animate the automaton, and imitate the movements of the chess-player. This me-thod will be best understood from the following extract : — •

‘ The drawer, G G, fig. 10, when closed, does not reach to the back of the chest; it leaves a space, O, behind it, about one foot two inches broad, eight inches high, and three feet eleven long. This space is never exposed to view. The small cupboard is divided into two parts by the door or screen, I, fig. 6, which is moveable on a hinge, and is so

contrived that, when Bis closed, this screen may be closed also. The machinery, H, occupies the whole of the front division as far as I ; the hinder division is nearly empty, and communicates with the space behind the drawer, the floor of this division being removed. The back of the great cupboard is double, and the part, P Q, to which the quadrants, &c., are attached, moves on a joint Q, at the upper part, and forms, when raised, an opening, S, between the two cupboards, by carrying with it part of the partition, R, which is composed of cloth stretched tight. Fig. 10 shows the false back closed. Fig. 11 shows the same raised, forming the opening S, between the chambers.

‘ VJhen the trunk of the figure is exposed, by lifting up the dress, it will be seen that a great part of it is occupied by an inner trunk, N, which passes off towards the back in the form of an arch, fig. 2, and conceals a portion of the interior from the view of the spectators. This inner trunk opens to the chest by an aperture, T. fig. 9, about one foot three inches high, by one foot broad. When the false back is raised, the two chambers, the trunk, and the space behind the drawer, are all connected together.

‘The player may be introduced into the chest through the sliding panel U, fig. 6, at the end. He will then elevate the false back of the large cupboard, and assume the position represented by the dotted lines in figs. 3 and 4. Every thin<r being thus prepared, ‘the charm’s wound up,’ and the exhibitor may begin his operations by opening the door, A. From the crowded and very ingenious disposition of the machinery in this cupboard, the eye is unable to penetrate far beyond the openine, and the spectator is led to conclude that the whole space is occupied with a similar apparatus. This illusion is strengthened and confirmed by observing the glimmering light which plays among the intricacies of the machinery, and occasionally meets

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KEMPELEN.

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the eye, when the lighted candle is held at the door, B. A fact, too, is ascertained, which is equally satisfactory, though for opposite reasons, to the spectator and the exhibitor, *viz.* that no opake body of any magnitude is interposed between the light and the spectator’s eye. The door, B, must now be locked, aud the screen, I, closed, which, being done at the moment the light is withdrawn, will wholly escape observa-ticn.

‘ It has been already mentioned, that the door, B, from its construction, closes by its own weight ; but as the player’s head will presently be very near it, the secret would be endangered, if, in turning round the chest, this door were, by any accident, to fly open ; it becomes necessary, therefore, ‘ to make assurance doubly sure,’ and turn the key. If the circumstance should be observed, it will probably be considered as accidental, the keys being immediately wanted for the other locks. The opening, B, being once secured, and the screen, I, closed, the success of the experiment may be deemed complete. The secret is no longer exposed to hazard ; and the exhibitor is at liberty to shape his conduct in any way he may think most likely to secure the confidence of the spectators, and lead them insensibly from the main object of pursuit. The door, A, may safely be left open; this will tend to confirm the opinion, which the spectators probably formed on viewing the candle through this cupboard, that no person was concealed within it: it will assure them that nothing can pass in the interior without their knowledge, so long as this door continues open. The drawer stands next in the order of succession : it is opened,

apparently for the purpose of taking out the chess men, cushion, &c., but really to allow time for the player to change his position (see fig. 5), and to replace the false back and partition, preparatory to the opening of the great cupboard.

‘ The machinery is so thinly scattered over this cupboard, that the eye surveys the whole space at one glance, and it might seem unnecessary to open a door at the back, and to hold a lighted candle there, as in the former instance; but the artifice is dictated by sound policy, which teaches that the exhibitor cannot be too assiduous in affording facilities to explore every corner and recess, which, he well knows, contains nothing that he is desirous of concealing. The chest may now be wheeled round for the purpose of showing the trunk of the figure; •leaving, however, the front doors of the great chamber open. The bunch of keys, too, should be suffered to remain in the door, D ; for the apparent carelessness of such a proceeding will serve to allay any suspicion which the circumstance of locking the door, B, might have excited, more especially as the two doors resemble one another in point of construction. When the drapery has been lifted up, and the doors in the trunk and thigh opened, the chest may be returned to its former situation, and the doors ie closed. In the mean time the player should withdraw his legs from behind the drawer, as he will not so easily effect this ipovement after the drawer has been pushed in.

‘ Here let us pause a while, and compare the real state of the chest at this time, with the impression which, at a similar period of an exhibition of the chess-player, has generally been left on the minds of the spectators ; the bulk of whom have concluded that each part of the chest had been successively exposed ; and that the whole was at that time open to inspection ; whereas, on the contrary, it is evident that some parts had been entirely withheld from view, others but obscurely shown, and that nearly half of the chest was then excluded fron» their sight. Hence we learn how easily, in matters of this sort, the judgment may be led astray by an art-ful combination of circumstances, each assisting the other towards the attainment of one object.

‘When the doors in front have been closed, the exhibitor .may occupy as much time as he finds necessary, in apparently adjusting the machinery at the back, whilst the player is taking the position described in figs. 7 and 8. In this position he will find no difficulty in executing every movement required of the automaton : his head being above the table, he will see the chess-board through the waistcoat as easily as through a veil; and his left hand extending be-yond the

elbow of the figure, he will be enabled to guide its hand to any part of the board, and to take up and let go a chess man with no other ‘ delicate mechanism’ than a string communicating with the finger. His right hand, being within the chest, may serve to keep in motion the contrivance for ˆproducing the noise, which is heard during the moves, and to perform the other tricks of moving the head, tapping on the chest, Sec. In order to facilitate the introduction of the player’s left arm into the arm of the figure, the latter is obliged to be drawn backwards; and, to account for and conceal this strained attitude, a pipe is ingeniously placed in the automaton’s hand. This pipe must not be removed till the other arrangements are completed. When all is ready, and the pipe removed, the exhibitor may turn round the winder, to give the impression to the spectators of winding up a spring, or weight, and to serve as a signal to the player to set the head of the automaton in motion. The above process is simple, feasible, and effective; showing indisputably that the phenomena may be produced without the aid of machinery, and thereby rendering it probable that the chess-player derives its merit solely from the very ingenious mode by which the concealment of a living agent is effected.’

De Kempelen published La Mecanisme de la Parole, Suivi de la Description d’une Machine Parlante, et enrichi de vingt-et-sept Planches, Vienne, 1791, 8vo. printed in French: also a drama, called Perseus and Andromeda; the Unknown Benefactor, a comedy, &c. In addition to the machines mentioned in the article AUTOMATON, he likewise made a printing press for the use of Madame Pardies, a blind musician. He died in Vienna in 1804.

K EM PIS (Thomas a), a pious and learned regular canon, born at the village of Kemp, in the diocese of Cologne, in 1320 ; from which he took his name. He studied at Deventer, in the community of poor scholars established by Ge—

rard Oroot ; where he made great progress in the sciences. In 1399 he entered the monasˆ tery of the regular canons of Mount St. Agnes, near Zwoll, of which his brother was prior. Thomas a Kempis there distinguished himself by his eminent piety, his respect for his superiors, Ins charity to his brother canons, &c. He died iu 1471, aged seventy. The best editions of his works, which consist of sermons, spiritual treatises, and lives of holy men, are those of Paris in 1649, and of Antwerp in 1607. The famous book de Imitatione Christi, which has been translated into almost all languages, having been found printed under the name of Gerson, has been, on this account, as on the credit of some MSS., since ascribed to the abbot Ger-son. This occasioned a violent dispute between the canons of St. Augustine and the Benedictines.

KEMPTEN, the ancient Campodunum, a town of the Bavarian states, on the lller. It consists of the old town, and the Stifts-stadt, and contains altogether 5300 inhabitants. Here is an aqueduct: manufactures of cotton and linen, and some trade on the lller. The two parts of the town were formerly distinct, the old town having no territory but a good trade ; while the Stifts-stadt, which stands on an eminence, was the seat of the abbey. In 1802 both the abbey and town were made over to Bavaria. Sixty-six miles W. S. VV. of Munich, and fifty south by east of Ulm.

KEN, v.a.&n. 5. Sax. cennan; Goth.kenna; Belg. hennen. To know ; to see at a distance ; to descry; to know. Ken, a view or sight.

Colin ! thou kenst the southerne shepheard’s boy Him love that wounded with a dealy darte,

Whilome on him wos all my care and ioye Forcing with giftes to win his wanton heart.

Spenser’s Shepheard’s Calendar.

‘Tis he, I ken the manner of his gait.

Shakspeare.

Lo ! within a ken our army lies. Id. Henry IV.

When from the mountain top Pisanio shewed thee, Thou wast within a ken. Id. Cymbeline.

The next day about evening we saw, within a tanning, thick clouds, which did put us in some hope of land. Bacon.

At once as far as angels ken, he views The dismal situation waste and wild. Milton.

It was a hill

Of paradise the highest ; from whose top The hemisphere of earth, in clearest ken, Stretched out to the amplest reach of prospect, lay.

Id. He soon

Saw within ken a glorious angel stand. Id.

Coasting they kept the land within their ken, And knew the North but when the pole-star shone.

Drydtn. If thou ken’st from far.

Among the Pleiads, a new-kindled star ;

Tis she that shines in that propitious light. Id.

When we consider the reasons we have to think, that what lies within our hen is but a small part of the universe, we shall discover an huge abyss of ignorance. Loche. AYe ken them from afar, the setting sun

Plays on their shining arms. Addlson.

Now plain I ken whence love his rise begun : Sure he was born some llocdy butcher’s sen, BreU up in a shamble*- Gay’i Patioralt.

KEN (Thomas), an eminent English bishop, in the seventeenth century, who was educated at Winchester school, whence he went to Oxford ; and in 1669 was made a prebend of Winchester, lie was appointed by king Charles II. to attend lord Dartmouth at the demolishing of Tangier ; and at his return was made chaplain to the king, as he was some time after to the princess of Orange. In Jan. 1685 he was made bishop of Bath and Wells. The month following he attended king

Charles II. at his death, for three whole days and nights. In James the Second's reign he zealously opposed the progress of popery ; and in June, 1688, he with five other bishops, and the archbishop of Canterbury, was committed prisoner to the Tower of London, for subscribing a petition to his majesty against the declaration of indulgence. Upon the Revolution, however, he refused to take the oaths to king William and queen Mary, on which account he was deprived of his bishopric. Queen Anne bestowed on him a yearly pension of £200 to his death, in 1710. He published several pious work*.

KENDAL, a market town of Westmoreland, seated in a valley, among hills, on the west side of the Ken, over which there are two stone bridges, and one of wood, which leads to the castle, now in ruins. It is a large handsome place ; and has two fine long streets, crossing each other. The inhabitants have carried on the cotton and woollen manufactory ever since the reign of Edward III., and laws were enacted for regulating Kendal cloths as early as Richard II. and Henry IV. It is also famous for the manufactory of cottons, druggets, serges, hats, worsted and yarn stockings, &c. Queen Elizabeth incorporated it with aldermen and burgesses; and king James I. with a mayor, recorder, town-clerk, twelve aldermen, twenty-four burgesses, or common councilmen, and two attorneys. There are seven companies, *viz.* mercers, shearmen, cord wainers, glovers, tanners, tailors, and pewterers. It has an elegant town-hall, and a court of conscience for debts under 40s. It has a large beautiful church, which stands on the other side of the brook called Blindbeck, out of the liberty of the town: a large and handsome Gothic fabric, 180 feet long and ninety-nine broad, with five aisles, each parted by a row of eight pillars, and a strong square steeple. Near it is Abbot's Hall, the residence of the abbot when this church belonged to an abbey dissolved by Henry VIII. In 1755 a new chapel was erected in the middle of the town, and twelve chapels of ease belong to it. Here are several public and private charitable institutions, *viz.* Sandy's Hospital and Charity School, founded in 1670; the Blue-coat schc ol, for fifty boys and forty girls ; a school of Ind as-try, built in 1799; a dispensary, erected in 1782 ; and the workhouse, which is at the north west end of the town, and is very commodious. The newspaper published here is of long standing, and a subscription book-club has been long established. Here is also a free grammar-school well endowed. Eastward of the town on the opposite side of the river on a hill, whence is a fine prospect, stand the ruins of a castle, whereiii

wns born Catharine Parr, the sixth wife of .Henry VIII. By the inland navigation, it has communication with the rivers Mersey, Dee, Ribble, Ouse, Trent, Severn, Humber, Thames, Avon, &c., extending above 500 miles in the counties of Lincoln, Nottingham, York, 1/inras'f-Cˆfster, Stafford, Warwick, Leicester, Oxford, Worcester, Sec. The sessions of the peace for this part of the < our.ty, called the barony of Kendal, are held in ihis town ; and there is a very good market on Saturday, for all kinds of provisions and for woollen yam. It has fairs May 6th, and November 8th : and between them a great market for black cattle every fortnight. Kendal sends one member to parliament. Returning officer, the mayor of the town.

KENE, or KENNE, a considerable place of Upper Egypt, which now forms the centre of its trade. The goods destined for India are brought up the Nile to this place in boats, where they are landed and carried over land to Cosseir, and embarked on the Red Sea. The goods from India are also landed at Cosseir, and brought to Kene. It is however chiefly supported by the great caravan from Western and Central Africa *vhich passes annually through it, and brings nu.nT-ous pilgrims for Mecca and Medina. Those ci'ies, as well as their port, Jidda, being situated in a very barren country, the pilgrims are obliged to supply themselves at Kene. Long. 32° 27' E., lat. 26° 9' 36* N.

KENHAWAY, a large river of the United States, in Virginia, which is formed by the Kenhaway Proper, and the Green Briar rivers. The former rises in North Carolina, in 36° N. lat. to the east of the Alleghany Mountains. Its course is first nearly north, passing into the Alleghany valley obliquely. It then follows the range of the valley, and at a distance of about forty miles enters Virginia, and, continuing sixty miles north-east to Inglisville, then turns north-west by north, enters Cumberland valley, over which it meanders about seventy miles, and receives, from the north-east, Green Briar River. Below their junction, the Great Kenhaway flows north-west forty or fifty miles, and passes Cumberland mountain by considerable falls. A rock, a little elevated in

the middle, crosses the bed of the river, over which the water shoots, and falls about fifty feet perpendicularly, except at one side, where the descent is more gradual. Below these falls the stream, upwards of 300 yards wide, pursues nearly a north course for 100 miles, and falls into the Ohio at Point Pleasant, in lat. 38° 55’ N. The Great Kenhawuy is 196 miles below Pittsburg, and navigable to the great falls most of the year.

KENHAWAY, LITTLE, a smaller river of the United States, in Virginia, which rises among the Alleghany Mountains, west of Chestnut ridge, or Cumberland Mountain. It is 150 yards wide at its mouth, and is navigable only ten miles. It falls into the Ohio at Parkersburg.

KENILWORTH, or KIT.UNGWORTH, is a market-town of England, in the county of Warwick, consisting chiefly of an irregular street, nearly a mile in length. The church is an ancient building, with a spire; and there are two dissenting meeting-houses. A manufacture of horn combs is carried on here, but the town is

chiefly noted for it* magnificent castle, whrca formed at one time the pride and ornament of this part of the kingdom. The remains present one of the most splendid and picturesque wreck* of castellated strength found in England. The castle was originally founded by Geoffrey de Glinton, chamberlain and treasurer to king Henry I. But most of the buildings which re-main were built by John of Gaunt, who acquired it by marr,age. Through his son Henry IV. it returned into the hands of the crown, until queen Elizabeth conferred it on Robert Dudley, earl of Le cester. This nobleman spent immense sums in adorning and enlarging it; and, when all was finished, he entertained the queen here for seventeen days. According to a survey, taken some time after, the area within the walls of the castle contained seven acres, and the circuit of the walls, manors, parks, and chase, was nineteen or twenty miles. During the civil wars the b”ildings Tere extensively demolished, at.d the materials sold. The earl of Clarendon is the present proprietor. Population 2279. Market on Wednesday. Five miles north of Warwick, and 101 north-west of London.

KENNEBECK, a river of Maine (next to Penobscot, the largest in the district), North America, has twp principal branches, the eastern and western. The former rises from Moosehead Lake; and the latter, called Dead River, interlocks with the sources of the Chaudiere, with which it is connected by a portage of only five miles. The two branches unite about twenty miles below Moosehead Lake ; and the river afterwards

pursues a southerly course, and flows into the Atlantic, between Phipsburg and Georgetown, a league from Seguin Island. It is joined by the Androscoggin, eighteen miles from the sea. The tide flows up as far as Augusta, and the river is navigable for ships to Bath, twelve miles; for vessels of 150 tons to Hallowell, forty miles ; for sloops to Augusta, two miles further ; and for boats to Waterville, eighteen miles above Augusta.

The most considerable falls on the Kennebeck are at Teconic, between Waterville and Wins-low ; Skouhegan Falls, between Bloomfield and Canaan ; Norrids>ewock Falls, between Anson and Madison ; and Karatunk Falls, between Emden and Sola. The country watered by it is one of the best grazing districts in New England ; and the towns of Bath, Gardiner, Hallowell, Aususta, Waterville, ‘Bloomfield, and Norridgewock are on its banks.

KENNEDY (John), M.D., a learned Scots physician of the eighteenth century, who resided several years at Smyrna. He made a valuable collection of coins and pictures: and published a Dissertation on the Coins of Carausius, which produced a controversy between him and Dr. Stukely. He died in 1760.

KEN’NEL, n. s. 8c v. n. Fr. chenil ; Dut. fcen-neltLat.canulis. Acotfordogs; anumberofdogi kept together; the hole of a fox or other beast ; the water-course of a street ; to lie ; to dwell : a term used in contempt when applied to man.

From forth tke kttmfl of tliy womb hath crept A hell-hound, thatrtoth hm.t us all to death.

6/1 ahtivni*.

A little herd of England's timorous deer, Mazed with a yelping kennel of French curs.1 Id. Bad humours gather to a bile ; or, as divers kennels flow to one sink, so in short time their numbers increase. Hayward.

The seditious remain within their station, which, by reason of the nastiness of the beastly multitude, might be more fitly termed a kennel than a camp.

Yet, when they list, would creep, If ought disturbed their noise, into her womb, And kennel there : yet there still barked and howled Within, unseen. Milton's Paradise Lost.

A dog sure, if he could speak, had wit enough to describe his kennel. Sidney.

The dog kennelled in a hollow tree, and the cock roosted upon the boughs. L'Estrunge.

He always came in so dirty, as if he had been dragged through the kennel at a boarding-school.

Arbutlmot.

Brutes capable would tell you 'tis a lie And judge you* from the kennel and the stye.

Cowper. Progress of Error.

A KENNEL for hounds should be situated on an eminence; its front ought to be to the east, and the courts round it ought to be wide and airy, to admit the sunbeams at any time of the day. Two kennels are necessary to the well-being of hounds : when there is but one it is seldom sweet. When the feeder first comes to the kennel in a morning, he should let out the hounds into the outer court ; and in bad weather should open the door of the hunting kennel (that in which the hounds designed to hunt next day are kept), lest want of rest should incline them to go into it. The lodging room should then be cleaned out, the doors and windows of it opened, the litter shaken up, and the kennel made sweet and clean before the hounds return to it again. The floor of each lodging room should be bricked, and sloped on both sides to run to the centre, with a gutter left to carry off the water, that when they are washed they may soon be dry. If water should remain, through any fault in the floor, it must be carefully mopped up ; for damps are always very prejudicial. The kennel ought to have three doors ; two in the front and one in the back ; the last to have a lattice-

win- dow in it, with a wooden shutter, which is constantly to be kept closed when the hounds are in, except in summer, when it should be left open all the day. ‘At the back of the kennel should be a house thatched and furzed up on the sides, large enough to contain at least a load of straw. Here should be a pit ready to receive the dung, and a gallows for the flesh. The gallows should have a thatched roof, and a circular board at the posts, to prevent vermin from climbing up. A piece of ground adjoining to the kennel should be enclosed for such dog horses as may be brought alive. In some kennels a stove is used ; but, where the feeder is a good one, a mop properly used will render the stove unnecessary. If ticks at any time be troublesome in your kennel, let the walls of it be well washed ; if that should not destroy them, the walls must then be white-washed. There should also be a stream of water in the neighbourhood, or even running through it if possible; with moveable stages on wheels for

the hounds to lie on. The soil ought at al events to be dry. The most magnificent kennel in England is the duke of Richmond’s at Good-wood, which cost £19,000, and is sufficiently extensive for two packs of hounds. The building comprises five kennels; two thirty-six by fiiteen, three thirty by fifteen, and two feeding rooms twenty by fifteen feet, with stoves for warming the air when too cold. The huntsman and whipper-in have each a parlour, kitchen, and sleeping room.

RENNET (Dr. White), bishop of Peterborough, a learned English writer, was born at Dover, August 10th, 1660 ; and educated at St. Edmund’s Hall, Oxford; where he soon distinguished himself by his translations of several books into English, and other publications. In 1695 he published his parochial Antiquities. In 1706 he published his Case of Impropriations, and two other tracts on the same subject. In 1709 he published the third volume of The Complete History of England ; the two former being compiled by Mr. Hughes. In 1709 he published A Vindication of the Church and Clergy of England from some late Reproaches rudely and unjustly cast upon them; and A True Answer to Dr. Sacheverel’s Sermon. Dr. Rennet was exposed to great odium as a low-churchman, on account of his conduct and writings. In 1713 he presented the Society for Propagating the Gospel with a great number of books, suitable to their design; published his Biblso-thecjE Americana Primordia, and founded an antiquarian and historical library at Peterborough. In 1715 he published a sermon entitled, The Witchcraft of the present Rebellion, and afterwards several other pieces. In 1717 he was engaged in a dispute with Dr. William

Nicholson, bishop of Carlisle, relative to some alterations in the bishop of Bangor's celebrated sermon ; and disliked the proceedings of the convocation against that bishop. Upon the death of Dr. Cumberland, bishop of Peterborough, he was promoted to that see in 1718: which he held till his death in 1728. He was an excellent philologist, and well versed in the history and antiquities of England.

RENNET (Dr. Basil), a learned English writer, and brother to the bishop, was born at Postling in Rent, in 1674 ; and educated in Corpus Christi College, Oxford, where he became fellow. In 1706 he went over as chaplain to the English factory at Leghorn ; where he met with great opposition from the papists, and was in danger from the Inquisition. He died in 1714. He published Lives of the Greek Poets ; the Roman Antiquities ; a volume of Sermons preached at Leghorn ; A Translation into English of Puffendorf's Treatise of the Law of Nature and Nations, &c.

RENNET, in geography, a river which rises among the chalky hills in Wilts, and flows to Newbury in Berks, where it becomes navigable, and below which it is augmented by the Lam-born. It tnen keeps along the south edge of the county, till, turning up to Reading, it mingles with the Thames. Pope has celebrated this river, as

' The Kennet swift, for silver eels renowned.'

KENNICOTT (Dr. Benjamin), well known in the learned world for his elaborate edition of the Hebrew Bible, and other valuable publications, was born in 1718, at Totness in Devonshire, where his father was parish clerk. Some opportunities of early improvement must have occurred, superior to those which his father could afford to give him ; for, in 1743, he wrote A Poem on the Recovery of the honorable Mrs. Elizabeth Courtenay from a dangerous illness; which was soon followed by such contributions as procured for him the advantages of an academical education. In 1744 he entered at Wadham College, and soon distinguished himself in that particular branch of study in which he afterwards became so eminent. His two

dissertations, On the Tree of Life, and The Oblations of Cain and Abel, came to a second edition so early as 1747, and procured him the singular honor of a bachelor's degree conferred on him gratis by the university, a year before the sta-tuteable time. The dissertations were gratefully dedicated to those benefactors whose liberality had opened his way to the university. He was soon after admitted a fellow of Exeter College, and distinguished himself by the publication of several sermons. In 1753 he laid the foundation of his great work on the Hebrew Bible, by publishing his first dissertation, On the State of the Printed Hebrew Text, in which he proposed to overthrow the then prevailing notion of its absolute integrity. The first blow, indeed, had been struck long before, by Capellus, in his Critics Sacra, published after his death by his son in 1650 — a blow which Buxtorf, with all his abilities and dialectical skill, was unable to ward off. But Capellus having no opportunity of consulting MSS., though his arguments were supported by the authority of the Samaritan Pentateuch, of parallel passages, and of the ancient versions, could never absolutely prove his point. Indeed the general opinion was, that the Hebrew MSS. contained no, or at most very few and trifling, variations from the printed text: and with respect to the Samaritan Pentateuch, very different opinions were entertained. Those who held the Hebrew verity, condemned the Samaritan as corrupt in every place where it deviated from the Hebrew ; and those who believed the Hebrew to be incorrect, did not think the Samaritan of sufficient authority to correct it. Besides the Samaritan itself appeared to a very great advantage; for no Samaritan MSS. were then known, and the Pentateuch was condemned for those errors which ought rather to have been ascribed to the incorrectness of the editions. In this dissertation, therefore, Dr. Kennicott proved, that there were many Hebrew MSS. extant, which, though they had hitherto been generally supposed to agree with each other, and with the Hebrew text, yet contained many and important various readings; and that from those various readings considerable authority was derived in support of the ancient versions. He announced the existence of six Samaritan MSS. in Oxford only, by which many errors in the printed Samaritan might be detected ; and he attempted to prove, that even from the Samaritan, as it was already printed, many passages in the Hebrew might undoubtedly be corrected. This work was ex-am.ned with great severity both in Britain and abroad. In some foreign universities, the belief of the Hebrew verity, on its being attacked by Capellus, had been insisted on as an article of faith. And at home this doctrine of the corrupt state of the Hebrew text was opposed by Comings and Bate, two Hutchinsonians, with as much violence as if the whole truth of revelation had been at stake. The next three or four years of Dr. Ke'nnicott's life were chiefly

spent in searching out and examining Hebrew MSS. About this time Dr. Kennicott became one of the king's preachers at Whitehall; and in 1759 vicar of Culham in Oxfordshire. In January, 1760, he published his second dissertation on the state of the Hebrew text; in which, after vindicating the authority and antiquity of the Samaritan Pentateuch, he disarmed the advocates for the Hebrew verity of their most specious arguments. He appealed also to the writings of the Jews themselves on the subject of the Hebrew text, and gave a compendious history of it, from the close of the Hebrew canon down to the invention of printing; together with a description of 103 Hebrew MSS. also which he had discovered in England, and an account of many others preserved in various parts of Europe. A collation of the Hebrew MSS. was now loudly called for, by the most learned and enlightened of the friends of biblical criticism ; and in this same year Dr. Kennicott published his proposals, for collating all the Hebrew MSS. prior to the invention of printing, that could be found in Great Britain and Ireland, and for procuring at the same time as many collations of foreign MSS. of note, as the time and money he should receive would permit. His first subscribers were archbishop Seeker, and the delegates of the Oxford press, who gave him an annual subscription of £40. In the first year the money received was about 500 guineas, in the next it arose to 900, at which sum it continued stationary till the tenth year, when it amounted to 1000. During the progress of the work, the industry of our author was rewarded by a canonry of Christ Church. He was also presented to the valuable living of Myn-henyote, in Cornwall, by the nomination of the chapter of Exeter. In 1776 the first volume was published, and in 1780 the whole was completed. If now we consider that above 600 MSS. were collated, that the whole work occupied twenty years of Dr. Kennicott's life, it must be owned that sacred criticism is indeed greatly indebted to him. Within two years of his death he resigned his living in Cornwall, on account of his not having a prospect of ever again be ng able to visit his parish. He died at Oxford, after a lingering illness, September 18th, 1783 and left a widow, who was sister to the late Edward Chamberlayne, esq., of the treasury At the time of his death he was employed in printing Remarks on Select Passages in the Old Testament ; which were afterwards .published, the volume having been completed from his MSS

KENSINGTON, a populous villnge of Middlesex, on the west road from London, nearly two miles from Hyde Park Corner. The palace.

which was the seat of Lord Chancellor Finch, afterwards earl of Nottingham, was purchased by king William III., who greatly improved it, and caused a royal road to be made to it, through St. James's and Hyde Parks. Queen Ann improved what William had begun ; and was so pleased with the place, that she frequently supped during the summer in the greenhouse, which is very beautiful ; but queen Caroline completed the design by extending the gardens from the great road in Kensington to Acton ; by bringing the Serpentine River into them ; and by taking in some acres from Hyde Pa,rk, on which she caused a mount to be erected. This mount is planted round with evergreens, and commands a fine view over the gardens, and the country south and west. They were originally designed by Kent, and were very much improved by Brown. The palace indeed has not much grandeur, but the royal apartments are noble, and some of the pictures good. At this palace king William, prince George of Denmark, queen Anne, and king George II. died. The old church was pulled down in 1696, and a much better one built in its room. Part of this village, from the palace gate to the Bell, is in the parish of St. Margaret's, Westminster.

KENT, a county of England, which Cam-den, Wallis, Harris, Hasted, and others, conjecture was originally united to the continent of Europe, by a narrow isthmus extending between Dover and Calais. The chalky cliffs of Dover, and of Calais and Boulogne, have indeed an almost exact resemblance; their faces are rugged and precipitous, appearing as if they had been rent asunder by violence; and their length on both coasts is similar, being about six miles. It is probable that Kent was possessed by the Belgse, and afterwards lost their proper name in the word Cantii, from the name of the county. Camden observes that time has not yet stripped this county of its ancient name; but as Caesar, Strabo, Diodorus, Siculus, Ptolemy, and others call it Cantium ; so the Saxons, as Nennius tells us, named it Cant-guar- lantol ; or, in other words, the country of the people inhabiting Cantium. Caint is a British word, and is still the name .of this county in Welsh. It is descriptive of a country abounding with clear, fair, or open downs ; and this is the general characteristic of Kent. In the Domesday Book it is written Chenth.

This was the first county invaded by the Romans, who, after they had

with much difficulty subjugated the island, named this district a portion of Britannia Prima. It formed also the first kingdom of the Saxon Heptarchy; but its kings, in process of time, being reduced or conquered hy Egbert, it became part of the West Saxon kingdom, and so continued till the Noiman Conquest. The inhabitants are said to have been the first in England that were converts to Christianity : and by their courage and resolution they retained some privileges which the inhabitants of every other county lost by a capitulation with William the Conqueror; particularly a tenure called gavelkind, by virtue of which even.- man possessed of landi in this

county is in a manner a freeholder, not being bound by copyhold, customary tenure, or tenant right, as they are in most other parts of England. The male heirs, and in default of such the female, share all lands alike. The lands of a brother, if he have no legal issue, are shared by all the surviving brethren. An heir of fifteen years of age may sell or alienate. And, lastly, though the ancestor be convicted of felony or murder, the heirs may enjoy his inheritance. But this privilege extends not to treason, piracy, outlawry, or abjuring the realm. Such are privileges still allowed (though not quite peculiar) to the county of Kent.

This county form's the south-east angle or corner of the kingdom. Some have supposed its name to have been hence derived. It is bounded on the north by the river Thames, the county of Essex, and the German Ocean; on the south by Sussex ; on the east by the British Channel ; and on the west by Surrey. Its figure is quadrilateral. It is about sixty-three miles in length from Deptford to the point of the North Foreland. Its breadth from east to west is forty miles ; and its circumference about 174 miles. It is divided into two grand districts, West and East Kent ; sixty-three hundreds, five lathes, fifteen liberties, two cities, thirty-four market-towns, and 414 parishes. It is in the home circuit, the province of Canterbury, and the dioceses of Canterbury and Rochester.

Kent, in consequence of its proximity to the German Ocean and British Channel, is very subject to cold sea winds. The prevailing breezes are from north-east and south-west. The subsoil of the whole Isle of Thanet is a dry, hard, rock chalk. The tops of the poor chalky ridges are about sixty feet above the level of the sea, and are covered with a dry loose chalky mould from six to eight inches deep ; it has a mixture of small flints, and is, without manure, a very poor soil. The vales between the ridges, and the flat lands on the hills, have a depth of dry

loamy soil, from one to three feet, with less chalk and of much better quality. The west end of the island, even on the hills, has a good mould, from one to two feet deep, a little inclining to stiffness ; but the deepest and best, soil is that which lies on the southernmost ridge, running westward from Ramsgate to Monkton ; it is there a deep, rich, sandy loam. The soil of the marshes is a stiff clay, mixed with sea-sand, and small marine shells. In east Kent, the open part of the district between Canterbury, Dover, and Deal is of various soils, the principal of which are chalk, loam, strong cledge, hazel-mould, and stiff clay. Besides these, there are some small tracts of flints, gravel, and sand. Almost the -yhole of the Isle of Sheppey is a deep, strong, stiff clay. The varieties of soil in west Kent are chalk, loam, clay, gravpl, sand, hassock, pinnock, coomb, and hazel-mould. The Weald of Kent has the reputation of being an entire mass of clay ; but on examination it is found to contain the following varieties of soil: — clay, hazel-mould, rag-stone, sand, and gravel. Almost the whole surface of the spacious level of fine marsh-land called Romney Marsh, is the sediment of the sea. It consists chiefly of a

soft loam and clay, with a greater or less mixture of sea-sand ; there are, however, near the shore, some small tracts of blowing sand, and some sea-beach, which are of very little value. The principal rivers are the Thames, the Medway, the Greater and Less Stone, the Darent or Dart, the Cray, and the Ravensbone. The only navigable canals within the county are the Rochester Canal from Chatham to Gravesend, and the Croydon Canal from Croydon in Surrey to London. Kent abounds with agricultural produce of various kinds ; with plantations of hops, and orchards of cherries and other fruit-trees. It also produces great quantities of corn, wood, and madder. The Weald of Kent is remarkable for large bullocks ; and in this district there are woods of oak, beech, and chestnut. There are several mineral springs in various parts, particularly in the neighbourhood of Tunbridge Wells. The parish of Penshurst, as well as the neighbouring ones, abounds in veins of iron ore, and most of the springs in them are more or less chalybeate.

Kent returns fifteen members to Parliament : *viz.* four for the county, two for the city of Canterbury, two for the city of Rochester, two for Maidstone, two for Dover, two for Sandwich, one for Hythe, and Qneenborough and New Romney formerly sent members. The family of Knatch-bull has represented this county at various periods since the reign of Charles I. The duke of Dorset is said to be proprietor or patron of the county, the admiralty of the city of Rochester, and the ordnance and admiralty of Queen-borough.

The eminent natives of Kent are very numerous: the following are the principal : — Lords Jeffery and Nicholas Amherst. — Sir Nicholas Bacon. — Sir Robert Buller. — R. Boyle.— Admiral Byng. — Mrs. Carter. — Wm. Caxton. — Dr. Tho-mas Comber. — Sir Ed. Dering. — Leonard and Thomas Digges. — Brien Duppa. — -Queen Elizabeth.— Sir George Ent. — J. Evelyn. — J. Eve-lyn, his son. — Sir R. Filmer. — William of Gil-lingham. — Robert Glover. — J. Goddard. — Peter Gunning. — Robert Jenkins — Stephen Hales. Dr. Harris. — J. Harvey. — Dr. Wm. Harvey. — Dr. J. Hawkesworth. — King Henry VIII. — Bishop B. Hoadly. — Bishop G. Home. — Drs. W. and Basil Kennet. — Kilburn, the antiquary. — Dr. N. Lardner. — J. Lilly. — Mrs. Macaulay. — Queen Mary. — Mrs. E. Montague. — Dr. John Monro. — The late Right Hon. William Pitt-Richard, Earl of Cork.— Sir G. Rooke.— Reginald Scott. — Sir Charles Sedley. — Christopher Smart. — Wm. Somner. — Algernon Sydney. — Sir Philip Sydney.— Lewis Theobald. — F. Thynne.— Sir Thomas Twysden.— Sir R. Twysden.— Sir Robert Twysden. — Sir F. Walsing-hnm. — Dr. Wilson. — Major-general James Wolfe.— Sir Henry Wotton. — Rev. Dean Wot-ton.— Sir T. Wyat.— Philip Yorke, Earl of Hardwicke. Canterbury and Rochester are both bishops' sees. Maidstone is the county town, and gives the title of Viscount to the Finch family.

Grazing and agriculture almost entirely engross the concerns of this county ; hence there are not many private manufactures of conse-

quence. The cloth trade, first introduced at Cranbrook, has long forsaken this county, but a few descendants of the French Protestant refugees carry on the manufacture of brocades, and there are some silk mills at Sevenoaks.' Some of the finest writing paper in the world is made in the vicinity of Maidstone. At Crayford are calico printing and bleaching works: at Dart-ford mills for manufacturing gunpowder In time of war government gives employment to vast numbers of workmen in this county. The greater part of the entire implements of our warfare are prepared here. At Woolwich the artillery

establishment is thought the most extensive and best regulated collection of work-shops and storehouses in the world; and the whole establishment under the Board of Ordnance, including the Academy for the instruction of the cadets, the Artillery Barracks, and the Arsenal, is highly creditable to the country. Kent also contains the four naval arsenals of Deptford, Woolwich, Chatham, and Sheernes* ; ana the magnificent Greenwich Hospital. See GREENWICH.

KENT, a populous and fertile county of Delaware, bounded on the east by the Delaware ; south by Sussex county, west by the state of Maryland, and north by Newcastle county. It is forty miles long from north to south, and twenty-six broad from east to west. Dover is the capital.

KENT, a county of Maryland, on the eastern shore, bounded on the east by Newcastle, and part of Kent county in Delaware ; south by the Chester, which divides it from queen Anne's county ; west by Chesapeake Bay ; and north by the Sassafras, which separates it from Cecil county. It is thirty-two miles and a half long, and thirteen broad. Chester is the capital.

KENT, a county of Rhode Island, bounded on the east by Narraganset Bay, south by Washington county, west by the State of Connecticut, and north by Providence county. It is twenty miles long, and ten broad. Warwick is the capital.

KENTUCKY, one of the United States of North America, is bounded north by the river Ohio, which separate s it from Ohio, Indiana, and Illinois ; east by Virginia ; south by Virginia and Tennessee ; and wesl by the river Mississippi. It extends from long. 81° 49' to 89° 20' W., lat. 36° 30' to 39° 10' N. ; 300 miles long, and from forty to 180 broad, containing 42,000 square miles. The number of inhabitants in 1830. amounted to 688,844.

The counties and chief towns, at present, are thus exhibited : —

Counties. Adair Barren Bath Boone Bracken Breckenridge Bourbon Butler Bullet Clarke

Chief Towns. Columbia Glasgow Owensvilla Burlington Augusta Hardingsburg Paris

Morgantown Shepherdsville Winchester

KENTUCKY.

Counties. Casey Campbell Christian Cumberland Clay Caldwell Estill Fayette Franklin Fleming Floyd Gallatin Greenup Green Gray son Garrard Henry Harrison Henderson Harden Hopkins Jessamin Jefferson Knox Livingston Lewis Lawrence Lincoln Logan Mason Mercer Madison Muhlunbergh Montgomery Nicholas Nelson Ohio Pulaski Penclleton Rockcastle Scott Shelby Union Wayne Washington Warren Woodford

Chief Towns. Liberty Newport Hopkinsville Burkesville Manchester Princeton Irvine Lexington Frankfort Flemingsburg Prestonville Port William Greenupsburgh Greensburgh Litchfield Lancaster Newcastle Cynthiana Henderson Elizabeth Town Madison villa Nicholasville Louisville Barbousville Smithland Clarksburg Louisa Stanford Russellville Washington 1 Danville Richmond Greenville Mount Sterling Carlisle Bairdstown Hartford Summerset Falmouth Mount Vernon Georgetown SI elbyv-ille Morganfield Monlicello Springfield Bowling-green Versailles.

Frankfort is the seat of government. Lexington-and Louisville are the largest towns. The other most considerable towns are Maysville, Washington, Bairdstown, Paris, Danville, Russellville, Georgetown, and Newport.

There have been no less than fifty-five banks and branches of banks incorporated in this state. They are not all, however, in operation.

The principal rivers are the Ohio, which flows along the state G37 miles, following its windings ; the Mississippi, Tennessee, Cumberland, Kentucky, Green, Licking, Big Sandy, Salt, and Rollins.

Cumberland mountains form the south-east boundary of this state. The eastern counties, bordering on Virginia, are mountainous and broken. A tract from five to twenty miles wide, along the banks of the Ohio, is hilly and broken land, interspersed with many fertile valleys. Between this strip, Green River, and the eastern

counties, lies what has been called the garden oi the state. This is the most populous part, and is about 150 miles long, and from fifty to 100 wide, comprising the counties of Mason, Fleming, Montgomery, Clarke, Bourbon, Fayette, Scott, Harrison, Franklin, Woodford, Mercer, Jessamine, Madison, Garrard, Logan, Casey, Lincoln, Washington, and Green. It is watered by Kentucky, Licking, Little Sandy, and Salt rivers, and their numerous branches. The soil is excellent, and the surface is agreeably diversified, gently rising and descending. These lands produce black walnut, black cheny, honey locust, buckeye, pawpaw, sugar-maple, mulberry, elm, ash, cotton-wood, white-thorn, with an abundance of grapp vines.

There is a tract of country in the south-western part of the state, east and north of Cumberland River, and watered by Green and Barren rivers, about 100 miles in extent, called the Barrens, which a few years since was a beautiful prairie, destitute of timber. It is now covered with a young growth of various kinds of trees. These, however, do not prevent the growth of grass, and an almost endless variety of plants, which are in bloom during the whole of the spring and summer ; when the whole region is a wilderness of the most beautiful flowers. The soil is of an excellent quality, being a mixture of clay, loam, and sand. Through this country there runs a chain of conical hills, called knobs. It is also distinguished for some most stupendous caves This country, sometimes called the Green Ilivei country, is now rapidly settling. The principal towns in it are Russellville, Bowling Green, and Hopkinsville.

Ancient fortifications and mounds of earth arc found in almost all parts of Kentucky. The caves in the south-western part of the state are great curiosities. One, styled Mam math cave, 130 miles from Lexington, on the road leading to Nashville, is said to be eight or ten miles in length, with a great number of avenues and windings. Earth strongly impregnated with nitre is found in most of these caves, and there are many establishments for manufacturing it From 100 Ibs. of earth SOlbs of nitre have frequently been obtained.

A number of the rivers in this state have exca vated the earth, so as to

form abrupt precipices, deep glens, and frightful gulfs. The precipices formed by Kentucky River are in many places awfully sublime, presenting perpendicular banks of 300 feet of solid limestone, surmounted with a steep and difficult ascent, four times as high. The banks of Cumberland River are less precipitous, but equally depressed below the surface of the surrounding country.

Wheat, tobacco, and hemp, are the staple productions; but Indian corn. is the principal grain raised for home consumption. Rye, oats, barley, buckwheat, flax, potatoes, &c., are cultivated. Apples, pears, peaches, cherries, and plums, are the mosi common fruits. Domestic animals are large and beautiful, and particularly the hoi > o.

Marble cl »xcellent quality abounds, and the whole state may be said to repose on a bed of limestone. Salt and iron are among the minerals of this state. The most extensive works for the

manufacture of salt, established west of the Alleghany Mountains, are on *he waters of Kentucky. These supply not only this state, but a great part of Ohio and Tennessee.

There is a college at Lexington, and academies are established at Augusta, Cynthiana, Frankfort, Georgetown, Greensburg, Harrodsburg, Louisville, Newport, Paris, Russellsville, Versailles, Washington, &c. The legislature has made an appropriation of lands for tHe support of public schools, in every county, but these appropriations, in many instances, have been injudiciously managed, and have, in some cases, turned to little account. Baptists, Methodists, and Presbyterians, are the most numerous denominations of Christians in Kentucky.

The legislature is composed of a senate, consisting of thirty-eight members, chosen by districts, for four years ; and a house of

representatives, not exceeding 100, chosen annually. The governor and lieutenant-governor are chosen by the people for four years, but are not eligible for the succeeding seven years. The legislature meets on the first Monday in November.

Kentucky, from its position, has become a manufacturing state. The amount of manufactured articles, in 1814, exceeded 13,000,000 of dollars. Of this sum, the looms produced 4,657,081 ; salt works, 725,870 ; rope walks, 393,400 ; maple sugar, 903,932.

KENTUCKY, a river, which rises in the south-east part of the state of that name, and runs north-west into the Ohio, sevtnty-seven miles above the rapids at Louisville. It is navigable in the winter for small boats, about 180 miles. The current is rapid, and the banks high and rocky.

KEPLER (John), one of the greatest astronomers of his age, was born at Wiel, in the county of Wirtemberg, in 1571. His father had been an officer in the imperial service, but was so much reduced as to be obliged to keep a public house. Young Kepler, however, studied astronomy and mathematics under Mcestlinus, and made such rapid progress, that in 1593 he was appointed professor of mathematics at Gratz. In 1595 he wrote an excellent work, which was printed at Tubingen in 1596, entitled Prodromus dissertationum de proportione orbium ccelestium, deque causis coelorum nu-meri, magnitudinis, motuumque periodicorum, genuinis et propriis. Tycho Brahe having settled in Bohemia, under the patronage of the emperor Rodolphus,he prevailed upon Kepler to leave the university of Gratz, and remove into Bohemia with his family and library, in 1600. Upon Brahe's death, the emperor appointed him his mathematician for life, and he daily acquired additional reputation by his works. The emperor ordered him to finish the tables of Tycho Brahe, which were called the Rodolphine Tables. He died at Ilatisbon, where he was soliciting payment of the arrears of his pension, in 1630. The principal works of this great astronomer are, 1. Prodromus dissertationum, above mentioned, which he also entitled Mysterium Cosmo-graphicum, and esteemed more than any other of his works. He sometimes said, he would not give up the honor of having written what was

contained in that book for the electorate of Saxony. 2. Harmonia mundi, with a defence of that treatise. 3. De cometis libri tres. 4. Epitome astronomiae Copernicanae. 5. Astronomia nova. 6. Chilias logarithmorum, &c.

7. Nova stereometria doliorum vinariorum, &c.

8. Dioptrice. 9. De vero natali anno Christi. 10. Ad Vitellionem Paralipomena, quibus Astronomiae pars optica traditur, &c. 11. Somnium, Lunarisve Astronomia ; in which he began to draw up that system of comparative astronomy which was afterwards pursued by Kircher, Huygens, and Gregory. His death happened while the work was printing; upon which James Bartschius his son-in-law undertook the care of it, but was also interrupted by death : and Lewis Kepler his son, who was then a physician at Konigsberg in Prussia, was with difficulty prevailed upon to attempt to finish it, lest it should prove fatal to him : he, however, completed the task.

KEPLER'S PROBLEM is the determining the true from the mean anomaly of a planet, or the determining itr place, in its elliptic orbit, answering to any given time. The general state of the problem is this : To find the position of a right line, which, passing through one of the foci of an ellipsis, shall cut off an area which shall be in any given proportion to the area of the ellipsis; which results from this property, that such a line sweeps areas that are proportional to the times. Many solutions have been given of this problem, some direct and geometrical, others not : *viz.* by Kepler, who first proposed it; Bulliald, Ward, Newton, Keill, Ma-chin, &c. See Newton's Principia, lib. 1, prop. 31 ; Keill's Astronomy Lect. 23 ; Philosophical Transactions, abr. vol. viii. p. 73, &c.

KEPPEL (Augustus), lord viscount Keppel, a celebrated British admiral, the second son of William earl of Albemarle. He accompanied Anson in his famous voyage round the world, and afterwards rose to the highest naval honors. In 1778 he commanded the channel fleet, and had Sir Hugh Palliser for his second. In the engagement between the British and French fleets, little was done, and the two admirals in consequence attacked each other. See ENGLAND. Admiral Keppel was acquitted, and in 1782 was created a peer, and was twice first lord of the Admiralty. He died in 1786.

KEPPEL BAY, a bay on the east coast of New Holland, found by captain Flinders to communicate with Port Curtis. It was discovered and named by captain Cook, in 1770. A ship going in will be deceived by the color of the water ; for, the shores of the bay being soft and muddy, the water running out by the deep channels with the latter part of the ebb is thick; whilst the shallows over which the tide does not flow are covered with clear water. The deep water is therefore in the muddy channels.

KERAH, or HAWEF.ZA, or, as called by the Turks, Karasu, a river of Persia, formed by the junction of several streams, of the province of Ardelan, in Koordistan. It runs through the plain of Kermanshaw, where it receives the Kazawur and the Gamasu, by which, being greatly increased, it flows with a violent course

through Chusistan; passes on the west of the ruins of Shus to the city of Haweeza, and enters the Shut-el-Arab about twenty miles below Korna.

KER'CHIEF, n. s. \ Coverchicf.— C!iaucer.

KER'CUIEFED, adj. > French couvre to cover,

KER'CHIEFT, adj.) and chef the head : and

hence a handkerchief to wipe the face or hands ;

a head-dress of a woman ; any loose cloth used

in dress : dressed ; hooded.

Hire gilded heres with a golden threde I bounden were, untressed as she laie : And naked from the brest unto the hede, Men might her se ; and sothly for to sale, The remenaunt covered well to my paie, Right with a lityl kerchefe of Valence ; There n'as no thicker clothe of no defence.

Chaucer. The Assemble of Fmilet. I see how thine eye would emulate the diamond ; thou hast the right arched bent of the bow, that becomes the ship-tire, the tire-valiant. — A plain kerchief, Sir John ; my brows become nothing else.

Shakspeare. Merry Wives of Windsor.

0 ! what a time have you chose out, brave Caius,

To wear a kerchief. Id. Julius Casar.

Every man had a large kerchief folded about the neck. Hayward.

The evening comes, Kerchiefed in a comely cloud, While racking winds are piping loud. Milton. The proudest herehief of the court shall rest Well satisfied of what they love the best. Dryden.

While the fair populace of crowding beauties, Plebeian as Patrician cheered us on With dazzling smiles, and wishes audible And waving kerchiefs, and applauding hands Even to the goal ! — Byron. Two Foscari.

KERF, n. s. Sax. ceojipan; Goth, kerfa ; Swed. karfwa. To cut.

The sawn-away slit between two pieces of stuff is called a kerf. Moxon's Mechanical Exercises.

KERBELA, anciently Vologesia, a populous town of Irak Arabi, near the western bank of the Euphrates, with which it is connected by a magnificent canal. Its chief celebrity is derived from Hossein, the son of AH by Fatima, the daughter of the prophet who was slain near this place ; and from whom it is sometimes called Mesched Hossein. Since his time it has become the resort of numerous pilgrims of the sect of Ali, particularly from Persia. The environs contain extensive plantations of palm trees ; and the walls are upwards of two miles in circumference. The town has five gates, a well supplied bazaar, and seven caravanseras, Nadir Shah embellished the tomb of Hossein with a gilded cupola, which forms a conspicuous object, fifty miles S. S. W. of Bagdad.

ivERCKRING (Theodore), a famous physician of the seventeenth century, born at Amsterdam. He found out the secret of softening amber without depriving it of its transparency; and made use of it in covering the bodies of curious insects to preserve them. He was a member of the Royal Society of London, and died in 1693 in Hamburg, where he had spent the greatest part of his life, with the title of resident of the srand duke of Tuscany. His principal works are, 1. Spicilegium Anatomicum. 2. ,Ant.hropo;ienire Ichono<;raphiu. There is also

attributed to him an anatomical work, printed in 1671 in folio.

KERCOLANG, or KARKALANG, an island of Asia, in the Indian Ocean, between eighty and 100 miles in circumference, and, in general, of a good height. The face of the country seems to be steep hills and extensive valleys, and every part to be covered with trees and verdure, with some pleasant cultivated grounds. The houses stand on posts, and are well built, and thatched. The fishing hooks and lines are mostly European ; and the inhabitants Mahommedans. Their clothing, in general, is made of a coarse kind of calico, though some wear silk, and most of them have a kind of turban round the head. A few are seen with a Chinese pointed hat. They are a mild and quiet people; and put great confidence in strangers. The Dutch had formerly a fort here ; but about the year 1773 the inhabitants of Magindano exercised a jurisdiction over the island, and exacted a tribute, which was usually paid in slaves. It lies between 4° and 5° of N. lat., and about 126° 30' E. lon».

KERGUELEN'S LAND, in the South Pacific Ocean, was visited by captain Cook, in 1779. From its sterility, it might properly have bten called the Island of Desolation. Mr. Anderson, who accompanied captain Cook in this voyage, says, that no place hitherto discovered in either hemisphere affords so scanty a field for the naturalist as this spot. Some verdure indeed appeared when at a small distance from the shore, which might nise the expectation of meeting with a little herbage ; but all this lively appearance was occasioned by one small plant resembling saxifrage, which grew upon the hills in large spreading tufts, on a kind of rotten turf, which, if dried, might serve for fuel, and was the only thing seen here that could possibly be applied to that purpose. Long. 69° 37' E., lat. 49° 3" S.

KERI (Francis Borgia), a Hungarian Jesuit, who published a History of the Emperors of the East, and a History of the Ottoman Emperors. He was also an astronomer, and made improvements on the telescope. He died in

KERI-CHETIB, in philology, the name given to various readings in the Hebrew Bible: keri signifies that which is read ; and chetib that which is written. For, where any such various readings occur, the wrong reading is written in the text, and that is called the chetib ; and the true reading is written in the margin, with p under it, and called the keri. It is generally said by the Jewish writers, that these corrections were introduced by Ezra ; but it is most probable, that they had their original from the mistakes of the transcribers after the time of Ezra, and the observations and corrections of the Masorites. Those Keri-chetibs which are in the sacred books written by Ezra himself, or which were taken into the canon after his time, could not. have been noticed by Ezra himself; and this affords a presumption that the others are of late date. These words amount to altout 1000; and Dr. Kennicott, in his Dissertatio Generalis, remarks, that all of them with the exception of fourteen are to be found in the text of MSS.

KERKOOK, the largest town in Lower Koordistan, Asiatic Turkey, is sitiated on an eminence, nearly perpendicular, and retains the appearance of a Roman fortress. The population is estimated at 18,000; but Mr. Kinneir does not think it can exceed 13,000; consisting of Armenians, Nestorians, Turks, and Curds. There are twelve mosques here ; but the streets are narrow and filthy, and the houses mean. The country around is hilly. Long. 43° 42’ E., lat. 35° 29’ N.

KERMES, in natural history, a roundish body of the size of a pea, of a brownish color, and containing a multitude of little distinct granules which when crushed yield a scarlet dye. Till lately it was believed to

be a vegetable excrescence, but it is now known to be the body of a specie* of Coccus, which see.

This insect hangs to the tree from which it is gathered by means of a cottony down, which, according to M. Chaptal, resembles the caout-chouc in many of its chemical characteristics. In Languedoc, about the middle of May, when this insect has attained to its proper size, the harvest commences, and the peasants begin to gather it. This harvest continues till about the middle of June, or later, but one heavy storm of rain puts an end to the gathering for that year. The persons employed in this business are women, who set out early in the morning, with a lantern and a glazed earthen pot, so as to pick off as many of the kermes as possible before day, which is the most favorable time for this business. A single person may gather from one to two pounds a day.

According as the winter has been more or less mild, the harvest of kermes is the more or less plentiful; and the people always presage themselves a fine season, when the spring has been free from frosts and fogs. It is observed, that the lowest and oldest shrubs are always the fullest of this insect ; and the kermes produced on those trees, which are in the neighbourhood of the sea, is always larger and finer than from the inland places.

It is no uncommon thing to have two harvests of kermes in the year. Those of the latter sea-son are smaller and less valuable than those of the first, and are found not on the branches, but on the leaves of the shrub ; which is just analogous to the custom of the gall-insects of all other kinds ; all which, about this age, leave the branches to feed on the leaves, where their yet tender trunks can find an easier entrance. See Coccus. When the kermes is dried there comes out of it an infinite number of small insects, and flies, so small that they are scarcely visible ; insomuch, that the whole inward substance seems converted into them. This shell is nothing but the body of the mother, distended by the growth of the eggs. To prevent this inconvenience, they usually steep the kermes in vinegar before it be dry ; and thus prevent the exclusion of the ova, and kill such animals as are already hatched. It is afterwards dried on linen cloths. This operation gives it a color like that of red wine. They draw the juice, or pulp, from the kermes, by pounding it in a mortar, and then •training it through a sieve : of this thev make a

syrup, by adding a sufficient quantity of sugar. Sometimes they dry

the pulp separate from the husk ; which pulp, thus dried, they call pastel of kermes. If the living insect be bruised, it gives out a red color.

Kermes is used in medicine also; and by it excellent effects may be produced. In kermes are united the exciting and evacuant virtues of the emetic preparations of antimony, with the tonic, aperitive, and resolving properties of the liver of sulphur. It is capable of answering two principal indications in the treatment of many acute and chronic diseases. Properly managed, it may become an emetic, a purgative, diuretic, sudorific, or an expectorant ; and it is always attenuating and resolving. When seven or eight grains are taken at once, it chiefly acts upon the primae viae, generally as an emetic and a purgative. A dose of three or four grains is seldom emetic, and more is frequently purgative. When administered in smaller doses it passes almost into the lacteal, blood, and lymphatic vessels. In these it increases all secretions and excretions, but particularly those of urine, sweat, and expectoration, according to the dose, the nature of the disease, and to the disposition of the patient. Kermes may be administered in linctuses, in oily or in cordial potions, in any vehicle ; or incorporated in a bolus, with other suitable remedies. Antiacid and absorbent substances ought to be joined with it, if the patient has an acescent disposition of the primse viae; for as these acids saturate the alkali, by which the kermes is rendered in antimoniated liver of sulphur, and by which alone it differs from what is commonly called golden sulphur of antimony, they accordingly render the kermes entirely similar to the golden sulphur of antimony, the properties of which are very different from those of kermes.

KERMES MINERAL, so called from its color, which resembles that of vegetable kermes, is one of the most important autimonial preparations, both with regard to its chemical phenomena and to its medicinal uses. The use of kermes mineral was not established in medicine before the beginning of this century. Some chemists, indeed, amongst others Glauber and Lemeri, had before that time mentioned in their works several preparations of antimony which approach more or less to kermes; but these preparations, being little known, were confounded with many others which are entirely neglected, although much praised by their authors. The fame of kermes was occasioned by friar Simon, apothecary to the Chartreux friars. He received this preparation from a surgeon called La Ligerie, who had procured it from a German apothecary, who had been a scholar of the famous Glauber. Friar Simon, from the commendations given to this new remedy by La. Ligerie, administered it to a Chartreux friar, who was dangerously ill of a violent peripneumony,

by which the friar was suddenly, and to all appearance miraculously cured. From that time the friar apothecary published the virtue of his remedy. Several other remarkable cures were performed by means of kermes. The public believed in its medicinal qualities, and called it powder of Chartreux ; because it

was prepared only in the apothecary's shop belonging to these monks. The reputation of kermes increased more and more, till at length the duke of Orleans, then regent of France, procured the publication of the process by La Ligerie. Cnizel gives the following process for obtaining a fine kermes, light, velvety, and of a deep purple-brown : One part of pulverised sulphuret of antimony, twenty-two and a half parts of crystallised subcarbonate of soda, and 200 parts of water, are to be boiled together in an iron pot. Filter the hot liquor into warm earthen pans, and allow them to cool very slowly. At the end of twenty-four hours the kermes is deposited. Throw it on a filter, wash it with water which had been boiled and then cooled out of contact with air. Dry the kermes at a temperature of 85°, and preserve in corked phials. Whatever may be the process employed, by boiling the liquor, after cooling and filtration, on new sulphuret of antimony, or upon that which was left in the former operation, this new liquid will deposit, on cooling, a new quantity of kermes. Besides the hydrosulphu-retted oxide of antimony, there is formed a sulphuretted hydrosulphuret of potash or soda. Consequently, the alkali seizes a portion of the sulphur from the antimonial sulphuret, water is decomposed, and whilst, a portion of its hydrogen unites to the alkaline sulphuret, its oxygen, and the other portion of its hydro'jen, combine with the sulphuretted antimony. It seems, that the resulting kermes remains d ssolved in the sulphuretted hydrosulphuret of potash or soda ; bvt, ˆs it is 'esff soluble in the cold than the hot, it is partially precipitated by refri eration. If we pour into the supernatant liquid, after the kennes is deposited and removed, any ac d, as the

dilute nitric, sulphuric, or muriatic, we decompose the sulphuretted hydrosulphuret of potash or soda. T*‘e alkaline base being laid hold of, the sulphuretted hydrogen and sulphur to which they were united are set at liberty; the sulphur and kermes fall together, combine with it, and form an orange-colored compound, called the eolden sulphuret of antimony. It is a Tiydrow’Mretted sulphuret of antimony. Hence, when it is digested with warm muriatic acid, a large residuum of sulphur is obtained, amounting sometimes to 12 per cent. Kermes is composed, by Thenard, of 20 3 sulphuretted hydrogen, 4-15 sulphur, 72-76 oxide of antimony, 279 water and loss; and the golden sulphuret consists of 17-87 sulphuretted hydrogen, 68-3 oxids of antimony, and twelve sulphur.

Ry evaporating the supernatant kermes liquid, and cooling, crystals form, which have been lately employed by the calico printer to give a topical orange. These crystals are d ˆsolved in water, and the solution, being thickened with paste or cum, is applied to cloth in the usual way, When the cloth is dried, it is passed through a dilute acid, when the orange precipitate is deposited and fixed on the vegetable fibres.

KERN, n. s. Irish cem-n, .contracted, says Mr. Thomson, from ceuthnrn ; Scot, caterane. Irish foot-soldier; an Irish boor.

These wizards welter in wealths waves,

Pampred in pleasures deepe ;

They han fat kernel and leany knaves.

Their fasting flockes to keepe.

Spenser. Shepheard’* Calender.

Out of the fry of these rake-hell horseboys, growing up in knavery and villainy, are their kea/rn supplied. Spenser.

Justice had with valour armed, Compelled these skipping kernes to trust their heels.

Sliadspeart.

If in good plight these northern kerns arrive, Then does fortune promise fair. Philips’! Briton.

KERN, n. s. A hand-mill consisting of two pieces of stone, by which corn is ground. It is written likewise quern, and still used in some parts of Scotland.

KERN, v. n. Teut. kernen. To harden, as ripened corn ; to take the form of grains.

When the price of corn falleth, men break DO more ground than will supply their own turn, where-through it falleth out that an ill kerned or saved harvest soon emptieth their old store. Carew.

The principal knack is in making the juice, when sufficiently boiled, to kern or granulate. Grew.

KER'NEL, n. s. &v. n. \ Saxon cyrinel, a KER'NELLY, adj. > gland; Fr. cerneuu ;

KER'NELWORT. j Belgic karne. The

edible substance contained in a shell ; anything included in a husk ; . the seed of fruits ; the central part of any thing which is covered with concretions; glandular tumors. Kernel, to ripen to kernels. Kernelly, full of kernels. Kernel-wort, an herb.

The sunne ysurmounteth the mone, That troublen is, and chaungeth sone, — And the nutte kemeill dothe the shell,— (I skorne nat that I you it tell. —)

Chaucer. Romaunt of the Rrse. I think he will carry this island home in his pocket, and give it his son for an apple. — And, sowing the kernels of it in the sea, bring forth more islands.

Shakspeare. Tempest. As brown in hue As hazel nuts, and sweeter than the kerneli.

Shakspeart.

There can be no kernel in this light nut ; the soul of this man is his clothes. Id.

The apple inclosed in wax was as fresh as at the first putting in, and the kernels continued white.

Bacon's Natural Hittaty, The kernel of a grape, the fig's small grain, Can clothe a mountain, and o'ershade a plain.

DeiJiatn.

The kernel of the nut serves them for bread and meat, and the shells for cups. Mare.

In Staffordshire, garden-rouncivals sown in -.the fields kernel well, ana yield a good increase.

Mortimer's Husbandry.

Oats are ripe when the straw turns yellow and the kernel hard. Id.

A solid body in the bladder, makes the kernel of a stone. Arbutlinot

KERRERA, an island of Scotland, in Argyleshire, in the Sound of Mull, near the main land of Mid Lorn, and included in the parish of Kilbride. In this island king Alexander II., being upon an expedition against ttoe Danes, died of a fever on the 8th of July 1249. His ships were anchored in the Greater Horse-Shoe Bay, whilst he, for the benefit of his health, was on shore, and his pavilion was erected on Dalree (i. e. the king's plain), by that natural harbour, whence his body was carried to the abbey of Mdrose

KERRY, a county or sliire in the province of Munster, and kingdom of Ireland. It is bounded on the west by the Atlantic Ocean ; on the east by parts of Cork and Limerick ; on the north by the Shannon ; and on the south by part of Cork and by the ocean. Its greatest length is about sixty-seven miles, and its maximum breadth about sixty-two: containing, according to Dr. Beaufort, 1,040,487 statute acres, or 1639 square miles. If Dr. Beaufort's returns of population and of houses be correct, both appear to have been doubled in thirty-five years.

Kerry is divided into eight baronies, Clan-maurice, Corkaguinny, Dunkerron, Glanerought, Iraghticonnor, Iveragh, Magunihy, and Truagh-nacmy, which are subdivided into eighty-three parishes, all of them being in the ancient dioceses of Ardfert, and Aghadoe,which have been annexed to the see of Limerick since the year 1663. Kerry comprehends a great part of the ancient Desmonia, and gives title of

earl to the noble family of Petty. Many schools for the education of the peasantry are established here, and upwards of 15,000 children are daily receiving the benefits of a very sound and substantial system of instruction. This is effected almost entirely by pay-schools, or, at all events, by domestic support, the bounty of strangers being rejected except in a very few cases.

The northern part of this county, lying towards the Shannon, is comparatively low, having a fall or inclination towards the river Gale or Cashen : it is new in a very unprofitable condition, although well adapted for conversion into a good tillage country. The central district is an upland country, rising gradually into the boundary between Limerick and Cork, the upper stratum of which is an indurated clay-shiver, covering thin beds of culm, which, in the eastern extremity of the range, are found alternating with a good coal blende, similar to that of Kilkenny. This field is flanked by extensive beds of secondary limestone. The vales of the central district consist of an extensive and improvable bog, having a drainage southward towards Dingle Bay, and eastward by the Blackwater, towards Cork. The southern district is formed of an extensive and lofty mountain chain, commencing on the eastern side of Dingle Bay, and continuing, with little interruption, along the south side of the lakes of Killarney, and of the river Blackwater, as far as the county of Waterford. The vales between these hills are generally extensive bog fields, capable of reclamation, and peculiarly well situated for exportation of this produce, though they now lie totally waste. The prevailing and component rock of this mountain range is clay slate, the strata of which are so highly inclined, that they are easily decomposable by the weather ; and this decomposition forms an adhesive loam •well suited to the reception of grain crops. This clay slate has also been quarried for roofing in some places : but the convenience of export has hitherto confined the workings to Cahir, Begnish, and Valentia.

The culm and stone coal of Kerry are yet but imperfectly explored, and the waste lands and bog, exceeding 200,000 acres, remain in the same unoccupied, unimproved, and deplorable con-

dition in which ihey were found by the bog commissioners in the year 1814. The barony of Glanerough is particularly oppressed by poverty, scarcely one plough existing within that whole district, for which spade labor is necessarily substituted. Besides the coal and culm already mentioned, copper is found in considerable quantities in the Kerry mountains, occurring chiefly in the limestone district. It occurs

on both sides of the river Kenmare, but on the south side is found in slate. On Ross Island, on the beautiful lake of Killarney, one of the richest mines of ruby copper ore in Ireland is now at full work : but this is also in the limestone region ; and another vein, not now worked, occurs in the same matrix, near to the picturesque ruin of Mucress Abbey, on the same lake.

The roads, or rather the want of them, have hitherto militated against the improvement of the Kerry peasants; but the patronage and assistance of government, as well as the exertions of the fishery board, have succeeded in opening the wildest districts of a very retired country, by lines of. road skilfully laid down and ably executed. A mail coach line is now completed from Limerick city by Listowel and Tralee to Dingle. Another line is finished from Limerick to Valentia, by Rathkeale, Abbyfeale, Castle-island, and Cahir : and a most necessary, as well as most romantic road (particularly distinguished for its workmanlike execution, and its systematic and durable conformation), connects the towns of Killarney and Kenmare, skirting the beautiful lakes of Killarney, which were hitherto concealed from all but navigators of their surface, and affording a sublime view of their picturesque scenery. How great are the benefits that in all likelihood will follow, from these improvements, may easily be imagined from the incalculable advantage already derived to the peasantry, whose only staple is live cattle or butter, the latter of which was formerly carried in panniers, on horseback, for distances exceeding fifty miles.

The rivers of this country do not afford any advantage U to inland navigation. TheKenmaie is navigable for some miles, but this may be called an arm of the sea. The other rivers are the Blackwater, the Feale, Gale, Cashin, Maing, Lea, Flesk, Laune, Carrin, Fartin, Inny, and Roughty. The Flesk falls into the Lower Lake of Killarney, the waters of which are discharged into the sea by the Laune. The principal towns are Tralee the assizes town, Dingle, Killarney, Nedeen or Kenmare, Castteisland, Lixnaw, Listowel, and Milltown.

The line of sea coast is very extensive and much indented : the chief islets and bays are those of Tralee, Brandon, Dingle, Valentia, Ballinaskell:gs, and Kenmare. The last, twenty miles in length, is capacious and safe, and X'alentia (a name given by the Spaniards) is one of the safest in Ireland. Here it is now proposed, by the American and Colonial Steam Navigation Company, to establish a packet station, and vessels to ply regulaily between tnis place and Nova Scotia. The coast, which is rather bold, is rendered dangerous by the great number of islands and rocks, above seventy, on two of the most conspicuous of which, the Skelligs, lighthouses

are now erected. In the limestone caves on the sea shore, near to Dingle, Kerry Head, and many other places, very beautiful crystals, clear and hard, are often found. These, called Kerry .stones and Irish diamonds, are deservedly esteemed by lapidaries. A few amethysts have also been detected, and some valuable pearls have been raised from the lakes and rivers of the county.

Cider was formerly made here in large quantities from the Cackigay apple, and obtained both a good price and estimation : but this traffic is now much neglected ; and another species of apple, equally valued, called the Kerry pippin, is now most difficult to be procured.

KERTSCH, KERTZ, or KJERCH, a fortress and seaport of European Russia, in the government of Taurida. It stands in a peninsula of this name, and has a good harbour, but is thinly peopled, containing, exclusive of the garrison, not more than 400 inhabitants, mostly Greeks. The fortress is of the greatest importance, as one of those commanding the passage which forms the communication between the Black Sea and the sea of Azoph. In the neighbourhood stood the ancient Panticapaeum, remarkable for the death of Mithridates. Kertsch was taken by the Russians in 1771. Its Russian name is Vospor. Sixty miles N.N. E. of Caffa, and 100 E. S. E. of Perekop.

KER’SEY, n. s. Fr. carisee ; Belg. karsaye, A coarse stuff.

Taffata phrases, silken terms precise,

I do forswear them ; and I here protest,

Henceforth my wooing mind shall be exprest

In russet yeas, and honest kersey noes.

Shakspeare.

His lackey, with a linen stock on one leg, and a kersey boot-hose on the other. Id.

The same wool one man felts into a hat, another weaves it into cloth, and another into kersey or serge.

Hale.

Thy /wrseiy doublet spreading wide, Drew Cicely's eye aside. Gay.

KEST. The preter tense of cast. It is still used in Scotland.

Only that noise heaven's rolling circles kest.

Fairfax.

KES'TREL. n. s. A little kind of bastard hawk.

His kestrel kind, A pleasing vein of glory, vain did find.

Faerie Queene.

Kites and kettreU have a resemblance with hawks.

Bacon,

KESTZHELY, a town of Hungary, in the palatinate of Sala, on the Platten see, with a castle. It is noted for an agricultural seminary, in which are taught mathematics, natural history, botany, economics, and mechanics. The inhabitants are supported partly by woollen manufactures, partly by the culture of vineyards. Here, in an extensive garden, provided with pomJs and ditches, are reared a number of land tortoise*;. Twenty-three miles south of Vasarhily. Inhabitants 9000.

KESSKL (John Van), an eminent painter, bom at Antwerp in 162G. He not only excelled in fru.ts and flowers, but was eminent for painting portraits. He resembled Velvet Breughel,

and nearly equalled him in birds, plants, anil flowers. The prodigious prices for which he sold his works occasioned the rich alone to be the purchasers; and the king of Spain admired his performances so much, that he purchased as many of them as he could procure, and at last prevailed on him to visit his court, where he was appointed painter to

the queen, and was retained in her service as long as she lived. He painted portraits admirably, with a light free touch, and a tone of color that very much resembled Vandyck ; nor are his works in that style considered in Spain as inferior to that great master. He died in 1708, aged eighty-two.

KESWICK, a town of Cumberland, with a market on Saturday ; seated in a vale surrounded by hills, near the rapid river Greeta. It was formerly famous for its copper mines, which rendered it a considerable place ; but it now consists only of one long street. Its chief trade is from the influx of travellers on visits to the lakes. The church stands nearly half a mile from the town, and is a beautiful object in the vale. A new market house was erected here a few years ago, which, viewed from any point, adds to the beauty of the scene. Here are a free-school and a Sunday school, and two museums, containing specimens of most of the minerals and other curiosities of Cumberland. It is twenty-five miles north-west by north of Kendal, and 291 N. N. W. of London.

KESWICK, VALE OF, a delightful spot in the south part of Cumberland, much visited by the admirers of nature. Here is the lake of Kes-wick, or, more properly, the Derwent-water. To the north of this romantic piece of water soars the lofty Skiddaw, one of the most distinguished mountains in England, the haunt of birds of prey. To the south is the dreary region of Borrowdale. The water of the Derwent is subject to violent agitations, and often without any apparent cause. It has one peculiar characteristic : namely, that it retains its form, viewed from any point, and never assumes the appearance of a rive. See DERWENT and CUMBER-LAND.

KESZDI VASARHELY, a handsome town of Transylvania, in the district of Haromsrek, separated from that of Kanta by a rivulet, and surrounded by mountains. One of them is decidedly volcanic, and yields tufa. Population 6500 : seventy-two miles E. N. E. of Hermanstadt.

KET (William), a tanner of Norfolk, who in the reign of Edward VI. instigated a revolt against the government. The populace were at first excited by the complaints against enclosures ; but finding their numbers increase, and amounting to 20,000 strong, they grew insolent, and proceeded to more exorbitant pretensions. They demanded the suppression of the gentry, the placing of new counsellors about the king, and the re-establishment of the popish religion. Ket assumed the government over them, and exercised his brief authority w.th the utmost arrogance. Having taken possessinnof

Moushold Hill, near Norwich, he erected his tribunal under the branches of an old spreading oak, thence denominated the Oak of Reformation, and summoning

.he gentry to appear before him, .ie gave such decrees as might be expected from his character and situation. At length the earl of Warwick was sent against the rebels and put them to flight. Ket being taken was hanged at Norwich Castle, and nine of his followers on as many boughs of the Oak of Reformation, and the insurrection was entirely suppressed in 1549.

KETCH, n. s. Ital. caicchio. A barrel; a heavy ship, as a bomb-ketch. Jack Ketch seems to derive his name from the Saxon ceocs, to choke or strangle.

I wonder

That such a ketch can with his very bulk Take up the rays o' the' beneficial sun, And keep it from the earth. Shakspeare.

KETCHES, in naval affairs, vessels with two masts, and usually from 100 to 250 tons burden, pincipally used as bomb-vessels. Bomb-ketches are built remarkably strong, as being fitted with a greater number of riders than any other vessel of war; and are furnished with all the apparatus necessary for a vigorous bombardment.

KETCHUP, in cookery, a most agreeable re-lish for fish, beef-steaks, &c., is manufactured from mushrooms, from cockles, and from walnuts. The first is generally most esteemed, but we shall present our readers with the methods of preparing each : —

Mushroom ketchup. — Take the largest broad mushrooms, break them in an earthen pan, strew salt over, and stir them now and then for

three days. Then let them stand till there is a thick skum over them ; strain and boil the liquor with Jamaica and black pepper, mace, ginger, a clove or two, and some mustard seed. When cold, bottle it and tie a bladder over the cork : in three months boil it again with fresh spice, and it will then keep for twelve months. Or ; take a stew pan full of large flap mushrooms, that are not worm eaten, and the skins and fringe of those you have pickled ; throw a handful of salt among them, and set them by a slow fire ; they will produce a great deal of liquor, which you must strain, and put to it four ounces of shalots, two cloves of garlick, a good deal of pepper, cloves, ginger, mace, and a few bay leaves. — Boil and skim very well. When cold, cork close. In two months boil it up again with a little fresh spice, and a stick of horse-radish, and it will keep the year ; which mushroom ketchup, if not boiled a second time, rarely does.

Cockle ketchup.— Open the cockles ; scald them in their own liquor ; add a little water when the liquor settles, if you have not enough ; strain through a cloth ; then season with every savory spice; and, if for brown sauce, add port, anchovies, and garlic : — if for white, omit these, and put a glass of sherry, lemon-juice, and peel mace, nutmeg, and white pepper. If for brown, burn a piece of sugar for coloring.

Walnut ketchup. — Boil or simmer a gallon of the expressed juice of walnuts, when they ire lender, and skim it well; then put in two pounds of anchovies, bones and liquor; ditto of shalots ; one ounce of cloves, ditto of mace, ditto of pepper, and one clove of garlick. Let all simmer till the shalots sink ; then put the liquor into a pan till cold ; bottle and divide the spice

to each; cork closely and tie a bladder over. It will keep twenty years, and is not good the first. Be very careful to express the juice at home; for it is»very rarely unadulterated if bought.

KETSKEMET, a large town of Hungary, the chief place of a district, and the residence of many families of rank. It has manufactures of soap and leather; but the chief property of the district consists in cattle and sheep. Both the Catholics ‘and Calvinists have churches and schools here. Forty-six miles N. N. W. of Szegedin, and fifty S. S. E. of Pest.

KETT (Henry), B. D., born at Norwich in 1761, was educated at the grammar-school, and entered as a commoner of Trinity College, Oxford, where he took his degree of M. A. in 1783. In 1790 he was

Bampton lecturer, and in 1795 took the degree of B. D. In 1798 he published History the Interpreter of Prophecy, which attracted notice. In 1802 appeared his Elements of General Knowledge, which, though severely criticised by some members of the university of Oxford, passed through nine editions. His other performances are of a trifling cast; a novel entitled Emily is the only one that bears an original character. After holding his fellowship many years, he married, and obtained the living of Charlton in Gloucestershire. He was found drowned at the seat of his friend Sir J. Gibbon, Stanwell, where he had been bathing, June 30th,

KETTERING, a town of Northamptonshire, pleasantly seated on an ascent, and surrounded by a great number of gentlemen's seats. The church has an embattled tower, with a very elegant spire sixty-three yards high. There are four fairs, and a market on Friday. Seventy-five miles N. W. from London.

KETTLE, n. s. y Sax. cetl ; Belgic ketel;

KET'TLEDRUM. \ Svved. and Teut. kettel. A vessel in which liquor is boiled : kettledrum, a drum of which the head is spread over a body of brass.

The fire thus formed, she sets the kettle on ; Like burnished gold the little seether shone. Dryden.

As he drains his draughts of Rhenish down, The kettledrum and trumpet thus bray out The triumph of his pledge. Shakspeare.

KETTLE is also a term given by the Dutch to a battery of mortars, because sunk under ground.

KETTLEDRUMS are formed of two large basins of copper or brass, rounded at the bottom, and covered over with vellum or goat-skin, which is kept fast by a circle of iron, with several holes in it, fastened to the body of the drum, and a like number of screws to screw up and down. The two basins are kept fast together by two straps of leather, which go through two rings, and are fastened the one before and the other behind the pommel of the kettledrum's saddle.

KETTLEWELL (John), a learned divine, born in 1653, was descended from an ancient family in the North Riding of Yorkshire, and elected fellow of Lincoln College, Oxford. In 1675 he entered into orders; but, refusing to take the oaths to king William and queen Man', was deprived of his living. He published several works which were collected and reprinted

together in 1718, in 2 vols folio. He died of a consumption in 1695.

KEv ELS, in ship-building, a frame composed of two pieces of timber, whose lower ends rest in a sort of step or foot, nailed to the ship's side, whence the upper ends branch outward into arms or horns, serving to belay the great ropes by winch the bottoms of the main-sail and foresail are extended.

KEW, a village of Surry, on the banks of the Thames, over which is a handsome stone bridge of seven arches to Brentford, seven miles west by south of London. It was formerly a hamlet to Kingston; but in 1769 an act of p;wliament was passed, forming Kew and Pe-tersham into one vicarage. Kew House, a royal palace, is celebrated for its fine gardens, and his majesty's exotic garden. This last has been brought to great perfection by the introduction of numbers of new plants from Africa, New South \Vales, and various parts of the world, and is known throughout all Europe. Kew gardens are open to the public every Monday, from Midsummer to the end of autumn.

KEY, n.s. Sax. ccej. An instrument by which the bolt of a lock is pushed forward or backward.

And lie had the gode kcping be [been kept] Whilom ot the universitee, That kepeth the kei of Cristendome, We had been tourmentc-d all and some. Chaucer.

If a man were porter of hell-gate, he should have old turning the key. Shakspeare.

The glorious standard last to heaven they spread, With Peti r's keys ennobled, and his crovra.

Fairfax*

Yet some there be, that by due steps aspire To lay their just hands on that golden key, That opes the palace of eternity. Milton.

He came, and knocking thrice without delay,. The longing lady heard, and turned the key.

Dryden.

Conscience is its own counsellor, the sole master of its own secrets ; and it is the privilege of our nature that every man should keep the key of his own breast.

South.

The warder at the door his key applies, Shoots back the bolt, and all his coinage dies.

Cowper.

An instrument by which something ii screwed *r tur ed.

Hide the key of the jack. Swift.

An explanation of any thing difficult.

An emblem without a key to it is no more than a ta.f of a tub. L'Ettrunge.

Fh< se notions in the writings of th>- ancients darkly delivered, receive a clrarer light when comparer! witi this theory, which represi nts every thing plainly, and is a hey to their thoughts. Burnet.

These who are accustomed to reason have got the true key of books. Liicke.

The parts of a musical instrument which are struck with the fingers.

Pamela loves to handle the spinnet, and touch the keys. Pamela.

KEY, in music, a certain tone to which every composition, whether long or short, ought to he fitted : and this key is said to be either flat or shaip, not in respect of its own nature, but \it'>

relation to the flat or sharp third, which is joined with it.

Te Deum amoris, sang the thrusted cocke

Tubal himself the first musician,

With key of armony coude not unlocke

So swete a tewne, as that the thrustel can

' The lorde of Love we praisen ; ' quod he than

' And so done al the foules gret and lite ;

Honour we may, in fals lovers despite.

Chaucer. The Court of Love. Hippolita, I wooed thee with my sword,

And won thy love doing thee injuries ;

But I will wed thee in another ke\i,

With pomp, with triumph, and with revelling.

Sliaktpeare.

But speak you with a sad brow ; or do you play the flouting Jack ? Come in what key shall a man take you to go in the song ? Id.

Not know my voice ! Oh, time's extremity ! Hast thou so cracked and splitted my poor tongue In seven short years, that here my only son Knows not my feeble key of untuned cares ? Id.

Fr. quai ; Dut. kaye. A bank raised perpendicular for the ease of lading and unlading ships.

A key of fire ran along the shore, And lightened all the river with a blaze.

Dryden.

Key cold was a proverbial expression, now out of use.

Poor hey cold figure of a holy king ! Pale ashes of the house of Lancaster.

Shakspeare.

KEY. See LOCK. L. Molinus has a treatise of keys, de Clavibus Veterum, printed at Upsal, wherein he says, that the use of keys is yet unknown in some parts of Sweden. The invention of keys is ascribed to Theodore of Sarnos, according to Pliny and Polydore Virgil ; but this must be a mistake, the use of keys having betm known before the siege of Troy; mention even seems to be made of them in Gen. xix. 10. ;\lo-linus is of opinion, that keys at first only served for the untying certain knots, wherewith tljey anciently secured their doors ; but the Laconic keys, he maintains, were nearly akin in use to our own; they consisted of three single teeth, and made the figure of an E ; of which form there are still some to be seen in the cabinets of the curious. There was another key called tiaXavaypa, made in the manner of a male screw ; which had its corresponding female in a bolt affixed to

the door. Key is hence become a general name for several things serving to shut up or close others. See LOCK.

This word is also used for ecclesiastical jurisdiction ; particularly for the power of excommunicating and absolving. The Romanists say the pope has the power of the keys, and can open and shut Paradise as he pleases : ground-ing their opinion on that expression of our Lord to Peter, ‘ I will give thee the keys of the kingdom of heaven.’ In St. Gregory we read, that it was the custom of the popes to send a golden key to princes, wherein they enclosed a little of the filings of St. Peter’s chains, kept with great devotion at Rome ; and that these keys were worn in the bosom, as being supposed to contain some wonderful virtues.

KEY is used for an index of a cipher. See CIPHER.

KEY in music, is the fundamental note or tone, to which the whole piece in cantata, sonata, concerto, &c., is accommodated, and with which it usually begins, but always ends. KEY, or QUAY. See QUAY. KEYS’ ISLANDS, three islands in the Eastern Seas, lying N. N. E. of Timour Laut and near the coast of New Guinea. They are called Key \Vatelas, Little and Great Key; the last being said to be fifty miles in length, and from seven to twelve broad, but little is known of any of them.

KEYS OF AN ORGAN, HARPSICHORD, &c., those little pieces in the fore part of those instruments, by means whereof the jacks play, so as to strike the strings. In large organs there are several sets of keys, some to play the secondary organ, some for the main body, some for the trumpet, and some for the echoing trumpet, &c. ; in some there are but a part that play, and the rest are only for ornament. See ORGAN, &c. KEY’AGE, n. s. ˆ Money paid for lying at KEY’HOLE, n. s.

>the key or quay. Key-KEY'STONE, n. s. j hole, the perforation in the lock through which the key is put. Keystone, the middle stone of an arch.

Make doors fast upon a woman's wit, and it wUl out at the casement ; shut that and it will out at the keyhole. Shakspeare.

I keep her in one room ; I lock it The key, look here, is in this pocket; The keyhole is that left] Most certain.

Prior.

If you will add a keystone and chaptrels to the arch , let the breadth of the upper part of the keystone be the height of the arch. Moxon.

I looked at the keyhole, and saw a well-made man.

Taller.

Shylock and the Moor

And Pierre, cannot be swept or worn away — The Keystones of the arch !

Byron. Childe Harold.

The KEYSTONE OF AN ARCH OR VAULT is the last stone placed at top ; which, being wider and fuller at the top than bottom, wedges and binds all the rest. The key is different in the different orders ; in the Tuscan and Doric it is a plain stone, only projecting ; in the Ionic it is cut and waved somewhat after the manner of consoles ; in the Corinthian and Composite it is a console enriched with sculpture, foliages, &c.

KEYSLER (John George). F. R. S.,a learned German antiquary, born at Thourneau in 1689. After studying at the university of Halle, he was appointed preceptor to Charles Maximilian and Christian Charles, the counts of Giech; with whom he travelled through Germany, France, «md the Netherlands, and gained great reputation among the learned, by illustrating several monuments of antiquity, particularly some fragments of Celtic idols discovered in the cathedral of Paris. In 1716 he was employed to superintend the education of two grandsons of baron Bernstorff, first minister of king George I., as elector of Brunswick Lunenberg. However, obtaining leave, in 17'8, to visit England, he was elected F. R. S. for a learned essay De Dea Nehelennia numine vtterum Walacho-rum topico. He also wrote on Stouehenge,

and on the Consecrated]\3is!etoe of the Druids.

These detached essays, with others, he published on his return to Hanover, under the title of An-tiquitates selectae Septentrionales et Celtics, &c. He afterwards made the grand tour with the young barons, to which we owe the publication of his Travels ; which were translated into English, and published in 1756, in 4 vols. 4to. Mr. Keysler on his return spent the remainder of his life under the patronage of his noble pupils, who committed their fine library and museum to his care, with a handsome income. He died in 1743.

KHALIF, KALIPH, or CALIPH. Arab, khalifah, *i.e.* a-successor or heir: successor of Mahomet in the spiritual as well as temporal empire erected by that legislator. After the death of Mahomet, Abubeker having been elected by the Mussulmans to supply this place, he would take no other title but that of khalifah resoul allah, *i.e.* vicar of the prophet, or messenger of God. Omar, who succeeded Abubeker, preferred the title of emir moumenin, i. e. prince of the believers : but his successors resumed that of khalif, which thus came to signify the supreme ecclesiastical dignity among the Saracens ; or sovereign among the Mahommedans, vested with absolute authority in all matters relating both to religion and policy. It is still one of the grand seignior's titles, as successor of Mahomet. One of the chief functions of the khalif, in quality of imam, or chief priest of Mussulmanism, was to begin the public prayers every Friday in the chief mosque, and to deliver the khothbak, or sermon. In after times they had assistants for this latter office; but the khalifs always performed in person. The khalif was also obliged to lead the pilgrims to Mecca in person, and to march at the head of the armies of his empire. He granted investiture to princes; and sent swords, standards, gowns, and the like, as presents to princes of the Mahommedan religion ; who, though they had thrown off the yoke of the caliphate, nevertheless held of it as vassals. The khalifs usually went to the mosque mounted on mules; and the Seljukide sultans, though masters of Bagdad, held their stirrups, and led their mule by the bridle some distance on foot, till such time as the khalifs gave them the sign to mount on horseback. At one of the windows of the khalifs palace there always hung a piece of black velvet, twenty cubits long, which reached to the ground, and was called the khalif's sleeve; which the grandees of his court never failed to kiss with great respect every day. After the destruction of the caliphate, by Hulaku, the Mahommedan princes appointed a particular officer, in their respective dominions, who sustains the sacred authority of khalif. In Turkey he goes under the denomination of mufti, and in Persia under that of sadne. After the death of Mahomet

(see ARABIA and MAHOMET), the succession of khalifs continued in Arabia and Bag-dad till the 655th year of the Hegira, when Bagdad was taken by the Tartars. See BAGDAD, EGYPT, and SARACENS. After this, .however,, there were persons who claimed the khalipliate, as pretending to be of the family of the Abas-sides, and to whom the sultans of Egypt rendered great honors at Cairo, as the *rue successors of Mahomet ; aut this honor was

merely titular, and the rights allowed them only ia matters relating to religion; and though they oore the sovereign title of khalifs, they were nevertheless subjects and dependents of the sultans. In the year of the Hegira 361 a kind of caliphate was erected by the Fatemites in Africa, and lasted till it was suppressed by Saladin. Historians also speak of a third caliphate in Gemen or Arabia Felix, erected by some princes of the family of the Jobites. The emperors of Morocco assume the title of grand cherifs ; and pretend to be the true khalifs, or successors of Mahomet, though under another title.

KHAN, or CHAM, the title given to the princes of Tartary. The word in Persian signifies mighty lord; in the Sclavonic, emperor. Sperlingius, in his Dissertation on the Danish term of majesty, koning, king, thinks the Tartarian cham may be derived from it; adding, that in the north they say kan, konnen, konge, konning, &c. The term is also applied among the Persians to the great lords of the court, and the governors of provinces.

KHANDESH, a Mahratta province of Hindostan, situated between 21° and 23° of N. lat. On the north it is bounded by Malwah, on the west by Gujerat, on the south by Aurun-gabad, and on the east by Berar. It was long in possession of the Afghauns, when the capital was Asseer

or Hasseer, but was conquered by the emperor Akbar in the sixteenth century. It is remarkably strong in fortresses. Within one day's march nearly twenty are to be seen ; and it is intersected by the Narbudda and Tapty rivers. The greater portion of it belongs to the descendants of Holkar; the remainder to the peshwa and Sindia; but many of the strong places are in possession of refractory chiefs. The inhabitants are chiefly Hindoos. Cotton cloths called baftahs were formerly manufactured here., The chief towns are Boorhampore, Hindia, and Hasser.

KHERASKOF (Michael), an eminent Russian poet of the eighteenth century, who published a poem On the Use of Science ; and an epic poem called the Russiada, the subject of which is the conquest of Casan by John Basiliowitz II. He was appointed vice-president of the College of Mines, curator of the university of Moscow, and a counsellor of state.

KHILKOF, PRINCE, a Russian nobleman, who was ambassador to Charles XII. ; and when the war broke out between Sweden and Russia, was, contrary to the law of nations, thrown into prison by that prince. During his confinement he wrote an Abridgment of the Russian History. He died after a captivity of eighteen years. His work was published by Mr. Muller in 1770, in 8vo.

KHOEE, a large and handsome town of Per-sia, in the province of Aderbijan, on the lake Ureemea. It is a principal channel of the trade with Turkey : the walls are in good condition ; the streets regular and well-built, and adorned with avenues of trees. Population about 25,000. In the neighbourhood a battle was fought in 1514 between the sultan Selim I. and Shah Ismael, in which 30,000 Persians engaged 300,000 Turks.

KHOJUND, a populous city of Bukharia, subject to Koukan, or the khan of the Tartar tribe of Mengh. It is said to be larger than Samarcand. The Sirr, or Sihon (anciently the Jaxartes), flows under its walls, but is no where fordable ; nor are boats or any bridge employed in passing it ; the inhabitants being merely conveyed over in floats of reeds.

KHORASSAN, a considerable province of Persia, having Irak and Mazanderan to the west, Seistan to the south, Bukharia and Balk to the north and east. Though nominally included in Persia, it partakes largely both of the natural and political character of the bordering

regions of Tartary ; and the south part belongs in fact to the Afghauns. It is in general a level country, though intersected by lofty and irregular ranges of mountains; some part of it also consists of sandy deserts. But the soil is fertile when cultivated, and yields corn, wine, rice, oil, and silk, in abundance. According to the elevation, the climate is sometimes extremely cold ; and it is subject to a pestilential wind, called the bad semum, which is observed to blow for forty days in the year.

KHYRABAD, or KAIRABAD, a district of the province of Oude, Hindostan, situated principally between 27° and 28° of N. lat : it is bounded on the west by the Ganges, and on the east by the Gogra; and is fertile and well watered, producing sugar, and all the grains of India. It is intersected by the Goomty River ; and its chief towns are Khyrabad, Shahabad, and Mahommedy.

KIAKHTA, a town of Asiatic Russia, in the government of Irkoutsk, and district of Verschnei Oudinsk. It has of late become the emporium of the commerce between Russia and China ; the latter allowing trade only at one point of each of its frontiers. Kiakhta was, in 1728, fixed upon by treaty as the medium of the communication. To the great fair, held in December, merchants flock from every part of the Russian empire, and bring cloths, beavers, furs, Russia and morocco leather, receiving in exchange tea, nankeens, silk stuffs, rhubarb, &c. Kiakhta is situated in a plain, traversed by a river of this name, and surrounded by high granitic and wooded mountains, on the most elevated of which is a fort. On another mountain are seen the boundaries of the two empires. The Russian boundary being a hillock, with a cross at the top, while the Chinese have a kind of cone or pyramid. The Chinese town close by is called Naimatschin. 330 miles south of Irkoutsk.

KIANG NAN, a province of China, and one of the most fertile, commercial, and opulent, in the empire. It is bounded on the west by Ho-nan and Hou-quang ; south by Tchekiang and Kiang-si; east by the gulf of Nanking; and north by Chan-tong. The emperors long kept their court in this province, till reasons of state obliged them to move nearer Tartary, and reside in Pekin. This province contains fourteen cities of the first class, and ninety-three of the second and third. They are all of them places of considerable trade. Large barks can go to them from all parts ; the whole country being intersected by lakes, rivers, and canals, communi-

eating with uie Yang-tse-kiang, which runs through the middle of the province. Silk stuffs, lacquer-ware, ink, paper, and every thing that comes from Nanking, as well as from the other cities of the province, are much more esteemed, and fetch a higher price than those brought from the neighbouring provinces. In the Chang-hai, and the villages dependent on it, there are said to be above 200,000 weavers of cotton cloths. In several places on the sea-coast are many salt-pits, the produce of which is distributed all over the empire. This province is divided into two parts, each of which has a distinct governor. The governor of the east part resides at Sou-tcheou, that of the west at Ngan-king. Each of them has under his jurisdiction seven cities of the first class. The official account of the population given to Sir George Staunton stated it to amount to 32,000,000.

KIANG-SI, a province of China, bounded on the north by that of Kiang-nan, west by Hou-quang, south by Quangtong, and east by Fo-kien and Tchekiang. The country is extremely fertile, but so populous, that it can scarcely sup-ply the wants of its inhabitants. They are people of great acuteness, and often rise to the highest dignities of the state. The mountains are covered with verdure, and contain mines of gold, silver, lead, iron, and tin. The rice produced here is very delicate, and several barks are loaded with it every year for the court. The porcelain is the most valuable in the empire. This province contains thirteen cities of the first class, and seventy-eight of the second and third.

KIAYAS, in Turkish polity, commanding officers of the janissaries, Arabs, &c., who, after the first year, lay down their employments, become veterans, and have a voice in the divan.

KIBBAN, or Madan, a considerable town of Koordistan, at the foot of a high mountain, and surrounded by narrow and deep defiles. The neighbourhood abounds with mines of copper and iron. It lies about a mile and a half from the Euphrates, and eighty miles west of

Diarbekir.'

KIBE, n. s.) From Germ, kerb, a cut —

KIBED', a</;. S Skinner; from Welsh kibwe — Minsheu. An ulcerated chilblain; a chap in the heel caused by the cold. Kibed, troubled with chilblains.

If 'twere a kibf, 'twould put me to my slipper.

Shakspeare.

The toe of the peasant comes so near the heel of our courtier, that it galls his kibe. Id.

One boasted of the cure, calling them a few kibes.

Witeman.

KIBITKA, the name of a Russian travelling carriage, which contains two persons. In shape it resembles a cart of about five feet in length, the hinder half being covered with a semicircular tilt like a waggon, made of laths, interwoven with bark. The Russians, when travelling, place a feather bed at the bottom of the kibitka, and having thus rendered bearable the jolts and concussions occasioned by the uneven timber -oads, comfortably doze away the journey.

KICK, v. a., r.'n., & n.s. J Teut. kauchen ;

KICK'ER,??. x. $ Lat. calcare. To

strike with the foot ; TO beat the foot in anger or

contempt : a blow with the foot. Kicker, one who strikes with his foot.

Jeshurun waxed fat and kicked. Deut. xxxii. 15. Wherefore hick ye at my sacrifice, which I have commanded » 1 Sam. ii. 29.

For, trewely, ther n'is non of us all, If any wight well claw us on the gall, That we n'il kike for that he saith us soth, Assay, and he shall find it that so doth.

Chaucer. The Wife of Bathe* Tale. The doctrines of the holy Scriptures are terrible enemies to wicked men, and this is that which makes them kick against religion, and spurn at the doctrines of that holy book.

THlotson.

What, are you dumb 1 Quick, with your answer,

quick, Before my foot salutes you with a kick.

Drifden's Juvenal.

He must endure and digest all affronts, adore the foot that kicks him, and kiss the hand that strikes him. South.

It angered Turenne once upon a day, To see a footman kicked that took his pay.

Pope.

Another, whose son haa employments at court, valued not, now and then, a kicking or a caning.

Swift.

KICK'SHAW, n. *. This word is supposed to be only a corruption of quclque chose, something : yet Milton seems to have understood it otherwise ; for he writes it kickshoe, as if he thought it used in contempt of dancing. — Johnson. But there is a Belgic kyckshouw, a trifle, from which it may directly come. Something uncommon, fantastical, or ridiculous ; a dish so changed by the cookery that it can scarcely be known.

Some pigeons, a joint of mutton, and any prettj little tiny kickshaws. Sliakspeare. Henry IV.

Shall we need the monsieurs of Paris to take oui youth into their slight custodies, and send them ovei hack again transformed into mimicks, apes, and kickshoes 1 Milton.

In wit, as well as war, they give us vigour ;

Cressy was lost by hickshtiu-s and soup-meagre.

KICK'SY-WICKSEY, n. s. From kick and wince. A made word, in ridicule and disdain ot a wife.

He wears his honour in a box, unseen, That hugs his kicksy-wicksey here at home, Spending his manly marrow in her arms.

Shaksptart.

KID, n.s. fcr.a. Dan. kid; Welsh cidwlen. The young of a goat ; a bundle of heath : to bring forth kids.

Therto, she coude skip, and make a game, As any hid or calf folowmg his dame.

Chaucer. The Millerts Tale. Next came fresh April], full of lustyhed. And wanton as a kid, whose home new buds ;

Upon a Bull he rode, the same which led Europa floting through the' Argolick fluds.

Spenser's Faerie Qtieeiif.

There was a herd of goats with their young ones, upon which sight Sir Richard Graham tells, he would snap one of the kids, and carry him close to their lodging. Wotton.

Sporting the lion ramped, and in his paw Dandled the kid. Hilton.

So kids and whelps their sires and dams express ; And so the great T measured by the less. Drydrn.

\Vhile bright the dewy grass with moon-beams

shone,

And I stood hurdling in my kids alone, How often have I said (bat thou had'st found Ere then thy dark cold lodgment under ground) Now uamon sings, or springes set for hares, Or wicker-work for various use prepares.

Cowper. Death of Danum.

KID'DER, n. s. Teut. kuutenˆ to chaffer. An engrosser of corn to enhance its price.

KIDDERS, in law, are those that carry corn, dead victuals, or other merchandise, up and down to sell : every person being a common badger, kidder, lader, or carrier, &c., says the stat. 5 Eliz. cap. 12. They are called kidders, 13 Eiiz. cap. 25.

KIDDER (Dr. Richard), a learned English bishop, born in Sussex, and educated at Cambridge. In 1689 he was installed dean of Peterborough; and, in 1691, was nominated bishop of Bath and Wells, in the room of Dr. Thomas Ken. He published, I. The Young Man's Duty; 2. A Demonstration of the Messiah, 3 vols. 8vo. ; 3. A Commentary on the Five Books of Moses, 2 vols. 8vo. ; and several other valuable tracts. He was killed in his bed, together with his lady, by the fall of a stack of chimneys, in his palace at Wells, during the great storm in 1703. The bishop, in the dissertation prefixed to his commentary on the five books of Moses, having reflected upon Monsieur Le Clerc, some letters passed between them in Latin, which were published by Le Clerc, in his Bibliotheque Choisie.

KIDDERMINSTER, or KEDDERMINSTER, a market town and parish of Worcestershire, seated under a hill on the Stour, near the Severn, 128 miles from London. It contains about 2000 houses, and 1 1 ,000 inhabitants, who carry on an extensive trade in the various branches of weaving. In 1735 a car-pet manufactory was established with success, so as to employ above 250 looms ; and there are upwards of 700 looms employed in the silk and worsted. Many hands are employed as spinners, &c., in the carpet looms only in the town and neighbourhood; others in preparing yarn, which is used in different parts of England in carpeting. The silk manufactory was established in 1755. The tov/n is remarkably healthy; and has also an extensive manufacture of quilting in the loom, in imitation of Marseilles quilting. Woollen plush is also made here for the Portuguese mar-ket. The water of the river Stour is said to contribute much to the celebrity of the manufactures of this place, by its remarkable property of striking and securing their colors. The lord of the manor holds a court leet for the prevention of encroachments and public nuisances, and here is a court of requests for debts under 40s. The church, which stands in a commanding situation, is a venerable Gothic structure, very large, and has lately been ornamented and repaired at considerable expense. In it are several curious ancient monuments. The tower adjoining the church is a strong, lofty pile, containing eight bells. The town-hall is a large commodious brick building, being in part occupied by the prison ; on the ground-floor are butchers' stalls;

and, above, is the council-chamber, for transacting public business. There are also in K;dderminster n Presbyterian meeting-house, two good free

schools, a charity-school, and two alms-houses tk.c. It is governed by a bailiff, twelve burgesses, twenty-five common councilmen, &c. And sends one member to parliament. By the inland navigation it has communication, by the junction of the Severn canals, with the rivers Mersey, Dee, Ribble, Ouse, Trent, Derwent, Severn, liumber, Thames, Avon, &c. ; which navigation, including its windings, extends above 500 miles, in the counties of Lincoln, Nottingham, York, Lancaster, Westmoreland, Chester, Stafford, Warwick, Leicester, Oxford, Worcester, &c. The parish extends to Bewdly Bridge, has a weekly market, and three fairs.

KIDDLE, or KIDEL, a dam or wear in a river with a narrow cut in it, for laying pots or other engines to catch fish. The word is ancient ; for in Magna Charta, cap. 24, we read, Omnes kidellideponantur perThamesiarnetMedweyam, et per totam Angliam, nisi per costeram maris' And by king John's charter power was granted to the city of London, de kidellis amovendis per Thamesiam et Medweyam. A survey was ordered to be made of the wears, mills, stanks, and kiddles, in the great rivers of England, 1 Hen. IV. Fishermen of late corruptly call these dams kettles ; and they are much used in Wales, and on the coasts of Kent.

KID'NAP, v. a. From Dut. kind, a child, and nab. To steal children; to steal human beings.

KID'NAPPER, n. s. From kidnap. Oue who steals human beings; a manstealer.

The man compounded with the merchant upon condition that he might have his child again ; for he had smelt it out, that the merchant himself was the kidnapper. L'Estrange.

These people lye in wait for our children, and may be considered as a kind of kidnappers within the law.

Spectator.

KIDNAPPING the forcible abduction or stealing away of man, woman, or child, from their own country, and sending them into another. This crime was capital by the divine law : see Exodus xxi. 16. So likewise,

in the civil law, the offence of stealing men and children, which was called plagium, and the offenders plagiarii, was punished with death. This is unquestionably a very heinous crime, as it robs the king of his subjects, banishes a man from his country, and may in its consequences he productive of the most cruel and disagreeable hardships ; and therefore the common law of England has punished it with fine, imprisonment, and pillory. And also the statute 1 1 and 12 VV. III., c. 7, though principally intended against pirates, has a clause that extends to prevent the leaving such persons abroad as are thus kidnapped or spirited away ; by enacting, that if any captain of a merchant vessel shall (during his being abroad) force any person on shore, or wilfully leave him behind, or refuse to bring home all such men as he carried out, if able and desirous to return, he shall suffer three months' imprisonment.

KID'NEY, n. s. Goth, kind, the belly, probably, and Sax. nor, the reins. A gland in the ABDOMEN. See that article.

A youth laboured under a complication of diseases, from his mesentery and kidneys.

Wiseman's Stirgcrji. •

Sort; kind: in ludicrous language.

Think of that, a man of my k'ulney ; think of that, that am as subject to h«at as butter ; a man of con-tiaual dissolution and thaw. Sliakspeare.

There are millio:is in the world of this man's kidney, that take up the same resolution without noise. L' Estrange.

KIDNEY, in anatomy, an abdominal viscus, shaped like a kidney-bean,

that secretes the urine. There are two kidneys. One is situated in each lumbar region, near the first lumbar vertebra, behind the peritonaeum. This organ is composed of three substances; a cortical, which is external, and very vascular ; a tubulous, which consists of small tubes ; and a papillous substance, which is the innermost. The kidneys are generally surrounded with more or less adipose membrane, and they have also a proper membrane, mein-brana propria, which is closely accreted to the cortical substance. The renal arteries, called also emulgents, proceed from the aorta. The veins evacuate their blood into the ascending cava. The absorbents accompany the blood-vessels, and terminate in the thoracic duct. The nerves of the kidneys are branches of the eighth pair and great intercostal. The excretory duct of this viscus i? called the uretur. See ANATOMY.

KID'NEYBEAN, n. s. Phaseolus : so named from its shape. A leguminous plant.

Kidneybeans are a sort of cod ware, that are very pleasant wholesome food. Mortimer's Husbandry.

KIDNEY-BEAN. See PHASEOLUS.

KID'NEYVETCH, n.s. Anthillis. A plant.

KID'NEYWORT, n. *. Cotyledon. A plant.

KIDNEY-WORT. See SAXIFRAGA.

KIEL, a considerable town of Denmark, the capital of the duchy of Holstein, with a castle, and a university founded in 1665. It stands upon a small peninsula in a bay of the Baltic, and has a very commodious harbour. It is one of the largest and most commercial places in Holstein ; and the neighbourhood is better cultivated than any other parts of the duchy. By its canal, which unites the Northern Sea with the Baltic, the whole duchy has been improved and enriched. See DENMARK. The imports are cotton, sugar, coffee, tobacco, and salt; the exports, corn, butter, cheese, an<d bacon ; but ship-building and mercantile agency are the principal occupations. Hats, tobacco, starch, and sugar refining, are the only manufactures. A great annual fair takes place in January; at other times Kiel displays little activity. The environs are beautiful. Population about 7000. Kiel is twenty-six miles south-east of Sleswic, and fifty-one north of Hamburg.

KIEMA, a promontory of Switzerland, on the west shore of the lake of Zug ; of which the ground belongs to the canton of Lucern, and the

wood to that of Zug.

KIEN-LONG, late emperor of China, was born in 1710, and, in 1735, succeeded his father, Yuntschin. Until 1759 he reigned in peace; then he engaged in war with the Songarians, and, taking possession of Calmuc Tartary, extended his dominions to the frontiers of Siberia. This gave him also the command of Thibet. He was now in his turn invaded by the sovereign of Ava, but the attempt finally failed. Kien-Long favored

privately the Christian religion it is said : the missionaries were however obliged to proceed with caution. Several of them were in the ei.i-peror's immediate service. On the suppression of the Jesuits, Chin.i being less visited l>y Europeans than heretofore, Kien-Longsent to Canton, and invited to his capital artists and learned men, particularly astronomer-;, of all the Kurop.-an nations. He possessed on his own part a taste for poetry and natural history; of which we nave specimens in his panegyrics on the tea-plant, and on the city of Moukden, both of which have been translated into French by father Amiot. He supplied also a version of a poem by the emperor, on the conquest of Calmuc Tartary. Kien-Long engaged some French artists to copy the Chinese paintings of his victories; but Louis XV. had them engraved for him at his own expense. This emperor established a library of no fewer than 600,000 volumes; and admitted three books written by the Jesuits, on the Christian religion. A description of the Chinese empire, which appeared in Busching's Magazine, was compiled by his order. He died at Pekm in 1786, after a reign of half a century.

KIERNANDER (John Zechariah), an early missionary of modern times, was born November 21st, 1711, at Akslad, in Sweden, and educated in the school of Lmdkoping, and the university of Upsal. At the age of twenty-four he went to Halle, where he was pationised by professor Franke, who recommended him to the London Society for promoting Christian Knowledge. He was accepted as a missionary to the East ; and, in 1740, arrived at Cuddalore, as colleague to Mr. Guester; but in 1744, on the removal of that gentleman to Madras, he had the sole charge of the mission. In 1749 Mr. Kiernander preached, in one day, a sermon in the same church, to the English, Tanv lian, and Portuguese congregations there. In 1758, on the surrender of Cuddalore to the French, he went to Tranquebar ; whence he removed to Calcutta, where he opened a school, and preached sometimes in English, at others in German, and occasionally in Portuguese. His celehr.ty was so

great, that the emperor Shah Aulum solicited from him copies of the Psalter and New Testament in Arabic. In 1767 Mr. Kiemander laid the foundation of a church at Calcutta, which was opened in 1770, under the name of Beth Tephillah. The cost, which was about £8000, fell almost wholly upon himself: he also erected, close to it, a school capable of holding 250 children. Becoming however, by this means, involved in debt, the church which he bu;lt was seized, and would have been desecrated, had not the late Mr. Grant purchased it, and placed it in trust for pious uses. Mr. Kiernander, after this, officiated as chaplain to the Dutch at Chinsurah; but when that settlement was taken, in 1795, he became a prisoner of war to the English, and returned to Calcutta, where he died, April 10th, 1799.

KIEV, a government of the south-west of European Russia, comprising a part of the Ukraine, and bounded by the provinces of Podolia, Volhynia, Minsk, Tschernigov, and Poltava, from which last it is separated by the Dnieper. As constituted bv the emperor Paul, in 1797, it

consisted of a territory lying on both sides of the Dnieper; but a subsequent arrangement by the emperor Alexander has given all the part on the east side of that river to the government of Tschernigov and Poltava ; while that of Kiev received a large addition out of Poland on the west. It lies between 28° 40’ and 33° 25’ of E. long., and 48° 30’ and 51° 50’ of N. lat.; and has a territorial extent of 21,000 square miles. It is divided into twelve circles, and contains seventy-seven, great and small, towns. The surface is level, and the soil produces abundance of corn for exportation, and hemp, flax, fruit, and vegetables. It abounds also in pasturage, and exports a number of cattle and horses; honey, and Polish cochineal. The population is scattered, and the manufactures are few and small. The commerce of the country is chiefly in the hands of Jews. Population about

1,000,000.

KIEV, Kiov, or Kiow, the capital of the preceding province, stands on an acclivity on the right bank of the Dnieper, and consists properly of three towns, *viz.* the Old Town, Podol or the Lower Town, and the fortress of Petscherski. The three parts are connected by entrenchments ; but the last alone is regularly defended. Here are barracks, magazines, officers' houses, several churches, and a government-house, with, public gardens. Below the monastery, founded in the eleventh century, are a number of subterraneous vaults, divided into apartments and chapels, in which are kept a number of corpses in an undecayed state, the relics of saints and martyrs. In the old town is the residence of a Greek archbishop ; and a cathedral. Agriculture, and the distilleries of Kiev, are the chief employments of the town and neighbourhood. Here is also a gymnasium, and an old established high-school, which formerly bore the name of an academy. It was erected into a university in 1803.

This dull town was founded, it is said, in 430, and it was long the capital of the kingdom of. Russia. It fell, in 1240, into the hands of the Tartars, and afterwards into those of the Lithuanians and Poles ; but was restored to Russia in the latter part of the seventeenth century ; and the church of St. Sophia, being the earliest Christian church in Russia, has always been an object of great interest. Eighty-three miles east of Zytomiers, and 270 north by west of Cherson.

K1GGELARIA, in botany, bastard euonymus: a genus of the decandria order, and dicecia class of plants ; natural order thirty-seventh, columniferae. Male CAL. quinquepartite : COR. pentapetalous ; there are five trilobous glandules ; thearrtherse are perforated at top. Female CAL. and COR. in the male; there are five styles: CAPS, unilocular, quinquevalved, and polyspermous. There is but one species, *viz.* K. Africana. It has an upright woody stem, and purplish branches, growing fifteen or eighteen feet high ; oblong, sawed, alternate leaves ; and dioecious, greenish-white flowers, in clusters from the sides of the branches ; succeeded by globular rough fruit, the size of cherries, containing the seeds, which seldom ripen here. Being a native of warm climates, it must be constantly kept in a stove in this country. It is propagated by seeds, layers, or cuttings, but most readily by seeds.

KILDA (St.), one of the Western Islands of Scotland. It lies in the Atlantic, and is about three miles long from east to west, and two

broad from north to south. The soil is better calculated for pasture than tillage. The natives prefer rearing sheep, and killing wild fowl, to the more toilsome business of husbandry. All the ground hitherto cultivated in this island lies round the village. The soil is thin, full of gravel, and naturally poor ; but it is, however, rendered extremely fertile by the industry of the husbandmen, who manure every inch of their ground, so as to convert it into a kind of garden. Barley and oats are the only sorts of grain known at St. Kilda. Potatoes have been but lately introduced, and only small quantities raised. On the east side of the island, a quarter of a mile from the bay, lies the village, where the whole inhabitants of the island live together. Their houses are built in two rows, regular, and facing one another, with a tolerable causeway in the middle. These habitations are flat in the roof, or nearly so. The island being peculiarly subject to violent squalls and hurricanes, were their houses raised higher the first winter storm would bring them down about their ears. The walls are made of a rough gritty kind of stones huddled together, without lime or mortar, from eight to nine feet high. Their method of catching wild fowl is remarkable. The men are divided into fowling parties, each consisting of four persons distinguished for their agility. Each party must have at least one rope, about thirty fathoms long, made of a strong raw cow's hide, salted 'and cut circularly into three thongs of equal length, which, being closely twisted together, form a threefold cord, able to sustain a great weight, and durable enough to last for two generations. To prevent the injuries it would receive from the sharp edges of the rocks, against which they often strike, the cord is covered with sheep skins, dressed in the same manner. This rope is the .mpst valuable implement of which, in St. Kilda, a man can be possessed. In a testament it makes the first article in favor of the eldest son ; should it fall to a daughter's share it is reckoned equal in value to two good cows. By the help of such ropes people, linked together in couples, each having either end of the cord fastened about his waist, go frequently through the most dreadful precipices : when one of the two descends, his colleague sets himself on a strong shelf, and takes care to have such sure footing that, if his fellow adventurer makes a false step, he may be able to save him.

KILDARE, a county of Ireland, bounded on the north by Meath, on the east by Dublin and Wicklow, on the south by Carlow, and on the west by King's and Queen's Counties. It is about forty-one miles long, and twenty-seven broad, and contains 392,397 English acres ; of which four-fifths are arable, meadow, and pasture, and the remainder bog. It is in the province of Leiuster, and archbishopric of Dublin : and there are fourteen baronies and half baronies, in all, in this county,

subdivided into 113 parishes.

The surface of Kildare is undulating, and often presents a pleasing landscape : but its

climate is thought to be more humid than thato any other part of Ireland. On the west the bay of Allen and similar tracts occupy the greater part of the county.

Its riveFs are the Liffey, Boyne, and Barrow ; and it enjoys the advantages of the Grand and Royal Canals. The former, entering it from the north-east, proceeds in a west and north-west direction, till it passes into King's County. At Lowton a branch leaves the main trunk, and advances to the town of Athy, on the south-west boundary, and from this the navigation is continued southward on the river Barrow, which, soon after leaving Athy, becomes the boundary with Queen's County. The Royal Canal passes through its northern quarter from east to west, and then enters the county of Meath. The Boyne and Barrow rise in the bog of Allen and its neighbourhood.

Potatoes are every where cultivated : with re-gard to scientific agriculture, the course of cropping, with few exceptions, is the same as it has been for a century, *viz.* fallow, wheat, oats. Oxen are er ployed in ploughing, and horses for carriages ; but in many instances four or six of these animals are mixed together in the plough. Mules are also kept on many farms. The rent of the arable and pasture land in 1807 was estimated at a little more than 20*. the Irish acre.

The great landowner of the county is the Duke of Leinster : it sends two members to the imperial parliament, but has no borough nor large towns. Common labor is said by Mr. Wakefield to yield 1$. 6d. a-day for men, and IQd. for women and children; and in hay and corn

harvest 2s. Qd. Potatoes were at this time 5d. a stone, beef and mutton 6d. per pound, oatmeal 18s. per cwt. milk per quart 2d., and but-ter-milk $d. in summer, and %d. in winter. Under these circumstances the population has doubled since 1 790 ; and the Catholics are to the Protestants in the proportion of thirty to one. Athy on the Barrow in the south-west of the county, and Naas on the north-east, are alternately the assize towns ; the others areKildare, Monasterevan, Castle Der-root, on the south and west ; Leixlip, Maynooth, and a few others, on the north and east. At Cell-bridge on the Liffey is a small woollen manufactory. At Maynooth about 200 Catholic students are trained for the priesthood, and accommodated with lodgings and commons. Each pays a small sum as entrance money, which, with other expenses, may amount to £20 a year ; the general charges of the establishment being supported by an annual parliamentary grant.

KILDARE, the county town, is situate on a rising ground, twenty-five miles south-west of Dublin, and is celebrated for its Curragh, tire Newmarket of Ireland. This common, or lawn, containing nearly 5000 acres of the softest turf, on a fine dry loam, is generally covered with flocks of sheep. It was once a forest of oaks. The races are held in April, June, September, and October. Here was a celebrated nunnery, founded about the year 584 by St. Bridget. This place is also noted for the remains of other religious houses ; and a round tower in good preservation, 130 feet high, built of white granite t° about twelve feet above the ground, the rest

being of blue stone ; the door is fourteen feet from the ground.

KIL'DERKIN, n. t. Dut. kindekin, a baby, says Dr. Johnson ; but more probably from Lat. quatuar, four: as Teut. chotern, chaldron. A small barrel ; the fourth part of a hogshead.

Make in the kilderkin a great bung-hole of purpose. Bacon.

A tun of man in thy large bulk is writ ; But sure thou'rt but a kilderkin of wit.

Dryden.

KILIAN (Lucas), an eminent German engraver, born at Augsburg, who flourished at the beginning of the seventeenth century. His style of engraving bears no small resemblance in many particulars to that of Henry Goltzius, and of John Mullar his disciple. He went to Italy to complete his studies. Few artists have manifested a greater command

of the graver than Kilian, whether we consider the facility with which the strokes are turned upon each other, or the firmness with which they are executed ; though, by paying too close attention to this part of the art, he neglected the correctness of the outlines, and fatigued the lights with unnecessary work ; by which means he broke the masses, and often destroyed the effect of his prints. The naked parts of the human figure are seldom well expressed : the extremities especially are in general heavy, and sometimes incorrect. Upon the works of this master, however, it appears that Balechou formed his taste. His works are exceedingly numerous. There were several other engravers of the same name and family, but of inferior merit.

KILKENNY, a county of Ireland, in the province of Leinster, bounded on the south by that of Waterford, north by Queen's county, west by that of Tipperary, east by those of Wexfcrd and Catherlogh, and north-west by Upper Os-sory. Its greatest length from north to south is thirty-eight miles ; and breadth from east to west eighteen. It contains ten baronies, and is one of the most healthy, pleasant, and populous counties in Ireland. It contains 287,650 Irish acres, 172 parishes, and one borough.

KILKENNY, the capital of the above county, lies seventy-five miles south-west of Dublin. It was named from the cell or church of Ca-nice, a learned monk of this county ; and is one of the most elegant cities in the kingdom. It is the seat of the bishop of Ossory, which was translated from Agabo in Ossory, about the end of Henry II.'s reign, by bishop O'Dullany. The city is pleasantly situated on the Neor, a navigable river that runs into the harbour of Waterford. It is said that its air is without fog, its water without mud, its fire without smoke, referring to the well-known Kilkenny coal, and its streets paved with marble, of which there are large quarries near the town. Its color is black, it takes a fine polish, and is beautiful!, intermixed with white granite. The air too is very salubrious. The city is governed by a mayor, recorder, aldermen, and sheriffs. This city was once a place of great importance, as appears by the venerable ruins yet remaining of churches,' monasteries, and abbeys; which, even in their dilapidated state, exhibit such specimens

of taste in architecture, as may vie with any mo-dern improvements, and the remains of its gates, towers, and walls, show it to have been a place of great strength. Here too parliaments were anciently held. It has two churches, and several catholic chapels ; barracks for a troop of horse and four companies of foot ; a market twice a week, and seven fairs. The cathedral, which stands in a sequestered situation, is a venerable Gothic pile. The bishop's palace is a handsome building, and communicates by a covered passage with the church. The castle was built in 1195, on the site of one destroyed by the Irish in 1173. The site was originally a conoid, the elliptical side abrupt and precipitous, with the river running rapidly at its base ; here the natural rampart was faced with a wall of solid masonry forty feet high ; the other parts were defended by bastions, curtains, towers, and out-wjrks; and on the summit the castle was erected, which is now in the possession of the Ormond family. The college, originally founded by the Ormond family, has been rebuilt in an elegant style. There are two very fine bridges of cut mar-ble over the Nore. The Ormond family also built and endowed a free school in this city. Here are the ruins of three old monasteries, called St. John's, St. Francis's, and the Black Abbey. The chief manufactures are, coarse woollen clothes, fine blankets, and of starch. The Kilkenny coal-pits are within nine miles of the town. This city was incorporated by James I. in 1609. The borough of St. Canice, or Irishtown, enjoyed very ancient prescriptive rights. A close roll, of 5 Edward III. A. D. 1376, forbids the magistrates of Kilkenny to obstruct the sale of victuals in the market of Irishtown; and, lest the ample grants made to Kilkenny might be interpreted to include Irishtown, the corporation of the latter secured their ancient rights by letters patent, 15 Edward IV. A. D. 1474. These renew their former privileges, and appoint a portriave to be chosen every 21st September, and sworn into office on the llth October. The portrieve's pr:son was at Troy-gate. Whenever the mayor of Kilkenny came within Water-gate, he lowered the point of the city sword, to show he claimed no pre-eminence within the borough. KILL, v. a. i Anciently to quell. Saxon KIL'IER, n. s.] cpellan; Dut. kelen. To deprive of life ; to put to death, as an agent ; to destroy animals for food ; to deprive of life as an instrument ; to deprive of vegetative life. Killer, one who destroys life.

\ e have brought us forth into this wilderness, to kill this whole

assembly with hunger.

Exodui xvi. 3.

Shall 1 take my bread and my flesh, that I have killed for my shearers. 1 Sam. xxv. 11.

Hut at the lest — though I therwith me kill — I shall not spare to waile and wepe my fill.

Chaucer. iMment of Mary Magdaleine. Wilt thou for the old lion hunt, or fill Hi» hungry whelps? and for the killer kill, U hen couched in dreadful dens ? Sandys. l)are>t thou resolve to .// a friend of mine ? — Please you, I'd rather hill two enemies.

Shaksptare. liifhard III.

Try with oil, or barm of drink, so they be such tilings as kill not the bouirh. Bacon.

The medicines, if they were used inwards, would kill those that use them ; and therefore they work potently, though outwar s. Bacon.

What sorrow, what amazement, what shame was in Amphialus, when he saw his dear foster-father find him the killer of his only son ! Sidney.

So rude a time,

When love was held so capital a crime,

That a crowned head could no compassion find,

But died, because the killer had been kind.

Waller. If killing birds be such a crime,

(Which 1 can hardly see,) AY hat think you, Sir, of killing time, _With verse addressed to me?

CitU'per. Beau's Reply.

When the rich soil teemed with youth's generous

flowers,

I felt thee, sunshine. — Now thy rayless light, Falls like the cold moon on a blasted heath, Mocking its desolation. — Speak thy vow — I will not chide thee if the words should kill me. Maturin. Bertram.

Would ‘that the hour were come! we will not

scotch, But kill. Byron. Marino Faliero.

KILLALA, a seaport of Ireland, in the county of Mayo, formerly a bishop’s >ei-, twenty-one miles north of Castlebar. This town, during the rebellion, suffered much by the depredations of both rebels and loyalists : but the bishop of Killala, who was himself a very loyal subject, says that the latter were by far the most unmerciful ; plundering, burning, and destroying wherever they went.

KILLALO E, a town and once a bishop’s see in the county of Clare and province of Munster, in Ireland, one hundred and ten miles from Dublin, otherwise called Lounia. It was anciently written Kill-da-Lua, *i.e.* the church of Lua, from Lua, or Molua, who, about the beginning of the sixth century, founded an abbey near this place. St. Molua appears to have derived his name from Loania, the place of his residence, as was customary amongst the ancient Irish. On the death of St. Molua, St. Flannan his disciple, and son of the chief of the district, was consecrated bishop of this place at Rome about A. D. 639, and the church endowed with considerable estates, by his father Theodoric. Towards the close of the twelfth century, the ancient see of Roscrea was united to that of Killaloe. At Killaloe is a bridge over the Shannon of nineteen arches; and here is a considerable salmon fishery. There are many ancient ‘buildings in and about this town. The cathedral is a Gothic edfice in form of a cross, with the steeple in the centre, supported by four arches ; it was built by Donald, king of Limerick, in 1160. There is a building near it, once the oratory of St. Molua ; and there is another of the same kind in an island on the Shannon, having marks of still higher antiquity. The see-house of the bishop is at Clarisford, near to Killaloe. Adjoining to the cathedral are yet the remains of the mausoleum of Brien Boru.

KILLARNEY, a post-town of Ireland, in the county of Kerry and province of Munster, seated near Lough Lean, or the Lake of Killarney. It is 224 miles from Dublin, and has two fairs. Within a mile and a half of this place are the

ruins of the cathedral of Aghadoe, an ancient bishopric united to Ardfert.

KILLA.RNEY, a beautiful lake of Ireland, in the county of Kerry, otherwise called Lough Lean, from its being surrounded by high mountains. It is divided into three parts, called the Lower, Middle, and Upper Lake. The northern, or lower lake, is six miles in length, and from three to four in breadth. On the side of one of the mountains is O'Sullivan's Cascade, which falls into the lake with a tremendous roar. The view of this sheet of water is uncommonly fine, appearing as if it were descending from an arch of wood, which overhangs it above seventy feet in height from the point of view. The islands are not so numerous in this as in the upper lake ; but there is one of uncommon beauty, called Innisfallen, nearly opposite O'Sullivan's Cascade. The shore is formed into a variety of bays and promontories. Among the distant mountains Turk appears an object of magnificence ; and Mangerton's more lofty, though less interesting summit, soars above the whole. Here is a celebrated rock, called the Eagle's Nest, which produces wonderful echoes ; the report of a sin-gle cannon is answered by a succession of peals resembling the loudest thunder, which seem to travel the surrounding scenery, and die away among the distant mountains. The upper lake is four miles long, and from two to three broad. It is almost surrounded by mountains, from which descend a number of beautiful cascades. The islands in this lake are numerous, and afford an amazing variety of picturesque views. The centre lake, which communicates with the upper, is small in comparison with the other two, and cannot boast of equal variety; but the snores are, in many places, indented with beautiful bays, surrounded by dark groves of trees. The east boundary is formed by the base of Mangerton, down the steep side of which descends a cascade, visible for 150 yards. This fall of water is supplied by a circular lake near the summit of the mountain, called the Devil's Punch-Bowl; which, on account of its immense depth, and the continual overflow of water, is considered as one of the greatest curiosities in Killarney. One of the best prospects which this admired

lake affords, is from a rising ground near the ruined cathedral of Aghadoe.

KILLAS, a genus of stones belonging to the argillaceous class, found chiefly in Cornwall in England. Its texture is either lamellar or coarsely granular ; the specific gravity from 2630 to 2666. It contains sixty parts of siliceous earth, twenty-five of argillaceous, nine of magnesia, and six of iron. The greenish kind contains more iron, and gives a green tincture to the nitrous acid.

KILLICRANKIE, a noted pass of Perthshire, formed by the lofty mountains impending over the Carrie, which rushes through a deep, darksome channel beneath. In the last century this was a pass of much danger and difficulty ; a path hanging over a tremendous precipice, threatened the traveller with destruction upon the least false step. At present a fine road, formed by the soldiery, gives an easy access to the Highlands; and the two sides are joined by

a fine arch. Near the north end of this pass, in its open and unimproved state, was fought, iu 1689, the battle of Killicrankie, between the adherents of James II. under viscount Dundee, and of William III. under general Mackay. Dundee's army was very much inferior to that of Mackay's. When he came in sight of the latter, he found them formed in battalions ready for action. They consisted of 4500 foot, and two troops of horse. The Highlanders, under Dun-dee, amounted to little more than half that num-ber. These he ranged instantly in order of battle. Maclean, with his tribe, formed the right wing. The Macdonalds of Sky, under their chieftain's eldest son, formed the left. The Camerons, the Macdonalds of Glengary, the followers of Clanronald, and a few Irish auxiliaries, were in the centre. A troop of horse was placed behind, under Sir William Wallace. The officers sent by James from Ireland were distributed through the whole line. His whole army stood in sight of the enemy for several hours on the steep side of a hill which faced the narrow plain where Mackay had formed his line. Dundee wished for the approach of night ; a season suited for either victory or flight. At 5 P. M. a kind of slight skirmish began between the right wing of the Highlanders and the left of the enemy. But, neither army wishing to change their ground, the firing was discontinued for three hours. Dundee in the mean time flew from tribe to tribe, and animated them to action. At eight he gave the signal for battle, and charged the enemy in person at the head of the horse. The Highlanders, in deep columns, rushed suddenly down' the hill. They kept their shot till they were within a pike's length of the

enemy ; and having fired their muskets, fell upon them sword in hand. Mackay's left wing could not for a moment sustain the shock. They were driven by the Macleans with great slaughter from the field. The Macdonalds on the left of the Highlanders were not equally successful. Colonel Hastings's regiment of foot stood their ground. They even forced the Macdonalds to retreat. Maclean with a few of his tribe, and Sir Evan Cameron at the head of his clan, fell suddenly on the flank of this gallant regiment, and forced them to give way. The slaughter ended not with the battle ; 2000 fell in the field and the flight. The tents, baggage, artillery, and provisions of the enemy, and even king William's Dutch standard, which was carried by Mackay's regiment, fell into the hands of the Highlanders. The victory was now complete. But the Highlanders lost their gallant leader. Perceiving the unexpected resistance of colonel Hastings's regiment, and the confusion of the Macdonalds, Dundee rode rapidly to the left wing. As he was raising his arm, and pointing to the Camerons to advance, he repeived a ball in his side. The wound proved mortal ; and with Dundee fell all the hopes of king James.

KILLIGREW (Thomas), son of Sir Robert Killigrew, knight, was born in 1611. He was page of honor to king Charles I., and groom of the bed-chamber to Charles II., with whom he suffered many years exile ; during which he applied his leisure hours to the study of pot-try, and

to the composition of several plays. After the Restoration he continued in high favor with the king ; and, while he exercised his privilege as a jester, often uttered bold and useful truths. One anecdote will afford a specimen. One day Killigrew called on the king in his private apartments, habited like a pilgrim who was bent on a long journey. The king, surprised at the oddity of his appearance, asked him what was the meaning of it, and whither he was going ? ' To fetch back Oliver Cromwell,' rejoined he, ' that he may take some care of the

affairs of England, for his successor takes none at all.' Killigrew died in 1682, and was buried in Westminster Abbey.

KILLILEAGH, or KILLY-LEAGH, a town of Ireland, in the county of Down, eighty miles north-east from Dublin. It is the principal town in the barony of Duffrin ; and seated on an arm of the lake of Strangford, from which it is supplied with a great variety of fish. The Hamiltons, earls of Clanbrassil, had a castle here at the upper end of the great street ; at the lower end is a small bay, where ships lie sheltered from all winds; in the town are some good houses, a horse barrack, andapresbyterian meeting-house. On an eminence at a small distance from the town is a handsome church in the form of a cross. This place suffered much in the year 1641. A linen manufacture is carried on in it, and fine thread made, for which there is a great demand. The celebrated Sir Hans Sloane was born here, and his father Alexander Sloane was at the head of the Scottish colony which king James I. settled in it. The town was incorporated by that monarch.

KILLOUGH, or Port St. Ann's a seaport town of Ireland, in the county of Down, seventy-six miles from Dublin. It lies north of St. John's Point, and has a good quay, where ships lie very safe. The town is agreeably situated ; the sea flowing close by the houses, where ships ride in full view of the inhabitants. It has a good church, and a horse barrack, with good fishing in the bay ; but the principal trade consists in the exportation of barley, and the importation of commodities for the adjacent country. A manufacture of salt is also carried on, and five fairs held in it. Near the town is a chartered working-school for the reception of twenty children. There is a remarkable well here, called St. Scor-dins's well, highly esteemed for the extraordinary lightness of its water. It gushes out of a high rocky hank upon the shore, and never diminishes its quantity in the driest season. There is also a mineral spring near the school, the waters of which are both purgative and emetic. At a small distance from the town near the sea is a rock in which there is an oblong hole, whence,at the ebbing and flowing of the tide, a strange noise is heard, resembling the sound of a huntsman's horn. The harbour is tolerably safe and commodious ; some degree of caution is however necessary in entering it, for a rock stands in the middle of the entrance covered at half flood, commonly called the water rock. Either to the east or west of this rock is a secure passage, the inlet lying south by east and north by west. On the west side of the rock, open to Coney Island, is a strong quay,

and a basin for ships, where they are defended from all winds, within

which the harbour on both sides affords good anchorage for vessels of 150 tons. At the end of the quay the channel is 400 yards wide.

KIL'LOW, n. s. This seems a corruption of coal, and low a flame, as soot is thereby produced.

An earth of a blackish or deep blue colour, and doubtless had its name from hollow, by which name, in the North, the smut or grime on the backs of chimneys is called. Woodward.

KILLYBEGS, a borough of Ireland, in the county of Donegal, and province of Ulster, 123 miles from Dublin. Itis situated on the north side of Donegal Bay ; but is a place of no great trade, though it has a harbour spacious enough to contain a large fleet; it lias a bold and ample opening to the sea on the south, and is secured within by the shelter of high lands surrounding it : so that vessels may enter at any time of the tide, there being from five to eight fathom water. The herring fishery is the most considerable of any carried on here. It has two fairs.

KILMALLOCK, a town of Ireland, in the county of Limerick, sixteen miles from Limerick, and 107 from Dublin. — This town makes a conspicuous figure in the military history of Ireland. In the sixteenth century it was a populous place ; and the remains of the wall, which entirely surrounded the town, are still to be seen. Edward the VI. granted a charter to it with many privileges, as did queen Elizabeth another, dated 24th of April 1584. In 1598 it was invested by the Irish forces, when the earl of Ormond hastened to its relief, and arrived in time to raise thejsiege : here was also some contest during the grand rebellion in 1641 and 1642. By an inquisition, llth of August 29 Eliz. it appears that there had been an abbey in Kilmallock, called Flacisphaghe ; on which a stone house was erected. Sir James Ware informs us that an abbey of Dominicans, was built here in the thirteenth century by the sovereign, brethren, and commonalty. The parish church was formerly an abbey for regular canons, founded by St, Mochoallog, who died between the years 639 and 656. A fair is held on Whitsun-Tuesday.

KILMARNOCK, a populous and flourishing town of Ayshire, noted for its manufacture of carpets, milled hosiery, and Scotch bonnets. It is a burgh of barony, governed by two bailhesand seventeen councillors. Its first charter was granted in 1541, in favor of Thomas lord Boyd ; its second in 1572, to William earl of Rilmarnock. In 1 700 the magistrates obtained a grant from the Kilmarnock family of the whole common good, customs, &c., of the burgh. It has five incorporations,

and two flourishing public schools, besides many private ones. In 1810 two acts of parliament were passed for paving, lighting, and watching the burgh and suburbs, for erecting a bridewell and a workhouse, and for various other purposes of public utility. Among the other edifices, built under these acts,are, an elegant new town-house, an academy, and coffee-room. Itis fifteen miles south-west of Glasgow.

KILMORE, a bishop's see of Ireland in the county of Cavan. It was called in former ages

Clunes, or Clunis, i. e. the sequestered place ; and is situated near Loch Km. St. Fedlimid founded this bishopric in the sixth century ; it was afterwards removed to an obscure village called Triburna : where it continued until 1454, when Andrew Mac-Brady, bishop of Triburna, erected a church on the site of that founded by St. Fedlimid, to whose memory it was dedicated, and named Kilmore, or the great church. At present there is neither cathedral, chapter, nor canon, belonging to this see, the small parish church contiguous to the episcopal house serving the purpose of a cathedral.

KILN, w. s Sax. cyln; Swed. kolna; Lat. culina, an oven. A stove; a fabric formed for admitting heat, in order to dry or burn things contained in it.

I'll creep up into the chimney. — There they always use to discharge their birding-pieces : creep into the kiln hole. Shakspeare.

After the putting forth in sprouts, and the drying upon the kitn, there will be gained a bushel in eight ot malt. Bacon.

Physicians chuse lime which is newly drawn out of the kiln, and not

slacked.

Moron's Mechanical Exercises.

KILN'DRY,…a. Kiln and dry. To dry by means of a kiln.

The best way is to kilndry them. Mortimer.

KILWORTH, a town of Ireland, in the county of Cork, 108 miles south-west of Dub-lin. It is a flourishing place, with six fairs and a good church, at the foot of a large ridge of mountains called Kilworth mountains, through which a good turnpike road is carried from Dub-lin to Cork; below the town runs the river Fun-cheon, which is -well stored with salmon and trout, and a mile south of this runs into the Black water. At this place is Moorpark, the su-perb seat of lord Mountcashel ; and near it stands the castle of Clough-leagh, boldly situated on the Puncheon, and which has stood several sieges.

KI'MBO, adj. Ital. a schembo. Crooked ; bent; arched.

And set his hand in kenebowe, he lakked never a faute. Chaucer. The Merchantes Second Tale.

The fctm&o handles seemed with bear's-foot carved, And never yet to table have been served.

Dryden's Virgil.

He observed them edging towards one another to whisper ; so that John was forced to sit with his •arms a kimbo, to keep them asunder. Arbuthnot.

KIMCHI. We have three learned rabbies of this name in the twelfth, and the commencement of the thirteenth centuries. David and Moses were the sons of rabbi Joseph, born in Spain : all threewere of considerable literary attainments; yet David exceeded both his father and brother in reputation. He is considered as the best grammarian of his nation. His known works are, a Grammar and Lexicon of the Hebrew tongue, which furnished Buxtorf with the materials for his Thesaurus, and Lexicon Li nguse Hebrece. His commentaries on the books of the Old Testament are also esteemed. His grammar first appeared at Venice in 1545, and was soon followed by a treatise on the Hebrew radicals. Rabbi David passed the principal part of his life in Narbonne, and in the schism which took place between the Spanish and French Jews in 1232, respecting

the books of Maimonides, was appealed to as a* arbitrator. He lived to an extreme old age, ana died in 1240. The best edition of his Dictionarium Talmudicum is that of 1506, folio.

KIN, n. t. ~\ Sax. cynne ; Lat.

KIND, adj. & n. s. f gigno ; Greek ytvof.

KIND'LY, adv. & adj. . Relation of consan—

KIND'NESS, n. «. i guinity or affinity ; of

KIN'DRED, n. s. & adj. J the same race, family, or generical class ; a diminutive termination from kind, a child, Dutch; as manikin, minikin, Thomkin, Wilkin. Kind ; benevolent ; favorable ; affectionate ; bland ; mild : kindness, benevolence ; goodwill ; lore : kindly, in a courteous or benevolent manner : kind, race ; generical class ; relation : kindred, relative ; congenial ; cognate. Kinc in Teutonic English answers to genus, and sort to species; though this distinction, in popular language, is not always observed : particular nature, manner, way, or sort.

And though so be that your kinrede be more stedefast and siker than the kin of your adversaries ; yet natheles youre kinrede is but a far kinrede ; they ben litel sibbe to you and the /cm of youre enemies ben nigh sibbe to them • and, certes, as in that, hir condition is better than yours. Chaucer. Tale of Melibeus. There mighten men the roiall egle finde,

That with his sharpe loke persieth the son j

And other egles of a lower kinde,

Of wbiche that clerkes well devisen can.

Id. The Assemble of Foulet.

Thus far we have endeavoured in part to open of what nature and force laws are, according to their kinds. Hooker.

The burst

And the ear-deafening voice of the oracle,

Kin to Jove's thunder, so surprised my sense,

That I was nothing. Shakspeare. Winter's Tale.

I sometimes lay here in Corioli, At a poor man's house : he used me kindly.

Shakspeare.

The skilful shepherd peeled me certain w nds, And in the doing of the deed of kind, He stuck them up before the fulsome ewes. Id.

An old mothy saddle, and the stirrups of no kindred. Id.

Tumultuous wars Shall kin wkh kin, and kind with kind confound. Id.

He did give the goods of all the prisoners unto those that had taken them, either to take them in hind, or compound for them. Bacon's Henry VII.

You must use them with fit respects, according to the bonds of nature ; but you are of kin, and so a friend to their persons not to their errours.

Id. Advice to Villien.

Then is the soul from God ; so pagans say, Which saw by nature's light her heavenly kind,

Naming her kin to God, and God's bright ray, A citizen of Heaven, to earth confined. Daiies.

Like them their armour seemed full near of kin : In this they only differ ; the' elder bent

His higher soul to Heaven ; the younger twin 'Mongst mortals here his love and kindness spent. Fletcher's Purple Island.

This competency I beseech God I may be able to digest into kindly juice, that I may grow thereby.

Hammond.

Nor needs thy juster title the foul guilt Of Eastern kings, who, to secure their reign, Must have their brothers, sons, and kindred slain.

DenJiam. These soft fires Not only enlighten, but with kindly heat,

Of various influence, foment and warm, Temper or nourish. Milton'* Paradise Lost.

As when the total kind Of birds, in orderly array on wing, Came summoned over Eden, to receive Their names of thee. Id.

That both are animalia I grant ; but not rationalia ; For though they do agree in kind, Specifick difference we find. Hudibras.

The odour of the fixed nitre is very languid ; but that which it discovers, being dissolved in a little hot water, is altogether differing from the stink of the other, being of kin to that of other alcalizate salts.

From Tuscan Coritum he claimed his birth ; But after, when exempt from mortal earth, From thence ascended to his kindred skies A god. Dryden.

Through all the living regions do'st thou move, And scatterest where thou goest the kindly seeds of love. Id.

The' unhappy Palamon,

Whom Theseus holds in bonds, and will not free, Without a crime, except his kin to rue. Id.

Some of you, on pure instinct of nature, Are led by kind to' admire your fellow-creature.

Id.

The father, mother, and the kin beside, Were overborne by fury of the tide. Id.

Some of the ancients, like kind hearted men, have talked much of annual refrigeriums, or intervals of punishment to the damned, as particularly on the great festivals of the resurrection and ascension.

South.

God and Nature do not principally concern themselves in the

preservation of particulars, but kinds and companies. Id. Sermons.

His grief some pity, others blame ; The fatal cause all kindly seek. Prior.

Love and inclination can be produced only by an experience or opinion of kindness to us.

Rogers's Sermons.

Some acts of virtue are common to Heathens and Christians ; but I suppose them to be performed by Christians after a more sublime manner than among the Heathens ; and even when they do not differ in kind from moral virtues, yet differ in the degrees of perfection. Atterbury.

The tax upon tillage was often levied in kind upon corn, and called decumae, or tithes. Arbuthnot.

He with a hundred arts refined, Shall stretch thy conquest over half the kind. Pope.

Ye heavens, from high the dewy nectar pour, And in soft silence shed the kindly shower ! Id.

Who, with less designing ends, Kindlier entertain their friends ; With good words, and countenance sprightly, Strive to treat them all politely. Swift.

Heaven born who bringest our kindred home again, Rescued, and givest eternity to Troy, Long have the Laurentum and the Latian plains Expected thee.

Cowper. Translation from Virgil's ASneid. The separation of chief friends Is what their kindness most intends ;. Their sport is your dissension. Id. Friendship.

What avails it !

The wretched have no country : that dear name Comprises home, kind kindred, fostering friends, Protecting laws, all that binds man to man — But none of these are mine. Maturin. Bertram. Ripped from all kindred, from all home, all things That make com-mumon sweet, and soften pain —

Byron. Prophecy of Dante.

I say he's innocent ! And, were he not so, Is our own blood and kin to shrink from us In fatal moments 1 Id, Two Foscan.

KINCARDINE, a town of Perthshire, in the parish of Tulliallan. It is seated on the banks of the Forth, and was formerly called West Pans, from fifteen salt pans, wherein asalt manufacture was anciently carried on in it. It has a post-office and two weekly markets on Wednesday and Saturday. It has a good roadstead, where 100 vessels may ride with safety. They import wood, iron, flax, linseed, 8cc., from Holland and the Baltic ; barley from England, &c., an 1 export coals to Norway, Sweden, &c., and some of them are in the Mediterranean and Levant trade. Vessels of 200 and 300 tons have been ouilt here.

KINCARDINESHIRE, or MEARNS. See MEARNS.

KIN'DLE, v. a. & v. n. \ Saxon cyndelan ; KIND'LER, n. s. S Welsh cinnu. To

set on fire ; to make to burn ; to inflame the passions ; to exasperate ; to heat or nre the mind; to catch fire; to bring forth young in rabbits : a kindler, one who lights a fire, or irritates and exasperates.

He hath kindled his wrath against me, and counteib me as one of his enemies. Job xix. 11.

When thou walkest through the fire, thou shall not be burnt, neither shall the flame kindle upon thee.

Isaiah xliii. 2.

He will take thereof, and warm himself ; yea, h» kindleth it, and baketh bread. Id. xliv. 15

— , but his enemie

Had kind.led such coles of displeasure, That the good man noulde stay his leasure, JJut home him hasted with furious heate Encreasing his wrath with many a threate.

Spenser. Sliepheardes Calendar. I've been to you a true and humble wife ; At all times to your will conformable : Ever in tear to kindle your dislike. Sliakspeare.

Are you native of this place ? As the coney that you see dwells where she is kindled.

I was not forgetful of those sparks, which som« men's distempers formerly studied to kindle in parliaments. K*ng Charles.

Thus one by one kindling each other's fire, 'Till all inflamed, they all in one agree. Daniel.

Each was a cause alone, and all combined To kindle vengeance in her haughty mind.

Dry den.

If the fire burns vigorously, it is no matter by what means it was at first kindled : there is the same force and the same refreshing virtue in it, kindled by a spark from a flint, as if it were kindled from the sun.

South,

Now is the time that rake? their revels keep Kindlers of riot, enemies ot sleep. Gay.

There soon ye shall perceive a kindling flame Glow for that infant God from whom it came.

Cowper. Nativity.

Thou sun ! which shinest on these things, and Thou ' Who kindlest and who quenchest suns ! — Attest ! I am not innocent — but are these guiltless 1

Byron. Marino Falierc.

KINDRED, in law, persons related to one anr ther, whereof the law reckons three degrees c lines *viz.* the descending, ascending, and collateral lines. See CONSANGUINITY, and INHERIT-

KING.

ANCE. On there being no kindred in the descending line, _the inheritance passes in the collateral one.

KINE, n. s. Sax. cuna; plur. of cow.

To milk the /cine, Ere the milk-maid fine Hath opened her eyne. Ben Jonson.

A field 1 went, amid* the morning dew, To milk my kin-. Gay.

When Aulus the nocturnal thief made prize Of Hermes, swift-winged envoy of the skies, Hermes, Arcadia's king, the thief divine, VV'ho, when an infant, stole Apollo's kine.

Cowper. A Thief. • in this blazing palace,

And its enormous walls of reeking ruin, \Ve leave a nobler monument than Egypt Hath piled in her brick mountains, o'er dead kings Or kine, for none know whether those proud piles Be for their monarch, or their ox-god Apis.

Byron. Sardanapalus.

KING, n. s. & v. a.ˆL Teut. cuniug or cyning. KING'DOM, n. s. I Sovereign dignity. In KINC'LY, adj. \the primitive tongue it

KINC'LIKE, adj. i signifies stout or valiant, KING'SHIP, n. *. J the kings of most nations being, in the beginning, chosen by the people on account of their valor and strength. — Verstegan. Monarch; supreme governor; used by Bacon in the feminine : a card with the picture of a king: king at arms, a principal officer at arms, that has the pre-eminence of the society ; of whom there are three in number, *viz.* Garter, Norroy, and Clarencieux. — Phillips. King, to supply with a king; to make royal ; to raise to royalty : kingdom, the territories subject to a monarch ; a particular class or order of beings, in the language of naturalists ; a region or tract of country : kingly, kinglike, royal ; like a monarch ; noble; august; magnificent; of or belonging to a king; with an air ofsuperior dignity : kingship, royalty ; monarchy.

With Arcita, in stories as men find, The gret Emetrius the King of Inde, Upon a stede bay, trapped in stele, Covered with cloth of gold diapred wele, Came riding like the god of armes, Mars.

Chaurer. The Knightes Tale. The great King of kings Hath in the table of his law commanded That thou shall do no murder.

Shakspeare. Jiicnard III.

True hope is swift, and flies with swallows' wings ; Kings it makes gods, and meaner creatures kings.

Shakspeare.

I am tar better born than is the king ; More like a king, more kingly in my thoughts.

Id.

The watery kingdom is no bar To stop the foreign spirits ; but they come, As o'er a brook, to see fair Portia. Id.

England is so idly kinged, Her sceptre so fantastically borne, That fear attends her not. Id. Henry V.

Sometimes am I a king ;

Then treason makes me wish myself a beggar, And so I am : then crushing penury Persuades me, I was better when a king ; Then am I kinged again. Id. Richard II.

Ferdinand and Isabella, kings of Spain, recovered the great and rich kingdom of Granada from the Moors. Room.

And on his shield kind Jonathan imparts To his soul's friend, his robes and pnnceiy name, And kingly throne ; which mortals so adore : And round about was writ in golden oie, Well might he give him all, that gave him life before Fletcher's Puipte Island. Adam bowed low ; he, kingly from his state Inclined not. Milton's Paradise Lest.

A letter under his own hand was lately shewed me by Sir William Dugdale, king at arms. Walton.

He was not born to live a subject life, each action of his bearing in it majesty, such a kii.yly entertainment, such a kingly magnificence, such a kingly heart for enterprizes. Sidney.

Yet this place

Had been thy kingly seat, and here thy race From all the ends of peopled earth had come To reverence thee. Dryden's State of Innocence. The animal and vegetable kingdoms are so nearly joined,

that if you take the lowest of one, and the highest of the other, there will scarce be perceived any difference. Lrcke.

Thus states were formed ; the name of king unknown,

Till common interest placed the sway in one : ‘Twas virtue only, or in arts or arms, Diffusing blessings, or averting harms, The same which in a sire the sons obeyed A prince the father of a people made. Pope.

His hat, which never vailed to human pride, Walker with reverence took, and laid aside ; Low bowed the rest, he, kingly, did but nod.

Dunciad.

The cities of Greece, when they drove out their tyrannical kings, either chose others from a new family, or abolished the kingly government, and be-came free states. Swift.

Ye shepherds, monarchs, sages, hither bring Your hearts an offering, and adore your king !

Cowper. Nativity. Ascend my son ! thy father’s kingdom share !

Id. Elegy.

Beset with all the thorns that line a crown, Without investing the insulted brow, With the all-swaying majesty of kings.

Biiron. Marine Faliero. But not a kingly one — I’ll none on’t ; or If ever I indulge in ‘t, it shall be With kings my equals. Id. Sardanapalus.

KING. Ths” Latin word rex, the Scythian reix, the Panic resch, the Spanish rey, and French roy, come all, according to Postel, from the He-brew U?tn, rosch, chief, or head. Kings were not known amongst the Israelites till the reign of Saul, though Abimelech usurped a partial royalty over the Shechemites. See ISRAELITES. Most of the Grecian states were governed at first by kings, who were chosen by the people to de-cide differences, and execute a power which was limited by laws. They commanded armies, presided over the worship of the gods, &c This royalty was generally hereditary ; but if the vices of the heir to the crown were odious to the peo-ple, or if the oracle had so commanded, he was cut off from the succession ; yet kings were supposed to hold their sovereignty by the appointment of Jupiter. The ensign of majesty was the sceptre, which was made of wood, adorned with studs of gold, and ornamented at the top with some figure ; commonly that of an eagle, the bird of Jove.

Rome also was governed at first by kings, who were elected by the people, with the approbation

of the senate, and concurrence of the augurs. Their power extended to religion, the revenues, the army, and the administration of justice. The monarchy subsisted 244 years in Rome, under seven kings. “See ROME. Among the Greeks, the king of Persia had anciently the appellation of the great king ; the king of France has that of the most Christian king; and the king of Spain that of Catholic king. The kings of England, by the Lateran council, under pope Julius II., had the title of Christianissimus conferred on them ; and that of defender of the faith was ad-ded by pope Leo X. The title of grace was first given to our kings about the time of Henry IV., that of majesty first to Henry VIII., before which time our kings were called grace, highness, &c. — In all public instruments and letters, the king styles himself nos, ‘ we ;’ though, till the time of king John, he spoke in the singular number.

In great Britain the power of the king is subject to great limitations : but they are the limitations of wisdom, and the sources of dignity ; being so far from diminishing his honor, that they add a particular glory to his crown : for, while other kings are absolute monarchs over innumerable multitudes of slaves, the king of Britain has the distinguished glory of governing a free people, the least of whom is protected by the laws ; he has great prerogatives, and a boundless power in doing good ; he is at the same time only restrained from acting inconsistently with his own happiness, and that of his people. To understand the royal rights and authority in Britain, we may here briefly consider the duties of the king. By the British constitution there are certain duties incumbent on the monarch ; in consideration of which, his dignity and prerogative are established by the laws of the land : it being a maxim in the law, that protection and subjection are reciprocal. And these reciprocal duties are what Blackstone apprehends were meant by the convention in 1688, when they declared that king James had broken the original contract between king and people. But, however, as the terms of that original contract

were in some measure disputed, being alleged to exist principally in theory and to be only deducible by reason and the rules of natural law, in which deduction different understandings might very considerably differ ; it was, after the Revolution, judged proper to declare these duties expressly, and to reduce that contract to a plain certainty. So that, whatever doubts might be formerly raised by weak and scrupulous minds about the existence of such an original contract, they must now entirely cease ; especially with regard to every prince who has reigned since the year 1688. The principal duty of the king is, To govern his people according to law. Nee regibus infinita aut libera potestas. And this is not only consonant to the principles of nature, of liberty, of reason, and of society ; but has always been esteemed -an express part of the common law of England, even when prerogative was at the highest. ‘ The king (says Bracton, who wrote under Henry III.), ought not to be subject to man ; but to God, and to the law : for the law m&koth the kinqj ; for he is not truly king, where will and pleasure rule, and not the law.’ And FtwteseiH1 hvs it down as a principle, that ‘ the

king of England ‘must rule his people according to the decrees of the laws thereof ; insomuch, that he is bound by oath at his coronation to the observance and keeping of his own laws.’ But, to obviate all doubts, it is expressly declared by statute 12 & 13 W. III. c. 2, ‘ that the laws of England are the birthright of the people thereof; and all the kings and queens who shall ascend the throne of this realm, ought to administer the government of the same according to the said laws, and all their officers and ministers ought to serve them respectively, according to the same ; and therefore, all the other laws and statutes of this realm, for securing the established religion and the rights and liberties of the people thereof, and all other laws and statutes of the same now in force, are by his majesty, by and with the ad-vice and consent of the lords spiritual and temporal, and commons, and by authority of the same, ratified and confirmed accordingly.’ The terms of the original contract between the king and people are now therefore couched in the coronation oath, which, by the stat. 1 W. & M. c. 6, is to be administered to every king and queen who shall succeed to the imperial crown of these realms, by one of the archbishops or bishops of the realm, in the presence of all the people ; who on their parts do reciprocally take the oath of allegiance.

It may not here be improper to take a short comparative review of the power of the executive magistrate, or prerogative of the crown as it stood in former days, and as it stands at present. And we cannot but

observe, that most of the laws for ascertaining, limiting, and restraining this prerogative, have been made within little more than 150 years ; or from the petition of right in 3 Car. I. to the present time. So that the powers of the crown are to all appearance greatly curtailed and diminished since the reign of king James I., particularly by the abolition of the star-chamber and high commission courts, in the reign of Charles I., and by the disclaiming of martial law, and the power of levying taxes on the subject, by the same prince; by the disuse of forest laws for a century past : and by the many excellent provisions enacted under Charles II. ; especially the abolition of military tenures, purveyance, and preemption ; the habeas corpus act ; and the act to prevent the discontinuance of parliaments for above three years ; and, since the revolution, by the strong and emphatical words in which our liberties are asserted in the bill of rights, and act of settlement ; by the act of triennial, since turn-ed into septennial elections ; by the exclusion of certain officers from the house of commons ; by rendering the seats of the judges permanent, and their salaries independent ; and by restraining the king's pardon from obstructing parliamentary im peachments. Besides all this, if we consider how the crown is impoverished and stripped of all its ancient revenues, so that it greatly depends on the liberality of parliament for its necessary support and maintenance, we may perhaps be led to think that the balance is inclined pretty strongly to the popular scale, and that the executive magistrate has neither independence nor power enough left, to form that check upon the lords and commons which the founders of our constitution intended. But, on the other hand, it is to

be considered that every prince, in the first parliament after his accession, has by long usage a truly royal revenue settled upon him for life ; and has never any occasion to apply further to parliament for supplies, but upon some public necessity. This restores to him that constitutional independence, which at his first accession seems to be wanting. And then, with regard to power, we may find perhaps that the hands of government are sufficiently strengthened; and that a

British monarch is now in no danger of being overborne by either the nobility or the people.

The instruments of power are not perhaps so public and avowed as they formerly were, ai.d therefore are the less liable to jealous and invidious reflections ; but they are not the weaker upon that account. In short, our national debt and taxes (besides other inconveniences) have in their natural consequences, thrown such a weight of power into the executive scale of government, as our patriotic ancestors, who gloriously struggled for the abolition of the then formidable parts of the prerogative, would have been very unwilling to confer. Witness the commissioners, and the multitude of dependents on the customs, in every port of the kingdom ; the commissioners of excise, and their numerous subalterns, in every inland district; the postmasters and their servants, planted in every town, and upon every public road ; 'the commissioners of the stamps, and their distributors, which are fully as scattered and fully as numerous : the surveyors of houses and windows ; the receivers of the land tax; and the commissioners of hackney-coaches; all which are either mediately or immediately appointed by the crown, and removeable at pleasure without any reason assigned : these must give that power, on which they depend for subsistence, an influence amazingly extensive. To this may be added the frequent opportunities of conferring particular obligations, by preference in loans, and other money transactions, which will greatly increase this influence ; and that over those persons whose attachment, on account of their wealth, is frequently the most desirable. All this is the natural, though perhaps the unforeseen consequence of erecting funds of credit, and, to support them, establishing perpetual taxes ; the whole of which is entirely new since the restoration in 1660 ; and by far the greatest part since the revolution in 1688. The same may be said with regard to the officers in our numerous army, and the places which the army has created. All which put together give the executive power so effective an influence with respect to the people as will amply make amends for the loss of external prerogative. But see our article LAW.

KING AT ARMS, an officer of great antiquity, and anciently of great authority, whose business is to direct the heralds, preside at their chapters, and have the jurisdiction of the armoury. In England there are three kings of arms, *viz.* GARTER, CLARENCIEUX, and NORKOY. See these articles. These two last are also called provincial heralds, as they divide the kingdom between them into provinces. They have power to visit noblemen's families, to set down their pedigrees, distinguish their arms, appoint persons their arms, and with VOL. XII.

Garter to direct the other heralds. Anciently the kings at arms were created and crowned by the kings of England themselves ; but of late the earl marshal has a special commission at every creation to personate the king. To these may be added Lyon, king at arms for Scotland, who is the second king at arms for Great Britain ; and also Ulster, king at arms for Ireland. The regalia of Lyon are, a crown of gold, with a crimson velvet cap, a gold tassel, and an ermine lining ; a velvet robe reaching to his feet, with the arms of the kingdom embroidered thereon before and behind in the proper tinctures ; a triple row of gold chain round his neck, with an oval gold medal pendant thereto, on one side ot which is the royal bearing, and on the other St. Andrew with his cross enamelled in proper colors, and a baton of gold enamelled green, powdered with the badges of the kingdom. Formerly Scotland was divided into two provinces, the one on the north, and the ether on the south side of the Forth ; and these provinces were under the management of two deputies appointed by the lord Lyon, to superintend the execution of all the business of his office. Before the revolution, the lord Lyon at his admission into office, was solemnly crowned by the sovereign or his commissioner, in presence of the nobility, the officers of state, &c., after a suitable sermon preached in the royal chapel ; and his crown was of the same form with the imperial crown of the kingdom. On solemn occasions he wears the regalia above described ; at all other times he wears the oval gold medal or badge on his breast, suspended by a broad green riband. He has the absolute disposal of all the offices in his own court, and of the heralds and pursuivant's places. The messengers at arms throughout Scotland are also created by him, and are amenable to his jurisdiction.

Ulster was substituted, as some say, in the room of Ireland king of arms, by Edward VI. ; though the king himself in his journal takes notice of it as a new institution. ' There was a king of arms made for Ireland,' says he, ' whose name was Ulster, and his province was all Ireland : and he was the fourth king at arms, and the first herald of Ireland. The patent passed under the great seal of England, with an ample testimony of the necessity and dignity of the office. . Whether Ulster was substituted in the room of Ireland king of arms, or else was newly erected, such an otncerof the crown of Ei/gland, on which Ireland is dependent, still continues, and may execute his heraldic order in this kingdom, though out of his province, in as extensive a manner as either Clarencieux or Norroy may do without the limits of either of their marches.

KING (Dr. John), a learned English bishop in the sixteenth century, born at Wornall in 1559, educated at Westminster, and at Christ Church, Oxford. He was appointed chaplain to queen Elizabeth. In 1605 he was made dean of Christ Church, and was for several years vice-chancellor of Oxford. In 1611 he was appointed bishop of London. Besides his Lectures upon Jonah, delivered at York, he published several sermons. King James I. used to style him the king of preachers; and lord chief-justice Coke often de—

clared, that he was the best speaker in the star-chatnber in his time.

KING (John Glen), D.D., an English divine, chaplain to the factory at Petersburg, was born in Norfolk, and educated at Caius College, Cambridge, where he graduated. He was appointed medalist to the empress Catharine II. He wrote, 1. The Rites and Ceremonies of the Greek church; with its Doctrine, Worship, and Discipline : 2. Observations on the Climate of Russia, and the Northern Countries, with a View of the Flying Mountains near Petersburg : 3. Observations on the Barberini Vase. He died in

KING (Sir Peter), lord high chancellor of England, and nephew of the great John Locke, was born in Exeter, in 1669. His father was a grocer in that city, and intended him for the same business ; but, his passion for learning soon appearing, hewas allowed to follow his inclination. In this he was also encouraged by his uncle, who left him half of his valuable library. By his ad-vice he went to Leyden, and on his return studied the law at the Inner Temple. In 1691 he published anonymously, An Enquiry into the Constitution, Discipline, Unity, and Worship of the Primitive Church within the first 300 years after Christ. London, 1691 ; 8vo. He afterwards published a second part of this work ; which gave rise to a controversy with Mr. Elys. In 1669 he was elected M. P. for Beer-Alston; which he represented in seven successive parliaments. In 1702 he published his History of the Apostles' Creed, a work of great merit and learning. In 1708 he was chosen recorder of London, and knighted. In 1709 he was appointed one of the managers of Dr. Sacheverel's trial. In 1714, on the accession of king George I., he was made lord chief-justice of the common pleas : in 1725 created a peer, by the title of lord King, baron Ockham, &c., and on the 1st of June appointed lord-chancellor. He resigned the seals in 1733, and died in 1734, leaving four sons and two daughters.

KING (William), a facetious English writer in the beginning of the eighteenth century, who was allied to the noble families of Clarendon and Rochester. He was elected student of Christ Church from Westminster school, in 1681, when aged eighteen. He afterwards studied the civil law, and took the degree of J. C. D. He soon acquired a considerable reputation, and obtained great practice. He attended the earl of Pembroke, lord lieutenant of Ireland, into that kingdom, where he was appointed judge advocate, sole commissioner of the prizes, keeper of the records, and vicar-general to the lord primate of Ireland. He at length, however, returned to England, and retired to his student's place at Christ Church. He died December 2,5th, 1712. His principal witings are, 1. Animadversions on a Pretended Account of Denmark, written by Mr. Molesworth, afterwards lord Molesworth. This work procured Dr. King the place of secretary to princess Anne of Denmark. 2. Dialogues of the Dead. 3. The Art of Love, in imitation of Ovid De Arte Amandi. 4. A volume of poems. 5. Useful Transactions. 6 An Historical Account of the Heathen Gods and heroes. 7.

Several translations. Dr. King hated the business of an advocate; but proved an excellent judge, when appointed one of the court of dele-

‘KiNG (William), D. D., archbishop of Dublin in the eighteenth century, was descended from an ancient family in the north of Scotland, but born in the county of Antrim in Ireland. In 1674 he entered into orders. In 1679 he was promoted by Dr. Parker, archbishop of Dublin, to the chancellorship of St. Patrick. In 1687 Peter Manby, dean of Londonderry, having published at London, in 4to., a pamphlet entitled Considerations which obliged Peter Manby to embrace the Catholic Religion, Dr. King immediately wrote an answer. Mr. Manby published a reply, entitled A Reformed Catechism, &c., in Reply to Mr. King’s Answer, &c. Dr. King rejoined in A Vindication of the Answer. Mr. Manby dropped the controversy ; but dispersed a loose sheet, entitled A Letter to a Friend, showing the Vanity of this Opinion, that every man’s Sense and Reason are to Guide Him in Matters of Faith. This Dr. King refuted in A Vindication of the Christian Religion and Reformation, &c. In 1689 he was twice confined in the tower by order of king James II. and the same year commenced D. D. In 1690, upon king James’s retreat to France after the battle of the Boyne, he was advanced to the see of Derry. In 1692 he published at London, in 4to., The State of the Protestants of Ireland under the late King James’s Government, &c. He had by him, at his death, attested vouchers of every particular fact alleged in this book, which are now in the hands of his relations. In 1693, finding the great number of Protestant dissenters in his diocese of Derry increased by a vast addition of colonies from Scotland, Dr. King, to persuade them to conformity to the established church, published A Discourse Concerning the Inventions of Men in the Worship of God. Mr. Joseph Boyle, a dissenting minister, wrote an answer. Replies and rejoinders followed. In 1702 he published at Dublin, in 4to., his celebrated Treatise De Origine Mali. Edmund Law, M. A. fellow of Christ’s College, Cambridge, published a translation of this, with very valuable notes, in 4to. In the second edition he has inserted a collection of the author’s papers on this subject, which he had received from his relations. In this excellent treatise Dr. King proves, that there is more moral good in the earth than moral evil. His sermon, preached at Dublin in 1709, was published under the title of Divine Predestination and Foreknowledge Consistent with the Freedom of Man’s Will. This was attacked by Anthony Collins, esq. in a pamphlet entitled A Vindication of the Divine Attributes, &c. He published likewise, A Discourse concerning the Consecration of Churches ; showing what is meant by dedicating them, with the grounds of that office. He died in

1720. Dr. King was witty as well as profound. Being disappointed in his expectations of the primacy of Ireland on the death of archbishop Lindsey, and hearing it was assigned as a reason for passing him over, that he was too far advanced in years, he received Dr. Boulter, the new primate, at his first visit, with

out the compliment of rising to salute him, apologising for the incivility by saying, ‘ My lord, I am sure your grace will forgive me, because you know I am too old to rise.’

KING (William), LL.D., principal of St. Mary’s flail Oxford, was born at Stepney in Middlesex in 1685. He graduated in 1715, was made secretary to the duke of Ormond, and earl of Arran, as chancellors of the university ; and principal, on the death of Dr. Hudson, in 1719 When he stood candidate for M.P. for the university, he resigned his office of secretary, but enjoyed his other preferment to his death. Dr. Clark, who opposed him, carried the election ; and after this disappointment, he, in 1727, went over to Ireland, where he wrote an epic poem, called The Toast, a political satire, printed and given away to his friends, but never sold On the dedication of Dr. Radcliff’s library, in 1749, he delivered a Latin oration in the theatre at Ox-ford, which was received with the highest acclamations; but when printed was attacked in several pamphlets. Again, at the contested election in Oxfordshire, 1755, his attachment to the Tory interest drew on him the resentment of the Whigs, and he was libelled in newspapers and pamphlets, against which he defended himself in an apology, and warmly retaliated on his adversaries. He wrote several other pieces, and died in 1762. He was a polite scholar, an excellent orator, an elegant and easy writer, and much esteemed for his learning and wit.

KING AND QUEEN COUNTY, a county of the east part of Virginia, bounded N. N. E. by Essex and Middlesex counties, east by Gloucester

county, S. S.W. by King William county, and west by Caroline county. Distance from Washington 140 miles. Chief town, Dunkirk.

KING GEORGE, a county of the north-east part of Virginia, hounded north-west and north by the Potomac, east by Westmoreland county, south by the Rappahannock, and west by Stafford county. Distance from Washington west eighty miles.

KING GEORGE'S ISLANDS, two islands of the South Pacific Ocean, discovered by Byron, in 1765, and visited by captain Cook in 1773. On commodore Byron's attempting to land, he was opposed by the natives, and, a shot or two being fired, one man was killed. The rest fled; but two canoes were brought off to the ship, of curious workmanship. One was thirty-two feet long : they consisted of well-wrought planks sewed together, and over every seam there was a strip of tortoise-shell, cleverly fastened. A mast was hoisted in each of them, and a matting sail. The houses were low hovels, thatched with cocoa-nut branches. The cocoa-nut tree furnished the natives with food, sails, cordage, timber, and vessels to hold water. The shore appeared to be covered with coral, and pearl oysters. Byron got several boat-loads of cocoa-nuts, a great quantity of scurvy-grass, and excellent fresh water here, but the last is scarce. Long. 149° 2' W., lat. 14° 35' S.

KING GEORGE'S SOUND, a name given by captain Cook to NOOTKA SOUND ; which see.

KING GEORGE THE THIRD'S ARCHIPELAGO, an extensive group of islands, so called by Van-

couver, on the west coast of North America, extending from north to south about 130 miles. It is at its northern part about forty-five miles broad; but, gradually diminishes to little more than one mile. On the eastern shore of this archipelago Vancouver's party discovered some square grounds in a good state of cultivation, and producing a plant not unlike tobacco. Long. 223° 45' to 225° 37' 30' E., lat. 56° 10' to 58° 18' N.

KING GEORGE THE THIRD'S ISLAND, or OTAHEITE. See OTAHEITE.

KING GEORGE THE THIRD'S SOUND, a large bay on the south coast of New Holland, divided into two harbours, Princess Royal Harbour on the west, and Oyster Harbour on the east, which afford many conveniences for shipping. The entrance is between two distant points,

Mount Gardner and Bald Head ; and several islands are included within its limits. See HOLLAND, NEW.

KING-AN-FOU, or KYGANFAN, a city of China of the first rank, in the province of Kiangsee, and on the river Kankian, the navigation of which is rather dangerous here. The embassy under lord Amherst observed several new buildings going on, and extensive cotton and linen manufactures here. The gardens under the walls occupy a large space.

KING'-APPLE, n. s. A kind of apple.

The kingapple is preferred before the jennetting.

Mortimer,

KING'-CRAFT, n. s. King and craft. The art of governing. A word commonly used by king James,

KINGCUP, n. s. King and cup. The name is properly, according to Gerard, Kins: Cob. The flower of the crowfoot ; the plant itself.

Strow me the grounde with daffadown-dillies, And cowslips, and kingcups, and loved lillies.

Spenser. Shepheard's Calender,

June is drawn in a mantle of dark grass green, and upon his head a garland of bents, kingrups, and maidenhair. Peaeham.

Fair is the kingcup that in meadow blows,

Fair is the daisy that beside her grows. Gay,

KING'FISHER,n.s. Halcyon. A species of bird.

When dew refreshing on the pasture fields The moon bestows, kingfishers play on shore.

May's Virgil.

Bitterns, herons, sea-gulls, kingfishers, and water-rats, are great enemies to fish.

Mortimer'* Husbandry.

KINGFISHER. See ALCEDO.

KINGS, BOOKS OF, two canonical books of the Old Testament, containing the history of the kings of Israel and Judah from the beginning of the reign of Solomon down to the Babylonish captivity, for the space of near 600 years. It is generally supposed, and seems very probable, that these books were composed by Ezra, who extracted them out of the public records.

KING'S BENCH. See BENCH.

KINGSBURY, a post town of Washington county, New York, on the east side of the Hud-son ; fifty-five miles north of Albany, Washington 432. Population 2272. It contains two Baptist meeting-houses.

KING'S COUNTY, a county of Ireland, in the

pro/incc of Leinster, so mimed fro n king Philip of Spain, husband to queen Mary I. It is bounded on the north by West Meath ; on the >east by Kildare ; on the south by Tipperary and Queen's County, from which it is divided by the Barrow ; and by part of Tip;>erary and Galway on the west, from which it is separated by the Shannon. It is a fine fruitful country, containing 257,510 Irish plantation acres, fifty-six parishes, eleven baronies, and two boroughs. It is about thirty-eight miles long, and from seventeen to thirty broad.' The chief town is Philips-town.

KING'S COUNTY, a fertile and well cultivated county of New York, on the west end of Long Island, bounded on the east by Queen's County, north by New York county, west by Hudson's River and the Ocean, and south by the Atlantic. It is ten miles long and eight broad ; is divided into six townships ; and contained 3063 citizens, and 1432

slaves, in 1795.

KING'S COUNTY, a county of Nova Scotia, comprehending the lands on the south-west and south sides of the basin of Minas. It has considerable settlements on the Elabitant, the Ca-naid, and the Cornwallis, which are navigable for about fire miles up.

KING'S-EVIL, w. s. King and evil. A scrofulous distemper, in which the glands are ulcerated, commonly believed to be cured by the touch of a king.

Sore eyes are frequently a species of the kingsevil, and take their beginning from vicious humours inflaming the tunica adnata. Wiseman's Surgery.

KING'S EVIL. See MEDICINE. KING'SHIP,n.s. From king. Royalty; monarchy.

They designed and proposed to me the new-modelling of sovereignty and kingship, without any reality ofpower, or without any necessity of subjection and obedience. King Charles.

We know how successful the late usurper was, while his army believed him real in his zeal against kingship ; but when they found out the imposture, upon his aspiring to the same himself, he was presently deserted and opposed by them, and never able to crown his usurped greatness with the addition of that title which he passionately thirsted after. South.

KING'S ISLAND, an island at the west-end of Bass' Straits, about thirty miles long from north to south, and twelve or eleven broad. The highest part is 400 or 500 feet above the level of the sea. It is inhabited only by the kangaroo and wombat ; but various species of seals are found on its shores. There is a lake of fresh water here. The hills are covered with wood. The north end of the island is in 39° 36' S. lat., and 143° 54' E. long. Distance from the main land forty-eight miles.

KING'S ISLAND, a small island in Behring's Straits, so called by captain Cook.

KING'S ISLAND, an island near the north-west coast of North America, so named by Vancouver. It is about thirty miles in length, and little more than six in breadth, being separated from the continental shore of New Albion, by Banke's canal, and by Fisher's canal from the Princess Royal Islands. Lone. 232° 9' to 232° 43' W., Jat. 51° 56' to 52°

KING‘3PEAR,i*.«. Asphodelus. A plant.

KINGSTON (Elizabeth, duchess of), born in 1720, was the daughter of colonel Chudleigh, governor of Chelsea College. From youth to age she was celebrated for intrigue, and owes her place in history to her remarkable trial for bigamy. She was at first maid of honor to the princess of Wales, the mother of George III. ; in which situation she received a proposal of marriage from the duke of Hamilton : but being informed, though falsely, that he had forgotten her while on the continent, she gave her hand privately to captain Hervey, R. N., afterwards earl of .Bristol. At about this period of her life, attending a masquerade where George II. came incog., his majesty laid his hand on her exposed bosom, and exclaimed, ‘ A soft place, Eve.’ To which, regardless of his rank, she is said to have replied, laying her hand on the king’s head, ‘A softer place, your majesty.’ Her marriage (August 4th, 1744) had been kept a secret, and her subsequent refusal of advantageous proposals of marriage having offended her mother, she now went abroad with a major in the army. They proceeded to Berlin, where they parted. Here she is said to have been well received by the king of Prussia, and on her re-turn to England she resumed her situation at the British court. Desirous of terminating her union with captain Hervey, she adopted at this time the expedient of tearing the leaf out of the parish register, in which their marriage was entered ; but, repenting of this step on his succeeding to the peerage, she contrived to have the leaf replaced. Through all these scenes she was only known to the public as Miss Chudleigh. Not long after, the duke of Kingston made her an offer, on which she endeavored to procure a divorce from lord Bristol. This he at first opposed, but at length assented to it, and the wished-for separation was arranged. On the 8th of March, 1769, she was married to Evelyn Pierrepont, duke of Kingston, on whose death in 1773 she found herself left mistress of a large fortune, under the condition of her not marrying again. But the heirs of the duke commenced a suit against her for bigamy, when she was tried before the house of lords, and found guilty : on her pleading the privilege of peerage, however, punishment of burning in the hand was remitted, and she was discharged on paying the fees. The remainder of her life was spent abroad, and she died at a seat near Fon-tainebleau in France, August 28th, 1788.

KINGSTON, a principal town of Jamaica, is seated on the north side of the bay of Port-Royal. It was founded in 1693, when the repeated

desolations by earthquakes and fires had driven the inhabitants from Port Royal. It extends from a mile to a mile and a half, from north to south, and about as much from east to west on the harbour. According to the original plan it was to be built in the form of a parallelogram, one mile in length by half a mile in breadth ; but it has of late years been much extended beyond this limit. The principal church is a large and elegant edifice, with four aisles, and a fine organ. There is also a Presbyterian church, a theatre, a free-school established

in 1729, a poor-house, and a public hospital here. The market is well supplied with poultry, butcher's meat, fish, fruits, and European vegetables. There are also great quantities of the finest pine apples and tropical fruits. This town enjoys the benefit of the sea breezes which blow regularly the greatest part of the year, and temper the beat of the climate; but the acclivity on which the town is situated has the inconvenience of admitting, during the wet season, a free passage to torrents of rain, which often render the streets impassable for wheel-carriages. It is governed by a mayor, twelve aldermen, and twelve com-mon councilmen, a recorder, two solicitors, and a treasurer, and returns three members to the house of assembly. The thermometer ranges between 96° and 76°. Ten miles from Spanish Town.

KINGSTON, the capital of the island of St. Vincent's in the West Indies, is situated at the head of a bay of this name, on the south-western shore of the island, in St. George's parish. Long. 81° W., lat. 13° 6' N.

KINGSTON, a considerable town of Upper Canada, is seated on the north side of the river St. Lawrence, on the eastern extremity of Lake Ontario. It was founded in 1784, on the ground upon which formerly stood Fort Frontenac ; it now presents a front of nearly three quarters of a mile, extending in depth about 600 yards. The streets run regularly at right angles with each otlier, but are not paved : the number of the houses may be estimated at about 450 ; some of them of stone, but the greater number of wood. The public buildings are a government and court-house, a Protestant and Catholic church, market-house, jail, and hospital, besides the gar-r.son, block-houses, and government magazines, wharfs, and spacious warehouses ; in fact, this is now the main entiepot between Montreal and the settlements along the lakes. The harbour is commodious and well sheltered for

ships not requiring more than three fathoms water, and has pood anchorage close to the north-eastern extremity of the town. The entrance is defended by a battery on Mississaga Point, and another on Point Frederick. Kingston also possesses one of the best harbours on lake Ontario, and it is a very important naval arsenal of Great Britain in this quarter. 190 miles north-west of Montreal. Long. 76° 40’ W., lat. 44° 8’ N.

KINGSTON, a township of the United States, in Addison county, Vermont. Population 324. There are numerous small towns of this name in the United States.

KINGSTON UPON HULL. See HULL.

KINGSTON UPON THAMES, a corporate town in Surry, with a market on Saturday. A national council was held here in 838, at which Egbert, the first king of all England, with his son Ethel-wolf, were present ; and several of the Saxon monarchs were crowned here ; and close to the north side of the church [is a large stone, on “which, tradition says, they sat during the cere- .nony. On the same side was formerly a chapel, adorned with the ficures of different kings who bad been crowned here. By the inscriptions over these figures it appeared that some of tliem have been crowne ! ir. the market-place, and

others in the chapel. — This town sent members to parliament in the reigns of Edward II. and III. ; but ceased afterward, in consequence of a petition from the corporation praying to be released from the burden ! The Lent assizes are held at this place. Here is a free-school, founded by queen Elizabeth, the school-room of which was an ancient chapel to the hospital of St. Mary Magdalen. An alms-house for twelve poor persons was founded here by William Cleve, esq. alderman of London, which was endowed with lands, the present annual income of whicli is £l-20. The wooden bridge over the Thames was the most ancient on that river except London Bridge ; it has been succeeded by a modern one at an expense of £40,000. It is ten miles south-west of London.

KING WILLIAM, acounty of Virginia, bounded N. N. E. by King and Queen county, S.S.W. by York River, and west by Caroline county.

KING-YUEN-FOU, a city of China, in Quanirsee, of the first rank. It is situated on a large river, surrounded by mountains, and inhabited by a very unpolished race. Gold is found in the district.

KING'STONE, n. s. Squatina. A fish.

KINHOA-FOU, a Chinese city of the first rank, in Tchekiang. It stands nearly in the centre of the prorince, on the banks of a considerable river, and was formerly of great extent. On the invasion of the Tartars it was almost destroyed, and has never been rebuilt on the same scale. The country round abounds with rice and wine ; and a trade is carried on to at parts of the empire in dried plums and hams Long. 119° 16' E., lat. 29° 16' N.

KINIC ACID, in chemistry, acidum kmicum, from kini, the French name of cinchona, from which it is obtained. Let a watery extract from hot infusions of the bark in powder be made. Alcohol removes the resinous part of this extract, and leaves a viscid residue, of a brown color, which has hardly any bitter taste, and which consists of kinate of lime and a mucilaginous matter. This residue is dissolved in water, the liquor is filtered and left to spontaneous evaporation in a warm place. It becomes thick like syrup, and then deposits by degrees crystalline plates, sometimes hexaedral, sometimes rhomboidal, sometimes square, and always colored slightly of a reddish-brown. These plates of kinate of lime must be purified by a second crystallisation They are then dissolved in ten or twelve times their weight of water, and very dilute aqueous oxalic acid is poured into the solution, till no more precipitate is formed. By filtration the oxalate of lime is separated, and the kinic acid, being concentrated by spontaneous evaporation, yields regular crystals. It is decomposed by heat. While it forms a soluble salt with lime, it does not precipitate lead or silver from their solutions. These are characters sufficiently distinctive. The kinates are scarcely known ; that of lime constitutes seven per cent, of cinchona.' We are indebted for the discovery to a Mr. Deschamps, apothecary at Lyons, who described the salt in the 48th volume of the Annaies de Chimie. He obtained it by macerating the bark in cold water; afterwards evaporating

the solution, and leaving it to crystallise. The crystals produced were equal to about seven per cent, of the bark employed. He did not prosecute his enquiry further ; and it was not until some experiments which were afterwards undertaken upon it by Vauquelin, that the salt in question was found to contain a new aoid.

KINO, in chemistry, is an astringent black resinous substance,

commonly called a gum, but very improperly; for, as V'auquelin has remarked, it has neither the physical nor chemical properties characteristic of those vegetable products. According to Dr. Duncan, the kino now known in the shops is principally imported from Jamaica; and is an extract from the coccoloba weifera, or sea-side grape. It is nearly wholly soluble in hot water and hot alcohol, and chiefly consists of tannin in a panicular state ; w.hich has the property of precipitating the salts of iron of a green color, instead of black. With gela-tine it forms a rose colored coagulum. It is in appearance very like the resin called sanguis draconis ; much redder, more firm, resinous, and astringent than catechu. It is now in common use, and is one of the most efficacious vegetable astringents, or styptics, in the materia medica. Its dose is from twenty to thirty grains.

KINROSS, a populous town in a parish of the same name, the capital of the county Kinross, containing 2917 inhabitants in 1831. It is seated on the west side of Lochleven. The manufactures are cutlery ware, leather, shoes, &c. It was formerly a very mean place, but many good houses have been lately built, and the streets much improved : Silesias and coarse cottons are now a principal manufacture. It is twenty-four miles north of Edinburgh, and fifteen south of Perth.

KINROSS, or KINROSS-SHIRE, a small county of Scotland, bounded on the north-east, east, and south, by that of Fife ; and on the west and north by Perthshire. It is almost circular, and about thirty miles in circumference. It sends a member to parliament, conjointly 'vith Clack-mannan. It contains only four parishes, *viz.* Cleish, Kinross, Orwell, and Portmoak. The middle part is occupied by that beautifnl expanse of water Loch-Leven, and from its banks the ground rises towards the north, with a gentle declivity; but, towards the south, the rise is more abrupt and rugged. Agriculture is well attended to, and the county is in a high state of improvement, producing gocd crops ; and on the sides of the lake are several seats. In the different districts are abundance of limestone and coal. Ironstone is also met with.

KINSALE, a town of Ireland, in the county of Cork, situated at the mouth of the Bandon, 186 miles from Dublin. It is reckoned the third town in the kingdom, and inferior only to Cork in point of trade. It is neat, well built : is governed by a sovereign and a recorder, and defended by a strong fort, built by king Charles II. called Charles's Fort. On the opposite shore there are two well built villages, called Cove and Scilly. In the town and liberties are six parishes containing 6846 acres. The barracks hold twelve companies of foot. In the centre of the town is a good market-house, and a strong

built prison. During the war Kinsale was a place of much business, being frequented by rich homeward bound fleets, and ships of war The harbour is very commodious, perfectly se-cure, and so large, that the English and Dutch Smyrna fleets have anchored in it at the same time. There is a dockyard for repairing ships of war, and a crane and gun wharf for landing and shipping heavy artillery. Ships may sail in or out of this harbour, keeping the middle of the channel, with the utmost safety. Within the haven on the west side lies a great shelf, which shoots far off from the land ; but leaves an ample passage by the side of it, which is many fathoms deep. Lord Kinsale has the ancient privilege of keeping his hat on in the king's presence, being lineally descended from John de Courcy, earl of Ulster, who first obtained this privilege.

KINS'FOLK, n. s.) See KIN. Persons of

KINS'MAN, n. s. >the same family, or con

KINS'WOMAN, n. s. j sanguinity.

My kinsfolk have failed, and my familiar friends forgotten me. Job xix. 14.

The jury he made to be chosen out of the nearest kinsmen, and their judges he made of their own fathers. Spenser.

Those lords, since their first grants of those lands, have bestowed them amongst their kinsfolkt. Spenser.

A young noble lady, near kinswoman to the fair Helen, queen of Corinth, was come thither. Sidney.

Both fair, and both of royal blood they seemed, Whom kinsmen to the crown the heralds deemed.

Dryden.

Let me stand excluded from my right, Robbed of my kinsman'i arms, who first appeared in fight. Id. Fables.

There is a branch of the Medicis in Naples : the head of it has been owned as a kinsman by the great duke, and 'tis thought will succeed

to his dominions.

Addison on Italy. Kinsman beloved, and as a son, by me !

When I behold this fruit of thy regard,

The sculptured form of my old favourite bard,

I reverence feel for him, and love for thee.

Coicper. To John Johnson.

A passing beggar hath remembered me, When with strange eyes my kinsmen looked on me. Maturin. Bertram. And now I take my leave, imploring you

In all things to rely upon my duty

As doth become your near and faithful kinsman,

And not less loyal citizen and subject.

Byron. Marino Faliero.

KINTYRE, or CANTYRE, from Cantierre, i. e. a headland, the south division of Argyleshire. It is a peninsula, stretching thirty-seven miles from north to south, and seven in breadth. It is mostly plain, arable, and populous ; inhabited promiscuously by Highlanders and Lowlanders ; the latter being invited to settle by the Argyle family in this place to cultivate the lands. It is divided by Lochfyne from Argyle Proper. There are many villages in this district, but no town of consequence, except Campbeltown. Kintyre was granted to the house of Argyle, after suppressing a rebellion of the Macdonalds of the Isles, in the beginning of the seventeenth century, and the grant was afterwards ratified by parliament. The ancient inhabitants were the Macdonalds, Maceachans, Mackays, and Mac-maths. See ARGYLE.

. K1NZIG, a circuit of the grand duchy of Baden, established in 1810. It comprises ten bailiwics, and extends along the Kinzig, from the Rhine on the west, to Wirtemberg on the east ; comprehending the southern part of the mar-graviate of Baden, the traek called the Ortenau, and the lordship of Wolfach. The chief town i > Otfenburjj. Population 118,000.

KIPLING (Thomas), D.D., was a native of Yorkshire, and educated at St. John's College ; Cambridge; where he proceeded B.A. in 1768; and M. A. in 1771 ; bachelor of divinity in 1779; and doctor in 1 784 ; at which time he was appointed deputy professor of divinity, under bishop Watson. In 1793 he rendered himself obnoxious by leading the prosecution of Mr. William Frend, of Jesus College, for professing Unitarianism while he held a fellowship ; in consequence of which, that gentleman was expelled the university. The doctor being afterwards selected to superintend the publication of the Codex of Beza, the zealots, who were already embittered against him, attacked this work with great acrimony. He was, however, consoled for the mortifications he endured by being made dean of Peterborough. He died at Holme, in Yorkshire, in 1822. The dean's works are — 1. The Elementary Parts of Dr. Smith's Cotnptete System of Optics, 4to. 1778 ; Codex Theodori Bezae Cantabrigiensis, Evangelia et Apostolorum Acta Complectens, Quadratis Literis Graeco-Latiuus, folio, 2 vols. 1793; The Articles of the Church of England, proved not to be Calvinistic, 8vo. 1802; and an 8vo. pamphlet, entitled Certain Accusations brought lately by the Irish Papists against British and Irish Protestants examined, 1809.

KIPPING, or KIPPINGIUS (Henry), a learned German Lutheran, born at Bostock; where, after having received the degree of M. A., he was met by some soldiers who pressed him into the service. This, however, did not prevent his following his studies. One day while he was upon duty, holding his musket in one hand and Statius's Thebaid in the other, a Swedish counsellor, who perceived him in that attitude, came up to him, entered into discourse with him, and then taking him to his house, made him his librarian, and procured him the under-rectorship of the college of Bremen, where he died in 1678. He wrote many works in Latin; the principal of which are, 1. A Treatise on the Antiquities of the Romans. 2. Another On the Works of Creation. 3. Sevenl Dissertations on the Old and New Testament, &c.

KIPPIS (Andrew), D.D. F.R.S., and F.S.A., an English biographer and divine, born at Nottingham, and educated under Dr. Doddridge at Northampton. He first settled as a minister at Boston, Lincolnshire, in 1746; thence removed to Dorking, Surry, in 1750; aud in 1753 to a congregation in Prince's Street, Westminster. He afterwards wrote in the Monthly Review, and in another periodical work called the Library, in 1761. In 1763 he was chosen philo-logical tutor to an academy for educating dissenting ministers. In 1773 he published a Vindication of the Protestant Dissenting Ministers, with regard to theii late application to par-

liament, which occasioned a controversy with dean Tucker. In 1777 he became editor of a new edition of the Biographia Britannica. Five volumes were published during his life, and the greater part of the sixth prepared before lie died. In 1788 he published the Life of captain Cook, in 1 vol. 4to., and a Life of Dr. Lardner, prefixed to his works. - He also wrote the History of Knowledge, Learning, and Taste, in Great Britain, contained in the New Annual Register; with various other tracts, sermons, &c. The university of Edinburgh presented him with the degree of D. D. He died at Westminster in 1795.

KIltCHER (Athanasius), a famous philosopher and mathematician, bora at Fulde in 1601. In 1618 he entered into the society of the Jesuits, and taught philosophy, mathematics, the Hebrew and Syriac languages, in the university of Wirtshurg, with great applause till 1631. He then went to France on account of the ravages committed by the Swedes in Franconia, and lived some time at Avignon. He was afterwards called to Rome, where he taught mathematics in the Roman College, collected a rich cabinet of machines and antiquities, and died in 1680. His works amount to twenty-two vols. folio, eleven in 4to., and three in 8vo. ; most of them are rather curious than useful ; but they display great talent and deep erudition. The principal are, 1. Praelusiones Magneticae. 2. Primitive Gnomonicae Catoptrics. 3. Ars magnae Lucis et Umbrae. 4. Musurgia Universalis. 5. Obeliscus Pamphilius. 6. Oedipus iEgyptiacus. 4 vols. folio. 7. Itinerarium Extaticum. 8. Obeliscus ˆEgytianus, in 4 vols. folio. 9. Mun-dus Subterraneus. 10. Chins IHustrata.

KIRCHER (Conrad), a learned German, who published a Greek and Hebrew Concordance of the Old Testament; with the Hebrew words arranged alphabetically, and the corresponding Greek under them ; in 1602.

KIRCHMAN (John), an eminent German divine, born at Lubec in 1575. He studied in several places of Germany; in 1602 was made professor of poetry at Rostock, and in 1613 rector of the university at Lubec. He exercised this last employment with extraordinary application during the rest of his life, and died in 1643. He wrote several works; the most esteemed of which are, 1. De Funeribus Romano-rum. 2. De Annulis, Liber Singularis.

KIRIN OULA, an extensive government of Eastern Tartary, to the north of China. It lies between the sea of Japan, the northern frontier of Corea, and the River Seghalien Oula, and is upwards of 700 miles long, and 200 of medium breadth. The climate is severe, considering the latitude, so that no grain, except oats and millet, comes to perfection. It is thus very thinly peopled, containing only three towns surrounded with mud walls. The best plant produced in this country is the ginseng, called by the Manchews the Queen of Plants, and celebrated for its virtues in the cure of various diseases. The country is a favorite scene for the hunting excursions of the emperors of China. The capital of the same name is situated on the river Songarie, which falls into the Seghalien, in Ion;- 126° 24', E., lat. 43° 48' N .

KIRJATH JEARIM, the city of the wood, a citv of the Gibeonites, belonging to the tribe of Judah, nine miles from TElia, in the road to Diospolis. It was also called Baala. — Joshua. The ark, after its recovery from the Philistines, stood for some time in this city. 1 Sam. viii.

KIRK, n. s. Sax.cyn.ce ; Gr. Kvptov oucoc-An old word for a church, yet retained in Scotland.

And the fest hold was in tentis, (As to tell you mine entent is,) In a rome in a large plane, Under a wode in a champaine, Betwixt a river

and a well ; Where never had abbay, ne selle, Vben, ne kirke, house, ne village, In time of any manes age.

Chaucer's Dreame.

Home they hasten the posts to dight, And all the hirk pillars ere daylight, With hawthorn buds, and sweet eglantine.

Spenser.

What one party thought to rivet by the Scots, that the other contemns, despising the kirk government and discipline of the Scots. •ˆ<”</ Charles.

Nor is it all the nation hath these spots, There is a church as well as k'u k ot' Scots.

Cleaveland.

KIRKALDY, a royal burgh of considerable importance in Fifeshire, extending more than a mile in length, and is about three miles from Kinghorn. The name is supposed to be derived from the Culdees, or Keldei, as they are called in the old charters. The town extends along the sea-shore, consisting principally of one long street, and a few lanes of small extent opening on each side of it. There are from thirty to forty large vessels belonging to this port, which trade to the Mediterranean, Baltic, West Indies, and America. The relative consequence of this burgh may be judged of from the circumstance, that in all public assessments it is rated as the sixth burgh of Scotland, and one-fortieth of the whole supplies levied from it. The principal manufactures of Kirkaldy are cottons, linens, checks, ticks, leather, cotton-spinning, &c. Kirkaldy joins with the neighbouring burghs of Dysart, Kinghorn, and Burntisland, in sending a representative to the imperial parliament.

KIRKCUDBRIGHT, a county of Scotland, which makes a considerable part of Galloway, of which the earls of Nithisdale were hereditary stewards. The face of the country exhibits the appearance of one continued heath, producing nothing but pasture for sheep and small black cattle, which are generally sold in England ; yet these dusky moors are intersected with pleasant valleys, and adorned with a great number of castles belonging to private gentlemen, every house being surrounded with an agreeable plantation. It is watered by the Dee ; which, taking its rise from the mountains near Carrick, runs through a •ract of land about seventy miles in length, and, entering the Irish sea, forms the harbour of Kirkcudbright. Of late years, agriculture has been

much improved, and manufactures of cot-ton and linen have been established, although it wants all the natural advantages of the neighbouring counties. There are several small lakes in this county, but Loch-Kenmure is the largest, being ten miles long: in this loch ˆare*1 pikes

are caught, weighing from twenty to thirty pounds and upwards.

KIRKCUDBRIGHT, a royal burgh in the above county. This place, which lies 101 miles south-west from Edinburgh, is a neat, clean, well-regulated burgh. There are twenty-eight brigs and stoops belonging to this port ; and it has a harbour equal to any on that coast of Scotland. The present castle is a strong massy building, almost entire, though built in 1582. The town bears several marks of having been at one period fortified. About the middle of the town is a large and elegant court-house, built about the year 1791, for the accommodation of the courts of justice, and the public meetings of the stewar-try; and in 1816 a commodious new gaol in the Gothic style was erected near the court-house'. A large and elegant academy, containing a room for the public library, was also built in the same year. It never had any considerable trade or manufacture; but about the year 1792 a manufacture of cotton was established, which continues to be carried on to a small extent.

KIRKLAND (Thomas), M. D., an eminent physician, born in 1 720. He was a zealous enquirer after medical science, and a successful practitioner. He was a member of the Royal Medical Society in Edinburgh, and of the Medical Society in London. He published An Enquiry into the present State of Medical Surgery, and some other valuable works. He died at Ashby dela Zouch, in Leicestershire, in 1798, aged seventy-eight.

KIRK-SESSION, the fourth and lowest ecclesiastical judicatory in Scotland. Each parish, according to its extent, is divided into several particular districts ; every one of which has its own elder or deacon to oversee it. A consistory of the ministers, elders, and deacons of a parish, form a kirk-session. These meet once a week, the minister being their moderator, but without a negative voice. They regulate matters relative to public worship, elections, catechising, visitations, &c. They judge in matters of minor scandal ; but in all cases an appeal lies from it to the presbytery. Kirk-sessions have likewise the care of the poor's funds.

KIRKWALL, a royal borough, the capital of the Orkneys. It is built upon an inlet of the sea, near the middle of the island of Pomona, having a very safe road and harbour for shipping. It is governed by a provost, four bailies, and a common council. It was formerly possessed by the Norwegians, who bestowed upon it the name of Crucoviaca. From king James III. of Scotland they obtained a new Charter, empowering them to elect their own magistrates yearly, to hold borough courts, arrest, imprison, make lu\vs and ordinances for the right government of the town ; to have a weekly market and three fairs. He also granted them some lands adjoining to the town, with the customs and shore-dues, the power of pit and gallows, and exempted them from the expense of sending commissioners tc parliament. This charter was confirmed by succeeding monarchs. At present Kirkwall is the seat of justice, where the steward, sheriff, and commissary, hold their several courts of jurisdiction: here is likewise a public grammar-

school, endowed with a competent salary for the master. The town consists of one narrow street about a mile in length ; the houses are chiefly Covered with slate. The principal edifices are the cathedral church and the bishop's palace. The former, called St. Magnus, from Magnus king of Norway, the supposed founder of the town, is a large Gothic structure ; the roof is supported by fourteen pillars on each side, and the spire is built upon four large columns. The gates are decorated with a kind of Mosaic work, of red and white stones elegantly carved and flowered. By the ruins of the king's castle or citadel, it appears to have been a strong and stately fortress. At the north end of the town there is a sort of fortification built by the English in the time of Oliver Cromwell. It is surrounded with a ditch and rampart, and mounted with cannon for the defence of the harbour.

KIRRIEMUIR, a burgh of barony, of considerable antiquity. It is about sixteen miles from Dundee, twenty-five from Perth, and sixty-four from Edinburgh. Situated in a fertile, extensive, and populous district,

it is the mart to which the inhabitants of the neighbouring parishes chiefly resort. Hence no town in the county has a better weekly market ; in none of its size is more trade carried on. Nine carriers go regularly to Dundee twice, often thrice a-week. There are two great annual fairs here, in July and October.

KIRSTENIUS (Peter), professor of physic at Upsal, and physician extraordinary to the queen of Sweden, was born at Breslaw in 1577. He studied Greek, Latin, Hebrew, Syriac, natural philosophy, anatomy, botany, and other sciences. In order to be able to read Avicenna, he applied himself to the study of Arabic ; and not only read Avicenna, but also Mesue, Rhasis, Abenzoar, Abukasis, and Averroes. He visited Spain, Italy, and England, and did not return home, till after seven years. He was chosen by the magistrate's of Breslaw to superintend their college and schools. Sickness having obliged him to resign that employment, he went with his family into Prussia.. Here he obtained the friendship of chancellor Oxenstiern, whom he accompanied into Sweden ; where he was made professor of physic in the University of Upsal, and physician to the queen. He died in 1640. He wrote many works; among which are, 1. Liber secundus Canonis Avicennae, typis Arabi-cis, ex MSS. editus, et ad verbum in-Latinum translatus, in folio. 2. De vero usu et abusu Medicinae. 3. Grammatica Arabica, folio. 4. Vitse quatuor Evangelistarum, ex antiquissimo codice MS. Arabico erutae, in folio. 5. Notae in Evangelium S. Matthsei, ex collatione textuum Arabicorum, Syriacorum, ˆEgyptiacorum, Grae-corum, et Latinorum, in folio, &c.

KIRTHIPORE, a town of Hindostan, in the province of Nepaul, and district of Patn. It was formerly the capital of an independent principality, but was taken by the rajah of Nepaul in the year 1768, who. for the resistance they made, most inhumanly ordered the noses of all the inhabitants to be cut off. Long. 85° 37' E., lat. 27° 30' N.

KIRTLE, n. s. Sax. cynrel. An upper garment; a gown.

Yclad he was ful smal and proprel v, All in a kirtel of light waget, Full faire and thicke ben the pointes set.

Chaucer. The Millera Tale. And in a kirtet of greene saye, The greene is for maydens meet. Spenter.

All in a kirtle of discoloured say He clothed was. Faerie Queene.

What stuff wilt thou have a kirtle of? Thou shall have a cap to-

morrow. Shaktpeare. Henry IV.

Thy gowns, thy shoes, thy beds of roses, Thy cap, thy kirtle, and thy posies, Soon break, soon wither, soon forgotten, In folly ripe, in reason rotten. Raleigh.

KIRWAN (Walter Blake), an Irish divine, and celebrated preacher, was born at Galway about 1754. He was educated in the English Catholic college at St. Omer's, and next at Louvain, where he entered into priest's orders, and became professor of philosophy. In 1778 he was appointed chaplain to trie Neapolitan embassy in London; but in 1787 conformed to the established church in Dublin, where his popularity as a preacher was great to an unparalleled degree. In 1788 the governors of the general daily schools of several parishes in Dublin entered into a resolution, 'That from the effects produced by the sermons of the Rev. Walter Blake Kirwan, from the pulpit, his officiating in this metropolis was considered a peculiar national advantage, and that vestries should be called to consider the most effectual method to secure to the city an instrument, under providence, of so much public benefit.' He was presented this year to a prebend in the cathedral of Dublin, and the living of St. Nicholas; but resigned the former in 1800, on being promoted to the deanery of Killala. He died in 1805. A volume of his sermons has been printed, with an account of his life.

KIRWAN (Richard), a distinguished modern geologist, was a native of the county of Galway in Ireland, and educated in the University of Dublin, where he took the degree of LL.D. He devoted himself with great ardor to chemical and mineralogical researches, and became a member of the Royal Irish Academy, and fellow of the Royal Society. He published in the Philosophical Transactions for 1781, 1782, and 1783, Experiments and Observations on the Specific Gravities and Attractive Powers of various Saline Substances ; which subjecc he farther prosecuted in the Transactions for 1785. His Elements of Mineralogy, 2 v&ls. 8vo., appeared in 1784, and were translated into German by Crell. In 1787 he published an Essay on Phlogiston and the constitution of Acids. This production was translated into French by the advocates for the anti-phlogistic hypothesis, and published with animadversions on the rival system, to which Dr. Kirwan became a convert. He was the au-thor, besides the foregoing works, of An Estimate of the Temperature of different Latitudes, 1787, 8vo. ; a Treatise on the Analysis of Mineral Waters, 8vo. ; and another on Logic, 2 vols. 8vo., &c. He founded at Dublin an association for the purpose of cultivating mineralogy; and,

as a geologist, distinguished himseif by advocating what has been called the Neptunian theory of the earth, in opposition to that of Dr. Hutton. His death took place in 1812.

KISHME, or KISMIS, or Jezira Derauz, (Long Island), the largest island in the Persian Gulf, is about ten miles from Ormus, and runs sixty miles parallel with the Persian shore. It is no where more than twelve miles broad. Formerly considered the granary of Ormus, it had 300 villages upon it, we are told, but it is now much declined. The soil is well adapted to wheat ; and the sheep reared upon it are remarkably line. It is under the rule of an independent Arab chief, who pays tribute to the Imam of Muscat. The town of Kishme, on the eastern side of the island, is defended by a wall and fort, and has a roadstead in which ships may ride securely during the westerly winds. The channel between Kishme and the main land va-ries from three to eight miles wide. Long. 56° 50’ E., lat. 26° 57’ 30* N.

KISHTAC, a large island in the North Pacific Ocean, in long. 152° 30” to 154° 50’ W., lat. 57° to 58° 40’ N. It is about 100 miles in length, and from thirty to fifty in breadth. Also an island on the north-west coast of North America, eastward of Foggy Cape, and opposite the mouth of Cook’s River.

KISHTEWAR, a town and district of Hindostan, situated principally between 33° and 34° of N. lat. in the north-east extremity of the province of Lahore, or near the south range of the Cashmere Mountains. The district is in general hilly, cold, and covered with wood. Hence it retains its independence. It is intersected by the Chunaub, over which there are no bridges ; but at the village of Nausman, where it is seventy yards wide, a large basket is slung to a tight rope, reaching from side to side, and well secured by posts, and in this the passage is effected.

KISS, v. a. &w.s. •) Welsh cusan ; Gr.

KISS’ER, n. s. > KWW. To touch or salute

Kiss’tNG-CRUST,n. s. J with the lips; to treat

with fondness; to touch gently; a salute: kissing-crust, crust formed

where one loaf touches

another in the oven.

And, mekeley, she to the sergeant praid (So as he was a worthy gentilman) That she might kisse hire childe, er that it died : And in her barme, this litel child she laid, With full sad face ; and gan the child to blisse, And lulled it, and after gan to kisse.

Chaucer. The Clerket Tale. ‘ Have mercie, Lord! upon us wimmen alle.’ And on hir bare knees adoua they falle; And would have kist his feet ther as he stood.

Chaucer. The Knightes Tale. Thy love I dare not aske, or mutual fixing, One /.“W is all my love and prides aspiring, And after starve my heart, for my too much desiring.

Spenser. Britain1! Ida.

What sense had I of her stolen hours of lust”! I found not Cassio’s kisses on her lips.

Shtikspeare. Othello. The hearts of princes kiss obedience, So much they love it ; but to stubborn spirits, 1 hoy swell and grow as terrible as storms.

Shaktpeare,

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Their lips were four red roses on a stalk, And in their summer beauty kitted each other,

H.

But who those ruddy lips can miss, Which blessed still themselves do kist?

Sidney.

Upon my livid lips bestow a Aiss : O envy not the dead, they feel not

bliss !

Drwfc*-

These baked him kiuinycrusts, and those Brought him small beer. King’s Cookery.

No lordly patron’s hand he deigned to kits, Nor luxury knew, save liberty, and bliss.

Cowper. A Fowler.

Woman, oh woman, and an urchin’s kist, Rends from thy heart thy love of many years — Go, virtuous dame, to thy most happy lord, And Bertram’s image taint your kist with poison.

Maturin. Bertram. With a swimmer’s stroke

Flinging the billows back from my drenched hair, And laughing from my lip the audacious brine. Which kissed it like a wine-cup, rising o’er The waves as they arose, and prouder still The loftier they uplifted me. Byron. Two Foscari.

KISSER, a cape, bay, and town, on the south coast of Arabia, in long. 51° 20’ E., a..d lat. 15° 19’ N. No water is nearer than a mile west. There are two inferior towns beside in this bay.

KISSER, in geography, a town of Africa, the ancient Colonia Assuras, as appears from many inscriptions still to be met with in the place. Here is a triumphal arch done in a very good taste ; there is also a small temple of a square figure, with several instruments of sacrifice carved upon it. The town is situated in the kingdom of Tunis, on the declivity of a hill, above a large fertile plain ; which is still called the plain of Surso, probably from its ancient name Assuras.

KISSING, by way of salutation, or as a token of respect, has been practised in all nations. The Roman emperors saluted their chief officers by a kiss. Kissing the mouth or the eyes was the usual compliment upon any promotion or happy event. Soldiers kissed the general’s hand when he quitted his office. The Romans affected such a degree of delicacy, that they ne-ver embraced their wives in the presence of their daughters ; yet what people ever plunged deeper in the most abominable vices ? Near relations were allowed to kiss their female kindred on the mouth, to discover if they smelt of wine ; as the Roman ladies sometimes made too free with the juice of the grape. Slaves kissed their master’s hand, who used to hold it out to then, for

that purpose. Kissing was a customary mode of salutation amongst the Jews, as we may collect from Judas approaching his master with a kiss. Relations used to kiss their kindred when dying, and when dead ; when dying, out of a strange opinion that they should imbibe the departing soul ; and when dead, by way of valedictory ceremony. They also kissed the corpse after it was conveyed to the pile, when it had been seven or eight days dead.

KISTNA, or KRISHNA, a river of the south of India, so called after the celebrated deity of this name. It takes its rise near Sattarah, in the province of Bejapore, fifty miles in a direct line from the western sea-coast. During its course east-

\vard, it is joined by the Malpurba, Gutpurba, Beeraah, and Toombuddra, and pours a prodigious volume of waters, by various mouths, into the Bay of Bengal. It is 650 miles in length ; but, owing to sand at its mouths, it is not navigable by ships. This river formed the southern boundary of the Mahommedan kingdom of the Deccan.

KISTNAGHURRY, a town and fortress of Barramahal in the south of India. It is situated on a rock nearly 700 feet in perpendicular height, and has never yet been taken by force. In November 1791 the British troops were repulsed in attempting to storm it ; but it came into our possession along with the province, in 1792, and has been since dismantled. It is surrounded by extensive rice fields. Long. 78° 23’ E., lat. 12° 32’ N.

KIT, n. s. But. kitte. A large bottle : a small diminutive fiddle. A small wooden vessel, in which Newcastle salmon is sent to London and elsewhere.

Tis kept in a case fitted to it, almost like a dancing master’s hit.

Grew'* Museum.

KITCH'EN, n. s. ~\ Saxon cycene; KITCH'ENGARDEN, n.s. j Welsh kegin ; Flem. Km H'EN-MAID, n.s. I keg; Fr. cuisine ; Ital. KITCH' ENSTUFF, n. s. j cucina ; Erse, kyshen. KITCH'ENWENCH, n. s. \ The room in a house KITCH'EN-WORK, n.s. J where the provisions are cooked : kitchengarden, garden in which esculent plants are produced: kitchen-maid, a maid under the cook maid: kitchenstuff, tlie fat of meat scummed off the pot, or gathered from the dripping pan: kitchenwench, scullion; maid employed to clean the instruments of cookery : kitchen-work, cookery, or work done in the kitchen.

These being culpable of this crime, or favourers of their friends, which are such by whom their kitchent are sometime amended, will not suffer any such statute to pass. Spenser.

Can we judge it a thing seemly for any man to go about the building of an house to the God of heaven, with no other appearance than if his end were to .rear up a kitchen or a parlour for his own use 1 Hooker. Laura to his lady was but a kitchenu-ench.

Shakspeare.

He was taken into service in his court to a base office in his kitchen ; so that he turned a broach that had worn a crown. Bacon.

Gardens, if planted with such things as are fit for food, are called kitchengardens. Id.

As thrifty wench scrapes kitchenstuff, And barrelling the droppings and the snuff Of wasting candles, which in thirty year, Reliquely kept, perchance buys wedding cheer.

Donne.

To that arch city of this government, The first three pipes the ready feast convoy : The other three in baser office spent, Fling out the dregs which else the kitchen cloy.

Fletcher's Purple Island. Instead of kitchenstujf' some cry A gospel-preaching ministry. Hudibras. A kitchengarden is a more pleasant sight than the finest orangery. Spectator.

\Ve see no new-built palaces aspire, No kitchens emulate the vestal fire. Pope.

Roasting and boiling leave to the kitchenwench.

Suift.

The kitchen soon was all on fire, And to the roof the flames aspire. Coieper.

Mr. Griffin, Sir, — This is to let you know, that though I can't write nor read, our Peter writes this for me, and I hear all your papers read in our kitchen. Canning. Microcosm.

KITCHEN, ARMY, is a space of about sixteen or eighteen feet diameter, with a ditch surround ing it three feet wide; the opposite bank of which serves as a seat for the men who dress the victuals. The kitchens of the flank companies are contiguous to the outline of the camp ; and the intermediate space is generally distributed equally for the remaining kitchens. As each tent forms a mess, each kitchen must have as many fire-places as there are tents in the company.

KITCHEN, PUBLIC. See PUBLIC KITCHEN.

KITE', n. s. I Sax. cyte; Welsh cud. A

KITES'FOOT, n. s. I bird of prey that infests farms and steals chickens ; a name of reproach denoting rapacity; a fictitious bird made of paper: kitesfoot, a plant.

The starling that the counsaile can bewrie ; The tame ruddocke ; and the cowarde-kite.

Chaucer. The Assemble of Faults. Detested kite ! thou liest.

Shakspeare. King Lear. More pity that the eagle should be mewed, While kites and buzzards prey at liberty.

Shakspeare.

The heron, when she soareth high, so as sometimes she is seen to pass over a cloud, sheweth winds ; but kites, flying aloft, shew fair and dry weather.

Bacon.

A leopard and a cat seem to differ just as a kite doth from an eagle. Grew.

A man may have a great estate conveyed to him ; but if he will madly burn, or childishly make paper kitts of his deeds, he forfeits his title with his evidence. Government of the Tongue.

KITE, in ornithology. See FALCO. KIT'S, (St.), or St. Christopher's, one of the West India Islands. See CHRISTOPHER'S.

KITTEN, n.s. &u.n. Teut. kasgin. The diminutive of cat. A young cat : to bring forth young cats.

So it would have done At the same season, if your mother's cat Had kittened, though yourself had ne'er been born.

Sliakspeare.

That a mare will sooner drown than an horse, is not experienced ; nor is the same observed in the drowning of whelps and kittens.

Browne's Vulgar Errovn.

The eagle timbered upon the top of a high oak, and the cat kittened in the hollow trunk of it.

L' Estrange.

Helen was just slipt into bed ; Her eyebrows on the toilet lay,

Awav the kitten with them fled, As fees belonging to her prey. Prior.

It was scratched in playing with a kitten.

Wiseman.

Close by the threshold of a door nailed fast Three kittens sat ; each kitten looked aghast.

Cowper. Colubriad.

KIUTAHIA, a city of Asia Minor, the capital of Anatolia, is situated partly at the foot, and partly on the sides of the Poorsac Dag, a range of mountains bounding a fertile valley, on

the south. It occupies the position of the ancient Cotyoeum. The town, covering a considerable extent of ground, is of course uneven in its site ; but contains several handsome fountains, conveyed from the hills by aqueducts ; and, though not so populous as formerly, is said still to contain between 50,000 and 60,000 inhabitants, Armenians and Greeks. There are said to be thirty hummums or public baths, fifty mosques, four Armenian and one Greek church, and twenty caravanseras. Here are also the ruins of a castle, which must have been once of great strength. Long. 29° 52’ E., lat. 39° 25’ N.

KIU-TCHEOU-FOU, a town of China of the first rank, in the province of Tchekiang. It is built on a fine river, and borders on Kiangsee and Footchien, from which last it is separated by a range of mountains, the ascent of which is by stairs. Long. 118° 39’ E., lat. 29° 2’ N.

KIZILERMAK, the ancient Halys, a considerable river of Asia Minor, which rises from Mount Argish, near Kaisarieh ; and, after flowing westwards, turns to the south, and falls into the Black Sea, about forty miles south of Sam-soon, in long. 36° 10’ E., and lat. 41° 30’ N. It is considered the finest river in Asia Minor.

KIZLAR, a fortified town and district of Asiatic Turkey, in the government of Caucasus. It is situated near the confluence of the Terek •with the Caspian, and was bu.lt in 1736. It is garrisoned by battalions of the tribes who wan-der over the steppe between Kizlar and Astrakhan, chiefly Nogays, Troukhmen, and Kalmuks. It is an entrepot for the commerce of Astrakhan with Persia and the Caucasus. Wine, brandy, and silk are produced and exported in considerable quantity ; also the oil of sesamus. Long. 46° 29’ lo’” E., lat. 43° 51’ N.

KLAPROTU {Martin Henry Yon), professor of chemistry at Berlin, died there at a very advanced age, January 1st 1817, having been a writer on that science above forty years. He was the fortunate discoverer of uranium, the zirconia, and mellitic acid ; and made various interesting experiments on copal, tellurium, and titanium. His works in German make 6 vols. 8vo.

KLATTAU, a circle and town of the south of Bohemia, bounded by

Pilsen and Prachatitz, and in part by the north-east frontier of Bavaria. The area of the circle is 870 square miles, with 140,000 inhabitants. The town is well built, and has extensive woollen manufactures. In the neighbourhood are marble quarries, some silver mines, and a celebrated mineral water. The town is said to have been surrounded with walls in the year 1000. In 1810 part of it was destroyed by fire. Population 4000 : sixty-nine miles south-west of Prague.

KLEBER (J. B.), a French general, was born in Strasburgh in 1759, and was educated for an architect. Accident led him to enter into the Austrian service, in which he continued eight years, and then, returning to his native country, he became inspector of the public buildings in Upper Alsace. The revolution of France rekindled his military ardor, and he obtained a commission in the service. He displayed great bravery and judgment at the siege of Alayenct?. after which he \vas employed in

La Vende”e ; but the sanguinary scenes of that province so disgusted him, that he obtained his recal, and was afterwards engaged in the north, where he defeated the Austrians, took Mons, and drove the enemy from Louvain. He also took Maestricht, and contributed to the capture of several other strong places. Discontented with the directory, he left the army and returned to Paris, where he led a private life, vriting his military memoirs, till Buonaparte, be.ng appointed general of the army of Egypt, chose Kleber as his companion. At the siege of Alexandria he was wounded on the head as he was climbing the ramparts, but did not retire till he received a second wound. He defeated the Turks in several actions, and Buonaparte, on quitting Egypt, left him in the chief command. In a shoit time he signed the treaty of El-Arish witli Sir Sydney Smith, by which the French agreed to leave Egypt ; but it was annulled by the British government, and hostilities were renewed. Kleber, though reduced, did not bend under his misfortunes, but defeated the Turks at the obelisk of Heliopolis. He next took Cairo by storm, aud formed an alliance with Murat Bey ; but was assassinated by a Turk named Solyman, who gave him four stabs with a dagger, in the year 1800.

KLEINHOVIA, in botany, a genus of the decandria order, gynandria class of plants; natural order thirty-seventh, columniferae : CAL. pentaphyllous ; the petals five ; the nectarium campanulated and pedunculated, containing the stamina : CAPS, inflated and five seeded.

KLEIST (Edward Christian de), a celebrated German poet, and a

soldier of distinguished bravery, was born at Zeblin, in Pomerania, in 1715. He studied at Cron in Poland, and afterwards at Dantzic and Koningsberg. Having in vain endeavoured to obtain preferment in the law, at twenty-one years of age he accepted a post in the Danish army. He then studied all the sciences connected with military affairs, with the same assiduity he had before studied civil law. In 1740, at the beginning of the reign of Frederick king of Prussia, he went to Berlin, and was presented to the king, who made him lieutenant of his brother prince Henry's regiment; and he was in all the campaigns which distinguished the first five years of Frederick's reign. In 1749 he was made a captain ; and published his excellent poem on the Spring. Before the breaking out of the war with Russia, the king appointed him companion to prince Frederick William, and to eat at his table. In 1756 he was nominated major of Hausen's regiment. Afte*- the battle of Rosbach the king gave him, by an order in his own hand writing, the inspection of the great hospital established at Leipsic. In 1758, prince Henry coming to Leipsic, captain Kleist desired to serve in his army, which was readily granted. He also served that prince at the beginning of the campaign of 1759, i>i Franconia, and in all the expeditions of that army, till he was detached with the troops under general de Fink to join the king's army. On the 12th of August was fought the bloody battle of Kunersdorf, in which he fell. He nsiarht have recovered, but the fractured bones >:iv.ii£ cut

an artery, lie died next day by loss of blood, after experiencing mucn kindness from the Russian huzzars. Though the city of Frankfort was then in the hands of the enemy, they buried this Prussian hero \v th all military honors : the governor, magistrates, professors, and students, with many of the Russian officers, forming the procession, preceded b) the funeral music. His poems, which are greatly admired, are elegantly printed in the German tongue, in 2 vols. 8vo.

KLICK, v. n. From clack. To make a small sharp noise. In Scotland it denotes to pilfer, or steal away suddenly with a snatch.

KLOPSTOCK (Frederick Theophilus), a celebrated poet of Germany,

born at Quedlinburgon the 2nd of July, 1724. After learning at home the elements of the languages, he proceeded in his sixteenth year to college, where his character displayed itself advantageously. He applied very diligently to compositions in prose and verse, and wrote, among other poetical essays, some pastorals, the favorite subjects of the youthful muse in the German universities. At so early a pe-riod as the present he took the resolution of writing an epic poem, which had hitherto not existed in the German language. The high opinion he had of Virgil, his favorite poet amongst the ancients ; the honor he promised himself in being the first who should offer the German public a work like the .flEneid; the warmth of patriotism that early animated him to raise the fame of German literature, in this particular, to a level with that of other European countries; all combined with the consciousness of his own superior powers, to spur him on to the execution of his purpose. He was, however, long undecided in the choice of his subject ; he sought out some hero in the German history ; but, after choosing and rejecting for some time, at length gave the preference to the Messiah. This was even before his acquaintance with Mil-ton, whose Paradise Lost was but lately become an important subject of his study. In the autumn of the year 1745 he left the college, and repaired to the university at Jena. He now applied to the study of divinity. In the Easter of 1746 he left Jena and went to Leipsic in company with his cousin Schmidt, from Langensalza, afterwards privy counsellor at the court of Vienna. Here he soon became acquainted with the young favorites of the muses, who had formed themselves into a sort of literary society, in order to purify their taste by mutual criticisms on their essays, the best of which were published in the paper entitled Bremen Contributions. Their names were Gaertner, Cramer, Schlegel, Geiseke, Rabener, Zacharia, and others. Our poet was admitted into their society, and attended their meetings. About this time Klopstock began to display his genius in the lyric style, and produced many excellent odes of this description. These, together with the three cantos of the Messiah, appeared at first in the Bremen Contributions. The Messiah acquired, in the space of a few years, its merited attention from all ranks in Germany. It found friends and enemies, admirers and critics, every where; but its approbation was owing as much to the sacredness

of the matter as to the beauty of the poetry ; Christian readers loved it as a book that afforded them, at length, amidst the themes of cold orthodoxy, some scope for devout feeling: young preachers quoted it in the pulpit, and coupled the name of Klopstock with that of the prophets.

Klopstock now, however, began to find Leipsic unpleasant to him ; his friends had one by one left the university, and he felt himself alone. He therefore in 1748 repaired to Langensalza, in which place he remained till 1750, when he was invited by his friend Bodmer to visit him in Switzerland. Klopstock accordingly accompanied the philosopher Sulzer to Zurig, where he remained for a considerable time. He became indeed so pleased with the scenery of the country, and the simple manners of the inhabitants, that he intended to settle and spend the remainder of his life there, when he received an invitation from Bernstorff to settle at Copenhagen with an assurance that such a pension should be given him as should permit him to devote himself solely to literature. Klopstock set off in the spring of the year 1751 for Denmark. He took the road to Copenhagen by Saxony and Quedlinburg, where he saw his relations; and at Brunswick he visited some of his academical friends; at Hamburg he enjoyed the company of Hagedorn, became acquainted with Miss Muller, celebrated in his odes under the name of Cidli, and who was a great admirer of his Messiah. At Copenhagen, Klopstock met with the most cordial reception from Bernstorff. He there lived a very secluded tranquil life, never obtruding his presence at court, but dedicating his time entirely to his poem. During his residence here he appears to have enlivened his mind by the works of Dr. Young and Samuel Richardson. WithJhe former he even kept up a correspondence, and addressed an ode to him expressive of his very high esteem and regard. The lively interchange of letters that passed uninterruptedly between his beloved Cidli and himself, knit the bonds of affection still closer, and in 1754 he travelled to Hamburg, where she at length became his wife. But he enjoyed for a short time only the true bliss of connubial affection. This amiable and affectionate lady was snatched from him in childbed about nine months after their marriage. To the year 1771 Klopstock made Copenhagen his usual place of residence ; but after that time he lived mostly in Hamburg, in the character of royal Danish legate, and counsellor from the court of the Margrave of Baden. This latter title, together with a pension, was the grant of the elector Frederick of Baden, whose invitation to our poet was so pressing, that he spent the year 1775 at the court of Carlsruhe. While sinking into the grave, he was engaged to present posterity with a collection of his works, such as would be worthy the great poet. From the year 1798 they passed through the office of the famous Goschen three different times, and evince the high veneration in which the poet was held by his contemporaries. Klopstock died as he had lived March 14th, 1803. His Messiah will ever remain a monument of his genius, and on the

raiue of his odes all cultivated Germans have but one opinion. From the superior talents of this poet, in the epic style, it is usual to forget his dramatic pieces, which are, however, certainly of no mean value. Although his tragedies are more fitted for reading than representation, yet they discover the same traits of simplicity, dignity, and force of amplification, as well as elegant language, which characterise all his productions.

KLOSTER-NEUBURG, a town of Lower Austria, on the right side of the Danube, six miles north of Vienna. It was once a Roman colony. It contains several monuments of interest, and takes its name from a monastery of the order of St. Augustine, founded in 1114. The church has several curiosities ; and in the treasury has been preserved, since 1616, the crown of the archduke of Austria, which is regularly carried to Vienna on the accession of a new sovereign. The library of this monastery contains 25,000 printed volumes, besides He-brew, Arabic, and Latin MSS. The cellars are of great extent, and contain a celebrated tun, the largest in Germany, next to that of Heidelberg. In 1688 the lower town was burnt by the Turks, but the upper town resisted all their efforts. Here is a dockyard for light-armed vessels, and a government manufacture of arms. Long. 16° 17’ E., Int. 48° 19’ N.

KLOTZ (Christian Adolphus), an eminent German critic, born in the year 1738 at Bi-schofswerden, near Dresden, where his father was settled as a clergyman. He ˆdisplayed, at an early period, such an attachment to letters, that his parents spared no expense to gratify his taste, and to enable him to cultivate his talents to the best advantage. He employed those leisure hours, which other youths devote to amusements, in composing and reciting German verses. At Gorlitz he studied, under Baumgar-teu, the Greek and Roman classics, and gave a specimen of his powers in versification by a poem composed on the

Destruction of the Zit-tau, which was laid waste in the year 1757. In 1758 he proceeded to Leipsic to study jurisprudence, and while here published several papers in the Acta Eruditorum, and some separate pieces. In 1761 he published his Opuscula Poetica, containing twenty-three odes, three satires, and as many elegies. From Leipsic he repaired to Jena, where he opened a school, which was well attended.

Having accepted of an invitation to a professorship at the University of Gottingen, in 1762, he set off for that place, and almost immediately after his arrival he was attacked by a severe illness, from which, however, he recovered, and immediately published a treatise, De Verecundia \ irgilii, to which were added three dissertations relative to the eclogues of the poet. He also published Miscellanea Critica, and applied himself to the study of ancient paintings, with which he became well acquainted. His celebrity had now so much increased, that he received two offers, one from the prince of Ilesse Darmstadt, to he professor of the oriental languages at Giessen, and the other from his Prussian majesty, to be professor of eloquence at Halle.

While lie was deliberating respecting fne choice he should make, he was nominated by his Britannic majesty to be professor of philosophy at Gottingen, with an increased salary. He soon, however, quitted Gottingen, and accepted an offer made him by his Prussian majesty of being professor of philosophy and eloquence at Halle, with the rank and title of aulic counsellor. While preparing for his departure, he published Historia Nummorum Contumeliosorum et Saty-ricorum, containing a history of these coins ; and on his removal to Halle he gave the public another work of the same kind, and at the same time effected the institution of a new society, called the Literary Society of Halle. In 1766 he was invited by his Polish majesty to Warsaw, to superintend the education of the children of the Polish nobility, which he would gladly have accepted, as it afforded him an opportunity of visiting new countries; but the king ordered him to remain at Halle, conferred upon him the rank of privy counsellor, and accompanied this mark of honor with a considerable addition to his salary. He died in 1771, leaving behind him many other works besides those to which we have referred. Before his death he revised every thing which he had written on coins, and published Opuscula, Nummana quibus Juris Antiqui Historiaeque nonulla Capita explicantur.

KNAB, v. a. } Belg. knappen ; Erse.

KNAB'BLE, v. n. S knaap. To bite. Perhaps properly to bite some brittle, that makes a noise when it is broken.

Horses will knabble at walls, and rats gnaw iron.

Jlrowtie.

I had much rather lie knubbing crusts, without fear, in my own hole, than be mistress of the world with cares. L'F.stiuuˆe.

An ass was wishing, in a hard winter, for a little warm weather, and a mouthful of fresh grass to knab upon. Id.

KNACK, n. s.&v.n.) Sax. cnanmje, skill.

KNACK'ER, n. s. \ A little machine ; a petty contrivance ; a toy. (This word is apparently formed from the knacking or snapping of the fingers, used by jugglers.) A readiness; facility; a dexterity; a nice trick: knack, to make a sharp quick noise ; perhaps to knock : knacker, a maker of small work ; a ropemaker.

The more queinte kiiakkes that they make, The more wol I stele whan that I take.

Chaucer. The Revet Tale. For thee, fond boy, If I may ever know thou dost but sigh That thou no more shall see this knack, as never I mean thou shall, we'll bar thee from success.

Shakspeare.

This cap was moulded on a porringer, A velvet dish ; fie, fie, 'tis lewd and filthy : Why 'tis a cockle, or a walnut shell, A knack, a toy, a trick, a baby's cap. Id.

I'll teach you the knacks Of eating flax, And out of their noses Draw ribbands and posies.

Ben Jonson's Gypsies,

But is't not presumption to write veise to you, Who i lake the better poems of the two ! For all these pretty knacks that you compose, Alas ! what are they but poems in prose "! Deuhain

He expounded both his pockets, And found a watch, with rings and lockets; A copperplate, with almanacks Engraved upon't, with other knacks. Hndibras. Knaves, who in full assemblies have the knack Of turning truth to lies, and white to black.

Drijden.

There is a certain knack in conversation that gives a good grace by the manner and address.

L' Estrange.

One part for plough-wright, knacker, and smith.

Mortimer.

My author has a great knack at remarks : in the end he makes another about our refining in controversy, and coming nearer and nearer to the church of Rome. Atterbury.

For how should equal colours do the knack ? Cameleons who can paint in white and black 1

Pope.

The dean was famous in his time, And had a kind of knack at rhime. Swift. KNAG, n. s. f Dan. knag. A hard knot KNAG'GY, adj. 3 in wood ; knotty. KNAP, n. s. Saxon cnaep, a protuberance ; Welsh map, a protuberance, or a broken piece. A protuberance ; a swelling ; prominence.

You shall see many fine seats set upon a knap of ground, environed with higher hills round about it, whereby the heat of the sun is pent in, and the wind gathered as in troughs. Bacon.

Hark on knap of yonder hill, Some sweet shepherd tunes his quill. Browne. It is a knappe of a mountaine very steepe and sharpe of all

sides, with a narrow point like a pine apple, by reason whereof we do call it orthopagum. North's Pint. Sylla.

KNAP, v. a. & v. n.) Dut. knappen ; Erse.

KNAP'PLE, v. n. > knaap. To bite or

break short ; to make a short sharp noise like

that of breaking : knapple, to break off with a

sharp noise.

He knappeth the spear in sunder.

Common Prayer.

Knap a pair of tongs some depth in a vessel of water, and you shall hear the sound of the tongs.

Bacon's Natural History. He will knap the spears a-pieces with his teeth.

More.

I reduced the shoulders so soon, that the standers-oy heard them knap in before they knew they were out. Wiseman.

KNAP'BOTTLE, n. s. Pupaver spumeum. A plant.

KNAPSACK, n. s. From Belg. knappen, bite, or to eat. The bag which a soldier carries on his back ; a bag of provisions.

The constitutions of this church shall not be repealed, 'till I see more religious motives than soldiers carry in their knapsacks. Ki-n£ Charlet.

If you are for a merry jaunt, I'll try for once who can foot it farthest : there are hedges in Summer, and barns in Winter : I with my knapsack, and you with your bottle at your back : we'll leave honour to madmen, and riches to knaves, and travel till we come to the ridge of the world. Dryden.

KNAPWEED, n. x. Lat.>«a. A plant. KNAPWEED. See CENTAUREA. KNARE, n. .s. Germ. knor. A hard knot.

A forest

In which ther wonneth neyther man ne best ; With knotty, knarry, barrein trees olde, Of stubbes sharpe and hideous to behold.

Chaucer. The Knightes Tale.

A cake of scurf lies baking on the ground, And prickly stubs instead of trees are found ; Or woods with knots and knares deformed and old, Headless the most, and hideous to behold. Dryden. KNARES BOROUH, a market town and parish of Yorkshire, in the West Riding, 211 miles from London. The town is an ancient borough, and called by foreigners the Yorkshire Spa. It is almost encompassed by the Nid, which issues from the bottom of Craven Hills; and had a priory with a castle, which have long smce been demolished, on a craggy rock, whence it took the name. It is about three furlongs in length ; and the parish is famous for medicinal springs near each other, and yet of different qualities. 1. The sweet spa, or vitriolic well, in Knaresborough Forest, three miles from the town, which was discovered in 1620. 2. The sulphureous spa, which is used only in bathing. 3. St. Mun-go's, a cold bath, four miles from the town. 4. The dropping-well, which is in the town, and the most noted petrifying spring in England, so called by reason of its dropping from the spongy rock hanging over it. Tiie ground which receives it, before it joins the well, is, for twelve yards long, become a solid rock. From the well it runs into the Nid, where the spring water has made a rock that stretches some yards into the river. It has a good market and six fairs. Here is a stone bridge over the river, near one end of which is a cell, dug out of the rock, called St. Robert's chapel. The town is 18 miles west by north of York. It sends 2 members to parliament. KNAVE, n.s. -\ Sax. cnapa, a page; KNA'VERY, n. s. fa boy; a male child; a KNA'VISH, adj. £ servant: all these are KNA'VISHLY, adv. 'obsolete. A petty rascal ; a scoundrel ; a rogue ; a card with a soldier painted on it : knavery, dishonesty ; petty cheating ; mischievous tricks or practices : knavish, wicked ; fraudulent ; waggish ; mischievous.

And to a knure a ring she gave, anon ; And prayed him by signes, for to gon Unto the Queene, and beren hire that clothe.

Chaucer. Legende nf Good Women.

Here's no knavery ! See, to beguile the old folks, how the young folks lay their heads together !

Shakspeare.

Here she comes curst and sad ; Cupid is a knavish lad,

Thus to make poor females mad. Id.

We'll revel it as bravely as the best, With amber bracelets, beads, and all this knavery.

Id.

For 'twill return, and turn to account, If we are brought in play upon't, Or but by casting knavet get in, What power can hinder us to win ! Hudibras.

For as the moon the eye doth please With gentle beams not hurting sight, Yet hath sir sun the greater praise, Because from him doth come her light : So if ray man must praises have, What then must I that keep the knavel

Sidney,

The cunning courtier should be slighted too, Who with dull knavery itakes so much ado ; 'Till the shrewd fool, 'by thriving too too fast, Like ˆEsop's fox, becomes a prey at last. Dryden,

He eats and drinks with his domestic slaves ; A verier hind than any of his knavts. Id.

An honest man may take a knave's advice ; But idiots only may be cozened twice. Id.

A hen both plaintiff and defendant happen to be rrai'ty knavet, there's equity against both.

L’Estrange.

Most men rather brook their being reputed knavet, than for their honesty be accounted fools ; knave, in the mean time, passing for a name of credit. South.

Tis foolish to conceal it at all, and knavish to do it from friends. Pope’s Letters.

See all our fools aspiring to be knaves. Pope.

From man to man, or ev’n woman paid, Praise is the medium of a knavish trade, A coin by csaft for folly’s use design’d, Spurious, and only current with the blind. Cowper. Epistle to a Protestant Lady in France. It is your knell — swell on thou lusty peal, Now knaves, what ransom for your souls.

Jlyron. Marino Faliero.

Not to keep my readers longer in suspense, the subject of the poem is, ‘ The Reformation of the Knave of Hearts.’ It is not improbable that some may object to me, that a knave is an unworthy hero for an epic poem ; that a hero ought to be all that is great and good. Canning. Microcosm.

KNAUTIA, in botany, a genus of the monogynia order, and tetrandria class of plants ; natural order forty-eighth, aggregate : common CAL. oblong, simple, quinqueflorous : the proper one simple, superior : the florets regular : the receptacle naked.

KNEAD, v. a.) Saxon, cnse’san ;

KNEAD’JNG-TROUGH, n.s. i Belg. kneden. To beat or mingle any stuff or substance : kneading-trough, a trough in which dough is mixed together, and worked for making bread.

Frogs shall come into thy kneading-troughs.

Exodus.

He goth and geteth him a hneding -trough, And after, a tubbe, — and a kemelyn.

Chaucer. The Milleret Tale. Here’s yet in the word hereafter, the kneading, the making of the cakes, and the heating of the oven.

Shakspeare.

It is a lump, where all beasts kneaded be, Wisdom makes him an arc, where all agree.

Donne.

Thus kneading up with milk the new-made man His kingdom o'er his kindred world began : 'Till knowledge misapplyed, misunderstood, And pride of empire, soured his balmy blood.

Dry den.

Ore paste of flesh on all degrees bestowed, And kneaded up alike with moist'ning blood. Id. Prometheus, in the kneading up of the heart, seasoned it up with some furious particles of the lion. Addison's Spectator. No man ever reapt his corn, Or from the oven drew his bread,

Ere hinds and bakers yet were born, That taught them both to sow and knead.

Prior. 1'he cake she kneaded was the sav'ry meat. Id.

KNEE, n. s. & v.a. ˆ Saxˆcneop; Belg. KNEED, adv. KKEE'-DEEP, adj & adv. KNEE'-PAN, n.s.

KNEEL, v. n.

KNEE'-TRIBUTE, n.s.

KXEED'-GRASS, n. s.

KNEE'HOLM, n. s.

and so cut that the trunk and branch make an angle : knee, to supplicate by kneeling : kneed,

knie ; Syr. cnea ; Gr yow ; Lat. genu. The joint of the leg where [the leg is joined to the thigh : a knee is a piece of timber growing crooked,

having knees or joints, as inkneed, outkneed, and kneedgrass : kneedeep, rising to the knees ; sunk in up to the knees : kneepan, knee

and pan, a little round bone which covers the knee joint, convex on both sides, and covered with a smooth) cartilage on its foreside: kneel, to bend the knee : knee-tribute, worship, or obedience, showr by kneeling : kneedgrass, a herb : kneeholm, a herb.

A certain man kneeling down to him, said, Lord, have mercy upon my son for he is lunatick.

Matt. xvii. 14.

And they, with humble herte ful buxumly, Kneling upon hir knees ful reverently, Him thonken all. Chaucer. The Clerkes Tale.

Ere I was risen from the place that shewed My duty kneeling, came there a reeking post, Stewed in his haste, half breathless, panting forth From Goneril his mistress, salutations.

Shakspeare.

When thou dost ask me blessing, I'll kneel down, And ask of thee forgiveness. Id. King Lear.

Go you that banished him, a mile before his tent fall down, and knee the way into his mercy.

Id. Coriolantu. Thy royal father Was a most sainted king : the queen that bore

thee,

Oftener upon her knees than on her feet, Died every day she lived. Id. Macbeth.

Such dispositions are the fittest timber to make great politicks of: like to knee timber, that is good for ships that are to be tossed ; but not for building houses, that shall stand firm. Bacon.

The kneepan must be shown, with the knitting thereof, by a fine shadow underneath the joint.

Peacham on Drawing.

As soon as you are dressed kneel and say the Lord's prayer. Taylor's Guide to Devotion.

I beg and clasp thy knees. Milton.

Receive from us

Kneetribute yet unpaid, prostration vile. Id.

Wearied with length of ways, woxn out with toil, 16 lay down, and leaning on her knees, Invoked the cause of all her miseries ; And cast her languishing regards above. For help from Heaven, and her ungrateful Jove.

Dryden.

The-country peasant meditates no harm, When clad with skins of beast to keep him warm ; In winter weather unconcerned he goes, Almost kneedeep, through mire in clumsy shoes.

Id.

Him, entering, thou shall haply see Beside his spouse, his infant on his knee..

Cowper. Elegy IV. And tortuous arms,

The shipwright’s darling treasure, didst present To the four quartered winds, robust and bold ; Warped into tough knee timber many a load ! But the axe spared thee. Id. Yardley Oah.

Ha ! art thou there ?

Come, kneel with me, and witness to the vow I offer to renounce thee, and to die.

Matiirin. Bertram.

Now — now — he kneels — and now they form a cir-cle, Round him, and all is hidden — but I see,

The lifted sword in air. Oh ! Hark ! it falls !

Byron. Marino Faliero.

KNEE, in anatomy, the articulation of the thigh and leg bones. See ANATOMY.

KNEE, in ship building, is a crooked piece of

timber, having two branches or arms used to connect the beams of a ship with her sides. The branches of the knees form an angle of greater or smaller extent, according to the mutual situa-ion of the pieces which they are designed to unite. One branch is securely bolted to one of the deck-beams, whilst the other is in the same manner attached to a corresponding timber in the ship's side. Besides the great utility of knees, in connecting the beams and timbers into one compact frame, they contribute greatly to the strength and solidity of the ship, in the different parts of her frame to which they are bolted ; and thereby enable her with greater firmness to resist the effects of a turbulent sea. In fixing these pieces, it is occasionally necessary to give an oblique direction to the vertical or side branch, to avoid the range of an adjacent gun-port, or because the knee may be so shaped as to require this disposition ; it being sometimes difficult to procure so great a variety of knees as may be necessary in the construction of a number of ships of war. In France the scarcity of these pieces has obliged their shipwrights frequently to form their knees of iron. Knees are either said to be lodging or hanging. The former are fixed horizontally in the ship's frame, having one arm bolted to the beam, and the other across two or threejimbers; the latter are fixed vertically, as we have described above.

KNEE OF THE HEAD, a large flat piece of tim-ber, fixed edgeways upon the foce part of a ship's stem, and supporting the ornamental figure or image placed under the bowsprit. See SHIP-BUILDING. The knee of the head, which may properly be defined a continuation of the stem, as being prolonged from the stem forwards, is extremely broad at the upper part, and accordingly composed of several pieces united into one. It is let into the head, and secured to the ship's bows by strong knees fixed horizontally upon both, and called the cheeks of the head. True heel of it is scarfed to the upper end of the fore foot ; and it is fastened to the stem above the knee, called a standard. Besides supporting the figure of the head, this piece serves to secure the

boom, by which the fore tack is extended to windward ; and, by its great breadth, prevents the sh p from falling to leeward when close hauled so much as she would otherwise do. It also affords a greater security to the bowsprit, increasing the angle of the bob-stay, so as to make it act more perpendicularly on the bowsprit. The knee of the head is a phrase peculiar to shipwrights; as this piece is always called the cut-water by seamen.

KNEEPAN. See ANATOMY. KNELL, n. s. Sax. cnyllan, to ring; Welsh cmY, funeral pile. The sound of a bell rung at a funeral.

I would not wish them to a fairer death : And so his knell is knolled. Shakspeare.

All these motions, which we saw, Are but as ice, which crackles at n thaw : Or as a lute, which in moist weather rings Her knell alone, by cracking of her strings.

Donne.

Unhappy slave, and pupil to a bell, Which his hour's work, as well as hours do tell ; Unhappy 'till the last, the kind releasing kiiell.

Couleif. VOL. \LF.

At dawn poor Stella danced and sung ; The am'rous youth aroung her Lowed :

At night her fatal knell was rung ; I saw, and kissed her in her shrowd. Prior.

He, who dies "mid clarions swelling, He who dies 'mid requiem's knelling.

Maturin. Bertram. It is our knell, or that of Venice. — On.

Byron: Marino Faliero.

KNELLER (Sir Godfrey), a celebrated painter, born at Lubeck in 1648. He received his first instructions under Rembrandt, next under Ferdinand Bol; and afterwards travelled to Rome, where he fixed his particular attention on Titian and the Caracci. He afterwards visited Venice, and distinguished himself so effectually in that city, by his historical pictures and portraits, that his reputation became

considerable in Italy. He came at last to England, where he gained the favor of the duke of Monmouth, and, by his recommendation, drew the picture of king Charles II. more than once; who was so taken with his skill that he used to come and sit to him at his house in Covent Garden. The death of Sir Peter Lely left him without a competitor in England, and from that time his fortune and fame were thoroughly established. No painter could have more incessant employment, and no painter could be more distinguished by public honor. He was state painter to Charles II., James II., William III., queen Anne, and George I., equally esteemed and respected by them all : the emperor Leopold I. made him a knight of the Roman empire, and king George I. created him a baronet. Most of the nobility and gentry had their likenesses taken by him, and no painter excelled him in a sure outline, or the graceful disposition of his figures : his works were celebrated by the best poets in his time. He built an elegant house at Whitton * near Hampton Court ; where he spent the latter part of his life, and died in 1726.

KNEW, the preterite of know. See KNOW. KNIFE, n. s. plural knives. Sax. cnip ; Dan. kniff. An instrument edged, and sometimes pointed, wherewith meat is cut, and animals killed.

Myne handes ben not shapen for a knife, As for to reven no man of his life : What devill have I with the knife to do ?

Chaucer. Legende of Good Women. The knfijf I gave my fader was yistirday yfound, Sith I hym apele, let him be fast ybou'nd.

Id. The Merchantes second Tale. Like raging Ino, when, with knife in hand, She threw her husband's murdered infant out ; Or fell Medea, when on Colchicke stand, Her brother's bones she scattered all about.

Spenser. Faerie Queene. In his one hand, as fit for harvests toyle, He held a knife -hook. , and in the other hand A paire of waightc. H.

Come, thick night!

And pall thee in the dunnest smoke of hell, That my keen kniff see not the wound it makes.

Sliakspeare

With him went many a fiend, and ugly spright, Armed with ropes and knives, all instruments of spit*.

Fletcher's Purple Island. Blest powers ! forbid thy tender life Should

bleed up>n a barbarous knife. Crashaw.

2 B

KNIGHT.

The sacred priests with ready knives bereave The beast of life, and in full bowls receive The streaming blood. Dry.lens JEneid.

Even in his sleep he starts, and fears the knife, And, trembling, in his arms takes his accomplice wife. Dryden.

Pain is not in the knife that cuts us ; but we call it cutting in the knife, and pain only in ourselves.

Watts.

Tell me, foii/‘e-grinder, how came you to grind knives, Did some rich man tyrannically use you 1 U as it the squire, or parson of the parish?

Or the attorney 1 Canning.

•vNIGHT (Richard Payne), esq., a late eminent patron of learning and the fine arts, was the son of a man of large landed property, who, from a dread of the effect of the discipline of a public school on his constitution, kept him at home till his fourteenth year. On his father’s decease, which took place at that period, Mr. Knight was placed at a seminary, where he soon distinguished himself by his progress in classical literature. This was ever after his favorite study and principal relaxation from his duties, as representative of Ludlow, for which borough ae sat in several successive parliaments. The collection of ancient bronzes, medals, pictures, and drawings, assembled in his museum at his house in Soho Square, was an equal proof of his taste and his liberality. The whole of this he ieqneathed at his death to the British Museum. As an author, he distinguished himself by great critical acumen, and his perfect familiarity with the domestic habits and customs of the ancients. His principal writings are, An Account of the Remains of the Worship of Priapus, lately existing at Isernia in the

kingdom of Naples, and its connexion with the Mystic Theology of the Ancients, 4to. 1786 ; an Analytical Essay on the Greek Alphabet, 4to. 1791; Analytical Enquiry into the Principles of Taste, 8vo. 1805; and Prolegomena in Homerum, reprinted in the Classical Journal. He published also the Landscape, a didactic poem, 8vo. 1794, a review of which he afterwards printed in 1795; The Progress of Civil Society, a didactic poem, 4to. 1 796 ; and a monody to the memory of Fox, 8vo. 1806; his last work was The Romance of Alfred. He died April 28th, 1824, aged seventy-six.

KNIGHT, n. $. & v. a. ~\ Sax. cni}»t ; Germ. KNIGHT'LY, adj. tknecht, a servant or

KNIGHT'HOOD, n. s. £ pupil. A man ad-KNIGHT'LESS, adj.) vanced to a certain degree of military rank. It was anciently the custom to knight every man of rank or fortune, that he might be qualified to give challenges, to fight in the lists, and to perform feats of arms. When the name was not known, it was usual to say sir knight. Shakspeare uses it of a female, and it must then be understood in its original meaning, pupil or follower; a champion: to create one a knight, which is done by the king, who gives the person kneeling a blow with a sword, and bids him rise, Sir: knightly, befit- "ting a knight : knighthood, the character and dignity of a knight; knightless, (obsolete); unbecoming a knight.

A knight ther was, and that a worthy man, That fro the time that lie first began To riden out, he loved chevalrie, Trouthe and honour, freedom and curtesie.

Chaucer. Prologue to Canterbury Tales. I say as fer as man may ride or go The world was his ; what should I more devise] For though I wrote or told ever mo Of his knighthode, it might not suffice.

Cltaucer. The Man of Lawes Tale. Arise, thou cursed miscreant,

That hast with knightless guile, and treacherous train. Fair knighthood foully shamed. Faerie Queene.

The sword which Merlin made, For that his noursling, when he knighthood swore, Therewith to doen his foes eternal smart. Id.

Sir knight, if knight thou be, Abandon this forestalled place. Spenter.

Pardon, goddess of the night, Those that slew thy virgin knight ; For

the which, with songs of woe, Round about her tomb they go. Shahtpeare. Speak truly, on thy knighthood, and thine oath, And so defend thee, Heaven, and thy valour. Id.

The lord protector knighted the king: and immediately the king stood up, took the sword from the lord protector, and dubbed the lord mayor of London knight. Hayward.

He suddenly unties the poke, Which out of it sent such a smoke, As ready was them all to choke,

So grievous was the pother ; So that the knights each other lost, And stood as still as any post. Drayton. Is this the sir, who some waste wife to win, A knighthood bought, to go awooing in ?

Ben Jonson.

This knight ; but yet why should I call him knight, To give impiety to this reverent stile 1 Daniel.

Favours came thick upon him : the next St. George's day he was knighted. Wotton.

Did I for this my country bring To help their knight against their king, And raise the first sedition ? Denham.

No squire with knight did better fit In parts, in manners, and in wit. Hudihras. Let us take care of your wound, upon condition that a more knightly combat shall be performed between us. Sidney. How dares your pride presume against my laws : As in a listed field to fight your cause : Unasked the royal grant, no marshal by, As knightly rites require, nor judge to try? Dryden.

If you needs must write, write Cesar's praise, You'll gain at least a knighthood, or the bays.

Pope.

The hero William, and the martyr Charles, One knighted Blackmore, and one pensioned Quarles.

Id.

Arthur the chief, who even now prepares, In subterraneous being, future wars, With all his martial knights, to be restored, Each to his seat, around the federal board ; And Oh, if spirit fail me not, disperse

Our Saxon plunderers, in triumphant verse.

Cowper. Manso.

KNIGHT, IN CHESS. See CHESS. The move of this piece in that interesting game has given rise to a curious problem with regard to the various methods by which the chess-board may be covered by the knight. In the life of Kempelen we have given an account of the attempt of an anonymous author to investigate the secret of his celebrated automaton. From his work we

I'll I-1, S S ,

fteeˆrtict, Ani,,ht

now extract the following account of this problem : — ' The curious operation of covering the board by the moves of the knight was often exhibited by the automaton, both over the whole and over half of the board, and the author was thus induced to study the subject, and to determine that this operation might be performed on any parallelogram consisting of twelve squares and upwards, with the exception of fifteen and eighteen squares.

' The path of the knight over the board is of two kinds, terminable and interminable. It is interminable, whenever the last or concluding move rf a series is made in a square which lies within the knight's reach of that from which he originally set out; and terminable in every other instance."

The celebrated Euler published a paper on this subject in the Memoirs of the Academy of Berlin for 1759, and has there given a method of

filling up all the squares, setting out from one of the corners. He has likewise given an endless or interminable route, and he explains a principle by which the routes may be varied so as to end upon any square. Solutions of the same problem have also been given by Montmori, Demoivre, and Mairan. These are represented in plate KNIGHT'S MOVES IN CHESS, in the following order : —

Terminable Routes over the whole Board. No. 1. By Euler. No. 6. By Demoivre.

2. Ditto. 7. Mairan.

3. Ditto. 8. Montmort. i. Ditto. 9. the Author. 5. Demoivre. 10. the Author.

Interminable Routes over the whole Board, No. 11. By Euler. No. 16. The Author.

12.. Monsieur W. 17. Ditto.

13. The Author. 18. Ditto.

14. Ditto. 19. Ditto, to. Ditto. 20. Ditto.

KNIGHTS, in a ship, two short thick pieces of wood, commonly carved like a man's head, having four shivers in each, three for the halyards, and one for the top to run in ; or.e of them stands tast bolted on the beams abaft the fore-mast, and is therefore called the fore-knight ; and the other standing abaft the main-mast is called the main-knight.

KNIGHTS OF THE SHIRE, or KNIGHTS OF PARLIAMENT, are two gentlemen of worth, chosen on the king's writ in pleno comitatu, by such of the freeholders of every county as can expend 40s. per annum, to represent such county in pailiament. These, when every man who held a knight's fee in capite of the crown was cus-tomarily constrained to be a knight, were of necessity to be rnilites gladio cincti, for so the writ runs to this day ; but now custom admits esquires to be chosen to this office. They must have at least £500 per annum freehold, and their expenses are to be defrayed by the county, though this is seldom now required.

KNIGHTS OF WINDSOR, or POOR KNIGHTS OF THE CHAPEL, were instituted by Henry VIII. in his testament. Their number was at first thirteen, but has been since augmented to twenty-eight.

They assist in the funeral services of the king* of England ; they are subject to the office of the canons of Windsor, and live on pensions assigned them by the order of the garter. They bear a blue or red cloak, with the arms of St. George on the left shoulder.

KNIGHT ER'RANT. Chevalier errant. A wandering knight; one who went about in quest of adventures.

Like a bold knight errant did proclaim Combat to all, and bore away the dame.

Denhttm.

The ancient errant knightt Won all their mistresses in fights They cut whole giants into fritters, To put them into amorous twitters.

Rndibras.

KNIGHT ER'RANTRY. From knight errant. The character or manners of wandering knights.

That which with the vulgar passes for courage is a brutish sort of knight errantry, seeking out needless encounters. Norru.

KNIGHTHOOD is a military order or honor ; a mark or degree of ancient nobility, or the reward of personal virtue and merit.

Military KNIGHTHOOD is that of the ancient knights, who acquired it by high feats of arms. They are called milites in ancient charters and titles, by which they were distinguished from mere bachelors, &c. These knights were girt with a sword, and a pair of gilt spurs ; whence they were called equites aurati. Knighthood is not hereditary, but acquired. It does not come into the world with a man like nobility ; nor can it be revoked. The sons of kings, and kings themselves, with all other sovereigns, heretofore had knighthood conferred on them as a mark of honor. They were usually knighted at their baptism or marriage, at their coronation, before or after a battle, &c.

Regular KNIGHTHOOD is applied to all military orders which profess to wear some particular habit, to bear arms against the infidels, to succour and assist pilgrims in their passage to the Holy Land, and to serve in hospitals where they should be received ; such were the knights templars, the knights of Malta, &c.

KNIGHTHOOD, as a system, known under the denomination of chivalry, is to be dated only from the eleventh century. All Europe

being reduced to a state of anarchy, on the decline ol the Charlemagne empire, every proprietor of a manor became a petty sovereign ; the mansion-house was fortified by a moat, defended by a guard, and called a castle. The possessor had a party of 700 or 800 men at his command ; and with these he used frequently to make excursions, which commonly ended in a battle with the lord of some petty state of the same kind, whose castle was then pillaged, and the women and treasures carried off by the conqueror. During this state of universal hostility, there was no friendly communication between the provinces, nor any high roads from one part of the kingdom to another : the wealthy traders, who then travelled from place to place with their merchandise and their families, were in perpetual danger; the lord of almost every castle extorted something from them on the road ; and, at last,

some one more rapacious than the rest seized upon the wliole cargo, and carried off the women for his own use. Thus castles became the warehouses 01 all kinds of rich merchandise, and the prisons of the distressed females, whose fathers or lovers had been plundered or slain, and who, being therefore seldom disposed to take the rob-ber or murderer into favor, were in continual danger of a rape. At length many lords associated to repress these sallies of violence and rapine, to secure property and protect the ladies. Among these were many proprietors of great fiefs; and the association was at length strengthened by a solemn vow, and received the sanction of a religious ceremony. As the first knights were men of the highest ra'ik, and the largest possessions, admission into the order was deemed the highest honor; many extraordinary qualifications were required in a candidate, and many new ceremonies were added at his creation. After having fasted from sun-rise, confessed himself, and received the sacrament, he was dressed in a while tunic, and placed by himself at a side-table, where he was neither to speak, to smile, nor to eat; while the knights and ladies, who were to perform the principal parts of the

ceremony, were eating, drinking, and making merry at the great table. At night his armour was conveyed to the church where the ceremony was performed ; and here, having watched it till the morning, he advanced with his sword hanging about his neck, and received the benediction of the priest. lie then kneeled down before the lady who was to put on his armour, who, being assisted by persons of the first rank, buckled on his spurs, put a helmet on his head, and accoutred him with a coat of mail, a cuirass, bracelets, cuisses, and gauntlets. Being thus armed cap-a-pee, the knight who dubbed him struck him three times over the shoulder with the flat side of his sword, in the name of God, St. Michael, and St. George. He was then obliged to watch all night in all his armour, with his sword girded, and his lance in his hand. From this time the knight devoted himself to the redress of wrongs, to secure merchants from the rapacious cruelty of banditti, and women from ravishers, to whose power they were, by the particular confusion of the times, continually exposed. The principal lords who entered into the confraternity of knights, used to send their sons to each other at seven years of age, to be educated far from their parents, in the mystery of chivalry. These youths at fourteen were made squires, and at twenty-one were qualified to receive the order of knighthood. See CHIVALRY, and FEUDAL SYSTEM.

Chivalry flourished most during the time of the crusades. These gave rise to new orders of knighthood ; hence the knights of the Holy Sepulchre, the Hospitallers, Templars, and an infinite number of religious orders. Various other orders were at length instituted by sovereign princes : the Garter by Edward III. of England ; the Golden Fleece, by Philip the Good, duke of Burgundy; and St. Michael, by Louis XI. of France. For an account of these orders see the various titles in the body of the work ; as knights of the garter, &c. See GARTER,

&c. From this time ancient chivalry declined to an empty name; when sovereign princes established regular companies in their armies, knights bannerets were no more, though it was still thought an honor to be dubbed by a great prince or victorious hero; and all who professed arms without knighthood assumed the title of esquire.

KNIGHT OF THE POST. A hireling evidence ; a knight dubVd at the whipping post, or pillory.

KNIGHTON, county of Radnor, South Wales. It is united, under the Reform bill, with Radnor and four other places, in return mg one

member to oarliament.

KNIGHT-SERVICE, servitium militare, and in old French law, chivalry, a species of tenure, the origin and nature of which are explained under the articles CHIVALRY, and FEUDAL SYS-TEM. The knights produced by this tenure differed most essentially from the knights above described. See KNIGHTHOOD. The one class of knights was of a high antiquity; the other was not heard of till the invention of a fee. The adorning with arms, and the blow of the sword, made the act of the creation of the ancient knight ; the new knight was constituted by an investment in a piece of land. The former was the member of an order of dignity which had particular privileges and distinctions ; the latter was the receiver only of a feudal grant. Knighthood was an honor; knight-service a tenure. The former communicated splendor to an army ; the latter gave it strength and numbers. The knight of honor might serve in any station whatever; the knight of tenure was in the rank of a soldier. It is true at the same time, that every noble and baron were knights of tenure, as they held their lands by knight-service. But the number of fees they possessed, and their creation into rank, separated them widely from the simple individuals to whom they gave out grants of their lands, and who were merely the knights of tenure. By the tenure of knight-service, the greatest part of the lands in England was holden, and principally of the king in capite, till the middle of the seventeenth century. It was created, as Sir Edward Coke testifies, for a military purpose, *viz.* for defence of the realm by the king's own principal subjects, which was judged to be much better than to trust to hirelings or foreigners. The description here given is that of knight-service proper, which was to attend the king in his wars. There were also some other species of knight-service ; so called, though improperly, because the service was of a free and honorable nature, and equally uncertain as to the time of rendering, as that of knight-service proper, and because they were, attended with similar consequences. Such was the tenure by grand sergeanty, per magnum servitium, whereby the tenant was bound, instead of serving the king generally in his wars, to do some special honorary service to the king in person ; as to carry his banner, his sword, or the like ; or be his butler, champion, or other officer, at his coronation. It was, in most other respects, like knight-service, only he was not bound to pay aid or escuage; and, when tenant

by knight-service paid £5 for a relief on every knight's fee, tenant by grand sergeanty paid one year's value of his land, were it much or little. Tenure by comage, which was to wind a horn when the Scots or other enemies entered the land, in order to warn the king's subjects, was like other services of the same nature a species of grand sergeanty. These services, both of chivalry and grand sergeanty, were ali personal, and uncertain as to their quantity or duration. But the personal attendance in knight-service growing troublesome and inconvenient in many respects, the tenants found means of compounding for it, by first sending others in their stead, and in process of time making a pecuniary satisfaction to the lords in lieu of it. This pecuniary satisfaction at last came to be levied by assessments, at so much for every knight's fee; and therefore this kind of tenure was called scuta-gium in Latin, or servitium scuti ; scutum being then a well-known denomination of money ; and in like manner it was called, in the Norman French, escuage; being indeed a pecuniary instead of a military service. The first time this appears to have been taken was in the 5 Henry II., on account of his expedition to Toulouse ; but it soon came to be so universal, that personal attendance fell quite into disuse. Hence we find in history, that, from this period, when the kings of England went to war, they levied scutages on their tenants, that is, on all the landholders of the kingdom, to defray their expenses, and to hire troops : and these assessments, in the time of Henry II., seem to have been made arbitrarily, and at the king's pleasure. Which prerogative being greatly abused by his successors, it became matter of national clamor ; and king John was obliged to consent, by his magna charta, that no scutage should be imposed without consent of parliament. But this clause was omitted in his son Henry III.'s •-•harter; where we only find, that scutages or escuage should be taken as they were used to be taken in the time of Henry II. ; that is, in a reasonable and moderate manner. Yet afterwards, by stat. 25 Edw. I. c. 5 and 6, and many subsequent statutes, it was enacted, that the king should take no aids or tasks but by the common assent of the realm. Hence it is held, that escuage or scutage could not be levied but by consent of parliament ; such scutages being indeed the groundwork of all succeeding subsidies, and the land-tax of later times. Had the escuage been a settled invariable sum, payable at certain times, it had been neither more nor less than a mere pecuniary rent; and the tenure, instead of knight-service, would have been of another kind, called soccage. By the degenerating of knight-service, or personal military duty, into escuage or pecuniary assessments, all the

advantages either promised or real of the feudal constitutions were destroyed, and nothing but the hardships remained. Instead of forming a national militia, composed of barons, knights, and gentlemen, bound by their interest, honor, and oaths, to defend their king and country, the whole of this system of tenures now tended to nothing else but a %‘retched means of raising money to pay an army of occasional mercenaries. In the mean lime, the families of all the nobility and gentry groaned under these intolerable burdens, which in consequence of the fiction adopted after the conquest were introduced and laid upon them by the subtlety and finesse of the Norman lawyers. For, besides the scutages to which they were liable in defect of personal attendance, which, however, were assessed by themselves in parliament, they might be called upon by the king or .ord paramount for aids, whenever his eldest son was to be knighted, or his eldest daughter married ; not to forget the ransom of his own person. The heir, on the death of his ancestor, if of full age, was plundered of the first emoluments arising from his inheritance, by way of relief and primer seisin ; and if under age, of the whole of his estate during infancy. And then, as Sir Thomas Smith complains, ‘ when he came to his own, after he was out of wardship, his woods decayed, houses fallen down, stock wasted, and lands let forth and ploughed to be barren,’ to make amer.ds, he was yet to pay half a year’s profits as a fine for suing out his livery ; and also the price or value of his marriage, if he refused such wife as his lord and guardian had bartered for, and imposed upon him ; or twice that value, if he married another woman. Add to this, the untimely and expensive honor of knighthood, to make his poverty more completely splendid. And when, by these deduc-tions, his fortune was so shattered and ruined, that perhaps he was obliged to sell his patrimony, he had not even that poor privilege allowed him, without paying an exorbitant fine for a licence of alienation. A slavery so complicated and so extensive as this called aloud for a re-medy in a nation that boasted of her freedom. Palliatives were from time to time applied by successive acts of parliament, which assuaged some temporary grievances; till at length the humanity of king James I. consented, for a proper equivalent, to abolish them all. King James’s plan for exchanging our military tenures seems to have been nearly the same as that which has been since pursued ; only with this difference, that, by way of compensation for the loss which the crown and other lords would sustain, aT annual fee farm rent should be settled and inseparably annexed to the crown, and assured to the inferior lords, payable out of every knight’s fee within their respective seignories. An expedient, seemingly much better than the hereditary excise which was afterwards made the principal equivalent for these concessions. For at

length the military tenures, with all their heavy appendages, were destroyed at one blow by the statute 12 Car. 11. c. 24, which enacts, ‘ that the court of ward or liveries, and all wardships, liveries, primer seisins, and ousterlemains, values, and forfeitures of marriages, by reason of any tenure of the king or otheis, be totally taken away. And that all fines for alienations, tenures by homage, knight-service, and escuage, and also aids for marrying the daughter or knighting the son, and all tenures of the king in capite, be likewise taken away. And that all sorts of tenures, held of the king or others, be turned into free and common soccage; save only

tenures tn frankalmoign, copyholds, anu the honorary services without the slavish part of grand-sergeanty.’ A statute which was a greater acquisition to the civil property of this kingdom than even magna charta itself; since that only pruned the luxuriances that had grown out of the military tenures, and thereby preserved them in vigor ; but the statute of king Charles extirpated the whole, and demolished both root and branches.

KNIGHT’S ISLAND, one of the Snares Islands of Vancouver, in the Pacific Ocean. It is the largest of them, and was discovered by Mr. Broughton, commander of the Chatham, November 23d, 1791. The south point is in long. 166°44’E., lat. 48°15’S.

KNIGHT’S ISLAND, an island of Prince William’s Sound, about thirty miles in length from north to south, and from two to five broad. Long. 212° 52’ E., lat. 60° 24’ N. Also a small island in Behring’s Bay, situated a little to the north-west of Eleanor’s Sound, and separated from the continent of America by a narrow navigable channel Long. 220° 47’ E., lat. 59° 45’ N.

KNISTENEAUX, an indigenous tribe of copper-colored Indians, in the

British possessions of North America, north of Lake Superior. They are of moderate stature, well proportioned, and of great activity. Mackenzie describes their women as the handsomest of all the Indian females.

KNIT,u.a., v. n. &ra.s. -v Saxon cmrtan.

KNIT/TER, ra.s. f Preter knit or knit—

KNIT'TINGNEEDLE, n. s. £ted. To make or

KNIT'TLE, n. s. 'unite by texture

without a loom ; to tie; to join or unite; to contract; to tie up; to weave without a loom; knit, texture: knitter, one who weaves or knits: knittingneedle, a wire which is used in knit ting : knittle, a string that gathers a purse round.

Nature, the vicaire of the almightie Lorde, That hote and colde ; hevie, light ; moiste, and drie Hath knit, by even nomber of accorde, — In esie voice began to speke and saie.

Chaucer. The Assemble of Foules. Not anie damzcll, which her vaunteth most In skilful knitting of soft silken twyne ; Nor anie weaver, which his worke doth boast In diaper, in damaske, or in lyrie, Might with their diverse cunning ever dare With this so curious networke to compare.

Spenser. Muiopotmos. The spinsters and the knitters in the sun, And the three maids that weave their thread with

bones, Do use to chant it. Shakspeare. Twelfth Night.

Let their heads be sleekly combed, their blue coats brushed, and their garters of an indifferent knit.

Shakspeare,

These, mine enemies, are all knit up In their distractions : they are in my power. Id.

Our severed navy too

Have knit again ; and float, threatening most sea-like. Id. Ye Icnit my heart to you by asking this question.

Bacon.

These two princes were agreeable to be joined in marriage, and thereby knit both realms into one.

Hay ward.

Pride and impudence, in faction knit, Usurp the chair of wit ! Ben Jonson's New Inn.

God gave several abilities to several persons, that each might help to supply the publick needs, and, by joining to fill up all wants, they be knit together by justice, as the parts of the world are by nature.

Taylor's Rule of Huly Living. Come, knit hands, and beat the ground In a light fantastick round. Milton,

A young shepherdess knitting and singing : her voice comforted her hands to work, and her hands kept time to her voice's musick. Sidney.

A thousand Cupids in those curls do sit ; Those curious nets thy slender fingers knit.

Waller.

Make the world distinguish Julia's son .From the vile offspring of a trull, that sits By the town-wall, and for her living knits.

Dryden.

What are the thoughts that knit thy brow in frowns, And turn thy eyes so coldly on thy prince 1

Addison.

He gave her a cuff on the ear, she would prick him with her knittingneedle. Arbuthnot's John Bull.

A single emanation from one body, Together knit for our oppression !

Byron. Marino Faliero.

KNOB, n. s. -\ Sax. cnaep ; Dut. knoop. KNOBBED', adj. (^ A protuberance ; any part KNOB'BINESS, n. s. i bluntly rising above the KNOB BY, adj. J rest ; having knobs or protuberances ; hard ; stubborn : sometimes written knop.

Ne oile of tartre non, Ne oinement, that wolde dense or bite, That him might helpen of his whelkes white, Ne of the knobbes sitting on his chekes.

Chaucer. Prologue to Canterbury Tales. The informers continued in a knobby kind of obstinacy, resolving still to conceal the names of the authors. Howel.

Just before the entrance of the right auricle of the heart is a remarkable knob or bunch, raised up from the subjacent fat. Kay.

The horns of a roe deer of Greenland are pointed at the top, and knobbed or tuberous at the bottom.

Grew.

KNOCK, v. n., v.a. & n. s.) Sax. cnucian;

KNOCK'ER, n. s. \ Welsh cnoce, a

blow. To clash ; to be driven suddenly together; to beat at a door for admittance : to knock under, a common expression, which denotes that a man yields orsubmits. Submission is expressed among good fellows by knocking under the table. Followed commonly by a particle : as, to km>ck up, to rouse by knocking ; to knock down, to fell by a blow ; to dash together or come in collision : to knock on the head, to kill by a blow ; to destroy : knock, a sudden stroke or blow ; a loud rap at the door : knocker, he that knocks ; the hammer which hangs at the door for strangers to strike.

Go up, quod ne unto his knave, anon ;

Clepe at his dore, or knocke with a ston ;

Loke how it is and tell me boldely,

This knave goth him up, ful sturdely,

And at the chambre dore while that he stood, .

He cried and knocked as that he were wood.

Chaucer. The Milleres Tale.

How do ye mean moving him ? — Why, by making him incapable of Othello's place ; knocking out his brains. Shaksfeare. Othello.

Villain, I say, knock me </• this gate, And rap me well, or I'll knock your knave's pate.

Shukujfeart

KNO

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KNO

Whether to knock against the gates of Rome, Or rudely visit them in parts remote, To fright them, ere destroy. Id. Coriolanus.

Any hard body thrust forwards by another body contiguous, without knocking, giveth no noise.

Bacon s Natural History, So when the cook saw my jaws thus knock it, She would have made a pancake of my pocket.

Cleveland.

Some men never conceive how the motion of the earth should wave them from a knock perpendicularly directed, from a body in the air above.

Browne's Vulgar Errours. Guiscard, in his leathern frock, Stood ready, with his thrice-repeated knock : Thrice with a doleful sound the jarring grate Rung deaf and hollow. Dryden's Boccace.

At him he launched his spear, and pierced his

breast ;

On the hard earth the Lycian knocked his head, And lay supine ; and forth the spirit fled. Dryden.

Knock at your own breast, and ask your soul, If those fair fatal eyes edged not your sword. Id. He that has his chains knocked off, and the

prison doors set open to him, is perfectly at liberty.

Locke.

Excess, either with an apoplexy, knocks a man on the head ; or with a fever, like fire in a strong-water shop, burns him down to the ground.

Grew's Cosmology.

He betook himself to his orchard, and walking there was knocked on the head by a tree. Sottth.

'Tis the sport of statesmen, When heroes knock their knotty heads together, And fall by one another. Kowe.

He began to knock down his fellow citizens with a great deal of zeal, and to fill all Arabia with bloodshed. Addison.

They may say, the atoms of the chaos, being va-riausly moved according to this catholick law, must needs knock and interfere. Bentley.

Shut, shut the door, good John ! fatigued, I said, Tie up the knocker, say I'm sick, I'm dead. Pope.

Time was, a sober Englishman would knock His servants up, and rise by five o'clock ; Instruct his family in every rule, And send his wife to church, his son to school.

Id.

KNOLL, v. a. & v. n. See KNELL. To sound as a bell.

If ever you have looked on better days, If ever been where bells have 'knolled to church.

Shakspeare.

Had I as many sons as I have hairs, I would not wish them to a fairer death : And so his knell is knolled. Id. Macbeth.

KNOLL, n. s. A little hill.

KNOLLES (Richard), an English historian, born in Northamptonshire about the middle of the sixteenth century, and educated at Oxford, after which he was appointed master of the free school at Sandwich in Kent. He composed Gramma-ticie Latins, Gnccse, et Hebraicae

Compendium, cum radicibus, London, 1606. He also compiled The General History of the Ottoman Empire, &c. He died in 1610, and this history has been since continued by several hands : the best by Paul Ricaut, consul at Smyrna, folio, London, 1680. Knolles wrote ako The Lives and Conquests of the Ottoman Kings and Emperors to the year 1610; printed in 1621 ; and A Brief Discourse of the Greatness of the Turkish Em-pire, &c.

KNOP, n. s. A corruption of knap. Any tufty top.

KNOP, n. ?. Ranunculus. A flowei

KNOT (Edward), a native of Northumberland, born in 1580, who, having taken orders, entered among the Jesuits in 1606. His real name was Matthias Wilson. He taught at Rome in the English College, and was afterwards appointed sub-provincial, and was twice sent thither as provincial. He was present as provincial at Rome in 1636, and chosen definitor. He died in London in 1646. He published several pieces, particularly Mercy and Truth, or Charity Maintained by the Catholics; against Dr. Pot-ter, who had charged the church of Rome with wanting charity ; but is principally known as the antagonist of Chillingworth, on whose Religion of Protestants he wrote some severe strictures, under the title of Infidelity Unmasked.

KNOT, n. s. Sax. cnotta; Goth, knun ; Germ, knot; Dut. knutte ; Erse, knotte. A complication of a cord or string not easily to be disentangled.

With that her glistening helmet she unlaced, Which doft, her golden locks, that were upbound, Still in a knot , unto her heeles downe traced, And like a silken veile in compasse round, About her backe, and all her bodie wound.

Spenser. Faerie Queene.

He found that Reason’s self now reasons found To fasten knots, which fancy first had bound.

Sidney.

As the fair vestal to the fountain came, Let none be startled at a vestal’s name, Tired with the walk, she laid her down to rest, And to the winds exposed her glowing breast, To take the freshness of the morning air, And gathered in a knot her flowing hair.

Addison.

Any figure of which the lines frequently intersect each other.

Garden knots, the frets of houses, and all equal figures, please : whereas unequal figures are But deformities. Bacon .

Our sea-walled garden, the whole land, Is full of weeds, her fairest flowers choked up. Her knots disordered. Shakspeare's Richard II. It fed flowers worthy of paradise, which not nice

art

In beds and curious knots, but nature boon, Poured forth profuse on hill and dale, and plain.

Milton.

Their quarters are contrived into elegant knnts, adorned with the most beautiful flowers. More.

Henry in knots involving Emma's name, Had half-expressed, and half-concealed his flame Upon this tree ; and as the tender mark Grew with the year, and widened with the bark, Venus had heard the virgin's soft address, That as the wound, the passion might increase.

Prior. Any bond of association or union.

And, for to fasten his hood under his chin, He hadde of gold ywrought a curious pinne, — A \o\e-hwtte in the greten ther was.

Chaucer. Prologue to the Canterbury Tales.

Whereas I find that whot is whot, And cold is cold by course of kind ; So shall I knit an endless knot : Such fruit in love alas I find. Wyatt.

Confirm that amity

With nuptual knot, if thou vouchsafe to grant That virtuous lady Bona.

Shakspeare. Henry VI. Richmond aims

At young Elizabeth, my brother's daughter, And by that knot looks

proudly on the crown.

Id.

I would he had continued to his country As he began, and not unknit himself The noble knot he made. Id. Coriolamis.

Why left you wife and children, Those precious motives, those strong knots of love ?

Id.

Not all that Saul could threaten or persuade, In this close knot, the smallest looseness made.

Cowley.

A hard part in a piece of wood caused by the protuberance of a bough, and consequently by a transverse direction of the fibres. Ajoint in a herb.

Take in the very refuse among those which served to no use, being a crooked piece of wood, and full of knots, he hath carved it diligently, when he had nothing else to do. Wisdom.

Such knots and crossness of grain is objected here, as will hardly suffer that form, which they cry up here as the only just reformation, to go on so smoothly here as it might do in Scotland.

King Charles. Difficulty; intricacy.

Some man preiseth his neighbour by a wicked entente, for he maketh, alway, a wicked knotte at the last ende ; alway he maketh a but at the last ende, that is digne of more blame than is worth all the preising. Chaucer. The Persones Tale.

A fretful temper will divide The closest knot that may be tied, By ceaseless sharp corrosion.

Cowper. Friendship.

A man shall be perplexed with knots and problems of business, and contrary affairs, where the determination is dubious, and both parts of the contrariety seem equally weighty ; so that, which way so ever the choice determines, a man is sure to venture a great concern. South'i Sermons. Any intrigue, or difficult perplexity of affairs. When the discovery was made that the king was living, which was the knot of

the play untied, the rest is shut up in the compass of some few lines.

Dryden't Dufresnoy.

A confederacy ; an association ; a small band.

Oh you panderly rascals f there's a knot, a gang', a conspiracy against me.

Shakspeare's Merry Wivet of Windsor. What is there here in Rome that can delight thee, Where not a soul, without thine own foul knot, But fears and hates thee. Ben Jonson's Catiline.

A knot of good fellows borrowed a sum of money of a gentleman upon the king's highway.

L'Ettrange.

I am now with a knot of his admirers, who make request that you would give notice of the window where the knight intends to appear.

Addison'* Spectator. A cluster ; a collection.

The way of fortune is like the milky way in the sky, which is a meeting or knot of a number of small stars, not seen asunder, but giving light together.

Bacon's Essays.

In a picture, besides the principal figures which compose it, and are placed in the midst of it, there art less groups or knots of figures disposed at proper

distances, which are parts of the piece, and seem to carry on the same design in a more inferior manner.

Dryden.

But not for any knot of men, Nor sect, nor faction, did I bleed or sweat !

Byron. Marino Faliero.

KNOT, v. n. & v. a. -\ To complicate in KNOT'TED, adj. I knots ; to entangle and

KNOT'TINESS, n. s. > perplex; to unite; to KNOT'TY, adj. i knit knots for fringes ;

KNOT'LESS, adj. J to form buds or joints, in vegetation : knotted, knottiness, knotty, full of knots ; unevenness, or intricacy ; hard ; rugged ; rough : knotless, free from knots or obstructions.

But God it wote, er fully monthes two, She was ful ferre fro that entencioun ; For bothe Troilus and Troie toun Shall, knotelesse, throughout her herte sliue ; For she wol take a purpose to abide.

Chauctr. Troilus and Creseide. Where bene the nosegayes that she dight for thee? The coloured chaplets wrought with a-chiefe, The knotted rush-ringes, and gilt rosemaree ?

Spenser. Shepheardes Calender. I have seen tempests, when the scolding winds Have rived the knotty oaks.

Shakspeare. Julius Caesar.

The timber in some trees more clean, in some more knotty : try it by speaking at one end, and lay-ing the ear at the other ; for if it be knotty, the voice will not pass well. Bacon.

Kjng Henry, in the very entrance of his reign, met with a point of great difficulty, and knotty to solve, able to trouble and confound the wisest kings.

Bacon.

The party of the papists in England are become more knotted, both independence towards Spain and amongst themselves. Id.

Virtue was represented by Hercules naked, with his lion's skin and knotted club : by his oaken club is signified reason ruling the appetite ; the knotting** thereof the difficulty they have that seek after virtue. Peacham on Drawing.

Some on the bench the knotty laws untie.

Dryden.

The knotted oak shall showers of honey weep. Id. Happy we who from such queens are freed,

That were always telling beads ;

But here's a queen when she rides abroad

Is always knotting threads. Sedley.

Princes exercised skill in, putting intricate questions ; and he that was the best at the untying of knotty difficulties, carried the prize. L' Estrange.

They compliment, they sit; they chat, Fight o'er the wars, reform the state ; A thousand knotty points they clear, 'Till supper and my wife appear. Prior

Yet is thy root sincere, sound as the rock, A quarry of stout spurs, and knotted fangs, Which, crooked into a thousand whimsies, clas > The stubborn soil, and hold thee still erect.

Cowper. Yardley Oak.

KNOT, Fr. nceud et bouton fait au bout d'un cordage, a large knob, formed on the extremity of a rope, generally by untviisting the ends thereof, and interweaving them regularly amongst each other. Among seamen there are several sorts of knots, which differ in their form, size, and name, according to the uses for which they are designed ; as,

Bowline KNOT, Fr. noeud de bouline, is made by laying the end of a rope a over the standing part 6, and turning a bight over the standing part; then leading the end round the standing part, through the bight again. When this knot is drawn close, it makes a loop, and, when fastened to the cringles of the sails, they must break, or the sails split before it will slip. See diagram.

Buoy-rope KNOT, nceud de 1 orin de 1'ancre, is made by unlaying the strands of the cable-laid rope, and also one of the small strands out of

each large one ; laying the large ones again as before, and leaving the small ones out ; then single and double wall the small strands round the rope, worm them along the divisions, and stop their ends with spun yarn,

Diamond KNOT, Fr. noeud de diamant, is made by unlaying the end of a hawser-laid rope for a considerable length, and with the strands from three bights down its side, holding them fast. Put the end of the strand a over the strand b, and through the bight of the strand c, as represented in the figure : then put the strand b over the strand c, and through the bite formed at the strand a ; and the end c over a and through the bight of b. This knot is used for the side ropes, jib-guys, bell-ropes, &c.

Double diamond KNOT, Fr. double noeud de diamant, is made with the strands opened out again, following the lead of the single knot through two single bights, the ends coming out at the top of the knot, and leading" the last strand through two double bights; then by laying the rope up again as before to where the nexf knot is to be made.

KNOTS ERRYBUSH, n.$. Chamzmorus. A plant. — Ainsworth.

KNOTGRASS, n. s. Knot and grass : poly-gonum. A plant.

You minimus of hindering knotgrass made.

Shahipeare.

KNOUT, a punishment inflicted in Russia, with a kind of whip called knout, and made of a long strap of leather prepared for this purpose. With this whip the executioners dexterously carry off a slip of skin from the neck to the bot-tom of the back, laid bare to the waist; and repeating their blows, in a little while rend away all the skin off the back in parallel strips. In the common knout the criminal receives the lashes suspended on the back of one of the executioners ; but in the great knout he is raised into the air by means of a pulley fixed to the gallows, and a cord fastened to the two wrists

tied together ; a piece of wood is placed between his two legs also tied together ; and another of a crucial form under his breast. Sometimes his hands are tied behind over his back : and when he is pulled up in this position his shoulders are dislocated. The executioners can make this punishment more or less cruel ; and, it is said, so dexterous, that when a criminal is condemned to die, they can make him expire either

by one or several lashes.

KNOW, v a. & v. n. ~] Saxon, cnapan, KNOW'ABLE, adj. I Armoric, knau ;

KNOW'ER, n. s. \ Goth, knu, kunna.

KNOW'ING, adj. & n. t. | Prefer. I knew, I KKOW'INGLY, adv. have known. To

KNOWL'EDGE, n.s. & v. a.) perceive with certainty, whether intuitive or discursive ; to be informed or taught ; to distinguish or recognise ; to be familiar with ; to have clear perception ; to have commerce with another sex ; not to be ignorant: to know for, to have knowledge of : to know of, to examine : knowable, possible to be discovered or understood : knower, one who has skill: knowing, skilful ; well instructed ; intelligent ; conscious : knowing, an old word for knowledge : knowledge, certain perception ; learning ; mental illumination ; skill ; acquaintance with any fact or person ; information : to acknowledge ; to avow.

And Adam knew Eve his wife. Genesit.

Shipmen that have knowledge of the sea. Kings.

And, right anon, she for her conseil sente : And they, ben comen to know what she mente ; And whan assembled wos this folk in fere, She set hire doun ; and sayd as ye shul here.

Chaucer. The Man of Lawet Tale. But many one with hire loke she herte ; And that sate hire full lyte at herte, For she kneu-c nothing of hir thought : But wher she hnewe or kneu-e it nought, Algate she ne rought of hem a stre.

Id. Bohe of the Duchesse. I know to seek the track of my desired foe, And fear to find that I do seek : but chiefly this I

know,

That lovers must transform into the thing beloved And live, alas ! who could believe 7 with sprite from

life removed. Earl of Sumy.

No soul, ye know, entereth heaven-gate, Till from the body he be separate : And whom have ye known die honestly, Without the help of

Poticaryl

Heywood. The Four P'*,

What art thou, thus to rail on me, that is neither knuu-n of thee, nor knows thee 1 Shakspeare.

Let him be so entertained as suits gentlemen of your knowing to a stranger of his quality. Id.

Ignorance is the curse of God, Knowledge the wing wherewith we fly to heaven.

Id.

O that a man might know The end of this day's business ere it come. Id.

Do but say to me what I should do, That in your knowledge may by me be done, And I am pressed unto it.

Id. Merchant of Venice. You have heard, and with a knowing ear, That he, which hath your noble father slain, Pursued my life. Id. Hamlet.

He said the water itself was a good healthy water ; but for the party that owned it, he might have moii diseases than he knew for. Id. Henry I V.

When they know within themselves they speak of that they do not well know, they would nevertheless seem to others to know of that which they may not well «poak. Bacon.

The prophet Hosea tells us that God saith of the Jews, they have reigned, but not by me ; which proveth plainly, that there are governments which God doth not avow : for though they be ordained by his secret providence, yet they are not knowledged by his revealed will. Id. Holy War.

A state's anger should not take

Knowledge either of fools or women. Ben Jonson.

The first in order (nor in worth the last) Is knowledge, drawn from peace, and Muse's spring, Where, shaded in fair Sinai's groves, his taste He feasts with words, and works of heavenly king. Fletcher's Purple Inland.

'Tis grief to know of grief, and ill to know of ill.

Not from experience, for the world was new, He only from their cause their natures knew.

Denham.

Not to know of things remote, but knnw That which before us lies in daily life, Is the prime wisdom. Milton.

*hese are resolved into a confessed ignorance, and I shall not pursue them to their old asylum ; and yet it may be, there is more kuowafile in these, than in less acknowledged mysteries. Glanville.

If we look on a vegetable, and can only say 'tis cold and dry, we are pitiful knowers. Id.

The dog straight fawned upon his master for old knowledge. Sidney.

He knowingly and wittingly brought evil into the world. More.

There is but one mineral body, that we know of, heavier than common quicksilver. Boyk.

The hnomngest of these have of late reformed their hypothesis. Id.

In the other world there is no consideration that will sting our consciences more cruelly than this, that we did wickedly, when we knew to have done better ; and chose to make ourselves miserable, when we understood the way to have been happy. Tillutson.

Bellino, one of the first who was of any consideration at Venice, painted very drily, according to the manner of his time : he was very knowing both in architecture and perspective. Dryden.

They who were rather fond of it than knowingly admired it, might defend their inclination by their reason. Id.

One would have thought you had known better things than to expect a kindness from a common enemy. IS Estrange.

\hen a man makes use of the name of any simple idea, which he perceives is not understood, he is obliged by the laws of ingenuity, and the end of speech, to make known what idea he makes it stand for. Locke.

Knowledge, which is the highest degree of the speculative faculties, consists in the perception of the truth of affirmative or negative propositions.

Id.

‘Tis plain, that under the law of works is comprehended also the law of nature, knowable by reason, as well as the law given by Moses. Id.

What makes the clergy glorious is to be knowing in their profession, unspotted in their lives, active and laborious in their charges. South.

All animals of the same kind, which form a society, arc more knmcing than others. Addison.

These two arguments are the voices of nature, the unanimous suffrages of all real beings and substances created, that are naturally knowable without revelation . Bentlei, .

To the pnvate duties of the closet he repaired, as often as he entered upon my business of consequence : I speak knowingly. Atterburti.

Verse graced of old the feasts of kings, ore yet Luxurious dainties destined to the gulph Immense of gluttony were known, and ere Lyacus deluged yet the temperate board.

Cowper. To hit Father.

This patron may be sounded ; I will try him, I know the people to be discontented.

Byron. Marino Faliero. But bring me to the knowledge of your chiefs.

Id.

KNOWLER (William), LL.D., a learned English divine, born in 1699, educated at St. John’s College, Cambridge, and chaplain to the first

marquis of Rockingham, who appointed him rector of Irthlingborough and Boddington. He was editor of the earl of Si/afford e's Letters, in folio, 1739; and translated St. Chrysostom's Commentary on Paul's Epistle to the Galatians, 1766. He died in 1767, aged sixty-eight.

KNOX (John), the hero of the Reformation in Scotland, was born in 1505, at Gifford near Haddington. His ancestors were originally proprietors of the lands of Knock, in the parish of Renfrew, whence the family derived the surname of the Knocks, or Knox. They afterwards obtained the lands of Craigend and Ranfurly, both in this parish, and resided long at the castle of Ranfurly. He was educated at the University of St. Andrew's, where he took the degree of A. M. and commenced teacher very early in life. At this time the new tenets of Martin Luther were but little known in Scotland. Knox therefore at first was a zealous Roman Catholic ; but attending the sermons of a black friar, named Guilliam, be began to waver in his opinions ; and afterwards conversing with the famous Wishart, who, in 1544, came to Scotland with the commissioners sent by Henry VIII., he renounced the Romish religion, and became a zealous reformer. Being appointed tutor to the sons of the lairds of Ormistoun and Lang Nid-dery, he began to instruct them in the principles of the Protestant religion ; and on that account was so violently persecuted by the bishop of St. Andrew's, that with his two pupils he was obliged, in 1547, to take shelter in the castle of that place. But the castle was besieged and taken by twenty-one French galleys. He continued a prisoner on board a galley two years, till the end of 1549 ; when being set at liberty he landed in England, and, having obtained a license, was appointed preacher, first at Berwick, and afterwards at Newcastle. Strype conjectures that in 1552 he was appointed chaplain to Edward VI. He certainly obtained an annual pension of £40, and was offered the living of All-hallows in London; which he refused, not choosing to conform to the liturgy. Soon after the accession of queen Mary I. he retired to Geneva ; whence he removed to Frankfort, where he preached to the exiles ; but a difference arising on account of his refusing to read the English liturgy, he went back to Geneva; and thence, in 1555, returned to Scotland, where the Reformation had made considerable progress during his absence. He now travelled from place to place, preaching and exhorting the

people with unremitting 2eal and resolution. About this time he wrote a letter to the queen regent, earnestly entreating her to examine the Protestant doctrine, which she treated with contempt. In 1556 he was invited by the English Calvinists at Geneva to reside among them, and accepted their invitation. Immediately after his departure from Scotland the bishop summoned him, and, he not appearing, condemned him to death for heresy, and burnt his effigy at the cross of Edinburgh. He continued abroad till 1559, during which time he published his First Blast against the Monstrous Regiment of Women. Being now returned to Scotland, he resumed the great work of reformation with his usual ardor, and was appointed minister at Edinburgh. In 1561 queen Mary arrived from France, and, being attached to the religion in which she was educated, was exposed to continual insults from her reformed subjects. Knox himself frequently insulted her from the pulpit; and when admitted to her presence, regardless of her sex and her high rank, behaved to her with the most unjustifiable freedom. In 1571 he was obliged to leave Edinburgh, on account of the confusion and danger from the opposition to the earl of Lenox, then regent : but he returned in 1572, and resumed his pastoral functions. He died at Edinburgh in November 1572, and was buried in the churchyard of St. Giles's in that city. — His History of the Reformation was printed with his other works at Edinburgh in 1584, 1586, 1644, 1732. He published many pieces, several of which are preserved in Calder-wood's History of the Church of Scotland. He left also a considerable number of MSS. Dr. Robertson says, ' Zeal, intrepidity, disinterestedness, were virtues that he possessed in an eminent degree. He was acquainted too with the learning cultivated in that age ; and excelled in that species of eloquence which is calculated to rouse and to inflame. His maxims, however, were often too severe, and the impetuosity of his temper excessive. Rigid and uncomplying, he showed no indulgence to the infirmities of others. Regardless of the distinctions of rank and character, he uttered his admonitions with an acrimony and vehemence more apt to irritate than to reclaim ; and this often betrayed him into indecent expressions with respect to queen Mary's person and conduct. Those very qualities, however, which now render his character less amiable, fitted him to be the instrument of providence for advancing the reformation among a fierce people, and enabled him to face dangers, and to surmount opposition, from which a person of a more gentle spirit would have been apt to shrink back. By an unwearied application to study and to business, as well as by the frequency and fervor of his public

discourses, he had worn out a constitution naturally strong. During a lingering illness he discovered the utmost fortitude, and met the approach of death with a magnanimity inseparable from his character. He was constantly employed in acts of devotion, and comforted himself with those prospects of immortality which not only preserve good men from desponding, but fill them with exultation in their last moments. The earl of Morton, who was

present at his funeral, pronounced his eulogiutn in few words, the more honorable to Knox, as they came from one whom he had often censured with peculiar severity : « Here lies he who never feared the face of man.'

KNOX (Vicesimus), D.D. a modern divine and polite writer, was born December 8th, 1752, and educated at Merchant Tailors' school, whence he proceeded to St. John's College, Oxford. On the death of his father, he was chosen his successor in the head-mastership of Tunbridge school, over which he presided thirty-three years, till, retiring in 1812, he was himself succeeded by his son. He held also the livings of Riemwell and Ramsden Grays in Essex, and the chapelry of Shipbourne «n Kent. His works are, Essays Moral and Literary, 3 vols. 8ro. and 12mo.; Liberal Education, 2 vols. ditto ; Winter Evenings, 3 vols. ditto ; Personal Nobility, or Letters to a Young Nobleman, 1 vol. 12mo. ; Christian Philosophy, 2 vols. 12mo.; Considerations on the Nature and Efficacy of the Lord's Supper, 1 vol. 8vo. ; and a pamphlet On the National Importance of Classical Education ; Sermons, &c. He published, for the use of his school, expurgated editions of Horace and Juvenal, and a series of selections from the works of the best English authors, generally known as Elegant Extracts and Elegant Epistles. On the breaking out of the French Revolution, several opposition pamphlets were attributed to him, and a translation of Erasmus's Bellum dulce inexpertis. He is also said to have been the author of a tract, entitled The Spirit of Despotism, published anonymously in 1794. Dr. Knox wrote Latin with great purity and elegance. He died in September 1821.

KNOX, a county in the south-west part of Indiana, United States. Chief town, Vincennes. 2. A county of the south side of Kentucky. Chief town Barboursville : and, 3, A county of East Tennessee. Chief town, Knoxville.

KNOXVILLE, a post town and capital of Knox county Tennessee, is on the Holston, four miles below the mouth of French Broad River, and

twenty-two above the junction of the Holston with Tennessee River. It is 134 miles W. S. W. from Abingdon, 190 south of Lexington, and 541 from Washington. Long. 83° 44 W., lat. 35° 45’ N. It is pleasantly situated and well laid out, contains a court house, jail, state barrack, barracks for 700 men, and three places of public worship. It was once the seat of the state government and is still the largest town in East Tennessee. Hampden’s Literary Academy established here is a respectable foundation.

KNOXIA, in botany., a genus of the monogynia order, and tetrandria class of plants : natural order forty-seventh, stellatae : COR. monopetalous, and funnel-shaped : there are two furrowed SEEDS : CAL. has one leaf larger that the rest. Species two, natives of Ceylon.

KNUB’BLE, v. a. Dan. knipler. To beat. — Skinner.

KNUCK’LE, n. $. &cv.n.\ Saxon cnucle ;

KNUCK’LED, adj. t Dut. knockle. The

joints of the fingers protuberant when the fingers close ; the knee joint of a calf; the articulation

or joint of a plant : knuckle (from the noun), to submit; perhaps from an odd custom of striking the under side of the table with the knuckles, in confession of an argumental defeat : knuckled, jointed.

Divers herbs have joints or knuckles, as it were stops in their germination ; as gillyflowers, pinks, and corn. Bacon.

The reed or cane is a watery plant, and groweth not but in the water : it hath these properties, that it is hollow, and it is knuckled both stalk and root ; that, being dry, it is more hard and fragile than other wood

; that it putteth forth no boughs, though many stalks out of one root. Id. Natural History.

Jelly, which they used tor a restorative, is chiefly made of knuckles of veal. Id.

Thus often at the Temple stairs we've seen Two tritons, of a rough athletic mien, Sourly dispute some quarrel of the flood, With knuckles bruised, and face besmeared in blood.

Garth.

KNUFF, n. s. Perhaps corrupted from knave, or the same with chuff. A lout : an old word preserved in a rhyme of prediction.

The couutry knuffs, Hob, Dick, and Hick,

With clubs and clouted shoon, Shall fill up Dussendale

With slaughtered bodies soon. Hayioard.

KNUR, n. s. 3 Germ. knor. A knot ; a KNURLE, n. s.) hard substance. The stony nodules found lodged in the strata, are called by the workmen knurs and knots.

Woodward.

KNUTZEN (Matthias), a native of Holstein, the only person on record, before the era of the French Revolution, who openly professed and taught atheism. It is said he had about 1000 disciples in different parts of Germany. They were called Conscienciaries, because they asserted there is no other God, no other religion, no other lawful magistracy, but conscience, which teaches every man the three fundamental principles of the law of nature : to hurt nobody, to live honestly, and to give every one his due. Several copies of a letter of his from Rome were spread abroad, containing the substance of his sys-tem. It is to be found entire in the last edition of Mecrselius. This speculatist made considerable noise in his day. He is not to be confounded with

KNUTZEN (Martin), professor of philosophy at Konigsberg, who was born in 1713, and died in 1751. He left some learned and excellent works the principal of which are, Systema Causarum efficientium ; Elementa Philosophise Rationalis, Methodo Mathematico demonstrata ; Theoremata de Parabolis Infinitis ; and a Defence of the Christian Religion, 4to. in German.

KODlAK, a group of islands in the north-west coast of America, and fifty miles from the entrance of Cook's inlet. They extend about 130 miles in length from south-west to north-east and about fifty miles in breadth. According to the Russian charts, as they were shown to Vancouver, the largest extends from Cape Trinity to Cape Greville, where a separation takes place between it and the land to the westward of St. Ilermocrnes's Island, and forms, with the land to tlif southward, what captain Cook called Whitsuntide Bay. A passage, however, leading west-

ward into those straits separates the island of Kodiak from the continent to the southward of Cape Douglas. These straits are said by the Russian navigators to be in general upwards of ten leagues wide, and free from interruption. Long. 206° 12' to 208° 45' E., lat. 56° 45 to 58° 28' N.

KOEHLER (John Bernard), a distinguished classical scholar of the last century, was a native ofLubeck. At the age of seventeen he published a Dissertation on the Deities who presided among the Greeks and Romans over marriage. In 1766 he became professor of history and philosophy in the university of Kiel; and from 1781 to 1786 occupied the chair of the Greek and Oriental languages, at Konigsberg. His death took place April 3d, 1802. His chief works are, Remarks on Dion Chrysostom, 1765; Notes and Observations on Theocritus, 1767 ; Tracts on Roman Law ; and a German translation of the Iphigenia in Aulis of Euripides.

KOEI-TCHEOU, a province of China, one of the smallest and most rugged in the kingdom, bounded on the south by Quang-si, east by Hou-quang, north by Setcheuen, and west by Yu-nan. The whole country is almost a desert, and covered with inaccessible mountains : it may justly be called the Siberia of China. The peo-ple who inhabit it are mountaineers, accustomed to independence, and who seem to form a separate nation, being no less ferocious than the sav-age animals among which they live. The mandarins and governors who were sent to this province are sometimes disgraced noblemen, whom the emperor does not think proper to discard entirely. Numerous garrisons are entrusted to their charge, to overawe the inhabitants ; but these troops are found insufficient, and the court despairs of being ever able thoroughly to subdue it. It produces a herb much resembling our hemp : the cloth made of it is used for summer dresses. Mines of gold, silver, quicksilver, and copper, are found here : and of the last metal those small pieces of money are made which are in common

circulation throughout the empire. — Koei-tcheou contains ten cities of the first class, and thirty-eight of the second and third. The population was reported to Sir G. Staunton at

9,000,000.

KOEI-TCHOO-FOU, a city of China, it. Setchuen of the first rank. Situated on the river Yang-tse-kiang, its trade is very extensive, and, though the country around is mountainous, it is highly cultivated, and abounds with fruits, particularly the orange and lemon. Long. 109° 50* E., lat. 31° & N.

KCEMPFER(Engelbert), a German physician born in 1651, at Lemgow, in Westphalia. After studying in several towns, he went to Dantzic, where he gave the first public specimen of his proficiency by a dissertation De majestatis divi-sione. He then went to Thorn ; and thence to the university of Cracow, where he took his de-gree of doctor in philosophy ; after which he went to Konigsberg in Prussia, and staid there four years. He next travelled into Sweden, where he was appointed secretary of the embassy to Persia. He set out from Stockholm with the presents for that empecui and went through

Aa'.and, Finland, and Ingermaiiland, to Narva, where he mel Fabricius the ambassador, who had been ordered to takeMoscow in his way. The ambassador, having ended his negociations at the Russian court, set out for Persia. During their stay (two years) at Ispahan, Dr. Koempfer took every possible advantage of so long an abode in the capital of the Persian empire. The ambassador, towards the close of 1685, preparing to re-turn into Europe, Dr. Koempfer entered into the service of the Dutch East India Company, in quality of chief surgeon to the fleet, then cruis-ing in the Persian Gulf, and which, after touching at many Dutch settlements, came to Batavia in September 1689. He here applied himself chiefly to natural history. Hence he set out for Japan, as physician to the embassy which the Dutch East India Company sends annually to Japan. He returned to Europe in 1692. In 1694 he took his degree of M. D. at Leyden : on which occasion he communicated, in his Inaugural Thesis, several very curious and singular observations made by him in foreign countries. He was afterwards made physrcian to the count de Lippe ; and died in 1716. His principal works are, 1. Amoenitatis Exotica, in 4to; a work which contains many curious particulars respecting the civil and natural history of the countries through which he passed. 2. Herbarium Ultra Gangeticum. 3. The History of Japan in Ger-man, which is much esteemed ; and for which the public is indebted to the late Sir HansSloane, who purchased all his curiosities, drawings, and MSS. and prevailed on Dr Scheuchzer to translate this history into English.

KOENIG (Daniel), a Swiss writer, elder brother of Samuel. He translated Arbuthnot's Fables of Ancient Coins into Latin; which were printed at Utrecht in 1756. He died at Rotterdam, in consequence of ill usage from the mob at Franeker, who mistook him for a French spy.

KOENIG (Samuel), a learned philosopher and mathematician, professor of philosophy at Franeker, and afterwards at the Hague ; where he be-came librarian to the Stadtholder, and died in 1757 He wrote several works which are esteemed.

KOKORO, or BAI.EE, a rapid river of Western Africa, rising in Manding, not far from the Niger, and flowing through Fooladoo. Here it enters the Brooko, and receives the Ba Woolima. On entering Kajaaga it falls into the Basing or Senegal, eighty miles east of Saltern.

KOLBE, or KOLBEN (Peter), a Dutch writer only known as the author of an obsolete account of the Cape of Good Hope, and a tract De Aquis Capitis Bonae Spei in the Acta Eruditorum of Leipsic, 1716.

KOLF, a Dutch game played in an enclosed rectangular area of sixty feet by twenty-three. The floor, composed of sand, clay, and pitch, is made as level as a billiard-table : the enclosing walls are, for two feet upwards, faced with polished stone or sheet lead, to make the ball rebound accurately. At about ten feet from each end wall a circular post, five inches in diameter, is placed in the middle of the breadth of the area. These two posts are about forty feet distant from ˆeach other. The balls are about the size of cricket-

balls, quite round and elastic, covered with soft leather and sewed with wire. The clubs are from three to four feet long, with stiff shafts. The head is of brass, and the face, which strikes the ball, perfectly smooth. The game may be played by any number, either in parties, or each for himself. The contest is, who shall hit the two posts in the fewest strokes, and make his ball retreat from the last one, so that it shall lie nearest the opposite end wall. Five points make game ; and such is the difference between a capital and an ordinary player, that the former will often give four points, and yet be the winner. This game combines the address required both in GOLF and BILLIARDS, which see.

KOLKOKRO, a large lake of Kamtschatka, connected with the river of the same name, and supposed to be about 112 miles in circumference. It abounds in sea calves, called by the natives nerpis, a name by which they o'ften call the lake itself.

KOLOMNA, a town and bishop's see in the government of Moscow, European Russia, situated on the Oka, near its junction with the Moskwa. Its traffic is in corn, tallow, and salt meat. Inhabitants 5800.

KOLOR, a large town of Woolly, Central Africa, where Park first saw the exhibition of Mumbo Jumbo.

KOLYVAN, a district of the government of Tomsk, in Asiatic Russia, situated on the upper part of the Obi. Here are extensive copper mines, containing a considerable proportion of silver, and gold. M. Demidoff first discovered their value in 1727, and began in 1730 to extract publicly the copper ; but the gold and silver being declared the property of the government, he clandestinely separated those metals.

His assistant of the name of Steyger, however, made known his secret, and the mines were confiscated. According to the accounts of the Russian board of mines, these works, from 1725 to 1786, produced about 3,500*,000 pounds of silver, and 48,000 pounds of gold, and were once the most considerable in the Altay, but they have of late declined. A line efforts was built here in 1745 to defend them from the incursions of the Tartars. The town of Koly van is small and situated on the right bank of the Berda, near its junction with the Obi, in long. 81° 50’ E., lat. 54° 48’ N.

KONG, i. e. a mountain, according to Park, a kingdom of Central Africa, to the south of the Niger, traversed by a high chain of mountains. A large one, Toolilescena, is situated near the capital. The market is supplied from Houssa. The country is populous, and the language is a corruption of the Bambarra or Mandingo. It abounds in horses and elephants. The people fight with spears, and bows and arrows. According to Mr. Bowdich, Kong is nearly midway between Ashantee and Bembarra, or about 200 miles south from the one, and north from the other.

KONG-CHANG-FOU,acity of China, in the province of Shensee, of the first rank. It is near the western frontier, in a mountainous country, abounding with the animal which produces musk. By the river Hoeiho, which falls into the Yellow River, it is enabled to carry on a considerable trade. Long 1 <M° 19’ E., lat. 34° 56’ N

KONGSBERG, a large town of Norway, in tin; government of Christiana, situated on the River Lowe. In the mountains were formerly silver mines; but they are now exhausted: and j;okl is occasionally found. The town still contains a mint; a seminary for the education of youth m metallurgy. Population 6800, mostly Germans, engaged in the mines. Thirty-six miles west of Christiana.

KONJEUR,a Mahratta district of Hindostan, province of Orissa, situated principally between 21° and 22° N. lat. It is watered by several streams. Chief towns Konjeur, Ogurapore, and Andapoorgur. Konjeur is the capital. Long. 85°45'E., lat. 21° 34' N.

KONIG (George Matthias), a learned German, born at Altorf in Franconia, in 1616. He be-came professor of poetry and Greek, and librarian to the university ; in which he succeeded his father. He gave several specimens of his learning, particularly by a biographical dictionary, entitled Bibliotheca Vetus et Not a, 4to. Altorf, 1674 : which, though defective, is useful to biographers. He died in 1699.

KONIGINGRATZ, a circle of Bohemia, on the Elbe ; contiguous to Silesia, Moravia, and Glatz. The northern parts are mountainous, being penetrated by the Reisengebirge : but in the central portion of the circle are many fertile valleys. The liren manufacture is extensive and superior : cotton and woollen stuff's are also made.

The capital is a bishop's see, neatly built and containing 5700 inhabitants. In 1758 and 1762 the Russians attacked this place ; and on the latter occasion the powder magazine was blown up, and destroyed a large part of the town. It is 139 miles north of Vienna, and sixty-four east by north of Prague.

KONIGSBERG, a city and government of the Prussian states, comprising the north and west parts of the province of East Prussia. The government contains an area of 8960 square miles, and a population of about 491,000.

The city of Konigsberg is the capital of East Prussia, and stands on the River Pregel, which falls into the sea at the Frische Haff about four miles distant. Part of the city stands on an island formed by the river, and is connected with the other part by bridges. Including the suburbs, Konigsberg is about seven miles in circumference, and contains various stately and magnificent pub-lic buildings, with many large and elegant houses. Most of the inhabitants are Lutherans, and several of their churches are handsome. The university is in high repute. This city, which dates its origin in the thirteenth century, was one of the Hanse towns : it is well fortified, and is the most commercial place in the Prussian dominions. But, as the river only admits small vessels to ascend to the town, the merchants have found it expedient to make a depot at Pillau, which is situated on a bay of the Frische Haff, about thirty miles below. In 1817 the number of vessels that entered the harbour amounted to 1098.

KONKODOO, a mountainous country of Western Africa, between the upper part of the courses of the Faleme and Senegal, bordering on Jailonkadoo, Satadoo, and Dentila. It is considered by Golberry as a district of Bambouk. The streams descending from the mountains are

impregnated with gold dust, which the natives separate by a mechanical process. The sand being put into a calabash, water is copiously poured over it, and a constant agitation kept up till the gold dust only remains. The mountains are said in some parts to be cultivated to the very summit. Park was much pleased with the en-tire appearance of this country.

ROOM, a ruined city of Persia, built by the Saracens in the year 806, on the site of the ancient Choana. It is said by some writers to have been erected out of the ruins of seven towns, which had been destroyed in a civil war. It be-came one of the first cities of Persia, especially in its silk manufacture ; but was taken and completely destroyed in 1722, by the Afghauns. It still however contains a very beautiful college, with a mosque and sanctuary, erected to the me-mory of Fatima, the daughter of Iman Reza. In the mosque are the tombs of Sen the First, and Shah Abbas the Second. Long. 50° 29’ E., lat. 34° 45’ N.

KOPAUL, a town and fortress of Bejapore, Hindostan, district of Guginderghur, belonging to the Nizam. This place, a sugar-loaf mountain surrounded by three lines of fortifications, is reckoned one of the strongest in the south of India. The magazines, storehouses, &c., are excavated out of the rock. But in the year 1790 it was taken from Tippoo Sultan, by the Mahrattas : the garrison having in a siege of six months expended all their provisions, were forced to capitulate. Long. 76° 6’ E., lat. 15° 28’ N.

KO’RAN, n. s. The alcoran, the bible of the Mahommedans. See ALCORAN.

KORDOFAN, a country of Central Africa, to the west of the Bahr-el-Abiad, between the kingdom of Darfur and that of Sennaar. About the time Mr. Bruce returned from Abyssinia, the Kordofanese renounced the allegiance of Sennaar ; but, at the period when Mr. Browne visited the country, it had again been subdued : still the disposition to insurrection had entirely interrupted the communication of Darfur with the eastern regions. The language is Arabic. Ibeil is the chief town.

KORIAKS, a barbarous tribe of Siberia, who inhabit part of the government of Okhotsk, around the gulf of Penginskaia, and north as far as the banks of the Anadir. They do not amount to more than 2000.

KOROS, BLACK, a river of Hungary, which, rising in the palatine of Bihar, passes through that of Strand, in which it receives the White Koros, coming from Transylvania, enters the palatinate of Bekesch, and falls into the Theysse near Czongrad. The Schnelle Koros rises also in the palatinate of Bihar, and joins the two others near Bekesch.

KOS, in Jewish antiquity, a measure of capacity, containing about four cubic inches: this was the cup of blessing out of which they drank when they gave thanks after solemn meals, like that of the passover.

KOSCIUSCO (Thaddeus), a Polish general and patriot, was born of a respectable family, and educated at the military school of Warsaw; after which he went to France and America, where he served as aid-de-camp to general Washington. On his return home he was made

major-general, and distinguished himself in the war of 1792, but without effect. Two years afterwards the Poles again took up arms, and were headed by him ; but all his exertions for his country were fruitless, and

Freedom shrieked when Kosciusco fell. He was made prisoner by the Russians, who treated him with great respect. The emperor Paul gave him an estate. Kosciusco now visited America a second time; and in 1798 returned to Europe, and settled in France, where Buonaparte in vain endeavoured to tempt him into his service. He died at Soleure, in Switzerland, 16th of October, 1817.

KOSIE, a kingdom of Western Africa, on the east bank of the Lagos, about sixty miles from its mouth. The people of Kosie command the trade of all the slaves which are brought down the river.

KOSTROMA, a considerable government of European Russia, lying between 40° 20’ and 48° 20’ of E. long., and 56° 45’ and 59° 13’ of N. lat., and bounded by Vologda, Viatka, Niznei-Novgorod, Vladimir, and Jaroslav. It is in the latitude of Scotland, and its territorial extent 38,400 square miles, divided into twelve circles or districts. It is watered by the Volga, the Vetluga, and the Kostroma, and has several

lakes. The surface is in general an undulating plain ; but the soil is very various, and in many places covered with heath and wood. The inhabitants are chiefly pastoral. Population about 1,150,000.
KOSTROMA, a town of European Russia, the capital of the preceding government, is situated on the left bank of the VVolga, near the influx of the Kostroma. It is the see of a bishop, and has manufactures of linen, Russian leather, Prussian blue, salt, wax, and soap, and a trade in corn and wine : 435 miles east by south of St. Petersburgh. Population 9000.

KOTTER, or KOTTERUS, (Christopher), one, of the three fanatics whose visions were published at Amsterdam in 1657, with the title of Lux in Tenebris. He lived at Sprotta in Silesia, and his visions began in 1616. As most of his predictions promised felicity to the elector palatine, and unhappiness to his imperial majesty, the emperor's fiscal in Silesia seized him, set him in the pillory, and banished him the emperor's dominions. Upon this he went to Lusatia, and there lived unmolested till his death in 1647.

KOTZEBUE (Augustus Von), was born at Weimar, May 30th, 1761. He was sent, at the age of sixteen, to the college of Jena, and from thence to Duisburg, where he raised a company of juvenile performers. In 1779 he returned to Jena, and studied the law; but most of his time was spent in the theatre. In 1781 he became secretary to general Bauer, whom he accompanied to Petersburg, and produced there his tragedy Demetrius, Czar of Muscovy, and married a Russian lady. He was now appointed president of the civil government at Revel, and wrote a number of dramas; some of which obtained srreat popularity. He lost his wife in 1789, on which he went to Paris, and then to Vienna, where he became superintendant of the imperial theatre ; but resigned that place, and returned to Russia. Here he was immediately arrested by

the emperor Paul, and sent to Siberia, but did not remain long in exile ; and on his arrival at Petersburgh, was taken into the capricious despot's favor. In 1813 he was appointed consul-general at Konigsberg ; but, the climate disagreeing with him, he resigned the situation to reside at Man-heim, where he was assassinated, March 23rd, 1819, by a fanatical student of Jena, named Sand, who also stabbed himself, but, recovering from his wound, was tried for the murder, and beheaded.

KOUANGNAN-FOU, a city of China, of the first rank, in Yunnan, situated on the border of Koei-tchoo, and separated from the rest of the .province by mountains. The soil is fertile, but the inhabitants barbarous. Long. 106° 14’ E., lat. 30° 32’ N

KOUANGSI-FOU, a city of China, in Yun-nan, of the first rank. It is situated on a plain, by the side of a lake, and surrounded by mountains, in long. 103° 28’ E., lat. 24° 40* N.

KOUANGSIN, a city of China of the first rank, situated on a stream which falls into the Poyang Lake. It is surrounded by lofty mountains, but the sides are fertile, and highly cultivated. Here are manufactures of paper and candles. Long. 117° 44’ E., lat. 28° 27ˆ N.

KOUANIN, in the Chinese theology, the tutelary deity of woman. The Chinese make great numbers of the figures of this deity in white porcelain, and send them to all parts of the world, as well as keep them in their own houses. The figure represents a woman with a child in her arms. The women who have no children pay a sort of adoration to these images, and suppose the deity they represent to have power to make them fruitful. The statue always represents a handsome woman modestly attired.

KOUC, KOUCH, or KOECK (Peter), a celebrated painter in the sixteenth century, born at Alost. He studied under Bernard Van Orley, who lived with Raphael. He visited Rome, and by studying there formed an excellent taste, and became a very correct designer. On his return home he superintended the execution of some tapestry work after the designs of Raphael. He was afterwards persuaded to go to Constantinople ; but finding that the Turks were not allowed, by their religion, to paint any figure, and that there was nothing for him to do but to draw designs for tapestry, he spent his time in designing the particular prospects in the neighbourhood of Constantinople, and the manners of the Turks, of which he has left many prints, that alone suffice to give an idea of his merit. After his return he settled at Antwerp, where he drew several pictures for the emperor Charles V. He was also a good architect, and wrote a Treatise on Sculpture, Geometry, and Perspective ; and translated Vitruvius and Serlix into the Flemish tongue. He died in 1550.

KOULI KHAN (Thamas), or Schah Nadir, was the son of the chief of a branch of the tribe of Affchars, and governor of a fortress erected by that people against the Turks. Upon his father’s death his uncle usurped his government, under pretence of taking care of it during the minority of young Nadir. Disgusted at this affront, he commenced

adventurer, and entered

into the service of Beglerbeg, governor of Mus-chada, in the Khorassan ; who, discovering in him a military genius, promoted him to the command of a regiment of cavalry ; and, in 1720, when the Usbec Tartars invaded the Khorassan with 10,000 men, raised him to the rank of general, when he defeated the Tartars, and took their commander prisoner. But Beglerbeg, after this, becoming jealous, and not fulfilling his promises of farther promotion, Kouli-khan publicly complained of the governor's ingratitude, who thereupon broke him, and ordered him to be punished with the bastinado so severely, that the nails of his great toes fell off. This affront occasioned his flight, and his joining a banditti of robbers. After various adventures, he was, in 1729, made general of Persia by Schah Thamas, and permitted to take his name Thamas, and that of Khuli, which signifies slave : his title therefore was, The slave of Thamas ; but he was ennobled by that of Khan. In 1736 he excited a revolt against his master, for having made an ignominious peace with the Turks ; and, having the army at his command, he procured his deposition, and his own advancement to the throne. In 1739 he conquered the Mogul empire; and at length met with the usual fate of tyrants, being assassinated by one of his generals, in league with his nephew and successor, in 1747, aged sixty. See PERSIA.

KOUMISS, a sort of wine made in Tartary, where it is 'used by the natives as their common beverage, and often serves them instead of all other food. It is said to be so nourishing and salutary, that the Baschkir Tartars, who, towards the end of winter are much emaciated, no sooner return in summer to the use of koumiss, than they become strong and fat. From the Tartars it has been borrowed by the Russians, who use it medicinally. It is made with fermented mare's milk, according to the following recipe communicated by Dr. Grieve : — ' Take of fresh mare's milk, on one day any quantity ; add to it a sixth part of water, and pour the mixture into a wooden vessel ; use then, as a ferment, an eighth part of the sourest cow's milk that can be got ;

but at any future preparation a small portion of old koumiss will better answer the purpose of souring ; cover the vessel with a thick cloth, and set it in a place of moderate warmth ; leave it at rest twenty-four hours, at the end of which time the milk will have become sour, and a thick substance will be gathered on the top ; then with a stick, made at the lower end in the manner of a churn staff, beat it till the thick substance above mentioned is blended intimately with the subjacent fluid. In this condition leave it again at rest for twenty-four hours more ; after which pour it into a higher and narrower vessel, resembling a churn, where the agitation must be repeated as before, till the liquor appears to be perfectly homogeneous ; and in this state it is called koumiss. Agitation must be employed every time before it is used.' To prevent changing the vessel, the milk must be put at once into a pretty high and narrow vessel ; and, to accelerate the fermentation, some warm milk may be added ti it, and more souring. The process may be shortened by heating the milk before the

souring is added to it, and as soon as the parts begin to separate, and a thick substance to rise .to the top, by agitating it every hour or oftener. It is common among some Tartars to prepare it in one day during summer, and that with only two or three agitations. And though it is commonly used within a few days after the preparation, yet when well secured in close vessels, and kept in a cold plaro, it may be preserved for three months, or more, without any injury to its qualities. The acid fermentation may also be produced by sour milk, as above, by a sour paste of rye-flower, by the rennet of a lamb's stomach, or by a portion of old koumiss. Pallas t says, that cows' milk is also susceptible of the vinous fermentation, and that the Tartars prepare a wine from it in winter, when mares' milk fails them ; that the wine prepared from cows' milk they call airen ; but that they always prefer koumiss when it can be got, as it is more agreeable and contains a greater quantity of spirit; that koumiss on distillation yields of a weak spirit one-third, but that airen yields only two-ninths of its whole quantity, which spirit they call arika. It appears that cows' milk may be fermented with, or even without souring, provided sufficient time and agitation be employed ; that no spirit can be produced from any one of its constituent parts taken separately, nor from any two of them, unless inasmuch as they are mixed with some part of the third ; that the milk with all its parts, in their natural proportion, is the most productive of spirit. From six pints of milk, fermented in a close vessel, and set to repose, a Russian chemist, Oscretskowsky, obtained three ounces of ardent spirit, of which one was consumed by burning ;

but from the same quantity of the same milk, fermented in an open vessel, he could scarcely obtain an ounce.

KOUTOUSOFF, or KUTUZOW SMOLENSRY (Michael Lavrionovitch Golemitcheff, prince of), a modern Russian general and minister of state, was born in 1745, and educated at Strasburgh. At the age of sixteen, he was a corporal in the artillery ; and shortly after he became lieutenant in a regiment commanded by Suwar-row. In 1762 he rose to the rank of captain, and went to Livonia; here he made five campaigns against the Poles : he then served under count Ro-manzow in the war with Turkey, and was distinguished at the battles of Pruth and Kagoul ; and in the Crimea in 1772 and 1773. He was appointed a major-general in November 1784, and succeeded against the enemy on various occasions, until in June, 1791, he added to his fame at the bat-tle of Matchine, which terminated the Turkish war. In 1793 and 1794 he was the Russian ambassador at Constantinople ; and on his return commanded in Finland. Under Paul I. he was afterwards sent into Holland. Alexander appointed him military governor of St. Petersburgh; and Kutu-zow commanded the Russian army first sent to assist the Austrians. lie was present at the battle of Austerlitz, which was, however, fought in opposition to his advice. In 1809 he was governor of Lithuania. lie concluded the treaty of Bucharest with the Turks, May 16th, 1812, on which he was made a prince of the Russian empire. In 1812 the emperor nominated him

president of the council of state, and general-issimo of his armies ; and, though lie failed to repulse the enemy in the bloody battle of Boro-dino, he most ably conducted the Russian forces afterward*, and followed the French into Prussia. He was suddenly attacked at Breslaw with a mor-tal disease, and died there April 16th, 181 3.

KOZLOV, a large town of European Russia, on the Voronet, in the

government of Tambov. Its chief trade is derived from horned cattle, which are sold to the Don Cossacks, and in tal-low and salt meat with Moscow. Population 7100. Forty-eight miles W.N.W. of Tambov.

KRAKEN is the name given to an imagined monster of the deep, concerning which, so many traditions have been cited, and so much credulity exercised, that the following abridged account of it, from bishop Pontoppidan's History of Norway will probably suffice. As a full grown kraken, says he, has never been seen in all its parts and dimensions, an accurate sur-vey of which must employ some time, it is impossible to give a complete description of one. 4 Our fishermen unanimously and invariably affirm, that when they are several miles from the land, particularly in the hot summer davs, and by their distance, and the bearings of some points of land, expect from eighty to 100 fathoms depth, and do not find but from twenty to thirty; more especially if they find a more than usual plenty of cod and ling, they judge that the kraken is at the bottom ; but if they find by their lines that the water in the same place still shallows on them, they know he is rising to the surface, and row off with the greatest expedition till they come into the usual soundings of the place ; when, lying on their oars, in a few minutes the monster emerges, and shows himself sufficiently, though his whole body does not ap-pear. Its back or upper part, which seems an English mile and a half in circumference (some have affirmed more), looks at first like a number of small islands, surrounded with something that floats like sea-weeds ; at last several bright points of horns appear, which grow thicker the higher they emerge, and sometimes stand up as high and large as the masts of middle sized vessels. In a short time it slowly sinks, which is thought as dangerous as its rising ; as it causes such a swell and whirlpool as draws every thing down with it, like that of Malestrom. This slow mo-tion may be necessary to the security of ships of the greatest force and burden, which must be overwhelmed on encountering such an immense animai, if his velocity were equal to his weight; the Norwegians supposing that if his arms, on which he moves, and with which he takes his food, were to lay hold of the largest man of war, they would pull it down to the bottom !'

KRANTZIUS (Albertus), a native of Ham-l>ureh, and a celebrated historian, who travelled over several parts of Europe, and was made rec-tor of the university of Rostoch in 1482. He went thence to Hamburgh in 1.508, where he was elected dean of the chapter in the cathedral ; and was so famed for his abilities and prudence, that lohn king of Denmark, and Frederick duke of Holstein, made him umpire in a dispute they had with the Ditrnar-o. He wiote 1. Chronica

Regnorum Aquilonum, Daniae, Sueciap, Norve-giae; 2. Saxonia, sive de Saxonioa; Gentis ve-tusta origine, &c. ; 3. Vandalia, sive Histona Vandalorum ; 4. Metropolis, sive Hist. Eccles. Saxomcce; 5. Institutiones Logicae, 4to. He died in 1517.

KRASICKI (Ignatius), count de Ciczin, a prince, bishop of Warmia, and archbishop of Gnesnia, in the eighteenth century. The partition of Poland in 1772 deprived him of his functions in the senate of his country ; and Frederick the Great, who took pleasure in his conversation, having one day said to him, I hope you will take me into Paradise under your episcopal mantle, the archbishop replied — ‘ No, sire, your majesty has cut it too short for it to conceal any contraband commodity.’ He excelled in exposing the ridiculous in national manners. Among his works are Mysieidos, an heroic-comic poem, in ten cantos ; Monachomachia, or the War of the Monks, in six cantos, thought to be his chef-d’- oeuvre; Anti-Monachomachia, in six cantos; Fables; The War of Choczim; and imitations of Ossian. He died March 14th, 1801, aged sixty-six.

KRASNOYARSK, a flourishing town of Asiatic Russia, in the government of Tomsk, situated on a river which falls into the Yenisei. It carries on a trade in furs ; and the great road from Tomsk to Irkoutsk passes through it. The surrounding country is of remarkable fertility. Population 3450.

KRASSOVA, an extensive palatinate of Hungary, bounded on the east by the palatinate ot Hunyad, in Transylvania, and on the east and south by the tract of country adjacent to Turkey, and called the Military Frontier. The western boundary is formed by the palatinate of Temes-var, as far as the Marosch, and the rest by the palatinate of Arad. Population 200,000.

KRISHNA, in Hindoo mythology, one of the avatas or incarnations of the god Vishnu, in which he is said by the sectaries, who exclusively worship him under this name, to have magnified himself in a degree of power and glory far exceeding any other of his forms. They maintain indeed, that under the other avatas he assumed only an ansa, or portion of his divinity, while Krishna was Vishnu himself in mortal mould. A numerous sect called Gokalasta, from Gokala, one of Krishna’s names, worship him exclusively, or conjointly with his consort Radha. This sect are immeasurably lavish in their praises, and vehement in their adoration of this deity, while other sects of Hindoos call Krishna a merciless t)rant, an incarnate demon, now expiating his

crimes in hell. As information is received from these different descriptions of zealots, so consequently will it differ in the account of the character and actions of this motley personage, of whom as much is recorded as of any of the Hin-doo deities. His life and actions have occupied the attention of many voluminous writers ; and if taken literally he led a life of excessive libertinism, but his followers maintain such appearances to have been the result of maya, or delusion, for that in reality his life was chaste and holy. The Gita Govinda, a be-.int < fiil porrn, is a series of mystical rhapsody in praise of Krish-2 C/

ua, and a relation of his loves with his consort Itadha ; and although loose, in a degree not admitting of literal translation into our language, is said to be purely mystical, and to signify the ‘ reciprocal attraction between the divine goodness and the human soul.’ This poem was translated or imitated by Sir VV. Jones, and appears in his works, and in the third volume of the Asiatic ‘{ •‘searches. Krishna’s names, like other deified parsonages, are numerous. He being Vishnu, they enjoy several in common, Murari, Heri, Madhava, and Baghavan, among them ; Govinda Gopala, Gokala, are derived from his occupation of herdsman ; Gopinatha, or the Gopia’s god ; Murlidur, the tuneful ; Kessu, Kesava, or Ke-savi, are said to refer to the fineness of his hair ; Vaninrali, to his pendent garland ; Yadava, Varshneya, and Vasudeva, to his tribe and fa-mily. In a curious work translated by Wilkins, entitled Bhagavat-Gita, Arjun, the son of Pandu, addresses Krishna as ‘ the supreme Brahm ; the most holy ; the most high god ; the divine being before all other gods ; without birth ; the mighty lord ; god of gods ; the universal lord.’ In different parts of the Gita he says of himself, ‘ I am, of things transient, the beginning, the middle, and the end ; the whole world was spread abroad by me in my invisible form. At the end of the period kalpa all things return into my primordial source ; and, at the beginning of another kalpa, I create them all again. I am the creator of all mankind, uncreated, and without decay. There is not any thing greater than I, and all things hang on me, as precious gems on a string . I am the understanding of the wise, the glory of the proud, the strength of the strong. I am the eternal seed of all nature ; I am the father and mother of this world, the grandsire and the preserver; I am death and immortality; I am entity and nonen-tity; I am never failing time; I am all-grasping death, and I am the resurrection. — I am the em-blem of the immortal, and of the incorruptible; of the eternal, of justice, and of endless bliss. —

Neither the sun nor the moon, nor the fire, enlightened) that place, whence there is no return, and which is the supreme mansion of my abode.' Sanjay, one of the interlocutors of the Gita, describes Krishna as he revealed his 'million forms divine,' to Arjun, 'covered with every marvellous thing — the eternal god, whose countenance is turned on every side. The glory and amazing splendor of this mighty being may be likened to the sun, rising at once into the heavens with a thousand times more than usual brightness. The son of Pandu then beheld within the body of the srod of gods, standing together, the whole universe divided forth into its vast variety.' Arjun, terrified at this wondrous exhibition, exclaims — ' Thou art the supreme being ! I see thee without beginning, without middle, and without end ; of valor infinite, of arms innumerable ; the sun and the moon thy eyes; thy mouth a flaming fire; and the whole world shining with thy reflected glory. Having beholden thy dreadful teeth, and gazed on thy countenance, emblem of time's last fire, I know not which way to turn; I find no peace. Have mprcy then, O god of •. r»ds ! thou mansion of the universe ! and show uie thy celestial form, with the diadem on thy

head, ai.d thy hands armed with the club and chakra. Assume then O god of a thousand arms ! image of the universe ! thy four-armed form.'

KROUTE, CROUTEjOr SOUR CROUTE, (Germ. Sauer Kraut, i. e. sour herb), a preparation of cabbage, which has been found of great efticacy as a preservative in long voyages from the sea-scurvy. The process for making it is this : — The soundest and most solid cabbages are selected, and cut crosswise very small, with a knife or an instrument made for the purpose, like that used for slicing cucumbers. The cabbage thus sliced is put into a barrel in layers, hand high, and over each is strewed a handful of salt and carraway seeds; in this manner it is rammed down with a rammer till the barrel be full, when a cover is put over it, and pressed down with a heavy weight. After standing some time in this state it begins to ferment ; and, when the fermentation has entirely subsided, the head is fitted to it, and the barrel is finally shut up and preserved for use. There is not a drop of vinegar employed. Great quantities of sour kroute are consumed in Germany and Holland.

KRUDENER (baroness Valerie de), an enthusiast, the Joanna Southcott of the continent, was born in 1765 at Riga, being the daughter of the

governor, count de Wittenkoff. At an early age she became the wife of baron de Krudener, ambassador from the empress of Russia to the court of Berlin, and afterwards at Venice, where the secretary of legation fell in love with her, and committed suicide; on which subject she wrote a romance called Valerie. At the commencement of the revolution in France, madame Krudener resided in that country, but afterwards returned to Germany; and in 1806 first appeared in her character of prophetess, avowing that she had a mission to establish the reien of Christ. She followed the emperor Alexander to Paris, and declared that he was the appointed regenerator of mankind. Her predictions excited great attention, and, when the sovereigns left Paris, she went into Switzerland, where she preached the advent of the millennium, and thousands flocked to her from the mountains. At length the States interfered, and madame Krudener, after making, it is said, a convert of Benjamin Constant, went into the Crimea, and died at Karasubassar, December, 25th, 1824.

KUARA, a very mountainous and unhealthy province, at the western extremity of Abyssinia, near the banks of the Bahr-el-Abiad . It abounds in gold, it is said, not however of its own produce, but brought hither by the Shangalla and other tribes. In the low country, near Sennaar, there is a settlement called Ganjum, which often acts independently of the government.

KUBAN or KUBIN, a town of Hungary, in the Bannat, opposite to Semendria. It has 2400 inhabitants, who carry on a brisk trade with the Turks.

KUFT, or KEPT, the ancient Coptos, a city of Upper Egypt, which, during the time of the Ptolemies, was the great emporium of its commerce. The productions of Lower Egypt and of Europe were landed from the Nile and conveyed to Beienice, on the coast of the Red Sea. It became still more flourishing under the Roman empire. Coptos, in the early ages of Christi-

anity, was distinguished by the number of its convents, and of those

who fled here to escape from persecution. Dioclesian reduced it to ashes. The old city was never afterwards inhabited, but an Arab town has been built in its vicinity, and most of the commerce with the Red Sea is transferred to Kene. The ruins of the ancient city, destroyed by Dioclesian, remain it is said nearly in the same state in which they were left by the fire, and exhibit splendid fragments of porphyry and granite columns.

RUHNIUS, (Joachim), a learned German critic, born at Gripswaldein Pomerania, in 1647. He was, in 1669, made principal of the college at Oettingen in Suabia; in 1676 Greek professor in the college at Strasburg ; and ten years after Greek and Hebrew professor. His uncommon skill in the Greek language attracted a great number of scholars from distant parts ; and he published some classic authors with very learned explanatory and critical notes. He died in 1697.

KULLA or QUALLA, a country and river of Central Africa, to the south-east of Wangara, represented to Browne as an important state, but he did not enter it.

RUMANIA, GREAT and LITTLE, the name of two districts, in the central part of Hungary, granted in the twelfth and thirteenth centuries to a foreign tribe. They consist properly of three parts; the most northerly, Great Rumania, or Nagy Runsag, is separated from the others by the great river Theyss, as well as by a considerable tract of country, and forms a plain of 420 square miles of area, with 33,000 inhabitants, chiefly Calvinists. Their chief town is Rards-zag. The two other parts are each called Little Rumania, or Ris Runsag : both being situated on the right side of the Theyss, and the left of the Danube, near the middle of Hungary. The two together are larger than Great Rumania, having an extent of 1000 square miles, with 41,000 inhabitants.

RUNASHIR, a mountainous island of the Eastern seas, forming part of the archipelago of the Ruriles. It is about 100 miles long and thirty-five broad. It contains many valleys capable of cultivation ; but is almost uninhabited, not containing more than sixty-eight men, and about twice the number of women. The Russians make occasional excursions, for the purpose of hunting and fishing, and have erected a small fort here

RUNCREL (John), a celebrated Saxon chemist, born in Sleswick, in 1630. He became chemist to the elector of Saxony, the elector of Brandenburgh, and Charles XI. king of Sweden, who gave him the title of counsellor in metals, and letters of nobility, with the surname of

Louwensteing. He employed fifty years in chemistry; in which, by the help of the furnace of a glass-house which he had under his care, he made several excellent discoveries, particularly of the phosphorus of urine. He died in Swe-den in 1702; and left several works, some in German, and others in Latin: among which that entitled Observations Chemicse, and the Art of Making Glass, printed at Paris in 1752, are the most esteemed.

KUR, the ancient Cyrus, the largest river af Georgia. It rises in Armenia, flowing north for about sixty miles, when it flows in a south-west direction into the Caspian. The banks are high and wooded. Its largest tributary is the Arar and Araxes.

RURDISTAN, or CORDISTAN, a mountainous country of Asia, whence issue the different branches of the Tigris, which, surrounding the upper part of the great Zab, passes to the southward, as far as the frontiers of the Irak-Adjemi, or Persian Irak. It has been regarded as one of the divisions of the Turkish province of Diarbekir, anciently known as Assyria Proper. It lies chiefly on the east side of .the Tigris, towards Persia, being bounded by that kingdom on the east, and by the Tigris on the west, by Irak on the south, and Turcomania on the north, and some writers extend it into Armenia, and the Persian province of Irak-Adjemi. Towards the south it scarcely exceeds ninety miles in breadth ; but northwards it stretches nearly 300 miles from east to west, or, from 41° to 47° of E. long, from north to south it reaches from 35° 30’ to 37° 20’ N. lat. The mountain of Coatras separates it from Persia on the east, and the Tigris. on the west, from Mesopotamia and Chaldac-a.

According to the ancients this country was rich and fertile ; but it is now desolate, and abounds with deserts, except in those few parts which lie near towns. It was in former ages the field of battle between the Parthians and Romans, and .at a later period between the Turks and Persians. Its chief towns and hamlets are Betlis, the capital, Scheresal, Arbela, Harpel, Nineveh, Rehobo, Rhesen, Van, and Holwan.

The Rurds are divided into tribes, which are dispersed over Lower Asia, and have widely extended themselves within the last 100 years. Volney suggests that Gord and Rurd are the same; and they are supposed to be the same people who are mentioned by Xenophon under the denomination of Card-uchi, and who opposed the retreat of the 10,000. In their modern state they are as independent ; for, though

apparently tributaries to the Porte, they pay little respect to the orders of the grand seignior. According to the account of Niebuhr, who travelled in these countries in 1769, they are subject, in their mountains, to a sort of feudal government, similar to that of the Druses their neighbours. Each village has its chief, and the whole nation is divided into different and independent commands. The disputes inseparable from this state have detached from the nation a great number of tribes and families, which have adopted the wandering life of the Arabs. These are dispered in the Diarbekir, and over the plains of Arzroum, Erivan, Sivas, Aleppo, and Damascus ; and all their tribes are estimated to exceed 140,000 armed men. Like the Turkmans, these Rurds are pastors and wanderers; often shifting their position in search of pasture for their numerous flocks and herds. Their tents are large, and formed of a sort of coarse brown cloth ; some houses are constructed for temporary use of cane hurdles, disposed in a square form, and having the floor matted, so as to answer the purposes both of bed and board. When they dislodge, in

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order to migrate, thoy take their huts to pieces, and load their oxen and cows with them. The children go almost naked m the coldest weather. The men are generally well mounted, and take great care of their noble horses : the lance is their chief weapon. The women ride both on horses and on oxen. Both sexes are naturally stout and nimble ; but not agreeable in their persons, having small eyes, wide mouths, and bad complexions. The Kurds differ from the Turkmans in various respects. The latter give their daughters a marriage portion ; the former receive a premium for them. The Turkmans pay no respect to nobility or extraction ; the Kurds highly honor it. The Turkmans do not steal; the Kurds are almost everywhere plunderers; and they are therefore much dreaded in the neighbourhood of Aleppo and Antioch.

In this pachalic, and in that of Damascus, their number sometimes exceeds 20,000 tents and huts. They are reputed Mahommedans; but do not trouble themselves about religious rites or opinions. Several of them, distinguished as the Yazdia, worship ‘ Shaitan’ or Satan, according to the ancient system of the good and evil principles, which has more or less prevailed in Diarbekir, and the frontiers of Persia. There are also some few professed Christians among them, under two patriarchs. The Kurds’ language is divided into three dialects. It has neither the aspirations nor the gutturals of the Arabic, and Volney says it does not resemble the Persian. Considering the antiquity of the people who speak it, and that they are related to the Medes, Assyrians, Persians, and even the Parthians, he conjectures, that a knowledge of this tongue would throw light on the history of these countries.

Colonel Squire says, ‘ the Kurds, like the Turcomans, lead a pastoral life ; in Syria they occupy the mountains between Aleppo and the sea; and never pass farther to the southward than Antioch. . Their number amounts to between 4000 and 5000. The Kurds have villages amongst them, though in summer, like the Turcomans, their ordinary residence is under tents. They also exact a tribute from travellers, though, their faith once plighted in your favor, you need never suspect their sincerity. Their women make a coarse sort of carpet, which is tinged with different colors.’ When a Koordish chief takes the field, says Mr. Kinneir, ‘ his equip-ment varies but little from that of the knights in the days of chivalry ; and the Saracen who fought under the great Salah-ed-deen (Saladin) was probably armed in the very same manner as he who now makes war against the Persians. His breast is defended by a steel corslet, inlaid with gold and silver; whilst a small wooden shield, thickly studded with brass nails, is slung over his left shoulder, when not in use. His lance is carried by his page, or squire, who is also mounted ; a carabine is slung across his back ; his pistols and dagger are stuck in his girdle, and a light scymhar hangs by his side : attached to the saddle, on the right, is a small case, holding three darts, each about two feet and a half in length ; and on the left, at the saddle-bow, you perceive a mace, the most deadly of all his weapons ; it is two feet and a half in length,

sometimes embossed with gold, at others set with precious stones. The darts have steel points, about six inches long, and a weighty piece of iron or lead at the upper part, to give them velocity when thrown by the hand.’ ‘ The Vail of Sineh,’ he adds, ‘ resides in a sumptuous palace, where he maintains a degree of state and splendor superior to any thing seen in Persia, except at court. His house is ever open for

the entertainment of strangers, and he always retains about his person a chosen body of horse. In short, it was impossible to contemplate this chief," sitting at the head of his hall, surrounded by his friends and relations, without calling to mind the Percys and Douglases of our own country.'

KURILES. The islands north of Jesso are included by the Japanese in the general name of Kuriles, which it would appear signifies the country of sea-weeds. The natives of Jesso reckon thirty-five islands, but the recent charts of Krusenstern mark only twenty-six. Tins chain is separated into two groups by the Bous-sole channel of la Perouse, and which may be properly distinguished by the names of the Great, or Japanese Kuriles, and the Less, or Kamschatka Kuriles ; the former are inhabited by the Mosins, who have been called the Hairy Kurilians, to distinguish them from the natives of the Little Kuriles, who are of the Kamtschatdale race, and without beards.

The principal islands of the Great Kuriles are Chicotan, or Chi-Kutan (Kutan in the Mosin dialect signifying country), separated from Jesso by a narrow strait : this island is claimed by Japan. Kunaschir, the next island to the north, is diversified by mountains and valleys, covered with maples, pines, and the pinus cembra. Etor-pu or Atorku (Staten-Eyland of the Dutch) is also covered with pine forests, and has a burning volcano. Urup (Company's land of the Dutch) is clothed with pines and alders, and is separated from Etorpu by Strait de Vries. Mareekan, the northernmost of the Great Kuriles, has only the same trees as the last : it is twelve leagues long, with an apparently volcanic peak in the centre. On the north-east is a large bay, but whose narrow entrance is crossed by a bar, with only two fathoms. The Russians formed an establishment here, but which had been abandoned before Broughton visited it.

The Little Kuriles, extending to Cape Lopotka of Kamtschatka, present a chain of rugged, sterile, and generally volcanic islands, through whose straits the tides run with great velocity. The names of these islands are so differently written by travellers and geographers, that it is difficult to give a correct list of them. They seem to stand thus from south to north : Raschaooa, in which is a volcanic peak, named Peak of Sarits-cheff; Rakhoa, or Kockkake ; Motua, or Muto-va, twenty miles long, on the south has a lofty volcano, in a state of ignition, on the north it is tolerably fruitful, but has not above 100 inhabitants ; Keyto, or Ketoi, uninhabited, is nearly the size of the last, rocky, but with wood ; Syas, or Schiasch-Kutan, an extinct volcano, uninhabited ; Ekarma, or Ikurma, a burning volcano, with sulphurous springs ; Etrama-kutan. an extinct volcano, uninhabited ; Ana-kutan, twenty

lc;iˆues long, with two volcanic peaks, has little wood ; ˆchioutschey ; Makan ; Kur-assey ; Schi-rinki lias steep rocky shores, covered with moss ; Poromuschir, or Poroluschir, high and woody ; Mavil ; Shoom, or Shooraska, four leagues south of Cape Lopatka ; Alaid, a conical volcano.

These islands are considered as an appendaje of Kan-tschatka, belonging to Russia; and their few inhabitants are subject to a tribute of skins, of the different kinds of foxes and of sea otters, with which these islands abound, but of which they have been much thinned. The entire population of the Kurile Islands is not supposed to exceed 1500.

KURSK, a considerable province or government of European Russia, between 35° and 39° of E. long., and 50° 30’ and 52° 30’ of N. lat. It is bounded by the governments of Orel, Vo-ronez, Slobodsk, Ukraine, and Czernigov, and has a territorial extent of 15,000 square miles, divided into fifteen circles. It is reckoned to contain no fewer that thirteen large, and nearly 500 small streams, of which the principal are the Sem, the Donez, the Isla, and the Oskol. Corn is the chief product. Its population is about 1,200,000. Kursk, the capital, stands on the river Tuskara, and has 16,000 inhabitants, a Protestant consistory, and sixteen churches.

KUSTER (Ludolf), a learned writer of the eighteenth century, born at Blomberg in Westphalia. When very young, he was recommended by baron Spanheim as tutor to the two sons of the count de Schwerin, prime minister to the king of Prussia, who, upon our author’s quitting that station, procured him a pension of 400 livres. He was promised a professorship in the university of Joachim ; and till there should be a vacancy, being then but twenty-five, he resolved to travel. He read lectures at Utrecht ; visited England and France, where he collated Suidas with three MSS. in the king’s library, which furnished him with

many fragments never before published. He was made LL. D. by the university of Cambridge, who made him several advantageous offers to continue there; but he was called to Berlin, where he was installed in the professorship promised him. He afterwards went to Antwerp, and abjured the Protestant religion. The king of France rewarded him with a pension, and ordered him to be admitted supernumerary associate of the academy of inscriptions. But he did not enjoy this new settlement long; for he died in 1716, aged forty-six. He was a great Latin scholar, but chiefly excelled

in the Geeek language, to which he almost entirely devoted himself. He wrote many works ; the principal of which are, 1. Historia critica Homeri. 2. Jamblicus de vita Pythagone. 3. An excellent edition of Suidas, in Greek and Latin, 3 vols. fol. 4. Aristophanes, Greek and Latin fol. 5. A new Greek edition of the New Testament, with Dr. Mill's Variations, in folio.

KUTTORE, a celebrated fortress of the province of Cafiristan, Hindostan. It is situated on the top of a perpendicular mountain, and was with difficulty taken by Timour, in the fourteenth century. It is the capital of a district of the same name.

KUTTUBDEA, an island of the bay of Ben-gal, adjacent to the district of Chittagong. It is about thirteen miles long by four broad, and is covered with wood. Ships, in case of distress, may run in between it and the main land ; but there is an extensive sand-bank to the westward. Long, of the north end 91' 48' E., lat. 21° 55' N.

KYD, v. n. Corrupted probably from Sax. cufc. To know.

But, ah ! unwise and witlesse Colin Cloute, That kydst the hidden kindes of many a weede, Yet kydst not ene to cure heart-roote, Whose ranckling wound as yet does rifely bleede. Spenser. Shepheardu Calendar.

KYNASTON (John), A. B., an English divine, born at Chester in 1 728, and educated at Oxford, of which he was elected fellow, June 4th. 1752. He acquired great reputation by an oration entitled De impietate C. Cornelio Tacito falso ob-jectata, oratio, &c. Oxon. 1761. He took an active part in the trial of the notorious parricide, Miss Blandy ; and published some other pieces. He died in June 1783, in consequence of a broken arm.

KYPHON1SM, KYPHOMSMUS, or CYPHONIS-MUS, an ancient

punishment inflicted on the primitive martyrs ; wherein the body of the person was anointed with honey, and so exposed to the sun, that the flies and wasps might be tempted to torment him. This was performed in three ways ; sometimes they tied the patient to a stake ; sometimes they hoisted him up into the air, and suspended him in a basket ; and sometimes they stretched him out on the ground with his hands tied behind him. Suidas gives us the fragment of an ancient law, which punished those who contemned the laws with kyphonism for twenty days ; after which they were to be precipitated from a rock, dressed in women's clothes.

LAB

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LAB

L.

L, a liquid consonant, which preserves always the same sound in English. In the Saxon it was aspirated as hlaf, loaf; hlrefdig, lady. At the end of a monosyllable it is always doubled : as, shall, still, full, except after a dipthong ; as, fail, feel, veal, cool. In a word of more than one syllable it is written single ; as, channel, canal, tendril. It is sometimes put before e, and sounded feebly after it ; as, bible, title.

L is used, 1. as a letter ; 2. as a numeral ; and 3. as an abbreviation. 1. As a Letter, L is the eleventh of the alphabet, and the eighth consonant. It was derived from the old Hebrew lamed, *?, or Greek lambda, X. It is sounded by intercepting the breath between the top of the tongue and fore part of the palate, with the mouth open; and makes a sweet sound, with something of an aspiration; and therefore the Britons and Spaniards usually doubled it, or added an h to it, in the beginning of words, as in Han, or lhan, a temple, sounding nearly like fl, &c. 2. As a numeral, L denotes fifty ; and with a dash over it, thus TJ, 5000. 3. As an Abbreviation, L stands for Lucius ; LL. D. for

Doctor of Laws ; L. S. in copies of deeds, charters, &c. for locus sigilli, the place of the seal; and L. L. S. for a sesterce. See SESTERCE.

LA ! interj. Sax. and Teut. lo, la, the imperative of look, behold. An exclamation of surprise.

La you ! if you speak ill of the devil, How he takes it at heart.

Shakspeare. Twelfth Night.

LAB, or) Belg. labben, kluppen.

LABBE, v. a. & n. s. $ To blab, babble, or slander. A babbler. Obsolete.

Quod tho this sely man : I am no labbe,

Ne though I say it I nam not lefe to gabbe.

Chaucer. Cant. Tales. But natheles, as trewe as any stele, I have a wif, though that she poure be, But of hire tonge a tabbing shrewe is she ; And yet she hath an hepe of vices mo. Id.

LABADIE (John), a celebrated French enthusiast, son of John Charles Labadie, governor of Bourges, and gentleman of the bed-chamber to the French king, was born in 1610. He entered, when young, into the Jesuits' college at Bourdeaux ; which, however, he afterwards quitted. He became a popular preacher ; but, being repeatedly detected in improper behaviour towards female devotees, his loss of character among the Catholics is said to have driven him among the Protestants. A reformed Jesuit being thought a great acquisition, he was precipitately accepted as a pastor at Montauban, where he officiated for eight years ; but, here again being accused of licentious conduct, and quarrelling with the Catholic priest about the right of interring a dead body, he was at length driven out, and went to seek an asylum at Orange, and then at Geneva. lie \vas afterwards invited to Middleburg, where his eloquence and imposing pretensions procure,! him many followers, distinguished by the name of Labadists. They increased so rapidly that he excited the attention of the other churches, whose authority he disputed, till he was formally deposed by the synod of Dort. Instead of obeying, he procured a tumultuous support from a crowd of his devotees, broke open the church of Middleburg, and administered the sacrament. At length he formed a little settlement between Utrecht and Amsterdam, where he erected a printing-press, which sent forth many of his works. Some of his followers, however, left him, and exposed his loose private life, until he was finally obliged to retire to Al-tena in Holsteia, where he died in

1674. The sect soon fell into oblivion after his death.

LABARUM, the banner or standard carried before the Roman emperors in the wars. It consisted ot a long lance, with a staff a-top, crossing it at right angles; from which hung a rich streamer, of a purple color, adorned with precious stones. Till the time of Constantine it had an eagle painted on it ; but that emperor, in lieu thereof, added a cross, with a cipher expressing the name of Jesus. This standard the Romans borrowed from the Germans, Dacx, Sarmatae, Pannonians, &c., whom they had overcome. The name labarum was not known be-fore the time of Constantine; but the standard itself in the form we have described, abating the symbols of Christianity, was used by the preceding emperors. Some derive the word from labor, as if this finished their labors ; some from Gr. tv\afitia, reverence, piety ; others from \a/t- (Saviiv, to take ; and others from Xatyvpa, spoils. See the life of CONSTANTINE.

LABAT (John Baptist), a celebrated traveller, of the order of St. Dominic, born at Paris. He taught philosophy at Nancy, and in 1693 went to America as a missionary. He returned to France in 1705, spent several years in Italy, and died in Paris in 1738. His principal works are, 1. A New Voyage to the American Islands, 6 vols. 12mo. 2. Travels in Spain and Italy, 8 vols. 12mo. 3. A New Account of the Western parts of Africa, 5 vols. 12mo. He also published Chevalier des Marchais's Voyage to Guinea, in 4 vols. 12mo. ; and An Historical Account of the western parts of Ethiopia, translated from the Italian of Cavazzi, 5 vols. 12mo.

LABBE (Philip), born at Bourges in France, in 1607, professed philosophy, divinity, and the languages, with great applause ; and died in 1667, aged sixty. He was a laborious writer and a good critic; and wrote, 1. Nova Bibliotheca MS. librorum, in 2 vols. fol. 2. De Byzantinae historise Scriptoribus. 3. Galeni vita. 4. Bibliotheca Bibliothecarum. 5. Concordantia Chro-nologica, &c. He began the last edition of The Councils, and died while the ninth volume was printing. They were finished in 17 vols. by F. Cossart.

LABDANUM, or LADANUM, exudes from a tree of the cistus kind. It is said to have been formerly collected from the beards of goats who browsed the leaves of the cistus : at present a kind of rake, with several straps or thongs of skins fixed to it, is drawn lightly over the shrub,

so as to take up the unctuous juice, which is afterwards scraped off with knives. It is rarely met with pure, even in the places which produce it; the dust, blown upon the plant by the wind, mingling with the tenacious juice : the inhabitants are also said to mix with it a certain black sand. In the shops two sorts are met with. The best, which is very rare, is in dark-colored masses, al-most black, of the consistence of a soft plaster, which grows still softer upon being handled ; of a very agreeable smell, and of a light pungent bitterish taste. The other sort is harder, not so dark colored, in long rolls coiled up ; of a much weaker smell than the first, and has a large admixture of fine sand, which, in the labdanum examined by the French Academy, made up three-fourths of the mass. It is used externally, to attenuate and discuss tumors ; internally, it is more rarely used, but is greatly extolled by some against catarrhs and in dysenteries. Rectified spirit of wine almost entirely dissolves pure labdanum, leaving only a small portion of gummy matter, which has no taste or smell ; and hence this resin may be thus excellently purified for internal purposes. It is a useful ingredient in the stomachic plaster, now styled emplastrum ladani. LA BEDOYERE (Charles Angelique Fran- £ois Huchet, count de), descended from an ancient and noble family, was born at Paris in 1786. At the age of twenty he entered the army, and served at the battle of Eylau as an officer in the imperial guard. In 1808 and 1800 he was aide-de-camp to Eugene Beauharnois. He afterwards served in Spain under Lannes, and was severely wounded at Tudela. We find LaBedoyere colonel of the 112th French regiment of infantry during the retreat from Moscow, and again distinguished at the battles of Lutzen and Bautzen, in 1813. On the abdication of Napoleon he was in 1815 made colonel of the seventh regiment of infantry, stationed at Grenoble ; and, when his former master landed from Elba, he joined him at Vizille, being the first who brought him a regiment. He was now made general of brigade, lieutenant-general, and aid-de-camp to Napoleon ; and raised to the peerage. He is said to have been one of the last officers •who left the field of Waterloo, and,

retiring to Paris, took his seat in the chamber of peers. On the capitulation of the metropolis, he followed the army, and afterwards was preparing to emigrate to America, but, being discovered in Paris, lie was tried by a military commission, August 4th, 1815, and condemned to suffer death : which sentence was executed in a few days.

LAB'EFY, Lat. labefucio. To weaken, im-pair, says Dr. Johnson, but neither his reading nor o»r own supplies an instance of the word. Perhaps it is connected with the foregoing, lab, obsolete.

LA'BEL, n. s. Lat. labellum. Originally, perhaps, derived from the legal use of the word ; i. e. a slip or parchment affixed to a deed, or paper, to hold the seal. Minsheu says ' & labando, falling down.' Hence any small slip of paper, or writing, attached to a thing. When waked, I found This label on my hosom ; whose containing Is so from sense in hardness, tnat I can Make no collection of it. S/iaAsyxv/re. Ciimbelinc.

God joined my heart to Romeo's ; thou our hands ; And ere this hand, by thee to Homeo sealed, Shall be the label to another deed, Or my true heart with treacherous revolt Turn to another, this shall slay them both.

.

On the label of lead, the heads of St. Peter and St. Paul are impressed from the papal seal.

Ay life's Parergon.

LABEL, in heraldry, is a fillet usually placed in the middle along the chief of the coat, without touching its extremities. Its breadth ought to be a ninth part of the chief. It is adorned with pendants ; and when there are above three of these, the number must be specified in blazoning. It is used on the arms of eldest sons while the father is alive, to distinguish them from the younger ; and is esteemed the most honorable of all differences. See HERALDRY.

LABERIUS (Decimus Juuius), a Roman knight, who wrote mimes, or

short satirical pieces for the stage. Julius Caesar obliged him, contrary to his inclination, to perform one of his own mimes; whereupon he delivered a prologue, in which he severely satirised Caesar. This piece is preserved in Aulus Gellius ; and fragments of his other works are also extant. LA'BIAL,a$, ˆ Lat./«6ia/i's. Formed

L,A.'KiAif.i>, part. adj. >or uttered by the lips: LABIODEN'TAL, adj. j formed with lips: labiodental is a compound ctf Holder's, from Inbium and dentalis, and means formed by the co-opera- tion of the lips and teeth.

The Hebrews have assigned which letters are labial, which dental, and which guttural.

Bacon's Natural History.

Some particular affection of sound, in its passage to the lips, will seem to make some composition in any vowel which is labial. Holder's Elements of Speech.

The dental consonants are very easy ; and first the labiodentals, f, c, also the linguadentals, t h, d h.

Holder.

The nine Mutes are divided into tenues, or smooth, mediae, or intermediate, and aspirate, or rough ; of which the labials or lip letters, the palatines, or palate letters, and the dentals, or teeth letters, are related respectively, and frequently exchanged for each other, one labial for another labial, &c.

Parkhurtt.

Those are called labials which are formed by the lips. Murray.

LA BLANCHERIE (Mammes Claude Pahin de), a French writer and emigrant, was born at Langres in 1752. He made a voyage early in life to the French colonies, but, disgusted at the treatment of the negro slaves, speedily returned home, and opened at Paris a general board of correspondence, to spread the knowledge of the improvements of different countries throughout Europe. He emigrated afterwards to England, and resided in London in a house once occupied by Sir Isaac Newton. The duke of Buccleugh kindly procured him a pension from government, to which he was principally indebted for his support. He died \n London in 1811, being the author of Extrait du Journal de mes Voyages, oullistoire d'un jeune Homme pour servir d'Ecole aux Peres

ct aux Meres, Paris, 1776, 2

vols. 12mo. ; and a literary journal commenced in January 1779, and continued under different titles to 8 vols. 4to.

LABON, a town of Sumatra, on the west coast, 150 miles S.S. E. of Acheen. Tt is fa-mous for its camphire and gold dust. Long. 96° 40’ E.,lat. 3° ItfN.

LABOOAN, an island of the Eastern Seas, on the north-west coast of Borneo, opposite the mouth of the river of that name. Long. 1 15° E., lat. 5° 20’ N.

LAB’ORANT, n.s.) Lat. laborans ; Fr.

LAB’ORATORY. \luboratoire. A chemist:

the operating room or apartment of a chemist.

I can shew you a sort of fixt sulphur, made by an industrious laborant.

Boyle.

It would contribute to the history of colors, if chemists would in their laboratory take a heedful notice, and give us a faithful account, of the colors observed in the steam of bodies, either sublimed or distilled.

Id.

The flames of love will perform those miracles they of the furnace boast of, would they employ themselves in this laboratory. Decay of Piety.

The human body is itself somewhat analogous to a laboratory, in which, by the varied functions of secretion, absorption, &c., composition and decomposition, are perpetually going on.

Parkers Ctiemical Catechism.

LABORATORY, in chemistry, a place fitted up with various chemical apparatus, and entirely devoted to the different operations of chemical research.

Although very many of the most distinguished laborers in chemical science have been content with such rude apparatus as they had themselves constructed, or converted from the common domestic utensils, it must nevertheless be obvious that they would have succeeded better with well constructed and appropriate apparatus — that we should not then have had so often to complain of investigations so general, of results so inaccurate. The gaseous products of the various substances under examination were indeed entirely neglected by the ancient chemist : he was in the constant habit of cutting a hole in the top of his retort, to admit of the escape of those elastic vapors for the preservation and examination of which instruments innumerable are now constructed.

Under our article CHEMISTRY we have already given a description of most of the principal chemical apparatus with appropriate plates ; it is now our task to notice their arrangement in the place destined for their use.

And first, the situation of a laboratory ought to be elevated and dry ; the advantages of a low situation for obtaining water, &c., being more than counterbalanced by the dampness of the atmosphere. Constant moisture indeed, though not very considerable and sensible, in many cases is a very great inconvenience in a chemical laboratory. In a damp situation most saline substances become moist, the inscriptions fall off, the bellows rot, the metals rust, the furnaces moulder, and every thing almost spoils. A la-Imnilory, therefore, should never be placed below ihe ground, and should be as dry as possible.

The air must have free access to it; and it should be so constructed that, by means of one or two opposite openings, a current of air may be admitted to carry off noxious vapors, &c.

A chimney ought to be constructed in the laboratory, so high that a person may easily stand under it, and arched forward from one wall to another. The funnel of this chimney ought to be as high as possible, and sufficiently contracted to make a good draught. As charcoal only in burnt under this chimney, it need not be so wide as to allow a

chimney-sweeper to pass up into it. Under this chimney may be constructed the brick furnaces, particularly a melting furnace, a furnace for distilling with an alembic, and one or two ovens. The rest of the space ought to be filled up withstands for portable furnaces of all kinds. These furnaces are the most convenient, from the facility of disposing them at pleasure; and they are the only furnaces which are necessary in a small laboratory. A double pair of bellows, of moderate size, must also be placed as commodiously under the chimney as the place will allow, and ought to have a pipe directed towards the hearth where the forge is to be placed. The necessary furnaces are, the simple furnace, for distilling with a copper alembic ; a lamp furnace ; two reverberatory furnaces of different sizes, for distilling with retorts; an air or melting furnace; an assay furnace : and a forge furnace. Under the chimney, at a convenient height, should be a row of hooks driven into the back and side walls; on which are to be hung small iron shovels, tongs, straight and crooked pincers, pokers, and other utensils for managing the /uel and crucibles.

To the walls of the laboratory ought to be fastened shelves of different breadths and heights, to contain glass vessels, the products of operations, &c. In a laboratory where many experiments are made there cannot be too many shelves. The most convenient place for a stone cistern, to contain water, is a corner of the laboratory ; and under it a sink ought to be placed with a waste pipe. As the vessels are always cleaned under this cistern, cloths and bottle brushes ought to be hung upon hooks fastened in the walls near it. In the middle of the laboratory a large table is to be placed, on which mixtures are to be made, preparations for ope,rations, solutions, ‘precipitations, small filtrations ; in a word, whatever does not require fire. In convenient parts of the laboratory are to be placed blocks of wood upon mats ; one of which is to support a middle-sized iron mortar; another to support a middle-sized hard stone mortar; a third to support an anvil . Near the mortars are to be hung searces of different sizes and fineness; and near the anvil a hammer, files, pincers, sheers, and other small utensils, necessary to give metals a form proper for the several operations.

Two moveable trestles ought to be in a laboratory, which may serve to support a large filter mounted upon a frame, when it is re quired.

Charcoal is an important article in a laboratory, and it therefore must be placed within reach ; but, as the black dust which flies about it

whenever it is stirred is apt to soil every thing in the laboratory, it had better be in some lumber-room near, together with furze, which is very convenient for kindling fires. This place serves, at the same time, for containing bulky things which are not often wanted; such as furnaces, bricks, tiles, fire-clay, quicklime, sand, &c.

Lastly, a middle-sized table, with solid feet, ought to be enumerated among the large moveables of a laboratory, the use of which is to support a porphyry, or levigating stone, or a very hard and dense gritstone, together with a muller made of the same kind of stone.

The other small moveables or utensils of a laboratory are, small hand-mortars of iron, glass, agate, and Wedgewood's ware, and their pestles ; earthen, stone, metal, and glass vessels, of different kinds, funnels, and measures.

Some white writing paper, and unsized paper for niters; glass tubes for stirring and mixing corrosive liquors ; spatulas of wood, ivory, me-tal, and glass, should also be if possible provided. Thin pasteboards and horns are very convenient for collecting matters bruised with water upon the levigating stone, or in mortars. Bladders and linen strips for luting vessels, a good portable pair of bellows, a glue-pot, and boxes of various sizes, to be placed upon the shelves, will also be found convenient.

The best construction of a furnace has not been well ascertained from experience. There are facts which show, that a fire made on a grate near the bottom of a chimney, of equal width throughout, and open both above and below, will produce a more intense heat than any other furnace. What may be the limits for the height of the chimney is not ascertained from any precise trials ; but thirty times its diameter would not probably be too high. It seerns to be an advantage to contract the diameter of a chimney, so as to make it smaller than that of the fire-place, when no other air is to go up the chimney than what has passed through the fire.

M. Chenevix has constructed a wind furnace, which is in some respects to be preferred to the usual form. The sides, instead of being

perpendicular, are inverted, so that the hollow space is pyramidical. At the bottom the opening is thirteen inches square, and at the top but eight. The perpendicular height is seventeen inches. This form appears to unite the following advantages : 1 . A great surface is exposed to the air, which, having an easy entrance, rushes through the fuel with great rapidity; 2. The inclined sides act in some Tieasure as reverberating surfaces ;' and, 3, The fuel falls of itself, and is always in close contact with the crucible placed near the grate. The late Dr. Kennedy of Edinburgh, whose opinion on this subject claims the greatest weight, found that the strongest heat in our common wind-furnaces was within two or three inches of the grate. This, therefore, is the most advantageous position for the crucible, and still more so when we can keep it surrounded with fuel. It is inconvenient and dangerous for the crucible to stir the fire often to make the fuel fall, and the pyramidical form renders this unne-v essary.

In the diagram annexed a is a grate ; c and

c are two bricks,

which can be let in

at pleasure to diminish the capacity ; b is

another grate, which

can be placed upon

the bricks c and c for

smaller purposes ; d

and d are bricks,

which can be placed

upon the grate b to

diminish the upper

capacity, so that, in

fact, there are four

different sizes in the

same furnace. The bricks should all be ground

down to the slope of the furnace, and fit it with

tolerable accuracy.

Charcoal is the material most commonly used in furnaces. It produces an intense heat without smoke, but it is consumed very fast. Coke or charred pit-coal produces a very strong and lasting heat. Neither of these produce a strong heat at a distance from the fire. Where the action of flame is required, wood or coal must be burned.

Frequently, however, the flame of an Argand lamp may be employed very conveniently for chemical purposes, a lamp furnace, as it is perhaps not very properly called, will be found very useful. It consists of a brass rod screwed to a foot of the same metal, loaded with lead. On tliis rod, which may be unscrewed in the middle for rendering it more portable, slide three brass sockets with straight arms, terminating in brass rings of different diameters. These rings serve for supporting glass alembics, retorts, Florence flasks, evaporating basins, gas bottles, &c. ; for performing distillations, solutions, evaporations, saline fusions, analyses with the pneumatic apparatus, &c. If the vessels require not to be exposed to the naked fire, a copper sand-bath may be interposed, which is to be previously placed in the ring. By means of a thumb-screw, acting on the rod of the lamp, each of the brass rings may be set at different heights, or turned aside, according to the pleasure of the operator. Below these rings is a fountain-lamp on Argand's plan, which slides on the main brass rod by means of a socket and thumb-screw. It is therefore easy to bring it nearer, or to move it further, at pleasure, from the vessel, which may remain fixed ; a circumstance which, independent of the elevation and depression of the wicks of the lamp, affords the advantage of heating the vessels by degrees after they are duly placed, as well as of augmenting1 or diminishing the heat instantly ; or for maintaining it for several hours at a certain degree, without in the least disturb-ing the apparatus suspended over it. It may therefore be used for producing the very gentle heat necessary for the rectification of ethers, or the strong heat requisite for distilling mercury. The chief improvement of this lamp consists in its power of affording an intense heat by the addition of a second cylinder, added to that of the common lamp of Argand. This additional cylinder encloses a wick of an inch and a half

in diameter, and it is by this ingenious contrivance, which was first suggested by Mr. Webster, that a double flame is caused, and more than three times the heat of an Argand's lamp of the largest size is produced.

In our article FURNACES we have already described the principles on which these most necessary instruments are constructed, and, in the description of the plates annexed to the article CHEMISTRY, notice is taken of the different kinds now in use. In the latter article will also be found a description of Nooth's and Wolfe's apparatus, Hope's eudiometer, and in fact of almost all the different implements necessary to a chemical laboratory. We shall therefore refer the reader to these articles, as well as to BLOWPIPE, ALEMBIC, BALANCE, and GAS for an account of them.

Under the article BLOWPIPE, however, we have omitted to notice some of the very important modern improvements in that instrument. It has deservedly of late years been considered as an essential instrument in a chemical laboratory; and several attempts have been made to facilitate its use by the addition of bellows, or some other equivalent instruments. These are doubtless very convenient, though they render it less portable for mineralogical researches. It will not here be necessary to enter into any description of a pair of double bellows fixed under a table, and communicating with a blowpipe which passes through the table. Smaller bellows, of a portable size for the pocket, have been made for the same purpose. The ingenious chemist will find no great difficulty in adapting a bladder to the blowpipe, which, under the pressure of a board, may produce a constant stream of air, and may be replenished as it becomes empty, by blowing into it with bellows or the mouth, at another aperture furnished with a valve opening inwards.

The chief advantage these contrivances have over the common blowpipe is, that they may be filled with oxygen gas, which increases the activity of combustion to an astonishing degree. The vapor from alcohol has likewise been employed, and an ingenious contrivance for this purpose by Mr. Hooke is represented in the annexed diagram : a is a hollow sphere for containing alcohol, resting upon a shoulder in the ring o. If the bottom be made flat instead cf spherical, the action of

the flame will then be greater: 6 is a bent tube with a jet at the end, to con-vey the alcohol in the state of vapor into the flame at q ; this tube is continued in the inside up to r, which admits of a being filled nearly, without any alcohol running over: d is a safety valve, the pressure of which is determined at pleasure, by screwing

higher or lower on the pillar e, the two milled nuts f and g carrying the steel arm A, which rests on the valve : i is an opening for putting in the alcohol : k is the lamp, which adjusts to different distances from a, by sliding up or down the two pillars //. The distance of the dame q from the jet is regulated by the pipe which holds the wick being a little removed from the centre of the brass piece m, and of course revolving in a circle : n the mahogany stand.

Dr. Robert Hare, professor of natural philosophy in the university of Philadelphia, published, in the first volume of Bruce's Mineralogical Journal, an account of very intense degrees of heat, which he had produced and directed on different bodies, by a jet of flame, consisting of hydrogen and oxygen gases, in the proportion requisite for forming water. The gases were discharged from separate gasometers, and were brought in contact only at a common orifice or nozzle of small diameter, in which their two tubes terminated.

In the first number of the Journal of Science and Arts is a description of a blowpipe contrived by Mr. Brooke, and executed by Mr. Newmann, consisting of a strong iron box, with a blowpipe, nozzle, and stop-cock, for regulating the emission of air, which had been previously condensed into the box, by means of a syringe screwed into its top.

John George Children, esq., first proposed to Sir H. Davy the application of Newmann's apparatus to the mixture of oxygen and hydrogen, immediately after Sir H. had discovered that the explosion from oxygen and hydrogen would not communicate through very small apertures ; and he first tried the experiment himself with a fine glass capillary tube. The flame was not visible at the end of this tube, being overpowered by the brilliant star of the glass ignited at the aperture.

Dr. Clarke, after being informed by Sir H. Davy that there would be no danger of explosion in burning the compressed gases, by suffering them to pass through a fine thermometer tube one-eightieth of an inch diameter, and three inches in length, commenced a series of

experiments, which were attended with most important and striking results. By the suggestion of Professor Gumming there has been enclosed in the iron box a small cylinder of safety, about half filled \vith oil, and stuffed at top with fine wire gauze. The condensed gases must pass from the large chamber into this small one, up through the oil, and then across the gauze before they can reach the stop-cock and blowpipe nozzle. By this means the dangerous explosions, which had occurred so frequently as would have deterred a less intrepid experimenter than Dr. Clarke, are now obviated. It is still, however, a prudent precaution, to place a wooden screen between the box and the operator. The box is about five inches long, four broad, and three deep. The syringe is joined to the top of the box by a stop-cock. Near the upper end of the syrince, a screw-nozzle is fixed in it at right angles, to which the stop-cock of a bladder containing the mixed gases may be

attached. When we wish to inject the gases, it is proper to draw the piston to the top, before opening the lower stop-cock, lest the flame of the jet should be sucked backward, and cause explosion. It is likewise necessary to see that no little explosion has dislodged the oil from the safety cylinder. A bubbling noise is heard when the oil is present. A slight excess of hydrogen is found to be advantageous.

Platinum is not only fused the instant it is brought in contact with the flame of the ignited gases, but the melted metal runs down in drops. Dr. Clarke has finally fused the astonishing quantity of half an ounce at once by this jet of flame. In small quantities it burns like iron wire. Palladium melted like lead. Pure lime becomes a wax-yellow vitrification. A lambent purple flame always accompanies its fusion. The fusion of magnesia is also attended with combustion. Strontites fused with a flame of an intense amethystine color, and after some minutes there appeared a small oblong mass of shining metal in its centre. Silex instantly melted into a deep orange-colored glass, which was partly volatilised. Alumina melted with great rapidity into globules of a yellowish transparent glass. In these experiments,

supports of charcoal, platinum, or plumbago, were used with the same effect. The alkalies were fused and volatilised the instant they came in contact with the flame, with an evident appearance of combustion.

The following refractory native compounds were fused : — Rock crystal, white quartz, noble opal, flint, calcedony, Egyptian jasper, zircon, spinelle, sapphire, topaz, cymophane, pycnite, andalusite, wavellite, rubellite, hyperstene, cya-nite, talc, serpentine, hyalite, lazulite, gadoli-nite, leucite, apatite, Peruvian emerald, Siberian beryl, potstone, hydrate of magnesia, subsul-phate of alumina, pagodite of China, Iceland spar, common chalk, Arragonite, diamond.

Gold, exposed on pipe clay to the flame, was surrounded with a halo of a lively rose color, and soon volatilised. Stout iron wire was rapidly burned. Plumbago was fused into a magnetic bead. Red oxide of titanium fused, with partial combustion. Red ferriferous copper blende, oxides of platinum, gray oxide of manganese, crystallised oxide of manganese, wolfram, sulphuret of molybdenum, siliceo-ral-careous titanium, black oxide of cobalt, pecu-blende, siliciferous oxide of cerium, chromate of iron, and ore of iridium, were all, except the second last, reduced to the metallic state, with peculiar, and for the most part, splendid phenomena. Jade, mica, amianthus, asbestus, melt like wax before this potent flame.

But the two most surprising of Dr. Clarke's experiments were the fusion of the meteoric stone from L'Aigle, and its conversion into iron ; and the reduction of barium from the earth barytes and its salts. Some nitrate of barytes, put into a cavity, at the end of a stick of charcoal, was exposed to the ignited gas. It fused with vehement ebullition, and metallic globules were clearly discernible in the midst of the boiling fluid, suddenly forming, and as suddenly disappearing. On checking the flame, the cavity of thf; charcoeil was studded over with innume-

rable globules of a metal of the most brilliant lustre and whiteness, resembling the purest platinum after fusion. Some globules were detached and dropped into naphtha, where they retained for some time their metallic as-pect. Their specific gravity was 4'00.

Dr. Clarke fused together a bead of barium and one of platinum, each weighing one grain. The bronze-colored alloy weighed two grains, proving a real combination. The alloy of ba-rium and iron is black and brittle. Barium is infusible before the blowpipe per se ; but with borax

it dissolves like barytes, with a chrysolite green color, and disclosing metallic lustre to the file. The alloy of barium and copper is of a vermilion color. When silex is mixed into a paste with lamp-oil, and exposed on a cavity of charcoal to the flame, it runs readily into beads of various colors. If these be heated, in contact with iron, an alloy of silicum and iron is obtained, which discloses a metallic surface to the file. Magnesium and iron may be alloyed in the same way.

By using from two to three volumes of hydrogen to one of bxygen, and directing the flame on pure barytes, supported on pincers of slate, Dr. Clarke more lately revived barium in larger quantities, so as to exhibit its qualities for some time. It gradually, however, passes again into pure barytes. Muriate of rhodium, placed in a charcoal crucible, yielded the metal rhodium, brilliant like platinum. It is malleable on the anvil. Oxide of uranium, from Cornwall, was also reduced to the metallic state.

In order to expel air from solid substances, by means of heat, a gun-barrel, with the touch-hole screwed up and rivetted, may be used instead of an iron retort. The subject may be placed in the chamber of the barrel, and the rest of the bore may be filled with dry sand, that has been well burned, to expel whatever air it might have contained. The stem of a tobacco pipe, or a small glass tube, being luted in the orifice of the barrel, the other extremity must be put into the fire, that the heat may expel the air from its contents. This air will of course pass through the tube, and may be received under an inverted vessel, in the usual manner.

But the most accurate method of procuring air from several substances, by means of heat, is to put them, if they will bear it, into phials full of quicksilver, with the mouths inverted in the same, and then throw the focus of a burning lens or mirror upon them. For this purpose, their bottoms should be round and very thin, that they may not be liable to fly with the sudden application of heat.

Some substances, more especially powders, cannot conveniently be put into a phial, or passed through a fluid. When air is to be extricated from, or added to these, there is no better method, than to place them on a stand under the receiver of the air-pump, and exhaust the common air, instead of excluding it by water or mercury. This process requires a good air-pump, and careful management, otherwise the common air will not be well excluded.

It is frequently an interesting object to pass the electric spark through different kinds of air, either alone or mixed together. In this case z

metallic wire may be fastened in the upper end of a tube, and the sparks or shock may be passed through this wire to the mercury or water used to confine the air. If there be reason to apprehend that an expansion in the air may remove the mercury or water beyond the striking distance, another wire may be thrust up to receive the electricity ; or two wires may be cemented into opposite holes in the sides of an hermetically sealed tube. Holes may be made in glass, for this and other chemical uses, by a drill of copper or soft iron, with emery and water ; and where this instrument is wanting, a small round file with water will cut a notch in small vessels, such as phials or tubes, though with some danger of breaking them. In some electrical experiments, of the kind here mentioned, there is rea-son to expect a fallacious result from the wires being burned by the explosion or spark. For Ihis reason, the electricity may be made to pass through the legs of a-syphon, containing the air which is under consideration in the upper part of its curvature. One of the vessels, in which the legs of the syphon rest, must therefore be insulated ; and, if any watery fluid be used to confine the air, it is generally supposed 4hat no combustion takes place.

We subjoin a list of the chemical substances necessary to be kept in a chemical laboratory. These are divided into wet and dry substances. The first of these must, of necessity, be kept in well-stopped bottles. The latter should also be kept in bottles, the necks of which should be wider than those for liquids.

Substances in common use should be kept in larger quantity than those which are kept as mere specimens, or only used occasionally and in small quantity.

Liquids in Common Use.

Sulphuric acid, pure.

•• • common

Nitric acid, pure.

, common.

Muriatic acid, pure.

, common.

Acetic acid.

Solution of potassa.

carbonate of potassa.

potassa.

super-carbonate of potassa.

soda, and carbonate of soda.

carbonate of ammonia.

Lime water.

Distilled water.

Alcohol, pure.

— , common.

The bottles in which the above are kept should hold from a pint to a quart each.

After a change of temperature in the air, from cold to hot, we find at the tops of bottles, about the stopper, a quantity of the liquid which has distilled up to the stopper, and been forced out Dy the expansion of the air in the bottle. This is very troublesome, especially with acids, and may be remedied by giving to the mouth of the bottle a. slight funnel shape, which forms a re-cess fcr the liquid.

Tlie following are the dry substances in com-mon use •— •

Oxide of man°:mese and common salt. Filings and rods of iron, tin, zinc, copper, and

lead.

Chalk and powdered marble. Quicklime, pipe-clay, and sand. Magnesia, common and calcined. Sulphurets of potassa, iron, and lime Isinglass and nutgalls. Brasil wood and turmeric. Calcined plaster of Paris, and bone ashes Black flux and white flux. See FLUX. Charcoal powder and saw dust. Sulphate of lead, as a body for lutes. Nitre in crystals. Borax and alum.

The following are bodies in solution, used as tests and kept in small quantities, in bottles from one to two ounces in size. The bottles should be shaped at the mouth as above recommended, and the diameter should be half the height in the cylindric part : —

Sulphate of potassa.

soda.

alumine.

ammonia.

magnesia.

zinc.

silver.

Oxisulphate of iron. Nitrate of potassa.

soda.

barytes.

strontian.

lime.

silver.

copper.

• lead.

bismuth.

Muriate of potassa.

soda.

barytes.

1 strontian.

lime.

— — — ammonia.

gold.

platina.

tin.

. cobalt.

Oximuriate of mercury. Phosphate of soda.

ammonia.

Fluate of potassa.

ammonia.

Borate of soda. Carbonate of potassa.

soda.

Acetate of potassa.

barytes.

strontian.

alumine.

silver.

copper.

— • lead.

Oxiacetate of iron.

Oxalate of soda and ammonia, buccinate of ammonia. Tartrate of ammonia.

LAB

Prussiate of potassa and iron.

- lime and iron. Pure gallic acid in alcohol. Infusion of galls in alcohol.

• litmus.

Acetic acid, pure. Hydrosulphuret of potassa.

The following substances should be kept in the solid state, and free from the contact of air and moisture : —

Sulphate pf iron kept in alcohol.

Muriate of lime.

Oximuriate of potassa.

Barytic earth.

Strontian earth, and all pure earths.

Pure potassa.

- soda

Every vessel and utensil in a chemical laboratory, says the celebrated Macquer, ought to be well cleansed as often as it is used, and put again into its place ; labels ought to be put upon all the substances. These cares, which seem to be trifling, are however very fatiguing and tedious ; but they are also very important, though frequently little observed. When a person is keenly engaged, experiments succeed each other quickly ; some seem nearly to decide the matter, and others suggest new ideas ; he cannot but proceed to them immediately, and he is led from one to another : he thinks he shall easily know again the products of the first experiments, and therefore he does not take time to put them in order ; he prosecutes with eagerness the experiments which he has last thought of; and in the mean time the

vessels employed, the glasses and bottles, so accumulate, that he cannot any longer distinguish them ; or, at least, he is uncertain concerning many of his former products. This evil is increased, if a new series of operations succeed, and occupy all the laboratory ; or if he be obliged to quit it for some time, every thing then goes into confusion. Thence it frequently happens, that he loses the fruits of much labor, and that he must throw away almost all the products of his experiments.

When new researches and inquiries are made, the mixtures, results, and products of all the operations ought to be kept a long time, distinctly labelled and registered ; for these things, when kept some time, frequently present phenomena that were not at all suspected. Many fine discoveries in chemistry have been made in this manner ; and many have certainly been lost by throwing away too hastily, or neglecting the products.

LA'BOUR, or LABOR,

LABO'RIOUS, adj.

LABORIOUSLY, adv.

LABO'RIOUSNESS, n. f.

LA'BORER.

LA'BORSOME, adj. Ileb.

n.ˆ Fr. labeur ; [&. v. a. j Span. & Lat. [labor, which jMinsheu and Parkhurst de-j rive from the

Work; the exertion of strength ; exercise ; travail in child-birth : as a verb neuter, to toil; take pains; act with painful efforts; be diseased or distressed ; be in child-birth: as an active verb *o work at or upon ; to form with toil; proceed in, or accomplish with difficulty ; te beat : laborer, laboriousness, and the adjec-

tives and adverb, follow these senses : laborious is also used as meaning assiduous, diligent.

Let more work be laid upon the men that they may labour therein.

Exod. v. 9.

That in the night they may be a guard to us, and labour in the day. Keh. iv. 22.

Epaphras saluteth you, always labouring fervently for you in prayers, that ye may stand perfect.

Col. iv. 12.

A labouring man that is given to drunkenness, shall not be rich. Ecclvs. xix. 1.

To use brevity, and avoid much labouring of the work, is to be granted to him that would make an abridgement. 2 Muc.

Sith of women's labours thou hast charge, And generation goodly doest enlarge, Incline thy will to effect our wishful vow.

Sinter.

Being a labour of so great difficulty, the exact performance thereof we may rather wish than look for.

Hooker.

If I find her honest, I lose not my labour ; if she be otherwise, it is labour well bestowed. Shaltspeare.

The base o' the mount

Is ranked with all deserts, all kind of natures, That labour on the bosom of this sphere To propagate their states. Id.

Sir, I am a true labourer; I earn that I eat ; get that I wear ; owe no man hate ; envy no man's happiness. Id.

If you had been the wife of Hercules, Six of his labours you'd have done, and saved Your husband so much sweat. Id. Coriolanus.

He hath, my lord, by laboursome petition, Wrung from me my slow leave. Id. Hamlet. If a state run most to noblemen and gentlemen, and that the husbandmen be but as their work-folks and labourers, you may have a good cavalry, but never good stable foot. . • Bacon.

They abound with horse, Of which one want our camp doth only labour.

Ben Jonson.

The parallel holds in the gainlessness, as well as the laboriousness of the work ; those wretched creatures, buried in earth and darkness, were never the richer for all the ore they digged ; no more is the insatiate miser. Decay of Piety.

The folly of him who pumps very laboriously in a ship, yet neglects to stop the leak. Id.

Moderate labour of the body conduces to the preservation of health, a d curing many initial diseases ; but the toil of the mind destroys health, and generates maladies. Harvey.

The matter of the ceremonies had wrought, for the most part, only upon lightheaded, weak men, whose satisfaction was not to be laboured for.

Clarendon. I to the evil turn

My obvious breast ; arming to overcome By suffering, and earn rest from labour won.

Milton. Not one woman of two hundred dies in labour.

G raunt.

Take, shepherd, take a plant of stubborn oak, And labour him with many a sturdy stroke.IVyiten.

Not knowing ‘twas my labour, 1 complain Of sudden shootings and of grinding pain ; My throws come thicker, and my cnes increased, Which with her hand theconscious nurse suppressed.

Id.

To this infernal lake the fury flies, Here hides her hated head, and frees the btmnag skies. Id-

Had you required my helpful hand The” artificer and art you might command, To labour arms for Troy. Id. JEneid.

There lay a log unJighted on the earth, When she was labouring in throes of birth ; For the’ unoorn chief the fatal sisters came, And raised it up, and tossed it on the flame.

Id. Ovid.

As a man had a right to all he could employ his labmir upon, so he had no temptation to labour for more than he could make use of. Locke.

His heart is in continual labour ; it even travaHs with the obligations, and is in pangs till it be delivered. Sbuth’s Sermons.

That which makes the clergy glorious, is to be knowing in their professions, unspotted in their lives, active and laborious in their charges, bold and resolute in opposing seducers, and daring to look vice in the face ; and, lastly, to be gentle, courteous, and compassionate to all. South.

Do’st thou love watchings, abstinence, and toil, Laborious viitues all ? learn them from Cato.

Addison:

To his laborious youth consumed in war, And lasting age, adorned and crowned with peace.

Prior.

I was called to another, who in childbed laboured of an ulcer in her left hip. Wiseman.

Labourers and idle persons, children and striplings, old men and young men, must have divers diets.

Arbuthiiot.

The stone that labours up the hill, Mocking the lab’rer’s toil, returning

still, Is love. Granville.

This exercise will call down the favour of Hea-ven upon you, to remove those afflictions you now labour under from you.

Wake's Preparation for Death. A person who is too nice an observer of the business of the crowd, jlike one who is too curious in observing the labour of the bees, will often be stung for his curiosity. Pope.

Here, like some furious prophet, Pindar rode, And seemed to labour with the inspiring God.

Id.

Not balmy sleep to laborers faint with pain, Not showers to larks, or sunshine to the bee, Are half so charming, as thy sight to me. Id.

I chuse laboriously to bear A weight of woes, and breathe the vital air. Id. The prince cannot say to the merchant, I have no need of thee ; nor the merchant to the labourer, I have no need of thee. Swift.

O how laborious is thy way to ruin. Young.

Which consideration, as it suggesteth to us the strongest motive to induce us to labour after a true knowledge of them ourselves, so it directs us at the same time how we may attain this knowledge—

Mason.

Ah, Melancholy ! howl feel thy power ! Long have I laboured to elude thy sway !

But, 'tis enough, for I resist no more. Beattie. LA'BRA. Span. A lip.

Word of denial in thy labras here ; Word of denial : froth and scum, thou ly'st.

Shakspeare.

LABOUREUR (John Le), a French historical writer, was born in 1623, at Montmorency. In 1644 he attended the embassy to Poland. On entering into orders he was made almoner to the king, and commander of the order of St. Michael. He died in 1675, leaving as his works, 1 Ttie History of Charles VI. 2. History of the Marshal Guebriant. 3. Genealogies of No-

ble Families. 4. Memoirs of Michael du Castelnau, 2 vols. fol. It was an uncle of this writer, Claude le Labouteur, provost of the abbey of St. Barbe, who wrote the history of that house ; a Treatise on the Origin of Arms ; History of the House of St. Colombe; and Notes on the Breviary of Lyons.

LABRADOR, an extensive barren region of North America, lying between 50° and 60° of N. lat., being bounded south by Canada and the Gulf of St. Lawrence ; north by Hudson's Straits ; west by Hudson's Bay ; and east by the Atlantic Ocean.

Its general aspect is most dreary, the whole district being mountainous and rugged, and every part of the soil strewed with stones. Coarse plants, adapted to the sustenance of the deer and wild goats, are its chief productions ; but in the interior iron ore and some inferior timber is found. Here also the arctic fox and bear appear. Black peat earth appears occasionally in patches, according to Mr. Cartwright, who resided here about sixteen years; but he fully confirms the report of other travellers as to the general infertility of this region. The waters only seem animated with life ; and here fish and fowl and a variety of amphibious creatures abound. A few miles from the sea, he says, the air is warm and agreeable. He describes the black, white, and red spruce, larch, silver fir, birch, and aspen, as valuable trees ; but they do not grow to a large size. The alimentary vegetables found here are wild celery, scurvy-grass, and other antiscorbutic plants. The fruits are currants, raspberries, partridge-berries, apples, pears, empetrum nigrum, whortle-berries, crane-berries, and a small pink berry, the plant of which resembles the strawberry, but the fruit, which is delicious, is granulated like the mulberry. The birds of the country are the white-tailed eagle, the falcon, hawks, owls ; the raven, grouse, ptarmigan, spruce game, curlew, plover, sand-piper, geese and ducks, swallows, martins, snipes, and doves.

The natives are of two races. The Mountaineers, or Indians, who it would seem have a mixture of French Canadian blood, are Christians, and live in wigwams, or huts of birch-iind and deers' skins. Their sole employment is hunting, and the skins of the animals they take they dispose of to the Canadians.

The Esquimaux are a totally different race, of • very short stature, with small limbs, of a copper color, flat-visuged, with short noses, black and very coarse hair. In language, person, and manners, they much resemble the Greenlanders. Their dress is entirely of skins, and their food chiefly seals, deer, and birds' flesh and fish. Their winter dwellings are sunk in the ground ; and in summer they construct huts

with poles, covered with skins. Unlike the Indians they have no relish for spirits. They are not known to have any religion, nor any object of worship, and are without government or laws. The men take a plurality of wives, who are considered as the property of the husband, and are transferred, bartered, or lent from one to another. On them falls all the labor except procuring food, which is the sole-occupation of the men. They cannot

reckon numerically beyond six, and their compound arithmetic goes no farther than twenty-one. Their chief occupations consist in hunting deer and seals, and collecting furs. They are wonderfully sagacious at the first of these occupations, otherwise they would starve; and when they are in a part of the country, in the winter time, where deer are scarce, they will follow a herd day and night, until they tire them quite down, when they are sure to kill them all, if the night is light enough; they rest only four or five hours, and then pursue again; which space of time being too short for the deer to obtain either food or rest, they are jaded out by the fourth day. The Esquimaux were formerly settled in different parts of the coast; but in consequence of their quarrels with the Mountaineers, with whom they wage perpetual hostility, they have removed farther north.

Their canoes are of ribs of wood, covered with seal-skins ; they are twenty feet long, and but two broad, holding but onewnan. Their arms are the dart, and bow and arrow. They keep great numbers of dogs, as well for food as for their skins, and to draw their sledges in winter. These animals cannot bark, but make a hideous howl. The chief establishment of the Moravians is at Nain, on the east coast, in lal 57°. The whole settlement includes about 600 inhabitants. The English visit the country for furs, whalebone, oil, and cod fish.

LABRADOR STONE, a curious species of feldt spar, or rhombic quartz, which exhibits all the colors of a peacock's tail. It was discovered first by the Moravians, who have a colony among the Esquimaux in Labrador. It is found of a light or deep gray color, but for the most part of a blackish-gray. When held in the light in various positions it discovers a variety of colors, such as the blue of lapis lazuli, grass-green, apple-green, pea-green, and sometimes, but more seldom, a citron yellow. Sometimes it has a color between that of red copper and tom-buck-gray ; at other times the colors are between gray and violet. For the most part these colors are in spots, but sometimes in stripes on

the same piece. The stones are found in pretty large argular pieces, appear foliated when bro-ken, and the fragments are of a rhomboidal figure. Their specific gravity is about 2‘755.

LABRUS, in ichthyology, a genus of fishes belonging to the order of thoracici. The characters are these : the covers of the gills scaly ; the brarichiostesous rays unequal in number : teeth conic, long, and blunt at their ends : one tuberculated bone in the bottom of the throat : two above, opposite to the other : one dorsal fin reaching the whole length of the back : a slender skin extending beyond each ray, with a rounded tail. There are forty-one species, which vary from each other, even those of the same species, almost infinitely in color; some of them being of a dirty red mixed with a certain duskiness ; others most beautifully striped, especially about the head, with the richest colors, such as blue, red, and yellow. Care must therefore be taken not to multiply the species from these accidental teints, but to attend to the form, which never varies. Pennant mentions his having seen a

species of labrus taken about the Giant’s Causeway in Ireland, of a most beautiful vivid green, spotted with scarlet ; and others at Bandooran, in the county of Sligo, of a pale green. To this genus belongs the fish called by the English the old wife.

LABUN, a town in the government of Volhynia, European Russia, containing a population of about 3000 souls.

LABY, a large town of Western Africa, in the kingdom of Foota Jallo. It is said to be two miles and a half in circumference, and trades with Timbuctoo, which is four months’ journey beyond. This place manufactures narrow cloth and leather, wood, iron, and various articles in silver. Population about 5000.

LAB’YRINTH, n. s. Lat. labyrinthus ; Gr. Xa/3wpiv0oc. A maze; an intricate ediiice or combination of walks. Any thing puzzling or perplexing.

My clamours tear The ear’s soft labyrinth, and cleft the air. Sandys.

Suffolk, stay !

Thou may’st not wander in that labyrinth ; There Minotaurs, and ugly treasons lurk.

Sliakspeare,

Words, which would tear

The tender labyrinth of a maid's soft tear. Donne. My soul is on her journey ; do not now

Divert, or lead her back, to lose herself

1' th' maze and winding labyrinths o' the world. '•• Denham.

The earl of Essex had not proceeded with his accustomed wariness and skill ; but ran into labyrinths from whence he could not disentangle himself.

Clarendon. How shall the blessed day of our discharge

Unwind, at once, the labyrinths of fate,

And straighten its inextricable maze ! Young. (Not that I have not several merits more,

But this will more peculiarly be seen) They so embellish, that 'tis quite a bore

Their labyrinth of fables to tread through,

Whereas this story's actually true. Byrt,n.

LABYRINTH, among the ancients, was a large intricate edifice cut out into various aisles and meanders running into each other, so as to rei> der it difficult to get out of it. Mention is made of several of these edifices, but the most celebrated are the Egyptian and the Cretan labyrinths. The word literally signifies a circumscribtd space, intersected by a number of passages, sonˆt of which cross each other in every direction, like those in quarries and mines, and others make larger or smaller circuits round the place from which they depart, like the spiral lines on certain shells. In a figurative sense it was applied to obscure and captious questions, to indirect and ambiguous answers, and to those discussions which, after long digressions, bring us back to the point from which we set out.

The LABYRINTH OF CRETE is the most noted in historv or fable ; having been rendered particularly remarkable by the story of the Minotaur, and of Theseus, who found his way through all its windings by Ariadne's clue. Diodorus Siculus relates as a conjecture, and Pliny

as a fact, that Diedalus constructed this labyrinth on the model of that of Fgypt, though on a smaller scale. They add, that it was formed by the command of Minos, who kept the Minotaui

shut up in it : and that in their time it no longer existed. Diodorus and Pliny, therefore, considered this labyrinth as a large edifice ; while other writers represent it simply as a cavern hollowed in the rock, and full of winding passages. But if this labyrinth had been constructed by Daedalus under Minos it is surprising that we find it mentioned, neither in Homer, who more than once speaks of Minos and Crete ; nor in Herodotus, who describes that of Egypt, after having said that the monuments of the Egyptians are much superior to those of the Greeks ; nor in the more ancient geographers ; nor in any of the writers of the ages when Greece flourished. Diodorus and Pliny suppose, that in their time no traces of the labyrinth existed in Crete, and that even the date of its destruction had been forgotten. Yet it is said to have .been visited by the disciples of Apollonius of Tyana, who was contemporary with those two authors. The Cretans, therefore, then believed that they possessed the labyrinth. ‘I would request the reader,’ says abbe Barthe-lemi, ‘ to attend to the following passage in Stra-bo. At Napulia, near the ancient Argos (continues that judicious writer) are still to be seen vast caverns, in which are constructed labyrinths that are believed to be the work of the Cyclops : the meaning of which is, that the labors of men had opened in the rock passages which crossed and returned upon themselves, as is done in quarries. Such is the idea we ought to form of the labyrinth of Crete. Were there several labyrinths in that island ? Ancient authors speak only of one, which the greater part place at Cnossus, and some at Gortyna. Belon and Tournefort have given us the description of a cavern at the foot of Mount Ida, on the south side of the mountain, at a small distance from Gortyna. This was only a quarry, according to the former ; and the ancient labyrinth, according to the latter, whose

opinion I have followed.' The abbe has some farther conjectures on this subject, for which see his Travels of Anacharsis, vol. VI. p. 441.

The LABYRINTH OF EGYPT, according to Pliny, was the oldest of all the known labyrinths, and was subsisting in his time, after having stood 3600 years. He says it was built by king Pete-sucus, or Tithoes, but Herodotus makes it the work of several kings. It stood on the banks of the lake Moeris, and consisted of twelve large contiguous palaces, containing 3000 chambers, 1500 of which were under ground. Strabo, Diodorus Siculus,. Pliny, and Mela, speak of this monument with the same admiration as Herodotus : but not one of them says it was constructed to bewilder those who went into it ; though it is manifest that, without a guide, they would be in danger of losing their way..- It was this clanger, no doubt, which introduced a new term into the Greek language.

LABYRINTH ISLES, a cluster o~ small islands in the Pacific Ocean, discovered by Roggewein in 1722; seventy-five miles west from the Pernicious Islands.

LAC, Fr. Icu/ue ; Hind, and Sans. lakh. A substance deposited by the coccus lacca, used in varnishes. See the article following.

IMC is usually distinguished by the name of a gum, but improperly, because it is inflammable, and not soluble in water. \ e have three sorts of it, which are all the product of the same tree. 1. The stick lac. 2. The seed lac. 3. The shell lac. Authors leave us uncertain whether this drug belongs to the animal or the vegetable kingdom. Hill.

White lac is a peculiar substance distinct from the shell lac and stick lac of commerce, and is brought from the East Indies.- This substance, which has a lesemblance to bees'-wax, is secreted by an opaque rough insect, of a grey colour.

Parkes's Chemical Catechtim. •

LAC, in the arts, is a substance well known in Europe, under the different appellations of stick-lac, shell-lac, and seed-lac. The first is the lac in its natural state, encrusting small branches or twigs. Seed-lac is the stick-lac separated, from the twigs, appearing in a granulated form, and probably deprived of part of its coloring matter by boiling. Shell-lac is the substance which has undergone a simple purification, as mentioned below. Beside these we sometimes meet with a fourth, called lump-lac, which is the seed-lac melted and

formed into cakes.

Lac is the product of the coccus lacca, which deposits its eggs on the branches of a tree called bihar, in Assim, a country bordering on Thibet, and elsewhere in India. It appears designed to answer the purpose of defending the eggs from injury, and affording food for the maggot in a more advanced state. It is formed into cells, finished with as much art and regularity as a honeycomb, but differently arranged; and the inhabitants collect it twice a-year, in the months of February and August. For the purification, it is broken into small pieces, and put into a canvas bag of about four feet long, and not above six inches in circumference. Two of these bags are in constant use, and each of them held by two men. The bag is placed over a fire, and frequently turned, till the lac is liquid enough to pass through its pores ; when it is taken off the fire, and twisted in different directions by the men who hold it, at the same time dragging it along the convex part of a plantain-tree prepared for this purpose; and, while this is doing, the other bag is heating, to be treated in the same way. The mucilaginous and smooth surface of the plantain-tree prevents its adhering; and the degree of pressure regulates the thickness of the coating of lac, at the same time that the fineness of the bag determines its clearness and transparency.

Analysed by Mr. Hatchett, stick-lac gave in 100 parts, resin 68, coloring extract 10, wax 6, gluten 55, extraneous substances 6-5; seed lac, resin 88-5, coloring extract 2-5, wax 4-5, gluten 2 ; shell-lac, resin 90-9, coloring extract 0‘5, wax 4, gluten 2-8. The gluten greatly resembles that of wheat, if it be not precisely the same ; and the wax is analogous to that of the myrica cerifera.

In India, lac is fashioned into rings, beatls, and other trinkets ; sealing-wax, varnishes, and lakes for painters, are made from it ; it is much used as a red dye, and wool tinged with it is employed as a fucus by the ladies; and the resinous part, melted ‘and mixed with about thrice its weight of finely-powdered sand, form-

polishing stones. The lapidaries mix powder of corundum with it in a similar manner.

The coloring matter is soluble in water; but one part of borax to five of lac, renders the whole soluble by digestion in water, nearly at a boiling heat. This solution is equal for many purposes to spirit vainish, and is an excellent vehicle for water-colors, as, when once dried, water has no cilfct on it. Lixivium of potassa, soda, and carbonate of soda, likewise dissolve it. So does nitric acid, if digested upon it in sufficient quantity forty-eight hours.

The coloring matter of the lac loses considerably of its beauty by keeping any length of time; but when extracted fresh, and precipitated as a lake, it is less liable to injury. Mr. Stephens, a surgeon in Bengal, sent home a great deal prepared in this way, which afforded a good scarlet to cloth previously yellowed with quercitron : but it would probably have been better, if, instead of precipitating with alum, he had employed a solution of tin, or merely evaporated the decoction to dryness.

Lac is the basis of the best sealing-wax. Lac is likewise employed for medicinal purposes. The stick-lac is the sort used. It is of great esteem in Germany, and other countries, for laxity and sponginess of the gums proceeding from cold or a scorbutic habit : for this use the lac is boiled in water, with the addition of a little alum, which promotes its solution ; or a tincture is made from it with rectified spirit. This tincture is recommended also internally in the fluor albus, and in rheumatic and scorbutic disorders ; it has a grateful smell, and not unpleasant, bitterish, astringent taste.

LAC DE LA PLUIE, a lake of Upper Canada, North America, formed by the water connecting Lake Superior with the Lake of the Woods.

LAC DES ILUNOIS, the connecting lake between lakes Huron and Michigan, North America. It is fifteen miles long, and of an oval figure.

LACARRY (Giles), a learned Jesuit of the seventeenth century, born in the diocese of Castres in Languedoc in 1605. He taught philosophy and theology : was rector of the college of Cahors, and well skilled in history. He wrote many works; among which are, 1. Historia Galliarum sub Praefectis Pratorii Galliarum, 4to. a work which is

much esteemed, and extends from the reign of Constantine to that of Justinian. 2. Historia Romana a Julio Cesare ad Constantinum Magnum, per numismata et marmora antiqua, an excellent work. 3. Epitome Historiae Reg. Franciae, ex Dionysio Petavio excerpta, also much esteemed. 4. An edition of VelleiusPaterculus, with learned notes.

LACCADIVA, or LACCADIVE ISLANDS, are a cluster of low islands lying off the Malabar coast, at the distance of thirty-eight leagues, and between lut. 12° and 10°. Thirty-two have been counted. They are all low, surrounded by reefs of coral ; producing abundance of cocoa-nuts, areka, plantains, and other fruits. Generally the islands are on the east edge of the reefs, and the latter stretches off from them to the west. They are inhabited by Malabar Mopleys, who visit the Malabar const in boats, constructed VOL. XII.

of the trunks of the cocoa-palm, loaded with cocoa-nuts, coir cordage of their manufacture (from the fibrous parts of the cocoa-nut), jagory, and areka. Vessels also visit these islands from the coast for toral-reef stone (madrepore), for the purpose of making Hindoo images and burning into lime. Ambergris is also found on the beaches. These islands are under nominal allegiance to Cannanore.

Being rarely visited by European ships, they are little known in detail; the two southernmost are Seuhelipar and Kalpeni, each composed of two islets: those of Seuhelipar are distant eight miles from each other, but surrounded by reefs. Kalpeni is also two islets joined by a reef; it is four miles long, and one broad. On the south-west side is a town, and an opening in the reef for the boats to land. Underoot, north of Kalpeni, is less than the latter, and has a village of a few scattered houses on the north side, whose inhabitants are poor and inoffensive.

The bank of Cherbaniani is a dangerous reefr north-west of the Laccadivas. The sea breaks violently on it; and in the north-east monsoon some of the rocks are dry. The safest channel of this neighbourhood is between Manicoy Island and the Laccadivas, and is called by the Arabs Mamal, and by the Europeans the Nine Degree Channel : that between it and the Mai-divas is named by the former Sindal, and by the latter the Eight Degree Channel.

LACCIC ACID (acidum laccicum, from lac, the substance in which it exists). ‘ Dr. John made a watery extractjof powdered stick-lac, and evaporated it to dryness. He digested alcohol on this extract, and

evaporated the alcoholic extract to dryness. He then digested this mass in ether, and evaporated the ethereal solution; when he obtained a syrupy mass of a light yel-low color, which was again dissolved in alcohol. On adding water to this solution, a little resin fell. A peculiar acid united to potassa and lime remains in the solution, which is obtained free, by forming with acetate of lead an insoluble laccate, and decomposing this with the equivalent quantity of sulphuric acid. Laccic acid crystallises ; it has a wine-yellow color, a sour taste, and is soluble, as we have seen, in water, alcohol, and ether. It precipitates lead and mercury white ; but it does not affect lime, barytes, or silver, in their solutions. It throws down the salts of iron white. With lime, soda, and potassa, it forms deliquescent salts, soluble in al cohol.'

LACE, n. s. & v. a. } Fr. lace, lucct ; Ital.

LACE'MAN, n.s. \laccio; Teut. less, lassc ;

LACED', part. adj. j Span, lazo ; all, perhaps, from Lat. laqueus, a noose. A string or cord ; twisted or worked threads ; a particular kind of network 'formed of cotton, linen, or silk ; see below. Prior uses it in a cant way for sugar. As a verb, to fasten or adorn with cord or lace ; to embellish : also, to beat (i. e. with a lace or cord) : laced ' mutton' is a pun used by Shakspeare (with Lat. muto) for a loose woman : a laceman, one who sells lace.

There the fond fly entangled, struggled long,

Himself to free thereout ; but all in vain : For striving more, the mdrc in laces strong 2 D

Himself he tied, and wrapt his winges twain In limy snares, the subtil loops among.

Spenser.

Look, love, what envious streaks Do lace the severing clouds in yonder

East ; Night's candles are burnt out, and jocund day Stands tiptoe on the misty mountains' tops.

Shakspeare.

O ! cut my lace, lest my heart cracking, it Break too. Id.

Aye, sir, I, a lost mutton, gave your letter to her a laced mutton, and she gave me nothing for my la-bour. Id.

It is but a night-gown in respect of yours ; cloth of gold and coats, and laced with silver. Id.

Our English dames are much given to the wearing of costly laces ; and, if they be brought from Italy, they are in great esteem. Bacon.

The king had snared been in love's strong lace.

Fairfax.

He wears a stuff, whose thread is coarse and;round, But trimmed with curious lace. Herbert.

These glittering spoils, now made the victor's gain, He to his body suits ; but suits in vain : Hessapus' helm he finds among the rest, i.nd laces on, and wears the waving crest. Dryden.

At this, for new replies he did not stay, ' But laced his crested helm, and strode away.

Id.

Go, you, and find me out a man that has no curiosity at all, or I'll lace your coat for ye.

L' Estrange.

I met with a nonjuror, engaged with a laceman, whether the late French king was most like Augustus Caesar, or Nero. Addison. Spectator.

When Jenny's stays are newly laced, Fair Alma plays about her waist. Prior.

If aptly he the sect pursues, That read and comment upon news ; " He takes up their mysterious face, He drinks his coffee without lace. Id.

Like Mrs. Primly's great belly ; she may lace it down before, but it burnishes on her hips.

Congrme.

I caused a fomentation to be made, and put on a laced sock, by which the weak parts were strengthened.

Wiseman.

Then clap four slices of pilaster on't, That, laced with bits of rustic, makes a front.

Pope.

Doll ne'er was called to cut her lace, Or throw cold water in her face. Swift.

But with our damsel this was not the case :

Her dress was many-coloured, finely spun ,• Her locks curled negligently round her face,

But through them gold and gems profusely shone ; Her girdle sparkled, and the richest lace

Flowed in her veil, and many a precious stone Flashed on her little hand ; but, what was shocking, Her small snow feetliad slippers, but no stocking.

Byron.

LACE, in the arts, is formed of cotton, thread, or silk, and is in the manufacture a species of weaving. See WEAVING.

We may notice in this place, however, the manner in which it is made by hand in Bedfordshire, Buckinghamshire, &c. A pillow or cushion being furnuhed with a stiff piece of parchment, having a number of holes pricked in it, through these holes pins are stuck into the pillow and the threads wound upon bobbins are woven round the pins, and twisted round each other so as to form the required pattern. The process is tedious, and since the invention of the Notting-

ham machinery confined to a. small part of the country. Still there is this difference between Nottingham and Buckinghamshire lace. In the

hand-made, or pillow lace, the net or meshes may be described, by supposing a number of ropes, each formed of two or more threads twisted round each other : these are extended parallel ; but, at every two or three spiral turns of these ropes, the strands or threads composing one rope are twisted around with those of its neighbour, and then return to be twisted with >ts own : and this reciprocally of the whole number forms a netting; the figure of the meshes depending upon the number of turns which are made, be-fore the twist is changed from one rope to the next. To form a lace of this description, it is essential that the ends of each thread be detached, and capable of being twisted over the adjacent threads. This is easily done by the hand upon the pillow, by twisting the bobbins round each other ; but has difficulties which prevent its performance by machinery. The Nottingham lace is a modification of the stitch or loop of which stockings are made ; all the meshes being formed by a continuance of one thread, which is, by the machine, formed into loops a whole course (that is, length of the intended piece of lace) at once, by pressing it down alternately over and under between a number of parallel needles ; a second course is then made of similar loops on the same needles, and the loops of the first are drawn through those of the second, in such a manner as to form meshes by retaining the first loops ; the second are then retained by a third course, and this by a fourth, and so on. The machine is very nearly like a common stocking-frame, but provided with an additional apparatus. It consists of a frame, containing a number of needles, or points ; these are introduced between the fixed needles of the stocking-frame, and a certain number (one half, for instance) of the loops in the thread are taken off the fixed needles upon these points, which are moved endways, the space of two, three, or more fixed needles, and put down upon them again. Another set of loops is now taken upon the points, and moved in the opposite direction ; by this means, crossing the loops over each other, and forming meshes, the figure of which will depend upon the number of needles it is thus carried over. But, as this admits of no great variety of patterns, another machine has been invented, which is much more extended in its applications. ‘Like the former, it h;is the parts of the stocking-frame, but differently made. The thread is, in tins, rolled upon a cylinder, i-i the same manner as the weaver’s beam ; as many being wound round it as there are needles in the frame. These threads pass through eyes in the ends of small points, called guides, which are opposite the needles; and these guides are fixed on two bars, each of which has half the guides fastened in it, that is, one guide is fast in one bar, and the next m the other, and so on alternately of the whole, Each of the guides presents a thread to its needle, and they are all at once moved by the hand to

twist the threads two or three times round the needles which are opposite them : the loop is now made in a manner similar to the other

frame. The next time, the alternate guides are shifted endways, so as to apply themselves to other needles than those they were opposite be-fore. This crosses the thread, so as to make a net : but the quantity which is shifted endways is altered every time, by means of the machinery, so as to move a certain number of needles ; which number is altered every time, to produce the pattern. All the parts of this machine, except the guides, are moved by means of treddles, instead of using the hands, as in the common stocking-frame. The net produced by these frames is woven in bands of the width of the intended lace, leaving a wider mesh than the others, to separate the lace into narrow strips. Before cutting up, the lace is spread in a frame, and a common needle with a thick thread is worked in the meshes, to imitate the gimp, or thicker threads of the pattern.

LACE, BLOND, is the finer lace made in the manner we have first described. Its finest specimens, however, have been imported into this country from Flanders.

LACE, GOLD AND SILVER, is similarly made, and until lately the importation of these finer laces was entirely prohibited. The excellent alterations of Mr. Huskisson now, however, only impose a protecting duty on them of thirty to fifty per cent, until October 1828. See SILK MANUFACTURE.

LACED.EMON, in fabulous history, a son of Jupiter and Taygejte, the daughter of Atlas. He married Sparta the daughter of Europa, by whom he had Amyclas and Eurydice the wife of Acrisius. He was the first who introduced the worship of the Graces into Laconia, and built them a temple. From Lacedstmon and his wife the capital of Laconia was called Lacedaemon and Sparta.

LACED.EMON, in ancient geography, a city of Peloponnesus, called also Sparta ; these names ” differing in this, that the latter was the

ancient name of the city, the former of the country, which afterwards came to be applied to the city (Strabo and Stephanus). Homer also makes this distinction ; and calls this country holy, because encompassed with mountains. It has also been severally known by the name of Lelegia, from the Leleges, the first inhabitants of the country, or from Lelex, one of their kings; and Oebalia from Oebalus, the sixth king from Eurotas. It was also called Hecatompolis, from 100 cities which the whole province once contained.

The city was the capital of Iˆaconia, situated on the right or west side of the Eurotas : it was less in compass than Athens, however equal, or even superior to it in power. Polybius makes it forty-eight stadia, a circuit much inferior to that of Athens. Lelex is supposed to have been the first king of Lacedaemon. His descendants, thirteen in number, reigned successively after him, till the reign of the sons of Orestes, when the Heraclida? recovered the Peloponnesus, about eighty years after the Trojan war. Procles and Eurysthenes, the descendants of the Heraclida?, usurped the crown together ; and after them it was decreed that the two families should always sit on the throne together. The monarchical power was abolished, and the race of the Heraclidae

was extinguished at Sparta, aVvt A. A.C. 219. Lacedaemon in its flourishing stute had no walls, the bravery of its citizens serving instead of them (Nepos). At length in Cassander's time, or after, when the city was in the hands of tyrants, distrusting the defence by arras and bravery, a wall was built round it, at first slight, and in a tumultuary or hasty manner ; which the tyrant Nabis made very strong (Livy, Justin). Pau sanias ascribes the first walls to the times of Demetrius and Pyrrhus, under Nabis. They were pulled down A. A. C. 188, by Philopoemen, who was then at the head of the Achaean league, and Laconia some time after became a Roman province, when reduced by Mummius. See SPARTA.

The site of the town of Lacedaemon has been called by modern travellers Paleo Chori (the Old Town) ; the modern town MISITRA, which see, is at some distance to the west.

LACEPEDE, B. G. Etienne, the French naturalist, was born at Agen, in 1756, and from his boyhood exhibited a strong attachment to that study in which he afterwards attained such eminence. His friends and instructors, Buffon and Daubentor, obtained for him the corrector-ship of Natural History in the Jardindesplantes. Napoleon conferred advantages and dignities upon him, and made him chancellor of the

Legion of Honor. During the hundred days the emperor appointed him general master of the university, Lut he did not act, having then resolved to abandon politics and embrace science altogether. He published an edition of Buffon's History: his History of Fishes is his most celebrated production ; and his civil and military history has appeared since his death, which took place at Epinay, near St. Denis, in the year 1825.

LACK KATE, v.a.ˆ Fr. lacerer; Lat. la—

LAC'EP.ABLE, adj. tcero. To tear; rend;

LACERA'TION, n. s. £ separate with violence ;

LAC'ERATIVE, adj. } mark by tearing: lacerable is that which may be or is liable to b« torn.

LACERNA, a coarse thick garment worn by the Romans over their gowns like a cloak. It was first used in the camp, but afterwards admitted into the city. The emperors wore the laccrna of a purple dye. It was at first very short, but it lengthened after it became common, which was not till the civil wars and the triumvirate. Senators were forbidden to wear it in the city by Valentinian and Theodosius. Martial mentions lacernae worth 10,000 sesterces. Some confound this garment with the penula; but it seems ra-ther to have resembled the chlamys.

LACERTA, in zoology, a genus of amphibia belonging to the order of reptilia, the characters of which are : that the body is naked, with four feet and a tail. The principal species are,

L. alligator, the alligator or American crocodile. So very great is the general resemblance between this animal and the crocodile, that many naturalists have considered it is as a mere variety, rather than a distinct species. The count de Cepede declares, that on examining several specimens of American crocodiles, and collating them with those of the Nile, he could not but consider them as of the same species ; and the slight difference observable between them as owin? merely to the effect of climate. Both ani—

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mals agree in the number of teeth ; and the general manners and habits of both are found to be similar in the old and new continents. The more accurate discrimination, however, of Blu-menbach, and some others, seems in reality to prove that the American crocodile is specifically distinct from the Nilotic. The leading difference appears to be, that the head of the alligator is smooth on the upper part, and not marked with those very strong rugosities and hard carinated scales which appear on that of the crocodile ; the snout is considerably flatter and wider, as well as more rounded at the extremity. The alligator arrives at a size not much inferior to that of the crocodile, specimens having often been seen of eighteen or twenty feet in length,

* Though the largest and greatest numbers of alligators,' says Catesby, ' inhabit the torrid zone, the continent abounds with them ten degrees more north, particularly as far as the river Neus, in North Carolina, in the latitude of about 33°, beyond which I have never heard of any, which latitude nearly answers to the northernmost parts of Africa, where they are likewise found. They frequent not only salt rivers near the sea, but streams of fresh water in the upper parts of the country, and in lakes of salt and fresh water, on the banks of which they lie lurk-ing among reeds, to surprise cattle and other animals. In Jamaica, and many parts of the continent, they are found about twenty feet in length : they cannot be more terrible in their aspect, than they are formidable and mischievous in their natures, sparing neither man nor beast they can surprise, pulling them down under water, that, being dead, they may with greater facility, and without a struggle or resistance de-vour them. As quadrupeds do not so often come in their way, they almost subsist on fish ; and as, by the close connexion of the vertebrae they can neither swim nor run away, but strait forward, and are consequently disabled from turning with that agility requisite to catch their prey by pursuit, therefore they do it by surprise in the water as well as by land.

L. Carolinensis, the green lizard of Carolina, is so denominated from its color. This species is very slender; the tail is near double the length of the body, and the whole length about five inches. It inhabits Carolina ; where it is domestic, familiar, and harmless. It sports on tables and windows, and amuses with its agility in catching flies. Cold affects the color; in that uncertain climate, when there is a quick

transition in the same day from hot to cold, it changes instantly from the most brilliant green to a dull brown. They are a prey to cats and ravenous birds. They appear chiefly in summer ; and at the approach of cold -weather retire to their winter recesses, and lie torpid in the hollow crevices of rotten trees. A few warm sun-shiny days often so invigorate them, that they will come out of their holes and appear abroad ; when on a sudden the weather, changing to cold, so enfeebles them, that they are unable to return to their retreats, and die of cold.

L. caii'liverhera has n depressed pinnatified tail, and palmuted feet. It is larger than the

common green lizard, is found in Peru, and lies obtained its name from its beating the tjroun 1 with its tail.

L. Cayman, or the Antilles crocodile, has been confounded with the alligator and Gangetica, but is evidently different from both ; and has accordingly been properly distinguished by the abbe Bonaterre in the Encyclopedic Methodique. The greatest strength of this animal, according to M. Merian, consists in its teeth, of which there are two rows crossing one another, by means ot which it grinds with the greatest ease whatever it seizes upon. The Cayman is so called from some small isles of that name among the Antilles, where these creatures are said to be very numerous. They are of exceeding strength, and equally the dread both of men and animals ; for they live on land as well as in the water, and devour every creature they meet with. See CAYMAN.

L. chamaeleon, the chamaeleon, has a crooked cylindrical tail. The head of a large chameleon is almost two inches long, and thence to the beginning of the tail it is four inches and a half. The tail is five inches long, and the feet two and a half. The thickness of the body is different at different seasons ; for sometimes from the back to the belly it is two inches, and sometimes one ; for he can blow up and contract himself at pleasure. This swelling and contraction is not only of the back and belly, but also of the legs and tail. The chamaeleon will continue blown up for two hours together, and then grow less and less insensibly ; for the dilatation is always more quick and risible than the contraction. In this last state he appears extremely lean ; the spine of the back is sharp, and all his ribs might be told; the tendons of the arms and legs might also be seen distinctly. The skin is very cold to the touch ; and, notwithstanding he seems so "lean, there is no feeling the beating of the heart. The surface of the skin is unequal, and

has a grain not unlike shagreen, but very soft, because each eminence is as smooth as if it was polished. Some of these are as large as a middling pin's head on the arms, legs, belly, and tail ; but on the shoulders and head they are of an oval figure, and a little larger. Those under the throat are ranged in the form of a chaplet, from the lower lip to the breast. Some of the head and back are amassed together in clusters, with spaces between them, on which are almost imperceptible spots of a pale red and yellow color, as well as the ground of the skin itself, which plainly appears between these clusters. This ground changes color when the animal is dead, becoming of a grayish-brown, and the small spots are whitish. The head is like that of a fish, being joined to the breast by a very short neck, covered on each side with cartilaginous membranes resembling gills. There is a crest directly on the top of the head, and two others on each side above the eyes, and between these there are two cavities near the top of the head. The muzzle is blunt, like that of a frog: at the end there is a hole on each side for the nostrils ; but there are no ears, nor the sisn of any. The jaws are furnished with a bone in the form of teeth, of which he makes but little use, as he lives by swallow-L A C E R T A

ing flies and other insects without chewing them ; and hence arose the vulgar notion of his living upon air, because he was never seen to eat. The tongue, which Linnaeus says resembles an earth-worm, is of considerable length, and is enlarged and somewhat flattened at the end. From this member there continually oozes out a very glutinous liquor, by means of which it catches such insects as come within its reach, and it is surprising to see with what quickness it retracts its tongue the instant it has arrested any prey. The form, structure, and motion of the eyes, have something very peculiar ; for they are very large, being almost half an inch in diameter, of a globular figure, and stand out of the head. They have a single eye-lid like a cap, with a small hole in the middle, through which the sight of the eye appears, no bigger than a pin's head, and a shining brown, encircled by a little ring of a gold-color. This eye-lid has a grain like shagreen, as well as the other parts of the skin ; and when the rest of the body changes color, and assume spots of different shape, those on the lid always keep the same form, though they are tinctured with the same color as the skin. But the most extraordinary thing relating to the eyes is, that this animal often moves one when the other is entirely at rest ; nay,

somtimes one eye will seecn to look directly forward and the other backward, and one will look up to the sky when the other regards the earth. The trunk of the body comprehends the thorax and the belly, but is almost all thorax, with little or no belly. The four feet are al! of equal length ; but those be-fore are turned backwards, and those behind forwards. There are five toes on each paw, which have a greater resemblance to hands than feet. They are all divided into two, which gives the appearance of two hands to each arm, and two feet to each leg ; and though one of these parts has three toes, and the other but two, yet they seem to be all of the same size. These toes lie together under the skin ; their shape, however, may be seen through the skin. With these paws the chamaeleon can lay hold of the small branches of trees like a parrot. When he is about to perch he parts his toes differently from birds, placing two behind and two before. The claws are little, crooked, very sharp, and of a pale yellow, proceeding but half way out of the skin, while the other half is hid beneath it. His walk is slower than that of a tortoise, and he seems to move along with an affectation of gravity. He seems to seek for a proper place to set his feet upon ; and, when he climbs up trees, he does not trust to his feet like a squirrel, but endeavours to find out clefts in the bark, that he may get a surer hold. His tail is like that of a viper when it is puffed up and round ; at other times the bones may be seen in the same manner as on the back. He always wraps his tail round the branches of trees, and it serves him instead of a fifth hand. He is a native of Africa and Asia. Wormius believes the change of color to depend upon the feelingˆ of the animal, or upon the different degrees of heat or coll to which it is subjected. It seems similar to blushing, and is probably produced by the greater or less quantity of bipod sent into the minute vessels,

assisted also by the distension of their immense lungs, which, being expanded with air, render the animal nearly transparent. Mr. Barrow observes, that ‘ previously to the chamxleon’s assuming a change of color, it makes a long inspiration, the body swelling out to twice its usual size ; and, as this inflation subsides, the change of color graduafly takes place. The only permanent marks are two small dark lines passing along the sides.’ According to D’Ob-sonville, the blood of the chamaeleon is of a violet blue color; the vessels and cutis yellow ; the epidermis transparent : hence he conceives, that, in consequence of more or less blood being sent to the external arteries, all the shades of color which the animal presents may be produced.

L. crocodylus, the crocodile, has a compressed jagged tail, five toes on

the fore, and four on the hind feet. This is the largest animal of the genus. A young one that was dissected at Siam, an account of which was sent to the Royal Academy at Paris, was eighteen feet and a half long ; the tail was no less than five feet and a half, and the head and neck above two and a half. He was four feet nine inches in circumference where thickest. The hinder legs, including the thigh and the paw, were two feet two inches long ; the paws from the joint to the extremity of the longest claws, were above nine inches. They were divided into four toes; of which three were armed with large claws, the longest of which was an inch and a half, and seven lines and a half broad at the root. The fourth toe was without a nail, and of a conical figure ; but was covered with a thick skin like shagreen leather. These toes were united with membranes like those of ducks, but much thicker. The fore legs had the same parts and conformation as the arms of a man, but were somewhat shorter than those behind. The hands had five fingers, the last two of which had no nails, and were of a conical figure, like the fourth toe on the hind paws. The head was long, and had a little rising at the top ; but the rest was flat, especially towards the extremity of the jaws. It was covered with a skin, which adhered firmly to the skull and jaws. The skull was rough and unequal in several places; and about the middle of the forehead there were two bony crests, about two inches high. They were not quite parallel, but separated from each other in proportion as they mounted upwards. The eye was very small in proportion to the rest of the body ; and so placed within its orbit, that the outward part, when shut, was only a little above an inch in length, and ran parallel to the opening of (he jaws. The nose was placed in the middle of tlie upper jaw, near an inch from its extremity, and was perfectly round and flat, being two inches io diameter, of a black, soft, spongy substance, like the nose of a dog. The form of the nostrils was somewhat like the Greek 2 ; and there were two caruncles which filled and closed them very exactly, and which opened as often as he -breathed through the nose. The jaws seemed to shut one within another by means of several apophyses, which proceeded from above downwards, and from below upwards, there being cavities in the oppo-406

site jaw to receive them. They had twenty-teven dog-teeth in the upper jaw, and fifteen in the lower, with several void spaces between them. They were thick at the bottom, and sharp at the point; being all

of different sizes, except ten large hooked ones, six of which were in the lower jaw, and four in the upper. The mouth was fifteen inches long, and eight and a half broad where broadest; and the distance of the two jaws, when opened as wide as possible, was fifteen inches and a half. The skull, between the two crests, was proof against a musket ball, which only rendered the part a little white that it struck against. The color of the body was dark brown on the upper part, and whitish citron below, with large spots of both colors on the sides. From the shoulders to the extremity of the tail he was covered with large square scales, disposed like parallel girdles, fifty-two in num-ber; but those near the tail were not so thick as the rest. In the middle of each girdle were four protuberances, which became higher as they approached the end of the tail, and composed four rows ; of which the two in the middle were lower than the other two, forming three channels, which grew deeper the nearer they came to the tail, and were confounded with each other about two feet from its extremity. The skin was defended by a sort of armour, which, however, was not proof against a musket-ball. Probably, however, if the ball had struck obliquely against the shell, it would have flown off. The parts of the girdles tinder the belly were whitish, and made up of scales of divers shapes. They were about one-sixth of an inch thick, and not so hard as those on the back. Some crocodiles have measured forty feet in length. They have no tongue, but in place of it a membrane, attached by its edges to the two sides of the under jaw. The crocodile lays egg* which she leaves to be hatched by the heat of the sun. The Egyptians use the fat against the rheumatism and stiffness of the tendons, esteeming it a powerful external remedy. They S3y the gall is good for the eyes ; they use it as a certain remedy for barrenness in women, taking about six grains internally, and outwardly they apply a pessus made of cotton and the gall of a crocodile. The eyes of the crocodile are the best aphrodisiacs of any known by the Arabs ; who prefer them to all confections, and even to ambergris. In the stomach of one of these animals, dissected before the English consul, they found the bones of the legs and arms of a woman, with the rings which they wear in Egypt as ornaments. These animals are seen in some places lying for hours, and even whole days, stretched in the sun, and motionless; so that one not used to them might mistake them for trunks of trees covered with rough and dry bark : but the mistake would soon be fatal : for the seemingly torpid animal, at the near approach of any living creature, instantly darts upon it, and carries it to the bottom. In the times of an inundation they sometimes enter the cottages of the natives, where they seize the first animal they meet with. The crocodile, however, except when pressed with hunger, or with a view of depositing its eggs, seldom leaves the water. Its usual method is to

upon the surface, and seize whatever a;iimuls come within its reach; but, when this method fails, it then goes close to the bank. There it waits in patient expectation of some land animal that comes to drink ; the dog, the bull, the tiger, or man himself. It seizes the victim with a spring, and goes at a bound much faster than such an unwieldy animal could be supposed to do ; then, having secured the creature both with teet'i and claws, it drags it into the water, instantly sinks with it to the bottom, and in this manner quickly drowns it. Sometimes it happens that the creature wounded by the crocodile makes its escape ; in which case the latter pursues it with great celerity, and often takes it a second time. In these depredations, however, this terrible animal often seizes on another as formidable as itself and meets with desperate resistance. Combats often occur between the crocodile and the tiger. All tigers are continually oppressed by a parch-ing thirst, that makes them frequent great rivers, whither they descend to drink. On these occasions they are seized by the crocodile, upon whom they instantly turn with the greatest agility, and force their claws into his eyes, while he plunges with his fierce antagonist into the river. There they continue to struggle, till at last the tiger is drowned. A negro, however, with no other weapon than a knife in his right hand, and his left arm wrapped round with a cow-hide, will often venture boldly to attack this animal in its own element. As soon as he approaches the crocodile, he presents his left arm, which the animal swallows, but as it sticks in his throat, the negro has time to give it several stabs below the chin, where it is easily vulnerable ; and the water also getting in it at the mouth, which is held involuntarily open, the creature soon expires. The natives of Siam are particularly fond of the capture of crocodiles, which they take by throwing three or four strong nets across a river, at proper distances ; so that if the animal breaks through the first it may be caught by one of the rest. When first taken it employs the tail, which is the grand instrument of strength, with great force ; but, after many unsuccessful struggles, the animal's strength is at last exhausted.

M. Denon, speaking of the French army in Egypt, says that the soldiers and himself bathed in the Nile, and yet they were never once attacked by them, nor did they ever meet witn <t single crocodile at a distance from the water. Hence he inferred that they find in the river a sufficient quantity of easily procured food, which they digest slowly, being, like the lizard and serpent, cold blooded, and of an inactive stomach. ' Besides,' says the traveller, ' having in the Egyptian part of

the Nile no enemies but each other and man, they would be truly formidable, if, covered as they art-with an almost impenetrable defensive armour, they were skilful and alert in making use of those means which nature has given them ‘for attack.’ He farther adds, that they saw three crocodiles, one of which was nearly twenty-five feet in length ; they were all asleep, so that they could approach them within about twenty yards, and had au opportunity of distinguishing them very accurately. He says, that in that positio i they resembled dismounted

cannon : he fired on one, the ball struck him and rebounded from his scales, lie made a leap of ten feet, and dived into the river.

All crocodiles breed near fresh waters, though they are sometimes found in the sea. They produce their young by eggs, and for this purpose the female chooses a place by the side of the ri-ver, or some fresh water lake, to deposit her brood in. She always pitches upon an extensive sandy shore, where she may dig a hole without danger of detection from the ground being fresh turned up. The shore must be gentle and shelving to the water, for the greater convenience of her going and returning ; and a convenient place must be found near the edge of the stream, that the young may have a shorter way to go. When all these requisites are adjusted, the ani-mal is seen cautiously stealing up on shore to deposit her burden. The presence of a man, a beast, or even a bird, is sufficient to deter her at that time ; and, if she perceives any creature looking on, she infallibly returns. If, however, nothing appears, she then goes to work, scratch-ing up the sand with her fore-paws, and making a hole pretty deep in the shore. There she deposits from eighty to 100 eggs, of the size and form of a tennis-ball, covered with a tough white skin like parchment. She takes above an hour to perform this task ; and then, covering up the place so artfully that it can scarcely be perceived, she goes back to return again th* next day. Upon her return, with the same precaution as before, she lays about the same number of eggs; and the day following also a like number. Thus having deposited her whole quantity, and having

covered them closely up in the sand, they are soon vivified by the heat of the sun ; and at the end of thirty days the young ones begin to break open the shell. At this time the female is instinctively taught that her young ones want re-lief; and she goes upon land to scratch away the sand and set them free. Her brood quickly avail themselves of their liberty; a part run unguided to the water; another part ascend the back of the female, and are carried thither in greater safety. But the moment they arrive at the water, when the female has introduced her young to their natural element, the male becomes their formidable enemy, and devours as many of them as he can. The whole brood scatters into different parts at the bottom ; by far the greatest number are destroyed, and the rest find safety in their agility or minuteness. The eggs of this animal are not only a delicious feast to the sa-vage, but are eagerly sought after by every beast and bird of prey. The ichneumon was erected into a deity among the ancients, for its success in destroying the eggs of these monsters : at present the gallinazo, a species of vulture, is their most prevailing enemy. All along the banks of great rivers, for thousands of miles, the crocodile propagates in such numbers as would soon overrun the earth, were not the vulture appointed by providence to counteract its fecundity. Among th« various animals that were produced to fight in the amphitheatre at Rome, the com-bat of the crocodile was one. Marcus Scaurus produced them living in his unrivalled exhibitions.

One of the greatest curiosities in the fossile world, which the late ages hare produced, is the skeleton of a large crocodile, almost entire, found at a great depth under ground, bedded in stone. This was in the possession of Linking who wrote many pieces in natural history, anc particularly an accurate description of this curious fossile. It was found in the side of a large mountain, in the midland part of Germany, and in a stratum of a black fossile stone, somewhat like our common slate, but of a coarser texture, the same with that in which the fossile fish of many parts of the world are found. This skeleton had the back and ribs very plain, and was of a much deeper black than the rest of the stone, as is also the case in the fossile fishes, which are preserved in this manner. The part of the stone where the head lay was not found, this being broken off just at the shoulders, but that irregularly, so that, in one place, a part of the back of the head was visible in its natural form. The two shoulder bones were very fair, and three of the feet were well preserved ; the legs were of their natural shape and size, and the feet preserved, even to the extremities of the five toes of each.

L. Gangetica, or Gangetic crocodile. This animal has long, roundish, or sub-cylindric jaws: its tail on the upper side has two crests running into one. This species is found in the Ganges, where it is nearly equal in size to the common crocodile. In this the structure of the snout is very remarkable, it being nearly three times as long as the head. The eyes are extremely prominent, and it is said they are so constructed, that they may be raised above the water, when the rest of the body is under the surface, by which the animal is enabled to see its prey either on the surface of the water, or on the banks of rivers. In the general form and color of the body and limbs, this species resembles the common crocodile. In the British Museum is a specimen of this creature, measuring eighteen feet in length.

L. gecko has a cylindrical tail, concave ears, and a warty body. It is the Indian salamander of Bontius. 'This animal is very frequent in Cairo,' says Hasselquist, 'both in the houses and without them. Its poison is very singular, as it exhales from the lobuli of the toes. The animal seeks all places and things impregnated with sea-salt, and, passing over them several times, leaves this very noxious poison behind. In July, 1750, 1 saw two women and a girl at Cairo at the point of death, from eating cheese new salted, bought in the market, and on which this animal had dropt its poison. Once, at Cairo, I had an opportunity of observing how acrid the exhalations of the toes of this animal are, as it ran over the hand of a man wlio endeavoured to catch it ; there immediately rose little pustules over all those parts the animal had touched ; these were red, inflamed, and smarted a little, greatly resembling those occasioned by the stinging of nettles. It emits an odd sound, especially in the night, from its throat, not un-like that of a frog.'

L. iguana, or guana, has the top of the back and tai'l, and the gullet, strongly serrated, and is

sometimes found five feet long. It has small teeth, and bites hard. It inhabits the rocks of the Bahama Islands, and lurks in cliffs or hollow trees. 1» feeds entirely on vegetables ; and the fat of the abdomen

assumes the color of that which it has last eaten. It is slow of motion, and has a most disgusting look ; yet it is esteemed a most delicate and wholesome food. It is not amphibious, yet on necessity will continue long under water ; it swims by means of the tail, keeping its legs close to the body. Guanas are the support of the natives of the Bahama Islands, who go in their sloops from rode to rock in search of them. They are taken with dogs trained for the purpose ; and, as soon as caught, their mouths are sewed up, to prevent them from biting. Some are carried alive for sale to Carolina ; others salted and barrelled for home consumption.

L. palustris has a lanceolated tail, and four toes on the fore feet ; and inhabits the stagnant waters of Europe. It has a slow and crawling pace. Pennant more than once found, under stones and old logs, some very minute lizards that had much the appearance of this kind : they were perfectly formed, and had not the least vestiges of fins ; which circumstance, joined to their being found in a dry place remote from water, seems to indicate, that they had never been inhabitants of that element, as many of our lizards are in their first state. At that period they have a fin above and below their tail ; that on the upper part extends along the back as far as the nead ; but both drop off as soon as the animal takes to the land, being then no longer of any use Ellis has remarked certain pennated fins at the gills of one very common in most of our stagnated waters, and which is frequently observed to take a bait like a fish.

L. salamandra, the salamander, has a short cylindrical tail, four toes on the fore feet, and a naked porous br<dy. This animal has been said, even in the Philosophical Transactions, to live in the fire: but this is a mistake. It is found in the southern countries of Europe. The fol-fowmg account of this species is extracted from the count de la Cepede's Natural History of Serpents. Whilst the hardest bodies cannot re-sist the violence of fire, the world have endeavoured to make us believe that a small lizard can not only withstand the flames, but even extinguish them. As agreeable fables readily gain belief, every one has been eager to adopt that of a small animal so highly privileged, so superior to the most powerful agent in nature, and which could furnish so many objects o. comparison to poetry, so many emblems to love, and so many brilliant devices to valor. The ancients believed this property of the salamander ; and wishing that its origin might be as surprising as its power, and, desirous of realising the fictions of the poets, they pretended that it owes its existence to the purest of elements, which cannot consume it, and called it the daughter of tire, giving it however a body of ice. The moderns have followed the ridiculous tales of the ancients ; and some have gone so far as to think

that the ?nost violent fire could be extinguished by the land salamander. Quacks sold this small

lizard, affirming that, when thrown into the greatest conflagration, it would check its progress. It was necessary that philosophers should prove by facts what reason might have demonstrated ; but it was not till after the light of science was diffused abroad, that the world gave over believing in this wonderful property of the salamander. This lizard, which is found in so many countries of the ancient world, and even in very high latitudes, has been very little noticed, because it is seldom seen out of its hole, and because for a long time it has inspired much terror. Even Aristotle speaks of it as of an animal with which he was scarcely acquainted. One of the largest of this species, preserved in the late French king's cabinet, is seven inches five lines in length, from the end of the muzzle to the root of the tail, which is three inches eight lines. The skin does not appear to be covered with scales, but it is furnished with a number of excrescences like teats, containing many holes, several of which may be very plainly distinguished by the naked eye, and through which a kind of milk oozes, that generally spreads itself in such a manner as to form a transparent coat of varnish. above the skin of this oviparous quadruped, naturally dry. The eyes are placed in the upper part of the head, which is a little flatted; their orbit projects into the interior part of the palate, and is there almost surrounded by a row of very small teeth, like those in the jaw bones : these teeth establish a near relation between lizards and fishes ; many species of which have also several teeth placed in the bottom of the mouth. The color of this species is very dark : upon the belly it has a bluish cast, intermixed with pretty large irregular yellow spots, which extend over the whole body, and even to the feet and eye-lid ; some of these spots are besprinkled with small black specks ; and those which are upon the back often touch withoiv* interruption, and form two long yellow bands. The color must, however, be various ; and some salamanders are found in the marshy forests of Germany, which are quite black above, and yellow below. To this variety we must refer the black salamander, found by Mr. Laurenti in the Alps, which he considered as a distinct species. The salamander has no ribs ; neither 'have frogs, to which it has a great ressmblancc in the general form of the anterior part of its body. When touched, it suddenly covers itself with that kind of coat of which we have spoke", and it can also very rapidly change its skin from a state of humidity to a state of dryness. The milk which issues from the small holes in its surface is very acrid ; when put upon the tongue, one feels as it were a kind of scar at tho part which it touched. This milk, which is considered as an

excellent substance for taking off hair, has some resemblance to that which distils from the esula and euphorbium. When the salamander is crushed, or when it is only pressed, it exhales a peculiarly bad smell. Salamanders are fond of cold damp places, thick shades, tufted woods, high mountains, and the banks of streams that run through meadows : they sometimes retire in great numbers to hollow trees, hedges, and below old rotten stumps ; and

they pass the winter, in places of high latitude, in a kind of burrows, where they are found joined and twisted together. The salamander being destitute of claws, having only four toes on each of the fore feet, and no advantage of conformation making up its deficiencies, its manner of living must be very different from that of other lizards. It walks very slowly ; far from being able to climb trees with rapidity, it often appears to drag itself with great difficulty along the surface of the earth. It seldom iroes far from its place of shelter; it passes its life under the earth, often at the bottom of old walls during summer ; it dreads the heat of the sun, which would dry it; and it is only when rain is about to fall that it comes forth from its asylum, to bathe itself, and to imbibe an element to which it is analogous. Perhaps it finds then with greatest facility those insects upon which it feeds. It lives upon flies, beetles, snails, and earth worms ; when it reposes, it rolls up its body in several folds like serpents. It can re-main some time in the water without danger, and it casts a very thin pellicle of a greenish gray color. Salamanders have even been kept six months in water without food ; care only being taken to change the water often. Every time a salamander is plunged into the water, it attempts to raise its nostrils above the surface as if to seek for air, which is a new proof of the need that all oviparous quadrupeds have to breathe during the time they are not in a state of torpor. The salamander has apparently no ears, and in this it resembles serpents. It has even been said that it does not hear, and on this account it has got the name of sourd in some provinces of France. This is very probable, as it has never been heard to utter any cry, and silence in general is coupled with deafness. Having then perhaps one sense less than other animals, and being

deprived of the faculty of communicating its sensations to those of the same species, even by imperfect sounds, it must be reduced to a much inferior degree of instinct; it is therefore very stupid ; and not bold, as has been reported : it does not brave danger, but it does not perceive it. Whatever gestures one makes to frighten it, it always advances without turning aside ; however, as no animal is deprived of that sensation necessary for its preservation, it suddenly compresses its skin when tormented, and spurts forth upon those who attack it that corrosive milk which is under it. If beaten, it begins to rattle its tail ; afterwards it becomes motionless, as if stunned by a kind of paralytic stroke ; for we must not, with some naturalists, ascribe to an animal so devoid of instinct, so much art and cunning as to counterfeit death. In short, it is difficult to kill it; but when dip-ped in vinegar, or surrounded with salt reduced to powder, it expires in convulsions, as is the case with several other lizards and worms. The ancients, and even Pliny have affirmed, that the poison of the salamander is the most dangerous of all, and that it might even cause the destruction of whole nations. The moderns also for a long time believed the salamander to be very poisonous; but they have at length had recourse o observation, by which they ought to have begun. The famous Bacon wished naturalists would endeavour to ascertain the truth respecting the poison of the salamander. Gesner proved by experiment, that it did not bite, whatever means were used to irritate it ; and Wurf-bainus showed that it might safely be touched, and that one might without danger drink the water of those wells which it inhabited. M. de Maupertuis studied also the nature of this lizard. In making researches to discover what might be its pretended poison, he demonstrated experimentally, that fire acts upon the salamander in the same manner as upon all other animals. He remarked, that it was scarcely upon the fire, when it appeared to be covered with the drops of its milk, which, rarefied by the heat, issued through all the pores of the skin, but in greater quantity from the head and dugs, and that it immediately became hard. It is needless to say, that this milk is not sufficiently abundant to extinguish even the smallest fire. M. de Maupertuis, in the course of his experiments, in vain irritated several salamanders ; none of them ever opened their mouths ; he was obliged to open them by force. As the teeth of this lizard are very small, it was very difficult to find an ani-mal with a skin sufficiently fine to be penetrateQ by them : he tried without success to force them into the flesh of a chicken stripped of its feathers ; he in vain pressed them against the skin : they were displaced, but they could not enter. He, however, made a salamander bite the thigh of a chicken, after he had taken off a small part of the skin. lie made salamanders newly caught bite also the tongue and lips of a dog, as well as the tongue of a turkey ; but

none of these animals received the least injury. M. de Maupertuis afterwards made a dog and a turkey swallow salamanders whole, or cut into pieces ; and yet neither of them appeared to be sensible of the least uneasiness. — Mr. Laurenti since made experiments with the same view : he forced gray lizards to swallow the milk proceeding from the salamander, and they died very suddenly. The milk, therefore, of the salamander, taken internally, may hurt, and even be fatal to certain animals, especially those which are small ; but it does not appear to be hurtful li large animals. It was long believed that the salamander was of one sex ; and that each individual had the power of engendering its like, as several species of worms. This is not the most absurd fable which has been imagined with respect to the salamander ; but, if the manner in which they come into the world is not so marvellous as has been written, it is remarkable in this, that it differs from that in which most other lizards are brought forth, as it is analogous to that in which the chal-cide and the seps, as well as vipers and several kinds of serpents, are produced. On this account the salamander merits the attention of naturalists much more than on account of the false and brilliant reputation it has so long enjoyed. M. de Maupertuis, having opened some salamanders, found eggs in them, and at the same time some young perfectly formed ; the eggs were divided into two long bunches like grapes, and the young were enclosed in two transparent bags; they were equal Iv well formed as the old

ones, and much more active. The salamander, therefore, brings forth young from an egg hatched within its belly, as the viper; and her fecundity is very great ; naturalists have long said that she has forty or fifty at once ; and M. de Maupertuis found forty-two young ones in the body of a female salamander, and fifty-four in another The young salamanders are generally black, al most without spots ; and this color they preserve sometimes during their whole lives in certain countries,

where they have been taken for a distinct species. Mr. Thunberg has given, in the Memoirs of the Academy of Sweden, the description of a lizard, which he calls the Ja

Eanese lizard, and which appears not to differ •om our salamander but in the arrangement of its colors. This animal is almost black, with several whitish and irregular spots, both on the upper part of the body and below the paws; on the back there is a stripe of dirty white, which becomes narrow to the point of the tail. This whitish stripe is interspersed with very small specks, which form the distinguishing characteristic of our land salamander. We, therefore, may consider this Japanese lizard as a variety of our land salamander, modified a little by the climate of Japan. It is found in Niphon, the largest island of that empire, inhabiting mountains and rocky places.

LACERTA, the lizard, in astronomy, a constellation of the northern hemisphere. See ASTRONOMY.

LACHES (from Fr. lascher, to slacken, or lasche, idle), in English law, signifies slack-ness or negligence, as it appears, in Littleton, where laches of entry is a neglect of the heir to enter. It seems to be an old English word for lack.

LACHESIS, in mythology (from \a\uv, to measure out by lot), one of the Fates. She presided over futurity, and was represented as spinning the thread of life ; cr, according to others, holding the spindle. She is painted covered with a garment variegated with stars, and holding spindles in her hand.

LACHISH, in ancient geography, a city south of the tribe of Judah. Eusebius and St. Jerome tell us that, in their time, there was a village called Lachish, seven miles south of Eleutheropolis. Sennacherib besieged Lachish, but did not take it. Thence he sent Rabshakeh against Jerusalem. Here king Amaziah was slain by his rebel subjects.

LACHNEA, in botany, a genus of the monogynia order and octandria class of plants; natural order thirty-first, vepreculae : CAL. none : COR. quadrifid, with the limb unequal: SEED one, a little resembling a berry. Species five, all Cape plants.

LACH'RYMAL, adj.-\ Fr. lachrymal ; Lat.

LACH'UYMARY, adj. {lachryma. Producing

LACHRYMA'TION, n. s. (or containing tears:

LACII'RYMATORY. 'the act of weeping. For lachrymatory, see below.

It is of such an exquisite sense, that, upon any touch, the tears might be squeezed from the lachrymal glands, to wash and clean it,

Cheiine's Philosophical Principks.

How many dresses are there for each particular

deity ! what a variety of shapes in the ancient urns, lamps, and lachrymary vessels ! Addison.

LACHRYMATORIES, in antiquity, small glass or earthen phials, with a long neck, found in ancient sepulchres. Many antiquaries have supposed that these vessels served to collect the tears of the weeping friends, or of persons hired for that purpose. This belief was grounded on the appearance of the opening of those phials, which is generally furnished with a round concave part well adapted for embracing the convexity of the eye-ball. On some lachrymatories are even found impressions of an eye, and sometimes of a pair of eyes. But here, as in many other cases, the eye appears to be merely emblematical : — The opinion of tears being preserved in those •vessels is indeed unsupported by any ancient custom with which we are acquainted, or by any well interpreted passage in ancient authors. It was first broached by Chiflet; it soon spread over Europe, and was, in spite of its improbability, adopted and supported by Kirchman, Kipping, and many other antiquaries. At last it was combated by Schoepflin and Paciaudi ; at present it appears to be agreed that the lachrymatories never contained any thing but balms destined to moisten the funeral pile or the ashes of the dead. There is in the Capitol a bas re-lief which is much in favor of this idea: on this marble, which represents the funeral rites at the death of Meleager, a woman approaches the pile, holding in one hand a large-bellied vessel, and in the other a long slender phial with elongated neck and bottom, and in every respect similar to several earthen lachrymatories preserved in collections. This woman is in the act of pouring out of the large into the small vessel what may be supposed to be balms or odorife-rous oil for the purpose of perfuming the funeral pile of Meleager. Many specimens of them are preserved in the cabinets of the curious, particularly in the British Museum.

LACHSA, or Hajar, a province of Arabia Felix, bounded on the north by Arabia Deserta, and extending along the whole south-west coast of

the Persian Gulf. Its camels and asses are much valued, and some thousands annually sold into Syria. It has also a pearl-fishery and some foreign trade. The interior is fertile in rice, dates, and cotton, where it is capable of cultivation : but a large portion is sand.

The sheik, formerly subject to Turkey, is independent and very powerful. The piracies committed on this coast some years since induced the British government (in 1809) to fit out an expedition against them from Bombay. The principal port (Ras-el-khima) was taken on this occasion by assault, and seventy vessels burnt.

LACINIUM,iu ancient geography, a promontory of Bruttii, in Italy, the southern boundary of the Sinus Tarentinus and the Adriatic ; all to the south of it being deemed the Ionian Sea. It was famous for a rich temple to Juno Lacinia, with a pillar of solid gold standing in it; which Hannibal intending to carry off was, according to Cicero, dissuaded by a dream. It is now called Capo delle Colonne, from the columns of Juno's temple still standing on the north-east coast of Calabria Ultra.

.-v Saxon lecan, to (lessen; Goth, and

LACK, v. a., v. n. & ». .t. LACK'BRAIN, n. s.

LACK'LINEN, adj. £Swed./«c7r«; lielg.

LACK.'LUSTHE. J laetkcn. To want;

be in need: want; need ; failure: lackbrain, and lacklir.en, lie who is in need of these useful articles: lacklustre, wanting brightness.

1'cradventure there shall lack five of the fifty righteous ; wilt thou

destroy all the city for lack of five ?

Genesit viii. 28.

A land wherein thou shall eat bread without scarceness ; thou shall not lack any thing in it.

!>• in . viii 9.

There was nothing lacking to them ; David reco-tered all. 1 Sam. xxx. 19.

Thai which was lacking on your parl, they have supplied. 1 Cor. xvi. 17.

The lions do lack and suffer hunger.

Common Prayer.

No saphire of Inde, no rube riche of price, There lacked then, nor emeraude so greene Balis Turkis, ne thing to my devise That may the castel makin to shene. Chaucer.

Wherefore cease of such cruelty, And take me wholly in your grace, Which lacketh will to change his place.

Wyalt.

Every good and holy desire, though it lack the form, hath notwithstanding in itself the substance, and with him the force of prayer who regardeth the very meanings, groans, and sighs of the heart.

Hooker.

He was not able lo keep that place three days, for lack of victuals. Knˆtles.

Many that are not mad Have sure more lack of reason .

Shalupeare.

What a lackbrain is this ! Our plot is as good a plot as ever was laid. Id. Henry IV.

You poor, base, rascally, cheating, lacklinen mate ; away, you mouldy rogue, away. Id.

And then he drew a dial from his poke, And, looking on it with lacklustre eye, Says very wisely, iv is ten o'clock.

Shakspeare. Intreat they may ; authority they lack.

Daniel.

The trenchant blade, Toledo trusty, For want of fighling was grown rusty, And cat into itself for lack Of somebody to hew and hack. Hwlibras. And once so near me he alit I could have smote, but lacked the strength.

Byron.

A LACK OF RUPEES is 100,000 rupees ; which, supposing them siccas, or standard, at 2s. 6d. each, amount to £12,500 sterling. Sec RUPEE.

LACKER, or LAC'QUER, n. .?. & v. a. From LAC, which see. A kind of varnish : to varnish or cover with lacquer.

What shook the stage, and made the people stare 1 Cato's long wig, flowered gown, and lackered chair.

Po] > e.

In forming a true judgment of yourself -then, you must entirely set aside the consideration of your estate and family, — your wit, beauty, genius, health, &c., which are all but the appendages or trappings of a man : a smooth and shining varnish, which may lacker over the basest metal. Mason.

Where it is desired to have the lacquer warmer or redder than this composition, the proportion of an-uotto must he increased. Imison's Elements.

LACKERS, or LACQUEKS, are varnishes applied upon tin, brass, and other metals, to preserve them from tarnishing, and to improve their co-lor. The basis of lackers is a solution of the resinous substance called seed-lac in spirit of wine. See LAC. The spirit ought to be very much dephlegmated, to dissolve much of the lac. For this purpose some authors direct dry potash to be thrown into the spirit. This alkali attracts the water, with which it forms a liquid that subsides distinctly from the spirit at the bottom of the vessel. From this liquid the spirit may be separated by decantation. The spirit is thus greatly

dephlegmated, but becomes impregnated with part of the alkali, which de-praves its color, and communicates a property to the lacker of imbibing moisture from the air. These inconveniences may be prevented by distilling the spirit ; or, if the artist has not an opportunity of performing that process, he may cleanse the spirit in a great measure from the alkali by adding to it some calcined alum ; the acid of which, uniting with the alkali remaining in the spirit, forms with it a vitriolated tartar, which, not being soluble in spirit of wine, falls to the bottom, together with the earth of the decomposed alum. To a pint of the dephlegmated and purified spirit about three ounces of powdered shell-lac are to be added ; and the mixture to be digested during the same day with a moderate heat. The liquor ought then to be poured off, strained, and cleared by settling. This clear liquor is now fit to receive the required color from certain resinous coloring substances, the principal of which are gamboge and annotto ; the former of which gives a yellow, and the latter an orange color. To give a golden color, two parts of gamboge are added to one of annotto ; but these coloring substances may be separately dissolved in the tincture of lac, and the color required may be adjusted by mixing the two solutions in different proportions. When silver leaf or tin is to be lackered, a larger quantity of the coloring materials is requisite than when the lacker is intended to be laid on brass.

LAC'KEY, n. «., v. a. & v.n. Goth, lacka, to hire; Dan. and Swed. lacker ; Fr. laquait. A servant ; a footboy or man : to attend upon in service, or personally ; to act as a lackey or footman.

Oft have I servants seen on horses ride, The free and noble lacquey by their side. Sandys.

They would shame to make me Wait else at door ; a fellow counsellor, 'Mong boys and grooms, and lackeys !

Shakspeare. Henry VIII. This common body,

Like to a vagabond flag upon the stream, Goes to, and back, lacqueying the varying tide, To rot ilself with motion.

III. Antony and Cleopatra. So dear to heaven is saintly chastity, That, when a soul is found sincerely so, A thousand liveried angels lackey her, Driving far off each thing of sin and guilt.

Mil tan

Though his youthful blood be fired with wine. He's cautious to avoid the coach and six, And on the luckfys will 110 quarrel fix.

Dryden’i Juvenal

Our Italian translator of the .Eneis is a foot poet ; he lackey* by the side of Virgil, but never mounts behind him. Drydeii.

JMcuueiis were never so saucy and pragmatical as they are now-a-days. Addisoii. Spectator.

Words are but lackeys to sense, and will dance attendance without wages or compulsion. Swijt.

LACOMBE (James), a French historian born in Paris, in 1724. He published several useful abridgments of histories; but his best work is Histoire de Christine Reine de Suede : 12mo. 1762.

LACOMBE DE PREZEL (Honorius), brother to James, was born in Paris in 1725. He published, 1. Dictionnaire du Citoyen, 2 vols. 8vo. 1761: 2. Dictionnaire de Jurisprudence, 3 vols. 8vo. 1763 : 3. Les Pensees de Pope, avec sa vie, I2mo. 1766 : 4. Dictionnaire de Portraits et d’ Anecdotes des Hommes Celebres, 2 vols. 8vo.

LACONIA, or LACONICA, a country in the south of Peloponnesus, having Argos and Arcadia on the north, Messenia on the west, the Mediterranean on the south, and the bay of Argos on the east. Its extent from north to south was about fifty -miles. It was watered by the Eurotas. The capital was called Sparta, or Lacedaemon. See LACEDJEMCN and SPARTA. The brevity with which the Laconians always expressed themselves became proverbial.

LACON’IC, or -\ Fr. laconique ; Lat

LACON’ICK, adj. f laconicus ; Gr. XaKwvia—

LAC’ONISM, n. s. 4 /toe, a short pithy speech,

LACONICALLY, adv. ‘ after the manner of the Lacedaemonians. Short; brief; sententious : laconism, a short concise speech or style of speaking or writing.

Alexander Nequam, a man of great learning, and desirous to enter into religion there, writ to the abbot laconically. Camden’s Remains.

As the language of the face is universal, so it is very comprehensive : no laconism can reach it. It is the short hand of the mind, and crowds a great deal in a little room. Collier of the Aspect.

1 grow laconick even beyond laconicism ; for sometimes I return only yes, or no, to questionary or petitionary epistles of half a yard long.

Pope to Swift.

LACTANTIUS FIRMIANIJS (Lucius Ccelius), a celebrated author in the beginning of the fourth century. According to Baronius, he was an African ; but others say he was born at Fenno in Ancona, whence he was called Firmianus. He studied rhetoric under Arnobius; and was afterwards a professor of that science in Africa and Nicomedia, where he was so admired that the emperor Constantine appointed him preceptor to his son Crispus Caesar. His works are written in elegant Latin. The principal are, 1. De ir& Divina. 2. De Operibus Dei, in which he treats of creation and providence. 3. Divine Institutions, in seven books. This is his principal work, in which he defends the truth of Christianity, refutes the objections that had been raised against it, and with great strength attacks the illusions of paganism. His style is pure, clear, and natural, and his expressions noble and elegant, on which account he has been called tlie Cicero of the Christians There is also attributed to him a treatise De Morte Persecuto-rum ; but several critics doubt its being written by Lactant.u.s. The best edition of his works is that of Paris in 1 748, 2 rols. 4to.

LAC’TARY, adj. & n. s.] Latin lactareus,

LACTA’TJON, I relating to milk;

LAC’TEAL, adj. & n. s. I lactariurn, a milk

LAC*TEOUS, adj. Chouse or place.

LACTESCENCE, n. s. Milky; juicy: lac—

LAC’TESCENT, adj. I tary, a milk house,

LACTIF’EROUS, adj. J or dairy: lacteal, a vessel containing or conveying chyle : lacteous, milky or conveying chyle : lactescence, tendency to milkiness, in appearance or reality : lactescent, producing milk or milky juice : lactiferous, producing or conveying milk.

From lactary, or milky plants, which have awhile and lacteous juice dispersed through every part, there arise flowers blue and yellow.

Browne’s Vulgar Erroum.

Though we leave out the lacteous circle, yet are there more by four than Philo mentions. Id.

This lactescence does commonly ensue, when wine, being impregnated with gums, or other vegetable concretions that abound with sulphureous corpuscles, fair water is suddenly poured upon the solution. Boyle on Colours.

As the food passes, the chyle, which is the nutritive part, is separated from the excrementitious by the lacteal veins ; and from thence conveyed into the blood. Locke.

He makes the breasts to be nothing but glandules, made up of an infinite number of little knots, each whereof hath its excretory vessel, or lactiferous duct. Rail on the Creation.

The mouths of the lacteals may permit aliment, acrimonious or not sufficiently attenuated, to enter in people of lax constitutions, whereas their sphincters will shut against them in such as have strong fibres. Arbuthnot.

Amongst the pot-herbs are some lactescent plants, as lettuce and endive, which contain a wholesome juice. Id.

The lungs are suitable for respiration, and the lacteous vessels for the reception of the chyle.

Bentley.

LACTEALS. See ANATOMY.

LACTIC ACID, in chemistry (acidum lacticum), from Lat. lac, milk. By evaporating sour whey to one-eighth, filtering, precipitating with lime-water, and separating the lime by oxalic acid, Scheele obtained

an aqueous solution of what he supposed to be a peculiar acid, which has accordingly been termed the lactic. To procure it separate, he evaporated the solution to the consistence of honey, poured on it alcohol, filtered this solution, and evaporated the alcohol. The residuum was an a'cid of a yellow color, incapable of being crystallised, attracting the humidity of the air, and forming deliquescent salts with the earths and alkalies.

Bouillon Lagrange afterward examined it more narrowly ; and from a series of experiments concluded, that it consisted of acetic acid, muriate of potassa, a small portion of iron probably dissolved in the acetic acid, and an animal matter. This judgment of Lagrange was afterwards supported by the opinions of Fourcroy and Vauquelin. But Berzelius has since investigated its nature very fully, and has obtained, by means of long and repeated series of differeritexperiments,acom-plcte conviction that the lactic acid is a peculiar

acid, very distinct from all others. It has, when purifi°d, a brown-yellow color, and a sharp sour taste, which is much weakened by diluting it with water. It is without smell in the cold, but emits, when heated, a sharp sour smell, not un-like that of sublimed oxalic acid. It cannot be made to crystallise, and does not exhibit the slightest appearance of a saline substance, but dries into a thick and smooth varnish, which slowly attracts moisture from the air. It is very easily soluble in alcohol. Heated in a gold spoon, over the flame of a candle, it first boils, and then its pungent acid smell becomes very manifest, but extremely distinct from that of the acetic acid ; afterwards it is charred, and has an empyreumatic, but by no means an animal smell. A porous charcoal is left behind, which does not readily burn to ashes. When distilled, it gives an empyreumatic oil, water, empyreumatic vinegar, carbonic acid, and inflammable gases. With alkalies, earths, and metallic oxides, it affords peculiar salts : and these are

distinguished by being soluble in alcohol, and in general by not having the least disposition to crystallise, but drying into a mass-like gum, which slowly becomes moist in the air.

LACTIFEROUS, and LACTESCENT, are appellations given to plants abounding with a milky juice, as the sow-thistle, &c. It is applied to all those plants which abound with a thick-colored juice, without regarding whether it is white or not. Most lactiferous plants are poisonous, ex-cept those with compound flowers, which are generally innocent. Of the poisonous lactescent plants, the most remarkable are sumach, agaric, maple, burning thorny plant, cassada, celandine, puccoon, prickly poppy, and the plants of the natural order contorts, as swallow-wort, apocy-num, cynanchum, and cerbera Among the lactescent plants with compound flowers that are innocent, m;iy be ment.oned dandelion, picris, hyoseris, wild lettuce, gum-succory, hawk-weed, bastard hawk-weed, hypochaeris, goat's beard, and most species of lettuce.

LACTUCA, in botany, a genus of the polygamia aequalis order, and syngenesia class of plants : natural order forty-ninth, compositae : receptacle naked : CAT,, imbricated, cylindrical, with a membranaceous margin : the pappus simple, stipated, or stalked. There are several species, most of which are of no use, and never cultivated but in botanic gardens for variety. Those commonly cultivated in the kitchengarden for use, are, 1. The common or garden lettt^. 2. Cabbage lettuce. 3. Silesia lettuce. 4. Dutch brown lettuce. 5. Aleppo lettuce. 6. Imperial lettuce. 7. Green capuchin lettuce. 8. Versailles or upright white cos lettuce. 9. Black cos. 10. Red cos. It. Red capuchin lettuce. 12. Roman lettuce. 13. Prince lettuce. 14. Royal lettuce. 15. Egyptian cos lettuce. The first sort is very common in gardens, and is sown for cutting very young, to mix with other salads in spring. The second is the same, only improve?! by culture. It may be sown in all seasons, but in the hot months requires shady borders. To have it in continuation, the first crop should be sown in February in an open situation ; the others at three weeks distance; the later ones under covert, but not

under the drippings of trees. The Silesia, imperial, royal, black, white, and upright cos lettuces, may be first sown in the end of February or beginning of March, on a warm light soil, and in an open situation ; when they come up they must be thinned to fifteen inches distance every way, they will then require no further care than to be kept clear of weeds. The black cos, as it grows large, should have its leaves tied

together to whiten the inner part. Succeeding crops of these should be sown in April, May, and June ; and toward the end of August, for a winter crop, should be preserved under glasses, or in a bed arched with hoops and covered with mats. The most valuable of all the English lettuces ar» the white cos, or the Versailles, the Silesia, and the black cos. The brown Dutch and the green capuchin are very hardy, and may be sown Jate under walls, where they will stand the winter, and be valuable when no others are to be had. The red capuchin, Roman, and prince lettuces, are very early, and are sown for variety ; as are also the Aleppo ones for their beauty. The several sorts of garden lettuces are very wholesome, emollient, cooling salads, easy of digestion, and somewhat laxative. Most writers suppose that they have a narcotic quality ; and, indeed in many cases they contribute to procure rest, by abating heat, and relaxing the fibres.

L. virosa, the strong-scented wild lettuce, which is indigenous in Britain, and grows in some places in considerable abundance, differs very essentially in its qualities from the garden lettuce. It smells strongly of opium, and resembles it in some of its effects : and its narcotic power, like that of the poppy, resides in its milky juice. An extract from the expressed juice is recommended in small doses in dropsy. In dropsies of long standing, proceeding from visceral obstructions, it has been given to the extent of half an ounce a-day. It is said to agree with the stomach, to quench thirst, to be gently laxative, powerfully diuretic, and somewhat diaphoretic.

LACYDAS, or LACYDES, a Greek philosopher, born at Cyrene, who was the disciple of Arcesilaus, and his successor in the academy. He taught in a garden given him by Attalus, king of Pergamus ; but, on that prince sending for him to court, he replied, ‘ That the pictures of kings should be viewed at a distance. He had a goose which followed him every where by night as well as by day ; and when she died he made a magnificent funeral for her! He died A. A. C. 212.

LAD, Sax. leode; Goth, laud; Teut. laed. A boy; youth; stripling; an unmarried man. The Swed. ledig signifies single; unmarried; as the corresponding word lass, in our language, is from the Sax. lesan ; Teut. lassen, to loose.

For grief whereof the lad would after joy, But pined away in anguish, and self-willed annoy.

Spenser. We were

Two lads, that thought there was no more behind. But such a day to-

morrow as to-day, And to be boy eternal. Shakspeare. Winter's Tale.

The shepherd lad,

Whose offspring on the throne of Judah sat So many ages. Miltnn.

The poor lad who wants knowledge must set his invention on the rack, to say something where he knows nothing. Locke.

Too far from the ancient forms of teaching several good grammarians have departed, to the great detriment of such tads as have been removed to other schools. \'titu.

Enough, enough my little lad ! Such tears become thine eye ;

If I thy paileles; bosom had, Mine own would not be dry. Byron.

LAD'DER, Sax. hlat>rie ; Teut. letter, a leaden or leiten, to lead up. — Minsheu. Goth, leid, led, away. — Thomson. A set of steps framed together for climbing; any instrument for climbing or ascending.

Whose compost is rotten, and carried in time, And spread as it should be, thrift's ladder may climb. Tusser.

I must climb her window, The (adder made of cords. tihtikspeare.

Northumberland, thou ladder, by the which My cousin Bolingbroke ascends my throne. Id.

Lowliness is young ambition's ladder, Whereto the climber upward turns his face. Id.

Your hearts make ladders of your eyes, In show to climb to heaven,

when your devotion Walks upon crutches. Massinger.

Then took she help to her of a servant near about her husband, whom she knew to be of a hasty ambition ; and such a one, who, wanting true sufficiency to raise him, would make a ladder of any mischief.

Sidney.

Now streets grow thronged, and busy as by day, Some run for buckets to the hallowed quire ;

Some cut the pipes, and some the engines play, Ana some, more bold, mount ladders to the fire.

Dry den.

The worst of it is, our modern fortune-hunters are those who turn their heads that way, because they are good for nothing else. If a young fellow finds he can make nothing of Coke and Littleton, he provides himself with a ladder of ropes, and by that means very often enters upon the premises. Hughes.

Easy in words thy stile, in sense sublime ; 'Tis like the ladder in the patriarch's dream, Its foot on earth, its height above the skies.

Prior.

I saw a stage erected about a foot and a half from the ground, capable of holding four of the inhabitants, with two or three ladders to mount it.

Gulliver's Travels.

Endowed with all these accomplishments, we leave him in the full career of success, mounting fast towards the top of the ladder ecclesiastical, which he hath a fair probability to reach. Swift.

Hearken to the armour's clank ! Look down o'er each frowning warrior, How he glares upon the barrier : Look on each step of each ladder, As the stripes that streak an adder. Byron. LADDERS, SCALING, in the military art, are used in scaling, when a place is to be taken by surprise. They are made several ways. In England generally of flat staves, so that they may move about their pins, and shut like a parallel ruler, for convenience of carriage. The French make them of several pieces, so as to be joined together, and to be made of any necessary length : sometimes they are made with single ropes, knotted

at proper distances, with iron hooks at each end ; one to fasten them upon the wall above, and the other in the ground ; and sometimes they are made with two ropes, and stav« between them, to keep the ropes at a proper distance. When they are used in scaling walls, they ought to be rather too long than too short, and to be given in charge only to the stoutest of the detachrnent. The soldiers should carry them with the lett arm passed through the second step, taking care to hold them upright close to their sides, and very short below to prevent any accident in leaping into the ditch. The first rank of each division, provided with ladders, should set out with the rest at the signal, marching resolutely with their firelocks slung, to jump into the ditch ; when they arrive, they should apply their ladders against the parapet, observing to place them towards the salient angles rather than the middle of the curtain, because the enemy have less force there. The ladders must be placed within a foot of each other, without too much or too little slope, that they may not be overturned or broken by the weight of the soldiers mounting upon them. The ladders be-ing applied, those who have carried them, and those who follow, should mount up, and rush upon the enemy sword in hand : if he who goes first happens to be overturned, the next should take care not to be thrown down by his com-rade ; but immediately mount himself, so as not to give the enemy time to load. As the soldiers who mount first may be easily tumbled over, and their fall may cause the attack to fail, their breasts should be protected by the fore parts of cuirasses ; for, if they can penetrate, the rest may easily follow. The success of an esca-lade is infallible, if they mount the four sides at once, and shower a number of grenades amongst the enemy, especially when supported by some grenadiers and picquets, who share the enemy's fire.

The late ingenious general Sir William Con, greve, of the royal artillery, very much improved upon the construction of these ladders. As the heights of different works vary, and the ladders when too long afford purchase to the besieged, he contrived a set of ladders having an iron staple at the lower part of each stem, so that if one, two, or three, should be found insufficient to reach the top of the work, another may with facility be joined to the lowest, and that be pushed up until a sufficient length can be obtained.

LADE, n.s.8f,v.a.-\ Saxon lai>e, hlat>an,

LA'DING, n. s. I hla'sle; Teut. Ityde , laden.

LA'DLE, £ See LOAD. To throw out

LA'PLE-FUL. * a fluid ; hence to freight,

load, burden: lading is a weight or burden:

ladle, a spoon or instrument for throwing out or

conducting liquid

And they laded their asses with corn, and departed thence. Gen. xlii. 26

Every tre well fro his fellow grew, With braunchis brode ladin with lev-is new, That sprongin out agen the sonne shene, Some very rede, and some a glad light grene.

Chtmcer. Some stirred the molten ore with ladle* great.

Spenser.

He chides the sea that sunders him from them. Saying, he'll lade it dry to have his way.

Shakspeare.

The experiment which showeth the weights of several bodies in comparison with water, is of use in lulling of ships, and shewing what burthen they will bear. Bacon.

Some we made prize, while others, burnt and rent, With their rich lading to the bottom went.

Waller.

When the materials of glass have been kept long in fusion, the mixture casts up the superfluous salt, which the workmen take off with ladles.

Boyle.

They never let blood ; but say, if the pot boils too fast, there is no need of lading out any of the water, but only of taking away the fire ; and so they allay nil heats of the blood by abstinence, and cooling herbs. Temple.

The vessels, heavy laaen, put to sea With prosperous winds; a woman leads the way.

Dry den.

It happened to be foul weather, so that the mariners cast their whole ladiny overboard, to save themselves. L'Estrange.

Though the peripatetick doctrine does not satisfy, yet it is as easy to account for the difficulties he charges on it, as for those his own hypothesis is laden with. Locke.

If there be springs in the slate marl, there must be help to lade or pump it out. Mortimer.

The storm grows higher and higher, and threatens the utter loss of the ship : there is but one way to save it, which is, by throwing its rich lading overboard. South.

A ladle for our silver dish Is what 1 want, is what I wish. Prior.

Why should he sink where nothing seemed to

press 1 His Jading little, and his ballast less. Swift.

If a footman be going up with a dish of soup, let the cook with a ladle-ful dribble his livery all the way up stairs. Id.

Lade is the mouth of a river, and is derived from the Saxon la"t>e, which signifies a purging or discharging ; there being a discharge of the waters into the sea, or into some great river. Gibson's Camden.

Melt them in an iron ladle, and pour them, when melted, into water lukewarm. Imismi't Elements.

LADENBURO, a town of Germany, in the palatinate of the Rhine, seated on the Neckar, on the east bank of the Rhine, six miles east of Manbeim, and forty south-east of Mentz. It belongs to the elector palatine. Long. 8° 42' E., lat. 49° 27' N.

LADOGA, the largest lake in Europe, is situated opposite the gulf of Finland, and is surrounded by the Russian governments of Petersburgh, Viburg, and Olonetz. Its length is about 130 miles, its breadth seventy-five, and its whole extent equal to 6200 square miles, or to about one-eighth part of England. It abounds in fish, particularly salmon. Its shores are flat : and the numerous shoals it contains, and the frequent storms by which it is agitated, so impede its navigation, that a canal has been cut along its southern shore. Ladoga receives several rivers, but the river Neva is its only outlet.

The LAD RONE, or MARIAN ISLANDS, are a cluster of islands in the North Pacific Ocean, in about 145° to 148° long. E., and between 13° and 21° lat. N. They were first discovered by Magellan, who gave them the name of Ladrone Islands, or the Islands of Thieves, from the dishonest disposition of the inhabitants. Towards the latter end of the seventeenth century they

obtained the name of the Mariana Islands, from the queen of Spain, who sent missionaries hither to propagate the Christian faith. They are situated north of the Carolines, and are fifteen or sixteen in number, extending through a space of about 450 miles from north to south. The principal islands are : Guam or St. John, the largest, Zarpane or Rota, Aguignan or St. Ann, Tinian, Saypan or St. Joseph, Anatachan or St. Joachim, Sarigan or St. Charles, Guguam or St. Philip, Amalagan or Conception Isle, Pagon or St. Ignatius, Agrigan or St. Xavier, Assonsong or Assumption Island, and Urac, a desert isle. The coasts are composed of a dark-colored rock, and their general aspect was, by the early navigators, represented as highly beautiful and picturesque, the mountains being clad witli forests, and the soil exhibiting the utmost fertility. Later voyagers, however, have not confirmed this account : but they agree in representing the climate as very temperate for the latitude.

When these islands were discovered, the natives, it is said, were totally unacquainted with any country besides their own ; and, having no account of their own origin, supposed that the authoi of their race was formed of a piece of the rock of Funa, one of their smallest islands. They had no animals, it is added, but one species of birds, resembling turtle doves, which they never killed, but only tamed them, and taught them to imitate articulate sounds. They were much astonished on seeing a horse which a Spanish captain left among them in 1673. But what is most incredible is, that they were utterly unacquainted with fire till Magellan, provoked by their repeated

thefts, burned one of their villages. When they saw their wooden houses blazing, they thought that the fire was a beast which fed upon the wood.

The largest of these islands is GUAM, which see. Here Anson landed in 1742, when his crew were debilitated by disease, and they be-came much refreshed. The author of his Voyages has contributed, therefore, in no small degree to impress the public with a favorable opinion of the island and its inhabitants. Cotton and indigo trees abound in all the islands; and most of the fruits of the tropics : wild hogs, remarkably fierce when attacked, are also met with in considerable herds, particularly in the island of Saypan. The fish of the coasts have been represented as remarkably unwholesome. Mosquitoes and other annoying insects are numerous.

The islanders of the group are olive-colored, but not of such a deep dye as those of the Philippines ; their stature is good, and their limbs well proportioned. Though their food consists entirely of fish, fruits, and roots, yet they are so fat, that to strangers they appear swelled. They often live to 100 years or more, yet retain the health and vigor of men of fifty* The men go quite naked, bat the females are partially covered. They admire black teeth and white hair. Hence one of their principal occupations is to keep their teeth black by the help of herbs, and to whiten their hair by sprinkling upon it a certain water. The women have thtrr hair very long ; but the men generally shave i

close, except a single lock on the crown of the head, after the Japanese manner. Their language is agreeable to the ear, having a soft and easy pronunciation.

LA DRONES is also the name of a small cluster of isles in the gulf of Sa, at the southern extremity of China. They are about ten in number, and, together with the Lema Islands, form a semicircular chain before the gulf The Great Ladrone, or Tyman-Shan, is distinguished, as its nan.e denotes, by an elevated domed summit that is seen ten leagues. The Ass’s Ears, or Keam-Cheum-Mee, another of them, has its name from two remarkable peaks rising from the same base almost perpendicularly from the sea, and surrounded by rocky islets.

The inhabitants are acute and lively in their disposition, and very audacious thieves. The groupe is a nursery of pirates, who are very

able seamen. They have vessels which would sail twenty miles in an hour. Sometimes they mount ten to twelve carriage-guns. Depredations are chiefly on the Chinese trading junks, the European vessels frequenting these seas being generally too strong for them. A Chinese squadron of war junks often cruises here; but every precaution seems taken to avoid a rencounter ; and for this purpose the war-junks are said on their part to beat their gongs night and day.

The Ladrone pirates have sometimes carried Iheir depredations to the mouth of the Canton River. In 1805 they had conquered the whole of Hainan, and the southern part of the island of Formosa. They seem not to have any regular form of government : and hostilities are frequent between the inhabitants of different islands and districts. Their religion consists in the belief of an evil spirit whom they endeavour to appease by various ceremonies.

LADVOCAT (John Baptist), an ingenious French lexicographer, who was a professor and librarian in the Sorbonne. He published, 1. Dictionuaire Geographique portatif, 8voˆ under the fictitious name of Volgien, and pretended it to be a translation from the English. 2. Dictionnaire Ilistorique portatif, 2 vols. 8vo. 3. A Hebrew Grammar, 8vo, 1744. He died in

LA’DY, n. s. ~) Sax. hlaepbij, from leof,

LA’DY-BI RD, high, or eminent, and bia,

LA’DY-DAY, a female. A woman of rank

LA’DY-FLY, or respectability ; a title of

LA’DYLIKE, adj.)>the wives of knights, and

LA’DY-MANTLE n.s. all degrees above them:

LA’DYSHIP, lady-bird, and lady-fly,

LA’DY’S-SLIPPER, are names of an insect:

LA’DY’S-SMOCK, J lady-day is the day of the

annunciation of the Blessed Virgin : lady-mantle,

lady’s-slipper, and lady’s-smock, are plants :

ladylike, elegant; delicate; becoming a lady:

ladyship, the title of a lady.

Ah, Ladie, sayd he, shame were to revoke The forward footing for an hideous shade Vertue gives herself light through darknesse for to

wade. Spenser. Faerie Queene.

O foolish fairy’s son, what fury mad I lath thee incensed to haste thy doleful fate? Were it not better I that lady had, Than that thou hadst repented it too late?

Spenser.

LAD

A lady

So fair, and fastened to an empery, Would make the greatest king double.

Shakspeare.

I am much afraid, my lady, his mother played false with a smith. Id.

I would thy husband were dead ; I would make thee my lady. — I your lady, Sir John ! alas, 1 should be a -jitilul lady.

Shakspeare. Merry Wives of Windsor. When dazies pied, and violets blue, And lady't-moaet all silver-white, Do paint the meadows much bedight.

Skahspeare. Say, good Caesar,

That I some lady trifles have reserved, Immoment toys, things of such dignity As we greet modem friends withal.

Id. Antony and Cleopatra. Of all these bounds, even from this line to this, With shadowy forests, and with champaigns riched. With plenteous rivers, and wide-skirted meads, We make thee lady. Id. King Lear.

Madam, he sends your ladyship this ring.

Shakspeare.

Before Ilorner's time this great lady was scarce heard of. Raleigh.

If they be nothing hut mere statesmen, Your ladyship shall observe their gravity, And their reservedness, their many cautions, iitting their persons. Ben Jonson's Catiline.

Plutarch says, Telesilla, a noble lady, being dangerously sick, was advised to apply her mind to poetry. Peacham.

I am sorry my relation to so deserving a lady should be any occasion of her danger and affliction.

King Charles.

In vaine shee wishth long Alchmaena's night, Cursing the hasty dawning of the light ; And, with her cruell /urfie-starre uprose, She seeks her third roust on her silent toes.

Bp. Hall'i Satire*.

See here a boy gathering lilies and lady-inmrh, and there a girl cropping culverkeys and cowslip*, all to make garlands. Walton't Angler.

May every lady an Evadne prove, That shall divert me from Aspasia's love.

Wall*.

I the wronged pen to please, Make it my humble thanks express Unto your ladyship in these. Id.

The ladies will make a numerous party against him, for being false to love in forsaking Dido.

Dry den.

Should I shun the dangers of the war, With scorn the Trojans would reward my pains, And their proud ladies with their sweeping trains.

Id,

Her tender constitution did declare, Too ladylike a long fatigue to bear. Id.

'Tis Galla; let her ladyship hut peep.

Id. Jnnenal.

I hope I may speak of women without offence to the ladies. Guardian.

Fly lady-bird, north, south, or east or west, Fly where the man is found tbat I love best. G«.y.

This lady-Jiy I take from off the grass, Whose spotted back might scarlet red surpass.

Id.

We find on medals the representations of ladies, that have given occasion to whole volumes on the account only of a face. Addison on Ancient Medals.

Her summoning handmaids bore Their lady to her couch with gushing eyes.

fij/7'OU.

L7EL1US (Caius), surnamed Sapiens, a Ro-man consul and orator, who distinguished himself in Spain in the war against Viriathus. He is highly praised by Cicero, who gives an admirable description of the intimate friendship which subsisted between Lalius and Scipio Africanus the Younger. His eloquence, his modesty, and his abilities, acquired him a great reputation : and he is said to have assisted Terence in his comedies. He died about 126 B. C.

LJENA, in antiquity, a gown worn by the Ro-man augurs, and peculiar to their office. With this gown they covered their heads when they made their observations on birds, &c. See AUGUR.

LAERTES, in fabulous history, king of Ithaca, the son of Arcesius and Chalcomedusa, and father of Ulysses. Apollodorus says he was one of the Argonauts.

L7ESTRYGONES, in fabulous history, the most ancient inhabitants of Sicily. Some suj>- pose them to be the same as the people of Leon-tium, and to have been neighbours to the Cyclops. They fed on human flesh ; and, when Ulysses came on their coasts, they sunk his ships, and devoured his companions. They were of a gigantic stature, according to Homer. A co-lony of them, as some suppose, passed over into Italy with Lamus at their head, where they built the town of Formiae; whence the epithet of Laestrygonia is often used for that of For-miana.

LAET (John De), a writer in the seventeenth century, born at Antwerp. He was director of the West India Company, and acquired great skill in philology, history, and geography. He wrote, 1. A Description of the East Indies, in French; 2. Novus Orbis, Leyden, 1633, fol.; 3. De Hispanix Regibus et Opibus; 4. Respub-lica Belgarum; 5. Gallia; 6. Turcici imperii Status; 7. Persici imperii Status; and other works. He died in 1749.

LAETIA, in botany, a genus of the monogynia order, and polyandria class of plants : COR. pentapetalous, or none : CAL. pentaphyllous; the

fruit unilocular and trigonal : SEEDS have a pulpy arillus or coat. There are four species, all natives of America. L. apetala, the gum wood, Dr. Wright informs us, is very common in the woodlands and copses of Jamaica, where it rises to a considerable height and thickness. The trunks are smooth and white ; the leaves are three inches long, a little serrated, and somewhat hairy. The stamina are yellow, without petals : the fruit is as large as a plum; and, when ripe, opens and shows a number of small seeds in a reddish pulp. Pieces of the trunk or branches, suspended in the heat of the sun, discharge a clear turpentine or balsam, which concretes into a white resin, and which seems to be the same as gum sandarach.

LjEVINUS TORRENTINUS, called also Van-der Bekin, or Torrentin, a native of Ghent, educated at the university of Louvain. He afterwards made the tour of Italy, where he obtained the friendship of the most illustrious personages of his age. On his return to the Low Countries lie was made canon of Liege, and vicar-general to Ernest de Baviere, bishop of that see. Having

executed a successful embassy to Philip II. of Spain, he was rewarded with the bishopric of Antwerp ; whence he was translated to the metropolitan church of Mechlin, where he died in 1595. He founded a college of Jesuits at Louvain, to which he left his library, medals, and curiosities.

LjEVIUS, a Latin poet, who is supposed to have lived before the time of Cicero. He wrote a poem entitled Erotopagnia, i. e. love games. Aulus Gellius and Apuleius quote it. Laevius also composed a poem entitled The Centaurs, which Festus quotes under the title of Petrarum.

LA FERTE IMBAULT (M. Theresa Geoffrin, marchioness de) was the daughter of madame Geoffrin, and born at Paris in 1715. She married, in 1733, the marquis de la Ferte, great grandson of marshal Ferte. The marchioness de la Ferte drew up a series of extracts from the writings of the Pagan and Christian philosophers, for the instruction of the grandchildren of Louis XV.; and was grand mistress of the LANTREREBUS, which see. She distinguished herself by her able opposition to the philosophical French literati of the last century, with whom her mother had been connected. She died at Paris in 1791.

LAFITAU, a French Jesuit, who was a missionary in America. He wrote Moeurs des Sau-vages Americains, comparers aux Moeurs des premiers Temps, Paris, 1723, 2 vols. 4to. He died about 1775.

LAFITE (Mary Elizabeth de), a French lady, born at Paris about 1750, and who died in Lon-don in 1794, published Reponses aDemeler, ou Essai d'une Maniere d'exercer 1'Attention, Lausanne, 1791, 12mo.; Entretiens, Drames, et Contes Moraux a 1'Usage des Enfans, 2 vols. 12mo., dedicated to the queen, and several times reprinted. She also translated into French various works of Wieland, Gellert, and Lavater.

LAG, v. n., adj. & n. 1. 1 M. Goth, laggun ;

LAG'GER, n.».) Sax.latijan. Tosiay

behind; move tardily; loiter: as an adjective, coming behind ; sluggish ; slow ; deficient ; last : as a substantive, the fag end ; the lowest class ; he who comes last : lagger, an idler, a loiterer.

Behind her far away a dwarf did lag.

Faerie Queene. I could be well content To entertain the lag end of my life With quiet hours. Shakspeare. Henry IV.

He, poor man, by your first order died, And that a winged Mercury did bear ; Some tardy cripple had the countermand, That came too lag to see him buried.

Id. Richard 111.

The rest of your foes, O gods, the senators 01 Athens, together with the common lag of people, what is amiss in them, make suitable for destruction

Shakspeart.

The slowest footed who come lag, supply the show of a reward. Carew't Survey.

I shall not lag behind, nor err The way, thou leading. Milton.

The knight himself did after ride, Leading Crowdero by bis side, And towed him, if he lagged behind, Like boat against the tide and wind,

-' I '

We know your thoughts of us, that laymen are Lag souls, and rubbish of remaining clay, Which Heaven, grown weary of more perfect work, Set upright with a little puft' of breath, And bid us pass for men. Dri/ den's Don Sebastian.

She passed, with fear and fury wild ; The nurse went lagging after with the child.

Dry den.

If he finds a fairy lag in light, He drives the wretch before, and lashes into night.

Id.

The last, the lag of all the race. Id. Virgil. What makes my ram the lag of all the flock? Pope.

The remnant of his days he safely past, Nor found they lagged too slow, nor flowed too fast.

Prior.

She hourly pressed for something new ; Ideas came into her mind

So fast, his lessons lagged behind. Swift.

LAGAN, or LAGOM (from Sax. legan, to lie), in sea laws, shipwrecked goods, left on the sand, or ashore : or goods cast overboard by seamen in danger of shipwreck.

LAGEMAN (lagammannus), homo habens legem, or homo legalis seu legitimus, such as we call now good men of the jury. The word is often used in Domesday Book, and the Laws of Edward the Confessor, c. 38.

LAGEN, LAGENA, in antiquity, a measure of wine, containing six sextarii : whence some derive the word flagon. The lieutenant of the tower has the privilege to take unam lagenam vini ante malum et retro, of all wine ships that come upon the Thames ; and Sir Peter Leicester, in his Antiquities of Cheshire, interprets lagena vini a bottle of wine.

LAGESTROEMIA, in botany, a genus of the monogynia order and polyandria class of plants : COR. hexapetalous, and curled : CAL. sexfid, and campanulated ; there are many stamina, and of these the six exterior ones are thicker than the rest, and longer than the petals. Species five, natives of the East Indies.

LAGO MAGGIORA, a lake of Italy. See MAGGIORA.

LAGO NEGRO. See NEGRO. LAGOON ISLAND, an island in the South Sea, of an oval form, with a lake in the middle, which occupies the greatest part of it. It abounds with trees. The natives are tall, cop-per-colored, and have long black hair. Their weapons are poles or spikes twice as long as themselves. Their habitations are under clumps of palm trees, which form very beautiful groves. This island was discovered by captain Cook in April 1769. Within a mile no bottom could be found with 130 fathoms of line, and no anchorage appeared to be near. Long. 139° 28’ W., lat. 18° 47’ S.

LAGOS, an ancient seaport town of Portugal, in the province of Algarva, with a castle near the sea, and a harbour having good anchorage, but open to the south-east, and of difficult entrance. It contains about 4000 inhabitants, and the neighbourhood yields excellent wine: 1 34 miles south of Lisbon.

LAGOON, MIDDLE, NORTH, and SOUTH, three ˆulfs of the bay of Honduras, Yucatan, in about long 88° 59’ W., and lat. 17° 54’ to 18° 40’ N.

LA GRANGE (Joseph Louis), an eminent mathematician and philosopher, was born at Tu-rin, November 25th 1736. He at first was more inclined to classical than to mathematical pursuits, but, having met with a memoir of Halley, he made such progress in the latter, at the age of sixteen, that he became professor at the Royal Artillery school. He selected from this period the most able of his pupils as his intimate friends, and thus originated the academy of Turin. In 1759 this institution published the first volume of its Transactions, wherein

La Grange first applied the theory of recurring consequences, and the doctrine of chances, to the differential calculus. He soon after corrected Newton's calculations of the motions of fluids, and made such an impression in his favor on Euler, that he soon procured him to be chosen a member of the Berlin academy. He now visited Paris, where he published his famous Mecanique Analytique, and in 1766 was appointed director of the academy of Berlin in physical and mathematical science. On the death of Frederick II. he returned to Paris; and, though he at first lost his pension, when the new institutions were formed he was appointed professor of the Normal and then of the Polytechnic school. He now announced his Fonc-tions Analytiques; Lecons sur le calcul, and Traite" de Relations numeriques des Equations ; and undertook a new edition of his Mecanique Analytique. But he labored in these pursuits with an assiduity unsuitable to his health and age, and died in the midst of them on the 10th of April, 1813, in his seventy-seventh year. He condescended to be greatly distinguished by Napoleon, and was member of his Imperial Institute and Board of Longitude, senator, and count of the empire, grand officer of the Legion of Honor, and grand cross of the Imperial Order of Reunion.

LA GUERRE (Louis), a painter of history on ceilings, staircases, &c., being an imitator of the celebrated Verrio. His father being master of the menagerie, at Versailles, Louis XIV. was the godfather of our artist. He studied under Le Bran, and came to England at the age of twenty, when he was immediately employed bjr Verrio upon the work at St. Bartholomew's Hospital. He was subsequently engaged to paint The Labors of Hercules, at Hampton Court, and will long be known by the line of Pope,

Where sprawl the saints of Verrio and La Guerre. He died of apoplexy in 1721.

LAGULLAS, CAPE, the most southerly point of Africa, east of the Cape of Good Hope. The name, says governor Phillips, in his voyage to Botany Bay, is corrupted from the original Portuguese Das Agulhas, i. e. Needle Cape, which is descriptive of its form.

LAGUNA, or San Christoval de Lagune, a considerable town in the island of Teneriffe, near a lake so named, on the declivity of a hill. It has several handsome buildings, and a fine square. Long. 16° 20' W., lat. 28° 30' N. See TENERIFFE.

LAGUNES OF VENICE are marshes or lakes in Italy, on which Venice is seated. They com-

municate with the sea, and are the security of the city. There are about sixty islands in them, which together make a bishop's see. Eurano is the most considerable, next to those on which Venice stands.

LACUNAS, the name of four lakes of Peru; three in Venezuela; and three others in the province of Nicaragua.

LAGURUS, in botany, a genus of the digynia order and triandria class of plants ; natural order fourth, gramina: CAL.bivalved, with avillous awn; exterior petal : coa. terminated by two awns, with a third on its back retorted. Species one only, L. ovatus, a native of Guernsey.

LAIIDACK, a town and mountainous district on the northern frontier of-Hindostan, situated between the thirty-fourth and thirty-seventh degrees of north latitude. It is bounded on the north and east by Thibet, and on the west by Cashmere, tributary to the lama of Thibet.

Lahdack, the capital, is a large trading town, having considerable commerce with Cashmere and China, the principal article of which is goats' hair. The inhabitants are of the religion of Boodh, but pay great respect to the lama of Thibet. Long. 78° 10' E., lat. 35° N.

LAHN, a large river of Germany, which flows through the duchy of Nassau, and Upper Hesse, passing Marburg, Giessen, Wetzlar, Nassau, &c. It joins the Rhine near Upper Lahnstein, and is navigable as far as Dietz.

LAHORE, a province of Hindostan, belonging to the Seiks, situated between the thirtieth and thirty-fourth degrees of north latitude, and about 320 miles in length, by 220 in breadth. This province is watered by numerous rivers, and under a good government would be very

fertile; but owing to its various revolutions, and its being possessed by a number of petty chiefs, it is now one of the most barren and worst cultivated districts of India. It however produces all the eastern grains and fruits; sugar, tobacco, cotton, salt, &c. ; and in its mountains are found the woods and fruits of Europe. It also produces fine cattle, and excellent horses. Its rivers are the Suttelege, the Beyah, Ravey, Chunab, Jhylum or Behut, and the Indus. As well as its Seik inhabitants, here are a great number of Mahommedans and Jauts, and other Hindoos. The north-west part belongs to the Afghauns, and Lahore and its neighbourhood to Rajah Runjeet Singh. The Seik government is a military aristocracy. They can bring an army of 100,000 cavalry, it is said, into the field. This province was the territory of Porus, who opposed Alexander. A. D. 977, it was governed by an independent rajah, named Jeipal. The chief towns are Lahore and Amretsir.

LAHOUF, the capital of the province, ,‘s situa-ated on the south-east bank of the Ravey, which is here at all times about 300 yards broad ; but in the rainy season frequently overflows its banks. At an early period of Hindoo history this city was well known, and was taken by the Mahommedans early in the eleventh century. It formed their frontier garrison till about 1157, when we find sultan Rhusero making it his residence. After being the capital of Hindostan, for about twenty-eight years, it was

taken by Mohammed Ghory. This city was afterwards the residence of an Afghaun provincial government ; but in 1520 was seized by the emperor Baber, and became the occasional residence of the Great Moguls. Akber founded the palace still existing, and the emperor Jehangire much improved the city. In 1609 it is described as ‘ a magnificent city, nearly ten miles in length, surrounded by a fortification having twelve gates. The walls and ceilings of the palace were covered with gold and silver ; and the royal garden, called Shah al Imaret, was superior to any thing of the kind in Europe.’ At present this city is daily falling into decay ; the rich inhabitants emigrate to the modern Seik capital Amretsir. Still the city contains some handsome temples of the Mogul emperors, and manufactories for all kinds of warlike instruments, and a foundry of brass guns. Long. 73° 48’ E., lat. 31° 50’ N.

On the other side of the Ravey at Shah Durra, about two miles north of Lahore, is the celebrated mausoleum of Jehangire, occupying nearly 600 yards square. It is sixty-six paces in length on each side, and still

in tolerably good condition. To the southward is to be seen the tomb of Noorjehan Begum, a building thirty-six paces square.

LAHOU, a considerable seaport on the Ivory coast of Africa. It is of the greatest commercial importance of any town on this coast, and said to be a league in extent. Long. 5° 5 W., lat. 5° 20’ N.

LAHR, a manufacturing town of Baden, next to Pforzheim, the most active town in that duchy. Its manufactures are of linens, woollens, cottons, tobacco, and leather, and have wholly arisen since the year 1780, when this was a mere village. It is eighteen miles S. S. E. of Strasburg, and twenty three north of Freyburg.

LA’IC, ˆ Fr iaique. Lat. laicus;

LA ICK, «. s. f. Gr Xa0£ The peopie> ˆ LAICAL, adj. I distinct from the clergy. LA ITY, n. s. t

In all ages the clerical will flatter as well as the laical. Camden.

To say that the laity should govern the church, when all ecclesiastical ministries are committed to the clergy, is to say, Scripture means not what it says.

Bishojt Taylor.

Some prophesied, some interpreted ; and, therefore, it is an ignorant fancy to think that he must needs be a laick, whoever in the ages apostoiical was not a preacher.

The more usual cause of this deprivation is a mere laity, or want of holy orders. Ay life’ t Parergtm.

An humble clergy is a very good one, and an humble laity too, since humility is a virtue that equally adorns every station of life. Swijt.

LAINEZ (James), a Spaniard, companion of Ignatius Loyola, and the second general of the Jesuits. Having procured from the pope I aul IV. the perpetual generalship of the order, he induced the pontiff to ratify the following privileges:—!. The right of making all sorts of contracts (without the privity of the community) vested in the generals and their delegates. 2. That of giving authenticity to all comments ami explanations of their constitutions. 3. The

pr»wer of making new, and altering the old constitutions; this opened the doofr to their bloody political tenets, which are not to be attributed to Loyola. 4. That of having prisons independent of the secular authority, in which they put to death refractory brethren. Lainez died in 1565, aged fifty-three.

LAING (Malcolm), a modern Scottish historian, was born at Stryorey in Orkney in 1762, and educated at Kirkwall. He was removed to the university of Edinburgh, with a view to the bar. On the death of Dr. Henry he completed the unfinished volume of his History of England. But his chief work is a History of Scotland, 4 vols. 8vo. He was brought into parliament by the Whigs in 1806. He edited also a new edition of Ossian of some repute, and died in 1819.

LAING (Alexander Gordon), was born at Edinburgh, in 1794, entered the army, served for several years in the West Indies, and, in 1820, was sent to Sierra Leone. In 1821 — 22, he was despatched on several missions from Sierra Leone, through the Timannee, Kooranko, and Soolima countries, with the view of forming commercial arrangements. In ,1826, he undertook to penetrate to Timbuctoo, and started from Tripoli, crossing the desert by way of Gha-damir. On his journey he was attacked by a band of Tuaricks, who wounded him severely, and left him for dead. He, however, recovered, and reached Timbuctoo, August 18, where he remained upwards of a month. Being obliged to leave Timbuctoo by the sultan of Masina, into whose power the city had fallen, he hired a Moorish merchant to accompany and protect him on his route by Sego to the coast. Three days after leaving the city, he was murdered by the person who had undertaken to guard him.

LAIR, n. «. Fr. lai, a forest: Goth, ligr ; Dan. ligttr. The habitation of a wild beast.

LAIRD, n. s. Sax. Jjlaporib. The lord of a manor in Scotland.

LAIRESSE (Gerard), an eminent Flemish painter, born at Liege in

1640. He received his chief instructions from his father Reniere de Lairesse, though he was also a disciple of Bar-tolet He first settled at Utrecht, but, removing to Amsterdam, soon rose to affluence and reputation. His historical designs are distinguished by grandeur of Composition : and the back grounds are rich in architecture. He had a singular method of working, playing on the violin, and dancing, alternately. He had three sons, two of whom were painters; and three brothers, Ernest, James, and John; Ernest and John painted animals, and James flowers. He also engraved in aquafortis ; and wrote an excellent work on the art, which has been translated into English, and printed in London both in 4to. and 8vo. He died at Amsterdam, in 1711.

LAIS, a celebrated courtezaji, daughter of Ti-mandra, the mistress of Alcibiades, born at Hyccara in Sicily. She sold her favors first at Corinth for 10,000 drachms, and the vast num-ber of her lovers of all ranks sufficiently prove her personal charms. The extravagant price of her embraces became proverbial : —

Non cuivis homini contingit adire Corinthum.

Demosthenes himself, the celebrated orator, is said to have visited Corinth for her sake ; but, when he was informed of her terms, he departed, saying, he would not purchase repentance at so dear a price. She ridiculed the austerity of the philosophers who pretended to have gained a superiority over their passions, and yet were at her door as often as others. She was assassinate 1 in Thessaly in the temple of Venus, about A. A. C.

LAI-TCHEOU-FOU, a city of China of the first rank in the south coast of the gulf of Pe-tche-lee in the province of Shatong. It is on a tongue of land terminating on one side in the gulf, and on the other in a lofty range of hills. Long. 114° 46’ E., lat. 37° 9* N.

LAKE (Gerard), lord viscount Lake, a distinguished English general, was born in 1744, and at the age of fourteen obtained an ensigncy in the guards. During the seven years’ war, he served in Germany, and in 1781 in America, under Cornwallis. After the taking of New York he returned home, and became aid-de- camp to the king. In Holland he commanded the first brigade of the guards, aud was distinguished in several engagements in 1793 and 1794, In 1800 he became command er-in-chief of the British forces in India; and in September 1803 gained a victory over the Mahratta army and the French general Perron, which resulted in the capture of Delhi. He afterwards defeated Scindia and Holkar, and returned to England in September 1807, when he was created lord Lake, baron of Delhi and Laswarri. Soon after he was raised to the rank of viscount, and made governor of Plymouth. He died after a short illness, February 21st 1808.

LAKE, n. s. Sax. lac; Fr. lac; Lat. locus; Ital. logo. A large inland piece of water. See below.

Now nearer to the Stygian lake they draw, Whom from the shore the surly boatman saw, Observed their passage through the shady wood, And marked their near approaches to the flood.

Dryden.

He adds the running springs and standing lakes, And bounding banks for winding rivers makes. Id. A brow like a Midsummer lake,

Transparent with the sun therein, When waves no murmur dare to make, And heaven beholds her face within.

Byron.

A LAKE is a collection of waters contained in some cavity in an inland place, of a large ex-tent, surrounded with land, and having no communication with the ocean. Lakes may be divided into four kinds. 1. Such as neither receive nor send forth rivers. 2. Such as emit rivers, without receiving any. 3. Such as receive rivers, without emitting any.

And, 4, Such as both receive and send forth rivers. Of the-first kind some are temporary and others perennial. Most of those that are temporary owe their origin to the rain, and the cavity of depression of the place in which they are lodged. There are also several of this kind formed by the inundations of the Nile and Niger; and in Russia, Finland, and Lapland, many lakes are

formed, partly by the rains, and partly by the melting of the ice and snow; but the perennial lakes, which neither receive nor emit rivers, are supposed to arise from subterraneous springs, by which they are constantly supplied. The second kind of lakes, which emit without receiving rivers, is very numerous. Many rivers flow from these as out of cisterns : where their springs being situated low within a hollow, first fill the cavity and make it a lake, which not being capacious enough to hold all the water, it overflows and forms a river. Of this kind are Lake Odium, at the head of the Tanais ; lake Adac, whence a head water of the Tigris flows ; Lake Ozero or White Lake, in Russia, the source of the Shaksna ; and the great Lake Chaamay, whence flow four very large rivers, which water the countries of Siam, Pegu, &c., *viz.* the Menan, the Asa, the Caipoumo, and the Laquia, &c. The third species of lakes, which receive rivers but emit none, apparently owe their origin to those rivers, which, in their progress from their source, falling into some extensive cavity, are collected together, and form a lake of such dimensions as may lose as much by exhalation as it continually receives from these sources ; of this kind is that great lake called the Caspian Sea ; the lake Asphaltites, also called the Dead Sea ; and several others. Of the fourth species, which both receive and emit rivers, are reckoned three kinds, as the quantity they emit is greater, equal, or less, than they receive. If it be greater, they must be supplied by springs at the bottom ; if less, the surplus of the water is probably spent in exhalations ; and if equal, their springs just supply as much water as runs off, and is evaporated by the sun. Lakes are also distinguished into fresh-water and salt-water lakes. Dr. Halley is of opinion that all great perennial lakes are saline, either in a greater or lesser degree; and that this saltness increases with time. Large lakes

answer the most valuable purposes in the northern regions, the warm vapors that arise from them moderating the extreme cold ; and in warmer climates, at a great distance from the sea, the exhalations raised from them by the sun cause the countries that border upon them to be refreshed with frequent showers, and consequently prevent their becoming barren deserts.

LAKE OF A THOUSAND ISLANDS, is a lake of the St. Lawrence, formed after it leaves Lake Ontario, and so called from the number of islands with which it is interspersed. It is twenty-five miles in length, and about six broad.

LAKE OF THE HILLS a large lake of North-West America, in length about 200 miles, and from fifty to twenty-five miles broad.

LAKE OF THE WOODS, or LAKE Du Bois, a lake of North America, seventy miles long, and forty wide. ks name is taken from the quantities of oak, fir, pine, &c., which grow on its banks ; and it has a few small islands. Lone. 95° 20’ W., lat. 54° 36’ N.

LAKE, n. s. A color. See LAC.

I have been told that tungsten has been employed in France to precipitate the coloring matter from certain woods for the purpose of forming lakes for the limners’ use. rark»s’s Chemical Catechism.

L\KE, a preparation of different substances

into a kind of magistery for the use of painters : one of the finest and first invented of which was gum lacca, or laque, from which all the rest are called by the common name lakes. The priacipal lakes are carmine, Florence-lake, and lake from madder.

For the preparation of carmine, four ounces of finely pulverised cochineal are to be poured into four or five quarts of distilled water, that has been previously boiled in a pewter kettle, and boiled with it for the space of six minutes longer (some advise to add during the boiling two drachms of pulverised crystals of tartar) Eight scruples of Roman alum in powder are then to be added, and the whole kept upon the fire one minute longer. As soon as the gross powder has subsided to the bottom, and the decoction has become clear, the latter is to be carefully decanted into large cylindrical glasses, covered over, and kept undisturbed, till a fine powder is observed to have settled at the bottom. The superincumbent liquor is then to be poured off from

this powder, and the powder gradually dried. From the decanted liquor, which is still much colored, the rest of the coloring matter may be separated by means of the solution of tin, when it yields a carmine but little inferior to the other.

For the preparation of Florentine lake, the sediment of cochineal, that remained in the kettle after the carmine has been taken, may be boiled with the requisite quantity of water, and the red liquor likewise, that remained after the preparation of the carmine, mixed with it, and the whole precipitated with the solution of tin. The red precipitate must be frequently edulcorated with water. Exclusively of this, two ounces of fresh cochineal, and one of crystals of tartar, are to be boiled with a sufficient quantity of water, poured off clear and precipitated with the solution of tin, and the precipitate washed. At the same time two pounds of alum are also to be dis-solvedv in water, precipitated with a lixivium of potassa, and the white earth repeatedly washed with boiling water. Finally, both precipitates are to be mixed together in their liquid state, put upon a filter and dried. For the preparation of a cheaper sort, instead of cochineal, one pound of Brasil wood may be employed in the preceding manner.

For the following process for making a lake from madder, the Society of Arts voted Sir H. C. Englefield their gold medal. Enclose two ounces troy of the finest Dutch crop madder in a bag of fine and strong calico, large enough to hold three or four times as much. Put it into a large marble or porcelain mortar, and pour on it a pint of clear soft water, cold. Press the bag in every direction, and pound and rub it about with a pestle, as much as can be done without tearing it, and, when the water is loaded with color, pour it off. Repeat this process till the water comes off but slightly tinged, for which about five pints will be sufficient. Heat all the liquor in an earthen or silver vessel, till it is near boiling, and then pour it into a large basin, into which a troy ounce of alum dissolved in a pint of boiling soft water has been previously put. Stir the mature together, and, while stir-LAK

ring, pour in gently about an ounce and a half of a saturated solution

of subcarbonate of potassa. Let it stand till cold to settle ; pour off the clear yellow liquor ; add to the precipitate a quart of boiling soft water, stirring it well ; and, when cold, separate by nitration the lake, which should weigh half an ounce. If less alum be employed, the color will be somewhat deeper ; with less than three-fourths of an ounce, the whole of the coloring matter will not unite with the alumina.

Almost all vegetable coloring matters may be precipitated into lakes, more or less beautiful, by means of alum or oxide of tin. For instance of turmeric a fine lake may be thus made : — Take a pound of turmeric root in fine powder, three pints of water, and an ounce of salt of tartar ; put all into a glazed earthen vessel, and let them boil together over a clear gentle fire,. till the water appears highly impregnated with the root, and will stain a paper to a beautiful yellow. Filter this liquor, and gradually add to it a strong solution of rock alum in water, till the yellow matter is all curdled together and precipitated ; after this pour the whole into a filter of paper, and the water will run off and leave the yellow matter behind. It is to be washed many times with fresh water, till the water comes off insipid, and then is obtained the beautiful yellow called lake of turmeric, and used in painting. In this manner may a lake be made of any of the tinging substances that are of a strong texture, as mad-der, logwood, &c. A yellow lake for painting is made from broom flowers thus : — Make a lie of potassa and lime pretty strong ; in this boil, at a gentle fire, fresh broom flowers till they are white, the lie having extracted all their color; then take out the flowers, and put the lie to boil in earthen vessels over the fire ; add as much alum as the liquor will dissolve ; then empty this lie into a vessel of clean water, and it will give a yellow color at the bottom. Let all settle, and decant off the clear liquor. Wash the powder fou nd at the bottom with more water, till all the salts of the lie are washed off; then separate the yellow matter, and dry it in the shade. It proves a very valuable yellow. A beautiful lake may be prepared from Brasil wood, by boiling three pounds of it for an hour in a solution of three pounds of common salt in three gallons of water, and filtering the hot fluid through the paper ; add to this a solution of five pounds of alum in three gallons of water. Dissolve three pounds of the best pearl ashes in a gallon and a half of water, and purify it by filtering ; put this gradually to the other, till the whole of the color ap-pear to be precipitated, and the fluid be left clear :nid colorless. But if any appearance of purple be seen, add a fresh quantity of the solution of alum by degrees, till a scarlet hue be produced. Then pursue the directions given in the first process with regard to the sediment. If half a pound of seed-lac be added to the solution of pearl-ashes, and dissolved in it before its

purification by the filler, and two pounds of the wood, and a proportional quantity of the common salt ami water be used in the colored solution, a lake will !>e produced that will stand well in oil or water, hvit is not so transparent in oil as without

the seed-lac. The lake with Brasil wood may be also made by adding half an ounce of anotto to each pound of the wood ; but the anotto must be dissolved in the solution of pearl-ashes. There is a kind of beautiful lake brought from China ; but as it does not mix well with either water or oil, though it dissolves entirely in spirit of wine, it is of no use in our painting. This has been erroneously called safflower. Orange Lake is the tinging part of anotto precipitated together with the earth of alum. This pigment, which is of a bright orange color, and fit for varnish painting, and also for putting under crystal to imitate the vinegar garnet, may be prepared by boiling four ounces of the best anotto and one pound of pearl-ashes half an hour in a gallon of water, and straining the solution through paper. Mix gradually with this solution a pound and a half of alum in another gallon of water ; desisting when ebullition ceases. Treat the sediment in the manner already directed for other kinds of lake, and dry it in square or round lozenges.

LAKTHO, or LACTHO, a province of the interior of India, beyond the Ganges, tributary to Cochin China. It is bounded on the south by Laos, on the north and east by Tungquin, and on the west by China. It has never been explored by any European.

Laktho is described by the Tungquinese as throughout mountainous, rocky, covered with jungle, and destitute of navigable rivers ; the air, it is added, is pestilential to the constitutions of strangers, and the water extremely unwholesome. But the climate is cooler than Tungquin. Between Tungquin and Laktho travellers are obliged to traverse for three or four days a wild uninhabited tract, and in the interior of th»> latter country the population is dispersed in small and savage communities, whose dialects are unintelligible to each other. They are governed by hereditary chiefs, who are engaged in perpetual hostilities.

Salt fish, oil, and some silk stuffs for the chiefs, are imported from Tungquin ; the exports are chiefly buffaloes and cotton. There is no coin current here except what is procured from Tungquin, the general traffic being carried on by barter, in which buffaloes are the medium of exchange. But in some parts shells, or cowries, are used in dealing

for articles of little value. The Tungquinese speak of several extraordinary natural caverns, which are found here. One is said to be a mile across.

LALAND, or LAALAND, an island of Denmark, at the entrance of the Baltic, the third of the Danish islands in size, is eleven leagues long, and six to three broad, containing 240 square miles, and 40,000 inhabitants. It is so low, that considerable portions of its coasts are inundated during the elevations of the sea, and the climate is not considered healthy ; it is, however, so fertile, that it is said to produce as much wheat, _ rye, barley, oats, peas, beans, lentils, hops, and flax, as all the other islands together. It has besides considerable forests of oaks, whose acorns feed vast herds of swine, and produces a great quantity of pearl herb. It is also much frequented by aquatic birds, whose feathers

afford a profitable export. It has five towns, *viz.* Naskow, the chief place, on the west, 1500 inhabitants ; Saxekoebing on the north, Nysted on the south-east, llodby on the south, and Ma-riaboe on a lake in the centre of the island.

LALANDE, a celebrated astronomer, boru in France about the middle of the last century. Before the age of twenty-five he was admitted into almost all the learned academies of the world, and pensioned by the principal monarchs of the continent. He travelled through nearly all the states of Europe, and was every where received with demonstrations of the most enthusiastic respect, not only by the learned of every description, but by all who were most distinguished in rank or fortune. In Italy he was overwhelmed with attentions by Clement XIII., and pursued, from the remotest extremities of that country, by its most distinguished ornaments. He found his bust in most of the observatories of Germany. His reception in England was

also of the most flattering kind. His works embrace more than sixty ponderous volumes, and correspond, by their learning and utility, to the high reputation which he enjoyed. Lalande, if not the most profound and original, was certainly one of the most learned astronomers France ever produced. But he was remarkable for egregious vanity, and for the broadest eccentricities of character. By a singular perversion of intellect, he became a professed atheist about the commencement of the revolution, pronounced in the year 1793, in the Pantheon, a discourse against the existence of a God, with the bonnet rouge upon his head, and displayed on this subject the most absolute insanity during the rest of his life. This monstrous infatuation betrayed him into the most whimsical acts of extravagance ; and particularly into the publication of a Dictionary of Atheists, in which he enregis-tered not only many of ‘ the illustrious dead/ but a great number of his contemporaries, and among these some of the principal dignitaries of the empire. This circumstance led to the following occurrence in the Institute :— At an extraordinary sitting of all the classes convoked for the purpose, when Lalande was present, a letter from the emperor was announced, and read aloud, in which it declared “that M. de Lalande had fallen into a state of dotage, and was forbidden to publish thereafter any thing under his own name. The old astronomer rose very solemnly, bowed low, and replied, that he would certainly obey the orders of his majesty. His atheistical absurdities deserved, no doubt, to be repressed, but, besides the singularity of this form of interdiction, there was an unnecessary degree of severity in it, as the end might have been attained without so public a humiliation. Lalande had the misfortune of living to see a maxim verified in his own regard, which has been exemplified in every age and country, — that some disciples may become superior to their masters* But he was, nevertheless, at all times among the luminaries of science, and to him astronomy was indebted for more substantial and unremitted services, than to any one of his contemporaries. He died, we believe, in Paris in 1810.

LALLY (Thomas Arthur, count), a native of Ireland, who attached himself to the house of Stuart, and entered into the French service. He distinguished himself at the battle of Fontenoy, and became appointed brigadier-general. In 1756 he was made governor of Pon-dicherry, which he was compelled to surrender to the English, when public clamor ran so high against him that he was beheaded by a most un-just sentence in 1766. His son, M. Lally de Tollendal, obtained the restoration of the estates of his father, and a reversal of the proceedings against him.

LALUZERNE (Caesar William de), cardinal, was descended of an ancient Norman family, and born at Paris in 1738. He studied in the seminary of St. Magloire, and the house of Navarre, and obtained orders in 1762. In 1765 he was elected agent-general of the French clergy. In 1770 Louis XV. nominated him to the ducal episcopal see of Langres; and in 1773 he pronounced his majesty's funeral oration. In 1788 he became a deputy of the clergy to the states-general, and was one of the first who proposed the establishment in France of a representative system. He was president of the constituent assembly on the 31st of August 1789 ; but soon after emigrated to Switzerland, whence he removed to Italy. In 1802 he published a pastoral letter, announcing his submission to Napoleon's concordat ; and, on the return of the Bourbons, was invited to re-assume his rank of duke, soon after which he was made a cardinal. He died at Paris in 1822. His works are numerous, and include Dissertation sur la liberte" de rhomme. Sur 1'Existence et les Attributs de Dieu. Instructions Pastorales sur le Schisme de France, 1808, 2 vols. 12mo. Dissertation sur les Eglises Catholiques-Protestantes, 1816, 2 vols. 12mo. Dissertation sur la Verite" de la Religion, 2 vols. 12mo. Sur la Difference de la Constitution Franpaise de la Constitution Anglaise, 1816,8vo. Sur la Responsibility des Ministres, 1816, 8vo.

LAMA, the sovereign pontiff, or rather god, of the Asiatic Tartary. The lama is not only adored by the inhabitants of the country, but also by the kings of Tartary, who send him rich presents, and go in pilgrimage to pay him adoration, calling him lama congiu, i. e. god, the everlasting father of heaven. He is never to be seen but in a secret place in his palace, amidst a great number of lamps, sitting cross-legged on a cushion, and adorned with gold and precious stones. They prostrate themselves before him at a distance, it not being lawful for any to kiss even his feet. He is called the great lama, or lama of lamas ; that is, priest of priests. The orthodox opinion is, that when the grand lama seems to die, either of old age or infirmity, his soul in fact only quits a crazy habitation to look for another younger or better; and it is discovered again in the body of some child, by certain tokens known only to the lamas or priests, in which order he always appears. A particular account of the pompous ceremonies attending the inauguration of the infant lama in Thibet is given in the first volume of the Asiatic Researches.

LAMA, in zoology. See C>MELUS

LAMALMON,a mountain of Abyssinia, in the lidge call* d Samen, by some supposed to be the highest in that empire, situated on the road to Gondar. It stands on the north-west part of the mountains of Samen, and is higher than those of Tigre ; but Mr. Bruce reckons it inferior to those on the south-east. The very highest part of the mountain, which from below appears to be sharp-pointed, is a large plain, full of springs, which are the sources of most of the rivers in this part of Abyssinia. The villages of this mountain are occupied by some of the most ancient Abyssinian tribes.

LAMARQUE, Maximilian, a French general, born in the year 1772, and entered the army as a private soldier, at an early age. His ability and spirit soon elevated him to the rank of captain of grenadiers, and when he reached the age of twenty years, he was adjutant-general. lie was distinguished in the wars of the Republic. Austerlitz, Tyrol, Naples, Wigram, witnessed his brilliant actions, and Italy and Spain were also theatres of his celebrity. Upon the return of Napoleon from Elba, Lamarque was appointed to the command of Paris, and general-in- chief of the army of La Vende”e. The Bourbons proscribed this brave officer, but the integrity of his character obtained for him a permission to re-turn to his country in 1818, when he employed himself wholly in literary pursuits. He published an Essay on the Necessity of a Standing Army, wrote for some of the public journals, and was returned to the chamber of deputies in 1826. The death of this upright and brave man either excited the dormant embers of genuine republicanism in the Parisians, or was seized by the discontented as an advantageous moment to excite confusion, and in the tumultuous proceedings that occurred five hundred of the rioters are supposed to have been killed by the military. He died on the first day of June, 1832.

LAMARTILIERE, COUNT DE, a French general of artillery, who lived through the Revolution, commenced his career as a sub-lieutenant in 1757. Having served with distinction in the seven years’ war, he was employed in the island of Guadaloupe, and published several tracts on

artillery, which procured him great reputation. He was made colonel in 1789, and contributed much to the success of various important operations in the revolutionary wars. In 1795 he was employed, with the rank of general of division, in the army of the Rhine and Moselle, and in January 1802 was called to the senate, and nominated a grand officer of the legion of honour. In 1814 Louis XVI 1 1. made him a peer of France, and a mem-ber of the council for the improvement of the Polytechnic school. He died in 1819.

LAMB, n. s. ˆ Sax., Goth., and

LAMB'KIN, f Swed. lamb; Dan.

LAM'BATIVE, adj. & n. s. ila/n ; Teut. and

LAMB'S' WOOL 3 Belg. lamm. The

young of a sheep: lambkin, is a little lamb:

lambative, as an adjective, is taken by licking;

as a substantive, a medicine of this sort : Shakspeare uses lamb's-wool for ale mixed with the

jiulp of roasted apples (Sax. lemp ol, soft ale).

Clean as young lambkins, or the goose's dovrn.

And like the goldfinch in her Sunday gown. Gay.

The lamb thy riot dooms to bleed to-day,

Had he thy knowledge, would he skip and play ?

Pope.

In affections both of lungs and weazon, physicians make use of syrups, and lambative medicines.

Browne.

I stitched up the wound, and let him blood in the arm, advising a lambative, to be taken as necessity should require. Wiseman's Surgery.

LAMB, in zoology. See Ovis. A male lamb of the first year is called a

wedder hog, and the female a ewe hog; in the second year it is called a wedder, and the female a theave. The best season for weaning them is at sixteen or eighteen weeks old; and about Michaelmas the males should be separated from the females, and such males as are not designed for rams, gelded.

LAMB (Sir James Bland Burges, D. C. L.)bart., an ingenious English writer in general literature, was the son of George Burges, esq., an officer of the army, holding the situation of comptroller-general of the customs in Scotland. Our author was born at Gibraltar June 8th, 1752, and educated at Westminster school, and University College, Oxford. On quitting the University he made a tour of Europe; and on his return entered of Lincoln's Inn, by which society he was called to the bar in 1777. He had early in life contracted an acquaintance with Mr. Pitt, which induced him to embark in politics, and in 1787 he took his seat in the house of commons, as member for Helston in Cornwall. Two years after he was appointed to one of the un-der secretaryships in the foreign office, and in 1794 made joint commissioner of the privy seal. About this period he assisted in establishing the Sun newspaper. In 1795 he retired from office, and obtained a baronet's patent. In 1821 he obtained permission to assume the name of Lamb. His writings are, Considerations on the Law of Insolvency, 1783, 8vo., and a Letter to the earl of Effingham on the same subject ; an Address to the Country Gentlemen of England on County Courts, 8vo., 1789 ; Letters on the Spanish Aggression at Nootka, published under the signature Verus, in 1790; the Birth and Triumph of Love, 4to., 1796: a poem written to illustrate a series of designs by the princess Elizabeth ; an Epic Poem, in eighteen books, on the History and Achievements of Richard Cceur de Lion, 8vo. 2 vols. 1801 ; The Exodiad, a sacred epic, written in conjunction with Cumberland, 4to., 1807,1808; Riches, a play, altered from Massinger's City Madam, 1810, reprinted afterwards with other dramatic works, in 2 vols. 8vo. ; and The Dragon Knight, a romance. At the close of his life he turned his attention to the study of divinity, and published, in 1819, Reasons for a New Translation of the Bible, apparently suggested by that re-doubtable critic Mr. John Bellamy. They largely quote his Literal Translation of the Old Testament; and are altogether unworthy Sir James Lamb's previous fame.

LAMBALLE (Maria Therese Louise de Sa-voie Carignan, princesse de), born at Turin, September 8th, 1 749, was married to the duke

of Bouroon Penthievre, whom she soon lost by death, in the flower of her youth. She was superintendant of the household of Marie Antoinette, queen of France, with whom she became a great favorite ; and mournfully remarkable for her attachment to that unhappy princess. On the flight of the royal family to Varennes, ma-dame de Lamballe proceeded to Dieppe and reached England; but, hearing of the queen's Imprisonment, she returned to France to s>hare tne prison of the Temple with her, where she continued till the commune of Paris ordered her removal to that of La Force. On the 3d of September, 1792, she was summoned to appear before her iniquitous judges ; and, on being interrogated as to her connexion with the queen, answered, ' I have nothing to say. It is indifferent to me whether I die sooner or later : I am prepared for the worst.' Several voices demanded her life amidst faint expressions of pity, but violence prevailed, and, being stabbed on the spot with sabres, she was dragged through a heap of mangled bodies, and murdered with circumstances of disgusting cruelty. See AN-TOINETTE.

LAMBAYEQUE, a town in the intendancy of Truxillo, Peru. It has an elegant stone church, and the river Lambayeque runs through it, and fertilises the environs. Some wine is made here, and coarse cottons. The road to Lima1 passes through Lambayeque. Population 8000, consisting of Spaniards, Mestizoes, and Indians. Ninety-five miles W.N. W. of Truxillo.

LAM'BENT, adj. Lat. lambens. Playing about; gliding over without harm.

LAMBETH, 'a parish of England, in the county of Surrey. It contains a population exceeding 80,000 souls, and was created a borough by the reform bill of 1832, with the privilege of sending two members to parliament. Here is the palace of the archbishop of Canterbury. See LONDON and SURREY.

LAMBERT, a Benedictine monk of As-chatfenburgh, in the eleventh ceutury. who wrote several works, among which is a History of

Germany from 1050 to 1077, which is esteemed.

LAMBERT (John), general of the parliamentary forces during the civil wars of the seventeenth century. He was of a good family, and for some time studied the law ; but, upon the breaking out of the civil war, espoused the cause of the parliament, and soon rose to the rank of colonel. When Cromwell seemed inclined to assume the title of king, Lambert opposed it with great vigor, and even refused to take the oath required by the assembly and council, to be faithful to the government; on which the protector deprived him of his commission, but granted him a pension of £2000 a year. Lambert then retired to Wimbleton House, where he turned florist, but amidst these rural amusements he still nourished his ambition ; for, when Richard Cromwell succeeded, he acted so effectually with Fleetwood, Desborough, Vane, Berry, &c., that the new protector was obliged to surrender his authority ; and the members of the long parliament dismissed by Oliver, on the 20th of April, 1653,

were restored to their seats. Lambert was now appointed one of the council of state, and colonel of a regiment of horse and foot. For this s,er-vice the parliament presented him with £1000, but he distributed it among his officers. The parliament concluded that he intended to secure a party in the army : they therefore courteously invited him to London, resolving as soon as he should arrive to secure him. Apprehensive of this, Lambert delayed his return, refused to resign his commission when it was demanded of him, and, marching up to London with his army, dislodged the parliament by force in October 1659. He was then appointed, by a council of the officers, major-general of the army, and one of the new council for the management of public affairs; and sent to command the forces in the north. But general Monk marching from Scotland into England to support the parliament, against which Lambert had acted with violence ; the latter, being deserted by his army, was obliged to submit, and was committed prisoner to the tower. Escaping thence, however, he soon appeared in arms, with four troops under his command, but was defeated and taken prisoner by colonel Ingoldsby. At the Restoration he was excepted out of the act of indemnity : being brought to his trial on the 4th of June, 1662, he behaved with great submission ; was reprieved at the bar, and confined for life in the island of Guernsey.

LAMBERTI (Lewis), a learned modern Greek scholar, was born at Reggio in Lombardy in 1758, and studied jurisprudence at Modena He then became secretary to the papal nuncio at Bologna, went to Rome,

and was introduced to the Borghese family, to whom he recommended himself by a work which he composed on the antiquities of the villa of the family. When the effects of the French revolution threatened Italy, Lamberti returned to Reggio and Milan ; and in 1796 aided Buonaparte in establishing a national republic. He had afterwards a place in the executive directory of the Cisalpine republic. Lamberti was also a member of the Italian Institute, professor of the belles lettres at the college of Brera, and keeper of the pub-lic library. His most important work was an edition of Homer, iti Greek, printed in folio by Bodoni at Parma. He went to Paris to present a copy of this production on vellum to Buonaparte, who made him a present of 12,000 francs. Among his original works are Italian poems, a volume of translations from the Greek poets, &c. He died in 1813.

LAM ETON (William), an English officer of distinguished science, was for more than twenty years a lieutenant-colonel in India, where he conducted a grand trigonometrical survey of that continent. He died January 20th, 1823, at Kingin Ghaut, fifty miles south of Nagpour, having enriched the Transactions of the Royal and Asiatic Societies with numerous and important papers.

LAMDOI'DAL, n. t. Gr. \ap$a and «£oc, form. Having the form of the letter lambda or A.

The course of the longitudinal sinus down through the middle of it, makes it advisable to trepan at thw

/ower port of the os parietale or at least upon the lumboidal suture. Sharp's Surgery.

LAME, adj. & v. a.) Sax., Goth., Belg.,

LAME’LY, adv. >and Swed. lam Crip—

LAME’NESS, n. s. J pled ; weak; hobbling; hence, imperfect ; unsatisfactory ; deficient : as a verb, to cripple; make lame or weak.

And Peter and Joon wenten up into the temple at the nynthe our of preying ; and a man that was lame fro the wombe of moder was borun, and was leed ech dai at the ghate of the temple that is seid fair. Wiclif. Acts iii.

I never heard of such another encounter, which lames report to follow it, and undoes description to do it. Shakspeare.

Shrubs are formed into sundry shapes, by moulding them within, and cutting them without ; but they are but lame things, being too small to keep figure.

Bacon.

Who reproves the lame, must go upright. Daniel. The son and heir

Affronted once a cock of noble kind,

And either lamed his legs, or struck him blind.

Dryden,

Our authors write,

Whether in prose, or verse, ‘tis all the same ; The prose is fustian, and the numbers lame. Id.

Let blindness, lameness, come ; are legs and eyes Of equal value to so great a prize 1 Id. Juvenal.

If the story move, or the actor help the lameness of it with his performance, either of these are sufficient to effect a present liking. Id. Spanish Fryar.

Look not ev’ry lineament to see ;

Some will be cast in shades, and some will be

So lamely drawn, you scarcely know ‘tis she.

Dryden.

A greyhound, of a mouse colour, lame of one leg, belongs to a lady. Arbuthnot and Pope.

Those muscles become callous, and, having yielded to the extension, the patient makes shift to go upon ‘t, though lamely. Wiseman’s Surgery.

Lameness kept me at home. Digby to Pope.

If you happen to let the child fall, aud lame !•; never confess. Swift.

Swift, who could neither fly nor hide,

Came sneaking to the chariot side ;

And offered many a lame excuse,

He never meant the least abuse. Id.

Should a barbarous Indian, who had never seen a palace or a ship, view the separated and disjointed parts, he would be able to form but a very lame and dark idea of either of those excellent and useful inventions. Watts.

LAM ECH, in scripture biography, the son of Methusael, of the race of Cain, the fifth in descent from him. He married two wives, Adah and Zillah, and is supposed to have introduced polygamy. To his wives he said, ‘ Hear my voice, ye wives of Lamech : for I have slain a man to my wounding, and a young man to my hurt: if Cain shall be avenged seven-fold, surely Lamech seventy and seven-fold.’ Gen. iv. 24, 25. These words have perplexed biblical critics. Some interpretations have been given of this passage, which, as they are founded on mere fables, are not worthy of recital. Onkelos, who wrote the first Chaldee paraphrase on the Pentateuch, reads the words with an interrogation : ‘ Have I slain a man to my wounding, and a young man to my hurt?’ and accordingly he paraphrases it l!nn: ‘ I have not killed a man, that I should b’jur the sin of it; nor have I destroyed a young

man, that my offspring should be cut off for it.’ Dr. Shuckford supposes that Lamech was endeavouring to reason his wives and family out of their fear of having the death of Abel revenged upon them, who were of the posterity of Cain. As if he had said, ‘ what have we done, that we should be afraid? We have not killed a man, nor offered any injury to our brethren of any other family; and if God

would not allow Cain to be killed, who had murdered his brother, but threatened to take seven-fold vengeance on any that should kill him, doubtless they must ex-pect much greater punishment, who should presume to kill any of us. Therefore we may surely look upon ourselves as safe under the protection of the law and of the providence of God.'

LAMEGO, a town of the province of Beira, Portugal, on the river Balsamao. It is a bishop's see, and celebrated as the place where the states-general of Portugal entered into a confederation in 1143, confirming the election of Alphonso I. Population 6600. Forty-six miles east of Oporto.

LAMELLA. Lat. A plate. LAM'ELLATED, adj. Covered with films or plates.

The lamellated antennae of some insects are surprisingly beautiful, when viewed through a microscope. Derham.

Talc has a plated texture, the lamella being easily separated from each other.

Parkes's Chemical Catechism. LAMENT', v.n., v. a., &~\ Fr. lamenler; LAM'ENTABLE, adj. [n. s. I Ital. lamentare ; LAM'ENTABLY, adv. >Port. and Span.

LAMENTA'TION, n. s. \ hmentar ; Lat.

LAMEN'TER. J lamentor. To

mourn ; wail ; grieve : to bemoan ; to express sorrow or regret for : as a substantive, expressing sorrow ; lamentation : lamentable, to be lamented ; causing, or expressing sorrow; miserable: the other compounds follow these senses.

Jeremiah lamented for Josiah, and all the singing-men and women spake of Josiah in their lamentations. 2 Chron.

Ye shall weep and lament, but the world shall rejoice. John.

His sons buried him, and all Israel made great lamentation for him. 1 Mac. ii. 10.

The night has been unruly where we lay ; And chimneys were blown down : and, as they say, Lamentings heard i' the' air, strange screams of death.

Shakspeare.

As you are weary of this weight, Rest you, while I lament king Henry's corse. Id.

To add to your laments,

Wherewith you now bedew king Henry's hearse, I must inform you of a dismal fight. Id.

The lamentable change is from the best ; The worst returns to laughter. Id.

Our fortune on the sea is out of breath, And sinks most lamentably.

Id. Antony and Cleopatra. Be't lawful that I invocate thy ghost, i"o hear the lamentations of poor Anne.

Id. Richard III.

Far less I now lament for one whole world Of wicked sons destroyed, than I rejoice For one man found so perfect and so just, That God vouchsafes to raise another world From him. Milta*.

•Vc, long ere oˆr approaching, heard within Noise, other than the sound of dance, or song ! Torment, and loud lament, and furious rage.

Milton.

Not until the earth was become no tolerable habitation but a theatre of lamentable tragedies, a seat of horrid iniquity, a sink of loathsome impurity !

Barrow.

A lamentable tune is the sweetest musick to a woe-ful mind. Sidney.

The matter in itself lamentable, lamentably expressed by the old prince, greatly moved the two princes to compassion. Id.

This bishop, to make out the disparity between the heathens and them, flies to this lamentable refuge.

Stillingjieet. The loud laments arise Of one distressed, and mastiffs mingled ‘cries.

Dry den.

The pair of sages praise ; One pitied, one condemned the woful times, One laughed at follies, one lamented crimes. Id. The victors to their vessels bear the prize, And hear behind loud groans, and lamentable cries.

Id.

Such a complaint good company must pity, whether they think the lamenter ill or not.

Spectator.

It is a most lamentable thing, that there should be a dispute raised upon a man’s saying another is what he plainly takes pains to be thought. Steele.

We gaze around ;

We read their monuments, we sigh ; and while We sic;h we sink ; and are what we deplored : Lamenting or lamented all our lot ! Young.

But he, who through life’s dreary way

Must pass when heaven is veiled in wrath, Will long lament the vanished ray That scattered gladness o’er his path.

Byron. The good old gentleman was quite aghast,

And made a loud and pious lamentation ; Repented all his sins, and made a last

Irrevocable vow of reformation. Id.

LAMENTATIONS, a canonical book of the Old Testament, written by the prophet Jeremiah, on occasion of Josiah's death, according to archbishop Usher and some other learned men, who follow the opinion of Josephus and St. Jerome. But as this opinion does not agree with the subject of the book, the lamentation composed by Jeremiah on that occasion is probably lost. The first two chapters are employed in describing the calamities of the siege of Jerusalem : in the third the author deplores the persecutions he himself had suffered : the fourth treats of the desolation of the city and temple, and the misfortune of Zedekiah : the fifth is a prayer for the Jews in their dispersion and captivity : and at the close of all he speaks of the cruelty of the Edomites, who had insulted Jerusalem in her misery. All the chapters in this book, except the last, are in verse, and digested in the order of the alphabet ; with this difference, that in the first, second, and fourth chapters, the first letter of every verse follows the order of the alphabet ; b"ut in the third the same initial letter is continued for three verses together. The style is lively, pathetic, and affecting. In this kind of writing the prophet Jeremiah was a great mas-ter, according to the character which Grotius gives of him, Minis in affectibus concitandis.

LAMIA, in ancient geography, a town of Thessaly, in the district of Phthiotis, famous for the bellnm Lamiacum, waged by the Greeks against the Macedonians after Alexander's death.

LAMIACUM HEI.LUM, the Lamian war, happened after the death of Alexander, when the Greeks, particularly the Athenians, incited by their orators, resolved to free Greece from the Macedonian garrisons. Leosthenes was appointed commander of a numerous force, and marched against Antipater, who then presided over Macedonia. Antipater entered Thessaly at the head of 1 3,000 foot and 600 horse, and was beaten by the superior force of the confederates. Antipater after this blow fled to Lamia, where he resolved to maintain a siege with about 8000 or 9000 men that had escaped from the battle. Leosthenes, unable to take the city by storm, be-gan to make a regular siege. His operations were disturbed by the frequent sallies of Antipater: and, being soon after killed by a stone, Antipater made his escape out of Lamia, and, with the assistance of Craterus's army from Asia, gave the Athenians battle near Cranon; who, though only 500 of their men were slain, became so dispirited, that they sued for peace Antipater consented, provided they would raise taxes in the usual manner, receive a Macedonian garrison, defray the expenses of the war, and deliver into his hands Demosthenes and Hyperides, the

orators whose eloquence had, excited their countrymen against him. These disadvantageous terms were accepted by the Athenians, but Demosthenes escaped and poisoned himself. Hyperides was carried before Antipater, who ordered his tongue to be cut out, and afterwards had him put to death.

LAMIˆE, in pagan mythology, a sort of de-mons, who were supposed to devour children. Their form was human, resembling beautiful wo-men. Horace mentions them in his Art of Poetry. They are also called Larvae and Lemures.

LAM'INA, ra. *. J Lat. Thin plate; one

LAM'INATED, adj. $ coat laid over another: plated : used of bodies whose contexture is in layers, or plates lying over one another.

From the apposition of different coloured gravel arises, for the most part, the laminated appearance of a stone. .; &mrp.

These rocks, however, instead of being disposed in lamina; or strata, form basaltic or angular columns, so closely attached to each other, that, though perfectly distinct from top to bottom, scarcely any thing can be introduced between them.

Parkes's Chemical Catechism.

LAMINITANUS ACER, in ancient geography, a territory of the Carpetani, in HispaniaCiterior, now called Campo de Montiel.

LAMINIUM, a town of the Carpetani, in the above territory, seven miles from the head of the Anas, or Guadiana ; now called Montiel, a citadel of New Castile. — Clusius.

LAMIUM, dead nettle, in botany; a ge-nus of the gymnospermia order, and didynamia class of plants : natural order forty-iecond, verticillatae: cor. upper lip entire, arched, the un-der lip bilobous; the throat with a bent or tooth on each side the margin. There are several species

L. album, white archangel, or dead-nettle, grows frequently under hedges, and in waste places. The flowers, which appear in April and May, have been particularly celebrated in uterine fluors and other female weaknesses ; also in disorders of the lungs; but they appear to be of very weak virtue ; and have now no place in our pharmacopoeia.

2. L. purpureum, red archangel, is very com-mon in corn fields and gardens. The young leaves of both species are boiled and eaten in some places like greens.

LAM'MAS. Sax. hlapmar-. Of Goth, lama, contribution, says Mr. Thomson. But see the extract from Brand's Antiquities.

In 1578 was that famous lammas aay, which buried the reputation of Don John of Austria.

Bacon.

Some suppose it is called Lammass-day, quasi Lamb-Masse, because on that day the tenants that held lands of the Cathedral Church in York, were bound by their tenure to bring a live lamb into the church at high mass on that day.

Brand's Antiquities.

LAMOIGNON (Christian Francis de), marquis of Baville, and president of the parliament of Paris, was born in 1644, and educated by his father. He studied rhetoric in the Jesuits' college, and afterwards made the tour of England and Holland. Literature, however, was only his amusement ; the law was his profession, and the eloquence of the bar at Paris owes its reformation from bombast and affected erudition, to the plain and judicious pleadings of M. Lamoignon. He was appointed king's advocate-general in 1673; which he discharged until 1698, when the presidentship of the parliament was conferred on him. This post he held nine years, when he was allowed to resign in favor of his eldest son : he was chosen president of the royal academy of inscriptions in 1705. The only work he suffered to see the light was his Pleader, which is a monument of his learning and eloquence. He died in 1709.

LAMP, n. s. ~\ Sax. leoma, flame ; Fr. lampe ;

LAMP'ASS, ˆLat. lampas; Gr. Xa/Mrac-A

LAMP'BLACK, i light made of oil or spirits; the

LAMP'ING. * instrument of such artificial

light: lampass, a fleshy excrescence in a horse's

mouth, so called, according to Minsheu, because

burned or seared away with a lamp : lampblack,

the soot of lamps : lamping, shining ; brilliant.

Thy word is a lamp unto my feet, and a light unto my path. Psalms.

Happy lines, on which with starry light Those tamping eyes will deign sometimes to look.

Spenser.

Marry, sir, she's the kitchen wench, and all grease ; and 1 know not what use to put her to, but to make a lamp of her, and run from her by her own light. I warrant her rags, and the tallow in them, will burn a Poland winter : if she lives till dooms-day, she'll burn a week longer than the whole world.

Shakspeare.

His horse possest with the glanders, troubled with the lamjmss, infected with the fashions. Id.

O thievish night,

Why should'st thou, but for some felonious end, I n thy dark lanthorn thus close up the stars That nature hung in heaven, and filled their lamps

With everlasting oil, to give due light

To the misled and lonely traveller ! M'dttm.

Thy gentle eyes send forth a quickening spirit, And feed the dying lamp of life within me. Rome.

Cynthia, fair regent of the night, O may thy silver lamp from heaven's high power, Direct my footsteps in the midnight hour. Gay.

In lump furnaces I used spirit of wine instead of oil, and the same flame has melted foliated gold.

Boyle.

You with light gas the lamps nocturnal feed, Which dance and glimmer o'er the marshy mead.

Darwin.

Lampblack is the soot of oil, collected after it is formed by burning. Imeson's Element*.

To keep the lamp alive With oil we fill the bowl ;

Tis water makes the willow thrive, And grace that feeds the soul. Cowper.

As, in far realms, where eastern kings are laid, In pomp of death, beneath the cypress shade, The perfumed lamp with unextinguished light Flames through the vault, and cheers the gloom of

night : —

So mighty Burke ! in thy sepulchral urn, To fancy's view, the lamp of truth shall burn ; Thither late times shall turn their reverent eyes, Led by thy light, and by thy wisdom wise.

Canning1.

LAMPS. The mode of producing artificial illumination by means of carbonated hydrogen gas, has already been pretty fully discussed under the head of GAS LIGHT; and we must in the present instance confine ourselves to the more simple arrangements employed in domestic economy, by which gas is generated and light produced by means of a portable apparatus.

In the common lamp there are three circumstances which particularly demand our attention, the oil, the wick, and the supply of air. It is required that the oil should be perfectly inflammable, without containing any fetid substance, mucilage, or other matter, to obstruct the channels of the wick. The office of the wick appears to be chiefly, if not solely, to convey the oil by capillary attraction to the place of combustion. As the oil is consumed and flies off, other oil succeeds, and in this way a continued current of oil and maintenance of the flame are effected. It is certain that the flame afforded by a wick of

rush differs very considerably from that afforded by cotton ; though perhaps this difference may, in a great measure, depend on the relative dimensions of each. And, if we may judge from the different odor that results from extinguishing a candle of each sort, there is some reason to suspect that the decomposition of the oil is not effected precisely in the same manner in each. We have also some obscure accounts of prepared wicks for lamps, which are stated to possess the property of facilitating the combustion of very impure oils, so that they shall burn for many hours without smoke or smell.

In lamps of the most common structure the wick should not be elevated too high above the surface of the oil, for, in that case, the capillary action by which the oil rises between the filaments of the cotton will not be able to raise it to so great a height. If the wick is too little elevated, above the surface of the oil, there will not be a sufficient quaotity of the oil converted into

the gas, whose combustion constitutes the flame, ;uul the flame will be too small.

The access of air is of the first importance in c-very process of combustion. When a lamp is fitted up with a very slender wick, the flame is small, and of a brilliant white color : if the wick be larger, the combustion is less perfect, and the flame is brown : a still larger wick not only exhibits a brown flame, but the lower internal part appears dark, and is occupied by a portion of volatilised matter, which does not become ignited until it has ascended towards the point. When the wick is either very large or very long, part of this matter escapes combustion, and shows itself in the form of coal or smoke. The different intensity of the ignition of flame, according to the greater or less supply of air, is remarkably seen by placing a lamp with a small wick beneath a shade of glass not perfectly closed below, and more or less covered above. While the current of air through the glass shade is perfectly free, the flame is white; but, in proportion as the aperture above is diminished, the flame becomes brown, long, wavering, and smoky ; it instantly recovers its original whiteness, when the opening

is again enlarged. The inconvenience of a thick wick has been long since observed, and attempts made to remove it; in some instances by substituting a number of small wicks instead of a larger; and in others by making the wick flat, instead of cylindrical. The most scientific improvement of this kind, though perhaps less simple than the ordinary purposes of life demand, is the well-known lamp of Argand. In this the wick forms a hollow cylinder or tube, which slides over another tube of metal, so as to afford an adjustment with regard to its length. When this wick is lighted, the flame itself has the figure of a thin tube, to the inner as well as the outer surface of which the air has access from below. And a cylindrical shade of glass serves to keep the flame steady, and in a certain degree to accelerate the current of air. In this very ingenious apparatus many experiments may be made with the greatest facility. The inconvenience of a lone wick, which supplies more oil than the volume of flame is capable of burning, and which consequently emits smoke, is seen at once by raising the wick ; and, on the other hand, the effect of a short wick, which affords a diminutive flame merely for want of a sufficient supply of combustible matter, is observable by the contrary process.

The best form of the Argand lamp is that contrived by Mr. Quarrill, under the name of the sinumbra, or shadpwless lamp. It is represented at fig. 1, plate LAMPS, from which it will be apparent that the oil reservoir is so shaped as to conform with the direction of right lines issuing from the brightest part of the flame, a portion of the light of which is thrown down by a small reflector upon the circular plate of ground glass which fills the lower part of the lamp, and which is surrounded by the oil vessel. The chimney of the lamp is constructed as usual, and the whole is surmounted by a ground-glass light-distributor, so formed as to do away all shadow from any portion of the lamp, and, at the same

time, not to offend the eye by any want of elegance in shape or dimension.

Lighthouses are now generally lighted with Argand lamps ; which have hollow cylindrical wicks placed before reflecting mirrors. Several of these lamps are fixed on a frame, and protected from the weather by glass windows. The lamps of lighthouses are fed with oil, and in some places with pit-coal gas, as in a lighthouse near Trieste.

In many of the light houses on the British coast the frame on which the lamps are fixed is made to revolve by means of clock-work, so that

to a spectator, situated in the circle of which the lighthouse is the centre, the light appears at its brightest at the end of a stated period of time, which is generally one or two minutes. The reVolving of the light enables seamen to distinguish the lighthouse from the light of limekilns or other fires upon the coast. This dictinction is of great importance, for shipwrecks have happened in consequence of mistaking the light of limekilns for the light of a lighthouse. The light is, in some lighthouses, made of a red tinge, to distinguish it from some other lighthouse not far distant. The red color of the light is produced by placing windows of red glass before the lamps. Red is the only color that can be given to the light in this way. When stained glass of other colors is placed before the lamp, it is not found to produce a change in the color of light seen at a distance; the blue or green color of the glass becomes insensible when seen through a great body of air, which has itself a blue color.

The flame in a lamp never consumes the wick, till the wick is exposed to the air by the flame's falling downward ; and from thence it may be inferred, that a way found out to keep the fuel, and consequently the flame, at the same height upon the wick, would make it last a long time. Many ways have been devised to arrive at this important desideratum, but it seems only possible to be done, in any degree of perfection, by reference to hydrostatic pressure. Thus, let a lamp be made two or three inches deep, with a pipe coming from the bottom almost as high as the top of the vessel ; let it be filled so high with water, as to cover the whole of the pipe at the bottom, to the end that the oil may not get in at the pipe, and so be lost. Then let the oil be poured in, so as to fill the Tessel almost to the surface, which must have a cover, pierced with as many holes as there are wicks designed. When the vessel is thus filled, and the wicks are lighted, if water falls in by drops at the pipes, it will always keep the oil at the same height, or very near ; the weight of the water being to that of the oil as 20$ to 19, which in two or three inches makes no great difference. If the water runs faster than the oil wastes, it will only run over at the top of the pipe, and what does not run over will come under the oil, and keep it at the same height.

In the lamp contrived by Mr. Kier, of Kentish Town, the oil is raised to the wick, ami sustained by a column of a solution of salt in water. This liquid, being as we have already stated, of

a greater specific gravity, a column of it counterbalances a taller column of oil. The solution of salt is made of such a specific gravity, that it will support a column of oil four-thirds of its own height. This is nearly the specific gravity of the heaviest saline solution that is known to exist in any great body of natural water, namely, in the Dead Sea ; the weight of the waters of this sea, of distilled water, and of oil, being in the relative proportions of 120, 100, 92. To convey an idea of this lamp, we may suppose a syphon with two uoright branches, and the junction of the branches at the bottom. The shortest branch has a bulb at top. The longest branch has a bulb near its lower extremity. The shortest branch is filled with a solution of salt, whose upper surface is in the superior bulbs. The longer branch contains the oil, and in its upper extremity the wick is placed. In the lower bulb the surface of the oil rests upon the surface of the solution of salt.

The bulbs serve as reservoirs, prolonging the action of the machine ; by means of the bulbs, and the greater specific gravity of the solution, it is effected, that the abstraction of a considerable quantity of oil by the combustion in the wick occasions but a small depression in the upper surface of the solution ; the height of the sustaining column of solution will become shorter in proportion as the column of oil which it counterbalances is consumed ; but this diminution of the height of the column of oil will be slow, and therefore the column of oil will for a considerable time be of sufficient length to reach the wick. Suppose an inverted syphon, of equal diameter throughout, the shorter leg of which contains a column of solution of salt, whose height is seventy-five, and this counterbalances a column of oil whose height is 100, in the longer leg ; if now the column of oil in the longer leg be diminished in height by ten, the counterbalancing column of solution will diminish to 67‘5, being 7-5 shorter than at first. But if the syphon, instead of being of equal diameter, has two dilatations or reservoirs, whose horizontal section is ten times the area of the tube of the syphon, one of the reservoirs being placed at the top of the short branch, so as to contain the upper surface of the solution of salt, and the other at the bottom of the lonpf branch, so as to coatain the surface where the oil rests upon the solution, then, if the same quantity of oil, as in the former example, is taken from the top of the longer leg of the syphon, the column of oil will only fall one-tenth of what it did in the undilated syphon of equal diameter, and the

solution of salt will diminish one-tenth of what it did in the syphon of equal diameter.

Th» oil reservoir and the wick remain stationary, and do not descend as the oil is consumed. This descent takes place in two lamps now to he mentioned, because in these two lamps the oil reservoir swims in liquid that acts as a counterpoise.

In the lamp contrived by the Chevalier Edel-crant/, of Stockholm,ˆ l'le °'l reservoir floats in mercury, and the column of oil is maintained at the requisite height by the counterpoise of a column of mercury ; in proportion as the oil is

consumed, the oil reservoir and the wick which is connected with it jink.

The general structure of this lamp may be understood by conceiving a flask, with a long narrow neck, and enlarged at the under p-*rt. The flask is heavy enough to swim, when it is placed in mercury, with part of its under part immersed. The bottom of the flask is open. The flask, being placed in mercury, is made to float with its neck perpendicular. Oil is poured in at the neck till the flask is full. Then the surface of the mercury at the bottom of the flask and within the flask will be depressed by the weight of the column of oil that rests upon it and the surface of the mercury on the outside of the bulb, or lower part of the flask, will stand higher than the surface of the mercury within the flask. The height which measures the difference of level of the two surfaces of mercury will be the height of a column of mercury 01 equal weight with the column of oil that is in the flask ; and, as mercury is about 14ˆ5 times the weight of oil, the difference of level of the two surfaces of mercury will be ˆ of the height of the oil in the flask. In proportion as oil is abstracted from the upper end of the tube, by the combustion in the wick, the height of the column of oil is thereby diminished, and the two surfaces of mercury will come nearer to each other, the flask sinking a little in the mercury. As the area of the horizontal section of the lower part of the flask is much greater than the area of the section of the neck, and as the specific gravities of mercury and oil are very different, it follows, that, to restore the equilibrium after the abstraction of a column of oil from the neck, the surface of the mercury within the lower part of the flask will rise by a much shorter column.

In the lamp invented by Mr. Barton, comptroller of his majesty's mint,

a solution of salt in water is used as a counterpoise to the oil. The combination consists of a light flask, open at the bottom, floating in a solution of salt, so that, when oil is poured into the flask, the surface of the oil in the neck of the flask stands at a higher level than the surface of the saline solution in which the flask swims. The wick is at the upper end of the neck of the flask, and as the area of the horizontal section of the bulb or lower part of the flask is much greater, suppose twenty times greater, than the area of the section of the neck of the flask, it will happen, that, when a column of oil an inch high is abstracted from the neck of the flask, the height of the rise of the surface of the solution in the bulb or lower part of the flask will be only jjj of an inch

At Paris, oil of rape-seed, and oil of poppy-seed, are clarified for the lamp by filtering through cotton, wool, and other processes. In the south of France and Italy the inferior kind of olive orl is used in lamps, and sometimes the oil of the plant called arachis hypogcrna, or earth-nut. In Italy, lamp-oil has been pressed from the stones of the grape. In Piedmont, walnut-oil is used for lamps. On the eastern and southern coasts of the Mediterranean, and in China, the inferior kind of oil of sesamum. In tropical countries, cocoa-nut oil, which in the temperature of heat of Britain, is solid and white like

tallow. It is burnt in lamps made of the shell of the cocoa-nut, and of bamboo. Much of the oil used in China is obtained by expression from the seeds of tl»e tree called by botanists camellia oleifera, which is extensively cultivated for that purpose, as is the shrub called croton sebiferum, for the solid oil or tallow that the Chinese press from its fruit. Essential oils, extracted from plants by distillation, are top volatile, and, in consequence of their volatility, are too easily inflamed.

The lamp commonly used in rooms at Florence consists of a round reservoir, with four beaks projecting from as many opposite points of its circumference ; through the middle of the reservoir a vertical stalk passes, and on this stalk the lamp may be raised or slid down. The

stalk is fixed in a foot that rests on the table. The whole is made of brass.

A lamp which affords a faint light is made of a waxed wick, an inch long, passed through the centre of a thin round piece of cork, and of a piece of card placed above the cork. Some oil is placed on the surface of water in a glass tumbler, and the cork, with its wick, is laid upon the surface of the oil. This lamp, called a veil-leute, is commonly used in Paris for burning in bedrooms during the night, as rush-lights are in London.

There is a very useful little lamp which is now much employed called the self-generating gas lamp. In this simple apparatus, a small cup is furnished with a tube capable of supplying as much oil as is required for combustion, and the capillary attraction, aided by a small addition of hydrostatic pressure, serves to raise the oil to the surface of the aperture. The best mode of lighting this lamp is to take a piece of small twine, and, having immersed one extremity in the oil, apply it when inflamed to the top of the tube. The moment that this is heated, sufficiently to decompose the oil, flame results. A section of the best form of this lamp is given at fig. 2.

The method of measuring the comparative intensities of light is one of the first requisites in an enquiry concerning the art of illumination. Two methods of considerable accuracy are described in the Traite d'Optique of Bouguer, of which an abridged account is given by Dr. Priestley in his Optics. The first of these two methods has been used by others since that time, and probably before, from its very obvious na-ture, but particularly count Rumford, who has given a description and drawings of an instrument called the photometer, in the Philosophical Transactions for 1794. The principle it is grounded upon is, that if two lights shine upon the same surface at equal obliquities, and an opaque body be interposed, the two shadows it will produce must differ in blackness or in intensity in the same degree. For the shadow formed by intercepting the greater light will be illuminated by the smaller light only, and reversely the other shadow will be illuminated by the greater light. That is to say, in short, the stronger light will be attended with the deeper shadow. But it is easy, by removing the greater light to a greater distance, to render the illumination it produces at the common surface,

equal to that afforded by me less. Experiments of this kind may be conveniently made by fastening a sheet of white paper against the

wall of a room. The two lights or candles, intended to be compared, must then be placed so thaj the ray of light from each shall fall with nearly the same angle of incidence upon the middle of the paper. In this situation, if a book or other object be held to intercept part of the light which would have fallen on the paper, the two shadows may be made to appear as in tig. 3, where A represents the surface illuminated by one of the lights only ; B, the surface illuminated by the other light ; C the perfect shadow from which both lights are excluded. It will easily be understood that the lights about D and E, near the angle F, will fall with equal incidences when the double shadow is made to occupy the middle of the paper : and, consequently, if one or both of the lights be removed directly towards or from the paper, as the appearances may require, until the two shadows at E and D have the same intensity, the quantities of light emitted by each will be as the squares of the distances from the paper.

By experiments of this kind many useful particulars may be shown. Thus, for example, the light of a candle, which is so exceedingly brilliant when first snuffed, is very speedily diminished to one-half, and is usually not more than one-fifth, or one-sixth before the uneasiness of the eye induces us to snuff it. Whence it follows, that, if candles could be made so as not to require snuffing, the average quantity of light afforded by the same quantity of combustible matter would be more than doubled. In the same way, likewise, since the cost and duration of candles, and the consumption of oil in lamps, are easily ascertainable, it may be shown, whether more or less of light is obtained at the same expense during a given time, by burning a number of small candles instead of one of greater thickness.

It is almost unnecessary to describe a thing so universally known as a candle. This article is formed of a consistent oil, which envelops a porous wick of fibrous vegetable matter. The cylindrical form and dimensions of the oil are given either by casting i? in a mould, or by repeatedly dipping the wick into the fused ingredient. Upon comparing a candle with a lamp, two very remarkable particulars are immediately seen. In the first place, the tallow itself, which remains in the unfused state, affords a cup or cavity to hold that portion of melted tallow which is ready to How into the lighted part of the wick. In the second place, the combustion, instead of being confined, as in the lamp, to a certain determinate portion of the fibrous mat-ter, is carried, by a slow succession, through the whole length. Hence arises the greater necessity for frequent snuffing the candle ; and hence also the station of the freezing point of the fat oil becomes of great consequence. For it has been shown that the brilliancy of the flame depends very much on the diameter of the wick being as small as

possible; and this requisite will be most attainable in candles formed of a material that requires, a higher degree of heat to fuse it. The wick of a tkllow candle must be

made thicker in proportion to the greater fusibility of the material, which would otherwise melt the sides of the cup, and run over in streams. The flame will therefore be yellow, smoky, and obscure, except for a short time immediately after snuffing. Tallow melts at 92° of Fahrenheit's thermometer ; spermaceti at 133°; the fatty matter formed of flesh after long immersion in water melts at 1 27° ; the pela of the Chinese at 145°; bees' wax at 142°; and bleached wax at 155°- Two of these materials are well known in the fabrication of candles. Wax in particular does not afford so brilliant a flame as tallow ; but, on account of its less fusibility, the wick can be made smaller; which not only affords the advantage of a clear perfect flame, but from its flexibility it is disposed to turn on one side, and come in contact with the external air, which completely burns the extremity of the wick to white ashes, and thus performs the office of snuffing. We see, therefore, that the important object to society of rendering tallow candles equal to those of wax, does not at all depfend upon the combustibility of the respective materials, but upon a mechanical advantage in the cup, which is afforded by the inferior degree of fusibility in the wax ; and that, to obtain this valuable object, one of the following effects must be produced : either the tallow must be burned in a lamp, to avoid the gradual progression of the flame along the wick ; or some means must be devised to enable the candle to snuff itselt, as the wax candle does ; or, lastly, the tallow itself must be rendered less fusible by some chemical process.

A lamp for burning tallow has been contrived by Mr. Close. Its construction will be best understood by reference to fig. 4. A represents a cup made in the form of a cone ; it contains the tallow, and is supported, with the point downwards, by the thumb-screw i, upon the piece of iron D, which is firmly fixed into the circular wood bottom E. The widest diameter of this cup is about two inches and a

half, and the diameter of a small aperture in the point is rather less than one-eighth part of an inch. This cup must be made of iron, brass, or copper, and the joint on the side closed with hard solder. A circular plate of iron is made to fit the widest diameter, and firmly fixed therein by the sides of the cup being turned over it a little : near one side of this circular plate a circular hole less than one inch in diameter is made, and into it is fixed the ring d, which forms the mouth of the cup, and may be closed with a cork, &c.

ub represents a piece of wire which passes through a hole made in the circular piece, and through the aperture in the point of the cup. This wire is rather more than one-eighth part of an inch in diameter ; it converges near the point, and exactly closes the same aperture when thrust down : it serves to regulate the descent of tallow into the cup B, according to the quantity consumed by the flame : and therefore, when it is required not quite to close the aperture, it is drawn up a little, and a small spring of brass, in the inside of the cup at C, presses against it, and holds it in the place.

The spring passes through the circular plate, and is fixed on the outside by a small screw.

B represents a small cup, in which the tallow is burned : it is about one inch in diameter, and about naif an inch in depth. Into the bottom of this cup is soldered the tube ft which is about two inches and a half long, and slides into the tube g, which is soldered into the bottom of the cup c.

e represents a piece of bent wire, which supports the wick of the lamp. The ends of this piece of wire are thrust into a piece of soft wood, fitted into the tube f. Another tube, represented by h, is soldered to one side of the cup B, above the brim : the use of this tube is to contain a quantity of clean wick, and to serve for a handle to lift the tube f out of the socket g when the lamp is to be lighted.

C represents a cup to receive any tallow that may chance to run over the sides of the cup B. It is rather more than one inch deep, and two inches in diameter.

Lastly, by the help of the thumb screws i, i, the height of the cups B, C, and A, and the distance between B and A, may be regulated at pleasure.

A wick of cotton being put into the tube A, and brought through the

ring e ; a quantity of tallow put into the conical cup ; and the small cup filled with melted tallow ; the lamp may be lighted : if the point of the cup A be raised two or three inches above the brim of the cup B, and the air in the room at rest, the tallow in the cup A will be fused in a few minutes, and if the wire a b be properly adjusted, a constant supply of tallow will drop to the flame.

Small particles of dust and other impurities in the tallow sometimes impede the drops, but the light continues undiminished, until all the tallow in the little cup is consumed, and the cup is then easily filled again by holding up the wire, after which the drops must be regulated again. To lessen this inconvenience as much as possible, nothing but clean tallow, or hog's lard, must be burned. Tallow and hog's lard will burn with a very clear bright flame, of the same intensity, for a long time.

The small cup, when detached from the rest of the apparatus, will supply the different uses of a candle : it may be carried about by the tube ft, or occasionally placed with the tubeˆin a small wooden stand. The tallow is not very liable to be spilled.

Every time before the lamp is lighted, a new portion of wick must be drawn through the ring. This is not easily effected when the tallow is cold ; therefore to avoid this trouble, it is the best method always to draw up the wick immediately before the flame is extinguished ; for which purpose, a small forceps, made of one piece of bended iron, will be most convenient.

Lastly, it may be necessary to remark, that after the lamp is lighted, when the tallow in both cups is cold, the tallow in the small cup must be broken and stirred up, that a sufficient quantity may be fused immediately to supply the flame ; and, the sooner to fuse the tallow in the conical cup, the flame should be raised near to its point,

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LAM l\s

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and when there is a strong current of air in the room, in that situation it ought to remain.

The hydro-pneumatic lamp must now be noticed. The discovery of professor Dobereiner, of the ignition of spongy platinum by hydrogen, naturally led to its application as a means of affording an instantaneous light-giving machine. Different instruments have accordingly been constructed for this purpose ; the first of which was that some time ago recommended by Gay Lus-sac, for keeping a store of hydrogen, and improved by Mr. Garden of London. It is, however, expensive, and not easily managed by those not accustomed to the use of chemical apparatus.

Another has been invented by Mr. Adie, which, though much less complicated, may, by many, be considered also as too expensive. The one contrived by Dr. Fyfe, combines the advantages of simplicity, cheapness, and facility of management, while it answers the purpose equally well with those above mentioned.

It consists merely of a bent glass-tube ABC fig. 5, the internal diameter of which is nearly an inch. It is open at both ends ; fixed into a •wooden stand B. The short limb, C, is five, and the long one, A, eight inches in length. To the jnouth C there is ground a glass-tube, to which is fixed a stop-cock D. At E there is a brass ring fitted closely to the tube, and from which there proceeds a piece of brass, to which the spongy platinum F is fixed by very fine wire.

As the platinum loses its power of ignition by exposure to air, or rather requires a large supply of hydrogen, Dr. Fyfe has it covered with a cap, represented by K, and which is ground accurately on the cylinder L. When the lamp is required for use, a piece of zinc is put into the short limb as at G, and which is prevented from coming

nearer than about an inch from the bending, by a tube of glass as at H. Diluted sulphuric acid is then poured in, so as to fill, as far up as I, after which the stopper and stop-cock are introduced. By the action of the acid on the metal hydrogen is generated, which fills the short limb, and raises the fluid in the opposite one : and, the production of gas ceasing when the acid gets below the zinc, there is thus always a supply of gas subjected to the pressure of a column of fluid of from six to seven inches. When the stop-cock, therefore, is opened, the hydrogen is propelled against the platinum ; the fluid falls into the short limb ; and, as the zinc is thus again surrounded by acid, more gas is generated to serve for the next time. The distance of the platinum depends on the size of the bore of the stop-cock ; but, as the ring E is moveable, it can be easily adjusted.

The apparatus described contains only about a cubic inch of gas ; but Dr. Fyfe found it sufficient for affording a light; for, though it does not ignite the platinum long enough to kindle the gas, yet there is sufficient heat to set fire to a sulphuric match. The moment, then, that the platinum becomes red-hot, a small sulphuric match must be applied to it. The only circumstance to be attended to is to allow the match to remain ignited for a few seconds, with a view of driving off any sulphur that may be left adhering, VOL. XII.

and which prevents the ignition when the fr-is is again impelled on it.

The merit of that very ingenious and mos* useful contrivance the safety lamp is wholly due to Sir Humphry Davy. After having made many experiments for the purpose of forming a lamp to give light in coal mines affected with fire-damp, without occasioning explosions which frequently prove fatal to the miners, he found that wire-gauze of which the apertures occupy more space than the cooling or radiating surface of the wire, so as to be permeable to air and light, offered a perfect barrier against explosion ; because, although the gas was inflamed within the enclosures formed by the wire gauze, yet, the heat being communicated to the numerous surfaces of the wire, the gas on the outeide of the wire enclosure was not inflamed. Wire gauze is the best material for safety lamps, as it affords the greatest extent of radiating surface, and, by cooling, prevents all explosions that require a temperature higher than the temperature of the atmosphere. An example of the radiating and cooling action of wire is seen in the fire guards of wire, which are hung upon the ribs of fire places in rooms to prevent sparks from being thrown into the room. These fire-guards, although they are very near the fire, do not become hot. The apertures

of the wire gauze must be smaller, and the wire which is the radiating and cooling surface, must be in greater quantity ; in proportion as the gas in which the lamp is to be used is more inflammable. The fire-damp in coal-mines is in almost all cases carbureted hydrogen ; and, for excluding explosion from a lamp in that gas, it is found that the wire gauze should contain 784 apertures in a square inch.

The wire gauze should be of iron or copper. Fine brass wire is improper, because it is too easily combustible by reason of the zinc it contains. The iron wire should not be tinned, tin being too easily combustible. The body of the lamp should be of copper riveted together, or of massy cast-brass or cast-iron. The screws should fit tight; no aperture, however small, should be suffered to exist in the body of the lamp; and the trimming wire should move through a long tight tube.

LAMPA, a district in the intendancy of Cuzco, Peru, commencing thirty leagues south from Cuzco, and stretching among the mountains between thirty and forty leagues. It is bounded by the chain of Vilcomoto, which separates it from Asangara, in the kingdom of 1'lata on the east. Its cli.nate is cold, producing little else than pasturage.

LAMP iDARY, an officer in the ancient church of Constantinople, so called from his employment, which was to take care of the lamps, and to carry a taper before the emperor or patriarch when they went to church or in procession.

LAMPEDOSA, a pleasant and fertile, but uninhabited island of the Mediterranean, between the coast of Tunis and Malta, about twenty miles in circumference. There is a church on it ; but the place is said to have been abandoned on account of the spectres who haunted it. In the discussions respecting Malta

in 1803, which occasioned the late war, there was a question of this little island, and Buonaparte actually proposed that it should become a British settlement, on condition that Malta were surrendered to the king of Naples, to become eventu-ally a French settlement. Lampedosa is seventy miles W. S.W. of Malta, and sixty-one from the Barbary coast. Long. 12° 20* E., lat. 35° 40' N. Lampedosa is well watered, level, and fertile. On the north coast it is inaccessible, and has no anchorage on the south ; a bank runs off to a considerable distance, and on this side is a noble bay, sheltered from all but south and south-west winds. Depth sixteen to eighteen fathoms, and the bottom fine sand. At its head is a creek, whose entrance is ninety fathoms broad, and running half a mile into the island. It is capable at a little expense of making an excellent harbour. The depth in the entrance is fifteen fathoms, decreasing gradually to the head, where is one fathom close to the shore. On the west side of the creek, about half way up, a projecting point forms a little cove, in which small vessels may anchor perfectly sheltered from the S. S.W. wind, which blows right up the creek, and makes a considerable swell. On the same side below this point is another cove entirely landlocked, but with only three to five feet water, the bottom soft sand. This cove "might easily be deepened and considerably enlarged, the land surrounding it being low, and composed of sand and clay. The bay is occasionally visited by the Maltese vessels, as well as the Barbary cruisers. «Ships from Turkey, having the plague on board, also run for this island, and remain until the malady has ceased, when they return to the port of Turkey they sailed from, to receive a fresh clearance and bill of health ; by this means they save both ship and cargo, which would be burnt were they to go into any European port. The island has the ruins of a castle and town : a league from the W. S.W. point is a rock with a safe channel between them, and four leagues from the same point is the island of Lampion, a high round uninhabited rock.

LAMPIC ACID, acidum lampsicum, from Gr. Xa/i7rw, to shine. Sir H. Davy, during his admirable researches on the nature and properties of flame, announced the singular fact, that combustible bodies might be made to pombine rapidly with oxygen, at temperatures below what were necessary to their visible inflammation. Among the phenomena resulting from these new combinations, he remarked the production of a peculiar acid and pungent vapor from the slow combustion of ether ; and from its obvious qualities he was led to suspect, that it might be a product yet new to the chemical catalogue. Faraday, in the third volume of the Journal of Science and the Arts, has given some account of the properties of this new acid ; but, from the very small quantities

in which he was able to collect it, was prevented from performing any decisive experiments upon it.

In the sixth volume of the same Journal we have a pretty copious investigation of the properties and compounds of this new acicl, by Daniell. From the slow combustion of ether during six

weeks, by means of a coil of platma wire sitiinjv on the cotton wick of the lamp, he condensed with the head of an alembic, whose beak was inserted in a receiver, a pint and a half of the lam-pic acid liquor.

When first collected it is a colorless fluid of an intensely sour taste, and pungent odor. Its vapor, when heated, is extremely irritating and disagreeable; and, when received into the lungs, produces an oppression at the chest very much resembling the effect of chlorine. Its specific gravity varies according to the care with which it has been prepared, from less than 1-000 to 1 '008. It may be purified by careful evaporation ; and it is worthy of remark, that the vapor which rises from it is that of alcohol, with which it is slightly contaminated, and not of ether. Thus rectified, its specific gravity is 1-015. It reddens vegetable blues, and decomposes all the earthy and alkaline carbonates.

LAM PONG, a district of the southern extremity of the island of Sumatra, beginning on the west coast, at the river of Padanguchi, and extending across as far as Palembang, on the north-east side. On the south and east sides it is washed by the sea, having several ports in the straits of Sunda, particularly Keysers and Lam-pong bays ; and the great river Tulangbawang runs through the heart of it, rising from a considerable lake between the ranges of mountains. The land in the neighbourhood of the rivers is overflowed during the rainy season, and the villages appear like islands. Here is a wide and deep bay, affording good anchorage. See SU-MATRA.

LAMPOON', n. s. & v. a.) Fr. lampen ;

LAMPOONER. S Lat. lambo, the

tongue. Slander ; personal satire.

They say my talent is satire ; if so it is a fruitfu 1 age ; they have sown the dragon's teeth themselves, and it is but just they should reap each other in lampoons. Druden.

We are naturally displeased with an unknown critick, as the ladies are with a lampooner, because we are bitten in the dark. Id.

The squibs are those who are called libellers, lampooners, and pamphleteers. Taller.

The world is so full of ill nature, that I have lampoons sent me by people who cannot spell, and satires composed by those who scarce know how to write. Spectator.

Lampoons and satires, that are written with wit and spirit, are like poisoned darts, which not only inflict a wound, but make it incurable. Addison.

Make satire a lampoon. Pope.

Satires and lampoons on particular people circulate more by giving copies in confidence to the friends of the parties, than by printing them. Sheridan,

LAM'PREY, n.s.) Fr. lamproye ; Bel?.

LAM'PRON. S and Dut. lampreye, both

of Lat. lampetra (a lambendis peiris, from its sucking stones). A kind of fish.

Many fish much like the eel frequent both the sea and fresh rivers ; as the lamprel, lamprey, and lam-perne. Waltun.

These rocks are frequented by lamproons, and greater fishes, that devour the bodies of the drowned.

Broome on the Odyssry.

LAMPREY. See PETROMYZON.

LANARK.

TAMPRIDIUS (TElius), a Latin historian, who lived under Dioclesian and Constantine the (iivnt. His lives of four emperors, Antoninus, Commodus, Diaduraenus, and Heliogabalus, are extant. Some attribute the life of Alexand r Severus to him ; but the MS. in the Palatine library ascribes it to Spartian.

LAMPRIDIUS (Benedict), of Cremona, a celebrated Latin poet of the sixteenth century. He taught Greek and Latin at Rome and Padua, until he was invited to Mantua, by Frederic Gonzaga, to undertake the tuition of his son. His epigrams and lyric verses, in Greek and Latin, were printed separately, as well as among the Deliciae of the Italian poets.

LAMPSACUM, or LAMPSACUS, in ancient geography, a considerable city of Mysia ; called Pilyea by Homer, because abounding in pine-trees, a circumstance confirmed by Pliny ; situated at the north end or entrance of the Hellespont into the Propontis, with a commodious harbour, opposite to Callipolis in the Thracian Chersonesus. It was assigned by Artaxerxes to Themistocles, for furnishing his table with wine, in which the country abounded. It was saved, by the address of Anaximenes the historian, from the ruin threatened by Alexander, because in the interest of Persia. See ANAXIMENES. It is now called Lampsaki.

LAMPYRIS, the fire fly, a genus of insects belonging to the coleoptera order ; the characters of which are : — The antennae are filiform ; the ely-tra are flexible ; the thorax is flat, of a semior-bicular form, surrounding and concealing the head. The segments of the abdomen terminate in papilla?, which are turned up towards the elytra, and partly fold one over the other. The females in general are apterous. Ihere are several species ; of which the most remarkable is the L. noctiluca. The male of this insect is less than the female : its head is shaped exactly in the same manner, and covered likewise by the plate of the thorax, only it appears rather longer than that of the female. Both the head and antennae are black. The thorax of the male, which is smaller and shorter than that of the female, has the folds and papillae on its sides much less remarkable : but the greatest difference between (he two sexes is, that the male is covered with brown elytra, shagreened, and marked with two lines longitudi nally. The elytra are longer than the abdomen, and under them lie the wings. The two last rings of the abdomen are not so bright as those of the female, only there appear four luminous points, two upon each of the two last rings. The glow-worm, which is frequently met with towards evening, in June, in woods and meadows, is the female of this species. By the shining light which it emits, it attracts the male. As a proof that the

light depends on a phosphorous matter, the animal, though dead and bruised, leaves a luminous substance on the hand, that only loses its lustre when dried. The perfect insect flies about during the evening in autumn, and frequents the grassy plantations of juniper trees.

LAMY, or LAMI (Bernard), a learned French protestant and Cartesian philosopher, born at Mans in 1640. He studied there under the fathers of the oratory ; and, in 1658, went to

Paris, and entered into the institution. He be-came priest in i6G7, and taught philosophy at Saumur and Angiers; which last he was obliged to quit by an order from court, having adopted the new philosophy instead of that of Aristotle. In 1676 he went to Grenoble, where cardinal Camus was bishop ; who conceived such an es-teem for him that he retained him, and derived considerable services from him in the government of his diocese. He went at last to reside at Rouen, where he died, in 1715. He wrote a Dissertation on the Sciences; The Art of Speaking; and several other scientific works, besides others in divinity.

LANA (Francis de), an Italian mathematician, and the first who suggested the inflation of bal-loons, was born at Brescia in 1637. He became a Jesuit, and was celebrated as a teacher of mathematics. He published in 1670 a work, under the title of Prodromo all' arte Maestra; of which another edition appeared in 1684, under the title of Magisterium Naturs et Artis, 3 vols. folio. In this production he first gave the hint of the principle of exploring the air by the aid of machines inflated with gas ; and, in 1 784, his treatment of this subject was printed separately at Naples. He died about 1700.

LANARK, or LANARKSHIRE, a county of Scotland, called also Clydesdale, from the Clyde, by which it is watered ; though this name belongs properly only to the southern district of Lanarkshire. See CLYDESDALE. It is bounded on the north by Dumbartonshire and Stirling; east by Edinburgh, Linglithlow, and Peebles ; on the south by Dumfries ; and on the west by Ayr and Renfrew shires. Its extent from north to south is about forty-eight miles, and from east to west thirty-two. It is said to contain 870 square miles, or 556,800 English acres. The Clyde, descending from the south part of this county, divides it naturally into two almost equal parts ; and after a course of about fifty miles meets the tide a little below Glasgow. See GLASGOW. It is also divided into three wards ; the Upper in which Lanark is situated, and which contains two-thirds of the county ; the Middle, containing the

town of Hamilton ; and the Lower in which Glasgow is situated. It is asa whole mountainous, and one-half of the area it contains is incapable of productive cultivation. The parishes are forty-seven in number, eleven of which belong to the presbytery of Lanark, fourteen to that of Hamilton, and thirteen to that of Glasgow, all in the Synod of Glasgow and Ayr; and nine to the Presbytery of Biggar, in the Synod of Lothian and Tweeddale.

Proceeding up the river, from Glasgow, the country is rich and well cultivated. Botliwell Castle here stands on an eminence, which overlooks the Clyde. Some of its walls measure fifteen feet in thickness and sixty feet in height. Between it and the priory of Blantyre on the opposite side of the Clyde, there is said to have been in ancient times a. subterraneous passage under the river. A little above stands Bothwell Bridge, celebrated for the defeat of the Cove-nanters, in June 1769. East from Bothwell Castle, in an elevated situation, and amid a wild and barren country, is the Kirk of Shots.

This dreary waste is covered with heath ; and, though a high situation, is flat, and very marshy. It is chiefly employed as sheep-walks; and, not-svithstanding the vicinity of coal and lime, seems scarcely capable of cultivation. This want is, however, compensated by the abundance of ironstone and coal. Nor is this advantage confined to the barren tract in the north-east corner of the shire. The whole county abounds with these valuable minerals. One of the most considerable iron-works in the county is that of Cleugh, a few miles south-east from the Kirk of Shots. The Clyde near this place runs for several miles between high rocks covered with wood ; and in its course exhibits many beautiful cataracts. See CLYDE.

From Lanark, passing Carstairs a few miles to the east, we meet the town of Carnwath. In this neighbourhood, and along the Clyde to the south-east, there is much cultivation and rich pasture. To the south of Carnwath is Biggar ; where is seen the ruin of a collegiate church,

founded in 1545. The lands about Coulter and Lumington are fertile ; but farther up the Clyde we principally meet with sheep-walks and pasture grounds. In the south part of the shire, called Clydesdale, the country is not less wild. Among the mountains here, or rather in a hollow near their summit, we meet with the village of Leadhills ; and the famous lead mines of the earl of Hopetown. Gold it is said was discovered in this region in the reign of James III. North from this mountainous region lies Crawfordmuir.

About nine miles north of Leadhills, on the east side of the Douglas, which falls into the Clyde a few miles below, stands Douglas Castle, for many ages the residence of the second family in Scotland ; and near it is the town of Douglas. A few miles to the north-east is Tinto, a remarkable conic mountain, round the base of which the Clyde makes a noble sweep. Westward, beyond Douglas, the Netham descends into the Clyde through the parish of Lismahago. Hamilton House, the seat of the duke of Hamilton, stands in a plain between the Clyde and Avon. It is a magnificent structure, surrounded by venerable oaks. In the vicinity is the town of Hamilton, and at a little distance an elegant appendage to it, called Cha-telherault, from the ancient lordship held here by the family in France. On the west of Hamilton is the town of Kilbride ; and to the south that of Strathaven, surrounded by the fertile tract from which it derives its name. The mountains of Lanarkshire sometimes reach an elevation of 3000 feet, as in the upper ward on the borders of Dumfries: and Leadhills is 1564 feet above the level of the sea: the only large plains are along the banks of the Clyde. The rock formations are sandstone, and limestone, and on the high grounds argillaceous schistus, prevails. In the Cathkin hills a number of Ixisaltic columns are found, more than forty feet high, inclined at an angle of about 70.°

The most important mineral production of this county is coal, winch is calculated to stretch Ih rough between 60,000 and 70,000 acres at an ge thickness of five feet. The cannel or

candle coal, so called from the abundance of gas or inflammable matter it contains, is much used by the lower classes for its light.

Western and south-western winds blow here through the greater part of the year, and the atmosphere is generally humid; so that the harvests are late : but the county is not thought unhealthy, and neither snow nor frosts are of long duration.

The farms are not large, and the dairy is a chief object of agriculture. In the Middle and Lower wards a great number of cows are kept, the milk of which is wholly applied to the making of butter, new milk, and skim milk, cheese. This county has also long been noted for its draught horses.

The fruit trees are apples, pears, and plums : 300 acres were supposed to be laid out in orchards twenty years ago; and their extent is rather increased of late than diminished. Many new plantations of timber trees are forming. ‘ A kind of Jewish abhorrence of swine’, we are told in the Agricultural Surveys, ‘ seems to have taken place, about the rigid times of the Reformation, in the western counties of Scotland. They were unclean beasts; it was sinful to eat their flesh, and neither creditable nor profitable to keep them. And, though these prejudices are now pretty much worn out, pork is not yet, in general, a favorite food, and, of course, the number of hogs kept and fed is not considerable.

The roads, once intolerably bad, are much improved of late years: and the river Clyde is connected with some of the finest specimens of our INLAND NAVIGATION : see our article of that name, for a description of the Forth and Clyde Canal. The county contains also the Monkland Canal, from the .coal works in that parish, to the Forth and Clyde at Port Dundas ; and the Ardrossan Canal, which from Port Eglinton, near Glasgow, to Ardrossan, on the coast of Ayrshire, will measure thirty-three miles. The county has a corresponding agricultural society of considerable repute.

The greater part of the inhabitants are engaged in the cotton manufactures, the iron or the coal works : each considerable establishment having its adjacent village occupied by the workmen. At New Lanark is the well known cotton spinning manufactory, lately conducted by Mr. Owen. The county returns one mem-ber to the imperial parliament. Glasgow, by the regulation of the reform bill, has the privilege of sending two; and Lanark shares in the franchise with Linlithgow, Falkirk, Aindrie, and Hamilton. The county formerly sent two representatives; and Glasgow contributes with Kuth-erglen and other places.

LANCASHIRE. Mr. Whitaker conjectures that the aboriginal inhabitants of this district were the Setanii mentioned by Ptolemy. This appellation he conjectures to signify the ‘ country of water,’ or ‘ the interior and southerly country of water.’ The Romans found this part of the country occupied by the people whom they afterwards called Brigantes, who possessed a tract of country extending from the

of the Humber to that of the Tyne on the eastern coast ; and from the estuary of the Mersey to the Eden on the western coast. On their conquest of the island, Lancashire was made part of the division named Maxima Caesariensis. After the establishment of the Saxons, this county was incorporated with the kingdom of Northumberland; and so it remained till the time of Egbert and his union of all the Saxon states.

Lancashire is a maritime county, bounded on the south by Cheshire; on the east by Yorkshire ; on the north by Westmoreland ; and on the west by the Irish Sea. Its form resembles that of England and Scotland collectively ; the populous town of Manchester standing in the same relative situation as that of London in the maps of this island, while Liverpool may be well imagined to approach the Land's End in Cornwall, lying nearly in the same comparative situation as the south-eastern borders of Devonshire. The county town, Lancaster, lies nearly •n the same situation, with respect to the north-eastern coast of the Irish Sea, as does the county itself in the general map with respect to the ame sea; or rather it may be supposed that Lancaster occupies the place of Carlisle in Cumberland. According to Mr. Yates's survey, the greatest length of this county is seventy-four miles, and the greatest breadth forty-four miles and a half. Passing over the river Ribble, at Nesketh bank, its circumference is about 342 miles, containing 1765 square miles, and 1,129,600 acres. Here are six hundreds, twenty-seven market-towns, sixty-two extensive parishes, and 894 villages. This county is in the diocese of Chester and the province of York, and is included in the northern circuit. In point of importance, in almost every light in which it can be viewed, there is not another county equal to it, Middlesex alone excepted ; and even that, exclusive of Londonˆ and Westminster, bears but a very trifling comparison with the county of Lancaster. With the exception of London and Yorkshire, the population will be found to average the amount of four counties.

The climate of this county is distinguished for its humidity, owing, no

doubt, to its local situation, between the Irish Sea, and the range of hills which form its eastern border. According to a Liverpool register, the least quantity of nun yearly, from 1784 to 1792, was twenty-four inches and one-eighth in 1788, and the greatest fifty-four and a quarter in 1792. At Lancaster, in the latter year, the quantity of rain was sixty-six inches. Four inches nave been known to fall in the course of a night. The mean heat at Lancaster, from 1784 to 1790, was 51° 8'. In 1819-20, when the thermometer in gardens near London fell 10° below Zero, in the botanic garden of Liverpool it never touched that point. The eastern side is more subject to rains than the side bordering on the coast; for, as the clouds are wafted over the Irish Sea from the Atlantic Ocean, they are first checked and broken by the mountainous ridge, which has a direction north and south; and thence the rains are almost continually on the western side of

those intercepting eminences. It is, however, said that this ridge of mountains, which bounds this county on the eastern side next Yorkshire, and which runs through not only Yorkshire, but Cheshire, Derbyshire, and Staffordshire, and is called tin back bone of the kingdom, being the most elevated ground in the island, screens Lancashire more particularly from the severe eastern blasts, the frosts, blights, and insects, which infest the counties bordering on the German Ocean ; and, though the high mountains may cause a greater quantity of rain to fall in this district than in the interior parts of the kingdom, yet this county, fanned by the western breezes, has a salubrity of air to which may be attributed the vigor and activity of the inhabitants, who are, if temperate, generally long lived. The prevailing winds are from the south, south-west, and north-east.

Mr. Britton, on the authority of Mr. Holt's Agricultural Survey, remarks, that the soil and surface of this county are various ; and that its features in some parts, towards the north, and all along its eastern border, are strongly marked. Here the hills are bold and lofty, and the valleys narrow and irriguous. Near the sea-coast, and nearly the whole of the southern side of the county, following the course of the river Mersey, the land is low and flat. In various fields, at Formby, near the shore, there is soil above two feet below the sand, which lies between the present green-sward ; and there are the strongest reasons for believing, that this soil (which is about four inches thick), originally formed the surface of the ground, and was gradually buried by sand from the neighbouring hills. Few counties produce greater variety ; and yet this does not change so rapidly as in some others. The greatest proportion of that district which lies between the river Ribble and the

river Mersey, has for its superficies a sandy loam, well adapted to the production of almost every vegetable that has yet been brought under cultivation, and that to a degree which renders it impossible to estimate the advantage which mighi be obtained by improved and superior management. The substratum of this soil is generally the red-rock, or clay-marie, an admirable sandy loam, perhaps one of the most desirable soils that can be found. The quantity of moss-lands has been very great in this county, but they are rapidly declining. Chat-Moss, Trafford-Moss, Risely-Moss, and Pilling-Moss, are all extensive tracts ; but some of these have now become, for a large portion, fine meadow land, owing in a great degree to the laudable and patriotic exertions of his grace the duke of Bridgewater, and Mr. Roscoe, of Liverpool.

Its principal minerals are copper, lead, iron, and coal. The last is in the greatest abundance. The great tract commences below Prescot on the south, and, crossing the county in a north-east direction, passes into Yorkshire; but coal abounds to the south-east of this district near Manchester, and to the north beyond Lancaster. It is chiefly of a bituminous description. Cau-nel coal is found at Wigan, and often in contact with black coal. Copper appears towards tr* northern extremity of the high Furness, or Ftil

district, at Coniston, Muckle Gill, and Hartriggs. Towards the north and north-east parts, lead is met with in small quantities. Iron is wrought in the liberty of Furness to the north of Lancaster sands, and though found in other quarters the working of it has not been profitable. In the northern parts of the liberty, blue slate quarries have been opened. Sandstone and limestone are also wrought here, and on the Lancaster side.

This county is amply supplied with water. The principal rivers are the Irwell, the Mersey, die Douglas, the Kibble, the Calders, the Wyer, and the Lune, besides numerous smaller streams. Few counties are so materially benefited by the conveniences of inland navigation. The Sankey Canal, the oldest canal in England, originated with a company of merchants and gentlemen in 1755, who obtained an act of

Parliament, authorising them to make Sankey Brook navigable from the river Mersey, which it joins about two miles west of Warrington, to near St. Helen's. It has proved one of the most profitable concerns of the kind in the kingdom. The Ashton-under-Line Canal communicates between Manchester and the town of Ashton. It commences on the east side of Manchester; and, passing the pleasing little Moravian settlement at Fairfield, enters a long tunnel at Ashton, in front of Duckenfield lodge, near which it is joined by the Peak Forest Canal, a branch having previously broken off at Fairfield, leading to New Mills, near Oldham. The whole length of the canal is eleven miles, with a rise of 152 feet. The duke of Bridge water's canal, though belonging more particularly to the county of Cheshire, has a branch which exclusively belongs to this county. This commences at Castle Field, Manchester, and terminates at Pen-nington, near the ancient town of Leigh, in Atherton parish. At Manchester there is a communication with the Mersey and Irwell navigation, and Manchester, Bolton, and Bury Canal, by means of Medlock Brook. Under the town of Manchester are arched tunnels for a portion of this canal, of considerable length, from one of which coals are hoisted up by a coal-gin, through a shaft, out of the barges bejow into a large coal-yard or storehouse, in the main street ; at which place the duke and his successors are by the first act bound to supply the inhabitants of Manchester at all times with coals at only 4rf. per hundred weight of 140 Ibs. At Worsley is the entrance into the famous under-ground works or tunnels, where, by an arch-way, partly bricked, and partly formed by the solid rock, wide enough to admit long flat-bot- tomed boats often to twelre tons burden, towed by means of rings and hand-rails on each side, the canal penetrates about three quarters of a mile before it reaches the first coal-works, where it divides into two branches, to the right and left. There are at certain distances shafts or funnels perpendicular to the surface, for the circulation of air, &c. To Mr. James Brindley the inhabitants of Manchester are principally indebted for the original successful execution of this navigation. But see our article INLAND NAVIGATION

Lancashire does not rank high as an agricui tural county. Arable land is less prevalent than grass; but great attention has been paid to the culture of potatoes, both by farmers and cottagers ; the former generally cultivate them in drills, and horse hoed ; the latter in beds or dibbled in rows and hand hoed. In this county potatoes first appeared in England. Onions are cultivated extensively near Warrington, and rhubarb and madder have been tried, and grown to very great perfection, but are not so easily dried and prepared for sale,

as to induce a continuance of the practice.

The grass lands are chiefly coarse upland pastures, but there are some good meadows and productive marsh lands. There are excellent market gardens of course near the large towns. ‘ About eight miles north-east from Liverpool is a certain farm in Kirkby, the soil of a small part of which is a black loamy sand, and which produces great quantities of early and strong aspa-ragus, and another farm, a part of which is of the same nature, at a place called Orrel, about four miles north-west of Liverpool: both which produce this plant with less attention and less dung than are requisite in the rich vale of Kirkdale, about two miles from Liverpool, where the greatest quantity of land in any place of this neighbourhood is appropriated solely to horticulture.’ There is an orchard of sixty-four acres on the banks of the Irwell, near Manchester, and some others in sheltered places near the principal towns ; but the prevailing west wind are much against their increase. The long-horned or Lancashire breed of cattle is distinguished by the length of their horns, the thickness and firm texture of the hides, the length and closeness of the hair,, the large size of the hoofs, and their coarse, leathery, thick necks : they are likewise deeper in their fore-quarters, and lighter in their hind quarters than most other breeds ; narrower in their shape, less in point of weight than the short horns, though better weighers in proportion to their size ; and, though they give considerably less milk, it is said to afford more cream in proportion to its quantity. They are more varied in their color than any of the other breeds ; but, whatever the color be, they have in general a white streak along their back, which the breeders term finched, and mostly a white spot on the inside of the hough.

Lancashire is a county palatine, of which the king is duke. It returns twenty-four members to parliament; four for the county, two for each of the places following, *viz.* : Lancaster, Preston, Wigan, Liverpool, Manchester, Bolton, Blackburn, Oldham : one each for the following places, namely, Clitheroe, Ashton - under - Lyne, Bury, Rochdale, Salford, and Warrington. It has given birth to Robert Ainsworth, lexicographer, born at Clifton in the parish of Eccles 1660, died 1745. — Wm. Allan, Alen, or Aleyn, Cardinal Rossal, born 1532, died 1594. — Thomas Barnes, D. D., Protestant dissenting minister, born at Wa’rington, 1747, died 1810. — Richard Arkwrighf, spinner, born at Preston, 1732, died 1792. — J. Bradshaw, the regicide judge, born near Bolton — The pious and ingenious poet and stenographer JohnByrom,

born at Kersal in the year 1691, diea 1763. — Kev. Dr. Edward IIur \vnod,anexcellentclassical scholar, born 1729, died January 14th 1794.— Jeremiah Horrox, a memorable astronomer, born 1619, died 1641, who first observed the transit of Venus over the sun's disk. — Dr. John Leland, author of A View of Deistical Writers, &c., born at Wigan, 1691, died January 21st, 1766. — I)r. Thomas Perceval, an eminent physician and medical and miscellaneous writer, born at Warrington 1740, and died at Manchester, August 30th 1804. — George Romney, a celebrated] > ai nter, born at Dal ton in Furness, December 15th, 1734, died at Kendal, November 15th, 1802. — Edwin Sandys, archbishop of York, born 1519, died 1588. — Dr. John Taylor, author of the Hebrew and English Concordance, and Key to the Apostolic Writings prefixed to a Paraphrase on the Romans, &c., a dissenting minister, born at Lancaster, 1694, died 1761. — Rev. John Whitaker, the celebrated historian of Manchester, &c., born at Manchester about 1735, died 1808.

Manchester is the great centre of the cotton trade. Its rr arket on Tuesday exhibits a scene but little inferior to the bustle of the Royal Exchange at London. Here merchants from all parts of the country flock for the purpose of buying and selling cotton goods of every description, cotton, twist, weft, yarn, and wool. Bolton is the ancient and great mart for these goods, particularly for cambric and fancy muslins. Spinning is also carried on here to an almost incredible extent. The whole commercial world has rung with the praises of the late Sir Richard Arkwright, whose invention of the water machine, &c., has certainly given an impulse to manufactures, to which they were before entirely strangers ; and which has since been universally aided by the application of steam. But for that fine and compact article called mule yarn, of which are manufactured all those beautiful cot-ton goods called jacconetts, bucks, gauzes, and other fine Scotch fabrics and cambrics ; also Sll fine cottons, laces, and threads, the commercial world is wholly indebted to the persevering higenuity of

Mr. Samuel Crompton, who first invented the machines called Hall-i'-th'- Wood-Wheels, or Mules. Parliament, above thirty years after the discovery, granted to Mr. Crompton the sum of £5000, clear of all fees, though, in the opinion of most persons, an an-nual pension to that amount would hardly have been a compensation adequate to the merits of Mr. Crompton's services. The neighbourhood of Bolton abounds with extensive factories, bleachin? grounds, &c. Chowbent, five miles west of Bolton, is a thriving village, where formerly larsre quantities of nails were manufactured for the navy, and for domestic uses. The trade is still carried on, but the cotton trade has taken the lead. Wigan has long been celebrated for its brass and copper manufactures ; but here also the cotton and linen weaving has gained a considerable ascendancy. At Preston the cotton business is very extensive, as also at Blackburn, Chorley, Ashton, Newton, &c. The woollen and cotton businesses are carried on at Bury, a handsome town of considerable extent ; and at

Prescot the finest tools are made for the use of watchmakers: the manufacturers there seem to inherit a peculiar method of cutting files. Liverpool, as a commercial seaport, is second only to London ; the abolition of the Slave Trade had a partial effect on the trade of this town ; but, as Mr. Roscoe has well said, ' A crime was never necessary in the course of human affairs.'

LANCASTER, a market and seaport town, the capital of the county of Lancashire, is situated on the banks of the Layne or Lune, and appears to have been originally a Roman station. . Cam-den says its Roman name was Longovicum, and Mr. Whitaker thinns it the Ad-Alaunum of Richard of Cirencester. For an account of various Roman remains that have been discovered here, the reader may consult Mr. Leigh's Dissertation in the Archaelogia, vol. v.

After the Romans had retired from this neighbourhood the place appears to have been desolated by the incursions of the Picts and Scots ; but was rebuilt by the Saxons, made the metropolis of the county, and constituted one of their chief places of defence north ward. In Domesday-book, Lancaster, and Cherca-Longcastre, appear as two vills, or Berwic, among the twenty-two which then composed the manor of Halton : the name of Cherca-Longcastre being affixed to one of them, renders it probable that it had a church, which had been destroyed by the Danes. Lancaster was granted either by the Conqueror or William Rufus to Roger de Poitou, who erected a castle upon its hill, and founded the church of St. Mary; as a cell to the

abbey of Sees, in Normandy. To this monastery it continued annexed until the reign of Henry V., when, on the alien priories being abolished, it was given to the Carthusian abbey ofSion, in Middlesex, and remained thus attached till the dissolution of the monasteries at the Reformation. The towers of the castle remaining are excellent specimens of the massive architecture adopted in that age. In 1109 this castle was besieged by Hubert, archbishop of Canterbury, it being held by the brother of king John in trust for that monarch. In the seventh year of John's reign it was in possession of Ranulph Blundevil, earl of Chester : in the early part of the reign of Henry III. it was held by William de Ferrars, earl of Derby ; but it owes its chief importance in history to Edward III. This monarch created his son, the celebrated John of Gaunt, duke of Lancaster, and granted a charter which constituted the dukedom a kind of independent state : within the county, indeed, almost all the regal privileges were enjoyed by the duke. It suffered greatly in the wars of the houses of York and Lancaster, so that in the time of Camden it was nearly depopulated : but Charles II. having renewed its charter, and granted it additional privileges, it has ever since flourished. At present the area included within the castle walls is about 380 feet square. The round towers seem to have been about twenty-six paces distant from each other, and joined by a wall and open gallery; two towers on the western side remain entire, and the remains of five others may be traced. One of these towers :< called Adrian's. On the top is a large square tower, called John of Gaunt's Chair, whence is

a most extensive prospect. In this castle aro now found the shire-hall, county courts, in which the assizes are held, and the county gaol. Here also was formerly an hospital for lepers, and a house for Dominican friars.

On an eminence near is the parish church, a spacious building, with a

lofty tower, which serves as a land-mark for vessels ascending the river. It has eight good bells. At the east end of the church is an elegantly carved wooden screen ; and among the monuments one by Roubiliac, for William Stratford, L. L. D. In the churchyard is the shaft of a stone cross, with a Runic inscription. Lancaster contains also two commodious chapels of ease, one of which has an elegant steeple, recently rebuilt ; places of worship for Presbyterians, Quakers, Methodists, Independents, and Roman Catholics. The town-hall and exchange, in the centre of the town, is a fine building, and has a noble portico. Here is also a neat theatre, a free-school, and a public library. The custom-house is a small building, with a portico, supported by four Ionic pillars, each fifteen feet and a half high, consisting of a single stone. The shambles in the market are built in the form of a street, every butcher having a shop with his name painted over the door. The town is incorporated under a mayor, aldermen, recorder, bailiffs, &c., and sends two members to parliament : the returning officers are the mayor and two bailiffs ; the right of election being vested in the freemen, to the amount of 3000. The markets are on Wednesday and Saturday.

The Lancaster canal communicates with the Mersey, Dee, Ribble, Ouse, Trent, Derwent, Severn, Humber, Thames, Avon, &c. An elegant aqueduct bridge carries it over the Lune : it consists of five arches, erected at an expense of £45,000. The principal commerce of the town is in hardware, woollen goods, and cabinet-ware. The new bridge over the Lune is a handsome building, of five equal arches, is 549 feet long, and cost £12,000.

Five miles to the north-east of the town is a cave in the middle of a common, called Dunald Mill Hole. A brook nearly as large as the New River at London, and which turns a corn-mill just at the entrance of the cave, runs in at its mouth by several beautiful cascades, whence, continuing its course for two miles under a large mountain, it makes its appearance again at Carnford.

LANCASTER, a county of Pennsylvania, North America; east of the Susquehanna; bounded north by Dauphine county ; north-east by Berks ; south-east by Chester ; south by Maryland ; and south-west by the Susquehanna, which divides it from York county. It is well cultivated, and the northern hills are abundant in minerals, especially iron.

LANCASTER, a city and capital of Lancaster county, is one mile and a half west of Conestoga Creek, which falls into the Susquehanna, nine miles S. S. W. of the city; thirty-six E. S. E. of Harrisburg, and sixty-

two west of Philadelphia. It is a pleasant, healthy, and flourishing place, situated in a delightful, fertile, and highly cultivated country, and contains a court house,

a jail, a market house, a poor house, a hospital, a register's office, a college, two banks, and nine houses of public worship, one for German Lutherans, one for German Calvinists, one for English Presbyterians, one for Episcopalians, one for Roman Catholics, one for Moravians, one for Friends, one for Methodists, and one for Africans. The court-house, the Lutheran church, and many of the private houses are spacious and elegant. The houses are chiefly of brick and stone. This city has an extensive trade with the surrounding country, and considerable manufactures in hats, rifles, hand-screws, nails, &c. About a mile from the city there is a very large cotton manufactory. The inhabitants, mostly of German descent, speak very commonly the German language, but the English predominates, and most parents are in the practice of giving their children an English education. There are six newspapers published here, three in English, and three in German. Franklin College was founded here in 1787. It has a. large brick building and some funds. But the seminary is not at present in operation, and the building is appropriated to schools.

LANCASTER, a county of the east part of Virginia, bounded north-east by Northumberland county; east by Chesapeake Bay; south and south-west by the Rappahannock, and west by Richmond county. Distant from Washington 168 miles. Chief town, Kilmarnock. This is the name of several post towns in the United States.

LANCASTER (James), an English navigator, whose name is connected with the oft attempted north-east passage. He made a voyage to America in 1591 ; and afterwards sailed round the Cape of Good Hope, and visited Ceylon and Pulo Penang. He engaged in 1524 in a preda-tory expedition to South America, and captured several prizes. In 1600 he went to the East Indies, and formed a commercial treaty with the king of Achen and the state of Bantam, in Java. He returned to his country in 1603, having procured some information relative to a north-west passage to the East Indies, which occasioned the expeditions of Hudson and others. Baffin in honor of him gave the name of Lancaster's Sound to an inlet which he discovered in 74° of N. lat. He is said to have received the honor of knighthood: he died in 1620.

LANCASTER (Joseph), the promulgator of the system of mutual

instruction, may be regarded as one of the most useful men of his age. He was born in 1771, was bred a quaker, and still maintains the habits and manners of that persuasion. It has been made a subject of dispute whether Dr. Bell or Mr. Lancaster is the inventor of the system of mutual or monitorial instruction. The facts in the case seem to be these : the Rev. Dr. Bell, an English chaplain in the East Indies, practised a system of mutual instruction in Madras, which he found, at least in part, already in existence among the natives. On his return to England, in 1797, he published a pamphlet (Education pursued in the Madras Asylum), giving some account of the method and his experience. A few years after, Lancaster began to apply the method, and iritro-LAN

duced some improvements, enabling him to manage and teach a greater number of children than had previously been attempted. It is evident that neither of these gentlemen can be strictly called the inventor of the system, although both are entitled to great praise for the improvements which they introduced. It has, in fact, heen long in use among the Oriental nations. Dr. Bell, as we have mentioned, borrowed it from the natives in llindostan, and Shaler speaks of it as employed in Algiers. To Lancaster, however, is due the nobler praise of having disinterestedly devoted himself to the task of diffusing a knowledge of this plan of instruction in two worlds. He began his labors in England, in 1803. The object was at first to procure a cheap means of instruction for the poorer classes, who, it is well known, were then unprovided for in most countries of Europe. Lancaster received great encouragement from many persons of the highest rank in England, which enabled him to travel over the kingdom, delivering lectures, giving instruction, and forming schools. Flattered by splendid patronage, and by promises of support which were never realized, he was induced to embark in an extensive school establishment at Tooting, to which ‘.is own resources proving unequal, he abandoned his establishment, and threw himself on his own talents, and on the liberality of the public at large ; but, being disappointed in his expectations, and unwilling to submit to prescribed terms, which he

considered as implying some fault on his part, when no fault really existed, he left England in disgust, and, about 1820, visited America. He had previously published Improvement in Education ; a Letter on the best Means of Educating and Employing the Poor in Ireland ; Outlines of a Plan for the Education of Children; Account of the Progress of J. Lancaster's Plan for the Education of Children ; and Report on the Progress of his Plan from the Year 1793. He died in indigent circumstances, in 1834.

LANCE, n. s. & v. a.-*\ Fr. and Arm. lance, LANCE' LY, adj. i lancer; Ilal. lunciu;

LANCE'PESADE, n. s. vLat. lancia. A long LAN'CET, i spear, or javelin: as a

LAKCH, v.a. J verb, to thrust, pierce,

or cut ; to open chirurgically : lancepesade, an old military non-commissioned officer (Fr. lance spezzcule), under the corporal : lancet, the surgeon's instrument for blood-letting, &c. : to lanch, to let fly, dart, or cast, as a lance.

They shall hold the bow and the lartce.

Jeremiah 1. 42. Plate sin with gold,

And the strong lance of justice hurtlcss breaks ; Arm it in rags, a pigmy's straw doth pierce it.

Shakspeare.

With his prepared sword he charges home My unprovided body, lanced my arm. Id.

The' infernal minister advanced Seized the due victim, and with fury lanced Her back, and piercing through her inmost heart, Drew backward. Drydcn.

LANCELLO1TL (Gianpaolo), an eminent jurist, was born at Perugia about the year 1510.

He was first noticed as a teacher of the law at his native place, and was engaged by pope Paul IV. to draw up an institute of canon law, in imitation of Justinian's Institutes of civil law. This was published in

1653, and went very quickly through several editions. It was annexed to the body of canon law, and still retains its place in the modem editions of that compilation. He was the author of other treatises on legal subjects, and of a life of Bartolus. He died at Perugia in 1591.

LANCELOT (Claude), a learned French writer, born in 1616. He was a Benedictine of St. Cy-ran, whence he was exiled to Lower Brittany, where he died in 1695. He wrote, 1. Nouvelle Methode pour apprendre la Langue Latine, 8vo. 2. Nouvelle Methode pour apprendre le Grec, 8vo. Both have been translated into English, under the title of Port Royal Grammars.

LANCEROTA, one of the group of the Ca-nary Islands, remarkably subject to volcanoes. One took place in 1730, on so great a scale as to destroy nine villages, and spread desolation over a highly fertile and cultivated region. The whole western side is still black, parched, and stripped of vegetable mould. But the eastern part contains plains of considerable fertility, and the camel thrives here. M. Humboldt estimates the height of the volcanic mountain at not more than 1800 feet, though from the sea it has a much loftier appearance. The ancient inhabitants are said to have been more polished than those of the other Canaries, and had the singular custom of one woman rˆ ing several husbands. Lancerota at present contains about 10,000 inhabitants ; and it produces a little cotton, sugar, honey, and wool. They export corn, and a large quantity of dried goats' flesh. The island is about thirty miles in length, and eight in breadth. On the south-east side are two good ports within reefs, called Puerto de Naos and Puerto Cavallos. The former, which is the northern, is well sheltered from the north-east ; and, the reefs breaking off the swell, the water is perfectly smooth, and here vessels in want of refitting usually put in. It has two entrances between the reefs ; the north one has only fourteen feet at high water, and the south seventeen feet; the depth within is twenty-seven to ten feet, rise of tide ten feet. Puerto Cavallos is one mile south of Puerto Naos ; it is formed on the north-east by a small island joined to the main by a bridge ; on the island are the ruins of a castle : on the south-west it is bounded by a rocky ledge running off from the shore in the middle of the channel, which has but twelve feet; within the depth is seventeen feet.

The LANCET is sharp-pointed and tw°-«gˆ chiefly used for opening veins in the operation of bleeding ; also for laying open abscesses, tu-mors, &c.

LANCETI, a name given by the ancient laws of England to a kind of vassals, who were obliged to work for the lord one day in a week,

from Michaelmas to autumn, either with fork, spade, or flail, at the option of the lord.

LANCIANO, a large town of Naples, in Abruzzo Citra, about four miles from the coast

of the Adriatic, stands on a river of the same name. It has two great annual fairs, and a considerable trade. Population 9000. Eighty-five miles E. N. E. of Rome, and eighty-four north of Naples.

LANCISI (John Marc), an eminent Italian physician, born at Rome in 1654. From his earliest years he attended to natural history ; and studied botany, chemistry, anatomy, and medicine. In 1688 pope Innocent XL appointed him his physician and private chamberlain, notwithstanding his youth; and cardinal Altieri Camerlinga made him his vicar for the installation of doctors in physic, which pope Clement XI. continued to him, with the other appointments conferred on him hy his predecessor. He died in 1710, after giving his fine library of more than 20,000 volumes to the hospital of the Holy Ghost, for the use of the public. It was opened in 1716, in the presence of the pope and most of the cardinals. He wrote many works which are esteemed. They were collected and printed at Geneva, in 1718, in 2 vols. 4to.

LANCRINCK (Prosper Henry), a painter of considerable note, born in 1628, and educated in the school at Antwerp. He studied principally after Titian and Salvator ; and met with encouragement in England suitable to his merit. His landscapes show a good invention, good coloring, and harmony ; they are chiefly of rough rude country, with broken ground and striking scenery. He died in 1692.

LAND, n. s., v. a., & v. n.

LAND’BRED, adj.

LAND’ED, adj.

LAND’CARRIAGE, n. s.

LAND’FLOOD, n. s.

LAND’FORCES,

LAND’HOLDER,

LAND’ING,

LANDING-PLACE,

LAND’-JOBBER,

LAND’LADY,

LAND’LESS, adj.

LAND’ LOCKED,

LAND’LOPER, n. s.

LAND’LORD,

LAND’MARK,

LAND’SCAPE,

LANDS’MAN,

LAND’-TAX,

LAND-WAITER,

LAND’WARD, adv. scape (Belg. landschape) the shape or appearance of the land : land-waiter, a custom-house- officer, who waits or attends on the landing of goods. We believe the other compounds will explain themselves.

Netheless I sey to you that to the land of Sodom it schal be lesse peyne in the dai of dome than tothee.

Widif. Malt. si.

Abraham sojourned in the land of promise as in a strange country, dwelling in tabernacles. Heb. xi.9.

And in a lannde, upon a hill of floures, Was set this queene, this noble goddesse Nature ;

0 braunchis were her hallis and her boures

1 wrought after her craft and her mesure. Chaucer.

They are invincible by reason of the overpouring mountains that back the one, and slender fortification of the other to landward. Sandys' Jou~ney,

Saxon, Ian"* ; Goth, land, and so in all the northern dialects. A country, or region, &c. ; hence, a peo-ple, its inhabitants; earth ; ground ; a real estate ; also (obsolete, Saxon ˆhlond), urine : to land is to set or come on shore : landed having an estate in land : landloper (Belg. landlooper) a lands-man, one who is used to run about on shore. See ELOPE. Land-

The nations of Scythia, like a mountain flood, did overflow all Spain, and quite washed away whatsoever reliques there were left of the landbred people. Spenser's State of Ireland.

This regard shall be had, that in no place, under any landlord, there shall be many of them placed together, but dispersed. Id.

He kept himself within the bounds of loyalty, and enjoyed certain lands and towns in the borders of Polonia. Knollcs

The legions, now in Gallia, sooner landed In Britain. Sltakspeare. Cymbeline.

Let him land, And solemnly see him set on to London.

Shakspeare. A landless knight makes thee a landed squire. Id.

Thy ambition,

Thou scarlet sin, robbed this bewailing land Of noble Buckingham. Id.

Henry VHf.

To forfeit all your goods, lands, and tenements, Castles and goods whatsoever, and to be Out of the king's protection. Id.

Land ye not, none of you, and provide to be gone from this coast within sixteen days.

Bacon's AT«0 Atlantis,

Men, whose living lieth together in one shire, are commonly counted greater landed than those whose livings are dispersed. Bacon.

Let the stairs to the upper rooms be upon a fair, open newel, and a fair landing-place at the top. Id.

With eleven thousand land soldiers, and twenty-six ships of war, we within two months have won one town. Id.

This man is freed of servile hands, Of hope to rise, or fear to fall :

Lord of himself, though not of lands, And having nothing, yet hath all. Wotton.

By land they found that huge and mighty country.

Abbot.

Probably land-damn was a coarse expression in the cant strain, formerly in common use, but since laid aside and forgotten, which meant the taking away a man's life. For land or lant is an old word for urine, and to stop the common passages and functions of nature is to kill. Hanmer.

Apprehensions of the affections of Kent, and all other places, looked like a landfiood, that might rol . they knew not how far. Clarendon.

The land-marks, by which places in the church had been known, were removed. Id.

I' the' midst, an altar, as the land-mark, stood, Rustick, of grassy sod. Milton

The sun, scarce uprisen, Shot parallel to the' earth his dewy ray, Discovering in wide landscape all the east Of Paradise, and Eden's happy plains. la. Necessity makes men ingenious and hardy ; and, if they have but land-room or sea-room, they find supplies for their

hunger.

Bale's Origin of Mankind.

The princes delighting their conceits with confirming their knowledge, seeing wherein the sea-discipline differed from the ionti-service, they had pleasing entertainment. Sidney.

Cromwell's officers, who were for levelling lands while they had none, when they grew landed, fell to crying up magna charta. Temple.

We behold in France the greatest land-forces that have ever been known under any Christian prince.

Temple.

Fate and the gods, by their supreme command, Have doomed our ships to seek the Latian land.

Dri/den's JEneid. He who rules the raging wind, To thee, O sacred ship, be kind,

Thy committed pledge restore, And land him safely on the shore.

Id. Horace.

I land with luckless omens : then adore Their gods. Id.Mneid.

They turn their heads to sea, their sterns to land, And greet with greedy joy the' Italian strand.

Drydeii.

I writ not always in the proper terms of navigation, or land-service. Id.

jEi,eid.

These answers, in the silent night received, The king himself divulged, the land believed.

Dry den.

Though they are not self-evident principles, yet, h they have been made out from them by a wary and unquestionable deduction, they may serve as land-marks, to shew what lies in the direct way of truth, or is quite besides it. Locke.

Money, as necessary to trade, may be considered as in his hands that pays the labourer and landholder ; and, if this man want money, the manufacture is not made, and so the trade is lost. Id.

If mortgages were registered, land taxei might reach the lender to pay his proportion. Id.

Once in three years feed your mowing lands, if you cannot get manure constantly to keep them in heart.

Mortimer.

The landing-place is the uppermost step of a pair of stairs, the floor of the room you ascend upon.

Mnxon.

A house of commons must consist for the most part of landed men. Addisons Freeholder.

There is a staircase that strangers are generally carried to see, where the easiness of the ascent, the disposition of the lights, and the convenient binding, are admirably well contrived. Id. ou Italy.

There are few natural parts better landlocked, and closed on all sides, than this Seems to have been.

Id.

Upon our arrival at the inn, my companion fetched out the jolly landlord, who knew him by his whistle.

Addison.

We are like men entertained with a view of a spacious landscape,

where the eye passes over one pleasing prospect into another. Id.

What the Romans called vestibulum was no part of the house, but the court and landing-place between it and the street. Arbuthnot on Coins.

The species brought by land-carriage were much better than those which came to Egypt by sea.

Arbuihnot.

Beneath his steely casque he felt the blow, And rolled, with limbs relaxed, along the land.

Pope.

Oft in her glass the musing shepherd spies The watery landscape of the pendant woods, And absent trees, that tremble in the floods.

Id.

LAN DA, a territory of the island of Borneo, on a northern arm of the river Fontiana. The rajah's residence is on the projecting corner of a mountain, to which there is an ascent by 118 steps, and two rivers flow right and left of the base. It has a strong capital of this name, well provided with artillery, and in the territory are gold mines of some importance. LANDAFF. See LLAKDAFP. LANDAU, a small hut ancient and celebrated •own of Germany, in Lower Alsace, annexed to France before the revolution, but now included in the Bavarian circle of the Rhine. It was formerly imperial, and in 1291 was endowed with the same privileges as Haguenau. In 1680 it

was confirmed to Louis XIV. and strongly fortified by Vauban ; yet, in 1 T0'2, it was taken by the Austrians. In 1703, 1704, and 1713, it was alternately retaken by the French and Austrians. In 1714 it was ceded to France by the treaty of Baden. In 1793 the Austrians and Prussians attacked it but without success. It contained about 4000 citizens in 1 789. It is seated on the Quiech, six miles east of Strashurg. and 347 east of Paris ; and has a collegiate church, com-mon to the Lutherans and Catholics, a lyceura lately founded by the Bavarian government, two monasteries, and 4250 inhabitants. The French retained it in the treaty of Paris of 1814, but the following year it was assigned to Bavaria.

LANDEN (John), F.R.S., an eminent mathematician, born at Peakirk,

near Peterborough, in Northamptonshire, in January 1719. He became very early a proficient in the mathematics ; for we find him contributing, in the Philosophical Transactions for 1754, An Investigation of some Theorems which suggest several very remarkable properties of the circle. In 1755 he published a volume of about 160 pages, entitled Mathematical Lucubrations. In 1762 he was appointed agent to earl Fitzwilliam, an employment which he retained till within two years of his death. About the end of 1759 he published proposals for printing by subscription The Residualˆ Analysis, a new branch of the Algebraic Art ; an'd in 1758 published a small tract in 4to. entitled A Discourse on the Residual Analysis, in which he resolved a variety of problems by a mode entirely new. In the fifty-first volume of the Philosophical Transactions for 1763 he gave A new method of computing the sums of a great number of infinite series. He published in 1764 the first book of The Residual Analysis, in a 4to. vol. of 218 pages, with several copperplates. In this treatise, besides explaining the principles on which this new analysis was founded, he applied it to drawing tangents and finding the properties of curve lines, &c. On the 16th of January, 1766, he was elected F.R.S. In the fifty-eighth vo-lume of the Philosophical Transactions for 1768 he gave a Specimen of a new method of comparing cnrvi lineal areas. In the sixtieth volume, Some new theorems for computing the whole areas of curve lines, where the ordinates are expressed by fractions of a certain form, in a morce concise and elegant manner than had been done by Cotes, De Moivre, and others, who had considered the subject before him. In the sixty-first he investigated several new and useful theorems for computing certain fluents, which are assignable by arcs of the conic sections. In 1771 he also published, Animadversions on Dr. Stewart's computation of the Sun's distance from the Earth. He continued in this manner contributing, to the Philosophical Transactions, various papers on mathematical subjects for the greater part of his life. He in 1780 published a volume of Memoirs ; with a valuable and extensive appendix containing Theorems for the Calculations of Fluents. The tables which contain these theorems are more complete than any to be found elsewhere. The second volume of his Memoirs was written and revised during the intervals ot dreadful fits of the stone. This volume, besides a

solution of the general problem concerning rota-tory motion, contains the resolution of the problem concerning the motion of a top ; an investigation of the motion of the equinoxes, in which Mr. Landen was the first who pointed out the cause of Sir Isaac Newton's mistake in his solution of this celebrated problem : and some other Eapers of considerable importance. He just ved to see this work finished, and received a copy of it the day before his death, which happened on the 15th of January 1790, at Milton, near Peterborough.

LANDEN, a small town of the Netherlands, in the ci-devant province of Austrian Brabant. Two bloody battles have been fought near it a century distant in point of chronology. The first was on the 22th of July 1693, between the allied forces under king William III. and the French under the duke of Luxemburg, wherein the latter were twice repulsed, and, though at last victorious, had about 15,000 men killed, and about 10,000 wounded. The French army amounted to 80,000 men, and that of the allies to little more than 40,000. The second battle was fought on the 18th of March 1793, between the French republicans and the Austrians; when the former were so completely defeated, that they •were compelled for a time to evacuate the whole Austrian Netherlands. Landen is seated on the Beck, nineteen mile.s south-east of Louvain.

LANDER, (Richard), the African Traveller, was the attendant of Captain Clapperton on his second expedition into the interior of Africa. He started with his master from the Bight of Benin, and after the death of that gentleman, at Soccatoo, in April 1827, Lander returned to the coast. In 1830, he set out again, ccom pan ied by his brother John, upon another exploring journey, and landed at Badagry, on the 25th of March. They reached the river at Boussa, from thence ascended to Youri, and the Cubbie,"whichi comes from Soccatoo. They next descended the river which flows nearly south from Bussa, and which, afier receiving the Shary, expands into a large lake, and thence empties itself, by several mouths, into the Bight of Benin. The mouth by which the Landers reached the sea is called the Nun ; and the point where Park began his descent upon the same river is 2000 miles, by the river's course, from the mouths discovered by the Landers. To establish fully the truth of this last discovery, Lander again undertook the cause of geographic science, and having purchased an Island in the river Nun, about 300 miles from its mouth, established a factory upon it. Here he sent an iron steam-boat, prepared for a voyage up the Niger, and in the very act of following the steamer to commence the great object of his life, was killed by a party of natives, who first fired

upon him and his party from the beach, and then followed in their war-canoes to complete the cruel work begun in so dastardly a manner. Lander's death occurred in the spring of 1834.

LANDF.S, orLANDES DE BORDEAUX, France, a country formerly comprehended in the province of Gascony. It extends about ninety miles from the Adour to Bourdeaux, and now forms the greater part of the departments of Landes and

the Gironde. It has received its name from the circumstance of the soil being poor, sandy, and covered with furze ; and has indeed the appearance of a desert, with here and there a patch of pasture, and richly cultivated land. On the sea-coast is a range of sandy downs of from six to nine miles broad, part of which is covered with fine plantations of firs, the planting of which is much encouraged by the government, and will perhaps finally tend to the covering and fertilising this long range of hills.

LANDES, DEPARTMENT DES, France, is formed of part of the former province of Gascony, and derives its name as above. The principal place of this prefecture is Mont de Marsan ; it has three arrondissements ; Mont de Marsan, containing 82,364 inhabitants; Dax, 90,362; and St. Sever, 83,585 ; making a total population of 256,311 souls, twenty-eight cantons, and 352 communes. It extends over an area of 4212 square miles, yielding a revenue of 7,537,000 francs, is included in the eleventh military division, has a royal court at Pau, and is in the diocese of Bayonne. It is divided into two electoral arrondissements, and sends three members to the chamber of deputies.

This department is bounded on the north by that of the Gironde, on the east by those of Lot et Garonne and the Gers, on the south by that of the lower Pyrenees, and on the west by the sea. The territory presents two natural divisions, formed by the course of the Adour: the first, which lies to the soutb of this river, bears the name of Cha'osse, presenting to the eye plains covered with wheat and maize, and delightful hills adorned with vines : the second, which is the far larger portion, is almost entirely covered with heath, woods, marshes, ponds, and vast plains of sand. An immense forest of pines spreads between these lands and the sea, with a small population thinly scattered over it. Sandy and naked downs, from three to nine miles broad, and sixty miles long, spread over the coast, opposing an insuperable barrier to the violence of its waves, and rendering the shore inaccessible to

navigators ; these are intersected with plots of excellent pasturage, feeding a great number of horned cattle and sheep, as well as horses of a small size, but excellent for service. The climate is temperate, but rather hot than cold.

The inhabitants of so wild a country must necessarily be almost savages; yet in these lands there are some well-built houses, provided with good furniture ; some of the peasants are even rich, but the greater part may be considered as shepherds ; their isolated and ill-built cottages have no allurements to attach them to the soil, and they can very easily remove them. The chiet person in the cottage takes the direction of the tillage and rustic labors, and seldom goes out to any distance ; but the young people go out into the forests to cut wood, to the distance of twenty-four or thirty miles, and make charcoal of a part of it: others go to an equal distance to feed their flocks. In these excursions each person carries with him a few cheeses, a bundle of pilchards, and a little saucepan to cook his maize and bacor.. Having arrived at the place of destination, they construct their huts of the branches of trees, and

proceed to feed their flocks or prepare their charcoal. They are also furnished with fowling-pieces to hunt during their leisure momenta ; they are skilful marksmen, and generally supply Bourdeaux, Dax, Bazas, and other places round, with game. As it is unpleasant to walk on the sands, in this country, the inhabitants make use of sticks four or five feet long, to which they at-tach a piece of an ox’s bone to rest their feet on. On these stilts, which they call changuees, they walk so easily and quickly that a horse can with difficulty keep pace with them.

The soil, being mostly so sandy and covered with heath, requires horses to cultivate it; and its harvests are very inadequate to the wants

of the people. There are in this department 127,412 hectars of forests, and 19,500 of vineyards, and the mean produce of the tilled land is six francs twenty-five centimes. Its productions comprise a small quantity of wheat, rye, buckwheat, maize, millet, vegetables, panic or Hungarian corn, potatoes, flax, hemp, excellent fruits, highly esteemed wines, wood, fine natural and artificial meadows, saffron, woad, madder, pine apples, cork ; large and small game, such as red and gray partridges, ortolans, &c. ; fish of all kinds, particularly turtles, leeches, &c. : horses, mules, oxen, numerous flocks of sheep, a great number of goats, pigs that run wild in the woods, the flesh of which is preferred for hams ; poultry, especially geese and ducks; and bees. There are also mines of iron, coal, and bitumen; quarries of marble, brown freestone, plaster, mill-stones, stones for lithographic purposes, ba-salt, pozzollona, peat, porcelain clay and clay for crucibles. Mineral and warm springs are found at Dax, Tercis, Canjac, Macey, Meylis, Saubaise, Pouillon, Ponson, and Pre”hac.

The manufactures consist of cloth for veils, table-linen, liqueurs, wine vinegar, resin, pitch, tar, sail-canvas, and lampblack. Their tanneries are celebrated, as also are their potteries, china factories, glass-houses, forges, and blastfurnaces. They also work, in various ways, the firs with which the country is covered, and prepare delicately flavored hams, known by the name of Bayonne hams. Their commerce consists in grain, wines, brandies, vegetables, linseed oil, hams, wood for masts and building, firs, resinous materials, &c. This country is the mart of the trade between France and Spain.

The principal rivers which water this department are the Adour and the Gave de Paw navigable, the Luys, the Leyre, the Gabas, the Louts, the Miclou, and the Douze. The great roads from Bourdeaux, Bayonne, and Pau, cross it.

LANDGRAVE (from land, German, earth, and graft’ and grave, a judge or count) was a title given to those who executed justice in behalf of the emperors, with regard to the internal policy of the country. It does not seem to have been used before the eleventh century. Those judges were first appointed within a certain district of Germany ; in time the title became hereditary, and the judges assumed the sovereignty of the several districts over which they presided. Landgrave is now applied, by way of eminence, to those sovereign princes of the empire, who

possess by inheritance certain estates called land-gravates, and of which they receive the investiture from the emperor. There are also

othei landgraves, who are not princes, but counts of the empire.

LANDLOCKED is when land lies all round the ship, so that no point of the compass is open to the sea. If she is at anchor in such a place, she is said to ride landlocked, and is therefore concluded to ride safe from the violence of the winds and tides.

LANDSBERG, a well-built town of Brandenburg, Prussia, which has a good bridge over the Wartha, and carries on a brisk trade in wool, woollens, cottons, and corn, with Silesia and Po-land. In 1758 it was besieged by the Russians; and in 1768 suffered severely from fire. Population 6000. Twenty-four miles E. N. E. of Custrin, and seventy-four east of Berlin.

LAND'SCAPE, or LAND'SKIP, n. s. 1. A re-gion ; the prospect of a country. 2. A picture representing an extent of space, with the various objects in it.

LANDSCAPE GAP.DENING is abranch of the picturesque that was scarcely at all attended to in this country prior to the close of the last century The interminable alleys, and closely clipped yew tree hedges, then began to give place to picturesque arrangements more in accordance with those of nature ; and, as art began to attain a higher degree of eminence, its presence became less and less perceptible. As the great object with the landscape gardener is to produce a series of picturesque views from the mansion, or principal edifice, we must commence with this part of the subject.

The residence should be approached by a line of gravel road winding up a commanding slope, so that the ornamental offices would be seen between and above the plantations as they are passed. The house itself would then be occasionally viewed through the intervening masses of trees, and the grounds should gradually open to an increased display, towards which its elevated terrace in front would contribute, besides affording an ample platform on which the building would stand. The terrace becomes a means of uniting the building with the grounds, removing the field-like approximation of the lawn on the spot where the objection commonly existing to its introduction would be the most apparent, and from this platform the scenery will combine a park-like effect with home views. From the southern side, the expanse must be varied by a series of undulations, and enriched by groups, masses, and single trees, in the1 fore-ground. Mr. Papworth, who has written an interesting book on this subject, recommends the introduction of a long corridor, and series of covered ways, with an aviary and pheasantry. ' This corridor, being entered from the vestibule, would

lead the spectator forward t o a considerable length, and until he would arrive at the rosiary. Along this extensive line of covered way, statues, vases, plants, and other embellish' merits of art and nature might be placed to ao-vnntage, and receive the protection of K shelter.'

The rosiary at the extremity of the avenue is circular, and contains in the centre a fountain and receptacles for gold and silver fish. As this portion of the garden is usually placed upon the projecting point of the hill on which the house is situate, it commands views of the surrounding country, and that of the house grounds, in which water should he a leading feature. It is in these select spots, in the neighbourhood of the house, that evergreen shrubs are chiefly placed, and ahout which walks are planned, for the purpose of being benefited by veidure in all seasons of the year. By these means, buildings and works of art are connected with both natural as well as landscape scenery ; and, being mixed with trees -f the deciduous kind, they may be made gradually to yield their compact and deep-toned effects, and insensibly unite with the park arrangements.

The kitchen garden should form a part of the arrangements for walks, and be so connected with the pleasure grounds that it may be entered from a variety of points. This circumstance, to many, is not of value; but, although the kitciien garden is not arranged for pleasure, its utility and perpetually changing culture give it importance as a feature in landscape gardening.

LAND SURVEYOR, Agriculture, the common name of one whose business is the planning and surveying of lands or estates.

It is remarked by Mr. Marshall that land surveyors are not only useful merely to measure, and map the whole or parts of estates, but to as-

sist in matters of arbitration and the amicable adjustment or settlement of disputes, as well as being highly useful in the management of landed property. See SURVEYING and MAPPING.

LANDED PROPERTY. All the particulars essential to a right understanding of the legal value of this species of property will be found amply discussed in the articles LAW, LEASE, COPYHOLD, &c., and we propose in the present case to confine ourselves to the best mode of valuing. The particular circumstances that require to be considered, as giving value to land, are chiefly these : — 1. The quantity of the land, which is the groundwork of the calculation ; though it has little weight in the scale of valuation. The fee-simple value of an acre of land may be less than 20s., or it may be more than £100. Nevertheless, it is on the quantity the rental value is calculated ; and it is usual for the person who parts with it to exhibit a ‘ Particular’ of the estate or property on its disposal, showing, or which ought to show, not only the aggregate quantity, but the number of acres that each piece or parcel contains, as well as other matters ; arid ought, most particularly, to specify the distinct quantities of the lands of different qualities, in order that their several rental values may be ascertained with greater ease and accuracy.

2. The intrinsic quality of the land, which is essential in forming the estimate. But even this, in a general view of the value of lands throughout the kingdom, is often, it is ‘said, of secondary consideration ; for in many cases their values

are given by situation, rather than by soil and substrata. In some cases, as has been seen, the value of the situation may be a great many times more than that of the intrinsic value of land. But this excessive influence of situation is, however, limited in its effects, and is chiefly confined to the environs of large towns, and other extraordinary markets for produce of the farm kind. A great majority of the lands of this country owe their values less to situation than to intrinsic quality ; and to come at this with sufficient accuracy is the most requisite, and at the same time the most difficult part of valuation, as it depends almost wholly on extemporary judgment, exercised on the frequently few data which rise to the eye in passing over the field of estimation. It is therefore almost needless to state that to acquire the degree of judgment which is necessary to the execution of this difficult critical task, it is required to know and be perfectly acquainted with the nature and productiveness of lands of different appearances — a sort of knowledge which scarcely any thing but

mature practice in the cultivation and use of lands of different qualities can sufficiently teach ; though long habit may do much in ordinary cases towards hitting off the value of lands, without an extensive knowledge of the practice of agriculture.

There are cases however, it is said, in which both of these qualifications are found insufficient to give any accuracy of judgment, even among provincial valuers of land ; and a person who ventures to step forward as a universal valuist should have either an extraordinary talent for the purpose, or should, after a suitable initiation, have had great experience in rural concerns in different parts of the kingdom.

3. The situation, which, although it has been already stated that the value of the lands of this country, aggregately considered, depends less on situation than on intrinsic quality, yet in every part it has great influence. Thus an acre of land, the intrinsic quality of which renders it, in an ordinary situation, in what regards locality, merely worth 20s. the acre, would not, it is observed, in some districts or places, be worth more than 15s., while in others it would bear to be estimated at 25s., or even a higher price of rent, to a farmer on a large scale, and away from the immediate environs of a town, or any populous district of manufacture, for reasons that will be seen in examining the different particulars of situation. In the temperature of situation, too, whether it be given by elevation, aspect, or exposure, a powerful influence is formed, which is capable of altering exceedingly the value of-lands. The same sort of soil and subsoil, it is said, which is not unfrequently seen on exposed mountains, and hanging to the north, and which in that situation is not worth more than 5s. an acre, would, if situated in a sheltered vale tract, and lying well to the sun, be worth 20s. or a greater rent. Even on climature, something considerable in the business, it is thought, depends. In the southern part of the country, the harvest is in general a month earlier than in those of the north, though it is not regulated exactly

by the climate or the latitude of the places. This is consequently a circumstance that requires to be attended to by those who estimate the value of estates or lands ; for an early harvest is not only advantageous in itself, but gives time to till the ground, or to take an autumnal crop, which are advantages that a late harvest will not admit of being had. And another kind of temperature of situation has still, it is supposed, more influence on the value of lands, which is that of the moistness of the atmosphere. A moist situation not only gives an uncertain and often late harvest, but renders it difficult and hazardous ; as is too frequently experienced on the western coast sides of this island. Even in the turn of the surface, exercise is found, it is said, for the judgment. Lands lying from too steep or too flat surfaces, particularly when of the arable kind, and retentive, are of less value than those which are greatly shelving, so as to give a sufficient discharge to surface-water, without their being difficult of cultivation. Steep-lying lands are not only troublesome and expensive under the operations of tillage, but in taking out manures, and getting off the produce. Lands lying with an easy descent, or on a gently billowy surface, may be worth more by many pounds an acre, in the money they will bring, than others of the same intrinsic quality, hanging on a steep. Another consideration of the same weight in valuing an estate, or other landed pro-pejty, is a supply of water for domestic purposes, for the uses of live stock, and for the purposes of irrigation. There are situations, it is said, in which a copious stream of calcareous water would enhance the fee-simple value of a large estate some thousands of pounds. Likewise a sufficient supply of manure, whether dung, lime, marie, or other melioration, being at a moderate price, and within a moderate distance of land-carriage, materially adds to the intrinsic value of lands : and the established practice of management of the district or county in which an estate or land lies is capable of enhancing or depressing the value of it exceedingly. Even the single practical point of ploughing light and loamy lands with two oxen, or two active horses, instead of four heavy ones, is capable of making a difference on good land which is kept alternately in herbage and corn crops of from 5s. to 10s. a year, on the acre ; or £10 an acre in the money value which it is worth.

The price of labor is also stated as another regulation of the marketable value of land in a given district. It is always right, however, to compare this with the habits of exertion and industry which HBjevail among farm workmen, before the netramount of labor can be safely set down. The price of living too, or expense of house-keeping, prevalent among farmers, has its share of influence on the

value of lands. In the more recluse parts of the north of this country, the farmers, especially of the lower and the more inferior classes, and their servants, are fed, clothed, and accommodated, at nearly half the expense of those of a similar degree in many parts of the more central and southern districts. In a county where frugality prevails, too, lands of a given quality will even, it is said,

bear a higher rent than they w?.l where a more profuse manner of living has gained a footing. Hence, likewise, the spirit of improvement, or the prejudice against it, which prevails in a district, is a circumstance of some value, it is supposed, in this intention ; for if the former be in a progressive state, especially if it be still in the more early stages of its advancement, a rapid increase of rent may with a degree of certainty be expected ; whereas, under the leaden influence of the latter, half a century may, it is thought, pass away, before the golden chariot of improvement can be profitably put in motion. And, lastly, may be noticed, it is said, the attractive centre to which the labors of the husbandman will ever tend — markets, in which, more than in any other circumstance, we are to look for the existing value of lands.

LANDSCRONA, a seaport town of Sweden, four leagues south of Helsingborg, is a staple town, and has a small well-sheltered port, with twenty feet water. It is defended by a fort on a little sandy island, and by a citadel on the main. Between Helsingborg and Landscrona is the village of Rosa ; and between Landscrona and Mal-mce, those of Bairebeck, Hut, Berby, and Allart. Inhabitants 4000. It has manufactures of gloves, and a brisk annual fair.

LAND’S END, a promontory of Cornwall, the most westerly point of Great Britain. It was called by Ptolemy Bolerium, and Avrivt-rmov or Antivestaeum, and by Diodorus Belerium, as Cambden conjectures, from the British word Pell, signifying remote. The ancient British bards called it Penrighnaed, or the Promontory of Blood ; and their historians Penwith, or the promontory to the left. The Saxons called itPenwith-steort, and the inhabitants Pen-von-las, or the land’s end. A tradition obtains that this head ran further out into the sea, and that the ground now covered was denominated Lioness. On the outermost rocks are to be seen veins of lead and copper at low water. Long. 5° 45* W., lat. 50° 6’ N.

LANDSHUT, a well-built town of Bavaria, capital of a district. It has two electoral palaces, a college, and two churches. The steeple of one

of them is the highest in Germany, being 456 feet in elevation. The university of Ingolstadt was removed to Landshut in the year 1800; and having been reorganised, and richly endowed by that monarch, received the name of the University of Louis Maximilian. There are thirty-four ordinary and four extraordinary professors ; the number of students varies from 500 to 600. The principal building is the once spacious Dominican convent. Its revenue is derived, in a great measure, from the funds 01 the suppressed monasteries ; and it is said to average about £9000 sterling a-year. There is besides an academy and a divinity school at Landshut. Brewing and distilling are carried on to a great extent, anfl there are also manufactures of leather, cloth, and watches. The position of the town always exposes it to suffer severely in war: as appeared in”t?42 and 1743 ; and also in the invasions of the French in 1796, 1800, 1805, and 1809. If te -seated on the Iser, thirty-two

miles north-cast of Munich, and thirty-six south-east of Ingolstadt.

There is also a manufacturing town of Prussia in Silesia of this name. Population about 3000. Twenty miles W. S. W. of Schweidnitz.

LANE, n. s. Sax. lana; Swed. lana; Belg. loan. A narrow pass or road in the fields; an alley ; any confined passage.

All flying

Through a strait lane, the enemy, full-hearted, Struck down some mortally. Shakspeare. Cymbeline.

The earl’s servants stood ranged on both sides, and made the king a lane. Bacon’s Henry VII.

1 know each lane, and every alley green, Dingle or bushy dell, of this

wild wood, And every bosky bourn. Milton.

Through a close lane as I pursued my journey.

Otway.

A pack-horse is driven constantly in a narrow lane and dirty road. Locke.

There is no street, nor many lanes, where there does not live one that has relation to the church.

Sprat's Sermons.

LANFRANC, an Italian, born at Pavia, who became archbishop of Canterbury in 1070. He disputed against Berengarius in the council held at Rome in 1059, and wrote against him concerning the real presence in the eucharist. He courageously resisted the authority of pope Gregory

VII. and died in 1089.

LANFRANC (John), an eminent Italian history painter, bora at Parma in 1581. He was the disciple of Augustin Caracci; and, after his death, of Hannibal, whose taste in design and coloring he so happily attained, that he was entrusted to execute some of his designs in the Farnesian palace at Rome. These he finished in so masterly a manner, that the difference is imperceptible to this day between his work and that of his master. He had a peculiar facility in designing and in painting large compositions, either in fresco or in oil : he did indeed aspire to the grace of Correggio, but could never arrive at his excellence ; his greatest power being manifested in composition and foreshortening. He was deficient in correctness and expression ; and his coloring, though sometimes admirable, was frequently too dark. By order of pope Urban

VIII. he painted, in St. Peter's church at Rome, the representation of St. Peter walking on the water, which afforded the pope so much satisfaction that he knighted him. He died in 1647.

LANGBAINE (Gerard), D. D., a learned English writer, was born in 1608. He was educated at Queen's College, Oxford ; and became keeper of the archives of that university, provost of his college, and D. D. He was highly esteemed by archbishop Usher, Selden, and several other learned men; and died in 1657-8. He published, 1. Longinus, in Greek and Latin with notes. 2. A Review of the Covenant ; and other

works.

LANGE (Charles Nicholas), an ingenious Swedish naturalist, who published, 1. Historia Lapidum figuratorum Ilelvetiae. 2. Origo eo-rundorum, et methodus Testaceas Marinse distri-luiendi.

LANGE (Joseph), professor of Greek at Fri-bure, in the end of the sixteenth century. He published, 1. Polyanthea, in 2 vols. folio.

2. A Florilegium, and, 3, Elements of Mathematics.

LANGELAND (Robert), an English poet of the fourteenth century, born in Shropshire, and one of the first disciples of Wickliffe the reformer. He wrote The Visions of Pierce Plow-man ; a piece which abounds with imagination and humor, though dressed in very uncouth versification and obsolete language. It is written without rhyme, an ornament which the poet has endeavoured to supply by making every verse begin with the same letter. Dr. Hickes observes, that this kind of alliterative versification was adopted by Langeland from the practice of the Saxon poets, and that these visions abound with Saxonisms : he styles him celeberrimus ille sati-rographus, morum vindex acerrimus, &c. Chaucer and Spenser have attempted imitations of his visions, and the learned Selden mentions him with honor.

LANGENSALZA, a town of Prussian Sax-ony, the capital of Thuringia, situated upon the Salza, near its confluence with the Unstrut. It has two parish churches, a castle, a theatre, a high-school in great repute ; and has manufactures of silk, woollen, cotton, gunpowder and starch. Population 5400. Fourteen miles west of Er-furt.

LANGER-OOG, a narrow sandy island, subject to Hanover, on the north-west coast of Germany. It is thirteen miles in circuit, a/id does not contain more than 100 inhabitants. Long. 7° 35’ E., lat. 53° 44’ N.

LANG HORN E (John), D. p., son of the Rev. Joseph Langhorne of Winston, was born at Kirkby-Stephen, in Westmoreland. ˆHis father died when he was young. After entering into orders, he became tutor to the sons of Mr. Cra-croft, a Lincolnshire gentleman, whose daughter he married. Dr. Langhorne held the living of Blagden in Somersetshire at the time of his death, which happened April 1st 1779. He was the author of, 1. Poems in 2 vols. 1766. 2. Sermons in 2 vols. 1773. 3. Effusions of Fancy, 2 vols. 4. Theodosius and Constantia, 2 vols. 5. Solyman and Almena. 6. Frederick and Pharamond, or the Consolations of Human Life, 1769. 7. A Dissertation on the Eloquence

of the Pulpit; and, 8, another on Religious Retirement. He also published the Works of St. Evremond ; the Poems of Collins ; and some other articles.

LANGIUS (John), M. D., a physician of Silesia, born in 1485. He graduated at Pisa, and became physician to four electors Palatine. He published at Basil, in 4to. 1B53, Medical Epistles, which are curious. He died in 1565.

LANGLAND, or Long Island, an island of Denmark, between Funen and Laaland, is ten leagues long and only one broad, containing seventy square miles, and 12,000 inhabitants. It produces some corn, potatoes, and flax; and exports salted meat, hides, honey, and wax. Rudkcebing, the only town, on the west, contains 700 inhabitants.

LANGOE, an island of the North Sea, about ninety-three miles in. circumference. • It is forty-six miles from the coast of the bishopric of Ag-j gerhuus, Norway.

LANG PORT, a well frequented market-town of Somersetshire, 128 miles from London, on the Parrot, between Bridgewater and Crewkern. It is divided into two parts, called Langport-Eastover, and Langport-Westover. It has a church, with a handsome tower, and a little to the east is a small ancient building, called the Hanging chapel, in which is a free-school, founded by Thomas Gil let, in the seventeenth century. Its lighters constantly fetch coals, &c., from Bridgewater ; and it is a stage for theTaun-ton waggon, which drops the goods here from London to be carried farther by water. It has a market on Saturday, and four fairs.

LANGREL SHOT, used at sea, consists of two bars of iron joined by a chain or shackle, and having half a ball of iron fixed on each end ; by means of which great execution is done among the enemy’s rigging. See CHAIN-SHOT.

LANGRES, a town of France, in the department of the Upper Marne,

and late province of Champagne. In Caesar's time it was the capital of the Lingones. It was burnt by Attila, and in

A. D. 407 by the Vandals. Its chief trade is in '•utlery, serges, cotton cloth, and sulphuric acid. The last is a considerable manufacture here. It affords a grand prospect, being seated on a mountain near the source of the Marne ; but the cathedral is the only building worth notice : among the public institutions is an Ecole Chre-tienne, where 300 poor children are educated. Thirty-five miles north-east of Dijon, and 100 north by east of Rheims. Long. 5° 24' E., lat 47°52'N.

LANGTON (Stephen), one of the most erudite men of his age, was born in England, but educated in Paris, and greatly esteemed far his learning by the king and nobility of France. He was chancellor of Paris, a cardinal of Rome, and in the reign of king John was made archbishop of Canterbury by pope Innocent III. in opposition both to the monks of Canterbury, and to the king. Langton continued archbishop twenty-two years, and died in 1228. A catalogue of his works is given by Bale and Tan-

LANGUAGE.

LAN'GUAGE.w.s. } Fr. langage ; Lat.

LAN'GUAGED, adj. / lingua. Speech; the

LAN'GUAGE-MASTER, n. *.) vernacular tongue

of a people : languaged, having various languages.

Thus lovers, with their moral documents, And eloquent langage, can exemplifye The Craft of Love what it doth signifie.

Chaucer.

O ! good my Lord, no Latin , I am not such a tyrant since my coming, As not to know the language I have lived in.

Shakspeare.

We may define language, if we consider it more materially, to be

letters, forming and producing words and sentences ; but if we consider it according to the design thereof, then language is apt signs for communication of thoughts. Holder.

He not from Rome alone, but Greece, Like Jason, brought the golden fleece ; To him that language, though to none Of the' others, as his own was known.

Denham.

Methinks the highest expressions that language, assisted with all its helps of metaphor and resemblance, can afford, are very languid and faint in. comparison of what they strain to represent when the goodness of God towards them who love him comes to be expressed ! Barrow.

Though his language should not be refined, It must not be obscure and impudent.

Roscammon.

Some know no joy like what a word can raise, Hauled through a language's perplexing maze ; Till on a mate that seems t' agree they light, Like man and wife that still are opposite.

Stillingfleet.

Latin is a more succinct language than the Italian, Spanish, French, or even than the English, which, by reason of its monosyllables, is far the most compendious of them. Dryden. They were divided into little independent societies, speaking different languages. Locke.

The third is a sort of language-master, who is to instruct them in the style proper frr a minister.

Sjiectator.

I have known men, grossly injured in their affairs, depart pleased, at least silent, only because they were injured in good language, ruined in caresses, and kissed while they were struck under the fifth rib.

South. Others for, language all their care express,

And value books, as women men, for dress;

Their praise is still — the stile is excellent ;

The sense, they humbly take upon content «. Pope.

He wandering long a wider circle made,

And many languaged nations has surveyed. Id.

The common fluency of speech in many men, and most women, is owing to a scarcity of matter, and a scarcity of words ; for whoever is a master of language, and has a mind full of ideas, will be apt in speaking to hesitate upon the choice of both ; whereas common speakers have only one set of ideas, and one set of words to clothe them in ; and these are always ready at the mouth : so people come faster out of a church when it is almost empty, than when a crowd is at the door. Swift.

He now busied his mind with literary projects, and formed the plan of a society for refining our language and fixing its standard. Johnson.

With eyes that were a language and a spell, A form like Aphrodite's in a shell ! Byron.

SECT. I. — OF THE ORIGIN OF LANGUAGE.

As it is evident that there is no instinctive articulated language, it has become an enquiry of some importance, how mankind were first induced to fabricate articulate sounds, and to em-ploy them for the purpose of communicating their thoughts. Children learn to speak by insensible imitation ; and, when advanced some years in life, they study foreign languages under proper instructors : but the first men had no speakers to imitate, and no formed language to study ; by what means then did they learn to speak ? On this question only two opinions can be formed. Language must either have been originally revealed from heaven, or the fruit of human invention. The greater part of Jews and

Christians, and even some of the wisest pagans, have embraced the former opinion ; which seems so far to be supported by the authority of Moses, that he represents the Supreme Being as teaching our first parents the names of animals. The latter opinion is held by Diodorus Siculus, Lucretius, Horace, and many other Greek and Roman writers, who consider language as one of the arts invented by man. The first men they represent as uttering for some time only confused and indistinct noises ; till, associating for mutual assistance, they came by degrees to use articulate sounds mutually agreed upon. This opinion sprung from the atomic cosmogony framed by Mochus the Phoenician, and afterwards improved by Democritus and Epicurus ; and though it is part of a system, in which the first men are represented as having grown out of the earth, like trees and other vegetables, it has been adopted by several modern writers of high rank in the republic of letters; particularly Father Simon, Voltaire, the abbe" Cond iliac, Dr. Adam Smith, the late lord Monboddo; and last, not least, professor Adelung. We shall return to an examination of his elaborate work on this subject.

Drs. Warburton, Delaney, Johnson, Beattie, Blair, and Stanhope Smith of New Jersey, who think that language was originally revealed from heaven, consider all accounts of its human invention as a series of mere suppositions, hanging loosely together, and the whole depending on no fixed principle. The opinions of Diodorus, Vitruvius, Horace, Lucretius, and Cicero, frequently quoted in its support, are in their estimation of no greater authority than the opinions of other men ; for, as language was formed and brought to a great degree of perfection long be-fore the era of any historian with whom we are acquainted, the antiquity of the% Greek and llo-man writers, who are comparatively of yesterday, gives them no advantage in this enquiry over the philosophers of France and England. Aristotle has defined man to be £wov *U*IIJT-HCOV : and the definition is certainly so far just, that man is much more remarkable for imitation than invention ; and therefore, say the reasoners on this side of the question, had the human race been originally mutum et turpe pecus, they would have continued so to the end of time, unless they had been taught to speak by some superior intelligence

The oldest book extant contains the only rational cosmogony known to the ancient nations ; and that book represents the first human inhabitants of this earth, not only as reasoning and speaking animals, but also as in a state of high perfection and happiness, of which they were deprived for disobedience to their Creator. Moses, setting aside his claim to inspiration, deserves, from the consistency of his narrative, at least as much credit as Mochus, or Democritus, or

Epicurus ; and from his prior antiquity, if antiquity could on this subject have any weight, he would deserve more, as having lived nearer to the period of which they all write. But the question respecting the origin of language may be decided without resting on authority of any kind, merely by considering the nature of speech, :i;id the mental and corporeal powers of man.

Those who maintain it to be of human invention suppose men at first to have been solitary animals; afterwards to have herded together without government or subordination; then to have formed political societies, and by their own exertions to have advanced from the grossest ignorance to the refinements of science. But, say the reasoners whose cause we are now pleading, this is a supposition contrary to all history and all experience . There is not upon record a single instance, well authenticated, of a people emerging by their own efforts from barbarism to Civilisation. There have indeed been many nations raised from the state of savages ; but it is known that they were polished, not by their own repeated exertions, but by the influence of individuals, or colonies from nations more enlightened than themselves. The original savages of Greece were tamed by the Pelasgi, a foreign tribe ; and were afterwards further polished by Orpheus, Cecrops, Cadmus, &c., who derived their knowledge from Egypt and the East. The ancient Romans, a ferocious and motley crew, received the blessings of law and religion from a succession of foreign kings; and the conquests of Rome, at a later period, contributed to civilise the rest of Europe. In America the only two nations which, at the invasion of the Spaniards, could be said to have advanced a single step from barbarism, were indebted for their superiority over the other tribes, not to the gradual and unassisted progress of the human mind, but to the wise institutions of foreign legislators.

Experience teaches us, continue these writers, that in every art it is much easier to improve than to invent. The human mind, when put into the proper track, is indeed capable of making great advances in aits and sciences ; but it has not, in a people sunk in ignorance and barbarity, sufficient vigor to discover that track, or to conceive a state different from the present. If the rudest inhabitants of America and other countries have continued (as there is every reason to believe they have), for ages in the same unvaried state of barbarism ; how is it imaginable that people so much ruder than they, as to be ignorant of all language, should think of inventing an art so difficult as that of speech, or even to form a conception of it? In building, fishing, hunting, navigating, &cc., they might imitate the instinctive arts of

other animals ; but there is no other animal that expresses its sensations and affections by arbitrary articulate sounds. It is said that, before language could be invented, mankind must have existed for ages in large political societies, and have carried on in concert some common work ; but if inarticulate cries, and the natural visible signs of the passions and affections, were modes of communication sufficiently accurate to keep a large society together for ages, and to direct its members in the execution of some common work, what could be their inducement to the invention of an art so useless and difficult as that of language?

In a word, daily experience informs us, that men who have not learned to articulate in their childhood, never afterwards acquire the faculty of speech, but by such helps as savages cannot obtain ; and therefore, if speech was invented at

all, it must have been either by children who seem incapable of invention, or by men who were incapable of speech. A thousand, nay a million, of children could not think of inventing a language. While the organs are pliable, there is not understanding enough to frame the conception of language ; and, by the time that there is understanding, the organs are too stiff' for the task. And, therefore, say the advocates for the divine origin of language, reason, as well as history intimates, that mankind in all ages must have been speaking animals ; the young having constantly acquired this art by imitating those who were elder; and we may warrantably conclude, that our first parents received it by immediate inspiration.

To this account of the origin of language, one objection readily occurs : if the first language was communicated by inspiration, it must have been perfect, and held in reverence by those who spake it, i. e. by all mankind. But a vast variety of languages have prevailed in the world ; ;ui(l some of those which remain are known to be very imperfect, whilst there is reason to believe that many others are lost. If different languages were originally invented by different nations, all this would naturally follow from the mixture of these nations; but what could

induce men possessed of one perfect language, of divine original, to forsake it for barbarous jargons of their own invention, and in every respect inferior to that with which their forefathers or themselves had been inspired?

To this it is replied, that nothing was given by inspiration but the faculty of speech and the dements of language ; for, when once men had huguage, it is easy to conceive how they might have modified it by their natural powers, as thousands could improve what they could not invent. The first language, if given by inspiration, must, in its principles, have had all the perfection of which language is susceptible; but, from the nature of things, it could not be very copious. The words of language are either proper names, or the signs of ideas and relations ; but it cannot be supposed that the All-wise Instructor would load the memories of men with words to denote things then unknown, or with tiie signs of ideas which they had not then ao-quired. It was sufficient that a foundation was laid, of such a nature as would support the largest superstructure which they might ever after have occasion to raise upon it, and that they were taught the method of building by composition and derivation. This would long preserve the language radically the same, though it couid not prevent the introduction of different dialects in the different countries over which men spread themselves.

Adelung, in his Mithridates, treats. professedly of the history of languages : and it is the most extensive and profound work on th.‘jt subject thai has ever yet issued from the European prjss. Materials for such an undertaking have been accumulating from all the parts of the world during the last fifty years. Since the voyages of Cook, every navigator and traveller in distant regions has considered it a part of his duty to collect specimens of the dialects of their VOL XII.

inhabitants. The ancient idioms of Persia, Hindostan, and Siam, which were either •vholly unknown to Europeans, or enveloped in a cloud of mystery, have been thoroughly investigated: and the languages of the African and American hordes have been studied. Yet, though our knowledge had increased so much in particulars, scarcely any attempt had been made to compare the data which were collected, and to obtain any general results. The author of Mithridates had already obtained celebrity as a lexicographer, with the reputation of extensive learning, and he brought to this undertaking all the qualifications which were necessary to ensure success. It is much to be regretted that he died before the completion of his work, but it is at the same time

fortunate for the world that his manuscripts fell into the hands of so enlightened a successor as professor Vater. That much remains in this department for future writers to perform, will not be questioned ; but what Mr. Adelung has accomplished claims for him, in our opinion, the decided approbation of the public.

Its full title is, Mithridates oder allgemeine Sprachenkunde. Mithridates; or, a General History of languages, with the Lord's Prayer as a Specimen, in nearly five hundred Languages and Dialects. By Johann Christoph Adelung, Aulic Counsellor and Librarian at Dresden. Berlin, 8vo. Vol . I., 1806. Vol. II., 1809. Vol. Ill , 1812. Part II., 1813. Vol. II. and III. are continued by Professor Vater from the papers of the author.

4 The idea,' he tells us, ' must be given up that language was communicated to the first men by their Creator, or that they were taught the use of articulate words by angels or superior intelligences.' There was a time, according to him, when the human race claimed but little privilege over the brutes ; when they crept upon the earth a ' mutum et turpe pecus.' ' This is a proposition which, on a little reflection, oflVs itself to the mind as a first principle, and requires no proof.' (We confess that to us it dors not appear so fully self-evident.) ' It is true.' he adds, ' that when we consider the artificial and complicated structure of a European language, which is capable of expressing all the shades of thought and sentiment that arise in civilised society, and of representing all the metaphysical reasonings of a Plato or a Voltaire, the production of so wonderful a contrivance seems beyond the reach of the human faculties.' 'A European war-ship, which with a burden of 2500 tons, and bearing 1000 men and 100 can nons, rides triumphantly through the ocean, and defies the rage of conflicting elements, would appear to the wondering eyes of a naked Huron, or to the miserable savage of Oonalashka, as a phenomenon altogether supernatural, and it would be impossible for him to conceive that such a work was produced by the hands of his fellow creatures. But if he were enabled to trace the art of the modern ship-builder backwards through all its stages to the fragile raft or the hollow trunk, on which the first trembling barbarian committed himself to the unstable element, his astonishment would gradually subside, and the supernatural being created by his

imagination would gradually dwindle into a simple man.' The case is similar, according to our author, when we enquire into the history and progress of language. ' It only requires a little observation to discover the stages of its advancement, and to trace it backwards to the first articulate sounds uttered by the uncouth child of nature.' — ' Even when we examine attentively the whole fabric, in its complete form, we discover clear vestiges of its homely beginning. The language which flows from the mouth of a Cicero or a Newton still bears traces of those infant ages of the world, when men referred all the movements of external nature to the same voluntary powers of which they were conscious within themselves ; when they fancied that the wind blows, that the sun goes down, and that the ocean roars, and when with similar ignorance they feigned mountains and rivers to be males and females.'

It is clear that the first words which a savage would utter would naturally be mere vocal sounds pronounced with the, open mouth, without articulation. Accordingly words of this character abound in the vocabularies of many barbarous nations, as the South Sea Islanders, the Hurons, the Algonquins, Galibis, and Esquimaux. Some well known languages preserve many of these first attempts to form words. The Greek expresses the most simple ideas by mere vocal sounds, such as aw, tw, MI, saw, diw, »}w, oiw, diet, aut. The addition of consonants was a considerable step in advance, and that it was a matter of some difficulty we may learn by observing how many languages are still very defective in this respect. La Hontan found it impossible to teach a Huron to articulate the labials b, p, and m. Scarcely are there two dialects which agree in the number of consonants. The Otaheiteans imitated the name of Cook by the word Tutu, and the Chinese, in the place of Christus, were obliged to substitute Ki-li-tu-su. Next to mere vocal sounds, the most simple class of words are those in which a single vowel follows a consonant, as ba, lo, ma, &c. These are the words which a child first pronounces. The dialects of the southern islanders are replete with such sounds, and the whole Chinese vocabulary contains scarcely any other words. On this account Mr. Adelung considers this as the nearest representative of the primitive language of mankind.

The first application of names to objects, or the invention of

significant words, has often been supposed to have taken its rise from the imitation of the voices of animals, or the sounds produced by various natural causes. The serpent hisses, the bees hum, the thunder peals, the tempest roars, the wind howls among the mountains. The savage listens and imitates the sound which salutes his ears, and the word which he pronounces serves afterwards to recall to himself and his companions the idea of the object which first gave occasion to its utterance. In fact all such phenomena as are accompanied by an audible sound are distinguished in most laiiffuawes by tones which are clearly imitative, and the names of animals which utter loud and Jislinct cries .uc.' of the same nature. Having

once by these si;nple efforts formed the habit cf communicating and receiving ideas, it is easy to conceive that a further progress could be made by associating analogous perceptions and objects. A stone falling to a great depth was frequently observed to occasion a peculiar sound. The imitation of this sound afforded a word to signify deep : the same word was afterwards extended to the opposite but connected sense of height, and it came at length to designate haughtiness, magnanimity, loftiness of mind, and whatever excites the sentiment of the sublime, either in animated or inanimate nature. How far these analogies may be carried, and how remote the derived sense of a word may become from the idea which first occasioned its invention, may be conceived by observing the terms which in several languages designate the soul or intellectual spirit, and which took their rise from words first applied to the act of breathing, or formed in imitation of the sound which a breeze produces in the foliage of a wood. As these analogies are for the most part arbitrary, and depend on peculiar habits of feeling and thinking, it may thus be imagined that every little society of men would form a language in a great measure peculiar, and that the diversities would chiefly consist in words which have a figurative sense, and therefore owe their origin to real or fancied resemblances. We find in reality that the terms furnished by natural objects, and by those analogies which are so accessible as to be universally perceived, are often similar in idioms which differ in their more abstract words. The structure of a language will thus bear the character of the nation by whom it was formed. Among the Oriental people the fancy takes a bolder flight, and discovers or invents analogies which escape the feeble perceptions and colder genius of the north.

But, if we suppose a sufficient number of words to be thus formed, we are still far from possessing a complete language. ' We have now indeed formed a canoe out of the unshapen trunk, but a rudder and

sails are wanting, and we can only grope with labor and difficulty along the coast.' The distinction of nouns and verbs, and the addition of numbers, declensions, and conjugations, are necessary before our dialect can assume a sufficiently perfect state for expressing our thoughts with precision and facility. These advantages have been obtained by different nations in degrees, and by methods very various. The Chinese and other languages of similar character are absolutely destitute of inflections. Simple monosyllables are incapable of variation ; they are a sort of monads or primitive particles ; all the connexions and shades of ideas are performed by them in the rudest manner ; variation of tone sustains an important part, and even gesticulation is used to render language more expressive. The composition of words is precluded by the mechanism of these dialects, which admits of no aggregates, and its place is rudely supplied by mere juxtaposition. In other languages our author supposes composition to be the source of all the modifications of words, and attributes declension, conjugation, Sec., to this sole principle; but he has not lesolved

the problem, how some languages originally monosyllabic, for such he supposes all to have been, have in the sequel entirely changed their character, and have become capable of combinations. This account of the invention of speech, though it contains little that is altogether new, appears to us on the whole well imagined and illustrated.

Having explained to his own satisfaction the origin of language, Mr. Adelung endeavours to confirm his views by enquiring what part of the earth is the native seat of the human race ; but into this topic we cannot follow him.

SECT. II. — HISTORICAL DEVELOPMENT OF THE

PROGRESS OF LANGUAGE. Our author's geographical arrangement of languages is ill adapted to the purpose of a connected essay. We, therefore, present our readers with a table in which they are distributed according to their affinities, as the foundation of some few

further remarks on their history.

MONOSYLLABIC LANGUAGES.

1. Chinese languages.

2. Tangut or Tibetan.

3. Barma or Birman. Rukheng or dialect of Arracan.

4. Mon or Peguan.

5. T'hay or Siamese. T'hay-j'hay or old Siamese. Lao or Laos.

6. Khomen or Cambojan.

7. Anam or Cochin-Chinese.

8. Corean languages ?

POLYSYLLABIC LANGUAGES.

9. Ancient Indian or Sacerdotal.

BRANCHES.

A. Sanscrit.

B. Bali.

C. Zend.

O. Pelasgic.

E. Celtic.

F. German.

G. Sclavonic.

DIALECTS.

A. OF THE SANSCRIT.

1st. Pracrits or ancient dialects.

&. Saraswati bala bani or poetical Pracrit.

b. Hindi.

c. Gaura or Bengali.

d. Mait-‘hila or Tirhut.

e. Odradesa or Orissan.

f. Tamul or Malabar language.

g. Maharashtra or Mahratta. h. Karnata or Canarese.

i. Tailanga or Telinga. k. Gurjara or Guzeratti.

2d. Bhathas or vulgar dialects. Dialect of Miiltan. Gipsey language, &c. &c.

B. BALI.

The Bali is not properly the parent of any fiving dialect, but has contributed to modify .many of the monosyllabic languages and the po-ysyilabic idioms of Japan and Ceylon.

C. ZEND.

a. Pahlavi. I c. Kurdish.

b. Parsi, parent of modern Persic. | d. Afghaun?

D. PELASGIC.

1. Thracian Tribet.

a. Phrygians.

b. Bithynians.

c Heneti and Paphlagoniaus.

d. Mysians and Trojans.

e. Lydians.

f. Carians.

g. Lycians. h. Cimmerii. i. Taurians.

k. Proper Thracians.

1. Getae or Daci.

in. Mffisians.

n. Macedonians.

o. Epirots.

p. Abantes.

q. Illyrians?

r. Veneti.

s. Pannonians.

2. Grecian Dialects.

b. CeluWEolic or

Latin. Italian. French. Spanish, Portuguese. Romanish.

a. Pure ˆEolic. Doric. Ionic. Attic.

I Hellenic.

Romaic.

E. CELTIC.

a. Cambro-British. b. Erse.

Welsh. Irish.

Armorican. Gaelic.

Cornish. Manks.

Old Helvetian.

F. GERMANIC. lit. Branch. Dutch or proper German.

A. SOUTH GERMAN OR GOTHIC.

Ancient Dialects.

Mceso-Gothic. Herulic.

Vandalian. Longobardic, &c.

Modern Dialects.

Dialects of Suabia, Alsace, Upper and Middle Rhine.

Bavarian. Austrian. Swiss and Tyrolese.

D. MIDDLE GERMAN.

Thuringian. | Franconian, &c.

C. LOW DUTCH.

Frieslandish. Holland or Dutch.

Lower Saxon. Belgian.

D. HIGH DUTCH.

Upper Saxony, since Luther's time, the polite language ot Germany.

Id Branch. Scandinavian. Danish. Icelandic

Norwegian. Swedish.

3d Branch. English. 10. HEBRAIC.

A. JETHIOPIC.

1. Geez. i 3. Old Egyptian?

2. Arnharic.

B. CASAANITISH.

1.

Hebrew.

Hebraeo-Chaldeaic. Samaritan. Galilaean.

Rabbinical. 2. Phsenician. 3 Punic.

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LANGUAGE.

c. … u.utrr.

1. Old Arabic. z. Modern Arabic, b. Moorish.

4. Mapulian.

5. Maltese.

D. ARAMEAN OR SYR1AC. E. ASSYRIAN OR PROPER CUALDAIC.

11. IBERIAN. Cantabric or Basque, Ligurian and Sicanian, extinct.
LANGUAGES OF NORTHERN /NATIONS.

12. Tchudic,

A. Finnish. Livonian. Esthonian.

B. Lapponic.

C. Hungarian.

13. Permian.

14. Vogulic.

15. Language of Ostiacs on the Oby.

16. of Chermisses.

— Votiaks.

Morduines.

Teptjerais.

Samoides.

Jenisean Ostiacs.

— Kamtsckatkans.

17. 18. 19. 20. 21. 22. 23.

Tschuktschi.

B. Koriaks.

C. Oonalashka.

D. Esquimaux.

E. Greenland. NATIONS OF CAUCASUS.

25. Abassians.

26. Circassians.

B. Cossacs of the Don.

27. Ossetes. B. Alani.

Albanians of Epirus.

28. Ingushi.

29. Lesgi.

30. Armenians.

31. Georgians.

ULTRA CASPIAN NATIONS. 32. Tartar or Scythian.

A. TARTARIAN STEM.

1. Nogays.

2. Comanians.

3. Kasan.

4. Kirguis.

B. TURKISH STEM.

4. Karamanians.

5. Osman Turks.

1. Turkmans.

2. Usbecks.

3. Bukharians.

C. MIXED WITH MONGOLES.

1. Chulymes. 3. Chuvashes.

2. Krasmojars. 4. Yakutes.

33. Mongolian.

A. Mongole Proper.

B. Kalmuc.

C. Bursettes.

34. Mantchurian.

A. Mantchu Proper.

B. Tungusian.

35. Sagalien.

36. Kurilian.

37. Japanese.

38. Formosan.

39. Ceylonese.

40. Polynesian.

A. Savage Races.

1. Andamaners. m

2. Malacca Negtoes.

3. Papuas.

4. New Holland.

5. New Hebrides.

6. Feejee, &c.

B. Tattooed Races. 1. Battas.

9 Bugis.

3 Pintados.

4 New Zealand.

5. Friendly Isles.

6. Society Isles.

7. Sandwich Isles, &c.

8. Easter Isle.

C. Menankabow Race.

1. Sumatra Malays.

2. Malays Proper.

3. Coast of the Indian Islands Magindano, &c.

The African and American Languages are too numerous and too little distinguished to be enumerated here.

Of the monosyllabic languages. — Thibet, the Chinese empire, and the whole of India, beyond the Ganges, contain a population much greater than that of all Europe. The languages of ail these nations, with the exception of a few tribes on the coast of the Malay Peninsula, are monosyllabic. The people themselves are distinguished from the rest of mankind by their physical traits, the most striking of which are a broad flattened countenance, with their cheek bones extending laterally, compressed features, and oblique orbits. These characters do not, however, prevail among them universally, or in the same degree. Some of the tribes of the Eastern peninsula scarcely differ from some castes of Hindoos. There are few problems in the history of mankind more curious than the uniform picture which these nations present, and the unvarying character which they have preserved through so many ages. The cause of this phenomenon must be sought partly in their insulated situation, in a remote corner of the world where they are cut off from other nations by natural boundaries ; and partly in the multitude of their population, which is so great as to swallow up in its mass the more warlike tribes who have occasionally penetrated their boundaries, and have exercised a temporary dominion over them. A

remarkable fact with respect to these nations is the almost endless variety of their oral languages. The same written character is used throughout the Chinese empire, and the same writing is intelligible in all its provinces. Europeans, from this circumstance, have imagined that there is one language proper to the whole nation ; but this is so far from being the case, that, as Mr. Barrow informs us, there are scarcely any two provinces in China which have the same oral language ; and Dr. Leyden, to whom we owe much valuable information on the literature of this family of men, declares that the same written words are read and understood by at least twenty different nations, who would scarcely an-LANGUAGE.

derstand a word of one another's speech, and would all use different words to express the same meaningi The dialect which has obtained by distinction the title of Chinese, is the Kuan-hoa, the language of the court and of the Mandarines, which was originally the proper speech of the province Kiang-nan, where the native emperors of China formerly held their residence. . Still greater is the diversity which prevails beyond the limits of the empire. It is only by comparing the internal structure of these dialects, and by considering the monosyllabic form and the uniform system of intonation which they all retain, that we derive an argument for the common ori-gin of the nations who use them ; an opinion which is, however, amply confirmed by their very «»riking resemblance in physical peculiarities and moral traits.

The boundless variations of these languages, and their great mutability, is a fact scarcely reconcileable with the high antiquity which Mr. Adelung imputes to them. Rude unformed jargons, consisting of monosyllables unconnected by any rules of structure, are in their very nature so liable to perpetual fluctuation, that it seems absurd to consider them as relics of ancient times ; and when we add to this the fact that the written characters have no relation to the vocal dialect, and therefore give no aid towards fixing and preserving the speech, as they do among nations whose letters represent sounds, the languages of this group are reduced to the same ever-changing condition with the mere oral jargon of savages, which often differs totally in contiguous districts, as in New Holland, where two neighbouring tribes call even the sun and moon by names quite

distinct from each other. Since the proofs of antiquity so entirely fail in this quarter, we are naturally invited to turn our p.yes to the boasted literature of China, for something in aid of the tottering hypothesis of our author. But here, as he himself confesses, we find only a glimmering and unsteady light. The famous History of China, translated by the Jesuit Joseph Anne Marie de Moyriac de Mailla, and published by the abbe Grozier in 12 vols. 4to., sets out from an epoch sufficiently remote : but what sort of documents do we draw forth from this precious store ? — ‘ Stories of emperors who find out arts and sciences by the dozen, who give command to their august consorts to invent manufactures, and who, in long-winded harangues, convince tfieir mathematicians of the importance of discovering astronomy.’ Even in that part of these annals, which is commonly considered as of unshaken authority, beginning with the year 207 B. C-, our author has fallen upon a most awkward stumbling-block. The great wall of China, perhaps the most stupendous monument of human labor that exists, is declared hy the Chinese Annals to have been completed 240 years B. C.

So prodigious a work, which has attracted the chief wonder of Europeans since their first acquaintance with China, could scarcely have remained unknown to any nation who carried on intercourse with that country. Yet Ptolemy, who describes the march of caravans into the country of Seres, never gives the smallest hint of

its existence. The Arabian travellers, »hose voyages Renaudot has published, were equally unacquainted with it: and, what is still more strange, Marco Polo, who served three years in the army of Kublai Khan, and travelled to the north of China in 1270, and who must actually have passed under the great wall, if it had existed in his time, has omitted entirely to mention it, though he is minutely accurate in noting down all that he saw worthy of observation. This fact, when taken together with the modern aspect of the structure, shows us what degree of reliance can be placed on the Chinese history, even in those part-, which are reputed most authentic. It is probable, indeed, that fragments are preserved among the Chinese as among other nations from remote times; but they are neither so well ascertained, nor so definite in time and circumstances, as to give us any insight into the history of the people.

Yet we wonder to find Mr. Adelung so quietly giving up a resource which promised support to his hypothesis, and we cannot but look upoti it as an extraordinary piece of magnanimity. But when he

acquiesces in the conjecture of Sir W. Jones, to which for our own parts we have no particular objection, that the Chinese are the offspring of a tribe which is mentioned in the Institutes of Menu to have emigrated from India, he seems to throw to the ground the whole fabric which he has been laboring to erect; for the ‘ Chinas mentioned by Menu were a branch of the Hindoo stock, had been subjected to the system of castes, find, of consequence, spoke the tongue of liindostan. What then becomes of the Ogygian antiquity of China, and her primeval language?’

We have no room to enter at length into our author’s observations on the structure of these languages in particular. In general he seems to have made a good use of the resources of which he was possessed, and has given a very good digest of all the information which had been acquired or. the subject of the Chinese language prior to the date of his work. Some progress had been made subsequently by our countrymen in the east, and we trust that what we have hitherto obtained is only the prelude to more important contributions. With respect to the nations of the eastern peninsula from the Ganges to China, and their dialects and literature, more valuable information is contained in the late Dr. Leyden’s work, in the tenth volume of the Asiatic Researches, than the whole amount of our previous knowledge.

Of polysyllabic languages. — The chain of Mount Imaus separates the jargons of China and Thibet from a tribe of languages which has performed a’ much more important part as an instrument of human thought. If men had always been limited to the use of the rude uninflected dialects of north-eastern Asia, it would scarcely have been possible for them to have risen above the rank of barbarians. ,

The Sanscrit and its cognate dialects present tlie strongest contrast to the monosyllabic languages. We have observed that the latter arc incapable of inflection. The relations ami modes of the chief words in a sentence ar»

partly expressed by particles which are in themselves distinct roots, and are partly left to be understood : nouns express in themselves neither numbers, casjj, nor genders; nor the verbs, moods, tenses, or persons. The Sanscrit, on the contrary, exhibits all these shades of ideas by inflections, which are in this more complicated and extensive than in any other language. A single word in Chinese is capable only of one application. In Sanscrit it gives origin to a numerous class of words, the whole of which the primitive idea pervades under an indefinite number of modifications. All the derivatives from one stock bear a certain stamp of affinity, and illustrate each other by their mutual relations. Hence this language and its sister dialects are exceedingly copious, and capable of expressing even the most general or abstract ideas with precision and at the same time with variety : they are applicable to all the purposes to which the human faculties can direct the use of words. Accordingly it is only among nations who use these dialects that the sciences have advanced, or that philosophy has flourished. Another consequence of this organised and systematic structure is the wonderful durability of this class of idioms, and the constancy with which they preserve their affinities and individual character, though scattered many thousands of years over distant parts of the earth. Their affinities are every where easily recognised, and the same families of words are traced back to similar origins : a sort of living principle seems to pervade them which preserves their organisation in vigor, and propagates it to perpetuity. It is quite the reverse with the monosyllabic tongues ; each word in them is an unconnected individual. When lost, its place is supplied by another without difficulty. Hence these languages are in their nature fluctuating, and subject to constant change.

Mr. Adelung has given a rather confused and imperfect account of the Sanscrit and its dialects ; at which we cannot be surprised, as he was unacquainted with what Mr. Colebrooke and other learned members of the society at Calcutta have done of late years in opening the stores of Asiatic literature, and depended chiefly for information on the presumptuous and half-learned missionary Paulinus a S. Bartholomeo, whose crude misrepresentations have frequently been opposed by foreign writers to the authority of Sir W. Jones and Mr. Colebrooke. The invidious disposition towards the English, which has been fostered of late among all ranks of people on the continent, has even extended itself to men of letters. We find symptoms of this feeling even in the work of Mr. Adelung, He takes an opportunity of informing us, that ‘ India since the ruin of the Mogul power has fallen under the tyranny of Mahrattas, Seiks, and Britons ; the former of whom have exercised their wonted atrocity: the latter have been more

systematic, but not less oppressive in their conduct.' He takes every opportunity of lessening the reputation of our countrymen as oriental scholars, and of exalting, at their expense, the fame of any pitiful Romish monk, who can be forced into competition with them. There is as

much folly as injustice in this attempt. The achievements of our learned men in the literature of India have been as pre-eminent as those of our arms upon her soil. But we hope that the time has passed by when every pedant of the continent looked for patronage by insulting England, and when high Dutch philosophers were vain of receiving the ton from the frivolous Parisians.

As Mr. Adeluns has been so unfortunate in the choice of his authorities, we shall pass by his account of the language of India, and shall present our readers with a brief sketch of what he might have done ; availing ourselves of the documents which have been brought to light by our illustrious countrymen in the east ; and some able comments of the late British Review.

In adverting to the opinions which have been entertained concerning the Sanscrit, it is scarcely necessary to mention the notion, that it owes its origin to the invasion of Alexander and the Macedonian colony settled in Bactria, which was proposed in order to account for the refined character of the language, and its affinity with the Greek. It would be just as reasonable to imagine that our Teutonic dialect was introduced into this country by a regiment of hussars from Hesse Cassel, or by an ambassador from the Hague. But the copious inflections of the Sanscrit, and the exquisite refinement of its grammatical system, seemed to afford somewhat better ground for the opinion that it never was the popular speech of any nation ; but was formed by the concerted efforts of the Brahmins, who, by polishing and reducing to more complex rules the vulgar tongue of Hindostan, gradually constructed an artificial language, adapted only to literary composition. Mr. Colebrooke has, however, fully refuted this notion, and has shown that there is no reason to doubt that the Sanscrit was once universally spoken in India, and that it was the parent of the modern dialects which are spread through that country from Mount Imaus to Cape Comorin. ' It evidently,' he says, ' derives its origin (and some steps of its progress may even now be traced) from a primeval tongue, which was gradually refined in various climates, and became Sanscrit in India, Pahlavi in Persia, and Greek on the shores of the Mediterranean.' He might have added that the Celtic, the German,

and the Sclavonian, were less ornamented dialects of the same ancient language.

The Hindoo grammarians distinguish three eras in the history of their national language. 1st. That of the ancient or classical Sanscrit. This is the idiom to which Adelung applies the term Deva Nagari, which is well known to every tyro to belong to no language whatever, but to be the designation of the alphabet used iu Sanscrit composition. The second era is that of the Prucrit, under which name are included the ten provincial languages of India. The third, termed the JMagad'hi, comprehends the popular dialects, or Bha«has.

The ten Pracrits are the written dialects which are now used in conversation, and are cultivated by literary men. There is reason to believe that

ten polished dialects formerly prevailed in as many different civilised nations, who once oc-fimif'l all the fertile provinces of Hindostan :m'.l the Deccan. They are thus enumerate<l by the Hindoo grammarians: — 1. The Saraswati l>:'ila bani, or ' speech of children on the banks of the Saraswati,' was the dialect of the Saraswati, a nation inhabiting the vicinity of the river Saraswati. This idiom is the Pracrit of the poets.

2. The Hindi was the dialect of the Canyacu-byas, whose capital was the ancient city Canoj or Canouge. This language is the groundwork of the modern Hindostani, which is intermixed with Persic and Arabic. Nine-tenths of the Hindi may be traced back to pure Sanscrit ; it lias been said that the remainder is wholly distinct from it, and of separate origin, but this assertion, as Mr. Colebrooke observes, requires further proof.

3. The Gaura or Bengali contains few words which are not evidently of Sanscrit origin.

4. Mait'hila or Tirhutiya spoken in the sircar of Tirhut, and as far as

the Nepaul Mountains, has a great affinity with the Bengali.

.5. Utcala or Odrade”sa, the language of Orissa.

These five nations of Hindoos are termed the five Gaurs or Northern Nations ; the remaining five are the Dravirs or southern ones.

6. Dravira is the southern part of the peninsula where lheTamel,Tamulian, or Malabar language is spoken. A great number of Sanscrit words exist in this idiom, but Mr. Marsden considers the basis of it as a distinct language.

7. Maharashtra or Mahratta, spoken by the people of that name. This idiom also contains many words derived from an unknown source.

8. Karnata or the language of the Karnataca. T:iis is commonly called the Canarese. It bears the same affinity to the Sanscrit as the other dialects of the Deccan.

9. Tailanga, or Telinga, the language spoken in Telingana, an ancient kingdom on the eastern coast of the peninsula. It is said to have borrowed more largely from the Sanscrit than the other dialects of the Deccan.

10. Gurjara, the dialect of Guzerat.

All these dialects, like other modern iuiom >, are much less abundant in inflections than the parent Sanscrit. Auxiliary verbs and particles supply the place of variations in the radical words.

The Magad’hi, or third class of languages, includes the bhashas, or vulgar dialects of India. Among them is the idiom prevalent in Multan, concerning which Adelung has announced a very curious fact. The wandering people who arc dispersed over a great part of Europe, and are known by the naines of Gipseys, Bohemians, and Zigeuners, were perceived by Grellmann to be of Hindoo descent ; but that author erred in confounding the Sudras, a class of respectable character, with the outcast Pariars ; and he was mistaken in deriving the Gipseys from the for-mer. These vagrants call themselves ‘Roma;’ hence Whiter, the author of the Etymologicum Magnum, ‘imputes to them the building of Rome !’ Pallas first perceived that the dialect of Multan bears a strong analogy with the Gip-sey language ; and Adelung has proved, by an extensive comparison of their idioms, that this people certainly originated from some low caste in that part of India.

We may now advert to the affinity between the Sanscrit and the languages of the West, to which we have said that it is related. If this affinity were confined to a resemblance in any given number of roots, it might be attributed to the effects of accidental intercourse. It is only an essential affinity in the structure and genius of languages that demonstrates a common origin. This sort of relationship exists in the Sanscrit, the ancient Zend as well as the modern Persic, the Greek, the Latin, the German dialects ; and is found, though not to the same extent, in the Celtic and Sclavonic. In the Hebrew and its cognate idioms, as well as in the Coptic, there are many Sanscrit roots, bearing little or no resemblance to the structure of that language. A striking example of affinity between these dialects occurs in the numerals, which we sub join : —

Sanscrit. Persic. Greek. Latin. Russian. German. English. Welsh. Gaelic.

Kka,

ek,

lie, «v—

unus,

odin,

eins, ein,

one,

un,

aon.

Dwau,

du,

Svw,

duo,

dwa,

zwey,

two,

dau, dwy,

da.

Traya,

se,

Tf > tlG,

tres,

tri,

drey,

three,

tri,

tri.

Chatur,

chehar,

TfTTOpff,

quatuor,

chetare,

vier,

four,

pedwar,

ceither.

chatuwar,

pettor (Oscan)

(Zend),

Pancha,

pansh,

rwn,

quinque,

pyat,

fuinf,

five,

pump,

coig.

Shash,

shesh,

5T***

sex,

shest,

sechs,

six,

chewe.

sia.

Sapta,

heft,

lirra,

septem,

sedm,

sieben,

seven,

saith,

seachd .

hapte (Zend),

sem,

Ashta,

hesht,

oirru),

octo,

osm,

acht,

eight,

wyth,

ochd.

Nova,

nu,

tvvia,

novem,

desyat,

neun,

nine,

naw,

noi.

Dasa,

deh,

ttica,

decem,

desyat,

zehn,

ten,

dfeg,

deach.

dese(Zend),

Ekadas,

yazdeh,

IvflKX,

undecim,

eilf,

eleven,

un ar ddˆg,

aon deug

Dwadas,

duazdeh,

iufeKOf

duodecim,

zwoelf,

twelve,

deuddeg,

dadhug.

Vinsati,

bist,

tlKOffl,

viginti,

zwanzisr,

twenty,

ugain,

fichid.

Trinsati,

si,

TpiaKovra,

triginta,

dreyssig,

thirty,

deg ar hu-deich tlu gain, fichid

Sat,

sad,

ixarov,

centum,

hunaert,

hundred,

cant,

The ordinals coincide remarkably in Greek, J.atin, and Sanscrit, as prat'hama or protoma, Trpwra, prima; dwitya, StvTtpa ; tritya, rpira, tortia ; chetoorta, rerapra, quarta ; penchema, iriinrra, quinla; sheshta, iiera, sexta; septima, iirra, septima ; ashtima, oydoa, octava ; novuma, nona (regularly deduced from the cardinal it would be novima); decima, faeara, decima, &c.

Here, as in most instances, we may observe th;it the Latin agrees with the Sanscrit much more nearly than the Greek.

The following are a few examples of roots which ramify through all these languages : the list might be extended to an almost indefinite number.

Pita, pitara, Sanscr. ; peder, Pers. ; irarrjp, Gr. ; pater, Lat. (whence Jupiter, Dies-piter) ; vater, Germ. ; father.

Tada, S.; tad, Welsh; tat'air, Irish; otshe, RUSS. ; tatta, vulgar German ; we may add, taat, Finnish, and aita, Basque ; daddy, vulgar English ; father.

Mata, matara, S., mother ; mader, P. ; prjTijp, Gr.; mater, L.; mutter, Germ.; mater, Sclav.

Bhrata, bhratara, S., brother ; bradar, P. ; ˆporjjp (of the same tribe), Gr. ; frater, L. ; bru-der, Germ.; brawd, brodyr, W.

Swasara, S., sister; kuaher, P.; soror, L. ; sch wester, Germ.; chwaer, W.

Padsja, S., boy ; a-pos (privative), Pers.; Traic, Gr. ; ajraic (privative) ; bachgen, W.

Duhita, duhitara, S., daughter; dochter, P.; &vyart)p, Gr.; tochter, Germ.

Agni, S., fire ; ignis, L. ; ogon, Russ. ; ?rwp, Gr.; feuer, Germ.; fyre, English.

Apa, S., water; ap. P.; aqua, L.

Uda, S., the sea ; } vciwp, Gr. ; udus, L.;

Udakam, S., water ; $ wasser, Germ. ; y dwr,

W. ; water, English.

Dhara, S., earth ; terra, L. ; epa, Gr. ; erde, Germ. ; daiar, tir, W, ; yjj, Gr. ; ke, ge, Gaelic.

Bhumi, S.; > bum, P.; humus, Lat.;

Jiami, S. ; J zumin, P. ; zemlija, Russ.

Naba (the air), S.; J v«j>t\i), Gr. ; nubes, nebu—

Nibu (cloud), S. ; $ la, L.; uebel, G. ; nev, W.; nebesi, Russ.

Hi tnmala (heaven), himmel, Germ.

Nisa, S., night; vv£, Gr. ; nox, L. ; notch, Russ.; nicht, Germ.: rios, W.

Divos, S.; dies, L.; day, Eug.; dydd, W.; tag. Germ.

Jajanmi S. (beget); \ yiyvw, ytvvaw, ytvoc, I Gr.;gigno,L.;ganu, V W.; kind, Germ.

Genita, S. (begotten) ; I genitus, L.

Janata, S. (nations) ; J gentes, gens, genus, L.

Mrityu, S. ; mors, L. ; mrete.Zend ; mertovii, Russ. ; mord. morsch, Germ. ; marw, W. Yuvan, S., } n£r. \ luwan, P.; juvenis, ju- \ un, S., J J -‘ i nior, juvencus, L.

leuangc, W. ; and yeong, Anglo-Saxon ; jo-vank, Armoric.

Yauvaua, S. youth ; iau, W.

loban, Hindi.

Jugend, Germ. ; juventus, L. St’ha, S. (stand) ; ? T *j T» /* St’lum

(station); $ Istadan' R (to stand > Estam, P. ;) sto, L. ; { iffrijpt, Gr.; i I stand. Estad, P. ; j stat. L.; ji wnjat, Gr.; J he stands. Stehen, stand, Germ. ; st'hira, S. }

oTfpsoc, Gr. S-firm. stier, Gerrn.J

From each of the above roots is derived a large catalogue of words in all the languages mentioned. In grammatical structure the Sanscrit scarcely difiers more from the Greek and Latin than they differ from each other.

The conjunctions of the verbs afford the strongest example of coincidence. The following is the present tense of the verb substantive : —

Sanscrit .

asmi

. asi

asti

— smah

st'ha .

santi.

Greek

iff/U

. COOT

tort

IffftV

tare

nffi or

Russian .

esm

. esi

. est

— esmui .

esti

sut.

Latin

sum

. es

. est

— sumus .

estis

sunt.

Persian

am

. ai

. ast

— a’im

aid’ .

and.

Welsh

wyv

. wyt

. oes

— ym

ych

ynt.

English

am

. art

. is

— are

are

are.

This verb is defective in many languages. In Latin and in Welsh several tenses are formed from an old verb which only survives in the Sanscrit in a tolerably perfect form. This is bhavimi, bhavasi, bhavati, &c., answering to the German ich bin, du bist, &c. The preter tense of this verb in Latin, fui, fuisti, fuit, coincides with the Welsh bum, buost, bu ; and the Latin

fuissem, fuisses, fuisset, &c., with the Welsh buaswn, buasit, buasai,buasem, buasech, buasent. The future in the Russian agrees with the Welsh, as budu, budesh, budet — budem, &c., which, in Welsh, is byddav (pronounced budhav), byddi, bydd — byddwm, byddwch, byddant. The verb to eat coincides almost as closely

Sanscrit

admi

. atsi .

atti —

admas .

att'ha .

adanti.

Latin

, edo

. edis .

edit —

edimus .

editis .

edunt.

. es

est

estis

»

Greek .

i&t

. iStif .

tSu —

itiofUV .

iStre .

iSoVTl (#.01.).

Russian .

iem

. iesh .

iest —

iedim .

iedite .

iedyat.

German .

esse

. issest .

isst —

essen

esset .

essen.

Some Sanscrit verbs coincide most with the Greek,

Jivami jivasi jivati —

with Vivo vivis vivit —

Dadiimi, dadasi, dadate, with StSufu, £i&5c, SioiHai,

The following are some miscellaneous examples :—

Russian . verchu . vertish . vertit —

Latin . vcrto vertis . vertit —

others the Latin, as jivamah jivathah jivanti, vivimus vivitis vivuut &c.

vertim . vertite . vertyat vertimus vertit s . vertunt. •

LANGUAGE.

Again,

Welsh Greek

Elwn t\0oi/j.i

elit

elai — elym

elych iXOotrt

rlynt.

In all UK? al>ove instances the German is more remote from the Sanscrit than the other languages; in the following it coincides remarkably with the common prototype. Varttita, er werde (he shall be), vetsi, vetti — du weisst, er weiss (thou shall know, he will know) ; schrityati, er schreitet (in Latin, scribit) (writes) ; shlissyati, er um-sthli- esset (he encloses) ; vindati, er findet (he finds) ; mishrati, er mischt (miscit) (he mixes).

The nearest relatives of the Sanscrit are two languages which, like it, have been for many ages confined to the use of sacerdotal orders. From eighteen to twenty centuries have elapsed since the Zend and the Bali were living dialects: both of them coincide very nearly with the Sanscrit in their vocables, and are formed from the roots of that language according to the regular laws of elision and contraction. This fact was pointed out by Sir W. Jones, and has been confirmed by Dr. Leyden, to whom we must refer the reader for details.

The modern Persic, as is universally known, is a mixture of the Parsee with Arabic.

The next offspring of the Indian family has held a still more conspicuous place in the history of literature and human society than the preceding ; this is the Pelasgian stem, from which are descended the Greeks and Romans, and the modern nations in the south of Europe, who speak dialects of the Latin. Our author has given good reasons for including the Thracians in the same stock, as well as the numerous population of Asia Minor, and all the European tribes who appear to have been allied on the one hand to the Getae and on the other to the Pelasgi. The Lydians, Lycians, Phrygians, Ac., are connected by many historical facts with the lineage of the Greeks and Thracians. The authority of Strabo is a far better reason for classing the Cimmerii with the Thracians and Getae, than the mere resemblance of a name can afford for identifying this nation with the Cimbri in Denmark, or the Cambro-Britons in Wales. Yet many modern writers, among whom is ever*. Mr. Townsend, talk of the Cimmerii in Britain, as if the name were synonymous with Welsh. The Tauri, whose celebrated rites in honor of Diana, or of some unknown goddess to whom the Greeks gave that name, form the foundation of the romantic drama of Iphigenia, were probably a remnant of the Cimmerian stock. We learn from Herodotus that they were a distinct nation from the Scythians, remaining within the old Cimmerian confines.

With respect to the Getae, and their relation to the Goths, our author adopts the opinion of M. d'Anville. All the ancients supposed the barbarians who invaded the Roman empire in the reign of Decius, and who afterwards conquered it, to have been the same people over whom the legions of Trajan had triumphed, and who had been known from early antiquity under the name of Getae. We 'are certain, however, that the Getse were Thracians. On the other hand, we know that the language of the Goths was a German dialect. This appears from the trans-

lation of the Bible into the Mceso-Gothic by the bishop Ulphilas. The manners also of the Getse distinguish them from the Germans : they lived in waggons, and roamed about like their neighbours the Scythians. From these facts the learned Cluverius thought himself authorised to depart from the unanimous opinion of antiquity, and to announce the Goths as a new peo-ple. He supposes that they descended from the shores of the Baltic, and, entering the empire through the Getic country, were mistaken by the Romans for their ancient enemies. D'Anville and Grotius followed Cluverius, and Mr. Adelung joins himself to their party. We have 'no room to enter into

the discussion of this question; but shall merely observe that the German dialects, and particularly the Moeso-Gothic, are found to bear a strong affinity to the Pelasgian, as Dr. Jamieson, in his Hermes Scythicus, and Mr. Townsend have sufficiently proved. This fact, of which Mr. Adelung was aware, puts the question with respect to the Getae in a very different light from that in which it appeared lo the excellent geographer who first started it. Ade-luug derives the Illyrians, the supposed ancestors of the Albanians, from the Thraco-Pelas- gians, and refers to a worlc of Thunmann, entitled Geschichte der bstlichen Europaischen vcilker. As far as we know, this work has never been imported into England ; but we are at a loss to conjecture what proofs can be found to identify the modern Albanians with the Grecian race. Our author is aware of this difficulty, and conjectures that these barbarians are not the Aborigines of Illyrium, but the remnant of some of the hordes, who made their way into Europe during the declining ages of the Byzantine empire. The Alani, a nation of Caucasus, who were perhaps the Albanians of the Caspian shores, may possibly have left relics of their once formidable name in the coasts of the Adriatic. At the era of the Turkish conquest many of the Albanians emigrated, and still preserve their language in their hamlets in Calabria and Sicily.

The origin of the Pelasgi, and their relation to the Hellenes or Greeks properly so called, has been a fertile subject of conjecture and dispute. Fourmont deduced the Pelasgi from Peleg, and identified them with the Philistines. D'Ancar-ville insisted on deriving them from the Titans. Larcher, who should have been better informed, makes them Phoenicians, and Pellouter forces them into the ranks of his favorite Celts. Ou. author adopts the only opinion which carries with it a shadow of probability : he considers the Pelasgi and Hellenes as one race. The passages from which this inference must be drawn occur so frequently in the writings of the Greek historians, that it is surprising they have been so often overlooked. We are told repeatedly by the Greeks, that the first inhabitants of the Pelo- , ponnesus were Pelasgi ; and that, when the Dorians introduced the Hellenic name into that country, the Arcadians, who defended themselves in their mountainous territory, and continued to boast that they were older than tlie moon, wove

still called Peiasgi. Yet we know that the Arcadian language was Greek, though a rude and unpolished dialect; and nobody will pretend that the Spartans and Argives, who fought under the Atridae, were not Greeks, though it is certain that they were Palasgians. The name of Hellenes belonged at first, as Thucydides informs us, to a kind of feudal association among the Thessalian princes, under Hellen son of Deucalion, and was extended over the Peloponnesus by the conquest of the Dorians. At what period the Athenians entered the confederacy we know not ; but, whenever it was, we may be sure that they did not, as Herodotus conjectures, abandon on that occasion their old Pelasgian speech, and learn universally a new language. Possibly the story of the death of Codrus, which savors strongly of Grecian fiction, was invented in order to conceal the submission of Athens to the Hellenic league.

The population of Italy is a very curious subject, and we regret that Adelung, who was so competent to such researches, has done little more than copy the speculations of Freret on this topic.

The chief information we possess at present concerning the Etruscan language is contained in a work of Lanzi, entitled Saggio di Lingua Etrusca. It appears that Mr. Adelung intended to insert some extracts from this work in the volume before us. These the editor has suppressed, under the singular pretext that they contradict several of the author's conclusions. He deferred these extracts in order to insert them in an Appendix at the end of the work. No such Appendix, however, has made its appearance.

The most interesting part of Mr. Adelung's work is the historical account he has given of the Latin tongue from its rude beginning to its period of classical refinement, and to its subsequent degeneracy into the Romance of the middle ages, and the modern dialects of the south of Europe. The oldest specimen we have of the Latin language appears to be a hymn of the Fratres Arvales, a well known order of priests. It is referred to the age of Romulus.

Enos Lases juvate Nos Lares juvate

Neve luerue Marmar Sins incurrere Neve luem Maniers Sines incurrere in Pleores satur fufere Mars lumen sali 'n flores ador fieri Mars Kvfi-qt marls sta Berber, Semunes Alternei advocapit Siste Semones alterni

advocate

conctos. o runes.

Such was an inscription discovered at the repairing of St. Peter's Church in 1777. The laws of Numa, of which some fragments are preserved by Festus, must be nearly as ancient as the foregoing. The following is a specimen of them : — Sei hemonem fulmin Jobis ocisit nei supera genua tolitod ; hemo sei fulmined ocisus escit oloe iousta nuli fieri oportetod. Se cuips hemonem loebesom dolo sciens mortei duit, pnriceidad estod, &c.

As late as '261 years before the Christian era the old Celtic terminations in od and ai, were retained in the Latin language. The words

pucnandod and praedad occur in the inscription in memory of the victory of Duilius. From this rude state it is surprising how soon the language became refined by a succession of great orators and poets, who had the example of the Greeks before them, and made the dialect of Rome approach continually towards the elegant structure of the Attic idiom. Fabius Pictor, Porcius Cato, Ennius, Plautus, Terence, and Cicero, form the series of illustrious men who brought the language from rude simplicity to its utmost refinement.

This rapid improvement accounts, as our author judiciously observes, for the confinement of pure Latinity to so small a number of the people : the lower orders were not able to keep up with the change. ' Cicero knew only five or six Roman ladies in his time who spoke their language with purity and correctness;' when he heard his motherin-law Lselia speak, he fancied he was listening to Plautus. Even the comic poets sinned every moment on the theatre against the purity of the language. Hence we may judge what was the state of the vulgar tongue. Quintilian complains that the populace could not utter an exclamation of joy without a barbarism. Already Plautus had divided the Latin tongue, as it was spoken at Rome, into Noble and Plebeian. Afterwards, when the difference became yet more remarkable, the former was named classic, because it was only to be found among citizens of the first classes, and lingua Urbana, and Urbanitas ; the latter was termed Vulgaris, and Rustica, because it was the most corrupt in the country. It was more difficult to acquire the classical Latin, even when flourishing in its highest perfection, than to learn the language of any foreign nation. Quintilian complains that it was a

very hard matter for his scholars to learn Latin in the midst of Rome ; and we are told by Cicero, ‘ that he sometimes employed several days in studying the purity of a single expression.’

It is not difficult to understand the causes of the decline of Latinity after the establishment of the monarchy. When oratory was no longer cultivated, the great incentive to improvement was lost. The distinguishing majesty of the Roman language ceased to exist when the dignity of republican manners had given way to the frivolous refinements of a court. A false taste immediately displayed itself. The higher class of citizens to whom the purity of speech had been confined were exterminated by the tyrants of Rome, and, amidst the turbulent horrors of a despotic government, people of the lowest order frequently rose to the highest rank. Even barbarians found their way to the senate house, and, before the reign of the second Claudius, an Arabian and a Goth had seated themselves on the throne of the Caesars. The language of Cicero was now extinct, and nothing remained but the lingua rustica, which gradually prepared itself for its transition into the modern dialects.

But it was not till the irruption of the northern nations that the important change took place which destroyed the structure of the Latin language. Tiie dialect was vulgar and debased before, but still it was Latin. It retained its

inflections ; the nouns were declined in cases, ;md the verbs in conjugations. But the learning of these required greater attention than the barbarians could bestow, and, in the dialects which were formed after the mixture of the conquerors with the old population, the use of particles and auxiliary verbs supplied the place of the old in-tlections.

We now pass to our author’s account of the Ctllic languages, and here we find nothing but inaccuracy and confusion. It is remarkable that foreign writers who touch upon this subject continually involve themselves in perplexity and error. Perloutier and Mallet, though learned authors, particularly the latter, are full of mistakes with

respect to the Celtic people and their languages. They ludicrously pronounce the high Dutch to be the most perfect specimen ex-tant of this ancient idiom. Adelung, who has been deceived by Macpherson and other Scottish writers, represents the Gaelic people as the only genuine offspring of the Celtae. He imagines the Welsh to be the descendants of the Belgse, who had possessed themselves of the south coast of Britain, before the arrival of the Romans, and avers that they had no claim to the title of ancient Britons, but are comparatively new corners ; that their language is a jargon compounded of various shreds from other tongues, and that nearly one-half of it is of German origin. He chooses to give it the name of Cimbric. We cannot quietly see our countrymen of the principality so unfairly stripped of the honor on which they have so long plumed themselves, without offering a few words in their be-half. We have sought for a motive for Mr. Adeluna:‘s unprovoked aggression, and have found it in the old name of Cymru (pronounced Cuniri), which the Welsh give themselves to this day, and which he is determined to identify with Cimbri ; in short, he is resolved to make our countrymen pass for a branch of that nation of savage monsters who ‘laid waste the north of Italy and were defeated so shamefully by Caius Marius. But he is well aware that the dialect of the Cimbri was nearly allied to his own language. The names of the leaders of this people are evidently German, and we are informed by several Italian writers that a remnant of them still preserve their northern speech in some hilly cantons in the Vicentine and Veronese, where they were visited by a Danish prince who found them able to understand the language of his people.

Their intimate connexion witn the Teutones is a strong symptom of Germanism, and their fierce blue eyes, which are mentioned by Plutarch, bear the same testimony. Moreover we are expressly told by Caesar, Tacitus, Strabo, and Pliny, that they were a native German race. This being settled, the only way of finding any affinity in their pedigree with that of the Welsh is to represent the latter as a branch of the Bf igic Gauls, who, according to Cresar, were in g«:at part of German, or possibly of Cimbric origin.

An appeal to the Welsh language completely refutes this unfounded conjecture. The dialect of the Welsh, as found in the Triads and in the writings of the old bards, is a <ar mere genuine

Celtic than that of the Gaels. And, if either people have ever been so far intermixed with foreigners as to destroy the integrity of its language, it was certainly the latter. One argument will serve amply to

demonstrate the truth of this position. We have frequently had occasion to observe that the oldest dialects are more copiously inflected than modern ones. The Sanscrit has in this respect the advantage of the Greek (if it be an advantage), and of the popular dialects of India ; and the Greek of the Romaic, or modern Greek. But the greatest disintegration in the structure of a language takes place when a nation becomes so mingled with foreigners as to constitute a new people. In all these instances the idioms are found to have lost a great part of their inflections. Whenever indeed we find two dialects of one language, one of which has an inflected, and the other a simple structure, we may conclude the former to have undergone fewer alterations by foreign intermixture than the latter. Such is the difference that subsists between the Welsh and Gaelic. The Welsh abounds with inflections of a particular kind, consisting of regular permutations of the initial consonants of words, which seem to have originated on a similar principle with the euphonical orthography of the Sanscrit. Most words are capable of four such modifications. Thus : ty, a house, becomes in different positions dy, nhy, and thy; pen, a head, becomes ben, mhen 01 phen ; cu, a dog, gu, nghu, or chu, 8cc. Besides this example, the Welsh has a great variety o* terminations in the plurals of nouns ; it has four degrees of comparison in adjectives, and a copiously inflected verb. The Gaelic has only one permutation of the initial consonants, and is deficient in all the other particulars above-men- tioned. From these circumstances we may fairly infer that the Welsh is a more perfect or less corrupted dialect of the Celtic. Its vocabulary indeed contains very few foreign words, with the exception of those which have plainly been introduced from the Latin and modern English.

All the historical facts of which we are in possession favor this conclusion. Caesar mentions the Belgic invaders as possessing merely the sea-coast of Britain. He says, ‘ Interior pars ab iis incolitur quos natos in insula ipsa memo-riae proditum dicunt;. maritima pars ab iis quos pncdae aut belli inferendi causa ex Belgis transierant.’ Now the Welsh at the departure of the Romans, and consequently at their arrival, possessed so great a portion of the island, that they cannot be the people here described as carrying on piracy on the coasts. We know that they had extended their possessions into Scotland. Dumbarton was a fortress belonging to the Strathclwyd Britons ; and Mr. Chalmers has proved indisputably that the names of places throughout the Lowlands of Scotland, as that of Aberdeen for example, are derived from the Welsh, whence we must conclude either that the Caledonians were of the Cambro-Britnn race, or that the Welsh possessed the northern part of the island before the arrival

of that peo-ple. These facts prove that the Welsh are the descendants of a nation who at one period had possession of the whole of this island, and who

retained by far the greater part of it until the Saxon conquest ; they are not, therefore, of the Belgian race. The names of places in Gallia Celtica also afford proof that the language of the genuine Celtae was Welsh, and not Irish. Those particularly which are still preserved in Helvetia are all Welsh.

It is remarkable that, notwithstanding the attention which has been directed to this subject, there is scarcely any point of importance relating to Celtic history which is not still involved in obscurity. The little progress that has been made can only be attributed to the manner in which enquiries have been conducted, and to the love of conjecture, by which our antiquarians have been bewildered. Mr. Adelung has certainly not contributed to dispel this darkness.

His disquisition on the German language contains a very elaborate and learned survey of the whole compass of Teutonic literature. He divides the dialects of this great nation into three principal branches, *viz.* the German, Scandinavian, and English. The German is again subdivided into South German or Gothic, Middle German, and Low German or Low Dutch. The South German dialects are all distinguished by their harsh and guttural pronunciation. This branch of the nation includes the Goths and Vandals, the Heruli, Quadi, Marcomanni, Burgundians, and Lombards. The South German is spoken in all the countries peopled by these nations and the Alemanni. The Bavarians, Austrians, Swiss, Suabians, and the people of Alsace and the Upper and Middle Rhine belong to this class. The Middle Dutch includes the vulgar dialects of Thuringia, Franconia,&c. The Low Dutch is spoken by the people of Lower Saxony, Friesland, Holland, and Belgium.

High Du<ch is considered by Adelung, not as popular language of any particular province, but as a refined idiom formed by and adapted for polite conversation and literature. The dialect of Upper Saxony, as

spoken by the better orders, served as a basis for it, and it was chiefly diffused and rendered a general language by means of the Reformation and the writings of Luther.

Adelung's account of the Scandinavian and English contains nothing remarkable, except that he denominates the oldest specimens of our language Danish-Saxon, which, as he contends, succeeded the extinct Anglo-Saxon. In the distribution of the Sclavonian nations he follows Dobrowsky, who, it seems, has adopted the old division of Procopius and Jornandes. The Antes, or Eastern branch, includes the Russians and Sclavonians of lilyrium. Under the Slavini, or Western, are enumerated the Polet, Bohemians, Servians, and Northern Wends, who spoke the Sclavonian language in Pomerania as lately as 1404. when it became extinct. Under the Sclavonian family might be arranged, as a subdivision, the Littish or Lithuanian idioms, which are a mixture of Sclavonian and German. A dialect of this language was formerly spoken in old I'rnssia.

We have now followed our author in his re-view of this irreat family of nations, who have spread the remains of one ancient idiom over so ,,rc';U a portion of the globe. A connected

chain of languages, which every where claim a common origin, and differ only in dialect, extending from Cape Comorin to Iceland and Scandinavia, is a striking phenomenon, and one which excites doubt when first announced ; it is found, however, to rest on sufficient proof to satisfy the utmost scepticism.* That all these nations were colonies from India, or from some eastern country not far distant from it, is a conclusion which follows inevitably ; but the period of their emigration, and the circumstances that attended it, will probably remain for ever involved in impenetrable darkness.

The West of Europe, in the time of Herodotus, was inhabited by the Celtae and Cynetae. We know who trie former were; the latter re-main to be the subject of conjecture. It has been supposed that the old Iberians are designated by this name : however this may be, they were certainly a very ancient people, and probably were seated in the west of Europe before the arrival of the Celts. Their language is yet preserved in the mountains of Biscay ; and, though it presents the most remote and most curious relic of European antiquity, has received as yet very little attention from the learned. Some Spanish writers have declared it to be the ante-diluvian tongue; and we have perused a large octavo volume, by a Castilian author, in the hope of

gaining some new light on its structure and origin ; but have only learnt that the Cantabric was the idiom in which the angol spoke to Abraham in the land of Charran. The elder baron Von Humboldt has long ago promised to give a perspicuous and detailed account of the Biscayan people and their antiquities. In the mean time we must make the best use we can of the information contained in the several works of Larramendi, of which we possess a very good abstract in the collection of M. Adelung.

The old Cantabrian or Iberian race possessed all Spain, as appears by the names of places throughout the peninsula, which are derived from their language. But they were not confined to Spain : we learn from Diodorus and Seneca, that the Sicani, who were driven by the Ligurians into Sicily, and the people of Corsica were of this race, and spoke the Iberian language. The Aquitani are associated with them by Caesar and Strabo. The Ibero-Ligyes of Scylax belonged .to the same family, as well as the Ligurians of Italy, whom we find mentioned by ˆLschylus in a fragment of the lost tragedy of Prometheus Delivered. They are represented as guarding the confines of the country, and intercepting the journey of Hercules from Caucasus to Hesperia.

HJuif St Aiyvuv iif arapfiijTOV ffTparbv

tvff oil na-Iic oa<f> olSa icat Qovpof jrtp Stv

ffygfyut

A number of German words are contained in the Basque, probably derived from intercourse with the Visigoths of Spain. Such are baldra, belt ; cilhar, silver ; dorrea, door ; dantza, dance, &c. A much greater number are of Latin origin ; as abitua, habit ; abitoa, fir-tree ; amatu, to love, &c. Some vocables are Celtic ; but, after abstracting all these additions, there remains so much which is peculiar, that the Basque must

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‘oc consi !t;re 1 as an original language, distinct from alt other idioms with which we are acquainted. ‘The slightest comparison,* says Mr. Adehlog, ‘ suffices to distinguisli it from the Celtic, with which many authors have connected it. The difference prevails as well in particular words, a< in the whole of the grammatical structure ‘ He has added a vocabulary in proof of the former point; the latter is exceedingly evident. The Basque abounds in multifarious inflections; but they are not founded on the principle which modifies the Indian dialects: they are formed by a variety of particles, suffixed to or inserted in the middle of the radical words. By means of these are produced six cases in the nouns, with a double declension to each, and eleven moods of the verbs, *viz.* an indicative, consuetudinary, potential, voluntary, obligatory, necessary, imperative, subjunctive, optative, pe-nitudinary, and infinitive. The following is a specimen: — il-dau, he is dead; il-ete-dau, he must be dead; il-edo-dau, it is probable that he is dead.

From the Biscayan, in the west of Europe, we proceed to the Finnish, and Lapponic, in the north, another wholly unconnected family of languages. To the nations of this stock, collectively, Adelung gives the name of Tchudes; and he establishes, en a firm basis, the old opinion of Leem and Gunnerus of Drontheim, which has been called in question by misinformed writers, that the Finns, Laplanders, and Esthonians are tribes of one kindred ; and that the Hungarians or Madjars, as they call themselves, are a remote branch of the same stock, the language of the latter being much intermixed with that of the Petchenegars, and other Tartar tribes, with whom they have been associated and mingled. A Laplander and a Finn cannot understand each other : the language of the former is split into a number of dialects, each wandering alone, having one peculiar to itself; so that one family, as often happens among savages, is scarcely intelligible to another. In many particulars the Lapponic coincides more nearly with the Hungarian than the Finnic; yet with the latter it is manifestly allied, as our author proves by a careful analysis of the grammatical structure of both. In the work of Leem, which contains a very excellent and interesting account of the Norwegian Laplanders, we find that their language has some traits which remind us of the Celtic, and we should not be surprised if a careful comparison should point out more. It is, indeed, highly probable, that when the Asiatic colonies arrived with their diuidical hierarchy in the north of Europe, they found that country already occupied by tribes of Tchudic race, and that some intermixture followed. A permuta- ‘ion of consonants

prevails in the Lapponic, not ‘inlike that of the Celtic dialects. The nouns have from ten to fifteen cases ; these, however, are not real inflections, but formed by prepositions, or rather suffixes added to the terminations of the nouns. Other inflections are very abundant, but mostly on the same principle. The present tense of the verb substantive is as follows : —

Lapponic. — Sing. 1. Leh. 2 lep. 3 le. — Dual.

1. Len. 2 Icpen. 3 lepe. — Piural. 1. Lepe. 2 le-pet. 3. Ian.

Finn. — Sing. 1. Olen. 2 olet. Son. — Plural. 1. Olemme. 2 olette. 3 owat.

The numerals are nearly the same in the two languages up to ten, the term for which is totally different. The number nine was probably the last term of their arithmetic, when the tribes of the Tchudic stock first separated. They give themselves the same national denomination. In short, it is evident that they were formerly one people.

The origin of this nation is a curious question ; and here the Hungarians come to our aid. This tribe, the Ongres, Ugurs, or Madjars, cf different writers, are deduced by Abulgasi from the Huns. His opinion is supported only by the resemblance of the names ; and this circumstance does more to invalidate it than thadifference of bo-dily characters between the present Hungarians and the ancient Huns, which, though very considerable, may be accounted for by the agency of physical causes. The Ongres come first to our view in the fourth century, when they inhabited Bashkiria, between the Tobol, the Volga, and the Jaik. In the seventh century we find them in alliance with the Chazares, living on plunder and the chace, in the department of Catharino-slav. Towards the end of the ninth century seven tribes, of which the most considerable was called Madjars, were driven out of their territory by the Petchenegers, and passed the Carpathian mountains into Paunonia, where they settled, and gave a new name to that country. The tribes of Ongres, who remained in Asia, were seen by Rubruquis in 1251. As it is proved incontestably that the Finnish language is allied to the Hungarian, these nations must be held to be of one race, and to have emigrated originally from the same quarter.

The old writers are exceedingly anxious, as usual, to force a comparison between the Lapponic and the Hebrew. Olave Rudbeck, a Swede, had the boldness to assert, that out of 2000 or 3000 words,

there are only 200 or 300 which are not from Hebrew or Syriac. We only notice this absurd declaration to express our astonishment that Mr. Townsend has been so far deceived by it as to pronounce peremptorily that the Lapponic is more ‘ pure,’ by which he means nearer to the Hebrew than the modern dialects of Ara-bia. Thus we find in the extremities of Europe, towards the north and west, the remains of nations, who from their situation must be supposed to have occupied this portion of the earth before the arrival of the Indian colonies. The languages of the Cantabrians and Tchudes are totally distinct from each other, and from those of the In-dian stock. Even the numerals, which coincide so extensively in languages otherwise unconnected, have here no resemblance. The Tchudes probably possessed all the southern shores oftb» Baltic, from which they were expelled by the Germans, and driven into Scandinavia.

The north of Asia, from the country occupied by the Finns to the sea, which separates this continent from America, is peopled by tribes of various origin, which are arranged by Mr. Adelung in three denartments. The first contains seven

nations of mixed nice, who are more or less connected with tne Tchudes ; the second consistˆ of the people called Samoiedes, and various scattered tribes, who claim a common origin with them ; iu the third are placed several nations, whose history has not been investigated, and who speak languages quite unconnected. As these nations are very little known, we shall extract some of the most interesting of our author’s observations concerning them.

1. The seven nations called Pennians, Vogules, Ostiacs of the Oby, Tcheremisses, Votiacs, Mordouines and Teptjerais, have been represented by Pallas, Gmelin,and others, as so many tribes of Finns, and their languages are generally said to be Tchudic dialects. Adelung shows that this affinity has been very much exaggerated. Of 200 Permian vocables, which Muller the Russian historian has collected, seventeen are of Finnish origin : he found only eight in the same number of Vogulian words, sixteen in the Tchere-missic, and twenty-

two in the Votiac vocabularies. In several of these there is a considerable mixture of Tartar words, which may well be accounted for from the long dominion of that people. The great mass of vocables in their language is apparently distinct, and of separate origin in each.

The Permians now inhabit the governments of Archangel and Kasan. In the middle ages they seem to have possessed all the country between the White Sea and the Ural Mountains. Ohthere, the celebrated voyager and friend of Alfred, represents the Biarmahs as a very populous nation, and says they spoke the same language as the Finns. The Icelandic traditions tell us, that this region was formerly enriched by the commerce of Persia and the Indies. It is difficult to imagine what was the foundation of this rumor.

2. The Samoiedes are the most destitute •vretches of the whole human race. They procure a miserable subsistence by fishing along the shores of the Icy Sea, and extend from the neighbourhood of Archangel to the Lena. They probably inhabited formerly a more hospitable climate, and were driven to the northern coasts oy the Tartars and Mongoles ; some tribes of ‘.he same kindred are dispersed around the ihores of lake Baikal and the borders of Mongolia. The tribes who wander through these wide regions have such a diversity of dialect, that it is difficult to recognise their mutual resemblance ; yet a careful examination discovers enough to identify the race. Perhaps in a few ages these traces will be lost.

3. Between the Lena and Behnng’s Straits are found several hunting or fishing tribes, who are for the most part addicted to the Shaman pagan ism. The Jeniscan Ostiacs, the Tchuktschi, and the Kamtschadales, are those whose names are best known in Europe. As far as we can judge, tiy the vocabularies which have been collected of their languages, no affinity can be discovered between them, or any resemblance with the idioms of nations better known, with one” remarkable exception, which we shall hereafter notice. Such is the result of Mr. Adelung’s observations on these remote tribes, and their languages. We may remark, howevei, that in his anxiety to avoid

the common error of philologists, he approaches the opposite extreme, and scarcely allows their due weight to real coincidences. A few vocables common to two distant nations do not, indeed, authorise our classing their languages together ; but, if such a coincidence cannot be referred to accident, it proves a connexion more or less re-mote between the nations in whose dialects it occurs. Traces are to be met

with in the idioms of many remote nations in northern Asia, which point out this sort of affinity between them and the southern races.

The Caucasian nations are distributed into five principal branches, distinguished from each other in languages and in origin. 1. The Abassians inhabit the north-western tract : they are probably the nation who, in the time of Strabo, practised piracy on the shores of the Euxine : they are now wild mountaineers, and as much distinguished from their neighbours by their features as by their languages, which have no affinity with any other. 2. The Circassians, or more properly Kasaeks, possess the northern declivities of Caucasus and the neighbouring plains. A tribe of this race, intermixed with Russians, gave origin to the Cossacs of the Don. The Circassian bards retain among them the tradition of the Amazons, a nation of women, who, as they say, settled in the territory of the Nogay Tartars, and intermarried with that people. This is exactly the story of Herodotus : he says the Amazons came into the country of the Scythians, who appear, from a variety of circumstances, to have been the ancestors of the proper Tartars. 3. The Ossetes, on the high mountains above the Circassians, are, according to Klapwroth, of Medo-Sarmatian race. He gives some reasons for believing them to be the remains of the celebrated Alam. 4. The Ingushi are a wild people, dwelling near the sources of the Terek. 5. The Lesgi are divided into many tribes, or rather the namp includes various hordes, who have little or no affinity. The languages of all these nations are said to be essentially distinct.

The more fertile and level countries, which border on the Caucasus to the southward, are called by Europeans Georgia, but more properly Gurgisthan, from the river Kur, the Cyrus of the Greeks. This country is the seat of a nation well known to antiquity, under the names of Iberians and Colchians, who carried on commerce on the Caspian and Euxine Seas. According to Klaproth they have ancient writings in a peculiar character which record the invasion of Asia by the Cimmerii of Herodotus. It is agreed by all writers that their language has no affinity with any other known idiom.

The Armenians are a remarkable nation of western Asia, whose language has been preserved from the beginning of the fifth century by the use of letters. The idiom of that time differed however widely from the modern dialect, as we learn from a translation of the Bible executed by Miesrob, whose pupil was-the historian Moses of Chorene. The Armenian language differs widely from all others, even in those vocables which are necessary to the rudest nations ; yet its grammatical structure, which lias an affinity witli that of the Greek

and Sanscrit induces a

suspicion that this diversity has been the effect of a gradual fluctuation.

The high mountainous ridge of Asia, which rises from the north of the Caspian, and stretches across to the Eastern Ocean, has been, from the remotest periods of history, the abode of several I arbarous nations, who have poured themselves clown from time to time on the more polished nations of the south, and have every where rendered their name terrible to future ages. The nomadic hordes of this elevated plain belong to three great races, equally illustrious in deeds of blood —

1. The native region of the Turks or Tartars is the western declivity of this steppe towards the Caspian Sea, and the banks of the Volga. This immense nation is divided into a number of departments, whose names and affili-ations our limits will not permit us to pursue. There is sufficient evidence of their belonging to one stock, though their languages are infinitely diversified. The Scythians of the Greeks, in the definite sense of that name, were this same nation, and it is remarkable that the Nogay Tartars, as Klaproth informs us, from local observations, have still that distemper prevalent among them, to which Herodotus ascribes so curious an origin. The language of the Ottomans is better known than the dialects of other Tartar hordes. The modern Turkish is mixed with Arabic and Persic, but -its Tartarian basis is easily distinguishable from these additions, and contains sucn a number of German vocables, as prove a remote connexion between the Tartar and German races. We may observe that the Saurbmatae, who spoke the Scythian language in the time of Herodotus, are certainly connected with the Sclavonian family. The features of the Tartar nations are European.

2. The mountains of Altai are the cradle of the Mongolian race, whose features distinguish them as widely as those of the negro from the rest of mankind. Three great nations belong to this stock : the Kalmucks,

the Burettes, and the proper Mongoles. These people are probably the Argippsei of Herodotus, and the Seres of the later Greeks : they are doubtless the Hiong-nu of the Chinese historians, and the Hunns who laid waste Europe. Their language, which is better known than many others, is polysyllabic, but formed in the structure of the monosyllabic dialects ; yet it is not without some traces of resemblance to the European languages. A num-ber of words contained in the vocabulary given by Strahlenburg exist, as Vallar.cey has remarked, in the modern Irish ; Mr. Townsend has copied them in his remarks on the Gaelic language.

3. The eastern region of the Asiatic steppe is the seat of the Mantshurian, or Mant-shoo race, the conquerors r.f China. The Tungusians, divided into the Rein-deer, Horse, and Dog-Tungusians, .and the Fishing Tunisians, who wander from the river lenisay to the limits of Daouria, are a branch of this family. They have a distinct language of peculiar structure. Yet, divided as they are from all connexion with European history, they have a number of words which are found in several of our dialects. IVIr. Adelung has given a list of them, a part of

which we extract : — ‘ Ura, Gr. owpa ; kalpin, Gr. icoXiroc ; chop, Germ, schopf, Eng. top; non, Germ, nonne (girl); heren, Germ, heer-Eng. array; kisun (word) kisureme (to talk), Germ, kosen, Fr. causer ; hife, Germ, hafe, avena, Lat. (pipe) ; fahala (black\ Germ, fahl ; farshe, pars, part; morin, Eng. mare; singui, sanguis; furu, furor, fury ; mala, malleus, ham-mer ; ania, annus, year, &c.’

Beyond Mantchuria, to the eastward, the peninsula of Corea contains a number of states, formerly independent, but now united under one sovereign, who is tributary to China. The Chinese pretend that this subjection took place 2188 years before Christ. The Jesuits who went from Pekin to Corea found that the nations neither understood the Chinese nor the Mantchurian language. Their dialect seems to be of the monosyllabic class. In the island of Sagalien, the longest in the world, the inhabitants change their name and language in every village.

The people of the Kuriles, who are said to be covered with hair on their backs, speak a peculiar language. The Japanese suppose themselves to be descended from the Chinese. Their language, however, gives no support to this opinion. It is polysyllabic, and totally different from the Chinese, and, as far as we know, from . all

other languages. The same remark may be made of the idiom of Formosa.

The extensive traces of one language scattered over the islands of the Indian Seas and Pacific Ocean are a very curious phenomenon. Adelung is very imperfectly informed concerning the history of these islanders, which has been solely investigated by our countrymen, particularly by Leyden, Marsden, and the companions of Cook An opinion long prevailed that all these tribes were colonies from Malacca, although many striking facts opposed themselves to such a conclusion. Marsden however has shown that the Malays themselves are a colony from the islands, which settled at some remote period on the main land. The inhabitants of all this region, which has been termed Polynesia, may be distributed into three classes, according to the different states of society in which they are found.

1. The negro races, who are every where savages, inhabit the larger islands, and the interior of some others, of which they appear to be the oldest inhabitants. Their languages are very various, and often radically different in adjoining islands ; the dialects however of some of their tribes resemble those of the second class. 2dly. The tattooed tribes, to whom belong the Battas of Sumatra, the Pintados of the Philippines, and the natives of the remote isles in the Pacific. Their languages resemble the Otaheitean. 3dly. The Menangkabow race is settled in many of the Indian islands, and on the Ma-layan coast.

We regret that the great length to which these observations have already extended forbids us from following Mr. Adelung and his successor, professor Vater, through their history of the dialects of the African and American savages. Their remarks on the latter particularly, which are comprised in the last part of the Mithridates, and appeared at a later period than the rest of the

work, are very interesting. The most striking tact which presents itself is the endless diversity of the idioms which prevail among these wild nations. Their languages are so numerous that Mr. Jefferson, from this

circumstance, fancied that the population of America must be more ancient than that of the eastern continent.

SEC,. 111. — OF THE DIFFERENCE BETWEEN

TRANSPOSITIVE AND ANALOGOUS LANGUAGES.

Such is a survey, which the labors of Adelung have enabled us to make rather extensive, of the history of all th<» greater dialects of human speech. We feel disposed, before closing this article, so far to enter into the genius or idiom of particular languages as to enquire into the relative advantages of the transpositive and analogous ones.

The learned reader knows that the severa. changes which take place in the arrangement of the words, in every transpositive language, could not be admitted without occasioning great confusion unless certain classes of words were endowed with particular variations, by means of which they are made to refer to the other words with which they ought naturally to be connected. From this cause proceeds the necessity of several variations of verbs, nouns, and adjectives ; which are not in the least essential or necessary in the analogous languages.

It is generally supposed that every language, whose verbs admit of inflection, is on that account much more perfect than one where they are varied by auxiliaries : we shall now examine this with some degree of attention ; and, that what is said on this head may be the more intelligible, we shall give examples from the Latin and English languages. We make choice of these languages because the Latin is more purely transpositive than the Greek, and the English admits of less inflection than any other language with which we are acquainted.

If any preference be due to a language, from the one or the other method of conjugating verbs, it must in a great measure be owing to one or more of these three causes : either it must admit of a greater variety of sounds, and consequently more room for harmonious diversity of tones in the language, — or allow a greater freedom of expression in uttering any simple idea, by the one admitting of a greater variety in the arrangement of the words which ate necessary to express that idea than the other, — or, lastly, a greater precision and accuracy, in fixing the meaning of the speaker, arise from the use of one of these forms than from that of the other; for as erery other circumstance which may serve to give a diversity to language, such as the general and most prevalent sounds, the frequent repetition of any one particular letter, and a variety of other circumstances of that nature, which may serve to debase a particular language, are not

influenced in the least by the different methods of varying the verbs, they cannot be here considered. We shall therefore compare the advantages and disadvantages which may accrue to a lanuuaee, by inflecting its verbs, with regard to each of these particulars, — - variety of sound, variety of arrangement, and accuracy of meaning.

The first particular that we have to examine is, whether the one method of expressing the varia-tfons of a verb admits of a greater variety ot sounds? In this respect the Latin seems, at first view, to have a great advantage over the English : for the words amo, amabam, amaveram, amavero, amem, &c., seem to be more different from one another than the English translations of them, I love, I did love, I had lored, I shall have loved, I may love, &c.; for although the syllable am is repeated in every one of the first, yet, as the last syllable usually strikes the ear with greater force, and leaves a greater impression than the first, it is very probable that many will think the frequent repetition of the word love, in the latter instance, more striking to the ear than the repetition of am in the former. We will therefore allow this its full weight, and grant that there is as great, or even a greater, difference between the sounds of the different tenses of a Latin verb, than between the words that are equivalent to them in English. But, as we here consider the variety of sounds of the language in general, be-fore any just conclusion can be drawn we must not only compare the different parts of the same verb, but also compare the different verbs with one another in each of these languages. And here, at first view, we perceive a most striking distinction in favor of the analogous language over the inflected ; for, as it would be impossible to form a particular set of inflections, different from one another, for each particular verb, all those languages which have adopted this method have been obliged to reduce their verbs into a small number of classes; all the words of each of which classes, called conjugations, have the* several variations of the moods, tenses, and persons, expressed exactly in the same manner, which must of necessity introduce a similarity of sounds into the language in general, much greater than where every particular verb always retains its own distinguishing sound. To be convinced of this we need only repeat any number of verbs in La-tin and English, and observe on which side the preference with respect to variety of sounds must fall.

Pono, I put.

Dono, I give.

Cano, I sing.

Sono, J sound.

Orno, I adorn.

Pugno, I fight.

Bibo, I drink.

Scribw, I write.

Moveo, I move.

Doleo, I ail.

Obeo, I die. ‘

Gaudeo, 1 rejoice.

The similarity of sounds is here so obvious in the Latin as to be perceived at the first glance ; nor can we be surprised to find it so, when we consider that ‘all their regular verbs, amounting to 4000 or upwards, must be reduced to four conjugations; and even these differing but little from one another, which must of necessity produce the sameness of sounds-which we here perceive; whereas every language thai, follows the natural order, like the English, instead of ihis small number of uniform terminations, have almost as many distinct sounds as original verbs in their language.

But if, instead of the present of the indicative mood, we take almost any other tense of the Latin verb, the similarity of sounds will be still

rioro perceptible, as many of these tenses have the same termination in all the four conjugations, particularly in the inrperint of the

indicative : as,

Pone-bain ; I did put, I put.

Dona-bain ; 1 dia give, I gave.

Cane-bam ; I did sing, I sung.

Sona-bam ; / did sound, I sounded.

Orna-bam ; I did adorn, I adorned.

Pugna-bam ; I didjight, I fotiglU.

Bibe-bam ; I did drink, 1 drank.

Scribe-bam I did write, I wrote.

Move-bam ; I did move, I moved.

Dole-bam; I did ail, I ailed.

7bi-bam; I did die, I died.

Gaude-bam; I did rejoice, I rejoiced.

It is unnecessary to make any remarks on the iˆatin words in this example : but in the English translation we have marked in the first column the words without any inflection ; and in the se-cond have put down the same meaning by an inflection ot our verb; which we have been enabled to do, from a peculiar excellency in our language unknown to any other either ancient or modern. The numerous tenses ending in am, bum, and ram, sound peculiarly barbarous when conjoined in the same sentence with other words ending also in am : thus what can be more uncouth than this? — Causam quam nesciebam diligentissime investigabam ; — 01 even than Ci-cero's famous poetical line, though none of these verbs occur in it, O fortunatam natam, me con-sule llomam ? Were it necessary to pursue this subject farther, we might observe that the perfect tense in all the conjugations ends universally hi

1, the pluperfect in eram, and the future in am or bo; in the subjunctive mood, the imperfect universally in rern, the perfect in erem, the pluperfect in issem, and the future in era : and as a still greater sameness is observable in the different variations for the persons in these tenses, seeing the first person plural in all tenses ends in mus, and the second person in tis, with little variation in the other

persons, it is evident that, in respect of diversity of sounds, this method of conjugating verbs by inflection is greatly inferior to the more natural method of expressing the various connexions and relations of the verbal attributive by different words, usually called auxiliaries.

The second particular, by which the differenc methods of marking the relation of the verbal attributive can affect language, arises from the variety of expressions which either of these may admit of in uttering the same sentiment. In this respect, likewise, the method of conjugating by inflexion seems to be deficient. Thus the present of the indicative mood in Latin can at most be expressed only in two ways, *viz.* scribo, and ego scribo ; which ought perhaps in strictness to be admitted as only one; whereas, in English, we can vary it in four different ways, *viz.* 1. 1 write;

2. I do write; 3. write 1 do; 4. write do 1. Though this last variation cannot, in serious composition, be considered as good language, yet examples might be given from some of our best authors. But in works of humor, such as But-ler's I hid ibras, and soi::e of Shakspeare's plays,

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it produces a fine effect, by giving a burlesque % air to the language. And if we consider tin: further variation which these receive in power ai well as in sound, by having the emphasis placed on the different words, instead of four we slrail find eleven different variations : thus, 1. J write, with the emphasis upon the I; — 2. I write, wit'i the emphasis upon the word write. Let any one pronounce these with the different emphasis necessary, and he will be immediately satisfied that they are not only distinct from each other with respect to meaning, but also with regard to sound ; and the same must be understood of all the other parts of this example : thus,

3. I do write, 8. Write I do,

4. I do write, 9. Write do I,

5. I do write, 10. Write do I,

6. Write I do, 11. Write do I.

7. Write I do,

None of the Latin tenses admit of more variations than the two above mentioned: nor do almost any of the English admit of fewer than in the above example; and several of these phrases, which must be considered as exact translations of some of the tenses of the Latin verb, admit of many more. Thus the imperfect of the subjunctive mood, which in Latin admits of the above two variations, admits in English of the following :—

1. I might have written.

2. Written I might have.

3. Have written I might,

4. Written might have I.

5. I written might have.

6. Have written might I. -

And, if we likewise consider the variations which • may be produced by a variation of the emphasis they will amount to no less than twenty-four, instead of two. If we likewise consider, that the Latins were obliged to employ the same word, not only to express ‘ I might have written,’ but also, ‘ 1 could, I would, or I should have written ;’ each of which would admit of the same variations as the word might i we have in all ninety-six different expressions in English for the same phrase which in Latin admits only of twp, unless they have recourse to other forced turns of expression, which the defects of their verbs in this particular have compelled them to invent. We may therefore safely conclude, that the mode of varying verbs by inflection affords less variety in the arrangement of the words of the particular phrases, than the method of varying them by the help of auxiliaries.

But if there should still remain any doubt whether the method of varying the verbs by inflection is inferior to that by auxiliaries, with regard to diversity of sounds, or variety of expression; there cannot be the least doubt, but that with respect to precision, distinctness, and accuracy, in expressing any idea, the latter enjoys a superiority beyond all comparison. — Thus the Latin verb aiiio may be Englished either by the words, 1 love, or I do love, and the emphasis placed upon any of the words that the circumstances may require : by means of which the meaning is pointed out with a force and energy which it is altogether impossible to produce bv the use of

any single word. The following line from Shakspeare's Othello may serve as an example : —

Excellent wretch !

Perdition catch my soul, but I DO love thee :

In which the strong emphasis upon the word DO, gives it a force and energy which conveys, in an irresistible manner, a most perfect knowledge of the situation of the mind of the speaker at the time. — That the whole energy of the expression depends upon this seemingly insignificant word, we may be satisfied, by keeping it away, thus :

Excellent wretch !

Perdition catch ray soul, but I love thee.

How poor — how tame — how insignificant is this, when compared with the other! Here nothing remains but a tame assertion, ushered in with a pompous exclamation, which could not here be introduced with any degree of propriety. Whereas, in the way that Shakspeare has left it to us, it has an energy which nothing can surpass ; for, overpowered with the irresistible force of Desdemona's charms, this strong exclamation is extorted from the soul of Othello in spite of himself. Surprised at this tender emotion, \vhichibrings to his mind all those amiable qualities for which he had so much esteemed her, and at the same time fully impressed with the firm persuasion of her guilt, he bursts out into that seemingly inconsistent exclamation, Excellent wretch ! and then he adds in the warmth of his surprise,— thinking it a thing most astonishing, that any warmth of affection should still remain in his breast, he even confirms it with an oath, — Perdition catch my soul, but I DO love thee — ' In spite of all the falsehoods with which I know thou hast deceived me — in spite of all the crimes of which I know thee guilty — in spite of all those reasons for which I ought to hate thee — in spite of myself, — still I find that I love, — yes, I DO love thee.' We look upon it as a thing altogether impossible to transfuse the energy of this expression into any language whose verbs are regularly inflected.

We might thus go through all the other tenses, and show that the same superiority is to be found in each. — Thus, in the perfect tense of the Latins, instead of the simple amavi, we say I have loved; and, by the liberty we have of putting the emphasis upon any of the words which compose this phrase, we can, in the most accurate manner, fix the precise idea which we mean to excite ; for if we say I have loved, with

the emphasis upon the word I, it at once points out the person as the principal object in that phrase, and makes us naturally look for a contrast in some person, and the other parts of the phrase become subordinate to it -.—Ilzhas lovedlhee much, but I have loved thee infinitely more.' The Latins too, as they were not prohibited from joining the pronoun with their verb, were also acquainted with this excellence, which Virgil has beautifully used in this verse :

ATos patriam fugimus ;

TV, Tityre, lentus in umbra, &c.

But we are not only enabled thus to distinguish the person in as powerful a manner as the Latins, but can also with the same facility point out any

of the other circumstances as principals ; for if we say, with the emphasis upon the word have, ' 1 HAVE loved,' it as naturally points out the time as the principal object, and makes us look for a contrast in that peculiarity, I HAVE ; ' I have loved indeed : — my imagination has been led astray— my reason has been perverted : — but, now that time has opened my eyes, I can smile at those imaginary distresses which once perplexed me.' — In the same manner we can put the emphasis upon the other word of the phrase, loved, — ' I have LOVED.' — Here the passion is exhibited as the principal circumstance ; and, as this can never be excited without some object, we naturally wish to know the object of that passion — ' Whom ? what have you loved T are the natural questions we should put in this case. ' I have LOVED — Eliza.' — In this manner we are, on all occasions, enabled to express, with the utmost precision, that particular idea which we would wish to excite, so as to give an energy and perspicuity to the language, which can never be attained by those languages whose verbs are conjugated by inflection; and if to this we add the inconvenience which all inflected languages are subject to, by having too small a number of tenses, so as to be compelled to make one word on many occasions supply the place of two, three or even four, the balance is turned still more in our favor. — Thus, in Latin, the same word AMADO stands for shall or will love, so that the reader is left to guess from the context which of the two meanings it was most likely the writer had in view. — In the same manner, may or can love are expressed by the same word AMEM ; as are also might, could, would, or should love, by the single word AMAREM ; so that the reader is left to guess which of these four meanings the writer intended to express:

which occasions a perplexity very different from that clear precision] of which our language allows, by not only pointing out the different words, but also by allowing us to put the emphasis upon any one of them we please, which superadds energy and force to the precision it would have had without that assistance.

On the whole, therefore, we must conclude, that the method of conjugating verbs by inflection is inferior to that which is performed by the help of auxiliaries ; — because it does not afford such a diversity of sounds, — nor allow such variety in the arrangement of expression for the same thought, — nor give so great distinction and precision in the meaning. — It is, however, attended with one considerable advantage above the other method : for, as the words of which it is formed are necessarily of greater length, and more sonorous, than in the analogous languages, it admits of more flowing harmony of expression ; for the number of monosyllables in this last greatly checks that pompous dignity which naturally results from longer words. Whether this single advantage is sufficient to counterbalance all the other defects with which it is attended, is left to the reader to determine : — but we may remark, that even this excellence is attended with some peculiar inconveniences, which shall be more particularly pointed out in the sequel.

Perhaps it may still be objected, that although the comparison we have made above may be fair, and the conclusion just, with regard to the Latin and English languages ; yet it does not appear clear, that on that account the method of conjugating verbs by inflection is inferior to that by auxiliaries ; for, although it be allowed that the Latin language is defective in point of tenses, yet if a language were formed which had a sufficient number of inflected tenses to answer every purpose ; if it had, for instance, a word properly formed for every variation of each tense ; one for I love, another for I do love; one for I shall love, another for I will love ; one for I might, another for I could, and would, and should love ; and so on ; that this language would not be liable to the objections brought against the inflection of verbs : and

that of course these objections are only valid against those languages which have followed that mode, and executed it imperfectly. — We answer that, although this would in some measure remedy the evil, yet it would not remove it entirely. For, in the first place, unless every verb, or every small number of verbs, were conjugated in one way, having the sound of the words in each tense, and division of tenses, different from all the other conjugations, — it would always occasion a sameness of sound, which would in some measure prevent that variety of sounds so proper for a language. And, even if this could be effected, it would not give such a latitude to the expression as auxiliaries allow; for although there should be two words, one for I might, and another for I could love; yet as these are single words, they cannot he varied ; whereas, by auxiliaries, either of these can be varied twenty-four different ways. In the last place, no single word can ever express all that variety of meaning which we can do by the help of our auxiliaries and the emphasis. I have loved, if expressed by any one word, could only denote at all times one distinct meaning ; so that, to give it the power of ours, three distinct words at least would be necessary. — However, if ail this were done ; that is, if there were a distinct conjugation formed for every forty or fifty verbs ; — if each of the tenses were properly formed, and all of them different from every other tense as well as every other verb ; and these all carried through each of the different persons, so as to be all different from one another ; — and if likewise there were a distinct \ord to mark each of the separate meanings which the same tense could be made to assume by means of the emphasis ; and if all this infinite variety of words could be form-ed in a distinct manner, different from each other, and harmonious ; this language would have powers greater than any that could be formed by auxiliaries, if it were possible for the human powers to acquire such a degree of knowledge as to employ it with facility. But how could this be attained, since upwards of 10,000 words would be necessary to form the variation of any one verb, and 100 times that number would not include the knowledge of the verbs alone of such a language. This assertion may perhaps appear very much exaggerated ; bullet any one mark all the variations of tense, mood, person, and num-ber, which an English verb can be made to assume, varying each of these in every way that they will admit, both as to the diversity of expression and the emphasis; he will soon be convinced that we have here said nothing more than enough. How much, therefore, ought we to admire the simple perspicuity of our language, which enables us, by the proper application of ten or twelve seemingly trifling words, the meaning and use of which can be attained with the utmost ease, to express all that could be expressed by this unwieldly apparatus ? What can equal the simplicity or the

power of the one method, but the well known powers of the twenty-four letters, the knowledge of which can be obtained with the ut-most ease — and their powers know no limits ? — or what can be compared to the fancied perfection of the other, but the 33,000 hieroglyphical characters, in which the Chinese write their unintelligible language, and which require half the life of a man to learn to read ?

After the verbs, the next most considerable difference we find between the analogous and transpositive language is in the nouns; the latter varying the different cases of these by inflection ; whereas the former express all the different variations of them by the help of other words, prefixed, called prepositions. Now, if we consider the advantages and disadvantages of either of these methods, we shall find that with regard to the first particular, *viz.* variety of sounds, almost the same remarks may be made as upon the verbs ; for, if we compare any particular noun by itself, the variety of sound appears much greater between the different cases in the transpositive, than between the translations of these in the analogous language. Thus, rex, regis, re-ge, regttn, &c., are more distant from one another in point of sound, than the translations of these, a king, of a king, to « king, a king, &c. But if we proceed one step further, and consider the variety which is produced in the language in general, by the one or the other of these methods, the case is entirely reversed. For as it would have been impossible to form distinct variations, different from one another, for each case of every noun, they have been obliged to reduce all their nouns into a few general classes, called declensions, and to give to all those included under each class the same termination in every case ; which produces a like similarity of sound with what we observed was occasioned to the verbs from the same cause ; whereas in the analogous languages, as there is no necessity for any constraint, there is almost as great a variety of sounds as there are of nouns. The Latins have only five different declensions ; so that all the great number of words of this general order must be reduced to the very small diversity of sounds of which these few classes admit; and even the sounds of these few classes are not so much diversified as they might have been, as many of the different cases in the different declensions have exactly the same sounds. We might here produce examples to show the great similarity of sounds between different nouns in the Latin language, and variety in the English, as we did of the verbs : but, as every reader in the least acquainted with these two languages must be satisfied of this, we think it unnecessary to enlarge.

But if the inflection of nouns is a disadvantage to a language >in point of diversity of sounds, it is very much the reverse with regard to the variety it allows in the arranging the word? of the phrase. Here, indeed, the transpositive language shines forth in all its glory, and the analogous must yield the palm without dispute. For as the nominative case (or that noun which is the cause of the energy expressed by the verb) is different from the accusative (or that noun upon which the energy expressed by the verb is exerted), these may be placed in any situation that the writer shall think proper, without occasioning the smallest confusion : whereas in the analogous languages, as these two different states of the uoun are expressed by the same word, they cannot be, distinguished but by their position alone ; so that the nouti which is the efficient cause must always precede the verb, and that which is the passive subject must follow; which greatly cramps the harmonious flow of composition. Thus the Latins, without the smallest perplexity in the meaning, could say either Brutum amavit Cassias, or Cassius amavit Bru-tum, or Brutum Cassius amavit, or Cassius Bru-tum amavit. As the termination of the word Cassius always points out that it is in the nominative case, and therefore that he is the person from whom the energy proceeds; and, in the same manner, as the termination of Brutum points out that it is in the accusative case, and consequently that he is the object upon whom the energy is exerted; the meaning continues still distinct and clear, notwithstanding all these several variations : whereas, in the English language, we could only say, Cassius loved Brutus, or, by a more forced phraseology, Cassius Brutus loved : Were we to reverse the case, as in the Latin, the meaning also would be reversed ; for if we say Brutus loved Cassius, it is evident, that, instead of being the person beloved, as before, Brutus now becomes the person from whom the energy proceeds, and Cassius becomes the ob-ject beloved. In this respect, therefore, the analogous languages are greatly inferior to the transpositive ; and indeed it is from this single circumstance alone, that they derive their chief excellence.

But although it thus appears evident, that any language, which has a

particular variation of its nouns to distinguish the accusative from the nominative case, has an advantage over those languages which have none : yet it does not appear that any other of their cases adds to the variety, but rather the reverse : for, in Latin, we can only say amor Dei : in English the same phrase may be rendered, either, — the love of God — of God the love, — or, by a more forced arrangement, God, the love of, or, by a Tery common abbreviation, God's love. And as these oblique cases, as the Latins called them, except the accusative, are clearly distinguished from one another, and from the nominative, by the preposition which accompanies them, we are not confined to any particular arrangement with regard to these as with the accusative, but may place them in what order we please, as in Milton's elegant in-"ocation at the beginning of Paradise Lost —

Of man's first disobedience, and the fruit Of that forbidden tree, whose mortal taste Brought death into the world, and all our wo, With loss of Eden, till one greater man Restore us, and regain the blissful seat, Sing, heavenly Muse.

In this sentence the transposition is almost as great as the Latin language would admit of, and the meaning as distinct as if Milton had begun witli the plain language of prose, thus, — ' Heavenly Muse, sing of man's first disobedience, &c.

The little attention which seems to hare been paid to this peculiar advantage, from the use of an accusative case different from the nominative is indeed surprising. The Latins, who had more occasion to attend to this than any other nation, and even the Greeks themselves, have in many cases overlooked it. For all nouns of the neuter gender, both in Greek and Latin, have in every declension their nominative and accusative singular alike : nor in the plural of such nouns is there any distinction between these two cases ; and in Latin all nouns whatever, of the third, fourth, and fifth declensions, have theii nominative and accusative plural alike. So that their language reaps no advantage in this respect from almost one-half of their nouns. Nor have any of the modern languages in Europe attempted to copy from them in this particular ; from which perhaps more advantage would have been gained, than from copying all the other supposed excellences of their language.

Let us now consider whether the inflection of nouns gives any advantage over the method of defining them by prepositions, in point of distinctness and precision of meaning. In this respect too the

analogous languages have the superiority. Indeed this is the particular in which their greatest excellence consists, nor is it disputed, but that, in point of accuracy and precision, this method must excel all others, however, defective it may be in other respects. We observed, when speaking of verbs, that it might perhaps be possible to form a language by inflection which should be capable of as great accuracy as in the more simple ordei by auxiliaries : but this would have been such an infinite labor, that no human powers would have been able to accomplish it. More easy would it have been, to hare formed the several inflections of the nouns so different from one another, as to have rendered it impossible ever to mistake the meaning. Yet even this has not been attempted. And, as we find that those languages which have adopted the method of inflecting their verbs are more imperfect in point of precision than the other, so the same may be said of inflecting the nouns : for, not to mention the energy which the analogous languages acquire by putting the accent upon the noun, or its preposition (when in an oblique case), according as the subject may require, to express which variation of meaning no particular variety of words has been invented in any inflected language, they are not even complete in other respects. The Latin, in particular, is in many cases defective, the same termination being employed in many instances for different cases of the same

noun. Tims the genitive and dative singular and nominative and vocative plural, of the first declension, are all exactly alike, and can only be distinguished from one another by the formation of the sentences ; — as are also the nominative, vocative, and ablative singular, and the dative and ablative plural. In the second the genitive singular, and nominative and vocative plural, are the same ; as are also the dative and ablative singular, and dative and ablative plural ; except nouns in urn, whose nominative, accusative, and vocative singular, and nominative, accusative, and vocative plural are alike. The other three declensions agree in as many of their cases as these do ; which evidently tends to perplex the meaning, unless the hearer is particularly attentive to, and well acquainted with, the particular

construction of the other parts of the sentence ; all of which is totally removed, and the clearest certainty exhibited at once, by the help of prepositions in the analogous.languages.

It is not necessary to enter into such a minute examination of the advantages or disadvantages attending the variation of adjectives; as it will appear evident, from what has been already said, that the endowing them with terminations similar to, and corresponding with, substantives, must tend still more to increase the similarity of sounds, than any of those particulars we have already taken notice of; and were it not for the liberty which they have, in transpositive languages, of separating the adjective from the substantive, this must have occasioned such a jingle of similar sounds as could not fail to have been most disgusting to the ear : but as it would have been impossible in many cases, in those languages where the verbs and nouns are inflected, to have pronounced the words which ought to have followed each other, unless their adjectives could have been separated from the substantives ; therefore, to remedy this inconvenience, they were forced to devise this unnatural method of inflecting them also ; by which means it is easy to recognise to what substantive any adjective has a reference, in whatever part of the sentence it may be placed. In these languages, therefore, this inflection, both as to gender, number, and case, becomes absolutely necessary ; and by the diversity which it admitted in the arranging the words of the several phrases might counterbalance the jingle of similar sounds which it introduced into the language.

Having thus examined the most striking particulars in which the transpositive and analogous languages differ, and endeavoured to show the general tendency of every one of the particulars separately, it would be improper to dismiss the subject without considering each of these as a whole, and pointing out their general tendency in that light : for it often happens in human inventions, that every part which composes a whole, taken separately, may appear extremely fine ; and yet, when all these parts are put together, they may not agree, but produce a jarring and confusion very different from what was expected.

Though all languages agree in this respect, that they are the means of conveying the ideas of one man to another, yet as there is an infinite

variety of ways in which we might wish to con-vey these ideas, sometimes by the easy and familiar mode of conversation, and at

other times by more solemn addresses to the understanding, by pompous declamation, &c., the genius of one language may be more properly adapted to the one of these than the other, while another language may excel in the opposite particular. This is exactly the case in the two general idioms of which we now treat. Every particular in a transpositive language is peculiarly calculated for that solemn dignity which is necessary for pompous orations. Long sounding words, formed by the inflection of the different parts of speech, flowing periods, in which the attention is kept awake by the harmony of the sounds, and in expectation of that word which is to unravel the whole, — if composed by a skilful artist, are admirably suited to that solemn dignity and awful grace which constitute the essence of a public harangue. On the contrary, in private conversation, where the mind wishes to unbend itself with ease, these become so many clogs which encumber and perplex. At these moments we wish to transfuse our thoughts with ease and facility — we are tired with every unnecessary syllable— and wish to be freed from the trouble of attention as much as may be. Like state robes, we would wish to lay aside our pompons language, and enjoy ourselves at home with freedom and ease. Here the solemnity and windings of the transpositive language are burdensome ; while the facility with which a sentiment can be expressed in the analogous language is what we wish to acquire. Accordingly, in Terence and Plautus, where the beauties of dialogue are most charmingly displayed, transposition is sparingly used. In this humble, though engaging sphere, the analogous language moves unrivalled ; — in this it wishes to indulge, and never tires. But it in vain attempts to rival the transpositive in dignity and pomp : the number of monosyllables interrupt the flow of harmony ; and, although they may give a greater variety of sounds, yet they do not naturally possess that dignified gravity which suits the other language. This, then must be considered as the striking particular in the genius of these two different idioms, which marks their characters. If we consider the effects which these two different characters of language must naturally produce upon the people who employ them, we shall perceive that the genius of the analogous language is much more favorable for the most engaging purposes of life, the civilising the human mind by mutual intercourse of thought, than the transpositive For as it is chiefly by speech that man is raised above the brutes ; as by this he improves every faculty of his mind, and, to the observations which he may himself have made, has the additional advantage of the experience of those with whom he converses, as well as the know- . ledge which the human race have acquired by the accumulated experience of all preceding ages ; — as it is by the enlivening glow of conversation that kindred souls catch fire from one another, that

thought produces thought, and each improves upon the other, till they soar beyond the bounds which human reason, if left alone,

could ever have aspired to;— we must surely consider that language as the most beneficial to •ociety which most effectually removes these bars that obstruct its progress. Now, the genius of the analogous language is so easy, so simple and plain, as to be w.thin the reach of every one who is born in the kingdom where it is used, to speak it with facility : even the rudest among the vulgar can hardly fall into any considerable grammatical errors : whereas, in the transpositive languages, so many rules are necessary to be attended to, and so much variation is produced in the meaning by the slightest variations in the sound, that it requires a study far above the reach of the illiterate ever to attain. So that, how perfect soever the language may be when spoken with purity, the bulk of the nation must ever labor under the inconvenience of rudeness and inaccuracy of speech, and all the evils which this naturally produces. Accordingly, we find, that in Rome, a man, even in the highest rank, received as much honor, and was as much distinguished among his equals, for ‘oeing able to converse with ease, as a modern author would be for writing in an easy and elegant style ; and Caesar, among his contemporaries, was as much esteemed for his superiority in speaking the language in ordinary conversation with ease and elegance, as for his powers of oratory, his skill in arms, or his excellence in literary composition. It is needless to point out the many inconveniences which this must unavoidably produce in a state. It naturally tends to introduce a vast distinction between the different orders of men ; to set an impenetrable barrier between those born in a high and those born in a low station; to keep the latter in ignorance and barbarity, while it elevates the former to such a height as must subject the other to be easily led by every popular demagogue. The history of the nations who have followed this idiom of language confirms this observation. See GRAMMAR and PHILOLOGY.

LANGUEDOC, a province of the south of France, now divided into the departments of the Tarn, the Higher Garonne, the Herault, the Aude, the Garde, the Ardeche, the Higher Loire, and the Lozere. See FRANCE. It has the Rhone on its eastern, and the Garonne on its western side : being of an oblique form, about 170 miles from east to west, and ninety from north to south. The Upper or Western Languedoc formerly had Toulouse for its capital ; and the Lower or Eastern, Montpelier. It has a population of full 2,000,000, and an area of 16,000 square miles. Its rivers are, the Rhone, Garonne, Aude, Tarn, Allier, and Gordan. In its soil Languedoc is highly favored, and it exports large quantities of wine and brandy. Corn cultivated by frequent irrigation, vines, olives, and mulberries variegate the interior, and fisheries and salt works occupy the inhabitants of its coasts.

In the north-east, or mountainous portion of the province, the climate is cold and the cultivation but very partial. Here, however, it is rich in mines of iron and copper, and in particular spots are found quarries of alabaster. On these mountains are fed vast flocks of sheep, the wool of which, mixed with that imported from Spain, affords materials for the manufactories at Lodeve, Carcassonne, and other towns of this province. Near Cette commences the celebrated canal of Languedoc, begun in the reign of Louis XIV. and which extends from east to west nearly 140 miles, until it reaches the Garonne near Toulouse; I'fFecting a communication by water from the Atlantic to the Mediterranean. The bridges over l are seventy-one in number; the aqueducts which carry it over streams and rivers are fifty-cight, and the sluices 103. A remarkable tunnel in its course is at the hill of Malpas, and is 500 feet in length, and twenty in breadth.

Languedoc was known to the Romans as the Piwincia Narbonensis Prima : it afterwards fell •mclei the government cf the count of Tou-iinise, until in the thirteenth century, partly by inarrinˆe and partly by conquest, it was united to the French crown.

LANGUET (Hubert), a native of Viteaux in Burgundy, born in 1518. He gained great reputation by his learning and virtue. Having read one of Melancthon's works at Bologna, he went to Wittenberg in 1549, where he contracted a strict friendship with him, and embraced the Protestant religion. In 1565 he was one of the first counsellors of Augustus elector of Saxony, who employed him in several important affairs and negociations. He was afterwards admitted to the

confidence of William prince of Orange ; and died at Antwerp, on the 30th of September 1581. Many of his letters in Latin to Sir P. Sidney, and Augustus elector of Saxony, have been repeatedly printed in three volumes. A famous treatise, entitled Vindiciae contra Tyran-nos, and other works, are also ascribed to him. His life is written by Philibert de la Mare.

LANGUET (John Baptist Joseph), the celebrated vicar of St. Sulpice at Paris, and a doctor of the Sorbonne, was born at Dijon in 1675. He was received into the Sorbonne in 1698 ; and attached himself to the community of St. Sulpice, where he continued nearly ten years; and in 1714 succeeded to the vicarage. The regent, duke of Orleans, granted him a lottery, and laid the first stone of a new church for him in 1718 ; and M. Languet spared neither labor nor expense to render it one of the finest in the world. He was also the founder of the Maison de 1'enfant Jesus ; an establishment for the support of about thirty-five poor ladies of good families, and of above 400 poor women and children of town and country. The order and economy of this house gave cardinal Fleury so high an opinion of Languet, that he offered to make him superintendant-general of all the hospitals in the kingdom, which, however, he declined. No man ever took more pains to procure charitable donations and legacies. He is said, from good authority, to have disbursed nearly 1,000,000 of livres annually to the poor. When there was a general dearth, in 1725, in order to relieve the poor, he sold his household goods, pictures, and furniture, and, when the plague raged at MarL A N I TJ S.

, guid is feeble; faint ; weak : senses which the adverb and noun follow :

seilles, he sent large sums into Provence for the relief of the distressed. M. Languet refused several bishoprics, and even resigned his vicarage in 1748 ; but continued to preach every Sunday at his own parish church, and to support the .Maison de 1' enfant Jesus, till his death, which happened in 1750.

LAN'GUID, adj. "j Lat. languidus

LAN’GUIDLY, adv. and langueo ; Fr.

LAN’GUIDNESS, n. s. and Span, languir ;

LAN’GUISH, v. n. & n. s. ! Ital. languire. Lan-LAN’GUISHINGLY, adv. • m”A ‘« fi*»M<»* LAN’GUISHMENT, n. s. LAN’GUOB, LAN’GUOROUS, adj. to languish, to grow or become feeble; to pine away ; sink ; exhibit decline, softness, or tenderness : languor and languish ment mean faintness ; feebleness ; listlessness ; laxity ; state of decline; dulness: languorous (obsolete), faint; melancholy.

If any man techith othirwise and accordith not to the hoolsum wordis of our lord lesus Crist, and to that techyng that is bi pitee, he is proud and can nothing, but languischith aboute questiouns and stryuyng of wordis. Widiffe, 1 Tym. 6.

The land shall mourn, and every one that dwell-eth therein languish. Hosea iv. 3.

We and our fathers do languish of such diseases.

2 Esdras.

By that count which lovers books invent, The sphere of Cupid forty years contains ;

Which I have wasted in long languishment, That seemed the longer for my greater pains.

Spenser.

Well hoped I, and fair beginnings had, That he my captive languor should redeem. Id.

Dear lady, how shall I declare thy case, Whom late I left in languorous constraint ? Id.

Let her languish

A drop of blood a-day ; and, being aged, Die of this folly. Shakspeare’s Cymbeline.

What man who knows What woman is, yea, what she cannot chuse But must be, will his free hours languish out For assured bondage ? Id.

For these, these tribunes, in the dust I write My heart’s deep languor, and my soul’s sad tears.

Shakspeare.

What can we expect, but that her languishing! should end in death 1 Decay of Piety.

A las ! my Dorus, thou seest how long and languishingly the weeks have past over since our last talking. Sidney.

The menstruum worked as languidly upon the coral as it did before. Boyle.

His sorrows bore him off ; and softly laid His languished limbs upon his homely bed.

Dry den.

What poems think you soft, and to be read, With languishing regards, and bending head. Id. Humility it expresses, by the stooping or bending of the head ; languishment, when we hang it on one side. Id.

I'll hasten to my troops, And fire their languid souls with Gate's virtue.

Addison.

Let Leonora consider, that, at the very time in which she languishes for the loss of her deceased lover, there are persons just perishing in a shipwreck. Id. Spectator.

iMBgHCr and lassitude signifies a faintness, which may arise from want or decay of spirits, through in-

digestion, or too much exercise ; or from an additional weight of fluids, from a diminution of secretion by the common discharges. Quincy.

Whatever renders the motion of the blood languid", disposeth to an acid acrimony ; what accelerates the motion of the blood, disposeth to an alkaline acrimony. Arbuthnot.

No' space can be assigned so vast, but still a larger may be imagined ; no motion so swift or languid, but a greater velocity or slowness may still be conceived. Bentley.

And the blue languish of soft Allia's eye. Pope. Leave such to tune their -own dull rhimes, and

know What's roundly smooth, or languishingly slow. Id.

To isles of fragrance, lilly-silvered vales, Diffusing languor in the panting gales. Dunciad. Academical disputation gives vigour and briskness to the mind thus exercised, and relieves the languor of private study and meditation.

Wattis Improvement of the Mind. Then forth he walks,

Beneath the trembling languish of her beam, With softened soul. Thomson's Spring.

A languid, leaden iteration reigns, And ever must, o'er those whose joys are joys Of sight, smell, taste. Young.

When by the bed of languishment we sit (The seat of wisdom ! if our choice, not fate), Or o'er our dying friends in anguish hang, Wipe the cold dew, or stay the sinking head, Number their moments, and in every clock Start at the voice of an eternity. Id.

They become, by degrees, fastidious in their choice of pleasure, languid in the enjoyment yet miserable under the want of it. Paley.

All love, half languor, and half fire, Like saints that at the stake expire, And lift their raptured looks on high, As though it were a joy to die. Byron.

LANJANG, or LANTCHANG, the capital city of Laos, situated on the river Mecon. See LAOS. It is said to be a magnificent place ; the palace of the sovereign itself resembling a city, while those of the grandees are proportionably large. The ordinary dwellings, however, are mere huts. Long, lot* 38' E., lat. 18° 30* N.

LANIARD. See LANYARD.

LAN'IFICE, n. 5. > Lat. lanificium and

LAN'IGEROUS, adj. 5 laniger. Woollen article : bearing wool.

The moth breedeth upon cloth and other lanifices, especially if they be laid up dankish and wet.

Bacon.

LANISTA, in antiquity, is sometimes used to signify an executioner ; but more frequently for a master gladiator, who taught the use of arms, and educated slaves, or children that had been exposed in that

art. See GLADIATOR.

LANIUS, the shrike, or butcher-bird, in ornithology, a genus belonging to tbe order of acci-pitres, the characters of which are :— the beak is somewhat straight, with a tooth on each side towards the apex, and naked at the base ; and the tongue is lacerated. There are above fifty species, besides many varieties.

L. albus, the white panyan shrike, is about double the size of a lark. Its bill is black : the head, neck, back, belly, and shoulders, are white : the rest of the wings and tail black ; and across the greater quills there is a white

bund; the legs are black. It inhabits the isle of I'anay.

L. Antiguanus, the Antiguau shrike, or pie griesche d' Antigue of Sonnerat, is about the size of a lark. Its bill is large and black ; the upper mandible very long, and the curvature so excessive, that one would rather take it for a monstrosity than a characteristic of a species ; the irides are dusky ; the head is black ; the back of a yellowish rufous color : the throat and breast are white ; the quills, and bastard wing-coverts, black ; and the wings reach only to the beginning of the tail, which is very long and wedge-shaped ; the two middle feathers are wholly black ; the legs are dusky black. It inhabits Panay, one of the Philippines, but principally about Antigua.

L. ccEnilescens, the fork-tailed Indian butcher-bird of Edwards, is about seven inches and a half long ; the bill is blackish-brown, and bent ; the upper mandible beset with black hairs turning forwards : the plumage on the upper parts of tiie body is a fine black, with a gloss of blue, and in some lights green ; the under parts are white : the greater quills and tail are of a ferruginous black ; the tail is pretty much forked, and the outer feather spotted with dirty white. It inhabits Bengal, where it is called fingah. It is called also by the Indians the king of the crows, from its pursuing these birds from place to place with a great noise, and pecking them on the back till they escape.

L. collurio, the less butcher-bird, is seven inches and a half long. The irides are hazel ; the bill resembles that of the excubitor; the head and

lower part of the back are of a fine light gray ; across the eyes from the bill runs a broad black stroke ; the upper part of the back, and coverts of the wings, are of a bright ferruginous color; the breast, belly, and sides, an elegant blossom-color: the two middle feathers of" the tail are longest, and entirely black ; the lower part of the other white, and the exterior webs of the outmost feather on each side wholly so. In the female, the stroke across the eyes is of a reddish brown ; the head of a dull rust color mixed with gray ; the breast, belly, and sides, are of a dirty white, markt^ with semicircular dusky lines ; the tail is of a deep brown ; the outward feather on each side excepted, whose exterior webs are white. It is rather larger than the male. This species is pretty common. La-tham suspects it to be a bird of passage, having never seen it in winter. It lays six white eggs marked with a rufous brown circle towards the large end. The nest is generally in a hedge or low bush ; near which, it is said, no small bird chooses to build : for it not only feeds on insects, but also on the young of other birds in the nest, taking hold of them "by the neck, and strangling (hem, beginning to eat them first at the brain and eyes. It is called in the German language great liead, or bull head, from the size of that part. It will feed on sheep's kidneys, if in a catjo, eating a whole one every day. When sitting on the nest, the female is soon discovered ; for on the approach of any one, she sets up a horrible out-cry.

L. Dominicanus, the Dominican shrike, or

pie-griesche Domintquaine of Sonnerat, is bigger than a sparrow, and rather longer. The bill is grayish, conical, and strong ; the base beset with bristles, pointing forwards; the head, neck, breast, back, wings, and tail, are black ; the belly and rump white ; the wings reach nearly an inch beyond the middle of the tail; the thighs are black. It inhabits the Philippines, and is a bold courageous bird ; it flies very quick, and with great rapidity, frequently hovering in the air like a swallow. It is a great enemy to the raven.

L. excubitor, the great cinereous shrike, or greater butcher-bird, is ten inches long. The plumage on the upper parts is of a pale ash co-lor ; the under, white : through the eyes there is a black stripe : the scapulars are white : the base of the greater quills white, the rest black : the tail is somewhat cuneiform; the two middle feathers are black ; the outermost on each side white ; those between are black, with the ends more or less white : the legs are black. Its bill is black, one inch long, and hooked at the end ; the upper mandible furnished with a

sharp process ; the nostrils are oval, covered with black bristles pointing downwards : the muscles that move the bill are very thick and strong; which makes the head very large. Its method of killing its prey and devouring it is extraordinary ; small birds it seizes by the throat, and strangles ; which is the reason why the Germans call it the wurchangl, or the suffocating angel. It feeds on small birds, young nestlings, beetles, and caterpillars. When it has killed the prey, it fixes them on some thorn, and when thus spitted pulls them to pieces with its bill: on this account the Germans call it thorntraer and thornfreker. When confined in a cage, it often treats its food in the same manner, sticking it against the wires before devouring it. This species inhabits many parts of Europe and North America. The fe-male makes its nest with heath and moss, lining it with wool and gossamer ; and lays six eggs, about as big as those of a thrush, of a dull olive-green, spotted at the thickest end with black. In spring and summer it imitates the vokes of other birds, to decoy them within reach, that it may destroy them ; but, excepting this, the natural note is the same in all seasons. If a trap-fall be baited with a small living bird, it may be taken in winter. It is mute when kept in a cage, though seemingly content. In countries where they are numerous, the husbandmen value them, on account of their destroying rats, mice, and other vermin. They live five or six years, and are often trained up for catching small birds in Russia'. In Carolina they are migratory, com-ing in May, and departing in September, as the few which are met with in England also do.

L. faustus, the white-wreathed shrike, is about the size of a thrush. Its bill is pale : the upper parts of the body are gray : the under ferruginous : from the eyes to the hind head there passes a whitish line, composed of numerous white feathers, rendering it truly characteristic : the wings are rounded ; the quills brownish, with gray edges, which are crossed with numercus slender brown lines : the tail is rounded, brown, and crossed with numerous bars of darker brown : the

legs are pale. This elegant species inhabits China, where it is known by the name of whornaj. It is often represented on Chinese paper hang-ings, where the white line encompasses the back of the head like a wreath.

L. infaustus, the rock-shrike, is seven inches and three-quarters long. The bill is about an inch long, and blackish : the head and neck are of a dark ash-color, marked with small rufous spots : the upper part of the back is a dark brown : the lower much paler, inclining to ash, especially towards the tail : the quills and wing-coveris are dusky, with pale margins : the breast and under parts of the body are orange, marked with small spots, some white and others brown : the tail is three inches long : the wings and tail are even. The male differs from the female only in being of a brighter color. This species is met with in many parts of Europe, from Italy to Russia, and is found in Germany, the Alps, the mountains of Tyrol, &c. Buffon says that it perches on a high stone, and, as soon as a marks-man appears with his gun, removes to a greater distance, doingthesame as often as he approaches; which renders it difficult to be come at. But Brun-nich and Linnaeus say, that it is a bold bird, attending the traveller wh'le at his meal, on purpose to feed on his scraps. It has an agreeable note, approaching to that of the hedge-sparrow, and will imitate that of other birds. It makes its nest among the holes of the rocks, &c., hid-ing it with great art ; and lays three or four eggs, feeding its young with worms and insects. If taken young it may be brought up as the nightingale.

L. jocosus, the jocose shrike, is seven inches and a half long. The bill is blackish, rather straighter than in most of the genus, and furnished only with a very fine notch near the tip : the crown of the head is black, except some long brown feathers, which form a kind of crest ; the sides of the head, throat, and forepart of the neck are white : from each corner of the mouth there is a black line, continued backwards : and under each eye is a small spot of lively red : the upper parts of the body are brown : the under parts dirty white : the vent rose-color : on the lower part of the neck and breast there is a kind of brown band : the quills are brown : the tail is greatly wedge-shaped, and brown, except the four outer feathers on each side, which have white tips : the legs and claws are black. It is a bird of China, and called there kowkai-kon. It feeds upon rice and insects, particularly cock-roaches.

L. nengeta, the guiraron of Buffon, is nine or ten inches long. Its bill is dusky, and beset with Visiles at the base : the irides are sapphiie-color- ed ; and from the angles of the mouth, through the eyes, there runs a black streak : the upper parts of the body are of a dark brownish ash-color : the under parts cinereous white : in the middle of the wing are a few white feathers : the quills and tail are nearly black; and all the feathers of the last, except the two middle ones, are obliquely tipped with white : the legs are of a dark ash-color: the claws black. These birds are found at Surinam and Brasil. They are

com-mon likewise at Guiana, where they frequent

watery places, and are found in great number* together. They are observed, at frequent intervals, to set up a great cry all together; which affords a certain presage to the thirsty traveller, in the immense forests of Guiana, of water being at hand.

L. tyrannus, the tyrant shrike, is about the size of a thrush. Its bill is a blackish-brown, beset with bristles at the base : the irides are brown : the upper parts of the plumage gray-brown : the under white : the breast inclines to ash-color: the head is blackish on the upper part : the base • of the feathers on that part in the male is orange, but seldom visible, unless it erects the feathers, when there appears a streak of orange down the middle of the crown : the tail is brown, margi-iiated with rufous : the legs and claws are black-brown. The female scarcely differs, except in the head ; the base of the crown feathers being yellow instead of orange; the colors are not quite so deep, and it is less in size. It inhabits Virginia. A variety inhabits St. Domingo and Jamaica, called titri, pipiri, or quiquiri, from their cry, which resembles these words. The first is called the black-headed, or great-billed pipiri ; the second the yellow-headed pipiri, or pipiri of passage. The first, though numerous are seldom seen but in pairs ; the second in great troops, about August, when they are very fat, and killed in great numbers for the table, as their flesh is accounted good ;eating. All authors agree that these birds are ferocious to a great degree while the hen is sitting, when no bird whatever dare approach their nest : they will attack the most ravenous without reserve, and usually come off conquerors ; whence by some they are called king birds. Another variety, the Carolina tyrant of Catesby, is little, if at all, different from the preceding, in regard to specific character. But, he says, it makes its nest rather exposed, on trees and bushes, frequently on the sassafras ; whereas the pipiri makes use of the hole of a tree, for the sake of concealing it. In Carolina it is a bird of passage, coming in spring, and making one nest annually in June ; and, after bringing up its young, retiring in autumn. These birds frequent also the red cedars ; are seldom found in woods, and often found in hedge-rows and fences of fields, and for the most part with-in 200 yards of each other. They do not molest their own species ; but the moment a crow, or even an eagle, appears, all within reach join forces, and attack him in all parts of his body at once, never desisting till they have driven him off.

LANK, adj. 3 Sax. hlanc, laenis ; Belg.

LANK'NESS, n. s. \lenk and lenche, of Lat. longus. Thin ; slender ; languid : hence not plump; not filled out; flaccid.

The commons hast thou racked ; the clergy's bags Are lank and lean with thy extortions. Shatcspea~e. Name not Winterface, whose skin's slack,

Lank, as an unthrift's purse. Dcnne.

He, piteous of her woes, reared her lank head, And gave her to his daughters to imbathe In nectared labors strewed with asphodil. ifiltim.

We let down into a receiver a great bladder well tied at the neck, but very lank, as not containing above a pint of air, but capable of containing tea times as much. Boyle.

Moist earth produces corn and grass, but both Too rank and too luxuriant in their growth, Let not my land so large a promise boast, Lest the lank ears in length of stem be lost.

Dryden.

Now, now my bearded harvest gilds the plain, Thus dreams the wretch, and vainly thus dreams on, Till his lank purse declares his money gone. <.

Meagre and lank with fasting grown, And nothing left but skin and bone ; hey just kept life and soul together. Swift.

Upon Her right hand — her lank, bird-like right-hand —

stood

A goblet, bubbling o'er with blood ; and on Her left, another, Ailed with — what I saw not, But turned from it and her. Byron.

LANNES (John), marshal, duke of Monte-bello, grand cordon of the legion of honor, &c., was boru in 1769 at Lectoure, in the department of Gers. He studied at the college there, but his father's misfortunes interrupted his education, and he was apprenticed to a dyer. He entered the army in 1792, and his zeal and intelligence gained him rapid promotion : in 1795 he had obtained the rank of chief of brigade. Displaced on the charge of incapacity, by the agent of the convention, Aubry, Lanues became a volunteer in the army of Italy ; and for his conduct at the battle of Milessimo, in April 1796, was made colonel of the twenty-fifth regiment. At the passage of the Po, the bridge of Lodi, and especially at the battle of Bassano, he was distinguished ; and, afterthe assault of Pavia, was promoted to be a general of brigade. Lannes was shortly after sent to Rome to arrange the conditions of peace with the pope. He returned to Paris in October 1797, and accompanied Buonaparte to Egypt, with whom also he returned, and was rewarded by him with a sabre of honor at the battle of Marengo. In 1801 he went as plenipotentiary to Lisbon. In May 1804 he was made a marshal and subsequently duke of Monte-bello. In 1805 he contributed to the victory of Austerlitz, on which occasion he commanded the right wing of the French, and in the Prussian campaign in 1807, signalised himself at Jena, Eylau, and Friedland. He then served in Spain, at the battle of Tudela ; and, the siege of Sarra-gossa. At length he lost his life by a wound which he received at the battle of Essling, in March 1809, and died nine days after that engagement.

LANSDOWN, an extensive plain of England, in the county of Somerset. A battle was fought on this plain between the royal army of Charles T. under the marquis of Hertford, and the par-amentary army under Sir William Waller, in the year 1643. The former kept the field of battle, but their loss, especially in officers, was very considerable. A monument was erected on the spot, by lord Lansdown, grandson of Sir Bevil Grandville, who fell on that occasion. The plain, which is four miles north of Bath, is now enclosed.

LANSINBURGH, a town of New York, capital of Renssellaer county, seated on the east side of the Hudson, opposite the south branch of the Mohawk; 175 miles north of New York,

and 270 N. N. E. of Philadelphia. LOG" 73" 34' W., lat. 42° 46' N.

LANSQUENET, or LANSQUINET, the name of a game at cards of French origin. It may bo played at by any number of people, though a single pack of cards is used during the deal. The dealer, who possesses an advantage, shuffles the cards, and, after they have been cut by another of the party, deals out two cards on his left hand, turning them up, then one for himself, and a fourth that he places on the table for the company, who is called the rejouissance. On this card any, or all of the company, the dealer excepted, may put their money, which the dealer is compelled to answer. The dealer continues turning the cards upwards, one by one, till two of a sort come up, that is to say, two aces, two deuces, &c., which, to prevent mistakes, or their being considered as single cards, he places on each side of his own card ; and as often as two, three, or the fourth sort of a card come up, he invariably places, as before mentioned, on each side of his own card. The company has a right to take and put money upon any single card, unless the dealer's card should happen to be double, which is often the case, by his card being the same as one of the two hand-cards, which he first dealt out on his left hand : thus he continues dealing till he brings either their cards or his own. Whilst the dealer's own card remains undrawn, he wins : and whichever card is turned up first, loses. If he deals out the two cards on his left hand, which are styled the hand cards, before his own, he is entitled to deal again. This advantage amounts to no more than his being exempted from losing, when he turns up a similar card to his own, immediately after he has turned up one for himself. Lansquenet is often played without the rejouissance, the dealer giving every one of the party a card to put their money upon. It is also often played by dealing only two cards, one for the company and the other for the dealer. A limitation is generally fixed for the sum to be placed upon any card or number of cards, either in gold or silver, beyond which the dealer is not obliged to answer.

LANTANA, or Indian sage, in botany, a ge-nus of the angiospermia order, and didynamia class of plants ; natural order fortieth, personatae: CAL. indistinctly quadridentated ; the stigma as it were broken and turned back like a hoof; the fruit is a plum with a bilocular kernel. There are fifteen species, consisting of shrubby exotics from Africa and America for the greenhouse or stove ; growing to the height of a yard or two, and adorned with oblong, oval, and roundish simple leaves, with monopetalous, tubular, quadripartite flowers of different colors. They may be propagated either by seeds or cuttings.

1. L. camara, or wild sage, is remarkable for the beauty of its flowers ; which are yellow, tinged with red. It grows wild among bushes.

2. L. involucrata, or sea-side sage, has small ash-colored leaves and a most agreeable smell. It grows near the sea. Both these species are natives of the West Indies. Their leaves, particularly those of the sea-side sage, are used by the blacks in tea for colds, rheums, and weakness of the stomach.

LANTERN, n. s.) Fr. lanterne ; Ital.

LAN'TER-JAW, > Span, and Port, lanterna ;

LAN'TERN-MAKER. 3 Lat. laterna (d lateo, because the light lies hid within it) ; written, corruptly, lanthorn and lenthorn. A case for exhibiting or concealing a light : lantern-jaws, such as if a candle were burning in the mouth might transmit the light ; or as would serve for a lantern.

No man lightnith a lanterne: hilith it with a vessel or puttieth it under a bed, but on a candle-stick that men that entren seen light.

Wlcliffe, Luk 8. God shall be my hope,

My stay, my guide, my lanthorn to my feet.

Shalapeare.

Thou art our admiral ; thou bearest the lanthorn in the poop, but 'tis in the nose of thee ; thou art the knight of the burning lamp. Id. Henry IV.

A candle lasteth longer in a lanthorn than at large.

Bacon.

Amongst the excellent acts of that king, one hath the pre-eminence, the erection and institution of a society, which we call Solomon's house ; the noblest foundation that ever was, and the lanthorn of this kingdom. Bacon's Atlantis.

O thievish night,

Why should'st-thou, but for some felonious end,

In thy dark lanthorn thus close up the stars

That nature hung in heaven, and filled their lamps

With everlasting oil 1 Milton.

Judge what a ridiculous thing it were, that the continued shadow of the earth should be broken by sudden miraculous eruptions of light, to prevent the art of the lantern-maker. More's Div. Dial.

Our ideas succeed one another in our minds, not much unlike the images in the inside of a lanthorn, turned round by the heat of a candle. Locke.

Caprea, where the lanthorn fixed on high Shines like a moon through the benighted sky, While by its beams the wary sailor steers. Addison.

Being very lucky in a pair of long lanthorn-jaws, he wrung his face into a hideous grimace.

Id. Spectator.

Vice is like a dark lanthorn, which turns its bright side only to him that bears it, but looks black and dis-mal in another's hand. Government of the Tongue.

Some men's wit is like a dark lantern, which serves their own turn, and guides them their own way. Pope.

The ignis fatuus or Jack a lantern, so frequently alluded to by poets, is supposed to originate from the inflammable air, or hydrogene, given up from morasses. Darwin.

A LANTERN, or LANTHORN, is usually made of while iron, with sashes of glass or horn, to transmit the light.

LANTERN, on shipboard, a well known machine, of which there are many in a ship, to direct the course of other ships in a fleet or convoy

; such are the poop and top lanterns. A patent was granted to Mr. Brine, of Portsea, for the invention of a lantern, intended as a signal lantern and for top-lights ; which is shaped like the middle frustum of two cones, abutting upon one common base, and conveys its light from six equidistant magnifying points as represented at a a a, in the diagram. Its properties are as follow :

No weather will affect its light ; no attendance is necessary after it is once lighted ; it will bum twelve successive hours; is not liable to entangle in the rigging ; and its light always preserves its central position, let the lantern be in any direction whatever. It is not likely to want repair ; the expense of burning is very trivial ; and it is fully adequate to all the purposes of night signal. Several of our ships of war are furnished with these lanterns.

LANTERN, in architecture, is a little dome raised over the roof of a building to give light, and serve as a crowning to the fabric.

LANTERN, DARK, has only one opening which may be closed up when the light is to be entirely hid, or opened when there is occasion for the light to discover some object.

LANTERN FLY, in zoology. See ENTOMOLOGT.

LANTERN, MAGIC. See DIOPTRICS.

LANTERNS, FEAST OF, in China, is a celebrated festival held from the 13th to the 16th day cf the first month ; so called from the immense number of lanterns hung out of the houses and streets. On this day are exposed lanterns of all prices, whereof some are said to cost 2000 crowns. They are adorned with gilding, sculpture, painting, japanning, Sec., and their size is extravagant ; some being from twenty-five to thirty feet diameter, representing halls and chambers. Two or three such machines ‘ together would make handsome houses ; so that in China they are able to eat, lodge, receive visits, hold balls, and act plays in a lantern. To illuminate them, they light up in them an incredible number of torches or lamps, which at a distance have a beautiful effect. In these they exhibit various kinds of shows, to divert the people. Besides these enormous lanterns, there are multitudes of smaller ones, each about four feet high, and one and a half broad. See CHINA.

LANTURELAS. In 1771 the marquis de Croismare, a man of wit and a friend of madame de la Forte” Imbault, founded a burlesque order of

this name, of which he appointed that lady the grand mistress, he himself being the grand master. This institution gave rise to a great many lively productions, and attracted so much attention, that Catharine II. was accustomed to advise all the Russian nobles who visited Paris to become Lanturelas, an honor which was also sought by sovereign princes.

LANYARDS, in nautical affairs, a short piece of cord or line fastened to several machines in a ship, «nd serving to secure them in a particular place, or to manage them more conveniently Such are the lanyards of the gun-ports, the lanyard of the buoy, the lanyard of the cat-hook, &c. The principal lanyards used in a ship, however, are those employed to extend the shrouds and stays of the masts by their communication with the dead eyes, so as to form a sort of mechanical power resembling that of a tackle These lanyards are fixed in the . dead-eyes, as follows : one end of the lanyard is thrust through one of the holes of the upper dead-eye, and then knotted, to prevent it from drawing out: the other is then passed through one of the hold in the lower dead-eye, whence, returning upwards

it is inserted through the second hole in the upper dead-eye, and next through the second in the lower dead eye, and finally through the third holes, in both dead-eyes. The end of the lanyard, being then directed upwards from the lowest dead-eye, is stretched as stiff as possible by the application of tackles ; and, that the several parts of it may slide with more facility through the holes in the dead-eyes, it is well smeared with hog’s lard or tallow, so that the strain is immediately communicated to all the turns at once.

LAOCOON, in fabulous history, a son of Priam and Hecuba, or, according to others, of Antenor or Capys. Being priest of Apollo and Neptune, he was commissioned by the Trojans to offer a bullock to

Neptune to render him propitious. During the sacrifice two enormous serpents issued from the sea, and attacked Laocoon's two sons, who stood next to the altar. The father immediately attempted to defend his sons ; but the serpents falling upon him enfolded him in their complicated wreaths, and he died in the greatest agonies. This punishment was said to hare been inflicted upon him for dissuading the Trojans from bringing into the city the fatal wooden horse which the Greeks had consecrated to Minerva; as also for his impiety in hurling a javelin against the sides of the horse as it entered within the walls. But, according to Hyginus, he was thus punished for his marriage against the consent of Apollo, or, according to others, for polluting the temple, by his commerce with his wife Antiope, before the statue of the god.

LAOCOON, in the history of the arts, is a celebrated monument of Greek sculpture, executed in marble by Polydorus, Athenodorus, and Age-sander, the three famous artists of Rhodes. This relic of antiquity was found in Rome in the ruins of the palace of Titus, in the beginning of the sixteenth century, under the pontificate of Julius II., and was afterwards deposited in the Farnese palace. Laocoon is represented with his two sons, with two hideous serpents clinging round his body, gnawing it, and injecting their poison. Virgil has given us the following beautiful description of the fact : —

Illi agmme certo

Laocoonta petunt, et primum parva duorum Corpora natorum serpens amplexus uterque Implicat, et miseros morsu depascitur artus. Post, ipsum auxilio subeuntem ac tela ferentem Corripiunt, spirisque ligant ingentibus : et jam Bis medium amplexi, bis collo squamea circura Terga dati, superant capite et cervicibus altis. Ille simul mauibus tendit divellere nodes, Perfusus sanie vittas atroque veneno : Clamores simul horrendos ad sidera tollit.

Mieid, lib. ii. ver. 212, &c.

This statue exhibits the most astonishing dignity and tranquillity of mind in the midst of the most excruciating torments. Pliny says of ii, that it is ' opus omnibus, -pictures et statuario? artis, praeferendum.' 'Laocoon,' Dr. Gillies observes, ' may be regarded as the triumph of Grecian sculpture ; since bodily pain, the grossest and most ungovernable of «dl our passions, and that pain united with anguish and torture of mind,

are yet expressed with such propriety and dignity, as afford lessons of fortitude superior to any taught in the schools of philosophy. The intolerable agony of suffering nature is represented in the lower part, and particularly in the extremities of the body ; but the' manly breast struggles against calamity. The contention is still more plainly perceived in his furrowed forehead; and his languishing paternal eye demands assistance, less for himself than 'or his miserable children, who look up to him for help.'

LAODAMIA, in fabulous history, a daughter of Acastus and Astydafnia, who married Protesilaus, the son of Iphiclus, king of a part of Thessaly. The departure of her husband for the Trojan war, and his death from the hand of Hector, was the source of great grief to her. To keep alive the memory of her husband, she ordered a wooden statue to be made, and regularly placed in her bed. This was seen by one of her servants, who informed Iphiclus that his daughter's bed was daily defiled by an unknown stranger. Iphiclus watched his daughter, andr when he found that the intelligence was false, he ordered the wooden image to be burned, in hopes of dissipating his daughter's grief. He did not succeed. Laodamia threw herself into the flames with the image, and perished. This circumstance has given occasion to the fabulous tradition that Protesilaus was restored to life,, and to Laodamia for three hours, and that, when he was obliged to return to the infernal regions, he persuaded his wife to accompany him.

LAODIC./EA, or LAODICEA, in ancient geography, a town of Phrygia, on the Lycus, first called Diospolis, then Rhoas. It was built by Antiochus Theos, and named, after his consort, Laodice. It increased in importance towards the time of Augustus, after having suffered in a siege from Mithridates. Hiero, who adorned it with many offerings, left the people more than 2000 talents. After that benefactor followed Zeno, the rhetorician ; and his son Polemo, the renowned sophist, who flourished at Smyrna; but was buried here by the Syrian gate, near which were the sepulchres or coffins of his ancestors. This city was often damaged by earthquakes, and restored by its own opulence or by the munificence of the Roman emperors. About 1097 it was possessed by the Turks, and submitted to Ducas, general of the emperor Alexius. In 11 20 the Turks sacked some of the cities of Phrygia by the Maeander, but were defeated by the emperor John Comnenus, who took Laodi-caea, and repaired the walls. About 1161 it was again unfortified. Many of the inhabitants were then killed, with their bishop, or carried into captivity by the Turks. In 1190 the German emperor Frederic Barbarossa, going by Laodicea with his army toward Syria on a crusade, was received so kindly that he prayed on his knees for the prosperity of the people. About 1196 this

region, with Caria, was dreadfully ravaged by the Turks. The sultan, on the invasion of the Tartars, in 1255, gave Laodicea to the Ro-mans ; but they were unable to defend it, and it soon returned to the Turks. It is now totally ruined and deserted. Several remains of its an-LAO

cient grandeur are, howevei, still to be seen; particularly the ruins of two theatres and an amphitheatre. The memoiy of this place is consecrated in Scripture, being one of the seven churches to which St. John in the Apocalypse addressess himself.

LAODICEA, or LAODIC.EA, in ancient geography, a town of Syria, on the sea-coast. According to Strabo, it was a town of Seleucis, extremely well built, with a commodious harbour. The country about it yielded great quantities of wine. The city wus ramed from Laodice, mother of Seleucus, the founder of it. It is now called Ladikieh.

LAODICE, in fabulous history, a daughter of Priam and Hecuba, who became enamoured of Acamas, son of Theseus, when he came with Diomedes from the Greeks to Troy, with an embassy to demand the restoration of Helen. She had a son by Acamas, whom she called Munitus. She afterwards married Helicaon, son of Antenor, and Telephus, king of Mysia. Some call her Astyoche. When Troy was sacked by the Greeks, Laodice threw herself down from the top of a tower, and was killed . — Homer. Also the name of the mother of Seleucus. Nine months before she brought forth, she dreamt that Apollo had introduced himself into her bed, and had presented her with a precious stone, on which was engraved the figure of an anchor, commanding her to deliver it to her son as soon as born. This dream appeared the more wonderful, when in the morning she discovered in her bed a ring answering the same description. Not only the son that she brought forth called Seleucus, but also all his successors of the house of the Seleu-xidse, had the mark of an anchor upon their thigh. — Justin .

LAO-KIUN, or LAO-TSE, a Chinese philosopher, who founded the sect of Tao-sse. He was born A. A. C. 603, and died in an advanced age, lea

.‘ing to his disciples a book called Tao-te, being a collection of 5000 sentences. His morality resembles that of Epicurus. See CHINESE.

LAOMEDON, in fabulous history, king of Troy, was son of Ilus, and married Strymo, called by some Placia, or Leucippe, by whom he had Podarces, better known by the name of Priam and Hesione. He built the walls of Troy, and was assisted by Apollo and Neptune, whom Jupiter had banished from heaven, and condemned to be subservient to the will of Laomedon for one year. When the walls were finished, Laomedon refused to reward the gods for their labors : and soon after his territories were laid waste by Neptune, and his subjects were visited by a pestilence from Apollo. Sacrifices were offered to the offended divinities ; but the calamities of the Trojans increased, and nothing could appease the gods, according to the words of the oracle, but annually to expose to a sea-monster a Trojan virgin. Whenever the monster appeared, the marriageable maidens were assembled, and the lot decided which of them was doomed to death for the good of her country. When this calamity had continued for five or six years, the lot fell upon Hesione, Laomedon’s daughter. The kins was unwilling to part with a daughter whom he loved with uncommon tenderness, but his refusal would irritate nit-re

strongly the wrath of the gods. In the midst of his fear and hesitati ;n, Hercules came and offered to deliver the Trojans from this public calamity, if Laoraedon would promise to reward him with a number of fine horses. The king consented : but, when the monster was destroyed, he refused to fulfil his engagements, and therefore Hercules besieged Troy and took it. Laomedon was put to death after a reign of nineteen years ; his daughter Hesione was given in marriage to Telamon, one of Hercules’s attendants ; and Priam was ransomed by the Trojans, and placed upon his father’s throne. According to Hyginus, the wrath of Neptune and Apollo was kindled against Laomedon, because he refused to offer on their altars, as a sacrifice, all the first-born of his cattle, according to a vow he had made.

LAON, a decayed town of France, on the Ar-don, the capital of the department of the Aisne. The cathedral, built in 1115, is a fine building, with five lofty turrets : there are also a number of other churches and chapels ; two hospitals, and a theatre. Its chief trade is in the wine of the vicinity, but there are some small manufactures of linen, stockings, hats, and nails. There was a sharp action here between the Prussians and the French in March, 1814. It is twenty miles north-east of Soissons, and seventy-seven north-east of Paris.

LAOS, a central kingdom of India, beyond the Ganges, extending from about 12° to 18° N. lat. To the north it is said to be bounded by Lactho and Tunquin ; to the south by Cam-bodia ; to the east by Tunquin and Cochin Chi-na ; and to the west by Siam. The exact limits of this province, however, have never been ascertained, and little is known respecting it except through the report of the earlier Portuguese and Dutch writers, or from the accounts of Tunquin-ese and Chinese merchants, communicated to the missionaries. According to these, the province is thinly inhabited, and poorly cultivated, the largest collected population being at the village of Hanniah, and amounting only to about 4000 or 5000 persons, many of them strangers, settled there for the purposes of traffic. The inhabitants speak a dialect of the Siamese called the Laos language, and are said to have many books among them, especially translations from the Bali : the Siamese denominate the two principal tribes Chong-mai and Lanchang. According to Mr. Hamilton, some of the most celebrated founders of the Budhoo religion have left remarkable vfcswges oi themselves here, and devotees pretend to trace the sacrert step? of Pra-ku-ku-son, Pra-kon-na-kon, Pra-putha-nat-sop, and Pra-sa-mutta-ko-dum. The people are warlike : great believers in magic ; and under but a nominal subjection to Cochin China. Elephants, superior gum lac, rubies, topazes, pearls, and fancy gold articles ; ivory, musk, bamboos, wax, and cotton, are the exports of this region ; the imports fire-arms and gunpowder, silk stuffs, oil, salt, and salt fish.

LAP,n.s.,v.«.&u. n.ˆl Sax. lo-jˆe; Goth.

LAP’DOG, j Teut. Belg. and Dan.

LAP’FUL, [lap ; Swed. lapp (any

LAP’PET, \ thingbroadand loose).

LAP’WING, | See FLAP. The loose

L.viAvoRK. J part of a garment; or

that which may be folded up at pleasure; the clothes spread over the knees, more generally applied to thi* part of female dress : to lap is to wrap or twLi round, or to involve; also to be spread or turned over any thing: a lapdog is a dog nursed in the lap : lappet, a loose part of the head-dress : lapwing, a bird remarkable for its long wings : lapwork is work the parts of which are wrapped interchangeably over each other.

One found a wild vine, and gathered thereof wild gourds his lapfitl, and shred them into the pot of pottage. 2 Kings.

And bad this sergeant that he. prively

Shulde this childe ful softe wind and wrappe,

With alle circumstances tendrely,

And carry it in a cofre or in a lappe. Chaucer. It feeds each living plant with liquid sap,

And fills with flowers fair Flora’s painted lap.

Spenser.

Upon a day, as love lay sweetly slumbering All in his mother’s lap,

A gentle bee, with his loud trumpet murmuring, About him flew by hap. id.

As through the flowering forest rash she fled, In her rude hairs sweet flowers themselves did lap, And flourishing fresh leaves and blossoms did en-

wrap.

Id.

I'll make my haven in a lady's lap. Shaltspeare.

Our stirring

Can from the lap of Egypt's widow pluck The ne'er-lust-wearied Antony. Id.

The Thane of Cawder 'gan a dismal conflict, Till that Bellona's bridegroom, lapt in proof, Confronted him. Id. Macbeth.

When we both lay in the field, Frozen almost to death, how he did lap me, Even in his garments, and did give himself, All thin and naked, to the numb cold night.

Shakipeare.

Ah ! but I think him better than I say, And yet, would herein others' eyes were worse :

Far from her nest the lapwing cries away ; My heart prays for him, though my tongue do curse.

Id.

Heaven's almighty sire Melts on the bosom of his love, and pours Himself into her lap in fruitful showers.

Crashaw.

Ever against eating cares, Lap me in soft Lydian airs. Mi/ton.

Men expect that religion should cost them no pains, and that happiness should drop into their laps. Tillotton.

He struggles into breath, and cries for aid ; Then, helpless, in his mother's lap is laid. He creeps, he walks, and issuing into man, Grudges their life from whence his own began : lletchless of laws, affects to rule aloiie, Anxious to reign, and restless on the throne.

Dryden.

Indulgent fortune does her care employ, And, smiling, broods upon the naked boy; I ler garments spreads, and laps him in the folds, And covers with her wings from nightly colds. Id.

These, if the laws did that exchange afford, \ ould save their lap-do* sooner than their lord.

Id.

And how in fields the lapwing Tereus reigns, The warbling nightingale in woods complains.

Id.

Will four per cent, increase the number of lenders? if it will not, then all the plenty of money these conjurers bestow upon us, is but like the gold and

silver which old women believe other conjurers bestow by whole lapfuUs on poor credulous girls.

Locke.

He hath a long tail, which, as he descends from a tree, he Itips round about the boughs, to keep himself from falling. Grew's Museum.

A basket made of porcupine quills : the ground is a pack-thread caul woven, into which, by the Indian women, are wrought, by a kind of lapwork, the quills of porcupines, not split, but of the young ones intire ; mixed with white and black in even and indented waves. Id.

The upper wings are opacous ; at their hinder ends, where they lap over, transparent, lik« the wing of a fly. Grew.

One of them made his court to the lap-dog, to improve his interest with the lady. Collier.

About the paper whose two halves were painted with red and blue, and which was stiff like thin pasteboard, 1 lapped several times a slender thread of very black silk. Newton.

Lapdogs give themselves the rousing shake ; And sleepless lovers just at twelve awake. Pope. If a joint of meat falls on the ground, take it up gently, wipe it with the lap of your coat, and then put it into the dish.

Swift'* Directions to a Footman. Here was the repository of all the wise contentions for power between the nobles and commons, lapt up safely in the bosom of a Nero and a Caligula.

Swift.

They may be lappers of linen, and bailiffs of the manor. Id.

How naturally do you apply your hands to each Other's lappets, and ruffles, and mantuas ! Id.

Get thee to Lamia's lap ! Byron.

LAP, v. n. & v. a. Sax. lajjjnan ; Belg. lappen ; Dan. labe; Fr. tamper, laper ; Arm. lapa ; Lat. lambo (to lick). To feed by licking or lapping up ; to lick up.

For all the rest They'll take suggestion, as a cat laps milk.

Sttakspeare. Upon a bull Two horrid lions rampl, and seized, and tugged off,

bellowing still, Both men and dogs came|; yet they tore the hide,

and lapt their fill. Chapman's Iliad.

The dogs by the river Nilus' side being thirsty, lap hastily as they run along the shore. Digby.

They had soups served up in broad dishes, and so tne fox fell to lapping himself, and bade his guest heartily welcome. L'Estrange.

The tongue serves not only for tasting, but for mastication and deglutition, in man, by licking ; in the dog and cat kind by lapping. Ray on Creation. LAPATHUS, LAPETUUS, or LEPITUUS, in ancient geography, a town on the north side of Cyprus, with a port or station for ships, and a cognominal river. It was built by a colony of Phoenicians, according to Scylax; by Belus, king of Tyre, according to Alexander Ephesius. According to Strabo, it was built by a colony of Spartans ; and one of the nine kings resided here, the last of whom was Pisistratus, who commanded the fleet of Alexander the Great. It had a temple dedicated to Venus. It is now called Lapitha.

LAPHYSTIUM, a mountain of Bceotia, where Jupiter had a temple, and where Aihamas was about to sacrifice Phryxus and Helle, when Jupiter saved them by sending a ram with a goldrn fleece.

LAPTCIDE, n.s. LAP’I DARY, w. s.kadj. LAP’IDAIE, v. a. LAPIDA’TION, n. s. LAPID’EOUS, adj.

Lat. laplcida, lapido, from lapis, a stone. A stone-cutter: lapidary, and lapidist, a dealer in stones. For lapi-

LAPIDES’CENCE, n.t. ‘dary, as an adjective,

see below. Lapidate, to stone, and to kill by stoning : lapideous, stony : lapidescence,

LAPIDES’CENT, adj. LAPIDII’IC, adj.

LAPIDIFICA’TION,n.i.

LAP’IDIST, n. t.

a concretion of the nature of stone : lapidescent, turning or growing to stone : lapidific, forming stones.

Induration or lapidification of substances more soft is another degree of condensation. Bacon.

Of lapis ceratites, or cornu fossile, in subterraneous cavities, there are many to be found in Germany, which are but the Itipidescencies, and petrefactive mutations, of hard bodies. Browne.

As a cock was turning up a dunghill, he espied a diamond : Well, says he, this sparkling foolery now to a lapidary would have been the making of him ; but, as to any use of mine, a barley-corn had been worth forty on’t. L’Estrange.

There might fall down into the lapideous matter, before it was

concreted into a stone, some small toad, which might remain there imprisoned, till the matter about it were condensed. 1'uu.

Hardness, wherein some stones exceed all other bodies, being exalted to that degree, that art in vain endeavours to counterfeit it, the factitious stones of chymists in imitation being easily detected by an ordinary lapidist. Id.

The atoms of the lapidific, as well as saline principle, being regular, do concur in producing regular stones. Grew.

Of all the many sorts of the gem kind reckoned up by the lapidaries, there are not above three or four that are original. Woodward's Natural History.

Blank verse makes some approach to that which is called the lapidary style ; has neither the easiness of prose, nor the melody of numbers, and therefore tires by long continuance. Johnson.

The lapidaries employ a considerable quantity of diamond in powder, which they use with steel instruments to divide pebbles and precious stones.

Parkes'i Chemical Catechism.

LAPIDARY is chiefly used for an artificer, who cuts precious stones. Dealers in precious stones are rather styled jewellers. The art of cutting these is of great antiquity. Various machines are employed in cutting precious stones, according to their quality. The diamond, which is extremely hard, is cut on a wheel of soft steel, turned by a mill, with diamond-dust, tempered with olive oil, which also serves to polish it. The oriental ruby, sapphire, and topaz, are cut on a copper wheel, with diamond-dust tempered with olive oil, and are polished on another copper wheel with tripoli and water. Hyacinths, emeralds, amethysts, garnets, agates, and other stones, not of inferior hardness, are cut on a leaden wheel with smalt and water, and polished on a tin wheel with tripoli. The tur-quois, girasol, and opal, are cut and polished on a wooden wheel with tripoli. Lapidary is also used for a virtuoso skilled in the nature, kinds, &c., of precious stones.

LAPIDARY STYLE denotes the style proper for monumental or other inscriptions. This is a

kind of medium between prose and verse; the jejune and the brilliant

are here equally to be avoided. Cicero has prescribed the rules of it : Accedat oportet oratio varia, vehemens, plena spiritus. Omnium sententiarum gravitate, om-nium Yerborum ponderibus, est utendurn.

LAPIS, in Roman antiquity, a geographical measure denoting a mile; because miles were distinguished by erecting a stone at the end of each ; from the number marked on which the length of way from Rome might be known. The device is by Plutarch ascribed to Caius Gracchus. This was more accurately executed by Augustus, who erected a gilt pillar in the forum, at which all the public ways of Italy, distinguished by stones, were terminated. The same thing was done in the Roman provinces. Hence the phrases tertius lapis, centesimus lapis, &c., for three, 100, &c., miles ; and sometimes the ordinal number without lapis, as ad duode-cimum, &c., at the twelfth mile distant.

LAPIS AQUILJE. See .&TITES.

LAPIS Assius, in the natural history of the ancients, the name of a stone, called also sarco-phagus, from its power of consuming flesh. See SARCOPHAGUS.

LAPIS LAZULI. The lapis lazuli, or azure stone, is a copper ore, very compact and hard, so as to take a high polish, and is worked <nto a great variety of toys. It is found in detached lumps, of an elegant blue color, variegated with clouds of white, and veins of a shining gold color : to it the painters are indebted for their beautiful ultramarine color, which is only a calcination of lapis lazuli. It is a combination of 46 silica, 28 lime, 14*5 alumina, 3 oxide of iron, 6-5 sulphate of lime, and 2 water, according to Klaproth. This blue does not suffer any alteration by the contact of air. The finest speci • mens come from China, Persia, and Great Bu charia. It was formerly exhibited as a purgative and vomit, and given in epilepsy.

LAPIS MUTABILIS, the changeable stone ; called also hydrophanes, from Gr. v&ap, wa-ter, and Qaivii), to shine, on account of its transparency in water. There are three of these stones in the British Museum, the largest of them about the size of a cherry-stone, but of an oval form. It is opaque and colored like * common yellow pea; it may be scratched, though not without difficulty, by a common knife, notwithstanding which it seems to leave a mark upon glass. It dots not ferment with nitrous acid. When it has iJn some hours in water, it becomes transparent, and of a yellow amber color. The change beg:ns soon afte1-the immersion, and at one en;l in foˆm uf a little spot ; but in a small one of the s>ame kind the transparency begins round the

edges. By degrees the spot increases, until the whole stone becomes uniformly clear throughout : when out of the water it loses its transparency, first at one end, and then gradually over the remainder, until the whole has become opaque; which change happens in less time than it takes to be-come transparent. This change is not entirel) peculiar to the hydrophanes. Bergman informs us, that some steatites produce the same effect ; and M. Magellan, that the crust of chalcedonies

tii i agates frequently produce the same appearance. Messrs. Bruckman and Veltheim were the first who particularly enquired into the •»ature of ihis stone, and investigated its properties. Their account is as follows : — As soon as the stone is put into water, it exhales a musty smell, several air hubbies arise, and it becomes gradually transparent. Some of the stones be-come colorless as soon as they are thoroughly transparent; others have a more or less deep yellow color ; some acquire a beautiful ruby color ; and others again a fine color of mother-of- pearl, or of a bluish opal. Whatever be the-color of the liquor in which the hydrophanes is immersed, it gains only its usual degree of transparency with the color peculiar to it. When we look at it in its moist state, we perceive a luminous point varying its situation as the position of the eye is altered. This luminous point is not, according to Mr. Bruckman, the immediate image of. the sun, but a reflection of that image refracted in the substance of the stone itself, a phenomenon which probably gave rise to its name of oculus mundi. Bruckman left a piece of this stone, weighing thirty-five grains, seven hours in water, the space requisite to make it perfectly transparent; and in that time he found that it had gained three grains in weight. The hydrophanes becomes much sooner transparent when put into hot water; and the same happens if it be dipped in a very dilute acid, or rather a very dilute solution of alkali. When dipped in oil of vitriol; it becomes very quickly transparent, and will continue so on account of the strong attraction of that acid for moisture, which takes as much from the atmosphere as is; necessary to keep the stone transparent ; but its opacity will return if it be dipped in an alkaline liquor and

afterwards dried.

LAPIS NEPHRITICIJS, or jaspachates, the jade stone, a genus of siliceous earths. It gives fire with steel, and is semitransparent like flint. It does not harden in the fire, but melts in the focus of a burning glass into a transparent green glass with some bubbles. A species brought from the river of the Amazons in America, called circoncision stone, melts easier in the focus into a brown opaque glass far less hard than the stone itself. The jade-stone is unctuous to the touch ; whence Kirwan thinks that it contains a portion of argillaceous earth, or rather magnesia. The specific gravity is from 2‘970 to 3-389; the texture granular, with a greasy took, but exceedingly hard, being superior in 1his respect even to quartz. It is infusible in the fire, nor can it be dissolved in acids without a particular management ; though M. Saussure extracted iron from it. Sometimes it is met with of a whitish milky color from China ; but mostly of a deep or pale green from America. The common lapis nephriticus is of a gray, yellowish, or olive color. It is so named from its supposed quality of giving ease in nephritic pains, when applied externally to the loins. It may be distinguished from all other stones by its hardness, semipellucidity, and specific gravity.

LAPIS THYITF.S, in the ancient materia medica, an indurated clay approaching to the nature of a stone. It was found in Egypt, and used in

diseases of the eyes. Chambers reckons it a species of inoroclithus ; and says it is (bund at Gosselar, in Saxony. It is of a smooth and regular texture ; very heavy ; the surface shining, and the color a pale green.

LAPITHA, a village of Cyprus : according to the abbe Mariti, the longest and most extensive in the island. It was anciently called Lapithus. Besides the advantage of a fine situation, it furnishes the best productions in the country; and, though Cyprus is in general not very abundant in fruits, Lapitha seems a favored spot in this .respect, and may be called the garden of the island.

LAPITHUS, in fabulous history, a son of Apollo, by Stilbe, and brother to Centaurus.

LAPLACE (Pierre Simon, marquis de), a celebrated mathematician and astronomer, born 1749, was the son of a farmer in Normandy went to

Paris, where he soon distinguished him. self by his knowledge of analysis and the highest branches of geometry. Laplace was chosen a member of the academy of sciences, one of the forty of the French academy, and member of the bureau des longitudes. In 1796 appeared his famous work, Exposition du Systeme du Monde. Laplace did not remain a stranger to politics, and, after the 18th of Brumaire, was made minister of the interior by the first consul. In a report to the senate in 1805, Laplace proved the necessity of restoring the Gregorian calendar, and abolishing that of the republic. His principal works are his Traite de Mecanique celeste ; his Theorie du Mouvement des Planetes ; Essai sur les Probabilities ; and Theorie analytique des Probabilites. In 1814, Laplace voted for the abdication of Napoleon, and the king created him a peer, with the title of marquis. During the hundred days, he did not appear at the Tuileries. He died March 5, 1827. His Mecanique celeste has been translated, with a Commentary by doctor Bowditch, of Bos-ton.

LAPLAND, a northern region of Europe, now possessed by Sweden and Russia, is bounded on the north by the Arctic Ocean, on the east by the White Sea, on the south by Swe-den, and on the west by Norway and the Atlantic. Taking 64° of N. lat. for its southern limit, its breadth from north to south will be 500 miles, and its length, from Cape Orlov, on the White Sea, to the entrance of Saltersfiord on the Atlantic, about 700 miles. The superficial extent is computed at 150,000 square miles, of which the total population is supposed not to exceed 60,000.

Lapland was divided formerly into three parts, Russian, Swedish, and Danish or Norwegian Lapland ; the first, the most dreary division of the whole, consisted of three districts, Bella-moreskoi, Maremanskoi, and Tcrskoi; but these are now all included in the general appellation of the circle of Kola, which includes also Kemi-Lapmark (or the tract to the east of the river Torneo), which was ceded by Sweden in 1809. Swedish Lapland, sometimes called Lapland Proper, is subdivided into the six provinces of Torneo -Lapmark, Lulea-Lapmark, Pithea-Lap-mark, Umea-Lapmark, Jamtland-Lapmark, and

Asele-Lapmurk ; belonging at the present time to the lehn or government of Umea. Norwegian Lapland, or F'inmark, now also belongs to Sweden. It is the most northerly of all.

Lapland is a huge congeries of stupendous rocks and mountains, interspersed with many pleasant valleys, watered by a vast number of rivulets that run into the rivers and lakes, which discharge their waters into the gulf of Bothnia. The natives consider it a terrestrial paradise; and indeed nothing could be more enchanting than its vast prospects of mountains, hills, forests, lakes, rivers, &c., if the climate were but mo- ' derate ; though even here in summer, roses are seen blowing wild on the banks of the lakes and rivers. All the intervals between the mountains are not, however, thus engrossed ; great part of the country being covered with brown dusky forests of fir and pine trees; often skirted by wide extended morasses, the stagnating waters of which in summer produce myriads of mischievous • insects. The country, however, abounds with excellent springs, and is remarkable for some surprising cataracts, in which the water tumbles over frightful precipices, and dashes among the rocks with amazing impetuosity.

The mountains between the latitude of 67° and 69° rise to an elevation of upwards of 6000 feet : 2700 being the general line of perpetual congelation. The Torneo, Kemi, Lulea, and Pitea are its principal rivers. We may add the Yana and Altan to the north-east. Some of these rivers traverse considerable lakes ; but all are in winter comparatively small streams. The principal lakes are the Great Uma, the Great Windel, the Oreavari, the Stor-avan, the Great Lula ; the lakes of Kartom, Kali, Torneo, and Enara. Some of these extend forty or fifty leagues in length, and contain a great number ot> islands: Stor-avan is said to contain upwards of 300 ; and Enara, in latitude 69°, still more. The maritime districts are of uniform and rather mild temperature ; the winters are not severe for the latitude, but the summers are raw and foggy : in the interior the winter is intensely cold, and the heat of summer in the valleys very acceptable and important for a few months. At North Cape, lat. 71°'l 1' 30', the mean annual temperature is 6° higher than at Enontekis in the interior, lat. 68° 30'. Yet, at the latter, the thermometer rises in July to 64°, while at the Cape it seldom reaches 50°. The summer may be said to begin in both regions in May, and end in September. Secondary rock formations are unknown here in the north ; and the primitive (gneiss) is much more common than the transition. The quantity of iron ore in some places is immense. It generally lies in large strata, one of which,

at Junossuvando, in lat. 67° 30’, is from fifteen to twenty feet thick in one mine, and from forty-two to forty-five in another. Another at Lussavara is 1 70 feet, and one at Suappavara, in lat. 67° 38’, 190 feet in thickness ; while at Kirunavara, lat. 67° 58’, about ten miles from Juckasjaerfui, the bed has been actually dug to a depth of 800 feet. The ore, almost always magnetic, is sent to the smelting forge of Torne-ofors, a distinct of forty or fifty miles, on small sledges d.-uwn by rein-deer, VOL XII.

at an expense for which the produce scarcely pays. The iron has the defect also, it is said, of being brittle when cold, and of requiring a mixture with more tenacious metal. Copper mines are also found in Lapland ; and lead, zinc, and arsenic are not uncommon. At Suappavara gold has been found. None of these mineral stores are-, however, profitably managed : fuel being greatly wanted, particularly in the neighbourhood of the iron mines. In some districts the Swedes have tilled and manured pieces of ground that bear plentiful crops of wheat, bar-ley, and rye. There is also great plenty of berries ; such as black currants, the Norwegian mulberry, growing upon a creeping plant, and much esteemed as an antiscorbutic ; raspberries, cran-berries, juniper-berries, and bilberries. The tops of the mountains are so much exposed to intense cold, and tempests of snow and hail, that no tree will grow near the summit ; but, in parts more sheltered, fine woods of birch, pine-and fir, grow naturally as if they had been planted by art in rows at regular distances, and without any undergrowth. Some parts of Lapland produce the service tree, the willow, the poplar, the elder, and the cornel. The angelica is greatly esteemed by the natives who use it in their food. , The acetosa, or sorrel, also grows in great plenty, besides various kinds of grass, heath, fern, and moss, enumerated by Linnaeus in his Flora La-ponica. But the vegetable which is the most abundant, and of most extensive use, is the lichen rangiferus. The Laplanders boil it in broth as a cordial and restorative. They likewise use one species of it as a soft and wholesome bed for their new-born children. See LICHEN. The quantity of any grain raised here is insignificant : the most remarkable agricul-turalists are the Finnish colonists, who have raised corn at Alien, in 70° lat., considered the , farthest limit of its growth.

Lapland, as well as Norway, is infested witli a great number of grey wolves and bears, witli whom the inhabitants wage perpetual war. The most honorable exploit among the Laplanders is to kill a bear ; and the heroes adorn their caps with a small plate of lead or pewter for every bear they have slain. The country abounds also with elks,

beavers, and otters, which live here unmolested, and find plenty offish for their subsistence. The forests furnish haunts to a great number of beautiful martens and squirrels ; as well as to the zibeling or sable, whose skin is extremely valuable ; together with ermines, weasels, hares, &c. Large black cats often attend the Laplanders in hunting, and curs are also trained to the game. But the most remarkable animal of Lapland is the rein-deer. See CERVUS. These animals, so useful in various respects to the natives, are kept at no expense. In summer they feed upon grasses and alpine plants; in winter upon the lichen rangiferus, or rein-deer litchen, and its varieties, which are so abundant as in many parts almost totally to cover the ground for several miles. This animal is in fact the chief wealth of the natives. The poorer classes have from fifty to 200 of them ; the nvd-dle classes from 300 to 700 ; and the affluent often above 1000 head. The females are driven

home morning and evening to be milked ; and the herds, when numerous, are unremittingly attended both by men and dogs day and night. Men and boys, wives and daughters, according to Dr. Clarke, take the post of watching by turns, twice or thrice a-day ; and each goes out with several dogs, which belong in property to that individual whose commands alone they will obey. The former guards in the mean while return with their hungry dogs. Hence, it not unfrequently happens that eight or twelve dogs march over the heads of the persons sleeping in the gamme in quest of comfortable spots for themselves to rest in ; and, when the Laplander returns wearied to his gamme, he always willingly shares his rein-deer flesh and his soup with his dog, which he would hardly do with either father or mother.

Here are found small breeds of oxen, cows, dogs, sheep, and goats : the last two uncommonly prolific. Birds are also numerous, and Lapland contains many peculiar to itself. The most remarkable is the bird of * a hundred tongues,' or Swedish mocking bird, extolled for the beauty of its plumage and variety of its tones. The seas abound in

fish, and the rivers and .lakes in excellent salmon, pike, perch, trout, eels, and char. Against the insects, which in summer prove a great annoyance, the inhabitants defend themselves by keeping their tents and huts as full of smoke as possible. The Laplanders are low in stature, ill shaped ; have remarkably large heads, and harsh features. They are, however, strong, hardy, and robust ; can bear incredible fatigue ; and the stoutest Norwegian, it is said, is not able to bend the bow of a Laplander. The women have a delicate and florid complexion. Both

fish. Not long since they had no bread, but used the inner rind of the pine-tree dried and ground, and dried fish reduced to powder. They make confections and decoctions of berries, an • gelica, and sorrel, which they use as preservatives against the scurvy.

The Laplander enjoys almost uninterrupted health by temperance and exercise ; but is very subject to sore eyes, and even to blindness, from the smoke of his hut, and the fires to which they are almost continually exposed. Some waste away in consumptions; others are afflicted with rheumatic pains and the scurvy ; and a few are subject to vertigo and apoplexy. For the cure of all their internal disorders, they use the decoction of a certain species of moss ; and, when this cannot be procured, they boil the stalks of angelica in the milk of the rein-deer. To their wounds they apply the turpentine that drops from the fir-tree. When frost-bitten (though this seldom happens), they thrust a hot iron into a cheese made of rein-deer's milk, and, with the fat that drops from it, anoint the frozen member, which generally recovers. But they often live to the age of 100 without feeling any disease ; and it is not uncommon to see a Laplander in old age hunting, fowling, skaiting, and performing, with agility, the severest exercises of his youth.

The summer garb of the men consists of a long coat of coarse cloth, reaching down to the middle of the leg, and girded round the waist by a belt or girdle ; from which hang a Norway knife, and a pouch containing flints, matches, tobacco, and other necessaries; the girdle itself being decorated with brass rings and chains.

sexes are simple, honest, hospitable, and timor-Their caps are made of the skin of the northern

ous ; but their timidity, respects war alone ; for to many other species of dangers they expose themselves with surprising intrepidity, whether in ascending and descending mountains and precipices with their snow shoes and in sledges, or in venturing amidst whirlpools and cataracts in slender boats made of thin fir boards, fastened together with thongs of leather, sinews of wild beasts, or tough and flexible twigs. These boats are of different sizes, from two to six yards in length, managed with oars, and caulked with moss so tight as to keep out the water.

The Laplanders are partly settled, and partly roving : the latter live in tents made with coarse cloth : the former are fixed in small villages near the lakes, and chiefly follow fishing. They build their cottages in the shape of a cone, by placing a circle of large trees or poles aslant in the earth, and close to each other, so that their tops meet, and form a small vent for the issue of the smoke : the ground within they cover with branches of trees. Their domestic utensils are nothing hut a few boxes, baskets, some bowls of birch wood, with pots and kettles made of brass or copper, more frequently of stone, and spoons made of the horn of the rein-deer. The beds, or more properly the sleeping places, are on logs laid on each side of the fire-place. In spring their food consists principally of the eggs of water fowls, which are extremely plentiful ; in summer and autumn, of the birds themselves: and in winter, of the milk and flesh of the rein-deer and dried

diver, with the feathers on ; and their shoes of the rein-deer skin, with the hair outwards. They wear no linen ; but the garments of the superior ranks are of a finer cloth ; and they delight in various colors, of which red is the most agreeable. In winter they are totally cased up in coats, caps, boots, and gloves, made of rein-deer skins. The women’s apparel differs very little from that of the men; only their girdles are more ornamented with rings, chains, needle-cases, and toys, that sometimes weigh 20 Ibs. In winter, both men and women lie in their furs ; in sum-mer they cover themselves entirely with coarse blankets, to defend themselves from the gnats.

The Laplanders make surprising excursions, upon the snow in their hunting expeditions. They provide themselves with a pair of skates, or snow shoes, which are fir boards covered with the rough skin of the rein-deer, turned in such a manner that the hair rises against the snow. One of these shoes is usually as long as the person who wears it;

the other is about a foot shorter. The feet stand in the middle, and to them the shoes arc fastened by thongs or withes. The Laplander, thus equipped, wields a long pole in his hand, near the end of which there is a round ball of wood, to prevent its piercing too deep in the snow ; and with this he stops himself occasionally. By means of these accoutrements he will travel at the rate of sixty miles a-day, without being fatigued ; ascending steep mountains, and sliding down

ngain with amazing swiftness. The Laplander is also provided with a carriage drawn by the rein-deer, in which he journeys with still greater rapidity. The sledge, called pulka, is made in the form of a small boat, with a convex bottom, that it may slide the more easily over the snow : the prow is sharp and pointed ; but the sledge is flat behind. The traveller is swathed in this carriage like an infant in a cradle, with a stick in his hand to steer the vessel, and disengage it from pieces of rock or stumps of trees that may chance to encounter it in the route. He must also balance the sledge with his body, otherwise he will be in danger of being overturned. The traces, by which this carriage is fastened to rein-deer, are fixed to a collar about the animal's neck, and run down over the breast between the fore and hind legs, to be connected with the prow of the sledge : the reins, managed by the traveller, are tied to the horns ; and the trappings are furnished with little bells, the sound of which is agreeable to the animal. With this draught at his tail, the rein-deer, if pressed, will travel ten or twelva Swedish miles (seventy or eighty-four English miles) in a day ; but by such hard driving he is generally destroyed. It, however, frequently happens, that he will persevere in his journey without intermission, and without refreshment, except occasionally moistening his mouth with the snow. Before he sets out, the Laplander whispers in his ear the way he is to go, and the place at which he is to halt, firmly persuaded that the beast understands his meaning. In the beginning of winter, the Laplanders mark the most frequented roads, by strewing them with fir boughs ; which being frequently covered with new snow, and alternately beaten by the carriage, consolidates them into a kind of causeway ; which is the harder if the surface has

felt a partial thaw, and been crusted by a subsequent frost. It requires great caution to follow these tracts ; for, if the carriage deviates to the right or left, the traveller is plunged into an abyss of snow. In less frequented parts, where there is no such beaten road, the Laplander directs his course by certain marks made on the trees. Hunting being the chief occupation of the Laplanders, they pursue it in winter by the tracks of the bear and other beasts upon the snow, and often run down their prey. They catch ermines in traps, and sometimes with doers. Squirrels, martens, and sables, they kill with blunt darts, to avoid wounding the skin. Foxes and beavers are slain with sharp-pointed darts and arrows ; in shooting which, they are accounted some of the best marksmen in the world. The larger beasts, such as bears, wolves, elks, and wild rein-deer, they either kill with fire-arms purchased in Sweden or Norway, or take in snares and pits. Their game laws are observed with ereat punctuality. The beast becomes the property of the man in whose snare or pit he is c-.iu<iht ; and he who discovers a bear's den hns the exclusive privilege of hunting him to death.

' The Lapps marry very early,' says Dr. Clarke, ' the men seldom later than the age of eighteen, or the women later than fifteen : but the Finns and the Swedes arn prohibited from -uch

early marriages. Very little previous ceremony is used upon these occasions; an interchange of presents, and copious libations of brandy, are all that take place before the solemnisation and consummation. The gifts consist of rings, spoons, cups of silver, or silver gilt, and rix-dollars in specie, according to the wealth of the parties. The richest make also other gifts ; such as silver girdles, and silk or cotton handkerchiefs for the neck. When banns have been published in the church, which is very commonly the case, the marriage immediately succeeds their publication; jmd the nuptials are consummated in one of the log-houses near the church, in which the Lapps deposit their stores for the annual feir. Upon these occasions, the bridegroom treats his friends with brandy, dried rein-deer flesh cooked with broth, rein-deer cheese, and bread and butter. If he be of a wealthy family, beer is also brewed : or, wanting this, plenty of pima and curd? and whey are provided. The luxury of smoking tobacco, so general among the Lapps, is of course largely indulged upon these occasions, and even takes place during the repast. Dancing, being unknown among them, forms no part of the merry-making. After the mairiage-feaft, a general collection is made in money for the married couple, when the distribution of brandy is renewed, and continued for two or three hours, according as the gifts are more or less liberal. Upon this

occasion, gifts of rein-deer are promised to the bridegroom, which he is afterwards to go and demand ; but, if he make the visit without carrying brandy to the owner of the rein-deer, the promise is never kept. The dowry of wealthy parents, among the Laplanders, to their children when they marry, consists of from thirty to fifty, and even eighty rein-deer, besides vessels of silver* and other utensils.'

This intelligent traveller contends, that the Laplander is clearly of Asiatic origin. ' His features mark him at once as belonging to a distinct and peculiar race of men ; — eyes half closed ; mouth pinched close, but wide ; ears full and large, projecting far from the head ; complexion tawny and copper colored ; hair dark, straight, and lank, none growing near the nape of the neck : add to this a small and stunted stature, with singular flexibility of limbs, easily falling into any posture, like the Oriental nations; looks regarding objects askance; hands constantly occupied in the beginning of conversation with filling a short tobacco-pipe; the head being turned over one shoulder to the person addressing, instead of fronting the speaker ; — such is the characteristic portrait of one and every Laplander. The moment we saw any of them, we could immediately recognise those traits by which the whole tribe are distinguished from the other inhabitants of Europe, and in which they differ from the other natives of the land in which they live. Even the Finlander, who is supposed to be a sort of cousin-german, differs, in many respects, from the Laplander. The hair of the Finlander is of a fair color; either pale yellow, flaxen, or almost white : and the honest Swede, of nobler race than either, is a giant, in whose person and manner there is nothing of the cat-like flexibility of the Asiatic, nor any resem-2 l"2

blance to that orient complexion, and form of llie countenance which assimilates the Laplander to the natives of Japan.'

LAPLANDERS, the natives of Lapland. See LAPLAND. They call themselves Salme-Same, and Samen-Almatjeh. Their country they denominate Same Landa, or Same-aednam ; the Swedes style it Lapland or Lappmarken, and the inhabitants Lappar. The natives of those districts under the dominion of Sweden are Lutherans; while many of those who are subject to Russia are still Pagans. The Laplanders, before their conversion to Christianity, which was not till lately introduced amongst them, possessed no books or MSS., though they knew many traditional histories and songs of ancient heroes and princes who once reigned orer them ; but involved in great uncertainty, and mixed with the most fabulous accounts. They have now a translation of the New Testament in their language ; and many of the natives are able to read and write.

LAPLYSIA, the sea-hare, a genus of ma-rine insects belonging to the order of vermes mollusca. The body is covered with membranes reflected. It has a shield-like membrane on the back, a lateral pore on the right side, the anus on the extremity of the back, with four feelers resembling ears. It grows to two inches and a half long, and to more than an inch in diameter ; its body approaches to an oval figure, and is soft, punctuated, of a kind of gelatinous substance, and of a pale lead color; from the larger extremity there arise four oblong and thick protuberances ; these are the tentacula ; two of them stand nearly erect, two are thrown backward. It is common about our shores, especially off Anglesea. It causes, by its poisonous juice, the hair to fall off the hands of those that touch it ; and is so extremely fetid as to occasion sickness.

LAPSANA, nipplewort, a genus of the polygamia aequalis order, and syngenesia class of plants : natural order forty-ninth, composite : receptacle naked : CAL. calyculated, with all the inferior scales canaliculated, or finely channelled. There are species, which grow commonly by the sides of ditches. The young leaves of the com-mon kind, called dock-cresses, have the taste of radishes, and are eaten raw at Constantinople as a salad. In some parts of England the peo-ple boil them as greens, but they have a bitter and disagreeable taste.

LAPS E, n. s. & v. n. Tr.laps; Ital . lapso ; Lat. lapsus. A fall ; slip ; flow ; smooth course : metaphorically, apostasy ; error ; venial fault; mistake : transfer of legal right, by the party who possessed it having failed to exercise it in due time: to lapse is, to slip; fall; fail ; glide away;” lose the proper time or opportunity ; fall legally from a negligent party to another ; fall from truth or moral purity.

I have ever verified my friends, Of whom he’s chief, with all the size

that verity Would without lapsing suffer. Shakspeare.

To lapse in fulness,

Is sorer than to lie for need ; and falsehood Is worse in kings than beggars. Id. Cymbeliite,

Myself stood out:

For which if I bo lapsed in this place, 1 shall pay dear. Id. Tweljtk l'i<jl;l.

A sprout of that fig-tree which was to hide the nakedness of lapsed Adam. Decay of Piety.

All public forms suppose it the most principal, universal, and daily requisite to the laps’my state of human corruption. 7,/.

Round I saw

Hill, dale, and shady woods, and sunny plains,

And liquid lapse of murmuring streams. Milton. Once more I will renew

His lapsed powers, though forfeit, and inthralltd

By sin to toul exorbitant desires. Id.

Notions of the mind are preserved in the memory, notwithstanding lapse of time. Hale.

As God did by the incomprehensible perfection of his nature from thence foresee our lapse and misery, so he did as soon determine our remedy and means of salvation. Barrow.

The weakness of human understanding all will confess ; yet the confidence of most practically disowns it ; and it is easier to persuade them of it from other lapses than their own. Glanville.

These are petty errors and minor lapses, not considerably injurious unto truth.

Browne’s Vu’gar Errours.

Ihese were looked on as lapsed persons, and great severities of penance were prescribed them, as appears by the canons of Ancyra. Stilling fleet .

Homer, in his characters of Vulcan and Thersites, has lapsed into the burlesque character, and departed from that serious air essential to an epick poem.

Addistm.

In a presentation to a vacant church, a layman ought to present within four months, and a clergyman within six, otherwise a devolution, or lapse of right, happens. dylijfe.

As an appeal may be deserted by the appellant's lapsing the term of law, so it may also be deserted by a lapse of the term of a judge. Id.

If the archbishop shall not fill it up within six months ensuing, it lapses to the king. Id.

This scripture may be usefully applied as a caution to guard against those lapses and failings to which our infirmities daily expose us. Rogers.

It hath been my constant business to examine whether I could find the smallest lapse in stile or propriety through my whole collection, that I might send it abroad as the most finished piece. Swift.

This disposition to shorten our words, by retrench-ing the vowels, is nothing else but a tendency to lapse into the barbarity of those northern nations from whom we are descended, and whose languages labour all under the same defect. Id.

Let there be no wilful perversion of another's meaning ; no sudden seizure of a lapsed syllable to play upon it. Watts.

Wrapt in the thought of immortality,

Wrapt in the single, the triumphant thought,

Long life might lapse, age unperceived come on,

And find the soul unsated with her theme.

Young.

Those faults which we cannot conceal from out own notice, are

considered, however frequent, not as habitual corruptions or settled practices, but as casual failures, and single lapses. Johnson.

Concerning lapsed Christians, Saint Paul gave instruction, that, ‘ if any man be overtaken in a fault, ye which are spiritual restore such a man in the spirit of meekness, considering lest ye also be tempted.’ Palei/.

LAPSE, in ecclesiastical law. an omission of a patron to present a clerk to a benefice within six

LAR

months of its being void ; in which case the benefice is said to be in lapse, or lapsed, and the right of presentation devolved to the ordinary. If the ordinary neglect to present, during the same time, the right of presentation accrues to the metropolitad, and to the king by neglect of the metropolitan. This right of lapse was first established in the reign of Henry II., when the bishops first began to exercise universally the right of institution to churches : and therefore, when there is no right of institution, there is no nght of lapse ; so that no donative can lapse to the ordinary, unless it has been augmented by the king's bounty; but no right of lapse can accrue, when the original presentation is in the crown. In case the benefice becomes void by death or cession, through plurality of benefices, the patron is bound to take notice of the vacancy at his own peril : but in case of a vacancy by resignation or canonical deprivation, or if a clerk presented be refused for insufficiency, these being matters of which the bishop alone is presumed to be cognizant, here the law requires him to give notice thereof to the patron, otherwise he can take no advantage by way of lapse; neither shall any lapse accrue thereby to the metropolitan or the king. If the bishop refuse or neglect to examine and admit the patron's clerk without good reason assigned, or notice given, he shall have no title to present by lapse : and if the right of presentation be litigious or contested, and an action be brought against the bishop to try the title, no lapse shall occur till the question of right be decided. If the bishop be both patron and ordinary, he shall not have double time allowed him to collate in : and if the bishop doth not collate his own clerk immediately to the iivingr, and the patron presents, though after the six months are lapsed, yet the presentation is j;ood, and the bishop is bound to institute the patron's clerk. If the bishop suffer the presentation to lapse to the metropolitan, the patron also has the same advantage if he present before tiie archbishop has filled up the benefice : yet the ordinary cannot, after lapse to the metropolitan, collate his own clerk to the prejudice of the archbishop. But if the presentation lapses to the kiii£, the patron shall never recover his right, till the king has satisfied his turn by presentation; for nullum tempus occurrit regi.

LAPWING, in ornithology. See TRINGA.

LAQUEARIUS, a kind of athleta among the ancients, who in one hand held a laqueus, i. e. a sort of snare, wherewith to embarrass and entangle his antagonist, and in the other a poniard to stab him.

LAQUEUS, in surgery, a ligature so contrived, that, when stretched by any weight, it draws up close. Its use is to extend broken or disjointed bones, to keep them in their places while they are set, and to bind the parts closely together.

LAIl, the capital of Laristan, a province of Persia, once a most magnificent city, but now in ruins, stands in an extensive plain of palm trees. There are still found some fine public buildings, however, and the houses are said to be commodious and well furnished : the bazaar is the foblest structure of the kind in Persia. The kiian resides in a mansion in the middle of the

city, surrounded with a strong wall, and flanked with towers. The castle is a ruin situated on the summit of a hill behind the town. It is celebrated for its manufacture of fire-arms and cotton cloth. Population 12,000. Long. 42° 30’ E., lat. 27° 30’ N.

LARA, or LARANDA, in fabulous history, one of the Naiades, daughter of the river Almon in Latium, famed for her beauty and loquacity. She revealed to Juno the amours of Jupiter with Juturna, for which he cut out her tongue, and ordered Mercury to conduct her to Tartarus. But Mercury falling in love with her by the way, she became the mother of twins, who were afterwards worshipped by the Romans, under the name of Lares. Ovid. Fast.

LARARIUM was a chapel which the Romans frequently had in their houses for the household gods, called lares. Spartian says, that Alexander the son of Mammea kept in his lararium the figure of our Saviour, together with his other idols.

LAR’BOARD, Fr. babord; in all the Goth, dialects buk board. A name given by seamen to the left side of a ship, when looking forward from the stern, wherein the right and left are apparently determined by the analogy of a ship’s position, on the water, to that of a fish. — Falconer. Opposed to the starboard.

Or when Ulysses on the larboard shunned . Charybdis, and by the other whirlpool steered.

Milton. Tack to the larboard ,-^.nd stand off to sea,

Veer starboard sea and land. Dryden.

Suppose the ships were in the order of sailing with the wind on their larboard side, then the starboard or lee line of the order is to heave to. Falconer.

LAR'CENY, n. s. Fr. larcin; Lat. latroci-nium. Theft. See below.

Those laws would be very unjust, that should chastise murder and petty larceny with the same punishment. Spectator.

LARCENY, or SIMPLE LARCENY, when it is the stealing of goods above the value of Is. is called grand larceny; when of goods to that value, or under, is petit larceny : offences which are considerably distinguished in their punishment, but not otherwise. See THEFT.

LARCENY, MIXED, or COMPOUND LARCENY, is such as has all the properties of the former (see THEFT) ; but is accompanied with either one or both of the aggravations of taking from one's house or person. See LAW.

LARCH, n. s. Lat. larix. A tree.

Some botanical criticks tell us, the poets have not rightly followed the traditions of antiquity, in metamorphosing the sisters of Phaeton into poplars, who ought to have been turned into larch trees ; for that it is this kind of tree which sheds a gum, and is commonly found on the banks of the Po.

Addison on Italy.

LARCHER (Peter Henry), a modern French classical scholar, was born at Dijon, October 12th 1726. Related to Bossuet, it was the intention of his father to bring him up to the magistracy. But he was attached too ardently to the belles lettres, and became an intense student of Greek. He gave the public as his first translation the Electra of Euripides ; then from the English Martinus Scriblerus, and Sir John

Pringle's Observations on the Diseases of the Army. This was followed by a translation of the Greek romance of Chereas and Callirhoe. In 1767 he published remarks, under the title of a Supplement, on Voltaire's Philosophy of History ; to which the latter replied in his Defense de mon Oncle. Larcher rejoined in a Reponse a la Defense de mon Oncle. He now undertook his celebrated translation of Herodotus ; and in 1774 published a Memoire sur Venus, to which the Academy of Inscriptions awarded their prize. He followed with a translation of Xenophon, which led to his being elected into the academy. During the revolution he lived very privately, and was subsequently decreed a sum of 3000 livres, and received into the Institute. He was »lso appointed professor of Greek in the Imperial university, but was too aged for service. Larcher died December 22d, 1812, universally regretted and esteemed. In 1814 his library was sold by auction.

LARD, n. s. & v. a.) French, lard, larder;

LAR'DER, n. s. $ Span, and Ital. lardo ;

Lat. lardum, ' vel laridum; qu. large aridum?' — Ainsworth. Bacon; the fat of bacon; grease, or fat generally : to lard is to fatten ; make like bacon; hence, metaphorically, to flatter; bedaub with praise; mix with something else by way of real or pretended improvement. A larder is an apartment where bacon or other meat is cured or salted ; hence, where meat or victuals are kept.

This similitude is not borrowed of the larder house, but out of the school house. Ascham.

Now Falstaff sweats to death, And lards the lean earth as he walks along.

Shakspeare.

Brave soldier, doth he lie Larding the plain 1 Id. Henry V.

An exact command, Larded with many several sorts of reasons.

Shahtpeare.

Flesh is ill kept in a room that is not cool ; whereas in a cool and wet larder it will keep longer. Bacon.

So may thy pastures with their flowery feasts, As suddenly as lard , fat thy lean beasts. Donne.

A certain monk saw some souls roasted upon spits like pigs, and some devils basting them with scalding lard ; but a while after they were carried to a cool place, and so proved purgatory. Bp. Taylor.

Who, forsooth, is the brave spark, the complete gentleman, the man of conversation and address, but he that hath the skill and confidence to lard every sentence with an oath or a curse 1 Barrow.

The sacrifice they sped ;

Chopped off their nervous thighs, and next prepared To' involve the lean in cauls, and mend with lard.

Dry den. The larded thighs on loaded altars laid. Id.

He lards with flourishes his long harangue, Tis fine, sayest thou. Id.

So have I seen in larder dark, Of veal a lucid loin. Dorset.

No man lards salt pork with orange peel, Or garnishes his lamb with spitch-cockt eel.

AY

"A'-

Old age,

:\lorose, perverse in humour, diffident The more he still abounds, the less content: His larder and his kitchen too observes, And now, lest he should want hereafter, starves.

Id.

Swearing by heaven; the poets think this nothing, their plays are so much landed with it.

Collier's View of the Stgye.

LARDNER (Nathaniel), an pminent English dissenting divine, born at Hawkhurst in Kent. June 6th 1684. After a grammatical education, he was sent first to a dissenting academy in London, under the care of the Rev. Dr. Joshua Oldfield ; and thence, in his sixteenth year, to prosecute his studies at Utrecht, under the celebrated professors D'Uries, Grstvius, and Bur-man. Here he remained above three years, and then removed for a short space to Leyden. In 1703 he returned to England, continuing at his father's house to prepare himself by close and diligent study for the sacred profession which he had in view. In 1709 he first entered the pulpit, and a few years after was received into lady Treby's family, as domestic chaplain and tutor to her son. He continued in this situation till her ladyship's death in 1721. This event threw him into circumstances of some perplexity, having preached to several congregations during his residence with la'dy Treby, without the approbation or choice of any one congregation ; a circumstance which Dr. Kippis considers reproachful to the Dissenters. Mr. Lardner, it seems, was very deficient in elocution and delivery. He was engaged, however, with some of his dissenting brethren in preaching a Tuesday evening lecture at the Old Jewry. In February 1727 he published, in two volumes 8vo., the first part of The Credibility of the Gospel History, or the Facts occasionally mentioned in the New Testament confirmed by passages of ancient authors, who were contemporary -with our Saviour or his apostles, or lived near their time. An appendix was subjoined, relating to the time of Herod's death. ' It is scarcely necessary to say,' observes Dr. Kippis, ' how well his work was received by the learned world. Not only was it highly approved by the Protestant Dissenters, with whom the author was more immediately connected, but by the clergy in general of the established church ; and its reputation gradually extended into foreign countries. These two, with the subsequent fifteen, volumes octavo, and the four thin quartos, entitled Jewish and Heathen Testimonies, occupied him, with the interruption arising from some smaller productions, during the space of forty-three years. The Supplement to the Credibility was published separately, under the title of the History of the Gospels and Epistles. But applauded as Dr. Lardner's works were, he received little recompense for them. Some of the latter volumes of the Credibility were published at a loss ; and at last he sold the copyright and all the remaining copies to the booksellers, for the trifling sum of £150. He just lived to see the last volume, the fourth of the Testimonies, published. This was in 1767. He was seized with a

decline in the summer following ; and was carried off in a few days nt Hawkhurst, the place of his nativity, where he had a small paternal estate, in the eighty-fifth year of his age.

LARENTINALIA, in antiquity, a feast held among the Romans on the 23rd day of Decen - ber, but ordered by Augustus to be observed twice

a year ; by some supposed to have been in honor of the Lares, but by others, with more probability, in honor of Acca Laurentia; and to have been the same with the Laurentalia.

LARES, among the ancients, derived by Apuleius, in his tract De Deo Socratis, from lar, familiaris ; a kind of domestic genii, or divinities, worshipped in houses, and esteemed the guardians and protectors of families. The Lares were distinguished from the Penates ; as the former were supposed to preside over house-keeping, the servants in families, and domestic affairs ; and the latter were the protectors of the masters of families, their wives and children. Accordingly the Lares were dressed in short succinct habits, to show their readiness to serve ; and they held a sort of cornucopia in their hands, as a signal of hospitality. According to Ovid, there were generally two of them, who were sometimes represented with a dog at their feet. Plutarch distinguishes good and evil Lares, as he had before done good and evil Genii. There were also some public, and some private Lares. Apuleius tells us the domestic Lares were no more than the souls of departed persons, who had lived well, and discharged the duties of their station ; whereas, those who had done otherwise were vagabonds, wandering about, called Larvae and Lemures. The Lares were also called Penates, and were worshipped under the figures of little marmousets, or images of wax, silver, or earthen ware. The public Lares were also called Compitales, from compitum, a cross way ; and Viales, from via, a way or pub-lic road ; as being placed at the meeting of roads and in the high ways, and esteemed the patrons and protectors of travellers. The private Lares took care of particular houses and farrilies : these they also called Praestites, from praesto :

Quod praestant oculis omnia tuta suis. Chid. Fast.

They gave the nameUrbani, *i.e.* Lares of Cities, to those who had cities under their care ; and Hostilii to those who were to keep their enemies off. There were also Lares of the country, called Rurales, as appears by

several antique inscriptions. The Lares were also ‘genial gods, supposed to take care of children from their birth. The ancients differ extremely about the origin of the Lares. Varro and Macrobius say that they were the children of Mania; Ovid makes them the issue of Mercury and the Naiad Lara or Laranda ; Apuleius assures us they were the posterity of the Lemures; Nigridus, according to Arnobius, made them sometimes the guardians and protectors of houses, and sometimes the same with the Curetes of Samothracia, whom the Greeks called Idosi dactyli. Nor was Varro more consistent in his opinion of these gods : sometimes makins them the manes of heroes, and sometimes gods of the air. Titus Tatius, king of the Sabines, was the first who built a temple to the Lares. The chimney and fire-plnce in the house were particularly consecrated to them. Tertullian tells us the custom of worshipping the Lares arose from this, that they anciently interred their dead in their houses ; whence the credulous imagined their souls con-7 LAR

tinued there also, and proceeded to pay them divine honors. To this it may be added, that, the custom being afterwards introduced of bury ing in the highways, they might hence take,- occasion to regard them as gods of the highways. The victim offered to the Lares in the public sacrifices was a hog; in private, they offered them wine, incense, a crown of wool, and a little of what was left at the table. They also crowned them with flowers, particularly the violet, myrtle, and rosemary. Their symbol was a dog, which was usually represented by their side, on account of its fidelity and the service it does to man in watching his house. They were sometimes also represented as clothed in a dog’s skin. The term Lares, according to Bryant, was formed from laren, an ancient word by which the ark was represented : and he supposes that the Lares and Manes were the same domestic deities under different names; and that by these terms the Hetrurians and Latins denoted the dii arkitae, who were no other than their arkite ancestors, or the persons preserved in the laren or ark; the genius of which was Isis, the reputed parent of the world. He observes farther, that they are described as daemons and genii, who once lived on earth, and were gifted with immortality. Arnobius styles, them Lares quosdam genios et functorum animas ; and he says, that, according to Varro, they were the children of Mania. Huetius adds, that Mania had also the name of Laranda; and she is styled the mother of the daemons. By some she is called Lara, and was supposed to preside over families ; and children were offered at her altar in order to procure her favor. In lieu of these they in after times offered the heads of poppies and pods of garlic.

LARGE, adj. & adv. 1 Fr. large; Lat. lar—

LARGE’LY, adv. /£”*• Wide, or broad ;

LARCE’NESS, n. s. 3 big; bulky; extensive ; ˆcopious ; abundant : hence liberal ; diffusive ; comprehensive : at large, free, or without restraint ; also diffusely, to the full extent

Let them dwell in the land, and trade therein ; for it is large enough for them. Gen. xxxiv. 21.

Thou shall drink of thy sister’s cup deep and large. Ezekiel.

They which would file away most from the largeness of that offer, do in most sparing terms acknowledge little less. Hooker.

Discover more at large what cause that was, For I am ignorant, and cannot guess. Shakspeare. The ample proposition that hope makes,

In all designs begun on earth below,

Falls in the promised largeness. Id.

Plant fnit trees in large borders, and set therein fine flowers, but thin and sparingly, lest they deceive the trees. Bacon.

If you divide a cane into two, and one speak at the one end, and you lay your ear at the other, it will cany the voice further than in the air at large. Id. •

Their former large peopling was an effect of the countries impoverishing. Carew’s Survey.

There he conquered a thousand miles wide and large. Abbot’s Vescripticn of the World.

Knowing best the largeness of my own heart to-ward my people’s good and just contentment.

King Charles.

Skippon gave a large testimony under his hand, that they had carried themselves with great civility.

Clarendon .

LAR

They their fill of love, aaJ love's disport, Took largely ; of their mutual guilt the seal.

Milton.

Thus incorporeal spirits to smallest forms Reduced their shapes immense ; and were at large, Though without number still. Milton,

Man as far transcends the beasts in largeness of desire as dignity of nature and employment.

Glanville's Apology.

Shall grief contract the largeness of that heart, In which nor fear nor anger has a part? Waller.

Charles II. asked me, What could be the reason, that in mountainous countries the men were commonly larger, and yet the cattle of all sorts smaller 1

Temple.

How he lives and eatsˆ: How largely gives ; how splendidly he treats.

Dry den.

Nor must Bumastus his old honours lose, In length and largeness like the dugs of cows. Id. Great Theroo, large in limbs, of giant height. Id. If the lorgenets of a man's heart carry him beyond prudence, we may reckon it illustrious weakness.

L'Estrange.

Warwick, Leicester, and Buckingham, bear a fan/e-boned sheep of the best shape and deepest sta-ple. Mortimer.

The children are bred up in their father's way ; or so plentifully

provided for, that they are left at large.

Spr'at.

Your real becomes importunate ; I've hitherto permitted it to rave And talk at large ; but learn to keep it in, Lest it should take more freedom than I'll give it.

Addison.

There will be occasion for largeness of mind and agreeableness of temper. Collier on Friendship.

1 might be very large upon the importance and advantages of education, and say a great many things which have been said before.

Felton on the Classics.

Supposing that the multitude and largeness of rivers ought to continue as great as now; we can easily prove, that the extent of the ocean could be no less.

Bentley.

The second natural division of power is of such men who have acquired large possessions, and consequently dependencies ; or descend from ancestors who have left them great inheritances. Swift.

Those, who in warmer climes complain From Phrebus' rays they suffer pain, Must own, that pain is largely paid By generous wines beneath the shade. Id.

It does not belong to this place to have that point debated at large. Watts.

Vernal suns and showers Diffuse their warmest, largest influence. Thomson.

If you listen to the complaints of a forsaken lover, you observe that he insists largely on the pleasures which he enjoyed or hoped to enjoy.

Burke on the Sublime. That large black prophet eye seemed to dilate

And follow far the disappearing sun. As if their last day of a happy date

With his broad, bright, and dropping orb were gone. Byron.

LARC.F. is also a sea term applied to the wind, when it crosses the line of a ship's course in a favorable direction, particularly on the beam or quarter. Thus, if a ship steer west, then the ivind in any point of the compass to the eastward of the south or north may be calle*d large, unless when it is directly east, and then ir. is said to be right aft. Sailing large is, therefore,

advancing with a large wind, so as that the sheets are slackened and flowing, and the bow-lines entirely disused. This phrase is generally opposed to sailing close-hauled.

LAR GESS, n. s. i Fr. largesse ; Lat. largi-LARGIT'ION, n. s.] tas, * a largiendo, giving liberally.' — Minsheu. A gift or present. Still retained as a call or cry for bounty by heralds and harvest-men : largition is the act of giving ; but we find no example of its use.

Our coffers with too great a court, And liberal largess, are grown somewhat light.

Shakspeare.

He assigned two thousand ducats, for a bounty to me and my fellows : for they give great larg'esses where they come. Bacon't New Atlantis.

A pardon to the captain, and a largess Among the soldiers had appeased their fury.

Dentiam. Irus's condition will not admit of largesses.

Addison.

When the Portuguese suffered under the retreat of the French, every arm was stretched out, every hand was opened, — from the rich man's largess to the widow's mite, all was bestowed to enable them to rebuild their villages and replenish their granaries.

ˆ Byron.

LARGILLIERE (Nicholas de), a French painter, born at Paris, in 1656. He lived for some years in England, and was employed by Charles II. Louis XIV. also patronised him, and he became director of the French academy. His best work is a picture of the crucifixion. He also painted portraits admirably. He died in 1746, aged ninety.

LARGITIO, in Roman antiquity, was a distribution of corn, provisions, clothes, money, &c., to the people. Gracchus, when tribune, to make himself popular, passed a law for supplying the Roman citizens with corn at a very low rate, out of the public granaries. Claudius, another tribune, with the same view to popular applause, procured it to be distributed gratis. Cato, to win the common people from Caesar, persuaded the senate to do the same, and 300,000 citizens shared in the distribution. Caesar, after his triumph, extended his bounty to 150,000, giving them each a mina. The Roman emperors enlarged still further the list of those who were to partake of their distributions. Largitio is frequently taken to signify a masked bribery; whereby candidates purchased votes, when they stood for places of honor or trust in the state. The distribution of money was called conaji-atium, and the distributors divisores and sequestres.

LARGS, a village on the west coast of Scotland, opposite the island of Bute; rendered memorable by the defeat of the Norwegians in their last invasion of that country. This invasion was made in the year 1263, with a fleet of 160 sail, and an army of 20,000. men, commanded by Haquin king of Norway, whose ravages on the coast of Ayr, Bute, and Arran, reaching the Scotti>h court, an army was immediately assembled by Alexander III., and a bloody engagement ensued at this village, when 16,000 of the invaders were slain in the battle and flight, with 5000 Scots. Haquin escaped to the Orkneys, where he soon after died of grief. The entrenchments of the

Norwegian carr.p may still be trcced along the coast of tliis place. The Scottisl commanders who fell in battle were buried in a rising field near the village ; three or four persons were interred in one grave, on each side of which was a large stone ; a third was placed across the grave, supported at the extremities by the side stones, and in this rude manner the warriors lay en-tombed.

LARICAJA, a province of Peru, north of La Pa/., celebrated for its gold mines of which few are worked. It is 240 miles from east to west, and seventy-five from north to south ; very-mountainous, but of temperate climate and capable of great improyement.

LA1USSA, an ancient, rich, and celebrated town of jGreece, in which there was a famous tempje of Jupiter. Adjoining to it was a plain of very great fertility, called by Horace (Carm. lib. 1, ()d. vii. 11.) Larissa? campus opimae, and by Strabo, Campus Pelasgiotis, from the Pelasgi who inhabited it. This town continues to be called by the same name. It is a mean ill-built place, inhabited by a mixed race of Greeks, Turks, and Jews, to the amount of 20,000. It contains, however, several handsome mosques, and is the residence of a pacha, and of an archbishop of the Greek church. It stands on the Peneus, now called the Salembria, over which there is a bridge that connects the suburb with the town. The situation is pleasant, but unhealthy, owing to the neighbouring marshes. It is the capital of Thessaly. Seventy-five miles south by west of Salonica.

LARISSAN, one of the poorest and least productive provinces of Persia, is only rendered habitable by the periodical rains. The inhabitants cultivate a quantity of dates, wheat, and barley. The coast is in the possession of Arab pirates who live under their own sheiks, and re-side in. small towns defended by mud forts. Lar is the capital.

LARISS./EUS, a surname of Achilles, from his birth-place, Larissa ; as well as of J upiter, from his temple there.

LARISSUS, a river of the Peloponnesus, running between Elis and Achaia.

LARIUS, in ancient geography, an extensive lake of Gallia Cisalpina, through which the Addua (now the Adda) runs, in its way to the Po, above Cremona. It is by some reckoned eighty-eight miles, by others 100 in circumference. Oppenheim states its length to be thirty-six Italian miles, from north to south. It is now called Como (see COMO), and is included in the department of the Lario, which is named from it. LARIX, the larch tree. See PINCS. LARK, n. s. ˆ Sax. lapepce, ampack, an LAR'KER, pearly riser; Belg. kuwerk,

LiRK'LrKE, adj. flare; Teut. lerch; Dan. lerke. Minsheu gives us an amusing specimen of etymology under this word : ' which,' he says, ' after Geropius, is derived in the Belg. leuwerk, from, leaf-werk, i. e. our lives' work, because this bird flies seven sundry times every day very high, and so sings hymns and songs to his Creator, in which

consists our lives' work.' A species of ALATDA, which see. A larker is an old name for a catcher of larks.

It was the lark the herald of the mora.

Shaturpca'".

Look up a height, the shrill-gorged lark so far Cannot be seen or heard. Id. King Lear .

The' example of the heavenly lark, Thy fellow-poet, Cowley, mark. Cowley

Mark how the lark and linnet sing ;

With rival notes They strain their warbling throats,

To welcome in the spring. Dryden.

The sprightly lark's shrill matin wakes the morn.

Young.

Pride, like an eagle, builds among the stars ; But pleasure, lark-Lik* nests upon the ground. Id.

The cheerful man hears the lark in the morning ; the pensive man hears the nightingale in the evening.

Johnton. He TV ho sits from day to day

Where the prisoned lark is hung, Heedless of his loudest lay,

Hardly knows that he has sung. Cowper. Rise, sons of harmony, and hail the morn, While warbling larks on russet pinions float, Or seek at noon the woodland scene remote, Where the grey linnets carol from the hill. Seattle.

'Tis the morn, but dim and dark. Whither flies the silent lark ? Byron.

LARK, in ornithology. See ALAUDA. The lark is not only a very agreeable bird for the cage, but will live upon almost any food, if it have once a week a fresh tuft of three-leaved grass. The proper method of keeping them in health is this : there must be two pans of food, the one containing meat, the other oatmeal and hempseed. A

very good food is the following : boil an egg very hard, to which add the crumb of a halfpenny loaf, and as much hempseed ; let the egg be chopped very small, and the hempseed bruised in a mortar; when these are mixed, the bread is to be crumbled in among the rest, and the whole to be rolled together with a com-mon rolling-pin, and kept for use. There must be some fine small gravel strewed at the bottom of the cage, and renewed at farthest once in a week. This will prevent the bird's feet from getting hurt by being clogged with the dung; and his basking in this will keep him also from growing lousy. There must be a perch in the cage, and it must either be lined with green baize, or made of fine matting, which the lark is very fond of. When the bird is first taken, some food must be strewed upon the sand in the bot-tom of the cage ; for it will be sometimes almost famished before it finds the meat in the pan. The cock bird is known from the hen by the loudness and length of his call, by his tallness as he walks about the cage, and by his doubling his notes in the evening, as if he was going with his mate to roost. Both the cock and hen of this kind are subject to many disorders ; the principal of these are cramp, giddiness ef the head, and breeding lice. Cleanliness is the best cure for the first and the last of these complaints ; but we know of no cure for the other. A good strong bird, however, will often last very well five or six years, and improve all the time.

LARKS, DARING, or DORIJJG, a method of taking larks, by means of a clap-net and a looking glass. For this there must be provided four sticks very straight and lifht, about the bigness of

a pike; two of these are to be four feet nine porium of the commerce of the island. The

inches long, and all notched at the edges or the ends. At one end of these sticks there is to be fastened another of about a foot long on one side ; and on the other side a small wooden peg about faree inches long. Then four or more sticks are

water is supplied by an aqueduct erected by the Turks. Its exports are corn, wine, silk, and drugs ; the imports cloth, hardware, and colonial produce; and rue from Egypt. The ruins of the ancient Citium are near, and frequently yield

to be prepared, each one foot long ; and each of medals and other relics of the former prosperity

these must have a cord of nine feet long fastened of the island. Population 5000.

to it at the end. Every one should hare a buckle LARREY (Isaac de), a French protestant his—

for the commodious fastening on the respective torian, who fled from France on the revocation

sticks when the net is to be spread. A cord must of the edict of Nantes, and took refuge in Hol—

also be provided, which must have two branches, land, where he was made historiographer to the

The one must have nine feet and a half, and the United Provinces. He wrote 1. The History of

other ten feet long, with a buckle at the end of England; 4 vols. folio; 2. The History of Louis

each; the rest, or body of the cord, must be XIV. ,3 vols. _4to. ; 3. The History of Augus-twenty-four yards long. All these cords, as well the long ones as those about the sticks, must be

well twisted, and of the bigness of one’s little

tus 8vo. ; 4. The History of the Seven Wise Men, 2 vols. 8vo. He died in 1719.

LARROGUE (Daniel de), was born at Vitre.

finger. The next thing is a staff of four feet long, He wrote a satire on Louis XIV., for which he pointed at one end, and with a ball of wood at suffered five years' imprisonment. He trans-the other, for the carrying these conveniences in a lated Prideaux's Life of Mahomet, and Echard's sack or wallet. There should also be carried a Roman history, into French. He died in 1731. spade to level the ground where there may be LARTIUS FLORUS (Titus), a Roman citizen any little irregularities ; and two small rods, each and consul, who appeased a sedition of the peo-eighteen inches long, having a small rod fixed pie, and was the first dictator ever elected 3» with a pack-thread at the larger end of the other. Rome. He was appointed to this high office, To these are to be tied some pack-thread loops, endued with the most absolute power, and in-which are to fasten in the legs of some larks ; vested with every ensign of royalty except the and there are to be reels to these, that the birds name of king, A. U. C. 255, within ten years may fly a little way up and down. The looking-only after the abolition of the monarchy, the ex-glass is to be prepared in the following manner : pulsion of the kings, and the erection of the re-Take a piece of wood about an inch and a half public. So rapidly did even the Roman demo-thick, and cut it in form of a bow, so that there cracy itself revert to a monarchy. But it was may be about nine inches space between the two only temporary : Lartius, after defeating the ends ; and let it have its full thickness at the enemies of his country, laid down his unlimited bottom, that it may receive into it a false piece ; power within six months, and returned to the in the five corners of which there are to be set in rank of a private citizen, with the glorious re-five pieces of looking-glass. These are so fixed, putation of having exercised his power with that they may dart their light upwards ; and the blameless lenity. Had he attempted, like the first whole machine is to be supported on a moveable consul of a neighbouring republic, to prolong pin with the end of a long line fixed to it ; so his dictatorship to ten or twenty years, the jea-that, the other end of the cord being carried lousy of the Roman citizens would have been through a hedge, the pulling it may set the whole justly alarmed.

machine of the glasses a turning. This and the LARV./E, in antiquity, derived from the

other contrivances are to be placed in the middle Etruscan word lar or lars, signifying prince or

between the two nets. The larks fixed to the place, termed calls, and the glittering of the looking-glasses as they twirl round in the sun, invite the other larks down ; and the cord that communicates with the nets, and goes through

lord, denoted the ghosts of the deceased, considered as wicked and mischievous. Hence is formed the term larvatus, i. e. larva indutus or demoniac. The ingenious Mr. Farmer urges the etymology and use of this term to prove,

the hedge, gives the person behind an opportu-that the heathen demons were human ghosts,

nity of pulling up the nets, so as to meet over The larvae were also called lemures.

the whole, and take every bird that is between LARVJE, in entomology, a name given by Lin—

them. The places where this sort of sporting naeus to insects in that state, called by other wri—

succeeds best are open fields, remote from any ters eruca or caterpillar. See ENTOMOLOGY.

trees and hedges except one by way of shelter LA'RUM, n. s. Johnson says from 'alarum

for the sportsman : and the wind should always or alarm.' But this word is just as probably

be either in the front or back ; for if it blows sideways, it prevents the playing of the net. See BIRD-CATCHING.

LARMIER (from larme, French, a tear), in architecture, a flat square member of the cornice, be.ow the cimasium, and jetting out farthest ; so called from its use, which is to disperse the water, and cause it to fall at a distance from the •wall, drop by drop, as it were by tears.

LARNICA, a considerable town of Cyprus,

the origin of that, as in the Goth, and Teut. dialects we have lur and luidr ; Swed. lur, a trumpet, or a loud sound ; Dan. and Swed. lurm, a night-clock. Alarm; note or instrument announcing danger; a piece of clock-work to rouse a sleeper at a certain hour.

His larum bell might loud and wide be heard, When cause required, but never out of time.

Spenser.

The peaking cornute, her husband, dwelling in a

consisting of an Upper and Lower town of continual larum of jealousy, comes to me in the

mean houses, but having a fine harbour, the cm-insta t of our encounter.

Shakspeare.

L A R U S.

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How far off lie these armies ? — Within a mile and half.

— Then shall we hear their /arum, and they ours.

Id.

She is become formidable to all her neighbours, as she puts every one to stand upon his guard, and have a continual /arum bell in his ears.

Howel.

Of this nature was that /arum, which, though it were but three inches big, yet would both wake a man, and of itself light a candle for him at any set hour.]VUkins.

I see men as lusty and strong that eat but two meals a day, as others, that have set their stomachs, like laruma, to call on them for four or five. Locke.

The youngs-Eneas, all at once let down, Stunned with his giddy laram half the town.

Dunciad.

Nor far beneath her in renown is she Who, through good breeding, is ill company ; Whose manners will not let her lurum cease, Who thinks you are unhappy when at peace.

Young.

LARUS, the gull, in ornithology, a genus belonging to the order of anseres, the characters of which are, the bill is straight, cultrated, a little crooked at the point, and without teeth ; the inferior mandible is gibbous below the apex ; the nostrils are linear, a little broader before, and situated in the middle of the beak. There are several different species, principally distinguished by their colors.

1. L. ar tic ilia, the laughing gull, is in length eighteen inches, breadth three feet. It resembles the pewit in every thing but in the legs, which are black instead of red. It is found in Russia, on the river Don, particulary about Tschercask. The note resembles a coarse laugh, whence the name. It is met with also in different parts of the continent of America; and is very numerous in the Bahama Islands.

2. L. canus, the common gull, is in length sixteen or seventeen inches; in breadth thirty-six ; weight one pound. The bill is yellow : the irides are hazel, and the eyelids brown : the head, neck, under parts of the body, and tail, are white ; the back and wings pale gray : the outer edge of the first four quills, and tips of the first five, are black ; but the fourth and fifth have a white spot at the tips; the rest, except the three nearest the body, have the ends white: the legs are of a dull greenish white. This seems to be the most common of all the gulls, being found in vast numbers on our shores and rivers contiguous to the sea. It is seen also very far north, as far as Iceland and the Russian lakes : it is met with in the neighbourhood of the Caspian Sea, in various shores

of the Mediterranean, and as far south as Greece : and it is found also in America, on the coast of Newfoundland. It breeds on the rocks and cliffs, like others of the genus ; and the eggs are two inches and a half in length, of a deep olive-brown, marked with irregular deep-reddish blotches. It is a tame species, and may be seen by hundreds on the shores of the Thames and other rivers, in the winter and spring, at low tides, picking up the various worms and small fish left by the tides; and will often follow the plough in the fields, for the sake of worms and insects which are turned up, particularly the cockchafer in its larva

state, which it joins with the rooks in devouring most greedily.

3. L. cataractes, the skua gull, is in length two feet; the extent four feet and a half; the weight three pounds : the bill is two inches one-fourth long, very much hooked at the end, and very sharp ; the upper mandible covered more than half-way with a black sere or skin,as in the hawk kind ; the nostrils are placed near the bend, and are pervious. The feathers on the head, neck, back, scapulars, and coverts of the wings, are of a deep brown, marked with rusty color ; brightest in the male. The breast, belly, and vent are ferruginous, tinged with ash color. The tail when spread is circular, of a deep brown, white at the root, and with shafts of the same color. The legs are covered with great black scalons : the talons, black, strong and crooked : the interior remarkably so. This species inhabits Norway, the Ferroe Isles, Shetland, and the noted rock Foula a little west of them. It is also a native of the South Sea. It is the most formidable of the gulls ; its prey being not only fish, but all the smaller sorts of water-fowl, such as teal, &c. Mr. Schroter, a surgeon in the Ferroe Isles, relates that it likewise preys on ducks and poultry. It has all the fierceness of the eagle in defending its young ; when the inhabitants of those islands visit the nest, they defend themselves from its attack by holding a knife erect over their heads, on which the skua will transfix itself when darting on the invaders. The natives are often very roughly treated by them while they are attending their sheep on the hills ; and are obliged to guard their heads by holding up their sticks. In Foula it is a privileged bird, because it defends the flocks from the eagle, which it beats and pursues with great fury ; so that even that rapacious bird seldom ventures near its quarters. The natives of Foula on this account lay a fine on any person who destroys one : they deny that it ever injures their nocks or poultry; but imagine it preys on the dung of the arctic and other larger gulls, which it persecutes till they moot for fear. These birds are also frequent in many high latitudes of

the southern hemisphere;, particularly about Port Egmont, whence they have been called Port Egmont hens. In this place, and at Terra del Fuego, they were observed to make their nests among the dry grass. After breeding-time they disperse over the ocean, and for the most part are seen in pairs. They are met with in Kerguelen's Land, and off the Cape of Good Hope, and other parts. In all places the habits of this species are the same with respectˆ to ferocity; it is frequently seen to attack the largest albatross, beating it with great violence so long as.it remains on the wing; and this cowardly giant finds no other resource than to settle on the water; upon which the skua flies away.

4. L. fuscus, the herring gull, weighs upwards of thirty ounces ; the length twenty-three inches, its breadth fifty-two : the bill is yellow, and the lower mandible marked with an orange-colored spot ; the back and coverts of the wings are ash-colored ; the upper part of the first five quill feathers are black, marked with a white spot near their end ; the legs of a pale flesh color. These

birds breed on the ledges of rocks that hang over the sea : they make a large nest of dead grass ; and lay three eggs of a dirty white, spotted with black. The young are ash-colored, spotted with brown. This species is a great devourer of fish, especially of herrings ; it is a constant attendant on the nets, and so bold as to seize its prey in presence of the fishermen. It is common in this kingdom, and frequents the same places as the black-backed gull. It is also found in most of the

and white ; near the end is a bar of black, and beyond this the end is white : the legs are of a dirty flesh-color, in some white. This species frequents the sea-coasts of many parts of England, though not in considerable numbers. At times it is seen on the banks of the Thames along with other gulls; and is there supposed to be the female of the black-backed.

8. L. ridibundus, the pewit, or black-headed gull, is in length fifteen inches, breadth three

northern parts of Europe, as well as about the feet, and weight ten ounces. The bill is rather

Caspian and Black Seas; the rivers which fall slender, and of a blood-red : the eyelids are red

into them, and the great lakes of Siberia. It is -

seen also in Iceland, Greenland, and Hudson's

Bay. In winter it migrates south, being found

in Jamaica; and is said to breed on some of the

islands on the coast of South Carolina.

5. L. hybernus, the winter gull, winter mew, or coddy moddy, weighs from fourteen to seven-

teen ounces ; the length eighteen inches, the breadth three feet nine. The irides are hazel ;

and the irides hazel : the head and throat are dusky brown, in old birds black ; and on each eye-lid is a small white spot ; the back and wings are of an ash-color ; the neck, all the under parts, and tail, are white : the first ten quills are white, margined, and more or less tipped with black; the others of an ash-color, with white ends : the legs are of the color of the bill, the claws black. This species breeds on the shores

the bill is two inches long, but the slenderest of of some of our rivers; but full as often in the

any gull : black at the tip, and whitish towards the base. The crown of the head, and hindpart and sides of the neck, are white, marked with oblong dusky spots ; the forehead, throat, mid-dle of the breast, belly, and rump, white ; the back and scapulars of a pale gray, the last spotted with brown : the coverts of the wings are of a pale brown,

edged with white ; the first quill-feather is black, the succeeding ones are tipt with white ; the tail is white, crossed near the end with a black bar ; the legs are of a dirty bluish-white. This kind frequents, during winter, the moist meadows in the inland parts of England, remote from the sea.

6. L. marinus, the black backed gull, is in length twenty-nine inches; in breadth five feet nine. The bill is very strong and thick, and almost four inches long ; the color a pale yel-low; but the lower mandible is marked with a red spot, with a black one in the middle. The head, neck, whole under side, tail, and lower part of the back, are white : the upper part of the

inland fens of Lincolnshire, Cambridgeshire, and other parts of England. They make their nest on the ground, with rushes, dead grass, &c., and lay three eggs of a greenish brown, marked with red-brown blotches. After the breeding season, they again disperse to the sea-coasts. They breed also in Northumberland, and are found throughout Russia and Siberia, as far as Kamtschatka, but no farther to the north. They are seen throughout the winter at Aleppo, in great numbers ; and so tame, that the women are said to call them from the terraces of their houses, throwing up pieces of bread, which these birds catch in the air. They inhabit North America, coming into New England in May, and departing in August. The young birds in the neighbourhood of the Thames are thought good eating, and are called red legs. They were formerly more esteemed, and numbers were annually taken and fattened for the table.

9. L. tridactylus, the tarrock, is in length fourteen inches, breadth thirty-six; weight severe

back and wings are black ; the quill-feathers tipt ounces. The bill is short, thick, and black : the

with white, the legs of a pale flesh-color. It inhabits several parts of England, and breeds on the highest cliffs. The egg is blunt at each end; of a dusky olive color; quite black at the greater end, and the rest of it thinly marked with dusky spots. It is also common on most of the northern coasts of Europe. It frequents Greenland ; but chiefly inhabits the distant rocks. It lays

head, neck, and under parts, are white: near each ear, and under the throat, there is a black spot; and at the hind part of the neck a crescent of black : the back and scapulars are bluish-gray ; the wing-coverts dusky, edged with gray, some of the larger wholly gray ; the exterior sides and ends of the first four quills are black, tips of the two next black, all the rest white : the

three etrgs in May, placing them on the heaps of ten middle feathers of the tail are white tipped

with black, the two outermost wholly white: the legs are of a dusky ash-color; in lieu of the back toe, it has only a protuberance. This species breeds in Scotland with the kittiwake ; and inhabits other parts of northern Europe ; as Iceland and Spitzbergen, the Baltic, and White Seas, and Kamtschatka. It is common in Greenland in summer. It comes in spring, and frequents the sea-coasts; builds in the rocky crags of the bays ; in June lays two eggs of a greenish-

dung which the birds leave there from time to time. It is said to attack other birds, and to be particularly an enemy to the eider duck. It very greedily devours carrion, though the most general food is fish. It is common also in America as low as South Carolina, where it is called the old wife. 7. L. naevius, the wagel, is a large species, being nearly two feet in length, and in breadth about fire ; weighs nearly three pounds. The bill is black ; two inches and a half long : the irides

are dusky : the whole plumage is composed of ash color spotted with brown ; and retires from

mixed brown, ash-color, and white; the middle the shores in autumn. It is observed frequent—

of each feather brown: the under parts of the ly to attend the whales and seals, for the sake of

body are the same, but paler : the quills are the fish which the last drive before them into the

black : the lower part of the tail is mottled black shallows, when these birds dart into the water

suddenly, and make them their prey. They are

cry noisy, especially during the time of incuba-ion. They both swim and fly well, and for a j0ng time together : they are often observed on portions of ice swimming in the sea. Botli the 6esh and eggs are esteemed by the Greenlanders, and the skins used as garments.

LARYBUNDER, a port of the province of Sinde, Hindostan, about twenty miles up the Pitty River. Owing to the mud-banks of the river, and the dangers of its navigation, the town of late years has much declined. In 1 793 in the agreement between Nadir Shah and the emperor Mohammed it was stipulated that Larybunder should be the west boundary of Hindostan. Long. 57° 25’ E., lat. 24° 40’ N.

LARYNGOT’OMY, n.s. I Fr. lari/ngoto—

LARNYX. } mie,ofGr. Xapvy£,

the throat ; and r«/*vw, to cut. Laryngotomy, says Quincy, is an operation where the forepart of the larynx is divided to assist respiration, during large tumors upon the upper parts ; as in a quinsy. See BRONCHOTOMY. The larynx is the upper part of the trochea. See ANATOMY.

There are thirteen muscles for the motion of the five cartilages of the larynx. Derham.

Human voice is air sent through the lungs, and so agitated or modified in its passage through the windpipe and larynx as to become distinctly audible. Murray.

LARYNX. See ANATOMY.

LASCARIS (Andrew John), surnamed Ryn-dacenus, a learned writer of an ancient Greek family, which emigrated into Italy, after the tak-ing of Constantinople by the Turks in 1453. He was well received by Laurence de Medicis ; and was twice sent to Constantinople to collect the best Greek MSS., by which means numberless scarce and valuable treasures of literature were carried into Italy. On his return Louis XII., king of France, prevailed on him to settle in the university of Paris, and sent him twice ambassador to Venice. Ten years after cardinal John de Medicis being elected pope, under the name of Leo X., Lascaris, his old friend, went to Rome, and had the direction of a Greek college. He died in Rome in 1535, at about the ninetieth year of his age. He brought into the west most of the fine Greek MSS. that are now extant, and composed some epigrams in Greek and Latin.

LASCAIUS (Constantine), one of the Greeks principally concerned in the revival of learning in the west. He retired into Italy in 1454, and taught polite literature at Milan, whither he was called by Francis Sforza ; he afterwards went to Rome, where he was well received by cardinal Bessarion. He afterwards taught rhetoric and the Greek tongue at Naples ; and ended his days at Messina, leaving the senate of that city many excellent MSS. which he had brought from Constantinople. He was interred at the public expense, and the senate of Messina erected a marble tomb to his memory. He wrote some grammatical works.

LASCARS, Indian seamen.

LASCENA (Peter), a learned Neapolitan, born 25th of September, 1590. His merits pro-rured him the patronage of cardinal Barberini,

with whom he resided at Rome, and to whom he dedicated his Latin discourses De Linguk Hellenistica. Intense study, and too great abstinence, (for he took but one meal in twenty-four hours,) threw him into a fever, of which he died, 30th of September, 1636. LASC1 VIENT, adj. ˆ Fr. lasciv ; Ital. LASCIV'IOUS, \hiscivo; Lat./omnu*.

LASCIV'IOUSNESS, n. s. i Lewd ; unchaste ; LASCIVIOUSLY, adv. * wanton ; soft.

In what habit will you go along 7 — \ot like a woman : for 1 would prevent The loose encounters of lascivious men.

Shakspeare. Grim visaged war hath smoothed his wrinkled

front ;

And now, instead of mounting barbed steeds To fright the souls of fearful adversaries, He capers nimbly in a lady's chamber, To the lascivious pleasing of a lute. Id.

••• - He on Eve

Began to cast lascivious eyes ; she him As wantonly repaid ; in lust they bum.

Milton.

The reason pretended by Augustus was the lut-civiousness of his Elegies, and his art of Love.

Dryden'i Preface to Chic.

Notwithstanding all their talk of reason and philosophy, and those unanswerable difficulties which, over their cups, they pretend to have against Christianity ; persuade but the covetous man not to deify his money, the lascivious man to throw off his lewd amours, and all their giant-like objections against Christianity shall presently vanish. South.

Repel all impure and lascivious thoughts, which taint and pollute the mind ; and, though hid from men, are known to God, in whose eye they are abominable. Mason.

LASERPTIUM, lazar-wort, a genus of the digynia order, and pentandria class of plants ; natural order forty-fifth, umbellate. The fruit is oblong, with eight membranaceous angles ; the petals indexed, emarginated, and patent. There are several species, none of which are at all remarkable for their beauty, but are only preserved-in botanic gardens for the sake of variety. They are natives of Germany, Italy, and the south of France. All of them abound with an acrid juice, which turns to an excessively acrimonious resin. This was used by the ancients to take away black and blue spots that came by bruises or blows; also to take away excrescences. It was likewise by some of the ancients used internally; but produced such violent effects, that the more prudent refrained from the use of it. It is generally supposed that the silphiuin of the ancients was procured from one of the species of this genus; but of this we are uncertain.

LASH, n. s., v. a. & «. n. > Fr. lags ; Ital.

LASH ER, n. s. > laciro ; Lat. laqueus, a net or cord. The thong of a whip; a cord or string of any kind : hence the stroke given with a whip or cord; any stroke; and, metaphorically, a satirical or sarcastic one : to lash follows these significations, and also means to tie or confine by a cord or rope. The eye-lash is the line of hair that laces or borders the eye-lid. See LACE and EYE.

The farmer they leave in the lash, With losses on every side.

Tusscr's Husband y»

Her whip of cricket's bone, her lath of film, Her waggoner a small grey-coated gnat.

Shakspeare.

Let's whip these stragglers o'er the seas again, Lash hence these overweening rags of France.

Id.

In 1330 there was a sect of whippers in Germany, that, to the astonishment of the beholders, Lashed, and cruelly tortured themselves.

Burton. Anatomy of Melancholy. He that can bear a friendly touch, will not en-dure to be lathed with angry and reproachful words.

Barrow. From hence are heard the groans of ghosts, the

pains Of sounding lashes, and of dragging chains.

Dry den.

Roused by the lash of his own stubborn tail, Our lion now will foreign foes assail. Id.

And limping death, lashed on by fate, Comes up to shorten half our date. Id.

The club hung round his ears, and battered

brows ; He falls ; and, lashing up his heels, his rider throws.

Id.

Gentle or sharp, according to their choice, To laugh at follies, or to lash at vice. Id

Let men out of their way lash on ever so fast, they are not at all the nearer their journey's end.

South.

Leaning on his lance, he mounts his car, His fiery coursers lashing through the air. Garth. I observed that your whip wanted a lash to it

Addison.

The winds grow high, Impending tempests charge the sky ; The lightning flies, the thunder roars, And big waves lash the frighted shores. Prior. Wheels clash with wheels, and bar the narrow

street ; The lashing whip resounds. Gay's Trivia.

Could pensioned Boileau lash in honest strain, Flatt'rers and bigots even in Louis' reign. Pope.

Fame and honour were purchased at a better pennyworth by satire, rather than by any other productions of the brain ; the world being soonest provoked to praise by lashei, as men are to love.

Swift.

They bound me on, that menial throng, Upon his back with many a thong ; Then loosed him with a sudden lath — Away ! — away ! — and on we dash ! — Torrents less rapid and less rash. Byron.

The tender blue of that large loving eye Grew frozen with its gaze on vacancy, Till — Oh how far! it caught a glimpse of him, And then it flowed — and phrensied seemed to swim Through those long, dark,

and glistening la*het

dewed With drops of sadness oft to be renewed. Id.

LASKO, LASCO, or LASKI (John de), a native of Poland, descended from a family of distinction. He travelled into Switzerland, where he became acquainted with Zuinglius, who made him a convert to the doctrines of the Reformation. Upon his return he was made provost of Gnesna, and bishop of Vesprim in Hungary, but these dignities did not prevent him from openly avowing his principles ; upon which he was condemned for heresy, and obliged to fly to Enibden, in East Friesland, where he became minister in 1542, and wherein he resided ten years. Being invited to England by archbishop

Cranmer, he lived unmolested till the death of Edward VI. ; but on the accession of Mary I., in 1553, he returned to Embden in 1554, where he and his companions in persecution were kindly treated. After an absence of twenty years he returned to Poland, where he was well received by king Sigismund, who employed him in some important affairs. He wrote several tracts ; particularly De CaenS. Domini : Epistola Continens Summum Controversial &c. He died January 13th, 1560.

LASS, n. s. i Sax. leap, loose, i. e. free

LASS'LORN, adj. 3 or single ; Swed. laska ; Goth.

lathska ; Teut. lassen is to loose. See LAD. A

girl ; a young unmarried woman : lasslorn is

forsaken of a lass or mistress.

Brown groves,

Whose shadow the dismissed bachelor loves, Being latslorti. Shakspeare.

Now was the time for vig'rous lads to show What love or honour could invite them to ; A goodly theatre, where rocks are round With reverend age, and lovely lasses crown'd.

Waller.

A girl was worth forty of our widows ; and an honest, downright,

plain dealing lass it was.

L'Ettrange.

They sometimes an hasty kiss Steal from unwary lasses ; they with scorn And neck reclined, resent. Phillips.

Her 'prentice han,' she tried on man, An' then she made the lasses 0. Burns.

LASSA, a city of Asia, the capital of Great Thibet, subject to the Chinese. It has only been visited by Romish missionaries, who have given very inaccurate accounts of it ; but it appears not to be very extensive, and to be rather a great temple than a city. It is the residence of the Dalai Lama, or great head of the Sha-man religion, who resides in a palace on the east of the city called Patala, or the Holy Mountain.

LAS'SITUDE. Fr. lassitude; Lat. lassitudo. Weariness ; fatigue ; laxity. See the citation from Quincy.

Lassitude is remedied by bathing, or anointing

with oil and warm water ; for all lassitude is a kind

of contusion and compression of the parts ; and

bathing and anointing give a relaxation or emollition.

Bacon's Xdtural History.

Assiduity in cogitation is more than our embodied souls can bear without lassitude or distemper.

Glanrille's Scept'u.

She lives and breeds in air ; the largeness and lightness of her wings and tail sustain her without lassitude. More's Antidote against Atheism.

Lassitude generally expresses that weariness which proceeds from a distempered state, and not from exercise, which wants no remedy but rest : it proceeds from an increase of bulk , from a diminution of proper evacuation, or from too great a consumption of the fluid necessary to maintain the spring of the solids, as in fevers ; or from a vitiated secretion of that juice, whereby the fibres are not supplied.

Quincy.

Do not over-fatigue the spirits, lest the mind be seized with a lassitude, and thereby be tempted to nauseate, and grow tired. Watts.

From mouth and nose the briny torrent ran,

And lost in tatsitude lay all the roan.

Pope's Odytsey.

LASSUS, or LASUS, a dithyrarabic poet, born at Hermione in Peloponnesus, about A. A. C. 500. He is reckoned by some among the wise men of Greece. He is particularly known by the answer he gave to a man who asked him what could best render life pleasant? Experience, said Lassus. He was acquainted with music. Some fragments of his poetry are to be found in \thenaeus. He wrote an ode upon the Centaurs, and a hymn to Ceres, avoiding the letter S in the composition.

LASSUS (Peter), professor of pathology at the school of medicine and surgery at Paris, and member of the French Institute, was born at Paris in 1741, and studied under his father; admitted a master of surgery in 1765. He obtained in 1771 the office of surgeon in ordinary to the daughters of Louis XV. He retired into Italy with those princesses at the Revolution, but returned to Paris on the reorganisation of the academical institutions, and became successively professor of the history of medicine and of pathology, which offices he held till his death in 1807. His professional works are valuable, and contain Essai ou Discours Historique et Critique sur les De"couvertes faites en Anatomic par les Anciens et les Modernes, Paris, 1783, 8vo. Traite" Elementaire de Medicine Operatoire, 1795, 8vo; Pathologie

Chirurgicale, 1805, 1806, 2 vols. 8vo.

LAST, n. s., adv., v. n. ~\ Sax. laept, laetej-t ; LAST'AGE, n.s. | Belg. luetste ; Teut.

LAST'ING, part. adj. \Jletzt. Latest; hind-LAST'INGLY, adv. f most ; that which

LAST'INGNESS, n. s. | follows all the rest LAST'LY, adv. J of a number ; hence,

utmost ; lowest ; meanest ; at last is at the end or conclusion of a series : as an adverb of time, last signifies at the time next before the present, or at the conclusion of all the series of its divisions ; in conclusion: to last is to endure; continue; persevere (i. e. to a supposed end). The last of shoemakers (also known to our Anglo-Saxon ancestors by this name) is derived, perhaps, from its being the enduring or preserved mould on which shoes are constantly formed : but there is a Goth, laest, the foot. Last, a measure of weight or capacity, is also an old word in the language (probably from the la-:t of a tale): last-age is a custom or duty paid on freights; also ballast.

Gad, a troop shall overcome him ; but he shall oveicome at the last. Gen. xlix. 19.

Why are ye the last to bring the king back?

Samuel. I will slay the last of them with the sword. Amos.

How long is't now since last yourself and I Were in a mask? Shakspeare.

I thought it agreeable to my affection to your grace, to prefix your name before the essays : for the Latin volume of them, being in the universal language, may last as long as books last. Bacon,

I will justify the quarrel ; secondly, balance the forces ; and, lastly, propound variety of designs for choice, but not advise the choice. Id.

When last I died, and, dear ! I die As often as from thee I go,

I can remember yet that I Something did say, and something did bestow.

Dunne.

Unhappy slave, and pupil to a bell, Unhappy to the last the kind releasing knell.

Cowley.

Nothing so inflameth the wrath of men, so pro-voketh their enmity, so breedeth their lasting hatred and spite, as do contumelious words. Barrow.

All the endeavours Achilles used to meet with Hector, and be the death of him, is the intrigue which comprehends the battle of the last day.

Browne's View of Epic Poetry. All more lasting than beautiful. Sidney.

All more lasting than beautiful, but that the consideration of the exceeding lastingness made the eye believe it was exceeding beautiful. Id.

White parents may have black children, as negroes sometimes have lasting white ones. Boyle on Colon.

In extremes, bold councils are the best ; Like empirick remedies, they last are tryed, And by the event condemned or justified.

Dryden.

Fools ambitiously contend For wit and power ; their last endeavours bend To' outshine each other. Id. Lucretius.

Pleased with his idol, he commends, admires, Adores ; and latt, the thing adored desires.

Dryden.

The grateful work is done, The seeds of discord sowed, the war begun : Frauds, fears, and fury, have possessed the state, And fixed the causes of a lasting hate. Id.

The several degrees of lasting ideas are imprinted on the memory. Locke.

Where there is something both lasting and scarce, and so valuable to be hoarded up, there men will not be apt to enlarge their possessions of land. Id.

To bodily punishment we are not to have recourse till all other means

of reformation have been attempted in vain ; and let this last remedy be applied, if at all applied, with temper and solemnity, that the child may see we are driven to it against our will, from a regard to our duty and his good. Id.

A sinew cracked seldom recovers its former strength, and the memory of it leaves a lotting caution in the man, not to put the part quickly again to any robust employment. Id.

Every violence offered weakens and impairs, and renders the body less durable and lasting. Ray. The greatest schemes that human wit can forge, Or bold ambition dares to put in practice, Depend upon our husbanding a moment, And the light lotting of a woman's will. Rtnee.

The swans, that on Cayster often tryed Their tuneful songs, now sung their last, and died.

Addison.

O ! may famed Brunswick be the last, The last, the happiest British king, Whom thou shalt paint or I shall sing. Id.

These are standing marks of facts delivered by those who were eye-witnesses to them, and which were contrived with great wisdom to last till time should be no more. Id.

Consider the lastingness of the motions excited in the bottom of the eye by light. Newton's Opticks.

Thus weather-cocks, that for a while Have turned about with every blast,

Grown old, and destitute of oil, Rust to a point, and fix at last. Friend.

O, may some spark of your celestial fire, The last, the meanest, of your sons inspire !

Pops.

Merion pursued at greater distance still, I aft came Admetus, thy unhappy son. Id.

Here, last of Britons, let your names be read.

Id.

LAT

Wit not alone has shone on ages past,

But lights the present, and shall warm the last.

Id. Antilochus

Takes the last prize, and takes it with a jest. Id.

All politicians chew on wisdom past, And blunder on in business to the last. Id. But, while I take my last adieu,

Heave thou no sigh, nor shed a tear. Prior.

O ye blest scenes of permanent delight !

Full above measure ! lasting beyond bound !

A perpetuity of bliss is bliss. Young.

None sends his arrow to the mark in view,

Whose hand is feeble or his aim untrue,

For though, ere yet the shaft is on the wing,

Or when it first forsakes the' elastic string,

It err but little from the' intended line,

It falls at last far wide of his design. Cowper.

A last is twelve sacks or 4368 Ibs.

Wal/tingham's Arithmetic.

Nothing is more common than for those who expressed the greatest

signs of a lasting repentance upon a sick bed, to forget all their vows and promises of amendment as soon as God had removed the. judgment and restored them to their former health.

Paley.

LASTERY, ».s. Goth, litcer; Swed. lit, a tinge. A red color.

The bashful blood her snowy cheeks did spread, That her became as polished ivory,

Which cunning craftman's hand hath overlaid, With fair vermilion, or pure lastery. Spenser.

LASWAREE, a town of Hindostan, in Delhi, where, 1st November 1803, the celebrated battle was fought between lord Lake and the Mahrattas under Dowlut Row Sindiah, in which the power of the latter was wholly broken.

LATAKIA, a seaport of the pachalic of Tripoli, Syria, the ancient Laodicea. It contains not above 5000 inhabitants, but has supplanted Scanderoon as the port of Aleppo. Ten years ago, however, it is said to have been far more flourishing. Its commerce consists in sugar, salt, and rice from Egypt, wine from Cyprus, oranges from Tripoli, and woollen cloth from Smyrna. Here is a Roman triumphal arch, between thirty and forty feet high, enriched with a handsome entablature : it is supposed to have been erected in honor of Caesar.

LATCH, n.s. & v. a.) Belgic, letse, litze;

LATCH'ES, \ Ital. laccio, & Sax.

LATCH'ET.) lettan, to hinder.

See LET. Minsheu says, ingeniously enough, from Belg. let, lid, between the knots. A catch or fastening of a door, often moved by a string: latches, nautically, are defined by Harris in the extract : latchet of a shoe is the tie or fastening : to latch, to fasten with a latch or tie.

There cometh one mightier than I, the latchet of whose shoes I >am not worthy to unloose.

Mar* i. 7. But hast thou yet latched the Athenian's eyes

With the love juice, as I did bid thee do?

Shakspeare.

lie had strength to reach his father's house; the door was only latched ; and, when he had the latch in his hand, he turned about his head to see his pursuer. Locke.

Latches or laskets, in a ship, are small lines like loops, fastened by sewing into the bonnets and drab-lersofaship, in order to lace the bonnets to the cou'-ses, or t!,c tliablors to the bonnets. Harris.

The latch moved up. Gay's Pastora.lt.

Then comes rosy health from her cottage of thatch, Where never physician had lifted the Latch. Smart. LATE, adj. & adv. ~) Sax. lar, laer; Goth. LA'TED, adj. | lat ; Belg. laet. The op—

LATE'LY, adv. [posite of soon and early.

LATE'NESS, n. s. (We seem to have no ex-LAT'TER, adj. I act synonyme of this

LAT'TERLY, adv. } word. Slow ; tardy; delayed; deceased : as an adverb, after long delay; soon in the day or night; not long since: of late seems synonymous with lately: lated is made late ; overtaken by night : latter is the comparative of late, though written with tt, contrary to analogy in the superlative latest. ' When the thing of which the comparison is made is mentioned we use later ; as, this fruit is later than the rest ; but latter when no comparison is expressed, and the reference is merely to time.'

And he found a man a iew aquyla bi name of ponte bi i ynde, that late cam fro itjiJie.

Wiclif. Dedis. 18.

Paul found a certain Jew named Aquila, lately come from Italy. Acts, xviii. 1.

But for to tellin you of his array, His hors wer good, but he was nothing gay ; Of fustian he werid a gipon, Alle besmottrid with his haburgeon, For he was late ycome from his viage, And wente for to do his pilgrimage. Chaucer.

That shortly from the shape of womanhed, Such as she was when Pallas she attempted,

She grew to hideous shape of drearihead, Pined with grief of folly late repented. Spent- > .

They arrived in that pleasant isle, ‘ Where sleeping late she left her other knight. Id.

Were it consonant unto reason to divorce these two sentences, the former of which doth show how the latter is restrained, and, not marking the former, ‘to conclude by the latter of them 1 Hunker.

O boy ! thy father gave thee life too soon, And hath bereft thee of thy life too late.

Shaktpeare.

Was it so late, friend, ere you went to bed, That you do lie so late? — Sir, we were carousing till the second cock.

The west glimmers with some streaks of day : Now spurs the lated traveller apace To gain the timely inn. Id. tfackth.

To make roses, or other flowers, come late, is an experiment of pleasure; for the ancients esteemed much of the rosa sera. Bacon’s Natural History.

My hasting days fly on with full career, But my late spring no bud nor blossom sheweth.

Milton.

In reason’s absence fancy wakes, Ill-matching words and deeds long past or late.

Id.

Who but felt of late? Id.

I doubt there’s deep resentment in his mind, For the late slight his honour suffered there.

Otway.

Through all the air his sounding strings dilate Sorrow, like that which touched our hearts of late.

Waller.

He laughs at all the giddy turns of state, When mortals search too soon, and fear too tale.

Driidrn.

Late the nocturnal sacrifice begun, Nor ended till the next returning sun. Id

\ second Silvius after these appears, Silvias . Lneas, for thy name he bears : For arms and justice equally renowned, Who late restored in Alba shall be crowned. Id. The Inter it is before any one comes to have these ideas, the later also will it be before he comes to those maxims. J^ocke.

-Men have of late made use of a pendulum, as a more steady regulator. Id.

Hath not navigation discovered, in these latter ages, whole nations at the bay of Soldania? Id.

I might have spared his life, But now it is too late.

Phillipt't Distressed Mother. All the difference between the late servants and those who staid in the family, was, that those latter were finer gentlemen. Addisons Spectator.

Just was the vengeance, and to latest days Shall long posterity resound thy praise.

Pope's Odyssey.

The goddess with indulgent cares, And social joys, the late transformed repairs.

Pope.

Lateness in life might be improper to begin the world with. Swift to Gay

The difference between reason and revelation, and in what sense the latter is superior. Watts.

Latterly Milton was short and thick. Richardt. This pray I, Jove, and wyth this latter breath, Vengeance I aske upon my cruell death. Sackville. He turned not — spoke not — sunk not — fixed his

look,

And set the anxious frame that lately shook : He gazed — how long we gaze despite of pain, And know, but dare not own, we gaze in vain !

Byron.

LATE WAKE, a ceremony used at funerals in some parts of the Highlands of Scotland. The evening after the death of any person the relations and friends of the deceased meet at the house, attended by a bagpipe or fiddle ; the nearest of kin, be it wife, son, or daughter, opens a melancholy ball, dancing, and greeting (i.e. crying violently) at the same time, and this continues till daylight ; but with gambols and frolics among the younger part of the company. If the corpse remains unburied for two nighw, the same rites are renewed.

LATENT, adj. Lat. latent. Hidden; secret; reserved ; concealed.

Who drinks, alas ! but to forget ; nor sees That melancholy sloth, severe disease, Memory confused, and interrupted thought, Death's harbingers, lie latent in the draught.

Prior.

If we look into its retired movements, and more secret intent springs, we may there trace out a steady hand producing good out of evil. Woodward.

What were Wood's visible costs I know not, and what were his latent is variously conjectured. Swift.

Latent caloric is that portion of the matter of heat

which makes no sensible addition to the temperature

f the bodies in which it exists. — Caloric in a latent

ate exists in all substances that we are acquainted

with. Parkes's Chemical Catechhm.

LATERAL, adj.ˆ Fr. lateral; Lat. latera-LATERAL'ITY, rwin out of

LAT'ERALLY. ing sideways.

Forth rush the Levant, and the ponent winds Eiirus and Zephyr, with their lateral noise, Sirocco and Libecchio. Milton.

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/ts. Growing out of, or belonging to the side: act-

We may reasonably conclude a right and left lutr* rutitii in the ark, or naval euitice of vsoali. Rrjwne.

The days are set lutemily against the columns of the golden number. Holder on Time.

Why may they not spread their lateral branches till their distance from the centre of gravity depress them? Hay.

The smallest vessels, which carry the blood by Literal branches, separate the next thinner fluid or se-rum, the diameters of which lateral branches are less than the diameters of the blood-vessels, jl Arbuthnot on Aliment*.

LATERAN was originally the proper name of a man ; whence it descended to an ancient palace in Rome, and to the buildings since erected in its place; particularly a church called St. John of Lateran, which is the principal see of the popedom.

The canons regular of the congregation of the lateran is a congregation of regular canons, of which that church is the principal place or seat. It is asserted there has been an uninterrupted succession of clerks, living in community, from the time of the apostles ; and that a number of these were established in the Lateran in the time of Constantine.

LATERAN, COUNCILS OF THE, are those held in the basilica of the Lateran : of these there have been five, held in 1123, 1139, 1179, 1215, and

A LATERE, a term used to denote the qualifications of the cardinals whom the pope sends as legates into foreign countries. They are called legates a latere, as being his holiness's assistants and counsellors in ordinary. These are the most considerable of the three kinds of legates, being such as the pope commissions to take his place in councils ; and so called in regard that he never gives this office to any but his favorites and confidants, who are always & latere, at his side. A legate a latere has the power of conferring benefices without a mandate, of legitimating bastards to hold offices, and has a cross carried before him as the ensign of his authority.

De LATERE, legates who are not cardinals, but yet are entrusted with an apostolical legation. See LEGATE.

LATH, n. s. Saxon laefc. Part of a county (obsolete). Mr. Thomson says from Saxon leth, contracted from Goth, lagthing, or lathing, a judicial convocation. See LATIIREVE.

If all that tything failed, then all that lath was charged for that tything ; and if the lath failed, then all that hundred was demanded for them : and if the hundred, then the shire, who would not rest till they had found that undutiful fellow, which was not amenable to law. Spenser's Ireland.

The fee-farms reserved upon charters granted to cities and towns corporate, and the blanch rents and lath silver answered by the sheriffs. Bacon.

LATH, n. s. & v. a. i Sax. larce ; Fr. latte,

LATHE. \ lute; Teut. latte ; Belg.

lat ; Welch, llath. A long thin piece of wood : lathe is a turning machine, formerly set in motion by a string and lath. To lath is to fit up or cover with lathf.

With dagger of lath. Shakspeare.

Penny-royal and orpin they use in the country to trim their houses; binding it with a lath or stick, and setting it against a wall.

Bacon'i Natural Hutory. 2K

The god who frights away,

With his lath sword, the thieves and birds of prey.

Dryden.

Those black circular lines we see on turned vessels oˆ wood, are the effects of ignition, caused by the pressure of an edged stick upon the vessel turned nimbly in the lathe. linn.

A small kiln consists of an oaken frame, lathed on every side. Mortimer's Husbandry.

The plasterer's work is commonly done by the yard square for lathing. Id.

Laths are made of heart of oak, for outside work, as tiling and plastering ; and of fir for inside plastering, and pantile lathing. Slown. For wheresoe'er the shrieking victim hath Poured forth his blood beneath the assassin's

knife, Some hand erects a cross of mouldering lath ;

And grove and glen with thousand such are rife Throughout this purple land, where law secures

not life. Byron.

The LATHE is a very useful engine for turning wood, ivory, metals, and other materials. See TURNING. The invention of it is very ancient : Diodorus Siculus says, the first who used it was a grandson of Daedalus, named Talus. Pliny ascribes it to Theodore of Samos ; and mentions one Thericles who rendered himself very famous by his

dexterity in managing the lathe. With this instrument the ancients turned all kinds of vases, many of which they enriched with figures and ornaments in basso relievo. Thus Vjrgil : —

Lenta quibus torno facili superaddita vitis.

The Greek and Latin authors make frequent mention of the lathe ; and Cicero calls the workmen who used it vascularii. It was a proverb among the ancients to say a thing was formed in the lathe to express its delicacy and justness. As it is the use and application of this instrument that makes the greatest part of the art of turning, we refer the particular description of it, as well as the manner of applying it in various works, to that head. See TURNING.

To LATHER, v. n., v. a. & n. s. Sax. lefcjian. To form or cover with a foam : a foam made with soap and water.

Chuse water pure,

Such as will lather cold with soap. Eaynard. LATHR7E, in botany, a genus of the angiospermia order, and didynamia class of plants; natural order fortieth, personatae : CAL. quadrifid ; there is a depressed glandule at the base of the suture of the germen : CAPS, unilocular. Species three, natives of the south of Europe.

LATHREVE, LEIDGREVE, or TRITHEN-GREVE, was an officer under the Saxon government, who had authority over a third part of the county ; and whose territory was therefore called trithing, otherwise a leid lath or leithin; in which manner the county of Kent is still divided; and the rapes in Sussex seem to answer to the same. As to the jurisdiction of this officer, those matters that could not be determined by the hundred court were thence brought to the trithing ; where all the principal men of the three or more hundreds being assembled by the lathreve, or trithingreve, did debate and decide it; or, if they could not, then the lathreve sent it up to the county court, to be there finally determined.

LATIIYRUS, in botany, chickling, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, papiliona-ceae. Stylus plain, villous above, towards the end broader: CAL. upper two segments shorter than the rest.

1. L. latifolius, the everlasting pea, has thick, fibrous perennial roots ; climbing, thick, branching annual stalks, having membranaceous

wings between the joints, rising upon support by their cirri six or eight feet high ; diphyllous leaves, of two spear-shaped lobes, terminated by claspers ; and numerous large red or purple flowers on long foot-stalks, appearing plentifully from June till October, succeeded by abundance of seed.

2. L. odoratus, toe sweet-scented pea, has a fibrous annual root; a climbing stalk, rising upon support by its claspers three or four feet high; diphyllous leaves of two oval lobes, terminated by climbing tendrils; and flowers by two's on long flower stalks, of different colors in the varieties.

3. L. Tangitanus, tne Tangier pea, has a fibrous annual root, a climbing stalk rising upon support for four or five feet high; diphyllous leaves, of two spear-shaped alternate lobes, terminated by tendrils ; and from the joints of the stalks large reddish flowers by two's on long foot-stalks. All the species are of hardy growth, and may be propagated by seed in the common ground, in patches where it is designed the plants should flower, for they do not succeed so well by transplantation. They may be sowed in spring; though, if sowed in autumn, the plants will flower earlier the following year.

LATIAR, in Roman antiquity, a feast or ceremony instituted by Tarquinius Superbus, in honor of Jupiter Latiaris, or Latialis. Tarquin, having made a treaty of alliance with the Latins, proposed, in order to perpetuate it, to erect a common temple, where all the allies, the Ro-m(ans, Latins, Hernici, Volsci, &c., should assemble themselves every year, hold a kind of fair, exchange merchandises, feast, and sacrifice. Such was the instituting of the Latiar. The founder only appointed one day for this feast ; the first consul added another to it, upon concluding the peace with the Latins ; a third was added, after the people, who had retired to Mons Sacer, were returned to Rome ; and a fourth, after appeasing the sedition raised on occasion of the plebeians aspiring to the consulate. These four days were called Feriae Latino;; and all things done during the course of the feriae, as feasts, sacrifices, offerings, &c., were called Latiares.

LATICLAVE, LATICLAVIUM, in Roman antiquity, was an honorable distinction, peculiar in the times of the republic to the senators ; but whether it was a particular kind of garment, or only an ornament upon it, the critics are not agreed. The most general opinion is, that it was a broad stripe of purple sewed upon the fore part of their tunic, aud round the middle of the breast. There were buttons set on the latus cla-vus, or laticlave, which appeared like the heads of large nails, whence some think it derived its name. The senators, praetors, and

chief magis-

trates of colonies and municipal cities, had a right to wear it. The pnctexta was always worn over it ; hut, when the pnetor pronounced sentence of death, the praetexta was then put off, and the laticlave retained. The laticlavium differed from the angusticlavium, but authors do not agree in what this difference consisted ; the most general opinion seems to be, that the slips or stripes of purple were narrower in the angus-ticlave.

LATLMER (Hugh), bishop of Worcester, an illustrious protestant martyr, born about the year 1480, at Thurcaston in Leicestershire, and the only son of a yeoman of that village. At the age of fourteen he was sent to Christ's College, Cambridge, where he applied himself to the study of divinity, and took the degree of B. D. At this time he was a zealous papist, and was honored with the office of keeper of the cross to the university : but when he was about thirty years of age he became a convert to the Protestant religion ; and, being now one of the twelve licensed preachers from Cambridge, he promulgated his opinions with great freedom. It was not long before he was accused of heresy ; and, being summoned before cardinal Wolsey, was obliged to subscribe certain articles of faith, which he certainly did not believe. About the year 1529 he was presented by Henry VIII. to the rectory of Westkinton in Wiltshire; to which place, after residing some time at court with his friend and patron Dr. Butts, he retired ; but, resuming his former invectives against the popish doctrines, he was again summoned to answer certain interrogatories, and once more obliged to subscribe. In 1535 he was promoted to the bishopric of Worcester ; in the possession of which dignity he continued till the year 1539, when, rather than assent to the act of the six articles, he resigned his mitre, and retired into the cou ntry ; but was in a short time accused of speaking against the six articles, and committed to the tower, where

he continued prisoner till the death of Henry VIII. in January 1547. On the accession of Edward VI. Latimer was released, but not restored to his bishopric, though he preached several times before the king, and continued to exercise his ministerial function with unremitting zeal and resolution. Young Edward, alas ! finished his short reign in 1553 ; and Mary I., of bloody memory, ascending the throne, Latimer was immediately doomed to destruction, and, together with Cranmer and Ridley, confined in the tower. In April 1554 they were removed to Oxford, that they might dispute with the doctors of both universities. Latimer, declining the disputation on account of his great age and infirmities, delivered his opinion in writing; and, refusing to subscribe the popish creed, was condemned for heresy ; and, in October following, was, together with bishop Ridley, burnt alive. He behaved with uncommon fortitude on the occasion, and died a real martyr to the Reformation. Of his plain dealing, even with crowned heads, the following circumstance is a celebrated proof: — It was the custom for bishops to make presents to the king on new-year's -day, and, among the rest, Latimer wpi'r,' ~.r, TTO.,PV '[[I. wjth his gift, which, instead of a purse of gold, was a New Testament, having the leaf turned down to this passage ' Whoremongers and adulterers God will judi'e.' When Mary ascended the throne, and he was cited to appear before the council, an opportunity, it is said, was afforded him to quit the kingdom. But, with a just anticipation of the consequences, he prepared himself to obey with alacrity the citation, and, as he passed Smithfield, exclaimed, ' This place has long groaned for me.' On reaching the place of execution at Ox-ford, and a faggot, ready kindled, being placed at Ridley's feet, Latimer exclaimed, ' Be of good comfort, master Ridley, and play the man ; we shall this day light such a candle by God's grace in England, as 1 trust shall never be put out.' His works are, 1. Sermons, 1635, folio. 2. Letters, in Fox's Acts and Monum. vol. ii. folio, 1580. 3. An Injunction to the prior and Convent of St. Mary's in Worcestershire. LATIN, n. s. & adj. -\ Latinus. The

LAT'INISM, n. s. /language of ancient

LAT'INIST, >Rome. It is most

LATIN'ITY, i surprising that Dr.

LAT'INIZE, u. a. & v.n.J Johnson, though he frequently used this word in this sense in his Dictionary, has not defined it in this sense. He says only of the n. s. ' an exercise practised by school-boys, who turn English into Latin.' Written or spoken in the Latin language : Latinism is a Latin idiom or mode of speech or writing : Latinist, a person learned in Latin : Latinity, the purity of Latin phraseology or style : to Latinize, to use Latin words or phrases ; to give Latin terminations ; or

to make Latin.

In learning farther his syntaxis, he shall not use the common order in schools for making of Latins.

ˆscham.

The Greek church did always dissent from the latins in this particular, since they had forged this new doctrine in the laboratories of Rome.

Bishop Taylor.

I am liable to be charged that I latinize too much.

Dryden. •

Augustus himself could not make a new Latin word. Locke.

Milton has made use of frequent transpositions, Latiuisms, antiquated words and phrases, that he might the better deviate from vulgar and ordinary expressions. Addison.

If Shakspeare was able to read Plautus with ease, nothing in Latinity could be hard to him.

Dennis.

He uses coarse and vulgar words, or terms and phrases that are latinized, scholastick, and hard to be understood. Watts.

Oldham was considered as a good Latiniit.

Oldheun's Life.

In the beginning, being probably most in pain for his Latinitif, h-.i endeavours to defend the use of the word persona. Johnson.

LATIN LANGUAGE. See LANGUAGE.

LATINUS I., king of the Latins in Italy, was the son of Faunus and Marica; and, it is said, began to reign about A.A.C. 121(3. Lavinia, his only daughter, married TEneas, after th;tt Trojan prince had killed Turnus king of the Ru-tuli. See ROME.

IATIROSTROUS, adj. Lat. latus *nd ros-trum. Broad-beaked.

In quadrupeds, in regard of the figure of their heads, ti e eyes are placed at some distance ; in uttirostrou* and flat-billed birds, they are more laterally seated. Browne.

LATITANCY, n. s. } Lat. latitaru. See LAT'ITANT, adj. > LATENT. The state of

LATITA'TION, n. *. j lying hid.

In vipers she has abridged their malignity by their secession or latitancy. Browne'* Vulgar Errcurs.

Snakes and lizards, latitant many months in the year, containing a weak heat in a copious humidity, do long subsist without nutrition. Browne.

It must be some other substance latitant in the fluid matter, and really distinguishable from it.

More.

Force the small latitant bubbles of air to disclose themselves and break. Boyle.

LATITUDE, n. s. > Fr. latitude ;

LATITUDINA'RIAN, adj. & n. $.) Lat. latitudo. Width ; breadth ; extent ; freedom ; in bodies of unequal dimensions the shorter axis ; in equal bodies the line drawn from right to left ; the space in the earth or heavens from the equator in either of the poles : a latitudinarian is a per-son unrestrained in his habits or opinions.

Whether the exact quadrat, or the long square be the better, I find not well determined ; though I must prefer the latter, provided the length do not exceed the latitude above one third part.

Wotton.

In such latitudes of sense, many that love me and the church well, may have taken the covenant.

King Charlet.

In human actions there are no degrees, and precise natural limits described, but a latitude is indulged. , Taylor.

Among the southern constellations, two there are who bear the name of the dog ; the-one in sixteen degrees latitude, containing on the left thigh a star of the first magnitude, usually called Procyon, or Anticanus. Browne's Vulgar Errourt.

Albertus, bishop of Ratisbon, for his great learning, and." latitude of knowledge, sirnamed Magnus ; besides divinity, hath written many tracts on philosophy. Browne.

I took this kind of verse, which allows more latitude than any other. Dryden.

There is a difference of degrees in men's understandings, to so great a latitude, that one may af-firm, that there is a greater difference between some men and others, than between some men and beasts.

Locke.

We found ourselves in the latitude of thirty degrees two minutes south. South.

1 hen, in comes the benign latitude of the doctrine of goodwill, and cuts asunder all those hard pinch-ing cords. Id.

Another effect *.he Alps have on Geneva is, that the sun here rises later and sets sooner than it does to other places of the same latitude. Addison.

iMtitwiinarian love will be expensive, and therefore I would be informed what is to be gotten by it. Collier on Kind nest.

Those places which lie on the equator have no latitude. Guthrie.

LATITUDE, in geography, is the distance of any place from the equator reckoned on a meridian, or great circle of the globe passing through the poles. The most simple method of finding the latitude of a place is by the meridian altitude of the sun, which may be obtained by direct observation, at the moment it passes

the meridian of the place ; or it may be found from several altitudes taken near the meridian, compared with the time. At the terrestrial equator, where the latitude is nothing, the celestial equator passes through the zenith ; the poles of the world are consequently in the horizon : but, if we suppose ourselves advancing along any meridian into either hemisphere, the pole of that hemisphere appears to ascend above the horizon, and describe an arc of a vertical circle,Mequal to the arc of the meridian passed over. Hence, as the arc of the meridian measures the latitude of the place arrived al, it follows that this is always equal to the elevation of the pole at that place, and that the inclination of the celestial equator to the horizon is equal to the complement of the latitude. To ascertain the meridional, altitude of the sun is, therefore, to ascertain this inclination ; and, consequently, the latitude.

We copy from Mr. Miers the following problems in illustration of this method. Let PEP, fig. 1, be a terrestrial meridian, and EQ the

equator. When the observer is at E, the plane of the equator, supposed to be produced to the heavens, will pass through the zenith Z, and the poles will evidently be situated in, the horizon H H. But, on proceeding from E to O, the horizon gradually recedes from II H to H'H', and the pole P appears to ascend through an equal arc, but in a contrary direction. Hence, as the sum of the two angles ECO and O C P is equal to a right angle, and the sum of the two O C P and P C H' also equal to a right angle, if the common angle O C P be taken from each of these sums, there will remain the angle ECO equal to the angle PCH'; that is, the altitude of the pole equal to the latitude of the place of observation. Again, the angle E C H', which is the complement of EC O, is evidently the inclination of the equator to the horizon of the observer at O ; and consequently the altitude of the equator at any place is equal to the complement of the latitude of that place. All that is necessary, therefore, to find the latitude, is, to ascertain the height of the equator, and subtract it from 90°. The easiest method of accomplish-ing this is to observe the meridian altitude of a heavenly body, and reduce it to the true altitude by the corrections already explained ; and then either by adding the declination to this altitude, or by subtracting it from it, as circumstances require, the height of the equator will be ob-LATITUDE.

tained. That is, if the sun pass the meridian The following example will show the applica-south of the observer's zenith, add the declination tion of these precepts. — Suppose the altitude of when it is south, and subtract it when north; the sun'« lower limb, when he passed the meri-but if he pass the meridian on the north of that dian south of the observer, on the 9th of May

1818, was found to be 46° 32*; what was the

latitude of the place ?

zenith, subtract his declination when south, and add it when north.

Observed altitude of Sun's lower limb Sun's semidiameter, 9th May, add

Observed altitude of Sun's centre Refraction, to be subtracted

Parallax corresponding to this altitude, add

True altitude of the sun's centre Declination north, 9th May, subtract

Height of equator .

Complement. LATITUDE NORTH

The latitude may also be found, as this writer observes, from the observed altitude of a star, the declination of which is known, as the corrections for semidiameter and parallax are then unnecessary. The meridional altitude of the moon will also afford the same result ; but in this case the corrections ar? more tedious, and, from the irregularity in her motion, much greater attention is requisite to insure equal accuracy.

' Another easy method of obtaining the latitude of a place is by

observing the greatest and least altitudes of a circumpolar star ; half the sum of which is the height of the pole, or, as shown above, the latitude of the place. Let P,P, fig. 2, be the axis of the earth, HH the horizon, a and b the greatest and least heights of a circumpolar star ; then, as this star describes a circle about P as a centre, the arcs P a and P b are equal to each other ; H o and H b are its two altitudes in these positions : hence H P — J (Ha + H6). Now,, when Ha and H6 are found by observation, the heights of the pole H P, and consequently the latitude of the place, is known. If half the difference of the two altitudes be

Greatest observed altitude . Refraction to he subtracted

True altitude of the star Least observed altitude Refraction answering to this altitude

True altitude of the star Greatest altitude of the same star

Sum of their altitudes

LATITUDE of the place

It is also evident that if half the difference of the two altitudes, which is 15° 15′ 37″, be added to the less altitude 36° 17′ 2″, or subtracted from the greater, 66° 48′ 16″, their sum or difference will be 51° 32’ 39’, wnich is the same as before.’ — Myers’s Geography. Introduction.

LATITUDES, INCREASING, is a name for the enlarged parts of the meridian in the construction

46 32 0

0 15 51

46 47 51

0 0 54

46 46 57 006

46 47 3

17 16 18

29 30 45

60 29 15

added to the less, or subtracted from the greater

altitude, the result will also be the same ; for

Fig. 2.

GL

H6 + 6P or Ha — aP is evidently equal to HP. Example. — Suppose the greatest altitude of a circumpolar star was observed to be 66° 48’ 40’, and its least 36° 18’ 20’ ; required the latitude of the place of observation.

o • *

66 48 40 0 0 24

66 48 16

36 18 20

0 1 18

36 17 2 66 48 16

103 5 18

half sum 51 32 39

of MerCator’s Chart; arid these are also frequently styled meridional parts. Tables of them are accurately calculated, and are of great utility in the construction and use of these maps. The following table shows the lengths which ought to oe given to the degrees of latitude, in charts of this kind, answering to the corresponding increase in the

longitude. It will be sufficient for

LAT

60-2

LAT

common purposes ; but, when the length is required for every minute of the quadrant, Robertson's Navigation, or any of the published tables, may be consulted.

TABLE.

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2

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48

3291

71

6146

3

180

26

1616

49

3382

72

6335

4

240

27

1684

50

3474

73

6534

5

300

28

1751

51

3569

74

6746

6

361

29

1819

52

3655

75

6970

7

421

30

1888

53

3764

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7210

8

482

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1958

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5179

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13917

20

1225

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2863

66

5323

89

16300

21

1289

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2946

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5474

22

1354

45

3030

68

5631

LATIUM, in ancient geography, the country of the Latins, at first contained within very nar-row bounds, but afterwards increased by the accession of various people. The appellation, according to Virgil, is derived from latendo, concealing, from Saturn's lying hid there from the hostile pursuits of his son Jupiter; and from Latium comes the name Latini, the people; though Dionysius Halicarnassaeus derives it from king Latinus, who reigned about the time of the Trojan war. But, whatever be in this, it is certain that Latium, when under ./Eneas and his descendants, or the Alban kings, contained only the Latins, exclusive of the JEqui, Volsci, and Hernici ; only that *Eneas reckoned the Rutuli, after their conquest, among the Latins. And this constituted the ancient Latium confined to the Latins : but afterwards, under the kings, and after their time, it reached from the Tiber to Circeii. Under the consuls the country of the* Equi, Volsci, Hernici, &c., after long and bloody wars, was added to Latium, under the appellation adjectitious or superadded Latium, as far as the river Liris, the eastern boundary, and to the north as far as the Marsi and Sabines. The various people, which in succession occupied Latium, were the Aborigines, the Pelasgi, the Arcades, the Siculi, the Arunci, the Rutuli ; and, beyond Circeii, the Volsci, the Osci, the Ausones : but the time and order in which they occupied the country are difficult to determine.

LATMUS, in ancient geography, a mountain of Ionia, or on the confines of Caria, famous for the fable of Endymion, of whom Diana was said ' to be enamoured : hence called Latmius Heros, and Latmius Venator. In the mountain was a cave in which Endymion dwelt. (Scholiast on Apollonius Rhodius). It is supposed by Heca-taeus to be the Phtheiron MODS of Homer ; bu* by Strabo to be Graius *Mons.*

LATOMIA properly signifies a stone quarry : but the places whence

stones had been dug having been made use of sometimes for dungeons, jails, or places for criminals, it is often applied as a name for a prison. There was a place of confinement of this sort at Rome, near the Tullianum ; another at Syracuse, in which, according to Cicero, Verres shut up Roman citizens.

LATONA, in mythology, a pagan goddess, whose history is very obscure. Hesiod makes her the daughter of the Titan Coe'us, and Phoebe his sister. She was admired for her beauty, and beloved by Jupiter. Juno, always jealous of her husband's amours, made Latona the object of her vengeance, and sent the serpent Python to persecute her. Latona wandered from place to place in the time of her pregnancy, continually alarmed for fear of Python. She was driven from heaven ; and Terra, influenced by Juno, refused to give her a place where she might rest and bring forth. Neptune, moved with compassion, struck with his trident, and made immoveable the island of Delos, which before wandered in the .ff/gean Sea, appearing sometimes above and sometimes below the surface. Latona, changed into a quail by Jupiter, came to Delos ; where she resumed her original shape, and gave birth to Apollo and Diana, leaning against a palm tree or an olive. Her repose was of short duration ; Juno discovered her retreat, and obliged her to fly from Delos. She wandered over the greatest part of the world ; and in Caria, where her fatigue compelled her to stop, she was insulted and ridiculed by the peasants, of whom she asked for water while they were weeding a marsh. ' Their refusal and insolence provoked her, and she intreated Jupiter to punish their barbarity, who changed them all into frogs. She was also insulted by Niobe, who boasted herself greater than the mother of Apollo and Diana, and ridiculed the presents which the piety of her neighbours had offered to Latona. See NIOBE. At last Latona, though persecuted by Juno, became a powerful deity, and saw her children receive divine honors. Her worship was generally established where her children received adoration ; particularly at Argos, De-los, &c., where she had temples. She had an oracle in Egypt, celebrated for the true and decisive answers which it gave. Latona, Venus, and Diana, were the three goddesses most in veneration among the Roman women.

LATOPOLIS, an ancient town of Egypt, so called from the fish Latus, which Strabo tells us the inhabitants worshipped as well as Minerva.

LATRANT, adj. Lat. latrans. Barking. Thy care be first the various gifts to trace,

The minds and genius of the latrant race.

Tichell.

LATRIA. Fr. latrie. ; Gr. Xarpiia; Lat. Jctria. The highest kind of worship ; distinguished by the papists from dulia, or inferior worship.

The image of the cross they worship with divine

honour. For in the very pontifical, published by

the authority of pope Clement VIII., these words are found, The legat's cross must be on the right hand, because latria or divine honour is due to it.

Bishop Taylor.

LATRIA, in theology, is that religious worship due only to God. The Romanists say, ' They honor God with the worship of latria, and the saints with the worship of dulia : but the terms, however distinct, are usually confounded. See however, on this point, the foregoing extract from Bishop Taylor. Mr. Daille seems to own that some of the fathers of the fourth century allowed the distinction between latria and dulia. See ADORATION.

LATRUNCULI, a game amongst the Ro-mans, of much the same nature with our chess. The latrunculi were properly the chess-men, called also latrones and calculi. They were made of glass, and distinguished by black and white colors. Sometimes they were made of wax or other convenient substances. Some give the invention of this game to Palamasdes when at the siege of Troy ; Seneca attributes it to Chilon, one of the seven Grecian sages ; others honor Pyrrhus with the invention ; and others again contend that it is of Persian origin. Frequent allusions to this game are met with in the Roman classics, and a little poem was written upon it, addressed to Piso, which some

say was the work of Ovid, others of Lucan, in the end of some editions of whose works it is to be found, and to which we refer for a fuller account of the game This game expresses so well the chance and order of war, that it is, with great appearance of probability, attributed to some military officer as the inventor. One Cnseus Julius was so exceedingly fond of chess, that after he was sentenced to death by Caligula, he was found playing, and, on being interrupted in his game by a call to execution, he obeyed the summons, but first desired the centurion who brought the fatal order, to bear witness that he had one man upon the board more than his antagonist, that he might not falsely brag of victory when he should be no more!

LATTALATTA, an island adjacent to Gilolo, in the Eastern seas, about twenty-five miles in circumference. It is divided from that of Tappa by a strait only about a mile and a half in length, and in some places not above forty yards broad. Between Lattalatta anil Mandioly the strait is about eight miles across. Long. 126° 50’ E., lat. 0° 20’ S.

LATTEN, n.s. Fr. kton; Belg. latoen; Ital. lattone. ; Welsh, luttwn. Brass ; a mixture of copper and calaminaris stone.

And hise feet lyk to latottn as in a brenynge chymney. Wicliffe. Apoc. 1.

To make lampblack, take a torch or link, and hold it under the bottom of a latten bason, and, as it groweth black within, strike it with a feather into some shell. Peacham.

LATTF.X, in the manufacture?, is a term used

for iron plates tinned over, of which cannistera, &c., are made. Plates of iron being prepared p{ a proper thinness are smoothed by rusting them in an acid, with which they fill certain troughs, and then put in the plates, which they turn once or twice a-day, that they may be equally rusted over. After this they are taken out, and well scoured with sand ; and, to prevent their rusting again, are immediately plunged into pure water, in which they are to be left till the instant they are to be tinned or blanched ; the manner of doing which is this : they flux the tin in a large iron crucible, which has the figure of an oblong pyramid with four faces. The crucible is heated only from below, its upper part being luted with the furnace all round. It is always deeper than the plates which are to be tinned are long; they plunge them in, and the tin ought to swim over them; for this purpose

artificers of different trades prepare plates of different shapes, though M. Reaumur thinks them all exceptionable. But the Germans use no sort of preparation of the iron to make it receive the tin, more than the keeping it always steeped in water till the time ; only, when the tin is melted in the crucible, they cover it with a layer of a sort of fryed suet, which is usually two inches thick, and the plate must pass through this before it can come to the melted tin. The first use of this covering is to keep the tin from burning ; for, if any part should take fire, the suet would soon moisten it, and reduce it to its primitive state again. The blanchers say, this suet is a compounded matter. The melted tin must also have a certain degree of heat : for, if it is not hot enough, it will not stick to the iron ; and, if it is too hot, it will cover it with too thin a coat, and the plates will have several colors, as red, blue, and purple, and upon the whole will have a cast of yellow. To prevent this, by knowing when the fire has a pro-per degree of heat, they might try with small pieces of iron ; but, in general, habit teaches them to know the degree, and they put in the iron when the tin is at a different standard of heat, according as they would give it a thicker or thinner coat. Sometimes also they give the plates a double layer, as they would have them very thickly covered. This they do by dipping them into the tin when very hot the first time, and when less hot the second. The tin which is to give -the second coat must be fresh covered with suet ; and that with the common suet ; not trie prepared.

LATTICE, n.s. Fr. lattis ; written by Ju-nius lettice, and derived from lertierin, a hindring iron, or iron stop ; but by Skinner more probably imagined to be derived from lath.

The mother of Sisera looked out at a window, and cried through the lattice. Judges v. 28.

My good window of lattice, fare thee well ; thy casement I reed not open, I look through thee.

Shahtpeare.

Up into the watch-tower get, And see all things despoil'd of fallacies : Thou shall not peep through lattices of eyes, Nor hear through labyrinths of ears, nor learn By circuit or collections to discern. Donng.

The trembling leaves through which he played. Dappling the walk with light and shade,

oO-l

LAV

I.flce lattte windows, give the spy Room hut to peep with half an eye. Cleaveland. No bliss has life to boast, till death can give

Far greater. Life's a debtor to the grave ;

Dark lattice! letting in eternal day. Young.

While her young hand,

Fair as the moonlight of which it seems part,

So delicately white, it trembles in

The act of opening the forbidden lattice,

To let in love through music, makes his heart

Thrill like his lyre-strings at the sight. Byron.

LATTIMO, in the glass trade, a name for a fine milk-white glass. There are several ways of making it, but the best of all is this : take 4 cwt. of crystal frit, and 60 Ibs. of calcined tin, and 2J Ibs. of prepared manganese: mix these well with the frit, and set tliem in a pot in a furnace to melt and refine. At the end of eighteen hours this will be purified ; then cast it into water, purify it again afterwards in the furnace, and make a proof of it. If it be too clear, add 15 Ibs. more of calcined tin; mix it well with the metal, and let it stand one day to purify ; it will then be of a whiteness surpassing even that of snow, and fit to work into vessels.

LATUS, in ichthyology, a fish of the coracinus or umbra kind, caught in the Nile, the Adriatic, and the Mediterranean. It resembles the coracinus, but is larger, wants the beard, 11 nd its body is rounder. It is esteemed very delicate.

LA'VA. Lat. lavo. See LAVE. The fused substance that flows from volcanoes.

Nymphs ! your fine forms with steps impassive

mock

Earth's vaulted roofs of adamantine rock ; Round her still centre tread the burning soil, And watch the billowy lavas, as they boil. Darwin.

LAVA. See VOLCANO.

LAVAL, a considerable walled town in the north of France, the capital of the department of the Mayenne. It is situated on the river of that name. It has two castles, five churches, and three hospitals, with a modern monastery of the order of La Trappe. The linen manufacture is carried on to great extent ; and that of serge, flannel, and cotton. Population 15,200. Fifteen miles south of Mayenne, and forty west of Le Mans.

LAVANDULA, lavender: a genus of the angiospermia order, and didynamia class of plants : natural order forty-second, verticillatae : CAL. ovate, and a little dentated, supported by a bracten or floral leaf : COR. is resupinated ; the stamina within the tube.

1. L. dentata, the dentate-leaved staechas, hath a woody stalk, branching on every side three or four feet high ; leaves deeply indented in a pinnated manner; and the branches terminated by scaly four-cornered spikes of flowers, appearing most part of summer.

2. L. spica, the lavender spike, hath a short shrubby stalk, rising two or three feet high ; small spear-shaped entire leaves ; and from the ends of the branches, numerous, long, erect, naked spikes of small ringent flowers, of different co-lors in the varieties. The varieties of this are common narrow-leaved lavender, with blue flowers, and with white flowers; broad-leaved lavender ; dwarf lavender : all of them flowering

in July. This species is the common lavender ; but the narrow-leaved variety, with blue flowers, is the sort usually cultivated for its flowers, for medicine, &c.

3. L. stoechas, or French la/ender, hath a shrubby fery branchy stalk, rising two or three feet high ; very narrow, spear-shaped, pointed,

hoary leaves, opposite ; and all the branches terminated by short bushy spikes of purple flowers in June and July ; succeeded by seeds in August. There is a variety with white flowers. All the sorts t're propagated plentifully by slips or cuttings of their young shoots in spring. In March or April take off a quantity of slips or cuttings, from three or four to six inches long ,- strip'off the under leaves; then plant them in ;i shady border, four inches asunder ; give a good watering, repeat it occasionally in dry weather, and the plants will be well rooted in summer, and each become a good plant, fit to be transplanted into any place early in autumn, that is, September or October; removing them, if possible, with balls of earth; and, if intended to plant them for use, set them in rows two or three feet asunder, and two feet distance in each row: if any are designed for the shrubbery they should be stationed singly at good distances near the front. The dentata species, being tender, should be potted to move to shelter in winter. The lavandula stoechas is also often raised from seed, sown in March or April, in a bed of light earth. The last two species are proper both for the kitchengarden, for medicinal and other family uses, and to plant in the pleasure ground to adorn the front of small shrubbery compartments, where they will increase the variety very agreeably; and are finely scented aromaties, both when growing, and their flowers when gathered. The flowers of this species are gathered for use in July, which being the time of their perfection, cut off the spikes close in a dry day, and tie them in small bunches for use. These and the summits are in a very eminent degree cephalic and nervine. They are given in palsies, vertigos, lethargies, tremors, and suppression of the menstrual evacuation. The compound spirit distilled from them is famous in these and many similar cases. The distilled oil is particularly celebrated for destroying the pediculi iuguinales, and other cutaneous insects.

LAVATER (John Caspar), the celebrated physiognomist, was born at Zurich, in 1740. He studied theology, but without making himself master of the learned languages, which he often afterwards regretted. lie was first appointed preacher to the Orphan House, and afterwards, in 1778, deacon and pastor of the principal church of St. Peter at Zurich, in which office he continued till his death. His peculiar religious tenets are to be found in his various works : particularly in his View of Immortality ; his Pocket Bible ; his Messiah; his Pontius Pilate ; his Treatise on Miracles ; his Sermons on the Existence of the Devil ; his Visions ; and his Observations on important Passages in the Evangelists. For a long time he kept a journal, of which above fifty copies were made out, and sent to his principal partisans abroad, who dispersed copies of them among their friends. The

evangelical doctrine and duty of brotherly love were always the chief subjects of these apostolical epistles. In the midst of these various labors, he found time to compose his Treatise on Physiognomy, a work which has rendered his name universally known throughout Europe and America. The opinions and theory which he published were a medley of judicious observations, ingenious conjectures, and fanciful reveries. The novelty as well as mystery of the subject greatly attracted at first the public attention, and every person was eager to learn to read his neighbour's heart in his face. In Switzerland, Germany, France, Britain, and North America, vast numbers became passionate admirers of his theory. His books were multiplied in many editions, and repeated translations : and the mania is to this day far from being extinct. While the Helvetians were trembling under the oppressions of the French proconsuls, Ilapinat, Schaumburg, and their associates, who tyrannised over the brave Swiss, Lavater wrote his celebrated Appeal to the French Government, and preached the rights of his countrymen, even while the sword of vengeance was hanging over him: nor did he desist, till -he was torn from his congregation, as a preacher of sedition and anarchy. He was first sent to Schaffhausen as a hostage, but returned soon after, without any interruption, through the French army. His death happened in consequence of some wounds which he received from a Swiss soldier, when Zurich was taken from the Austrians and Russians, by general Massena, in autumn 1799.

LAVATERA, in botany, a genus of the polyandria order, and polydelphia class of plants : natural order thirty-seventh, columniferae : exterior CAL. double and trifid ; the arilli or seed-coats are very many and monospermous. There are several species, most of them herbaceous flowery annuals, or shrubby perennials, growing erect from two or three, to eight or ten feet high, garnished with large roundish, heartshaped, and angular leaves, and quinquepetalous flowers of the mallow kind. They are easily propagated by seed in the open ground in the spring ; and thrive best when they are sown where they are designed to remain. The lavatera tribe affect a warm sandy situation and soil, in which they will sometimes continue to exhibit their beauties for many years ; but in general they are short-lived, continuing only two or three years ; this renders them peculiarly eligible to be scattered plentifully in a newly made shrubbery ; they will add warmth to young plants, and will die away themselves before the spaces they occupy will oe required by the surrounding shrubs.

LAVATORY, or LAVADERO, a name given to certain places in Chili and Peru, where gold is obtained from the earth by washing.

LAUBAN, or LUBAN, a manufacturing town of Prussia, in Upper Lusatia, on the Queis. Of late its woollen manufactures are declined, and those of cotton and linen have the chief attention. Here is a central school, a house of correction, a foundling-hospital, and a convent. Across the river are dye-works and bleachfields. Inhabitants 5000. Sixty-two miles north of Dresden, and seventy-two N. N. E of Prague.

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LAU

LAUD, n. s. & v. a. LAUD'ABLE, adj.

LAUD'ABLY, adv. Brate.

-\ Lat. lavs, kudo, tlaudabilti. Praise to < God or man : to laud J is to praise or celc-

And the honour they did to the laurir Is for by it they have ther land wholly, fher triumph eke and martial glory, Which unto them is more perfite richesse, Than any wight man can or gesse. Chaucer.

I'm in this earthly world, where to do harm Is often laudable ; but to do good, sometime Accounted dangerous folly. Shahspeare. Macbeth. We have certain hymns and services, which we say daily of laud and thanks to God for his marvellous works. Bacon.

In the book of Psalms, the lauds make up a very great part of it. Government of the Tongue.

The holy Apostle doth recommend to us ; — carefully to perform

things good and laudable, eschewing whatever is bad or culpable. Barrow.

Obsolete words may be laudably revived when either they are sounding or significant. Dryden. Affectation endeavours to correct natural defects, and has always the laudable aim of pleasing, though it always misses it. Locke

Good blood, and a due projectile motion or circulation, are necessary to convert the aliment into laudable animal juices. Arbvthnot.

O thou almighty and eternal Creator, having considered the heavens the work of thy fingers, the moon and the stars which thou hast ordained, with all the company of heaven, we laud and magnify thy glorious name. lientley.

Doubtless, O guest, great laud and praise were

mine,

Replied the swain, for spotless faith divine : If, after social rites, and gifts bestowed, I stained my hospitable hearth with blood. P,pe.

Their example will not only be your motive to laudable pursuits, but a mirror to your mind.

Mason.

LAUD (William), archbishop of Canterbury, in the seventeenth century, was born at Reading iu 1573, and educated at St. John's College, Oxford, of which he was afterwards a fellow. In 1610 he entered into orders. In 1611 he was elected president of St. John's College ; and, his election being disputed, king James confirmed it. The same year .he was sworn the king's chaplain. In 1621 he was nominated bishop of St. David's; and in 1628 bishop of London. In 1 630 he was elected chancellor of the University of Oxford. In 1633 he attended the king into Scotland, and was sworn a privy counsellor of that kingdom. In the same year he succeeded archbishop Abbot in the see of Canterbury ; and soon after came out the king's declaration concerning lawful sports on Sundays, which the archbishop was* charged with having revived and enlarged, and also with the vexatious prosecutions of such clergymen as refused to read it in their churches. In 1634-5 he was in the committee of Trade and the King's Revenue; on the 4th of March following he was appointed one of the Commissioners of Treasury; and on the 6th of March, 1635-6, he received the staff of lord High Treasurer. To prevent the printing and

publishing of what he thought improper books, he procured a decree to be passed in the star-chamber, on the llth

of July, 1637, whereby it was enjoined that the master-printers should be reduced to a certain number, and that none of them should print any books till they were licensed, either by the archbishop, or the bishop of London, or some of their chaplains, or by the chancellors or vice-chan- cellors of the universities. A new parliament being summoned met on the 13th April, 1640; and the convocation on the day following; but the commons launching out into complaints against the archbishop, and insisting upon a redress of grievances before they granted any supply, the parliament was dissolved on the 7th of May. The convocation, however, continued sitting ; and made seventeen cantons, which were supposed to be formed under the immediate direction of the archbishop. In the beginning of the long parliament he was attacked on account of those canons ; and they being condemned by the house of commons on the 16th of December, 1640, 'as containing many things contrary to the king's prerogative, to the fundamental laws and statutes of this realm, to the rights of parliament, to the property and liberty of the subject, and tending to sedition, and of dangerous consequence ;' he was, on the 18th of December, accused by the commons of high treason, and sent to the Tower. Being tried before the house of lords, for endeavouring to subvert the laws, and to overthrow the Protestant religion, he was found guilty, and beheaded on Tower Hill on January 10th following, in the seventy-second year of his age. This learned prelate, notwithstanding his being charged with a design to bring in popery, wrote an answer to Dr. Fisher, which is esteemed one of the best pieces that has been printed against that religion. When he was privately offered a cardinal's hat by the pope, he refused it, saying, that ' something dwelt within him which would not suffer his compliance, till Rome was other than it is.' He was temperate in his diet, and regular in his private life; but his fondness for introducing new ceremonies, in which he showed an indiscreet zeal, his encouraging various sports on Sundays, his illegal and cruel severity

in the star-chamber and high commission courts, and the fury with which he persecuted the dissenters, and all who presumed to contradict his sentiments, exposed him to deserved popular hatred. Besides his Answer to Fisher, he published seve-lal Sermons, and other works.

LAUDANUM. See OPIUM.

LAUDATIO, in a legal sense, was anciently the testimony delivered in court of the accused person's good behaviour and integrity of life. It resembled the custom which prevails in our trials, of calling persons to speak to the character of the prisoner. The least number of the laudatores amongst the Romans was ten.

LAUDER, an ancient royal borough in a parish of the same name, lately much improved. In the reiffn of king James III. the nobility, whom lie had summoned to meet him in this town, on public business, seized his favorite minister, Sir Robert Cochran, whom he had raised from the rank of a common mason to be earl of Mar, and huns him, with his associates, over Lauder Bridge, in sight of the king and his army. Lau-

der has five fairs, and joins with Jedburgh, Had* dington, Dunbar, and North Berwick, in electing a representative in the imperial parliament. It is twenty-five miles south of Edinburgh, and twenty-four west of Berwick.

LAUDER (William), a native of Scotland, edu cated at the university of Edinburgh, where he finished his studies with great reputation. In 1739 he published, at Edinburgh, an edition of Johnstons Psalms. In 1742 he was recommended by Messrs. Cuming and Maclaurin, professors of ecclesiastical history and mathematics, to the mastership of the grammar school At Dundee, then vacant. Whether he succeeded in the application or not is uncertain ; but a few years afterwards he figured in London, where he endeavoured to ruin the reputation of Milton ; an attempt which ended in the destruction of his own. His reasons for the attack probably sprung from the virulence of a violent party spirit, which triumphed over every principle of honor and honesty. He commenced his nefarious operations in The Gentleman's Magazine, 1747; and, finding that his forgeries were not detected, was encouraged in 1751 to collect them, with additions, into a volume, entitled, An Essay on Milton's Use and Imitation of the Moderns in his Paradise Lost, 8vo. ; the object of which was to prove that our great

bard had pirated in that work the thoughts and expressions of certain modern Latin poets. The fidelity of his quotations had been doubted by several people ; and the falsehood of them was soon after exhibited by Dr. Douglas, bishop of Salisbury, in a pamphlet entitled Milton vindicated from the Charge of Plagiarism brought against him by Lauder, and Lauder himself convicted of several Forgeries and gross Impositions on the Public: Jn a Letter humbly addressed to the Right Honorable the Earl of Bath, 1751, 8vo. The appearance of this detection overwhelmed Lauder with confusion. It was demonstrated that this adventurer had thrust into his pretended extracts, from the works of Massenius, Taubmannus, &c., whole lines of a bad Latin translation of Milton's work ; and then quoted them against the poet. He subscribed a confession, dictated by a learned friend, wherein he ingenuously acknowledged his offence. He afterwards imputed his conduct to various motives ; abused the few friends who continued to countenance him ; and, finding that his character was not to be retrieved, quitted the kingdom, and went to Barbadoes, where he some time kept a school. His behaviour there was mean and despicable ; and he passed the remainder of his life in universal contempt. He died about the year 1771.

LAUDICCENI, amongst the Romans, ap-plauders who for reward entered the rehearsal rooms, attended the repetition of plays, and were in waiting when orations were pronounced, in order to raise or increase the acclamation and applause.

LAUDOHN (Gideon), baron de, a celebrated general in the imperial service, born in 1716, was a native of Livonia. He made his first campaigns under marshal Munich, in the wai of 1738, between the Russians and Turks; and was at the taking of Oczakow, Choczim, and

Stawutzchane, where the Turks were entirely defeated. Frederick the

Great refused, in 1741, to take young Laudohn into his service, saying he did not like his countenance : he afterwards was compelled to acknowledge that, though he often admired the position of other generals, he had ever dreaded the battles of Laudohn. In 1756 he entered into the service of the house of Austria, with the rank of lieutenant-colonel, and made such a rapid progress, that within less than a year he was a general of artillery, and, within three years, commander in chief of the whole army. He rescued Olmutz, when besieged by the Prussians ; beat the king himself at Frankfort on the Oder; at Zorndorf, took general Fouquet prisoner ; carried Glatz and Schweidnitz by assault, and stopped the progress of Frederick in a war which might otherwise have proved fatal to the house of Austria. In 1778, when elevated to the rank of marshal, at the head of 60,000 men he prevented Henry, brother to the king of Prussia, from joining his army to that of the king. At Dubicza, Novi, Gradisca, and Belgrade, in the war between the emperor and the Turks, lie had but to present himself before the place, and say with Caesar, Veni, vidi, vici. But at his head-quarters in Moravia he was seized with a fever, in consequence of an operation he underwent for an obstruction in the urethra. His impatience under the medical applications, the impetuous ardor of his character, and the knowledge, above all, of his importance in the war, contributed to irritate his mind, and promote the violence of the fever. He resisted the application of cataplasms, before and after the incisions were made, with a fatal obstinacy, which raised the inflammation to such a height, that he expired under the accession of the fever on the 14th of July, 1790, in the seventy-fourth year of his age.

LAVE, v. a. & v. n.~\ Fr. lover and lavoir;

LAVA'TION, n. s. (Lat. lavo. To wash;

LAVA'TORY, n. s. £ bathe; lade or throw

LA'VER. J up water : a lavation is

the act of washing : lavatory, a wash or a washing vessel : and laver is used wholly in the latter sense.

Unsafe, that we must law our honours

In these so flatt'ring streams. Shakspeare.

Though hills were set on hills, And seas met seas to guard thee, I would through : I'd plough up rocks, steep as the Alps in dust, And lave the Tyrrhene waters into clouds, . But I would reach thy head.

Ben Jonson.

Such filthy stuff was by loose lewd varlets sung before the chariot on the solemn day of her lavation.

Hakewill.

Lavatories, to wash the temples, hands, wrists, and jugulars, do potently profligate, and keep off the venom. Harvey.

But as I rose out of the laving stream. Heaven opened her eternal doors, from whence The spirit descended on me like a dove. Milton.

Let us go find the body where it lies Soaked in his enemies' blood, and from the stream With Livers pure, and cleansing herbs, wash off ,The clodded gore. Id. Agonistet.

With roomy decks, her guns of mighty strength, Whose low-laid mouths each mounting billow Oaves.

Deep in her draught, and warlike in her length, She seems a sea-wasp flying on the waves.

Dry den.

Some stow their oars, or stop the leaky sides. Another bolder yet the yard bestrides, And folds the sails ; a fourth with labour laves The intruding seas, and waves ejects on waves.

Id.

In her chaste current oft the goddess laves, And with celestial tears augments the waves.

Pope.

Young Aretus from forth his bridal bower Brought the full laver o'er their hands to pour.

Id. Odystey. Fill high the bowl with Samian wine.

Our virgins dance beneath the shade — I see their glorious black eyes shine ; But, gazing on each glowing maid, My own the burning tear-drop laves, To think such breasts must suckle slaves.

Byron.

LAVEER', v. n. From VEER, which see. To change the direction often in a course.

How easy 'tis, when destiny proves kind, With full-spread sails to run before the wind : But those that 'gainst stiff gales luveering go, Must be at once resolved, and skilful too.

Dry den.

LAUENBURG, a duchy of north Germany, on the right bank of the Elbe ; and, since 1815, belonging to Denmark. It has 425 square miles of undulating plain, and a soil, on the whole, well cultivated. It is watered by the Elbe, Steckenitz, and Trave ; and has the two lakes of Schall and Ratzeburg, and the extensive forest of Sachsenwald. The inhabitants, who are in num-ber 35,000, have a carrying trade in timber between the Elbe and the Baltic. This duchy was formerly independent ; but on the extinction of the ducal family, in 1689, its possessions lapsed to the house of Hanover, and consisted, at that period, of the province just described, and a territory on the left bank of the Elbe. The latter, in 1815, was united with Luneburg ; and the rest of the duchy ceded to Prussia, who soon after transferred it to Denmark. The inhabitants are Lutherans.

Lauenburg, the capital, stands on a rising ground, between the Elbe and the Steckenitz. Here is a toll on the Elbe, which produces an annual revenue of between £7000 and £8000 ; and the trade of the town is respectable. Population 2200. Thirty-five miles E. S.E. of Hamburgh.

LAVENDER, n. s. Lat. lavandula. A plant.

And then again he turneth to his play, To spoil the pleasures of that paradise ;

The wholesome sage, and lavender still grey, Rank smelling rue, and cummin good for eyes.

Spenter.

The whole lavender plant has a highly aromatick smell and taste, and is famous as a cephalick, nervous, and uterine medicine. Hill.

LAVENDER. See LAVANDULA.

LAVENDER COTTON. See SANTOLINA.

LAVENDER, SEA. See STATICE.

LAVERNA, in antiquity, the goddess of thieves and cheats among the Romans, who honored her with public worship, because she was supposed to favor those who wished that

their designs might not be discovered. Varro says that she had an altar near one of the gates of Rome ; hence called porta lavernalis.

LAUGH, v. n.,v. a. & re. S.N Sax. hlanan ; LA UGH' ABLE, adj. i Goth, hlaja,

LAUGH'ER, n. t. \hlcea to rejoice;

LAUCH'INGLV, adv. f Teut. and Belg.

LAUGH'INGSTOCK, 1 Indian. Min—

LAUGH'TER. -' sheu says with

some probability from Heb. JJ75?. To make the noise of sudden merriment, or that sudden mirth excites ; to appear gay : to laugh at is to treat as only fit for laughter, or contemptuously; as an active verb, to deride ; scorn : laugh, as a noun, is the convulsion caused by mirth : laughable, causing or fit to excite laughter : laughing-stock, a butt for ridicule : laughter, convulsion or noisy mirth.

Woo to you that now leyghen for ye schulen raourne and wepe. Wiclif. Luk 6.

A wicked soul shall make him to be laughed to scorn of his enemies.

Ecclus. vi. 4.

The forlorn maiden, whom your eyes have seen

The laughing-stock of fortune's mockerie. Spenser.

You saw my master wink and laugh upon you.

Shakspeare. There's one did laugh in's sleep, and one cried,

Murther ! They waked each other. Id.

Twere belter for you, if 'twere not known in council ; you'll be laughed at. Shakspeare.

Be bloody, bold, and resolute : laugh to scorn The power of man. Id. Macbeth.

Nature hath framed strange fellows in her time : Some that will ever more peep through their eye, And laugh like parrots at a bagpiper ; And others of such vinegar aspect, That they'll not show their teeth in way of smile, Though Nestor swear the jest be laughable.

Shakspeare.

I am a common laugher. Id.

Pray you, let us not be laughing-stocks to other men's humours. Id.

Laughing causeth a continued expulsion of the breath with the loud noise, which inaketh the interjection of laughing, shaking of the breast and sides, running of the eyes with water, if it be violent.

Bacon't Natural History. Some say that laughter here Keeps residence, but laughter fits not there, Where darkness ever dwells, and melancholy fear.

Fletcher's Purple Island.

Abraham heard this news from the angel, and laughed ; Sarah heard it and laughed ; Abraham laughed for joy ; Sarah for distrust. Bp. Hall.

The act of laughter, which is a sweet contraction of the muscles of the face, and a pleasant agitation of the vocal organs, is not merely voluntary, or totally within the jurisdiction of ourselves.

Browne.

We find not that the laughter -\o\ng dame Mourned for Anchises. Waller.

Then laughs the childish year with flowrets crowned.

Dryden.

Casaubon confesses Persius was not good at turning things into a pleasant ridicule ; or, in other words, that he was not a laughable writer. Id.

Supine credulous frailty exposes a man to be both a prey and laughing-stock at once. L' Estrange.

The dissolute and abandoned, before they are aware of it, are betrayjd to laugh at themselves, and upon reflection find that they are merry at their own expence. iddison.

[n order to look into any person's temper, I generally make my first observations upon his laugh, whether he is easily moved, and what are the passages which throw him into that agreeable kind of convulsion. Steele.

Pain or pleasure, grief or laughter. Prior.

That mind is dissolute and ungoverned, which must be hurried out of i self by loud laughter or sensual pleasure, or else be wholly inactive. Steele. The plenteous board, high-heaped with cates di-vine, And o'er the foaming oowl the laughing wine.

Pope.

No wit to flatter left of all his store ; No fool to laugh at, which he valued more. Id.

Me gentle Delia beckons from the plain, Then hid in shades, eludes her eager swain ; But feigns a laugh, to see me search around. Id. Some sober men cannot be of the general opinion but the laughers are much the majority. Id.

A reserved man is in a continual conflict with the social part of his nature, and even grudges himself the laugh into which he is sometimes betrayed.

Siienttone.

Democritus, who was always laughing, lived one hundred and nine years ; Heraclitus, who never ceased crying, only sixty. Laughing then is best ; and to laugh at one another is perfectly justifiable, since we are told that the gods themselves, though they made us as they pleased, cannot help laughing at us.

Sleevens.

Each dimpling cheek with warmer blushes dyes, Laughs on the lips, and lightens in the eyes.

Darwin.

Dainties he heeded not, nor gaude, nor toy Save one short pipe of rudest minstrelsy : Silent when glad ; affectionate, though shy ; And now his look was most demurely sad ; And now he laughed aloud, yet none knew why.

Seattle.

The last of human sounds which rose, As I was darted from my foes, Was the wild shout of savage laughter, Which on the wind came roaring after.

Byron.

LAUGHTER is an affection peculiar to mankind. In laughter the eyebrows are raised about the middle, and drawn down next the nose; the eyes are almost shut ; the mouth opens and shows the teeth, the corners of the mouth being drawn back and raised up; the cheeks seem puffed up, and almost hide the eyes; the face is usually red ; the nostrils are open ; and the eyes wet.

Authors attribute laughter to the fifth pair of nerves, which sending branches to the eye, ear, lips, tongue, palate, and muscles of the cheek, parts of the mouth, pracordia, &c., there hence arises a sympathy, or consent, between all these parts ; so that when one of them is acted upon the others are proportionally affected . Hence a thing seen or smelt affects the glands, and parts of the mouth ; a thing seen or heard, that is shameful, affects the cheeks with blushes : on the contrary, if it please and tickle the fancy, it affects the pracorclia, and muscles of the mruth and face with laughter ; if it cause sadness and melancholy, it likewise affects the precordia. and demonstrates itself by causing the glands of the eyes to emit tears. The affection of the mind by which laughter is produced is seemingly so very different from the other passions with which we are endowed, that it has

engaged

the attention ot very eminent persons. 1. Aristotle, in the fifth chapter of his Poetics, observes of comedy, that ‘ it imitates those vices or meannesses only which partake of the ridiculous : — now the ridiculous’, adds he, ‘consists of some fault or turpitude not attended with great pain, and not destructive.’ 2. ‘ The passion of laughter,’ says Hobbes, ‘is nothing else but sudden glory arising from some conception of some eminency in ourselves, by comparison with the infirmity of others, or with our own formerly. For men,’ continues he, ‘ laugh at the follies of themselves past, when they come suddenly to remembrance, except when they bring with them any sudden dishonor.’ 3. Akenside, in the third book of his excellent poem, treats of ridicule at considerable length. He gives a detail of ridiculous characters ; ignorant pretenders to learning, boastful soldiers, and lying travellers, hypocritical churchmen, conceited politicians, &c. Having finished the detail of characters, he makes some general remarks on the cause of ridicule ; and explains himself more fully in a prose definition, illustrated by examples, in these words : * That which makes objects ridiculous is some ground of admiration or esteem connected with other more general circumstances comparatively worthless or deformed : or it is some circumstance of turpitude or deformity connected with what is in general excellent or beautiful ; the inconsistent properties existing either in the objects themselves, or in the apprehension of the person to whom they relate ; belonging always to the same order or class of beings ; implying sentiment and design, and exciting no acute or vehement commotion of the heart.’ 4. Hutche-son has given another account of this ludicrous quality, and seems to think that it is the contrast or opposition of dignity and meanness which occasions laughter.

LAUGIER (Mark Antony), an ingenious French author of the

eighteenth century. He wrote, 1. An Essay on Architecture ; 2. A History of Venice; 3. A History of the Peace of Belgrade. He died in 1769.

LAUGIERIA, in botany, a genus of the monogynia order, and pentandria class of plants: COR. is quinquefid : FRUIT, a plum, with a quinquelocular kernel, Species five, all natives of the south of Europe.

LAVINIUM, orLAViNUM, in ancient geography, a town of Latium, six miles east of Laurentum, so named from Lavinia, and built by the Trojans : the first town of Roman original in Latium, and the seat or the Dii Penates (Livy), situated near the river Numicus, between which and the Tiber .Ssneas landed, according to Virgil. Holstenius supposes the town to have stood on an eminence, now called Mount Levano.

LAVISH, adj. & r.a.ˆ Old Fr. laver, to

LAV'ISHER, n.s. I dabble, throw about:

LAV'ISHLY, adv. \or from lave as Dr.

LAV'ISHMENT, n.s. i Johnson suggests.

LAV'ISHNESS. J Wasteful ; profligate ;

profuse, liberal to excess; unrestrained : to lavish is to scatter with profusion, squander.

First got with guile, and then preserved with dread, And after spent with pride and lavishness.

Faerie Queene.

Bellana's bridegroom, lapt in proof, Confronted him, curbing his lavish spirit.

Skaktptart.

My father's purposes have been mistook ; And some about him have too lavishly Wrested his meaning and authority. Id.

His jolly brother, opposite in sense, Laughs at his thrift; and, lavish of expence, Quaffs, crams, and guttles, in his own defence.

Dry den. Then laughs the childish year with flowreU

crowned, And lavishly perfumes the fields around. Id.

If we consider lavish men carefully, we shall find it always proceeds from a certain incapacity of possessing themselves, and finding enjoyment in their own minds. Spectator.

Should we thus lead them to a field of slaughter, Might not the impartial world with reason say, We lavished at our deaths the blood of thousands ?

Atlduon.

The dame has been too lavish of her feast, And fed him till he loaths. Roue's Jane Shore. Praise to a wit is like rain to a tender flower ; if it be moderately bestowed, it cheers and revives ; but, if too lavisltly, overcharges and depresses him.

Pope.

But has the cause been truly stated 1 Have not lamentation and wonder been lavished on an evil that was never felt. Johnson.

Let us not then be so lavish, so unjust, as not to pay this debt ; by spending some part, at least, if we cannot all or most, of our time and care upon that which has not the most indefeasible claim to it.

Mason.

Yes — from afar a landscape seems to rise,

Deckt gorgeous by the lavish hand of Spring : Thin gilded clouds float light along the skies, And laughing loves disport on fluttering wing.

Eeattie.

There youth, which needed not, nor thought of such Vain adjuncts, lavished its true bloom, and health, And bridal beauty, in the unwholesome Dress Of flushed and crowded wassailers, and wasted Its hours of rest in dreaming this was pleasure.

Byron.

LAUNCESTON, the capital of Cornwall, called also Dunhivid, from its situation on a down. King Henry III. made it a free borough. It was formerly composed of two other boroughs, *viz.* Dunhivid and Newport.

It was incorpo rated by queen Mary I. in 1555. It is governed by a mayor, recorder, and eight aldermen ; has a free-school, founded by queen Elizabeth, and now returns one member. Its markets are on Thursday and Saturday, and it has four fairs. The chaoel, which was enlarged in the reign of Henry VI., and converted into a parish church, was rebuilt in the time of Henry VIII. It is a handsome Gothic building, with a lofty tower, and stands near the centre of the town. On the side of one of the walls is a fine figure of St. Mary Magdalen, in a recumbent position. Here is a handsome meeting-house of the Methodists. It had a monastery and a noble cas”e, which, because of its strength, was called Castle Terrible, and was given by king Richard I. to lus brother, afterwards king John. The lower part of its ancient castle is used for the gaol. It is seated on the Tamar, twenty-eight miles north of Plymouth, and 214 west by south of London.

LAUNCH, v.n. & v. a. Skinner says from «ince, because a ship is pushed into water with great force. To cast a ship into water ; to push to sea : hence to expatiate ; rove ; cast from the hand.

Launch out into the deep, and let down your nets for a draught. Luke v. 4.

From hence that general care and study springs, That launching and progression of the mind.

Davideis.

All art is used to sink episcopacy, and launch presbytery in England. King Charles. So short a stay prevails ;

He soon equips the ship, supplies the sails,

And gives the word to launch. Dryden.

The King of Heaven, obscure on high, Bared his red arm, and launching from the sky His writhen bolt, not shaking empty smoke, Down to the deep abyss the flaming fellow strook.

Id.

For general history, Raleigh and Howel are to be had. He who would launch further into the ocean, may consult Whear. Locke.

Spenser has not contented himself with submissive ‘nutation : he launches out into very flowery paths, which still conduct him into one great road, Prior.

I have launched out of my subject on this article.

Arbuthnot.

With stays and cordage last he rigged the ship, And rolled on leavers, launched her in the deep.

Pope.

He had not acted in the character of a suppli-ant, if he had launched out into a long oration.

Broome.

They little thought, that day of pain, When launched, as on the lightning’s flash, They bade me to destruction dash,

That one day I should come again, With twice five thousand horse, to thank The count for his uncourteous ride. Byron.

LAUND, n. s. Fr. lande ; Welsh lawn. Lawn ; a plain extended between woods.

Under this thick-grown brake we’ll shroud ourselves, For through this laund anon the deer will come.

Shakspeare.

LAUNDER, in mineralogy, a name given in Devonshire, and other places, to a long and shallow trough, which receives the powdered ore after it conies out of the box or coffer, which is a soit of mortar, in which it is powdered with iron pestles. The powdered ore, which is washed into the launder by the water from the coffer, is always finest nearest the grate, and coarser all the way down.

LAUN'DRESS, n. s.) Fr. lavandiere ; Ital.

LAUN'DRY. $ lavandera. Skinner

thinks that lavandaresse may have been the old word. A woman whose employment is to wash clothes : laundry, a room for washing clothes.

Take up these clothes here quickly ; carry them to the laundress in Datchet Mead. Shakspeare.

The countess of Richmond would often say, On condition the princes of Christendom would march against the Turks, she would willingly attend them, ami be their laundress. Camden.

C'halky water is too fretting, as appeareth in laundry of cloaths, which wear out apace. Bacon.

The* IHIIIK! rets must be sure to tear her smocks in the washing, and yet wash them but half. Swift.

The affairs of the family ought to be consulted, whether they concern the stable, dairy, the pantry, or lutind.ni. Id.

LAUNOI, DE, or LAUNOIUS (John), D. D., a learned French divine, born in 1691. Instead of seeking ecclesiastical preferment, he refused several good benefices, and devoted his time chiefly to church history. In pursuit of this study he visited Rome, where he acquired the esteem and friendship of Leo Allatius and Holstenius. He was a zealous defender of the liberties of the Gallican church; and wrote against legends and canonisations. His works make several large folio volumes. He lived in primitive simplicity, and died in 1678.

LAVOISIER (Anthony Laurence), the celebrated chemist, and one of the most eminent men of the eighteenth century, was born at Paris August 16th, 1743. Being of a noble family, he received a very liberal education, which he improved by the most unremitted industry. In his twenty-third year, on the 9th of April, 1766, the Academy of Sciences presented him with a gold medal, for his Dissertation on the best mode of enlightening the streets of a great city during the night. In 1768 he was admitted a member of that learned society, to whose service he chiefly devoted his scientific labors, and became one of its most active and useful associates. In these exertions his attention was successfully occupied with every branch of physical and mathematical

science. The analysis of gypsum, the crystallisation of salts, the supposed conversion of water into earth, the effects produced by the grande deloupe of the garden of the infanta, the congelation of water, the project of bringing water from the Yvette to Paris, the phenomena of thunder and lightning, of the aurora boreal is, of electricity, mineralogy, and various other important objects of experimental science, gave constant employment to the genius and talents of this great chemist. Journeys, in concert with M. Guettard, through every province of France, enabled him to procure numerous materials for a proper description and arrangement of the various genera and species in the mineral kingdom. These he arranged into a kind of chart, which served as a groundwork for a more laborious work on the Revolutions of the Globe, and the formation of Couches de la Terre ; a work of which two beautiful sketches are to be seen in the Memoirs of the French Academy for 1772 and 1787. All his time and fortune were devoted to the culture of the sciences in general, nor did he seem to have an attachment to one science more than to another, till the investigations of Black, Priestley, and Cavendish, into the nature and properties of the gases, opened a new sphere for the exertions of genus ; and, when Mr. Cavendish arrived in France, Lavoisier repeated and varied their experiments in every possible manner. In the end of 1755 he presented to the Academy his first chemical work, entitled New Experiments relative to the Existence of a fixed elastic fluid in certain substances, and to the phenomena which result from its fixation or disengagement. This came out in Paris just about the same time that Dr. Priestley's treatise on the different species of air appeared at London; and, though it may be considered rather as a syllabus or outline than a complete treatise, yet it was executed with so much perspicuity, and

his processes were described in it with so much exactness and accuracy, that it surpassed every former publication of the kind.

Lavoisier now began to hold in his house philosophical assemblies, to which he invited every literary character celebrated in geometrical, chemical, or physical investigations. In these instructive conversations, discussions were regularly held, similar to those that preceded the first establishment of academies ; the opinions of the most eminent literati in Europe were canvassed, the most new and striking passages in the works of foreign authors were quoted and discussed, and modern theories were investigated and tried by the touchstone of experiment. To these assemblies the literati of all nations found a ready admission ; and Priestley, Watt, Bolton, Blagden, Fontana, Jacquin, Ingenhousz, Landriani, and other illustrious physiologists of Great Britain, Germany, and Italy, mingled in company with Berthollet, Monge, Borda, Cousin, Laplace, Lagrange, Guyton, Meunier, and Vandermonde. Thus Lavoisier became the founder of the French chemical school. This school, in which every individual was both tutor and pupil, lasted from 1776 to 1792 ; but the period when it flourished in its greatest vigor was between 1780 and 1788. Ancient and baseless theories were exploded, and the ideal doctrine of phlogiston vanished before the decisive proofs of experiment. In the twenty volumes published by the Academy of Sciences, between 1773 and 1793, there are forty memoirs by Lavoisier, replete with all the most important phenomena of the science. At last, in 1789, he published his Elements of Chemistry, which presented the science in a form entirely new, and completely distinguished the discoveries and improvements of Lavoisier from those of Dr. Priestley, and former chemists. This virtuous and truly great man could not, however, escape the bloody fangs of revolutionary violence. After having been repeatedly elected by his fel-low-citizens a member of the national Assembly and National Convention, and a commissioner of the National Treasury, Sec., he was falsely accused of being an accomplice in a plot to favor the success of the enemies of the republic ; and, being brought before the revolutionary tribunal, was condemned to be guillotined. The bloody sentence was executed on the 9th of May 1794, to the regret of every friend to virtue, science, and humanity : his prosecutors, with barbarity worse than Gothic, refusing to allow him the respite of fourteen days to finish some important experiments in chemistry. See CHEMISTRY.

LAVOLTA. Fr. lavolt. An old dance. I cannot sing,

Nor heel the high lavolt ; nor sweeten talk ;

Nor play at subtle games. Sltakspeare.

LAVORO, TERRA DI, a considerable province of the north-west part of Naples, bordered by the Tuscan Sea on the south-west, the Campagna di Itoma on the north-west, and on the east and south by other provinces of the Neapolitan territory; about 1720 square miles in superficial extent. It has a rich soil ; towards the coast the country is level ; but in the interior it is penetrated by various branches of the Appenines. Its rivers are the Gang! iano, the Vokurno.and the

Clanio. It contains also the lakes Fondi, Ar-gano, Lucrino, Fusano, and Licalo. Here is made the famous lachrymae Christi wine.

LAURA, in church history, a collection of small cells at some distance from each other, in which the hermits in ancient times lived together in a wilderness. These hermits did not live in community, but each monk provided for himselt in his distinct cell. The most celebrated lauras mentioned in ecclesiastical history were in Palestine : as the laura of St. Euthymus, at four or five leagues distance from Jerusalem ; the laura of St. Saba, near the brook Cedron ; the laura oi the Towers, near the river Jordan, &c.

LAURA, the celebrated mistress of Petrarch was born in 1310, at Avignon, and married to Hugh de Sades. See PETRARCH. She died ot the plague in 1348, aged thirty-eight.

LAUREATE, or POET LAUREATE, an officer of the household of the kings of Britain. — Of the first institution of poets laureate, Wharton in his History of English Poetry has ghen the following account : ‘ Great confusion has entered into this subject, on account of the degrees in grammar, which included rhetoric and versification, anciently taken in our universities, particularly at Oxford : on which occasion, a wreath of laurel was presented to the new graduate, who was afterwards usually styled Poeta laureatus. These scholastic laureations, however, seem to have given rise to the appellation in question. I will give some instances at Oxford, which at the same time will explain the nature of the studies for which our academical philologists received their rewards. About the year 1470 one John Watson, a student in grammar, obtained a concession to be graduated and laureated in that science; on condition that he composed 100 Latin verses in praise of the university, and a Latin comedy. Another grammarian Was distinguished with the same badge, after having stipulated, that, at the next public act, he would affix the same number of hexameters on the great gates of St. Mary’s church, that they might be seen by the whole university. This was at that period

the most convenient mode of publication. About the same time one Maurice Byrchensaw, a scholar in rhetoric, supplicated to be admitted to read lectures, that is, to take a degree in that faculty ; and his petition was granted, with a provision, that he should write 100 verses on the glory of the university, and not suffer Ovid's Art of Love, and the Elegies of Pamphilius, to be studied in auditory. Not long afterwards, one John Balman, another rhetorician, having complied with the terms imposed, of explaining the first book of Tully's Offices, and likewise the first of his Epistles, without any pecuniary emolument, was graduated in rhetoric; and a crown of laurel was publicly placed on his head by the chancellor of the university. About the year 1489, Skelton was laureated at Oxford, and in the year 1493 was permitted to wear his laurel at Cambridge. Robert Whittington affords the last instance of a rhetorical degree at Oxford. He was a secular priest, and eminent for his various treatises in grammar, and for bis facility in Latin poetry ; having exercised his art many years, and submitting to the customary demand

of 100 verses, he was honored with the laurel in the year 1512. With regard to the poet laureate of the kings of England, he is undoubtedly the same that is styled the king's versifier, and to whom 100 shillings were paid as his annual stipend in the year 1251. But when or how that title commenced, and whether this officer was ever solemnly crowned with laurel at his first investiture, I will not pretend to determine, after the researches of the learned Selden on this question nave proved unsuccessful. It seems most probable, that the barbarous and inglorious name of versifier gradually gave way to an appellation of more elegance and dignity : or rather, that at length those only were in general invited to this appointment who had received academical sanction, arid had merited a crown of laurel in the universities for their abilities in Latin composition, particularly Latin versification. Thus the king's laureate was nothing more than ' a graduated rhetorician employed in the service of the king.' That he originally wrote in Latin, appears from the ancient title versificator : and may be moreover collected from the two Latin poems, which Bastonand Gulielmus, who appear to have respectively acted in the capacity of royal poets to Richard I. and Edward II., officially composed on Richard's crusade, and Edward's siege of Striveling Castle. And Bernard, successively poet-laureate of Henry VII. and VIII. affords a still stronger proof that this officer was a Latin scholar. Bernard was a native of Thoulouse and an Augustine monk. He was

not only the king's poet laureate, as is supposed, but his historiographer, and preceptor in grammar to orince Arthur. He obtained many ecclesiastical preferments in England. All the pieces now to be found in character of poet laureate are in Latin. These are, An Address to Henry VIII., for the most auspicious beginning of the tenth year of his reisjn, with an Epithalamium on the marriage of Francis the dauphin of France with the king's daughter; A New Year's Gift for the year 1515 ; and, Verses wishing prosperity to his majesty's thirteenth year. He has left some Latin hymns ; and many of his prose pieces, which he wrote in t.ne quality of historiographer to both monarchs, are remaining. I am of opinion that it was not customary for the royal laureate to write in English till the reformation of religion had begun to diminish the verreration for the Latin language ; or, rather, till the love of novelty, and a better sense of things, had banished the narrow pedantries of monastic erudition, and taught us to cultivate our native language.'

LAU'REL, n. s. ~\ Fr. laurier ; Ital. lauro ;

LAU'REATE, adj. (Span, lauriero ; Port, lau—

LAUREA'TION,W.S. f rero, a tree. See LAURUS.

LAU'REATFD, adj. 3 Laureate is decked with laurel, or pertaining to the poet so decked, or styled poet laureate : laureation, the act or state of taking degrees in a Scottish university : laurelled, crowned with laurels.

And whanne this worthy due had thus ydon, ' He toke his host, and home he rit anon,' vVith laurer crouned as a conquerour, And thcr he liveth in joye and in honour Terme of his lif. Chaucer. Cant. Tales.

The laurel, rceed of mighty conquerors,

And poets sage. Faerie Queen.

Hearest thou the news ? my friend ! the express is

come With laurelled letters from the camp to Rome.

Dryden,

Bid Amaranthus all his beauty shed, And daffodillies fill their caps with tears, To strew the laureate hearse where Lycid lies.

Miltmi.

The laurel or cherry-bay, by cutting away the sid« branches, will rise to a large tree. Mortimer.

The laurels or laurel of the ancients is affirmed by naturalists to be what we call the bay tree.

Ainsworth.

Then future ages with delight shall see How Plato's, Bacon's, Newton's, looks agree ; Or in fair series laurelled bards be shown, A Virgil there, and here an Addison. Pope.

Soft on her lap her laureate son reclines. Id.

If endless ages can outweigh an hour, Let not the laurel, but the palm inspire.

Young.

The beacons of surrounding foes — A king must lay his limbs at length,

Are these the laurels and repose, For which the nations strain their strength ?

Byron.

And being fluent — save indeed when fed ill — He lied with such a fervour of invention — There was no doubt he earned his laureat pension.

Id.

LAUREL, See LAURUS, and PRUNUS.

LAUREL, ALEXANDRIAN. See Ruscus.

LAUREL, SEA SIDE. See PHYLLANTHUS.

LAUREL MOUNTAINS a ridge of mountains in the United States, extending from North Carolina to Pennsylvania, and forming part of the great range called the Alleghany Mountains. They lie west of the

Alleghany ridge, and several head-waters of the Ohio rise among them. In one of them, about lat. 36°, there is a spring of water remarkably cold, and as blue as indigo. The Great Kanhaway breaks through them in its way to the Ohio, in long. 81° 19' W., lat. 38° 30' N.

LAURELS, pieces of gold coined in the year 1619, with the king's head laureated, which gave them the name of laurels ; the 20s. pieces whereof were marked with XX., the 10s. X: and 5.s. pieces with V.

LAURENCE (St.), a river of North America. See LAWRENCE (St.).

LAURENS CASTRA. See LAURENTUM. ,

LAURENT, or ST. LAURENT, an island of South America, near the coast of Peru, at the entrance of the harbour of Callao.

LAURENTALES, LAURENTALIA, or LAREN-TALIA, called also Larentinalia, and Larentales, feasts celebrated among the Romans on the tenth of the kalends of January or 23d of December, in memory of Acca Laurentia, wife of the shepherd Faustulus, and nurse of Romulus and Remus. Acca Laurentia, from whom the solemnity took its name, is represented as no less remarkable for the beauty of her person, than her lasciviousness ; on account of which she was nicknamed by her neighbours lupa, the she wolf; which has given rise to the tradition of Romulus and Remus being suckled by a wolf. She after-terwards married a very rich man. who brought her great wealth, which, at her death, she left to the Roman people ; in consideration whereof

tlioy performed these honors to her memory, though others represent the feast as held in ho-nor of Jupiter Latiaris. SeeLARENTiNALiAand LARKS.

LAURENTIUS, (Roster), one of the first printers, and, according to some, the inrentor of the art, was born at Haerlem about 1370, and held several offices in the magistracy of lhat city. His first work was

an Horarium containing the letters of the alphabet, the Lord's prayer, the apostles' creed, and two or three short prayers ; the next was the Speculum salutis, in which he introduced pictures on wooden blocks ; then Donatus, the larger size; and afterwards the .same work in a less size. All these were printed on separate moveable wooden types fastened together by threads. It has been very erroneously supposed, that he quitted the profession, and died broken-hearted : but it is certain that he did not live to see the art brought to perfection. He died in 1440, aged seventy. His grandsons took his business and printed new editions of Donatus and the speculum. They afterwards reprinted the latter, with a Latin translation, in which they used their grandfather's wooden pictures ; and printed the book partly on wooden blocks, partly on wooden separate types, according to Mr. Meerman, who has given an exact engraving of each kind, taken from different parts of the same book, which was published between the years 1442 and 1450. Nor did they stop here : they continued to print several editions of the Speculum, both in Latin and in Dutch ; and many other works, particularly Historia Alexandri Magni : Flavii Vedatii (for Vegetii) Renati Epitome de Re Militari ; and Opera varia a Thomas a Kempis. Of each of them Meerman has given an engraved specimen. They were all printed with separate wooden types ; and, by their great neatness, are a proof that the descendants of Laurentius were industrious in improving his invention. Kempis was printed at Haerlem in 1472, and was the last known work of Laurentius's descendants, who soon after disposed of all their materials, and probably quitted their employment ; as the use of fusile types was about that time universally diffused through Holland, by the settling of Martens at AJost, where he pursued the art with reputation for upwards of sixty years. See PRINTING.

LAURENTUM, or LAURENS CASTBA, in ancient geography, a town of Latium, supposed to be the royal residence of those most ancient kings, Latinus, Picus, and Faunus. (Virgil.) Hither the emperor Commodus retired during a pestilence. Its name was from an adjoining grove of bay trees, midway between Ostia and Antium.

LAURICOCHA, Tunguragua, or False Ma-ranon, a river of South America, which has its rise in a lake of the same name near Guanuco, in 11° S. lat. It sweeps with a circular course towards Xauxa ; when, rising over the east side of the Andes, it flows northwards through Cha-chapoyas, to Jean de Bracamoros, and the Ucay-ale or Amazons, into which it falls, in lat. 4° 55' S. Its course is about 1000 miles.

LAURO (Philip\ a celebrated painter, born Vor.. XII-

in Rome in 1623. lie learned the first rudiments of the art from his father, Balthasar, who was himself a good painter. He afterwards studied under Angelo Carosello, his brother-in-law; and proved so great a proficient, that in a short time he far surpassed his tutor in design, coloring, and elegance of taste. He applied himself to painting historical subjects in a small size, enriching the back grounds with lively landscapes ; but though his small paintings are most esteemed he finished several grand compositions for altar-pieces. He died in 1694 ; and his works are eagerly purchased at high prices all over Europe. LAURO, or LAURON, in ancient geography, a town of Hispania Citra, where Cneius Pompeius, son of Pompey the Great, was defeated and slain. It is now called Lorigne, and lies fifteen miles north of Llina in Valencia.

LAURUS, the bay tree, a genus of the monogynia order, and enneandria class of plants ; natural order twelfth, holoraceae : CAL. none: COR. calycine, or serving in place of the calyx, and sexpartite ; the nectarium with three glandules, each terminated by two bristles surrounding the germen. The interior filaments furnished with glandules at the base : the fruit a monospermous plum. There are several species ; the following are the most remarkable : —

1. L. aestivalis, the deciduous bay, growing naturally in North America. It rises with an upright stem, covered with a purplish bark, having oblong, oval, acuminated, veined, deciduous leaves, two or three inches long, and half as broad, growing opposite; with small white flowers succeeded by red berries. The deciduous bay, in a moist rich soil, in which it principally delights, will grow to be about sixteen feet high ; but in some soils, that are possessed of the opposite qualities, it will hardly arrive at half that height. The flowers are succeeded in May by large red berries, which never ripen in England : so that, notwithstanding the leaves in summer are very handsome, and the color of the bark makes a variety in winter, it is principally the scarcity of this plant which makes it valuable.

•2. L. benzoina, the benzoin, or Benjamin tree, is also a native of North America ; grows fifteen or twenty feet high, divided into a very branchy head ; with oval, acute, deciduous leaves, three or four inches long, and half as broad ; and small yellowish flowers, not succeeded by berries in this country. This tree will grow to a much larger size than the preceding, and its branches are more numerous. The leaves on their upper surface are venose, and of a whitish cast. When bruised, they emit a fine fragrant smell. This tree was formerly

mistaken for that which produces the drug called benzoin ; wh.ch is now known to be obtained from a species of styrax.

3. L. camphora, the camphor tree, grows naturally in the woods of the western parts of Japan, and in the adjacent islands. The root smells stronger of camphor than any of the other parts, and yields it in greater plenty. The bark of the stalk is outwardly somewhat rough ; but in the inner surface smooth and mucous, and therefore easily separated from the wood, which is drv and of a white color. The leaves

stand upon slender foot-stalks, have an entire undulated margin, running out into a point ; have the upper surface of a lively and shining green, the lower herbaceous and silky ; and are furnished with a few lateral nerves, which stretch archwise to the circumference, and frequently terminate in small warts; a circumstance peculiar to this species of laurus. The flowers are produced on the tops of foot-stalks, which proceed from the arm-pits of the leaves ; but not till the tree has attained considerable age and size. The flower-stalks are slender, branched at the top, and divided into very short pedicles, each supporting a single flower. These flowers are white, and consist of six petals, which are succeeded by a purple and shining berry of the size of a pea, and in figure somewhat top-shaped. It is composed of a soft pulpy substance that is purple, and has the taste of cloves and camphor; and of a nucleus or kernel of the size of a pep-per, that is covered with a black, shining, oily corticle, of an insipid taste. The medicine called camphor, though solid, is the essential oil of the laurus camphora; and is obtained from it by distillation in the East Indies. The abbe Crosier informs us, that in China some of these trees are above 100 cubits in height, and so thick that twenty persons cannot enclose them. Common camphor costs only a penny the ounce at Peking; but it is inferior to that of Borneo, in the judgment even of the Chinese. The manner in which some authors have spoken of camphor, the abbe observes, gives us reason to conclude, that they

have been entirely ignorant of the process employed to ob'tain this salutary gum. The camphor does not drop to the earth like the gums of certain resinous trees, which are preserved by discharging that part of their substance which is too oily; neither does it distil from the bottom to the top of the tree through an incision made in it. The Chinese would practise this method could it be employed with success; for it is very common in China to make such kind of incision* in resinous trees ; but the camphor is obtained by boiling the branches of the tree, and then purifying the juice so extracted. See CHEMISTRY and PHARMACY.

4. L. cassia, the base cinnamon, has lanceolated leaves, triple nerved. The bark of this species is known in the shops by the name of cassia lignea! This bark, which is imported from China and different parts of the East Indies, has a very near resemblance to the cinnamon ; though distinguishable from it by being of a thicker and coarser appearance, and by its breaking short and smooth, while the cinnamon breaks fibrous and shivery. It resembles cinnamon still more exactly in its aromatic flavor, than in its external appearance : and seems only to differ from it in being somewhat weaker, in abounding more with a viscous mucilaginous matter, and in being less astringent. Accordingly, it has not only a place in the Edinburgh pharmocopoeia, but is also the basis of a distilled water.

5. L. cinnamomum, the cinnamon tree, is a native of Ceylon. It has a large root, and 'livides into several branches, covered with a

bark, which on the outer side is of a grayish-brown, and on the inside has a reddish cast The wood of the root is hard, white, and has no smell. The body of the tree, which grows to the height of twenty or thirty feet, is covered, as well as its numerous branches, with a bark which at first is green, and afterwards red. The leaf is longer and narrower than the common bay tree : and it is three-nerved, the nerves vanishing towards the top. The flowers are small and white, and grow in large bunches at the extremity ot the branches ; they have an agreeable smell, something like that of the lily of the valley. The fruit is shaped like an acorn, but is not so large. This species may be treated like the greenhouse plants, but it is rather a stove plant in this country. As the tree puts out numerous side branches, with a dense foliage, from the very bottom of the trunk ; this furnishes an opportunity of obtaining plenty of layers, and facilitates the propagation of the tree, as it does not perfect its seeds in any quantity under six or seven years ; when it becomes so plentifully loaded, that

a single tree is sufficient almost for a colony. It seems to delight in a loose moist soil, and to require a southern aspect ; the trees, thus planted, flourishing better than others growing in loam, and not so well exposed to the sun. When healthy, it is (from layers) of a pretty quick growth, reaching in eight years, the height of fifteen or twenty feet, is very spreading, and furnished with numerous branches, of a size fit for decortication. The seeds, however, are a long time in coming up, and the plants make small progress for the first year or two. ‘ The birds appear to be very fond of the berries, and will probably propagate this tree in the same way they do many others every where over the island; so that in a short time it will grow spontaneously, or without cultivation.’ Cinnamon is the under bark of the cinnamomum. The best season for separating it from the outer bark, which is gray and rugged, is the spring, when the sap flows in the greatest abundance. It is cut into thin slices, and exposed to the sun, and curls up in drying. The old trees produce a coarse kind of cinnamon ; the spice is in perfection in the island of Ceylon, when the trees are not older than three or four years. When the trunk has been stripped of its bark, it receives no further nourishment ; but the root is still alive, and continues to throw out fresh shoots. The fruit of the tree is shaped like an acorn, but is not so large. Its seed, when boiled in water, yields an oil which swims at top, and takes fire. If left to cool, it hardens into a white substance, of which candles are made, which have an agreeable smell. The cinnamon is not reckoned excellent, unless it be fine, smooth, brittle, thin, and of a yellow color inclining to red; fragrant, aromatic, and of a poignant, yet agreeable taste. The connoisseurs give the preference to that of which the pieces are long, but slender. That which comes to us is generally mixed with the cassia bark ; but this last is easily distinguished. Cinnamon splinters in breaking, and has a roughness with its aromatic flavor ; while the cassia breaks smooth, and has a mucilaginous taste. CinnaL

mon is a very elegant and useful aromatic, more grateful both to the palate and stomach than most other substances of this class. By its astringent quality it likewise corroborates the viscera, and proves of great service in several kinds of alvine fluxes, and immoderate discharges from the uterus. ‘ The best cinnamon tark is taken from the small branches, of about an inch diameter, the larger limbs not being

so easily decorticated, and not yielding so good or so strong a cinnamon. The smaller twigs, or those that have not acquired a cineritious bark, are too full of sap and mucilage, and have little aroma. It is the liber, or inner bark, that constitutes the cinnamon; from which the two external barks must be carefully and entirely separated, or they vitiate the flavor of the cinnamon ; to do which with dexterity, and to raise the bark from the wood, requires some practice. The bark being separated, the smaller pieces are to be placed within the larger ; which, by exposure to the sun or the air, presently coil up, and require no further preparation. A dry season is the proper one for taking the bark ; as it is found to be weakened after long or heavy rains. Cinnamon, though more retentive of its virtues than any of the other spices, yet requires to be protected, when taken, from the air and moisture, by close packing in cedar chests. The leaves of this tree, whether recent or dried, are so strongly impregnated with an aroma, as to afford a good succedaneum for the bark, both in cookery and medicine. Distilled, they give an excellent simple and spirituous water, and an essential oil. Powdered, they are a good aromatic spice, or mareschal perfume.'

L. nobilis, the evergreen bay tree, is a native of Italy, and has an upright trunk, branching on every side from the bottom upward; with spear-shaped, nervous, stiff, evergreen leaves, three inches long, and two broad ; and small, yellowish, quadrifid, dioecious flowers, succeeded by red berries in autumn and winter. Of this species there are varieties, with broad, narrow, striped, or waved leaves. They are propagated by layers, or by the berries. Evelyn says, he has seen bay trees nearly thirty feet high, and al-most two feet in diameter; and enumerates the bay amongst useful trees. Hanbury tells us, that ' it will grow to thirty feet in height, with a trunk of two feet in diameter ;' and accordingly he arranges it amongst his forest trees : he acknowledges, however, at the same time, that the wood is of little value. The bay is nevertheless a fine aromatic, and a beautiful evergreen. It is said to be the true laurus of the ancients, with which they adorned the brows of their successful generals. Like the holly, box, and laurel, the bay will bear the shade and drip of taller trees ; and it is upon the whole a very desirable evergreen, being extremely ornamental. The leaves and berries have a moderately strong aromatic smell, and a warm, bitterish, pungent taste ; the berries are stronger in both respects than the leaves, and afford in distillation a larger quantity of essential aromatic oil ; they yield also an almost insipid oil to the press, in consequence of which they prove unctuous in the mouth. They are warm carminatives, and sometimes prescribed with this intention against flatulent cholics, and in hysterical disorders.

Their principal use in the present practice is in glys-ters, and some external applications.

L. persea, the avocado pear tree, or alligator pear, rises to a considerable height, with a straight trunk, of which the bark and wood are of a grayish color. The leaves are long, oval, pointed, of a substance like leather, and of a beautiful green color. The flowers are produced in large knots or clusters at the extremities o/ the branches, and consist each of six petals disposed in the form of a star, and of a dirty white or yellow color, with an agreeable odor, vyhich diffuses itself to a considerable distance It -is a native of the West Indies. It begins U bear two years and a half, or at most three years, after being planted ; and, like most of the trees in warm climates, bears twice a year. This species, with the camphor and cinnamon require the treatment common to greenhouse plants. The persea is cultivated universally in the West Indies by all ranks of people. The fruit is pear-shaped, and from one to two pounds in weight. On removing a green skin or covering, a yellow butyraceous substance appears ; and in the heart a large round seed or stone, which is unequal in the surface, and exceedingly hard and woody. This fruit is ripe in August and September, and constitutes one of the most agreeable articles of diet for six or eight weeks to the negroes. These pears, with a little salt and a plantain or two, afford a hearty meal. They are also served up at the tables of the planters as choice fruit. When the pear is ripe, the yellow or eatable substance is firmer than butter, and tastes somewhat like butter or mar-row : hence it is called by some the vegetable marrow. But, however excellent this fruit is when ripe, it is very dangerous when pulled and eaten before maturity. The leaves of this tree and those of the bead vine or wild liquorice are made into pectoral decoctions by the common people. The large stone is used for marking linen. The cloth is tied or held over the stone, and the letters are pricked out by a needle through the cloth and into the seed. The stain is a reddish brown, which never washes out.

L. sassafras, is a native of North America. It has a shrub-like straight stem, garnished with both oval and three-lobed, shining, deciduous leaves, of different sizes, from three to six inches long, and nearly as broad, with ‘small yellowish flowers, succeeded by blackish berries ; but not in this country. This species, as well as the sestivalis and benzoin, may be propagated — 1. By the seeds; 2. By layers; but by this me-thod they will be two, three, or even four years, before they have struck out good roots ; though the Benjamin tree is propagated fastest by this method ; 3. By suckers, which they will at all times throw out, and which may be often taken off with pretty eood roots ; 4. Cuttings, when planted in a good bark bed, and duly watered, will

also often grow. When this method is practised, and plants obtained, they must be inured by degrees to the open air, til' they are hardy enough to be finally planted out. The sassafras will grow to nearly the height of the

deciduous bay and benzoin, though the branches are not so numerous. Its bark is smooth, and of a red color, which beautifully distinguishes it in winter: whilst the fine shining green of its leaves constitutes its greatest beauty in summer. In these, indeed, there is a variety, and a very extraordinary one. Some are large, and of an oval figure ; others are smaller, and of the same shape ; whilst others again are so divided into three lobes as to resemble the leaves of some sorts of the fig-tree. In America, the sassafras generally stands single in the woods, and along the fences round the fields. It flowers in May before the leaves come out; and, being entirely covered with them, it is distinguished at a great distance by their beautilul yellow color. The root has a fragrant smell, and a sweetish, aromatic, subacrid taste; the bark tastes much stronger than any other part, and the small twigs stronger than the large pieces. It is a warm aperient and corroborant, and frequently employed with success for purifying and sweeten-ing the blood and juices. Sassafras yields in distillation an extremely fragrant oil of a penetrating pungent taste, so ponderous notwithstanding the lightness of the drug itself as to sink in water. Rectified spirit extracts the whole taste and smell of sassafras, and elevates 110-thing in evaporation : hence the spirituous extract proves the most elegant and efficacious preparation, as containing the virtue of the root entire. The bark is used in Pennsylvania and other parts of North America for dyeing worsted a fine lasting orange color, which does not fade in the sun. They use urine instead of alum in dyeing ; and boil the dye in a brass boiler, because in an iron vessel it does not yield so fine a color. The wood is made use of for posts belonging to enclosures, for it is sard to last a long time in the ground : but it is likewise said, that there is hardly any kind of wood which is more attacked by worms

than this, when it is exposed to the air without cover ; and that in a short time it is quite worm-eaten through and through. On cutting some part of the sassafras tree, or its shoots, and holding it to the nose, it has a strong but pleasant smell. Some people peel the root, and boil the peel with their beer wnile brewing. Others put the peel into brandy, either whilst it is distilling or after it is made.

LAUS, or LAOS, in ancient geography, a river of Italy, separating Lucania from the Bruttii, and running from east to west into the Tuscan Sea ; with a cognominal bay, and a town, the last of Lucania, a little above the sea ; a colony from Sybaris, according to Strabo, Pliny, and Stephanus. Both town and river are now called Laino, in Calabria Citra; and the bay, Golfo della Scalea.

LAUS POMPEIA, in ancient geography, a town of Insubria, situated to the east of Milan, between the rivers Addua and Lamber. It was built by the Boii after they passed the Alps : its ancient Gallic name is unknown. Strabo Pompeius, father of Pompey, leading thither a colony, gave it a new name, and conferred the Jus Latii on the ancient inhabitants who remained there. The mo-dern Lodi is built from its ruins, at some distance. LAUSANNE, a beautiful town of Switzerland,

the capital of the canton of the Pays de Vaud, is situated on three eminences, about a nr.:le north of the lake of Geneva. The streets of course are steep and irregular ; but the Gothic cathedral crowning one of the eminences has been much admired. Little trade is carried on, and the only manufactures are jewellery and silversmiths' work. Other objects deserving attention are the chateau, an old edifice, the arsenal, the town house, the hospital, the charity school, and the riding and drawing schools. Here are also some good libraries and cabinets. Lausanne has long had claims to literary distinction. Since 1536 its academy has boasted various distinguished scholars, as Beza and Barbeyrac. Classics and divinity are the chief objects of study: there is also a professorship of law, and of natural and moral philosophy. In 1808 an improved form was given to this institution. Exclusive of the academy there also existed at Lausanne, after the revocation of the edict of Nantes, a seminary for the education of the French Protestant clergy, but since 1809 this has been discontinued. The French language is very well spoken here. Haller and Voltaire passed some years at Lausanne ; and Gibbon, from 1783 to 1793, composed the chief part of his history here. Since 1814 it has been much visited by our countrymen. Strangers are still generally accommodated at pensions or boarding houses, in the manner described by Gibbon. The

climate, though cold in winter, is thought healthy; and nothing can exceed in richness the prospect from the high tower of the cathedral. About a mile to the westward of Lausanne was a Roman station, Lausomum, of which fragments of buildings, bricks, coins, &c., have been at different times discovered. There are also the remains of a Roman road to the east, in the Chemin d'Estras, Via strata. Lausanne was long an appendage to the canton of Bern, but always had a separate constitution : the French in 1798 first incorporated it with the new canton of Vaud. It is forty-one miles south-west of Bern.

LAW (Edmund), D. D., bishop of Carlisle, was born in the parish of Cartmel in Lancashire A. D. 1703. His father, who was a clergyman, held a chapel in Cartmel. He was educated first at Cartmel, afterwards at Ke/idal, and completed his studies at St. John's College, Cambridge. Soon after taking his first degree he was elected fellow of Christ's College. During his residence there he published a translation of archbishop King's Essay upon the Origin of Evil, with copious notes; in which many metaphysical subjects are treated with great ingenuity and learning. To this work was prefixed, as a preliminary dissertation, a valuable piece, by the Rev. Mr. Gay of Sidney College, of whom Dr. Law had a high opinion. At this time he also prepared for the press an edition of Stephens's Thesaurus. In the year 1737 he was presented to the rectory of Graystock in Cumberland, worth £300 a-year. Soon after this he married Mary the daughter of John Christian, Esq. of Unerigg in Cumberland ; and was promoted by the bishop of Carlisle to the archdeaconry of that diocese: in 1746 he went ro reside at SaU

keld, on the Eden, where he published Considerations on the Theory of Religi)n , to which were subjoined Reflections on the Life and Character of Christ; and an appandix concerning the use of the words Soul and Spirit in Holy Scripture, and the state of the dead there described. In 1754 he took his degree of D. D., and in his thesis defended the doctrine of the natural mortality of the soul. In 1756 he succeeded Dr. Keene, bishop of Chester, as master of Peterhouse in Cambridge. About 1760 ne was appointed head librarian of the university ; a situation peculiarly suited to his taste. Some time after this he was also appointed casuistical professor. In 1762 he suffered an irreparable affliction by the death of his larly, who left him eleven children, many of them very young. Some years afterwards, he

received several other preferments. In 1768 the duke of Grafton recommended him to his majesty for the bishopric of Carlisle, not only without solicitation, but without his knowledge About 1777 our bishop gave to the public a handsome edition, in 3 vols. 4to., of Mr. Locke's Works, with the author's life, and a preface. About this time too he published Considerations on the Propriety of Requiring Subscriptions to Articles of Faith, and new editions of his two principal works, considerably enlarged. He held the see of Carlisle nearly nineteen years, generally spending the summer in his diocese at Rose Castle, where he died August 14th, 1787, a?ed eighty-four. His life was almost entirely devoted to metaphysical and religious enquiries. Beside the above works, he published in 1734 or 1735 a very ingenious Enquiry into the Ideas of Space, Time, &c., in which he combats the opinions of Dr. Clarke and his adherents. He was interred in his cathedral church, in which a handsome monument is erected to his memory, with a suitable inscription.

LAW (Edward;, lord Ellenborough, fourth son of Dr. Law, bishop of Carlisle, was born at Great Salkeld in Cumberland, in 1749, and educated at Cambridge. There he obtained a prize medal, given by the chancellor in 1771; and, after taking his first degree, became a student at Lincoln's Inn. Having been called to the bar, he established his reputation as leading counsel for Mr. Hastings. He was made attorney-general in 1801; and the following year he succeeded to the station of chief-justice, on which he was also made a baron. In 1806 he was a member of the whij cabinet, and held his post of chief-justice till 1818, wnen ne resigned, and died December 13th of that year. Lord Ellenborough was an able judge, but of an ardent temperament, and well inclined to support all the measures of ministers.

LAW (John), the celebrated projector, was the eldest son of a goldsmith in Edinburgh, and was born about 1681. He was eJucated for business ; but possessed great abilities, and a very fertile invention. He had the address, when but a very young man, to recommend himself to the king's ministers in Scotland to arrange the revenue accounts, which were in great disorder at the time of the union. He also laid a proposal before the Scottish parliament, for supplying the kingdom with money, by establishing a bank,

which should issue paper to the value of tli« whole landed property in the kingdom; but his plan, being thought wild, was rejected. His father dying, about 1704, Law succeeded to the small estate of Laurieston ; and became a game-ter and a man of fashion. He was tall and graceful

in his person, and commonly went by the name of Beau Law. He was forced to fly his country, however, in the midst of his career, in consequence of having fought a duel and killed his antagonist. He escaped to Holland ; thence proceeded to Venice, and wandered over Italy, studying the nature of banks, and making himself an adept in the mysteries of exchanges and re-exchanges. At the close of the reign of Louis XIV., when the French finances were in great disorder, Law having obtained an audience,,the bankrupt king was delighted by his projects ; but the minister Desmarest, menacing him with the Bastile, obliged him to fly from Paris. He next applied to Victor Amadeus, duke of Savoy, who informed him he was not rich enough to ruin himself. At the death of Louis XIV. the regent duke of Orleans, in despair, called in our numerical quack. By an arret of the 2d March, 1716, a bank was established by authority, in favor of Law and his associates ; 200,000 shares were instituted, of 1000 livres each; and Law deposited in it to the value of 2000 or 3000 crowns, which he had accumulated in Italy by gaming. Many people had at first little confidence in this bank ; but, when it was found that the payments were made with quickness and punctuality, they began to prefer its notes to ready money; in consequence of which, shares rose to more than twenty times their original value; and in 1719 their nominal value was more than eighty times the amount of all the current specie of France. Law was now created count Tankerville, Europe rang with his praise, even his calculating countrymen were beguiled into admiration of him, and his native city, humbly presenting him with her freedom, used these remarkable expressions : ‘ The city of Edinburgh presents its freedom to John Law, count of Tankerville, &c., &c., a most accomplished gentleman, the first of all bankers in Europe, the fortunate inventor of sources of commerce, in all parts of the remote world, and who has so well deserved of his nation.’ Law was in fact adored ; the proudest courtiers were reptiles before this mighty man, and dukes and duchesses patiently waited in his antichamber. But in 1720 this commercial bubble burst, and in its explosion almost overthrew the French government : it is remarkable that the same desperate game was played by the South Sea directors in England, in the same fatal year, 1720. Law being exiled as soon as the credit of his projects began to fail, retired to Venice, where he died in 1729. Montesquieu who saw him there, says, ‘ He is still the same man ; his mind ever busied in financial schemes ; his head is full of figures, of agios, and of banks. Of all his more than princely revenues, he has only saved a large white diamond, which, when he has no money, he pawns.’ The principles upon which Law’s original scheme was founded, are explained by himself in a Discourse concerning Monev and Trade, which he published in Scotland.

LAW.

LAW, n. s. “1 Sax. laja ; Goth, lalag ;

LAWFUL, ad;’. Swed. lag ; French /o»;

LAW’FULLY, adv. Span, and Port, ley; It. LAWFULNESS, n. s. kgge. Rule; decree; LAW’GIVER, edict ; statute : hence

LAW’GIVING, Vjudicial process; estab—

LAW’LBSS, adj. lished rule of any kind ;

LAW’LESSLY, adv. the science of jurispru-LAW’MAKER, n. s. dence ; theologically, the LAW’SUIT, Mosaic, as distinct from

LAW’YER. j the Christian institution :

lawgiver and lawmaker are synonymous; lawsuit is a process in the law ; a lawyer the professional conductor of it, or any professor of, or practitioner in the law. The other derivations do not seem to require explanation.

But the lawe is not of bileue, but he that doith the thingis of the lawe schal lyue in hem.

Wiclif. Gal. 3.

And lo a man that hadde a drie hond, and thei axreden him and seiden, wher it be leeful to heele in the sabot, that thei shulden accuse him.

Id. Matt. 12. It is not lawful for thee to have her.

Matth. xiv. 4.

That which doth assign unto each thing the kind, that which doth moderate the force and power, that which doth appoint the form and measure of working, the same we term a law. Hooker.

Their judgment is, that the church of Christ should admit no lawmakers but the evangelists. Id.

Is the law evil, because some lawyers in their office swerve from it “! Whitgifte.

He hath resisted law,

And therefore law shall scorn him further trial Than the severity of publick power. Shakspeare.

I dyed, whilst in the womb he stayed, Attending Nature’s law. Id. Cymbeline.

This bond is forfeit ; And lawfully by this the Jew may claim A pound of flesh. Id. Merchant of Venice. Take not the quarrel from his powerful arms, He needs no indirect nor lawless course To cut off those that have offended him.

Shakspeare.

Fear not, he bears an honourable mind, And will not use a woman lawlessly. Id.

It is like the breath of an unfee’d lawyer, you gave me nothing for it. Id. King Lear.

The necessity of war, which among human actions is the most lawless, hath some kind of affinity with the necessity of law. Ealeigh’s Essays.

It v;ere an error to speak further, till I may see some sound foundation laid of the lawfulness of the action. Bacon.

•olomon we esteem as the lawgiver of our nation.

Id.

I have entered into a work touching laws, in a middle term, between the speculative and reverend discourses of philosophers, and the writings of lawyers. Jd. Holy War.

Our nation would not give laws to the Irish, therefore now the Irish gave laws to them. Daviet. So many lairs argue so many sins. Milton.

T.aw can discover sin, but not remove, Save by these shadowy expiations. Id.

The lawless tyrant, who denies I o know their God, or message to regard, Must be compelled. Id.

Laux, if convenient and useful, are never the worse though they be desumed and taken from the laws of other countries. Hale.

Law does not put the least restraint Upon our freedom, but maintain ‘t ; Or, if it does, ‘tis for our good, To give us freer latitude ; For wholesome lau-s preserve us free, By stinting of our liberty. Butler.

Orpheus did not, as poets feign, tame savage

beasts, But men as lawless, and as wild as they.

Roicommon.

Lawgiving heroes, famed for taming brutes, And raising cities with their charming lutes.

Waller

Not lawyers at the bar play more with sense, When brought to their last trope of eloquence, Than they on every subject, great or small, At clubs or councils, at a church or ball ; Then cry we rob them of their tribute due : Alas ! how can we laugh and pity too 1

Stillingjieet's Essay on Conversation Unhappy man ! to break the pious lawi Of nature, pleading in his children's cause.

Dry den.

I may be allowed to tell your lordship, the king of poets, what an extent of power you have, and how lawfully you may exercise it. I'd.

Not the gods, nor angry Jove, will bear Thy lawless wandering walks in open air. Id. This is an inconvenience, I confess, that attends all governments whatsoever, when the governors have brought it to this pass, to be generally suspected of their people ; the most dangerous state which they can possibly put themselves in ; wherein they are the less to be pitied , because it is so easy to be avoided ; it being as impossible for a governor, if he really means the good of his people, and the preservation of them, and their laws together, not to make them see and feel it, as it is for the father of a family not to let his children see he loves, and takes care of them. Locke.

Though it be not against strict justice for a ma* to do those things which he might otherwise lawfully do, albeit his neighbour doth take occasion from thence to conceive in his mind a false belief, yet Christian charity will, in many cases, restrain a man.

South.

Tom Touchy is a fellow famous for taking the law of every body ; there is not one in the town where he lives that he has not sued at a quarter-sessions.

Addison's Spectator.

He, meteor-like, flames lawless through the void, Destroying others, by himself destroyed. Pope.

A law may be very reasonable in itself, although one does not know the reason of the lawgivers.

Swift.

Thy nymphs with scorn beheld their foes, When the defendant's council rose ; And, what no lawyer ever lacked, With impudence owned all the fact. Id.

The giving the priest a right to the tithe would produce lawsuits and wrangles ; his attendance on the courts of justice would leave his people without a spiritual guide. -W—

Laws are like cobwebs, which may catch small flies, but let wasps and hornets break through. Id

Whati > atlaw, if those who make it Become the fopwardest to break it ? Beattie,

Children ought, as far as it is necessaiy and they are able, to support their parents, and to bear with their infirmities, do every thing in their power to make their lives comfortable, receive their advice with respectful attention, and obey all their lawful commands. Beattie.

The language of the Christian lawgiver is different. The world is not worthy of the ambition of an immortal being. Its honours and pleasures have a tendency to debase the mind, and disqualify it for future happiness. Id.

And here it must be remembered, that he distribute every thing according to the exact rules of justice, and with such a due care as to prevent all lawsuits and contentions for the future. Paley.

The framers of such a bill must be content to inherit the honours of that Athenian lawgiver, whose edicts were said to be written not in ink but in blood.

Byron.

I am not speaking here of the reviled and discredited statute law only,

but of that venerable common law to which our reformers are so fond of appealing on all occasions, as well as of the statute law by which it is modified, explained, or enforced. Canning.

LAW. Upon a subject of this magnitude and importance, our first duty, perhaps, is the lucid arrangement of what we have to offer the reader. He will find, therefore, the following treatise divided into four principal parts : — I. Of the Nature of Laws in general. II. Of the Laws of the United Kingdom, England. III. Of the Laws of Scotland. IV. Of the Laws of Ireland.

PARTI.

OF THE NATURE OF LAWS IN GENERAL. SECT. I — DEFINITIONS OF LAW.

Law, in its most general signification, is the rule or principle by which all things are regulated according to their nature and constitution. In this sense, all substances and beings have their laws. The material world has its laws ; as the laws of motion and gravitation : thus, in bodies moved, the motion is received, increased, diminished, lost, according to the relations of the quantity of matter and velocity. The world itself, subsisting through so long a succession of ages, is directed by invariable laws, and without their constant operation it would inevitably perish. The brute creation has its laws : by which the individual is preserved, and the species co itinued. But, although brutes have their natural laws, they do not invariably conform to them. In this respect the vegetable world acts in stricter adherence to its innate principles ; and indeed the whole intelligent world is far from being so well governed by its laws as the physical ; for, though the laws of the former are equally invariable, it does not in the same degree obey them. This is because, on the one hand, man, though an intelligent beings is of a finite nature, and liable to error; and, on the other, his nature requires him to be a free agent. As a physical being he is, like all other bodies, governed by invariable laws ; but as an intelligent being he frequently transgresses the primitive laws established by the Author of his nature, and even those of his own instituting he frequently alters and infringes

Law, in its more remaned sense, and in which it is our present business to consider it, denotes the rules, not of action in general, but of human action or conduct ; that is, the precepts by which man is commanded to regulate his behaviour. In this sense ‘ Law ‘ is

synonymous with one of the significations of right ; for the law is that which is right, as that is right which is the law. Thus, according to Grotius, right signifies nothing more than what is just, and that more in a negative than a positive sense ; so that right is that which is not unjust. For instance, to deprive another of what belongs to him, merely for one's own advantage, is repugnant to the law of nature, as Cicero observes in his third book of Offices ; and, by way of proof, says, that, if the practice were general, all society and intercourse among men must be overturned. Florentinus, the lawyer, maintains that it is impious for one man to form designs against another, as nature has established a degree of kindness amongst us. Seneca remarks that, as all the members of the human body agree among themselves, because the preservation of each conduces to the welfare of the whole, so men should forbear from mutual injuries, as they were born for society, which cannot subsist unless all the parts of it are defended by mutual forbearance and good will.

Following the etymology of the term, as defined'by Home Tooke, right is that which is ordered, as wrong is that which is wrested from the right or ordered course. The next step in the definition is to determine by whom it has been ordered, so as to ascertain the sufficiency of the authority, and then to learn how the rule on any particular occasion is to be applied. The answer is, that the Author of nature has made the law, and reason must judge of its application, by comparing its consistency with other rules of the moral system, and observing its adaptation to the end designed, namely, the general happiness of the human race.

SECT. II. — OF THE ORIGIN OF PROPERTY AND CIVIL GOVERNMENT.

According to divine revelation, God gave to mankind in general dominion over the earth and all its creatures, from the first creation of the world. Even those who dispute this original title to property, must acknowledge the fact, that such dominion has actually existed from the earliest periods of society. All things, as Justin says, formed a common stock for all mankind, as the inheritors of one great patrimony. That is to say, the existing race were entitled to the earth, in the same manner that the immediate heir of an entailed estate is entitled to all its productions during the period of his natural life. In a rude state of society it naturally happened that every man seized to his own use or consumption whatever he met with ; a general exercise of right which supplied the place of private property. So that to deprive any one of what he had thus seized, became an act of injustice. Yet this natural right of appropriation must be exercised

under the restraint imposed by the law of benevolence, whicu is as innate a principle as the feeling of self-love, and the conse-520

quent law of self-preservation. Though we are entitled to benefit ourselves as much as possible, we are not at liberty to injure ethers ; still less to injure them needlessly. And it follows that no one could be entitled to take possession of a larger portion of unoccupied land than he really needed, or to retain so much of it as would deprive other human beings of a reasonable share in the common patrimony of mankind. If, indeed, that which was unoccupied were no more than sufficient for the use of a single family, but which could not be the case in the commencement of society, those who first took possession would have an absolute right to retain it, to the entire exclusion of all others. But if the unoccupied territory were of ample extent, and the first settlers or colonists were succeeded by others, who, driven by necessity, sought the means of subsistence, the latter would have a natural and moral right to a partition of so much of the soil as would be necessary for their wants, as the younger children of the same parent are entitled according to the natural law to a participation in the inheritance which would have descended entire, had the eldest remained the only child ; and to withhold an equitable distribution, thus founded in nature and reason, would be atrociously unjust.

Cicero aptly compares the world to a theatre, in which the seats are common property, yet every spectator claims that which he occupies, for the time being, as his own. But it is clear that the spectator is entitled to one seat only, and has no right, because he first arrived, to take possession of more than one.

This view of the subject is further confirmed by the actual events which have occurred in the acquisition of property of different kinds. Thus it appears that a community of lands for pasture prevailed amdng men long after a community in animals, or flocks, had ceased. For the great extent of land was sufficient for the use of all occupants, as yet but few in number, without their incommoding each other. In the worJs of Virgil, it was declared unlawful to fix a land-mark on the plain, or to apportion it out in stated limits. But as men increased in numbers, and their flocks in the same proportion, they could no longer with convenience enjoy the use of lands in common, and it

became necessary to divide them into allotments for each family. It is evident here that the circumstance of first occupancy is not the only one by which mankind have been guided. We perceive that their convenience is assigned as the reason for the division of lands, and no one can doubt that it is more ‘ convenient’ for individuals in general, as well as more just, that the division should be as nearly as possible proportioned to the wants and interests of society at large. In the hot countries of the east, wells would naturally be objects of preat importance, for the refreshment of their herds and flocks; so that, in order to avoid strife and inconvenience, all would be anxious to have them as possessions of their own, and these would therefore constitute the first objects of contract or agreement. Strictly speaking, according to the moral law, it would be unjust in any individual to appropriate exclusively so essential an object as a well of water, which obviously is

a common gift, and which no one could entirely require. The circumstance of first occupation could only confer the right of being first supplied, after which every one else would have an equal right. The accounts of the commencement of many of these important rights we derive from Sacred History, and they are found to agree with the opinions maintained upon this subject by philosophers and poets, who have described the community of goods that prevailed in the early state of the world, and the distribution of property which afterwards took place. Hence a notion may be formed of the reason why men departed from their primeval state of holding all things in common, attaching the ideas of property, first to moveable, and next to immoveable things. In considering how things passed from being held in common to a state of property, it is obvious, says Grotius, that it was not by the act of the mind alone that this change took place. For men in that case could never know what others intended to appropriate to their own use, so as to exclude the claim of every other pretender to the same ; and many too might desire to posses? the same thing. Property therefore must have been established either by express agreement, as by division; or by tacitconsent, as by occupancy. For as soon as it was found inconvenient to hold things in common, before any division of lands had been established, it is natural says Grotius, that it must have been generally agreed that whatever any one had occupied should be accounted his own. Cicero, he says, considered it admitted as a universal maxim that every one should rather wish himself to enjoy the necessaries of life, than leave them for the acquisition of another. This is an opinion very consonant with the character of the Roman orator, who was much addicted to

the vice of avarice. Quintilian observes, if such be the condition of life, that whatever has fallen to the private use of any individual, becomes the property of such holder, it is evidently unjust to take away any thing which is possessed by such a right, an opinion which evidently rests upon the assumption of the very thing in dispute, that whatever has ‘ fallen’ to private use, becomes the absolute property of the holder. Besides, if ever such an agreement took place as that which Grotius assumes, with respect to the division of lands either expressly or tacitly, the natural feeling of mankind in general must necessarily have been, that the land retained by each on account of previous occupancy should be of reasonable extent only, and proportioned to the wants of the rest of the community. Indeed the division of lands among the Hebrew and other early nations, however barbarous the state of society might be in which it took place, is a proof of the existence of that natural feeling amongst mankind relating to the claims of each individual to an equal or fair participation in thp common property of the earth, notwithstanding accidental circumstances may have invested sorrie of them with a previous occupation. The contrary theory supposes that the natural right does not depend upon moral considerations, but on the mere accident of first possession or seizure, which is equally absurd and unjust.

Among the means of acquiring property, Pau-lus, the lawyer, reckons one, which seems most natural ; and that is, if by the ingenuity of art, or the exertions of labor, we have given to any production its existence amongst the works of man. Grotius contends, however, that as nothing can naturally be produced, except from some materials before in existence, it follows that, if those materials were our own, the possession of them under any new shape or commodity, is only a continuation of our former property. If they belonged to no one, our possession comes under the class of title by occupancy : but, if they were another’s, no improvement of ours can by the law of nature give us a right of property therein. Now occupancy is, undoubtedly, according to the origin of society, the primary means of title ; but it is

obvious that the produce of labor stands equally high in natural right, although second to it in the order of existence. Thus the ancients, in styling Ceres a lawgiver, meant to signify that the division of lands had given birth to a new kind of right ; namely, the fruits of the earth. There is, indeed, an evident distinction between the right to the fruits of the earth and the right to the land itself. The former is generally the produce of some degree of skill, labor, care and attention, which, in natural justice, confers a claim beyond the mere act of possession. The latter is fortuitous, may be unattended by merit, and requires the sanction of time and the proof of general convenience fully to establish it ; but no one can hesitate to concede to industry its reward, or can doubt that, whilst man is doomed to labor, he is entitled to its fruits.

The acquisition of property, or the establishment of the rights of individuals to its separate and exclusive enjoyment, and the formation of government, are necessarily coeval. It would have been in vain that a few scattered individuals or families should have agreed to respect each other's possessions, until society had been so far matured, that such agreements could be enforced amongst the parties making them, and their violation punished. When society is once formed, government, as observed by Blacksttne, results of course, as necessary to preserve and to keep that society in order. Unless some superior be constituted, whose commands and decisions all the members are bound to obey, they would still re-main as in a state of nature, without any judge upon earth to define their several rights, and redress their several wrongs. But as all the members of society are naturally equal, in whose hands are the reins of government to be entrusted? To this the general answer is easy ; but the application of it to particular cases has occasioned one-half of those mischiefs which are apt to proceed from misguided political zeal. In general, all mankind will agree, thai government should be reposed in such persons, in whom those qualities are most likely to be found, the perfection of which is among the attributes of him •who is emphatically styled the Supreme Being ; the three grand requisites, namely, of wisdom, of goodness, and of power: wisdom, to discern the real interest of the community; goodness, to endeavour always to pursue that interest; and power to carry this knowledge and intention into effect.

These are the natural foundations of sovereignty, and these requisites ought to be found in every well constituted government.

How the several forms of government we now see in the world at first actually began is matter of great uncertainty. However they began, or by what right soever they subsist, there is and must be in all of them a. supreme, irresistible, absolute, uncontrolled authority, in which the jura summi imperii, or the rights of sovereignty, reside. And this authority is placed in those hands wherein (according to the opinion of the founders of such respective states, either expressly given or collected from their tacit approbation) the qualities requisite for supremacy, wisdom, goodness and power, are the most likely to be found.

The political writers of antiquity do not allow more than three regular forms of government: the first when the sovereign power is lodged in an aggregate assembly, consisting of all the members of a community, which is called a democracy ; the second when it is lodged in a council composed of select members, and then it is styled an aristocracy ; the last when it is entrusted in the hands of a single person, and then it takes the name of a monarchy. All other species of government, they say, are either corruptions of, or reducible to, these three.

By the sovereign power is meant the making of laws ; for, wherever that power resides, all others must conform to and be directed by it, whatever appearance the outward form and administration of the government may put on. For it is at any time in the option of the legislature to alter that form and administration by a new edict or rule, and to put the execution of the laws into whatever hands it pleases : and all the other powers of the state must obey the legislative power in the execution of their several functions, or else the constitution is at an end.

In a democracy, where the right of making law resides in the people at large, public virtue, or goodness of intention, is more likely to be found than either of the other qualities of government. Popular assemblies are frequently foolish in their contrivance, and weak in their execution ; but generally mean to do the thing that is right and just, and have always a degree of patriotism or public spirit.

In aristocracies there is more wisdom to be found than in the other forms of government; being composed, or intended to be composed, of the most experienced citizens ; but there is less honesty than in a republic, and less strength than in a monarchy.

A monarchy is indeed the most powerful of any, all the sinews of government being knit and united together in the hand of the prince ;

but then there is imminent danger of his employing that strength to improvident or oppressive pur- - poses.

Thus these ‘three species of government hare all of them their several perfections and imperfections. Democracies are usually the best calculated to direct the end of a law ; aristocracies to invent the means by which that end shall be obtained ; and monarchies to carry those means into execution. And the ancients had in general

no idea of any other permanent form of government but these three, and Tacitus treats the no-tion of a mixed government, formed out of them all, and partaking of the advantages of each, as a visionary whim, and one that, if effected, could never be lasting or secure.

But, happily for the people of this island, the British Constitution has long remained a standing exception to the truth of this observation. For, as with us the executive power of the law is lodged in a single person, they have all the advantages of strength and despatch that are to be found in the most absolute monarchy : and, as the legislative power of the kingdom is entrusted to three distinct estates, entirely independent of each other; 1. the king; 2. the lords, spiritual and temporal, which is an aristocratical assembly of persons selected for their piety, birth, wisdom, valor, or property ; and, 3. the house of commons, freely chosen by the people from among themselves, which makes it a kind of democracy ; as this aggregate body, actuated by different springs, and attentive to different interests, composes the British parliament, and has the supreme disposal of every thing, there can no inconvenience be attempted by either of the three branches which will not be withstood by one of the other two, each branch being armed with a negative power sufficient to repel any innovation which it shall think inexpedient or dangerous.

Here, then, is lodged the sovereignty of the British constitution ; and lodged as beneficially as is possible for society. For in no other shape could we be so certain of finding the three great qualities of government so happily united. If the supreme power were lodged in

any one of the three branches separately, we must be exposed to the inconveniences of either absolute monarchy, aristocracy, or democracy : and so want two of the principal ingredients of good polity ; either virtue, wisdom, or power. If it were lodged in any two of the branches, for instance in the king and house of lords, our laws might be providently made and well executed, but they might not always have the good of the people in view. If lodged in the king and commons, we should want that circumspection and media-tory caution which the wisdom of the peers is to afford. If the supreme rights of legislature were lodged in the two houses only, and the king had no negative upon their proceedings, they might be tempted to encroach upon the royal prerogative, or perhaps to abolish the kingly office, and thereby weaken, if not totally destroy, the strength of the executive power.

But the constitutional government of this island is so admirably tempered and compounded that nothing can endanger or hurt it, but destroying the equilibrium of power between one branch of the legislature and the rest. For if ever it should happen that the independence of any one of the three should be lost, or that it should become subservient to the views of either of the other two, there would soon be an end of our constitution. The legislature would be changed from that which was originally set up liy the cceneral consent and fundamental act of the society: and such a change, however effected, is according to Mr. Locke at once an entire dis-

solution of the bands of government ; and the people are thereby reduced to a state of anarchy, with liberty to constitute to themselves a new legislative power.

SECT. III. — OF THE NATURAL OR MORAL LAW.

We have in the previous section anticipated some of the grounds upon which the law of na-ture depends, and have illustrated some of its applications.

Grotius observes that natural right is the dictate of right reason, showing the moral turpitude, or moral fitness, of any act, from its agreement or disagreement with a rational nature, and consequently that such an act is either forbidden or commanded by God, the Author of nature. The actions upon which such a dictate is given are either binding or unlawful in themselves, and therefore necessarily understood to be commanded or forbidden by God. This characteristic

distinguishes natural right, not only from hu-man law, but from the law which God himself has been pleased to reveal.

There are some things, however, allowed by the law of nature, not absolutely, but according to a certain state of affairs. Thus, by the law of nature, before property was introduced, every one had a right to the use of whatever he found unoccupied ; and, before laws were enacted, to avenge his personal injuries by force. Thus Polybius, relating the manner in which men first entered into society, concludes., that the injuries done to parents or benefactors inevitably provoked the indignation of mankind, giving an additional reason, that, as understanding and reflection form the great difference between men and other animals, it is evident they could not transgress the bounds of that difference, like other animals, without exciting universal abhorrence of their conduct. When this sense of justice is attributed to brutes, it is done improperly, from some shadow and trace of reason they may possess. But it is not material to the nature of right, whether the actions appointed by the law of nature, such as the care of our offspring, are common to us with other animals or not, or, like the worship of God, are peculiar to man. We have two criteria for determining the conformity of actions with the moral law : — the one is the general tendency of the action to a beneficial re-sult, and the other is the common or moral sense, and uniform feeling of mankind at large.

It appears that Blackstone rests the determination of the moral law upon the first criterion which we have stated : as does Dr. Paley. But we think the latter is an equally valid and satisfactory test. The nature of the former, however, Blackstone well explains; and the other we shall illustrate from the pages of Grotius. If, says he, the discovery of the first principles of the law of nature depended only upon the due exertion of right reason, and could not otherwise be obtained, than by a chain of. metaphysical disquisitions, mankind would have wanted some inducement to have quickened their enquiries, and the greater part of the world would have rested content in mental indolence, and ignorance its inseparable companion. As therefore the Creator is a beiuu”, not only of infinite power and wisdom, but also

of infinite goodness, he has been pleased so to contrive the constitution of human nature, that we should want no other prompter to enquire after and pursue the rule of right, but only our own self-lore, that universal principle of action. For he has so intimately connected the laws of eternal justice with the happiness of each individual, that the latter cannot be attained but by observing the former; and, if the former be punctually obeyed, it cannot but induce the latter. In consequence of which mutual connexion of justice and human felicity, he has not perplexed the law of nature with a multitude of abstract rules and precepts, referring merely to the fitness or unfitness of things, as some have surmised; but has graciously reduced the rule of obedience to this one paternal precept, ‘ that man should pursue his own happiness.’ This is the foundation of what is called ethics, or natural law. For the several article* into which it is branched, in our systems, amount to no more than demonstrating, that this or that action tends to man’s real happiness ; that is, his happiness estimated with reference to its substantial and enduring influence upon the whole aggregate of life. And therefore very justly concluding, that the performance of it is a part of the law of nature ; or, on the other hand, that this or that action is destructive of man’s real happiness, and therefore that the law of nature forbids it.

This law of nature, being coeval with mankind, and dictated by God himself, is of course superior in obligation to any other. It is binding over all the globe, in all countries, and at all times ; no human laws are of any validity, if contrary to this ; and such of them as are valid derive all their force, and all their authority, mediately or immediately, from this original.

But to apply this to the particular exigencies of each individual, we must still have recourse to reason, to discern what the law of nature directs in every circumstance of life; by considering what method will tend the most effectually to our own substantial happiness.

The existence of the law of nature is proved, 1st, by its agreement with a reasonable and so-cial nature: 2nd, by its being received as such among all, or at least the more civilised, nations. For a general effect can only arise from a general caus«. Now scarcely any other cause can be assigned for so general an opinion but the com-mon sense, as it is called, or moral sense, of mankind.

In support of this doctrine Grotius has quoted various authorities. There is a sentence of He-siod, he says, that has been much praised,

that opinions which have prevailed amongst many nations, must have some foundation : and Heraclitus establishing common reason as the best criterion of truth, says, those things are certain which generally appear so. Among other authorities may be quoted Aristotle, who says it is a strong proof in our favor, when all appear to agree with what we say ; and Cicero maintains, that the consent of all nations, in any case, is to be admitted for the law of nature. Seneca is of the same opinion : any thing, says he, appearing the same to all men, is a proof of its truth.

Quintilian says, we hold those things to be true in which all men agree.

We have called them ‘ the more civilised nations ;’ for, as Porphyry observes, some nations are so strange that no fair judgment of human nature can be formed from them. Chrysostom cautions us not to form our judgments of things from such as have corrupt minds. Andronicus, the Rhodian, says that, with men of a right and sound understanding, natural justice is un-changeable. Nor does it alter the case, though men of disordered and perverted minds think otherwise, like him who should deny honey to be sweet. Plutarch too agrees entirely with what has been said, as appears from a passage in his life of Pompey, affirtning that man neither was nor is by nature a wild unsociable animal, but it is the corruption of his nature which makes him so ; yet by acquiring new habits, by changing his place and way of living, he may be reclaimed to his original gentleness. Aristotle, taking a description of man from his peculiar qualities, makes him an animal of a gentle nature ; and in another part of his works he observes, that, in considering the nature of man, we are to take our likeness from nature in its pure, and not in its corrupt state.

Natural right, as Grotius observes, relates not only to those things that exist independently of the human will, but to many things which necessarily follow the exercise of that will. Thus property, as now in use, was at first a creature of the human will. But, after it was established, one man was prohibited by the law of nature from seizing the property of another against his will. Wherefore Paulus said that theft is expressly forbidden by the law of nature. Ulpian condemns it as infamous in its own nature ; and Euripides, in the verses of Helena : — ‘ The air is common to men, the earth also, where every man, in the ample enjoyment of his possession, must refrain from doing violence or injury to that of another.’

The practice of Grotius, which we have followed, in citing the opinions of poets, orators, and historians, in support of his argument, has been most satisfactorily vindicated by Sir James Mackintosh, in his admirable discourse on the Law of Nations. He says, ‘ he quotes them as witnesses, whose conspiring testimony, mightily strengthened and confirmed by their discordance on almost every other subject, is a conclusive proof of the unanimity of the whole human race on the great rules of duty, and the fundamental principles of morals. On such matters, poets and orators are the most unexceptionable of all witnesses; for they address themselves to the general feelings and sympathies of mankind; they are neither warped by system nor perverted by sophistry ; they can attain none of their objects ; they can neither please nor persuade ; if they dwell on moral sentiments not in union with those of their readers. No system of moral philosophy can surely disregard the general feelings of human nature, and the according judgment of all ages and nations.’

To this may be added, that not only are poets, orators, and historians, naturally the most competent of all to give evidence upon the nature of

our moral feelings, from their own full possession of the best sympathies of human nature, and to establish the general fact by their own innate consciousness ; but the appeal to these authorities has a due and beneficial effect upon those who do not possess this moral faculty in the same degree ; yet who are influenced by the reverence they feel for distinguished authority, and who yield a salutary obedience to the principle, though they may not fu’ly appreciate its nature, or comprehend its consequences.

SECT. IV. — OF THE REVEALED LAW.

If the moral sense of mankind could always be relied upon; if the benevolent feelings of men were always in operation — their sense of justice unswayed by selfishness — and their rea-son and understanding always unclouded, each would be ‘ a law unto himself,’

and need no other guide than his own impressions and convictions. But this every one personally knows is not the case ; and it is too true, that even those who possess the most intelligence, the highest human virtue, and the longest experience, are still prone to error alike in their moral and intellectual perceptions. To them ‘ the ways of Heaven are dark and intricate,’ and ‘ their understanding traces them in vain.’

It has pleased, therefore, Divine Providence, to enlighten this natural darkness of the human mind by several express revelations, which are to be found in the Holy Scriptures. Writers upon this subject hold that the revealed law, emanating from the will of the Creator, does not command or forbid things in themselves either binding or unlawful, but makes them unlawful by its prohibition, and binding by its command. ‘ Undoubtedly,’ says a commentator on Grotius, ‘ actions are made unlawful by the law of God declaring them to be such ; ‘ as St. Paul says, ‘ but for the law, I should not have known sin : ‘ that is, ‘ I should not have known its evil and its enormity, but from finding it so expressly prohibited.’ Yet still, as God is the moral Governor of the world, though his prohibitions alone render any acts unlawful, such acts, even though prohibited, would be found, upon trial, to be at variance with the nature, and consequently detrimental to the happiness of men. Therefore, the Divine prohibitions, when examined, will be found conformable to the laws of nature. Thus the conspiring evidence of nature and revelation will show that God is the author of both.

The revealed law is termed by some the voluntary divine right. The very meaning of these words shows, that it springs from the di-vine will, by which it is distinguished from natural law. This law admits of what Anaxar-chus said, that God does not will a thing because it is just, but that it is just or binding because God wills it. Now this law was given either to mankind in general or to one particular people. We find three periods at which it was given by God to the human race: the first of which was immediately after the creation of man; the se-cond at the period of the flood, and the third by that glorious dispensation through Jesus Christ. These three laws undoubtedly bind ail men, as

soon as they come to a sufficient knowledge ot them.

Of all nations there is but one to which God particularly vouchsafed to give laws, and that was the people of Israel. Hence we may infer that we are bound by no part of the Levitical law, strictly and properly so

called ; because any obligation, beyond that arising from the law of nature, must proceed from the express will of the lawgiver. Now it cannot be discovered by any proof, that God intended any other people than the Israelites to be bound by that law. Therefore, with respect to ourselves, we have no occasion to prove an abrogation of that law, for it could never be abrogated with respect to those whom it never bound. But the Israelites were released from the ceremonial part as soon as the law of the gospel was proclaimed.

The chief doctrines of the revealed law, so far as they relate to the morals of society, independently of religious considerations (which will be treated in another part of the work), are the following : — That we should do unto others as we would they should do unto as. That we should love our neighbour as ourselves : and in the interpretation of the rule we are to consider every human being as our neigbour. That we should render good for evil. In other words, that we should not only love our neighbours but our enemies. Philosophically speaking, it is substituting the law of universal philanthropy in the place of individual rights and interests.

These are precepts which manifestly inculcate a higher and purer morality than the selfishness of human beings, and their natural short-stˆnted-ness would have been willing to adopt even had they been able to discover them.

SECT. V. — OF INTERNATIONAL LAW.

It is evidently impossible for the whole race of mankind to be united in one great community in which the same laws should prevail, and in which the same supreme power could enforce their execution. They must therefore necessarily be divided into many different states, suited to the natural variety of their inclinations and capacities. But, though entirely independent of each other, yet they are capable of, and benefited by mutual intercourse. Hence arises another kind of law to regulate this inter-communica- tion ; namely. The law of nations ; which, as none of these states will acknowledge a superiority, must depend entirely upon the rules of natural law, or u-pon mutual compacts, treaties. or leagues, between the several communities.

Yet, frequently, in one part of the world tha; is held for the law of nations which is not so in another. Now this law of nations can only be proved in the same manner as the unwritten civil law, and that is by the continual experience and testimony of the sages of the law. For this law, as Dio Chrysostom well observes, consists of the discoveries made by experience and time, that is of the universal expediency of

the general principles of justice; and in this we derive great advantage from the writings of eminent historians.

The following are some of the general rules of the law of nations : —

1 . That there should be a right of free pas-page through countries, across rivers, and over any part of the sea, which belong to a particular people, upon necessary occasions : as in quest of settlements, to trade with other nations, or recover lost possessions.

2. In the prosecution of a just war any power has a right to take possession of a neutral soil, if there be real grounds for supposing the enemy intends to make himself master of the same; especially if the enemy's occupying it would be attended with irreparable mischief. But this rule, or rather exception, arising from necessity, must be followed by ample restitution when the necessity has ceased.

3. The privileges or rights granted to the people of one country, should be grar.ted to those of all other countries; yet it is said a monopoly may be lawfully allowed to one particular state. Both these dicta, however, cannot be correct , and, to reconcile them, we must suppose that monopolies are generally unlawful, but that there may be some exceptions to the rule, arising, from peculiar circumstances.

4. The natives of one country have a right to reside in another for the recovery of health or other just cause.

SECT.. VI. — OF CONVENTIONAL OR MUNICIPAL LAW.

Although some part of the laws by which the intercourse of nations is regulated has its origin in compact, and depends-upon the mere will of the«contracting parties, yet the much larger and most important part of it depends on the law of nature. The reverse of this is the case with municipal laws, by which the citizens or subjects of particular communities are regulated. These are chiefly conventional, adopted by common consent, and binding only by the law of nature on Ae

principle of obedience to the civil power. It is true the municipal law generally, though not invariably, enforces the natural law; but the larger portion of its code applies to actions whic*h in a state of nature would be indifferent, and in the neglect or performance of which there might be neither blame nor merit.

This corresponds with what Grotius terms * voluntary right,' deriving its origin from the will ; and, according to his authority, that which is of human origin is either a civil right, or a right more or less extensive than the civil right, and which is derived from the civil power. The less extensive right, and not derived from the civil power although subject to it, is various ; comprehending the authority of parents over children, masters over servants, and the like. For as there were parents and children, masters and servants, before there were princes and subjects, the rights arising out of these primitive relations exist independently of the conventional law.

In one signification of the word ' right,' Grotius considers it a moral quality annexed to the person, justly entitling him to possess some particular privilege, or to perform some particular act. This moral quality, as he terms it, when perfect, is culled a faculty ; when imperfect, an. aptitude. Some of the instances adduced in sup-

port of this position, however, rather show a natural than a moral quality, and others a conventional one. Of the former is the power of a father over his child, and the right of a husband over his wife. Of the latter is the right to services in respect of land, the right of passage to a house, and the right of demanding the fulfilment of a promise.

Civilians call a ' faculty ' that right which every man has to his own ; but Grotius, taking it in its strict and proper sense, as applicable to a state of society, terras it a right, comprehending the power that we have over ourselves, which is called liberty, and the power that we have over others, as that of a master over his slaves. It likewise comprehends property, the use and possession, and the power of alienating and pledging it. It implies also the power of demanding what is due, to which the obligation of the party indebted corresponds.

In this conventional view of the subject, ' right ' is two-fold, the one private, established for the advantage of each individual; the other superior, or public, involving the claims which the state has upon individuals and their property for the public good. Thus the regal

authority is above that of a father and a master, and the sovereign has a greater right over the property of his subjects, where the public good is concerned, than the owners themselves ; and, when the exigencies of the state require a sup-ply, every man is moie obliged to contribute towards it, than to satisfy his creditors.

Accoiding to the signification of the word right, now under review, it has the same meaning as law, taken in its most extensive sense, to denote a rule of action obliging us to do what is proper. We say, ‘ obliging ‘ us, for the best counsels or precepts, if they lay us under no obligation to obey them, cannot come under the denomination of law or right. Permission is no act of the law, but only the silence of the law ; yet the law prohibits any one from impeding another in doing what the law permits.

The law obliges us to do what is proper, no simply what is just. Yet from giving the name of a right to that which is proper, a more general acceptation of the word justice has been derived. Aristotle, defining one kind of right to be natural, and the other voluntary, adopts the term lawful right in the strictest sense of the word, law; and sometimes an instituted right. The Hebrews distinguished natural rights as precepts, and voluntary rights as statutes.

A positive, legal permission, is either full, granting us power to do some particular act without the least restriction, or less than full, only allowing men impunity for certain actions, and a right to do them without molestation from others. From the permission of the former kind, no less than from a positive precept, it follows that what the law allows is not contrary to the law of nature. Thus, the law of nature.authorising self-defence in its fullest extent, the law of nations, which authorises war for the same purpose, cannot be repugnant to it. But with regard to the latter kind of permission, allowing impunity for certain acts, but not expressly authorising them, we cannot so readily conclude those acts

to be conformable to the law of nature ; because, where the words of

permission are ambiguous in their meaning, it is better for us to interpret, according to the established law of nature, what kind of permission it is, than from our conception of its expediency to conclude it conformable to the law of nature. The law of England on homicide, as excusable in self-defence, will illustrate this position.

The rights which God has established called natural rights, because every man has naturally a right to them, such as life and liberty, need not the aid of human laws to be more effectually invested in every man than they are ; neither do they receive any additional strength, when declared by the municipal laws to be inviolable. On the contrary, no human legislature has power to abridge or destroy them, unless the owner shall himself commit some act that amounts to a forfeiture.

Neither do divine or natural duties, such as, for instance, the worship of God, the maintenance of children, and the like, receive any stronger sanction from being also declared to be duties by the law of the land. The case is the same as to crimes, and misdemeanors, that are forbidden by the laws, and therefore styled mala in se, such as murder, theft, and perjury ; which contract no additional turpitude from being declared unlawful by the legislature.

From these general considerations we proceed to the more minute definition of municipal law, which, according to Blackstone, is ‘ a rule of civil conduct prescribed by the supreme power in a state, commanding what is right, and prohibiting what is wrong.’

It is a rule ; not a transient sudden order concerning a particular person, but something permanent, uniform, and universal. It is also distinguished from advice or counsel, which we are at liberty to follow or not as we see proper, and to judge of the reasonableness or unreasonableness of the thing advised ; for our obedience to the law depends -not upon our approbation, but upon the maker’s will. Counsel is only matter of persuasion, law is matter of injunction — counsel acts only upon the willing, law on the unwilling also.

It is also distinguished from a compact or agreement; for a compact is a promise proceeding from us — law is a command directed to us. It is true there is an obligation, which a compact carries with it, equal in point of conscience to that of a law ; but then the origin of the obligation is different. In compacts, we ourselves determine and promise what shall be done, be-fore we are obliged to do it : in laws, we are obliged to act without ourselves determining or promising any thing at all ; yet it may be observed that, although we do not

personally consent, we are presumed to do so by our representatives in the legislature.

It is also a rule of civil conduct. This distinguishes it from the natural and revealed law : the former of which is the rule of moral conduct, and the latter not only the rule of moral conduct but of faith. Municipal law regards man only as a citizen, and as bound to contribute his part to the subsistence and peace of society.

It is likewise a rule prescribed . It is requisite that the rule be notified to the people who are to obey it. The manner in which the notification is to be made very greatly varies. It may be notified by universal tradition and long practice ; or vivfi, voce by officers appointed for that purpose ; or by writing or printing. Yet, whatever way is made use of, it is incumbent on the promulgators to do it in the most public and perspicuous manner. All laws should be made to commence in future, and be notified before their commencement, which is implied in the term ‘ prescribed.’

It is also a rule made by the supreme power in the state, for legislation is the greatest act of superiority that can be exercised by one being over another. Wherefore it is requisite to the very essence of a law, that it be made by the supreme power, the nature of which has been already shdwn.

Having thus defined the general nature of municipal laws, we now proceed to consider their several parts and objects.

Every law, as further defined by Blackstone, may be said to consist of several parts : one declaratory ; whereby the rights to be observed, and the wrongs to be eschewed, are clearly defined and laid down — another, directory, whereby the subject is instructed and enjoined to observe those rights, and to abstain from the commission of those wrongs — a third, remedial, whereby a method is pointed out to recover a man’s private rights, or redress his private wrongs — to which may be added a fourth, usually termed the sanction, or vindicatory branch of the law, whereby is signified what evil or penalty shall be incurred by such as commit any public wrongs, or transgress or neglect their duty.

With regard to the first of these, the declaratory part of the municipal law, this depends not so much upon the law of revelation or of nature, as upon the wisdom and will of the legislator. In all those cases which

are determined by the former, the legislator acts only in subordination to the great Lawgiver, transcribing and publishing his precepts. So that the declaratory part of the municipal law has no force with regard to actions that are naturally and intrinsically right or wrong.

But, with regard to things in themselves indifferent, the case is entirely different. These become either right or wrong, just or unjust, duties or misdemeanors, according as the municipal legislator sees proper for promoting the welfare of the society, and more effectually carrying on the purposes of civil life Thus the com-mon law has declared, that the goods of the wife do instantly upon marriage become the property and right of the husband ; and the statute law has declared all monopolies a public offence ; yet that right, and this offence, have no foundation in nature; but are merely created by the law for the purposes of civil society.

And sometimes, where the thing itself has its rise from the law of nature, the particular circumstances and mode of doing it become right or wrong, as the laws of the land shall direct. Thus, for instance, in civil duties, obedience to superiors is the doctrine of revealed as well as

.natural religion : but who those superiors shall be, and in what circumstances, or to what degrees they shall be obeyed, it is the province of human laws to determine. And so, as to injuries or crimes, it must be left to our own legislature to decide, in what cases the seizing another's cattle shall amount to the crime of robbery, and where it shall be a justifiable ac-tion, as when a landlord takes them by way of distress for rent.

So much for the declaratory part of the municipal law : and the directory stands much upon the same footing ; for this virtually includes the former, the delaration being usually collected from the direction. The law that says, ' thou shall not steal,' implies a declaration that stealing is a crime. And we have seen, that, in things naturally indifferent, the very essence of right and wrong depends

upon the direction of the laws to do or to omit them.

The remedial part of a law is so necessary a consequence of the former two, that laws must be very vague and imperfect without it. For in vain would rights be declared, in vain directed to be observed, if there were no method of re- •covering and asserting those rights, when wrongfully withheld or invaded. This is what we mean when we speak of the protection of the law. When, for instance, the declaratory part of the law has said, 'that the field or inheritance which belonged to Titius's father is vested by his death in Titius,' and the directory part has, ' forbidden any one to enter on another's property without the leave of the owner ;' if Gaius after this will presume to take possession of the land, the remedial part of the law will then interpose its office ; will make Gaius restore the possession to Titius, and also pay him damages for the invasion.

With regard to the sanction of laws, or the •evil that may attend the breach of public duties ; human legislators have for the most part chosen to make the sanction of their laws rather vindicatory than remuneratory, or to consist rather in punishments than in actual particular rewards. Because in the first place the quiet enjoyment and protection of all our civil rights and liberties, which are the sure and general consequence of obedience to the municipal law, are in themselves the best and most valuable of all rewards: because, also, were the exercise of every virtue to be enforced by the proposal of particular rewards, it were impossible for any state to furnish stock enough for so profuse a bounty : and farther, because the dread of evil is a much more forcible principle of human actions than the prospect of good. The truth is, also, it may be observed, that providence, in its bounty, has not only connected our actual prosperity with every kind of good conduct, but has rendered the performance of duty in itself an agreeable and pleasurable act, and the source of enduring satisfaction afterwards in the contemplation of the result. It is manifest, also, that the good •which already predominates in the lot of the meritorious, must present a contrast to the evil of punishment amply sufficient to constitute the most efficient motive.

For which reasons, though a prudent bestow-

ing of rewards is sometimes of exquisite use, yet those civil laws which enforce and enjoin our duty, seldom, if ever, propose any privilege of gift to such as obey the law ; but constantly come armed with a penalty denounced against transgressors, either expressly

defining the nature and quantity of the punishment, or else leaving it to the discretion of the judges, and those who are entrusted with the care of putting the laws in execution.

Of all the parts of a law, the most effectual is the vindicatory For it is but lost labor to say, Do this, or avoid that, unless we also declare, this shall be the consequence of your non-com- pliance. The main strength of a law, therefore, consists in the penalty annexed to it. In this lies the principal oblijation of human laws.

Legislators and their laws are said to compel and oblige ; because, by declaring a penalty against offenders, they bring it to pass that no man can easily choose to transgress the law ; since, by reason of the impending correction, compliance is in a high degree preferable to disobedience.

It has been justly held by ethical writers, that human laws are binding upon men's consciences. But, if that were the only or most forcible obligation, the good only would regard the laws, and the bad would set them at defiance. And, true as this principle is, it must still be understood with much restriction. It holds, we apprehend, as to rights; and that when the law has determined the field to belong to Titius, it is matter of conscience no longer to withhold or invade it.

So also in regard to natural duties, and such offences as are mala in se : here we are bound in conscience, because we are bound by superior laws, before those human laws were in being, to perform the one and abstain from the other.

But in relation to those laws which enjoin only positive duties, and Ibrbid only such things as are not.mala in Se, but mala prohibita merely, without any intermixture of moral guilt, annexing a penalty to non-coinpliance ; here, in the opinion of Blackstone (but in which we cannot agree) : Conscience seems to be no farther concerned, than by directing a submission to the penalty, in case of our breach of those laws : for otherwise, he says, the multitude of penal laws in a state would not only be looked upon as an impolitic, but would also be a very wicked thing, if every such law were a snare for the conscience of the subject. But in these cases the alternative is offered to every man ; either abstain from this, or submit to such penalty : and his conscience will be clear, whichever side of the alternative he thinks proper to embrace. Thus, by the statutes for preserving the game, a penalty is denounced against every unqualified person that kills a hare, and against every person who possesses a partridge in August. And so too, by other statutes, pecuniary penalties are inflicted for exercising

trades without serving an apprenticeship thereto, for erecting cottages without annexing four acres of land to each, for not burying the dead in woollen, for not performing statute work on the public roads, and for innumerable other positive misdemeanors. Now these prohibitor) laws do not make the transgression a moral offence, or

sin: the only obligation in conscience is to sub-mit to the penalty, if levied. It must, however, be observed, he continues, that we are here speaking of laws that are simply and purely penal, where the thing forbidden or enjoined is wholly a matter of indifference, and where the penalty inflicted is an adequate compensation for the civil inconvenience supposed to arise from the offence. But, where disobedience to the law involves ink also any degree of public or private injury, there it falls within our former distinction, and is also an offence against conscience.

We cannot subscribe to the soundness of this distinction between the duty of obedience to those laws which relate to things termed intrinsically bad and those which are merely prohibited. Undoubtedly there are different degrees of offence, and the conscience is infinitely more outraged by the destruction of human life than by that of an animal protected only by the game laws ; but the principle is the same in kind though different in degree. The duty of obedience is violated in the one case as it is in the other, although the importance of the consequences are widely different in amount.

The duty of obedience to the divine law, whether revealed or natural, stands first in order, but next to that must be placed obedience to the laws of our country, which, although less perfectly constructed than the other, are, at least, designed for the general benefit. The learned judge himself observes, that obedience to superiors is the doctrine of revealed as well as of natural religion, and who those superiors shall be, and in what circumstances or what degrees they shall be obeyed, it is the province of human laws to determine.

In reference to the divine law, it may be observed, that obedience is

the test of the performance of the highest duty. The very first offence was an act of disobedience. Now, it cannot be objected that the command related to that which was in itself indifferent, for the divine will of the Creator is absolute. Nor can it be urged that the propriety or reasonableness of the injunction was not intelligible to the creature. Neither can it be said that the doom which followed the transgression would have been more consistent with justice, had the commission of murder, or some other offence which we are accustomed to deem atrocious, been the appointed criterion of obedience rather than the eating of the prohibited fruit.

If the doctrine, that the payment of the penalty is a full compensation for offence, be valid, then it would follow that the sufferings which succeeded the fall of man expiated his offence, and no other atonement could be necessary; an inferrence we presume from which the orthodox judge would have recoiled with abhorrence.

The doctrine is also equally at variance with the duties which arise out of the natural relations of life. The child is not exculpated for an act of express disobedience by the reproof or puiiishmeut which the parenf inflicts. Repeated acts of disobedience, though followed each by chastisement, still leave a stain upon the moral character. The child remains incorrigibly disobedient. Is it enough to say that it has always

undergone such .punishment as the parent thought proper to apportion ? No : the outrages against the moral law cannot be balanced by ‘ corporal sufferance,’ anymore than a felony can be compounded by the restoration of the stolen property, Or the payment of its price.

But the absurdity of this may be shown still more. Though, according to the barbarous rules of the lex talionis, an eye may be demanded Jor an eye, and a tooth for a tooth, justice cannot acquit the offender from blame by his submitting to the mutilation. Punishment is the consequence of the offence, and he who suffers it cannnot complain of its infliction, for he is forewarned that it must ensue. But is the injured party, he who has been deprived of sight, is he satisfied by knowing that his enemy has been reduced to equal blindness ? Has the injury he has sustained been removed by it ? Did he sub-irit to the wrong upon the tacit understanding t tat a similar fate awaited his assailant? He entered into no such contract, he is not benefited by it, and cannot be satisfied with its fulfilment ; and, monstrous as such an hypothesis is, it is the only one that can support the position that justice is

satisfied by inflicting the penalty. This wild sort of retribution is illustrated by a tale ascribed to the author of Waverley, and selected from a work now said to be in the press. A Highland drover, after a dispute with his fellow traveller, an Englishman, who triumphs over him in a boxing-match, quits the scene of his deadly mortification, and obtains a weapon which he had confided to a friend, with which he returns after the lapse of some hours, and stabs his antagonist to the heart. He then surrenders himself to the law. What his conscience is supposed to tell him we are not informed, but his language is quite accordant with the doctrine under review : he holds himself justified : ‘ I give,’ says he, ‘ life for life ; what can I do more?’ The sophism is manifest; though he could not do more, he could have done less ; he could have permitted his fellow-being to live ; his own recklessness of life restored not animation to the dead, nor diminished the n ortal pang which followed his murderous blow, or the agony inflicted upon the kindred of his victim.

Tried by the general principles of legislation it is a doctrine the most absurd imaginable. The legislator frames a law, declaring a certain act unlawful, and prohibiting its performance. The case supposes that the interest of society is concerned in making the regulation, and a conscientious man, a good subject, he who .feels a regard for the interests of his country, would concur in the law, and require no other sanction. Although he might not perceive the reason of the enactment, he would not think himself justified in setting up his private judgment against the whole legislative body of the state ; or, if he were conscientiously satisfied of the injustice or im-policy of the measure, he would seek in a lawful way to obtain an alteration, and in the mean time submit to it. But, as we have seen, it is necessary to enforce obedience upon the unwilling by affixing adequate penalties for transgression. Yet it can never be supposed that the legislator intends to open an account currem

with the disobedient, and accept so much money for so many acts of transgression. The object of the legislator is to prevent the infraction

altogether. The penalty is imposed for that purpose; and, according to every correct principle, the penalty should be of an amount calculated to effect its object.

According to this, rule, if it happened that the penalty at first imposed did not prevent the offence, it would be strictly justifiable, and indeed tlie duty of the legislature, to increase the amcutit until the object of prevention were accomplished. Now another question arises out of this race between the legislator and the culprit,— hus the latter a moral right, as regards the duty he owes to himself, to throw away his substance, to consume his property, in paying the forfeitures consequent upon his infractions of the law? We think this cannot be maintained.

The principle may be illustrated by applying it to the private transactions of individuals. It must be allowed that it is immoral to withhold the payment of a debt, or the performance of a contract, which we know to be just, and which we are able to discharge. And it cannot be maintained that this breach of the moral law is healed by the payment of the expense to which the creditor may be put. We can never know the precise consequences of our misconduct, and certainly do not repair it by the mere satisfaction which the law has awarded, since the evil may be, and generally is, much greater than the law can ascertain, or than can be on all occasions made the subject of legal proof and adjudication.

Nay it is singularly enough in another place admitted by the learned judge, that human laws are binding upon men's consciences, so far as respects the rights of property, and that, ' when the law has determined the field to belong to Titius, it is matter of conscience no longer to withhold or invade it.' Yet in a state of nature the field could not belong to Titius. It was perfectly indifferent who first obtained a right by occupancy, and that occupancy could not naturally enable him to invest it in some other person after his death, to the entire exclusion, not only of mankind in general, but even of his own children ; yet such are the rights of property according to the conventional law.

When we examine indeed the instances, which are adduced to support the doctrine, its dangerous tendency becomes still more obvious. In all these instances the evil is, that each individual is allowed to judge, in his own case, whether the action prohibited be malum in se or not, and it is unnecessary to say that the interests of society must suffer, when every one is thus allowed to consult his own personal interest aid convenience ; and to enter into a sort of bargain with justice, that

he shall be at liberty to violate its rules at a certain price. Take the instances adduced by Blackstone. First, of the penalties inflicted by the game laws. Now, al-thouah these laws are liable to many serious objections, and it is desirable to alter them, “yet in several respects they are founded on prin- ˆiples clearly important and beneficial to society. It is not right that one man should trespass on VOL. XII.

another’s land to kill even what are termed ‘ wild animals,’ but which have been reared at considerable expense. Nor is it right that the poor should quit their useful and honest callings to prowl after these wild animals ; a practice which, if it were general, would reduce civilised society to barbarism, and carry us back to the precarious life of the hunter. Against, therefore, the killing of game, except on a man’s own land, and against the seizure of it by those who have contributed nothing to rear it, we conceive the laws may justly provide by adequate penalties.

Then it is said that exercising certain trades without having served an apprenticeship is also an ‘indifferent thing,’ and the payment of the penalty all that the moral law requires. To us it appears, however, that there is both mischief to the public and injury to individuals by a transgression of this prohibition. With respect to several trades the law may be unnecessary, since the public can provide against the evil by employing those only who are skilful ; yet, even here, it is a small part of the public only that is competent to form a correct judgment and to elude imposition. The injury in such cases is limited to those, who, conforming to the law are put to expense or inconvenience in the course of their apprenticeship from which those who set the law at defiance are exempted. But take the instance of an apothecary : is it not contrary to good conscience that he should, in breach of a wholesome provision, venture to exercise his important profession to the imminent danger of hu-man life without adequate skill and knowledge, which he can scarcely acquire in less than seven years ?

The other instances of burying in woollen, working on the public roads, fkc., may also be shown to have the public good in view and the neglect or violation of them as tending to its in-jury : and, therefore, that it is not an ‘ indifferent thing’ to violate such laws, nor the infraction morally satisfied by the discharge of the penalty.

It may be said, however, that this mode of stating the instances adduced, brings them within the rule of mala in se. If that be so, we ought to have been furnished with those cases which are not capable

of such an explanation. The illustrations are at variance with the doctrine. Yet we may presume that the well-known learning and ingenuity of the distinguished commentator have selected the best that could be found ; and in truth, if there were any instance in which it is really a matter of perfect indifference whether the law were obeyed or not, except as to the payment of the price set upon the infringement, such a law ought not to exist. There ought to be no enactments which do not tend, on the one hand, to benefit society; or, on the other, to prevent the injuries which may assail it. All other laws are necessarily in violation of the indefeasible rights of individual liberty. And it will be recollected that the important question before us does not in the least depend upon the natural injustice of any law, but that it simply is — Whether the infringement of a law, relating to things in a state of nature indifferent, but which in a state of society the legislator has a

right to make, can be violated, with moral impunity, upon satisfaction of the penalty affixed ?

There is also this evil consequent upon allowing individuals to compound for their disobedience, that it lessens the respect we should feel for the laws in general, and consequently those maxims of jurisprudence, which in every view of moral obligation we are bound to obey, would possess proportionally a less degree of influence. Indeed, the bulk of mankind are unable to make those distinctions, which in some cases are so exceedingly nice, that even the .earned themselves differ about them, and they will be apt to confound such distinctions, and interpret them in their own favor, rather than the contrary. And we conceive there is this important consideration lost sight of, in pursuing these subtleties, that the moral disgrace attendant upon a trial and conviction for offending against any legal enactment, tends more to secure obedience to the laws in general, than those penalties which it is supposed altogether settle the account, as if it were a mere matter of arithmetic.

In short, we deny altogether the correctness of the premises from which the doctrine in question has been drawn. There are no actions which can be considered strictly 'indifferent,' after the law of the land has pronounced them otherwise. What might have been the case in an imaginary state, prior to the institution of civilised life, it is now needless to discuss. It is clearly important to connect the sanction of moral obligation with the enactments of the legislature, and thus to ensure as far as possible that obedience upon which the well-being of society depends.

Such being the general nature and several constituent parts of the municipal law, we have next to consider the rules by which they are interpreted and the general principles of equity.

The fairest and most rational method to interpret the will of the legislature is by exploring its intentions at the time when the law was made. To consult the legislative body upon the meaning of its laws, in relation to particular cases, is objectionable at all periods ; but especially so at any considerable distance of time from their enactment, for the individual members are frequently changed, and it would rarely, if ever, occur that the same persons, the exact majority of whom passed the law, could be assembled to expound its intention. Besides, as Blackstone observes, such a practice would not only be endless but afford great room for partiality and oppression.

The most natural and probable means of determining questionable laws are by the examination of the words, the context, the subject matter, the effects and consequence, and the spirit and reason of the law.

1 . Words are generally to be understood in their usual and most known signification, according to their general and popular use. Thus the law mentioned by Puflfendorf, which forbad a layman to lay hands on a priest, was adjuged to extend to iiim who had hurt a priest with a wea-pon. Aijain, terms of art, or technical terms, must be. taken according to the acceptation of the

learned in each art trade and science. So in the act of settlement, where the crown of England is limited ' to the princess Sophia, and the heirs of her body, being protestants,' it becomes necessary to call in the assistance of lawyers to ascertain the precise idea of the words ' heirs of her body ;' which in a legal sense comprise only certain lineal descendants. Lastly, where words are clearly repugnant in two laws,

the latter law takes place of the elder.

2. If words happen to be still dubious we may establish their meaning from the context ; with which it may be of singular use to compare a word or sentence, whenever it is ambiguous, equivocal, or intricate. Thus the preamble is ofted called in to help the construction of an act of parliament. Of the same nature is the comparison of a law with other laws made by the same legislature that have some affinity with the subject, or that expressly relate to the same point.

3. As to the subject matter, words are always understood as having a regard thereto ; for that is always supposed to be in the eye of the legislator, and all his expressions directed to that end. Thus, when a law of Edward III. forbids all ecclesiastical persons to purchase provisions at Rome, it might seem to prohibit the buying of grain and other victual ; but when we consider that the statute was made to repress the usurpa-tions of the papal see, and that the nominations to benefices by the pope were called provisions, we see that the restraint is intended to be laid upon such provisions only.

4. As to the effects and consequences, the rule is that where words bear either none, or a very absurd signification, if literally understood, we must deviate from the received sense of them. Therefore the Bolognian law, mentioned by Puffendorf, which enacted, * that whoever drew blood in the streets should be punished with the utmost severity,' was held not to extend to the surgeon who opened the vein of a person who fell down in the street in a fit.

5. But, lastly, the most universal and effectual way of discovering the true meaning of a law, when the words are dubious, is by considering the reason and spirit of it, 01 the cause which moved the legislator to enact it. For, when the reason ceases, the law itself ought likewise to cease with it. An instance of this is given in a case putby Cicero, or whoever else was the author of the treatise inscribed to Herennius. There was a law, that those who in a storm forsook the ship should forfeit all property therein, and the ship and lading should belong entirely to those who staid in it. In a dangerous tempest all the mariners forsook the ship, except only one sick passenger, who was unable to get out and escape. By chance the ship came safely to port. The sick man kept possession, and claimed the benefit of the law. Now here all the learned agree that the sick man was not within the reason of the law ; for the reason of making it was, to give encouragement to such as should venture their lives to save the vessel : but this is a merit to which he could never pretend, who neither staid in the. ship upon that account, nor contributed any thing to its preservation.

From this method of interpreting laws by the reason of them, arises what we call equity : which is thus defined byGrotius, ‘the correction of that wherein the law (by reason of its universality) is deficient.’ For since in laws all cases cannot be foreseen or expressed, it is necessary, that, when the general decrees of the law come to be applied to particular cases, there should be somewhere a power vested of defining those circumstances, which (bad they been foreseen) the legislator himself would have expressed. And these are the cases which, according to Groiius, ‘ lex non exacte definit, sed arbitrio boni viri permittit.’

Equity thus depending essentially upon the particular circumstances of each individual case, there can be no established rules and fixed precepts of equity laid down, without destroying its very essence, and reducing it to a positive law. And, on the other hand, the liberty of considering all cases in an equitable light must not be indulged too far, lest thereby we -destroy all law, and leave the decision of every question in the breast of the judge. And law, without equity, though hard and disagreeable, is much more desirable for the public good than equity without law; which would make every judge a legislator and introduce in finite confusion : as there would then be almost as many different rules of action laid down in our courts, as there are differences of capacity and sentiments in the human mind.

PART II.

OF THE LAWS OF ENGLAND. The LAWS of ENGLAND seem sufficiently important to require a separate introduction on the subject of their origin and foundations ; the civil must, then, necessarily be divided from the criminal code ; and each of these heads will be subdivided into chapters, preserving all the greater distinctions of rights and injuries, crimes and punishments, &c.

INTRODUCTION.

Origin, foundation, and maxims of the law. — The law of England

may be divided into the lex non scripta, the unwritten or common law ; and the lex scripta, the written or statute law.

OF THE COMMON LAW. — The lex non scripta, or unwritten law, includes not only general customs, or the common law properly so called, but also the particular customs of certain parts of the kingdom, and likewise those particular laws that are by custom observed only in certain courts and jurisdictions. In the profound ignorance of letters which formerly overspread the whole western world, all laws were entirely traditional ; the nations among which they prevailed having little or no idea of writing. Thus the British as well as the Gallic druids committed all their laws and learning to memory ; and it is said of the primitive Saxons here, as well as their brethren on the continent, that leges sol& memoria et usu retinebant. But at present the monuments and evidences of our legal customs are contained in the records of the several courts of justice, in books of reports and judicial derisions, and in the treatises of learned sages of

the profession, preserved and handed down from the times of highest antiquity. These parts of the English law, however, are styled leges non scriptae, because their o-iginal institution and authority are not set down in writing as acts of parliament are, but receive their binding power, and the force of laws, by long and immemorial usage, and by their universal reception throughout tht kingdom: in like manner as Aulus Gellius uefines the jus non scriptum to be that which is tacito et illiterate hominum consensu et moribus expressum

The ancient English, particularly Fortescue, insist that these customs are as old as the primitive Britons, and continued down through the several mutations of government and inhabitants to the present time, unchanged and unadulterated. But the truth is, that there never was any formal exchange of one system of laws for another, though doubtless, by the intermixture of nations, the Romans, the Picts, the Saxons, the Danes, and the Normans, they must have insensibly introduced and incorporated many of their own customs with those that were before established. ‘ Our laws,’ says lord Bacon, ‘ are mixed as our language ;’ and, indeed, antiquarians and historians assure us that our body of law is of this compound nature. For they tell us, that in the time of Alfred the local customs of the several provinces of the kingdom were grown so various that he found it expedient to compile his dome-book, or liber judicialis, for the general use of the whole kingdom. This book is said to have been extant so late as the reign of Edward IV., but is now unfortunately lost.

But the irruption and establishment of the Danes in England, which followed soon after, introduced new customs, and caused this code of Alfred in many provinces to fall into disuse, or at least to be mixed and debased with other laws. So that about the beginning of the eleventh century there were three principal systems of laws prevailing in different districts. 1. The Mercen /age, or Mercian laws, and those bordering on Wales. 2. The West Saron lage, or laws of the West Saxons, prevailed in the counties south and west of the island, from Kent to Devonshire. These were probably much the same with the laws of Alfred, Berkshire being the seal of his peculiar residence. 3. The Dane lage, or Danish law, was principally maintained in the rest of the midland counties and on the east coast, the part most exposed to their inroads. The northern provinces were then under a distinct government.

Out of these three laws, Roger Hoveden and Ranulphus Cestrensis inform us, king Edward the Confessor extracted one uniform digest of laws to be observed throughout the whole kingdom ; though Hovedon and the author of an old MS. chronicle assure us, likewise, that this work was projected and begun by his grandfather king Edizar. General digests of the same kind were formed in the thirteenth and fifteenth centuries in Sweden, Spain, and Portugal. That of Swe-den was styled the Land's Lagh.

But these compilations of Edgar, and Edward the Confessor seem to have been only a new

edition of Alfred's dome-book, with additions. For Alfred is generally styled legum Angli-canarum conditor, as Edward is the restitutor. These, however, are the laws so often styled in history the laws of Edward the Cqnfessor; which our ancestors struggled so hard to maintain, under the first princes of the Norman line ; and which subsequent princes so frequently promised to keep and to restore, as the most popular act they could do when pressed by foreign

emergencies, or domestic discontents. These are the laws that so vigorously withstood the repeated attacks of the civil law ; which established in the twelfth century a new Roman empire over most states on the continent ; states that have lost by these means their political liberties, while the free constitution of England, by the struggle to retain them, has been rather improved than debased. These, in short, are the laws which gave rise to that collection of maxims and customs now known by the name of the common law, a name either given to it, in contradistinction to other laws, as the statute law, the civil law, the law merchant, and the like ; or, more probably, as a law common to all the realm, the jus commune, or folcright, mentioned by king Edward the Elder, after the abolition of the several provincial customs and particular laws above-mentioned. But the antiquity of this law is much higher than tradition or history can reach: hence, in this law, the goodness of a custom depends upon its having been used time out of mind.

This unwritten or common law is properly distinguishable into three kinds : I. General customs, which are the universal rule of the kingdom, and form the common law in its stricter and more usual signification. II. Particular customs ; which for the most part affect only the inhabitants of particular districts. III. Certain particular laws ; which by custom are adopted and used by some particular courts of pretty general and extensive jurisdiction.

SECT. I. — GENERAL CUSTOMS.

The common law, properly so called, is that by which proceedings and determinations in the king's ordinary courts of justice are guided and directed. This, for the most part, settles the course in which lands descend by inheritance ; the manner and form of acquiring and transferring property ; the solemnities and obligation of contracts ; the rules of expounding wills, deeds, and acts of parliament ; the respective remedies of civil injuries ; the several species of temporary offences, with the manner and degree of punishment ; and an infinite number of minuter particulars, which diffuse themselves as extensively as the ordinary distribution of common justice requires.

Some have divided the common law into two principal grounds or foundations : 1 . Established customs; such as that, where there are three brothers, the eldest brother shall be the heir to the second in exclusion of the youngest : and, 2. Established rules and maxims; as, ' that the king can do no wrong,' that no man shall ' be bound tc accuse himself,' and the like. But these seem to be one and the same thing. For

the authority of these maxims rests entirely upon general reception and usage ; and the only me-thod of proving that this or that maxim is a rule of the common law is, by showing that it has been always the custom to observe it.

But here a very material question arises, How are these customs or maxims to be known, and by whom is their validity to be determined? The answer is, by the judges in the several courts of justice. They are the depository of the laws; the living oracles who must decide in all cases of doubt, and who are bound by an oath to decide according to the law of the land. Their knowledge of that law is derived from experience and study ; from the viginti annorum lucubrationes which Fortescue mentions ; and from being long personally ‘ accustomed to the judicial decisions of their predecessors.

The doctrine of the law then is briefly this, that precedents and rules must be followed, un-less flatly absurd or unjust; for though their reason be not obvious, at first view, yet we owe such a deference to former times as not to suppose they acted wholly without consideration. We may indeed take it as a general rule, that the decisions of courts of justice are the evidence of common law.

The decisions, therefore, of courts are held in the highest regard, and are not only preserved as authentic records in the treasures of the several courts, but are handed out to public view in the numerous volumes of reports which furnis i the lawyer’s library. The reports are extant in a regular series from the reign of king Edward II. inclusive; and from his time to that of Henry VIII. were taken by the prothonotaries, or chief scribes of the court, at the expense of the crown, and published annually, whence they are known under the denomination of the year-books. But though king James I., by advice of lord Bacon, appointed two reporters, vwith a handsome stipend for this purpose; yet that wise institution was soon neglected, and, from the reign of Henry VIII. to the present time, this task has been executed by many private and contemporary hands, who, sometimes through haste, sometimes through mistake, have published very crude and imperfect accounts. Some of the most valuable of the ancient reports are those published by lord chief justice Coke, a man of great learning in his profession, whose four volumes of Institutes are of great authority in the courts of justice. The works of Glanvil, Bracton, Britton, Fleta, Littleton, and Fitzherbert, with some others of ancient date, are also often cited as authorities. Thus the first ground and chief corner stone of the laws of England is ge nerally immemorial

custom, or common law, from time to time declared in the decisions of the courts of justice, which decisions are preserved among the public records, explained in the reports, and digested for general use in the authoritative writings of the venerable sages of the law. And it is esteemed one of the characteristic marks of British liberty, that the common law depends upon custom ; which carries this mark of freedom along with it, that it seems to have been introduced by the voluntary consent of the people.

SECT. II.— PARTICULAR CUSTOMS.

The second branch of the unwritten laws of England are particular customs, or laws which affect only the inhabitants of particular districts.

Such is the custom of gavelkind in Kent, and some other parts of the kingdom (though perhaps it was general till the Norman Conquest) ; which ordains, among other things, that not the eldest son only of the father shall succeed to his inheritance, but all the sons alike ; and that though the ancestor be attainted and charged, yet the heir shall succeed to his estate, without any escheat to the lord. Such is the custom that prevails in divers ancient boroughs, and therefore called borough English, that the youngest sou shall inherit the estate in preference to all his elder brothers. Such also are the special and particular customs of manors, of which every one has more or fewer, and which bind all the copyhold tenants that hold of such manors. Such, lastly, are many customs in London, with regard to trade, apprentices, widows, orphans, and a variety of other matters. All these are contrary to the general law of the land, and are good only by special usage ; though the customs of London are also confirmed by act of parliament.

To this head may, most properly, be referred a particular system of customs used only among one set of the king’s subjects, called the

custom of merchants, or lex mercatoria ; which, however different from the general rules of the common law, is yet ingrafted into it, and made a part of it ; being allowed, for the benefit of trade, to be of the utmost validity in all commercial transactions ; for it is a maxim of law that cuilibet in suil arte credendum est.

The rales relating to particular customs regard either the proof of their existence ; their legality when proved ; or their usual method of allowance. And, first, we will consider the rules of proof.

As to gavelkind, and borough English, the law takes particular notice of them ; and there is no occasion to prove that such customs actually exist, but only that the lands in question are subject thereto. All other private customs must be particularly pleaded ; and as well the existence of such customs must be sho«n, as that the thing in dispute is within the custom alleged. The trial, in both cases, is by a jury of twelve men, and not by the judges ; except the same particular custom has been before tried, determined, and recorded, in the same court.

When a custom is actually proved to exist, the next enquiry is into the legality of it ; for, if it is not a good custom, it ought to be no longer used. Malus usus abolendus est, is an established maxim of the law. To make a particular custom good, the following are necessary requisites : —

1. That it has been used so long, that the memory of man runneth not to the contrary.

2. It must have been continued, without interruption of the right : an interruption of the possession only for ten or twenty years, will not destroy the custom ; but, if the right be discontinued, even for a day, the custom is quite at an end.

3. It must have been peaceable, and acquiesced in ; not subject to contention and dispute.

4. Customs must be reasonable : or rather they must not be unreasonable.

5. Customs ought to be certain. A custom that lands shall descend to the most worthy of the owner’s blood is void ; for how shall this superior worth be determined ? but a custom to descend to the next male of the blood, exclusive of females, is certain, and therefore good.

6. Customs, though established by consent, must (when established) be compulsory; and not left to the option of every man, whether he will use them or not.

7. Lastly, customs must be consistent with each other. One custom cannot be set up in opposition to another. For, if both are really customs, then both are of equal antiquity, and both established by mutual consent : which, to say of contradictory customs, is absurd.

N'ext, as to the allowance of special customs. Customs, in derogation of the common law, must be construed strictly : and all special customs must submit to the king's prerogative.

SECT. III. — PECULIAR CUSTOMARY LAWS.

The third branch of the leges non scripts, or customary laws, are those peculiar laws which by custom are adopted and used only in certain peculiar courts and jurisdictions. And by these are understood the civil and canon laws.

It may seem improper, at first view, to rank these laws under the head of unwritten laws, seeing they are set forth in pandects, codes, and institutions, &c., and enforced by an immense number of expositions, decisions, and treatises of the learned in both branches of the law. But it is plain, that it is not on account of their being written laws, that either the canon law, or the civil law, has any obligation within this kingdom. They bind not the subjects of England, because their materials were collected from popes or emperors; digested by Justinian, or declared authentic by Gregory ; for the legislature of England does not, nor ever did, recognise any foreign power, as superior or equal to it in this kingdom ; or as having the right to give law to any, the meanest of its subjects. But all the strength that either the papal or imperial laws have obtained in this realm is because they have been admitted and received by immemorial usage and custom in some particular cases and courts ; or because they are in some other cases introduced by consent of parliament. This is expressly declared in statute 25 Henry VIII. cap. 21.

By the CIVIL law, absolutely taken, is generally understood the civil or municipal law of the Roman empire, as comprised in the institutes, the code, and the digest of the emperor Justinian, and the novel constitutions of himself and some of his successors. It consists of 1st. The Institutes, which contain the elements or first principles of the Roman law, in four books. 2d. The digests or pandects in fifty books; containing the opinions and writings of eminent lawyers, digested in a

systematical method. 3rd. A new code or collection of imperial constitutions ; the lapse of a whole century having rendered the former code of Theodosms imperfect. 4th. The novels or new constitutions posterior

in time to the other books, and amounting to a supplement to the code, containing new decree8 of successive emperors as new questions happened to arise.

The CANON law is a body of Roman ecclesiastical law relative to such matters as that church either has, or pretends to have, the proper jurisdiction over. This is compiled from the opinions of the ancient Latin fathers, the decrees of general councils, and the decretal epistles and bulls of the holy see ; and contains also the Decretum Gra-tiani compiled by one Gratian, an Italian monk, and entitled by him Concordia Discordantium Ca-nonum ; the Decretalia of Gregory IX., the Sextus Decretalium of Boniface VIII., the Constitutions of Clement V., and the Extravagantes of John XXII., and his successors.

Besides these collections, which during the times of popery were received as authentic in this island, as well as in other parts of Christendom, there is also a kind of national canon law composed of legatine and provincial constitutions., and adapted only to the exigencies of this church and kingdom. At the dawn of the reformation under Henry VIII. it was enacted in parliament that a review should be had of the canon law, and, till such review should be made, all canons, constitutions, ordinances, and synodals provincial, being then already made and not repugnant to the law of the land or the king’s prerogative, should still be used and executed. And, as no such review has yet been perfected, upon *his statute now depends the authority of the canon law in England. For, though canons were »nacted by the clergy under James I. in 1603, yet as they were never confirmed in parliament, it has been solemnly adjudged that where they are introductory of new regulations they do not bind the laity, whatever regard the clergyjnay think proper to pay them.

There are four species of courts in which the civil and canon laws are pennitted, under different restrictions to be used. 1. The courts of the archbishops and bishops and their derivative officers, usually called courts Christian (curiae Christianitatis) or the ecclesiastical courts. 2. The military courts. 3. The courts of admiralty. -J. The courts of the two universities. In all, their reception in general and the different degrees of that reception are grounded entirely upon custom; corroborated in the latter instance by act of parliament, ratifying those charters which confirm the customary law of the universities.

1 . The courts of common law have the superintendency over these courts; to keep them within their jurisdictions; to determine wherein they ex-ceed them ; and to punish the officer who executes, and in some cases the judge who enforces the sentence so declared to be illegal.

2. The common law has reserved to itself the exposition of all such acts of parliament as concern either the extent of these courts, or the matters depending before them.

3. An appeal lies from all these courts to the kinu, in the last resort.

SECT. IV. — OF THE STATUTE LAW.

We next proceed to the leges scriptae, the written laws of the kingdom, which are statutes,

acts, or edicts, made ‘.y the king’s majesty by and with the advice ;f the lords spiritual and temporal and commons in parliament assembled. The oldest of these now extant, and printed in our statute-books, is the famous Magna Charta, as confirmed in parliament by 9 Hen. III.

As to their several kinds, statutes are either general or special, public or private.

1. A general or public act is a universal rule that regards the whole community: and of this the courts of law alre bound to take notice judicially, and ex officio, without the statute being particularly pleaded, or formally set forth by the party who claims an advantage under it.

2. Special or private acts are rather exceptions than rules, being those which only operate upon particular persons and private concerns ;

such as the Romans entitled senatus decreta in contradistinction to the senatus consulta, which regarded the whole community ; and of these the judges are not bound to take notice, unless they be for-irfally shown and pleaded.

Statutes also are either declaratory of the com-mon law, or remedial of some defects therein .

. Declaratory, where the old custom of the kingdom is almost fallen into disuse or become disputable; in which case the parliament has thought proper in perpetuum rei testimonium and for avoiding all doubts and difficulties, to declare what the common law is and ever has been.

2. Remedial statutes are those made to supply such defects, and abridge such superfluities, in the common law, as arise either from the general imperfection of all human laws, from change of time and circumstances, from the mistakes and unadvised determinations of unlearned judges, or from any other cause whatsoever. And the doing of this, either by enlarging the common law where it was too circumscribed, or by restraining it where it was too lax, has occasioned another subordinate division of remedial acts of parliament into enlarging and restraining statutes.

The rules to be observed with regard to the construction of statutes are principally the following : —

1. There are three points to be considered in the construction of all remedial statutes; the old law, the mischief, and the remedy ; that is, how the common law stood at the making of the act, what the mischief was for which the common law did not provide, and what remedy the parliament has provided to cure the mischief.

2. A statute which treats of things or persons of an inferioi rank cannot, by any general words, be extended to those of a superior.

3. Penal statutes must be construed strictly.

4. Statutes against frauds are to be liberally and beneficially expounded. This may seem a contradiction to the last rule, most statutes against frauds being in their consequences penal But this difference is here to be taken : where the statute acts upon the offender, and inflicts a penalty, as the pillory or a fine, it is then to be taken strictly ; but when the statute acts upon the offence, by setting aside the fraudulent transaction, here it is to be construed liberally.

5. One part of a statute must be so construed by another that the whole may, if possible, stand : et res magis valeat quain pereat.

6. A saving totally repugnant to the body of the act is void.

7. Where the common law and a statute dif- *er, the common law gives place to the statute ; and an old statute gives place to a new one upon the general principle that leges posteriores con-trarias abrogant. But this is to be understood only when the latter statute is couched in negative terms, or by its matter necessarily implies a negative.

8. If a statute, that repeals another, is itself repealed afterwards, the first statute is hereby revived without any formal words for that purpose.

9. Acts of parliament derogatory from the power of subsequent parliaments bind not.

10. Lastly, acts of parliament that are impossible to be performed are of no validity : and if there arise out of them collaterally any ab-surd consequences, manifestly contradictory to common reason, they are, with regard to those consequences, void.

Such is the general nature of the laws of England, over and above which, equity is also frequently called in to assist, to moderate, and to explain them. There are courts of equity established for the benefit of the subject to detect latent frauds and concealments, which the process of the courts of law is not adapted to reach — to enforce the execution of such matters of trust and confidence as are binding in conscience, though not cognizable in a court of law; to deliver from such dangers as are owing to misfortune or oversight ; and to give a more specific relief, and more adapted to the circumstances of the case, than can always be had by -lost of the rules of the positive or common .aw. This is the business of the courts of equity, which, however, are only conversant in matters of property. For the freedom of our constitution will not permit, that in criminal cases a power

should be lodged in any judge to construe the law otherwise than according to the letter. This caution, while it admirably protects the public liberty, can never bear hard upon individuals. A man cannot suffer more punishment than the law assigns, but he may suffer less. The laws cannot be strained by partiality to inflict a penalty beyond what the letter will warrant, but, dn cases where the letter induces any apparent hardship, the crown has the power to pardon.

GENERAL MAXIMS OF THE ENGLISH LAW.

Although it has not been usual in works of this kind, we conceive it will be useful to state the leading maxims of the English law, and especially those which from their nature are calculated to be of extensive application. This is the more necessary on account of the brevity with which the details of the law must necessarily be set forth. We shall arrange these principles in the order of their nature and importance.

1. Maxims relating to public offences.

No man ought to accuse himself unless it be before God.

In criminal cases the proof ouˆht to be as clear as daylight.

Intent without act is not punishable.

Malice is held equivalent to age.

A madman is punished by his madness : he cannot be further punished by the law.

He confesses his guilt who flies from judgment.

Offences the most difficult to guard against ought to be the most severely punished.

The health and welfare of the people is the highest law.

2. Maxims of justice in general.

The public good is to be preferred before private interest.

It is for public good that there should be an end to litigation.

Ignorance of the law doth not excuse.

Ignorance of the fact excuseth.

We ought not to go from the words of the law.

The disposition of the law is of greater force than the disposition of man.

Delays are odious in the law.

No injury is to be presumed.

The law excuseth impotency, or natural inability : as idiots, prisoners, &c.

In cases in general, there is favor shown to persons within age.

The law compelleth no man to impossibilities.

The construction of law shall wrong no person.

Necessity gives a privilege denied by law.

That which in the beginning is vicious cannot by length of time be made good.

Whatever is inconvenient and contrary to reason is not permitted in the law.

What otherwise is good and just, if it be acquired by force, or fraud, it is evil and unjust.

Things done between strangers ought not to injure those not parties : they may benefit them.

The laws help those that are watchful, and not those that are sleepy and negligent.

Every thing should be dissolved by the same means whereby it was first constituted.

3. Maxims of equity.

In all things, but especially in the law, there is equity.

He that will have equity done, must do equity.

Equity suffers not a wrong to be without remedy.

Equity suffers not advantages to be taken of a penalty or forfeiture, where compensation can be made.

Where equity is equal, the law must prevail.

A rerdict at law is a bar to equity.

A contract founded in evil, or against morality, is void.

Conditions against law are void.

Deceit is not purged by circuity.

4. Maxims affecting individuals.

A personal action dies with the person, as in cases of trespass, and battery.

Injuries to the body cannot be remitted or forgiven.

What one does by another, he does by himself.

He who cannot pay in purse, must pay in person.

The title to an Englishman's liberties is older than the oldest title to any estate-

No one can be a witness in his own cause.

No one ought to be a judge in his own cause.

No one shall take advantage of his own wrong.

Let the actor take care what he does : as an acquittance for the last rent presumes the arrears discharged.

Every act is to be judged from the intention of the agent.

5. Maxims affecting property.

The act of God does injury to no man, as, if a house is blown down by tempest, the tenant is excused in waste, unless he expressly covenants to repair.

The act of law does injury to no one. Thus, if land out of which a rent charge is granted be recovered by elder title, the grantee shall have a writ of annuity.

An ambiguous deed or contract is to be expounded against the seller or granter.

Bad grammar does not vitiate a deed.

The right to land is of an infinite extent upwards as well as downwards.

To whomsoever any one shall grant any thing, he grants that without which it cannot be.

That is certain which can be reduced to certainty.

To whom it is lawful to do the greater, to him it is not unlawful to do the smaller thing.

A right sometimes sleeps, but never dies.

It is forbidden that any one should do that with his own, which” may injure another; and so use your own that you do not hurt others.

Every man’s grant shall be taken most strongly against himself.

He who bears the burden ought also to receive the profit.

He that reaps the profit ought to bear the burden.

Clandestine gifts are suspicious.

No action lies on a naked contract ; that is, without consideration.

Long possession is the law of peace.

The naming of one thing is the exclusion of another.

Every thing may be annulled by the same means that made it.

The English law has been frequently censured for its voluminousness and complexity, by those who have not understood its nature, or the various circumstances out of which it arose. Sir Walter Scott, in his comparison of the Code Napoleon with the English system of jurisprudence, has admirably investigated the grounds of the public prejudice.

‘ It is the common and vulgar idea,’ he says, ‘ that the system of legislation may be reduced and simplified into a few general maxims of equity, sufficient to lead any judge of understanding and integrity to a just decision of all questions which can possibly occur between man and man. It follows, as a corollary to this proposition, that the various multiplications of authorities, exceptions, particular cases, and especial provisions, which have been introduced among civilised nations, by the address of those of the legal profession, are just so many expedients

to embarrass the simple course of justice with arbitrary modifications and refinements, in order to procure wealth and consequence to those educated to the law, whose assistance must be used as its interpreters, and who become rich by serving litigants as guides through the labyrinth of obscurity which had been raised by themselves and their predecessors.

‘ Such were the ideas of law and its professors, which occurred to the parliament of Praise-God Barebones, when they proposed to Cromwell to abrogate the whole common law of England, and dismiss the lawyers, as drones who did but encumber the national hive. Such was also the opinion of many of the French statesmen, who, as rash in judging of jurisprudence as in politics, imagined that a system of maxims, modified on the plan of the twelve tables of the ancient Romans, might serve all the purposes of a civil code in modern France. They who thought in this manner had entirely forgotten how soon the laws of these twelve tables became totally insufficient for Rome herself — how, in the gradual change of manners, some laws became obsolete, some inap-plicable,— how it became necessary to provide for emerging cases, successively by the decrees of the senate, the ordinances of the people, the edicts of the consuls, the regulations of the praetors, the answers or opinions of learned jurisconsults, and finally by the rescripts, edicts, and novels of the emperors, until such a mass or legislative matter was assembled as scarcely the efforts of Theodosius or Justinian were adequate to bring into order, or reduce to principle.

But this, it may be said, was the very subject complained of. The simplicity of the old laws, it may be urged, was corrupted, and hence by the efforts of interested men, not by the natural progress of society, arose the complicated sys-tem which is the object of such general complaint.

‘ The answer to this is obvious. So long as society remains in a simple state, men have occasion for few and simple laws. But when society begins to be subdivided into ranks, when duties are incurred, and obligations contracted, of a kind unknown in a ruder or earlier period, these new conditions, new duties, and new obligations, must be regulated by new rules and ordinances, which accordingly are introduced as fast as they are wanted, either by the course of long custom, or by precise legislative enactment. There is no doubt one species of society in which legislation may be much simplified ; and that is, where the whole law of the country, with the power of enforcing it, is allowed to re-side in the bosom of the king, or of the judge who is to administer justice. Such is the system of Turkey, where the cadi is bound by no laws nor former precedents, save what his conscience may discover from perusing the koran. But so apt are mankind to abuse unlimited power, and indeed so utterly unfit is human nature to possess it, that, in all countries where the judge is possessed of such arbitrary jurisdiction, he is found accessible to bribes, or liable to be moved by threats. He has no distinct course prescribed, nc beacon on which to direct his vessel, and

trms therefore his sails to the pursuit of his own profit.’

Before presenting an outline of the law of England, it may not be immaterial further to observe, that there are various modes in which its several departments may be treated and arranged. It may be viewed historically, and its progress delineated from rudeness to refinement; — philosophically, in relation to the principles of universal law; or artificially and technically, as regards the peculiar character and circumstances of the country to which its provisions apply. We shall endeavour to combine, as far as practicable, the two

latter methods ; the first would lead us beyond our limits, and be inconsistent with our plan.

The celebrated Commentaries of Sir William Blackstone have so fully taken possession of the minds of all legal enquirers, that, even were the work less excellent than it is, it would still be expedient, in some degree, to adopt the general plan of that distinguished composition. It has become a sort of text book, and has established so firm a hold in the recollection, that an entire deviation from its plan would appear like affectation rather than improvement. There are, nowever, some respects in which we think an alteration may be judiciously made, and in which the natural and philosophic arrangements may be preferred to the artificial and the technical.

In one respect Blackstone seems to have followed the classification of Grotius, who treats of the general rights of things, (On War and Peace, book II., chap. 2.) But this distinction, which might have some reason in its favor in a general work upon the law of nature and nations, can scarcely be maintained in reference to a code of municipal laws long established. In the former case it relates to the origin of property, and to the consideration that some things are impossible to be made the subject of property, as the sea in its full extent, &c. Now the laws of England, in relation to property, can apply only to those ‘ things’ which are recognised as property, or over which the subjects or inhabitants of the realm are entitled to exercise dominion.

It may be questioned, also, whether the distinction which has been attempted to be made between public and private wrongs is well founded, or recognised as a principle in jurisprudence. Violations of the public law, whether civil or criminal, are public wrongs, although a single individual only may be the sufferer, and whether the injury be inflicted on person or property. The distinction, indeed, is not kept up consistently even in the Commentaries themselves, for the third volume is entitled Private Wrongs, and the fourth Public Wrongs ; yet the latter includes offences against individuals, their persons, habitations, and property.

Adopting, therefore, a more popular arrangement and phraseology, our classification of the CIVIL code will consist in its principal divisions of rights and injuries, relating to person and property; and of redress, and the mode of obtaining it. The CRIMINAL code will be divided into different classes of crimes, their prevention, and appropriate punishment.

CIVIL CODE.

CHAP. I.— OF RIGHTS RELATING TO PERSONS. Of persons in public authority.

1. Of the king, his title, duties, prerogative!, hit royal family, councils, and revenue. — The superior executive power of this kingdom is lodged in a single person, the king or queen. This royal person may be considered with regard to 1. His title; 2. His duties; 3. His prerogative; 4. His royal family; 5. His councils; 6. His revenue, ordinary and extraordinary.-

The king's title. The crown of 'England by the positive constitution of the kingdom has ever been descendible, and so continues. The crown is descendible in a course peculiar to itself. This course of descent is subject to limitation by parliament. Notwithstanding such limitations the crown retains its descendible quality, and becomes hereditary in the prince to whom it is limited. King Egbert, king Canute, and king William I., have been successively constituted the common stocks, or ancestors, of this descent. At the revolution, the convention of estates, or representative body of the nation, declared that the misconduct of king James II. amounted to an abdication of the government, and that the throne was thereby vacant. In consequence of this vacancy, and from a regard to the ancient line, the convention appointed the next protestant heirs of the blood royal of king Charles I. to fill the vacant throne, in the old order of succession, with a temporary exception or preference to the person of king William III. On the impending failure of the Protestant line of king Charles I., whereby the throne might again have become vacant, the king and parliament extended the settlement of the crown to the protestant line of king James 1. *viz.* to the princess Sophia of Hanover, and the heirs of her body, being protestants, and she is now the common stock from whom the heirs of the crown must descend.

The king's duties, are to govern his people according to law, to execute judgment in mercy, and to maintain the established religion. These are his part of the original contract between himself and the people, founded in the nature of society, and expressed in his oath at the coronation.

The king's prerogative is that special power, and pre-eminence, which the king has above other persons, and out of the ordinary course of law, in right of his regal dignity. Such prerogatives are either direct or

incidental. The incidental, arising out of other matters, are considered as they arise : we now treatonly of the direct.

In the king's authority, or legal power, consists the executive part of government. In foreign concerns, the king, as the representative of the nation, has the rjght or prerogative, 1. Of sending or receiving ambassadors ; 2. Of making treaties; 3. Of proclaiming war or peace; 4. Of issuing reprisals ; 5. Of granting safe conducts. In domestic affairs the king is considered a constituent part of the supreme legislative power, and has a negative upon all new laws. He is not bound by statute unless specially named.

As the general of the kingdom, he may raise fleets and armies, build forts, appoint havens,

erect beacons, prohibit the exportation of arms and ammunition, and confine his subjects within the realm, or recall them from foreign parts.

The king is also the fountain of justice, and conservator of the peace; and therefore may erect courts, prosecute offenders, pardon crimes, and issue proclamations. He is likewise the fountain of honor, of office, and of privilege. He is also the arbiter of domestic commerce (not of foreign which is regulated by the law of merchants); and is therefore entitled to the erection of public marts, the regulation of weights and measures, and the coinage or legitimation of money.

The king is, lastly, the supreme head of the church ; and, as such, convenes, regulates, and dissolves synods, nominates bishops, and receives appeals in all ecclesiastical causes.

The king's royal family are, 1. The queen, either regnant, consort, or dowager. 2. The prince and princess of Wales, and the princess royal. 3. The king's other descendants.

The king's councils are, 1. The parliament. 2. The peers. 3. The judges.

4. The privy council.

The king's revenue is either ordinary or extraordinary ; and the ordinary is, 1. Ecclesiastical,

2. Temporal.

The ecclesiastical revenue consists : 1 . In the custody of the temporalities of vacant bishoprics ; 2. In corrodies and pensions ; 3. In extra parochial tithes ; 4. In the first fruits and tenths of benefices.

The kings ord inary temporal revenue consists, 1. In the demesne lands of the crown; 2. In the hereditary excise, being part of the consideration for the purchase of his feudal profits, and the prerogatives of purveyance and preemption ;

3. In wine licenses, being the residue of the same consideration ; 4. In his forests ; 5. His courts of justice; 6. Royal fish; 7. Wrecks, and things jetsam, flotsam, and ligan; 8. Royal mines; 9. Treasure trove; 10. Waifs; 11. Es-trays ; 12. Forfeitures for offences, and deodands; 13. Escheats of lands; 14. Custody of idiots and lunatics.

What is usually termed the hereditary revenue of the crown, namely, the profits of the crown lands, the hereditary excise, the duty on wine licenses, and the profits arising from courts of justice, has been relinquished by his present majesty, and now forms part of the consolidated fund ; instead of which parliament have granted to his majesty, during his life, for the maintenance of his civil list, £850,000 in England, and £207,000 in Ireland, chargeable upon the consolidated fund of the United Kingdom. Stat. 1 Geo. IV., c. 1.

The king's extraordinary revenue consists in aids, subsidies, and supplies, granted him by the commons in parliament. Heretofore, these were usually raised by grants of the nominal tenth or fifteenth of the moveables in every township ; or by subsidies assessed upon individuals, with respect to their land and goods.

A new system of taxation took place soon after the revolution; our modern taxes are therefore, 1. Annual; 2. Perpetual.

The annual taxes are, 1. The land-tax, or the ancient subsidy raised upon a new assess-

ment ; 2. The malt-tax, being an annual excise on malt, mum, cider,

and perry.

The perpetual taxes, are, 1. The customs or tonnage and poundage of all merchandise; exported and imported; 2. The excise duty, or inland imposition, on a great variety of commodities ; 3. The salt duty, or excise on salt ; 4. The post-office, or duty for the carriage of letters ; 5. The stamp-duty on paper, parchment, 8cc. ; 6. The duty on houses and windows ; 7. The duty on licenses for hackney-coaches and chairs.

Part of this revenue is applied to pay the interest of the national debt, till the principal is discharged by parliament.

The produce of these several taxes went originally to separate and specific funds, to answer specific loans upon their respective credits ; but these are now consolidated by parliament into three several funds, the aggregate, general, and south-sea funds, to answer all the debts of the nation ; the public faith being also superadded, to supply deficiences and strengthen the security of the whole.

The surpluses of these funds, after paying the interest of the national debt, are carried together and denominated the sinking fund ; which, un-less otherwise appropriated by parliament, is annually applied to pay off some part of the principal. But previous to this the aggregate fund is charged with an annual sum for the civil list which is the immediate proper revenue of the crown, settled by parliament on the king at his accession, for defraying the charges of civil government.

2. Of the parliament. — Parliaments, in some shape, are of as high antiquity as the Saxon government, and have subsisted in their present form upwards of 500 years. The parliament is assembled by the king's writs, and its sitting must not be intermitted above three years.

Its constituent parts are the king's majesty, the lords spiritual and temporal, and the commons represented by their members, each of which parts has a negative or necessary voice in making laws.

With regard to the general law of parliament, its power is absolute : each house is the judge of its own privileges, and all the members of either house were formerly entitled to the privilege of speech, of person, of their domestics, and of their lands and goods.

But the privileges as to their servants and property, together with all other privileges which derogated from the common law in matters of civil right, save only as to freedom of person in the members themselves, have since been relinquished by parliament, by stat. 10 Geo. III. c. 50.

The peculiar privileges of the lords, besides their judicial powers, are to hunt in the king's forests, to be attended by the sages of the law, to make proxies, to enter protests, and to regulate the election of the sixteen peers of North Britain, and of the twenty-eight peers of Ireland.

The peculiar privileges of the commons are, to raise taxes on the subject, and to determine the merits of their own elections, with regard to the qualifications of the electors and elected, and the proceedings at elections themselves.

Bills are usually read twice in each house, committed, engrossed, and then read a third

lime ; and when they have obtained the concurrence of both houses, and received the royal assent, they become acts of parliament.

The houses may adjourn their meetings, but the king only can prorogue the parliament.

Parliaments are dissolved, 1 . At the king's will; 2. By the demise of the crown, or rather within six months after the demise ; 3. By length of time, or having sat for the space of seven years.

3. Of subordinate magistrates. — Subordinate magistrates of the most general use and authority are, 1. Sheriffs; 2. Coroners; 3. Justices of the peace ; 4. Constables ; 5. Surveyors of the highways ; 6. Overseers of the poor.

The sheriff is the keeper of each county, annually nominated in due form by the king : and is (within his county) a judge, a conservator of the peace, a ministerial officer, and the king's bailiff.

Coroners are permanent officers of the crown in each county, elected by the freeholders, whose office it is to make enquiry concerning the death of the king's subjects, and certain revenues of the crown, and

also in particular cases to fill the office of the sheriff.

Justices of the peace are magistrates in each county statutably qualified and commissioned by the king's majesty ; with authority to conserve the peace, to hear and determine felonies, and other misdemeanors, and to do many other acts committed to their charge by particular statutes.

Constables are officers of hundreds and townships, appointed at the leet, and empowered to preserve the peace, to keep watch and ward, and to apprehend offenders.

Surveyors of the highways are officers appointed annually in every parish, to remove annoyances in, and to direct the reparation of, the public roads.

Overseers of the poor are officers appointed annually, in every parish, to relieve such impotent, and employ such sturdy poor, as are settled in each parish, by birth, by parentage, by marriage, or by forty days' residence ; accompanied with 1. Notice to an overseer; 2. Renting a tenement of ten pounds annual value ; 3. Paying their assessed taxations ; 4. Hiring and service for a year ; 5. Apprenticeship fpr seven years ; 6. Having a sufficient estate in the parish.

2. Of the people generally, and their allegiance. The people are either aliens, that is, born out

of the dominions or allegiance of the crown of Great Britain, or natives, that is, born within it. Allegiance is the duty of all subjects ; being the reciprocal tie of the people to the prince, in re-turn for the protection he affords them : and in natives this duty of allegiance is natural and perpetual; in aliens it is local and temporary only.

The rights of natives are also natural and perpetual ; those of aliens local and temporary only, unless they be made denizens by the king or naturalised by parliament.

3. Of Hie clergy and laity ; the army and navy. Natives are also either clergy, that is, all persons in holy orders or in ecclesiastical offices : or laity, which comprehends the rest of the nation.

The clergy are, 1 . Archbishops and bishops ;

2. Deans and chapters; 3. Archdeacons; 4. Rural deans; 5. Parsons

(under which are included appropriators) and vicars, to whom there are generally requisite holy orders, presentation, institution, and induction: 6. Curates; to which may be added, 7. Churchwardens; 8. Parish clerks and sextons.

The laity are divisible into three states : civil, military, and maritime.

The civil state (which includes all the natives except the clergy, the army, the navy, and many individuals among them also) may be divided into the nobility and commonalty.

The nobility are dukes, marquises, earls, viscounts, and barons : these had anciently duties annexed to their respective honors. They are created either by writ, that is by summons to parliament ; or by the king's letters patent, that is, by royal grant ; and they enjoy many privileges, exclusive of their senatorial capacity.

The commonalty consists of knights of the garter, knights bannerets, baronets, knights of the bath, knights bachelors, esquires, gentlemen, yeomen, tradesmen, artificers, and laborers.

The military state, by the standing constitutional law, consists of the militia of each county, raised from among the people by lot, officered by the principal landholders, and commanded by the lord-lieutenant.

The more disciplined occasional troops of the kingdom are kept on foot only from year to year, by parliament ; and, during that period, are governed by martial law, or arbitrary articles of war, formed at the pleasure of the crown.

The maritime state consists of the officers and mariners of the British navy ; who are governed by express and permanent laws, or the articles oif the navy, established by act of parliament.

4. Of corporations. — Bodies politic, or corporations, which are artificial persons, are established for preserving in perpetual succession certain rights, which being conferred on natural persons only would fail in process of time. Corporations are, 1 . Aggregate, consisting of many members ; 2. Sole, consisting of one person only.

Corporations are also either spiritual, erected to perpetuate the rights of the church; or lay : and the lay are 1. Civil, erected for many temporal purposes ; 2. Eleemosynary, erected to perpetuate the charity of the founder.

Corporations are usually erected and named by virtue of the king's

royal charter, but may be created by act of parliament. The powers incident to all corporations are, 1. To maintain perpetual succession ; 2. To act in their corporate capacity like an individual ; 3. To hold lands subject to the statutes of mortmain; 4. To have a common seal ; 5. To make bye-laws ; which last power, in spiritual or eleemosynary corporations, may be executed by the king or the founder.

The duty of corporations is to answer the ends of their institution. To enforce this duty, all corporations may be visited ; spiritual corporations by the ordinary ; lay corporations by the founder, or his representative, *viz.* the civi. ny the king (who is the fundator incipiens of ali\

represented in his court of king's bench ; the eleemosynary by the endower (who is the fundator perficiens of such), or by his heirs or assigns. Corporations may be dissolved, 1. By act of parliament; 2. By the natural death of all their members ; 3. By surrender of their franchises ; 4. By forfeiture of their charter.

5. Of the absolute rights of individuals. — T*"; absolute rights of individuals compose what is called civil liberty.

Civil liberty is the natural liberty of mankind so far restrained by human laws as is necessary for the good of society.

The absolute rights or civil liberties of Eng-lishmen, as frequently declared hi parliament, are principally three : — The right of personal security, of personal liberty, and of private property.

The right of personal security consists in the legal enjoyment of life, limb, body, health, and reputation.

The right of personal liberty consists in the free power of locomotion, without illegal restraint or banishment.

The right of private property consists in every man's free use and disposal of his own lawful acquisitions, without injury or illegal diminution.

Besides these three primary rights, there are others which are

designed to preserve the former from unlawful attacks : 1 . The constitution and power of parliaments ; 2. The limitation of the king's prerogative : and others to vindicate them, •when actually violated ; namely, 3. The regular administration of public justice ; 4. The right of petitioning for redress of grievances ; 5. The having and using of arms for self-defence.

6. Of persons in their private relations. — The private relations of persons are four: — 1. Husband and wife; 2. Parent and child; 3. Guardian and ward ; 4. Master and servant.

(1.) Husband and wife. — The relation of marriage includes the reciprocal rights and duties of' husband and wife.

Marriage is duly contracted between persons, 1. Consenting; 2. Free from canonical impediments, which make it voidable; 3. Free also from the civil impediments — of prior marriage — of want of age — of non-consent of parents, &c., where requisite — of want of reason ; any of which make it totally void ; and it must be celebrated by a clergyman in due form and place.

Marriage is dissolved, 1. By death; 2. By divorce in the spiritual court; not a mensa et thoro only, but a vinculo matrimonii, for a canonical cause existing previous to the contract; 3. By act of parliament ; as for adultery.

By marriage the husband and wife become one person in law ; which unity is the principal foundation of their respective rights, duties, and disabilities.

(2.) Of parent and child. — The next and most universal private relation, is that of parent and child. Children are, 1. Legitimate, or those who are born in lawful wedlock, or within a competent time after; 2. Bastards, being those who are not so born.

The duties of parents to legitimate children are, 1. Maintenance; 2. Protection; 3. Education.

The power of parents consists principally in correction, and consent to marriage : both may.

after death, be delegated by will to a guardian ; and the former also, at any time, to a tutor or master.

The duties of legitimate children to parents are obedience, protection, and maintenance. The duty of parents to bastards is only that of maintainance. The rights of a bastard are such only as he can acquire ; for he is incapable of inheriting any thing.

(3.) Guardian and Ward. — We come next to the relation of guardian and ward, which is plainly derived from the last ; these being, during the continuance of their relation, reciprocally subject to the same rights and duties.

Guardians are of divers sorts : 1 . Guardians by nature, or the parents; 2. Guardians for nurture, assigned by the ecclesiastical courts ; 3. Guardians in soccage, assigned by the common law; 4. Guardians by statute, assigned by the father's will. All subject to the superintendence of the court of chancery.

Full age in male or female, for all purposes, is the age of twenty-one years (different ages being allowed for different purposes); till which age the person is an infant. An infant, in respect of his tender years, has various privileges, and various disabilities in law ; chiefly with regard to suits, crimes, estates, and contracts.

(4.) Of Master and Servant. — There are four species of servants (for slavery is unknown to our laws), *viz.* 1. Menial servants, who are hired ; 2. Apprentices, who are bound by indentures; 3. Laborers, who are casually employed ; 4. Stewards, bailiffs, and factors, who are rather in a ministerial state.

From this relation result divers powers to the master, and emoluments to the servant. The master has a property in the service of a servant, and must be answerable for such acts as the servant does by his express or implied command.

CHAP. II. — OF RIGHTS RELATING TO PROPERTY.

1. Of Property in general. — All dominion over external objects has its original from the gifts of the Creator to man in general. The substance of things was, at first, common to all mankind ; yet a temporary property, in the use of them, might oven then be acquired, and continued, by occupancy. In process of time a permanent property was established in the substance, as well as in the use, of things ; which was also originally acquired by occupancy only.

Lest this property should determine by the owners' dereliction, or death, whereby the thing would again become common, societies have established conveyances, wills, and heirships, in order to continue the

property of the first occupant ; and, where, by accident, such property becomes discontinued and unknown, the thing usually results to the sovereign of the state, by virtue of the municipal law.

But of some things, which are incapable of permanent substantial dominion, there still subsists only the same transient usufructuary property which originally subsisted in all things.

This property, or exclusive dominion, may be divided into, 1. Things real : 2. Things personal.

2. Of real Property. — In things real may be considered, 1. Their several kinds; 2. The te-

nures by which they may be holden; 3. The {•states which may be acquired therein; 4. Their title, or the means of acquiring and losing them.

All the several kinds of things real are reducible to one of these three, *viz.* lands, tenements, or hereditaments ; whereof the second includes the first, and the third includes the first and second.

Hereditaments, therefore, or whatever may come to be inherited (being the most comprehensive denomination of things real) are either corporeal, or incorporeal.

Corporeal hereditaments consist wholly of lands in their largest legal sense ; wherein they include not only the face of the earth, but every other object of sense adjoining thereto, and subsisting either above or beneath it.

Incorporeal hereditaments are rights issuing out of things corporeal, or concerning, or annexed to, or exercisable within, the same.

Incorporeal hereditaments are, 1. Advowsons; 2. Tithes; 3. Commons; 4. Ways; 5. Offices; 6. Dignities; 7. Franchises; 8. Corrodies, or pensions; 9. Annuities; 10. Rents.

An advowson is a right of presentation to an ecclesiastical benefice, either appendant or in gross. This may be, 1. Presentative ; 2. Collative; 3. Donative.

Tithes are the tenth part of the increase yearly arising from the profits and stock of lands, and the personal industry of mankind. These, by the ancient and positive law of the land, are due of common right to the parson or (by endowment) vicar, unless especially discharged, 1. By real composition ; 2. By prescription, either de modo decimandi, or de non decimando.

Common is a profit which a man has in the lands of another; 1. Common of pasture; which is either appendant, appurtenant, because of vi-cinage, or m gross; 2. Common of piscary; 3. Common of turbary ; 4. Common of estover or botes.

Ways are a right of passing over another man's ground.

Offices are the right to exercise a public or private employment.

For dignities, which are titles of honor, see chap. I.

Franchises are a royal privilege, or branch of the king's prerogative, subsisting in the hands of a subject.

Corrodies, which may be converted into pensions, are ecclesiastical annuities.

An annuity is a yearly sum of money, charged upon the person, and not upon the lands of the grantor.

Rents are a certain profit issuing yearly out of lands and tenements ; and are reducible to, 1. Rent-service; 2. Rent-charge; 3. Formerly rent-seek, where the party entitled to it had no power to distrain for it, but the remedy by distress is now given in all cases of distress.

3. Of the feudal system and ancient tenures. — The doctrine of tenure is derived from the feudal law, which was planted in Europe by its northern conquerors at the dissolution of the Roman empire.

Pure and proper feuds were parcels of land allotted by a chief to his followers; to be held

on the condition of personally rendering due military service to their

lord.

These were granted by investiture ; were held under the bond of fealty ; were inheritable only by descendants ; and could not be transferred without the mutual consent of the lord and vassal.

Improper feuds were derived from the other, but differed from them in their original, their services and renders, their descent and other circumstances.

The lands of England were converted into feuds of the improper kind soon after the Nor-man conquest; which gave rise to the grand maxim of tenure, *viz.* that all lands in the kingdom are holden mediately or immediately of the king.

The distinction of tenures consisted in the nature of their services; as 1. Chivalry, or knight service ; where the service was free, but uncertain ; 2. Free soccage, where the service was free and certain; 3. Pure villenage, where the service was base and uncertain ; 4. Privileged vil-leuage, or villein soccage, where the service was base, but certain.

The most universal ancient tenure was that by chivalry, or knight service; in which the tenant of every knight's fee was bound, if called on, to attend his lord to the wars. This was granted by livery, and perfected by homage and fealty, which usually drew after them suit of court.

The fruits and consequences of the tenure by knight service were, 1. Aid ; 2. Relief; 3. Primer-seism ; 4. Wardship; 5. Marriage; 6. Fines upon alienation ; 7. Escheat.

Grand sergeantry differed from chivalry principally in its render, or service; and not in iu fruits and consequences.

The personal service in chivalry was at length gradually changed into pecuniary assessments, which were called scutage or escuage.

These military tenures (except the services of grand sergeantry) were, at the restoration of king Charles, totally abolished, and reduced to free soccage by act of parliament.

Free soccage is a tenure by any free, certain, and determinate service. This tenure, the relic of Saxon liberty, includes petit sergeantry, tenure in burgage, and gavelkind.

Free soccage lands partake strongly of the feu-dal nature, as well as those in chivalry ; being holden subject to some service ;— at the least to fealty and suit of court; subject to relief, to wardship, and to escheat, but not to marriage ; subject also formerly to aids, primer seisin, and fines for alienation.

Pure villenage was a precarious and slavish tenure; at the absolute will of the lord upon uncertain services of the basest nature. Hence, by tacit consent or encroachment, have arisen the modern copyholds, or tenure by copy of court roll ; in which lands may be still held at the (nominal) will of the lord (but regulated) according to the custom of the manor. These are subject, like soccage lands, to service, relief, and escheat ; and also to heriots, wardships, and fines upon descent and alienation.

Privileged villenage, or villein soccage, is an exalted species of copyhold tenure, upon base but certain services ; subsis'ing only in the

ancient demesnes of the crown, whence the tenure is denominated the tenure in ancient demesne.

Copyholds of ancient demesne have divers immunities annexed to their tenure; but are still held by copy of court roll, according to the custom of the manor, though not at the will of the lord.

Frankalmoign is a tenure by spiritual services at large, whereby many ecclesiastical and eleemosynary corporations now hold their lands and tenements ; being of a nature distinct from tenure by divine service in certain.

4. Of freehold estates. — Estates in lands, tenements, and hereditaments, are such interest as the tenant has therein; to ascertain which, may be considered, 1. The quantity of interest; 2. The time of enjoyment; 3. The num-ber and connexion of the tenants.

(1.) Quantity of interest. — Estates with respect to their quantity of

interest or duration, are either freehold, or less than freehold. A freehold estate, in lands, is such as is created by livery of seisin at common law ; or in tenements of an incorporeal nature, by what is equivalent thereto. Freehold estates are either estates of inheritance, or for life only ; and inheritances are, 1. Absolute, or fee simple; 2. Limited fees. Tenant in fee simple is he that has lands, tenements, or hereditaments, to hold to him and his heirs for ever.

Limited fees are, 1. Qualified, or base fees ; 2. Fees conditional at the common law. Quali fied, or base fees, are those which, having a qualification subjoined thereto, are liable to be defeated when that qualification is at an end.

Conditional fees, at the common law, were such as were granted to the donee, and the heirs of his body, in exclusion of collateral heirs. These were held to be fees granted on condition that the donee had issue of his body ; which condition being once performed by the birth of issue, the donee might immediately alien the land ; but the statute de Donis, being made to prevent such alteration thereupon, from the division of the fee (by construction of this statute), into a particular estate, and a reversion, the conditional fees began to be called fees-tail.

Entails, curtesy, and dmver. — All tenements, real, or savouring of the reality, are subject to entails. Estates tail maybe 1. General, or special;

2. Male or female ; 3. Given in frank marriage. Incident to estates tail are 1. Waste; 2. Dower;

3. Curtesy; 4. Bar; by fine, recovery, or lineal warranty with assets. Estates tail are now, by many statutes and resolutions, almost brought Lack to the state of conditional fees at the com-mon law.

Freeholds, not of inheritance, or for life only, are, 1. Conventional, or created by act of the parties; 2. Legal, or created by operation of law. Conventional estates for life are created by an express grant for term of one's own life, or per autre vie ; or by a general grant, without expressing any term at all. Incident to this and all other estates for life, are estrovers and em- •lements: and to estates per autre vie general iiccupancy was also incident, as special occupancy still is, if cestuy que vie survives the tenant.

Legal estates for life are, 1. Tenancy in tail after possibility of issue extinct ; 2. Tenancy by the curtesy of England ; 3. Tenancy in dower.

Tenancy in tail, after possibility of issue extinct, is where one is tenant in special tail and a person from whose body the issue was to spring, dies without issue, or having left issue, that issue becomes extinct : whereupon the surviving tenant becomes tenant in tail after possibility of issue extinct. This estate partakes both of the incidents to an estate tail, and of those to an estate for life.

Tenancy by the curtesy of England is where a man marries a woman seised of an estate of inheritance, and he by her has issue, born alive, which was capable of inheriting her estate ; in which case he shall, upon her death, hold the tenements for his own life, as tenant by the curtesy.

Tenancy in dower is where a woman marries a man seised of an estate of inheritance, of which her issue might by any possibility have been heir and the hushand dies ; the woman is hereupon entitled to dower, or one-third part of the lands to hold for her natural life. Dower is either by the common law ; by special custom ; ad os-tium ecclesiae ; or ex assensu patris. Dower may be forfeited or barred ; particularly by an estate in jointure.

Estates for a limited term, conditional, reversionary, Sac. — Estates less than freehold are, 1. Estates for years ; 2. Estates at will ; 3. Estates at sufferance ; 4. Estates on condition .

An estate for years is where a man, seised of lands and tenements, letteth them to another for a certain period of time, which transfers the interest of the term ; and the lessee enters thereon, which gives him possession thereof, but not legal seising of the land. Incident to this estate are estovers ; and also emblements, if it determine before the full end of the term.

An estate at will is where lands are let by one man to another, to hold at the will of both parties, and the lessee enters thereon.

Copyholds are estates held at the will of the lord, regulated according to the custom of the manor.

An estate at sufferance is where one comes into possession of land by lawful title, but keeps it afterwards without any title at all.

Estates on condition, whether freehold or otherwise, are, 1. On condition implied: 2. On condition expressed; 3. Estates in gage; 4. Estates by statute merchant, or staple; 5. Estates by elegit.

Estates on condition implied are where a grant of an estate has, from

its essence and constitution, a condition inseparably annexed to it ; though none be expressed in words. Estates on condition expressed are where an express qualification or provision is annexed to the grant of an estate; on the performance of which, either expressed or implied (if precedent), the estate may be vested or enlarged, or on the breach of them (if subsequent) an estate already vested may be defeated.

Estates in gage, in vadio, or in pledge, are estates granted as a security for money lent: being 1. In vivo vadio, or living gage, where the profits of land are granted till a debt t* paid; upon which payment the grantor's es'ate

will revive: 2. In mortuo vadio, in dead, or .Tiortgage, where an estate is granted on condi- ..on to be void at a day certain, if the grantor then repays the money borrowed ; on failure of which, the estate becomes absolutely dead to the grantor.

Estates by statute merchant, or statute staple, are also estates conveyed to creditors in pursuance of certain statutes, till their profits have discharged the debt.

Estates by elegit are, where, in consequence of a judicial writ so called, lands are delivered by the sheriff to a plaintiff, till their profits shall satisfy a debt adjudged to be due by law.

(2.) Estates, with respect to their time of enjoyment, are either in immediate possession, or in expectancy; which estates in expectancy are created at the same time, and are parcel of the same estates, as those upon which they are expectant: these are, 1. Remainders; 2. Reversions.

A remainder is an estate limited to take effect, and be enjoyed, after another particular estate in possession is determined. Therefore, 1. There must be a precedent particular estate in order to support a remainder; 2. The remainder must pass out of the grantor, at the creation of the particular estate ; 3. The remainder must vest in the grantee, during the continuance, or at the determination, of the particular estate.

Remainders are, 1. Vested — where the estate is fixed to remain to a

certain person, after the particular estate is spent ; 2. Contingent — where the estate is limited to take effect, either to an uncertain person, or upon an uncertain event.

An executory devise is such a disposition of lands, by will, that no estate shall vest thereby at the death of the devisor, but only upon some future contingency, without any precedent particular estate to support it.

A reversion is the residue of an estate left in the grantor, to commence in possession after the determination of some particular estate granted ; to which are incident, fealty and rent.

Where two estates, the one less, the other greater, the one in possession, the other in expectancy, meet together in one and the same person, and in one and the same right, the less is merged in the greater.

(3.) Of Tenancy in severalty, joint, common, &c. — Estates, with respect to the number and connexion of their tenants, may be held, 1. In severally ; 2. In joint-tenancy ; 3. In coparcenary ; 4. In common.

An estate in severalty is where one tenant holds in his own sole right, without any other person being joined with him.

An estate in joint-tenancy is where an estate is granted to two or more persons ; in which case the law construes them to be joint-tenants, unless the words of the grant expressly exclude such construction.

Joint-tenants have a unity of interest, of title, of time, and of possession ; they are seised per my ct per tout; and, therefore, upon the decease of one joint-tenant, the whole interest remains to the survivor.

7c int-tenancy maybe dissolved, by destroving one of its four constituent unities.

An estate in coparcenary is where an estate of inheritance descends from the ancestor to two or more persons, who are called parceners, and all together make but one heir.

Parceners have a unity of interest, title, and possession — but are only seized per my, and not per tout; wherefore there is no survivorship among parceners.

Incident to this estate is the law of hotchpot.

Coparcenary may also be dissolved, by destroying any of its three constituent unities.

An estate in common is where two or more persons hold lands by distinct titles, and for distinct interests, but by unity of possession, because none knoweth his own severalty.

Tenants in common have therefore a unity of possession (without survivorship — being seised per my, and not per tout), but no unity of title, time, or interest.

This estate may be created, 1. By dissolving the constituent unities of the two former ; 2. By express limitation in a grant : and may be destroyed, 1st, by uniting the several titles in one tenant; 2dly, by partition of the land.

5. Of the title to real property.— A title to, or right to possess, things real, may be reciprocally acquired or lost, 1. By descent; 2. By purchase.

(1). By descent. — Descent is the means whereby a man, on the death of his ancestor, acquires a title to his estate, in right of representation, as his heir at law. To understand the doctrines of descent, we must form a clear no-tion of consanguinity, which is the connexion or relation of persons descended from the same stock or common ancestor ; and it is, first, lineal, where one of the kinsmen is lineally descended, not one from the other; secondly, collateral, where they are lineally descended uot one from the other, but both from the same common ancestor.

The rules of descent or canons of inheritance observed by the laws of England are these: 1. Inheritances shall lineally descend to the issue of the person last actually seised, in infiniturr, but shall never lineally ascend. 2. The male issue shall be admitted before the female. 3. When there are two or more males in equal degree, the eldest only shall inherit ; but the females all together. 4. The lineal descendants, in infinitum, of any person deceased, shall represent their ancestor, or stand in the same place as the person himself would have done, had he been living. 5. On failure of lineal descendants, or issue of the person last seised, the inheritance shall descend to the blood of the first purchaser, subject to the last three rules. To evidence which blood, the two following rules are established. 6. The collateral heir of the person last seked must be his next collateral kinsman of the whole

blood. 1. In collateral inheritances, the male stocks shall be preferred to the female ; that is, kindred derived from the blood of the male ancestors shall be admitted before those from the blood of the female, unless, where the lands have, in fact, descended from the female.

(2.) By purchase. — Purchase, perquisitio, is the possession of an estate, which a man hath by his own act or agreement, and not by the mere act of law, or descent from any of Ins ancestors :

this includes, 1. Escheat; 2. Occupancy ; 3. Prescription ; 4. Forfeiture; 5. Alienation.

Escheat is where, upon deficiency of the tenant's inheritable blood, the estate falls to the lord of the fee.

Inheritable blood is wanting to 1, such as are not related to the person last seised ; 2, the maternal relations in paternal inheritances, and vice versa ; 3, kindred of the half blood ; 4, monsters; 5, bastards ; 6, aliens and their issue ; 7, persons attainted of treason or felony.

Occupancy is taking possession of those things which before had no owner. Thus at the com-mon law where tenant per auter vie died during the life of cestuy que vie, he who could first enter might lawfully retain the possession, unless by the original grant the heir was made a special occupant. But the law of derelictions and alluvions has narrowed the title by occupancy.

Prescription, as distinguished from custom, is a personal immemorial usage of enjoying a right in some incorporeal hereditament, by a man, and either his ancestors or those whose estate of inheritance he has ; of which the first is called prescribing to his ancestors, the latter in a que estate.

Forfeiture is* a punishment annexed by law to some illegal act, or negligence, of the owner of things real; whereby the estate is transferred to another, who is usually the party injured. Forfeitures for

crimes, or misdemeanors, are for 1. Treason ; 2. Felony ; 3. Misprision of treason ; 4. Premunire; 5. Assaults on a Judge, and batteries, sitting the courts.

Alienations or conveyances which induce a forfeiture are, 1. Those in mortmain, made to corporations contrary to the statute law ; 2. Those made to aliens ; 3. Those made by particular tenants, when larger than their estates will warrant.

Lapse is a forfeiture of the right of presentation to a vacant church by neglect of the patron to present within six calendar months.

Simony is the corrupt presentation of any one to an ecclesiastical benefice, whereby that turn becomes forfeited to the crown.

Waste is a spoil, or destruction, in any corporeal hereditaments, to the prejudice of him that has the inheritance. Copyhold estates may have also other causes of forfeiture, according to the custom of the manor.

Bankruptcy is the act of becoming a bankrupt ; that is, a trader who secretes himself, or does certain other acts, tending to defraud his creditors ; by bankruptcy all the estates of the bankrupt are transferred to the assignees of his commissioners, to be sold for the benefit of his creditors.

6. Of alienating or transferring real property. — Alienation, conveyance, or purchase, in its more limited sense, is a means of transferring real estates wherein they are voluntarily resigned by one man, and accepted by another. This formerly could not be done by a tenant, without license from his lord ; nor by a lord without attornment of his tenant.

All persons are capable of purchasing; and all that are in possession of any eslates are capable of conveying them, unless under peculiar disabilities by law; as being attainted, non com-ootis, infants under duress, feme coverts or

aliens. Alienations are made by common assurances which are, 1 . By deed, or matter in pais ; 2. By matter of record ; 3. By special custom ; 4 By devise.

In assurances by deeds may be considered. 1. The general nature of a deed. 2. Its several species. A deed, in general, is a writing sealed and delivered by the parties; and may be, 1. A deed indented, or

indenture. 2. A deed poll.

The requisites of a deed are, 1. Sufficient parties, and proper subject matter; 2. Good and sufficient consideration; 3. Writing on paper, or parchment, duly stamped ; 4. Legal and orderly parts: namely, 1st, the premises; 2dly, the habendum ; Sclly, the tenendum ; 4thly, the reddendum ; 5thly, the conditions ; 6thly, the warranty which is either lineal or collateral; 7thly, the covenants ; 8thly, the conclusion, which includes the date. 5. Reading it, if desired ; 6. Sealing, and, in many cases, signing it also ; 7. Delivery; 8. Attestation.

A deed may be avoided, 1. By the want of any of the requisites before-mentioned; 2. By subsequent matter ; 1st, rasure or alteration ; 2dly, defacing its seal; 3dly, cancelling; 4thly, disagreement of those whose consent is necessary; Sthly, judgment of a court of justice.

Deeds which serve to convey real property, or conveyances, are either by common law or by statute ; and, of conveyances by common law, some are original or primary, others derivative or secondary.

Original conveyances, are, 1. Feoffments ; 2. Gifts ; 3. Grants ; 4. Leases ; 5. Exchanges ; 6. Partitions. Derivative are, 7. Releases ; 8. Confirmations; 9. Surrenders; 10. Assignments; 11. Defeasances.

A feoffment is the transfer of any corporeal hereditament to another, perfected by livery of seisin, or delivery of bodily possession from the feoffer to the feoffee ; without which no freehold estate therein can be created at common law. A gift is properly the conveyance of lands in tail. A grant is the regular method, by common law, of conveying incorporeal hereditaments. A lease is the demise, granting, or letting to farm of any tenement, usually for a less term than the lessor has therein, yet sometimes possibly for a greater ; according to the regulations of the restraining and enabling statutes. An exchange is tht mutual conveyance of equal interests, the one in consideration of the other. A partition is the division of an estate held in joint-tenancy, in coparcenary, or in common, between the respective tenants ; so that each may hold his distinct part in severally. A release is the discharge or conveyance of a man’s right, in lands and tenements, to another that has some former estate in possession therein. A confirmation is the conveyance of an estate or right in esse, whereby a voidable estate is made sure, or a particular estate is increased. A surrender is the yielding up of an estate for life, or years, to him that has the immediate remainder or reversion; wherein the particular estate may emerge.

An assignment is the transfer, or making over to another, of the whole right ons has in any es-tate ; but usually in a lease for life or years. A defeasance is a collateral deed made at the same

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time with the original conveyance, containing some condition upon which the estate may be defeated.

Conveyances by statute depend much on the doctrine of uses and trusts ; which are a confidence reposed in the terre-tenant, or tenant of the land, that he shall permit the profits to be enjoyed, according to the directions of cestuy que use, or cestuy que trust. The statute of uses, having transferred all uses into actual possession (or, rather, having drawn the possession to the use) has given birth to three other species of conveyance : 1 . A covenant to stand seised to uses ;

2. A bargain and sale, enrolled ; 3. A lease and release ; 4. A deed to lead or declare the use of other more direct conveyances. 5. A revocation of uses ; being the execution of a power, reserved at the creation of the use, of recalling at a future time the use or estate so created. All which owe their present operation principally to the statute of uses.

Deeds which do not convey, but only charge real property, and discharge it, are, 1. Obligations. 2. Recognizances. 3. Defeasances upon both.

By mutter of record. — Assurances by matter of record are where the sanction of some court of record is called in, to substantiate and witness the transfer of real property : these are, 1. Private acts of parliament ; 2. The king's grants ;

3. Fines ; 4. Common recoveries.

Private acts of parliament are a species of assurances calculated to give (by the transcendent authority of parliament) such reasonable powers or relief as are beyond the reach of the ordinary course of law. The king's grants, contained in charters or letters patent, are all entered on record for the dignity of the royal person, and security of the royal revenue. A fine (-sometimes said to be a feoffment of record) is an amicable composition and agreement of an actual, or fictitious suit ; whereby the estate in question is acknowledged to be the right of one of the parties. The parts of a fine are, 1. The writ of covenant; 2. The license to agree; 3. The concord; 4. The note ; 5. The foot ; to which the statute hath added, 6. Proclamations.

Fines are of four kinds, 1 . Sur cognizance de droit come ceo que il ad de son done ; 2. Sur cognizance de droit tantum; 3. Sur concessit, sur done, grant, et render ; which is a double fine. The force and effect of fines (when levied by such as have themselves any interest in the estate) are to assure the lands in question to the cocrnizee, by barring the respective rights of parties, privies, and strangers. A common recovery is by an actual, or fictitious, suit or ac-tion for land, brought against the tenant of the freehold, who thereupon vouches another, who undertakes to warrant the tenant's title; but, upon such vouchee's making default, the land is recovered by judgment at law, against the tenant ; who in return obtains judgment against the vouchee to recover lands of equal value in recompense. The force and effect of a recovery are to assure lands to the recoverer, by barritig estates tail, and all remainders and reversions expectant thereon, provided the tenant in tail either suffers or is vouched in such recovery. VOL. XII.

The uses of a fine or recovery may be directed by, 1. Deeds to lead such uses, which are made previous to the levying or suffering them ; 2. Deeds to declare the uses, which are made subsequent.

By special custom. — Assurances by special custom are confined to the transfer of copyhold estates.

This is effected by, 1. Surrender by the te-nant into the hands of the lord to the use of another, according to the custom of the manor ; 2. Presentment, by the tenants or homage, of such surrender; 3. Admittance of the surrender, by the lord, according to the uses expressed in such surrender. Admittance may also be had upon original grants to the tenant from the lord, and upon descents to the heir from the ancestor.

By devise. — Devise is a disposition' of lands and tenements contained in the last will and testament of the owner. This was not permitted by the common law, as it stood since the conquest, but was introduced by the statute law, under Henry VIII., since made more universal by the statute of tenures under Charles II., with the introduction of additional solemnities by the statute of frauds and perjuries in the same reign. The construction of all common assurances should be, 1. Agreeable to the intention ; 2. To the words of the parties ; 3. Made'upon the en-tire deed; 4. Bearing strongest against the contractor; 5. Conformable to law; 6. Rejecting the latter of two repugnant clauses in a deed, and the former in a will ; 7. Most favorable in case of a devise.

Of the nature of and property in things personal.— Things personal are comprehended un-der the general name of chattels, which include whatever wants either the duration or the immobi-lity attending things real. In these are to be considered, 1. Their distribution; 2. The property of them ; 3. The title to that property.

As to the distribution of chattels, they are, 1. Chattels real; 2. Chattels personal. Chattels real are such quantities of interest in things immoveable, or lands and tenements, as are short of the duration of freeholds, being limited to a time certain, beyond which they cannot subsist. Chattels personal are things moveable, which may be transferred from place to place, with the per-son of the owner.

Property in chattels personal is either in possession or in action. Property in possession, where a man has the actual enjoyment of the thing, is, 1. Absolute; 2. Qualified. Absolute property is where a man has such an exclusive right in the thing, that it cannot cease to be his without his own act or default. Qualified property is such as is not in its nature permanent ; but may sometimes subsist, and at other times not subsist. Tins may arise, 1. Where the subject is incapable of absolute ownership ; 2. From the peculiar circumstances of the owners. Property in action is where a man has not the actual occupation of the thing, but only a right to it, arising upon some contract, and recoverable by an action at law. The property of chattels personal is liable to remainders expectant on estates for life to joint-tenancy, and to tenancy in

Of the title to personal property. — The title to things personal may be acquired or lost by, 1. Occupancy; 2. Prerogative ; 3. Custom; 4. Succession; 5. Marriage; 6. Forfeiture; 7. Judgment; 8. Gift or grant; 9. Contract; 10. Bankruptcy; 11. Testament; 12. Administration.

By occupancy. Occupancy still gives the rirst occupant a right to those few things which have no legal owner, or which are incapable of permanent ownership. Such as, 1. Goods of alien enemies ; 2. Things found ; 3. The benefit of the elements; 4. Animals, ferae naturae; 5.

Emblements ; 6. Things gained by accession ; 7. By confusion ; 8. Literary property.

By prerogative is vested in the crown, or its grantees, the property of the royal revenue; and also the property of all game in the kingdom, with the right of pursuing and taking it.

By custom, obtaining in particular places, a right may be acquired in chattels; the most usual of which customs are those relating to, 1. Heriots ; 2. Mortuaries ; 3. Heirlooms. Heriots are either heriot-service, which differs little from a rent ; or heriot-custom, which is a customary tribute of goods and chattels, payable to the lords of the fee, on the decease of the owner of lands. Mortuaries are a customary gift, due to the minister, in many parishes, on the death of his parishioners. Heirlooms are such personal chattels as descend by special custom to the heir, along with the inheritance of his ancestor.

By succession, the right of chattels is also vested in corporations aggregate, and likewise in such corporations sole as are the heads and representatives of bodies aggregate.

By marriage the chattels of the wife are vested in the husband, in the same degree of property, and with the same powers, as the wife, when sole, had over them, provided he reduces them to possession. The wife also acquires by marriage, a property in her paraphernalia.

By forfeiture for crimes and misdemeanors the right of goods and chattels may be transferred from one man to another, either in part or totally. Total forfeitures of goods arise from conviction of, 1. Treason, and misprision thereof; 2. Felony; 3. Excusable homicide ; 4. Outlawry for treason or felony; 5. Flight; 6. Standing mute ; 7. Atrocious contempts, as assaults on a judge and batteries, sitting the courts; 8. Praemunire ; 9. Pretended prophecies; 10. Owling; 11. Residing abroad of artificers; 12. Challenges to fight for debts at play. »

By judgment consequent on a suit at law a mar, may, in some cases, not only recover, but originally acquire a right to personal property. As, .1. To penalties, recoverable by action popular; 2. Damages; 3. To costs of suit.

By gifts, grants, and contracts. A grant or gift is a voluntary conveyance of a chattel, personal in possession, without any consideration or equivalent. A contract is an agreement, upon sufficient consideration, to do or not to do a particular thing ; and, by such contract, any personal property, either in possession or in notion,

may be transferred. Contracts may be either express or implied, either executed or executory.

The consideration of contracts is, 1. A good consideration ; 1. A valuable consideration ; which is, 1. Do, ut des; 2. Facto, ut facias; 3. Facto, ut des ; 4. Do, ut facias.

The most usual species of personal contracts are, 1. Sale or exchange; 2. Bailment; 3. Hiring or borrowing ; 4. Debt. Sale or exchange is a transmutation of property from one man to another, in consideration of some recompense in value. Bailment is the delivery of goods in trust, upon a contract, express or implied, that the trust shall be faithfully performed by the bailee. Hiring or borrowing is a contract, whereby the possession of chattels is transferred for a particular time, on condition that the identical goods (or sometimes their value) be restored at the time appointed, together with (in case of hiring) a stipend or price for the use. This price being calculated to an-swer the hazard, as well as the inconvenience of lending, gives birth to the doctrine of interes*. or usury upon loans ; and consequently to the doctrine of bottomry or respondentia and insurance. Debt is any contract whereby money becomes due to the creditor: this is, 1. A debt of record; 2. A debt upon special contract; 3. A debt upon simple contract ; which last includes paper credit, or bills of exchange, and promissory notes.

By bankruptcy. Herein may be considered, 1. Who may become a bankrupt; 2. The acts whereby he may become a bankrupt; 3. The proceedings on a commission of bankrupt; 4. How his property is transferred thereby. Persons of full age, using the trade of merchandise, by buying and selling, and seeking their livelihood thereby, are liable to become bankrupts for debts of a sufficient amount.

A trader who endeavours to avoid his creditors, or evade their just demands, by any of the acts specified in the several acts of bankruptcy, doth thereby commit an act of bankruptcy. The proceedings on a commission of bankrupt, so far as they affect the bankrupt himself, are principally by 1. Petition ; 2. Commission ; 3. Declaration ; 4. Choice of assignees ; 5. The bankrupt’s surrender ; 6. His examination ; 7. His discovery; 8. His certificate ; 9. His allowance. The property of a bankrupt’s personal estate is, immediately upon the act of bankruptcy, vested by construction of law in the assignees, and they, when they have collected sufficient for the

purpose, distribute it by equal dividends among all the areditors. See BANKRUPT.

By Testament and Administration. — Concerning testaments and administrations, considered jointly, are to be observed 1. Their original, and antiquity; 2. Who may make a testament; 3. Its nature and incidents ; 4. What are executors and administrators ; 5. Their office and duty.

Testaments have subsisted in England immemorially ; whereby the deceased was at liberty to dispose of his personal estate, reserving anciently to his wife and children their reasonable part of his effects. The goods of intestates belonged anciently to the king, who granted them to the prelates to be disposed of in pious uses ; but, on their abuse of this trust in the times of |M)j>ery, llie legislature compelled them to dele-

gate their power to administrators expressly provided by law.

All persons may make a testament, unless disabled by, 1. Want of discretion; 2. Want of free-will ; 3. Criminal conduct.

Testaments are the legal declarations of a man's intentions, which he wills to be performed after his death : These are, 1. Written ; 2. Nuncupative.

An executor is he to whom a man by his will commits the execution thereof.

Administrators are, 1. Durante minore setate of an infant executor or administrator ; 2. Cum testamento annexe, when no executor is named, or the executor refuses to act ; 3. General administrators, in pursuance of the statutes of Edward III. and Henry VIII. ; 4. Administrators de bonis non ; when a former executor or administrator dies without completing his trust.

The office and duty of executors, and, in many points, of administrators also, are, 1. To bury the deceased ; 2. To prove the will, or take administration ; 3. To make an inventory ; 4. To collect the goods and chattels ; 5. To pay debts, observing the rules of priority ; 6. To pay legacies, either general or specific if they be vested and not lapsed ; 7. To distribute the undivided surplus, according to the statute of distributions.

CHAP. III. — OF INJURIES RELATING TO PERSONS.

1. Of injuries proceeding from, or affecting the crown. — Injuries to which the crown is a party are, 1. Where the crown is the aggressor; 2. \here the crown is the sufferer. Some of these relate to injuries of property as well as personal rights ; but it will be convenient to class them all under the present head.

The crown is the aggressor, whenever it is in possession of any property to which the subject has a right. This is remedied, 1. By petition of right; where the right is grounded on facts disclosed in the petition itself; 2. By monstrans de droit ; where the claim is grounded on facts, already appearing on record. The effect of both which is to remove the hands or possession of the king.

Where the crown is the sutferer, the king's lemedies are, 1. By such common law actions as are consistent with the royal dignity ; 2. By inquest of office, to recover possession : which, when found, gives the king his right by solemn matter of record ; but may afterwards be traversed by the subject; 3. By writ of scire facias, to repeal the king's patent or grant ; 4. By information of intrusion, to give damages for any trespass on the lands of the crown ; or of debt, to recover monies due upon contract, or forfeited by the breach of any penal statute ; or sometimes in the latter cases by information in rem : all of which informations are filed in the exchequer, ex officio, by the king's attorney-general ; 5. By writ of quo warranto, or information in the nature of such writ ; to seize into the king's hands any franchise usurped by the subject, or o oust a usurper from ary public office; G. t>y writ of mandamus, unless cause be shown, to ad mil or restore any person entitled to a franchise or office : to which, if a false cause be returned, the remedy is by traverse, or by action on the case for damages; and in consequence a peremptory mandamus or writ of restitution.

2. Of injuries to the absolute rights of persons.— Injuries to the rights of persons are, 1. Injuries to the absolute ; 2. Injuries to the relative, rights of persons.

The absolute rights of individuals are, 1. Personal security; *2. Personal liberty; 3. Private property. To which the injuries must be correspondent.

(1.) Personal security. — Injuries to personal security are, 1 . Against a man's life ; 2. Against his limbs ; 3. Against his body ; 4. Against his health ; 5. Against his reputation. The first must be referred to a subsequent chapter.

Injuries to the limbs and body are, 1. Threats; 2. Assault; 3. Battery; 4. Wounding; 5. May-hem.

The remedy for these injuries is by action of trespass, vi et armis ; for damages. The mode of procedure, before the several courts in which redress may be obtained, will be stated in a subsequent chapter; but it will be found convenient to point out the general nature of each remedy in connexion with the injury to which it applies. Injuries to health, by any unwholesome practices, are remedied by a special action of trespass, on the case, for damages.

Injuries to reputation are, 1. Slanderous and malicious words. The remedy is by action on the case, for damages; 2. Libels; for which a similar remedy is provided; 3. For malicious prosecutions. The remedy is by action of conspiracy, or on the case, for damages.

(2.) Personal liberty. — The injury to personal liberty is false imprisonment. The remedies are, 1. By writ of, 1st, Mainprize; 2ndly, Odio etatia; 3dly, Homine replegiando; 4thly, Habeas corpus; to remove the wrong; 2. By action of trespass; to recover damages.

(3.) Injuries to private property. See the next chapter.

3. Of the injuries to the relative rights of persons. — Injuries to relative rights affect, 1. Husbands; 2. Parents; 3. Guardians; 4. Masters.

(1.) Husbands — Injuries to a husband are, 1. Abduction, or taking away his wife. The reme-dy provided by the law is by action of trespass, de uxore rapta et abducta ; to recover possession of his wife, and damages; 2. Criminal conversation with her. The remedy for which is by action on the case, for damages; 3. Beating her. For which a remedy is provided by action on the case, or in trespass, per quod consortium amisit; for damages at the suit of the husband, or a joint action of trespass by the husband and wife.

(2.) Parents and guardians. — The injury to a parent or guardian is

the abduction of their children or wards. The remedy for which is by an action of trespass, defiliis vel custodiis rapfis vel abductis, to recover possession of them, and damages.

(3.) Masters. — Injuries to a master are, 1. Retaining his servants. For which the law has provided a remedy by action on the case for

damaees; 2. Beating them; the remedy in which case is by action on the case or in trespass, per quod servitium amisit, for damages.

CHAP. IV.— INJURIES RELATING TO PROPERTY.

1. Of injuries to personal property.— Personal property is either in possession or in action. Injuries to personal property in possession are, 1. By dispossession; 2. By damage, while the owner remains in possession.

(1) Dispossession.— Dispossession may effected, 1. By an unlawful taking; 2. By an unlawful detaining.

In this place, as in the chapter respecting personal injuries, we refer to a subsequent part of the treatise for an account of the mode of redress, and the courts in which it is to be sought ; but we shall find it convenient briefly to notice, along with each species of injury, the general kind of remedy which the law affords ; reserving the details of procedure for the fifth chapter.

For the unlawful taking of goods and chattels personal, the remedy is, 1. Actual restitution, which in case of a wrongful distress is obtained by action of replevin ; 2. Satisfaction in damages : 1st, in the case of rescous, by action of rescous, pound breach, or on the case : 2dly, in case of other unlawful takings, by action of trespass or trover.

For the unlawful detaining of goods lawfully taken, the remedy is also, 1. Actual restitution ; by action of replevin or detinue. 2. Satisfaction in damages : by action on the case, for trover and conversion.

(2.) Damage. — For damage to personal property while in the owner's possession, the re-mede is in damages; by action of trespass vi et arrais, in case the act be immediately injurious ; or by action of trespass on the case to redress consequential damage.

Injuries to personal property, in action, arise by breach of contracts, 1. Express; 2. Implied.

Breaches of express contracts are, 1 . By non-payment of debts; the remedies for which are, 1st, Specific payment ; recoverable by action of debt; 2dly, damages for non-payment ; recoverable by action on the case. 2. By non-perform- ance of covenants. In which case remedy is by action of covenant, 1st, to recover damages, in covenants personal ; 2dly, to compel performance, in covenants real. 3. By non-performance of promises, or assumpsits. And here the remedy is by action on the case, for damages.

Implied contracts are such as arise, 1. From the nature and constitution of government ; 2. From reason and the construction of law.

Breaches of contracts, implied in the nature of government, are by the non-payment of money which the laws have directed to be paid. In these cases the remedy is by action of debt (which in such cases is frequently a popular, frequently a qui tarn, action), to compel the specific payment ; or, sometimes, by action on the case, for damages.

Breaches of contracts implied in reason, and construction of law, are by the non-performance of lorpti rvesum;itive assumpsits : for which the

remedy is in damages; by an action on the case on the implied assumpsits, 1 . Of a quantum me-ruit; 2. Of a quantum valebat ; 3. Of money expended for another ; 4. Of receiving money to another's use; 5. Of an insimul computas-sent on an account stated (the remedy on account unstated being by action of account) ; 6. Of performing one's duty, in any employment, with integrity, diligence, and skill. In some of which cases an action of deceit (or on the case in nature of deceit) will lie.

2. Of injuries to real property. — Injuries affecting real' property are, 1. Ouster; 2. Trespass ; 3. Nuisance; 4. Waste; 5. Subtraction; 6 Disturbance.

(1.) Dispossession of freehold. — Ouster is the amotion of possession ; and is, 1. From freeholds;

2. From chattels real.

Ouster from freeholds is effected by, 1. Abatement; 2.; Intrusion; 3. Disseisin; 4. Discontinuance; 5. Deforcement.

Abatement is the entry of a stranger, after the death of the ancestor, before the heir.

Intrusion is the entry of a stranger, after a particular estate of freehold is determined, before him in remainder or in reversion.

Disseisin is a wrongful putting out of him that is seised of the freehold.

Discontinuance is where the tenant in tail, or the husband of a tenant in fee, makes a larger estate of the land than the law allows.

Deforcement is any other detainer of the freehold from him who has the property, but who never had the possession.

The universal remedy for all these injuries is restitution or delivery of possession ; and sometimes damages for the detention. This is effected, 1. By mere entry ; 2. By action possessory ;

3. By writ of right.

Mere entry on lands, by him who has the apparent right of possession, will (if peaceable) di-vest the mere possession of a wrong doer. But forcible entries are remedied by immediate restitution, to be given by a justice of the peace. Where the wrong doer has not only mere possession, but also an apparent right of possession, this may be divested by him who has the actual right of possession by means of the possessory actions of writ of entry or assise.

A writ of entry is a real action, which disproves the title of the tenant, by showing the unlawful means under which he gained or continues possession. And it may be brought either against the wrong doer himself, or in the degrees called the per, the per and cui, and the post. These writs of entry, however, are not now in use.

An assise is a real action, which proves the title of the demandant by showing his own or his ancestor's possession ; and it may be brought either to remedy abatements, *viz.* the assise of mort d'ancestor, &c. ; or

to remedy recent disseisins, *viz.* the assise of novel disseisin. But these writs have also fallen into disuse. Where the wrong doer has gained the actual right of possession, he who has the right of property can only be remedied by a writ of right, or some writ of a similar nature. As, 1. Where such right of possession is gained by the discontinuance of tenant in tail The remedy for the right

of property is by writ of formedon. 2. Where gained by recovery in a possessory action, had against tenants of particular estates by their own default. The remedy is by writ of quod ei de-forceat. 3. Where gained by recovery in a possessory action had upon the merits. 4. Where gained by the statute of limitations. The remedy, in both cases, is by a mere writ of right, the highest writ in the law, which is now the general mode of proceeding in a real action and of •which there have been several recent instances.

Dispossession of chattels real. — Ouster from chattels real is, 1. From estates by statute and elegit; 2. From an estate for years.

Ouster from estates by statute, or elegit, is effected by a kind of disseisin. The remedy for which is restitution and damages; by assise of novel disseisin, or usually by scire facias and re-extent.

Ouster from an estate for years, is effected by a like disseisin or ejectment, and the remedy is also by restitution and damages; 1. By writ of ejectione firmae ; 2. By writ of quare ejecit infra terminum.

A writ of ejectione firmae, or action of trespass in ejectment, lieth where lands, &c., are let for a term of years, and the lessee is ousted or ejected from his term ; in which case he shall recover possession of his term and damages.

This is now the usual method of trying titles to land, instead of an action real : *viz.* By 1. The claimant's making an actual or supposed lease upon the land to the plaintiff; 2. The plaintiff's actual or supposed entry thereupon ; 3. His actual or supposed ouster and

ejectment by the defendant. For which injury this action is brought either against the tenant, or (more usually) against some casual or fictitious ejector ; in whose stead the tenant may be admitted defendant, on condition that the lease, entry, and ouster, be confessed, and that nothing else be disputed but the merits of the title claimed by the lessor of the plaintiff.

A writ of quare ejecit infra terminum is an action of a similar nature; only not brought against the wrong doer or ejector nimself, but such as are in possession under his title. But this writ has now become wholly obsolete.

(2.) Of trespass. — Trespass is an entry upon, and damage done to another's lands, by one's self, or one's cattle ; without any lawful authority, or cause of justification : which is called a breach of his close. The remedy for which is in damages ; by an action of trespass, quare clausum fregit : besides that of distress, damage feasant. But unless the title to the land came chiefly in question, or the trespass was wilful or malicious, the plaintiff (if the damages be under 40.9.) shall recover no more costs than damages.

(3.) Of nuisance. — Nuisance, or annoyance, is any thing that worketh damage or inconvenience : and it is either a public and common nuisance, or a private nuisance ; which is any thing done to the hurt or annoyance of 1. The corporeal; 2. The incorporeal, hereditaments of another.

The remedies for a private nuisance, besides that of abatement, are 1. Damages, by action on the case ; which also lies for special prejudice by a public nuisance; 2. Removal thereof, and

damages, by assise of nuisance ; 3. Like removal and damages, by writ of quod permittat proster-nere. The remedy usually adopted is by action on the case, the others have fallen into disuse.

(4.) Of waste. — Waste is a spoil and destruction in lands and tenements, to the injury of him who hath, 1. An immediate interest, as by right of common in the lands ; 2. The remainder or reversion of the inheritance.

The remedies for a commoner are restitution and damages, by assise of common : or damages only, by action on the case ; the former of which remedies has become obsolete. The remedy for him in remainder or reversion is, 1. Preventive, by writ of estrepement at

law, or injunction out of chancery, to stay waste ; 2. Corrective, by action of waste, to recover the place wasted and damages : or by action on the case for damages only. The writ of estrepement is now disused. (5.) Of subtraction. — Subtraction is when one who owes services to another, withdraws or neglects to perform them. This may be, 1. Of rents and other services, due by tenure ; 2. Of those due by custom.

For subtraction of rent? and services due by tenure, the remedy is, 1. By distress, to compel the payment or performance ; 2. By action of debt; 3. By assise; 4. By writ de consuetudi-nibus et servitiis, to compel the payment ; 5. By writ of cessavit ; and, 6. By writ of right stir disclaimer; to recover the land itself. The distraint and action are the usual remedies.

To remedy the oppression of the lord, the law has also given, 1. The writ of ne injuste vexes ; 2. The writ of mesne.

For subtraction of services due by custom, the remedy is, 1. By writ of secta ad molendi-num, furnum torrale, &c., to compel the performance and recover damages ; 2. By action on the case; for damages only. The latter is the ordinary remedy in use.

(6.) Of disturbance. — Disturbance is the hindering or disquieting the owners of an incorporeal hereditament, in the regular and lawful enjoyment of it. Disturbances are, 1. Of franchises; 2. Of commons; 3. Of ways; 4. Of tenure ; 5. Of patronage.

Disturbance of franchises is remedied by a special action on the case ; for damages.

Disturbance of common is, (l.)Intercommon-ing without right. The remedy given for which is in damages ; by an action on the case, or of trespass : besides distress, damage feasant : to compel satisfaction.

(2.) Surcharging the common. The remedies for which are distress, damage feasant ; to com-pel satisfaction; action on the case, for damages; or, writ of admeasurement of pasture; to apportion the common, and writ de secunda su-peroneratione ; for the supernumerary cattle, and damages. In these cases, also, the common remedy is by distraint or action ; the others having become obsolete.

(3.) Inclosure or obstruction. The remedies for which are by restitution of the common, ami damages ; by assise of a novel disseisin, and l>y writ of quod permittat : or damages only ; by action on the case. The latter is the only re-medy now in use.

Disturbance of ways is the obstruction, 1. Of :i \.iy in gross, by the owner of the land; 2. Of a way appendant, by a stranger. And the rt-medy lor both is by damages, obtained in an action in the case.

Disturbance of tenure, by driving away tenants, is remedied by a special action on the case, for damages.

Disturbance of patronage is the hindrance of a patron to present his clerk to a benefice, whereof usurpation within six months is now become a species.

Disturbers may be, 1. The pseudo-patron, by his wrongful presentation ; 2. His clerk, by demanding institution ; 3. The ordinary, by refusing the clerk of the true patron.

The remedies are, 1. By assise of darrein presentment; 2. By writ of quare impedit ; to com-pel institution and recover damages, consequent to which are the writs of quare incumbravit, and quare non admisit, for subsequent damages; 3. By writ of right of advowson ; to compel institution, or establish the permanent right. The writ of quare impedit is now, however, the only remedy in use.

CHAP. V.— OF REMEDIES FOR INJURIES, AND MODE OF PROCEDURE.

The redress of civil injuries is one prin cipal object of the laws of England. This redress is effected, 1. By the mere act of the parties; 2. By the mere operation of law; 3. By both together, or suit in courts.

1. Of redress by the mere act of the parties. — Redress, by the mere act of the parties, is that which arises, 1. From the sole act of the party injured; 2. From the joint act of all the parties.

Of the first sort are, 1. Defence of one’s self or relations; 2. Recaption of goods; 3. En-try on lands and tenements ; 4. Abatement of nuisances; 5. Distress for rent, for suit or service, for amercements, fcjr

damage, or for divers statutable penalties, made of such things only as are legally distrainable ; and taken and disposed of according to the due course of law ; 6. Seising of heriots, &c.

Of the second sort are, 1. Accord; 2. Arbitration.

2. Ofredreu by the mere operation of law.— Redress, effected by the mere operation of law, is, 1. In the case of retainer, where a creditor is executor or administrator, and is thereupon allowed to retain his own debt; 2. In the case

f remitter, where one who has had a good title to lands, &c., comes into possession by a bad one, and is thereupon remitted to his ancient good title, which protects his ill-acquired possession.

3. Of redress in courts of justice.— Injuries)etween subject and subject, cognisable by the courts of common law, are in general remedied by putting the party injured into possession of that right whereof he is unjustly deprived

This is effected, 1. By delivery of the" thing

ietained to the rightful owner; 2. Where that

remedy is eitner impossible or inadequate, by

5 the party injured a satisfaction in damages

The instruments by which these remedies may be obtained are suits or actions : which are defined to be legal demands of one's right.

Redress, that is effected by the act both of the law and of the parties, is by suit or action in the courts of justice.

Herein may be considered, 1. The courts themselves; 2. The cognisance of wrongs or injuries therein. And, of courts, 1. Their nature and incidents ; 2. Their several species.

A court is a place wherein justice is judicially administered by officers delegated by the crown ; being a court either of record or not of record.

Incident to all courts are a plaintiff, defendant, and judge: and there are also usually attorneys ; and advocates or counsel, *viz.* either barristers or Serjeants at law.

(1.) Of courts in general. — Courts of justice, with regard to their several species, are, 1. Of a public, or general jurisdiction throughout the realm; 2. Of a private, or special jurisdiction.

Public courts of justice are, 1. The courts of common law and equity; 2. The ecclesiastical courts; 3. The military courts; 4. The maritime courts.

The general and public courts of common law and equity are, 1. The court of piepoudre; 2. The court baron; 3. The hundred court; 4. The county court ; 5. The court of com-mon pleas ; 6. The court of king's bench ; 7. The court of exchequer ; 8. The court of chancery (which two last are courts of equity as well as law); 9 The court of exchequer chamber; 10. The house of peers, to which may be added as auxiliaries, 11. The courts of. assize and nisi prius.

(?.) Of courts ecclesiastical. — Ecclesiastical courts which were separated from the temporal by William the Conqueror, or courts Christian, are, l.The court of the archdeacon. 2. The court of the bishop's consistory. 3. The court of arches. 4. The court of peculiars. 5. The prerogative. 6. The court of delegates. 7. The court of review.

Remedies in the ecclesiastical courts. — Injuries cognizable in the ecclesiastical courts are, 1. Pecuniary. 2. Matrimonial. 3. Testamentary.

Pecuniary injuries, here cognizable, are, 1. Subtraction of tithes ; for which the remedy is by suit to compel their payment, or an equivalent ; and also their double value. 2. Non-payment of ecclesiastical dues, the remedy for which is by suit for payment. 3. Spoliation, for which the remedy is by suit for restitution. 4. Dilapida-tions, the remedy for which is by suit for damages. 5. Non-repair of the church, &c., and non-payment of church-rates, for which the re-medy is by suit to compel them.

Matrimonial injuries, are, 1. Jactitation of marriage, in which the remedy is by suit for perpetual silence. 2. Subtraction of conjugal rites, for which the remedy provided is by suit for restitution. 3. Inability for the marriage state. The remedy for which is by suit for divorce. 4. Refusal of decent maintenance to the wife, for which there is a remedy by suit for alimony.

Testamentary injuries are, 1. Disputing the validity of wills, the remedy provided for which

is by suit ta establish them. 2. Obstructing of administrations, and the remedy is by suit for the granting them. 3. Subtraction of legacies, for which the. remedy is by suit for the payment.

The course of proceedings in these courts is much conformed to the civil and canon law ; but their only compulsive process is that of excommunication ; which is enforced by the temporal writ of significavit, or de excommunicate capiendo.

(3.) Of courts military and maritime. — Of courts military : the only permanent military court was that of chivalry, but which is now entirely out of use. The courts martial are temporary, and are annually established by act of parliament.

Civil injvs-ies cognizable in the court military, or court of chivalry, are, 1. Injuries in point of honor, for which there was formerly a remedy by suit for honorable amends, but which is now entirely obsolete. 2. Encroachments in coat-armour, Jcc., the remedy for which is by suit to remove them, and the proceedings are of a summary nature.

Of Courts Maritime, — Maritime courts are,

1. The court of admiralty, and vice-admiralty.

2. The court of delegates'. 3. The lords of the privy council, and others, authorised by the king's commission for appeals in prize causes.

Civil injuries cognizable in the courts maritime are injuries in their nature of common law cognizance, but arising wholly upon the sea, and not within the precincts of any county. The proceedings herein are also much conformed to the civil law.

(4.) Of courts of a special or limited jurisdiction. — Courts of a special and private jurisdiction, are,

1. The forest courts ; including the courts of attachments, regard,

swienmote, and justice seat.

2. The court of commissioners of sewers. 3. The court of policies of assurance. 4. The court of the marshalsea, and the palace court. 5. The courts of the principality of Wales. 6. The court of the duchy chamber of Lancaster. 7. The courts of the counties palatine, and other royal franchises. 8. The stannary courts. 9. The courts of London, and other corporations; to which may be referred the courts of requests, or courts of conscience ; and the modern regulations of certain courts baron and county courts. 10. The courts of the two universities.

(5.) Mode of procedure in the common law courts. — 1. Of proceedings before trial. The pursuit of the several remedies furnished by the laws of England is, 1 . By action in the courts of common law; 2. By the proceedings in the courts of equity.

Of an action in the court of common pleas (originally the proper court for prosecuting suits) the orderly parts are, 1. The original writ; 2. The process; 3. The pleadings; 4. The issue, or demurrer; 5. The trial; 6. The judgment; 7. The proceedings in nature of appeal ; 8. The execution.

Original writ. — The original writ is the begin-iti£ or foundation of a suit, and is either optional, called a precipp, commanding the defendant to <l«.i something in certain, or otherwise show cause '.<» tlii-contrary ; or proremptory, called a si fece-

rit te securum, commanding, upon security being given by the plaintiff, the defendant to appear in court, to show wherefore he has injured the

Elaintiff: both issuing out of chancery under the ing's great seal, and returnable in bank during term time.

Process. — Process is the means of compelling the defendant to appear in court. This includes, 1. Summons; 2. The writ of attachment, or pone; which is sometimes the first or original process; 3. The writ of distringas, or distress infinite; 4. The writs of capias ad respondendum, and testa turn capias ; or, instead of these, in the king's bench, the bill of Middlesex, and writ of Latitat ; and, in the Exchequer, the writ of quo minus. 5. The alias and pluries writs ; 6. The exigent, or writ of exigi facias, proclamations, and outlawry ; 7. Appearance and common bail ; 8. The arrest; 9. Special bail, first to the sheriff, and then to the action.

Pleadings. — Pleadings are the mutual alterca-tions of the plaintiff and defendant in writing : under which are comprised, 1. The declaration or count; wherein, incidentally, of the visne, nonsuit, retraxit, and discontinuance ; 2. The defence, claim of cognizance, imparlance, view, oyer, aid, prayer, voucher, or age. 3. The plea; which is either a dilatory plea, (1st, to the jurisdiction; 2dly, in disability of the plaintiff; 3dly, in abatement ;) or it is a plea to the action ; sometimes confessing the action either in whole or in part, (wherein of a tender, paying money into court and set off,) but usually denying the complaint, by pleading either, 1st, the general issue; or, 2dly, a special bar, (wherein of justifications, the statutes of limitations, &c.) 4. Replication, rejoinder, surrejoinder, rebutter, surrebutter, &c. Therein of estoppels, color, duplicity, departure, new assignment, protestation, averment, and other incidents of pleading.

Issue and demurrer. — Issue is where the parties, in a course of pleading, come to a point affirmed on one side and denied on the other ; which, if it be a matter of law, is called a demurrer; if it be a matter of fact, it still retains the name of an issue of fact.

Continuance is the detaining of the parties in court from time to time, by giving them a day certain to appear upon. And, if any new matter arises since the last continuance or adjournment, the defendant may take advantage of it, even after demurrer or issue, by alleging it as a plea puis darrein continuance.

The determination of an issue in law, or demurrer, is by the opinion of the judges of the court, vvhich is afterwards entered on record.

2. Of Trials. — Trial is the examination of the matter of fact put in issue.

The species of trial are, 1. By the record. 2. By inspection. }. By certificate. 4. By witnesses. 5. By wa.jer of battel. 6. By wager of law. 7. By jury.

Trial by the record is had v/nen the existence of such record is the point in issue.

Trial by inspection, or examination, is had by the court, principally when the matter in issue is the evident object of the senses.

Trial by certificate is had in those cases, where such certificate must have been conclusive to u

Trial by witnesses (the regular method in the ciril law) is only used in writ of dower, when the death of the husband is in issue.

Trial by wager of battel, in civil cases, was only had on writ of right ; but, in lieu thereof, the tenant might have, at his option, the trial by the grand assise: but this mode of trial is now abolished by act of parliament.

Trial by wager of law is only had where the matter in issue may be supposed to have been privily transacted between the parties themselves, without the intervention of other witnesses.

Trial by jury. Trial by Jury is, 1. Extraordinary ; as by the grand assise, in writs of right ; and by the grand jury, in writs of attaint. 2. Ordinary.

The method and process of the ordinary trial by jury is, 1. The writ of venire facias to the sheriffs, coroners, or elisors : with the subsequent compulsive process of habeas corpora, or distringas. 2. The carrying down of the record to the court of nisi prius. 3. The sheriffs return ; or pannel of, 1st, special, 2dly, common jurors. 4. The challenges ; 1st, to the array ; 2dly, to the polls of the jurors ; either, propter honoris respectum, propter defectum, propter affectum (which is sometimes a principal challenge, sometimes to the favor), or propter delictum. 5. The tales de circumstantibus. 6. The oath of the jury. 7. The evidence ; which is either by proofs, 1st, written; 2dly, parole:— or by the private Itnowledge of the jurors. 8. The verdict, which may be, 1st, privy ; 2dly, public ; 3dly, special.

3. Of Judgment and its incidents. — Whatever is transacted at the trial, in the court of nisi prius, is added to the record under the name of a postea: consequent upon which is the judgment.

Judgment may be arrested or stayed for causes,

1. Extrinsic, or dehors the record; as in the case of new trials. 2. Intrinsic, or within it; as where the declaration varies from the writ, or the verdict from the pleadings and issue ; or where the case, laid in

the declaration, is not sufficient to support the action in point of law

Where the issue is immaterial, or insufficient, the court may award a repleader.

Judgment is the sentence of the law, pronounced by the court, upon the matter contained in the record.

Judgments are, 1. Interlocutory; which are incomplete till perfected by a writ of enquiry.

2. Final.

Costs are expenses of suit, and are now the necessary consequences of obtaining judgment.

Appeals. — Proceedings, in the nature of appeals from judgment, are, 1. A writ of attaint, to impeach the verdict of a jury ; which of late has been superseded by new trials. 2. A writ of audita querela; to discharge a judgment by matter that has since happened. 3. A writ of error from one court of record to another; to correct judgments, erroneous in point of law, and not helped by the statutes of amendment and jeofails.

\iits of error lie, 1. To the court of king's bench, from all inferior courts of record ; from the conrt of common pleas at Westminster; and <Vom the court of king's bench in Ireland. 2.

To the courts of exchequer chamber, from the law side of the court of exchequer ; and from proceedings in the court of king's bench by bill. 3. To the house of peers, from proceedings in the court of king's bench by original and on writs of error; and from the several courts of exchequer chamber.

Execution. — Execution is the putting in force of the sentence or judgment of the law. Which is effected, 1. Where possession of any hereditament is recovered ; by writ of habere facias sei-sinam, possessionem, 8cc. 2. Where any thing is awarded to be done or rendered by especial wr.t for that purpose : as by a writ of abatement, in case of nuisance ; retorna habendo, and capias in vviihernam, in replevin; distringas, and scire facias, in detinue. 3. Where money only is recovered; by writ of, 1st, Capias ad satisfacien-dum, against the body of the defendant; or, in default thereof, scire facias against his bail. 2dly, Fieri facias, against his goods and chattels. 3dly, Levari

facias, against his goods and the profits of his lands. 4thly, Elegit against his goods, and the possession of his lands. 5thly, Extendi facias and other process, on statutes, recognizances, &c., against his body, lands, and goods.

(6.) Of Proceedings in the Courts of Equity — Matters of equity which belong to the peculiar jurisdiction of the court of chancery, are, 1. The guardianship of infants. 2. The custody of idiots and lunatics. 3. The superintendance of charities. 4. Commissions of bankrupt.

The court of exchequer, and the duchy-court of Iˆncaster, have also some peculiar causes, in which the interest of the king is more immediately concerned.

Equity is the true sense and sound interpretation of the rules of law ; and, as such, is equally attended to by the judges of the courts both of common law and equity.

The essential differences, whereby the English courts of equity, are distinguished from the courts of law, are, 1. The mode of proof, by a discovery on the oath of the party ; which gives a jurisdiction in matters of account and fraud. 2. The mode of trial, by depositions taken in any part of the world. 3. The mode of relief, by giving a more specific and extensive remedy than can be had in the courts of law ; as, by carrying agreements into execution, staying waste or other injuries by injunction, directing the sale of incumbered lands, &c. 4. The true construction of securities for money, by considering them merely as a pledge. 5. The execution of trusts, or second uses, in a matter analogous to the law of legal estates.

The proceedings in the court of chancery (to which those in the exchequer very nearly conform) are, 1 . Bill. 2. Writ of subpaena, and perhaps injunction. 3. Process of contempt, *viz.* (ordinarily) attachment, attachment with proclamations, commissions of rebellion,)sergeant at arms, and sequestrations. 4. Appearance. 5. Demurrer. 6. Plea. 7. Answer. 8. Exceptions, amendments, cross or supplemental bills, bills of revivor, interpleader, 8cc. 9. Replication, 10. Issue. 11. Depositions taken upon interrogatories, and subsequent publication thereof. 12. Hearing. 13. Interlocutory decree, feigned issue,

and trial, reference to the master and report, 8cc. 14. Final decree. 15. Rehearing, or bill of review. 16. Appeal to parliament.

CRIMINAL CODE. CHAP. I. — OF CRIMES AGAINST THE PUBLIC.

1. Of the nature of crimes. — A crime or misdemeanor is an act committed, or omitted, in violation of a public law, either forbidding or commanding it. Crimes are distinguished from civil injuries, as they are a breach and violation of the public rights, due to the whole community, considered as a community.

2. Of persons responsible for crimes. — All persons are capable of committing crimes, unless there be in them a defect of will : for, to constitute a legal crime, there must be both a vicious will, and a vicious act. The will does not con-cur with the act, 1. Where there is a defect of understanding. 2. Where no will is exerted.

3. Where the act is constrained by force and violence.

A vicious will may therefore be wanting in the cases of, 1. Infancy. 2. Idiocy, or lunacy. 3. Drunkenness ; which does not however, excuse.

4. Misfortune or chance-medley. 5. Ignorance,or mistake of fact. 6. Compulsion, or necessity ; •which is 1st, that of civil subjection; 2dly, that of duress per minas ; 3dly, that of choosing the least pernicious of two evils, where one is unavoidable; 4thly, that of want, or hunger; which is no legitimate excuse. The king, from his excellence and dignity, is also incapable of doing wrong.

3. Of the different degrees of guilt in crimi nals, which are, 1. As principals. 2. As accessories. A principal in a crime is, 1 . He who commits the fact. 2. He who is present at, aid-ing and abetting, the commission. An accessory is he who does not commit the fact, nor is present at the commission : but is in some sort concerned therein, either before or after. Accessories can only be in petit treason, and felony : in high treason and in simple larceny, and other crimes under the degree of felony, all are principals.

An accessory, before the fact, is one who, being absent when the crime is committed, has procured, counselled, or commanded, another to commit it.

An accessory after the fact is, where a person, knowing a felony to have been committed, receives, relieves, comforts, or assists, the felon. Such accesory is usually entitled to the benefit of clergy ; where the principal, and accessory before the fact, are excluded from it.

Every accessor)' before the fact is made punishable by the late statute in the same manner as the principal ; and an accessory after the fact (ex-cept a receiver of stolen property) is liable to be imprisoned not exceeding two years.

4. Of offences against religion and the law of nations. — Crimes and misdemeanors cognizable by the laws of England are such as more immediately offend, 1. God and his holy religion. 2. The law of nations, 3. The king and his government. 4. The public, or commonwealth. 5. Individuals.

Crimes more immediately offending God and religion are, 1 Apostasy. For which the penalty is incapacity, and imprisonment. 2. He-resy, and the penalty for one species thereof is the same as in the previous instance. 3. Offences against the established thurch, either by reviling its ordinances ; for which the penalties are fine, deprivation, imprisonment, forfeiture ; or by nonconformity to its worship : 1st, Through total irreligion, where the penalty is fine. 2dly, Through protestant dissenting ; the penalty for which was abolished by the toleration act. 3rdly, Through popery, either in professors of the popish religion, popish recusants convict, or popish priests. The penalties were, incapacity, double taxes, imprisonment, fines, forfeitures, abjuration of the realm, judgment of felony without clergy, and judgment of high treason. But the greater part of these barbarous and intolerant statutes were repealed in 1779, by the famous popish bill. 4. Blasphemy ; for which the penalty is fine, imprisonment, and corporal punishment. 5. Profane swearing and cursing ; the penalty for which is fine, or imprisonment in the house of correction. 6. Witchcraft, or at least the pretence thereto ; the penalty inflicted is imprisonment, and pillory. 7. Religious imposture ; the penalty for which is fine, imprisonment, and corporal punishment. 8. Simony ; which is punished by forfeiture of double value ; and incapacity. 9. Sabbath-breaking, which may be fined. 10. Drunkenness, the penalty for which is fine, or stocks. 11. For lewdness, the penalties are fine, imprisonment, house of correction.

The law of nations is adopted in England ir. its full extent, as part of the law of the land Offences against this law are principally incident

to whole states or nations ; but, when committed by private subjects, are then the objects of the municipal law.

Crimes against the law of nations, animadvert-ed on by the laws of England, are, 1. Violation of safe conducts. 2. Infringement of the rights of ambassadors : the penalty in both cases is arbitrary. 3. Piracy, for which the penalty is judgment of felony, without benefit of clergy.

5. Of offences against the state and government. — Crimes and misdemeanors more peculiarly offending the king and his government are, 1. High treason. 2. Felonies injurious to the prerogative. 3. Praemunire. 4. Other misprision* and contempts.

High treason may, according to the statute of Edward III., be committed, 1. By compassing or imagining the death of the king, or queen consort, or their eldest son and heir ; demonstrated by some overt act. 2. By violating the king's companion, his eldest daughter, or the wife of his eldest son. 3. By some overt act of levying war against the king in his realm. 4. By adherence to the king's enemies. 5. Counterfeiting the king's great or privy seal. 6. By counterfeiting the king's money, or importing counterfeit money. 7. By killing the chancellor, treasurer, or kings justices, in the execution of their offices. High treasons, created by subsequent statutes, are such as relate, 1. To papists : as the repeated defence of the pope's jurisdiction ; the coming from beyond sea of a natural born popish priest

the renouncing of allegiance, and reconciliation to the pope, or other foreign power. 2. To the coinage, or other signatures of the king: as counterfeiting, or importing and uttering counterfeit foreign coin, here current; forging the sign manual, privy signet, or privy seal ; falsifying, &c., the current coin. 3. To the Protestant succession: as corresponding with, or remitting to, the late pretender's sons ; endeavouring to impede the succession; writing or printing in defence of any pretender's title, or derogation of the act of settlement, or of the power of parliament to limit the descent of the crown.

The punishment of high treason in males is, generally, to be, 1. Drawn; 2. Hanged; 3. Embowelled alive ; 4. Beheaded ; 5. Quartered ; 6. The head and quarters to be at the king's disposal. But, in treasons relating to the coin, only to be drawn and hanged till dead. Females, in both cases, were formerly drawn and burnt alive ; but this last barbarous punishment was abolished by act of parliament about 1790.

Against the king's prerogative. — Felony is that offence which occasions the total forfeiture of lands or goods at common law; now usually also punishable with death by hanging ; unless through the benefit of clergy.

Felonies injurious to the king's prerogative, of which some are within, others without clergy, are, 1. Such as relate to the coin : as the wilful uttering of counterfeit money, &c., to which head some inferior misdemeanors affecting the coinage may be also referred. 2. Conspiring or attempting to kill a privy counsellor ; 3. Serving foreign states, or enlisting soldiers for foreign service; 4. Embezzling the king's armour or stores ; 5. Desertion from the king's armies, by land or sea.

Preemunire, in its original sense, is the offence of adhering to the temporal power of the pope, in derogation of the regal authority. The penalties for which are, outlawry, forfeiture, and imprisonment : which have since been extended to some offences of a different nature.

Among these are, 1. Importing popish trinkets ; 2. Contributing to the maintenance of popish seminaries abroad, or popish priests in England ; 3. Molesting the professors of abbey-lands ; 4. Acting as broker in an usurious contract, for more than ten per cent ; 5. Obtaining any stay of proceedings in suits for monopolies ; 6. Obtaining an exclusive patent for gunpowder or arms ; 7. Exertion of purveyance or preemp-tion ; 8. Asserting a legislative authority in both or either house of parliament; 9. Sending any subject a prisoner beyond sea ; 10. Refusing the oaths of allegiance and supremacy; 11. Preaching, teaching, or advised speaking, in defence of the right of any pretender to the crown, or in derogation of the power of parliament to limit the succession ; 12. Treating of other matters by the assembly of Scotland, convened for electing their representatives in parliament; »3. Unwarrantable undertakings by unlawful subscriptions to public funds.

M'upritiom and contempts are all such high of-fmces as are under the degree of capital. These art, 1. Negative, in concealing what ought to be

revealed ; 2. Positive, in committing what ought not to be done.

Negative misprisions are, 1. Misprision of treason ; for which the penalty is forfeiture and imprisonment. 2. Misprision of felony ; the punishment for which is fine and imprisonment. 3. Concealment of treasuretrove ; in which also the punishment is fine and imprisonment.

Positive misprisions, or high misdemeanors and contempts, are, 1. Mai-administration of public trusts, which includes the crime of peculation; the usual penalties for which are banishment, fines, imprisonment, disability. 2. Contempts against the king's prerogative ; which are punished by fine and imprisonment. 3. Contempts against his person and government ; the penalties inflicted for which are fine, imprisonment, and infamous corporal punishment. 4. Contempts against his title ; the penalties are fine and imprisonment ; or fine and disability. 5. Contempts against his palaces, or courts of justice ; which are punished by fine, imprisonment, corporal punishment, forfeiture, and formerly the loss of right hand.

6. Offences against the community. Crimes especially affecting the commonwealth are offences, 1. Against the public justice; 2. Against the public peace ; 3. Against the public trade ; 4. Against the public health ; 5. Against the public police or economy.

(1.) Offences against public justice are, 1. Embezzling or vacating records, and personating others in the courts of justice ; the penalty for which is judgment of felony, without benefit of clergy. 2. Compelling prisoners to become approvers; the punishment is judgment of felony. 3. Obstructing the execution of process. 4. Escapes; 5. Breach of prison; 6. Rescue; which four may, according to the circumstances, be either felonies or misdemeanors, punishable by fine and imprisonment. 7. Returning from transportation ; this is felony, without benefit of clergy. 8. Taking rewards to help one to his stolen goods ; the oenalty is the same as for the theft. 9. Receiving stolen goods ; the penalties are transportation, fine, and imprisonment. 10. Theftbote; 11. Common b* Tetry and suing in a feigned name ; 12. Maintenance ; 13. Champerty : in these four the penalties are fine and imprisonment. 14. Compounding prosecutions on penal statutes ; penalty, fine, imprisonment, and disability. 15. Conspiracy, and threats of accusation in order to extort money, &c. ; for which the penalties to be inflicted are the villainous judgment, fine, imprisonment, pillory, whipping, transportation. 16. For perjury

and subornation thereof; the penalties are infamy, imprisonment, fine, or pillory ; and sometimes transportation, or house of correction. 17. For bribery, the penalties are fine, and imprisonment. 18. Embracery (an attempt to overawe a jury); which is punished by infamy, fine, and imprisonment. 19. For false verdict; the penalty is the judgment in attaint. 20. Negligence of public officers, 8cc.,is punished by fine, and forfeiture of the office; 21. Oppression by magistrates; 22. Extortion of officers: the penalty, in both instances is imprisonment, fine and sometimes forfeiture of the office.

(2.) Against public peace. — Offences against the public peace are, 1. Riotous assemblies to the number of twelve; 2. Appearing armed or hunting in disguise; 3. Threatening or demanding any valuable thing by letter. All these are felonies without benefit of clergy. 4. Destroying of turnpikes, &c. ; the penalties are, whipping, imprisonment, judgment of felony, with and without clergy. 5. Affrays; 6. Riots, routs, and unlawful assemblies ; 7. Tumultuous petitioning; 8. Forcible entry and detainer. The penalties in the last four are fine and imprisonment. 9. For going unusually armed the penalty is forfeiture of arms and imprisonment; 10. Spreading false news ; which is punished by fine and imprisonment; 11. For pretended prophecies the penalties are fine, imprisonment, and forfeiture; 12. Challenges to fight; the penalties are fine, imprisonment, and sometimes forfeiture; 13. For libels the penalties are fine, imprisonment, and corporal punishment.

(3.) Against public trade. — Offences against the public trade, are, 1. Owhng, and the penalties are fines, forfeiture, imprisonment, transportation, judgment of felony ; 2. Smuggling, for which the penalties are fines, loss of goods, judgment of felony ; 3. Fraudulent bankruptcy ; the penalty for which is judgment of felony; 4. Usury, which is punished by fine and imprisonment;

5. For cheating, the penalties are fine, imprisonment, pillory, tumbrel, whipping, or other corporal punishment; 6. Forestalling; 7. Re-grating ; 8. Engrossing : the penalties for all three are loss of goods, fine,

imprisonment ; 9. Monopolies, and combinations to raise the price of commodities, the penalties for these are fines, imprisonment, loss of goods, infamy, and sometimes the pains of prtemunire ; 10. For exercising a trade, not having served as an apprentice, the penalty is fine ; 11. Transporting or residing abroad of artificers ; for which the penalties are fine, imprisonment, forfeiture, incapacity, becoming aliens.

(4.) Against public health and police. — Offences against the public health are, 1. Irregularity in the time of the plague, or of quarantine ; and the penalties are whipping, judgment of felony, with and without clergy ; 2. Selling unwholesome provisions, for which the penalties are amercement, fine, imprisonment, abjuration of the town.

Offences against the public police and economy, or domestic order of the kingdom, are 1. Those relating to clandestine and irregular marriages; the penalties are judgment of felony, with and without clergy ; 2. Bigamy, or (more properly) polygamy, the penalty for which is judgment of felony; 3. Idleness, vagrancy, and incorrigible roguery, the penalties for which are imprisonment, whipping, judgment of felony ; 4. Common nuisances; 1st, By annoyances or purprestures in highways, bridges, and rivers; 2dly, By offensive trades and manufactures ; 3dly, By disorderly house's ; 4thly, By lotteries ; 5thly, By cottages; 6thly, By fireworks ; 7thly, By eaves-dropping : the penalty in all of which is by fine ; 8th ly, By common scolding; penalty thecucking stool : 5. Luxury in diet; penalty discretionary;

6. Gaming; the penalties inflicted on gentlemen

are fines, on others fine and imprisonment, on cheating gamesters, fine, infamy, and the corporal pains of perjury ; 7. For destroying game the penalties are fines and corporal punishment.

CHAP. II. — OF OFFENCES AGAINST INDIVIDUALS.

1. Of offences against life. — Crimes especially affecting individuals are, 1. Against their persons ; 2. Against their habitations; 3. Against their property;

Crimes against individuals are, 1. By homicide, or destroying life ; 2. By other corporal injuries.

Homicide is, 1. Justifiable; 2. Excusable; 3. Felonious.

Homicide is justifiable, 1. By necessity and command of law; 2. By permission of law; 1st, for the furtherance of public justice; 2dly, for prevention of some forcible felony.

Homicide is excusable, 1. Per infortunium, or misadventure ; 2. Se defendt.ndo, or in self-defence, by chance-medley. The penalty in both cases is forfeiture of goods ; which, however, is pardoned of course.

Felonious homicide is the killing of a human creature without justification or excuse. This is, 1. Killing one's self; 2. Killing another.

Killing one's self, or self murder, is where one deliberately, or by any unlawful malicious act, puts an end to his own life. This is fe-lony; punished by forfeiture of goods and chattels.

Killing another is, 1. Manslaughter; 2. Mur-der.

Manslaughter is the unlawfully killing of another without malice, express or implied. This is either, 1. Voluntary, upon a sudden heat ; 2. Involuntary, in the commission of some unlawful act. Both are felony, but within clergy, except in the case of stabbing.

Murder is when a person, of sound memory and discretion, unlawfully killeth any reasonable creature in being, and under the king's peace ; with malice1 aforethought, either express or implied. This is felony without clergy ; punished with speedy death, and hanging in chains, or dissection.

Petit treason (being an aggravated degree of murder) is where the servant kills his master, the wife her husband, or the ecclesiastic his superior. The punishment for which is to be drawn and hanged.

2. Of offences against the person. — Crimes affecting the persons of individuals not amounting to homicide are, 1. Mayhem, and also shooting at another. The penalties for which are fine, imprisonment, judgment of felony, without benefit of clergy. According to a re-cent act of parliament, shooting, stabbing, or cutting, with intent to murder, rob, maim, or disfigure, is deemed felony, without benefit of clergy, if the crime would have been murder had death ensued. 2. Forcible abduction and marriage or defilement of an heiress, which is felony; also stealing and deflowering or marrying any woman child under the age of sixteen years ; for which the penalty is imprisonment, fine, and temporary forfeiture of her lands. 3. Rape, and

also carnal knowledge of a woman child under the age of ten years. 4. Buggery with man or beast. Both these are felonies, without benefit of clergy. 5. Assault ; 6. Battery, especially of clergymen; 7. Wounding. The penalties in all three are fine, imprisonment, ana other corporal punishment. 8. False imprisonment ; for which the penalties are fine, imprisonment, and (in some atrocious cases) the pains of pramunire and incapacity of office or pardon. 9. For kidnapping, or forcibly stealing away the king's subjects, the penalty is fine and imprisonment. 10. Administering medicine to procure abortion is in some cases a capital felony, in others punishable by imprisonment or transportation.

3. Of offence* against habitation*. — Crimes affecting the habitations of individuals are, 1. Arson ; 2. Burglary.

Arson is the malicious and wilful burning of the house, or out-house, of another man. This is felony ; in some cases within, in others without clergy.

Setting fire to a man's own house, out-house, &c., with intent to injure another, is now also made felony, without benefit of clergy.

Burglary is the breaking and entering by night into a mansion house, with intent to commit a felony. This is felony without clergy.

4. Of offences against property. — Crimes affecting the private property of individuals are, 1. Larciny; 2. Malicious mischief; 3. Forgery.

Larciny is, 1. Simple; 2. Mixed or compound. Simple larciny is the felonious taking, and carrying away, of the personal goods of another. And it formerly was, 1 . Grand larciny, being above the value of 12d; 2. Petit larciny, to the value of 12d or under. This distinction is now abolished as to the value of the property, and the punishment for simple larciny is whipping, imprisonment, hard labor, or transportation.

Mixed or compound larceny is that wherein the taking is accompanied

with the aggravation of being, 1. From the house; 2. From the person.

Larcinies from the house are punished with death for breaking and entering a dwelling house and stealing property to any value.

Or stealing to any value in any dwelling house, •uttf person therein being put in fear.

Or stealing in any dwelling house to the value of £5 or more.

No building is deemed part of the dwelling house unless there be a communication immediate or by a covered and enclosed passage leading from the one to the other.

Stealing from a church or chapel is also a capital felony.

Itobbery from buildings not within this description is punished with transportation or imprisonment And so for robberies in shops and counting-houses.

ledgers robbing a house or apartment are liable to transportation, imprisonment, or whin-pin-.

l.arriny from the person is, 1. By privately itealiii'.' from the person of another, above the vain,- of 12(/. ; 2. By robbery, or the felonious

d forcible taking from the person of another, m or near the highway, goods or money of any value by putting him in fear. These are both

felonies without clergy. An attempt to rob is also felony.

Malicious injury to property by destroying ships, machinery, and manufactures, fish-ponds, sea, river, and canal banks, bridges, churches, chapels, meeting-houses, houses, out-houses, trees, shrubs, corn, hay, straw, hop-binds, cattle, coal-mines (or engines thereunto belonging), flood-gates, fences for enclosures by act of parliament, walls, &c., are punished by forfeitures, imprisonment, hard labor, and in some cases by transportation.

Forgery is the fraudulent making or alteration of a writing in prejudice of another's right : the penalties for which are fine, imprisonment, pillory, forfeiture, judgment of felony without clergy.

CHAP. III. — OF THE PREVENTION OF CRIMES.

It is an honor, and almost a singular one, to our English laws, that they furnish a title of this sort ; since preventive justice is upon every principle of reason, of humanity, and of sound policy, preferable in all respects to punishing justice ; the execution of which, though necessary, and its consequence a species of mercy to the commonwealth, is always attended with many harsh and disagreeable circumstances.

This preventive justice consists in obliging those persons, whom there is a probable ground to suspect of future misbehaviour, to stipulate with, and to give full assurance to the public, that such offence as is apprehended shall not happen ; by finding pledges or securities for keeping the peace, or for their good behaviour. This requisition of sureties forms part of the penalty inflicted upon such as have been guilty of certain gross misdemeanors : but there it must be understood rather as a caution against the repetition of the offence, than any immediate pain or punishment. And, indeed, if we consider all human punishments in a large and extended view, we shall find them all rather calculated to prevent future crimes, than to expiate the past: since all punishments inflicted by temporal laws may be classed under three heads ; such as tend to the amendment of the offender himself, or to deprive him of any power to do future mischief, or to deter others by his example : all of which conduce to one and the same end, of preventing future crimes, whether that be effected by amendment, disability, or example. But the caution of which we speak at present is such as is intended merely for prevention, without any crime actually committed by the party, but arising only from a probable suspicion that some crime is intended, or likely to happen ; and consequently it is not meant m any degree of punishment, unless perhaps for a man's imprudence in giving just ground of apprehension.

By the Saxon constitution these sureties were always at hand, by means of king Alfred's wise constitution of decenaries or frankpledges ; wherein the whole neighbourhood or tithing of freemen were mutually pledges for each other's good behaviour. But, this great and general security being now fallen into disuse and neglected, there has succeeded to it the method of making

suspected persons find particular and special securities for their future conduct : of which we find mention in the laws of king Edward the Confessor; ‘tradat fidejussores de pace et legalitate tuenda.’ Let us therefore consider, first, what this security is; next, who may take or demand it; and, lastly, how it may be discharged.

1 . Security to keep the peace and be of good behaviour. — This security consists in being bound, with one or more sureties, in a recognizance or obligation to the king, entered on record, and taken in some court or by some judicial officer ; whereby the parties acknowledge themselves to be indebted to the crown in the sum required (for instance £100), with condition to be void and of none effect, if the party shall appear in court on such a day, and in the mean time shall keep the peace ; either generally, towards the king, and all his liege people ; or particularly, also, with regard to the person who craves the security. Or, if it be for the good behaviour, then on condition that he shall demean and be-have himself well, or be of good behaviour, either generally or specially, for the time therein limited, as for one or more years, or for life. This recognizance, if taken by a justice of the peace, must be. certified to the next sessions, in pursuance of the statute 3 Hen. VII., c. 1 ; and if the condition of such recognizance be broken, by any breach of the peace in the one case, or any misbehaviour in the other, the recognizance becomes forfeited, or absolute; and, being estreated or extracted (taken out from among the other records), and sent up to the exchequer, the party and his sureties, having now become the king’s absolute debtors, are sued for the several sums in which they are respectively bound.

2. By whom and how it may be obtained. — Any justices of the peace, by virtue of their commission, or those who are ex officio conservators of the peace, may demand such security according to their own discretion ; or it may be granted at the request of any subject, upon due cause shown, provided such demandant be under the king’s protection ; for which reason it has been formerly doubted whether Jews, Pagans, or persons convicted of a praemunire, were entitled thereto Or, if the justice is averse to act, it may be granted by a mandatory writ, called a suppli-cavit, issuing out of the king’s bench or chancery ; which will compel the justice to act, as a ministerial and not as a judicial officer : and he must make a return to such writ, specifying his compliance, under his hand and seal. But this writ is seldom used ; for, when application is made to the superior courts, they usually take the recognizances there, under the directions of the

statute 21 Jac. I. c. 8. And indeed a peer or peeress cannot be bound over in any other place than the courts of king's bench or chancery : though a justice of the peace has a power to require sureties of any other person, being compos mentis, and under the degree of nobility, whether he be a fellow-justice or other magistrate, or whether he be merely a private man. Wives may demand it against their husbands ; or husbands, if necessary, against their wives. But feme-coverts, and infants under age, ought to

find security by their friends only, and not to be bound themselves : for they are incapable of engaging themselves to answer any debt; which, as we observed, is the nature of these recognizances or acknowledgments.

3. How the responsibility may be discharged. — A recognizance may be discharged either by the demise of the king, to whom the recognizance is made ; or by the death of the principal party bound thereby, if not before forfeited; or by order of the court to which such recognizance is certified by the justices (as the quarter sessions, assizes, or king's bench), if they see sufficient cause : or in case he at whose request it was granted, if granted upon a private account, will release it, or does not make his appearance to pray that it may be continued.

Thus far what has been said is applicable to both species of recognizances, for the peace, and for the good behaviour; de pace, et legalitate, tuenda, as expressed in the laws of king Edward. But as these two species of securities are in some respects different, especially as to the cause of granting, or the means of forfeiting them, we shall now consider them separately : and, first, shall show for what cause such a recognizance, with sureties for the peace, is grantable ; and, then, how it may be forfeited.

4. For what causes the security is grantable. — Any justice of the peace may, ex officio, bind all those to keep the peace who in his presence make any affray ; or threaten to kill or beat another ; or contend together with hot and angry words ; or go about with unusual weapons or attendance, to the terror of the people ; and all such as he knows to be common barrators ; and such as are brought before him by the constable for a breach of the peace in his presence ; and all such persons as, having been before bound to the peace, have broken it and forfeited their recognizances. Also, whenever any private man has just cause to fear that another will burn his house, or do him a

corporal injury, by killing, imprisoning, or beating him; or that he will procure others so to do; he may demand surety for the peace against such person : and every justice of the peace is bound to grant it, if he who demands it will make oath that he is actually under fear of death or bodily harm, and will show that he has just cause to be so, by reason of the other's menaces, attempts, or having lain in wait for him ; and will also farther swear, that he does not require such surety out of malice or for mere vexation. This is called swearing the peace against another : and, if the party does not find such sureties as the justice in his discretion shall require, he may be immediately committed till he does.

5. Of the forfeiture of recognizances for keeping the peace. — Such recognizances for 'keeping the peace, when given, may be forfeited by any actual violence, or even an assault, or menace, to the person of him who clentanded it, if it be a special recognizance : or, if the recognizance be general, by any unlawful action whatsoever, that either is or tends to a breach of the peace ; or, more particularly, by any oiie of the many species of offences which are mentioned as crimes in the two preceding chapters; or by any private

violence committed against any of his majesty's subjects. But a bare trespass upon the lands or goods of another, which is a ground for a civil action, unless accompanied with a wilful breach of the peace, is no forfeiture of the recognizance. Neither are mere reproachful words, as calling a man knave or liar, any breach of the peace so as to forfeit one's recognizance (being looked upon to be merely the effect of unmeaning heat and passion), unless they amount to a challenge to fight

The other species of recognizance, with sureties, is for the good abearance or good behaviour. This includes security for the peace, and somewhat more : we will therefore examine it in the same manner as the other.

6. Of compelling security for good behaviour.— First, then, the

justices are empowered, by the statute 34 Edw. III. c. 1, to bind over to the good behaviour towards the king and his people, all them that be not of good fame, wherever they be found ; to the intent that the people be not troubled nor endamaged, nor the peace diminished, nor merchants and others, passing by the highways of the realm, be disturbed nor put in the peril which may happen by such offenders. Under the general words of this expression, ‘ that be not of good fame,’ it is holden that a man may be bound to his good behaviour for causes of scandal, contra bonos mores, as well as con-tra pacem ; as, for haunting bawdy-houses with •women of bad fame, or for keeping such women in his own house, or for words tending to scandalise the government, or in abuse of the officers of justice, especially in the execution of *heir office. Thus also a justice may bind over all night-walkers ; eaves-droppers ; such as keep suspicious company, or are reported to be pilferers or robbers ; such as sleep in the day and wake in the night ; common drunkards ; whoremasters ; the putative fathers of bastards ; cheats, idle vagabonds, and other persons, whose misbehaviour may reasonably bring them within the general words of the statute, as persons not of good fame: an expression, it must be owned of so great a latitude as leaves much to be determined by the discretion of the magistrate himself. But, if he commit a man for want of sureties, he must express the cause thereof with convenient certainty : and take care that such cause be a good one.

7. Forfeiture of recognizances for good behaviour.— A recognizance for the good behaviour may be forfeited by all the same means as one for the security of the peace may be : and also by some others. As, by going armed with unusual attendance, to the terror of the people ; by speaking words tending to sedition ; or by committing any of those acts of misbehaviour which the recognizance was intended to prevent. But not by giving barely fresh cause of suspicion of that which perhaps may never actually happen ; for though it is just to compel suspected persons to give security to the public against misbehaviour that is apprehended, yet it would be hard, upon such suspicion, without the proof of any actual crime, to punish them by a forfeiture of their recognizance.

CHAP. IV. — OF THE PUNISHMENT OF

AND THE MODE OF PROCEDURE.

1 . Of the nature and object of punishment. — Punishments may be) considered with regard to

1. The power; 2. The end; 3. The measure of their infliction.

The power, or right, of inflicting human punishments for natural crimes, or such as are mala in se, was by the law of nature vested in every individual ; but, by the fundamental contract of society, is now transferred to the sovereign power; in which also is vested, by the same contract, the right of punishing positive offences, or such as are mala prohibita.

The end of human punishments is to prevent future offences ; 1. By amending the offender himself; 2. By deterring others through his example ; 3. By depriving him of the power to do future mischief.

The measure of human punishments must be determined by the wisdom of the sovereign power, and not by any uniform universal rule : though that wisdom may be regulated, and assisted, by certain general, equitable, principles.

2. Of courts of criminal jurisdiction. — In the method of punishment may be considered, 1. The several courts of criminal jurisdiction; 2. The several proceedings therein.

The criminal courts are, 1. Those of a public and general jurisdiction throughout the realm;

2. Those of a private and special jurisdiction. Public criminal courts are, 1. The high court

of parliament ; which proceeds by impeachment; 2. The court of the lord high steward; and the court of the king in full parliament for the trial of capitally indicted peers ; 3. The court of king's bench ; 4. The court of chivalry, now disused ; 5. The court of admiralty under the king's commission ; 6. The courts of oyer and terminer, and general gaol delivery ; 7. The court o» quarter-sessions of the peace; 8. The sheriffs tourn ; 9. The court-leet ; 10. The court of the coroner ; 1 1. The court of the clerk of the market. Private criminal courts are, 1 . The court of the lord steward, &c., by statute of Henry VII.; 2. The court of the lord steward, &c., by statute of Henry VIII. ; 3. The university courts.

3. Of summary convictions. — Proceedings in criminal courts are, 1 . Summary. 2. Regular.

Summary proceedings are such whereby a man may be convicted of divers offences, without any formal process or jury, at the discretion of the judge, or judges, appointed by act of parliament or common

law.

Such are, 1. The trials of offences and frauds against the laws of excise, and other branches of the king's revenue. 2. Convictions before justices of the peace upon a variety of minute offences, chiefly against the public police. 3. Attachments for contempts of superior courts of justice.

4. Of proceedings before trial. — Regular pro ceedings in the courts of common law, are, 1. Arrest. 2. Commitment and bail. 3. Prosecution 4. Process. 5. Arraignment, and its incidents. 6. Plea and issue. 7. Trial and conviction. 8. Formerly benefit of clergy. 9. Judgment and its consequence. 10. Reversal of judgment. 11. Reprieve or pardon. 12. Execution.

(1.) Arrest. — An arrest is tlie apprehending or restraining of one's person • in order to be forthcoming to answer a crime whereof one is accused or suspected.

This may be done, 1. By warrant. 2. By an officer, without warrant. 3. By a private per-son, without warrant. 4. By hue and cry.

(2.) Commitment and bail. — Commitment is the confinement of ones's person in prison for safe custody, by warrant from proper authority ; unless in bailable offences he puts in a sufficient bail or security for his future appearance.

The magistrate is bound to take reasonable bail, if offered, unless the offender be not bailable.

Such are, 1. Persons accused of treason; or, 2. Of murder; or, 3. Of manslaughter, by indictment; or if the prisoner was clearly the slayer. 4. Prison-breakers, when committed for felony. 5. Outlaws. 6. Those who have abjured the realm. 7. Approvers and appellees. 8. Persons taken with the mainour. 9. Persons accused of arson. 10. Excommunicated persons.

The magistrate may, at his discretion, admit to bail or otherwise, persons not of good fame, charged with other felonies, whether as principals or as accessories. If they be of good fame, ne is bound to admit them to bail. The court of king's bench, or its judges, in time of vacation, may bail in any case whatsoever.

(3.) Prosecutions. — Prosecution, or the manner of accusing offenders, is either by a previous finding of a grand jury ; as, 1. By presentment. 2. By indictment : or without such findings. 3. By information. 4. By appeal.

A presentment is the notice taken by a grand jury of any offence, from their own knowledge or observation.

An indictment is a written accusation of one or more persons of a crime or misdemeanor, preferred to, and presented on oath by, a grand jury; expressing with sufficient certainty, the person, time, place, and offence—

An information is, 1 . At the suit of the king and a subject, upon penal statutes. 2. At the suit of the king only. Either 1. Filed by the attorney general ex officio, for such misdemeanors as affect the king's person or government; or, 2. Filed by the master of the crown office, with leave of the court of king's bench, at the relation of some private subject, for other gross and notorious misdemeanors, all differing from indictments in this, that they are exhibited by the informer, or the king's officer, and not on the oath of a grand jury.

An appeal was an accusation or suit, brought by one private subject against another, for larceny, rape, mayhem, arson, or homicide ; which the king could not discharge or pardon, but the party alone could release : but which proceeding is now abolished.

(4.) Process on an indictment. — Process to bring in an offender, when indicted in his absence, is, in misdemeanors, by venire facias, distress infinite, and capias ; in capital crimes, by capias only ; and in both, by outlawry.

During this stage of proceedings, the indictment may be removed into the court of king's bench from any inferior jurisdiction, by writ of

certiorari facias; and cognizance must be claimed in place of exclusive jurisdiction.

(5.) Arraignment. — Arraignment is the calling of the prisoner to the bar of the court, to answer the matter of the indictment.

Incident hereunto are, 1. The standing mute of the prisoner ; for which, in petit treason, and felonies of death, he shall undergo the peine forte et dure. 2. His confession, which is either simple, or by way of approvement.

In treason, petit larceny, and misdemeanors, standing mute has always been holden as a confession, and equivalent to a conviction ; and now the law extends it to felony and piracy.

(6.) Plea and issue. — The plea, or defence, alleged by the prisoner, may be, 1. A plea to the jurisdiction. 2. A demurrer in point of law. 3. A plea in abatement. 4. A special plea in bar; which is, 1st, autrefois acquit; 2dly, autrefois convict; 3dly, autrefois attaint ; 4thly, a pardon. 5. The general issue, not guilty.

Hereupon issue is joined by the clerk of the arraigns, on behalf of the king.

5. Of the trial, conviction, and its consequences.— (1.) Trials of offences, by the laws of England, were and are, 1 . By ordeal, of either fire or water. 2. By the corsned. Both these have been long abolished. 3. By battel, in appeals and approvements, which are also now abolished. 4. By the peers of Great Britain. 5. By jury.

The method and process of trial by jury are, 1. Theimpannelling of the jury. 2. Challenges ; 1st, for cause; 2dly, peremptory. 3. Tales de circumstantibus. 4. The oath of the jury. 5. The evidence. 6. The verdict, either general or special.

(2.) Conviction is when the prisoner pleads, or is found guilty ; whereupon, in felonies, the prosecutor is entitled to, 1 . His expenses. 2. Restitution of his goods.

(3.) Benejit of clergy. — Clergy, or the benefit thereof, was originally derived from the usurped jurisdiction. of the popish ecclesiastics; but was new-modelled by several statutes. It was an exemption of the clergy from any other secular punishment, for felony, than imprisonment for a year, at the court’s discretion : and it was extended likewise, absolutely, to lay peers, for the first offence. All felonies were entitled to the benefit of clergy, except such as were ousted by particular statutes. Felons, on receiving the benefit of clergy, though they forfeited theii goods to the crown, were discharged of all clergyable felonies before committed, and restored in

all capacities and credits. But now every one guilty of felony, whether peer or commoner, clergy or layman, is alike amenable. The term benefit of clergy, however, still discriminates a certain class of offences, to which a specific punishment is attached.

(4.) Judgment. — Judgment, unless any matter be offered in arrest thereof, follows upon conviction ; being the pronouncing of that punish men* which is expressly ordained by law.

Attainder of a criminal is the immediate consequence. 1. Of having judgment of death pronounced upon him; 2. Of outlawry for a capital offence.

The consequences of attainder are, 1. Forfeiture to the king. 2. Corruption of blood.

Forfeiture to the king is, 1. Of real estates, upon attainder : — in high treason absolutely, till the death of the late pretender's sons; in felonies, for the king's year, day, and waste ; in misprision of treason, assaults on a judge, or battery sitting the courts, during the life of the offender. 2. Of personal estates upon conviction ; in all treason, misprision of treason, felony, excusable homicide, petty larceny, standing mute upon arraignment, the above named contempts of the king's courts, and flight.

Corruption of blood is an utter extinction of all inheritable quality therein : so that, after the king's forfeiture is first satisfied, the criminal's lands escheat to the lord of the fee ; and he can never afterwards inherit, be inherited, or have any inheritance derived through him. But this corruption of blood is now limited to high treason, petit treason, and murder.

(5.) Reversal of judgment. — Judgments, and their consequences, may be avoided, 1. By falsifying, or reversing, the attainder. 2. By reprieve, or pardon.

Attainders may be falsified, or reversed, 1. Without a writ of error; for matters dehors the record. 2. By writ of error ; for mistakes in the judgment, or record. 3. By act of parliament ; for favor.

When an outlawry is reversed, the party is restored to the same plight as if he appeared upon the capias. When a judgment, on conviction, is reversed, the party stands as if never accused.

(6.) Reprieve and pardon. — A reprieve is a temporary suspension of the judgment, 1. Ex arbitrio judicis. 2. Ex necessitate legis ; for pregnancy, insanity, or the trial of identity of person, which ir.ust always be tried instanter.

A pardon is a permanent avoider of the judgment by the king's majesty, in offences against his crown and dignity ; drawn in due form of law, allowed in open tourt, and thereby making the offender a new man.

The king cannot pardon, 1. Imprisonment of the subject beyond the seas. 2. Offences prosecuted by appeal. 3. Common nuisances. 4. Of offences against popular or penal statutes, after information brought by a subject. Nor is his pardon pleadable to an impeachment by the commons in parliament.

(7.) Execution. — Execution is the completion of human punishment, and must be strictly performed in the manner which the law directs.

The warrant for execution is sometimes under the hand and seal of the judge ; sometimes by writ from the king ; sometimes by rule of court ; but commonly by the judge's signing the calendar of prisoners, with their separate judgments m the margin.

PART III. OF THE LAWS OF SCOTLAND.

INTRODUCTION.

The municipal law of Scotland, as of most other countries, consists partly of statutable or written law, -which has the express authority of 't e legislative power; partly of customary or

unwritten law, which derives force from presumed or tacit consent.

Under the statutable or written law are comprehended, 1. Acts of parliament; not only those which were made down to the union with

England, but such of the British statutes enacted since the union as concern this partof the United Kingdom.

A collection of law books under the title of Regiam Majestatem was published by Sir John Skene, at the commencement of the sixteenth century. It consists of the Regiatr Majestatem, now generally deemed to be a mere transcript from a work of Glanville, an English lawyer, called Regiam Potestatem, interlarded with a iew of the laws and particular customs of this country, the borough laws, the laws of R. Malcolm, &c.

The written law of Scotland also comprehends the acts of sederunt, which are ordinances foi regulating the forms of proceeding before the court of session. The Roman law continues to have great authority in all cases where it is not derogated from by any statute or custom.

Unwritten or customary law, is that which, without being expressly enacted by statute, derives its force from the tacit consent of king and people : custom, as it is equally founded in the will of the lawgiver with written law, has therefore the same effects : hence, as one statute may be explained or repealed by another, so a statute may be explained by the uniform practice of the community, and even go into disuse by a posterior contrary custom.

A uniform train of the judgments or decisions of the court of session is commonly considered as part of the customary law.

The Scottish acts of parliament were proclaimed in all the different shires, boroughs, and baron-courts. But after statutes came to be printed that custom was gradually neglected ; and at last the publication of laws at the market cross of Edinburgh was declared sufficient; and they became obligatory forty days thereafter. British statutes are deemed sufficiently notified without formal promulgation; though, for the information of the lieges in general, copies of every public statute are now forwarded to each district of every county throughout the kingdom at the public expense. After a law is published, no pretence of ignorance can excuse the breach of it.

By the rules of interpreting statute law received in Scotland, an argument may be used from the title to the act itself; a mbro ad ni-grum; or at least where the rubric has been either originally framed, or afterwards adopted, by the legislature.

By the rules for the interpretation of laws in Scotland being, in general, nearly the same with those observed for the interpretation

and construction of the statute laws in England, it is unnecessary to repeat thejn here.

The objects of the laws of Scotland, according to Mr. Erskine in his Institute, are persons, things, and actions.

CHAP. I. — OF PERSONS IN THEIR PUBLIC

RELATION.

1. Of the authority of courts in general. — Jurisdiction is a power conferred upon a judge

or magistrate, to take cognizance of, and decide Causes according to law, and to carry his sentences into execution. The district, within which a judge has the right of jurisdiction, is called his territory : and every act of jurisdiction exercised by a judge without his territory is null.

Jurisdiction is either supreme, inferior, or mixed. That jurisdiction is supreme from which there lies no appeal to a higher court. Inferior courts are those whose sentences arc subject to the review of the supreme courts, and whose jurisdiction is confined to a particular territory. Mixed jurisdiction participates of the nature both of the supreme and inferior.

Jurisdiction is either civil or criminal. By the first, questions of private right are decided ; by the second, crimes are punished.

Jurisdiction is either privative or cumulative. Private jurisdiction is that which belongs only to one court, to the exclusion of all others. Cumulative, otherwise called concurrent, is that which may be exercised by any one or two or more courts in the same cause.

Jurisdiction is either proper or delegated. Proper jurisdiction is that which belongs to a judge or magistrate himself, in virtue of his office. Delegated is that which is communicated by the judge to another,

called a deputy or substitute.

Civil jurisdiction is founded, 1. Ratione domicilii, if the defender has his domicile within the judge's territory.

A domicile is the dwelling place where a person lives with an intention to remain ; and custom has fixed it as a rule, that residence for forty days founds jurisdiction. If one has no fixed dwelling-place, e. g. a soldier, or a travelling merchant, a personal citation against him within the territory is sufficient to found the judge's jurisdiction over him, even in civil questions. As the defender is not obliged to appear before a court to which he is not subject, the pursuer must follow the defender's domicile.

It is founded, 2. Ratione rei sitas, if the subject in question be within the territory. If that subject be immpveable, the judge, whose jurisdiction is founded in this way, is the sole judge competent, excluding the judge of the domicile.

Where one who has not his domicile within the territory is to be sued before an inferior court, ratione rei sita?, the court of session must be applied to, whose jurisdiction is universal, and, who, of course, grants letters of supplement to cite the defender tc appear before the inferior judge. Where the party to be sued resides in another kingdom, and has an estate in this, the court of session is the only proper court, as the commune forum to nil persons residing abroad ; and the defender, if his estate be heritable, is considered as lawfully summoned to the court by a citation at the market-cross of Edinburgh, and pier and shore of Leith : but where a stranger, not a native of Scotland, has only a moveable estate in this kingdom, he is deemed to be so little subject tp the jurisdiction of its courts, that action cannot be brought against him till his effects be first attached by an arrestment jurisdictionis fundandae causa. VOL. XII.

A judge may in special causes arrest or secure the persons of such as have neither domicile nor estate within his territory, even for civil debts. Thus, on the border between Scotland and England, warrants are granted of course by the judge ordinary of either side, against those who have their domicile upon the opposite side; and security is also required where natives are suspected of withdrawing.

A judge may be declined, i. e. his jurisdiction disowned judicially, 1. Ratione causae, from his incompetency to the special cause brought

before him. 2. Ratione suspecti judicis ; where either the judge himself, or his near kinsman, has an interest in the suit. No judge can vote in the cause of his father, brother, or son, either by consanguinity or affinity ; nor in the cause of his uncle or nephew by consanguinity-3. Ratione privilegii; where the party is by privilege exempted from their jurisdiction.

Prorogated jurisdiction, jurisdictio in consen-tiente, is that which is, by the consent of parties, conferred upon a judge, who without such consent would be incompetent.

A party who has either properly declined the jurisdiction of the judge before whom he had been cited, or who thinks himself aggrieved by any proceedings in the cause, may before de-cree apply to the court of session to issue letters of ad vocation for calling the action from before the inferior court to themselves.

2. Of the supreme judges and courts. — The British house of peers is the court of last resort, to which appeals lie from all the supreme courts of Scotland ; but that court has no original jurisdiction in civil matters, in which they judge only upon appeal.

A court was erected in 1425, consisting of certain persons to be named by the king, out of the three estates of parliament, which was vested with the jurisdiction formerly lodged in the council, and obtained the name of the session, because it was ordained to hold annually a certain num-ber of sessions at the places to be especially appointed by the king.

The judges who were vested with a universal civ 1 jurisdiction, consisted originally of seven churchmen, seven laymen, and a president, who was required to be a prelate; but spiritual judges were in 1584 partly, and in 1640 totally, prohibited. At the commencement of the winter session, 1808, the fifteen ordinary judges were separated into two divisions, the one consisting of eight, and the other of seven members. Each division possesses the same powers, and carries on actions under the same forms, as the whole did formerly, with some improvements, by which the business of the nation is greatly facilitated.

The appellation of the college of justices is not confined to the judges who are distinguished by the name of senators; but comprehends advocates, clerks of sesssion, writers to the signet, and others.

Though the jurisdiction of the session is properly limited to civil

causes, the judges nave always sustained themselves as competent to the crime of falsehood. Where the falsehood deserves death or clemembration, they, after finding the crime proved, remit the criminal to the court

of justiciary. Special statute has given to the court of session jurisdiction in contraventions of law burrows, deforcements, and breach of arrestment ; and they have been in use to judge in battery pendente lite, and in usury. In certain civil causes, the jurisdiction of the session is exclusive of all inferior jurisdictions, as in declarations of property, and other competitions of heritable rights, provings of the tenor, cessiones bonorura, restitution of minors, reductions of decrees or of writings, sales of the estates of minors or bankrupts, 8cc. : in a second class of causes, their jurisdiction can be exercised only in the way of review, after the cause is brought from the inferior court ; as in maritime and consistorial causes, which must be pursued in the first instance before the admiral or commissary ; and in actions below £25 sterling, which must be commenced before the judge ordinary. The session may proceed as a court of equity by the rules of conscience, in abating the rigor of law, and giving aid in proper oases to such as in a court of law can have no remedy.

In 1672 five lords of session were added as commissioners of justiciary, to the justice general and justice-clerk. The justice general, if present, is constant president of the court, and in his absence the justice-clerk. The kingdom is divided into three districts, and two of the judges are appointed to hold circuits in certain boroughs of each district twice in the year ; one judge may proceed to the business in the absence of his colleague. In trials before this court the evidence was always taken down in writing till the act 23 Geo. III. was passed, by which the judges may try and determine all causes by the verdict of an assise, upon examining the witnesses viva voce, without reducing the testimony into writing, unless it shall appear more expedient to proceed in the former way, which they have it in their

power to do. This act was at first temporary, hut is now made perpetual by 27, Geo. III. c. 18.

By an old statute, the crimes of robbery, rape, murder, and wilful fire-raising (the four pleas of the crown), are said to be reserved to the king's court of justiciary ; but the .only crime in which, in practice, the jurisdiction of justiciary became at last exclusive of all inferior criminal jurisdiction, was that of high treason. The court of justiciary, when sitting at Edinburgh, has a power of advocating causes from all inferior criminal judges, and of suspending their sentences.

The circuit court can also judge in all criminal cases which do not ir.fer death or demembration, upon appeal from any inferior court within their district; and has a supreme civil jurisdiction, by way of appeal, in all causes not exceeding £12 sterling, in which their decrees are subject to re-view ; but no appeal is to lie to the circuit, till the cause be finally determined in the inferior court.

The court of exchequer consists of the lord high trcagurer of Great Britain, and a chief baron, with four other barons of exchequer; which barons are to be made of sergeants at law, Knglish barristers, or Scottish advocates of five years standing. This court has a private jurisdiction conferred upon it, as to the duties of cus-

toms, excise, or other revenues appertaining to the king or prince of Scotland, and as to all honors and estates that may accrue to the crown ; in which matters they are to judge by the forms of proceeding used in the English court of exchequer, under the following limitations: that IK. debt due to the crown shall affect the debtor's real estate in any other manner than such estate may be affected by the laws of Scotland, and that the validity of the crown's title to any honors or lands shall continue to be tried by the court of session. The barons have the powers of the Scots court transferred to them, of passing the accounts of sheriffs or other officers who have the execution of writs issuing from, or returnable to, the court of exchequer, and of receiving resignations, and passing signatures of charters, gifts of casualties, Sec. But, though all these must pass in exchequer, it is the court of session only that can judge of their preference after they are completed.

The high admiral is declared the king's justice-general upon the seas, on fresh water within flood mark, and below the first bridge, and in all harbours and creeks. His civil jurisdiction extends to all maritime

causes, and so comprehends questions of charter-parties, freights, salvages, bottomries, &c. He exercises this supreme jurisdiction by a delegate, the judge of the high court of admiralty ; and he may also name inferior deputies, whose jurisdiction is limited to particular districts, and whose sentences are subject to the review of the high court. In causes which are declared to fall under the admiral's cognizance his jurisdiction is sole; insomuch that the session itself, though it may review his decrees by suspension or reduction, cannot carry a maritime question from him by advocation. The admiral has acquired, by usage, a jurisdiction in mercantile causes, even where they are not strictly maritime, cumulative with the judge of the ordinary. All our supreme courts have seals or signets proper to their several jurisdictions.

3. Of the inferior judges and courts. — Sheriff is the judge ordinary constituted by the crown over a particular division or county. His civil jurisdiction extends to all actions upon contracts, or other personal obligations, forthcomings, poindings of the ground, mails, and duties; and to all possessory actions, as removings, ejections, spuilzies, &c. ; to all brieves issuing from the chancery, as of inquest, terce, division, tutory, &c. ; and even to adjudications of land estates, when proceeding on the renunciation of the apparent heir. His present criminal jurisdiction extends to certain capital crimes, as theft, and even murder, though it be one of the pleas of the crown, and he is competent to most questions of public police, and has a cumulative jurisdiction with justices of the peace in all riots and breaches of the peace. Sheriffs have a ministerial power, in virtue of which they return juries for trial of causes that require them. The writs for electing members of parliament have been, since the union, directed to the sheriffs, who, after they are executed, return them to the crown office whence they isstied. They also execute writs issuing from the court of exchequer; and, in

general, take care of all estates, duties, or casualties, that fall to the crown within their territory, for which they must account to the

exchequer. No high sheriff or Stewart can judt>e personally in any cause. One sheriff or stewart-depute is to be appointed by the king in every shire, who must be an advocate of three years standing; and whose office as sheriff or stewart-depute is now, by 28 Geo. III., held ad vitam ant culpam.

The appanage or patrimony of the prince of Scotland, has been long erected into a regality jurisdiction called the principality. It is personal to the king's eldest son, upon whose death or succession it returns to the crown. The prince has, or may have, his own chancery, from which his writs issue, and may name his own chamberlain and other officers, for receiving and managing his revenue. The vassals of the prince are entitled to elect, or to be elected, members of parliament for counties, equally with those who hold of the crown

Justices of the peace are magistrates named by the sovereign over the several counties of the kingdom, for the special purpose of preserving the public peace. They may compel workmen or laborers to serve for a reasonable fee, and they can condemn masters in the wages due to their servants. They have power to judge in questions of highways, and to call out the tenants with their cottars (cottagers) and servants to perform six days' work yearly for upholding them ; but have no jurisdiction in common actions for debts, except where they are declared competent by special statute.

Since the union, over and above the powers committed to them by the laws of Scotland, they are authorised to exercise whatever belonged to the office of an English justice in relation to the public peace. Two justices can constitute a court. Special statute has given the cognizance of several matters of excise to the justices in which their sentences are final.

A borough is a body corporate, made up of the inhabitants of a certain tract of ground erected by the sovereign with jurisdiction annexed to it. Boroughs are erected either to be holden of the sovereign himself, which is the case of royal boroughs ; or of the superior of the lands erected, as boroughs of regality and barony. Boroughs royal have power, by their charters, to choose annually certain office-bearers or magistrates, and, in boroughs of regality and barony, the nomination of magistrates is, by their charter, lodged sometimes in the inhabitants, sometimes in the superior. Bailies of boroughs have jurisdiction in matters of debt, services, and questions of possession betwixt the inhabitants. Their criminal jurisdiction extends to petty riots, and reckless fire-raising. The dean of guild is that magistrate of a royal borough who is head of the Merchant Company. He has the

cognizance of mercantile causes within the borough ; and the inspection of buildings that they encroach neither on private property, nor on the public streets ; £.nd he may direct insufficient houses to be pulled down. His jurisdiction has no dependence on the court of the borough, or bailie-court.

A baron, in the extensive sense of that word,

is one who holds his lands immediately of the crown.

By the jurisdiction act, the civil jurisdiction of a baron is reduced to the power of recovering from his vassals and tenants the rents of lands, and of assessing them in mill-services ; and ot" judging in causes where the debt and damages do not exceed 40s. sterling. -His criminal jurisdiction is, by the same statute, limited to assaults, batteries, and other similar offences, which may be punished by a fine not exceeding 20s. sterling, or by setting the offender in the stocks in the day time not above three hours ; the fine to be levied by poinding, or one month's imprisonment.

The high constable of Scotland had no fixed territorial jurisdiction, but followed the court ; and had, jointly with the marischal the cognisance of all crimes committed within two leagues of it. By the jurisdiction act, all jurisdictions constabulary are dissolved, except that of high constable.

The office of the Lyon king of arms was chiefly ministerial, to denounce war, proclaim peace, carry public messages, &c. But he has also :i right of jurisdiction whereby he can punish all who usurp arms contrary to the law of arms, and deprive or suspend messengers, heralds, or pursuivants (who are officers named by himself; ; but he has no cognizance of the damage arising to the private party through the messenger's fault.

4. Of ecclesiastical persons. — Upon abolishing the pope's authority, the regular clergy were totally suppressed ; and in place of all the different degre.es which distinguished the secular clergy, we had at first only parochial presbyters or ministers, and superintendants, who had the oversight of the church within a certain district : soon afterwards the church government became episcopal, by archbishops, bishops. &c.; and after some intermediate turns, is now presbyterian, by kirk-sessions, presbyleries, synods, and general assemblies.

The term prelate, in the statutes, signifies v bishop, abbot, or other

dignified clergyman Since the reformation, the crown, as coming i' place of the pope, is considered as universal patron, where no right of patronage appears in a subject. Where two churches are united, which had different patrons, each patron presents by turns. Where a fund is gifted for the establishment of a second minister, in a parish where the cure is thought too heavy for one, the patronage of such benefice does not belong to the donor, but to him who was patron of the church, unless either where the donor has reserved to himself the right of patronage in the donation, or where he and his successors have been in the constant use of presenting the second minister, without challenge from the patron.

The right of presenting incumbents was, by act 1650, c. 23, taken from patrons, and vested in the heritors and elders of the parish, upon payment to be made by the heriters to the patron of COO merks ; but it was again restored to patrons, 10 Ann. c. 12, with the exception of the presentations sold in pursuance of the former act. Patrons were not simply administrators of the church ; for they held the fruits of the vacant benefice as their own, for some time after the re—

formation. But tliat right is now no more than a trust in the patron who must apply them to pious uses within the paris.h, at the sight of the heritors, yearly as they fell due. If he fail, he loies his right of administering the vacant rtipend for that and the next vacancy. The king, who is exempted from this rule, may apply the vacant stipend of his churches to any pious use, though not within the parish. If one should be ordained to a church, in opposition to the presentee, the patron, whose civil right cannot be affected by any sentence of a church court, may retain the stipend as vacant. Patrons are to this day entitled to a seat and burial place in the churches of which they are patrons, and to the right of all the teinds (i. e. tithes) of the parish not heritably disponed.

That kirks may not continue too long vacant, the patrons must present

to the presbytery a fit person for supplying the cure, within six months from his knowledge of the vacancy, otherwise the right of presentation accrues to the presbytery jure devoluto. Since the revolution a judicial act of admission by the presbytery, proceeding either upon a presentation! or upon a call from the heritors and elders, or upon their own jus de-volutum, completes the minister's right to the benefice.

The expedients for the maintenance of the clergy having proved ineffectual, a commission of parliament was appointed, in the reign of James VI., for planting kirks and modifying stipends to ministers out of the teinds ; and afterwards several other commissions were appointed with the more ample powers of dividing large parishes, erecting new ones, Sec., all of which were, in 1707, transferred to the court of session, with this limitation, that no parish should be disjoined, nor new church erected, nor old one removed to a new place, without the consent of three-fourths of the heritors, computing the votes, not by their own numbers, but by the valuation of their rents within the ˆparish. The judges of session, when sitting in that-court, are considered as a commission of parliament, and have their proper clerks, macers, and other officers of court, as such.

By a subsequent law, a fund has been set apart for raising all the stipends in Scotland below £150 to at least that sum.

Where a certain quantity of stipend is modified to a minister out of the teinds of a parish, without proportioning that stipend among the several heritors, the decree is called a decree of modification ; but where the commissioners also fix the particular proportions payable by each heritor it is a decree of modification and locality. Where a stipend is only modified it is secured on the whole teinds of the parish, so that the minister can insist ngainst any one heritor to the full extent of his teinds; such heritor being always entitled to relief against the rest for what he shall have paid above his just share ; but, •where the stipend is also localled, each inheritor 1$ liable in no more than his own proportion.

Few of the reformed ministers were, at first, provKled with dwelling-houses; most of the popisU clergy having, upon the first appearance it the reformation, let their manses in feu, or in

long tacks. Ministers therefore got a right, in 1563, to as much of these manses as would servo them, notwithstanding such feus or

tacks. Where there was no parson's nor vicar's manse, one was to be built by the heritors, at the sight of the bishop (now the presbytery) the charge not exceeding £1000 Scots, nor below 500 merk's. Under a manse are comprehended stable, barn, and byre (cow-house), with a garden : for all which it is usual to allow half an acre of ground.

Every incumbent is entitled at his entry to have his manse put in good condition ; for which purpose the presbytery may appoint a visitation by tradesmen, and order estimates to be laid before them of the sums necessary for the repairing, which they may proportion among the heritors according to their valuations. The presbytery, after the manse is made sufficient, ought, upon application of the heritors, to declare it a free manse ; which lays the incumbent under an obligation to uphold it in good condition during his incumbency, otherwise he or his executors shall be liable in damages ; but they are not bound to make up the loss arising from the necessary decay of the building by the waste of time.

All ministers, where there is any landward or country parish, are, over and above their stipend, entitled to a glebe, which comprehends four acres of arable land, or sixteen sowms of pasture ground, where there is no arable land (a sowm is what will graze ten sheep, or one cow) ; and it is to be designed or marked by the bishop or presbytery out of such kirk lands within the parish as lie nearest to the kirk, and in default of kirk lands, out of temporal lands.

A right of relief is competent to the heritors, whose lands are set off for the manse or glebe, against the other heritors of the parish. Manses and glebes, being once regularly designed, can-not be feued or sold by the incumbent in prejudice of his successors, which is in practice extended even to the case where such alienation evidently appears profitable to the benefice.

Ministers, besides their glebe, are entitled to grass for a horse and two cows. And if the lands, out of which the grass may be designed, either lie at a distance, or are not fit for pasture, the heritors are to pay to the minister £20 Scots yearly an equivalent. Ministers have also freedom of foggage, pasturage, fuel, feal, divot, loaning, and free ish and entry, according to use and wont; but what these privileges are, must be determined by the local customs of the several parishes.

The legal terms at which stipends become due to ministers are Whitsunday, and Michaelmas. If the incumbent be admitted to his church before Whitsunday (till which term the corns are not presumed to be fully sown), he has right to that whole year's stipend ; and if he

is received afterWhitsunday, and before Michaelmas, he is entitled to the half of that year ; because, though the corns were sown before his entry, he was admitted before the terms at which they are presumed to be reaped. If he dies, or is translated to another benefice before Whitsunday, he has right to no part of that year ; if before Michaelmas, to the half; and, if not till after Michaelmas, to die

After the minister's death, his executors have right to the annat; which, in the sense of the canon law, was the right reserved to the pope of he first year's fruits of every benefice. Upon a threatened invasion from England, 1547, the annat was given, by our parliament, to the executors of such churchmen as should fall in battle in defence of their country ; but the word annat or arm, as it is now understood, is the right which law gives to the executors of ministers, of half a year's benefice over and above what was due to the minister himself for his incumbency.

The executors of a minister need make up no title to the aim by confirmation : neither is the right assignable by the minister, or affectable with his debts; for it never belonged to him, but is a mere gratuity given by law to those for whom it is presumed the deceased could not sufficiently provide ; and law has given it expressly to executors ; and, if it were to be governed by the rules of succession in executory, the widow, in case of no children, would get one-half, the other would go to the next of kin ; and, where there are children, she would be entitled to a third, and the other two-thirds would fall equally among the children. But the court of session have in this last case divided the ann into two equal parts, of which one goes to the widow, ar.d the other among the children in capita. '

At the Reformation all episcopal jurisdiction, exercised under the authority of the pope, was abolished . As the course of justice in consistorial causes was thereby stopped, queen Mary, besides naming a commissary for every diocese, did, by a special grant, establish a new commissary court at Edinburgh, consisting of four judges or commissaries. This court is vested with a double jurisdiction ; one

diocesan, which is exercised in the special territory, contained in the grant, *viz.* the counties of Edinburgh, Haddington, Linlithgow, Peebles, and a great part of Stirlingshire ; and another universal, by which the judges confirm the testaments of all who die in foreign parts, and may reduce the decrees of all inferior commissaries, provided the reduction be pursued within a year after the decree.

The commissaries retain to this day an exclusive power in judging of declarators of marriage, and of the nullity of marriage ; in actions of divorce and of non-adherence ; ‘of adultery, bastardy, and confirmation of testaments ; because all these matters are still considered to be properly consistorial. Inferior commissaries are not competent to questions of bastardy and adherence, when they have a connexion with the lawfulness of marriage, or with adultery.

Commissaries have now no power to pronounce decrees in absence for any sum above £40 Scots, except in causes properly consistorial ; but they may authenticate tutorial and curatorial inventories, and all bonds, contracts, &c., which contain a clause for registration in the books of any judge competent ; and protests on bills may be registered in their books.

CHAP. II. — OF PERSONS IN TUEIR PRIVATE RELATION.

1. Of Mtirrittgc. — Marriage is a contract, and requires the consent of parties. Idiots

therefore, and furious persons, cannol marry. A; no person is presumed capable of consent within the years of pupillarity, which, by our law, lasts till the age of fourteen years in males, and twelve in females, marriage cannot be contracted by pupils ; but, if the marriage pair shall cohabit after puberty, such acquiescence ˆives force to the marriage. Marriage is fully perfected by consent, which founds all the conjugal rights and duties. The consent requisite to marriage must be de praesenti.

It is not necessary that marriage should be celebrated by a clergyman. The consent of parties may be declared before any magistrate, or simply before witnesses, which, if copula follows, constitutes a marriage ; and, though no formal consent should appear, marriage is presumed from the cohabitation, or living together at bed and board, of a man and woman who are generally reputed husband and wife. A man’s acknowledgment of his marriage to the midwife whom he

called to his wife, and to the minister who baptized his child, was found sufficient presumptive evidence of marriage, without the aid either of cohabitation, or of habit and repute. Children may enter into marriage, not only without the knowledge, but even against the remonstrances, of a father.

Marriage is forbidden within certain degrees of blood. By the laws of Moses (Leviticus xviii.), which, by the act 1567, c. 15, has been adopted by us, cousins german, and all remoter degrees, may lawfully marry. Marriage, in the direct line, is forbidden in infinitum. Marriage also, where either of the parties is naturally unfit for generation, or stands already married to a third person, is ipso jure, null.

To prevent bigamy and incestuous marriages, the church has introduced proclamation of banns, that all persons who know any objection to the marriage may offer it. When the order of the church is observed, the marriage is called regular; when otherwise, clandestine. Marriage is valid when entered into in either of these ways; but, when clandestine, there are certain penalties imposed upon the parties, as well as on the celebrator and witnesses.

Rights by marriage. — It is only moveable subjects, or the fruits produced by heritable subjects during the marriage, that become common to man and wife. The husband, as the head of the wife, has the sole right of managing the goods in communion, which is called jus mariti. The husband can sell, or even gift, at his pleasure, the whole goods falling under communion ; ind his creditors may affect them for the payment of his proper debts. But a stranger may convey an estate to a wife, so as it shall not be subject to the husband's administration ; or the husband himself may, in the marriage contract, renounce his jus mariti in all or any part of his wife's moveable estate.

From this right are excepted paraphernal goods, which, as the word is understood in our law, comprehends the wife's wearing apparel, and the ornaments to her proper person; as necklaces, earrings, breast or arm jewels, buckles, &c. These are neither alienable by the husband, nor affectable by his creditors.

The right of the husband to the wife's moveable estate is burdened with the moveable debts contracted by her before her marriage, though they should far exceed her moveable estate. The husband is only cited as administrator of the society goods. As soon therefore as the marriage is dissolved, and the society goods thereby suffer a division, the husband is no farther concerned in the share belonging to his deceased wife; and consequently is no longer liable to pay her debts, which must be recovered from ner representatives, or her separate estate.

This obligation upon the husband is, however, perpetuated against him, 1. Where his proper estate, real or personal, has been affected, during the marriage, by complete legal diligence. 2. The husband continues liable, even after the wife's death, in so far as he is lucratus, or profited by her estate: still however the law does not consider a husband, who has got but a moderate tocher with the wife, as lucratus by the marriage.

Where the wife is debtor in that sort of debt which, if it had been due to her, would have excluded the jus mariti, e. g. in bonds bearing interest, which continue heritable as to the rights of husband and wife, the husband is liable only for the by-gone interests, and those that may grow upon the debt during the marriage.

The husband by marriage becomes the perpetual curator of the wife. From this right it arises, 1. That no suit can proceed against the wife till the husband be cited for his interest; 2. All deeds done by a wife without the husband's consent are null; neither can she sue in any action without the husband's concurrence. Yet where the husband refuses, or by reason of forfeiture cannot concur, &c., or where the action is to be brought against the husband himself, for not performing his part of the marriage articles, the judge will authorise her to sue in her own name.

lf the husband should either withdraw from his wife, or turn her out of doors, or if, continuing in family with her, he should by severe treatment endanger her life, the commissaries will authorise a separation a mensa et thoro, and give a separate alimony to the wife, suitable to her husband's estate, from the time of such separation until either a reconciliation or a sentence of divorce.

Certain obligations of the wife are valid, notwithstanding her being sub cura mariti, e. g. obligations arising from delict ; for wives have

no privilege to commit crmes. But, if the punishment resolves into pecuniary mulct, the execution of it must, from her incapacity to fulfil, be suspended till the dissolution of the marriage, un-less the wife has a separate estate exempted from ihe jus mariti.

Obligations arising from contract affect either the person or the estate The law has been so careful to protect wives, while sub cura mariti, mat all persona! obligations granted by a wife, though with the husband's consent, as bonds, bills, Sec., are null, with the following exceptions, 1. Where the \ife gets a separate peculium, or stock ; 2. A wife's personal obligation, granted in the form of a dti'd, inter vivos, is valid, if it is not to take

effect till her death ; 3. Where the wife is by the husband, praeposita negotiis, intrusted with the management of a particular branch of business or of his whole affairs.

A wife, while she remains in family with her husband, is considered as praeposita negotiis domesticis; and, consequently, may provide things proper for the family, for the price whereof the husband is liable, though they should be misapplied, or though the husband should have given her money to provide them elsewhere. A husband may use the remedy of exhibition against her, by which all persons are interpelled from contracting with her, or giving her credit.

As to rights granted by the wife, affecting her estate, she has no moveable estate, except her paraphernalia, and these she may alienate with consent of the husband. She can, without the husband, bequeath by testament her share of the goods in communion. All donations, whether by the wife to the husband or by the husband to the wife, are recoverable by the donor; but if the donor dies without revocation the right becomes absolute.

When dissolved. — Marriage, by the law of Scotland, cannot be dissolved till death, except by divorce, proceeding either upon account of adultery or of wilful desertion.

Marriage is dissolved by death, either within year and day from its being contracted, or after year and day. If it is dissolved within year and day, all rights in consideration of the marriage, unless guarded against in the contract, become void, and things return to the same condition in which they stood before the marriage, with this restriction, that the husband is considered as a bona fide posssesor, in

relation to what he has consumed upon the faith of his right ; but he is liable to repay the tocher without any deduction in consideration of his family expense during the marriage. If things cannot be restored on both sides, equity hinders the restoring-of one party and not the other. Where a marriage had been dissolved within the year, without a living child, by the death of the husband the widow was entitled to be alimented out of an estate of which he died possessed.

Upon the dissolution of a marriage, after year and day, the surviving husband becomes the irrevocable proprietor to the tocher, and the wife, where she survives, is entitled to her jointure, or to her legal provisions. She has also right to mournings, suitable to the husband's quality, and to alimony from the day of his death till the term at which her liferent provision, either legal or conventional, commences. If a living child be procreated of the marriage, the marriage has the same effect as if it subsisted beyond the year.

Divorce. — Divorce is such a separation of married persons, during their lives, as looses them from the nuptial tie, and leaves them at freedom to intermarry with others. But neither adultery nor wilful desertion are grounds which must necessarily dissolve marriage ; they are only handles which the injured party may take hold of to be free. In the case of divorce upon adultery, marriage is, by a special statute (1600, c 20), prohibited betwixt the two adulterers.

Where either party lias deserted from the other for four years together, that other may sue for adherence. If this has no effect the church is to proceed, first by admonition, then by excommunication ; all which previous steps are declared to be a sufficient ground for pursuing a divorce. 'In practice, however, the commissaries pronounce sentence in the adherence, after one year's desertion, but four years must intervene between the first desertion and the decree of divorce.

The legal effects of divorce on the head of desertion are, that the offending husband shall restore the tocher and forfeit to the wife all her provisions, legal and conventional; and, on the other hand, the offending wife shall forfeit to the husband her tocher and all the rights that would have belonged to her in the case of her survivance. This was also esteemed the rule in divorces upon adultery. But by a

decision of the court of session in 1662, founded on a tract of ancient decisions recovered from the records, the offending husband was allowed to retain the tocher !

2. Of minors and their tutors and curators. — A child is under pupillarity from the birth to fourteen years of age if a male, and till twelve if a female. Minority begins where pupillarity ends, and continues till majority; which, by the law of Scotland, is the age of twenty-one years complete, both in males and females ;' but minority, in a large sense, includes all under age, whether pupils or puberes. Because pupils cannot in any degree act for themselves, and minors seldom with discretion : pupils are put by law under the power of tutors, and minors may put themselves under the direction of curators. Tutory is a power and faculty to govern the person, and administer the estate of a pupil. Tutors are either nominate, of law, or dative.

A tutor nominate is he who is named by a father, in his testament or other writing, to a lawful child.

If there be no nomination by the father, or if the tutors nominate do not accept, or if the nomination falls by death or otherwise, there is place for a tutor of law. This sort of tutory devolves upon the nearest related by the father, though females intervene.

Where there are two or more equally near to the pupil, he who is entitled to the pupil's legal succession is preferred to the others. But, as the law suspects that he may not be over careful to preserve a life estate which stands in the way of his own interest, this sort of tutor is excluded from the custody of the pupil's person, which is commonly committed to the mother, while a widow, until the pupil be seven years old ; and in default of the mother, to the highest relation by the mother. The tutor of law must be at least twenty-five years of age. He is served or declared by a jury of sworn men, who are called upon a brief issuing from the chancery, which is directed to any judge having jurisdiction. He must give security before he enters upon the management.

If no tutor of law demands the office, any person, even a stranger, may apply for a tutory dative. If a pupil be without tutors of any kind, the court of session will, at the suit of any

kinsman, name a factor (steward) for the manauc-ment of the pupil's estate.

After the years of pupillarity are over, the minor is considered as capable of acting by himself, if he has confidence enough of his own capacity and prudence. The only two cases in which curators are imposed upon minors are, 1. Where they are named by the father, in a state of heal'.!1. ; 2. Where the father is himself alive. If the minor chooses to be under the direction of curators, he may fix ou any lie pleases.

These curators are styled ad negotia, to distinguish them from another sort, called curators ad lites, who are authorised by the judge to concur with a pupil or minor in actions of law, either where he is without tutors and curators, or where his tutors and curators are parties to the suit. Women are capable of being tutors and curators under certain restrictions.

In this, tutory differs from curatory, that, as pupils are incapable of consent, they have no person capable of acting: which defect the tutor supplies. Hence, the tutor subscribes alone all deeds of administration; but in curatory it is the minor who subscribes as the proper party ; the curator does no more than consent. Hence, also, the persons of pupils are under the power either of their tutors, or of their nearest cognates ; but the minor, after pupillarity, has the disposal of his own person and may reside where he pleases.

Both tutors and curators must, previous to their administration, make a judicial inventory, subscribed by them and the next of kin, before the minor's judge ordinary, of his whole estate personal and real.

Tutors and curators cannot grant leases of tlie minor's lands, to endure longer than their own office; nor under the former rental, without either a warrant from the court of session, or some apparent necessity.

They have power to sell the minor's moveables ; but cannot sell their pupil's land estale, without the authority of a judge ; yet this restraint reaches not to such alienations as the pupil could by law be compelled to grant.

Tutors and curators cannot, contrary to the nature of their trust, authorise the minor to do any deed for their own benefit ; nor can they acquire any debt affecting the minor's estate It seems, however, that such purchase would be considered as valid, provided it were bona fide acquired at a public sale.

Persons named to the offices of tutory or curatory, may either accept or decline ; and where a father, in liege poustie (when in a state of

health), names certain persons both as tutors and curators to his children, though they have acted as tutors, they may decline the office of curatory. Tutors and curators, having once accepted, are liable in diligence, that is, are accountable for the consequences of their neglect in any part of their duty from the time of their acceptance. They are accountable singuli in solidum, i. e. every one of them is answerable, not only for his own diligence, but for that of his co-tutors ; and any one may be sued without citing the rest ; but he who is condemned in the whole i as ac-tion of relief against his co-tutors.

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From this obligation to diligence are esceptud, 1 . I'athers or administrators in law, who, from the presumption that they act to the best of their power for their children, are liable only for ac-tual intromissions. 2. Tutors and curators named by the father in consequence of the act 1696, with the special provisos, that they shall be liable barely for intromissions, not for omissions; and that each of them shall be liable only for himself, and not in solidum for the co-tutors ; but this power of exemption fron. diligence is limited to the estate descending from the father himself. Tutors or curators are not entitled to any salary or allowance for pains, unless a salary has been expressly contained in the testator's nomination ; for their office is presumed to be gratuitous.

Though no person is obliged to accept the office of tutor or curator, yet having once accepted be canuot throw it up, or renounce it, without sufficient cause; but if he should be guilty of misapplying the minor's money, or fail in any other part of his duty, he may be removed at the suit of the minor's next in kin, or by a co-tutor or co-curator. When the misconduct proceeds merely from indolence or inattention, the court, in place of removing the tutor, either join a curator with him, or, if he be a tutor nominate, they oblige him to give caution (surety) for his past and future management.

The offices of tutory and curatory expire also by the pupil's attaining the age of puberty, or the minor's attaining the age of twenty-one years complete ; and by the death either of the minor, or of his tutor and curator. Curatory also expires by the marriage of a female minor, who becomes thereby under the coverture of her own husband.

Deeds either by pupils, or by minors having curators, without their consent, are null; but they oblige the grantors, in as far as relates to sums profitably applied to their use. A minor under curators can indeed make a testament by himself; but, whatever is executed in the form of a deed inter vivos, requires the curator's consent. Deeds by a minor, who has no curators, are as effectual as if he had curators and signed them with their consent ; he may even alienate his heritage without the interposition of a judge.

Minors may be restored against all deeds granted in their minority that are hurtful to them.

A minor cannot be restored against his own delict or fraud, e. g. 1. If he should induce one to bargain with him by saying he was major. 2. If at any time after majority he has approved of the deed. 3. A minor who has taken himself to business, as a merchant, shopkeeper, &c., cannot he restored against any deed granted by him in the course of that business. 4. A minor cannot be restored in a question against a minor, unless some cross unfairness shall be qualified in the bargain.

Curators are given not only to minors, but in general to every one, who, either through defect of judgment, or unfitness of disposition, is incapable of rightly managing his own affairs. The way of appointing this sort of curators is by a jury summoned from the chancery.

Persons, let them be ever so profuse, or liable

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to be imposed upon, if they have the exercise of reason, can effectually oblige themselves till they are fettered by law. This may be done by interdiction, which is a legal restraint laid upon such persons from signing any deed to their own prejudice, without the consent of their curators or interdictors. An interdiction, duly registered, has this effect, that all deeds done thereafter by the person interdicted, without the consent of his interdictors, affecting his heritable estate, are subject to reduction.

Registration in the general register secures all his lands from alienation, wherever they lie ; but, where the interdiction is recorded in the register of a particular shire, it covers no lands except those situated in that shire.

3. Of children. — Children are either born in wedlock, or out of -it. All

children born in lawful marriage are presumed to be begotten by the person to whom the mother is married ; and consequently to be lawful children. This presumption is so strongly founded, that it cannot be defeated but by direct evidence that the mo-ther's husband could not be the father of the child. A father has the absolute right of disposing of his children's persons, of directing their education, and of moderate chastisement; and even after they become puberes he may compel them to live in family with him, and contribute their labor and industry, while they continue there, towards his service. A child who gets a separate stock from the father for carrying on any trade or employment, even though he should continue in his father's house, may be said to be emancipated or foris-familiated, in so far as concerns that stock ; for the profits arising from his are his own. Foris-familiation, when taken in this sense, is also inferred by the child's marriage, or by his living in a separate house with his father's permission or good will.

Children born out of wedlock are styled natural children or bastards. Bastards may be legitimated or made lawful, 1. By the subsequent intermarriage of the mother of the child with the father; and this legitimation entitles the child to all the rights of lawful children. The subsequent marriage which produces legitimation is considered by the law to have been entered into when the child legitimated was begotten ; and hence, if he be a male, he excludes by his right of primogeniture the sons procreated after the marriage from the succession of the father's heritage, though these sons were lawful children from the birth. Hence, also, those children only can be thus legitimated who are begotten of a woman whom the father might at that period have lawfully married. Bastards are legitimated by letters of legitimation from the sovereign.

4. Of servants. — As to the power of masters over their servants, all servants now enjoy the same rights and privileges with other subjects, unless in so far as they are tied down by their engagements of service. Servants are either necessary or voluntary. Necessary are those whom law obliges to work without wages. Voluntary servants engage without compulsion, either for mere subsistence, or for wages also. Those who cam their bread in this way, if they

should refuse to engage, may be compelled to it by the justices of the peace, who have power to fix the rate of their wages.

Colliers, coalbearers, salters, and other persons necessary to colliers and salt-works, as they are particularly described by act 1661, were formerly tied down to perpetual service at the works to which they had once entered. Upon a sale of the works, the right of their service was transferred to the new proprietor. All persons were prohibited to receive them into their service without a testimonial from their last master; and if they deserted to another work, and were redemanded within a year thereafter, he who had received them was obliged to return them within twenty-four hours, under a penalty. But though the proprietor should neglect to require the deserter within the year, he did not, by that short prescription, lose his property in him. Colliers, &.C., where the colliery to -which they were restricted was either given up or not sufficient for their maintenance, might lawfully en-gage with others; but, if the former work should be again set a-going, the proprietor might reclaim them back to it.

But by 15 Geo. III., c. 28, these restraints, the only remaining vestiges of slavery in the law of Scotland, were abrogated ; and, after the 1st of July, 1775, all colliers, coalbearers, and salters, were declared to be upon the same footing with other servants or laborers. The act subjects those who are bound prior to the 1st of July, 1775, to a certain number of years' service for their freedom, according to the age of the person.

5. Of the poor. — Indigent children may be compelled to serve any of the king's subjects without wages, till the age of thirty years. Vagrants and sturdy beggars may be also compelled to serve any manufacturer. And, because few persons are willing to receive them into their service, public workhouses are ordained to be built for setting them to work. The poor who cannot work must be maintained by the parishes in which they were born; and, where the place of their nativity is not known, the bur-den falls upon the parishes where they have had their most common resort for the three years immediately preceding their being apprehended, or their applying for the public charity. Where the contributions collected at the churches to which they belong are not sufficient for their maintenance, they are to receive badges from the minister and kirk session, in virtue of which they may ask alms at the dwelling-houses of the inhabitants of the parish.

CHAP. III. — OF PROPERTY AND ITS ACQUISITION IN GENERAL.

1 . Of rights relating to property. — The right of enjoying and disposing of a subject at one's pleasure is called ' property.' Proprietors are restrained by law from using their property to their neighbour's prejudice; and, on this principle, nuisances of every kind are reprobated by law. In particular, such as corrupt the air, render the neighbourhood unwholesome ; or in short, to use the words of lord Mansfield, 'ren-der the enjoyment of life and property uncom-

fortable.' Every state or sovereign has a power over private property, called by some lawyers dominium eminens, in virtue of which the proprietor may be compelled to sell his property for an adequate price, where an evident utility on the part of the public demands it.

Certain things are by nature incapable of appropriation ; as the air, the light, the ocean, &c.. none of which can be brought under the power of any one person, though their use be common to all. Others are by law exempted from private commerce, in respect of the uses to which they are destined. Of this last kind are, 1. Res publicae, as navigable rivers, highways, bridges, &.C.; the right of which is vested in the king, chiefly for the benefit of his people, whence they are called regalia. 2. Res universitatis, things which belong in property to a particular corporation or society, and whose use is common to every individual in it; but both property and use are subject to the regulations of the society ; as town-houses, corporation-halls, market-places, churchyards, &c. The lands or other revenue belonging to a corporation do not fall under tin's class, but are juris privati, in so far as regards the corporation.

2. Of the meant of acquiring property.— Property may be acquired either by occupation or accession ; and transferred by tradition or prescription; but prescription, being also a way of losing property, will be explained under a separate title. Occupation, or occupancy, is the appropriating of things which have no owner, by apprehending them or seizing their possession. This was the original method of acquiring pro ' perty ; and accorded, under certain restrictions,, with the doctrine of the Roman law, quod nullius est, fit occupantis : but this doctrine can have no place in the feudal plan, by which the king is looked on as the original proprietor of all the lands within his dominions.

Even in that sort of moveable goods which is presumed to have once

had an owner, this rule obtains by the law of Scotland, quod nullius est, fit doroini regis. Thus the right of treasure hid under ground is not acquired by occupation, but accrues to the king. Thus, also, where one finds strayed cattle or other moveables, which have been lost by the former owner, the finder acquires no right in them, but must give public notice thereof; and if, within a year and a day after such notice, the proprietor does not claim his goods, they fall to the king, sheriff, or other per-son to whom the king has made a grant of such escheats.

In that sort of moveables which never had an owner, as wild beasts, fowls, fishes, or pearls found on the shore, the original law takes place, that he who first apprehends becomes proprietor ; insomuch, that though the right of hunting, fowling, and fishing, are restrained by statute under certain penalties, yet all game, even what is caught in contravention of the law, becomes the property of the catcher (unless where the confiscation thereof is made part of the penalty) ; the contravener being obnoxious, howevei, to the penal enactment of the statutes, in consequence of his transgression. It was not for a long time a fixed point, whether a person, though

possessed of the valued rent by law entitling him to kill game, could hunt upon another per-son's grounds without consent ; but it was lately found, by the court of session, and affirmed upon appeal, that he could not ; it being repugnant to the idea of property, that any person, however qualified, should have it in his power to traverse and hunt upon another's grounds without consent of the proprietor. Although certain things become the property of the first occupant, yet thert are others which fall not under this rule. Thus whales, thrown in, or killed on our coasts, belong neither to those who killed them, nor to the proprietor of the grounds on which they are cast, but to the king, providing they are so large as that they cannot be drawn by a wain with six oxen.

Accession is that way of acquiring property, by which, in two things which have a connexion with, or dependence on one another, the property of the principal thing draws after it the property of its

accessory. Thus a house belongs to the owner of the ground on which it stands, though built with materials belonging to, and at the charge of another; trees taking root in our ground though planted by another become ours. Thus also the insensible addition made to one's ground by what a river washes from other grounds (which is called alluvio) accrues to the master of the ground which receives the addition. The Romans excepted from this rule the case of paintings drawn on another man's board or canvas, in consideration of the excellency of the art ; •which exception our practice has, for a like reason, extended to similar cases. Under accession is comprehended specification ; by which is meant, a person's making a new species or subject from materials belonging to another.

Though the new species should be produced from the commixtion or confusion of different substances belonging to different proprietors, the same rule holds ; but, where the mixture is made l>y the common consent of the owner, such consent makes the whole a common property, according to the shares that each proprietor had formerly in the several subjects.

Property is carried from one to another by tradition, which is the delivery of possession by the proprietor, with an intention to transfer the property to the receiver. Two things are therefore rfquisite in order to the transmitting of property in this way, 1. The intention or consent)f the former owner to transfer it on some pro-per title of alienation, as sale, exchange, gift, &c. ; 2. The actual delivery in pursuunce of that intention.

Tradition is either real, where the ipsa corpora of moveables are put into the hands of the receiver ; or symbolical, which is used where the tiling is incapable of real delivery, or even when nttiial delivery is only inconrenient.

Possession, which is essential both to the acquisition and enjoyment of property, is defined, the detention of a thing, with a design, or ani-Ji.us, in t!ie detainer, of holding it as his own. !t cannot be acquired by the sole act of the mi-id, without real detention; but, being once luqmrfd, it may be continued solo animo. •> >!on :s either natural or civil. Natural l< >Mssion is when one possesses by himself;

thus, we possess lands by cultivating them and reaping their fruits, houses by inhabiting them, moveables by detaining them in our hands. Civil possession is our holding the thing either by the sole act

of the mind, or by the hands of another who holds it in our name.

A bona fide possessor is he who, though he is not really proprietor of the subject, yet believes himself, on probable grounds, to be proprietor. A malft fide possessor is he who knows, or is presumed to know, that what he possesses is the property of another. By our customs, perception alone, without consumption, secures the possessor. If he has sown the ground, while his bona fides continued, he is entitled to reap the crop. But this doctrine does not reach to civil fruits, e. g. the interest of money, which the bona fide receiver must restore, together with the principal, to the owner.

Bona fides necessarily ceases by the con-scientia rei aliens in the possessor, whether such consciousness should proceed from legal interpellation, or private knowledge. Mala fides is sometimes induced by the true owner's bringing his action against the possessor, sometimes not till litiscontestation, and, in cases uncommonly favorable, not till sentence be pronounced against the possessor.

The property of moveable subjects is presumed by the bare act of possession, until the contrary be proved; but possession of an immoveable subject, though for 100 years together, if there is no seisin, does not create even a presumptive right to it; nulla sesina, nulla terra. Such subject is considered as caduciary, and so accrues to the sovereign. Where the property of a subject is contested, the lawful possessor is entitled to continue till the point of right be discussed; and, if he has lost it by force or stealth, the judge will, upon summary application, immediately restore it to him.

Where a possessor has several rights in his person affecting the subject possessed, the general rule is, that he may ascribe his possession to which of them he pleases ; but one cannot ascribe his possession to a title, other than that on which it commenced, in prejudice to him from whom his title flowed.

3. Of the general nature of heritable and moveable rights. — Since the introduction of feus, wherever there are two or more in the same degree of consanguinity to one who dies intestate, and who are not all females, such rights belonging to the deceased as are either properly feudal, or have any resemblance to feudal rights, descend wholly to one of them, who is considered as his proper heir ; the others, who have the name of next of kin, or executors, must be contented with that portion of the estate which is of a more perishable nature. Hence has arisen the division of rights to be explained un-der this title. The subjects descending to the heir are styled heritable ; and those that fall

to the next of kin moveable.

All rights of, or affecting lands, under which are comprehended houses, mills, fishings, teinds (or tithes), and all rights of subjects that are fundo annr.xa, whether completed by seisin or not, are heritable ex sou natura. On the otlici

hand, every tiling tliat moves itself or can be moved, and, in general, whatever is not united to land, is moveable : as household furniture, corn, cattle, cash, arrears of rent*and interest, even though they should be due on a right of annual rent; for, though the arrears last mentioned are secured on land, yet, being presently ;> ty.ible, they are considered as cash.

Debts (nomma debitorum) when due by bill, proniisorv note, or account, are moveable. When constituted by bond, they do not fall under any one head; but are divided into heritable and. moveable by the following rules : — all debts constituted by bond, bearing an obligation to infeft the creditor in any heritable subject, are heritable. Bonds merely personal are moveable as to succession, but they are heritable with respect to the fisk, and to the rights of husband and \vife. Bonds taken payable to heirs and assignees, secluding executors, are heritable in all respects, from the destination of the creditor. But a bond which is made payable to heirs, without mention of executors, descends, not to the proper heir in heritage, though heirs are mentioned in the bond, but to the executor ; for the word heir, which is a generic term, points out him who is to succeed by law in the right ; and the executor, being the heir in mobilibus, is considered as the person to whom such bond is taken payable. But, where a bond is taken to heirs male, or to a series of heirs one after another, such bond is heritable, because its destination necessarily excludes executors.

Subjects originally moveable become heritable, 1 . By the proprietor's destination ; 2. Moveable rights may become heritable by the supervening of an heritable security.

Heritable rights do not become moveable by accessory moveable securities ; the heritable riuht being in such case the jus nobilius, which draws the other after it.

Certain subjects partake in different respects 01 the nature both of heritable and moveable J'erscnal bonds are moveable in respect of succession, but heritable as to the fisk and the rights of husband and wife. All bonds, whether merely personal or even heritable, on which no seisin has followed, may be affected at the suit of creditors, either by adjudication, which is a diligence pro-per to heritage, or by arrestment which is peculiar to moveables. Bonds secluding executors, though they descend to the creditor's heir, are payable by the debtor's executors without relief against the heir.

All questions, whether a right be heritable or moveable, nnust be determined according to the condition of the subject at the time of the ancestor's death. If it was heritable at that pe-riod, it must belong to the heir; if moveable it must fall to the executor, without regard to any alterations that may have affected the subject in the intermediate period between the ancestor's death and the competition.

CHAP. IV. — OF HERITABLE PROPERTY.

1. By charter and seisin. — Heritable rights are governed by the feudal laws. In feudal questions, therefore, Scotland is governed, in the first place, by its own statutes and customs ;

where these fail, regard must be had to the practice of neighbouring countries, if the genius of the law appears to be the same; and, should the question still remain doubtful, we may have recourse to books written concerning feus, as to the original plan on which all feudal systemv have proceeded.

This military grant got the name first of beneficium, and afterwards of feudum ; and was defined a gratuitous right to the property of lands, made under the conditions of fealty and military service, to be performed to the grantor by the receiver ; the radical right of the lands still remaining in the grantor.

Under lands in this definition are comprehended all rights or subjects so connected with land, that they are deemed a part thereof, as houses, mills, fishings, jurisdictions, patronages, &c. Though feus in their original nature were gratuitous, they soon became the subject of commerce ; services of a civil or religious kind were frequently

substituted in place of military; and now services of eveiy kind have been entirely dispensed with in certain feudal tenures. He who makes this grant is called superior, and he who receives it the vassal. The subject of the grant is commonly called the feu ; though that word is at other times, in our law, used to signify one particular tenure. The interest retained by the superior in the feu is styled dominium directum, or the superiority ; and the interest acquired by the vassal dominium utile • or the property. The word fee is promiscuously applied to both.

Allodial goods are opposed to feus ; by which are understood goods enjoyed by the ownerr independent of a superior. All moveable goods are allodial ; lands only are so when they are given without the condition of fealty or homage. By the feudal system, the sovereign, who is the fountain of feudal rights, reserves to himself the superiority of all the lands of which he makes the grant; so that, with us, no lands are allodial, except those of the king's own property, the feudal or allodial lands of Orkney, the superiorities which the king reserves in the property lands of his subjects, and manses and glebes, the right of which is completed by the presbytery's designation without any feudal grant.

Every person who is in the right of an immoveable subject, provided he has the free administration of his estate, and is not debarred by statute or by the nature of his right, may dispose of it to another. Nay a vassal, though he has only the dominium utile, can subfeu his property to a subvassal by a subaltern right, and thereby raise a new dominium directum in himself, subordinate to that which is in his superior, and so on in infinituin. The vassal who thus subfeus is called the subvassal's immediate superior, and the vassal's superior is the subvassal's mediate superior.

All persons who are not disabled by law may acquire and enjoy feudal rights. Papists could not formerly purchase a land estate by any voluntary deed ; but now, by 33 Geo. III. c. 44, their situation is assimilated in that respect to that of Roman Catholics in England. Alien-", who owe allegiance to a foreign prince, cannot

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hold a feudal right without naturalisation : and tlierefore, where such

privilege was intended to be given to favored nations or persons, statutes of naturalisation were necessary, either general or special ; or, at least, letters of naturalisation by the sovereign.

Every heritable subject capable of commerce may be granted in feu. From this general rule are excepted, 1. The annexed property of the crown. 2. Tailzied lands, which are devised under condition that they shall not be aliened. 3. An estate in hereditate jacente cannot be effectually alienated by the heir apparent that is not entered ; but such alienation becomes effectual upon his entry, the supervening right accru-ing in that case to the purchaser ; which is a rule applicable to the alienation of all subjects not belonging to the vendor at the time of the sale.

The feudal right, or, as it is called, investiture, is constituted by charter and seisin. By the charter we understand that writing which contains the grant of the feudal subject to the vassal, whether it be executed ir. the proper form of a charter or of a disposition. Charters by subject superiors are granted either, 1. A me de superiore meo, •when they are to be holden, not of the grantor himself, but of his superior. This sort is called a public hold ing, because vassals were in ancient tiroes publicly received in the superior's court before the pares curia or co-vassals. Or, 2. De me, where the lands are to be holden of the grantor. These were called sometimes base rights, from has ' lower ;' and sometimes private, because, before the establishment of our records, they were easily concealed from third parties. An original charter is that by which the fee is first granted : a charter by progress is a renewed disposition of that fee to the heir or assignee of the vassal. All doubtful clauses in charters by progress ought to be construed agreeably to the original grant; and all clauses in the original charter are understood to be implied in the charters by progress, if there be no express alteration.

A seisin is the instrument or attestation of a notary, that possession was actually given the superior or his bailie, to the vassal or his attorney ; which is considered as so necessary a solemnity, as not to be suppliable, either by a proof of natural possession, or even of the special fact that the vassal was duly entered to the possession by the superior's bailie.

The symbols by which the delivery of possession is expressed are, for lands, earth and stone ; for rights of annual rent, payable out of land, it is also earth and stone, with the addition of a penny money ; for parsonage teinds, a sheaf of corn ; for jurisdiction, the book of the court ; for patronages, a psalm book and the keys of the church; for

fishinqs, net and cable; for mills, clap and hopper, 8cc. The seisin must be taken upon the ground of the lands, except where there is a special dispensation in the charter from the crown.

AH seisins must be registered within sixty •lays af'er their date, either in the general registe'r of seisins at Edinburgh, or in the register of the jwjticiilar shire appointed by the act 1617 : which .t iVtiist be observed is not, 'n every case,

the shire within which the lands lie. Bur»acc seisins are ordained to be registered in the books of the borough.

Unregistered seisins are ineffectual against third parties, but they are valid against the grantnrs and their heirs. Seisins regularly recorded are preferable, not according to their own dates, but the dates of their registration.

Seisin necessarily supposes a superior by whom it is given. The right tlierefore, which the sovereign who acknowledges no superior has over the whole lands of Scotland, is constituted jure corona?, without seisin. In several parcels of land that lie contiguous to one another, one seisin serves for all unless the right of the several parcels be either holden of different superiors, or derived from different authors, or enjoyed by different tenures under the same superior. In discontiguous lands, a separate seisin must be taken on every parcel, unless the so \ereign has united them into one tenantry by a charter of -nion ; in which case, if there is no special place expressed, a seisin taken on smy part of the united lands will serve for the whole, even though they be situated in different shires. The only effect of union is to give the discontiguous land the same quality as if they had been contiguous or naturally united. Union, therefore, does not take off the necessity of separate seisins, in lands holden by different tenures, or the rights of which flow from the different superiors ; these being incapable of natural union.

The privilege of barony carries a higher right than union does, and consequently includes union in it as the less degree. The right of barony can neither be given nor transmitted, unless by the crown ; but the quality of simple union, being once conferred on lands by the sovereign, may be communicated by the vassal to a subvassal. Though part of the lands united or erected into a barony be sold by the vassal to be holden a me, the whole union is not thereby dissolved : what remains unsold retains the quality.

A charter not perfected by seisin is a right merely personal, which does not transfer the property, and a seisin of itself bears no real faith without its warrant. It is the charter and seisin joined together that constitutes the feudal right, and secures the receiver against the effect of all posterior seisins, even though the charters on which they proceed should be prior to his.

No quality which is designed as alien, or real burden on a feudal right, can be effectual against singular successors, if it be not inserted in the investiture. If the creditors in the burden are not particularly mentioned, the burden is not real ; for no perpetual unknown encumbrance can be created upon lands. Where the right itself is granted with the burden therein mentioned, or where it is declared void if the sum be not paid against a certain day, the burden is real; but, where the receiver is simply obliged by his acceptance to make payment, the clause is effectual only against him and his heirs.

2. Of the several kinds of holding. — Feudal subjects are chieflydistinguished by their different manners of holding. Fen holding is that whereby the vassal is obliged to pay to the su-

perior a yearly rtnt in money or giain, and sometimes ;ilsoiu services proper to a farm, as ploughing, reaping, carriages for the superior’s use, &c., nomine feucli firmae. This kind of tenure was introduced for the encouragement of agriculture, the improveirent of which was considerably obstructed by the vassal’s obligation to military service.

It appears to have been a tenure known in Scotland as far back as leges burgorum.

Blanch holding is that whereby the vassal is to pay the superior an elusory yearly duty, as a penny-money, a rose, a pair of gilt spurs, &c., merely in acknowledgment of the superiority nomine albse firmae. This duty where it is a thing of yearly growth, if it be not demanded within the year, cannot be exacted thereafter; and, where the words si petatur tantum are subjoined to the reddendo, they imply a release to the vassal whatever the quality of the duty may be, if it is not asked within the year.

Burgage holding is that by which boroughs royal hold of the sovereign the lands which are contained in the charters of erection. As the royal borough is the king's vassal, all burgage holders hold immediately of the crown. The magistrates, therefore, when they receive the resignations of the particular burgesses and give seisin to them, act, not as superiors, but as the king's bailies especially authorised thereto.

Feudal subjects granted to churches, monasteries, or other societies for religious or charitable uses, are said to be mortified or granted ad manura mortuum ; either because all casualties must necessarily be lost to the superior, where the vassal is a corporation which never dies ; or becauses the property of these subjects is granted to a dead hand, which cannot transfer it to another. Lands may be mortified to any lawful purpose, either by blanch or by feu holding. But as the superior must lose all the casualties of superiority ir the case of mortifications to churches, universities, &c., therefore lands cannot be mortified without the superior's consent.

3.-O/" the casualties due to the superior. — The right of the superior continues unimpaired, notwithstanding the feudal grant, unless in so far as the dominium utile, or property is conveyed to his vassal. The superiority carries a right to the services and annual duties contained in the reddendo of the vassal's charter. The duty payable by the vassal is a debitum fundi ; i. e. it is recoverable not only by a personal action against himself, but by a real action against the lands.

Besides the constant fixed rights of superiority, there are others, which, because they depend upon uncertain events, are called casualties.

The tenure of the lands holden ward of the crown or prince is turned in blanch for payment of one penny Scots yearly, si petatur tantum, and the tenure of those holden of subjects into feu for payment of such

yearly feu-duty in money victual or cattle, in place of all services, as should be fixed by the court of session.

The only casualty, or rather forfeiture, is the loss or tinsel of the feu right, by the neglect of payment of the feu duty for two full years. Yet wheie there is no conventional irritancy in the feu right, the vassal is allowed to purge, the legal irritancy, by makinr nayment

before sentence ; but where the legal irritancy is fortified by a conventional, he is not allowed tr purge, unless where he can give a good reason for the delay of payment.

The casualties common to all holdings are non-entry, relief, liferent, escheat, disclamation, and purpresture.

Nonˆentry is that casualty which arises to the superior out of the rents of the feudal subject, through the heir's neglecting to renew the investiture after his ancestor's death. The amount is ascertained by the retoured duties, or valued rent, made by the inquest, according to which the public taxes, as well as private dues, are regulated.

In feu-holdings, the feu-duty is returned a* the rent, because the feu-duty is presumed to be, and truly was at first, the rent. The superior of teinds gets the fifth part of the retoured duty as non entry ; because the law considers teinds to be worth a fifth part of the rent. The heir, after he is cited by the superior in the action of general declarator, is subjected to the full rents till his entry, because his neglect is less excusable after citation. The decree of declarator, proceeding on this action, entitles the superior to the possession, and gives him right to the rents downward from the citation. Non-entry does not obtain in burgage holdings, because the incorporation of inhabitants holds the whole incorporated subjects of the king ; and there can be no non-entry due in lands granted to communities, because there the vassal never dies. It is also excluded as to a third of the lands by the terce, during the widow's life; and as to the whole of them by the courtesy during the life of the husband. But it is not excluded by a precept of seisin granted to the heir, till seisin be taken thereupon.

Relief is that casualty which entitles the supe-pior to an acknowledgment or consideration from the heir for receiving him as vassal. It is called relief, because, by the entry of the heir, his fee is relieved out of the hands of the superior. It is not due in feu-holdings flowing from subjects, unless where it is expressed in charter by a

special clause for doubling the feu-duty at the entry of an heir ; but in feu-rights holden of the crown it is due, though there should be no such clause in the charter. In blanch and feu holdings, where this casualty is expressly stipulated, a year's blanch or feu duty is due in name o ' relief, beside the current year's duty, payable in name of blanch or feu farm.

Escheat, from escheoir, to fall, is that forfeiture which falls through a person's being denounced rebel. It is either single or life rent.

Single escheat falls, without denunciation, upon sentence of death pronounced in any criminal trial ; and, by special statute, upon one's being convicted of certain crimes, though not capital ; as perjury, bigamy, deforcement, breach of arrestment, and usury. All moveables belonging to the rebel at the time of his rebellion, or aftef^ wards acquired by him until relaxation, 'f>ll under single escheat. Bonds bearing interest, because they continue heritable quoad fisctim, fall not under it, nor such fruits of heritable snb-jects as become due after the term next erisulntj

the rebellion, these being reserved for the liferent escheat. The king never retains the right of escheat to himself, but makes it over to a donatory, whose gift is not perfected till, upon an action of general declarator, it be declared that the icbel's escheat has fallen to the crown by his denunciation, and that the right of it is now transferred to the pursuer by the gift in his favor. Every creditor, therefore, of the rebel, whose debt was contracted before rebellion, and who has used diligence before declarator, is preferable to the donatory. But the escheat cannot be affected by any debt contracted, nor by any voluntary act of the rebel after rebellion. The rebel, if he continues unrelaxed for year and day after rebellion, is construed to be civilly dead ; and therefore, where he holds any feudal right, his superiors, as being without a vassal, are entitled each of them to the rents of such of the lands belonging to the rebel as hold of himself, during all the days of the rebel's natural life, by the casualty of liferent escheat; except where the denunciation proceeds upon treason, or proper

rebellion, in which case the life rent falls to the king. It is that estate only, to which the rebel has a proper right of life rent in his own person, that falls under his liferent escheat.

Though neither the superior nor his donatory can enter into possession in consequence of this casualty, till decree of declarator, yet that de-cree, being truly declaratory, has a retrospect, and does not so properly confer a new right as declare the right formerly constituted to the superior, by the civil death of his vassal. Hence all charters are heritable bonds, though granted prior to the rebellion, and all adjudications, though led upon debts contracted before that period, are ineffectual against the life escheat, unless seisin be taken thereon within year and day after the grantor's rebellion. Here, as in single escheat, no debt contracted after rebellion can hurt the donatory, nor any voluntary right gianted after that period, though in security or satisfaction of prior debts.

Disclamation is that casualty whereby a vassal forfeits his whole feu to his superior, if he disowns or disclaims him, without ground, as to any part of it.

Purprcsture draws likewise a forfeiture of the whole feu after it ; and is incurred by the vas-sal's encroaching upon any part of his superior's property, or attempting, by building, enclosing, or otherwise, to make it his own. In both these feudal delinquencies the least color of excuse saves the vassal.

4. Of rights annexed to the feu. — Under the dominium utile, whicli the vassal acquires by the feudal right, is comprehended the property of whatever is considered as part of the lands, whether of houses, woods, enclosures, &c., above ground ; or of coal, limestone, minerals, &c., under ground. Mills have, by the generality of our lawyers, been deemed a separate tenement, and so not carried by a charter or disposition, without either a special clause conveying mills, or the erection of the lands into a barony. Yet it is certain that, if a proprietor builds a mill on lus own lands, it will be carried by his entail, or by u retuur without mentioning it, although the

lands are not erected into a barony. If the lands disponed be astricted or thirled to another mill, the purchaser is not allowed to build a new corn mill on his property,even though he should offer security that it shall not hurt the thirl.

Proprietors are prohibited to hold dove-cote?, unless their yearly rent, lying within two miles thereof, extend to ten chalders of victual. A purchaser of lands with a dove cote is not obliged to pull it down though he' should not be qualified to build one ; but, if it become ruinous, he cannot rebuild it. The right of brewing, though not expressed in the grant, is implied in the na-ture of property, as are also the rights of fishing, fowling, and hunting, in so far as they are not restrained by statute. Every proprietor is entitled to a grant of the mines within his own lands with the burden of delivering to the crown a tenth of what shall be brought up.

Salmon fishing is likewise a right understood to be reserved by the crown, if it be not expressly granted ; but forty years' possession thereof, where the lands are either erected into a barony, or granted with the general clause of fishings, establishes the full right of the salmon fishing in the vassal. A charter of lands, within which any of the king's forests lie, does not carry the property of such forests to the vassal.

All the subjects which were by the Roman law accounted respublicse, as rivers, highways, ports, &c., are, since the introduction of feus, held to be inter regalia, or in patrimoniS. principis ; and hence encroachment upon a highway is said to infer purpresture. No person has the right of a free port without a special grant, which implies a power in the grantee to levy anchorage and shore-dues, and obligation upon him to uphold the port in good condition. In this case of things our forefathers reckoned fortalices or small places of strength originally built for the defence of the country, either against foreign invasions or civil commotions ; but these now pass with the lands in every charter.

The vassal acquires right by his grant, not only to the lands specially contained in the charter, but to those that have possessed forty years as pertinent thereof. But, 1. If the lands in the grant are marked out by special limits, the vassal is circumscribed by the tenor of his own right, which excludes every subject, without these limits, from being pertinent of the lands. 2. A right, possessed under an express infeftment, is preferable, caeteris paribus, to one possessed only as pertinent. 3. Where neither party is infeft per expressum, the mutual promiscuous possession by both, of a subject as pertinent, resolves into a commonly of the subject possessed. But if one of the parties has exercised all the acts of property of which the subject was capable, while the possession of the other was con fined" to pasturage only, or to casting feal and divot, the first is to be deemed sole proprietor, and the other to have merely a right of servitude.

As barony is a nomen universitatis, and unites the several parties contained in it into one individual right, the general conveyance of a barony carries with it all the different tenements of which it consists, though they should not be

specially enumerated ; and this holds, even without erection into barony, in lands that have been united under a special name. Hence likewise the possession by the vassal of the smallest part of the barony lands preserves to him the right of the whole. The vassal is entitled in consequence of his property to levy the rents of his own lands, and to recover them from his tenants by an action for rent before his own court; and from all other possessors and intromitters, by an action of mails and duties before the sheriff. He can also remove from his lands tenants who have no leases ; and he can grant tacks or leases to others.

A tuck is a contract of location, whereby the use of lands, or any other immoveable subject, is set to the lessee or tacksman for a certain yearly rent, either in money, the fruits of the ground, or services. It ought to be reduced into writing, as it is a right concerning lands : tacks, therefore, that are given verbally, to endure for a tt-rm of years, are good against neither party for more than one year. An obligation to grant a tack is as effectual against the grantor as a formal tack. A liferenter, having a temporary property in the fruits, may grant tacks to endure for the term of his own life rent.

The tacksman's right is limited to the fruits which spring up annually from the subject set, either naturally, or by his own industry ; he is not therefore entitled to any of the growing tim-ber above ground, and far less to thej minerals, coal, clay, &c., under ground, the use of which consumes the substance. Tacks are, like other contracts, personal rights in their own nature ; and consequently ineffectual against singular successors in the lands ; but, for the encouragement of agriculture, they were, by act 1449, declared effectual to the tacksman for the full time of their endurance, into whose hands soever the lands might come.

To give a written tack the benefit of this statute, it must mention the special tack-duty payable to the proprietor, which, though small, if it be not elusory, secures the tacksman ; and it must be followed by possession, which supplies tiie want of a seisin. If a tack does not express the term of entry, the entry will commence at the next term after its date, agreeably to the rule quod pure debetur, praesenti die debetur. If it does not mention the ish, *i.e.* the term at which it is to determine, it is good for one year only ; but, if the intention of parties to continue it for more than one year should appear from any clause in the tack (e. g. if the tacksman should be bound to certain annual prestations), it is sustained for two years as the minimum. Tacks granted to perpetuity, or with an indefinite ish, have not the benefit of the statute. Tacks of houses within borough do not fall within this act, it being customary to let these from year to year. The conveyance of a tack which is not granted to assignees is ineffectual without the landlord's consent. A right of tack, though it be heritable, falls under the jus mariti. This implied exclusion of assignees, is, however, limited to voluntary, and does not extend to assignments ; but a tack expressly excluding assignees cannot be carried even by adjudication. Liferent tacks may he assigned, unless assignees be

specially excluded. If neither the setter nor tacksman shall properly discover their intention to have the tack dissolved at the term fixed for its expiration, they are presumed to have entered into a new tack upon the same terms with the former, which is called tacit relocation, which continues till the landlord warns the tenant to remove, or the tenant renounces his tack to the landlord. This obtains also in the case of moveable tenants, who possess from year to year without written tacks. In judicial tacks, however, by the court of session, tacit relocation does not take place.

No relief is afforded in the reduction of rent unless where a total loss arises from the act of God or the king's enemies.

Tacks may be evacuated during their currency, 1. In the same manner as feu rights, by the tacksman running in arrear of his tack duty for two years together. This irritancy may be prevented by the tenant's making payment at the bar be-fore sentence. 2. Where the tenant either runs in arrear of one year's rent, or leaves his farm uncultivated at the usual season ; in which case he may be ordained to give security for the arrears, and for the rent of the five following crops, otherwise to remain as if the tack were at an end.

The landlord, when he intends to remove a tenant whose tack is expiring, or who possesses without a tack, must warn the tenant forty days preceding the term, personally or at his dwelling-house. This precept must be also executed on the ground of the lands, and thereafter read in the parish church where the lands lie, and affixed to the door. A landlord's title in a removing cannot be brought under question by a tenant ; but, if he is to insist against tenants not his own, his right must be perfected.

The defender in a removing must, before offering any defence which is not instantly verified, give security to pay to the pursuer the violent profits if they should be awarded against him. These are so called because the law considers the tenant's possession after the warning as violent.

The landlord has in security of his tack-duty, over and above the tenant's personal obligation, a tacit pledge or hypothec, not only on the fruits, but on the cattle pasturing on the ground. The corn and other fruits are hypothecated for the rent of tha» year whereof they are the crop. The landlord is entitled to a preference over any creditor. This right, however, cannot compete with an extent issued for a debt due to the crown. A superior has also a hypothec for his feu-duty. In tacks of houses, breweries, shops, and other tenements, which have no natural fruits, the furniture, and other goods brought into the subject set, are hypothecated to the landlord for one year's rent. But the tenant may by sale impair this hypothec, as he might that of cattle in rural tenements.

5. ()/' the transmission of rights. — A vassal may transmit his feu either to universal successors, as heirs ; or to singular successors, i. e. those who acquire by gift, purchase, &c. This last sort of transmission is either voluntary, by disposition ; or necessary, by adjudicat.on.

The superior is entitled, for the entry of singular successors, in all cases where such entries are not taxed, to a year's rent of the subject, deducting the feu-duty, and likewise all annual burdens and repairs.

Base-rights, i. e. dispositions to be holden of the disponer, are transmissions only of the property, the superior remaining as formerly.

Public rights, i. e. dispositions to be holden of the grantor's superior, may be perfected either by confirmation or resignation. When the receiver is to complete his right in the first way, lie takes seisin upon the precept, but such seisin is ineffectual without the superior's confirmation, for the disponee cannot be deemed a vassal till the superior receive him as such, or confirm the holding. Where two several public rights of the same subject are confirmed by the superior, their preference is governed by the dates of the confirmations, not of the infeftments confirmed, because it is the confirmation which completes a public right.

Hesitation is that form of law by which the vassal surrenders his feu to his superior. In resignation ad remanentiam, where the feu is resigned that it may remain with the superior, he acquires the property also of the lands resigned.

Resignations in favorem are made, not with an intention that the property resigned should re-main with the superior, but that it should be again given by him in favor either of the resignor himself or of a third party. The grantor even of a personal right of lands is not so divested by conveying a right to one person, but that he may effectually make it over afterwards to another ; and the preference between the two does not depend on the dates of the dispositions, but on the priority of the seisins following upon them.

6. Of redeemable rights, and first of wadsets and mortages. — A wadset (from wad, a pledge) is a right by which lands, or other heritable subjects, are impignorated by the proprietor to his creditor in security of his debt. The debtor who grants is called the reverser, and the creditor is called the wadsetter.

Rights of reversion are generally esteemed stricti juris ; yet they go to heirs unless there be some clause discovering the intention of parties that the reversion should be personal to the reverser himself. Though the right should not express it, redemption will be competent against the heir. Reversions cannot be assigned unless they are taken to assignees, but they may be adjudged.

Reversions commonly leave the reverser at liberty to redeem the lands without restriction in point of time; but sometimes if the debt be not paid against a determinate day, the lands become the irredeemable

property of the wadsetter. Where the sum lent falls short of the value of the lands, the right of redemption is continued to the reverser while the irritancy is not declared. This indulgence is limited to forty years. If the reverser would redeem his lands, he must use an order of redemption against the wadsetter. In the voluntary redemption of a right of wadset holden base, a renunciation duly registered re-establishes the

reverser in the full right of the lands. If the wadsetter either does not appear at the time and place appointed, or refuses the redemption money, the reverser must consign it under form of instrument in the hands of the person ap pointed in the right of reversion, or, if no person be named, in the hands of the clerk to the bills in the court of session, a clerk of the session, or any responsible person.

After decree of declarator is obtained, by which the lands are declared to return to the debtor, the consigned money, which comes in place of the lands, becomes the wadsetter's, who therefore can charge the consignatory upon letters of horning, to deliver it up to him.

A proper wadset is that whereby it is agreed that the use of the land shall go for the use of the money ; so that the wadsetter takes his hazard of the rents, and enjoys them in satisfaction of his interest.

In an improper wadset, the reverser, if the rent should fall short of the interest, is taken bound to make up the deficiency ; if it amounts to more, the wadsetter is obliged to impute the excrescence towards extinction of the capital.

If the wadsetter be entitled by his right to enjoy the rents without accounting, and if at the same time the reverser be subjected to the hazard of that deficiency, such contract is declared usurious. Infeftments of annual rent are also redeemable rights. A right of annual rent does not carry the property of the lands; but it creates a real burden upon the property for payment of the interest or annual rent contained in the right.

7. Of servitudes or burdens. — Servitude is a burden affecting lands, or other heritable subjects, whereby the proprietor is either restrained from the full use of what is his own, or is obliged to suffer another to do something upon it. Legal servitudes are established by statute or custom.

Conventional servitudes are constituted either by grant, where the will

of the party burdened is expressed in writing, or by prescription where his consent is presumed from his acquiescence in the burden for forty years. Servitudes constituted by grant are not effectual in a question with the superior of the tenement burdened with the servitude, unless his consent be adhibited. But, where the servitude is acquired by prescription, the consent of the superior, whose right afforded him a good title to interrupt, is implied.

Predial servitudes are burdens imposed upon one tenement in favor of another tenement.

Predial servitudes are divided into rural servitudes, or of lands ; and urban servitudes, or of houses. Servitudes may be constituted of a foot-road, horse-road, cart-road, dams and aqueducts, watering of cattle, and pasturage. Com-mon pasturage is sometimes constituted by a general clause of pasturage in a charter or disposition, without mentioning the lands burdened i in which case the right comprehends whatever had been formerly appropriated to the lands disponed out of the grantor's own property, and likewise all pasturage due to them out of other lands. When a right of pasturage is given to

several neighbouring proprietors, on a moor or common belonging to the grantor, indefinite as to the number of cattle to be pastured, the ex-tent of their several rights is to be apportioned according to the number that each of them can fodder in winter upon his own dominant tenement.

The servitudes of houses, where different floors or stories of the same house belong to different persons, the property of the house cannot be said to be entirely divided. The proprietor of the ground floor must uphold it for the support of the upper, and the owner of the highest story must uphold that as a cover to the lower. When the higher floor is divided among the several proprietors, each proprietor is obliged, according to this rule, to uphold that part of the roof which covers his own garret.

No proprietor can build, so as to throw the rain water from his own house, immediately upon his neighbour's ground, without a special servitude, which is called of stillicide; but if it fall within his own property, though at the smallest distance from the march, the owner of the inferior tenement must receive it. The servitudes altius non tollendi, et non officiendi lu-minibus vel prospectui, restrain proprietors from raising their houses beyond a certain height, or from making any building whatsoever that may hurt the light or prospect of the dominant tenement.

There are two other predial servitudes ; that of fuel or feal and divot, and of thirlage. The first is a right by which the owner of the dominant tenement may turn up peats, turfs, feals or divots from the ground of the servient, and carry them off either for fuel or thatch, or the other uses of his own tenement.

Thirlage is that servitude by which lands are astricted or thirled to a particular mill ; and the possessors bound to grind their grain there, for payment of certain multures and sequels as the agreed price of grinding.

Multure is the quantity of grain or meal payable to the proprietor of the mill, or to the multurer his tacksman.

The sequels are the small quantities given to the servants under the name of knaveship, ban-nock, and lock or gowpen.

Thirlage is either, 1. Of grindable corns; or, 2. Of all growing corns ; or, 3. Of the invecta et illata, *i.e.* of all the grain brought within the thirl, though of another growth. Where the thirlage is of grindable grain, it is restricted to the corns which the tenants have occasion to crind, either for the support of their families, or for other uses ; the surplus may be carried out of the thirl unmanufactured, without being liable in multure. Where it is of the grana crescentia, the whole grain growing upon the thirl is astricted with the exceptions, 1 . Of seed and horse-corn ; and 2. Of the farm-duties due to the landlord, if they are delivered in grain not ground. But if the rent be payable in meal, flour, or malt, the grain of which these are made must be manufactured in the dominant mill.

The thirlase of invecta et illata is seldom constituted but against thp inhabitants of a borough -v village, that they shall eriiid all the unmanu-VOL. XII. '

factored grain tliey import thitiier at the dominant mill.

Thirlage, in the general case, cannot be established by the prescription alone, except 1 . Where one pays to a mill a certain sum, 01 quantity of grain yearly, in the name of multure, whether he grinds at it or not, cal».jd dry multure. 2. In mills of the king's property. This is extended to mills belonging to church lands, where thirty years' possession is deemed equivalent to a title in writing.

The possessors of the lands astricted are bound to uphold the mill, repair the dam-dykes and aqueducts, and bring home the mill-stones. The right of thirlage may be commuted into a fixed or annual payment in money, at the instance of the proprietor either of the mills or of the thirled lands.

Servitudes being restraints upon property are stricti juris. They are not therefore presumed.

Servitudes are extinguished, 1. Confcsione, when the person comes to be proprietor of the dominant and servient tenements ; 2. By the perishing either of the dominant or servient tenement ; 3. Servitudes are lost by the dominant tenement neglecting to use the right for forty years.

Personal servitudes are those by which the property of a subject is burdened, in favor, not of a tenement, but of a person. The only personal servitude known in our law, is usufruct or liferent ; which is a right to use and enjoy a thing during life, the substance of it being preserved.

A simple liferent is that which is granted by the proprietor in favor of another. And this sort requires seisin in order to affect singular successors.

A liferent by reservation is that which a proprietor reserves to himself in the same writing by which he conveys the fee to another. It requires no seisin.

Liferents by law are the terce and the courtesy. The terce (tertia) is a liferent competent by law to widows, who have not accepted of special provisions in the third of the heritable subjects in which their husbands died infeft, and takes place only where the marriage has subsisted for a year and a day, or where a child has been born alive of it.

The terce is not limited to lands, but extends to teinds, and to

servitudes and other burdens affecting lands ; thus the widow is entitled to a liferent of the third of the sum secured, either by rights of annual rent, or, by rights in security. In improper wadsets the terce is the third of the sum lent. In those that are proper, it is a third of the wadset lands, or in case of redemption, a third of the redemption money. Neither rights of reversion, superiority, nor patronage, fall under the terce. Where a terce is due out of lands burdened with a prior terce still subsisting, the second tercer had only right to a third of the two-thirds. But upon 'the death of the first widow, whereby the lands are disburdened of her terce, the smaller terce becomes enlarged. A widow who has accepted of a special provision from her husband is excluded from the terce, unless such provision shall contain a clause that

uho shall have right to both. The widow has no title of possession, and so cannot receive the rent? in virtue ok' her terce, till she be served to it ; and, in order to this, she must obtain a brief out of the chancery directed to the sheriff, who calls an inquest to take proof that she was wife to the deceased, and that her husband died infeft in the subjects contained in the brief.

Courtesy is a liferent given by law to the surviving husband of all his wife's heritage in which she died infeft, if there was a child of the marriage born alive. The child born of the marriage must be the mother's heir. If she had a child of the former marriage, the husband has no right to the courtesy while such child is alive.

The husband is considered as her temporary representative; and is liable for the burdens chargeable on the subject, and of the current interest of all her debts to the value of the yearly rent he enjoys.

All life-renters must use their right salva rei substantia. Whatever therefore is part of the fee itself, cannot be encroached on by the liferenter, e. g. woods or growing timber, even for the necessary uses

of the liferented tenement. Life-renters are bound to keep the subject liferented in proper repair. They are also burdened with the alimony of the heir where he has not enough for maintaining himself.

8. Of teinds or tithes. — Teinds are that proportion of rents or goods which is due to churchmen for performing divine service, or exercising the other spiritual functions proper to their several offices. The crown, by the final abolition of episcopacy, is now in the right of the teinds and superiorities of bishop's lands.

Ministers or stipendiaries are, in the first place, to be supported from the teinds, which are of four classes, *viz.* 1. Such as are in the hands of the crown, never disponed or erected. 2. Such as are in the hands of laymen. 3. Such as are in lease from the crown, titulars or patrons. 4. Those heritably disponed by the titulars. The two first are called free teind, and are modified primo loco to their real extent or tack-duty paid, and then the surplus teind of the tacksman (after paying the tack-duty which was previously allocated), in consideration of which the commissioners grant him a prorogation. And lastly, the teinds heritably disponed are burdened in proportion with the patron's own lands when all the free and surplus tack-teinds are exhausted. If the titular warranted against future augmentations, he is liable solely. The patron may modify upon any one heritor, to the extent of his teinds, until citation in an action of valuation : and the minister may sue any one heritor to the like extent upon a modification of stipend. But a locality prevents this.

The commission, with consent of two-thirds of the valuation, may remove or erect churches. Horning is obtained upon decrees. of the presbytery for realising the legal provisions of ministers, of manses, glebes, stipends, Sec.

9. Of rights which may be affected at the suit of creditors. — Diligences are forms of law whereby a creditor endeavours to make good his payment, either by affecting the person of his debtor, by sec-rli.ˆ .he subjects belonging to him

from alienation, or by carrying the property of these subjects to himself. Real diligence is that which is proper to heritable or real rights ; per sonal is that by which the person of the debtor may be secured, or his personal estate affected. Of the first sort we have two, *viz.* inhibition and adjudication.

Inhibition is a personal prohibition against the party inhibited to contract any debt, or do any deed, by which any part of his lands may be aliened or carried off in prejudice of the creditor inhibiting.

Adjudications and judicial sales. — Heritable rights may be carried from the debtor to the creditor, either by the diligence of adjudication, or by a judicial sale carried on before the court of session.

Such part of the debtor's lands is to be adjudged as is equivalent to the principal sum and interest of the debt, with the composition due to the superior, and expenses of infeftment ; and a fifth part more, in respect the creditor is obliged to take land for his money. The adjudger lies under no obligation to account for the surplus rents. The debtor may redeem in five years ; and the creditor attaining possession upon it can use no farther execution against the debtor, unless the lands be evicted from him.

Where the debtor does not produce a sufficient right to the lands, or is not willing to renounce the possession, and ratify the decree, the statute makes it lawful for the creditor to adjudge all right belonging to the debtor in the same manner, and under the same reversion of ten years, as he could by the former laws have apprised it. In this last kind, which is called general adjudication, the creditor must limit his claim to the principal sum, interest, and penalty, without demanding a fifth part more. Abbreviates are ordained to be made of all adjudications, which must be recorded within sixty days after the date of the decree.

Where the debtor's apparent heir formally renounces the succession, the creditor may obtain a decree cognitionis causa ; in which, though the heir renouncing is cited for the sake of form, no sentence condemnatory can be pronounced against him in respect of his renunciation ; the only effect of it is to subject the haereditas jacens to the creditor's diligence.

Adjudications contra haereditatem jacentem carry not only the lands themselves that belonged to the deceased, but the rents thereof fallen due since his death. This sort of adjudication is declared redeemable within seven years by any coadjudging creditor, either of the deceased debtor, or of the heir renouncing. Adjudications in implement are declared against those who have granted deeds without procuratory of resignation or precept of seisin and refuse to divest themselves.

All adjudications led within year and day of that which has been made first effectual by seisin (where seisin is necessary), or exact diligence

for obtaining seisin, are preferable pan passu. The year and day runs from the date of the adjudication, and not of the seisin or diligence for obtaining it. After the days of that period they aro preferable according to their dates.

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All the coadjudgers within the year are preferable p:iri passu, as if one adjudication had been led for all their debts.

Sequestration is a diligence that generally ushers in actions of sale. Sequestration of lands is a judicial act of the court of session, whereby the management of an estate is put into the hands of a factor or steward named by the court, who gives security and is to be accountable for the rents to all having interest. The court of session, who decree the sequestration, have the nomination of the factor, in which they are directed by the recommendation of the creditors.

The court of session, without sequestration, name a factor to preserve the rents from perishing. The estates of those engaged in trade and manufactures may be sequestered at the suit of a creditor to the extent of £100, two creditors to the extent of £150, and three or more to the ex-tent of £200. • The bankrupt's funds are placed under the management, first of a factor, then of a trustee, chosen by the creditors.

The word bankrupt is sometimes applied to persons whose funds are not sufficient for their debts; and sometimes, not to the debtor, but to his estate. The court of session are empowered, at the suit of any real creditor, to try the value of a bankrupt's estate, and sell it for the payment of his debts. No process cf sale at the suit of a creditor, can proceed without a proof of the debtor's bankruptcy, or at least that his lands are so charged with debts that no prudent person will buy from him. The debtor or his apparent heir, and all the real creditors in

possession, must be made parties to the suit ; but it is sufficient if the other creditors be called by an edictal citation.

As processes of ranking and sale are designed for the common interest of all the creditors, no diligence carried on or completed during their pendency ought to give any preference in the competiton.

It is a rule in all real diligences, that where a creditor is preferable on several different subjects, he cannot use his preference arbitrarily, by favoring one creditor more than another : but must allocate his universal debt proportionally against all the subjects or parties whom it affects.

CHAP. V. — OF MOVEABLE PROPERTY.

1. Of obligations and-contracts. — Obligations are either, 1. Merely natural, where one person is bound to another by the law of nature, but cannot be compelled by any civil action to the performance. Or, 2. Merely civil, which may be sued upon by an action, but are elided by an exception in equity, as in the case of obligations granted through force or fear, &c. 3. Proper or full obligations are those which are supported both by equity and the civil sanction.

Obligations may be also divided into 1. Pure, to which neither day nor condition is adjected. These may be exacted immediately. 2. Obligations ex die, which have a day adjected to their performance. 3. Conditional obligations, in which there is no proper debt till the condition be purified, because it is possible the condition may never exist

Obligations when considered with regard to their cause are sometimes called obediential. Such

are the obligation on parents to aliment or maintain their children. Under parents are comprehended, the mother, grandfather, and grandmother, in their proper order. This obligation on parents extends to the providing of their issue in all the necessaries of life, and giving them suitable education. It ceases when the children can earn a livelihood by their own industry ; but the obligation on parents is perpetual. Th-s obligation is on the father’s death transferred to the eldest son, the heir of the family. The brothers are only entitled to alimony till the age of twenty-one, after which they are presumed able to do for themselves; but the obligation to maintain the sisters in families of rank continues till their marriage.

A contract is the voluntary agreement of twr. or more persons, whereby something is to lie given or performed upon one part, for a valuable consideration, either present or future, on the other part. Consent, which is implied in agreement, is excluded, 1. By error in the essentials of the contract. 2. By such a degree of restraint, upon any of the contracting parties, as extorts the agreement.

Loan or mutuum is that contract which obliges a person, who has borrowed any fungible subject from another, to restore to him as much of the same kind, and of equal goodness. Whatever receives its estimation irj number, weight, or measure, is a fungible; as corn, wine, current coin, &c.

Commodate is a species of loan, gratuitous on the part of the lender, where the thing lent may be used, without either its perishing or its alienation. Hence, in this sort of loan, the property continues with the lender ; the only right the borrower acquires in the subject is its use, after which he must restore the individual thing that he borrowed ; consequently if the subject perishes, it perishes to the lender, unless it has perished by the borrower's fault.

Depositation is a bilateral contract by which one who has the custody of a thing committed to him is obliged to restore it to the depositor. li a reward is bargained for by the depositary for his care, it resolves into the contract of location. As this contract is gratuitous, the depositary is only answerable for the consequences of gross neglect; but, after the deposit is redemanded, he is accountable even for casual misfortunes. He is entitled to a full indemnification for the losses he has sustained by the contract, and to the recovery of all sums expended by him on the subject.

An obligation arises without formal paction, barely by a traveller's entering into an inn, ship, or stable, and there depositing his goods, or putting up his horses, whereby the inkeeper, &c., is accountable not only for his own acts and those of his servants, but of the other guests or passengers; and indeed in every case, unless where the goods have been lost by pirates or house-breakers. Carriers fall within the intendment of this law ; and practice has extended it to vintners within borough. The extent of the damage sustained by the party may be proved by his oath in litem.

Sequestration, whether voluntarily consented

to by the parties or authorise’! by the judge, is a kind ot deposit. Consignation of money is alio a deposit. The risk of the consigned money lies on the consigner, where he ought to have made payment, and not consignation, or has consigned only a part, or has chosen for con-Mˆnatory a person neither named by the parties nor of good credit.

Pledge is a contract by which a debtor puts into the hands of his creditor a special moveable subject in security of the debt. Tradesmen and ship-curpenters have a hypothec, on the house or ship repaired, for the materials and other charges of reparation, but not for the expense of building a new ship ; but no hypothec exists for the expense of repairs done in a home port. Owners of ships have a hypothec on the cargo for the freight, heritors on the fruits of the ground, and landlords on the invecta et illata for their rents. Writers also, and agents, have a right of hypothec, or more properly of retention, in their constituents’ writings for their claim of pains and disbursements. A creditor cannot, for his own payment, sell the subject impignorated without applying to the judge-ordinary for a warrant to put it up to public sale, and to this application the debtor ought to be made a party.

2. Ofobligationt by word or writing, — Agreement implies the intervention of two different parties who come under mutual obligations to one another. Where nothing is to be given or performed but on one part, it is properly called a promise; which, as it is gratuitous, does not require the acceptance of him to whom the promise is made. An offer, which must be distinguished from a promise, implies something to be done by the other party ; and, consequently, is not binding on the offerer till it be accepted, with its limitations or conditions, by him to whom the offer is made ; after which it becomes a proper agreement.

Writing must necessarily intervene in all obligations and bargains concerning heritable subjects, though they should be only temporary, as Ucks, which, when they are verbal, last but for one year. In these no verbal agreement is binding, though it should be referred to the oath of the party. If, upon a verbal bargain of lands, part of the price shall be paid, the payment creates a valid obligation, and gives a

beginning to the contract of sale. An agreement, whereby a real right is passed from, or restricted, called pactum liberatorium, nmy be perfected verbally. Writing is also essential to bargains made under condition that they shall be reduced into writing. In the same manner verbal, or nuncupative testaments are rejected ; hut verbal legacies «re sustained where they do not exceed i‘100 Scots. Anciently, when writing was little used, deeds were executed by the party appending his seal to them in presence of witnesses. The subscription, also, of the grantor was afterwards required ; and, if he could not write, that of a notary. In subscription of the parties by initials, proof must be given that the urantor used to subscribe in that way and had Milxcribed the deed in question.

ˆ ritmas carmi.2 any heritable right, and i-of importance, must be subscribed

by tlie principal parties, if they can sˆoscnbe, otherwise, by two notaries before four witnesses specially designed. The designation of the witnesses is now necessary where the parties themselves subscribe. Sums exceeding £100 Scots are held obligations of importance In a divisible obligation, *e.g.* for a sum of money, though exceeding £100, the subscription of one notary is sufficient if the creditor restricts his claim to £100. But in an obligation indivisible, e. g. for the performance of a fact, if it be not subscribed in terms of the statute it is void. When notaries thus attest a deed, the attestation, or docquet, must specially express that the grantor gave them a mandate to sign; nor is it sufficient that this be mentioned in the body of the writing.

In every deed the name of him who writt-s it, with his dwelling-place, or other mark of distinction, must be inserted. The witnesses must both subscribe as witnesses, and their naraes and designations be inserted in the body of the deed ; and all subscribing witnesses must know the grantor, and either see him subscribe or hear him acknowledge his subscription, otherwise they are declared punishable as accessary to forgery.

Instruments of seisin are valid if subscribed by one notary, before a reasonable number of witnesses, which is extended by practice to instruments of resignation. Two witnesses are deemed a reasonable number to every deed that can be executed by one notary. Another requisite is that deeds must be executed on stamped paper or parchment;

Bonds were frequently executed without filling up the creditor's name, and they passed like notes payable to the bearer ; but now, all writings taken in blank in the creditor's name are declared null, with the exception of indorsations of bills of exchange.

Certain privileged writings do not require the ordinary solemnities. 1. Holograph deeds (written by the grantor himself; are effectual without witnesses. 2. Testaments, if executed where meiT of skill and business cannot be had, are valid, though they should not be quite formal. Clergymen were frequently notaries before the Reformation; and, though they were afterwards prohibited to act as notaries, the case of testaments is excepted ; so that these are supported by the attestation of one minister with two witnesses. 3. Discharges to tenants are sustained without witnesses; 4. Missive letters, commissions, and fitted accounts in the course of trade, and bills of exchange, though they are not holo-graph, are sustained without the ordinary solemnities.

A bill of exchange is an obligation whereby the drawer desires him to whom it is directed to pay a certain sum, at the day and place therein mentioned, to a third party. Bills drawn blank, in the creditor's name, fall under the statutory nullity ; for, though indorsations of bills are ex-' cepted from it, bills themselves are not. Not only the person drawn upon must sign his acceptance, but the drawer must sign his draught, before any obligation can be formed against the acceptor. Yet it is sufficient that the drawer signs before the bill be produced in judgment, though it should be after tlic death both of the

creditor and acceptor. A creditor in a bill may transmit it to another by indorsation, though the bill should not bear to his order.

Bills, when drawn payable at any considerable distance of time after date, are denied the privileges of bills ; for bills are intended for currency, and not to lie as a security in the creditor's hands. Bills are not valid which appear ex facie to be donations.

Promissory notes are placed upon the same footing as bills, and

declared to have the same privileges. Both prescribe in sii years after the term of payment. Bank notes and post bills are excepted from this prescription; nor does it run during the years of the creditor's minority. Inlanl bills and promissory notes must be protested within the days of grace to secure recourse; and the dishonor notified within fourteen days ;uter the protest.

3. Of contracts by consent and of accessory obligations.— Contracts consensual, i. e. which might be perfected by sole consent, without the intervention either of things or of writing, are, sale, permutation, location, society, and mandate. Where the subject of any of these contracts is heritable, writ.nˆ- is necessary.

Sale is a contract by which one becomes obliged to give something to another in consideration of a certain price in current money to be paid for it. Things consisting merely in hope uiLiy be the subject of this contract, as the draught «-f a net. Commodities, vyhere their importation or use is absolutely prohibited, cannot be the Mibjtctof sale; and even in contraband goods, no action lies against the vender for not delivery it' the buyer knew the goods were contraband. Hut where the foreign merchant was not a native "t .Scotland, no ways amenable to its laws, he has l>een allowed action for the price of such goods unless it were shown that he had in fact been]iar iceps criminis by aiding the smuggling.

Though this contract may be perfected before delivery of the subject, the property remains-till then with the vender: yet, till delivery, Hie hazard of its deterioration falls on the purchaser, because he has all the profits arising from it ;ii'ier the sale. On the other hand the subject itself perishes for the vender, 1. If it should]>erish through his fault or after his undue delay to deliver it ; 2. If a subject is sold as a fungible, and not as an individual, or corpus, e. g. a quantity of farm wheat, sold without distinguishing the parcel to be delivered from the rest of the farm; 3. The periculum lies on the vender till delivery, if he be obliged by special article in the contract to deliver the subject at a certain place.

Location is that co'njtract where a hire is stipulated for the use of things or for the service of persons. In the location of things the lessor is obliged to deliver the subject fitted for the use it was let for ; and the lessee must preserve it carefully, put it to no other use, and, after that is over, restore it. Where a vvorkmnn, or artificer, lets his labor, and if the work is either not performed according to contract, or if it be insufficient even from mere unskilfulness, he is l<;il>le to his employer in damages. A servant liirˆrl for a certain term is entitled to

his full wages, though

from sickness, or other accident, he should be disabled for a part of his time; but, if he da-before the term, his wages are only due for the term he actually served. If a master dies, oc without good reason turns off, before the term, a servant who eats in Ins house, the servant is entitled to his fall wages and to his maintenance till that term : and, on the other part, a servant who witliout grounds deserts his service, forfeits his wages and maintenance, and is liable lo IMS master in damages.

Society or copartnership is a contract whereby the several partners agree concerning the communication of loss and gain arising from the subject of the contract. A copartnership may be so constituted that one of the partners shall be entitled to a certain share of the profits without being subject to loss. No partner can, without a special power, transfer any part of his share to another. All the partners are bound in solidum by the obligation of any one of them, if he subscribe by the firm, or name of the company, un-less it be a deed that falls not under the common course of administration. The company effects are the common property of the society, subjected to its debts, so that no partner can claim a division thereof till these are paid, and consequently no creditor of a partner can by diligence carry to himself the property of any part of the common stock in prejudice of a company creditor; but he may, by arrestment, secure his debtor's share in the company's hands, to be made forthcoming to him at the close of the copartnership, in so far as it is not exhausted by /he company's debts.

Society is dissolved not only by the renunciation but by the death of any of them if not o'hcr-wise covenanted. Not only natural but civil death, e. g. arising from a sentence inflicting capital punishment, makes one incapable to perform the duties of a partner, and consequently dissolves the society. In both cases, of death and renunciation, the remaining partners may continue tke copartnership, either expressly, by entering into a new contract, or tacitly, by carrying on their trade as formerly.

A joint trade is not a copartnership, but a momentary contract, where two or more persons agree to contribute a sum to be employed in a particular course of trade, the produce whereof is to be divided among adventurers, according to their several shares, after the voya«e is finished. If, in joint trade, that partner who is intrusted with the

money for purchasing ihe <ioods should, in place of paying them in cash, buy them upon credit, the furnisher, who followed his faith alone in the sale, has no recourse against the other adventurers ; he can only recover from them what of the buyer's share is yet in their hands. Where any one of the adventurers in a joint trade becomes bankrupt, the others are preferable to his creditors, upon the common stock, as long as it continues undivided, for their relief of all the engagements entered into by them on account of the adventure.

Mandate is a contract by which one employs another to manage any business for him. It may be constituted tacitly, by one's suffering another to act in a certain branch of his affairs, for a tract of time together, without challenge.

Where no special rules are prescribed, the mandatory, if he acts prudently, is secure, whatever the success may be. Mandates may be general, containing a power of administering the mandant's whole affairs; but no mandate implies a power of disposing gratuitously of the constituent's property, nor even of selling his heritage for an adequate price ; but a general mandatory may sell such of the moveables as must otherwise perish. No mandatory can, without special powers, transact doubtful claims belonging to his constituent, or refer them to arbiters.

Mandates expire, 1. By the revocation of the employer, though only tacit ; 2. By the renunciation of the mandatory, even after he has executed part of his commission, if his office be gratuitous ; 3. By th§ death either of the mandant or mandatory. But, if the matters are not entire, the mandate continues in force, notwithstanding such revocation, renunciation, or death.

Masters of ships are empowered to contract in name of their executors, or employers, for repairs, ship-provisions, and whatever else may be necessary for the ship or crew. Whoever has the actual charge of the ship is deemed the mas-ter. The furnisher or lender must prove that the ship needed repairs, provisions, &c. ; but he is under no

necessity to prove the application of the money or materials to the ship's use. If there are several exercitors they are liable singuli in solidum. In the same manner, the undertaker of any branch of trade, manufacture, or other land negotiation, is bound by the contracts of the institors whom he sets over it, in so far as relates to the subject of the praepositura.

Contracts and obligations receive strength by the contractor or his heirs doing any act thereafter which imports an approbation of them. This is called homologation. It cannot be inferred, 1 . By the act of a person who was not in the knowledge of the original deed ; 2. Where the act or deed, which is pleaded as such, can be ascribed to any other cause.

Quasi contracts are formed without explicit consent by one of the parties doing something which by its nature either obliges him to the other party, or the other party to him.

Indebiti solutio, or the payment to one of what is not due to him, if made through any mistake either of fact or even of law, founds him who made the payment in an action against the receiver for repayment ; condictio indebiti. This action does not lie, 1. If the §um paid was due ex aequitate, or by a natural obligation. 2. If he who made the payment knew that nothing was due.

Where two or more persons become common proprietors of the same subject by legacy, &c., an obligation is thereby created among the proprietors to communicate the profit and loss arising from the subject, while it remains com-mon ; and the subject may be divided at the suit of any having interest.

The throwing of goods overboard, for lightening a ship in a storm, creates an obligation wliereby the owners of the ship and goods saved are obliged to contribute for the relief of those whose goods are thrown overboard. In this contribution, the ship's provisions suffer no esti-

mation. A master, who cut his mast, or parted with his anchor, to save the ship, is entitled to this relief; but if he has lost them by the storm, the loss falls only on the ship and freight. If the ejection does not save the ship, the goods preserved from shipwreck are not liable in contribution. Ejection may be lawfully made, if the master and a third part of the mariners judge that measure necessary, though the owner

of the goods should oppose it ; and the goods ejected are to be valued at the price that the goods of the same sort which are saved shall be afterwards sold for.

There are certain obligations which cannot subsist by themselves, but are accessions to, or make a part of, other obligations. Of this sort are fidejussion, and the obligation to pay interest. Cautionary or fidejussion is that obligation by which one becomes engaged as security for another, that he shall either pay a sum or perform a deed.

A right of relief is competent de jure to the cautioner who pays against his co-cautioner, un-less where the cautioner appears to have renounced it. Cautionary is also judicial, as in a suspension. It is sufficient to loose the cautioner, that, when he became bound, the suspender had good reason to suspend. Obligations for sums of money are frequently accompanied with an obligation for the annual rent or interest thereof.

Interest is the profit due by the debtor of a sum of money due to the creditor, for the use of it, which is fixed at five per cent. Bills of exchange and inland bills, though they should not be protested, carry interest from cheir date in case of non-acceptance ; or from the day of their falling due in case of acceptance and non-pay- ment.

Dotation, so long as the subject is not delivered to the donee, may be justly ranked among obligations; and it is that obligation which arises from the mere good will and liberality of the granter. Donations made in contemplation of death or mortis causa, are of the nature of legacies, and like them revocable ; consequently, not being effectual in the grantor's life, they cannot compete with any of his creditors ; not even with those whose debts were contracted after the donation. They are understood to be given from a personal regard of the donee, and therefore fall by his predecease. No deed, after delivery, is to be presumed a donatio mortis causa ; for revocation is excluded by delivery.

Deeds are not presumed, in dubio, to be donations. Hence a deed by a debtor to his creditor, if donation be not expressed, is presumed to be granted in security or satisfaction of the debt; but bonds of provision to children are, from the presumption of paternal affection, construed to be intended as an additional patrimony ; yet a tocher given to a daughter in her marriage contract is presumed to be in satisfaction of all former bonds and debts, because the marriage contracts usually contain the whole provisions in favor of the bride.

4. Of the dissolution of obligations. — Obligation may be dissolved by performance or implement, consent, compensation, novation, or confusion.

Vaymunt made by the debtor upon a mistake in fact, to one whom he believed, upon probable grounds, to have the right of receiving payment, extinguishes the obligation. But payment made to one, to whom the law denies the power of receiving it, has not this effect.

Obligations are extinguishable by the consent of the creditor, who without full implement, or even any implement, may renounce the right constituted in his own favor.

A discharge, though it should be general, of all that the grantor can demand, extends not to debts of an uncommon kind, which are not presumed to have been under the grantor's eye. Where the same person is both creditor and debtor to another, the mutual obligations, if they

competing creditors, he is debtor to all of them. The person in whose hands the diligence is used is styled the anrestee.

Arrestment may be laid on by the authority either of the supreme court, or of an inferior judge.

All debts ii; which one is personally bound, though they should be heritably secured, are grounds upon which the creditor may arrest the moveable estate belonging to his debtor. Arrestment may proceed on a debt, the term of payment whereof is not yet come, in case the debtor be vergens ad inopiam.

Moveable debts are the proper subject of arrestment ; under which are comprehended conditional debts, and even depending claims.

are for equal sums, are extinguished by compen-Certain moveable debts are not arrestable: 1.

sation; if for unequal, still the less obligation is extinguished, and the greater diminished, as far as the concourse of debt and credit goes.

The right of retention, which bears a near resemblance to compensation, is chiefly competent where the mutual debts, not being liquid, cannot be the ground of compensation ; and it is sometimes admitted ex sequitate, in liquid debts where the compensation is excluded by statute.

Obligations are dissolved by novation, whereby one obligation is changed into another without changing either the debtor or creditor. The first

Debts due by bill, which pass from hand to hand, as bags of money. 2. Future debts. Claims, depending on the issue of a suit, are not considered as future debts ; for the sentence, when pronounced, has a retrospect to the period at which the claim was first founded. The like doctrine holds in conditional debts. 3. Alimentary debts ; but the past interest due upon such debts may be arrested by the person who has furnished the alimony. The surplus fee, over and above what is necessary for a servant's personal uses, may be arrested. If the arrestee shall

obligation being thereby extinguished, the cau-make payment of the sum, or deliver the goods

arrested, to the common debtor, he is not only liable criminally for breach of arrestment, but he must pay the debt again to the arrester.

Arrestment is not merely prohibitory, as inhibitions are, but is a step of diligence, which founds the user in a subsequent action, whereby the property of the subject arrested may be adjudged to him.

Where arrestment proceeds on a depending action, it may be loosed by the common debtor's giving security to the arrester for his debt in the event it shall be found due. Arrestment founded on decrees, or on registered obligations, cannot be loosed but upon payment or

consignation ; except, 1. Where the term of payment of the debt is not yet oome, or the condition has not yet existed. 2. Where the arrestment has proceeded on a registered contract, in which the debts or mutual obligations are not liquid. 3. Where the decree is suspended, or turned into a libel.

Arrestment is only an inchoated or begun diligence; to perfect it there must be an action brought by the arrester against the arrestee, to make the debt or subject arrested forthcoming.

In all competitions regard is had to the dates, not of the grounds of debt, but of the diligences proceeding upon them. In the competition of arrestments, the preference is governed by their dates, according to the priority even of hours, where it appears with any certainty which is the first. All arrestments which shall have been used for attaching any effects of a bankrupt, within sixty days prior to the bankruptcy, or within four calendar months thereafter, shall be ranked, pari passu, as if they had been of the same date.

Poinding is that diligence affecting moveahle subjects, by which their property is carried di-

tioners in it are loosed, and all its consequences discharged, so that the debtor remains bound only by the last. Obligations are extinguished con-fusione, where the debit and credit meet in the same person either by succession or singular title. 5. Of assignations or assignments. — Heritable rights, when they are clothed with infeftment, are transmitted by disposition, which is a writing containing procuratory of resignation and precept of seisin ; but those which either require no seisin, or on which seisin has not actually followed, are transmissible by simple assignation. He who grants the assignation is called the ce-dent ; and he who receives it, the assignee or cessionary. If the assignee conveys his right to a third person, the deed of conveyance is called a translation ; and, if he assigns it back to the cedent, a retrocession.

Assignations must not only be delivered to the assignee, but intimated by him to the debtor, Intimations are considered as so necessary for completing the conveyance, that, in a competition between two assignations, the last, if first intimated, is preferred. Though, regularly, intimation to the debtor is made by an instrument taken in the hands of a notary, by the assignee or his procurator, yet the law admits equipollen-cies where the notice of the assignment given to the

debtor is equally strong.

6. Of arrestments and poindings, or attachment of property. — The diligences, whereby a creditor may affect his debtor's moveable subjects, are arrestment and poinding. Arrestment is the order of a judge, by which he who is debtor in a moveahle obligation to the arrester's debtor, is prohibited to make payment or delivery till the debt to the arrester be paid or secured. The arrester's debtor is usually called the common debtor, because, where there are two or more

MotfBtfethe creditor. No puiuJing c.ui proce«d,r till it charge be given to the debtor to pay or jwrfon", ;n«J the f:- vs thereof be expired, except pmndingB against Vassa.s for their ftu duties, an*! poindinga agai. <t tenants for rent, proceeding upon the landlord's own decree, in which itw ancient custom of poinding without a pre-viom charge continues. A debtor's goods may lie nomded by one creditor, though they have consensual contracts, to the constitution of which been arrested before by another; for arrestment, writing is not necessary. But all the above-mentioned debts may, after the five years, be

Ministers' stipends and multures prescribe in live years after they are due; and arrears of rent five years after the tenants' removing from the lands.

Bargains concerning moveables, or sums of money which are proveable by witnesses, prescribe in five yeais after the bargain. Under these are included sales, locations, and all other

being but an imperfect diligence, leaves the right of the subject still in the debtor, and so cannot hinder any creditor from using a perfect diligence, which has the effect of carrying the property directly to himself. No cattle pertaining to the plough, nor instrument of tillage,

can be poinded in the time of laboring or tilling the ground, unless where the debtor has nc other goods.

Ministers may poind for their stipends, upon one appraisement, on the ground of the lands ; and landlords were always in use to poind so for their rents.

No poinding of the moveables belonging to a bankrupt, within forty days from his bankruptcy, or within four calendar months thereafter, shall give a preference to such poinder ; but every other creditor of the bankrupt, having liquidated grounds of debt or decrees for payment, and summoning such poinder before the four months are elapsed, shall be entitled to a proportional share of the goods so poinded, effeiring to his debt.

7. Of title by pretcription.— Positive prescription is generally denned, the acquisition of property by the possessor's continuing his possession for the time which law has declared necessary for that purpose : negative is the loss or omission of a right, by neglecting to follow it forth, or use it, during the whole time limited by law.

Whoever shall have possessed his lands, an-nual rents, or other heritages, peaceably, in virtue of iufefiments, for forty years continually after their dates, shall not thereafter be disquieted in his right by any person pretending a better title. Under heritages are comprehended every right that is fundo annexum, and capable of continual possession.

8. Of limitation ofclaimt. — Actions of spuilzie, ejection, and others of that nature, must be pursued within three years after the commission of the faet on which the action is founded. Under the ceneral words are comprehended all actions, where the pursuer is admitted to prove his libel !>v his own oath in litem.

Servants' fees, house rents, men's ordinaries ii. e. money due for board), and merchants' ac-rour.ts, fall under the triennial prescription

proved, either by the oath or the writing of the debtor. A quinquennial prescription is established in arrestments, whether on decrees or depending actions : the first prescribe in five years after using the arrestment, and the last in five years after sentence is pronounced on the depending action.

No person binding for or with another, either as cautioner or co-

principal, in a bond or contract for a sum of money, continues bound after seven years from the date of the bond, provided he has either a cause of relief in the bond, or a separate bond of relief, intimated to the creditor at his receiving the bond. But all diligence used within the seven years against the cautioner shall stand good. The statute excludes all cautionaries for the faithful discharge of offices; these not being obligations in a bond or contract for sums of money : and practice has denied the benefit of it to all judicial cautioners, as cautioners in a suspension. Actions of count and reckoning, competent either to minors against their tutors or curators, or vice versi, prescribe in ten years after the majority or death of the minor.

Holograph bonds, missive letters, and books cf accounts, not attested by witnesses, prescribe in twenty years, unless the creditor shall thereafter prove the verity of the subscription by the debtor's oath. The duration of bills is limited to six years.

Prescription does not run contra non valentem. agere, against one who is barred, by some legal incapacity, from pursuing; for, in such case, neither negligence nor dereliction can be imputed to him. Prescription may be interrupted by any deed, whereby the proprietor or creditor uses his right or ground of debt.

Diligence used upon a debt, against any one of two or more co-obligants, preserves the debt itself, and so interrupts prescription against all of them ; except in the special case of cautioners,, who are not affected by any diligence used against the principal debtor.

CHAP. VI. — OF THE TITLE TO PROPERTY sr

SUCCESSION OR DESCENT. 1 . Of succetsion in heritable rights : — and,

There is also a general dause subjoined to this firtt, of heirs general. — Singular successors are

statute, of other the like debts, which includes alimentary debts, wages due to workmen, and accounts due to writers, agents, or procurators.

In accounts, prescription does not begin till the last article ; for a single article cannot be called an account. Actions of removing must

;dso be pursued within three years after the Darning. Reductions of erroneous retours prescribe, if not pursued within twenty years.

those who succeed to a person yet alive, in a special subject by singular titles ; but succession, in its proper sense, is a method of transmitting rights from the dead to the living. Heritable rights descend by succession to the heir, properly so called; moveable rights to the executors, wlii > are sometimes said to be heirs in moveable-;. Succession is either by special destination, whic't descends to those named by the proprietor him-

self; or legal, whic.; devolves upon the persons whom the law marks out for successors, from a presumption that the proprietor would have named them had he made a destination. The first is in all cases preferred to the other, as presumption must yield to truth.

In the succession of heritage, the heirs at law are otherwise called heirs general, heirs whatsoever, or heirs of line ; and they succeed, by the right of blood, in the following order: — First, descendants ; among these, sons are preferred to daughters, and the eldest son to all the younger. Where there are daughters only, they succeed equally, ard are called heirs proportioners. Failing immediate descendants, grandchildren succeed ; and, in default of them, great-grand-children, and so on ad infinitum : preferring, as in the former case, males to females, and the eldest male to the younger. Next, after descendants, collaterals succeed ; among whom the brothers german of the deceased have the first place. The immediate younger brother of the deceased excludes the rest, according to the rule that heritage descends. If there are no brothers german, the sisters german succeed equally ; then brothers consanguinean, in the same order as brothers german; and, failing them, sisters consanguinean equally. Next, the father succeeds. After him, his brothers and sisters; then the grandfather ; failing him, his brothers and sisters ; and so upwards, as far back as propinquity can be proved. Though children succeed to

their mother, a mother cannot to her child ; nor is there any succession, through the mother of the deceased.

In heritage there is a right of representation, by which one succeeds, not from any title in himself but in the place, and as representing some of his deceased ascendants. In the succession of heirs portioners, indivisible rights, *e.g.* titles of dignity, fall to the eldest sister. A single right of superiority goes also to the eldest. The principal seat of the family falls to the eldest with the garden and orchard belonging to it, without recompence to the youngest sisters ; but all other houses are divided amongst them, together with the lands on which they are built as parts and pertinents of these lands.

(2.) Heirs by enfai/.— The heir of line is entitled to the succession, not only of subjects properly heritable, but to that sort of moveables called heirship, which is the best of certain kinds. This doctrine has been probably introduced that the heir might not have a house and estate to succeed to, quite dismantled by the executor.

The appellation of tailzie, or entail, is chiefly used in the case of a land estate, which is settled on a long series of heirs substituted one after another. The person first called in the tailzie is the institute ; the rest the heirs tailzie, or substitutes.

Tailzies, when considered in relation to their several degrees of force, are either, 1. Simple destinations ; 2. Tailzies with prohibitory clauses ; 3. Tailzies with prohibitory, resolutive, and irritant clauses. That is a simple destination where the persons called to the succession are substituted one after another, without any restraint laid on the exercise of their property. The heirs therefore, succeeding to such estate, are absolute

fiars, and consequently may alter the destination at pleasure.

In tailzies with clauses prohibitory, e. g. declaring that it shall not be lawful to the heirs to contract debts or alien the lands in prejudice of the succession, none of the heirs can alien gratuitously. But the members of entail may contract debts which will be effectual to the creditors, or may dispose of the estate for onerous causes. In both these sorts, the maker himself may alter the tailzie, except, 1. Where it has been granted for an onerous cause, as in mutual tailzies ; or 2. Where the maker is expressly disabled, as well as the institute or the heirs. Where a tailzie is guarded with irritant and resolutive clauses,

the estate entailed cannot be carried off by the debt or deed of any of the heirs succeeding thereto, in prejudice of the substitutes. The entail must be registered in a special register established for that purpose ; and the irritant and resolutive clauses must be inserted, not only in the procuratories, precepts, and seisins, by which the tailzies are first constituted, but in all the after conveyances thereof; otherwise they can have no force against singular successors. But a tailzie, even without these requisites, is effectual against the heir of the grantor or against the institute who accepts of it. An heir of entail has full power over the entailed estate, except in so far as he is expressly fettered. Heirs of entail are entitled (notwithstanding any restrictions in the deed of entail) to improve their estates by granting leases, building farm-houses, draining, enclosing, and excambing, under certain limitations, and to claim repayment of three-fourths of the expense from the next heir of en-tail. An heir, who counteracts the directors of the tailzie, by alienating any part of the estate, charging it with debt, &c., is said to contravene. It is not the simple contracting of debt that in-fers contravention ; the lands entailed must be actually adjudged upon the debt contracted.

When the heirs of the last person specially called in a tailzie come to succeed, the irritancies have no longer any person in favor of whom they can operate; and consequently the fee, which was before tailzied, becomes simple and unlimited in the person of such heirs. The king may purchase lands within Scotland notwithstanding the strictest entail ; and, where the landz are in the hands of minors or fatuous persons, his majesty may purchase them from the curators or guardians. And heirs of entail may sell to their vassals the superiorities belonging to the entailed estate ; but, in all these cases, the price is to be settled in the same mannner that the lands or superiorities sold were settled before the sale.

Rights, not only of land estates, but of bonds, are sometimes granted to two or more persons in conjunct fee. Where a right is so granted to two strangers, without any special clause adjected to it, each of them has an equal interest in the fee, and the part of the deceased descends to his own heir. If the right be taken to the two jointly, and the longest liver and their heirs, the several shares of the conjunct fiars are affectable by their creditors during their lives : but, on the death of any of them, the survivor has the fee of the whole in so far as the share of the predeceased remaius free after payment of his debts.

Where a right is taken to a husband and vrife, in conjunct fee and liferent, the husband is the only fiar; the wife's right resolves into a life rent, unless it be presumable that the fee was intended to be in the wife. Where a right of moveables is taken to husband and wife, the heirs of both succeed equally.

(3.) Heart by provition. — Heirs of provision are those who succeed to any subject, in virtue of a provision in the investiture or other deed of settlement. Though all provisions to children by marriage contract, conceived in the ordinary form, being merely rights of succession, are postponed to every onerous debt of the grantor, even to those contracted posterior to the provisions ; yet where a father executes a bond of provision to a child actually existing, whether such child be the heir of a marriage or not, a proper debt is thereby created, which, though it be without doubt gratuitous, is not only effectual against the father himself and his heirs, but is not reducible at the instance even of his prior onerous creditors, if he was solvent at the time of granting it.

In marriage contracts, the conquest, or certain part of it, is often provided to the issue ; by which is meant whatever real addition shall be made to the father's estate during the marriage by purchase or donation. Conquest therefore must be free, i. e. what remains after payment of the father's debts. Where heritable rights are provided to the heirs of a marriage, they fall to the eldest son, for he is the heir at law in heritage. Where a sum of money is so provided, the word heir is applied to the subject of the provision, and so marks out the executor, who is the heir in moveables. When an heritable right is provided to the bairns (or issue) of a marriage, it is divided equally among the children, if no division be made by the father ; for such destination cuts off the exclusive right to the legal heir. No provision granted to bairns gives a special right of credit to any one child, as long as the father lives : the right is granted familix- ; so that the whole must go to one or other of them : but the father has a power inherent in him to divide it among them, in such proportions as he thinks best, yet so as none of them may be entirely excluded, except in extraordinary cxses. A clause of return is that by which a sunr in a bond or other right is, in a certain event, limited to return to the grantor himself or his heirs.

(4.) Rights and liabilities of heirs. — An heir is, in the judgment of law, eadem persona cum defuncto, and so represents the deceased universally, not only in his rights, but in his debts: in the first view he is said to be heir active ; in the second passive.

Before an heir can have an active title to his ancestor's rights, he must be entered by service and retour. He who is entitled to enter heir is, before his actual entry, called apparent heir. The bare right of apparency carries certain privileges \ith it. An apparent heir may defend his ancestor's titles against any third party who brings them under challenge. Tenants may safely pay them their rents ; a'nd, after they have once acknowledged by payment, he may compel

them to continue it; and the rents not uplifted by the apparent heir belong to his executors upon his death.

As an heir is by his entry subjected universally to his ancestor's debts, apparent heirs have therefore a year (annus deliberandi) allowed to them from the ancestor's decease to deliberate whether they will enter or not ; till the expiration of which, though they may be charged by creditors to enter, they cannot be sued in any process founded upon such charge.

The service of heirs is either general or special. A general service vests the heir in the right of all heritable subjects, which either do not require seisin, or which have not been perfected by the seisin in the person of the ancestor. A special service, followed by seisin, vests the heir in the right of the special subjects in which the ancestor died infeft.

If an heir within the annus deliberandi exhibit upon oath a full inventory to the clerk of the shire, his subsequent entry will subject him no farther than to the value of such inventory. Creditors are not obliged to acquiesce in the value of the estate given up by the heir; but may bring the estate to a public sale in order to discover its true value.

An heir by immixing with his ancestor's estate without entry, subjects himself to his debts as if he had entered ; or incurs a passive title. This passive title is excluded, if the heir's intromission be by order of law; or if it be founded on singular titles, and not as heir to the deceased. But an apparent heir's purchasing any right to his ancestor's estate, otherwise than at public roup (auction), or his possessing it in virtue

of rights settled in the person of any near relation of the ancestor, to whom he himself may succeed as heir, otherwise than upon purchase by public sale, is deemed behaviour as heir. Behaviour as heir is also excluded where the intromission is small, unless an intention to defraud the ancestor's creditors be presumable from the circumstances attending it.

Another passive title in heritage may be incurred by the apparent heir's accepting a gratuitous right from the ancestor to any part of the estate to which he himself might have succeeded as heir. If the right be onerous there is no passive title; if the consideration paid first does not amount to its full value, the creditors of the deceased may reduce it in so far as it is gratuitous, but still it infers no passive title. The heir incurring this passive title is no farther liable, than if he had, at the time of his acceptance, entered heir to the grantor, and so subjected himself to the debts that were then chargeable against him.

Neither of these passive titles takes place, un-less the subject intermeddled with, or disponed, be such as the intromitter or receiver would succeed to as heir. In this also, these two passive titles agree, that the intromission in both must be after the death of the ancestor ; for there can be no termini habiles of a passive title while the ancestor is alive. An apparent heir, who i» cited by the ancestor's creditor in a process for payment, if ho offers any peremptory defence against the debt, incurs a passive title. Every

person passing over his immediate ancestor, who had been three years in possession, and serving heir to one more remote, shall be liable for the debts and deeds of the person interjected, to the value of the estate to which he is served.

(5.) Death-bed deeds. — Deeds affecting heritage, if they be granted by a person on death-bed (i. e. after contracting that sickness which ends in death), to the danger of the heir, are ineffectual, except where the debts of the grantor have laid him under a necessity to alien his lands.

The allegation of death-bed is also excluded by the grantee having lived sixty days after signing the deed. The legal evidence of convalescence is the grantor's having been after the date of the deed at kirk or market unsupported, when the people are met together for any public meeting civil or ecclesiastical or at the time of public market. Where a deed is consented to or ratified by the immediate heir, it is secured against all challenge, even from the remoter.

In a competition between the creditors of the deceased and of the heir the creditors of the deceased are preferred. But this preference is limited to the case where the creditors of the deceased have used due diligence within three years from his death; and the heir's creditors may, after that period, affect it for their own payment. All dispositions by an heir of the ancestor's estate, within a year after his death, are null, in so far as they are hurtful to the creditors of the ancestor.

2. Of succession in moveablet. — In the succession of moveable rights, it is a universal rule, that the next in degree to the deceased, or next of kin, succeeds to the whole ; and, if there are two or more equally near, all of them succeed by equal parts. Neither does the right of representation obtain in the succession of moveables, except in the single case of competition between the full blood and the half blood. Where the estate of a person deceased consists partly of heritage and partly of moveables, if there are others as near in degree to the deceased as himself, but where the heir, in such case finds it his interest to renounce his exclusive claim to the heritage, and betake himself to his right as one of thˆ next of kin, he may collate or communicate the heritage with the others, who in their turn must collate the moveables with him, so that the whole is thrown into one mass and divided equally among all of them.

One may settle his moveable estate upon whom he pleases, excluding the legal successor by a testament ; which is a written declaration of what a person wills to be done with his moveable estate after his death. If the executor nominated be a stranger, he is merely a trustee, accountable to the next of kin ; but he may re-tain a third of the dead's part for his trouble in executing the testament ; in payment of which, legacies, if any be left to him, must be imputed. The heir, if he be named executor, has right to the third as a stranger ; but if one be named who has an interest in the legal succession, he has no allowance unless such interest be less than a third. Nuncupative or verbal testaments are not by the law of Scotland effectual for supporting the nomination of executor, let the subject of the succession be ever so small : but verbal legacies, not exceeding £100 Scots, are sustained ; and, even where they are granted for more, they

are ineffectual only as to the excess.

A legacy is a donation by the deceased to be paid by the executor to the legatee. It may be granted either in the* testament or in a separate writing. Legacies are not due till the grantor's death, and consequently they can transmit no right to the executors of the legatee in the event that the grantor survives him.

Legacies where they are general, i. e. of a certain sum of money indefinitely, give the legatee no right in any one debt or subject ; he can only insist in a personal action against the executor for payment out of the testator's effects. A special legacy, i. e. of a particular debt due to the deceased or of a particular subject belonging to him, is of the nature of an assignation, by which the property of the special debt or subject vests, upon the testator's death, in the legatee, who can therefore directly sue the debtor or possessor; yet, as no legacy can be claimed till the debts are paid, the executor must be cited in such process, that it may be known whether there are free effects sufficient for answering the legacy. Where there is not enough for payment of all the legacies each of the general legatees must suffer a proportional abatement; but a special legatee gets his legacy entire, though there should be nothing over for payment of the rest ; and, on the contrary, he has no claim if the debt or subject bequeathed should perish, whatever the extent of the free executry may be.

Minors, after puberty, can test without their curators, wives without their husbands, and persons interdicted without their interdictors ; but bastards cannot test, except in the cases afterwards set forth.

If a person deceased leaves a widow, but no child, his testament, or, in other words, the goods in communion, divide in two ; one half goes to the widow ; the other is the dead's part, i. e. the absolute property of the deceased on which he can test, and whioh falls to his next of kin, if he dies intestate. Where he leaves children, one or more, but no widow, the children get one-half as their legitime ; the other half is the dead's part, which falls also to the children, if the father has not tested upon it. If he leaves both widow and children, the division is tripartite; the wife takes one-third by herself ; another falls, as legitime, to the children equally among them, or even to an only child, though he should succeed to the heritage ; the remaining third isthedead's part. Where the wife predeceases, without children, one-half is retained by the husband, the other falls to her next of kin. Where she leaves children, two-thirds remain with the surviving father, as if one-third were due to him proprio nomine, and another as administrator of the legitime for his children ; the remaining third,

being the wife's share, goes to her children.

Before a testament can be divided, the debts owing by the deceased are to be deducted. As the husband has the full power of burdening the goods in communion, his debts affect the whole, and so lessen the legitime and the share of the relict as well r.s the dead's part. His funeral charges and the mournings and alimony due to

the widow arc considered as his proper debts; hut legacies, or other gratuitous rights granted by him on death-bed, affect only the dead's part Bonds bearing interest, due by the deceased, can-not diminish the relict's share, because such bonds, when due to the deceased, do not increase iL The funeral charges of the wife predeceasing, fall wholly on her executors, who have right to her share. Where the deceased leaves no family, neither husband, wife, nor child, the testament suffers no division, but all is the dead's part.

The whole issue of the husband, not only by that marriage which was dissolved by his death, but by any former marriage, has an equal interest in the legitime. But no legitime is due, 1. Upon the death of a mother. 2. Neither is it due to grandchildren, upon the death of a grandfather. Nor, 3. To children who having renounced the legitime are no longer considered as in familia.

As the right of legitime is strongly founded in nature it is not to be inferred by implication. The child who has got a provision from his father is obliged to collate it with others, and impute it towards his own share of the legitime ; but, if from the deed of provision, the father shall appear to have intended it as a praecipuum to the child, collation is excluded. A child is not bound to collate an heritable subject provided to him, because the legitime is not impaired by such provision.

An executor is not vested in the right of the moveable estate of the deceased without confirmation.

Confirmation proceeds upon an edict which is affixed on the door of the parish church where the deceased dwelt, and serves to intimate to all concerned the day of confirmation, which must be nine days at least after publishing the edict. In a competition for the office of executor, the commissary prefers, primo loco, the person named to it by the deceased himself, whose nomination he ratifies or confirms, without any previous decerniture : this is called the confirmation of a testament testamentary. In default of an executor named by the deceased, universal disponees are by the present practice preferred ; after them the next of kin ; then the relict ; then creditors ; and lastly, special legatees.

Acreditor, whose debtor's testament is already confirmed, may sue the executor, who holds the office for all concerned, to make payment of his debt. Where there is no confirmation, he may himself apply for the office, and confirm as executor-creditor.

A creditor, whose debt has not been constituted, or his claim not closed by decree, during the life of his debtor, has no title to demand directly the office of executor qua creditor : but he may charge the next of kin who stands off, to confirm, who must either renounce within twenty clays after the charge, or b« liable for the debt.

There are certain debts of the deceased, called privileged debts, which were always preferable to every other. Under that name are comprehend-cri medicines furnished to the deceased on death-bed, physicians' fees during that period, funeral

diaries, and the rent of his house, and Ins sei-vants' wages tor the year or term current at his death. These the executors are in safety to pay on demand. If no diligence be used within six months, the executor may retain for his own debt. Such creditors of the deceased as have used diligence within a year after their debtor's death are preferable, on the subject of his testament, to the creditors of his next of kin.

The only passive title in moveables is vicious intromission; which may be defined, an unwarrantable intermeddling with the moveable estate of a person deceased, without the order of the law. This is not confined, as the passive titles in heritage are, to the persons interested in the succession, but strikes against all intromitters whatever. Where an executor confirmed intromits with more than he has confirmed, he incurs a passive title; fraud being in the common case presumed from his not giving up an inventory of the full subject intermeddled with.

Vicious intromission is also presumed where the depositories of a dying person are not sealed up,-as soon as he becomes incapable of sense, by his neare>t relations ; or, if he dies in a house not his own, they must be sealed up by the master of such house, and the keys delivered to the judge ordinaiy, to be kept by him, for the benefit of all having interest.

The passive title of vicious intromission does not take place where there is any probable title or circumstance that takes off the presumption of fraud. In consequence of this rule, necessary intromission, or custodiae causa, by the wife or children, who only continue the possession of the deceased in order to preserve his goods for the benefit of all concerned, infers no passive title.

The whole of a debtor's estate is subjected to the payment of his debts; and therefore both his heirs and executors are liable for them, in a question with creditors : but, as succession is by law divided into the heritable and the moveable es-tate, each of these ought, in a question between the several successors, to bear the burdens which naturally affect it. Action of relief is accordingly competent to the heir who has paid a moveable debt, against the executor ; and vice versa. This relief is not cut off by the deceased's having disponed either his land estate or his moveables with the burden of his whole debts.

3. Of last heirs and bastards. — Where a vas-sal dies, without having any heir who can prove the remotest propinquity to him, the king succeed? as last heir, both in the heritable and moveable estate of the deceased.

If the lands to which the king succeeds be holden immediately of himself, the property is consolidated with the superiority, as if resignation had been made in the sovereign's hands. If they are holden of a subject, the king, who can not be vassal to his own subject, names a donatory ; who, to complete his title, must obtain a decree of declarator. The whole estate of the deceased is in this case subjected to his debts, and to the widow's legal provisions. Neither the king nor his donatory is liable beyond the value of the succession.

A bastard can have no legal heirs except those of his own body. The king therefore succeed*

to him, failing his lawful issue, as last heir. Though the bastard, as absolute proprietor of his own estate, can dispose of his heritage in liege poustie, and of his moveables by ?..iy deed inter vivos ; yet he is disabled, ex defend natalium, from bequeathing by testament without letters of .estimation from the sovereign. If the bastard has lawful children, he may test without such letters, and name tutors and curators to his issue.

The legal rights of succession, being founded in marriage, can be claimed only by those who are born in lawful marriage. A bastard, though he cannot succeed jure sanguinis, may succeed by destination, where he is specially called to the succession by an entail or testament.

Aliens are incapable of succeeding in feudal rights, without naturalisation. Children born in a. foreign state, whose fathers were natural born subjects and not attainted, are held to be natural born subjects.

CHAP. VII. — OF REMEDIES AND MODE OF PROCEDURE.

1. Of the nature of actions for enforcing rights. — Actions are either real or personal. A real action is that which arises from a right in the thing itself; and which therefore may be directed against all possessors of that thing. A personal action is founded only on an obligation undertaken for the performance of some fact, or the delivery of some subject ; and therefore can be carried on against no other than the person obliged, or his heirs.

Actions, again, are either ordinary or rescissory. All actions are, in the sense of this division, ordinary, which are not rescissory. Rescissory actions are divided, 1. Into actions of proper improbation. 2. Actions of reduction-improbation. 3. Actions of simple reduction. Reduction-improbation is an action whereby a person, who may be hurt or affected by a writing, insists for producing or exhibiting it in court in order to have it set aside, or its effect ascertained under the certification that the writing if not produced shall be declared false and forged. As the certification hi this process draws after it KO heavy consequences, two terms are assigned to the defenders for production.

In an action of simple reduction, the certification is only temporary, declaring the writings called for null, until they be produced; so that

they recover their .“all force after production.

The most usual grounds of reduction of writings are, the want of the requisite solemnities; that the grantor was minor, or interdicted, or inhibited ; or that he granted it in prejudice of his lawful creditors.

In reductions on the head of force or fear, or fraud and circumvention, the pursuer must libel the particular circumstances from which his allegation is to be proved. Reduction is not competent upon every degree of force or fear ; it must be such as would shake a man of constancy and resolution. Neither is it competent on that fear which arises from the just authority of husbands or parents over their wives or children, nor upon the fear arising from the regular execution of lawful diligence by caption, provided the deeds granted under that fear relate to the

ground of debt contained in the diligent ; but, if they have no relation to that debt, they are reducible ex metu.

Alienations granted by debtors after contracting lawful debts, in favor of conjunct or confident persons, without just and necessary causes, and without a just price really paid, are null. One is deemed a prior creditor whose ground of debt existed before the right granted by the debtor ; though the written voucher of the debt should bear a date posterior to it.

Rights, though gratuitous, are not reducible, it the grantor had at the date thereof a sufficient fund for the payment of his creditors. Provisions to children are, in the judgment of law, gratuitous; so that their effect, in a question with creditors, depends on the solvency of the grantor; but settlements to wives, either in marriage contracts, or even after marriage, are onerous, in so far as they are rational ; and consequently are not reducible even though the grantor was insolvent. This rule holds also in rational tochers contracted to husbands : but it must, in all cases, be qualified with this limitation, ‘ if the insolvency of the grantor was not publicly known ;’ for, if it was, fraud is presumed in the receiver of the right, by contracting with the bankrupt.

The receiver of the deed, if he be a conjunct or confident person, must instruct or support the onerous cause of his right, not merely by his own oath, but also by some circumstances or adminicles. But, where a right is granted to a stranger, the narrative of it, expressing an

onerous cause, is sufficient per se to secure it against reduction. Persons are accounted conjunct whose relation to the granter is so near as to bar them from judging in his cause. Confident persons are those who appear to be in the granter's confidence by being employed in his affairs, as a steward or servant.

All voluntary payments or rights made by a bankrupt to one creditor, to disappoint the more timeous diligence of another, are reducible at the instance of that creditor who has used the prior diligence. But the creditor who neglects to complete his diligence within a reasonable time is not entitled to reduce any right granted by the debtor, after the time that the diligence is considered as abandoned.

A prohibited alienation, when conveyed feiy the receiver to another who is not privy to the fraud, subsists in the person of the bonft fide purchaser. In the case of moveable rights, this nullity is receivable by exception ; but it most be declared by reduction where the right is heritable. AH alienations by a bankrupt, within sixty days before his bankruptcy, to one creditor in preference to another, are reducible at the instance even of such creditors as had not used the least step of diligence.

Actions are divided into rei persecutoriae, and poenales. By the first the pursuer insists barely to recover the subject that is his, or the debt due to him; and this includes the damage sustained. In penal actions, which always arise ex delicto, something is also demanded by way of penalty.

Actions of spuibie, ejection, an 1 intrusion,

are penal. An action of spuilzie is competent to one dispossessed of a raoveable subject violently or without order of law, against the person dispossessing. Ejection and intrusion are, iu heritable subjects, what spuilzie is in moveables. The difference between the two first is, that, in ejection, violence is used ; whereas the intruder enters into the void possession, without either a title from the proprietor, or the warrant of

a judge.

The action of contravention of law-borrows is also penal. It proceeds on letters of law-borrows (from borgh a cautioner) which contain a warrant to charge the party complained upon, that he may give security not to hurt the complainer in his person, family, or estate.

The most marked division of actions is into petitory, possessory, and declaratory.

Petitory actions are those where something is demanded from the defender, in consequence of a right of property or of credit in the pursuer.

Potsessory actions are those which are founded either upon possession alone, as spuilzies; or upon possession joined with another title, as removings ; and they are competent either for getting into possession, for holding it, or for recovering it.

A declaratory action is that in which some right is craved to be declared in favor of the pursuer, but nothing sought to be paid or performed by the defender.

The action of double or multiple-poinding may be also reckoned declaratory. It is competent to a debtor who is distressed, or threatened with distress, by two or more persons claiming right to the debt. In these competitions, any of the competitors may bring an action of multiple-poinding in the name of the tenants or other debtors, without their consent, or even though they should disclaim the process. By the bankrupt statute it is competent, in the case of a forthcoming or multiple-poinding raised on an arrestment used within sixty days prior, or four calendar months subsequent to a bankruptcy, for any other creditor, who has used an arrestmeut, producing his interest, and making his claim in the process, at any time before the expiration of the four months, to be ranked,

A process of wakening is of the same class. An action is said to sleep when it lies over not insisted on for a year, in which case its effect is suspended ; but even then it may at any time within the years of prescription be revived or wakened by a summons.

An action that stands upon any of the inner house rolls cannot sleep ; nor an action in which the decree is pronounced, because it has got its full competition.

An action of transumpt falls under the same class. It is competent to

those who have a partial interest in writings that are not in their own custody, against the possessors thereof, for exhibiting them, that they may be transumed for their behoof: after which full duplicates are made out, collated, and signed, by one of the clerks of court, which are called transumpts, anil are as effectual as an extract from the register.

A summons, when applied to actions pursued

before the session, is a writ in the king's namti issuing from bis signet upon the pursuer's complaint authorising messengers to cite the defender to appear before the court and make his defences.

The days indulged by law to a defender between his citation and appearance, to prepare for his defence, are called inducise legales. If he is within the kingdom, twenty-seven days must be allowed him for that purpose ; and, out of it, two diets of sixty and fifteen. Defenders residing in Orkney or Zetland must be cited on forty days. In certain summonses, which are privileged, the induciae are shortened. Spuilzies and ejections proceed on fifteen days ; wakenings and transferences, being but incidental, on six.

Defences are pleas offered by a defender for eliding au action. They are either dilatory, which do not enter into the cause itself, and so can only procure an absolvitor from the lis pendens j or peremptory, which entirely cut off the pursuer's right of action.

By litiscontestation a judicial contract is understood to be entered into by the litigants, by which the action is perpetuated against heirs, even when it arises ex delicto. Litiscontestation is not formed till an act is extracted admitting the libel or defence to proof.

2. Of probation or evidence. — All allegations by parties to a suit must be supported by proper proof. Probation is either by writing, by the party's own oath, or by witnesses. In the case of allegations, which may be proved by either of the three ways, a proof is said to be admitted prout de jure, because in such case all the legal methods of probation are competent to the party ; if the proof he brings by writing be lame, he may have recourse either to witnesses or to his adversary's oath ; but, if he should first take himself to the proof by oath, he cannot thereafter use any other probation. As obligations or deeds signed by the party himself, or his ancestors or authors, must be of all evidence the least liable to exception ; therefore every debt or

allegation may be proved by proper evidence in writing. Books of account kept by merchants, tradesmen, and other dealers, though not subscribed, are probative against him who keeps them ; and, in case of furnishings by a shopkeeper, such books, if they are regularly kept by him, supported by the testimony of a single witness, afford a semiplena probatio in his favor, which becomes full evidence by his own oath in supplement. Notarial instruments and executions by messengers bear full evidence that the solemnities therein set forth were used, not to be invalidated otherwise than by a proof of falsehood ; but they do not prove any other extrinsic facts therein averred against third parties.

Regularly, no person's right can be proved by his own oath, nor taken away by that of his adversary ; because these are the bare averments of parties in their own favor. But, where the matter in issue is referred by one of the parties to the oath of the other, such oath, though made in favor of the deponent himself, is decisive of the point; because the reference is a virtual contract between the litigants, by which they are

understood to put the issue of the causes upon what shall be deposed. A defender, though he cannot be compelled to swear to facts in a libel properly criminal ; yet may in trespasses, where the conclusion is limited to a fine or to damages. Oaths of verity are sometimes referred by the judge to either party, ex officio; which, because they are not founded on anyi implied contract between the litigants, are not finally decisive, but may be traversed on proper evidence afterwards produced. These oaths are commonly put by the judge for supplying a lame or imperfect proof, and are therefore called oaths in supplement.

To prevent groundless allegations, oaths of calumny have been introduced, by which either party may demand his adversary's oath, that he believes the fact contained in his libel or defences to be just and true.

In all oaths, whether of verity or of calumny, the citation carries, or at least implies, a certification, that, if the party does not appear at the

day assigned for deposing, he shall be held pro oonfesso. Though an oath which resolves into a non memini cannot be said to prove any point, yet where one so deposes upon a recent fact, to which he himself was privy, his oath is considered as a dissembling of the truth, and he is held pro confesso, as if he had refused to swear. An oath in litem is that which the judge refers to a pursuer, for ascertaining either the quantity or the value of goods which have been taken from him by the defender without order of law, or the extent of his damages.

The law of Scotland rejects the testimony of witnesses, 1. In payment of sums above £100 Scots, which must be proved either scripto vel juramento ; 2. In all gratuitous promises, though for the smallest trifle ; 3. In all contracts where writing is either essential to their constitution, or where it is usually adhibited, as in the borrowing of money. On the other part, probation by witnesses is admitted to the extent of £100 Scots, in payments, nuncupative legacies, and verbal agreements, which contain mutual obligations, and it is received in certain cases to the highest extent.

No person, whose near relation to another bars him from being a judge in his cause, can be admitted as a witness for him ; but he may against him, except a wife or child, who cannot be com-pelFed to give testimony against the husband or parent. The testimony of persons is rejected who have been guilty of crimes that the law declares to infer infamy.

All witnesses, before they are examined in the cause, are purged of partial counsel ; that is, they must declare that they have no interest in the suit, nor have given advice how to conduct it ; that they have got neither bribe nor promise, nor have been instructed how to depose ; and that they bear no enmity to either of the parties.

Where facts do not admit a direct proof, presumptions are received as evidence, which in many cases make as convincing a proof as the direct. Presumptions are consequences deduced from facts known or proved, which infer the certainty, or at least a strong probability, of another fact to be proved. This kind of probation is

therefore called artificial, because it requires a reasoning to infer the truth of the point in question. Presumptions are either, 1. Juris et de jure; 2. Juris; or, 3. Hominis or judicis. The first sort obtains where statute or custom establishes the truth of any point upon a

presumption ; and it is so strong, that it rejects all proof that may be brought to elide it in special cases.

Presumptiones juris are those which the law-books or decisions have established. Most of this kind are founded merely on the want of a contrary proof; thus the legal presumptions for freedom, for life, for innocence, &c, are in effect so many negative propositions. All of them maybe elided, not only by direct evidence, but by other conjectures affording a stronger degree of probability to the contrary.

A fictio juris differs from a presumption : things are presumed which are likely to be true; but a fiction of law assumes for truth what is either certainly false, or at least is as probably false as true.

3. Of sentences. — Decrees of the court of session are either in foro contradictorio, where both parties have litigated the cause in the absence of the defender. Decrees of the session in foro cannot be again brought under the review of the court, either on points which the parties neglected to plead before sentence (which are called competent and omitted), or upon points pleaded and found insufficient (proponed and repelled). But decrees, though in foro, are reversible by the court where either they labor under essential nullities, e. g. where they are ultra petita, or not conformable to their grounds and warrants, or founded on an error in calculation, &c. ; or where the party against whom the decree is obtained has thereafter recovered evidence sufficient to overturn it, of which he knew not before. No appeal is to be received from sentences of the session after five years from extracting the sentence, unless the person entitled to such ap-peal be minor, clothed with a husband, noq compos mentis, imprisoned, or out of the kingdom. Sentences pronounced by the lord ordinary have the same effect, if not reclaimed against, as if they were pronounced in presence ; and all petitions against the interlocutor of an ordinary must be preferred within a certain number of days after signing such interlocutor.

Decrees in absence of the defender have not the force of res judicatae as to him. A party therefore may be restored against those upon paying to the other his costs. The sentences of inferior courts may be reviewed by the court of session, before decree by advocation, and after decree by suspension or reduction.

Reduction is the proper remedy, either where the decree has already received full execution by payment, or where it decrees nothing to be paid or performed, but simply declares a right in fa-vor of the pursuer.

Suspension is that form of law by which the effect of a sentence condemnatory, that has not yet received execution, is stayed or postponed till the cause be again considered. The first step towards suspension is a bill preferred to the lord ordinary on the bills. Suspensions of decrees in foro cannot pass, but by the whole lords in

time of session, and by three iu vacation time ; After a debtor is imprisoned, lie ought not to but other decrees may be suspended by any one of be indulged the benefit of the air, not even under the judges. As suspension has the effect of a guard. Any magistrate or jailer who shall , . >.—_i j;i: suffer the prisoner to go abroad, without a proper attestation, upon oath, of the dangerous state of liable subsidiarie for the debt

staying the execution of the creditor's legal dili gence, it cannot pass without caution given by the suspender to pay the debt, in the event it shall be found due. Where the suspender can-not, from his low or suspected circumstances, procure unquestionable security, the lords admit juratory caution, i. e. such as the suspender swears is the .best he can offer ; but the reasons of suspension are, in that case, to be considered with particular accuracy at passing the bill. Decrees in favor of the' clergy, of universities, hospitals, or parish schoolmasters, for their sti-ends, rents, or salaries, cannot be suspended,

his health, is Magistrates are in like manner liable if they shall .suffer a prisoner to escape through the insufficiency of their prison ; but if he shall escape under night by the use of instruments, or by open force, or by any other accident which can-not be imputed to the magistrates or jailer, they are not chargeable with the debt; provided they shall have, immediately after his escape, made all possible search for him.

Insolvent debtors may apply for a release

pends, rents, or salaries, cannot u< suspenueu, usuiveui ueuiuis may app'j •

but upon production of discharges, or on con-from prison upon a cessio bonorum, i. e. upon

sig ation of the sums charged for. Though he, in whose favor the decree suspended is pronounced, be always called the charger, yet a de-cree may be suspended before a charge be given on it. And suspension is competent even where there is no decree for putting a stop to any illegal act whatsoever. Letters of suspension are considered merely as a prohibitory diligence ; so that the suspender, if he would turn provoker, roust bring an action of reduction. If, upon discussing the letters of suspension, the reason shall be sustained, a decree is pronounced, suspending the letters of diligence on which the charge was given simpliciter, which is called a decree of suspension, and takes off the effect of the decree suspended. If the reasons of suspension be repelled, the court find the letters, of

their making over to their creditors all their es-tate real and personal. This must be insisted for by way of action, to which all the creditors of the prisoner ought to be made parties. The prisoner must in this action, which is cognizable only by the court of session, exhibit a particular inventory of his estate, and make oath that he has no other estate than is therein contained, and that he has made no conveyance of any part of it since his imprisonment, to the hurt of his creditors. He must also make oath whether he has granted any disposition of his effects before his imprisonment, and condescend on the persons to whom, and on the cause of granting it.

A fraudulent bankrupt is not allowed this privilege; nor a criminal, who is liable in any assythment or indemnification to the party in-

diligence orderly proceeded, i. e. regularly car-jured or his executors, though the crime itseli

should be extinguished by a pardon. A disposition granted on cessio bonorum is merely in farther security to the creditors, not in satisfaction, or in solutum of the debts.

Where a prisoner for debt declares upon oath, before the magistrate of the jurisdiction, that he

ried on ; and they ordain them to be put to farther execution.

4. Of executions. — Decrees are carried into execution, by diligence, either against the per-son, or against the estate of the debtor. The first step of personal execution is by letters of

horning, which pass by warrant of the court of has not wherewith to maintain himself, the ma-

session, on the decrees of magistrates of boroughs, sheriffs, admirals, and commissaries. If the debtor does not obey the letters of horning, within the days of -the charge, the charger, after denouncing him rebel, and registering the horning, may apply for letters of caption, which contain a command, not only to messengers, but to magistrates, to apprehend and imprison the debtor. Law secures peers, married women, and pu-pils, against personal execution by caption upon civil debts. Such commoners also as are elected to serve in parliament are secured against personal execution by the privilege of parliament. No caption can be executed against a debtor

gistrate may set him at liberty, if the creditor does not aliment him within ten days after intimation made for that purpose. But the magistrate may detain him in prison, if the creditor chooses to bear the burden of the aliment. The statute authorising this release, which is usualh called the act of grace, is limited to the case o. prisoners for civil debts.

Decrees are executed against the moveable estate of the debtor by arrestment or poindins, and against his heritable estate by inhibition, or adjudication.

5. Of arbitrations. — A decree arbitral is a sentence proceeding on a submission to arbiters.

within the precincts of the king's palace of Holy-A submission is a contract entered into by two

rood House ; but this privilege of sanctuary affords no security to criminals. Where the personal presence of a debtor under caption is necessary, in any of our supreme courts, the judires are empowered to grant him a protection,

or more parties, who have disputable rights or claims, whereby they refer their differences to the final determination of an arbiter or arbiters, and oblige themselves to acquiesce in what shall be decided. Where the day, within which the

for such time as may be sufficient for his coming arbiters are to decide, is left blank in the sub-and uumir, not exceeding a month. Protection mission, practice has limited the arbiter's power from diligence is also granted by the court of of deciding-to a year. Where a submission is

session under the bankrupt statutes, where it is aopi ed for with concurrence of the trustee, or a ceru n mim'jfcr of the creditors, as the case may require.

indefinite, like all other contracts, it subsists for forty years. Submissions, like mandates, expire by the death of any of the parties' submitters before sentence. As arbiters are not vested uith

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nrisdiction, they cannot compel witnesses to make oath before them, or havers of writings to exhibit them ; but this defect is supplied by the court of session, who at the suit of the arbiters, or of either of the parties, will grant warrant for citing witnesses, or for the exhibition of writings. For the same reason, the power of arbiters is barely to decide; the execution of the decree belongs to the judge. Where the submitters consent to the registration of the deeree arbitral, performance may be enforced by summary diligence.

The power of arbiters is wholly derived from the consent of parties. Hence, where their powers are limited to a certain day, they cannot pronounce sentence after that day ; nor can they subject parties to a penalty higher than that •which they have agreed to in the submission ; and where a submission is limited to special claims, sentence pronounced on subjects not specified in the submission is null. But on the other hand, as submissions are designed for a most favorable purpose, the amicable composing of differences, the powers thereby conferred on arbiters receive an ample interpretation. Decrees arbitral are not reducible upon any ground, ex-cept corruption, bribery, or falsehood.

CRIMINAL LAW. CHAP. I. — OF CRIMES.

1 . Their nature. — The word crime in its most general sense includes every breach either of the law of God, or of our country ; in a more restricted meaning it signifies such transgressions of law as are punishable by courts of justice. By the Scottish law, no private party, except the party injured, or his next of kin, can accuse criminally ; but the king's advocate, who in this question represents the community, has a right to prosecute all crimes in vindictam publicam, though the party injured should refuse to con-cur. Smaller offences, as petty riots, injuries, &c., which do not demand the public vengeance, pass generally by the appellation of delicts, and are punished either by fine or imprisonment.

The essence of a crime is, that there be an intention in the actor to commit ; for an action in which the will of the agent has no part is not a proper object either of reward or punishment. Simple negligence does not therefore constitute a proper crime. Yet, where it is extremely gross, it may be punished arbitrarily. Far less can we reckon in the number of crimes, those committed by an idiot or furious

person ; but smaller degrees of fatuity, which only darken reason, will not afford a total defence, though they may save from the pcena ordinaria. Actions committed in drunkenness are not to be considered as involuntary, seeing the drunkenness itself, which was the first cause of the action, is both voluntary and criminal.

On the same principle, such as are in a state of infancy, or in the confines of it, are incapable of a criminal action, dole not being incident to that age; but the precise age at which a person becomes capable of dole, being fixed neither by nature nor by statute, is by our practice to be gathered by the judge, as he best can, from the VOL. XII.

understanding and manners of the person accused. Where the guilt of a crime arises chiefly from statute, the actor, if he is under puberty, can hardly be found to be guilty ; but, where nature itself points out its deformity, he may, if he is proximus pubertati, be more easily presumed capable of committing it ; yet, even ia that case he will not be punished pcena ordinariii.

One may be guilty of crime, not only by perpetrating it himself, but being accessory to a crime committed by another. A person may be guilty, art and part, either, 1. By giving advice Dr counsel to commit the crime: or, 2. By giving warrant or mandate to commit it ; or, 3. By actually assisting the criminal in the execution. It is generally agreed by doctors that, in the more atrocious crimes, the adviser is equally punishable with the criminal ; and that, in the slighter, the circumstance arising from the adviser's smaller age, the jocular or careless manner of giving advice, &c., may be received as pleas for softening the punishment. One who gives mandate to commit a crime, as he is the first spring of action, seems more guilty than the per-son employed as the instrument in executing it ; yet the actor cannot excuse himself under the pretence of orders which he ought not to have obeyed.

Assistance may be given to the committer of a crime not only in the actual execution but previous to it, by furnishing him, intentionally, with poison, arms, or the other means of perpetrating it. That sort of assistance which is not given till after the criminal act, and which is commonly called abetting, though it be of itself criminal, does not infer art and part of the principal crime ; as if one should favor the escape of a criminal knowing him to be such, or conceal him from justice.

Those crimes that are in their consequences most hurtful to society are punished capitally, or by death ; others escape with a smaller punishment, sometimes fixed by statute, and sometimes arbitrary, i. e. left to the discretion of the judge, who may exercise his jurisdiction, either by fine, imprisonment, or a corporal punishment. Where the punishment is left by law to the discretion of the judge, he can in no case extend it to death. The single escheat of the criminal falls, on conviction, in all capital trials, though the sentence should not express it.

2. Of crimes against religion. — Certain crimes are committed more immediately against God himself; others against the state ; and a third kind against particular persons. The chief crime in the first class, cognisable by temporal courts, is blasphemy, under which is included atheism. This crime consists in the denying or vilifying the Deity by speech or writing. All who curse God, or any of the persons of the blessed Trinity, are to suffer death even for a single act; and those who deny him, if they persist in their de-nial. The denial of a providence, or of the authority of the Holy Scriptures, is punishable capitally for the third offence. No prosecution can now be carried on for witchcraft or conjura-tion. But all who undertake, from their skill in any occult science, to tell fortunes, or discover stolen eoods, are to suffer imprisonment for a

year s»a..d in the pillory four times in that year, commotions or disturbances in the state and find surety for their future good behaviour. “^ vprhal nr m. V.rtmL swlitinn. or

3. Of crimes against the state and government. — Some crimes against the state are levelled directly against the supreme power, and strike at the constitution itself: others discover such a contempt of law as tends to baffle authority, or slacken the reins of government. Treason, crimen majestatis, is that crime which is aimed against the majesty of the state, and can be committed only by those who are subjects of that

disturbance of the public peace. Those who are state either by birth or residence. Soon after convicted of this crime are punished with the

confiscation of their goods ; and their lives are at the king's will. If any persons, to the number of twelve, shall assemble, and, being required by a magistrate or constable to disperse, shall never-

either verbal or real. Verbal sedition, or leasing-making, is inferred from the uttering of words tending to create discord between the king and his people. It is punished either by imprisonment, fine, or banishment, at the discretion of the judge. Real sedition is generally committed by convocating together any considerable number of people, without lawful authority, under the pretence of redressing some public grievance, to the

the union of the two kingdoms, in 1707, the laws of treason then in force in England were extended to Scotland by 7 Ann. c. 21, both with regard to the facts constituting that crime, to the forms of trial, the corruption of blood, and all the penalties and forfeitures consequent on it.

It is high treason by the law of England to imagine the death of the king, queen consort, or

theless continue together for an hour after such comrraud, the persons disobeying shall suffer death and confiscation of moveables.

4. Of crimes against public justice and policy.

of the heir apparent to the crown ; to levy war — Judges who wilfully, or through corruption.

against the king, or adhere to his enemies ; to counterfeit the king's coin, or his great or privy

use their authority as a cover to injustice or oppression, are punished with the loss of honor,

seal; to kill the chancellor, treasurer, or any of fame, and dignity. Under this head may be the twelve judges of England, while they are classed theftbote (from bote, compensation), which ‘ ‘ ‘ ‘ ‘ ” ‘ ‘- *— iL is the taking a consideration in money or goods

doing their offices ; which last article is, by the forenamed act 7 Ann., applied to Scotland, in the case of slaying any judge of the session or justiciary sitting in judgment. Those who wash, clip, or lighten the proper money of the realm ; who advisedly affirm, by writing or printing, that the pretender has any right to the crown, that the king and parliament cannot limit the succession to it, or who hold correspondence with the pretender, or any person employed by him, are also guilty of treason.

The forms of proceeding in the trial of treason, whether against peers or commoners, are set forth in a small treatise published by order of the house

from a thief to exempt him from punishment, or connive at his escape from justice. A sheriff* or other judge, guilty of this crime, forfeits his life and goods. And even a private person who takes theftbote, suffers as the principal thief. The buying of disputed claims concerning which there is a pending process, by any judge or member either of the session or of an inferior court, is punished by the loss of the delinquent’s office, and all the privileges thereto belonging.

Deforcement is the opposition given, or resistance made, to messengers or other officers while they are employed in executing the law. The

of lords in 1709, subjoined to a collection of court of session is competent to this crime. It

statutes concerning treason. By the conviction upon this trial, the whole estate of the traitor becomes forfeited to the crown. His blood is also corrupted, so that, on the death of an ancestor he cannot inherit ; aˆd the estate which he cannot take falls to the immediate superior as escheat, ob dpfectum haeredis without distinguishing whether the lands be held of the crown or of a subject. No attainder for treason shall,

is punishable with the confiscation of moveables, the one half to the king, and the other to the creditor at whose suit the diligence was used. Armed persons, to the number of three or more, assisting in the illegal running, landing, or exporting of prohibited or uncustomed goods, or any one who shall resist, wound, or maim, any officer of the revenue in the execution of his of-fice, are punishable with death and the confisca-

after the death of the pretender and all his sons, tion of moveables.

hurt the right of any person, other than that of Breach of arrestment is a crime of the same the offender during his natural life: the rights of nature with deforcement, as it imports aeon-creditors and other third parties, in the case of tempt of the law and of the judges. It sub-forfeiture on treason, must be determined by the jects to an arbitrary corporal punishment, and

law of England.

the escheat of moveables ; with a preference to

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overlooking or concealing of treason. It is in-sum as shall be modified to him by the judge,

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by his office to take examinations; ling of markets; that is, the buying of goods

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ion to Scotland. Its punishment is, infers the escheat of moveables, as also slaying

by the law of England, perpetual imprisonment, salmon in forbidden time, destroying ploueh—

sther with the forfeiture of the offender's graith in time of tillage, slaying or houghing—

noveables, and of the profits of his heritable horses or cows in time of harvest, and destroy-

:state durmtr his life ; that is, in the style of our ing or spoiling growing timber. iMMlil simple and liferent escheat. 5. Crimes against individuals. (1.) Murder.—

t sedition consists in the racing Crimes against particular persons may be di

reeled either against life, limb, liberty, chastity, goods, or reputation. Murder is the wilful taking away of a person's life without a necessary cause. The law makes no distinction between premedi-tated and sudden homicide ; both are punished capitally. Casual homicide where

the actor is in some degree blameable, and homicide in self-defence, where the just bourds of defence have been exceeded, are punished arbitrarily : but the slaughter of night-thieves, house-breakers, assistants in masterful depredations, or rebels denounced for capital crimes may be committed with impunity. The crime of demembration, or the cutting off of a member, is joined with that of murder ; but, in practice, its punishment has been restricted to the escheat of moveables, and an assythment or indemnification to the party. Mutilation, or the disabling of a mem-ber, is punished at the discretion of a judge.

(2.) Self-murder. — Self-murder is as highly criminal as the killing our neighbour ; and for this reason the law has, contrary to the rule crimina morte extinguuntur, allowed a proof of the crime after the offender's death, that his single escheat might fall to the king or hrs donatory. To this end an action must be brought, not before the justiciary, but the session, because it is only intended ad civilem effectum, for proving and declaring the self-murder ; and the next of kin to the deceased must be made a party to it

(3.) Parricide. — The punishment of parricide, or the murder of a parent, is not confined by the Scottish law to the criminal himself. All his posterity in the right line are declared incapable of inheriting, and the succession devolves on the next collateral heir. Even the cursing or beating of a parent infers death, if the person guilty be above sixteen years ; and an arbitrary punishment if he be under it. A presumptive or statutory murder is constituted by 1690, c. 21, by which any woman who shall conceal her pregnancy during its whole course, and shall not call for, or make use of, help in the birth, is to be reputed the murderer, if the child be dead or missing. This act was intended to discourage the unnatural practice of women making away with their children begotten in fornication, to avoid church censures. A new statute has been since enacted, with a view to improve the law of the act of 1 690.

(4.) Duelling. — Duelling is the crime of fighting in single combat on previous challenges given and received. Fighting in a duel, without license from the king, is punishable by death ; ind whatever person, principal, or second, shall give a challenge to fight a duel, or shall accept a challenge, or otherwise engage therein, is punished by banishment and escheat of moveahles, though no actual fighting should ensue.

(5.) Haimsucken. — Haimsucken (from haim, ' home' and socken, ' to seek or pursue') is the assaulting or beating of a person in his own

house. The punishment of this crime is no where defined, except in the books of the Majesty, which mike it the same as that of a rape. It is, theiefore, like rape, capital by our practice. The assault must be made in the proper house of the person assaulted, where he lies and rises daily and nightly ; so that neither a public

nor even a private house, where one is only transiently, falls within the law. Any party to a law suit, who shall slay, wound, or otherwise invade his adversary, at any period of time between executing the summons and the complete execution of the decree, or shall be accessory to such invasion, shall lose his cause. The sentence pronounced on this trial, against him who has committed the battery, is not subject to reduction, either on the head of minority, or on any other ground whatever ; and if the person prosecuted for this crime shall be denounced for not appearing, his liferent, as well as single escheat, falls upon the denunciation.

(6.) Wrongous imprisonment. — The crime of wrongous imprisonment is inferred by granting warrants of commitment in order to trial, proceeding on informations not subscribed, or without expressing the cause of commitment ; by receiving or detaining prisoners on such warrants ; by refusing to a prisoner a copy of the warrant of commitment; by detaining him in close confinement above eight days after his commitment; by not releasing him on bail, where the crime is bailable ; and by transporting persons out of the kingdom, without either their own consent or a lawful sentence. The persons guilty of a wrongous imprisonment are punished by a pecuniary mulct, from £6000 down to £4000 Scots, according to the rank of the per-son detained ; and the judge, or other person guilty, is over and above subjected to pay to the person detained a certain sum per diem, proportioned to his rank, and is declared incapable of public trust. All these penalties may he insisted for by a summary action before the session, and are subject to no modification.

(7.) Adultery. — Adultery is the crime by which the marriage-bed is polluted. This crime could neither by the Roman nor Jewish law be committed, but where the guilty woman was the wife of another. By the law of Scotland ‘t is adultery, if either the man or woman be married The law distinguishes between simple adultery and that which is notorious or manifest. Open and manifest adulterers, who con tin ae incorrigible notwithstanding the censures of the church, are punished capitally. This Berime is distinguished by one or other of the following characters ; where there is issue procreated between the

adulterers, 01 where they keep bed and company together notoriously, or where they give scandal to the church, and are, upon their obstinately refusing to listen to its admonitions, excommunicated. The punishment of simple adultery, not being defined by statute, is left to the discretion of the judge ; but custom has made the falling of the single escheat one of its penalties.

(8.) Bigamy. — Bigamy is a person's entering into the engagement of a second marriage, in violation of a former marriage-vow subsisting. Bigamy, on the part of the man, has been tolerated in many states, before the establishment of Christianity, even by the Jews themselves ; but it is prohibited by the precepts of the gospel, and it is punished by the Scottish law, whether on the part of the man or of the woman, with the pains of perjury.

(9.) Incest.— Incest is committed by persons who stand within the degrees of kindred forbidden in Lev. xviii., and is punished capitally. The same degrees are prohibited in affinity, as in consanguinity, Lev. xviii. 15, et seq. As this crime is repugnant to nature, all children, whether lawful or natural, stand on an equal footing : civilis ratio civilia jura corrumpere po-test, non vero uaturalia. It is difficult indeed to bring a legal proof of a relation merely natural on the side of the father ; but the mother may be certainly known without marriage.

(10.) Rape.— There is no explicit statute making rape, or the ravishing of women, capital ; but it is plainly supposed in act 1612, c. 4, by which the ravisher is exempted from the pains of death, only in the case of the woman's subsequent consent, or her declaration that she went off' with him of her own free will ; and even then he is to suffer an arbitrary punishment, either by imprisonment, confiscation of goods, or a pecuniary fine.

(11.) Theft, robbery, and piracy. — Theft is defined a fraudulent intermeddling with the property of another, with a view of making gain. The old law of Scotland proportioned the punishment of the theft to the value of the goods stolen ; heightening it gradually from a slight corporal punishment to a capital, if the value) amounted to

thirty-two pennies Scots, which in the reign of David I. was the price of two sheep. In several later acts it was taken for granted that this crime is capital. But where the thing stolen is of small value, it is considered, not as theft but as pickery, which is punished either corporally, or by banishment. The breaking of orchards, and the stealing of green wood, is punished by a fine, which rises as the crime is repeated.

Theft may be aggravated into a capital crime, though the value of the thing stolen be trifling; as theft twice repeated, or committed in the night, or by banded men, or of things set apart for sa-cred uses. The receivers and concealers of stolen goods, knowing them to be such, suffer as thieves. Those who barely harbour the person of the criminal, within forty-eight hours either before or after committing the crime, are punished as par-takers of the theft. Such as sell goods belonging to thieves or lawless persons, who dare not themselves come to market, are punished with banishment and the escheat of moveables.

Theft attended with violence is called robbery ; and in the old statutes rief or stouthrief. under which class may be included sorning, or the taking of meat and drink by force, without pay-ing for it. Stouthrief came at last to be committed so audaciously, by bands of men associated together, that it was thought necessary to vest all our freeholders with a power of holding courts upon sorners and rievers, and condemning them to death. Nay, all were capitally punished, who to secure their lands from depredation paid to the rievers a yearly contribution, which got the name of black mail. An act also passed, commanding to banishment a band of sorners, supposed to come from Egypt, called gypsies, and ailju-lginp to death all that should “be reputed Egyptians, if tu’inu thereafter within the kingdom. Robbery committed on the seas is called piracy, and is punished capitally by the high admiral. Several of the facts which constitute this crime are set forth in statute 8. Geo. I. c. 24.

(12.) Falsehood and forgery. — Falsehood, in a large sense, is the fraudulent imitation or suppression of truth, to the damage of another. The lives and goods of persons convicted of using false weights or measures were, by our old law, in the king’s mercy ; and their heirs could not inherit but upon a remission. The latest statute against this crime punishes it by confiscation of moveables. That particular species of falsehood which consists in the falsifying of writings passes by the name of forgery. Our practice has now of a long time, agreeably to the Roman law, made this crime capital ; unless the forgery be of executions or other writings of smaller moment; in which case it is punished arbitrarily. The writing must not only be fabricated but put

to use, or founded on, in order to infer this crime. And, though it be strictly criminal, yet the trial of it is competent to the court of session. Where improbation is moved against a deed by way of exception, the inferior judge, before whom the action lies, may try the question ad civilem effectum. When it is pleaded as an exception, our practice to discourage affected delays obliges the defender, who moves it, to consign £40 Scots ; which he forfeits, if his plea shall appear calumnious. Where a person found guilty of forgery by the court of session, is by them remitted to the justiciary, an indictment is there exhibited against him, and a jury sworn, before whom the decree of session is produced, in place of all other evidence of the crime, in respect of which the jury find the pannel guilty ; so that decree being pronounced by a competent court, is held as full proof, or, in the style of the bar, as probatio probata.

(13.) Perjury and subornation. — Perjury, which is the judicial affirmation of a falsehood on oath, really constitutes the crimen falsi ; for he who is guilty of it does in the most solemn manner substitute falsehood in the place of truth. To constitute this crime, the violation of truth must be deliberately intended by the swearer; and therefore reasonable allowance ought to be given to forgetfulness or misapprehension according to his age, health, and other circumstances. The breach of a promissory oath dops not infer this crime ; for he who promises on oath may sincerely intend performance when he swears, and so cannot be said to call on God to attest a falsehood. Though an oath, however false, if made upon reference in a civil question, concludes the cause, the person perjured is liable to a criminal trial ; for the effect of the reference can go no further than the private right of the parties.

Notwithstanding the mischievous consequences of perjury to society, it is not punished capitally, but by confiscation of moveables, imprisonment for a year, and infamy. The court of session is competent to perjury incidenter when in any examination upon oath, taken in a cause depending before them, a person appears to have sworn falsely : but in the common cabe, that trial is proper to the justiciary. Subornation

of perjury consists in tampering with persons who are to swear in judgment, by directing them now they are to depose; and it is punished with the pains of' perjury.

(14.) Stellionate, double conveyance*, fraudulent bankruptcy, &>c. — The crime of Stellionate, from stellio, includes every fraud which is not distinguished by a special name ; but is chiefly applied to conveyances of the same right granted by the proprietor to different disponees. The punishment of Stellionate must necessarily be arbitrary, to adapt it to the various natures and different aggravations of the fraudulent acts. The persons guilty of that kind of it which consists in granting double conveyances, are by our law declared infamous, and their lives and goods at the king's mercy. The cognisance of fraudulent bankruptcy is appropriated to the court of session, who may inflict any punishment on the offender that appears proportioned to his guilt, death excepted.

(15.) Usury. — The crime of usury, before the reformation, consisted in the taking of any interest for the use of money ; and now in taking u higher rate of interest than is authorised by law. It is divided into usura manifesta, or direct; and velata, or covered. One may be guilty of the first kind either where he covenants with the debtor for more than the lawful interest on the loan money ; or where one receives the interest of a sum before it is due, since thereby he takes a consideration for the use of money before the debtor has really got the use of it. Where a debt is clogged with an uncertain condition, by which the creditor runs the hazard of losing his principal, he may covenant for a higher interest than the legal, without the crime of usury ; for there the interest is not given merely in consideration of the use of the money, but of the danger undertaken by the creditor.

Covered usury is that which is committed under the mask, not of a loan, but of some other contract; e. g. a sale or an improper wadset. And, in general, all obligations entered into with an intention of getting more than the legal interest for the use of money, however they may be disguised, are usurious. As a further guard against this crime, the taking more than the legal interest for the forbearance of payment of money, merchandise, or other commodities, by way of loan, exchange, or other contrivance whatever, or the taking a bribe for the loan of money, or for delaying its payment when lent, is declared usury. Where usury is proved, the usurious obligation is not only declared void, but the creditor, if he has received any unlawful profits, forfeits the treble value of the sums or goods lent. Usury, when

it is to be pursued criminally, must be tried by the justiciary ; but where the libel concludes only for voiding the debt, or restitution, the session is the proper court.

(1 6.) Injury to character, slander, fyc. — Injury, in its proper acceptation, is the reproaching or affronting our neighbour. Injuries are either verbal or real. A verbal injury, when directed naainst a private person, consists in the uttering contumelious words, which te»d to expose our neighbour's character by making him little or

ridiculous. It does not seem that the twitting one with natural defects, without any sarcasticul reflections, though it be uncharitable, falls under this description, as these imply no real renroach in the just opinion of mankind. Where the injurious expressions have a tendency to blacken one's moral character, or fix some particular guilt, and are deliberately repeated in different companies, or handed about in whispers to confidants, it then grows up to the crime of slander; and, where a person's moral character is thus attacked, the animus injuriandi is commonly inferred from the injurious words themselves, unless special circumstances be offered to take off the presumption ; e. g. that the 'words are uttered in judgment in one's own defence, or by way of information to a magistrate and had some foundation in fact. Though the cognisance of slander is proper to the commissaries, who, as the judices Christianitatis, are the only judges of scandal ; yet, for some time past, bare verbal injuries have been tried by other criminal judges, and even by the session. It is punished either by a fine proportioned to the condition of the persons injuring and injured, and the circumstances of time and place ; or if the injury import scandal, by publicly acknowledging the offence ; and frequently the two are conjoined. The calling one a bankrupt is not, in strict speech, a verbal injury, as it does not affect the person's moral character; yet, as it may hurt his credit in the way of business, it founds him in an action of damages, which must be brought before the judge ordinary. A real injury is inflicted by any fact by which a person's honor or dignity is affected ; as striking one with a cane, or even aiming a blow without striking; spitting in one's face ; assuming a coat of arms, or any other mark of distinction proper to another, &c. The composing and publ.sium: defamatory libels may be reckoned of this kind. Real injuries are tried by the judge ordinary, and punished either by fine or imprisonment, according to the demerit of the offenders.

CHAP. II. — OF PUNISHMENT.

1. Of criminal jurisdiction. — Criminal jurisdiction is founded, 1. Ratione domicilii, if the defender dwells within the territory of the judge. Vagabonds, who have no certain domicile, may be tried wherever they are apprehended. 2. Ratione delicti, if the crime was committed within the territory. By a temporary act now expired, treason, committed in certain Scottish counties, was made triable by the ˆourt of justiciary, wherever it should sit.

No criminal trial can proceed, unless the per-son accused is capable of making hi= defence. Absents, therefore, cannot be tried ; nor fatuous, nor furious persons, durante furore, even for crimes committed while they were in their senses. But our practice considers every person who is capable of dole to be also sufficiently qualified for making his defence in a criminal trial.

No person can be imprisoned in order to stand tiial for any crime, without a warrmt in writing expressing the cause and proceeding upon a subscribed information, unless in the case of indignities done to judges, riots, and other offences,

specially mentioned :r .ft 1701, c. 6. fcvery prisoner committed for Unas, if the crime of which he is accused be not capital, is entitled to be released upon bail, the extent of which is to be modified by the judge, not exceeding 12,000 merks, Scots, for a nobleman, 6000 for a landed gentleman, 2000 for every other gentleman or burgess, and “600 for any other inferior person : or, in the option of the judge, £60 sterling. That persons who, either from the nature of the crime with which they are charged, or from their low circumstances, cannot procure bail, may not be for ever in prison untried, it is lawful for every prisoner to apply to the criminal judge, that his trial may be brought on. The judge must, within twenty-four hours after such application, issue letters directed to messengers, for intimating to the prosecutor to fix a diet for the prisoner’s trial, within sixty days after the intimation, under the pain of wrongous imprisonment : and, if the prosecutor does not insist within that time, or, if the trial is not finished withing forty days more when carried on before the justiciary, or in thirty days when before any other judge, the prisoner is, upon a second application, setting forth that -the legal time is elapsed, entitled to his freedom, under the same penalty.

Upon one's committing any of tne grosser crimes, it is usual for a justice of the peace, sheriff, or other judge, to take a precognition of the facts, i. e. to examine those who were present at the criminal act, upon .the special circumstances attending it, in order to know whether there is ground for a trial, and to serve as a direction to the prosecutor how to set forth the facts in the libel ; but the persons examined may insist to have their declarations cancelled before they give testimony at the trial. Justices of the peace, sheriffs, and magistrates of boroughs, are also authorised to receive informations concerning crimes to be tried in the circuit courts ; which informations are to be transmitted to the justice clerk forty days before the sitting of the respective courts. To discourage groundless criminal trials, all prosecutors, where the defender was absolved, were condemned by statute in costs as they should be modified by the judge ; and, besides, were subjected to a small fine to be divided between the fisc and the defender : and, where the king's advocate was the only pursuer, his informer was made liable. This sufficiently warrants the present practice of condemning vexatious prosecutors in a pecuniary mulct, though far exceeding the statutory sum.

2. Of prosecutions. — The forms of trial upon criminal accusations differ much from those observed in civil actions, if we except the case of such crimes as the court of session is competent to, and of less offences tried before inferior courts. The trial of crimes proceeds either upon indictment, which is sometimes used when the person to be tried is in prison, or by criminal letters issuing from the signet of the justiciary. In either case, the defender must be served with ;i full copy of the indictment or letters, and with a list of the witnesses to be brought against him, and of the persons who are to pass on the inquest ; and fifteen free days must intervene be-

tween 1 is being so served and the day of appearance. When the trial proceeds upon criminal letters, the private prosecutor must give security, at raising the letters, that he will report them, duly executed, to the justiciary in the terms of 1535, c. 35; and the defender, if he be not already in prison, is by the letters required to give caution, within a certain number of ^°ys after his citation, for his appearance upon the day fixed for his trial ; and, if he gives none within the days of the charge, he may be denounced rebel, which infers the forfeiture of his moveables.

Libel. — That part of the indictment, or of the criminal letters, which contains the grounds of the charge against the defender, and the

nature or degree of the punishment he ought to suffer, is called the libel. All libels must be special, setting forth the particular facts inferring the guilt, and the particular place where these facts were done. The time of committing the crime may be libelled in more general terms, with an alternative as to the month, or day of the month ; but, as it is not practicable in most cases to libel upon the precise circumstances of accession tha may appear in proof, libels against accessories are sufficient, if they mention, in general, that the persons prosecuted are guilty art and part.

Letters of exculpation. — The defender of a criminal trial may raise letters of exculpation, foi citing witnesses in proof of his defences against the libel, or of his objections against any of the jury or witnesses, which must be executed on the same day of appearance with that of the indictment or criminal letters.

Diets of appearance. — The diets of appearance, in the court of justiciary, are peremptory. The criminal letters must be called on the very day to which the defender is cited; and hence, if no accuser appears, their effect is lost, instantia perit, and new letters must be raised. If the libel, or any of the executions, shall to the prosecutor appear informal, or if he be diffident of the proof, from the absconding of a necessary witness, or such like, the court will, upon a mo-tion made by him, desert the diet pro loco et tempore; after which new letters tecome alsc necessary. A defender who does not appear on the very day to which he is cited is declared fugitive ; in consequence of which his single escheat falls. The defender, after his appearance in court, is called the pannel.

The two things to be chiefly regarded in a criminal libel are, 1. The relevancy of the facts,

1. e. their sufficiency to infer the conclusion;

2. Their truth. The consideration of the first belongs to the judge of the court; that of the other to the jury of assize. If the facts libelled be found irrelevant, the pannel is dismissed from the bar ; if relevant, the court remits the proof thereof to be determined by the jury; which must consist of fifteen men, picked out by the court from a greater number, not exceeding forty-five, who have been all summoned, and given in list to the defender at serving him with a copy of the libel.

Evidence. — Crimes cannot, lu.e debts, be referred to the defender's oath ; for no person is compellable to swear agains' himself where his

lile, limb, liberty, or estate, is concerned ; nor even in crimes which infer infamy, because one's good name is, in right estimation, as valuable as his life. There is one exception, however, to ihis rule in trying the crime of usury, which may be proved by the usurer's oath, notwithstanding the rule, nemo tenetur jurare in suam turpitu-dinem. Crimes, therefore, are, in tlv general case, proveable only hy the defender's tret confession, or by writing, or by witnesses. No ex-tra-judicial confession, unless it is adhered to by the pannel in judgment, can be admitted as evidence.

All objections relevant against a witness, in civil cases, are also relevant in criminal. No witness is admitted who may gain or lose by the event of the trial. Socii criminis, or associates in the same crime, are not admitted against one another, except either in crimes against the state, as treason ; in occult crimes, where other witnesses cannot be had, as forgery ; or in thefts or depredations committed in the Highlands The testimony of the private party injured may be received against the pannel, where the king's advocate is the only prosecutor, if, from the na-ture of the crime, there must needs be a penury of witnesses, as in rape, robbery, 8cc.

The jury and their verdict. — After all the witnesses have been examined in court, the jury are shut up in a room by themselves, where they must continue, excluded from all correspondence, till their verdict, or judgment, be subscribed by the foreman, or chancellor, and clerk ; and accordingly to this verdict the court pronounces sentence, either absolving or condemning. It is not necessary, by -the law of Scotland, that a jury should be unanimous in finding a person guilty; the narrowest majority is as sufficient against the pannel as for him. Juries cannot be punished on account of an erroneous verdict, either for or against the pannel. Though the proper business of a jury be to enquire into the truth of the facts found relevant by the court, for which reason they are sometimes called the inquest, yet, in many cases, they judge, also, in matters of law or relevancy. Thus, though an objection against a witness should be repelled by the court, the

jury are under no necessity to give more credit to his testimony than they think just ; and, in all trials of art and part, where special facts are not libelled, the jury, if they return a general verdict, are indeed judges, not only of the truth, but of the relevancy of the facts that are sworn to by the witnesses. A general verdict is that which finds, in general terms, that the pannel is guilty, or not guilty, or that the libel or defences are proved or not proved. In a special verdict, the jury finds certain facts proved, the import of which is to be afterwards considered by the court.

Execution. — Criminal judges must now suspend, fo-sr.rne time, the execution of such sentences as ariect life or limb, that so condemned criminals, whose cases deserve favor, may have access to apply to the king for me cy. No sentence of any court of judicature south of the river Forth, importing either death or demem-braiion, can be executed in less than thirty days; and, if north of it, in less than forty days, after the date of the sentence. But corporal punish-

ments, less than death, or dismembering, e. g. whipping, pillory, &c., may be inflicted eight days after sentence beyond it.

Extinction or remission of crimes. — Crimes are extinguished (1.) By the death of the criminal ; both because a dead person can make no defence, so that his trial would be truly a judging upon the hearing of one side ; and because, though his guilt should be ever so notorious, he is, after death, carried beyond the reach of human penalties. Such trials, therefore, can have no effect, but to punish the innocent heir, contrary to that most equitable rule, culpa tenet suos auctores.

(2.) Crimes may be extinguished by a remission from the sovereign. But a remission, though it secures the delinquent from the public resentment, the exercise of which belongs to the crown, cannot cut off the party injured from his claim of damages, over which the crown has no prerogative. Whoever, therefore, founds on a remission, is liable in damages to the private prosecutor, in the same manner as if he had been tried and found guilty. Even general acts of indemnity passed by parliament, though they se-cure against such penalties as the law inflicts upon the criminal merely per modum poenae, yet do not against the payment of any pecuniary fine that is given by the statute to the party injured, nor against the demand of any claim competent to him in name of damages.

Less injuries, which cannot be properly said to affect the public peace,

may be extinguished, either by the private party's expressly forgiving him, or by his being reconciled to the offender after receiving the injury. Hence arises the rule, dissimulatione tollimr injuria. But, where the offence is of a higher nature, the party injured, though he may pass from the prosecution, in so far as his private interest is concerned, cannot preclude the king's advocate, or procurator fiscal, from insisting ad vindictam publicam.

Crimes are also extinguished by prescription, which operates by the mere lapse of time, without any act either of the sovereign or of the private sufferer. Crimes prescribe in twenty years ; but, in particular crimes, the prescription is limited by statute to a shorter time. No person can be prosecuted, upon the act against wrongous imprisonment, after three years. High treason, committed within his majesty 'sdomin.ons, suffers likewise a triennial prescription, if indictment be not found against the traitor within that timf. All actions, brought upon any penal statute made or to be made, where the penalty is appropriated to the crown, expire in two years after committing the offence ; and, where the penalty goes to the crown or other prosecutor, the prosecutor must sue within one year, and the crown within two years after the year ended. Certain crimes are, without the aid of any statute, extinguished, by a shorter prescription than twenty years. By our old law, in the cases of rape, robbery, and hame-sucken, the party injured was not heard after a silence of twenty-four hours ; from a presumption that persons could not be so grossly injured without immediately complaining: And it is probable that a prosecution for these crimes, if delayed for any considerable time, would be cas<,

e\e:i ;it this day, or at least the punishment restricted. Less injuries suffer also a shoit prescription ; law presuming forgiveness, from the nature of the offence, and the silence of the party. The particular space of time sufficient to establish this presumption, must be determined by the judge, according to circumstances.

PART IV.

THE LAW OF IRELAND. CHAP. I.— OF THE LAW BEFORE THE UNION.

Ireland, until the last reign, constituted a distinct, though a dependent and subordinate kingdom. It was entitled the dominion, or lordship of Ireland, and the king's style was, ' lord of Ireland,' till the 33d year of Henry VIII. when he assumed the title of king, which is recognised by act of parliament, 35 Henry VIII. c. 3.

Scotland and England, though now one and the same kingdom, yet differ in their municipal laws. But England and Ireland, although so recently distinct kingdoms, yet in general agree in their laws.

On the conquest of Ireland by Henry II. the laws of England were received and sworn to by the Irish nation, assembled at the council of Lismore. At the time of this conquest the Irish were governed by what they called the Brehon law, so styled from the Irish name of judges, who were denominated Brehons. But king John, in the twelfth year of his reign, went into Ireland, and carried over with him many sages of the law, and there, by his letters patent in right of the dominion of conquest, is said to have ordained and established, that Ireland should be governed by the laws of England : which letters patent Sir Edward Coke apprehends to have been there confirmed in parliament. But to this ordinance many of the Irish were averse to conform, and still stuck to their Brehon law : so that both Henry III. and Edward I. were obliged to renew the injunction ; and at length, in a parliament holden at Kilkenny, 40 Edw. HI., under Lionel, doke of Clarence, the then lieutenant of Ireland, the Brehon law was formally abolished, it being unanimously declared to be in-deed no law, but a lewd custom crept in of later times. And yet, even in the reign of queen Elizabeth, the wild natives still kept and preserved their Brehon law ; which is described to have been ' a rule of right unwritten, but delivered by tradition from one to another, in which oftentimes there appeared great show of equity in determining th* right between party and party, but in many things repugnant quite both to God's law, and man's.' The latter part of this character is alone ascribed to it, by the laws before cited of Edward I. and his grandson. Hut as Ireland was a distinct dominion, and had parliaments of its own, it is to he observed, that though the immemorial customs, or common law of England, were made the rule of justice in Ireland also, yet no acts of the English parliament, since the 12th of king John, extended into that kincdom ; unless they were specially named, or included under general words, such ns, ' within any of the king's dominions.' And tins is p-micularly expressed, and the reason

given in the year books : ‘ a tax granted by the parliament of England shall not bind those of Ireland, because they are not summoned to our parliament ;’ and again, ‘ Ireland hath a parliament of its own, and maketh and altereth laws ; and our statutes do not bind them, because they do not send knights to our parliament : but their persons are the king’s subjects, like as the inhabitants of Calais, Gascoigny, and Guienne, while they continued under the king’s subjection.’ The general run of laws, enacted by the superior state, -are supposed to be calculated fof its own internal government, and do not extend to its distant dependent countries; which, bearing no part in the legislature, are not therefore in its ordinary and daily contemplation. But when the sovereign legislative power sees it necessary to extend its care to any of its subordinate dominions, and mentions them expressly by name, or includes them under general words, there can be no doubt but then they are bound by its laws.

The Irish nation, being formerly excluded from the benefit of the English statutes, were deprived of many excellent improvements of the common law : and, the measure of justice in both kingdoms becoming thence no longer uniform, it was enacted, that all acts of parliament, before made in England, should be of force within the realm of Ireland. But, by the same rule that no laws made in England were anciently binding in Ireland, it followed that no acts of the English parliament since the 10 Henry VII. bound the people of Ireland, unless specially named or included under general words. On the other hand, it was equally clear that where Ireland was particularly named, or included under general words, they were bound by such acts of parliament.

By a subsequent statute, 6 Geo. I. c. 5, it is declared., that the kingdom of Ireland ought to be subordinate to, and dependent upon, the imperial crown of Great Britain, as being inseparably united thereto ; and that the king’s majesty-, with the consent of the lordsand commonsof Great Britain in parliament, assembled, has power to make laws to bind the people of Ireland. Thus we see how extensively the laws of Ireland communicate with those of England ; and indeed such communication is highly necessary, as the ultimate resort from the courts of justice in Ireland is, as in Wales, to those in England ; a writ of error (in the nature of an appeal) lying from the king’s bench in England, as the appeal from the chancery in Ireland lies immediately to tht house of lords here ; it being expressly declared, •by the same statute, 6 Geo. I. c. 5, that the peers of Ireland have no jurisdiction to affirm or reverse any judgments or decrees whatsoever.

The propriety, and even necessity, in all inferior •dominions, of this constitution, ‘ that, though justice be in general administered by courts of their own, yet the appeal in the last resort ought to be to the courts of the superior state,’ is founded upon these two reasons, 1. Because otherwise the law, appointed or permitted to such interior dominions, might be insensibly changed within itself without the assent of the superior. 2. Because otherwise judgments mi’iht

be given to the disadvantage or diminution of the superiority ; or to make the dependence to be only on the person of the king, and not on the crown of England.

But this act of 6 Geo. I. c. 5 was afterwards repealed in the British parliament by the statute 22 Geo. III. c. 53. The former act, however, being considered as merely declaratory of the previous law, the repeal produced no other effect than to make the law somewhat less clear than the declaratory act had made it. Afterwards, by the 23 Geo. III. c. 28, it was declared that the people of Ireland should in all cases whatever be bound only by laws enacted by his majesty and the parliament of that kingdom; and the right claimed by them to have all actions and suits instituted in that kingdom decided in his majesty’s courts there finally, and without ap-peal thence, was established and ascertained, as it was then said, « for ever.’ And it was declared, that such decisions were at no time to be questioned or questionable : and all writs of error and appeals in the English courts were declared to be null and void.

CHAP. II. — OF THE LAW SINCE THE UNION.

1. Of the state and united parliament. — By the articles of the union, 39 and 40 Geo. III., it is declared that the kingdoms of Great Britain and Ireland shall on the 1st day of January, 1801, and for ever after, be united into one kingdom, by the name of the United Kingdom of Great Britain and Ireland ; and that the royal style and titles of the imperial crown, and the ensigns, armorial flags, and banners, shall be such as should be appointed by his majesty’s royal proclamation. That the succession to the imperial crown shall continue settled in the same manner as the succession to the crown of Great Britain and Ireland stood before limited. That there shall be one parliament, styled the parliament of the united kingdom of Great Britain and Ireland. That four lords spintual of Ireland, by rotation of sessions, namely one of the four archbishops and three of the eighteen bishops, and twenty-eight lords temporal of Ireland, elected for life by the peers of Ireland,

shall sit in the house of lords; and 100 commoners, two for each county, two for the city of Dublin, and two for the city of Cork, one for Trinity College, and one for each of the thirty-one most considerable cities, towns, and boroughs, shall be the number to sit in the house of commons on the part of Ireland.

2. Of peers and commoners. — Of peers. — The act of union also declares, that questions respecting the rotation or election of the spiritual or temporal peers, shall be decided by the house of lords ; and in the case of an equality of votes in the election of a temporal peer, the clerk of the parliament shall determine the election by drawing one of the names from a glass. A peer of • Ireland, not elected one of the twenty-eight, may sit in the house of commons ; but, whilst he continues a member of the house of commons, ne shall not be entitled to the privilege of peerage, nor capable of being elected one of the twenty-eight, nor of voting at such election, and

he may be sued and indicted for any offence as a commoner. As often as three of the peerages of Ireland, existing at the time of the union, shall become extinct, the king may create one peer of Ireland ; and when the peers of Ireland are reduced to 100 by extinction, or otherwise, exclusive of those who shall hold any peerage of Great Britain subsisting at the time of the union, or created of the united kingdom since the union, the king may then create one peer of Ireland for every peerage that becomes extinct, or as often as any one of them is created a peer of the united kingdom; so that the king may always keep up the number of 100 Irish peers, over and above those who have an hereditary seat in the house of lords.

The lords of parliament on the part of Ireland, spiritual and temporal, sitting in the house of lords, have the same rights and privileges respectively as the peers of Great Britain; and the lords spiritual and temporal of Ireland have rank and precedency next, and immediately after, all the persons holding peerages of the like order and degree in Great Britain, subsisting at the time of the union ; and all peerages thereafter created of Ireland, or of the united kingdom, of the same degree, have precedency according to the dates of their creations ; and the peers of Ireland, except those who are members of the house of commons, have all the privileges of peers as fully as the peers of Great

Britain ; the right and privileges of sitting in the house of lords, and upon the trial of peers, only excepted.

An Irish peer is now entitled to every privilege, except that of sitting in the house of lords ; un-less he chooses to waive it, in order to sit in the house of commons ; and, therefore, Irish peers, who are not members of the house of commons, are entitled to the letters missive from the court of chancery, when a bill is filed against them.

Of the commons. — Questions respecting the election of the members of the house of commons returned for Ireland are to be tried in the same manner as questions respecting the elections for places in Great Britain, subject to such particular regulations as the parliament afterwards shall deem expedient. The qualifications by property of the representatives in Ireland are declared the same respectively as those for counties, cities, and boroughs in England, unless some other provision be afterwards made. And it was declared that, until an act should be passed in the parliament of the united kingdom, providing in what cases persons, holding offices and places of profit under the crown of Ireland, should be incapable of sitting in the house of commons, not more than twenty »uch persons should be capable of sitting ; and, if more than twenty such persons should be returned fron. Ireland, then the seats of those above twenty should be vacated who have last accepted their offices or places.

The following are the cities, towns, and boroughs, which are entitled each to send one representative to sit in the house of commons. These are exclusive of the several counties, as well as of the cities of Dublin and Cork, and of Trinity College : —

1. Armagh.

17 Galway.

2. Athloue.

18. Kilkenny.

3. Bandonbridge.

19. Kinsale.

4. Belfast.

20. Limerick

5. Carrickfergus. 6. Cashel.

21. Lisburn. 22. Londonderry.

7. Catherlough.

23. Mallow.

8. Clonmel.

24. New Ross.

9. Coleraine.

25. Newry.

10. Downpatrick.

26. Portarlington.

11. Drogheda.

27. Sligo.

12. Dundalk.

28. Tralee.

13. Dungannon.

29. Waterford.

14. Dungarvon.

30. Wexford.

15. Ennis.

31. Youghall.

16. Enmskillen.

3. Of Protestants and Roman CatMks. — The churches of England and Ireland are declared by the union to be united in one Protestant

episcopal church, to be called the united church of England and Ireland, according to the doc-

tholics, who are nominated to parochial offices, are may execute them by deputy. They may hold certain offices upon taking the oath, and making the declaration prescribed by the act.

The king may grant them commiss'ons in the army, navy, and marines. They are also eligible, upon taking the oaths of allegiance only, to the offices of commissioners of customs, excise, stamps, taxes, or«ny other office in the revenue, or under the postmaster-general.

But they are, in strictness, disqualified from voting for members of parliament; for the oath of supremacy may be tendered, although such is not the practice, and in Ireland they are considered as eligible to vote. No Catholic, however, can sit in either house of parliament, because the oath of supremacy and declaration against popery, must be made by every member before taking his seat.

4. Of trade and navigation. — The subjects of Great Britain and Ireland are declared by the act of union to be equally entitled to the same

trine, worship, discipline, and government of privileges with regard to trade and navigation,

the church of England.

The laws, so far as regard the Protestant church, have been stated in the former parts of this article, and need not here be repeated.

Though the laws relating to Roman Catholics apply to all parts of the united kingdom, yet we deem it appropriate to introduce them in this place, on account of their general relation and great importance to the people of Ireland,

Of the Roman Catholic Clergy, and their church observances. — The Roman Catholic clergy, notwithstanding the removal of many disabilities, are still prohibited from officiating in any place of worship having a steeple and a bell. An exception in this respect,

however, has been made in favor of places of worship in Ireland. Neither can they wear the habit of their order, except in places allowed by the statute (43 Geo. III.) or in a private house, where there are not more than five persons, besides the family. A Catholic priest cannot teach in an endowed school, nor can he receive into his school the child of any Protestant parent.

No Roman Catholic can found any religious order or society bound by monastic vows, or any school or college. All uses, trusts, and dispositions of property remain still unlawful.

Formerly the Catholics in Ireland were not allowed to bury their dead in any suppressed monastery or convent, nor to bury in the burial grounds of the established churches, unless the

and also in respect of all treaties with foreign powers. It was also enacted, that all prohibitions and bounties upon the exportation of merchandise, the growth, produce, or manufacture, of either country to the other shall cease. But that the importation of certain articles therein enumerated shall be subject to such countervailing duties as are specified in the act.

For twenty years from the union, i. e. until 1st of January, 1821, certain manufactured articles, *viz.* apparel, cabinet-ware, pottery, sadlery, &c.; were subjected to a duty of £10 per cent. Salt, hops, coals, calicoes, and muslins, &c., to certain duties specified. Articles, the growth, produce, or manufacture of either country, subject to internal duty, or to duty on the materials of which they are composed, are made subject, by certain schedules in the acts, to the countervailing duties there specified. And it is provided that all articles subject to such internal duty, shall from time to time be subjected on their importation into each country respectively, from the other, to such duty as shall be sufficient to countervail such internal duty in the country from which they are exported; and that, upon the ex-port of the like articles from one country to the other, a drawback shall be given equal in amount to the countervailing duty payable on such articles, if they had been imported into the country whence they are exported. All articles, the growth, produce, or manufacture of either country, when

Protestant service was celebrated by a minister exported through the

other, are made subject to

of the established church. But these restrictions are now removed (5 Geo. IV. c. 25), and Catholics may be buried in suppressed religious

the like charges, as on exportation directly from their own country.

All duty on the import of foreign or colonial

houses, or in Protestant churchyards, according articles into either country, shall, on their export

the Catholic ceremonial. to the other, be drawn back; and this is con—

Cathohcs, having taken the oaths prescribed by firmed by 59 Geo. III. c. 52, § 8, and c. 83. § 9,

statutes 31 and 43 Geo. III., are not liable By statutes 55 Geo. III. c. 83, 59 Geo. III. c.

to prosecution for attending or performing mass, 52, and 83, foreign or colonial goods, imported

other ceremonies of the church of Rome, into Great Britain or Ireland from each other,

l the place must be certified to the sessions, shall pay such duties as on their first importa-

.e minister's name registered. The Catho-tion, according as they were imported either by

jrgy are exempted from serving on juries British or foreign ships, or directly or not directly from the place of their growth ; and for

c Roman Catholx laity.— Roman Ca-this purpose the clearances on the exhortation

LAW.

of such goods from either country to the other, shall state whether the original importation into the exporting country was a British or foreign vessel, or directly from the place of growth or not ; the purpose of these acts is to prevent the evasion of the higher duties payable on the original importation, if made in foreign vessels, &c.

Corn, meal, malt, flour, and biscuit, are exempted from the operation of the union acts, so that all these, except malt, were declared free between Great Britain and Ireland, under 46 Geo. III. c. 97. The intercourse of malt between the two countries is regulated by statute 50 Geo. III. c. 34, 53, and the countervailing duties are ascertained by the several acts imposing the internal duties.

In 1823 several alterations were made under the authority of parliament for facilitating the repeal of the countervailing duties, and placing the commerce between the two countries on the footing of the coasting trade.

5. Of taxation. — The sinking funds, and the interest of the national debt of each country, according to the union acts, are to be defrayed by each separately. And, for the space of twenty years after the union, the contribution of Great Britain and Ireland towards the public expenditure in each year was directed to be in the proportion of fifteen to two, subject to future regulations.

Under the 56 Geo. III., c. 98, amended by 57 Geo. III., c. 48, one general consolidated fund of the united kingdom has been established, charged indiscriminately, whether in the exchequer of Great Britain or Ireland, with the whole of the interest and sinking funds of the national debts of Great Britain and Ireland, as one joint consolidated national debt, interest and sinking fund ; with all other charges on the for-mer separate consolidated funds; and, subject to such charges, to be indiscriminately applied to the service of the united kingdom.

Regulations are made for the issue of money out of the Irish exchequer, under warrant of the lord-lieutenant of Ireland, and the issues out of the treasury of Great Britain, from the growing produce of the consolidated fund ; and the balance of joint contributions between Great Britain and Ireland are declared to be cancelled.

6. Of the administration of justice. — By the statute of union it is also enacted that all the laws and courts of each kingdom shall remain the same as they were then established, subject to such alterations by the united parliament as circumstances may require; but that all writs of error and appeals shall be decided by the house of lords of the united kingdom, except appeals from the court of admiralty in Ireland, which shall be decided by a court of delegates appointed by the court of chancery in Ireland.

7. Apprehension of criminals in one country for offences committed in the other. — By 44 Geo. III., c. 92, persons against whom warrants have been issued in Ireland, who shall escape to, or be in, England or Scotland, or where persons shall escape from England or Scotland to Ireland, any justice of the peace, of the place where such person shall escape to, shall indorse the warrant,

and the person charged may be apprehended where such warrant is indorsed, and carried into England, Scotland, or Ireland, as the case may require, to be proceeded against according to law.

In offences not bailable, the original warrant shall be indorsed, according to 45 Geo. III. c 92;

If bailable, the party shall be bailed in the place where he is apprehended, by duplicate bonds, one to be transmitted to the proper officer of the place where the warrant was issued, and the other to the court of exchequer in the country where the party is bailed ; and the penalty may be levied in the county where the bond is taken, on certificate of the breach thereof to the exchequer there.

Witnesses may be served in England with subpoenas, to compel appearance in Ireland in criminal prosecutions, and may be served in Ireland to compel appearance in England, 45 Geo. III., c. 92, sect. 3, 4. And by the 54 Geo. III., c. 186, sect. 2, 3, it is provided that warrants signed in England, Scotland, or Ireland, may be indorsed and acted upon in any part of the united kingdom, in the same manner as directed by 13 Geo. III., c. 31, as to warrants in England and Scotland ; and judges in Ireland may indorse Scotch letters of second deliverance, for compelling attendance in Scotland of witnesses, in criminal cases, resident in Ireland.

ADDENDA.

OF ISLANDS SUBJECT TO THE LAWS OF THE UNITED KINGDOM.

There are several adjacent islands which are subject to the crown of the united kingdom. Some of them, *viz.* the Isles of Wight, of Portland, of Thanet, &c., are comprised within some neighbouring county, and are therefore to be looked upon as annexed to the mother Island, and part of the kingdom of England. But there are others which require a more particular consideration.

The Isle of Man is a distinct territory from England, and is not governed by our laws : neither does any act of parliament extend to it, unless it be particularly named therein, and then an act of parliament is binding there. It was formerly subject to the kings of Norway. Afterwards to England, under John and Henry III. Subsequently to Scotland, and again to England. Henry IV., by right of conquest, disposed of it to the earl of Northumberland. Several changes of dominion occurred until the year 1735, when the duke of Athol succeeded to the title, as heir of earl Derby. Though the title of king had been long abolished, the lords of the island had the power of making laws ; and no process from England was available, until the year 1765, when the property in the island was purchased by the British government. It retains, however, its peculiar laws, except those of the revenue.

The islands of JERSEY, GUERNSEY, SARK, ALDERNEY, and their appendages, are also governed by their own laws. The king's writ, or process from the courts of Westminster, is there of no force; but his commission is. They are not bound by common acts of our j'arlia-

ment, unless particularly named. All causes are originally determined by their own officers, the bailiffs and jurats of the islands ; but an appeal lie? from them to the king in council, in the last resort.

For the law relating to the plantations and colonies in America, and the East and West Indies see PLANTATIONS and WEST INDIES.

LAW LANGUAGE.

All law proceedings in England were formerly written, as indeed all public proceedings were, in Norman or law French, and even the arguments of the counsel and the decisions of the' court were in the same barbarous dialect: an evident and shameful badge, it must be owned, of tyranny and foreign servitude ; being introduced under the auspices of William the Norman, and his sons; whereby the ironical observation of the Roman satirist came to be literally verified, that Gallia causidicos docuit facunda Britannos. This continued till the reign of Edward III.; who, having employed his arms successfully in subduing the crown of France, thought it unbe-seeming the dignity of the victors to use any longer the language of a vanquished country. By a statute therefore passed in the thirty-sixth year of his reign, it was enacted, that for the future all pleas should be pleaded, shown, defended, answered, debated, and judged in the English tongue; but be entered and enrolled in Latin. In like manner as don Alonso X., king of Castile (the great-grand-father of our Edward III.) obliged his subjects to use the Castilian tongue in all legal proceedings; and as in 1286 the German language was established in the courts of the empire. And perhaps if our legislature had then directed that the writs themselves, which are mandates from the king to his subjects to perform certain acts or to appear at certain places, should have been framed in the English language according to the rule of our ancient law, it had not been very improper. But the record or enrollment of those writs, and the proceedings thereon, which was calculated for the benefit of posterity, was more serviceable (because more durable) in a dead and immutable language than in any flux or living one. The practisers, however, being used to the Nor-man language, and therefore imagining they could express their thoughts more aptly and more concisely in that than in any other, still continued to take their notes in law French; and of course when these notes came to be published under the denomination of reports, they were printed in that barbarous dialect; which, joined to the additional terrors of a Gothic black letter, has occasioned many a student to throw away his Plowden and Littleton without venturing to attack a page of them. And yet in reality, upon a nearer acquaintance, they would have found nothing very formidable in the language, which differs in its grammar and orthography as much from the modern French, as the diction of Chaucer and Gower does from that of Addison and Pope. Besides, as the English and Norman lanˆnaˆes were concurrently used by our ancestors for several centuries together, the two idoms have naturally assimilated, and mutually borrowed from each other; for which reason the grammatical construction of each is so very much the same, that an Englishman (with a weeks' preparation) would understand the laws collected in their grand coustumier as well, if not

better, than a Frenchman bred within the walls of Paris.

The Latin which succeeded the French for the entry and enrollment of pleas, and which continued in use for four centuries, answers so nearly to the English (oftentimes word for word) that it is not at all surprising 4hat it should generally be imagined to be totally fabricated at home, with little more art or trouble than by adding Roman terminations to English words Whereas in reality it is a very universal dialect, spread throughout all Europe at the irruption of the northern nations, and particularly accommodated and moulded to answer all the purposes of the lawyers with a peculiar exactness and precision. This is principally owing to the simplicity, or (if the reader pleases) the poverty and baldness of its texture, calculated to express the ideas of mankind just as they arise in the human mind, without any rhetorical flourishes, or perplexed ornaments of style ; for it may be observed, that those laws and ordinances, of public as well as private communities, are generally the most easily understood, where strength and perspicuity, not harmony or elegance of expression, have been principally consulted in compiling them. These northern nations, or rather their legislators, though they resolved to make use of the Latin tongue in promulging their laws, as being more durable and more generally known to their conquered subjects than their own Teutonic dialects, yet (either through choice or necessity) have frequently intermixed therein some words of a Gothic original ; which is more or less the case in every country of Europe, and therefore not to be imputed as any peculiar blemish in our English legal Latinity. The truth is, what is generally denominated law Latin is in reality a mere technical language, calculated for eternal duration, and easy to be comprehended both in present and future times ; and on those accounts best suited to preserve those memorials which are intended for perpetual rules of action. The rude pyramids of Egypt have endured from the earliest ages, while the more modern and more elegant structures of Attica, Rome, and Palmyra have sunk beneath the stroke of time.

As to the objection of locking up the Jaw in a strange and unknown tongue, this is of little weight with regard to records, which few havt occasion to read, but such as do, or ought to, understand the rudiments of Latin.

It was once observed by the late lord Ellenborough (certainly a very high authority, for he possessed a masculine intellect and great learning) that it was to be lamented, as a consequence of the statute for rendering the proceedings at law into English, that the literature of the inferior part of the profession (by which he meant the attorneys as

compared with the barristers) had receded since that time. It is however somewhat questionable whether the knowledge of sufficient Latin to umlerstai/.l the language oi'.

the old law proceedings could be a very decisive test of literature. Especially when it is recollected that the pleadings were formerly transcribed by the officers of the court, and not by the attorney, and in cases which varied from the ordinary routine the forms might be and probably were prepared (as they are now) by sergeants and counsel, or by special pleaders, and therefore but a scanty portion of legal learning would enable an attorney to pass through the customary practice of the profession. Besides, as Blackstone himself says, it may be observed of the law Latin, as the very ingenious Sir John Davis observes of the law French, ' that it is so very easy to be learned, that the meanest wit that ever came to the study of the law doth come to understand it almost perfectly in ten days without a reader.'

It is true indeed that the many terms of art, with which the law abounds, are sufficiently harsh when Latinised (yet not more so than those of other sciences), and may, as Mr. Selden observes, give offence ' to some grammarians of squeamish stomachs, who would rather choose to live in ignorance of things the most useful and important, than to have their delicate ears wounded by the use of a word, unknown to Cicero, Sallust, or the other writers of the Au-gustan age.' Yet this is no more than must unavoidedly happen when things of modern use, of which the Romans had no idea, and consequently no phrases to express them, come to be delivered in the Latin tongue. It would puzzle the most classical scholar to find an appellation, in his pure Latinity, for a constable, a record, or a deed of feofFment : it is therefore to be imputed as much to necessity, as ignorance, that tt.ey were styled in our forensic dialect constabularius, recordum, and feoffamentum. Thus again, another uncouth word of our ancient laws (for it is unnecessary to defend the ridiculous barbarisms sometimes introduced by the ignorance of modern practisers) the substantive murdrum or the verb murdrare, however harsh and unclassical it may

seem, was necessarily framed to express a particular offence ; since no other word in being, occidere, interficere, necare, or the like, was sufficient to express the intention of the criminal, or quo animo the act was perpetrated; and therefore by no means came up to the notion of murder at present entertained by our law; *viz.* a killing with malice aforethought.

A similar necessity to this produced a similar effect at Byzantium, when the Roman laws were turned into Greek for the use of the oriental empire. They studied more the exact and precise import of the words, than the neatness and delicacy of their cadence. And it may be suggested that the terms of the law are not more numerous, more uncouth, or more difficult to be explained by a teacher, than those of logic, physics, and the whole circle of Aristotle's philosophy, nay even of the politer arts of architecture and its kindred studies, or the science of "hetoric itself. Sir Thomas More's famous legal question contains in it nothing more difficult, than the definition which in his time the philosophers currently gave of their materia prima, the ground \vork of all natural knowledge; that

it is, neque quid, neque quantum, neque quale, neque aliquid eorura quibus ens determinatur ; or its subsequent explanation by Adrian Heere-boord, who assure us that materia prima non est corpus, neque per formam corporeitatis, neque per simplicem essentiam : est tamen ens, et quidem substantia, licet incompleta; habetque actum ex se entitativum, et simul est potentia subjecti va. The law therefore, with regard to its technical phrases, stands upon the same footing with other studies, and requests only the same indulgence.

This technical Latin continued in use from the time of its first introduction till the subversion of our ancient constitution under Cromwell ; when, among many other innovations in the law, some for the better and some for the worse, the language of our records was altered and turned into English. But, at the Restoration of king Charles, this novelty was no longer countenanced ; the practisers finding it very difficult to express themselves so concisely or significantly in any other language as the Latin. And thus it continued without any sensible inconvenience till about the year 1730 when it was again thought proper that the proceedings at law should be done into English, and it was accordingly so ordered by statute 4 Geo. II. c. 26.

This provision was made, according to the preamble of the statute,

that the common people might have knowledge and understanding of what was alledged or done for and against them in the process and pleadings, the judgment and entries in a cause. Which purpose Blackstone apprehends has not been answered ; being apt, he says, to suspect that the people are now, after so many years experience, altogether as ignorant in matters of law as before. It may be observed, however, that the time at which the commenta ries were written was too near the period of the change, fully to appreciate the general advantages which in the process of time might be expected to result from so apparently rational a course as that of using our native language in the forms of administering justice.

We cannot indeed by any means subscribe to the opinion of the learned commentator, that the inconveniences which have arisen from conducting the law proceedings in English are of a very formidable nature. ‘ It maybe true,’ as he says, ‘ that many clerks and attorneys are hardly able to read, much less to understand a record even of so modern a date as the reign of George I.’ The fact is that scarcely any member of the profession ever has occasion either to read or understand such records, and when we are reminded by Blackstone himself that ‘ the meanest wit can understand it almost perfectly in ten days,’ we need not ‘.vender that the acquisition of it is deferred until it is really wanted, which it is at least a thousand to one will never be the case No doubt there were inconveniences which followed this change, and which follow almost every one; but which every year diminishes in an increased proportion. It is now very nearly a century since the change took place, and the records of the courts in the reign of George I. are as little required now, as in his day were required those of Charles I.

Another objection of a more serious nature, <f it were well founded, is ‘ that it has much enhanced the expense of legal proceedings : for since the practicers are confined (for the sake of the stamp duties, which are thereby considerably increased) to write only a stated number of words in a sheet ; and as the English language, through the

multitude of its particles, is much more verbose than the Latin, it follows that the number of sheets must be very much augmented by the change.' The most considerable part of the expense, on which this objection is founded, is now removed by the repeal of the stamp duties upon law proceedings, which were forty years ago pointed out and reprehended by Mr. Bentham as an unwarrantable tax upon justice. It is true that some part of the difference of expense between writing in English and in Latin still remains, inasmuch as the charges of the practitioner are governed by the extent of the written proceedings at so much per folio of seventy-two words ; yet we think no Englishman would ever think of complaining that it cost him something more to have the pleadings, which involved perhaps his highest interests, written in his native tongue, than might have happened had they been expressed in a dead language, which would occupy at least ten days tolerably to learn !

It is true that the translation of technical phrases and the names of writs and other process were found to be so very ridiculous (a writ of nisi prius, quare impedit, fieri facias, habeas cor-pus, and the rest, not being capable, it was thought, of an English dress with any degree of seriousness) that in two years' time a new act was obliged to be made, 6 Geo. II. c. 14, which allows all technical words to continue in the usual language, and has thereby, as Sir W. Blackstone contends, defeated every purpose of the former statute.

The attempt to translate these technical names literally was no doubt absurd, but we cannot admit that the object of the writs enumerated, or any other, could not have been briefly designated in the English language. If, however, it be impossible to do so, it is surely a matter of no great difficulty to learn the signification of the Latin term ; and at all events it cannot be truly said that ' every purpose' of the statute has been defeated, when we have the proceedings themselves in English, although the technical name of some of them remains in its ancient state. That the people continue as ignorant of matters of law as before, notwithstanding the alteration, cannot be entirely correct ; for they had formerly the two difficulties, of barbarous language and technical phraseology to contend with — they have now only the latter; which it may be expected will n length also yield to the influence of reasonable improvement.

But it is justly observed by Sir W. Blackstone that, although our English Justinian obtained a victory over the French language, in our courts of justice there was one mischief too deeply ro >ted, and which king Edward came too late to eradicate. Instead of the plain and easy method of determining suits in the county courts, the

chicanery and subtleties of Norman jurisprudence had taken possession of the king's courts

to which every cause of consequence was drawn. Indeed that age, and those immediately succeeding it, were the era of refinement and subtlety. There is an active principle in the human soul, that will ever be exerting its faculties to the ut-most stretch, in whatever employment, by the accidents of time and place, the general plan of education, or the customs and manners of the age and country, it may happen to find itself engaged. The northern conquerors of Europe were then emerging from the grossest ignorance in point of literature ; and those who had leisure to cultivate its progress were such only as were cloistered in monasteries, the rest being all soldiers or peasants. And, unfortunately, the first rudiments of science which they imbibed were those of Aristotle's Philosophy, conveyed through the medium of his Arabian commentators; which were brought from the east by the Saracens into Palestine and Spain, and translated into barbarous Latin. So that, although the materials upon which they were naturally employed, in the infancy of a rising state, were those of the noblest kind ; the establishment of religion, and the regulations of civil polity; yet, having only such tools to work with, their execution was trifling and flimsy. Both the divinity and the law of those times were, therefore, frittered into logical distinctions and drawn out in metaphysical subtleties most amazingly artificial ; but which serves no other purpose than to show the vast powers of the human intellect, however vainly or preposte-rously employed. Hence law in particular, which (being intended for universal reception) ought to be a plain rule of action, became a science of the greatest intricacy, especially when blended with the new refinements engrafted upon feudal property : which refinements were from time to time gradually introduced by the Norman practitioners, with a view to supersede (as they did in a great measure) the more homely, but more intelligible, maxims of distributive justice among the Saxons. And, to say the truth, these scholastic reformers have transmitted their dialect and finesse to posterity, so interwoven in the body of our legal polity, that they cannot easily be taken out without injury to the substance. Statute after statute has in later times been made to pare off these troublesome excrescences, and restore the common law to its pristine simplicity and vigor, and the endeavour has greatly succeeded ; but still the scars are deep and visible ; and the liberality of our modern courts of justice is frequently obliged to have recourse to unaccountable fictions and circuities in order to recover that equitable and substantial justice, which for a long time was totally buried under

the narrow rules and fanciful niceties of metaphysical and Norman jurisprudence.

LAWS RESPECTING GAME.

Referring to the article GAME for an account of the property in animals included under this denomination, and for the reasons on which the statutes are founded, and their origin in the feudal policy, we may, in the language of Sir William Blsickstone, in treating of the alterations in these laws, and mentioning franchises granted of chase an:! free warn n, as well to preserve the breed of

animals, as to indulge the subject, observe, that though the forest laws are now mitigated, and by degrees grown entirely obsolete ; yet from this root has sprung a bastard slip, known by the name of the game law, now arrived to and wantoning in its highest vigor; both founded upon the same unreasonable notion of permanent property in wild creatures ; and both productive of the same tyranny to the commons; but with this difference, that whilst the forest laws established one mighty hunter throughout the land — the game laws have raised a little Nimrod in every manor. And in one respect the ancient law was much less unreasonable than the modern ; for the king's grantee of a chase or free warren might kill name in every part of his franchise ; but now, though a freeholder of less than £100 a year is forbidden to kill a partridge upon his own es-tate, yet nobody else (riot even the lord of the manor, unless he has a grant of free warren) can do it without committing a trespass and subjecting himself to an action.

Under the article GAME, already referred to, will be found a statement of the law, upon the old principles of the forest law, as to destroying beasts and fowls ranked under the denomination of game. By that law all persons are alike treated as trespassers and offenders who have not authority from the crown to kill game (which is royal property) by the grant of either a free warren, or who have not at least a manor of their own.

Besides the old remedies against trespassers, the laws called the game laws have also inflicted additional punishments, which are chiefly pecuniary, on persons guilty of this general offence, unless they should be people of such rank or fortune as therein specified.

For unqualified persons transgressing the law by killing game, keeping engines for that purpose, or having game in their custody ; or for persons, however qualified, that kill game, or have it in possession at unseasonable times of the year, or unseasonable hours of the day or night, on Sundays or on Christmas days, or selling or exposing it to sale, there are various penalties assigned, corporal and pecuniary, by different statutes ; on any of which, but only on one at a time, the justices may convict, or in most of them prosecutions may be carried on at the assizes. The substance of these statutes will be stated under their appropriate heads.

1 . Of killing deer, hares, and other game. — It is declared felony by the 7 and 8 Geo, IV. c. 29, to course, hunt, snare, carry away, kill, or wound, or attempt to kill or wound, any deer kept in the enclosed part of any forest, chase, or purlieu, or any enclosed land where deer are usually kept. The offender is liable to transportation for seven years, or imprisonment for two years either with or without whipping. If the offence be committed on the unenclosed nart of a forest, chase, or purlieu, a penalty of £50 may be inflicted, and for the second offence the same punishment as above. Setting engines for taking deer, or pulling down any fence or bank enclosing land where deer are kept, renders the offender liable to a penalty not exceeding £20.

According to 11 Henry VII., c. 13, persons

taking pheasants or partridges with engines in another man's ground, without license, are subject to a penalty of £10. Hunting with spaniels, in standing corn, incurs a penalty, by 23 Eliz. c. 10, of 40s. Those who kill any pheasant, partridge, duck, heron, hare, or other game, are liable to a forfeiture of 20*. for every fowl and hare.

2. Of the several qualifications for killing game. — It may be in general sufficient to observe that the qualifications for killing game, as they are usually called, but more properly the exemptions from the penalties inflicted by the laws, are,

As to property. — 1. Tht having a freehold or copyhold estate of £100 per annum ; there being fifty times the property required to enable a

man to kill a partridge, even on his own land, as to vote for a knight of the shire. 2. A lease-hold for ninety-nine years or for life of £150 per annum. An ecclesiastical living is within the act. 3. Being the owner or keeper of a forest, park, chase, or warren. 4. The lord of any manor or royalty. 5. The game-keeper of qualified lords of manors, employed solely to kill game for their use.

As to rank. — Being the son and heir apparent of an esquire (a very loose and vague description), or person of superior degree. It is singular that whilst the son of an esquire is qualified on account of his rank, the father is not qualified unless he possess a sufficient amount of property.

Certificates and deputations. — By the 25 Geo. III. c. 50, and 31 Geo. III. e. 21, every person in Great Britain, the royal family excepted, who shall use any dog, gun, net, or other en-gine, for the taking or destruction of game (not acting as game-keeper), shall deliver in a paper or account in writing, containing his name and place of abode, to the clerk of the deace, or his deputy, and annually take out a certificate thereof; and every such certificate shall be charged with a stamp duty, amounting: in the whole to £3 3s. The clerk of the peace is directed by the act annually to deliver to persons requiring the same^ duly stamped, a certificate or license according to the form therein mentioned, for which he is entitled to demand Is. for his trouble, and, on refusal or neglect to deliver the same, he is liable to forfeit £20. — Every certificate is to bear date the day when issued, and to continue in force until the 1st of July following.

Any person that shall use any greyhound, hound, pointer, setting-dog, spaniel, or other doe, or any gun, net, or engine, for taking or killing game, without a certificate, is liable to the penalty of £20. The clerks of the peace are to transmit to the stamp office in London alphabetical lists of the certificates granted every year before the 1st of August, under the penalty of £20. These lists are to be kept in the stamp office in London, and there to be inspected on payment of 1*. And the commissioners of the stamp duties are, once or oftener in every year, as soon as such lists are transmitted to them, to cause the same to be published in the newspapers circulating in each county, or such public paper as they shall think most pro-608

per. Any person ic pursuit of game who shall refuse to produce his certificate, or to tell his name and place of abode, or shall give any false or fictitious name or place of abode, to any person requiring the same, who shall have obtained a certificate, is liable to a penalty of £50.

Effect of the certificate.— The certificates are not to authorise persons to kill game at any time prohibited by law, nor to give any person any right to kill game, unless such person shall he qualified so to do by the law, but he shall be liable to the same penalties as if the act (relating to certificates) had not passed. So that though by this act, qualified and unqualified persons are equally included, yet having a certificate does not give an unqualified person a right to kill game. The point of right still stands upon the former acts of parliament. And any unqualified person killing game without a certificate is not only liable to the penalty inflicted by this act, but also to all the former penalties relating to the killing of game, &c.

The deputation of a game-keeper must be registered with the clerk of the peace, and such game-keeper must annually take out a certificate thereof, which certificate is charged with stamp duties amounting in the whole to £l 1*.

Game-keepers must also, within the space of twenty days next after their appointment, register their deputations, and take out a certificate thereof, in default of which they are liable, in each instance, to the penalty of £20. If any game-keeper who shall have registered his deputation, and taken out a certificate thereof, shall be changed, and a new . nine-keeper appointed in his stead, the first certificate is declared null and void, and the person acting under the same, after notice, is liable to the penalty of £20.

Game-keepers have power within the manors for which they are appointed to seize guns, dogs, nets, and engines, kept by unqualified persons to destroy game. But they have no right to use fire arms for the capture of poachers, though they are justified in taking them into custody.

3. Of selling, purchasing, and possessing game. — By 1 Jac. I. c. 17, for selling, or buying to sell again, any hare, pheasant, &c., the penalty is 10s. each hare, 8cc.

By the 9 Ann. c. 25, the penalty is increased to £5 against higglers, chapmen, earners, innkeepers, victuallers, &c., for selling game, or offering the same to sale : and it is adjudged ‘ an exposing to sale’

when any hare or other game is found in a shop, &c.

The 28 Geo. II., c. 12, enacts that persons selling, or exposing to sale, any game, are liable to the penalties inflicted by 5 Ann. c. 14, on higglers, &c., offering game to sale; and game found in the house or possession of a poulterer, salesman, fishmonger, cook, or pastry-cook, is deemed exposing thereof to sale.

According to the 58 Geo. III., c. 75, any per-son, whether qualified or not, who buys game, H liable to forfeit £5, and, for the discovery of offenders, the penalty is remitted, and they re-rcivp the reward from the other party if they in-l.T.n within six months.

Constables, by 7 Jac. I. c. 11, having a justice of peace's warrant, may search for game and nets in the possession of persons not qualified to kill game or keep nets. Suspected persons, without lawful occasion, found in possession of deer, or any part thereof, or of any snare or engine for taking deer, forfeit on conviction £20.

Under 4 & 5 W. & M. c. 23, the houses of suspected persons may be searched by constables, authorised by a justice of the peace, and, in case any game be found, the offender may be apprehended, and if h? do not give a good account before a justice of the peace, how he came by the game, or produce the party of whom he bought it, or a creditable person to prove the sale, he shall forfeit for every article of game a sura not less than 5s., nor more than 20s., or be committed to the house of correction, not exceeding a month, nor less than ten days, and there be whipped and kept to hard labor.

Higglers, chapmen, innkeepers, victuallers, &c., having in their custody hare, pheasant, partridge, heath-game, &c., except sent by some person qualified to kill game, shall by 5 Ann. c. 14, forfeit for every hare and fowl £5, to be levied by distress and sale of their goods, being proved by one witness before a justice ; and for want of distress shall be committed to the house of correction for three months ; one moiety of the forfeiture belongs to the informer, and the other to the poor.

4. Of offences during the night, fyc. — If any person shall take or kill any pheasants or partridges with any net in the night time, they shall by 23 Eliz., c. 10, forfeit 20s. for every pheasant, and 10s. for every partridge taken. By a subsequent statute the penalty for killing hares during the night is £5, or imprisonment in the house of correction for

three months.

By 5 Geo. III., c. 14, persons convicted of entering warrens in the night time, and taking or killing of conies there, or aiding or assisting therein, may be punished by transportation, or by whipping, fine, or imprisonment. Persons convicted on this act are not liable to be convicted under any former act. This act does not extend to the destroying conies in the day-time, on the sea and river banks in the county of Lincoln, &c. No satisfaction is to be made for damages occasioned by entry unless they exceed 1*.

It is further enacted, by 10 Geo. III. c. 19, that if any person kill any hare, &c, between sun-setting and sun-rising, or use any guns, &c. for destroying game, he shall for the first offence be imprisoned for any time not exceeding six nor less than three months. If guilty of a second offence, after conviction of a first, to be imprisoned for any time nc ‘exceeding twelve months, nor less than six ; and shall also, either for the first or any other offence, be once publicly whipped.

By 13 Geo. III., c. 80, persons destroying game, between seven at night and six in the morning, from the 12th of October to the 12th of February, and between nine at night and four in the morning from the 1 2th of February to the 1 2th of October, or in the day-time on Sundays or on Christmas day, are liable to a penalty of £20 for the first offence, £30 for the second, and £50

for the third : the amount of which, however, may be mitigated. In default of payment, imprisonment for six or twelve months may be inflicted, besides whipping.

A subsequent statute, 57 Geo. III. c. 97, inflicts the penalty of transportation for seven years, or fine and imprisonment, on persons found with offensive weapons with intent illegally to destroy game or rabbits. “The 3d of Geo. IV., c. 114, adds to this hard labor.

By the statute 7 and 8 Geo. IV., c. 29, persons in the night time killing

hares or conies in any warren are guilty of a misdemeanor. The same offence in the day-time, or using snares or engines, subjects the offender to a penalty of £5.

Offences during prohibited seasons of the year.— By 7 Jac. I., c. 11, pheasants or partridges are not to be taken between the 1st of July and the last of August, on pain of imprisonment for a month, or the payment of 20s. for each pheasant, &c., killed. And by the 9th Ann., c. 25, if any persons shall drive wild fowls with nets, between the 1st of July and the 1st of September, they shall forfeit 5s. for every fowl.

The 2d of Geo. III., c. 19, provides against any person taking, killing, buying or selling, or having in his custody any partridge between the 12th of February and the 1st of September, or pheasant between the 1st of February and the 1st of October, or heath -fowl between the 1st of January and the 20th of August, or grouse between the 1st of September and the 25th of July in any year—

Black game, or heath-fowl, is protected under a penalty of £20, from the 10th of December to the 20th of August. Red game, or grouse, has the same protection ; and bustards from the 1st of March to the 1st of September. There is an exception by 50 Geo. III., c. 55, as to htath-game in the New Forest, and in Somerset and Devon, which may be taken between the 10th of December and the 1st of September. The eggs

of game are also protected by various penaHes.

5. Of legal proceedings and their limitation. — By the 26th of Geo. II., c. 2, all suits and actions brought by virtue of stat. 8 Geo. I., for the recovery of any pecuniary penalty, or sum of money, for offences committed against any law, for the better preservation of the game, shall be brought before the end of the second term after the offence committed.

Evidence, and recovering penalties. — Witnesses refusing to appear on summonses from justices of the peace, or appearing and refusing to give evidence, are liable to forfeit £10. The certificates obtained under deputations are not to be given in evidence for killing of game by a game-keeper out of the manor in respect of which such deputation or appointment was given or made.

Penalties exceeding £20 are to be recovered in any of his majesty’s courts of record at Westminster; and penalties not exceeding £20 are

recoverable before two justices, and may be levied by distress. The whole of the penalties go to the informer.

6. Of the seisure of guns, dogs, and nets. — If any unqualified person shall keep a gun he shall forfeit £10 : and persons being qualified may take guns from those who are not qualified, and break them, 35 Henry VIII. c. 6, and 21 and 22 Car. II. c. 25. One justice of peace, upon examination and proof of the offence, may commit the offender till he has paid the forfeiture of £10. And persons not qualified by law keeping dogs, nets, or other engines to kill game, being convicted thereof before a justice of the peace, shall forfeit £5, or be sent to the house of correction for three months.

If a person hunt upon the ground of another, such other person cannot justify the killing of his dogs, as appears by a case reported in 2 Roll. Abr. 567; but it was otherwise adjudged in Mich. 3 Car. II., in C. B. 2 Cro. 44.

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LAWERS, an eminent engraver, who flourished about the middle of the sixteenth century. He was a native of Flanders, and is said to have studied under Paul Pontius, whose style of engraving he often imitated.

LAWLESS COURT, a famous court held annually at Rochford, in Essex, on Wednesday morning after Michaelmas-day. See ROCHFORD.

LAWN, n. t. Fr. linon. Fine linen, used in bishop's sleeves.

Should'st thou bleed,

To stop the wounds my finest lawn I'd tear, Wash them with tears, and wipe them with my hair.

Prior.

What awe did the slow solemn knell inspire ; The duties by the Utun robed prelate payed, And the last* words, that dust to dust conveyed 1

TicheL From high life high characters are drawn,

A saint in crape is twice a saint in lawn. Pope.

LAWN, n. $. Fr. lande ; Ital. Span, and barb. Lat. landa; Teut. Sax. and Belg. land. An open, smooth ground : an open space of ground between woods.

Betwixt them lawns, or level downs and flocks Grazing the tender herb, were interposed. Milton.

His mountains were shaded with young trees, that giadually shot up into groves, woods, and forests, intermixed with walks, and lawns, and gardens.

Addison. Interspersed in lawns and opening glades,

Thin trees arise that shun each other's shades.

Pope.

Stern beasts in trains that by his truncheon fell, Now grisly forms shoot o'er the lawns of hell. Id.

A Turkey carpet was his lawn, Whereon he loved to bound. Cowper.

A LAWN is a spacious plain in a park, or adjoining to a noble seat. The dimensions of a lawn, in a large park, should be as extensive as the ground will permit ; and never less than fifty acres ; but, in gardens of a moderate extent, a lawn of ten acies is sufficient : and, in those of the largest size, fifteen acres.. The best situation for a lawn is in the front of the house : and here, if the house front the east, it will be extremely convenient; but the most desirable aspect for a lawn is that of the south-east. Some recommend an exact square, others an oblong square, some an oval, and others a circular figure. The most proper trees are the elm, oak, chestnut, and beech ; and some clumps of evergreens intermixed will add to the beauty of the whole, especially in winter ; the best sorts are lord Wey-mouth's pine, and the silver and spruce firs.

LAWRENCE (French), LL.D., a learned modern civilian, was born at Bristol, where he

received his early education, and whence he removed to Winchester and to Corpus Christi College, Oxford. In 1781 he graduated M. A., and in 1787 LL.D. In 1797 he was appointed regius professor of civil law at Oxford, and, through the friendship of Mr. Burke and earl Fitzwilliam, became a member of the legislature. He was one of the executors of Mr. Burke, and a joint editor of his works. He contributed to the probationary odes for the laureatship, and wrote Remarks on the Apocalypse. He was also a writer in the Annual Register. A volume of letters between him and Mr. Burke has recently appeared. He died in 1807 of ft. decline.

LAWRENCE (sir Thomas), a distinguished English portrait painter, was born at Bristol in 1769. His father was an innkeeper, and the artist very early exhibited proofs of his talent for the art : he is said to have sketched portraits very successfully in his fifth year. At the age of six he was sent to school, where he remained two years ; and this, with

the exception of a few lessons subsequently in Latin and French, constituted his whole education. His father would not even permit him to be instructed in drawing, declaring that his genius would be cramped by the restraint of rules. Young Lawrence, however, had access to the galleries of some of the neighboring gentry, in which he employed himself in copying historical and other pieces. In 1782, his father removed to Bath, where his son was much employed in taking portraits in crayon ; and, having made a copy of the Transfiguration, by Raphael, the Souety of Arts bestowed on him their silver palette, in consequence of its merits. During six years, he was the sole support of his father and a large family. In1 1787, the family removed to London, and Lawrence was admitted a student at the Royal Academy. His subsequent career was successful and brilliant. He was elected royal associate in 1791, and, on the death of sir ,T. Reynolds, the next year, was made painter to the king. His reputation grew steadily, and he was soon considered the first portrait painter of the age in England. His scene from the Tempest was a successful attempt at historical painting; but that branch of the art receives too little encouragement in England, in comparison with that of portrait painting, to induce a successful artist in the latter department to cultivate the former. In 1815, he xvas knighted by the prince regent, who also employed him to take the likenesses of the sovereigns, and the most distinguished persons of their suite. During their visit to England, he finished the portrait of the kiug of

Prussia, and went to Aix-la-Chapelle, several years afterwards, to paint Alexander; thence he went to Vienna, where he completed the portraits of the emperor, the archdukes. Metternich, &c., and, in Rome, painted Pius VII. and cardinal Gonsalvi. On his return to England, he was elected president of the Royal Academy, as successor

to West. This office he held till his death, which occurred suddenly, January 7, 1830. His portraits are striking likenesses, and display a bold and free pencil ; but they are, particularly his later ones, chargeable with mannerism, and are not considered to be successful in expressing the nicer shades of character. In his drawing, there is a want of accuracy and finish. His income, for the last twenty years of his life, was from £10,000 to £20,000; but he died poor, owing to his zeal to possess the first-rate productions of his art, which he purchased at any price. The personal appearance of sir Thomas Lawrence was striking and agreeai le. His countenance bore a marked resemblance to that of Canning, and he was always pleased when this resemblance was observed. A look of settled melancholy was always upon his features, and there was a restlessness in his manner that bespoke an unquiet spirit.

LAWKENCE, ST., GULF OF, a gulf which receives the waters of the St. Lawrence, formed between the western part of Newfoundland, the eastern shores of Labrador, the eastern extremity of New Brunswick, part of Nova Scotia, and the island of Cape Breton. It communicates with the Atlantic by three passages, — on the nortfc by the straits of Belleisle, between Labrador and Newfoundland ; on the south-east, by the passage between Cape Ray and Newfoundland ; and by the gut of Canso, which divides Cape Breton from Nova Scotia. The distance from Cape Rosier to Cape Ray is seventy-nine leagues; from Nova Scotia to Labrador, 106.

LAWSONIA. SeeALHEN.

LAX, adj.k n. t. -\ Fr. lache ,• Latin

LAX'ATIVE,U < #. &n.*. liana. Loose; dis—

LAX'ATIVENESS, > united ; not closely

LAXITY, i Or strongly combined ;

LAX NESS. j slack : hence vague ;

not legally or morally rigid : as a substantive diarrhoea; looseness of body: laxative is having the power or tendency to remove that habit ; a purgative: laxativeness, power of removing costiveness : laxity and laxness, state of being un-compressed ; incoherentˆ not costive ; not precise.

LAXAS, a town of New Granada, South America. It was formerly rich, owing to its mines; but its population is now greatly reduced.

LAY, preterite of lie. See LIE.

LAY, v. a. &«.,.> Sax. lecjan, lejan ; Teut.

LAY ER, n. ,. $ fyan ; Swed. laga ; Goth. Itya; Dan. leyge. To place ; deposit ; apply ; put down ; prostrate ; dispose : hence to quiet • calm; allay (mentally); dispose of ; put into at, v supposed state or condition ; to scheme or contrive; chaige or allege; impose; enjoin; exhibit. t is combined with a great number of preposi-is and adverbs : but some one of the above original senses seems always to be retained : to lav is to deposit them : a lay is synonymous with > er, row, or stratum : it also wgi.ifies a wager.

How shall this bloody deed be answered ? It will be laid to us. Id. Hamlet.

For her, my lord, I dare my life lay down, and will do't, Sir.

Shakspean. Embalm me,

And lay me forth ; although unqueened, yet like A queen, and daughter to a king, inter me. Id. Lay down by those pleasures the fearful and dangerous thunders and lightnings, and then there will be found no comparison. Raleigh.

Another ill accident is laying of corn with great rains in harvest. Bacon'* Natural History.

After the egg layed, there is no further growth or nourishment from the female. Id.

A viol should have a lay of wire-strings below, as close to the belly as the lute, and then the strings of guts mounted upon a bridge as in ordinary viols, that the upper strings strucken might make the lower resound. Bacon.

Let the main part of the ground employed to gardens or corn be to a common stock : and laid in, and stored up, and then delivered out in proportion. Id.

There is a cunning, which we in England call the turning of the cat in the paw ; which is, when that which a man says to another, he layt it as if another had said it to him. Id.

Every breast she did with spirit inflame, Yet still fresh projects layed the grey-eyed dame.

Chapman.

Friends, loud tumults are not laid With half the easiness that they are raised

Ben Jorum. Till us death lay To ripe and mellow, we are but stubborn clay.

Donne.

I have laid down, in some measure, the description of the old known world. Abbot.

Let no sheep there play, Nor frisking kids the flowery meadows lay.

May.

The only son of God, upon this very hill is laid upon the altar of the cross ; and so becomes a true sacrifice for the world. Bp. Hall.

Whilst he this, and that, and each man's blow, Doth eye, defend, and shift, being laid to sore ; Backwards he bears. Daniel' t Civil War.

He that really lays these two things to heart, the extreme necessity that he is in, and the small possibility of help, will never come coldly to a work of that concernment. Duppa.

I feared I should have found A tempest in your soul, and came to lay it.

Denham.

Fathers are wont to lay up for their sons, Thou for thy son art bent to lay out all. Milton. Soft on the flowery herb I found me laid. Id. Thus passed the night so foul, till morning fair Came forth with pilgrim steps in amice grey, Who with her radiant finger stilled the roar Of thunder, chased the clouds, and laid the winds.

Id.

A vessel and provisions laid in large For man and beast. Id.

Let us be glad of this, and all our fears Lay on his providence. Id. Paradise Eegained. It is esteemed an even lay, whether any man lives

ten years longer : I suppose it is the same, that one of any ten might die within one year.

Graunt.

And laid about in fight more busily, Than the Amazonian dame Penthesile. Htidibras. When we began, in courteous manner, to lay his v.nkindness unto him, he, seeing himself confronted

by *o many. like a resolute orator, went not to de-nial, hut to justify his cruel falsehood. Sidney. After a tempest, when the winds are l*id,

The calm sea wonders at the wrecks it made.

Waller. Darkness, which fairest nymphs disarms,

Defends us ill from Mira’s charms ;

Mira can lay her beauty by,

Take no advantage of the eye,

Quit all that Lely’s art can take,

And yet a thousand captives make. Id.

Tycho Brahe laid out, besides his time und industry, much greater sums of money on instruments than any man we ever heard of. Boyle.

You see what obligation the profession of Christianity lays upon us to holiness of life. Tiltotson.

Kircher lays it down as a certain principle, that there never was any people so rude, which did not acknowledge and worship one supreme

deity.

Stillingfieet.

The writers of those times lay the disgraces and ruins of their country upon the numbers and fierceness of those savage nations that invaded them.

Temple.

The whole was tilled, and the harvest laid up in several granaries. Id.

I lay the deep foundations of a wall, And Enos, named from me, the city call.

Dry den.

At once the wind was laid, the whispering sound Was dumb, a rising earthquake rocked the ground.

Id.

But since you will be mad, and since you may Suspect my courage, if I should not lay ; The pawn I proffer shall be full as good. Id.

While cumbered with my dropping cloaths I lay, The cruel nation covetous of prey, Stained with my blood the' unhospitable coast.

Id. JEneid.

They lay want of invention to his charge ; a capi-td crime. Id.

A prince who never disobeyed, Not when the most severe commands were laid , Nor want, nor exile with his duty weighed.

Drydcn.

He took the quiver and the trusty bow Achates used to bear ; the leaders first He laid along, and then the vulgar pierced. Id. Dismiss your rage, and lay your weapons by, Know I protect them, and they shall not die. Id.

Answer, or answer not, 'tis all the same, He layt me on, and makes me bear the blame.

Id.

I have laid in for these, by rebating the satire, where justice would allow it, from carrying too sharp an edge. Id.

The story of the tragedy is purely fiction : for I take it up where the history has laid it down. Id.

He laid down his pipe, and cast his net, which brought him a very great draught. L'Estrange.

The husband found no charm to lay the devil in a petticoat, but the rattling of a bladder with bea~s in it. id.

O bird ! the delight of gods and of men ! and so he lays himself forth upon the gracefulness of the raven. Id.

A dispute, where every little straw is laid hold on, and every thing that can but be drawn in any way, to give colour to the argument, is advanced with ostentation. Troche.

The pictures drawn in our minds are laid in fading colours, and, ,f not sometimes refreshed, vanish and disappear. Id.

If you can get a good tutor, you will never repent the charge ; but will always have the satisfaction to think it the money, of all other, the best laid out.

Id.

They, who so state a question, do no more but separate and disentangle the parts of it, one from another and lay them, when so disentangled, in their due order. Id.

A tax laid upon land seems hard to the landholder, because it is so much money going out of his pocket. Id.

They lay the blame on the poor little ones. Id.

Retention is the power to revive again in our minds, those ideas which, after imprinting, have disappeared, or have been laid atide out of sight.

Id.

Favourable seasons of aptitude and inclination, be heedfully laid hold of. Id.

We make no excuses for the obstinate : blows are the proper remedies ; but blows laid on in a way different from the ordinary. Id. on Education.

It was a sandy soil, and the way had been run of dust ; but an hour or two before a refreshing fragment shower of rain had laid the dust. Uay.

The chief time of laying gilliflowers is in July, when the flowers are gone. Mortimer's Husbandry.

Hens will greedily eat the herb which will make them lay the better. Id.

Upon this they lay a layer of stone, and upon that a lay of wood. Id.

A layer of rich mould beneath, and about this natural earth to nourish the fibres. Evelyn.

Never more shall my torn mind be healed,

Nor taste the gentle comforts of repose !

A dreadful band of gloomy cares surround me,

And lay strong siege to my distracted soul.

Philips.

If we lay all these things together, and considei the parts, rise, and degrees of his sin, we shall find that it was not for nothing. South.

In the late successful rebellion, how studiously did they lay about them, to cast a slur upon the king »

Id.

A hen mistakes a piece of chalk for an egg, and sits upon it ; she is insensible of an increase or diminution in the number of those she lays.

Addison. A Roman soul is bent on higher views,

To civilize the rude unpolished world,

And lay it under the restraint of laws. Id.

Readers, who are in the flower of their youth, should labour at those accomplishments which may set off their persons when the bloom is gone, and to lay in timely provisions for manhood and old age.

Id. Guardian.

My father never at a time like this Would lay nut his great soul in words, and waste Such precious moments. Id. Cato.

1 he wars have laid whole countries waste.

Addison.

Their office it is to lay the business of the nation before him. W.

No selfish man will be concerned to lay out himself for the good of his country. Smalridge.

I shall lay down some indisputable marks of this vice, that, whenever we see the tokens, we may conclude the plague is in the house : — let us hear your diagnosticks. Collier on Pride.

The terrestrial matter is disposed into strata or layeri, placed one upon another, in like manner as any earthly sediment, settling down from a flood in great quantity, will naturally be. Woodward. _

Whilst YOU lay on your friend the favour, acquit him of the” debt. WycherUy.

For that look which does your people awe, When in your throne and robes you give ‘em law, IMV it by here, and give a gentler smile. Walker

Ambitious conquerors, in their mad career, Checked by thy voice, lay down the sword and spear.

Blackmore's Creation.

There was eagerness on both sides ; but this is far from /.lying a blot upon Luther. Atterbury.

Till he lays his indictment in some certain country, we do not think ourselves bound to answer. Id.

' He was dangerous, and takes occasion to lay out bigotry, and false confidence, in all its colours. Id.

"if the sinus lie distant, lav it open first, and cure that apertion before you divide that in ano.

Wiseman.

Don Diego and we have laid it so, that, before the rope is well" about thy neck, he will break in and cut thee down. Arbuthnot.

Roscommon first, then Mulgrave rose, like light ; The Stagyrite, and Horace, laid aside, Informed by them, we need no foreign guide.

Granvillf.

I cannot better satisfy your piety, than by laying before you a prospect of your labours. Wake.

I must lay down this for your encouragement, that ve are no longer now under the heavy yoke of a per- •ecl unsinning obedience. Id.

We to thy name our annual rites will pay, And on thy altars sacrifices fay. Pope't Statius. Homer is like his Jupiter, has his terrors, shaking Olympus ; Virgil, like the same power in his benevolence, counselling with the gods, laying plans for empires. Pope.

Neglect the rules each verbal critick lays, For not to know some trifles is a praise. Id. What right, what true, what fit, we justly call, Let this be all my care ; for this is all ; To Jay this harvest up, and hoard with haste What every day will want, and most, the last. Id.

A scheme which was writ some years since, and laid hy to be ready on a fit occasion. Swift.

From the maxims laid down many may conclude that there had been

abuses. Id.

The colouring upon those maps should be laid on so thin, as not to obsure or conceal any part of the lines. Wattt.

M?ny trees may be propagated by layers : this is to be performed by slitting the branches a little way, and laying them under the mould about half a foot. Miller.

No money is better spent than what is laid out for

domestic satisfaction. A man is pleased that his

wife is dressed as well as other people, and the wife

is pleased that she is dressed. Johnson.

I served out my trade when the gallant game was

played, And the Moro low was laid at the sound of the drum.

Burns.

Do not you think there is a sort of antipathy between philosophical and poetical genius ? I question whether any one person was ever eminent for both. Lucretius layt atide the poet when he assumes the philosopher, and the philosopher when he assumes the poet. Seattle.

How many hours of night or day In those suspended pangs I lay, I could not tell ; I scarcely knew If this were human breath I drew. Byron.

LAY, n. s. Sax. ley, leaj. See LEA. Pasture land : ground laid down in grass.

A tuft of daisies on a flowery lay They saw. Dryden’s Flower and Leaf.

The plowing of layes is the first plowing up of grass ground for corn. Mortimer’s Husbandry.

LAY, n. s. Sax. ley, leofc ; Ital. lai ; Welsh llais; Goth, lio, from loa, to sound. A song or poem.

To the maiden’s sounding timbrels sung, In well attuned notes, a joyous lay.

Faerie Queene.

Soon he slumbered, fearing not be harmed, The whiles with a loud lay, she thus him sweetly charmed. Id.

This is a most majestic vision, and Harmonious charming lays. Shahtpeare.

Nor then the solemn nightingale Ceased warbling, but all night tuned her soft layt.

Milton. If Jove's will

Have linked that amorous power to thy soft lay, Now timely sing. Id.

He reached the nymph with his harmonious lay, Whom all his charms could not incline to stay.

Waller.

On Ceres let him cail, and Ceres praise With uncouth dances, and with country lays.

, Drydeni

Even gods incline th'eir ravished ears, And tune their own harmonious spheres To his immortal lays. Dennis.

Unhappy Dryden ! in all Charles's days, Roscommon only boasts unspotted lays. Pope.

I strive, with wakeful melody, to cheer The sullen gloom, sweet Philomel ! like thee, And call the stars to listen : every star Is deaf to mine, enamoured of thy lay. Young.

But hail, ye mighty masters of the lay, Nature's true sons, the friends of man and truth, Whose song sublimely sweet, serenely gay, Amused my childhood, and informed my youth.

Beattie.

On thy voiceless shore The heroic lay is tuneless now —

The heroic bosom beats no more ! And must thy lyre, so long divine, Degenerate into hands like mine ? Byron.

LAY, adj.) Lat. laicus ; Gr. Xaoc, the LAY'MAN, n.s. $ people.

Belonging to th.p peo-ple as distinct from the clergy : one of the people ; a painter's image of a man.

The say of the father may no way prejudge the bishop's authority, but it excludes the assistance of laymen from their consistories. Bp. Taylor.

All this they had by law, and none repined, The preference was but due to Levi's kind : But, when some lay preferment fell by chance, The Gourmands made it their inheritance.

Dryden.

Since a trust must be, she thought it best To put it out of laymen's power at least, And for their solemn vows prepared a priest. Id. You are to have a layman almost as big as the life for every figure in particular, besides the natural figure before you. Id. Dufresnoy.

It might well startle

Our lay unlearned faith. Rowe.

Lay persons, married or unmarried, being doctors of the civil law, may be chancellors, officials, &c.

Ayliffe's Purer gon.

Laymen will neither admonish one another themselves, nor suffer ministers to do it.

Government of the Tongue.

Where can be the grievance, that an ecclesiastical landlord should expect a third part value for his lands, his title as antient, and as legal, as that of a layman, who is seldom guilty of giving such beneficial bargains'! Swift.

LAY BROTHERS, among the Romanists, pious but illiterate persons, who devote themselves in some convent to the service of the religious. They wear a different habit from that of the religious ; but never enter into the choir, nor are present at the chapters : nor do they make any other vow except of constancy and obedience. In the nunneries there are also lay sisters.

The institution of lay brothers began in the eleventh century. The persons on whom this title was conferred were such as were too ignorant to become clerks, and who therefore applied themselves wholly to bodily labor.

It seems to have taken its rise from hence, that the laity in those days had not, for the generality, the least tincture of learning ; whence also those came to be called clerks, by way of distinction, who had studied a little, and were able to read.

In some orders they are only retained by a civil contract, which, however, binds them for life ; in other orders they are to pass through four years of probation, as among the Jacobins; or seven, as among the Feuillants. The Capuchins admit none before nineteen years of age. The Jesuits call them coadjutors.

LAYBACH, GOVERNMENT OF, one of the greatest divisions of Austrian ILLYRIA, which see. It is divided into the circles of Laybach, Neustadtel, Adelsberg, Clagenfurt, and Villah. Population about 640,000.

LAYBACH, one of the circles of the above government, has a territorial extent of 1423 square miles, and a population of 140,000.

LAYBACH, the capital of the division of Austrian Illyria of this name, stands on the river Laybach. It has a cathedral, town-house, ten churches, two hospitals, a central school or university, an observatory, and public library. Also three distinct suburbs, and a castle on an eminence, which is used as a prison. The manufactures of silks and woollens are fallen into decay, but the potteries and tanneries are thriving; and there is a good trade with Italy, Croa-tia, and the south of Germany. Population 11,000. It is twenty-eight miles north-east of Onesk.

LAYBACH, or LAUBACH, a river of Carniola, which rises about a mile

west of Upper Laybach, and falls into the Save. It is navigable for boats almost to its head, but forms a marsh in its course.

LAYERS, in gardening, are tender shoots or twigs of trees, laid in the ground, till, having struck root, they are separated from the parent tree, and become distinct plants. The propagating trees by layers is done in the following manner : the branches of the trees are to be slit a litile way, and laid under the mould for about half a foot ; the ground should be first made very light, and after they are laid they should be gently watered. If they will not remain easily in the position they are put in, they must be pegged down with wooden hooks ; the best season for doing this is, for evergreens, towards the end of August; and, for other trees, in the beginning of February If they have taken root, they are to be cut off from the main plant the succeeding winter, and planted out. If the branch is too

high from the ground, a tub of earth is to be raised to a proper height for it. Some paie off the rind, and others twist the branch before they lay it, but this is not necessary. The end of the layer should be about a foot out of the ground ; and the branch may be either tied tight round with a wire, or cut upwards from a joint, or cut round for an inch or two at the place, and it is a good method to pierce several holes through it with an awl above the part tied with the wire.

LAYING THE LAND, in navigation, the state of motion which increases the distance from the coast, so as to make it appear lower and smaller, a circumstance which evidently arises from the intervening convexity of the surface of the sea. It is used in contradiction to raising the land, which is produced by the opposite motion of approach towards it.

LAY'-STALL, n. s. From LAY, to place, or deposit ; and STALL, which see. A dung-heap.

Scarce could he footing find in that foul way, For many corses, like a great lay-stall

Of murdered men, which therein strewed lay.

Spenter.

LA'ZAR, n. s. ~\ Italian, lazzaretto, larza-LA'ZARHOUSE, I rino. From Lazarus, the Si

LAZ’ARETTO,

. sick man of the Gospels ;

LA’ZARLY, adj. I or Arab. aUtzur, sick. A LA’ZAR-WORT, n. s.J man loathsome with disease. Lazar-house and lazaretto, signify a house for the reception of the diseased ; an hospital. Lazarly, like, or pertaining to, the diseased.

They ever after in most wretched case, lake loathsome lazars, by the hedges lay.

Faerie Queene.

I’ll be sworn, and sworn upon’t, she never shrowded any but lazars. Shakspeare.

The church of Rome, unto her four famous orders of Jacobins, Franciscans, Augustins, and Carmelites, hath added a fifth of Jesuits; and, like another Jerusalem, for those five leprous lazarly orders hath built five porches ; that, if the water of any state be stirred, they may put in for a share.

Bp. Hall’s Contemplation!.

A place

Before his eyes appeared, sad, noisome, dark, A lazar-house it seemed, where were laid Numbers of all diseased. Milton.

1 am weary with drawing the deformities of life, and la.iu.rs of the people, where every figure of imperfection more resembles me. Dryden.

Life he labours to refine Daily, nor of his little stock denies Fit alms to lazars, merciful and meek.

Phillips.

LAZARUS, Ileb. ItfJ?‘1?, i. e. the Lord’s help, a Jew of Bethany, whom our Saviour raised from the dead, after having been four days in the grave. This miracle, with many peculiarly affecting circumstances attending it, is recorded in John xi. Lazarus, from the attention paid to

his sisters by the Jews, upon his death, is supposed to have been a man of considerable property. He and his sisters, Martha and Mary, are recorded to have been among the peculiar friends of our Lord.

LAZARUS (St.), or LAZARO, a military order, instituted at Jerusalem by the crusaders, and whose business was, to receive pilgrims under their care, guard them on the roads, and defend

them from the insults of the Saracens. The knights of this order, being driven out of the Holy Land in 1253, followed St. Lewis into France ; who put them into possession of soveral houses, commanderies, and hospitals, and endowed the order with ample privileges, and procured in 1255 a bull, from Alexander IV., confirming the order, and giving them permission to observe the rule of St. Augustine. In the year 1490 pope Innocent VIII. suppressed their order, and united them to the order of St. John of Jerusalem ; but the bull issued for that purpose was not received in France. In 1572 pope Gregory XII. united those of the order in Italy with that of St. Maurice, then newly instituted by Emanuel Philibert, duke of Savoy. And, in 1608, this order was united in France to that of our Lady of mount Carmel, which had been instituted by Henry IV. The knights of St. Lazarus, and those of our Lady of mount Carmel, were allowed to marry, and, at the same time, to possess pensions charged upon ecclesiastical livings. The badge of this order is a cross of eight points, made of pure gold, edged with white enamel ; the middle, or nucleus, of the cross is enamelled crimson, and on it is the image of the blessed virgin and child proper; the reverse has the middle enamelled green, on which is the figure of St. Lazarus ; between the rays of the cross are four fleurs-de-lis, and on each of the points a small gold ball. The cross is fastened to a broad crimson riband, and is worn either on the breast or scarf-wise.
LAZULI. See LAPIS LAZULI. LA’ZY,adj. \ Fr. lache ; Goth, losk ;
LA’ZILY, adv. > Swed. loshi, lose ; Teut. lax-LA’ZINESS, n. $. jsig; all,

perhaps, of Latin lassus, relaxed. Sluggish; idle; slow; feeble; the adverb and noun corresponding.

Our soldiers, like the night-owl's lazy flight, Or like a lazy thrasher with a flail, Fall gently down as if they struck their friends.

Sltakspeare.

Wicked condemned men will ever live like rogues, and not fall to work, but be lazy, and spend victuals.

Bacon.

The eastern nations view the rising fires, Whilst mght shades us, and lazily retires.

Creech.

The ordinary method for recruiting their armies, was now too dull and lazy an expedient to resist this -orrent. Clarendon.

Whose lazy waters without motion lay.

Roscommon.

My fortune you have rescued, not only from the power of others, but from my own modesty and lazi—

Dryden.

The lazy glutton safe at home will keep,

Indulge his sloth and batten with his sleep. Id.

Watch him at play, when following his own in-

••linations ; and see whether he be stirring and active,

or whether he lazily and listlessly dreams away his

Locke.

I he towering bard had sung, in nobler lays, How the last trumpet wakes the laxy dead. Smith.

The sot cried, L'tinani hoc esset laborare, while he lay lazing and lolling upon his couch. South.

That instance of fraud and laziness, the unjust steward, who pleaded that he could neither dig nor nc<r, would quickly have been brought both to ditr ami to bep too, rather than starve. Id.

Or lazi, lakes, unconscious of a flood, Whose dull brown Naiads ever sleep in mud.

1'arneit.

He that floats lazily down the stream in presence of something borne along by the same current, will find himself move forward ; but unless he Jays his hand to the oar, and increases his speed by his own labour, must be always at the same distance from that which he is following. Adventurer.

Like eastern kings, a lazy state they keep, And close confined in their own palace sleep.

Pope.

Laziness travels so slowly, that poverty soon overtakes him. Franklin. LAZZAROVICH, one of the four counties of Austrian Dalmatia, in the district of the Mouths of the Cattaro. It forms the north-west corner of the district of Xuppa.

LEA, n. s. Sax. lea, ley. See LAY. Pasture ; enclosed ground.

Greatly agast with this pittious plea ; Him rested the good man on the lea. Spenser.

Her fallow leas

The darnel, hemlock, and rank fumitory Doth root upon. Shaktpeare.

Dry up thy harrowed veins, and plough torn lea*, Whereof ingrateful man with liquirish draughts, And morsels unctuous, greases his pure mind. Id.

Such court guise,

As Mercury did first devise,

With the mincing Dryades,

On the lawns and on the leas. Milton.

The lowing herds wind slowly o'or the lea.

Gray.

LEA, a river of England, which rises near Luton, in Bedfordshire, and running to Hertford and Ware, and afterwards south, dividing Essex from part of Hertfordshire, and from Middlesex, falls into the Thames below Blackwall. Great quantities of corn are brought by it from Hertfordshire to London.

LEAD,v. a., v. n. &n. s.^\ Sax. Ise'&an ; Goth.

LEAD'ER, ra,s. I leidu ; Be\g.leiden;

LEAD'ING, * > Teut. leiten; Dan.

LEAD'ING-STRINGS, i lede. To guide ; con—

LEAD'MAN J duct; pass or spend,

(applied to time) ; introduce ; hence to induce ; persuade ; allure ; a lead-man is the leader or beginner of a dance.

Knowist thou not that the benyngnyte of god ledith thee to forthinkyng. Wiclif. Rom. ii.

I will lead on softly, according as the cattle that goeth before me, and the children, be able to endure.

Gen. xxxiii.

Which may go out before them, and which may go in before them, and which may lead them out, and which may bring them in. Num. xxvii. 17.

I have given him for a leader and commander to the people. Isaiah Iv. 4.

The leaders of this people cause them to err, and they that are led of them are destroyed. Id. ix. 16.

Then brought he me out of the way, and led me about the way without unto the outer gate.

Ezek. xlvii. 2.

Then shall they know that I am the Lord your God, which causeth

them to be led into captivity among the heathen. Id. xxxix. 28.

They thrust him out of the city, and led him anto the brow of the hill. Luke iv. 29.

Would you lead forth your army against the em>- m • and seek him where he is to riirht 1 Spenser

There is a cliff whose high and bending head Looks fearfully on the confined deep : 3ring me but to the very brim of it, ˆnd I'll repair the misery thou dost bear, With something rich about me : from that place I shall no leading need. Shakspeare.

What I did, I did in honour, Led by the impartial conduct of my soul. Id. The sweet woman leads an ill life with him.

Id.

Nay, keep your way, little gallant ; you were wont to be a follower, now you are a leader. Id. He turns head against the lion's armed jaws ; And, being no more in debt to years than thou, Leads antient lords, and reverend bishops, on To bloody battles. Id. Henry IV.

The way of maturing of tobacco must be from the heat of the earth or sun ; we see some leading of this

Luther's life was led up to the doctrines lie preached, and his death was the death of 'the righteous. Atterbury. This distemper is most incident to such as lend a sedentary life. Arbuthnot on Alimenti.

What I say will have little influence on those whose ends lead them to

wish the continuance of the war. Swift.

ˆ The understandings of a senate are enslaved by three or four leaders, set to get or to keep-employ- ments. Id. Mistakes arise from the influence of private persons, upon great numbers stiled leading men and parties. Id. Was he ever able to walk without leading-strings, or swim without bladders, without being discovered by his hobbling and his sinking ? Id.

Human testimony is not so proper to lead us into

in musk-melons sown upon a hot-bed dunged below. the knowledge of the essence of things, as to acquaint

us with the existence of things. Watts.

Bacon.

Those escaped by flight, not without a sharp jest against their leaders, affirming that, as they had followed them into the field, so it was good reason they should follow them out. lluiiward.

His guide, as faithful from that day, As Hesperus that leads the sun his way.

Fairfax.

Such a light and mettled dance Saw you never,

And by leadmen for the nonce, That turn round like grindle stones.

Ben Jonson.

He was driven by the necessities of the times, more than led b} his own disposition, to any rigour of actions. King Charles.

WTien our Lycians see Our brave examples, they admiring say, Behold our gallant leaders. Denhnm.

The lord Cottington, being a master of temper, knew how to lead him into a mistake, and then drive him into choler, and then expose him. Clarendon.

So shall thou lead

Safest thy life, and best prepared endure Thy mortal passage when it comes. Milton.

He led me on to mightiest deeds, Above the nerve of mortal arm, Against the uncircumcised, our enemies : But now hath cast me off. Id. Agonistes.

They being to lead and give law, not to follow or receive it. Barrow.

Cyrus was beaten and slain under the leading of a woman, whose wit and conduct made a great figure.

Temple.

Him, fair Lavinia, thy surviving wife Shall breed in groves, to lead a solitary life.

Dryden.

The vessels heavy-laden put to sea With prosperous gales, a woman leads the way.

Id. Sound may serve such, ere they to sense are

grown, Like leading-strings, till they can walk alone. Id.

In organised bodies, which are propagated by seed, the shape is the leading quality, and most characteristical part, that determines the species.

Locke.

As in vegetables and animals, so in most other bodies, not propagated by seed, it is the colour we most fix on, and are most led by. Id.

Christ took not upon him flesh and blood, that he might conquer and rule nations, lead armies, or possess places. South.

He left his mother a countess by patent, which was a new lending example, grown befoJV somewhat rare. Wotton.

Yorkshire takes the lead of the other counties.

Herring.

Prosperity is too apt to prevent us from examining our conduct, but, as adversity leads us to think properly of our state, it is most beneficial to us.

Johnson.

Riches are passed away from hand to hand, As fortune, vice, or folly, may command ; As in a dance the pair that take the lead Turn downward, and the lowest pair succeed, So shifting and so various is the plan, By which Heaven rules the mixed affairs of man.

Cowper.

Slow treads fair Cannabis the breezy strand, The distaff streams dishevelled in her hand ; Now to the left her ivory neck inclines, And leads in Paphian curves its azure lines.

Darwin.

This account allows, or rather leads us to suppose, that St. Paul, in going over Macedonia, had passed so far to *he west as to come into those parts of the country whicn were contiguous to Illyncum, if he did not enter into Illyricum itself. Paley.

I am — or rather was — a prince,

A chief of thousands, and could lead Them on where each would foremost bleed ; But could not o'er myself «vince The like control. Byron.

But all the cities you have taken, all the armies which retreated before your leaders, are but paltry subjects of self-congratulation, if your land divides against itself, and your dragoons and executioners must be let loose against your fellow-citizens. Id.

LEAD, n. s. & v. a.) Sax. lae'c. A metal.

LEAD'EN, adj. \ See below. To cover

with lead ; in the plural, the roof of a house or top of any thing covered with lead. Leaden, made of lead ; and metaphorically heavy ; dull, stupid.

Thou didst blow with thy wind, the sea covered them : they sank as lead in the mighty waters.

"Exod. xv. 10.

He fashioneth the clay with his arm, he applieth himself to lead it over; and he is diligent to make clean the furnace. Ecclus. xxxviii. 30.

Thou art a soul in bliss, but I am bound Upon a wheel of fire ; that mine own tears Do scald like molten lead. Shakspeare.

Stalls, bulks, windows,

Are smothered up, leads filled, and ridges horsed With variable complexions ; all agreeing In earnestness to see him. !*•

This tiger-footed rage, when it shall find The harm of unskanued swiftness, will, too late, ‘1 ie lender pounds to’s heels. Id.

O murth’rous slumber ! l.ay’st thou the leaden mace upon my boy, That plays thee nmsick ? Id. Julius Cicsar.

If thou dost find him tractable to us, Encourage hinn, and tell him all our reasons : if he be leaden, icy, cold, unwilling, Be thou so too. Id. Richard III.

I would have the tower two stories, and goodly leads upon the top, raised with statues interposed.

Bacrm.

There is a traverse placed in a loft, at the right hand of the chair, with a privy door, and a carved window of glass leaded with gold and blue, where the mother silteth. Id.

A leaden bullet shot from one of these guns against a stone wall, the space of twenty-four paces from it, will be beaten into a thin plate. Wilkins.

Of lead, some I can show you so like steel, and so unlike common lead ore, that the workmen call it steel ore. Boyle.

Lead is employed for the refining of gold and sil-ver by the cupel ; hereof is made common ceruss with vinegar ; of ceruss, red lead ; of plumbum us-tum, the best yellow ochre ; of lead, and half as much tin, solder for lead. Grew.

sided prisms, broad unequiangular six-sidea prisms, six-sided tables, and three-sided tables. Specular splendent, to glimmering. Lustre metallic. Cleavage hexahedral. Fragments cubical. Harder than gypsum. Sextile and frangible Specific gravity 7, to 7‘6. Effervesces both with nitrous and marine acid. In a crucible it melts easily into a yellowish slagg, and some lead is commonly found reduced, and so much the more as the ore is more pyritous, but mere iron renders it refractory. Before the blowpipe, on charcoal, it decrepitates, but melts easily with a sulphureous smell, part sinks into the charcoal ; if alternately heated and cooled, it will at last vanish and leave its silver, if it contains any. Lead enters into this ore, generally in the proportion of from forty-five to eighty-three per cent. The sulphur is to the lead in the proportion of sixteen to eighty-three nearly. But the lead commonly contains silver in the proportion of from ˆ to. •&. The ores that have most lustre are said to contain most silver ; those that have least lustre contain most iron, unless the want of lustre proceeds from decay. According to Westrumb’s analysis its constituents are, lead 83, sulphur, 16-41, silver 2-08. The following are the results of Vauquelin’s examination of this ore : —

Night, sable goddess ! from her ebon throne, In rayless majesty, now stretches forth Her leaden sceptre o’er a slumbering world. Young.

LEAD, in mineralogy and chemistry, Lat. plumbum ; Fr. plomb ; Span, plomo ; Ital. piembo ; Germ, bleg; is a metal of a bluish-white color, very soft, flexible, and malleable, extending easily under the hammer into very thin plates ; but its tenacity is less than that of almost any other metal, a wire of the diameter of the tenth of an inch breaking under a weight of three pounds. It may easily be cut with a knife ; and, when heated, gives a very peculiar smell. Its specific gravity is 11-33, and it melts at 612°, rendering the refractory metals also more fusible. In a strong heat it boils, and emits fumes; dur-ing which time, if exposed to the air, its oxidation proceeds with considerable rapidity. Lead is brittle at the time of congelation. In this state it may be broken to pieces with a hammer, and the crystallisation of its internal parts will exhibit an arrangement in parallel lines. Lead is not much altered

by exposure to air or water, though the brightness of its surface, when cut or scraped, very soon goes off. It is probable that a thin stratum of oxide is formed on the surface, which defends the rest of the metal from corrosion. It is much doubted whether lead is ever found perfectly metallic in a native state. Specimens have been shown as native lead from Poland and Monmouthshire, some of which are certainly the work of art ; and, although they are not all proved to be of this kind, yet, when we take into con-deration the easy calcination of this metal by the atmosphere, &c., the existence of native lead must be allowed to be, at least, very improbable.

The principal ores of lead are the following:

Species 1. Galena, or lead; glance bleiglanz of Werner.— Color lead-gray, sometimes iridescently variegated. Massive, imitative, and crystallised in cubes, octohedrons, rectangular four-

From

Kirsch-wald in Deux

Kampf-stein.

Eckler-berg.

Fonts.

54

69

68-69

Sulphur ….

8

16

16-18

Carbonated lime

and silex . .

38

15

16-13

Oxide of iron . .

0

0

0

100

100

101

Kantenbach.

Cologne.

Lead

64

63-1

Sulphur ….

18

12

Carbonated lime

and silex . .

18

19-67

Oxide of iron . .

0

3-33

100

98-1

Dr. Thomson gives the following as the result of his experiments : —

Lead …. 85-13 Sulphur … 13-02

Oxide of iron 0-5

Loss

This ore abounds in various parts of Great Britain and on the continent, particularly in Siberia and Geimanj ; nearly all the lead of commerce, indeed, is procured from galena.

LEAD.

619

Species 2 Compact galena bley sclm-eif of Werner. — Color lead-gray, inclining occasionally to the steel-gray. Found massive, in nodules, investing, and specular. External lustre 2, 3. Internal 0, 1, 2. Transparency 0. Fracture compact, mostly even, or inclining to the flat conchoidal, seldom discovers stria, or inclines to the foliated; sometimes in the gross slaty, /raiments indeterminate, and presents no distinct concretions. Hardness from 6 to 8. Specific gravity from 6‘886 to 7-444, Gellert. Streak, brighter lead-gray, and metallic. Often feels somewhat greasy, and stains the fingers. Effervesces with nitrous acid. In lustre, fracture, fragments, and specific gravity, it differs much from the former species : it is said to contain no silver, but often iron and zinc. The connexion it may often have with the plumbiferous silver ore, which contains so large a proportion of lead, should be noted. Before the blowpipe it does not decrepitate so strongly as the former species, but melts easily,- and is reduced on charcoal with a sulphureous smell. It occurs in veins, and is usually accompanied by the com-mon lead-glance. When the two sub-species occur together, the compact always forms the sides of the vein, owing, probably, to its having be«n in a less perfect state of solution. It is accompanied with black blende, common iron pyrites, copper pyrites, quartz, and heavy spar. It is found in the lead-hills in Lanarkshire, and in Derbyshire, in divers parts of Germany, and in the valley of Chamouni in Switzerland.

Species 3. Blue lead ore ; blau bleyerz of Wer-ner. Mine de plomb bleue, Broch. Color between dark indigo-blue and lead-gray. Massive, and crystallised in regular six-sided prisms. Feebly glimmering. Soft. Sectile. Specific gravity

It occurs in veins, and is almost always accompanied with white-lead ore and lead-glance, and usually in the upper part of veins, and in new lead-glance formations. It very frequently encrusts lead-glance, and is covered with white lead ore, and sometimes by green lead ore. It is found in the lead-hills of Scotland, in different parts of Bohemia, Saxony, Salzburg, Lower Brittany, and in Siberia. Previously to the analysis of Lampadius, Haiiy supposed it was a phosphate of lead; and Werner suspected that it was a compound of lead, carbonic, and sulphuric acids.

Species 5. Cobaltic lead glance. — Color fresh lead-gray. Minutely disseminated in exceedingly small crystals, aggregated in a moss-like form. Shining and metallic. Scaly foliated. Opaque. Soft. Soils feebly. It communicates a smalt-blue color to glass of borax. It occurs near Clausthal in the Hartz.

Species 6. Triprismatic lead spar, or sulphate of lead ; blei vitriol of Werner. Colors yellowish and grayish-white. Massive and crystallised. In the primitive form the vertical prism is 120°. The principal crystallisations are, an oblique four-sided prism, variously bevelled or truncated ; and a broad rectangular four-sided pyramid. Lustre shining, adamantine. Fracture conchoidal. Translucent. As hard as calcareous spar. Streak white. Brittle. Specific gravity 6-3. It decrepitates before the blowpipe, then melts, and is soon reduced to the metallic state. Its constituents are, according to Klaproth, oxide of lead 70-5, sulphuric acid 25-75, water 2-25. It occurs in veins along with galena at Wanlockhead in Dumfries-shire, Leadhill, Pary's mine, and Pen-zance.

Species 7. Pyramidal or yellow lead spar,

5-461. It is conjectured to be sulphuret of lead, yellow molybdenated lead ore of Kirwan, gelbe intermixed with phosphate of lead. It occurs in bleyerz of Werner. Color wax-yellow or citron-veins. It has been found in Saxony and France, yellow. Found massive, disseminated, or lamel-Species 4. Black lead ore ; schwarz bleyerz of lar, or crystallised

in small cubic or rbomboidal Werner. — Light or deep black, often with some or octohedral tables, or thin plates, often cellu-Found massive, cellular, stalac-

streaks of red. titic, or crystallised in small or minute hexahae-dral prisms, generally truncated, and often so implicated as to be difficultly distinguished. External lustre 2, 3. Internal 2, 1-5. Metallic. Transparency 0. Fracture uneven, or imperfectly conchoidal, or intermediate. Hardness from 5, 6. Brittle. Specific gravity 5-744, Brisson; 5-77, Gellert. Streak light bluish-gray. Before the blowpipe it decrepitates, but melts easily, and is reduced. By the experiments of M. Laumont, it appears that this ore consists chiefly of sulphureted lead, arising from decayed galenas, and the red part from the brownish-red phosphoric ore. For from the black prisms he extracted sulphur, and from the red part phosphoric acid. According to Lampadius it consists of

Lead .

Oxygen

Carbonic acid

Carbon

Loss

72 7

18 2

99

1

100

larly accumulated, or acicular. Lustre 2. Waxy. Transparency 2, 3. Fracture minute, conchoidal. Fragments 3. Hardness from 5 to 6.

Specific gravity of the massive, much debased with mild calx, 3-800. Streak white. Sulphureted vollalkali blackens it. Before the blowpipe it decrepitates, and melts into a yellowish and blackish-gray mass, which to borax imparts a bluish-white color, and, if nitre be added, it is reduced. It does not effervesce with acids, though it often seems to do so from a mixture of mild calx invisibly contained in it ; but, if it be digested with a large proportion of nitrous acid, the greater part will be dissolved in it, and white flakes will appear diffused through the solution. Its constituents, according to Hatchett, are, oxide of lead 58-4, molybdic acid 38, oxide of iron 2‘08, silica 0-28. It occurs at Bleiberg in Ca-rinthia.

Species 8. Prismatic or red lead spar ; roth bleyerz of Werner. Color hyacinth-red, with a shade of yellow. In France it is said to have been found massive, but more generally disseminated or overlaying. In Siberia it has hitherto occurred only crystallised in small acute angled four-sided prisms, sometimes smooth,

sometimes longitudinally streaked, often hollow, rarely in low hexahedral prisms, with two small and four broad sides. These crystals are often implicated in each other. External lustre 2, 3. Internal 2, 1-5. Common. Transparency 2, 3. Fracture, if made crossways, foliated. Otherwise compact, being fine grained, uneven, or minute conchoidal. Fragments 2. Hardness 5, 4. Specific gravity 6-0269, Brisson. Streak and pow-der orange yellow. Does not effervesce with acids. The vitriolic, while cold, scarcely or but slowly affects it. It refuses to unite, but not to diffuse itself in the nitrous, whether hot or cold. But the marine, even without heat, sensibly attacks it, and dissolves about one-sixteenth of its weight ; if heated, an effervescence is perceived. Treated with the blowpipe on charcoal it decrepitates, a small proportion of the lead is reduced, but the greater part of it remains a black slagg, which to borax gives a grass-green color passing into the leek green. Its constituents are, according to Vauquelin, oxide of lead 63-96, chro-mic acid 36*4. It occurs in veins of gneiss in the gold mines of Beresofk in Siberia.

Species 9. Green rhomboidal lead spar. Color grass green. Occurring imitative or crystallised. The primitive form is a dirhomboid, or a flat equiangular double six-sided pyramid. The secondary forms are the equiangular six-sided prism, variously truncated and acuminated. Splendent. Fracture uneven. Translucent. Sometimes as hard as fluor. Brittle. Specific gravity 6-9 to 7‘2. It dissolves in acids without effervescence. Its constituents are, according to the analysis of Klaproth, oxide of lead 80, phosphoric acid 18, muriatic acid 1-62, oxide of iron, a trace. It occurs along with galena at Leadhills, and Wanlockhead ; at Alston in Cumberland, &c.

Species 10. Brown rhomboidal lead spar.— Color clove brown. Massive, and crystallised in an equiangular six-sided prism ; and an acute double three-sided pyramid. Glistening, resinous. Feebly translucent. Streak grayish-white. Brittle. Specific gravity 6‘91. It melts before the blowpipe, and, during cooling, shoots into acicular crystals. It dissolves without effervescence in nitric acid. Its constituents are, oxide of lead 78-58, phosphoric acid 19-73, muriatic acid 1-65. It occurs in veins that traverse gneiss. It is found at Miess in Bohemia.

Species 11. White lead spar, carbonate of lead. Color milk white. Occurring massive, and crystallised ; in a very oblique four-sided prism ; an unequiangular six-sided prism ; acute double six-sided pyramid; oblique double four-sided pyramid ; long acicular crystals ; and in twin and triple crystals. Lustre adamanttne. Fracture small conchoidal. Translucent. Refracts double in a high degree. Harder than calcareous spar. Brittle. Specific gravity 6-2 to 6-6. It dissolves with effervescence in muriatic and ni-tric acids. It yields a metallic globule with the blowpipe. Its constituents are, according to the analysis of Klaproth, oxide of lead 82, “carbonic acid 16, water 2. It occurs in veins at Leadhills in Lanarkshire.

Species 12. Corneous lead ore, or muriate of lead.— Color grayish-white. Occurring crystal-

lised in an oblique four-sided prism, variously truncated, bevelled, and acuminated. Splendfnt and adamantine. Cleavage threefold. Fracture conchoidal. Transparent. Soft. Sextile and easily frangible. Specific gravity 6‘065. It melts before the blowpipe into an orange colored globule. Its constituents are, according to Klaproth, oxide of lead 85-5, muriatic acid 8-5, carbonic acid 6‘0. It is found near Matlock in Derbyshire.

Species 13. Arseniated lead ore. — Color reddish brown. Shining. Fracture conchoidal. Opaque. Soft and brittle. Specific gravity 3-933. It gives out arsenical vapors with the blowpipe. It colors glass of borax lemon-yellow. Its constituents are, oxide of lead 35, arsenic acid 25, water 10, oxide of iron 14, silver 1-15. silica 7, alumina 2. It is found in Siberia.

Treated with the blowpipe, it reddens before it melts, and retains its color. It melts more difficultly than phosphoreted lead does. To decompose it, it must be heated to whiteness, then the arsenical acid escapes with effervescence and the lead is reduced.

Smelting and reduction of lead ore. — The only ore of lead purchased in th'e large way is galena, and the method of treating this is very simple, partly on account of the richness of the ore, and partly on account of the low price of the metal itself, which therefore will not admit of any but the most summary methods of bringing it into a marketable state.

When first brought up from the mine, this ore is dressed by women and boys, who with a hand hammer separate the greater part of the adhering impurities, consisting of blende, iron, pyrites, quartz, calcareous spar, &c. The residue, being broken into pieces of about the size of a hazel nut, is washed from all the adhering clay and dirt, and is then ready to be smelted. The furnace used for this purpose is the common reverberatory with a low arch. A ton of more of the ore is spread on the floor of the furnace, and by means of a pit-coal flame it is soon brought to a red heat. In this state it is occasionally stirred with iron rakes to expose fresh surfaces to the action of the flame, and facilitate the separation of the sulphur. In a short time the mass begins to acquire a pasty consistence ; upon which the heat is lowered, and the ore is kept at a dull red till the sulphur is nearly all got rid of: the fire being then increased, the ore is brought to a state of perfect fusion, and visibly consists of two fluids ; the lower is the metallic lead ; the upper is a vitreous slagg still holding a considerable portion of lead, but mixed with various impurities. In this state of the process the fire is damped ; and a few spadefuls of quicklime are thrown into the fluid mass : by this the scoriae are suddenly solidified, and are raked to the side of the furnace. The tap-hole is then opened, and the lead runs into moulds placed to receive it, when it congeals into oblong masses called pigs, weighing about 60lbs. each.

As soon as the lead has run out of the furnace, the tap-hole is closed, the scoriae are replaced in the bed, and, being quickly raised to a glowing red heat, are soon melted. The greatest part oi the lead that

they contained by this means col-

‘.ects into a mass at the bottom : a little lime is •hrown in as before, the scoriae thus rendered solid are raked aside, and the lead which they covered is let off into a mould. This second scoria, though still holding from five to eight per cent, of lead, is now removed from the furnace, and applied to no purpose but that of mending roads; the expense of separating the last portions of metal being more than the value of the produce. The lead of the first running is the best : that procured from the scoriae being sensibly harder and less malleable on account of the iron that it contains.

In order to obtain perfectly pure lead, the lead of commerce may be dissolved in pure nitric acid, and the solution be decomposed by adding to it, gradually, a solution of sulphate of soda, so long as a precipitate ensues. This precipitate, which is sulphate of lead, must then be collected on a filter, washed repeatedly in distilled water, and then dried. In order to reduce it to its metallic state, let it be mixed with two or three times its weight of black flux, introduce the mixture into a crucible, and expose it briskly to a red heat.

There are certainly two, perhaps three, oxides of lead : — 1. The powder precipitated by pot-ash from the solution of the nitrate of lead, being dried, forms the yellow protoxide. When somewhat vitrified it constitutes litharge, and, combined with carbonic acid, white-lead, or ceruse. It has been obtained by M. Houton-Labillardiere, in dodecahedral white crystals, about the size of a pin-head, by slow deposition, from a solution of litharge in soda. Heat volatilises it. It is of very great importance to know accurately the composition of this oxide of lead, especially in consequence of its great influence in the analyses of organic bodies. The mean of Berzelius’s last experiments, as detailed in vol. v. of the Afhandlingar i Fysik, and translated into the Ann. of Phil, for February, 1820, gives us 7-73 for the quantity of oxygen, combined with lOOof lead in 107-73 of the protoxide, •whence the prime equivalent of lead comes out 12-93661. The very near approach of this to 13 will justify us in

adopting this round number; and in estimating the equivalent of the protoxide at 14. The pigment massicot is merely this oxide

2. When massicot has been exposed for about forty-eight hours to the flame of a reverberatory furnace, it becomes red-lead, or minium. This substance has a specific gravity of 8-94. At a red heat it gives out oxygen, and passes into vitrified protoxide. It consists of 100 lead + 11-08 oxygen ; and it may be represented as a compound of 2 primes of lead -j-3 oxygen ; or of 1 prime protoxide + 1 prime peroxide.

3. If upon 100 parts of red-lead we digest nitric acid, of the specific gravity 4-26, 92*5 parts will be dissolved, but 7‘5 of a dark brown pow-der will remain insoluble. This is the protoxide of lead, and consists of 100 lead + 15-4 oxygen ; or 13 + 2 — 15.

By passing a stream of chlorine through red-lead enlaced in water, we obtain a solution, which yields by potash an abundant precipitate of the bronn oxide of lead. From 100 of mi-

nium, sixty-eight of the peroxide may be obtained. It is tasteless, and with muriatic acid evolves chlorine. When heated, oxygen is disengageu, and protox’de remains. The red-lead of commerce is often very impure, containing yellow oxide, sulphate of lead, submuriate of lead, and silica.

Chloride of lead is formed, either by placing lead in chlorine, or by exposing the muriate to a moderate heat. It is a semitransparent grayish-white mass, somewhat like horn, whertfce the old name of plumbum corneum. It is fixed at a rtd heat in close vessels, but it evaporates at that temperature in the open air. By Dr. Davy’s analysis, it consists of chlorine 25 78 -(- lead 74-22; or 4-5 + 13.

The iodide is easily formed, by heating the two constituents. It has a fine yellow color. It precipitates when we pour hydriodate of potash into a solution of nitrate of lead.

The salts of lead have the protoxide for their base, and are distinguishable by the following general characters : —

1. The salts which dissolve in water usually give colorless solutions, which have an astringent sweetish taste.

2. Placed on charcoal they all yield, by the blowpipe, a button of lead.

3. Ferroprussiate of potash occasions insolations a white precipitate.

4. Hydrosulphuret of potash, a black precipitate.

5. Sulphureted hydrogen, a black precipitate.

6. Gallic acid, and infusion of galls, a white precipitate.

7. A plate of zinc, a white precipitate, or metallic lead.

Most of the acids attack lead. The sulphuric does not act upon it, unless it be concentrated and boiling. Sulphurous acid gas escapes during this process, and the acid is decomposed. When the distillation is carried on to dryness, a saline white mass remains, a small portion of which is soluble in water, and is the sulphate of lead; it affords crystals. The residue of the white mass is an insoluble sulphate of lead. It consists of 5 acid + 14 protoxide.

Nitric acid acts strongly on lead.

The nitrate solution, by evaporation, yields tetrahedral crystals, which are white, opaque, possess considerable lustre, and have a specific gravity of 4. They dissolve in 7-6 parts of boiling water. They consist of 6‘75 acid + 14 protoxide ; or nearly 1 + 2.

A subnitrate may be formed in pearl-colored scales, by boiling in water equal weights of the nitrate and protoxide.

A subnitrate of lead may be formed, by boiling a solution of ten parts of the nitrate on 7-8 of metallic lead, if more of the metal be used, a quadro-subnitrate results. By saturating one-half of the oxide of the subnitrate, with the equivalent proportion of sulphuric acid, a neutral nitrate is formed.

Muriatic acid acts directly on lead by heat, oxidizing it, and dissolving part of its oxide.

The acetic acid dissolves lead and its oxides ; though probably the access of air may be necessary to the solution of the metal itself in this acid

White-lead, or ceruse, is made by rolling leaden plates spirally up, so as to leave the space of about an inch between each coil, and placing them vertically in earthen pots, at the bottom of which is some good vinegar. The pots arf> to be covered, and exposed for a length of time to a gentle heat in a sand bath, or by bedding them in dung. The vapor of the vinegar, assisted by the tendency of the lead to combine with the oxygen which is present, corrodes the lead, and converts the external portion into a white substance, which comes off in flakes, when the lead Js uncoiled. The plates are thus treated repeatedly, until they are corroded through. Ceruse is the only white used in oil paintings. Commonly it is adulterated with a mixture of chalk in the shops. It may be dissolved without difficulty in the acetic acid, and affords a crystallisable salt, called sugar of lead from its sweet taste. This, like all the preparations of lead, is a deadly poi-son. The common sugar of lead is an acetate ; and Goulard's extract, made by boiling litharge in vinegar, a subacetate. The power of this salt, as a coagulator of mucus, is superior to the other. If a bit of zinc be suspended by brass or iron wire, or a thread, in a mixture of water and the acetate of lead, the lead will be revived, and form an arbor Saturni.

The acetate, or sugar of lead, is usually crystallised in needles, which have a silky appearance. They are flat four-sided prisms with dihedral summits. Its specific gravity is 2'345, It is soluble in three and a half times its weight of cold water, and in somewhat less of boiling water. Its constituents are 26-96 acid + 58-71 base + 14-32 water. — Berzelius.

Acetate and subacetate of lead in solution, have been used as external applications to inflamed surfaces, and scrofulous sores, and as eye-washes. In some extreme cases of haemorrhagy from the lungs and bowels, and uterus, the for-mer salt has been prescribed, but rarely and in minute doses, as a corrugant or astringent. The colic of the painters, and that formerly prevalent in certain counties of England, from the lead used in the cyder presses, show the very deleterious operation of the oxide, or salts of this metal, when habitually introduced into the system in the minutest quantities at a time. Contraction of the thumbs, paralysis of the hand, or even of the extremities, have not unfrequently supervened. A course of sulphureted hydrogen waters, laxatives, of which sulphur, castor-oil, sulphate of magnesia, or calomel, should be preferred, a mercurial

course, the hot sea-bath, and electricity, are the appropriate remedies.

Dealers in wines have occasionally sweetened them, when acescent, with litharge or its salts. This deleterious adulteration may be detected by sulphureted hydrogen water, which will throw down the lead in the state of a dark brown sulphuret. Or subcarbonate of ammonia, which is a very delicate test, may be employed to precipitate the lead in the state of a white carbonate ; •which, on being washed and digested with sulphureted hydrogen water, will instantly become black. If the white precipitate be gently heated ‘t will become yellow, and on charcoal, before lie blowpipe, it will yield a globule of lead

Chromate of potash will throw down from saturnine solutions a beautiful orange-yellow powder. Burgundy wine, and all such as contain tartar will not hold lead in solution, in consequence of the insolubility of the tartrate.

The proper counter-poison for a dangerous dose of sugar of lead is solution of Epsom or Glauber salt, liberally swallowed ; either of which medicines instantly converts the poisonous acetate of lead into the inert and innoxious sulphate. The sulphuret of potash, so much extolled by Navier, instead of being an antidote, acts itself as a poison on the stomach.

Oils dissolve the oxide of lead, and become thick and consistent ; in which state they are used as the basis of plasters, cements for water-works, paints, &c.

Sulphur readily dissolves lead in the dry way, and produces a brittle compound, of a deep gray color and brilliant appearance, which is much less fusible than lead itself; a property which is common to all the combinations of sulphur with the more fusible metals.

The phosphoric acid exposed to heat, together with charcoal and lead, becomes converted into phosphorus, which combines with the metal. This combination does not greatly differ from ordinary lead ; it is malleable, and easily cut with a knife : but it loses its brilliancy more speedily than pure lead ; and when fused upon charcoal with the blowpipe the phosphorus burns, and leaves the lead behind.

Litharge fused with common salt decomposes it; the lead unites with the muriatic acid, and forms a yellow compound, used as a pigment. The same decomposition takes place in the humid way, if common salt be macerated with litharge ; and the solution will contain caustic

alkali.

Lead unites with most of the metals. Gold and silver are dissolved by it in a slight red-heat. Both these metals are said to be rendered brittle by a small admixture of lead, though lead itseli is rendered more ductile by a small quantity oi them. Platina forms a brittle compound with lead ; mercury amalgamates with it ; but the lead is separated from the mercury by agitation, in thf form of an impalpable black powder, oxygen being at the same time absorbed. Copper and lead do not unite but with a strong heat. If lead be heated so as to boil and smoke, it soon dissolves pieces of copper thrown into it; the mixture, when cold, is brittle. The union of these two metals is remarkably slight ; for, upon exposing the mass to a heat no greater than that in which lead melts, the lead almost entirely runs off by itself. This process is called eliquation. The coarser sorts of lead, which owe their brittleness and granulated texture to an admixture of copper, throw it up to the .surface on being melted by a small heat. Iron does not unite with lead, as long as both substances retain their metallic form. Tin unites very easily with this metal, and forms a compound, which is much more fusible than lead by itself, and is, for this reason, used as a solder for lead . Two parts ot lead and one of tin form an alloy more fusible than either metal alone : this is the solder of the plumbers. Bismuth combines readily with lead, and affords a metal of a fine close grain, but verj

brittle. A mixture of eight parts .bismuth, five lead, and three tin, will melt in a heat which is not sufficient to cause water to boil. Antimony forms a brittle alloy with lead. Nickel, cobalt, manganese, and zinc, do not unite with lead by fusion. The alloys in any proportion have the singular property of being of less specific gravity than the mean, the very contrary of which is observed in most other compounds of metals. The following is a table given by Mr. Hatchett exhibiting these

facts: —

Metals.

Grains.

Specific Gravity of Alloy

Bulk before Union.

Bulk after Union.

Ex-‘

pansion.

Gold Lead

442 38

18-08

1000

1005

5

Gold

sr

442 19 19

17-765

1000

1006

6

Gold Copper Lead

442 30 8

17-312

1000

1022

22

Gold

sr

442 34 4

17-032

1000

1035

35

Gold Copper

Lead

i

442 37-5

•5

16-627

1000

1057

57

Gold . Copper ! Lead

442 37-75

•25

17-039

1000

1031

31

LEAD, RED. See MINIUM.

LEAD, WHITE. See WHITE LEAD.

LEAD, BLACK. See PLUMBAGO.

LEAD, or HAND LEAD, in maritime affairs. Fr. petit plomb de sonde. An instrument for discovering the depth of water : it is composed of a large piece of lead, from seven to ten pounds weight, and attached, by means of a strap, to a long line called the lead-line. It is shaped like the diagram, having a hole in the upper extremity, •hrough which is reeved a gromet a, being well served over to keep it from chafing ; and the lower extremity is hollowed for the purpose of being armed (filled with tallow), to ascertain what kind of ground you strike

soundings on. In the end of the lead-line there is a long eye spliced, which is also served over. The eye is reeved through the gromet and taken over the lead, being thus secured. This line is about twenty fathoms in length, and particularly marked as follows : at the distance of two and three fathoms, a piece of black leather is thrust through the strands — at five fathoms, a white rag — at seven fathoms, a red one — at ten and thirteen, black leather ; and at seventeen, a red rag.

I

Deep-Sea LEAD. Fr. grand plomb de sqnde. A lead of a larger size, being from twenty-five to thirty pounds weight, is attached to a much longer line, and shaped like the former.

LEADHILLS, mountains of Scotland, in the county of Lanark, and district of Clydesdale, abounding with the most famous and ancient lead mines in that kingdom, the lead ores having been first discovered in 1513. In the summit of these mountains gold has also been found. The lead ore affords a portion of silver ; and the chief business is carried on by the Scots Mining Company, who farm the hills from the earl of Hopetoun, the latter receiving every sixth bar of lead as a rental. The number of bars annually cast amounts to about 18,000.

LEADHILLS is a village on one of the above mountains, by some said to be the highest human habitation in Great Britain. Here reside many hundreds of miners with their families, and have a public library for the instruction and amusement of their little community. They labor in the mines about six hours only in the twenty-four ; and ‘ Nothing,’ says Mr. Pennant, ‘ can equal the gloomy appearance of the country round. Neither tree, nor shrub, nor verdure, nor picturesque rock, appear to amuse the eye. The spectator must plunge into the bowels of these mountains for entertainment.’ But a few spots have been made to produce corn and potatoes. The veins of lead lie mostly north and south’, and their thickness^ which seldom exceeds forty feet, varies greatly in different parts. Some have been found filled with ore within two fathoms of the surface ; others sink to the depth of ninety fathoms. The lead is all sent to Leith, where it has the privilege of being exported free of duty. The scanty pasture of this barren region feeds some sheep and cattle ; but those in the neighbourhood of the mines often perish by drinking of the water in which the ore has been washed. Population about 1000.

LEAF, n. s. &. v. n.-\ Sax. leap ; Goth, lauf;

LEAF'I.ESS, adj. f Danish, lev. The loose

LEAF'Y, f green part of a plant ;

LEA'VY. 3 the petal of a flower;

foliage ; any tning foliated, or beaten thin ; any thing broad, flat, and open; hence part of a book (containing two pages) ; a broad door, or part of folding-doors ; the flap of a table, &c. To leaf is to come into, or bear leaves. Leafless is destitute of leaves : leafy and leavy, full of them.

And the leeuys of the tree ben to heelthe of folkis.

Wiclif. Apoc. xxii.

And they sewed fig leaves together, and made themselves aprons. Gen. iii. 7.

The two leave* of the one door were folding.

1 Kings.

Now, fair Madame ! quod I, (If I durst ask) what is the cause and why That knightis have the ensigne of honour Rather by the lefe than by the flour ?

Chaucer

Happy, ye leavci, when as those lily hands Shall handle you. Spgiuer.

This is the state of man ; to-day he puts forth The tender leaves of hopes, to-morrow blossoms.

ShaltS})earc

The frauds of men were ever so, Since summer first was leafy. Id.

Now near enough : your leiivy screens throw down, And show like those you are. Id.

Heat drieth bodies that do easily expire, as parchment, leaves, roots, and clay ; and so doth time arefy. Bacon.

Eleven ounces two pence sterling ought to be of so pure silver, as is called leaf silver, and then the meiter must add of other weight seventeen pence halfpenny farthing. Camden.

Leaf gold, that flies in the air as light as down, is as truly gold as that in an ingot. Digby.

What chance, good lady, hath bereft you thus : — Dim darkness, and this leafy labyrinth. Milton.

Most trees fall off the leaves at autumn ; and, if not kept back by cold, would leaf about the solstice.

Browne.

Strephon, with leaey twigs of laurel tree, A garland made on temples for to wear, For he then chosen was the dignity Of village lord that Whitsuntide to bear. Sidney.

A man shall seldom fail of having cherries borne by his graft the same year in which his incision is made, if his graft have blossom buds ; whereas, if it were only leaf buds, it will not bear fruit till the second season. Boyle.

Those things which are removed to a distant view, ought to make but one mass ; as the leaves on the trees, and the billows in the sea. Dryden.

Her leafy arms with such extent were spread, That hosts of birds, that wing the liquid air, Perched on the boughs. Id. Flower and Leaf. Bare honesty, without some other adornment, being looked on as a leafless tree, nobody will take himself to its shelter. Government of the Tongue. Where doves in flocks the leafless trees o’ershade, And lonely woodcocks haunt the watery glade.

Pope.

Peruse my leaves through every part, And think thou seest my owner’s

heart Scrawled o'er with trifles. Swift.

Ofttimes its leaves of scarlet hue

A golden edging boast; And, opened, it displays to view

Twelve pages at the most. Cowper. The tempest's howl, it soothes my soul,

My griefs it seems to join ; The leafless trees, my fancy please,

Their fate resembles mine ! Burns.

Again rejoicing nature sees

Her robe assume its vernal hues Her leafy locks wave in the breeze,

All freshly steeped in morning dews. Id. Though by no hand untimely snatched.

The leaves must drop away : And yet it were a greater grief To watch it withering leaj by leaf

Than see it plucked to-day ; A lovely being, scarcely formed or moulded, A rose with all its sweetest leaves yet folded.

Byron.

LEAF is defined by Miller, ' a part of a plant extended into length and breadth in such a man-ner as to have one side distinguishable from the other.' Linnaeus defines leaves ' the organs of motion, or muscles of the plant.' The leaves ore not merely ornamental to plants; they serve very useful purposes, and make part of the '•mans of vegetation. Most plants, especially trees, are furnished with leaves; n mushrooms, ..nd shrubby horse-tail, they are totally wanting. ' udwig defines leaves to be fibrous and cellular ; iocesses of the p!;i!,t, which are of various

figures, but generally extended into a plain membranaceous or skinny substance. They are of a deeper green than the foot-stalks oh which they stand, and are formed by the expansion of the vessels of the stalk, among which, in several leaves, the proper vessels are distinguished by the particular taste, color, and smell of the liquors contained within them. By the expansion of the vessels of the stalk are produced several ramifications or branches, which, crossing each other mutually, form a

kind of net; the meshes or interstices of which are filled up with a tender cellular substance, called the pulp, pith, or pa-renchyma. This pulpy substance is frequently consumed by insects, whilst the membranous net remaining untouched exhibits the genuine skeleton of the leaf. The net is covered externally with an epidermis or scarf-skin, which appears to be a continuation of the scarf-skin of the stalk, and perhaps of that of the stem. M. De Saussure, a judicious naturalist, has attempted to prove that this scarf-skin, like that of the petals, is a true bark, composed itself of an epidermis and cortical net; these parts seem to be the organs of perspiration, which serve to dissipate the superfluous juices. The cortical net is furnished, principally on the surface of the leaf, with a great number of suckers or absorbent vessels, destined to imbibe the humidity of the air. The upper surface, turned towards heaven, serves as a defence to the lower, which looks downward ; and this disposition is so essential to the vegetable economy, that if a branch is overturned, in such a manner as to destroy the natural direction of the leaves, they will of themselves, in a very short time, resume their former position ; and that as often as the branch is thus overturned. Leaves are useful and necessary organs ; trees perish when totally divested of them. In general, plants stript of any of their leaves cannot shoot vigorously witness those who have undergone the depredations of insects ; witness, likewise, the very common practice of stripping off some of the leaves from plants, when we would suspend their growth, or diminish the number of their shoots. This method is sometimes observed with corn and the esculent grasses ; and in cold years is practised on fruit-trees and vines, to render the fruit riper and better colored : but in this case it is proper to wait till the fruits have acquired their full bulk, as the leaves contribute greatly to their growth. See BOTANY.

LEAF, in clocks and watches, an appellation given to the notches of their pinions.

LEAF GOLD, or GOLD LEAF, fine gold beaten into plates of extreme thinness, for the purpose of gilding, &c. ‘ The gold is melted in a black lead crucible, with some borax, in a wind furnace, called by the workmen a wind hole : as soon as it appears in perfect fusion, it is poured out into an iron ineot mould, six or eight inches long, and three quarters of an inch wide, previously greased and heated, so as to make the tallow run and smoke, but not to take flame. The bar of gold is made red-hot, to burn off the unctuous matter, and forged on an anvil int’< a long plate, which is further extended, by being passfed repeatedly between polished steel rollers,

till it becomes a riband as thin as paper. Formerly the whole of this extension was procured oy means of the hammer, and some of the French workmen are still said to follow the same practice : but the flatting mill both abridges the operation, and renders the plate of more uniform thickness. The riband is divided by compasses, and cut with sheers into equal pieces, which consequently are of equal weights : these are forged on an anvil till they are an inch square ; and afterwards well annealed to remove the rigidity which the metal has contracted in the hammering and flatting. Two ounces of gold, or 960 grains, the quantity which the workmen usually melt at a time, make 150 of these squares, when each of them weighs six grains and two-fifths ; and, as 902 grains of gold make a cubic inch, the thickness of the square plates is about the 766th part of an inch. In order to the further extension of these pieces into fine leaves, it is necessary to interpose some smooth body between them and the hammer, for softening its blow, and defending them from the rudeness of its immediate action : as also to place between every two of the pieces some proper intermedium, which, while it prevents their uniting together, or injuring one another, may suffer them freely to extend. Both these ends are answered by certain animal membranes. The gold-beaters use three kinds of membranes; for the outside cover, common parchment made of sheep-skin ; for interlaying with the gold, first, the smoothest and closest vellum, made of calf-skin ; and afterwards the much finer skins of ox-gut, stript off from the large straight gut slit open, curiously prepared on purpose for this use, and hence called gold-beater's skin. The preparation of these last is a distinct business. The general process is said to consist in applying one upon another, by the smooth sides, in a moist state, in which they readily cohere and unite inseparably; stretching them on a frame, and carefully scraping off the fat and rough matter, so as to leave only the fine exterior membrane of the gut ; beating them between double leaves of paper, to force out what unctuosity may remain in them ; moistening them once or twice with an infusion of warm spices ; and, lastly, drying and pressing them. It is said, that some calcined gypsum or plaster of Paris is rubbed with a hare's foot both on the vellum and the ox-gut skins, which fill up such minute holes as may happen in them, and prevent the gold-leaf from sticking, as it would do to the simple animal

membrane. It is observable, that, notwithstanding the vast extent to which the gold is beaten between these skins, and the great tenuity of the skins themselves, yet they sustain continual repetitions of the process for several months, without extending or growing thinner. Our workmen find, that, after seventy or eighty repetitions, the skins, though they contract no flaw, will no longer permit the gold to extend between them ; but that they may be again rendered fit for use by interlaying them with leaves of paper moistened with white-wine vinegar, beating them for a whole day, and afterwards rubbing them over as at first with plaster of Paris. The gold is said to ex-VOL. XI!.

tend between them more easily after they have been used a little than when they are new. The beating of the gold is performed on a smooth block of black marble, weighing from 200 to 600 pounds, the heavier the better; about nine inches square on the upper surface, and sometimes less, fitted into the middle of a wooden frame, about two feet square, so as that the surface of the marble and the frame form one continuous plane. Three of the sides are furnished with a high ledge ; and the front, which is open, has a leather flap fastened to it, which the gold-beater takes before him as an apron, to preserve the fragments of gold that fall off. Three hammers are employed, all of them with two round and somewhat convex faces, though commonly the workman uses only one of the faces : the first, called the cutch-hammer, is about four inches in diameter, and weighs fifteen or sixteeu pounds, and sometimes twenty, though few workmen can manage those of the last size ; the se-cond, called the shodering-hammer, weighs about twelve pounds and is about the same diameter-the third, called the gold-hammer, or finishing hammer, weighs ten or eleven pounds, and is nearly of the same width. The French use four hammers, differing both in size and shape from those of our workmen; they have only one face, being in figure truncated cones. The first has very little convexity, is nearly five inches in diameter, and weighs fourteen or fifteen pounds : the second is more convex than the first, about an inch narrower, and scarcely half its weight : the third, still more convex, is only about two inches wide, and four or five pounds in weight : the fourth or finishing hammer, is near as heavy as the first, but narrower by an inch, and the most convex of all : 150 of the pieces of gold are interlaid with leaves of vellum, three or four inches square, one vellum leaf being placed between every two of the pieces, and about twenty more of the vel-lum leaves on the outsides ; over these is drawn a parchment case, open at both ends, and over this another in a contrary direction, so that the assemblage of gold and vellum leaves is kept tight and close on all sides. The whole is beaten

with the heaviest hammer, and every now and then turned upside down, till the gold is stretched to the extent of the vellum ; the case being from time to time opened for discovering how the extension goes on, and the packet, at times, bent and rolled as it were between the hands, for procuring sufficient freedom to the gold, or, as the workmen say, to make the gold work. The pieces, taken out from between the vellum leaves, are cut in four with a steel knife; and the 600 divisions, hence resulting, are interlaid in the same manner, with pieces of the ox-gut skins five inches square. The beating being repeated with a lighter hammer, till the golden plates have again acquired the extent of the skins, they are a second time divided in four : the instrument used for this division is a piece of cane cut to an edge, the leaves being now so light, that the moisture of the air or breat'i condensing on a metallic knife would occasion them to stick to it. These last divisions being so numerous, that the skins necessary for interposing between them would make t!>e packet to< >

thick to be beaten at once, they are parted into three parcels, which are beaten separately, with the smallest hammer, till they are stretched, for the third time, to the size of the skins : they are now found to be reduced to the greatest thinness they will admit of; and indeed many of them, before this period, break or fall. In the beating, however simple the process appears to be, a good deal of address is requisite, for applying the hammers so as to extend the metal uniformly from the middle to the sides : one improper blow is apt not only to break the gold leaves, but to cut the skins. After the last beating, the leaves are taken up by the end of a cane instrument, and, being blown flat on a leather cushion, are cut to a size, one by one, with a square frame of cane made of a proper sharpness, or with a frame of wood edged with cane : they are then fitted into books of twenty-five leaves each, the paper of which is well smoothed, and rubbed with red bole to prevent their sticking to it. Tne French use

only the cane knife ; cutting them first straight on one side, fitting them into the book by the straight side, and then paring off the superfluous parts of the gold about the edges of the book. The size of the French gold leaves is from three inches to three and three-quarters square ; that of ours, from three inches to three and three-eights. The process of gold-beating is considerably influenced by the weather. In wet weather, the skins grow somewhat damp, and in this state make the extension of the gold more tedious : the French are said to dry and press them at every tkne of using; with care not to overdry them, which would render them unfit for farther service. Our workmen complain more of frost, which appears to affect the metalline leaves themselves : in frost, a gold leaf cannot easily be blown flat, but breaks, wrinkles, or runs together. Gold leaf ought to be prepared from the finest gold ; as the admixture of other metals, though in too small a proportion to sensibly affect the color of the leaf, would dispose it to lose much of its'beauty in the air. And indeed there is little temptation to the workmen to use any other ; the greater hardness of alloyed gold occasioning as much to be lost in point of time and labor, and in the greater number of leaves that break, as can be gained by any quantity of alloy that would not be at once discoverable by the eye. All metals render gold harder and more difficult of extension : even silver, which in this respect seems to alter its quality less than any other metal, produces with gold a mixture sensibly harder than either of them separately, and this hardness is in no art more felt than in gold-beating. But, though the gold-beater cannot advantageously diminish the quantity of gold in the leaf by the admixture of any other substance with the gold, yet means have been contrived, for some particular purposes, of saving the precious metal, by producing a kind of leaf called party gold, whose basis is silver, and which has only a superficial coat of gold upon one side: a thick leaf of silver and a thinner one of gold, laid flat on one another, heated and pressed together, unite and cohere; and being then beaten into fine leaves, as in the foregoing process, the gold, though its quantity as only about one-fourth of that of the silver,

continues everywhere to cover it, the exfcn sion of the former keeping pace with that of tlie latter. See GOLD.

LEAGUE, n.s. kv.n. \ Fr. ligue ; L:it.

LEAGUED', adj. } ligo, to bind together. A confederacy ; union ; bond of agreement; political treaty : to unite; confederate.

Thou shalt be in league with the stones of the field ; and the beasts of the field shall be at peace with thee. Job.

You peers, continue this united league : I every day expect an embassage From my Redeemer, to redeem me hence. And now in peace my soul shall part to heaven, Since I have made my friends at peace on earth.

Shakspeare.

It is a great error, and a narrowness of mind, to think that nations have nothing to do one with another, except there be either an union in sovereignty, or a conjunction in pacts or leagues : there are other bands of society and implicit confedera-tions. Bacon's Holy War.

Oh Tyrians, with immortal hate Pursue this hated race : and let there be 'Twixt us and them no league nor amity.

Denham.

I, a private person, whom my country As a league breaker gave up bound, presumed Single rebellion, and did hostile acts. Milton.

And now thus leagued by an eternal bond, What shall retard the Bntons bold designs ?

Philips.

Where fraud and falsehood invade society, the band presently breaks, and men are put to a loss where to league and to fasten their dependances.

South. Thus every kind their pleasure find,

The savage and the tender ; Some social join, and leagues combine ;

Some solitary wander. Burns.

While Israel's chiefs the sacred hill surround, And famished armies crowd the dusty ground : While proud Idolatry was leagued with dearth, And withered Famine swept the desart earth.

Darwin.

When we are told that these men are leagued together, not only for the destruction of their own comfort, but of their very means of subsistence, can we forget that it is the bitter policy, the destructive

warfare of the last eighteen years, which has destroyed their comfort, your comfort, all men's comfort ?

Byron.

LEAGUE, n. s. Fr. lieue ; Ital. lega ; Lat. leuca; Wei. lech, a stone, says Camden, which used to mark every three miles; other etymologists connect it with Sax. leaj, Goth, lag", ;i place or station. Minsheu says, a Gr. XEUKO£, albus, ' Because they did of old time pitc:i white stones at every league's end.' A measure of length, equal to three miles.

Ere the ships could meet by twice five leagues, We were encountered by a mighty rock.

Hu/uptart,

Even Italy, though many a league remote, In distant echoes answered. Addisiin.

Mazeppa said — ' 'Twere long to tell ; And we have many a league to go, With every now and then a blow, And ten to one at least the foe, Before our steeds may graze at ease Beyond the swift Borysthenes. J-'yio i

LEAGUE.

027

A LEAGUE contains more or fewer geometrical paces, according to the different usages and customs of countries. A league at sea, where it is chiefly used by us, being a land measure mostly peculiar to the French and Germans, contains 3000 geometrical paces, or three English miles. The French league sometimes contains the same measure, and in some parts of France it consists of 3500 paces ; the mean or common league consists of 2400 paces, and the little league of 2000. The Spanish leagues are longer than the French, seventeen Spanish leagues making a degree, or twenty French leagues, or sixty-nine and a half English statute miles. The league of Spain is ~ four ancient Roman miles =. 6441-392 yards. The large league of Spain is *five ancient Roman miles m 8051-74 English yards. On roads made since 1766 the distances are laid*

down at the rate of 8000 varas to the league; that is, 7416 English yards ; so that five such leagues twenty-one English miles nearly. But the juridical league is 5000 varas, or 4635 English yards; so that eight of these are equal to twenty-one English miles. Marine leagues are reckoned at the rate of twenty to a degree. But in different parts of Spain the leagues are very different. The leagues of Germany and Holland contain four geographical miles each. The German league, or that of Scandinavia, is — 9662-0886 English yards. The mile or league of Germany is zz 200 Rhenish yards — 8239-846 English yards. The Persian leagues are pretty nearly of the same extent with the Spanish ; that is, they are equal to four Italian miles ; which is pretty near to what Herodotus calls the length of the Persian parasang, which contained thirty stadia, eight whereof, according to Strsbo, made a mile. The word comes from leuca, or leuga, an ancient Gaulish word for an itinerary measure, and retained in that sense by the Romans. Some derive the word leuca from Xtvicoc, white ; as the Gauls, in imitation of the Romans, marked the distances in their roads with white stones.

LEAGUE denotes also an alliance between princes and states for their mutual aid, either in attacking some common enemy, or in defending themselves. Leagues among the Greeks were of three sorts: 1. Sirovfoj, owSijioj «pijv»j, whereby both parties were obliged to cease from hostilities, without even molesting the allies of each other; 2. Eiriftaxia, whereby they engaged to have the same friends and enemies, and to assist each other upon all occasions. All these leagues were confirmed with oaths, imprecations, and sacrifices. The victims most generally used were a boar, ram, or goat, sometimes all three ; and sometimes bulls and lambs. They cut out the testicles of the animal, and stood upon them while they swore ; and some of the hair of the victim was distributed to all present. They then cut the animal's throat, which was called opria r«/iv«v, in Latin ferire foedus. This done, they repeated their oaths and imprecations, calling the gods to witness the honesty of their intentions. A libation was then made of wine, which at this time was mixed, to imply their conjunction and union ; while this was pouring out they prayed that the blood of him who should break

the treaty might be poured out in like manner. Upon these occasions no part of the victim was eaten. Still further to increase the solemnity of this obligation, the league was engraven upon brass, fixed up in places of public concourse, and sometimes read at the solemn games. Some exchanged certain tu/3oXo, or tesserae, upon the occasion, and

frequently sent ambassadors, on some appointed day, to keep them in mind of their engagements to each other. The ceremonies of the Romans in making leagues were performed by the Feciales. See FECIALES.

LEAGUE, by way of eminence, denotes a celebrated one which existed in France, from 1576 to 1593. Its intent was to prevent the succession of Henry IV., who was of the reformed religion, to the crown ; and it ended with his abjuration of that faith. The leaguers, or confederates, were of three kinds. The zealous leaguers aimed at the utter destruction, uot only of the Huguenots, but also of the ministry. The Spanish leaguers had principally in view the transferring the crown of France to the king of Spain, or the infanta his daughter. The moderate leaguers aimed only at the extirpation of Calvinism, without any alteration of the government. See FRANCE.

LEAGUE, ACHˆAN. See ACHˆANS.

LEA’GUER, n. s. Swed. and Teut. lager, from Goth, lega, to lay or place. Siege ; investment of a town.

We will bind and hoodwink him so, that he shall suppose no other but that he is carried into the leaguer of the adversaries, when we bring him to our owu tents. Shakspeare.

LEAK, n.s.Sc v.a. (Sax. lecen; Belg. and

LEA’KY, adj. i Teul. lecken ; Heb. pin1?,

accipere. Minsheu. A hole or breach which lets in water ; to let in or let out water ; to fall through a hole or breach.

There will be always evils, which no art of man can cure : breaches and leaks more than man’s wit hath hands to stop. Hooker.

They will allow us ne’er a Jordan, and then we le ,k in ycur chimney. Shakspeare.

Thou’rt so leaky,

That we must leave thee to thy sinking ; for

Thy dearest quit thee.

The water, which will perhaps by degrees leak into several parts, may be emptied out again.

Wilkiru.

The water rushes in, as it doth usually in the leak of a ship. Id—

Golden stars hung o'er their heads, And seemed so crowded, that they burst upon 'em, And dart at once their baleful influence In leaking fire. Dryden and Lef.

If you have not enjoyed what youth could give, But life sunk through you like a leaky sieve. Accuse yourself, you lived not while you might, id. Whether she sprung a leak I cannot find,

Or whether she was overset with wind,

Or that some rock below her bottom rent,

But down at once with all her crew she went.

Id.

Women are so leaky, that I have hardly met with one that could not hold her breath longer than she could keep a secret. L> Estrange.

His feet should be washed every day mcold water and have his shoes so thin that they might leak, and let in water.

L E A K £.

A small leak will sink a great ship,

Franklin.

As day advanced the weather seemed to abate, And then the leak they reckoned to reduce,

And keep the ship afloat, though three feet yet Kept two hand and one

chain-pump still in use.

Byron.

A LEAK, at sea, is a hole in the ship, through which the water comes in. A ship is said to spring a leak, when she begins to leak, or to let in the water. The manner of stopping a leak is to put into it a plug wrapped in oakum, and well tarred, or in a tarpawling clout, which keeps out the water, or nailing a piece of sheet lead on the place. Seamen sometimes stop, a leak by thrusting a piece of salt beef into it. The sea-water, being fresher than the brine imbibed by the beef, penetrates into its body, and causes it to swell so as to bear strongly against the edges of the broken plank, and thereby stops the influx of the water. — A ready way to find a leak in a ship is, to apply the narrower end of a speaking trumpet to the ear, and the other to the side of the ship where the leak is supposed to be ; when the noise of the water issuing in at the leak will be heard distinctly, whereby it may be discovered. LEAKAGE, in commerce, is an allowance in the customs, granted to importers of wines, for the* waste or damage it is supposed to have received in the passage.

LEAKE (John), M.D., an eminent English physician, born at Kirk-Oswald, in Cumberland. After going through the usual studies, in which he made rapid advances, he attended the Lon-don Hospitals, and was admitted a member of the corporation of surgeons in that city. He then set out on a tour to Portugal and Italy, and on his return commenced business in Piccadilly, and delivered lectures on the obstetrical art. His Introductory Lecture on the Theory and Practice of Midwifery was published in 1764, and went through four editions in 4to. In 1765 he published the original plan of the Westminster Lying-in Hospital ; and, having purchased a piece of ground, erected a building according to his plan, and made a free gift of the whole to the governors of the hospital. In 1773 he published Practical Observations on the Childbed Fever ; in 1774 he republished his lecture, including the History, Nature, and Tendency of Midwifery; which he afterwards considerably enlarged, and published in two volumes, under the title of Medical Observations and Instructions, on the Nature, Treatment, and Cure of Various Diseases Incident to Women. In 1792 he published a Practical Essay on the Diseases of the Viscera, particularly those of the Stomach and Bowels. But his intense application, in the composition of this work, induced an affection of the breast, which ended in his death in 1 792. LEAKE (Richard), master gunner of England, was born at Harwich in 1629, and bred to the sea. At the Restoration he was made master gun-ner of the Princess, a frieate of fifty guns ; and, in the first Dutch war,

distinguished himself by his skill and bravery in two extraordinary actions: one aeainst fifteen sail of Dutch men of <;u; arifl another, in 1667, against two Danes in iiie Baltic, in wii.cli, tiie commanding officers of

the Princess being killed or desperately wounded, the command devolved upon him. In 1669 he was promoted to be gunner ofxthe Royal Prince, a first-rate man of war. He was engaged, with his two sons Henry and John, in the sea-fight against Van Tromp, in 1673; when the Royal Prince had all her inasts shot away, near 400 of her men killed and disabled, and most of her upper tier of guns dismounted. As she lay thus like a wreck, a large Dutch man of war came down upon her with two fire ships ; and captain Rooke, afterwards Sir George, thinking it impossible to defend her, ordered the men to save their lives, and the colors to be struck Leake, hearing this, took the command upon himself, saying, ‘ The Royal Prince shall never be given up to the enemy, while I am alive to defend her.’ His undaunted spirit inspired the small residue of the ship’s company with courage; they returned with alacrity to the fight, and, under the direction of this valiant gunner and his two sons, sunk both the fire-ships, and obliged the man of war to sheer off: having thus saved the Royal Prince, he brought her into Chatham. Soon after Leake was made commander of a yacht, and gunner of Whitehall. In 1677 he obtained a grant for life of the office of master gunner of England, and store-keeper of the ordnance at Woolwich. He was the principal contriver of what the French call infernals, used at the bombardment of St. Male’s, in 1693. LEAKE (Sir John), an English admiral, distinguished by his bravery and success, was boru in 1656, and was taught mathematics and gunnery by Richard his father. He distinguished himself in 1673 in the memorable engagement between Sir Edward Spragg and Van Tromp, when but sixteen years of age; and, being afterwards made captain, signalised himself by carrying into effect the desperate attempt of convoying some victuallers into Londonderry. In 1702, being made commodore of a squadron, he destroyed the French trade and settlements at Newfoundland, and thus restored the whole island to the British. On his return he was created rear-admiral ; soon after he was made vice-admiral of the blue, and was knighted. He was engaged with admiral Rooke in taking Gibraltar; after which he distingu.shed himself in the general engagement off Malaga. He was soon after made vice-admiral of the white, and then twice relieved Gibraltar. The last time he attacked five ships of the French fleet coming out of the bay, of which two were taken, and two run ashore and destroyed : baron Pointi died

soon after of the wounds he received in the bat-tle ; and in a few days the enemy raised the siege. In 1705 Sir John was engaged in the reduction of Barcelona; and in 1706 relieved that city, when reduced to the last extremity, and obliged king Philip to raise the siege, Soon after he took Carthagena; whence, proceeding to Ali-cant and Joyce, they both submitted to him ; and he concluded the year with the reduction of Ma-jorca. Upon his return home prince George of Denmark made him a present of a ring ralued at £400, and he received £1000 from queen Anne as a reward for his services. In 1707 he was made admiral of the white, and commander-LEA

‘n-chief of the fleet; and in 1708 he surprised a convoy of the enemy’s corn, sent to Barcelona. He then proceeded to Sardinia, which he reduced to the obedience of king Charles of Spain, and soon after assisted lord Stanhope in the conquest of Minorca. On his return he was appointed one of the lord high admiral’s council ; and, in 1709, was made rear-admiral of Great Britain. He was several times chosen M. P. for Rochester; and in 1712 conducted the English forces to take possession of Dunkirk. But upon the accession of king George I. he was superseded, and allowed a pension of £6000 a year. He died at Greenwich in 1720.

LEAKE (Stephen Martin), a writer on heraldry, was the nephew of Sir John Leake, .the • naval officer. At the revival of the order of the Bath he was appointed one of the esquires of the deputy earl marshal, and, in 1727, Lancaster herald, and successively Norroy, Clarencieux, and at length in 1754 garter king-at-arms. In 1 750 he printed a life of his uncle Sir John Leake, 8vo., which, however, was never published, and, the impression having been restrained to fifty copies, the book is rare. His other works are, Reasons for granting Commissions to the provincial Kings-at-arms to visit their Provinces ; An Historical Account of English Money ; and The Statutes of the Order of the Garter,. He died in 1773.

LEAMINGTON. See LYMINGTOK. LEAMINGTON, Spa, England, in the parish of Leamington Priors, and county of Warwick, celebrated for its

mineral waters. This place has been rapidly progressing to prosperity and elegance since the year 1797, and from an inconsiderable village, such as it then was, it has be-come a populous, regularly built, fashionable ren-dezvous during the summer, visited not only by invalids, for whom the waters have been prescribed, but also by persons of rank and high professional reputation, who see!c a restoration of their energies, in the regularity of regimen, and agreeable society of this favourite watering place. Baths, public walks, libraries, assembly and pump-rooms, are all in a style of costliness and good taste. The waters contain salt, sulphate of soda, muriate of magnesia, and sulphate of lime. Leamington is distant from Warwick two miles, from London 95 miles, has a population amounting to 6000 souls. The benefice of Leamington Priors is a vicarage in the diocese of Lichfield and Coventry, of the annual value of £141. 5s.

LEAN, v. a. Sax. linian ; Belg. lenen, leti-nen ; Goth, ligen, to recline. To incline or rest against; to bend or tend towards; to recline; to be in a bending posture.

The columns may be allowed somewhat above their ordinary length, because they lean unto so good sup-

porters.

Wutton.

‘Mid the central depth of blackening woods, High raised in solemn theatre around Iˆans the huge elephant. Thomson.

Lean not on earth, ‘twill pierce thee to the heart ; A broken reed at best ; but oft a spear; On ils sharp point peace bleeds, and hope expires.

Young.

And oft by yon blue gushing stream,

Shall Sorrow lean her drooping head, And feed deep thought with

many a dream, And lingering, pause and lightly tread, Fond wretch ; as if her step disturbed the dead.

Byrtni.

LEAN, adj. & n. t. \ Sax. laene ; Swed. ten LEAN'LY, >Goth. and Teut. hn; Lat.

LEAN'NESS. j lenis. Thin; meagre;

frail; weak; not fat; wanting flesh : hence poor in any way; hungry.

Lean raw-boned rascals ! who would e'er suppose, They had such courage and audacity ! Shaktpeare.

I would invent as bitter searching terms, With full as many signs of deadly hate, As kan-faced envy in her loathsome cave. Id. That which combined us was most great, and fet

not A leaner action rend us. Id.

The poor king Reignier, whose large style Agrees not with the leanness of his purse. Id. Let a physician beware how he purge after hard frosty weather, and in a lean body, without preparation. JiuCllt.

If thy leanness loves such food, There are those, that, for thy sake, Do enough. Ben Junton.

And fetch their precepts from the cynic tub, Praising the lean and sallow abstinence. Milton. Swear that Adrastus, and the ka»i-looked prophet, Are joint conspirators. Dryden and Lee.

With razors keen we cut our passage clean Through rills of fat, and deluges of lean.

Farquhar.

There are two chief kinds of terrestrial liquors, those that are fat and light, and those that are lean and more earthy, like common water. Unmet.

No laughing graces wanton in mine eyes ; But haggered grief, Jean-looking sallow care. Dwell on my brow. Howe's Jane Shore.

Lean people often suffer for want of fat, as fat people may by obstruction of the vessels.

Arbuthnot.

The symptoms of too great fluidity are excess of universal secretions, as of perspiration, sweat, urine, liquid dejectures, leanness and weakness. Id.

With eye askance,

I view the muscular proportioned limb Transformed to a lean shank. Cowper.

LEAO, in natural history, a mineral substance approaching to the nature of the lapis lazuli, found in the East Indies, and of great use in the Chinese porcelain manufactures, being the finest blue they are possessed of. This stone is found in the strata of pit-coal, or in those of a yellowish or reddish earth in the neighbourhood of the veins of coal. Pieces of it are often found lying on the surface of the ground, and these are a sure indication that more will be found on dipping. It is generally found in oblong pieces of the size of a finger, not round, but flat. Some of this is very fine, some coarse and of a bad color. The latter is very common ; but the former is scarce, and greatly valued. It isnot easy to distinguish them at first sight, but the trying one piece is generally a sufficient test of the whole mine ; for all that is found in the same place is usually of the same sort. In preparing it for use they first wash it very clean ; then lay it at the bottom of their baking furnaces; and, when it has been thus calcined for three or four hours, it is taken

out and powdered very fine in large mortars of porcelain, with stone pestles faced with iron. When the powder is perfectly fine, they pour in boiling water, and grind that with the rest; and, when thoroughly incorporated, they add more, and pour it off after some time settling.

The remainder at the bottom of the mortar, which is the coarser part, they grind again with more water; and so on, till they have made the •whole fine, excepting a little dirt or grit. All the liquors are then mixed together, and stirred ; and after being allowed to stand two or three minutes, poured off with the powder remaining in them. This is suffered to subside gradually, and is the fine blue used in their best works, common smalt serving for the blue of all the common China.

LEAP, v. n., v. a. & n . s. ~) Saxon lea)?an ; LEAP'FROG, n. ». > Belg. loopen ; Sw.

LEAP'YEAR. jlopa; Scotch loup.

To jump ; bound ; spring : hence to start, fly, or rush impetuously : to pass over or into by leaping : the noun signifies either the jump or bound accomplished, or the space passed over : leap-frog, a leaping play of children in imitation of frogs: leap-year is abundantly defined in the extracts.

And anoon his leggis and hire feet were sowdid togidre, and he leppide and stood and wandride, and he entride with hem into the temple and wandride and leppide and heriede God. Wiclif. Dedit 3.

Out of his mouth go burning lamps, and sparks of fire leap out. Job. xli. 19.

Rejoice ye in that day, and leap for joy. Luke vi. 2. For age, with stealing steps,

Hath clawed me with his crowch, And lusty life away she leapes, As there had been none such. Vncertaine Auctors. Thassault of Cupide, fyc.

He ruin upon ruin heaps,

And on me, like a furious giant, leapt. Sandyt. He parted frowning from me, as if ruin Leaped from his eyes ; so looks the chased lion Upon the daring huntsman that has galled him ; Then makes him nothing. Shakspeare. Henry VIII.

Methinks, it were an easy leap To pluck bright honour from the pale-faced moon.

Shakspeare.

If I could win a lady at leap-frog, I should quickly leap into a wife. Id.

Henry V.

A man teapeth better with weights in his hands than without; for that the weight, if it be proportionable, strengthening the sinews by contracting tnem. In leaping with weights, the arras are first cast backwards and then forwards with so much the greater force ; for the hands go backward before they take their rise. Bacon.

In a narrow pit

He saw a lion, and leaped down to it. Cowley. The reason of the name of leap-year is, that a day of the week is missed ; as, if on one year the first of .March be on Monday, it will on the next year he on a Tuesday, but on leap-year it will leap to Wednesday.

As one condemned to leap a precipice, \V ho sees before his eyes the depth below, Stops short. Dryden's Spanish Fryar.

Behold that dreadful downfal of a rock, \ litre yon old fisher views the waves from high ! Tis the convenient leap 1 mean to try. Dryden.

Too soon they must not feel the sting of love : I .it him not leap the cow. Id. Getiig.

Every man is not of a constitution to leap a gulf for the saving of his country. L' Estrange .

Wickedness comes on by degrees, as well as vir-tue ; and sudden leaps from one extreme to another are unnatural. Id.

The cat made a leap at the mouse. Id.

Strait leaping from his horse, he raised me up.

Howe.

Leap-year or bissextile is every fourth year, and so called from its leaping a day more that year than in a common year : so that the common year has 365 days, but the leap-year 366 ; and then February hath 29 days, which in common years hath but 28. To find the leap-year you have this rule : Divide by 4 ; what's left shall be For leap-year 0 ; for past 1,2, 3. Harrii.

I am warmed, my heart Leaps at the trumpet's voice, and burns for glory.

Addison.

She dares pursue, if they dare lead : As their example still prevails, She tempts the stream or leapt the pales.

Prior.

The commons wrested even the power of chusing a king intirely out of the hands of the nobles ; which was so great a leap, and caused such a convulsion in the state, that the constitution could not bear.

Sicift.

I see the circling hunt of noisy men Burst law's inclosure, leap the mounds of right, Pursuing and pursued, each other's prey ; As wolves for rapine, as the fox for wiles ; Till death, that mighty hunter, earth them all.

Young.

LEAP, in music, is when the song does not proceed by conjoint degrees, as when between each note there is an interval of a third, a fourth, a fifth, &c. It is to be observed that there are two kinds of leaps, regular and irregular, called by the Italians salti regolari, and irregolari. The regular leaps are those of a third major or minor, whether natural or accidental, fourth, fifth, sixth minor, and octave, and these either ascending or descending.

Irregular leaps are the triton, sixth major, seventh major, the ninth, tenth, and, in general, all beyond the compass of an octave ; at least in vocal music. Besides these, there are others which may be used, such as the diminished fourth, the false fifth, and flat seventh. The difference between the regular and irregular leaps is, that the former are performed by the voice, without any great difficulty or effort ; whereas the latter require more attention to execute. LEAP, THE LOVER'S. See LEUCATA. LEARN, v. a. & v. n.-\ Sax. leonnian ; Teut. LEARN'ED, / lernen ; Goth, and

LEARN'EDLY, p > Swed. lara. To ob—

LEARN'ING, i tain knowledge or

LEARN'ER. .'skill; to improve; to

take pattern (used with of) : also, in a sense deservedly obsolete, to impart knowledge : learned is skilled or versed to some degree of

proficiency in science or art : learning, scholastic knowledge ; skill of any kind.

But britheren I preie ghou that ghe aspie hem that maken dissentiouns and hyrtyngis bisidis the doctrine that ghe han lenied, and boweghe awai fro hem.

Wiclif. Itomayns 16. Learn a parable of the fig-tree.

Malt. xxiv. 32.

LEASE.

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Take my yoke .pon you, and learn of me ; tor I am ineek and lowly. Matt. xi. 29.

He would learn

The lion stoop to him in lowly wise, A lesson hard. Spenser's Faerie Queene.

The apostle seemed in his eyes but learnedly mad.

Hooker.

An art of contradiction by way of scorn, a learning wherewith we were long sithence forewarned, that the miserable times where unto we are fallen should abound. '.

He, in a shorter time than was thought possible, leer ned both to speak and write the Arabian tongue.

Knollei:

You taught me language, and my profit on't Is, I know not how to curse : the red plague rid

you, For learning me your language.

Shakspeare. Tempest. Much

He spoke, and learnedly, for life ; but all Was either pitied in him, or forgotten.

Shakspeare.

In imitation of sounds, that man should be the teacher is no part of the matter ; for birds will learn one of another. Bacon's Natural History.

Learning hath its infancy, when it is almost childish ; then its youth, when luxuriant and juvenile ; then its strength of years, when solid ; and, lastly, its old age, when dry and exhaust.

Bacon.

The late learners cannot so well take the ply, ex-cept it be in some minds that have not suffered themselves to fix. Id.

He that sips of many arts, drinks of none. However, we must know that all learning, which is but one grand science hath so homogeneall a body, that the parts thereof do with a mutuall service relate to, and communicate strength and lustre each to other.

Fuller.

Learn, wretches ! learn the motions of the mind, And the great moral end of humankind. Dryden.

Great contemporaries whet and cultivate each other : and mutual borrowing and commerce make the common riches of learning, as it does of the civil government. Id.

It is indifferent to the matter in hand, which way the learned shall determine of it. Locke.

To be learned in the lump by other men's thoughts, and to be in the right way by saying after others, is the much easier and quicker way. Id.

You will find it difficult to persuade learned men to fall in with your projects. Addison on Medals.

To tongue or pudding thou hast no pretence, Learning thy talent is, but mine is sense. Prior. The learned Vossius says his barber used to comb his head in iambics. Steele.

Though trained in arms, and learned in martial arts, Thou chusest not to conquer men but hearts.

Granville.

As Moses was learned in all the wisdom of the Egyptians, so it is manifest from this chapter, that St. Paul was a great master in all the learning of the Greeks. Bentley.

Some by old words to fame have made pretence : Such laboured nothings, in so strange a style, Amaze the unlearned, and make the learned smile.

Pope.

As those move easiest that have learned to dance.

Id. Every coxcomb swears as learnedly as they.

Swift.

The learned met with free approach. Although they came not in a coach. Id.

You may rely upon my tender care, To keep him far from perils of ambition : ‘All he can learn of me will be to weep !

A. Philips.

Would you be still more learned than the learned ? Learn well to know how much need not be known, And what that knowledge which impairs your sense.

Young.

Much learning shews how little mortals know ; Much wealth how little worldlings can enjoy. Id.

A man of the best, and the greatest learning, it’ he does not know the world by his own experience and observation, will be very absurd, and consequently very unwelcome in company. Chesterfield.

Learning once made popular is no longer learning ; it has the appearance of something which we have bestowed upon ourselves, as the dew appears to rise from the field which it refreshes. Johnson.

\ hat pity it is that men should take such immense pains, as some do, to learn those things which, as soon as they become wise, they must take as much pains to unlearn ! Mason.

Knowledge is proud that he has learned so much ; Wisdom is humble that he knows no more.

Cowper.

LEASE, v.n.ˆ Sax. hsan ; Goth, lescv; LEAS'ER, n. s. J Teut. and Belg. lesen; O~. , to gather. To glean.

She in harvest used to lease ; But harvest done, to chare-work did aspire, Meat, drink, and two-pence, was her daily hire.

Dryden.

There was no office which a man from England might not have ; and I looked upon all who were born here as only in the condition of leasers and gleaners. Swift,

LEASE, n. s. & v. a. Fr. laisser ; Teut. /«*- sen ; Goth, leysa. A demise or tenure of houses or lands. See below : to lease is to demise or let property.

Why, cousin, wert thou regent of the world, It were a shame to let this land by leate.

Shakspeare.

Our high-placed Macbeth Shall live the lease of nature. Id.

Lords of the world have but for life their lease, And that too, if the lessor please, must cease.

Denham.

Thou to give the world increase, Shortened hast thy own life's lease. Milton. Where the vicar /eases his glebe, the tenant musf pay the great tythes to the rector or impropriator, and the small tithes to the vicar. Ayliffe.

I have heard a man talk with contempt of bishop's leases, as on a worse foot than the rest of his estate.

Swift.

Leases of a Dean and Chapter are good without confirmation of the Bishop. Tomtins.

LEASE, in law. In times of remote antiquity the feudal law imposed restrictions oa the granting of leases wholly incompatible with the spirit of the common law. By this, as it has stood for many centuries, all persons seised of an estate might let leases to endure so long as their own interest lasted. A tenant, therefore, in fee simple might let leases of any duration, for he had the whole interest ; but tenants in tail, or for life, could make no leases which should bind the issue in tail or reversioner; nor could a husband, seised jure uxoris, make a firm o» valid lease for any longer term than the joint-lives of himself and his wife. Yet some tenants

for life, as, where the fee-simple was in abey-ance, might (with the concurrence of such as had the guardianship of the fee) make leas« of equal duration with those granted by tenants in fee-simple; such as parsons and vicars with consent of the patron and ordinary. Co. Lit. 44. So also bishops and deans, and such other sole ecclesiastical corporations as are seised of the fee-simple of land in their corporate right, might, with the concurrence and confirmation of such persons as the law requires, have made leases for years, or for life, estates in tail, or in fee, without any limitation or control. And corporations aggregate might have made what estates they pleased, without the confirmation of any other person whatever. Whereas now, by several statutes, this power where it was unreasonable, and might be m'ade an ill use of, is restrained ; and, where in the other cases the restraint by the common law seemed too hard, it is in some measure removed. The former statutes are called the restraining, the latter the enabling statute, 2 Counm. c. 20.

A lease may be either in writing or by word of mouth : sometimes it is made and done by record, as fine, recovery, &c., and sometimes and most frequently by writing, called a lease by indenture ; it may be also made by deed-poll ; when made by word of mouth, without any writing, it is called a lease-parol. But by the statute of frauds, statute

29 Car. II. c. 3, leases of lands, except leases not exceeding three years, must be in writing, and signed by the parties themselves, or their agents duly authorised, otherwise they will operate only as leases at will.

A parol agreement to lease lands for four years creates only a tenancy at will. 4 Term Rep. 680. — But see 8 Term Rep. 3, that a lease by parol enures as a tenancy from year to year; the meaning of the statute of frauds being that such an agreement should not operate as a term. As to the time a lease may be made either for life, for years, or at will. For life ; as for life of the lessee, or another, or both. — For years, i. e. for a certain number of years, as ten, 1 00, 1000, or 10,000 years, months, weeks, or days, as the lessor and lessee agree. And then the estate is properly called a term for years ; for this word term does not only signify the limits and limitation of time, but also the estate and interest that doth pass for that time. These leases for years do some of them commence in prasenti, and some in future at a day to come ; and the lease that is to begin in futuro is called an interesse termini, or future interest. — At will; i. e. when a lease is made of land to be held at the will and pleasure of the lessor and lessee together ; and such a lease may be made by word of mouth, as well as the former.

A lease but for half a year, or a quarter, or any less time, this lessee is still respected as a *enant for years, and is styled so in some legal proceedings ; a year being the shortest term which the law in this case takes notice of. In-deed every estate which must expire at a period certain and prefixed, by whatever words created, is an estate for years, and therefore this estate is frequently called a term, terminus, because its

duration or continuance is bounded, limited, and determined ; for every such estate must have a certain beginning and certain end. Co. Lit. 45. But the law reckons an estate for years inferior in interest, as compared to an estate for life, or an inheritance ; an estate for life, even if it be per auter vie, is a freehold; but an estate for 1000 years is only a chattel, and reckoned part of the personal estate. Co. Lit. 45. Hence it follows, that a lease for years may be made to commence in futuro, though a lease for life can-not. As if one grants lands to another to hold from Michaelmas next for twenty years, this is good ; but to hold from Michaelmas next, for the term of his natural life is void.

Generally, to the making of a good lease there must concur, 1. A lessor not restrained from making a lease; 2. A lessee not disabled to receive; 3. A thing demised which is demisable, and a sufficient description of the thing demised, 8sc. ; 4. If for years, it must have a specified commencement and termination ; 5. It is to have all the usual ceremonies of sealing, delivery, and acceptance.

If the substance of a lease be put in writing, and signed by the parties, though it be not sealed, it shall have the effect of a lease for years (Wood's Inst. 266) ; but a lease in writing, though not under seal, cannot be given in evidence, unless it be stamped : and articles with covenants to let and make a lease of lands, for a certain term, at so much rent, have been adjudged a lease. In a covenant with the words 'have, possess, and occupy lands, in consideration of a yearly rent, without the word demise, it was held a good lease ; and a license to oc-cupy, take the profits, &c., which passes an interest, amounts to a lease. 3 Bulst. 204 ; 3 Salk. 223. An agreement of the parties, that the lessee shall enjoy the lands, will make a lease ; but if the agreement has a reference to the lease to be made, and implies an intent not to be perfected till then, it is not a perfect lease until made. If on a promise of lease a man lays out money on the premises, he shall oblige the lessor afterwards to make the lease ; the agreement being executed on the lessee's part.

A paper containing words of present contract, with an agreement that the lessee should take possession immediately, and that a lease should be executed in future, operates only as an agreement for a lease, and not as a lease itself. But an instrument containing words of present de-mise will operate as a lease.

A lessee has a term for a year by parol, and so from year to year, so long as both parties please ; if the lessee enters on a second year, he is bound for that year, and so on ; and if there is a lease by deed for a year, and so from year to year as long as both parties agree, this is binding but for one year ; though, if the lessee enters upon the second year, he is for that year bound : if it is for a year, and so from year to year, so long as both parties agree, till six years expire ; this is a lease for six years, but determinable every year at the will of either party ; but if it is for a year, and so from year to year till six years determine, this is a certain lease for six years.

LEASE.

A man out of possession cannot make a lease of lauds, without entering and sealing the lease upon tne land. Dalis. 81. The lessee is to enter on the premises let ; and such lessee for years is not in possession, so as to bring trespass, &c., until actual entry; but he may grant over his term before entry. 1 Inst. 46 ; 2 JLil. 160.

Lands and mines are leased to a tenant; this only extends to the open mines, and the lessee shall not have any others, if there are guch : and, if land and timber are demised, the lessee is not empowered to sell it. 2 Lev. 184 ; 2 Mod. 193. A man makes a lease of lands for life, or years, the lessee has but a special interest in the tim-ber trees, as annexed to the land, to have the rnast and shadow for his cattle ; and when they are severed from the lands, or blown down with wind, the lessor shall Lave them as parcel of his inheritance. 4 Rep. 62; 11 Rep. 81. A de-raise of premises in Westminster, late in the occupation of A, particularly describing them, part of which was a yard, does not pass a cellar situate under that yard, which was then in the occupation of B, another tenant to the lessor : and the lessor, in an ejectment brought to recover the cellar, is not estopped by his deed from going into evidence, to show that the cellar was not intended to be demised. Whether parcel or not of the thing demised is always matter of evidence.

He that is seised of an estate for life, may make a lease for his life according as he is seised ; also he may make a lease for years of the estate, and it shall be good as long as the estate for life doth last; one possessed of lands, for years, may make a lease for all the years except one day, or any short part of the term; and if lessee for years make a lease for life, the lessee may enjoy it for the lessor's life, if the terra of years last so long ; but, if he gives livery and seisin upon it, this is a forfeiture of the estate for years. Wood's Inst. 267. If tenant in tail or for life make a lease generally, it shall be construed for his own life. 1 Inst. 42. By various acts of parliament, and also by private settlements, a power is granted of making leases in possession, but not in reversion, for a certain time ; the ob-ject being that the estate may not be incumbered, by the act of the party, beyond a specific time. Yet persons who had this limited power of mak-ing in possession only, had frequently demised the premises to hold from the day of the date ; and the courts in several instances determined, that the words ' from

the day of the date,' excluded the day of making *.he deed : and that in consequence these were leases in reversion, and void; but this question having been brought again before the court of king's bench, it was determined that the words ' from the day' might either be inclusive or exclusive; and therefore that they ought to be construed so as to effectuate these important deeds, and not to destroy them. Of all kinds of powers the most frequent is that to make leases. In the making such leases all the requisites particularly specified in the power must be strictly observed ; and such leases must contain all such beneficial clauses and reservations as ought to be, for the benefit cf the re-mainderman ; the principle of law in this case

being, that the estate mustˆcˆme to him in as beneficial a manner as the ancient owners held it. Joint-tenants, tenants in common, and co-parceners, may make leases for life, years, or at will, of their own parts, which shall bind their companions ; and, in some cases, persons who are not seised of lands in fee, &e., may make leases for life or years, by special power enabling them to do it; when the authority must be exactly pursued. Wood's Inst. 267. But there is a difference where there is a general power to make leases, and a particular power. See ante, et 8 Rep. 69. If joint-tenants join in a lease, this shall be but one lease, for they have but one freehold ; but, if tenants in common join in a lease, it shall be several leases of their several interests. A lessor who has the fee cannot reserve rent to any other but himself, his heirs, Sec. And, if he 'reserves a rent to his executors, the rent shall be to the heir, as incident to the reversion of the land. 1 Inst. 47. The lessor may take a distress on the tenements let for the rent ; or may have action of debt for the arrears, &c. Also land leased shall be subject to those lawful remedies which the lessor provides for the recovery of his rent, possession, &c., into whose hands soever the land may come. In lands leased at will, the lessee cannot determine his will before or after the day of payment of th« rent, but it must be done on that very day; and the law will not allow the lessee to do it to thu prejudice of the lessor, as to the rent; nor that the lessor shall determine his will to the prejudice of the lessee, after the land is sown with corn, &c. For where lessee at will sows the land, if he does not himself determine the will, he shall have the corn: and where tenant for life sows the corn, and dies, his executors shall have it ; but it is not so of a tenant for years, where the term ends before the corn is ripe, &c. 5 Rep. 116. The lessor and lessee, where the estate is at will, may determine the will when they please; but, if the lessor does it within a quarter, he shall lose that quarter's rent ; and, if the lessee does it, he must pay a quarter's rent. 2 Salk. 413. By words spoken on

the ground, by the lessor in the absence of the lessee, the will is not determined ; but the lessee is to have notice. 1 Inst. 55. If a man makes a lease at will, and dies, the will is determined ; and, if the tenant continues in possession, he is tenant at sufferance. Ibid. 57. But where a lessor makes an estate at will to two or three persons, and one of them dies, it has been adjudged this does not determine the estate at will. 5 Rep. 10. If a tenant at will grants over his estate to another, it determines his will.

The cancelling a lease is not a surrender within the statute of frauds : nor is the recital in a second lease that it was granted in part consideration of the surrender of a former lease, it not purporting in the terms of it to be of itself a surrender. If a landlord lease for seven years by parol, and agree that the tenant shall enter at Lady-day, and quit at Candlemas; though the lease be void by the statute of Frauds, as to the duration of the term, the tenant holds under the terms of the lease in other respects. When the term of a lease is to end on a particular day

there is no occasion for a notice to quit : but a demand of possession, and notice in writing, are necessary to entitle the landlord to raise his rent. See LANDLORD and TENANT. The enabling statute, 32 Hen. VIII. c. 28, empowers three manner of persons to make leases, to endure for three lives, or one-and-twenty years, which could not do so before. At first, tenant in tail may by such leases bind his issue in tail, but not those in remainder or reversion. Secondly, a husband seised in right of his wife, in fee-simple or fee-tail, provided the wife joins in such lease, may bind her and her heirs thereby. Lastly, all persons seised of an estate in fee-simple in right of their churches, which extends not to parsons and vicars, may, without the concurrence of any other person, bind their successors. But many requisites must be observed which the statute specifies: as, 1st, The lease must be by indenture, and not by deed-poll or parol. 2dly, It must begin from the making, or day of the making, and not at any distance of time. 3dly, If there be any old lease in being, it must be first absolutely surrendered, or be within a year of

expiring. 4thly, It must be either for twenty-one years, or three lives; and not for both. Sthly, It must not exceed the term of three lives, or twenty-one years, but may be for a shorter time. Gthly, Under this statute, 32 Hen. VIII., it must have been of corporeal hereditaments, and not of such things as lie merely in grants ; for no rent can be reserved thereout by the common law, as the lessor cannot resort to them to distrain. But now, by the statute 5 Geo. III. c. 17, a lease of tithes or other incorporeal hereditaments, alone may be granted by any bishop or any such ecclesiastical or eleemosynary corporation, and the successor shall be entitled to recover the rent by an action of debt ; which, in case of a freehold lease, he could not have brought at the common law. Zthly, It must be of lands and tenements most commonly letten for twenty years past ; so that if they had been let for above half the time, or eleven years out of the twenty, either for life, for years, at will, or by copy of court-roll, it is sufficient. 8thly, The most usual and customary feorm or rent for twenty years past must be reserved yearly on such lease. 9tbly, Such lease must not be made without impeachment of waste. These are the guards imposed to prevent unreasonable abuses, in prejudice of the issue, the wife, or the successor, of the reasonable indulgence here given. Next follow, in order of time, the disabling or restraining statute, 1 Eliz. c. 19 (made entirely for the benefit of the successor); which enacts, thai all grants by archbishops and bishops (which include even those confirmed by the clean and chapter, the which, however long and unreasonable, were good at common law), other than for the term of twenty-one years, or three lives from the making, or without reserving the usual rent, shall be void. Then the 13 Eliz. c.

10; 14 Eliz. c. 11 and 14; 18 Eliz. c. 11; and 43 Eliz. c. 29.

Concerning these restrictive statutes two gene-r.il observations are to be made. First, that

I'py do not, by any construction, enable any 'K-STP.S to make such leases as they were by

common law disabled to make. Therefore a parson or vicar, though he is restrained from making longer leases than for twenty-one years or three lives, even with the consent of the pa-tron and ordinary, yet is not enabled to make any lease at all, so as to bind his successor, without obtaining such consent. Co. Lit. 44. Secondly, that though leases contrary to these statutes are declared void, yet they are good against the lessor, during his life, if he be a sole corporation ; and are

also good against an aggregate corporation, so long as the head of it lives, who is presumed to be the most concerned in interest. For the statute was intended for the benefit of the successor only ; and no man shall make an advantage of his own wrong. Co. Lit. 45, 2 Comm. c. 20.

LEASE, in Scots law, is generally called a tack. See LAW. The shortness of leases in many parts of Scotland has been long and justly complained of, as disadvantageous, not only to the tenants, but even to the proprietors, as well as to the country in general, by tending greatly to retard improvements in husbandry. Leases for nineteen years are too short for making any material improvements. Three times that period, or fifty-seven years, is much recommended. See Stat. Ace. Index, part I. ‘ Although the granting of leases for nineteen years at least,’ says the author of the Stat. Ace. of Dunnichen, ‘ is now become universal, yet there prevails a considerable diversity of opinion among proprietors, as to the expediency of including the life of the farmers in their leases. Some advantages, however, seem to give a decided preference to this last sort of lease. The tenant knows he is settled for life, and is therefore afraid to over-crop his land, lest -he thereby injure himself. Many lawsuits are thereby avoided. The tenant is also more attentive to the repairs of his buildings and fences ; and requires a much less vigilant inspection on the part of the proprietor, or his factor. To protect the newly planted trees round the enclosed fields, the proprietor of Dunnichen has given the heirs of the tenants a right to one-third part of them at the expiration of the lease ; and engages not to prosecute the tenants for any accidental damage from cattle. The tenants consider the trees as a part of their own property, and are at pains to protect them from injury. Until farms are transmitted from father to son like an inheritance, as is much the case in England, agriculture will not attain all the perfection of which it is capable. Veteres migrate coloni is an odious mandate.’

Upon this subject, however, respectable writers have given very different opinions. ‘ What ought to be the term of a lease,’ says Mr. Loudon, ‘ can only be determined by a reference to the circumstances of each particular case. Lands naturally rich, or such as have already been brought to a high degree of fertility, requiring no great investment of capital, and returning all or nearly all the necessary outlay within the year, may be advantageously held upon short leases, such as perhaps give time for two, or at most three, of the rotations or courses of crops to which the quality of the soil is best adapted. The practice of England in this re-

ipect is extremely various, almost every term, from twenty years downwards, being found in different parts of it. In Scotland, by far the most common period is nineteen years, to which it was formerly the practice, in some places, to add the life of the tenant. In that country, even when it is thought expedient to agree for a much longer term, this is still expressed in periods of nineteen years, a sort of mysterious cycle, which seems to be no less a favorite with the courts of law, than with landholders and farmers. Yet this term is somewhat inconvenient, as it can never correspond with any number of the recognised rotations of arable land. A lease for twenty years, it has been maintained by several writers, is not sufficient to reimburse a tenant for any considerable improvements, and landholders have often been urged to agree to a much longer term, which, it is alleged, would be not less for their own interest than for that of the tenant. This is a question which our limits do not permit us to discuss, but, after viewing it in different lights, assisted by the experience of long leases in different parts of Scotland, we cannot help expressing some doubts of their utility, even in so far only as regards the parties themselves ; and we are decidedly of opinion, that a greater produce will be brought to market, from any given extent of land held on successive leases of twenty years, for half a century, than if held on one lease of that duration, whether the term be specified or indefinite, as is the case of a lease for life. As a general mode of tenure, leases for lives seem to us particularly objectionable.'

LEASE AND RELEASE is a species of convey ance used in the English law, first invented by sergeant Moore, soon after the statute of uses, and now the most common of any, and therefore not to be shaken; though very great lawyers, particularly Mr. Noy, formerly doubted its validity. It is thus contrived : a lease, or rather bargain and sale, upon some pecuniary consideration, for one year, is made by the tenant of the freehold to the lessee or bargainee. Now this, without any enrolment, makes the bargainer stand seised to the use of the

bargainee, and vests in the bargainee the use of the term for a year; and then the statute immediately annexes the possession. He therefore, being thus in possession, is capable of receiving a release of the freehold and reversion, which must be made to a tenant in possession ; and accordingly, the next day, a release is granted to him. This is held to supply the place of livery of seisin ; and so a conveyance by lease and release is said to amount to a feoffment. See USES.

LEASH, n. s. & v. a. Fr. liasse, lesse : Ital. laccio ; Belg. litse ; Scot. kick. A cord or thong by which birds or dogs are held : hence a tierce, three ; a bond generally : to leash is to bind or hold in a string.

Holding Corioli in the name of Rome, Even like a fawning greyhound in the leash, To let him slip at will. Shakspeare.

I am sworn brother to a leash of drawers, and can call them all by their Christian names. Id.

What I was, I am, ;

More straining on, for plucking back ; not following My bash unwillingly. Id. W inttr's Tale.

Then should the warlike Harry, like himself, Assume the port of Mars ; and, at his heels, Leasht in like hounds, should famine, sword, and fire, Crouch for employment. Id. Henry V.

Some thought when he did gabble, Th'ad heard three labourers of Babel. Or Cerberus himself pronounce A leash of languages at once. Hudwras. The ravished soul being shewn such game, would break those leashet that tie her to the-body. Boyle.

Thou art a living comedy ; they are a leash of dull devils. Dennis's Letters.

LEASING, 7i. s. 1 Sax. leape, leap, defici-LEA'SY, adj. J ent; Goth, leasing. Lying; deceit ; fraud : leasy, loose ; flimsy.

The lawe is not sette to a iust man, but to uniuste men, — and lecchouris, to hem that doen leccherie with men, lesing mongeris and forsworun.

Wiclif. 1 Tymo. i.

If thou because of thin humilitee, makest a leting on thyself, though thou were not in sinne before yet arte thou than in sinne through thy lesing.

Chaucer. Personnel Tale.

O ye sons of men, how long will ye have such pleasure in vanity, and seek after leasing?

Psalms iv. 2.

He never leaveth, while the sense itself he left loose and leasy. Ascham's Schoolmaster.

That false pilgrim which that leasing told, Was indeed old Archimago. Faerie Queene.

He 'mongst ladies would their fortunes read Out of their hands, and merry leasings tell.

Hubberd's Tale.

He hates foul leasings and vile flattery, Two filthy blots in noble gentery. Id.

I have ever verified my friends With all the size that verity Would without lapsing suffer : nay, sometimes, Like to a bowl upon a subtle ground, I've tumbled past the throw ; and in his praise Have almost stampt the leasing. Shakspeare.

As folks, quoth Richard, prone to leasing, Say things at first, because they're pleasing ; Then prove what they have once asserted, Nor care to have their lie deserted : Till their own dreams at length deceive them, And oft repeating they believe them. Prior.

Trading free shall thrive again, Nor leasings lewd affright the swain. Gay.

LEAST, adj. & adv. Sax. laeft. The superlative of little (Sax. ht) ; Goth, litest. Wallis contends we should write it lest, as analogous to less. Smallest ; in the lowest degree : ' at least,' ' at the least,' ' or at least-wise,' mean saying no more than necessary, or barely sufficient ; at the lowest degree ; also, not to say all.

He that is leest among you all is the grettist.

Wiclif. Luke ix.

I am not worthy of the least of all the merciet shewed to thy servant. Gen. xxxii. 10.

Every effect doth after a sort contain, at leait-viit resemble, the cause from which it proceedeth.

Hooker.

To come from all things to nothing is not a descent but a downfall ; and it is a rare strength and constancy, not to be maimed at leatt.

Bp. Hall's Contemplations.

He who tempts, though in vain, at least asperse* The tempted with dishonour. Milloi .

Whether such virtue spent now foiled New angels to create, if they at leas,. Are his created. llt

He resolved to wave his suit, Or for a while play leatt in sight.

Hudibras.

Upon the mast they saw a young man, at leatt if he were a man, who sat as on horseback. Sidney.

The remedies, if any, are to be proposed from a constant course of the milken diet, continued at leatt a year. Temple.

Even that avert ; I chuse it not ; But taste it as the least unhappy lot.

Driiden.

A fiend may deceive a creature of more excellency than himself, at least by the tacit permission of the omniscient Being. !&•

A man can no more have a positive idea of the greatest than he has of

the least space. Locke.

A true and genuine impudence is ever the effect of ignorance without the least sense of it. Steele.

No man more truly knows to place a right value on your friendship, than he who least deserves it on all other accounts than his due sense of it. Pope.

Honour and fame at least the thunderer owed, And ill he pays the promise of a god. Id.

Let useful observations be at least some part of the subject of your conversation. Wattt.

Oh ! how I wished for spear or sword, At leatt to die amidst the horde, And perish — if it must be so — At bay, destroying many a foe. Byron.

LEATH'ER, n. s. & adj.ˆ\ Saxon, le«eri ; LEATHER'COAT, Belgic and Teut.

LEATHER'DRESSER, leder ; Dan. ladur ;

LEATHER'MOUTHED, adj. VGoth. leder ((Joth. LEATH'ERN, adj. lid, a cover). The

LEATH'ERY, dressed skin of an

LEATH'ERSELLER, n. s. _) animal ; any skin. Shakspeare calls apples with tough skins ' leather-coats.' See the extract for leather-mouthed : leathern is made of leather: leathery, resembling leather.

He was a hairy man, and girt with a girdle of leather about his loins. 2 Kings i. 8.

The shepherd's homely curds, His cold thin drink out of his leather bottle ; Is far beyond a prince's delicacies. Shakspeare. There is a dish of leathercnats for you. Id. I saw her hand ; she has a leathern band, A freestone colored hand :ˆI verily did think That her old gloves were on. Id.

By a leather mouthed fish, I mean such as have their teeth in their throat ; as, the chub or cheven. Walton's Angler.

In silken or in leathern purse retains A splendid shilling. Philips.

Wormius calls this crust a leathery skin.

Grew.

And if two boots keep out the weather, What need you have two hides of leather ?

Prior.

He removed to Cum* ; and by the way was entertained at the house of one Tychius, a leather-dreuer. Pope.

Returning sound in limb and wind, Except some leather lost behind. Sicift. No grassy mantle hides the sable hills, No flowery chaplet crowns the trickling rills ; Nor tufted moss, nor leathery lichen, creeps In russet tapestry on the crumbling steeps.

Darwin. But, ere they came to this, they that day shared

Some leathern caps, and what remained of shoes ; And then they looked around them, and despaired, And none to be the sacrifice would choose.

Buron.

LEATHER, in commerce and the arts, is the prepared skin of various animals. Under the article CURRYING will be found an ample account of that process, and the operations of the tanner upon skins under TANNING. See also SKINS, for miscellaneous information respecting different modes of dressing and disposing of them.

Leather is of three principal sorts, i. e. tanned or tawed, oil, and alum leather. To dress leather in oil, the skins are first soaked, then thrown into the lime-pit ; and, when taken thence, pulled and delivered to the friezer; they are then struck with the oil, and sent to the mill. When milled sufficiently, they are thrown into the ditch to be scoured ; sometimes they are scudded, and afterwards hung upon the hooks to dry. Skins dressed in oil are those of deer, sheep, and lambs, and some few of goats ; the oil used for the purpose is Newfoundland, or cod's-liver oil. The alum leather-dressers' art consists in soaking, liming, wringing (an operation sometimes omitted), and striking them in a liquor composed of water, salt, and alum, and then drying them properly. The skins dressed in alum are those of sheep and lambs, and a large quantity of kid.

The following processes for dyeing red and yellow leather, as

practised in Turkey, with directions for preparing and tanning the skins, were communicated by Mr. Philippe, a native of Armenia, who received from the Society for the Encouragement of Arts, &c., £100, besides the society's gold medal, as a reward.

1. First preparation of the skins, for both colors, by lime. Let the skins, dried with the hair on, be first laid to soak in clean water for three days; let them then be broken over the flesh-side, put into fresh water for two days longer, and afterwards hung up to drain half an hour. Let them now be broken OB the flesh - side, limed in cold lime on the same side, and doubled together with the grain-side outward. In this state they must be hung up within doors over a frame for five or six days, till the hair be loose; which must then be taken off, and the skins returned into the lime-pit for about three weeks. Take them out, and let them be well worked flesh and grain, every sixth or seventh day during that time ; after which let them be washed ten times in clear water, changing the water at each washing.

2. Preparation for both dyes, by drenching. After squeezing the water out of the skins, put them into a mixture of bran and water, warm as new milk, in the following proportions : *viz.* about three pounds of bran for five skins, and water sufficient to make the mixture moderately fluid, which will be about a gallon to each pound of bran. In this drench let the skins lit; three days ; at the end of which they must be well worked, and then returned into the drench two days longer. They must next be taken out and rubbed between the hands, the water squeezed from them, and the bran scraped off clear from both sides of the skin. After this they must be again washed ten times in clear water, and the water squeezed out of them. Thus far, the preparatory process for both

colors is the same ; but after this the skins must be treated differently.

3. Preparation in honey and bran of the skins to be dyed red. Mix one pound of honey with three pints of lukewarm water, and stir them together till the honey is dissolved. Then add two double handfuls of

bran: and, taking four skins (for which the above quantity of the mixture will be sufficient), work them well in it one after another. Afterwards fold up each skin separately into a round form, with the flesh-side inwards ; and lay them in an earthen pan, or other proper vessel ; in summer by the side, but in winter on the top of each other. Place the vessel in a sloping position, so that such part of the fluid as may spontaneously drain from the skins may pass off. An acid fermentation will then rise in the liquor, and the skins will swell considerably. In this state they must continue for seven or eight days ; but the moisture that drains from them must be poured off, once or twice a-day, as occasion may require.

4. Preparation in salt of the skins to be dyed red. After the skins have been thus fermented in honey and bran, let them be taken out of that mixture on the eighth or ninth day, and well rubbed and worked with dry sea salt, in the proportion of about half a pound to each skin. This will make them contract again, and part with a considerable quantity more of moisture ; which must be squeezed out by drawing each skin separately through the hands. They must next be scraped clean on both sides from the bran, superfluous salt, and remaining moisture ; after which dry salt must be strewed over the grain side, and well rubbed in with the hand. They are then to be doubled with the flesh side outwards, lengthwise from neck to tail, and a little more dry salt must be thinly strewed over the flesh side and rubbed in ; for the two last opeiations about 1J Ib. of salt will be sufficient for each skin. They must then be put, thus folded on each other, between two clean boards, placed sloping breadthwise : and a heavy weight laid on the upper board, in order gradually to press out what moisture they will thus part with. In this state of pressure they must be continued two days or longer, till it be convenient to dye them, for which they will then be duly prepared.

5. Preparation of the red dye, in a proportion for four skins. Put eight gallons of water into a copper, with 7 oz. of shenan tied up in a linen bag. Shenan is a species of salicornia, and is much used by dyers in the east. See SALICORNIA. Light a fire under a copper, and, when the water has boiled about a quarter of an hour, take out the bag of shenan, and put into the boiling fluid or lixivium, 1st, 2 drams of alum; 2dly, 2 drains of pomegranate bark ; 3dly, J oz. of turmeric ; 4thly, 3 oz. of cochineal ; 5thly, 2 oz. of loaf sugar. Let the whole mixture boil about six minutes, then cover the fire, and take out a quart of liquor, putting it into a flat earthen pan; and, when it is as cold as new milk, take one skin, folded lengthwise, the grain side outwards, and dip it in the liquor, rubbing it gently with the hands. Then, taking out the skin, hang it up to drain, and throw away the

superfluous dve. Proceed in the same manner with the other

three skins ; repeating the operation of each separately, eight times, squeezing the skins by drawing them through the hands before each fresh dipping. Lay them now on one side of a large pan, set sloping, to drain off as much of the moisture as will run from them without pressure, foi about two hours, or till they are cold; then tan them.

6. Tanning the red skins. Powder 4 oz. of the best white galls in a marble mortar, sifting it through a fine sieve. Mix the powder with about three quarts of water, and work the skins well in this mixture for half an hour or more, folding up the skins fourfold. Let them lie in this tan for twenty-four hours ; when they must be worked again as before ; then taken out, scraped clean on both sides from the first galls, and put into a like quantity of fresh galls and water. la this fresh mixture they must be again well worked for three quarters of an hour; then folded up as before, and left in the fresh tan for three days. On the fourth day they must be taken out, washed clean from the galls in seven or eight fresh quantities of water, and then hung up to dry.

7. Method of dressing the skins. When the skins are very nearly dry, they should be scraped with the proper instrument or scraper, on the flesh side, to reduce them to a proper degree of thickness. They are then to be laid on a smooth board, and glazed by rubbing them with a smooth glass. After which they must be oiled, by rubbing them with olive oil, by a linen rag, in the proportion of 1 J oz. of oil for four skins : they are then to be grained on a graining board, lengthwise, breadthwise, and cornerwise, or from corner to corner.

8. Preparations with galls, for the skins to be dyed yellow. After the four skins are taken out of the drench of bran, and clean washed, they must be very well worked, half an hour or more, in a mixture of 1J Ib. of the best white galls, finely powdered, with two quarts of clean water. The skins are then to be separately doubled lengthwise, rolled up with the flesh side outwards, laid in the mixture, and closely pressed down on each other, in which state they must continue two whole days. On the third day let them be again worked in the tan, and afterwards scraped clean from the galls, with an ivory or brass instrument; for no iron must touch them. They must then be put into a fresh tan, made of 2 Ibs. of galls finely powdered, with about three quarts of water, and well worked therein fifteen times. After this they must be doubled, rolled up as before, and laid in the second tan for three days. On the third day £ Ib. of sea-salt must be worked into each

skin; and the skins doubled as before, and returned into the tan, till the day following, when they are to be taken out and well washed six times in cold water, and four times in water lukewarm. The water must be then well squeezed out, by laying the skinsunder pressure for about half an hour, between two boards, with a weight of about 200 or 300 Ibs. laid upon the uppermost board, when they will be ready for the dye.

9. Preparations for the yellow dye in the proportion for four skins. Mix 6 ozs. of cassiui

Ht'hira, or dgehira, or the berries of the eastern rhammis, with the same quantity of alum; and pound them together till they be fine in a marble or brass mortar, with a brass pestle. These may be had at Aleppo, and other parts of the Levant, at a small price. The common Avignon or yellow berries may be substituted, but not with so good an effect; the cussiari gehira being a stronger and brighter yellow dye. After pounding them, divide the materials thus powdered, into three equal parts of 4 ozs. each, put ene part into about lj pints of water, in a china or rarthen vessel, and stir the mixture together. Let the fluid stand to cool, till it will not scald the hand. Then, spreading one of the skins flat on a table, in a warm room, with the grain side uppermost, pour a fourth part of the liquor over the upper or grain side, spreading it equally over the skin with the hand, and rubbing it well in. Afterwards do the like with the other three skins. This operation must be repeated twice more on each skin separately, with the remaining 8 ozs. of the powder of the berries and alum, with the same proportions of hot water. The skins when dyed, are to be hung up on a wooden frame, without being folded, with the grain side outwards, about three quarters of an hour to drain ; when they must be carried to a stream of running water, and well washed six times or more. After this they must be put under pressure for about an hour, till the water he well

squeezed out ; afterwards the skins must be hung up to dry in a warm room. The skins are then to be dressed and grained, as before directed for those dyed red ; except the oiling, which must be omitted.

There are various statutes relating to leather : 27 Henry VIII. c. 14 directs packers to the appointment of leather intended to be transported. The 18 Eliz. c. 9 prohibits the shipping of leather on penalty of forfeitures, &c. ; though, by 20 Car. II. c. 5, transportation of leather was allowed to Scotland, Ireland, or any foreign countiy, paying a custom or duty ; which statute was considered by divers subsequent acts. See stat. 1 .lac. I. c. 22.; and NAVIGATION LAWS.

No person must ingress leather to sell again, under the penalty of forfeiture; none but tanners are to buy any rough hides of leather, or calve-skins in the hair, on pain of forfeiture'; and no person shall forestall hides, under the penalty of 6s. Qd. a hide. Leather not sufficiently tanned is to be forfeited. In London the lord mayor and aldermen are to appoint and swear searchers of leather out of the company of shoemakers, &c., and also triers of sufficient leather ; and the same is to be done by mayors, &c., in other towns and corporations; and searchers allowing insufficient leather incur a forfeiture of 40s. Shoemakers, making shoes of insufficient leather, are liable to 3s. 4d. penalty.

Red tanned leather is to be brought into open leather markets, and searched and sealed before exposed to sale, or shall be forfeited ; and contracts for sale be void : 13 and 14 Car. II. c. 7. Hides of leather are adjudged the ware and manufacture of the currier, and subject to search, Sec. All persons dealing in leather may buy tunned leather searched in open market ; and

any person may buy or sell leather hides or skin-s by weight: stat. 1 W. & M. c. 33. Duties are granted on leather, and entries to be made of tan-yards, under the penalty of £50, and tanners and leather dressers using any private tan-yards, or concealing skins, &c., shall forfeit £20 leviable by justices of the peace, by distress, &c. : stats. 9 Ann. c. 11 : 5 Geo. I. c. 2 : 9 Geo. I. c. 27: 52 Geo. III. c. 94 : 55 Geo. HI. c. 102. Artificers may freely buy their leather, and cut it and sell it in small pieces : 12 Geo. II. c. 25. Penalty on curriers neglecting to curry leather, 12 Geo. II. c. 25. By stats. 39, 40, Geo. III. c. 66 : 4 Geo. III. c. 53. Regulations are made to prevent the spoiling of hides and leather, by the flaying animals injudiciously : and inspectors appointed to insure their execution.

LEAVE, n. s., v. a. & v. n. ˆ Saxon, lepe, LEFT, part, prefer. /’ˆp (lypan, to

LEA’VER, n. s. 3 grant); Swedish,

laf; Dan. lov ; Belg. lof. Permission ; grant ; allowance ; liberty ; consent : hence farewell ; permission to depart ; and, probably hence also the verb to leave, i. e. to permit to remain; to quit consentingly ; to desist from ; to give, or voluntarily to resign ; to bequeath ; to abandon ; not to choose or select; not to deprive of; not to take away ; to reject : as a verb neuter, to cease ; desist. It is compounded with off, which gives it intensity, both in the active and neuter form of the verb ; and in the former with out, when it signifies to omit or neglect.

Jhesus answeride to hem, now ghe bileuen, lo the our cometh and now it cometh, that ghe be dispar-pled ech into hise owne thingis, and that ghe leeue me aloone : and I am not aloone, for the fadir is with me. Wiclif. Jon. xvi.

A man shall leave his father and his mother, and cleave to his wife. Gen. ii. 24.

He began at the eldest, and left at the ‘youngest.

Id. xliv. 12.

He shalj eat the fruit of thy cattle ; which also shall not leave thee either corn, wine, or oil.

Deut. xxviii. 48.

Let us return, lest my father leave caring for the asses, and take thought for us. 1 S;im. ix. 5.

When him his dearest Una did behold, Disdaining life, desiring leave to die. Spenser. Grittus, hoping that they in the castle would not hold out, left off to batter or undermine it, wherewith he perceived he little prevailed. Knolles.

Vastius gave strict commandment, that they should leave behind them unnecessary baggage. Id.

I make bold to press upon you. — You’re welcome ; give us leave, drawer.

Shfikspeare. Take leave and part, for you must part forthwith.

Id.

Alas, poor lady ; desolate and left ; I weep myself to think upon thy words. Id, She is my essence, and I leave to be, If I be not by her fair influence Fostered, illumined, cherished, kept alive. Id, And since this business so far fair is done, Let us not leave till all our own be won. Id.

Let the world rank me in register A master-/eauer and a fugitive. Id.

I am so fraught with curious business, that I leave out ceremony. Id. Winter's Tale.^

If it be done without order, the mind comprehend-eth less that which is set down : and besides, U

Ifaveth a suspicion, as it' more might be said than is expressed. Bacon.

What is set down by order and division doth de-minstrate that nothing is left out, or omitted, but all is there. Id.

You may partake : I have told 'em who you are. — I should be loth to be left out, and here too.

Ben Jonsoii.

If they love lees, and leave the lusty wine, Envy them not their palates with the swine. Id.

The days

Of Sylla's sway, when the free sword took leave To act all that it would. Id. Catiline.

These things must be left uncertain to farther discoveries in future ages. Abbot.

But, my dear nothings, take your leave, No longer must you me deceive. Suckling. If Chaldea had not been grossly idolatrous, Abraham had not left it. Bp. Hall. Wrongs do not leave off there where they begin, But still beget new mischiefs in their course. Dan.

They still have left me the providence of God, and all the promises of the gospel, and my charity to them too. Taylor.

Befriend till utmost end, Of all thy dues be done, and none left out, Ere nice morn on the Indian steep From her cabined loop-hole peep. Milton. Many stars may be visible in our hemisphere, that are not so at present ; and many shall take leave of our horizon, and appear unto southern habitations. Browne. But, when you find that vigorous heat abate, Leave off", and for another summons wait.

Roscommon.

Thrice happy snake ! that in her sleeve May boldly creep ; we dare not give Our thoughts so unconfined a leave. Waller. If a wise man were left to himself, and his own choice, to wish the greatest good to himself he could devise ; the sum of all his wishes would be this, That there were just such a being as God is.

TUlotsm.

Offended that we fought without his leave, He takes this time his secret hate to shew. Dryden. If, upon any occasion, you bid him leave off the doing of any thing, you must be sure to carry the point. Locke.

Who those are, to whom this right by descent belongs, he leaves out of the reach of any one to discover from his writings. Id.

This I leave with my reader, as an occasion for him to consider how much he may be beholden to experience. Id.

In either of these cases, though a man perhaps does but his duty in changing his side, he not only makes himself hated by those he left, but is seldom heartily esteemed by those he comes over to.

A ddison.

In proportion as old age came on, he left off fox-hunting. Id. Spectator.

I always thought this passage left out with a great deal of judgment, by Tucca and Varius, as it seems to contradict a part in the sixth JEneid.

Id. On Italy.

My father has this morning railed together, To this poor hall, his little Roman senate, The leavings of Pharsalia. Id. Cato.

In all the common incidents of life, I am superiour, I can take or leave. Steek.

We ask, if those subvert, Reason's established maxims, who assert That we the worlds's existence may conceive Though we one atom nut of matter leave ?

Btudaurt,

He began to leave off some of his old acquaintance, his roaring and bullying about the streets : he put on a serious air. Arbuthnot.

LEAVEN, LOCH; a lake of Scotland, about twelve miles in circumference, in the county of Kinross. It contains four islands, on one of which was formerly a priory, and on another stand the remains of the castle of Loch Leaven, once a royal residence, which was granted by Robert III. to Douglas. In this castle Mary Stuart was confined, after her separation from Bothwell, and her capture by the confederate lords, at the battle of Carberry Hill. After several unsuccessful attempts, she made her es-cape, by the aid of George Douglas, her keeper's brother.

LEAVEN, n.s. & v.a. Fr. leeain; Ital. levane, levatura ; Span, levadura, all perhaps of Lat. leva, levando, lifting up. Any ferment or fermenting substance ; dough fermented ; yeast ; and, metaphorically, any thing that powerfully but gradually changes or affects the mind and its qualities. It is used in the Bible both in a good and bad sense.

Whosoever eateth leavened bread, that soul shall be cut off. E*od. xii. 17,

It shall not be baken with leaven.

Lev. vi. 17.

Let us keep the feast, not with old leaven, neither with the leaven of malice and wickedness.

1 Cor. v. 8. You must tarry the leavening.

Shalapeare.

Breads we have of several grains, with divers kinds of leavenings, and seasonings ; so that some do extremely move appetites. Bacon.

Many of their propositions savour very strongly of the old leaven of innovations. King Charles.

This gospel of mine is like unto leaven, which, though in a very small quantity it be hid amongst much dough, yet seasoneth the whole batch ; so shall this gospel of mine diffuse the power and vir-tue thereof, to all the whole mass of the habitable world. Bp. Hall.

That cruel something unpossest, Corrodes and leavem all the rest. Prior.

All fermented meats and drinks are easiest digested ; and those unfermented, by barm or leaven, are hardly digested. Flayer.

Pride, like leaven in a mass of flour,

Tainted her laws, and made e'en virtue sour.

Churchill.

LEAVEN is used to ferment and render light a much larger quantity of dough or paste. See BREAD and YEAST. Leaven was strictly forbidden by the law of Moses during the seven days of the passover; and the Jews, in obedience to this law, very carefully purified their houses from all leaven as soon as the vigil of the feast began. Nothing of honey or leaven was to have place in any thing presented upon the altar during this solemnity. If, during the feast, the least particle of leaven was found in their houses, the whole was polluted.

LEBADEA, or LEBADIA, an ancient town of Boeotia, on the borders of Phocis, situated between Helicon and Chseronea, near Coronaea. In it stood the oracle of Jupiter Trophonius, where all who went to consult it descended into a subterraneous gulf.

LEBANON, a celebrated mountain in the south of Syria and north of Canaan. See LiBANUS.

LEBANON, a post town of New York, county of Maine, on the Piscataqua. It is twenty-eight miles north-west of New York. 2. Also a post town of Grafton county, New Hampshire, on the east side of the Connecticut, opposite Hartford, with which it is connected by a bridge ; four miles south-east of Dartmouth College. White River flows into the Connecticut opposite this town. 3. A post town of Windham county, Connecticut; nine miles north-west of Norwich, and thirty south-east of Hartford. It is a pleasant and valuable agricultural town among the best in the state. 4. A post town pleasantly situated, and the capital of Lebanon county, Pennsylvania, is regularly laid out, and contains an elegant court house, a number of other public buildings, and many handsome houses, and has considerable trade. It is situated on the Quiti-pihilla Creek, within about a mile of the Schuyl-kill Canal which connects this stream with the Tulpehocken. About five miles from this town there are extensive mines of iron and copper, called the Cornwall mines. 5. A post town, the capital of Warren county, Ohio ; four miles west of the Little Miaine.

LEBANON, NEW, a post town in Canaan, Columbia county, New York, six miles west of Pittsfield, and twenty-four south-east of Albany. It is on the turnpike between Pittsfield and Al-bany. Here is a spring of considerable celebrity. It is a thermal water of the temperature of 72° of Fahrenheit, but is not characterised by any mineral substance in solution. The spring is kept constantly in ebullition by a copious emission of azotic gas.

LEBEDOS, one of the twelve ancient cities of Ionia, situated south of Smyrna. It was the residence of players, where they met from all parts of Ionia, as far as the Hellespont, and celebrated annual games in honor of Bacchus. Strabo. It was overthrown by Lysimachus, who removed the inhabitants to Ephesus ; after which it dwindled down to a village. Horace.

LKBEN, or LEBENA, one of the port towns of the Gortynians, near the promontory of Leon, on the south-east side of Crete ; famous for a temple of ./Ksculapius, built in imitation of that of Cyrenaica.

LEBRUN (Pone;. Denis Ecouchard), called the French Pindar, was born in 1729, and early manifested a talent for poetry. He became secretary to the prince of Conti, and at the age of twenty-six he had taken his place in the first rank of French lyric poets : an ode which he now addressed to Voltaire was the means of interesting the latter in the support of the niece of Cor-neitte. At the revolution he celebrated the birth of freedom in various odes and epigrams ; but in 1793 deplored in harmonious verses the fate of liis country. On the restoration of order, Lev.cun became a member of the Institute, and received from Buonaparte a pension of 6000 s'rancs : he died September 1807.

LECCE, a considerable trading town of Na-pics in tlie province of Otranto. It is well Mnit, and is a bishop's see. The surrounding

district is fertile, but ill cultivated. It supplies, however, the chief commerce of the town, which is in flax and tobacco. The flax is spun and manufactured into lace. Other products of this neighbourhood are oil and cotton ; and its wool is esteemed. Seventeen miles west of Otranto, and twenty-eight south-east of Brindisi. Population 14,000.

LECCO, a town in the Milanese, Italy, situated on the eastern branch of the lake of Como. It has flourishing manufactures of silk, woollens, and hardware. Population 4000. Fourteen miles E. N. E. of Como.

LECH, v. a. Fr. lecher; or perhaps Ltt. litus. To lick or smear over.

Hast thou yet leclied the Athenian's eyes With the love-juice? Shakspeare,

LECH, a large river of Bavaria, which rises in the Tyrol, and flows northward between Bavaria and Suabia. It passes Fuessen, Landsburg, Augsburg, and joins the Danube five miles below Donawert. Its stream is only navigable for rafta of wood and boats.

LECH'ER, n. s. & v. n.~\ According to Skin—

LECH'EROUS, adj. / ner, from old Fr.

LECH'EROUSLY, adv. > luxure : but the

LECH'EROUSNESS, n.s. i Teut. leker or leiker;

LECH'ERY. J Lat. ligurius, seems

the more probable derivation. A loose libidinous

person ; an adulterer or whoremonger : the verb

signifies to be addicted to the habits or practices

of such a person : lecherous, tending to luxury

or lust.

Ye Kan herd that it was seid to olde men thou schalt not do leeclterie. Wiclif. Matt. v.

A lecherous thing is wine, and dronkenesse Is ful of striving and of wretchednesse.

Chaucer. Canterbury Tales.

The rest welter with as little shame in open lechery as swine do in the common mire. Ascham.

I will now take the lecher ; he's at my house ; he cannot 'scape me. Shakspeare.

Against such lewdsters, and their lechery, Those that betray them do no treachery. Id. Gut eats all day, and letchers all the night.

Ben Jonson.

Ho ! all ye females that would live unshent, Fly from the reach of Cyned's regiment. If Trent be drawn to dregs and low refuse, Hence, ye hot lechour ! Bp. Hall's Satires.

The lecher soon transforms his mistress ; now In lo's place appears a lovely cow. Driiden. The sapphire should.grow foul, and lose its beauty, when worn by one that is lecherous ; the emerald should fly to pieces, if it touch the skin of any unchaste perton. Derham.

She yields her charms To that fair lecher, the strong god of arms.

Pope,

LECOMTE (Felix), a modern French sculptor of eminence, was a native

of Paris, and the pupil of Falconet and Vasse". Having obtained a prize for a bas-relief of the massacre of the Innocents, he was sent to Rome as a pensionary of the French school of arts. On his return he presented to the academy of painting and sculpture, a model for a statue of Phorbas preserving GEdipus, which he afterwards executed in mar-ble; and procured in 1771 admission into the academy. The statue of Fenelon, in the hall of

the National Institute, is perhaps his chef-d'oeuvre. That of llollin is also celebrated. In 1810 he was appointed by Buonaparte a member of the fourth class of the Institute; and under the regal government professor of sculpture. He died in 1817, at the age of eighty.

LECTI, beds or couches, were of two kinds amongst the Romans, being destined to two different uses ; to lie upon at entertainments, and to repose on for sleep. The former were called lecti triclinares, the latter lecti cubicularii. See BED.

LECTICA was a litter, or vehicle, in which the Romans were carried. It was of two kinds, covered and uncovered. The covered lectica is called by Pliny cubiculumviatorum, a traveller's bed-chambor. Augustus frequently ordered his servants to stop his litter, that he might sleep upon the road. This vehicle was carried by six or eight lecticarii. The lectica differed from the sella; for in the first the traveller could recline himself for sleep, in the latter he was obliged to sit. The lectica was invented in Bithynia ; the sella was a Roman machine, and esteemed the more honorable of the two. Lectica was also the name of the funeral bed, or bier for carrying out the dead.

LECTICARIUS was also an officer in the Greek church, whose business it was to bear off the bodies of those who died, and to bury them. These were otherwise denominated decani and «opiatae.

LECTION, n.s. ~\ Lat. lectio; Fr.

LEC'TURE, n. s.,v. a. &t>. n. {lecture; Ital. let—

LEC'TURER, n. s. i tlone, lettura ;

LEC'TURESHIP. J Span, lecion, lec—

tina. A reading; a variety in a given or similar passage of an author. A lecture is a formal discourse read or pronounced : hence the act or art of reading or delivery ; as a verb, to instruct formally or solemnly ; to read or pronounce a discourse in public. Both the verb and noun are often used satirically.

Wrangling pedant,1

When in musick we have spent an hour, Your lectures shall have leisure for as much.

Sha/ispeure.

When you meet with several readings of the text (scripture) take heed you admit nothing against the tenets of your church : but do as. if you was going over a bridge, be sure you hold fast by the rail, and then you may dance here and there as you please ; be sure you keep to what is settled, and then you may flourish upon your various lections. Selden.

When letters from Caesar were given to Rusticus, he refused to open them till the philosopher had done his lectures. Taylor's Holy Living.

If any minister refused to admit into his church a lecturer recommended by them, and there was not one orthodox or learned man recommended, he was presently required to attend upon the committee.

Clarendon.

In the lecture of holy scripture, their apprehensions are commonly confined unto the literal sense of tne text. Browne.

Mark him, while. Dametas reads his rustic lecture unto him, how to feed his beasts before noon, and where to shade them in the extreme heat. Sidney.

Virtue is the solid good, which tutors should not only read Icctwes and talk of, but the labour and art Vor.. XII.

of education should furnish the mind with, ana fasten there. Loche.

Numidia will be blest by Cato's lectures.

Addiion.

He got a lectureship in town of sixty pounds a year, where he preached constantly in person.

Sicift.

Every critick has his own hypothesis : if the com-mon text be not favourable to his opinion, a various lection shall be made authentick. Watts.

Heaven waits not the last moment ; owns her

friends

On this side death, and points them out to men ; A lecture silent, but of sovereign power ! To vice confusion, and to virtue peace. Young.

Narcissa's youth has lectured me thus far :

And can her gaiety give counsel too ? Id.

The auditor, therefore, listens as to a lecture, without passion, without anxiety. Johnson.

From dearth to plenty, and from death to life, Is nature's progress, when she lectures man In heavenly truth : evincing, as she makes The grand transition, that there lives and works A soul in all things, and that soul is God. Camper .

But I will venture to affirm, from experience, that, if a professor does no more than deliver a set of lectures, his young audience will be little the wiser for having attended him. Beattie.

LECTISTERNIUM, a solemn ceremony observed by the Romans in times of public danger, wherein an entertainment was prepared with great magnificence, and served up in the temples. The gods were invited to partake of the good cheer, and thel" statues placed upon couches round the table, in the same manner as men used to sit at meat. The first lectisternium held at Rome was in honor of Apollo, Latona, Diana, Hercules, Mercury, and Neptune, to put a stop to a

contagious distemper which raged amongst the cattle, A. U. C. 354. At these feasts the Epulones presided, and the sacred banquet was called epulum. Something like the lectisternium was occasionally observed among the Greeks, according to Casaubon.

LECTIUS (James), syndic of Geneva, a respectable poet and critic of the sixteenth century. His chief work is his collection entitled Poeta; Grseci Veteres, in 2 vols. folio. He died in 1612. „,').•>«<

LECTORES, among the ancient Romans, servants in great men's houses, who read while their masters were at supper. They were called by the Greeks anagnostae.

LECTOURE, a town of France, in the department of the Gers, and on the river Gers, is situated on a hill and accessible only on one side. It has manufactures of leather ; and a trade in corn and wine. Several Roman inscriptions have been found in the neighbourhood. Population 5500. Sixteen miles north of Auch.

LECTURERS, in the church of England, are an order of preachers, distinct from the rector, vicar, and curate. They are generally chosen by the vestry or chief inhabitants, supported by voluntary subscriptions and legacies, and often preach on the Sunday afternoon. But the term is most generally applied to those who preach on any stated day. By 13 and 14 Car. II., c. 4, lecturers in churches, unlicensed, and not conforming to the liturgy, shall be disabled, and shall suffer three months' imprisonment in the com—

mon gaol; and two justices, or the mayor in a town corporate, shall, upon certificate from the ordinary, commit them. Where there are lectures founded by the donations of pious persons (such as that of lady Mayer at St. Paul's) the lecturers are appointed by the founders, without any interposition of rectors, See., only with the leave of the bishop. But the lecturer is not entitled to the pulpit, without the consent of the rector or vicar, who is possessed of the freehold of the church.

LEDA, in fabulous history, a daughter of king Thespius and Eurythemis, who married Tyndarus king of Sparta. Jupiter saw her bathing in the Eurotas, when she was some few days advauced in

pregnancy, and, struck with her beauty, resolved to deceive her. He persuaded Venus to change herself into an eagle, while he assumed the form of a swan ; and after this metamorphosis Jupiter, as if fearful of the bird of prey, fled through the air into the arms of Leda, who willingly sheltered the trembling swan from the assaults of his superior enemy. Nine months after this adventure, Leda brought forth two eggs, from one of which sprung Pollux and Helena, and from the other Castor and Clytemnestra. The two former were deemed the offspring of Jupiter, and the others claimed Tyndarus for their father. Some mythologists attribute this amour to Nemesis, and not to Leda ; and say that Leda was entrusted with the education of the children, which sprung from the eggs brought forth by Nemesis ; others maintain that Leda received the name of Nemesis after death. Ho-mer and Hesiod make no mention of the metamorphosis of Jupiter into a swan, whence some think that the fable was unknown to these two ancient poets, and invented after their time.

LEDBURY, a market-town of Herefordshire near the extremity of the Malvern Hills, sixteen miles east from Hereford, and 1 20 west by north from London. The town is well built, consisting chiefly of two streets, crossing each other at right angles. The church is a large building. Here are a free-school, a well endowed hospital, and several alms-houses. The chief manufactures are ropes and sacking. Great quantities of fine cider are made in this neighbourhood. Market on Tuesday.

LEDGE, n. s. Sax. lexian ; Goth, leggia, to plan, or order. A layer or row ; ridge ; or prominence.

Beneath a ledge of rocks his fleet he hides.

The bending brow above a safe retreat provides.

Dryden.

The lowest ledge or row should be merely of stone, closely laid without mortar: a general caution for all parts in building contiguous to board.

Wotton’s Architecture.

The four parallel sticks rising above five inches higher than the handkerchief, served as ledges on each side. Gulliver.

LEDUM, marsh cistus, or wild rosemary, a genus of the monogynia order, and decandria class of plants : natural order eighteenth,

bicornes. (A i.. quinqtiend : COR. plain and quinquepartite : CAPS, quinquel ocular, and opening at the buso. The principal species is

L. palustre, with very narrow leaves. It grows

naturally upon bogs and mosses in Yorkshire Cheshire, and Lancashire ; rising with a slender shrubby stalk about two feet high, dividing into many slender branches, garnished with narrow leaves, like those of heath. The flowers are produced in small clusters at the end of the branches, and are shaped like those of the strawberry tree, but spread wider at top. They are of a reddish color, and are succeeded by seed-vessels filled with small seeds which ripen in autumn. This plant is with difficulty raised in a garden : for, as it naturally grows upon bogs, unless it has a similar soil it will not thrive. It must be procured from the place of its growth, and taken up with good roots, otherwise it will not live.

LED YARD (John), a native of North America, and greatly celebrated as a traveller. After living several years with different tribes of the American Indians, he made a voyage to the South Sea, in the humble station of a corporal of marines, with the celebrated captain Cook. On his return he became anxious to traverse the vast continent between the Pacific and Atlantic Ocean. With only ten guineas he crossed the British Channel to Ostend, and proceeded by Denmark and the Sound to Stockholm and Petersburg!!. On his arrival at this last metropolis ne was observed as an extraordinary person ; and, though without stockings and shoes, was invited to dine with the Portuguese ambassador. Being now supplied with necessaries, he travelled eastward 6000 miles through Siberia to Yakutzk, thence to Oczakow, and back again to Yakutzk, where he was seized in the empress's name by two ruffians who conveyed him on a sledge through the deserts of North Tartary, and left him on the borders of Poland, telling him that, if he returned to Russia, he would be hanged. In spite of poverty, he made his way to Konigsberg, where he obtained pecuniary assistance, which enabled him to reach London. Being introduced to th Society for promoting the discovery of the interior parts of Africa, they employed him ; and he proceeded to Grand Cairo in Egypt, where he engaged with the conductor of a caravan, and was on the point of setting out for Sennaar, when he was seized with an indisposition, on the 17th of January 1789, which terminated in his death. He was a man of an amiable disposition ; and, in his various peregrinations,

suffered many hardships among the barbarous nations whom he visited ; but, in the account he published of his travels, he pays this compliment to the female sex. ‘ To a woman, whether civilised or savage, I never addressed myself in the language of decency and friendship, without receiving a decent and friendly answer. With man it has often been otherwise. In wandering over the barren plains , of inhospitable Denmark, through honest Sweden and frozen Lapland, rude and churlish Finland, unprincipled Russia, and the wide spread regions of the wandering Tartar, if hungry, dry, cold, wet, or sick, the women have ever been friendly to me, and uniformly so ; and to add to this vir-tue (so worthy the appellation of benevolence), these actions have been performed in so tree and so kind a manner, that if I was dry, I drank the sweetest draught ; and if hungry, I ate the coarse morsel with a double relish.’

LEE.

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LEE, n. s. I Fr. lie; Span, lias; Port, lia ; LEES, plur. i qu. Lat. liquidm. Dregs ; sediment : more frequently used in the plural.

The memory of king Richard was so strong, that it lay like lees at the bottom of men’s hearts ; and, if the vessel was but stirred, it would come up.

Bacon’s Henry VII.

If they love lees, and leave the lusty wine, Envy them not their palates with the swine.

Ben Jonstin.

Behold all purity above ; below, the dregs and lees of all. Bp. Hall.

Those lees that trouble it refine The agitated soul of generous wine. Dryden. My cloaths, my sex, exchanged for thee, I’ll mingle with the people’s wretched lee. Prior.

Life’s lee is not more shallow than impure And vapid. Young.

LEE, n.s. 3 Sax. lee leepeajVs; Teut.

LEE'WARD, adj. $ lee; Be'g. and Goth, ly ; ' Isl. Uifa, to cover,' observes Mr. Thomson : * lee shore denotes that the wind blows on a vessel from the sea towards the land.' Leeward is the direction towards which the wind blows. See below.

Him, haply slumb'ring on the Norway foam, The pilot of some small night-foundered skiff. Deeming some island, oft, as seamen tell, With fixed anchor in his scaly rind, Moors by his side under the lee, while night Invests the sea. Milton.

If we, in the bay of Biscay, had had a port under our lee, that we might have kept our transporting ships with our men of war, we had taken the Indian fleet. Raleigh.

The Hollanders were before Dunkirk with the wind at north-west, making a lee shore in all weathers.

Id.

Unprovided of tackling and victualling, they are forced to sea by a storm ; yet better do so than venture splitting and sinking on a lee shore.

King Charles.

Battered by his lee they lay,

The passing winds through their torn canvass play.

Dr uden.

The classical were called long ships, the onerarire round, because of their figure approaching towards circular : this figure, though proper for the stowage of goods, was not the fittest for sailing, because of the great quantity of leeward way, except when they sailed full before the wind. Arbuthnut.

Let no statesman dare A kingdom to a ship compare ; Lest he should call our common weal A vessel with a double keel ; Which just like ours, new rigg'd and mann'd, And got about a league from land, By change of wind to leeward side, The pilot knew not how to guide. Swift.

And others went on as they had begun,

Getting the boats out, being well aware That a tight boat will live in a rough sea, Unless with breakers close beneath her lee.

Byron.

LEE is used by seamen to distinguish that ~ > art of the hemisphere to which the wind is directed, from the other part whence it arises; which last is called to windward. This expression is chiefly used when the wind crosses the line of a ship's course, so that all on that side of her is called to windward, and all on the opposite side to leeward. Hence, Under the lee, implies farther to the leeward, or farther from that part

of the horizon whence the wind blows. Under the lee of the shore, *i.e.* at a short distance from the shore which lies to windward. This phrase is commonly understood to express the situation of a vessel anchored, or sailing under the weather shore, where there is always smoother water, and less danger of heavy seas, than at a great distance from it.

LEE-SIDE, all that part of a ship or boat which lies between the mast and the side furthest from the direction of the wind ; or, otherwise, the half of a ship, which is pressed down towards the water by the effort of the sails, as separated from the other half by a line drawn through the middle of her length. That part of the ship which lies to windward of this line is accordingly called the weather-side. Thus, admit a ship to be sailing southward, with the wind at east, then is her starboard, or right side, the lee-side; and the larboard, or left, the weather-side.

LEE (Charles), a celebrated general in the service of the American congress, was a native of England. He served under general Burgoyne, in the British army in Portugal, which he after-w«rds quitted for the American service. Upon the commencement of the revolution he was appointed a major-general. See AMERICA. But iu 1776 he was taken prisoner by colonel Har-court, and closely confined as a deserter ; though six field officers were offered in exchange for him. He was even threatened to be tried for high treason ; but the spirited conduct of general Washington, and the congress, prevented that measure. On the capture of Burgoyne and his army he was allowed his parole in New York, and, being soon after exchanged, rejoined the American army. But general Lee's misfortunes were not over. His defeat and disorderly retreat at Monmouth, with the flower of the American troops under his command, subjected him to a court martial, who

suspended him from his command for one year, which he spent at his estate in Berkley county, Virginia, and during which he arranged his letters, and other papers on pub-lic affairs, for the press. These he sent by hig aid-de-camp to Philadelphia, to be printed. But this ungrateful young man betrayed his trust, and gave the papers to the governor, who, on perusal, found it his interest to suppre; s the publication. In the beginning of 1782 Lee wen*, to Philadelphia on this business ; but, soon after his arrival, was seized with a fever, of which he died. His body was interred with military honors, and the members of the congress attended the funeral.

LEE (Nathaniel), an English dramatic writer, the son of a clergyman, educated at Westminster under the famous Dr. Busby, and afterwards at Trinity College, Cambridge, where he took the degree of B.A. in 1668. He went thence to London, where he attempted to commence actor in 1672 ; but, failing, he became a dramatic author. His first piece, entitled Nero, Emperor of Rome, appeared in 1675, and was well received. He continued to write one piece every year, till November 1684, when, showing symptoms, of insanity, he was confined. In April, 1688, he was discharged, and wrote two other plavs. He died in 1690, in consequence of a

drunken frolic. Lee is allowed to have great power over the passions, but his language is mere rant and bombast. His Rival Queens and Theodosius, however, are still acted with applause. He wrote eleven tragedies in all, which contain a great portion of poetic enthusiasm. Addison commends his genius highly ; observing, that none of our English poets had a happier turn for tragedy, although his natural fire, and unbridled impetuosity, hurried him beyond the bounds of probability. While he was confined, a coxcomb scribbler had the cruelty to jeer him with his misfortune, observing that it was easy to write like a madman : — ‘ No,’ said Lee, ‘ it is not easy to write like a madman ; but it is very easy to write like a fool.’

LEE (Sophia), an English novelist, and dramatic writer, of reputation, was born in London in 1750. She first became known to the public in 1780, when she published her comedy, called The Chapter of Accidents. The profit of this enabled her to open an academy at Bath. In 1784 appeared her well known novel, The Ruin, or a Tale of other Times. This was followed, in 1787, by the ballad, A Hermit's Tale, found in his Cell; and, in 1796, by a tragedy, called Almeyda, Queen of Grenada; but, although aided by the talents of Mrs. Siddons, it disappointed the public. The following year, Miss Harriet Lee published the first five volumes of the Canterbury Tales, three of which were from the pen of her sister; and one of them, Krutzner, was selected by lord Byron as the subject of a tragedy. In 1803 our authoress retired from her school, soon after which appeared her Life of a Lover, written in early life. In 1807 another comedy by Miss Lee, The Assignation, was produced at Drury Lane, but did not succeed. She died at Clifton, March 13th, 1824. LEE (Charles Lewes), a modern comic actor of some celebrity, first appeared as a harlequin at Covent Garden. In 1776 he took the parts previously played by Woodward ; and removed, in 1783, to Drury Lane. He now travelled throughout the country, delivering Stevens's Lecture on Heads; after which he went to the East Indies, Scotland, and Dublin, where he wai well received. But the latter part of his life was spent in embarrassments : it terminated •24th of June, 1803, on the morning of which day lie was found dead in his bed. There appeared, in 1805, an amusing work, entitled Memoirs of C. Lee Lewes, 4 vols. 12mo.

LKECH, n. s. & v. a. \ Saxon laec, lece;

1-F.r.cn'rRAFT, M. x. \ Maeso-Goth. lek; Go—

LEEC H'LESS, adj. J thic and Swed. Itekare,

from Sax. lacan, and Goth, laka, to diminish.

A physician, surgeon, or medical practitioner of

any kind ; also a species of water serpent, much

used to draw blood. Leechcraf" is the art of

healing. Leechless seems used by Mr. Maturin for neglected wounds.

And heseide to him, sotheli ye schulen seyetome this likeness*, lerlie heale thi silf. Wiclif, Luk. 4.

ˆ The clotered blood for any leche-crafte Corrumpeth, and in his

boiikeylaft, 1 hat neyther veine-blood ne ventousing, Ae drinke of Jierbes, may ben his helping.

Chaucer. Cant. Tales.

A leech, the which had great insight In that diseise of grieved conscience, And well could cure the same ; his name was P i tience. Spenser's Faerie Queeiie*

We study speech, but others we persuade : We leechcruft learn, but others cure with it.

Davies. I drew blood by leeches behind his ear.

Wiseman.

Sticking like leeches, till they burst with blood, Without remorse insatiably. Boteotamon.

Physick is their bane, The learned leeches in despair depart, And shake their heads, desponding of their art.

Driitten.

The hoary-wrinkled leech has watched and toiled, Tried every health-restoring herb and gum, And wearied out his painful skill in vain. Rawe.

A skilful Leach,

They say, had wrought this blessed deed ; This Leach Arbuthnot was yclept.

Ga^'s Pastorals. In want, and war, and peril,

Things that would thrill the hearer's blood to tell of, My heart grew human when I thought of thee — Imogine would have shuddered for my danger — Imogine would have bound my leechless wounds — Imogine would have sought my nameless corse, And known it well. Maturin.

LEECH. See HIRUDO.

LEECHES, in a ship, the borders or edges of a sail, which are either sloping or perpendicular. The leeches of all sails whose tops and

bottoms are parallel to the deck, or at right angles to the mast, are denominated from the ship's side, and the sail to which they belong ; as, the starboard leech of the main-sail, the larboard leech of the fore top-sail, &c. But the sails which are fixed obliquely on the masts have their leeches named from their situation with respect to the ship's length ; as, the fore leech of the mizen, the after leech of the jib or fore stay-sail, &c.

LEECH-LINES, certain ropes fastened to the middle of the leeches of the main-sail and foresail, and communicating with blocks on the opposite side of the top, whence they pass downwards to the deck, serving to truss up those sails to the yard, as occasion requires.

LEECH-ROPE, a name given to that part of the bolt-rope to which the border or skirt of a sail is sewed. In all sails whose opposite leeches are of the same length, it is terminated above the earring, and below the clue. See BOLT-ROPE. LEEDS, a populous and flourishing market town in the wapentake of Skyrac, in the liberty of the honor of Pontefract, in the West Riding of the county of York, England, is situate principally upon the north side of the river Aire, upon an easy ascent, which rises from the north bank of the river; it extends nearly two miles along the river from east to west, but is not quite a mile in breadth from north to south.

It is a place of considerable antiquity, and is registered in the Domesday survey. There was formerly a strong castle here, built probably by Ilbert de Lacy, and which was besieged by king Stephen when on his march towards Scotland in 1139 : here the unfortunate Richard II. was confined about the year 1399, a short time before his barbarous murder in Pontefract Castle. No vestige of this fortress remains ; but its site

is said to have been at a place called Mill Hill. The borough of Leeds was incorporated by t'had.is 1. in 1626; a second charter was given to it by Charles II. in 1661 ; and a third by James !I. in 1684. The second charter was restored by William and Mary in 1689, under which it is

governed by a mayor, 12 aldermen, 24 common-council-men : it returns 2 members to parliament. Leland speaks of Leeds us ‘a pretty market-town, subsisting chiefly by clothing, reasonably well builded, and as large as Bradford, but not so quick as it.’ At the commencement of the troubles of the reign of Charles I. it was held for the king by Sir William Saville; but its fortifications, after a sharp action, were stormed by the forces which marched out of Bradford under Sir Thomas Fairfax.

The river Aire is navigable from the Humber up to the town; and the Leeds and Liverpool Canal communicates with it about a quarter of a mile above Leeds bridge. Thus situate, in the centre of that line of fine inland navigation which extends across the island, it is equally open to the eastern and western seas, having a ready communication with those great depots of commerce, Hull and Liverpool. The Aire also supplies the principal part of the town with water. The neighbouring mines supply the town, and the surrounding district north of the town, with coals; and to these local advantages, together with other circumstances which have rendered Leeds and its vicinity the seat of the woollen manufactures, its increasing wealth, population, and prosperity, are chiefly to be attributed. The bridge, which connects the northern and southern parts of the town, is substantially built with free stone, and is of a tolerable width; but such has been the increase of traffic in that part of the town, of late years, that it has become necessary either to widen it or to erect another bridge or bridges in the same neighbourhood; this, however, has not yet been effected. It was enlarged for carriages to pass and repass in 1730, and further enlarged in 1760. Upon this bridge the woollen market used formerly to be held, on the Tuesdays and Saturdays; the cloths being laid upon the battlements, and upon benches below : thus it continued till the 14th of June 1648, when it was removed into Briggate for greater accommodation. The market for cloth was held here till the erection of the mixed cloth hall in 1758.

This building is quadrangular, enclosing an open area 127£ yards long, and sixty-six yards broad. It is divided into six streets, each street containing two rows of stands, and every stand measuring twenty-two inches in front, with the / name of the owner and his residence marked upon it. The total number of stands, each of which is freehold property, is 2500, and cost originally three guineas each. About thirty years

ago they sold at from £16 to £24 each, but sinro that time the value

has been greatly reduced, atxl the average price is about £2 10s. In the year 1810 an additional story was erected on the north side of the colored-cloth hall, and is now used principally for the sale of ladies' cloths.in the un-dyed state. In the year 1775 the white-cloth hall, over the north side of which is an assembly-room, was erected on the same plan as the other, and of nearly the same dimensions, containing about 1300 stands; the price of which has undergone similar fluctuations. This depreciation in their value is not occasioned by any diminution in the quantity of woollen goods manufactured, but is owing to the great increase of factories, and the very general use of machinery, which has prevailed over the domestic system of manufacture. Cloth used formerly to be woven by hand !>y the clothiers in the neighbourhood, and brought to the cloth halls in an unfinished state, whence it was purchased by the merchants and dressed ; but, in the factories, the operations are completed throughout, and great quantities of cloth have, since 1823, been sold at the mixed-cloth hall in a finished state. The markets for cloth are held on the Tuesdays and Saturdays, on which daysv only the merchants are permitted to purchase, or even to look at, the cloth in the halls. The regulations are similar in both, and tend greatly to promote expedition and regularity. The mixed-cloth hall opens at half-past eight in the morning during the summer season ; at nine ir spring and autumn; and at half-past nine I. winter ; the white-cloth hall opens when the other closes. The halls open at the ringing of a bell, and in a few minutes the merchants walk in, each manufacturer appearing behind his own cloth, and they immediately proceed to make their bargains in the most silent and expeditious manner. At the expiration of an hour a warning bell announces the approaching close of the market; and the sound of a third bell, in a quarter of an hour afterwards, terminates the business of the day ; when each merchant quits the hall on pain of a penalty of 5s. for every five minutes he remains there after the last bell has rung : thus in an hour and a quarter transactions are completed, often to the amount of £15,000 or £20,000, and sometimes to a much greater extent.

From the year 1732 to the year 1821, inclusive, an annual return was made, at the general quarter sessions, held at Pontefract, according to a late act of parliament, of the quantity of cloth milled at the fulling-mills in the West Riding of Yorkshire ; from which returns the following statement, showing the quantity produced in each ten years, will serve to exhibit the astonishing progress of this branch of staple manufacture : —

(54G

LEEDS.

Years.

No. of Pieces of Broads.

No. of Pieces of Narrows.

Total No. of Pieces.

From 1732 to 1741, inclusive

387,4864 557,212 529,225$

749,653|

193,159 679,092 726,114 797,169

580,6454 1,236,304 1,255,3394 1, 546,822 1

The quantity manufactured in these years is not expressed in yards

Years.

Broads.

Narrows

Total.

Pieces.

Yards.

Pieces.

Yards.

No. of Pieces.

From 1772 to 1781, inclusive From 1782 to 1791 . From 1792 to 1801 . From 1802 to J811 . From 18 12 to 1821

1,063,268 1,507,097 2,370,073 2.817,807 3,169,686

31,542,321f

47,674,316 75,612,373 91,762,295 100,078,027

946,7044 1,261,103 1,570,154 1,526,204 1,352,056

24,997,158 38,249,317 53,277,085 57,199714 53,038,125

2,009,9724 2,768,200 3,940,227 4,344,011 4,521,742

In the year 1644, or 1645, a plague commenced in this town, which raged with such violence that the inhabitants were appalled and confounded. The return of deaths to major-general Carter, governor of Leeds, from March 1644 — 5 to December 1645, amounted to no less than 1325. The air was so very warm in July that 126 died in one day, and it was so infectious that dogs and cats, mice and rats, died ; also several birds, in their flight over the town, dropped down dead. Here are now eight ecclesiastical edifices appropriated to the established religion. Of these, the original is the parish church of St. Peter, built in the form of a cross, with a tower in the middle ; and has a painting in fresco of the ascension, by Parmentier, who presented the town with this specimen of his genius. The whole edifice is 165 feet in length and ninety-seven in breadth ; the high choir fifty-seven feet in length, in breadth twenty-two, in height thirty-six ; and 274 in circumference, and is well adapted to, perhaps, one of the most numerous congregations in the kingdom. The steeple tower is ninety-six feet high Leeds continued without any other place of worship than the parish church till the beginning of the reign of Charles I., when John Harrison, who also enlarged the free grammar-school and built the market-cross, which was taken down in 1825, a native of the parish, who had acquired considerable fortune by trade, and, being childless,

built and endowed St. John's Church, which was consecrated September 21st in 1634. It is neither convenient nor elegant, but possesses all the gloom and obstructions of an ancient church, without one vestige of its dignity and grace. The foundation-stone of the third church in Leeds, dedicated to the Holy Trinity, was laid by Mr. Henry Robinson, on the 28th of August 1721, and it was consecrated by archbish -,) Blackburn, August 27th 1727. This is a beautiful edifice of moor-stone, and of the Doric order; though the capitals of the columns within are composite. The expenses of erection amounted to f 4.r>63 9s. 6d. The masonry, car-ptMitry, and joiners* work, are all admirable. St. Paul's church, a plain, neat, handsome, com-iiiixhous, and modern structure, was built by the

Rev. Miles Atkinson, at an expense little short of £10,000, and was consecrated by Dr. William Markham, archbishop of York, on the 10th of September 1793. St. James's church was erected shortly after St. Paul's. It was at first intended for an independent chapel, but was afterwards purchased by the Rev. John King, who is still the minister. This church, which is built in the form of an octagon, had formerly a dome upon it ; but, the roof being found too weak to support it, it was removed. There are also three new churches here, erected by his majesty's commissioners, called Christ Church, St. Mary's, and St. Mark's ; the latter of which is at Woodhouse, but a short distance from the town.

The first endowment of a free grammar-school at Leeds is found in the last will and testament of a ' Syr William Sheaffield Priest, dated in the sixth yere of the reigne of king Edward VI.' The school was subsequently removed, and endowed, by Mr. Harrison. The national school, adapted for the instruction of 320 poor boys and 180 poor girls, on Dr. Bell's system, was opened in February 7th, 1813; the foundation-stone was laid by the Rev. P. Haddon, vicar, May 18th, 1812. The royal Lancasterian free-school was established in 1811. There are also other charity schools, schools of industry, Sunday schools, and infant and adult schools, connected with Christians of various denominations. The Methodists have five chapels ; the Independents four ; the Methodist new connexion two ; the Baptists two ; the Friends one chapel ; the Unitarians one ; the Arians one ; the Roman Catholics one ; the primitive Methodists, male, one ; the primitive Methodists, female, one; the Sweden-borgians one; and the Inghamites one.

Among the public buildings of Leeds we may also notice the following:

— the court-house, situated at the bottom of Park Row : the principal front consists of a confined portico of Corinthian columns and two wings, which havepannelshighly wrought in bas-relief, containing the fasces, fleece, wreaths, &c. The foundation-stone was laid on the 2d of September 1811, and it was opened in October 1813. The horse-barracks, which are situate about half a mile on the north road,

are a spacious brick building, comprising genteel apartments for the officers, rooms and stabling tor 400 men and horses, a canteen, riding-school, hospital, magazine, guard-rooms, and every other convenience requisite for a military station. The site of the building, together with parade, ground, &c., occupy an enclosed space of about eleven acres. The philosophical hall is a handsome stone edifice, fronting Park Row and Bond Street. The society has for its object the discussion of literary and philosophical subjects, and was established on the 14th of January, 1820. Its officers consist of a president, two vice-presidents, two secretaries, a treasurer, a librarian, a curator, a sub-curator, and a council of twelve members. The museum contains rare and valuable specimens of fossils, minerals, coins, natural history, &c. There are, also, a library and a collection of apparatus connected with the institution. There is another museum, in Commercial Street, the property of a private gentleman, open for public exhibition, also, comprising many rare and beautiful specimens.

The general infirmary is a large commodious brick building, situate in a line with the colored cloth hall, opened March 1st, 1771. This is an excellent hospital, diffusing its extensive benefits to the country around, and is liberally supported by annual subscriptions and voluntary contributions. The soutˆ front is tastefully laid out in pleasure-grounds, 4000 square yards of which were presented to the trustees by Richard Foun-tayne Wilson, esq., M. P. for Yorkshire, at a cost of £1500; at once forming a monument to the munificence of the donor, an ornament to the town, and a lasting benefit to the institution. The town is also indebted to Mr. Wilson for his liberal gift of one-half the expenses of commut-ing the tythes of the parish, by act

of parliament, for ever, amounting to upwards of £7000. The bouse of recovery, in Vicar Lane, for the reception of persons attacked by infectious fevers, was built by public subscription in 1802; connected with this institution there is also a general dispensary. The lying-in hospital, established in 1824, for the reception of poor married women, is in St. Peter's Square.

The Leeds subscription library was established about sixty years ago. The subscribers had formerly some apartments in Kirkgate, but in the year 1808 the present handsome edifice, built of ashlar stone, was opened. It is situate in Commercial Street, and cost nearly £5000. There is a row of shops on the basement floor, and the library is above, ascended by a flight of steps on the west end of the building. Dr. Whitaker, in his Loidis and Elmete, says, ' It would not disgrace the library of a college.' There are some other libraries of a. minor description. There are five banks in the town, exclusive of the bank of England branch in Bank Street, which was opened in August, 1827. The two principal news-rooms are in Briggate.

Among the charitable institutions are the Benevolent Strangers' Friend Society, Harrison's hospital. Potter's alms-houses, Jenkinson's alms-houses, Mrs. Dixon's charity, the Guardian Asy-lum, for the reception of unfortunate females; and the workhouse. The religious charitable

institutions are the Society for Promoting Christian Knowledge, bible, missionary, and tract societies. The mechanics' institute is situate in Basinghall Street. The public baths, a neat and commodious building, stands opposite the south front of the infirmary, and was completed in

The music-hall, a large brick building, consisting of a suite of rooms, including a spacious saloon, commodious picture gallery, &c., is in Albion Street. The theatre, in Hunslet Lane, is an old dilapidated, unsightly, black brick building. There are also several billiard-rooms. There are three newspapers in the town : The Leeds Intelligencer, published by Messrs. Robinson and Hernamen, in Commercial Street, on the Thursday; at which office also the Leeds and Yorkshire Almanack is printed : the Leeds Mercury, by Messrs. Baines and Son ; and the Leeds Patriot, by Messrs. Fothergill and Thompson, both in Briggate. The Leeds and Yorkshire fire-office, established in 1824, is in Commercial Street; besides this there are several agents to other offices of a similar description. The coal-gas works, established in 1818, are situate in York Street ; the oil-gas works are at New Road end, on the opposite side of the town, established in 1824.

One of the most substantial and serviceable edifices in the town, is the central market, in Duncan Street, which was opened on the 6th of October 1827 ; the foundation stone of which was laid in December 1824. The expenses of erection amounted to nearly £30,000. The principal part of the building is an enclosed market-house, the roof of which is supported by twelve cast-iron columns, and sixteen oaken pillars, and is thirty-four feet six inches high ; the height from the floor to the upper point in the ceiling being fifty-four feet four inches. The size with-in the walls is 138 feet by 103 feet. There are twenty shops within and the same number without the building ; and an outer line of shops for butchers and fishmongers, forming three sides of a quadrangle, with a street between them and the principal building. Above the shops within is a most commodious bazaar, forming together one of the most complete markets in this part of the kingdom. The main front is built of stone, the remainder of brick : the architecture is of the Grecian order. There is another bazaar in the shambles, near the top of Briggate. The corn exchange, opened in August. 1827, is a brick building, forming three sides of a quadrangle, with a colonnade on each side supported by cast-iron pillars, with offices under the north and west colonnades. The free-market is a large open space of ground, situate in the centre of the town, and is a great convenience to the inhabitants. Here the fortnight cattle fair is held ever} other Wednesday — established 1827. This mar-ket is bounded on the south by Kingsgate, on the west by Vicar Lane, and on the north by Ludgate Hill. Upon this site the old vicarage stood, but it was taken down in 1826 ; and was exchanged for an elegant house in

Park Place where the Rev. Richard Fawcett, A. M.,the vicar, now resides. The south market, a neat and commodious pile of buildings, with a circular

cross in the centre, is situate between Ilinslet Lane and Meadow Lane. Here a quarterly leather fair was established in 1827 which is resorted to by the principal tanners and leather dealers in the county. The streets in Leeds are for the most part spacious and uniform, particularly at the west end of the town, where there are some beautiful squares, and open parades. Briggate, the main street in the centre of the town, extends nearly half a mile from north to south, and contains 177 shops. Till the year 1825 this street was obstructed by an old pile of buildings, one of which was the Moot Hall, used as a court-house, extending 120 yards from a little above Commercial Street, upwards, dividing Briggate into two inconvenient and dangerous alleys. That on the east was the shambles, and that on the west was formerly the wool-market. A little above the upper end of these buildings stood the market-cross, built by Mr. Harrison in 1776. These obstructions are now removed, and Briggate is equalled by few streets out of the metropolis. Leeds is 196 miles from London.

The greatest ornament to the town, in point of architectural beauty, is now in a considerable state of forwardness; and is expected to be completed in a few months. This is the Leeds commercial buildings, erecting at the bottom of Park Row, and intended as a place of resort for merchants and others, similar to the exchange in Liverpool and Manchester. The architecture is of the Grecian Ionic order, and in classical simplicity and elegance will exceed any public structure in this neighbourhood. The front extends from West Street to Park Row, and the entrance is at the junction of the two. Along the front are ten chaste columns, surmounted with beautiful capitals. Above the grand staircase in the centre uf the building, there will be a circular tower,

richly embellished with groups of figures, and ornamented battlements.

LEEF, or > Sax. leop; Bel?, lieve; leve.

Li EVE, ad/. SKind; fond. Obsolete. See LIEI.

Whilome all these were low and leef,

And loved their flocks to feed ; They never strove to be the chief,

And simple was their weed. Spenter's Pastomls.

LEEK, n.s. Sax. leac; Dan. leeg; Goth. .Mid Teut. lank; Belg. loock, of Heb.nS smooth, fresh, (applied to vegetables generally). A well-known plant. See ALLIUM.

We remember the fish which we did eat in Eo-ypt freely ; Hie cucumbers, and the melons, and the

Kumb. xi. 5. Knowest thou Fluellen ? — Yes.

—Tell him I'll knock his leek about his pate

I'pon St. David's day. Shaksp'eare.

Uek to the Welsh, to Dutchmen butter's dear.

\ e use acrid plants inwardly and outwardly in Irenes; ,n the scurvy, water-cresses, horse-ra- ilish, garhck, or leek pottage. Flayer on Humours. I.i IK, in botany. See AI.LICM. .EEKATOO, or LATAKOO, a town of South Africa, m the Moshuanna country, and the best known to us of any of their towns. It has been isited since 1801 by Messrs. Trutter and Somer-villr, Dr. Lichtenstein, and Mr. Campbell. It

contains about 8000 inhabitants, who display considerable knowledge of the arts.

LEER, n. x. & v. n. Sax. j?leari& ; Swedish lecra. A smile or oblique glance or view ; arch or malignant look ; to look obliquely or archly. 1 spy entertainment in her ; she gives the leer of invitation. Shaktpeare. Merry Wives of Windsor. I will leer upon him as he comes by ; and do but mark the countenance that he will give me.

Shakipea re .

Aside the devil turned For envy, yet with jealous leer malign Eyed them askance. Milton.

Bertran has been taught the arts of courts, To gild a face with smiles, and leer a man to ruiu.

Dryden. Damn with faint praise, concede with civil leer.

Pope.

1 wonder whether you taste the pleasure of independency, or whether you do not sometimes leer upon the court. Swift.

A grey-haired, withered, bloody-eyed, And bloody-handed, ghastly, ghostly thing, Female in garb, and crowned upon the brow, Furrowed with years, yet sneering with the passion Of vengeance, leering too with that of lust, Sate : — my veins curdled. Byron.

LEESE, n. s. Belg. lesen, liezen ; Swed. lisa. To destroy ; to lose. Obsolete.

A nyght theef cometh not, but that he stele, sle, and leese: and 1 cam that thei haue lyf and hau« more plenteously. Wiclif, Jon 10.

But nathelesse yet had I lever lese My lif than of my body have a shame, Or know myselven false, or lese my name.

Chaucer. Cant. Titlesˆ

Then sell to thy profit both butter and cheese, Who buieth it sooner the more he shall leese.

No cause, nor client fat, will Chev'ril leese, But as they come on both sides he takes fees ; And pleaseth both : for while he melts his grease For this, that wins for whom he holds his peace.

lien Jonson.

How in the port our fleet dear time did leese, Withering like prisoners, which lie but for fees.

Donne.

LEET, n. s. Sax. lefce. ' Otherwise called a law-day,' says Cowell. ' The word seemeth to grow from the Saxon lefce, which was a court of

jurisdiction above the wapentake or hundred, comprehending three or four of them, otherwise called thirshing, and contained the third part of a province or shire.' See LATH.

Who has a breast so pure, But some uncleanly apprehensions Keep leets and law-days, and in sessions sit With meditations lawful ? Shakspeure. Othello. You would present her at the leet, Because she bought stone jugs, and no sealed quarts.

Shakspeart.

A LEET, or COUIIT LEET (leta visus franci), is a court of record, ordained for punishing offences against the crown ; and is said to be one of the most ancient courts of the land. It enquires of all offences under high treason ; but those who are to be punished with loss of life or member, are only enquirable and presentable here, and to be certified over to the justices of assise. Stat. 1. Edw. III. And this court is called the view of frank pledge, because the king

is to be there certified by the view of the steward, how many people are within every leet, and have an account of their good manners and government; and every person of the age of twelve years, who hath remained there for a year and a day, may be sworn to be faithful to the king, and the people to be kept in peace, &c. A leet is incident to a hundred, as a court baron to a manor; for, by grant of a hundred, a leet passeth ; and a hundred cannot be without a leet. The usual method of punishment in the court-leet, is by fine and amercement; the former assessed by the steward, and the latter by the

LEEUW (William de), an eminent engraver of the seventeenth century.

-He was a native of Flanders, and the disciple of Sootman, whose manner of engraving, or rather etching, he imitated. His prints generally appear harsh at first sight ; but become more agreeable upon examination. Several of them have great effect; particularly his Daniel in the lion's den, a large plate lengthwise, from Rubens. The first impressions of this plate are before the name of Dankertz was added, and are extremely rare and dear.

A LEEWARD SHIP is a vessel that falls much to leeward of her course, when sailing close-hauled, and consequently loses much ground.

LEFEBVRE (Francis Joseph), duke of Dantzic, born at Rurack, in the department of the Upper Rhine, October 25th, 1755, entered when young into the French guards, and was a sergeant at the beginning of the revolution. From being a captain he passed to the rank of adjutant-general in September, 1793; and, in the beginning of 1794, to that of general of division. In June this year he distinguished him-salf at the battle of Fleurus, and after the death of Hoche was raised to the command of the army of the Meuse and Sambre. Being wounded at the battle of Stockhet in 1799, he retired to Paris, where he assisted Buonaparte in seizing the supreme power. He was now made pretor of the conservative senate, which office he held to the end of the imperial government. In 1804 he was created a marshal ; and at the battle of Jena he commanded the imperial guard ; but his greatest exploit was the taking of Dantzic, May 24th 1807, after which he was raised to the dignity of a duke. He subsequently commanded in Spain and Germany, and he contributed greatly to the success of the French at Eckmuhl and Wagram. After the restoration of royalty, he was made a peer, and died at Paris September, 1820.

LEFOOGA, one of the Friendly Islands, in the cluster called Hapaees; about seven miles long, and three broad ; very fertile, and highly cultivated ; the fences running parallel from spacious public roads. Captain Cook sowed melons, pine-apples, Indian corn, &c., on it. In this island, in 1800, the Port au Prince privateer was cut off, and almost the whole crew massacred. Long. 185° 40' E. lat. 19° 49' S.

LEFT, adj. } Lat. lavus ; Gr.

LEFTHAND'ED, >\aioc-Some etymo—

LEFTHAXD'EDNESS, n.s. > legists however trace this adjective and the Belg. lefts, Teut. links,

Lat. hnqiM, to the verb leave, *i.e.* as expressing the usual preference for the right hand, this be-ing ‘ left.’ Sinistrous : opposed to the right ; not on the right side.

Among all this people there were there seven hundred chosen men left handed. Judge* xx. 16.

The limbs are used most on the right side, whereby custom helpeth ; for we see, that some are lift handed, which are such as have used the left hand most. Bacon.

Although a squint left handedness Be ungracious ; yet we cannot want that hand

Donne.

That there is also in men a natural prepotency in the right, we cannot with constancy affirm, if we make observation in children, who, permitted the freedom of both hands, do ofttimes confine it unto the left , and are not without great difficulty restrained from it. Brou-ns’ii 1’ulgar Errours.

For the seat of the heart and liver on one side, whereby men become left Itandud, it happeneth too-rarely to countenance an effect so common : for the seat of the liver on the left side is very monstrous.

Id.

The gods of greater nations dwell around, And, on the right and left, the palace bounds ; The commons where they can. Dri/den.

A raven from a withered oak, Left of their lodging was obliged to croak : That omen liked him not. I/I.

The man who struggles in the fight, Fatigues left arm as well as right. Prior.

LEG, n.s. Sax. 1323 ; Dan. leg ; Goth, legg, litha, to bend. — Thomson. The limb used in walking : that part of it particularly which is between the knee and the foot : hence the support of any thing: and a bow with the leg drawn back or upwards.

The elephant hath joints, but none for courtesy ; his legs are for necessity, not for pleasure.

Shakspeare.

At court, he that cannot make a leg, put off his cap, kiss his hand, and say nothing, has neither leg, hands, lip, nor cap. Id.

Purging comfits, and ants' eggs, Had almost brought him off his legs. Hudibras.

Their horses never give a blow, But when they make a leg, and bow. Id. They haste ; and what their hardy feet denied, The trusty staff, their better leg, supplied. Dryden.

If the boy should not put off his hat, nor make legs very gracefully, a dancing-master will cure that defect. Locke.

Such intrigues people cannot meet with, who have nothing but tegs to carry them. Addison

Persons of their fortune and .quality could well have stood upon their own legs, and needed not to lay in for countenance and support. Collier.

He made his leg, and went away. Swift. And I appeal to the first and most natural feelings of mankind, whether on beholding a beautiful eye, or a well fashioned mouth, or a well turned leg, any ideas of their being well fitted for seeing, eating, or running, ever present themselves.

Burke on the Sublime. At length a generation more refined, Improved the simple plan ; made three legt four, Gave them a twisted form vermicular. Cowper.

Halting on crutches of unequal size, One leg by truth supported, one by lies ; They sidle to the goal with awkward pace, Secure of nothing — but to lose the race.

(. Progress of t'rrour.

Here agonizing rolled the mouse in gore j And there the frog (a scene full sad to see !) Shorn of one leg, slow sprawled along on three I ie vaults no more with vigorous hops on high, But mourns in hoarsest croaks his destiny.

Beat tie.

LEG, in anatomy, the whole lower extremity from the acetahula of the ossa innominata, is commonly divided into three parts, *viz.* the thigh, the leg properly so called, and the foot. See ANATOMY.

LEG'ACY, n.i.-\ Lat. legatum. A bequest LEG'ATARY, ˆ by will: legatary aim lega-LEGATEE', i tee both mean the party to

LEGATOR'. * whom a legacy is left :

legator, he who leaves one.

If there be no such thing apparent upon record, they do as if one should demand a legacy by force and virtue of some written testament, wherein there being no such thing specified, he pleadeth that there it must needs be, and bringeth arguments from the love or goodwill which always the testator bore him ; imagining, that these, or the like proofs, will convict a testament to have that in it, which other men can no where by reading find. Hooker.

Legacy is a particular thing given by last will and testament. Cowell.

The honour of a maid is her name ; and no legacy is so rich as honesty. Shakspeare.

Fetch the will hither, and we shall determine

How to cut off some charge in legacies. Id.

When the heir of this vast treasure knew

How large a legacy was left to you,

He wisely tyed it to the crown again. Dryden.

Suppose debate

Betwixt pretenders to a fair estate, Bequeathed by some legator's last intent. Id.

If he chance to 'scape this dismal bout, The former legatees are blotted out.. Id.

Good counsel is the best legacy a father can leave a child. L' Estrange.

Leave to thy children tumult, strife, and war, Portions of toil, and legacies of care. Prior.

An executor shall exhibit a true inventory of goods, taken in the presence of fit persons, as creditors and legatariei are, unto the ordinary, Ayliffe.

My will is, that if any of the above-named legatees should die before me, that then the respective legacies shall revert to myself. Swift.

If the legatee dies before the testator, the legacy is a lost or lapsed legacy, and shall sink into the residue. Tomtin.

If the legatee dies before the age of twenty-one, Ins representatives shall receive it out of the testator's I ersonal estate, at the same time that it would have I ccome payable in case the legator had lived. Id.

LEGACY. See WILLS.

LE'GAL, adj.

to legalise is to make lawful; authorise.

It was not in the power of the legal priesthood to perform, or promise mnocency to her ministers.

Bp. Hall.

He had sinned concerning the dead body; and yi-t it was nothing but a legal impurity.

Bp. Taylor.

A prince may not, much less may inferior judges, deny justice, wl.en it is legally and competently de-

His merits

To save them, not their own, tnough legal, works.

Milton.

It was a punishment never by the Romans, under whose law our Lord suffered, legally inflicted upon freemen, but upon slaves only. Jiurnw.

Whatsoever was before Richard I., was before time of memory ; and what is since, is, in a legal sense, within the time of memory. Hate.

If any thing can legalise revenge, it should be injury from an extremely obliged person : but revenge is so absolutely the peculiar of Heaven, that no consideration can impower, even the best men, to assume the execution of u. South.

In this situation, they have frequently a right to decide, and that upon their oaths, questkms of nice importance, in the solution of which some legal skill is requisite. Blacltstone .

LEG'ATE, n. s. ˆ Fr. kgat ; Ital. legato ;

LEG'ATIVE, adj. > Lat. legatus, legare, to send

LEGA'TION, n. s. t or appoint. An ambassador or deputy, particularly of the pope. Legatine,-proceeding from, or pertaining to, a legate. Legation, commission; embassy; diplomatic employment.

Look where the holy legate comes apace,

To give us warrant from the hand of Heaven.

Shakspeare. All those you have done of late,

By your power legatine within this kingdom,

Fall in the compass of a praemunire. Id.

After a legation ad res repetendas, and a refusal, and a denunciation or indiction of a war, the war is no more confined to the place of the quarrel, but is left at large. Bacon.

They are called apostles of the churches, not going from Corinth with the money, but before they came thither from whence they were to be dispatched in legation to Jerusalem. Bp. Taylor.

The legates from the' ˆEtolian prince return : Sad news they bring, that after all the cost, And care employed, their embassy is lost. Dryden.

Upon the legate's summons, he summitted himself to an examination, and appeared before him.

Atterbury.

When any one is absolved from excommunication, it is provided by a legatine constitution that some one shall publish such absolution. Ayliffe.

In attiring, the duke had a fine and unaffected politeness, and upon occasion costly, as in his lega-tioru. Wott<m.

A LEGATE is generally a cardinal or bishop, whom the pope sends as his ambassador to sovereign princes. See AMBASSADOR. There are three kinds of legates, *viz.* legates a latere, legates de latere, and legates by office, or legati nati; of these the most considerable are the legates a latere, the next are the legates de latere. See LATERE. Legates by office are those who have not any particular legation given them ; but who, by virtue of their dignity and rank in the church, become legates : but the authority of these legates is much inferior to that of the legates a latere. The power of a legate is sometimes given without the title. Some of the nuncios are invested with it. It was one of tne ecclesiastical privileges of England, from the Norman conquest, that no foreign legate should be obtruded upon the English, unless the kiniˆ should desire it upon some extraordinary emer-pencv, as when a case was too difficult for the English prehites to determine.

LEGATE, COURT OF THE, was a court obtained by Cardinal Wolsey of pope Leo X., in the ninth year of Henry VIIL, wherein he, as legate of the pope, had power to prove wills, and dispense with offences against the spiritual laws, &c. It was but of shor* continuance.

LEGATIO LIBERA, was a privilege frequently obtained of the state, by senators of Rome, going into any province or country upon their own private business, to assume the quality of legati or envoys from the

senate, that the dignity of this nominal office might secure them a good reception, and have an influence on the management of their concerns. The cities and towns through which they passed were obliged to defray their expenses. It was called libera legatio, because they might lay aside the office as soon as they pleased, and were not encumbered with any actual trust.

LEGATUS, a military officer among the ancient Romans, who commanded as deputy of the commander-in-chief. The legati, at their first institution, were not so much to command as to advise. They were generally chosen by the consuls, with the approbation of the senate. As to their number, we have no certain information, but there appears to have been at least one to every legion. In the absence of the consul or proconsul, they had the fasces. Under the emperors there were two sorts of legati, consulares and praetorii. The first commanded whole armies, as the emperor's lieutenant generals ; and the latter had the command of particular legions. The legati under the proconsuls in the provinces judged inferior causes, and managed smaller concerns, remitting affairs of great moment to the governor or president. This was their original office, though they were afterwards admitted to command in the army.

LE'GEND, n. s. 3 Fr. legende ; Port, and

LEG'ENDARY, adj. 3 Lat. legenda. Strictly, that which may be read. See LEGIBLE. A tale or story, true or false ; any narrative, or collection of narrations ; used particularly for narrations of the lives of Romish saints ; an inscription on a coin or medal. Legendary, pertaining to, or partaking of the character of a legend.

Legends being grown in a manner to be nothing else but heaps of frivolous and scandalous vanities, they have been even with disdain thrown out, the very nests which bred them abhorring them.

Hooker.

And in this legend all that glorious deed Read, whilst you arm you ; arm you whilst you read. Fairfax.

A religion that, instead of the pure milk of the gospel, hath long fed her starved souls with such idle legends, as the reporter can hardly deliver without laughter, and their abettors not hear without shame and disclamation. Bp. Hall.

There are in Rome two sets of antiquities, the Christian and the heathen ; the former, though of a fresher date, are so embroiled with

fable and legend, that one receives but little satisfaction. Addison.

Compare the beauty and comprehensiveness of legends on ancient coins. Id. On Medalt.

Writing has lost more mistresses than any mistake in the whole legend of love. Steele.

Who can show the legends, that record

idle tales, or fables so absurd ‘< Blackmore.

Then slowly climb the many-winding way, And frequent turn, to linger as you go, From loftier rocks new loveliness survey, And rest ye at our ‘ Lady’s house of woe ; ‘ Where frugal monks their little relics show, And sundry legends to the stranger tell. Byron. The LEGEND was originally a book used in the old Romish churches, containing the lessons to be read at divine services ; hence the lives of the saints and martyrs came to be called legends, because chapters were read out of them at matins, and at the refectories of religious houses. Among these the Golden Legend, which is a collection of the lives of the saints, was received in the church with great applause, which it maintained for 200 years; though the Roman Catholics themselves are almost ashamed of it.

LEGEND is also used to signify the words engraven about the margins, &c., of coins. Thus the legend of a French crown was Sit nomen domini benedictvm; that of a moidore, In hoe signovinces; on those of the last emperors of Constantinople, we find Jesvs Christvs basil evs basileon, ihs xps nika, i. e. Jesvs Christvs vincit. It is also applied to the inscription of medals, which serves to explain the figures or devices represented on them. In strictness, the legend differs from the inscription ; this last properly signifying words placed on the reverse of a medal, in lieu of figures. It seems the ancients had intended their medals to serve both as images and as emblems ; the images to represent the faces of princes ; emblems their virtues and great actions. Every medal has properly two legends; that on the front, and that on the reverse. The first generally serves only to distinguish the person by his name, titles, offices, &c. ; the latter is intended to express his noble deeds, and the advantages the public has reaped by him. This, however, does not hold universally ; for sometimes we find the titles shared between both sides, and sometimes also the legend. In the medals of cities and provinces, as the head is usually the genius of

the place, or at least some deity adored there, the legend is the name of the city, province, or deity, or of both together ; and the reverse is some symbol of the city, &c., frequently without a legend, sometimes with that of one of its magistrates. Legends generally commemorate the virtues of princes, their honor and consecrations, signal events, public monuments, deities, vows, privileges, &c., which are either in Latin or Greek, or a mixture of both.

LEG'ER,n.s. Sax. lejian, to place in order. See LEDGE. Any thing or person permanently fixed in a place : thus, a leger-ambassador is one constantly resident ; a leger, one of the most important, and therefore most carefully deposited, books of the merchant,

I've given him that,

Which, if he take, shall quite unpeople her Of leidgers for her sweet.

Shakspeare. Cymbeline. Lord Angelo, having affairs to Heaven, Intends you for his swift ambassador, Where you shall be an everlasting leiger.

Shaktptare. If leiger ambassadors or agents were sent to remain

near tha courts of princes, to observe their motions, such were made choice of as were vigilant. Bacon.

\Vho can endear

Thy praise too much 1 thou art Heaven's leiger here, Working against the states of death and hell.

He withdrew not his confidence from any of those who attended his person, who, in truth, lay leiger for the covenant, and kept up the spirits of their countrymen by their intelligence. Clarendon.

I call that a ledger bait, which is fixed, or made to rest, in one certain place, when you shall be absent ; and I call that a walking bait which you have ever in motion. Walton.

By these means the journal i& greatly shortened and simplified ; but the principal advantage of such arrangement consists in posting the books; for here a whole month's cash, bills, commission, insurance, and interest, are each carried into one sum, or entry, from the journal to the ledger.

Nicholson's Journal. LEG'ERDEMAIN, n. s. (Fr. legerete. Le—

LEGER'ITY. $ gerdemain seems

to be contracted from Fr. legerete de main, or le-ger de main, i. e. levis manu, light of hand. — Minsheu. Slight of hand ; deception of the eye by nimbleness of the hand ; juggle ; Irick ; cosenage ; knack. Legerity is lightness • nimbleness ; quickness of motion.

He so light was at legerdemain, That what he touched came not to light again.

Hubberd. When the mind is quickened,

The organs, though defunct and dead before,

Break up their drowsy grave, and newly move

With casted slough and fresh legerity.

Shakspeare.

Whoever shall pretend that any time, easily, with a celerity, by a kind of legerdemain, or by any mysterious knack, a man may be settled in virtue, or converted from vice, common experience abundantly will confute him. Barrow.

Of all the tricks and legerdemain by which men impose upon their own souls, there is none so com-mon as the plea of a good intention. South.

LEGERDEMAIN is a denomination given to certain deceptive performances, which either depend altogether on dexterity and

address, or derive a small degree of aid from philosophical principles. The former class, though they may be styled arts in one sense of the word, yet de-pend so entirely upon trick and deception, and have so little connexion with real science, that we are persuaded none of our readers will regret our omitting them. Of the latter class, sufficient specimens of entertaining experiments, illusions, £c., of a philosophical nature, will be found un- <!er the articles ACOUSTICS, OPTICS, ELECTRI-riTY, ELECTRO-MAGNETISM, HYDROSTATICS, PYROTECHNICS.

LEGHORN, Ital.Livorno, and the ˆiburnum and Liburni Portus of former times, one of the most flourishing and important seaports of Italy, in the grand duchy of Tuscany, stands in a marshy district, intersected by canals. The harbour is formed by a mole a mile in length, but, from the sand washed into it, requires continual clearing, for which purpose a number of galley slaves are kept employed ; the sand being conveyed to the neighbouring marshes to raise the soil, and render them more healthy.

Toward the sea it is fortified, and a stone rampart encloses it on the land side. The city abounds in churches : one of which, the Duorno or high church, is a Gothic fabric, chiefly remarkable for its vault. There are six other Catholic and two Greek churches, a mosque, an American chapel, and an elegant synagogue. The streets are in general wide, straight, and clean : the west end of the town, from the circumstance of canals intersecting it so frequently, is called the New Venice : and the town altogether is considered the greatest commercial depot in Italy. The ducal palace is an inferior building; but near the harbour is a fine statue (by John of Bologne) of the grand duke Ferdinand I. Other remarkable structures are the arsenal, the salt, tobacco, and oil warehouses, the public baths and the theatre. Here are also three lazarettos ; that nearest the harbour is esteemed one of the finest establishments of this kind in Europe; the literary institutions are, an academy of lectures and the arts, and an excellent public library.

Leghorn is the residence of consuls from all the principal states of Europe, and the chief medium of Italian commerce with the Levant and Barbary; It is visited annually by upwards of 4000 vessels great and small. The manufacturers of Silesia and other parts of Germany find this a valuable market for linen, the French for silks, and the English for woollens. The chief branches of manual labor are the working of coral and alabaster; manufactures of silk, leather, paper, &c. The population is at present about 50,000. Of this number a sixth

part are Jews, who here enjoy considerable privileges, and are said to be very rich. This part is entirely indebted for its prosperity to the family of Medici, the princes of which successively enlarged and fortified the town, constructed the harbour and mole, and declared it free. Good water being scarce, the government has caused a stream of excellent water to be conveyed hither from the distant mountains of Colognole, by a long and expensive aqueduct. In the environs the most interesting object is the English church— yard, where, among other monuments, is to be seen one in memory of Dr. Smollett : fifteen miles south-west of Peru, forty-seven W. S. W. of Florence, and 140 N. N. W. of Rome.

LEG'IBLE, adj. > Fr. Span, and Ital. lepi—

LEG'IBLY, adv. 3 ble ; Lat. legibilis. See LEGEND. That may be read ; discriminate ; plain ; apparent.

The deserts of men shall often be legible in the recompenses conferred or inflicted upon them.

Barrow.

People's opinions of themselves are legible in their countenances. Thus a kind imagination makes a bold man have vigour and enterprize in his air and mo-tion ; it stamps value and significancy upon his face.

Collier.

You observe some clergymen with their heads held down within an inch of the cushion, to read what is hardly legible. Swiff.

Whate'er she meˆant, this truth divine Is legibk and plain,

'Tis power Almighty bids him shine, Nor bids him shine in vain. Covtper.

LKGIO, a town of Galilee, from which Jerome determines the distances of the places in Galilee, so named from a Roman legion there. It lay fifteen miles west of Nazareth, between Mount Tabor and the Mediterranean ; now thought to be Legune.

LE'GION, n. s. ? Fr. Span, and Port, leLE'GIONARY. ygion; Lat . kgio. A body of Roman soldiers» amounting to about 5000 ; a large military force; any large number. Legionary, pertaining to, or containing a legion or great number.

I\Iy name is legicn, for we are many. Mark . 9.

Not in the legion*

Of horrid hell, can come a devil more damned.

Shakspeare.

My name is legion. — The author of discord hath borrowed a name of war : from that military order of discipline by which the Jews were subdued, doth the devil fetch his denominations. Bp. Hull.

Too many, applying themselves betwixt jest and earnest, make up the legionary body of error.

Jirowne's Vulgar Errours. She to foreign realms Sends forth her dreadful legions. Philip*.

The partition between good and evil is broken down ; and, where one sin has entered, legions will force their way through the same breach. liogeri.

What can preserve my life ! or what destroy ! An angel's arm can't snatch me from the grave ; Ijegioiuof angels can't confine me there. young-.

SAR. I fear it not ; but I have felt— have seen — A legion of the dead. Byron.

A LEGION, in Roman antiquity, consisted of different numbers at different periods. The word come from Lat. legere to choose; because, when the legions were raised, they chose such of their youth as were most proper to bear arms. In the time of Romulus the legion consisted of 3000 foot and 300 horse ; though, after the reception of the

Sabines, it was augmented to 4000. In the ‘war with Hannibal it was raised to 5000 ; after this it sunk to 4000 or 4500 ; this was the number in the time of Polybius. In the age of Julius Caesar we do not find any legions exceeding the Polybian number of men ; and he himself expressly speaks of two legions that did not make above 7000 between them. Commentar. lib. 5. The number of legions kept in pay differed according to circumstances. During the consular government four legions were fitted up every year, and divided betwixt the two consuls ; yet there were sometimes sixteen or eighteen, as the situation of affairs required. Augustus maintained a standing army of twenty-three or twenty-five legions ; but this number in after times is seldom found. The •different legions were named, or rather numbered, from the order in which they were raised ; legio prima, secunda, tertia, &c. ; and they were also surnamed from the emperors, as Augusta, Clau-dianA, Galbiana, Flavia, Ulpia, Trajana, Antoni-na, &c. ; or from the provinces which had been •conquered by their means, as Parthica, Scythica, Gallica, Arabica, &c.; or from the deities under whose protection the commam’ers had particularly placed themselves, as Minervia, Apollinaris, 8cc. ; or from the region where they were quartered, as Cretensis, Cyrenaicn, Rritnniiica, &c. ;

or from particular accidents, as adjutrix, martia, fulminatrix, repax, victrix, &c. Each legion was divided into ten cohorts, each cohort into ten companies, and each company into two centuries. The chief commander of the legion was called legatus, i. e. lieutenant. The standards borne by the legion were various ; at first the standard was a wolf, in honor of Romulus’s nurse; afterwards a hog, which animal was usually sacrificed at the conclusion of a treaty, to indicate that war is undertaken with a view to peace ; sometimes a minotaur, a horse, and also a boar; and Marius was the first who changed all these for the eagle. In the time of Marius the four divisions of the legion which had taken place under the consuls were united into one, and augmented; and cohorts were appointed from 500 to 600 men, each under the command of a tribune. Each cohort consisted of three companies of manipules, each manipule of two centuries, and the legion was divided into ten cohorts, who made as many distinct battalions, disposed in three lines; so that the legion then consisted of 6000 men.

Isidore tells us, that the legion consisted of 6000 men, and was divided into sixty centuries, thirty manipules, twelve cohorts, and 200 troops. According to the French academy, the legion consisted of 6000 foot, and 725 horse. The legion consisted of four sorts of soldiers, who

differed in their age, arms, and names : they were called Velites, Hastati, Principes, and Triarii. Till the destruction at Carthage these were citizens of Rome, but after the Social War the freedom of the city was granted to other towns in Italy, and legionary troops were raised which were called Roman, because, as they shared the privilege of Roman citizens, they were incorporated in the republic.

LEGISLATE, v. n. ˆ Lat. legislator,

LEGISLA'TION, n. s. f (lex, legis). To

LEGISLATIVE, adj. & n. s. I make or give laws.

LEGISLATOR, n. s. * Legislation, the

act or power of making laws. Legislative, giving laws ; and as a substantive, that department of a government which makes or gives them. Legislator, a lawgiver.

Pythagoras joined legislation to his philosophy, and, like others, pretended to miracles and revelation* from God, to give a more venerable sanction to the laws he prescribed. Littleton.

Without the concurrent consent of all three parts of the legislature, no law is, or can be made.

Hole's Common Lav.-.

The poet is a kind of lawgiver, and those quali'ics are proper to the legislative style. Dryden.

It spoke like a legislator : the thing spoke was a law. . South.

In the notion of a legislature is implied a power to change, repeal, and suspend laws in being, as well as to make new laws. Addison.

Heroes in animated marble frown, And legislators seem to think in stone. Pope.

By the supreme magistrate is properly understood the legislative power ; but the word magist.-ate seeming to denote a single person, and to express the executive power, it came to pass that the obedience due to the legislature was, for want of considering this easy distincton, '• saoplied o the administra-

'

The natural liberty o.” man is to be free from any superior power on earth, and not to be under the will or legislative authority of man, but to have only the law of nature for his rule. Locke.

To embarrass justice by a multiplicity of laws, or to hazard it by a confidence in our judges, are, I grant, the opposite rocks on which legislative wisdom has been split. Goldsmith.

How unbecoming must it appear in a member of the legiilature to vote for a new law, who is utterly ignorant of the old ! Blackstone. Know, sirrah, in its very nature

A law can’t reach the legislature. Seattle.

The first maxim of a free state is, that the laws be made by one set of men, and administered by another ; in other words, that the legislative and judicial characters be kept separate. Paley.

I believe it had occupied the serious thoughts of all descriptions of persons long before its introduction to the notice of that legislature whose interference alone could be of real service. Byron.

LEGISLATORS, ANCIENT. The most celebrated ancient legislators were, MOSES among the Jews; THESEUS, DRACO, and SOLON, among the Athenians; LYCURGUS among the Lacedemonians; NUMA among the Romans, &c See these articles. The first laws among the Athenians seem to have been those of Theseus. After him came Draco, whose laws were said, for their severity, to have been written with blood : by them every offence was punished with death ; so that stealing an apple, and betraying one’s country, were treated as equal crimes. These were repealed by Solon, except such as related to murder : by way of distinction, Draco’s laws were called Qiopoi, and

Solon's No/iot. The laws of Solon were in a great measure suspended during the usurpation of Pisistratus; but after the expulsion of his family were revived with some additions by Clisthenes. After this the form of government was again changed, first by the 400, and afterwards by the thirty tyrants ; but the ancient laws were again restored in thearchonship of Euclides, and others established at the instance of Diocles, Aristophon, and finally of Demetrius the Phalerean. But many laws were enacted by the suffrages of the people on particular exigencies ; the decrees of the senate continued to have the force of laws no longer than a year. If a new law was to be proposed to the assembly, it was necessary to \viite it upon a white tablet, and fix it up some days before the meeting, lest their judgment should be caught by surprise. The laws were carefully revised every year ; and if any of them, from a change of circumstances, were found unsuitable or prejudicial, they were repealed : this was called »;7rix«porovia rwv vo-HKIV, because the surTraues were given by holding up of hands. The first laws among the Grecians were not written, but composed in verse, that the people mi'*;lit with more ea«e commit them to memory. Solon penned his laws upon wooden tablets, called A%ovtc; and some authors with* <rreat probability assert, that they were written in the manner called KurpoQiidov, from left to right, and from right again to the left. See BOUSTRO-I'Hi : UN It was against the law for any person t< > irase a decree, ai.d certain persons called l\,a<viaTiiG, were appointed to prevent any corruption; whose business it was also to transcribe the old and enter the new ones. At Rome the people were in a great measure their«own legislators ; though Solon may be said, in some sense, to have been their legislator, as the decemviri, who were created for the making of laws, borrowed a great number from those of Solon. With us the legislative power is lodged in the king, lords, and commons assembled in parliament.

LEGITIMATE, adj. & v. a.-\ Fr. legitiwc ; LEGITIMACY, n. s. ˆItalian, Span.,

LEGITIMATELY, adv. i and Port., legi—

LEGITIMA'TION, n. $. J timo ; Lat. /<-

gitimus, lege (by law). Legal, applied particularly to being born in marriage ; lawfully begotten. To legitimate is to make lawful, or obtain the right of legitimate birth. Legitimacy is lawfulness ; genuineness ; lawfulness of birth in particular. Legitimation, the act of investing with legitimacy, or state of being so invested.

I have disclaimed my land ; Legitimation, name, and all is gone ;

Then, good my mother, let me know my father.

Shakspeare.

Legitimate Edgar, I must have your land ; Our father's love is to the bastard Edmund. Id. It would be impossible for any enterprize to be lawful, if that which should legitimate it is subsequent to it, and can have no influence to make it good or bad. Decay of Piety.

An adulterous person is tied to make provision for

the children begotten in unlawful embraces, that

they may do no injury to the legitimate, by receiving

a portion. Taylor.

By degrees he rose to Jove's imperial seat ;

Thus difficulties prove a soul legitimately great.

Drifden.

From whence will arise many questions of legitimation, and what in nature is the difference betwixt a wife and a concubine. Locke.

In respect of his legitimacy, it will be good.

AyKffe.

Legitimate him that was a bastard. Id.

The legitimacy or reality of these marine bodies vindicated, I now inquire by what means they were hurried out of the ocean. Woodward.

Had divines taught them the tnie and proper and peculiar end of this revelation, they would then have seen that universal history afforded the most legitimate prejudice in favour of Christianity.

Warbwrion.

LEGITIME, in Scottish law, the share of the moveable effects belonging to a husband and wife, which upon the husband's death fall.'! to the children.

LKGNANO, a fortified and populous town of Italy, in the department

of the Mincio, and district of Verona. It has a great trade in grain, particularly rice; and a canal erected in 1762, which runs between the Adige, the Tartaro, and the Po. It surrendered to the French September 13th 1796; but on the 26th of March 1799 the French attacked the Austrians unˆier general Kray here, and were defeated, with the loss of 1.500 killed, twenty-two officers, and 500 men taken prisoners; besides fifteen cannons, fifteen loaded waggons, &c. Population 6350. It lies twenty-two miles E.S.E. of Verona, and twenty-ei'jjit N.N.W. of Ferrara. '

\ Fr. legume ; Lat. legu—

V mm Sppds nnf rpanpH

LEG'UME, n. s.

LEGU'MEX, ˆmen. Seeds not reaped,

LEGU'MINOUS, adj. J but gathered by the hand; as beans ; all larger seeds; pulse : of or belonging to pulse.

Some legumens, as peas or beans, if newly gathered and distilled in a retort, will afford an acid spirit.

Boyle.

In the spring fell great rains, upon which ensued a most destructive mildew upon the corn and legumes.

Arbuthnot.

The properest food of the vegetable kingdom is taken from the farinaceous seeds : as oats, barley, and wheat : or of some of the siliquose or leguminous ; as peas or beans. Id.

LEGUMEN or POD. See BOTANY.

LEGUMINOUS is applied to all plants whose fruit is a legumen, or pod. See BOTANY.

LEIBNITZ (Godfrey William de), an eminent mathematician and philosopher, born at Leipsic in Saxony in 1646. At the age of fifteen he studied mathematics at Leipsic and Jena ; and in 1663 maintained a thesis de Principiis Individuationis. In 1 664 he was admitted M. A. He endeavoured to reconcile Plato with Aristotle, as he afterwards did Aristotle with Des Cartes. But the study of the law was his principal object, and he was admitted LL. B. in 1665. In 1666 he would have taken the degree of doctor, but was refused it, on pretence that he was too young, though in reality because he had rejected the principles of Aristotle and the schoolmen. Upon this he went to Altorf, where he maintained a thesis de Casibus Perplexis, with such applause, that the degree of LL. D. was conferred on him. He might have settled to great advantage in Paris : but his aversion to the Roman Catholic religion made him refuse all offers. In 1673 he went to England ; where he became acquainted with John Collins, F. R. S., and Mr. Oldenburgh, the secretary of the Royal Society. In 1676 he returned to England, and thence went into Holland, in order to proceed to Hanover, where he proposed to settle. Upon his arrival there, he applied himself to enrich the duke's library with the best works of all kinds. The duke dying, in 1679, his successor Ernest Augustus continued to patronise him, and employed him to write the history of the house of Brunswick. He travelled over Germany and Italy to collect materials. Frederick I. king of Prussia, then elector of Brandenburgh, founded an academy at Berlin by his advice, and appointed him perpetual president, though be could not reside constantly at Berlin. He projected an academy of the same kind at Dresden, but the execution of this de-sign was prevented by the confusions in Poland. His writings had long before made him famous over all Europe. Besides the office of privy-connsellor of justice, which king George I., then elector of Hanover, had given him, the emperor appointed him in 1711 aulic-counsellor ; and Peter the Great made him privy-counsellor of justice, with a pension of 1000 ducats. He undertook the establishment of an academy of sciences at Vienna ; but the plague prevented the execution of it. However the emperor, as a mark of his favor, settled a pension on him of 2000 florins, and promised him another of 4000,

if he would come and reside at Vienna, but he was prevented by death in 1716. His memory was so strong, that he could, even in his old age,

repeat the whole /Eneid without error. He professed the Lutheran religion, but never went to church ; and, upon his death bed, his favorite servant desiring him to send for a minister, he replied, he had no need of one. Foreigners for some time ascribed to him the invention of fluxions, which had been previously discovered by Sir Isaac Newton. See FLUXIONS.

LEICESTER, the capital of the county of this name, is situated on the banks of the river Scare, in the centre of the finest wool district of England. On three sides, north, south, and east, it has canal communications with the rest of the kingdom, and though, from its late rapid increase as a manufacturing town, the houses are chiefly modern, the town itself is of great antiquity, and often mentioned in our history.

It is divided into six parishes, possessing respectively the churches of St. Nicholas, St. Mary, All Saints, St. Martin, St. Margaret, and St. George: in 1220 it is said no fewer than nine churches were standing here. St. Nicholas's, a Saxon building, is the most ancient; and consists only of a nave and south aisle, with a square tower at the west end. St. Mary's is a large pile of irregular building, exhibiting various styles of architecture. All Saints is a small modern church. St. Martin's, an old building of commodious size, consists of a nave, side aisles, chancel, and handsome tower. Leland calls it the ' fairest church in the place, which once was a cathedral.' The interior is handsome, and contains several elegant monuments. St. George's is a modern erection and considered an elegant specimen of architecture. Here are also places of worship for the Particular and General Baptists, the Independents, the Methodists, the Unitarians, and the Roman Catholics. Other public buildings are, the town jail, a commodious stone edifice, erected in 1791 ; the infirmary, a plain square building, with two wings, at the south end of the town ; and, exclusive of the fever ward, calculated to receive fifty-four patie.nts ; near it is an asylum for indigent lunatics : and the exchange, a plain building, in the open square of the market place. A new county jail has just been finished, situated near the infirmary, with all the modern improvements of which such erections are susceptible. Leicester is also distinguished for its excellent inns. The hotel is a handsome modern building, originally intended for a coffee-room and tavern, but now converted into assembly-rooms, lodgings for the judges at the circuits, and rooms for the sittings of the magistrates. Adjoining is the theatre. The free grammar school was augmented and re-established in the reisjn of Elizabeth, when a new school-house was erected. The New Walk, south-east of the town, is a very agreeable promenade, twenty feet broad and extending three-fourths of a mile in length. In the meadows are the ruins of the abbey

where cardinal Wolsey bade farewell to this world's greatness.

Near the north bridge is an old mint house, Leicester having lor.ˆ had the privilege of coining ; and a series of coins from Athelstan to Henry II. are preserved in the town. In what

is called the ' Newark' part of the town is an ancient mound, the only relic of the once extensive castle of Leicester: this part of Leicester appears to have an enclosed area belonging to ill-.- castle, and is said to have contained an hospital, church, college, &c.

The chief manufacture of Leicester is connected with the staple production of the county, i. e. wool, and consists in the combing, spinning, and manufacturing it into stockings. A very considerable por'con of what is called the Nottingham lace has likewise for some years past been manufactured in this town and neighbourhood. Between 10,000 and 12,000 persons are said to be employed in the various branches of the hosiery business ; there are about 1 50 master hosiers, and 3500 stocking machines. In prosperous times, about 6000 dozen stockings are manufactured per week. The government of the town is vested in a corporation, consisting of a mayor, recorder, steward, bailiff, twenty-four aldermen, and forty-eight common-council-men, &c. It has sent two members to parliament since the time of Edward I. The right of election vests in the freemen not receiving alms, and the inhabitants paying scot and lot ; the number of whom together is about 5000.

Leicester, previously to that period the capital of the Coritani, became after the Roman conquest the Ratae of the itinera and was situated in the Fosse way. Tesselated pavements, and coins of brass and silver, have been found in such numbers, that, had they been collected together, they would have formed a complete series from the emperor Nero to Valerius ; also urns, and various domestic and military relics : a Roman mile-stone was discovered in 1771, on the side of the Fosse road, two miles north of the town. During the Saxon heptarchy, Leicester was called a city, and some think it was a bishop's see. At

the Norman conquest it was •very populous, according to the Doomsday book. It suffered greatly during the subsequent civil wars, and in that of Charles I. was stormed by the royal army, and with a considerable slaughter of the inhabitants. The market is on Saturday and the fairs are numerous. It is ninety-eight miles north-west of London.

LEICF.STKR, a post town of Worcester county, Massachusetts, distant six miles south-west from “Worcester, forty-eight W. S. W. from Boston. Larse quantities of cotton and wool cards are manufactured in this town; and here is a respectable and flourishing academy, which was incorporated in 1784, and has a principal, an assistant, and about 100 students. The building is a spacious and elegant edifice, three stories hi:j[h, and has an elevated and pleasant situation. The town contains also three meeting-houses for the Baptists, and one for Friends.

LEICESTERSHIRE, an important county of England, situated between 52° 24’ and 53° N. lat., and between 35’ and 1° 32’ W. long. It is an inliind county, bounded on the north by Derbyshire and Nottinghamshire; on the east by Lincolnshire and Rutlandshire ; on the south by Northamptonshire, from which it is divided by ttie river Welland ; and on the south-west an:l west by Warwickshire; from which it is divided

by the Roman road Watl ing-Street Way, from near Atherstone to south of Lutterworth about twenty miles. It also just touches upon Staffordshire in one point between Warwickshire and Derbyshire. Its greatest length, from the south of Lutterworth to the north part of the vale of Belvoir, is forty-five miles ; and its greatest breadth, from Nethersoil in the west to Wymondham or Easton Magna in the east, is upwards of forty miles. Its mean diameter is about thirty miles, and it contains about 816 square miles and 522,240 acres. This county is divided into six hundreds, containing twelve market-towns aad 196 parishes. It is in the province of Canterbury and diocese ot Lincoln.

The Saxon word Ledceˆterscyre has been generally supposed to signify a town or castle upon the Seir, which was the ancient name of the river Soar. Previous to the Roman invasion this county formed part of the principality of the Coritani. The Romans made it part of the province of Flavia Caesariensis. During the Saxon heptarchy it belonged to the kingdom of Mercia.

The climate, says Mr. Pitt in his Agricultural Report, is in general mild and temperate, as there are no mountains or bogs. He conjectures that the average annual fall of rain may be about thirty inches. There is no surface soil that can properly be denominated clay or sand ; it has no chalk, and its peat bogs, having been long since drained, are now become a meadow soil, being a compost of peat and sediment; the peat being originally formed by aquatic vegetation, and the sediment brought down by streams and rain water from the upland. The soil of the county may therefore be divided into three classes : first, clay loam, having a considerable degree of tenacity, and holding the rain as it falls, generally of a good depth. Secondly, sandy or gravelly loam, more loose, porous, and friable than the last, generally of a good depth. Thirdly, mea-dow soil, formed as above. The best soil is generally upon the hills, and the worst and coldest in the valleys. The soil varies much in short distances, respecting its strong or friable qualities. The general characteristic of the uplands is grayish-brownish friable loam, of greater or less depth, upon an under stratum of clay, marl, gravel, or rock, and may be divided as follows : — strong clay loam 160,000 acres; one-half only in occasional tillage, 80,000 acres; milder friable loam, in occasional tillage, 160,000 acres ; total occasional tillage 240,000. Strong clay loam in permanent grass 80,000 acres; natural meadows in permanent grass, upland pasture attached to farms and occupations, and near towns, parks, and pleasure-grounds in permanent grass about 240,000.

The general face and appearance of the county is marked with interest and variety ; the hills and vales are connected by easy slopes, and with few abrupt precipices : so that almost the whole surface is practicable and useful. There is nothing; that approaches the sterility of sand or the hardness of clay. The margins of rivers, brooks, and rivulets, are natural grass lands ; and the upland is in some places gravelly, but generally loam, more or less tenacious, the strongest of which is in the vale of Belvoir.

The principal rivers are the Welland, the Soar and the Anker. The

Welland rises near Mar-ket-llarborough, and, running in a nˆrth-west direction, divides Leicestershire from Northamptonshire; and, entering Rutlandshire, continues its course through that county and through the south part of Lincolnshire, and falls into a bay of the German Ocean, called the Wash. The Soar rises about half way between Lutterworth and Hinckley, and running north-east, by Leicester, receives a small rivulet called the Eye; and then directing its course N. N. W. falls into the Trent, a few miles north of Ashby-de-la Zouch. The Anker has its origin near the source of the •Soar; and running north-west, dividing Leicestershire from Warwickshire, falls into the Avon, a river belonging to this latter county. Leicestershire is tolerably well supplied with the conveniences of inland navigation, although it may be considered more an agricultural than a commercial district, and is also deprived of any particular mines. We may enumerate the following canals. Loughborough Canal : — This canal commences at the river Soar, a little below Grace-Dieu Brook, and takes a straight course to the Rushes at Loughborough. This being a chain of connexion with the river Trent, and from thence with most of the canals in the kingdom, is of the greatest utility, particularly to the town of Loughborough. Its course is about a mile, the whole of which is level. Leicester Canal commences at, and connects itself with, the basin of the Loughborough Canal, passes on the north side of the town, and falls into the river Soar at Quorndon. Thus far it is a new cut ; the remainder is only an improvement of the river, with occasional cuts and deviations. ‘From Thrinkstone Bridge to the Loughborough Canal is about seven miles and a half, with a fall of about 185 feet. From the Loughborough Canal to its junction with the Soar is a level of about three miles ; and from thence to Leicester is eleven miles, with a rise of forty-five feet. Union Canal: — We must not omit to notice in this place the Union Canal, for which an act of parliament was obtained some years back. The following may be stated as the line of route originally suggested : — It was proposed that it should join the River Soar on the west side of Leicester, and, passing on by Aylestone and Sad-dington by means of two tunnels, it was to have united with the branch at Market-Harborough. From thence it was to make a bend, and cross the river Welland, and pass between Marston, Trussel, and Halhorp, and turn up by East Farn-don and Oxendon Magna, with a small tunnel of thirteen chains. Near here was to be the reservoir for the summit level, supplied by the Oxendon Brook. From Oxendon it was to pass by Kelmarsh, and thence, by another tunnel of forty-five chains, proceed through Maidwell, Lamport, Hanging, Houghton, Brixworth, and parallel with that branch of the river Nen called the Northern River. Its route was to be continued by Stratton, Pitsford, Chapel Brampton, Kingsthorp,

Dillington,ancl, on the west side of Northampton, join the river Nen navigation. Ash-by-de-lu-Zoncli Canal: — This canal joins the Coventry Canal at Morston Bridge, about two miles Vor. XII.

to the south of Nuneaton, from whence it passes to Stoke Golding, crosses the river Leuce, and at Snareston has a small tunnel, whence it windi along to Ashby-de-la-Zouch ; from wheuce it is continued about a mile and a half, and then, passing a tunnel of near a mile, one branch goes to Tickenhall to the west, and another to the lime-works at Cloudhil to the east. From the Tickenhall branch is also a short cut to the lime-works at Stanton. The total length of this canal is fifty miles, with 25J feet lockage. The Grantham Canal commences on the east side of Grant-liam, passes Harleston, the Point, at the foot of Woolsthorp Hill, Stainworth, Redmill, along Belvoir Vale, by Brakestone, Plainger, Harby, Long Clomton, to Hinckley, being from Grantham a south-west course. From Hinckley it bends to the north and passes through Kinnoul-ton, Coulton Basset, Cropwell Bishop, and joins the Trent between Holme Pierrepoint and Rad-cliffe. There is a branch from near Cropwell Bishop to Bingham. The length of this canal from Grantham to the river Trent is thirty miles, with 148 feet fall to the river. The branch to Bingham is more than three miles, and level. Melton Navigation : — The rivers Wreak and Eye are made navigable from the junction at Turn-water Meadow to Melton Mow bray, by several new cuts and deviations where necessary. Oak-ham Canal: — This canal commences at and joins the Melton navigation on the south side of the town of Melton : and, proceeding on the north side of the river Eye, passes Brentingby, Wively, Stapleford, Saxby, Wymondham, Edmonthorpe, Teigh, Market-Overton, Barrow, Coltesmore, and Busley ; and joins the town of Oakham on the north side, being a course of fifteen miles, with 126 feet regular rise in the first eight miles and a half, that is to Edmonthorpe, and from thence to Oakham is level. The reservoir is on the west side of the canal near Langham.

Leicestershire is famous for its breed of large black cart-horses, and for its fine cattle and sheep. Though there are but few mineral or fossil productions peculiar to this county, or very-common in it, yet it produces more or less of limestone, lead, coal, ironstone, slate, and freestone ; and there have been found in the fissures of the limestone at Barrow many curious fossil productions; also, in the neighbourhood of Hinckley, fossil shells in gravel are frequently found. There are a few medicinal springs, particularly one at Burton Lazars ; and a cathartic water at Nevil Holt, near Market-IIarborough.

This county returns only six members to the British parliament, *viz.* four for the county, and two for the town of Leicester.

Leicestershire is biographically rich : for in this county were born, among others, — John Bainbridge, physician and astronomer. lie was born at Ashby-de-la-Zouch in the year 1582, and died at Oxford, in a house opposite Merton College, in the year 1643. — Robert Bakewell, the experimental farmer and cattle breeder. — Francis Beaumont, the dramatic writer. He died in March 1615, not being then thirty year? of age. — The learned bishop Beveridge. He was born at Barrow in 1638, and died on the 5th of March 1707. — William Burton, historian of this

county. Born at Lindley, August 24th, 1575, and became a barrister and reporter in the court of common pleas. His history of this county, so often and justly praised, is valuable only on account of its being early written, being preceded only by Lambard's Kent in 1576, Carew's Cornwall in 1602, and Norden's Surveys. (Mr. Nicholas has, however, entirely superseded the use of all other works on this county, by his elaborate and valuable history.) — Robert Burton, brother of William, and author of the Anatomy of Melancholy, known also by the name of Democritus junior. He also was born at Lindley, February 8th, 1576. — The learned Dr. William Cave, the biographer and ecclesiastical historian, born in 1637. — William Cheselden, the physician and anatomist. — Dr. R. Farrr.tr, an ingenious poet and critic. — George Fox, the founder of the Quakers, born at Drayton-in-the-Clay in the year 1624. — The excellent bishop Hall, au-thor of Meditations, &c., born in Bristow Park, within the parish of Ashby-de-la-Zouch, July 1, 1574. — John Henley, commonly called Orator Henley. — Daniel Lambert, who exhibited himself as an instance of

extraordinary weight and size. — William de Langton, bishop of Litchfield and Coventry, and lord high treasurer of England in the reign of Edward I. — The pious mar-tyr, Dr. Hugh Latimer, born at Thurcaston about 1470. — Sir Edward Leigh, critic and He-brew lexicographer. — William Lilly, the celebrated astrologer. — Thomas Marshall, divine, and Anglo-Saxon critic. Died 1685. — William Melton, archbishop of York, and lord chancellor 1n the reign of Edward III. — John Ozell, dramatic and miscellaneous writer. — Dr. Richard Pulteney, the botanist. — T. Simpson, the mathematician.— Dr. Thomas Skeffington, bishop of Bangor. Died in 1533. — Thomas Staveley, au-thor of the Romish Horse-leech. — Dr. Styan Thirlby, a learned and ingenious critic. — George Villiers. duke of Buckingham, the celebrated statesman and royal favorite. His profligate son, author of the Rehearsal, died a beggar. — The honest, learned, but eccentric William Whiston. — William Wirley, antiquary and heraldic writer. — The late amiable Rev. Hugh Worthington, of liters' Hall. Mr. W. died in the year 1813.

LEIGH (Charles), M. D., and F. R. S., an eminent physician and naturalist, born in Lancashire. He published, 1 . An Account of the Natural History of Lancashire, Cheshire, and Derby ; 2. A History of Virginia ; and several other works. He died about 1701

LEIGH (Sir Edward), a learned historical writer ana divine, was born at Shawell in Leicestershire, in 1602, and entered as commoner of Magdalen Hall, Oxford, in 1616; after taking his degree of M. A. he removed to the Middle Temple as a student of law. In 1625, the plague being in London, he went to France : on his return he devoted many years to literary researches, and, soon after the commencement of the civil war, was chosen M. P. for Stafford He was one of the commons who were delegates to the assembly of divines at Westminster. Sir Edward was also colonel of a regiment in the service of parliament; but in 1648 was, with other Presbyterian members, expelled from the

house of commons, and imprisoned. After the Restoration he chiefly occupied himself in literature. He died at his seat, Rushall Hall, in Staffordshire, in 1671. His works are chiefly biblical : the most important is his well known Critica Sacra.

LEIGHLIN, a town of Ireland, in the county of Carlow, Leinster : about forty-three miles from Dublin, near the river Barrow. At the east end of the church is a famous well, covered with ash trees, and dedicated

to St. Lazarian. This place was formerly a city, though now only a village, and the cathedral has been kept in good repair. It was a sole bishopric, founded in 632, but joined to Ferns in 1600. Gurmund, a Danish prince, was buried in this church. This cathedral was burnt by lightning, and rebuilt A. D. 1232 ; since the sees were joined it has been used as a parish church.

LEIGHTON (Alexander), a presbyterian di-vine, born in Edinburgh in 1587, and remarkable for his sufferings under archbishop Laud. Having published some pieces against episcopacy, and censured the measures of king Charles I., he was tried for sedition, and condemned to be publicly whipped, to have his ears cut off, and his nose slit ; which barbarous sentence was accordingly executed. As some compensation for his sufferings, the parliament, in 1640, appointed him keeper of Lambeth palace, which they had converted into a State prison. He died in 1644. LEIGHTON (Robert), D. D., archbishop of Glasgow, the son of the preceding, was also born in Edinburgh. During the times of the Commonwealth he was minister of a church near Edinburgh, and distinguished himself by his charity, and his aversion to religious disputations. The ministers were then called over yearly in the synod ; and were commonly asked, Whether they had preached to the times? When all my bretheren, answered Leighton, preach to the times, pray suffer me to preach about eternity. His moderation, however, giving offence, he retired to a life of privacy. But soon after he was called, by the unanimous voice of the magistrates, to preside over the college of Edinburgh ; where, during ten years, he displayed all the talents of a prudent, wise, and learned governor. In 1662 it was resolved to introduce episcopacy into Scotland, and Leighton was consecrated bishop of Dunblane ; when, however, Sharpe and the other bishops proposed to enter Edinburgh in a pompous manper, Leighton remonstrated, and went to Edinburgh alone. In his own diocese, he set such an example of moderation, that he was revered even by the most rigid Presbyterians. He went about preaching without pomp ; gave liberally to the poor ; and removed none of the ministers however exceptionable he might think their political principles. But finding that none of the other bishops could be induced to join in his moderate plan, he resigned his bishopric. He was, however, persuaded in 1669 to accept of the archbishopric of Glasgow ; but, finding it not in his power to stem the violence of the times, he resigned this also in 1675, and retired into Sussex, where he devoted himself to acts of piety. He died in London, in 1684. He wrote a Commentary on St. Petei ;

besides many sermons and useful tracts, which are greatly esteemed. He bequeathed his library to the church and clergy of Dunblane; and sunk about £840 for bursaries and other charitable purposes, in the colleges of Edinburgh and Glasgow.

LEIGHTON, or LEIGHTON-BUZZARD, a market

town of Bedforshire, standing on the river Ouse, commodious harbours, the line of coast hav—

forty-one miles N. N. W. from London, and six ing scarcely any ; and, though art has been

west by north from Dunstable. The church is a called in to alleviate the misfortune, its pressure

fine ancient pentangular building, with a hand-still continues to be felt. The bays of Carling—

some cross ornamented with the figures of the ford, Dundalk, Drogheda, and the coasts of

saints. There are also several dissenting meeting Wicklow and Wexford continue in a state of

tural purposes. One county only, Wicklow, is totally encumbered with mountains, the highest of which, Lugnaquilla, is 3070 feet above sea-level; this county abounds in natural beauties and curiosities, and is extremely rich in mineral wealth. The greatest natural disadvantage under which this province labors is a want of safe or

houses ; the Grand Junction Canal passes this either inutility or imminent peril, while King'splace. The business of the town consists of town is the only port in Leinster capable of

cattle, corn, lace, platted straw, &c. The market affording safe anchorage and deep water at all

on Tuesday is generally well supplied with times of tide, for vessels of any magnitude, cattle. LEIPSIC, a circle of the kingdom of Sax—

LEINSTER (anciently called Lageuia) is one ony, is bounded on the east by that of Meis—

of the four provinces into which Ireland was sen, on the south by Erzgebirg and the priuci—

ecclesiastically divided, in the year 1152, by palily of Altenburg, and on the west and north

pope Eugenius III.; this arrangement is topo-by Prussian Saxony. It has an area of 1537

graphically injurious, and, in the Ordinance Sur-square miles, and is fertile in corn, but deficient

vey now executing, should be wholly neglected, in wood. Potters' clay, limestone, marble, por—

Lcinster is bounded on the north by the province phyry, chalk, and near Frohburg excellent jas-

of Ulster ; on the west by the river Shannon ; on the south by the province of Munster ; and on the east by the Irish Sea. The ancient Lagenia was the kingdom of the notorious Dermod, who occasioned and invited the English inva-

per are found. This circle comprises fourteen bailiwics, and is the seat of considerable manufactures. Population 220,000.

LEIPSIC, the capital of the foregoing province, is situate on the river Pleisse, and was sion of Ireland; to whom succeeded the famous anciently fortified, but its fortifications have been Strongbow, earl of Strigul. After centuries of dismantled, and its ramparts converted into

gar-warfare and devastation, Leinster conferred the dens. It, however, is still entered by four hand-honor of a dukedom on Schomberg in 1690, but some gates, and contains several fine churches that prince did not long survive the dignity, and and hospitals, with a spacious square. Its it is now the ornament of the ancient and illus-streets are kept clean, but the town is represented trious house of Fitzgerald. The province of as having on the whole rather a grotesque ap-Leinsteris partitioned into twelve shires orcoun-pearance. Goethe describes its houses, we are ties : Carlow, Dublin, Kildare, Kilkenny, King's told, correctly, when he calls them ' extraor-County, Longford, Louth, East Meath, Queen's dinary shining buildings, with a front to two County, West Meath, Wexford, and Wicklow. streets, enclosing courts, and containing every Its superficial contents amount to 4,460,657 class of citizens, within heaven-high buildings, English acres, which are divided between ninety-which resemble large castles, and are equal to two baronies, and 992 parishes. half a city.' ' Roofs,' says another writer, 'which

Its mineral productions are granite and lime-alone contain six stories of windows, with small stone, in great abundance. Copper and lead steeples on their tops ; circular houses diminish-ore, the latter in large quantities. Carbonaceous ing at every story, resembling the pictures of the or stone coal, in Kilkenny, Queen's County, and tower of Babel ; two or three towers placed by Carlow ; aud gold has been found in the county the sides of houses, as if a staircase separate of Wicklow. There are, besides, quarries of from the building had been provided for it ; excellent marble in the limestone district, adja-some fronts which had been modernised, and cent to the coal. The chief rivers of this pro-disfigured by a multitude of pillars and pilasters vince are the Boyne, Barrow, Slaney, Inney, above pillars and pilasters ; and the ancient gaol-Brusna, and Liffey, none of which are consider-like, but fantastical town-house, made the marable ; this deficiency of natural inland naviga-ket-place of Leipsic one of the most grotesque

tion is amply compensated by two noble artificial

water-courses, called

Canals. These grea

of Dublin with the river Shannon, the one

looking spots I ever saw.' Among the public

the Royal and Grand edifices of this city may be noticed the exchange, ducts connect the bay the cloth-hall, the church of St. Nicholas, the

Catholic chapel, the theatre, and some of the

locking inatTarmonbury, in the county of Long-hospitals. The university, one of the most ce—

ford, the other at Banagher, in the Kings lebrated in Germany, particularly for its medical

County. The Grand Canal projects a branch departments, contains usually from 900 to 1200

also to the river Barrow at Monasterevan, there-students : it is divided into four nations, the

by completing an inland navigation to Wa-Misnian, Saxon, Polish, and Franconian, and is

terford Harbour and Dunmore from Dublin composed of six colleges ; the number of its

Bay. The surface of Leinster is in general level, regular professors is twenty-seven. The largest

the soil productive, resting chiefly on limestone, book trade belonging to any one place in Ger—

which presents itself at the surface also, suffici-many is here carried on, and there are several

ently often, both for agricultural and architec-literary and scientific societies, with libraries,

and collections of curiosities. Upwards of fifty booksellers are settled in the town, and be-tweeu 200 and 300 assemble at the Easter fair, i'rom other parts of the continent, bringing the Looks they have published. The average number of works that are thus exposed to sale, is estimated at 5000, and the annual value of them exceeds £200,000. Here are, also, manufactures of silk, velvet, linen, musical instruments, jewellery, &c., which, added to its central situation, render it a kind of emporium of North Germany. Its three great fairs are held at the commencement of the year, at Easter, and at Michaelmas, and are frequented by merchants from all parts of the civilised world. Immense quantities both of native and foreign manufactures and products are disposed of, or exchanged, on these occasions, the whole annual amount of this trade having been stated at £3,000,000, exclusively of the book-trade.

Leipsic has been the theatre of numerous bloody conflicts. It was more than once distinguished as the scene of action during the thirty years' war ; and became in 1813 the general hospital of the French army. The battle which took place here in the October of that year, between the French and allies, involved the greatest number of men of any conflict recorded in the last two centuries. The former were 160,000, the latter 240,000 strong. It began on the 18th of that month, about seven miles east of Leipsic, and soon became close and sanguinary, particularly at the village of Probstheyde, on the right of the French, where Buonaparte soon appeared in person. This place was repeatedly taken and retaken ; the fire of the artillery on both sides was most destructive, and all was undecided, when at noon a messenger from the left of the French position announced that the Saxon artillery and cavalry had gone over to the allies. This was followed at three o'clock by the still more alarming information of the desertion of the Saxon infantry, and though the intelligence was kept secret, and a detachment of the French guards replaced the Saxons, the superiority now acquired by the allies was decisive, and the bat-tle closed with the loss of a great part of the French position. A retreat to the Rhine was finally unavoidable, and orders for it were issued at night fall, but the execution was necessarily slow, all the men and baggage being obliged to lake one road. The French army accordingly suffered

dreadfully on this occasion, and from this conflict the superiority of the allies and the deliverance of Europe may be dated. Sixty-four miles west by north of Dresden, ninety south by west of Berlin, and 180 E.N. E. of Frankfort on the Maine. Population 35,000. LEIS'URE, ». t. -v Fr. loisr; Swed. LEIS'URABLE, adj. I lisa ; Dan. list (forte LEIS'URABLY, adv. fa Gr. Xvcric, Min-LEIS'URELY, adj. & adv.J sheu); or perhaps Sax leap, loose. Freedom from occupation, hurry, or anxiety ; convenience in regard to time. Johnson strangely defines the use of it in Shakspcare's Richard III. ' Want of leisure,' which, lie says (happily), is obsolete : it clearly means, in tlu; instances subjoined, convenience, or the leisure considered as to its limit, i e. the little leisure possessed by the speakers.

Wherefore we axen leiser and space to have deliberation in this cas to deme.

Chaucer. Cant. Tales.

Let us beg of God, that, when the hour of our rest is come, the patterns of our dissolution may be Jacob, Moses, Joshua, and David, who, leisurably ending their lives in peace, prayed for the mercies of God upon their posterity. Hooker.

We'll make our leisures to attend on yours.

Shakspeare.

They summoned up their meiny, strait took horse ; Commanded me to follow and attend The leiture of their answer. Id. King Lear.

More than I have said, loving countrymen. The leisure and enforcement of the time Forbids to dwell on. Id. Richard III.

Farewell. The leisure and the fearful time Cuts off the ceremonious vows of love.

Id. Stanley in Richard HI.

A gentleman fell very sick, and a friend said to him, Send for a physician : but the sick man answered, It is no matter ; for if I die, I will die at leisure.

Bacon's Apothegms.

The earl of Warwick, with a handful of men, fired Leith and Edinburgh, and returned by a leisurely march. Hayward.

There are some men who are busy in idleness, and make the leisure of peace not only more troublesome, bat eren more wicked than the business of war.

Burton.

Where ambition and avarice have made no entrance, the desire of leisure is much more natural than of business and care. Temple.

You enjoy your quiet in a garden, where you have not only *he leisure of thinking, but the pleasure to think of nothing which can discompose your mind.

Dryden.

The Belgians hoped, that with disordered haste, Our deep-cut keels upon the sands might run ;

Or if with caution leisurely we past, Their numerous gross might charge us one by one.

Id.

I shall leave with him that rebuke, to be considered at his leisure. Locke.

We descended very kiturely, my friend being careful to count tEe steps. Addison.

You shall seldom find a dull fellow of good education, but, if he happens to have any kiture upon his hanas, will turn his head to one of those two amusements for all fools of eminence, politics or poetry. Steele.

It has been computed by some political arithmetician, that, -if every man and woman would work for four hours each day on something useful, that labour would produce sufficient to procure all the necessaries and comforts of life ; want and misery would be banished out of the world, and the rest of the twenty-four hours might be leisure and pleasure.

Franklin .

Just now I've taen the fit o' rhyme, My barmie noddle's working

prime, My fancy yerkit up sublime

Wi' hasty summon : Hae ye a tewure-moment's time

To hear what's comin ?

Burns.

Such short recollections as these, and a little leiture to take a view of the nature and consequences of things or actions, before we reject or approve them.

Mason.

The expectations of those who retire from their shops and counting-houses, to enjoy the remainder of their days in leisure and tranquillity, are seldom answered by the effect. Paley.

L E I T II.

66]

LEITII, a seaport town of Scotland, in the county of Edinburgh, and the port of that city, is situate between one and two miles north-oast of the metropolis, on the banks of the Water of Leith, at its confluence with the Frith of Forth, which forms the harbour. This also divides the town into two districts, called South and North Leith, communicating by two drawbridges. Formerly there was here a stone bridge of three arches, founded in 1493 by Robert Ballentine, abbot of Holyrood. The largest ships lie in the roads, a mile and a half from Leith, perfectly secure. At the entrance of the harbour is a noble stone pier, erected at the beginning of the last century.

The town stands principally on the south side of the river, and, with the exception of the numerous modern erections, is irregularly built. The new streets are laid out on a regular and generally excellent plan ; and consist of well-built and elegant houses. North Leith, indeed, is now full three times its former size; and the whole town is rapidly extending on all sides. On the east of what is called Leith Walk, additions are in course of being made, which, when completed, will

entirely unite Leith with Edinburgh. Extensive improvements were projected, in 1800, for the accommodation of the increasing trade of this port ; amongst which were a magnificent suite of wet-docks, the first of which was opened in 1806, and a second in 1817. These, together with three graving-docks, cost £250,000 ; and it is intended to construct another, equal in size to the two former, which will be capable of receiving frigates. A battery of nine guns was erected to the west of the citadel of Oliver Cromwell, during the American war, in consequence of the appearance of Paul Jones in this neighbourhood : since that period the boundaries of the fort have been extended ; and it is now the head-quarters of the royal artillery in Scotland, who have commodious barracks; and there are besides warehouses and magazines for the various military and naval stores, which may be required in the service. The harbour is defended by a martello tower, about a quarter of a mile from the pier. In 1785 a naval yard or depot was established here, for supplying materials to his majesty's vessels coming to the Forth. What is called the parish church is a Gothic edifice, surmounted with a tower and spire: but in 1816 was erected, in North Leith, a new church, which has a spire 140 feet high. The chapel of ease to the church of South Leith is a plain but neat building; and an episcopal chapel was erected here in 1805. The other places of worship are, two burgher meeting-houses, and an anti-burgher one. The public charities are numerous: the principal are, King James VI.'s Hospital, founded in 1614; the Mariner's Hospital, or Trinity House, rebuilt in a stately manner in 1817; a female society, *br relieving indigent and sick wompn : a society for the relief of the destitute sick ; a female school of industry ; a boy's charity school, and many religious societies. Leith high school was built in 1805. The exchange is also an extensive •edifice, of freestone, containing the assembly-rooms, coffee-rooms, sale-rooms, subscription

library, and reading-rooms. The custom-house, which contains the excise-office, was rebuilt in 1812. East of the town are the baths, which are constructed upon a grand scale, and in a style of great elegance. The prison was erected in 1565, and contains the court-house, and town-cierk's office. The butchers' shambles have been lately erected. The bank is in Bernard Street. The harbour of Leila was granted to the town of Edinburgh by king Robert I. in 1329 ; but, the adjacent ground belonging to Logan of Restalrig, the inhabitants were obliged to purchase it on high terms, for their accommodation. It has been gradually improved, according to the increase of its trade. There were, at an early period, no quays for the accommodation of the shipping; the vessels, which were small, lying at the mouth and on the

banks of the river which runs through the harbour. A breastwork or quay was first built by the city of Edinburgh, some time after the purchase of Leith, with the adjoining lands ; but, at the beginning of the last century, it was prolonged to the northward, a considerable way into the sea, somewhat in the form of a crescent, by the extension of wooden and stone piers, at the extremity of which is a lighthouse.

Leith has a considerable trade with the Baltic, Holland, France, Spain, Portugal, the Mediterranean, and the West Indies. In the London trade twenty-seven smacks were lately employed by four companies; registering from 145 to 195 tons. They sail regularly twice a week. There are two Hamburgh shipping companies, who employ ten vessels of 150 tons, which sail weekly; and there aie, besides, regular traders to Hull, Newcastle, Berwick, Liverpool, Dublin, and on the east coast of Scotland to Arbroath, Montrose, Dundee, Aberdeen, Banff, Shetland, the Orkneys, &c. The Greenland fishery is also prosecuted with activity. Betwixt Leith and Kinghorn, on the opposite shore of Fife, a distance of about seven miles, large passage-boats and pinnaces ply twice a-day ; and steam-boats are constantly sailing from Leith to Grange-mouth, Stirling, &c. It has also extensive rope-works and canvas manufactories; six or seven glass-houses ; sugar refineries, soap-works, breweries, iron and vinegar works, distilleries, a card manufactory, with an apparatus for drawing wire, and a large manufactory of excellent agricultural implements. Ship-building is also carried on to a great extent. Leith is under the civil jurisdiction of three bailies, who continue two years in office, aided by an assessor appointed by the magistrates of Edinburgh, one of whose number piesules as admiral of Leith. In conjunction uith Porto Bello and Mussel-burgh, it returns one representative. The annual amount of shore dues averages £10,000; harbour dues, after deducting pilotage, about £2000; and dock-dues, £5000.

LEITRIM (i. e. Liato-druim, the gray ridge), a county in the province of Connaught, in Ireland, bounded on the north by Donegal Bay and part of Fermanagh County; on the east by the county of Cavan; on the west by parts of Sligo and Roscommon ; and on the south by Lang-ford County; having a sea-coast of two miles in.

leneth only, intercepted between the rivers Duffe this kingdom. On his return to England he en—

aiid Buiuiroise. The length of this county is tered into orders, and was appointed chaplain to

about fifty-two miles, while its breadth varies Henry VIII., who also gave him the rectory of

from seven and a half to twenty statute miles. Poppeling, in the marshes of Calais, appointed

The superficial contents amount to 407,260 acres, him his librarian, and in 1533 made him king's

i. e. 652 square miles, which are partitioned into antiquary ; an office never borne by any other

five baronies, *viz.* Carrigallen, Dromahaire, Lei-person before or since. By this commission he trim, Mohill, Rosclogher; and into seventeen was empowered to search for ancient writings

in all the libraries of colleges, abbeys, priories, &c., in his majesty's dominions. It is said that he renounced popery soon after his return

parishes.

The surface is varied and uneven, the greater but nowhere completely

part mountainous, — — , …

barren, excellent pasturage abounding amids* to England. In 1536 he obtained a dispen-tlie recesses of the mountainous district; hence sation to keep a curate at Poppeling, and set the universal practice in this shire of rearing black out *n his journey in search of antiquities. In cattle. The linen trade is cultivated here with this employment he spent six years, during vigor and success, and tillage is adopted in the which time he visited every part of England low lands. But the greatest and most certain where monuments of antiquity were to be

ex-supply of wealth and occupation in this county pected. After his return, in 1 542, the king gave is yet hardly opened to the inhabitants ; this him the rich rectory of Haseley in Oxfordshire ;

consists in the beds of coal and quantities of iron stone which appear in every region of the county. Three miles from ManorHamilton, and only ten

and, in 1555, a prebend of King's College, now Christ's Church, in Oxford, besides that of east and west Knowles, in Salisbury. Being thus

from Sligo, is an extensive bed of inflammable amply provided for, he retired to a house of his coal, in Lacca Mountain, at an elevation of 1150 own in the parish of St. Michael le Querne in

feet above the first mentioned town. A second bed of coal is known to exist in Lugnaquilla Mountain (part of which is in this county), and a third at Meneask, 1010 feet above Lough Allen. To the two latter there is not, at present, any road. Another bed exists at Aughnarashiel, where pits have been sunk, and works carried on, with profit to the proprietary, and benefit to the county. Besides these prospects of advantage to Leitrim, the ironstone of Drumshabro,

London, where he spent six years in digesting the materials he had collected. Henry VIII. died in 1547; and, not long after, Leland lost his senses. In this dreadful state he continued till 1552, when he died. He was a man of great learning, a universal linguist, an excellent Latin poet, and a most indefatigable and skilful antiquary. On his death, Edward VI. gave all his papers to Sir John Checke, his tutor and Latin secretary of state. The king dying, and Sir John

and of the Sliebh-an-Erin Mountain, promises being obliged to leave the kingdom, he gave four

greater accessions of wealth and occupation. Limestone occurs in abundance and of fine

folio volumes of Leland's collections to Humphrey Purefoy, esq. ; which, in 1612, were, by

quality : fire-clay of excellent quality is readily his son, given to William Burton, author of the

raised in many places ; and superior sandstone, which is used not only for flagging but for orna-

History of Leicestershire. This gentleman also became possessed of the Itinerary, in 8 vols.

mental work, is wrought in the quarries of Glan-folio, which, in 1632, he deposited in the Bod—

farn and elsewhere. The towns of Leitrim are leian library. Many other of Leland's MSS., after

but few, and these not important. Carrick-on- the death of Sir John Checke, fell into the hands

Shannon, the assizes town, contains only a po-of lord Paget, Sir William Cecil, and others, and

pulation of 1600, exclusive of the military in at last, fortunately, came into the possesion of Sir

barrack at this station ; and the village of Lei-John Cotton. These MSS. were of great use to

trim has only a population of 246, in forty-nine all our subsequent antiquarians, particularly

houses. The other towns, or rather villages, are Camden, Sir William Dugdale, Stowe, Lam—

Ballynampre, Dromahaire, where there is a pot-bard, Dr. Batteley, Anthony Wood, &c. His

tery established, Killargy,ManorHamilton,Drum-Itinerary throughout most parts of England and ker, the picturesque and elegant village of Drumsna, with Cashgarin and Mo. The family of Clements now bear the title of Leitrim. The ancient families were O'Rourke's, Macgauran's,

j n < » r» _ 1 1 rrw • *• . *

and M'Ranalls. The ruins of the monastic

Wales was published by Mr. Hearne, in 9 vols. 8vo. in 1710-11 ; as was also his Collectanea de rebus Britannicis, in 6 vols. 8vo. in 1715.

LELAND (John), an eminent writer in defence of Christianity, born at Wigan in Lancashire, in

edifices remain in Leitrim, besides many ancient 1691. His parents settled in Dublin, which

gave him an easy introduction to learning and the sciences. When properly qualified, he was called to be pastor to a congregation of Protes-

castles, chiefly of the O'Rourke's or O'Ruarc's. J-eitrim is also the name of a river in the countv of Wicklow.

LELAND (John), the great English antiquary, tant dissenters in that city". "He was an able

was born m London about the year 1507. Hav-preacher, but his labors were not confined to the

in-: lost his parents when a child, he found a pulpit. The many attacks made on Christianity,

friend and patron in Mr. Thomas Miles, who and some of them by writers of no contempti—

placed him m St. Paul's school, of which the ble abilities, led him to examine the subject

mmanan Lily was master. From that school with the strictest care. After the most deliberate

he was sent to Cambridge, and, after some years, enquiry, he published answers to several au-

>xford From Oxford he went to Paris, thors who successively appeared in that cause.

.liieHy with a design to study the Greek Ian-He was, endeed, a master in this controversy;

guuˆe, which was then but little understood in and his history of it, entitled A View of the

Deistical Writers, that have appeared in England, in the last and present Century, &c., is highly and justly esteemed. In the decline of life he published another laborious work, entitled The Advantage and Necessity of the Christian Revelation, shown from the State of Religion in the ancient Heathen World, especially with respect to the Knowledge and Worship of the One True God; a Rule of Moral Duty, and a State of future Rewards and Punishments; to which is prefixed along preliminary Discourse on Natural and Revealed Religion : 2 vols. 4to. This noble and extensive subject, the several parts of which

have been slightly and occasionally handled by other writers, Leland has treated at large with the greatest care, accuracy, and candor. And, in his View of the Deistical Writers, his cool and dispassionate manner of treating their arguments and his solid confutation of them, have contributed more to depress the cause of atheism and infidelity than the angry zeal of warm disputants. According to Dr. Walk ins he died in 1766, or in 1761.

LELEGES, an ancient people of Asia, of Greek original ; the name denoting a collection of people. They first occupied the islands; then, passing over to the continent, they settled partly in Mysia on. the Sinus Adramyttenus, and partly in that part of Ionia next to Caria.

LELEGES, a people of Laconia, who went to the Trojan war with Altes their king. Achilles plundered their country, and obliged them to retire to the neighbourhood of Halicarnassus, where they fixed their habitation.

LELONG (James), a French ecclesiastic, born in 1655. He wrote a curious work, entitled An Historical Library of France. He died in 1721, aged sixty-six.

LELY (Sir Peter), a celebrated painter, born in Westphalia in 1617. He was a disciple of Peter Grebber at Haerlem; and, in 1641, was induced, by the encouragement Charles I. gave to the fine arts, to come to England. He became state painter to Charles II., who knighted him. As a portrait-painter he was preferred before all his contemporaries : and had so many engagements always on his hands that he was prevented from going to Italy to finish his studies. To compensate for this, he procured the best drawings, prints, and paintings, of the most celebrated Italian masters. Among these were part of the Arundel Collection, which he procured from that family, many of which were sold after his death at prodigious prices, bearing upon them his usual mark of P. L. In his correct draught and beautiful coloring, but especially in the graceful airs of his heads, and the pleasing variety of his postures, together with the gentle and loose management of the draperies, he excelled most of his predecessors. Yet critics remark, that he preserved in almost all his female faces a drowsy sweetness of the eyes peculiar to himself; for which he is reckoned a mannerist. The hands of his portraits are remarkably fine and elegantly turned ; and he frequently added landscapes in the back grounds of his pictures, in a style peculiar to himself. He excelled, likewise, in crayon-painting. He became enamoured of a beautiful Englisn lady, whom he married ; and he purchased an estate at Kew, in Surrey, to which h< often retired. He died of an apoplexy in 1680,

at London ; and was buried in vˆovent Garden church.

LEM’ AN, n. s. According to Junius from leop, beloved, and man : other etymologists suggest the Fr. I’aimant; andMinsheu Fr. kmignon, i. e. minion ; favorite. Our old poets (see the instances from Chaucer) use the word both for a male and female favorite ; a gallant, or a mistiess.

Unto his lemman Dalila he told That in his heres all his strength lay, And falsely to his foman she him sold.

Chaucer. Cant. Tales. A theef that had reneyed our creance Came into the ship alone, and said he wolde Hire lemman be whether she wolde or n’olde.

Id.

O hold thy mortal hand for ladle’s sake. Hold for my sake, and do him not to die ; But vanquished, thine eternal bondslave make, And me thy worthy meed unto thy leman take.

Spenser. A cup of wine, That’s brisk and fine, And drink unto the leman mine.

Shakspeare.

LEMAN, or LAC LEMAN, a former department of France, comprehending the republic of Geneva ; and so named from Lemanus, the ancient name of the lake of Geneva. See GENEVA.

LEMBERG, a city of Austrian Poland, once the capital of Red Russia, and now of Galicia and Lodomeria, stands on the Pelten, a branch of the Dniester. It contains, with the suburbs, 29,000 Christian and 15,000 Jewish inhabitants. Its former ramparts are now converted into streets and public walks ; but it has still two castles. The towers and cupolas of the cathedral and churches, and the height of the house , which are generally built of stone, give the town from a distance an air of grandeur. Several of the streets are wide, and the squares spacious. The environs contain numerous villas. Here is a high-school, two Jewish schools, and a university, which was removed to Cracow. Next to Brody, Lemberg is the greatest trading town of Galicia. Its nankeen and cotton manufactures are also considerable. The circle has an area of 720 square miles and a population of 130,000. 156 miles east of Cracow.

LEMERY (Nicholas), a celebrated chemist, born at Rouen in Normandy

in 1645. After having made the tour of France, he, in 1672, commenced an acquaintance with M. Martyn, apothecary to the prince; and performed several courses of chemistry in his laboratory at the Hotel de Conde". Having procured a laboratory of his own, he gave lectures on chemistry, which were attended by such numbers of scholars as scarcely to allow him room to perform his operations. He was the first modern chemist who abolished the senseless jargo-i of barbarous terms, reduced the science to clear and simple ideas, and promised nothing that he did not perform. In 1681 he was persecuted on account of his religion ; and came to England, where he was well received by Charles II. : he returned to France, where,

on the icvocation of the edict of Nantes, he be-came a Catholic. He then became associate chemist and pensionary in the royal academy of sciences, and died in 1715. He wrote, 1. A Course of Chemistry; 2. A Universal Pharmacopeia; 3. A Universal Treatise of Drugs; and, 4. A Treatise on Antimony.

LEMMA, Xa/i/3avw, I assume, in mathematics, denotes a proposition laid down to clear the way for some following demonstration ; and prefixed either to theorems, to render their demonstration less intricate ; or to problems, to make their resolution more easy. Thus, to prove a pyramid one third of a prism, or parallelepiped, of the same base and height with it, the demonstration of which, in the ordinary way, is difficult and troublesome ; this lemma may be premised, which is proved in the rules of progression, that the sum of the series of the squares in numbers in arithmetical progression, beginning from 0, and going on 1, 4, 9, 16, 25, 36, &c., is always sub-triple of the sum of as many terms, each equal to the greatest; or is always one-third of the creates! term multiplied by the number of terms. Thus, to find the inflection of a curve line, this lemma is first premised : that a tangent may be drawn to the given curve in a given point. So, in physics, to the demonstration of most propositions, such lemmata as these are necessary htat to be allowed : — that there is no penetration of dimensions ; that all matter is divisible ; and the like : and, in

medicine, that where the blood circulates there is life, &c.

LEMNA, duck's meat, in botany, a genus of the diandria order and moncecia class of plants; natural order fifty-fourth, miscellanea;. Male, CAL. monophyllous: COR. none. Female,,CAL. monophyllous : COR. none; one style: CAPS. unilocular. There are three species ; all natives of Britain, growing in ditches and stagnant waters ; all acceptable food for ducks and geese. LEMNIAN EARTH, in mineralogy, sometimes also called sphragide, as a substance of a yellowish gray color, frequently variegated with rusty spots. Lustre dull. Fracture fine earthy. Meagre to the feel. Adheres slightly to the tongue. When plunged in water, it falls to pieces with disengagement of air-bubbles. Its constituents are, according to Klaproth, 66 silica, 14-5 alumina, 0-25 magnesia, 0'25 lime, 3'5 soda, 6 oxide of iron, 8-5 water. It has hitherto been found only in the island of Stalimene or Lemnos. It is reckoned a medicine in Turkey ; and is dug up only once a year, with religious solemnities, cut into spindle-shaped pieces, and stamped with a seal. It was esteemed an antidote to poison and the plague in the days of Homer.

LEMNIUS (Laevinius), a famous physician, born at Zeric-Zee in Zealand, in 1505. He practised physic with applause ; and after his wife's death, being made priest, became canon of Lerich-Zee, where he died in 1560. He wrote, 1 . An Account of the Plants mentioned in Scripture : 2. A book on astrology : 3. De Occultis Naturae Miraculis.

LEMNOS, an island in the northern part of the Archipelago, lying at almost equal distances from mount Athos and that part of the Asiatic

continent called the Troad, having the island of Imbro to the north-east, and the peninsula of mount Athos rather to the north-west of it, and situated in N. lat. 39° 55', E. long. 22° 46'. In ancient times it was dedicated to the god Vulcan, who was supposed to have established his forges in the volcanoes of this island, and, every time the craters threw out smoke and flames, it was thought to arise from the blows of the Cyclops, striking their anvils. From the time of Homer to the age of Pericles, and even later, Greek authors speak of the eruptions of Lemnos; so that its continual fires passed into a proverb, and the Greeks were accustomed to say, when speaking of a great fire, that it was like the fire of Lemnos. In time, however, its eruptions ceased, and nothing is now left but the traces of these devastations. Towards the reign of the emperor Antoninus, it appears that a part of the island was engulphed by one of those revolutions so common in this part of the Archipelago, and another island called Chrysevs, or the Isle o.

Gold, was also swallowed up.

It was on the island of Lemnos, that Philoc-tetes was abandoned : Lucullus saw here in his time the altar near which a serpent had wounded the Grecian hero. The soundings taken during the voyage of count Choiseul-Gouffier, enabled him to trace the line of the sand banks and the rocks under water, to the east of the island, which appeared to be the remains of the destroyed part of the ancient Lemnos and Chryseus. •The situation of the ancient volcano has been a subject of much dispute among the learned, as well as the site of Hephastia, or the city of Vul-can. In a corner of the precincts of this ancient city, called by the present inhabitants Palaio-Castro, or the Old Fort, you descend by a flight of fifty-one steps, of which nearly every twelfth is of marble, into a subterraneous cavern, where many have expected to find the celebrated labyrinth, but the stairs terminate in a small saloon, containing a well which the Christians of the island hold to be sacred. No sculptures or ancient medals have been found in these ruins ; generally not a single medal is to be met with in the whole island, and the only Grecian remains are some blocks of white marble, one pillar of granite, and a few fragments of ancient Greek pottery.

Lemnos has been famed from the earliest antiquity for the quarries, whence is extracted the bole, known in ancient medicine under the name of terra sigillata. The Greek priests, who were clever at availing themselves of every branch of revenue, used to accompany the working of these quarries with religious ceremonies, ascribing to them wonderful properties, and the present inhabitants never fail to boast of its effects as a febri-fuge. Galen took a journey to Lemnos on purpose to procure it. On the 16th of August every year the Lemnians begin working the quarry, before the rising of the sun, without which precaution, they pretend, it would not heal fevers ; they mix it with water, riddle it through a sieve, and harden it into various forms. In the neighbourhood of these quarries, near the village of Charous, there is a warm spring which appears to have some medicinal qualities. Hassan Pacha

LEMUR.

caused some baths and an inn to be built on the spot.

Pieces of calcined rock, scoriae, red-brown earth, and a soil shaded by not a single tree, announce the destructive effects of volcanic eruptions throughout the whole island ; but the valleys :overed with vegetable mould and watered by numerous rivulets, present an aspect of fertility amidst the surrounding desert. The islanders, in number about 10,000 and almost all of them Greeks, cultivate a sufficient quantity of grain to be able to export it : they also send out oil, silk, wax, and honey ; and they have a sort of dark red wine of little value, of which they export a part. Besides the grape, the soil produces figs ; but oranges and citrons will not grow in it. They have about fifty vessels, with which they trade to Constantinople and the ports of Egypt. The dock yard is situated near the city and port of Lemnos. At the back of this city, which lies on the south-west coast, is a rock, which, jutting out into the sea, separates two bays, and on which the citadel stands. At the time that the Russians made their appearance in the Archipelago, Orlow's squadron blockaded Lemnos without success for three months. The Turks have lately kept up a garrison there of 300 janissaries and 400 canno-uiers; the artillery consisted of fifty pieces of cannon and a few mortars. Only 1000 of the islanders live in the city : the rest inhabit different villages. They have excellent anchorage on the coasts of the island. At Saint Antoine and Condee or Candia, on the southern coast, vessels find a safe and commodious harbour. The road of Cape Cochino is not safe on account of the northerly winds, to which it is exposed. A French traveller, Sonnini, was much struck with the beauty of the women ; and another, an Englishman, admired their costume, consisting of a corset of scarlet cloth with wide sleeves, a short jacket, pantaloons drawn close round the ancles, yellow slippers without stockings, and a head-dress of white stuff in the form of a turban. They always veil themselves at the appearance cf a Turk.

The coasts of Lemnos swarm with fish ; such as red and gray mullets, several kinds of sparus, graylings, pike, &c.

LEM'ON, n. s. i Fr. limon , Ital. limini ; LEM'ON ADE. 5 barb. Lat. limenum. A species of CITRUS, which see ; the tree bearing lemons : lemonade, a beverage in which the juice of le-mons is a principal ingredient.

The dyers use it for dying of bright yellows and lemon colours. Mortimer.

The juice of lemons is more cooling and astringent than that of oranges. Arbuthnot.

Thou, and thy wife and children, should walk in my gardens, buy toys, and drink lemonade.

Id. John Bull. Bear me, Pomona !

To where the lemon and the piercing lime, With the de»;p orange, glowing through the green, Their lighter glories blend. Thomson.

The lemon tree hath large stiff leaves ; the flower consists of many leaves, which expand in form of a rose : the fruit is almost of an oval figure, and divided into several cells, in which are lodged hard seeds, surrounded by a thick fleshy substance, which, for the most part, is full of an acid juice. Miller.

Lemons are cooling and grateful to tue stomach, quenching thirst and increasing appetite.

Dr. A. Ktu.

LEMON, in botany. See CITRUS. LEMON (George William), an English divine and lexicographer of considerable learning and industry. He was born in 1726; and published An English Etymological Dictionary, in one vol. 4to., which is esteemed. He died in 1797, aged seventy-one.

LEMON ISLAND, one of the Skelig Islands, situated off the coast of Kerry, in Munster, Ireland. It is a round rock, always above water, and therefore no way dangerous to ships. An incredible number of gannets and other birds breed here ; and it is remarkable that the gannet nestles nowhere on the coast cf Ireland but on this rock on the south, and another on the north coast, though many of them are seen on all parts of our coasts on the wing.

LEMO VICES, a people of Aquitania, situated between the Bituriges Cubi on the north, the Arverni on the east, the Cadurci on the south, and the Pictones on the west.

LEMPRIERE(John), D.D., a learned classical author, was a native of Jersey, and educated at Winchester school, whence he removed to Pembroke College, Oxford, and graduated A. M. in 1792, B. D. in 1801, and D. D. in 1803. His reputation for learning procured him in

1792 the head mastership of Abingdon grammar school, which he conducted several years. He then removed to the free grammar school at Exeter, where he remained till, in consequence of some disputes with the trustees, he was obliged to re-sign. In the year 1811 he was presented to the rectory of Meeth, Devonshire, which living, together with that of Newton Petrock, in the same county, he held till his death. Dr. Lempriere's Bibliotheca Classica, first published in 8vo. in 1788, has furnished one of the most useful assistants in the study of the heathen mythology. The year following he published a sermon, preached on the 12th of August in that summer, at the parish church of St. Helier, in his native island, the great object of which seems to be his own vindication from aspersions. His other writings are the first volume of a translation of Herodotus, with notes, which appeared in 1792, and was intended to have been followed by two others, but, an entire translation of that historian being given to the world in the mean time by Mr. Beloe, Dr. L. desisted. A compilation of Universal Biography, first printed in 4to., with an abridgment of the same in 8vo., both in 1808, was his last work. He died of apoplexy February 1st, 1824, in Southampton Street, Strand.

LEMUR, the maucauco, in zoology, a genus of the mammalia class of quadrupeds, and of the order of primates. The characters are these : — There are four fore teeth in the upper jaw, the intermediate ones being remote; and six long, compressed, parallel teeth in the under jaw, the dog teeth are solitary, and the grinders somewhat lobated. Kerr and Gmelin enumerate thirteen species ; *viz.*

1 . L. bicolor, the American maucauco, inhabits South America. It has a tail; the upper parts of the body are a blackish-gray, the under,

a dirty white color ; with a heartshaped spot of the same color on the forehead. The head resembles a bull-dog ; the toes have narrow sharp claws.

2. L. catta, the ring-tailed maucauco, inhabits Madagascar, Mauritius, Joanna, and the neighbouring African continent. It is of the size of a

cat ; has the hair on the top and hind part of the head of a deep ash-color, the back and sides reddish, the belly and insides of the limbs white ; all its hair is very soft, close, and fine, and erect like the pile of velvet ; the tail is twice the length of the body. In a wild state they go in troops of thirty or forty, but are easily tamed when taken young.

3. L. ecaudatus, the tailless maucauco, a small animal found in Bengal and the island of Ceylon. It is of a very singular construction, and perhaps longer in proportion to its thickness than any other quadruped. The head is roundish, with a sharp-pointed nose and small ear?*; the body is covered with short, soft, and silky ash-colored and reddish fur : the toes are naked, and the nails flat ; excepting those of the inner toe on each hind foot, which are long, crooked, and sharp. Its length from the nose to the rump is sixteen inches. It lives in the woods, and feeds on fruits : in a tame state it appears to be fond of eggs, and devours small birds. This animal has the inactivity of the sloth, and creeps slowly along the ground ; it is very tenacious of its hold, and makes a plaintive noise. Some confound this species with the loris.

4. L. indri, the indri, inhabits Madagascar. It is black and has no tail ; is about three feet and a half high ; has eight canine teeth in each jaw, two cutting teeth in the upper jaw, and four close set in the lower ; all the feet have five toes, with flat sharp nails ; the great toes are very large ; the hair is silky and thick, gray on the face, white and curled on the rump ; all the rest black. It is easily tamed. Its voice resembles that of a child.

5. L. laniger, the curly maucauco, inhabits ./ladagascar. It is of a brick-dust color on the upper parts, and white on the under ; the face black ; the tail a tawny red. The head and body are twenty-one inches long; the tail nine. It has two foreteeth in the upper, and four in the lower jaw : the eyes are large ; the ears small : the paws have five toes each : the thumbs and great toes have flat rounded nails; the rest pointed claws. The hair is very soft and curled like wool ; whence the name.

6. L. macaco, or caudatus, the ruffed maucauco, or the vari of Buffon, is an inhabitant of Madagascar. It is somewhat larger than the catta, and has long hair standing out round the sides of the head like a ruff; a long tail; the color of the whole animal generally black ; but sometimes white spotted with black. In a wild state it is very fierce ; and makes such’a noise in the woods, that the cries of two might be easily mistaken for 100. Kerr distinguishes four varieties of this species.

7. L. mongoz, the mongooz or wool'y maucauco, inhabits Madagascar, and the islands to the eastward, as far as Celebes. It is about the size of a cat, and has the whole upper part of

the body and the tail covered with long, soft and thick fur, a little curled or waved, of a deep brownish ash-color; the tail is very long. I lives on fruits, turns its tail over its head to protect it from rain, and sleeps on trees ; it is very sportive and good-natured; and very tender. Kerr describes five varieties of the Mongooz.

8. L. murinus, the murine maucauco, inhabits Madagascar; is of an ash color, with a rusty brown tail; all the toes and fingers have flat rounded nails.

9. L podji, the tarsier of Buffon, has a pointed visage ; slender nose, bilobated at the end : eyes large and prominent ; ears erect, broad, naked, semitransparent, an inch and a half long, with a tuft of hair between them on the top of the head, and long hairs on each side of the nose and on the upper eyebrow. In each jaw are two cutting and two canine teeth ; which form an exception in this genus. There are four long slender toes, and a distinct thumb on each foot ; the thumbs on the hind feet are very broad and greatly dilated at their ends : the tail is almost naked ; the greater part round and scaly like that of a rat, but growing hairy towards the end, which is tufted. . Its length from nose to tail is nearly six inches ; to the hind toes eleven and a half, the hind legs being of a great length ; the tail is nine inches and a half long. It inhabits the remotest islands of India, especially Amboyna.

10. L. potto, the potto, inhabits Guinea ; has a tail, and is all of a pale rusty brown color. In other particulars it is very like the indri.

11. L. prehensilis, the prehensile or little maucauco, has a rounded head, sharp nose, lot:g whiskers; two canine teeth in each jaw; four cutting teeth in the upper jaw, six in the lower : seven grinders on each side : the nearest sharp, the more distant lobated : the ears are large, roundish, naked, and membranaceous ; the eyes very large and full. The toes are long, and of unequal lengths ; the ends round ; the nails round, and very short ; the tail is hairy, as long as the body, and prehensile. The animal is rather less than the black rat : and, in Mr. Pennant's opinion, seems to be the same which Buffon calls le rat de Madagascar. It is supposed to live in the palm-trees, and feed on fruits. It holds its food in its fore feet like a squirrel ; is lively, and has a

weak cry; and when it sleeps it rolls itself up.

12. L. tardigradus of Seba, the lorris of Buffon, or sloth of Ceylon, has a produced dog-like visage, with the forehead high above the nose : the ears are large, thin, and rounded : the body is slender and weak ; the limbs are very long and slender ; the thumb on each side is distinct, and separate from the toes : the hair on the body is universally short and delicately soft ; the color on the upper part tawny, beneath whitish. From the tip of the nose to the anus the animal is only eight inches long. It differs totally in form and nature from the ecaudatus ; and, notwithstanding the epithet of tardigradus or sloth given in Seba, it is very active, and ascends trees most nimbly. It has the actions of an ape ; and Seba says, the male climbs th«

trees, and tastes the fruits, before it presents them to its mate.

13. L. volans, the flying maucauco, the colugo of Pallas, or flying cat of Ternate, resembles a bat, being furnished with a strong membrane like that animal, by which it is enabled to fly. It inhabits the country about Guzarat, the Molucca Isles, and the Philippines ; feeds on fruits, and is very distinct both from the bat and flying squirrel. Pennant says it is three feet long, nearly as broad when expanded ; the tail one foot ; the head long ; mouth, teeth, and ears small ; the hair ash-colored ; the legs covered with yellow clown ; the paws five-toed ; the claws crooked and very sharp.

LEMURES, in antiquity, sprites or hobgob-lins ; restless ghosts of departed persons, who were supposed to return to terrify and torment the living. These are the same with the larvae, whom the ancients imagined to wander round the world, to frighten good people, and plague the bad. For which reason, at Rome, they had lemuria, or feasts instituted to appease the manes of the defunct. See LARES.

Apuleius explains the ancient notion of manes thus : the souls of men released from the bands of the body, and freed from performing their bodily functions, be-come a kind of daemons or genii, formerly called lemures. Of these lemures, those that were kind to their families were called lares familiares ; but those who, for their crimes, were condemned to wander continually, without meeting with any place of rest, and terrified good men and hurt the bad, are vulgarly called larvae. Apuleius observes, that, in the ancient Latin, lemur signified the soul of a man separated from the body by death.

LEMURIA, or LEMI;RAUA, a feast solemnised at Rome on the 9th of May, to pacify the manes of the dead, or in honor of the lemures. It was instituted by Romulus, to appease the ghost of his murdered brother Remus, which he thought was continually pursuing him to revenge the horrid crime. Sacrifices continued for three nights, the temples were shut up, and marriages were prohibited during the solemnity. A variety of whimsical ceremonies were performed, magical words made use of, and the lemures desired to withdraw, without endeavouring to hurt or affright their friends above ground. The chief formalities were ablution, putting black beans into their mouths, and beating kettles and pans to make the goblins keep at a distance.

LENA, a river of Asiatic Russia, rises in the mountains to the north-west of the lake Baikal, and flows almost from south-west to north-east, till near Yakoutsk. Here it receives the Wi-lime and the Olekma, and, combined with the Obi and the Toungouska, furnishes an almost continued navigation from west to east, across Siberia. Soon after, passing Yakoutsk, it receives the Aldane, the largest of its tributaries, by which the navigation is continued nearly to Okhotsk. The course of the Lena is now north, with a ” slight declination westward. The Wilhoui is the only other considerable river which falls into it. The channel of this river is broad and deep, and it forms numerous islands in its course which may be estimated at nearly 2000 miles

LENJEA, from Xqvoc, a wine-press ; a festival kept by the Greeks in honor of Bacchus at which there was much feasting and Bacchanalian jollity, accompanied with poetical contentions and the exhibition of tragedies. A goat was generally sacrificed on the occasion, and trtated with various marks of cruelty and contempt as being naturally fond of brousing on the vine shoots.

LEND, v. a.) Sax. laenan; Belg. leenen;

LEND'ER, n. s. \ lehen. To grant the use of •

to grant, afford, or bestow generally ; to let on

hire : a lender is one who either freely, for hire,

or by way of trade, lends or lets out any thing!

Thou shall not give him thy money upon usury,

nor lend him thy victuals for increase.

Lev. xxv. 37.

Thou pinchist at my mutabilitie, For I the lent a droppe of my richesse, And now me likith to withdrawin me, Why shouldist thou my roialtie oppresse ?

Chaucer'* Baladet.

In common worldly things 'tis called ungrateful With dull unwillingness to pay a debt, W hich, with a bounteous hand, was kindly lent : Much more to be thus opposite with Heaven.

Shakspeare.

I'll lend it thee, my dear, but have no power to give it from me. fd.

Let the state be answered some small matter, and the rest left to the lender ; if the abatement be small, it will not discourage the lender : hie that took ten in the hundred, will sooner descend to eight than give over his trade. Bacon.

This gave them at once freedom, victory, riches ; bestowing upon them the remainder of that wealth, which the Egyptians had but lent. Ep. Hall.

One would think a man of sense would grutch to lend his ear, or incline his attention to such motley ragged discourse. Barrow.

They dare not give, and e'en refuse to lend, To their poor kindred, or a wanting friend.

Dry den.

Covetousness, like the sea, receives the tribute of all rivers, though far unlike it in lending any back again. Decay of Piety.

From thy new hope, and from thy growing store, Now lend assistance, and relieve the poor. Dryden. Whole droves of lenders crowd the bankers' doors To call in money. Id. Spanish Fryar,

Cato, lend me for a while thy patience, And condescend to hear a young man speak.

Addison.

By Jove the stranger and the poor are sent, And what to those we give, to Jove is lent. Pope.

Cephisa, thou Wilt lend a hand to close thy mistress' eyes.

A. Philips.

Man wants but little, nor that little long ; How soon must he resign his very dust, Which frugal nature lent him for an hour !

Young

He now began to engage in the controversies of the times, and lent his breath to blow the flames of contention. Johnson.

L'ENFANT (James), a learned French writer, born in 1661. After studying at Saumur, he went to Heidelberg, where he became minister of the French church in 1684, and chaplain to the electress dowager Palatine. The descent of the French into the palatinate obliged him to leave Heidelberg in 1688. He went to Berlin, where the elector Frederick, afterwards king of

Prussia, appointed him one of the ministers. There he continued thirty-nine years, distinguishing himself by his writings. He was

preacher to Charlotta Sophia, queen of Prussia; and, after her death, to Frederick the Great. In 1707 he took a journey to England and Holland, where he preached before queen Anne. In 1712 he went to Helmstadt, in 1715 to Leipsic, and in 1725 to Breslaw, to search for rare books and MSS. He died in 1728. His principal works are, 1. The History of the Council of Constance, '2 vols. 4to. ; 2. A History of the Council of Pisa, 2 vols. 4to. ; 3. The New Testament translated from the Greek into the French, with Notes by Beausobre and L'enfant, 2 vols. 4to. ; 4. The History of Pope Joan, from Spanheim's Latin Dissertation ; 5. Several Pieces in the Bibliotheque Choisie, La Republique des Lettres, La Bibliotheque Germanique, &c.

LENGLET (Nicholas, du Fresnoy, abbe), a celebrated French author, born at Beauvois, in 1674. He wrote on various subjects. The following works merit notice: 1. A Method of Studying History, with a Catalogue of the Principal Historians of every Age and Country; 1713. This work was translated into most modern languages, particularly our own, with improvements, by Richard Rawlinson, LL. D. and F.R.S., and published in London in 1730, in 2 vols. 8vo. ; 2. A copious abridgment of universal history and biography, in chronologi-cal order, under the title of Tablettes Chrono-logiques ; which first appeared at Paris in 1744, in 2 vols. 8vo., and was universally admired. In subsequent editions he made several corrections and improvements ; and from one of these an English translation was published in London, in 1762, in 2 vols large 8vo. Another edition appeared in 1763 in whi6h the general history was brought down to 1762. Du Fresnoy, however, loaded his work with catalogues of saints, martyrs, councils, heresies, and other ecclesiastical matters, fit only for the libraries of popish convents. He was secretary to the French ambassador at Cologne in 1705, where he discovered a plot of delivering up Mons to the English. In 1721 he became librarian to prince Eugene. He lived eighty-two years, but his end was tragical ; for, falling asleep by the fire, he fell into it, and was burnt to death before the accident was discovered. This happened in 1756.

LENGTH, n. s. ~) Sax. lens ; Teu—

LENGTH'EN, v. a. & v, n. > tonic langheit; Belg.

LENGTU'WISE, adv. j lenghde. See LONG Full extent ; utmost expansion or duration ? un-contracted state ; comparative extent (in which sense it admits of a plural) ; distance; end ; from which last sense comes the phrase at length : once written ' at the length.' To lengthen is, to draw out; elongate; make longer; protract: it sometimes has ' out,' affixed by way of emphasis ; also, to grow, or become

longer. Lengthwise is, in the direction of the length ; longitudinally.

T.iat ghe rootid and groundid in charite moun comprehende with alle seyntis which is the breede and the letigthe and the hyghenesse and the depnesse. Wiclif, Effn. iii.

Break off thy sins by righteousness, and thine iniquities by showing mercy to the poor: if it may be a lengthening of thy tranquillity. Dan.

A crooked stick is not straitened, unless it be bent as far on (he clear contrary side, that so it may settle itself at length in a middle state of evenness between them both. Hookei,

Large lengths of seas and shores Between my father and my mother lay.

Shakspeure

Frame your mind to mirth and merriment, Which bars a thousand harms, and lengthens life.

Id.

There is in Ticinum a church that is in length one hundred feet, in breadth twenty, and in height near fifty ; it reporteth the voice twelve or thirteen times.

Bacon.

He had marched to the length of Exeter, which he nad some thoughts of besieging. Clarendon

To get from the' enemy, and Ralph, free ; Left dangers, fears, and foes, behind, And beat, at least, three lengths the wind.

Hudibras.

Mezentius rushes on his foes, And first unhappy Acron overthrows : Stretched at his length he spurns the swarthy ground.

Dry den.

Time glides along with undiscovered haste, The future but a length beyond the past. Id. What leni/th of lands, what oceans have you

passed. Id.

May Heaven, great monarch, still augment your

bliss, With length of days, and every day like this. Id.

At length, at length, I have thee in my arms, Though our malevolent stars have struggled hard, And held us long asunder. Id. Kin% Arthur.

The learned languages were less constrained in the quantity of every syllable, besides helps of grammatical figures for the lengthening or abbreviation of them. Dryden.

Having thus got the idea of duration, the next thing is to get some measure of this common duration, whereby to judge of its different lengths.

Locke.

One may as well make a yard, whose parts lengthen and shrink, as a measure of trade in materials that have not always a settled value. Id.

If Lztitia, who sent me this account, will acquaint me with the worthy gentleman's name, I will insert it at length in one of my papers.

Additon's Spectator.

In length of time it will cover the whole plain, and make one mountain with that on which it now stands.

Addison.

It lengthens out every act of worship, and produces more lasting and permanent impressions in the mind, than those which accompany any transient form of words. Id.

Still 'tis farther from its end ; Still finds its error lengthen with its way.

Prior.

Relaxing the fibres, is making them flexible, or easy to be lengthened without rupture. Arbuthnot.

It is in our power to secure to ourselves an interest in the divine mercies that are yet to come, and to lengthen the course of our present prosperity.

Atterbury's Sermons.

Falling dews with spangles decked the glade, And the low sun had lengthened every shade. Pope-, I do not recommend to all a pursuit of sciences, to those extensive lengths to which the moderns have advanced. Watts,

What folly can be ranker? like our shadows,

Our wishes lengthen as our sun declines. Young.

Extension is either in length, height, or depth.

Burhf on the Sublime.

In faithful memory she records the crimes Or real, or fictitious, of the times ; Laughs at the reputations she has torn, And holds them dangling at arm's length in scorn.

Cowper.

' Comrades, good night ! ' — The Hetman threw His length beneath the oak-tree shade, With leafy couch already made,

A bed nor comfortless nor new To him, who took his rest whene'er The hour arrived, no matter where. Byron.

Those lonely walks, and lengthening reveries, Could not escape the gentle Julia's eyes ;

She saw that Juan was not at his ease. Id.

LENGTHENING, in ship carpentry, the operation of cutting a ship

down across the middle, and adding a certain portion to her length. It is performed by sawing her planks asunder in different places of her length, on each side of the midshipframe, to prevent her from being too much weakened in one place. The two ends are then drawn apart to a limited distance, which must be equal to the proposed addition of length. An intermediate piece of timber is next added to the keel, upon which a sufficient number ot timbers are erected to fill up the vacancy produced by the separation. The two parts of the kelson are afterwards united by an additional piece, which is scored down upon the floor timbers, and as many beams as may be necessary are fixed across the ship in the new interval. Finally, the planks of the side are prolonged so as to unite with each other ; and those of the ceiling refitted in the same manner ; by which the whole process is completed.

LE'NIENT, adj. & n. s. ˆ Fr. Unifier, kLEN'IFY, v. n. tnitif; Lat. lenio,

LEN'ITIVE, adj. & n. s. t leniens. Assua—

LEN'ITV, n. s. J sive ; softening ;

qualifying; laxative; emollient. To lenify, is to mitigate or assuage. Lenitive is an adjective synonymous with lenient : as a substantive, any thing applied to relieve pain or suffering. Le-nity, generally applied to the mind or temper, signifies mercy ; tenderness ; sweetness.

Henry gives consent, Of meer compassion, and of Lenity, To ease your country. Shakspeare. Henry VI. Used for squinancies, and inflammations in the throat, it seemeth to have a mollifying and lenifying virtue. Bacon.

Some plants have a milk in them ; the cause may be an inception of putrefaction ; for those milks have all an acrimony, though one would think they should be lenitive. Id.

Albeit so ample a pardon was proclaimed touching treason, yet could not the boldness be beaten down either with severity, or with lenity be abated.

Hayward. Lenity must gain The mighty men, and please the discontent. Dan.

Consolatories writ

With studied argument, and much persuasion sought, Lenient of grief

artd anxious thought. Milton.

These jealousies

Have but one root, the old imprisoned king, Whose lenity first pleased the gaping crowd : But when long tried, and found supinely good, Like ./Esop's log, they leapt upon his back. Dryden.

All softening simples, known of sov'reign use, He presses out, and pours their noble juice ; These first infused, to lenify the pain, lie tuˆs with pincers, but he tugs in vain. /<'

There are lenitives that friendship will apply, be-fore it would be brought to decretory rigours.

South's Sermon*.

There is aliment lenitive expelling the faeces without stimulating the bowels ; such are animal oils.

Arbuthnot.

Oils 'relax the fibres, are lenient, balsamick, and abate acrimony in the blood. Id. on Alimentt.

In this one passion man can strength enjoy ; Time, that on all things lays his ler.ient hand, Yet tames not this : it sticks to our last sand. Pope.

I dressed it with lenients. Wiseman's Surgery.

The king, with lenity of which the world has had perhaps no other example, declined to be the judge or avenger of his own or his father's wrongs. Johnton.

LENNEP (John Daniel Van), an able critic and classical scholar, a native of Leenwarden in Friesland, commenced his career in 1747, by an edition of the Greek poem of Coluthus, on the Rape of Helen. He was professor of Greek and Latin literature at Groningen in 1752 ; and in 1768 succeeded Gisbert Koen as professor at Franeker. He died February 6th, 1771, at Aix-la-Chapelle. Lennep was the author of two treatises, De Analogia Lingua; Graecae ; and Etymologicon Linguae Graces, republished at Leyden in 1805-1808, with the Notes of Schei-dius.

LENNOX, or Dunbartonshire, a county of Scotland, twenty-four miles long and twenty broad, bounded on the south by the river and frith of Clyde; on the west by Lochlong and Argyleshire ; on the north by the Grampians ; and on the east by Monteith and Stirlingshire. Great part of it is fit for nothing but pasturage and sport; even in the lower lands the soil is not fertile : yet the face of the country is agreeably diversified with hills, dales, mountains, heaths, rivulets, rivers, lakes, woods, fields of corn, and gentlemen's seats and plantations. Part of it is washed by the Clyde, which, at the castle of Dunbarton, is two miles broad at high water, and continues extending in width and depth until it joins the ocean. From the mouth of the Clyde, the two bays of Lochlong and Lochfyne make large indentations in the county. The only river of any note is the Leven. See LEVEN. But the greatest curiosity of this county is Loch-lomond, a vast body of fresh water supplied by subterraneous springs and rivulets, surrounded with huge mountains extending twenty-five miles in length, and in some places five in breadth, incredibly deep in every part, interspersed with twenty-four verdant isles, some of which are stocked with reddeer, and inhabited. Nothing can be more wildly romantic than this part of the country during summer, on the south side of the lake: the high' road runs in some places through natural woods ; overhung, on one hand, by steep mountains covered with flowery heath ; and on the other opening in long vistas upon the lake, terminated by green islands that seem to float upon the water. Among the rivers we must not omit the Blane, which, though an inconsiderable stream, has been rendered famous by the birth of George Buchanan, the celebrated Latin poet and historian, on its banks. Near his birth-place (which, however, Jies in Stirlingshire), is Buchanan House, an elegant scat belonging to the duke of Mon-LEN

trose, head of the noble family of Graham, so often distinguished by its loyalty, integrity, and valor. The same part of the country gave birth to the great mathematician and naturalist, Na-pier, lord Merchiston, inventor of the logarithms. The title of Lennox, with the property of great part of the shire, was formerly vested in a branch of

the royal family of Stuart, with which it was reunited in the person of king James VI., whose father, Henry lord Darnley, was son to the earl of Lennox. This prince conferred the title upon his kinsman Esme Stuart, son of John lord Au-bigny in France: but his race failing at the death of Charles duke of Lennox and Richmond, and the estate devolving to the crown, Charles II. conferred both titles on his own natural son by the duchess of Portsmouth ; and they are still enjoyed by his posterity. The people of Lennox are chiefly Lowlanders, though in some parts of it divine service is performed in the-Erse language. The most numerous clans in this district are the Macfarlanes, the Colquhouns, and the lir.chanans. They generally profess the Protestant faith, according to the Presbyterian discipline; though some of the gentry follow the English ritual. The people are sober, honest, and industrious ; and are tall, vigorous, and healthy.

LENNOX (Charlotte), a literary lady, a native of North America, much respected by Dr. Johnson and Samuel Richardson. She was born at New York in 1720 (her father, colonel James Ramsay, being then governor of that state), but received her education in England. Little is known of her subsepuent history until she married a Mr. Lennox. In 1751 she published the Memoirs of Harriet Stuart; and in 1752 The Female Quixote, a very ingenious production ; to which a dedication was written by Johnson In the following year appeared her Shakspeare Illustrated. In 1756 she published the Countess de Berci, from the French, and translated Sully's Memoirs. These were followed by Philander, a dramatic pastoral, and the novel of Henrietta, in 2 vols. In 1759 she was assisted by the earl of Cork and Dr. Johnson, in translating Brumoy's Greek Theatre ; and the next year started the well known Ladies' Museum. Her other works are, Sophia, a novel, 2 vols. ; The Sisters, a comedy ; Old City Manners ; and Euphemia, a novel in 4 vols. published 1790. With all her talents and industry, however, she was doomed to penury and sickness in declining life, but was effectually relieved, we are told, by the Literary Fund Society. She died 4th of June, 1804.

LENS.ˆn. *. j Lat. lens, a plant. This

LEX rrc'uLAii, adj. > word is understood to be

LEN'TIFORM. 3 formed from the resemblance of the glass in question to the seed of the lentil. A glass generally convex on both sides : hut there are also concave lenses. Lenticular, l«~ntiform, of the form of a lens.

The crystalline humour ia of a lenticular figure, • -oiivex on both sides.

Ray on the Creation.

\ <rlass spherically convex on both sides, is usuallj railed a lent ; such as is a burning-glass, or spectacle-glass, or an object-glass of a telescope.

Newton's Opticki.

According to the difference of the lenses, I used various distances. /d

So the clear lens collects with magic powe.'

The countless glories of the midnight nour;

Stars after stars with quivering lustre fall,

And twinkling glide along the whitened wall.

Darwin.

A LENS is a piece of glass, or any other transparent substance, the surfaces of which are so formed, that the rays of light by passing through it, are made to change their direction, either tending to meet in a point beyond the lens, or made to become parallel after converging or diverging; or proceeding as if they had issued from a point before they fell upon the lens. See OPHIS.

LENT, n. s. > Saxon lent ; Belgic lent ;

LEN'TEN, adj.) Teut. lente, glent (spring). See the extract from Camden. The quadrigesi-mal fast in spring: hence any fast. Lenten, pertaining to, or used in Lent ; sparing.

My lord, if you delight not in man, what lenten entertainment the players shall receive from you ! Shakspeare. Hamlet.

Lent is from springing, because it falleth in the spring ; for which our progenitors, the Germans, use glent. Camden.

What the church debars us one day, she gives us 1eave to take out in another : first we fast, and then, we feast ; first there is a carnival, and then a lent.

Selden .

Giving of ashes on Ash Wednesday, is to put in remembrance every Christian man in the beginning of Lent and penance, that he is but ashes and earth, and thereto shall return. Fuller.

She quenched her fury at the flood, And with a /enten sallad cooled her blood, Their commons, though but coarse, were nothing scant. Dryden's Hind and Panther.

Those have a short Lent who owe money to be paid at Easter. Franklin.

LENT is a solemn time of fasting in the church. /Those of the Romish church, and some of the Protestant communion, maintain, that it was always a fast of forty days, and, as such, of apostolical institution. Others think it was only of ecclesiastical institution, and that it was variously observed in different churches, and grew by degrees from a fast of forty hours to a fast of forty days. This is the opinion of Morton, bishop Taylor, Du Moulin, Daille", and others. The ancient manner of observing Lent, among those who were piously disposed, was to abstain from food till evening : their only refreshment was a supper; and it was indifferent whether it was flesh or any other food, provided it was used with sobriety and moderation. Lent was thought the proper time for exercising, more abundantly, every species of charity. Thus what they spared from their own bodies by abridging them of a meal, was usually given to the poor; they employed their vacant hours in visiting the sick, and those that were in prison ; in entertaining strangers, and reconciling differences. The imperial laws forbad all prosecution of men in criminal actions that might bring them to corporal punishment and torture, during the whole season. This was a time of more than, ordinary strictness and devotion, and therefore, in many of the great churches, they had religious assemblies for prayer and preaching everyday. All public games and stage plays were prohibited ; as well as the celebration of all festivals, birth-days, and marriages,

a* unsuitable to the occasion. The Christians of the Greek church

observe four Lents ; the first commences on the 15th of November; the second is the same with that of the church of Kngland ; the third begins the week after Whitsuntide, and continues till the festival of St. Peter and St. Paul ; and the fourth commences on the 1st of August, and lasts till the 15th. All these Lents are observed with great strictness ; but on Saturdays and Sundays they drink wine and use oil, which are prohibited on other days.

LENTIL, n. s. Fr. lentiile ; Lai. lens. A species of EUVUM, which see.

The Philistines were gathered together, where was a piece of ground full of Untiles. 2 Sam. xxiii, 11.

lentils grow a foot and a half in length, with stalks and leaves like those of tares, but smaller ; and, like them, they bear their seed* generally three or four in a pod. Dr. A. Rees.

LENTISCK, in botany. See PISTACIA.

LENTISCK, AFRICAN,) in botany. See SCHI—

LENTISCK, PERUVIAN, } NUS.

LENTNER, n. s. Lat lentus, slow. A kind of hawk.

I should enlarge my discourse to the observation of the haggard, and the two sorts of lentnen.

Walton s Angler.

LEN'TOR, n. s. a Fr. lenteur ; Lat. lentor.

LEN'TOUS, adj. > Tenacity ; viscosity ; slowness.

Some bodies have a kind of lentor, and more de-pectible nature than others. Bacon.

In this spawn of a lentous and transparent body, are to be discerned many specks which become black, a substance more compacted and terresthous than the other ; for it riseth not in distillation. Browne.

The Lentor of eruptions, not inflammatory, points to an acid cause. Arbuthnot on Diet.

LENTULUS, the surname of a branch of the Cornelian family at Rome, which produced several great men during the republic. See ROME.

LENTULUS (Cneius Cornelius), surnamed Gae-tulicus, was consul A. D. 26, and was also a literary character. He wrote a history, mentioned by Suetoniu., and Martial informs us that he was a poet ; but his works are lost. He was put to death by Tiberius, who was jealous of his popularity.

LEO, in zoology. See FELIS.

LEO, a native of Byzantium, who flourished about A. A. C. 350, and wrote some treatises on physic and history, which are lost. His philosophy, patriotism, and political abilities, while they endeared him to his countrymen, who employed him as ambassador to Athens, Macedonia, &c.,on their most important business, excited the jealousy of Philip III. of Macedon; who saw his ambitious designs would be frustated while such a vigilant patriot lived. He therefore forged a letter in Leo's name, offering to betray Byzantium to the king of Persia, which produced the desired effect. The mob ran enraged to the house of the philospher, who, toavoid their fury, killed himself.

LEO III., the Isaurian, emperor of Constantinople, was the son of a poor mechanic, but entering the army, became one of the body-guard to Justinian II ; and was made a general

by Anastasius II., who, in 717, made him his colleague in the empire. The Saracens having ravaged Thrace, besieged Constantinople, but Leo bravely defended it, and repulsed them. After this he proved a tyrant, and burnt the libraryof Constantinople, containing above 30,000 volumes, besides a vast quantity of medals and other antiquities. He died in 741, and was succeeded by his son Constantine V.

LEO VI., surnamed the philosopher, the son of Basil I., was associated by his father in 876, and succeeded him in 878. The Saracens, Bulgarians, and Hungarians, having united against him, he imprudently called the Turks to his aid, who ravaged Bulgaria with fire and sword. He drove out and deposed the patriarchs Phocas and Nicholas; and died in 911. He wrote several books ; the principal of which is a Treatise on Tactics ; printed at Leyden in 1612.

LEO I., surnamed the Great, an Italian, who succeeded Sextus III. in 440. He showed great zeal against the Manichees and other heretics. His works amount to 3 vols. folio. He died in 461.

LEO X., whose proper name was John de Medicis, was made a

cardinal at fourteen years of age, and some years after a legate, by Julius II. He was in that quality in the army which was defeated by the French near Ravenna, in 1512, where he was taken prisoner. The soldiers who took him humbly asked his pardon, besought him to give them absolution for it, and promised never to bear arms against the pope. When Julius died, Medicis was very ill at Florence, and was carried to Rome in a litter. The cardinals consulted his physicians to know whether he was likely to live long, and they being bribed, said the cardinal de Medicis could not live a month; which principally occasioned his being chosen pope. Thus when not thirty years of age, he was elected and soon recovered his health. He was better calculated for a temporal than a spiritual prince, being ambitious, luxurious, and a connoisseur in the fine arts ; he is supposed to have disbelieved Christianity itself, which he called a very profitable fable for him and his predecessors. In 1517 he published general indulgences throughout Europe (and ordered the priests to recommend them) in favor of those who would contribute any sum towards completing the church of St. Peter ; and thus paved the way for the reformation. (See INDULGENCE and LUTIIER). Leo died in 1521, aged forty-five. It is but justice to add, that to this pope was principally owing the revival of literature in Italy. He spared neither pains nor expense to recover ancient MSS. and procure good editions of them ; he favored the arts and sciences ; and gloried in being the patron of learned and ingenious men, who, in return, have been very lavish in his praise. Pope, in his Essay on Criticism, celebrates this pontiff in the following lines : —

But see ! each muse, in Leo’s golden days, Starts from her trance, and trims her withered bays ; Rome’s ancient Genius, o’er its ruins spread, Shakes off the dust, and rears his reverend head. Then sculpture and her sister arts revive : Stones leap to form, and rocks begin to live ; With sweeter notes each rising temple rung, A Raphael painted, and a Yida sung;.

LEON.

L«o OF MODEM A, a learned rabbi of Venice, who flourished in the

seventeenth century. He wrote a history of the Jewish rites and ceremonies; and compiled a Hebrew and Italian Dictionary.

LEO PILATUS, the first professor of Greek at Florence, about A. D. 1360. He was a man of great erudition ; and went to Constantinople to procure MSS., but was shipwrecked on his return to Italy, in the Adriatic.

LEOBEN, a town of Austria, on the Mur, in Upper Styria. It has a traffic in iron, there being mines in the vicinity ; and here are barracks, and a public magazine for salt. The convention was concluded here between the French and Austrians, on the 20th of April 1797, which terminated in the peace of Campo Formio. Population 2400. Eighty miles south-west of Vienna.

LEOMINSTER,alarge and populous borough of Herefordshire, seated on the Lug, which waters the north and east sides of it, and over which it has several bridges. It extends about a mile from north to south, and half a mile from west to east. The modern houses are well built with brick, but those of ancient date are of tim-ber and plaster, ornamented with grotesque carvings. The town-hall stands on twelve oak pillars, and under it is held the butter-market. In this hall are held the town quarter-sessions, and the corporation meetings. In 1750 a new gaol was built, and in 1803 a neat market-house was erected for the sale of wheat and other grain, hops, flax, wool, and cider, of which articles the neighbourhood yields great plenty. The church is a neat spacious building, and appears to have been built at different periods ; the roof is supported by four large Tuscan pillars. It has a beautiful altar-piece from Rubens, and in the tower is a musical peal of eight bells. In king John's reign this town was burnt, but soon rebuilt. It was incorporated by queen Mary 1. and is governed by a high steward, bailiff, recorder, twelve burgesses, and a town-clerk. Its market is on Friday, and its fairs are noted for horses and black cattle. The inhabitants carry on a considerable trade in wool, gloves, leather, hats, &c., and they have mills and other machines on the river. Near its church are some remains of its ancient priory. It has several good inns, and sends two members to parliament. It lies twenty-six miles west hy north of VVorcester,and 137 W.N. W. of London.

LEOMINSTER, a town of Massachusetts, in Worcester county ; forty-six miles west of Boston. It carries on various manufactures of cloth, bricks, combs, &c.

LEON (Peter Cicca de), author of the history ot Peru. He left Spain, his native country, at thirteen years of age, to go into America. The first

part of his history was printed at Seville in 1553. He began it in 1541, and ended it in 1.551. He was at Lima, the capital of the kingdom of Peru, when he finished it, and was then thirty-two years of age.

LEON, an important north-west division of Spain, still retaining the title of a kingdom, is surrounded by Estremadura, Old Castile, Galicia and Portugal. It is of an irregular oblong firrure

being about 200 miles from north to south and 168 from east tc west, and ˆhaving a territorial area of 21,000 square miles. It is divided into six provinces, of which the population has beet thus given : —

Provinces. Leon

Salamanca Palencia Zamora Torn Valladolid ,

Total

Inhabitants.

240,000 , 210,000

120,000 72,000

100,000

188,000

930,000

This province is divided by the Douro into two nearly equal parts ; and is watered besides by the Carrion, the Eresma, the Tormes, and other smaller streams. Several of its mountain-chains also are remarkable, particularly those which form a part of the Sierras, of Pico and Occa. It contains abundance of fine pasturage, on which noble herds of cattle and flocks of sheep are found, and is fruitful in maize, olives, wheat, and flax. The mountains are covered with oak

and other saleable timber; but the plains and valleys are remarkably destitute both of wood and fruit trees. On the south-east side of the province only is the wine an article of exportation. Nor has Leon any manufactures worth notice, though there are mines of iron and copper in the mountains. Mules are bred in large numbers. Madder finds its way from this province through Portugal to England. Th<» kingdom of Leon was founded in the eighth century by Pelagius, but Ordonno II. was the first who assumed the title of king. In 1030 this state was united to that of Castile, by Ferdinand the Great, and both are now governed by the same laws.

LEON, a province of Spain, in the northern part of the above kingdom of Leon, is surrounded by the Asturias, Palencia, Toro, Valladolid, Zamora, and Galicia. Its extent is about 6200 square miles : the soil is stony, and the surface divided between a large chain of mountains and extensive valleys. The climate is moist and cold in the winter months. The vegetable products are wheat, barley, pulse, fruit, flax, and a few vines ; but the chief source of employment is the rearing of cattle. The manufactures are linen and hardware.

LEON (Lat. legio, from the seventh Roman legion being stationed here), the capital of the foregoing province, is situated at the confluence of the Torio and Bernesga. It is a compound of great and mean buildings of all kinds. A great part of the walls are of green marble, in a decayed state. It has thirteen churches, a number of convents, and noble mansions, but the streets are filled with beggars. The Plaza Mayor, opposite to the town-house, contains several good buildings. The cathedral surpasses in grandeur and beauty all the ecclesiastical edifices of Spain; and has a claim to be considered one of the finest monuments of Gothic architecture extant. It encloses the tombs of thirty-seven kings, and the shrines of several saints. Founded in Hie reign, of the emperor Galba, Leon was the first town

of consequence recovered from the Moors ; after which it continued for three centuries the residence of the Catholic kings of Spain. The ancient palace of the kings is now in a decayed state, and has been

converted into a manufactory, The town has small manufactures of woollens, linen, stockings, and leather ; but the inhabitants subsist chiefly on the expenditure of the clergy. The environs contain many fine avenues of ash, poplars, and elms ; they are also productive in corn, fruit, and in flax. Population 6200 ; 174 miles N. N. W. of Madrid, and seventy-four N. N.W. of Valladolid.

LEON, ISLA DE, a tract of land on the south-west coast of Spain, containing the city of Cadiz, and another city of this name. It is separated from the main land by a canal and river, ten miles in length, and from twenty to thirty feet in depth. The defence thus afforded against an enemy in possession of the main land (as the French were in 1810) is strengthened by the salt marshes, which extend eastward, and are impassable, except along a causeway. This causeway leads to the Puente de Zuarzo, a bridge built over the river in the fifteenth century, and strongly fortified on the island side. The length of the island of Leon is ten miles ; its breadth three. Cadiz is at one extremity, and the naval arsenal of La Caracca on the other. In 1811 or 1812 the French could not make themselves masters of this island, though enabled, by a projecting point of the main land, to bombard Cadiz from a distance of four miles, or at a point. Bay salt in vast quantities is made in the marshes we have mentioned.

The city of Leon, or of Isla de Leon, is situated at the distance of eleven miles south-east of Cadiz. Its population, including St. Carlos, is said by Mr. Jacob to amount to 40,000, and is supported by the works carried on at the neighbouring arsenal and dockyard of Caraccas. It is chiefly a modern place ; the streets are wide and many of the houses large ; and there is much more animation here than in most Spanish towns. The principal street is two miles in length. In the great square is the Hotel de ville, a handsome building. The principal church is remarkable for its repository for the dead, called the Pantheon, an open court of an oval form, with a corridor and walls, which are of sufficient thickness to contain receptacles for the clergy in the form of ovens.

‘ I counted 500 of these places,’ says our traveller, ‘ all of which were filled ; and I was told that, when a priest died, the bodies which had been longest deposited there were removed to make room for the new occupier.’

‘ There cannot be a more unfounded prejudice,’ adds Mr. Jacob, ‘ than the idea of the superiority of Spanish over English salt, if the process of evaporation goes on slowly, as it must necessarily do when performed by the power of the sun •done : the crystals are formed very

large, and die sire depends more on the slowness of the operation than on the strength of the brine; and die bay salt made in Cheshire, by applying a small portion of heat to the brine, falls in crystals equally large with those formed by nature in the pits in this vicinity. The quantity of salt col-Voi. XII. ‘

lected here, however, is prodigious. It is piled in large heaps, of a pyramidical form; and, when the rain has fallen upon them once, the heat of the sun again crystallises that portion which the rain had melted, and the top becomes a colid cake of salt, from which the rain that may afterwards fall is carried off without penetrating or damaging the heap. Bay salt is permitted to be exported on the payment of a very trifling duty; but that which is used for the consumption of the interior becomes the subject of a royal monopoly, and is charged with a very heavy tax. The heaps of salt, at a distance, give the morass on which it is collected the appearance of a plain covered with stone buildings, in the form generally of pyramids, but mixed with others of a cubical shape, with slanting roofs.’

LEON, NEW, a mountainous province of Mexico, is bounded on the north by Coaguila, on the west by Coaguila and New Biscay, on the east by New Santander, on the south by Za-catecas and St. Luis Potosi, or Guastica. It is thinly inhabited, possessing few other mines than those of jlead. The chief town is Monterey. There are also several villages and small stations ; but, although it has been sometimes designated by the high sounding title of the New Kingdom of Leon, it is only a small tract, and little known.

LEON, or LEON DE NICARAGUA, the capital of the province of Nicaragua, South America, and a bishop’s see, is situated on a fresh water lake of this name, abounding with fish. It has also a mountain near it, with a volcano, which has often caused it to suffer by earthquakes. It contains about 1200 houses, four churches, and many convents. Its port is Realejo, situated near it, and a fortified town, with a good harbour. The river Realejo is so deep here and commodious as to be capable of containing 200 sail of vessels. Long. 87° 20’ W., lat. 12° 24’ N.

LEONCLAVIUS (John), one of the most learned men of the sixteenth century, was a na-tive of Westphalia. He travelled into Turkey, and collected excellent materials for composing The Ottoman History; and it is to him the public is indebted for one of the best accounts we have of that empire. To his knowledge in the learned languages, he had

added that of the civil law; whereby he was well qualified to translate the Basilica. His other versions were esteemed. He died in 1593, aged sixty.

LEONICENUS (Nicolas), an eminent Italian physician, born in 1428. He was professor of medicine at Ferrara, for above sixty years. He was the first who translated Galen's works, which he illustrated with commentaries. He also translated Hippocrates's Aphorisms, and the works of Lucian and Dion Cassius, into Italian ; and wrote De Plinii et plurium medicorum aliorum in medicina erroribus. He died in 1524, aged ninety-six.

LEONIDAS I., king of Sparta, a renowned warrior, slain in defending the straits of Ther-mopyla against Xerxes, 480 B. C. See SPARTA. There were other two Spartan kings of this name. LEONFORTE, a large town in the interior of Sicily, in the Val di Noto, seven miles west of San Filippo d' Argiro. It has an annuaj

{ iir, much frequented ; but it is a place little visited by travellers. Population 8000.

LE'ONINE, adj. Lat. leoninus. Having the nature of, or belonging to, a lion.

Save wine and women, nothing might assuage Ills high entente in arnies and labour, So was he ful of lemin corage.

Chaucer. Cant. Tales.

LEONINE VERSES are those of which the end Humes to the middle, as,

Gloria factorum temere conceditur horum.

They were much used in ancient hymns, epigrams, prophecies, &c. The origin of the word is uncertain ; Pasquier derives it from one Leoninus or Leonius, who excelled in this way ; and dedicated several pieces to pope Alexander III.; others derive it from pope Leo ; and others from leo, the lion, esteeming it the loftiest of verses, as the lion is styled the king of beasts.

LE()NTICA, feasts or sacrifices celebrated among the ancients in honor of the sun. They were called Leontica, and the priests who officiated at them Leones, because they represented the sun under the figure of a lion radiant, bearing a tiara, and griping in his two fore-paws the horns of a bull, who struggled with him in vain to disengage himself. The critics are extremely divided about this feast. Some will have it anniversary, and to have made its return not in a solar but in a lunar year ; but others hold its return more frequent, and give instances where the period was not above 220 days. The ceremony was sometimes also called Mithraica; Mithras being the name of the sun among the ancient Persians. See MITHRAS. A man was always sacrificed at these feasts, till the time of Adrian, who prohibited it by a law. Coramodus introduced the custom afresh, after whose time it was again exploded.

LEONTICE, lion's leaf, a genus of the monogynia order, and hexandria class of plants; natural order twenty-fourth, corydales: COR. hexapetalous ; nectarium hexaphyllous, standing on the heels of the corolla, with its limb patent : CAL. hexaphyllous, and deciduous. There are five species, natives of the southern part of Europe, two of which are sometimes cultivated in this country. These are,

L. chrysogonum, with winged leaves ; and

L. leontopetalum, with decompounded leaves. Both are natives of the Archipelago islands, and also grow in the corn fields about Aleppo, in Syria, where they flower soon after Christmas. They have large tuberous roots, like those of the c'yclamen, covered with a dark-brown bark. The flowers sit upon naked foot-stalks : those of the first sort sustain many yellow flowers, but the flowers of the second are of a paler color. Both are propagated by seeds, which must be sown soon after they are ripe, otherwise they seldom succeed. When sent to distant countries they must be preserved in sand. The plants are, however, very difficult to be preserved in this country : for they will not thrive in pots ; and, when planted in the full ground, frost frequently destroys them. The best way is to sow the f< cd as soon as

it comes from abroad, covering

it with glasses in the winter to protect it from frost ; and in the spring, when the plants begin to appear, they must have free air admitted to them at all times when the weather is mild, otherwise they will be weak.

LEONTINI, or LEONTIUM, in ancient geography, a town of Sicily on the south side of the Tenas, twenty miles north-west of Syracuse. The territory called Campi Leontini, was extremely fertile ; anciently called Campi Laestri-gonii, the seat of the Laestrigons, according to the commentators on the poets : the name Leontini is from Leo, the impression on their coin being a lion. It is now called Lentini.

LEONTIUM, one of the twelve towns of Acbaia, whether on, or at some distant from, the bay of Corinth, is uncertain.

LEONTIUM, a celebrated courtezan of Athens, who studied philosophy under Epicurus. She was either the wife or concubine of Methrodorus the philosopher, by whom she had a son, to whom Epicurus left a legacy. She had also a daughter named Danae, who married the poet Sophron. She wrote a book in defence of the doctrines of Epicurus, against Theophrastus, and which Cicero praises for purity of style.

LEONTODON, dandelion, a genus of the polygamia aequalis order, and syngeuesia class of plants; natural order forty-ninth, composite. The receptacle naked : CAL. imbricated, with the scales somewhat loose ; the pappus feathery. There are nine species, of which the most remarkable one is,

L. taraxacum, the common dandelion, found on the road sides, in pastures, and on the banks of ditches. Early in spring, the leaves, whilst yet white and hardly unfolded, are an excellent ingredient in salads. The French eat the roots and tender leaves with bread and butter. When a swarm of locusts had destroyed the harvest in the island of Minorca, many of the inhabitants subsisted upon this plant. The expressed juice has been given to the quantity of 4 ozs. three or four times a-day ; and Boerhaave had a great opinion of the utility of this and other lactescent plants in visceral obstructions. Goats eat it ; swine devour it greedily ; sheep and cows are not fond of it, and horses refuse it. Small birds are fond of the seeds.

LEONURUS, lion’s tail, a genus of the gymnospermia order, and didynamia class of plants ; natural order forty-second, verticillatae.

The anthera are powdered with shining points, or small elevated globular particles. There are six species.

1. L. Africana, with spear-shaped leaves, is a native of Ethiopia. It rises with a shrubby stalk seven or eight feet high, sending out several four-cornered branches, garnished with oblong narrow leaves, acutely indented on their edges, hairy on their upper side, standing opposite. The flowers are produced in whirls, each branch having two or three of these whirls towards the end. They are of the lip kind, shaped somewhat like those of the dead nettle, but much longer, and covered with short hairs. They are of a golden scarlet color, and make a fine appearance. The flowers commonly appear in October and November, and sometimes continue till the

middle of December, but are not succeeded by seeds in this country. There is a variety with variegated leaves which is admired, but the whorls are smaller than those of the plain sort.

2. L. nepetaefolia, with oval leaves, is a native of the Cape of Good Hope. It rises with a square shrubby stalk about three feet high, sending out several four-cornered branches, garnished with oval crenated leaves, rough on their under side like the dead nettle, but veined on the upper side, and placed opposite. The flowers come out in whirls like those of the former sort, but are not so long nor so deep colored. They appear at the same season with the first, and continue as long in beauty. Both these species are propagated by cuttings, which should be exposed to the air long enough to harden the shoots, and planted in the beginning of July, after which they will take root very freely. They should be planted in a loamy border to an eastern aspect ; covered closely with a bell or hand glass to exclude the air, and shaded from the sun. As soon as they have taken good root they should be taken up, and planted in separate pots, filled with soft

loamy earth, and placed in the shade till they have taken new root. In October they must be removed into the greenhouse.

LEOP'ARD, n. s. Lat. leo, and pardus, a panther. A spotted beast of prey. See FELIS.

Look from the lion's dens, from the mountains of the leopards. Cant. iv. 8.

About this king ther ran on every part

Ful many a tame Icon and leopart.

Chaucer. Cant. Tales.

Sheep run not half so timorous from the wolf, Or horse or oxen from the leopard, As you fly from your oft-subdued slaves. Shakspeare. Before the king tame leopards led the way,

And troops of lions innocently play. Dryden.

A leopard is every way, in shape and actions, like a cat ; his head, teeth, tongue, feet, claws, tail, all like a cat's : he boxes with his fore feet, as a cat doth her kittens ; leaps at the prey, as a cat at a mouse ; and will also spit much after the same manner : so that they seem to differ, just as a kite doth from an eagle. Grew.

LEOPARD. See FELIS.

LEOPARD ALIS. See FELIS.

LEOTAUD (Vincent), a French Jesuit and mathematician, who published a work entitled Examen Quadrature, in 4to. 1654; in which he asserts, the impossibility of demonstrating the quadrature of the circle.

LEOTYCHIDES, king of Sparta, a celebrated general of the Greeks, who by his courage and conduct put an end to the Persian war, at the fa-mous battle of Mycale. He afterwards fell a sacrifice to the intrigues of the Ephori, after reigning twenty-two years ; A. A. C. 469.

LEOVITUS, or LEOWICQU (Cyprian), a Bohemian astronomer and astrologer, born in 1504, and descended from a noble family. He published Ephemerides, and some other works, in which lie inserted predictions that alarmed great numbers in Germany ; particularly that the world would come to an end in 1584. But he did not live to see his

prediction falsified, as he died in

LEPANTC), GULF AND TOWN OF, are situated on the south coast of Romania, in the

Morea. The former was known to the ancients as the gulf of Corinth. It extends from Patras on the west to the isthmus of Corinth east ; its entrance is defended by two old castles ; and it is seventy miles long. The town is of inferior consideration, surrounded by old fortifications It was the ancient Naupactus, and is 360 mile. W.S.W. of Constantinople.

LEPAS, the acorn, in zoology, a genus belonging to the order of vermes testaceae. T. e animal is the triton ; the shell is multivalve, unequal, fixed by a stem or sessile. There are several species, of which the most remarkable is, the

L. anatifera, consisting oi five shells depressed affixed to a pedicle, and in clusters. It adheres to the bottom of ships by its pedicles. The tentacula are feathered ; and gave Jhe old English historians and naturalists the idea of a bird. They ascribed the origin of the barnacle goose to these shells.

LEPAS, the limpet See PATELLA. LEP'ER, n. s. -\ Fr. lepre; Span, and LEP'EROUS, or I Port, lepra ; Lat. lepra, le-LEP'ROUS, adj. \prosus ; Greek \tirpa. A LEPROS'ITY, n. s. i loathsome disease. A le-LEP'ROSY. j per is a person infected

with this disease. Leprosity, scaly disease. For leprosy see MEDICINE.

And whanne he had seid this, anoon the lepre partide awey fro him and he was clensid.

Wiclif, Mark 1.

The leper in whom the plague is, his cloaths shall be rent. Lev. xiii. 45.

It is a plague of leprosy. Id. 3.

I am no loathsome leper ; look on me.

Shakspeare.

Upon my secure hour thy uncle stole, With juice of cursed hebenon in a vial, And in the porches of mine ears did pour The leperous distilment. Id. Hamlet,

Itches, blains,

Sow all the Athenian bosoms, and their crop Be general leprosy. Id. Timon of Athens.

If the crudities, impurities, and kproaities of me-tals were cured, they would become gold.

Bacon's Natural History.

The silly amorous sucks his death, By drawing in a leprous harlot's breath.

Donne.

Our mere-learned me ; and modern wise Taste not poor poesies ingenuities, Being crusted with their couetous leprosies.

Chapman. Homer. The Battaile of Frogs

and Mice. Epistle Dedicatorie. Between the malice of my enemies and other men's mistakes, I put as great a difference as between the itch of novelty and leprosy of disloyalty.

King Charles.

Since she would acknowledge no difference betwixt herself and her brother Moses, every Israelite now sees his face glorious, hers leprous. Kp. Hall.

These and many more do not intend that any one grace alone is sufficient, much less any one act of one grace, proceeding from the Spirit of God, can be sufficient to wipe off our leprosies. Rp-Taylor.

Authors, upon the first entrance of the pox, looked upon it as so highly infectious, that they ran away from it as much as the Jews did from the le- »r,)sv Wiseman's Surgery

LEPIDIUM, dittander, or pepper-wort, a genus of the siliculosae order, and tetradynamia class of plants ; natural order thirty-ninth, siliquosac : silicula-emarginated, cordated, and po-lyspennous, with the valves carinated contrary or broader than the partition. There are twenty-nine species, of which the most remarkAble is,

L. latifolium, or the common dittander. It is a native of both Scotland and England. It has small, white, creeping roots, by which it multiplies very fast, and is difficult to be eradicated after it has long grown in any place. The stalks are smooth, rise two feet high, and send out many side branches. The flowers grow in close bunches towards the top of the branches, coming out from the side ; they are small, and composed of fou/ small white petals. The seeds ripen in autumn. The whole plant has a hot biting taste like pepper; and the leaves have been often used by the country people to give a relish to their viands instead of that spice, whence the plant has got the appellation of poor man's pepper. It is reckoned an antiscorbutic.

LEPIDOLITE is a mineral of a light red color, sometimes gray. Massive, and in small concretions. Lustre glistening, pearly. Cleavage single. Fracture coarse splintery. Feebly translucent. Soft. Rather sectile. Rather easily frangible. Specific gravity 2'6 to 2-8. It intumesces before the blowpipe, and melts easily into a milk-white translucent globule. Its con- '.tituents are, according to Vauquelin, 54 silica, 0 alumina, 18 potassa, 4 fluate of lime, 3 manganese, and 1 iron. It occurs in limestone at Dalmally, and on the north side of Lochfine ; on the east side of Lochleven, nearly opposite the Inn at Balachulish. It is found in many places on the Continent. On account of its beautiful color, it has been cut into snuff-boxes, but it is rather soft and greasy to the aspect.

LEPIDOPTERA, in zoology,an order of insects with four wings, covered with imbricated squamulae. See ENTOMOLOGY.

LEPIDUS (M. jEmilius), one of the triumvirs with Anthony and Octavius. (See ROME.) He was compelled to resign by Augustus, and

died in obscurity at Cerceli ; A. A. C. 13.

LEPISMA, in zoology, a genus of apterous insects, the characters of which are : they have six feet formed for running ; the mouth is furnished with four palpi, two of which are ceta-ceous and two capitated ; the tail is terminated by extended bristles, and the body imbricated with scales. There are several species.

L. saccharina is an American species, so called because mostly found among sugar ; but is now common in Europe. It is of a leaden color, rather inclining to that of silver, by the small silvery scales with which it is covered ; in which circumstance it resembles the silver fish, especially in its under part. It is found in gardens, under boxes, and in the crevices of win-dow-sashes in houses, where it is very common. It runs with great swiftness, and is difficult to catch. When touched, it looses part of its scales i.nd its softness makes it easy to crush.

LEPIUM, in natural history, a genus of fossils ot the harder gypsum, composed of very small

particles, and of a less glittering hue. There is only one species of this genus, being one of the least valuable and most impure of the class uf gypsums. It is of an extremely rude, irregular, coarse, and unequal structure; a little soft V? the touch, of a very dull appearance, and of different degrees of a grayish-white. It is burnt in plaster for the coarser works; it calcines very slowly and unequally, and makes but a very coarse plaster.

LEPROSY is a foul cutaneous disease, appearing in dry, white, thin, scurvy scabs, either on the whole body, or part of it, and usually attended with a violent itching and other pains. See MEDICINE. The leprosy is of various kinds, but the Jews were particularly subject to that called elephantiasis. The Jewish law excluded all lepers from communion with mankind, without excepting even kings. And various ceremonies were ordained to be performed by them after they were cleansed, ‘previously to their re-admis- sion into society. See Levit. xiii. 42 — 59 ; xiv. 1—57.

LEPTODECORHOMBES, in natural history, a genus of fossils of the order of the sele-nitic; consisting of ten planes, each so nearly equal to that opposite to it as very much to approach to a decahedral parallelepiped, though never truly or regularly so. There are only five known species, *viz.* 1. A thin, fine, pellucid, and slender-streaked kind,

with transverse striae, found in considerable quantities in the strata of clay in most parts of England, particularly near Haddington in Oxfordshire. 2. A thin, dull-looking, opaque, and slender-streaked sort, more scarce, found principally in Leicestershire and Staffordshire. 3. A thin fine-streaked species, with longitudinal striae, found in the clay pits at Richmond, generally at great depths. This has often on its top and bottom a very elegant smaller rhomboid, described by four regular lines. 4. A rough kind, with thick transverse striae, and a scabrous surface, very eommon in Leicestershire and Yorkshire. And, 5. A very short kind, with thick plates, common iu the clay-pits of Northamptonshire and Yorkshire.

LEPTURA, in zoology, a genus of insects belonging to the order of coleoptera, the characters of which are these. The feelers are bristly ; the elytra are attenuated towards the apex : and the thorax is somewhat cylindrical. There are several species, principally distinguished by their colors. See ENTOMOLOGY.

LEPUS, the hare, in astromony, a constellation of the southern hemisphere. See ASTRONOMY.

LEPUS, the hare, in zoology, a genus of the mammalia class of quadrupeds, and order of glires. The characters are these: they have two fore teeth in each jaw ; those in the upper jaw are double, the interior ones being smallest. The fore feet have five toes each, and the hind feet four.

L. Alpinus, the mountain hare, or Alpine rabbit, has short, broad, rounded, ears ; no tail ; a long head, and very long whiskers, with two very long hairs above each eye : the color of the fur at the bottom is dusky, towards the ends of a bright ferruginous color ; the tips white, and

;utermixed are several long dusky hairs, though m first inspection the whole seems of a bright bay. The length of the animal is nine inches. This species is first seen on the Altaic chain ; extends to Lake Baikal ;

thence to Kamtschatka ; and is found in the Fox Islands : inhabiting always the middle region of the snowy mountains in the rudest places, which abound with herbs and moisture. They sometimes form burrows between the rocks, and often lodge in the crevices. They are generally found in pairs ; but in cloudy weather they collect together, and lie on the rocks, and give a keen whistle, very like that of a sparrow. On the report of a gun they run into their holes, but soon come out again. A company of them, towards autumn, collect together vast heaps of herbs and grasses, nicely dried, which they place either beneath the overhanging rocks, or between the chasms, or round the trunks of trees. In many places Xhe herbs appear scattered, as if to be dried in the sun. The heaps are formed of round or conoid ricks; and are of farious sizes, according to the number of the society employed in forming them. They are sometimes of a man's height, and many feet in d:.ameter. Without this provision of winter's stock they would perish during the storms of snow. These ricks occasion fertility amidst the rocks ; for the reliques, mixed with the dung of the animal, rot in the barren chasms, and form a soil productive of vegetables. These ricks are also of great service to those people who hunt sables; for their horses would often perish if they had not the provisions of these little industrious animals to support them ; which are easily to be discovered. The people of Jakutz feed both their horses and cattle with the reliques of the winter stock of these hares. These animals are neglected as a food by mankind ; but are the prey of sables and the Siberian weasels. They are likewise greatly infested with a sort of gad-fly, which lodges its egg in their skin in August and September, and thus often proves destructive to them.

L. Americanus, the American hare, or hedge coney, has the ears tipt with gray : the upper part of the tail is black, the lower white ; the neck and body are mixed with cinereous, rust color, and black; the legs are of a pale ferruginous color, and the belly is white ; the fore legs are shorter, and the hind legs longer, in proportion, than those of the common hare. It is eighteen inches long, and weighs from 3lbs. to 4Jlbs. This species inhabits all parts of North America. In New Jersey, and the states south of it, it retains its color the whole year. In New England, Canada, and about Hudson's Bay, at the approach of winter, it changes its short sum-mer's fur for one very long, silky, and silvery, even to the roots of the hairs ; the edges of the ears only preserving their color. These hares are then in the highest season for the table ; and are of vast use to those who winter in Hudson's Bay, where they are taken in great abundance in springes made of brass wire, to which they are led by a hedge made for that purpose, with holes left before the snares for the hares to pass through. They breed once or twice a

year, and have from five to seven at a time. They do not

migrate, but always haunt the same places; neither do they burrow, but lodge under fallen tim-ber, and in hollow trees. They breed in the grass; but in spring shelter their young in the trees, to which they also run when pursued ; from which, in the southern states, the hunters force them by a hooked stick, or by making a fire, and driving them out by the smoke.

L. Capensis, the Cape hare, has long ears dilated in the middle ; the outsides naked, and of a rose color, the insides and edges covered with short gray hairs : the crown and back are of a dusky color, mixed with tawny; the cheeks and sides cinereous , the breast, belly, and legs, rust-colored ; the tail is bushy, carried upwards, and of a pale ferruginous color. This species is about the size of a rabbit. It inhabits the country three days' journey north of the Cape of Good Hope ; where it is called the mountain hare, for it lives only in the rocky mountains, and does not burrow. It is difficult to shoot it, as on the sight of any one it instantly runs into the fissures of the rocks.

L. cuniculus, the comrnon rabbit, has a very short tail, and naked ears. The color of the fur, in a wild state, is brown ; the tail black above, white beneath : in a tame state the general color varies, and the eyes are of a fine red. The original na-tive country of this species is Spain, where they were formerly taken with ferrets, as is now practised here. They love a temperate or warm climate, and are incapable of bearing great cold : In Sweden they are kept in houses. They abound in Britain. Their furs make a considerable article in the hat manufactories; and of late such part of the fur as is unfit for that purpose has been found as good as feathers for stuffing beds and bolsters. Numbers of the skins are annually exported to China. The English counties most noted for rabbits are Lincolnshire, Norfolk, and Cambridgeshire. Methwold is fa-mous for the best kind for the table ; the soil there is sandy, and full of mosses and carex grass. Rabbits swarm in the Orkneys, where their skins form a considerable article of commerce. They are in general gray, those which inhabit the hills grow hoary in winter. Kerr enumerates five varieties, *viz.* the wild rabbit; the black, the white, the pied, and the silvery tame rabbit. The last was formerly in grea esteem, and their skins were sold at 3s. a piece, for lining clothes ; but since the introduction of more elegant furs their price has fallen to 6d. The Sunk Island in the Humber was once fa-mous for a mouse-colored sort, which has since been extirpated on account of the injury they did to the banks by

burrowing. The fecundity of the rabbit is greater than that of the hare They breed seven times in the year, and the fe-male sometimes brings eight young ones at a time. Supposing this to happen regularly for four years, the number of rabbits from a single pair will amount to 1,274,840. From this we might apprehend being overstocked with these animals, but a great number of enemies prevent their increase; not only men, but birds and beasts of prey making dreadful havoc among them. Notwithstanding all these enemies, we are told by Pliny and Strabo that they once proved such a nuisance to the inhabitants of the

Balearic Islands that they were obliged to implore the assistance of a military force from Augustus to exterminate them. They devour herbs of all kinds, roots, grain, fruits, &c. They are in a condition for generating at the end of six months ; the female is almost constantly in sea-son ; goes with young about thirty days, and brings forth from four to eight at a litter. A few days before littering she digs a hole in the earth in a zig-zag form : the bottom of this hole she enlarges every way, and then pulls off a great quantity of hair from her belly, of which she makes a kind of bed for her young. During the two first days after birth she never leaves them but when pressed with hunger, and then she eats quickly and returns; and in this manner she suckles and attends her young for six weeks. All this time both the hole and the young are concealed from the male , sometimes, when the female goes out, she, to deceive the male, fills up the mouth of the hole with earth mixed with her own «rine. But when the young ones begin to come to the mouth of the hole, and to eat such herbs as the mother brings to them, the father seems to know them ; he takes them betwixt his paws, smooths their hair, and caresses them with great fondness.

L. niger, the black hare, has a very short tail ; the fur is entirely black, or very dark tawny, all the year. It is much larger than the common hare. Mr. Muller says he once saw two black hares in Siberia, of a wonderfully fine gloss, and full as black as jet. Near Cason was taken another, in the middle of winter 1768. In the south and west provinces

of Russia is a mixed breed of hares, between this and the common species. It sustains, during winter only, a partial loss of color; the sides, and more exposed parts of the, ears and legs in that season becoming white, the other parts retaining their colors. This variety is unknown beyond the Uralian chain. They are called by the Russians russacks ; they take them in great numbers in snares, and export their skins to England and other places. The Russians and Tartars, like the ancient Britons, esteem the flesh of hares impure.

L. Ogotona, the Ogotona hare, has oblong oval ears, a little pointed, with short whiskers, and hairs long and smooth : the color of those on the body is brown at the roots, light gray in the middle, and white at the ends, intermixed with a few dusky hairs ; there is a yellowish spot on the nose, and a space about the rump of the same color : the outside of the limbs is yellowish ; the belly is white. The length is about six inches: weight of the male from 6J to 7£ozs. ; of the female, from 4 to 4 Jozs. This species inhabits only the country beyond lake Baikal, and thence is common in e>U parts of the Mongolian desert, and the vast desert of Gobee, which extends on the back of China and Thibet, even to Indi.‘1. They frequent the valleys and rocky mountains in vast abundance. They live under heaps of stones, or burrow in the sandy soil, leaving two or three entrances, which all run obliquely. They make a nest of soft grass ; and the old females make for security a number of burrows near each other, that they may retreat from one to the rther. They wander out chiefly in

the night. Their voice is excessively shrill, and they emit a note like that of a sparrow, twice or thrice repeated, but very easily to be distinguished from that of the Alpine rabbit. They live principally on the tender bark of a sort of service, and the dwarf elm ; in spring on various herbs. Before the approach of severe cold they collect great quantities of herbs, and fill their holes with them, which the inhabitants consider as a sure sign of change of weather. Like the Alpine hares they form in autumn ricks of hay of a hemispherical shape, about a foot high and wide ; in spring these disappear, and nothing but the relics are seen. They copulate in spring, and about the end of June their young are full grown. They are the prey of hawks, magpies, and owls ; but the ermine and fitchet make most havock among them.

L. pusillus, the calling hare, with a long head, thickly covered with fur even to the tip of the nose ; numerous hairs in the whiskers ; ears large and triangular ; legs very short, and the soles furred beneath ; its

whole coat is very soft long, and smooth, with a thick, long, fine, down beneath, of a brownish lead color ; the hairs are of the same color, towards the ends of a light gray, and tipt with black ; the lower part of the body is hoary; the sides and ends of the fur are yellowish. The length of the animal is about six inches ; weighs from 3J to 4Jozs. ; but in winter scarcely 2 Jozs. This species inhabits the south-east parts of Russia, and about all the ridges of hills extending south from the Uralian chain ; also about the Irtish, and in the west part of the Altaic chain ; but no where in the east beyond the Oby. They delight in sunny valleys and green hills, especially near woods, to which they run on any alarm. They live so concealed as rarely to be seen : but are often taken in winter in the snares laid for the ermines. About the Volga they are called semlanoi Saet-shik, or ground hares : the Tartars, from their voice, style them tschotschot, or ittsitskan, or the barking mouse : the Kalmucs call them rusla. They choose for their habitation a dry spot, amidst bushes covered with a firm sod, prefering the western sides of the hills. In these they burrow, leaving a very small hole for the entrance, and forming long galleries for their nests. Those of the old ones are numerous and intricate ; so that their places would be scarcely known but for their excrements; and even these they drop, by instinct, under some bush, lest their dwelling should be discovered. Their voice alone betrays their abode; it is like the piping of a quail, but deeper, and so loud as to be heard at the distance of half a German mile. It is repeated at just intervals, three, four, and often six times. The voice is emitted at night and morning ; never in winter or bad weather. It is common to both sexes ; but the female is silent for some time after parturition, which is about the beginning of May N. S. She brings forth six at a time, blind and naked ; which she suckles often, and covers carefully with the materials of her nest. These harmless aniVnals never go from their holes. They feed and make their excursions by night : they are easily tamed, and scarcely bite when handled. The males in con-L E P U S.

finement attack one another, and express their anger by a grunting noise.

L. timidus, the common hare, has a short tail ; the points of the ears are black ; the upper lip is divided up to the nostrils ; the length of the body is generally about a foot and a half; and the hair is reddish,

interspersed with white. It is naturally a timid animal. It sleeps during the day, and feeds, copulates, See. in the night. In a moonlight evening a number of them are sometimes seen sporting together, leaping, and pursuing each other : but the least motion, the falling of a leaf, alarms them ; and then they all run off separately, each taking a different route. They are extremely swift ; their motion is a kind of gallop, or a succession of quick leaps. When pursued, they always take to the higher grounds : as their fore feet are much shorter than the hind ones, they run with more ease up hill than down hill. The hare is endowed with all those instincts which are necessary for its preservation. In winter he chooses a form exposed to the south, and in summer to the north. He conceals himself among vegetables of his own color. Mr. Fouilloux says, that he observed a hare, as soon as she heard the sound of the horn, or the noise of the dogs, although a mile distant, rise from her seat, swim across a rivulet, then lie down among the bushes, and thus evade the scent of the dogs. After being chased for two hours, a hare will sometimes push another from its form, and lie down in it himself. When hard pressed, the hare will mingle with a flock of sheep, run up an old wall and conceal himself among the grass on the top of it, or cross a river several times at small distances. He never runs against the wind, or straight forward ; but constantly doubles, to make the dogs lose their scent. A hare, although ever so often pursued by the dogs, seldom leaves the place where she was brought forth, or even the form in which she usually sits. It is common to find them in the same place next day, after being long and keenly chased the day before. The females are more gross than the males, and have less strength and agility ; they are likewise more timid, and never allow the dogs to approach so near their form before rising as the males. They likewise practise more arts, and double more frequently tha.n the males. Hares are found almost over every climate ; and, notwithstanding they are every where hunted, the species never diminishes. They propagate in their first year ; the females go with young about thirty days, -and produce four or five at a time ; as soon as they have brought forth they again admit the embraces of the male ; so that they may be said to be always pregnant. The eyes of the young are open at birth ; the mother suckles them about twenty days, after which they separate from her and procure their o%vn food. The young live solitary, and :nake forms about thirty paces distant from eacu other. On finding a young hare, therefore, one may almost be certain of finding several oth«:is within a small distance. The hare is not so savage as his manners would indicate. He is gentle, and is susceptible of a kind of education. He is pretty easily tamed, and will even show a kind of attachment to his benefactors ;

but it is not so strong as *.o engage him to be-come altogether domestic; for although taken very young, and brought up in the house, he no sooner arrives at a certain age than he takes the first opportunity of recovering his liberty, and flying to the fields. He lives about seven or eight years ; and feeds upon grass and other vegetables. His flesh is excellent food. Hares are very subject to fleas. Linnaeus informs us, that the Dalecarlians make a sort of cloth, called felt, of the fur; which, by attracting these insects, preserves the wearer from their troublesome attacks. The hair makes a great article in the hat manufacture ; and a great dˆal is annually imported from Russia and Siberia. The hare was reckoned a great delicacy among the Romans ; but the Britons thought it impious even to taste it ; yet they bred them, either for the chase, or for the purposes of superstition. Boadicea, immediately before her last conflict with the Romans, let loose a hare she had concealed in her bosom, which, taking what was deemed a fortunate course, animated the soldiers by the omen of an easy victory over a timid enemy. Mr. Kerr mentions two varieties, *viz.* the cornu-tus, or horned hare ; and the melinus, or yellow hare. The former he suspects to be fabulous.

L. variabilis, the varying hare of Pallas, has soft hair, which in summer is gray, with a slight mixture of black aud tawny ; the ears are shorter, and the legs more slender than those of the com-mon hare ; the tail is entirely white, even in summer; and the feet are most closely and warmly furred. In winter the whole hair changes to a snowy whiteness, except the tips and edges of the ears, which remain black, as well as the soles of the feet, on which, in Siberia, the fur is doubly thick, and of a yellow color. It is less than the common species. These ani- * mals inhabit the highest Scottish Alps, Norway, Lapland, Russia, Siberia, Kamtschatka, the banks of the Wolga, and Hudson's Bay. In Scotland they keep on the tops of the highest hills, and never descend into the vales ; nor do they ever mix with the common hare, though these abound in the neighbourhood. They do not run fast; and are apt to take shelter in clefts of rocks. They are easily tamed, and are very frolicsome. They are fond of honey and caraway comfits. They change their color in September; resume their gray coat in April ; and in the extreme cold of Greenland are always white. Both these and the common hares abound in Siberia, on the Wolcja, and in the Orenburg government. The one never changes color : the other, a native of the same place, constantly assumes the whiteness of the snow during winter, not only in the open air and in a state of liberty, but, as experiment has proved, even when kept tame, and preserved in houses in the stove-warmed apartments, in which it experiences the same

changes of color as if it had dwelt on the snowy plains. — They collect together, and are seen in troops of 500 or 600, migrating in spring, and returning in autumn, in search of subsistence. In winter they quit the lofty hills, the south boundaries of Siberia, and seek the plains and wooded parts, where vegetables abound ; and in spring seek again the mountainou? quarters. The flesh

of the ‘variable hare, in its white state, is excessively insipid. There have been several instances of what may be called monsters in this species, horned hares, having excrescences growing out of their heads, like the horns of the roe-buck. These instances have occurred in Saxony, in Denmark, and near Astracan.

L. viscacia, the Peruvian hare ; the viscachos, or vizcacha, mentioned by Acosta and Feuille, in their accounts of Peru, is reckoned by Mr. Pennant nearly allied to the Cape hare. Feuille says, they inhabit the colder parts of Peru. Their hair is very soft, and of a mouse color ; the tail is pretty long, and turns up; and the ears and whiskers are like those of the common rabbit. In the time of the Incas the hair was spun, and woven into cloth, which was so fine as to be used only by the nobility.

LERCHEA, in botany, a genus of the pentandria order, and monadelphia class of plants: CAL. five-toothed : COR. funnel-shaped and quin-quetid ; there are five anthers sitting on the tube of the germ ; there is one style : CAPS, trilocular and polyspermous.

LERE, n.s. & v. a. Sax. Iterie ; Belg. here ; Goth. lor. Doctrine; lesson; lore. As a verb, to learn a lesson. Obsolete.

But all ther home harneis and other gere Was in sute according everichone, As ye have herd the forsaid trumpets were, And by seming

they were nothing to lere And ther guiding they did so manirly. Chaucer.

The kid, pitying his heaviness, Asked the cause of his great distress ; And also who, and whence, that he were, Though he had well ycond his lere, Thus melled his talk with many a teare.

Spenser.

LERIDA, the Ilerda of Lucan, a large town of Catalonia, Spain, on the right bank of the Segre, and a bishop's see. It forms a long triangle, and is situated on the slope of a hill, but the streets are crooked, narrow, and ill paved, except next the river, where there is a good quay. The university of Lerida was formerly in great repute, but was suppressed by Philip V. At present, however, here is a college supported by the bishop, and a school for young ladies, conducted by Franciscan nuns. On the top of the hill are the remains of a pa-lace of the kings of Arragon. The modern cathedral has been erected in the town, but the original one stood on this spot. The trade of the place is confined to the exportation of the products of the neighbourhood, which is very fertile, and beautifully intersected with canals. Lerida was taken by the Goths and Moors, and was for some time the capital of a kingdom under the latter. Population 17,000. Sixty-nine miles east by south of Saragossa,and ninety west by north of Barcelona.

LERINS, THE, two small islands of the Mediterranean, on the south-east coast of France, and belonging to the department of the Var. The larger is called St. Marguerite, the 'other St. Honorat.

LERMA, an ancient town of Spain, having the title of a duchy, in the province of Burgos, and standing on the river Arlanza. It has a magnificent castle, built by the duke of Lerma,

minister of Philip III. Twenty-three miles south, of Burgos.

LERNA, in ancient geography, a town, territory, or lake, of Argolis, situated on the confines of Laconica. Some suppose it to be a town of Laconica, on the borders of Argolis. Pausanias places it near Temenium, on the sea ; without adding whether it is a town, river, or lake. According to Strabo it is a lake, situated between the territories of Argos and Mycene. If there was a town of this name it seems to have stood towards the sea, and the lake to have been more inland. Mela calls it a well known town on the Sinus Argolicus ; and Statius, by Lerna, seema to mean something more than a lake. The lake,

however, is that in which, according to Strabo, was the fabled Hydra of Hercules, and therefore called Lerna Anguifera. Statius. Mr. Lempriere calls it ‘ a country of Argolis celebrated for a grove and a lake, into which the Danaides threw the heads of their husbands.’

LERNˆA, a festival celebrated at Lerna, in honor of Proserpina, Ceres, and Bacchus.

LERNEA, in zoology, a genus of insects of the order of vermes mollusca, the characters of which are, that the body fixes itself by its tentacula, is oblong, and rather tapering ; there are two ovaries like tails, and the tentacula are shaped like arms.

1. L. asellina has a lunated body and cordated thorax, and inhabits the gills of the codfish and ling of the northern ocean.

2. L. cyprinacea has four tentacula, two of which are lunulated at the top. It is about half an inch long, and of the thickness of a small straw : the body is rounded, of a pale grayish white, glossy on the surface, and somewhat pellucid : it is thrust out of a kind of coat or sheath, as it were at the base, which is of a white color and a thick skin : towards the other extremity of the body there are three obtuse tubercles, one of which is much larger than the rest ; the mouth is situated in the anterior part, and near it there are two soft and fleshy processes ; and near these there is also on each side another soft process, which is lunated at the extremity. It is found on the sides of the bream, carp, and roach, in many of our ponds and rivers, in great abundance.

3. L. salmonea, the salmon louse, has an ovated ‘ body, cordated thorax, and two linear arms approaching nearly to each other.

LERNICA, in ancient geography, a city of Cyprus, as appears from its ruins ; but now only a large village, seated on the south coast, where there is a good road, and a small fort for its defence.

LERNUTIUS (John), a Latin poet of the sixteenth century, born at Bruges. His works were published by Elzevir, under this title : Jani Lernutii Basia, Ocelli, et alia Poemata. He died in 1619.

LERO, in ancient geography, one of the two small islands in the Mediterranean opposite to Antipolis, and half a mile distant from it on the south. Now called St. Margaret, over against. Antibes.

LERWICK, a celebrated seaport town of Shetland, situated in the island called Mainland.

Al ihe north end there is a regular fort, which was built in the reign of Charles II., who, during his first war with the Dutch, sent over a garrison of 300 men under colonel William Sinclair, a native of Shetland ; with Milne, an architect, to build the fort, and twenty-five or thirty cannons to plant upon it for protection of the coun-1ry. A house was built within the fort to lodge 00 men. When the garrison removed they carried off the cannon ; and in the Dutch war, which followed soon after, a Dutch frigate came into Bressay Sound, and burnt the house in the fort, and several others of the best in the town. It is usually garrisoned by a party of invalids, and serves to protect the north entry of the harbour. About a mile and a half from the town are the remains of two ancient Danish castles. The parish extends about six miles along the coast, but at no point is more than one in breadth. The surface of the ground is for the most part rocky and mountainous. Immediately upon the shore, however, there are many very fine arable fields, the" soil of which, though light and sandy, possesses considerable fertility. Lerwick is governed by a bailie.

LESBIANS, the ancient people of Lesbos. They were so debauched and dissipated that Lesbian was often used to signify debauchery and extravagance.

LESBONAX, a philosopher of Mytilene, who flourished in the first century. Two of his orations are inserted in Aldus's edition of Ancient Orators; and his treatise De Figuris Gram-maticis was printed at Leyden in 1739.

LESBOS, or Mytilene", an island in the Archipelago, to the south-west of the gulf of Adramyttium, now called Adramiti, in lat. 39° 12' N., and long. 23° 50' E. The Turks are the masters of it, and, as usual, the monuments of antiquity are fast crumbling to the dust, the original inhabitants disappearing, and even vegetation itself seeming to wither.

When Lesbos was free it inspired Alceus and Sappho, and the genius of music and lyric poetry was peculiar to the Lesbians, who had so refined upon the pleasures of the body and the mind, that they had fallen into effeminate softness. That fine climate, to the influence of which Hippocrates attributed the genius of the inhabitants, must have been altered through want of the cultivation of the soil ; for we are told that there are now whole villages inhabited by leprous persons.

The native richness of the land, however, still struggles with some success against the stupid indifference of its masters. Woods of olive trees overshadow part of the island, without requiring any cultivation : they surround the hay, which from these woods has taken the name of the bay or port of the Olive trees, and is capable of containing a whole fleet. It lies on the south-eastern side of the island. There is also another extensive bay or lake in the centre of the island. Lesbos still produces excellent figs, and, if we cannot now find the wine once celebrated in the songs of Horace and Catullus, it is because they know not, or do not care, how to prepare it; the grapes are still delicious ; as are also some other fruits. There are fine pasturages, forests abounding in wood for building, and

fertile plains. The fisheries, would be sufficient for the revival of industry, commerce, and prosperity, if there were a free and active people to take advantage of such resources.

Although destitute of rivers, the soil of Mytilene is watered by too many springs to be dry ; and agriculture is so easy here, that it is still almost the only occupation and means of subsistence for the inhabitants. Their dockyards, which derive their materials for building from the forests in the neighbourhood, were of late very nearly abandoned.

Travellers differ as to the population of this island. According to Olivier there are still 20,000 Greeks, and as many Turks; but others do not reckon them so many. Every Greek, from the age of seven years, is condemned to the caratch, or capitation tax, imposed by the Turks upon Christians. The island is divided into two dioceses ; that of IVf ethymne” extends over the southern part, and derives its appellation from the ancient city of that name, now a poor village called Molivo. The diocese of Mytilene” has for its chief place the capital of the island, Castro, which takes its name from the strong fort built near it ; it occupies the site of the ancient Mytilene’, of which there are no remains, except a few fragments of sculpture and architecture, which

are said to be very fine, but travellers have given us no particular account of them. The capital contains about 6000 inhabitants, two-thirds of whom are Turks, besides about forty Jewish families.

The ancient custom of this island bestows the family inheritance with the paternal mansion upon the eldest son ; the bishop of Mytilene' has, however, recently modified in his diocese this usage, more singular than it is useful, and which originated in the time when the men were devoted to maritime occupations.

LESCAILLE (Katharine), surnamed the Sap-pho of Holland, and the tenth muse, died in 1711. A collection of her poems has been printed, in which are the tragedies of Genseric, Wenceslaus, Herod and Mariamne, Hercules and Dejanira, Nicomedes, Ariadne, Cassandra, &c.

LESGHlSTAN, a narrow but long slip of territory in the Caucasus, forming the north-eastern frontier of Georgia. To the north it has Circassia, and to the east Daghestan. It is chiefly composed of the loftiest mountains in the great range of the Caucasus, on the top of which many of the houses of the inhabitants are built, and along the edge of some of the most tremendous precipices. The Lesghis consist almost entirely of hordes of robbers of the most desperate character. Secure in their inaccessible abodes, they set all laws and all attack at defiance, and cany off at pleasure the flocks, and even the inhabitants of the neighbouring regions on their swift coursers. Shah Nadir failed to subdue them ; and it is a Persian proverb, that no prince who is not mad will make war against them. They wear a light Tartar dress, and go armed with a gun, pistols, dagger, and sabre. They carry in their expeditions nothing but a small quantity of provisions in bottles of goat skins ; when reduced to the last extremity they have been known to

cast lota, and sacrifice one of their company to satisfy the hunger of the rest. It is also common for them to hire themselves out to fight the battles of their neighbours', at the rate of twelve roubles for a campaign of three months. Their women are said to be of superior beauty, and to bring a higher price in the market of Constanti-

when but a youth. He was soon after created LL. D.; but, being peculiarly attached to the study of divinity, he entered into orders, and became priest of Une. When the reformation began to spread in Scotland, Dr. Leslie, in 1560, distinguished himself at Edinburgh as aprincipal advocate for the Romish church, and was af'ler-

nople than those belonging to any other of these wards deputed by the chief nobility of that reli-tribes. The Mahommedan is the prevailing gion, to condole with Mary queen of Scots on

religion ; but some of them are still Pagans, and adore the sun, moon, trees, and -ivers. There is

the death of her husband the king of France, and to invite her to return to her native dominions.

a remarkable diversity in their language, which Accordingly, they embarked together at Calais,

is said to have eight very distinct dialects.

in 1561, and landed at Leith. She immediately

LESIGNAU, a small town in the south of made him one of her privy council, and a senator

France, department of the Aude. Population 1500. Eleven miles west of Narbonne.

LESINA, or LEZINA, the ancient Pharos or Pharia, an island in the Adriatic, on the south

of the college of justice. In 1564 he was made abbot of Lindores ; and, on the death of Sinclair, was promoted to the bishopric of Ross. The influence derived from these accumulated honors

coast of Austrian Dalmatia, lying between the he exerted for the good of his country. To him islands of Brazzola, Durzola, and Sabioncello. Scotland is indebted for the publication of its It is about sixty-five miles long, and fourteen laws, commonly called The Black Acts of Par-

liament, from the Saxon character in which they were printed. At his desire the revision and collection of them were committed to the great

broad, and is fruitful in wine, olives, and rosemary, of which a distilled liquor is produced. Population 14,000.

LESKEARD, a large and well built town of officers of the crown. In 1568 queen Mary hav-Cornwall, which has sent two members to parlia-ing fled to England for refuge, and being detain-ment since the 23d of Edward I. It had formerly ed a prisoner, queen Elizabeth appointed com-a castle, now in ruins. It has the greatest mar-missioners at York to examine into the dispute ket in Cornwall. It was first incorporated by between Mary and her subjects. These commis-Edward earl of Cornwall ; afterwards by Richard sioners were met by others from the queen of king of the Romans, and had privileges from Scots. The bishop of Ross was of the number, Edward the Black Prince. Queen Elizabeth and pleaded the cause of his royal mistress with granted it a charter ; by which it was to have a great energy, though without success. Mary, mayor and burgesses, with power to purchase disappointed in her expectations from the con-lands, &c. It has a handsome town-hall built ference at York, sent the bishop

ambassador to on stone pillars, with a turret on it, and a clock Elizabeth, who paid little attention to his com-with four dials that cost nearly £200. It has a plaints. He then began to negociate a marriage large church, three meeting-houses, an eminent between his royal mistress and the duke of Nor-free-school, and a curious conduit. The adjacent folk; which negociati on proved fatal to the duke, commons feed multitudes of sheep. It has a and was the cause of Leslie's being sent to the market on Saturday, and a very great trade in Tower. In 1573 he was banished the kingdom, the various branches of the leather manufacture, and retired to Holland. The two following Spinning has been of late encouraged by the years he spent in fruitless endeavours, to engage clothiers of Devonshire. On the hills of Leskeard the powers of Europe to espouse the cause of his

are many tin-mines ; the metal obtained from which is cast into blocks at the bio wing-houses,

queen. His last application was to the pope ; but the power of the heretic Elizabeth had no

and, this being one of the stannary towns, it is less weight with his holiness than with the other sent hither to be coined. Roman Catholic princes of Europe. Finding all LESLIE (Charles), an Irish divine, and a his personal applications ineffectual, he had re-zealous protestant; who, being attached to the course to his pen in queen Mary's vindication ; house of Stuart, left Ireland, and went to the but Elizabeth s ultima ratio regum was too po-pretender at Bar le Due, and resided with him tent for all his arguments. Bishop Leslie, during till near the time of his death; endeavouring to-his exile, was made coadjutor to the archbishop convert him, but without effect He died in of Rouen. He was at Brussels when he received 1722. His principal works are, 1. A Short and the account of queen Mary's execution ; and im-Easy Method with the Deists. 2. A Short and mediately entered the convent of Guirtemberg Easy Method with the Jews. 3. The Snake in near that city, where he died in 1596. During the Grass. 4. Hereditary Right to the Crown the long captivity of Mary he wrote his History of England asserted. 5. The Socinian contro-of Scotland, and other works. His knowledge versy discussed. 6. The Rehearsals, a periodical and judgment as an historian are equally to be paper in 6 vols. large

12mo. 7. The Charge of recommended. His other works are, 1. Afflieti Socinianism against Dr. Tillotson considered; Animi Consolationes, &c., composed for the con-and many others. All his theological pieces, solation of the captive queen. 2. De Origine, except the last, were collected and published by Morbis, etGestis Scotorum. 3. DeTitulo et Jure himself, in 2 vols. folio. serenissimse Marise Scotorum reginse, quo regni LESLIE (John), bishop of Ross in Scotland, the Angliae successionem sibi juste" vindicat. 4. son of Gavin Leslie, an eminent lawyer, was born-Paraenesis ad Anglos et Scotos. 5. De Illust. in 1.V26, and educated at the universiiy of Aber-Fasminarum in republ. administranda, &c. 6. dctn ; of which diocese he was n;ade official, Oratio ad reginam Elizabeth? m pro Libertate

Impetranda. 7. Paranesis ad Nobilitatem Po-pulumque Scoticum. 8. An Account of his Proceedings during his Embassy in England from 1568 to 1572; MS. Oxon. 9. Apology for the Bishop of Ross, concerning the Duke of Norfolk; MS. Oxon. 10. Several Letters, MSS.

LESLIE (sir John), a distinguished Scotch chemist, mathematician, and natural philosopher, professor of natural philosophy in the University of Edinburgh, author of numerous scientific works of great value. Among them are, An Inquiry into the Nature and Propagation of Heat; Elements of Geometry, Geometrical Analysis, and Plane Trigonometry ; Account of Experiments and Instruments depending on the Relation of Air to Heat and Moisture ; Philosophy of Arithmetic; and various papers in scientific journals. He has likewise invented several curious and valuable philosophical instruments. His differential thermometer is an important acquisition to physics. His election to the professorship, for which he was a candidate, did not succeed without a violent alterca-tion between the members of the University, and some of the divines of the church of Scotland, who opposed Leslie on account, as they alleged, of his being a sceptic in religious matters.

Leslie was one of the contributors to the Edinburgh Review, and the Supplement to the Encyclopaedia Britannica. The author of Peter's Letters says: "He (Leslie) is a very fat, heavy figure of a man, without much more appearance of strength than of activity ; and yet by no means a slothful looking person. His face is one which, at first sight, you would pronounce to be merely a coarse one, but in which, once informed to whom it belongs, you are at no loss to discover a thousand marks of vigorous intellect, and fancy too. Of this last quality, indeed, his eyes are, at times, full to overflowing. In the midst of the sombre gravity of his usual look, there are always little flashes of enthusiasm breaking through the cloud ; and, in this respect, he forms a striking contrast to the calm, tranquil uniformity of Playfair's physiognomy and deportment." He died on the 3rd of November, 1833, in the sixty-sixth year of his age.

LESS, adj., n. s. &«dy.) Sax. leap. Com—

LESS'KN, v. a. &v.n. £ parative of little ;

LESS'ER, adj. & adv.) not so much ; in a lower or smaller degree : to lessen is to make smaller or less ; diminish; degrade; deprive of dimensions, power, dignity, or esteem ; to grow less ; shrink : lesser, ' a barbarous corruption of less.'

Who seeks

To lessen thee, against his purpose serves To manifest the more thy might. Milton.

All government may be esteemed to grow strong or weak, as the general opinion in those that govern is seen to lessen or increase. Temple.

Yet could he not his closing eyes withdraw, Though less and less of Emily he saw. Dryden.

The mountains, and higher parts of the earth, grow lesser and lesser from age to age : sometimes the roots of them are weakened by subterraneous

fires, and sometimes tumbled by earthquakes into caverns that are under them. Bur net.

Tis less to conquer, than to make wars cease, And, without fighting,

awe the world to peace.

H.difax.

Company lessen* the shame of vice by sharing it, and abates the torrent of a common odium by driving it into many channels. South.

This thirst after fame betrays him into such inde-cencies as are lessening to his reputation, and is looked upon as a weakness in the greatest characters.

Addison'i Spectator.

The lea they themselves want from others, they will be less careful to supply the necessities of the indigent. Smalridge.

Their learning lay chiefly in flourish ; they were not much wiser than the less pretending multitude.

Collier on Pride.

Any heat promotes the ascent of mineral matter, but more especially of that which is subtile, and is consequently moveable more easily, and with a lesser power. Woodward.

St. Paul chose to magnify his office, when ill men conspired to lessen it. Atterbury's Sermont.

Though charity alone will not make one happy in the other world, yet it shall lessen his punishment. Calamy's Sermont.

The larger here, and there the lesser lambs, The new-fallen young herd bleating for their dams.

Pope.

Happy, and happy still, she might have proved, Were she las beautiful, or less beloved. Id.

Who builds on kss than an immortal base, Fond as he seems, condemns his joys to death.

Young.

The poor, inured to drudgery and distress, Act without aim, think little, and feel lets, And no where, but in feigned Arcadian scenes, Taste happiness, or know what pleasure means.

Cowper.

An unnatural parent is a character that raises not only disapprobation but horror ; nor kss odious is an undutiful child : indeed it is not easy to determine which of the two is the more detestable. Beattie.

Prepared and spread his slender stock ; And to the monarch and his men The whole or portion offered then, With far less of inquietude Than courtiers at a banquet would. Byron.

LES'SON, n. s. & v. n*. Belg. lesse ; Fr. Vecon ; Lat. lectio. See LECTION. Any thing read or pronounced before a teacher ; precepts ; lecture ; opinion inculcated ; a portion of Scripture read in divine service : as a verb, to teach ; instruct.

Be not jealous over the wife of thy bosom, and teach her not an evil lesson against thyself.

Ecclus. ix. 1.

This day's ensample hath this letson dear Deep written in my heart with iron pen, That bliss may not abide in state of mortal men. Faerie Qveene.

Notwithstanding so eminent properties, whereof lessont are happily destitute ; yet, lessont being free from some mconveniencies whereunto sermons are most subject, they may, in this respect, no less take, than in other they must give the hand which be-tokeneth pre-eminence. Hooker.

Even in kind love, I do conjure thee To lesson me.

Shakspeare. Two Gentlemen of Verona. Well hast thou lessoned us, this shall we do.

Slialupeare. Those good laws were like good lestois set for a

flute out of tune ; of which lessoni little use can be made, till the flute be made fit to be played on.

Davits on Ireland.

The pleasancc of numbers is, that rudeness and barbarism might the better taste and digest the les-tont of civility. Peacham.

I but repeat that lesson Which I have learned from thee.

Denham's Sophy.

She would give her a lesson for walking so late, that should make her keep within doors tor one fortnight. Sidney.

Children should be seasoned betimes, and lessoned into a contempt and detestation of this vice.

L'Estrange's Fables.

Meditation here

Ma} think down hours to moments. Here the heart May give a useful lesson to the head, And Learning wiser grow without his books.

Cowper.

What were we,

If Brutus had not lived ? He died in giving Rome liberty, but left a deathless lesson — A name which is a virtue, and a soul Which multiplies itself throughout all time, When wicked men wax mighty, and a state Turns servile. Byron.

LESSONS, among ecclesiastical writers. In the ancient church reading the Scriptures was part of the service of the catechumens ; at which all persons were allowed to be present, to obtain instruction. The church of England, in the choice of lessons, proceeds as follows: for the first les-son, on ordinary days, she directs to begin at the beginning of the year with Genesis, and so continue on, till the books of the Old Testament are read over; only omitting the Chronicles, which are for the most part the same with the books of Samuel and Kings, and other particular chapters in other books, because they contain either names

of persons, or places, or other matters less profitable to ordinary readers. The course of the first lessons for Sundays is regulated after a different manner. From Advent to Septuagesima Sun-day some particular chapters of Isaiah are appointed to be read, because that book contains the clearest prophecies concerning Christ. Upon Septuagesima Sunday Genesis is begun, because that book, which treats of the fall of man, and the severe judgment of God inflicted on the world for sin, best suits with a time of repentance and mortification. After Genesis, follow chapters out of the books of the Old Testament, as they lie in order ; only on festival Sundays, such as Easter, Whitsunday, 8tc., the particular history relating to these days is appointed to be read ; and on the saints' days the church appoints lessons out of the Proverbs, Ecclesiastes, Eccle-siasticus,&c., as containing excellent instructions for the conduct of life. As to the second lessons, the church observes the same course both on Sundays and week days; reading the gospels and Acts of the Apostles in the morning, and the Epistles in the evening, in the order they stand in the New Testament : excepting on saints' days and 'holy days, when such lessons are appointed as either explain the mystery, re-latp the history, or enforce the example.

LES'SOR, H. .s-. From lease. He who disposes of a-xl or other property by lease.

Lords of the world have but for life their lease. And that too, if the lessor please, must cease.

Detiham.

If he demises the glebe to a layman, the tenant must pay the small tithes to the vicar, and the great tithes to the leisor. Ayliffe't Parergon.

A lease which is only voidable, and not absolutely void, must be made void by the lessor by re-entry.

Tomlin.

LEST, any. Sax. leer-, lej-, (corresponding with the Lat. minus), that not ; for fear that, expressing care to prevent a thing or event , »ppening.

But I drede, leit as the serpent disseyuyde eue with his sutil fraude, so ghoure wittis ben corupt and fallen doun fro the symplenesse that is in Crist. Wiclif, 2 Cor. 11.

Forty stripes he may give him, and not exceed, lest if he should exceed, then thy brother should seem vile. Deut. xxv.

Lett they faint,

At the sad sentence rigorously urged, All terror hide. Milton .

One doubt

Pursues me still, lest all I cannot die,

Lest that pure breath of life, the spirit of man,

Which God inspired, cannot together perish

With this corporeal clod. Id.

King Luitprand brought hither the corps, lest it might be abused by the barbarous nations.

Addison.

L'ESTRANGE (Sir Roger), a noted writer in the seventeenth century, descended from an ancient family in Norfolk, where he was born in 1616. Having in 1644 obtained a cominission from king Charles I. for reducing Lynn in Norfolk, then in possession of the parliament, liis design was discovered, and his person seized. He was tried by a court martial at Guildhall in London, and condemned to die as a spy ; but was reprieved, and continued in Newgate for some time. He afterwards went beyond sea ; and in August 1653 returned to England, where he applied to Oliver Cromwell, and, having once played before him on the bass-viol, he was by some nicknamed Olivers fiddler. Being a man of talent, but in narrow circumstances, he set up a newspaper, entitled The Public Intelligencer, in 1663 ; but gave it up upon the publication of the first London gazette in 1665, having been allowed, however, a sum of money by government. Some time after the Popish plot, when the Tories began to gain the ascendant, he, in a paper called the Observator, became a zealous champion for them. He was afterwards knighted, and served in the parliament called by James II. in 1685. He continued licenseer of the press till king Wjlliam's accession, in whose reign he met with some trouble as a disaffected person. He published many political tracts, and translated several works from the Greek, Latin, and Spanish ; *viz.* Josepbus's works, Cicero's Offices, Seneca's Morals, Erasmus's Colloquies, TEsop's Fables, and Bonas's Guide to Eternity. His style has been variously represented ; his language being esteemed by some easy and humor-

ous, while others reckon it low and grovelling.

LET. Sax. laetm; Goth, leta ; Swed. lutu ; Belg. laatan. To permit; admit; allow; suffer ; leave ; relinquish ; drop : used as a sign of entreating, exhorting, and commanding, as ‘ let me

go; ‘ ‘let us go ; ‘ ‘ let him go : ‘ also to lend or put out on hire; grant to a tenant; free from obstruction or confinement; discharge (taking jff intensively).

The seventh year thou shalt let it rest, and lie •ill. . Exodus.

Let me die with the Philistines. Judges. She let them down by a cord through the window.

Joshua.

The beginning of strife is as when one letteth out water. Proverbs xvii. 14.

Solomon had a vineyard at Baal Hamon ; he let ‘he vineyard unto keepers. Canticles viii. 11.

And curteis, as a man of your estat, In compagnie we wiln have no debat : Telleth your tale, and let the Sompnour be. Nay, quod the Sompnour, let him say by me What so him list. . Chaucer. Cant. Tale*.

Let reason teach impossibility in any thing, and the will of man doth let it go. Hooker.

Roscetes presented his army before the gates of the city, in hopes that the citizens would raise some tu-mult, and let him in. K twites. Let us seek out some desolate shade.

Shakspeare.

They did me too much injury, That ever said I hearkened for your death. If it were so, I might have let alone The' insulting hand of Douglas over you. Id. His ancient knot of dangerous adversaries To-morrow are let blood at Pomfret castle. Id.

Let in your king, whose laboured spirits Crave harbourage within your city walls. Id. As terebration doth meliorate fruits, so doth letting plants blood, as pricking vines, thereby letting forth tears. Bacon.

Let Indians, and the gay, like Indians, fond Of feather'd fopperies, the sun adorn ; Darkness has more divinity for me ; It strikes thought inward.; — Young.

Nay, nay, quoth he, let be your strife and doubt.

Fairfax.

Where there is a certainty and an uncertainty, let the uncertainty go, and hold to that which is certain.

Bishop Sanderson.

The more tender our spirits are made by religion, the more easy we are to let in grief, if the cause be innocent. Taylor.

To give a period to my life, and to his fears, you're welcome ; here's a throat, a heart or any other part, ready to let in death, and receive his commands.

Denham.

What boots it at one gate to make defence, And at another to let in the foe, Effeminately vanquished 1 Milton's Agonistet. Let Euclid rest, and Archimedes pause.

Milton.

(Persons) who have a conscience, but are shy of disclosing it, or letting it take air, and walk in open daylight, confining it as a criminal to close restraint or obscure retirement. Barrow.

And if I knew which way to do't, Your honour safe, I'd let you out. Hudibras, Finding an ease in not understanding, he let loose his thoughts wholly to pleasure. Sidney.

The letting out our love to mutable objects doth but e large our hearts, and make them the wider marks for fortune to be wounded. Boyle.

Let me alone to accuse him afterwards.

Dryden.

On the crowd he cast a furious look, And withered all their strength before he spoke ; Back on your lives, let be, said he, my prey, And let my vengeance take the destinea way. J-/.

But one submissive word which you let fall, Will make him in good humour with us all. Id. Nothing deadens so much the composition of a pic* tnre, as figures which appertain not to the subject : we may call them figures to be let. Id.

This is of no use, and had been better let alone: he is fain to resolve all into present possession.

Locke.

One who fixes his thoughts intently on one thing, so as to take but little notice of the succession of ideas in his mind, lets slip out of his account a good part of that duration. Id.

They should speak properly and correctly, whereby they may let their thoughts into other men's minds the more easily. Id.

You must let it down, that is, make it softer by tempering it. Mowns Mechanical Exercises.

She let her second floor to a very genteel man.

Taller.

It is the key that lets them into their very heart, and enables them to command all that is there.

South' *Sermon*.

Nestor, do not let us alone till you have shortened our necks, and reduced them to their antient standard.

Addison.

He was let loose among the woods as soon as ha was able to ride on horseback, or carry a gun.

Id. Spectator.

There are pictures of such as have been distinguished by their birth or miracles, with inscriptions, that ttt you into the name and history of the person represented. Additon.

As soon as they have hewn down any quantity of the rocks, they fet in their springs and reservoirs among their works. Id.

We must not let go manifest truths, because we cannot answer all questions about them. Cellier.

A solution of mercury in aqua fortis being poured upon iron, copper, tin, or lead, dissolves the metal, and lets go the mercury. Newton't Opticks.

This notion might be let alone and despised, as a piece of harmless unintelligible enthusiasm.

Rogers.

Hippocrates let great quantities of blood, and opened several veins at a time. Arbuthnot on Coin*.

O'er golden sands let rich Pactolus flow, Or trees weep amber on the banks of Po, While by our oaks the precious loads are born, And realms commanded which those trees adorn.

Pope.

From this point of the story, the poet is let down to his traditional poverty. Id.

A law was enacted, prohibiting all bishops, and other ecclesiastical corporations, from letting their lands for above the term of twenty years. Swift.

Charging my pistol with powder, I cautioned the emperor not to be afraid, and then let it off in the air.

Id.

Here let me sit, And hold high converse with the mighty dead.

Thomson.

Life’s a debtor to the grave ; Dark lattice ! letting in eternal day. Young. LET, v. a., v. n. & n. s. Sax. lercan : Goth. letta; Belg. letten. To hinder; obstruct; op-pose : as a verb neuter, to forbear ; desist ; withhold one’s self. ‘ To let, when it signifies to permit or leave, has let in the preterite and part, passive; but, when it signifies to hinder, it. has letted ; as, ‘ many things have letted me.’ As a noun, it signifies hindrance; obstacle; impediment.

Wherefore do ye let the people from their workg ? go you unto your burdens. Exodus v. 4.

f will work, and who will let it ? Ita. xliii. 1 1 . The mystery of iniquity doth already work ; only he who now Utteth will let, until he be taken out of the way. 2 Then.

And in she goth withouten lenger lette, And to the markis she hire fader sette.

Chaucer. Cant. Talei.

Just judge, two fete remove; that, free from dread, I may before thy high tribunal plead. Stmtlys.

Leave, ah, leave off, whatever wight thou be, To let a weary wretch from her due rest, And trouble dying soul’s tranquillity !

Faerie Queene.

To glorify him in all things is to do nothing whereby the name of God may be blasphemed ; nothing whereby the salvation of Jew or Grecian, or any in the church of Christ, may be let or hindered.

Hooker.

The secret let* and difficulties in public proceedings are innumerable and inevitable. Id.

After king Ferdinando had taken upon him the person of a fraternal ally to the king, he would not let to counsel the king. Bacon.

Solyman without let presented his army before the city of Belgrade. Knotles's History of the Turks.

It had been done ere this, had I been consul ; We had had no stop, no let. Ben Jonson's Catiline.

Whosoever seeks the land of promise, shall find many Lett. Bp. Hall.

Their senses are not letted from enjoying their objects : we have the impediments of honour, and the torments of conscience. Sidney.

And now, no longer letted of his prey, He leaps up at it with enraged desire.

Dry den.

To these internal dispositions to sin, add the external opportunities and occasions concurring with them, and removing all lets and rubs out of the way, and naning the path of destruction plain before the sinner's face , so that he may run his course freely.

South.

LETHAR'GIC,a<#. -v Fr. lethargic, ktar-LETHAR'GICNESS.H.S. f gic ; Ital. kthargio, le-LETH'ARCY, n. s. (targo ; Span, and Port. LE'THE. Jletargia; Lat. lethar—

gia, lethargus; Gr. \»;0apyoc, Xij0»;, as Parkhurst and Minsheu suggest, from the Heb. tOK1?, to hide. Drowsy; morbid ; sleepy through disease, or unnaturally : lethargicness, and lethargy, both signify morbid drowsiness: lethe, oblivion; an oblivious draught. See below. I wold make invocacion, With devoute speciall devocion, Unto the god of Slepe anone, That dwellith in a cave of stone, Upon a streme that cometh fro Lete.

Chaucer. House of Fame. I he conquering wine hath steept our sense In soft and delicate lethe. Shakspeare.

I he lethargy must have his quiet course ; If not, he foams at mouth,

and by and by Breaks out to savage madness. ‘ Id.

His notion weakens, or his discernings Are letfaiffied. Id. King Lear.

A gram of glory mixt with humbleness, Cures both a fever, and lethargickness. Herbert. Though his eye is open, as the morning’s, Towards lusts and pleasures ; yet, so fast a lethargy Has seized his powers towards public cares and dangers, He sleeps like death. Denham’, Sophy.

lˆthe, the river of oblivion, rolls His watery labyrinth, which whoso drinks Forgets both joy and grief. Wilton.

As sharp physic to cure public or private distempers ; as an instrument of rousing us out of our sin-ful lethargies. Barrow.

When I behold a fashionable set out in all its magnificence, I fancy that I see gouts and dropsies, fevers and lethargies, with other innumerable distempers, lying in ambuscade among the dishes.

Addifon.

Europe lay then under a deep lethargy ; and was no otherwise to be rescued from it, but by one that would cry mightily. Atterbury.

A lethargy demands the same cure and diet as an apoplexy from a phlegmatick case, such being the constitution of the lethargick. Arbuthnot on Diet.

Vengeance is as if minutely proclaimed in thunder from heaven, to give men no rest in their sins, till they awake from the lethargick sleep, and arise from so dead, so mortiferous a state.

Hammond’s Fundamentals.

And therefore all fools, and distracted persons, and children, and lethargical and apoplectical people, or that are any ways senseless and incapable of hu-man and reasonable acts, are to be assisted only by prayers. Paley.

Away ! away ! my early dream

Remembrance never must awake : Oh ! where is Iˆethe’s fabled stream ?

My foolish heart be still, or break. Byron.

LETHE, in ancient mythology, one of the rivers of hell, signifying oblivion or forgetfulness ; its waters having, according to the poeti c fictions of the priests, the power of making those who drank ol them to forget every thing past.

LETI (Gregory), an eminent Italian writer, born in Milan in 1630, and who studied undei the Jesuits at Cosenza, and was afterward sent by an uncle to Rome, who wished him to entei into the church ; but he, being averse to it, wenl to Geneva. Thence he went to Lausanne ; and contracting an acquaintance with John Anthony Guerin, an eminent physician, lodged at his house, professed the Calvinist religion, and married his daughter. He settled at Geneva ; where he spent almost twenty years, carrying on a correspondence with learned men, especially those oi Italy. Some contests obliged him to leave tha> city in 1679 ; upon which he went to France and then into England, where he was receiver with great civility by Charles II., who, after his first audience, made him a present of 1000 crowns and promised him the place of historiographer. He wrote there tbe History of England ; but, that work not pleasing the court, he was ordered to leave the kingdom. He went to Amsterdam in 1682, and was honored with the place of historiographer to that city. He died suddenly in 1701 . He was a man of indefatigable application, as the multiplicity of his works show. The principal of these are, 1. The Universal Monarchy of Louis XIV. 2. The life of Pope Sixtus V. 3. The Life of Philip II. King of Spain. 4. The Life of the Emperor Charles V. 5. The Life of Elizabeth, Queen of England. 6. The History of Oliver Cromwell. 7. The History of Great Britain, 5 vols. 12mo 8. The History of Ge-neva, &.c.

LET'TER, n. s. & v. a. -) Fr. lettre ; Italian

LF.T'TERS, n. s. £ lettera ; Lat. litera.

LF.T'TERED, adj. j An alphabetical character ; one of the elements of a syllable ; verbal expression ; written message or communication ;

an epistle ; printers' type. Letters (only used ni the plural in this sense), signify learning; scholastic knowledge. To letter is to inscribe or stamp with letters. Lettered, learned ; literary.

For if ye bileueden to Moyses perauenture ye sclmlden bileue also to me ; for he wroot of me. liut if ye bileuen not hise lettris, how schulen ye bileue to my wordis "! 1 1 'iclif, Jon 5.

,\d ;l we, as some others, epistles of commenda-tior. to you, or letters of commendation from you.

2 Cm: n'i. 1.

A superscription was written over him in letters of Greek, Latin, and Hebrew. Luke xxiii. 38.

The Jews marvelled, saying, How knoweth this man letters, having never leained? John vii. 15.

Touching translations of holy scripture, we may not disallow of their painful travels herein, who strictly have tied themselves to the very original letter. Hooker.

I have a letter from her

Of such contents as you will wonder at.

Shahs .

When a Spaniard would write a letter by him, the Indian would marvel how it should be possible that he, to whom he came, should be able to know all things. Abbot.

In obedience to human laws, we must observe the letter of the law, without doing violence to the rea-son of the law, and the intention of the lawgiver. Taylor's Holy Living.

Having once surveyed the true and proper natural alphabet, we may easily discover the deviations from it, in all the alphabets in use, either by defect of single characters, of letters, or by confusion of them.

Holder. What ! since the pretor did my fetters loose,

And left me freely at my own dispose,

May I not live without controul and awe,

Excepting still the letter of the law 1 Dryden.

The asses will do very well for trumpeters, and the hares will make excellent letter carriers.

L’ Estrange.

The iron ladles that letter founders use to the cast- .ng of printing letttrs, are kept constantly in melting metal. Moron.

The stile of letters ought to be free, easy, and natural ; as near approaching to familiar conversation as possible : the two best qualities in conversation are, good humour and good breeding ; those letters are therefore certainly the best that shew the most of these qualities. Walsh.

Those words of his must be understood not according to the bare rigour of the letter, but according to the allowances of expression. South.

Good laws are at best but a dead letter. Addiion.

I observed one weight lettered on both sides ; and I found on one side, written in the dialect of men, and underneath it, Calamities ; on the other side was written, in the language of the gods, and underneath, Blessings. Id.

A martial man, not sweetened by a lettered education, is apt to have a tincture of sourness.

Collier on Pride.

There is no rule in the world to be made for writing letters, but that of being as near what you speak face ˆo face as you can ; which is so great a truth, that I am of opinion, writing has lost more mistresses than any one mistake in the legend of love. Steele.

The flowers of eloquence, profusely poured O’er spotted vice, fill half the lettered world.

F«»»

Whatever absurdities men of letters have indulged,

and how fantastical soever the modes of science have been, their anger is still more subject to ridicule.

Goldsmith.

‘ There’s ither poets much your betters, Far seen in Greek, deep men o’ letteri, Hae thought they had insured their debtors,

A’ future ages. Burns.

The volume of Christian Scriptures contains thh-teen letten, purporting to be written by St. Paul.

Paley.

Julia was sent into a convent : she Grieved, but, perhaps, her feelings may be better Shown in the following copy of her letter. Byron.

LETTER is a character used to express one of the simple sounds of the voice ; and, as the dif ferent simple sounds are expressed by different letters, these, by being differently compounded, become the visible signs or characters of all the modulations and mixtures of sounds used to express our ideas in a regular language. See LANGUAGE. Thus, as by the help of speech we render our ideas audible, by the assistance of letters we render them visible, and by their help we can preserve our thoughts, and send them to the most distant parts of the earth and read the transactions of different ages. Philo attributes the invention of letters to Abraham ; Josephus, St. Irenaeus, and others, to Enoch ; Bibli-ander,toAdam;Eusebius,ClemensAlexandrinus, Cornelius Agrippa, and others, to Moses ; Pomponius Mela, Herodian, Rufus, Festus, Pliny, Lucan, 8cc., to the Phoenicians ; St. Cyprian, to Saturn ; Tacitus, to the Egyptians ; some, to the Ethiopians. There have been also various conjectures about the different kinds of letters used in different languages : thus, according to Crinitus, Moses invented the Hebrew letters; Abraham, the Syriac and Chaldee ; The Phoenicians, those of Attica, brought into Greece by Cadmus, thence into Italy by the Pelasgians; Nicostrata, the Roman; Isis, the Egyptian ; and Vulsilas, those of the Goths. It is probable that hieroglyphics were the first writings ; but whether Cadmus and the Phoenicians learned the use of letters from the Egyptians, or from their neighbours of Judea or Samaria, is a question that cannot be determined. But, wheresoever the Phoenicians learned this art, it is generally agreed, that Cadmus the son of Agenor nest brought letters into Greece ; whence, in following ages, they spread over the rest of Europe. The alphabet of

every language consists of a number of letters, which ought each to have a different sound, figure, and use. As the difference of articulate sounds was intended to express the different ideas of the mind, so one letter was originally intended to signify only one sound, and not, as at present, to express sometimes one sound and sometimes another; which practice has brought confusion into the languages, and rendered the acquisition of modern tongues a more difficult task than it would otherwise have been. This consideration, together with the deficiency of all the known alphabets, from their wanting some letters to express certain sounds, has occasioned several attempts towards a universal alphabet, to contain an enumeration of all such single sounds or letters is are used in any language. Grammarians oistinsniish letters into vowels, consonants

mutes, liquids, diphthongs, and characteristics. LETTER, or type, among printers, is not only used to signify the CAPITALS, SMALL CAPITALS, and small letters, but all the points, figures, and other marks cast and used in printing. They are also denominated from the shape and turn of the letters ; and are distinguished into different hands, German text, Roman, Italic, black letter, &c. The letters used in printing are cast at the ends of small pieces of metal, about three quarters of an inch in length ; and the letter being not indented, but raised, easily gives the impression, when, after being blacked with a glutinous ink, paper is closely pressed upon it. See the article PRINTING. A font of letters includes small letters, capitals, small capitals, points, figures, spaces, &c. ; but besides, they have different kinds of two-line letters, only used for titles, and the beginning of books, chapters, &c. LETTER OF ATTORNEY, in law, is a writing by which one person authorises another to do some lawful act in his stead ; as to give seisin of lands, to receive debts, sue a third person, &c. The nature of this instrument is to transfer to the person to whom it is given the power of the maker, to enable him to accomplish the act

intended to be performed. It is either general or special ; and sometimes it is made recoverable, which is when a bare authority only is given; and sometimes it is irrecoverable, as where debts, &c., are assigned from one person to another. It is generally held, that the power granted to the attorney must be strictly pursued ; and that where it is made to three persons two cannot execute it. In most cases the power given by a letter of attorney determines upon the death of the person who gave it. No letter of attorney made by any seamen, &c., in any ship of war, or having letters of marque, or by their executors, &c., in order to empower any person to receive any share of prizes or bounty money, shall be valid, unless the same be made revocably, and for the use of such seamen, and be signed and executed before, and attested by, the captain and one other of the signing officers of the ship, or the mayor or chief magistrate of some corporation.

LETTER OF MARQUE. See MARQUE. LETTERS, PATENT, or overt, are writings sealed with the great seal of England, whereby a man is authorised to do, or enjoy any thing, which of himself he could not do. See PATENT. They are so called, by reason of their form ; as being open with the seal affixed, ready to be shown for the confirmation of the authority given by them.

LETTSOM (John Coakley), M.D., an ingenious medical and miscellaneous writer, was l>orn in the Island of Little Vandyke, near Tortola, in the West Indies, of a Quaker family. He was sent to England at an early age, and plaoed under the tuition of a Mr. Thompson, near Warrington, where Dr. Fothergill had a summer residence, and also superintended his studies. He was then apprenticed to an apothecary at Settle, and attended for two years at St. Thomas's Hospital, London. His father having now died, he returned to the West Indies, to take possession sf some property \vliich devolved on him, and

settled as a medical practitioner at Tortola The slaves of his paternal estate he at this time t.obly liberated. Shortly after he re-crossed the Atlantic, and visited the medical schools of Edinburgh, Paris, and Leyden, at the last of which he took his degree of M. D. Having married a lady of considerable fortune, he settled in London as a physician, and obtained a lucrative practice. In 1769 he was admitted a member of the college of physicians, the next year F. S. A., and the year succeeding F. R. S. Besides papers in the Philosophical Transactions, and medical periodical works, he published The Natuial

History of the Tea-tree; 1772, 4to. The Naturalist's and Traveller's Companion ; 1774, 8vo., third edition 1800. Medical Memoirs of the General Dispensary, 1774, 8vo. Hints on Beneficence, Temperance, and Medical Science, 1801, 3 vols. 8vo. Memoirs of Dr. Fothergill ; &c. He died in Sambrook Court, London, November 1st, 1815, aged seventy-one. His life, and a collection of his works, were published by Mr. Pettigrew.

LETTUC E, n. s. Teut. lattu'ti ; Ital. lattuca ; Span, lechuga ; Lat. LACTUCA, which see. A herb.

Fat colworts, and comforting purseline, Cold lettuce, and refreshing rosemerine. Spenier. Lettuce is thought to be poisonous, when it is so old as to have milk. Bacon's Natural History.

The medicaments proper to diminish milk, are lettuce, purslane, endive. Wiseman's Surgery.

The species are, common or garden lettuce ; cabbage lettuce ; Silesia lettuce ; white and black cos ; white cos ; red capuchin lettuce. Miller.

His diet was of wheaten bread, And milk, and oats, and straw ;

Thistles, or lettuces instead, With sand to scour his maw. Coicper.

LETTUCE, in botany. See LACTUCA. LETTUCE, HARES. See SONCHUS. LETTUCE, WILD. See PRENANTHES. LEVANT, adj. & n. s. Fr. levant ; Lat. levo. Eastern ; the quarter of sun-rise ; the Mediterranean coasts east of Italy.

Thwart of those, as fierce Forth rush the tenant, and the potent winds. Eurus and Zephyr. Milton's Paradise Lost.

LEVANT, or Titan, one of the Ilieres. LEVANT SEA, the eastern part of the 'Mediterranean, bounded by Lesser Asia on the north ; by Syria and Palestine on the east; by Egypt and Barca on the south ; and by Candia and the other ports of the Mediterranean on the west

LEVA'TOR, n. s. Lat. levator (levis). A surgical instrument, whereby depressed parts of the skull are lifted up : now more commonly called an elevator.

Some surgeons bring out the bone in the bore ; but it will be safer to raise it up with your levatcr, when it is but lightly retained in some part.

Wiseman's Surgery.

LEUCA, in antiquity, a geographical measur of length, in use among the later Gauls ; which according to Jornandes, who calls it leuga, con tained 1500 paces, or one mile and a half. Hence the word league, now reckoned at three miles; in the lower age called leuva.

LEUCADIA, formerly called Neritis, a peninsula of Acarnania (Homer) ; but afterwards,

by cutting through the peninsula, made an island, u.i it is at this day, called St. Maura.

LEUCAS, in ancient geography, a city of Leucadia, formerly called Neritos and Neritutn, situated near a narrow neck of land, or isthmus, on a hill facing the east and Acarnania: the foot or lower part of the town was a plain lying on the sea, by which Leucadia was divided from Acarnania (Livy); though Thucydides places Leucas more inward in the island, which was joined to the continent by a bridge. It was an illustrious city, the capital of Acarnania, and the place of general assembly.

LEUCAS, in zoology. See DELPHINUS. ' LEUCATA, or LEUCATE, in ancient geography, a promontory of Leucadia, according to Strabo, a white rock projecting into the sea to-wardsj Cephalenia, on which stood a temple of Apollo, surnamed Leucadius. At his festival, which was annually celebrated here, the people offered an expiatory sacrifice, to avert on the bead of the victim all the calamities with which they might be threatened. For this purpose they made choice of a criminal condemned to die ; and, leading him to the brink of the promontory, precipitated him into the sea amidst the loud shouts of the spectators. The criminal, however, seldom perished in the water :

for it was the custom to cover him with feathers, and fasten birds to his body, which by spreading their wings might serve to break his fall. No sooner did he touch the sea, than a number of boats, stationed for that purpose, flew to his assistance, and drew him out; and, after being thus saved, he was banished for ever from the territory of Leucadia. Strabo, lib. 10, p. 452. According to ancient authors, a strange opinion concerning this promontory prevailed for some time among the Greeks. They imagined that the leap of Leucata was a certain remedy for excessive love. Hence disappointed or despairing lovers often came to Leucadia ; and, having ascended the promontory, offered sacrifices in the temple, and, engaging by a formal vow to perform the desperate act, they voluntarily precipitated themselves into the sea. Some ara reported to have recovered from the effects of the fall ; and, among others, mention is made of a citizen of Bulhroton, in Epirus, whose passions always taking fire at new objects, he four times had recourse to the same remedy, and always with the same success. As those who made the trial, however, seldom took any precaution to render their fall less rapid, they were generally destroyed ; and women often fell victims to this act of desperation. At Leucata was shown the tomb of Artemisia, that celebrated queen of Caria, who #ave so many proofs of courage at the battle of Salamis. Inflamed with a violent passion for a young man who inflexibly refused her love, she surprised him in his sleep and put out his eyes. Regret and despair soon brought her to Leucata, where she perished in the waves, notwithstanding every effort to save her. Such, likewise, was the end of the unhappy Sappho. Forsaken by her lover Phaon, she came hither to seek relief from her sufferings, and found her death.

LEUCE, a triangular island, in the Euxine VOL. XII.

Sea, between the mouths of the Borysthcnes and the Danube. The poets fabled it to be a kind of Elysian receptacle for departed heroes, and hence styled it the Island of the Blessed.

LEUCIPPUS, a celebrated Greek philosopher and mathematician ; first author of the famous system of atoms and vacuums, and of the hypothesis of storms ; since attributed to the moderns. He flourished about A. A. C. 428.

LEUCOG./EUS, in ancient geography, a bill of Italy, between Puteoli and Neapolis, in Campania, abounding in sulphur; now 1'Alumera. It had springs called Lecogaei fontes ; the waters of which, according to Pliny, gave a firmness to the teeth, clearness to the eyes, and proved a

cure to wounds.

LEUCOJUM, great snow-drop, a genus of the monogynia order, and hexandria class of plants ; natural order ninth, spathaceae : COR. campanulated,sexpartite; the segments increased at the points; the stigma simple. There are four species, *viz.*

1. L. aestivum, the summer leucojum, has a large, oblong bulbous root, crowned with several long, flat, broad leaves; and amidst them an upright, thick, hollow stalk, fifteen or eighteen inches high ; terminated by a spatha protruding many white flowers, on slender foot-stalks, drooping downwards ; flowering in May.

2. L. autumnale, the autumnal leucojum, has a large, oblong, bulbous root, crowned with many narrow leaves ; an upright, naked, hollow stalk, terminated by a spatha protruding many white flowers on long weak foot-stalks, hanging downwards, and flowering in autumn.

3. L. vernum, the spring leucojum, has an oblong, bulbous root, sending up several flat leaves, six or eight inches long; and amidst them an upright, channelled, hollow, naked stalk, about afoot high, terminated by a spatha, protruding one or two white flowers on slendei foot-stalks, drooping downwards, and appearing in March. All these species are very hardy, durable in the roots, and increase exceedingly by offsetts, which may be separated every two or three years.

LEUCQMA, in antiquity, a public register among the Athenians, in which were inserted the names of all the citizens, as soon as they were of age to enter upon their paternal inheritance.

LEUCOMA, in surgery, a distemper of the eye. See SURGERY.

LEUCOPETRA, in ancient geography, a promontory of Italy, so called from its white color (Strabo) ; in the country of the Bruttii, and territory of llhegium ; the termination of the Appenine, and the outmost extremity of the Bruttii, or the modern Calabria Ultra; as the Japygium is of the ancient Calabria, or the mo» dern Calabria Citra.

LEUCOPETRTANS, in ecclesiastical history, a flnatical sect, which sprang up in the Greek and Eastern churches towards the close of the twelfth century : the fanatics of this denomination professed to believe in a double Trinity rejected wedlock, abstained from flesh, treated with the utmost contempt the sacraments of baptism and the Lord’s supper, and all the vari—

OU3 branches of external worship; placed the essence of religion in internal prayer alone, and maintained, as it is said, that an evil being or genius dwelt in the breast of every mortal, and could be expelled thence by no other method than by perpetual supplication to the Supreme Being.

LEUCOPHLEG'MACY, n. *. 1 From Xtv—

LEUCOPHLEGMAT'IC, adj.) KOC, white,

and $\tyna, phlegm. Paleness, with viscid juices and cold sweatings.

Spirits produce debility, flatulency, fevers, leuco-phlegmacy, and dropsies. Arbuthnot on Aliments.

Asthmatick persons have voracious appetites, and for want of a right sanguification are leueophlegma-tick. Arbuthnot.

LEUCOTHEA, or LEUCOTHOE, in mythology, the wife of Athamas, changed into a sea deity: see INO. She was called Matuta by the Romans. She had a temple at Rome, where all the people, particularly women, offered vows for their brother's children. They did not intreat the deity to protect their own children, because Ino had been unfortunate in hers. No female slaves were permitted to enter the temple ; or, if their curiosity tempted them to transgress this rule, they were beaten with great severity.

LEUCTRA, in ancient geography, a town of Bfflotia, west of Thebes, or between Plateae and Thespia, where the Lacedemonians were completely defeated by Epamic.ondas and Pelopidas the Theban generals. The Theban army consisted at most but of 6000 men, whereas that of the enemy was at least 18,000 ; but Epaminondas trusted most in his horse, wherein he had much the advantage, both in their quality and good management ; the rest he endeavoured to supply by the disposition of his men, and the vigor of the attack. He suffered none to serve under him in the engagement, but such as he knew to be fully resolved to conquer or die. He put himself at the head of the left wing, opposite to Cleombrotus, king of Sparta; concluding, that if he could break the body of the Spartans, which was but twelve men deep, while his own was fifty, the rest would be soon

put to flight. He closed his own with the sacred band, which was commanded by Pelopidas ; and placed his horse in the front. His right, from which he had drawn so many men, he ordered to fall back, in a slanting line, as if they declined to fight, that they might serve for a corps of reserve in case of need. This wise disposition of their few but resolute forces succeeded according to the wish of the Theban generals. Epaminondas advanced with his left wing, extending it obliquely, to draw the enemy ‘s right from the main body ; and Pelopidas charged them with such desperate speed and fury, at the head of his battalion, before they could reunite, that their horse were forced back upon their infantry, which threw the whole into the greatest confusion; so that though the Spartans were of all the Greeks the most expert in recovering from any surprise, yet their skill on this occasion failed them ; for the Thebans, observing the impression they had made with their horse, pushed furiously upon the Spartan king, who fell with vast numbers of his troops. Upon the death

of Cleombrotus, and several officers of note, the Spartans renewed the fight with double fury to recover his body. Epaminondas chose rather to gratify them ia that point, than to hazard the success of a second onset : and, leaving them in possession of their king’s corpse, marched straight against their other wing, commanded by Archidamus, and consisting chiefly of such auxiliaries as had not heartily engaged in the Spartan interest. These were so discouraged by the death of the king and the defeat of that wing, that they betook themselves to flight, and were presently after followed by the rest of the army. The Thebans, however, pursued them so closely, that they made a second dreadful slaughter among them ; which completed Epaminondas ‘s victory, who remained master of the field, and erected a trophy in memory of it. In this famed battle of Leuctra the Lacedemonians lost 4000 men, and the Thebans only 300.

LEVEE, n.s. FT. lever, from Lat. levo ; levee. Strictly, the time of rising : hence the attendants or concourse round a man of power in the morning.

Would’st thou be first minister of state ; To have thy levees crouded with resort Of a depending, gaping, servile court 1

Dry den.

Be levees ne'er so full, afford it room, And give it audience in the cabinet. Young. He chides the tardiness of every post, Pants to be told of battles won or lost, Blames his own indolence, observes, though late, 'Tis criminal to leave a sinking state, Flies to the levee, and, received with grace, Kneels, kisses hands, and shines again in place.

Cawper.

LE V'ELjjoi;., n. s., v. a. & v. n.) Sax. laepel ; LEV'ELLER, n. *. £old Fr. level;

LEV'ELNESS. j Lat. libellu.

Even; flat; plane; on a line with something else ; and, metaphorically, without gradations of superiority: a level is a surface thus equal, even, or flat ; it also signifies standard ; line of general or average height ; state of equality ; line of right, or direction ; rule ; plan ; and a mechanical instrument for ascertaining the truth or flatness of masons' and carpenters' work : a leveller is generally used in a bad sense, or for one who seeks to destroy the authority with the superiority of station : levelness, evenness ; equality.

He will thy foes with silent shame confound. And their proud structures levtl with the ground.

Sandys.

Those bred in a mountainous country oversize those that dwell on low levels. Id. Travels.

The glory of God, and the good of his church, was the thing which the apostles aimed at, and therefore ought to be the mark whereat we also level.

Hooker.

Dogged York, that reaches at the moon, Whose overweening arm I have plucked back, By false accuse doth level at my life.

Shakspeare. Henry VI. Our navy is addressed, our power collected, And every thing lies level to our wish.

Sliakspeare. As if that name,

Shot from the deadly level of a gun, Did muither her. Id. Romeo and

Juliet.

LEV EL,

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1 stood i’ the’ level

Of a full charged confederacy, and gave thanks To you that choked it. Id. Henry VIII.

We know by experience, that all downright rains do evermore dissever the violence of outrageous winds, and beat down and level the swelling and mountainous billows of the sea. llaleigh.

The river Tiber is expressed lying along, for so you must remember to draw rivers, to express their ievet-ui’sx with the earth. Peaclutm.

Reason can never assent to the admission of those brutish appetites which would overrun the soul, and level its superior with its inferior faculties.

Decay of Piety.

It might perhaps advance their minds so far Above the level of subjection, as T” assume to them the glory of that war. Daniel. Now shaves with level wing the deep. Milton.

Less bright the moon, But opposite in levelled west was set. Id.

Each at the head

Levelled his deadly aim. Id.

After draining of the level in Northamptonshire, innumerable mice did upon a sudden arise.

Hale’* Origin of Mankind.

It (Christianity) levelleth the rich and the poor, the prince and the peasant, the philosopher and idiot, in spiritual regards ; yea far

preferreth the meanest and simplest persons endued with tnie piety, above the mightiest and wealthiest who is devoid thereof.

Barrow.

He to his engine flew, Placed near at hand in open view, And raised it till it levelled right Against the glow-worm tail of kite.

Hudibras.

Love of her made us raise up our thoughts above the ordinary level of the world, so as great clerks do not disdain our conference. Sidney.

Thrice happy is that humble pair, Beneath the level of all care, C)v«r whose heads those arrows fly, Of sad distrust and jealousy. Waller.

There is a knowledge which is very proper to man, and lies level to human understanding, the knowledge of our Creator, and of the duty we owe to him. .

Tillotton.

The garden, seated on the level floor She left behind. Dryden's Boccace.

With unresisted might the monarch reigns; He levels mountains, and he raises plains ; And, not regarding difference of degree, Abased your daughter, and exalted me. Dryden.

One to the gunners on St. Jago's tower, Bid 'em for shame level their cannon lower. Id.

Behold the law

And rule of beings in your Maker's mind i And thence, like limbecks, rich ideas draw, To fit the levelled use of humankind. Id.

The level is from two to ten feet long, that it may reach over a considerable length of the work : if the plumb-line hang just upon the perpendicular, when the level is set flat down upon the work, the work is level ; but if it hangs on either side the perpendicular, the fioor or work must be raised on that side, till the plumb-line hang exactly on the perpendicular.

Moron's Mechanical Exercises. Providence, for the most part, sets us upon a level, and observes proportion in its dispensations towards US. Addison's Spectator.

Be the fair level of thy actions laid, As temperance wills, and prudence may persuade, And try if life be worth the liver's care. Prior.

You are an everlasting leveller ; you won't allow encouragement to extraordinary merit. Collier.

The time is not far off when we shall be upon the level. — I am resolved to anticipate the time, and be upon the level with them now : for he is so that neither seeks nor wants them. Atterbvry to Pope.

Be level in preferments, and you will soon be as level in your learning. Bentley.

Fired at first sight with what the muse imparts, In fearless youth we tempt the heights of arts ; While from the bounded level of our mind Short views we take, nor see the lengths behind.

Pope.

I suppose, by the stile of old friends, and the like, it must be somebody there of his own level ; among whom his party have, indeed, more friends than i could wish. Stfift.

It pleads exemption from the laws of sense, Considers reason as a leveller, And scorns to share a blessing with the crowd.

Young.

A level plain of a vast extent on land is certainly no mean idea ; the prospect of such a plain may be as extensive as a prospect of the ocean : but it can never fill the mind with any thing so great as the ocean itself. Burke on the Sublime.

Each sate him down, all sad and mute,

Beside his monarch and his steed, For danger levels man and brute,

And all are fellows in their need. Byron.

LEVEL, in the arts, is an instrument with which to draw a line parallel to the horizon, and thus to find the true level, or the difference of ascent or descent between several places, for con-vey ing water, draining fens, &c. There are several instruments of different contrivance and matter, invented for the perfection of levelling ; the principles of all which, however, may be found in the following : —

LEVEL, AIR. — The air-level is that which shows the line of level, by means of a bubble of air enclosed with some liquor in a glass tube of an indeterminate length and thickness, whose two ends are hermetically sealed. When the bubble fixes itself at a certain mark, made exactly in the middle of the tube, the plane or ruler wherein it is fixed is level. When it is not level, the bubble will rise to one end. This glass tube may be set in another of brass, having an aperture in the middle, whence the bubble of air may be observed. The liquor wherewith the tube is filled is oil of Tartar, or aqua secunda ; these not being liable to freeze as common water, nor to rarify and condense, as spirit of wine is. This application of a bubble of air was the invention of Dr. Hooke. There is one of these instruments, which, by the addition of sights, becomes much more exact. It consists of an air-level (fig. 1. plate LEVELS), about eight inches long, and seven or eight lines in diameter, set in a brass tube 2, with an aperture in the middle, C. The tubes are carried in a strong straight ruler, a foot long ; at whose ends are fixed two sights, 3, 3, exactly perpendicular to the tubes, and of an equal height, having a square hole, formed by two fillets of brass crossing each other at right angles, in the middle whereof is drilled a very small hole, through which the point on a level with the instrument is observed. The brass tube is fastened on the ruler by means of two screws. The top of the ball and socket is rivetted to a little ruler that springs, one end whereof is fastened with screws to the great ruler, and at the

other end has a screw, serving to raise and depress the instrument when nearly level. The following instrument, however, is still more commodious, because, though the holes be ever so small, yet they will still take in too great a space to determine the point of level precisely. It consists of an air-level, with telescope sights. This level, fig. 2, is like the la»t ; with this difference, that, instead of plain sights, it carries a telescope to determine exactly the point of level at a distance. Thp telescope is a little brass tube about fifteen inches long,

fastened on the same ruler as the level. At the end of the tube of the telescope, marked 1, enters the little tube, 1, carrying the eye-glass and a hair horizontally placed in the focus of the object-glass, 2 ; which little tube may be drawn out, or pushed into the great one, for adjusting the telescope to different sights; at the other end of the telescope is placed the object-glass. The screw, 3, is for raising or lowering the little fork, carrying the hair, and making it agree with the bubble of air when the instrument is level ; and the screw, 4, is for making the bubble of air E agree with the telescope : the whole is fitted to a ball and socket. M. Huygeus is said to be the first inventor of this level ; which has this advantage, that it may be inverted by turning the rules and telescope half round ; and if then the haircut the same point that it did before, the operation is just. A telescope may be added to any kind of level, by applying it upon, or parallel to, the base or ruler, when there is occasion to take the level of remote objects.

LEVEL, ARTILLERY FOOT, is in form like a carpenter's square, having its two legs or branches of an equal length ; at their juncture is a little hole, whence hangs a thread and plummet playing on a perpendicular line in the middle of a quadrant. It is divided into twice forty-five degrees from the middle. This instrument may be used on other occasions, by placing the ends of its two branches on a plane ; for, when the thread plays perpendicularly over the middle division of the quadrant, that plane is assuredly level. To use it in gunnery, place the two ends on the piece of artillery, which you may raise to any proposed height, by means of the plummet, whose thread will give the degree above the level. See fig. 3, plate LEVELS.

LEVEL, CARPENTER'S AND PAVIOR'S, consists of a long rule, to which is fitted, at right angles, another rule at the top of which is fastened a line, which, when it hangs over a fiducial line at right angles with the base, shows that the said base i s horizontal. Sometimes this level is all of one board. See figs. 4 and 5.

LEVEL, Dr. DESAGULIERS'S. Dr. Desaguliers contrived an instrument, by which the difference of level of two places, which could not be taken in less than four or five days with the best telescope levels, may be taken in as few hours. — To the ball C (fig. 6, plate LEVELS), is joined a recurve tube B A, with a very fine bore, and a small bubble at top A, whose upper part is open. If the air atC be so expanded with heat, as to drive the liquor to the top of the tube, the cavity A will icceive the liquor, which will come down again and settle at D, or near it, according to the level *f the place where the instrument is, as soon as

the air at C returns to the same temperament as to heat and cold. To preserve the same degree of heat, when the different observations are made, the machine is fixed in a tin vessel EF, filled with water up to g h, above the ball, and a very sensible thermometer has also its ball under water, that the height of the liquor at D, in each experiment may be noticed, when the thermometer stands at the same height as before. The instrument is carried by means of the wooden frame, which is set upright by the three screws, S, S, fig. 7, and a line and plummet P P, fig. 8. At the back part of the wooden frame, from the piece at top K, hangs the plummet P, over a brass point at N; fig. 9 represents a front view of the machine, supposing the fore part of the tin-vessel transparent ; and here the brass socket of the recurve tube, into which the ball is screwed, has two wings at I, I, fixed to the bottom, that the ball may not break the tube by its endeavour to emerge when the water is poured in at g h. After the doctor had contrived this machine, he considered, that, as the tube is of a very small bore, if the liquor should rise into the ball at A, in carrying the instrument from one place to another, some of it would adhere to the sides of the ball A, and, upon his descent in making the experiment, so much might be left behind, that the liquor would not be high enough at D to show the difference of the level ; therefore, to prevent that inconveniency, he contrived a blank screw, to shut up the hole at A, as soon as one experiment is made, that, in carrying the machine, the air in A may balance that in C, so that the liquor shall not run up and down the tube, whatever degree of heat and cold may act upon the instrument, in going from one place to another. Observe and set down the degree of the thermometer at which the spirit stands, and likewise the de-gree of the water in the barometer at D ; then screw on the cap at A, pour out the water, and carry the instrument to the place whose level you would know; then pour in your water, and, when the thermometer is come t the same degree as before, open the screw at top, and observe the liquor in the barometer. The doctor's scale for the barometer is ten inches long, and divided into tenths; so that such an instrument will serve for any height not exceeding ten feet, each tenth of an inch answering to a foot in height. The doctor made no allowance for the decrease of density in the air, because he did not propose this machine for measuring mountains (though, with a proper allowance for the decreasing density of the air, it will do very well), but for heights that are wanted to be known in gardens, plantations, and the conveyance of water, where an experiment that answers two or three feet in a distance of twenty miles, will render this a very useful instrument.

LEVEL, GUNNER'S, for levelling cannons and mortars, consists of a triangular brass plate, about four inches high, fig. 10, at the bottom of which is a portion of a circle, divided into 45° ; which number is sufficient for the highest elevation of cannons and mortars, and for giving shot the greatest range : on the centre of this segment of a circle is screwed a piece of brass, by means of which it may be fixed or screwed off at pleasure: tlie end of this piece of bras, is made so as to

serve for a plummet and index, in order to show the different degrees of elevation of pieces of artillery. This instrument has sometimes also a brass foot to set upon cannons or mortars, so as, when those pieces are horizontal, the instrument will be perpendicular. The foot of this instrument is to be placed on the piece to be elevated, in such a manner as that the point of the plummet may fall ou the proper decree. The most curious instrument for the use of the artillerist has been invented by the ingenious colonel Congreve, of the royal artillery ; having the following qualifications, *viz.* : 1. It will find the inclination of any plane, whether above or below the horizon. 2. By applying it either to the cylinder, or outside of any piece of ordnance, angles of elevation or depression may be given to the sixtieth part of a degree, with less trouble than the common gunners' quadrant, which only gives to the fourth part of a degre?. 3. It will give the line of direction for laying either guns or mortars to an object above or below

the horizon. 4. It will find the centre of metals of any piece of ordnance. 5. With it, a point may be found in the rear of a mortar-bed, in the vertical plane of the mortar's axis ; consequently a longer line of sight is given for directing them to the object than the usual way. 6. It answers all the purposes of a pair of callipers, with the advantage of knowing (to the 100th part of an inch) diameters, whsther concave or convex, without the trouble of laying the claws upon a diagonal scale. 7. On the sides of the instrument are the following lines, *viz.* equal-parts, solids, planes, and polygons, logarithms, tangents, versed sines, sines and numbers, plotting scales, and diagonal scale of inches for cutting fuses by. 8. In the lid of the instrument-case is a pendulum to vibrate half seconds. It is likewise of singular use in surveying; as (1.) It takes horizontal angles to the sixtieth part of a degree. (2.) Vertical angles. (3.) Levels. (4.) Solves right-angled plane triangles. (5.) Oblique-angled plane triangles. (6.) Answers all the purposes of a protractor, with the advantage of laying down angles exactly as taken in the field. LEVEL, MASON'S, is composed of three rules, so joined as to form an isosceles rectangle, somewhat like a Roman A ; at the vertex of which is fastened a thread, from which hangs a plummet, that passes over a siducial line, marked in the middle of the base, when the surface to which the level is applied is horizontal ; but declines from the mark when it is lower on the one side than on the other.

LEVEL, HUYGENS'. Mr. Huygens' invention consists of a telescope a, fig. 11, in form of a cylinder, going through a ferule, in which it is fastened by the middle. This ferule has two flat branches b, b, one above, and the other below : at the ends whereof are fastened little moving pieces, which carry two rings, by one of which the telescope is suspended to a hook at the end of the screw 3, and by the other a heavy weight is suspended, to keep the telescope in equilibrio This weight hangs in the box 5, which is almost filled with linseed-oil, or other matter that will not easily coagulate, for more aptly settling the balance of the weight and telescope. The instru-

ment carries two telescopes close and very parallel to each other ; the eye-glass of the one being against the object-glass of the other, that one may see each way without turning the level. In the focus of the object-glass of each telescope a little hair must be stretched horizontally, to be raised and lowered as occasion requires, by a little screw. The hook on which the instrument is hung is fixed to a flat wooden cross, to which is applied another hollow one, that serves as a case for the instrument, that the telescope may be secured from the

weather, and always in a condition to be used. The foot of this instrument is a round brass plate 4, to which are fastened three brass ferules, moveable by means of joints, whereon staves are put.

LEVEL, PLUMB, or PENDULUM, that which shows the horizontal lines by another line perpendicular to that described by a plummet or pendulum. This instrument, fig. 12, consists of two legs or branches, joined together at right angles, whereof that which carries the thread and plummet is about a foot and a half long ; the thread is hung towards the top of the branch, at the point 2. The middle of the branch where the thread passes is hollow, so that it may hang free every where ; but towards the bottom, where there is a little blade of silver 3, whereon is drawn a line perpendicular to the telescope 1, the cavity is covered by two pieces of brass, making as it were a kind of case, lest the wind should agitate the thread ; for which reason the silver blade is covered with a glass G, to the end that it may be seen when the thread and plummet are perpendicular : the telescope is fastened to the other branch of the instrument, and is about two feet long ; having a hair placed horizontally across the focus of the object-glass, which determines the point of the level. The telescope must be fitted at right angles to the perpendicular. It has a ball and socket, T>y which it is fastened to the foot, and was invented by M. Picard.

LEVEL, REFLECTING, that made by means of a pretty long surface of water representing the same object inverted which we see erected by the eye, so that the point where these two objects appear to meet is level with the place where the surface of the water is found. This is the invention of M. Marriotte. There is another reflecting level, consisting of a mirror of steel or the like, well polislred, and placed a little before the object-glass of a telescope, suspended perpendicularly. This mirror must make an angle of 45° with the telescope, in which case the perpendicular line of the telescope is converted into a horizontal line, which is the same with the line of level. This is the invention of M. Cassini.

LEVEL, SPIRIT, the most accurate levelling instrument. The following is a description of one of the best of these levels. Fig. 13. is a representation of the instrument mounted on its complete staves. The telescope, ABC, is made from fifteen inches to two feet in length, as may be required. It is a chromatic, of the best kind and shows the objects erect. In the focus of the eye-glasses are exceedingly fine cross wires, the intersection of which is evidently shown to be perfectly in the axis of the tube ; for, by turning

it round on its ”fo supporters D E, and looking through the telescope, the intersection of the wires will constantly cut the same part of the object viewed. By turning the screw a, at the side of the telescope, the object-glass at g is moved ; and thus the telescope is exactly adapted to the eye. If these cross wires are at any time out of their adjustment, which is discovered by their intersection not cutting the same part of the object during the revolution of the telescope on its axis, they are easily adjusted by means of the screws 6 b, placed on the telescope, about an inch from the end, for the eye. These screws act in perpendicular directions to one another, by unscrewing one and tightening the other opposite to the wire, so that, if connected with it, it may be moved either way at pleasure; and in this manner the other wire perpendicular to it may be moved, and thus the intersection of the wires brought exactly in the axis of the tube. To the telescope is fixed, by two small screws, cc, the level tube containing the spirits, with a small bubble of air : this bubble of air, when the instrument is well adjusted, will settle exactly in the same place, in or near the middle of its tube, whether the telescope be reversed or not on the supporters, which in this case are kept unmoved. It is evident that the axis of the telescope, or the intersection of the wires, must be in this case truly level. In this facile mode of adjustment consists the new improvement of the instrument; and it is hereby capable of being adjusted -by only one station and one object, which will at the same time determine it to be in a true level. If by change of weather, accident, or otherwise, the instrument should have lost its level adjustment, it may thus be readily restored and re-ad- justed at the first station ; which is an advantage none of the other instruments formerly made have been capable of. The two supporters D E, on which the level rests and turns, are shaped like the letter Y. The telescope rests within the upper part of them ; and the inner sides of each of these Y’s are tangents to the cylindrical tube of the telescope, which is turned to a true cylinder. The lower end of these supporters is inserted into a strong brass plate, F, and so as to stand perpendicularly on it. One is kept fast by a tightening screw G, and to the other is applied a fine threaded screw II, to adjust the tube when on its supporters to a true level. To the supporter D is sometimes applied a line of tangents as far as 12°, in order to take an angle of

depression or elevation to that extent. Between the supporters is also sometimes fixed a compass-box, I, divided into 360°, and again into four 90° ; having a centre pin, and needle and trigger, at d, to throw off the needle from the centre when not used ; so in this manner it constitutes a perfect circumferentor, connected with all the foregoing improvements. This plate is fixed on a conical brass ferule, K, which is adapted to the bell-metal frustum of a cone at top of the brass head of the staves, having a ball and socket, with three bell-metal joints, two strong brass parallel plates L,L, the four screws e,e,e,e, for adjusting; the horizontal motion, a regulatinw screw, M, to this motion, and a fastening screw) N, to lighten it on the cone when necessary.

The fastening screw N, and the regulating screw M, by which the whole instrument is mover! with accuracy through a small space in an hori zontal direction, was an addition of Mr. Ramsden's. To adjust it at the first station, the whole level being placed steadily on its staves, it must be rendered parallel to the axis of the telescope before adjusting the horizontal motion. To this end the telescope must be placed in a line with two of the screws e,e, and then levelled thereby till the bubble of air in the spirit-tube keeps its position in the middle, while turned about to three points, making nearly right angles at the centre to one another. The horizontal motion being thus adjusted, the rims of the Y's are to be opened, the telescope taken off, and laid the contrary way upon the supporters. If the bubble of air then rests exactly the same, the level and telescope are rightly adjusted to one another; but, if the bubble does not remain the same, the end to which the air-bubble goes must be noticed, and the distance of it from the telescope altered ; correcting one-half the error by the screws c, c, and the other half by the screws e,e. Now the intersection of the wires being directed to any distant object : if they continue to be precisely against it while the telescope is turned round on its Y's, it proves, as before mentioned, that the axis of the telescope coincides with the intersection of the wires, and that the instrument will give the true level direction.

LEVEL, WATER, that which shows the horizontal line by means of a surface of water, founded on the principle that water always places itself level. The most simple is made of a long wooden trough or canal, whose sides are parallel to the base ; so that, being equally filled with water, its surface shows the line of level. This is the chorobates of the ancients. It is also made with two cups fitted to the two ends of a pipe, three or four feet long, about an inch in diameter, by means of which the water communicates from the one to the other

cup ; and this pipe being moveable on its stand by means of a ball and socket, when the two cups become equally full of water, their two surfaces mark the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches long, fastened to each extremity of the pipe with wax or mastic. Into the pipe is poured some common or colored water, which shows itself through the cylinders, and thus the line of level is determined; the height of the water, with respect to the centre of the earth, being always the same in both cylinders : this level, though very simple, is yet very commodious for levelling small distances.

LEVELLING may be defined, the art which instructs us in finding how much higher or lower any given point on the surface of the earth is than another ; or, in other words, the difference in their distance from the centre of the earth. The practice of levelling, therefore, consists, 1. In finding and marking two or more points that shall be in the circumference of a circle whose centre is that of the earth 2. In comparing the points thus found with other poinis, to ascertain the difference in their distances from the earth's centre. With regard tc

(Vie theory of levelling, we must observe, that a plumb-line, hanging freely in the air, points directly towards the centre of the earth ; and a line drawn at right angles, crossing the direction of the plumb-line, and touching the earth's surface, is a true level only in that particular spot ; but if this line, which crosses the plumb, be continued for any considerable length, it will rise above the earth's surface, and the apparent level will be above the true one, because the earth is globular ; and this rising will be as the square of the distance to which the said right line is produced ; that is to say, however much it is raised above the earth's surface at one mile's distance, it will rise four times as much at the distance of two miles, nine times at the distance of three, &c. This is owing to the globular figure of the earth ; and this

rising is the difference between the true and apparent levels; the real curve of the earth being the true level, and the tangent to it the apparent level. Hence it appears, that the less distance we take betwixt any two stations, Ae truer will be our operations in levelling ; and so soon does the difference betwixt the true and apparent levels become perceptible, that it is necessary to make an allowance for it, if the distance betwixt the two stations exceeds two chains in length. The following is an infallible rule for determining the allowance to be made : multiply the number of Gunter's decimal statute chains, that are contained in length between any two stations where the levels are to be taken, by itself, and the product arising therefrom again by 124 ; which is a common multiplier for all man-ner of distances for this purpose on account of the earth's curvature : then divide the second product arising therefrom by 1 00,000 ; or, which is also the same, with the dash of the pen cut off five figures on the right hand side of the product, and what remains on the left side IS inches, and the five figures cut off decimal parts of an inch.

TABLE of CURVATURE of the EARTH, showing the quantity below the apparent level, at the end of every number of chains to 100.

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LEVELLING STAVES, instruments used in levelling, serving to carry the marks to be observed,

and at the same time to measure the heignts of those marks from the ground. They usually consist of two mahogany staves, ten feet long, divided into 1000 equal parts, and numbered at every tenth division

by ten, twenty, thirty, &c., to 1000 ; and on one side the feet and inches are also sometimes marked. See plate LEVELS, fig. 14. A vane, A, slides up and down upon each set of these staves, which by brass springs will stand at any part. These vanes are about ten inches long and four inches broad : the breadth is first divided into three equal parts, the two extremes painted white, the middle space divided again into three equal parts, which are less ; the middle one of them is also painted white, and the two other parts black ; and thus they are suited to all the common distances. These vanes have each a brass wire across a small square hole in the centre, which serves to point out the height corrected, by coinciding with the horizontal wire of the telescope of the level.

LEV'EN. See LEAVEN.

LEVENTIN, a considerable lake of Prussian Lithuania, which is joined to the lake of Anger-burg by a small canal. Fifty-six miles south-east of Konigsberg.

LE'VER, n. s. Fr.levier; Lat. levator. An important mechanical power; a species of balance. See the extract from Harris.

Have you any leavers to lift me up again, being down 1 Shakspeare.

Some draw with cords, and some the monster drive With rolls and levers. Denham.

In a lever, the motion can be continued only for so short a space, as may be answerable to that little distance betwixt the fulciment and the weight : which is always by so much lesser, as the disproportion betwixt the weight and the power is greater, and the motion itself more easy.

](‘ilkin‘3 Mathematical Magick.

Some hoisting leavers, some the wheels prepare.

Drydeii.

The second mechanical power is a balance supported by a hypomochlion ; only the centre is not in the middle, as in the common balance, but near one end ; for which reason it is used to elevate or raise a great weight ; whence comes the name lever, Harris.

The lever is the simplest of all machines, and is only a staight bar of iron, wood, or other material, supported on, and moveable round, a

prop called the fulcrum. Imison'i Elements.

LEVER, in mechanics, is a bar of iron or wood, one part of which being supported by a prop, all other parts turn upon that fulcrum as their centre of motion. This instrument is of two kinds. First, that in which the weight we desire to raise rests at one end of it, our strength is applied at the other end, and the prop is between both. When we stir up the fire with a poker, we make use of this lever; the poker is the lever, it rests upon one of the bars of the grate as a fulcrum; the incumbent fire is the weight to be overcome, and the other end held in the hand is the strength or power. In this, as in all the rest, we have only to increase the distance between the strength and prop to give the man that works the instrument greater power. The lever of the second kind has the fulcrum at one end, the strength is applied to the other, and the weight to be raised rests between them. In this lever, also, the greater the distance of the ful-LEV

crutn from the power, the greater is the work-nan's ability. See MECHANICS.

LEVF.R (Sir Ashton), a celebrated collector of curiosities in natural history, was the son of Sir D'Arcy Lever, knight, of Alcame, gentleman commoner of Corpus Christi College. On leaving it, he soon rendered his family seat famous by the best aviary in the kingdom. He afterwards extended his plan to all branches of natural history, and thus rendered his museum one of the most complete in the world. He died in 1788, and his museum was sold by lottery.

LEVERET, n. s, Fr. lievrct ; Ital. lepretta ; (Lat. Itpus}. A young hare.

Their travels o'er that silver field does show

Like track of leverets in morning snow. Waller. Ye squirrels, rabbits, leverets, rejoice,

Your haunts no longer echo to his voice ;

This record of his fate exulting view,

He died worn out with vain pursuit of you.

Cowper.

LE'VET, n. s. Fr. lever. A blast on the trumpet ; probably that by which the soldiers are roused in the morning.

He that led the cavalcade Wore a sowgelder's flagellet, On which he blew as strong a levet As well-fee'd lawyer on his breviate.

Hudibrat.

LEVE'ROOK, n. s. Sax. laperie. An old name for the lark, retained in Scotland.

The smaller birds have their particular seasons ; as, the leverook. Walton's Angler.

If the lufil fa' 'twill smoore aw the leverooks.

Scotch Proverbs.

LEVI, Heb. »ft, *i.e.* joined, the third son of Jacob by Leah, and the progenitor of the priests and Levites, was born about A. M. 2254. His treacherous and bloody combination with Si-meon, to murder the Schechemites, is recorded in Gen. xxxiv. : as well as Jacob's detestation of it, and his curse denounced against them for it, on his death-bed.

LEVI (David), an English Jew and mechanic, was born in London in 1740. Though of hum-ble rank, he became possessed of considerable information with regard to the antiquities of his own people; and, in 1787, entered into a pole-mical controversy with Dr. Priestley, whose Letters to the Jews he answered in two collections of essays, in the same epistolary form. He also wrote a Hebrew and English Lexicon, in 3 vols. ; a Translation of the Pentateuch, another of the Hebrew Liturgy, in 6 vols.; and Dissertations on the Mosaic Rites and Ceremonies ; On the Prophecies, &c. His death took place in 1799.

LKVTATHAN, n. «. Heb. fnˆ. A water or amphibious animal mentioned in the book of Job. Not inaptly applied by lord Byron to our men of war.

Canst thou draw out leviathan with an hook 1

Job.

« e may, as bootless, spend our vain command I [> on the' enraged soldiers in their spoil, As send our precepts to the leviathan, To come ashore. Shakspeare. Henry V.

More to embroil the deep, leviathan, And his unwieldy train, in dreadful sport Tempest the loosened brine.

Tliomion't Winter.

The magnificent description of the unicorn and of leviathan, in the same book, is full of the same heightening circumstances. Burke on the Sublime.

The armaments which thunder-strike the walls Of rock-built cities, bidding nations quake, And monarchs tremble in their capitals ; The oak leviathans, whose huge ribs make Their clay creator the vain title take Of lord of thee, and arbiter of war. Byron.

LEVIATHAN. Zoologists and commentators have been much puzzled to determine to what genus of animals the leviathan belongs. Some suppose it to be the whale ; others a species of land dragon, said to frequent the banks of the Red Sea; others the crocodile; while a fourth class do not reckon it an animal at all, but a whirlpool. This last opinion is too absurd to refutation, as the whole description, in Job xli., of his parts, passions, motions, strength, invulnerability, &c., evidently refer to an animated being, and not to a collection of dead matter, such as a whirlpool. Of the dragon nothing yet certainly known suits the description of the leviathan. See DRACO. As to the whale, many parts of the description, particularly verses sixth and seventh, cannot, by any construction of language, be made to apply to it ; for it is well known that the whale s ' skin' is often ' filled with barbed irons/ and ' his head with fishspears ;' and that those engaged in the whale-fishery ' part him' (his blubber, bones, spermaceti, &c.) ' among the merchants.' In a word, no animal, that we have any certain knowledge of, comes any thing near the grand and majestic description given of the leviathan, by his Creator, Jexcept the crocodile, who, it is well ascertained, cannot be ' drawn out' or taken ' with a hook,' or his ' jaw bored through with a thorn .' whose teeth are indeed ' terrible round about,' whose scales may be said to be ' his pride,' shut up together as with a close seal ; one so near to another, that no air can come between them ; so joined one to another, and

sticking together, ‘ that they cannot be sundered,’ &c. See LACERTA.

LEVIGATE, v. a. ? Lat. lavigo. To grind

LEVIGA’TION, n. s. 5 to an impalpable powder.

Levigation is the reducing of hard bodies, as coral ,

tutty, and precious stones, into a subtile powder, by

grinding upon marble with a muller ; but, unless the

instruments are extremely hard, they will so wear as

to double the weight of the medicine. Quincy.

The chyle is white, as consisting of salt, oil, and water, much levigated or smooth. Arbuthnot.

Levigation (is) the grinding down hard substances to an impalpable powder on a stone with a muller, or in a mill adapted to the purpose.

Parke’s Chemical Dictionary.

LEVIGATION, in pharmacy and chemistry. The mechanical process of grinding the parts of bodies to a fine paste, by rubbing the flat face of a stone called the muller, upon a table or slab called the stone. Some fluid is always added in this process. The advantage of levigation with a stone and muller, beyond that of triturating in a mortar, is, that the materials can more easily be scraped together, and subjected to the action of the muller, than in the other case to that of the pestle ; and, from the flatness of the two surfaces, vhey cannot elude the pressure.

LE'VITE, n. s. \ Lat. levita, from Heb.

LEVIT'ICAL, adj. S ˆ, a son of Jacob, the fa-ther of the tribe set apart as priests by Moses ; a Jewish priest; any priest: levitical, pertaining to the Levites or priesthood, or to the Jewish dispensation.

If therefore perfection were by the levitical priesthood, what further need was there that another priest should rise"? Heb. vii. 11.

Love procures truer servitude than necessity : mercy becomes well the heart of any man, but most of a Levite. Bp. Hall.

In the Christian church, the office of deacons succeeded in the place of the levites among the Jews, who were as ministers and servants to the priests. Ay life's Purer gon.

By the levitical law, both the man and the woman were stoned to death ; so heinous a crime was adultery. Id.

LEVITES, in a general sense, include all the descendants of Levi, among whom were the Jewish priests. In a more particular sense, the Levites were an order of officers in the Tewish church, who were employed in performing the manual service of the temple. They were obedient to the priests, the descendants of Aaron, in their ministration, and brought them wood, water, and other necessaries for the sacrifice. They sung and played upon instruments in the temple and other places. They applied themselves to the study of the law, and were the ordinary judges of the country, but always subordinate to the priests. Their subsistence was the tithes of corn, fruit, and cattle, throughout Israel : but the priests were entitled to a tenth of their tithes, by way of first-fruits to the Lord : forty-eight cities were assigned for the residence of the Levites, of which the priests claimed thirteen, six of which were appointed cities of refuge. They were consecrated, before they entered upon their ministry, by shaving their flesh, washing their clothes, and sprinkling with the water of expiation. Imposition of hands was used in consecration, and two bullocks were offered at the door of the tabernacle. They waited weekly, and by turns, in the temple, beginning their attendance on one sabbath and ending the next : during this time they were maintained out of the offerings, &c. In the time of Solomon the number of Levites, above the age of twenty, capable of serving, was 38,000.

LEVITICUS, a canonical book of the Old Testament, so called from its containing the laws and regulations relating to the priests, Levites, and

sacrifices.

LEVITY. Lat. levitas, leva. Lightness; applied to physical weight; to tempers of the mind ; to manners ; and to character.

They every day broached some new thing ; which restless levity they did interpret to be their growing in spiritual perfection. Hooker.

Our graver business frowns at this levity.

Sliakspeare.

He gave the form of levity to that which ascended ; to that which descended, the form of gravity.

Kaleigh.

It is more than probable that in Egypt it was very ordinary to admit lapsed persons, and even idolaters, to repentance, because of the strange levity of the nation. Jeremy Taylor.

Hopton abhorred the licence, and the levities with which he saw too many corrupted. Clarendon.

I unbosomed all my secrets to thee ; Not out of levity, but overpowered By thy request. Milton's Agonistet.

As we may well stoop to friendly complaisance, so we should take heed of falling into contemptible levity. Barrow.

He never employed his omnipotence out of levity or ostentation, but as the necessities of men required.

Calamv.

That spirit of religion and seriousness vanished, and a spirit of levity and libertinism, infidelity and profaneness, started up in the room of it.

Atterbury.

This bubble, by reason of its comparative levity to the fluidity that encloses it, would ascend to the top.

Bentley.

Where wigs with wigs, with sword-knots sword-knots strive,

Beaus banish beaus, and coaches coaches drive, This erring mortals levity may call. Pope.

Why spur the speedy 1 why with levities

New-wing thy short, short, day's too rapid flight 1

Young.

His cheerfulness is without lenty, and his pensive-ness without asperity. Johnson.

He was the only man I ever saw who was a greater fool than myself, where woman was the presiding star ; but he spoke of illicit love with the levity of a sailor, which hitherto I had regarded with horror.

Burns.

Such a regulation and right management of your thoughts and rational powers will be of great and general advantage to you in the pursuit of youthful knowledge, and a good guard against the levities and frantic sallies of the imagination. Mason.

Besides that ignorance, inattention, prejudice, rashness, levity, obstinacy, in short all those passions, and all those vices, which pervert the judgment in other matters, prejudice it no less in its more refined and elegant province. Burke on the Sublime.

LEVIZAC (John Pons Victor Lacoutz de), a French author, descended of a noble family in Languedoc, became an ecclesiastic when young, and obtained a canonry at Vabres. In 1776 he commenced his literary career, by a poem called Le Bienfait rendu, which gained the prize at the Floral games of Toulouse. He quitted France for Holland at the revolution, and afterwards settled in England as a teacher. Here he died in 1813. Levizac is advantageously known a» the author of Bibliotheque portative des e"crivains Francais, ou Choix des meilleurs morceaux Extraits de leurs Ouvrages ; Dictionnaire des Synonymes ; and other works designed to facilitate an acquaintance with the language and literature of France.

LEUNCLAVIUS (John), a learned German, descended of a noble family, and born at Amel-brun in Westphalia in 1533. He travelled through most countries in Europe. While he was in Turkey he collected materials for a History of the Ottoman Empire; which he

published, and several other pieces concerning it, in Latin. He also translated Xenophon, Zosimus, &c., into Latin. To a knowledge of the learned languages he added that of the civil law. He died at Vi-enna in 1593, aged sixty.

LEUSDEN (John), a celebrated philologer, born in 1624. He studied the learned languages and mathematics at Utiecht; and then visited

Amsterdam, to converse with the rabbies and perfect himself in the Hebrew tongue. After which he became professor of Hebrew at Utrecht, where lie acquired a great reputation, and died in 1699. He wrote many valuable works; the principal of which are, 1. Onomasticum Sacrum, 8vo. 2. Clavis Hebraica et Philologica Veteris Testament!, 4to. 3. Novi Testament! Clavis Graeca, cum An-DOtationibus Philologicis, 8vo. 4. Compendium Hiblicum Veteris Testamenti, 8vo. 5. Compendium Graecum Novi Testamenti ; the best edition of which is that of London, in 1668, 12mo. 6. Philologus Hebraeus, 4to. 7. Philologus Hebraeo-inixtus. 4to. 8. Philologus Hebraeo-Graecus, 4to. 9. Notes on Jonas, Joel, Hosea, &c.

LEUTMERITZ, a circle of Bohemia, lies in the north of that kingdom, and is bounded by Saxony and the circles of Rakonitz and Bunzlau. Its territorial extent is 1336 square miles: the Elbe traverses its whole length ; receiving here the Eger, the Bila, and the Polzen. The most lofty mountains of the Erzgebirg chain also penetrate this circle, and it is consequently in many places barren and uncultivated ; in others it is so fertile as to be called ‘ the Paradise of Bohemia.’ In its mountains are occasionally found garnets, and other precious stones. Here are also several mineral springs, among which is that of Toplitz. Population 292,000.

LEUTMERITZ, a town of Bohemia, the capital of the preceding circle,

is a neat well-built place, on the Elbe, over which is a wooden bridge, 1 646 feet long, leading to the fortress of There-sienstadt. It has a cathedral, theological seminary, and an academy, together with a productive fishery in the Elbe. Population 3600: thirty-six miles N. N. E. of Prague.

LEUTOMISCHL, a manufacturing town of Bohemia, containing a public school, manufactures of cloth and dye-stuffs, with extensive distilleries. In 1758 this town was taken by the Prussians, and suffered severely from fire in 1775. Population 4650. It is eighty-six miles east by south of Prague, and twenty-two east of Chrudim.

LEUTSCHAU, an old town in the county of Zyps, Hungary, the place of meeting for the provincial assemblies, stands partly on the slope of a hill. It has a large square, in which is a handsome church ; but is irregularly built. This town, formerly walled, was frequently taken and retaken during the commotions of the seventeenth century. It has also suffered considerably from fires. Population 4500 : twenty-five miles west by south of Szeben.

LEUWENHOEK (Anthony de), F. R. S., a celebrated Dutch physician and naturalist, born at Delft in 1632. He was of an ancient family, and acquired great reputation throughout all Eu-rope, by his experiments and discoveries. He particularly excelled in making glasses for microscopes and spectacles: he died in 1723. His letters to the Royal Society of London were printed at Leyden in 1722, in 4to.

LKV'Y, r.o.&n. *. > Fr. levee, lever; Lat.

I. KV'IAIH.E, adj.] leva. To raise; applied to the raising men and money for public purposes; and hpnce to the making war : leviable, t:iat which may be imposed or raised by law.

Levy a tribute unto the Lord of the men of wai

A umbers.

Treason has done his worst: nor steel, nor poison, Malice domestick, foreign levy, nothing Can touch him further. Shakspeare. Macbeth.

The sums which any agreed to pay, and we'V not brought in, were to be leviable by course of law.

Bacon's Henry VII.

He resolved to finish the conquest of Ireland, and to that end levied a mighty army.

Davies on Ireland.

The ancient discipline of the church, in imposing penances, was made so loose that the indulgence was more than the imposition, and began not to be an act of mercy but remissness, and absolution without amends : it became a trumpet, and a levy for the Holy War. Bp. Taylor.

Instead of a ship, he should levy upon his county such a sum of money. Clarendon..

They live in hatred, enmity, and strife, Among themselves, and levy cruel wars. Milton. These were the misdemeanors of those in the late times, who, instead of praying for their sovereign, did raise tumults, and (evy war against him, pretending by rude force to reduce him to his duty.

Barrow.

As none but kings have power to raise A lent/ which the subject pays, And though they call that tax a loan, Yet when ‘tis gathered ‘tis their own. Hudibras. They have already contributed all their superfluous hands, and every new levy they make must be at the expence of their farms and commerce.

Addison’s State of the I fur.

LEWD, adj. ~\ Sax. laepe&e, Ieo1 >; Goth.

LEWD’LY, adv. * lydt the people. Lay, not

LEWD’NESS, n. s. (clerical; common; vulgar:

LEWD’STER. ‘hence, low; gross; sensual;

wicked ; dissolute; licentious; libidinous. (Few

words have descended in their signification more

singularly.) A lewdster is a lecher.

For lewyd men this boke I wrot. Bp. Grosthead. I le loved fair lady Eltred, lewdly loved. Whose wanton pleasures him too much did please, That quite his heart from Guendcline removed.

Spenser. -

If some be admitted into the ministry, either void of learning, or lewd in life, are all the rest to be condemned? U'hiigiJ'te.

He is not lolling on a lend love-\>ed ; But on his knees at meditation. Shakspeure. A sort of naughty persons, lewdbi bent, Have practised dangerously against your state.

U.

Against such lewdsters, and their lechery, Those that betray them do no treachery. Id. So these great clerks their little wisdom shew To mock the lewd, as learned in this as thev.

Davies.

Then lewd Anchemolus he laid in dust, Who stained his stepdame's bed with impious lust.

Dryden.

Suffer no lewdness, nor indecent speech, The' apartment of the tender youth to reach. Id. There is no such slavery iii the dear name of a sister, that it should bind us to g've eitiiei aid or countenance to lewdness. Bp. Hull.

What do their prophetical writings contain beside pathetical comminations of judgment upon them, for their prodigious impieties, iniquities, and Imdnesses.

Barrow.

Damianus's letter to Nicholas is an authentick record of the letvdnesses committed under the reign of celibacy. Atterbury.

Then mark him weltering in his nastv sty, Bare his lewd transports to the public eye.

Canning.

LE WON ESS. See FORNICATION. Lewdness is punishable by our law by fine, imprisonment, &c. Formerly, when any man granted a lease of his house, it was usual to insert an express covenant, that the tenant should not entertain any lt-\vd women, &c.

LEWENZ, or LEVA, a large town of the palatinate of Barsch, in the interior of Hungary. It carries on a traffic in corn, cattle, wine, and tobacco ; and manufactured leather. Here are several distilleries ; and in the neighbourhood various mineral springs. Eight miles east of Barsch.

LEWES, an ancient, large, and well-built town of Sussex, seated on an eminence on the banks of the Ouse, fifty miles from London. A bloody battle was fought near it, wherein king Henry III. was defeated and taken prisoner by the barons. King Athelstan appointed two mint-houses here; and in the reign of Edward the Confessor it had 127 burgesses. The gate and two towers of its ancient castle, built in the eleventh century, still remain. Several religious houses appear to have been established here ; *viz.* a priory of Cluniac monks, founded in 1078, and the first of that order in England ; a priory of gray friars ; a monastery dedicated to St. James, and an hospital to St. Nicholas. A borough by prescription. The constables are chosen yearly. It has handsome streets and suburbs, with six parish churches. It carries on a good trade; and the Ouse, which runs through it, brings goods in barges from the port of New-haven, seven miles off. On this river are several iron works, where cannons, &c., are cast. A charity-school was opened in 1711, where twen-ty-eight boys are taught, clothed, and maintained. The market is on Saturday. Lewes is a handsome town, and one of the largest and most populous in the county, having two extensive suburbs, one on the west side of the town, and the other on the east bank of the river, called Cliffs. From a windmill in the neighbourhood is a fine view of the sea and the circumja-cent towns, gentlemen’s seats, &c., not to be exceeded in England. It sends two members to parliament, and lies thirty miles east of Chichester, and forty-eight south of London.

LEWIS. ” See Louis.

LEWIS (John), M. A., a learned English di-vine, born in Bristol in 1675, and educated at Exeter College, Oxford. Archbishop Tenison gave him the vicarage of Minster in the Isle of Thanet. lie published, 1. The Life of John Wickliffe, D. D. 8vo. 1720; 2. The History and Antiquities of the Isle of Thanet, 4to. 1723; 3. History of the Abbey and Church of Fevershatn ; 4to. 1727; 4. Life of William Caxton, the first printer in England, 8vo ; 5. A complete History of the Translations of the Bible into English ; 8vo. He also published Wickliffe 's Translation ; and died in 1746.

LEWIS, in geography, one of the largest of the Western Islands of Scotland, extending about sixty miles in length from north to south, and from thirteen to fourteen in breadth, consisting

of a greal number of isles and rocks, anil connected by an isthmus of six miles with the isle of Harris. See HARRIS. Lewis belongs to the county of Ross ; is divided by several channel.*, distinguished by several names, and portioned out among different proprietors ; but Lewis, strictly so called, stretches about thirty-six miles in length, from the north point of Bowling-head to the south extremity of Hussiness in Harris. The air is moderately cold, moist, and healthy; great part of the low ground is flooded with lakes; the rest is arable in many places, and fruitful in oats, barley, rye, flax, and hemp. The soil in these parts is a light sand, which the inhabitants manure with soot and sea-ware. Ot their corn they not only make malt for ale, but likewise a strong spirit called trestareg, which is whisky three times distilled. Lewis abounds with convenient bays and harbours, in which are caught, in great plenty, cod, ling, and herring : whales of different sizes are also often driven into the bays, and killed with harpoons. These bays afford great plenty of shell-fish, such as clams, oysters, cockles, muscles, limpets, welks. The cows, horses, sheep, goats, hogs, and deer, are all of a diminutive size; but the beef, mut-ton, and pork, are juicy and delicious : the horses are active and hardy : the deer, which are of the red kind, confine themselves to the chase of Oservaul, about fifteen miles in compass, which affords tolerable pasturage ; but in winter, when the ground is covered with snow, these animals feed on sea-ware. There is likewise a small grove of birch and hazel on the south-west side of Loch-Stornaway. Along this coast are •several natural mounts or forts, called duns; suchasDun-rowly,Dun-coradel, and Dun-eisten. There are also the remains of some old castles, and other monuments of antiquity. At Stornaway village are the ruins of a fortress destroyed by the English garrison sent thither by Oliver Cromwell. To the north of Brago there is a round tower built of large

stones, three stories high, tapering to the top, with a double wall, and a circular staircase between, by which one may go quite round the building. On the summits of the hills there are several cairns. The most remarkable monument of this kind appears by the village of Classerniss. Here we find thirty-nine pyramidal stones standing upright, about six or seven feet high from the surface, each about two feet in breadth. They are placed in form of an avenue,- eight feet wide ; the distance between every stone being six feet, and a single piece stands at the entrance. This avenue leads to a circle of twelve stones of the same dimensions, with one in the centre, thirteen feet in length, and shaped like a rudder: on the east, south, and west, sides of this circle, are four stones, forming three lines, or as it were rays from the body of the circle. This is supposed to have been a Druid temple; and tradition reports, that the chief Druid stood by the large stone in the centre, and harangued the audience. At the distance of a quarter of a mile there is another circle of the same nature ; but without the range and avenue. In all probability, these were places of worship erected by the Druids in time of Pagan superstition. The chief town is Stor-LEX

naway. Lewis is divided into the two parishes of Barvas and Eye, and in each of these one minister is settled.

LEWISTOWN, the capital of Mifflin county, Pennsylvania, on the Juniatta; fifty-six miles north-west of llarrisburg, 162 W. N. W of Philadelphia. It is regularly laid out, and contains a court-house, a jail, a market-house, a bank, and has considerable trade. Large quantities of wheat are annually exported.

LEWISTOWN, a post town of Sussex county, Delaware, North America, on Lewes Creek, three miles from its entrance into Delaware Bay; three miles W. N. W. of Cape Henlopen Light House, and 112 south of Philadelphia. It has an elevated and pleasant situation, and contains an academy, a presbyterian and a methodist meeting-house, &c. It was formerly the seat of justice for the county : and the neighbourhood contains salt works 10,000 feet in extent, which are considered a great curiosity.

LEX, law. The Roman laws were of three kinds : first, such as were made by their kings. Secondly, The laws of the XII tables, brought by the decemviri from Athens, &c. And, thirdly, Such as were proposed by the superior magistrates in the times of the republic. Romulus made laws by his sole authority ; but his successors sought the approbation of the people. The laws of the third class were enacted in the following manner: No law could be proposed but by some of the following magistrates, *viz.* the praetor, consuls, dictator, interrex, decemviri, military tribunes, triumviri, tribunes of the people. If any of these proposed a law, it was first committed to writing, and privately examined as to its utility and probable consequences, by persons qualified for the task ; sometimes it was referred to the whole senate for their sentiments. It was then hung up publicly for three market days, that all the people might have time to examine it, and consider its tendency : this was called legis promulgatio. If the person who framed the bill did not in the mean time drop it, the people were convened in comitia, and he addressed them in an oration, being also seconded by his friends setting forth the expediency and probable utility of such a law : this was called rogatio legis, because the address was always prefaced with this petitionary form of words, Velitis, jubeatisne, Quirites? 'Will you, O Romans, consent and order this law to pass ?' This being done, those that disliked the motion delivered their sentiments in opposition to it. An urn was then brought to certain priests who attended upon the occasion, into which were cast the names of the tribes, centuries, or curia, as the comitia happened to be tributa, centuriata, or curiata. See COMITIA. The names were shaken together, and the first drawn tribe or century was called praero-pativa, because their suffrages were first ajied. The curia first drawn was called principium, for the same reason. The other tribes, centuries, &c., were called tribus jure vocatie, centuri* jure vo-cata;, &;c. In this situation, the veto or negative voice of the tribunes of the people might put an end to the proceedings, and dissolve the assembly. The tribune's interference was called intercessio. Tlio consul also had it in his power to stop further proceedings, by commanding any of the holi days called feriae imperative to be observed. The comitia would also be dissolved by any per-son being seized with the falling sickness, or upon the appearance of any unlucky omen. If the business met with no interruption of this sort each of the people were presented with two tablets, on one of which was written A, on the other U. R. Their disapprobation of the bill was expressed by throwing into an urn the tablet inscribed A. Their assent by throwing in the one marked U. R. According to the majority of these tablets, the law passed or not. If it passed, it was written upon record, and carried into the treasury; this was called legem ferre. Afterwards it was engraved

upon plates of brass, and hung up in the most public and conspicuous places : this was termed legem figere, and a future repeal of this was legem refigere. If a law passed in the comitia curiata, it was called lex curiata ; if in the comitia centuriata, it had the name of lex centuriata ; but, if it passed in the comitia tributa, it was termed plebiscitum. The law, too, generally bore the names of the proposers, as lex /Elia, lex Fusia, &c.

LEXAWACSEIN, a river of Pennsylvania, which rises in Northampton county, on the east side of Mount Ararat, and falls into the Delaware, 174 miles above Philadelphia.

LEXIARCHI, at Athens, six officers, assisted by thirty inferior ones, whose business it was to fine such as came not to the public assemblies, and to make scrutiny among such as were present. They kept a register of the age, manners, and abilities of all the citizens, who were enrolled at the age of twenty.

LEX'ICON, n. s. -\ Gr. X«?«cov. A dic-LEXICOG'RAPHER, >tionary: a list of the LEXICOG'RAPHY. j words of a language, their etymology, and meaning. A lexicographer, Dr. Johnson defines, ' a writer of dictionaries,' andadds, with more spleen than accuracy, 'a harmless drudge that busies himself in tracing the original, and detailing the signification of words :' some lexicographers have been far from 'harmless;' and others aspire (circumspice!) to be something more than ' drudges :' lexicography is the act or art of making dictionaries.

Though a linguist should pride himself to have all the tongues that Babel cleft the world into, yet if he had not studied the solid things in them as well as the words and lexicons, he were nothing so much to he esteemed a learned man as any yeoman competently wise in his mother dialect only. Milton.

Commentators and lexicographers, acquainted with the Syriac language, have given these hints in their writings on scripture. Watts.

When Scaliger, whole years of labour past, Beheld his lexicon complete at last, And, weary of his task, with wondering eyes, Saw from words piled on words a fabrick rise, He cursed the industry, inertly strong, In creeping toil that could persist so long.

Murphy.

With equal justice may the lexicographer be derided, who, being able to produce no example of a nation that has preserved their words and phrases from mutability, shall imagine that his dictionary can embalm

his language, and secure it from corruption and decay. Jo7u«0n.

LEXINGTON, a post town of Middlesex county, Massachusetts, is eleven miles north-west of Boston. This town is famous for being the place where hostilities commenced between Great Britain and America, April 19th, 1775. A stone monument, with an inscription, is erected on the ground where the battle was fought.

LEXINGTON, a post town, the capital of Rock-bridge county, Virginia, on the north branch of fames River, is thirty miles S. S. W. of Staunton, and thirty-eight N. N. W. It is a handsome town, finely situated, and contains a court-house, a jail, a female academy, a presbyterian meeting-house, and a college. The surrounding country is fertile and well cultivated.

Washington College, at this place, was originally incorporated as an academy, in 1782, un-der the name of Liberty Hall Academy ; and in 1813 it was erected into a college, called Washington College, from general Washington, who presented to the institution 100 shares in the Jajnes River Canal, amounting to 20,000 dollars. This stock for a number of years was unproductive, but since the late war it has produced 16 per cent, per annum. There are two college buildings of brick, sixty feet by twenty, of two stories, a steward's house, and a refectory. In addition to these buildings, the trustees contemplate erecting a large college edifice. The college has a philosophical apparatus, and a library of about 2000 volumes. The board of trustees consists of thirty members. The executive government is entrusted to a president, who is also professor of belles lettres and mathematics, a professor of natural philosophy and astronomy, a professor of languages, and one tutor. The number of students is usually from forty to fifty.

The studies of which a knowledge is necessary, in order to admission into the freshman class, are Virgil, Greek Testament, Minor Dialogues of Lucian, and the fundamental rules of arithmetic ! The studies of the first year are the Latin and Greek languages ; of the second year, mathematics, arithmetic, algebra, Euclid six books, surveying, navigation, and conic sections : of the third, natural philosophy, astronomy, and geography ; and, of the fourth, belles lettres, logic , natural and political law.

LEXINGTON, a post town of Fayette county, Kentucky, twenty-two miles E. S. E. of Frankfort, and seventy-four east of Louisville. It is situated on Town Fork, a small stream which falls into the south branch of the Elkhorn. It is regularly laid out, and contains a court-house ; a jail; a market-house ; a theatre; a masonic hall; a museum ; a public library; a female academy ; a university ; three banks, one of which is a branch of the United States bank ; three printing offices, from each of which is issued a weekly newspaper; and seven houses of public worship, thcee for Presbyterians, one for Episcopalians, one for Baptists, one for Methodists, and one for Roman Catholics.

Lexington has had a very rapid growth. In 1797 it contained only about fifty houses. It is the largest town in Kentucky, and the most wealthy and bestbuilttown in the western states. The houses are mostly of brick, and the streets are paved and have sidewalks; the principal

one is about eighty feet wide. Near the centre of the town is a pullic square, surrounded with brick buildings.

This town contains various and extensive manufacturing establishments, among which are four nail manufactories, two copper and tin manufactories, two steam paper-mills, a number of large rope-walks, cotton and woollen manufactories, distilleries, breweries, &c. — The site on which the town is built is in a gently descending valley, which is one of the most fertile tracts in the United States. The climate is healthy and delightful, and in the vicinity there are a num-ber of handsome country seats. The surrounding country is greatly admired for its rich and beautiful scenery.

Transylvania University was incorporated here a number of years ago, and is now about to be reorganised, and it is intended to place it on a respectable foundation. There are two college edifices of brick, one erected geveral years since, the other an elegant edifice built in the

year 1818, and calculated to accommodate about 100 students. The library contains between 1000 and 2000 volumes. Large additions are about to be made to it. The philosophical apparatus is now small, but is soon to be made complete. The funds consist of lands, houses, house lots, and bank stock. There are thirteen trustees, all elected biennially by the legislature. The executive government is entrusted to a president, a professor of languages, one of mathematics ana natural philosophy, one of chemistiy and mineralogy, two tutors, a professor of law. and four professors in the medical department.

The institution, as a regular college, is not perfectly organised ; all the votes, however, necessary for this purpose, have been passed by the trustees, and the officers are elected. The requisitions for admission, and the course of study, are to be the same as at the university in Cambridge, Massachusetts, and it is intended to make the standard of education as high as in any of the eastern colleges. Commencement to be held on the second Wednesday in July, and followed by a vacation of about eleven weeks. Instruction is already provided for in the departments of law and medicine. The course of medical lectures was commenced for the first time in November 1817.

LEYDEN (in Lat. Lugdunum Batavorum), one of the largest and finest cities of Holland, in the department of Delft, abounding with canals, along which are rows of lofty trees, that afford very pleasant walks. Its form is oblong ; its length being about two miles from east to west. A small branch of the Rhine runs through it. Over the canals are, it is said, 145 bridges, chiefly of stone or brick, and the streets are remarkably clean. The street in which the stadthouse is situated, is accounted equal to almost any in Europe. The university is the oldest in the republic, and has a library rich in MSS.; a botanical garden well stocked with exotic plants ; an anatomy-hall and observatory. The professors are generally eminent. Its buildings, however, have a humble appearance; but the government in 1819 began a more stately structure. The number of professors is twenty-LEY

one ; * it. four of theology, four of law, four of medicine, four of

philosophy, and five of languages. Their lectures are delivered in Latin; and their salaries, independent of a house, and the small fees paid by the pupils, are rarely more than £250. The number of students is at present about 300. Of these about eighty stuay medicine, 100 philosophy and languages, and the others divinity and law. The session, as in other Dutch colleges, commences in September, and terminates at the end of June. Greek literary names are connected with the history of Lcyden. We may instance those of fleinsius, Scahger, and Salmasius. In the centre of the town is a very ancient and lofty castle or fort, considered traditionally as a work of the Ro-mans. It rises above the tops of the highest houses, and affords an extensive view of the town and neighbourhood. The church of St. Peter, the finest of the seventeen that belong to the city, is a large and handsome building in the Gothic style. It contains the tombs of Boerhaave, P. Camper, and Meerman. The cloth manufacture formerly flourished to such a degree, that 100,000 pieces have sometimes been made in a year. At present this is in a low state ; but soap and indigo are manufactured in large quantities. The city sustained a long and severe siege, in 1573, against the Spaniards. That illustrious magistrate, Adrian de Verf, when the citizens represented to him the havoc made by the famine during the siege, and insisted upon his surrendering, said, ‘ Friends, here is my body, divide it among you to satisfy your hunger, but banish all thoughts of surrendering to the cruel and perfidious Spaniards.’ They took his advice, and told the Spaniards, they would hold out as long as they had one arm to eat and another to fight. In 1655 the city was greatly depopulated by the plague: in January 1795 the citizens opened their gates to the French under general Pichegru, and in 1809 there was a remarkably destructive explosion of gunpowder here. The neighbourhood is quite a flat country, too wet for tillage, but productive of pasturage, cheese, and butter. It is ten miles north-east of the Hague, and twenty-two south-west of Amsterdam.

LEY DEN PHIAL, a phial coated on the inside and outside with tinfoil, or other conducting substance, and furnished with a brass wire and knob, for giving the electrical shock. See ELECTRICITY.

LLYSERA, in botany, a genus of the polygamia superflua order, and syngetiesia class of plants; natural order forty-ninth, composite : receptacle naked ; pappus paleaceous ; that of the disc plumy : CAL. scarious.

LKYTA, one of the southern Philippine Islands, ninety-five miles in length, by thirty-eight in average breadth. The soil is very fertile, and the mountains abound in deer, cows, wild hogs, and fowls; cocoas

grow without culture. The air is pure and healthy. A chain of mountains runs north-west and south-east; and so materially do they influence the climate! that the seasons differ ertirely on the different sides of them. The inhabitants are mild, peaceable, and hospitable. They are about

9000, and pay a tribute in wax, rice, ?.nd cloth Long. 124° 40’ E., lat. 10° 50’ N.

LEZAY-MARNESIA (Claude Francis Ad-rian, marquis de), was born at Metz in 1735, and early entered the French army. He soon, however. r**:ired *o his estate of St. Julian, near Lons-lˆSaunter, and devoted himself to study. At the revolution he declared in favor of the abolition of the feudal impositions and privileges, and was chosen a deputy from the states-general and the constituent assembly : alarmed, however, at the prospect of affairs, he emigrated to North America in 1790, taking with him artists, laborers, &.C., to form a colony on a tract of land which he had purchased of the Scioto company. This scheme failing, he returned to France in 1 792. During the reign of terror he was confined in prison at Besancon, but, the fall of Robespierre liberating him, he returned home to his old pursuits. At length, after passing some time in Switzerland, he settled at Besanˆon, where he died November 9th, 1800. He was the author of Essai sur la Mineralogie du Bailliage d’Orge-let, en Franche-Compte, 1778, 8vo. ; Le Bon-heur dans les Campagnes, 1778, 8vo. ; Les Paysages, ou Essais sur la Nature, a poem ; Lettres e”crites des Rives de 1’Ohio, 1792, 8vo. ; and other works.

LEZAY-MARESIA (Adrian, count de), son of the preceding, distinguished himself as a diplo-matist. He also was for a short time in the army. He then studied diplomacy at the school of Brunswick, and at the revolution travelled in Germany and England. Returning to France he became a contributor to the Journal de Paris. Having too freely predicted the destruction of the directorial government, he was forced to leave Paris. He returned under the consulate, and was employed on various diplomatic missions. In 1806 he was made prefect of the department of the Rhine and Moselle, and in 1810 of that of the Lower Rhine, in which office he was continued on the restoration of the Bourbons. He died at Strasburgh in 1814, owing to a fall. He translated into French, Schiller’s tragedy, Don Carlos, and wrote several popular political tracts.

LHOYD, LHUYD, or LHWYD (Humphrey), a learned antiquarian of the

sixteenth century, born at Denbigh, who applied to the study of physic ; and, living mostly in the walls of Denbigh Castle, practised there as a physician ; and died in 1570. He wrote and translated several pieces relative to history and antiquities ; in particular the history of Cambria, now called Wales, from Caradoc of Langcarvan, &c., but died before it was finished : however, Sir Henry Sidney, lord president of Wales, employed Dr. David Powel to finish it, who published it in 1584. A new and improved edition of this work was published in 1774.

LHUYD (Edward), keeper of the museum at Oxford, was a native of South Wales, and was educated at Jesus College, Oxford, where he was created M. A. July 21st, 1701. He succeeded Dr. Plot as keeper of the Ashmolean museum, and had the use of all Vaughan's collections. With incessant labor and great oxaot-

ness he searched into the Welsh antiquities; collected and perused a great deal of ancient and valuable matter from their MSS. ; transcribed all the old charters of their monasteries that he could find ; travelled several times over Wales, Cornwall, Scotland, Ireland, Armonc Bretagne; compared their antiquities, and made observations on the whole ; but died in July 1709, before he had digested them, as he had intended, :nto the form of a treatise on the ancient inhabitants of this island. He communicated many observations to bishop Gibson, whose edition of the Britannia he revised ; and published Archseo-logia Britannica, giving some additional account of the languages, histories, and customs of the original inhabitants of Great Britain, from collections and observations in travels through Wales, Cornwall, Bas Bretagne, Ireland, and Scotland.

LI'ABLE, adj. \ Old Fr. liable, tier.

LIABJL'ITY, n. s.) Subject or obnoxious to ; not exempt : taking to after it.

But what is strength without a double share

Of wisdom? vast, unwieldy, burthensome,

Proudly secure, yet liable to fall

By weakest subtleties. Hfilton's Agonistes.

Seeing they are so liable to sin, they must consequently stand often in need of God's mercy to bear with them, and to pardon them. Barrow.

The English boast of Spenser and Milton, who neither of them wanted genius or learning ; and yet both of them are liable to many censures.

Dry den.

They think, that whatever is called old must have the decay of time upon it, and truth too were liable to mould and rottenness. Locke.

This, or any other scheme, coming from a private hand, might be liable to many defects. Swift.

And that the apostle John should be liable to thi* censure, whose temper seemed to be all love and sweetness. Mason.

People are not liable to be mistaken in their feelings, but they are very frequently wrong in the names they give them, and their reasonings about them.

Burke, on the Sublime.

LI'AR. From LIE, which see. This word, as Dr. Johnson observes, would analogically be lier ; but this orthography has prevailed, and the convenience of distinction from Her, he who lies down, is sufficient to confirm it.

He approves the common liar, fame, Who speaks him thus at Rome. Stiakspeare. I do not reject his observation as untrue, much less condemn the person himself as a liar, whensoever it seems to be contradicted. Boyle.

Thy better soul abhors a liar's part, Wise is thy voice, and noble is thy heart.

Pope.

The maxim, in vino veritas — ‘a man who is well warmed with wine will speak truth,’ may be an argument for drinking, if you suppose men in general to be liars : but, Sir, I would not keep company with a fellow who lies as long as he is sober, and whom you must make drunk before you can get a word of truth out of him. Johnson.

LI ARD, adj. Fr. Hard ; It. leardo ; Scot. Hart, Hard. Roan ; gray ; hoary.

That was wel twight, min owen Hard boy.

Chaucer.

LIBAiS’IUS, a famous Greek rhetorician and sophist in the fourth century, born at Antioch. Me had a great share in the friendship of Julian

the Apostate, who offered him the dignity of Prafectus Praetorio; but Lib*nius refused it, thinking the title of sophist,. 01 professor of eloquence, much more honorable. There are still extant several of his letters and Greek orations, by which he acquired great reputation ; but his style is somewhat affected and obscure. He was a Pagan. Basil and Chrysostom were his disciples about A. D. 360. His letters were published at Amsterdam in 1738; his orations at Venice, in 1755.

LIBANDMANTIA, in antiquity, a species of divination performed with frankincense ; which, if it presently caught fire, and sent forth a grateful odor, was esteemed a happy omen, and vice rersfe.

LIBANUS, a cnain of mountains of Turkey in Asia, which lie between Syria Proper and Palestine, extending from west to east from the Mediterranean Sea as far as Arabia. The summits are always covered with snow, but below there are very pleasant and fertile valleys. Dr. Claike saw snow here in July. The basis of the range is limestone, which presents itself occasionally in the shape of towers, castles, and various grotesque forms ; near Damascus there are immense caverns, one of which is capable of containing 4000 men. They were formerly famous for great numbers of cedar trees, but now there are very few remaining. Geographers distinguish this chain into Libanus and Antilibanus ; the latter of which lies on the south side of the valley, rising near the ruins of Sidon, and terminates in Arabia, in N. lat. 34°. They are separated from each other at an equal distance throughout, by a

country called by the ancients Ccelesyria.

LIBATION, n. s. Lat. libatio, a libo, to taste or drink, or to offer a drink-offering. The act of pouring wine on the ground in honor of some deity ; the wine poured.

In digging new earth pour in some wine, that the vapour of the earth and wine may comfort the spirits, provided it be not taken for a heathen sacrifice, or libation to the earth. Bacon's Natural History.

They had no other crime to object against the Christians but that they did not offer up libations, and the smoke of sacrifices, to dead men.

Stillingfleet on Romish Idolatry.

The goblet then she took, with nectar crowned, Sprinkling the first libations on the ground.

Drifden's jEneid.

The ancient Greeks and Romans used at their meals to make libations, pour out and even drink wine in honour of the gods. Brand's Antiquities.

In sighs he worships his supremely fair, And weeps a sad libation in despair ; Adores a creature, and, devout in vain, Wins in return an answer of disdain. Cowper.

LIBATION, amongst the ancient Greeks and Romans, was an essential part of solemn sacrifices. It was also performed alone, as a drink-offering, by way of procuring the protection and favor of the gods, in the ordinary affairs of life. Libations, according to the different attributes of the gods in honor of whom they were made, consisted of different liquids, but wine was the most usual. It was always unmixed with water. Libations of water, of honey, of milk, and of oil, were called vn<j>a\ia I«pa. They were all made

with a serious deportment and solemn prayer. At sacrifices, the libation, after it had been tasted by the priest, and handed to the bystanders, was poured upon the victim. At entertainments, a little wine was generally poured out of the cup, before the liquor began to circulate, to show their gratitude to the gods for the blessings they enjoyed. Libations were also in use among the Hebrews, who poured a hiu of wine on the victim after it was killed, and the several pieces of the sacrifice were laid on the altar, ready to be burnt.

LIBAU, a seaport of Russia, in the government of Courland, on the Baltic. It exports hemp, linseed, &c., the produce of the surrounding country. This town was a place of trade in the thirteenth century ; but it afterwards suffered severely from the wars which the Swedes carried on here. It has a commodious harbour for small vessels. Population 5000. Sixty-six miles west of Mittau.

LIB’BAPcD, ». *. Teut. liebard, leupard; Lat. leopardus. See LEOTARD. A leopard. Obsolete.

Make the libbard stern

Leave roaring, when in rage he for revenge did

yearn. Spenser.

The libbard and the tiger, as the mole

Rising, the crumbled earth above them threw.

Milton.

The torrid parts of Africk are by Piso resembled to a libbard’s skin, the distance of whose spots represents the disperseness of habitations, or towns of Africk. Brerewood.

LI’BEL, n. «.,v.n. &w.o.ˆ Tr.libelle; Lat. LI’BELLEE, n. t. > libellus, a little

LI’BELLOUS, adj. 3 book. The civil

law retains its primitive sense of a written charge ; and hence it has been used to signify a defamatory writing, satire, or lampoon : as a neuter verb it formerly took against after it, see the extracts : as a verb

active it means to de-fame ; satirise : a libeller is the author of a libel : libellous, defamatory.

And it hath ben seid, whoevere leveth his wyf, give he to hir a libel of forsaking. Wiclif. Matt. v.

Sweet scrawls to fly about the streets of Rome : What's this but libelling against the senate !

Shakspeare.

He, like a privileged spy, whom nothing can Discredit, libel* now 'gainst each great man. Donne.

It was the most malicious surmise that had ever l*:en brewed, howsoever countenanced by a libellous pamphlet. Wotton.

For the stopping of that deluge of libellous invectives, wherewith we are thus impetuously overflown.

Bp. Hall.

Though some make slight of liMi, yet you may see by them how the wind sits : as take a straw and throw it up in the air, you shall see by that which way the wind is, which you shall not do by casting up a stone. More solid things do not show the complexion of the times so well as ballads and libelt.

Selden.

Are we reproached for the name of Christ? that ignominy serves hut to advance our future glory ; every such lihel here becomes a panegyrick there.

Decay of Piety.

Good heaven ! that sots and knaves should be so

vain, To wish their vile resemblance may remain !

And stand recorded, at their own request,

'lo future days, a liltel or a jest. Dryden.

'1 he squibs are those who, in the common phrase, are called libellers

and lampooners. lade .

Hut what so pure which envious tongues will

spare? Some wicked wits have libelled all the fair. Pope.

The common libellers, in their invectives, tax tae church with an insatiable desire of power and wealth, equally common to all bodies of men.

Swift.

LIBEL, libellus famosus, taken in its largest and most extensive sense, signifies any writing, picture, or the like, of an immoral or illegal tendency ; but, in a peculiar sense, is used to denote a malicious defamation of any person, and especially a magistrate, made public by either printing, writing, signs, or pictures, in order to provoke him to wrath, or expose him to public hatred, contempt, and ridicule. The direct tendency of these libels is the breach of the public peace, by stirring up the objects of them to revenge, and perhaps to bloodshed. The communication of a libel to any one person is a publication in the eye of the law : and therefore the sending an abusive private letter to a man is as much a libel as if it were openly printed, for it equally tends to a breach of the peace. With regard to libels, in general, there are two remedies ; one by indictment, and another by action. The former for the public offence ; for every libel has a tendency to break the peace, or provoke others to break it : which offence is the same, whether the matter contained be true or false ; and therefore the defendant, on an indictment for publishing a libel, is not allowed to allege the truth of it by way of justification. But in the remedy by action on the case, which is to repair the party in damages for the injury done him, the defendant may, as for words spoken, justify the truth of the facts, and show that the plaintiff has received no injury at all. What was said with regard to words spo-ken, will also hold in every particular with regard to libels by writing or printing, and the civil actions consequent thereupon : but as to signs or pictures, it seems necessary always to show, by proper innuendos and averments of the defendant’s meaning, the import and application of the scandal, and that some special damage has followed ; otherwise it cannot appear that such libel by picture was understood to be levelled at the plaintiff, or that it was attended with any actionable consequences. In a civil action, then, a libel must appear to be false, as well as scandalous: for, if the charge be true, the plaintiff has received no private injury, and has no ground to demand a compensation for himself, whatever offence it may be against the public peace: and

therefore, upon a civil action, the truth of the accusation may be pleaded in bar of the suit. But, in a criminal prosecution, the tendency which all libels have to create animosities, and to disturb the public ˆeace, is the sole consideration of the law. And, therefore, in such prosecutions, the only points to be considered are, first, the making or publishing of the book or writing ; and, secondly, whether the matter be criminal : and, if both these points are against thfe defendant, the offence against the

public is complete. The punishment of such libellers, for either making, repeating, printing, or publishing the libel, is a fine, and such corporal punishment as the court in its discretion shall inflict ; regarding the quantity of the offence, and the quality of the offender. By the law of the XII. tables, at Rome, libels, which affected the reputation of another, were made a capital offence : but, before the reign of Augustus, the punishment became corporal only. Under Valentinian it was again made capital, not only to write, but to publish, or even to omit destroying them. Our law, in this and many other respects, corresponds rather with the middle age of Roman jurisprudence, when liberty, learning, and humanity, were in their full vigor, than with the cruel edicts that were established in the dark and tyrannical ages of he ancient decemviri, or the later emperors. In this and other instances, where blasphemous, immoral, treasonable, schismatical, seditious, or scandalous libels are punished by the English law, some with a greater, others with a less de-gree of severity, the liberty of the press, properly understood, is by no means infringed or violated. See LAW, part I.

LIBELLA, a piece of money amongst the Romans, being the tenth part of the denarius, and equal in value to the as. It was called libella, as being a little pound, because equal to a pound of brass. Its value in our money is 1 ob. 1 qu., or a halfpenny farthing. See MONEY.

LIBELLA, or LIBELLULA, in zoology, a genu3 of four-winged flies, called in English dragon-flies, or adder-flies. The characters are these: the mouth is furnished with jaws ; the feelers are shorter than the breast: and the tail of the male terminates in a kind of hooked forceps. See ENTOMOLOGY.

LIBELLI was the name given to the bills which were put up amongst the Romans, giving notice of the time when a show of gladiators would be exhibited, with the number of combatants, and other circumstances. This was called munus pronunciare, or proponere. These bills were sometimes termed edicta. These public notices were given by the person who designed to oblige the people with the show, and were frequently attended with pictures representing the engagement of some celebrated gladiator. This custom is alluded to by Horace.

LIBELLI FAMOSI, defamatory libels. Seneca calls them contumoliosilibelli, defamatory rhymes which by a Roman ordinance were punishable with death.

LIBELLULA. See LIBELLA.

LIBENTINA, a surname of Venus, who had a temple at Rome, where young girls, arrived at puberty, dedicated their juvenile toys.

LIBER, in botany, the bark or rind, principally of trees. This is conceived to consist of a number of cylindric and concentric surfaces, whose texture is reticular, and in some trees plainly extrusible exery way, as the fibres are soft and flexible. While in this condition, they <tre either hollow regular canals, or have inter-stitial spaces, which serve the office of canals. The nutritious juice which they are continually icceiving, remains in part in them, makes them VOL. XII.

grow in length and thickness, and sli<?ngthei>s and brings them closer together ; and thus tl»e texture, which was before reticular, becomes an assemblage of straight fibres ranged vertically and parallel to each other ; that is, as they are thus altered behind one another, they by degrees become a new substance, more woody, called blea.

LIBER. Lat. i. e. free, in mythology, a tine conferred on Bacchus, in memory of the freedom which he granted to the people of Bccotia : or, perhaps, because wine, whereof he was the reputed deity, delivers men from care, and sets their mind at ease and freedom.

LIBERA, in mythology, a goddess whom Ci-cero, in his book De Nat. Deor., styles the daughter of Jupiter and Ceres. Ovid, in his Fasti, says that the name was given by Bacchus to Ariadne. Libera is exhibited on medals as a kind of female Bacchus, crowned with vine leaves.

LIB'ERAL, adj. & n. *. ~\ Fr. liberal ; Lat.

LIBERALITY, n. *. fliberalis. Free ; un—

LIB'ERALLY, adv. j controlled ; bland ;

generous; munificent: hence not mean in any way ; not of low origin or birth ; genteel : it takes of before things and to before persons.

If any of you lack wisdom, let him ask of God. that giveth to all men liberally, and upbraideth not.

James i. 5.

Some are unwisely liberal, and more delight to give presents than to pay debts. Sir P. Sidney.

Her name was Mercy, well-known over all To be both gracious and eke liberal.

Faerie Queene.

Sparing would shew a worse sin than ill doctrine. Men of his way should be most liberal ; They're set here for examples.

Shaktpeare. Henry VIII. Why should he despair, that knows to court With words, fair looks, and liberality1!

Sliakspeare.

There is no art better than to be liberal of praise and commendation to others, in that wherein a man's self hath any perfection. Bacon's Etsay*

Such moderation with thy bounty join, That thou may'st nothing give that is not thine ; That liberality is but cast away, Which makes us borrow what we cannot pay.

Venhatr.

Needs must the power That made us, and for us this ample world, Be infinitely good, and of his good As liberal and free as infinite.

Milt < m.

The painter is, as to the execution of his work, a mechanic ; but as to his conception, his spirit, and design, he is hardly below even the poet, in liberal art. »«teThe liberal are secure alone. For what we frankly give, for ever i? our own.

Graiivitle.

Several clergymen, otherwise little fond of obscure terms, are, in their sermons, very liberal of all those which they find in ecclesiastical writers, as if it were our duty to understand them. Swift.

He seldom lives frugally, who liv«s by chance. Hope is always liberal, and they that trust her prc mises make little scruple of revelling to-day, on the profits of to-morrow. Johnson.

Virtue and vice are oftentimes so near neighbours that we pass into each other's borders without obser-

vation, and think we do justice when we are cruel ; or call ourselves liberal when we are loose and foolish in our expenses. Paley.

Poets, and orators, and painters, and those who cultivate other branches of the liberal arts, have without this critical knowledge succeeded well in their several provinces. Burke on the Sublime.

LIBERALIA, feasts celebrated by the ancient Romans, in honor of Liber or Bacchus, the same with those which the Greeks called Dionysia,

and Dionysiaca. Varro derives the name of this feast from liber, considered as a noun adjective, and signifying free ; because the priests were free from their functions, and eased of all care, during the time of the liberalia, as the old women officiated in the ceremonies and sacrifices of these feasts.

LIBERIA, in Roman antiquity, a festival observed on the sixteenth of the kalends of April, at which time the youth laid aside their juvenile habit for the toga virilis, or habit peculiar to grown men. See TOGA.

LIBERTINE, n. s. & adj. 1 French libertin ;

LIB'ERTINISM, n. ». J I-atin libertinus

(liber, free). Uncontrolled by law or morals ; legally, the son of a freedman.

And steuene, ful of grace and of the strengthe, made woundris and grete signes in the peple, but sutnme risen of the synagoge that was clepid of liberty ni — disputiden with steuena. Wielif. Dedit vi. When he speaks,

The air, a chartered libertine, is still ;

And the mute wonder lurketh in men's ears,

To steal his sweet and honied sentences.

Shahspeare. Henry V. They say this town is full of couzenage, Disguised cheaters, prating mountebanks. And many such like libertines of sin.

Shahpeare.

There are men that marry not, but choose rather a libertine and impure single life, than to be yoked in marriage. Bacon.

Man, the lawless libertine, may rove, Free and unquestioned. Howe's Jane Shore.

Some persons are forbidden to be accusers on the

score of their sex, as women ; others on the score 'of

their age, as pupils and infants ; others on the score

of their condition, as libertines against their patrons.

Aylife's Parergon.

That word may be applied to some few libertines in the audience. Collier's View of the Stage.

That spirit of religion and seriousness vanished all at once, and a spirit of liberty and libertinism, of infidelity and profaneness, started up in the room of it. Atterbury's Sermons.

Alight not the queen make diligent inquiry, if any person about her should happen to be of libertine principles or morals 1 Swift's Project.

Thus the atheists, libertines, and despisers of religion, usually pass under the name of free-thinkers.

Swift.

Want of power is the only bound that a libertine puts to his views upon any of the sex. Clarissa.

LIBERTINES, LIBERTINI, in ecclesiastical history, a religious sect, which arose in 1525, whose principal tenets were, that the Deity was the sole operating cause in the mind of man, and the immediate author of all human actions; that, consequently, the distinctions of good and evil, which hud been established with regard to those actions, were false and groundless, and that men could not, properly speaking, commit sin ; that religion consisted in the union of the spirit or

rational soul with the Supreme Being; that all those who had attained this happy union, by sublime contemplation and elevation of mind, were then allowed to indulge, without exception or restraint, their appetites or passions ; that all their actions and pursuits were then perfectly innocent; ana that, after the death of the body, they were to be united to the Deity. They likewise said that Jesus Christ was nothing but a mere je ne sai quoi, composed of the Spirit of God, and of the opinion of men. — These maxims occasioned their being called Libertines ; and the word has been used in a bad sense ever since. They spread principally in Holland and Brabant. Their leaders were Quintin, Picard, Pockesius, Ruffus, and Chopin, who joined with Quintin, and be-came his disciple. This sect obtained a footing in France through the favor of Margaret, queen of Navarre, and sister to Francis I., and found patrons in several of the reformed churches.

LIBERTUS, or LIBERTINUS, among the Ro-mans, a freed man, or a person set free from a legal servitude. These still retained some mark of their ancient state : he who made a slave free having a right of patronage over the libertus ; so that, if the latter failed of showing due respect to his patron, he was restored to his servitude; and if the libertus died without children, his patron was his heir. See SLAVE. In tV beginning of the republic, libertinus denoted the son of a libertus or freedman: but afterwards before the time of Cicero, and under the emperors, the terms libertus and libertinus, as Suetonius remarks were used synonymously.

LIB'ERTY, n. s. Fr. liberit ; Lat. libertus, liber. Freedom ; state of being uncontrolled ; hence opposed to necessity and restraint ; exemption; privilege; leave; permission. See the fine exemplification and caution of Burke below.

Where the spirit of the Lord is there is liberty.

2 Cor. ill. 17.

My master knows of your being here, and hath threatened to put me into everlasting liberty, if I tell you of it ; for he swears, he'll turn me away.

Shaktpeare.

His majesty gave not an intire country to any, much less did he grant jura regalia, or any extraordinary liberties. Davies. Justly thou abhorrest

The son, who, on the quiet state of man,

Such trouble brought, affecting to subdue

Rational liberty ; yet know withal

Since thy original lapse, true liberty

Is lost, which always with right reason dwells.

Milton.

Not assuming the liberty to find fault with princes, we should practise the duty of seeking God for his blessing on their proceedings. Barrow.

Liberty is the power in any agent to do, or forbear, any particular action, according to the determination, or thought of the mind,

whereby either of them is preferred to the other. Locke.

I shall take the liberty to consider a third ground which, with some men, has the same authority. Id. O Liberty ! thou goddess, heavenly bright !

Profuse of bliss, and pregnant with delight,

Eternal pleasures in thy presence reign. Addison.

It is some loss of liberty to resolve on schemes beforehand. Shenstune.

Show me the man, who knows what life is, who-

dreads death ; and I'll show thee a prisoner who dreads his liberty. Slente.

A'ews-writers by profession, are the rudest braw-lers for liberty, a subject which they seem to have considered least of any. Joineriaiw, 1772.

The effect of liberty to individuals is, that they may do what they please : we ought to see what it will please them to do, before we risk congratula-tions which may be soon turned into complaints.

Burke.

Now, Virtue, now thy powerful succour lend, Shield them for liberty who dare to die —

Ah, Liberty ! will none thy cause befriend 1 Are these thy sons, thy generous sons, that fly t

Beat tie.

LIBERTY may be considered as either natural or civil.

LIBERTY, NATURAL. The absolute rights of man, considered as a free agent, endowed with discernment to know good from evil, and with power of choosing those measures which appear, to him to be most desirable, are usually summed up in one general appellation, and denominated the natural liberty of mankind. This natural liberty consists properly in a power of acting as one thinks fit, without any restraint or control, un-less by the law of nature ; being a right inherent in us by birth, and one of the gifts of God to man at his creation, when he endued him with the faculty of free-will. But every man, when he enters into society, gives up a part of his natural liberty, and, in consideration of receiving the advantages of mutual commerce, obliges himself to conform to those laws which the community has thought proper to establish. And this species of legal obedience, and conformity, is infinitely more desirable than that wild and savage liberty which is sacrificed to obtain it. For no man, who considers a mo-ment, would wish to retain the absolute and uncontrolled power of doing whatever he pleases : the consequence of which would be, that every other man would also have the same power ; and then there would be no security to individuals in any of the enjoyments of life.

LIBERTY, POLITICAL, therefore, or civil liberty, which is that of a member of society, is no other than natural liberty, so far restrained by human laws (and no farther) as is necessary and expedient for the general advantage of the public. Hence we may collect, that the law, which restrains a man from doing mischief to his fellow-citizens, though it diminishes the natural, increases the civil liberty of mankind ; but every wanton and causeless restraint of the will of the subject, whether practised by a monarch, a nobility, or a popular assembly, is a degree of tyranny. Nay, that even laws themselves, whether made with or without our consent, if they regulate and constrain our conduct in matters of mere indifference, without any good end in view, are laws destructive of liberty : whereas, if any public advantage can arise from observing such precepts, the control of our private inclinations, in one or two particular points, will conduce to preserve our general freedom in others of more importance, by supporting that state of society which alone can secure our independence. Thus the statute of Edward IV., which forbade the fine

gentlemen of those times (under the degree of a lord) to wear pikes upon their shoes or boots of more than two inches in length, was a law that savored of oppression ; because, however ridiculous the fashion then in use might appear, the restraining it by pecuniary

penalties could serve no purpose of common utility. But the statute of Charles II. which prescribes a thing seemingly as indifferent, *viz.* a dress for the dead, who were all ordered to be buried in woollen, was a law consistent with public liberty ; so far as »t encouraged the staple trade in wool, on which in a great measure depended the universal good of the nation. So that laws, when prudently framed, are by no means subversive, but rather introductive, of liberty ; for (as Mr. Locke has well observed) where there is no law there is no freedom. On the other hand, that constitution or frame of government, that system of laws, is alone calculated to maintain civil liberty, which leaves the subject entire master of his own conduct, except in those points wherein the public good requires some direction or restraint. But the reader will find this subject amply discussed in the introduction to our article LAW.

LIBERTY, in mythology, was a goddess both among the Greeks and Romans. Among the former she was invoked under the title Eleutheria, and by the latter she was called Libertas, and held in singular veneration ; temples, altars, and statues, were erected in honor of her. A very magnificent temple was consecrated to her on mount Aventine by Tiberius Gracchus, before which was a spacious court, called atrium liber-tatis. The Romans also erected a new temple in honor of Liberty when Julius Caesar established his empire over them, as if their liberty had been secured by an event which destroyed it.

LIBERTY OF THE PRESS. The art of printing, soon after its introduction, was looked upon in England, as well as in other countries, as merely a matter of state, and subject to the coercion of the crown. It was therefore regulated with us by the king's proclamations, prohibitions, charters of privilege and license, and finally by the decrees of the court of star-chamber, which limited the number of printers, and of presses which each should employ, and prohibited new publications unless previously approved by pro-per licensers. On the demolition of this odious jurisdiction in 1641, the long parliament of Charles I., after their rupture with that prince, assumed the same powers as the star-chamber had exercised with respect tc the licensing of books: and in 1643, 1647, 1649, and 1652 (Scobell, i. 44, 134, ii. 88, 230), issued their ordinances for that purpose, founded principally on the star-chamber's decree of 1637. In 1662 was passed the statute 13 and 14 Car. II. c. 33, which, with some few alterations, was copied from the parliamentary ordinances. This act expired in 1 679 : but was revived by statute 1 .lac. II. c. 17, and continued till 1692. It was then continued for two years longer by statute 4 W. & M. c. 24 ; but though frequent attempts were made by the government to revive it in the subsequent part of that reign (Com.

Journ. 12th of February 1694, 26th of November 1695, 22nd of October 1696, 9th of February 16< >7. 31st of

January 1698), yet the parliament resisted it so strongly, that it finally expired, and the press became properly free in 1694, and has continued so ever since. The liberty of the press, however, so essential to the existence of a free state, con- «ists not in freedom from any criminal matter that may be published, but in laying no previous restraints upon publications. Every free man has undoubtedly a right to lay what sentiments he pleases b' fore the public ; to forbid this, is to destroy the freedom of the press : but if he publishes what is improper, mischievous, or illegal, he must take the consequences of his own temerity. See LIBEL and LAW. To subject the press to the restrictive power of a licenser, in the manner above mentioned, is to subject all freedom of sentiment to the prejudices of one man, und make him the arbitrary and infallible judge of all disputed points in learning, religion, and government. But to punish (as the law does at present) any dangerous or offensive writings which, when published, shall, on a fair and impartial trial, be adjudged of a pernicious tendency, is necessary for the preservation of peace and good order, of government and religion, the only solid foundations of civil liberty. Thus the will of individuals is still left free ; the abuse only of that free-will is the object of legal punishment. Neither is any restraint hereby laid upon freedom of thought or inquiry ; the disseminating or making public of bad sentiments, destructive of the ends of society, is the crime which society corrects. A man (says a fine writer on this subject) may be allowed to keep poisons in his closet, but not publicly to vend them as cordials. And to this we may add, that the only plausible argument heretofore used for restraining the just freedom'of the press, 'that it was necessary to prevent the daily abuse of it,' will

entirely lose its force, when it is shown (by a seasonable exertion of the laws) that the press cannot be abused to any bad purpose without incurring a suitable punishment : whereas, it can never be used to any good one when under the control of an inspector. So true will it be found, that to censure thp licentiousness is to maintain the liberty of the press. It is curious and gratifying to observe how much the late experiment of an established censorship of the press in France confirms the above reasoning.

LI BETH HA, in ancient geography, a town and fountain of Thessaly. The latter was called the fountain of song, and was situated in Mag-i.esia, a district of Macedonia annexed to Thessaly. The town stood on mount Olympus, where it verges towards Macedonia : hence the muses are called Libethrides. (Virgil). Strabo y > laces on Helicon, not only Hippocrene, and the temple of the Muses, but also the caves of the nymphs Libethrides.

LIBETHRIUS MONS, LIBETHRUS, in ancient geography, a mountain of Boeotia, forty stadfa from Coronea ; where stood the statues of the - Muses, and of the Libethrides. It was either conjoined with, or at least very near to, Helicon.

LIBID'INOUS, adj. Lat. libidinosus, libido, lust. Lustful ; wanton.

None revolt fron > the faith because they must not look upon a woman to lust after her, but because they are much more restrained from the perpetration of their lusts. If wanton glances and libidinous thoughts had been permitted by the gos-pel, thev would have apostatized nevertheless.

Bentley.

LIBITINA, in Roman mythology, a goddess who presided over funerals. She was the same with the Venus infera or Enithymbia of the Greeks. She had a temple at Rome, where was lodged a certain piece of money for every person who died, whose name was recorded in a.register called Libitinae ratio. This practice was established by Seryius Tullius, in order to obtain an account of the number of annual deaths in the city of Rome, and consequently the increase or decrease of its inhabitants. All things requisite for funerals were sold in the temple of Libitina.

LIBITINARII, from Libitina, were under-takers whose office it was to take care of funerals, prepare all things necessary upon the solemn

occasion, and furnish every article required. They kept a number of servants to perform the working part of the profession, such as the pollinc-tores, vespillones, &c. See FUNERAL.

LIBLILLA. See LIBELLA.

LIBNA, in ancient geography, a sacerdotal city in the tribe of Judah, a place of strength, as appears from Sennacherib's laying siege to it. In Jerome's time it was a village, called Lobna, in the territory of Eleutheropolis.

LIBRA, in astronomy, one of the twelve signs of the zodiac, exactly opposite to Aries ; so called because when the sun is in this sign, at the autumnal equinox, the days and nights are equal, as if weighed in a balance. See ASTRONOMY.

LIBRA also denotes the ancient Roman pound, borrowed from the Sicilians, who called it litra. The libra was divided into twelve unciae or ounces, and the ounce into twenty-four scruples. The divisions of the libra were, the uncia, one-twelfth ; sextans, one-sixth ; quadrans, one-fourth ; triens, one-third ; quincunx, five ounces ; semis, the half pound or six ounces ; septunx, seven ; bes, eight ; dodrans, nine ; dextrans, ten ; deunx, eleven ; lastly, the as weighed twelve ounces or one libra. The Roman libra was used in France for the proportion of their coin, till the time of Charlemagne, or perhaps till that of Philip I. in 1093, their sols being so proportioned as that twenty of them were equal to the libra. By degrees it became a term of account ; and every thing of the value of twenty sols was called a livre. Hence too £. stands for pound sterling, and Ib. for a pound in weight.

LIBRA PENSA, in law books, denotes a pound of money in weight. It was anciently the cus-tom not only to tell the money but to weigh it ; because many cities, lords, and bishops, having their mints, coined money, and often too light; for which reason, though the pound consisted of 20s., they always weighed it.

LIBRARII, among the ancients, were a sort of copyists who transcribed, in beautiful or at least legible characters, what had been written by the notarii in notes and abbreviations.

LIBRARY.

LI’BR.‘V k Y, n. s. 7 Fr. librarie, of Lat. liber,

LIBRA’RIAN. Ja book. A collection of

books ; the librarian, the appointed keeper of

them. It was also used formerly for a transcriber

of books or MSS.

Then as they ‘gan his library to view, And antique registers for to avise, There chanced to the prince’s hand to rise An ancient book, hight Briton’s monument

Faerie Queene.

I have given you the library of a painter, and a catalogue of such books as he ought to read.

Dryden’s Dufresnoy.

Charybdis thrice swallows, and thrice refunds the waves: this must be understood of regular tides. There are indeed but two tides in a day, but this is the error of the librarians. Broome.

There is a book, which we may call

(Its excellence is such) Alone a library, though small :

The ladies thumb it much. Cmvper.

A library, pharmaceutically disposed, would have the appearance of a dispensatory, and might be properly enough so called. Cumberland.

LIBRARY. ‘ Books,’ says lord Bacon, ‘ must follow sciences, not sciences books’ ; yet modern bibliographers, or bibliomaniacs, as they have most aptly been termed, have followed the mere impulse of collecting books, and especially those which are rare and costly, until bibliography itself has been called a science, and the time and taste to profit by what is collected have ba;n alike sacrificed to this most unscientific mania. Mere costliness is with collectors of this description no small proof of value, an-1 rareness an absolute demonstration.

We confess we would sooner employ the humblest man of letters, connected with the typogra-phical composition of our work, to form for us a library, than the popular author of a late Library Companion, the high priest of these sacri-ficers of sovereigns and good sense to iˆOjbutg!}? partialities, and title-page learning. The latter, tor instance, can omit in this misnamed Young Man's Guide and Old Man's Comfort, Hooker's Polity, Dr. Lardner's, Dr. Leland's, and Hannah More's works ; Reid and Stewart, and Hartley and Brown, on the Philosophy of the Mind : while he can recommend the purchase of the *Universal History, Ancient and Modern, in the folio edition, and bound in white calf by C. Lewis, with marble edges and full chased gilt backs,' ' for the not unconscionable price of £52 10*.' 'To which work add,' he says, 'Calmet Ilistoire Universelle, 17 vols. 4to.'

Although, therefore, we had designed to afford the reader some hints toward the formation of a general library in the present article, we feel distanced, we confess, into absolute heresi-archs on the subject of bibliography, by the re-cent and most appalling contribution to it just named ; and shall, under the article RARE AND SCARCE BOOKS, endeavour to furnish a brief view of the criteria of this important part of that science, according to this and other writers : while the article USEFUL BOOKS will contain our opinions on the selection and arrangement of a general library, as distinct from any professional one (respecting which a professional and exclu-

sive catalogue can alone be consulted), within the means, and really uniting the cultivation at a moral feeling with the literary taste of our intelligent readers.

Some authors refer the origin of libraries to the Hebrews; and observe that the care they took to preserve their sacred books, and the memory and actions of their ancestors, became an example to other nations, particularly to the Egyptians. Osymandyas, king of Egypt, according to Diodorus, had a library built in his palace with this inscription over the door, ¥YXHS IATPEION. Nor were the Ptolemies, who reigned in the same country, less curious and magnificent in books. The first who erected a library at Athens was the tryant Pisistratus ; though Strabo ascribes the honor to Aristotle. That of Pisistratus was transported by Xerxes into Persia, and was afterwards brought back by Seleucus Nicator to Athens. Some time after it was plundered by Sylla, and re-established by Adrian. Plutarch informs us, that under Eu-menes there was a library at Pergamus, containing 200,000 books. Tyrannion, a celebrated grammarian, contemporary

with Pompey, had a library of 30,000 volumes. That of Ptolemy Philadelphus contained, according to A. Gellius, 700,000 rolls, accidentally burnt by Caesar's soldiers. The most celebrated libraries of ancient P.r.me were the Ulpian and the Palatine. Those of Paulus ˆEmilus (who conquered Perseus) of LuciliiiR, Lucullus, of Asinius Pollio, Atticus, Julius Severus, Domitius Serenus, Pamphilius Martyr, and the emperors Gordian and Trajan, are also much celebrated ; and Constantine erected a magnificent one in his new capital. Pope Nicholas laid the foundation of the Vatican in 1450. It was destroyed by the constable Bourbon, in the sacking of Rome; restored by pope Sixtus V. ; and considerably enriched with books from that of Heidelberg, plundered by count Tilly in 1622. One of the most complete libraries in Europe was said to be that erected at Florence by Cosmo de Medicis, over the gate of which is written, Labor absque labore. The emperor's library at Vienna, according to Lambecius, consists of 80,000 volumes : but the Bodleian at Oxford used to exceed that of any university in Europe. See OXFORD and CAM-BRIDGE. The principal public libraries in Lon-don, besides that of the British Museum, are those of the college of Heralds, of the college of Physicians, of Doctors' Commons, Gray's Inn, Lincoln's Inn, Inner Temple, and Middle Tem-ple ; that of Lambeth, founded by archbishop Bancroft in 1610, for the use of succeeding archbishops of Canterbury, and increased by the benefactions of archbishops Abbot, Sheldon, and Tennison, and said to consist of at least 15,000 printed books, and 617 volumes in MS. ; that of Red-cross Street, founded by Dr. Daniel Williams, a Presbyterian divine, and since enriched by many private benefactions : that of the Royal Society; that of St. Paul's, and of Sion College. See LONDON and ROYAL SOCIETY.

LIBRARY, TUB COTTON IAN, originally consisted of 958 volumes of original charters, grants, instruments, letters of sovereign princes, transactions between this and other kingdoms and

states, genealogies, histories, registers of monasteries, remains of Saxon laws, the book of Genesis, thought to be the most ancientGreek copy extant, and said to have been written by Origen in the second century, and the curious Alexandrian MS. copy, in-Greek capitals. This library is kept in the British Museum, with the large and valuable library of Sir Hans Sloane, amounting to upwards of 42,000 volumes, &c.

LIBRARY, THE KING'S, at St. James's, was founded by Henry, eldest son of James I., and made up partly of books, and partly of MSS., with many other curiosities, for the advancement of learning. It has received many additions from the libraries of Isaac Casaubon and others.

LIBURNA, or LIBURNICA, denoted a kind of light and swift skiff, used by the Liburnians in their piracies, for which they were noted. Horace.

LIBRATION. Fr. librarian ; Lat. libratio, libra, a balance. The state of being balanced. Its astronomical use is well explained in the extract below.

This is what may be said of the balance, and the libration of the body. Dryden't Dufresnov.

Those planets which move upon their axis, do not all make entire revolutions ; for the moon maketh only a kind of libration, or a reciprocated motion on her own axis. Grew.

Their pinions still

In loose libmtions stretched, to trust the void Trembling refuse. Thomson's Spring.

Libration is the balancing motion or trepidation in the firmament, whereby the declination of the sun, and the latitude of the stars, change from time to time. Astronomers likewise ascribe to the moon a libratory motion, or motion of trepidation, which they pretend is from east to west, and from north to south, beacause that at full moon they sometimes discover parts of her disk which are not discovered at other times. These kinds are called, the one a libration in longitude, and the other a libration in latitude. Besides this, there is a third kind, which they call an apparent libratwn, and which consists in this, that when the moon is at her greatest elongation from the south, her axis, being then almost perpendicular to the plane of the ecliptick, the sun must enlighten towards the north pole of the moon some parts which he did not before, and that, on the contrary, some parts of those which he

enlightened towards the opposite pole are obscured : and this produces the same effect which the libration in latitude does.

Diet. Trev.

LI BURN IA, in ancient geography, a district of Illyricum, extending towards the Adriatic, between Istria on the west, Dalmatia on the east, and mount Albius on the north.

LIBURNIANS, LIBURNII, or LIBURNI, the people of Liburnia. The apparitors, who at the command of the Roman magistrate summoned the people from the country, were called Li-burnii, because generally from Liburnia.

LIBURNUM was a species of litter made in form of Liburnian skiffs, wherein the noblemen of Rome were carried, and where they sat at their ease, either reading or writing. Juvenal.

LIBURNUS, in ancient geography a mountain of Campania.

LIBYA, in a general sense, among the Greeks, denoted Africa, a name derived from

lub, thirst, being a dry and thirsty country. AFRICA.

LIBYA, in a more restrained sense, was the middle part of Africa, extending north and west according to Pliny, between the Mediterranean on the north, and Ethiopia on the east ; and was divided into the Hither or Exterior Libya, and the Farther or Interior. The former lay between the Mediterranean on the north, and the Farther Libya, and Ethiopia beyond Egypt, on the south. Ptolemy. The Farther or Interior Libya was a vast country, lying between the Hither Libya on the north, the Atlantic Ocean on the west, the Ethiopic on the south, and Ethiopia beyond Egypt on the east. Ptolemy. LIBYA, in a still more restrained sense, called, for distinction's sake, Libya Propria, was a northern district of Africa, and a part of the Hither Lybia ; situated between Egypt on the east, the Mediterranean on the north, the Syrtis Major and the Regio Tripolitana on the west, the Garamantes and Ethiopia beyond Egypt on the south : now the kingdom and desert of Barca.

LIBYCUM MARE, the Libyan Sea, a part of the Mediterranean, on the coast of Cyrene.

LIBYSSA, a town and river of Bithynia, where the tomb of Hannibal the Great was visible in Pliny's time.

LICE, plural of LOUSE, which see. LFCENSE, TJ.O. &n.«.ˆj Fr. licence; Lat. LI'CENSER, 7i. s. I licentia, liceo, to be

LICEN'TIATE, v.a. &n.s. I lawful. To permit LICEN'TIOUS, adj. (by law : liberty ;

LICEN'TIOUSLY, adv. permission ; grant

LICEN'TIOUSNESS, n. $. J of freedom, or leave ; freedom from restraint of any kind : hence extravagant liberty ; contempt of restrain or authority : licentiate, probably from the Fr. licentier, seems an unnecessary synonyme of the verb license : as a noun it means one who uses or acts upon a license, rule, or law ; hence it is a Spanish literary distinction or degree : licentious and its derivatives are always used in the sense of excessive freedom or liberty, or in 'a bad sense.'

It is not the manner of the Romans to deliver any man to die, before that he which is accused have the accusers face to face, and have licence to answer for himself. Acts.

They sent some to bnng them a licence from the senate. Jvditk xi. 14.

Later ages pride, like cornfed steed, Abused her plenty, and fat swoln encrease, To all licentious lust, and gan exceed The measure of her mean, and natural first need.

Faerie Queene. Taunt my faults

With such full licence, as both truth and malice Have power to utter.

Shakspeare. Antony and Cleopatra. How would it touch thee to the quick, Should'st thou but hear I were licentious? And that this body, consecrate to thee, With ruffian lust should be contaminate'!

Shakspeare.

One error is so fruitful, as it begetteth a thousand children, if the licentioumeis thereof be not timely restrained. Raleigh.

Thelicentiatet somewhat licentiously, lest they should prejudice poetical liberty, will pardon themselves for doubling or rejecting a letter, if the sense fall aptly.

Camden.

They baul for freedom in their senseless moods, And still revolt when truth would set them free ; Licence they mean, when they cry liberty. Milton.

We ought to have an especial care of perverting this excellent truth by mistakes and vain presumptions ; that we do not turn the grace of God into wantonness, or occasion of licentious practice.

Barrow.

Some of the wiser, seeing that a popular licence is indeed the many-headed tyranny, prevailed with the rest to make Musidorus their chief. Sidney.

The privilege that ancient poets claim, Now turned to licence by too just a name.

IloKommon.

The Tyber, whose licentious waves, So often overflowed the neighbouring fields, Now runs a smooth and inoffensive course. Id. \‘e may not hazard either the stifling of generous inclinations, or the lioentiating of any thing that is coarse. L’ Estrange.

Though this be a state of liberty, yet it is not a state of licence : though man, in that state, have an uucontroulable liberty to dispose of his person or possessions, yet he has not liberty to destroy himself.

Locke.

A man might, after that time, sue for the degree of licentiate or master in this faculty. Ayliffe.

We procured a licence of the duke of Parma to enter the theatre and gallery. Addison on Italy.

It is not the increase of vices inseparable from humanity that alarms

us, the riots of the licentious, or the outrages of the profligate ; but it is the absence of that integrity, the neglect of that virtue, the contempt of that honour, which by connecting individuals formed society, and without which society can no longer subsist. Adventurer.

Wit's Titans braved the skies, And the press groaned with licensed blasphemies.

Pope.

This custom has been always looked upon, by the wisest men, as an effect of licentiousness, and not of liberty. Swift.

He would play well, and willingly at some games of greatest attention, which shewed, that when he listed he could licence his thoughts. Wotton.

While she seems, nodding o'er her charge, to drop On headlong appetite the slackened rein, And give us up to licence unrecalled, Unmarked ; — see from behind her secret stand, The sly informer minutes every fault. Young.

On this history the licenser again fixed his claws, and before he could transmit it to the press tore out several parts. Johnson.

His interposition of a long paragraph of blank verses is unwarrantably licentious. Id.

Alternate follies take the sway ;

Licentious passions burn ; Which tenfold force give nature's law, That man was made to mourn. Burns.

The other part of our rule is the sacred scriptures, which we are to use as our guard against the licentious excursions of fancy, which is often imposing itself upon us for right reason. JHason.

His suit consisted of three servants, and

A tutor, the licentiate Pednllo, Who several languages did understand,

But now lay sick and speechless on his pillow.

Byron .

LICENTIATE, in England, usually means a physician who has a license to practice, granted by the college of physicians. Licentiate also

signifies a degree granted in the English univer-

sities in medicine to persons who are neither bachelors nor doctors in that faculty.

LICENTIATE. The greatest number of the officers of justice in Spain are distinguished by no other title than that of licentiate. To pass licentiate in common law, civil law, and physic, they must have studied seven years, and in divinity ten years.

LICETUS, a celebrated physician of Italy, born at Kappollo, in Genoa, in 1577. He came into the world before his mother had completed the seventh month of her pregnancy; but his father, an ingenious physician, nurtured him up in cotton, so that he lived to be seventy-seven years of age. He became a very distinguished man in his profession ; and was the author of a great number of works : his treatise De Mon-stris is well known. He was professor of philosophy and physic at Padua, where he died in

1655.

LICHEN, liver wort, in botany, a genus of the natural order of algae, and cryptogamia class of plants. The male receptacle is roundish, somewhat plain, and shining. In the female the leaves have a farina or mealy substance scattered over them. There are about 130 species, all found in Britain. The following are among the most remarkable : —

1. L. aphthosus, the green ground liverwort, with black warts, grows upon the ground at the roots of trees in woods, and other stony and mossy places. It differs very little from the caninus, and, according to some, is only a variety of it. Linnaeus informs us that the country people of Upland, in Sweden, give an infusion of this lichen in milk to children that are troubled with the thrush or aphtha, which induced that distinguished naturalist to bestow upon it the trivial name of aphthosus.

2. L. barbatus, the bearded lichen, grows upon the branches of old trees in thick woods and pine-forests. The stalks or strings are slightly branched and pendulous, from half a foot to two feet in length, little bigger than a thread ; cylin drically jointed towards the base ; but surrounded every where else with numerous, horizontal, ca pillary fibres, either simple or slightly branched Their color is a whitish-green. This has an astringent quality. When steeped in water it acquires an orange color; and is used for dyeing that color.

3. L. calicaris, the beaked lichen, grows sometimes upon rocks, especially on the coasts ; but is not very common. It is smooth, glossy, and wbitish, producing flat or convex shields, of the same color as the leaves, very near the summits of the segments, which are acute and rigid, and, being often reflected from the perpendicular by the growth of the shields, appear from, under their limbs like a hooked beak.

4. L. candelarius, or yellow farinacecous liclien, is common upon walls, rocks, boards, and old pales. There are two varieties. The first has a farinaceous crust of no regular figure, covered with numerous, small, green ish-yt How, or olive shields, arid grows commonly upon old boards. The other has a smooth, hard, circular crust, wrinkled and lobed at the circumference which adheres closely to rocks and stones. In

Jlie centre are numerous shields of a deeper yel-low or or.inge color, which, as they grow old, swell in the middle, and assume the figure of tubercles. The inhabitants of Sraaland, in Swe-den, scrape this lichen from the rocks, and mix it with their tallow, to make candles to burn on festival days.

). L. caninus, the ash-colored ground liver-vort, grows upon the ground among moss, at the roots of trees in shady woods, and in heaths and stony places. The leaves are large, gradually dilated towards the extremities, and divided into roundish elevated lobes. Their upper side, in dry weather, is ash-colored ; in rainy weather of a dull fuscous green color: the underside white and hoary, having many thick downy rerves, from which descend numerous, long, white, pencil-like radicles. The shields grow at the extremities of the elevated lobes, shaped like the human nail ; of a roundish oval form, con-vex above, and concave beneath ; of a chocolate color on the upper side, and the same color with the leaves on the under. There are two varieties, the one called reddish, and the other many-fin- gered ground liverwort. The former is most common. This species was recommended by the celebrated Dr. Mead as a preventive of the dreadful consequences attending the bite of a mad dog. He directed half an ounce of the leaves, dried and pulverised, to be mixed with two drachms of powdered black pepper; divided into four doses, one to be taken by the patient every morning fasting, for four mornings successively, in half a pint of warm cow's milk; after which, to use the cold bath every morning for a month. But the success has not answered the expectation.

6. L. cocciferus, the scarlet-tipped cup lichen, is frequent and moors and heaths. It has, in the first state, a granulated crust for its ground, which is afterwards turned into small laciniated leaves, green above, and hoary beneath. The plant assumes a very different aspect, according to the age, situation, and other accidents of its growth ; but may be, in general, readily distinguished by its fructifications, which are fungous tubercles of a fine scarlet color, placed on the rim of the cup, or on the top of the stalk. These tubercles, steeped in an alkaline lixivium, are said to dye a fine durable red color.

7. L. Islandicus, the eatable Iceland lichen, or rock grass, grows on

many mountains both of the Highlands and Lowlands of Scotland. It consists of nearly erect leaves about two inches high, of a stiff substance when dry, but soft and pliant when moist, variously divided without order into broad distant segments, bifid or trifid at the extremities. The uppei or interior surface of the leaves is concave, chestnut color, smooth, and shining, but red at the base ; the under or exterior surface is smooth and whitish, a little pitted, and sprinkled with very minute black warts. The margins of the leaves, and all the segments from bottom to top are ciliated with small, short, stiff, hair-like spinules, of a dark chestnut color, turning towards the upper sides The Icelanders use it. as an esculent herb. Made into broth or gruel, it is said to be useful in coughs and consumptions.

8. L. juniperinus, the common yellow tree lichen, is common upon the trunks and branches of elms and many other trees. Linnaeus says it is very commoa upon the juniper. The Goth-land Swedes dye their yarn of a yellow color with it, and give it as a specific in the jaundice.

9. L. omphaloides, the dark-colored dyer's lichen, is frequent upon rocks. It forms a thick widely expanded crust of no regular figure, composed of numerous imbricated leaves of a brown or dark purple color, divided into small segments. The margins of the shields are a little crisped and turned inwards, and their outsides ash-colored. The lichen is much used by the Highlanders in dyeing a reddish-brown color. They steep it in urine for a considerable time, till it becomes soft and like a paste : then, forming the paste into cakes, they dry them in the sun, and preserve them for use as they do the tartarius.

10. L. parellus, the crawfish-eye lichen, grows upon walls and rocks, but is not very common. The crusts spread closely upon the place where they grow, and cover them to a considerable ex-tent. They are rough, tartareous, and ash-co- lored, of a tough coriaceous substance. The shields are numerous and crowded, having white or ash-colored, shallow, plain discs, with obtuse margins. This is used by the French for dyeing a red color.

11. L. plicatus, the officinal stringy lichen, grows on the branches of old trees, but is not very common. The stalks are a foot or more in length, cylindrical, rigid, and string-shaped, very irregularly branched, the branches entangled together, of a cinereous or ash-color; brittle and stringy if doubled short, otherwise tough and pliant; and hang pendent from the trees on which they grow. The shields grow generally at the extremities of the branches, are nearly flat, or slightly

concave, thin, ash-colored above, pale brown underneath, and radiated with fine rigid fibres. As the plant grows old the branches become covered with a white, rough, warty crust ; but the young ones are destitute of it. It was formerly used in the shops as an astringent to stop haemorrhages; but is out of the modern practice. Linnaeus says, the Laplanders apply it to their feet to relieve the excoriations occasioned by much walking.

12. L. prunastri, the common ragged hoary lichen, grows upon all sorts of trees, but is generally most white and hoary on the sloe and old palm trees, or upon old pales. This is the most variable of the whole genus, appearing different in figure, magnitude, and color, according to its age, place of growth, and sex. The young plants are of a glaucous color, slightly divided into small acute crested segments. As they grow older they are divided, like a stag's horn, into more and deeper segments, somewhat broad, flat, soft, and pitted on both sides, the upper surface of a glaucous color, the under one white and hcary. The male plants are short, seldom more thai; an inch high, not hoary on the under side, and have pale glaucous shields situated at the extremities of the segments, standing on short peduncles, which are only small stiff portions of the leaf produced. The females ha\u

numerous farinaceous tubercles both on the edges of their leaves, and the wrinkles of their surface. The pulverised leaves have been used as a pow-der for the hair, and also in dyeing yarn of a red color.

13. L. pulmonarius, the lung-wort lichen, grows in shady woods upon the trunks of old trees. The leaves are as broad as a man's hand, of a kind of'leather-like substance, hanging loose from the trunk on which it grows, and laciniated into wide angular segments. Their natural color, when fresh, is green ; but in drying they turn first to a glaucous, and afterwards to a fuscous color. It has an astringent bitter taste ; and, according to Gmelin, is boiled in ale in Siberia, instead of hops. The ancients used it in coughs and asthmas, 8tc., but it is not used in modern practice.

14. L. rangiferinus, the rein-deer lichen, is common in woods, heaths, and mountainous places. Its general height, when full grown, is about two inches. The stalk is hollow, and very much branched from bottom to top ; the branches are divided and subdivided, and at last terminated by two, three, four, or five, very fine, short, nodding horns. The axillae of the branches are often perforated. The whole plant is of a hoary white or gray color, covered with white farinaceous particles, light and brittle when dry, soft and elastic when moist The fructifications are very minute, round, fuscous, or reddish-brown tubercles, which grow on the very extremities of the finest branches ; but these tubercles are very seldom found. The plant seems to have no foliaceous ground for the base, nor scarcely any visible roots. Linnaeus informs us that, in Lapland, this moss grows so luxuriant that it is sometimes found a foot high. There are many varieties of this species, of which the principal is the sylvaticus, or brown-tipt rein-deer lichen. The most remarkable difference between them is, that the sylvaticus turns fuscous by age, while the other always continues white.

15. L. saxatilis, the gray-blue pitted lichen, is very common upon trunks of trees, rocks, tiles, and old wood. It forms a circle two or three inches diameter. The upper surface is of a blue-gray, and sometimes of a whitish ash color, uneven, and foil of numerous small pits or cavities ; the under side is black, and covered all over, even to the edges, with short simple hairs or radicles. A variety sometimes occurs, with leaves, tinned of a red or purple color. This is used by finches and other small birds, in constructing the outside of their curiously formed nests.

16. L. tartarius, the large yellow-saucered dyer's lichen, is frequent on rocks, both in the Highlands and Lowlands of Scotland. The crust is thick and tough, either white or greenish white, and has a rough warted surface. The shields are yellow or buff-colored, of various sizes, from that of a pin's head to the diameter of a silver penny. Their margins are of the same color as the crust. This lichen is much used by the Highlanders for dyeing a fine claret red color.

17. L. ventosus, the red spangled tartareous licitun, has a hard tartareous crust, cracked and

tesselated on the surface, of a pale yellow color when fresh, and a light olive when dry. The tubercles are of a blood-red color at top, their margin and base of the same color as the crust.

18. L. vulpinus, the gold-wiry lichen, grows upon the trunks of old trees, but is not very common. It is produced in erect tufts, from half an inch to two inches in height, of a 6ne yellow or lemon color, which readily discovers it. The filaments which compose it are not cylindrical, but a little compressed and uneven in the surface, variously branched, the angles ob-tuse, and the branches straggling and entangled one with another. Linnaeus informs us that the inhabitants of Smaland, in Sweden, dye their yarn of a yellow color with this lichen ; and that the Norwegians destroy wolves by stuffing dead car-casses with this moss reduced to powder, and mixed with pounded glass, and so exposing them in the winter season to be devoured by those animals.

LICHFIELD, or LiTCHFiELD,an ancient city of Staffordshire in the hundred of Offlow. It stands near the site of an old Roman station named Etocetum : which has been traced about a mile distant from the present town, at the place where the Ikenild and Watling Street Roads cross each other. ‘ Lichenfield’ the old-est name by which it is known, is said by some antiquaries, see the word LICKWAKE, to signify the field of dead bodies, from a massacre of the Christians ; which took place here in the reign of Dioclesian. Oiher writers derive the name of this town from its marshy situation ; the Sax. leccian, signifying land covered with water.

Mr. Shaw, the historian of Staffordshire, considers this by far the more probable origin of the name, and that the place owes its entire origin to the Saxons. He thinks it was one of the first established seats of. that people in Britain ; but observes that, so late as A. D. 669, when St. Chad was bishop, it was little more than a village. Berracapil in the neighbourhood seems to have been a chief residence of the Saxon princes. At the Norman conquest the synod held in London decided that Lichenfield was too mean a place for an episcopal residence, and it appears to have been entirely neglected until the reign of Henry L, when it was encompassed with a ditch, and a castle, which Bishop Clinton ,fortified. There is still a field of the neighbourhood called from this circumstance Castle field.

Stephen granted the right of coining to this town, which it seems only however to have enjoyed for a short period. The reign of Edward I. brings it forward to considerable notice. In 1305 it first sent two members to parliament, and enjoyed in the same reign the patronage of its celebrated bishop Langton, who built a respectable bridge over the lake, or pool of water, •which separated it from the Castle field. Following its political history we find Edward VI. constituting it a city by charter, dated 1549, queen Mary confirmed and enlarged four

years afterwards, constituting this city a county by itself, from and after the then ensuing feast of St. Thomas. All actions of whatever denomination, arising within the city, were ordained to

be held by the bailiffs and citizens, if they could determine them, and if not by the justices nex* coming into the city, and not on any account by any authority out of the city. These great privileges were conferred in consequence of the faithful services of the citizens in the time of rebellion. These charters were both ratified by queen Elizabeth, and further confirmed by her successor James I. Charles II. confirmed all the privileges of this city, by a charter dated the 5th of November 1664. The government is vested at present in two bailiffs, elected from the common-council, one of whom is named by the bishop, and the other by the council themselves, a recorder, a sheriff, a steward, and other inferior officers. The burgesses are twenty-four in num-ber. The right of election of the two members is in the bailiffs, magistrates, freeholders of 40s. a-year, the holders of burgage tenements, and such freemen as are enrolled and pay scot and lot.

Lichfield stands on an enchanting situation in a healthy valley, and is chiefly inhabited by persons of respectable property and independence ; its pretensions as a trading or manufacturing town being small. It was formerly divided into two portions, by three lakes or pools of wa-ter, one of which is now dried up, and contains three parishes, but part of the lands of St. Chad's and St. Michael's lie without the boundaries of the city. It is adorned with various buildings well worthy of notice, both on account of their antiquity and splendid architecture. The most conspicuous of these is the cathedral, which stands in the close, and is said to have been first fortified by bishop Clinton; though Dr. Shaw thinks he only repaired the fortifications. Some ascribe the foundation of the cathedral to king Oswy, in the year 655; others attribute it to Peada, his son-in-law. St. Chad is generally allowed the honor of being the first bishop. The cathedral, then called the Mercian church, was probably at first only constructed of wood, and the whole was taken down in 1148, by bishop Clinton, who

substituted another of enlarged dimensions, and more elegant design. To this prelate it is indebted for that magnificent stone vault, which is to this day one of the finest works of its kind extant. The next benefactor to this cathedral was Walter de Langton,who expended the sum of £2000 on -a shrine for the relics of St. Chad, laid the foundation of the choir, and obtained many privileges for the vicars and ca-nons ; amongst which was the formidable one of hanging upon the next gallows, without trial, persons who withheld some disputed lands from the church. This beautiful edifice continued in undiminished glory till the Reformation, when it was despoiled of many valuable relics.

Lichfield, in the civil wars, was the first cathedral that fell into the hands of the parliament, when the roof was stripped, and many of the curious statues, monuments, and other carved works, demolished with axes and hammers. The inimitable painted windows were battered to pieces. In short, it scarcely escaped ruin; and what did remain was further desolated in 165J, when colonel Danvers, by authority of the Rump Parliament, eirployed workmen in order to effect

this purpose. At this time, the beli called ‘ Jesus bell,’ was knocked to pieces by a pewterer, and Ur. John Hacket rendered himself remarkable for his courageous perseverance in his sacred duties. When a serjeant and trooper were sen to stop the performance of the daily service, and putting a pistol to his head, threatened to shoot him instantly if he did not desist, this prelate calmly, but resolutely, replied, ‘Soldier, I am doing my duty ; do you your’s :’ a sentence which so impressed the minds of the soldiers, that they left him to the free performance of the service. No sooner was he nominated to the bishopric of Lichfield, than he vigorously set himself to restore the splendor of the cathedral. By his large benefactions, and those of the dean and chapter and neighbouring gentleman, he greatly succeded in restoring this building. In the bishopric of Dr. James Cornwallis it received its last addition in the painted window at the east end of the choir, the execution of which reflects high honor on the artist Mr. Eginton. The whole edifice is now 411 feet in length, and 155 in breadth. From the centre rises an elegant spire 256 feet high. At the west front are two towers, terminated by spires, sixty-six feet high. The chancel is paved with alabaster and channel stone, in imitation of black and white marble. The north door is particularly rich in sculpture. On the western front are a number of beautiful images, the subjects of which are taken from the sacred writings.

The government of the cathedral is in a dean and four residentiary canons. The diocese, joined to Coventry, contains all the county of Stafford (with the exception of Brome and Clent),all Derbyshire, and nearly one-half of Shropshire. The archdeaconries are Coventry, Stafford, Derby, and Salop. At the north-east side of the close is the bishop's palace. The original building said to have been founded by bishop Clinton, but probably of earlier date, was destroyed in the civil wars, when bishop Hacket expended £1000, it is said, on the present house, and fixed upon it as his residence. It is now not inhabited by the bishop, whose residence has long been at Eccle-shall.

Another ecclesiastical building worth notice is the church of St. Chad or Stowe church, considered as the oldest edifice in or near Lichfield. St. Ceadda or Chadda had his cell here in the year 653. The interior has been lately repaired and improved ; and contains a number of neat monuments. St. Mary's church stands in the market-place, near the guildhall. Leland calls it a riglit beautiful piece of work, in the very ' market-place.' The body of the building certainly is of pleasing appearance, and it is adorned with a handsome altar-piece. St. Michael's church is on the summit of Greenhill, at the south-east extremity of the city, and is remarkable for the extent of its burial-ground. This hill is likewise remarkable for a court held here annually on Whit-Monday, in a temporary stand for wood, and anciently called the court of array. On the top of the hill a small edifice has been erected by subscription, with seats. Not far from hence is the hospital and chapel of St. John, originally a monastery. Tiie

front of the building is remarkable for the antique form and great number of its chimneys. An inscription over the doorway ascribes its erection to bishop Smith, the founder of Brazen-nose College, Oxford. The free grammar school, built nearly at the same time, stands opposite.

Dr. Samuel Johnson was bom in a stuccoed house situated at the corner of Market-street, Lichfield, where his father kept a bookseller's shop. Garrick was a native of this town. Two neat monuments to their

memory are now to be found in the cathedral. The guildhall, the theatre, and free English school, are in Broad Street. The latter is in an ancient building, erected and endowed about the year 1670. At the back of the guildhall is a gaol for the debtors and felons of the city. To the west of Bird Street is a pleasant seat called the Friary, having been formerly a monastery of Franciscan or Gray friars. The history of this see is curious. St. Ceadda, or Chad, was consecrated in the year 669. A century afterwards, Offa, king of Mer-cia, of which Staffordshire formed a part, insisted upon his kingdom being governed by an archie-piscopal see, and that the bishop of Lichfield should be appointed to it. Accordingly Adolphus, the successor of Sigebert, was created archbishop of Lichfield by pope Adrian, and the pall sent to him from Rome, about the year 786. The see, however, did not long enjoy this pre-eminence, for upon the death of Offa it again became a bishopric, at the earnest request of the archbishop of Canterbury, who presented pope Leo with a large sum of money, as a bribe. For a long period the bishoprics of Coventry and Lichfield were united, but at the Reformation they were disjoined.

In the castle, built by bishop Clinton, king Richard II. is said to have kept his sumptuous Christmas festival, in 1397, when he consumed 200 tuns of wine and two thousand oxen. This fortress was, afterwards, likewise the place of his confinement when on his way to Lon-don as a prisoner. He attempted to effect his escape from it, it is said, by slipping from the window of ths high tower into the garden, but, being discovered, was carried back. In the civil wars between king Charles and the parliament, many of the inhabitants voluntarily subscribed considerable sums of money for his use, and enrolled themselves under the command of captain Richard Dyott, for the protection of their city against the parliament. The cathedral and close were now fixed upon as a proper place of defence. But in a short time after the garrisoo was attacked by the republicans. They maintained their post, however, with resolution, but the town, as well as the cathedral, suffered much damage. In one assault, lord Brook, who commanded the parliamentary army, lost his life in a singular manner. His army was about half a mile from Lichfield, and his lordship, having prayed most devoutly for the destruction of the cathedral, ordered an immediate attack, placing himself in a small house near the south gate, tth the view of directing the operations of the gunners. Some sudden accident at this juncture occasioned the soldiers to give a shout, when lord Brook came to the door, and being perceived by

a gentleman of the name of Dyott, who stood on the top of the tower,

he levelled his piece at him, and the ball penetrated directly into the socket of the eye, lodged in his brain, and caused his instant death. The loss of their commander, however, did not dismay the besiegers, who at last succeeded in compelling the garrison to sub-mit. The troops of the parliament were, however, soon after attacked by prince Rupert ; and the commanding situation chosen by him, and the explosion of a mine, soon effected an extensive breach. The prince then conferred the government of the town on colonel Hervey Bagot, who maintained it for the king till the utter destruction of his affairs.

The markets of this city are held on Tuesday and Friday ; the fairs on the three first Thursdays after Twelfth day, Ash Wednesday, May 1st, and the Friday before St. Simon and St. Jude. It is sixteen miles north of Birmingham ; fourteen south-east of Stafford, and 119 north-west of London.

LICH-WAKE, n. t. Sax. he, or lice ; Goth, and Swed. lik, a corpse, and wake, a vigil or watching. See WAKE. Watching with a corpse. Mr. Pennant, speaking of Highland customs, says, ‘ The late-wake is a ceremony used at funerals : — The evening after the death of any person, the relation or friends of the deceased meet at the house, attended by bagpipe or fiddle ; the nearest of kin, be it wife, son, or daughter, opens a melancholy ball, dancing and greeting, i. e. crying violently at the same time ; and this continues till daylight, but with such gambols and frolics among the younger part of the company, that the loss which occasioned them is often more than supplied by the consequences of that night. If the corpse remains unburied for two nights, the same rites are renewed. Thus, Scythian-like, they rejoice at the deliverance of their friends out of this life of misery.’ Lich-gate, as Dr. Johnson observes, was the gate through which the dead were carried to the erave ; Lichfield, the field of the dead, a city in Staffordshire, so named from martyred Christians. Lichowl, a sort of owl supposed by the vulgar to foretel death.

How Arcite is brent to ashen cold ; Ne how the liche-wake was yhold
All thilke night

I woll not tellen. Chaucer. Cant. Talts.

LICIUS (Stolo, Caius), a celebrated Roman tribune, styled Stolo, on account of a law he made, that no Roman citizen should possess more than 500 acres of land ; alleging that, when they occupied more, they could not cultivate it with care, nor pull up the useless shoots (stolones) that grow from the roots of tree. He is memorable also for enacting, that one of the consuls should always be of a plebeian

family. He lived about A. A. C. 362.

LICK, v.a. Sax. hccan, hccan; Belg. lichen ; Teut. lecken ; Fr. lecher ; Lat. lingua ; Gr. XMˆW. a Ileb. “\rb. To lap or take up with the tongue; to pass the tongue over; to take food in this way ; hence to devour. The Scripture use of this word in Numb xxii. 4, et passim, is particularly justified by the rapid manner in which all ruminating animals take in their food

NJW shall this company lick up all that are round About us, as the ox licketh up the grass. Numbers.

At once pluck out

The multitudinous tongue ; let them not lick The sweet which is their poison. Shahspeare. Were a man designed only, like a fly, to buzz about here for a time, sucking in the air, and licking the dew, then soon to vanish back into nothing, or to be transformed into worms ; how sorry and despicable a thing were he ! And such, without religion, we should be. Barrow.

A bear’s a savage beast ; Whelped without form, until the dam Has licked it into shape and frame.

Hudibras.

.Ksculapius went about with a dog and a she-goat, both which he used much in his cures ; the first for licking all ulcerated wounds, and the goat’s milk for the diseases of the stomach and lungs.

Temple.

He with his tepid rays the rose renews, And licks the drooping leaves,

and dries the dews.

Dry den.

I have seen an antiquary lick an old coin, among other trials, to distinguish the age of it by its taste.

Addison.

When luxury has licked up all thy pelf, Cursed by thy neighbours, thy trustees, thyself : Think how posterity will treat thy name. Pope.

Our love is principle, and has its root In reason, is judicious, manly, free ; Yours, a blind instinct, crouches to the rod, And licks the foot that treads it in the dust.

Cowper.

LICK, v. a. Sax. lecjan; Goth, leggia. To beat, or strike. Retained only in vulgar language.

He turned upon me as round as a chafed boar, and gave me a lick across the face. Dryden.

LICK'ERISH, adj. ˆ Sax. liceria, a glut-LICK'EROUS, Mon; Teut. and Swed.

LICK'ERISHNESS, n. s.i lecher, soft, luxurious.

Pampered in appetite or food ; eager ; greedy ;

lustful.

soil of which is a soft clay. They are distin guished by various names ; but the most remarkable are

LICKS, BIG BONE, lying on each side of Big Bone Creek, a river of Kentucky, so named from a number of extraordinary large bores belonging to the Mammoth found about it. See MAMMOTH. Big Bone Licks lie eight miles above the mouth of Big Bone Creek.

LICNON, in the Dionysian solemnities, the mystical van of Bacchus ; so essential to all the solemnities of this god that they could not be duly celebrated without it. See DIONYSIA.

LICOLA, a lake of Naples, formerly famous for plenty of excellent fish; but in 1538 an explosion of a volcano changed one part of it into a mountain of ashes 1000 feet high, and four miles in circumference, and the other into a morass. It was anciently called Lucrinus Lacus.

LIC'ORICE, n. s. Old Fr. liquerice ; Ital. ligoritia ; Belg. likeresse, see LICKERISH : Gr. •yXvKvppiZa. A sweet root.

Liquorice root is long and slender, externally of a dusky reddish brown, but within of a fine yellow, full of juice, and of a taste sweeter than sugar : it grows wild in many parts of France, Italy, Spain, and Germany. The inspissated juice of this root is brought to us from Spain and Holland ; from the first of which places it obtained the name of Spanish juice. Hill'* Materia Medico.

LICORICE. See GLYCIRRHIZA.

LIC'TORS, n. s. Lat. tictar. Officers or beadles, among the Romans, who always attended the chief magistrates when they appeared in pub-lic.

Saucy lictort

Will catch at us like strumpets. Shakspeare.

Proconsuls to their provinces Hasting, or on return, in robes of state, Lictors and rods the ensigns of their power.

Milt n.

Democritus could feed his spleen, and shake His sides and shoulders till he felt 'em ake ;

Certain rare manuscripts, sought in the most re-mote parts by Erpenius, the most excellent linguist,

had been left to his widow, and were upon sale to rhou?h m hls country-town uolictors were, the Jesuits, liquorish chapmen of all such ware.]Sor rods> nor ax> nor tnbune. Dryden. Juvenal.

liquorish chapmen of all

Wotton.

The first motive that inclined our liquorish grandmother Eve, was, that she saw the tree was good for food. Bp. Hall.

Wouldest thou seek again to trap me here With lickerish baits, fit to ensnare a brute ?

Milton.

In vain he proffered all his goods to save His body, destined to that living grave ; The liquorish hag rejects the pelf with scorn, And nothing but the man would serve her turn.

Dryden.

Voluptuous men sacrifice all substantial satisfac-tions to a liquorish palate. L'llttranqe.

In some provinces they were so liquoruh after man's flesh, that they would suck the blood as it run from the dying men. Locke.

LICKS, in geography, a name given to several places in the United States of America, particularly in the north-western territory, abounding with salt springs ; where the earth is furrowed up in a very curious manner by the deer and buffaloes, which lick it on account of the saline particles with which it is impregnated. Streams of brackish water run through these licks, (he

LICTORS, among the ancient Romans, were officers established by Romulus, who attended the consuls when they appeared in public. The duties of their office were these : 1. Submotio, or clearing the way for the magistrate they attended : this they did by word of mouth ; or, if there was occasion, by using the rods they always carried with them. 2. Animadversio, or causing the people to pay the usual respect to the magistrate ; as, to alight, if on horseback or in a chariot; to rise up, uncover, make way, and the like. 3. Praitio, or walking before the magistrates : this they did, not confusedly, or all together, nor by two or three abreast, but singly following one another in a straight line. They also preceded the triumphal car in public triumphs ; and it was also part of their office to arrest criminals, and to be public executioners in beheading, &c. Their ensigns were the fasces and securib. As to the number of lictors allowed each magistrate, a dictator had twenty-four; a master of tht horse six ; a consul twelve ; a przetor six ; and each vestal virgin, when she appeared abroad, had one.

LID, n, j. Sax. J > li-» ; Goth, lid; Teut. lied. A cover of any kind ; any thing that closes the mouth or aperture of a vessel: often particularly applied to the eye-lid.

r > ut Jchoiada the priest took a chest, and bored a hole in the Hi of it, and set it beside the altar.

2 Kings zii. 9.

Do not for ever with thy veiled lids, .. eek for thy noble father in the dust. Shaktpeare. Our eyes have lids, our ears still ope we keep.

Davies.

Flope, instead of flying off with the rest, stuck so close to the lid of the cup, that it was shut down upon her. Addison.

That eye dropped sense distinct and clear, As any muse's tongue could speak ;

W hen from its lid a pearly tear Ran trickling down her beauteous cheek. Prior. The rod of Hermes

To sleep could mortal eyelids fix,

And drive departed souls to Styx

That rod was just a type of Sid's,

Which o'er a British senate's lids

Could scatter opium full as well,

And drive as many souls to hell. Swift.

Tired Nature's sweet restorer, balmy sleep ! He, like the world, his ready visit pays Where fortune smiles ; the wretched he forsakes : Swift on his downy pinions flies from woe, And lights on lid* unsullied with a tear. Young.

LIDDEL (Duncan), M. D., professor of mathematics and medicine in the university of Helmstadt, was born in 1561 at Aberdeen, where he received the first part of his education About the age of eighteen he went to the university of Frankfort, where he spent three years in studying mathematics and philosophy. From Frankfort he proceeded to Breslaw, where he made great progress in mathematics, under professor Paul Witichius. After a year he returned to Frankfort, where he studied physic for three years. A contagious distemper having appeared in that place, Liddel retired to the university of Rostock ; where he renewed his studies, rather as a companion than a pupil of the celebrated Brucseus; whom, though an excellent mathematician, he instructed in the more perfect knowledge of the Copernican System, and other astronomical subjects. In 1590 he returned again to Frankfort. But having there heard of the increasing reputation of the Academia Julia, established at Helmstadt by Henry duke of Brunswick, he removed thither; and soon after his arrival was appointed to the lower professorship of mathematics. Thence he was promoted to the more dignified mathematical chair, which he occupied for nine years with much credit to himself and to the Ju-lian Academy. In 1596 he obtained the decree of M.D.; began to teach physic, and by his teaching and writings became the chief support of the medical school at Helmstadt ; was employed as first physician at the court of Brunswick, and had much practice among the principal inhabitants. Having been several times elected dean of the faculties both of philosophy and phy-sic, he in 1604 was chosen pro-rector of the university. But neither academical honors, nor the profits of an extensive practice abroad, could make him forget his native country. In 1606 he took leave of the Academia Julia ; and, after travelling through Germany and Italy, at length

settled in Scotland. He died in 1613, in the fifty-second year of his age. By his last will he bestowed certain lands near Aberdeen upon the university there, for the education of six poor scholars. Among various regulations and injunctions, for the management of this charity, he appointed the magistrates of Aberdeen his trustees, and solemnly denounced the curse of God on any person who should abuse or misapply it. His works are, 1. Disputationes Medic-males; Helmstadt, 1603, 4to. 2. Ars Medica succincte et perspicue explicata ; Hamburgi,

1 607, 8vo., dedicated to king James VI. and divided into five books, *viz.* IntroductiointotamMedicinam; De Physiologia; De Pathologic; De Signorum doctrin& ; De Therapeutic^. 3. De Febribus, Libri tres ; Hamburgi, 1610, 12mo.

LIDDISDALE, an extensive district of Scotland, so named from a small river named Liddel, which runs through it from east to west and south. It was anciently styled a county and lordship, and comprehends the whole southern angle of Roxburgshire. Being mountainous, it is chiefly adapted for pasture, though the soil of the low land is excellent, and produces very good crops of wheat, barley, oats, peas, flax, turnips, potatoes, and clover. Limestone abounds, and there are many cairns, Druidical temples, Pictish camps, and other antiquities in this district.

LIDO DI SOTTOMARINO, an island and town of Maritime Austria, near Chioggia, containing about 2600 souls. It is built on a bank, which separates the Venetian Lagunes from the sea, and protected by a strong pier, with walls composed or enormous masses of freestone, thirty-two feet thick, and many fathoms high.

LIE, v. n. Sax. lijan, liejan ; Goth, ligga ; Teut. liegan; Belg. tygen; pret. lay, lain, lien. To rest ; remain ; recline ; be recumbent : (hence to sleep); lean; incline; press upon ; be deposited ; consist ; remain fixed : hence, metaphorically, to be imputed ; be burdensome, or troublesome ; be in a helpless, afflicted, or confined state; be in prison ; be in the power of, or belong to ; he judicially valid ; oblige ; be buried. It is used with the prepositions at, by, down, in (to express the confinement of women in childbed)j under, upon, with ; but retains throughout these uses one or other of the above senses, implying, as Dr. Johnson says, ‘ something of sluggishness, inaction, or steadiness, as applied to persons ; and some gravity, or permanency of condition, as applied to things.’

And he found a man, eneas bi name, that fro eighte gheer he hadde teye in bed, and was syk iu paJesie. Dedif ix.

If thou doest well, shall thou not be accepted ? and if thou doest not well, sin lieth at the door.

Gen. iv. 7.

One of the people might lightly have lien with thy wife. Gen. xxvi. 10.

I will lie with my fathers, and thou shall carry me out of Egypt, and bury me in your burying-place. Gen. xlvii. 30.

The seventh year thou shall let it rest and lie still.

/.‘ii« 11.1.

There were lien in ambush against him Ichintl the city. Joth. viii. 14.

jflis bones are full of the sin of his youth, which shall lie down with him in the dust. J< >h xx. 11.

The highways lie waste, the wayfaring man ceaseth.

Imiah.

My little daughter lieth at the point of death ; I pray thee come and lay thy hands on her, that she may be healed. Mark.

What houndes liggen on the floor adoun.

Chaucer. Cant. Tales.

As for all other good women that love to do but little work, how handsome it is to lie in and sleep, or to louse themselves in the sunshine, they that have been but a while in Ireland can well witness. Spenser on Ireland. Thou kenst the great care I have of thy health and thy welfare, Which many wild beasts liggen in wait, For to entrap in thy tender state.

Id. Pastorals.

Death lies on her like an untimely shower Upon the sweetest flower of all the field.

Shakspeare.

If money go before, all ways do lie open. Id. How many good young princes would do so ; their fathers lying so sick as yours at this time is 7 Id.

Your imprisonment shall not be long ; I will deliver you, or else lie for you. Id.

The image of it gives me content already ; and I trust it will grow to a most prosperous perfection : — It lies much in your holding up. Id.

Every thing that heard him play, Even the billows of the sea,

Hung their heads, and then lay by; In sweet musick is such art, Killing care, and grief of heart, Fall asleep, or hearing die.

Id. Henry VIII.

You confine yourself most unreasonably. Come, you must go visit the lady that lies in.

Id. Corwlanus. Pardon me, Bassanio,

For by this ring she lay with me. Shakspeare. Do’st thou endeavour, as much as in thee lies, to preserve the lives of all men 1

Duppa’s Rules far Devotion. He that commits a sin shall find The pressing guilt lie heavy on his mind, Though bribes or favour shall assert his cause.

Creech.

But their way

Lies through the perplexed paths of this drear wood, The nodding horror of whose shady brows Threats the forlorn and wandering passenger.

Milton.

It is but a very small comfort, that a plain man, lying under a sharp fit of the stone for a week, receives from this fine sentence. Tillot*on.

He shews himself very malicious if he knows I deserve credit, and yet goes about to blast it, as much as in him liet. Stillingfleet mi Idolatry.

I have seen where copperas is made, great variety of them, divers of which I have yet lying by me.

Boyle.

The Spaniards have but one temptation to quarrel with us, the recovery of Jamaica, for that has ever lien at their hearts. Temple.

So the false spider, when her nets are spread, Deep ambushed in her silent den does /i?.

Dryden.

The watchful traveller, That by the moon's mistaken light did rise, Lay down again, and closed his weary eyes. Id.

Mars is the warrior's god ; in him it lies On whom he favors to confer the prize. Id.

Are the gods to do your drudgery, and you lie bellowing with your finger in your mouth ?

L' Estrange' s Fables.

What lies beyond our positive idea towards in • finity, lies in obscurity, and has the undeterminate confusion of a nega'ive idea. Locke.

He that thinks that diversion may not lie in haid labour, forgets the early rising, and hard riding ot huntsmen. Id.

The doctor has practised both by sea and land, and therefore cures the green sickness and lyings-in.

Spfciator.

Shew the power of religion, in abating that particular anguish which seems to lie so heavy on Leonora.

Addison.

It were to be wished, that men would promote the happiness of one another, in all their private dealings, among those who lie within their influence.

Id.

As a man should always be upon his guard against the vices to which

he is most exposed, so we should take a more than ordinary care not to lie at the mercy of the weather in our moral conduct.

Id. Freeholder.

A generous person will lie under a great disadvantage. Smalridge's Sermons.

Forlorn he must, and persecuted be ; Climb the steep mountain, in the cavern lie.

Prior.

When Florimel designed to lie privately in ; She chose with such prudence her pangs to conceal, That her nurse, nay her midwife, scarce heard her

once squeal. Id.

Envy lie* between beings equal in nature, though unequal in circumstances. Collier of Envy.

Lie heavy on him, earth, for he Laid many a heavy load on thee.

Epitaph on Vanbrugh.

Europe lay then under a deep lethargy, and was no otherwise to be rescued but by one that would cry mightily. Atterbury.

These are not places merely of favor, the charge of souls lies upon them ; the greatest account whereof will be required at their hands. Bacon.

It should lie upon him to make out how matter, by undirected motion, could at first necessarily fall, without ever erring or miscarrying, into such a curious formation of human bodies.

Bentley's Sermons.

This mistake never ought to be imputed to Dry-den, but to those who suffered so noble a genius to lie under necessity. Pope.

The maintenance of the clergy is precarious, and collected from a most miserable race of farmers, at whose mercy every minister lies to be defrauded.

Swift.

Do not think that the knowledge of any particular subject cannot be improved, merely because it has lain without improvement. Watts.

And last (the sum of a' my griefs !)

My noble master '.ies in clay ; The flower amang our barons bold,

His country's pride, his country's stay.

Burns.

A man that hath so far lost the command of'himself, as to lie at the mercy of every foolish or vexing thought, is much in the same situation as an host, whose house is open to all comers. Mason.

LIE, or 1 Sax. lija, hjan ; Goth.

LYE, n.s.&v. n. \ lygi, of lae, deceit, prourl. A verbal fraud or deception ; criminal falsehood ; any fiction. ' To give the lie' is to charge with lying; to make the imputation of this crime: tr» lie is to utter lies, or tell what is untne, deceitfully. See the extract from Watts.

If a soul lye'unto his neighbour in that which was delivered him to keep, he shall restore that which was delivered. Lev.

Should I lye against my right? Job xxxiv. 6.

Thou liest, abhorred tyrant ! with my sword I'll prove the lie thou speakest.

Shahspeare. Macbeth, That lie shall lye so heavy on my sword,

That it shall render vengeance and revenge];

Till thou the lie giver, and that lie, rest

In earth as quiet as thy father's skull.

Shakspeare.

Truth is the object of our understanding, as good is of our will ; and the understanding can no more be delighted with a lye, than the will can choose an apparent evil. Dryden.

The cock and fox, the fool and knave imply ; The truth is moral, though the tale a lie. Id.

Men will give their own experience the lie, rather than admit of any thing disagreeing with these tenets. Locke.

Thy better soul abhors a liar's part,

Wise is thy voice, and noble is thy heart. Pope.

He who tells a lie is not sensible how great a task he undertakes ; for he must be forced to invent twenty more to maintain that one. Id.

Inform us, will the emperor treat 1 Or do the prints and papers lie1. Swift.

When I hear my neighbour speak that which is not true, and I say to him, This is not true, or this is false, I only convey to him the naked idea of his error ; this is the primary idea ; but if I say it is a lie, the word lie carries also a secondary idea ; for it implies both the falsehood of the speech, and my reproach and censure of the speaker. Watts's Logick.

Here the soul sits in council, ponders past, Predestines future action ; sees, not feels, Tumultuous life, and reasons with the storm ; All her lies answers, and thinks down her charms. I Young.

The common people do not accurately adapt their thoughts to the objects ; nor, secondly, do they accurately adapt their words to their thoughts : they do not mean to lie ; but, taking no pains to be exact, hey give you very false accounts. A great part of heir language is proverbial : if any thing rocks at all, they say it rocks like a cradle ; and in this way they go on. Johnson.

Have I not had my brain seared, my heart riven, Hopes snapped, name blighted, Life's life lied away? And only not to desperation driven,

Because not altogether of such clay As rots into the souls of those whom I survey.

Byron.

LIE, in morals. Dr. Paley observes, on this subject, that there are falsehoods which are not lies : that is, which are not criminal : and there are lies which are not literally and directly false. I. Cases of the first class are those, 1. Where no one is deceived : as for instance in parables, fables, novels, jests, tales to create mirth or ludicrous embellishments of a story, in which the declared design of the speaker is not to inform, but to divert ; compliments in the subscription of a letter ; a prisoner's pleading not guilty ; an advocate asserting the justice of his client's cause. In such instances no confidence is destroyed, because none was reposed ; no promise to speak the truth is violated, because none was given or understood to be given. 2. Where the person you speak to has no right to know the truth ; as where you tell a falsehood to a robber to conceal your property ; to an assassin to defeat or to

divert him from his purpose. It is upon this principle, that, by the laws of war, it is allowed to deceive an enemy by feints, false intelligence, and the like : but by no means in treaties, truces, signals of capitulation, or surrender : and the difference is, that the former suppose hostilities to continue, the latter are calculated to terminate or suspend them. II. As there may be falsehoods which are not lies, so there may be lies without literal or direct falsehood. An opening is always left for this species of prevari-cation, when the literal and grammatical signification of a sentence is different from the popular and customary meaning. It is the wilful deceit that makes the lie; and we wilfully deceive, when our expressions are not true, in the sense in which we believe the hearer apprehends them. Besides, it is absurd to contend for any sense of words, in opposition to usage; for all senses of all words are founded upon usage, and upon nothing else. Or a man may act a lie ; as by pointing his finger in a wrong direction, when a traveller enquires of him his road ; or when a tradesman shuts up his windows, to induce his creditors to believe that he is abroad ; for to all moral purposes, and therefore as to veracity speech and actions are the same; speech being only a mode of action.

LIEF, or 3 Sax. leop; Belg. lief,

Li EVE, adj. & adv. 5 lieve, to love. Beloved ; dear : as an adverb,

willingly, by choice.

Ye wot yourself, she may not wedden two

At ones, though ye fighten evermo ;

But on of you, al be he loth or left,

He mot gon pipen in an ivry lefe.

Chaucer. Canterbury Talet. My liefest lord she thus beguiled had,

For he was flesh ; all flesh doth frailty breed.

Faerie Queent. You with the rest,

Causeless' have laid disgraces on my head ;

And with your best endeavour have stirred up

My liefest liege to be mine enemy.

Shakrpeare. Henry VI.

Speak the speech, I pray you, as I pronounced it to you, trippingly on the tongue : but if you mouth it, as many of our players do, I had as lieve the town-crier had spoke my lines. Shakspeare.

Action is death to some sort of people, and they would as Here hang as work. L'Estrange.

LIEGE, adj. & n. s. > Fr. lige, liege ; Ital. LIEGE'MAN,] ligio ; barb. Lat. //-

gius, from llgo, to bind. Bound by feudal tenure, or law ; hence supreme or sovereign, by such tenure: and, as a substantive, the supreme lord or sovereign : liegeman is one who owes allegiance ; a subject man.

For sothe, my liege, quod I A n hundred times I have been at the gate Afore this tyme, yet coude I ner espie, Of myne acqueintaunce eny in mine eye.

Chaucer.

This liegeman 'gan to wax more bold, And when he felt the folly of his lord, In his own kind, he 'gan himself unfold.

Faerie Qvtenc.

Sith then the ancestors of those that now live, yielded themselves then subjects and liegemen, shall it not tye their chi'dren to the same subjection ?

Spenser on Ireland.

Did not the whole realm acknowledge Henry VIII. fnr their king and liege lord 1 Spenser.

O pardon me, ray liege ! but for my tears I had forestalled this dear and deep rebuke.

Shakspeure.

The other part reserved I by consent, For that my sovereign liege was in ray debt. Id.

Stand, ho ! who is there ? — Friends to this ground, and liegemen to the Dane.

Id.

My lady liege, said he What all your sex desire is sovereignty.

Dryden.

The natives, dubious whom They must obey, in consternation wait Till rigid conquest will pronounce their Kfge.

Philips.

So much of it as is founded on the law of nature, may be stiled natural religion ; that is to say, a devotedness unto God our liege lord, so as to act in all things according to his will.

Crew's Cosmogony.

LIEGE, in law, properly signifies a vassal, who holds a kind of fee, that binds him in a closer obligation to his lord than other people. The term seems to be derived from the Latin ligo, to bind ; on account of a ceremony used in rendering faith or homage ; which was by locking the vassal's thumb or his hand in that of the lord, to show that he was fast bound by his oath of fidelity. Cujas, Vignere, and Bignon, choose rather to derive the word from the same source with leudis or leodi, i. e. loyal or faithful. But Du Cange agrees with those who derive it from liti, a kind of vassals, so firmly attached to the-i lord, on account of lands or fees held of him, that they were obliged to do him all manner of service, as if they were his domestics. He adds, this was formerly called litgium servitium, and the person Htge. In this sense the word is used, Leg. Edw. c. 29. Judaei sub tutela regis ligeas debent esse, that is, wholly under his protection. By liege homage, the vassal was obliged to serve his lord towards all, and against all, excepting his father. In which sense the word was used in opposition to simple homage; which last only obliged the vassal to pay the rights and accustomed dues to his lord ; and not to bear arms against the emperor, prince, or other superior lord ; so that liegeman was a person wholly devoted to his lord, and entirely under his command. Omnibus, &c., Reginaldus, rex Insu-larum,salutem. Sciatis quod deveni homo ligeus domini regis Anglia? Johannis, contra omnes mortales quamdiu vixero ; &c. MS. penes W. Dugdale. Kut, it must be observed, there were formerly two kinds of liege homage: the one, by which the vassal was obliged to serve his lord against all, without exception even of his sovereign ; the other, by which he was to serve him against all, except such other lords as he had formerly owed liege homage to. In the old Knglish statutes, lieges, and liege people, are terms peculiarly appropriated to the king's subject; as being liges, ligi, or ligati, obliged to I iay allegiance to him ; 8 Henry VI. ; 14 Henry VIII. &c., though private persons had their iieges too.

Li EOF, a large and fertile province in the so'ith-east part of the kingdom of the Nether-

lands, surrounded by the Prussian province of the Lower Rhine, the grand duchy of Luxemburg, and the Belgic provinces of Namur, South Brabant, and Limburg. Its superficial extent is 2200 square miles, and it is divided into the four districts of Liege, Huy, Viviers, and Marche. The aspect of the country is that of an undulating plain, except in the south and east, where it is hilly and well wooded. These districts

border on the forest of Ardennes. The principal river is the Maese, with its subordinate streams, the Ourthe, the Loose, and the Semoys. Most parts of the province are better adapted to pasture than tillage, and cattle and sheep are reared in large quantities. The districts of Liege and Huy produce corn, and an inferior wine resembling that of Burgundy. The mineral productions are coal, which is said to be worked to the ex-tent of 450,000 tons annually, alum, calamine, lead, and iron. The principal mineral waters are those of the celebrated Spa fountains. Large quantities of woollens, hardware, and arms, are made and exported, together with cheese, Spa-water, timber, coal, and the various minerals.

This province sends six deputies to the states-general, and belongs to the fifth military division of the Netherlands. Before the French revolution it was subject to the prince bishop of Liege, a member of the Germanic body, whose revenue exceeded £100,000 a-year; the members of the states consisted almost ei.tirely of the clergy and the nobles. In 1 792 the French took possession of the whole bishopric, which they retained at the peace of Luneville, and formed into parts of the departments of the Lower Meuse, the Ourthe, and the Sambre and Meuse. On the fall of Buonaparte the bishopric of Liege was re-incorporated with the Netherlands by the congress of Vienna. Its inhabitants, amounting to 354,000, are chiefly Catholics.

LIEGE, a large old town of the Netherlands, formerly the capital of the bishopric of Liege, is upwards of four miles in circumference, and is seated on the Meuse, in a fine valley surrounded with hills and woods. At this city the Meuse is divided into three branches, which after passing through it, under several bridges, unite again below it. It was formerly a free imperial city of Germany, and one of the largest and most eminent in Europe. Though 100 miles from the sea by water, the Meuse is navigable up to it. It is divided into the upper and lower town, the former of which is very irregularly built, and has a dark and gloomy aspect ; the houses being lofty, and the streets narrow, and surcharged with filth. The latter is subdivided into the Isle and the Quarter beyond the Maese. The suburb of Maestricht, distinct from the whole, is a double range of buildings extending along the left bank of the river to the north. There are also the suburb of Valbarge (north-west) and St. Marguerite to the south.

The fortifications of Liege were once imposing, and the town had sixteen gates, and a citadel to the north-west, now rased : but it is no longer considered a garrison town. The public buildings are not very remarkable : the cathedral, built in the eighth century, is an inelegant Gothic edifice. Of the ten other churches, that

< >*’ St. Paul is the most remarkable, both for structure and ornaments. Besides a great num-ber of other convents, of both sexes, here was formerly a college of English Jesuits, founded in 1616, and a fine English nunnery. Churches, convents, and other religious foundations, occupied indeed a large part of the town, whence it was called the paradise of priests, the purgatory of men, and the hell of women. In St. William’s convent, without the city, is the tomb of the lUmous English traveller Sir John Mandeville. Near it were long kept the saddle, spurs, and knife, that he used in his travels. Existing institutions worth notice are the lyceuni, a great provincial school; the arsenal; and the theatre. The fountains are also fine, particularly one in the centre of the great square. At this place is made a great quantity of excellent cannon and musketry : its clock-work is also superior ; and the manufacture of mats is said to occupy from 10,000 to 14,000 hands. All these are large articles of export. Grates and various other hardware articles are also exported from Liege. The cloths and tanneries have also long been in good repute. The carrying trade with Holland and Germany is considerable, the town having ample water communications; and the scenery of the environs fully counterbalances the gloom of the town.

It was bombarded in 1691, and delivered up to the French in 1701. The allies retook it in 1702, and the French besieged it again in 1705, but were obliged to raise the siege on the approach of the duke of Marlborough. In 1734 a fire happened here, which consumed the bishop’s palace, with all the furniture and MSS. In 1789 the inhabitants, who had long complained of the oppression which they experienced under the government of their bishop, insisted upon a charter of privileges, and, as that prelate and his chapter would not comply with their demands, they had recourse to arms ; until the bishop, apprehensive for his safety, left the city, and appealed to the imperial chamber of Wetzlar. Decrees were now issued by the

chamber in his favor; while the king of Prussia, in 1 790, seemed to act as a mediator for the citizens : the sentences, however, issued by the imperial chamber against the insurgents, were followed by requisitorial letters, addressed to the government of the Austrian Netherlands, desiring that his imperial majesty's troops would assist those of the electoral princes in enforcing their decrees ; in consequence of which the Austrians entered Liege in 1791, restored the old magistracy, who had been expelled, to their functions, and reinstated tlia bishop. In November, 1792, the French, under Dumouriez, took the city, and effected another revolution ; but being driven thence by the allies in March, 1793, the citizens were once more obliged to submit. Early in 1794 it was again however taken by the French under Pichegru, and annexed to that country in 1 796, and until the downfall of Buonaparte. Liege is sixteen miles S. S.W. of Maestricht, and fifty-three east by south of Brussels.

LIEGER, n. s. Or LEGER, which see. A resident ambassador. VOL. XII.

Tiis passions and liis ft;ars Lie liegen for you in liis breast, and there Negotiate your affairs. lieukam'i Sophy.

LIEGNITZ, a large government of Prussian Silesia, occupying the country which lies to the north of the governments of Breslau and ileich-enbach. Its area is 4100 square miles. It includes the former duchies and principalities of Glogau, Sagan, Liegnitz, and Karolath, with part of those of Jauer and Upper Lusatia ; and is divided into thirteen circles, *viz.* Lowenberg Bunzlau, Goldberg, Liegnitz, Luben, Glogau Sprottuu, Sagan, Friestadt, Grunberg, Gorlitz, Rothenburg, and Lauban. Population 506,000.

This country is generally of level surface, and intersected by hills of but little elevation. The soil is sandy, but in many places fertile, and producing corn for exportation. The climate is mild, and vines are reared in the eastern pun. Timber abounds, and forms a large article of export. The pasturage is also good. The manufactures are of linen and woollen. The rivers are the Oder, the Bober, the Neisse, the Queis, the Schwartzwasser, and the Katzbach.

LIEGNITZ, a town of Lower Silesia, the capital of the preceding government, is situated at the conflux of the Katzbach, the Schwartzwasser, and the Neisse, and surrounded by an earthen mound, covered with fine alleys of lime, mui-berry, and chestnut trees. It has four gates, but is not fortified. An old palace of the princes

is surrounded by a distinct moat and wall. The cattle, town-house, and public school, are worth notice : as also the college formerly belonging to the Jesu.ts; the Catholic church of St. John, and the noble chapel where the former dukes of Liegnitz were buried. There is also an academy, having five professors, in the town. The chief trade is in woollens and madder. Inhabitants

10,000.

LI EN, Fr., in the English law is of two significations ; i. e. personal lien, such as bond, covenant, or contract ; and real lien, i. e. a judsment, statute, recognizance, which oblige and affect the land. It signifies an obligation, tie, or claim annexed to, or attaching upon, any property : without satisfying which such property cannot be demanded by the owner. Thus the costs of an attorney are a lien upon deeds and papers in his hands; a factor has a lien on goods in his hands for balance due from his principal, &c. By the common law every person, whether attorney or not, has a lien on the specific deed or paper, delivered to him to do any specific work or business upon ; but not on othei papers of the same party, unless he be an attorney. A banker has a lien for the amount of his balance upon securities (bills and checks) paid in by a customer upon his running account. A printer has a lien generally upon the copies of a work not delivered, for his balance. But the lien of a common carrier for his general balance, however it may arise in point of law from an implied agreement to be inferred from a general usage of trade, and proved by numerous instances , yet is not to be favored, nor can it be supported by a few recent instances of detention of goods by four or five carriers for their general

balance. Rut such a lieu may be inferred from evidence of the particular words of dealing between the respective parties. The master

of a ship has no lien on it for money expended, or debts incurred by him for repairs done to it on the voyage.

LI'ENTERY, n. s. > Fr. lienterie ; from Gr.

LIENT'ERIC, adj. J \ttov, lave, smooth, and tvrtpov, intestinum, gut. A particular looseness, or diarrhoea, wherein the food passes too quickly through the stomach.

There are many medicinal preparations of iron, but none equal to the tincture made without acids; especially in obstructions, and to strengthen the tone of the parts ; as in tienterick and other like cases. Grew's Museum.

LIENTERY, in medicine, a disease consi" dered by Cullen as a variety of diarrhoea, in which great portions of the food pass off by stool almost unchanged. The term is derived from Gr. Xuoc, smooth, and tvrtpov, intestine, ancient physicians conceiving that this disease was owing to the excessive smoothness and lubricity of the internal membrane of the stomach, which allowed the food to slip through it in an undigested state.

Many writers have treated the lientery as a disease altogether distinct from diarrhoea : its principal cause, according to Cullen, appears to consist in a morbid irritability of the stomach and bowels ; by which the former organ is excited to an excessive motion of its muscular coat, and consequently expels the aliment into the bowels in an undigested state; and the latter being likewise morbidly sensible to the same stimulus, carry on the undigested matter speedily through the whole canal. The faces are at the same time loose or liquid, because, while the undigested matter is not taken up by the lacteals, the irritation caused by its rapid passage excites the ex-halant vessels, and the excretories of the mucous glands, to pour out a more abundant quantity of their fluids. This symptom causes generally ureat weakness of the digestive powers as well as an increased morbid irritability of the stomach.

It is one of those diseases which are called hereditary, from their often proceeding through several generations in particular families. In this case, however, nothing more seems to descend than a general looseness of habit. With proper care that the aliment is given in small quantities, and of a digestible quality ; that the child have plenty of wholesome air, not that of Fleet Street or Cheapside ; and plenty of good exercise, not mere walking in Temple Gardens ; the disease may be often overcome as the patient urows np.

It is therefore the endeavour of the physician first to lessen the irritability of the whole alimentary canal; and, secondly, to strengthen as much us possible the digestive powers of the stomach : for, although food, when converted into chyle by the process of digestion, passes through the bowels without producing any irritating effect; yet the same food, when it is transmitted into them from the stomach in a crude unaltered condition, operates as an extraneous and foseign matter on the irritable villous lining of the bowels, and excites them to an extraordinary peristaltic action.

The first indication of allaying the irritability

of the stomach and intestines must, of course, be fulfilled by the administration of narcotic medicines, and of astringents. Opium itself is the most effectual soother of morbid irritability that we possess ; and, in cases like that under consideration, its operation is improved by the union of some aromatic substance ; hence the opiate confection, according to the formula of the London pharmacopeia, is a grateful and efficacious medicine for this purpose. But the irritability is still more effectually allayed, when astringents and absorbents are employed at the same time with the opiates ; the best of these are the catechu, and the testaceous powders, or chalk. The confectio catechu of the Edinburgh pharmacopeia, which combines the opiate, astringent, and aromatic, in one substance, is a valuable medicine for the fulfilment of this indication. These substances may be administered in a little distilled water of some aromatic vegetable.

Or, with a view to strengthening the digestive powers of the stomach, the same medicines may be usefully combined with bitters, as the infusion of cascarilla, gentium root, or orange peel, or either the decoction or infusion of cinchona or Jesuit's bark. At the same time moderate exercise, especially on horseback, will aid in re-establishing the functions of the stomach. But, above all, every cold and debilitating kind of food, all substances of difficult solubility, and even the most nourishing and digestible in large quantities, must be studiously avoided. This is the more important as instances sometimes happen in which this disease is accompanied with a bulima or excessive appetite, and parents often feel considerable difficulty in denying their children common articles of food when they desire them, though certain they can only be injurious. Of this fact we have ourselves known instances. All such things as ice sallads. water-cresses, cucumbers, or other raw vegetables, vegetable acids, &c., are to be avoided. We have heard of a severe lientery being brought on by

eating a little ice-cream, at a time when a considerable degree of indigestion already prevailed ; it appeared at once to sink the feeble digestive powers of the stomach, and the food was discharged almost unchanged. Cheese, hard or salted meats, fatty substances, &c., which require all the energy of the healthy stomach to subdue them into chyle, should on no account be allowed. When the alimentary canal is in the irritable condition above mentioned, it is advisable for the invalid to avoid active exercise immediately after his meals, which is liable to hurry on the food into the intestines before the digestion is completed, and thus to occasion a lienteric attack. Persons subject to habitual indigestion, or at least great feebleness of stomach, have at those times frequently brought on lienteric diarrhoea, unless they remained quiet for some time after every meal. See MEDICINE.

LIEU, Fr. lieu. Place ; stead : always used with in ; and not a very respectable Gallicism.

God, of his great liberality, had determined, »”» lieu of man’s endeavours, to bestow the same by the rule of that justice which best beseemeth him.

Hooker.

In /iV i* of such an increase of dominion, it is our ousiness to extend our trade. Addison’s Freeholder. She shall stoop to be

A province for an empire, petty town In lieu of capital, with slaves for senates;

Beggars for nobles , panders for a people !

Byrmi.

LIEVENS (John), a celebrated painter, born in Leyden in 1607. He was the disciple of Joris Van Schooten, and afterwards of Peter Lastman. He excelled principally in portraits ; but he also executed several historical pieces with great success. He resided three years in England, and painted the portraits of Charles I., the queen, the prince, and several of the nobility; after which he returned to Antwerp, where he met with full employment. There are several of his etchings extant, performed in a slight, but masterly manner. The chiaro scuro is very skilfully managed in them, so as to produce a most powerful effect. His style of etching resembles that of Rembrandt; but is coarser and less finished.

LIEUTAUD (Joseph), M. D., counsellor of state and first physician to the court of France, was born at Aix in Provence, and resided principally there till he took his degree. After this he studied for some years at Montpelier. He returned to Aix, where he soon acquired extensive practice, and became eminent for his literary abilities. There he resided till 1750, when he was invited to act as physician to the royal infirmary at Versailles ; where he practised with such reputation and success, that he soon arrived at the head of his profession; and in 1774, upon the death of M. Senac, was appointed archiater. He published many valuable works ; particularly, 1. Elementa Philologiae ; 2. Precis de la Medicine; 3. Pratique Precis deMatiere Medicale; 4. Essais Anatomiques ; o. Synopsis Universae Praxeos Medicina? ; 6. Historia Anatomico-Medica. He died at Versailles in 1780, aged seventy-eight.

LIEUTEN’ANCY, n. s. } Fr. lieutenance,

LIEUTEN’ANT, > lieutenant. A de—

LIEUTEN’ANTSHIP. J puty; a subordinate

officer ; one who acts in the place or stead of another.

It were meet tnat sucn captains only were employed as have formerly served in that country, and been at least lieutenants there. Spenser on Ireland.

If such tricks as these strip you of your lieutenancy, it had been better you had not kissed your three fingers so oft. Shakspeart. Whither away so fast ?

— No farther than the tower.

— We’ll enter all together,

And in good time here the lieutenant comes. Id.

I must put you in mind of the lords lieutenants, and deputy lieutenants, of the counties : their proper use is for ordering the military affairs, in order to op-pose ˆan invasion from abroad, or a rebellion or sedition at home. Bacon.

Killing, as it is considered in itself without all undue circumstances, was never prohibited to the lawful magistrate, who is the vicegerent, or lieutenant of God, from whom he, derives his power of life and death. Bramhall against Hol > bes.

The earl of Essex was made lieutenant general of the army ; the most popular man of the kingdom, and the darling of the swordsmen. Clarendon.

Sent by our new lieutenant, who in Ro:ne, And since from me, has heard of your renown, 1 come to offer peace. Philips'* Briteit.

His lieutenant, engaging against his positive orders being beaten by JLysander, Alcibiades was again banished. Swift.

Canst thou so many gallant soldiers see, And captains and lieutenants slight for me ?

Gau.

According to military custom the place was good, and the lieutenant of the colonel's company might well pretend to the next vacant captainship.

Walton.

The list of undisputed masters is hardly so long as the list of the lieutenancy of our metropolis.

Felton on the Classic*.

The lieutenant brought up the rear, and took care that none of the soldiers were left behind, or deserted.

Potter's Antiquities.

He was born in Ireland during the lieutenancy of Stafford, who, being both his uncle and his godfather, gave him his own surname. Johnson.

• A LIEUTENANT is an officer who supplies the

Elace and discharges the offices of a superior in is absence. Of these some are civil, as the lords lieutenants of kingdoms and counties ; others military, as the lieutenant-general, lieutenant-colonel, &c.

LIEUTENANT, in the land service, is the second commissioned officer in every company of both foot and horse, being next to the captain, and taking the command upon the death or absence of the captain.

LIEUTENANT-COLONEL, the second officer of a regiment, who commands in the absence of the colonel.

LIEUTENANT-GENERAL is the next in command after the general ; and, provided he should die or be killed, the order is, that the oldest lieutenant-general shall take the command. This office is the first military dignity after that of a general. Lieutenant-generals have multiplied iu Europe, in proportion as the armies have become numerous. They serve either in field or in the sieges, according to the dates of their commissions.

LIEUTENANT OF ARTILLERY. The lieutenant has the same detail of duty with the captain ; because in his absence he commands the company : he is to see that the soldiers are clean and neat ; that their clothes, arms, and accoutrements, are in good and serviceable order; and to watch over every thing else which may contribute to their health. He must attend to their being taught the exercise, see them punctually paid, their messes regularly kept, and visit them in the hospitals when sick. He must assist at all parades, &c. He ought to understand the theory of projectiles, and the science of artillery, with the various effects of gunpowder, however managed or directed; to enable him to construct and dispose his batteries to the best advantage; to plant his cannon, mortars, and howitzers, so as to produce the greatest annoyance to an enemy. He is to be well skilled in the attack and defence of fort. fied places; and to be conversant in arithmetic, mathematics, mechanics, &c.

LIEUTENANT OF A SHIP OF WAR, an officer next in rank and power to the captain, in whose

absence he is charged with the command of the ship, and the execution of whatever orders he may have received from the commander relating to the king's service. The lieutenant who commands the watch at sea keeps a list of all the officers and men thereunto belonging, in order to muster them when he judges it expedient, and report to the captain the names of those who are absent from their duty. During the night-watch, he occasionally visits the lower decks, or sends thither a careful officer, to see that the proper sentinels are at their duty, and that there is no disorder amongst the men ; no tobacco smoked between decks, nor any fire or candles burning there, except the lights which are in lanterns, under the care of a proper watch. He is expected to be always upon deck in his watch, as well to give the necessary orders with regard to trimming the sails and superintending the navigation, as to prevent any noise or confusion ; but he is never to change the ship's course without the captain's directions, unless to avoid an immediate danger. The lieutenant, in time of battle, must particularly^ take care that all the men are present at their quarters, where they have been previously stationed according to the regulations made by the captain. He should ex-hort them every where to perform their duty ; and acquaint the captain at all times of the misbehaviour of any person in the ship, and of whatever else concerns the service. The youngest lieutenant in the ship, who is also styled lieutenant at arms, besides his common duty, is particularly ordered, by his instructions, to train the seamen to the use of small arms, and frequently to exercise and discipline them therein. His office in time of battle is chiefly to direct and at-tend them ; and at other times to have a due re-gard to the preservation of the small arms, that they be not lost or embezzled, and that they be kept in good condition for service.

LIEUTENANT, REFORMER, he whose company or troop is broken or disbanded, but himself continued in whole or half pay, still preserving his right of seniority and rank in the army.

LIEUTENANTS, LORDS, OF COUNTIES, are officers, who, upon any

invasion or rebellion, have power to raise the militia, and to give commissions to colonels and other officers, to arm and form them into regiments, troops, and companies. Under the lords lieutenants are deputy lieutenants, who have the same power ; these are chosen by the lords lieutenants out of the principal gentlemen of each county, and presented to the king for his approbation.

LIE WARDEN, or LEWARDEN, a large town of the Netherlands, the capital of the province of Friesland, situated on the river Ee. It is surrounded with an earthen mound and broad moat. The streets, which are straight and wide, are intersected by canals, which communicate with the sea. The chief public buildings are the town-house, arsenal, the house belonging to the prince of Orange, as hereditary stadtholder of the province, and a large and handsome church, containing the tombs of the princes of his family. The walls and banks of the canals are delightful promenades, planted with trees. Twenty-eight miles west of Groninuen.

LIFE, n. s. ˆ Sax. hpan : Teut. leben ;

LIFE’BLOOD, Belg. leven, to exist; Goth.

LIFE’GIVING. and Swed. lif; Dan. l\v.

LIFE’GUARD, Existence ; animated ex—

LIFE’LESS, adj. I istence; human existence;

LIFE’LESSLY, (idv. (man’s present state of be—

LIBE’LIKE, adj. ing : hence, conduct; con—

LiFE’sTRrNG, n. s. dition; manner of life;

LIFE’TIME, human affairs; living per—

LIFE’WEARY. J son ; narrative of a life :

spirit; briskness: activity; enjoyment; and

blood, the supposed vehicle of life; a living, or

real form, as opposed to copies : lifeblood, the

blood necessary to life : life-guard, the guard of

the king's life or person : life-string, nerve ;

strings supposed essential to life: lifetime, time

of the duration of life : lifeweary, tired of life,

or living; wretched.

But be clothid aboue, that thilk thing that is deedli be sopun up of lyf. Wiclif. 2 Cor. v.

Let the waters bring forth abundantly the moving creature that hath life. Gen. i. 20.

For the Life of the flesh is in the blood.

Lev. xvii. 11.

Wei coude he peinten ///ft/ that it wrought, With many a florein he the hewes bought.

Chaucer. Cant. Tales.

Thus I know, not only by reading of books in my study, but also by experience of life abroad in the world. An-htiin.

The weapon bright, Taking advantage of his open jaw, Rau through his mouth with so importune might, That deep empurst his darksome hollow maw, And back retired, his lifeblood forth withall did

draw. Spenser. Faerie Queene.

Then avarice 'gan through his veins to i spire

His greedy flames, and kindle life devouring fire.

Id.

His own heat, Kindled at first from heaven's lifegiving fire.

Spfnser.

On thy life no more. — My life I never held but as a pawn To wage against thy foes. Shtikspeare. King Lear.

She shews a body rather than a life, A statue than a breather.

Id. Antony and Cleopatra.

Why should I play the Roman fool, and die

On mine own sword 1 whilst I see lives the gashes

Do better upon them. Id. Macbeth.

How couldest thou drain the lifeblood of the child ?

Shakspeare.

Hopeless and helpless doth ˆEgeon wend, But to procrastinate his lifeless end. Id.

Let me have

A dram of poison, such soon speeding geer, As will disperse itself through all the veins, That the lifeweary taker may fall dead. Id.

This is the best part of beauty which a picture cannot express, no, nor the first sight of the life.

Bacon's Essays.

There is a false gravity that is a very ill symptom ; and it may be said, that, as rivers which run very slowly have always the most mud at the bottom ; so a solid stiffness, in the constant course of a man's life, is a sign of a thick bed of mud at the bottom of his brain. Satr.O*.

And since this life our nonagp i.*, And we in wardship to thine AngeiT, fc«, Native in heaven's fair palaces, Where we shall be but denizoned by thee.

fiouue. Dir'aie Pcent.

He that through inconsiderateness doubted twice < >! his own life, doubted nut the life of his seed, even from the dead aud dry womb of Sarah.

Bp. Hall.

These lines are the veins, the arteries, The undecaying lifettrings of those hearts ‘I hat still shall pant, and still shall exercise The motion spirit and nature both impart. Daniel.

0 life, thou nothing’s younger brother !

So like, that we may take the one for t’other !

Dream of a shadow : a reflection made From the false glories of the gay reflected bow,

Is more a solid thing than thou ! Cowley.

1 believe no character of any person was ever better drawn to the life than this. Denham.

Nor love thy life, nor hate ; but what thou livest Live well, how long or short permit to Heaven.

Milton.

Not to know at large of things remote From use, obscure and subtile ; but to know That which before us lies in daily life, Is the prime wisdom. Id. Paradise Lost.

He sat devising death

To them who lived ; nor on the virtue thought Of that lifegiving plant. Id.

Was I to have never parted from thy side 1 As good have grown there still a lifeless rib !

Milton.

The Helots bent thitherward with a new life of resolution, as if their captain had been a root out of which their courage had sprung. Sidney.

When I consider life, ‘tis all a cheat, Yet fooled by hope men favour the deceit, Live on, and think to-morrow will repay ; To-morrow’s

falser than the former day ; Lies more ; and, when it says we shall be blest With some new joy, takes off what we possest. Strange cozenage ! none would live past years again, Yet all hope-pleasure in what yet remain ; And from the dregs of life think to receive What the first sprightly running could not give.

Dryden.

Rich carvings, portraiture, and imagery, Where every figure to the life expressed The godhead's power. Id. Knight's Tale.

His forehead struck the ground, LifeltU'od and life rushed mingled through the wound.

Dryden.

The other victor-flame a moment stood, Then fell, and lifeless left the extinguished wood.

Id.

The identity of the same man consists in nothing but a participation of the same continued life, by c mstanlly fleeting particles of matter, in succession vitally united to the same organized body.

Locke.

Some have not any clear ideas all their lives. Id. They loved with that calm and noble value which dwells in the heart, with a warmth like that of lifeblood. Spectator.

J ordain talked prose all his lifetime, without knowing what it was. Addkon on Medal*.

"The administration of this bank is for life, and partly in the hands of the chief citizens.

Id. On Italy.

Not with half the fire and life, With which he kissed Amphytrion's wife. Prior. I, who make the triumph of to-day, May of to-morrow's pomp one part appear, Ghastly with wounds, and lifeless on the bier. Id.

Untamed and fierce the tyger still remains, And tires his life with biting on his chains. Id. He that would' be a master, must draw by the life as well as copy from originals, and join theory and experience

together. Collier.

They have no notion of life and fire in fancy and in words ; and any thing that is just in grammar and in measure is as good oratory and poetry to them as the best. Fetton.

The power which produces their motions, springs from something without themselves : if this power were suspended, they would become a lifeleu unactiv* heap of matter. Cheyne.

So peaceful shall thou end thy blissful days, And steal thyself from life by slow decays. Pope.

His gushing entrails smoaked upon the ground. And the warm life came issuing through the wound.

H.

Minerva, lifelike, on embodied air Impressed the form of Iptheraa the fair. It. Henry and Edward, brightest ions of fame, And virtuous Alfred, a more sacred name . After a life of glorious toils endured, Closed their long glories with a sigh. la.

Money, the lifeblood of the nation, Corrupts and stagnates in the veins,

Unless a proper circulation Its motion and its heat maintains. Suv/K

He entreated me not to take his life, but exact a sum of money. Broome on the Odytsetf.

That life is long which answers life's great end ; The time that bears no fruit deserves no name.

Young.

What is the life of man ? Is it not to shift from side to side 1 — from sorrow to sorrow 1 — to button up one cause of vexation — and unbutton another ?

Sterne. There's nought but care on every han',

In every hour that passes, O ; What signifies the life o' man,

An' 'twerna for the lasses, O ? Burns. The first is, because out of it are

the issues of life ; i. e. As our heart is, so will the tenor of our life and conduct be. Mason.

The Lord of all, himself through all diffused, Sustains, and is the life of all that livet : Nature is but a name for an effect, Whose cause is God. Covper.

— With weak unsteady step the fainting maid Seeks the cold garden's solitary shade, Sinks in the pillowy moss her drooping head, And prints with lifeless limbs her leafy bed.

Darwin.

Therefore, they who all their lifetime derive blessings from the Fountain of Grace, by the channels of ecclesiastical ministers, ought then more especially to do it in the time of their sickness. Patey.

But vain the wish — for Beauty still

Will shrink, as shrinks the ebbing breath, And woman's tears, produced at will,

Deceive in life, unman in death. Byron.

But the white shroud, and each extended tress, Long — fair — but spread in utter lifeletsnest, Which, late the sport of every summer wind, Escaped the baffled wreath that strove to bind. Id.

LIFE ANNUITIES AND ASSURANCE. We have disposed of a portion of this subject under the article ASSURANCE, i. e. the history and chief practical details ; and our article ENGLAND contains M. Babbage's list all the respectable companies for the assurance of lives, against fires, &c., with remarks on the principles of their calculations and procedure.

That gentleman, unquestionably the first among those practical mathematicians of our age who have investigated these topics, disappointed us however, with many others of his readers, in

his ‘ Comparative View’ of the various institutions for the assurance of lives, published in 1826. It is in fact only a popular introduction to the scientific consideration of the topics involved ; digesting into a very convenient Manual, the preceding labors and investigations of Mr. Mor-gan, Mr. Baily, and Mr. Milne. But we understand that his wonderful machinery for the computation of logarithms has been for some time employed in the calculation of ac entirely new and most important series of Tables on this subject :

and we need not remind our readers, who have looked into it, of the jarring claims of former calculations, and the entire dependence of every practical question involved on such data. The Northampton Tables, for instance, which have been the chief basis of all the insurances hitherto made, of the rate of premium charged, Sec., compared with the actual deaths among the members of the Equitable Society, according to Mr. Morgan, exhibit the following curious result.

From the age of 10 to 20 the deaths occurring have been only as 1 to 2 on the Northampton 20 to 30 1 to 2 Tables.

30 to 40 3 to 5

40 to 50 3 to 5

50 to 60 5 to 7

60 to 70 4 to 5

This society on the whole is said for the last thirty years to have paid therefore only two claims where the tables in question state that three would arise : and hence the source of its exorbitant profits. Government, we may add, is understood to have liberally assisted in the designs of our author, and that the appearance of the calculations in question may be confidently looked for in a few months. We shall,

in this case, not fail to avail ourselves of them in the article SURVIVORSHIP, to which under these circumstances the reader is referred.

LIFE BOAT. See BOAT.

LIFFEY, THE, a river of Ireland, which rises in the Wicklow mountains and falls into the bay of Dublin. Its course is about seventy-one miles, although the direct distance from its source to its estuary is not more than ten. In Kildare its banks are well wooded, and when it enters the county of Dublin they present most interesting and picturesque scenery. The tide conducts vessels of burden to the city, but is stopped by a beautiful fall at its western extremity. Its floods, shallows, and rapids, are very frequent.

LIFT, v. a., v. n. Scn.s.) Sax. ˆhfian ; Goth.

LIFT'ER, n. s. \lofa; Swed. lyfta ;

Teut. liften. To heave ; raise up ; exalt ; hold on high ; used with up, emphatically : hence to elevate mentally ; exalt in station, fortune, dignity, or esteem; inflate with pride: as a neuter verb, to strive to raise : as a noun, the act, man-ner, or effect of raising any thing ; also a weight lifted ; or a load : a dead lift is a load that remains immoveable after a given exertion, and exhaustion (the consequence of extreme exertions). See DEAD.

I wole that men prei in alle place liftynge up cleene hondis withouten wrathe and strf.

Widif. 1 Tymo. ii. Arise, lift up the lad, and hold him in thine hand.

Genetu. My heart was lift up in the ways of the Lord.

2 Chran.

Thou, O Lord, art my glory, and the lifter up of mine head. Psalm iii. 3.

Lifted up with pride. 1 Tim. iii. 6.

Pinch cattle of pasture while summer doth last, And lift at their tailes ere a winter be past.

Tusser.

So down he fell, that the' earth him underneath 1'iJ groan, as feeble

so great load to lift.

Faerie Queene

Neither can it be thought, because some lessons are chosen out of the Apocrypha, that we do offer disgrace to the word of God, or lift up the writings of men above it. Hooker.

Your guests are coming ; Lift up our countenance, as ‘twere the day Of celebration of that nuptial.

Shakspeare. Winter’s TaU. Filial ingratitude !

Is it not as this mouth should tear this hand For lifting food to’t 1 Id. King Lear.

In the lift of the feet, when a man goeth up the hill, the weight of the body beareth most upon the knees. Bacon.

Myself and Trulla made a shift To help him out at a dead lift. Hudibras. Propped by the spring, it lifts aloft the head, But of a sickly beauty soon to shed, In summer living, and in winter dead. Dryden. The goat gives the fox a lift, and out he springs.

L’ Estrange.

The mind by being engaged in a task beyond its strength, like the body strained by lifting at a weight too heavy, has often its force broken. Locke.

See to what a godlike height The Roman virtues lift up mortal man !

Addisem.

Our successes have been great, and our hearts have been too much lifted up by them, so that we have reason to humble ourselves. Atterbury.

Of Orpheus now no more let poets tell, To bright Caecilia greater power is given ;

His numbers raised a shade from hell, Hers lift the soul to heaven. Pope.

Mr. Doctor had puzzled his brains In making a ballad, but was at a

stand, And you freely must own, you were at a dead lift.

Swift.

As some tall cliff that lifts its awful form, Swells from the vale, and midway leaves the storm.

Goldsmith.

The quiet night, now dappling ‘gan to wane, Dividing darkness from the dawning main : The dolphins, not unconscious of the day, Swam high, as eager of the coming ray ; The stars from broader beams began to creep, And lift their shining eyelids from the deep.

Byron. See LIE.

Fr. ligament ; Latin ligamentum, a ligo, to bind. A cartilaginous appendage or bandage of the joints; any tie or

LIG, v. n. To lie. LIG’AMENT, n. «.- LIGAMEN’TAL, adj. LIGAMEN’TOUS, LIGA’TION, n. s.

Lll/ATURE.

bond : ligation is the act of binding, or state of being bound : ligature, a bandage, that which is bound round something; it is also used synonymously with ligation.

Be all their ligaments at once unbound,

And their disjointed bones to powder ground.

Sandys.

But he in a battail seeing his father in danger to be slain, in zeal to

save his father's life strained the ligature of his tongue, till that broke which bound him. Bp. Taylor.

Though our ligaments betimes grow weak, We must not force them till themselves they break.

Denham.

The urachos, or ligamental passage, is derived from the bottom of the bladder, whereby it discharg-eth the watery and urinary part of its aliment.

Browne's Vulgar Erroisrs.

He deludeth us also by philters, ligatures, charms, and many superstitious ways in the cure of diseases.

Browne.

The incus is one way joined to the malleus, the other end being a process is fixed with a Hgament to the stapes. Holder.

If you slit the artery, and thrust into it a pipe, and cast a strait ligature upon that part of the ar-tery ; notwithstanding the blood hath free passage through the pipe, yet will not the artery beat below the ligature ; but do but take off the ligature, it will beat immediately. Ray on the Creation.

Sand and gravel grounds easily admit of heat and moisture, for which they are not much the better, because they let it pass too soon, and contract no ligature. Mortimer's BvtktHJry.

The many ligatures of our English dress check the circulation of the blood. Spectator.

- Men sometimes, upon the hour of departure, do speak and reason above themselves ; for then the soul, beginning to be freed from the ligaments of the body, reasons like herself, and discourses in a strain above mortality. Addison's Spectator.

The slumber of the body seems to be but the waking of the soul ; it is the ligation of sense, but the liberty of reason. Addison.

The fatal noose performed its office, and with most strict ligature squeezed the blood into his face.

Arbuthnot's John Bull.

The clavicle is inserted into the first bone of the sternon, and bound in by a strong ligamentous membrane. Wiseman.

1 found my arms and legs very strongly fastened 0:1 each side to the ground ; I likewise felt several slender ligatures across my body, from my arm-pits to my thighs. Gulliver's Travels.

LIGATURE, in surgery, is a cord, band, or string ; or the binding any part of the body with a cord, band, fillet, &c. Ligatures are used to extend or replace bones that are broken or dislocated; to tie the patients down in lithotomy and amputations; to tie upon the veins in phle-botomy ; on the arteries in amputations, or in large wounds ; to secure the splints that are applied to fractures, &c., and in taking off warts or other excrescences by ligature.

LIGATURE, in the Italian music, signifies a binding together of notes. Hence syncopes are often called ligatures, because they are made by the ligature of many notes. There is another sort of ligatures for breves, when there are many of these on different lines, or on different spaces, to be sung to one syllable.

LIGNY, a village of the Netherlands, in Na-

mur, only remarkable as the scene of an obstinate and sanguinary battle between the Prussians and French, on the 16th of June 1815, the prelude to the decisive battle of Waterloo, ft is three miles north-east of Fleurus, and eleven W.N.W of Namur.

LIGHT, adj. & adv.~) Sax. leopt ; Goth. LIGHT'-FOOT, adj. \ lett ; Teut. kicht ; Belg. LICHT'EN, v. a. \leiht. Of small weight ,

LIGHTLEGGED', adj. ^opposed to heavy : LIGHT'LY, adv. hence active; nimble;

LIGHTMIND'ED, adj. unincumbered ; easy to LIGHT'NESS, n. t. J be lifted, worn, or carried; not dense or gross: and, metaphorically, easy of endurance ; not afflictive; not mentally burdensome; easy, generally ; not heavy -armed ; airy; gay; unsteady; unsettled; unchaste: light, as an adverb, means cheaply, but is a barbarism : to lighten is to make of less weight ; to relieve of a burden or affliction ; to cheer : the other derivatives seem to require no explanation.

He seitli to hem, what thinken ye these thingis in youie heitis 1 What is lightere to seye to the syk man m palesye synnes be forghiven to

thee ; or to seye rise take thi bed and walke 1 Widif. Mark i.

In the wilderness there is no bread, nor water, and our soul loatheth this tight bread. Numbers xxi. 5. Asahel was as light of foot as a wild roe.

2 Sum. ii. 18.

The mariners were afraid, and cast forth the wares that were in the ship into the sea, to lighten it of them. Jonah i. 7.

He that is hasty to give credit is lightminded.

Ecclus. xi-c. 4.

To you my purse, and to none othir wight, Complain I, for ye be my ladie dere ; I am sorie now that ye be so light, For certis ye now make me hevie chere.

Chaucer's Balades. Horse, oxen, plough, tumbrel, cart, waggon, an<?

wain, The lighter and stronger the greater thy gaine.

Tusser.

He so.liyht was at legerdemain, That what he touched came not to light again.

Spenser.

Land some of our passengers, And light this weary vessel of her load.

Faerie Queene.

For, unto knight there is no greater shame, Than lightness and inconstancy in love. Id.

Him so far had bora his lightfoot steed, Pricked with wrath and fiery fierce disdain, That him to follow was but fruitless pain. Id. Shall we set light by that custom of reading, from whence so precious a benefit hath jrown 1 Hooker.

If they write or speak publicly but five words, one of them is lightly about the dangerous estate of the church of England in respect of abused ceremonies.

Of two things they must choose one ; namely, whether they would, to

their endless disgrace, with ridiculous lightness, dismiss him, whose restitution they had in so importunate manner desired, or else condescend unto that demand. Id.

Paulus Bachitius, with a company of light horsemen, lay close in ambush, in a convenient place for that purpose. Knolles.

It will be light, that you may bear it

Under a cloak that is of any length. Adbpwre.

False of heart, light of ear, bloody of hand. Id. Let me not be light,

For a tight wife doth make a heavy husband. Id.

LIGHT.

Believe ‘t not lightly that your son WiU not exceed the common, or be caught \ itli cautelous baits and practice. Id.

Bid that welcome

Which comes to punish us, and we punish it, Seeming to bear it lightly. Id.

As I blow this feather from my face, Obeying with my wind when I do blow, And yielding to another when it blows, Commanded always by the greatest gust ; Such is the lightness of you common men. Id.

A trusty villain, very oft, When I am dull with care and melancholy, Lightens my humour with his merry jest. Id. How oft when men are at the point of death, Have they been merry ! which their keepers call A lightning before death. Id. Romeo and Juliet.

A king that would not feel his crown too heavy, must wear it every day ; but, if he think it too light, he knoweth not of what metal it is made.

Bacon’s Essays.

Unmarried men are best masters, but not best subjects ; for they are light to run away. Bacon.

Some are for masts of ships, as fir and pine, because of their length, straightness, and lightness.

Id. Natural History.

These light vain persons still are drunk and mad With surfeitings and pleasures of their youth.

Davifs.

This grave partakes the fleshly birth, Which cover lightly, gentle earth. Ben Jonson. They have cock-boats for passengers, and lighten for burthen. Carew.

They are light of belief, great listeners after news.

HoweU.

Flatter not the rich ; neither do thou willingly or lightly appear before great personages. Taylor.

There Stamford came, for his honor was lame Of the gout three months together ;

But it proved, when they fought, but a running

gout, For heels were lighter than ever. Denham.

The English Liturgy, how piously and wisely •oever framed, had found great opposition ; the ceremonies had wrought only upon lightheaded, weak, men, yet learned men excepted against some particulars. Clarendon.

Strive

In offices of love how we may lighten Each other's burden. Milton.

To entitle every petty chance that arriveth to special providence, may signify lightness. Barrow. Lightlegged Pas has got the middle space.

Sidney.

Is it the disdain of my estate, or the opinion of my lightness, that emboldened such base fancies towards Ine ‘ Id.

A light error in the manner of making the following trials was enough to render some of them unsuccessful. Boyle.

There is no greater argument of a light and inconsiderate person, than profanely to scoff at religion.

Tiliottom,

The audience are grown weary of continued melancholy scenes ; and few tragedies shall succeed in this age, if they are not lightened with a course of mirth. Dryden.

Light fumes are merry, grosser fumes are sad ; Both are the reasonable soul run mad. Id.

Hot and cold were in one body fixt, And soft with hard, and light with heavy mixt.

Id.

Light sufferings give us leisure to complain ; W e groan, but cannot speak, in greater pain. Id.

The force of fire ascended first on high, And took its dwelling in the vaulted sky ; Then air succeeds, in lightness next to fire. Id. Suppose many degrees of littleness and lightness iu particles, so as many might float in the air a good . while before they fell. Burnet.

A cheerful temper, joined with innocence, will make beauty attractive, knowledge delightful, and wit good-natured. It will lighten sickness, poverty,' and affliction ; convert ignorance into an amiable simplicity, and render deformity itself agreable.

Addison.

These weights did not exert their natural gravity till they were laid in the golden balance, insomuch that I could not guess which was light or heavy whilst I held them in my hand. Id.

We were once in hopes of his recovery, upon a kind of message from the widow; but this only proved a lightening before death. Id. Spectator.

The soft ideas of the cheerful note, Lightly received were easily forgot. Prior.

Youths, a blooming band ; Light bounding from the earth at once they rise, Their feet half viewless quiver in the skies. Pope. I am bright as an angel, and light as a feather.

Swift. I was the Queen o' bonnie France,

Where happy I hae been, Fu' lightly rose I in the morn, As blythe lay down at e'en. Burnt.

The redbreast warbles still, but is content With slender notes, and more than half suppressed : Pleased with his solitude, and flitting light From spray to spray, where'er he rests he shakes From many a twig the pendent drops of ice, That tinkle in the withered leaves below. Cowper.

Upon his hand she laid her own — Light was the touch, but it thrilled to the bone, And shot a dullness to his heart, Which fixed him beyond the power to start.

Byron .

What mortal among us is there, that, when any misfortune comes on him unexpectedly, does not find himself wonderfully lightened of the load of his sor-row, by pouring out the abundance of his vexation in showers of curses on the author of his calamity ?

Canning.

LIGHT, v. n. Sax. liptan ; Goth, ligta ; Teut. leighten. From LOT, which see. To descend or fall upon ; to happen to find ; to fall in a particular 'direction ; descend from a horse or carriage ; desist from motion ; rest.

Rebekah lifted up her eyes, and, when she saw Isaac, she lighted oft the cdmel. Gen. xxiv. 64.

When Naaman saw him running after him, he lighted down from the chariot to meet him.

2 Kings v. 21.

They shall hunger no more ; neither shall the sun light on them, nor any heat. Rev. vii. 16.

O Lord, let thy mercy lighten upon us, as we do put our trust in thee. Common Prayer.

And whan she saw her fadir in the strete, She light adoun and falleth him to fete.

Chaucer. Canterbury Tales. The prince, by chance, did on a lady light, That was right fair, and fresh as morning rose.

Spenser.

He at his foe with furious rigour smites, That strongest oak might seem to overthrow ;

The stroke upon his shield so heavy lights, That to the ground it doubleth him full low. Id. At an uncertain lot none can find themselves grieved on whomsoever it lighteth. Hooker.

LIGHT.

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Haply your eye should light upon some toy You have desired to purchase. Shakspeare.

1 saw ‘em salute on horseback, 13eheld them when they lighted, how they clung In their embracement. Id.

1 placed a quire of such enticing i»irds, That she will light to listen to their lays. Id. As in the tides of people once up there want not stirring winds to make them more rough ; so this people did light upon two ringleaders. Bacon.

Then as a bee which amongst weeds did fall, Which seem sweet flowers, with lustre fresh and gay

She lights on that, and this, and tasteth all, Hut pleased with none, doth rise, and soar away.

Davies.

Of late years, the royal oak did light upon count llhodophil. Howell.

On me, me only, as the source and spring Of all corruption, all the

blame lights due.

Milton’s Paradise Lost.

No more settled in valour than disposed to justice, if ehher they had lighted on a better friend, or could have learned to make friendship a child, and not the father of virtue. Sidney.

The way of producing such a change in colours may be easily enough lighted on, by those conversant in the solutions of mercury. Boyle. The wounded steed curvets ; and raised upright, Lights on his feet before : his hoofs behind Spring up in air aloft, and lash the wind. Dryden.

He sought by arguments to sooth her pain ; Nor those availed : at length he lights on one, Before two moons their orb with light adorn, If Heaven allow me life, I will return. Id.

Truth, light upon this way, is of no more avail to us than error ; for what is so taken up by us, may be false as well as true ; and he has not done his duty, who has thus stumbled upon truth in his way to preferment. Locke.

Whosoever first lit on a parcel of that substance we call gold, could not rationally take the bulk and figure to depend on its real essence. Id.

Plant trees and shrubs near home, for bees to pitch on at their swarming, that they may not be in danger of being lost for want of a lighting place.

Mortimer’* Husbandry.

A curse lights upon him presently after : his great army is utterly ruined, he himself slain in it, and his liead and right hand cut off, and hungup before Jerusalem. South.

As wily reynard walk’d the streets at night, On a tragedian’s mask he chanced to light ; Turning it o’er he muttered with disdain, . How vast a head is htre without a brain!

Addison.

The god laid down his feeble rays, Then lighted from his glittering couch. Swift. A weaker man may sometimes light on notions which have escaped a wiser. Watti on the Mind.

The wretched he forsakes, Swift on his downy pinions flies from woe, And lightt on lids unsullied with a tear.

Young.

LIGHT, n. s., adj. & v. a.^\ Sax. li)>t, leont;

LIGHT'EN, v. a. I Tout, lie/it; Lat.

LIGHT'HOUSE, n. s. \ htx ; Gr. Xv^voc.

LIGHT'SOME, adj. i The medium of

LIGHT'SOMENF.SS, n. s. J vision; luminous matter ; state of the elements in the day time ; power of vision : hence sometimes synonymous with day and with sight; also with life (as a great medium of enjoyment) : artificial illumination ; any instrument or body yielding such illumination; that part of a picture on which

the light appears to fall ; point of view ; direction in which light falls ; public view : metaphorically, instruction ; knowledge ; mental view or illumination ; explanation : light, as an adjective, means bright ; clear ; not dark ; approaching to whiteness: to light, is to inflame; kindle; make a flame (i. e. a light) ; to give light to ; to illuminate, literally or mentally; as signifies also the verb to lighten : light is also used with tip, emphatically : lit is the preterite of light : lighthouse, an edifice erected to give light on dangerous coasts or seas : lightsome, cheerful ; airy ; opposed to gloominess or darkness of condition.

I am the light of the world : he that sueth me, walketh not in derknessis, but schal haue the light of lyf. Wiclif. Jan. viii.

The lanterne of thi bodi is thin iye : yf thin iye be symple, al thi bodi schal be Hgtful. Wiclif. Matt. vi.

God called the light day, and the darkness he called night. Genesis i.

As soon as the morning was light, the men were sent away. Gen. xliv. 3.

Seven lamps shall give light. Numb.

The murderer rising with the light killeth the poor.

Job.

Infants that never saw light. Id.

My strength faileth me ; as for the light of mine eyes, it also is gone from me. Psalmt.

Light, and understanding, and wisdom, like the wisdom of the gods, was found in him.

Daniel v. 11.

Then he called for a light, and sprang in and fell down before Paul. Acts xvi. 29.

Of those things which are for direction of all the parts of our life needful, and not impossible to be discerned by the light of nature itself, are there not many which few men's natural capacity hath been able to find out 1 Hooker.

It suiteth so fitly with that lightsome affection of joy, wherein God delighteth when his saints praise him. Id.

The horses ran up and down with their tails and manes on a liyht fire. Knoll t.

That light you see is burning in my hall :

How far that little candle throws his beams,

So shines a good deed in a naughty world.

Shakspeare. Upon his bloody finger he doth wear

A precious ring, that lightens all the hole. Id.

Neither the sun, nor any thing sensible is that light itself, which is the cause that things are lightsome, though it make itself, and all things else, visible ; but a body most enlightened, by whom the neighbouring region, which the Greeks call tether, the place of the supposed element of fire, is affected and qualified. Raleigh.

Light may be taken from the experiment of the horse-tooth ring, how that those things which assuage the strife of the spirits, do help diseases contrary to the intention desired.

Bacon's Natural History.

Equal posture, and quick spirits, are required to make colours

lightsome. Id.

They have brought to light not a few profitable experiments. Id.

White walls make rooms more lightsome than black. Bacon.

O Light, which mak'st the light which makes the

day,

Which settest the eye without, and mind within ; / ishten my spirit with one clear heavenly ray, Which now to view itself doth first begin. Davits.

L I G H T.

So alike thou drivest away Light and darkness, night and day. Carew.

A beam that falls

Fresh from the pure glance of thine ey«, Lighting to eternity. Crashaw.

But whence, O God, was that first light, ? the sun was not made till the fourth day ; light the first. If man had been he might have seen all lightsome ; but whence it had come he had not seen. Bp. Hall.

Several lights will not be seen If there be nothing else between ; Men doubt, because they stand so thick i' the' sky, If those be stars that paint the galaxy. Cowley.

Ere the third dawning light Return, the stars of morn shall see him rise Out of his grave, fresh as the dawning light.

Milton.

Let them be for signs,

For seasons, and for days, and circling years ; And let them be for lights, as I ordain Their office in the firmament of heaven, To give

light on the earth. Id.

If it be true that light is in the soul, She all in every part, why was the sight To such a slender ball as the' eye confined, So obvious and so easy to be quenched, And not as feeling through all parts diffused That she might look at will through every pore 1

Id*

What%fct is without, that is truth within, shining on our inward world, illustrating, quickening, and comforting all things there, exciting all our faculties to action, and guiding them in it. Barrow.

Thus did that morning of divine knowledge, from the first dawning, by degrees grow more lightsome.

Id.

I put as great difference between our new lights and ancient truths, as between the sun and a meteor.

Glanville.

This truth shines so clear, that to go about to prove it, were to light a candle to seek the sun. Id.

Swinging coals about in the wire, thoroughly lighted them. Boyle.

I will make some offers at their safety, by fixing some marks like lights upon a coast, by which the ships may avoid at least known rocks. Temple.

Never admit two equal lights in the same picture ; but the greater light must strike forcibly on those places of the picture where the principal figures are ; diminishing as it comes nearer the borders.

Dryden's Dufresnoy. The sun

His course exalted through the Ram had run, Through Taurus, and the lightsome realms of love.

Dry den.

The sun was set, and Vesper, to supply His absent beams, had lighted up the sky. Id. Be witness, gods, and strike Jocasta dead, If an immodest thought, or low desire, Inflamed my breast since first our loves were Ugh ted.

Id.

In painting, the light and a white colour are but one and the same thing : no colour more resembles the air than white, and by consequence no colour which is lighter. jˆ>

If internal light, or any proposition which we take for inspired, be conformable to the principles of rea-son, or to the word of God, which is attested revelation, reason warrants it. Locke.

Frequent consideration of a thing wears off the strangeness of it ; and shews it in its several lights, and various ways of appearance, to the view of the mi”d-Smith.

The lightsome passion of joy was not that which now often usurps the name ; that trivial, vanishing,

superficial thing, that only gilds the apprehension, and plays upon the surface of the soul. Id.

It is impossible for a man of the greatest parts to consider any thing in its whole extent, and in all its variety of lights. Spectator.

Allegories, when well chosen, are like so many tracks of light in a discourse, that make every thing about them clear and beautiful. Addisen.

Absence might cure it, or a second mistress

Light up another flame, and put out this.

Id. Cato. He still must mourn

The sun, and moon, and every starry light,

Eclipsed to him, and lost in everlasting night.

Prior.

Light is propagated from luminous bodies in time, and spends about seven or eight minutes of an hour in passing from the sun to the earth.

Newton’s Optichs.

Two cylindrick bodies with annular sulci, found with sharks’ teeth,

and other shells, in a light coloured clay. Woodward.

Here pensive I behold the fading light,

And o'er the distant billow lose my sight. Gay.

The books of Varro concerning navigation are lost, which no doubt would give us great light in those matters. Arbuthnot on Coins.

He charged himself with the risque of such vessels as carried corn in winter ; and built a pharos or lighthouse. Arbuthnot.

It is to our atmosphere that the variety of colours, which are painted on the skies, the lightsomeness of our air, and the twilight, are owing.

Cheyne's Philosophical Principles.

Thin glitt'ring textures of the filmy dew ; Dipt in the richest tincture of the skies, When light disports in ever mingling dyes.

Pope.

Ah hopeless, lasting flames ! like those that burn To light the dead, and warm the unfruitful urn.

Id. Swift roll the years, and rise the expected morn,

0 spring to light, auspicious babe be born ! Id.

Grave epistles bringing vice to light, Such as a king might read, a bishop write. Id. It is in disputes, as in armies ; where the weaker side sets up false lights, and makes a great noise, to make the enemy believe them more numerous and strong than they really are. Swift.

I humbly conceive, though I light my candle at my neighbour's fire, that does not alter the property

01 make the wick, the wax, or the flame, or the whole candle less my own. Id.

Believe thyself, thy eyes, That first inflamed, and lit me to thy love, Those stars, that still must guide me to my joy.

Southerne.

Sounds, which address the ear, are lost and die In one short hour ; but that which strikes the eye, Lives long upon the mind : the faithful

sight Engraves the knowledge with a beam of light.

Watts.

Nature from the storm

Shines out afresh ; and through the lightened air A higher lustre, and a clearer calm, Diffusive tremble. Thomson's Summer.

Books (says Lord Bacon) can never teach the use of books ; the student must learn by commerce with mankind to reduce his speculations to practice. No man should think so highly of himself, as to think he can receive but little light from books, nor so meanly as to believe he can discover nothing bu* what is to be learned from them. Johnson. '

LIGHT.

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She's fresh as the morning, the fairest in May ; She's sweet us the eveuing amaog the new hay ; As blithe and as aitless as the lamb on the lea, And dear to my heart as the light to my ee. Burns.

An easy observation of the most common, sometimes of the meanest things in nature, will give the truest lights, where the greatest sagacity and industry that slights such observation, must leave us in the dark, or, what is worse, amuse and mislead us by false lightt. Burke on the Sublime.

But, though life's valley be a vale of tears, A brighter scene beyond that vale appears, Whose glory, with a light that never fades, / Shoots between scattered rocks and opening shades, And, while it shows the land the soul desires, The language of the land she seeks inspires.

Cowper.

With silver darts he pierced the kindling frame, And lit with torch divine the ever-living flame.

Darwin. We sped like meteors through the sky,

When with its crackling sound the night

Is chequered with the northern light. Byron.

Theirs be the dreadful glory to destroy, And theirs the pride of pomp, and praise suborned, Whose eye ne'er lightened at the smile of Joy, W hose cheek the tear of Pity ne'er adorned. Id.

LIGHT. The nature of light is a subject in many respects extremely interesting ; especially as it tends to assist our views both of the nature of our sensations, and of the constitution of the universe at large. The examination of the production of colors, in a variety of circumstances, is intimately connected with the theory of their essential properties, and their causes ; and we shall find that many of these phenomena will afford us considerable assistance in forming our opiuion respecting the nature and origin of light in general.

It is allowed, on all sides, that light either consists in the emission of very minute particles from luminous substances, which are actually projected, and continue to move with the velocity commonly attributed to light, or in the excitation of an undulatory motion, analogous to that which constitutes sound, in a highly light and elastic medium pervading the universe ; but the judgments of philosophers of all ages have been much divided with respect to the preference of one or the other of these opinions. There are also some circumstances which induce those who entertain the first hypothesis, either to believe, with Newton, that the emanation of the particles of light is always attended by the undulations of an etherial medium, accompanying it in its passage ; or to suppose, with Boscovich, that the minute particles of light themselves receive, at the time of their emission, certain rota-tory and vibratory motions, which they retain as long as their projectile motion continues. These additional suppositions, however necessary they may have been thought for explaining some particular phenomena, have never been very generally understood or admitted, although no attempt has been made to accommodate the theory in any other manner to those phenomena.

We shall proceed to examine in detail the manner in which the two principal hypotheses .•especting light may be applied to its various properties and affections ; and in the first place 10 tlie simple propagation of light in right lines

through a vacuum, or a very rare homogeneous medium. In this

circumstance there is nothing inconsistent with either hypothesis ; but it undergoes some modifications, which require to be noticed, when a portion of light is admitted through an aperture, and spreads itself in a slight degree in every direction. In this case it is maintained by Newton that the margin of the aperture possesses an attractive force, which is incapable of inflecting the rays : but there is some improbability in supposing that bodies of different forms and of various refractive powers should possess an equal force of inflection, as they appear to do in the production of these effects ; and there is reason to conclude from experiments, that such a force, if it existed, must extend to a very considerable distance from the surfaces concerned, at least a quarter of an inch, and perhaps much more, which is a condition not easily reconciled with other phenomena. In the Huygenian System of undulation, this diver-gence or diffraction is illustrated by a comparison with the motions of waves of water, and of sound, both of which diverge when they are admitted into a wide space throujh an aperture, so much indeed that it has usually been considered as an objection to this opinion, that the rays of light do not diverge in the degree that would be expected if they were analogous to the waves of the water. But as it has been remarked by Newton, that the pulses of sound diverge less than the waves of water, so it may fairly be inferred, that, in a still more highly elastic medium, the undulations, constituting light, must diverge much less considerably than either.

With respect, however, to the transmission of light through perfectly transparent mediums of considerable density, the system of emanation labors under some difficulties, [t is not to be supposed that the particles of light can perforate with freedom the ultimate atoms of matter, which compose a substance of any kind ; they must, therefore, be admitted in all directions through the pores or interstices of those atoms ; for if we allow such suppositions as Boscovich ‘s, that matter itself is penetrable, that is, immaterial, it is almost useless to argue the question further. It is certain that some substances retain all their properties when they are reduced to the thickness or > TOKwrojth °f an mcn at roost, and we can-not therefore suppose the distances of the atoms of matter in general to be so great as lURssjocoth of an inch. Now if ten feet of the most transparent water transmits, without interruption, one-half of the light that enters it, each section or stratum of the thickness of one of these pores of matter must intercept only about KOTOWWTOˆ’ and so much must the space or area occupied by the particles be smaller than the interstices between them, and the diameter of each atom must be less than Tˆˆth part of its distance from the neighbouring particles, so that the whole space

occupied by the substance must be as little filled as the whole of England would be filled by 100 men, placed at the distance of about thirty miles from each other. This astonishing degree of porosity is not indeed absolutely inadmissible and there are many reasons for believing the statement to agree in some measure with

tual constitution of material substances ; but the Huygenian hypothesis does not require the disproportion to be by any means so great, since the general direction and even the intensity of an undulation would be very little affected by the interposition of the atoms of matter, while these atoms may at the same time be supposed to as-siat in the transmission of the impulse, by propagating it through their own substance. Euler, indeed, imagined that the undulations of light might be transmit ed through the gross substance of material bodies alone, precisely in the same manner as sound is propagated ; but this supposition is for many reasons inadmissible.

A very striking circumstance, respecting the propagation of light, is the uniformity of its velocity in the same medium. According to the projectile hypothesis, the force employed in the free emission of light must be about a million million times as great as the force of gravity at the earth's surface ; and it must either act with equal intensity on all the particles of light, or must impel some of them through a greater space than others, if its action be less powerful, since the velocity is the same in all cases ; for example, if the projectile force is weaker - with respect to red light than with respect to violet light, it must continue its action on the red rays to a greater distance than on the violet rays. There is no instance in nature besides of a simple projectile moving with a velocity uniform in all cases, whatever may be its cause, and it is extremely difficult to imagine that so immense a force of repulsion can reside in all substances capable of becoming luminous, so that the light of decaying wood, or of two pebbles rubbed together, may be projected precisely with the same velocity as the light emitted by iron burning in oxygen gas, or by the reservoir of liquid fire on the surface of the sun. Another cause would also

naturally interfere with the uniformity of the velocity of light, if it consisted merely in the motion of projected corpuscles of matter; M. Laplace has calculated t hat, if any of the stars were 250 times as great in diameter as the sun, its attraction would be so strong as to destroy the whole momentum of the corpuscles of light proceeding from it, and to render the star invisible at a great distance, and, although there is no reason to imagine that any of the stars are actually of this magnitude, yet some of them are probably many times greater than our sun, and therefore large enough to produce such a retardation in the motion of their light as would materially alter its effects. It is almost unnecessary to observe that the uniformity of the velocity of light, in those spaces which are free from all material substances, is a necessary consequence of the Huygenian hypothesis, since the undulations of every homogeneous elastic medium are always propagated, like 'hose of sound, with the same velocity, as long as the medium remains unaltered.

To determine whether light consists of particles emitted from the luminous body, or only in the vibrations of a subtile fluid, it has been attempted to find out its momentum, or the force with which it moves. The first who set ttuout this with any tolerable pretensions to ac-

curacy was M. Mairan Hartsocker and Homberg had indeed pretended, that in certain cases this momentum was very perceptible; but M. Mairan proved, that the effects mentioned by them were owing to currents of heated air produced by the burning-glasses used in their experiments, or to some other causes overlooked by these philosophers. To decide the matter, therefore, he began with trying the effects of rays collected by lenses of four and six inches diameter, and thrown upon the needle of a compass ; but the result was nothing more than some tremulous motion, whence he could draw no conclusion. After this he and M. Du Fay constructed a kind of mill of copper, which moved with an exceeding slight impulse ; but, though they threw upon it the focus of a lens of seven or eight inches diameter, they were still unable to draw any conclusions from the result. M. Mairan afterwards procured a horizontal wheel of iron three inches in diameter, having six radii, at the extremity of each of which was a small wing fixed obliquely. The axis of the wheel, which was also of iron, was suspended by a magnet. The wheel and the axis together did not weigh more than thirty grains ; but, though a motion was given to this wheel when the focus of the burning-glass was thrown upon the extremities of the radii, yet it was so irregular, that

he could not but conclude that it was occasioned by the motion of the heated air. He then intended to have made his experiment in vacuo, but he concluded that it was unnecessary : for, besides the difficulty of making a vacuum, he was persuaded that there was in our atmosphere a thinner medium which freely penetrates even glass itself, the existence of which he imagined that he had fully proved in his treatise on the aurora borealis.

Mr. Mitchell some years ago endeavoured to ascertain the momentum of light in a manner still more accurate. The instrument he made use of consisted of a very thin plate of copper, a little more than an inch square, which was fastened to one end of a slender harpsichord wire about ten inches long. To the middle of this was fixed an agate cap, such as is commonly used for small mariner's compasses, after the manner of which it was intended to turn ; and at the other end of the wire was a middling sized shot corn, as a counterpoise to the copperplate. The instrument had also fixed to it in the middle, at right angles to the length of the wire, and in a horizontal direction, a small bit of a very slender sewing needle, about one-third or perhaps half an inch long, which was made maghetical. In this state the whole instrument weighed about ten grains. It was placed on a very sharp-pointed needle, on which the agate cap turned extremely freely ; and to prevent its being disturbed by any motion of the air, it was enclosed in a box, the lid and front of which were of glass. This box was about twelve inches long, six or seven inches deep, and about as much in width ; the needle standing upright in the middle. At the time of making the experiment, the box was so placed, that a line drawn from the sun passed at right angles to the length of it ; and the instrument was brought to

range in the same direction with the box, by means of the magnetical bit of needle above mentioned, and a magnet properly placed on the outside, which would retain it, though with extremely little force, in any situation. The rays of the sun were now thrown upon the copperplate from a concave mirror of about two feet diameter, which,

passing through the front .glass of the box, were collected into the focus of the mirror upon the plate. In consequence of this the plate began to move with a slow motion of about an inch in a second of time, till it had moved through a space of about two inches and a half when it struck against the back of the box. The mirror being removed, the instrument returned to its former situation by means of the little needle and magnet; and, the rays of the sun being then again thrown upon it, it again began to move, and struck against the back of the box as before ; and this was repeated three or four times with the same success. The instrument was then placed the contrary way in the box to that in which it had been placed before, so that the end to which the copperplate was affixed, and which had lain, in the former experiment, towards the right hand, now lay towards the left; and, the rays of the sun being again thrown upon it, it began to move with a slow motion, and struck against the back of the box as before ; and this was repeated once or twice with the same success. But by tin's time the copperplate was so much altered in its form, by the extreme heat which it underwent in each experiment, and which brought it nearly into a state of fusion, that it became very much bent, ai.d the more so as it had been unwarily supported by the middle, half of it lying above and half below the wire to which it was fastened. By these means it now varied so much from the vertical position, that it began to act in the same manner as the sail of a windmill, being impelled by the stream of heated air which moved upwards, with a force sufficient to drive it in opposition to the impulse of the rays of light. If we impute, says Dr. Priestley, the motion produced in the above experiment to the impulse of the rays of light, and suppose that the instrument weighed ten grains, and acquired a velocity of one inch in a second, we shall find that the quantity of matter contained in the rays falling upon the instrument in that time amounted to no more than one 1200 millionth part of a grain, the velocity of light exceeding the velocity of one inch in a second in the proportion of about 1,200,000,000 to 1. The light was collected from a surface of about three square feet, which reflecting only about half what falls upon it, the quantity of matter contained in the rays of the sun incident upon a square foot and a half of surface in one second of time, ought to be no more than the 1200 millionth part of a grain, or upon one square foot only the 1800 millionth part of a grain. But the density of the rays of light at the surface of the sun is greater than at the earth in the proportion of 45,000 to 1 ; there ought, therefore, to issue from one square foot of the sun's surface in one second of time, in order to supply the waste by light, one 40,000th part of a grain of matter; that is, a little more than

two grains in a day, or about 4,7;”>2,000 grams or 670 pounds avoirdupois nearly in 6000 years a tjuantity which would have shortened the sun s semidiameter no more than about te.; feet, if it was formed of the density of water only.

Mr. Partington observes, ‘ that experience has long ago established the fact, that vegetables be-come destitute of smell and color, and lose much of their combustibility, by growing in the dark. In Dr. Black’s Lectures we find an illustration of this circumstance, in an account given by the celebrated Dr. Robinson of Edinburgh. In the drain of a coal-work under ground, he accidentally laid his hand upon a very luxuriant plan?, with large indented foliage, and perfectly white He had not seen any thing like it, nor could any one inform him what it was. He had the plant brought into the open air in the light. In a little time the leaves withered, and soon after new leaves began to spring up, of a green color, and of a different shape from that of the old ones. On rubbing one of the leaves between his fingers he found that it had the smell of common tansy, and ultimately it proved to be that plant, which had been so changed by growing in the dark. Indeed, it was recollected that some soil had been taken into the drain from a neighbouring garden, some time before it was found so altered.

‘ This effect of light is not less conspicuous in the growth of celery. By covering it with earth, the light is shut out, which would very soon turn it green, and make its flavor so strong as to render it unfit to be eaten, at the same time that it would render it more fibrous and tenacious.

‘ The parts of fish, also, which are exposed to the light, such as the back or fins, are uniformly colored ; but the belly, which is deprived of il, is white in nearly all of them ; while birds that inhabit tropical countries have much brighter plumage than those of the north ; and this is also the case with every species of insect.’— Manual of Natural and Experimental Philosophy, by C. F. Partington, vol. II. p. 5.

If the white sunbeam, admitted through a small hole of a window-shutter into a darkened room, be made to pass through a triangular prism of glass, it will be divided into a number of splendid colors, which may be thrown upon a sheet of paper. Newton ascertained, that if this colored image, or spectrum as it is called, be divided into 360 parts, the red will occupy forty five, the orange twenty-seven, the yellow forty-eight, the green sixty, the blue sixty, the indigo forty, and the violet eighty. The red rays, being least bent by the prism from the

direction of the white beam, are said to be least refracted, or the least refrangible ; while the violet rays, being always at the other extremity of the spectrum, are called the most refrangible. According to Dr. Wollaston, when the beam of light is only 55 of an inch broad, and received by the eye at the distance of ten feet through a clear prism ol flint glass, only four colors appear, red, yellowish-green, blue, and violet.

If the differently colored rays of light, thus separated by the prism, be concentred on one spot by a lens, they will reproduce colorless light. Newton ascribes the different colors of

bodies, to their power of absorbing all the primitive colors except the peculiar one which they reflect, and of which color they therefore appear to our eye.

According to Sir William Herschel, the different colored rays possess very different powers of illumination. The lightest green, or deepest yellow, which are near the centre, throw more light on a printed page than any of the rays towards either side of the spectrum. Sir H. Davy remarks, that, as there are more green rays in a given part of the spectrum than blue rays, the difference of illuminating power may depend on this circumstance. The rays separated by one prism are not capable of being further divided by being passed through another ; and in their relations to double refraction and reflection they appear to agree with direct light. An object illuminated by any of the rays in the spectrum is seen double through island crystal, in the same manner as if it had been visible by white light.

If the white luna cornea, the muriate of silver moistened, be exposed to the different rays in the prismatic spectrum, it will be found that no effect is produced upon it in the least refrangible rays, which occasion heat without light; that only a slight discoloration will be occasioned by the red rays ; that the blackening power will be greater in the violet than in any other ray ; and that beyond the violet, in a space perfectly obscure to our eyes, the darkening effect will be manifest on

the muriate. This fine observation, due to M. Hitter and Dr. Wollaston, proves that there are rays more refrangible than the rays producing light and heat. As it appears, from the observations of M. Berthollet, that muriatic acid gas is formed when horn-silver is blackened by light, the above rays may be called hydro-genating. Sir H. Davy found that a mixture of chlorine and hydrogen acted more rapidly upon each other, combining without explosion, when exposed to the red rays, than when placed in the violet rays; but that solution of chlorine in water became solution of muriatic acid most rapidly, when placed in the most refrangible rays in the spectrum. He also observed, that the puce-colored oxide of lead, when moistened, gradually gained a tint of red in the least refrangible rays, and at last became black, but was not affected in the most refrangible rays. The same change was produced by exposing it to a current of hydrogen gas. The oxide of mercury from calomel and water of potassa, when exposed to the spectrum, was not changed in the most refrangible rays, but became red in the least refrangible, which must have been owing to the absorption of oxygen. The violet rays produced, upon moistened red oxide of mercury, the same effect as hydrogen gas.

Dr. Wollaston found that guaiac, exposed to the violet rays, passed rapidly from yellow to •bfreen; and M. M. Gay Lussac and Thenard applied to the same influence a gaseous mixture of hydrogen and chlorine, when explosion immediately took place. By placing small bits of c.ud, coated with moist horn-silver, or little •,-.i:;.ils of those mixed pases, in the different n uts of the spectrum, M. Berard verified the foim-r observations of the chemical power

acquiring a maximum in the violet ray, and existing even beyond it; but he also found, that, by leaving the tests a sufficient time in the indigo and blue rays, a perceptible effect was produced upon them. He concentrated by a lens all that portion of the spectrum which extends from the green to the extreme boundary of the violet ; and by another lens he collected the other half of the spectrum, comprehending the red. The latter formed the focus of a white light, so brilliant that the eye could not endure it ; yet in two hours it produced no sensible change on muriate of silver. On the contrary, the focus of the other half of the spectrum, whose light and heat were far less intense, blackened the muriate in ten minutes. The investigations of Delaroche enable us, in some measure, to reduce these dissimilar effects of light to a com-mon principle.

In Mr. Brande’s Bakerian lecture, on the composition and analysis of

coal and oil gases, this ingenious chemist shows, that the light produced by these, or by defiant gas, even when concentrated so as to produce a sensible degree of heat, occasioned no change on the color of muriate of silver, nor on a mixture of chlorine and hydrogen ; while the light emitted by electrised charcoal speedily affects the muriate, causes these gases to unite rapidly, and sometimes with explosion. The concentrated light of the moon, like that of the gases, produced no change. He concludes with stating, that he found the photometer of Mr. Leslie ineffectual. He employed one filled with the vapor of ether (renewable from a column of that fluid), which he found to be more delicate.

The general facts, says Sir H. Davy, of the refraction and effects of the solar beam, offer an analogy to the agencies of electricity. In the voltaic circuit, the maximum of heat seems to be at the positive pole, where the power of combining with oxygen is given to bodies, and the agency of rendering bodies inflammable is exerted at the opposite surface ; and similar chemical effects are produced by negative electricity, and by the most refrangible rays of the solar beam. In general, in nature, the effects of the solar rays are very compounded. Healthy vegetation depends upon the presence of the solar beams, or of light; and, whilst the heat gives fluidity and mobility to the vegetable juices, chemical effects likewise are occasioned, oxygen is separated from them, and inflammable compounds formed. Plants deprived of light becorre white, and contain an excess of saccharine and aqueous particles ; and flowers owe the variety of their hues to the influence of the solar beams. Even animals require the presence of the rays of the sun, and their colors seem materially to de-pend upon the chemical influence of these rays; a comparison between the polar and tropical animals, and between the parts of their bodies exposed and those not exposed to light, shows the correctness of this opinion.

If air which has been heated up to 900° of Fahrenheit, and which is in itself obscure, be made to fall on pieces of metal, earth, &c., it will speedily communicate to them the power of radiating light. The brilliant flame, exhibited in the burning1 of charcoal and nhosphorus, re-

suits from the ignition of the solid particles of these bodies. At a certain elevation of temperature, about 800° Fahrenheit, all solid bodies begin to give out light. The same effect is produced in vacuo by transmitting voltaic electricity through a metallic wire.

Thtj most complete account which we have of mineral phosphorescence is that recently given

by Dr. Brewster, in the first volume of the Edinburgh Philosophical Journal. His method of examination was ingenious and accurate. He never reduced the body to powder, but placed a fragment of it upon a thick mass of hot iron, or, in delicate experiments, introduced it into the bot-tom of a pistol barrel, heated a little below redness.. The following Table presents his results :

Names of the minerals.

Color of the minerals.

Color and intensity of the light.

Fluor spar,

Pink, Purple, Bluish-white, Yellowish, White, Yellow, Transparent,

Green. Bluish. Blue. Fine green. White sparks. Yellow. Yellowish. Yellowish-red. Yellow. Reddish-yellow. Pale white. Reddish-yellow. Specks of light. Yellow. Bluish.

Faint yellowish. Bluish. Scarlet. Faint light. Pale light.

Compact fluor, Sandy fluor, Calcareous spar,

Limestone from north of Ireland, Phosphate of lime, Arragonite, Carbonate of barytes, Harmotome, Dipyre, Grammatite from Glentilt,

Pink, Dirty white, W hitish, Colorless, White,

Blue, Yellow, White, Reddish, Yellowish, Yellow, Slate color, Bluish, Transparent, Reddish, Dark green, Yellowish, Red, White, Yellowish, Yellow, Whitish, Greenish, Black, Brown, Black, Gray, Whitish, Blue,

Greenish, Reddish, Yellowish-white, Brown, Green, Reddish tinge,

Topaz, Aberdeenshire,

, New Holland, Rubellite, Sulphate of lime,

A fragment shone pretty bright. Faint and by fits. Faint light. Pretty bright. Faint white. Pretty bright, but flitting Faint. Bright white.

Anhydrite, Sodalite, Bitter spar, Red silver ore, Barystrontianite, Arseniate of lead, Sphene, Tremolite, Mica, from Waygatz,

Reddish-yellow. Whitish. White specks. Pretty bright. Feeble specks. Yellowish.

Titanium sand, Hornstone, Table spar, Dognatsk.i, Lapis lazuli, Spodumene, Titanite, Cyanite, Calamine, Augite, Petalite, Asbestus, rigid, Datholite, Corundum, Anatase, Tungstate of lime, Quartz, ”” Amethyst, Obsidian, Mesotype from Auverˆr.e, Glassy actinolite, Ruuy silver, Muriate of silver, Carbonate of copper, Green telesie,

Faint.

Extremely faint. Bluish. Faint. Pretty bright. Blue and very bright. Pretty bright. Bright.

Transparent, Brown, Dark, Yellowish-white,

The phosphorescence of thes nine minerals was observed i the pistol barrel.

Reddish yellow. Brilt, like a burning coal. Very faint. Faint. Pretty bright, dirty blue. Very faint. Little specks. Rather bright. Blue. Very faint. Pale blue, and pretty bright

The phosphorescence of anatase is entirely different from that of the other minerals. It appears suddenly like a flame, and is soon over. Dr.

Brewster found, in opposition to what Mr. Vedgewood had stated, that exposure of green fluor spar to the heal of a common fire in a crucible, for half an hour, entirely deprived it of phosphorescence. Though he placed one frag-meut for several days in the beams of a sunnier sun, and even exposed it to the bright light near tli« focus of a burning glass, he could not succeed in obtaining from it the slightest indication of phosphorescence. The light emitted in combustion belongs to the same head. The phosphoric light of minerals has the same properties as the direct light of the sun, according to Dr. Brewster.

Of light emitted from bodies in consequence of the action of extraneous light. — To this section we refer solar phosphori. The most powerful of these is the artificial compound of Canton. If we mix three parts of calcined oyster shells in powder, with one of flowers of sulphur, and, ramming the mixture into a crucible, ignite it for half an hour, we shall find, that the bright parts will, on exposure to the sunbeam, or to the common daylight, or to an electrical explosion, acquire the faculty of shining in the dark, so as to illuminate the dial of a watch, and make its figures legible. It will, indeed, after a while cease to shine ; but, if we keep the powder in a well corked phial, a new exposure to the sunbeam will restore the luminescence. Oyster shells, stratified with sulphur, in a crucible, and ignited, yield a more powerful phosphorescent substance than the powder. It also must be kept in a close phial. When the electric discharge is transmitted along the surfaces of certain bodies, or a little above them, a somewhat durable phosphorescence is occasioned, which probably belongs to this division.

Sulphate of barytes gives a bright green light. Carbonate, Do. less brilliant.

Acetate of potassa, Brilliant green light.

Succinic acid, Do. more durable.

Loaf sugar, Do.

Selenite, Do. but transient.

Rock-crystal gives a light red, and then white. Quartz, Dull white light.

Borax, Faint green light.

Boracic acid, Bright green light.

Mr. Skrimshire has given an extensive catalogue of such substances in Nicholson's Journal 8vo., vols. xv. xvi. and xix. He shows that Canton's pyrophorus yields more light by this treatment than any other body ; but that almost every native mineral, except metallic ores and metals, becomes more or less luminous after the electric explosion. A slate from Colly Weston, Northamptonshire, which effervesced with acids, gives a beautiful effect. When the explosion of a jar is taken above the centre of a piece some inches square, not only the part above the discharging rods is luminous, but the surface of the s-late appears bespangled with very minute brilliant points, to some distance from its centre ; and, when the points of the dischargers rest upon the surface of the slate, these minute spangles

are detached and scattered about the table in a luminous state.

Of light*emitted during chemical changes, independent of heat, or in which no perceptible heat is developed. The substances from which such light is emitted are principally the following : — Marine animals, both in a living state, and when deprived of life. As instances of the first ma be mentioned the shell-fish called phola-s, the medusa phosphorea, and various other molluscs. When deprived of life, marine fishes, in general, seem to abound with this kind of light. The flesh of quadrupeds also evolves light. In the clas of insects are many which emit light very copiously, particularly several species of fulgora, or lantern-fly; and of lampyris or glow-worm; also the scolopendra electrica, and a species of crab called cancer fulgens. Rotten wood is well known to evolve light copiously, as well as peat earth.

Dr. Hulme, in an elaborate dissertation on this light, published in the Philosophical Transactions for 1790, establishes the following important propositions : —

1. The quantity of light emitted by dead ani-mal substances is not in proportion to the degree of putrefaction in them, as is commonly supposed ; but, on the contrary, the greater pu-trescence, the less light is evolved. It would seem that this element, endowed with pre-eminent elasticity, is the first to escape from the condensed state of combination in which it had been imprisoned by the powers of life; and is followed, after some time, by the relatively less elastic gases, whose evolution constitutes putrefaction.

2. This light is a constituent chemical principle of some bodies,

particularly of marine fishes, from which it may be separated by a peculiar process, retained and rendered permanent for some time. A solution of one part of sulphate of magnesia in eight of water is the most convenient menstruum for extracting, retaining, and increasing the brilliancy of this light. Sulphate and muriate of soda, also, answer in a proper state of dilution with water. When any of the saline solutions is too concentrated, the light disappears, but instantly bursts forth again from absolute darkness, by dilution with water. This curious experiment has frequently been made with the light procured from whiting. Common water, lime water, fermented liquors, acids even very dilute, alkaline lies, and many other bodies, permanently extinguish this spontaneous light. Boiling water destroys it, but congelation merely suspends its exhibition ; for it reappears on liquefaction. A gentle heat increases the vividness of the phenomenon, but lessens its duration. Vide Dr. Ure's Chemical Dictionary.

The inflection of light is distinct from the peculiar properties of refraction and reflection, both of which will be fully examined under our article on OPTICS. Inflection was first discovered by Gri- . maldi, who made many curious experiments and observations relative to it ; but the following experiments of Sir Isaac Newton will be better adapted than Grimaldi's to explain the nature of this property of lightf At the distance of two or three feet from the window of a darkened

room, in which there was a hole three-fourths of an inch broad, to admit the light, he placed a black sheet of pasteboard, having inthe middle a hole about a quarter of an inch square, and be-hind the hole the blade of a sharp knife, to intercept a small part of the light which would otherwise have passed through the hole. The planes of the pasteboard and blade were parallel to each other, and, when the pasteboard was removed to such a distance from the window that all the light coming into the room must pass through tins hole in the pasteboard, he received what came through the hole on a piece of paper, two or three feet beyond the knife, and perceived two streams of faint light shooting out both ways, from the beam of light into the

shadow. As the brightness of the direct rays obscured the fainter light, by making a hole in his paper he let them pass through, and had thus an opportunity of attending closely to the two streams, which were nearly equal in length, breadth, and quantity of light. That part which was nearest to the sun's direct light was pretty strong for the space of about a quarter of an inch, decreasing gradually until it became imperceptible ; and at the edge of the knife it subtended an angle of about 12° or at most of 14°. Another knife was then placed opposite to the former, and he observed that, when the distance of their edges was about the un th part of an inch, the stream divided in the middle, and left a shadow between the two parts, which was so dark that all the light passing between the knives seemed to be bent to each other ; this shadow grew broader, till upon the contact of the knives the whole light disappeared. He observed, also, fringes of different colored light, three made on one side by the edge of one knife, and three on the other side by the edge of the other. Grimaldi, Dr. Hcoke, and all the philosophers who made experiments on inflection before the time of Newton, ascribed the broad shadows, and even the fringes which he mentions, to the ordinary refraction of the air ; but the investigation upon which he entered, to discover their cause, afforded him satisfactory evidence to conclude that bodies have the power of acting upon light at a distance.

We must now briefly notice the experiments of Mr. Brougham on this interesting] subject : they are detailed in the Transactions of the Royal Society for 1796. He commenced by admitting a beam from the sun into a darkened room, through a hole in a metal plate (fixed in the win-dow shutter) of ˆth of an inch in diameter; and, all other li~ht being absorbed by black cloth hung before the window in the room, at the hole he placed a prism of glass, whose refracting angle was 43°, and which was covered all over with black paper, except a small part on each side, which was free from impurities, and through which the light was refracted, so as to form a distinct and homogeneous spectrum on a sheet of paper at six feet from the window. In the rays, at two feet from the prism, he placed a black unpolished pin, one-tenth of an inch in diameter, parallel to the paper, in a vertical position ; its shadow was formed in the spectrum on the paper, and had a considerable penumbra, especially in the brightest red. It varied very VOL. XII.

materially in its width; in the violet it was broad* est and most distinct ; in the red it was narrowest and most confused ; and in the intermediate colors it was of an intermediate degree of distinctness. It

was not bounded by straight, but by curvilinear sides, which were concave outwardly. This figure of the shadow was not owing to any irregularity in the pin, for the same thing happened with all sorts of bodies that were used ; and also if the prism was caused to revolve on its axis, so that the colors might ascend and descend on these bodies, still, wherever the red fell, it made the least, and the violet the greatest shadow. In the next place he lixed a screen, having in it a large hole, on which was a brass plate, pierced with a small hole of ,‘j of an inch in diameter; then, causing an assistant to move the prism slowly on its axis, he observed the round image made by the different rays passing through the hole to the paper ; that made by the red was greatest ; by the violet least ; and by the intermediate rays of an intermediate size. When he employed the sharp blade of a knife, so as to produce the fringes mentioned by Grimaldi and Newton, those fringes in the red were broadest, and most moved inwards to the shadow, and most dilated when the knife was moved over the hole ; and the hole itself on the paper was more dilated, during the motion, when illuminated by the red, than when illuminated by any of the other rays, and least of all when illuminated by the violet. From these, and a great variety of other experiments, well devised, and often repeated with the greatest care, he infers, that the rays of light are separable into their primitive colors, by inflection, deflection, and reflection, as well as by refraction ; that these properties of the rays are inversely as their re-frangibilities ; that is, those which deviate the least by refraction, deviate the most by flection, and are reflected the farthest from the perpendicular; and that these different phenomena are all produced by the differences in the magnitude of the particles. He calculates that the size of the red particles are to those of the violet as 1275 to 1253. This he extends to all the other colors by similar calculations, their sizes lying between 1275 and 1253 ; which are the extreme red and extreme violet ; the red therefore, according to this hypothesis, is from 1275 to 1272J ; the orange from 12724 to 1270 ; the yellow from 1270 to 1267; the green from 1267 to 1264; the blue from 1264 to 1260; the indigo from 1260 to 125$; and the violet from 1258 to

Dr. Thomson, after enumerating the general properties of light, concludes thus : ‘ such are the properties of light as far as they have been examined. They are sufficient to convince us that it is a body, and possesses many qualities 111 common with other bodies. It is attracted by them, and combines with them, precisely as other bodies do. But it is distinguished from all other substances, by possessing three peculiar properties of which they are destitute. The first is the power which it has of exciting in us the sensation of vision, by movin? from the object seen and entering the eye. The phenomena of colors, and the prismatic spectrum, indicate the existence of

seven different species of light; but to what Che difference of these species is owing has not been ascertained. We are altogether ignorant of the component parts of every one of these species. The second peculiar property of light is the prodigious velocity with which it moves, whenever it is separated from any body with which it was formeiiy combined. This velocity it acquires in a moment, and in all cases, whatever the body be from which it separates. The third and not the least singular of its peculiar properties, is, that its particles are never found cohering together so as to form masses of any sensible magnitude. This difference between light and other bodies can only be accounted for by supposing that its particles repel each other. This seems to constitute the grand distinction between light and other bodies. Its particles repel each other, while the particles of other bodies attract each other; and, accordingly, are found cohering together, in masses of more or less magnitude.’

We cannot better conclude this paper than with the following important and practical problem : Count llumford has shown that the quantity of light emitted by a given portion of inflammable matter, in combustion, is proportional in some high ratio to the elevation of temperature; and that a lamp having many wicks very near each other, so as mutually to increase their heat, burns with infinitely more brilliancy than the Argand lamps in common use.

To measure the proportional intensities of two or more lights : Place them a few inches asunder, ana at the distance of a few feet or yards from a screen of white paper, on a white wall. On holding a small card near the wall, two shadows will be projected on it, the darker one by the interception of the brighter light, and the lighter shadow by the interception of the duller light Bring the fainter light nearer to the card, or remove the brighter one further from it, till both shadows acquire the same intensity; which the eye can judge of with great precision, particularly from the conterminous shadows at the angles. Measure now the distances of the two lights from the wall or screen, square them, and you have the ratio of illumination. Thus if an Argand flame, and a candle, stand at the distance of ten feet, and four feet, respectively, when their shadows are equally deep, we have 10” and 4s, or 100 and 16, or 6 i and 1, for their relative quantities of light.

LIGHTEN, v. a.) Sax. h j, hst. From the LIGHT’NING, n. s. \ verb to LIGHTEN, above. To flash with the electric fire of the clouds ; to shine like lightning: lightning, the flame, or fire, which proceeds from the clouds ; the flash preceding thunder.

He directeth it under the whole heavens, and his lightning unto the ends of the earth. Job. xxxvii. 3.

The lifhtning that lightenelh out of the one part under heaven, shineth unto the other part.

Luke xvii. 24.

Yet looks he like a king ; behold his eye, As bright as is the eagle’s, lightens forth Controlling majesty. Shakspeare.

This dreadful night,

That thunders, lightens, opens graves, and roars, As doth the lion. Id.

Although 1 joy in thee, I have no joy of this contract to-night ; It is tooˆash, too unadvised, too sudden, Too like the lightning, which doth cease to be Ere one can say it lightens.

Id. Romeo and Juliet.

Sense thinks the lightning born before the thunder); What tells us then they both together are? Davies.

Misery assails riches, as lightning does the highest towers. J3«r(o;i.

Salmoneus, suffering cniel pains, I found, For emulating Jove ; the rattling sound Of mimic thunder, and the glittering blaze Of pointed lightnings and their forky rays.

Dry den.

No warning of the approach of flame, Swiftly, like sudden death, it came ; Like travellers by lightning killed, It burst the moment I beheld. Granville.

Through sparkling spray, in thundering clash, The lightnings of the waters flash In awful whiteness o'er the shore, That shines and shakes beneath the roar. Byro:i.

LIGHTER, n. s. From light, lightening, to make less heavy. A boat into which ships are lightened or unloaded.

They have cock-boats for passengers, and lighten for burthen. Careie.

He climbed a st> anded lighter's height, Shot to the black abyss, and plunged downright.

Pope.

LIGHTERMAN, n. s. Lighter and man. One who manages a lighter.

Where much shipping is employed, whatever be comes of the merchant, multitudes of people will be gainers; as shipwrights, butchers, carmen, and lightermen. Child.

LIGHTFOOT (John), D. D., a learned English divine, born in 1602, at Stoke upon Trent in Staffordshire. Having finished his studies at Morton-green, Cheshire, he went in 1617 to Cambridge. Here he made an extraordinary proficiency in the Latin and Greek ; but neglected the Hebrew. His taste for the oriental languages was not yet excited. As soon as he had taken the degree of B. A. he left the university, and

became assistant to a school at Reptoa in Derbyshire. About two years after he entered into orders, and became curate of Norton under Hales in Shropshire, near Bellaport, the seat of Sir Rowland Cotton ; who, being his constant hearer, made him his chaplain, and took him into his house. This gentleman, being a perfect master of the Hebrew language, engaged Lightfoot in that study ; who soon applied himself to it, and made great progress. In 1628 he was offered the living of Stone in Staffordshire, which he accepted, and having, when at Bellaport, formed an acquaintance with the daughter of William Crompton, esq., of Stonepark, he now married her. But his unquenchable thirst after rabbinical learning would not suffer him to continue long in this place. Sion College library, he knew was well stocked with books of that knid. He therefore quitted his charge at Stone, and removed with his family to Hornsey, near London, where he gave the public a specimen of his advancement in those studies, by his Eurubhim, or Miscellanies Christian and Judai-cal, 1629 He was then only twenty-sever: years

of age; and appears to have been well acquainted with the Latin and the Greek fathers, as well as with the classics. These first fruits of his studies were dedicated to Sir Rowland Cotton; who, in 1631, presented him to the rectory of Ashley in Staffordshire, where he applied himself with indefatigable diligence to the study of the Scriptures. In 1642 he was nominated a member of the memorable assembly of divines at Westminster for settling a new form of ecclesiastical polity. This induced him to resign his rectory, and, having obtained the presentation for a younger brother, he set out for London in 1642. He had provided the chief materials, as well as formed the plan of his Harmony ; and he now embraced the opportunity of putting it to the press in London, where he had not long been before he was chosen uJnister of St. Bartholomew's. In the assembly of divines which met in 1643, Mr. Lightfoot became distinguished for his eloquence in debate, and activity in business. His learning recommended him to the parliament, whose visitors, having ejected Dr. \illiam Spurstow from the mastership of Catherine Hall, in

Cambridge, substituted Lightfoot in his place in 1653; and he was also presented to the living of Much-Munden, in Hertfordshire, upon the death of Dr. Samuel Ward. Meanwhile he often preached before the house of commons, warmly pressing the speedy settlement of the church in the Presbyterian form, as most agreeable to Scripture. He was during this time employed in publishing the several branches of his Harmony ; but he met with great discouragements in that work, chiefly from that anti-eruditional spirit which prevailed, and threatened even the destruction of the universities. In 1655 he entered upon the office of vice-chancellor of Cambridge, to which he was chosen that year, having taken the degree of D. D. in 1652, with great applause. He executed the office of vice-chancellor with exemplary diligence, and, at the commencement, supplied the place of professor of divinity, then undisposed of. At the same time he was engaged with others in perfecting the Polyglot Bible, then in the press. At the Restoration he offered to resign the mastership of Catherine Hall ; but, as he had acted from no spirit of opposition to the king and government, a confirmation was granted him from the crown, both of the place and of his living. Soon after this he was appointed one of the assistants at the conference upon the liturgy, held in 1661, but attended only once or twice. He died December 6th, 1675, and was buried in Munden church. Dr. Lightfoot's works were collected and published first in 1684, in two volumes folio. The second edition was printed in Amsterdam, 1686, in two volumes folio, containing all his Latin writings, with a Latin translation of those which he wrote in English. At the end of both these editions there is a list of such pieces as he left unfinished. There was also published a third edition of his works, by John Leusden, in Utrecht, in 1699, folio. Mr. Strype, in 1700, published another collection of these papers, under the title of Some genuine remains of the late pious and learned Dr. John Lightfoot.

A LIGHTHOUSE is generally erected upon .1 cape or promontory on the sea-coast, or upon some rock in the sea, and has on its top in the night-time a great fire, or light formed by candles, which is constantly attended by some careful person, so as to be seen at a great distance from the land. It is used to direct the shipping on the coast, that might otherwise run ashore, or steer an improper course when the darkness of the night and the uncertainty of currents, &c., might render their situation with regard to the shore extremely doubtful. Lamp lights are, on many accounts, preferable to coal fires or candles ; and the effect of these may be increased by placing them either behind glass hemispheres, or before properly disposed glass or metal reflectors ;

which last method is now generally adopted.

LIGHTNING is a bright and vivid flash of fire, suddenly appearing in the atmosphere, and commonly disappearing in an instant, sometimes attended with clouds and thunder, and sometimes not.

Lightning was looked upon as sacred both by the Greeks and Romans, and was supposed to be sent to execute vengeance on the earth. Hence persons killed by lightning, being thought hateful to the gods, were buried by themselves, lest the ashes of other men should be polluted by them. Some say they were suffered to rot where they fell because it was unlawful for any man to approoch the place. For this reason the ground was hedged in lest any person should be polluted by it. All places struck by lightning were fenced round, from an opinion that Jupiter had either fixed upon them the mark of his displeasure, or that he had thus chosen them as sacred to himself. The ground thus fenced about was called by the Romans bidental. Lightning was much observed in augury, and was a good or bad omen, according to the circumstances attending it.

In a serene sky, the lightning almost always has a kind of indistinct appearance without any determinate form, like the sudden illumination of the atmosphere occasioned by firing a quantity of loose gunpowder; but when accompanied with thunder it is well defined, and has very often a zig-zag form. Sometimes it makes an angle, like the letter V, sometimes it has several branches, and sometimes it appears like the arch of a circle. But the most formidable and destructive form which lightning is ever known to assume is that of balls of fire. The motion of these is very often easily perceptible to the eye ; but, wherever they fall, much mischief is occasioned by their bursting, which they always do with a sudden explosion like that of fire arms. Sometimes they will quietly run along, or rest for a time upon any thing, and then break into several pieces, each of which will explode ; or the whole ball will burst at once, and produce its terrible effects in one place only. The next to this in destructiveness is the zig-zag kind ; for that which appears like indistinct flashes, whose form cannot be observed, is never known to do injury. The color of the lightning also indicates in some measure its power to do mischief; the palest and brightest flashes being most destructive ; such as are red,

or of a darker color, commonly doing less da-mage Besides these kinds of lightning, it is not uncommon to see flashes unattended by any report. These are always of the sheet kind ; they happen very frequently in windy weather, when the sky is clear, and likewise, when the sky is cloudy, immediately before a fall of rain or snow. The general reason of these appears to be, that the electric fluid is the medium by which vapors are suspended in the atmosphere ; and, of consequence, every separation of vapor, whether as rain, snow, or hail, must be attended with a discharge of electrical matter. The reason why this kind of lightning is never attended with any report is, that there is no particular object against which the force of the flash is directed ; but it dissipates itself among the innumerable conducting bodies with which the atmosphere always abounds. A flash of lightning, however limited its extent may appear, diffuses its effects over a great space of atmosphere ; for, after one of these silent flashes, k is no uncommon thing to observe the sky become obscure, though it had been quite serene before; or, if it had been cloudy, to see rain or snow begin to fall in a very few minutes.

A very surprising property of lightning, the zig-zag kind especially, when near, is its seeming omnipresence. If two persons are standing in a room looking different ways, and a loud clap of thunder accompanied with zig-zag lightning happens, they will both distinctly see the flash, not only by that indistinct illumination of the atmosphere which is occasioned by fire of any kind ; but the very form of the lightning itself, and every angle it makes in its course, will be as distinctly perceptible as if both had looked directly at the cloud whence it proceeded. If a person happened at that time to be looking on a book, or other object which he held in his hand, he would distinctly see the form of the lightning between him and the object at which he looked. The effects of lightning are seldom similar to those which accompany explosions of gunpowder or inflammable air. Upon one occasion, a tent in a gentleman’s garden was carried to the distance of 4000 paces ; and a branch torn from a large tree, struck a girl in the forehead at the distance of forty paces from the trunk of the tree, and killed her on the spot. These terrible effects seem to have been owing to the prodigious agitation in the air, occasioned by the emission of such a vast quantity of lightning at once; or perhaps to the agitation of the electric fluid itself, which is still more dangerous than any concussion of the atmosphere ; for thunder-storms will sometimes produce most violent whirlwinds. Instances are commonly occurring where lightning, by its own proper force, without any assistance from those less common agitations of the atmosphere or electric fluid, has

thrown stones of immense weight to considerable distances; torn up trees by the roots, broken them in pieces; shattered rocks; beaten down houses, and set them on fire, &c. The following singular effect of lightning is recorded, in the Philosophical Transactions, upon a pied bullock. ‘ In the evening of Sunday the 28th of August, 1774, there was an appearance of a thunder-storm, but no report was heard. A gentleman who was riding near the marshes, not far from Lewes, saw two strong flashes of lightning running along the ground of the marsh, at about nine o’clock P. M. On Monday morning, when the servants went to fetch some oxen to their work, they found a four year old steer, standing up, to appearance much burnt, and so weak as to be scarcely able to walk. The animal seemed to have been struck by lightning in a very extraordinary manner. He was of a white and red color; the white in large marks, beginning at the rump bone, and running in various directions along both sides; the belly all white; and the whole head and horns white likewise. The lightning, with which he must have been undoubtedly struck, fell upon the rump bone, which was white, and distributed itself along the sides in such a manner as to take off all the hair from the white marks as low as the bottom of the ribs, but so as to leave a list of white hair, about half an inch broad, all round where it joined to the red, and not a single hair of the red was touched. The whole belly was unhurt, but the end of the sheath of the penis had the hair taken off; it was also taken off from the dewlap ; the horns and the curled hair on the forehead were uninjured ; but the hair was taken off from the sides of the face. The farmer anointed the ox with oil for a fortnight; the animal was greatly reduced in flesh, but at length recovered. One very singular effect of lightning is, that it has been observed to kill alternately ; that is, supposing a number of people standing in a line ; if the first person was killed, the second would be safe ; the third would be killed, and the fourth safe; &c. Effects of this kind are generally produced by the most violent kind of lightning ; namely, that which appears in the form of balls, which frequently divide themselves into several parts be-fore they strike. If one of these parts of a fire-ball strike a man, another will not strike the person who stands immediately close to him ; because there is always a repulsion between bodies electrified the same way. Now, as these parts into which the ball breaks have all the same kind of electricity, it is evident that they must for that reason repel one another ; and this repulsion is so strong that a person may be interposed within the stroke of two of them, without being hurt by either. Another singular effect of lightning is said to have taken place, when Julian the apostate ordered the temple of Jerusalem to be rebuilt; when those who attempted to rebuild the temple are reported to have had the marks of crosses impressed upon their garments and

bodies. This some have supposed to have arisen from the same cause to which the angular appearance of lightning in the air is owing, namely, its violent impetus and velocity, together with the opposition of the atmosphere; and have endeavoured to account for it on electrical principles. See Warburton's Julian, where this opinion is maintained with equal learning and acuteness ; and a similar fact (of crosses impressed in a thunder storm on the bodies of several persons), which happened in England in the seventeenth century, is related. The fact is unquestionable, to account for it may be difficult.

The identity of the electric matter and lightning is now established beyond a doubt. The Jifierent forms of the flashes are all exemplified b those of electrical sparks, and the subject of tmospherical electricity or lightning has been ally entered into under that title. See ELECTRICITY.

Though the zig-zag kind of lightning is dangerous, yet the most destructive kind is that which assumes the form of balls. These are produced by an exceedingly strong power of electricity gradually accumulated till the resistance of the atmosphere is no longer able to confine it. In general, the lightning breaks out from the electrified cloud by means of the approach of some conducting substance; either a cloud, or some terrestrial substance : but the fire-balls seem to (be formed, not because there is any substance at hand to attract the electric matter from the cloud, but because the electricity is accumulated in such quantity that the cloud can no longer contain it. Hence such balls fly off slowly, and have no particular destination. Their appearance indicates a prodigious commotion and accumulation of electricity in the atmosphere, without a proportionable disposition in the earth to receive it. This disposition, however, is perpetually-altered by a thousand circumstances, and the place which first becomes most capable of admitting electricity will certainly receive a fire-ball. Hence this kind of lightning moves slowly backwards and forwards in the air for a considerable time, and then suddenly falls on one or more houses according to their being more or less affected with

an electricity opposite to that of the ball at the time. It will also run along the ground, break into several parts, and produce several explosions at once. It is very difficult to imitate lightning of this kind in electrical experiments. The only cases in whicn it has been done in any degree are those in which Dr. Priestley made the explosion of a battery pass for a considerable way over the surface of raw flesh, water, &c., and in Mr. Arden's experiment, when a fire-ball ascended to the top of an electrified jar, and burst it with a violent explosion. In these cases, if, while the electric flash passed over the surface of the flesh, it had been possible to interrupt the metallic circuit by taking away the chain, the electric matter discharged from the battery would have been precisely in the situation of one of the fire-balls above mentioned ; i. e. it would have been at a loss for a conductor. The negative side of the battery was the place of its destination ; but to that it would not have easily got, because of the atmosphere which lay in its way, and the incapacity of the neighbouring bodies -to receive it. But, while the electric matter was thus stationary for want of a conductor, if any person standing near, or touching the negative side of the battery, presented a finger to that seemingly inoffensive luminous body, he would instantly be struck very violently : because, a free communication being now made by means of his body, the powers by which the electric fluid is impelled from one place to another would instantly urge it upon him. But, if we suppose a person who has no communication with the battery to present his finger to the same

body, he may perhaps receive a slight spark from it, but not a shock of any consequence; because there is not a perfect communication by means of his body with the place to which the electric fire is destined. Hence we may account for the seemingly capricious nature of lightning, but especially of that kind which appears in the form of balls. Sometimes it will strike tiees, high houses, steeples, and towers, without touching cottages, men or other animals, who are in the neighbourhood. In such cases people would be apt to say, that the neighbourhood of these higher objects preserved the others from the stroke ; but with little reason, since low houses, men walking in the fields, cattle, nay the surface of the earth it-self, have all been struck, while high trees and steeples in the neighbourhood have not been touched. In like manner, fire-balls have passed very near certain persons without hurting them, while they have, as it were, gone considerably out of their way to kill others. The reason of all this is, that in thunder-storms there is constantly a certain zone of earth considerably under the surface, which the lightning desires (if we may

use the expression) to strike, because it hath an electricity opposite to that of the lightning it-self. Those objects, therefore, which form the most perfect conductors between the electrified clouds and that zone of earth, will be struck by the lightning, whether they are high or low.

The following account of a melancholy accident which happened near Coldstream, on the Tweed, is given by Mr. Brydone, F. U.S., in the Philosophical Transactions : — ‘ The morning was fine, with the thermometer at 68° ; but about eleven A. M. the sky became obscured with clouds in the south-east ; and betwixt twelve and one a storm of thunder and lightning«came on. This storm was at a distance of five or six miles from Mr. Brydone’s house ; but. while our author was observing the progress of the storm, he was suddenly surprised with a loud report, neither preceded nor accompanied by any flash of lightning, which resembled the explosion of a great number of muskets, in such quick succession that the ear could scarcely discriminate the sounds. On this the thunder and lightning instantly ceased, the clouds began to separate, and. the sky soon recovered its serenity. In a little time Mr. Brydone was informed, that a man with two horses had been killed ; and, on returning out to the place, our author found the two horses lying on the spot where they had been first struck, and still yoked to the cart. As the body of the man who was killed had been carried off, Mr. Brydone had not an opportunity of examining it, but was informed by Mr. Bell, minister of Coldstream, who saw it, that the skin of the right thigh was much burnt and shrivelled ; that there were many marks of the same kind all over the body, but none on the legs : his clothes, particularly his shirt, had a strong smell of burning; and there was a zig-zag line of about an inch and a quarter broad, extending from the chin to the right thigh, and which seemed to have followed the direction of the buttons of his waistcoat. The body was buried in two days, without any appearance of putrefaction. Mr. Brydone was

informed, by another person who accompanied him that was killed, of the particular circumstances. They were both driving carts loaded

with coals; and James Lauder, the person who was killed, had the charge of the foremost cart, and was sitting on the fore part of it. They had crossed the Tweed a few minutes before at a deep ford, and had almost gained the highest part of an ascent of about sixty-fire or seventy feet above the bed of the river, when he was stunned with the report above mentioned, and saw his companion with the horses and cart fall down. On running up to him, he found him quite dead, with his face livid, his clothes torn in pieces, and a great smell of burning about him. At ihe time of the explosion he was about twenty-four yards distant from Lauder's cart, and had him fully in view when he fell, but felt no shock, neither did he perceive any flash or appearance of fire. At the time of the explosion his horses turned round, and broke their harness. The horses of the first cart had fallen on their left side, and their legs had made a deep impression on the dust ; which, on lifting them up, showed the exact form of each leg, so that every principle of life seemed to have been extinguished at once, without the least struggle or convulsive motion. The hair was singed over the greatest part of their bodies, but was most perceptible on their belly and legs. Their eyes were dull and opaque, as if they had been long dead, though Mr. Brydone saw them in half an hour after the accident happened. The joints were all supple, and he could not observe that any of the bones were broken or dissolved, as is said to be sometimes the case with those who are killed by lightning. The left shaft of the cart was broken, and splinters had been thrown off in many places; particularly where the timber of the cart was connected by nails or cramps of iron. Many pieces of the coals were thrown to a considerable distance ; and some of them had the appearance of having been some time on a fire. Lauder's hat was torn into innumerable small pieces ; some part of his hair was strongly united to those which had composed the crown of it. About four feet and a half behind each wheel of the cart he observed a circular hole, of about twenty inches diameter, the centre of which was exactly in the track of each wheel. The earth was torn up as i* by violent blows of a pick-axe ; and the small stones and dust were scattered on each side of the road. The tracks of the wheels were strongly marked in the dust, both before and behind these holes, but did not in the smallest degree appear on the spots themselves for upwards of a foot and a half. There were evident marks of fusion on the iron rings of the wheels ; the surface of the iron, the whole breadth of the wheel, and for the length of about three inches was become bluish, had lost its polish and smoothness, and was formed into drops which projected sensibly, and had a roundish form ; but the wood did not appear any way injured by the heat which the iron n.ust have received. To determine whether these \ere made by the explosion which had torn up the ground, the

cart was pushed back on the same tracks which it had described on the road ;

and the marks of fusion were found exactly to correspond with the centres of the holes. They had made almost half a revolution after the explosion ; which our author ascribes to the cart being pulled a little forward by the fall of the horses. Nothing remarkable was observed on the opposite part of the wheel. The broken ground had a smell something like that of ether ; the soil itself was very dry and gravelly. The catastrophe was likewise observed by a shepherd, at the distance of about 200 or 300 yards from the spot. He said, that he was looking at the two carts going up the bank when he heard the report, and saw the foremost man and horses fall down ; but observed no lightning, nor the least appearance of fire, only he saw the dust rise about the place. There had been several flashes of lightning before that from the south-east ; whereas the accident happened to the north-west of the place where he stood. He was not sensible of any shock. Our author next gives an account of several phenomena which happened the same day, and which were evidently connected with the explosion. A shepherd, attending his flock in the neighbourhood, observed a lamb drop down ; and said, that he felt at the same time as if fire had passed over his face, though the lightning and claps of thunder were at a considerable distance. He ran up to the creature immediately, but found it quite dead ; on which he bled it with his knife, and the blood flowed freely. The earth was not torn up ; nor did he observe any dust rise, though he was only a few yards distant. This happened about a quarter of an hour before Lauder was killed, and the place was only about 300 yards distant. About an hour before the explosion, two men standing in the middle of the Tweed, fishing for salmon, were caught in a violent whirlwind, which felt sultry and hot, and almost prevented them from breathing. They could not reach the bank without much difficulty and fatigue ; but the whirlwind lasted only a very short time, and was succeeded by a perfect calm. A woman, making hay near the banks of the river fell suddenly to the ground, and called out that she had received a violent blow on the foot, and could not imagine whence it came ; and Mr. Bell, the minister above mentioned, when walking in his garden, a little before the accident happened to Lauder, felt several times a tremor in the ground. The conclusion drawn from these facts by Brydone is, that at the time of the explosion the equilibrium between the earth and the atmosphere seems to -have been completely restored, as no more thunder was heard, nor lightning observed ; the clouds were dispelled, and the atmosphere resumed the most perfect tranquillity ; ‘ But how this vast

quantity of electric matter,' says he, 'could be discharged from the one element to the other, without any appearance of fire, I shall not pretend to examine. From the whole it would appear, that the earth had acquired a great superabundance of electrical matter, which was every where endeavouring to fly off into the atmosphere. Perhaps it might be accounted for from the excessive dryness of the ground, and for many months the almost total want of rain, which is probably the agent

that natuie employs in preserving the equilibrium between the two elements.'

The following account of a similar accident which occurred in May, 1821, fromSchweigger's Journal, may serve to throw some light upon the mode of action of this formidable meteor. As two carts were proceeding in a hollow way, bordered on either side by a wood, they were successively struck by a thunder-bolt. In the first cart were seated the two brothers Teele, the one aged thirty-three years, the other twenty-nine : in the second, Mr. Teele the nephew, a young man of twenty, and Mr. Decker. The lightning struck successively the horse of the first cart, the two brothers, Mr. Decker, and his companion, the latter of whom did not survive the accident. The horse was killed upon the spot ; the skin of the belly was torn in all the lower part ; the mouth left open ; and the teeth blackened. It struck the younger Teele, passing through his umbrella, which was thrown to a distance of twenty-four paces from the cart ; the cart itself was perforated with a hole of half a foot in diameter. The body, on being carried to the nearest village, was put into a tepid bath, and rubbed ; blood flowed from the nose, the mouth, and ears, but no sign of life appeared. The mouth and nose were blackened ; the skin and muscles of the arms and hands, which were both employed in holding the shaft of the umbrella, were furrowed to the bone; the sleeves of the coat and shirt were torn ; but the lesions of the skin were not of the nature of tumors or scars, such as are produced by the application of red-hot iron : the skin looked as if it had been raised by a very quick rubbing. In the

same manner, the clothes bore no marks of burning, but seemed as if they had been torn by • the rapid passage of a sharp point. Mr. Decker, who was in the same cart, received, at the same instant, so violent a blow in the lower belly that he was precipitated from the cart, and remained senseless for half an hour. When he was undressed, the place in which he had felt the shock was of a bright red color, but without any open wound. He was by this time in a condition for continuing his journey.

The two brothers Teele had suffered considerable damage from the lightning ; they, however, quickly recovered, as will presently be seen. But it will be interesting, in the first place, to follow the progress of the electric fluid over the different parts of their bodies, and to observe the nature of the wounds which resulted. They were sitting by the side of one another when struck. The lightning first hit the head of the elder; it tore to pieces the velvet cap which he had on, grazed the temporal bone an inch above the left ear, and then behind the ear; after which, slightly raising the skin, it descended upon the neck, traversed the back part obliquely, and ascended towards the right ear ; here it scratched the inner part of the ear, near the tragus and antihelix ; it then fell upon the right shoulder, passed beneath the chin, over the right breast and arm ; and, returning to the back, descended along the vertebral column to the sacrum. In this latter part of the course of the lightning the skin was not cut, but only a little

raised, and very red. Impressions of the same nature were seen across the arms ; and attested, as well as the rupture of the clothes, the zig-zag progress of the lightning, which had passed alternately from the right side of the younger brother to the left side of the elder. It fixed upon the latter, on meeting with some pieces of metal that were in his waistcoat pocket : here it raised the skin upon a space about the size of the hand. After this it descended upon the left part of the region of the pubis, and traversed the inner surface of the thigh, the ham and calf of the leg. A piece of steel, which the younger of the brothers carried in his fob, led the lightning to the region of the groin, where a space of the size of the piece was deprived of the skin, and affected with a deep wound. The breadth of the mark left by the lightning upon the different parts of the body was in general two inches ; the wounds were more extended and deeper at the intersections of this mark ; several of them were very painful, and suppurated abundantly. The skin had been rolled, in close folds, to the right and left, by the rapid passage of the lightning. The wounds did not bleed; and all needful to be done was to provide for the reno-vation of the skin

destroyed. In a word, there was no indication of any lesion of organs by fire or heat; but the effect produced might be compared to that which takes place when a ball grazes the surface of a limb.

Dr. Tilesius, having assisted at the two first dressings, had all the leisure necessary for carefully examining the form and nature of the hurts; he even took a sketch of them, which accompanies his memoir.

The brothers Teele, after having perfectly recovered themselves, were affected with violent nausea, and vomited repeatedly, when some cups of ea were given them to drink j they threw up a little blood at first, as had happened o the one who had been killed. Notwithstanding the great extent of their wounds, and their being besides of a robust habit, they had [no fever. The elder was perfectly deaf on the day of the accident ; but, on the following day, he recovered his hearing to a certain degree. No trace of paralysis made its appearance in the limbs struck by the lightning ; the wounds were cicatrised in the space of a few weeks.

Dr. Tilesius having seen Dr. Bauer, the physician of the brothers Teele, a year after the accident (which took place in May 1821), received from him the following information. The elder has remained somewhat dull of hearing, more or less so, according to the season. He experiences a marked disposition to sleep, and would often remain twenty-four hours together asleep, were he not wakened. The younger has latterly had an inflammatory fever. He is subject to a periodical weakness or state of relaxation, which was before unknown to him. In general, it has had a much greater influence upon the nervous system of the two brothers than might have been presumed from the vigor of their constitution. The cicatrices of the wounds now present, in several places, the appearance of the turns of a screw.

Professor Pictet, of Geneva, communicated to

the Helvetic Society an account of a singular effect produced by a stroke of lightning on the 3rd of July, 1824. The house had no conductors, but its roof was covered with white iron, and had bars of the same metal communicating with the ground. The stroke of lightning did no damage to the house, but the lightning perforated a piece of white iron with two holes, of an inch in diameter, and five inches distant; and, what ˆras very remarkable, the bars at the edges of the noles were in opposite directions. Hence, as Professor Pictet remarks, it appears to follow, either that the electric fluid had passed through the white iron, forming one hole, and, after moving five inches along it, had penetrated it again in an opposite direction ; or that two currents of electric fluid had moved simultaneously in opposite directions, and at the distance of rive inches from each other.

The mineralogists of Philipothal, East Prussia, have availed themselves of the force of lightning to shiver or blast the rock instead of gunpowder. For this purpose an iron-rod, similar to a conductor, is fixed in the work that is intended to be blasted; when the occurrence of the first thunder-storm generally conveys the electric fluid down the rod in such quantity as to split it into several pieces without displacing it. See ELECTRICITY, ATMOSPHERIC.

LIGHT-ROOM, a small apartment enclosed with glass windows, near the magazine of a ship of war. It is used to contain the lights by which the gunner and his assistants are enabled to fill the cartridges with powder to be ready for action.

LIGHTS, n. s. From light, not heavy ; so called from their lightness in proportion to their bulk. The lungs; the organs of breathing in animals.

The complaint was chiefly from the lights, a part as of no quick sense, so no seat for any sharp disease.

Hay ward.

LIGNAC (Joseph Adrian de), a French ecclesiastic, born at Poictiers, who published several works, pt,-ticularly Letters to an American, concerning Buffon’s Natural History. He died iu Rome in 1762.

LIGNALOES, n. s. Lat. lignumaloes. Aloes wood. t

The vallies spread forth as gardens by the river’s side, as the trees of lignaloei which the Lord hath planted, and as cedar trees beside the

water.

Numb. xxiv. 6. The woful teris that thei leten fal

As bitter werein, out of teris kinde,

For paine, as is lignealoes or gal.

Chaucer. Troilut and Creteide.

LIGNE (Charles Joseph, prince de), was born at Brussels in 1735, of an ancient Flemish family. He entered the army of his country in 1752, and made his first campaign as captain in 1757. He was made a colonel for his gallantry at Hochkirchen ; and was a major-general at the accession of Joseph II. In 1771 he became a proprietor of a regiment of infantry, and added preatly to his military reputation in the war relating to the succession of Bavaria in 1778, when lie commanded the advanced guard of Laudohn. 1 Tome m 1 782 on a mission to Russia, he became a !avcnte with Catharine II., who nominated

him a field marshal of that empire, and gave him an estate in the Crimea. In 1788 Joseph II. made him general of artillery, and sent him to assist prince Potemkin at the siege of Okzakow ; he also divided with Laudohn the glory of taking Belgrade. The death of Joseph II. terminated his military career. Francis II. in 1808 made him a field marshal, and he was often consulted on public affairs. He died in 1814. He published a collection of his writings in 30 vols. 12mo. in 1807; and subsequently Vie du Prince Eugene de Savoie, £crite par lui-meme; and Lettres et Pense'es du Marechal Prince de Ligne, both which were translated into English. His posthumous works were published in 1817 in 6 vols. 8vo.

LIGNE, a town of the Netherlands, in the department of Gemappes, and late province of Austrian Hainault, on the Dender, twelve miles north-west of MODS, and twenty north of Valen-ciennes.

LIG'NEOUS, adj. Fr. ligneux ; Lat. ligneut. Wooden : made of, or resembling, wood.

It should be tried with shoots of vines, and root* of red roses ; for it may be they, being of a more ligneous nature, will incorporate with the tree itself.

Bacon's Natural Hittory.

Ten thousand seeds of the plant hart's-tongus hardly make the bulk of a pepper-corn: now the covers, and the true body of each seed, the parenchy-mous and ligneous part of both, and the fibres of those parts, multiplied one by another, afford a hundred thousand millions of formed atoms, but how many more we cannot define. Grew.

LIGNET, among goldsmiths, a longitudinal hollow iron mould, made for receiving melted masses of gold or silver. It has a large hollow for the former, and a small one for the latter. See INGOT. This word is by some derived from lignum, wood ; ingots of gold and silver having been probably at first thrown into lignets made of hollow hard wood, till their rapid consumption by the melted metal had shown the necessity of making them of more durable stuff. They are now made of iron, and are also called ingots.

LIGNICENSIS TERRA, in the materia me-dica, a fine yellow bole dug in many parts of Germany, particularly about Emeric ,in Westphalia, and used in astringent complaints.

LIGNIERE, or LIGNIERES, a town of France, in the department of Cher, and late province of Berry, with a castle : twenty-four miles south of Bourges, and thirteen and a half south-east of Issoudon. Long. 2° 24' E., lat. 46° 47' N.

LIGNUM Vnx.. See GUAIACUM.

LIGNY, a town of France, in the department of the Meuse, and late duchy of Bar, with a castle on the Orney, nine miles south-east of Bar le Due, and 125 south-east of Paris. Long. 5° 25' E., lat. 48° 39* N.

L1GON, a seaport of Siam, in Malacca, capital of a territory so named, with a m.f/aziiw belonging to the Dutch East India Company, csv the east coast. Long. 100° 5' E., lat. 7° 40* N.

LIGUEIL, a town of France, in the department of Indre and Loire, nine miles south-west of Loches, and twenty-one south-east of Tours. Long. 0° 52' E., lat. 47° 3' N.

LIGUEUX, a town of France, in the department of Dordogne, nine miles N. N. E. of Pe-rigueux.

LIGULATED, among botanists, an appellation given to such floscules as have a straight end turned downwards, with three indentures, but not separated into segments.

The LIGURE, in Hebrew antiquity, was the fust stone in the third row of the high priest's breast-plate, and had the name of Gad inscribed on it. Exod. xxviii. 19. It is said to have been spotted like the ounce. Some suppose it to be the jacinth.

LIGURIA, in ancient geography, a country of Italy, bounded on the south by the Mediterranean Sea; on the north by the Appennine mountains, on the west by part of Transalpine Gaul, and on the east by Etruria.

LIGURIANS, the ancient inhabitants of Liguria. There is a great disagreement among critics concerning their origin, though most probably they were descended from the Gauls. Some carry up their origin as far as the fabulous heroes of antiquity ; while others trace them from the Ligyes, a people mentioned by Herodotus as attending Xerxes in his expedition against Greece. They are by some ancient geographers placed in Colchis, by others in Albania. According to Diodorus Siculus, the Ligurians led a very wretched life ; their country being entirely overgrown with woods, which they were obliged to pull up by the roots in order to cultivate their land, which, being naturally barren, made but very poor returns for all their labor. They were much addicted to hunting; and, by a life of continual exercise and labor, became very strong. The women are said to have been almost as strong as the men, and to have borne an equal share in all laborious enterprises. They were, however, subdued by the Romans about A. A. C. 211.

LIGUSTICUM, in botany, lovage, a genus of the digynia order and pentandria class of plants; natural order forty-fifth, umbellatae. The fruit is oblong, and quinquesulcated on each side; the florets are equal ; the petals involuted or rolled inwards and entire. There are fourteen

species : the most remarkable are, •

1. L. levisticum, the common lovage, a native of the Appennine mountains in Italy. It has a thick, fleshy, deeply penetrating perennial root, crowned by very large, many-parted, radical leaves, with broad lobes, having incisions at top, upright, strong channelled stalks, branching six or seven feet high, and all the branches terminated by yellow flowers in large umbels. The root agrees nearly in quality with that of angelica: the principal difference is, that the lovage root has a stronger smell, and somewhat less pungent taste, accompanied with a more durable sweetness, the seeds being rather warmer than the root.

2. L. Scoticum is a native of Scotland, and grows near the sea. It has a thickish, fleshy, penetrating, perennial root, crowned by large doubly trifoliated leaves, with broad, short, indented lobes, upright round stalks, half a yard high, terminated by small yellow umbels. The leaves are sometimes eaten raw as a sallad, or

boiled as greens, by the inhabitants of the Hebrides. The root is reckoned a good carminative. Both these species are hardy, and easily propagated by seeds sown in spring or autumn.

LIGUSTRUM, privet, in botany, a genus of the monogynia order, and diandria class of plants ; natural order forty-fourth, sepiariae : COR. quadrifid ; berry tetraspermous. There are four species.

L. sempervirens, the evergreen privet, is a hardy plant, rising from ten to fifteen feet high, adorned with oblong entire leaves and spikes of infundibuliform oblong white flowers, succeeded by black berries. It is easily propagated by seed, layers, suckers, or cuttings, and is used for making hedges. With the addition of alum, the berries are said to dye wool and silk of a good durable green ; for which purpose they must be gathered as soon as they are ripe. The leaves are bitter and slightly astringent. Oxen, goats, and sheep, eat the plant ; horses refuse it,

LIKE, adj., adv., n. s.,v. a. & v. n.ˆ\ Sax. lie;

LIKE’LIHOOD, n. s. Sw. like;

LIKE’NESS, Goth, anil

LIKE’LY, adj. & adv. 1 Belg. lyk ;

LI’KEN, v. a. \ TeuVfycA.

LIKE’NESS, n. «. Similar;

LIKE’WISE, adv. equal ; of

LI’KING, adj. & n. j. J the same

quality or quantity ; resembling ; hence probable credible : as an adverb, in the same manner, or in a befitting manner : like and likely are both used also for probably ; credibly : such as may reasonably be thought or expected. It is often, Dr. Johnson observes, not easy to determine whether like is used as an adverb or adjective. To like is to choose; prefer; approve; please; or be pleased with (taking of before the object), but both these last are obsolete senses : likelihood was in Shakspeare’s time used for show ; appearance ; resemblance : it now signifies probability ; verisimilitude : to liken is, to exhibit or represent as resembling ; compare : likeness, similarity ; resemblance ; counterpart : likewise, in like manner : liking, in good condition ; plump: pleasure or delight in ; plumpness; inclination ; state of trial or approval.

What euer thingis he doith, the son doith in lijh maner tho thingis. Wiclif. Jon. v.

Blynde, loueris of lustes more than of God, hauynge lickeiiesse of pitee, but denyynge the vertue of it. Id. 2 Tymo. iii.

He shall dwell where it liketh him best.

Dent. Be strong, and quit yourselves like men.

1 Sam. iv. 9.

Their young ones are in good liking ; they grow up with corn. Job xxxix. 4.

Like as a father pitieth his children, so the Lord pitieth them that fear him. Psalm ciii. 13.

He is like to die for hunger, for there is no more bread. Jeremiah xxxviii.~9.

Jesus said unto them, I also will ask you one thing, which if ye tell me, I likeu-ite will tell you by what authority I do these things.

Matt. xxi. 24.

Conformity with them is only then a disgrace, when cither we follow

them in that they think or do amiss, or follow them generally in that they do, without other reason than only the liking we have to

the pattern of their example . which liking doth intimate a more universal approbation of them than is allowable. Hooker.

That way we are contented to prove, which teing the worse in itself is notwithstanding now, by reason of common imbecility, the fitter and likelier to be brooked. Id.

Of any thing more than of God they could not by any means like, as long as whatsoever they knew besides God, they apprehended it not in itself without dependency upon God. Id.

The man who has nothing to boast of but hit illustrious ancestors, is like a potatoe— the only good belonging to him is under ground.

Sir T. Overbury.

The joyous nymphs and lightfoot fairies, Which thither came to hear their musick sweet, Now hearing them so heavily lament, Like heavily lamenting from them went. Spenter.

Well hoped he, ere long that hardy guest, If ever covetous hand, or lustful eye, Or lips be laid on thing that liked him best, Should be his prey. Spenser. Faerie Queene.

Why do you longer feed on loathed light, Or liking find to gaze on earthly mold 1 Id.

The young soldiers did with such cheerfulness like of this resolution, that they thought two days a long delay. Knolles.

He was a man, take him for all in all, I shall not look upon his like again.

Shakspeare.

I lile the work well ; ere it be demanded, As like enough it will, I'd have it copied. Id.

I looked upon her with a soldier's eye ; That liked, but had a rougher task in hand Than to drive liking to the name of love. Id.

What of his heart perceive you in his face,

By any likelihood he shewed to-day ?

— That with no man here he is offended. Id.

Many of likelihood informed me of this before, which hung so tottering in the balance, that I could neither believe nor misdoubt.

Id. All's Well that Ends Well.

Sir John, they are your likeliest men ; I would have you served with the best. Id. Henry IV.

The prince broke your head for likening him to a singing man of Windsor. Id.

Never came trouble to my house in the likeness of your grace ; for trouble, bsing gone, comfort should rem,ain-Shakspeare.

1 here is no likelihood between pure light and black darkness, or between righteousness and reprobation.

Raleigh.

Keport, being carried secretly from one to another in my ship, hadiite to have been my utter overthrow.

Id.

The trials were made, and it is like that the experiment would have been effectual. Bacon.

Ibis desire being recommended to her majesty, it liked her to include the same within one entire lease.

Id.

So was it in the decay of the Roman empire, and likewise in the empire of Almaigne, after Charles the Great, every bird taking a feather. Id.

The yearly value thereof is already increased double of that it was within these few years, and is like daily to rise higher till it amount to the price of our land in England. Davies.

Albeit an eagle did bear away a lamb in her ta-lons, yet a raven endeavouring to do the like was held entangled. Haifward.

The likeliest things always succeed not.

Bp. Hall.

One offers, and in offering makes a stay Another forward sets, and doth no more ; A third the like. Daniel's Civil War.

Hopton resolved to visit Waller's quarters, that he might judge whether he were like to pursue his purpose. Clarendon.

He gave such an account as made it appear that he liked the design. Id.

For no falshood can enaure Touch of celestial temper, but returns Of force to its own likeness. Milton.

His desire

By conversation with his like to help, Or solace his defects. Id. Paradise Lost. There let them learn, as likes them to despise God and Messiah. Id.

For who, though with the tongue Of angels, can relate 1 or to what things Liki-n on earth conspicuous, that may lift Human imagination to such height Of Godlike power. Id.

Both in respect to the generality of men, who by them were warned, and by such examples deterred from incurring the like mischiefs. Barrow.

While man was innocent, he was likely ignorant of nothing that imported him to know. Glanville.

Though they did not like the evil he did, yet they liked him that did the evil. Sidney.

He proceeded from looking to liking, and from liking to loving. Id.

These young companions make themselves believe they love at the first looking of a likely beauty. Id.

Are we proud and passionate, malicious and re-vengeful 1 Is this to be like-minded with Christ, who was meek and lowly? TMotson.

They roared like lions caught in toils, and raged : The man knew what they were, who heretofore Had seen the like lie murthered on the shore.

Waller.

Two likes may be mistaken. L'Estrange.

His son, or one of his illustrious name,

How like the former, and almost the same.

Dryden's JEneid. Beasts can like, but not distinguish too,

Nor their own liking by reflection know.

Dryden.

The royal soul, that, like the labouring moon, By charms of art was hurried down ; Forced with regret to leave her native sphere, Came but a while on liking here. Id.

HP that has" the prison doors set open is perfectly at liberty, because he may either go or stay, as he best like*. Locke.

What will be my confusion, when he sees me Neglected, and forsaken like himself. Philips.

More clergymen were impoverished by the late war, than ever in the like space before. Sprat.

Scarce any man passes to a I iking of sin in others, but by first practicing it himself. South.

Where things are least to be put to the venture, as the eternal interests of the other world ought to be ; there every, even the least,

probability, or likelihood of danger, should be provided against. Id.

There are predictions of our Saviour recorded by the evangelists, which were not completed till after their deaths, and had no likelihood of being so when they were pronounced by our blessed Saviour.

Addiaon on the Christian Religion. Full fifteen thousand lusty fellows With fire and sword the fort maintain ; Each was a Hercules, you tell us, Yet out they marched like common men.

Poor Cupid, sobbing, scarce could speak, Indeed, mamma, 1 do not know ye :

Alas ! how easy my mistake ? I took you for your likeness Cloe. Id.

We like our present circumstances well, and dream of no change. Atterbury.

Thus, in all likelihood, would it be with a libertine, who should have a visit from the other world : the first horror it raised would go off, as new diversions come on. Id.

Spirit of vitriol poured to pure unmixed serum, coagulates as if it had been boiled. Spirit of sea-salt makes a perfect coagulation of the serum likewise, but with some different phenomena.

Arbuthnot on Aliments.

If the fluid be supposed to consist of heterogeneous particles, we cannot conceive how those dissimilar parts can have a like situation. Beniley.

She'd study to reform the men, Or add some grains of folly more To women than they had before ; This might their mutual fancy strike, Since every being loves its like. Swift.

This plan, as laid down by him, looks liker an universal art than a distinct logick. Baker.

A few seem favourites of fate,

In pleasure's lap carest ; Yet think not all the rich and great

Are likewise truly blest. Burnt.

A man to whom sculpture is new, sees a barber's block, or some ordinary piece of statuary ; he is immediately struck and pleased, because he sees something like an human figure ; and, entirely taken up with this likeness, he does not at all attend to its defects. Burke on the Sublime.

By these, and the like arguments, the spiritual man may raise the drooping sphitsxrf good men in their causeless dejections. Paley.

Moments like to these

Rend men's lives into immortalities. Byron. So when destruction lurks unseen, Which men, like mice, may share, May some kind angel clear thy path, And break the hidden snare. Barbauld.

LIL'ACH, n. s. Fr. Idas ; Span. lila. A shrub.

The white thorn is in leaf, and the lilarh tree.

Bacon.

LILACH, or LILAC. See SYRINGA.

LILBUHNE (John), an enthusiastic English republican, born in 1618, and descended of an ancient family in Durham. lie was brought up a clothier, but he gave up business in 1636, and became assistant to Dr. Bastwick, in whose sufferings he shared. In 1636 he went over to Holland to get Bastwick's Merry Liturgy printed; and on his return, in 1637, was tyrannically punished by the star-chamber court ; being put in the pillory, whipped, fined, and imprisoned, and loaded with heavy irons, for publishing pamphlets, reflecting on the church of England and its bishops, particularly Prynne's News from Ipswich. In 1641 he was released by the long parliament; and from that period made

himself formidable to all parties, by his bold aspiring genius. He signalized himself in the parliamentary army, in which he was made a major in 1643, and a colonel in 1644. He was at one time the secret friend and confidant of Jromwell, and at another his avowed enemy and accuser; so that, in 1(550, Cromwell found it his interest to silence liirr by a grant of £3000 out

of some forfeited estates. Yet, after this, he attacked the protector's government ; became chief of the levellers; and was twice tried for high treason, but acquitted by the juries. After this he settled at Eltham, where he joined the Quakers ; and died August 29th, 1657, aged thirty-nine. His funeral was attended by 4000 persons. His brother Robert was a major-general in Cromwell's army. He wrote his Christian Man's Trial, in ,1637, 4to., and many similar pieces while in prison.

LILIUM, the lily, in botany, a genus of the monogynia order, and hexandria class of plants; natural order tenth, coronariae : COB. hexapetalous and campanulated, with a longitudinal nectariferous line or furrow : CAPS, connected by small cancellated hairs. There are many species, all bulbous-rooted, herbaceous, flowery perennials, rising with erect annual stalks three or four feet high, garnished with long narrow leaves, and terminated by clusters of large, bell-shaped, hexapetalous flowers of exceeding great beauty, of white, red, scarlet, orange, purple, and yellow colors. All the species are propagated by sow-ing the seeds; and, if care is taken to preserve these seeds from good flowers, very beautiful va-riet.es are often produced. The manner of sow-ing them is as follows : Some square boxes should be procured, about six inches deep, with holes bored in the bottoms to let out the wet ; these must be filled with fresh, light, sandy earth ; and the seeds sown upon them pretty thick in the beginning of August, and covered over about half an inch deep with light sifted earth of the same kind. They should then be placed where they may have the morning sun ; and, if the weather proves dry, they must be watered at times, and the weeds carefully picked out. In October the boxes are to be removed to a place where they may have as much sun as possible, and be secured from the north and north-east winds. In spring the young plants will appear, and the boxes are then removed into their former situation. In August the smallest roots are to be emptied out of these boxes, strewed over a bed of light earth, and covered with about half an inch depth of the same earth sifted over them. Here they must be watered, shaded at times, and defended from the severity of winter by a slight covering of straw in the hardest weather. In February the surface of

the bed should be cleared, and a little light earth sifted over it. When the leaves are decayed, the earth should be a lit-tle stirred over the roots ; and in the month of September following some more earth sifted on. In the September of the following year the roots must be transplanted to the places where they are to remain, and set at the distance of eight inches; the roots being placed four inches below the surface : this should be done in moist weather. They will now require the same care as in the preceding winters ; and, the second year after they are transplanted, the strongest roots will begin to flower. The fine ones should then be removed at the proper season into flowerbeds, and planted at great distances from one another, that they may flower strong. The roots of the white lily are emollient, maturating, and greatly suppurative. They are used externally in cata-LIL

plasms for these purposes. The common form of applying them is boiled and bruised ; but some prefer roasting them till tender, and then beating them to a paste with oil, in which form they are said to be excellent against burns. Ge-rard recommends them internally against dropsies.

L. Kamtschatense, or Kamtschatka lily, called there saranne, makes a principal part of the food of the Kamtschatkans. Its roots are gathered by the women in August, dried in the sun, and laid up for use : they are the best bread of the country; and after being baked are reduced to pow-der, and serve instead of flour in soups and several dishes. They are sometimes washed, and eaten as potatoes ; are extremely nourishing and have a pleasant bitterish taste. The natives often parboil and beat them up with several sorts of berries, so as to form a very agreeable confection. Providentially it is a universal plant there, and all the grounds bloom with its flower during the season. Another remarkable circumstance is, that while fish are scarce the saranne is plentiful; and when it is scarce the rivers abound with fish. A species of mouse saves the Kamtschatkan wo-men a great deal of trouble. The saranne forms part of their winter provisions ; they not only gather them in the proper season, and lay them jp in their magazines, but

bring them out in sunny weather to dry them, lest they should spoil. The natives search for their hoards, but leave part for the owners, being unwilling to suf-fer such useful caterers to perish.

LILLE, a large, handsome, and strong town of France, in the department of the north (French Flanders) and the chief place of a prefecture. It is the capital of the arrondissement of the same name, being a post town, containing 64,291 inhabitants, and is situated in the midst of a fertile country, on the canal which connects the river Sensee with the sea, and on the Moyenne- •Deule, which crosses it, and is navigable. Surrounded by immense fortifications, and defended by a citadel, the work of the celebrated Vauban ; it is regarded as the finest remaining specimen of his skill in Europe. The streets are broad, clean, and airy, the houses well built, the squares spacious and regular, and the public edifices of singular beauty.

It was founded in 1009, by Baudouin IV. earl of Flanders ; fell into the hands of Philip the Fair in 1296, after a siege of three months; and was retaken by Guy earl of Flanders in 1302. The protestants attempted in vain to surprise it in 1581, and in 1645 the French were equally ••Jiisuccessful. Being taken from the Spaniards on the 27th of April 1667, and retaken by the allies in 1708, after a very long and obstinate

powder blue, soap, and ropes. There are many distilleries of brandy from corn ; salt and sugar refining houses ; oil mills; bleaching grounds; starch, paper, glass and porcelain manufactories ; and tanning and currying yards. It has likewise a royal factory for the refining of saltpetre, and in the neighbourhood there are more than 200 windmills for the preparation of oil. It carries on a considerable trade in linens, thread, flax, lace, spun cotton, combed wool, corn, oils, tobacco, madder, endive, coffee, colonial produce, spices, wines, brandy, hollands, &c. Among its public buildings and institutions may be mentioned, the public library, containing 18,000 volumes, the museum of pictures, the citadel, the arsenal, the depot of arms, the town hall, the infirmary, the circus, the markets, and the botanical gar-den. It is 168 miles north of Paris, fifty-eeven south-east of Dunkirk, fifty-seven north-west of Mons, seventy-five W. S. W. of Brussels, twen-ty-four north of Douay, and thirty-three N. N. E. of Arras.

LILLERS, a town of France, in the department of the Straits of Calais, and ci-devant province of Artois ; ceded to France by Spain at the

peace of the Pyrenees, when its fortifications were demolished. It is seated on the Navez, six miles north-west of Bethune and seventeen of Arras. Long. 2° 35’ E., lat. 50° 30’ N. LILLO (George), a celebrated dramatic writer, born in London in 1693. He was a jeweller by profession, and followed his business for many years in that neighbourhood with reputation. His George Barnwell, Fatal Curiosity, and Arden of Feversham, are all planned on common and well known stories ; yet they have perhaps oftener drawn tears from an audience than more pompous tragedies. He died in 1737, in the forty-seventh year of his age. His works were published, with his Life, in 2 vols 12mo.,by Mr. T. Davis.

LILLY, or LYLLY (John), a dramatic poet, born in Kent, about 1553, and educated in Magdalen College, Oxford, where he took the degree of A. B. in 1573, and that of M. A. in 1575. from Oxford he removed to Cambridge, and thence to London, where he became acquainted with some of queen Elizabeth’s courtiers, by whom he was caressed as a poet and a wit, and on particular festivals the queen honored his* dramatic pieces with her presence. He wrote nine plays, but his first publication, printed in 1580, was a romance, which was called Euphues, and which was universally read and admired. ‘ Lilly was,’ says Oldys, ‘ a man of great reading, good memory, ready faculty of application, and uncommon eloquence; but he ran into a vast excess of allusion.’ When or where

aie’-re, it was yielded to France by the treaty of he died is not known. Wood says he was living I trecht. The Austrians bombarded it from the in 1597, when his last comedy was published. 9th of September to the 6th of October 1792 ; After attending the court of queen Elizabeth but the garrison, aided by the courage of the in-thirteen years, notwithstanding his reputation as habitants, forced them to raise the siege. The an author, he was under a necessity of petition- manufactures consist of unbleached and bleaching the queen for support in his old age. His ed coarse linen, ticking, calicoes, table linen, two letters to her majesty on that subject are pre-handkerchiefs, and printed cottons. It has also served in MS

factories for thread, for sewing and lace-making; LILLY (William), a noted Eng’ish astrologer,

cloths, camlets, waggoners’ frocks, wool-combing, born in Leicestershire in 1602. He arrived in

lace-making, stay-laces cotton yarn, white lead, London in 162l\ ai'd lived four yean AS a ser-

vant to a mantua-maker; after which he entered into the service of Mr. Wright, master of the Salters' Company, who not being able to write, Lilly kept his books. In 1627, his master dying, he married the widow, with a fortune of £1000. Being now his own master, he followed the puritanical preachers; and, turning his mind to judicial astrology, became pupil to one Evans, a Welsh parson, in that pretended art. He was the author of The Book of Fortune; Merlinus Anglicus junior; The Supernatural Sight; and The White King's Prophecy. In him we have an instance of the general superstition that prevailed during the civil war between Charles I. and his parliament ; for the king consulted this astrologer to know in what quarter he should conceal himself, if he could escape from Hampton Court ; and general Fairfax, on the other side, sent for him to ask, whether God was with them and their cause? In 1648 he published his Treatise of the three Suns seen the preceding winter ; and also an astrological judgment upon a conjunction of Saturn and Mars. This year the council of state gave him £50, and a pension of £100 per annum, which he received for two years, and then resigned on some disgust. In June 1660 he was taken into custody by order of the parliament, by whom he was examined concerning the person who cut off the head of Charles I. The same year he sued out his par-don under the great seal of England. The plague raging in London, he removed with his family to his estate at Hersham ; and in October 1666 was examined before a committee of the house of commons concerning the fire of London, which happened in September that year. After this he studied physic, and, by means of Mr. Ashmole, obtained from archbishop Sheldon a license to practise it. He adopted for his son, by the name of Merlin junior, one Henry Coley, a tailor, and gave him the property of his almanac after it had been printed for thirty-six years. lie died in 1681, of a dead palsy. Mr. Ashmole erected a monument over his grave in the church of Walton upon Thames. His Observations on the Life and Death of Charles, late King of England, if we overlook the astrological nonsense, may be

read with as much satisfaction as more celebrated histories, Lilly being not only well informed, but strictly impartial. This work, with the Lives of Lilly and Ashmole, written by themselves, were published in 1 vol. 8vo. in 1774, by Mr. Burman.

LIL'Y, n. s. ~\ Lat. lilium. A flower :

LIL'IED, adj. >lilied, abounding with

LIL'YLIVERED, adj. j lilies: lilylivered, white-livered • cowardly.

Biholde ye the lilies of the feeld hou thei weren, thei traveilen not neither spynnen.

Wiclif. Matt. vi. I am the rose of Sharon and the lily of the valleys.

Cant. ii. 1.

O rubi cunde rose, and white as the lyly, Clarified chrystal of worldly portraiture ! O courfin figure, resplendent with glory, Geme of beauti ! o carbuncle shining pure ! Your faireness exceedeth 'he craft of nature.

Chaucer's Baladts.

Ship* recked upon a kingdom, where no pity ! No friends ! no hope '. no kindred weep for me !

Almost no grave allowed me! Like the lily, That once was mistress of the field, and flourished, I'll hang my head, and perish. Shakspeare.

A base, litylivered, action-taking knave.

Id. King Lear.

Arnus, a river of Italy, is drawn like an old man, by his right side a lion, holding forth in his right paw a red lily, or flower-de-luce.

Peacham on Drawing. Nymphs and shepherds dance no more By sandy Ladon's lilted banks. Milton.

Lily of the valley has a strong root that runs into the ground. Mortimer's Husbandry.

Take but the humblest lily of the field ; And if our pride will to our reason yield, It must by sure comparison be shown, That on the regal seat great David's son, Arrayed in all his robes, and types of power, Shines with less glory than that simple flower.

Prior.

For her the lilies hang their heads, and die. Id. There are thirty-two species of this plant, including white lilies, orange lilies, red lilies, and martagons of various sorts. Miller.

Now blooms the lily by -the bank,

The primrose down the brae ; The hawthorn's budding in the glen,

And milk-white is the slae. Burnt.

What scenes of glory rise Before my dazzled eyes ! Young Zephyrs wave their wanton wings, And melody celestial rings : Along the Hlied lawn the nymphs advance, Flushed with love's bloom, and range the sprightly

dance. • beatiie.

And her dead drooped as when the lilii lies O'ercharged with rain. Byron.

To be enfolded to this desolate heart — A blighted lily on its icy bed — Nay, look not up, 'tis thus I would behold thee.

Matvrin.

LILY, in botany. See LILIUM, and AMARYIL-LIS.

LILY, HYACINTH. See SCILLA.

LILY OF THE VALLEY. See CONVALLARIA.

LILYBˆEUM, in ancient geography, a city of Sicily, seated on the most westerly cape of Sicily, and said to have been founded by the Carthaginians, on their expulsion from Motya by Dionysius tyrant of Syracuse. It sustained three sieges ; one by Dionysius, another by Pyrrhus king of Epirus, and the third by the Romans. The first two failed in their attempts, but the Romans made themselves masters of it, though with no small difficulty. No remains of this once stately city are now to be seen, except some aqueducts and temples ; though it was standing in Strabo's time.

LILYE (William), the grammarian, was born in 1466 at Oldham in Hampshire ; and in 1486 was admitted a semi-commoner of Magdalen College, in Oxford. Having taken the degree of A. B. he left the university, and travelled to Jerusalem. Returning thence, he continued five years in Rhodes, where he studied the Greek, several learned men having retired thither after the taking of Constantinople. From Rhodes he travelled to Rome ; where he improved himself in the learned languages, under Sulpitins and P. Sabinus. He then returned to London, where for sometime he taught a private grammar-school, being the first person, it is said, who taught

Greek in this metropolis. In 1510, when Dr. Colet founded St. Paul's school, Lilye was ap-

of the community. The placa, or great square, is said to be 500 feet above the Pacific, the

pointed the first master ; at which time he was cabildo occupies one side. It is a building very married and had many children. In this em- much in the Chinese style, and in front of it is ployment he had labored twelve years, when the cathedral, a very handsome pile. The riches bein" seized by the plague, which then raged in which have been lavished at various times upon London, he died in February 1523, and was the interior of this edifice are scarcely to be buried in St. Paul's. He had the character of an credited any where, says Mr. Caldcleugh, but in excellent grammarian, and a successful teacher, a city which once paved a street with ingots of His principal work is Brevissima Institutio, seu silver to do honor to a new viceroy. The balus-ratio Grammatices Cognoscendae ; London, 1513, trades surrounding the great altar, and the pipes very often reprinted, and commonly called Lilye's-of the organ, were of silver. It may be men- Grammar. The English rudiments were written tioned, as a proof of

the abundance of silver by Dr. Colet, dean of St. Paul's; and the pre-ornaments, that three weeks prior to my arrival face to the first edition by cardinal Wolsey. The a ton and a half of silver was taken from the Latin syntax was chiefly the work of Erasmus, various churches, without being missed, to meet The rest was written by Lilye. See Ward's the_exigencies of the state.'

preface

1732.

to his edition of Lilye's Grammar,

This writer notices the church of San Pedro as remarkable for its architecture, and the small

LIMA, a province of Peru, bounded on the church built by Pizarro, which has never been

north by Truxillo, east by Tarma and Guanca-totally ruined by the earthquakes, and which is

velica, west by the Pacific, and south by Are-situate abajo de la puente. Of the monastic es—

quipa. Its principal districts are Lima Proper, tablishments, which are very numerous and of

Chancayˆ Huarachiri, Canta, Canete, lea, Pisco, singular extent and splendor, the convent of the

and Nasca. Rain is seldom or never known to Franciscans seems most worthy of attention. It

fall on the west of the Cordillera of the Andes, is calculated to cover an eighth part of the whole

which runs along its eastern side ; and on the sea coast the climate is intensely warm, but towards the interior it becomes milder and more salubrious. The wealth of the province greatly consists in the produce of the mines of Tarma, which are worked by proprietors in Lima; but agriculture is not neglected, and the new and more liberal institutions of South America are no where more highly appreciated.

LIMA (or in the Indian language Rimai), the capital of the above province, and of Peru, has also been called by way of eminence

Ciudad de los Reyes, or the City of Kings, and was founded by the celebrated Francisco Pizarro, in the beginning of the sixteenth century. It stands in the valley of Rimai and on the river of that name, both called after the name of an idol, who was here said to afford auricular responses to his votaries, the word Rimai signifying to speak. Over the river, which when not flooded is small, is an elegant stone bridge, having at one end a gate which forms an entrance into the city by the grand square. The form of the city is triangular ; the base, or longest side, extending along the banks of the river, being about 1920 toises, or exactly two-thirds of a league, in length. Its greatest breadth from north to south,

city. The usual number of its inmates is only however about 160. Other public buildings worthy of notice are the palace of the archbishop, the mint, the famous palace of the inquisition, and a noble establishment for retired secular clergymen, adjoining the church of San Pedro. The former college of the Jesuits is converted into a foundling hospital. On the right bank of the river a late v.ceroy laid out large sums in forming a public walk called the Paseo d'Agua ; at the termination of it the bull-ring is seen. Another object which strangers are directed to visit is the Pantheon, or burial place of a part of the city. It is surrounded and divided by walls with niches for the reception of the dead. The funeral service is performed in the church which adjoins.

Several years ago a municipal regulation was published to prevent the towers of the churches being constructed of any other materials than wood and painted canvas, in order to obviate the horrors which occurred during earthquakes : latterly they have been built of clay, which in time takes the hardness of stone. For the same reason the houses have rarely an upper story . when they have, an overhanging wooden balcony is attached to the windows : they are all con-

that is, from the bridge to the angle opposite to structed of unburnt bricks, with a court and

the base, is 1080 toises, or two-fifths of a league, garden in the rear. The walls of the court and

It is surrounded with a brick wall, flanked with gateway are covered with fresco paintings ; and

thirty-four bastions-, without platforms or embra-when there is a dead wall in front it ˆs often

sure; the intention of it being merely to er.close decorated in the same way. The rooms are

the city against any sudden attack of the Indians. It has, in its whole circumference, seven

gaudily adorned with gold and silver, and the floors are generally tiled; an estrada or long

gates and three posterns.ˆ ˆOn the other side of narrow sofa fills up' one side, before which is a

piece of carpet. The roofs of all the houses are perfectly flat, and are merely composed of lath and plaster.

Mr. Caldcleugh, who was here in 1818, supplies us with the following lively picture of the manner of the inhabitants : ' The nobility and higher orders of the clergy appeared to live in

the river is a suburb called St. Lazaro.

The pavement of the streets, which are all built at risht anp-les, is formed of small rounded stones washed down from the mountains, extremely fatiguing to walk over; all those in the direction of east and west have a small stream of water running down them. The suburb al-

luded to is inhabited by the less respectable part some 3tyle, and drove about in their caleches

richly gilt, and drawn by one horse at a foot pace. The streets were at all times full of monks, the whole number of whom in the city is computed at nearly 1100. They still preserve that custom of begging which, until a few years ago, distinguished the cloistered inhabitants of Europe, and proved so annoying to travellers. Latterly the viceroy, finding the army in want of recruits, threw every difficulty in the way of professing. The influence of religion is considerable ; one order, that of Buena Muerte, is distinguished by the black gown and large red cross on the left arm. As these friars have the peculiar privilege of attending persons in their last moments, they are mounted on mules, and are seen at all times galloping about the city and running a race with death. The convents for women consist of fourteen, with a rental of not less than 150,000 dollars. Independently of these are several establishments of Beatas (soeurs de la charite) and of Casas de Exercicio, where ladies, leaving their families, shut themselves up for two or three weeks at a time, in order to submit themselves to a stricter discipline in fasting and prayer than they can observe in their own houses.

‘ As a university has existed in Lima since the year 1551 (the most ancient consequently of the New World), as well as many other establishments for learning, besides many private schools ; and as, in addition to these reasons, the Spaniards sent to Lima were always of a better class and more educated than those who went to Buenos Ayres, Chile, and New Granada, literature has been by no means overlooked, and several works published in Lima have been much sought after. The opportunities of acquiring information in Lima are so numerous that the generality of men are well informed and polite.

‘ The ladies have also the full benefit of the Tarious nunneries and establishments for instruction, which abound in this capital. They are generally endowed with great beauty, and their figures boast that rich fulness of person which is the truest symptom of health in a warm country. They have very small feet and ancles, and no means are resorted to to produce this effect. Their persons are shown to great advantage in the usual walking-dress, the saya and manto. The former is composed of an elastic silk petticoat, like a stocking, which is drawn over the head down to the ancles, and then fastened round the waist with a buckle; — this is the saya. It is usually worn of a deep blue, black, or cinnamon color. Its elasticity makes it sit perfectly tight, showing the contour of the person; and some ladies wear it so

contracted at the ancles that they can scarcely step over the little streams which run down the streets. The manto is formed of a large square piece of black silk, which is first placed be-hind, and two strings attached to the corners are tied in front, it is then brought over the back of the head down to the waist, and held there by the arms, which are enveloped in it. One eye is alone visible, and generally the left. It appears at first impossible toˆrecognise one's acquaintance in the streets in this costume, but custom soon overcomes the difficulty. This is the walking dress of all the respectable persons, indeed of every class above the menial slaves, and they

may be seen occasionally with an old saya tha does not fit them, which belonged to their mistress. An Englishman, who arrived at Lima during my stay thent, observed a remarkably fine figure in the street, and determined to find out her abode. He followed her down several streets, and as she entered her house she threw back her manto, and to his great regret he discovered a black face. I am informed that the ladies wear during the warm months, under ,the saya and manto, merely a shift finely ornamented with lace, and a neckerchief. The ladies, when concealed in this dress, are termed tapadas, and the appearance of so many in the streets is not a little extraordinary.

' In the house the costume partakes more of the ordinary fashion of Spain than of France. The hair is ornamented with flowers, and a black veil is thrown back on the head. The manners of the ladies are extremely agreeable, and they are as kind and attentive to foreigners as the Spanish women every where show themselves. In their persons they are extremely cleanly, taking the cold bath several times a day, although it must be stated that they smoke a little, and occasionally take snuff. They get rid of the unpleasantness which attends the former operation by chewing paper. It is not unusual for them to smoke a litile at the theatre, but they always choose small cigars, and, placing their fan before them, retire to the back of the box. This custom may be therefore considered on the wane. It proceeds in a great measure from the almost constant fogs which prevail in Lima, and from an idea, not without foundation, that it prevents stomach attacks. The habits of the people have generally a tropical turn in every thing. Dances are not so common as in Chile, nor any of those games so prevalent in that country. Cards, chess, and music, which require little exertion, and sitting tranquilly at the bull ring, are the more usual enjoyments of Lima. The people of rank rise early, and their slaves bring them directly a light breakfast of chocolate and fruit ; sometimes, it must be confessed, stewed meat is added. Dinner takes

place about two o'clock, and consists of excellent fish, meat dressed in a variety of ways, and highly seasoned. The wine is either Peruvian orErropean. The siesta follows until six o'clock, and about nine o'clock a cup of chocolate forms their supper. At evening parties, which are of constant occurrence, punch is the more usual beverage.' Before the earthquake in 1687, when this city suffered so dreadfully, the harvests of wheat and barley were sufficient to supply the country around without importation ; but by this convulsion of nature the soil was so vitiated, that the wheat rotted soon after it was sown, occasioned it is supposed by the vast clouds of sulphureous particles exhaled, and the prodigious quantities of nitrous effluvia diffused through it. The land continued forty years in this state of sterility, when the husbandmen began to perceive an alteration, and upon trial, wheat was now found to thrive as before. The olive plantations appear like forests ; the height, magnitude, and fulness of their leaves exceed those of Spain. The grapes are of various kinds, and among them one, called the Italian, is very delicious. *

The bread at Lima is said to be the best in all this part of America. Mutton is the most com-mon and palatable meat, though the beef also is good. Here is also plenty of poultry, partridges, turtle-doves, &c. ; and pork is in great abundance. Of fish there is a great variety daily brought from the neighbouring parts. Most of the dried fruits are brought from Chili. Among the most noted of the manufactures to be met with here are articles of silver filagree of exquisite workmanship, which are chiefly made in Huamanga, consisting of animals, and devices for burning pastilles, holding fruit, &c. The workmen are of a mixed race, like the greater proportion of those exercising handicrafts in the city.

Another noted fabric of this place and neighbourhood is that of a species of grass, bleached and plaited into various articles, such as

pouches and cigar cases, of extreme regularity and fine-IIPSS. Hats of the same material, but coarser, are exported in large quantities. The raw material grows on the coast to the northward in profusion. The pastilles of Lima are also very celebrated and much used to drive away insects. But, whether the latter have become accustomed to them I know not, says the traveller we have already quoted : these insects may be considered the only plagues of this part of the world. The mosquito is not so troublesome as in other warm countries, but fleas of more than usual size and activity try the tempers, not only of foreigners but of the natives, who make war upon them in every way. I never saw such numbers of these disgusting and annoying insects in any other place; they swarmed like flies on the sea beach. The other entomological production incident to beds (to use the expression of the worthy doctors Hoppe and Hornschuch in their erudite travels), it must be confessed is far too numerous. Dr. Unanue asserted that insects were not more common in Lima than in the large cities of Europe, and that in Paris alone there were upwards of seventy species of cimex ; but after making every allowance for climate and want of rain, I was obliged to give him credit for a large stock of the 'amor patriae.' The earthquakes to which this country is so subject, have more than once involved Lima in almost total ruin. The first concussion, after the establishment of the Spaniards in these parts, happened in 1 582, a few years after its foundation and was chiefly felt at Arequipa. One on the 9th of July, 1586, is solemnly commemorated. In 1609 was another. On the 27th of November 1630 such prodigious damage was done that it is noted by a festival annually. In 1655, on the 3d of November, the inhabitants fled into the country, and remained there several days, to avoid the threatening danger. On the 17th of June 1678 another earthquake happened, by which several houses were destroyed, and the churches much damaged : but one of the most dreadful of which we have any account was that of the 20th of October 1687. During this concussion the sea retired considerably from its bounds, and, returning in immense waves, totally overwhelmed Callao, and the neighbouring parts. Others happened on the 29th of September 1697;

on the 14lh of July 1699; the 6th of February 1716 ; on the 8th of January 1725 ; and on the 2d of December 1732 ; in the years 1690, 1734, and 1745. These, however, were less terrible than one on the 28th of October 1746. In little more than three minutes the greatest part, if not ail the buildings, great and small, in the whole city, were destroyed on this occasion, burying under their ruins those inhabitants who had not made sufficient haste into the streets and squares.

European goods in greatest request in Lima, and Peru, are silk, superfine cloth, lace, and fine linen. There is also a considerable demand for ordinary linen, and for all the inferior cloths and woollens, cutlery, and hardware. The inhabitants amount to about 70,000. See AMERICA, SOUTH. Lima is about two leagues from the sea-coast, and thirty from the Cordilleras.

LIMASSOL, or LIMISSO, a town of Cyprus, in the south of the island. Of the ancient city nothing but ruins remain, though it was a celebrated place, even under the government of the dukes. King Richard I., the conqueror of the last of these vassals of the empire, raised it in 1191, and it was never rebuilt. It was the ancient Amathus, or Amathonte ; famous, as Pausanias tells us, for its temple of Venus and Adonis ; and was the residence of the first nine kings of Cyprus. It was erected into an archbishopric in the time of the Christians, and has produced a number of personages celebrated* for their learning and sanctity. Near it are copper mines, which the Turks have been forced to abandon.

Ovid takes notice of its metals in the Metamorphoses, lib. X. ver. 220 and 531 : where he styles it ‘ faecundam, gravidamque Ama-thunta metallis ;’ and where he relates the metamorphosis of its inhabitants into wild bulls, on account of their ferocious barbarity in sacrificing all strangers to Jupiter. (Fab. vi.) The place where Limassol stands had also formerly had the name of Nemosia, from the many woods which surrounded it. Richard I. king of England, having destroyed Amathonte, Guy de Lusignan in the twelfth century laid the foundations of a new city, which the Greeks called Neopoleos. The family of Lusignan, which continued to embellish and fortify it, built palaces, and Greek and Latin churches; and made it the seat of a bishop. When Cyprus was taken by the Turks, in July 1570, they plundered and burnt this city. The harbour is commodious, and, being sheltered from impetuous winds, affords a safe asylum to vessels overtaken by a storm. The best Cyprus wine is made from the vines on the hills of Limassol.

LIMAX, the slug, or naked snail, a genus of insects belonging to the order of vermes mollusca. The body is oblong, fitted for crawling, with a kind of muscular coat on the upper part ; and the belly is plain. They have four tentacula, or horns, situated above the mouth, which they ex-tend or retract at pleasure. This reptile is always destitute of shell ; but besides that its skin is more clammy, and of a greater consistency than that of the snail, the black naked slug has a furrowed cloak, almost as thick and as hard as leather, un-der which it withdraws its head as within a shell.

The head is distinguished from the breast by a black line. In its head and back the snail-stone is found ; which is a small pearled and sandy stone, of the nature of limestones : according to a popular opinion, it cures the tertian ague, if fastened to the patient's arm. These slugs move on slowly, leaving every where clammy and shining marks of their passage. They come together about the end of spring. They deposit their eggs in the earth. There are eight species, distinguished entirely by their color; as the black, the white, the reddish, the ash-colored slug, &c. The black slug is hermaphrodite. A black slug powdered over with snuff, salt, or sugar, falls into convulsions, casts forth all its foam, and dies.

LIMB, n.s. & v. a. 3 Sax. lira ; Scott. Urn,

LIMBED, adj. 3 lem ; Swed. and Belg.

lem. A member ; a jointed or articulated part

of animals : to supply with limbs ; and, strangely

enough, to tear them off, or to dismember

A second Hector, for his grim aspect, And large proportion of his strong knit limbt.

Shakspeare, O ! that I had hen here, to tear her limb meal ?

Id.

Now am I come each limb to survey, If thy appearance answer loud report.

Milton'* Agonistes. As they please,

They limb themselves, ana colour, shape, and size Assume, as likes them best, condense, or rare.

Milton.

A steer of five years age, large limbed, and fed, To Jove's high altars Agamemnon led.

Pope's Iliad. Chill horror the dissolving limbs invades ;

Smit by the blasting lightning of his eyes,- A bloated paleness beauty's bloom o'erspreads, Fades every flowery field, and every verdure dies.

Beattie.

' Bring forth the horse !' — the horse was brought; In truth he was a noble steed, A Tartar of the Ukraine breed, A' ho looked as though the speed of thought Were in his limbs. Byron.

LIMB, n. s. Fr. limbe ; Lat. limbus. An edge; a border; a philosophical term.

By moving the prisms about, the colours again emerged out of the whiteness, the violet and the blue at its inward limb, and at its outward *in*6 the red and yellow. Nf irton.

LIM'BECK, 7i. s. Corruption of ALEMBIC, which see. A still.

Her cheeks, on which this streaming nectar fell, Stilled through the limbeck of her diamond eyes.

Fairfax.

Fires of Spain, and the line, \Yhose countries limbecks to our bodies be, Canst thou for gain bear? Donne.

The earth, by secret conveyances, lets in the sea, and sends it back fresh, her bowels serving for a limbeck. Howel.

Call up, unbound,

In various shapes, old Proteus from the sea, Drained through a limbeck to his naked form.

Milton.

He first surveyed the charge with careful eyes, Yet judged, like

vapours that from limbecks rise, It would in richer showers descend again.

Dry den. VOL. XII.

The warm limbsrk dr”ws Salubrious waters from t!ic uoum; brood.

1’hilipt.

LIM’BEll, adj. From limb. Flexible ; easily bent or twisted.

You put me ofT with limber vows. Sliaksjxare. At once came fortlv whatever creeps the ground, Insect, or worm ; those waved their limber fans For wings; and smallest lineaments exact In all the liveries decked of summer’s pride.

Milton.

She durst never stand at the bay, having nothing hut her long soit Umber eais to defend her.

Mure on Atheism.

The muscles were strong on both sides of the as-pera arteria, but on the under side, opposite to that of the oesophagus, very limber. Kati on Creation.

1 wonder how, among these jealousies of court and state. Edward Atheling could subsist, being the indubitate heir of the Saxon line : but he had tried, and found him a prince of limber virtues ; so as though he might have some place in his caution, yet he reckoned him beneath his fear. Wotton.

LIM’BO, n. s. Ital. limbo ; Lat. limbus. Eo quod sit limbus inferorum. Du Cange. According to the Romish writers, a region bordering upon hell, hi which there is neither pleasure nor pain. Popularly hell ; and hence any place of restraint or misery.

Oh, what a sympathy of woe is this! As far from help as limbo is from bliss.

Shakspeare.

All these up-whirled aloft Fly o’er the backside of the world far off, Into a limbo large, and broad, since called The paradise of fools.

Milton'* Paradise Lett. For he no sooner was at large, But Trulla straight brought on the charge ; And in the self-same limbo put The knight and squire, where he was shut.

Hudibrai.

Friar, thou art come off thyself, but poor I am left in limbo. Dryden's Spanish Fryar.

LIMBORCH (Philip), a learned writer among the Remonstrants, born at Amsterdam in 1633. After having made great proficiency in his studies, he was, in 1655, licensed to preach, which he did first at Haerlem. He was chosen minister of Goudja, whence he was called to Amsterdam, and appointed professor of divinity, in which - office he acquired great reputation. He had great talents, and a tenacious memory ; and corresponded with the most eminent men of his age. His letters to Mr. Locke are printed with those of that celebrated author. He preserved his vigor of body and mind till he died, in 1712, aged seventy-nine. He wrote many works, th« principal of which are, 1. Arnica collatio de veritate religionis Christiana cum erudito Judaeo, in 12mo. 2. A complete body of Divinity, according to the opinions and doctrines of the Remonstrants. 3. A history of the Inquisition; translated into English by Dr. Samuel Chandler.

LIMBURG, a province of the Netherlands, bounded by Prussia, and the provinces of Liege, Antwerp, South and North Brabant. It has a territorial extent of 1500 square miles; and though a flat and marshy yet fruitful soil, which rears corn, flax, and tobacco in considerable quantities. Here is also very rich pasturage, and numerous herds of cattle. Its coal mines pro—

ducc annually about 150,000 tons ; and there are also mines of calamine and iron. The capital is Maestricht.

LIMBURO, a town of the Netherlands, in the province of Liege, and celebrated for its cheese, is seated on a steep rock near the Vesse, among shady wrods : it consists chiefly of one broad street. It was taken by the French in 1675, and by the confederates under the duke of Marlborough in 1702. It contains about 30,000 inhabitants, and lies eighteen miles south-east of Liege.

LIMBUS, in the church of Rome, is used in two different senses : 1. The limbus patrum, or limbus of the patriarchs, is said to be the place where the patriarchs waited for the redemption of mankind: in this place they suppose our Saviour's soul continued from the time of his death to his resurrection. 2. The limbus of infants dying without baptism is a place supposed to be distinct both from heaven and hell ; since, say the Catholics, children dying innocent of any actual sin do not deserve hell; and, by reason of their original sin, cannot be admitted into heaven.

LIME, w. s. Sax. hub ; Lat. tilia. The linden tree : also Fr. lime ; Span . lima ; a species of lemon.

For her the limes their pleasing shades deny,

For her the lilies hang their heads and die.

Pope.

Bear me, Pomona! to thy citron groves ! To where the lemon and the piercing lime, With the deep orange glowing through the green, Their lighter glories blend. Thomson's Summer.

LIME, n. s. & v. a.\ Sax. lime; Goth, lim ; LIME'KILN, n. 5. I Swed. lijm ; Lat. limus, LIME'STONE, V, slime. A viscous vege—

LIME'WATER, {table substance with

LI'MOUS, adj. 1 which twigs were smear—

LI'MY. r ed formerly to catch

birds ; a calx of stone, of which mortar is made : to lime, to smear or spread with lime ; to entangle ; entrap. The other words are explained in the extracts.

And the people shall be as the burnings of lime. Isaiah xxxiii. 12.

But for al this, whan that he seeth his time, He held his pees, non othir

bote him gained, For love began his fethers so to lime, That wel unneth unto his folke he fained That other besy nedis his distrained.

Chaucer. Troilus and Creseide. Laws are not made like lime-twigs or nets, to catch at every thing that toucheth them, but rather like sea-marks, to guide from shipwreck the ignorant passenger. Sir P. Sidney.

Stnving more, the more in laces strong

Himself he tied, and wrapt his wingcs twain

In limy snares, the subtil loops among.

Spenser.

You must lay lime, to tangle her desires, By wailful sonnets, whose composed rhimes Should be full fraught with serviceable vows.

Shakspeare.

The bird that hath been limed in a bush, \ ith trembling wings misdoubteth every bush And I, the hapless male to one sweet bird, Have now the fatal object in my eye, W here my poor young was limed, was caught, and killed. U,

I will not ruinate my father’s house,

Who gave his blood to lime the stones together,

And set up Lancaster. Id. Henry VI.

The counter gate is as hateful to me, as the reek of a limekiln. Id. Merry Wives of Windsor.

They were now, like sand without lime, ill bound together, especially as many as were English, who were at a gaze, looking strange one upon another, not knowing who was faithful to their side. Bacon Jollier of this state

Than are new-beneficed ministers, he throws,

Like nets or lime twigs, whereso’er he goes,

His title of barrister on every wench. Donne.

That country became a gained ground by the muddy and limous matter brought down by the Nilus, which settled by degrees unto a firm land.

Browne's Vulgar Errours.

Encouragement that abatement of interest gave to landlords and tenants, to improve by draining, marl-ing, and liming. Child.

Then toils for beasts, and lime for birds were found, And deep-mouthed dogs did forest walks surround.

Dryden.

A thrush was taken with a bush of lime twigs.

L' Estrange.

All sorts of pease love limed or marled land.

Mortimer.

Fire stone and lime stone, if broke small and laid on cold lands, must be of advantage. Id.

Lime is commonly made of chalk, or of any sort of stone that is not sandy, or very cold. Id.

A human skull covered with the skin, having been buried in some limy soil, was tanned, or turned into a kind of leather. Grew's Mutaxtm.

They were found in a limekiln, and having passed the fire, each is a little vitrified. Woodward.

They esteemed this natural melancholick acidity to be the limous or slimy foeculent part of the blood.

Flayer. Or court a wife, spread out his wily parts,

Like nets or lime twigs, for rich widows' hearts.

Pope.

As when a lofty pile is raised, We never hear the workmen praised, Who bring the lime, or place the stones, But all admire Inigo Jones. Swift.

Lime-water, made by pouring water upon quick lime, with some other ingredients to take off its ill flavour, is of great service internally in all cutaneous eruptions, and diseases of the lungs. Hill.

A knowledge of the first principles of chemistry will teach him when to use lime hot from the kiln, and when slacked. Purkes's Chemistry.

What is called poor lime has this peculiar property ; but as this species of limestone rarely occurs, it is often an expensive article. Id.

LIME. See CHEMISTRY and CALCIUM. The most important compounds of lime will be found noticed under the different acids, combustibles, &c. We shall therefore only now notice its use as a cement. There are two modes in which lime acts as a cement; in its combination with water, and in its combination with ' carbonic acid.

When quicklime is rapidly made into a paste with water it soon loses its softness, and the water and the lime form together a solid coherent mass, which consists of one part of water to three parts of lime. When hydrate of lime, whilst it is consolidating, is mixed with red oxide of iron, alumina, or silica, the mixture becomes harder and more coherent than when lime alone is used ; and it appears that this is owing1 to a

certain degree of chemical attraction between hydrate of lime and these bodies ; and they render it less liable to decompose by the action of the carbonic acid in the air, and less soluble in water.

The Basis of all cements that are used for works which are to be covered with water must be formed from hydrate of lime : and the lime made from impure limestones answers this purpose very well. Puzzolana is composed principally of silica, alumina, and oxide of iron; and it is used mixed with lime to form cements intended to be employed under water. Mr. Smeaton, in the construction of the Eddystone lighthouse, used a cement composed of equal parts by weight of slaked lime and puzzolana. Puzzolana is a decomposed lava. Tarras, which was formerly imported in considerable quantities from Holland, is a mere decomposed basalt; two parts of slaked lime and one part of tarras form the principal part of the mortar used in the great dykes of Holland. Substances which will answer all the ends of

puzzolana and tarras are abundant in the British Islands. An excellent red tarras may be procured in any quantities from the Giant's Causeway, in the north of Ireland; and decomposing basalt is abundant many parts of Scotland, and in the northern districts of England in which coal is found.

Parker's cement, and cements of the same kind made at the alum works of lord Dundas and lord Mulgrave, are mixtures of calcined ferruginous, siliceous, and aluminous matter, with hydrate of lime. See CEMENT.

The cements which act by combining with carbonic acid, or the common mortars, are made by mixing together slaked lime and sand. These mortars at first solidify as hydrates, and are slowly converted into carbonate of lime by the action of the carbonic aoid of the air. Mr. Tennant found that a mortar of this kind, in three years and a quarter, had regained sixty-three per cent, of the quantity of carbonic acid gas, which constitutes the definite proportion in carbonate, of lime. The rubbish of mortar from houses owes its power to benefit lands principally to the carbonate of lime it contains, and the sand in it ; and its state of cohesion renders it particularly fitted to improve clayey soils. The hardness of the mortar, ;in very old buildings, depends upon the perfect conversion of all its parts into carbonate of lime. The purest limestones are the best adapted for making this kind of mortar: the magnesian limestones make nxcellent water cements, but act with too little energy upon carbonic acid gas to make good common mortar.

The Romans, according to Pliny, made their best mortar a year before it was used ; so that it was partially combined with carbonic acid gas before it was employed.

In burning lime there are some particular precautions required for the different kinds of limestones. In general, one bushel of coal is sufficient to make four or five bushels of lime. The magnesian limestone requires less fuel than the common limestone. In all cases in which a limestone containing much aluminous or siliceous earth is burnt, great care should be taken to

prevent the fire from becoming too intense ; for such lime easily vitriries, in consequence of the affinity of lime for silica and alumina. And, aj in some places there are no other limestones than such as contain other earths, it is important to attend to this circumstance. A

moderately good lime may be made at a low red heat ; but it will melt into a glass at a white heat. In limekilns, for burning such lime, there should be always a damper.

In general, when limestones are not magnesian, their purity will be indicated by their loss of weight in burning ; the more they lose, the larger is the quantity of calcareous matter they contain. The magnesian limestones contain more carbonic acid than the common limestones; and all of them lose more than half their weight by calcination. See CHEMISTRY.

LIME, CHLORIDE OF, the more scientific and proper name of the bleaching powder of Mr. Tennant, commonly called oxymuriate of lime, see CHEMISTRY and CHLORINE. The following account of its manufacture and the methods of ascertaining its purity, from a paper communicated to the Journal of Science and the Arts by Dr. Ure' in 1823, may not be unacceptable to some of our readers. ' A great variety of apparatus,' says that writer, ' has been at different times contrived to assist the combination of chlorine with slacked lime, for the purposes of commerce. One of the most ingenious forms was that of a cylinder, with narrow wooden shelves within, and suspended on a hollow axis, by which the chlorine was admitted, and round which the barrel was made to revolve. By this means the lime-dust being exposed on the most extensive surface, was speedily impregnated with the gas to the requisite degree. But this is a costly refinement, inadmissible on the largest scale of British manufacture. The simplest and best construction for exposing the lime-powder to chlorine, is a large chamber of siliceous sandstone, eight or nine feet, having the joints of the masonry secured witha cement composed of pitch, rosin, and dry gypsum, in equal parts. A door is fitted into it at one end, which can be made air-tight by stripes of cloth and clay lute. A window in each side enables the operator to judge how the impregnation goes on by the color of the air, and also gives light for making the arrangements within at the commencement of the process. If a large valve be made in the roof, which together with the door may be opened by cords passing over a pulley, it will let off the vapors and supersede entirely the necessity of the workmen approaching the deleterious gas, when the apartment is to be opened. A great number of wooden shelves, eight or ten feet long, two feet broad, and one inch deep, are provided to receive the sifted slack lime, containing generally about two parts of lime to three of water. These shelves are piled one over another in the chamber, to the height of five or six feet, cross-bars below each keeping them about an inch asunder, that the gas may have free room to circulate over the surface of the calcareous hydrate.

‘ The alembics for generating the chlorine, which are usually nearly spherical, are in some cases made entirely of lead ; in others, of two he—

inispheres joined together in the middle, the upper hemisphere being lead, the under one cast iron. The first kind of alembic is enclosed for two-thirds from its bottom in a leaden or iron case, an interval of two inches left between the two to receive steam from an adjoining boiler. Those whose lower part consists of cast iron have their bottom directly exposed to a very gentle fire ; round the outer edge of the iron hemisphere a groove is cast, into which the under edge of the leaden hemisphere fits, the joint being rendered air-tight by Roman or patent cement. In this leaden dome there are four apertures. The first is about ten or twelve inches square, shut with an air-tight leaden valve, and is destined for the admission of a workman to rectify any derangement in the apparatus, or to detach hard concretions of salt from the bottom. The second aperture is in the centre of the top, and is secured by water lute. Here a tube of lead is fixed, which descends nearly to the bottom, and down which the vertical axis passes, to whose lower end the cross bars of iron, sheathed with lead, are attached, by whose revolution the materials receive the proper agitation for mixing the dense manganese with the sulphuric acid and salt. The motion is communicated either by the hand of a workman applied from time to time to a winch at top, or it is given by connecting the axis with wheel work, impelled by a stream of water, or a steam-engine. The third opening admits the syphon-formed funnel, through which the sulphuric acid is introduced and the fourth is the orifice of the eduction pipe,

Manufacturers differ much about the proportion of their materials for generating the chlorine. In general 10 cwt. of salt (muriate of soda), are mixed with 13 cwt. of manganese on which, after its introduction into the alembic, from 16 to 18 cwt. of sulphuric acid diluted to the specific gravity of about 1-65, are poured. But indeed this dilution is

seldom actually made, for the manufacturer of bleaching powder almost always prepares his own sulphuric acid for the purpose, and therefore carries its concentration no higher in the leaden boilers than the density of 1-65, which indicates one-fourth of its weight to be water. The fourth aperture admits the eduction pipe. This pipe is afterwards conveyed into a leaden chest, or cylinder, in which all the other deduction pipes also terminate. In this general diversorium the chlorine is washed from adhering muriatic acid, by passing through a little water, in which each tube is immersed, and from this the gas is led off by a pretty large leaden tube, into the combination room. It usually enters in the top of the ceiling, whence it diffuses its heavy gas equally around. Four days are required, at the ordinary rate of working, to make good marketable bleaching powder. A more rapid formation would produce muriate of lime, at the expense of the bleaching quality. But skilful manufacturers use here an alternating process. They pile up first of all the wooden trays only in alternate shelves in each column. At the end of two days the distillation is intermitted, and the chamber is laid open. After two hours the woikman enters to introduce the alternate trays covered »:i:h fresh hydrate of lime, and at the sarr. <? time rakes up thoroughly the

half-formed chloride in the others. The door •« then secured, and the chamber, after being filled for two days more with chlorine, is again opened, to allow the first set of trays to be removed, and to be replaced by others containing fresh as before. Thus the process is conducted in regular alternation; and very superior bleaching pow-der is manufactured, and thus the chlorine may be suffered to enter in a pretty uniform stream. But for this judicious plan, as the hydrate advances in impregnation, its faculty of absorption becoming diminished, it would be requisite to diminish proportionately the evolution of chlorine, or to allow the excess to escape, to the great loss of the proprietor. The manufacturer generally reckons on obtaining from one ton of rock-salt, employed as above, a ton and a half of good bleaching powder. But the following analysis of the operation will show, that he ought to obtain two tons.

Science has done only half her duty, when she describes the best apparatus and manipula-tions of a process. The maximum produce should be also demonstrated, in order to show the manufacturer the perfection which he should strive to reach with the minimum expense of time, labor, and materials. ‘For this end,’ says Dr. Ure, ‘ I instituted the following research : — I first examined fresh commercial specimens of bleaching powder ; 100 grains of these afforded from 20

to 28 grains of chlorine. This is the widest range of result, and it is undoubtedly considerable ; the first being to the second, as 100 to 71. The first yielded by saturation with muriatic acid, 82 grains of chloride of calc'in:-., equivalent to about 41 of lime ; it contained besides 26 per cent, of water, and a very Huh: common muriate ready formed. On heating such powder in a glass apparatus, it yielded at first a little chlorine, and then oxygen tolerably pure. The bulk of chlorine did not exceed one-tenth of the whole gaseous product.

‘ Sulphate of indigo, largely diluted with water, has been long used for estimating the bleaching powder of chloride of lime ; and it affords, no doubt, a good comparative test, though from the variableness of indigo it can form no absolute standard. Thus three parts of indigo, from the East Indies, have been found to saturate as much bleaching powder as four parts of good Spanish indigo.’

M. Welter's method is the following: — He prepared a solution of indigo in sulphuric acid, which he diluted, so that the indigo formed ˆ55 of the whole. He satisfied himself by experiments, that 14 litres (854-4 cubic inches, or 3-7 wine gallons English) of chlorine, which weigh 651 £ English grains, destroyed the color of 164 litres of the above blue solution. He properly observes, that chlorine discolors more or less of the tincture, according to the manner of proceeding ; that is, according as we pour the tincture on the aqueous chlorine, and as we operate at different times, with considerable intervals ; if the aqueous chlorine or chloride solution be concentrated, we have the minimum of disco-loiation; if it be very weak, the maximum. He says, that solution of indigo, containing about liˆs part, will give constant results to nearly ˆj, and to greater nicety still, if we dilute the chlo-L I M E R I C K.

rine solution, so tliat it snail amount to nearly one-half the volume of the tincture which it can discolor ; if we use the precaution to keep tiie solution of chlorine and the tincture in two separate vessels ; and, finally, to pour both together into a third vessel. We should, at the same time, make a trial on another sample of chlorine whose strength is known, in order to judge accurately of the hue. On the whole, he considers that fourteen measures of gaseous chlorine can discolor 164 measures of the above indigo solution, being a ratio of nearly one to twelve. The advantage of the very dilute tincture obviously consists in this, that the excess of water condenses the chlorine separated from combination by the sulphuric acid, and confines its whole efficacy to the liquor; whereas, from concentrated solutions, much of it escapes

intf> the atmosphere. ‘ Though,’ says Dr. Ure, ‘ I have made very numerous experiments with the indigo test, yet I never could obtain such consistency of result as M. Welter describes : when the blue ?olor begins to fade, a greenish hue appears, which graduates into brownish yellow by imperceptible shades. Hence an error of ˆ may readily be allowed, and even more, with ordinary observers.

WThen a mixture of sulphuric acid, common salt, and black oxide of manganese, are the ingredients used, as by the manufacturer of bleaching powde/, the absolute proportions are, 1 atom muriate of soda . . 7-5 29-70 100-0

1 atom peroxide of manganese 5-5 21-78 73‘3

2 atom oil of vitriol Ir846 12-25 48-52 163-3

25-25 lOO’OO

And the products ought to be Chlorine disengaged . 1 atom 4*5 17-82 Sulphate of soda 1 9‘0 35-64

Protosulphate of manganese 1 9‘5 37-62

Water 2 2-25 8-92

25-25 100-00

These proportions are, however, very different from those employed by many, nay, I believe, by all manufactures ; and they ought to be so, on account of the impurity of their oxide of manganese.

From the preceding computation, it is evident that 1 ton of salt with 1 ton of the above native oxide of manganese properly treated, would yield 0-59 of a ton of chlorine, which would impregnate 1-41 tons of slacked lime, producing 2 tons of bleaching powder, stronger than the average of the commercial specimens ; or allowing lor a little loss, which is unavoidable, would afford 2 tons of ordinary powder, with a little more slacked lime.

MM. Orlila, Leseure, Cercly, and Hennelle, having to examine the body of an individual who was supposed to have been poisoned, and

who had been dead nearly a month, found the smell so insupportable that they were induced to try the application of the chloride of lime, as recommended by M. Labarraque. A solution of this substance was frequently sprinkled over th> body, and produced quite awonderful effect; fo-scarcely had they made a few aspersions,

when the unpleasant odor was instantly dcsfjyod and the operation was proceeded ir," with comparative ease.

Since the above experiment, a commission was appointed by the prefect of the police in Paris to clear out offensive drains, in the execution of which much benefit to the protection of the workmens' health was derived from chloride of lime. M. Gaultier de Claubry, after stating that carbonic acid expels the chlorine from the chloride of lime, proposes, as the best and most durable means of disinfecting the air in hospitals moistening the chloride of lime in the apartments of the sick. The carbonic acid of die air will slowly and steadily evolve the chlorine without annoying the patients. This indeed is the only admissible plan of fumigating with chlorine where the rooms cannot be emptied.

LIMEUICK, a county in Ireland, in the province of Munster, having for its boundaries, on the north, the river Shannon ; on the north and east Tipperary county ; on the west the county of Kerry; and Cork county on the south. Its area contains 622,975 acres, or 970 squa.e miles, according to Dr. Beaufort ; and it extends fifty-one miles in length by thirty-two in breadth. It is divided into ten baronies, *viz.* Upper Connelloe, Lower Connelloe, Costlia, Coshma, Small county, Clanwilliam, Coonah, Kerry, Pobble-Brien, Owneybeg, besides the liberties of Kilmallock, and the county of the city of Limerick ; these baronies again are subdivided into 125 parishes. The population of the county, exclusive of *the county of the city,* is returned at 218,432 souls, and the number of habitations amounts to about 35,000. Its chief towns are Limerick, Kilmallock, Askeaton, Rathkeal, Adare, Newcastle, Hospital, Bruff, Kilfinan: the principal rivers are the Deel, the Maig, the Co-mogue (the two latter of which should be deepened and straightened), the Feale, the Gale, and the Blackwater, besides the noble river Shannon, which may rather be said to flow by the county The suiface of the county of Limerick is not much varied, being tolerably level, but sheltered on the south-east by a range of mountains called the Galteas, the highest of which is 2500 feet above the sea level. This chain of lofty and beautiful hills, which extends twenty-five miles in length, is composed of old red sandstone resting

on gray-wacke, or transition-slate, the surface on each side being limestone cf the latter formation. To the north of the Galteas lies the tract of land so celebrated for its fertility as to be known only by the appellation of the Golden Vein ; and on the banks of the Shannon lie the coreahs, or swamps, grass lands, rendered fertile by the annual deposits of rich manure derived from the inundations of the river Shannon; so that this county is proverbial for its fertility and agricultural capabilities. The non-flaming coal-field of Tipperary extends to Loghill in Limerick, and slates of an excellent quality are distant from this county only by the breadth of the river Shannon, being raised at Killaloe. The remains of antiquity here are very numerous, upwards of fifty monastic ruins being still traceable; of these Adare is particularly conspicuous for the romantic character of its beautiful though ruinod abbey

built about the year 1315. The ancient families of Limerick were the Fitzgeralds, O'Briens, O'Quins, Purcells, and O'Scanlans. In 1 709 the lord Southwell introduced a colony of industrious farmers from Germany, called Palatines, whose example was of important consequences to the native peasantry, and which continues its beneficial operation to the present time ; these were planted at Bruff, and under their auspices, and by their energies, the linen manufacture was prosecuted with much success. There are at present about 3000 acres of land, in this county, annually employed in growing flax. Hemp was also a staple here, and was sold in the Cork and Limerick markets for the sail-cloth manufactory, but this trade has considerably decayed from various causes. The fisheries also, once a source of great emolument to the county, have totally degenerated, and require both protection and excitation. The Irish government have not been neglectful of the statistical improvements, which this district chiefly called for ; a new line of road has been opened, at the public cost, from Cork to Limerick, under the advice and inspection of Mr. Griffith, and £45,000 is now granted for the execution of a railway from Limerick to Waterford, after the design of Mr. Nimms, between the cities of Dublin and Limerick.

LIMERICK, or Lough-Meath, a market-town, borough, and bishop's see of Ireland, seated on the Shannon, the metropolis of the above county as well as of the province of Munster. It is a county in itself, and is divided into the Irish and English town, the latter being built on an island of the Shannon called King's Island. It is ninety-four miles from Dublin; and was once the strongest fortress in the kingdom.

Its ancient name was Lunneach ; and after the arrival of the Danes in Ireland it was a place of considerable trade. It was plundered by Mahon, brother of Brien Borom, after the battle of Sul-choid, in 970 : Brien afterwards exacted from tiie Danes of this city 365 tons of wine as a tribute, which shows the extensive traffic carried on in that article. About A.D. 550 St. Mun-chin is said to have founded a bishopric and built a church here, which, however, was destroyed by the Danes on their taking the port in H53, and remained in ruins until their conversion in the tenth century. Donald O'Brien, about the time of the arrival of the English, founded and endowed the cathedral; and Donat O'Brien, bishop of Limerick, in the thirteenth century, contributed much to the opulence of the see. About the close of the twelfth century the bishopric of Innis-Cathay was united to that of Limerick.

Limerick was besieged by king William III. in 1690, but without being taken. On the 21st of September, 1691, it was invested by the English and Dutch, and surrendered on the 13th of ( )ctober, after losing many men ; but the garrison had very honorable terms, forming what have been called in history the articles of Limerick. At that period, it was reckoned the second city in Ireland, but has since lost its rank, in the rupid growth of Cork. Limerick is three miles in circumference; has markets on Wednesday and Saturday, and fairs on Easter Tuesday, 1st of July, 4th of August, and 12th of December.

Latterly a new quarter of the town has been erected by lord Pery between the Irish and English towns.

This city is governed by a mayor, sheriffs, recorder, aldermen, and burgesses. It had once the privilege of coinage ; and different parliaments have been held jn it. It was formerly walled, and in 1760 there were seventeen of the gates standing. Since its fortifications have been dismantled, however, a number of handsome streets and convenient quays have added to its respectability. Linen, woollen, and paper manufactures are carried on here to great extent, and the export of provisions is considerable. Besides the ancient cathedral and

churches it has a modern episcopal palace at the west end of the city ; Methodist, Presbyterian, and Quaker places of worship ; and eight chapels for the Catholics. There is also an extensive barrack ; and it has a military governor, constable, and town major. A charter was granted to it by king John, and confirmed in succeeding reigns. Limerick obtained the privilege of having mayors ten years before that right was allowed to the citizens of London. Its first provost was John Stafford, in 1195 and 1 197; and, during the provostship of Henry Troy, a charter was granted by Richard I., whereby the citizens were allowed to choose mayors and bailiffs, Adam Servant, in 1 198 being the first mayor. It continued to be thus governed, until the office of bailiff was changed to that of sheriff, in 1609. Limerick is fifty miles north of Cork and ninety-four south-west of Dublin. The country around is fertile and pleasant.

LIMESTONE, in mineralogy, a species of minerals, divided by professor Jameson into twelve sub-species.

1 . Foliated limestone. — Color white, of various shades ; sometimes it is spotted. Massive, and in distinct angulo-granular concretions. Lustre glistening, between pearly and vitreous. Fracture foliated. Translucent. Hard as calcareous spar. Briule. Specific gravity, Carrara marble 2-717 It "• '.^i'dtly phosphoresces when pounded, or when thrown on glowing coals. Infusible. Effervesces with acids. It is a pure carbonate of lime. It occurs in beds in granite, gneiss, &c., and rarely in secondary rocks. It is found in all the great ranges of primitive rocks in Europe. Parian marble, Pentelic marble, the Marmo Greco, the white marble of Luni, of Carrara, and of Mount Hymettus, the translucent white marble of statuaries, and flexible white marble, are the chief of the white marbles which the ancients used for sculpture and architecture. The red antique marble, Rosso antico of the Italians, and Egyptian of the ancients ; the Verdo antico, an indeterminate mixture of white marble and green serpentine ; yellow antique marble ; the antique Cipolin marble, marked with green-colored zones, caused by talc or chlorite ; and African breccia marble, are the principal colored marbles of the ancients. The Scottish marbles are the red and white Tiree, the former of which contains hornblende, sahlite, mica, and green earth ; the lona marble, harder than most others, consisting of limestone and tremolite, or occasionally a dolomite; the Skye marble ; the Assynt in Sutherland, intro-LIMESTONE.

duced into commerce by Mr. Joplin of Gates-head. It is white and gray of various shades. The Glentilt marble; the Balachulish; the Boyne ; the Blairgowrie ; and the Glenavon. Hitherto but few marbles of granular foliated limestone have been quarried in England. The Mona marble is not unlike Verde antico. The black marbles of Ireland, now so generally used by architects, are Lucullites. The Toreen, in the county of Waterford, is a fine variegated sort; and a gray marble, beautifully clouded with white, has been found near Kilcrump, in the same county. At Loughlougher, in Tipperarj, a fine purple marble is found. The county of Kerry affords several variegated marbles. Of the continental marbles a good account is given by professor Jameson, Mineralogy, vol. ii. p. 502.

2. Compact limestone. — Common compact limestone has usually a gray color, with colored delineations. Massive, corroded, and in various extraneous shapes. Dull. Fracture fine splintery. Translucent on the edges. Softer than the preceding sub-species. Easily frangible. Streak grayish-white. Specific gravity 2‘6 to 2‘7. It effervesces with acids, and burns into quicklime. It is a carbonate of lime, with variable and generally minute proportions of silica, alumina, iron, magnesia, and manganese. It occurs principally in secondary formations, along with •sandstone, gypsum, and coal. Many animal petrifactions, and some vegetable, are found in it. It is rich in ores of lead and zinc ; the English mines of the former metal being situated in limestone. When it is so hard as to take a polish, it is worked as a marble, under the name of shell, or lumaccella marble. It abounds in the sandstone and coal formations, both in Scotland and England ; and in Ireland it is a very abundant mineral in all the districts where clay-slate and red sandstone occur. The Florentine marble, or ruin marble, is a compact limestone. Its constituents are, lime 58, carbonic acid 28-5, water somewhat ammoniacal 11, magnesia 0-5, oxide of iron 0‘25, carbon 0-25, and silica 1-25. Klaproth.

3. CHALK, which see.

4. Agaric mineral, or rock-milk. Color white. In crusts or tuberose pieces. Dull. Composed of fine dusty particles. Soils strongly. Feels meagre. Adheres slightly to the tongue. Light, almost supernatant. It dissolves in muriatic acid with effervescence, being a pure carbonate of lime. It is found on the north side of Oxford, between the Isis and the Cherwell, and near Chipping Norton ; as also in the fissures of limestone caves on the Continent. It is formed by the attrition of water on limestone rocks

5. Limestone fibrous. Color white of various shades. Massive and in distinct fibrous concretions. Lustre glistening and pearly ; fragments splintery ; feebly translucent ; as hard as calcareous spar ; easily frangible ; specific gravity 2‘7. Its constituents are, lime 50‘8, carbonic acid 47-6. Stromeyer says it contains some per cents of gypsum. It occurs in thin layers in clay-slate at Aldstone-moor in Cumberland : in layers and veins in the middle district of Scotland, as in Fifeshire. It is sometimes cut into necklaces, fcc.

6. Tufaceoui limeitone. Color gray. Massive, and in imitative shapes, enclosing leaves, bones, shells, &c. Dull Fracture fine grained, uneven. Opaque. Soft. Feels rough. Brittle. It is pure carbonate of lime. It occurs in beds, generally in the neighbourhood of rivers; near Starly-burn in Fifeshire, and other places. Used for lime.

7. Sub-species. Pisiform limestone, or pea-stone. Color yellowish-white. Massive, and in distinct concretions, which are round granular, composed of others which are very thin and concentric lamellar. In the centre there is a bubble of air, a grain of sand, or of some mineral matter. Dull. Fracture even. Opaque. Soft. Brittle. Specific gravity 2-532. It is carbonate of lime. It is found in great masses in the vicinity of Carslbad in Bohemia.

8. Sub-species. Slate spar. Schieferspath. Color white of various shades. Massive, and in distinct curved lamellar concretions. Lustre glistening and pearly. Feebly translucent. Soft ; between sectile and brittle. Feels rather greasy. Specific gravity 2-63. Its constituents are, carbonate of lime, with three per cent, of oxide of manganese. It occurs in primitive limestone, in metalliferous beds, and in veins. It is found in Glentilt; in Assynt; in Cornwall; and near Granard in Ireland.

9. APHRITE, which see.

10. Lucullite. Color grayish-black. Massive. Glimmering. Fracture fine grained, uneven. Opaque. Semihard. Streak, dark ash-gray. Brittle. Specific gravity 3. When two pieces are rubbed together a fetid urinous odor is exhaled, which is increased by breathing on them. It burns white, but forms a black-colored mass with sulphuric acid. Its constituents are, lime 53-38, carbonic acid 41-5, carbon 0‘75, magnesia and oxide of manganese 0-12, oxide of iron 0-25, silica 1-13, sulphur 0-25, muriates and sulphates of potassa with -water 2-62. — John. It is said to occur in beds in primitive and older secondary rocks. Hills of this mineral occur in the district of Assynt in

Sutherland. Varieties of it are met with in Derbyshire, at Kilkenny, and in the coun ties of Cork and Galway. The consul Lucullus admired it so much as to give it his name. It is the Nero antico of the Italians. Two varieties of this are,

Prismatic lucullite. Colors blackj gray, and brown. Massive, in balls, and in distinct concretions. External surface sometimes streaked. Internal lustre shining. Cleavage threefold. Translucent on the edges. Semihard. Streak gray colored. Brittle. When rubbed it em its a strong fetid urinous smell. Specific gravity 2-67. When its powder is boiled in water, it gives out a transient hepatic odor. The water becomes slightly alkaline. It dissolves with effervescence in muriatic acid, leaving a charcoaly residuum. Its constituents resemble those of the preceding. It occurs in balls, in brown dolomite, at Building Ilil!. near Sunderland. It was at one time called madreporite.

. fo/ta.t J or spairy lucullite. Colors white, gray, and bhck. Masnw lisseminated and crystallised in acute six-sided pyramids. Internal lustre climmcring. Fragments rhomboidal. Tn\n»lu-

cent. Semihard. Brittle. Emits on friction a urinous smell. Specific gravity 2-65. In other respects similar to the preceding. It is found in veins at Andreas'ourg in the Hartz.

11. Marl; of which there are two kinds, earthy and compact. Earthy marl has a gray color, consists of fine dusty particles, feebly cohering; dull; soils slightly; is light; effervesces with acids; and emits a urinous smell when first dug up. Its constituents are, carbonate of lime, with a little alumina, silica, and bitumen. It occurs in beds' in the secondary limestone and gypsum formations in Thuringia and Mansfeld. Compact marl has a gray color; is massive, vesicular, or in flattened balls ; contains petrifactions ; dull ; fracture earthy, but in the great

slaty ; yields to the nail ; opaque ; streak grayish-white ; brittle ; feels meagre; specific gravity 2-4. It intumesces before the blowpipe, and melts into a greenish-black slag. It effervesces with acids. Its constituents are, carbonate of lime 50, silica 12, alumina 32, iron and oxide of manganese 2. — Kirwan. It occurs in beds in the secondary floetz limestone. It is frequent in the coal formations of Scotland and England.

12. Bituminous piarl-slate. — Color grayish-black. Massive and frequently with impressions of fishes and plants. Lustre glistening. Fracture slaty. Opaque. Shining streak. Soft. Sectile. Frangible. Specific gravity 2-66. It is said to be carbonate of lirne, with albumen, iron, and bitumen. It occurs in rlcetz limestone. It frequently contains cupreous minerals, petri-fied fishes, and fossil remains of cryptogamous plants. It abounds in the Hartzgebirge.

LIM'IT, n. s. & v. a.~\ Fr. limiti, limit er ; LIM'ITARY, adj. f Latin limito. Boun-LIMITA'TION, n. s. £dary; border; utmost LIM'ITOUR, n. s. j reach or extent ; to confine or restrict within certain bounds : limitary is used by Milton for belonging to, or guarding, certain bounds : limitation is the act or state of restriction or confinement : limitour, a friar licensed to beg within certain limits.

The whole limit of the mountain round about shall be most holy. Exod. xhii. 12.

They tempted God, and limited the Holy One of Israel. Psalms.

Ther walketh now the limitour himself In undermeles and in morweninges, And sayth his matines and his holy thingis, As he goeth in his limitatioun.

Chaucer. Cant. Tales.

Limitation of each creature, is both the perfection and tlie preservation thereof. Hooker.

Thanks I must you con, that you Are thieves profest ; for there is boundless theft In limited professions.

Shakspeare. Timon of Athens. Am I yourself, But, as it were, in sort of limitation 1

Shaktpeare. Covetousness and ambition know no limits.

BD. Hall.

Then, when I am thy captive, talk of chains, Proud limitary cherub ! Milton's Paradise Imt.

'!' <) kill the body is, as our Lord himself taught, 'he utmost limit of all human power and malice, tiit; snost aud worst that raan can do. Barrow.

We went, great emperor ! by thy command,

To view the utmost limits of the land :

E'en to the place where no more world is found,

But foaming billows beating on the ground.

Dry den.

I despair, how this limitation of Adam's empire to his line and posterity, will help us to one heir. This limitation, indeed, of our author, will save those the labour, who would look for him amongst the race of brutes ; but will very little contribute to the discovery amongst men. Locke.

If a king come in by conquest, he is no longer a limited monarch ; if he afterwards consent to limitations, he becomes immediately king de jure.

Swift.

How our hearts burnt within us at the scene, Whence this brave bound o'er limits fixed to man ! His God sustains him in his final hour ! His final hour brings glory to his God ! Man's glory heaven vouchsafes to call her own.

Young.

With what limitation* this universality is to be understood, who shall inform us 1 Johnson.

We are limited in our enquiry by the strict laws to which we have submitted at our setting out.

Burke on the Sublime.

Now to this view of the matter I have no other objection than this —

that the British constitution is a limited monarchy ; that a limited monarchy is, in the nature of things, a mixed government ; but that such a House of commons as the radical reformer requires would, in effect, constitute a pure democracy, which, it appears to me, would be inconsistent with any monarchy, and unsusceptible of any /imitation. Canning.

LIMM'ER, n. s. Fr. limler. A bloodhound. There ovirtoke I a grete rout

Of huntirs and of foresters,

And many relaies and limers,

That hied them to the forest fast,

And I with hem. Chaucer's Dream.

LIMN, v. a.) Fr. enluminer, of Lat. lumino.

LIMN'ER, n. s. V To adorn ; paint ; take a likeness : the limner is the painter.

Mine eye doth his effigies witness,

Most truly limned, and living in your face.

Shakspeare.

Emblems limned in lively colours. Peacham.

Like as some skilful artizan, some exquisite limner, or carver, when he hath made a masterpiece of his art, he doth not hide it up in some dark corner, where it may not be seen. Bp. Hall.

Poets are limners of another kind,

To copy out ideas in the mind ;

Words are the paint by which their thoughts are shown,

And nature is their object to be diawn.

Granville.

How are the glories of the field spun, and by what pencil are they limned in their unaffected bravery?

Id.

LIMNING, the art of painting in water-colors, in contradistinction to painting which is done in oil colors. Limning is the most ancient kind of painting. Till John Van Eick found out the art of painting in oil, the painters all painted in water and in fresco. See EICK, When they used boards, they usually glued a fine linen cloth over them, to prevent their opening ; then laid on a ground of white; and lastly mixed up their colors with water and size, or with water and yolks of eggs, well beaten with the branches of a fig-tree, the juice whereof thus

mixed with the sggs; and with this mixture they painted their pieces. In limning all colors are proper, except the white made of lime, which is only used in fresco. The azure and ultramarine must always be mixed with size or gum ; but there are always applied two layers of hot size before the size-colors are laid on : the colors are ;ill ground in water each by itself; and, as they are required in working, are diluted with size-water. When the piece is finished, go over it with the white of an egg well beaten; and with varnish if required.

LIMOGES AUGUSTORITUM, a large and ancient city of France, the chief place of the arrondissement of Limoges, in the department of the Upper Vienne; which formerly constituted part of the province of Limousin. It contains a royal court for the departments of Upper Vienne, La Corrige, and La Creuse, a tribunal of justice for petty causes, boards of trade and manufactures, a royal college, a university academy, lectures on anatomy and midwifery, an agricultural society, ;i society for arts and sciences, and a mint. It i.« a bishopric and a post town, with 25,000 inhabitants.

This place is situated in an amphitheatre on the top and side of a hill, at the foot of which flows the Vienne, waterfng a delightful valley,

covered with meadows and bordered with picturesque uplands. It is for the most part badly built; the streets are narrow, crooked, and steep, but they are clean, and washed by the waters of a fountain, brought from a distance by means of an aqueduct. The higher part of the town is surrounded by long boulevards, agreeably planted, and has several spacious squares and fine walks. The air is fresh and pure.

Julius Cfesar speaks of Limoges, in his commentaries, as a place of considerable importance, inhabited by the Lemovices. In the fifth century it was invaded by the Visigoths ; in 1360 it was ceded to England, and reunited to the French crown, nine years afterwards, in the reign of Charles V. It was the native place of D'Agues-seau, of marshal Jourdan, and of Vergniaud, an eloquent lawyer and member of the legislative assembly and the convention, who was beheaded at Paris on the; 1st of October 1793, when he was only thirty-one years old. There are here extensive manufactories of porcelain and crucibles, cloth, kerseymeres, druggets, sheep-skins, flannel, glue, wax-candles, wooden shoes, and horse-shoe nails; so.ne hydraulic machines for the spinning of cotton and wool, fine paper-T.iills, brass foundries, potteries, and delf factories. It is the great mart for Toulouse and the southern departments, and carries on a trade in corn, chestnuts, wines, brandy, liqueurs, iron, copper, and brass. The races here are resorted to by the people of thirty-two departments. The buildings most worthy of notice are, the public library, containing 11,000 volumes; the museum of natural history, mechanics, arts, and antiquities; /he cathedral ; the bishop's palace ; the fountain of Aigoulene; and the public squares and promenades. Limoges is situated 2'H miles south of Paris, fifty -seven south-east of Poictiers, and seventy-two east by north of Anˆoulcme.

LIMOUSIN, or LIMOSIN, a considerable pro-

vince of the interior of France, forming the departments of the Upper Vienne and the Cor-reze. It is divided into two parts, Upper and Lower Limousin. The former is hilly, and contains mines of copper, lead, tin, and iron, the Lower Limousin is fertile, and highly beautiful in its scenery. The whole extends seventy miles in length, and in breadth about sixty.

LIMOUX, a trading town of France, in the department of the Aude, situated on the river Aude. Its traffic is in the hardware manufactured, and in the white wine raised in the neighbourhood. Some woollens, leather, and soap, are also made here : fifteen miles south-west of

Carcassonne. Population 5200.

LIMP, adj. Sax. lempe; Teut. limp; Ital. limpio. Limber ; pliant ; weak. Obsolete.

The chub eats waterish, and the flesh of him is not firm, limp, and tasteless. Walton'* Angler.

LIMP, v.n. Sax. lempan. To halt; walk lamely.

An old poor man,

Who after me hath many a weary step Limped in pure love. Sfraktpeare. A* Yen Like It

Son of sixteen,

Pluck the lined crutch from thy old limping sire.

9haks) > eaic.

When Plutus, with his riches, is sent from Jupiter, he limps and goes slowly ; but when he is sent by Pluto he runs, and is swift of foot. Bacon.

Limping death, lashed on by fate, Comes up to shorten half our date. Dryden.

Can syllogism set things right ? No : majors soon with minors fight : Or both in friendly concert joined, The consequence limps false behind. Prior. He with the mitred head, and cloven heel : — Doomed the coarse edge of Hewbell's jest to feel ; To stand the playful buffet, and to hear The frequent ink-stand whizzing past his ear ; While all the five directors laugh to see The limping priest so deft at his new ministry.

Canning.

LIM'PID, adj. Fr. limpide ; Lat. limpidut. Clear; pure; transparent.

The springs which were clear, fresh, and limpid, become thick and turbid, and impregnated with sulphur as long as the earthquake lasts. l'wdu-ard.

The brook that purls along The vocal grove, now fretting o'er a rock, Gently diffused into a limpid plain.

Thomson's Summer. Thou foundest me, like the morning sun

That melts the fogs in limpid air ; The friendless bard, and rustic song,

Became alike thy fostering care. Bum*. By cautiously continuing to add the pure ammonia, this oxide will again be dissolved, and the whole be-come a limpid colourless solution.

Parket's Chemical Cateehitm.

LIN, v. n. Sax. abhnnan, alinnan. To yield ; relinquish.

Unto his foe he came, Resolved in mind all suddenly to win. Or soon to lose before he once would /in.

Faerie Querne.

LINACRE (Thomas), M.D., was bom in Canterbury about 1460, and there educated un-der the learned William Selling i thence he removed to Oxford, and in 1484 was chosen fellow of All-Souls College. Selling being ap-

pointed ambassador from king Henry VII. to the pope, Linacre accompanied him to Rome, where he attained the highest perfection in Greek and Latin, and studied Aristotle and Galen. On his return to Oxford, he graduated, and was chosen professor of medicine. He was soon after called to court by Henry VII., to attend prince Arthur as his tutor and physician. He was afterwards appointed physician to the king, and, on his death, to Henry VIII. He founded two medical lectures at Oxford, and one at Cambridge ; and immortalised his name by being the founder of the college of physicians in London. Observing the wretched state of physic, he applied to cardinal Wolsey, and obtained a patent, in 1518, incorporating the physicians of London, in order to prevent illiterate and ignorant medi-casters from practising the art. Dr. Linacre was the first president, and held the office as long as he lived. Their meetings were held in his own house in Knight-rider

Street, which house he bequeathed to the college. When he was about the age of fifty he began to study divinity; entered into orders; and was collated, in 1509, to the rectory of Mersham ; installed prebendary of Wells ; in 1518 prebendary of York ; and in 1519 was admitted precentor of that cathedral, which he resigned for other preferments. He died of the stone in October 1524, aged sixty-four; and was buried in St. Paul's, Dr. Caius, or Kay, thirty-three years after his death, caused a monument to be erected to his memory, with a Latin inscription. He was a man of great natural talents, a skilful physician, a profound grammarian, and one of the best Greek and Latin scholars of his time. Erasmus in his epistles speaks highly of his translations from Galen. His works are, 1. De Emendata StructurS, Latini Sermonis, libri sex ; London, printed by Pynson, 1524, 8vo. and by Stephens, 1527, 1532. 2. The rudiments of grammar, for the use of the princess Mary, by Pynson. Buchanan translated it into Latin; Paris, 1536. He likewise translated into very elegant Latin several of Galen's works, printed chiefly abroad at different periods. Also Procli Diadochi sphaera, from the Greek ; Venet. 1499, 1500.

LINCOLN, the capital of the county of this name, extends, in a long street, from the foot of a hill, near the Witham, to the south. On the north side, without the walls, is a suburb, called Newport, supposed to have been the outwork of a Roman station. Camden states that this place was a strong hold of the Britons, anterior to the Roman colonisation; and that then it bore the name of ' Lindcoit, from the woods (for which some copies have, corruptly, Lincoit). By Plolemy and Antoninus the name of the place is written Lindum ; and, having the privilege of a colony, it was called Lindum Colonia. The form of the station was that of a parallelogram, divided into four equal parts by two streets, v. Inch crossed it at right angles. At the extremities of these were four gates, nearly facing the four cardinal points. The whole was encompassed by an embattled wall, which, on three sides, was flanked by a deep ditch, but on the south side the steepness of the hill rendered a fuss unnecessary. The area thus enclosed is estimated to have contained thirty-eight acres. The remaining gate to the north, which is called Newport gate, is described by Stukeley as ' the noblest remnant of this sort in Britain, as far as I know ;' and he expresses surprise that it had not ' been taken notice of before his time. The great or central gateway has a semicircular arch, sixteen feet in diameter, formed with twenty-six large stones, apparently without mortar. The height is twenty-two feet and a half, of which eleven are buried beneath the ground. Each side of the arch has seven courses of horizontal stones, called springers, some of which are from six to seven feet in length. On each side cf the arch are two small lateral

doorways or posterns. A mass of the old Roman wall is still to be seen eastward of this gate ; and to the west is another large mass, not part of the city-wall, called the mint-wall, which was about sixteen feet high, and forty feet long, and had scaffold holes, and marks of arches. Mr. Gough supposed this to be part of a Roman granary. South of this station were other Roman works, which extended from the brow to the bottom of the hill. In 1793 three stone coffins were found at the south-west corner of the close, near the chequer gate. Beneath was a tessellated pavement, and under that a Roman hypocaust. A similar discovery was made in 1782. In 1790 was found, about three or four feet below the surface, a curious sepulchral monument, evidently of some Roman of high rank. Many fragments of antiquity were preserved by the Rev. Dr. Gordon, the precentor of the cathedral, who gives an account of several earthen and glass urns, which were discovered in the same field, some of which were of singular shape. He also describes a room, twenty feet by sixteen, wnich was discovered in a quarry. At what period the Saxons possessed themselves of this city does not ap-pear : but early in the sixth century we find Arthur, king of Britain, obtaining great advantages over them here. At this period the old town was nearly destroyed, and, according to Leland, ‘ new Lincoln was made out of a piece of old Lincoln.’ The Saxons fortified the southern part of the hill with ditches and ramparts, walled the town, and erected gates. At the time of the Norman conquest Lincoln was one of the richest and most populous cities in England. The Domesday Survey mentions its 1070 mansions, 900 burgesses, and twelve lage-men, ‘ having sac and soke.’ On the accession of the Conqueror to the throne, he ordered a strong castle to be built on the ridge of the hill, on which this city was situated. The building was 644 yards in circumference, arid occupied the space on which it is asserted that 166 houses had stood ; seventy-four more were at the same time demolished without the limits, that the whole might be insulated. In the time of Henry I. a navigable canal was made or enlarged, from the river Witham at Lincoln, to the Trent near Torksey ; probably the first canal of the kind ever made in England. It is at present called the Foss dyke. By this a communication was formed with the Trent, and down that by the Ilumber to the sea, and an unobstructed navigation secured to the then good part of Boston.

LINCOLN.

‘ Lincoln was now stored,’ says a poet of that age, ‘ with good things,

and became the support UF the neighbouring country.' When, in 1140, the empress Maud came to England, to assert her title to the crown, she took up her residence at Lincoln, as a place of safety, and conveniently situated for communication with her friends. Stephen on this marched quickly hither, and besieged the city, and took it : but the empress had escaped. During the contest, Lincoln acquired great notoriety. This city and its castle were materially concerned in the contentions between king John and his barons. They continued in the occupation of the crown till the time of Edward I., when Henry de Lacy died seised of them, and they passed, with other parts of his inheritance, to the earl of Lincoln, and so became annexed to the duchy of Lancaster. John of Gaunt greatly improved the castle, and made it his summer residence. Parliaments were held at Lincoln in the reigns of Edward I. II. and III. In 1348 the weavers of Lincoln obtained a charter from Edward III., of what they considered and called their liberties. By this they were invested with the power of depriving any weaver not of their guild, of the privilege of working at his trade within twelve leagues of the city. This and other monopolies were abolished in 1351, by an act called the Statute of Cloths. In the year following the staple of wool was removed from Flanders to England ; and Lincoln was one of the staple towns. It was also made a staple for leather, lead, and various other articles; and ranked the second of those towns for the quantity exported, as appears by the record of the sums collected for the king's duties. At the commencement of the civil war, between Charles I. and his parliament, the king came to Lincoln, and convened the freeholders of the county.

The diocese of Lincoln early included so many counties, that it is described as being ready to sink under the weight of its own greatness ; and though Henry II. took out of it the diocese of Ely, and Henry VIII. those of Peterborough and Oxford, it is still the largest in England, and excep* the two archbishoprics, and the principality bishoprics of Winchester, Durham, and Ely, no see has been so well endowed. Prior to the time of Elizabeth, there is no instance of a bishop of this see being translated to another, except Winchester. It is remarkable for the number of its episcopal palaces. In 1547 it had eight. In this county, Lincoln, Sleaford, and Nettleham ; in Rutlandshire, Lid-dington ; in Huntingdonshire, Buckden, now the usual residence of the bishops ; in Bedfordshire, Woburn ; in Buckinghamshire, Fingest; in Oxfordshire, Banbury Castle ; two at Newark in Nottinghamshire ; and Lincoln Place, Chancery Lane, London. All these, except that at Lincoln, with about thirty manors, were given up in the first year of Edward VI., by Holbech, t'.e first married bishop ; so that now only four manors remain of the ancient

demesnes.

The cathedral is a magnificent structure, raised at a vast expense by the munificence of several prelates; and its western front attracts the attention of every traveller. On the see being trans-

from Dorchester, in 1088, St. Reraigius de Fescamp, the first bishop, founded a cathedral church, which in four years was ready for consecration ; and all the bishops of England were summoned to attend on the occasion. Remigius died two days before the solemnity. His successor, Robert Bloet, finished the building, and dedicated it to the Virgin Mary. Having been destroyed by fire, it was rebuilt by Alexander de Blois iu 1124, who arched the new fabric with stone, and greatly increased the size of it. Bishop Hugh Burgundus, who died in 1200, enlarged it by what is called the New Work, and the chapter-house. Kings John of England and William of Scotland assisted to carry his body to the cathedral, where it was enshrined in silver, according to Stukeley ; but, according to Sanderson, the shrine was of beaten gold. Bishop Gynewell added the chapel of St. Mary Magdalen. Bishop Fleming, a chapel on the north side, in which he was buried : on his monument is his figure in freestone. Bishop Alnwick was also a considerable benefactor to tin: cathedral, and built the stately porch at the great south door. It at present consists of a nave, with its aisles ; a transept at the west end ; and two other transepts, one near the centre and the other towards the eastern end ; and a choir and chancel, with their aisles, of corresponding height and width with the nave and aisles. The great transept has a nave towards the east : attached to the western side of this transept is a gallilee, or grand porch ; and on the southern side of the eastern aisle are two oratories, or private chapels ; while the northern side has one of nearly similar shape and character: Diverging from the northern side are the cloisters, which communicate with the chapter-house. The whole is surmounted with three lofty towers; one at the centre, and two at the western end, decorated with varied tracery, pillars, pilasters, &c. The dimensions of the whole structure are as follow. The height of the two western towers 180 feet. Previous to the year 1808 each of these was surmounted by a central spire of 101 feet high. The great tower in the centre of the church, from the top of the corner pinnacle to the ground, is 300 feet; its width fifty-three feet. Exterior length of the

church, with its buttresses, 524 feet ; interior length 482 feet ; width of the western front 174 feet ; exterior length of great transept 250 feet ; interior 222 ; width 66 ; the less or eastern transept 170 feet in length, forty-four in width, including the side chapels; width of the cathedral eighty feet; height of the vaulting of the nave eighty feet. The chapter house is a decagon, and measures, interior diameter, sixty feet six inches. The cloisters measure 118 feet on the north and south sides, and ninety-one on the eastern and western sides. The grand western front, wherein the greatest variety of styles prevails, is certainly the workmanship of three, if not more, distinct and distant eras. It consists of a large square-shaped facade ; the whole of which is decorated with doorways, windows, arcades, niches, &c., and has a pediment in the centre, and two octangt'- lar staircase turrets at the extreme angles, sur- •nounted by plain spire-shaped pinnacles. The

upper transept and the choir appear the next in point of date. These are in the sharp-pointed style ; and their architecture is very irregular. The vaulting is generally simple ; the ribs of a few groins only have a filleted moulding. A double row of arches or arcades, one placed be- fore the other, is continued round the inside of the aisles, beneath the lower tier of windows. The windows are lofty and narrow, placed two or three together ; the greater buttresses in front are ornamented in a singular manner with detached shafts, terminating in rich foliage. The great transept, the gallilee porch, and the vestry, are nearly of the same, but in a later style. The vestry is vaulted, the groining having strong ribs ; and beneath it is a crypt with groins, converging into pointed arches. The nave and central tower were next rebuilt, probably begun by bishop Hugh de Welles, as the style of their architecture is that of the latter part of the reign of John, or the beginning of Henry III. The part extending from the smaller transept to the east end appears to have been built by bishops Gravesend, Sutton, and D'Alderby, about the commencement of the fourteenth century. The latter prelate built the upper story of the rood tower, and added a lofty wooden spire, which was blown down in a violent storm in the year 1547 : the damages then sustained were not wholly repaired till 1775. Dugdale says that Henry VIII. took away from this church 2621 ounces of gold, and 4285 ounces of silver, besides precious stones of great value : at the Reformation, indeed, what the ravages of time had left, the zealots pulled down or defaced ; so that

at the close of the year 1548 there was scarcely a perfect tomb remaining. Among illustrious persons buried here, who had monuments erected to their memory, were Catharine Swinford, wife of John of Gaunt ; Joan, countess of Westmoreland, their daughter ; and Bartholomew, lord Burghersh, brother to the bishop of that name. On the north side of, and connected with the cathedral, are the cloisters, of which only three sides remain in the original state.

The chapter-house forms a decagon, the groin-ed roof of which is supported by an umbilical pillar, consisting of a circular shaft, .with ten small fluted columns attached to it; having a band in the centre, with foliated capitals. One of the ten sides forms the entrance : in the other si les are nine windows, having pointed arches with two lights each. Over the north side of the cloisters is the library, which contains a large collection of hooks, and some curious specimens of Roman antiquities. It was built by dean Iloneywood. A magnificent work containing several finely engraved views of this cathedral, and a concise well written history of it, was published in 181!) by Mr. C. Wild.

Lincoln had formerly more than fifty churches. l.\> vcn only, exclusive of the cathedral, now re-main ; scarcely any of which merit n particular description. The most remarkable are, St. liciH diet's, St. Maryde Wjgford's,aml St. Peter's '.t (Jowts; having lofty square Norman towers. St. Peter's is an ancient structure, and appears to h:ive been the chapel of some religious house.

The Dissenters' chapels are, 1. A Presbytenar. or Unitarian meeting, erected early in the last century. 2. The Particular Baptist meeting-house in Mint Lane, a very neat and recen* erection. 3. The Catholic chapel in New Street a small, neat, brick building, erected in 1799, contains a good painting brought from the convent at Gravelines by the English nuns of that place when expelled at the Revolution. 4. The general Baptist meeting, behind St. Benedict's church, near the High-bridge: they have also now erected (1827) a small building for public worship, about a mile distant from the old one, or near Newport Gate at the northern extremity of the city. 5. The Wesleyan Methodists have a handsome chapel in St. Swithin's Lane, erected in 1816. 6. The Independents have two congregati»ns, one meeting in Zion Chapel

near ly adjoining the Catholic Chapel, and erected in-1802 ; and another meeting in a spacious brick edifice erected in the year 1820, towards the south end of the city. 7. The Society of Friends have also a small building in Newland, made use of for their quarterly meetings.

The number of parishes in the city of Lincoln is twelve, which, with the four townships within its jurisdiction, make sixteen. It has an extensive trade in corn and wool, of which great quantities are exported into Yorkshire and Lancashire, by vessels which obtain a back freightage of coals, &c. This city is a county of itself, having subject to it four townships in the vicinity, Bracebridge, Canwick, Branstdn, and Wadding-ton ; and in official acts it is denominated ‘ The city and county of the city of Lincoln. Its vis-countial jurisdiction extends over twenty miles in circumference. In the history of the boroughs of Great Britain, it is said, ‘ This city had summons, with London and York, to send members to parliament, the forty-ninth of Henry III.’ The right of election is considered to be in the freemen, and the number of voters is about 1300. The civil government is vested in a corporation, consisting of a mayor, twelve aldermen, two sheriffs, twenty-eight common-council-men, and four chamberlains ; with a recorder, deputy recorder, steward of the courts of borough-mote, a town-clerk, four coroners, four Serjeants of the key, or bailiffs, and other inferior officers. The city was incorporated so early as the seventh year of Edward II. ; Henry Best being then the first mayor.

Of the castle, built by William I., little remains; but the few vestiges remaining exhibit the same original structure as that of York. The keep stood half without and half within the castle wall, which ascended up the slopes of the hill, and joined the great tower. It was nearly round, and covered the summit of a high artificial mount. The walls are above seven feet in thickness. In the north-east corner of the castle yard is a curious smill building, appearing on the outside likˆ a tower, called Cob’s Hall ; which Mr. King thinks was originally used as a chapel ; it is now made use of as a place of execution for criminals by a drop machine. The mint-wall, mentioned by Mr. Gough, is still remaining, and forms part of the enclosure of a garden.

LINCOLN.

Cliecquer gate, at the west end of the cathedral, lm<l two gate-houses ; the western one has been taken down about thirty-five years; the

remaining one to theeast has three gateways, and two turrets between them. In Eastgate Street were two very ancient gateways, both of which are now removed. At the bottom of the town, near Bradford water, are remains of a fort, called Lucy Tower. An oblong building in Broadgate Street was appropriated to the gray friars, and still displays much of its ancient architecture : part of this edifice is now used as a free-school. On the south side of the hill is the bishop's palace, which, from being situated near the summit, Leland describes as ' hanging in declivio,' and was built by bishop Chesney, to whom the site was granted by Henry II. It was enlarged by succeeding prelates, and was scarcely at one time exceeded in grandeur by any of our ancient castles. Nearly opposite to the church of St. Peter, at Gowts, formerly stood the palace of the celebrated John of Gaunt. Opposite to this house is a large building, called John of Gaunt's stables. It was a large structure, probably con-ventual, in the Norman style ; the north and west fronts remain. The Jew's house, on the side of the hill, is a curious object, and is ornamented in front, and in some of its mouldings similar to the west doors of the cathedral : in the centre of the front is a semicircular arched doorway, with a projecting pilaster. It is recorded to have been originally possessed by Belaset de Wallingford, a Jewess, who was hanged for clipping in the 18th of Edward I. Formerly here were two grammar schools, one in the close, the other in the city : they were united in 1583.

The principal modern buildings are, a good market house, with assembly rooms over, erected in 1736 ; the county hospital, a large brick edi-h'ce on the brow of the hill, erected in 1769, and accommodating yearly about 200 in-patients, and 170 out-patients on an average, at an expenditure of about £l 300 per annum; Christ's Hospital, situated near the last mentioned, is a blue-coat school, which maintains, educates, and apprentices sixty poor boys; the county jail, built in 1788, within the area of the castle walls, a neat and strong building : nearly adjoining to which, within the same area, is a splendid county hall, erected in 1823-6, from a Gothic design by Smirke, at an expense of about £40,000, including decorations; th* county assembly rooms are in the bail ; a good theatre, below the hill, where a respectable company perform from the last week in September to about the second week in November. The city jail and sessions house is a new brick structure, finished in 1809, and situated by the side of the new road, at the foot of the hill : it is to be regretted that increasing crime proves the great want of room in this building, there being no means of classing or separating prisoners, nor any system of employment for them. The national school, a good brick building, near St. Peter's church, was erscted about 1814, from funds

collected from various parts of the county, but maintained by the annual subscriptions of the inhabitants. It receives about 300 boys and 200 gills: there is

no school on the British or Lancasterian system in Lincoln. The lunatic asylum, a handsome edifice with a stuccoed front, standing conspicuously on the hill, rather west of the city, the front is 260 feet long, and the area, with ˆirdens, &c. occupies about three acres and a half of ground . it was erected in 1820, at an expense of upwards of £15,000.

The judges lodgings is an elegant mansion, erected at the expense of the county for the accommodation of the judges during the assizes; the magistrates of the district also hold their weekly meetings there : it is situated on the castle hill. The race stand, erected in 1826, on Car-holm Hill, upon the west common (where the races are held), has cost the corporation, together with other improvements of the course, nearly £5000. The race course is now one of the finest in the kingdom, as well for the convenience of running, as for its beautiful panoramic effect upon the spectator; the annual meetings are said, however, to be but indifferently attended.

Though not the seat of any fixed manufacture, Lincoln possesses considerable advantages as an inland commercial station, communicating with the seaport of Boston, thirty-two miles distant, by means of the Witham and with the Trent, Humber, and their tributaries ; by the Fossdyke Canal from Lincolu to Torksey on the Trent, twelve miles distant. The river Withain, from Lincoln to Boston, is placed in the hands of a joint-stock company, and after many years of vast expenditure the works may now (1827) be considered as very nearly completed ; the channel through the town is undergoing most important improvements in respect of width and depth and a new lock of great dimensions and excellent workmanship is in course of erection. Th« Fossdyke Canal, mentioned above, had in times past been suffered to fall into such disuse ami decay as to have been assigned by the corporation of Lincoln to a Mr. Elliston of Thome, m 1741, for a term of 999 years, at the trifling an-nual rent of £75 ; a comparat.vely insignificant outlay soon sufficed to render it again navigable, and the descendants of that gentleman now de-rive an annual income of between £l 0,000 and £12,000 from the tolls. In consequence, however, of the shallow and very inefficient state into which it was suffered to full, dry seasons and floods alike rendering it almost impassable, a formidable opposition was organised about the

year 1826, and a close scrutiny disclosed, in the opinion of eminent, counsel, some very serious defects in the title of the lessees. The conse-. quence of the agitation of the subject, and of the strong general feeling produced, has been the offer of such concessions on their part as regarded the necessary improvements required, provided that an act of parliament were procured expressly confirming their ,title ; and it appear* probable that an agreement of this kind will be effected .

The picturesque beauty of the city, viewed in almost any direction, together with the peculiar interest attached to many of its antiquities, induces a considerable annual resort of travellers to Lincoln. This is much aided by the greatly improved state of travelling in the district :

while, from the great facility with which passengers are steam-ferried over the Humber at Bar-ton several times a day, Lincoln has become a favorite line of connexion from the south, with the east of Yorkshire, and the northern parts of England. There is, perhaps, no point between London and York which better repays a day's delay to a traveller. Lincoln is 131 miles north by west from London.

LINCOLN, a county in the south part of Maine, bounded north by Kenneheck county, east by Hancock county, south by the Atlantic, and west by Cumberland county : the chief towns, Wis-casset and Bath. 2. A county in the central part of Kentucky : chief town, Stanford. 3. A county on the south side of west Tennessee : chief town, Fayetteville. 4. A county in the west part of North Carolina : chief town Lin-colntown. 5. A county north part of Georgia : chief towns, Lincolnton and Goshen.

LINCOLNSHIRE.— This county was called oy the Saxons Lincollnscyre, and by the Nor-man invaders Nicholshire : but its etymology is extremely doubtful. Before the Roman invasion it belonged to a people whom the invaders called Coritani ; but when the Romans took possession of it they made it a part of the divis.on called Britannia Prima. By the Anglo-Saxons it was attached to the

kingdom of Mercia, but was subsequently incorporated with that of Wessex. The Norman conqueror divided the whole county among his followers.

It is a large maritime county, the third with respect to size in the kingdom, bounded on the north by Yorkshire, from which it is separated by the Humber ; on the east by the German Ocean, by that arm of the sea called the Wash ; on the west by Nottinghamshire, Leicestershire, and Yorkshire ; and on the south by Rutland, Northamptonshire, and Cambridgeshire. Its form is an irregular oblong. The late ingenious secretary to the board of agriculture gives the following estimate of the extent of the county in square miles, including the wolds, the heath north and south of Lincoln, the lowland tracts, and a remainder or miscellaneous tract of 1122 miles : in all 2888 square miles, or 1,848,320 acres. Its circumference is about 160 miles. The county consists of three divisions, viz.Lindsey, Kesteven, and Holland ; thirty hundreds, five sokes, one city, thirty-one market towns, and 630 parishes. It is in the diocese of its own name, in the province of Canterbury, and ‘s included in the midland circuit.

The climate of this county has long been considered cold, damp, and unhealthy; but these disadvantages have, for some years, been decreasing. The progress of drainage, and consequent cultivation, has Gradually operated to render the air more mild and dry. It has, however, been observed, ‘ that immediately after the Witham drainage, the climate of the lowland district was rendered more agueish than before ; but, upon the drainage being completed, this effect disappeared, and it became much healthier than it had ever been. Still, however, the people are subject to agues occasionally. The north-east winds in the spring also are more sharp and prevalent than further inland.’ There is also

another extraordinary ciin instance in the north-west corner of the county : agues were formerly commonly known upon the Trent and Humber side ; at present they are rare, and nothing has been effected on the Lincoln side of the Humber to which it can be attributed ; but there was a coincidence of time with the draining of Wellin fen in Yorkshire; ana this effect Mr. A. Young very justly conjectures to have been the cause of this remarkable change

The face of the country presents many features of beautiful and picturesque scenery. The indefatigable author already quoted observes, that ‘ about Belton are fine views from the tower on

Belmont. Lynn and the Norfolk Cliffs are visible, Nottingham Castle, the Vale of Belvoir, &c. ; and on going by the Cliff-towns to Lincoln there are many fine views.' Various places are pointed out which cannot be here enumerated; but it may be sufficient to add, that 'the country round Grantham, in the vicinity of Louth, and that more particularly between Bourn and the former place, including the noble and very spacious woods of Grimsthorpe, abounds with that inequality of surface, that diversified interchange of hill and dale, wood and lawn, which constitute the picturesque and beautiful in natural scenery.' Of the soil of this county it has been observed, that it may be truly said to include all sorts of land that are to be found in the whole kingdom. The county naturally divides itself into the wolds, the heaths, and the fens. The last occupy the south-east parts of the county, and were formerly a swampy and unprofitable waste. The heaths, now enclosed, are north and south of Lincoln ; and the wolds extend, somewhat diagonally, from Spilsby to very near the Humber ; they are in length about forty miles, and their greatest breadth about ten. Both the heaths and the wolds are calcareous hills. The fens consist of lands which at some former period ' have been covered by the sea, and by human art have been recovered from it.' Some, however, have entertained the opinion that this fen-land was formerly a woody country; but concerning the grounds of this opinion we have here no room to enquire.

The principal rivers belonging to or passing through this county are the Trent, the Ancholme, the Witham, the Welland, and the Glen. The first of these has but very little connexion with Lincolnshire, more properly belonging to Staffordshire. It forms nearly the north-western boundary from North Clifford to Stockworth, and thus constitutes the eastern boundary of the Isle of Axholme. The Witham is the only ri-ver that strictly belongs to this county. It rises near South Witham, about ten miles north of Stamford, and pursues a line deviating but a little from the north by Grantham to Lincoln. It then turns eastward, and, joined by a stream from the wolds in the north, proceeds southward through the fens to Tattershall, where it is met by the Bain from Horncastle, and afterwards to Boston, soon falling into the great bay between Lincolnshire and Norfolk, at the mouth of the Fossdyke Wash. This river is defended against the incursions of the sea by a curiously constructed sluice, just before it reaches Boston.

It is the last of those numerous streams which contribute to form the great gulf between the two above-named counties ; the Boston Deeps being at its mouth nearly opposite to those of Lynn across the bay. Much of the present bed of the river, from Boston upwards, is a new artificial cut, made for the purpose of widening and straightening the channel, rendering it more commodious for navigation, and better adapted to receive and carry off the water of the contiguous fens. The coast north of Boston is not distinguished by any remarkable streams to the mouth of the Humber; the rivers which reach the sea at Wainfleet and Saltfleet being consi-rable, though the latter is navigable to Louth.

There are several valuable canals in this county, particularly an inland navigation from Boston by Brothertoft farm on the Witham, cut to Lincoln, and thence by, Fossdyke Canal into the Trent; and thence again to all parts of Yorkshire, Lancashire, &c. There is also a canal from Wit-ham to Boston, finished in 1796; and another from Grantham into the Trent, near Holm Pierre—

Eoint. The Ancholme cut is navigable from iishop's Bridge to the Humber, at Ferraby Sluice. There is another from Horncastle to the river Witham, at Dogdyke, near Tattershall ; and another from Louih to the Humber. There is another from Grantham to Nottingham, thirty-three miles, a very fine canal, completed in 1796, which cost £100,000. It passes near some fine beds of plaster; and lime is brought in large quantities from Criche in Derbyshire. Caistor Canal joins the river Ancholme in the parisli of south Kelsey, and proceeds in a direct course nearly to the town of Caistor, being a distance of about nine miles. The Stainforth and Keadley Canal commences at the river Dun, about a mile to the west of Fishlake, and runs parallel with that river opposite to Thorn ; from whence, in a line nearly due east, it passes Crowle aid Keadley, whence it forms a junction with '.he river Irent. A branch from this ca sal, about a mile across Thorn Common to Hangman H 11, joins the river Dun. The total length of this canal is between fourteen and fifteen miles ; and, running through a fen part of the courtry, has little elevation, and no lockage, except out of the rivers, and at the extremities. Lincolnshire being so completely a grazing county, there is but little else to notice with respect to its natural productions. Some of the cattle raised in this county are of the most surprising and almost incredible size. This county returns twelve members to parliament; *viz.* two for the shire, two for the city of

Lincoln, two for Stamford, two for Boston, two for Grantham, and two for Grimsby. No other name need be mentioned to establish the biographical honor of this county than that of Sir ISAAC NEWTON, who was born at the manor-house of Woolsthorpe, in the village of Colterworth. The house is still standing.— The accomplished Anne Askewe, who was born at Kelsey about 1520, and martyred at Smithfield 1546, going to heaven, as Fuller expresses it, ‘ in a chariot of fire.’ — The patriotic and loyal Cecil, lord Burleigh. Born at Bourn, 1521. Died 1598. — John Fox, the martyrolo-gist, the celebrated author of the Acts and Monuments of the Church, in which he was greatly assisted by Dr. Grindal, afterwards archbishop 01 Canterbury. Born at Boston, 1517. Died 1587. — Mr. Alexander Kilham, founder of a new sect, or rather division, of Arminian Methodists, was born at Epworth. — Admiral Sir W. Monson. Born at South Carlton, 1569. Died 1642-3. — Francis Peck, an eminent antiquary, biographer, and critic. Born at Stamford, 1692. Died 1743.— The Patriotic Thomas Sutton, founder of the Charterhouse-School, London. Born at Knaith, 1532. Died 1611. — The two Wesleys, John and Charles, founders of the Arminian Methodists. They were born at Epworth. John, 1703. Died 1791. Charles, 1708. Died 1788. — The zealous and intrepid archbishop Whitgift. Born at Great Grimsby, 1530. Died February 29th, 1603.

There are here no manufactures of any great extent. Woollen and woollen yarn have been considered the staple trade of the county. Ships are built at Gainsborough ; and ‘ a pretty fabric for brushes’ is also manufactured there ; also coarse hemp-sacking. There are also some factories for the spinning and weaving of flax and linen. Its chief trade, however, is in fat cattle.

LIN’DEN, n.s. Sax. lim>. The lime-tree. See LIME.

Hard box, and linden of a softer grain. Dryden.

LINDEN TREE. See TILIA.

LINDSAY (Sir David); a celebrated Scottish poet, descended of an ancient family, and born in the reign of .James IV., near Cupar in Fifeshire. He was educated at St. Andrew’s; and, after making the tour of Europe, returned to Scotland in 1514. Soon after his arrival he was appointed gentleman of the bed-chamber to the king, and tutor to the prince, afterwards James V. He enjoyed several other honorable employments at court ; but, in 1533, was depnved of them all, except thatoflyon king at arms, which he held till his death. His disgrace was probably owing to his invectives against the clergy. After the decease

of James V. Sir David be-came a favorite of the regent earl of Arran ; but the abbot of Paisley did not suffer him to continue long in favor with the earl. He then retired to his paternal estate, and spent the remainder of his days in rural tranquillity. He died in 1553. His poetical talents, considering the age in which he wrote, were not contemptible ; he treats the Romish clergy with great severity, and writes with humor : but he takes such liberties with words, lengthening or shortening them for measure or rhime, that the Scotch have to this day a proverb, for an unusual expression, There is nae sic a word in a' Davie Lindsay. He wrote several tragedies and comedies, and first introduced dramatic poetry into Scotland. His poems are printed in one volume ; and fragments of his plays in MS. are in Mr. William Carmi-chael's collection.

LiNnsAY (John), a learned English clergyman, born in 1686, and educated at Oxford. He preached many years to a dissenting congregation in Aldersgate Street. He published, 1. The

Short History of the Regal Succession: 2. Remarks on Whiston's Scripture Politics, 8vo. London. 1720: 3. A Translation of Mason's Vindication of the Church of England ; 1726 : and some sermons. He died 21st of June 1768, aged eighty-two.

LINDSEY (Theophilus), a modern divine of the Unitarian persuasion, was born at Middlewich in Cheshire, in 1723. He received his early education at Middlewich and Leeds, and at the age of eighteen was admitted a scholar at St. John's Cambridge. Having taken orders, by the recommendation of the earl of Huntingdon, his sponsor, he was appointed domestic chaplain to the duke of Somerset, and in 1754 accompanied earl Percy to the continent. On his return he married the daughter of Mr. archdeacon Blackburne, and was presented to a living in Dorsetshire, which he exchanged in 1764 for that of Catterick,

Yorkshire. In 1771 he zealously co-operated with his father-in-law, Dr. John Jebb, and others, to obtain' relief in regard to subscription to the thirty-nine articles, and soon after, having rejected the doctrine of the Trinity, he resigned his livings, and came to London, where he opened the Unitarian Chapel in Essex Street, Strand; and conducted the service according to the plan of a liturgy, altered from that of the establishment by the celebrated Dr. Samuel Clarke. About the same time he published his Apology, of which several editions were printed. This was followed by A Sequel to the Apology, in which he replies to the various answers given to that work. Hfc continued to conduct the services of his chapel in conjunction with Dr. Disney until 1793, when he resigned the pulpit, but continued actively to em-ploy his pen. In 1802 he published his last work, entitled Cansiderations on the

Government. He died November 3d, 1803, in his eightieth year. Besides the above works he wrote, On the Preface to St. John's Gospel ; On Praying to Christ ; An Historical View of the State of the Unitarian Doctrine and Worship, from the Reformation ; and several other pieces. Two volumes of his sermons have also been published since his death, and a life of him by Mr. Belsham.

LINDUM, an ancient town of Britain, on or near the site of Lincoln, possessed by the Horesti ; mentioned by Richard of Cirencester, with Alauna and Victoria, as the three principal cities of that people. If the conjectures of the moderns are just, that Alauna was Alnwick, Lindum Lincoln, and Victoria Perth, the dominions of the Horesti must have been very extensive.

LINDUS, in ancient geography, a town of Rhodes, situated on a hill on the west side of the island. It was built by Tlepolemus the son of Hercules, according to Diodorus Siculus; by Lindas, one of the Heliades, grandsons of Apollo, according to Strabo. It was the native place of Cleobulus, one of the seven wise men ; ar J had a famous temple of Lindian Minerva, built by the daughters of Danaus. Cadmus enriched it with many splendid offerings. The citizens dedicated and hung up here the seventh of Pindar's Olympic odes, written in letters of gold. The ruins of this superb edifice are still to be seen on the top of a high hill which overlooks the sea. Re-lics of the walls, consisting of stones of an enormous size, still show it to have been built in the Egyptian style. The pillars and other ornaments have been carried off. On the most elevated peak of the rock are the ruins of a castle, which may have served as a fortress to the city. Tts circum.fcr.enoe is very extensive.

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NUMEROUS ENGRAVINGS, A GENERAL ATLAS,

AM) APPKUI'KIAIE DIAGRAMS.

Sic opiirtct ad librum, presertini iiiisi-ell-.iiici ficiieris, luˆctidum accettcre Icctorein, ut siilet jiI conviviiiiti coi»viv;i civilis. Cuiivivdtur aiuiititur oiiiaibiis s;Utsf':icc-rc , ei tanien si quid appoaitur, i|iiod liujiis nut illius palato uuii rcsptiuileat, et hie et ille urliaui: dissimul wit, et alia t'erciila probaiit, ue quid coutrisCeai cuiivivutoruiii.

Erasmus.

A rea.i.T should sit do«u to a l.u..k, rspicially of tlie luiscellaneous kind, as a «cil-l > cliav.ˆd visitor dors to a banquet. Tbc master of the (east exerts himself to satisfy his guests ; but if, after all his care and pains, something should appear on tile table that does not suit this or that person's taste, they politely pass it over without uotice, and commend utlier dishes, that they may not distress a kind ho-ˆt. Tiiiii < l < ili,ni.

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LONDON ENCYCLOPAEDIA. ” ‘^

LINE, n.s. ˆ Fr. *jne ; Lat.* i’nea. The

Lin’eage, path of a mathematical

Lin’eal, adj [point : . extension longi—

Lin’eally, adv. f tudinally ; limit : hence Lin’ear, adj. sketch; outline; marks or

Li N ea’tion, w.s. J features of the hand or face; contour; an extended thread or string; family, ascending or descending; and, particularly, the equinoctial circle ; a rank, or disposition, of soldiers ; a trench, or work, in fortification; as much as is written, or printed, from margin to margin in a book or manuscript; a verse ; a measure of extension, containing one-tenth of an inch : lineage is race ; progeny ; family : lineal, containing or composed of lines ; in direct descent ; hereditary : lineally, in a direct line : lineal, composed of lines : lineation, lineal form; draught of a line, or lines.

And it hadde a wall greet and high hauynge twelue ghatis, and in tiie ghatis of it twelue auugelis and names writen yn that ben the names of twelue tynaˆis of the sones of Israel. Wiclif. Apoc. x\i.

Their line is gone out through all the earth ; and their words to the end of the world. Psalm xix. 4. Joseph was of the house and lineage of David.

Luke. O Conqueror of Brut’is Albion ! Whiche that by lyne and fre eleccion Ben very kinge. Chaucer. Unto the Kinge. Let calle thyn trewe frendes alle, and thy linage, which that ben wise, and telleth to hem your cas, and herkeneth what they saye in counseilling, and governe you aftir hir sentence. Id, Cant. Tales. Both the lineage and the certain sire From which I sprung, from me are hidden yet.

Sjpenser. I shall have good fortune ; go to, here’s a simple line of life ; here’s a small trifle of wives.

Shakspeare. Long is it since I saw him. But time hath nothing blurred

those lines of favour Which then he wore. Id.

He chid the sisters When first they put the name of king upon me, And bade them speak to him ; then, prophet-like, They hailed him father to a line of kings. Id.

Queen Isabel, his grandmother, Was lineal of the lady Ermengere. (d.

Peace be to France, if France in peace permit Our just and lineal entrance to our own. hi.

(Knowledge) A climbing height it is, without a head. Depth without bottom, way without an end ; A circle with no line environed. Not comprehended, all it comprehends. Worth infinite, yet satisfies no mind Till it that infinite of the Godhead find.

Sir Fulk Greville. The Tirsan cometh forth with all his generation or lineage, the males before him, and the females following him ; and, if there be a mother from whose body Vol. XIII.— Part 1.

the whole lineage is descended, there is a traverse where she sitteth. Bacon.

Here, while his canting drone-pipe scanned The mystic figures of her hand. He tipples palmestry, and dines On all her fortune-telling lines. Cleaveland.

When the sun below the line descends. Then one long night continued darkness joins.

Creech. If he had been the person upon whom the crown had lineally and rightfully descended, it was good law. Clarendon.

Eden stretched her line From Auran eastward to the royal towers Of great Seleucia. Milton’s Paradise Lost.

His empire, courage, and his boasted line. Were all proved mortal. Roscommon .

Well sung the Roman bard ; all human things. Of dearest value, hang on slender strings ; O see the then sole hope, and in design Of heaven our joy, supported by a line. Waller, Victorious with their liries and eyes. They make the fishes and the men their prize. Id. You have generous thoughts turned to such speculations ; but this is not enough

towards the raising such buildings as I have drawn you here the lines of unless the direction of all affairs here were wliolly ii your hands. Temple.

We as by line upon the ocean go. Whose paths shall be familiar as the land.

Dryden, Now snatch an hour that favours tliy designs. Unite thy forces, and attack their lines. Id.

A golden bowl The queen commanded to be crowned with wine, The bowl that Belus used, and all the Tyrian line.

Id, O that your brows my laurel had stistained ! Well had I been deposed if you had reigned : The father had descended for the son ; For only you are lineal to the throne. Id.

Men of mighty fame. And from the' immortal gods their lineage came.

Id. To re-establish, de facto, the right of lineal succession to paternal government, is to put a man in possession of that government which his fathers did enjoy, and he by lineal succession had a right to.

Loc/ce. A line seldom holdˆ to strain, or draws streight in length, above fifty or sixty feet. Motou.

The years Ran smoothly on, productive of a line Of wise heroick kings. Philips.

In moving lines these few epistles tell What fate attends the nymph who loves too well.

Clarth. The real lineage and succession of wit is plainly founded in nature. Shaflesburg.

No longer shall the widowed land bemoan A broken lineage, and a doubtful throne. But boast her royal progeny's increase, And count the pledges of her future peace.

Addison.,

‘I’hey pierce the broken foe’s remotest lines. Id.

The soul, considered with its (,‘reator, is like one of tliose mathematical lines that may draw nearer to auothei for all eternity without a possibility of touching it : and can there be a thought so transporting, as to consider ourselves in these perpetual approaches to him, who is not only the standard of perfection, but of happiness ! Addison.

When any thing is mathematically demonstrated weak, it is much more mechanically weak ; errors ever occurring more easily in the management of gross materials than lineal designs. IVotton.

ˆVhere-ever it is freed from the sand stone, it is covered with linear strifle, tending towards several centers, so as to compose flat stellar figures.

IViMclward on Fossils.

There are in the horney ground two white linea-lians, with two of a pale red. Woodward.

Even the planets, upon this principle, must gravi-tate no more towards the sun ; so that they would not revolve in the curve lines, but fly away in direct tangents, till they struck against other planets.

Bent ley.

Oh lasting as those colours may they shine, Free as lliy stroke, yet faultless as thy line! Pope.

In the preceding line, Ulysses speaks of \ausicaa, yet immediately changes the words into the masculine gender. Broome.

There is a sort of masonry in poetry, wherein the

pause represents the joints of building, which ought

ill every line and course to have their disposition

varied. SItenstone.

To dote on aught may leave us, or be left,

Is that ambition I then let flames descend,

Point to tlie centre their inverted spires,

And learn humiliation from a soul

Which boasts her lineage from celestial fire.

Yonntj. A poet does not work by square or line,

As smiths and joiners perfect a design ;

At least we moderns, our attention less,

Beyond the' example of our sires digress.

And claim a right to scamper and run wide,

^^ herever chance, caprice, or fancy guide.

Cowper, Nor less amazed, that such a blot His noble 'scutcheon should have got, While he was highest of his line. Byrun.

Line, v. a.) From Linen, which see ; or

LtN'iNG, n. s. J Lat. /iHMw. To cover inside; to guard or protect within ; place within ; double; impregnate: alining is an inward covering or guard.

Her women are about her : what if I do line one of their hands ? Shakspeare. Cijmbeline.

Line and new repair our towns of war With men of courage, and with means defendant.

Shakspeare. Son of sixteen, I'luck the lined crutch from thy old limping sire.

Jd. Who lined himself with hope. Eating the air on promise of supply. Id. The lining of his coffers sliall make coats To deck our soldiers for these Irish wars. Id. The two armies were assigned to the leading of two generals, both of them rather courtiers, and assured to the slate, than martial men ; yet lined and assisted with subordinate commanders of great experience and valour. Bacon.

The charge amounteth very high for any one man's purse, except lined beyond ordinary, to reach unto.

Carrir.

! UN

Let no man tell me now of that just wonde of the world, the .lewish temple ; white marble without, lined witli gold within. Bp. Hall.

Thus from the Tyrian pastures lined with Jove, He bore Europa, and still keeps his love. Creech.

Notwithstanding they had lined some hedges with musqueleers, they were totally dispersed.

Cliirendon. W'as 1 deceived, or did a sable cloud Turn forth her silver lining on the night ?

iˆIilton. A box lined with paper to receive the mercury that might be spilt. Bojjle.

The fold in the gristle of the nose is covered with a lining, which differs from the facing of the tongue, ('(•fir's Cosmologia, The gown with stiff" embroidery shining. Looks charming with a slighter lining. Prior. He, by a gentle bow, tlivined How well a cully's purse was lined. Swifi. Nor name nor title, stamped behind,

Adorns its outer part ; But all within 'tis richly lined,

A magazine of art. Cowper.

Line, EQtixocTiAL. See Astronomy.

Line, Gunter's, a logarithmic line, usually graduated upon scales, sectors, &c. It is also called the line of lines, and line of numbers ; being only the logarithms graduated upon a ruler, which therefore serves to solve problems instru-mentuliy in the same manner as logarithms do arithmetically. It is usually divided into 100 parts, every tenth of which is numbered, beginning with 1 and ending with 10: so that if the first great division, marked 1, stand for one-tenth of an integer, the next division, marked 2, will stand for two-tenths, 3 for three-tenths, and so on ; and the intermediate divisions will in like manner represent 100th parts of the same integer. If each of the great divisions represent ten integers, then will the less divisions stand for integers ; and, if the greater divisions be supposed each 100, the subdivisions will be each ten. 1. To find the product of two numbers. From 1 extend the compasses to the multiplier ; and the same extent, applied the same way from the mul-tiplicand, will reach to the product. Thus, if the product of 4 and 8 be required, extend the compasses from 1 to 4, and that extent laid from 8 the same way will

reach to 32, their product. 2. To divide one number by another. The ex-tent from the divisor to unity will reach from the dividend to the quotient: thus, to divide 36 by 4, extend the compasses from 4 to 1, and the same extent will reach from 36 to 9, the quotient sought. 3. To three given numbers to find a fourth proportional. Suppose the numbers 6, 8, 9; extend the compasses from 6 to 8; and this extent, laid from 9 the same way, will reach to 12, the fourth proportional required. 4. To find a mean proportional between any two given numbers. Suppose 8 and 32 : extend the compasses from 8, in the left-hand part of the line, to 32 in the right ; then, bisecting this distance, its half will reach from 8 forward, or from 32 .backward, to 16, the mean proportional sought. 5. To extract the square root of any number. Suppose 25 : bisect the distance between 1 on the scale and the point representing 2.5 ; then the half of this distance, set off from 1, will give the point representing the root 5. In

the same manner tlie cube root, or that of any higher power, maybe found by dividing the distance on the line between 1 and the given num-ber into as many equal parts as the index of the power expresses ; then one of those parts, set from 1, will find the point representing the root required.

Line, Meridian. See Geography. Line of Battle is the disposition of the fleet in the day of engagement, on which occasion the vessels are usually drawn up as much as possible in a straight line, to gain and keep the advantage of the wind and to run the same board. See Naval Tactics.

Line, Ship of the, a vessel large enough to be drawn up in the line, and to have a place in a sea-fight.

LINEA Alba, in anatomy, the concourse of the tendons of the oblique and transverse muscles of the abdomen ; dividing the abdomen in two in the middle. It is called linea, line, as being straight ; and alba, from its color, which is ■white.

LIN’EAMENT, n. s. Fr. lineament ; Lat. Uneamentum. From Line, which see. Feature ; discriminating mark.

Noble York. Found that the issue was not his begot : Which well

appeared in his lineaments, Being nothing like the noble duke, my father.

Shaksyeare. Man he seems In all his lineaments, though in his face The glimpses of his father's glory shine.

Milton. God our parent hath stamped on our nature some lineaments of himself, whereby we resemble him.

Barrow. There are not more differences in men's faces, and the outward lineaments of their bodies, than there are in the makes and tempers of their minds ; only there is this difference, that the distinguishing characters of the face, and the lineaments of the body, grow more plain with time, but the peculiar phy-siognomy of the mind is most discernible in children.

Locke. The utmost force of boiling water is not able to ■destroy the structure of the tenderest plant : the /incame«fs of a white lily will remain after the strongest decoction. Arbutlinot.

I may advance religion and morals, by tracing some few lineaments in the character of a lady, who hath spent all her life in the practice of both. Swift.

These are the moral attributes of the Divine Being, in which he requires us to imitate him ; the express *)nea*?ˆ«n(* of the divine nature, in which all good men bear a resemblance to him ; and for the sake of which only they are the objects of his delight. Mason.

LIN'EN, Ji. 4'. & af/;. > Sax. linen; Goth—

Lin'ener. Slin; Teut. Icin, flaxi

Lat. linum ; Gr. Xivoi/. Cloth of hemp or flax.

And thei tooken the bodi of .Miesus and boundeii it in liinmtn clothis with swetesmellyngeoynementis, as it is the custom to iewis for to byrie.

Wiclif. Jon. XX.

Here is a basket, he may creep in , throw foul iinen upon him, as if going to bucking. Shakspearp.

A lineti stock on one leg, and a kersey hoot hose on the other, gartered with a red and blue list. Id.

Death of tiiy soul ! those linen cheeks of thine Are counsellors to fear. What soldiers, whoy-frtcp ?

/.I.

Where is my fashioner ? my feather-man 1 My linener, perfumer, barber? Ben Jonson.

Unseen, unfelt, the fiery serpent skims Between her linen and her naked limbs.

Dryden. A pampered spendthrift, whose fantastic air, Well fashioned figure, and cockaded brow. He took in charge, and underneath the pride Of costly linen tucked his filthy shroud. Young. A drawer, it chanced, at bottom lined With linen of the softest kind. With such as merchants introduce From India, for the ladies' use. Cowper.

Linen. The fabrication of linen is a most important branch of the staple manufactures of Great Britain. On this account we have already fully examined the agricultural processes connected with the cultivation of flax ; the dressing of hemp has also been briefly considered, and we must now proceed to the operation of spinning.

The most ancient mode of spinning is by the spindle and distaff, and this method is the simplest of all others. The spindle is nothing more than a piece of hard wood, made round, and sharp pointed at one end, so that it can be made to whirl upon its point in the same manner _ as a child's top : the upper part is reduced to a pin or peg, and it is this part which has the fibres united to it, the lower or enlarged part being only to give sufficient weight to make it revolve. The spinner must be seated upon the ground, and after having put the distaflT in motion upon its point, by twirling it between the hands, get it up to a rapid motion by striking it occasionally with the hand, with a motion very similar to that by which a child keeps up the motion of his whipping-top, when he draws the lash of a whip round it.

The flax, after having been properly prepared, is lapped round the end of the distaff, which is nothing more than a stick that the spinner holds in his left hand, so as to be conveniently situated to draw off from it a few fibres at a time with the finger and thumb of tlie right hand, to form the thread. The upper part of the spindle, which is made smaller like a pin, has the ends of the fibres which are to form the thread attached to it before it is put in motion. These fibres are drawn out of the bunch which is wound upon the distaff, and held between

tlie finger and thumb, so as to be in the direction of the length of the spindle ; therefore, when the spindle is once made to revolve, it twists these fibres together, to form a thread, and, as fast as the thread forms, the spinner draws ofl" more flax from the distafl', and guides the fibres between the finger and thumb, so that they shall be regularly delivered out, and make an even thread. The motion of the spindle is constantly kept up, by striking it as often as the hand can be spared from the ojieration of guiding the thread. When by these means as great a length of thread is fornacd as is convenient to reach from the end of it to the spindle, the thread is wound upon the outside of tlie small part or pin of the spindle, for which purpose the spinner applies the fore-finger against the thread, close to the end of the spindle, and bends the thread at thai

part, so that it will be at right angles with the touching it. The end of the thread is fastened direction of the spindle, instead of being nearly to the bobbin, and conducted through a hook in the direction of its length ; and also, that it fixed in the flyer, so tiiat it proceeds from the will be guideil opposite to the middle of the circumference of the l)ol)bin to this iiook, in a pin, or small part of the spindle, instead of direction perpendicular to the bobbin, but turns being at tlie extreme end thereof. In this situa-round the iiook so as to come into the direction tion tlie motion of the spindle, wliich is continu-of the spindle.

ally kept up, occasions the tiiread to wind up, Tlie tiiread is then conducted through a per-or lap upon the pin of the spindle, instead of foration made in the centre of the end of the twisting round upon itself, as in tlie former case ; spindle or pivot, upon wiiich it revolves, and to but, wiien nearly all the length of thread is thus this end of the thread the fibres are supplied, disposed of, the finger is removed from the The twisting motion given by the revolution of thread, and it immediately assumes its original the spindle forms them into a continuation of the direction, by slipping to the extreme end of the thread, which is gathered up upon the bobbin as spindle, so as to be twisted round itself by the fast as the spinner lets it go through her fingers, motion of the spindle, and more fibres are now by a tendency whicli the bobbin has to turn supplied to it from the buncli upon the distaff, slowly, at the same time that the flyer to which to form a fresli

length of thread. In this manner the thread is hooked is revolving rapidly round the spinning proceeds, until as mucli thread is the bobbin. For this purpose a string is passed spun and wound upon the pin of the spindle as round a small neck upon the bobbin, and, one will make a moderately sized ball. end of the string being fastened to die frame, the

This simple and inconvenient method of spin-other has a small weight to draw it tight round ning becomes very efficient, when the spindle, the neck of the bobbin, and occasion friction, instead of being spun upon the ground, is In other spinning wheels a second band from mounted in a proper frame, and turned by a the great wheel is made to turn the bobbin more wheel and band ; this forms a machine which is slowly than the spindle. ‘ The diread which called the one-thread wheel, and is still used in passes over the hook of the flyer is rapidly car-some parts of the country for spinning wool: ried round the circumference of the bobbin ; but, the spindle is made of iron, and placed horizonas the bobbin follows the motion of the tlyer, it tally, so that it can revolve freely ; and the ex-only winds up as much thread upon the bobbin tremity of the spindle, to which the thread is as the difierence of the two motions; and this applied, projects beyond the support. tendency to wind up can be increased or diini-Tiie wheel which turns it is placed at one nished at pleasure, by the friction which is oc-side, the pivots of both being supported in casioned by the string or band which passes upright pieces, rising up from a sort of stool, round the neck of the bobbin. When thewind-The spinner puts the wheel in rapid motion by ing-up of the thread upon the bobbin has accu-its handle, and its weight is sufficient to con-mutated a rid,;e of thread, upon it opposite, to the tinue the motion for some seconds; then walk-hook in the flyer, the thread must be slufted to ing backwards from the spindle, in the direction another hook opposite to a different part of the of its lengUi, she supplies the fibres regularly, bobbin, for which purpose the arms of the flyer and the motion twists them into a thread ; but, are furnished with different hooks, and this when a convenient length is spun, the spinner must be repeated several times, until the whole steps on one side, and reaches out that arm length of the bobbin is filled ; it is then taketi off which holds the end of the thread, so as to alter to be reeled, and replaced by another empty the direction of the Uiread, and bring it nearly bobbin.

perpendicular to the length of the spindle, which An improvement was made in the’ spinning-motion gathers or winds up tlie thread upon die w/tiel by iMr. Antis some years ago, which was middle of the projecting part of the spindle, an application of what Sir Richard Arkwright This being done, she holds the thread in the direc-had

before invented. The object is to obviate tion of die spindle, so that it will receive twist, the necessity of stopping the wheel to remove and retreats again to spin a fresh length of thread, the thread from one hook to another, in the A spinning-wacliiiw more perfect than tliis is manner just described. Tor this purpose, the the one-thread flax-wheel, with spindle and flyer; bobbin is made to move regularly backwards and it has the property of constantly drawing up the forwards upon the spindle a space equal to its thread as fast as it is spun, instead of spinning a length, so that every part will, in succession, be length, and then winding it upon die spindle, presented opposite the hook over which the For this purpose die spindle is made longer than thread passes, and thus receive the thread regu-the oUier, and is turned by a band and wheel ; larly upon the whole length of the bobbin. The but the wheel receives motion from tlie foot by a additional parts necessary for producing this small treadle, because the spinner sits before the movement are as follow : a pinion of only a sin-wheel to work the spindle, which is supported gle leaf is made to project from die extremity of upon its two extreme ends, and near one end the the pivot of the great wheel, or a worm or end-flyer is fixed; diis is a piece of wood curved to less screw formed on the end pivot will answer an arc, die vertex of which is fixed on the spin-the same purpose, which is to actuate a wheel of die, and from die extremities of the arc two seven inches diameter, and ninety-seven teeth; arms proceed, so as to be parallel to die spin-dicrefore ninety-seven revolutions of the great die, and at such a distance from it as to admit a wheel will produce one revolution of this smaller wooden bobbin to be fitted loosely upon die wheel; upon the face of which a circular ring of spindle ; and at die same time the arms of the wire is fixed, and supported from the wheel by flyer can revolve round the bobbin widiout six degs, so [ˆas to be oblique to the plane of the

OCCXC Cf]c-cyˆe 0\c 0|C Qc QcQc Oˆ

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wheel, as it touches it at one part, and at the opposite side of the ring projects nearly tliree-c|uarters of an inch. This ruig of wire gives motion to an upright lever, about fifteen inches long and moving on a centre at three inches from its lower extremity, where it has a pin fixed in it and resting against the oblique ring of wjre ; therefore, when the wheel turns round, it communicates a small motion to the lever in consequence of its obliquity to tlie plane in which it revolves. The upper end of the lever is connected to an horizontal sliding-bar situated beneath the spindle, and having an upright piece of brass, which works in the notch of apully formed in the ends of the bobbin, and drives the bobbin backwards and forwards upon the spindle, according as the oblique ring of wire forces the pm at the lower end of the lever in or out, when tlie wheel moves round. To regulate and return this alternate motion, a small weight hangs by a line to the sliding-bar, and, passing over a pulley, rises and falls as the bobbin recedes and advances, and tends constantly to keep the pin at the lower end of the lever in contact with the wire. It is evident from this description, that one staple only is wanted to the arms of the flyer, which being placed near the extremity, the thread passes through it, and by the motion of the bobbin is laid regularly upon it from one end to the other.

The invention has also another advantage over the old method, wliich always winds the thread in ridges upon the bobbin ; and, if the thread breaks in reeling the yarn, tlie whole bobbin may as well be thrown away, because the thread can-not easily be found again ; but this improved wheel always winds the threads across upon one another, by which means the end can never be lost.

In order to regulate the friction on the bobbin, and retard its motion in a greater or less degree at pleasure, there is a neck of brass or steel fastened to one end of it, and embraced by a kind of small vice, or pincers, fixed to the sliding-bar. This vice must be made either with two elastic springs with wooden tops, or of wood wholly, and faced with leatlier ; but, if made of •wood only, then a spring must be made beneath the shoulder of the screw, to answer the same purpose. By tightening this screw, more or less, the friction on the bobbin may be

regulated to the greatest nicety, provided the sprin<:;s are of a strength rightly proportioned to their functions. It will readily appear, that all this may be done ■without the least effect on the velocity of the whole machine, as thereby nothing is added to the general friction so as to obstruct it.

We shall now proceed to give a description of a patent, obtained in 1806, by Messrs. Clarke and Bugby, for effecting certain improvements in a mac/ihu', intended to be worked by hand-labor, for the spinning of hemp, flax, &;c. : —

Plate Linen MANUiAcrniiF., ivx. 1, represents an oblique view of the front of a frame containing ten spindles (but the frames may contain an indefinite number of spindles). A, the spindle or a bow passing through the whole frame, having ten bosses of brass or cast-iron thereon, each about four inches diameter, each boss supplying one spindle ; B, a pinion of twelve leaves

upon the end of tlie spindle A, connected with liie wheel C, of eighty teeth, fixed upon the end of a small iron spindle F, covered with wood, and extending tlirough the whole frame ; D, a slack or intermediate pinion of any size at discretion, connected wilii another similar pinion, the latter connected with a wheel of 120 teeth, which is fixed upon an iron spindle G, of about an inch and a half in diameter, and extending through the whole frame ; but the wheels B, C, D, and E, may be varied in tiieir numbers, to increase or dimmish the draught of the substance operated upon, as may best suit its Cjuality or the ideas of the workman. The pinion B is so contrived as to slip off the end of the spindle A, to make room for a smaller or larger one; by means whereof a larger or shorter thread may be spun from the same sized rovings; a a a a a a a a a a represent ten roved slivers of hemp, fiax, tow, or wool, passing between the iron spindle G and rollers in pairs pressed against them by springs or weights; these springs or weights must operate with sufficient force to hold back the slivers or rovings so securely, that they may only pass on with the movement of the spindle ; these pairs of pressing rollers are placed behind the spindle. The use of the small iron spindle Yˆ covered with wood, and left rather larger than the spindle G, is, with pressure of the small wood-roller, made up in pairs bb bbb, and so contrived that each pair may roll upon two slivers, to bring them down straight, and preserve the twist which they receive in the roving-ma- chine till the slivers leave them. The bosses on the sy)indle A, have likewise wooden rollers in pairs pressed against them by springs or weights,

between which the drawn, lengthened, or extended slivers pass to the spindle, the rollers having each a tin conductor, c c c c c c c c c c, io bring the material under operation as centrically as possible between the wood-rollers and the bosses ; but all the above-mentioned parts of the machine are so similar to the common upright frames, that a person conversant with them will not be at a loss to understand its arrangement. H, is a wheel of wood four feet in diameter, having its rim about two inches thick, witii a groove in its peripliery for a small cord or band. In its centre is a rule or stock of wood, through which the sjjin-dle I passes, and extends into its frame about one-fourtli of its length. To enable the person that turns the winch to reach all the spindles at work, witli the hand that is not engaged in turning, to remove any obstacle that may arise to the spindles, the arbor or spindle of the wheel I has its bearing on the sides of the frame that contains it, marked L L L L ; this frame, with tlie wheel II, the arbor I, and the winch K, is similar to that part of a machine called a mule-jenny, used for spinning cotton ; this frame is su])ported in a horizontal position at the outer end by two legs marked M M, and a screw-])iii which passes through K, the front upright a A, iig. 2, and made tight with the thumb-screw u ; the screw passes through a groove or mortise at the end of tiie wheel frame, to enable the workman to ad-just the wheels N and U, as it will be found necessary to change the wheel N, to make such alteration in the twist as the size of the yarn may

require, or as the workman may think proper. P and Q are bevel wheels of equal size, the former fixed upon the rule or stock of the wheel H, and eonnected with Q upon the spindle R, takinground with it the wheel N, which is connected with the wheel O. Upon the embossed spindle or arbor A, a a a a a a a a a a, are spindles standing on a carriage with four wheels, similar to the carriages used in mule-jennies for spinning cotton, having at each of them, at d d d d d d d d d d, a convex seat of wood of any convenient size, not less than the bottom of the bobbins or quills eeeeeceeee; these bobbins or quills are about six inches long and one inch and a quarter diameter at the bottom, and three quarters of an inch diameter at the top ; but the sizes must be varied according to the size of the yam. Perhaps four or five variations will be sufficient to spin yarn for tarpaulins or sail-cloth, up to fine yarn fit for good dowlas and fine stockings. T, a

pulley, over which a band, from S, runs and returns, to draw out the carriage upon the four wheels described ; W, the cylinder which drives the spindles.

Fig. 2 exhibits a side view. A, the wheel mentioned above in fig. 1, and there marked H ; B, the winch by which it is turned by hand ; C C C C, the frame wherein it works ; D and E are blocks of wood on each side of the said frame to raise the wheel, so that the winch may be clear of the carriage F F, and apparatus G G ; the two end wheels upon the carriage containing the spindles having two more corresponding on the opposite side thereof. H, a groove upon the end of a cylinder, which drives the spindles, and stretches through the carriage-frame, for the diameter of which no certain rule can be laid down, as it depends upon the length or size of the yarn, taken into account with the other parts of the machinery. N N N N N N N, a small band passing over the wheels A K, HI L, and M, by which the groove-wheel II and its cylinder are moved, and the spindles driven. O, a treadle shaft, represented by S S, fig. 1, passing through the frame or part thereof at the option of the workman, connected with a tumbler at the end of the embossed spindle or arbor A, in fig. 1, by a small band, wound five or six times round each of them, and passing over the wood groove-wheel Q, and made fast to the back of the carriage F F ; this tumbler, by the motion of A, is, at the return of the carriage, locked to the wheel R ; and unlocked when the carriage is not in its proper situation.

The carriage is drawn on by the weight of S fastened to a cord, which passes over the groove-wheel T, and is connected with the front of the carriage; U, the wheel on the arbor containing die holder shown in fig. 1 ; ', the cylindrical roller on a stirt fixed therein, and rolling at every return of the carriage on the plane W and X, which raises and falls the fallers and holders, so as to distribute the yam upon the bobbins from the top to bottom ; the wheels Y Z, A 2,and B 2, are the same wheels shown by B,C, D, and E, in fig. 1 ; 1, 2, &c., spools containing the rovings.

This machinery is calculated to save the heavy expense of currents of water, erecting spacious ˆuildingsˆ water-works, steam engines, &,c., and

to spin hemp, flax, &c., at such an easy expense as to bring it within the reach of small manufactories. This machinery is also constructed upon such safe and simple principles, that no length of experience is

necessary to enable even children to work it; and the use of water, steam, &c., being rendered unnecessary, it occupies so little space, that it may be placed in small rooms, out-buildings, or other cheap places. To efl'ect the above purpose, it was necessary to get rid of the lanier or flyer, upon the spindle used in the old machinery for spinning hemp and flax, which requires a power in proportion of five to one, and to surmount the difficulty that arose from the want of elasticity in these substances. This want of elasticity, in the substance to be operated upon, is compensated and provided for in this machinery ; and upon this composition and provision, eflfected by the various means hereafter mentioned, the return of the carriage without any assistance from the work-person, and the traverse for distributing the yarn upon the bobbins or quills, lay the stress upon the patent. The most simple mode of compensating the want of elasticity, and which is recommended in preference to the other, is that of having a holder of large wire for every spindle, fixed in an arbor or shaft extending from one end of the carriage to the other.

This arbor or shaft, with the holders, may be considered as a large and improved substitute for what is called a faller in the mule-jennies for spinning cotton, fig. 3. Let A represent the arbor or shaft, bbbbbbbbbb the holders fixed therein with the elliptical eyes, through each of which a thread passes from the bosses on the arbor A, in fig. 1, to its spindle. B, a spindle, which may be from ten to thirteen inches long ; C, the whirl, wherein a small worsted band from the cylinder H, fig. 2, works D, a convex seat upon the spindle, whereon the concave bottom of the bobbin or quill E rests.

F, a piece of buffalo skin, or meta4, screwed or nailed to the rail I, having a hole in it, through which the spindle passes, and by which it is kept steady ; G, a wire bent at right angles at a, and the bent part driven into the rail A, so that it may be removed to or from the whirl C, and, by the other crook /;, prevent the spindle from running out of its step II, which is a screw of brass or other metal passing through the rail K. The wire of which the holder is made, after forming tlie elliptical eye, is left or extended beyond the uppermost part ate, that the yarn may be conveniently slipped in when occasion may require it; these holders for each thread are for the purposes of keeping the yarn in a state nearly vertical over the tops of the spindles when the carriage which contains them is coming out, and being released from that situation at the beginning of the carriage's return, and thrown into nearly a horizontal position, so as to bring the yarn below the top of the bobbins or quills upon the spindles ; and then being curved and raised again by the wheel U, and its cylindrical roller moving upon the plane W and X, fig. 2, distributes the yarn upon the bobbins or quills,

and prevents it from cockling, hinkling, or improperly doubling or twisting together. Ths

seats ujjon the spindles described by D, are turned convex, and the bottoms of tlie bobbins and the bottoms of the qiˆills concave, to keep the bobbins or quills in a more central state upon the seats. The concavity of the bobbins or quills, exceeding the convexity, throws the weight of the bobbins or quills upon the peripheries or extremities of the seats, and ensures the rotatory motions of the bobbins or quills with that of their spindles. We prefer the convex and concave surfaces before described ; but other surfaces will have nearly the same effect, if so contrived (as they easily may be) to bear upon the peripheries or extremities of the seats, as well as of the bobbins or quills. The hole through the bobbin or quill, fig. 4, is rather larger than the spindle, that it may not be obstructed in its mo-tion round the spindle, which motion takes place at every return of the carriage, and as often as any thing obstructs the coming forward of the sliver of which the yarn is formed. At one end of the arbor whereon the holders are fixed is a counterpoise L, fig. 3, having a socket, and made fast ; the arbor by a thumb-screw m, the round ball at the top being led to counterbalance the holders. This counterpoise, when the holders are in a vertical state, declines about 10° or 13° towards the horizon ; but when the holders are thrown down, and under the government of the cylindrical roller V, upon the wheel U, is in a different situation ; but the roller V, arriving at B 3, fig. 2, on the return of the carriage, the holders are precipitated to a height where the counterpoise overbalances tliem, and locks the wheel M fig. 3, or U in fig. 2, in the ratchet n, where it remains until the carriage has reached its destined place, where the tail of the catch O strikes against the pin in a frame C C C C, fig. 2, and releases it, the said roller then resting upon the frame U X. A second method of compensating and providing for the want of elasticity in hemp and flax, which is a part of the discovery, is, to fix a round bar of wood, about an inch and a half in diameter, the whole length of the carriage, about three or four inches above the tops of the spindles, so that the outer surface, or that next the work-person, may be perpendicularly, or nearly so, over the tops of the spindles, tile inner side having pieces of wood or metal nailed or otherwise fixed thereto, leaving only small spaces between each for the yarn to pass through ; the use of these pieces is to prevent the threads getting

together and entangling, see fig. 5. A AAA represents a common faller used in the mule-jennies for spinning cotton with counterpoise B, wheel C, with its cylindrical roller D, with the plane W and X, before described by figs. 1, 2, and 3; E K, spindles with their whirls, convex seats, bobbins or quills, with tlieir concave bottoms ; F 1' ¥ Y V V F F F F the pieces of wood or metal, nailed or olherwise fastened to the round piece of wood, to prevent the thread getting together. In this case every thing applied to or used with the arbor, contain-ingthe holders a) vve mentioned, may bo uj)plied or used.

The bleacliing of linen being a purely chemical art, it might be expected that the knowledge of the instruments it employs would keep pace

with tiie progress and improvements of that science to which it is subordinate, and so mucli the more us the nature of alkaline substances in general, which are its proper instruments, has been in a great measure explained by the celebrated Dr. Black. Yet it has so happened, when a scarcity of these saline substances unhappily prevailed in this kingdom, it was seriously questioned whether their place could be supplied by materials manufactured at home. Mr. Kirwan very minutely gxamined the various processes that had previously been resorted to, and the result of his labors is given in a very valuable paper in the Transactions of the Royal Irish Academy. He commences with barilla. Of this substance there are several sorts, made of different plants ; but the best is that formed near Alicant, at a distance from the sea, by tlie combustion of a plant called by the inhabitants ba-rilha, and described by Jussieu, in the memoirs of the Academy of Paris for 1717, under the name of kali hispanicum, supinum, annuum, sedi foliis brevibus. It seems to be classed by Linnaeus under the pentandria digynia, by the name of sal sola vermiculata frutescens foliis ovatis acutis carnosis, and should carefully be distinguished from the various kinds of salicornia which he ranges under the tide of monandria monogynia; and also from other plants which he calls chceno-podia, which yield an alkali, but less pure tlian the salsola. These plants, being dried to the same degree as hay, are burned in pits nearly as kelp is with us, the ashes and salt run into a grayish blue mass, which is the barilla. Tiie best sort is here called sweet barilla.

The sweet barilla examined by Mr. Kirwan was of a bluish color, covered over with a saline powder exceedingly hard, and had a smart alkaline taste. When broken, it looked black in the fractured part, and

visibly contained pretty large pieces of charcoal. To find the proportion of fixed air in this substance, having reduced a quantity of it to fine powder, he poured on an ounce of it a sufficient rjuantity of marine acid, and found it to lose by the action of this acid eighty grains of its weight; consequently one pound troy of this substance contains 960 grains of fixed air (mixed with a little that had an hepatic smell), that is exactly one-sixth of its weight. Other parcels contained somewhat more, and others somewhat less.

As this substance evidently contained some parts that were soluble in water, and some that were insoluble therein, to discover the weight of each, Mr. Kirwan poured on one pound of it, reduced to fine powder, thirteen pounds of water, moderately hot, successively; this water had previously been boiled and filtered, and contained no other imjmrity than a slight trace of common salt. This (]uaiitity of water was necessary to exhaust all the soluble matter in the barilla. Tiie solutions were taken in six different portions : none of them betrayed the smallest trace of sulphur, nor did tiie Prussian alkali discover any vestige of iron. By eighteen successive evaporations and crystallisations, he obtained 4881 grains of saline matter, and 2903 of insoluble matter.

It may at first sight appear extraordinary that

the saline matter and the insoluble part should weigh more than the pound of barilla that seemed to afford them ; for this amounts only to 5760 grains, and the two former weigh 7784 grains ; but it should be considered that these products were obtained not from the barilla alone, but from the barilla and the water in which the salts were dissolved, whose crystals retained a great quantity of it, and also from the air to which the solutions were exposed, and which they absorbed in large proportion. As the quantity of the insoluble matter was subject to no such deceptive appearance, Mr. Kirvvan began by examining the weight of that ; for this, being subtracted from 5760 grains, necessarily determined the true weight of the saline part; as the state in which the saline part exists in barilla depends in some measure on the earths and charcoal with which it is united, as well as the most advantageous method of using it.

Having therefore dried the insoluble matter for a considerable time, in a low heat, until it appeared as dry as the barilla itself, and found its weight in that state to amount to 2903 grains, or 6‘04791 ounces, Mr. Kirwan took one ounce of it, and, drying it in a heat little below redness, found it to lose thirty-eight grains of moisture. Another ounce of the same residuum, being treated with dilute marine acid, lost 12o‘5 grains of its weight, and this loss expresses the quantity of fixed air contained in it. Another ounce, being calcined in a white heat for about one hour, lost 200 grains of its weight; and, on repeating this experiment, he found the loss amount to 199 grains. Lastly, on the 281 grains which remained after this experiment, he poured dilute marine acid, and found the quantity of fixed air to be 106 grains.

Mr. Kirwan next examined the fixed incombustible part that remained after the above calcination. On the 279 grains of this, which remained after the calcination of an ounce of the insoluble part, he poured a quantity of distilled vinegar, whose specific gravity in the temperature of 62° was 1-008, and digested that residuum therein for sixteen hours in a heat little more than 100°. After edulcoration, and desiccation, the weight of what remained undissolved was found to amount to sixty-three grains. Upon this experiment he reasoned thus: 281 grains of a residuum of this sort contained 106 grains of fixed air, therefore the 279 grains subjected to the vinegar in this experiment must have contained 105-24, which were dissipated by the action of the acid ; there remained, therefore, of mere earth only 173-76; but of these sixty-three escaped the action of the acid, therefore there were dissolved 110-76. And as distilled vinegar can act only on calcareous and muriatic earth (the barytic not being excepted), the 110-76 that were dissolved must have consisted of either or both of these, and the undissolved sixty -three grains must have been argillaceous or siliceous. The sixty-three grains, being digested in spirit of salt, left a residuum of 41 -.‘3 grains, which, therefore, were siliceous ; the remainder, not being precipitable by the vitriolic acid, was consequently argillaceous earth : hence the quantities of these ingredients in 480 grains of the insoluble ˆ>art of barilla were found to be : —

In the whole soluble

part.

grains.

grains.

Fixed air

125-5

759

Water ….

38

229-82

Charcoal …

142-5

861-82

Calcareous earth

89-76

542-86

JMuriatic .

21

127

Argillaceous . .

21-7

131-23

Siliceous …

41-3

249-58

479-76

2901-31

Error .

Error 1-69

480-00

2903-00

We may now return to the soluble part of the barilla, which necessarily amounted to 2857 grains. In the first place, Mr. Kirwan obtained 4213 grains of pure crystallised mineral alkali; but these crystals are known to contain but one-fifth of real alkaline substance, the remainder being fixed air and water of crystallisation ; therefore, one pound of barilla contains but 842 grains of pure real alkali. Besides this, he also obtained 127 grains of a mixture of vegetable and mineral alkali, with a small proportion of extractive matter, and some digestive salt ; this mass constantly attracted moisture. These solutions aftbrded also 125 grains of Glauber's salt, and seventy of common salt ; but the Glauber's salt, at least, did not exist in a crystallised form in the barilla; and, as 100 grains of it are reduced to forty-two by expelling the water of crystallisation, no more than fifty-three grams of it can be deemed to have pre-existed in the barilla. Hence the weight of the different ingredients contained in one pound of sweet barilla is as follows : — '

1050-67

Fixed air …

960

Charcoal

861-82

Calcareous earth .

542-86 ˆ

Muriatic earth

1‘27 (

Argillaceous

131-23 (

Siliceous

24D-58 3

Mineral alkali pure

842 -J 250/ .^

■ 127)

Mineral alkali impure .

Mineral alkali mixed

with common salt

Glauber’s salt

125

Common salt

70

Earth deposited .

20

4306-49

Water

1453-51

Total

5760-00

Hence we see that the alkaline part of barilla is nearly in a caustic state ; for the entire pound of barilla contained but 960 grains of fixed air, and of this quantity 759 were contained in the earthy part. Therefore only 201 grains were contained in the saline part. Now 960 grains of this require for their saturation at least 700 of fi.xcd air, therefore they wanted at least two-thirds

of the quantity requisite to saturate tliem. Hence bleachers should not use boiling water to extract the saline substance of barilla, for the alkaline part being in a caustic state dissolves part of the coaly matter with which it is united, which sullies the solution, gives it a dark hue, and afterwards is deposited on the linen, and cannot be separated by acids.

Dantzic pearlash. — The quantity of fixed air and earth contained in different parcels of this substance is variable ; in some ounces the quantity of fixed air was found to amount to 100 grains, in others to 115 ; and therefore at a medium it may be rated at 107‘5 grains, or 1290 grains in one pound troy. The earth remaining after the solution of one pound amounted to twenty grains. After ten evaporations, Mr. Kirwan procured from one pound of this substance 505 grains of tartar vitriolate, the last portions of which contained some digestive salt, and also thirty-six grains of this last containing a portion of tartar vitriolate ; about eighteen grains of earth were deposited during the evaporations. The remainder of the pound consisted of the pure alkali. Hence the ingredients in a pound must have been nearly in the following quantities : —

Fixed air 1290

Moisture 414

Digestive salt and ditto . . 36 Tartar vitriolate … 505 Earth 38

Mr. Kirwan considers the following method much more practicable and easy than the preceding, for discovering the alkaline principle in all substances in which it exists. 1st. Procure a quantity of alum, suppose one pound ; reduce it to powder, wash it with cold water, and then put it into a tea-pot ; pour on it three or four times its weight of boiling water. 2dly. Weigh an ounce of the alkaline substance to be tried, powder it and put it into a Florence flask with one pound of pure water ; if the substance to be examined be of the nature of barilla or potash ; or half a pound of water if it contain but little earthy matter as pearlash ; let them boil for a quarter of an hour; and when cool let the solution be filtered into another Florence flask. 3dly. This being done, gradually pour the solution of alum hot into the alkaline solution also heated, a precipitation will immediately appear ; shake them well together, and let the effervescence, if any, cease before more of the aluminous solution be added ; continue the addition of the alum until the mixed liquor, when clear, turns syrup of violets red ; then pour the liquor, and])recipitate on a paper filter placed in a glass funnel, the precipitated earth will remain on the filter; pour on this a pound or more of hot water until it passes tasteless; take up the filter and let the earth dry in it until they separate easily, then put the earth into a cup of Staff'ordsliire ware, place it on hot sand anil dry the earth until it ceases to stick to glass or iron, then pound it and reduce it to powder in the cup with a glass pestle, and keep it a quarter of an hour in a heat of from 470" to 500°. 4thly. The earth being thus dried, throw it into a Florence flask and weigh it, then put about one ounce of spirit of salt into another flask, and place this in the same scale as the earth, and counterbalance both in the opposite scale; this being done, gradually pour the spirit of salt into the flask that contains the earth, and, when all eff'ervescence is over, blow into the flask, and observe what weight must be added to the scale containing the flasks to restore the equilibrium ; subtract this weight from that of the earth, the remainder is a weight exactly proportioned to the weight of mere alkali of that particular species which is contained in one ounce of the substance examined ; all beside is superfluous matter.

Crystallised soda. — Though it contains only one-fifth of its weight of real alkali, the remainder being water and fixed air, but the

proportion of alkali being invariably the same, it is the fittest for a standard with which other substances containing the same sort of alkali maybe compared. Mr. Kirwan found that as much of this substance as would contain 480 grains of mere alkali would precipitate 725 grains of earth of alum dried, and consequently that 430 grains of mere mineral alkali precipitate 725 of earth of alum.

Cunnamara kelp. — This is a hard porous black substance, mixed with white and gray spots, its smell sulphureous, and its taste mixed, being that of common salt and alkali. One ounce of it dissolved in marine acid lost twenty-four grains of its weight, which escaped in an aerial form. This air was hepatic. Another ounce dissolved in boiling water left an insoluble residue, which, being heated in a crucible to redness, weighed 165 grains; this residue eff'ervesced with acids, and seemed for the most part calcareous. This solution precipitated twenty-five grains of earth of alum, and therefore contained 16‘5 grains of mere alkali. During the precipitation of the earth of alum much hepatic air was emitted, and the earth was sullied by the sulphur, though only a few grains of this can be presumed to be mixed with it.

Strangfurd kelp. — This substance was much denser, less porous, and in a])pearance approached more to that of a vitrified mass than Cunnamara kelp ; it was at least equally sulphureous. The solution of one ounce of it precipitated only nine grains of earih of alum, and this earth was much more discolored than that precipitated by the preceding kelp. Tiie insoluble residuum of an ounce amounted to 174 grains.

Vegetable alkali. — Mr. Kirwan found that 480 grains of the purest and driest salt of tartar (making allowance for the quantity of fixed air it contained) precipitated 331 “5 grains of eartii of alum.

Cashiip. — The best sort, namely, that marked with the cross arrows, is of a bluish-gray color, exceedingly hard, and of a semivitrified appearance, its smell sulphureovis, its taste scarcely alkaline, and does not attract the moisture of the air. \ ith marine acid, one ounce of it afforded thirty-one grains of hepatic air. When dissolved in water the residuum of an ounce was 357 grains of a gray earth, that appeared to be calca-

leous for the most part. The solution itself was of a yellow color and strongly sulphureous. With the solution of alum it did not effervesce stronijly, until a good deal was addod. The precipitate was of a dirty white, and amounted to sixty-six grains, of which two appeared to be sulphur. Hence its quantity of vegetable alkali is nearly ninety-three grains per ounce.

Common Irish uced ashes. — This was of a loose texture, dark gray color, and salt taste, mixed with charcoal, brick-dust, and other impurities. One ounce of it lost by gentle drying forty-seven grains, and in a red heat seventy-two grains more. Twelve ounces of the undried ashes, being lixiviated, left a residuum, which when dried weighed 4214 grains ; the solution was reddish, replete with extractive matter ; it afforded a large quantity of digestive salt, and some tartar vitriolate, and very little alkali. Two ounces of the same ashes being gently heated to a slight degree of redness lost 186 grains of their weight. One ounce of this calcined ash being boiled in six ounces of water left a residuum of 344 grains, and consequently contained 136 grains of saline matter; but of this saline matter only 22-4 grains were pure alkali, for the solution precipitated 13‘5 grains of earth of alum; an hepatic smell was perceived during the precipitation of the alum, and the earth was of a dirty color.

The following table contains the quantity of mere alkali, in 100 avoirdupois pounds of the substances below-mentioned, by the aluminous test : —

jMiaeral alkali. Crystallised soda . . -20 lbs.

Sweet barilla … .24 Cunnamara kelp … 3‘437

Do. desulphurated by fixed air . 4-457 Strangford kelp … .1-25

Vegetable alkali. Dantzic pearlash … 63-33 Clarke’s refined ash … 26-875

Cashup 19-376

Common raw Irish weed ash . 1-666 Do. slightly calcined . . 4-666

Mr. Kirwan furnishes in his paper a section on the coloring matter of linen yarn and its solvents. Having procured a sufficient quantity of

alkaline lie saturated with this coloring matter, or, as the workmen call it, killed, and which they are m the habit of throwing away, he found it to be a turbid liquor, of a reddish-brown color, a peculiar taste, and strong smell, affording no sign of either acidity or alkalescence. On five quarts of this liquor he poured two ounces of weak marine acid ; there was no eff'ervescence, but a copious deposition instantly took place of a erayish-green color, and the liquor freed from this deposit was of the color of red amber. The next day he drew otT the liquor with a syphon, and poured two quarts of pure water on the deposited matter ; and, having agitated the whole, suffered this matter again to subside, drew off" the water, and added two quarts more ; this liquor gave manifest signs of acidity, and continued somewhat reddish. Presuming, that after the addition of so much water, this acidity could

not proceed from the small quantity of marine acid he had used, more especially as the liquor originally contained an alkali, in the saturation of which the greater part of the acid must have been employed, he began to suspect that this lie contained an acid of its own, which was disengaged and separated from the alkali by the ma-rine acid as the more powerful of the two ; and hence he reserved the two quarts of liquor, last added, for subsequent experiments. After repeated eff'usions of cold water, when the characters of acidity were scarcely any longer perceptible, he threw the deposited matter on a filter and suffered it to dry for some time ; it was then of a dark greenish color, 'somewhat clammy like moist clay. He took a small portion of it, and added to it sixty times its weight of boiling water, but not a particle of it was dissolved. The remainder was dried in a sand heat; it then assumed a shining black color, became more brittle, but internally remained of a greenish yellow, and weighed an ounce and a half.

By treating eight quarts more of the saturated lie in the same manner, Mr. K. obtained a further quantity of the greenish deposit, on which he made the following-experiments : 1st. Having digested a portion of it in rectified spirit of wine, it communicated to it a reddish hue, and was in a great measure dissolved ; but by the eff"usion of distilled water the solution became milky, and a white deposit was gradually formed ; the black matter dissolved in the same manner. 2ndly. Neither the green nor the black matter was soluble in oil of turpentine or linseed oil by a long continued digestion. 3dly. The black matter being placed on a red-hot iron, burned with a yellow flame and a black smoke, leaving a coally residuum. 4thly. The green matter being put into the vitriolic, marine, and nitrous acids, communicated a

brownish tinge to the two former, and a greenish to the latter, but did not seem in the least diminished.

Hence it appears that the matter extracted by alkalies from linen yarn is a peculiar sort of resin, difl^erent from pure resins only by its insolubility in essential oils, and in this respect resembling lacs. He now proceeded to examine the power of the different alkalies on this sabstance ; eight grains of it being digested in a solution of crystallised mineral alkali, saturated in the temperature of 60°, instantly communicated to the solution a dark brown color ; two measures (each of which would contain eleven pennyweights of water) did not entirely dissolve this substance. Two measures of the mild vegetable alkali dissolved the whole. One measure of caustic mineral alkali, whose specific gravity was 1-053, dissolved nearly the whole, leaving only a white residuum. One measure of caustic vegetable alkali, whose specific gravity was 1-039, dissolved the whole. One measure of liver of sulphur, whose specific gravity was ri70, dissolved the whole. One measure of caustic volatile alkali dissolved also a portion of the matter.

M. Hermbstaedt has furnished the following method of preparing colors for dyeing linen poods, which may easily be -cashed out or bleached and rephccd by others. Thev are-

much used in Germany, where they are called u-usc/if'arben or washing colors. The base is a good white starch, which may be combined with any color whatever, in such a manner as to form a compound, that can be dissolved in warm water without being decomposed. But although starch forms the base of all these colors, a particular process is necessary to prepare each of the different coloring matters that are to be combined with it, which we shall give as follows : —

t. Blue. — Grind some indigo of Guatimala to an impalpable powder; then pour four ounces of burning oil of vitriol into an earthen pan, and put to it an ounce of the pulverised indigo, by degrees, and

always in small quantities ; while the indigo is being thus incorporated with the oil of vitriol, the mixture must be well stirred at each fresh addition of the powder with a stone pestle, until the whole liquid mass becomes of a uniform blackish blue color. By thus mix-ing indigo with oil of vitriol the mixture heats itself, exhales a sulphurous smell, and a slight fermentation will be perceived. As soon as the fermentation ceases, the vessel must be closely covered, and placed for twenty-four hours in a situation moderately warm, in order to give time for the acid to dissolve the indigo entirely.

When the dissolution is effected, the liquid must be diluted with ten times its weight of pure water ; after wiiich it is exposed to the fire in a copper vessel, until it is nearly as hot as boiling water. Then soak it in some flocks of wool well bleached, or pieces of white wool, in the proportion of eight ounces of wool to half an ounce of the dissolved indigo ; expose the whole for twenty-four hours to a moderate fire of about 150° of Fahrenheit's thermometer. The wool acquires a very deep blue dye, almost black; and the remainder of the liquid is almost entirely deprived of the blue coloring matter, and appears of a dirty green color. In this manner the wool absorbs the blue coloring matter of the indigo, by separating it from the heterogeneous particles that were combined with it.

The wool that lias been thus dyed is put into a sieve over a tub, and some pure river water poured on, being kneaded at the same time, until tlie water comes ofl' quite clear and colorless; thus the heterogeneous and dirty parts are separated from the indigo, and the pure blue coloring matter remains with the wool. When this operation is terminated, a quantity of river or rain water, equal to forty times the weight of the indigo and oil of vitriol, i.s boiled in a boiler ; in this water is dissolved as much crystallised natron as equals the quantity of inoigo eifi-pJoyed ; the dyed wool is then])lungcd into it, and boiled until it has nearly lost all its color. The wool when it comes out of the boiler is a blue gray ; the liquid remains of a fine deep blue, and contains the coloring matter of the indigo pure and dissolved.

If, for instance, an ounce of indigo is dissolved in oil of vitriol, and the liquid evaporated until the weight is reduced to four pounds and a half, then strained through a linen cloth, in order to sepanite the foreign particles that may be mixed with it, after which, if this blue dye be left to cool, it is then in a proper state to be em-

ployed as a coloring matter to give a blue color to starch.

If a deep blue is desired, the proportions must be half an ounce of indigo to a pound of starch ; for a middling color, a pound and a half of starch to the same ciuantity of indigo; and, for a light blue, two pounds of starch to the same. The starch must be put into a bowl, tlie blue dye poured on it, and the whole well rub-bed together until the starch be completely divided, and uniformly combined with the dye. Lastly, the mixture must be left at rest, until it acquires the consistency of a fine thin jelly; it is then dried in a warm air, and put away for use.

2. To prepare a blue color with prussiate of iron. — A blue color, similar to the preceding, may be prepared by employing, instead of indigo, prussiate of iron, or Berlin blue. The last mentioned must be of the best quality, and it is rubbed with water in a mortar until it is so far combined with it that it will not easily separate ; afterwards the blue matter is left to deposit, the water is decanted off, and the matter is triturated with the quantity of wet starch that is necessary to make the shade of blue desired. This color, which is very fine, is dried, and bears the action of the sun and air better than the preceding. It must be observed, however, that when the cottons that have been dyed with this color are washed with this soap, it always leaves a yellowish tint in the water.

3. Citron-yelloiv. — Weld, saw-wort, and turmeric, are employed in preparing this color. One pound of the two first substances, or half a pound of the turmeric, if that root is preferred, are boiled with twelve pounds of water, in a copper boiler, until the liquid is reduced to a pound, which is then strained through a linen cloth. In this clear liquid two ounces of alum are dissolved, the solution is suffered to cool, and two pounds of white starch are mixed with it, and rubbed until all its particles are well combined with those of the color. This compound is then dried in the air.

4. Orange color. — Bixa orellana is preferred for this color : an ounce of it is pulverised with half an ounce of pure potash ; some river water is poured on it, and this mixture is digested in an earthen vessel,closely covered, for four hours, at a temperature of 18.5° of Fahrenheit, and occasionally shaken.

The liquid obtained by this process is of an orange color, which is drained through linen, suffered to cool, and then incorporated with two pounds of starch. The whole is afterwards dried in a warm or temperate air.

5. Green. — This color is composed of blue and yellow : in order to

obtain it, a part of the indigo dye, described at No. 1, and as much of the yellow dye of No. 3, are mixed together until the desired color is produced, which may be known by trying it on])aper. A pound of this-mixed dye is dissolved with an ounce of alum ; when the solution is cold two pounds of white starch are mixed, and well incorporated with it, after which it is dried.

In this manner different shades of green can be obtained, according to the proportions iu whii-ii tlie blue and yellow dyes are mixed.

LINE N.

6. Dlivc. — Tlii.s color is prepared by mixing tlie indigo dye No. l, \vith the bixa orellana, No. 4, until the desired shade is obtained ; the necessary quantity of starcii is llieu added, and the mixture dried.

7. Rid. — This is prepared from Brasil wood or cocliineal; if the first be preferred, a pound of scrapings of this wood must be boiled in a tin copper cauldron, with twelve pounds of rain or river water, until the vvliole is reduced to two pounds. It is then strained tlirougii linen. Afterwards two ounces of alum are dissolved in three ounces of boiling water, to which are added six ounces of the decoction of lirasil wood, and the whole is left to cool. To tliis mixture diree pounds of white starch are added, and well incorporated ; then the remainder of tlie decoction of Brasil wood is poured on, and the mixture is stirred until it acquires the consistency of a tliin jelly, when it is dried in the air.

8. Crimson. — Half an ounce of pulverised cochineal is tempered with water, and put into a tin vessel, containing two pounds of boiling water. When the whole is well mixed, it must continue gently boiling until the quantity of li-quid is reduced to a pound : it is afterwards strained through linen or a paper filter. In this colored liquid half an ounce of alum is dissolved ; and when it is cold two pounds of starch are well incorporated with it ; it is then left to dry in the air at a mild temperature.

Besides these two colors, other shades of red may be obtained : —

(1.) By adding, instead of the alum, half an ounce of tin dissolved in aqua regia, to a pound of the cochineal or fernambouc dye.

(2.) By mixing either of these dyes with a decoction of weld or turmeric, by which means yellow reds and coquelicot may be produced.

(3.) By mixing them in difl'erent proportions with tlie blue dye, this mixture will produce different shades of violet and purple.

9. Violet. — Haifa pound of scrapings of logwood must be boiled with six pounds of water in a tin vessel, until the liquid is reduced to a pound and a half. This decoction is strained through linen, or filtered through paper. An ounce of tin dissolved in aqua regia is then added to it, two pounds of starch incorporated witli it, and left to dry in mild air. In this manner the colors and shades may be multiplied and diversified in a thousand ways by mixing the above decoction in different proportions, or by adding to it other coloring substances, in order to obtain dyes tiiat may be combined with the starch.

When any of these colors are used to dye wearing apparel, furniture, &c., any quantity may be taken and tempered with fresh water, and afterwards dissolved in boiling water: into tills the stuff must be plunged; which, with well rubbintˆs takes the desired color, and acquires also additional body or solidity.

Mr. .Shotwell obtained a patent, in 1807, for a machine for bleaching, washing, and cleansing linen. It consists of an oblong wooden box of about three feet and a half in length, fourteen inches wide, and about fourteen inclies deep, made perfectly water-tight, excepting a small

bole through the bottom near to one end, todiav/ off the water when done with, which hole is at other times stopped up by a bung or any other contrivance. To this box legs are affixed, so as to raise it about three feet from the ground ; it is covered over with boards laid crossways about four inches and a half at each end, and which may be made to project outwards to any extent, as also over each side so as to form a table. Tiie remaining open space is covered with two Haps, excepting a portion of about uine-eigliths of an inch ; one of these flaps is hung with hinges to the outward or back side, so as to form a door to lift up ; tlie other is simply laid in grooves, and fastened down by wooden bolts. Into the open space between the boards, the washing implement, represented in figs. 6 and 7, is introduced ; and to the top

of this a lever is attached in tiie manner shown at B in figs. 8 and 9 ; tliough it is evident, the patentee states, that any other mode of propelling the washing implement may be employed, or the lever may be attached in any other way.

Instead of having the washing-implement on the above plan, the box may be entirely covered over with boards, flaps, or doors, as before mentioned ; and pieces of wood may be nailed to the inside, so as to form ridges about an inch and a half from the top, on which the washing-imple- ment may be suspended and made to slide ; the whole of the upper part will in this case be needless, and the lower part, which will be in the box, is to be affixed to a lengthened piece of wood C, fig. 8, which is to be brought through a hole made in the end of the machine, opposite to that at which the lever B is placed. This lengthened piece of wood is connected with the lever in the manner shown by the dotted lines C U in fig. 8.

The foul linen to be washed by this machine is evidently to be placed on each side of the implement, which is to be forced backwards and forwards by the lever, as before described.

If it be convenient to admit steam into the machine, the water therein will be kept at a pro per heat, and the linen will be whiter than in the usual way of washing. The steam may be introduced into the washing-macliine by means of a pipe communicating with a boiler.

Fig. 6 exhibits a side view of the washing-implement.

Fig. 7 a front view of the same, or that part which faces the end of the machine.

Fig. 8 is a side view of the apparatus complete. A, the oblong box, with small inclinations at each end, as shown by the dotted lines u «, which cause the linen to turn more about than they otherwise would, when the washing-imple- ment approaches tiiem. B shows one way of connecting the lever with the im]ilemeiit, and the dotted lines C D another. E is a mortise to support a tenant board, on wliich the lever B works ; it is more clearly shown in fig. 9 which is an end view.

Mr. Sliotwell has constructed another apparatus for the same purpose, which it may be advisable briefly to examine. Instead of making an oblong box, a barrel is formed, which is placed horizontally on axes at eacli end, whicii

are made to turn in friction-boxes. Tlie barrel is placed on a convenient framing, as may be seen in iigs. 10 and 11, to which is generally attached a vessel, immediately under the washing-barrel A, to receive the dirty water from the barrel, in which there is a hole B to permit its escape into the vessel D. In this barrel a hole C is made sufficiently large to put in and take out the linen, &c., and which is stopped up with a bung when in use. On the inside of this barrel one or more ribs is affixed, as in the com-mon horizontal barrel-churn ; and when steam is to be employed, as in the apparatus described, it must be introduced through one of the axes, which must be perfoiated for that purpose: the other axis should also be perforated to permit the es-cape of any superabundance.

Mr. Weise, of Tooley Street, has taken out a patent for making cloth waterproof. Among the materials enumerated by the patentee are, fur, flax or hemp, carded silk, and feathers. The proportions of these are to be five pounds of the finer furs, two pounds and a half of the wool, two pounds of the flax, one pound of the carded silk, and three-quarters of a pound of the feathers. These materials are to be divided into portions of about two ounces each, and to be passed through a fine carding engine by one portion at a time, the fine fur being first laid or bowed on the roller cloth of the engine, which will cause it to lie on the outside of the carded flake. After being thus carded, the materials are to be drawn, roved, and spun, like cotton, the management directed for them being the same as is used for that substance.

The yarn spun is to be of two sorts, one fine, for the warp, and the other coarser and softer, for the weft. It is then to be woven in a loom of from eight to twelve lambs, and a proportional number of treadles. The fine yarn forming the warp is to be kept at the back of the cloth, and the soft weft in the front, by the means well known to weavers, and similar to those used in weaving diapers and velvets.

When the cloth is wanted to be made waterproof, a composition is to be prepared of equal portions of shell-lac, caoutchouc, mastic, gum animi, and sandarac; by cutting the caoutchouc into very small shreds,

and pounding tlie gums and lac very fine, and then dissolving them in ether and spirits of wine, or spirits of turpentme. Into this composition the fine skeins for the warp are to be dipped, and then to be gently pressed or left to drain, and to be hung up to dry ; and, wiien dry, are to be stretched in the loom, where, instead of the common sizing, the composition above stated is to be used.

After the cloth is woven, the fur or nap is to be drawn forward on its front by teazles or cards, and a hot smoothing iron is to be passed over its back, to cause the composition to sink into it, and close the interstices.

This cloth, when intended for hats, is to be laid over linings or moulds, on hat blocks, of the same materials usual for those of silk hats, and to be managed in the same manner. For weariuij; apparel tlie cloth is to be chiefly made of Saxon wool and flax, managed as before mentioned ; and when cloth with a pile, like

plush or velvet, is wanted, it is to be woven in a velveteen loom, and then to be cut in the u»5ual manner.

A few facts connected with the history of weaving may now he introduced.

The combined arts of spinning and weaving are among the first essentials of civilised society, and we find both to be of very ancient origin. The fabulous story of Penelope's web, and still more the frequent allusions to this art in the sacred writings, tend to show, that the fabrication of cloth from threads, hair, &c., is a very-ancient invention. It has, however, like other useful arts, undergone a vast succession of improvements, both as to the preparation of the materials of which cloth is made, and the apparatus necessary in its construction, as well as in the particular modes of operation by the artists. Weaving, when reduced to its original principle, is nothing more than the interlacing of the weft or cross threads into the parallel threads of the warp, so as to tie them together, and form a web or piece of cloth. This art is doubtless more ancient than that of spinning, and the first cloth was what we now call matting, *viz.* made by weaving together the slu-eds of the bark, or fibrous parts of plants, or the stalks, such as rushes and straws.

This is still the substitute for cloth amongst most rude and savage nations. When they have advanced a step farther in civilisation than

the state of hunters, the skins of animals become scarce, and they require some more artificial substance for clothing, and which they can procure in greater quantities. Nevertheless, some people are still ignorant of the art of weaving ; for the cloth made in the islands of the Soutli Sea appears to be made by cementing or glue-ing the shreds together, rather than by weaving. From the description given by captain Cook, and other circumnavigators, and from the specimens which have been brought to Europe, their cloth, or rather matting, is in general produced by cohesion of the parts, rather than texture. This assimilates it more to the ideas which we attach to paper or pasteboard, than those which we form of cloth.

When it was discovered that the delicate and short fibres, which animals and vegetables afford, could be so firmly united together by twisting as to form threads of any required length or strength, the weaving art was placed on a permanent foundation. By the process of spinning which was very simple in its origin, the weaver is furnished with threads far superior to any natural vegetable fibres in lightness, strength, and flexibility; and he lias only to combine them together in the most advantageous manner.

The art of weaving cloth has been so extensively applied in almost every civilised country, and the knowledge of its various branches ha.i been derived from such a variety of sources, that n» one person can ever be practically employed in all its branches ; and, though every part bears a strong analogy to the rest, yet a mi-nute knowledge of each of these parts can only be acquired by experience and reflection.

We may now briefly examine the origin of the linen manufactory in Ireland. In the year

1633 lord Wentwortli, an austere, imperious, but active and sagacious nobleman, entered into office as chief governor. He was a tyrant, but his tyranny was tempered with wisdom. Sensible how much the power and glory of a monarch depend on the prosperity of his people, he was so assiduously attentive to the peace, intellectual improvement, and

industry of tlie Irish, that, though individuals often felt the arrogance of his temper, the nation in general had reason to be grateful for the benefits arising from the vigor of his administration. Protected by a strictness before unknown in the execution of English law, unusual numbers, and with unusual attention, applied their thoughts to pursuits of industry; the consequences of which appeared in the rising value of land, the augmented quantity of products for exportation, and such an increase of commerce, that the sliipping of Ireland was multiplied a hundred fold. For the encouragement of traffic, this deputy, so zealous for the promotion of the power and revenue of his master, used his influence for the abolition of oppressive duties on the importation of coals and horses into Ireland, and on the exportation of live cattle.

By Wentworth's endeavours, a manufacture of linen cloth was established in Ulster : a re-cent fabrication of woollen drapery was discouraged, lest it should come in competition with that of England, for the purpose that Ireland should be dependent on that country for the clothing of its inhabitants, and consequently less prone to a political separation ; to make amends for this injustice, the deputy exerted himself so strenuously for the encouragement of linen, that he took a share in the enterprize, at the expense, according to his own statement, of £30,000, from his private fortune ; as flax had long been known to thrive in this country, and many of the women being spinners, hopes of success were early conceived. Flax-seed was brought from Holland ; weavers from several parts of the Low Countries, and from France ; looms were fabricated, and regulations formed for the prevention of defects in the cloth by fraud or negligence : experience has proved the propriety of the plan, since this manufacture, notwithstanding its interruption in its infancy, by a desolating civil war, became in time the principal support of the wealth of Ireland.

In Ireland, every bleacher must stamp his own i>arae on the end of every web ; hence it can al-ways be ascertained, by mere inspection, where the bleaching has been performed. Again, should any goods be improperly bleached, so that the texture is injured, the bleacher is liable to be compelled to take back the whole of them, and pay every expense of carriage, however far they may have been conveyed from the spot wliere they were finished. In this case, the bleacher is also subjected to a considerable fine. So certain is the infliction of this penalty, in case of a complaint being properly lodged against a delinquent, that some years ago, when the bleaching process was not conducted with that care with which it is at present, several persons actually travelled through many of the counties of England and

Scotland for the purpose of collecting

from tlie mercers all such damaged Irish linens, and for whicli they paid good prices, in order to be entitled to receive the fines.

Tlie best regulation may, however, be superseded and often evaded. Accordingly it is well known that many hundred thousands of pieces of calicoes are made and finished in Lancashire, and stiffened in a peculiar way, to imitate the Irish linens, particularly those made at Coierain, and that they have the name of this place stamped upon them.

It is notorious that a kind of linen thread made at Paisley, in Scotland, and known by the name of nuns' thread, has. the preference, and is the best for use. In consequence of the character which this thread has acquired, the Irish have begun a similar manufacture, and scruple not to usher theirs into the market under the sanction of a stamp bearing the name of Paisley.

In like manner, an article called Inkle, and some species of thread resembling tliat which is made in Holland, are now manufactured in large quantities in Scotland, and sold under a Dutch stamp ; the method of making these articles hav-ing been stolen from Holland, and brought into Scotland half a century ago. Thiis, self-interest is apt to be the leading motive with mankmd in all nations.

The linen trade of this country is regulated by several statutes.

No person shall put to sale any piece of dowlas linen, &;c., unless the just length be expressed thereon, on pain of forfeiting the same, 28 Hen. 'III. cap. 4. Losing means whereby linen-cloth shall be made deceitfully incurs a forfeiture of the linen, and a month's imprisonment. Stat. 1 Eliz. cap. 12. Any persons may set up trades for dressing hemp or flax, and making thread for linen-cloth, &c. 15 Car. II. cap. 15.

By 43 Geo. III., c. 69, all former duties on linen-cloth, silks, cottons, and calicoes are repealed ; and in lieu thereof other duties are imposed upon all goods which shall be printed, stained, painted, or dyed in Great Britain, according to a schedule annexed to the act : and, by 50 Geo. III. c. 26, certain export duties are imposed ; the said dutrs to be paid by the printer, stainer, painter, or dyer. By 49 Geo. III., c. 98, certain duties and customs are imposed upon French linens (or lawns). By 43 Geo. III., c. 69, every calico printer, and every

printer, painter, or stainer of linens, cottons, or stuffs shall pay annually for a license £lO. The printing or staining of calicoes must be for exportation ; because by 7 Geo. I., stat. 1, c. 7, the use of printed, painted, stained, or dyed calico for wearing apparel is prohibited, on pain of £5 to I'he informer, on conviction : and a person off"er-ing such for sale, unless for exportation, forfeits £20, half to the informer and half to the poor. This prohibition, however, does not extend to calicoes dyed wholly blue : and it shall be law-ful to use stuft' made of linen yarn and cotton wool manufactured, and printed or painted in Great Britain, provided the warp thereof be wholly linen yarn. 9 Geo. II., c. 4. By 14 Geo. III., c. 72, it is enacted that no greater duty shall be paid for stufls made of raw cotton wool within this kingdom than Sˆc/. a yard, 43 Geo.

III., c. 69, and tliat any person may use the same in apparel or otherwise : and every piece is to have three blue stripes in both selvedges, and to be stamped at each end with a stamp provided by the officers of excise ; and, instead of the word calico, used for foreign calicoes, each piece shall be marked with the words British Manufactory. If stuffs made wholly of cotton, and printed, painted, stained, or dyed stuffs (muslins, neckcloths, and fustians excepted), without such mark shall be exposed to sale, they shall be forfeited, and £50 for each piece. If any person shall counterfeit such stamp, or knowingly sell such stuffs with a counterfeit stamp, he shall be guilty of felony without benefit of clergy. If any person shall import any calicoes, muslins, or other stuffs made of linen yarn only, or of linen yarn and cotton wool mixed, or wholly of cotton wool, in which shall be woven in tlie selvedge any such blue stripe, he shall forfeit the same and £lO for each piece. Every such printer, painter, stainer, or dyer, shall give notice in writing, at the next office, of his name and place of abode, and where he intends to work, on pain of £50. 10 Anne c. 19 ; 25 Geo. in., c. 72. By 1 Geo. II., stat. 2, c. 34, any person undertaking to print, paint, &c., any silks, linens, or stuffs, at any other place than the place of his usual residence or exercise of his trade, shall first make entry of the place, and pay the duties, on pain

of £50, and forfeiture of the goods. Officers may enter at all times, by day or night, to take account, &c., and the penalty of obstructing the officer in the execution of his duty is £200. 10 Anne c. 19; 25 Geo. III., c. 72. Goods shall be entered once in six weeks on oath before the collector or supervisor, on pain of £50. 10 Anne c. 19. No person shall begin to print, stain, paint, or dye any goods before they have been measured and mark-ed, on pain of forfeiting the same, and also £20' for every piece. 25 Geo. III., c. 72. If any printer shall wilfully cut out or deface such frame-mark, he shall forfeit £50. Concealing goods, or avoiding duty, incurs a forfeiture of £50 ; and all goods found in a place of which no notice has been given, or the value thereof, shall be forfeited. 10 Anne c. 19 ; 25 Geo. III. c. 72. Nor shall goods be kept in unentered places on pain of forfeiting £50, and the goods. 20 Geo. III., c. 72. Within six weeks the du-ties shall be cleared, on pain of forfeiting double. 10 Anne c. 19. Nor shall they be removed be-fore the officer has taken account of them and stamped them, on pain of £50, and seizure. 10 Anne c. 19 ; 25 Geo. III., c. 72. Goods surveyed shall be kept separate from those unsurveyed, on pain of £50 ; and goods unstamped may be searched for and seized. 10 Anne c. 19 : 25 Geo. III., c. 72. The person in whose custody such goods are found shall forfeit £100. 5 Geo. III., c. 11 ; 27 Geo. III., c. 31.

Calicoes, Sec, that shall not have three blue threads in the selvedge, shall be deemed foreign calicoes; and, on being printed or dyed, shall be marked at each end with the words 'foreign calicoes for exportation;' and every dealer who shall have any such goods in his custody (except dyed throughout of one color), or any stuffs

made wholly of cotton wool woven in Great Bri tain, commonly called ' British manufactory,' (muslins, neckcloths, and fustians, excepted), not having such blue threads, shall forfeit £200, and every such piece found in his custody. 25 Geo. III. c. 72. The owner or printer of any piece or remnant of cossac, or foreign muslins and calicoes, shall, before they be presented to the officer, mark the same at both ends with a frame-mark, containing his name and place of abode, and also the name by which such goods are commonly known (except such as are dyed throughout of one color), on pain of forfeiting £l0 for every piece or remnant. The owner or printer of any linens or stuffs made of cotton mixed, or wholly of cotton wool woven in Great Britain, called ' British manufactory or muslins,' shall mark the same at both ends (fustians, velvets, velverets, dimities, and other figured stuffs, excepted) with a mark, containing his name and place of abode, and the name and quality of such goods, with the ready-money price

thereof, before the same are presented to the officer in order to be printed or dyed, on pain of forfeiture, and seizure, and £20 ; and, if any such piece be marked at a less price than the real value, the same may be seized and forfeited, and the owner shall forfeit £20. If the frame-mark be defaced, the same shall be renewed on notice ; but if any person shall counterfeit or forge any frame-mark, he shall forfeit £lOO ; and, if any person counterfeit the stamp, it is felony without benefit of clergy. 25 Geo. III. c. 72; 27 Geo. III. c. 31. If any person shall knowingly sell any of the goods with a counterfeit stamp, he shall forfeit £100, and stand two hours in the pillory, 10 Anne, c. 19; 13 Geo. III. c. 56; 25 Geo. III. c. 72. By 27 Geo. III. c. 31, if any person shall knowingly sell any such goods with counterfeit stamp, thus intending to defraud his majesty, he shall be guilty of felony without benefit of clergy. Every person who has' paid the duties, or bought the goods of any person who has paid the duties, may export the same, and shall be allowed all the duties in drawback, as set forth in 43 Geo. III. 0. 69, Sched. C, on conforming to certain prescribed conditions. 25 Geo. III. c. 72 ; 25 Geo. III. c. 74. By the 4 Geo. III. c. 37, which establishes the corporation of the English Linen Company for making cambrics and lawns, it is enacted that the commissioners of excise, where there shall be a manufactory of cambrics or lawns, or of goods known undei tliat denomination, shall appoint the supervisor or other officer to seal the same, for which they shall have such fee as the commissioners shall appoint; the manufacturer to give notice in writing to the officer of the finishing of every piece, before it is taken out of the loom, who shall seal the same at both ends ; on pain that such manufacturer, taking the same out of the loom without having given such notice, and hav-ing the same sealed as aforesaid, shall forfeit .£5 ; and every such piece shall be forfeited, and may be seized by any officer of the customs or excise ; and llic officer, witii convenient speed after notice, shall mark and also number eacli piece ; and make entry in writing, in books to be provided at the expense of the manufacturer,

of the number set to each piece, the length tliereof, and the number of

threads in the warp, on pain of .£“10. If the officer shall mark any not made in England, or after the same is taken , out of the looms, he shall forfeit £50 for each piece to him who shall sue, and forfeit his office, and be incapacitated to hold any other office of trust under tiie crown. If any person sliall offer to the officer any bribe, he shall forfeit X50 ; and if he shall by bribery, or oiherwise, prevail upon the officer to commit such offence, he shall forfeit £100, and stand in the pillory two hours. And tlie officer shall yearly, in the n onth of June, transmit to the commissioners an account of all goods which he shall have stamped, and a copy of the entries made, on pain of dismission ; and he, or his executors, shall deliver up the seals, on demand from the commissioners, on pain of £200. Cambrics and lawns made in Eu’jˆland, found unstamped, shall be forfeited, and may be seized by any officer of the customs or excise, and, after condemnation, shall be sold; and every person who shall sell, or expose to sale, or have in his custody for that purpose, any cambrics or lawns made in England, unmarked, shall forfeit £-200 : such goods not to be sold, or worn in this kingdom, but to be exported, and to be sold only on condition of exportation. Nor shall they be delivered out of the warehouse until bond be given, to the satisfaction of the collector, in double penalty of the goods, that

the same shall be exported, and not relanded. To counterfeit the seal appointed by this act, or import any foreign cambrics or lawns having such counterfeit mark thereon, or expose the same to sale, knowing the stamp thereon to be counterfeited, is felony without benefit of clergy. All goods condemned in pursuance of this act, and all pecuniary forfeitures (not otherwise directed), shall be sued for and recovered in any of his majesty’s courts, in the name of the attorney-general, or of such officer as aforesaid; and applied, after deduction of charges, half to the king, and half to the officer seizing, informing, or suing, according to the directions of this act. The penalties may be sued for, levied, and mitigated, as by the laws of excise, or in the courts at Westminster ; and employed half to the king, and half to him that shall discover, in-form, or sue. lOAnne, c. 19; 24 Geo. II. c. 40; 23 Geo. III. c. 72. All utensils and instruments for printing, painting, staining, or dyeing such goods, in custody of the said person, or any other, shall be liable to all arrears of the duty, and to all penalties concerning the same, in like manner as if such person was the lawful owner, 10 Anne, c. 19; 25 Geo. III. c. 72; 28 Geo. III. c. 37.

A few statistical tables, illustrative of this branch of our manufacture, must conclude our article. We shall commence with an enumeration of

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The following is an account of the number cf yards of linen cloth on which duties of ex-cise have been paid in the year ending 5th of January, 1826, for painting and printing linen cloth respectively; with the rates of duty paid per square yard.

Linen cloth painted at 3ˆd. per square yard.

Linen cloth printed at 3ˆrf. per square yard.

Yards.

554,721

Yards. 1

1,378,356

LING, n. s. Isl. and Goth, ling; Dan. lyng. Heath ; brake. The former sense is retained in tlie northern counties ; yet Bacon seems to distinguish them.

Heath, and ling, and sedges.

Bacon ,, Natural History.

LiNG, n.s. Belg. livg/ic ; Swed. langa. A kind of sea fish.

When harvest is ended, take shipping, or ride, Ling, salt fish, and herring, for Lent to provide.

Tiisser. Our English bring from thence good store of fish,

LIX

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but especmlly our deepest and tliickest Utig, which are therefore called island Hugs. Abbot.

Li\G. See Gadls.

LINGELBACII, or Lixgelback (John), an excellent painter, horn at Franckfort on the Maine, in 1625. He learned the art in Holland, but perfected himself at Rome ; wliere he studied till 1650, when he settled at Amsterdam. His usual subjects are fairs, mountebanks, sea-pieces, and landscapes, which he executed well, and enriched with antiquities. His sea-fights are full of expression. He had also great readiness in painting figures and animals, and was employed by other artists to adorn their landscapes with such objects. He died in 1687.

LIXGEN Isle, an island in the Eastern Seas, of irregular figure and situated off the north-east coast of Sumatra. It is fifty miles in length, and thirty in breadth, and is remarkable for a moun-tam in its centre, terminating in a fork, which the seamen have distinguished by the name of Ass's Ears. It is much frequented, and indeed possessed by Malay pirates. The equinoctial line passes through it.

LIN'GEll,v.«.&cv. rt. ˆ Sax. hnj.lenj, long.

Lin'gerixoly, rtrfy. i To remain (i.e. stay long); particularly to remain in pain, languor, idleness, or suspense. Generally used respecting a culpable or painful delay : barbarously used by Shakspeare as an active verb, or iti the sense of to protract; draw out : lingeringly is tediously; in a delaying manner.

And while he lingered, the men laid hold upon his hand ; and they brought him forth. Gen. xix. 16. Let order die,

And let this world no longer be a stage

To feed contention in a lingevbiˆ act. Shakspeare.

We have lingered about a match between Anne Page and my cousin Slender, and tliis day we shall have our answer. W.

She doth think, she has strange lingering poisons.

I can get no remedy against this consumption of the purse. Borrowing

only lingers and lingers it out, but the disease is incurable. Id.

Perhaps thou lingereat, in deep thoughts detained Of the' enterprise so hazardous and high. Milton.

Of poisons, some kill more gently and lingeringly, others more violently and speedilv, jet both kill.

Hale. Not accompanied with so acute torments, nor with so lingering pains, nor with so utter a ruin as might have been inflicted. Barroir.

Should not a lingering fever be removed. Because it long has raged within my blood?

Dryden . Ye brethren of the lyre, and tuneful voice, Lament his lot ; but at your own rejoice. Now live secure, and linger out your days ; The gods are pleased alone with Purcel's lays.

Like wretches, that have lingered long, We'll snatch the strongest cordial of our love.

Id. Your very fear of death shall make ye try To catch the shade of immortality ; Wishing on earth to linger, and to save Part of its prey from the devouring grave.

Prior. Better to rush at once to shades below, Tlian linger life away, and nourish woe.

I'ope's Odysfcy-

Sir, — For some months past I have been rambling over the country ; but 1 am now confined with some lingering complaints, originating, as I take it, in the stomach. Burns.

Straight be thy course : nor tempt the maze that leads

Where fell Remorse his shapeless strength conceals, .'Vnd oft Ambition's dizzy cliff he treads,

And slumbers oft in Pleasure's flowery vales. Nor linger unresolved. Beattie.

LIN'GET, or ˆ Fr. Unget, iron; Span, ingot.

Lix'guet, 72. s. S A small piece of metal.

Other matter hath been used for money, as, among the Lacedemonians, iron linguets quenched with vinegar, that they may serve to no other use. Camden.

LIN'GO, n. s. "\ Port, lingoa, from

Lingl'a'cious, adj. ˆthe Lat. lingua, tiie

Linguadent'al, adj. (tongue, the origin of

Lin'guist. ' tlie other words. Lin—

guacious is full of tongue; loquacious; talkative: linguadental, Lat. Lingua and denx, uttered by the joint action of the tongue and teeth : linguist, a professor of languages, or one skdled in various languages.

Though a linguist should pride himself to have all the tongues that Babel cleft the world into, yet, if he had not studied the solid things in them, as well as the words and lexicons, he were nothing so much to be esteemed a learned man, as any yeoman or tradesman competently wise in his mother dialect only. Milton.

The Unguadentuls, f, v, as also the Hnguadentdls, ih, dh, he will soon learn.

Holder s Elements of Speech.

Our linguist received extraordinary rudiments towards a good education. Addison's Spectator.

I have thoughts to learn somewhat of your lingo, before 1 cross the seas. Congreve.

Tliis then, if fostered by the hand of a skilful linguist, this science might perhaps, in time, come nearer than any other to realize the extravagant idea of the ingenious but romantic Bishop \ ilkins, of an universal language. Canning.

LINGONES, an ancient people of Gallia Belgica, who inhabited part of Champagne, now in the department of the L'pper Marne. They were conquered by Julius Csesar, and made tributaries to Rome. They afterwards emigrated into Italy, and settled on the Adriatic, near the Alps.

LING-TAO, a city of China of the first rank, in the province of Chen-si, in a fertile territory, abounding with gold, corn, fruits, cattle, tigers,

wild bulls, &c. : 672 miles W.S. W. of Peking. Long. 121” 20’ E. of Ferro, lat. 35° 22’ N.

LIN’IMENT, ?i. s. Ft. liniment; Lai. lini-mentum. Ointment; balsam; unguent.

The nostrils, and the jugular arteries, ought to be anointed everj’ morning with this liniment or balsam.

Harvev.

The wise author of nature hath provided on the rump two glandules, which the bird catches hold upon with her bill, and squeezes out an oily pap or liniment, fit for the inunction of the feathers. Ray.

A Liniment, in pharrr.acy, is somewhat thinner than an unguent, and thicker than an oil, used for anointing different parts of the body. The materials proper for composing liniments are, fats, oil, balsams, and whatever enters the composition of unguents and plasters.

LINK, n. s. &L V. a. Teut. gelenke ; Dan. and Isl. lankc ; Swed lank. A purt or ring of a

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chain ; a loop ; any thing connected in its parts by loops or rings, and any siiigle part of such thing: to connect together ; enchain; unite; or concatenate.

But fair Clarissa to a lovely frere Was linked, and by him had many pledges dear.

Faerie Qtieene. They make an offer of themselves into the service of that enemy, with vi'hose servants they link themselves in so near a bond. Hooker.

These things are linked, and, as it were, chained one to another : we labour to eat, and we eat to live, and we live to do good ; and the good which we do is as seed sown, with reference unto a future harvest.

Id. The Roman state, whose course will yet go on The way it takes, cracking ten thousand curbs Of more strong links asunder, than can ever Appear in your impediment.

Shakspeare. Coriolanus. They're so linked in friendsliip, That young prince Edward marries Warwick's daughter. Shukspeure. Blood in princes linked not in such sort. As that it is of any power to tj'e.

Daniel's Civil War. God has linkl our hopes and our duty together. Decay of Piety. I feel Tlie link of nature draw me ; flesh of flesh, IJone of my bone thou art.

Milton's Paradise Lost. Descending tread us down. Thus drooping ; or with United thunderbolts Transfix us to the bottom of this gulph. Milton. INIarried to immortal verse. Such as the meeting soul may pierce In notes, with many a winding bout Of linked sweetness long drawn out. Id. The thread and train of consequences in intellective ratiocination is often long, and chained together by divers links, which cannot be done in imaginative ratiocination, by some attributed to brutes.

Jndge Hale. Truths hang together in a chain of mutual dependence ; you cannot draw one link without attracting others. Glanville.

So gracious hath God been to us, as to link together our duty and our

interest, and to make those very things the instances of our obedience, wiiich are the natural means and causes of our happiness.

Tillotson. Fire, flood, and earth, and air, by this were bound, And love, the common link, the new creation crowned. Dry den's Knight's Tale. By which chain of ideas thus visibly linked together in train, i. e. each intermediate idea agreeing on each side with those two it is immediately placed between, the ideas of men and self-determination ap-pear to be connected. Locke.

Make a link of horse hair very strong, and fasten it to the end of the stick tliat springs. Mortimer.

Though I have here only chosen this single link of martyrs, I might find out others among those names which are still extant, that delivered down this account of our Saviour in a successive tradition.

Addison on (he Christian Religion. While she docs her upward fliglit sustain, Touching each link of the continued chain, At length she is obliged and forced to see A first, a source, a life, a deity. Prior.

So from the first eternal order ran, And creature '.inked to creature, man to —nan.

1'opc.

The three principal links in this chain are svmpa-thy, imitation, and ambition.

Barke on the SnbUme, Ask not the boy, who, when the breeze of morn First shakes the glittering drops from every thorn, Unfolds his flock, then under bank or bush Sits Unking cherry stones, or platting rush. How fair is Freedom 1 Ccu-per.

Steel were the knots, and steel the twisted thong, Ring linked in ring, indissolubly strong ; On viewless hooks along the fretted roof He hung, unseen, the inextricable woof. Daruin. 'Tis something, in the dearth of fame.

Though linked among a fettered race, To feel at least a patriot's shame.

Even as 1 sing, sufiTuse my face. Byron.

LINK, ra. s. ˆ Goth, lugii; Gt.Xvxvoq. A LiKKBoy, > torch of pitch : link hoy or LiNKMAN, 3 man, the bearer of this useful invention.

O, thou art an everlasting bonefire light ; thou hast saved me a thousand marks in li)iks and torches, walking with thee in the night betwixt tavern and tavern. Shukspeure. Henry IV.

There was no link to colour Peter's hat.

Shakspeare. Whereas history should be the torch of truth, he makes her in divers places a fuliginous link of lies.

Hotvel. One that bore a link On a sudden clapped his flaming cudgel, Like linstock to the horse's touch-hole.

Hudibras. What a ridiculous thing it was, that the continued shadow of the earth should be broken by sudden miraculous disclusions of light, to prevent the officiousness of the linkboti ! More.

Bound as a globe, and liquored every chink. Goodly and great he sails behind his link.

Drydcn . Though thou art tempted by the linkman's call. Yet trust him not along the lonely wall. ('cy—

In the black form of cinder-wench she came, O may no linkboi/ interrupt their love ! Id.

LINLITHGOW (from Lin, Gael. *i.e.* a lake, lith, a twig, and gow, a dog), a royal borough in Scotland, capital of the county. The name is said to allude to a black bitch, which, according to tradition, was found tied to a tree in a small island, on the east side of the lake, near whicli the town stands. This etymology seems confirmed from tlie figure of the black bitch making part of tlie town's armorial bearing, on its public seal. Otliers, however, derive the name from lin, a lake, lith, snug or close, and gow, a vale, which seems confirmed from its situation. It was a royal borough in the time of David I. On the accession of the house of Stuart it became a royal residence. James IV. was much attached to it, and built the cast part of the palace, which has been pecidiarly magnificent. Several queens of Scotland held it as their jointure. It is built of polished stone, and covers an acre of ground forming a square with towers at the corners, and standing on a gentle eminence, with the lake behind it on the west. It was greatly ornamented by .lames V. and VI. Within it is a handsome square ; one side of which was built by James V'l., and kept in repair till 174(3, when it was accidentally damaged by the king's troops

making lires on the liearlhs, by which the joists were burnt. A stone ornamental fountain in the middle of the court was destroyed at the same time. The other sides of the square are more aivcient. Narrow galleries run quite round the old part, to preserve communications with the rooms; in one of which the unfortuiˆate Mary queen of Scots was born. The town consists of one open street of stone houses, three-quarters of a mile loig, with lanes on each side, and gardens on the nortii and on the soutii. On the north side of the Higli Street, on an eminence erst of the palace, stands St. Michael's church. In the market place is another fountain of two stories with eight spouts, and surmounted like the former with an imperial crown. The gallery, whence the regent iNlurray was shot, is still to be seen. The house of Carmelites, founded in 1290, was destroyed by the reformers in 1559. Tliis borough is governed by a. jirovost, four bailies, dean of guild, treasurer, twelve merchant-coun- cillors, and eight deacons of incorporations. The market is on Friday, and there are six fairs. A considerable trade is carried on in leather, flax, wool, stockings, linen, porter, ale, &c. Linlithgow is two nldes south of Borrowstownness, its port, and sixteen west of Edinburgh.

LixLiTUGow. See Lothian West.

LINNE' (Sir Charles), the celebrated reformer of botany and natural history, was born on May •2ith, 1707, in a village called Roeshult in Sma-land, W'liere his father, Nicholas Linne was then vicar. Tlie name assumed by this great man, even in his Latin works, is neitlier Lindeliu-;, nor Linna?us, but Linno, which seems to be the real Swedish name of the family. In his Latin works, printed in Sweden, he styles himself Carolus a Linne. How he came to be styled Linnaus by foreigners is therefore not easily accounted for.

His taste for botany seems to have been imbibed from his father ; who cultivated a garden plentifully stored with plants, by way of amusement. Young Linne soon became acquainted with these, as well as withtlie indigenous ones of his neiglibourhood. In 1717 he was sent to school at Wexio; where, as his opportunities were enlarged, his

progress in all his favorite pursuits was proportior.ably extended ; and even ˆt this early period he began to study the natural history of insects. Professor Stoba;us, under whom he received the first part of his academical education at Lund, in Scania, favored his inclination to natural history. He removed in 1728 to Upsal, where he contracted a close friendship with Artedi, a native of Angermania, who had been four years a student in that university, and had a strong bent to natural history, particularly ichthyology. Soon after his arrival at Upsal, hˆ obtained the favor of several gentleinpn of established character in literature. He was particularly encouraged in the pursuit of his studies by Dr. Olaus Celsius, then professor of divinity, and tlie restorer of natural history, in Sweden; who, being struck with the accuracy of Linne in describing the plants of tlie garden at Upsal, admitted him to his house, his table, and his library. Lender his patronage Linm" made such a rapid progress, that in two years he was thought qualified to give lectures in the botanic chair, in the

room of professor Rudbeck. In 1731 the lloya Academy of Sciences at Upsal, with a view to improve the natural history of Sweden, at the instance of professors Celsius and Rudbeck, deputed Linne to make the tour of Lapland, and explore the natural history of that arctic region, He left Upsal the 13th of INIay, by the route ot Cievalia, the capital of Gestricia, forty-five miles from Upsal, and travelled llirough Helsingland into Medalpadia. Thence he went through Angermanland to Hernosand, a sea-port on the Bothnic Gulf; where he visited the remarkable caverns on tlie summit of mount Skula, though at the hazard of his life. Arriving at Uma, in West Botimia, he quitted the public road, and took his course through the woods westward, to the most southern parts of Lapland. Tliough a stranger to the language and manners of the peo pile, and without any associate, he trusted to the hospitality of the inhabitants, and mentions, with peculiar satisfaction, the innocence and simplicity of their lives. He now arrived at the mountains of Norway, and, after encountering great hardships, returned to West Bothnia ; visited Pitha and Lula, on the gulf of that name; from which last place he took a western route, proceeding up the river Lula, and visited the ruins of the temple of Jockmock in Lappmark : thence he traversed the Lapland desert, destitute of all villages, cultivation, roads, or any conveniences, and inhabited only by a few straggling people, originally descended from the Finlanders. Hence he crossed the Lapland Alps into I'in-mark, and traversed the shores of the North Sea as far as Sallero. These journeys were made on foot, attended by two Laplanders, as his interpreter and guide. In descending a river, ha narrowly escaped perishing by the

oversetting of tlie boat, and lost many of the natural productions he had collected. He now spent the greater part of the summer in examining tliis arctic re-gion, and those mountains on which, four years afterwards, the French philosophers secured immortal fame to Sir Isaac Newton. At length, after having suffered incredible fatigues and hardships, he returned in September to Tornoa. Hav-ing next resolved to visit and examine the country on the east side of the gulf, his first stage was to Ula in East Bothnia; thence to Old and New Carleby, eighty-four miles south of Ula. He continued his route through Wasa, Christianstadt, and Biornebuigh, to Abo, a small university in Finland. As winter was at this time setting in, he crossed the gulf by the island of Aland, and arrived at Upsal in November, after having performed, mostly on foot, a journey of 10° of lat. in extent, exclusively of numberless deviations. In 1733 he visited and examined the mines in Sweden. The outlines of his system of mineralogy ajipeared in the early editions of the Systema ? > atura? ; but he did not exemplify the whole until 1768. In 1734 he was sent by baron Ileuterholin, governor of Dalecarlia, with several other naturalists in that province, to investigate the productions of that jiart of the Swedish dominions ; and published the result under the title of Pan Suecus, in the second volume of the AmjEiiitates Academicae. After this expedition, Linne resided some time at Fahlun, the chief

town in Dalecarlia; wliere lie tauij;lit mineralogy, and practised piiysic. lie contracted at this time an intimacy with a daugliter of Dr. More, tlie pliysician of the place, whom he married about five years afterwards. In 1735 he travelled over many parts of Sweden, Denmark, and Germany, and fixed in Holland, where he chiefly resided until his return to Stockholm, about 1739. In 1735 he took his degree of M. D., and published tlie first sketch of his Systema Naturae, in the form of tables, in twelve pages folio. By this it appears that he had, before he was twenty-four years old, laid the basis of that structure which he afterwards erected to the increase of his own fame, as well as of natural science. In 1736 he came to England, and visited Dr. Dillenius, of Oxford, whom he justly considered as one of the first

botanists in Europe. He mentions Die privilege he gave him of inspecting his own and the Slierardian collection of plants. lie also became acquainted with Dr. Martyn, Mr. Rand, Mr. Miller, and Dr. Isaac Lawson, and Mr. Peter CuUinson.

Early in 1738 Linne had a long and dangerous fit of sickness ; and upon his recovery went to Paris, where he was entertained by the Jussieus, then the first botanists in France. The opportunity this gave him of inspecting their Herbaria, as well as those of Surian and Tournefort, afforded him great satisfaction. He did not fail to avail himself of every advantage which access to the several museums of that country atibrded]iim in every branch of natural history ; and the number and importance of his publications, dur-ing his absence from Sweden, demonstrate tiie fund of knowledge wiiich he had accumulated before, as well as his extraordinary application. These were, Systema Naturae, Fundamenta Bo-tan ica, Bibliotheca Botanica, and Genera Plantarum ; tiie last of which is justly considered as the most valuable of all his works. Before the publication of the first edition, the author had examined the characters of 8000 flowers. The last book he published, during his stay in Holland, vvas the Classes Flantarum, which is a co-‘ pious illustration of the second part of the Fundamenta. About the end of 1738, or beginning of 1739, he settled as a physician at Stockholm. By the interest of count Tessin, his patron, he obtained the rank of physician to the fleet, and a salary for giving lectures on botany. The establishment of the Royal Academy of Sciences at Stockholm, was highly favorable to the advancement of his character and fame; he was constituted the first president. By the rules of the academy, this officer held his place but three months. At the expiration of that term, Linne made his Oratio de memorabilibus in Insectis, October 3d, 1739; in which he endeavours to excite an attention to entomology. In 1741, upon the resignation of Dr. Roberg, he was constituted professor of physic and physician to the king of Sweden. During the interval of his removal from Stockholm to Upsal, in consequence of this appointment, he was deputed by tiie states to make a tour to the islands of Oeland and Gothhind in the Baltic, attended by six pupils. On his return he pronounced before the univorsily his Oratio de Pe-egrinationum intra

Patriam necessitate, October 17lli, 1741. Linnu was now fixed in the situation best adapted to his character, taste, and abilities ; but, v.lien he was appointed professor, the garden did not contain above fifty exotic plants. His correspondence with the first botanists in Europe soon supplied him witii great variety. He received Indian plants from

Jussieu of Paris, and Van Royen of Lˆyden ; European plants from Haller and Ludwig ; American plants from the late Mr. CoUinson, Mr. Catesby, and others ; and many annuals from Dillenius. How much the garden owed to his diligence and care, in a few years, may be seen by the catalogue entitled Ilortus Upsaliensis, exibens Plantˆs exoticas horto Upsaliensis Academiae a sese (Linnseo) illatas ab anno 1742, in annum 1748; additis difterentiis, synonymis, habitationibus, hospitiis, rariorumque descriptionibus, in gratiam studiosae juventutis ; Holm. 1748, 8vo. pp. 306, tab. 3. By this it appears, that he had introduced 1100 species, exclusively of all the Swedish plants and of varieties ; which last, in ordinary gardens, often amount to one-third of the whole. The fame which Linne had now acquired by his Systema Naturae, of which a sixth edition, much enlarged, had been published at Stockholm in 1748, in 8vo., with plates and eight tables explanatory of the classes and orders, had brought him a conflux of every thing rare and valuable in every branch of nature and from all parts of the globe. The king and queen of Sweden had their separate collections of rarities ; the former at Ulrick-sdahl ; the latter, very rich in exotic insects and shells, procured at great expense, at the palace of Drottningholm ; both of which our author was employed in arranging and describing. The museum of the royal academy of Upsal had also been augmented by a considerable donation from the king, whilst hereditary prince, in 1746 ; by another from count Gyllenborg in 1745; by a third from M. Grill, an opulent citizen of Stockholm.

Linne from this time sustained a more elevated rank. His reputation had procured him honors from almost all the royal societies in Europe; and Adolphus Frederick created him in 1753 a knight of the polar star, and in 1757 a noble of Sueden. His successor Gustavus III. doubled his pension in 1776, and settled a liberal donation of landed property on his family. In reply to an invitation to IMadrid from the king of Spain, with the ofier of a pension for life of 2000 pistoles, letters of nobility, and the free exercise of his own religion, he returned for answer, ‘ that if he had any merits they were due to his own country.’ Soon after this Linne obtained tlie pracmium centum aureorum, proposed by the imperial academy of sciences at Petersburgli, for the best paper written to establish or disprove by new arguments the doctrine of tlie sexes of plants.

Linne, on the whole, enjoyed a good constitution, but was sometimes severely afflicted with a heniicrania, as well as with the gout. In the close of 1776 he was seized with an anojilexy, wiiich left him paralytic; and at the begnming of 1777 suffered another stroke, which much impaired his powers. But the disease supposed to

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have been the immediate cause of his death, vvas an ulcsration of the urinary bhidder ; of which, after a tedious indisposition, he died, January 11th, 1778, aged seventy-ono. His otiier principal works are, Iter Oelandicum et Gothmdi-cum : Iter Scanicum : Flora Suecica : Materia Medica : Pliilosopliia Botanica: Uenera Morborum : different papers in the Acta Upsaliensia, and tiie Amoenitates Academicas. The last of his treatises was the Mantissa Altera, published in 1771 ; but before his death he had finished the greatest part of tiio Mantissa Tertia, afterwards completed and published by his son. On hii death a general mourning took place at Upsal, and his funeral was attended by the whole university, and the pall supported by sixteen doctors of physic, ali of whom had been his pupils. The king lamented his death in his speech to the states, and ordered a medal to be struck in his memory. Nor was Linne honored only in his own country. Tiie professor of botany at Edinburgh, Dr. Hope, pronounced an eulogium in honor of him before his students, at the opening of his lectures in spring 1778, and erected a monument to his memory in the botanic garden there. He possessed a lively imagination, a strong judgment, the most retentive memory, unremitting industry, and the greatest perseverance in all his pursuits. Perhaps there is no circumstance of his life, however, which shows him in a more dignified light than his conduct towards his opponents. Disavowing controversy he replied to no one of them. lie had a happy command of the Latin language; and has altogether, perhaps, advanced the literary honor of his country more than any otlier of her sons. Natural history arose in Sweden, under his culture, to a state of perfection unknown elsewhere ; and was thence disseminated through all Europe.

EI’NNET, 71. s. Fr. linot ; Lat. linaria. A small singing bird.

The sw.-.Uows make use of celandine, the linnet of euphragia, for the repairing of their sight.

Mine’s Antidote.

‘s it for thee the linnet pours his throat? Pope. Congregated thrushes, linnets, sit On the dead tree, a dull desspondent flock.

Thomson. Far dearer to me are yon humble broom bowers.

Where the blue-bell and gowan lurk lowly un-seen ; Tor there, lightly

tripping amang the wild flowers,

A listening the linnet, aft wanders my Jean.

Burns.

LiNNF.T, in ornithology. SeeFniNciLLA. Tiiese birds build in hedges, as well as in furze bushes on heaths, but with very different materials. In hedges they use the slender filaments of the roots of trees, and the down of feathers and thistles ; but on heaths they use moss, principally for the outer part, finishing it within with such tiiinˆcs as the place affords. They have young ones three or four times a year, especially if they are taken away before they are able to leave the nests. When linnets are to be taught to whistle tunes, or to imitate the notes of any ol';er bird, they must be taken from the old one when they are not a! ove four days old ; for at this time they have no idea of the note of the

old ones, and will be readily taught to modulate their voice like any thing that is most familiar to their ears, and within the compass of their throats. More care is required in feeding them when taken thus young, than wher they are left in the nest till nearly fledged; but they will be reared very well upon a food half bread and half rape-seed boiled and bruised : this must be given them several times a day. It must be made fresh every day, and given sufficiently moist, but not in the extreme. If it be in tiie least sour, it gripes and kills them; and if too stiff it is as mischievous by binding them up. They must be hung up as soon as taken from the nest under the bird whose note they are intended to learn ; or, if they are taught to whistle tunes, it must be done by giving them lessons at the time of feeding ; for they will profit more while young in a few days than in a long time afterwards, and will take in the whole method of their notes before they are able to crack hard seeds. Some have attempted to teach them to speak, and they often arrive at some perfection in that art !

LIN'.SEED, n. s. Lat. semen lini. The seed of flax, which is much used in medicine.

The joints may be closed with a cement of lime, limced oil, and cotton. Mortimer's Husbandry.

Linseed cakes, in agriculture, is the name of such cakes as remain after the expression of the oil from flax seed. They are at present much used in the fattening of cattle, sheep, and other sorts of live slock, and of

course of great value and importance to the farmer. Dr. A. Rees.

Linseed, or more properly Lint-seed, is the seed of the plant linum. Lint-seed steeped and bruised in water gives it very soon a thick mucilaginous nature, and communicates much of its emollient virtue to it. See Linum.

LI'NSEYWOOLSEY, adj. From linen and wool. Linen and wool mixed : hence of different and unsuitable parts; vile; mean. A lawless linseifwoolsie brother, Half of one order, half anothtr. Hudibras.

Peeled, patched, and pyebald, linseywoolsey brothers. Grave mummers ! sleeveless some, and shirtless others. Pope.

LI'N.STOCK, n. s. Teut. lunte or lerite, (a match cord), and stock. A staff of wood with a match at the end of it, used by gunners. The nimble gunner

With Itinstcck now the devilish cannon touches.

And down goes all before him. Shakspeare.

The distance judged for shot of every size.

The linstocks touch, the pond'rous ball expires.

Vriiden.

A Linstock, or Lintstock, in military affairs, is about three feet longhand has a sharp])oiiit on one end, and a fork or crotch on the other ; the latter serves to contain a lighted match, and by the former the linstock is occasionally stuck in the ground, or in the deck of a ship during an engagement. It is used in small vessels, where one is fixed between every two guns, by which the match is always kept dry, and ready for firing.

LINT. Sax. Ime-t;].:iX. linteum. A flaxei: substance ; linen scraped.

1 dressed them up with unguentum basilici cum vilello ovi, upon pledgets of lint.

Wiseman's Surgery. Lint made up in an oval, or orbicular form, is called a pledtret ; if in a cylindrical form, or in the shape of a date

olive-stone, it is called a dossil.

Dr. A. Rees.

Lint, in surgery, is made into various forms, which acquire different names according to the difference of their figures. Made up in an oval or orbicular form, it is called a pledget; in the shape o-f a date or olive-stone, as we liave seen, a dossil. These different forms are required for many purposes ; as 1. To slop blood in fresh wounds, by filling them up with dry lint before tlie a])plication of a bandage : though, if scraped lint hs not at hand, a piece of fine linen may be torn into small rags, and applied in the same manner. In very large haemorrhages the lint or rags should be first dipped in some styptic liquor, as alcohol, or oil of turpentine ; or sprinkled w itli some styptic powder. 2. To agglutniate or heal wounds ; to which end lint is very serviceable, if spread with some digestive ointment, balsam, or vulnerary liquor. .3. In drying up wounds and ulcers, and forwarding the formation of a cicatrix. 4. In keeping the lips of wounds at a proper distance, that tliey may not hastily unite before the bottom is well digested and healed. 5. They are highly necessary to preserve wounds from the injuries of the air. Surgeons of former ages formed compresses of sponge, wool, feathers, or cotton ; linen being scarce : but lint is far preferable to all these, and is at present universally used.

LI’NTEL, n. s. Fr. linteuu. The head piece of a door frame.

‘lake a bunch of hyssop, and dip it in the blood that is in the bason, and strike the lintel and the two side-posts. Exod.

Smite the lintel that the po9t& may shake.

Amos ix. 1.

The Israelites’ doors, whose ?i«fe/s were besprinkled with blood, were passed over by the destroying angel.

Bp. Halt.

When you lay any timber or brick work, as lintels over windows, lay them in loam, which is a great preserver of timber. Moxon.

Silver the lintels deep projecting o’er,

And gold the ringlets that command the door.

Pope’s OdtjsseU’

LINTERNUM, or Liternlm, in ancient geography, a city of Campania, situated at the mouth of the Clanius, or Liturnus, between Cumae and Vulturnum. It received a Roman colony at the same time witii Puteoli and Vulturnum ; was improved and enlarged by Augustus ; afterwards forfeited its right of coloiiysliip, and became a prefecture. Hither Scipio Africanus the elder retired from the envy of his ungrateful countrymen; and here he died. No vestige of the place now remains.

LINTZ, the capital of Upper Austria, is situated at the confluence of the Danube and Traiin. It is a bishop's see; has a hall in wiiich the states meet; a wooden bridge over the Danube; and several manufactories. Tlie houses are in general respectable, but roofed with sliingle. 'J'he clnircli of St. Ignatius is wortli notice, and the remaining castle, for in 1800 one was dc-

stroyed by fire. Here a lyceum, two public schools, a public library, an institution for the deaf and dumb, and a large theatre. The manufactures are of linen (in which 30,000 hands are said to be employefl), looking-glasses, gunpowder, and bottles. The town has two good an-nual fairs, at Easter and the Assumption : the environs are very fertile and picturesque. It was burnt in 1542. It was taken by the French in 1741, but retaken by the Austrians in 1742. Lintz is forty-two miles E. S. E. of Passau, and ninety-four west of V'ienne.

LINUM, flax; a genus of the pentagynia order, and pentandria class of plants : cal. pentaphyllous; petals five : caps, quinqnevalved and decemlocular : seeds, solitary. There are thirty species.

1. L. catharticum, tiie purging flax, has leaves opposite and lanceolate ; the stem bifurcated, and the coroUge acute. This plant is not above four or five inches high, and is found wild upon chalky hills, and in dry pleasure grounds. Its virtue is expressed in its title ; an infusion in water or whey of a handful of the fresli leaves, or a drachm of them in substance when dried, may be used as a cathartic without inconvenience.

2. L. perenne, the perennial Siberian flax, has a fibrous perennial root, sending up several upriglit, strong, annual stalks, branching four or five feet high; garnished with small, narrow, spear-shaped, alternate leaves, of a dark-green color; and terminated by umbellate clusters of large blue flowers in June, succeeded by seeds in autumn. Tiiis species

is raised from seed in a bed or border of common garden earth, in shallow drills six inches asunder ; when the plants are two or three inclies high, thin them to the same distance ; and in autumn plant them out where they are wanted.

3. L. usitatissimum, the common annual flax, has a taper fibrous root; upright, slender, unbranched stalks, two feet and a half high; garnished with narrow, spear-shaped, alternate, gray-colored leaves ; and the stalks divided into foot-stalks at top, terminated by small blue crenated flowers in June and July; succeeded by large round capsules of ten cells, containing each one seed. This species may justly be looked upon as one of the most valuable of the whole vegetable kingdom : as from the bark of its stalks is manufactured tlie lint or flax for making all sorts of linen cloth ; from the rags of the linen is made paper ; and from the seeds is expressed the linseed oil, so useful in painting and other trades. The seeds are an excellent emollient and.anodyne; they are used externally in cataplasms, to assuage tlio pain of inflamed tumors; internally a slight infusion of them by way of tea, in coughs, is an excellent pectoral, and of great service in pleurisies, lU'iiliritic complaints, and suppressions of urine. For tlie cultivation, dressing, &c., of this species, see I'l.AX.

FIN US, in classical history, a native of Colchis, contemporary with Orpheus, and one of the most ancient poets and musicians of Greece. According to archbisiiop Usher, he flourished about 1280 II C, and he is mentioned iiy

Eusebius among the poets who wrote before tlie time of ;\Ioses. Diodorus Siculus It.'Us us, from Dioiiysius of Mitylene the historian, who wus contemporary with Cicero, that Linus was the first among the Greeks who invented verses and music, as Cadmus first taught them letters. He liiˆewise attributes to him an account of the exploits of the first Bacchus, and a treatise upon Greek mythology, written in Pelasgian cliaracters, which were also those used by Orpheus, and by Pranopidas the preceptor of llomer. Diodorus says that he added the string lichanos to the Mercurian lyre, and ascribes to him tlie

invention of riiyme and melody; which Sui-das, who regards him as the most ancient of lyric poets, confirms. Mr. Marpurg tells us, that Linus invented cat-gut strings for the use of the lyre which, before his time was only strung \vith thongs of leather, or with different threads of flax strung together. He had several disciples of great fame ; among whom were Hercules, Tiiamyris, and, some add, Orpheus. Hercules, says Diodorus, in learning from Linus to play upon the lyre, being extremely dull and obstinate, provoked his master to strike him; which so enraged him that instantly seizing the lyre of the musician, he beat out his brains with his own instrument.

LI'ON, n. s. I Fr. lion ; Span, leon ; Ital.

Li'oNESS. S leone, Hone : Lat. leo. A species of Felis. See below.

So a liouii of tlie lynage of iuda, the roote of daiiide, hath ouercomen to opene t!ie book, and to undo the sevene seelis of it. iViclif. Apoc. 5.

riie lion did tear in pieces enough for his whelps, and strangled for his lionesses, and filled his holes with prey, and his dens with ravin. NaUuin ii. 12. He lion mettled ; proud, and take no care Who chafes, who frets, or where conspirers are ; IMacheth shall never vanquished be.

Shdksjicare. Mdcbe'Jt. Under which hush's shade, a lioness Lay couching head on ground, with catlike watch, AVhen that the sleeping man should stir.

Shakspeare. King Richard's surname was Coeur-de-Lion, for his /io;(-like courage. Camden's Uenmins,

The sphinx, a famous monster in Egypt, had the face of a virgin, and the body of a Hun.

Peaciinm on Drawing. The furious lio)iess, I'orgetting young ones, through the fields doth roar.

May. It hath ever been the fashion of God, to exercise his champions with some initiatory encounters: both Sampson and David must first fight with lions, then with J'hilistinos ; and he, whose type tliey bore, meets with that roaring lion of the wilderness, in the very threshold of his public charge. Bp. Hull.

The liun for the honours of his skin. The squeezing crab, and stinging scorpion shine For aiding heaven, when giants dared to brave The threatened stars. Creech's Manilius.

They rejoice Each with their kind, lion with lioness ; So fitly them in pairs thou hast combined. Milton. The greedy lioness the wolf pursues. The wolf tlie kid, the wanton kid the browze.

Dry den. See /ion-hearted Richard, Piously valiant, like a torrent cvvellcd With wintry tempests, that disdains all mounds,

Breaking away impetuous, and involves

\ ithin its sweep trees, houses, men, he pressed,

Amidst the thickest battle. Phillips.

If we may believe Pliny, lions do, in a very se-vere manner, punish the adulteries of the lioness.

Ayliffe.

Lion, in zoology. See Felis. The lion is frequently hunted for the sake of the flesh, which, though possessing a strong and disagreeable flavor, is eaten by the negroes, and also for the skin. In the day time, and on the open plain, from ten to sixteen dogs will easily overcome one of the largest lions. Nor is there any necessity tiiat the dogs with which the lion is hunted should be trained up for the sport : the common farm-house dogs will serve. As the lion is less swift than the dogs, the latter easily approach him, when, with sullen magnanimity, the lion turns round, and waits for the attack, shaking his mane, and roaring with a short and sharp tone. Tlie hounds then surround him, and, all rushing upon him at once, are able, by their united efforts, to subdue, or tear him in pieces; he has seldom time to give more than two or three slight strokes with his paws, each of which, however, is attended with the death of one of his assailants.

The lion is sometimes hunted by parties of horsemen, in which case the horses should be trained to the purpose, or at least accustomed to the pursuit of beasts of prey, and the perils attendant on their chase ; and it is only on the plains that the hunters ever venture to go out on horseback in this chase. If tlie lion remains in the jungle, or on a rising ground, they endeavour to tease iiim with the dogs till he comes into the plain. If the lion sees the hunters at a great distance, he flies from them with all possible speed ; but, if they chance to discover him at a small distance only from them, he retires with sullen dignity, and at a slow pace, as though he were above showing any symptom of apprehension. If pursued, he soon slackens his pace, and at length

only slides slowly off, step by step, at tiie same time watching his pursuers obliquely, till he finally makes a full pause, and, turning round upon them, shakes his mane, roars, and appears ready to seize upon them, and tear them in pieces. The foremost huntsman, or he who has the best mark at that part of the lion's body nearest his heart or lungs, is now the first to jump off his horse, and, securing the bridle by putting it round his arm, discharges his piece; then, in an instant recovering his seat, rides obliquely athwart his companions ; and, giving his horse the reins, depends entirely on the speed and fear of the latter to convey him beyond the reach of the lion, should he have only wounded him. A fair opportunity now presents itself for some one of the otlier hunters to jump off his horse immediately, as he may then discharge his piece with effect, and save his companion. If this shot should miss likewise, a third sports-man rides after the lion, which is in pursuit of the first or second, and, springing off his horse, fires his piece as soon as he arrives within a proper distance. In the event of the lion turning again and attacking this pursuer, the other hunters return to his rescue with their pieces ready

charged, having loaded them while Hyiiiˆ;. No instance, it is said, has ever been known of any misfortune happening the hunters in chasing the lion on horseback. The remote parts of Africa are most exposed to the ravages of wild beasts, and the colonists in those districts, from the habit of hunting them, become excellent maiksmen.

Mr. Wombwell's late attempt to bring a certain number of trained dogs upon one or two lions, we consider, on the whole, not worthy of detail in a work of science. It terminated only in the partial worrying of the lions selected, and established no new facts with regard to tlieir habits, or natural history.

The Lion Mountain of the Cape of Good Hope, Africa, rises immediately behind Cape Town. The summit is a mass of stone, much resembling from some points of view tiie dome of St. Paul's. It is 2160 feet in height, and is surmounted by a single post. It is properly part of the Table Mountain.

LIONCELLES, in heraldry, a term used for several lions borne in the same coat of arms.

LIOTAllL), an eminent painter, born at Ge-neva, in 1702, and by his father designed for a merchant ; but his genius inclined him to painting. He went to Paris in 1725, and in 1738 accompanied the marquis de Puisieux to Rome, where lie was taken notice of by lords Sandwich and Duncannon, who engaged him to go with them to Constantinople. There he became acquainted with lord Edgecombe, and Sir Everard Fawkener, who brouglit him to England, wliere he staid two years. In his journey to the Levant he adopted tiie eastern habit, and wore it in Britain witli a very long beard, whence he was called the Turk. After his return to the continent lie married a young wife, and sacrificed his beard to Hymen. He came again to England in 1772, and brought a collection of pictures of different masters, wliicli he sold by auction, and some pieces of glass painted by himself, with surprising effect of light and shade, but mere curiosities, as it was necessary to darken the room before they could be seen to advantage. He engraved some Turkish portraits, one of the empress queen and the eldest arch-duchess in Turkish habits, and the heads of the emperor and empress. He painted admirably well in miniature, and finely in enamel, though he seldom practised it. But he is best known by his works in crayons. His likenesses were as exact as possible, and too like to please those who sat to him: thus he had great business the first year, and very little the second. Devoid of imagination, and one would tliink of memory, he could render nothing but what he saw before ids eyes. Freckles, marks of the smallpox, every thing found its place ; not so much from fidelity, as because he could not conceive tlie absence of any thing that appeared to him. Truth prevailed in all his works, grace in few or none.

UP, n.s. &!>.«. “J Sax. lif’l’e ; Yx. Vippe ;

Lii>’-i,Aiiou, n.$. J-Tcut. Belg. and Swed. /iyj;

Lip’-wiSDOM. J Lat. labia. The edge or outer part of the mouth; hence the edges of a wound or any aperture : to lip is to hiss: lip-labor is well defined below by bisliop Taylor : lip-wisdom, verbiage.

IJy hym oftVe we a sacrifice of heriynge euermore to god, that is to seie, the fruyt of lippes know-lechyuge to his name. Wiclif. Ebreids xiii.

No falsehood shall defile my lips with lies,

Or with a veil of truth disguise. Sandys on Job,

Then in the midst a tearing groan did break The name of Antony : it was divided Between her iieart and lips. Sluikspeare.

Tliose happiest smiles That played on her ripe lip, seemed not to know What guests were in lier eyes. Id.

O ! ‘tis the fiend’s arch mock,

T 1 lip a wanton and suppose her chaste. Id.

A letter for me I It gives me an estate of seven years health ; in which time 1 will make a /(‘]) at the physician. Jd.

And if some have fetched new noses, and lips, and ears from Italy, by the help of Tagliacotius and his scholars, never any brought a new tongue from thence. lip-Hall.

INIethinks to kiss ladies’ hands after their lips, as some do, is like little boys, who, after they eat the apple, fall to the paring, out of love they have to the apple. Selden.

Fasting, when prayer is not directed to its own purposes, is but liplalnmr. Taylor’s Rule of Living.

1 find that all is but lipwisdum, which wants experience ; I now, woe is me, do try what love can do.

Sidney.

In many places is a ridge of mountains some distance from the sea, and a plain from their roots to the shore ; which plain was formerly covered by the sea, which bounded against those hills as its first ramparts, or as the ledges or lips of its vessel.

Burnet.

In wounds the lijis sink and are flaccid ; a gleet followeth, and the Hesh within withers.]]‘iseman.

Her lijis blush deeper sweets. Thomson’s Sprin;;.

Oh that those *;’*« had language ! life has passed With me but roughly since 1 heard thee last. Those lips are thine — thy own sweet smiles I

see. The same that oft in childhood solaced me.

Coicper. Or touch the shrill reed, as they trip, With finger light and ruby lip. Darwin.

LIPARA, in ancient geography, the principal of the islands called / Eoliee, situated between Sicily and Italy, with a cognominal town, so powerful as to have a fleet, and other islands in subjection to it. Diodorus Siculus says, it was famous for excellent harbours and medicinal waters ; and that it suddenly emerged from the sea about the time of Hannibal's deatii. Tlie • name is Punic, according to Bochart; and given it, because, being a volcano, it shone in tlie night. It is now called Lipari, and gives name to nine others in its neighbourhood.

LIPARI Isles. — The Lipari islands, twelve in number, are situated at the south-east extremity of the Tuscan Sea, ofi'the north coast of Sicily. They received from the ancients the names of A'.olian and X'ulcanian islands, it being supposed that vEolus kept the winds imprisoned in their caverns, and that they contained the forges of Vulcan. The first volcanic eruption in the Lipari islands, recorded in history, is that which Callius mentions in his History of the Wars in Sicily. Callius was contemporary with Agatliocles. That eruption continued without interval for several days and niglits ; and tlirew out great stones, which fell above a mile distant. The sea boiled all round the island of Lipari, we are

loia. During the consulship of jTZ,inilius Lepi-tlus and L. Aureiius Orestes, A.A. C. 126, these i > lancls were affected with a dreadful earthquake. The buri.ir.g of /Etna was the first cause of it. ' Around Lipari and the adjacent islands the air was all on fire.' Vegetables were burnt up, animals died, and fusible bodies, such as wax and resin, became li{]uid. If the iniiabitants of i.ipari, from whom Callius received these facts, and the writers who have harided them down to lis, have not exaggerated matters, the sea boiled around the island ; the earth became so hot as to burn the cables by which vessels were

fixed to the shore, and consumed the planks, the oars, and (!ven the small boats. Pliny speaks of a similar event, which happened thirty or forty years afterwards, in the time of the war of the allied states of Italy against Rome. One of the A'.olian islands, says he, was on fire as well as the sea; and that prodigy continued to appear till the senate appeased by a dejjutation the ˆvrath of the gods. From the time of that war, wiiich happened A.A. C. 86, till A. D. 144, we have no account of an eruption of these volcanoes; and from that period again till 1444, we liear of no explosion from them for 1300 years. Eut at that time both Sicily and these isles were agitated by dreadful shocks of earthquakes ; the A'olcano isle poured forth streams of flame and smoke, which rose to an amazing height. After that it discharged enormous stones, wˆhich fell above six miles distant. In 15,50 the ashes and stones discharged from its crater filled up the strait between 'olcano and Volcanello. In 1739 there was a sixth eruption. Tlie burstings of the volcanic fire were attended with a noise so dreadful, that it was heard as far as Melazzo in Sicily. In 1775 the whole island was shaken ; subterraneous thunder was heard, and considerable streams cf flame, with smoke, stones, and vitreous lava, issued from the crater. Lipari were covered over with ashes, and part of these was conveyed by the winds all the way into Sicily. In April 1780 there issued a new explosion from 'olcano ; the smoke was thick, the shocks constant, and the subterraneous noise very frequent. In 1783 the isles of Lipari were agitated anew by that fatal earthquake which ravaged Calabria, and part of Sicily, on the 5th of J'"ebruary. They are almost entirely composed of volcanised substances, and aff"ord sul- })hur, nitre, alum, cinnabar, pumice stone, &c., in abundance. We enumerate the chief of them : —

1 . The largest, most fertile, and best inhabited is]-ip3ri (Lipara), five leagues in circuit; more tlian half of its surface is cultivated, the remainder being either covered with vrood, or entirely barren. The vegetable productions are rye, nearly enough for its consumption, some cotton, and olives ; but its chief riches are its vines, which give wines of various qualities, particularly a kind of malmsey. It also exports a considerable quantity of raisins. The prickly pear is indigenous in this island. It has many hot sprinss. On the south is a little town at the foot of a hill, rising abruptly from the sea; the houses, except those of the bishop and governor, are viean. It is defended by a castle on a naked

rock of lava, rising perpendicularly from tiie water. Close to its west side is a rock, called Pietro del Bagno.

2. Salini (Didimc), is nearly as large as Li-pari, and consists of two mountains united at the base. It has its name from the salt, which is formed by the sun in a lagoon, communicating with the sea. On the north side is a fine spring of water, gushing from a rock close to the shore. Off its south end are three rocks, called the Three Stones.

3. Volcano (Ilieri and Therasia),is fourleagues in circuit, and has the sliape of a cone with the top broken off. It continually throws out volumes of smoke. It is uninhabited, and only occasionally visited by the other islanders, to cut brush-wood for fuel, which grows in the crater of an old volcano. Volcanello, anciendy a distinct island, has been joined to Volcano by a narrow neck, formed by an eruption. On each side of the neck is a good road.

4. Stromboli (Strongyle) is one immense volcano, whose continual eruptions of flame have gained it the name of the Lighthouse of the Mediterranean. It is three leagues in circuit, and very barren, having only a few poor vineyards on the north side. There is no anchorage round it, and the small vessels that belong to or visit it are hauled on the beach. The number of inhabitants is about 1000, who live in scattered huts on the shore, and are principally employed in fishing for congers, which are abundant round the island. They chiefly depend on the rains for fresh water, the island having but two small springs. A mile from the nortii end is a great rock called tlie Stone of Stromboli, one-fourth of a mile in circuit, and sixty feet high.

5. Panaria (Hycesia) is nearly three leagues in circuit, moderately elevated, and composed of volcanised granite, generally barren, but producing some olives. North uf it are several lesser volcanic islands and rocks, *viz.* the Forraiculas, or Ants, a group of rocks nearly level widi the water, Dattolo, Lisca Nera (Black Lisca), Lisca Bianca (White Lisca), and Bottero, Tilanavi, and Panarelli.

6. Baziluzzo is only two miles in circuit, elevated but a few feet above the sea, and inhabited by iialf a dozen persons, who cultivate a small spot near its centre. It abounds with rabbits, and on the soutii-east coast is a little cove for boats.

7. Felicudi, or Filicuri (Phenicodes), is composed of a group of hills, and has about 600 inhabitants in insulated dwellings. It has a natural cavern, called the Grotto of the Sea-Ox, in which is a kind of apartment 200 feet long, 120 broad, and sixty-five high. On tlie south and north-east sides of the island are coves for small vessels, according to the winds

8. Alicudi, or Alicuri (Kricades), the westernmost island, has 400 inhabitants, who reside on the east and south-east sides, all the rest of the island being composed of volcanic barren precipices. This island, as well as Felicudi, produces some wine, barley, and rye, together estimated at 7000 Neapolitan crowns a year. Both islands are destitute of springs, and the inhabitants consequently depend on the rain-water preserved in their cisterns, which, in dry s< =iasons.

LIP

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19 sometimes exhausted. Eacli island has four or six barks belonging to it; those of Alicudi are hauled on shore, there being no anchorage round it.

LIPOTH'YMOUS, adj. 2 Greek Kmrw, to

Lipoth'ymy, M.S. 5 faint or fail, and

ˆvˆog, the animal spirit. Swooning ; fainting : fainting-fit.

If the patient be surprised with a lipothiimoiis lanaˆour, and great oppression about the stomach and hypochonders, expect no relief from cordials.

Harveii on the Plague.

The senators falling into a liipothiiinij, or deep swooning, make up this pageantry of death with a representing of it unto life. Taylur.

In lypoihtfmys or swoonings, he used the frication of his finger with saffron and gold. Browne.

LIPPE, or LiPPE Detmold, a principality of Westphalia, adjoining Hanover and the Prussian states : the bailiwic of Lipperode is a detached part round the town of Lippstadt. The area of the principality has been computed at 434 square miles : the population at 73,000, who are mostly Calvinists. The Emma, Werra, Ilamme, and Bever traverse its hilly surface, wiiich is also diversified by large forests of oak and beach timber. Its chief manufactures are wool and cattle, which with its linen and yarn are largely exported by the Weser. It is divided into eleven bailiwics.

LIPPERT (Philip Daniel), an ingenious artist in glass was born of poor parents, at Dresden, in 1703. Having studied drawing, and made himself acquainted with the I>atin and Greek languages, he was appointed drawing-master to the pages of the elector, and his situation afforded him facilities for forming a collection of antiquities. He contrived a method of taking impressions in glass of ancient gems, a number of which he offered for sale, and of which he published a catalogue with the following title : Gemmarum anaglyphicarum et diaglyphicarum, ex prsecipuis Europae Musa>is selectarum ectypha

M. ex vitro cbsidiano et massa quodam, studio P. D. Lippert fusa et afficta, Dresd. 4to. lie published an account of a second collection in 1756, and of a third in 1763; besides other works. He died in 1785.

LIPPI (Eorenzo, or Lawrence), a painter of history and portraits, was born in 1606, and learned the principles of painting from Matthew Iloselli. He had an exquisite genius for music and poetry, as well as for painting; and, in the latter, his proficiency was so great, that some of Ids com[)Ositions were taken for those of Koselli. He afterwards adopted the manner of Santi di Titi, who has more of simple nature and truth in his compositions than any otiier artist of that time. At Florence Lippi painted many designs for the chapels and convents, by which he enlarged his reputation ; and produced at the court of Inspruck a great number of portraits of the nobility, which were deservedly admired. His works are held in the highest esteem for the graceful airs of their heads, the correctness of lis outline, and the elegant disposition of the figures. He died in 1664.

LIP'PITUDE, 11. s. Er. lippitvde ; Lat. lip-bduJo. Blearcdness of eves.

Diseas.ˆs tnnt are infectious, are such as arc in the spirits and not so mucli in the humours, and therefore pass easily from body to body : such are pestilences asiAlipp'Uudes. Bacon.

I flatter myself I shall soon get rid of this infirmity ; nay, that 1 shall ere long be in the way of becoming a great man. For have i not heail-achts, like Pope] vertigo, like Swift ! grey hairs, like Ho-mer] Do 1 not wear large shoes (for fear of corns), like Virgil ? and sometmies complain of sore eyes (though not of tippitude), like Horace 7 Beattie.

LIPSIUS (Justus), a learned critic, born at Isch, a village near Brussels, in 1547. After having distinguished himself in literature, he became secretary to cardinal de Granveilan at Rome, where the best libraries were open to him ; and he collated the MSS, of ancient authors. He lived twelve years at Leyden ; during which he composed and published what he esteemed his best works ; but settled at Louvain, where he taugiit polite literature with great reputation. He was remarkable for unsteadiness in religion, fluctuating often between the Protestants and Papists ; but he became finally a bigotted Catholic. IJe died at Louvain in 1606 ; and his works are collected in 6 vols, folio.

LIPTAU, a mountainous and bleak palatinate of Hungary, traversed by the Carpathian JVIoun-tains : it has gold, silver, and iron mines, some

precious stones ; and is abundant in antimony. Its forests are also considerable ; but there is much good pasturage, and the flocks of sheep are large. Population 64,000, about half of whom are Protestants. Szent-Miklos is the chief town.

LIQ’UABLE, adj.

LiQUa’tION, 71. s.

Li’quate, v.n.

LiQUEFAC’tION, 21. s.

Liquefi’ahle, adj. Liq’uefy, v. a.

LiQUEs’CENCY, U.S.

Liques’cent, adj. Liq’uid, adj. & n.s Liq’uidate, v. a. Liquid’ity, n. s. Liq’uidness, n. s.

~] All these words seem to have their ori-gin in the Lat. liquco (a Ux, water,) to melt or dissolve. Cognate words are, in Vr. li-ipiefaction ; lujmjier ; liquidc, liqueur-; Ital. Span, and Port, li-quido ; Span, and Port. ticor ; Ital. liquore. Liquable and lique-Liq’uor, 71. s. &LV. a. j fiable mean, that may be melted or made into liquid : liquation, the act or capacity of being made so : to liquate and to liquefy, to melt, sink into liquidity : liquefaction, the act of melting or making lifiuid, or state of being melted : to liquefy is, to dissolve; melt; make liquid : liqucsrency, aptness or tendency to melt: liquescent, melting: li-quid, fluid ; not solid ; dissolved ; hence it means invalid, in law; soft; clear; gentle; flowing : a liquid and a liquor, as substantives, mean a fluid ; a body in a liquid state; and the latter has a particular application to impregnated or strong fluids or drinks : to liquor is to drink or moisten with li(juid : to licpiidate is synonymous with to liquefy, but is more generally applied in the figurative sense of lessening or payinsi ofi” debts: litjuidity and litpiiduess are subtilty ; thinness; quality of being liquid. Tn(>se words seem to have been multiplied in our language from the different cognate sources specified, un-til many of them have become redundant.

LIQ

■ji)

Thou shall not delay to offer the first of thy ripe fruits, and of thy li(]iii>rs. ExoJ. xxii. 29.

i\ either shall he drink any liquor of grapes.

I^tiinliers vi. 3. Heat dissolveth and melteth bodies that keep in their spirits, as in divers iuiuefacl'wns ; and so doth time in honey, which by age waxeth more litjuid.

Bacon's Natural HisUoy. There are three causes of fixation, the even spreading of the spirits and tangible parts, the closeness of the tangible parts, and the jejuneness or extreme comminution of spirits; the two first may be joined with a nature liqiteliable, the last not. •• Id.

That degree of heat which is in lime and ashes, l)eing a smothering heat, is the most proper, for it doth neither liquefy nor rarefy ; and that is true maturation. Id. Cart wheels squeak not when they are liquored.

Bacon, Her breast, the sug'red nest Of her delicious soul, that there does lie. Bathing in streams of liquid melody. Crashaw. Return your superfluous liquors into tears of repentance, which only can quench that fire.

Bp. Hall. Gently rolls the liquid glass. Dr. Daniel.

Nor envied them the grape Whose heads that turbulent liquor fills with fumes.

Milton. The spirits, for their liquidity, are more incapable than the fluid medium, which is the conveyor of sounds, to persevere in the continued repetition of vocal airs. Glanville.

The common opinion hath been, that chrystal is nothing but ice and snow concreted, and, by duration of time, congealed beyond liquation.

Broicne's]'nlgar Errours. Oil of anniseeds, in a cool place, thickened into the consistence of white butter, which, with the least heat, resumed its former tiquidness. Buijle.

The many liquid consonants give a pleasing sound to the words,

though they are all of one syllable. Dryden's /Eneid. Be it thy choice, when summer heats annoy, To sit beneath the leafy canopy. Quaffing rich liquids. Phillips.

The burning of the earth will be a true liquefaction or dissolution of it, as to the exterior region.

Burnet. Sin taken into the soul is like a liquor poured into a vessel ; so much of it as it fills, it also seasons.

South's iSermons. The blood of St. Januarius liquefied at the approach of the saint's head. Addison Q7i Italy.

If a creditor should appeal to hinder the burial of his debtor's corpse, his appeal ought not to be received, since the business of burial requires a (juick dispatch, though the debt be entirely liquid.

Axiliffe's Parergon. Why does she wake the correspondent moon. And filkher willing lamp with liquid light.

Prior. If the salts be not drawn forth before the clay is baked, they are apt to liquate.

Woodicard on Fossils. Let Carolina smooth the tuneful lay. Lull with Amelia's liquid name the nine, And sweetly flow through all the royal line.

Pope's Horace. When amatory poets sing their loves In liquid lines mellillously bland. And praise their rhymes as Venus yokes her doves, They little think what mischief is in hand.

Byron .

In this state, being exposed in an earthen vessel to the naked fire, it readily becomes *oft, but did not liquefy without considerable diificulty, rather frying as a piece of soap would do, and disengaging at the same time ammoniacal vapours. Dr. A. Bees.

Liquefaction is au operation by wliich a solid body is reduced into a liquid ; or the ac-tion of fire or heat on fat and other fusible bodies, which puts their parts into a mutual intestine motion. The liquefaction of wax, &c., is performed by a moderate heat ; that of sal tartari, by the mere moisture of the air. All salts liquefy; sand, mixed with alkalies, becomes liquefied by a reverberatory fire, in the making of

glass. In speaking of metals, instead of liquefaction, we ordinarily use the word fusion.

LIQUIDAMBAR, sweet gum tree, in botany, a genus of the polyandria order, and moncecia class of plants. Male, gal. common, triphyllous: COR. none, but numerous filaments. Female, cal. collected into a spherical form, and tetr.iphyilous : COR. none, but seven styles; and many bivalved and monospermous capslles collected into a sj)here. There are only two species, both deciduous, *viz.* —

1. L. peregrinum, Canada liquidambar, or spleenwort-leaved gale, is a native of Canada and Pennsylvania. The young brandies are slender, tough, and hardy. The leaves are oblong, of a deep green color, hairy underneath, and have indentures on their edges alternately very deep. The flowers come out from the sides of the branches, and they are succeeded by small roundish fruit, which seldom ripens in England.

2. L. styraciflua, the Virginia or maple-leaved liquidambar; a native of the rich moist parts of Virginia and INIexico. It shoots in a regular manner to thirty or forty feet high, having its young twigs covered with a smooth, light-brown bark, while those of the older are of a darker color. The leaves are of a lucid green, and grow irregularly on the young branches, on long foot-stalks : they resemble those of the common maple in figure ; the lobes are all serrated ; and from the base of the leaf a strong mid-rib runs to the extremity of each lobe that belongs to it. The flowers are of a kind of safl'ron color : they are produced at the ends of the branches in the beginning of April, sometimes sooner ; and are succeeded by large round brown fruit, which looks singular. Both species may be propagated either by seeds or layers ; but the first method is the best. 1. The seeds arrive from America in spring. A fine bed, in a warm well-sheltered place, should be prepared. If tlie soil be sandy, it should be wholly taken out nearly a foot deep,

.and the vacancy filled up with earth taken up a year before from a fresh pasture with the sward, well rotted and mixed by being often turned, and afterwards mixed with a sixth pari of drift or sea-sand. In a dry day, early in March, let the seeds be sown, and the finest of this compost riddled over them a quarter of an inch deep. When the hot weather in spring comes on, the beds should be shaded and watered often, but in very small cpiantities. The plants being come up, shading should still be afforded them in summer, and a watering every other night; which will promote their growth, and render them

stronger by the autumn. In iiulumn the beds should be hooped, to be covered with mats in the severe frosts. These mats, however, shouhl always be taken off in open weather. Tliis is all tlie management they require during the first winter. Tlie succeeding summer they only require weeding ; though, if it should prove a dry one, they will need a little water now and then. By autumn they will be strong enough to resist the cold of the following winter, without the trouble of matting, if the situation is well sheltered ; if not, it will be proper to have the hoops prepared, and the mats ready, against the northern frosts, which would endanger at least their losing their tops. After this, weeding only will be wanted ; and in the spring following, that is, three years from their first appearance, they should be taken up, and planted in the nursery a foot asunder, and two feet distant in the rows. Hoeing the weeds in the rows in summer, and digging them in the winter, is all the trouble they will afterwards require until they are finally planted out. 2. They are easily increased by layers. The operation must be performed in au-tumn on the young summer's slioots ; and the best way is by slitting them at a joint, as is practised for carnations. In a strong dry soil they will be often two years or more before they take root; though, in a fine light soil, they will be found to take freely enough. The leaves emit their odoriferous particles in such plenty as to perfume the circumambient air ; nay, the whole tree exudes such a fragrant transparent resin, as to have given occasion to its being taken for the sweet storax. These trees, therefore, are very proper to be planted singly in large opens, that they may amply display their fine pyramidal growth, or to be set in places near seats, pavilions, &c. The resin was formerly of great use as & perfume.

LIIIIA, an old town of Valencia, Spain, (the Carthaginian, Edera, and Roman Edeta), stands in a valley between two small hills. Its principal church is worth notice ; it has two others ; two convents, and a flourishing brandy distillery. Roman antiquities are frequently found. Twenty miles N. N. VV. of Valencia.

LIRIODENDRON, the tulip-tree, in botany, a genus of the polygynia order, and polyandria class of plants, natural order fifty-second, coa-dunatffi : cal. triphyllous ; there are nine petals : SEEDS imbricated in such a manner as to form a cone. Species four, the principal one is,

L. tulipifera, a deciduous tree, native of America. It rises with a large upright trunk, branching forty or fifty feet high. The trunk, which often .attains to a circumference of thirty feet, is covered with a gray bark. The branches, which are not very numerous, of the two-yfvrs-old

wood, are smooth and brown ; while the bark of the sum-mer's shoots is smoother and shining, and of a bluish color. They are very pithy. Their young wood is green, and when broken emits a strong scent. The leaves grow irregularly on the branches, on long foot-stalks. They are of a particular structure, being composed of three lobes, the middlemost of which is shortened in such a manner that it appears as if it had been cut off and hollowed at the middle : the other

two are rounded off. They are about four or five inches long, and as many broad. They are of two colors ; their upper surface is smooth, and of a stronger green tiian the lower. They fall off pretty early in autumn; and the buds for the next year's shoots soon after begin to swell and become dilated, insomuch that, by the end of December, thoae at the ends of the branches will become nearly an inch long and half an inch broad. The outward laminae of these leaf-buds are of an oval figure, have several longitudinal veins, and are of a bluish color. The flowers are produced with us in July at the ends of the branches : they somewhat resemble the tulip, wliich occasions its being called the tulip-tree. The number of petals of which each is composed, like those of the tulip, is six ; and these are spotted with green, red, white, and yellow, thereby making a beautiful mixture. The flowers are succeeded by large cones, wliich never ripen in England. The propagation is very easy if the seeds are good ; for by those which we receive from abroad, they are to be propagated. No particular compost need be sought for ; neither is the trouble of pots, boxes, hot-beds, &c., required. They grow exceedingly well in beds of common garden mould, and the plants will be hardier and better than those raised with more care. Therefore, as soon as the seeds arrive, which is generally in February, and a few dry days have happened, so that the mould will work freely, sow the seeds, covering them three quarters of an inch deep ; and observe to lay diem lengthwise, otherwise, by being very long, one part, perhaps that of the embryo plant, may be out of the ground soon, and the seed be lost. This being done, let the beds be hooped ; and as soon as the hot weather and drying winds come on, in spring, let them be covered from ten A. RI. till sunset. If little rain happens, they must be duly watered every other day ; and by the end of May the plants will come up. Shade and watering in the hottest summer must be attbrded them, and they will afterwards give very little trouble. The next winter they will want no other care than, at the approach of it, sticking some furze bushes round the bed, to break the keen ed-e of the black frosts, for it is found that the seedlings of this sort are very hardy, and seldom suffer by any weather. After they have been two years in the seed-bed, they sliould be taken up and planted in the nursery, a foot asunder, and two feet distant in the rows. After this the usual nursery care of hoeing the weeds, and digging between the rows in the winter, will suflice till they are taken up for planting out. The tulip-tree, in those parts of America where it grows common, affords excellent timber for many

uses ; particularly, the trunk is frequently hollowed, and made into a canoe sufficient to carry many people; and for this purpose no tree is thought more proper by the inhabitants of those parts. It may bp stationed among trees of forty feet growth.

LIIMS, in ancient geography, a river of Italy in Campania, which it separated from Latium and falling into the Mediierranean ; now called Garigliano.

LIRON (John), a learned Benedictine, wlio published two curious works: 1. Bibliothefjue <les Auteurs Ciiartrains. 2. Les Amenites de la Critique. He died in 1749.

LIS, or Lvs (John V'ander), a painter of history, landscapes, and conversations, born at Ol-deuburiˆh in 1570. He went to llaerlem tostudy under Henry Goltzius; and, as he was endowed witli great natural talents, soon distinguished himself in that school. He adhered to the same style till he went to Italy ; where, having visited Venice and Rome, he studied the works of Titian, Tintorreto, Paul Veronese, and Dominic Petti, so effectually, that he altered his manner entirely, ile soon received marks of public approbation; and his compositions became universally admired. His subjects were sacred histories, or rural sports, marriages, balls, and villagers dancing, dressed in Venetian habits ; all which he painted in a small as well as a large size. An excellent picture of liis is Adam and Eve lamenting tlie death of Abel. His paintings are rare. He died in 16'29.

Lis (John N'ander), of Breda, an historical painter, born at Breda about IGOl. He became a disciple of Cornelius Polenburg, whose manner he imitated with extraordinary exactness. His portrait painted by himself, formerly in the possession of Horace Walpole, esq., is described as being worked up equal to the smoothness of enamel.

LISBON, the ancient Olisippa, and Felicitas Julia, seems to have acquired the latter name from the beauty and salubrity of its situation and climate ; for it is found to have 200 tine, and but eighty rainy

days in the course of the year. The capital, and one of the most important ports of Portugal, it is situated on seven hills, in the province of Estremadura (Extrema Durii), and rises from the north bank of the Tagus, three leagues within the bar. Above Lisbon, the Tagus is navigable sixteen leagues, and might easily be made so ten leagues fartlier, to Alcantara, on the frontiers of Spain. As it has most to dread an attack by shipping, the banks of the river are lined with forts on both sides. The first met with, on entering the harbour, is Fort Lorenzo, or the Tower of Bugio, on a sand-bank, which serves as a prison for convicts. Fort St. Julian is on a rock on the north shore of the entrance, and Fort St. Antonio on the south. The quays along the river are described as surpassing any thing of the kind in London or Paris ; and the coup d'ceil of the city from a distant point of the river, especially in crossing it from the south-east, is most imposing and majpstic. Its general form is that of a half moon, four miles from point to point, and about a mile and a quarter broad.

It is surrounded by old and useless walls, flanked with towers, and may be divided into the Old and New town, the latter being that part rebuilt since the earthquake of 1755. This part of the city is neat and regular, and its streets have sewers and footways on each side. In the Old, part of the streets are so narrow, that the sun is said never to shine on the pavement, ex-cept when passing the meridian. In the centre

of the city is a small citadel. It has three suburbs, Junqueira, Alcantara, and Campo Grande, to which may be added Belem, a pleasant town immediately adjoining the city on the west, which has long been the residence of the court.

The public buildings of this metropolis are numerous, but not distinguished as specimens of architecture. In all there are forty parish churches, ninety-nine chapels, seventy-five convents or monasteries, and several distinct hospitals : here are also thirteen squares, great and small. The best edifices are the patriarchal church, situated on an eminence at the north-east of the city ; the royal monastery of Belem, built in 1500; the church of St. Roque, formerly belonging to the Jesuits ; and the New Church, the largest structure erected since the earthquake of 1755. The royal hospital, and the palace of the inquisition, are also large and elegant buildings Near tiie latter is the public walk, an oblong garden laid out in alleys ; and farther to the north is one of the two theatres of Lisbon, with a square for bull fights. The greatest architectural curiosity, however, is the aqueduct to

the north of the city, which, though not half a mile in length, passes in one part through a tunnel, in another across a defile. It is partly Roman, partly a Gothic work; the principal arch is of the width of 107 feet, and considered one of the finest specimens of the Gothic style in Europe. In the great earthquake the body of it withstood the shock unhurt, but the key-stone sunk several inches. The Lisbon academy of sciences was founded in 1779 by the duke of Lafoens, and has an observatory and a good mathematical library. The geographical academy was founded in 1799; the college of nobles in 1761; the royal marine academy in 1779 ; the academia real das Guardas Marinhas, in 1782; and the royal academy of fortification in 1790. Ex.‘ept the geographical academy, tliese are all institutions for education, and have sometimes had professors of merit. Tliere are various public libraries, which contain all the standard Spanish and Portuguese works; but are deficient, as indeed is the whole city, in foreign books. The collections of natural history, laboratories, observatories, and botanical gardens, mentioned in the State Calendar, are of little importance. The only newspaper of the country is the Lisbon Gazette; and the insipid Almoirene de Petas was very lately the only literary journal. The royal or St. Joseph’s hospital is an excellent institution, in which the sick are carefully attended, irre-spective of their nation or religion. The number of patients admitted in a year frequently amounts to 12,000 or 14,000. The foundling hospital is also a noble charity.

Lisbon is one of the most commercial cities of Europe, having 200 mercantile houses, of which 150 are English, and its trade annually employs between 1000 and 1500 vessels. In I’^go there cleared out 967: *viz.* English 319; Portuguese 252; North American 75; and 321 of all other nations. In 1797 the numbers entered and cleared out were,

Englisli

Portuguese

Danes

Americans

Hamburgers

Ragusans

Vˆenetians

Bremeners

Oenoese

Lubeck

Morocco

Oldenburg

Neapolitans

Spaniards

French

Imperial

Entered.

Sailed

533

4(i6

300

309

218

229

154

161

80

86

43

43

22

23

19

24

10

11

9

13

9

10

9

2

6

8

4

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Total 1423

1396

This includes all the colonial and three-fourths of the foreign trade of the kingdom, which altogether is very backward in manufactures, both in the capital as well as in the provincial towns. Lisbon has, however, manufactures of gold, silver, and brass ; silk, cotton, woollen, and linen ; thread, stockings, and lace ; leather, hats, soap, tobacco, and earthenware, on a small scale. To England the chief exports are the wines, known as Lisbon and Calcavella ; lemons, oranges, and fruits ; cork, wood, silk and wool. The principal imports from this country are woollens, calicoes, stockings, watches, trinkets, coals, hardware, copper, and lead. From Ireland, corn, flour, and salted provisions. To the north of Europe Lisbon exports wines, salt, fruits, and colonial produce; and receives as imports corn, hemp, tlax, iron, timber, deal, stock-fish, pitch, tar, Russian and German linens. The exchange transactions are on a large scale.

The patriarch of Lisbon, generally a cardinal of the Roman consistory, takes precedence of all the ecclesiastics of Portugal, and is always first chaplain to the king. Ignorance and su—

Kerstition pervade all classes of its inhabitants, umbers are seen throughout the day kneeling and motionless before figures of the V^irgin, or of our Saviour on the cross, hung against the walls, and furnished on festival days with lamps. The streets, though less dirty than formerly, are still offensive to English visitors. At night, however, they are tolerably lighted, and the po-lice regulations are good, but ill executed : assassinations and robberies being frequently committed in lonely parts of the city. Even in the day, the appearance of Lisbon is lifeless and cheerless, the Portuguese having little of the activity of their forefathers in business or amusement. The Moors seem to have given the name Lisiboa or Lisboa to this city when they conquered it with tiie rest of Portugal m the year 716. In the subsequent wars between them and the Christians, it was alternately lost and won by each, and continued many ages a sea-port of consequence, but did not become the capital of the kingdom until the beginning of the sixteenth century, when king Emanuel first made it a Vor. XIII.

royal residence, and the central port for the e>:- peditions to the East and West Indies.

It was unmolested by the demon of war from this period until the late French invasion of Portugal ; but was partially shaken by the eariiiquake of 1531, and almost annihilated by that of 1755. See our article Earthquake. Ruins of its ravages are still visible. In 1807 the French army marched from Abrantes on this devoted capital, which afterwards became the scene of various important operations both of the British and French, until the latter al)andoned it after the convention of Cintra. Mr. Soutliey's description of these events is so picturesque and interesting, that our readers, we are sure, will find it acceptable in this place .

' The dismay and astonishment of the Lisbon-ians may well be conceived, when they learnt that the French were at Abrantes, and saw the court making ready for immediate flight. The hurry and disorder of Junot's march was not unknown; his artillery had been damaged, having been dragged by oxen and peasantry over mountainous roads; a great number of his horses had died upon the way over worked, and the men themselves had been marched so rapidly, and fed so ill, that a large proportion of them were more fit for the hospital than for active service. The greater part of the Portuguese army was near the capital, and, wretched as the state was to which it had fallen, neither the will nor the courage of the men was doubted. The English in the fleet, with a right English feeling, were longing to be let loose against the enemy : Sir Sidney off'ered to bring his ships abreast of the city, and there, seconded by the indignant populace, dispute every inch of ground with the invader: 'Surely,' he said, 'Lisbon is as defensible as Buenos Ayres !' Well might he thus feel and express himself who had defended Acre ˆ and certain it is that Junot and all his foremost troops might have been put to the death which they had already merited at the hands of the Portuguese, if the prince had given the word. But such an act of vengeance, just as it would have been, would have been advantageous to Buonaparte, by giving him a colorable pretext for treating Portugal as a conquered country : this the prince knew ; and it was in reliance upon his gentle and conscientious character that Junot advanced in a manner which would else have appeared like the rashness of a madman.

'The Portuguese navy was ill equipped fin-sea; no care had been taken to keep it victualled, and it was now found that many of the water-casks were rotten, and new ones were to be made. The morning of the

27th had been fixed for the embarkation (of the royal family), and at an early hour numbers of both sexes and of all ages were assembled in the streets and upon the shore at Belem, where the wide space between the river and the fine Jcronymite convent was filled with carts and packages of every kind. From the restlessness and well-founded alarm of the people, it was feared that Miey would proceed to some excess of violence against those who were the objects of general suspicion. The crowd however was not yet very great when the prince appeared, both because of tiie distance

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from Lisbon, and that tlie hour of embarkation was not known. lie came from Ajuda, and the Spanish Infant D. Pedro in the carriage vvitii him; the troops who were to be on duty at the spot liad not yet arrived, and, wlien the prince ahghted upon the quay, there was a pressure round him, so that, as he went down the steps to tlie water-edge, he was obliged to make way with liis hand. He was pale and trembling, and his face was bathed in tears. The multitude forgot for a mo-ment their own condition in commiseration for his ; they wept also, and followed him, as the boat pushed off, with their blessings. There may have been some among the spectators who remembered that fiom this very spot Vasco de Gama had embarked for that discovery which opened ttio way to all their conquests in the east; and Cabral for that expedition which gave to Portugal an empire in the west, and prepared for her prince an asylum now when the mother country itself was lost.

‘ In the course of the day the advanced guard (of the French) arrived in the immediate vicinity of the city, and junot himself saw the ships with that prey on board in the hope of which he had advanced witii sucli rapidity, conveying the family of Braganza beyond his power, and beyond that of his mighty master. The troops arrived without baggage, having only their knapsacks, and a half gourd slung from the

girdle as a drinking-cup; their muskets were rusty, and many of them out of repair; the soldiers themselves mostly barefoot, foundered with their march, and almost fainting with fatigue and hunger. The very women of Lisbon might have knocked them on the head. Junot reached Sacavem between nine and ten at night. The next morning the royal guard of po-lice went on to meet him at an early hour. Without halting in Lisbon, he hurried on to Belem, and, entering the battery of Bom-successo, satisfied himself by ocular demonstration that the Portuguese squadron was beyond his reach; he fired, however, upon those merchant-ships, which, not having been ready in time, were now endeavouring to escape. Very many were thus detained, for the prince's order t» spike the guns had only been partially obeyed, having been countermanded by the governors; and this was another of their acts for which the people could assign no adequate or excusable cause. .lunot immediately sent a battalion to garrison Fort St. Juliens, and then returned to Lisbon, with hardly any other guard than some Portuguese troops whom he had met on the way and ordered to follow him ; thus accompanied he paraded, as in triumph, through the principal streets. It was raining heavily, yet the streets were filled with a melancholy and wondering crowd. The shops were shut, the windows and verandas full of anxious spectators. The gestures of all those who saluted him as he passed, either for former acquaintance, or flattery, or fear, he returned with studied courtesy and statcliness. In this manner he proceeded to the house of Barao de Quintclla, in the Una d'Alegria, one of the most opulent of the Portuguese merchants. The palace of Bemp»stH had been prepared for him, and the Senado da Camera assigned for his household expetvses a moi.thly contribution of 12,000 cru-zados. lie received the money, and compelled Ijuinteila to be at the whole charge of his establishment.' -; Our author's description of the embarkation of the French, under Junot, is too long for insertion : but it forms an important record in illustration of the character of the French army at this period, and is closely connected with the history of this city. Speaking of the memorable convention, already alluded to, he says, ' During the negotiation Lisbon was in a dreadful state. Those wretches who, to the reproach of Christian states and civilised society, are bred in the corruption of all great cities, took advantage of the temporary dissolution of government as they would have done of a conflagration or an earthquake. The soldiers of the police, being Portuguese, had almost all gone to join their countrymen in arms , and the French, while they went the rounds, suffered robberies to be committed in their hearing and in their sight, either not understanding the cries for help, or not choosing to interfere, now that their reign was at an end. They indeed themselves were in such danger, that they soon gave over

patroling the streets, and fired upon those who approached their quarters in the night. In this manner several Portuguese were shot; the French venturing upon this, not so much in the confidence of their own strength, as in full reliance upon the interference of the English to protect them.

‘ The French continued that system of public and private robbery for which they seemed to think the convention had granted them entire impunity. General Freire complained to Sir Hew Dalrymple that they were plundering the treasury, the museum, public libraries, arsenals, churches, and the houses and stores of individuals. The British commissioners for carrying the convention into eflfect, major-general Beresford and lord Proby, informed him, that except the military and naval stores there was no kind of public property which the French intended to relinquish ; that they meant to carry off the valuables of the prince, the plunder of the churches, and much of the property of individuals; that they had packed up the royal library, and most of the articles of the museum : that during the negotiation they had taken a sum of about £22,000 from the Deposito Publico, which was in fact a robbery of individuals, that money being deposited there till litigations concerning it should be decided : and that even after the terms were signed they had actually demanded the money arising from the revenues of the countiy. The merchants of Lisbon addressed a memorial to the British commander, stating that Junot had exacted from them a forced loan of 2,000,000 cru-zados, promising that payment should be made out of the enormous war-contribution which he had imposed , they had not been paid, and it was now his intention to depart without paying them; they therefore prayed for redress, and likewise that some steps should be taken for recovering their ships and property which had been unlawfully sequestered in France. There was something absolutely comic in the impudent persuasion of the French that they might continue to pillage and carrv off wliat they pleased, under protection

of the British army. They proposed to take away the Vasco de Gama and some Portuguese frigates : the Gama, it may be remembered, was the ship wherein they had embarked great part of the treasure which they had collected. The reply was, that these vessels did not belong to them, and they were only to carry away their individual baggage. Junot actually demanded five ships to remove his own personal effects. Such a de-mand was of course pronounced to be inadmissible.

'The first division of the French embarked under protection of the second, the second and third were protected by the British troops from the fury of the Portuguese. Wholly to restrain it was impossible, but no serious injury was done. They embarked amid the curses of the people. Nine days and nights the rejoicings continued, not by any order from the magistracy, but by the voluntary act of the inhabitants, whose joy was in proportion to the misery from which they had been delivered. It was a joy which thousands vvhose fortunes had been ruined, in the general calamity, partook ; and which brought the last earthly consolation to many a broken heart. The enemy, while they lay in the river, were within sight of the illuminations and fire-works, and could hear the bells with which that great city rang from side to side. However brave in arms, however skilful in negotiation, they departed under circumstances more reproachful than had ever before attached to any army, or body of military men.'

Lisbon is 313 miles west by south of Madrid, and contains a population of 240,000 inhabitants.

Lisbon, New, a post town and the capital of Columbiana, a county of Ohio, on a branch of the Little Beaver. It is thirty-five miles south of Warren, thirty-four north of Steubenville, and fifty-six north-west of Pittsburg. It is a very flourishing town, and contains a court-house, a jail, a bank, a public library, a printing office, and two brick meeting-houses. In the vicinity of the town there are four merchant, and several other mills, a paper mill, a furnace, and a woollen manufactory.

LISBUllN, a borough of the county of An-trim, Ireland, standing on the river Lagan, eight miles south-west of Belfast, and seventy miles north-east of Dublin. It has altogether a handsome appearance, and a considerable manufacture of linens. The damask table linen

manufacture is particularly distinguished by the quality of the cloth, and the beauty of the patterns: muslin and cambric are also made. It sends one member to parliament.

LISIEUX, a considerable town of France, in the department of Calvados, and late province of Upper Normandy, seated at the confluence of the Orbeck and Gassey. The churches and public buildings are very handsome ; but many of the houses are of wood. The cathedral has been much admired, and the gardens and cas-cades of the episcopal palaces. Here are manufactures of linen, flannel, cotton, and cyder : but the chief occupation of the neighbourhood is rearing cattle for tlie Paris market. It is thirty miles east of Caen, fourteen from the channel and 116 west of Paris.

LISLE or Lille. See Lille.

Lisle (Claudius de), a learned historiographer, born at 'ancouleurs, in 1644. He studied among the Jesuits at Pontamousson ; took his degrees in law, and afterwards studied history and geography ; and to perfect himself in those sciences went to Paris, where the duke of Orleans, afterwards regent, and the principal lords of the court, became his scholars. He wrote,

1. An Historical Account of the kingdom of Siam.

2. A Genealogical and Historical Atlas. 3. An Abridgement of Universal History. He died at Paris in 1720.

Lisle (William de), son of the above, and the most learned geographer France has produced, was born at Paris in 1675. He became first geographer to the king, royal censor, and mem-ber of the academy of sciences. He died in 1726. He published a great number of excellent maps, and wrote many pieces in the Memoirs of the Academy of Sciences.

Lisle (Sir John), a brave loyalist in the time of the civil wars, was the son of a bookseller in London, and was educated in the Netherlands. He signalised himself upon many occasions, particularly in the last battle of Newbury; where, in the dusk of the evenincr, he led his men to the charge in his shirt, that his person might be more conspicuous. The king, who was an eye-witness of his bravery, knighted him in the field of battle. In 1648 he was one of the royalists who so obstinately

defended Colchester, and who suffered for the defence of it. Having tenderly embraced the corpse of Sir Charles Lucas, his departed friend, he immediately presented himself to the soldiers who stood ready for his execution. Thinking that they stood at too great a distance, he desired them to come nearer: one of them said, ‘ I warrant you, sir, we shall hit you !’ He replied with a smile, ‘ Friends, I have been nearer you when you have missed me.’ He was executed August 28th 1648.

Lisle (Joseph, Nicholas de), a celebrated French astronomer born at Paris in 1688. He was the intimate friend of Newton and Halley, and was a member of most of the learned academies in Europe. In 1726 he was invited to Russia, and remained there till 1747. His principal work is Iris Memoirs of the History of Astronomy. Unlike many of the French philosophers, he joined unaffected])iety to the love of science. He died in 1768.

LISMORE, a town of Waterford, Ireland, formerly a considerable city, and anciently called Dunskille ; both Lis and Doone signifying a Danish mount, of which nature is the round hill of Lismore. It stands on the river Blackwater, over which it has a fine bridge, the span of the principal arch being 102 feet. The bishop’s see was founded here in the seventh century, but united, in 1536, with the see of Waterford. The cathedral is spacious and handsqine. Lismore castle was burned in the Irish war, in 1645 ; the duke of Devonshire has rebuilt it, in its ancient stylo, magnificently; an example imitated by Richard Edward (iumbleton, esq., who rebuilt Castle-Richard, situated upon the river’s bank, three miles from Lismore, accordinc; to an elc—

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ˆant Gothic elevation, at an expense of many iliousand pounds. Tliere is a considerable salmon fishery here. It is thirty-one miles W. S. \V, of Waterford, and 100 S.S. VV. of Dublin.

LisMORE, one of the Hebrides, or Western Islands of Scotland, seated at the mouth of Loch-Linnhe, or a capacious lake in Argyllshire, navigable for the largest ships to Fort William. Tliis island is ten miles long, and from one to two miles bread. It abounds in limestone. Its population in 1791 was 1121. It is now not above 1350. It was anciently the residence of the bishops of Argyle, and gives name to the extensive parish in which it lies. It formerly abounded with deer, and elks' horns of a large size have been discovered in it. It was frequented by Fingal and his heroes, if such there were, of whom relics are still pointed out. Oats, barley, and flax, are the chief articles of cultivation. The church was once the chancel of its cathedral.

LISNE, n. n. Barb. Lat. licia, an enclosure. A cavity; a hollow.

In the lisne of a rock, at Kingscote in Gloucestershire, I found a bushel of petrified cockles, each near as big as my fist. Hale.

LISP, V. a. Scn.s. I Sax. «lirp; Teut. lis—

Lisp'er, n. s. S pen ; Belg. lespen. To

speak with imperfect appulses of the tongue to the teeth or palate : to speak imperfectly in any way. See the extract from Holder.

Farewel, Monsieur Traveller ; look you lisp, and wear strange suits ; disable all the benefits of your own country. Sltakapeare.

Come, I cannot cog, and say, thou art this and that, like a many of these lisping hawthorn buds, that come like women in men's apparel, and smell like Bucklersbury in simpling time. Id.

Scarce had she learnt to lisp a name Of martyr, yet she thinks it shame Life should so long play with that breath, Which spent can buy so brave a death.

Crashaw. They ramble not to learn the mode, How to be drest, or how to lisp abroad.

Cleaveland. Appulse partial, giving some passage to breath, is made to the upper teeth, and causes di lispittg so\md, the breath being strained through the teeth.

Holder's Elements of Speech. I overheard her answer, with a very pretty lisp, O ! Strcphon you are a dangerous creature. Taller. As yet a child, nor yet a fool to fame, I lisped in numbers, for the numbers came.

Pope. Pleased with the distant roar, with quicker tread. Fast by his hand one lisping boy she led. Darwin.

LISSA, a large town of Prussian Poland, on the borders of Silesia, was principally peopled by the Protestants who fled, in the seventeenth century, from the persecutions in Silesia, Bohemia, and Moravia. It now consists, for the greater part, of wooden buildings ; and it has accordingly suffered severely from fire. It has a palace belonging to prince Sulkoroski, the chief proprietor ; a Catholic, and a Lutheran church, two Calvinist churches, a gymnasium, and % synagogue. Of the inhabitants (7600) one-half are .lews, and they have the greatest part of the trade. The articles of commerce are woollens ;

the manufactures furs, hardware, and wines. Forty-four miles S. S. W. of Posen, and sixty-five west of Kalisch.

LissA, an island on the coast of Dalmatia, in the gulf of Venice. It is hilly, and thinly peopled; but has a good fishery, and produces wine, olives, almonds, and figs. It has also a good harbour. Its ancient town of Issa is now a mere village. Lissa, in 1807, was occupied by the British ; but, in 1810, it was taken by a French flotilla from Ancona. Fifty-six miles west of Ragusa.

LISSUS, in ancient geography, the last town of lUyricum, towards Macedonia, situated on the Drino. It had a capacious port, the work of Dionysius the tyrant, who led the colony thither, and enlarged and walled it round. — Diodorus Siculus. It is now called Alessio, in Albania.

LissuH, a river of Thrace, running into the /F-gean Sea, between Tliasos and Samothracia, which was dried up by the army of Xerxes, when he invaded Greece. — Strabo, lib. 7.

LIST, n. s. & V. a. Fr. and Dan. liste ; Goth. lest, kit, to speak or read. Thomson. A roll ; catalogue; enrolment; hence a limit or bound : to

enrol; register; hence to engage or retain for military service.

He was the ablest emperor of all the list.

Bacon.

The lords would, by listing their own servants, persuade the gentlemen in fhe town to do the like.

Clarendon.

Some say the loadstone is poison, and therefore in the lists of poisons we find it in many authors.

Browne.

The king who raised this wall appointed a million of soldiers, who were listed and paid, for the defence of it against the Tartars. Temple.

They list with women each degenerate name.

Who dares not hazard life for future fame.

Dryden.

For a man to give his name to Christianity, in. those days, was to list himself a martyr, and to bid farewel not only to the pleasures, but also to the hopes of this life. Soot/i.

Bring next the royal list of Stuarts forth,

Undaunted minds, that ruled the rugged north.

Prior. He that is born is listed ; life is war ;

Eternal war with woe. Young.

List, n. s. k. v. a. Fr. lice ; Ital. lizza ; Span, and Port, liza {alixar, Span., is to make even or smooth). An enclosed and prepared field of combat or exercise : to enclose ground for such purposes.

But telleth me what mistere men ye ber,

That ben so hardy for to fighten here

Withouten any juge or other officere,

As though it were in listes really.

Chaucer. Cant. Tales. The ocean, overpeering of his list.

Eats not the flats with more impetuous haste.

Then young Laertes in a riotous head,

O'erbears your officers. Shakspeare. Hamlet.

She within Hats my ranging mind hath brought. That now beyond myself I will not go. Davies.

How dares your pride presume against my laws. As in a listed field to fight your cause 1 Unasked the royal grant. Dryden s Knight's Tales. Paris thy son, and Sparta's king advance.

In measured lists to toss th« weighty lance ;

And vvho his rival shall in arms subdue,

His be the dame, and his the treasure too. Pope.

List, n. s. &, v. n. Sax. lypran ; Goth. Ij/atu. Desire ; choice , willingness : to choose ; desire ; incline.

To fight in field, or to defend this wall, Point what you Hit, I nought refuse at all.

Faerie Queeiie. Let other men think of your devices as they list, in my judgment they be mere fancies. Whilgijte.

Cnto them that add to the word of God what them liMeth, and make God's will submit unto their will, and break God's .commandments for their own tradition's sake, unto them it seemeth not good.

Hooker. Alas, she has no speech ! — Too much ; 1 find it still when I have list to sleep.

Shakspeare. Nothing of passion or peevishness, or list to contradict, shall have any bias on my judgment.

King Charles. I first adventure ; follow me who list. And be the second English satirist. Bp. Hall.

Kings, lords of time, and of occasions, may Take their advantage when, and how, they list.

Daniel. When they list, into the womb That bred them they return ; and howl, and gnaw My bowels, their repast. Milton. Paradise Lost.

He saw false reynard where he lay full low ; I need not swear he had no list to crow. Dryden. They sang as blithe as finches sing, That flutter loose on golden wing.

Aid frolic where they list. Coivper.

List, w. s. & V. a. (Fr. lice; Ital. Span. List'ed, adj. S Port, and barb. Lat. lista; Swed. list ; Belg. lisse. The border or limit of a web, orpieceof clotli ; any border or margin; a strip of cloth ; to list is to sew together in strips: hence listed; striped; party-colored. See List, a roll.

They thought it better to let them stand as a list, ormarginal border, unto the Old Testament. Hooker.

A linen stock on one leg ; and a kersy boot hose on the other, gartered with a red and blue list.

Shakspeare. Some may wonder at such an accumulation of benefits, like a kind of embroidering or listing of one favour upon another. Wotton's Life of Buckingham. Over his head beholds A dewy cloud, and in the cloud a bow Conspicuous, with three listed colours gay, Betokening peace from God, and covenant new.

Milton. Instead of a list of cotton, or the like filtre, we made use of a siphon of glass. Boyle.

As the showery arch With listed colours gay, or, azure, gules, Delights and puzzles the beholder's eyes. Phillips. A list the cobler's temples ties. To keep the hair out of his eyes. Swift.

List, v. a. ") List is an abbrevia—

Lis'ten, v. a. 5c V. 71. } tion of listen. Sax. J.ist'ener, n. s. [lyptan ; Dan. lyste ;

List'less, TGothic, hluusl ; Greek,

List'lessly, I kXvii), to listen to. To

List'i.essness. j hearken; attend: listen, as a neuter verb, is to give attention ; * give ear:' a listener, a hearkener; generally used of intruders and spies: listless, without attention; -areless; heedless; languid.

Listen, O isles, unto me, and hearken ye people.

Isaiah, xlix. Who list unto tins balades have inspection Thlnke that lov is lordship is excellente Is remedy for disese and correccioa I'o woful herte. Chaucer's Balades.

Then weigh, what loss your honour may sustain, If with too credent ear you list his songs ; Or lose your heart, or your chaste treasure open To his unmastered importunity.

Shakspeare. Hamlet. Lady, vouchsafe to listen what 1 say. Shakspeare. One cried, God bless us ! and Amen ! the other : As they had seen me with these hangman's hands, Listening their fear. 1 could not say, Amen ! Id. Listen to me, and if you speak me fair, I'll tell you news. Id.

Antigonus used often to go disguised, and listen at the tents of his soldiers ; and at a time heard some that spoke very ill of him: whereupon he said, If you speai ill of me, you should go a little farther off. Bacon's Apuplilhegms.

I, this sound I better know : List! I would I could hear mo. Ben Jonson. They are light of belief, great listeners after news.

Howel. It may be the palate of the soul is indisposed by listlessness or sorrow. Taylor.

The wonted roar was up amidst the woods. And filled the air with barbarous dissonance, At which I ceased and listened them a while.

Milton. It [piety] is an employment most constant, never allowing sloth or listlessness to creep in ; incessantly busying all our faculties with earnest contention.

Barrow. Intemperance and sensuality clog men's spirits, make them gross, listless, and unactive. Tillotson.

When we have occasion to listen, and give a more particular attention to some sound, the tympanum is drawn to a more than ordinary tension. Holder. If your care to wheat alone extend, Let Maja with her sisters first descend, Before you trust in earth your future hope, Or else expect a listless, lazy crop.

Dryden’s Virgil. On the green bank 1 sat, and listened long ; Nor till her lay was ended could I move, But wished to dwell for ever in the grove.

Dryden. Listeners never hear well of themselves.

L’Estrange, To know this perfectly, watch him at play, and see whether he be stirring and active, or whether he lazily and listlessly dreams away his time. Locke.

If it is dangerous to be convinced, it is dangerous to listen ; for our reason is so much of a machine, that it will not always be able to resist when the ear is perpetually assailed. Mackenzie.

To this humour most of our late comedies owe their success : the audience listens after nothing else.

Addison. Lazy lolling sort Of ever listless loiterers, that attend No cause, no trust. Pope,

1 was listless and desponding. Gulliver s Trarels. The hush word, when spoke by any brother in a lodge, was a warning to the rest to have a care of listeners. Sicijt.

Silence how dead ! and darkness how profound !

Nor eye, nor listening ear an object finds ;

Creation sleeps. Youny.

At first he aims at what he hears.

And listening close with both his ears,

Just catches at the sound. Cowper.

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Lilt! — ‘tis the bugle — Juan shrilly blew —

One kiss — one more — aaother — Oh ! adieu !

Byron. Who listens once will listen twice ; Ilcr heart, be sure, is not of ice, And one refusal no rebulT. Id.

List, iu commerce, the border of cloth or stuif • serving not only to show their quality, but to preserve them from being torn, in fulling, dye-ing, &,c.

List, in gardening, a border used by gardeners for securing tlieir wall-trees.

List, in the tournament, was so called, as be-ing hemmed round with pales, barriers, or stakes, as with a list. Some of these were double, one for each cavalier ; which kept them a])art, so tiiat they could not come nearer to each other than a spear’s length. See Duel, Just, Tournament, ˆc.

To List, or Enlist, Soldiers. Persons listed either as volunteers, or by any kind of compulsion, must be carried within four days, but not sooner than twenty-four hours after, before the ne.xt justice of peace of any county, riding, city, or place, or chief magistrate of any city or town corporate (not being an officer in the army), and if before such justice or magistrate they dissent from such enlisting, and return the enlisting money, and also 204-. in lieu of all charges expended on them, they are to be discharged. But persons refusing or neglecting to return and pay such money, within twenty-four hours, shall be deemed as duly listed as if they had assented to it before the proper magistrate ; and they shall, in that case, be obliged to take the oath, or, upon refusal, shall be confined by the officer who listed them till liiey do take it.

LISTER (Sir Matthew), M. D., physician to queen Anne of Denmark, queen of James VI., and to king Charles I., was president of the College of Physicians, and one of the greatest practitioners of his age. He died about 1637.

Lister (Martin), M. D. and F. II. S., nephew to the preceding, was born in Bucks, in 1638, and educated at Cambridge. He afterwards

travelled into France ; and at his return practised physic at York, and afterwards in London. In 1683 he was created M.D., and became fellow of the College of Physicians in London. In 1G98 he attended the earl of Portland in his embassy from king William III. to France; of which journey he published an account at his return, and was afterwards physician to queen Anne. He also published, 1. Historia Animalium Angliae, 4to. 2. Conchiliorum Synopsis, folio. 3. Cochlearum et Limachum Exercitatio Anatomica, 4 vols. 8vo. 4. Many pieces in the Philosophical Transactions, and other works.

LITANA, or Litana Silva, in ancient geography, a wood of the Boii, in Gallia Togata, or Cispadana, where the Romans, under L. Posthu-mius Albinus, sustained a great defeat, scarcely ten escaping of 25,000, and their general's head being cut off by the Boii, and carried in triumph into their temple. — Livy. Holstenius supposes this happened above the springs of Scultenna, in a part of the Appennines, between Cersinianum and Mutina; now called Selva di Lugo.

LITANY, M.S. Gr.Xiraviia. Pezron derives this Greek word from the Celtic lit, a feast or solemnity. A form of prayer. See below.

Supplications, with solemnity for the appeasing of God's wrath, were, of the (J reek church, tenned litanies, and rogations of the Latin. Hoo/ ier,

There was never any church-liturgy but said litanies for their king and for their bishop ! Bp. Taylor.

If our holy martyrs heretofore went to heaven with a lilaiiit in their mouth, let not an ill-advised new-fangledness be suffered to put scorn upon that, wherein tliey thought themselves happy. Bp. Hall.

Litany is derived from Xiravtvio, I beseech, the expression repeated by the people in the service. At first litanies were not fixed to any stated time, but were only employed as exigencies required. They were observed with ardent supplications and fastings, to avert the threatening judgments of fire, earthquakes, inundations, or hostile invasions. About A. D. 400 litanies began to be used in processions, the people walking barefoot, and repeating them with great devotion. The days on which these were used were called rogation days; these were appointed by the canons of different councils, till it was decreed, by the council of Toledo, that they should be used every month throughout the year ; and by degrees they came to be used weekly on

Wednesdays and Fridays, the ancient stationary days for fasting. To these the rubric of the church of England has added Sundays. Before the last review of the Common Prayer the litany was a distinct service by itself, and used some time after the morning prayer was over ; at present it is made one office with the morning service, being ordered to be read after the third collect for grace, instead of the intermissional prayers in the daily service.

Litchfield, a county of Connecticut, is bounded on the north by INIassachusetts, east by Hartford, south-east by New Haven, south-west by Fairfield county, and west by New York.

Litchfield, a post town, the capital of Litchfield county, in Connecticut, is situated thirty-eight miles N.N.W. of New Haven, and thirty west of Hartford. It contains a court house, a jail, a female academy, a law school, and two houses of public worship, one for Congregationalists, and one for Episcopalians, and has some trade. In the township there are nine houses of))ublic worship ; four for Congregationalists, four for Episcopalians, and one for Baptists. In the parish of South Farms there is another academy. It is a good agricultural town, and contains numerous mills and manufacturing establishments, among wliich are four forges for iron, a slitting-inill, nail manufactory, cotton manufactory, liaper-mill, and five large tanneries. Mount Tom, on the western border of the town, is 700 feet high. There are four])onds in this town, the largest of which comprises 900 acres. There is a medicinal spring within half a mile of the court-house.

The law school in this town is a private institution, established upwards of thirty years since. It has two professors, and at present thirty-six or thirty-seven students. Tiie members study the law by titles, in the order in which the lectures are given. The mode of instruction is by lee-

luring on the several titles of the law in an established order. The course of lectures occupies about fourteen or fifteen months. One lecture is given every day. There are two vacations of four weeks each

; one in May, the other in October. The price of tuition is at the rate of 100 dollars a year, that of board from three dollars to three and a half a week. Also a county of Ohio, on Lake Erie. LIT'ERAL, adj. & n. s. "l Fr. literal ; Lat. Lit'erally, adv. >litera. See Letter.

Literal'ity, w. s. J Following the letter; according to the strict or primitive meaning ; consisting of letters : literal, as a substantive, and literality, both signify original or primitive meaning.

The fittest for public audience are such as, following a middle course between the rigour of literal translations and the liberty of paraphrasts, do with greater shortness and plainness deliver the meaning.

Hooker. No man puts out his right eye literally, or cuts off his right hand to prevent scandal. Certain it is, there hath been much greater inconvenience by following the letter of these words of institution, than of any other in Scripture. lip. Taiflor.

How dangerous it is in sensible things to use metaphorical expressions unto the people, and what ab-surd conceits they will swallow vn their literals, an example we have in our profession. Browne.

Not attaining the true deuteroscopy, aad second intention of the words, they are fain to omit their superconsequences, coherences, figures, or tropolo-gies, and are not sometimes persuaded beyond their literaliliea. Browne's ' ulgar Erronrs.

A foundation being primarily of use in architecture, hath no other literal notation but what belongs to it in relation to an house, or other building ; nor figurative, but what is founded in that, and deduced from thence. Hammond.

Endeavouring to turn his Nisus and Euryalus as close as I was able, I have performed that episode too literally; that giving more scope to Mezentius and Lausus, that version, which has more of the majesty of Virgil, has less of his conciseness.

Di-yden. That a mam and his wife are one flesh, I can comprehend ; yet literalli) taken it is a thing impossible.

Swift. The literal notation of numbers was known to Europeans before the cyphers. Johnson.

LIT'ERARY, adj. ˆ Lat. literarius. Re—

Litera’ti, n. s. > specting or belonging

Lit’euature, 71. 5. ‘to letters, learning, or the learned : literati is a substantive of Ital. origin, signifying the learned, or any number of learned men taken collectively : literature, learning ; scholastic knowledge.

This kingdom hath been famous for good litciature ; and, if preferment attend deservers, there will not want supplies. Bacon.

I shall consult some literati on the project sent me for the discovery of the longitude. Spectator.

When men of learning are acted by a knowledge of tlie world, they give a reputation to literature, and convince the world of its usefulness.

Addison’s Freeholder.

All hopes of new literary institutions were quickly suppressed by the contentious turbulence of king James’s reign. Johnson.

We, in Scotland, boast of our professors, that they give regular lectures in all the sciences, which

the students are obliged to attend ; a part of literary economy which is but little attended to in tiie universities of England. Beattie.

Hence a moderate pain, upon which the attention may fasten and spend itself, is to many a refreshment , as a literary controversy. Paley. As boys love rows, my boyhood liked a squabble ;

13ut at this hour I wish to part in peace, Leaving such to the literary rabble,

Whether my verse’s fame be doomed to cease Wˆhile the right hand which wrote it still is able,

Or of some centuries to take a lease. Byron.

Literary Property. See Copyright.

Literati (letrados, lettered), an epithet given to such persons among the Chinese as are able to read and write their language. The literati alone are capable of being made mandarins. See China.

Literati may also be considered as the name of a particular sect in religion or philosophy, consisting principally of the learned men of China. It is called the jukiao, i. e. learned sect. It had its rise A. D. 1400, when the emperor, to awaken the attention of the people to knowledge, which had been quite neglected during the civil wars, and to stir up emulation among the mandarins, ordered forty-two of their ablest men of learning to compose a body of doctrine agreeable to that of the ancients. The work, being composed by so many learned persons, and approved by the emperor, was received with great applause. Many were pleased witli it because it seemed to subvert all religion ; others approved it because the little religion that it left them could not give them trouble to regard it. The court, the mandarins, persons of fortune and quality, Jcc, are generally literati. They freely toleiate the Mahommedans, because they adore, with them, the king of heaven, and author of nature ; they have an aversion, however, to all sorts of idolaters, and it was once resolved to extirpate them. See China.

Literature, as a branch of the fine arts, has been chiefly regarded as embracing the consideration of the etlects of Eloquence or Oratory, and of the structure and influence of Poetry. Both these arts are connected in their essence and end with the sister arts of music, painting, sculpture, and architecture ; that essence being in the whole of them cxpres&ion, and the end, pleasure.

Beauty, again, is the object with which all these arts are conversant; and wwcˆ.s-are admitted by Mr. Burke to have as considerable share in exciting the ideas of beauty and of the sublime as any of them ; but he contends that words affect us in a very different manner to nature, or the other fine arts. ‘ The common notion,’ he observes, ‘is, that the power of poetry and eloquence, as well as that of words in ordinary conversation, is, that tiiey afi’ect the mind by raising ideas in it of those things for wiiich cus-tom has appointed them to stand ; but their influence on the passions may be traced to a totally different source.’ ‘ Nobody, I believe,’ says this great man, ‘ immediately on hearing the sounds, virtue, liberty, or honor, conceives any precise notions of the particular modes of action and thinking, together with the niixt and

!siinple ideas, and tlie several relations cf them for which tliese words are substituted ; neither has lie any general idea, compounded of them ; for, if he had, then some of those particular ones, though indistinct, perhaps, and confused, might come soon to be perceived. But this, I take it, is hardly ever the case. For put yourself upon analysing one of these words, and you must re-duce it from one set of general words to another, and then into the simple abstracts and aggregates, in a much longer series than may be at first imagined, before any real idea emerges to light, before you come to discover any thhig like the first principles of such compositions ; and, when you have made such a discovery of the original ideas, the effect of the composition is utterly lost. A train of thinking of this sort is much too long to be pursued in the ordinary ways of conversation, nor is it at all necessary that it should. Such words are in reality but mere sounds ; but they are sounds, which being used on particular occasions, wherein we receive some good, or suffer some evil ; or see others atfected with good or evil ; or which we hear applied to other interesting tilings or events; and being applied in such a variety of cases, that we know readily by habit to wliat things they belong, they produce in the inind, whenever they are afterwards mentioned, effects similar to those of their occasions. The sounds being often used without reference to any particular occasion, and carrying still their first impressions, they at last utterly lose their connexion with the particular occasions that gave rise to them ; yet the sound, without any annexed notion, continues to operate as before.' ' I find it very hard,' he adds, ' to persuade several that their passions are affected bywords from whence they have no ideas; and yet harder to convince tliem, that in the ordinary course of conversation we are sufficiently understood withovU raising any images of the things concerning which we speak. It seems to be an odd subject of dispute with any man, whether he has ideas in his mind or not. Of this, at first view, every man, in his own forum, ought to judge without appeal. But, strange as it may appear, we are often at a loss to know what ideas we have of things, or whether we have any ideas at all upon some subjects. ' It even requires a good deal of attention to be thoroughly satisfied oa this head. Since I wrote these papers I found two very striking instances of the possibility there is, that a man may hear words without having any idea of the things which they represent, and yet afterwards be capable of returning them to others, combined in a new way, and with great propriety, energy, and instruction. The first instance is that of

Mr. Blacklock, a poet blind from his birth. Few men blessed with the most perfect sight can describe visual objects with more spirit and justness than this blind man ; which cannot possibly be attributed to his having a clearer conception of the things he describes tlian is common to other persons. The second instance is of i\Ir. Saunderson, professor of ina-iliematics in the University of Cambridge. Tiiis learned man had acquired great knowledge in natural philosophy, in astronomy, and whatever sciences depend upon mathematical skill.

What was the most extraordinary, and the most to my purpose, he gave excellent lectures upon light and colors ; and this man taught others the theory of those ideas vvhicli they had, and whicli he himself undoubtedly had not. But it is probable that the words red, blue, green, answered to him as well as the ideas of the color themselves for the ideas of greater or less degrees of refrangibility being applied to these words, and the blind man being instructed in what other respects they were found to agree or to disagree, it was as easy for him to reason upon the words, as if he had been fully master of the ideas. Indeed it must be owned he could make no new discoveries in the way of experiment, lie did nothing but what we do every day in common discourse.'

Our author then instances, in passages from Virgil, Horace, and Milton, the manner in which he conceives we are affected by verbal description : — * There is not perhaps in tlie whole *Eneid a more grand and labored passage than the description of Vulcan's cavern in* Etna, and the works that are there carried on. Virgil dwells particularly on the formation of the thunder, wliich he describes unfinished under the hammers of the Cyclops. But what are the principles of this extraordinary composition ?

Tres imbris torti radios, tres nubis aquosae Addiderant ; rutili tres ignis et alitis austri ; Fulgores nunc terrificos sonitumque, metumque Miscebant operi, fiammisque sequacibus iras.

This seems to be admirably sublime; yet, if we attend coolly to the kind of sensible images which a combination of ideas of this sort must form, the chimeras of madmen cannot appear more wild and absurd than such a picture. ' Three rays of twisted showers, three of watery clouds, three of fire, and three of the winged south wind ; then mixed they in the work terrific lightnings, and sound, and fear, and anger, with pursuing flames.' This strange composition is formed into a gross body ; it is hammered by the Cyclops, it is in part polished, and partly

continues rough. The truth is, if poetry gives us a noble assemblage of words, corresponding to many noble ideas, which are connected by circumstances of time or place, or related to each other as cause and effect, or associated in any natural way, they may be moulded together in any form, and perfectly answer their end. The picturesque connexion is not demanded ; because no real picture is formed ; nor is the effect of the description at all the less upon this account.

‘ What is said of Helen by Priam and the old men of his council, is generally thought to give us the highest possible idea of that fatal beauty.

Qv vifiiaiQ Tpwac Kai tvKvijfitcac Axa««c Toit} S’ ayapi yvvaiKt noXvv ypwvov aXyea Traaxtiv Aivwc ˆ‘aOavciToini ˆtrje 4ig loira tc.iKiv.

Tiiey cried, no wonder such celestial charms For nine long years have set the world in arms ; What winning graces 1 what ma esticmien ! She moves a goddess, and she looks a queen. Ptriie.

Here is not one word said of the particulars of her beauty; nothing which can in the least help us to any precise idea of her person ; but yet we are much more touched by this manner of men-

(iniiiiig iier than by tliose long and labored descriptions of Helen, whether handed down by tradition, or formed by fancy, which are to be met with in some authors. I am sure it affects me much more than the minute description which Spenser has given of Belphebe ; though I own that there are parts in that description, as there are in all tlie descriptions of that excellent writer, extremely fine and poetical.’

‘ Certain ii is, that the influence of most things on our passions is not so much from the things themselves, as from our opinions concerning them ; and these again depend very much on the opinions of other men, conveyable for the most part by words only. Secondly, there are many things of a very affecting nature, which can sel-dom occur in the

reality, but the words which represent them often do ; and thus they have an opportunity of making a deep impression and taking root in the mind, whilst the idea of the reality was transient; and to some perhaps never really occurred in any shape, to whom it IS notwitlistanding very affecting, as war, death, famine, &c. Besides many ideas have never been at all presented to the senses of any men but by words, as God, angels, devils, heaven, and liell, all of which have, however, a great influence over the passions. Thirdly, by words we have it in our power to make such combinations as we cannot possibly do otherwise. By this power of combining we are able, by the addition of well-chosen circumstances, to give a new life and force to the simple object. In painting we may represent any fine figure we please : but we never can give it those enlivening touches which It may receive from words. To represent an angel in a picture, you can only draw a beautiful young man winged : but what painting can furnish out any thmg so grand as the addition of one word, ‘ the angel of the Lord V It is true, i have here no clear idea : but these words affect the mind more than the sensible image did ; which is all I contend for. A picture of Priam drai,ˆged to the altar’s foot, and there murdered, if it were well executed, would undoubtedly be very moving : but there are very aggravating circumstances, which it could never represent:

San{{uine fcedentem quos ipse sacraverat ignes.

As a farther instance, let us consider those lines of Milton, where he describes the travels of the fallen angels through their dismal habitation :

O’er many a dark and dreary vale They passed, and many a region dolorous ; O’er many a frozen, many a fiery Alp; Hocks, caves, lakes, fens, bogs, dens, and shades

of death. \ universe of death.

Here is displayed the force of union m

Rocks, caves, lakes, dens, bogs, fens, and shades ;

which yet wou’d lose ‘the greatest part of the effect, if they were not the

Rocks, caves, lakes, dens, bogs, fens, and shades— of Jˆeath.

This idea or this affection caused by a word, \hich nothing but a word could annex to the • ‘thcrs, rai.ics a very great degree of the sublime;

and this sublime is raised yet higher by what follows, ‘ a universe of Deatli.’ Here are again two ideas not presentable but by language ; and a union of them great and amazing beyond conception ; if they may properly be called ideas which present no distinct image to the mind : — but still it will be difficult to conceive how words can move the passions which belong to real objects, without representing these objects clearly-This is difficult to us, because we do not sufficiently distinguish, in our observations upon language, between a clear expression, and a strong expression. These are frequently confounded with each otiier, though they are in reality extremely different. The former regards the understanding; the latter belongs to the passions. The one describes a thing as it is; the other describes it as it is felt. We yield to sympathy what we refuse to description. The truth IS, all verbal description, merely as naked description, though never so exact, conveys so poor and insufficient an idea of the thing described, that it could scarcely have the smallest effect, if the speaker did not call in to his aid those modes of speech that mark a strong and lively feeling in himself. Then, by the contagion of our passions, we catch a fire already kindled in another, which probably might never have been struck out by the object described : and words, by strongly conveying the passions, by those means which we have already mentioned, fully compensate for their weakness in other respects. It may be observed, that very polished languages, and such as are praised for their superior clearness and perspicuity, are generally deficient in strength. The French language has that perfection and that defect. Whereas the oriental tongues, and in general the languages of most unpolished people, have a great force and energy of expression; and this is but natural. Uncultivated people are but ordinary observers of things, and not critical in distinguishing them ; but, for that reason, they admire more, and are more affected with what they see, and therefore express themselves in a warmer and more passionate manner. If the affection be well conveyed, it will work its effect without any clear idea ; often without any idea at all of the thing which has originally given rise to it.’

These ideas suggest, at least, the basis on which the influence of literature on the character and manners of nations must rest. When oratory and poetry become distinct arts, they claim, of course, distinct discussion. See Poetuy and Okatory.

LITHANTHRAX, or pit coal, is a black or brown, laminated, bituminous substance; not very easily inflammable, but, when once inflamed, Inirns longer and more intensely than any t)ther substance.

See CoAr.. (jf this substance three kindsarc distinguished by authors. Tiie residuum of the first, after combustion, is black ; the residuum of the second is spongy, and like pumice stone; and the residuum of the third is whitish ashes. Some fossil coal, by long exposure to air, falls into a grayish powder; from which alum may be extracted. Fossil coal by distillation yields, 1, a phlegm or water; 2, a very acid liquor ; .‘J, a thin oil like naphtha ; •!, a tliicktr

oil, resembling petroleum, which falls to the bottom of the former, and which rises with a violent fire ; 5, an acid concrete salt ; 6, an un-inflammable earth remains in the retort. These constituent parts of fossil coal are very similar to those of amber and other bitumens. From some sorts of it a varnish may be made by fat oiis. Fixed alkali has never been found in any sppcies of it; nor sulphur, unless when mixed with pyrites. None of the species are electrics pel se. For exciting intense heats, as in furnaces for smelting iron ore, and for operations where the acid and oily vapors would be detrimental, as in drying of malt, fossil coals are previously charred, or reduced to cokes. See Coke. Pit-coal affords tar, and, on that and other accounts, is ranked by modern chemists among vegetable substances. See Chemistuy. LITH’AllGE. Fr. litharge; Lat. lithnr-gj/ruin. Lead vitrified with copper.

Our orpiments and sublimed mercury, Our grounden litarge eke on the porphurie, Of eclie of thise of unces a certain, Not helpeth us ; our labour is in vain.

Chaucer. Cant. Tales. 1 have seen some parcels of glass adhering to the test or cupel as well as the gold or litharge. Boyle.

Litharge is properly lead vitrified, either alone or with a mixture of copper. This recrement is of two kinds, lithar!;e of gold, and litharge of silver, ll is collected from the furnaces where silver is separated from lead, or from those where gold and silver are purified by means of that metal. The litharge sold in the shops is produced in the copper works, where lead has been used to purify diat metal, or to separate

silver from it. Hill.

Litharge of lead is often used in the analysis of the ores of what are called the perfect metals.

Parkes's Chemical Catechism.

Litharge is a preparation of lead, usually in form of soft flakes, of a yellowish reddish color. If calcined lead be urged with a hasty fire, it melts into the appearance of oil ; and, on cooling, concretes into litharge. According to the degree of fire and other circumstances, it proves of a pale or deep color ; the former called litharge of silver, the latter litharge of gold.

LITHE, «(/;. ˆ Sax. EEli«e; Moeso-Goth. Litu'er, adj. S lUft/i, to bend. I'lexible; lim-ber ; soft ; pliant.

When it was night, to slepel laie. Right as I was wont for to doen, And fill aslepe wondir sone, As he that was werie forgo On pilgrimage mills two To the corps of sainct Leonarde, To makin lith that erst was harde. Chancer. Thou antick death. Two Talbots winged through the lither sky, In thy despight shall 'scape mortality.

Shahpeare. 'I'he' unwieldy elephant. To make them mirth, used all his might, and

wreathed His lithe proboscis. ˆfitton's Pinndhe Lost.

LITIIIATF, from Gr. X(0oc,.a stone, a neutral salt, formed by the combinations of thelithic acid with varif)us bases. See Chemistry.

LITHIC A(iD, an acid extracted from the urinary calculus. See Chemistuy.

LITIIOG'RAPHV, ;*. *. . Gr. Xt9oc, astone. Lith'omancy, # Lithography is the

Lithontrip'tick, Vart of engraving or

Lithot'omy, i writing on stone :

Lithot'o.mist. J lithomancy, Greek,

\iOoc, a stone, and fiavna, divination ; prediction by stones: lithonlriptick, Fr. lU/iontriptique, a medicine that dissolves stones in

the kidneys or bladder : lithotomy, Gr. \i9oc and rifivw, to cut, the art or practice of cutting for the stone : lithotomist, one who professes the art of extracting stones from the bladder.

As strange must be the lithomancy, or divination, from this stone, whereby Helenas the prophet foretold the destruction of Troy. Browne.

If it be certain that Uthotomjj is more likely to be followed by the patient's recovery, when no manual roughness is exercised, rapid operating must be condemned by the judicious and discerning.

Dr. A. Bees.

Lithography is the art of taking impressions from drawings made on stone. The general process consists in drawing the design upon the absorbent body with a soapy chalk, and in decomposing this soapy design by an acid, which, liberating the fatty matter present, greases the stone where the design existed, or rather brings it into such a state that, being wetted and then rolled with the ink-roller, no ink will adhere except at the parts underneath the original de-sign. From this it will be obvious that the process depends entirely on chemical principles, and is thus distinct from letter-press or copper-plate printing, which are altogether mechanical. On this account it has in Germany been called chemical printing ; and, as metallic plates can be prepared to be printed from in a similar manner, lithography is considered only as a branch of chemical printing.

Alois Senefelder may be considered as the inventor of this beautiful art. His first professional essays were executed in 1796. The difficulty he experienced in writing backwards, led him to the process of transfer, and the use of dry soap, which was found to leave permanent traces, which would give impressions, naturally led to the mode of chalk-drawings. Having made considerable improvements, Mr. Senefelder obtained, in 1799, a patent privilege for Bavaria, when he made known his process, and afterwards entered into partnership with Mr. Andre, of Oflfenbach, who proposed to establish presses, and take out patents at London, Paris, and X'ienna. For this purpose Senefelder came to London with a brother of Andre's, and the invention having been much spoken of, under the name of poly-autography, most of the principal English artists made trials of it.- Unfortunately, however, the art of printing from the stones was not then fully understood, and the difference between the materials of Germany and those of England, used both for the purposes of drawing and printing, caused constant failures, and the artists in succession abandoned the practice of it. To

this cause is to be attributed the unpopularity of lithography in England, as it was left entirely in the hands of amateurs, whose productions, generally speaking, did no credit to the art, and

whose faults were in some degree bupposed to be those of the art itself, lii August, 1800, Seiiefelder, who had now separated from Andre, went to V'lenna, where, after much difficulty, a patent was obtained, and extensive preparations were made, for applying his process to print cottons ; but bad management, and some unfortunate circumstances, prevented his success, and he returned to Munich in 1806, leaving the estiblishment in other hands.

Mr. Mitterer, professor of drawing at the public school at Munich, now (1806), practised lilho/raphy to multiply copies for the pupils, and is said to have invented the chalk composition in its present form, or at least to have improved it greatly. From this period tlie practice of the art has extended and improved rapidly, and more particularly at Munich, where several establishments were formed, for the purpose of applying it to the fine arts, as well as for printing writings and official forms, for the different departments of the government.

In October, 1809, Senefelder was appointed inspector of the Royal Lithographic Establishment at Munich, for printing from stone a complete map and survey of Bavaria, since which period he has devoted his time to experiments, and to writing the history of his invention. Among other points of improvement, to which his attention has been directed, is a substitute for the stones, which are inconvenient to use on account of their weight, and they are also liable to break in the press, when used without due caution, or when they contain flaws. For this purpose he has made a composition of dryintj oil, finely ground earth, and other substances, which is thinly spread over pieces of parchment; but it has not hitherto been found to answer. The surface cracks after repeated wetting and exposure to the power of the press, and the printing ink is then taken in the cracks and spoils the impressions. Thus a very small num-ber only of good impressions can be obtained.

From the period of Andre's English patent, till Mr. Hullmandel commenced his establishment in London, but little progress was made in this country; but that ingenious artist formed a new era in lithography, and in many cases English printing is now equal, if not superior, to the continental works.

The principal operation in lithography consists in impregnating a stone with fatty substances, very superficially, so that, in consequence of the affinity which exists between these substances and their power to repel water, the points or lines formed with them on stone shall be capable of retaining other such substances ˆyhenever tliey are brought in contact with them ; while these substances will be repelled by the moisture which the stone has imbibed in those parts which they do not cover. Thus, when lines have been made on a stone with lithographic ink, or crayons, intotiie composition of which fatty bodies enter, and afterwards a roller charged with a fat or oily ink is passed over these stones, this ink will be •'3posited on the traces of the crayon, or of the lithographic ink, in a thin layer, but sufficient to produce an impression ; whilst it will not ad-here to any parts of the stone which are not

impregnated with the fatty inatler ; and which, besides, are kept in a moist state. It is on das point that all the art of lidiograpliy depends; and it is only requisite, therefore, to discover what substances, by a proper combination, can be made most suitable to answer the double purpose of producing a good drawing, and of receiving the ink, which is to form the impression. It will be apparent that it is not a matter of indifference what kind of fatty substance is used with which to form a drawing, or to trace a writing, on the stone. These substances, in their natural state, if brought into contact with a stone, would diffuse themselves in every direction ; and, consequently, would not be capable of forming points or lines sufficiently fine and well defined, to give to a drawing the delicacy, precision, and harmony, which it ought to iiave It is necessary, then, to find a liquid composition, by which may be traced lines as clear and well defined as those made on paper with Indian ink ; and also a solid preparation, which will produce the same results as the common crayons used by artists. Hitherto, it has only been possible to effect this by forming a kind of soap, by tiie combination of fatty or resinous substances with an alkali. This soap, when liquid, does not spread as grease and oils do; and, when in a solid state, it has such a degree of consistency as to enable the artist to produce upon stone all the effects of a drawing. But as soapy bodies are, in general, soluble in water, and as the water

with which it is necessary to moisten the stone, and consequently the drawing, before applying the printing-ink, would destroy tlie drawing, by dissolving the soapy substance with wliich it was formed, it was found necessary to find a means of reducing this soap to the state of a fatty body insoluble in water. This is effected by spreading over the stone and over the drawing an acid, which, by uniting witli the alkali of the soap, reduces the latter to the state of grease. This operation is called the preparation. Lithographic ink, if good, will be soluble in distilled water, which is capable of perfectly dissolving common soap. It ought to flow freely from the pen, and not spread on the stone ; it must also be capable of forming extremely fine lines, and should be very black, in order to render the work of the artist perfectly clear and distinct. The most essential quality, however, is tiiat of imbedding itself firmly in the stone, so as to reproduce the most delicate touches of the drawing, and to aftbrd a great number of impressions : in order to do this, it is necessary that it should be capable of resisting the acid which is spread over it in the preparation, so as not to have its fatty particles either removed or altered. Ahostof recipes, for making litiiographic ink and crayons, have been published, and scattered both in Germany and France. M. Senefelder, iu his work, gives eight receipts for making tiiis drawing-ink ; yet, assuredly, he has not publislied that which he considers the best. We think it sniˆerfluous to give these receipts, as it would only serve to create uncertainty in choosing from amonp fhem, and especially as they are all considered more or less inferior to lh(? following :—

Soap, from suet or tullow, dry Mastic, in tears Soda of commeree Shell-lac . Fine lamp-black

Drachms.

. 30 . 30 . 30 . 150 . 12

Soap made of tallow is to be preferred to that prepared from oil. But as soap is more or less hard, according to its age and tlie dryness of the situation in which it lias been kept, it must not be used in exactly the above proportions with tlie other articles, without regard to its being either moist or dry. To obviate this source of error, and to obtain the exact proportions, the soap should be cut with a knife into thin slices, and exposed to the sun and air until it is perfectly dry; it is then to be put into a box lined witli paper, and thus kept in a very dry place until it is wanted for use. The best lamp-black, which is the product of tiie combustioa of resin, should be used.

In order to melt these materials, a copper, cast-metal skdlet, should be used, wliich should be furnished with a wooden handle ; it will also be found convenient for it to have a lip on its edge, in order that the material may pass more readily into the moulds, particularly when crayons are to be made. The soap is first put into this vessel, which is then to be placed over a brisk fire in a chafing-dish ; when this is well melted the shell-lac is to be thrown in, wliich will fuse very readily; the soda is then to be added, a little at a time, and after this the mastic, taking care to stir it with a spatula, furnished with a wooden handle ; lastly, the lamp-black is gradually put in, stirring it between every successive addition until the mixture is complete. A very brisk fire is used that the materials may be perfectly fused. The shell-lac is apt to swell up ; it is, therefore, put into the skillet gradually that it may not boil over. When all these materials are well incorporated, they are poured out on a plate of cast-iron, made very warm and rubbed over with oil, in order that the composition may be easily detached from it. Before the mass is poured on the plate, ledges are formed round it with pieces of wood, wliich serve to prevent the mass from running oflf, and enable us to preserve it of an equal thickness throughout ; when these pieces of wood are removed, the composition is to be cut into stripes by means of a knife, which should be guided by a straight ruler ; this must be done whilst the compositioi is warm, i.ittle sticks are tlius formed, similar to those of Indian ink ; it would, however, be more convenient to have mould's in which to pour the composition.

IVIany who have written on the subject of lithography have recommended, not merely the melting, but the partial burning of the materials with which lithographic ink and crayons are to be composed ; but this is a bad method, since it is impossible in this way always to obtain the same combinations, as some portion of the materials woidd thus be wholly destroyed. The means of obtaining good ink must (lepond on the nature of the materials, and upon their being duly jroportioned to each other, and, to accom-

plisii these ends, it is not necessary to have recourse to combustion.

The ink, of which we are about to give the composition, is used either with the pen or the (lamel's hair pencil, for writings, dotted, and aquatinta drawings, those of a mixed character, or those intended as imitations of wood or other engravings.

We proceed to describe, practically, the process for])reparing the autographic mk, or that kind which is suitable for transferring to stone the writings or drawings which have been executed on paper, prepared for that purpose.

This ink ought to be mellow, and somewhat thicker than that used immediately on the stone ; so that, when it is dry on the paper, it may still be sufficiently viscous to cause it to adhere to the stone by simple pressure. The following is the manner of preparing the ink : —

Drachms. Dry soap . .100

White-wax, free from tallow . 100 Mutton suet …. 50 Shell-lac …. 50

Mastic 50

Lamp-black 30 to 35

These materials are to be melted in the way we have described for lithographic ink.

The operation, by which a writing or drawing is transferred from paper to stone, not only affords the means of abridging labor, but also of producing the writings or drawings in the same direction in which they have been traced ; whereas, when they are executed immediately on stone, they must be performed ,in a direction opposite to that which they are eventually to have. Thus it is necessary to draw those objects on the left, which, in the impression, are to be on the right hand. To acquire the art of reversing subjects, when writing or drawing, is both difficult and tedious ; while by the aid of transparent, and of autographic, paper, impressions may be readily obtained, in the same direction as that in which the writing or the drawing has been made. In order to make a transfer to stone of a writing or drawing, in lithographic ink or in crayons, or an impression from a copper-plate, it is necessary, first, that the drawing, or transcript, should be on a thin and flexible substance, such as com-mon paper; secondly, that it should be capable of being easily detached from this substance, and

transferred entirely to the stone, by means of pressure. But as the ink with which a drawing is traced penetrates the paper to a certain depth, and adheres to it with considerable tenacity, it would be difficult to detach them perfectly from each otlier, if, between the paper and the drawing, some substance were not interposed, which, by the portion of water it is capable of imbibing, should so far lessen their adhesion to each other, that they may be completely separated in every point. It is to efi'ect this that the paper is prepared, by covering it with a size, which may be written on with facility, and on which the finest lines may be traced, without blotting the paper. X'^arious means may be found of communicating this property to paper. The following preparation is always found to succeed, and

when the operation is performed with the necessary precautK)ns, admits of tlie finest and most delicate lines being perfectly transferred, without leaving the faintest trace on the paper. For this purpose it is necessary to take a strong unsized paper, and to spread over it a size, prepared of the undermentioned materials :

Drachms. Starch ...120

Gum Arabic ...40 Alum . .21

A moderately thick paste is made with the starch, by means of heat; into this paste is thrown the gum arable and the alum, which liave been previously dissolved in water, and in separate ve&sels. The whole is mixed well together ; and it is applied warm to the sheets of paper by means of a brush, or a large flat hair pencil. The paper may be colored by adding to the size a decoction of French berries, in tlie proportion of ten drachms. After having dried this autographic paper, it is put into a press, to flatten the sheets ; and they are made smooth by placing them, two at a time, on a stone, and passing them under the scraper of the lithographic press. If, on trying this paper, it is found to have a tendency to blot, this inconvenience may be remedied by rubbing it with finely powdered gum sandarach.. We give below another receipt, which will be found equally useful ; and which has

the advantage of being applicable to thin paper, which has been sized. It requires only that the paper be of a firm texture.

Drachms. Gum tragacanth . . 4

German glue … 4 Sjjanish white … 8 Starch …. 4

Th« tragacan.th is to be put into a large quantity of water, to dissolve, thirty-six hours before it is mixed with the other materials. The glue is to be melted over the fire in the usual manner. A paste is made with the starch ; and after hav-ing, whilst warm, mixed these several ingredients, the Spanish white is to be added to them, and a layer of this sizing is to be spread over the paper, as already described : taking care to agitate the mixture with the brush, to the bottom of the ve-ssel, that tiie Spanish white may be equally distributed throughout the liquid.

We must not omit to notice two autographic / processes which facilitate and abridge this kind of work, when it is desired to copy a fac simile, or a drawing in lines. The first of these methods is to trace, with autographic ink, any subject whatever, on a transparent paper, which is free from grease and resin ; like that which is known in commerce by tlie name of papier vegetal; and, to transfer it to slone, this paper is to be covered with a transparent size ; this operation is very difficult to execute, and requires much address, in consequence of the great tendency which this paper has to cockle or wrinkle when it is wetted. Great fiicilities will be found from using tissue paper impregnated with a fine white varnish, and afterwards sized over. In the second process, transparent leave.s, formed of gelatin or fish glue, au-employed ; and the design is traced on them

witii the dry-point, so as to make an incision ; these traces are to be filled up with autogiaphic nk, and thence transferred.

The German artists principally make use of various tints, wiiicii are added to the original black and white impression. This mode of printing has been rarely adopted in this country ; but, when employed vvitli judgment, is capable of producing very beautiful effects. We may illustrate this by reference to a chalk drawing done in the common manner: when finished, an impression of this drawing is thrown on a polished stone, and a transparent coating of a waxy substance laid over the impression thus transferred. In this state it is sent to the artist, who must scrape away this waxy coating where-ever

he wishes white lights to appear. To produce a good effect, in this way, requires some judgment ; the lights must never be scraped out too broad, for the impressions will have a snowy appearance, which will be very disagreeable, the effect must rather be produced by small scratches close to one another, it being well borne in mind that half tints of white cannot be scraped out. Every line scraped will be positive light; but the effect of half tints must be produced by the fineness of the lines, and not by the more or less scraping of the waxy coating. In scraping, the artist must feel that he has actually removed the waxy coating, and that the tool has touched the face of the stone, if not, the intended light will not tell, and the scraping becomes useless. I'or imitating the rough touches of white chalk, it is a very good plan to jag (by striking with a knife) the edge of the tool used in scraping. With such a tool, a ruggedness will be given to the scraping, which could not be easily imitated in any other manner; but, unless they are scraped with art, these lights will have a heavy and mechanical look in the printing.

There is another method of executing the tint plates, which some persons prefer: it is as follows. After the printer has thrown off an impression of the drawing on a polished stone, instead of laying on a waxy mixture, the stone is sent to the artist, who lays on gum water over all those parts which are intended to be white ; a margin of gum must also be added, and the rest is done by the printer.

Lithographic chalk should have the qualities of a good drawing crayon, it should be even in texture and carry a good point. It is, however, difficult to avoid making it too soft and greasy on the one hand, and too brittle on the other. For the chalk, as for the ink, more or less of the soap, wax, and tallow, may be used, as the ex-tent of the burning may render necessary, and the remedies pointed out for defects of the ink will enable the operator to judge of what is wanting.

The following proportiens are the best :

Ounces. Common soap . • 1 J

Tallow …2

Virgin wax . ■ 2.^

Shell-lac …. 1

The manipulation is similar to that for the ink. It is well, however, to throw in a little of the

wax just before the flame is extinguished. Less bhick must be mixed with the chalk than with the ink, its only use being to color the drawing, so that the artist may see the lines he traces.

When the whole is well mixed, it should be poured into a mould, and very strongly pressed to prevent any bubbles, which would make the texture irregular.

We may now furnish some useful information relative to the kind of stone to be employed -in lithography. The country adjacent to that wiierein lithography originated is abundantly provided with stoues suited to this art. There are immense quarries of it, disposed in layers, along the Danube, in the country of Pappenheim, and in several other spots. The principal quarries worked are at a village called Solenhofen. Every one admitting the existence of a first cause, must believe that Providence, who destined to this age the invention of an art favorable to the progress of civilisation, had formed a considerable mass of stones ready prepared for the service of lithography. They are, in fact, found disposed in layers of one, two, three, or more inches in thickness, in sucli a manner that it is merely necessary to raise them from the quarries, and to cut them into convenient sizes, their thickness being equal tliroughout in each strata. Nature, who acknowledges neither privilege nor monopoly, has distributed the same benefit amongst other countries also, though in a way less striking. Lithographic stones are found in France, Italy, Prussia, Britain, Spain, and in the United States. Researches made with greater care would undoubtedly discover them in a great number of places. All the lithographers of Paris make use, almost exclusively, of the stones from Germany. The reason of this is, that the French quarries have been badly worked, either from want of funds or ignorance. The first masses which presented themselves on the superficial strata have been employed ; these stones are full of hollows, veins, or other defects, though otherwise of a good quality, being harder than those of Solenhofen. Those of the first quality, from Germany, are preferred for designs in crayons; those found in commerce are nofall equally

good. The following are the properties which denote the goodness of a lithographic stone.

White stones are generally inferior to other kinds, being less durable. Those of a yellowish, or rather a grayish tint, are to be preferred on account of their durability, and because their grain is generally most equal. Those which are covered with points, or little whitish parts resembling vermicella, ought to be altogether rejected, especially when it is necessary to make delicate drawings in crayon ; as the marblings or shades of different colors deceive the eye of the artist, and prevent his giving to his work that effect and harmony which it ought to have. The strata with stripes of a more transparent tint than the rest of the stone ought to be rejected, not only because they are liable to split, but because they take the ink more readily in those parts, and leave the traces of it more strongly upon the designs Stones, however, are met with, which have fine lines, or threads of a brownish hue,

which do not present any impediments to the success of the artist.

Stones whicli are liard and homogeneous acquire a more equal surface, and are better adapted to the harmony of the tints ; they give a greater' number of impressions without clogging, and furnish proofs more clear and brilliant, whilst the contrary is the case with those which are softer ; the durability of a stone may be ascertained by scratching it with the point of a knife. Those which are soft retain with more difficulty the traces of the design in tlie light touches ; they clog more readily, and consequently afford a smaller number of impressions. The metallic pen cuts them easily, which produces a clogging, and prevents the ink from flowing. The grain of these stones is always coarse and unequal. Those which have holes, or those which are unequal in their grain or in their hardness, present the same inconvenience; they check the point of the pen when employed in imitating line engraving, and do not admit of the artist giving clearness and neatness to his work. The soft parts being also more easily acted on by the acid are corroded, and injure the parts of the design with which they have been covered. Stones which have any defect whatever, ought never to be used for the crayon, with which it is necessary to draw with particular care ; they are therefore generally used for works in ink. The thickness of the stones is immaterial, provided they are not too thin ; for in this case there is a risk of breaking ihem in the operation of printing. Their thickness ought to be proportioned to their surface ; the smallest should not be less than an

inch, when thicker they have the advantage of serving for a considerable number of designs ; but they are very inconvenient when it is desired to remove or export them. It sometimes happens that a stone, the surface of which presents all the qualities which have just been spoken of, and which has succeeded well in the impressions of one or more copies, is found to be bad in the succeeding impressions.

The stones proper for lithography are composed of lime, argil, and silex. The first of these substances predominates, the third is found in very small quantity. A stone entirely calcareous does not answer for lithography, as has been proved by the marble of Carrara ; the crayon and ink adhere to this stone with difficulty, and are readily effaced from it; the lines and the shades in a great measure disappear. One of the most certain indications of lithographical properties is the conchoidal fracture. All stones of this kind will be found good if they are also hard, and have all the fineness of grain and homogeneousness of texture which are necessary.

The mode of polishing them must next be adverted to. Polishing is an operation by means of which a uniform and flat surface, and a polish more or less high, is given to the stone, according to the different kind of design or of work for which it is intended. The care and precision with which this first preparation of the stone is effected, are not of less importance to the execution of the design than to that of the impression. A stone, the grain of which is unsuitable for the

crayon, will not allow the artist to regulate his tints, and to give them harmony ; when he works in ink, or with the dry point, he will meet with other obstacles if the polish of the stone be not perfect ; and in each case his drawings will be defectire ; but they will be more so, if in the surface of the stone there are undulations, hollows, stripes, Jcc. Stones are poliˆshed with sand, by rubbing them one on the other. The best sand for this purpose is that quartzose sand which is fine and hard-grained. In Paris they in general make use of a yellow sand, which, though fine, requires to be sifted. It is necessary to be very careful that the sand which is used be not mixed with gravel or any

sharp angular substance, which would form stripes on the stones, the hollows of which would not receive the printing-ink, and there would consequently be white marks on the impressions. This serious evil is avoided by sifting the sand before it is used, and by rubbing the upper stone slowly at the commencement of the operation, and occasionally turning it round upon the lower stone.

The kind of design for which a stone is intended determines the kind of polish which should be given to it. A work in which the crayon is used cannot be executed uoless the stone have a grain left upon it ; all other kinds of drawing require surfaces which have the polish of marble. Whether we wish to employ a fresh stone, or to renew one which has been already used, it must equally undergo the process of polishing. For this purpose it is placed on a table ; a little sand is very equally sifted over it, which is moistened with a very little water. On the first stone is placed a second, as nearly as possible of the same dimensions, and the upper one is rubbed about in a direction nearly circular, but drawing it successively towards the four corners, and continually changing the relative position of the stones, so that every part of their surfaces may be subjected to an equal degree of friction. If this be neglected, and the stones be pressed on each other, and the circular motion be always the same, hollows will be formed, and uneven surfaces produced; and these irregularities will show themselves in the impressions. It is easy to ascertain, by means of a straight line, whether the stone be well levelled.

At first the motion should be slow, and the pressure trifling, the rapidity of the one and the force of the other increasing as the sand becomes equally distributed. When the sand becomes reduced to a paste, it no longer acts upon the stone ; fresh sand must be taken until the stone be perfectly smooth, and there no longer remain on it the traces of any former design. The ink which formed this design may have been made to disappear without our having removed the source of its reproduction. This cause exists in the particles of the fatty substance of the crayon, or of the ink, which have penetrated be-low the surface of the stone, and which, being again brought in contact with the printing-ink, will retain it, and reproduce part of the old de-sign. It may be known that this cause exists, when it is perceived that in the wet stone there are light traces of the former drawing. It is

tl)en necessary to contuiuc the rubbing until tliese have entirely disappeared. The aquafortis employed in the preparation of the stone for printing will, by itself, produce this effect when the traces are very

superficial. It should be remarked, that, of two stones of the same size, the lower becomes polished sooner than the upper one. To avoid this it is only necessary to change their position.

In order to produce, on a stone intended for a drawing on crayon, the gram which it ought to have, it is necessary, after having treated it as we have just described, to sprinkle and rub it again with fine sand, which, by the friction it produces, may be made to give the desired grain. When it is wished to obtain a coarse grain, the stone is rubbed for a less space of time with the sand, this being also renewed more frequently ; but the rubbing with the same sand is prolonged when a very fine surface is required. This rubbing, however, should not be continued too long, or the grain which has been produced will be destroyed. The state of the grain may be judged of by blowing briskly on the surface of the stone, on which has been placed a little water, and then examining its plane by looking at it in an oblique direction.

When stones intended for drawings in ink, or with other materials fit for lithography, are to have a very high polish given to them, the procedure is the same as that we have just described, excepting only, that, after having produced a fine grain on the surface, the rubbing is continued with the same sand reduced to a thin paste, taking care to wet the stones when the adhesion between them becomes so great as to prevent them moving freely. The workman, when he discontinues his labor, should not leave the stones in this state, as they would adhere, and could then be separated only by keeping them in a vessel full of water.

The stones, having acquired by the operation described a certain degree of polish, are well washed, in order to remove the grains of sand, which might produce scratches; a fine polish i.s then to be given to them by means of pumice-stone. This polishing is effected on one stone ai a time, by rubbing it with a large piece of pumice-stone after it has been slightly moistened. The rubbing should be in a straight line, sometimes in one direction and sometimes in the opposite, passing successi\ely over all parts of the surface of the stone. By this rubbing witi» the pumice-stone, and the white paste which it produces, only adding water enough to preserve a slight degree of moisture, the beautiful polish of marble is produced. It is afterwards necessary to wash the stone in a considerable quantity of water, rubbing it with the hand, or with a cloth entirely free from grease, and thus to remove any particles of matter, which, by their position on the surface of the stone, would present a sul)stance intermediate between the surface and tlic drawing, which would prevent the adhesion of tiie latter.

Three kinds of grain may be given to stones, the coarse, the middling, and the fine. The first produces designs, the proofs of which have not the finish and delicacy of those which are ob-

tained on the two otliers. The second ought in every case to be preferred, for it possesses all the properties requisite for beauty of execution, altliough the proofs wiiicli it produces have not an apjjearance cpiite so soft and mellow as those from stones with tlie finest grain. But these last have the great disadvantage of ˆsoon losing tlie delicacy of the design, of clogging readily, and conse(iuently of affording much fewer proofs. In every case it is necessary that the grain should be smooth and uniform over the whole surface of the stone, otherwise the lines traced by tlie crayon will be found nearer to each other, or more strongly marked in some places than in others ; the proofs, in reproducing the same defects, will be found without harmony and without effect.

When it is intended to execute very beautifid designs, it is necessary to reject the stones which are too soft; tliose which have hollows; those whose texture is softer in particular spots than in the general mass ; those which are not of equal thickness, and which have inequalities in their upper surfaces ; those, in short, which are not of a iiood quality and well polished.

A last precaution is, to preserve the grained or polished stones under cover, to protect them from the air and the dust, and not to touch them with tne hand, or any greasy substance, on that side which is to be worked upon. They are preserved by wrapping them up carefully in an envelope of white paper. To prevent the stone being soiled by the hand, with which it is very likely to come in contact, Mr. Hullmandel, in his admirable work on Lithography, recommends the use of a rest, A B, fig. , which supports the hand, and is furnished with a slider K, which may be tightened by a screw d, at any required point. The smaller diagram represents the moveable rest taken from its place, with the supporting plane i i.

As, in graining the stone, a portion of dust will always remain on its surface, notwithstanding the washing previously performed by the workman, this dust existing between the chalk of the stone itself, will hinder many portions of the pencil from adhering properly, and thereby occasion some of the tints to be rotten. It is prudent, consequently, on the part of the draughtsman, cither to wash the stone well in pure water, or to rub the face with a piece of clean flannel, and afterwards to brush off the Just : great care must be taken not to begin the drawing until the stone be y)erfeclly dry. These directions refer solely to grained stones, polished stones requiring a mere wiping with a clean cloth or brush.

As it is very difficult to alter any part of a drawing, and it is almost always necessary to execute it reversed on the stone, in order that it might print the right way, it is requisite to have a correct outline. If any parts be made out on the stone with a lead pencil, it must be drawn with a very hard one, and the line must be extremely fine and delicate ; otherwise, if a thick line be drawn, the portions of lead existing between the face of the stone and the chalk will hinder the latter from adhering, and a white line will appear where the lead pencil had been

applied. The best metliod to follow is this : — iiaving made a correct outline of the subject on paper, take some Frencii tracing paper (never use in any case oiled or varnished paper), and place a piece over tli.? outline ; as this paper is transparent, the whole drawing will be seen through. You may now trace an outline either wiili a soft lead pencil (if a chalk drawing is intended), or with red chalk (if an ink drawing). This outline, when completed, must be placed on the stone true and square, another thick piece of paper placed over the whole, and this latter piece well rubbed (without shifting) at the back, with a piece of ivory, or the handle of a knife, wlien the entire outline will be found to be transferred, reversed on the stone.

We have stated above that the outline on the French tracing-paper must be made with red chalk, if an ink drawing is the object; because black-lead, however soft, comes off with great dithculty on a polished stone, whereas red chalk comes off very easily.

The method given above is very convenient when the subjects are small; but, when they are above eight or nine inches in length, and accuracy is required, it is unsafe to follow it, because the paper extends by rubbing, and a double, or at least a thick and blurred

outline, is the consequence. When the drawing is large, the tracing-paper must be placed over the original outline, and the lines drawn with a pen and Indian or common ink, and the uˆper face (of this tracing), or side on which the ink lies, be rubbed over with a piece of cotton and black lead, or red chalk ; the overplus of the dust must then be well shaken off, and the face of the paper thus rubbed laid on the .stone, so that the ink outline (which is clearly seen through) may be the reverse of the original ; these lines must be carefully gone over with a blunt etching needle, when a pure outline will be found traced on the stone. As soon as the lines have all been gone over, the paper may be pulled up, and the face of the stone, being well brushed, is ready to be commenced upon with the drawing.

In order to copy the drawing, so that it may be reversed, the best method is to place the original drawing at the foot of, and before, a looking glass, and copy from the glass instead of consulting the drawing. In placing the drawing upon the stone, it is very important to recollect that_ a space or margin, of at least half an inch, and more if possible, must be left between the extremities of the drawing and the edge of the stone, and a still larger space left at the bot-tom than at the top of the orawing, in order to have room for the writing, if any is ii.tended to be placed under the subject ; for, unless this be attended to, the drawing cannot be printed, and the whole labor of the artist is lost. It happens, however, that some stones have small black veins, like hair lines, which run across them, as well as other little imperfections. The artist ought, therefore, always to take these defects (if existing) into consideration, when he puts his tracing on the stone ; for often the drawing may be so placed that these black veins (which an: apt to print) are lost in the dark tints of the foreground : or if there are “^^tached and separate subjects on

tl’.e stone, lie may place these so that tˆie veins shall come between them, as in this case they are of little consequence : or else, if tne stone is large enough to allow it, there is no absolute necessity to place the drawing in the middle ; but it may be made on one side so as

to avoid the veins, &c.

The drawing, being finished on the stone, is sent to the lithographic printer, on whose knowledge of his art the success of the impressions entirely depends. The first process is to etch the drawing, as it is called. This is done by placing the stone obliquely on one edge over a trough, and pouring over it very dilute nitric acid. It is poured on the upper part of the stonje, and runs down all over the surface. The stone is then turned, and placed on the opposite edge, and the etching water, being collected from the trough, is again poured over it in the same man-ner. The degree of strength, which is little more than one per cent, of acid, should be such as to produce a very slight effervescence; after the etching water has lain on the stone for a second or two its strength must vary according to the heat of the atmosphere, and the degree of fineness of the drawing. It is desirable to pass the etching water two or three times over the darkest parts of the drawing, as they require more etching than the lighter tints. Some stones, also, and different chalks, require different degrees of strength of the acid, and experience alone can guide the lithographer in his practice upon this point. Chalk drawings require weaker acid than the ink ones.

The stone is now carefully washed by pouring clean rain-water over it, and afterwards with gum-water : and, when not too wet, tiie roller, charged with printing-ink, is rolled over it in both directions, sideways, and from top to bot-tom, till the drawing takes the ink. It is then well covered over with a solution of gum-arabic in water, of about the consistency of oil. This is allowed to dry, and preserves the drawing from any alteration, as the lines cannot spread, in consequence of the pores of the stone being filled with the gum. After the etching, it is desirable to leave the stone for a day, and best not to leave it more than a week, before it is printed from. In some establishments a few proofs are taken immediately after the drawing is etched, but it is better not to do so.

The operation of the etching requires great nicety, and must be done quickly. If the drawing is etched too strongly, the fine tints disappear; if too vveakly, the printing-ink mixes with the darker parts, and the drawing runs into blots. A soft stone requires weaker acid than a hard one, if they are equally pure in quality. The differences in the compositions of the stones also require differences in the strength of the etching water, so that no strict rules can be given. The ofiect of the etching is, first, to take away the alkali mixed with the drawing chalk, or ink, which would mat-ˆ the drawing lial)le to be af-feciert oy the water ; an<l, secondly, to make the stone refuse more decidedly to

take any grease. The gum assists in this latter process, and is fiuite essential to the perfect preparation of the surface of the stone. ^“OT.. xiir.

An experiment lias lately been rnade to take off impressions from plants by lithographic jirint-ing. A specimen of Sibthorpia Kuropaea, which was gathered several years ago in Cornwall, was covered with lithographic ink and impressed on a stone, from which stone several impressions were afterwards taken. The experiment was not so successful as was wished, but still promised to be beneficial in leading to the means of multiplying copies of the impressions of plants, much more accurate, in some respects, than a drawing can be expected to be.

The pfess formerly employed in the lithographic process, was exceedingly complicated ; and, like the early German presses, but little adapted to the higher branches of the art. This cumbersome apparatus has now, however, been materially simplified by Messrs. Taylor and Martineau, to whom the public have been some time indebted for an improved typographical press. Messrs. Taylor and Martineau’s press is faithfully represented in plate Lithogiiaimiy, fig. 1 ; and its arrangement may be best understood by reference to the various parts lettered in tlu; engraving.

The cast iron uprights a a form the sides of the press, and are firmly attached to the base and table beneath. The carnage /’, with its stone c, slide upon the railway dd, the former being supported by small rollers, which considerably diminish the friction that might otherwise arise from the weight of a large stone. A stong handle, f, is attached to the roller f, by means of whicli motion is given to the carriage. The scraper, ^, is depressed by means of a spiral placed at the extremity of the handle, h ; and, as the scraper is only in operation upon the narrow line with which it is immediately in contact, the entire force exerted upon every part of its surface is as great as in a press requiring more than several hundred times the power, i represents the tym-pan, and the regulating screw, k, is employed to adjust the press to the various stones that may be required in the different branches of this art. The number of impressions which can be taken from a chalk drawing will vary according to the fineness of the tints. A fine drawing will give 400 or 500; a strong one from 1000 to l.‘iOO. Ink drawings and writings give considerably more than copper-plates. The finest will give 6000 or 8000, and strong lines and writings many more. Upwards of 80,000 impressions have been taken at Munich

from one writing of a form for regimental returns.

LiTHOM.ˆxcY, LiTHOMANTiA, in antiquity, a species of divination performed with stones. Sometimes the stone called siderites was used ; this they washed in spring water in the night, by candle-light; the person that consulted it was to be purified from all manner of pollution, and to have his face covered : this done, he repeated certain prayers, and placed certain characters in an appointed order; and then tiie stone moved of itself, and in a soft gentle murnuir, or in a voice like that of a child, returned an answer. LiTHONTRiPTicK. See MnnicTNE. LTTIIOPIIYTA, the name of Linna;us's third order of vermes. See Zoology.

LITIIOSPERMUM, gromwcll, a genus of

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the monogynia order, and pentandriu class of plants : cou. funnel-shaped, the throat perforated and naked : cal. quinquepartite. There are , several species; but the only remarkable ones are these: 1. L. arvense, the bastard alkanet, grows in corn fields. 2. L. officinale, the com-mon gromvvell, grows in a dry gravelly soil. The seeds are reputed to be of service in calculous cases. Grew says that they have so much earth in their composition, ttiat they effervesce with acids; but if this is the case it must be attributed rather to an alkaline than an earthy quality. IJoth are natives of Britain.

LITllOSTROTION, in natural history, a species of fossil coral, composed of a great num-ber of long and slender columns, sometimes round, sometimes angular, jointed nicely to one another, and of a starry radiated surface at tlieir tops. These are found in considerable quantities in the northern and western parts of this kingdom, sometimes in single, sometimes in complex specimens.

LITHO.STROTON, among the Romans, was a pavement of Mosaic work, consisting of small pieces of cut marble of different kinds and colors. The lithostrota began to be used in the time of Sylla, who made one at PrEeneste in the temple of Fortune. At last they were used in private houses ; and were brought to such perfection, that they exhibited most lively representations of nature, with all the exactness of painting.

Lithotomy. See Surgery. LITHUANIA is the former name of an extensive tract of country lying between Poland and Prussia (annexed to Poland m the fourteenth century), and now forming the three Russian governments of Wilna, Grodno, and Minsk. It was divided into two parts, called Samogitia and Lithuania Proper. Lithuania Proper was formerly divided into the palatinates of Troki and Wilna. It is flat and sandy, and intersected by vast marshes and bogs, and covered with immense pine, oak, and elm forests. Here bears, wolves, and wild boars, abound; and the urus, or wild ox, is sometimes found. Immense quantities of pot-ash and pearlash are annually produced from these woods ; and honey is collected ill great abundance. In some of tiie bogs is found an ochre which gives forty per cent, of tolerably good iron, copper, pyrites, petrifactions, yellow amber, and the remains of marine animals. The pasturage is excellent in particular districts, and the cattle of a better breed than in Russia; and buckwheat is raised in

preference to any other. The Lithuanians are a sluggish race, and their appearance is generally very squalid. Their dress is a coarse shirt, covered by a woollen cloak or drawers, and sometimes merely a sheepskin. Their shoes are made of bark, and the harness of their horses of the more flexil)le branches of trees.

LITTGANT, «.s.&«(y/.l Lat. litigo, to Lix'iGiTE, V. a. & V. n. I strive ; Fr. lUigam, LiTiGA'TiON,n.s. [litigieux. One en—

Liiro'iov?, adj. "gaged in a law suit:

Litig'iously, adv. judicially contest—

Litig'iousness, H.s. Jing: to litigate is to urge or manage a suit : litigious, disposed to

litigation in the legal or any other sense; also (obsolete) disputable; controvertible.

In liligioies and controverted causes, the will of God is to have lliein to do whatsoever the sentence of judicial and final decision shall determine.

Hooker. .Soldiers find wars, and lawyers find out still Litif^ious men, who quarrels move. Donne.

The cast lUitjant sits not down with one cross verdict, but recommences his suit. Decay of Pietu.

And by that we sliall know who are l\w. litigants that like the two sons of Rebecca strive within us.

Jerenii) Taulor. Kever one clergyman had experience of botli lici-gntioHS, that hath not confessed, he had rather have tliree suits in Westminster Hall, than one in the arches. Clarendon.

No fences parted fields, nor marks, nor bounds, Distinguished acres of litigious grounds.

Drtfdens Georgics. The litigants tear one another to pieces for the benefit of some third intferest. L' Estrange' s Fables.

His great application to the law had not infected his temper with any thing positive or litigious.

Addison, The appellant, after the interposition of an ap-peal, still litigates in the same cause.

Ai/lijje's Parergon. Judicial acts are those writings and matters which relate to judicial proceedings, and are sped in open court at the instance of one or both of the parties litigant. Id.

Dar'st thou still litigate thy desp'rate cause, Spite of these numerous, awful witnesses. And doubt the deposition of the skies I Young. LITMUS, orLACMus, in the arts, a blue pig-ment, formed from arcliil. It is brought from Holland at a cheap rate; but may be prepared by adding quicklime and spirit of urine to the archil, previously bruised by grinding. The mixture having cooled, and the fluid evaporated, becomes a mass of the consistence of a paste, which is laid on bor.rds to dry in square lumps. It is only used in miniature paintings, and can-not be well depended on, because the least approach of acid changes it instantly from blue to red. The best litmus is very apt to change and fly. See Archil.

LITTER, 71. s. & V. a. Fr. liticrc. A sedan or portable bed ; the straw bed of animals or plants ; the brood or young of one litter or bed : and (from beds of straw apparently) to strew things carelessly about : any number of things carelessly strewed.

To my Utter strait ; Weakness possesseth me.

Shukspeare. King John. To crouch in litter of your stable planks.

Shukspeare. Then was this island, Save for the son that she did Utter here, A freckled whelp, hag-born, not honoured with A human shape. Id. Tempest.

I do here walk before thee like a sow that hatn overwhelmed all her litter but one. Shakspeare.

lie was carried on a rich chariot litter -yi\%e., with two horses at each end. Bacon s ifew Atlantis.

The whelps of hears are, at first littering, wilhou. all form or fashion. Hakewill on Providence,

The drowsy frighted steeds. That draw the litter of closo-curtained sleep.

Milton.

We might conceive that dogs were created blind, because we observe they were uttered so with us.

Browne. He found a stall where oxen stood, But for his ease well Uttered was the floor.

Druden. Here modest matrons in soft litters driven In solemn pomp appear. Id. /Eneid.

Fruitful as the sow that carried The thirty pigs at one large litter farrowed.

Id. Juvenal. A wolf came to a sow, and very kindly offered to take care of her litter. L'Estranye.

Reflect upon that numerous litter of strange, senseless opinions, that crawl about the world.

South . Take off the Utter from your kernel beds.

Evelyn. Strephon, who found the room was void, Stole in, and took a strict survey Of all the litter as it lay. Swift.

They found The room with volumes littered round. Id.

The Litter, lectica, was carried upon shafts, and was anciently esteemed the most easy and elegant kind of carriage. Du Cange derives the word from the barbarous Latin lecteria, straw or bedding for beasts : others from leclus, a bed ; there being ordinarily a quilt and a pillow to a litter in tlie same manner as to a bed. Pliny calls the litter the traveller's chamber : it was much in use among the Romans, among whom it was carried by slaves kept for that purpose ; as it still continues to be in the east, where it is called a palanquin. The Roman lectica, made to be carried by four men, was called tetrapho-rum : that by six, hexaphorum ; and that by eight, octaphorum. The invention of litters, according to Cicero, was owing to the kings of Bithyuia : in the time of Tiberius they were be-come very frequent at Rome, as appears from Seneca; and even slaves were carried in them, though never by more than two persons.

LlT'TLE, adj., n. s. & adv. (Sax. lyrel ;

Lit’tleness, 71. s. S Goth. liiUI, litt ;

Swed. li/t, comparative Less, superlative Least, which see. Small in bulk, or extent of space or time ; not much ; not many ; some : hence of small power, dignity, or importance: as a substantive, a small space, part, or affair: as an adverb, small in degree or quantity : littleness is smallness (of any kind) ; meanness.

Nyle thou ghit drynke watir, but use a Util wyn for the stomak and for thin ofte fallyngc ynfmuytees. Wiclif. 1 Tiimo. v.

The coast of Dan went out too little for them.

Joshua, xix. When thou wast little in thine own sight, wast thou not made the head of the tribes ■?

1 Sam. XV. 17. A little sleep, a little slumber, a little folding of the hands to sleep ; so shall poverty come upon thee.

Proverbs. And at the last a path of litcl brede I found, that gretly had not usid be. For it forgrowin was with grass and wede. That well unne this a wight might it se. Chaucer. It is done by Uttle and Uttle, and with many es-says ; but all this dischargeth not the wonder.

Bacon’s Natural Hiiloni.

All trying, by a love of littlenets. To make abridgments, and to draw to less Even that nothing which at first we were.

Donne. Finding him .’*ft*e studious, she chose rather to en-due him with conversative qualities of youth ; as, dancing and fencing. W’otton.

If we find but a Uttle pleasure in our life, we are ready to dote upon it. Bp. Hall’s Contemplations.

All that is past ought to seem Uttle to thee, because it is so in itself. Taylor’s Guide to Devotion. He was a very liltle gentleman. Clarendon.

And now in little space The confines met. Milton.

By sad experiment I know How little weight my words with thee can find.

Id. The poor sleep little. Olvoay.

By freeing the precipitated matter from the rest’ by filtration, and diligently grinding the white precipitate with water, the mercury will little by little be gathered into drops. Boyle.

.Much in little was writ ; and all conveyed With cautious care, for fear to be betrayed.

Dryden . They have much of the poetry of]Maecenas, but little of his liberality. Id.

As if ‘twere Utile from their town to chase, I through the seas pursued their exiled race. Id. His son, being then very Uttle, I considered only as wax, to be moulded as one pleases. Locke.

There are many expressions, which, carrying with them no clear ideas, are like to remove but little of my ignorance. Id.

I leave him to reconcile these contradictions, which may plentifully be found in him, by any one who will but read with a little attention. Id.

One would have all tilings Uttle ; hence has tryed Turkey poults, fresh from the egg, in batter fryed.

King. We may suppose a great many degrees of littleness and lightness in these earthy particles, so as many of them might float in the air. Burnet.

The English and French, in verse, are forced to raise their language with metaphors, by thepompous-ness of the whole phrase, to wear off any littleness that appears in the particular parts. Addison.

I view with anger and disdain. How little gives thee joy or pain : A print, a bronze, a flower, a root. Prior.

The angelick grandeur, by being concealed, does not awaken our poverty, nor mortify our littleness so much, as if it was always displayed. Collier.

Where there is too great a thinness in the fluids, subacid substances are proper, though they are a little astringent. Arbuthnol.

These they are fitted for, and little else. Cheyne.

A little learning is a dangerous thing : Drink deep, or taste not the Pierian spring.

Pope. Several clergymen, otherwise Utile fond of obscure terms, yet in their sermons were very liberal of all those which they find in ecclesiastical writers.

Swift. The received definition of names should be changed as tittle as possible. M'kˆ/s's Logick.

As man was made for glory and for bliss. All littleness is in approach to woe. Young.

The great art of life is to play for much, and stake little. Johnson.

Little (William), an ancient English Jiis-torian, called also Gulielmus Neuburgcnsis, born at Bridlington in Yorkshire, in 1136; and

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educated in llie abbey of Ncwborougli, wiierelie became a monk. \n his advanced years, he wrote a history of England, in five books, from tiie Norman conquest to A. D. 1197; wliich, for veracity, legularity of disposition, and purity of hinguage, is one of the most valuable productions of that period.

LITTLETON (Adam), an eminent iexicogra-])her, descended from an ancient family in Shropshire. He was born in 1627, educated at Westminster school, and went to O-xford, a student of Cinist Church, whence he was ejected, by the parliament's visitors, in 1648. Soon after he became usher of Westminster school ; and, in 1648, was made second master. After the Restoration he kept a school at Chelsea, of wiiich church he was admitted rector in 1664. In 1070 he took his degrees in divinity, being then chaplain to Charles IL In 1674 he became prebendary of Westminster, of which he was afterwards subdean. Besides the well known Latin and English Dictionary, he published several other works. He died in 1694.

Littleton (Edward), LL. U., a learned English divine, educated at Cambridge in 1716. In 1729 he was elected fellow of Eton College, and presented to the living of Maple Derham, O.xford. In 1730 he took his degree, and was appointed chaplain to king George I. He died in 1734 ; and his discourses, in 2 vols. 8vo., were printed for the benefit of his family, under the patronage of queen Caroline. His celebrated noem on a spider, and other fugitive pieces, are preserved in Dodsley's Collection.

Littleton, or Lyttleton (Sir Thomas), judge of the common pleas, was the eldest son of Thomas Westcote, esq., of Devonshire, by Elizabeth, sole heiress of Thomas Littleton of Frankley in Worcestershire, at whose request he took the name and arms of that family. He was educated at Oxford or Cambridge; and was afterwards, by Henry 'I., made steward of the court of the palace. In 1455 he was appointed king's Serjeant; and, in 1466, a judge of the common pleas, under Edward IV. In 1474 he was created knight of the Bath. He died in 1481 ; and was buried in the cathedral of Worcester, where a marble tomb, with his statue, was erected to his memory. He was author of the Treatise upon Tenures, on which Sir Edward Coke wrote a comment, well known by the title of Coke upon Littleton.

LIT'UllGY. Gr. Xarapyia ; Fr. liturgk. Form of prayer ; devotion. See below.

We dare not admit of any such form of liturgy, as either appointeth no scripture at all, or very little to be read in the church. Hooker.

At last, the Jesuitish casuits, finding their great disadvantage by the inoffensive use of our liturgy, determined it utterly unlawful to join in jchurch service with heretics. Bp. Hall.

The blessedest of mortal wights began to be im- • portuned, so that a great part of divini. liturf^y was addressed solely to her. Howel.

It is the greatest solemnity of prayer, the most powerful liturgif and means of impetration in this world. Taylor.

In the Greek liturgies (the composure whereof is fathered of St. Chrysostom) there are divers pravers

interspersed for the emperors, couched in terms very pregnant and lespectful. Barrow.

Lnt'UGV is derived from Xtirof, public, and tpyov, work ; and includes all tiie ceremonies belonging to public worship. In a more restrained signification, liturgy is used among the Romanists to signify the mass; and, in the church of England, the book of common prayer. All who have written on liturgies agree that, in the primitive days, divine service was exceedingly simple, clogged with very few ceremonies, and consisted of but a small number of prayers ; but, by degrees, they increased the number of external ceremonies, and added new prayers. Liturgies have been different in diflerent times and countries. There are liturgies of St. Chrysostom, St. Peter, St. James, St. Basil, of the Maronites, of the Cophtas; the Armenian, Roman, Gallican, Ambrosian, Spanish, African, and English liturgies, itc. In the early ages of the church, every bishop had a power to form a liturgy for his own diocese ; and, if he kept to the analogy of faith and doctrine, all circumstances were left to his own discretion. Afterwards the whole province followed the metropolitan church, which became the general rule of the church : and this Lind-wood acknowledges to be the common law of the church ; intimating that the use of several services in the same province, which was the case in England, was not to be warranted but by long custom. The liturgy of the church of England was composed in 1547, and established in the second year of Edward VL In his fifth year it was reviewed ; because some things were

contained in it which showed a compliance with the superstition of those times, and which were objected to by Calvin, and some learned men at home. Some alterations were made in it ; the general confession and absolution were added ; and the communion was mide to begin with the ten commandments. The use of oil in confirmation, and extreme unction, were taken away ; also prayers for souls departed. This liturgy, so reformed, was established by act of 5 and 6 Ed-ward VL, cap. 1 : abolished by queen Mary (who enacted that the service should stand as it was used in the last year of Henry VIII.) ; but re-established with a few alterations and additions, by 1 Eliz. cap. 2. Some farther alterations were introduced by order of king James I., in the first year of his reign ; particularly in the oflice of private baptism, in several rubrics, &c. ; with the addition of five or six new prayers and thanksgivings, and all that))art of the catechism which contains the doctrine of the sacraments. The book of common prayer, thus altered, remained in force from the first year of king .lames I. to the fourteenth of Charles II. The last review of the liturgy was in 1661 ; and the last act of uniformity, enjoining the observance of it, is 13 and 14 Car. II., cap. 4. Many applications have been since made for a review, but hitherto without success.

LITUUS, among tlie Romans, was the staff made use of by the augurs in quartering the heavens. It bore a great resemblance to the crosier of a bishop, but was slu>rler. It was crooked at one end, and thickest in the curved part, according to A. Gellius. We frequently

meet with a representation of it upon nnedals, amongst otlier pontifical instruments. It was called Lituus Quirinalis, from Quirinus, a name of Romulus, who was skilled in all the mysteries of augury.

Lrruus was also an instrument of music in use in the Roman army. It was straight, excepting that it had a little hending at the upper end like the lituus or sacred staff of the augurs; and from the similitude it derived its name. The lituus, as an instrument of martial music, was of a middle kind betwixt the cornu and tiie tuba.

LIV'ADIA, a province of European Turkey, the ancient Achaia and Hellas, or Greek Proper ; bounded on the north by Epirus and Thessaly, from which it is separated by Mount Oeta, now Banina, and by the Euripus, now the strait of Negropont; on the east by the Archipelago ; on the south by the gulf of Engia, the isthmus of Corinth, and the gulf of Lepanto ; and on the west by the Ionian Sea and part of Epirus. Its extent is about 180 miles from north-west to south-east : its greatest breadth not above forty. It is in general mountainous, but pleasant and fruitful. The principal mountains are, the Oeta in BcEotia, where is the famous pass of Therrao-pylee, not above twenty-five feet broad ; and Parnassus, Helicon, and Cythaeron in Phocis, celebrated by the poets. The rivers of most note are, the Sionapro, the ancient Achelous, the Cephisus, the Ismenus, and the Asopus. The province is at present divided into Livadia Proper, Stramulippa, and the duchy of Athens. Tiie principal places are, Lepanto, anciently Naupactus ; Iˆivadia, anciently Lebadia; Athens, or Setines ; Thebes, or Stibes : Lepsina, anciently Eleusis ; Castri, formerly Delphi ; and Megara. ■ See Greece.

Livadia, the capital of the above province, is a large and poimlous place, seated on the gulf of Lepanto, about fifty miles from Athens. It has a considerable trade in woollen stuffs and rice. Near this place is the cave of Trophonius. It contains about 10,000 inhabitants.

LI'E, V. n. & adj. ˆ Sax. lipian ; Swed.

Live' LESS, adj. Live'i-iiiood, n. s. Live'liness, Live' LODE, Liv'elong, adj. Live'ly, adj. k-adv. Live'lily, adv. Liv'er, n. s. Liv'iNG, adj. & n. s. Liv'iN(,LY, adv.

lefwa; Goih. liva; Dan. lew , Belg. kvcn. To exist ; be in animal existence ; vegetate : hence to continue in life ; pass life ; converse, or cohabit (tak-ing with) ; feed ; live in happiness ; remain undestroyed or unex-

tinguished; be exempt from death: live, as an adjective, is quick; active: hcinoe burning: live-loss written by Shakspeare for lifeless: livelihood, means of living, a corruption of livelode, or lead, *i.e.* the manner of leading life. See Lode. Livelong is tedious; long in passage; lasting : lively, according to, or represenling, life; active; strong; energetic; brisk; gay: briskly ; vigorously ; with near resemblance to life: liver, one who exists, or who lives in some y > articular manner: living, as an adjective, is synonymous with lively; as a substantive it signifies power or means of continuing life; main-

tenance ; benefice of a clergyman ; all who live :

livingly in the state of the living.

In him was luf, and the luj' was the light of men.

WicUf. Jon. i. If one man's ox hurt another that he die, they shall sell the live ox, and divide the money. F.iodits.

My statutes and judgments, if a man do, he shall live in them. Lev. xviii. 5.

The imiiiy know that they shall die. Eccles.

All they did cast in of their abundance ; but she of her want did cast in all that she had, even all her living. Mark.

They which minister about holy things, live of tfie things of the temple. 1 Cor. ix. 13

Tell me, niadame, I you beseech For sith the first of my living Was I so fereful c" nothing As I am now to here you speke.

Chaucer's Dreme. By whiche the lesse whyle I looke to lyne with you, the more depelye am I moued to care in what case I leaue you, for such as I leaue you, suclie bee my children lyke to fynde you. Sir G.

Moore.

His weary foe into that livinr] well, Gan high advaunce his broad discoloured brest Above his wonted pitch, with countenance fell, And clapt his yron wings, as victor he did dwell. Spenser. Faerie Queene. A most notorious thief ; lived all his lifetime of spoils and robberies. Spenser.

If any loose liver have any goods of his own, the sheriff is to seize thereupon. Id. on Ireland.

Some of our ministers having the livinijs of the country offered unto them, without pains, will, neither for any love of Gotl, nor for all the good they may do, by winning souls to God, be drawn forth from their warm nests. Spenser.

She gave like blessing to each creature. As well of worldly livelode as of live, That there might be no difference nor strife.

Hnbberd. For ourselves we may a living make. Id.

My life thou shalt command, hut not my shame : The one my duty owes ; but my fair name. Despite of death, that lives upon my grave. To dark dishonour's use thou shalt not have

Shakspeare. Our high-placed Macbeth Shall live the lease of nature, and pay his breath To time and mortal custom. *(*.

The shepherd swains shall dance and sing, For they delight each May morning. If these delights thy mind may move, Then live ivilh me and he my love. Id.

The obscured bird clamoured the livelong night.

Then may I set the world on wheels, when she can spin for her living. Id.

Is't night's predominance, or the day's shame. That darkness does tiie face of earth entomb, W lien *(rt«(* day should kiss it? Id. Macheth.

Men's evil manners live in brass, their virtues

We write in water. Id. llvnnj Vlll.

Description cannot suit itself in words,

To demonstrate the life of such a battle,

In life so liveless as it shews itself. Id. Henry V.

I.iviny creatures have voluntary motion, which plants have not. Bacon's Natural llistorii.

Dr. Parker, in his sermon before them, touched iliem so near for their living, that they went near to touch liirn for his life. Hayward.

Tliey brought their men to the slough, who dis- ‘^harging livelii almost close to the face of the enemy, • lid nuich amaze them. Id.

LIV

o4

So snort is life, that every peasant strives, Til a t'anu-hou.se or Held, to have three tiws.

Donne. Noae but our last enemy comes once for all ; and 1 know not, if that : for even in tiring we die daily. Bp. Hall's Cuntei.ipliitions. The end of his descent was to gather a church of holy christian livers over the whole world.

Hammond's Fundamentals. 1"he faithful minister live.i sermons. Fuller.

Isaac and his wife, now dig for your life. Or shortly you'll dig for your liring. Denham. That rebellion drove the lady from thence, to find a livelihiwd out of her own estate. Clarendon.

Young and old come forth to play On a sunshine holiday,

■"Till the livelong day-light fail. Milton.

But wherefore comes old Alaiioa in such haste, \N'itli youlliful steps ! much livelier than ere while He seems ; supposing here to find his son, Or of him bringing to us some glad news ! Id.

Now three and thirty rolling years are fled Since 1 began, nor yet begin to live. Browne. In vain do they scruple to approach the dead, who livinglu are cadaverous, or fear any outward pollution, whose temper pollutes themselves.

Id. Vulgar Errourf. The Arcadians fought as in an unknown place, havi g no succour but in their hands ; the Helots, as 'n their own place, fighting for their livings, wives, and diildren. Sidney.

Some so like to thorns and nettles live That none for them can, when they perish, grieve.

Waller. A louder sound was produced by the impetuous eruptions of the halituous flames of the saltpetre upon casting of a live coal upon it. Boyle.

The rays of wit gild wheresoe'er they strike, But are not, therefore, fit for all alike ; They charm the livelji/, but the grave offend, And raise a foe as often as a friend ; Like the resistless beams of blazing light. That

cheer the strong and pain the weakly sight.

Stilting fleet. The number of soldiers can never be great in proportion to that of people, no more than of those that are idle in a country, to that of those who live by la-bour. Temple. Pity and he are one ; So merciful a king did never live. Loth to revenge, and easy to forgive. Dryden. To save the living, and revenge the dead. Against one warrior's arms all Troy they led. fd.

Mark how the shifting winds from west arise, And what collected night involves the skies ! Nor can our shaken vessels live at sea. Much less against the tempest force their way. Id.

In a spacious cave of living stone. The tyrant ˆ-I'-olus, from his airy throne. With power imperial curbs the struggling winds.

Id. Pure oil and incense on the fire they throw ; These gifts the greedy flames to dust devour. Then on the living coals red wine they pour. Id. That liveliness which the freedom of the jjencil makes appear, may seem the living hand of nature.

Id. Dufresnot/. Since a true knowledge of nature gives us pleasure, a livelii imitation of it in poetry, or painting, must produce a much greater. Id.

That part of poetry must needs be best, which describes most lirelij our actions and passions, our virtues and our vices. Uryden.

There is no lininq without trusting some body or othwr, in some cases. 1.' Estrange.

He brings disgrace upon his character, to submit to the picking up of a livelihood in that strolling way of canting and begging. Id.

lOxtravagant young fellows, that have liveliness and spirit, come sometimes to be set right, and so make able and great men ; but tame and low spirits very seldom attain to any thing. Locke.

Tlie way to lire long must be, to use our bodies so as is most agreeable to the rules of temperance.

Rayon the Creation.

It was a miraculous providence that could make a vessel, so ill-

manned, /iiv upon sea; that kept i* from being dashed against the hills, or overwhelmed in the deeps. Burnet.

It is their profession and livelihood to get their liv-intj by practices for which they deserve to forfeit theii //«.’<. South.

His faith must be not only living, but lively too: it must be brightened and stirred up by a particular exercise of those virtues specifically requisite to a due performance of this duty. Id.

Most of the trades, professions, and ways of living among mankind, take their original either from the love of pleasure, or the fear of want. Addison.

When men of rank and figure pass away their lives in criminal pursuits and practices, they render themselves more vile and despicable than any innocent man can be, whatever low station his fortune and birth have placed him in. Id.

If we are fimily resolved to live up to the dictates of reason, without any regard to wealth and reputa- «ion, we may go through life with steadiness and pleasure. Id.

They have been as often banished out of most other places ; which must very much disperse a people, and oblige them to seek a livelihood where they can find it.

Id. Spectator. Be thy affections undisturbed and clear,

Guided to what may great or good appear.

And try if life be worth the liver’s care. Prior.

The colours of the prism are manifestly more full, intense, and lively, than those of natural bodies.

Netvtons Opticks.

Imprint upon their minds, by proper arguments and reflections, a lively persuasion of the certainty if a future state. Atterbury.

Here are the wants of children, of distracted persons, of sturdy wandering beggars and loose disorderly livers, at one view represented. Id.

A late prelate, of a remarkable zeal for the church, were religions to be tried by lives, would have lived down the pope, and the whole

consistory. Id.

Those animals that lii'e upon other animals have their flesh more alkalescent than those that live upon vegetables. Arlmthnot.

The parson of the parish preaching against adultery, Mrs. Bull told her husband that they would join to have him turned out of his living for using personal reflections. Id.

The tomb with manly arms and trophies grace.

There high in air, memorial of my name.

Fix the smooth oar, and bid me live to fame.

Pope. Formed by thy converse, happily to steer

From grave to gay from liiely to severe. Id.

How could she sit the livelong day, Yet never ask us once to play ? Swift.

Sounds which address the ear are lost and won In one short hour ; but that which strikes the eye Lives long upon the mind ; the faithful sight Engraves the knowledge with abeam of light.

Watts. Live while you live, the F,picure would say

And snatch the pleasures of the present day ;

LIVERPOOL.

Live while you live, the sacred preacher cries, And give to God each moment as it flies : J.ord, in my views let both united Ije, I live to pleasure when I live to thee. Doddridge. We are of Christ ; our concern is, to honour that superior denomination, by living up to it. Mason. When Love Divine, with brooding wings unfurled. Called from the rude abyss the living world.

Dartviti. They only have lived long who hixvelived virtuously.

Sheridan. She was not violently lively, but

Stole on your spirits like a i\Iay-day breaking ; Her eyes were not too sparkling, yet, half-shut. They put beholders in a tender taking. Byron.

Liv'er, n. s. > Sax. lipeji; Swed. lefevei- ;

Liver'grown. S Dan. lever ; Teut. liber, a li-3en, to live. — [Nlinsheu. One of the most important of the entrails, of a dark red color : livergrown is having too great a liver.

And the caul above the liver — it shall he take away. Lev. iii. 4.

With mirth and laughter let old wrinkles come ; And let my liver rather heat with wine. Than my beart cool with mortifying groans.

Sliakspeare.

I enquired what other casualties were most like the rickets, and found that livergrown was nearest.

Graunt.

The uppermost stratum is of gravel ; then clay of various colours, purple, blue, red, liver colour.

Woodward.

Liver, in anatomy. See Anatomy, Index. Plato, and others of the ancients, fix the principle of love in the liver ; whence the Latin proverb, Cogit amare jecur : and in this .sense Horace frequently uses the word, as when he says, Si torrere jecur quaeris idoneum. The Greeks, from its concave figure, called it jjTrag, vaulted or suspended;

the Latins, jecur, q. d. juxta cor, as being near the heart. The French call it foye, from foyer, focus, a fire-place ; agreeably to the doctrine of the ancients, who believed the blood to be boiled and prepared in it. Erasistratus, at first, called it parenchyma, i. e. effusion or mass of blood ; and Hippocrates, by way of eminence, frequently calls it the hy-pochondrium.

LIVERPOOL, a borough and corporate town, and the second port in Great Britain, is in 53° 24′ 40″ of N. lat., and 2° 58′ 25″ W. long., calculated from St. Paul's church in Liverpool. It is situate in the county of Lancaster, and on the river Mersey ; and altiiough it is not easy of entrance, on account of sand-banks at the mouth of the Mersey, it is the most accessible port of the west coast of England.

Liverpool was first noticed for its trade with Ireland. Leland, who wrote in the reign of Henry VIIL, says of Liverpool, that ' Irisch merchants cum much thither as to a good haven ;' and Camden, in his Britannia published in 1586, says, ' the Mersey spreading, and presently contracting its stream from Warrington, falls into the ocean witli a wide channel, very convenient for trade, where opens to \ iew Litherpoolc commonly called Lirpoole, from a water extending like a pool, according to the common opinion, wiiere is the most convenient and most frequented passage to Irelaudo.' At an early period, too

the conveniency of the port of Liverpool as a passage to the Isle of Man was sufficiently estimated by the Stanley family ; and the trade to Ireland and the Isle of Man, which commenced at so early a period, has never been lost, but has increased with their increasing wealth. Liverpool enjoys also a great coasting trade with Wales, Bristol, London, the English maritime corn counties, and with Scotland and Cumberland. In 1752 Liverpool employed only 122 vessels in the coasting trade: in 1818 2960 vessels were entered outwards as coasters at the Liverpool custom-house: in 1823 3580 vessels were reported inwards as coasters. Since which time the coasting trade of Liverpool has prodigiously increased by the number of steam vessels constantly employed in it.

As to the inland trade, the manufacturing towns of Manchester, Bolton, Blackburn, Wigan, Preston, Rochdale, Oldham, Ashton-Underlyne, Stockpool, Macclesfield, and Congleton, are all within fifty miles of Liverpool, and have almost all communication with it by water. By water conveyance too tlie more distant towns of Hud-dersfield, Halifax, and Leeds, have constant commercial intercourse

with Liverpool. A rapid communication also subsists between Liverpool, Birmingham and Sheffield ; and great quantities of hardware and polished goods, the manufactures of these towns, are in the constant course of transit to Liverpool. At the distance of about fifteen to twenty miles from Liverpool is an inex-haustible supply of excellent coal, which is brought down by canal. The river Weaver, which is navigable from Northwich to the INIer-sey, furnislies an easy conveyance to Liverpool for the produce of the salt works of Northwich and Winsford. Liverpool has communication by water with Staffordshire, and draws from that county immense stores of iron and earthenware. At St. Helen's and Warrington, the former within twelve and the latter nineteen miles from Liverpool, are most extensive manufactures for plate glass and glass bottles. The amount of the commercial dealings between Liverpool and the in-land district is beyond all computation. By a railway, now laying down between Liverpool and Manchester, the communication with the large manufactures will be more direct and facile, and c;n increase of traffic will necessary result from it.

In respect to its foreign trade, Liverpool is the peculiar port for vessels belonging to the United .States ; and, by lines of packet ships sailing between Liverpool and several of the principal ports in the United States on stated days and with the utmost punctuality, tiie most rapid communication is kept up between the two countries. Most of the timber vessels from North America import their cargoes into Liverpool. The commerce of Liverpool vvitii the infant states of Soutii America is also immense ; and since the opening of the J'".ast India trade Liverpool has entered spiritedly into it, and now maintains a regular and advantageous commerce with it. Regular trading vessels are also established between Liverpool and New South W'ales. In the West India trade Liverpool has now far outstripped Bristol. It has still some Iradi. with -Vfrica; but no longer of the de.;rading and dis-5t) L I V E R P O O L.

publiiiu; cliuracter for whicli it was once so me-Liveri)()ol jjariiciputes iu all foreign unnionopo-iiiorahlo. It has considerable trade too, with lized commerce, except the Greenland trade, Itussia and all the European ports ; iu short which it has abandoned for the last few years.

Importation into London of grain, &c., from the 1st of January

Importation into Liverpool during the |

‘ to the 1st of December 1827.

same period.

Qty.

Ireland.

Coastwise—

Foreign parts.

America.

Ireland.

Isle of Man and Coastwise.

Europe.

America.

Wheat

qrs.

2,818

214,894

96,850

184,332

45,957

79,737

23,654

Oats

qrs.

138,410

126,652

889,123

399,435

13,779

50,658

375

Barley

qrs.

400

122,830

96,561

10,119

27,185

30,274

Rye

qrs.

496

5,523

209

1,363

8,274

Beans

qrs.

25

41,904

53,352

3,591

3,292

25,321

100

Peas

qrs.

36,077

9,767

981

4,012

2,1 23| 953 1

Malt

qrs.

192,079

393

52,015

Meal

loads.

48,157

906

Flour

sacks. “

100

473,094

1,145 bar.

3365

79,3‘23

7,957

530

42,257

Beef

ˆ Tierces.

14,044

5,492

if Barrels.

1,091

894

t Tierces. .] Barrels. C i bar.

11,862

Pork

14,761

14,764

2,417

r Firkins. ■? ˆ firkins. (Casks.

312,201

268,272

Butter

1,555

16.457

1

! 258,248

165

A statement is annually made by the Liverpool timber brokers of the quantity of timber imported into Liverpool during the preceding year. Their calculation is to each 1st of February, and the following is the table of imports from the 1st of February 1826 to the 1st of February 1827.

Pine (British America), cubic feet Quebec deals, standard Quebec oak, cubic feet Quebec elm and ash Quebec staves ….

Pine planks ….

Hardwood, cubic feet Lathwood, f;ithom …. Timber, Dantzic, Munich and Stettin, cubic feet ….. Riga (Baltic)

4,168,000

1569

290,400

92,000

668

2,200,000

290,000

1,529

764,000

51 ,000

3400

610

162

5200

42

640

1888

3000

26,700

124,000

The tides of the Mersey vary from twenty to thirty feet in sjiring tides, and from ten to fifteen feet at neap tides. \ essels exceeding 800 tons in burthen have come into the port at the height of springtides; but the Liverpool merchants seldom])uild vessels of greater burthen than 400 to 500 tons, from the danger of their being neaped, and on account of the delay wiiich always attends the hjading and unloading of large vessels.

I'evv maritime towns possess accommodations for ships at all comparable !o Liverpool ; for it has now six docks, *viz.* the Dry dock, the Salt-

Deals, standard

■v\,- ■ .1 i whole VVamscot logs ? , ,r

Deck planks, pieces .Staves pipe, M I..athwon(l, fathom Cedar Ilavannah logs Pencil cubic feet Pitch pine African oak

house dock, the King's dock, the Queen's dock, the George's dock, and the Prince's dock, which with their basins occupy about forty-five acres of land. These docks communicate with the river, and vessels have an easy entrance into them from it, at flood tide. The old dock, which was made early in the last century, was closed at the beginning of the present year (1827), an arrangement having taken place between the government and the corporation of Liverpool for the erection on its site of a custom-house and other government buildings. But the present dock-room, extensive as it is, is insufficient for the commerce of the port, and a large dock to the northward is now constructing, and another to the southward will be commenced in the course of next ye;n : by which the extent of dock-room will be ir-creased to seventy-five acres. Steam vess(Is have greatly increased in number during the last four years, and a dock for their accommodation exclusively is now in rapid progress. Communicating with the present docks are several graving docks, as they are called, where vessels undergo repair. They are taken in at tide time and the gates are then closed, and the water is iet out by flood-gates as the tide ebbs ; the tide is afterwards wholly excluded, so that vessels in these docks can be tiioroughly exa" lined from the keel upwards. The docks are vested by act of parliament in trustees consisting of some members of the Liverpool corporation, and some merchants not of the corporation. Perhaps in the abstract it is objectionable that members of the corporation should be dock trustees also, as there is occasionally a collision of interest between the corporation and dock estates : whether the sys-tem has been practically mischievous or not we will not stop to enquire. At present the dock trustees are vi';ilantly watched by the public, and tliev seem to b.avo set on foot a iutlicious svstem

for llie management of their large revenue. The dock duties, for the year ending-June 1827, amounted to £145,000.

IJesides the docks above enumerated the trustees of the duke of

Bridgewater, and the Manchester old quay company, have docks at Liverpool for the convenience of the flats and barges plying on their respective navigations. And, for liie examination and repair of vessels, a patent slip has lately been erected by a private individual at Wallasey Pool on the Chesinre side of the Mersey. The advantage of the patent slip over graving docks is said to be that it is made at a comparatively trifling expense, and tiiat vessels can be better examined there, as no part of the day light is kept from the bottoms of the vessels, whilst in graving docks a great deal of light is obstructed by the sides of the graving docks, which are narrow, and which could not be made wider on account of the necessity of shoring up vessels previous to repair.

A telegrapiiic communication between Liverpool and Holyhead, by means of stations at intervals along the coast of North Wales has just been effected by lieutenant Watson, K. N., and is now in operation. Its objects are to give instant tidings of the arrival of ships off Holyhead, the variations of the wind there, and damage to shipping on the Welsh coast.

The limits of the parish and town are co-extensive, containing 2300 yards from east to west, and 4420 yards from north to south, and 10,400 yards in circumference, forming an area of 2202 acres, nearly one-half of which belongs to the corporation of Liverpool, and the rest to private individuals.

Liverpool sends two members to parliament : it is a corporation by charter, with a common council consisting of forty-one persons, from among whom a mayor and two bailiffs are annually chosen by the burgesses on St. Luke's day. Towards the end of the last century many trials at law were had between the burgesses and the common council, upon the construction of the charter, *i.e.* as to the jjower of the common council to make' by-laws without the sanction of the burgesses in common hall, and as to their])ower to fill up vacancies occurring in the council. But these trials, though in favor of the burgesses, did not effect any alteration in the system ; and so long as tlie council shall consist, as it now does, of gentlemen of intelligence, wealth, and integrity, and the revenue of the corporation estate shall be expended in improving and embellishing the town, and publicity be given to their l)roceedings in council, no other mode of election of common councilmen would be more beneficial to the town. The income of the corporalion estate, for the year ending October 1827, amounted to £88,980. There is a court for the trial of civil causes arising within the borough, ;it. which the mayor and bailiffs and recorder preside ; but the process of attachment against the goods of a

debtor does not prevail here as in J.ondon and Bristol.

The population of Liverpool has increased since tlie commencement of the last century, at the followmg prodigious ratio : —

In 1700 it was

1750 1801 1811 1821

5145

18,400

77,653

94,376

118,972

But the census of 1821 does not contain the population of Harrington, Edgehill, Lowhill, Everton, and Kirkdale, townships immediately conti ruous to it, and which are chiefly inhabited by persons having some daily pursuit in Liverpool. These contained, in 1821, 22,515 persons; and to them should be added almost 9000 seafaring men belonging to tlie port, and of whom no return is made. These would form an aggregate of 150,000 persons, as the population of Liverpool and its suburbs in 1821 ; and the population has increased since that census.

In ship-building and repairing, in cordage and sail-making, a great many hands are employed. Here are also extensive brass and iron foundries; at the latter of which boilers, and all the necessary apparatus for steam vessels, are executed. Brewing, distilling, soap-boiling, and sugar-refining, are also carried on to a great ex-tent. There are a great many windmills and steam corn-mills in the town and neighbourhood of Liverpool, and much corn is ground previous to its being sent into the manufacturing districts. The windmills are now generally upon a new construction, the principle of which is that by the action of a fan or pilot-sail, which varies with any change of wind, the mill-sails are al-ways presented to the wind, and much watching, manual labor, and delay, are saved by it. Mordant and alkali, and

other chemical works, connected with bleaching and dyeing, are increasing here rapidly. Tanning is carried on to considerable extent in Liverpool and the neighbourhood , but the interruption of commercial intercourse between this country and Buenos Ayres, in which Liverpool is most materially interested, fetters the operations of the Liverpool tanners. A steam-mill, on a very ingenious construction, for tht? separation of rice from the husk (or paddy, as it is called,) has recently been erected in Liverpool. There is an immense bed of good clay in Liverpool, and great quantities of bricks are annually made here both for home consumption and for shipment abroad. They are ail made by hand

Liverpool can boast of many specimens of architectural taste. The town-hall and the exchange buildings probably rank first. The ly-ceum, the Wellington rooms, the infirmary, and the corn exchange, are beautiful structures, though certainly they are of different degrees of merit. The Saint .lohn's market, which was erected by the corporation about five years ago, under the direction of their architect Mr. .lohn Foster, jun., at an expense of £35,000, deserves a more detailed notice iiad we space for it. It is under excellent regulations, and the rents vary from .£l8 a year, (which is the price for the best shops), to 12.S'. a year, the rent for a bench com- [laitnient. Anoliier roofed inarket on a similar plan, but smaller scale, has been erected near St. .'amcs's Church, from whicii it takes the name

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of St, James's Market, and aiiotiier is intended to be erecte i to tlie nortii of the town.

Tiiere are al)out twenty cliurches in Liverpool l)olon<,nn;,ˆ to tl>e establishment. These in general do not display much architectural beauty; but the church attached to tiie school for the l)liud, St. George's, St. Miciiael's, and Christ's Church, are exceptions; and St. Luke's Church, at the top of Bold Street, as a specimen of pure Cothic, when finished, will be scarcely exceeded in the kingdom. It is built by the corporation, from designs of their architect Mr. .John Toster. The chapels belonging to the various denominations of dissenters greatly exceed in number the cliurches belonging to the establishment. There are five Roman Catholic chapels, a meeting-house for (Quakers, and a .lews' synagogue. The churches and all the dissenting chapels have schools attached to them, and great facilities are afforded for the educationof the children of the poor. The charitable institutions are too numerous to detail. We shall content ourselves witii nam-ing the school for the instruction of the indigent blind in music and several useful manufactures. It was established in 1791, and has perhaps never been surpassed for benevolence of desiixn, and success as a charity. It is the parent of the London and other similar establishments.

A public cemetery, originating with the dissenters, was made a few years ago in Brunswick Road, by the contributions of share-holders. The building has a handsome stone front, the ground is well laid out : and the arrangements being such as to insure decent interment, and to prevent exhumation ; and it has become a com-mon repository for the dead. A cemetery, attached to the establishment is now constructing in the form of catacombs, on a very large scale at the Stone Delf, at the back of the St. James's Walk, and when finisned will probably be one of tlie most beautiful and curious in the kingdom. Liverpool is deficient in public promenades, inving only the St. James's walk and the marine parade, near the prince's dock ; the latter, however, is beautiful, being of the extent of 700 yards along the side of the Mersey.

The Athenaeum is an institution combining commercial and political information with literature, as it possesses a news-room and a most valuable library. The lyceum is a similar institution, but the books in

the latter circulate amongst the proprietors.

The botanic garden, under the skill of its cu-rator Mr. John Sheppard, has acquired both in England and abroad considerable reputation for its rare and valuable collection of native and foreign plants. The royal institution, which was opened in November 1817, has a charter of incorporation, and its object is the promotion of literature, science, and the arts, by academical schools, public lectures, the encouragement of societies, which may associate for similar objects; the collection of books, specimens of art, natural history, &c. ; by promotini; a laboratory and philosophical apparatus ; and bv associations of the proprietors. The academical schools have a great many students, and are well conducted, and the museum of the institution has been enriched by several most valuable donations.

Ll'KR-WOH.T, in botany. See Lichen and

M.ˆUCUANTIA.

LIV’EllY, n.s. } Fr. livrer, Uvree ; Ital.

Liv’eryman, S Span, and Port. Icvrca, li-brea ex Lat. lilnro. A giving or taking legal possession; return from wardship; food, or clothes, given to servants, or followers, or at a certain rate ; hence any particular or characteristic dress: liveryman, a footman; also, in London, a freeman of a particular rank in some company.

What liveiy is, we by common use in fˆngland know well enough, namely, that it is an allowance of horse-meat ; as they commonly use the word stabling, as to keep horses at Iherij ; the which word, 1 guess, is derived of livering or delivering forth their nightly food, lVc. Spenser on /reluiid.

I’erhaps they are by so much the more lotii to forsake this argument, for that it hath, thougii nothing else, yet the name of scripture, to give it some kind of countenance more than the pretexts of liveri/ coats affordeth. Hooker.

You do wrongfully seize Hereford’s right,

Call in his letters patent that he hath

By his attorneys general to sue

His livery, and deny his oflered homage.

Shahpeare. I think, it is our way,

If we will keep in favour with the king,

To be her men and wear her Uverii. Id.

Had the two houses first sued out their liveriˆ, and once effectually redeemed themselves from the wardship of the tumults, I should then suspect my own judgment. fˆi”g Churles.

Jhou, who, in thyself, art worthy to be a child of wrath, art, in him adopted to be a co-heir of glory; and hast the liver;/ and seizin given thee beforehand, of a blessed possession. Bp. Hull.

At once came forth whatever creeps the ground, Insect, or worm : those waved their limber fans For wings, and smallest lineaments exact. In all the liveries decked of summer’s pride, AVith spots of gold and purple, azure, green.

Milton.

My mind for weeds your virtue’s livery wears.

Sidney. Kvery lady clothed in white,

And crowned with oak and laurel every knight,

Are servants to the leaf, by liveries known

Of innocence. Drydens Flower and Leaf.

The witnesses made oath, that they had heard some of the liverymen frequently railing at their mistress. Arbuthnot. On others’ Interest her gay livery flings.

Interest that waves on party-coloured wings ;

Turned to the sun she casts a thousand dyes :

.Vnd as siic turns the colours fall or rise.

Dunciiid.

If your dinner miscarries, vou were teazed by the footmen coming into the kitchen ; and, to prove it true, throw a ladleful of broth on one or

two of their liveries. Suift.

Because no livery of seisin is necessary to a lease for years, such lessee is not said to be seized, or to have true legal seisin of the lands. Tomlin.

] > IVERY, in dress and equipage, a certain color and form of dress, by which noblemen and gentlemen distinguish their servants. Liveries are usually taken from fancy, and continued in families by succession. The ancient cavaliers, at their tournaments, distinguished themselves by wearing the liveries of their mistresses: thus

j'eople of quality make their domestics wear their livery. The Romish church has also her s:.'veral colors and liveries; white for confessors and virgins, and in times of rejoicing; hlacli for the dead ; red for the apostles and martyrs ; blue or violet for the penitents ; and gˆreen in times of hope. Liveries were abolished in France by the Constituent National Assembly, as badges of servitude, inconsistent with their system of equality, but have of course been since resumed.

The Liverymen of London are a number of men chosen from among tlie freemen of each oorapany. Out of this body the common-coun- c\, sheriff, and other superior officers for the government of the city are elected ; and they alone have the privilege of giving their votes for members of parliament for the city. See LoNDoy.

LI'IA, the second wife of the emperor Augustus, and mother of Tiberius, a woman of great beauty and ability, but of a very loose and depraved character. She was the daughter of L. Drusus Calidianus, and tlie wife of Tiberius Claudius Nero, one of Antony's adherents; by whom siie was pregnant, when Augustus saw her, and married iier ; for which purpose he divorced his wife Scribonia. To ensure the succession to her son, she secretly procured the death of Augustus's grand-children and nearest relations. See Rome. She died A. D. 29, aged eighty-six.

LIVID, adj. } Fr. livide ; Lat. lividus.

Livir/iTY, 71. s. S Discolored, as by a blow; purple-colored.

It was a pestilent fever, not seated in the veins or humours, for that there followed no carbuncles, no purple or livid spots, the mass of the blood not being tainted. Bacun.

Tiiey beat their breasts with many a bruising blow, Till they turned livid, and corrupt the snow.

Drydeii. The signs of a tendency to such a state, are darkness or lividity of the countenance. Arhuthnot. Days lay she in that state, unchanged, though chill. With nothing livid, still her lips were red ; She had no pulse, but death seemed absent still ; No hideous sign proclaimed her surely dead.

B'-ron,

LIVINGSTON (William), a statesman and author of the United States of America, was born at New York, in 1723. During the contest for independence heemployedhimself in defending his country's cause; and after having filled various important situations in his native city, became a member of congress for New Jersey : on the establisliment of the constitution, he was made governor of the state. He died at Klizabeth-town in 1790, havinc held the government twelve years. He was the author of Philosophical Solitude, a poem ; A Review of the Military Operations in North America, from 17.")3 to '758; and several other works.

LIVIUS (Titus), the celebrated Roman historian, was born at Patavium. Few particulars of his life have been handed down to us. We first hear of him at Rome, wlicrc he acquired

the notice and f i\ or of AugMstus, He had previously written Dialogues, historical and philo-sopliical, and some books on philosophy. It is probable that he began his History as soon as he was settled at Rome. He used to read parts of it, while he was composing it, to Maecenas and Augustus ; and the latter appointed him to superintend ihe education of his grandson Claudius, afterwards emperor. After the death of Augustus, Lify returned to the place of his birth, where he was received with honor and respect ; and where he died in the fourth year of Tiberius's reign, aged above seventy. Some say he died on the samˆ day with Ovid; it is certain he died the same

year. Scarce any man was ever more honored, .‘a life or after his death, than this historian. A monument was erected to him in the temple of Juno, where was afterwards founded the monastery of St. Justina ; and whe.’-e, in 1413, was discovered the following epitaph : — ‘ Ossa Titi Livii Patavini, omnium mortalium judicio digni, cujus prope invicto calamo invicti populi Romani res gestce conscriberentur.’ — ‘The bones of Titus Livius of Patavium, a man wor-thy to be approved by all mankind, by whose almost invincible pen the acts. and exploits of the invincible Romans were written.’ Tiiese bones are said to be still preserved with high veneration by the Paduans. In 1451 Alphonsus, king of Arragon, sent his ambassador Anthony Panormita, to desire of the citizens of Padua the bone of that arm with which this their famous countryman had written his history : and, obtaining it, caused it to be conveyed to Naples with the greatest ceremony as a most invaluable relic. He is said to have recovered from an ill state of health by the pleasure he found in reading this history : and therefore, out of gratitude, took this method of doing honor to the memory of the writer. Panormita also, who was a native of Palermo in Sicily, and one of the ablest men of the fifteenth century, sold an estate to purchase this work. The history of Livy is transmitted down to us exceedingly mutilated and imperfect. Its books were originally 142, of which only thirty-five are extant. The epitomes of it, from which we learn their number, all remain, except those of the 136th and 137th books. Livy’s books have been divided into decades, which some will have to have been done by Livy himself, because there is a preface to every decade; while others suppose it to be a modern contrivance, as nothing about it is mentioned by the ancients. The first decade is extant, and treats oftheaflairs of 4G0 years. .The second is lost ; the years of which are seventy-five. The third is extant, and contains the second Punic war, including eighteen years. It is reckoned the most excellent part of the history. The fourth contains the Macedonian and Asiatic wars, which take up the space of about twenty-three years. The first five books of the fifth decade, were found atW\)rms by Simon Grynoeus, in 1431, but are very defective ; and the remainder, which reaches to the death of Drusus in (iermany in 74(5, together with the second decade, are supplied by Frein-shemius. The encomiums bestowed upon Livy, by both ancients and moderns, are great and nu merous. But his probity candor, and impartia

lity, have dislinguislied him above all liistonans ; for neitlier complaisance to the times, nor his particular connexion with the emperor, could restrain him from speaking so well of Pompey, that Augustus called him a Pompeian. Livy has been censured, and perhaps with justice, for being too credulous, and loading his history with superstitious tales. But though he mentions that milk and blood were rained from lieaven, or that an ox spoke, or a woman changed her sex ; yet he car.didly confesses, that he recorded only what made an indelible impression upon the minds of a credulous age. Quintilian says, that he had a son, to whom he addressed some excellent precepts in rhetoric. An ancient inscription speaks also of one of his ˆdaughters, named Livia Quarta ; the same, perhaps, who espoused an orator of the name of Lucius Magius, whom Seneca mentions; and observes, that the applauses he usually received from the public in his harangues, were not so much on his own account, as for the sake of his fa-ther-in-law. Livy's history has been often published with and without the supplement. The best editions are diat of Gronovius, cum notis variorum et suis, Lugd. Bat. 1679, 3 vols 8vo. ; that of Le Clerc, at Amsterdam, 1709, 10 vols. 12mo. ; and that of Crevier, at Paris, 1735, 6 vols. 4to. A fragment of Livy's history was published in 1773, by Dr. Bruns.

Livius Androxicus, a comic poet, who flourished at Rome about A. A. C. 240. He was the first who turned die personal satires and fescennir.e verses into the form of dialogue and regular drama. Though the character of a player was reckoned despicable among the Romans, Andronicus acted a part in his dramatical compositions. He was a freed man of M. Livius Salinator, whose children he educated. His poetry was grown obsolete in the age of Cicero.

LIVONLV, a maritime province of the north-west of Russia in Europe, bounded by Esthonia on the north, and Courland on the south. It lias an area of 21,000 s(juare miles ; but a population of not above 000,000, and consists of a vast tract of level marshy country, and several imndred lakes, great and small. Those of Peipus, I/juban, and Wirzjev, are of considerable size. The soil is in general a rich loam, well calculated i'r-r tillage or pasturage; and it exports rye, bar-ley, tlax, hemp, and linseed. The cattle are small

This cour.try, which has been often the seat of war, was almost

unknown to the south of Eu-rope' to the end of the twelfth century, when it was overrun by the Danes. It was, during the thirteenth and fourteenth centuries, governed by the Teutonic knights; and in the sixteenth the I'oles acquired it. In the seventeenth century Russia and Sweden contested the possession of it ; but in 16G0 it was ceded to the latter by the peace of Olivia, The vice of drunkenness is said to be here particulaiiy prevalent, and the wretchedness of the lower orders extreme. Edicts have recently been issued to lighten their vassalage ; but a long lime mmt elapse liefore they can produce a substantial result. Horpat is the only university here, and Uiga the only place of much trade.

LIXIV lAL, «(//. J Ldi. li.iivuim ; Vv. lut—

Lixiv'iATE, adj. ˆvietix. Impregnated with

i/ixiv'iUM, ?j.s. 3 salts like a lixivium ; obtained by lixivium : lixiviate, making a lixivium : lixivium, lie; water impregnated with alkaline salt ; having the power of extraction.

In these the salt and Ihiviated serosity, with some portion of choler, is divided between the guts and the bladder. Hivinie.

Lixiviate salts, to which potashes belong, by piercing the bodies of vegetables, dispose them to part readily with their tincture. Boxjle.

1 made a lixivium of fair water and salt of wormwood, and, having frozen it with snow and salt, I could not discern any thing more like to wormwood than to several other plants. Id.

llelniont conjectured, that liimal salts do not pre-exist in their alcalizate form. hi.

The syniptoms of the excretion of the bile vitiated, were a yellowish color of the skin, and a lixivial urine.

Arhuthnot.

Lixiviation is the separation, by means of water, or other fluid, of such substances as are soluble in the fluid from other substances that are not soluble in it. linison's Elements.

And, as the hydriodate of potash is very soluble and even a deliquescent salt, this circumstance accounts for its remaining in the mother-li(iuor during the subtraction of the subcarbonate of soda and other neutral salts from the alkaline liuivium by the usual process of evaporation. Parkes't Chemical Catechism.

LIXURI, a town of the island of Cefalonia, Greece, having 6000 inhabitants. It has a harbour and a considerable trade, but has often suffered from earthquakes.

Lizard Island, one of the Direction islands in the South Pacific Ocean, is about 240 miles in circumference, rocky and barren. Tiiis name was given to it by captain Cook, from the num-ber and large size of the lizards found here. It is twenty miles north-east of Cape Elattery.

Lizard Point, in Cornwall, the most south-em point of England ; whence ships bound westward usually take their departure. It is 282 miles south-west of London, and in long. 5° 11′ 17″ W., lat. 49° 57′ 55″ N.

LIZ'ARD, n. s. Fr. lisarde ; Lat. lacerta. An animal resembling a serpent, with legs. See Lacerta.

And the lizard, and the snail, and the mole. These are unclean to you. Lev. xi. 30.

Thou'rt like a foul misshapen stigmatick,

Marked by the destinies to be avoided.

As venomous toads, or lizards dreadful stings.

Sliakspeare.

There are several sorts of lizards ; some in Arabia of a cubit long. In America they eat lizards ; it is very probahle'likevvise that they were eaten in Ara-bia and .Tudea, since Moses ranks them among the unclean creatures. Caltnet.

Lizard. See Lacerta.

LLANDAFF, a city of Glamorganshire, two miles north-west from Cardiff, and 163 from London. Its name is supposed to be a corruption of Llan-ar-daff, Welsh, the church on the Taff, the walls of the churchyard being close to the river. The present structure was built by l)ishop Crban in 1120 ; it had two towers at the west end, eighty-nine

feet high, of which that on the south only remains The north tower was rebuilt in an elegant manner in the reign of Henry VIl. The body of its ancient cathedra’

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ims been re'ouilt. Amoiicc tl'6 ancient inonu-meiits of the bishops interred in this tliurch, there is one representing an emaciated corpse in H winding-sheet, in which the appearance of death brought on by a long sickness is admirably pourtrayed. The ecclesiastical establishment consists of the bishop, archdeacon, twelve prebendaries, and two vicars choral. The episcopal see was founded about the end of the fifth century. This diocese includes great part of the counties of Glamorgan and Monmouth, and though this is styled a city, from being the see of a bisiiop, it is without a market. It has the benefit of a tolerably good harbour, that opens into the Severn at four miles distance. Fairs 9th of February and Whit-Monday.

LLANOS, San Juan de los, a province of the former kingdom of New Granada, bounded on the north by Xˆarinas and Merida, on the east by Varinas, on the west by Santa Fe and Popayan, and south by the government of (ˆuixos, and extending to the immense length and breadth of from 200 to 300 leagues. It is watered by the Apure, Meta, Casanari, and Orinoco. The soil is fertile, but the climate immoderately hot, especially on die widely extended plains, which the long grass shelters from all winds. Li some of them Humboldt found the thermometer rise to 115°. Here were several missions, established by the monks of Santa Fe de Bogota and the Jesuits ; but little is known concerning them.

Llanos, San Juan de los, the capital of the above province, was formerly celebrated for the gold mines of its neighbourhood. It was founded in 1555 ; and is fifty miles E. S. E. of Santa Fe de Bogota. Long. 73° 55′ 30″ W., lat. 3° 11' N. This is also the name of several inconsiderable settlements of Spanish America.

LLANRWST, a market-town and parish of Denbighshire, twelve miles south from Abercon-vvay, and 218 north-west from London; standing on the banks of the river Conway, over wliich it has a simple elegant bridge of three arches, built in 1636. The church is a plain building, adjoining which is a chapel built by one of tiie Wynne family. The river is navigable for small vessels for a mile and a half above the town. Near Llanrvvst stands Gwydir House, the seat of lord Gwydir, an extensive pile, which marks the splendor of its ancient })Ossessors. This town is in the high road from Siirop-shire to Holyhead, and, being the only market-town in this part of the country, it is the centre

of all the business of the populous vale in which it stands. It has a good market-house, and a. free-school. Marketday Tuesday.

LLANTlIISSANT, a borough, markot-town, and parish of Glamorganshire, ten miles north-west from LlandafT, and 170 west from London. It is pleasantly seated on the side of a steep hill, the property of the niarcjuis of Bute, which abounds in lead-ore. Its name signifies the church of the three saints ; the church being dedicated to St. llhog, St. Devong, and St. Monow. The streets are steep and narrow, but many of the houses are tolerably well-l)iiilt, and the prospects are picturesque. The town-hall and market-house were both erected by the late earl of Bute. Its ancient castle is in ruins.

ITiis borougii is goNeincd by a portreve, an>l with Cardiff, Swansea, !k<:., unites in sending one member to parliament. Market on Friday.

LLORENTE (Don Juan Antonio), a modern Spanish historian, was chancellor of the university of Toledo, and a member of the Inquisition; a complete history of which, from the jjcriod of its establishment by Ferdinand V”., was published by him, and translated into English in 1817. He accepted a situation under Joseph Buonaparte, and was therefore driven into exile on tlie return of Ferdinand ; but being also expelled from France, by the influence of the court of Rome, lie returned secretly to Madrid, where he died in the spring of 1823.

LLOYD (Nicholas), a learned lexicographer, in the seventeenth century, born in Flintshire, and educated at Wadham College, Oxford. He was rector of Newington, near Lambeth in Surry, till his death in 1680. His Dictionarium Histoii-cum is a valuable work, to which Hoffman and Moreri are greatly indebted.

Lloyd (Robert), an English poet, son of Dr. Pierson Lloyd, second master of Westminsici” school, where Robert was educated. He took his degree of M.A. at Cambridge. He published a poem, entitled the Actor, in 1760, the merit of which was so great, that, when the Rosciad appeared, he was supposed to be the author of that also. He was employed as usher at Westminster school, but lost it by his irregularities; and afterwards lived almost entirely on the generosity of his friend Churchill, the poet. He died in 1764. His poems were published by Dr. Kenrick, in 2 vols. 8vo. He also wrote tlie Capricious Lover, a comic opera, 1764, 8vo., and other dramatic pieces.

Lloyd (William), D. D., a learned English bishop, born in Berkshire in 1627, and educated under his father, who was vicar of Tylehurst in Berkshire. He entered into orders at Oxford ; in 1660 was made prebendary of Rippon ; and in 1666 chaplain to the king. In 1667 he graduated ; in 1672 he was installed dean of Bangnr; and in 1680 was consecrated bishop of St. -Vsaph. He was one of Ihe seven bishops who were ini' prisoned in the tower, for subscribing a petition to the king against his declaration i'or liberty of conscience. Soon after the revolution he was made almoner to king William and queen Mary : in 1692 bishop of Litchfield and Coventry ; and in 1699 of Worcester, where he sat till his deatli in 1717, in the ninety-first year of his age. His works are much esteemed.

LO ! intC7J. Sax, and Teut. lo, la, imperative of Look, to which refer. See ; beliold !

And the farisees seiden to him, /c what thi (lisciplis don in Sabotis that is not Icfful.

Wiclif. Mark iii.

Ln! within a ken our army lies. Sliuhspenre.

Now must the world point at poor Catherine,

.And say, lo! there is mad I'ctrucliio's wife. /d.

Why /() you now, I've spoke to the purpose twict.

Id.

For lo! he sung the world's stupendous birth.

Riifcomiiioii. Lo! heaven and earth combine

To blast our bolil design. Uriiilen's Alliioii.

t) smile accurst to hide tiie worst designs !

Now with blithe eve sIib wooes him to be blest,

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While round her arm unseen a serpent twines — And lo, she liurls it hissing at his breast! —

Beattie.

LOACH, n. s. Fr. loche ; Lat. lotus. A fish ; the CoBiTis, which see.

The loach is a most dainty fish ; he breeds and feeds in little and clear swil't brooks or rills, and lives there upon the gravel, and in the sharpest streams : he grows not to be above a finger long, and no thiclier than is suitable to that length : he is of the shape of an eel, and has a beard of wattels like a barbel : he has two fins at his sides, four at his belly, and one at his tail, dappled with many black or brown spots : his mouth, barbel-like, under his nose. Walton's Angler.

LOAD, U.S. & V. a. Sax. hlaˆe; Swed. ludu ; It3i. lade ;Tf.ni. laden. Preterite loaded; part, loaded, loaden, or laden. A burden ; weight ; freight ; pressure : hence violence of blows ; any thing that depresses ; as much of drink, or any other thing, as can be borne.

Your carriages were heavy loaden ; they are a bur-den to the beast. Isa. xlvi. 1. Like lion moved they laid on load. And made a cruel fight. Chevy Chace. At last, laden with honour's spoils, Returns the good Andronicus to Rome.

Shahspeare. Fair plant with fruit surcharged, Deigns none to ease thy load, and taste thy sweet?

Milton . Far heavier load thyself expect to feel Trom my prevailing arm. Id.

One grain of true science and sound wisdom in real worth and use doth outweigh loads, if any loadj can be, of freakish wit. Barrow.

Then on his back he laid the precious load. And sought his wonted shelter.

Dryden's Nun's Tale. There are those that can never sleep without their load, nor enjoy one easy thought, till they have laid all their cares to rest with a bottle. L'Estrange.

He that makes no reflections on what he reads, only loads his mind

with a rhapsody of tales, fit in w'nter nights for the entertainment of others. Locke.

How a man can have a quiet and cheerful mind under a great burden and load of guilt, I know not, unless he be very ignorant. Pan.

Thy dreadful vow, loaden with death, still sounds In my stunned ears. Addison's Cato.

A mariner having discharged his gun, and loading it suddenly again, the powder took fire. Wi.eman. Let India boast her groves, nor envy we The weeping amber, and the balmy tree ; AVhile by our oaks the precious loads are born, And realms commanded, which these trees adorn.

Pope. When fraud is great, it furnishes weapons to de-fend itself, and at worst, if the crimes be so flagrant that a man is laid aside out of perfect shame, he retires loaded with the spoils of the nations. Swift.

I consider very testy and quarrelsome people in the same light as 1 do a loaded gun, which may by accident go off and kill one. Shenslone.

Unheard, uiipitied, unrelieved,

1 bare alane my lade o'care, For silent, low, on beds o'dust,

Lie a' that would my sorrows share. Burns. The solemn fop : significant and budge ; A fool with judges, amongst fools a judge ; He says but little, and that little said Owes all its weight, like loaded dice, to lead.

Cowpfr.

Load, or

Lode,

Loads

More properly written lode; Sax. lae'i)an, to lead; Goth, lod, leid ; Dan. load.

n, or -N ;, ?i. s. I

.is'man, \ ˆ… ,,,,,, .,.,, , ˆ,,,,. ˆîˆ,,u.

Load'star, i Signifying respectively, the Load'stone, pleading vein of a mine; a leading man or pilot : leadingˆstar, :.e. the pole-star, or cynosure : leading stone, i. e. tne magnet by which mariners are led or directed.

And this sterre, that is toward the Northe, that wee clejjen the lode sterre ne apperethe not to hem.

Sir J. Mandeville. Ther saw I how woful Calistope, Whan that Diane agreved was with here. Was turned from a woman til a here, And aftir was she made the lode-starre.

Chaucer. Cant. Tales. My Helice, the loadstar of my life.

Spenser. Their manner of working, in the lead mines, is to follow the load as it lieth.

Carew's Survey of Cormcull. O happy fair ! Your eyes are loadstars, and your tongue sweet air! More tuneable than lark to shepherd's ear When wheat is green, when hawthorn buds appear.

Shakspeare. That clear majesty Which standeth fixed, yet spreads her heavenlj

worth, Lodestone to hearts, and loadstar to all eyes.

Davies. She was the loadstar of my life ; she the blessing of mine eyes ; she the overthrow of ray desires, and yet the recompence of my overthrow. Sidney.

The grace of God's spirit, like the true loadstone or adamant, draws up the iron heart of man to it ; and holds it in a constant fixedness of holy purposes and good actions. Bp. Hall.

The use of the loadstone was kept as secret as any of the other mysteries of the art. Suift.

The loadstone is a peculiar and rich ore of iron, found in large masses, of a deep iron-grey where fresh broken, and often tinged with a brownish or reddish color ; it is very heavy and considerably hard, and its great character is that of affecting iron. This ore of iron is found in f^ngland, and in most other places where there are mines of that metal.

Hill's Materia Medica.

Load, or Lode, is used, particularly in the tin mines, for any regular vein or course, wliether metallic or not ; but most commonly for a metallic vein. Mines in general are veins or cavities within the earth, whose sides, receding from or approaching to each other, make them of unequal breadths in different places, sometimes forming large spaces, which are called holes ; these holei = are filled like the rest with substance-;, which, whether metallic, or of any other nature, are called loads. When the substances forming these loads are reducible to metal, the loads are by the English miners said to be alive, otherwise they are termed dead loads. In Cornwall and Devonshire the loads all hold their course from east to west, though in other parts of iMigland they frequently run from north to south. The miners report, that the sides of the load never bear in a perpendicular, but always overhang either to the north or south above. The mines seem to have been so many channels through which the waters pass within the earth; and like rivers they have their small branches opening into them in all directions : these are by the miners termed the

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feeders of ne load. INIost mines have streams of water runninoj through them ; and, when they are found dry, it seems owin<ˆ to the water having changed its course; which it seems sometimes to iiave been compelled to do, by the load hav-ing filled up the course, and sometimes to have fallen into other more easy channels. Tlie load is frequently intercepted by tlie crossing of a vein of earth or stone, or some other metalline substance; in which case it generally happens, that one part of the load is moved to a considerable distance on one side. This transient load IS, l)y the miners, termed a tlooking ; and the part of the load which is moved is by them said to be heaved. This fracture or heave of a load, according to Mr. Price, is produced by a subsidence of the strata from tlieir primary positions, which he supposes to have been horizontal or parallel to the surface of the earth, and therefore should more properly be called a depression than a heave. This heaving of the load would be an inexpressible loss to the miner, did not experience teach him, tiiat, as the loads always run on the sides of the hills, sO the part heaved is always moved towards the descent of the hill; SO that tlie miner, working towards the ascent of the hill, and meeting a flooking, considers himself as working in the heaved part ; wherefore, cutting tlirougli the flooking, he works upon its back up the ascent of the hill, till he recovers the load, and vice versa. See JMine.

LOADED Shell, an ingenioL's contrivance for saving tlie lives of people in imminent danger, on board a ship, when the vessel is either stranded, or in danger of being so, near the coast. It is a bomb-shell filled with lead, wherein a staple or ring is fixed, to which a rope i-s fastened ; and the shell, tlius loaded, being thrown on shore, fixes itself in the ground, and, the other end of the rope being fastened to the. ship, the persons on board are thereby enabled to haul themselves ashore. It was invented by John Bell, serjeant of the royal regiment of artillery, who obtained a premium for it of fifty guineas in 1792, from the Society for the Encouragement of Arts, &c., after exhibiting its utility and practicability be-fore a committee of the society. On this occasion a loaded shell, weighing about seventy pounds, was thrown on shore, from a small mortar fixed in a boat, moored in the Thames, about 200 yards from the coast. The shell, falling about 100 yards within land, buried itself about eighteen inches in the gravel, when Bell and his assistant, on a raft floated by casks properly ballasted, hauled themselves ashore in a few minutes by the rope affixed to the

shell. Loadstone. See Magnet. LOAF, n.s. Sax. hlap, lap; Goth, hlef, laf, of Sax. {ˆlipian ; Lat. leva, to raise up. See Lf.aven. a mass or large portion of bread : hence masses of other bulky articles.

And thci forgaten to take bread, and th«i hadden not with hem but oo loaf in the boot.

Wlclif. Mark 8. Easy it is Of a cut Iddf to steal a sliive we know.

Shakspeare.

Democritus, when he lay a dying, caused loaves of new bread to be opened, poured a little wine into

them ; and so kept himself alive with the odour till a feast was past. Bacon.

The bread corn in the town sufficeth not for six days : hereupon the soldiers entered into proportion ; and, to give example, the lord Clinton limited himself to a loaf a-day. Hayward.

With etjual force you may break a loaf of bread into more and less parts than a lump of lead of the same bigness. Diirby.

Your wine becomes so limpid, that you may bottle it with a piece of loaf sugar in each bottle.

Mortimer. It undergoes in Europe several refinings in order to fomi it into loaf sugar.

Parkes's Chemical Catechism, LOAM, n. a. &: w. a. i Sax. laam ; Teutonic Loam'y, adj. S leiin ; Lat. Umus (of Or.

XilxvT], a fen, says Junius). Rich tenacious earth ; marl.

JMen are but gilded loam, or painted clay.

Shakspeare. Alexander returneth to dust ; the dust is earth ; of earth we make loam ; and why of that loam might they not stop a beer barrel ! Jd.

The mellow earth is the best, between the two extremes of clay and sand, if it be not loamy and binding. Bacon.

Auricula seedlings best like a loamy sand, or light moist earth ; yet

rich and shaded. Evelifn.

The joist ends, and girders which be in the walls, must be loomed all over, to preserve them from the corroding of the mortar.

Moxon's Mechanical Exercises LOAN, 72. s. Sax. jˆlsen, Ian ; Goth, and Swed. lu?t. Something lent ; amount of monies lent or bargained for in the way of borrowing.

The better such ancient revenues shall be paid, the less need her majesty ask subsidies, fifteens, and loans.

Bacon. You're on the fret, Because, in so debauched and vile an age, Thy friend and old acquaintance dares disown The gold you lent him, and forswear the loan.

Dry den. As none but kings have power to raise A levy, which the subject pays. And tho' they call that tax a loan. Yet when 'tis gathered 'tis their own. Bailer Loans, in modern finance, are the basis of the funding system, and the reader will find tlieir general effect on the finances of this country traced in our article Funds.

The British mode of negociating loans is there particularly pointed out. Very extensive contracts of this nature have however of late been made in this country by the agents of foreign governments. The terms of the loan recjuired are stated to one of the larger merchants or bankers, the security offered, &c., and this house and its friends have die management of the loan, and the payment of the dividends upon it. There is hardly a ci\ilised state in the world that has not raised money in this way in London since the peace of Paris. These loans have, we fear, in many instances, proved any thing but what their name would inijiort, i. c. money advanced with the prospect of its being returned. Minor states, however, have thus participated in the wealth of more established communities; in some cases (as in the mercantile Greek loans) they have received but a small share of ad van-64

tage from tlieir pledged resources ; and tliese measures as iiiterlinkiiiLj the prosperity of numerous and distant nations are a species of security, perliaps, against the frequent recurrence of wars.

Loan-Banks, or lending-houses, were establishments of an ancient data, supported by humane persons, with a view of lending money to the poor. The emperor Augustus we are told converted into a fund tlie surplus of tlie money whicli arose to tlie state from the confiscated property of criminals, and lent sums from it, without interest, to tiiose who could give security for its return, equal to double the amoui.t. Suet. Vit. August!, cap. 41. Tiberius also advanced a large capital, from which those were supplied with money, for three years, who could give security of this kind in land. Suet. Vit. Tiberii, cap. 48. Tacit. Annul, vi. 17. Dio Cassius, cap. viii. 21. Alexander Severus also advanced certain sums at a low rate, to the poor without interest to purchase lands, and received payment from the produce of them. IE. Lamprid. \ˆit. Alex. Severi, cap. 21.

In modern Italy, the pontiffs at first patronised the erection of lending-houses to advance money to the poor without interest ; then they allowed these houses to receive interest, not for the whole capitals which they lent, but only for a part, that they might raise money sufHcient to defray their expenses. In process of time, under pretext of miproving their resources for the public benefit, it was thought proper, to give to those who should advance money a moderate interest concealed by blending it with the unavoidable expenses of their establishments. The interest received was said to be ‘ pro indemnitate ;’ in the papal bulls, and tlie pope declared the lending-houses or ‘ holy mountains of piety,’ as they were caUed, to be legal ; threatening those with vengeance who dared to entertain any doubts on the subject. Most of the Italian cities now therefore established lending-houses : their origin, in the strict sense of the term, is referred to the time of Pius II. or Paul II., but the greater part of them were established in the fifteenth and following centuries by certain Minorites. The Dominicans exclaimed against these institutions as montes impietatis, and the dispute respecting them was agitated with so much warmth in the beginning of the sixteenth century, that Leo X. was obliged in tlie council of the Lateran to declare by a particular bull, that lending-houses were legal and useful ; that all doubts to the contrary were sinful ; and that those who should write against them would be in a state of excommunication. The holy council of Trent also decreed their legality, and confirmed their use.

LOANDO, orLoANDO St. Paul’s, the capital of the Portuguese settlements in Angola, Southern Africa, was founded in 1578. It covers a large extent of ground, but the white population is not more than 3000 in number ; the rmmber of negroes is perhaps 5000. Provisions are plentiful ; but the water is bad, and must be brought, either from a neighbouring river, or the opposite island of this name. Lo-ando

contains three convents, and is the seat of

a bishop, but is wholly without forts and even walls. Long. 13° 22’ l-.., lat. 8ˆ 55’ S.

Loan DO, the island opposite to the foregoing city, is about twenty miles long, and one broad. It is separated from the continent by a narrow cliannel, which the natives often swim across. It produces goats and sheep, and contains seven or eight villages. The citizens have a number of country houses and gardens here. It yields the best water in all the neighbourhood. Lat. 8° 50 S.

LOANGO, a considerable, but unexplored country of Western Africa, to tlie nordi of the river Zaire or Congo. The country, which owns the supremacy of the king, is said to extend from Cape St. Catherine to the Zaire, having a coast of upwards of 400 miles : Loango Proper occupies only the middle part of this space. The character of the whole coast is very similar, and is thus described by captain Tuckey in his Maritime Geography ; —

Mayumba, or Alvarez Martin’s Bay, is three leagues wide between Cape Primero on the north, which takes in three saddle hills, and Cape Se-condo, or Matooty, on the south, from which a reef runs out to the north one mile and a half; and off Cape Primero is a sunken rock with but two fathoms and seven fathoms all round. This bay affords good anchorage in four to seven fathoms. Ten leagues south of Mayumba is Cape Sellage, on the south side of which, and close to the main, is a small island, and two leagues farther south, and three leagues off shore, a reef of breakers. Kilonga River is sixteen leagues south of Cape Sellage, and is closed by a bar that admits only canoes ; it is known by a hill on the north, with a knob on the summit; north of the river’s mouth is a large lagoon. Se-ven leagues south of Kilongo is Moutas Itiver, crossed by a bar, of sand and stones, on which the depth is two fathoms.

Loango Bay is surrounded by red cliffs. From its south point a reef, called the Indian Bar, runs nearly half way across the bay, but within it is good anchorage in four fathoms, three quarters of a mile from the shore. The surf, however, prevents landing, except in the canoes of the country. Within the beach is a lagoon, named Barachonas, which communicates with the sea through the beach, or rather in high surfs the waves beat ever the beach ; but, when the sea outside is smooth, the beach remains dry, and the lagoon empties itself by filtration and

evaporation : when half empty it may be passed on foot, but when full it is extremely dangerous.

Sixteen leagues south of Loango is Malemba ; an open road, the approach to which is denoted by the high mountains of Cacongo, which rise behind a bay of the same name, into which falls a little river: the anchorage in this bay is bad. Malemba is a mountain, rising perpendicularly from the water to the height of seventy fathoms, and descending towards the land ; before it is a bar of volcanic rocks, one mile and a half from t!ie shore, which is sometimes dangerous to pass, but, when within it, landing is perfectly commodious, in a litde cove called Paradise, or Canoe Cove, and in another, named Sloops Cove, is the watering place ; the latter is, however, beat by

c:

the surf, through which the casks are obliged to be swam, not without risk from the sharks. The anchorage is outside the bar, a league and a half from the shore. The trading place is on the summit of the mountain, the ascent to whicli is tiirough a ravine formed by the rains, and is difficult and surrounded by precipices, so that a false step may endanger life. Goats, hogs, and fruit, are abundant at Malemba, and a great slave trade was formerly carried on here by the French. A league and half to the south-east is the lagoon of Loanguilly abounding with fresh water fish.

Cabenda, five leagues south of Malemba, is named the Paradise of the Coast, from its agreeable situation, and the facility of landing. It is known by a single sugar-loaf mountain, covered with wood. The south point of the bay is named Cabenda Hook, or Palm-tree Point : it is long, low, and covered with palm-trees, and shelters the bay on the south. The anchorage is within this point, in four fathoms, within two miles of the shore, the hook bearing S. S. W. and the sugar loaf E. S. E. ; a small river falls into the bay, and receives boats at its mouth ; half a mile above which the water is fresh, but is said to be unwholesome. There is also another watering place a little south of the point of the hook on the side of the sea : the surf here renders watering difficult, but the water which issues from a spring is excellent. The tide never

rises by the shore more than one inch and a half. The bay abounds in fish, and has good places for hauling the seine.

Half way between Malemba and Cabenda is the little river Bela, ofi' which is a line of banks of the same name, whose north extremity is a league and a half south of the anchorage in Malemba. Their approach is dangerous, as there is seven fathoms close alongside of them ; hence vessels sailing from Malemba to the south are cautioned to keep off" in twelve fathoms. On these banks are taken great quantitiesof fish. The coast of Congo commences at tlie river Zaire.

The climate is said to be fine, and never subject to hurricanes, nor even to violent winds. Rain occurs rarely, and is never violent : whde the dews are sufficient for vegetation. The win-ter is in May, June, and July, when the nights are cooler, but without being chill. The soil is in general a red stiff clay, very fertile; the sand on the coast is extremely fine, and carried about by the lightest breeze. The coast is high ; but the hills are covered with earth and luxuriant vegetation. The lakes and rivers abound with fish, and the forests with game. But the bounties of nature are little improved by an indolent people. Almost the only grains grown are manioc, maize, and a species of pulse called msangen. The women just stir the ground to the depth of an inch, and cover up the grain, to prevent it from being devoured by the birds : and even this slender culture is confined to little spots like gardens, situated around the villages. The rest of the country is covered with luxuriant herbs, rising to the height of eight feet, through which it is almost impossible to pass. The potatoe and yam are abundant. The most remarkable tree is the mapou, distinguished, like the boabab, v>y the cnormbus dimensions of its trunk : but it Vol. XHI,

afibrds neither fruit, shade, nor fuel, and forms thus a striking contrast to the extreme utility of the cocoa tree, which also abounds. Palm trees are also plentiful.

The wild animals are hyaenas, tyger-cats, and ounces. The hare, antelope, and Chinese hog, are also seen : but it is remarkable that neither the horse, the cow, the sheep, nor the ass, have multiplied in this country.

It is obvious tiiat the population of this coast cannot be in proportion to its extent. The inhabitants are not supposed by Degrandpre to exceed 600,000. Their houses are of s'raw and junk, roofed with palm-

leaves cemented by twigs Their grandees, and even kings, have only a number of these upon the same plan.

The government here is despotic, and the dig nity transmitted only it is said in the female line. The son even of the king, by a female of ordinary rank, enjoys no dignity above the rest of the subjects. The princesses choose their own husband, who does not enjoy the liberty of declining the honor ; and who is entirely debarred from that privilege of polygamy which is enjoyed in the most unlimited measure by other nations. He is prevented, if possible, even from seeing any other woman.

The object for which Europeans have resorted to this coast is the disgraceful one of the trade in slaves. The coast to the south of the Zaire is almost entirely in the possession of the Portuguese. While Loango was in the height of its power, its port was almost the exclusive theatre of this trade; but now Mayumba, Malemba, and Cabenda are as much frequented.

LoAN'Gu, the capital of the above kingdom of Loango, is about four miles in circuit, but does not contain a population of above 15,000, and there are not in the whole above 600 enclosures. The land in the vicinity is fertile, and the water excellent. It is not above a league from the sea. The entrance of the bay we have described. It is recognised by red clifls, which, illumined by the morning rays, appear as if on fire. The longitude, according to captain Tuckey's observations, appears to be about 12° 30' E., lat. 4" 40' N.

LOATH, adj.

Loathe, v. a. Sc v. n. Loatii'ful, adj. Loath'ingly, adv. Loath'ly, adj. 8c adv. Loath'ness, n. s. Loath'some, adj.

LoATll'sOMENESS, n.S.

Sax. laˆ, latSian ; Tout, leidai, to dislike. Unwilling; uninclined ; unready ; averse : ' to loathe is to hate ; ab-hor; disrelish ; feel abhorrence or disgust ; and, in an obsolete

sense, to create disgust : loathly is used both for hateful and exciting

hatred ; as well as adver-bially for unwillingly ; without liking : loathsome is also abhorred or causing abhorrence or disgust.

The fish in the river shall die, and the river stink ; and the Egyptians shall loath to drink of the water.

Exodus. For on my portos here I make an oth. That never in my lit', for lel'e iie loth, Ne shal 1 of no consuil you bewray.

Chaucer. Cant. Tales.

When he heard licr answers luth. he knew Some secret sorrow <li(l her heart distrain.

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‘I’hey with their filthiness ˆ

Polluted this same gentle soil long time, I’liat liieir own mother loathed their beastliness.

Spetiser. Where 1 was wont to seek the honey bee, The grisly toadstool grown there might I see, And loiithiniˆ paddocks lording on fhe same. Id.

An huge great dragon, horrible in sight, Ured in tlie loatliy lakes of Tartary, \ ith murderous ravin. Faerie Qiieeiie.

15efore such presence to offend with any the least unseemliness, we would be surely as loth as they who most reprehend or deride what we do. Hooker.

Which he did with loathful eyes behold, He would no more endure. Hubberd’s Tale.

To speak so indirectly, I am loath ; I’d say the truth ; but to accuse him so, That is your part.

Shakspeare. Measure for Measure. Sour-eyed disdain and discord shall bestow ”lie union of your bed with weeds so loathlij, ‘i’hat you shall hate it. Id. Tempest.

Loihlii opposite I stood To his unnatural purpose.

Id. Khig Lear. Should we be taking leave. As long a term as yet we have to live. The loathiuss to depart would grow.

Shakspeare. The sweetest honey Is loathsnme in its own deliciousness. And in the taste confounds the appetite. Id. After they had sat about the fire, there grew a general silei.ce and lothness to speak amongst them ; and immediately one of the weakest fell down in a s”. oon. Bacon.

Long doth she stay, as loth to leave the land, 1’rom whose soft side she first did issue make ;

She tastes all places, turns to every hand, Ilf T flowery banks unwilling to forsake. Davies.

This shows that you from nature loathly stray.

That suffer not an artificial day. Donne.

How loth is God to strike, that threats so long.

Bp. Hall. Loathing the honey cakes, I longed foi bread.

Cowleii. Then wilt thou not be loth To leave this paradise, but shalt possess A paradise within thee, happier far ! Milton. While they persert pure nature's healthful rules ' ■ loathsome sickness. Milton's Paradise Lost.

Such indignities did add somewhat of loathsomeness U' his cup of affliction. Barrow.

Parthenia had learned both liking and misliking, loving and loathiiif^. Sidney.

To pardon willing, and to punish loth ; \(m strike with one hand, but you heal with both ; L'iting up all tliat prostrate lie, you grieve You cannot make the dead again to live. Waller.

As some faint pilgrim standing on the shore, I'irst views the torrent he would venture o'er A ad then his inn upon the farther ground. Loth to wade through, and lothcr to go round : Then dipping in his staff does trial make How deep it is; and sighing, pulls it back,

Dryden. Red blisters rising on their paps appear. Ami flaming carbuncles, and noisome sweat. And clammy dews, that loathsome lice beget ; Till the slow creeping evil eats his ways.

Id. VirgiL For tliee the lion loalhs the taste of blood, Vnd roaring hunts his female throuirh the wood.

Drudru.

If we consider man in such a loathsome and provoking condition, was it not love enough that he was permitted to enjoy a being ? South.

Why do 1 stay within this hated place. Where every object shocks my loathing eyes?

Rowe. The catacombs must have been full of stench and loathsoineness, if the dead bodies that lay in them were left to rot in

open niches. Addison.

Loathing is a symptom known to attend disorders of the stomach ; the cure must have regard to the cause. Qttincii

Our appetite is extinguished with the satisfaction, and is succeeded by loathing and satiety.

Rogers. Now his exalted spirit loaths Incumbrances of food and clothes. Swift. Body and soul, like peevish man and vrife. United jar, and yet are loath to part. y'otmg.

The occurrences of life, by the time we come to know it a little, would be incapable of affecting the mind witli any other sensations than those of loathing and weariness, if many things were not adapted to affect the mind by means of other powers besides novelty in them, and of other passions besides cilriosity in ourselves. Burke un the Sublime.

The limb which it adorned, its only mould ; So beautiful — its very shape would charm.

And clinging as if loth to lose its hold. The purest ore inclosed the whitest skin That e'er by precious metal was held in. Byron.

Thought of the gloomy day and ghastly night. That dreads the darkness, and yet loathes the light, That winds around, and tears the quivering heart ! Ah! wherefore not consume it — and depart? Id. LOB, n. s. k, v.a. "i Belg. los, loon ; Sweo Lob's-pound. S lorn, slow. A sluggard ; a large earth worm : to lob is to let fall in a slow slucgish manner : lob's-pound, a house of correction.

Farewel, thou lob of spirits, I'll begone. Our queen and all her elves come here anon.

Sliakspeare. The horsemen sit like fixed candlesticks, And their poor jades

Lob down their heads, dropping the hide and hips.

Id. Crowderow, whom in irons bound. Thou basely threw'st into lob's pound.

Hiidibras. For the trout the dew worm, which some also call the lob worm, and the brandling, are the chief.

Walton's Angler. LOB'BY, n. s. Teut. haibe. The opening or waiting place before a room, public or private Ilis lobbies fill with 'tendance. Rain sacrificial whisperings in his ear. Make sacred even his stirrup.

Shakspeare. Timon of Athens. liefore the duke's rising from the table, he stood expecting till he should pass through a kind of lohhy between that room and the next, where were divers attending him. Wotton.

Try your backstairs, and let the lobby wait, A stratagem in war is no deceit. King.

LOBE, 7J. s. Fr.lobe; Gr. Xo/Soˆ. A division - distinct part : particularly a part of the lungs or liver.

Nor could the lobes of his rank liver swell To that prodigious mass, for their eternal meal.

Dryden. From whence the quick reciprocating breath, The lobe adhesive, and the sweat of death.'

Sewell.

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Air bladders form lobuli, whicli hang upon the bronchia like bunches of grapes ; these lobuli constitute *.he lobes, and the lobet: the lungs.

ArhuUuwt on Al'nnents.

LOBEL (Matthias), M. D., physician and botanist to king James I., was born at Lisle in 1538. He published several esteemed works, *viz.* 1. Plantarum sen Stirpium Historia, folio; 2. Dilucids Simplicium Medicamentorum Explicationes, et Stirpium Adversaria, Sec, folio ; Icones Stirpium, 4to. ; Balsami Explanatio, 4to.; Stirpium lUustrationes, 4to. He died at Lon-don in 1616, aged seventy-eight.

LOBELIA, cardinal flower, a genus of the raonogamia order, and syngenesia class of plants : natural order twenty-ninth, campanaceae : cal. quinquefid : cor. monopetalous and irregular : CAPS, inferior, bilocular, or trilocular. There are many species, but only four are cultivated in our gardens ; of these two are hardy herbaceous plants for the open ground, and two shrubby plants for the stove. They are all fibrous-rooted perennials, rising with erect stalks from two to five or six feet high, ornamented with oblong, oval, spear-shaped, simple leaves, and spikes of beautiful, monopetalous, somewhat ringent, five-parted flowers, of scarlet, blue, and violet colors. They are easily propagated by seeds, offsets, and cuttings of their stalks. The tender kinds require the common treatment of other exotics. They are natives of America, from which their seeds must be procured.

L. siphilitica grows in most places in Virginia, and stands our winter. The root is an article of the materia medica. It is perennial, has an erect stalk three or four feet high, blue flowers, a milky juice, and a rank smell. The root consists of white fibres about two inches long, resembles tobacco in taste, which remains on the tongue, and is apt to excite vomiting. It is used by the North American Indians as a specific for the venereal disease. The form is by decoction ; the dose is gradually increased till it bring on very considerable purging, then intermitted for a little, and again used in a more moderate degree till the cure be completed. The ulcers are also washed with the decoction, and the Indians sprinkle them with the powder of the inner bark of the spruce tree. The same strictness of regimen is observed as during a salivation by a mercurial course.

LOBINEAU (Guy Alexis), a Benedictine monk born at Rennes, in 1666.

He wrote several works of reputation ; particularly, 1. The History of Britanny, 2 vols, folio. 2. A continuation of Felibium's History of Paris, 9 vols, folio. 3. A History of Spain. 4. A Translation of Polybius. He died in 1727, aged sixty-one.

LOBO (Jerome), a famous Portuguese Jesuit, born at Lisbon. He travelled into Ethiopia, as a missionary, and continued there for a long time. At his return he was made rector of the college of Coimbra, where he died in 1678. He wrote An Historical Account of Abyssinia, which is esteemed, and was translated into French by Lc Grand, and into English by Dr. Johnson.

LOB'STER, n. s. Sax. lobftej-i. A crusta-ccous fish

Those that cast their shell, are the lobster, the cra\>, and craw-fish. Bacon's Natural History.

Lobster. See Cancer.

LO'CAL, adj. -\ Fr. local ; Lat. locm.

Local'ity, n. s. { Pertaining to, or having the

Lo'cALLY, adv. i properties of, place; being

Loca'tion, 7l. s. J in a particular place : locality is state or condition in relation to place : location, the act of placing or of occupying a particular place.

By ascending, after that the sharpness of death was overcome, he took the very local possession of glory, and that to the use of all that are his, even as himself before had witnessed, I go to prepare a place for you. Hooker.

How is the change of being sometimes here, sometimes there, made by local motion in vacuum, without a change in the body moved 1 ˆK')"!ˆ *"* bodies. Uream not of their fight. As of a duel, or of the local wounds Of head or heel. Milton's Paradise Lost.

That the soul and angels are devoid of quantity and dimension, and that they have nothing to do with grosser locality, is generally opinioned.

Glanville.

Whether things, in their natures so divers as body and .spirit, which almost in nothing communicate, are not essentially divided, though not locally distant, I leave to the readers. Id.

To say that the soul is somewhere, means no more than it does exist ; this, though a phrase borrowed from place, signifying only its existence, nut location. Locke.

A higher flight the venturous goddess tries,

Leaving material world, and local skies. Prior.

Which fashions also and institutions themselves have grown out of the exigencies, the climate, situation, or local circumstances of the country. Foley,

Not that I mean to approve, or would enforce A superstitious and monastic course : Truth is not local, God alike pervades And fills the world of traffic and the shades.

Cowper.

In case of invasion, or appearance of an enemy in force upon the coast of any part of the uni'.ed kingdom, his majesty may order the local militia to be embodied and marched to any part of Great Britain. Local Militia Act.

Local, in law, something fixed to the freehold, or to a certain place : tlius, real actions are local, since they must be brought in the county where they lie ; and local customs are those particular to certain countries and places.

LOCH, 71. s. Scottish. A lake.

A lake or loch, that has no fresh water running into it, will turn into a stinking puddle.

Cheijnes Philosophical Principles.

LOCHABER, a district of Scotland, in Inverness-shire, bounded by Moydart on the west, Glengary on the north, Badenoch on the east, and Lorn on the south. It derives its name from the lake or locli Aber ; and extends about twenty miles from east to west, and thirty from north to south. The country is barren, bleak, mountainous, “and rucged. In one of the most barren parts of this country, near the mouth of the River Aber, in the centre between the West and North

Highlands, stands Fort William, with the town of Maryburgh, built vipon a navigable arm of the sea, near the foot of Ben Nevis. The inhabitants pay little attention to any commerce, but

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that which consists in the sale of their black cat-tle ; and hunt fowl and fish as the seasons per-mit, and as tlieir occasions require.

LOCIIES, a town of I’rance, in the department of Indre and Loire, and late jirovince of Touraine. It is defended by a stroncc castle, and was anciently famous, or rather infamous, for its horrid dungeons, built by Lewis XI ; in one of ■wiiicli Lewis Sforza, duke of Milan, after ten years’ imprisonment, ended his days. It is seat-ed on the Indre, fifteen miles south of Ainboise, and twenty south-east of Tours. Long. 0’^ 51’ E., lat. 47^ 10’ N.

LOCH-LE'EN, a spacious and beautihd lake of Kinross-shire, about fifteen miles in circumference and four in length, interspersed with islands of various appearance and extent. One Df these, called St. Serf’s Isle, contains forty-eight acres of good pasture. The ancient priory of Loch-Leven, founded by Brudus king of the Picts, was seated in it: two miles north of it lies a small island almost covered with the ruins of a castle, anciently belonging to the Douglasses of Loch-Leven, and afterwards used as a state pri-son. In this castle, the unfortunate Mary queen of Scots was kept a close prisoner, from June 16th, 1567, to May 2d, 1568. It is said to have been founded by Congal, the son of Dongart king of tiie Picts, and occasionally inhabited by king Alexander III. Its whole circuit is 585 feet. Patrick Graham archbishop of St. Andrew’s, and grandson of king Robert III., died a prisoner here in 1468; and the earl of Northumberland was imprisoned in it from 1569 to the end of 1572. The island is ornamented with trees. The lake abounds with a great variety of different kinds of trouts, of a high flavor and bright red color. The lake also abounds with eels, pikes, perches, &c. ; and the islands in it are frequented by herons, snipes, teals, swans, grills, rails, king’s fishers, &c.

LOCIIMABEN, an ancient royal borough in Annandale ; governed by a provost, three, bailies, dean of guild, treasurer, and nine counsellors. Its first charter, granted by king Robert I., being destroyed with its records by the English, a new one was granted by James VI. in 1612. It has fairs in January, April, July, and October, and joins with Dumfries, Sanquhar, Annan, and Kirkcudbriiˆht, in sending a representative to the imperial parliament. It is almost surrounded with lakes, and is seated on the west side of the Annan, near its junction with the Ae and Kinnel ; eight miles north-east of Dumfries, and

twenty-two from Annan.

The site of a very ancient castle, close to the town, on a fine eminence, between the castle and Kirk Lochs, surrounded by a deep moat and fosse, is still visible. It was the original seat of the Bruces, lords of Annandale, and the birth-place of king Robert Bruce. The stones were carried away to build another castle, which is seated on a peninsula in the castle Loch, and was by far the largest and strongest of any either on the English or Scottish borders next to Carlisle, against which it was a frontier garrison. It occupies about an acre, and contains three courts, .strongly built of stone and lime. The walls are twelve feet thick. It was surrounded with three

deep fosses, filled with water from the lake, which met on each side. The whole fortification contains about thirteen acres. The inner fosse went through the castle, within which there was a basin for the boats, to preserve them from the enemy and the weather. Before the Union, a garrison of 200 men was constantly kept in it. The castle Loch, on wiiich it stands, is a beauti-hi\ lake on the south side of the town, one mile and a half long and one bro d.

LOCK, 71. s., V. a., & V. n. i Sax. loc, lucan ; Lock'er, n. s. > Goth, lok, luka. A

Lock'et, j fastening by way of

clasp, bolt, or grapple ; a quantity of hair or wool hanging together : hence any tiling that stops or secures an opening; secures the priming of a gun, &c. : to lock is to fasten or shut with locks ; hence to close or fasten any way ; and, as a verb neuter, to become fast ; to unite : a locker, and locket, things fastened by a lock or catch ; also the catch or spring of such things.

Thine herte to me now well I shet, For all thy jolful lobe and knet I bind undir this little keie, That no wight maie cary avvaie.

Chaucer. Romaunt of the Ross. His grizly locks, long grovvea and unbound. Disordered hung about his shoulders round.

Spenser. No gate so strong, no lock so firm and fast, But with that piercing noise flew open quit or brast. Id. Faerie Queene. For not of wood, nor of enduring brass Doubly disparted it did lock and close. That when it locked, none might through it pass.

Id. We have locks, to safeguard necessaries, And pretty traps to catch the petty thieves.

Shaksi:eare. I am lockt in one of them ; If you do love me, you will find me out. Id. The bottom was set against a lock of wool, and tlie sound was quite deaded. Bacon.

‘I’lien seek, to know those things which make us blest. And, having found them, lock them in thy breast.

Denham. They must lie practised in all the locks and gripes of wrestling, as need may often be in fight to tugg or grapple, and to close. Milton on Education.

Where knights are kept in narrow lists, With wooden dockets ‘bout their wrists.

Hudihras. A goodly cypress, who bowing her fair head over the water, it seemeth she looked into it, and dressed her green locks by that running river. Sid7iei).

Either they lock into each other, or slip one upon another’s surface ; as much of their surfaces touches as makes them cohere. Boyle.

The garden, seated on the level floor. She left behind, and, locking every door. Thought all secure. Dryden.

Sergesthus, eager with his beak to press Betwixt the rival galley and the rock, Shuts up the unwieldy centaur in the lock. Id. If one third of the money in trade were locked up, must not the landholders receive one third less ?

Locke. As there are locks for several purposes, so are there several inventions in locks, in contriving their wards or guards. Moxon.

A gun carries powder and bullets for seven charges and discharcres : under the breech of the barrel is

LOCK S.

one box for the powder ; a little before the lock another for the bullets ; behind tlie cock a charger, •which carries the powder to the further end of the toc/i. Greu\

A lock of hair will draw more than a cable rope.

Id. Behold the locks that are grown white Beneath a helmet in your father's battles.

Addison.

I suppose this letter will find thee picking of

daisies, or smelling to a lock of hay. Id.

I made lockers or drawers at the end of the boat.

Jiobinson Crusoe.

Death blasts his bloom, and locks his frozen eyes.

Gay. Two locks that graceful hung behind In equal curls, and well-conspired to deck, \ ith shining ringlets her smooth ivory neck.

Pope. Your wine locked up, Plain milk will do the feat. Id. Horace, Always lock up a cat in a closet where you keep your china plates, for fear the mice may steal in and break them. Swift.

Prudent men lock up their motives ; letting familiars have a key to their heart, as to their garden.

Shenstone. Fleecy locks and black complexion

Cannot forfeit Nature's claim ; Skins may differ, but affection

Dwells in white and black the same.

Cowper. Locks. Mechanical fastenings for doors were employed at a very early period, and we have seen some of those brouglit from Herculaneum that might, in complexity, vie with the most curious productions of the present day. From the various structure of locks, accommodated to their diff'erent intentions, they acquire various names. Those placed on outer doors are called stock-locks ; those on chamber doors, spring-locks, those on trunks, trunk-locks, padlocks, &c. The principal parts of the spring-lock are, the main-plate, the cover-plate, and the pin-hole : to the main-plate belong the key-hole, top-hook, cross-wards, bolt-toe or bolt knab, drawback-spring tumbler,

pin of tlie tumbler, and the staples; to the cover-plate belong tlie pin main-ward, cross-ward, step-ward, or dap-ward ; to the pin-hole belong the hook-ward, main cross-ward shank, the pot or bread, bow-ward, and bit. *

The principle on which all locks depend is the application of a lever to an interior bolt, by means of a communication from without ; so that by means of the latter, the lever acts upon the bolt, and moves it in such a manner as to secure the lid or door from being opened by any pull or push from witliout. The security of locks, in general, therefore, depends on tiie number of impediments we can interpose betwixt the lever (the key) and the bolt which secures the door : and these impediments are well known by the name of wards, the number and intricacy of which alone are supposed to distinguish a good lock from a bad one. If these wards, however, do not in an effectual manner preclude the access of all other instruments besides the pro-per key, it is still possible for a mechanic of equal skill with tlie lock-maker to open it without the key, and thus to elude tlie labor of the other.

The excellence of locks consists in the security they afibrd ; and as numberless schemes are continually brought forward by designing men, to elude every contrivance of the most ingenious mechanics, tiie invention of a durable lock, so constructed as to render it impossible for any person to open it without its proper key, has ever been an object of considerable importance.

Denon has engraved an Egyptian lock of wood of very clumsy construction; and such were those of the Greeks and Romans, or at least some similar. Bars or bolts suspended by chains were drawn backwards or forwards by means of a hook or key, or raised out of a latch, and let fall, or a bolt cogged was caught in one of the teeth, and drawn back by the key. Sometimes there was a box with a pin, which box received a bar, that the pin (balanos) confined. A key in the form of a vice, called balanagra, disengaged the pin, and the bar fell or turned aside. But wooden locks still exist in the Highlands, so artfully contrived by notches, made at unequal distances, within side, that they can only be opened by the wooden key which belongs to them. These were probably Celtic, for locks and keys of metal are found in British towns occupied by the Romans. Before the use of keys and locks they fastened their doors with knots, according to fancy, which were very difficult to unloose, because the secret was known only to the makers. The locks upon scrinia resemble our trunk locks. Du Cange mentions the pes-sulus versatilis, or turning latch, box-locks,

chain-locks, or padlocks, as early at least as 1381; gate-locks; the speldolum or crook by which a chain was let into the lock, and the ver-tevella not easily defined. The lock and key of Taillebois Castle was vast and substantial, in the form of a fetter lock. The locks of our old church doors and chests familiarly show their construction. On opening a small ancient brass ring lock, the letters on each ring were thus placed together E, R, C, O. Nares mentions also a padlock formed of rings, marked with letters (Amen) which when placed to form the word would open, but not otherwise. This therefore is not a modern fashion. It seems that on chamber-doors there were often two locks ; one called the privy-lock.

The marquis of Worcester furnishes the following curious suggestion for the escutcheon of a lock : ‘An escutcheon, to be placed before any of these locks with these properties. 1. The owner, though a woman, may, with her delicate hand, vary the ways of coming to open the lock 10,000,000 of times, beyondˆhe knowledge of the smith that made it, or of me who invented it. 2. If a stranger open it, it sctteth an alarm a-going, which the stranger cannot stop from running out ; and besides, though none should be within hearing, yet itcatcheth his hand, as a trap doth a fox ; and, though far from maiming him, yet it leaveth such a mark behind it as will discover him if suspected ; the escutcheon or lock plainly showing what money he hath taken out of the box, to a farthing, and how many times opened since the owner had been at it.’

The noble author does not enter into any further particulars of his contrivance : but Mr. Par-

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Imgton, in his edition of tlie woik, thus illustrates It : — * The two principal properties of this escutcheon may be readily contrived ; and the first of them has, in fact, been already applied to a very ingenious padlock, invented by Mr. Marshall, and for which the Society of Arts voted him a reward of ten guineas. In Mr. M.'s escutcheon the letters or figures commonly used in the ring padlock allow an almost endless variety of changes, and the owner may in one minute alter the arrangement in such a manner that even the maker would experience as much difficulty to open it, as an entire stranger to its construction. To render the combination of letters variable, the characters must not be engraved upon the outside of the rollers themselves, but upon a thin brass hoop made to fit on its outer surface ; and a spring fastened to the roller, and pressing upon the inside of the hoop, will cause a sufficient degree of friction to make them move together.

* The other part of this invention is equally simple with the preceding. An alarum, such as is attached to a clock, may easily be wound up prior to closing the box ; and the lid provided with a chamfered bolt or staple, capable of effecting its discharge when the box is opened.

* To register the amount of money taken from the box, it will be necessary either to place each distinct piece of money in separate divisions, or to put a number together in one deep recess capable of admitting but one piece to pass at a time. As the pieces are shaken out, they will, in their passage, raise a lever capable of moving a wheel one division in the passage of each piece. The Bank of England have a method somewiiat similar for registering the number of notes worked from the printing press of that establishment.'

In the year 1784 the Society of Arts conferred their silver medal on Mr. Taylor, of Petworth, for his improvement on the latch or spring-bolts of common locks. This was effected by simply reversing the tumbler, so that its curved side acts against two stubs fixed on the tail of the iatch, and tlmists back the latter with ease; whether the knob be turned to the right or the left, when the lock is opened. Mr. Taylor has also, behind the tail of the latch, fixed a guide containing a groove, in which runs a small friction-wheel, that serves to keep the latch in its

direct situation, and at the same time to diminish its friction ; the arms of its tumbler are somewhat contracted, in order that the latch or spring bolt may move with greater facility. By this construction the parts of the tumbler and latch, which are in contact, move in a line, so that they pass over the greatest space under the smallest angle ; and the lock itself may be constantly used for several years, without requiring the application of oil.

'arious patents have been obtained for the construction of locks, so as to prevent the possibility of picking them : the principal of these is Mr. Bramah's, registered in 1784. One of Mr. Bramah's simplest forms of a lock for a drawer, nr for a door, is represented in plate Locks, figs. 1, 2, 3, and l; in which A represents the bolt, fitted to slide on the metal plate B B C, by pass-j'lg through a hole in the side C, which is turned

up ; the other end of the bolt is guided by passing under proper grooves in the lower side of the circular box D U, which is screwed to the plate B to confine the bolt down. It contains the whole mechanism of die lock, consisting of an interior cylinder or barrel E E, shown in the section, fig. 3. This barrel is fitted to turn round within the box DD; the upper end a a being received into a cavity exactly fitting it, and the middle encompassed by a circular ring of steel plate b b, screwed into the box, as shown in fig. 3. The ring enters a circular groove formed round the barrel, and thus confines it from having any other motion than a rotation on its axis, and this only by the aid of the key R, fig. 4. The barrel has a hole through its centre, which is closed at bottom by a circular plate screwed to it, and supporting the central pin G, which occupies the centre of the hole through the barrel; this centre pin guides the key in entering the lock. When the barrel E E is turned round by the key it shoots the bolt A, by an ingenious contrivance, explained in fig. 2, an aperture being cut through the plate B B C to exhibit it. The plate F, on the lower end of the barrel E, has a pin *"projecting from it : this pin enters a curved opening, at a small distance from the centre, and therefore describes a circle when the barrel is turned round, cut through the bolt A, as is shown by the dark curve F in fig. 2. In the position there shown the bolt is withdrawn, and the pin^", resting against the solid part of the groove, prevents the barrel being turned round any farther in the direction from F to f : but, by the application of the key, the barrel may be turned in the other direction, in which course it passes round in a circular part of the groove, and therefore produces no motion of the bolt A, until the pin* 'strikes the straight part g of the groove, and acts against it to throw the bolt forwards : and when the barrel has made a complete circuit, and the piny'is again come to the

same position it was at first, the bolt is shot out as at fig. 1, and the pin is resting in the hollow *(, which prevents its moving any further in the same direction. When the barrel is turned back again, the pin*‘ acts against the notch i, and the curved part k of the groove, and withdraws the bolt into the position of fig. 2 ; now the pin /’ either when the bolt is shot out or in, is in a right line with the centre of the barrel E, to which it is fixed, and the direction of the bolt’s motion. By this means no force whatever applied to drive back the bolt can have the least tendency to turn the barrel round, and strain the mechanism which prevents its motion, unless the parts are first put into a particular arrangement l)y the key.

The key has six notches cut in the end of it, and, being forced down into the key-hole II, depresses all the sliders at once, until the projecting leaf t of the key stops upon the bottom of the recess cut in the upper edge of the barrel. In this position the sliders are depressed, so that the notch made in each slider comes exactly opposite the steel ring h b, and the barrel is at liberty to turn round all the sliders, being by this means remov.ed, or at least relieved from the steel ring, which embraces a groove cut round the barrel, but which cannot turn round therein

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unless the sliders are also moved by the key, that the notches cut in them may coincide with the groove cut round the barrel, and then it can turn freely round. The key, having thus relieved the barrel by being thrust in as far as it can go, obtains a hold of the barrel to turn it round, by the leaf t entering the recess, which it exactly fills up, so as to form a continuation of the circular top of the barrel : but, as soon as the key is turned round with the barrel a small quantity, its leaf is caught beneath tlie circular cavity in the top of the box D; and thus the key is prevented from being thrown out by tlie spiral spring, until it has been turned quite round, and locked or unlocked the bolt: then the leaf of the key coming opposite the enlargement 2, fig. 1, of the key-hole H, the spring tlirows the key out, and raises all the sliders, that they may interlock with the steel plate b b, and prevent the barrel from turning, unless the key be again put in (its leaf being opposite the aperture z of the key hole), and, being thrust forvvards as far as it will go, the barrel will turn round very easily ; and, when it has made a complete circuit, the lock is opened, and the key thrown out of the key-hole by the spring.

The security of this ingenious lock from being picked, or opened by a false key, depends upon a circumstance not yet mentioned, which is, that the notches in the six sliders are so made, that every one requires to be depressed a different quantity to bring them all at once opposite

the steel ring, in which position alone the barrel can be moved. For this reason the six notches in the key are all of different depths, correspondent to the positions of the notches in their respective sliders ; and, unless each notch in the key is of the proper depth, the lock cannot be opened ; for aijy one being too deep, that slider will not be pressed low enough to relieve the barrel, and will hold it fast, though all the others may be correct: on the other hand, any notch not being of sufficient depth, the slider it acts upon will be pressed too far, and in this case the notch in it, having passed by the steel ring, will lock the barrel as effectually as though it was not far enough. Tims this lock admits of an immense number of combinations: 1st, in the number of the sliders ; 2dly, in the depths of the different notclies in the key; and, 3dly, the arrangement of these sliders. The combination of these three changes admits such an immense number of varieties of locks, that it never need happen that two locks should be made to open by tlie same key. Any of Mr. Bramah's locks may be arranged so as to require a new and different key in case tiie original should be lost or stolen : for this purpose tlie lock must be opened, and tlie sliders taken out and changed into difierent grooves: a new key must now be made, with the grooves of the same depth as the original key, but arranged in a different order, corresponding with the new arrangement of the sliders. The old key will not now open the lock.

To pick a lock of this kind is perhaps impossible ; because, though the sliders are exposed to the examination of any person, yet no information can be obtained of the depth of each of the sliders required to be depressed ; for, unless they

are all together pressed down, the barrel cannot be turned in the least, and, without turning it, no guess can be made by pressing down any o:. - slider of the depth at which the notch in it v.i!. be opposite the steel ring. Another great adva;.- tage of these locks is, that from the circumstant before explained, of the bolt having no action) turn the barrel, though the barrel has a greitˆ power to shoot the bolt, a strong lock may ha-but a very small key. For instance, the bolt > the lock is of great strength, while the key R iˆ so small, that it may always be carried suspendci to the watch chain, and then it will not be in danger of being lost or mislaid, as one may hap-pen to lose a key, and give opportunity for iil disposed persons to make a false key from it,uri-known to the owner.

Mr. Bullock's drawback lock for house doors &c., will next engage our attention. The in-provemeni consists in latching the door ; for = is

well known, particularly in damp wealhei that the air drawing through it rusts the head or bevel of the bolt, by which means it requires great force to shut the door, and occasions . disagreeable noise, besides shaking the buildint It has frequently happened that the house lu;- been exposed to robbers from the door being left unlatched, when supposed to be fast. This iiˆ provement removes all these inconveniencie as it lets the bolt shoot into the staple immed ately when the door closes, but not before; an the reliever works so very easy, that the door \ made fast with ˆ th part of the force required with locks upon the common construction.

Mr. Bullock's lock is represented in fig. 5, where A is the new iron latch here affixed to an old common drawback house-lock. B, an iron pin at one end of the latch, on whicn pin it is moveable. C, a projecting part of the latch, which, when the common spring bolt D of the lock is drawn back, in the usual manner, is forced into the nick on its higher part at E, by the spring F underneath the latch. The bolt D then remains within the lock, until, on closing the door, the reliever G gently presses on the lock box, fixed in the common way on the door cheek ; which pressure draws tlie projecting part C out of the nick E, and permits the end of the bolt D, by tiie force of the spring G, to slide into the lock-box, and fasten the door.

A lock invented by Mr. Stansbury, an American gentleman, has great merit. To explain it, we must suppose tliat a fiat circular plate is fitted to turn round upon the centre-pin for tlie key, and that this plate, when turned round, shoots the bolt, which may be done by various means. The locking part consists of four, six, or more small steel pins, which are received in Iioles made very near each other, through both the circular turning plate, and the fixed plate beneath it. By these pins the circular plate is held fast from turning. The key has the same number of pins, and arranged in the same position and distance, as the pins in the plate. The key, being introduced, is pressed forwards against the circular plate, and turned round till the])ins in it come over the pins in tiie circular plate, and the pressure of the hand forces the pins out of the circular plate, the pins in the key

occupying the place of them. The plate is now relieved, and the key has hold of the plate to turn it round and open tlie lock. Each pin is provided with a spring; behind the fixed i)late to force it forwards. The diHiculty of makinjj a false key to this lock is very great ; as any error in the number, size, position, or length of the pins, will prevent it from opening tlie lock. To avoid the danger of impressions being taken, many marks are stamped upon the circular plate, whicli are exactly the same as the marks of the real pins : thus an impression taken from it would only mislead

Mr. Stansbury has also made an ingenious improvement upon tlie common spring door-lock. The handle which opens the spring catch for fastening the door, instead of requiring to be turned round, is made so that it withdraws tiie spring catch, by pushing the handle on one side of tlie door and pulling it on the other. This metliod is extremely convenient; for pressing the handle releases the lock, and continuing the pressure opens tlie door, and pulling the handle on tiie otiier side has the same effect. A person with his hands full may open such a door by only leaning against the handle.

Mr. Nicholson has invented a secret lock of more tlian GOOO combinations ; it possesses the following requisites: — 1. Tiiat certain portions of the lock are variable in position througii a great number of combinations, only one of whicii will allow the lock to be opened or shut. 2. This last combination is variable at the pleasure of the possessor. 3. It is not possible, after the lock is closed and the combination disturbed, for any one, not even the maker himself, to discover by any examination what may be the proper situation of the parts required to open it. 4. Trials of this nature will not injure the work. 5. It requires no key. And 6. It is as easily opened in the dark as in the light. This lock consists of four wheels : and by adding a fifth the combinations would be increased to nearly

60,000.

It is well known tliat, in the usual way of arranging the levers of locks, it is necessary that they sliould ascend to tlieir proper places before the bolt can pass ; which arrangement gives an opportunity of introducing a nail, or a piece of stout wire. Sec, into the lock, and thus raising the levers without the necessity of using the key. In Mr. Somerford’s lock, for which he wa”? rewarded by the Society of Arts,

the arrangement has been changed ; one lever being made to as-cend, and the others to descend, before the bolt can be shot. Tliese works may be put into all kinds of locks without increasing their bulk, and the bolt may be made to take on one side of the lock or on tlie oilier. The lower ascending lever has an iron plate attached to it, the use of which, besides receiving tiie key and thus bringing it down to its central place, is, that it stands as a complete guard in front of the riding lever which descends. The lever on the top of the bolt is also of a new construction, having the lower levers working in its racks, and refusing to let them pass till it is brought to its proper situation.

Fig. 6 is a front view of the lock, the upper

plate being removed; a a the bolt, having a lorr-gitudinal perforation, in each side of which are four notches opposite each other ; b b a plate of brass fixed to the bolt by the pin and collet c, under which it freely moves; this plate has a perforation with four notches in the upper side, and three in the under, corresponding with the notches in the bolt, but deeper; dd a. spring fixed to the side of the bolt acting on the protuberance b of the plate b b, and pressing it on one side, so as to prevent the notched perforation corresponding with that in the bolt. To move the bolt, the key must by its hook *, fig. 7, travelling in the groove m of the under plate*j pull the pin just out of the upper notch, and no more, while tiie front of the key, pushinj; the se-cond plate e, moves its pin just out of the bot-tom notch, and no more; and. now, the pins being even, the bolt is free of them, but is locked by its upper plate 66 catching them in two of its upper notches ; therefore the upper front of the key must raise this plate to make its perforation coincide exactly with that in the bolt, and then it is free.

The improved mortise lock, contrived by Messrs. T. and S. Smith, of Darnick, is represented in fig. 8. A is the spring-bolt, cranked inside to avoid the key of the lock-bolt, and to bring its nose and tail into the same line. B the tumbler or follower, of hardened steel, made to work upon the beech C C, which is of brass, and fixed to the bell by the tenon, I) D. E a piece of brass, with an oblong hole through it, to ad-mit of the tail F working througii it, to keep the bolt in its proper place, and diminish the friction. Tlie spring G, and player 11, are brought to the fore end of the lock, which allows it to be narrowed at the other end.

In the lock-bolt and night-bolt there is little difference from the common lock. The advantages of a lock constructed upon this plan are

the following : *viz.*

1. It is less bulky than the common lock, easier put on, and does not weaken the door so much.

2. There is less friction in the working, from the spring being placed to draw, instead of pushing, as in the common lock. The slide at F also contributes much to diminish the friction.

3. It works with perfect equality whichever way the handle is turned, from the tumbler being placed exactly in the line of the centre of the bolt; which it is evident the common lock can never do, from the tumbler being placed so far from the bolt. In the common lock there is a difference, in most cases, of between thirty and forty per cent, between the turns of the handle, which is the reason of the bolt coming readily back when the handle is turned the one way, and often sticking fast when turned the other way.

LOCKE (John), F. R. S., was the son of Mr. John Locke of Pensford in Somersetshire, and was born at Wrington near Bristol in 1632. He was sent to Christ Church in Oxford, and here became acquainted with the works of Des Cartes which first attracted his attention to philosophy. He applied himself with vigor to his studies, particularly to physic, in which he gained a cou

siderable knowledge, thougli he never practised it. In 1694 he went to Germany as secretary to Sir William Swan, envoy from the English court to the elector of Brandenburgh, and some other German princes. In 1695 he returned to Ox-ford, where he applied himself to natural philosophy, and became acquainted with lord Ash-ley, who introduced him to some of the most eminent persons of that age. In 1670 he began to form the plan of his Essay on Human Understanding. About this time he became F. U.S. In 1672 his patron, lord Ashley, now earl of Shaftesbury, and lord chancellor of England, appointed him secretary of the presentations. In 1673 he was made secretary to a commission of trade, worth £;”)00 a year ; but that commissioc was dissolved in 1674. The earl of Shaftesbury, after his discharge from the Tower, retired to Holland in 1682, and Mr. Locke followed his patron thither. He had not been absent from England a year, when he was accused of having written certain tracts against the government, which were afterwards discovered to have been written by another;

and in November 1684 he was deprived of his]jlace of student in Christ Church. In 1685 the English envoy at the Hague demanded him and eighty-three other persons to be delivered up by the States General, upon which he lay concealed till 1686 ; and during this time formed an acquaintance with Limborch, Le Clerc, and some few other learned men at Amsterdam. In 1689 he returned to England in the fleet which brought over the princess of Orange. Being esteemed a sufferer for the principles of the revolution, he obtained the post of commissioner of appeals, worth £200, and was offered to be sent abroad as envoy at the court of the emperor, the elector of Brandenburg, or any other where he thought the air most suitable to him : but he waived all these, on account of the infirm state of his health ; wliich led him to prefer an offer made by Sir Francis Masham and his lady, of an apartment in their country seat at Gates, in Essex, twenty-five miles from London. This place proved perfectly agreeable to him in every respect. He found in lady Masham a lady of a contemplative and studious turn, inured from her infancy to deep speculations in tiieology, metaphysics, and morality. In this family Mr. Locke lived with as much ease as if the whole house had been his own ; and he had the additional satisfaction of seeing this lady bring up her only son exactly upon the plan which he had laid down for the best method of education. He was made a commissioner of trade and plantations in 1695, which engaged him in the immediate business of the state. With regard to the church, he published a treatise the same year, to promote the scheme which king William had much at heart, of a compre-iiension with the dissenters. This, however, drew iiim into a controversy : which was scarcely ended, when he entered into anotiier, in defence of his essay, which continued till 1698 : soon after which, the asthma increasing with his years, he became so infirm, that, in 1700, he resigned his seat at tlie board of trade, as lie could no longer bear the air of London siifTiciently for a regular attendance upon it. After this he con-LOG

tinued constantly at Gates, where he employed the remaining years of his life entirely in the study of the Holy Scriptures. He died in 1704 aged seventy-three. Whoever is acquainted with the barbarous state of the philosopliy of the human mind, when .Mr. Locke paved the way to a clear notion of knowledge, wdl be able to appreciate tiiis great man’s abilities; and discover how much we are indebted to him for the improvements that have since been made. His Discourses on Government, Letters on Toleration, and his Commentaries on some of St Paul’s FLpistles, are justly held in the highest es-teem.

LOCK’RAM, n. s. From lock, twisted hair. A sort of coarse linen.

The kitchen malkin pins Her richest lockram about her reeky neck, Clambering the walls to eye him. Shakspeare.

LOCOMO’TION, 71. s. l Lat. locus, motus. Locomo’tive, adj. ji Power of changing

place.

All progression, or animal locomotion, is performed by drawing on, or impelling forward, some part which was before at quiet.

Bnnpne”s Vulgar Errours. In the night too oft he kicks, Or shows his locomotive tricks. Prior.

An animal cannot well be defined from any particular organical part, nor from its locomotive faculty, for some adhere to rocks. Arbutlniot.

I shall consider the motion, or locomotive faculty of animals. Derham’s Physico-Tlteologu.

LGCRI, or LocRi Epizephyrii, in ancient geography, a town of the Bruttii, on the Ionian Sea; a colony of the Locri Ozolae (Strabo); or rather of the Epicnemidii, according to 'irgii, who calls it Narycii Locri, from Naryx, a town of the Locri Epicnemidii. The epithet Epizephyrii is from its situation near the promontory Zephyrium. (Strabo.)

LocKi, or LocRE.\sr:s, the people of Locri. They are said to have been the first who used a code of written laws, compiled by Zaleucus from the laws of the Cretans, Lacedemonians, and the Areopagitac, adding an express penalty to each law, which was before discretionary, at the option of the judge. (Strabo) Adultery was punished with the loss of both eyes. Zaleucus’s own son being convicted of this crime, in order to maintain the authority of the law, and at the same time to pay some regard to the intercession of the people in favor of his son, Zaleucus suffered tbe loss of one eye, his son losing another. (/Elian, 'al. Maximus.)

LOCIIIS, a country of Achaia, in Greece; twofold, and divided by mount Parnassus into

LocRis CiTKRioR, occupicd by tlie Locri Ozolit, or Zephyrii, i. e. Western Locri, contained between jEtolia and Phocis, beginning at Naupactum, and running in a narrow slip of land, scarcely 200 stadia, along the sea, to the borders of the Phocenses ; and Locris I’lterior, whicli lay beyond I’arnassus, running out towards Tliermo|i)la), and

reaching to the Euripus of Euboea; occupied by the Locrii Opuntii, who dwelt on the Euboean Sea ; and the Locri F'picnemidii, who occupied mount Cnomis (Strabo) ; and these two were tlie Eastern Locri.

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LOCULAMENTA, and Loculi, m botuny, cells or pockets. The internal divisions of a capsule, or other dry seed-vessel. These cells contain the seeds, and differ in number in different plants.

LOCULUS is also sometimes used to express the minute divisions in some species of untheriE, whicii contain the tine impalpable powder, supposed by the sexualists to be the principal agent in the Eˆeneration of plants.

LOCUS, Geometricus, alineby which alocal or indeterminate problem is solved. Thus if a rijjht line suffice for tiie construction of the equation, it is called locus ad rectum; if a circle, locus ad circulum ; if a parabola, iocus ad para-bolam ; if an ellipsis, locus ad ellipsin; and so of the rest of tlie conic sections.

LO’CUST, «. s. Ldit. locusta. A species of Guy LI-US, which see.

.Vnd locust is wenten out of the smoke of the pit iato erthe, and power was gliouen to hem as scorpions of the erthe liath power. Wiclif. Apoc. ix.

To-morrow will 1 bring the locusts into thy coast.

tˆiodvs.

Nothing now is left him, but a bare fruitless earth to live upon, and that covered over with locusts.

Bp. Hall.

Air replete with the steams of animals rotting, has produced pestilential fevers ; such have likewise been raised by great quantities of dead locusts.

Arhuthnot on Air.

The Hebrews had several sorts of locusts, which are not known among us : the old historians and modern travellers remark, that locusts are very numerous in Africk, and many places of Asia ; that sometimes they fall like a cloud upon the country, and eat up every thing they meet with : Moses describes four sorts of locusts. Since there was a prohibition against using locusts, it is not to be questioned but that

these creatures were commonly eaten in Palestine, and the neighbouring countries. Calmet,

Locust, in zoology. See Gryllus.

Locust, in botany. See Ceratgnia.

Locust Tree. See Gleditsia, Hymenˆa, and RoiiiNiA.

LOCUTORIUM. The monks and other religious in monasteries, after they had dined in their common hall, had a withdravving-room, where they met and talked together among themselves; which room, from that sociable use and conversation, they called locutorium (from loquor, to speak), as we call such a place in our houses parlour, from the French parler; and they had another room which was called locutorium forin-secum, where they might converse with laymen.

LODEVE, a town of France, on the Lergues, in the department of the llerault. Its streets are narrow, it has, however, flourishing manufactures of silk stuffs, cloth, hats, oil, and wine. It was the birth-|)lace of cardinal Fleury. During the vvar it supplied a great part of the clothing of the French army. Population 8000. Twenty-nine miles west of Montpelier.

H)DiiE,v.a.,v.7i. icn.s.-\ Saxon, lojian ;

Lono'iMENT, (ˆ Moeso-Goth. lag—

Lodg'er, igun, to lay; Fr.

Lopg'ing. Jloger. To place;

deposit for a time ; lay flat ; afford an abode, temporary or settled; to settle; fix: as a verb iiLUter, to reside ; take up an abode for the night.

or generally : a lodge is a small appendant abode : lodgement, collocation, disposition, or collection of things in a place: lodger, one who hires his lodging, or lives in hired rooms ; one who resides in a particular place : lodging has the same temporary and general application as lodger.

Thy father is a man of war, and will not lodge with the people. Surnuel.

Oh, that I had in the wilderness a lodging place of wayfaring men,

that I might leave my people !

Jeremiah. And eche of hem goth to his hostelrie. And toke his logging as it wolde falle That on of hem was togged in a stalle. For in a yard, with oxen of the plough, That other man was logged wel ynougli.

Chaucer. Canterbury Talcs. Fair bosom fraught with virtue's richest treasure. The nest of love, the lodging of delight.

The bower of bliss, the paradise of pleasure. The sacred harbour of that heavenly spright.

Spenser. My lords And soldiers, stay and lodge by me this night.

Sluikspeare. By whose fell working I was first advanced. And by whose power I well miglit Ibdge a fear To be again displaced. Id.

Though bladed corn be lodged, and trees blown down. Though castles topple on their warders' heads. Id. Care keeps his watch in every old man's eye, And where care lodges, sleep will never lie. Id.

He and his lady both arc at the lodge, Upon the north side of this pleasant chase. Id. Base tyke, call'st thou me host ? now, 1 scorn the term ; nor shall my Nell keep lodgers. Id.

I can give no reason, More than a lodged hate, and a certain loathing I bear Antonio. Id. Merchant of Venice.

Let him change his lodging from one end of the town to another, which is a great adamant of acquaintance. Ihicu.

This cunning the king would not understand, though he lodged it and noted it, in some particulars.

Id. lieiny VII. He hath no blood of an Israelite that delights to lodge in .lebus. Bp. I lull.

Those houses are soonest infected that are crowded with multiplicity of lodgers and nasty families.

Ilarveu. Here thou art but a stranger travelling to thy country ; it is therefore a huge folly to be afflicted because thou hast a less convenient inn to lodge in by the way. Taulor.

Thus at their shady lodge arrived, both stood, Both turned, and under open sky adored The God that made both sky, air, earth. Milton. Something holy lodges in that breast, And with these raptures moves

the vocal air To testify his hidden residence. Id.

He brake up his court, and retired himself, his wife and children, into a certain forest thereby, which he calleth his desart, wherein he hath buUt two fine lodges. Sidueu.

The hounds were uncoupled ; and the stag thought it better to trust to the nimbleness of his feet, than to the slender fortification of his lodging. Id.

A\ hen on the brink the foaming boar I met, And in his side thought to have lodged my spear, The desperate savage rushed within my force, iVnd bore me headlong with him down the rock.

Ola ay.

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Every house was proud to ledge a knight.

Dryden. At night he came To his known ladgingi, and his country dame.

Ib viewing again the ideas that are lodged in the memory, the mind is more than passive. Locke.

Their feathers serve to stuff our beds and pillows, yielding us soft and warm lodging.

Rail on the Creation. Long cone wheat they reckon in Oxfordshire best for rank clays; and its straw makes it not subject to lodge, or to be mildewed. Mortimer's llusbitndi-ii.

The gentlewoman begged me to stop ; for tliat a lodger she had taken in was run mad. Taller.

He lodged an arrow in a tender breast. That had so often to his own been prest.

Addison.

The deer is lodged, I've tracked her to her covert ;

Rush in at once. Id. Calo.

The military pedant is making lodgments, and fighting battles, from one end of the year to the other. Addison.

It has been observed, that not one favourite of the muses has ever been able to build a house since the days of Amphion, whose art it would be fortunate for them if they possessed ; and that the greatest punishment that can possibly be inflicted upon them, is to oblige them to sup in their own lodgings.

Adventurer. Sylla was reproached by his (eWow-lodger, that whilst the kUow-Mgcr paid eight pounds one shilling and five pence halfpenny for the uppermost story, he paid for the rest twenty-four pounds four shillings and four pence halfpenny. Arbuthnot.

An oppressed diaphragm from a mere lodgment of extravasated

matter. Sharp's Surgerti.

The curious lodgment and inosculation of the au-ditory nerves. Derhain.

The memory can lodge a greater store of images, than all the senses can present at one time.

Cheynt's Philosophical Principles. And dwells such rage in softest bosoms then ; And lodge such daring souls in little men 1 Pope. Wits take lodgings in the sound of Bow. Id.

Look in that breast, most dirty dear ; Say, can you find but one such lodger there 1 Id. Whenever I am turned out, my lodge descends upon a low-spirited family. Swift.

Lodge (Thomas), M.D., an English physician and poet of the seventeenth century. He was educated at Oxford, but graduated at Avignon. He settled in London, and obtained great practice among the Roman Catholics, as he was of that communion. He wrote two plays ; *viz.* Wounds of Civil War, a tragedy ; and, A Looking-Glass for London, a tragi-comedy ; and assisted R. Green in some others. He died in 1625. ■

Lodgement, in military affairs, a work made by the besiegers in some part of a fortification (after the besieged have been driven out), to maintain it, and be covered from the enemy's fire. When a lodgement is to be made on the glacis, covert-way, or in a breach, there must be a great provision made of fascines, sand-bags, gabions, woolpacks. Sec., in the trenches,; and, during the action, the])ioneers, under the direction of an engineer, with fascines, sand-bags. Sec, should be making the lodgement, in order to form a covering, while the grenadiers are storming tlie cove\jt-way.

LODI, a province of Austrian Italy, in the government of Milan, surrounded by the grand duchy of Parma, and the delegations of Pavia, Milan, Bergamo, and Cremona. Its extent is 390 square miles. Pasturage is the chief object of agriculture ; and it is in this district that Par-mesan cheese is chiefly made. Population

141,000.

LoDi, a considerable town of Austrian Italy, the capital of the above delegation, stands on the Adda, over whicli there is a wooden bridge of 600 feet in length. It is regularly and well built. One of its public squares contains a number of very superior buildmgs. The cathedral and convents claim the attention of the traveller: the most remarkable church is that called dell' Incoronata, built by the celebrated Bramante, and painted partly in fresco, and partly in oil, by Callisto, a pupil of Titian. Here are manufactures both of silk and porcelain, and some considerable trade. Its chief export is the cheese made in the environs. Lodi is surrounded with walls and stands high. Buonaparte's early military career was here distinguished, in 1796, by his forcing with the bayonet the passage of the bridge, though defended by 10,000 Austrians. Population 12,500. Sixteen miles north-east of Pavia, and seventeen south-east of Milan.

LODRONE, a town of Italy, in the bishopric of Trent, near which a bloody battle was fought, on the 12th of August 1796, between the French and Austrians, wherein the latter were defeated. It is seated at the influx of the Chiese into Lake Idro.

LOEFORT, an island of the North Sea, on the coast of Norway, a little north of the Mael-stroom.

LOEVESTEIN, or Lowenstein, a fortress of the Netherlands, in Guelderland, at the western point of the island of Bommelwaert, and eighteen miles E. S. E. of Rotterdam.

LOFIT (Capel), esq., barrister-at-law, was the son of Christopher Lofft, also a barrister, who resided in Carey Street, Fleet Street, where this his second son was born, in November 1751. He distinguislied himself at Eton, where he was placed in 1759, by several elegant compositions, and proceeded in 1769 to Peterhouse, Cambridge. Here he had the reputation of being a sound classical scholar ; but his deficiency iri mathematical knowledge lost liim the Craven scliolarshii). His praise of Shakspeare in a Latin poem in hexameters, published as a tripos, March 1st 1770, inspired Garrick with so great an interest in him, that to the exertions of that actor may be attributed tiie reconciliation, with some l)ranches of his family, which eventually secured his succession to the C!apel estates. He entered himself at Lincoln's Inn 1770, and, under tlie superintendance of his father, proceeded to qualify himself for the bar, to which lie was called in Michaelmas term, 175.'^(; having, in tlie mean time, published the Praises of Poetry ; and Timoleon,a tragedy ; both of which appeared in 1775. He also now commenced the study of the IJobrew and Saxon languages. He published in 1776 a colleclion of Cases, chiefly in the

king’s bench, from lt72 to 1774, with a Latin

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list of law maxims. The latter maxims he afterwards printed in an enlarged shape, in two volumes, under the title of Principia cijm Juris Universalis turn praecipue Auglicaiu; with a translation, called Elements of Universal Law ; about the same period he also wrote several political tracts on the subject of the American war. Succeeding-to the Capel estates, in 1781, he removed to Troston, in Sufl'ulk ; and became an active macˆistrate for the county till 1800; when, having unduly, as it was thoui;ht, exerted himself as under sheriff, to delay the execution of a young woman who had received sentence of death, Mr. Loift was removed from the commission. In 18l0 he became deputy recorder of AldborousTJi ; but, conceiving tliat great facilities were afforded fortlie education of his family on the continent, he in 1816 proceeded to Brussels, and thence to Lausanne, Turin, and iMontcallier ; at which latter place he died. May 26t!i, 1824. Besides a variety of political pamphlets, Mr. LoflTt was the author of Davideis, an imperfect poem in blank verse; Eudosia, a poem in blank verse, 1780; a Translation of tlie first two Georgics of X'irjril, 1784 ; an F.ssay on the Law of Libel, 178,'); an edition of Gilbert's Law of Evidence, with considerable additions, 2 vols. 8vo. 1792; Laura, or aˆi Anthology of Sonnets, in 5 vols. 1814 ; and a volume of Aphorisms, from Shakspeare. lie was a very considerable contributor also to most of the magazines of his day ; and it was to his zealous patronage the public was, in a great measure, indebted for the publication of the Farmer's Boy, by Robert Biooml^eld. Mr. Lofll married twice, and left a son and daughter by his first wife.

LOFODEN, a group of islands on the coast of Norway, lying between 67° 30' and 68° 45' of N. lat. Tliey consist of five large, and several smaller islands, having in all about 4000 inhabitants. Their lofty mountains are covered with])erpetual snow. During the winter they are visited by boats, manned with perhaps 20,000 fishermen ; and the value of the fish taken has been estimated at £12,000.

LOFT, 71. s. "\ From Lift, which see.

Lof'ty, adj. I A high or elevated place ;

Lof'tily, adv. ˆ the upper room or floor of

Lof'tiness, 71. s.) a building. Lofty is high ; towering, elevated in place, condition, true dignity or temper; proud.

They speak wickedly concerning oppression : they speak loftily. Psalms Ixxiii. 8.

Thus saith the high and loft;/ One. haiah.

The eyes of the loftv shall be humbled. Id.

Eutvchus fell down from the third loft. Acts.

To lull him in his slumbers soft, A trickling stream from high rock tumbling down,

And ever-drizzling rain upon the loft, JMixt with a murmuring wind. Faerie Queene.

l\Iy lowly verse may loftilii arise, And lilt itself unto the highest skies. Id.

J oft II and sour to them that loved him not ; But to those men that sought him sweet as summer.

Sluikipeare. There is a traverse placed in a loft above. Bacon. Passing through the spheres of watchful fire. And hills of snow, and lofts of piled thunder.

Milton. (-‘ities of men with loftu gates and towers. Id

He knew Himself to sing and build the lofty rliime. Id.

See *(i*‘ty Lebanon his head advance, See nodding forests on the mountains dance.

Pope. A weasel once made shift to slink In at a corn loft, through a chink. Id.

Three poets in three distant ages born ; The first in loftiness of thought surpassed, The next in majesty ; in both the last. Dryden. jMan, the tyrant of our sex, 1 hate, A lowly servant, but a lofty mate. Id.

Augustus and Tiberius had loftiness enough in their temper, and affected to make a sovereign figure.

Collier. Like birds quite exquisite of note and plume, Transfixed by fate (who loves a loftii mark), How from the summit of the groves he fell. And left it unharinonious ! Y’oini”.

lie was equally qualified for sprightly sallies, and for lofty flights. Johnson.

The peevish youth, who ne'er had found before A rival of his skill, indignant heard.

And soon (for various was his tuneful store) In loftier tones defied the simple bird. Cowper,

In health how fair, how ghastly in decay INIan's lofty form ! how heavenly fair the mind Sublimed l)y Virtue's sweet enlivening sway ! But ah', to Guilt's outrageous rule resigned.

Beattie. An empire thou could'st crush, command, rebuild, But govern not thy pettiest passion, nor However deeply in men's spirit skilled. Look through thine own, nor curb the lust of war, Nor learn that tempted Fate will leave the loftiest star. Byron.

LOG, n. s. "\ Sax.li33an,tolie. —

Log'gerhead, w. s. ˆSkinner. Goth, log, Log'geriieaded, adj. i lag. That which is laid Log'man, 71. s. J or placed. — Thomson.

Belg. logge, heavy; lumpish. A mass of wood ; a block ; a dolt or blockhead. Loggerhead is also synonymous with blockhead. To go or fall to loggerheads, to scuffle ; to bring two or more thick s!:ulls into collision. Loggerheaded, stu-pid ; thick-skulled ; dollish. Logman, one who carries or transports logs from place to place.

AVould the lightning had Burnt up those logs that thou' rt enjoined to pile.

aiiakqjcare. For your sake Ami this patient logman. Id.

\'here hast been, Hal? — With three or four loggerheads, amongst three or fourscore hogsheads. Id. Henry IV.

'ou loggerheaded and unpolished groom, what! no attendance 1 Id. Turning of the Hhrew.

The worms with many feet are bred under logs of timber, and many times in gardens where no logs are.

Bacon. Some log, perhaps upon the water swam, An useless drift, which rudely cut within,

And hollowed, first a floating trough became, And cross some riv'let

passage did begin.

Dryden. Says this loggerhead, what have we to do to quench other people's fires? L' Estrange.

A couple of travellers that took up an ass, fell to loggerheads which should be his master. Id.

The usual way of breaking up logs of wood for the purposes of fuel, is by axes, and driving wedges in. IniisoH s Elements,

LOG.

77

The ship still lay Like a mere log, and baffled our intent.

Bijron.

Log, n.s. Ileb. J?. The smallest measure of capacity among the Jews (about three-fourths of a pint). — Parkhurst. Ai-butlinot says the seventy-second part of the boll or epliah, and twelfth part of the hin.

A meat offering mingled with oil, and one log of oil. Lev.

Log, in the Jewish antiquities, is mentioned (2 Kings vi. 25) as the fourth part of a cab. But in Leviticus the word log is often met witli, and signifies that measure of oil winch lepers were to offer at the temple after they were cured of their disease.

Log, a sea term, signifying a small piece of timber, of a triangular, sectoral, or quadrantal figure, on board a ship, generally about a quarter of an inch thick, and five or six inches from the angular point to the circumference. It is balanced by a thin plate of lead, nailed upon the arch, or circular side, so as to swim perpendicularly in the water, with about two-thirds immersed under the surface.

Log and Line, or the Log-Line, a little cord, or line, about 150 fathoms long, fastened to the log by means of two legs, one of which passes through a hole at the corner, and is knotted on tlie opposite side, while the other leg is attached to tiie arch by a pin fixed into anollier

hole, so as to draw out occasionally. By tliese legs the log is hung in equilibrio ; and the line thus annexed to it is wound round a reel fixed for that purpose in tiie gallery of the ship. This line, from the distance of about ten, twelve, or fifteen fathoms off the log, has certain knots or divisions, which ought to be at least fifty feet from each other; fhough it was the common practice at sea not to have them above forty-two feet asunder. The length of each knot ought to be tlie same part of a sea-mile as half a minute is of a-n hour ; and admitting the measurementof Mr. Norwood, who makes a degree on a great circle of tlie earth to contain 367,200 English feet, or about sixty-nine English statute miles and a half, and, therefore, one-sixtieth part of it, or a nautical mile, will be 6120 feet ; ˆ?ˆˆth of 6120, or fifty-one feet, should be the length of each knot. But, because it is safer to have the reckoning rather before the ship than after it, therefore fifty feet may be taken as the proper kngth of each knot. The knots are sometimes made to consist only of forty-two feet each, even in the present practice; and tliis me-thod of dividing the log-line was founded on the supposition that sixty miles, eacli of .5000 English feet, made a degree ; for -,1ˆ of ■‘iOOO is forty-one and two-thirds, or, in round numbers, forty-two feet. Mariners, rather than quit the old way, though known to be erroneous, use glasses for lialf minute ones, that run but twenty-four or twenty-five seconds. They have also used a line of forty-five feet to thirty seconds, or a glass of twenty-eight seconds to forty-two feet. When tliis is the case, the distance between the knots should be corrected by the following proportion : as thirty is to fifty, so is the number of seconds of the glass to the distance between the knots upon the line. The heat or moisture of the weatiier

has often a considerable effect upon the glass, so as to make it run slower or faster, it should therefore be frequently tried by tiie pendulum in the following manner: — On a round nail hang a string that has a musket-ball fixed to one end, carefully measuring between tiie centre of the ball and the string’s loop over the peg thirty-nine inches and an eighth, being the length of a second pendulum; then swing it, and count one for every time it passes under the peg, beginning at the second time it passes; and tiie number of swings made during the time tiie glass is running out shows tiie seconds it contains. Tlie line also is liable to relax and shrink, and should therefore be occasionally measured. Tiie use of the log and line is to keep account, and make an estimate of die ship’s way or distance run ; which is done by observing tiie length of the line unwound in half a minute’s time, told by a half-minute glass ; for so many knots as run out in that time, so many miles the ship sails in an hour. Thus, if tiiere

be four knots veered out in half a minute, the ship is computed to run four miles an hour. No mention of this device for measuring the siiip's way occurs till 1607, in an East India voyage published by Purciias; but from that time its name occurs in otlier voyages among iiis collections; and henceforward it be-came famous, being taken notice of botli by oui* own authors and by foreigners; as by Gunter in 1623: Snellius in 1624; Metius in 1631; Oughtred in 1633; Ilerigone in 1634; Salton-stali in 1636; Norwood in 1637; Pournier in 1643; and by almost all the succeeding writers on navigation of every country.

Log, Heaving the, is throwing it into tlie water on the lee-side, letting it run till it comes without tiie eddy of the ship's wake; then one, holding a half-minute glass, turns it up just at the first knot, or tiie mark from whicli tiie knots begin to be reckoned, turns off the reel, or passes over the stern. As soon as the glass is out the reel is stopped, and the knots run oft' are told, and tiieir parts estimated. It is usual to heave the log once every hour in sliips of war and East-India- men, and in all other vessels once in two hours; and if at any time of the watch the wind has increased or abated in the intervals, so as to affect the ship's velocity, the officer generally makes a suitable allowance for it at the close of tiie watch The log is a very prec?rious way of computing, and must always be corrected by experience ; tiiere being a great ueal of uncertainty in tlie yawing of tli, siiip, going with the wind aft, or upon tiic quarter, in the heaving of it, by its coming home, or lieing drawn after tlie sliip ; on account of the friction of the reel and liglitness of the log in the course of the current, and in the strength of the wind, wiiicii seldom keeps the same tenor for two hours together, wliich is the interval between the times for using the log in short voyages, thougli in longer ones they heave it every hour. Yet this is a much more exact way of com])nting than any other in use; much preferable certainly to tiiat of tlie Sjianiards and Portuguese, who guessed at the sliip's way by the running of tiie frotii or water by the sliip's side ; or to that of tiie Dutch, who used to heave a chip overboard, and to number the paces they

walk on the deck vvliile the chip swims between any two marks or bulk-heads on the side.

Log, Tiif. Comi'ound. Tiie above mentioned errors, anil particularly the log's being subject to drive witii the motion which the water may have at its surface, whereas the experiment requires it to be fixed in the place where it is when the mark commencing the knots goes off the reel, have been considered by writers, and many methods have been proposed to remove, or at least to lessen them. The late M. Bouguer proposed a method, which has been thought deserving of particular attention, in the Mem. Acad. Sc. 1747; afterwards in his Treatise on Navigation, published at Paris in 1753, and since reprinted in 1760, ˆby tlie abbe de la Caille. For this purpose, take for the log a conical piece of wood, which t\x to the' log-line passed through or along its axis, at about forty, fifty, or sixty, or more feet, from one end ; and to this end fix the diver, which is a body formed of two equal square pieces of tin, or of thin iron plate, fixed at right angles to one another along their diagonals ; and its size so fitted to that of the cone that the whole may float. A cone of three inches diameter in the base, and of six inches in the slant height, is proposed by M. Bouguer to suit a diver made of plates about nine inches and three quarters square ; the intersection of the diagonals is joined to the log-line, and the loop and peg fixed as in the common log. However, it has been found, that no kind of wood used in British dock-yards, when formed into a cone of the above dimensions, will float a diver made of stout tin plates, one side of the square being nine inches and three quarters. Such a diver, weighing one pound fourteen ounces avoirdupois, required to float it a cone of five inches diameter and twelve inches on the slant side, so as the point of the cone, which was made of light fir, should just appear above the water. Now supposing one side of such a square, tin diver to be about ten inches, and made of plates only two-thirds of the thickness of the former, such a diver would weigh, with its solder, about twenty ounces, and can be floated by a light fir cone of four inches diameter in the base, and ten inches in the slant height or length ; and such a compound log might perhaps be found on trial to be affected by about as much again as that proposed by M. Bouguer; and consequently the difference between the numbers given by the com-mon log and compound log, must be augmented by two-thirds of itself for the necessary correction, as below. When the compound log of Bouguer, above described, is hove overboard, the diver will sink too deep to be much affected by the current or motion of water at the surface, and the log will thereby keep more steadily in the place where it first fell ; and consequently the knots run off the reel will show more accurately the ship's rate of sailing. As the common log is

affected by the whole motion of the current, so this compound log will feel only a part thereof, *viz.* such a part nearly as the resistance of the cone is to the resistance of the diver ; then the resistances of the above cone and diver are about as one to five ; and consequently this log ‘will drive but one-fifth part of what the common

log would do ; and so the ship’s true run will be art’ected by one-fifth only of the motion of the waters. To obtain the true rate of sailing, it will be proper to heave alternately, hour and hour, the common log and this compound log ; then the difference of tlieir knots run ofl’, augmented by its fourth part, is the correction; which, applied to tlie knots of the common log, will give the ship’s true rate of sailing at the middle time between the hours when these logs were hove. The correction is additive when the compound log’s run is the greatest, otherwise it is subtractive. To find the course made good : increase the observed angle between the log-lines by one fourth part ; and this gives the correction to be applied to the apparent course, or the opposite of that shown by the common log ; the correction is to be applied to the right of the apparent course, when the bearing of the common log is to the left of the compound log ; and vice versa, to the left, when the bearing is to the right of it. Or thus : the lengths run off both logs, together with their bearings, being known ; in a card or compass apply the knots run off, taken from a scale of equal parts, along their respective bearings, from the centre; join the ends; and in this line produced, on the side next the compound log’s length, take one-fourth of the interval; then a line drawn from the end, thus produced, to the centre of the card, will show the true course and distance made good. When a current, such as a tide, runs to any depth, the velocity of that current may be much better ascertained by the compound log than by the com-mon one, provided the diver does not descend lower than the run of the current ; for, as those ships which are deepest immerged drive fastest with the tide, so the diver, by being acted on below, as well as the log on the surface, their joint motion will give the total effect of the current’s motion better than could be had from the motion at the surface only. Also, by such a compound log, the depth to which any current runs may be easily tried.

We have an account, in the Voyage to the North pole, p. 97, of two other logs, which were tried by captain Phipps ; one invented by Mr. Russel, the other by Foxon ; both constructed upon this principle, that a spiral, in proceeding its own length in the direction of its axis through a resisting medium, makes one revolution round the axis ; if,

therefore, the revolutions of that spiral are registered, the number of times it has gone its own length through the water will be known. In both these the motion of the spiral in the water is communicated to the clock-work within-board, by means of a small line fastened at one end to the spiral, which tows it after the ship, and at the other to a spindle, which sets the clock work in motion. That invented by Mr. Russel has a half spiral of two threads, made of copper, and a small dial with clock-work, to register the number of turns of the spiral. The other log has a whole spiral of wood with one thread, and a larger piece of clock-work with three dials, two of tliem to mark the distance, and the other divided into knots and fathoms, to show the rate by the half-minute glass, for the convenience of comparing it with the log. This kind of log

will have the advantage of every other in smooth water and moderate weather ; and it will be use-ful in finding the trim of a ship when alone, in surveying a coast in a single ship, or in nieasur-inof distances in a boat between head-lands and shoals : but it is subject to other inconveniences, which will not render it a proper substitute foi the common log.

LOGAN, a chief among the Mingo tribe of the North American Indians, whose pathetic address to lord Dunmore, governor of Virginia, has been much and justly admired. The occasion was as follows ; and the authenticity of the narrative is unquestionable. In spring, 1774, a robbery and murder were committed on an inhabitant of the frontiers of Virginia by two Indians of the Shawanee tribe. The neighbouring whites, according to custom, undertook to punish this outrage in a summary way. Colonel Cresap, a man infamous for the many murders he had committed on that much-injured people, collected a party, and proceeded down the Kanha-v/ay in quest of vengeance. Unfortunately a canoe of women and children, with one man only, was seen coming from the opposite shore, unarmed, and unsuspecting any hostile attack from tiie whites. Cresap and his party concealed themselves on the bank of the river ; and, the moment the canoe reached the shore,

singled out their objects, and at one fire killed every person in it. This happened to be the family of Logan, who had long been distinguished as a friend of the whites. This unworthy return provoked his vengeance. He accordingly signalised himself in a war which ensued. In autumn, 1774, a decisive battle was fought at the mouth of the Great Kanhaway, between the collected forces of the Shawanees, Mingoes, and Delawares, and a detachment of the Virginia militia. The Indians were defeated, and sued for peace. Logan disdained to be seen among the suppliants ; but, lest the sincerity of a treaty should be distrusted, from which so distinguished a chief absented himself, he sent by a messenger the following speech, to be delivered to lord Dunmore : ‘ I appeal to any white man to say if ever he entered Logan’s cabin hungry, and he gave him not meat; if ever he came cold afid naked, and he clothed him not. During the course of the last long and bloody war Logan remained idle in his cabin, an advocate for peace. Such was my love for the whites, that my countrymen pointed as they passed, and said, Logan is the friend of white men. I had even thought to have lived with you, but for the injuries of one man. Colonel Cresap, the last spring, in cold blood, and unprovoked, murdered all the relations of Logan, not sparing even my women and children. There runs not a drop of my blood in the veins of any living creature. This called on me for revenge. I have souglit it ; I have killed many; I have fully glutted my vengeance. For my country, I rejoice at the beams of peace ; but do not harbour a thought that mine is the joy of fear. Logan never felt fear. He will not turn on his heel to save his life. Who is there to mourn for Logan? Not one.’

Logan (.John), D. D,, late a clergyman of the church of Scotland, author of several works of

merit. He was born in Mid Lothian about 1748; studied divinity at the university of Edinburgh, and was ordained minister of South Leith, in 1770. In 1781 he published his Philosophy of History, the substance of which had been delivered in his public lectures at Edinburgh, with great approbation. He also])ublished his Poems, which underwent a second edition in 1782. In 1783 he wrote Runnamede, a tragedy, which he offered to the manager of Covent-garden theatre ; but as the lord chamberlain did not approve of the political sentiments displayed in it, a license was refused, though it was afterwards acted at Edinburgh with much applause. His last work was A Review of the Principal Charges against Mr. Hastings. Mr. Logan died in London in 1 788. Two volumes of his Sermons were published after his death.

LOGARITHMIC Lines. Formany mechanical purposes it is convenient to have the logarithms of numbers laid down on scales, as well as the logarithmic sines and tangents ; by which means computations may be carried on by mere mensuration with compasses. Lines of this kind are always put on the common Gunter's scale; but as these instruments must be extended to a very great length, in order to contain any considerable quantity of numbers, it becomes an object of importance to shorten them. Such an improvement has been made by Mr. William Nicholson, and published in the seventy-seventh volume of the Philosophical Transactions. The principles on which the construction of his instruments depends are as follow : I. If two geometrical series of numbers, having the same common riitio, be placed in order with the terms opposite to each other, the ratio between any term in one series and its opposite in the other will be constant : Thus,

2 6 18 54 162, &:c.

3 9 27 81 243, &c. Then, 2 3 6 9 18 27 54 81 162 243, &c.

where it is evident that each of the terms in the upper series is exactly two-thirds of the corresponding one in the lower. II. The ratio of any two terms in one series will be tlie same with that between those which have an equal distance in the other. III. In all such geometrical series as have the same ratio the property above mentioned takes place, though we compare the terms of any series with those of another ; Thus,

ˆ2 4 8 16 32 64, &c.

I 3 6 12 24 48 96, &c.

ˆ4 8 16 32 64 128, &c.

) 5 10 20 40 80 160, &c.

where it is plain that 2, 4, 3, 6 ; also 2, 4, 4, 8, and 2, 4, 5, 10, &c., have the same ratio with that of each series. I\ˆ If the diflerences of the logaridmis of the numbers be laid in order upon equidistant parallel right lines, in sucli a manner that a right line drawn across the whole shall intersect it at divisions denoting numbers in geometrical progression ; then, from the condition of the arrangement, and the property of tliis logarithmic line,ˆit follows, 1st, That every right line so drawn will, by its intersections, indicate a geometrical series of numbers ; 2dly,

LOGARITHMIC LINES.

That such series as are indicated by these right lines will have tlie same common ratio ; and, 3dly, That the series thus indicated by two parallel right lines, supposed to move laterally, without changing either their mutual distance or parallelism to themselves, will have each the same ratio; and in all series indicated by such two lines, the ratio between an antecedent and consequent, the former taken upon one line, and the latter upon anodier, will be also the same. 'Ihe first of these propositions is proved in the followmg manner : — Let the lines A B, C D, E V, plate]ˆo<;ARrrHMS, fig. 5, represent parts of the loga-ritiimic line, arranged according to the proportion already mentioned ; and let G 11 be a right line passing through the points e, c, a, denoting numbers in geometrical progression ; then wdl any other line I K, drawn across the arrangement, likewise pass through three points *', d, b, in geometrical progression. From one of the points of intersection f, in the last mentioned line I K, draw the Y e.fg parallel to Gil, and intersecting the arrangement in the points t, /* ; and the ratios of the numbers c, f, c, i, will be equal, as well as of u, A : because the intervals on the logarithmic line, or differences of the logarithms of those numbers, are equal. Again, the point /J the line id, and the line lib, are in arithmetical progression, denoting the differences between the logarithms of the numbers themselves; whence the quotients of the numbers are in geometrical progression. The second proposition is proved in a similar manner. For as it was shown that the line J'g, parallel to G H, passes through points of division denoting numbers in the same continued ratio as those indicated by the line G II ; it may also be shown that the line L M, parallel to any other line 1 K, will pass through a series of])oints denoting numliers which have the same continued ratio with those indicated by the line I K, to which it is parallel. The third proposition arises from the parallelism of the lines to their former situation ; by which means they indicate numbers in a geometrical series, having the same common ratio as before : their distance on the logarithmic line also remains unchanged ; whence the differences between the logarithms of the opposite numbers, and of consequence their ratios, will always be constant. V. Supposing now an antecedent and consequent to be given, in any geometrical series, it will always be possible to find them, provided the line be of unlimited length. Drawing two parallel lines', then,

through each of the numbers, and supposing the lines to move without changing their direction or parallel situation, they will continually describe new antecedents and consequents in the same geometrical series as before. 'l. Though the logarithmic line contain no greater range of numbers than from 1 to 10, it will not be found necessary for the purposes of computation to repeat it. The only tiling requsite is to have a slider or beam with two fixed points at the distance of the interval betwixt 1 and 10, and let a moveable point be made to range betwixt them always to indicate the antecedent ; then, if the consequent fixed point fall without the rule, the other fixed point will always denote the division on which it

would have fallen had the ruler been prolonged; and this contrivance may easily be adapted to any arrangement of parallel lines whatever. The arrangement of right lines, however, ought always to be disposed in such a manner as to occupy a right angled parallelogram, or the cross line already mentioned ought always to be at right an-gles to the length of the ruler. Fig. 6 is a ruler consisting of ten parallel lines. F'ig. 7 a beam compass for measuring the intervals. B, A, C, are the parts which apply to the surface of the ruler ; the middle one. A, being moveable sidewise in a groove in the piece D i-,, so as always to preserve its parallelism to the external pieces D, C, which are fixed at a distance equal to the length of the ruler, and have their edges placed in such a manner as to form, with the parallel lines which they intersect, a ratio, which by composition is one-tenth; which in the present case requires them to be at right angles to the length. The piece D E is applied to the edge FG of the ruler. The edges or borders 11, I, K, L, are more conveniently made of transparent horn, or tortoise-shell, than ofany opaque matter. In using this ruler, apply the edge of either B or C to the consequent, and slide the piece A to the antecedent ; observing the difference between the numbers on the pieces denoting the lines they are found on : then, applying the same edge of A to any other antecedent, the other piece B or C will intersect a consequent in the same ratio upon that line, having the same situation with regard to the antecedent that the line of the former consequent had to its antecedent. But if B be the consequent piece, and fall without tlie ruler, the piece C will show the consequent one line lower; or if C, in like manner, fall without the ruler, then B will siiow the consequent one line higher. ' It might be convenient,' says Mr. Nicholson, 'for the purpose of computation, to make instruments of this kind with 100 or more lines : but, in the present instrument, the numbers on the pieces will answer the same purpose; for, if a consequent fall upon a line at any given number of intervals without

the ruler, it will be found on that line of the arrangement which oc cupies the same number of intervals, reckoned inwards from the opposite edge of the ruler.' Fig. 8 is an instrument on the plan of a Guuter's scale, of twenty-eight inches and a half long, invented by the late Mr. Robertson. There is a moveable piece A B in the slider G II, across whicli is drawn a fine line: the slider having also ' lines C D, E F, drawn across it at distances from each other equal to the length of the ruler A B. In using the instrument, the line C D or E F is to be placed at the consequent, and tlie line in A B at the antecedent : then, if the piece A B be placed at any other antecedent, the same line C D or EF will indicate its consequent in the same ratio taken the same way : that is, if the antecedent and consequent lie on the same side of the slider, all other antecedents and consequents in that ratio will be in the same manner; and the contrary if they do not. But, if tlie consequent line fall without the ruler, the other fix-ed line on the slider will show the consequent, but on the contrary side of the slider to that where it would else have been seen by means of

the first consequent lino. Fi'T. 9 is a circular instrument equivalent to the former ; consisting of three concentric circles enˆˆraved and graduated upon a plate of an inch and a half diameter. Two lezˆ, A and B, proceed from the centre, hav-ing riˆhtlined edges in tlie diiection of radii; and are moveable either singly or together. In using the instrument,])lace one of the edges at the antecedent and the other at the consequent, and fix them at the angle. Move tlie two legs then together ; and, having placed the antecedent leg at any other number, the other will give the consequent one in the like position on the lines. If the line C D happen to lie between the legs, and B be the consequent leg, the number sought will be found one line farther from the centre than it would otherwise have been : and, on the contrary, it will be found one line nearer in the like case, if A be the consequent le?. ' This instrument,' says Mr. Nicholson, * diifering from that represented fig. 6, only in its circular form and the advantages resulting from that form, the lines must be taken to succeed each other in the same manner laterally; so that numbers whicli

fall either within or without the arrangement of circles will be found on such lines of the arrangement as would have occupied the vacant places, if t!ie succession of lines had been indefinitely repeateii sidewise. I approve of this construction, as superior to every other which has yet occurred to me, not only in point of convenience, but likewise in the probability of being better executed; because small arcs may be graduated with very great accuracy, by divisions transferred from a larger original. The instrument, fig. G, may 1 a contained conveniently in a circle of about four inches and a half diameter. The circular instrument is a combination of the Gunter's line and the sector, with the improvements here pointed out. The property of the sector may be useful in magnifying the differences of the logarithms in tiie upper part of the line of sines, the middle of the tangents, and the beginning of the versed sines. It is even possible, as mathematicians will easily conceive, to draw spirals, on which graduations of parts, every where equal to each otlier, will show the ratios of tliose lines by moveable radii, similar to those in this instiument.'

General Definition.

1. LOGARITHMS. Hogarithme, Fr. \oyoc and apiQjuoc) — Logarithms, which are the indexes of the ratios of numbers one to another, were first invented by Napier lord Merchiston, a Scottish baron, and afterwards completed by Mr. Briggs, Savilian piofessor at Oxford. They are a series of artificial numbers, contrived for expediting calculations; and proceed in an arithmetical proportion, as the numbers they answer to do in a geometrical one. The addition and subtraction of logarithms answer to the multiplication and division of the numbers they correspond with ; and this saves an infinite deal of trouble. In like manner will the extraction of roots be performed, by bisecting the logarithms of any numbers for the square root, and trisecting them for the cube, and so on. Htnris.

The doctrine of logarithms being of great importance, in the science of mathematics, we shall explain their nature and properties more fully in the following section : —

Sect. I. — Of the Nature and Properties of Logarithms.

2. Let there be two series of numbers, the one constituting an arithmetical progression, and the other a geometrical progression, as follows : —

Arith. prog. 0,1,2,3, 4, 5, 6, 7, 8, 9, &c. Geom.piog,l,2,4,8, 16,32,64,128,256,512,&c. where the terms stand over each other in such a manner, that 0 in the arithmetical series corresponds to unity in the geometrical series ; then we readily perceive, that the two series, so arranged, possess the following properties :

3. I. Let the sum of any two terms of the arithmetical series be taken ; and also the product of the corresponding terms of tiie geometrical series ; then, below that term of the arith-mtˆMcal series, which is equal to the sum, will he

“oi.. XITl.

lound a term of the geometrical series equal to the product.

Thus, if the terms of the arithmetical series be 3 and 5, those of the geometrical series will be 8 and 32. Now 3 -f-5r: 8; and 8 x 32=z256; and, by inspecting the two series, we find that the term 256 in the geometrical series stands be-low 8 of the arithmetical series.

4. II. Let the difference of any two terms of the arithmetical series be taken, and also the quotient of the corresponding terms of the geometrical series ; then, below that term of the arithmetical series which is equal to the difference, will be found a term of the geometrical se-ries equal to the quotient.

Thus, if the terms of the arithmetical series be 5 and 8, and therefore those of the geometrical series 32 and 2.56 ; we shall have 8 — 5rr 3, and 256-ˆ32=: 8 ; and we find, by inspecting the se-ries, that 8 of the geometrical series stands below 3 of the arithmetical series. This last property is evidently nothing else than the converse of the former.

5. In the preceding geometrical series the com-mon ratio is 2, but it may be any other number whatever, whole or fractional. Thus the same properties will be found to hold true of these series .

Arith. prog. 0, 1, 2, 3, 4, 5, 6, 7, &c.

(Jcom.prog. 1, 3, 9, 27,81, 243,729,2187,&c.

where the common ratio of the geometrical series

is 3. They also hold true in the following : —

Arith. prog. 0, 1, 2, 3, 4, 5, &c.

CJeom. prog. 1, I ˆ„ j\„ ˆl„ ,1ˆ,, &c.

where the common ratio is t.

6. To demonstrate that the two foregoing properties must necessarily be true in every case, it is only necessary to write down a geometrical series, according to the algebraic method of notation, thus, r° or 1, >•’, r=, r’, r\ r% r”. /•’, &.C., ˆvhˆ•re ;• denotes the ratio of the series, and it

presently appears, that tlie arithmetical series is supplied by the numeral exponents of the terms. Hence it follows, that tiie properties, wiiich we have ascribed to any geometrical, and its corresponding arithmetical scries, are no other than two well known propositions in algebra; namely, that the sum of the exponents of any two powers of an algebraic quantity is equal to the exponent of their product; and that the diflerence of tlieir exponents is equal to the exponent of their quotient.

7. When the terms of an arithmetical progression are adapted to those of a geometrical progression, as in the three examples given in § 2 and 5, the terms of the arithmetical series are call-ed the loguritifams of the corresponding terms of tiie geometrical series.

Thus, in the first example, 0, 1,2, 3, &c., are the logarithms of 1, 2, 4, 8, 16, &c., respectively.

In the second example, 0, 1, 2, 3, Sec, are the logarithms of the numbers 1, 3, 9, 27, &;c.

And, in the third example, 0, 1,2, 3, Sec, are the logarithms of 1, J, ^3, vij? *-c.

By applying now the properties of these series which were demonstrated in § 6, to logarithms, and tlieir corresponding numbers, we may define logaritiims to be a series of numbers in aritiimetical progression, so adapted to another series of numbers in geometrical progression, that the iunis and difl'erences of the former correspond 10 and show the products and quotients of the latter.

8. From this definition of logarithms it appears, that there may be an infinity of different systems according as one or other geometrical series IS adapted to the arithmetical series, 0, 1, 2, 3, &c. It may,

however, be readily supposed that some systems are better suited to general calculation than others. Accordingly it has been found convenient in piactice to adopt that in which the logarithm of 10 is unity: the series of numbers which may have their logarithms expressed by integers being as in the following table : —

Logarithms 0, 1, 2, 3, 4, &c.

Numbers 1, 10, 100, 1000, 10,000, &c.

9. With respect to the numbers between 1 and 10, 10 and 100, &c, and their corresponding logarithms, they may be understood to be supplied by interpolation, thus : Conceive a great number of geometrical proportionals to be inserted between the natural numbers 1 and 10 vviiich are the extremes ; also an equal number of arithmetical proportionals between their logarithms 0 and 1: tlien, if the number of geometrical)n-oportionals be sufficiently great, some one or other of them will be sufficiently near to each of the natural numbers 2, 3, 4, 5, &c., to 9, as to admit of the one being taken for the other, without any sensible error. There will also be a rorresponding logarithm to each, which, as it will be less than unity, may be most conveniently exj)ressed by a decimal fraction.

10. Let us suppose the number of geometrical])roportionals between 1 and 10, and also tiie number of arithmetical proportionals between 0 and 1, co be 9909, and therefore the number of terms, including 1 and 10, 10001. Then the .‘nin;, ;(rm of the ueometrical series will be

1‘9999, or 2 nearly, and the corresponding term of the arithmetical series, ‘3010: therefore the logarithm of 2 is -SOiO, nearly. Again, the 4772d term of the geometrical series will be 2-9999, or 3 nearly ; and the corresponding term of the arithmetical series -4771 ; therefore the logarithm of 3 is -4771 nearly; and so on with respect to other numbers.

11. If we suppose the series of natural numbers 1, 2, 3, 4, 5, Sec, to be arranged in a table, so that each number may stand opposite to its corresponding logarithm ; it is evident from the properties which we have shown to belong to logarithms, that, by means of such a table, the arithmetical operations of multiplication, division, involution, and evolution, may be performed with great facility.

12. For, since the sum of the logarithms of any two numbers is equal to the logarithm of their product, § 3, the product of any two numbers

will be found in the table opposite to that loga-riilim wiiich is the sum of tiie logarithms of the numbers.

Again, because the difl'erence of the logaritiims of two numbers is equal to the logarithm of the quotient arising from the division of the one num-ber by the otiier, § 4, that quotient will be found in the table, opposite to the logarithm wiiich is excess of the logarithm of the dividend, above that of the divisor.

13. Involution is performed by multiplying the root into itself a number of times, winch is one less than the exponent of the power; therefore, if the logarithm of the root be nuilti plied by the exponent of that power, the product will be the logarithm of the power of the root. And, evolution being the leverse of involution, the logarithm of any root of a number will be bad if we divide tlie logarithm of that number by the index of the root; and tlience the root itself may be found, by inspecting the table of loAˆ-'ithms.

14 L'pon the whole, therefore, it appears that by means of a tacic? containing the series of natural numbers, 1, 2, 3, &c., as far as may be convenient, and their corresponding logarithms, the operations of multiplication and division may be reduced to the more simple operations of addition and subtraction ; and the operations of involution and evolution, to those of multiplication and division.

Sect. II. — IIistouy of Looaritiims.

15. The properties of a geometrical series, which constitute the foundation of the doctrine of logaritiims, appear to have been known as far back as the days of Archimedes ; for that celebrated mathematician makes use of them in his work entitled Arenarius, or Treatise on the Num-ber of Sands. The same properties are also mentioned in the writings of Stifelius, a German mathematician, who lived about the middle of the sixteenth century. It does not, however, appear, tliat any person perceived all tlie advantages which might be derived from these properties, till about the beginning of the seventeenth century, when their utility was rendered evident by the happy invention of logarithms.

IG. This discovery, certainly one of the most valuable that ever was made in mˆlliematics, is

due to .lohii Napier, baron of Merchistoii, in Scollaiul, who published it to the world, in 1614, Ml a work, which lie called iVJintici Logaiithnio-rura Canonis Descriptio, and which contained a large table of logarithms, together with their description and uses : but tiie author reserved his method of constructing them, till the sense of tiie learned concerning his invention should be known.

17. In the above mentioned work, Napier explains his notion of logarithms by lines described, or generated, by the motion of points, in this manner : — lie first conceives a line to be generated by the motion of a point, whicli passes over equal portions of it, in ec[ual small moments or portions of time. lie tlien considers another line to be generated by the unequal motion of a point, in such a manner, that, in the aforesaid equal portions, or moments of time, there may be described, or cut off from a given line, parts which shall be continually in the same proportion with the respective remainders of that line, which had before been left; then are the several lengths of the first line the logarithms of the correspomiing parts of the latter. Wiiich description of tliem IS similar to that which we have already given, *viz.* that logarithms are a series of quantities, or immbers in arithmetical progression, adapted to another series in geometrical progression.

18. Napier made the first, or whole length of the line, which is diminished in geometrical progression, the radius of a circle ; and its logaritlmi 0, or nothing, representing the beginning of the first or arithmetical line. Thus the several])ro-jjortional remainders of the geometrical line are the natural sines of all arches of a quadrant, decreasing down to 0 ; while the successive increasing values of the arithmetical line are the corresponding logarithms of those decreasing sines : so that, while the natural sines decrease from radius to 0, their logarithms increase from 0 to infinity. Napier made the logarithm of radius to be 0, that he might save the trouble of adding and subtracting it in trigonometrical operations, in which it so frequently occurred ; and he made the logarithms of the sines, from the entire quadrant down to 0, to increase, that they might be positive, and so, in his opinion, easier to manage ; the sines being of more frequent use than the tangents and secants, of which the whole of the latter, and the half of the former, being greater tiian radius, would, according to his construction, have their logarithms negative.

19. The description and use of Napier's canon being in the Latin language, they were translated into English by Mr. Edward Wright, the ingenious inventor of what is commonly, though erroneously, called Mercator's sailing. The translation was sent to the author, who revised it, and returned it with his approbation. Mr. Wright, however, dying soon after he received it back, the work, together wiih the tables, was published in 1616, after his death, by his son Samuel Wright, who dedicated it to the J'>ast India ('ompany. It contained also a preface by Henry Briggs, of whom we shall have occasion to speak again presently, on account of the great share he bore in perfecting the logarithms.

20. As Napier's canon contained only the

natural sines for every minute of tiie quadrant, and their corrcsjionding logarithms, it was attended with some degree of inconvenience, when used as a table of the logarithms of comm.on numbers ; because, when a number was proposed which was not exactly the same with some num-ber denoting a natural sine, it was then necessary to find its logarithm by means of an arithmetical calculation, performed according to precepts which the author delivered in his work. This inconvenience, which was in part obviated by certain contrivances of Wright and Briggs, was not the only one ; for there was another, which arose from the logarithms being sometimes -}-, or additive, and sometimes — , or negative; and which therefore required the knowledge of algebraic addition and subtraction. This last defect was occasioned partly by making the logarithm of radius 0, and those of the sines to increase ; and partly by the compendious manner in whicli the author had formed the table ; making tlie three columns of sines, cosines, and tangents, to serve also for the other three of cosecants, secants, and cotangents.

21. But this latter inconvenience was well remedied by John Speidell, in his New Logarithms, first published in 1617 ; which contained all th • six columns, and these all of a positive form, b\ being taken the arithmetical complements oT Napier's, that is, they were tiie remainders leli by subtracting each of the latter from 10,000,0UU. And the former inconvenience was more completely removed by Speidell in a second table, given in the sixth impression of the former work, in the year 1624. This was a table of Napier's Logarithms for the integers 1, 2, 3, 4, 5, Sec, to 1000, together with their differences and arithmetical complements ; as also the halves of the said numbers, with their differences and arithmetical complements; which lialves

were consequently the logarithms of the square roots of tiie said numbers. Those logarithms are, however, a little varied in their form from Napier's, namely, so as to increase from 1, whose logarithm is 0, instead of decreasing to 1 or radius, whose logarithm Napier made 0 likewise; that is, Speidell's logarithm of any number n is equal to Napier's logarithm of its reciprocal J. So that, in this last table of Spcidell's, the logarithm of 1 being 0, the logarithm of 10 is 2302584; the logarithm of 100 is twice as much, or 4605168; and that of 1000, thrice as much, or 6907753. The logarithms contained in this table are now commonly called hyperbolic logarithms ; because they serve to express the areas contained between tire curve of the hyperbola and its as-symptote.

22. The celebrated inventor of the logarithms died in the year 1618; and in 1619 his son Robert Napier published a new edition of the Logarithmorum Canonis Descriptio, to which was now added the promised Logarithmorum Canonis (ˆonstructio, and other miscellaneous pieces written by his father and Mr. Brigu's. This work was reprinted in France in 1620; also, nearly about this time, difterent mallioinaticians abroad published tables of logarithms of the same kind as those of Napier; as Benjamin Ursinus, mathematician to the elector of Brandenburgh,

also llie famous Kepler, who was the mntlicma-lioian to the emperor I'erdinand II. and others.

23. Next to tlie discovery of loEjarithnis, the most remarkable circumstance coruiected with their history is tliat improvement which they received in their form from Henry Briiˆijs, who was, at the time of tlie publication of Napier's logaritiims, professor of geometry in Gresham College, in London, and afterwards Savilian professor of geometry at Oxford, where he died in the year 1630,

24. On the first publication of Napier's logarithms, Briggs immediately

applied himself to the study and improvement of them ; and presently saw that it would be of advantage to change the scale ; so tiuit the logarithm of I being 0, as in Napier's form, the logarithm of 10 might be 1, that of 100 2, of 1000 3, and so on; whereas the logarithms of the same numl)ers, according to Napier's construction, were 2-302585, 4-6051 08, 6907753, &c. This improvement Briggs communicated both to the public in his lectures, and to Napier himself, who afterwards said, that he had also thought of the same thing; as appears from the following extract, translated from the preface to Brigg's Arithmetica J^oganthmica : ' Wonder not,' says he, ' that these logarithms are different from those which the excellent baron of Marchiston published in his Admirable Canon. For when I explained the doctrine of them to my auditors at Gresham College, in Limdon, I remarked, that it would be much more convenient, the logarithm of the sine total being 0 (as in the Canon Mirificus), if the logarithm of the tenth part of the said radius, namely, of 5° 44′ 21″, were 100000, &c., and concerning this, I presently wrote to the author ; also, as soon as the season of tlie year, and my public teaching, would per-mit, I went to Edinburgh, where, being kindly received by him, 1 staid a whole month. But, when we began to converse about the alteration of them, he said, that ho had formerly thought of it, and wished it; but that he chose to publish those that were already done, till such time as liis leisure and health would])ermit him to make others more convenient. And, as to the nature of the change, he thought it more e\pedient, that 0 should be the logarithm of 1, and 100000, &c., the logarithm of radius, which I could not but acknowledge was much better; therefore, rejecting those I had before prepared, I proceeded, at his exhortation, to calculate these, and the next summer I went to Edinburgh, to show him the principal of them, and should have been glad to do the same the t!;ird summer, if it had pleased God to spare him so long.'

25. Thus it appears that Briggs was the inventor of the present scale of logarithms, in which 1 is thologarithmof 10,and2 thatof 100,&c., and that the share which Napier had in them was only advising Briccgs to begin at the lowest number 1, and make the logarithms, or artificial numbers (as Na-pier had also called them), to increase with the natural numbers, instead of decreasing, which made no alteration in the figures that expressed Biiggs's logarithms, but only in their affections or signs, changing them from negative to positive; for, according to Briggs's first intention, the logarithms of -001. -01, -l, 1, 10, 100, 1000,

5ic., would have been -i-3, -f-2, --\, 0, — 1, — 2, — 3, Jcc. ; but. in conformity to the suggestion of Napier, t!u!y were made — 3, — 2, — 1, 0, -)-l, -|-2, -|-3, &c., which is a change of no essential importance, as the scale of the system is the same in either case. And the reason why Briggs, after that interview, rejected wliat he had before done, and began anew, was proiiably because he had adapted his new logaritiims to approximate sines of arcs, instead of the roimd or integei numbers, and not from their being logarithms of anotlier system, as were those of Napier.

26. About the year 1618 Briggs published the first 1000 logarithms to eight places of figures, besides the index, under the title of Logarithmorum Chilias Prima : and in 1624 ho produced his Arithmetica Logarithmica, a stupendous work for so .short a time, containing tiie logarithms of 30,000 natural numbers, to fourteen places of figures besides the index ; namely, from 1 to 20,000, and from 90,000 to 100,000, together with the differences of the logaritlmis ; and in both these works the logarithms were calculated according to the system which had been agreed upon between him and the first inventor; that is, they were the same as the system whicli we commonly employ at the present time.

27. Soon after the publication of the Arithmetica Logarithmica, Adrian A'lacq, or Flack, completed the intermediate seventy chiliads, and republished it at Gouda, in Holland ; thus making in the whole, the logarithms of all numbers from 1 to 100,000 ; but only to ten places of figures. He also added a table of artificial sines, tangents, and secants, to every minute of the quadrant.

28. Briggs himself also lived to complete a table of logarithmic sines and tangents for the 100th part of every degree of the quadrant, to for.rteen places of figures, besides the index ; together with a table of natural sines for the same parts, to fifteen places, and the tangent.5 and secants of the same to ten places, with the construction of the whole. These tables were printed at Gouda, under the care of Adrian \lacq, and nearly finished off before 1631. But the deatli of the author, which happened in 1630, prevented him from completing the application and uses of them. However, the performing of this office he recommended, when dying, to his friend Henry Gellibrand, then }rofessor of astronomy in Gresliam College; who added a preface, and the application of the logarithms to plane and spherical triaonometry, &c. The work was published in 1633, under the title of Trigonometria Britannica; and besides the arcs in degrees, and centesms of degrees, it has another column, containing the minutes and seconds, answering to the several centesms in the first column.

29. In the same year 'lacq printed at Gouda his Trigonometria Artificialis ; sive Magnus Canon Triangulorum Logarithmicus, ad Deca-das Secundorum Scrupulorum constructus. This work contains the logarithmic sines and tangents to ten places of figures, with their differences, for every ten secon;ls in the quadrant. To then) is

also added Briggs’s table of the first 20,000 logarithms; but carried only to ten places of figures, besides the index, with their differences. The whole is preceded by a description of the tables, and the application of tliem to plane and spherical trigonometry, chiefly extracted from Briggs’s Trigonometria Britannica, mentioned above.

30. Gellibrand published also, in 1635, An Institution Trigonometrical, containing the logarithms of the first 10,000 numbers, with the natural sines, tangents, and secants, and the logarithmic sines and tangents for degrees and minutes, all to seven places of figures, besides the index ; as also other tables proper for navigation, with the uses of the whole.

31. Having now given some account of such works on logarithms as seem most connected with their first discovery and subsequent improvement, we shall pass over many others, some of which, however, have been held in liiˆh repute, both for their accuracy, and the exte˚nt to which the tables have been carried. As, however, even the arrangement of the logarithms in tiie tables has received considerable improvements since the days of Napier, it may be proper to mention, that they were first reduced to the most convenient form by John Newton, in his Trignonietria Britannica, published at London in lGo8.

32. Among the tables of logarithms which have been published of late years, in this country, there are two works most deservedly in repute, both for accuracy and convenience of arrancˆe-ment: these are Dr. Mutton’s Mathematical Tables, containing common, hyperbolic, and logistic logarithms, &c., and Taylor’s Tables of logarithms of all numbers, from 1 to 101,000; and of the sines and tangents to every

second of the quadrant. Several very accurate and well arranged collections of tables of logarithms have also been lately printed in France one which deserves to be particularly mentioned is Callet's stereotype edition of Tables Portatives de Logarithms. These contain the logarithms of numbers from 1 to 108,000, and the logarithmic sines and tangents for every second, in the first five degrees, and for every ten seconds of the remaining degrees of the quadrant, and also for every 10,000th part of the arc, according to the new centesimal division of the quadrant. The logarithms are to seven decimal places.

3.3. But a more extensive collection of logarithmic tables than any we have yet mentioned, was begun in France in 1794, under the direction of C. Prony, who engaged not only to compose tables which should leave nothing farther to be desired with regard to accuracy, but to make them the most extended and most striking monument of calculation, which had everˆbeen executed, or even imagined. In preparing this work, C. Prony availed himself of the advantage to be derived from the division of labor, by means of which, the greatest perfection of workmanship is obtained in the arts, with the least expense of money and time. By the united labors of C. Prony and his assistants, who were divided into three classes, two MS. copies of the tables were prepared ; these composed seventeen volumes, large folio, and contained.

(1.) An introduction, consisting of an exposition of the analytical formulae, the use of the trigonometrical table; and a number of auxiliary tables.

(2.) The natural sines for every 10,000th part of the quadrant, calculated to twenty-five places of decimals, with seven or eight columns of differences; to be published with twenty-two decimals, and five columns of differences.

(3.) The logarithms of these sines calculated to fourteen decimals, with five columns of differences.

(4.) The logarithms of the ratios of the sines to the arcs, for the first 5000 10,000ti» parts of the quadrant, calculated to fourteen decimals, with three columns of differences.

(5.) The logarithms of the tangents, corresponding with the logarithms of the sines.

(6.) The logarithms of the ratios of the tangents to the arcs, calculated

like those in the fourth article.

(7.) Logarithms of numbers from 1 to 100,000, calculated to nineteen places of decimals.

(8.) The logarithms from 100,000 to 200,000, calculated to twenty-four decimals, in order to be published to twelve decimals, and three columns of differences.

The printing of this immense work was commenced under the auspices of the French government, but was suspended at the fall of the assignats, and has not since been resumed. After the overthrow of Buonaparte an offer was made by the British sovernment (on the suggestion of Mr. Davies Gilbert, the present president of the Royal Society), to defray one-half of the expense attending the printing and publication of the work ; Ijut the offer was declined by the French government, but in a manner which showed that the feelings which dictated the ofl'er were duly appreciated.

Sect. III. — The Construction or Logarithms.

34. From the general explanation which has been given of the nature of logarithms, in § 1, it is not diflicult to see how we may find the logaritlims of as many numbers as we please. For the arithmetical series 0, 1,2, 3, 4, &c., being assumed to denote the logarithms of the geome-rtical series

1, 10, 100, 1000, 10,000, &c. if we find any number of arithmetical pioportionals between every two terms of the former, and an equal number of geometrical proportionals between the corresponding terms of the latter; these arithmetical proportionals will be the logarithms of the corresponding geometrical])roportionals.

35. The logarithms thus found will not indeed correspond exactly to any term in the series of whole numbers 2, 3, 4, 5, kc, but, proceeding upon the same principle, the logarithms of these may be also found, as in the following example, where it is proposed to determine the logarithm of the number <) : and, as the inserting of two or more geometrical proportionals between any two given numbers would require the extraction of the cube or some higher root, we shall carry on the operation by inserting only one meaii.

which may be done by t!ie extraction of tlie square root.

3(5. Because the lo”ˆarilhni of 1 is 0, and the logarithm of 10 is 1, we are to find un arithmetical mean between 0 and 1 , and a geometrical mean between 1 and 10; the former will be

0 4-1 . .

~ — — ˆ — -5, and the latter V 1 X 10 ;=

v/ To”=: 3-1G22777. Hence the losˆanthui of 3-1622777 is -5. Agam, let an arilliuielical mean be found between -5, the logariUun of 3-1G22777, and 1, the logaritlim of 10, and a geometrical mean betwfen 3-1622777 and 10, 1 -f •■’-> _l-5

~~2 ~ 2

Thus

5-75.

tiie former will be

-= = -75 ; and tlie

latter V 10 X 3-1622777 = 5-6234132. the logarithm of 5-6234132 is found to 1 For a third operation, let an arithmetical mean be found between ‘75, the logarithm of5-G234132, and 1, the logaritlim of 10; also a geometrical mean between 5-6234132 and 10; the

former will be

1 + -75

= -875 ; and the latter

s/lOx 5-6234132 = 7-4989422. Therefore the loˆMridim of 7-4989422 is -875.

Fourth operation. Let an arithmetical mean be found between -875, the logarithm of 7-49B9422, and 1, the logarithm of 10; also a geometrical mean between 7 498942 and 10; the former will be -9375, and the latter 8-6596431. Thus the logarithm of 8-6596431 is -9375.

Fifth operation. Let an arithmetical mean be found between -9375, the logarithm of 8-6596431, and 1 the logarithm of 10; also a geometrical mean between 8-6596431 and 10, the former will be -96875, and the latter 9-3057204. Thus the logarithm of 9-3057204 is -96875.

Sixth operation. As the geometrical mean last found exceeds 9, let there now be found an arithmetical mean between -9375, the logarithm of 8-6596431, and -96875 the logariUim of 9-.3057204, the former will be -953125, and the latter 8-9768713. Thus the logarithm of 8-9768713 is -953125.

Proceeding in this manner, after twenty-five extractions of the square root, it will be found that the logaritlim of 8-9999998 is -9542425, which may be taken also for the logarithm of 9, as it differs so little from it, that it is sufficiently exact for all practical purposes.

37. Having found the logarithm of 9, we may thence find the logarithms of all roots and powers of 9, as well as all multiples of those roots and powers, by 10, 100, 1000, &c. Thus

log. 3 = log. V9 = J log. 9 = -4771213 log. 81 = log. 9»=2 X ‘og 9 =1-9084850 log. 30 = log. 3 -f log. 10 = 1-4771213.

38. This method of computing the logarithms of numbers, by the finding of geometrical proportionals, is exceedingly tedious : it is,

however, nearly the same as was employed by the first computers of logarithms ; but the improvements which have been since made in the various branches of mathematics, and particularly in the doctrine of infinite series, have furnished much easier me-

thods of computing logarithms. Tiiese, as well as the nature and properties of logarillims, we now proceed to explain, by means of the princi pies of the common algebraic analysis, in th-ˆ following manner.

39. Let r denote any positive numi)er whatever, different from unity. Then, by assuming proper exponents, tiie powers of r may become equal to all positive numbers whatever, whettier those numbers iˆe whole or fractional. Thus if r~2, we have 2”z=. 1, 2’ rr 2, 2ˆ— 4, 2’n 8, 2ˆ :ˆ 16, &c. As to the intermediate numbers 3, 5, 6, 7, Sec, they may be expressed, at least nearly, by fractional powers of 2. Thus,

.2i.5bo0 _ 3ˆ 22-‘-’” — 5, 2=-ˆˆˆ”= 6, 1’-*”” — T , &c.

So also the powers of !0 may become, either exactly or nearly, equal to all j)ositive iiumbeis whatever. Thus,

10° =: 1 10-“ˆ’ =: 6

1Q.3010 _ 2 io-8«i — 7

10-4771 _ 3 lo-”” =: 8

1Q.6021 *4 IQ.M4J* 9

• 10-«ˆˆ» = 5 10’ =: 10

40. In general, if « denote any positive num-ber, it is suthcientiy evident, that it iˆ possible to conceive a corresponding number A, such, that r”ˆrz a ; and A, tliat is the exponent of /-, which gives a power equal to a, is called the logarithm of a.

41. From this manner of defining lonaritiims, we readily derive all their properties. For a and b denoting any two numbers ; also A and B their logarithms ; we have r* zˆ a, and rˆ =: b, therefore r” + rˆ Z= ab; but r” X rˆ — r” +”’ tlierefore A -}- B is the logarithm of ah ; that is, the sum of the logarithms of any two numbers is equal to the logarithm of the product. Again,

-7,- zz — ; but —rz r * ; therefore. A — B ?'^ b r-"

(I is the logarithm of — ; that is, the difference of b

the logarithms of two numbers is equai to the

logarithm of their quotient.

If we resume the equation r'^zzi u, we have

/• " * rz a " , therefore n A is the logarithm of

a "; and, since n may be either a whole number

or a fraction, it follows, that the logarithm of any

power of a number is ecpial to the logarithm

of that number, multiplied by the exponent

of tiie power ; also, that the logarithm of any

root of a number is equal to the logarithm

of the number divided by the exponent of the

root.

42. There may be various systems of logarithms, according to the different values which may be given to the number r, which is called the radical number of the system. In the com-mon system of the logarithms, r is 10 ; but in the system of Napier it is 2-7182818. It is evident from the definition given in § 40, that the logarithm of the radical number in every system must be unity. In difl'erent systems, the logarithms of the same number are always to one another in a constant ratio. Suppose that A is the logaritlim of the number a, the radical number of the system being r ; and A' the logarithm of the same number, according to another system.

the radiciil number of which is /•' : Then «, and r' ' *n a; therefore r* rr r' '

and

r — - =: ?•’. Thus it appears that the traction -ˆ

depends only on r, and r’ ; and t.ierefore must be the same wliatever be the value of the num-ber a.

43. Hence it follows, that if the logarithms of numbers, according to any one system, be given the logarithms of the same numbers, according to any other proposed system, may be readily found. Thus, if the given system be the common logarithms, the radical number of which i? 10, and it be required to find tlie logarithm of any num-ber a, according to Napier’s system, of which the radical number is 2-7182818; let A denote the logarithm of a, according to the former sys-tem ; and .r the logarithm of a, according to the latter. Then, by substituting 10 and 2-7182818, for r and r’ ; also x for A’, in the last equation of

A

§42, we have 10~:z: 2-7182818, -and, from the nature of logarithms, — X log. 10 z: log.

2-7182818, §41 : Hence

log. 10 ˆ 1 ˆ

~ X A rz X A

log. 2-7182818 ” ■ -4342945 = 2-3025851 X A. Thus it appears, that Na-pier’s logarithm of any number is equal to the common logarithm of the same number, multiplied by 2-3025851 ; or divided by -4342945.

44. Let us now denote any number whatever by y, and its logaritlim by x ; then, r representing as before the radical number of the system, the relation between a number and its logarithm is represented by the algebraic equation?-* z= y. This equation suggests two subjects of enquiry, both capable of being resolved by means of the algebraic method of analysis. These are : first, To determine y when .r is given ; or to determine the number which corresponds to a given logarithm. Secondly, To determine .r when j/ is given; that is, to determine the logarithm corresponding to a given number.

45. We proceed to the first subject of enquiry, namely, to find an algebraic expression for y, in terms of x and r ,- or to express, generally, any number by means of its logarithm, and the base or radical numbers of the system : for this purpose, let us assume

r’ =z A -I-H X -f-C j’ -h D j’ + E X* -H &c. Here A, B, C, U, &c., are supposed to be co-effici- ents independent of x. Let z denote any other (juantity ; then, in like manner, we have

r’~A--ˆz -f-C zˆ 4-D £» -I-E 5ˆ -H &c. Taking now tiie difference between the assumed equations, and dividing both sides of the result by X — z, we have r’ — r-_ B(j— 2)4-C(x’— 3’J4-D(3’»— 2»)-|-&c.

x — z x—z

Now it is well known, that each of the quantities X — 2, .r’ — zˆ, X* — zˆ, x”” — z*, &c., which compose ilie latter part of this equation, s

divisible by X — z ; therefore, the several divisions being actually effected, the last equation may otherwise be ex-r' — r '

pressed thus ■ — -rr B -f C {x -^ z)-- D

X — z

(X^ •+■ IZ -1-i^) -t-]•. (i- -f-l'2 -f-XZ- -- X^) -f

4(5. That we may expand tlie first part of this equation into the form of a series, let us express

the numerator r' — r' thus, 7—(;-' ' — 1); then, putting 1 -|- a for r, we have

Now, by the binomial theorem, the quantity

(1 -- u)' ', when expanded into a series, is

{x—z) , (x-z){x—z—\) „

a: +

a? -|- he.

1-2 -3

Therefore, subtracting unity from this series, and

dividing each of tlie remaining terms by x — z, as

indicated by the latter part of the last equation,

r" — r'- , X — z — 1„ we have zz v [a-\ u- -f-

{x—z-\) {x — z -2)

2 - 3

Hence it appears that

7-la +

fl2 + &c.)

{x-z-l){x-z-2)

+

{x-z-

2

-l)(.r-

2 - 3

-—2) Cr-.~-3)

a* + &c.)

2-3*4

B + C (r + 2) + D (1-2 + X2+Z-‘

+ E (x3 + x”z + X z- -I-z°-) -h &c

This last equation, by supposing zzz. x, becomts

a} aˆ J* a’ ˆ \

r’ la 1 — H vˆc.) =

V 2 3 4ˆ5

B -I-2 Cx -f-3 D xˆ + 4 E x’ -f 5 F .(‘ + .ˆ.c.

and substituting for r’ the series

A -f-B X -I-C x’ -f D x* -f E rˆ + 5ˆc.

also, putting, for the sake of brevity,

aˆ . aˆ a* , «*

a — H - &c. m T’l

2 3 4 5

we find

A7n+B m x + C in xˆ + I) m xˆ + E m x’ + ic(.._

B + 2 C X + 3 D x’ + 4 E x3 + 5 F x< + &c.

Hence, by putting the co-efficients of the like

powers of x in each series equal to one another,

we find B zz A??(, C, nz , 1) rz — , E:z — : — ,

‘ 2 3 4

F - — > &c.

Thus we have obtained a series of equations, by which all the co-efficients, except A, the fii-st,.are doterinined. It is however readily obtained from the assumed equation r* zz A + B x -F C .i’ -- Sec, by taking x -rz 0 ; for then the first part of the cfiuation of r’ becomes unity, and all the terms of the second part vanish, except A ; ilius A zz 1 ,

B=- C=ˆ

1 1

>’ 1-2-y’ 1-2-3-4

}•’ zz , &c. ; and, by substituting these

1-2-3-4-5 > ˆ } b

values in the assumed series, we find y iz r’ ~ 1

+ ‘1ˆ +

1-2

+

F« + rfF4 + ^^-

47. Thus we have obtained a series for?/, which will always converge, whatever be the values of the quantities m and x. Before, however, the sc-ries can be applied to practice, it will be necessary to compute tlie value of vi, whicli, by putting r — 1 for its value a, is equal to this oihcr series

88

> ■— 1 _ (r— 1 ,” (> ■— ly

&c. But as this last series will not converge, unless r — 1 be less than unity, it will be necessary to have recourse to another metliod of obtaining its sum than by the mere addition of its terms.

4B. Resuming, therefore, the equation

»i X . m’ XT’ . 111ˆ xˆ , Jiiˆ X* . „

/et us suppose ,r =: 1 ; and we have

rzzl +• — H + \r + &c.

1 1-2 1-2-3 1-2-3-4

This series gives the value of ?•, when ?« is known. Therefore, if we suppose a system of logarithms to be such, that w) zz 1, and put e for the radical number of that system, we have

c = 1 + 1 + — + — !— + -Ar- + &c. ˆ11-2 1 2-3 1-2-3-4

and by reducing a sufficient number of the terms

of this series to decimal fractions, and taking their

sum, we readily find en: 2-7812818, nearly. Now,

as e is tlie radical number of a system, in which

tiiˆz 1, for the same reason that

L O G A R 1 T 11 iM S.

nr X’ , „

4-H &c.

ˆ 1-2-3

we have

t’ =: \ +— 4- — H H

1 1-2 1-2-3 1-2-3-4

+ &c.

and as this must be true, whatever be the value of .r, we may suppose x — m ; hence we have

— 1 +

1 1 1 4- &C.

1 1-2 ˆl-2-3 1-2-3-4 ˆ

which last series we have already found to l)e n: r, therefore e” :ˆ r; and taking the logarithms of both sides of the equation, 7n x log. e

loˆ. r zz log. r, hence at last we find inzz -r-ˆ — ; or,

log. c

since the logarithm of the radical number of any

system is unity, ;« n , . Let this value of

tn be substituted in the series of § 46, and we

have t/ :=. r’ˆ zz I --

+

+

1-log.c l-2-(log.O-ˆ -|- &c., where it is to be ob-

l-2-3-(log.fy served that x and log. e are logarithms belonging to the same system ; and by this series a number may be found corresponding to any given logarithm whatever.

49. We are next to investigate a series which shall express the logarithm by means of the number. This may be readily obtained, if we recollect that in § 47 we found

r-l (r-1)’ (r-iy (r-lˆ , ,.„ ”’-— ˆ + -3 ˆ + ˆˆC.

and that in § 48 we also found log. r zz 711 x log. c, hence we have

log. rzzlog.. ˆ -.ˆ- -2 + ˆ_J

— -“—- f- &:C. f Now, this equation must

hold true, whatever be the value of >•; we may

therefore substiiutu . • ‘/ for r, and conse-

quently *y lor r — 1; whci‘3*)/ denotes any num-ber whatever; hence we rind

(V vˆ V*

■ˆ”■“2”+ 3 ” 4 ■•” &c.) Thus’ we have found a series which expresses the logarithm of any numl.er whatever, by means of the number itself’, and the logaritlim of another given number, e.

50. The series which wi; have just now found will be of little or no use in the actual construction of logarithms, unless (/ be a small fraction ; we may however derive from it another series, much better adapted to that purpose, in the following manner : —

Let us put M for log. e rr — Then, because 7/r

lcg.(l +.y) = M(y -JL+JL_t + &c.) if we substitute — 3ˆ for -{- y we

shall have .og.(l-ˆ):nM(-,y-|— ˆ— ˆ - &c.) and subtractuig this last equation from the former, log.ˆ1 +3/)_log.(l — y) = 2M(,v+ ˆ+-J -- &c.) But, from the nature of logarithms, log. (1 + 3/) - log. (1 - 3/) = log. \ˆ. Ttierefore

Or, puttinsr z for ˆ and therefore “- for

</, log.

ˆ — o \T J

(ˆ/

(z 4-1 ˆ 3 \z -1-1/ ˆ

+ lVC

and, by a proper application of this series, which always converges, the logarithms of numbers may be found witli great facility.

51. For example, let us suppose that it is required to compute the logarithm of 2 ; then, because z :zz 2, we have n: -;-, therefore

z -{• 1 3

log. 2=2 m{ — -f -l—i-jL+ -iˆ + \ 3 ˆ3-3ˆˆ5-3-‘ˆ7-3’ ˆ

&c.) This series converges very fast, for the

eighth term does not exceed : bv re-

” 100000000’ ˆ

ducing, therefore, the first seven terms to decimals, and taking tlieir sum, find log. 2= -3465736 X 2 IM =r -6931472 X log.r; but we cannot find the absolute value of the logarithm of 2, without previously assigning the particular system to which the logarithm required is to belong. The most simple hypothesis we can assume is, that log. c zz I ; hence we have log. 2 z: -6931472. This system, which

corresponds to the equation 1/ zz e’ (where 1/ denotes a number, x its logarithm, and e the base of the system, zz 2-7182818), is the same as that first adopted by Napier ; the logarithms of whic li are also called hyperbolic, for the reason already assigncvl in ˆ21.

52. It appears tlierefore, fiuin §§ 49 and .ˆO, that Napier’s, or the hyperbolic logaritlim of any numbers 2, is equal to either of these two series

1

Sec.

n . + 1

1 z — \ˆ \ z — I \s

.S:c. i and tha.t the loijarithm of z, according

t’ˆ any other system, is equal to the hyperbolic logarithm of the same luunber, multiplied by a certain constant quantity M rr log. e; wi)ich, being peculiar to that system, has been called by writers on logarithms the modulus of tl)e sy.ˆtem. Now it appears, by recurrmg to § 47, tliat

-, or m, is equal to this series

loˆ. e

r— 1

(r— n» + (r— 1)’

&c.

2 3

•viiicli is evidently the liyperbolic logarithm of?-, the radical number of the system : hence it follows, that the modulus of any system of logarithms is the reciprocal of the hyperbolic logarithm of the radical number of that system.

53. In the common system of logarithms, the radical numl)er being 10, the modulus of the system may be found by computing the hyperbolic logarithm of 10. Now, by the latter series of § 52, we have

hyp. log. 10 = 2 ^^_+-(_) +

5 Vll/ }

Jjut, as this series converges too slowly to be of any use, we may find another that converges faster, by considering, that since 10 =: 2 X 5, therefore, log. 10 rz log. 2 + log. 5: Now we have already found hyperbolic logaritlim 2 ; it is only necessary, therefore, to compute hyperbolic iogaritiim 5.

34. But, in seeking hyperliolic logarithm 10, it will be convenient to begin with even a less number than 5 ; and, for this purpose, we shall ir* vestigate a rule, by which, the logarithm of any number being supposed given, the logarithm of another number, a little gr(iater than the given one, may be found with great facility

Let n be a number, whose logaritlmi is given, and 71, -- V another number, whose logarithm is

required ; then, since n -- v nz 7i (\ -\ ), it

follows, that log. {n + v) •=. log. n -- log.

(1 + ˆ).

If

put c ii: 1 H ,

have z — 1 — _, and : + 1 = 2 -|- — , and

therefore, ^^ zn

1

+ 1

In ■- V tuting 1-)- — for z, and

Hence, by substi-z— 1

for

%7l -{■ V ’” ˆ -H 1’

m the series for the logarithm of z, found in §50,

log. (/* 4-lO = log. « + 2 M j

1

.1-

2 71 + V ˆ

i

{2 71 + vf “•” ‘^”- b

3 (2 71 + vf which is the series we proposed to investigate.

55. To calculate tlie hyperbolic logaritlim of 10 by this series, we may take w z: 8 and v z= 2,

f 2 1 , , . ,

then ; zz — — ˆ -— , and, remarking that

2 r? -f V 18 9

log. 8 =: 3 X log. 2. we have

hyp. log. 10 =: 3 X hyp. .og. 2 -}- 2 (-+ J

-ˆ + Tˆ F + ^^-ˆ

This series converges very fast, so that the three first terms are sufficient to give a result true lo the seventh decimal ; and accordingly their sum, when multiplied by the co-efficient 2, will be found rr ‘2231435. Now we formerly found hyperbolic logarithm 2 zz -6931472, § 51, therefore, to the number just now found, let hyperbolic logarithm 8 zz 3 liyperbolic logarithm 2 zz 2 0794416 be added, and the “result, 2-3025851, will be the hyperbolic logarithm of

1

10; the reciprocal of which, or zz

ˆ ‘ 2-3025851

•4342945 is the modulus of the common system of logaritlims.

56. We may now find the common logarithm of 2 ; for nothing more is necessary tb’an to multiply its liyperbolic logarithm already found,

§51, by tlie modulus, -4342945; or divide it by 2-3025851, the reciprocal of the modulus, and, in either way, we find the common logarithm of 2 to be -3010300 The common logarithm of

5 may now also be found; for, since 5 :z: ,

we have log. 5 =: log. 10 — I02;. 2ˆ1 —

0-3010300 = -6989700.

57. We have investigated a series, by which the logarithm of r* -f-v may iˆe found from that of w; or ihe logarithm of « from that of 7t -|-v. We shall now investigate another series, by means of which, and the logarithms of any two of these three quantities, n — v, n, n -f v, the logarithm of the remaining quantity may be found.

Because

therefore

{n — v) {/I + V) n” - 2 log. 71. — log. (.« — v) — log. (« -{- v) zz log.

Let us suppose

-f 1 =

2n'—vˆ

— „ and

Let these values of i and

z, then z r — 1 _

r + - 1 -

'Z 71' W ~ + 1

inserted in the series of § 50, and we presently have 2 log.jj zz log. («— rj + log. (7i-f i-) + 2 M x c V-1 / vˆ Yˆ ., ?

58. We shall conclude tliis section by showing the application of the three series whicli have been investigated in §$ 51, 54, and 57, to the calculation of the common logarithms of

the numbers between 1 und 10; and, as it will be most coiivenieiit in j)ractice to compute the common U)i;arilhm directly, instead of first finding the hyperbolic logarithm, and afterwards multiply by the modulus of the common system, we siiall put down each series in a

form suited to that purpose. Tiie value of v in the two series last found will generally be unity, we shall therefore put them down under that form.

Let N = 2 M = -aGS.jSBOGSB + &c.

Let 71 — 1, 71, n + 1 denote three numbers.

Put — r= A;

1

1

n + 1 = C.

2n -- 1

=: B ; and

2 n* — 1

NAˆ NA* NAˆ

I. Log. n= N A +—-+-— +-—

+ &c.

NB3

IL Log. («+ l) = log.«. + NB -f— - 4-

NB*

-f &c.

IIL 2 Log. 71 = log. (n — 1) + log. (n -f-1) N C + —- + -— + &c.

6 5

59. Euiiiiple 1. It is required to find the common logarithm of 2, to six places of figures,

by tlie first series.

;; I \

Here ti = 2, A = — -— = — , and the calculation will stand as below.

N = -868.5890 NA = -2895297

NA3

N.V = -0321700 N A’ = -0035944 N Aˆ = -0U03972 NAˆ = -0000441 .N A” — -0000049

= -0107233

= -0007149

= -0000567

= 0000049

. = -0000004

•3010299

The log. of 2 to six decimals is -301030.

Example 2. Required the common logarithna

of 3 to six places of figures, having given the

loiiarithm of 2, by the second series.

ˆ 1 1

Here « + 1 = 3, 7i = 2, B =

N = -8685890 N W = -0069487

N B* = -0002779

N B’ = -OOOOlll

Add log. 2

2h + 1 NB = -1737178

— = -0023162

3

=z -0000556

-0000016

-1760912 = -3010299

log. 5 = log. 10 — log. 2 = -6989700 log. 6 = log. 2 + log. 3 = -778151 log. 8 = 3 log. 2 = -903090 log. 9 = 3 log. 3 = -954242

Example 3. Having given the logaritluns of 6 and 8, it is required from these to determine the logarithms of 7 to six places of figures, by the third series.

Here n = 7, C = -—, ~ = r-zr

‘ 2 7jˆ — 1 9 /

N = -8683390, N C = -0089545 NC3 = -0000010 — — = -0000003

-0089548

log. 6 = -7781513 log. 8 = -9030900

-4771211

log. of 3 to six places is -477121 The louvarithins of 2 and 3 being found, we hence fiiul lou. 4 = 2 log. 2 = -6020600

2)1-6901961

.8450980

log. of 7= -845098

Instead of finding the logarithm of 7 from the logarithms of 6 and 8, we might have otherwise found it from those of 5 and 6, or those of 8 and 9 ; in the former case we should have had n — 1 =5,

n = 6, n + 1ˆ7, and C = — • ; and therefore , -T- , ˆj >

log. 7 = 2 log. 6 - log. 5 - J fj” + 3ˆ73 +

N i

4- &c. , and in the latter case /« = 1 — 7,

5-715 T s

n~ n,n + \ — 9, C

and heuce

(N N

log. 7 = 2 log. 8 — log. 9 — ; .-rr + ;

t 127 ˆ3-127’

+

60 & 61. Proceeding in this manner, we may find the logarithms of as many numbers as we please, by deriving them one from another. Thus we have

log. 12 = log. 2 + log. 6.

2 log. 11 = log. 10 + log. 12 + N } :^^ +

1

)

3-2413 ˆ »

log. 14 = log. 2 -4-log. 7.

S 1

2 log. 13 = log. 12 + log. 14 + N 1-ˆ +

3-3373 + ^^- s

and in this way might a table of logarithms be calculated ; it would

however be necessary to compute the logarithms of the numbers at the beginning of the table, to many more figures than were intended to be retained ; because, that at each operation, the last figure of the logarithm is set down only to the nearest figure. But, in constructing a table, there are many expedients by which the calculations may be abridged; these we cannot here find room to explain; and must tlierefore refer the curious reader to Dr. Hutton's Mathematical Tables, where he will meet with auiple information on the subject

62. On the method of computing logarithmic sines, cosines, c)c. — A table of the logarithms of numbers being computed, by the methods explained above, one of logarithmic sines, &c., may easily be formed from it, by taking the logarithms of the numbers which represent the natural sines, &c. ; and this, the most ready and convenient method, is that which has generally been used. But the logarithmic sines, &c., may lie computed independently of a knowledge of the logarithms of natural numbers ; or, with the aid of a table of logarithms, they may be obtained without reference to natural sines ; and even witiiout the aid of either the one or the other, as we shall shortly explain.

Tables of logarithmic sines, &:c., are generally adapted to a radius whose logarithm is 10, but they can be more conveniently computed by assuming the radius unity; and 10 being added to the logarithms computed on that supposition, we have the logarithmic sines, &c., to the com-mon talmlar radius.

The length of an arc of 1°, to radius unity is •01745329252, &c. ; and this, multiplied by the degrees contained in any given arc, thus the length of that arc, to radius 1, and it is this length which is to be understood in what follows, when the length of an arc is said to be given.

63. Ithas been shown in the article Fluxions, in this work, that if M be -43429, &c., the modulus of the common system of logarithms,

then the logarithm of .r is the fluent of M -

X ■ And if x be any arc whose sine is 3/, then j/n

&c.;

and by the latter without the aid of a table of logarithms, the natural sines being given.

65. We shall now show how such a table may be computed without a knowledge of either logarithms or natural sines. — Let x be any giveM arc, of which it is required to find the lo—

ganthmic cosme y. We have 3^ =z 1 - --

; whence — =: — xi — tJ:

y 3

, Sec. ; and the fluent of M ^ , or

the log. cosme of j =z — M ^ - -I- — + -£_ ^ 2 ^ 12 ^ 45

3-4 2’

3-4-

5-6’

17.r*

+ f7-^» &c. ; and the tabular log. cos. j — lo

&c. ; whence

2-3 2

3-4’

2-3’

whence y’^z.x — + ;

4-5- 6-7

v6 ^.

&c.

XX

“3 ~

2 ‘ 2 • 3 • 4 2 • 3 • 4 • 5 . 6,

V T

and consequently by division -ˆ—ZL — —

x’ X 2 .rˆ x xˆ X

, &c. ; and the fluent

45 945 4725

y

S x’

2 ■ 12 ■ 45 ‘ 2520’ the cosine is obtained without the aid of either logarithms or natural numbers.

As the cosme of an arc is the sine of its complement, this last series will give the sines as well as the cosines of all arcs. Like expressions might easily be deduced for the secants and tangents of arcs; but, our object being simply to show the manner in which such expressions may be obtained, we leave it to the student to apply what we have here given to any other purpose that he may think proper.

Of proportional or logistif logarithms. — These logarithms are adapted to making proportions among sexagesimals, and were particularly intended by Dr. Maskelyne, who first formed them, to facilitate the finding of the Greenwich time, corresponding to the distance of the moon from the sun or a star. If the change in the lunar distance in three hours, as given in the Nautical Almanac, be called ?«, and it be required to find the time ,i-, corresponding to any other less, but given change n, in the distance,

the proportion is in In]’. 3” : .r = : — ; whence

of M — , or los;.vir log. x — M • > ‘- — |- 7/ ˆ ‘ o

180

“^ “2835 “^ 3780’ ^^” °^ ^^^ tabular logarithm of.. = :10 + log..-M- ;£- V4 + ˆ

+ 3T85’^^’-

64. (Otherwise ; let z z:

1

1

tural sme; then y rr , and— ˆ

‘ -ˆ 11-‘

— 2

s

kc

log. 7H — log. n = S”” — log. X. Now 3”- and x being expressed in seconds of time, log. S”” — log. X is the proportional logarithm of .r ; and similarly, log. 3” — log. ?n is the proportional logarithm of w?, and log. 3” — log. »;, is the proportional logarithm of ?«. Hence log. m — log. n — prop. log. .r becomes (log. S”” — prop. log. w) — (log. 3 — prop. log. n) = = prop. log. x ; or prop. log. n — prop. log. m = prop. log. x. , V being the na-Again, if m ; n \ o ; p; m, n, u, and ;; being any sexagesimal quantities; we should have by reducing them all to the same denomination p = on — ; or log. p = log. 0 + log. 71 — log. ?« ,• or.

1 — 2ˆ

hence tlie ”’

fluent of M < -, or log.?/rr

2 M-

S

z +

+

r, + ?’^^^-

< ■ 3

or the taljular log. of ?/

=: 10 — 2M

t’^ ;-+-+7-‘^’

&c.

P.y the former of these series a table of logarithmic sines may be computed without a knowledge of tlie corresponding natural sines,

changmg them fo’- proportional logarithms, 1o.t. 3” — prop. log. p , log. 3” — prop, log o +]oii. 3” — prop. log. 71- ,og. 3” + prop. h>g. m ; or prop. log. p = prop. log. o + prop. log. 11 — prop. log. m ; so that proportions arc made with these logarithms precisely as they arc with common logaritlmis.

It follows, from the construction of proportional logarithms, that the logarithm of the largest interval which they arc made to compre-lieiul is always nothing ; as in those adapted to

three hours, t!ie logarithm of three liours is iiotliii)g.

06. Proportional logarithms greatly facilitate the taking of proportional points among sexagesimal quantities, whether in time or in arc ; for the hours, minutes, and seconds of time may be considered as degrees, minutes, and seconds of arc.

Kxaiuple 1.— If the altitude of tlie sun increase 38’ 15’ in 4-” 20’; what will it increase in l”” 32’.

Here the proportion is 4” 20’ * 1” 32’ : : .J8’ 15” : 14’ 34’, the answer; or,bypioportional logarithms.

4” 20” prop. log. 1-6183 1”” 32” ditto 2-0378

38’ 1,5” ditto 672b

“104

14′ 34″ ditto

;-0919

Example 2.— If the change in the lunar distance in 3” be I” 42’ 14’, what interval of time will correspond to a change of 37′ 5″ in tlie distance !

37′ 5″ prop. log. 6861 1° 42′ 14″ ditto 2457

Ans. 1” 5”” 1

8’ ditto

Sect. IV. — Or certain Curves belated to Logarithms.

68. The discovery of logaritlims suggested to mathematicians the idea of curve lines, wliich might have similar properties to those numbers - hence the origin of the logarithmic, or, as it has been also called, the logistic curve, the nature and properties of which we now proceed to explain.

69. Plate Logarithms, fig. 1 1. Let C D be the logarithmic curve, and AB its base or abscissa, in which let there be taken any number of points, P, P', P", &c., so that the lines AP, AP', AP"' &c. may constitute an arithmetical progre'ssion ; ^^5"'/P^"“P^"^^"-“"l^“"s or ordinates, PM, P'JM", P"M", &c., be drawn, meeting the curve in the points M, M', M", kc, its nature is such, that the ordmates PM, P'M', P"M", constitute a geometrical progression. Hence, and from the properties of logarithms, it appears, that the abscissas A P, A P, A P", &c., may be considered

P tIt u°I v'^r.™;%"^ ”"”"” corresponding ordinates I iVl, P JM , i M", &c., respectively.

70. That we may express the relation between any abscissa and its corresponding ordinate by means of an equation, let us put the ordinate at the point A, or A C, = 1 ; take A p, a given portion of the abscissa, and put/j;«, thecorrespond-mgordinate, = «; take/;//, pp', ^c, in the abscissa^ equal to one another, and to A/j; and let A I — X X A/), -draw the ordinates ;/»«',/,«",

^vc, also P.M. Tiien, from the nature of continued proportionals, / m' = a', p" m" = u\ &c., to 1 M, whicii will be expressed by «'; hence, if we put 1 M =y, vve have a' = _y for the equation or the curve.

71. From this equation, as well as by other methods all the properties of the logarithmic curve may be derived. We shall briefly mention some of the most remarkable.

IV '^I'/rh^f,'^^ " ^" asymptote to the curve.

II. It 1 M be an ordinate to the curve at M and MQ a tangent at the same point, the subtangent i Q IS a constant quantity, and equal to t.ie modulus of the particular logarithmic sy.stem to which the curve belongs. ” ‘

III. The curvilineal space, comprehended between any two ordinates, AC, PM, is equal to ine rectangle contained by PQ the subtangent ”’”^ ^^^r^^ ^’^^’ difference of the ordinates.

72. 1 here is yet another curve, the properties of which are analogous to those of logarithms, namely, the common hyperbola. Hg 12. Let C be its centre, and C D, C E, its asymptotes, in either of which, let the points A A , A , A’”, &c., be taken, so that C A, C A’, C A”,’ C A , &c., may be continued geo-netrical proportionals; draw AB, A’B’, A”B”, A“’E”, &c., parallel to the other asymptote, meeting the curve p3,^„’ ^ ‘ ^”” ^”^-^ ^“d join CB, CB’, CB”, ^a , &c. Then it is demonstrated, by writer on comes, that the hyperbolic sectors C B B’, CB’ B”, C I^” B”’, &c., are equal to each other ; and’ ^“at the quadrilateral spaces A B B’ A’, A’ B’ B”A”, A’ B”B“’A”’, &c., are also equal to one another’ and to each of the sectors. Hence the sectors, C B B , C B B”, C B B”’, &c., or the quadrilateral figures A B B’ A’, A B B”A”, A B B“’A”’, &c., have equal differences, while their corresponding abscissas CA’, CA”, CA”’, have equal ratios to one another, *viz.* tlie ratio of C A to C A’ : thus the former are analogous to the logarithms of the latter.

73. Let H be the vertex of the hyperbola, draw HG and HK parallel to the asymptotes so as to form the rhombus HGCK; then, putting CK = 1, if CP denote any number whatever, and PQbe drawn parallel to the other asymptote, the hyperbolic area KllQP will serve to express the logarithm of C P, according to a system, the modulus of which is denoted by the area of the rhombus CKHG. If the asymptotes contain a right angle, the area of the rhombus will be = 1, and thus the hyperbolic areas will express Napier’s or the hyperbolic logarithms. But any system of logarithms whatever may be represented by hyperbolic areas ; thus, if the asymptotes contain an angle of 25*^ 44′ 25″ -5, the area of the rhombus will be •43429448, kc, *viz.* equal to the modulus of the common system of logarithms, and therefore the hyperbolic areas equal to the common loo-a- rithms. °

LOG-BOARD, a sort of table, divided into several columns, containing the hours of the day and night, the direction of the winds, the course of the ship, and all the material occurrences that

happen during the twenty-four hours, or from noon to noon; together with the latitude by ob- -servation. From this table the different officers of the ship are furnishea with materials to com-

pile their journals, wherein t!iey likewise insert whatever may have heen omitted, or reject what may appear superfluous in the log-board.

LOG-BOOK, a book into which the contents of the log-board are daily copied at noon, together with every circumstance deserving notice that may happen to the ship, or within her cognisance, eitiier at sea or in a harbour, &:c. The intermediate divisions or watches of the log-book, containing four hours each, are usually signed by the commanding officers in ships of war or East Indiamen. See Navigation.

LOG'CiAT.S, n. #. Probably from log, a game. See tlie extract from Hanmer.

Loq;jnts Is the ancient name of a play or game, which is one of the unlawful games enumerated in the thirty-third statute of Henry \ 111. It is the same which is now kittle-pins, in whifh boys often make use of bones instead of wooden pins, throwing at tliem with another bone instead of bowling.

Hunmer.

Did these bones cost no more the breeding, but to play at ˆogguls with them ?

Shakspeare. Hamlet.

FˆOG’IC, n. s. “\ Fr. logiqtic ; Span. Port. Log’ical, (icij. 9 and Lat. logira ; fir. Xoyoc-Lof,‘icALLY,<*ii*;. ˆlˆ.easou; thea-t of reason-LoGic’iAN, >i. s. i’i’ig-Logical is pertaining LoGOM’AcnY,7i.s. ‘ to, or skill in tl)is art. Logician, a teacher, performer, or proticient m it : logomachy, verbal contention.

‘I’he heretick complainpd greatly of St. Augustine, as being too full of Icujical subtilties. Hooker.

Talk /ngicA with acquaintance, And practise rhetorick in your common talk.

6hultsp£are. If a man can play the true logician, and have as well judgment as invention, he may do great matters.

Bacon. By a logick that left no man any thing which he might call his own, they no more looked upon it as the case of one man, but the case of the kingdom.

ClareniJon. Forced terms of art did much puzzle sacred theology with distinctions, cavils, quiddities ; and so tr;insformed her to a mere kind of sophistry and /:>- ■ˆomaclnj. Hoiiel.

In such manner easily, without uttering any lo’jical untruth, one may yet grievously calumniate.

Barrow. Logicians use to class a proposition, As justices do criminals in prison. And in as learned authentic nonsense writ ‘I’he names of all their modes and figures fit : For a loificians one that has been broke To ride and pace his reason by the book. And by their rules, and precepts, and examples, To put his wits in any kind ot trammels. Builer. Those who in a logical dispute keep in general terms, would hide a fallacy. Drqden.

The application of whips, racks, gibbets, gallies, dungeons, fire and faggot, in a dispute, may be looked upon as popish refinements upon the old heathen logic. Addison.

If we may believe our logicians, man is distinguished from all other creatures by the faculty of laughter. /”.

How can her old good man With honor take her back again ? From hence I logicalh/ gather, The woman caimot live with either. Prior. Here foamed rel;ellious Logick, gagged and bound, There stripl, fair

Uhetorick languished on the ground.

Pope. Each staunch polemick stubborn as a rock, Hach fierce logician still expelling Locke, Came whip and spur. Id. Diinciad.

A logician might put a case that would serve for an exception. uaji.

Logick is the art of using reason well in our enquiries after truth, and the communication of it toothers.

Watts's Logick. Add to these incentives to social life, my reputation for bookish knowledge, a certain wild logical talent, and a strength of thought, something like the rudiments of good sense ; and it will not seem surprising that I was generally a welcome guest where I visited. Burns.

Vociferated logic kills me quite, A noisy man is always in the right — I twirl my thumbs, fall back into mv chair. Fix on the wainscot a distressful stare. And, when I hope his blunders are all out. Reply discreetly — to be sure — no doubt ! Cowper. But hold, why deign I to dispute With such a scoundrel of a brute ! Iuˆgic is lost upon a kijave, Let action prove the law our slave. Beattie. Logic, accurately defined, is the art of thinking and reasoning justly : it traces the progress of our knowledge from our first and most simple conceptions through all their diflerent combinations, and all those numerous deductions that result from variously comparing them one w.ih another.

The object of this science therefore is, to explain the nature of the human mind, and the j)roper manner of conducting its several powers, in order to attain truth and knowledge. It lays open those errors to which we are liable through inattention ; atul teaches us how to distinguish between truth and the appearance of it. By these means we become acquainted w'itli the nature and power of the understanding ; see what things lie within its reach; where we may attain certainty and demonstration ; and when we must be contented with probability.

This science has been generally divided into four parts, *viz.* perception, judgment, reasoning, and method ; which comprehend the whole operations of the Mind. The late professor Brown resolves judgment and reason into relative suggestion. See Lectures on the Philosophy of the Human IMind, vol. iii. lee. .'il. He also sup-l)lies us with an able view of the rationale of logic, which the reader will find in a co'.densed form at the end of tliis paper.

PART I.

OF PKRCEPTION.

Man is surrounded with a variety of objects,

which, acting differently upon his senses, convey

distiacl impressions into the mind, and thcrebv

rovise the attention and notice of llie understancl-iii’^^ IJy rt’tit’ctiiig too nil what jiasses within us, wc become sensible of tiu-operations of our own minds, and atteii < i to them as a new set of im-])i'ssions. But in all this there is only bare consciousness. The mind, without proceedins; any farther, takes notice of the impressions that are made upon it, and views things in order as llioy present themselves one after another. This attention of the understanding to the objects act-ing upon it, whereby it becomes sensible of the impressions they make, is called by logicians perception ; and the notices tiieniselves, as they exist in tlie mind, and are there treasured up to be tiie materials of thinking and knowledge, are distinguished by the name of ideas. In tiie article IMetaimiysics, it will be shown at large how ttie mind, being furnished with ideas, contrives to diversify and enlarge its stock: we have here chiefly to consider the means of making known our thoughts to others; that we may not only understand how knowledge is acquired, but also in what manner it may be communicated with the greatest certainty and advantage.

Sect. I. — Of Words, considered as the Signs of Ideas.

1. Our ideas, though manifold and various, being all within our own breasts, invisible to others, cannot of themselves be made to appear. But God, designing us for society, has provided us with organs fitted to frame articulate sound.*, and has given us a capacity of using these sounds as signs of internal conceptions. Hence spring words and language : for, having once fixed upon any sound to stand as the mark

of an idea in the mind, custom bv degrees establishes such a connexion between them, that the appearance of the idea in the understanding always brings to our remembrance the sound or name by which it is expressed; as in like manner the hearing of the sound never fails to excite the idea for which it is made to stand. And thus it is easy to conceive how a man may record his own thoughts, and bring them again into view in any succeeding period of life. For this connexion being once settled, as the same sounds will always serve to excite the same ideas ; if he can but register his words in the order and disposition in which the present train of his thoughts presents itself to his imagination, it is evident he will be able to recal his thoughts at])leasiire, and tliat too in the very manner of their first appearance. Accordingly we find, that the inventions of writing and printing, by enabling us to fix and perpetuate such perishable things as sounds, have furnished us with the means of giving a kind of permanency to the transactions of the mind, so that they may be subjected to our review in the same manner as any other objects of nature.

2. But, besides the ability of recording our own thoughts, there is this farther advantage in the use of external signs, that they enable us to communicate our tlioughts to others, and to receive information of what passes in their breasts. For any number of men, having agreed to establish the same sounds as signs of the same ideas, it is evident that the repetition of these sounds must excite the like perception in each, and

create a perfect correspondence of thoughts. NN hen, for instaiˆce, any ideas succeed one another in my mind, if the names by which I am wont to express them have been annexed by those with whom I converse to the very same set of ideas, nothing is more evident than that, by repeating those names, according to the tenor of my present conceptions, I shall raise in their minds the same course of thought that has taken possession of my own. So that we here clearly perceive how a man may communicate his sentiments, knowledge, and discoveries to others, if the laii;iuage in which he converses be extensive enough to mark all the ideas and operations ot his mind. But as this is not always the case, and men are often obliged to invent terms of their own to express new views and conceptions of things ; it may be asked, how in these circumstances we can become acquainted with the thoughts of another, when he makes use of words to which we have never annexed any ideas, and whicli of course can raise no perceptions in our minds ? To unveil this mystery, and give some

insight into the foundation, growth, and improvement of language, the following observations wall be found of considerable moment.

3. First, that no word can be to any man the sign of an idea, till that idea conies to have a real existence in his mind. For names being only so far intelligible as they denote known internal conceptions, wliere they have none such to answer them, they are plainly sounds without signification, and of course convey no instruction or knowledge. But no sooner are the ideas to which they belong raised in the understanding, than, finding it easy to connect them with the established names, we can join in any agreement of this kind made by others, and thereby enjoy the benefit of their discoveries. 1 he first thing therefore to be considered is, how these ideas may be excited in the mind ; tliat, being there, we may learn to connect them with their appropriated sounds, and so become capable of understanding others, when they make use of these sounds in communicating their thoughts. To comprehend tliis distinctly, it will be necessary to attend to the division of our ideas into the simple and complex. And first, as for our simple ideas ; they originate in sensation and reflexion. If therefore any of these have as yet no being in the understanding, it is impossible by words to excite them there. A man who had never felt the sensation of heat, could not be brought to comprehend that sensation by any thing we might say to explain it. If we would really produce the idea in him, it must be by applying the projier object to his senses, and bringing him within the influence of a hot body. \Vhen this is done, and experience has taught him the perception to which men have annexed the name heat, it then becomes to him the sign of that idea, and he thenceforth understands the meaning of the term, which, before, all the words in this world would not have been sufficient to convey into his mind. The case is the same in respect of light and colors. A man born blind, and thereby deprived of the only conveyance for ideas of this class, can never be broivjˆht to understand the names by which thev are ex-LOGIC.

pressed. The reason is plain : they stand for ideas that have no existence in his mind; and, as the organ appropriated to their reception is wanting, all other contrivances are vain, nor can tiiey by any force or description be raised in his imagination. But it is quite otherwise in our complex notioiis : ibr these being no more than

certain combinations of simple ideas, put together in various forms ; if the original ideas out of which the collections are made iiave already found admission into tlie understanding, and the names serving to express them are known; it will be easy, by enumerating the several ideas concerned in the composition, and marking t!ie order and manner in which they are united, to raise any complex conception in the mind. Thus the idea answering to the word rainbow may be readily excited in the imagination of another who has never seen the appearance it-self, by barely describing the figure, largeness, position, and order of colors ; if we suppose these several simple ideas, with their names, sufficiently known to him.

4. This leads to a second observation upon this subject, namely, that words standing for complex ideas are all definable, but those by which we denote simple ideas are not; for simple ideas being perceptions, which have no other en-entrance into the mind than by sensation or reflection, can only be obtained by experience, from the several objects of nature proper to produce those perceptions in us. Words indeed may serve to remind us of thcni, if they have already found admission into the understanding, and if their connexion with the established names is known ; but they can never give them their original being or existence there. Hence, when any one asks the meaning of a word denoting a simple idea, we pretend not to explain it to him by a definition, knowing that to be impossible ; but, supposing him already acquainted with the idea, and only ignorant of the name by which it is called, we either mention it to him by some other name with which we presume he knows its connexion, or appeal to the object wliere llie idea itself is found. Thus, were any man to ask the meaning of the word white, we should tell him it stood for the same idea as alhus in Latin, or blanc in French; or, if we thought him a stranger to these languages, we might appeal to an object jiroducing the idea, by saying it denoted the color we observe in snow or milk. Ikit this is by no means a definition of the word, exciting a new idea in his understanding; but merely a contrivance to remind him of a known idea, and teach him its connexion with the established name. For if the ideas after which lie enquires have never yet been raised in his mind; as suppose one, who had seen no other colors tlmn black and white, should ask the meaning of the word scarlet ; it is easy to perceive, liiat it would be no more possible to make him comprehend it by words, or by a definition, than to introduce the same])ercoption into the imagination of a man born blind. The only method in tills case is, to present some object, by looking at which the perception itself may be excitetl ; and thus he will learn both the name and the idea tosjether.

5. But how comes it to pass, that men agree in the names of their simple ideas, seeing iliey cannot view tiie perceptions in one another's minds, nor make known these perceptions by words to others ? The effect is produced by experience and observation. Thus finding, for instance, that the name of heat is annexed to that sensation which men feel when they approach the fire, I make it also the sign of the sensation excited in me by such an approacli, nor have any doubt but it denotes the same perception in my mind as in theirs. For we are naturally led to imagine, that the same objects operate alike upon the organs of the human body, and produce a uniformity of sensations. No man fancies that the idea raised in him by the taste of sugar, and which he calls sweetness, differs from that excited in another by the like means ; or that wormwood, to whose relish he has given the epithet bitter, produces in another the sensation which he denotes by tile word sweet. Presuming, therefore, upon this conformity of perceptions, when they arise from the same objects, we easily agree as to the names of our simple ideas: and if at any time, by a more narrow scrutiny into things, new ideas of this class come in our way, which we choose to express by terms of our own invention ; these names are explained, not by a definition, but by referring to the objects whence the ideas themselves may be obtained.

6. Being in this manner furnished with simple ideas, and the names by which they are expressed, the meaning of terms that stand for complex ideas is easily acquired, because the ideas themselves answering to these terms may be conveyed into the mind by definitions. For our complex notions are only certain combinations of simple ideas. When, therefore, these are enumerated, and the manner in which they are united into one conception explained, nothing more is wanting to raise that conception in the understanding ; and thus the term denoting it comes of course to be understood. And here it is worth while to reflect a little upon the wisdom and goodness of the Deity, in thus furnishing us with the very aptest means of communicating our thoughts. For were it not so ordered, that we could thus convey our complex ideas to one another by definitions, it would in many cases be impossible to make them known at all. This is apparent in those ideas which are the proper work of the mind. For as they exist only in tlie understanding, and have no real objects in nature in conformity to which they are framed ; if we could not make them known by description, they must lie for ever hid within our own breasts, and be confined to the narrow limits of a single mind. All the fine scenes that arise from time to time in the poet's fancy, and, by his lively painting, give such entertainment to his readers ; were he

destitute of tiiis faculty of laying them open to the view of others by words and description, could not ex-tend their influence beyond his own imagination, or give joy to any but himself.

7. There is this additional advantage, in the ability we enjoy of communicating our complex notions by definitions ; that as these make by far the largest class of our ideas, and most fre- (picntly occur in the progress and improvement

of knowicJge, so they are by tliese means imparted with the greatest readiness, than which nothing would tend more to the increase and spreading of science : for a definition is soon examined ; and, if the terms of it are well understood, the idea itself finds an easy admission into the mind. ˆVhereas, in simple perceptions, where we are referred to tlie objects producing them, if these be not accessible, as is sometimes the case, the names by which they are expressed must remain empty sounds. But new ideas of this class occurring very rarely in the sciences, they seldom create any great obstructions. It is otherwise with our complex notions : for every step we take leadiULt us mto new combinations and ˆviews of things, it becomes necessary to explain these to others, before they can be made acquainted with our discoveries ; and as tiie manner of defining is easy, requiring no apparatus but words, which are always ready, and at hand, we can with less difficulty remove such obstacles as might arise from terms of our own invention, when they are made to stand for new complex ideas suggested to tlie mind by some])resent train of thinking. And thus we see how we may become acquainted with the thoughts of another, when he makes use of words to which we have as yet joined no ideas. If the terms denote simple perceptions, lie must refer us to those objects of nature whence the perceptions themselves are to be obtained ; but, if they stand for complex ideas, their meaning may be ‘explained by a definition.

Sect. II. — Of Definitions.

1. A definition is the unfolding of some conceptions of the mind,

answering to the word or term made use of as its sign. Now as, in exhibiting any idea to another, it is necessary that the description be such as may excite that precise idea in his mind ; it is plain that definitions,])roperly speaking, are not arbitrary, but confined to the representing of certain determinate settled notions, annexed by the speaker or writer to the words he uses. As, however, it is universally allowed, that the signification of words is perfectly arbitrary, and not the efi'ect of any natural and necessary connexion between them and the ideas for which they stand ; some may perhaps wonder why definitions are not so too. To unravel this difficulty, and show distinctly what is and what is not arbitrary in speech, we must carefully distinguish between the connexion ot our words and ideas, and the unfolding of the ideas themselves.

2. First, as to the connexion of our words and ideas ; this, it is plain, is purely arbitrary. When, for instance, we have in our minds the idea of any particular species of metals, our calling it by the name of <jold is an effect of the voluntary choice of men speaking the same language, and not of any peculiar aptness in that sound to express that idea. Other nations we find make use of different sounds, and with the same effect. Thus aurum denotes that idea in Latin, and or in I'rench ; and even the word gold itself would have as well served to express the idea of that metal which we call silver, had custom in the beginning established it.

3. But, although weave thusei'.tirely at liberty in connecting any idea witli any sound, yet it is quite otherwise in unfolding the ideas tliemselves. I'or every idea having a precise appearance of its own, by which it is distinguished from every other idea; it is manifest that, in representing it to others, we nmst study such a description as shall exhibit that peculiar appearance. When we have formed the idea of a figure hounded by four equal sides, joined together at right angles, we may express that idea by any sound, and call It either a square or a triangle. But whichever of these names we use, so long as the idea is the same, the description by which we would signify it to another must be so too. Let it be called square or triangle, it is still a figure having four equal sides, and all its angles right ones. Hence we clearly see what is and what is not arbitrary in the use of words. The establishing of any sound, as the mark of some determinate idea in the mind, is the effect of free choice, and a voluntary combination among men : and, as different nations make use of different sounds to denote the same ideas, hence proceeds all that variety of languages which we meet with lu the world. But, when a connexion between our ideas and

words is once settled, the unfolding of the idea answering to any word, which properly constitutes a definition, is by no means an arbitrary tlnng: for here we are bound to exhibit that precise conception which either the use of language, or our own particular choice, lias annexed to the term we use.

4. Thus it appears, that definitions, considered as descriptions of ideas in the mind, are steady and invariable, being bounded to the representation of these precise ideas. But then, in the application of definitions to particular names, we are altogether left to our own free choice ; because, as the connecting of any idea with any sound is perfectly arbitrary, the applying the description of tliat idea to that sound must be so too. When, therefore, logicians tell us that the definition of the name is arbitrary, they mean no more than this; »hat as different ideas may be connected with any term, according to the good pleasure of him that uses it, so may different descri])tions be applied to the term, suitable to the ideas thus connected. But this connexion being settled, and the term considered as the sign of some fixed idea in the understanding, wc are no longer left to arbitrary explications, but must study such a description as ccrresi)onds with that precise idea. Now this alone, according to what has been before laid down, ought to be accounted a definition. Wliat seems to have occasioned no small confusion in this matter, is, that many explanations of words, where no idea is unfolded, but merely the connexion between some word and idea asserted, have yet been dignified with the name of definitions. Thus, when we say that a clock is an instrument by which we measure time; that is by some called a definition : and yet it is plain that we are previously supposed to have an iiiea of this instrument, and only taught that the word clock serves in common language to denote that idea. By this rule all explications of words in our dic-tionarits will be definitions, nay, the names of

even simjjle ideas may be thus defined. White, we may say, is the color we observe in snow or milk ; heat, the sensation produced by approaching tlie fire; and so in irnuimerable other instances. But

these, and all others of the like kind, are by no means definitions, excitini; new ideas in the mind, but merely contrivances to remind us of known ideas, and teach their connexion with tiie established names.

5. But now, in definitions properly so called, we first consider the term we use as tlie sign of some inward conception, eitiier annexed to it by custom, or by our own free choice ; and tlien the business of the definition is to unfold and explain that idea. As, therefore, the whole art lies in giving just and true copies of our ideas ; a definition is then said to be perfect, when it serves distinctly to excite the idea described in the mind of another, even supposing him before wholly unacquainted v/ith it. This point settled, let us next enquire what those ideas are wiiich are ca])able of being thus unfolded ? In the first place, it is evident, that all oar simple ideas are necessarily excluded. We have seen that experience alone is to be consulted here, so that if either the objects whence tiiey are derived come not in our way, or the avenues appointed by nature for tlieir reception are wanting, no description is sufficient to convey them into tlie mind. But wlvere the understanding is already supplied with these original and primitive conceptions, as they may be united together in an infinity of different forms, so may all their several combinations be distinctly laid open, by enumerating the simple ideas concerned in the various collections, and tracing the order and manner in which they are linked one to another. Now these combinations of simple notices constitute what we call our complex notions ; whence it is evident, tliat complex ideas, and these alone, admit of that kind of description which goes by the name of adefinition.

6. Definitions, then, are representations of our ideas ; and, as these representations are possible only when the ideas themselves are complex, it is obvious, that definitions cannot have place but where we make use of terms standing for such complex ideas. But, our complex ideas being nothing more than different combinations of sini-]jle ideas, we then know and comprehend them perfectly, when we know the several simple ideas of which they consist, and can so put them together in our minds, as may be necessary towards the framing of that peculiar connexion which gives every idea its distinct and proper appearance.

7. Two things are therefore required in every definition : 1st, That all the original ideas, out of which the complex one is formed, be distinctly enumerated ; and, 2dly, That the order and man-ner of combining them into one conception be clearly explained. Where a definition has these requisites, nothing is wanting to its perfection ;

bewiuse every one who reads it and understands the terms, seeing at once what ideas he is to join together, and also in what manner, can at pleasure form in his own mind the complex conception answering to the term defined. Let us, for instance, suppose the word square to stand for tha* idea by which we represent to ourselves a

figure whose sides subtend quadrants of a circumscribed circle. The])arts of this idea are the sides bounding the figure. These must be four in number, and all equal among themselves, because they are each to subtend a fourth part of the same circle. But, besides these component parts, we must also take notice of the manner of putting them together, if we would exhibit the precise idea for which tlie word square here stands. For four equal right lines, anyhow joined, will not subtend quadrants of a circumscribed circle. A figure ˆvith this property must have its sides standing also at right angles. Taking in therefore this last consideration, respecting the man-ner of combining the])arts, the idea is fully described, and the definition thereby rendered complete. For a figure bounded by four equal sides, joined together at right angles, ha? the property required; and is moreover the only rightlined figure to which that property belongs. 8. It will now be obvious to every one, in what manner we ovight to proceed, in order to arrive at just and adequate definitions. 1st, We. are to take an exact view of tlie idea to be described, trace it to its original principles, and mark the several simple perceptions that enter into its composition. ■2dly, We are to consider the particular manner in which these elementary ideas are combined, in order to form that precise conception for which the term we make use of stands. When this is done, and the idea wholly unfolded, we have only to transcribe the appearance it makes to our own minds. Such a description, by distinctly exhibiting the order and number of our primitive conceptions, cannot fail to excite at the same time, in the mind of every one that reads it, the complex idea resulting from them ; and therefore attains the true and proper end of a definition.

Sect. III. — Of the Composition and Resolution OF OUR Ideas, and the Rules of Definition thence arising.

1. The rule laid down in the last section is y:eneral, e.xtending to all possible cases; and is indeed that to which alone we can have recourse where any doubt or difficulty arises. It is not, however, necessary that we should practise it in every case. iMany of our ideas are extremely

complicated, insomuch that to enumerate all the simple perceptions, out of which they are formed, would be a very troublesome and tedious work. For this reason logicians have established certain compendious rules of defining, of which we shall give some account. But, for the better understanding of what follows, it is necessary to observe, that there is a certain gradation in the com]iosition of our ideas. The mind of man is very limited in its views, and cannot take in a great number of objects at once. We must therefore proceed by steps, and make our first advances subservient to those which follow. Thus, in forming our complex notions, we begin at first with but a few simple ideas, such as we can manage with ease, and unite them together into one conception. \N'lien we are provided with a sufficient stock of these, and have by habit and use rendered them familiar to our minds, thev become the component parts of ether

ideas still more complicated, and form what we call a second order of compound notions. This process may be continued to any degree of composition we please, mounting from one stage to another, and enlarging the number of combinations.

2. But, in a series of this kind, whoever would acquaint himself perfectly with the last and highest order of ideas, finds it the most expedient method to proceed gradually through all the intermediate steps. For, were he to take any very compound idea to pieces, and, without regard to the several classes of simple perceptions tliat have already been formed into distinct combinations, break it at once into its original principles, the number would be so great as perfectly to confound tiie imagination, and overcome the utmost reach and capacity of the mind. When we see a prodigious multitude of men jumbled together in crowds, without order or any regular position, we find it impossible to arrive at an exact knowledge of their number. But if they are formed into separate battalions, and so stationed as to fall witliin the deliberate survey of the eye, by viewing tliem successively and in order, we come to an easy and certain determination. It is the same in our complex ideas. When the original perceptions, out of

which they are framed, are very numerous, it is not enough that we take a view of them in loose and scattered bodies; wc must form them into distinct classes, and unite tliese classes in ajustand orderly manner, before we can arrive at a true knowledge of tlie compound notices resulting from them.

3. This gradual progress of tlie mind to its compound notions, through a variety of intermediate steps, plainly points out the manner of conducting the definitions by which these notions are conveyed into the minds of others. For as the series begins with simple and easy combinations, and advances through a succession of different orders, rising one above another in the degree of composition, it is evident that, in a train of definitions expressing these ideas, a like gradation is to be observed. Thus the complex ideas of the lowest order can no otherwise be described than by enumerating the simple ideas out of which they are made, and explaining the manner of their union. But then, in the second or any other succeeding order, as they are form-ed out of those gradual combinations, and constitute the inferior classes, it is not necessary, in describing them, to mention one by one all the simple ideas of which they consist. They may be more distinctly and briefly unfolded, by enumerating the compound ideas of a lower order, from whose unifln they result, and which are all supposed to be already known in consequence of previous definitions. Here then it is, that the logical method of defining takes place; which, that it may be the better understood, we shall explain somewhat more particularly the several stejis and gradations of tlie mind in compounding its ideas, and thence deduce that peculiar form of a definition which logicians have thought fit to establish.

4. All the ideas we receive from the several objects of nature that surround us represent distinct individuals. These individuals, when com-

pared together, are found in certain particulars to resemble each other. Hence, by collecting tile resembling particulars into one conception, we form the notion of a species. And here let it be observed, that this last idea is less complicated than that by which we represent any of the particular objects contained under it. For the idea of the species excludes the peculiarities of the several individuals, and retains only such properties as are common to them all. Again, by comparing several species together, and observing their resemblance, we form the idea of a genus ; where, in the same manner as before, the composition is lessened, because we leave out what is particular to

the several species compared, and retain only the particulars wherein they agree. It is easy to conceive the mind proceeding thus from one step to another, and advancing through its several classes of general notions, until at last it comes to the highest genus of all, denoted by the word being, where the bare idea of existence only is concerned.

5. In this procedure we see the mind unravelling a complex idea, and tracing it in the ascending scale, from greater or less degrees of composition, until it terminates in one simple perception. If now we take the series the contrary way, and, beginning with the last or highest genus, carry our view downward, through all the inferior genera and species, quite to the individuals, we shall thereby arrive at a distinct apprehension of the conduct of the understanding in compounding its ideas. For, in the several classes of our perceptions, the highest in the scale is for the most part made up of but a few simple ideas, such as the mind can take in and survey with ease. This first general notion, when branched out into the different subdivisions contained under it, has in every one of them something peculiar, by which they are distinguished among themselves ; insomuch that, in descending from tlie genus to the species, we al-ways superadd some new idea, and thereby increase the degree of composition. Thus the idea denoted by the word figure is of a very general nature, and composed of but few simple perceptions, as implying no more than space every where boiuided. But if we descend farther, and consider the boundaries of this space, as that they may be either lines or surface, we distinguis'uthe several species of figure. For, where the space is bounded by one or more surfaceis, we give it the name of a solid figure ; but, where the boundaries are lines, it is called a plain figure.

6. In this view of things it is evident, that the species is formed by superadding a new idea to the genus. Here, for instance, the genus is circumscribed space. If now to this we superadd the idea of a circumscription by lines, we frame the notion of that species of figures which are called plain ; but, if we conceive the circumscription to be by surfaces, we have the species of solid figures. This superadded idea is called the specific difference, not only as it serves to di-vide tlie species from the genus, but because, being different in all the several subdivisions, we thereby also distinguish the species one from another. And as it is likewise that conception, which, by being joined to the general idea, completes the

notion of the species; iience it is plain, that the genus and specitic difference are to be considered as the proper and constituent parts of the species. If we trace the progress of the mind still farther, and observe it advancing through the inferior species, we shall find its manner of proceeding to be always the same. For every lower species is formed by superadding some new idea to the species next above it; so tliat, in this descending scale of our perceptions, the understanding passes through different orders of complex notions, which become more and more complicated at every step it takes. Let us re-sume here, for instance, the species of plain figures. They imply no more than space bounded by Lines. But if we take in an additional consideration of the nature of these lines, as whether they are right or curves, we refer to the subdivisions of plain figures, distinguished by the names of rectilinear, curvilinear, and mixtihnear.

7. And here we must observe, that though plain figures, when considered as one of those branches tliat come under the notion of figure in general, take the name of a species ; yet, compared with the classes of curvilinear, rectilinear, and mixtilinear, into which they themselves may be divided, they really become a genus of which the above mentioned subdivisions constitute the sevepal species. These species, in the same manner as in the case of plain and solid figures, consist of the genus and specific difference as their constituent parts. For, in the curvilinear kind, the curvity of the lines bounding the figure makes what is called the specific difference; to which if we join the genus, which here is a plain figure or space circumscribed by lines, we have all that is necessary towards completing the no-tion of this species. We are only to take notice that this last subdivision, having two genera above it, *viz.* plain figure, and figure in general, tlie genus jo-ined with the specific difference, in order to canstitute the species of curvilinears, is that which lies nearest to the said species. It is the notion of plain figure, and not of figure in general, that, joined with the idea of curvity, makes up the complex conception of curve-lined figures. For in this descending scale of our ideas, figure in general, plain figures, curve-lined figures, the first two are considered as general in respect of the third : and the second in order, or that which stands next to the third, is called the nearest genus. But now as it is this second idea, which, joined with the notion of curvity, forms the species of curve-lined figures, it is plain, that the tiiird or last idea in

the series is made up of the nearest genus and specific difference. This rule Imlds invariably however far tlie series is continued ; because, in a train of ideas thus succeeding one another, all that precede the last are considered as so many genera in respect of that last, and the last itself is always formed by superadding the specific difference to the genus next it.

8. Here then we have a universal description, applicable to all our ideas of whatever kind, from the highest genus to the lowest species. For, taking them in order dovi'nwards from the said general idea, tiiey every where consist of the genus proximum, and differentia specifica.

as logicians express them. But when we come to the lowest species of all, comprehending under it only individuals, the superadded idea by which these individuals are distinguished one from another no longer takes the name of the specific difference. For here it serves not to denote distinct species, but merely a variety of individuals, each of which, having a particular existence of its own, is therefore numerically different from every other of the same kind. And hence it is that, in this last case, logicians call the superadded idea by the name of the numeral difference, so that, as the idea of a species is made up of the nearest genus and specific difference, the idea of an individual consists of the lowest species and numeric difference. Thus the circle is a species of curve-lined figures, and what Vie call the lowest species as comprehending under it only individuals. Circles in particular are distinguished from one another by the length and position of their diameters. The length therefore and position of the diameter of a circle form what logicians call the numerical difference ; because, these being given, the circle itself may be described, and an individual thereby constituted.

9. Thus the mind, in compounding its ideas, begins, we see, with the most general notions, which, consisting of but a few simple notices, are easily combined and brought together into one conception. Thence it proceeds to the species comprehended under this general idea, and these are formed by joining together the genus and specific difference. And as it often happens that these species may be still farther subdivided, and run on in a long series of continued gradations, producing various orders of compound perceptions, so all these several orders are regularly and successively formed by annexing in every step the specific difference to the nearest genus. When by this method of procedure we are come to the lowest order of all, by joining the species and numeric difference, we frame the ideas of

individuals. And here the series necessarily terminates, because it is impossible any farther to bound or limit our conceptions. This view of the composition of our ideas, representing their constituent parts in every step of the progression, naturally points out the true and genuine form of a definition. For as definitions are merely descriptions of the ideas for which the terms defined stand, and as ideas are then described, when we enumerate distinctly the parts of which they consist, it is plain that, by making our definitions follow one another according to the natural train of our conceptions, tiiey will be subject to the same rules, and keep pace with the ideas they describe.

1 0. As, therefore, the first order of our compound notions, or the ideas that constitute the highest genera in the different scales of perception, are formed by uniting together a certain number of simple notices, so the terms expressing these genera are defined by enumerating the simple notices so combined. And as liie species comprehended under any genus, or the complex ideas of the second order, arise from superadding the specific difference to the said general i'le;t, so the definition of the names of the

species consists in a detail of the ideas of die specific difference connected with llie term of the ijenus. For, the genus having been before defined, tlie term by uliicli it is expressed stands for a iinovvn idea, and may therefore be introduced into all subsecpient detinitions, in the same manner as the names of simple perceptions. It will now be sufficiently obvious, tiiat the detinitions of all the succeeding orders of compouii 1 notions will every wliere consist of the term of the nearest genus, joined with an enumeration of the ideas that constitute tl'.e specific difference ; and tliat tlie definition of individuals unites the names of the lowest species with the terms by which we express the ideas of the numeric difference.

11. Here then we have the true and proper form of a definition, in all the various orders of conception. Tliis is that method of defining which is commonly called logical, and whicli we see is perfect in its kind, as it presents a full and adequate description of the idea for which tlie term defined stands.

PART II.

OF JUDGMENT.

Sect I. — Of the Grounds of Human Judgment.

1. The mind being furnished with ideas, its next step in the way to knowledge is the comparing of these ideas together, in order to judge of their agreement or disagreement. In this joint view of our ideas, if the relation is such as to be immediately discoverable by the bare inspection of the mind, the judgments thence obtained are called intuitive, from a word that denotes to look (d ; for, in this case, a mere attention to the ideas compared suffices to let us see how far they are connected or disjoined. Thus, that the whole is greater than any of its parts, is an intuitive judgment; nothing more being required to convince us of its truth than an attention to the ideas of whole and part. And this too is the reason why we call the act of the mind forming these judgments intuition; as it is indeed no more than an immediate perception of the agreement or disagreement of any two ideas.

2. Hut here it is to be ooserved, that our knowledge of this kind respects only our ideas, and the relations between them ; and therefore can serve only as a foundation to such reasonings as are employed in investigating those relations. Now it so happens, that many of our judgments are respecting facts, and the real existence of things, which cannot be traced by the bare contemplation of our ideas. It does not follow, because I have the idea of a circle in my mind, that therefore a figure answering to that idea has a real existence in nature. I can form to myself the notion of a centaur or golden mo\in-tain, but never imagine on tliat account that either of them exists. What then are the grounds of our judsjment in relation to facts? Experience and testimony. By experience we are informed of the existence of the several objects which surround us, and operate upon our senses. Testimony is of a wider extent, and reaches not only to objects beyond the present

si)here of our observation, but also to such as could not witiiont this conveyance have fallci.' under our cognizance.

3. Here we have three foundations of human judgment, from which the whole system of our knowledge may with ease and advantage be derived. First, intuition, which respects our ideas themselves, and tlieir relations, and is the foundation of tliat species of reasoning which we call detnonslrution. For whatever is deduced from our intuitive perceptions, by a clear and connected series of proofs, is said to be dt-monstrated, and produces absolute certainty iu the mind. Hence the knowledge obtained lo this manner is what we properly term science ; because in every step of the procedure it carries Its own evidence along with it, and leaves no room for doubt or hesitation. And it is highly worthy of notice, that as the truths of this class express the relation between our ideas, and the same relations must ever and invariably suljsist between the same ideas, our deductions in the way of science constitute what we call eternal, necessary, and immutable truths. If it be true that the whole is equal to all its parts, it mu.st be so unchangeably ; because the relation of equality, being attached to the ideas themselves, must ever intervene where the same ideas are compared. Of this nature are all the truths of natural religion, morality, and mathematics, and, in general, whatever may be gathered from the bare view and consideration of our ideas.

4. The second ground of human judgment is eiperience ; from which we infer the existence of those objects which surround us, and fall under the immediate notice of our senses. When we see the sun, or turn our eyes towards a building, we not only have perceptions of these objects within ourselves, but ascribe to them a real existence out of the mind. It is also by the information of the senses, that we judge of the qualities of bodies ; as when we say that snow is white, fire hot, steel hard. For, as we ar-i wholly unacquainted with the internal structure and constitution of the bodies that produce these sensations in us, nay, are unable to trace any connexion between that structure and the sensations themselves, it is evident, that we build our judgments altogetlier upon observation, ascribing to bodies such qualities as are answerable to the perceptions they excite in us. Not that we ever suppose the qualities of bodies to be things of the same nature with our perceptions; for there is nothing in fire similar to our sensation of heat, or in a sword similar to pain ; but that, when different bodies excite in our minds similar perceptions, we necessarily ascribe to tliese bodies not only an existence independent of us, but likewise similar qualities, of which it is the nature to produce similar perceptions in the human mind. But this is not the only advantage derived from experience ; for to it also we are

indebted for all our knowledge regarding the co-existence of sensible qualities in objects, and the operations of bodies one upon another. Ivory, for instance, is hard and elastic; this we know by experience, and indeed by that alone. I'or, being altogether strangers to the true nature both of elasticity

and hardness, we cannot by tlie bare contemplation of our ideas determine liow far the one necessarily implies the other, or whether there may not be a repugnance between them. But, when we observe them to exist both in the same object, we are then assured from experience that they are not incompatible ; and when we also find that a stone is hard and not elastic, aini that air though elastic is not hard, we also conclude upon the same foundation, that the ideas are not necessarily conjoined, but may exist separately in difl'erent objects. In like manner, with regard to the mutual operations of bodies, it is evident that our knowledge is derived entirely from observation. Nitro-mu- riatic acid dissolves gold, as has been found by frequent trial, nor is there any other way of arriving at the discovery. Naturalists may tell us, if they please, that the parts of nitro-muria- tic acid are of a texture apt to insinuate between the corpuscles of gold, and thereby loosen and shake them asunder. If this is a true account of tiie matter, it will notwithstanding be allowed, that our conjecture in regard to the conformation of these bodies is deduced from the experiment, and not the experiment from the conjecture. It was not from any previous knowledge of the intimate structure of nitro-muriatic acid and gold, and the aptness of their parts to act or be acted u[)on, that we arrived at the conclusion above mentioned. The internal constitution of bodies is wholly unknown to us ; and, could we even surmount this difficulty, yet as the separation of the parts of gold implies something like an active force in the chemical agent, and we are unable to conceive how it comes to be possessed of this activity, the effect must be owned to be altogether beyond our comprehension. But when repeated trials had once confirmed it, so that it was admitted as an established truth, it was then easy for men to spin out theories of their own invention, and contrive such a

structure of parts, both for gold and nitro-muriatic acid, as would best serve to explain the phenomenon upon the principles of that system of philosophy which they had adopted.

5. But, though experience is what we may term the immediate foundation of knowledge, yet with respect to particular persons its influence is very narrow and confined. The bodies that surround us are numerous, many of them lie at a u'reat distance, and some f|uite beyond our reach. i>ife is so short, and so crowded with cares, that but little time is left for any single man to employ hiirwelf in unfolding the mysteries of nature. Hence it is necessary to admit many things upon the testimony of others, which thus becomes the foundation of a great part of our knowledge of body. No man doubts of the power of nitro-muriatic acid to dissolve gold, though perhaps he never himself made the experiment. In these therefore, and such cases, we judge of the facts and operations of nature upon the mere ground of testimony. However, as we can always have recourse to experience where any doubt or scruple arises, this is justly considered as the true foun- • latioii of natural))hilosophy ; being indeed the ultimate .support on which our assent rests, and to which we appeal when tiie highest degree of tviuencc is retjuircd.

6. But there ar: many facts that wdl not al-low of an appeal to the senses; and in thi-s case testimony is the true and oidy foundation of our judgments. All human actions of whatever kind, when considered as already past, are of the na-ture here described ; because, having now no longer any existence, both the facts themselves, and the circumstances attending them, can be known only from the relations of such as had sufficient opportunities of arriving at the truth. Tcstii/ ioiii/ therefore is justly accounted a third ground of human judgment; and as from the other two we have deduced scientific knowledge, so we may from this derive historical; by which we mean, nol merely a knowledge of the civil transactions of states and kingdoms, but of all facts wiiatever, concerning which testimony is the sole foundation of our belief.

Sect. II. — Of Affirmative and Negativk Propositions.

1. While the comparing of our ideas is considered merely as an act of the mind, assembling them together, and joining or disjoining' them according to the result of its perceptions, we call it judgment; but, when our judgments are put into words, they then bear the name of propositions. A proposition therefore is a sentence expressing some

judgment of the mind, whereby two or more ideas are affirmed to agree or disagree. Now, as our judgments include at least two ideas, one of which is affirmed or denied of the other, so must a proposition have terms answering to these ideas. The idea of which we affirm or deny, and of course the term expressing that idea, is called the subject of the proposition. The idea affirmed or denied, as also the term answering it, is called the predicate. Thus in the proposition, God is omnipotent : God is the subject, it being of him that we affirm omnipotence ; and omnipotent is the predicate, because we affirm the idea expressed by that word to belong to God.

2. But as, in propositions, ideas are either joined or disjoined, it is not enough to have terms expressing those ideas unless we have also some words to denote their agreement or disagreement. That word in a proposition which connects two ideas together is called the copula; and, if a negative particle beannexed, we thereby understand that the ideas are disjoined. The substantive verb is eommoidy made use of for the copula ; as in the above-mentioned proposi-sition, God is omnipotent : where it re])rescnts the copula, and signifies the agreement of the ideas of God and omnipotence. But, if we mean to separate two ideas, then, besides the substantive verb, we must also use some i)article of negation to express this repugnance. The proposition, Man is not perfect, may serve as an example of this kind ; where, the notion of perfection being removed from the idea of man, the negative particle not is inserted after die co])ula, to signify the disagreement between the subject and predicate.

3. Every projiosilion necessarily consists of these three jiarts : bu*. then it is not alike needful that they be all severally expressed in words ; because the copula is often included in the term of the predicate, as when we s;iy, ho sit-; ; which imports the same as, he is silting. In the Latin

language, u single word has often the force of a whole sentence. Thus ambulat is the same as ille est ambulans ; amo, as ego sum amans; and so in innumerable other instances : by wliich it appears, that we are

net so much to regard the number of words iu a sentence, as the ideas they represent, and the manner in which they are put together. For wlienever two ideas are joined or disjoined in an expression, though of but a single word, it is evident that we have a subject, predicate, and copula, and of consequence a complete proposition.

4. When the mind joins two ideas, we call it an ‘://(V77 < </fc judgment ; when it separates them, a ncgutivc ; and, as any two ideas compared togetiier must necessarily either agree or not agree, it is evident that all our judgments fall under these two divisions. Hence likewise the propositions expressing these judgments are all either affirmative or negative. An affirmative proposition coimects the predicate with the subject, as, a stone is heavy ; a negative proposition separates them, as, God is 7iot the author of evil. Affirmation therefore is the same as joining two ideas together, and this is done by means of the copula. Negation, on the contrary, marks a repugnance between the ideas compared ; in which case a negative particle must be called in, to show that the connexion included in the copula does not take place.

5. Hence we see the reason of the rule commonly laid down by logicians, That, in all negative propositions, the negation ought to aflfect the copula. For as the copula, when placed by itself, between the subject and the predicate, manifestly binds them together, it is evident that, to render a proposition negative, the particles of negation must enter it in such a manner as to destroy this union. In a word, then only are two ideas disjoined in a proposition, when the negative particle may be so referred to the copula as to break the affirmation included in it, and undo that connexion it would otherwise establish. When we say, for instance, No man is perfect, take away the negation, and the copula of itself plainly unites the ideas in the proposition. But, as this is the very reverse of what is intended, a negative mark is added, to show that this union does not here take place. The negation, therefore, by destroying the eifect of the copula, changes the very nature of the proposition, insomuch that, instead of binding two ideas together, it denotes their separation. On the contrary, in this sentence, The man who departs not from an upright behaviour is beloved of God ; the predicate, beloved of God, is evidently affirmed of the subject an upright man : so that, notw ithstanding the negative particle, the proposition is still affirmative. The reason is plain : the negation here affects not the copula, but, making properly a part of the subject, serves, with other terms in the sentence, to form one complex idea, nf which the predicate, beloved of God, is directly affirmed.

Sect. III. — Of Univer.sal and PARrtctLAK ProPOsniONS.

1. Tlic vo\l considerable division of propositions is ir.lo universal and particular. Our

ideas, accord ni'.; to wliat has been already observed in the fust part, are all singular as they enter the mind, and represent individual objects. But as by abstraction we can render them universal, so as to comprehend a whole class of things, and sometimes several classes at once ; hence the terms expressing these ideas must be in like manner univers'al. If, therefore, we suppose any general term to become the subject of a jiroposition, it is evident that whatever is affirmed of the abstract idea, belonging to that term, may be affirmed of all the individuals to which that idea extends. Thus, when we say, men are mortal ; we consider mortality, not as confined to one or any number of particular men, but as what may be affirmed without restriction of the whole species. Thus the. proposition becomes as general as the idea which makes the subject of it; and indeed derives its universality entirely from that idea, being more or less so, accordmg as this may be extended to more or fewer individuals. But it is further to be observed of these general terms, that they sometimes enter a proposition in their full latitude, as in the example given above ; and sometimes ap-pear with a mark of limitation. In this last case we are given to understand, that the predicate agrees not to the whole universal idea, but only to a part of it ; as in the proposition, Some men are wise : for here wisdom is not affirmed of every particular man, but restrained to a few of the human species.

2. From this different appearance of the general idea, that constitutes the subject of any judgment, arises the division of propositions into universal and particular. A univerml proposition is that wherein the subject is some general term taken in its full latitude ; insomuch that the predicate agrees to all the individuals comprehended under it, if it denotes a proper species ; and to all the several species and their individuals, if it marks an idea of a higher order. The words all, every, no, none, &c., are the proper signs of this universality ; and, as they seldom fail to accompany general truths, so they are the most obvious criterion whereby to distinguish them. All animals have a power of beginning motion. This is a universal proposition ; aswe know from the word all prefixed to the subject animals, which denotes that it must be taken in its fidl extent. Hence the power of beginning motion may be affirmed of all the several species of animals.

3. A particular proposition has in like manner some general term for its subject ; but witii a mark of limitation added, to denote that the predicate agrees only to some of the individuals comprehended under a species, or to one or more of the species belonging to any genus, and not to the whole universal idea. Thus, Some stones are heavier than iron ; Some men have an uncommon share of prudence. In the latter of these propositions, the subject, some men, implies only a certain number of individuals, comprehended under a single species. In the former, where the subject is a genus that extends to a great variety of distinct classes, some stones may not only imply any number of particidar stones, but also several whole species of stones, inasmuch as there may be not a few with the property there

described. Hence we see tliat a pioposition (Joes not cease to be particulai-by the predicate's agreeing to a whole species, unless that species, singly and distinctly considered, makes also the subject of which we affirm or deny.

4. There is still one species of propositions that remains to be described, and which the more deserves our notice as it is not yet agreed among logicians, to which of the two classes mentioned above they ought to be referred ; namely, singular propositions, or those where the subject is an individual. Of this nature are the following : — Sir Isaac Newton was the inventor of fluxions; This book contains many useful truths. There is some difficulty as to the proper rank of these propositions, because, the subject being taken according to the whole of its extension, they sometimes have the same effect in reasoning as universals. But if it be considered that they are in truth the most limited kind of particular pro-sitions, and that no proposition can with any propriety be called universal but where the subject is some universal idea, we shall not be long in determining to which class they ought to be referred. When we say some books contain use-ful truths; the proposition is particular, because the general term appears with a mark of restriction. If, therefore, we say, This book contains useful truths ; it is evident that the proposition must be still

more particular, as the limitation applied in the word this is of a more confined nature than in the former case.

5. We see, therefore, that all propositions are either affirmative or negative; nor is it less evident that, in both cases, they may be universal or particular. Hence arises that celebrated fourfold division of them into universal affirmative and universal negative, particular affirmative and particular negative, which comprehends indeed all their varieties. The use of this method of distinguishing them will appear more fully afterwards, when we come to treat of reasoning and syllogism.

Sect. IV. — Of Absolutk and Conditional Propositions.

1. The objects about which we are chiefly conversant in this world are all of a nature liable to change. What may be affirmed of them at one time, cannot often be affirmed at another; and it makes no small part of our knowledge to distinguish rightly these variations, and trace the reasons on wiiich tliey depend. For it is observable that, amidst all the vicissitude of nature, some things remain constant and invariable; nor even are the changes, to which we see others liable, effected but in consequence of uniform and steady laws, which, when known, are sufh-cient to direct us in our judgments respecting them. Hence philosophers, in distinguishing the objects of our perception into various classes, have been very careful to note, tiiat some properties belong essentially to the general idea, so as not to be separable from it but by destroying its very nature ; while others are only accidental, and may be affirmed or deiiied of it in different circumstances. Thus solidity, a yellow color, and great weight, are considered as essential qualities of gold ; but whether it shall exist as a

uniform conjoined mass, is not alike necessary. We see that by a certain process it may be reduced to a fine powder, and that an intense heat will bring it into a state of fusion.

2. From this diversity in the several qualities of things arises a considerable diflerence as to the manner of our judging concerning them. For all such properties as are inseparable from objects, when considered as belonging to any genus or species, are affirmed absolutely and without reserve of that general idea. Thus we say, Gold is very weighty ; a stone is hard ; animals have a power of self-motion. But in the case of mutual or accidental qualities, as they depend upon some other consideration distinct from the general idea, that also must

be taken into the account, in order to form an accurate judgment. Should we affirm, for instance, of some stones, that they are very susceptible of a rolling motion ; the proposition, while it remains in this general form, cannot with any advantage be introduced into our reasonings. An aptness to receive that mode of motion flows from the figure of the stone ; which, as it may vary infinitely, our judgment then only becomes applicable and determinate, when the particular figure, of which volubility is a consequence, is also taken into the account. Let us, then, bring in this other consideration, and the proposition will run as follows: stones of a spherical form are easily put into a rolling motion. Here we see the condition upon which the predicate is affirmed, and therefore know in what particular cases the proposition may be applied.

3. This consideration of propositions, respecting the manner in which the predicate is affirmed of the subject, gives rise to the division of them into absolute and conditional. Absolute propositions are those wherein we affirm some property inseparable from the idea of the subject, and which therefore belongs to it in all possible cases : as, God is infinitely wise ; virtue tends to the ultimate happiness of man. But where tile predicate is not necessarily connected with the idea of the subject, unless upon some consideration distinct from that idea, there the proposition is called conditional. The reason is from the supposition annexed, which is of the nature of a condition, and may be expressed as such, thus : If a stone is exposed to the rays of the sun, it will contract some degree of heat; if a river runs in a very declining channel, its rapidity will constantly increase.

4. There is not any thing of greater importance in philosophy than a due attention to this division of propositions. If we are careful never to affirm things absolutely but where the ideas are inseparably conjoined, and if in our other judgments we distinctly mark the conditions which determine the predicate to belong to the subject, we shall be loss liable to mistake in applying general truths to the particular concerns of human life. It is owing to the exact observance of this rule that mathematicians have been so happy in their discoveries, and that what they demonstrate of magnitude in general may be applied with ease in all obvious occurrences.

■). The truth of it is, particular propositions are then known to be true, when we can trace

their connexion with universals; and it is iiccord-ingly the great business of science to find out general truths that may be applied with safety m ull obvious instances. Now tiie great advantage arising from determining with care tlie conditions upon which one idea may be affirmed or denied of another is this : that thereby i)articular propositions really become universal, may he introduced with certainty into our reasonings, and serve as standards to conduct and regulate our judgments. To illustrate this by a familiar instance : if we say, some water acts very forcibly; the proposition is particular: and, as the conditions on which this forcible action depends are not mentioned, it is as yet uncertain in what cases it may be applied. Let us then supply tiiese conditions, and the proposition will tun thus : Water, conveyed in sufficient quantity along a steep descent, acts very forcibly. Here we have a universal judgment, inasmuch as the pre-(iicaie forcible action may be ascribed to all water under the circumstances mentioned. Nor i-i it less evident that the proposition in tiiis new lunn is of easy aj)plication ; and in fact we tind that men do apply it in instances where the forcible action of water is required; as in corn-iiiills and many other works of art.

Sf.ct. V. — Of Simple and Compound Piio—

POSITIONS.

1. Hitherto we have treated of propositions, where only two ideas are compared together. Tiiese are in the general called simple ; because, having but one subject and one predicate, they arc the effect of a simple judgment that admits of no subdivision. But if several ideas offer themselves to our tlioughts at once, whereby we are led to affirm the same thing of different objects, or different things of the same object, ihe propositions expressing these judgments are called compound; because they may be resolved into as many others as there are subjects or predicates in the whole complex determination of the mind. Thus, God is infinitely wise and infinitely powerful. Here there are two predicates, infinite wisdom and infinite power, both affirmed of the same subject; and accordingly the proj)osition may be resolved into two o-lhers, affirming these predicates severally. In like manner, in the proposition, Neither kings nor people are exempt from death ; the predicate is denied of both subjects, and may tlierefore be

separated from them in distinct propositions. Nor is it less evident that, if a complex judgment consists of several subjects and predicates, it may be resolved into as many simple propositions as are the number of different ideas compared together. Riches and honors are dipt to elate the mind, and increase tlie number of our desires. In this judgment there are two subjects and two predicat'is, and it is at the same time ap]iaient that it may be resolved into four distinct propositions. Riches arc a])t to elate the mind. Riches are apt to increase the number of our desires. And so oi' honors.

2. Logicians have divided these compound jiropositions into many different classes ; but not with a due regard to tiicir proper definition. Thus conditionals, causals, relatives, &.c., are

mentioned as so many distinct species of this kind, though in fact they are merely simple propositions. To give an instance of a conditional: If a stone is exposed to tlie rays of the sun, it will contract some degree of heat. Here we have but one subject and one predicate ; for the complex expression, a stone exposed to the rays of the sun, constitutes the proper subject of this proposition, and is no more tlian one determined idea. The same tiling happens in causals. Rehoboam was unhappy because he followed evil counsel. There is iiere an appearance of two propositions arising from the complexity of the expression ; but, when we consider the matter more attentively, it is evident that we have but a single subject and predicate. The pursuit of evil counsel brouglit misery upon Rehoboam. It is not enough, therefore, to render a proposition compound, that the subject and predicate are complex notions, requiring sometimes a whole sentence to express tliem ; for in this case the comparison is still confined to two ideas, and constitutes what we call a simple judgment. But wliere there are several subjects or predicates, or both, as the affirmation or negation maybe alike extended to them all, the proposition expressing such a judgment is truly a collection of as many Simple ones as there are different ideas compared. Confining ourselves therefore to this more strict and just nouon of compound propositions, they are all reducible to two kinds, *viz.* copulatives and disjunctives.

3. A copulative proposition is, where the subjects and predicates are so linked togetlier, that they may be all severally affirmed or denied one of another. Of this nature are the examples of compound propositions given above. ' Riches and honors are apt to elate the mind, and increase the number of our desires.' ' Neither kings nor people are exem])t from death. In the first of these the two predicates

may be affirmed severally of each subject, whence we have four distinct propositions. The otlier furnishes an example of the negative kind, where the same predicate, being disjoined from botli sulijects, may be also denied of them in separate propositions.

4. The other species of compound propositions are those called disjunctives ; in which, comparing several predicates with the same subject, we affirm that one of them necessarily belongs to it, but leave the particular predicate undetermined. If any one, for example, says, ‘ This world either exists of itself, or is the work of some all-wise and powerful cause ;’ it is evident that one of the two predicates must belong to the world; but, as the proposition determines not which, it is therefore of the kind we call disjunctive. Such too are the following : ‘ The sun either moves round tiie earth, or is the centre about which tlie earth revolves.’ ‘ Friendship finds men equal, or makes them so.’ It is the nature of all propositions of this class, supposing them to be exact in pointof form, that, upon determining the particular predicate, the rest are of course to be removed ; or, if all the predicates but one are removed, that one necessarily takes place. Thus, in the example given above, if we allow the wo.-ld to be the work of some wise and

powertul cause, we of course deny it to be self- •ixistent ; or, it’ we deny it to be self-existent, we iiuist necessarily admit that it was produced by some wise and powerful cause. Now this particular manner of linking the predicates togetlierˆ so that the establishing one displaces all the rest, or the excluding all but one necessarily establishes that one, cannot otherwise be effected than by means of disjunctive particles. And lience propositions of this class take their names from these particles which make so necessary a jiart of them, and indeed constitute their very nature considered as a distinct species

Skct. VI. — Of the Division of Propositions INTO Self-Evident and Demonstrable.

1. When any proposition is offered to the view of the mind, if the terms in which it is expressed be understood, upon comparing the

ideas togetlier, the agreement or disagreement asserted is eitiier immediately perceived, or found to iie be-yond the present reach of the understanding. In the first case, the proposition is said to be self-cvidtnt, and admits not of any proof, because a hare attention to the ideas themselves produces full conviction and certainty ; nor is it possible to call in any thing more evident by way of confirmation. But, where the connexion or repugnance comes not so readily under tiie mspection of the mind, there we must have recourse to reasoning ; and if by a clear series of proofs we can make out the truth proposed, so that self-evidence shall accompany every step of the procedure, we are then able to demonstrate what we assert, and the proposition itself is said to be deinonstrable. \ hen we atfirm, for instance, that ‘ ii is impos-sii)le for the same tiling to be and not to be ;’ whoever understands the terms made use of perceives at first glance the trutli of what is asserted, nor can he by any efforts bring himself to believe tiie contrary. The juoposition therefore is self-evident, and such that it is impossible by reasoning to make it plainer; because there is no truth more obvious or better known, from which as a consequence it may be deduced. But if we say, tiiis world had a beginning; the assertion is in-deed equally true, but shines not forth with the same degree of evidence. We find great difficulty in conceiving how tlie world could have a beginning : and are not brought to a free and full consent, until by reasoning we arrive at a clear view of the absurrlity involved in the contrary supposition, lience thi.s proposition is of the kind we call demonstrable, as its trudi is not immediately perceived by the mind, but yet may \n-. made to appear by means of others more obvious, whence it follows as an unavoidable consequence.

2. From what has been siiid, it appears, that reasoning is employed only about demonstrable propositions, and that our intuitive or self-evi- dent perceptions are the foundation on which it rests.

:i. Self-evident propositions furnish the first principles of reasoning ; and it is certain, that if in our researciies we employ only sucli principles • IS have the character of seH-evidcncc, and api)ly them accordin;; to the rules to be aftcrsvards explained, we shall le in no danger of error in

advancing from one discovery to anotiier. i’Or this we may apjx’al to the w ntings <jf the mathematicians, which, being conducted by the express model here mentioned, are an incontestable proof of the firmness and stability of human knowledge, wlien built upon so sure a foundation. For not only have the propositions of this science stood

the test of ages, but are found attended with that invincible evidence, which forces the assent of all who duly consider the proofs upon which they are established. Since the mathematicians are universally allowed to have adopted the right method of arriving at unknown truths, and have been the happiest in the choice as well as in the application of their principles, it may not be amiss to explain here their method of stating self-evident propositions, and applying tiiem to the purposes of demonstration.

4. Fir.st then, it is ‘o be observed, tliat they have been very careful in ascertaining their ideas and fixing the signification of their terms. F’or this purpose they begin with definitions, in which the meaning of their words is so distinctly explained, that they cannot fail to excite in the mmd of an attentive reader the very same ideas tiiat are annexed to them by the writer. And in-deed the clearness and irresistible evidence of mathematical knowledge is owing to nothing so much as te this care in laying the foundation. Where the relation between any two ideas is accurately and justly traced, it will not be difficult for another to comprehend that relation, if in setting himself to discover it he brings the very same ideas into comparison. But if, on the contrary, he affixes to his words ideas difi’erent from those that were in the mind ;of him who first advanced the demonstration ; it is evident that, as the same ideas are not compared, the same relation cannot subsist, so that a proposition will be rejected as false, which, had the terms been rightly understood, must have appeared incontestably true. A square, for instance, is a figure bounded by four equal right lines, joined together at riiˆht angles. Here the nature of the angles makes no less a part of the idea than the equality of the sides; and many properties demonstrated of the square flow entirely from its being a rectangular figure. If, therefore, we suppose a man, who has formed a partial notion of a square, comprehending only the ecjuality of its sideˆ, wiliiuut regard to the angles, reading some demonstration that imjilies also this latter consideration; it is plain he would reject it as nut universally true, as it could not be ajjplied where the sides were joined togetlier at equal angles. I’ˆor this last figure, answering still to his idea of a scpiare, would be yet found without the property assigned to it in the proposition. But, if he comes afterwards to correct his notion, he will then readily own the truth and justness of the demonstration.

i>. We see, therefore, that nothing contributes S(.) much to the improvement and certainty of Iiuinan knowledge as having determinate ideas, and kccjiing them steadily and inˆ■ari■.)bly in al! our disoouises and reasonings. On tliis account mathematicians always begin liy defining their terms, and distinctly unfolding the notions

they arc intended to expre.ˆs. Hence sucli as apply

tlieniselves to tiiesc studies have exactly the same views of t'iint;s ; and, bringing always the very same ideas into comparison, readily discern the relation between them. It is likewise of importance, in every demonstration, to express the same idea invariably by the same word. From this practice mathematicians never deviate; and if it be necessary in their demonstrations, where the reader's comprehension is aided by a diagram, it is much more so in all reasonings about moral or intellectual truths, where the ideas cannot be represented by a diagram. The observation of this rule may sometimes be productive of ill-sounding periods ; but, when truth is the object, sound ought to be disregarded.

6. When the mathematicians have taken this first step, and made known the ideas whose relations tliey intend to investigate ; their next care is, to lay down some self-evident truths, which may serve as a foundation for their future reasonings. And here indeed they proceed with remarkable circumspection, admitting no principles but such as flow immediately from their definitions, and necessarily force themselves upon a mind in any degree attentive to its ideas. Thus a circle is a figure formed by a right line moving round some fixed point in the same plane. The fixed point round which the line is supposed to move, and where one of its extremities terminates, is called the centre of the circle. The other extremity, which is conceived to be carried round until it returns to the ppint whence it first set out, describes a curve running into itself, and termed the circumference. All right lines drawn from the centre to the circumference are called radii. From these definitions compared, geometricians derive this self-evident truth, ' that the radii of the same circle are all equal to one another.'

7. We now observe, that, in all propositions, we either affirm or deny some property of the idea that constitutes the subject of our judgment, or we maintain that something may be done or effected. The first sort are called speculative propositions, as in the example mentioned above, 'The radii of the same circle are all equal one to another.' The

others are called practical, for a reason quite obvious ; thus, that a right line may be drawn from one point to another, is a practical proposition, inasmuch as it expresses that something may be done.

8. From this twofold consideration of propositions arises the twofold division of matliematical principles into axioms and postulates. By an axiom they understand any self-evident speculative truth ; as, 'That the whole is greater than its parts : ' ' That things equal to one and the same thing are equal to one another.' But a self-evident practical proposition is what they call a postulate. Such are those of Euclid : ' That a finite right line may be continued directly forwards;' ' That a circle may be described about any centre with any distance.' And here we are to observe, that, as in an axiom the agreement or disagreement between the subject and predicate must come under the immediate inspection of the mind, so in a postulate, not only the possibility of the thing asserted must he evident at first view, but also the manner in which it niiiy

be effected. For, wiiere this manner is not of itself apparent, the proposition ccmes under the notion of the demonstrable kind, and is treated as such by geometrical writers. Thus, ' to draw a right line from one point to another,' is assumed by Euclid as a postulate, because the manner of doing it is so obvious, as to require no previous teaching. But then it is not equally evident, how we are to construct an equilateral triangle. For this reason he advances it as a demonstrable proposition, lays down rules for the exact performance, and at the same time proves, that, if these rules are followed, the figure will be justly described.

9. This leads us to notice, that as self-evident truths are distinguished into different kinds, according as they are speculative or practical, so is it also with demonstrable propositions. A demonstrable speculative proposition is by mathematicians called a theorem. Such is the famous forty-seventh proposition of the first book of the Elements, known by the name of the Pythagoric theorem, from its supposed inventor Pythagoras, *viz.* ' That, in every right-angled triangle, the square described upon the side subtending the right angle is equal to both the squares described upon the sides containing the right angle.' On the other hand, a demonstrable practical proposition is called a problem ; as where Euclid teaches us to describe a square upon a given right line.

10. Besides the four kinds of propositions already mentioned,

mathematicians have also a fifth, known by the name of corollaries. These are usually subjoined to theorems or problems, and differ from them only in tliis, that they flow from what is there demonstrated in so obvious a manner as to discover their dependence upon the proposition whence they are deduced, almost as soon as proposed. Thus Euclid having demonstrated, ‘ that in every rightlined triangle all the three angles taken together are equal to two right angles,’ adds, by way of corollary, ‘ that all the three angles of any one triangle taken together are equal to all the three angles of any other triangle taken together : ‘ which is evident at first sight; because in all cases they are equal to two ri<j;ht ones, and things equal to one and the same thing are equal to one another.

11. The scholia of mathematicians are indifferently annexed to definitions, propositions, or corollaries: and answer the same purposes as annotations upon a classic author. For in them occasion is taken to explain whatever may ap-pear intricate and obscure in a train of reasoning ; to answer objections ; to teach the application and uses of propositions; to lay open the original and history of the several discoveries made in the science ; and, in a word, to acquaint us with all such particulars as deserve to be known, whether considered as points of curiosity or profit.

PART III.

OF REASONING.

Sect, I. — Of Reasoning in general, and the Parts of which it consists.
1 . It often happens, in comparing ideas together, that their agreement or disagreement cannot

be discerned at first view, especially it’ they are of such a nature as not to admit of an exact application one to another. When, for instance, we compare two figures of a different make, in order to judge of their equality or inequality, it is plain that, by barely considering the figures themselves, we cannot arrive at an exact

determination ; because, by reason of their disagreeing forms, it is impossible to put them together, so that their several parts shall mutually coincide. Here then it becomes necessary to look out for some third idea that will admit of such an application as the present case requires ; wherein if we succeed, all difficulties vanish, and the relation we are in quest of may be traced with ease. Thus rightlined figures are all reduced to squares, by means of which we can measure their areas, and determine exactly their agreement or disagreement in point of magnitude.

2. But how can any third idea serve to discover a relation between two others ? The answer is, by being compared severally with these others ; for such a comparison enables us to see how far the ideas witli which this third is compared are connected or disjoined between themselves. In the example mentioned above of two rightlined figures, if we compare each of them with some square whose area is known, and find the one exactly equal to it, and the other less by a square inch, we immediately conclude that the area of the first figure is a square inch greater than that of the second. The manner of determining the relation between any two ideas, by the intervention of some third with which they may be compared, is that which we call 7-caso)ihig ; and is indeed the chief instrument by which we push on our discoveries, and enlarge our knowledge. The great art lies in finding out such intermediate ideas, as, when compared with the others in the question, will furnisli evident and known truths; because, as will afterwards appear, it is only by means of them that we arrive at the knowledge of what is hidden and remote.

3. Hence it appears, that every act of reasoning necessarily includes three distinct judgments ; two wherein the ideas whose relation we want to discover are severally compared with the middle idea, and a third wherein they are themselves connected or disjoined, according to the result of that comparison. Now, as in the second part of logic our judgments, when put into words, were called propositions, so here in the third part the expressions of our reasonings are termed syllogisms. Hence it follows, that as every act of reasoning implies three several judgments, so every syllogism must include three distinct propositions. When a reasoning is thus put into words, and a])pears in form of a syllogism, the intermediate idea, made use of to discover the agreement or disagreement we search for, is called the middle term ; and the two ideas themselves, with which this third is compared, go by the name of the extremes.

4. But as these things are best illustrated by examples; let us, for instance, set ourselves to enquire whether men are accountable for

their actions. As the relation between the ideas of men and accountableness comes not within the immediate view of the mind, our first care must

be to find out some third idea that will enable us the more easily to discover and trace it. A very small measure of reflection is sutticient to inform us, that no creature can be accountable for his actions, unless we suppose him capable of distinguishing the good from the bad; that is, unless we suppose him possessed of reason. Nor is this alone sufficient. For what would it avail him to know good from bad actions, if he had no freedom of choice, nor could avoid the one and pursue the other? Hence it becomes necessary to take in both considerations in the present case. It is at the same time equally apparent, that wherever there is this ability of distinguishing good from bad actious, and of pursuing the one and avoiding the other, tliere also a creature is accountable. We have then obtained a third idea, with which accountableness is inseparably connected, *viz.* reason and liberty; which are here to be considered as making up one complex conception. Let us now take this middle idea, and compare it with, the other term in the question, viz, man, and we all know by experience that it may be affirmed of him. Having thus by means of the intermediate idea formed two several judgments, *viz.* that man is possessed of reason and liberty ; and that reason and liberty imply accountableness ; a third obviously and necessarily follows, *viz.* that man is accountable for his actions. Here then we have a complete act of reasoning, in which, according to what has b?ei) already observed, tliere are three distinct judgments ■ two that may be styled previous, inasmuch as they lead to tlie other, and arise from comparing the middle idea with the two ideas in the question ; the third is a consequence of these previous acts, and flows from combining the extreme ideas. If now we put this reasoning into words, it exhibits what logicians term a syllogism : and when proposed in due form runs thus :: — ‘ Every creature possessed of reason and liberty is accountable for his actions. — Man is a creature possessed of reason and liberty ; — Therefore man is accountable for his actions.’

5 In this syllogism we may observe, that there are three several propositions expressing the tiiree judgments implied in the act of reasoning; and so disposed as to represent distinctly what passes within the mind in tracing the more distant relations of its ideas. The first two propositions an-swer the two previous judgments in reasoning, and are called the premises, because they are placed before the other. The third is termed the conclusion, as being gained in

consequerce of wiiat was asserted in the premises. We are also to remember, that the terms expressing the two ideas wliose relations we enquire after, as iierc man and accountableness, are in general called the extremes; and that the intermediate idea, by means of which the relation is traced, *viz.* a creature possessed of reason and liberty, takes the name of the middle term. Hence it follows, that by the premises of a syllogism we are always to understand the two propositions where the middle term is respectively compared with the extremes; for these constitute the previous judgments, whence th(; truth wc are in quest of is by reasoning deduced. The conclusion is thatotiicr

proposition, in wliicli tlie extremes tlieniselves are joined or separated agreeably to what appears upon ilie above comparison.

6. The conclusion is made up of the extreme terms of the syllogism : and the extreme, which serves as the predicate of the conclusion, goes by the name of tlie major terni : the other extreme, which makes the subject in the same proposition, is called the minor term. From this distinction of the extremes arises also a distinction between the premises, where these extremes are respectively compared witii the middle term. That proposition which compares the greater extreme, or the predicate of the conclusion, with the middle term, is called the major proposition: the otlier, wlierein the same midille term is compared with the subject of the conclusion or less extreme, is called the minor proposition. All this is obvious from the syllogism already given, where tlie conclusion is, man is accountable for Jiis actions. For here tlie predicate, accountable for his actions, being connected with the middle term in the first of the two premises, every creature possessed of reason and liberty is accountable for his actions, gives what we call the major proposition. In the second of the premises, man is a creature possessed of reason and liberty, we find the less extreme, or subject of the conclusion, *viz.* man, connected with the same middle term, whence it is known to be the minor])roposition. When a syllogism is proposed in due form, the major proposition is always placed first, the minor next, and the conclusion last.

7. These things premised, we may define reasoning to be an act or operation of the mind, deducing some unknown proposition from other previous ones that are evident and known. These previous propositions, in a simple act of reasoning, are only two in number; and it is always re- <iuired that they be of themselves ajiparent to the understanding, so that we assent to and perceive the trutii of tliem as soon as proposed. In the syllogism given above, tlie premises are supposed lo be self-evident truths ; otherwise the conclusion could not be inferred by a single act of reasoning. If, for instance, in the major, ‘ every creature possessed of reason and liberty is accountable for his actions,’ the connexion between tlie subject and predicate could not be perceived by a bare attention to the ideas themselves; it is evident tliat this proposition would no less require a proof than the conclusion deduced from it. In this case a new middle term must be sought, to trace the connexion here supposed; and this of course furnishes another syllogism, by which having established the proposition in question, we are then, and not before, at liberty to use it in any succeeding train of reasoning. And should it so happen, that in this second essay tiiere were still some previous proposition whose truth did not appear at first sight, we must then have recourse to a third syllogism, to lay open that truth to the mind : because, so long as the premises remain uncertain, the conclusion built upon them must be so too. When, by conducting our thoughts in this manner, we at last arrive at some syllogism wliere the previous propositions are intuitive truths, ilie mind then res’s in full security • as porccivuig that the several conclusions it has passed through, staud upon the immoveable foundations of self-evi- dence.

8. We see, therefore, that, to infer a conclusion by a single act of reasoning, the premises must be intuitive])ropositions. Where they are not, previous syllogisms are required; in which case reasoning becomes a complicated act, takiiic: in a variety of successive steps. This frequently happens in tracing the more remote relation of our ideas; where, many middle terms being called in, the conclusion cannot be made out but in consequence of a series of syllogisms following one another in train. Bat although, in this concatenation of propositions, those that form the premises of the last syllogism are often considerably removed from self-evidence ; yet, if we trace the reasoning backwards, we shall find them the conclusions of previous syllogisms, whose premises approach nearer and nearer to intuition in proportion as we advance, and are found at last to terminate in it. And if, after having thus performed a demonstration, we take it the contrary way ; and observe how the mind, setting out with intuitive perceptions, couples them togetlier to form a conclusion ; how, by

introducing this conclusion into another syllogism, it stdl advances one step farther; and so proceeds, making every new discovery subservient to its future progress ; we shall then perceive clearly, that reasoning is no more than an orderly combination of those simple acts which we have already so fully explained.

9. Thus we see that reasoning, beginning with first principles, rises gradually from one judgment to another, and connects them in such a manner, that every stage of the progression brings with it intuitive certainty. And now we may clearly understand the definition given above of tills distinguishing faculty of the human mind. Reason, we have said, is the ability of deducing unknown truths from])riuciples or propositions that are already known. This evidently appears by the foregoing account, where we see that no proposition is admitted into a syllogism, to serve as one of the previous judgments on which the conclusion rests, unless it is itself a known and established truth, whose connexion with self-evident principles has been already traced.

Sect. II. — Ox the sEVEa.\L Kinds of Rtason—

IKG ; AND FIRST OF THAT BY WHICH WE DtTEIi—

MiNE THE Genera and Si'ecies of Things.

1. All the aims of human reason may in general be reduced to these two : 1. To rank things under those universal ideas to which they truly belong; and, 2. To ascribe to them their several attributes and properties in consequence of that distribution.

2. One great aim of human reason is to dete-mine the genera and species of things. We have seen, in the first part of this treatise, how the mind proceeds in framing general ideas. We have also seen, in the second part, how, by means of dicso general ideas, we arrive at universal propositions. Now, as in these universal propositions we aftirm some property of a genus or species, it is plain that we cannot ap] > ly this property to particular objects till we have first

dcterminod wliPthpr ihey are rompreliendeH under tliat general idea of wliicli tlie properly is affirmed. Tims there are certain properties belonging to all even numbers, which cannot how-oyer be applied to any particular number, until we have first discovered it to be of the species expressed by that name. Hence reasonincf begins with referring things to their several divisions .■\nd classes in the scale of our ideas; and, as these divisions are all distinguished by particular names, we hereby learn to apply the terms expressing general conceptions to such particular objects as come under our immediate observation.

3. Now, to arrive at these conclusions, by which the several objects of perception are brought under general names, two things are manifestly necessary. First, that we take a view of the idea itself denoted by that general name, and carefully attend to the distinguishing marks which serve to characterise it. Secondly, that we compare this idea with the object under consideration, observing diligently wherein they agree or differ. If the idea is found to correspond wit'i the particular object, we then without hesitation apply to it the general name ; but, if no such correspondence intervenes, the conclusion must necessarily take a contrary turn. Let us, for u- st.mce, take the number eight, and consider by what steps we are led to pronounce it an even number. First, then, we call to mind the idea signified by the expression an even number, *viz.* that it is a number divisible into two equal parts. We then compare this idea with the number eight, and, finding them to agree, see at once the necessity of admitting the conclusion. These several judgments, therefore, transferred into language, and reduced into the form of a syllogism, appear thus : — ' Every number that may be divided into two equal parts is an even num-ber : — The number eight may be divided into two equal parts; — Therefore the number eight is an even number.

4. Here it may be observed, that where the general idea, to which particular objects are referred, is very familiar to the mind, and frequently in view ; this reference, and the application of the general name, seem to be made witliout any apparatus of reasoning. When we see a horse in the fields, or a dog in the street, we readily apply the name of the species; habit, and a familiar acquaintance with the general idea, suggesting it instantaneously to the mind. We are not however to imagine on this account that the understanding departs from the usual rules of just thinking. A freciuent repetition of acts begets a habit; and habits arc attended with a certain promptness of execution, tiiat prevents our observing the several steps and gradations by which any course of action is accomplislicd. FJut in

other instances, where we judge not by precontracted habits, as when the general idea is very complex, or less familiar to the mind, we always proceed according to the form of reasoning estalilished above. A goldsmith, for instance, who is in doubt as to any piece of metal, whether it be of the species called gold, first examines its properties, and then comparing them with the

eneral idea signified by that name, if he find.! a

perfect correspondence, no longer hesitates under what class of metals to rank it.

5. Nor let it be imagined that our researches here, because in appearance bounded to the imposing of general names upon particular objects, are therefore trivial and of little consequence. Some of the most considerable debates among mankind, and such too as nearly regard their lives, interest, and happiness, turn wholly upon this article. Is it not the chief employment of our several courts of judicature to determine, in particular instances, what is law, justice, and equity? Of what importance is it in many cases to decide aright, whether an action shall be termed murder or manslaughter ! We see then that no less than the lives and fortunes of men often dejjend upon these decisions. The reason is plain. Actions, when once referred to a general idea, draw after them all that may be affirmed of that idea ; insomuch tliat the determining the species of actions is all one with determining what proportion of praise or dispraise, commendation or blame. Sec, ought to follow them. For, as it is allowed tliat murder deserves death, by bringing any particular action under the head of murder, we of coiirse decide the punishment due to it.

6. But the great importance of this branch of reasoning, and the necessity of care and circumspection in referring particular objects to general ideas, is still farther evident from the practice o'. liie mathematicians. Every one, who has read Euclid, knows that he frequently requires us to draw lines through certain points, and according to such and such directions. The figures thence resulting are often squares, parallelograms, .or rectangles. Yet Euclid never supposes this frori their bare appearance, but always demonstrates it upon the strictest principles of geometry. Nor is the method he takes in any thing differen'. from that described above. Thus, for instance, having defined a square to be a figure boundea by four equal sides joined togedier at right angles ; when such a figure arises in any

construction previous to the demonstration of a proposition, yet he never calls it by that name until he has sliown that its sides are equal, and all its angles right ones. Now this is apparently the same form of reasoning we have before exhibited in proving eight to be an even number.

7. Having thus explained the rules by which we are to conduct ourselves in ranking jjarticular objects under general ideas, and shown Uieir conformity to the practice and manner of the mathematicians, it remains only to observe, that the true way of rendering this part of knowledge both easy and certain, is, by habituating ourselve to clear and determinate ideas, and keeping then steadily annexed to their respective names. For as all our aim is to apply general words aright if these words stand for invariable ideas diat are perfecdy known to the mind, and can be readily distinguished upon occasion, there will be little danger of mistake or error in our reasonm-s. Let us sujˆpo.se diat, by examining any object, and carrying our attention successively from one]3art to another, we have acquainted ourselves witli the several particulars observable in it. If among these we find such as constitute some

gener.'.l iiica, framed and setikd beforehand by the understanding, and disiinguished by a j)articular name, the resemblance thus known and perceived necessarily determines tlie species of the object, and thereby gives it a right to the name by which that species is called. Tims four equal sides, joined together at right angles, make up the notion of a square. As this is a tixed and invariable idea, witliout which the general name cannot be applied, we never call any particular figure a square until it appears to have these several conditions ; and, contrarily, wherever a figure is found with these conditions, it necessarily takes the name of a square. The same will be found to hold in all our other reasonings of this kind, where nothing can create any difficulty but the want of settled ideas. If, for instance, we have not determined within ourselves the precise notion denoted by the word manslaughter, it will be impossible for us to de-cide whetlier any particular action ought to bear that name : because, however nicely we examine the action itself, yet, being strangers to the general idea with which it is to be compared, we are utterly unable to judge of their agreement or disagreement. But if we take care to remove this obstacle, and distinctly trace the two ideas under consideration, all difficulties vanish, and the resolution becomes both easy and certain.

8. Thus we see of what importance it is towards the improvement and certainty of human knowledge, that we accustom ourselves to clear and determinate ideas, and a steady application of words.

Sf.ct. III. — Of Reasoning as it Regards the Powers and Properties of Thikgs, and THE Relations of our General Ideas.

1. We now come to the second great end which men have in view in their reasonings : namely, the discovering and ascribing to things their several attributes or properties. And here it will be necessary to distinguish between reasoning as it regards the sciences, and as it concerns common life. In tlie sciences our reason is employed chiefly about universal truths, it being by them alone that the bounds of human knowledge are enlarged. Hence the division of things into various classes, called otherwise genera and species. For these

universal ideas being set up as the representatives of many particular things, whatever is affirmed of them may be also affirmed of all the individuals to which they belong. Murder, for instance, is a general idea, representing a certain species of human actions. Reason tells us that the punishment due to it is death. Hence every particular action, coming under tlie notion of murder, has tlie punishment of death allotted to it. Here then we apply the general truth to some obvious instance ; and this is what properly constitutes tlie reasoning of common life. For men, in their ordinary transactions and intercourse one with another, have, for the most part, to do only with jiarticular objects. Our friends and relations, their characters and behaviour, the constitution of the several bodies that surround us, and the uses to which they may be applied, are what cliieflv engage our attention. In all these we

reason about particular things; and the whole result of our reasoning is, the applying the general truths of the sciences in the ordinary transactions of human life. Wiien we see a viper, we avoid it. Wlierever we have occasion for the forcible action of water, to move a body that makes considerable resistance, we take care to convey it in such a manner that it shall fall upon the object with impetuosity. Now all this happens in consequence of our familiar and ready application of these two general truths. 'The bite of a viper is mortal.' ' Water, falling upon a body with impetuosity, acts very forcibly towards setting it in motion.' In like manner, if we set ourselves to consider any particular character, in order to determine the share of praise or dispraise that belongs to it, our great concern is to ascertain exactly the proportion of virtue and vice. The reason is obvious. A just determination, in all cases of this kind, depends entirely upon an application of these general maxims of morality ; ^"irtuous actions deserve praise; vicious actions deserve blame.

2. Hence it appears that reasoning, as it regards common life, is no more than the ascribing the general properties of things to those several objects with which we are mere immediately concerned, according as they are found to be of that particular division or class to which the properties belong. The steps then by which we proceed are manifestly these. First, we refer the object under consideration to some general idea or class of things. We then recollect the several attributes of that general idea. And, lastly, ascribe all those attributes to the present object. Thus, in considering the character of Sempronius, if we find it lo be of the kind called virtuous, when vve, at the same time, reflect that a virtuous character is deserving of

esteem, it naturally and obviously follows that Sempronius is so too. These thoughts, put into a syllogism, in order to exhibit tlie form of reasoning here required, run thus: — ‘Every virtuous man is worthy of esteem. — Sempronius is a virtuous man ; — Therefore Sempronius is worthy of es-teem.’

3. By this syllogism it appears, that, before we affirm any thing of a particular object, that object must be referred to some general idea. Sempronius is pronounced worthy of esteem only in consequence of his being a virtuous man, or coming under that general notion. Hence we see the necessary connexion of the various parts of reasoning, and the dependence they have one upon another. The determining the genera and species of tilings is one exercise of human rea-son ; and here we find that this exercise is the fust in order, and previous to the other, which consists in ascribing to them their properties, and ielations. But when we have taken this previous step, and brought particular objects under general names ; as the properties we ascribe to them are no other than those of the general idea, it is plain that, in order to a successful progress in this part of knowledge, we must thoroughly acquaint ourselves with the several relations and attributes of these our general ideas. When this is done, the other part will be easy, and requires scarcely any l.ibor

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■■]■ thought, as being no more than an application of the general form of reasoning represented in tiie foregoing syllogism. Now, as we have already sufficiently shown how we are to proceed in determining the genera and species of things, which, as we have said, is the previous step to this second branch of human knowledge, all that 13 farther wanting towards a due explanation of it is, to offer some considerations as to the man-ner of investigating the general relations of our ideas. This is the highest exercise of tne powers of the understanding, and that by means of which we arrive at the discovery of universal truths ; so that our deductions in this way constitute that particular species of reasoning which regards principally the sciences.

4. But, that we may conduct our thoughts with some order and method, we shall begin with observing, that the relations of our general ideas are of two kinds : either such as immediately discover themselves, upon comparing the ideas one with another ; or such as, being more remote and distant, require art and contrivance to bring them into view. The relations of the first kind furnisli us with intuitive and self-evident truths . those of the second are traced by reasoning, and due application of intermediate ideas. It is of this last kind that we are to speak here, having discussed the other in the second part. As, therefore, in tracing tlie more distant relations of things, we must always have recourse to intervening ideas, and are more or less successful in our researches according to our acquaintance with these ideas, and ability of applying them, it is evident that, to make a good reasoner, two things are principally required. 1st, An extensive knowledge of those intermediate ideas, by means of which things may be compared one with another. 2dly, The skill and talent of applying them happily in all particular instances that come under consideration.

5. In order to our successful progress in reasoning, we must have an extensive knowledge of those intermediate ideas, by means of which things may be compared one with another. For as it is not every idea that will answer the pur-y)Ose of our enquiries, but such only as are peculiarly related to the objects about which we reason, so as, by a comparison with them, to furnish evident and known truths ; nothing is more apparent than that the greater variety of conceptions we can call into view, the more likely we are to find some among them that will help us to the truths here required. And, indeed, it holds in

experience, that in proportion as we enlarge our views of things, and grow acquainted with a multitude of different objects, the reasoning faculty gathers strength: for, by extending our sphere of knowledge, the mind acquires a certain force and penetration, as being accustomed to examine the several appearances of its ideas, and observe what light they cast one upon another.

G. This is the reason why, in order to excel remarkably in any one branch of learning, it is necessary to have at least a general acquaintance >vith the whole circle of arts and sciences. All the vai lous divisions of human knowledge are very

nearly related, and, in innumerable instances, serve to illustrate each other. And although it is not to be denied that, by a resolute application to one branch of study, a man may make considerable progress, and acquire some degree of eminence in it ; yet his views will be always narrow and contracted, and he will want that masterly discernment which not only enables us to pursue our discoveries with ease, but also, in laying them open to others, to spread a certain brightness around them. But, when our reasoning regards a particular science, it is further necessary that we more nearly acquaint ourselves with whatever relates to that science. A general knowledge is a good preparation, and enables us to proceed with ease and expedition in whatever branch of learning we apply to. But then, in the minute and intricate questions of any science, we are by no means qualified to reason with advantage until we have perfectly mastered the science to which they belong.

7. We come now to the second thing required, in order to a successful progress in reasoning ; namely, the skill and talent of applying intermediate ideas happily in all particular instances that come under consideration. And here rules and precepts are of little service. Use and experience are the best instructors. For, whatever logicians may boast of being able to form perfect reasoners by book and rule, we find by experience that the study of their precepts does not always add any great degree of strength to the understanding. In short, it is the habit alone of reasoning that makes a reasoner. And, therefore, the true way to acquire this talent is, by being much conversant in those sciences where the art of reasoning is allowed to reign in the greatest perfection. Hence it was that the ancients, who so well understood the manner of forming the mind, always began with mathematics as the foundation of their philosophical studies. Here the understanding is by degrees habituated to truth, contracts insensibly a certain fondness for

it, and learns never to yield its assent to any proposition where the evidence is not sufficient to produce full conviction. Fortius reason Plato has called mathematical demonstrations the cathartics or purgatives of the soul, as being the proper means to cleanse it from error, and to promote that natural exercise of its faculties in which just thinking consists.

8. If, therefore, we would form our minds to a habit of reasoning closely and in a train, we cannot take any more certain method than exercising ourselves in mathematical demonstrations, so as to contract a kind of familiarity widi them. Not that we look upon it as necessary that all men should be deep mathematicians ; but that having acquired the manner of reasoning, which tliat study necessarily l)rings the mind to, they may be able to transfer it to other parts of knowledge, as they shall have occasion.

9. But though the study of mathematics be of all others the mosˆ useful to form the mind, and give it an early relish ibr truth, yet ought not otiier parts of philosophy to be neglected. For there also we meet with many opportunities of exercising the powers of the understanding; ar-d the variety of subjects naturally leads us to olv

serve all tliose difierent turns cf ihiiikiiii; tliut are peculiarly adapted to tlic several ideas we examine, and tlie truth we searcli after. A mind thus tiaiiied acquires a certain mastery over its own thoughts, insomuch tliat it can range and model ihem at pleasure, and call such into view as best suit its present designs. Now in this the whole art of reasoning consists; from among a iˆreat variety of different ideas to single out those liiat are most proper for the business in hand, and to lay them together in such order, that from plain and easy beginnings, by gentle degrees, and a continued train of evident truths, we may be insensibly led on to such discoveries as at our first setting out appeared beyond the reach of the human understanding. For this purpose, besides the study of mathematics before recommended, we ought to apply ourselves diligently to the reading of such authors as have distmguished themselves for strength of reasoning, and a just

and accurate manner of thinking. For it is observable, that a mind exercised and lial)ituated to truth seldom rests satisfied in a bare contemplation of the arguments offered by others; but will be frequently trying its own strength, and pursuing its discoveries upon the plan it is most accu.stomed to. Thus we insensibly contract a habit of tracing truth from one stage to another, and of investigating those general relations and properties which we afterwards ascribe to particvilar things, according as we find them comprehended under the abstract ideas to which the properties belong.

Sect. IV. — Of the Forms of Syllogisms.

1 . Having thus given a general notion of syllogisms, and their parts, we shall now enter more particularly into the subject, examine their various forms, and lay open the rules of argumentation proper to each. In the syllogisms above mentioned the middle term is the subject of the major pro])osition, and the predicate of the minor. This disposition, though the most natural and obvious, is not however necessary ; as it often happetis that the middle term is the subject in both the premises, or the predicate in both ; and sometmies, directly contrary to its disj)osition in the preceding sections, the predicate in the major, and the subject in the minor. Hence the distinction of syllogisms into various kinds, called figures by logicians. For figure, according to their use of the word, is nothijig but tlu' order and disposition of the middle term in any syllogism. And, as this disposition is fourfold, so the figures of syllogisms thence arising are four in number. When the middle term is the subject of the major proposition, and the predicate of the minor, we have what is called the first figure : as, ‘ No work of (iod is bad : — The natural passions and appetite? of men are tiie work of God : — Therefore none of them is bad.’ If, on the other hand, it is the predicate of both the premises, the syllogism is said to be the second figtire : as, ‘ Whatever is bad is not the work of God : — All the natural passions and appetites of men are the work of God : — Therefore the natural passions and appetites of men are not bad.’ Again, in the third figure, the mijdle term is the subject of the two premises :

as, ‘ All Africans are black : — All Africans are men : — Therefore some men are black.’ And lastly, by making it the predicate of the major and subject of the minor, we obtain syllogisms in tlie <ourtli figure ; as, ‘ The only being who ought to be worshipped is the Creator and Governor of the world : — The Creator and Governor of the world is God : — Therefore God is the only being who ought to be

worshipped.'

2. But, besides this fourfold distinction of syllogisms, there is a further subdivision of them in every figure, arising from the quantity and quality, as they are called, of the propositions, liy quantity we mean the consideration of pro-l)ositions, as universal or particular ; by quality, as affirmative or negative.

Now as, in all the several dispositions of the middle term, the propositions of which a syllogism consists may be either universal or particular, affirmative or negative, the due determination of these, and so putting them together as the laws of argumentation require, constitute what logicians call tlie moods of syllogisms. Of these moods there is a determinate number to every figure, including all the possible ways in which propositions differing in quantity or quality can be combined, according to any disposition of the middle term, in order to arrive at a just conclusion.

The first figure has only four legitimate moods. The major proposition in this figure must be universal, and the minor affirmative; and it has this property, that it yields conclusions of all kinds, affirmative and negative, universal and particular.

The second figure has also four legitimate moods. Its major proposition must be universal, and one of the premises must be negative. It yields conclusions both universal and particular, but all negative.

The third figure has six legitimate moods. Its minor must always be affirmative ; and it yields conclusions both affirmative and negative, but all particular. These are all the figures whidi were admitted by the inventor of syllogisms ; and of which, so far as we know, the number of legitimate moods has been ascertained, and severally demonstrated. In every figure it will be found uy)on trial that there are sixty-four different moods of syllogism ; and he who thinks if worth while to construct so many in the fourth figure, always remembering that the m.iddle term in each must be the predicate of the major and the subject of the minor proposition, will easily discern what number of these moods are legitimate, and give true conclusions.

Besides the rules that are proper to each figure, Aristotle has given some that are common to all, by which the legitimacy of syllogisms may be tried. These may be reduced to five: 1. There must be only three terms in a syllogism : as each term occurs in two of the propositions, it must be precisely the same in both ; if it be not, the

syllogism is said to have four terms, which makes a vicious syllogism. 2. The middle term must be taken universally in on.e of the premises. 3. Both premises must not be particular propositions, nor both negative. ■1. The conclusion must ha particular, if either

of the premises be particular; and negative, if either of the premises be negjative. 5, No term can be taken universally in the conclusion, if it be not taken universally in the premises.

Far understanding the second and fifth of these rules, it is necessary to observe, that a term is said to be taken universally, not only when it is the subject of a universal proposition, but also when it is the predicate of a neijutive proposition. On the other hand, a term is said to be taken particularly, when it is either the subject of a particular, or tiie predicate of an affirmative proposition.

3. Tliedivisionofsylloijisms, according to mood and figure, respects those especially which are known by the name of plain simple syllogisms; that is, which are bound to three propositions, all simple, and where the extremes and middle term are connected, according to the above rules. But as the mind is not tied down to any one precise form of reasoning, but sometimes makes use of more, sometimes of fewer premises, and often takes in compound and conditional propositions, it may not be amiss to take notice of the different forms derived from this source, and explain the rules by which the mind conducts itself in the use of them.

4. When in any syllogism the major is a conditional proposition, the syllogisni itself is termed conditional. Thus : ‘ If there is a God, he ought to be worshipped : — But there is a God : — Therefore he ought to be worshipped.’ In this example the major, or first proposition, is conditional, and therefore the syllogism itself is also of the same kind. And here we must observe, that all conditional propositions consist of two distinct parts : one expressing the condition upon which the predicate agrees or disagrees with the subject, as in this now before us, if there is a God ; the other joining or disjoining the said predicate

and subject, as here, he ought to be worshipped. The first of these parts, or that which implies the condition, is called the antecedent ; the second, where we join or disjoin the predicate and subject, has the name of the consequent.

5. In all propositions of this kind, supposing them to be exact in point of form, the relation between the antecedent and consequent must ever be true and real ; that is, the antecedent must always contain some certain and genuine condition, which necessarily implies the consequent ; for otnerwise the position itself will be false, and therefore ouuht not to l<e admitted into our reasonings. Hence it folhiws, that when any conditional proposition is assumed, if we admit tlie antecedent of that proposition, we must at the same time necessarily admit the consequent ; but, if we reject the consequent, we are in like manner bound to reject the antecedent. For as the antecedent always expresses some condition which necessarily implies the truth of the consequent ; by admitting the antecedent, we allow of tliat condition, and therefore ouuht also to admit the consequent. In like manner, if it appears that the consequent ou2;ht to he rejected, the antecedent evidently must be so too ; because, as has just been demonstrated, the admitting of

the antecedent would necessarily imply the admission also of the consequent.

6. There are two ways of arguing in hypothetical syllogisms, which lead to a certain and unavoidable conclusion. For as the major is always a conditional proposition, consisting of an antecedent and a consequent ; if the minor admits the antecedent, it is plain that the conclusion must admit the consequent. This is called arguing from the admission of the antecedent to the admission of the consequent, and constitutes that mood or species of hypothetical syllogisms which is distinguished in the schools by the name of the modus ponens, as by it the whole conditional proposition, both antecedent and consequent, is established. Thus : If God is infinitely wise, and acts with perfect freedom, he does nothing but what is best : — But God is infinitely wise, and acts with perfect freedom : — Therefore he does nothing but what is best.' Here we see the antecedent or first part of the conditional proposition is established in the minor, and the consequent or second part in the conclusion ; whence the syllogism itself is an example of the modus ponens. But if now we on the

contrary suppose that the minor rejects the consequent, then it is apparent that the conclusion must also reject the antecedent. In tliis case we are said to arˆue from the removal of the consequent to the removal of the antecedent, and the particular mood or species of syllogism thence arising is called by logicians the modus tollens ; because in it both antecedent and consequent are rejected or taken away, as appears by the following example. ‘ If God were not a being of infinite goodness, neithei would he consult the happiness of his creatures : — But God does consult the happiness of his creatures : — Therefore he is a being of infinite goodness.’

7. These two species take in the whole class of conditional syllogisms, and include all the possible ways of arguing that lead to a legitimate conclusion ; because we cannot here proceed by a contrary process of reasoning, that is, from the removal of the antecedent to the removal of the consequent, or from the establishing of the consequent to the establishing of the atitecedent. For although the antecedent always expresses some real condition, which, once admitted, necessarily implies the consequent, yet it does not follow that there is therefore no other condition • and if so, then, after removing the antecedent, the consequent may still hold, because of some other determination that infers it When we say. If a stone is exposed some time to the rays of the sun, it will contract a certain decree of heat; the proposition is certainly true; and, admitting the antecedent, we must also admit the consequent. But, as there are other ways by which astone may gather heat, it will not follow, from the ceasing of the before-mentioned condition, that therefore the consequent cannot take place. We cannot argue : but the stone has not been exposed to the rays of the sun ; therefore neither has it any degree of heat : for there are ma>iy other ways by which heat misˆht be communicated to it. And, if we cannot argue fion\ the removal of the antecedent to the removal of

tlie coniequent, neither can we from the admission o(tlie consequent to the admission of the antecedent : because, as the consequent may fiow from a great variety of difierent suppositions, the allowing of it

does not determine the precise supposition, but only that some one of tiiem must take place. Thus, in the foregoing propositions, ‘ If a stone is exposed some time to tiie rays of the sun, it will contract a certain degree of heat;’ admitting the consequent, *viz.* that it has contracted a certain degree of heat, we are not therefore bound to admit the antecedent, that it has been some time exposed to the rays of the sim ; because there are many other causes whence that heat may have])roceeded. These two ways of arguing, therefore, hold not in conditional syllogisms.

8. As, from the major being a conditional proposition, we obtain the species of conditional syllogisms; so, where it is a disjunctive pro()0-s’ition, the syllogism to which it belongs is also called disjunctive, as in the following example : — ‘The world is either self-existent, or the work of some finite, or of some infinite being : — But it is not self-existent, nor the work of a finite being : — Therefore it is the work of an infinite Being.’

Now,adisjunctive proposition is that, in which, of several predicates, we aflfirm one necessarily to belong to the subject, to the exclusion of all the rest, but leave that particular one undetermined. Hence it follows that, as soon as we determine the particular predicate, all the rest are of course to be rejected ; or if we reject all the predicates but one, that one necessarily takes place. When, therefore, in a disjunctive syllogism, the several predicates are enumerated in the major ; if the minor establishes any one of these predicates, the conclusion ought to remove all the rest; or if in the minor all the predicates but one are removed, the conclusion must necessarily establish that one. Thus, in the disjunctive syllogism given above, the major affirms one of the three predicates to belong to the earth, *viz.* self-existence, or that it IS the work of a finite, or that it is the work of an infir.ite Being. Two of these predicates are removed in the minor, *viz.* self-existence, and the work of a finite being. Hence the conclusion necessarily ascribes to it the third predicate, and affirms that it is the work of an infinite Being. If we give the syllogism another turn, so that the minor may establish one of the predicates, by affirming the earth to be the production of an infinite Being : then the conclusion must re-move the other two, asserting it to be neither self-existent, nor the work of a finite being. These are the forms of reasoning in these species of syllogisms, the justness of which appears {it first sight: and that there can be no other is evident from the very nature of a disjunctive proposition.

9. In the several kinds of syllogisms hitherto mentioned, we may observe, that the parts are complete ; that is, the three propositions of which they consist are represented in form. But it often happens, that

some one of the premises is not only an evident truth, but also familiar and in the minds of all men ; in which case it is usually omitted, whereby we have an imperfect syllocrism .!iat seems to be madeupofonly two propositions.

Should, we, for instance, argue in this manner : — ‘ Every man is mortal : — therefore every king is mortal : — the syllogism appears to be imperfect, as consisting but of two propositions. Yet it is really complete ; only the minor (every king is a man) is omitted ; and left to the reader to supply, as being a proposition so familiar and evident that it cannot escape him.

10. These seemingly imperfect syllogisms are called enthpnemcs ; and occur very frequently in reasoning, especially where it makes a part of common conversation. Nay, there is a particular elegance in them, because, not displaying the argument in all its parts, they leave somewhat to the exercise and invention of the mind. We are thus put upon exerting ourselves, and seem to share in the discovery of what is proposed to us. Now this is the great secret of fine writing, so to frame and put together our thoughts as to give full play to the reader’s imagination, and draw him insensibly into our views and course of reasoning. This gives a pleasure not unlike to that which the author himself feels in composing. It besides shortens discourse, and adds a certain force and liveliness to our arguments, when the words in which they are conveyed favor the natural quickness of the mind in its operations, and a single expression is left to exhibit a whole train of thoughts.

11. But thete is another species of reasoning with two propositions, which seems to be complete in itself, and where vve admit the conclusion withoiit supposing any tacit or suppressed judgment in the mind, from which it follows syllogistically. This happens between propositions, where the connexion is such, that the admission of tlie one necessarily, and at the first sight, implies the admission also of the other. For if the proposition on which the other depends is self-evident, we content ourselves with barely affirming it, and infer that other by a direct conclusion. Thus, by admitting a universal proposition, we are forced also to admit of all the particular prcK positions comprehended under it, this being the very condition that constitutes a proposition universal. If then that universal proposition be self-evident, the particular ones follow of course, v\ithout any farther train of reasoning. Whoever allows, for instance, ‘ that things equal to one and the same thing are equal to one another,’ must at the

same time allow, ‘ that two triangles, each equal to a square whose side is three inches, are also equal between themselves.’ This argugument, therefore, — ‘ Things equal to one and the same thing, are equal to one another : — Therefore these two triangles, each equal to the square of a line of three inches, are equal between themselves :’ — is complete in its kind, and contains all that is necessary towards a just and legitimate conclusion. For the first or universal proposition is self-evident, and therefore requires no farther proof. And as tlie truth of the particular is inseparably connected with that of the universal, it follows from it by an obvious and unavoidable consequence.

12. Now, in all cases of this kind, where propositions are deduced one from another, on account of a known and evident connexion, we are said to reason by immediate consequence. Such

a coherence of propositions, manifest at first sight, and forcing itself upon the mind, frequently oc-curs in reasoning. Logicians have explained at some length the several suppositions upon which it takes place, and allow of ail imuied.ate consequences that follow in conformity to them. It IS however observable, that these arguments, though seemingly complete, because the conclusion follows necessarily from the single proposition that goes before, may yet be considered as real enthymemes, whose major, which is a conditional proposition, is wanting. The syllogism just mentioned, when represented according to this view, will run as follows : — ‘ If things equal to one and the same thing, are equal to one another; these two triangles, each equal to a square whose side is three inches, are also equal between themselves. But things equal to one and the same thing are equal to one another: — therefore also ihtse triangles, &c., are equal between themselves.’ This observation will be found to hold in all immediate consequences whatsoever, so that they are in fact no more than enthymemes of hypothetical syllogisms. But then it is particular to them, that the ground on which the conclusion rests, namely its coherence with the minor, is of itself apparent, and seems immediately to flow from the rules and reasons of logic.

13. The next species of reasoning we shall notice here is what is commonly known by the name of sorites. This is a way of arguing, in which a great number of propositions are so linked together, that the predicate of one becomes continually the subject of the next following, until at last a conclusion is formed, by bringing together the subject of the first proposition, and the predicate of the last. Of this kind is the following argument: — 'God is omnipotent: — an omnipotent being can do every thing possible : he that can do every thing possible, can do whatever involves not a contradiction : — therefore God can do whatever involves not a contradiction.' This particular combination of propositions may be continued to any length we please, without in the least weakening the ground upon which the conclusion rests. The reason is, because the sorites itself may be resolved into as many simple syllogisms as there are middle terms in it; where this is found universally to hold, that when such a resolution is made, and the syllogisms are placed in train, the conclusion of the last in the series is also the conclusion of the sorites. This kind of argument, therefore, as it serves to unite several syllogisms into one, must stand upon the same foundation with the syllogisms of which it consists, and is indeed, properly speaking, no other than a compendious way of reasoning syllogistically.

14. What is here said of plain simple propositions, may be as well applied to those that are conditional ; that is, any number of them may be so joined together in a series, that the consequent of one shall become continually the antecedent of the next following; in which case, by establishing the antecedent of the first proposi- '-ion, we establish the consequent of the last, or, by removing the last consequent, remove also the first antecedent. This way of reasoning

is exempli lied in the following argument : — ' If we love any pers(ju, all emotions of hatred towards him cease : — If all emotions of haired towards a person cease, we cannot rejoice in his misfortunes : — If we rejoice not in his misfortunes, we certainly wish him no injury : — Therefore, if we love a person, we wish liim no in-jury.' It is evident that this sorites, as well as the last, may be resolved into a series of distinct syllogisms, with this only difi'erence, that here the syllogisms are all conditional.

15. The last species of syllogism we shall take notice of in this section is that commonly distinguished by the name of a dilemma. A dilemma is an argument by which we endeavour to prove the absurdity or falsehood of some assertion. In order to this, we assume a conditional

proposition, the antecedent of which is the assertion to be disproved, and the consequent a disjunctive proposition, enumerating all the possible suppositions upon which that assertion can take place. If then it appears, that all these several suppositions are to be rejected, it is plain, that the antecedent or assertion itself must be so too. When, therefore, such a proposition as that before mentioned is made the major of any syllogism; if the minor rejects all the suppositions contained in the consequent, it necessarily follows, that the conclusion ought to reject the antecedent, which is the very assertion to be disproved. This particular way of arguing is that which logicians call a dilemma; and, from the account here given of it, it appears that we may in the general define it to be a hypothetical syllogism, where the consequent of the ma-jor is a disjunctive proposition, which is wholly taken away or removed in the minor. Of this kind is the following : — ‘ If God did not create the world perfect in its kind, it must either proceed from want of inclination, or from want of power: — But it could not proceed either from want of inclination or want of power : — Therefore, he created the world perfect in its kind.’ Or, which is the same thing : ‘ It is absurd to say that he did not create the world perfect in its kind.’

16. The nature, then, of a dilemmiˆ is universally this. The major is a conditional proposition, whose consequent contains all the several suppositions upon which the antecedent can take place. As, therefore, these suppositions are wholly removed in the minor, it is evident that the antecedent must be so too ; insomuch that we here always argue from the removal of the consequent to the removal of the antecedent. That is, a dilemma is an argument in the modus tollens of hypothetical syllogisms, as logicians speak. Hence it is plain that, if the antecedent of the major is an affirmative proposition, the conclusion of the dilemma will be negative; but, if it is a negative proposition, the conclusion will be affirmative.

SfXT. V. Or INDL’CIION.

1. All reasoning proceeds ultimately from first truths, either self-evident or taken for granted ; and the first truths of syllogistic reasonings are general propositions, liut except in the mathematics, and such otiier sciences as, being oo.i-

versant about mere ideas, have no immediate relation to tilings without the mind, we cannot assume as truths propositions which are general. The mathematician, indeed, may be considered as taking his ideas from the beginning in their general form. Every proposition composed of such ideas is therefore general ; and those which are theoretic are reducible to two parts or terms, a predicate and a subject, with a copula generally affirmative. If the agreement or the relation between the two terms be not immediate and self-evident, he has recourse to an axiom, which is a proposition still more general, and which supplies him with a third or middle terrii. This he compares first with the predicate, and then with the subject, or vice versa. These two comparisons, when drawn out in form, make two propositions, which are called the premises ; and, if they be immediate and self-evident, the conclusion, consisting of the terms of the question proposed, is said to be demonstrated. This me-thod of reasoning is conducted exactly in the syllogistic form explained in the preceding section.

2. But, in sciences which treat of things external to the mind, we cannot assume as first principles the most general propositions, and from them infer others less and less general till we descend to particulars. The reason is obvious. Every thing in the universe, whether of mind or body, presents itself to our observation in its individual state; so that perception and judgment, employed in the investigation of truth, whether physical, metaphysical, moral, or historical, have in the first place to encounter with particulars. ‘ With these reason begins or should begin, its operations. It observes, examines, compares, and judges of them by some of those native evidences and original lights which, as they are the first and indispensable inlets of knowledge to the mind, have been called the primary principles of truth.’

3. *By such acts of observation and judgment,’ says that accurate logician, Mr. Tatham,* diligently practised, and frequently repeated, on many individuals of the same class or of a similar nature, noting their agreements, marking their diflf’erences, however minute, and rejecting all instances which, however similar in appearance, are not

in effect the same, reason, with much labor and attention, extracts some general laws respecting the properties and relations of real things.' This is no hasty, premature, no-tional abstraction of the mind, by which ideas are formed that have no archetypes in nature : it is a rational experimental process, instituted and executed upon the constitution of beings, which in part compose the universe. By this process reason advances from particulars to generals, from less general to more general, till by a series of slow progression, and by regular degrees, it arrives at the most general notions. And by afiirming or denying a genus of a species, or an accident of a substance or class of substances, through all the stages of the gradation, we form conclusions, which, if loc.ncally drawn, are axioms, or general propositions ranged one above another, till they terminate in those that are universal.

4. * Thus, for instance, the evidence of the ex-

ternal senses is obviously the primary principle from which all physical knowledge is derived. But, whereas nature begins with causes, which, after a variety of changes, produce effects, the senses open upon the effects, and from them, through tlie slow and painful road of experiment and observation, ascend to causes. By experiment and observations skilfully chosen, carefully conducted, and judiciously applied, the philosopher advances from one stage of enquii-y to another, in the rational investigation of the general causes of physical truth. From different experiments and observations made on the same individual subject, and from the same experiments and observations made on difterent subjects of the same kind, by comparing and judging, he discovers some qualities, causes, or phenomena, which, after carefully distinguishing and rejecting all contradictory instances that occur, he finds common to many. Thus, from many collateral comparisons and judments formed upon particulars, he ascends to generals; and, by a repetition of the same industrious process and laborious investigation, he advances from general to more general, till at last he is enabled to form a few of the most general, with their attributes and operations, into axioms or secondary principles, which are the well-founded laws enacted and enforced by the God of nature. This is that just and philosophic method of reasoning which sound logic prescribes, in this as well as in other parts of learning; by which, through the slow but certain ˆroad of experiment and observation, the mind ascends from appearances to qualities, from effects to causes, and, from experiments upon many particular subjects, forms general propositions concerning the powers and properties of physical body.

5. * Axioms so investigated and established are applicable to all parts of learning, and are the indispensable, and, indeed, the wonderful expedients, by which, in every branch of knowledge, reason pushes on its enquiries to the particular pursuit of truth : and the method of reasoning by which they are formed is that of true and legitimate induction ; which is, therefore, by lord Bacon, tiie best and soundest of logicians, called ‘ the key of interpretation.’

G. ‘ Instead of taking his axioms promiscuously or arbitrarily out of the great families of the categories, and erecting them by his own sophistical invention into the principles upon which his disputation was to be employed, had the analytical genius of Aristotle presented us with the laws of the true inductive logc, by which axioms are philosophically formed, and had he, with his usual sagacity, given us an example of it in a single branch of science , he would have brought to the temple of trudi an offering more valuable than he has done by the aggregate of all his logical and philosophical productions.

7. ‘ In all sciences, except the mathematics, it is only after the inductive process has been industriously pursued and successfully performed, that definition may be logically and usefully introduced, by beginning with the genus, passing through all the graduate and subordinate stages, and marking the specific difference as it

descends, till it arrive at the individual, wiiicli is the subject of the question. And, by adding an aftirniaiion or negation of the attribute of tlie genus on the species or individual, or of a general accident on the particular substance so defined, making the definition a proposition, the truth of the question will be logically solved without any farther process. So that instead of being the first, as employed by the logic in com-mon use, definition may be the last act of reason ‘.n the search of truth in general.

8. ‘ These axioms, or general propositions, thus inductively established, become another species of principles, which may be properly called secondary, and which lay the foundidion of the

syllogistic method of reasoning. W hen these are formed, but not before, we may safely admit the maxim with which logicians set out in the exercise of their art, as the great hinge on which their reasoning and disputation turn : ‘ From truths tliat are already known, to derive others which are not known.’ Or, to state it more comprehensively, so as to apply to probable as well as to scientific reasoning — ‘ From truths which are better known, to derive others which are less known.’ Philosophically speaking, syllogistic reasoning is, under general propositions to reduce others which are less general, or which are particular ; for the inferior ones are known to be true, only as we trace their connexion with the superior. Logically speaking, it is, To predicate a genus of a species or individual comprehended under it, or an accident of the substance in which it is inherent.

9. * Thus iuilticlion and syllogism are the two methods of direct reasoning corresponding to the two kinds of principles, primary and secondary, on which they are founded, and by which they are respectively conducted. In both methods, indeed, reason proceeds by judging and comparing, but the process is different throughout ; and, though it may have the sanction of Aristotle, an inductive syllogism is a solecism.

10. ‘Till general truths are ascertained by induction, the third or middle terms by which syllogisms are made, are no where safely to be found. So that another position of the Stagyrite, that ‘ syllogism is naturally prior in order to induction,’ is equally unfounded ; for induction does not only naturally but necessarily precede syllogism ; and, except in mathematics, is in every respect indispensable to its existence ; since, till generals are established, there can be neitlier definition, proposition, nor axiom, and of course no syllogism. And, as induction is the first, so is it the more essential and fundamental instrument of reasoning : for, as syllogism can-not produce its own principles, it must have them from induction : and if the general propositions, or secondary principles, be imperfectly or infirmly established, and much more, if they be taken at hazard, upon authority, or by arbitrary assumption, like those of Aristotle, all the syllogising in the world is a vain and useless logomachy, only instrumental to the multiplication of false learning, and to the invention and confirmation of error. The truth of syllogisms de-pen-is ultimately on the truth of axioms, and the truth of axioms on the soundness of inductions.’

Tatham’s Chart and Scale of Truth. But though induction is prior in

order, as well as superior in utility, to syllogism, we have thought it expedient to treat of it last ; both because syllogism is an easier exercise of the reasoning faculty than induction, and because it is the method of mathematics, the first science of reason in which the student is commonly initiated.

Sect. VI. — Of Demonstration.

1 . Having despatched what seemed necessary with regard to induction and syllogism ; we now proceed to consider the laws of demonstration. And here it must be confessed that, in strict demonstration, which removes from tlie mind all possibility of doubt or error, the inductive me-thod of reasoning can have no place. When the experiments and observations from which the generrl conclusion is drawn are numerous and extensive, the result of this mode of reasoning is moral certainty; and, could the inductions be made complete, it would be absolute certainty, equally convincing with mathematical demonstration. But however numerous and extensive the observations and experiments may be, upon which an inductive conclusion is established, they must of necessity come short of the num-ber and extent of nature ; which in some cases, by its immensity, defeats all possibility of their co-extension ; and in others, by its distance, lie out of the reach of their immediate application. Though truth does not appear in all other departments of learning with that bold and resistless conviction with which it presides in mathematical science, it shines through them all, if not interrupted by prejudice or perverted by error, with a clear and useful, though inferior strength. And as it is not necessary, for the general safety or convenience of a traveller, tiiat he should always enjoy the heat and splendor of a mid-day sun, whilst he can with much more ease pursue his journey under the weaker influence of a morning or an evenmg ray ; so it is not requisite, for the various concerns and purposes of life, that men should be led by truth of the most redundant brightness. Such truth is to be had only in those sciences which are conversant about ideas and their various relations; where, everything being certainly what it appears to be, definitions and axioms arise from mere intuition. Here syllogism lakes up the process from the beginning ; and by a sublime intellectual motion advances from the simplest axioms to the most complicated speculations, and exhibits truth springing out of its first and purest elements, and spreading on all sides into a system of science. As each step in the progress is syllogistic, we shall endeavour tc explain the use and application of syllogisms in this species of reasoning.

We have seen that, in all the difTcrent appearances Uiey put on, we

still arrive at a just and legitimate conclusion : now it often ha|)j)ens, that the conclusion of one syllogism becomes a previous proposition inanodier; by which means great numbers of them are sometimes linked together in a series, and truths are made to follow one another in train. And as in such a concatenation of syllogisms all the various ways ot

reasoning that are truly conclusive may be with safety introduced; hence it is plain, that in deducing any truth from its first principles, especially where it lies at a considerable distance from them, we are at liberty to combme all the several kinds of syllogisms above explained, according as they are found best to suit the end and purpose of our enquiries. When a jiropo-silion is thus, by meatis of syllogisms, collected from others more evident and known, it is said to be proved ; so tliat we may, in general, define the proof of a proposition to be a syllogism, or a series of syllogisms, collecting that proposition from known and evident truths. But, more particularly, if the syllogisms of which the])roofs consist admit of no premises but definitions, self-evident truths, and propositions already established, then is the argument so constituted called a demonstration : whereby it appears that demonstrations are ultimately founded on definitions and self-evident propositions.

2. All syllogisms, whether compound, multiform, or defective, are reducible to plain simple syllogisms in some one of the four figures. But this is not all. Syllogisms of the first figure, in jjarticular, admit of all possible conclusions : tliat is, any proposition, whether a universal affirmative or universal negative, a particular affirmative or particular negative, which fourfold division embraces all their varieties ; any one of tliese may be inferred by virtue of some syllogism in the first figure. By these means it happens, that the syllogisms of all the other figures are reducible also to syllogisms of the first figure, and may be considered as standing on tlie same foundation with them. To demonstrate and explain the manner of this reduction would too much swell this treatise. It is enough to notice that the thing is universally

known and allowed among logicians, to whose writings we refer such as desire farther satisfaction in this matter. This then being laid down, it is plain that any demonstration whatever may be considered as composed of a series of syllogisms, all in the first figure, lor, since all the syllogisms that enter the demonstration are reducible to syllogisms of some one of the four figures ; and since the syllogisms of all the other figures are farther reducible to syllogisms of the first figure, it is evident, that the whole demonstration may be resolved into a series of these last syllogisms. Let us now, if possible, discover the ground on which the conclusion rests in syllogisms of the tlrst figure; because, by so doing, we shall arrive at a universal principle of certainty, whence the evidence of all demonstrations in all their parts rnay be ultimately derived.

3. The rules, then, of the first figure are briefly these : the middle term is the subject of the major proposition, and the predicate of the minor. The major is always a universal proposition, and the minor always affirmative. Let us now see what effect these rules will have in reasoning. The major is a universal proposition of which the middle term is the subject, iind the predicate of the conclusion the predicate. Hence it appears, that in the major the predicate of the conclusion is always affirmed or denied universally of the middle term. Again,

the minor is an affirmative proposition, whereof tile subject of the conclusion is the subject, and the middle terra the predicate. Here then the middle term is affirmed of the subject of the conclusion ; that is, the subject of the conclusion is affirmed to be comprehended under, or to make a part of, the middle term. Thus then we see what is done in the premises of a syllogism of the first figure. The predicate of the conclusion is universally affirmed or denied of some idea. The subject of the conclusion is affirmed to be or to make a part of that idea. Hence it naturally and unavoidably follows, that the predicate of the conclusion ought to be aftirmed or denied of the subject. To illustrate this by an example, we shall resume one of the syllogisms of the first section : * every creature possessed of reason and liberty is accountable for his actions : — Man is a creature possessed of reason and liberty : — Therefore man is accountable for his actions.' Here, in the first proposition, the predicate of the conclusion, accountableness, is affirmed of all creatures that have reason and liberty. Again, in the second proposition, man, the subject of the conclusion, is affirmed to be or to make a part of this class of creatures. Hence the conclusion necessarily and unavoidably follows, *viz.* that man is accountable for his actions; because, if reason and liberty be that which constitutes a

creature accountable, and man has reason and liberty, it is plain he has that which constitutes him accountable. In like manner, where the major is a negative proposition, or denies the predicate of the conclusion universally of the middle term, as the minor always asserts the subject of the conclusion to be or make part of that middle term, it is no less evident that the predicate of the conclusion ought in this case to be denied of the suh/ject. So that the ground of reasoning, in all syllogisms of the first figure, is manifestly this, ‘ whatever may be aifirmed universally, of any idea, may be affirmed of every one or any number of particulars comprehended under that idea.’ And again, ‘ whatever may be denied universally, of any idea, may be in like manner denied of every one or any number of its individuals. These two propositions are called by logicians the dictum de omni, and dictum de nuUo ; and are indeed the great principles of syllogistic reasoning, as all conclusions whatever either rest immediately upon them, or upon propositions deduced from them. But what adds greatly to their value is, that they are really self-evident truths, and sucli as we cannot gainsay without running into an express contradiction. To affirm, for instance, that no man is perfect, and yet argue that some men are perfect; or to say that all men are mortal, and yet that some men are not mortal, is to assert a thing to be and not to be at the same time.

4. And now we may affirm that, in all syllogisms of the first figure, if tlie premises are true, the conclusion must also be true. If it be true that the predicate of the conclusion, whether affirmative or negative, agrees universally to some idea; and if it be also true that the subject of the conclusion is a part of, or ccunpre’nended under that idea ; then it necessarily follows, that

the predicate of the conclusion agrees also to tlie subject. For to assert the contrary, would be to run counter to some one of the two principles before established ; that is, it would be to maintain an evident contradiction. And thus we are come at last to the point we have been all along-endeavouring to establish ; namely, that every

proposition which can be demonstrated is necessarily true For as every demonstration may be resolved into a series of syllogisms, all in the first figure; and as in anyone of these syllogisms, if the premises are true, tlie conclusion must be so too; it evidently follows that, if all the several premises are true, all the several conclusions are so, and consequently tlie conclusion also of the last syllogism, which is always the proposition to be demonstrated. Now, that all the premises of a demonstration are true, will easily appear from the very nature and definition of that form of reasoning. A demonstration is a series of syllogisms, all whose premises are either definitions, self-evident truths, or propositions already established. Definitions are identical propositions, wherein we connect the description of an idea with the name by which we choose to have that idea called, and therefore as to their truth there can be no dispute. Self-evi- dent propositions appear true of themselves, and leave no doubt or uncertainty in the mind. Propositions before established are no other than conclusions gained, by one or more steps, from definitions and self-evident principles, that is, from true premises, and therefore must needs be true. Whence, all the previous propositions of a demonstration being manifestly true, the last conclusion, or proposition to be demonstrated, iiHist be so too. So that demonstration not only loads to certain truth, but we have here also a clear view of the ground and foundation of that certainty. For as, in demonstrating, we may be said to do nothing more than combine fi series of syllogisms together, all resting on the same bottom ; it is plain that one uniform ground of certainty runs through the whole, and that the conclusions are every where built upon some one of the two principles before establisiied as the foundation of all reasoning. These two principles are easily reduced into one, and may be expressed thus : whatever predicate, whether affirmative or negative, agrees universally to any idea ; the same must agree to every one or any number of individuals comprehended under that idea. And thus we have, according to our first design, reduced the certainty of demonstration to one simple and universal principle, which carries its own evidence with it, and which is indeed the ultimate foundation of all syllogistic reasoning.

5. Demonstration therefore serving as an infallible guide to truth, and standing on so sure and unalterable a basis, we may now venture to as-sert, that the rules of logic furnish a sufficient criterion for distinguishing between truth and ˆfalsehood. For, since every proposition that can 1 I.’ demonstrated is necessarily true, he is able to distinguish truth from falsehood, who can with certainty judge when a proposition is truly demonstrated. Now a demonstration is nothing nmre than a concatenation of svHogisms, all whose

premises are definitions, self-evident trutlis, or propositions previously established. To judge therefore of the validity of a demonstration, we must distinguish whether the definitions that en-ter it are genuine and truly descriptive of the ideas they are meant to exhibit ; whether the propositions assumed without proofs as intuitive truths have really that self-evidence to which they lay claim : whether the syllogisms are drawn up m due form, and agreeable to the laws of argumentation : in fine, whether they are combined together in a just and orderly manner, so that no demonstrable propositions serve anywhere as premises unless tiiey are conclusions of previous syllogisms. Now it is the business of logic, in explaining the several operations of the mind, fully to instruct in all these points. It teaches the nature and end of definitions, and lays down the rules by which they ought to be framed. It unfolds the severa\ species of propositions, and distinguishes the self-evident from the demonstrable. It delineates also the different forms of syllogisms, and explains the laws of argumentation proper to each. In fine, it describes the manner of combining syllogisms, so as that they may form a train of reasoning, and lead to the successive discovery of truth. The precepts of logic, therefore, as they enable us to judge with certainty when a proposition is duly demonstrated, furnish a sure criterion for tiie distinguishing between truth and falsehood.

6. Perhaps it may be objected, that demonstration is a thing very rare and uncommon, as being the prerogative of but a few sciences, and therefore the criterion here given can be of no gieat use. But wlierever, by the bare contemplation of our ideas, truth is discoverable, there also demonstration may be attained. Now that is an abundantly sufficient criterion which enables us to judge with certainty in all cases where the knowledge of truth comes within our reach ; for, with discoveries that lie beyond the limits of the human mind, we have,])roperly, no business. When a proposition is demonstrated, we are certain of its truth. When, on the contrary, our ideas are such as have no visible connexion or repugnance, and therefore furnish not the proper means of tracing their agreement or disagreement, there we are sure that scientific knowledge is not attainable. But where there is some foundation of reasoning, which yet amounts not to the full evidence of demonstration, there the precepts of logic, by teaching us to determine aright of the degree of proof, and of what is still wanting to render it full and complete, enable us to make a due estimate of the measures of probability, and to projiortion our assent to the grounds on wliicli the proposition stands. And this is all we can possibly arrive at, or even so much as

hoi)e for, in the exercise of faculties so imperfect and limited as ours.

7. Before we conclude this section, it is proper to lake notice of the distinction of demonstration into direct and indirect. A direct demonstration is, when, beginning with definitions, self-evident propositions, or known and allowed truths, we form a train of syllogisms, and combine them in an orderly manner, continuing the series through a variety of successive steps, until

at last we arrive at a syllogism whose conclusion is the proposition to be demonstrated. Proofs of this kind leave no doubt or uncertainty behind them; because, all the several premises being true, the conclusion must be so too, and of course the very last conclusion or proposition to be proved. The otiier species of demonstration is the indirect, or, as it is sometimes called, the apogogical. The manner of proceeding here is, by ussumini; a proposition which directly contradicts that which we mean to demonstrate; and thence, by a continued train of reasoning, in the way of a direct demonstration, deducing some absurdity or manifest untruth. For hereupon we conclude that the proposition assumed was false; and thence again, by an immediate consequence, that the proposition to be demonstrated IS true. Thus Euclid, in his tlnrd book, being tn demonstrate tliat circles which toucli one another inwardly have not the same centre, assumes tne direct contrary to this, *viz.* that they have tile same centre ; and thence, by an evident train of reasoning, proves that a part is equal to the whole. The supposition therefore leading to this absurdity he concludes to be false, and thence immediately infers, that they have not the same centre.

8. Now, because this manner of demonstration is accounted by some not altogether so clear and satisfactory, we shall therefore endeavour to show that it leads to trutli and certainty equally with the other. Two propositions are said to be contradictory, when that which is asserted to be in the one is asserted not to be in the other. Thus the propositions, Circles that touch one anotiier inwardly have the same centre, and Circles that touch one another inwardly have not the same centre, are contradictories, because the second asserts the direct contrary of what is asserted in the first. Now, in all contradictory propositions, this holds universally, that one of them is necessarily true, and the other necessarily false. For, if it be true that circles which touch one another inwardly have not the same centre, it is unavoidably false that they have tiie same centre. On the other hand, if it be false tliat they have the same centre, it is necessarily true that they have not the same centre. Since therefore it is impossible for them to be both true or both false at tiie same time ; it unavoidably follows that one is necessarily true, and the other necessarily false. This then being allowed, wiiich is indeed self-evident, if any two contradictory propositions are assumed, and one of them can, by a clear train of reasoning, be demonstrated to be false, it necessarily

follows that the other is true. For, as the one is necessarily true and the other necessarily false, when we come to discover which IS the false proposition, we thereby also know the other to be true.

9. Now this is precisely the manner of an indirect demonstration, as is evident from the account given of it above. For there we assume a proposition which directly contradicts that which we mean to demonstrate ; and having, by a continued series of proofs, shown it to be false, thence infer that its contradictory, or the proposition to be demonstrated, is true. As, therefore, this last conclusion is certain and unavoidable;

let us next enquire afler what manner we come to be satisfied of tiic falsehood of the assumed proposition, that so no possible doubt may re-main as to the force and validity of demonstrations of this kind. Tlie manner then is plainly this: Beginning with tlje assumed proposition, we, by the help of definitions, self-evident truths, or propositions already established, continue a series of reasoning, in the way of a direct demonstration, until at length we arrive at some absurdity or known falsehood. Thus Euclid, in tlie example before-mentioned, from the su[>position that circles toucliing one anotiier inwardly have the same centre, deduces, tiiat a part is equal to the whole. S.nce, therefore, by a due and orderly process of reasoning, we come at last to a false conclusion ; it is manifest tliat all the premises cannot be true ; for, were all tlie premises true, the last conclusion must be so too, by what has been before demonstrated. Now, as to all the other premises made use of in the course of reasoning, they are manifest and known truths by supposition, as being either definitions, self-evident propositions, or truths previously established. The assumed proposition is that only as to which any doubt or uncertainty remains. That alone, therefore, can be false; and indeed, from what has been already shown, must unavoidably be so. And thus we see that, in indirect demonstrations, two contradictory propositions be-ing laid down, one of which is demonstrated to be false, the other, which is always the proposition to be proved, must necessarily be true; so that here, as well as in the direct way of proof, we arrive at a clear and satisfactory knowledge of truth.

10. This is universally the method of reasoning in all apogogical or indirect demonstrations. But if any proposition is assumed from which, in a direct train of reasoning, we can deduce its contradictory; the proposition so assumed is false, and the contradictory one true. For, if we suppose the assumed proposition to be true, then, since all

the other premises that enter the demonstration are also true, we shall have a series of reasoning consisting wholly of true premises; whence the last conclusion, or contradictory of tiie assumed proposition, must be true likewise: so tliat we should thus have two contradictory propositions both true at the same time, which is manifestly impossible. The assumed proposition, therefore, whence this absurdity flows, must necessarily be false ; and consequently its contradictory, which is here the proposition deduced from it must be true. If then any proposition is proposed to be demonstrated, and we assume the contradictory of that proposition, and thence directly infer the proposition to be demonstrated ; by these very means we know, that the proposition so inferred is true. For since, from an assumed proposition, we have deduced its contradictory, we are thereby certain that the assumed proposition is false; and if so, then its contradictory, or that deduced from it, which in this case is the same with the proposition to be demonstrated, must be true.

It. We have a curious instance of this in the twˆelfth proposition of the ninth book of the Elements. Euclid there proposes to demonstrate.

that in any series of numbers, rising from unity in geometrical progression, all the prime numbers that measure the last term in the series will also measure the next after unity. In order to this, he assumes the contradictory of the proposition to be demonstrated : namely, that some prime number measuring thcˆ last term in the series does not measure the next after unity, and tiieiice, by a continued train of reasoning, proves that it actually does measure it. Hereupon he concludes the assumed proposition to be false ; and that which is deduced from it, or its contradictory; which is the very proposition he proposed to demonstrate, to be true. Now that this is a just and conclusive way of reasoning is abundantly manifest from what we have so clearly established above. Whence it appears how necessary some knowledge of the rules of logic is, to enable us to judge of the force, justness, and validity of demonstrations. For, though it is readily allowed, that by the mere strength of our natural

faculties we can at once discern that, of two contradictory propositions, the one is necessarily true, and the other necessarily false ; yet when they are so linked together in a demonstration, as tliat the one serves as a previous proposition whence the other is deduced, it does not so immediately appear, without some knowledge of the principles of logic, why that alone, which is collected by reasoning, ought to be embraced as true, and the other, whence it is collected, to be rejected as false.

12. Having thus sufficiently evinced the certainty of demonstration in all its branches, and shown the rules by which we ought to proceed, in order to arrive at a just conclusion, according to the various ways of arguing made use of; it is needless to enter upon a particular consideration of those several species of false reasoning which logicians distinguish by the name of so-p/iisnis. He that thoroughly understands the form .and structure of a good argument, will of himself readily discern every deviation from it. And although sophisms have been divided into many classes, which are all called by sounding names, that therefore carry in them much appearance of learning; yet are the errors themselves so very palpable and obvious, that it would be lost la-bor to write for a man capable of being misled by them. Here, therefore, we choose to conclude this part of logic ; and shall in the next give some account of method, which, though inseparable from reasoning, is nevertheless always considered by logicians as a distinct operation of the mind ; because its influence is not confined to the mere exercise of the reasoning faculty, but €xtends in some degree to all the transactions of the understanding.

PART IV.

OF METHOD.

Skct. I. — Or THE Different Species of

Method. 1. We have now done with the first three operations of the mind, whose office it is to search after truth, and enlarge the bounds of human knowledge. There is yet a fourth, which regards the disposal and arrangement of our

thoughts, when we endeavour so to put them together as that their mutual connexion and dependence may be clearly seen. This is what logicians call method, and place always the last in order in explaining the powers of the understanding; because it necessarily supposes a

previous exercise of our other faculties, and some progress made in knowledge, before we can exert it in any extensive degree.

2. In this view, it is plain that we must be previously well acquainted with the truths we are to combine together ; otherwise, how could we discern their several connexions and relations, or so dispose of them as their mutual dependence may require ? But it often hayjptˆns that the understanding is employed, not in the arrangement and composition of known truths, but in the search and discovery of such as are unknown. And here the manner of proceeding is very different. We assemble at once our whole stock of knowledge relating to any subject, and, after a general survey of things, begin with examining them separately and by parts. Hence, though at our first setting out we were acquainted only with some of the grand outlines of truth, we gradually discover the whole : and thus by a narrow scrutiny into things, when we have unravelled any part of knowledge, and traced it to its first principles, so that the whole contexture of it lies open to the view of the mind ; here by taking it the contrary way, and beginning with these principles, we can so adjust and put together the parts, as the order or method of science requires.

3. But, as these things are best understood when illustrated by examples, let us suppose any machine, for instance a watch, presented to us, whose structure we are as yet unacquainted with, but want, if possible, to discover. The manner of proceeding in this case is by taking the whole in pieces, and examining the parts separately one after another. When, by such a scrutiny, we have thoroughly informed ourselves concerning each, we then compare them together, in order to judge of their mutual action. Thus we gradually trace out the make and composition of the whole, and come at length to discover how parts of such a form, and so put together, constitute that particular machine called a watch, and contribute to all die seveiTil motions observable in it. This discovery being made, we can take things the contrary way, and, beginning with the parts, so dispose and connect them as their several uses and structures require, until at length _we have the whole presented to our view.

4. And as in tracing and examining the works of art, so it is in a great measure in unfolding any part of human knowledge ; for the relations and mutual operations of things do not always immediately appear upon comparing them together. Hence we have recourse to intermediate ideas, and, by means of them, are furnished with those previous propositions that lead to the conclusion we are in quest of. And, if it so happen that the previous propositions themselves are not sufficiently evident, we endeavour, by new middle terms, to ascertain

their truth ; still tracing things backward, in

u continual series, until wo arrive at some syllogisui wiiere the premises iire first and self-evident principles. This done, we become perfectly satisfied as to the truth of all tlie conclusions we liave passed tlirough, as they are now seen to stand upon the firm and immoveable foundation of our intuitive perceptions : and, as we arrived at this certainty by tracing things backward to their original principles, so may we at any time renew it by a direct contrary process, if, beginning with tliese principles, we carry our thoughts forward, until tliey lead us, by a connected chain of proofs, to tlie very last conclusion of the series.

5. Hence it appears that, in disposing and putting together our thouglits, either for our own use, that the discoveries we have made may at all times lie open to the review of the mind, or w here we mean to communicate and unfold the discoveries to others, there are two ways of proceeding equally within our choice; for we ir.ay so propose the truths relating to any part of knowledge, as they presented tliemselves to the mind in the manner of investigation; carrying on tlie series of proofs, in a reverse order, untd they at last terminate in first principles : or, beginning with these principles, we may from them deduce, by a direct train of reasoning, all the several propositions we want to establish. The diversity in the manner of arranging our thoughts gives rise to the twofold division of method establisiied among logicians ; for method, according to their use of the word, is nothing but the order and disposition of our thoughts relating to any subject. When truths are so proposed and put together as they were or might have been discovered, this is called the analytic method, or the method of resolution, as it traces things backward to their source, and resolves knowledge into its first principles. When, on the other hand, they are deduced from these principles, and connected according to their mutual dependence, so that the truths first in order tend always to the demonstration of those that follow ; this constitutes what we call the syntiietic method : for here we proceed by gathering

together the several scattered parts of knowledge, and combining them into one whole, or system, in such a manner that the understanding is enabled distinctly to follow truth through all her different stages and gradations.

6. Tiie first of these two species of method lias also obtained the name of the method of invention, because it observes tlie order in which our thoughts succeed one iinother in the invention or discovery of truth. The other, again, is often denominated the method of doctrine or instruction ; as, in laying our thougiits before otliers, we generally choose to proceed in the synthetic manner, deducing them from their first principles. I-‘or although there is great pleasure in pursuing ti-uth in the method of investigation, because it places us in the condition of the inventor, and shows the particular train and process of thinking by which he arrived at his discoveries ; yet it is not so well adapted to the jMirposes of evidence and conviction. For, at (iur first setting out, we are commonly unable tc <livine whither the aualysis will lead uˆ, so that

our researches are lor some tune little better than a mere groping in tlie dark. And, even after light begins to break in upon us, we are still obliged to make many reviews, and a frequent comparison of tlie several steps of the investigation among themselves. Nay, when we iiave unravelled the wiiole, and reached the very foundation on which our discoveries stand, all our certainty in regard to their truth will be found in a great measure to arise from that connexion which we are now able to discern bet.veen them and first principles, taken in die order of com-l)Osition. But in the synthetic manner of dis-lˆosingour thoughts, the case is quite different; for as we here begin with the intuitive truths , and advance by regular deduction from diem, every step brings evidence and conviction with it ; so that, in our progress from one part of knowledge to another, we have always a clear perception of the ground on which our assent rests. In communicating, therefore, our discoveries to others, this method is apparently to be chosen, as it greatly improves and enlightens the understanding, and leads to an immediate perception of truth.

Sect. II. — Of the Utility of Logic

The logic which for so many ages kept possession of the schools, and was deemed the most important of the sciences, has long been condemned as a mere art of wrangling, of very little use in the pursuit of truth. Attempts have been made to restore it to credit, but without

success; and of late years little or no attention whatever has been paid to the art of reasoning in the course of what is called a liberal education. As both extremes are faulty, we cannot conclude this short treatise more properly than with the following reflections on the utility of this science.

If Aristotle was not the inventor of logic, he was certainly the prince of logicians. The whole theory of syllogisms he claims as his own, and as the fruit of much time and labor ; and it is universally known, that the later writers on the art have borrowed their materials almost entirely from his Orgauon and Porphyry's Introduction. But after men had labored nearly 2000 years in search of truth by the help of syllogisms, lord Bacon proposed the method of induction, as more effectual for that purpose : and since his days the art of logic has gradually fallen into disrepute.

To this consequence many causes contributed. The art of syllogism is admirably calculated for wrangling ; and by the schoolmen it was employed, with too much success, to keep in countenance the absurdities of the Romish church. Ihider their management it produced numberless disputes, and numberless sects, that fought against each other with much animosity, without gaining or losing ground ; but it did nothing considerable for the benefit of human life, whilst the me-thod of induction has improved arts, and increas-, ed knowledge. It is no wonder, therefore, that the excessive admiration of Aristotle, which continued for so many ages, should end in an un-due contempt ; and that the high esteem of logic as «he grand engine of science should at last make way for too unfavorable an opinion, which

aeems now prevalent, of its being unworthy of a place in a liberal education. PJen rarely leave one extreme without running into the contrary : those who think according to the fashion will be as prone to go irjto the present extreme as their grandfathers were to go into the former ; and even they wiio in general think for themselves, when they are offended at the abuse of any thing, are too apt to entertain prejudice against the thing itself. ‘ In practice,’ says the learned Warburton in his Introduction to Julian, ScC, ‘ logic is more a trick than a science, form-ed rather to amuse than to instruct. And in some sort we may apply to the art of syllogism what a man of wit says of rhetoric, that it only tells us how to name tjiose tools which nature had before put into our hands. In the service of chicane, indeed, U is a mere jutigler’s knot, now fast, now loose; and the schools where this legerdemain was exercised in great perfection are fall of the stories of its wonders.’ The authority of Warburton is great ; but it may be counterbalanced by anotiier which, on subjects of this nature, is confessedly greater.

‘ Laying aside prejudice, whether fashionable or unfashionable, let us consider (says Dr. Reid in his Appendix to lord Karnes’s Sketch on the Principle and Progress of Reason), wiietherlogic may be made subservient to any good purpose. Its professed end is to teach men to think, to judge, and to tea-son with accuracy. No man will say that this is a matter of little importance; the only thing therefore that can admit of doubt is, whetlierit can be taught?

‘ To resolve this doubt, it may be observed, that our rational faculty is the gift of God, given to men in very different measures: Some have a large portion, some a less; and, when there is a remarkable defect of the natural power, it cannot be supplied by any culture. But this natural power, even where it is the strongest, may lie dead for want of the means of imjMOveinent. INIany a savage may have been born witli as good faculties as a Newton, a Bacon, or an Aristotle ; but their talents were buried by having never been put to use, whilst those of the pliilosophers were cultivated to the best advantage. It may likewise be observed, tliat the chief means of improving our rational

power is tlie vigorous exercise of it in various ways and on different subjects, by which the habit is acquired of exercising it properly. Without such exercise, and good sense also, a man who has studied logic all his life may be only a petulant wrangler, without true judgment or skill of reasoning in any science.'

This must have been Locke's meaning, when, in his Thoughts on Education, he says, ' If you would have your son to reason well, let him read Chillingword).' The state of things is much altered since Locke wrote: logic has been much improved, chiefly by his writings; and yet mucli less stress is laid upon it, and less time consumed in its study. His counsel, therefore, was judicious and seasonable: to wit, that the improvement of our reasoning power is to be expected much more from an intimate acquaintance with the authors who reason best, than from studying voluminous systems of school

logic. But if he had meant, that the study of logic was of no use, nor deserved any attention, he surely would not have taken the pains to make so considerable an addition to it, by his Essay on the Human Understanding, and by his Thoughts on the Conduct of tlie Understanding; nor would he have remitted his pupil to Chil-lingworth, the acutest logician as well as the best T-easoner of his age.

There is no study better fitted to exercise and strengthen the reasoning powers than that of the mathematical sciences ; because there is no other branch of science which gives such scope to long and accurate trains of reasoning, orin which there is so little room for authority or prejudice of any kind to give a false bias to the judgment. When a youth of moderate parts begins to study Euclid, every thing is new to him : his apprehension is unsteady, his judgment is feeble, and rests partly upon the evidence of the tiling, and partly upon the authority of his teacher. But every time he goes over the definitions, the axioms, the elementary propositions, more light breaks in upon him; and, as he advances, the road of demonstration becomes smooth and easy : he can walk in it firmly, and take wider steps, till at last he acquires the habit, not only of understanding a demonstration, but of discovering and demonstrating mathematical truths.

It must indeed be confessed, that a man without the rules of logic may acquire a habit of reasoning justly in mathematics, and perhaps in any other science. Good sense, good examples, and assiduous exercise, may bring a man to reason justly and acutely in his own profession without rules. But whoever thinks, that from this concession he may

infer the inutility of logic, betrays, by this inference, a great want of that art; for he might as well infer, because a man may go from London to F.dinburgh by the way of Paris, that therefore any other road is useless.

There is perhaps no art which may not be acquired, in a very considerable degree, by example and practice, witliout reducing it to rules. But practice joined with rules may carry a man forward in his art fardier and more quickly than practice witliout rules. Every ingenious artist knows the utility of having his art reduced to rules, and thereby made a science. By rules he is enlightened in his practice, and works with more assurance. They enable him sometimes to correct his own errors, and often to detect the errors of others; and he finds them of great use to confirm his judgment, to justify what is right, and to condemn what is wrong. Now mathematics are the noblest praxis of logic. Through them we may perceive how the stated forms of syllogism are exemplified in one subject, namely the predicament of quantity; and by marking the force of these forms, as tliey are there applied, we may be enabled to apply them of ourselves elsewhere. Whoever, therefore, will study mathematics with this view, will be-come, not only by mathematics a more expert logician, and by logic a more rational mathematician, but a wiser philosopher, and an acuter reasoner, in all the possible subjects cither of science or deliberation. But when mathematics.

instead of being applied to this excellent purpose, are used, not to exemplify logic, but to supply its place ; no wonder if logic fall into contempt, and if mathematics, instead of furthering science, become in fact an obstacle. Tor when men, knovvii\g nothing of that reasoning which is universal, come to attach themselves for years to a single specieˆ, a species wholly involved in lines and numbers, tlie mind becomes incapacitated for reasoning at large, and especially in the search of moral truth. Tiie object of mathematics is demonstration ; and whatever, in that science, is not demonstration, is nothing, or at least below the sublime enquirer’s regard. Probability, through its

almost intinite degrees, from sunple ignorance up to absolute certainty, is the terra incognita of the mathematician. And yet here it is that the great business of the human mind is carried on, in the search and discovery of all the important truths which concern us as reasonable beings. And here, too, it is, that all its vigor is exerted ; for, to proportion the assent to the probability accompanying every varying degree of moral evidence, requires the most enlarged and sovereign exercise of reason.

In reasonings of this kind, will any man pretend that it is of no use to be well acquainted with the various powers of the mind by which we reason ? Is it of no use to resolve the various kinds of reasoning into their sim pie elements ; and to discover, as far as we are able, the rules by which these elements are combined in judging and in reasoning ? Is it of no use to mark the various fallacies in reasoning, by which even the most ingenious men have been led into error ? It must surely betray great want of understanding, to think these things useless or unimportant. Now these are the things which logicians have attempted ; and which they have executed — not indeed so completely as to leave no room for improvement, but in such a manner as to give very considerable aid to our reasoning powers. That the principles they have laid down with regard to definition and division, with regard to the conversion and opposition of propositions, and the general rules of reasoning, are not without use, is sufficiently apparent from the blunders committed daily by those who disdain any acquaintance with them.

Althougii the art of categorical syllogism is confessedly little fitted for the discovery of unknown truth, it may yet be employed to excellent purpose, as it is perhaps the most compendious method of detecting a fallacy. A man in quest of unknown truths must generally proceed by the way of induction, from eftects to causes; but he who, as a teacher, is to inculcate any system upon others, begins with one (fc more self-evident truths, and proceeds, in the way of demonstration, to the conclusion which he wishes to establish. Now every demonstration may be resolved into a series of syllogisms, of which the conclusion of the preceding always enters into the premises of that which follows ; and if the first principles be clear and evident, and every syllogism in some legitimate mode and figure, the conclusion of the whole must infallibly be admitted. But, when the demonstration is thus

broken into parts, if we find that the conclusion of one syllogism will not, without altering the meaning of the terms, enter legitimately into

the premises of that which should immediately fol-low ; or, supposing it to make one of the premises of a new syllogism, if we timl that the conclusion resulting from the whole series, thus obtained, is dill'erent from that of the demonstration ; we may, in eitlier of these cases, rest assured tiiat the author's reasoning is fallacious, and leads to error ; and that, if it carried an appearance of conviction before it was thus resolved into its elementary parts, it must have been owing to the inability of the mind to comprehend at once a long train of arguments. W'hoever wishes to see the syllogistic ait employed for this purpose, and to be convinced of the truth of what we have said respecting its utility, may consult the excellent writer recommended by Locke, who, in places innumerable of his incomparable book, has, without pedantry, even in that pedantic age, made the happiest application of the rules of logic for detecting and exposing the sophistry of his Jesuitical antagonist.

On the whole then, though we acknowledge that much time was wasted by our forefathers in syllogistic wrangling, which may be termed the mechanical part of logic, yet the art of forming and examining arguments is certainly an attainment well worthy the ambition of that being whose highest honor is to be endued with reason.

Sect. III. — Dr. Brown's View of this Science.

The following is a condensed view of the general pretensions of the Aristotelian logic from Lectures on the Philosophy of the Human Mind by Dr. Brown, late professor of moral philosophy in tlie university of Edinburgh. In the condemnation of the science he may be found too severe and indiscriminating in the opinion of some of our readers, but his great and just fame as a metaphysician entitles him to a hear—

Reasoning according to this author, then is nothing more than a number of propositions, consecutive in a certain order : it is a continued series of analytic operations developing the elements of our thought. In every proposition, that which is affirmed is a part of that of which it is affirmed, and the proposition, however technical its language may be, expresses only the single feeling of this relation. When I -say snow is white, I state one of the many feelings which constitute my complex notion of snow. When I say man is fallible, I state one of the many imperfections which enter into iny complex notion of man. The statements of one particular relation are simple propositions, in each of which a certain analysis is involved. But, when I reason, or add proposition to proposition in a certain series I merely prosecute my analysis, and prosecute it more or less minutely,

according to the length of the ratiocination. When I say man is fallible, I state a quality involved in the nature of man, as any other pait of an aggregate is involved in any

other comprehending whole. When I add, lie may therefore err, even when he thinks himself least exposed to error, I state what is involved in the notion of his fallibility. When I say, lie therefoie must not expect that all men will think as he does, even in points which appear to have no obscurity, I state tiiat which is involved in the possibility of his and their erring even on such points. When I say, that he therefore should not dare to punish those who merely differ from him, and who may he right eren in differing from him, I state what is involved in the absurdity of expecting that all men should think as he does. And when I say, that any particular legislative act of intolerance is as unjust as it is absurd, I state only what is involved in the impropriety of attempting to punish those who have no other guilt than that of differing in opinion from others, who are confessedly of a nature as fallible as tiieir own.

In all this reasoningˆ, though composed of many propositions, there is obviously only a progressive analysis, with a feeling, at each step, of the relation of parts to the whole, the predicate of each proposition being the subject of a new analysis in the proposition which follows it. Man is fallible. He who is fallible may err, even when he thinks himself least exposed to error. He who may be in error, even when he thinks himself safest from it, ought not to be astonished that others should think diflerently from him, even on points which may seem to him perfectly clear; and thus, successively, through the %vhole ratiocination, the predicate becomes in its turn a subject of new analysis, till we ar-rive at the last proposition, which is immediately extended backwards to the primary subject of analysis, man, — as involved in that which is itself involved in tlie primary complex conception, or aggregate of many qualities.

If reasoning be nothing more than a number of propositions, consecutive in a certain order of mutual relation between the subjects

and predicates, what are we to think of that art of lea-sonins:, whicli, for so many ages, banished reason from the schools ; of that art which rendered it so laborious a drudgery to be a little more ignorant than before ; which could produce so much disputation without any subject of dispute, and so many proud victories of nothing over less than nothing! Such was the scholastic art of logic : an art which was held out, not so much as an auxiliary to reason, as with the still higher praise of being an instrument that might almost supply its place, and by the possession of which the acute and accurate might argue still more acutely and accurately, and imbecility itself be-come a champion worthy of encounterinn them ; and, though not perhaps the victor, at least not always the vanquished.

That there may be, or rather that there is, a rational logic, we are far from denying; and tiiat many useful directions, in conformity witli a certain system of rules, may be given to the inexperienced student that may facilitate to him acquisitions of knowledge which, but for such directions, he would have made only more slowly, or perhaps not made at all. The art of reasoning, however, which a judicious logic affords, is

not so much the art of acquiring knowledge as tlie art of communicating it to others, or recording it in the manner that may be most profitable for our own future advancement in the track which we have been pursuing. Its direct benefit to ourselves is rather negative than positive — teaching us the sources of error in our mental constitution, and in all the accidenKd circumstances of the language which we are obliged to use, and the society in which we must mingle, — and thus rather saving us from what is false, than bestowing on us what is true. Indeed, since we cannot produce directly in our mind any one conception, or any one feeling of relation, it is very evident tliat the influence of any art of reasoning on our trains of thought must be indirect only.'"

But, if an art of reasoning is to be given to us, it ought surely to be an art which will render the acquisition of knowledge more easy, not more difficult; an art which is to avail itself of the natural tendency of the mind to the discovery of truth, not to counteract this tendency, and to force the mind, if it be possible, to suspend the very prog.ess which was leading it to truth. Wilh which of these characters did the syllogistic logic more exactly correspond?

The natural progress of reasoning has been already explained and

illustrated. One conception follows another conception, according to certain laws of suggestion (commonly termed associulioii) to wiiich our divine Author has adapted our mental constitution ; and by another set of laws, which the same divine Author has established, certain feelings of relation arise from the consideration of the suggesting and suggested object. This is all in which reasoning as felt by us consists. We have the conception of A, it suggests B, and, these two conceptions co-exerting, we feel some relation which they bear to each other ; B, thus suggested, suggests C, and the relation of these is felt in like manner; and thus through the longest ratiocination, analytical or proportional, each subject of our thought suggests something which forms a part of it and is involved in it, or something which has to it a certain relation of proportion ; and the relation of comprehension in the one case, or of proportion in the other case, is felt accordingly at every step. Nothing surely ‘can be simpler than a process of this kind; and it is not easy to conceive how the process could be made shorter than nature herself has rendered it, unless every truth were known to us by intuition. Objects and the relations of objects — these are all which reasoning involves; and these must always l)e involved in every reasoning. While reasoning, then, or a series of propositions, is necessary for the development of truth, the intervening conceptions which form the subjects of those propositions that connect one remote conccjition with another must arise successively in the mind, and their relations be felt in like manner, successively. What is it which the syllogistic art would confer on us in addition ? To shorten the process of arriving at truth, it forces us to use, in every case, three propositions instead of the two which nature directs us to use. Instead of allowing us to say man is fallible he may

tiieiC’ibre err even when lie tliiiiks liimselt most secure from error, which is the spontaneous order of reasoning, the syllogistic art compels us to take a longer journey to the same conclusion, by tlie use of what is called a major proposition, a proposition which never rises spontaneously, for the best of all possible reasons, that it cannot ˆ rise witiiout our knowledge of the very trutli whicli is by supposition

unknown. To proceed in the regular form of a syllogism, we must say, all beings that are fallible may err, even when they think themselves most secure from error. But man is a fallible being : he may therefore err, even when he thinks himself most secure from error. In our spontaneous reasoniivˆs, in which we arrive at precisely the same conclusions, and with a feeling of evidence precisely the same, there are, as we have said, no major propositions, but simply what, in this futile art, are termed technically the minor and the conclusion. The invention and formal statement of a major proposition, then, in every case, serve only to retard the progress of discovery, not to quicken it, or render it in the slightest degree more sure.

This retardation of the progress of reasoning is one circumstance which distinguishes the syllogism ; but the absurdity, which is implied in the very theory of it, distinguishes it still more. It constantly assumes, as the first stage of that reasoning by which we are to arrive at a particular truth, our previous knowledge of that particular truth. The major is the very conclusion itself under another form, and its truth is not more felt than that which it professes to develope. Thus to take one of the many trifling examples which, in books of logic, are usually given, with a most appropriate selection, to illustrate this worse than trifling art, when, in order to prove that John is a sinner, I do not adduce any particular sin of which he has been guilty, but draw up my accusation more irresistibly, by the major of a syllogism. All men are sinners: John is a man : therefore John is a sinner. If I really attached any meaning to my major proposition, all men are sinners, I must, at that very moment, have felt as completely that John was a sinner, as after I had pursued him technically through the minor and conclusion.

The great error of the theory of the syllogism, consisted in supposing that, because all our knowledge may be technically reduced, in some measure, to general maxims, these maxims have naturally a prior and paramount existence in our thought, and give rise to those very reasonings which, on the contrary, give rise to them. It is not on account of our previous assent to the axiom, A whole is greater than a part, — that we believ any particular whole to be greater than any part of it ; but we feel this truth in every particular case, by its own intuitive evidence, and the axiom only expresses briefly our various feelings of this kind without giving occasion to them. The general axiom is, in every case, pos-terior to the separate feeling of which it is only the brief expression, or at least without which, as prior to our verbal statement of the axiom, the axiom itself never could have formed a part of our system of knowledge. The syllogism therefore, which proceeds from the axiom to the demonstration of particulars,

reverses completely the order of reasoning, and begins with tlie conclusion in order to teach us how we may arrive at it.

The natural process of reasoning, by two propositions, instead of the three which the syllogism would force us to use, has been allowed, indeed, by logicians to have a place in their system ; because, with all their fondness for their own technical modes and figures, they had not quite sufHcient hardihood to deny, that it is at least possible for us to reason soinetimes, as in truth we always reason. Their only resource, therefore, was to reduce this natural process under their own artificial method, and to give it a name which might imply the necessity of this reduction, be-fore the reasoning itself could be worthy of that honorable title. They supposed, accordingly, the proposition, which was technically wanting, to be understood in the mind of the thinker or hearer, and termed the reasoning, therefore, an enthymeme. It was, they said, a truncated or imperfect syllogism. They would have expressed themselves more accurately, if they had described their own syllogism, as, in its relation to the natural process of our thought, a cumbrous and overloaded enthymeme.

These remarks, though relating chiefly to the influence of this technical process, as a supposed mode of facilitating the acquisition of knowledge in our own meditative reasonings, show that if the syllogism was inefficacious, and worse than inefficacious as a process for discovering truth, it was not less inadequate as an instrument for communicating truih to others. A very little attention to the nature of the different propositions of the syllogism will be sufficient to show that the same fundamental error, which renders it useless for discovering truth, renders it equally useless for the development of it : and that, as our internal reasoning is only a series of enthymemes, it is only by such a series of enthymemes as that by which truth unfolds itself to our own minds that it can be successfully unfolded to the minds of others. As a mode of communicating knowledge the syllogism is indeed, if possible still more defective than as a mode of acquiring it. It does not give any additional knowledge, nor communicate the knowledge which it does communicate in any simpler, or shorter, or surer way. On the contrary, whatever knowledge it gives it renders more confined by being more cumbrous ; and it cannot fail to train the mind which receives instruction this way to two of the most dangerous practical errors, — the errors of admitting, without proof, only what requires proof, and of doubting, that is to say, of requiring proof, only of what is evident. Such is the .syl-lo’j;ism, considered as an instrument, either for facilitating our attainments in knowledge, or for communicating those attainments unto others.

The triumph of the syllogistic art, it must be confessed, however, is not as an art of acquiring or communicating truth, but as an art of disputation,— as the creat art of]iroving any thins by any thing, quidlibet per quodlibet probandi. And if it be a merit to be able to dispute long and equally well, on subjects known and unknown, to vanquish an opponent by being in the wrong, and

sometimes too by bemg in the riglit, but without the slightest regard either to the right or the wrong, and merely as these accidental circumstances may have corresponded witli certain skilful uses of terms without a meaning, — this merit the logicians of the schools unquestionably might claim. Indeed in controversies of this sort, in those ages of endless controversy, success, as has been very truly remarked, ‘ tended no more to decide the question, than a man’s killing his antagonist in a duel serves now to satisfy any person of sense that the victor had right on his side, and that the vanquished was in the wrong.’

Of the direct influence of the school logic in retarding, and almost wholly preventing, the progress of every better science, it is unnecessary to attempt any ariditional illustration after tlie remarks already otiered, and the masterly views of the subject presented by the great lord Bacon. But the indirect influence of this art was not less hurtful.

One of the most hurtful consequences of this method was the ready disguise of venerable ratiocination which it afforded for any absurdity. However futile an explanation might be, it was still possible to advance it in all the customary solemnities of mood and figure; and it was very natural, therefore, for those who heard what they had been accustomed to regard as reasoning to believe, that, in hearing a reasoning, they heard a reason.

Another very hurtful consequence of this technical system was, that the constant necessity of having recourse to some syllogistic form of argument, and of using these forms in cases in which the opinions

involved in the syllogism were as clear before tlie syllogism as after it, rendered argument and belief, by a sort of indissoluble association, almost synonymous terms. If we had still to prove John to be fallible, after having proved, or at least obtained assent to the proposition, that all men are fallible, it was not easy to discover any truth so self-evident as not to stand, at least equally, in need of demonstration. Hence the constant tendency in the scholastic ages to jKOve what did not stand in need of proof. Every thing was to he demonstrated, and every thing was demonstrated ; though it must be confessed the only effect of the demonstration frequently was to render obscure fas obscure as any tiling self-evident could be rendered), what, but for the demonstration, could not have admitted of the slightest doubt.

Akin to this tendency of proving every thing, even self-evident propositions, by some syllogistic form, was the tendency which the mind acquired to apply many varieties of technical phraseology to the same proposition, so as to make

vmni/ propositions of o„c, as if every repetition of it, in another form of language, were the enunciation of another truth. It is impossible to read a single page of the old logicians witliout discovering innumerable examples of this. Indeed as the forms of technical expression, or at least the possible combinations of them are almost infinite, it is, in many cases, difficult to discover what principle of forbearance and mercy to the reader led the logician to stop at one of his identical propositions, rather than to extend the supposed ratiocination through many similar pages. There can be no doubt that tlie principle which produced many pages miglit with as much reason have produced as many volumes.

Tlie reign of this philosopliy may now be considered, like the age of Chivalry, as gone ; for it is scarcely necessary to speak of a few admirers of the Aristotelian logic who have not yet vanished from among us, who love what is very ancient and what is written in Greek, and who hare therefore two irresistible reasons for venerating that philosphy which is unquestionably much older than Newton, or Des Cartes, or Bacon, and as unquestionably written in language which saves it from vulgar eyes. Or, to speak with more candor of such misplaced sages of other times, there may perhaps be some few generous, but erring, lovers of wisdom, who, impressed with the real merits of Aristotle, and with the majesty of that academic sway, whicli he exercised for so long a period of the history of our race, give him credit for merit still greater and more extensive than he really

possessed ; but merit it must, at the same time, be acknowledged, which was long as indisputable as his real excellence, and which all the learned and honored, of every nation, in which learning could confer honor, united in ascribing to him, and gloried in being his worshippers. The worship, however, is now past, but there are effects of the idolatry which still remain. We have laid aside the superstition, but, as usually happens where superstition has reigned, we have retained many of the superstitious practices.

That we reason worse than we should have done, if our ancestors had reasoned better, there can be no doubt, because we should have profited by the results of their better reasoning ; but there can be almost as little doubt that we suffer from their errors, in another way, by having imbibed some portion of the spirit of their dialectic subtleties ; some greater passion for distinctions merely verbal, and more laborious demonstrations of things self-evident, than we should have felt from the mere imperfection of our intellectual nature, if the logic of Aristotle had never existed.

LOG'WOOD, 71. .s. From Laguna, in the I. ay of Campeachy. A dye-wood : a species of Hjˆmatoxylon, which see.

To make a light purple, mingle ceruse with leg-wood water. Pedrhnm.

J,o(jwood is of a verv dense and firm texture : and is the heart only of the tree which produces it. It is very heavy, and remarkably hard, and of a deep, strong red colour. It grows both in the East and

West Indies, but no where so plentifully as on the coast of the bay of Campeachy. Hill's Mat. Med.

LocJwooD. See IlyTiMATOXYLON. Logwood is used in great quantities for dyeing puri)le. and more especially black. All the colors, however, which can be jirepared from it, are of a fading nature, and cannot, by any art, be matlc equally durable with those prepared from some other materials. Of all the colors prepared from log-

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wood, the black is the most durable. Dr. Lewis recommends it as an ingredient in making ink. Logwood is also found to have a considerable astringent virtue as a medicine, and an extract of it is sometimes given with great success in diarrliceas.

LOHAGIIUR, or the Iron Fort, is a celebrated fortress of llindostan, in Dowletabad, and stands on a rock nearly perpendicular, of great heiglit, and surrounded by a double stone wall. It is also well supplied with water, and has extensive magazines and store rooms in the solid rock. It belongs to the British, who took it not long since from the paishwa, and is about twenty miles north-west of Poona.

LOIIEIA, a city of Yemen, Arabia, on the coast of the Red Sea, and at the bottom of a capacious but shallow bay. A large island, and a group of smaller ones, are a barrier against the sea to the north-west. It is defended by several towers, which admit cannon, and many of the houses are built of stone; but the greater number are mud huts. 'essels can only anchor at a distance from the town; and at low water heavy laden boats cannot approach. The trade is in a second rate species of coffee of inferior quality. Goods brought direct from India pay a duty of five per cent, here : all goods brought down the Red Sea, seven per cent.; and presents are necessary to a good understanding with the authorities. The water is bad, and the surrounding country desolate.

LO’IIOCK, 7K .s. Yt. lohoc, loch. ‘An elec-tuary that is licked, not chewed, nor divided by the teeth. — Minsheu.

Lohock is an Arabian name for those fprms of medicine which are now commonly called eclegmas, lambatives, or linctuses. Quincy.

Lohocks and pectorals were prescribed, and vene-section repeated. Wiseimins Surgery.

LOIN, 7j. s. Sax. len*»; Belg. longie ; Ital. longca : Fr. longe. The back of an animal. In the plural, the reins of man : metaphorically, any source of progeny or production.

Thou slander of thy heavy mother’s womb ! Thou loathed issue of thy father’s tuins !

Slinkspeare. IMy face I’ll grime with filth, Blanket my Inius. Id. Kiiii;

Lear.

Shall these hands destroy the fruits of mine own loins ? Bp. Hall.

A multitude ! like which the populous north Poured never from her frozen loina, to pass Rhene, or the Danaw, when her barbarous sons Came like a deluge on the south. 3Iilton.

LOIR, a river of France, which rises at Cernay, in the arrondissemeut of Chartres, department of the Kure et Loire. It begins to be navigable for floats at Ponce, and for vessels at Co(;smont, near Chateau du Loir, in the department of Sarthe. In its course, which is about 165 miles, it receives the Ozanne the Couie, the Braye, the Long, the One, and several small rivers.

LoiK-ET-CiiK.R, a department of France, hounded on the north-west by that of the Sarthe, north-east by that of the Loiret, south by that of the Indrc, south-east by that of the Cher, and south-west by that of the Indre-et-Loire. It is formed of part of the Blaisois and the Sologne,

a dependency of the old province of Orleannais, and derives its name from the two rivers : the Loir, which flows into it from the north toward tlie east, and the Cher, which runs from east to west. The chief place in this prefecture is Blois: it contains three arrondissements ; Blois, containing 111,075 inhabitants; Romarantin 43,624; and Vˆendome 72,828 ; being a total population of 227,527, on a surface of 2871 square miles. These are subdivided into twenty-four justiciaries of the peace, or cantons, and 309 communesˆ with a territorial revenue of 11,721,000 francs. It is in the fourth military division, belongs to the diocese and royal court of Orleans, and is divided into two electoral arrondissements, sending three members to the chamber of deputies.

This is almost entirely a level country, having very few hills; the Loire, in its course, divides it into two very distinct parts : that on the left bank, wliich is nearly covered with marshes, pools, extensive forests, uncultivated and sandy lands, where scarcely any thing but buckwheat will grow ; while that on the right bank of the river presents an appearance of the greatest fertility, being composed of rich and well cultivated plains, hills covered with vineyards, and beautiful verdant meadows. A long line of small hills, planted with vines and fruittrees, extends through the whole course of the river, on the borders of which are seen handsome residences, and villages

shaded with groves of trees. The climate is generally mild and temperate, and the air pure and healthy, with the exception of some parts near Romarantin, from the marshes of which unwholesome exhalations arise. The soil is chalky, but produces more than sufficient for its inhabitants. It contains 66,324 hectars of forest land (chiefly oaks and hornbeams), and 28,000 hectars of vineyards. The average produce of a liectar of arable land amounts to 1 7 francs 1 5 centimes. It yields all kinds of grain, especially wheat and buckwheat, chestnuts, fruits, and vegetables of every description ; a great quantity of fine hemp, wines of excellent quality, mulberry trees, wood, and good pasturage. There is abundance of game, as red partridges, foxes, and wolves ; the rivers are well stocked with lish, especially trout, carp, crabs, &c. ; numerous flocks of sheep, and herds of horned cattle, good horses, and poultry of all sorts, abound here, as well as silk-worms and bees. It has a large nursery, a royal depot of standard measures at Blois, iron-mines, quarries of alabaster, freestone, flint (supplying all France with gun-flints), marl, potter's earth, and turf. The inhabitants carry on the manufacture of coarse woollen cloths, cotton, fringes, cotton counterpanes, woollen caps, leather gloves, and cutlery. They have also refining houses for sugar, procured from beet-root, spinning mills for woollen and cotton yarn, worked by water, tan-yards, glasshouses, delf-factories, forges, &c. ; and trade in grain, wines, Orleans brandy, vinegar, wood for building and for fuel, cattle, iron, flint stones, &c. The principal rivers which water this department arp the Loire and the Cher, wliich are navigable in thi? part of their course ; the Loir; the Beuvron ; the Cosson ; and the Sauldre ; it is crossed by the great roads of Tours, Chateaudun, and Orleans.

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LOIRE, one of the principal rivers of France •for the length of its course, rises in Mount Gerbier-le-Joux, near ths village of Sainte Eulalie, in the department of Ardeche, watering a vast plain of more than 600 miles, and dividing !•' ranee almost into two equal parts. It establisiies a communication between the Atlantic Ocean and the Mediterranean Sea, by means of the central canal, and facilitates the commercial operations of a great number of cities in the kingdom. At

first this majestic river is closely shut up between the romantic mountains of the Vivarais, then crossing Velay, Forez, Berry, and Nivernais, it directs its course a little from the south-east to the north-west, as far as Orleans : below that city it flows directly westward through the middle of a fertile vale, bordered with woody elevations, and hills planted with vines, at the foot of which are extensive and beautiful plains. Numerous hamlets, villages, towns, cities, and chateaus, adorn its banks, while the multitude of boats that skim over its waters contribute to give life to this charming country. Standing on the bridge at Blois, and looking towards its source, the most magnificent prospect presents itself of hills and woods, towns, villages, country houses, and insulated towers, in a vast amphitheatre of nearly twenty miles.

The Loire presents no uniform or clear channel for navigation ; the shifting of the sands, from one side to the other, constantly varies the course that the boats must pursue. It has been found necessary, therefore, to construct dikes in some parts, both for the purpose of collecting its waters in the dry season, and confining them in times of great increase. These embankments are generally about twenty feet high, and twenty-four feet broad at the top ; in parts where they are most exposed to the shock of the waters, they are capped with masonry. The middle of this causeway is also paved almost through its whole length, and presents one of the finest roads in the world, bordered with rows of poplars. This river begins to be passable for rafts, carrying fir trees for boat-building at Retournac, in the department of the Upper Loire ; it is then navigable for other vessels from La Noirie, in the department of the Loire, to Roanne, where the greater part of the merchandise of Lyons, Languedoc, Provence, and Dauphiny, is embarked. The chief of these are grain, wines, brandy and other spirits, liqueurs, oils, southern fruits, colonial commodities, salt, wool, hemp, forged and cast iron, small copper vessels, pit-coal, wood for ship-building, ropes, resin, tar, &c. The mean height of water varies from 1 metre 95 centimes, to 2 metres 90 centimes, and their fall is about 1 metre in every 200. A sort of boats has lately been established on the Loire, called flies, whicli regularly proceed from Nantes to Orleans, completing the voyage in about a fortnight.

After passing by Nevers, Chatillon, Chateau-neuf, Orleans, lilois, Tours, Saunmr, Nantes, and many other considerable places, the Loire falls into the ocean just below St. Nazaire; its course being about 660 miles, and receiving the waters of the Arroux, the Rebre, tlie Arnon, the Nievre, the Allier, the Cher, the Indrc, the Vienne, the Tbouet, the Authion, the Mayenne, the Sevrc-Vor.. XIII.

Nantaise, the Erdro, the Aoheneau, and many tther smaller tributary streams. Its moutli is in a very bad state, occasioned by the formation of a sand-bank about a mile and a half from the anciiorage, where the water is not more than seven or eight feet deep at low tide, while formerly it was more than twenty.

Loire, The, a department of France, is form-ed out of the Forey, a dependency of the former province of Lyonnois, and takes its name from the above river, which crosses it from south to north. The chief place of this prefecture is Montbrison : it has three arrondissements, Montbrison, containing 114,607 inhabitants; Roanne 107,808; and St. Etienne 121,139; being a to-tal population of 343,554 souls, on an area of 732 square miles, and yielding a revenue of 14,368,000 francs. It is situated in the nineteenth military division, has twenty-eight cantons, and 327 communes, a royal court and a bishop's see at Lyons, is divided into three electoral arrondissements, and sends five members to the chamber of deputies. This department is bounded on the north by that of the Saone et Loire ; on the east by that of the Rhone ; on the south by those of Ardeche and the Upper Loire; and on the west by those of Puy de Dome and the Allier.

It consists of beautiful and fertile plains on both banks of the Loire, and lofty mountains, which surround it on the north, south, and west; the soil is for the most part poor and stony. On these mountains, the highest point of which is Mount Pilat, are to be found some excellent pastures, feeding a great number of cattle, and excellent cheeses are made in these places ; some of them are cultivated to a certain height, others are covered with vines, producing wines of good quality ; and abundance of chestnut trees, the fruit of which is sold at Paris under the name of Lyons chestnuts. This rocky soil is cultivated mostly with horses and mules, but the produce is far from sufficient for its inhabitants; the country contains about 36,386 hectars of forests, chiefly of oaks, beech, and firs; and 13,000 hectars of vineyards, each hectar of arable land yielding on an average twenty-four francs ninety centimes. The productions consist of all kinds of grain, excellent potatoes, fine chestnuts, good fruits, a quantity of hemp, dyers' weed, madder, saflron, every sort of mountain plants, wine, and wood. It abounds in roebucks, hares, thrushes, and aquatic birds ; pools full of fish ; mules, horses, horned cattle, sheep (famous for the delicacy of their meat), and great numbers of goats, and poultry. This department also contains mines of iron, lead, natural steel, and black emery, besides quarries of marble, granite, por|)hyry, whetstones, gun-flints, &c. At St. Alban, and Sail-en-Cousan, are some fine mineral springs.

The inhabitants liave considerable manufactories of arms of all kinds, ironmongery, hempen cloths, calicoes, cambrics, coarse cloths, lace, silk, ribands and shoe-laces, haberdashery, crapes, glue, lamp-black, cast and wrougnt iron, files, saw-blades, locks, fencing foils, knives, and nails. Th«rc are also many cotton spinning manufactories, paper-mills, numerous and large glasshouses, silk-mills, iron works, lime, plaster,

brick and tile kilns, dye-houses, tan-yards, and factories for the preparation of chamois leather. There is likewise a royal manufactory of arms. Their trade consists in coal, iron and iron wares, arms, nails, leather, paper, silk, ribands, wood for boat-building, chestnuts, and the famous cheeses called La Roche cheeses.

The principal rivers are the Loire, which is here navigable, the Lignon, the Ysable, the Aax, the Semene, the Coise, the Faran, and the Gier ; and this department is crossed by the great roads of Lyons, Clermont, and Moulins.

Loire, Upper, a department of Trance, comprising the 'elay and that part of the Cevennes dependent on the former province of Languedoc, derives its name from its situation with regard to the river Loire, which flows through it from the south to the north-east. The principal place of this prefecture isLe Puy ; it contains three arrondissements, Le Puy, with 122,717 inhabitants; Briouda 78,227; and Yssengeaux 75,677; constituting a total population of 276,621 souls, on an area of 2196 square miles ; twenty-eight cantons, and 272 communes. It yields a revenue of 10,400,000 francs, is in the nineteenth military division, has a royal court at Riom, and a bishop’s see at St. Flour: it is divided into two electoral arrondissements, and sends three members to tlie chamber of deputies. It is bounded on the north by the departments of the Loire and the Puy de Dome; on the east by that of Ardeche ; on tlie south by that of Lozere ; and on the west by that of Cantal.

This department is entirely covered with basaltic mountains, the tops of which are covered with snow during more than six months of the year, and on the sides of them are extensive forests, enclosing excellent pastures, wliich feed a great number of cattle, and mules. Some of the smaller liills are covered with chestnut trees and vines, cultivated with great care. In the valleys are found plains of small

extent, and yet more ferule than might be expected from their wild situation ; they yield abundance of excellent fruit for the Paris market, and a quantity of good corn. The soil is naturally very fertile, especially in the valleys and on the hills : it is almost every where of the same quality, consisting of volcanic earth, lava, and pumice-stone of all kinds. In the mountains are to be perceived the remains of ancient volcanoes ; streams of lava and strange collections of basaltic columns cover their sides, and extend to their feet, presenting a most smgular spectacle. The soil, being rocky, is cultivated with mules, and yields a full supply for its inhabitants ; there are 36,386 hectars of forest land, and 13,000 of vineyards: the mean produce of each hectar of arable land is eighteen francs fifty-nine centimes.

Here are mines of antimony and pit-coal, and quarries of statuary marble, granite, millstones, freestone, plaster, and gray stone. The manufactures consist of black and white lace, thread, silk, blond, ribands, woollen counterpanes, com-mon stuffs, nails, organ/ine silk, and fullers' earth. They have also considerable dye-houses, tan-yards, paper-mills, sand-pits, lime-kilns, &c. An extensive trade is carried on in grain, vegetables, mules, cattle, lace, leather, and paper. This

country is watered by the Allier, which is navi-vable, the Loire, the Ance, the Auzon, the Alag-non, and the Arcueil.

LoniE-lNrEaiEUKE, a department of France, is formed of part of the former province of Up-per Bretagne, and takes its name from the natural course of the Loire, which crosses it from east to west, and here empties itself into the ocean. The principal place of this prefecture is Nantes : it is divided into tive arrondissements, Nantes, containing 187,435 inhabitants ; Ancenis 45,234; Chateau Briant 57,237 ; Paimboeuf 39,394; and Savenay 104,515 : being a total population of 433,815 souls, on a superficial extent of 3168 miles : it has forty-five cantons and 209 communes, yielding a revenue of 18,904,000 francs: it is in the twelfth military division, lias a royal court at Rennes and a bisliopric at Nantes, and consists of four electoral arrondissements, which send six members to the chamber of deputies. Its boundaries are, the department of INIorbihan to the north-west; that of-IUe-et Vilaine to the north ; that of Maine-et-Loire to the east ; that of La V'endee to the south ; and the ocean to the west.

The territory of this maritime department is intersected by an incredible number of rivers, several of which are navigable. It has a

coast of sixty miles in extent, which the inroads of the sea are continually increasing in some parts. The soil, generally level, presents a multitude of delightful situations and various scenery, and produces grain of all kinds; the pasturage is excellent, and furnishes feeding for great numbers of cattle and horses; extensive forests, heaths, marshes, meadows planted with fruit trees, and rich vineyards spread over the surface of this country. The salt marshes, which stretch along the coast, are very productive and of considerable importance to the inhabitants. In the southern part is the lake Grand Lieu, one of the largest in France, and abounding in fish ; there is also another formed by the Erdre, which for nearly twenty miles widens into a stream between seven and eight miles broad ; this lake is “ery beautiful, being surrounded by verdant hills, planted with chestnut trees and peopled with villages and country houses. This country is cultivated witii the aid of horses, and yields a sufficiency for its inhabitants, containing 37,452 hectars of forest land, chiefly oaks, beech, and birch, and 45,000 hectars of vineyards, producing on an average twenty-nine francs eighty-nine centimes per hectar of arable land. There are mines of iron, antimony, pewter, loadstone, and fine coal ; and quarries of marble, granite, freestone, quartz, potter’s clay and turf. The manufactures consist of common stufls, linen and cotton cloth, handkerchiefs, printed calicoes, flannels, stockings, porcelain, delf and earthenware, pipes, iron, cast metals, sugar baking, vinegar, liqueurs, mineral acids, lamp-black, leather, morocco, ropes, paper, glass, tanning, brass founding, cotton spinning, sugar refining, salt making, forginj;, blast furnaces, nail making, a royal foundry for cannon and shqi building both for merchants and the state. The trade lies chiefly in grain, faggots, wool, cattle, wines, brandy, sugar, honey, building wood, iron, salt,

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dry and salted fish, spices, drugs, colonial produce, exports and imports to and from the principal states of Europe, Africa and the Indies, fishing tackle for the cod fishery in Newfoundland and Cape Breton, and the herring, mackerel, and pilchard fishery. It also largely supplies the navy with provisions and ammunition. The principal rivers of the department are tlie Loire, the Sevre Nantaise, the Acheneau, the Boulogne, the Brive, the Don, the Isac, the Erdre, the Ognon, and theTenu navigable; the 'ilaine,the Logue, the Cher and the Maine : it is crossed by the great roads of Rochelle, Vannes, Rennes, and Angers.

LoiRET, The, a department of France, consists of part of the former province of (Jrleannais, and takes its name from the little river Loiret, which rises here, and falls into the Loire below Orleans. This town is the chief place of the prefecture, which is divided into four arrondissements : Orleans, containing 133,006 inhabitants; Gien 38,550; Montargis 61,942; and Pithwiers 57,896; being a total population of 291,394 souls, on an extent of 2016 square miles; thirty-oiˆe cantons and 363 communes. This department yields a territorial revenue of 17,516,000 francs, is in the first military division, has a royal court and bishopric at Orleans, contains three electoral arrondissements, which send five members to the chamber of deputies. It is bounded on the north by the departments of Seine-et-Oise and Seine-et-Marne ; on the east by tliat of the Gonne, on the south by those of the Cher and the Loir-et-Cher, and on the west by that of the Eure-et-Loir.

This is generally a level country, composed of fertile plains, vast forests, hUls covered with vines, beautiful meadows and numerous pastures. That part, which extends along the right bank of the Loire from Orleans to Briare, and for a great distance inland, presents nothing but a sterile and sandy soil ; the hills, however, are covered with vines, which yield excellent red and white wines. Great numbers of cattle also, and abundance of poultry, especially turkeys, are reared here for the supply of the capital. The climate is temperate and healthy ; the soil, which is mostly fat and rich, is cultivated with horses and yields more than sufficient for its inhabitants ; there are 95,700 hectars of forests, and 39,000 of vineyards, each hectar of arable land producing twenty-four francs twelve centimes. The productions of this department are all sorts of wheat, barley,

buckwheat, maize, millet, dry vegetables, hemp, flax, fine saffron, good fruits of every kind, pasturage for cattle, wood, abundance of game, river fish, numerous herds of cattle and flocks of sheep, poultry, and bees. Tiiere is a botanical garden at Orleans ; mines of antimony and quarries of stone for building, marl and potter's earth. Mineral springs are found in different communes, and establishments of mineral waters at Segay and Beaugency.

Considerable manufactures are carried on by the inhabitants, in woollen counterpanes, cloth, serge, caps, paper, parchment, leather, files, shot, brass pots, pipes, and highly esteemed vinegar. They have likewise sugar-refining bouses, brandy distilleries, wax-bleaching houses,

cotton and wool spinning mills, brass foundries and famous tan-yards. Their trade consists in faggots, corn, wine, vinegar, brandy, spices, drugs, fruits and fruit trees, vegetables, chestnuts, cyder, excellent honey, saffron, salt, wool, wood, charcoal, cattle, &c. The principal rivers of this department are the I-oire and the Loiret, navigable; the canals of Briare and Orleans, the Loing, the Bied, the Ouanne, the Essoimes and the Cosson; and the chief roads are those of Paris, Malon, Bourges, and Tours.

Loiret, The, a small river, which rises from a very deep spring at the chateau de la Source, about a league below the bridge of Olivet, in the department to which it gives its name; and, after running a course of scarcely nine miles, falls into the Loire below St. Mesmin. It is navigable from the mills of la Chausse Inferieure to its mouth, and possesses the singular property of never being frozen over, however intense the cold. Many factories are established on its banks, and in time of frost it serves for a receptacle to the Orleans boats, which run up for shelter as far as St. Mesmin.

LOI'TER, V. 11. \ Belg. leuteroii; Goih. la—

Loi'terer, n. s. S tur. To delay; linger; idle time away.

Give gloves to thy reapers a largess to cry,

And daily to loileren have a good eye.

Tnsser's Husbandry .

Sir John, you loiter here too long, seeing you are to take soldiers up in

the countries. Shakspeare.

The poor, by idleness or unthriftiness, are riotous spenders, vagabonds, and loiterers. Ha-jward.

Where hast thou been, thou loiterer ? Though my eyes closed, my arms have still been

opened. To search if thou vvert come. Ot'cai/.

Providence would only enter mankind into the useful knowledge of her treasures, leaving the rest to employ our industry, that we live not like idle loiterers and truants. More. Whence this long delay] You loiter, while the spoils are thrown away.

Drydcii.

Mark how he spends his time, whether he inac-tively loiters it away. Locke.

If we have gone wrong, let us redeem the mistake ; if we have loitered, let us quicken our pare, and make the most of the present opportunity. Rogers. Ever listless loiterers, that attend

No cause, no trust, no duty, and no friend.

Pope.

What folly can be ranker"! like our shadows. Our wishes lengthen as our sun declines, No wish should loiter, then, this side the grave.

Yowif;.

LOKE, in mythology, a deity of the northern nations, answering to the Arimanius among the Persians, whom they represent as at enmity both with gods and men, and tiie author of all the evils which desolate the universe. Lokc is described in the Edda as producing the great serpent which encircles the world ; which seems to have been intended as an emblem of corruption or sin ; he also gives birth to llcla or death, the queen of the infernal regions; and to the wolf I'enris, wlio is to encounter the gods and destroy the world.

LOKI'MIEN, a large town of the kingdom ot the Netherlands, in East Flanders, on the

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Durrae, asmall river from wliicli is a canal uniting it with the Scheldt. It carries on a good trade in corn, hemp, flax, and linen. The manufactures are woollens, lace, cotton, hats, and tobacco works : it has also fifteen oil mills. Population 12,800; twelve miles north-east of Ghent.

LOKMAN, surnamed the Wise, an eminent philosopher among the Easterns. The Arabians say he was the sou of Baura, the son or grandson of a sister of Job. He was an Ethiopian, and a slave for some time. It is said that he was born in the time of David, and lived till the age of the prophet Jonas, a period of about 240 years. Some suppose him to have been the same with ;Esop tiie mythologist : and indeed his Parables or Apologues in Arabic, as well as many particulars in his life, resemble the fables and fortune of /Esop. He is said, like yF.sop, to have been deformed in his person, and some of his pieces are still extant ; Mahomet entitled a cliapter of the Koran after his name, in which he introduces God as saying, ‘ We heretofore bestowed wisdom on Lokman.’ He obtained his liberty on account of his obedience in eating the whole of a bitter melon, at his master’s command. His master, surprised, asked how it was possible for him to eat such a nauseous fruit? He answered, ‘ I have received so many favors from you, that it is no wonder I should once in my life eat a bitter melon from your hand.’ M. Galland translated all the fables of Lokman, and Bidpai or Pilpay, a brahmin phi-lo.sopher, which were published at Paris in 1724. Erpenius published his fables and grammar in Arabic and Latin, at Leyden, in 1636.

LOLIUM; darnel grass, in botany, a genus of the digynia order, and triandria class of plants, natural order fourth, gramina : cal. monophyllous, fixed, and uniflorous.

L. perenne, red darnel, or rye-grass, is very common in roads and dry pastures, and makes excellent hay upon dry, chalky, or sandy soils. It is advantageously cultivated along with clover, and springs earlier than other grasses ; thereby supplying food for cattle at a time when it is most difficult to be obtained. Cows, horses, and sheep eat it ; goats are not fond of it.

L. temulentum, or white darnel, grows spontaneously in ploughed fields. If the seeds of this species are malted with barley, the ale soon

occasions drunkenness; mixed with bread corn, they produce but little effect unless the bread is eaten hot.

LOLL, v.n. & v.a. Belg. luylegin, luy, idle, and liiˆen, to lie ; Belg. luUen ; Teut. helten is to suck with the tongue. — Thomson. To lie idle upon or against; recline lazily : to hang or put out the tongue.

.So hangs, and lolls, and weeps upon me ; so shakes and pulls me. Shakspeare. Otlielto.

lie is not lolling on a lewd love bed, But on his knees at meditation.

(. Richard HI. Close by a softly murmuring stream, Where lovers used to loll and dream.

Iludibras. To loll on couches, rich with cytron steds,

And lay your guilty limbs in Tyrian beds.

Druden.

\ ith harmless play amidst the bowls he passed, And with his loUintj tongue assayed the taste. Id.

I?y Strymon's freezing streams he sat alone. Trees bent their lieads to hear him sing his wrongs, Fierce tygers couched around, and lulled their fawning tongues. Id. Virgil.

A lazy, lolling sort Of ever listless loiterers. Vunciad.

'Tis done — he steps into the welcome chaise.

Lolls at liis ease behind four handsome bays.

That whirl away from business and debate

The disencumbered Atlas of the slate. L'owper.

LOLLARD (Walter), founder of the sect of the Lollards, is said to have been an Englishman. He first introduced his doctrines in Germany, about A. D. 1313. After preaching with great zeal, and gaining many proselytes on the continent, he returned to England, where his disciples were called Lollards. He and his followers rejected the sacrifice of the mass-, extreme unction, and penances for sin ; insisting that Christ's sutlerings were sufficient. He is likewise said to have set

aside baptism as a thing of no effect ; and repentance, as not absolutely necessary. But, in that age, none who had the courage to oppose the errors of the church of Rome escaped slander or persecution. Lollard sealed his testimony with his blood, being burnt alive in Cologne in 1322.

LoLLAUDs, in ecclesiastical history, a religious sect, which arose in Germany about the beginning of the fourteenth century; so called from W. Lollard, their founder. See the last article. Soraeˆ derive the name from lolium, a tare, as if the Lollards were tares in God's vineyard : others derive lollhard, lullhard, loUert, or lullert, from the old German word luUen, lollen, or lallen, ' to sing with a low voice;' and say, Lollard means a singer, or one who is continually praising God with a song. The Alexians or Cellites were called Lollards, because they were public singers who interred those who died of the plague, and sang a dirge in a mournful tone as they carried them to the grave. The name was afterwards assumed by persons who, though they made many pretences to piety, entertained the most ridiculous opinions, and committed the most enormous vices. And many injurious aspersions were propagated against those who assumed this name by the priests and monks; so that, by degrees, any person who covered heresies or crimes under the appearance of piety, was called a Lollard. Thus the name was formerly common to all persons and sects who were supposed to be guilty of impiety against God or the church, under profession of extraordinary piety. However, many societies of Lollards, of both sexes, were formed in most parts of Germany and Flanders, and were supported partly by their manual labors, and partly by charitable donations. The magistrates anrl inhabitants of the towns where they resided favored and protected them, on account of their usefulness to the sick. They were thus supported against their malignant rivals, and obtained many papal cor-stitutions, by which their institute was confirmed, their persons exempted from the cog-iisance of the inquisitors, and subjected entirely to the jurisdiction of the bishops; but, as these measures

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were insufflcientto secure them from molestution, Charles, duke of Burgundy, in 1472, obtained a solemn bull from pope Sixtus IV., ordering that the CcUites or Lollards should be ranked among the religious orders, and delivered from the jurisdiction of the bishops ; and pope Julius II. granted them yet greater privileges in 1506. In England, the followers of Wickliffe were called, by way of reproach, Lollards, from some affinity, between their tenets. They were solemnly condemned by the archbishop of Canterbury and the council of Oxford.

LOMBARD (Lambert), an eminent painter, bom at Liege in 1500 ; who, after a diligent study of the antique at Rome, introduced that style of painting among his countrymen instead of the Gothic. He painted historical and architectural pieces; and, though he could never altogether free himself from his national taste, he is ranked among the best painters of his time. He died in 1560.

Lombard (Peter), well known by the title of Master of the Sentences, was born at Novara in Lombardy ; but, being educated in Paris, he distinguished himself so much at that university, that he was first appointed canon of Chartres ; afterwards tutor to Philip, son of Louis VI., and lastly bishop of Paris. He died in 1064. His work on the Sentences is looked on as the source of the scholastic theology of the Latin church. He wrote also Commentaries on the Psalms, and on St. Paul's Epistles.

LOMBARDO-Venetian Kingdom, a name given in 1815, at the congress of Vienna, to Austrian Italy, comprising both Lombardy and the former Venetian territory. See Italy.

LOMBARDS, a nation of Scandinavia, who formerly settled in Italy, and for some time made a considerable figure. The name of Lombards, or Longobards, is derived by Paulus Diaconus, their historian, who was himself a Lombard, from the length of their beards. A nation, called Lombards, is mentioned by Tacitus, Strabo, and Ptolem.y ; but these are different from the Lombards who afterwards settled in Italy, and are reckoned to be the same with the Gepidae, whom the Italian Lombards almost exterminated. The Lombards who settled in Italy are first mentioned by Prosper Aquitanus, bishop of Khegium, in 379, who tells us, that about this time the Lombards, abandoning the most distant coasts of the ocean, and their native country Scandinavia, and seeking for new settlements, as they were overstocked with people at home, first attacked and overcame the Van-dals in Germany. They were then headed by two chiefs, Iboreus and Aion ; who, dying about A. D. 389, were succeeded by Agilmund.

The Lombards were at first a cruel and barbarous nation; but their native fierceness gradually wore off, after they had cmbiaced the Christian religion ; and they governed with such equity and moderation, that most other nations envied the happiness of those who lived under tbem. Under their government, says Paulus Diaconus, no violence was committed, no one unjustly dispossessed of his property, none oppressed with taxes; theft, robberies, murder, and adultery, were seldom heard of; everyone

went, without a;iprehension, wherever he pleased. Their laws were so just and equitable, that they were retained in Italy, and observed there some ages after their kingdom was at an end. Theˆ dress was loose, and for the most part of linen, such as the Anglo-Saxons wore, being interwoven with various colors ; their sVioes were open to the end of their foot, and they used to button or lace them. From some ancient paintings, it appears, that they shaved the back part of their head's, but that their hair was long before; their locks being parted, and laid on each side their foreheads.

Agilmund is commonly reckoned the first king of the Lombards. Before the time of Odoacer the history of the Lombards affords nothing remarkable ; in his time, however, they settled on the Danube, in the country of the Rugians, whom Odoacer had either exterminated or carried into captivity. During their stay in this country they rendered themselves formidable to the neighbouring nations, and carried on successful wars with the Heruli and Gepidje. In 526 they were allowed by the emperor Justinian to settle in Pannonia ; and here tliey made war a second time with the Gepidae. Alboinus, the Lombard king, killed the king of the Gepidae with his own hand, put his army to the rout, and cut such numbers of them in pieces, that they ceased from that time to be a nation. Having caused the deceased king's head to be cut off, he made a cup of his skull, which he used in all public entertainments. However, having taken, among many other captives of great distinction, Rosamunda, the late king's daughter, he married her after the death of his former wife Clodisvinta, the daughter of Clotaire king of France. By this victory Alboinus gained such reputation, that his friendship was courted by Justinian; and, in consequence of the emperor's application, 6000 Lombards were sent to the assistance of Narses against the Goths. The success of the Romans in this expedition, the invasion of Italy by tb Lombards, and their successes, have been related under Italy. At last Alboinus having made himself master of Veuetia, Liguria, iEmilia, Hetruria, and Umbria, was murdered in the year 575, the fourth of his

reign, by the treachery of his wife, whom he had irritated to the most im-placable vengeance, by ordering her, one day, at a feast at Verona, to drink merrily with her father, presenting her with the cup above-mentioned. This she accomplished by the assistance of 1 lelmi-child, the king's shield-bearer, who at first peremptorily refused to engage in the treason; but Rosamunda having, by placing herself in his mistress's bed, drawn him into an adulterous connexion with herself, told him he must now either kill Alboinus, or be himself put to death ; promising at the same time to marry him, if he accomplished it, and bestow on him the kingdom. This last part of her promise, however, she did not get fulfilled, as they were obliged to save themselves by flight. They fled to Longi- • nus the exarch of Ravenna, taking with them all the jewels and treasure of the late king. Longi-n\is receiving her with the greatest kindness, assured her of his protection; and, judging this a favorable opportunity of making himself king of Italy, proposed to marry her, provided she dis-134

patched Ilelmicluld. Uosair.uiid, pleased with the proposal, resolved to satisfy her ambition by getting rid of the man she luul married to gratify her revenge. Accordir.TJy, havini? prepared a strong poison, she mixed it with wine, and gave it to her husband as lie came out of the bath ; but he had not half emptied the cup, when, from its sudden effects, he concluded what it was, and compelled her to drink the rest. They both died in a few hours. Longinus, on l.er deatli, laid aside thoughts of making himself king of Italy, and sei.t the king's treasure lo Constantinople, together with Albisoinda, the ilaughter of Alboinus by Rosamund, whom she had brought along with her. After the death of Alboinus the Lombards chose Clephis, one of the nobility, for their king, lie was murdered aftera short reign of eighteen months; upon which ensued an interregnum of ten years. During this time they extended their conquests in that country; but, at last, the Ro-mans, jealous of their progress, resolved to put a stop to their victories, and, if possible, to drive them quite out. For this purpose they entered in-to an alliance with the Franks; vphich so alarmed the Lombards, that they re-established the mo-narchical form of government among themselves, and chose Autharis, the son of Clephis, for their king. This monarch, considering that the power of the dukes, who had governed Lombardy for ten years, was very much established, allowed them to continue in their government ; but oblicjed them to contribute a

moiety of their revenues towards the support of his royal dignity, and take an oath that, in the time of war, they would assist him to the utmost of their power. Having thus settled matters with the dukes, he enacted scTcral wholesome laws against theft, rapine, murder, adultery, &c., and was the first Lombard king who enibraced Christianity. Most of his subjects followed his example, but, be-ing instructed by Arian bishops, disputes continued long between them and the orthodox bishops of the cities subject to them. From the re-establishment of the monarchy under Autharis, to the reign of Rotharis in 036, the history of the Lombards affords nothing memorable. This period is remarkable for the introduction of written laws among these people. Before this time they had been governed only by tradition ; but Rotharis, in imitation of the Romans and Goths, undertook the publishing of written laws; and, to those which he enacted, many were added by succeeding princes. These laws were enacted in public assemblies, convened for that purpose, after they had been examined and approved of by all the lords of the kingdom ; the le<;islative power being lodged in the king and nobles alone. Rotharis also carried on successful wars with the oxarch of Ravenna, whom he totally defeated in several enrragements, and made himself master of part of his territories. He died in 652 ; and the affairs of the Lombards went on prosperously, till the ambition of Luitprand laid the foundation of the total ruin of his kingdom. He ascended the throne in 711, and watched all opportunities of enlarging his dominions at the expense of the emperors. In 726, the emperor Leo III. havincr forbidden the worship of iir'agcs, and ordered them to be inUled

down, the people revolted. And having strictly enjoined his officers in the west, especially the exarch of Ravenna, to see his edict punctually obeyed, Scholasticus, then exarch, began to pull down the images in Ravenna; which incensed the superstious multitude to such a degree, that, taking arms, they openly declared they would rather renounce their allegiance to the emperor than the worship of images. Luit[)raMd seized this opportunity of making liimself master of the seat of the exarch ; having drawn together all his forces, he unexpectedly ai)peared before Ravenna, and closely besieged it. But the exarch defended the place with sucii courage, that Luitprand brcke up the siege, and led his army against Classis, which he took, plundered, and levelled witli the ground. The severe treatment the inhabitants met with, threw the citizens of Ravenna into the utmost consternation; which Luitprand resolved to take advantage of, and, returning before Ravenna with his whole army, by fiecjuent attacks tired the inhabitants and garrison to such a degree, that the exarch,

despairing of relief, privately withdrew. Luitprand, having carried the town by storm, gave it up to be plundered by his soldiers, who found in it an immense booty, as it had been long the seat of the emperors, the Gothic kings, and the exarchs. The reduction of Ravenna was followed by the surrender of several cities of the exarchate, which Luitprand reduced to a dukedom ; appointing Hildebrand, his grandson, to govern it with the title of duke, and, as he was yet an infant, appointing Peredeus, duke of Vi-cenza, for his guardian. The conquest of the greater part of tiie exarchate alarmed Gregory II. though he was then at variance with the emperor, whose edict against the worshipping of images he had opposed. But, jealous of the power of the Lombards, he exerted his influence with Urfus, doge of Venice, who resolved to assist the exarch with the whole force of the republic. The exarch accordingly laid siege to Ravenna by land, wiiile they invested it almost at the same instant by sea. Peredeus defended the town for some time with great conrase and resolution ; but the 'enetians, having forced open one of the gates, the city was taken, and Peredeus slain, while attempting to drive the enemy from the posts they had seized. Hildebrand fell into the hands of the 'enetians; who, having thus recovered Ravenna to the emperor, returned home, leaving the exarch in possession of the city. Luitprand was then at Pavia ; but the town was taken before he was able to assemble his troops for its relief. Gregory, persuading himself that the emi)eror would now, out of gratitude for the recovery of Ravenna, give ear to his admonitions, began to solicit iiim with the most pressinu; letters to revoke his edict against the worship of images: but Leo, instead of complying, sent three officers to Rome, with private orders either to assassinate the pope, or send him prisoner to Constantinople : and in 725 he recalled Scholasticus, and sent Paul, a patrician, into Italy, to govern in his room, with private instructions to encourage the above-mentioned officers. But, in the mean time, the plot was discovered, and two of the consi)irators were

appreliended by the citizens of Rome, and put to death; the third having escaped. Hereupon the exarch drew together a considerable

body of troops, and set out on his march to Rome, with a design to seize the pope, and send him m chains to Constantinople. But the politic Luitprand now leagued with Gregory against the exarch, in order to preserve the balance of power between them, and, by assisting sometimes the one and sometimes the other, weaken both. The consequence of this coalition was, that, the superstition of the people being awakened, almost the whole of Italy revolted from the emperor. Meantime the exarcii Paul, havmg gained a considerable party in Ravenna, began to remove the images out of the churches. Hereupon the adverse party, encouraged by the pope, flew to arms ; and, falling upon the Iconoclasts, gave rise to a civil war within the walls of Ravenna. Great numbers were killed on both sides ; but, the worsliippers of images prevailing, a dreadful slaughter was made of the opposite party, and the exarch himself was murdered. However, Raverma continued faithful to the emperor; but most of the cities [of Romagna, belonging to the exarchate, and all those of Pentapolis, abhorring the emperor as a heretic, submitted to Luitprand. In Naples, Exhilaratus, the duke, hav-ing received orders from Leo to execute his edict, endeavoured to persuade the people to receive it; but, finding all his endeavours thwarted by the pope, for whom the Neapolitans had a great veneration, he hired assassins to murder him. But, the plot being discovered, the Neapolitans murdered both the duke and his son, with one of his chief officers. They still, however, continued stedfast in their allegiance to Leo, who sent one Peter to govern them in the room of Exhilaratus. In the mean time Leo, not doubting but the pope was the chief author of so much mischief, sent the eunuch Eutychius into Italy, with the title and autiiority of exarch, strictly enjoining him to get the pope despatched, as his death was absolutely necessary for the tranquillity of Italy. But a messenger, whom the exarch had sent to Rome, be-ing apprehended, and the emperor's order being found upon him, the pope's friends thenceforth guarded him with such care, that the exarch's assassins could never afterwards find an opportunity. Tiie Romans were for putting tlie messenger to death ; but the pope interposed, contenting himself with excommunicating the exarcli. And now the Romans, provoked more than ever against Leo, resolved to revolt, and appoint their own magistrates, keeping themselves united under the pope, not yet as their prince, but only as their head. Eutychius, having brought with him from Constaminople a good number of troops, easily ((uelled tiie rebellion at Ravenna, and severely punished the authors. But he found he could never reduce them, so long as they were supported by tlie Lombards : and therefore he employed all ills art and policy to take off Luitprand from the i)arty of the Romans, and bring him over to his own. Luitprand, for some time, willistood all his offers ; but

Tlirasimund, duke of Spoleto, revolting at this juncture, the exarcii offered to assist the king against the rebellious

duke, provided lie would assist him against tlie pope and the Romans. With this proposal Luitprand readily closed ; and the two armies joined, and began their march towards Spoleto. Al tlieir approach, the duke, despairing of being able to resist two such powers, sued for pardon ; which Luitprand not only granted, but confirmed him in the dukedom, after he had obliged him to take a new oatli of allegiance, and give hostages for his future fidelity. From Spoleto tlie two armies marched to Rome; and encamped in the meadows of Nero, between the Tiber and the 'atican. Gregory had caused the city to be fortified ; but, being sensible that the Romans alone could not long hold out against two such armies, he went to the king in his camp ; and there, with a pathetic speech, softened Luitprand to such a degree, that, throwing himself at b,is feet in presence of the army, he begged pardon for entering into an alliance against him ; went with him to the church of St. Peter, and laid his girdle, sword, gauntlet, royal mantle, crown of gold, ar.d cross of silver, on the apostle's sepulchre. After this he reconciled the pope with the ex-arch, who was thereupon received into the city, where he continued f6r some time, in a friendly correspondence with the pope. At this time an impostor, taking ttie name of Tiberius, and pretending to be descended from ilie emperors, seduced many people in Tuscany, and was by them proclaimed emperor. Gregory, wisliing to oblige Leo, persuaded the Romans to attend the exarch in his expedition against this usurper, whom they soon took in a castle, sent his head to the emperor, and suppressed the rebellion. But Leo, still insisting upon his edict against the images being received in Rome, the Romans, at the instigation of tiie pope, publicly renounced their allegiance, paid nira no more tribute, and withdrew for ever their obedience to tiie eastern emperors. On this Leo caused all the patrimonies of the church in Sicily, Calabria, and his otlier dominions, to be confiscated ; and raised a powerful army to recover the towns that had revolted. Gregory, alarmed at tliese warlike preparations, resolved to recur to the protection of the French, the only nation then capable of coping with the emperor, and on whom, on account of their zeal for religion, he thought he might depend. They were, at this time, governed by the celebrated Charles Martel, who was reckoned the greatest hero of his age. To him, therefore, Gregory sent a solemn embassy, witli a great number of relics, earnestly entreating him to take the Romans, and the church, under his protection, and defend them against the attempts of Leo. The ambassadors were received with extraordinary marks of honor;

and a treaty was soon concluded between them and Charles. But Gregory did not long enjoy the fruit of this negociation; for he died tiic same year, 731, and was succeeded by Gregory III. The French nation, by the bravery and conduct of Charles Martel, had now become the most powerful kingdom in the west. His successor, Pepin, was no less wise and powerful tiiaii his fatlier; and, as till' ambition of tiic Lombard princes would be satisfied with nothing less than the entire con quest of Italy, the French monarch, Charlemagne,

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under color of assisting the pope, at last put an end to tlie empire of Lonibardy, as related under the article France.

LOMBARD Y, a country of Upper Italy, is a name commonly given to the whole tract of country between the Alps and the Appennines, or between the frontiers of Switzerland and Tuscany. It is more strictly applicable to the vale of the Po only. In tlie more general acceptation it is about 250 miles in length, and 130 in breadth, and corresponds pretty nearly to the Gallia Cisalpina of the Romans. It derived its present name from the Lombards of the sixth century, who occupied it as a kingdom till the eighth. Lombardy is divided into Upper and Lower : the former, the western part, comprehending the Milanese, and a portion of the Sardinian territory ; the latter, Parma, Modena, the papal legislation, and great part of the Austrian government of Venice. It is also divided into Cispadan, and Transpadan Lombardy : the former, or Lombardy on this side the Po, including all the territory between that river and the Appennines ; Transpadan Lombardy, or Lombardy beyond the Po, all that is between that river and the Alps. The states of Lombardy at present are Austrian Italy, Sardinia, Parma, Modena, and Lucca.

LOMBLEM, one of the Sunda Islands, between the larger islands of Floris and Timor, and the eighth and ninth degrees of south latitude. It is itself about fifty miles in length, by sixteen average breadth ; but has never been explored.

LOM BOCK, an island in the eastern seas, separated from that of Bally by the straits of Lombock, and from Sumbawa by the straits of Alias. It is about fifty-three miles in length, north and south, and forty-five in average breadth, very mountainous, but covered with wood and verdure. At the town of Bally, in the Straits of Alias, and in the many flourishing plantations and villages of the coast, European ships passing to the east are well supplied. The articles required in exchange are fire-arms, ammunition, or dollars. Its commerce with the neighbouring Malay Islands is also extensive. The inhabitants are supposed to have been originally emigrants from Ilindostan, and retain most Hindoo customs.

LoMRocK, THE Stuait OF, is formed by the island of Bally west, and that of Lombock east. The south entrance is in long. 115’^ 43’ E., and

in lat. 8ˆ 45’ S., where is a large island, called Banditti Island, to the west of which there is no passage. The navigation is here extremely dangerous, owing to the great rapidity of the tides. The strait of Alias, formed by the island of Lombock to the westward, and that of Sumbawa eastward, is reckoned the best and safest to the eastward of Java, having generally anchorage at the towns and villages.

LOMOND IltLi.s, several verdant hills of Scotland, in the west part of Fifeshire, distinguished by different names. The two highest are called the Eastern and Western Lomonds. From their relative situation, more than from their magnitude, they command a very extensive and variegated prospect into many distant as well as adjacint counties, and arc; seen at a

very great distance by travellers in various directions.

Lomond, Eastern, the most regular and beautiful of the above hills, is said to be about 550 yards in height above the level of the plain; and, where it is most accessible, seems to have been fortified near the top with a deep trench. It lies a little west of Falkland, and is skirted with furze, above which it exhibits a beautiful verdure at all seasons, and rises into a coiiical sum-mit. It slopes gradually on the east, but on the west the descent is steep, down to the gap or valley below; which separates it from the Western L«mond, and extends above a mile nearly on a level. Very near the top there is a small cavity about one foot and a half in diameter, which, by travellers, has been esteemed a. volcanic crater. It abounds with limestone, and has also some strata of good coal, and a lead mine.

Lomond, Western, is considerably higher than the Eastern, and has a large cairn of loose stones at the top. From its summit, the southern aspect has little variety, but a gradual and uniform descent, till it joins the parishes of Leslie and Portmoak.

Lomond, Loch, a large lake of Scotland, in Dumbartonshire, which I \Ir. Pennant styles ‘ the most beautiful of the Caledonian lakes.’ The view of it from Tarbat presents an extensive serpentine lake, winding amidst lofty hills on the north, barren, bleak, and rocky, which darken with their shade that contracted part of the water. About twenty-eight islands are dispersed over the lake, well wooded ; of these some just peep above the surface, and are tufted with trees ; others are so disposed as to form a magnificent vista. Opposite Luss, at a small distance from the shore, is a mountainous isle almost covered with

wood, near half a mile long. The largest island is two miles long, and stocked with deer. The lake is thirty-six miles long ; its greatest breadth is eight ; its greatest depth 120 fathoms. Its surface has, for many years past, been observed gradually to increase, and invade the adjacent shore. And, from a passage in Camden's Atlas Britannica, it appears, that an island existing in his time, called Camstraddan, in which was a house and orchard, is now lost. Large trees are also often found in the mud near the shore, overwhelmed in former times by tiie increase of water, occasioned by vast quantities of stone and gravel brought down by the rivers, and by the falls of their banks.

LOMONOZOF, a celebrated Russian poet, the great reformer of his native tongue, was the son of a fishmonger at Kolmogori, and was born in 1711. His genius for poetry was first kindled by the perusal of the Song of Solomon, versified by Polotski. He soon after left his father, and took refuge in the Kaikonospaski monastery at Moscow ; where he indulged his taste tor letters, and studied the Oreek and Latin languages. In this seminary he made such progress in literature as to be employed by the imperial Academy of Sciences, In 1736 that society sent him to the university of Marpurg in Hesse Cassel, where he studied universal grammar, rhetoric, and philosophy, under the celebrated Chiisliaa

Wolf. He continued at Marpurg four years, during which time he applied himself to chemistry, which he afterwards pursued with still greater success under the famous Henckel at Freyberg in Saxony. In 1741 he returned into Russia, was chosen in 1742 adjunct to the imperial academy; and, in 1743, member of that society, and professor of chemistry. In 1760 he was appointed inspector of the seminary, then annexed to the academy, and in 1764 Catharine II. made him a counsellor of state. Lomonozof excelled in various kinds of composition ; but his chief merit is derived from his poetical com-

positions, the finest of which are his odes. They are greatly admired

for originality of invention, sublimity of sentiment, and energy of language. In this, and other species of composition, he enriched his native language with various kinds of metre, and is hence styled the Father of Russian Poetry. Ilis principal works were printed in 3 vols. 8vo. He wrote Annals of the Russian Sovereigns ; and The Ancient History of Russia, from its Origin to the Death of Yaroslaf I. in 1054 ; a work of great merit, as it illustrates the most obscure period in the annals of Russia. He died 4th of April, 17(34.

LONDON.

LONDON, (Lat. Londinium and Augusta), from the British Lyn-den, signifying the town on the lake, thus supplies in its name one of the earliest and most prominent facts of its history, *i.e.* that at the period of its foundation the Thames in tliis neighbourliood was rather a lake, occasionally subsiding into a stream, than a river regularly confined by fences and embankments. The name of the village of Mort-lake still perpetuates the same idea.

PART I. EARLY HISTORY OF LONDON.

Ammianus Marcellinus mentions Londinium as the capital of the Trinobantes : and Tacitus says, * London is so called from its situation, and Augusta from its grandeur.' If we advert to more remote writers, the chronicler, Geoffry of Monmouth, tells us that London was founded in the year 1108 before the Christian era, by Brute, a lineal descendant of Eneas, and called by him, after the great scene of his ancestor's exploits, Troy Novant, or New Troy, whence the inhabitants received the name of Trinovantes, or Trinobantes ; and so, as we are further told, it continued to be called for 1000 years and more, till the sceptre having devolved on king Lud, a native of Britain, he gave it the name of Caer Lud, or Ludstoun, which in process of time be-came softened into London. Mr. Pennant, rejecting this story, has framed anotlier of his own, nearly as fanciful. ' London,' he says, 'certainly existed prior to the invasion of Caesar; it was, at the time of liis arrival in this island, the capital of the Trinobantes, who had recently come from Belgium, and composed one of the small nations into which Britain was formerly divided. Tlie name of this nation, as we learn from Baxter's British Glossary, was derived from the three following British words — tri now hant, which signify the inhabitants of the New City, the ancient name of tlie renowned metro])olis of Britain.'

But the Commentaries of C.tsar at once dissipate these visions of the early grandeur of our metropolis, and prove that it owwl every thing worthy of that character to tiie Romans. He tells us tiiat ‘ what the Britons called a town was nothing inori-than a thick wood, surrounded by a ditch and fortified by a lampart, into which they retired when apprehensive of invasion.’

Tlie proofs are indubitable, that the Britons knew nothing of brick-making at this period, and had never, so far as the Romans could observe, attempted to raise one stone above another. No traces of building have ever yet been discovered about London, which could with any probability be ascribed to a period anterior to the Roman invasion ; tiiough, of the natural advantages of the place, the Britons were probably as good judges as their conquerors. We find, accordingly, that as far as regards the site of London, a stronger one for purposes of defence could scarcely have been chosen. The heart of the city was on the summit of an angle of rising ground (about where St. Paul’s cathedral now stands), bounded on the one side by the marshy Thames, on the other by the Fleta, a stream or torrent since covered over, which cmj)iied itself into the Thames, near where Black fnars-bridge has been since erected ; and behind this naturally entrenched mount there was a thick wood, which extended far into the interior. We have only in imagination to cover this mount also with ‘thick wood,’ to complete the idea which Caesar presents to us of the British town. So slowly, indeed, was the wood cleared away, that so late as the reign of Henry II. all the northern parts of the city bordered on a thick forest, where beasts of the chase roamed. When, under Caesar, the Romans advanced to the Thames, the Trinobantes were the first of the tribes beyond that river who sent proposals of submission ; and there is every reason to believe, that they formed no part of that native force which, under Cassivelaunus, attemjited to oppose his jirogress. When victory declared for Ciesar, and he had effected the passage of the river, he found not only a friendly people in the Trinobantes, but, in their city or strong hold in the wood, as advantageous a position for encampment as the invader of an unknown territory could desire. It was such as a very slight application of the Ro-man skill in fortification could render impregnable to any attacks from the hostile nations of the interior ; while, on the side of the Thames, lie secured a free communication with the sea.

It has beeri a matter of dispute among antiquaries to determine the jirecise spot where .tu-bus Ciusar forded the Thames. Camden and

others think that it was at Sheppeilon, and that

•what are called Cowey Stakes were planted there to obstruct his passage. Alaitland, conceiving however tliat this would place the ford at a greater distance from London than would agree with Cffisar's account, was at great pains to discover a ford lower down. ' I endeavoured,' he says, 'by sounding the river at several neap tides, from Wandsworth to London-bridge, to discover a ford, which, to my no small satisfaction, I did, on the 18tli of September, aimo 1732, about ninety feet west of the south-west angle of Chelsea College-garden ; where, in a right line fron) north-east to south-west, I found the deepest part of the channel to be only four feet seven inches deep.' But the state of any part of the river in modern times can be no evidence of what its state was in the time of the Romans. It is besides certain, that to the west <jf London-bridge, and not so high up as Chelsea, there existed, previous to the general embankment of the river, at least two well known fords. Milford Lane, opposite to St. Clement's Churcli in the Strand, was so called from a corn mill which anciently stood there, and from its leading to a ford across the river. At York House, the palace of the archbishop of York, which stood on the site of the streets adjoining to what still bears the name of York-stairs, there was another ford, which, as late as the beginning of the eighteenth century, had been used witiiin the memory of many persons.

JNIr. Bagford, another learned antiquary, in a letter to ilearne, written in 1714, says, 'And now I shall relate to you the manner of the Roman approaches near to London. These led along Kent Street, on the left hand, leading to London, and pointed directly to Dowgate, now so called, through an arch since built by tiie bishop of Winchester at his stairs, which, to this day, is called Stone Street, and came directly out of Surrey. It was at this very place (as I take it) that the Roman legions forded over the river of Thames, first the horse and then the foot, which might not then take them up to the shoulders. And this they might attempt (as we may conjecture) when the tide was first coming

in, they then making an angle, and directing their course against the stream of the river. When they came to the middle of the stream, the tide drove them to their intended landing-])lace — which was Dowgate.'

At wliatever place the Romans forded the ri-ver, it seems certain, at least, that the passage was not efl'ected at any part lower than the junction of the Fleta with the Tiiames. All the territory within tlie angle formed by these two streams was occupied by the Trinobantes, who were in neuociation for a friendly treaty with the invader ; and it must have been above it, therefore, that Ca'sar found the hostile forces of Cassivelaunus drawn up to oppose his passage. It may possibly have been as far up as Cowey Stakes, but not less possibly as low down as the Mill-ford; — in short, the range of reasonable conjecture is so wide, that nothing can be vainer than to attempt to come to a fixed conclusion on the subject.

1. London, under the Rornans. — The Romans conquered to civilise. They showed the Britons

how to fashion the clay of their soil into bricks and domestic utensils ; to build houses for themselves, temples to their gods, and courts for the administration of justice; to drain and embank; to cut roads and erect causeways ; to lay out their towns in streets and squares, and to surround them with walls and towers. Tlie Britons cliose the site of London, but to the Romans we must allow the praise of adorning it with its earliest monuments of art.

It was soon perceived, by this sagacious peo-ple, that London, though well fitted by its natural strength for a military station, was still better qualified to be a place of extensive commerce. Seated at a considerable distance from the sea on a broad and navigable river, which, after watering some of the fairest portions of the island, discharges itself into the ocean almost in sight of the continent of Europe, it seemed calculated to be at once the mart for a great domestic and great foreign trade. The Romans, however, were warriors, and not traffickers ; and they contented themselves with directing the Britons to the cultivation of those advantages, which have raised their capital to the proud pre-eminence which it now holds among the cities of the earth. We find, accordingly, that London was never, like other settlements of the Romans, formed into what they termed a military colony, exclusively Roman. Here the Roman prefects resided ; and from this point, as we learn from the Itinerary of

Antoninus, branched most of the great roads into the interior ; botli decisive proofs that they regarded it as the most important station they possessed in the island : vet neither did they occupy it alone, not did they subject it to the inconvenient restrictions of a garrison-town. London remained a free city, where Ro-man and Briton mingled amicably together; and to which strangers from all parts were encouraged to resort with their commodities. So rapid was now the progress of London in commercial importance, that, as early as the revolt of the celebrated Boadicea, it is described by Tacitus as having become famous for the vast num-ber of merchants who resorted to it, and the abundance of every species of commodity which it could supply. The first interruption to its prosperity arose from the early triumphs of this illustrious heroine. The Roman general Sueto-nius, unable in the outset to encounter so formidable a rebellion, was obliged to abandon London to its fate. Boadicea and her troops, eager to punish the ancient defection of the Trinobantes from the common cause of the native powers, and irritated by the spectacle which London presented of Roman greatness, massacred every soul they found in the city, and, setting fire to it in several places, nearly reduced the whole to ashes.

The Romans, however, again recovering the ascendancy, a new city speedily arose on the same favored spot, devoted as before to the peaceful pursuits of commerce, and flourishing by them. In the year 339 no less than 800 vessels are said to have been employed in the exportation from London of corn alone. On the decline of the empire, in the fifth century, London had to lament the departure of the be-

nt'ficent founders of her greatness. There are various statements of the period when the Ro-mans abandoned Britain ; all that is certain is, that it took place not later than the year 450, when a dominion which brought many blessings to this island had wholly and for ever ceased.

2. Roman remains. — When the Romans evacuated London, they left it encompassed with lofty and well fortified walls. The circuit of them, as described by Stowe, measured two miles and a furlong ; and this

did not include the side towards the Thames, which, though originally walled in, was subsequently left to its natural defence : when perfect, the walls are supposed to have been twenty-two feet high. They commenced on the east with a large fort, erected on the present site of the Tower (supposed by Bagford still to survive under the name of the White Tower), and taking a semicircular direction by the Minories, Ilounsditch, Cripplegate, Aldersgate, Newgate, and Ludgate, terminated in another lofty fort on the Thames, close to Fleet Brook. Besides these two principal forts, the walls were guarded by thirteen other towers, erected at proper distances on the land side, and supposed by INIaitland, from some remains of them existing in his time, to have been about forty feet high. The entrances into the city on the land side were originally but three; by Aldgate on the east; Aldersgate on the north, and Ludgate on the west ; but in the course of time many new gates were opened to facilitate communicat.on with the country, such as Newgale, Cripplegate,]Moor-gate, Bishopsgate, the postern on Tower Hill, &c. The barbican, specula, or watch-tower, belonging to every fortified place, stood a little without the walls to the east of Aldersgate, on the spot which still goes by the name of Barbican. Mr. Bagford's account of the uses to which this was applied is curious. ' Here,' he says, ' the Romans kept cohorts of soldiers in continual service to watch in the night, that if any sudden fire should happen they might be in readiness to extinguish it, as also to give notice if an enemy were gathering or marching towards the city to surprise them. In short, it was a watch-tower by day, and at night ihey lighted some combustible matter on the top thereof, to give directions to the weary traveller repairing to the city, either with provision, or upon some other occasion. The same was intended by a lantern on the top of Bow steeple before the fire of London (although seldom made use of), for burning of lights, to give direction to the travellers and to the market people, that came from the northern parts of London. Of all these extensive outworks, walls, towers, and gates, very few vestiges remain.

The dangers which they were erected to avert, having long since ceased to exist : they have one after another been swept away in the course of modern improvement; and itisonly by the names which survive, that their sites are now to be traced. The coins found at their foundations 'lave been invariably Roman ; an incontestable proof that it was to the protecting and magnific mt spirit of the Roman])eople, that the British wtre indebted for the fortification of their capital. Some of the gates were very handsome and

costly structures ; especially in later times, when the citizens delighted to distinguish themselves by benefactions and bequests for the embellishment of these inlets to their cherished city. Ludgate, which was taken down and rebuilt in the reign of queen Elizabeth, was not even at that time erected at a less expense than £l500 ; and the expenditure on the other gates was equally munificent. When in the last stage of their dilapidation they were ordered to be pulled down, they brought, even as old materials, considerable prices. Aldgate was sold for£l57 10s.; Ludgate for £148 ; and Cripplegate for £9L

London Stone, now to be seen in the south wall of St. Swithin's Church, Cannon Street, was another monument of the Roman power. It appears to have been a miliary, of the same kind as that in the forum at Rome, where all the highways of the country met in a point, and from which they were measured. We have before alluded to the proof which this furnishes, that London was regarded by the Romans as the chief seat of their British dominion. When Jack Cade struck this stone with his sword, exclaiming, ' Now is Mortimer lord of London,' he was probably not unaware of its emblematic character.

According to Bagford, the Romans had in London a field of Mars, in imitation of that at Rome; and through so long a lapse of ages did the same spot continue to be appropriated to military exercises, that this field was no other than what, in more recent times, was called the Old Artillery Ground. ' On the farther side of Whitechapel Street,' he says, ' next Bishopsgate Street, was another station of the Romans, in that part which formerly bore the name. of the Old Artillery Ground, and was their field of Mars, in which place the Romans trained up and exercised their young soldiers, and likewise the youth of the neighbouring Britons, in the skill and exercise of arms, that they might be more expert in the use of them upon all emergent occasions. And, if any sudden tumults or insurrections should happen in the city, they were then ready and at hand to suppress them. This field of Mars was in imitation of that at Old Rome, where they mustered their soldiers, and which must needs have been a very large place, as the same is excellently described and likewise observed to have been a Roman camp, by a judicious author in the latter end of queen Elizabeth's reign.

Of the temples of the Romans no specimens are now extant. In Norden's Middlesex, it is said, there was one near the Tilt Yard ; and Bagford makes no doubt of there having been a temple of Diana on the south side of St. Paul's. The ruins of a building, called the Camera Dianac, situated on the eminence of St. I'aul's Wharf, existed in the lime of How, who wrote u continuation of Stowe; and the tenements

which have been since erected on its site are still designated in the leases of them as part and parcel of the ancient Cˆamcra Dianas. From the accounts given of this structure, however, it does not appear to have been at all of the nature of a temple. The Camera Dianai was a vaulted labyrinth, similar in its ground plan to the celebrated

Rosamond's Dower at Woodstock, and was employed by Henry II., of amorous memory, for the same purpose. The one was the country, and the otlier the town repository of this jewel of his heart. * At this time,' says How, ' some ruins of it are remaining, and many evident testimonies of intricate turnings and windings, as also a subterraneous passage to Castle Baynard, which no doubt the king made use of privately to have access to his brightest Diana, one of the most exquisite and most celebrated beauties that we find mentioned in any history.' The name Camera DiantE had an obvious reference to those purposes of chaste seclusion, for which the building was designed ; and it would be preferring a less probability to a greater, to suppose that it derived this appellation from having been erected on the same spot where a Roman temple of Diana previously stood.

In December, 1803, a large and very beautiful specimen of Jloman mosaic was accidentally discovered by some workmen employed in digging for a sewer immediately opposite the East India House. It is preserved in the honorable company's museum, and suggests to us a splendid idea of the extent to which the Romans liad carried the internal embellishment of their houses. It is about eleven feet square, and exhibits the centre of the floor of an apartment, which could not have been less than twenty-two feet square, but in all probability was considerably larger. The figure of the god Bacchus is represented reclining on the back of a tiger. The drawing, coloring, and shadows, are all effiected with great skill and ingenuity, by the use of about twenty separate tints, composed of tessellae, of different materials. The major pan consist of baked eartlis, but the more brilliant colors of green and purple, which form the drapery, are of glass. These tessellae are of different sizes and figures, adapted to the situations they occupy in the design ; and are placed in rows, either straight or curved, as occasion demanded, each tessella presenting to those around it a flat side. The interstices of mortar being thus very narrow, and the bearing of the pieces against each other uniform, the work in general possessed much strength, and was, very probably, when uninjured by damp, nearly as firm as the solid stone. A mosaic pavement, with a similar device, was discovered in 1711 — 12 at Woodstock in Oxfordshire.

3. London to the Danish conquest. — The departure of the Romans proved the commencement of a long train of calamities to London.

The sun of her prosperity seemed to have set. The Saxons, invited over to furnish that protection against the incursions of the Scots and Picts which the Romans could no longer afford, violated the com[)act wliich gave them a footing in the country ; and during the vain and sanguinary struggles of the British, for nearly a centuiy and a half, to preserve themselves from Saxon subju-gation, London, from its importance, became, more than any other part of the island, a prey to the evils of intestine war. When the Saxons had at last established themselves in the sovereignty of the country, it was no longer with London that the metropolitan sceptre was suffered to remain. Ethelbert, king of Kent, to whom all the Saxon nations, south of the Huniber, were feudatory, made Canterbury the seat of his government ; and neglected London ceases to figure in history, except for the disasters which befel it. In G64 it was ravaged by the plague ; in 764 it was wasted by fire ; in 798 it again suffered severely from fire, and numbers of the inhabitants perished in the flames; and in 801, before there was time to repair the ruin done, a third conflagration nearly completed the work of destruction. On the establishment of the Heptarchy under Egbert, A. D. 827, the fortunes of London brightened for a moment. Egbert chose it for his residence, and here, in 833, a wittenagemot, or parliament, was held. But on the invasion of England by the Danes, soon after, they drove Egbert from his adopted capital, and, after delivering it up to pillage and massacre, reduced nearly the whole to ashes.

In such a succession of calamities, it was inevitable, that nearly all that beauty and magnificence which the Romans had imparted to London should for ever disappear. Its naked walls, in fact, alone remained ; and if a city, far transcending even the Roman Augusta, has since arisen within and around them, it is to the British themselves that the merit and the fame be-long.

After a dismal lapse of nearly four centuries, the reign of the renowned Alfred brought, among many blessings, the restoration of London to its former greatness and prosperity. Having, A. D. 884, freed the kingdom from the Danish yoke, he gave directions for rebuilding the desolated cities; and of these none claimed or received a larger share of his beneficent patronage than London. He repaired and strengthened the walls; he prevailed on the inhabitants, whose houses had hitherto consisted almost wholly of wood — the cause of repeated conflagrations, to rebuild many of them of brick and stone; he presented them with models of merchant ships, that would both sail better and carry larger cargoes than those of former times ; and he laid down the plan of that excellent system of municipal government which, with various modifications and improvements, subsists to the

present day. With such aids and encouragements, the renovation of London proceeded so rapidly, and the spirit of its citizens so much revived, that notwithstanding an accidental fire in 893, which occasioned very considerable injury, it was in a few years in a condition, for the first time since the departure of the Romans, not only to defend itself against invasion, but to go forth and meet the invaders. In 893 when a predatory party of the Danes, under the command of Hastings, encouraged by the absence of Alfred from his capital, had advanced as far as Beamflete, the garrison of London, joined by a body of gallant citizens who eagerly volunteered their services, went out and surprised the enemy in their camp, cut all who opposed them to pieces, took a great many prisoners, and spoiled the spoilers. When again, in 890, another body of the Danes had sailed up the river Lea to Ware, and posted themselves in a strong position between that place and Hertford, Alfred, at the head of his grateful and in

trepid citizens, marched from London, attacked the enemy iti their intrenchments, and compelled them to riy at all points.

In 994, about one century after the restoration of London by Alfred, during all which time it continued to increase in strength and opulence, the kings of Denmark and Norway, at the head of a numerous fleet and army, sailed up the Thames, with the hope of reducing the city to their power. The reins of the Saxon government were at this moment in the hands of the feeble and dastardly Ethelred IL, and the citizens of London were left unassisted to the defence of their own walls. So bravely, however, did they defend them, that the enemy were repeatedly repulsed with great loss, and finally obliged to raise the siege. The Danes, though un-able to make themselves masters of Lon-don, ceased not to harass every other part of the country with their incursions ; till, weary of resistance, Ethelred abdicated his throne, and retired into Normandy, A. D. 1013. London, thus abandoned, was at length compelled to open her gates, and with her the whole of England submitted to the sceptre of Sweyn, king of

Denmark.

On the accession of Canute, the son of Sweyn, to the throne, the citizens of London joined in the general effort made by the Saxons under the brave Edmund Ironside, the son of Ethelred, to throw off the Danish yoke. For a time the enterprise gave promise of a glorious triumph, Canute was obliged to abandon the capital to ins rival; and, in 1016, Edmund Ironside was in London crowned king of England. Three times in the course of that year Canute returned and laid siege to it, but was as often repulsed with great loss. The contending princes, finding at length that their forces were too equally balanced, to give either a hope of sole dominion, entered into an agreement for a division of territory ; but scarcely had this compromise been made, when the assassination of the gallant Edmund, by his perfidious relation Edric Streon, depriving the Saxons of a leader, left Canute sovereign of all England.

4. London under the Danes and Normans.— Historians have represented Canute as filled with resentment against London, for the strenuous resistance which it made to his pretensions, and its persevering attachment to the Saxon line. Of a tax of £82,000 Saxon, which he imposed on the whole country, the portion for which he assessed London was nearly one-eiglith ; and it is to this we are referred as a proof of the weight with which his vengeance fell upon this devoted city. It seems to us a great deal more probable, that one-eighth was only the fair proportion which the wealth of London then bore to that of the rest of the kingdom ; for as yet agriculture had made but small progress in the inland counties; there were few or no manufactures ; the bowels of the earth had scarcely begun to pour forth their mineral treasures; and whatever profit could be derived from commerce with foreign nations was almost wholly absorbed by the merchants of the Thames. Canute was too high minded to cherish an ungenerous recollection; too wise, liad it been otherwise, to

satiate his revenge by the oppression of a people whom he wished to attach to his dommion. lie proved, in fact, a beneficent conqueror. He established order and tranquillity throughout the country; and was, perhaps, the first of our princes who was at the pains to protect his subjects in their commercial intercourse with foreign states, by treaties which had this alone for their object. A letter which William of Malmesbury has preserved (1. ii. c. 11), written by Canute to his regent in England, when he was on a pilgrimage to Rome, shows a solicitude on this head which does immortal honor to his memory. * I

have conversed,' he says, ' with the pope, the emperor, and all the princes whom I found here,\especting the grievances imposed on my subjects, whether English or Danes, on visiting their several states; and have insisted that in future they shall be treated more favorably, and exempted from the tolls and exactions of various kinds, with which they have been hitherto harassed. The emperor, king Rodolphus, and the other sovereigns, have accordingly listened to my remonstrances, and have assured me that henceforth no subject of mine, whether merchant or pilgrim, passing through their territories, shall meet with any obstruction, or be made liable to the payment of any impost whatever.'

On the death of Ilardicanute, the third and last prince of the Danish line, the nation called to the throne a prince of the race of Alfred, in the person of Edward the Confessor. The privileges of London, which seem to have rested hitherto altogether upon usage and tradition, received from Edward their first statu lary recognition ; but what these privileges were does not distinctly appear. In the Speculum, one of the oldest records ' de antiquis legibus, libertatibus, et consuetudinibus civit. Lond.,' there is a great deal of romance about the privileges of London being ' after the manner of old great Troy.' The only certain fact we are able to collect from it is, that London possessed from time immemorial a right of conferring liberty on such slaves or vassals as should reside for a year and a day within the city unclaimed by their lords ; and that this was among the rights confirmed in general terms by Edward. The city was from this circumstance called the Free Chamber of the King of England ; inasmuch as a slave so emancipated might ever afterwards * as freely and securely tarry there, as if he were in the house or chamber of the king.' The value of such a privilege, at a time when the feudal system held all the rest of the kingdom in slavery, is beyond all calculation. It presented to the people at large the first chance of obtaining liberty through some other means than the benevolent caprices of their feudatory lords; it made London, to the rest of England, nearly what England has since become to all the world beside — the only spot, to touch which is to bo free. Proud is the distinction which London thus enjoys, of having been the nursery of British liberty ! A distinction only equalled by another, to which London has no less a claim, that of being for ages the chief strong hold of that liberty which she nursed and reared. So justly have the citizens appreciated a blessing, which for

a long time they almost exclusively enjoyed, that there are instances upon record of individuals having been degraded from the rank of citizens, solely because, forgetting the freedom to which they had been raised, they had descended to hold in villainage lands without the limits of the city.

It was not by force of arms only, but by treaty and compact, that William the Norman advanced to the throne of England. The citizens of London, like the men of Kent, agreed to receive lum for their king ; but it was with arms in their hands, and with spirit to use them if they had been so inclined. That the Normans should abuse the influence whicli they acquired, by the elevation of their chief to the throne of England, was an event which might have been reasonably anticipated ; but let us not confound want of prudence with want of courage.

The conditions on which the citizens of Lon-don consented to William's assumption of the crown formed the subject of a written charter, the first they ever possessed. It is still preserved among the city archives, and consists of only four lines, on a bit of parchment six inches long and one broad. The following is a literal translation of this interesting document : — ' William the king greeteth William the bishop and Godfrey the portreve, and all the burgesses within London, friendly. And I acquaint you, that I will that ye be all there law-worthy, as ye were in king Edward's days. And I will tliat every child be his father's heir, after his father's days. And I will not suffer that any man do you wrong. God preserve you.'

To be law-worthy appears to have meant, that they should, in all cases of disputed right, or alleged crime, be entitled to a legal trial ; that they should not, like men who still remained in a state of vassalage, be liable, in their persons or possessions, to arbitrary rule. That ' every child should be his father's heir,' insured the descent of property to the heirs of those who acquired it ; an important privilege, for there were still numbers who held iheir lands and goods at the will of the feudal lords, and could never be sure of leaving any part of the fruits of their industry to their posterity.

Among the laws or customs of King Edward's days, referred to in this charter, we see that most important one of conferring freedom on

every vassal or slave who could acco'mplish a residence of a year and day within the city, unclaimed by his lord. William not only confirmed this privilege to the city of London, but he extended it to all other cities and walled towns throughout the kingdom.

The first circumstantial detail of the rights of the city of London was contained in a charter of confirmation, granted by William's son, Henry I. Some of these have in the course of time been considerably modified ; such as the exemption of the citizens from going (from being obliged to go), to war (nuUus eorum faciat hel-ium); their freedom from all tolls, duties, and customs, throughout the realm ; and the privilege of hunting in Chiltre, Middlesex, and Surry, now annually compounded for by a day's frolic at Epping. Others again have been lost entirely; particularly a right of summary execu-

tion against tlie goods of debtors without the walls : but the citizens have still, as is declared in this charier, the right of electing their own sheriff's and magistrates, and of being amenable only to courts held within the walls — for the rule, which is to this day observed by the king's courts of holding sittings in each term at Guildhall for the city of London, is but the practical result of this privilege; and they are still exempted from having soldiers, or any of the ' king's i ivory,' quartered upon them. A stout sheriff of the city, named John de Causton, once resisted, by force of arms, an attempt to invade this last privilege within the verge of the tower, in the time of Edward II. ; and, on being prosecuted for this contempt, as it was called, of tlie king's authority, was brought in ' faulty in nothing.'

It is deserving of remark, that this declaratory charter makes no mention of the rights of inheritance and of conferring freedom, recognised by the charter of William I. ; and the omission can only be explained by the supposition, tliat they had by this time become matters of such notoriety and necessity, as not to be reckoned among those rights which stood in need of confirmation. The omission was not, however, without its consequences ; for it gave occasion in the reign of Henry VI. to a writ of inspeximus, issued for tiie express purpose of ascertaining on what ground the city of London claimed the privilege of emancipating servants and natives, * tarrying there for a year and a day.' The return which the lord mayor and aldermen made to this writ showed, so satisfactorily, tliat both London and all other walled cities and towns now possessed this riglu, that it was again solemnly recognized and confirmed by the king.

In the same charter by which he declared and confirmed the privileges of the citizens of Lon-don, Henry conferred on them, for an annual rent of £300, to be paid to his majesty and his heirs for ever, the perpetual sheriffalty of Middlesex. Considering the low prices of provisions, at this period, it would seem that they paid dear for the acquisition. Tor such was the prosperous state of tlie country during this reign that corn, sufficient for a day's consumption of 100 persons, could be purchased for the small sum of Is. ; and a pint of wine was sold at the taverns for Id., with bread for nothing ! The prices of these articles have since increased at least forty-fold, so that the £300, paid by the city of London in the time of Henry I. for tlie privilege of giving sheriffs to the county of Middlesex, were equal to not less than £l2,000at the present day. The privilege was by no means, however, a nominal one, though extravagantly paid for. Tlie internal government of so large and increasing a metropolis as London could never have been well administered without it. Already had it suffered severely from the ease with which offenders could escape from the jurisdiction of its magistrates into the adjoining county of Middlesex ; and it was to remedy this grievance, tliat the citizens were now content to pay the price of a principality, to unite the powers of the sherififalties of London and Middlesex in two freemen of their own nomination.

The reign of Richard I., tiiough not one of glory or prosperity to England, cannot be said to have been productive of much positive harm, lie scattered charters nmong his subjects, in order to raise the means of pursuing his schemes of adventure in foreign lands ; but tiiey were charters of liberty. lie left his people in a great measure to shift for themselves; but the evil consequences of interfering little with the pursuits of an industrious nation, do not appear to have been enormous. When the chivalrous knight-errantry of Richard had terminated in an Austrian dungeon, London was both able and generously forward to contribute largely to his ransom ; and on his return from captivity, such was the civic magnificence with which he was received in his ancient capital, that a German nobleman, who attended Richard to England, was constrained to observe, that ' had

his mas-ter, the emperor, been aware of the wealth of the king of England's subjects, he would have demanded a far higher sum for his release.'

Richard was not unmindful of the loyal services which London rendered on this occasion. He granted the citizens a confirmation of all their rights and privileges, such as they existed in ' the freest and best' periods of their history, and he farther conferred upon them the conservatorship of the Thames, and the power of fixing a standard of weights and measures for the whole.

5. Foundation of IVestminster, and its junction with London. — For several centuries after the foundation of London, the space which is now covered by the sister city of Westminster consisted of a small island, called Thorny, in consequence, says Stowe, of its being ' a place overgrown with thorns, and environed with waters.' Here, according to monkish chronicles, there anciently stood a heathen temple of Apollo, out of the ruins of which Sebert, king of the East Saxons, after his conversion to Christianity A. D. 612, erected a church, which he dedicated to St. Peter, and which forms the east angle of what is now called Westminster Abbey. Sir Christopher Wren, however, could not discover in the Materials of this structure the least trace of heathen or Roman art. The church of St. Peter's was certainly one of the earliest architectural monuments of the introduction of Christianity into Britain ; but it was, in all probability, not erected till after the principal remains of the Roman power had been swept away amidst the furious struggles, which ended in the subversion of Britain to the Saxons.

When the Danes began, in their turn, to contend for mastery with the Saxons, the church of St. Peter's suffered severely from ttieir devastations; and but for the piety of Edgar the Peaceable, who repaired it in 958, and, at the same time, erected it into a monastic establishment, it might not have survived the downfal of a Saxon dynasty. From its situation to the westward of London, it was now called (in monkish i-atin) Westmonasterium, and hence the modern name of Westminster.

On the temporary restoration of the Saxon dynasty, in the person of Edward the Confessor, Westminster was one of the few places to which that event proved auspicious. By the peniten-

tiary labors of this sceptred monk the abbey was enlarged into that magnificent fabric wiiich, embellished by Sir Christopher Wren, now

stands the admiration of the world ; and near to it he erected a palace (on the site since called Old Palace Yard) whicli, though now no more, made Westminster the seat of royalty, as well as of ecclesiastical splendor. The courts of law and parliament necessarily attached themselves to the spot where our kings resided ; and contributed, in a very material degree, to raise Westminster to dignity and importance.

In 1257 Henry III. granted to the abbot and convent of Westminster the privilege of holding a market and fair, for the space of forty days; and in 1352 the town had so much increased, that Westminster was one of the ten places where, by act of parliament, the staple of wool was to be perpetually held.

An order of council was passed in the ensuing year (1353), which imposed a duty on every pack of wool, as well as all other goods, ‘ carried either by land or water to the staple of Westminster;’ ‘ for the purpose of repairing the highway leading from the gate of London, called Temple Bar, to the gate of the Abbey at Westminster.’ It is evident, from this record, that London and Westminster were then regarded as distinct towns ; but it would be, perhaps, too much to infer, that ‘ the highway’ between them, ‘ now the noble street, called the Strand, was not then built upon, but was a mere country road, having, however, many noblemen’s and gentlemen’s houses and gardens adjoining to it,’ &c. ; Hughson, vol. i. p. 78. For we learn, from the same order of council, that the cause of the impost was, the ‘ highway being, by the frequent passing of carts and horses, carrying merchandise and provisions to the said staple, become so deep and miry, and the pavement so broken and worn, as to lie very dangerous both to men and carriages ;’ and we farther find, that it was ordained, that ‘ all owners of houses, adjacent to the highway, should repair as much as lay before their doors.’ It seems pretty clear, from these parts of the edict, that even at this early period the buildings of both cities had extended considerably beyond their respective gates, along the line of the highway between them ; although probably they did not reach on either side as far as Charing Cross, which is supposed to have derived its name from a village called Charing, which anciently stood midway between London and Westminster.

The privdeue which Westminster possessed, of holding a fair for forty days every year, was fenced with a prohibitory clause, by whicli, during all that time, no sales were permitted, either in London or in any of the places adjacent. As trade and population increased, the evil consequences of this monopoly came to be very severely felt by the citizens of London. The corporation, therefore, opened a negociation with the abbot, for the redemption of this part of their privilege, and

found him so well disposed to prefer a present good to all prospective advantages, that for the sum of .€B000 he abandoned the right to a fair altogether. By this stroke of priestly cupidity, Westminster, which

had been rlsiivj; fust in commercial Importance, was almost entirely cut off from this source of prosperity, and left to depend in future chiefly upon those advantages which it derived from being the residence of the court. The Genius jf Trade took its leave of her for ever ; ami I'ashion became henceforth the tutelary deity of Westminster.

On the general suppression of the monasteries by Henry VIII., that of Westminster was converted into a bishopric; but in 1550 the bishopric of Westminster merged in that of Norwich. It was tliis temporary possession of a mitre which conferred on Westminster the rank of a city ; and, though the mitre is gone, tlie popular voice, inclining always to reason in its decisions, has refused to give an inferior title to a place, which, though no longer a bishop's see, is the seat of supreme power both in church and state.

Since tliat period, Wˆestminster has spread so extremely on all sides, and become so interlaced with London, that the two cities have lost every external mark of separation, Temple Bar alone excepted. But see Westminster forsome particulars of its history, into which we cannot now diverge.

6. The great charter and early wealth of Lon-don.— On the accession of king John to the throne, the citizens of London paid 3000 marks to him for a contirmation of their liberties. ' It shall be delivered to tliem,' said the royal mandate, ' on these terms, that if they will give those 3000 marks tiiey shall have the charter ; but if not, they sliall not have it.' On the field of llunnymede, this mercenary tyrant was afterwards content to give them what they pleased, on their own terms. The general resistance which produced that glorious declaration of tlie rights of Englishmen, INIagna Charta, had its first rise under the city banner. The castellan and standard bearer of

London, at this period, was Robert Fitzwalter, a gallant knight of Norman descent, and lord of Baynard's Castle, an ancient and princely fabric, from which one of tlie wards of the city derived its name. This knight had a daughter, called Matilda the Fair, whose beauty attracted the admiration of the king. John came not, however, as an honorable suitor, and, when his proposals were repelled witli indignation, he threatened to have recourse to violence. Fitzwalter appealed to his brother barons, to aid him in protecting his child from the polluting grasp of the tyrant. With honorable alacrity they obeyed the call; and, from the battlements of Baynard's Castle, the city banner waved defiance to aggression. John, whom a continued series of misdeeds had deprived of all favor with his subjects, was unable to muster a force sufficient to cope with so formidable an opposition.; and, yielding reluctantly to the necessity of his situation, he aflected to have abandoned ail design against the honor of Fitzwalter's fa-mily, and, by the strongest assurances of respect for the rights of the barons, prevailed with them to disperse their forces. No sooner, however, did he find himself alone in the field, than he violated every promise he had made. Taking Fitzwalter by surprise, he compelled him to fly

the country ; razed his castle of Baynard to the ground ; and when the unfortunate Matilda, whom her fatiier, in his sudden flight, had been forced to leave behind him, still resisted all his entreaties, he is said to have destroyed by poison that beauty which he could not enjoy. The day of retribution at length arrived. Fitzwalter had taken refuge in France, and fought on the side of the French in their battles with the English uude* king John. During the truce which took place, in 1214, an English knight rode into the space between the two armies, and challenged any one of the opposite side to a trial of prowess. Fitzwalter, mounted on a noble charger, instantly came forth to accept the challenge, and at the first course struck both the English champion and his horse to the ground. John, admiring the gallantry of the stranger, warmly exclaimed, ' He were a king, indeed, who had such a knight.' Fitzwalter had been recognised by some old friends in the English camp, and, on hearing this observation from John, they kneeled down, and said, ' May it please your majesty, he is your own knittht; it is Robert Fitzwalter.' John, repenting the injury he had done to the gallant knight, next day effected a reconciliation with him, and publicly restored to him all the possessions of which he had been so unjustly deprived. Fitzwalter, however, returned to England only to find new cause, in common with his fellow citizens, to detest the arbitrary rule of John ; and we accordingly behold him again a leader against the king, in that patriotic struggle which obtained for England

the great charter of its liberty. By the thirteenth article of this charter it is specially provided, ‘ That the city of London, and all other cities, burghs, and towns, and ports of the kingdom, shall enjoy all their free customs both by land and water.’

Of the military importance of the citizens of London, about this period, contemporary writers give us a very high idea. Although exempted by their charters from ‘ going to war,’ they ap-pear to have been naturally of so martial a temperament, and so forward in the assertion of tiieir rights, even at the point of the sword, that William of Malmesbury assures us, they ‘ showed at a muster 20,000 armed horsemen, and 40,000 footmen, serviceable for the wars.’ In this number, however, were doubtless included the followers of many noblemen and chiefs, who resided in the city, or who, from various causes, considered themselves identified with it ; for so large a quota is wholly incompatible with every account we have of the ancient population of London.

Speaking of the commercial prosperity to which London had now reached, the same writer describes it as ‘ a noble city, renowned for the opulence of her citizens, and crowded with the merchants who resort thither with their various connnodities.’ Corn was still, as in the time of the Romans, their chief article of commerce; ‘ they had their granaries always filled, whence all parts of the kingdom were supjilied.’

The commencement of the reign of John’s successor, Henry II., presents us with a very striking display of the wealth for which the citizens of London were now, above all other classes of their fellow subjects, distinguished. When it

was known, tliat queen Eleanor was to ride througli the city to be crowned at Westminster, the chief citizens, to the number of 360, preceded by a band of trumpeters, went out to welcome her majesty. They were all clothed in silken garments, richly embroidered with gold ; and mounted on horses, most splendidly caparisoned. Every

man bore a cup of gold or silver in his hand ; and, having joined in the royal train, these 3(50 cup-bearers served the wine, as butlers, at the coronation of her majesty.

The prodigality and misrule of Henry soon destroyed that cordiality which, at first, subsisted between him and the city. When, however, his necessities became so great, that he was obliged to pawn the crown jewels for an immediate supply, it was to the citizens he was forced to hare recourse. Angry that they should ac-cept a pledge which it was ignominious in him to give, he passionately exclaimed, ‘ Were the treasures of Augustus Caesar exposed to sale, the city would buy them. These fellows, who call themselves barons, are wallowing in wealth and every species of luxury, whilst we labor under the want of common necessaries.’

When the citizens, however, had to deal with princes, not embarrassed through their personal follies, but impoverished by honorable enterprises for their country’s benefit or renown, they stayed not for pledges to administer most liberally to their wants. They presented the hero of Cressy with a free gift of 20;000 marks, to pursue his honorable warfare in France ; and their mayor, the celebrated Whittington, at an entertainment given at Guildhall to the hero of Agincourt, threw into a fire of spices, bonds which he held from that monarch, for money advanced, to tiie amount of no less than £00,000 !

It must be allowed, indeed, that although the citizens of London were occasionally thus liberal, there was, in general, a considerable degree of reserve between the city and the court, on the score of money transactions. Till as late a pe-riod as the reign of I-llizabeth, our sovereigns were obliged to have recourse to the merchants of Antwerp for such loans as they required ; and though the citizens of London often became security for these loans, because without it they could not have been obtained, they could never be induced, except 39 in the case of Henry IIL, when the jewels of the crown were to be saved, to become themselves the lenders. Can any one be in doubt as to the reason ! Notwithstanding all the char-tors, and confirmations of charters, granted by the sovereigns of England to tlieir subjects, property was still insecure. A king of England might still deny to his own subjects that justice which lie would not nor durst not, deny to those of another. The first considerable loan effected in England, solely on the))ersonal security of an English monarch, wasnegociated by SirThomas Gresham, in behalf of the maiden queen, and this fact we may regard as a certain indication that her government approached nearer to one of order and law, than I’ngland had ever

known since tlie days of Alirtd. Her majesty paid the interest of the loan regularly, until she was in a situation to discharge the principal; and it has been ever since found, that it is only necessary Voi. XIIL

to observe tiie Same simple rule of honesty, to find at home, and in London itself, whatever aid the exigencies of t!ie public service require.

The opulence of the citizens of the olden time was in no instance more laudably displayed, than in doing honor to such illustrious strangers, as friendship to the monarch, or the chances of war, brought to England. In 1363 Henry Pi-card, who had some years before served the otfice of lord mayor, gave a splendid entertainment, at his house in Cheapside, to king Edward IIL, king John of France, king David of Scotland, and the king of Cyprus ; an honor such as no citizen ever before enjoyed.

Among the citizens themselves there appears to have been a constant rivalry in sumptuous and costly living. A dish fit for an alderman, in those days, while turtle was as yet unknown, was one of eels, so lusciously dressed, as to cost about £5, equal to at least £80 of our present money. — Fitzstephen. At the annual Spittal feast, the cost to the sheriff's, for wine alone, was, about the middle of the sixteenth century, .£600 ; so, that supposing the guests to have drank of Malmsey only, which, though the most choice wine of that period, cost no more than Is. a gallon, there must have been emptied, on this occasion, the incredible number of 48,000 bottles ! The expense of feasting became at lenglii so excessive, that in 1554 the corporation found it necessary to pass a bye-law to restrain it. ' So huge and great,' says this cu_rious document, had ' the charges of the mayoralty and shrivealty ' become through this means, ' that almost all good citizens flie and refuse to serve in this iio-norable city, only because of the great excess and chargeable fare and diet, used in the time of the said offices.' To remedy this grievance, it was ordained, that no mayor, or sheriff, or alderman, or commoner, should have at dinner or supper more courses than one, and not more dishes at one course than six, whether hot or cold. Some curious reservations, however, follow, which show, on the part of the corporation, a prudent care to soften, as much as possible, the hardshij) of this limitation. It is provided, that ' one or two of the same six dishes may come to the board hot, as a reward, if they will, after the first three or five are served.' It is farther specially declared, that neither brawn, nor collops with eggs, nor sallads, nor pottage, nor butter, nor cheese, nor eggs, nor herrings,

nor sprats, nor shrimps, nor any shell fish whatever, nor any kind of unbaked fruit, arc to ‘ be accounted for any of the said number of dishes above-men- tioned ! ‘ And moreover, as the guests could not be supposed, after such penurious fare, to have any disposition to make merry, it was decreed, that ‘ from henceforth neither mayors nor sheriffs shall keep any lord of misrule (merry andrew or fool), in any of their said houses.’ All these regulations, it will be observed, had reference only to the private and family entertainments of tlie citizens ; for, it is yet farther provided, that when a foreign ambassador, or any of the privy council, liai)i)ens to be of the parly, the feast may be ‘ amended and ordered ‘ at cliscretion.

In 1573 we find it again a matter of grave lamentation, that there should be such an excess

of good things at the tables of the cliief magistrates, and of tiie companies ; nay, at the very taverns and cook-shops, the consumption of venison, we are told, was shameful, ‘ insomuch that the court was much offended with it.’ Tlie common council, therefore, in order ‘ tliatthe city might not continue to give the queen and nobility oft’ence,’ issued another commandment, by which they forbade all such extravagant feasting in fu-ture, except at tiieir ‘ necessary meetings,’ and ordered that, even on these necessary occasions, (most incredible sacrifice !), there should be no venison.

We have mentioned Whittington as entertaining the hero of Agincourt. The story of Sir Richard and his cat is not, after all, so remote from possibility as might be imagined. Mr. Soutliey, in his History of the Brasils, relates, that ‘ the first couple of cats which were carried to Cuyuba, sold for a pound (a pound’s weight) of gold. There was a plague of cats in the settlement, and they (the cats) were purchased as a speculation, which proved an excellent one. Their first kittens produced thirty oitavas each ; the next generation were worth twenty ; and the price gradually fell as the inhabitants were stocked with these beautiful and useful creatures.’ In the East, also, according to a Persian MS. quoted by Sir William Gore Ouseley, there is an island, which derived its name from a circumstance of the same kind ; and Mr. Collet, an intelligent collector of relics, asserts, without hesitation, that the story of Whittington and his Cat is ‘ borrowed ‘ from this tale of the East. It is scarcely necessary to remark, that there may have been a plague of rats, and tliat cats may have been worth their weight in gold, more than once since the world began. Although it is just possible, therefore, that the story of Whittington, as it exists in nursery records, may have had some foundation in fact, there are few who will not be desirous of a more probable explanation of his extraordinary rise in life. Foote, in iiis comedy of tlie Nabob, makes Sir Matthew Mite offer to the Society of Antiquaries a suggestion on the subject, which is not without ingenuity, wbatever degree of truth it may

possess. — * The commerce,' says Sir Matthew, ' which this wor-thy merchant carried on was chiefly confined to our coa'Sts ; for this purpose he constructed a vessel, which from its aLnlity and lightness he aptly christened a cat. Nay, to this day, gentlemen, all our coals from Newcastle are imported inirothing but cats ; from hence it appears, that it was not the whiskered, four-footed, mouse-killing cat, but the coasting, sailing, coal-carry- ing cat — that, gentlemen, was Whittington's cat.'

While Whittington was yet a boy, the burning of coal was considered such a public nuisance, that it was prohibited by an act of parliament, under pain of death ; but it is singular enough, that by the time he had been ' thrice lord mayor of London' (1419), and although there is no trace of any repeal, in the interim, of the prohibitory statute, the importation of coal formed a considerable branch of the commerce of the Thames. 'As early as 1421,' says Mr. Brand in his History of Newcastle, ' it appears to be a trade of

great importance, and tliat a <Uity of 2d. pet chaldron had been imposed upon it for some time.' To account for the trade having made such progress, while a statute against it remained unrepealed, and of such rigorous operation, that, according to a record in the tower, a person was once actually executed for offending against it (Sir Everard Home's Dissertations), we must suppose, that the crown had exercised that dispensing power, which it assumed in the earlier periods of our lustory, and had permitted to the lieges generally the importation of the forbidden commodity ; or, what is more probable, because more consistent with the court practices of th'*se days, granted to some favored individual a license to make hjs fortune, by infringing the law. It would be making a bold leap to a conclusion to say, tliat Sir Richard Whittington was the individual on whom this privilege was conferred; and yet the supposition is countenanced by a very strong declaration in the foundation charter of Whittington's College. The members of it are directed to remember in their prayers ' Ricliard the Second, and Tliomas of Woodstock, duke of Gloucester, special lords and promoters of the said Richard Whittington ;' showing distinctly, that it was to some special privik'ge or favor conferred on him by these princes, that he was indebted for his rise in life. It is farther extremely worthy of observation, that from the first opening of the coal trade in England, and for ages after, it had a reputation for making fortunes, only exceeded by that of the mines of Golconda and Peru.

IMany circumstances thus combine to heighten the probability, that

Sir Richard Whittington, wlio flourished at tlie same time with the commencement of this trade, was one of those who made a fortune by it ; and that it was, as Sir Matthew says, ‘ the coasting, sailing, coal-carry- ing cat,’ that was the real instrument of his aggrandisement. It had only to become a by-word, that by a cat and a king he had made his fortune ; and popular invention would soon supply all the other lineaments of the story. In the print of Whittington by Elstrucke, he is represented with a grimalkin by his side , but Granger, our best historian of portraits, says, that it was substituted for a skull, which originally occupied its place, as the common people did n-ot choose to purchase the print without their favorite traditional emblem.

Sir Richard was a liberal benefactor to the city, over which he had so often the honor to preside. At his own expense, he built the chapel of guildhall, and the library of Christ’s Hospital ; made large additions to the guildhall and St. Bartholemew’s Hospital ; and left funds to his executors for entirely rebuilding the prison of Newgate, which was previously in a most ruinous and miserable condition. He, besides, annexed to the church of St. Michael’s a college of priests, called after his name, with an almshouse for thirteen poor persons ; and to use the words of his executors, in the ordinances of the college, ‘ while he lived had ryghte liberal and large hands to the needy and poor.’ The house in which Whittington resided is still to be seen in Switliin’s passage, Moor-lane.

7 Anciem spores ana pasiimes. — Let us come now,’ as honest Fitzstephen says, ‘ to the sports and pastimes, seeing it is fii that a city should not only be commodious and serious, but also merry and sportful.’ In the olden time, the inhabitants of the metropolis united the duties of the citizen with the relaxations and recreations of the country ‘squire. Fitzstephen notices, that the citizens delighted in hawks and hounds, and the ‘ common hunt’ still gives a yearly salary to an officer of the lord-mayor’s household, whose duty it is to take care of a pack of hounds, which the corporation is entitled to keep. The exercise of hunting is now little indulged in by the citizens, ‘not,

however,' says Stowe, 'forwant of taste for the amusement, but for want of leisure to pursue it.' The ' common hunt,' who used to purchase his place, which sometimes sold as high as £1500, had formerly a house in Finsbury-fields, where the hounds were kept, particularly * the deep, full-mouthed hounds,' and he had a yearly salary and perquisites.

* In the holidays all the summer,' says the same historian, 'the youths are exercised in leaping, dancing, shooting, wrestling, casting the stone, and practising their shields. The maidens trip with their timbrels, and dance as long as they can well see. * In winter, every holiday before dinner, the bears prepared for brawn are set to fight, or else bulls or bears are baited. When the great fen, or moor, which watereth the walls of the city on the north side, is frozen, many young men play upon the ice : some striding as wide as they may, do slide swiftly; others make themselves seats of ice, as great as millstones. One sits down, many hand in hand do draw him, and one slipping on a sudden, all fall together. Some tie bones to their feet and under their heels, and, shoving themselves by a little picked staff do slide swiftly, as a bird flieth in the air, or an arrow out of a cross-bow.'

The most gallant of the youthful exercises of these times was that of running at the quintain. This game is of Roman origin. On an upright post, a cross bar was placed horizontally, which turned upon a swivel. A board was nailed to one end of this bar, and a bag of sand to the other. It was the custom to tilt against the board, on horseback, with a spear, or long staff; and it required great dexterity to avoid being s.truck with the bag of sand as it swung round. At this city exercise, in 1253, some of the household of Henry III., being present, chose to deride the performance of the citizens, who, resenting the affront, beat 'his majesty's servants severely.' For this act of just resentment, the city was fined 1000 marks. The fields were more usually the scene of this pastime ; but it was frequently permitted even in the heart of the city. ' I have seen, says Stowe, 'a quintain set up in Cornhill, near the Leadenhall, where the attendants on the lord of Merrydisports have run and made great pastime ; for he that hit not the board end of the quintain, was of all men laughed to scorn.' The greatest feat which could be accomplished at this game was to break the board, and escape the revolving blow of the bag of sand. Whoever did so was accounted for the time ' Prin-ceps Juventutis,' the prince or chief of the

youths. Plot, in his History of Oxfordshire, says, that this game was

still to be met with in his time at Deddington ; and Dr Kennet, bishop of Peterborough, mentions, that le had seen it at the village of Blackthorn, where he thinks it had been introduced as in London by the Romans, the Roman way lying through that village. At the Easter holidays there used to be a sort of water quintain on the river, where boats supplied the place of horses. The tUter stood with his lance in the prow, leaving the boat to be carried by the force of the stream against a shield suspended from a pole. If he broke his lance and kept his place in the boat, he was loudly applauded ; but if, as was more frequently the case, the shock threw him into the water, ‘ there were upon the bridge, wharfs, and houses, by the river side, standing great numbers to see and laugh thereat.’

Archery became also a favorite game with the citizens, and was very successfully cultivated. It appears at one time, however, to have been supplanted by sports of a less noble order ; for there is a writextant, from Edward III. to the citizens of London, in which he thus reprimands them on the subject : — ‘ the king, to the citizens of London, greeting : Because the people of our realm, as well of good quality as mean, hare commonly in their sports, before these times, exercised the skill of shooting arrows, whence it is well known that honor and profit have accrued to our whole realm ; and to us, by the help of God, no small assistance in our warlike acts ; and, now the said skill being as it were wholly laid aside, the same people pleasing themselves in hurling of stones, and wood, and iron, and some hand ball, foot ball, bandy ball, and in lumbrick and cock fighting ; and some also apply tliemselves to other dishonest games, and less profitable or useful, whereby the said realm is likely in a short time to become destitute of archers;’ his majesty therefore commanded, ‘ every one of the said city, strong in body,’ to cultivate the art of archery, and to leave off the other games to which they had betaken themselves, under pain of imprisonment. In consequence of this compulsatory oide” archery became speedily again the favorite amusement, and continued to be so, long ijler n nad ceased to be of importance in a military point of view. In Henry VIII. ‘s time, it was as much in vogue as at any period of our history. The king bimself was fond of it, and used to repair frequently to Mile End to witness the performances of the citizens. Many of the most skilful archers received nominal titles, as the duke of Shoreditch(a title given by the king to one Barlow), the marquis of Clerkenwell or Hogsden, earl of Pancras, &c. In the year 1583 there was a great shooting match, when a vast body of tlie citizens marcht’il in great pomp, singularly dressed, through the principal streets of London, to Smitlifield, the scene of contest. Their attire is said to ha-vc been very gorgeous; 942 of them

wearing ciiains of gold. The number of archers that shot was 3000, and their attendants exceeded that number.

Wrestling was another favorite amusement, and the lord mayor and citizens frequently

attended to encourage the youths engaged in this ■.ithletic game atClerkenwell. In the year 1‘222, at a match of wrestling near St. Giles’s, the citizens challenged those in the suburbs and city of Westminster, and beat them, which so irritated the bailiff of Westminster, that he determined on a base and treacherous revenge. He proclaimed a game to be held at Westminster on Lammas day, to which the citizens were invited, and attended. When they had played some time, the bailiff, with a large party, suddenly furnished themselves with arms, and treacherously attacked the citizens, who, being unarmed, fled to the city, where they sounded the alarm, by ringing the common bell. The citizens assembled in great numbers, eager for revenge, when one Constantine Fitz-Arnult, notwithstanding the remonstrance of the lord mayor, who promised to obtain redress, urged the multitude to join him in pulling down the house of the abbot of Westminster, and several others. A few days afterwards, the chief justice of England, Hubert de Burgh, with a great army of men, repaired to the Tower, and, sending for the lord mayor and aldermen, demanded the ringleaders. Constantine gave himself up, and, with two others, was executed next morning, although he offiˆred 15,000 marks for his life.

As the fields around London came, in the progress of improvement, to be divided and enclosed, the tilting at the quintain, archery, wrestling, and all other field sports, began to decline ; and, at the period at which we have now arrived, they have entirely disappeared. In 1514 much discontent prevailed among the populace, on account of the abridgments which were constantly taking place in the theatre of their rural pastimes ; and being stirred up by a fellow who went about

disguised in the dress of a merry-andrew, calling out for spades and shovels, they resolved to take the work of redress into their own hands. A great multitude of them assembling, armed with these weapons, they soon levelled with the ground all the newly erected fences and enclosures about Shoreditch, Hoxton, Islington, Sec. Government censured the magistrates severely for neglect of duty in not preventing this tumultuary proceeding; but that cannot be considered as a proceeding altogether without apology, which the government itself, about a century after, sanctioned by an act of its own as nearly similar (in intention at least) as possible. James I., in the eighth of his reign, granted a commission to several persons of distinction, for the purpose, he states, of stopping the practice of enclosing the ground formerly used for archeiy, by making of banks and hedges in such fields and closes, as, time out of mind, were allowed to be shot in. It empowers the commissioners to go upon these places, and to view and survey in such grounds next adjoining to the city of London and the suburbs, within two miles compass ; and the same to reduce in such order and state for the archers, as they were in the reign of king Henry VIIL, and to cause the banks, ditches, and quicksets, to be made plain and reformed. It is scarcely necessary to state, that this commission was never carried into effect ; nor would it now be of any avail to enquire into the causes wiiich made it inoperative. That it would have been injurious to the public interest, and oppressively unjust to individuals, had it been fully executed, must be sufficiently obvious ; but we may be permitted to regret, that it should have been so entirely neglected, and the cultivation of the robust virtues so much disregarded, that a population of about 1,000,000 of souls is now left with scarcely a single open spot on which they can indulge in athletic and manly exercises.

Excluded from the fields, the citizens were forced to turn to such pastimes as the narrower limits of their streets, courts, and squares, and the safety of the passengers, would allow. The proscribed games of the days of Edward III., hand-ball, foot-ball, throwing of bars, cock-fighting, &c., came again into fashion ; and hence the skittle-grounds, bowling-greens, tennis-courts, which now form the chief resorts of the London artizans, in their hours of recreation.

It appears, that, even as late as the time of Charles II., the citizens were still allowed, without hindrance, to make the streets the scene of their most boisterous amusements. Sir William Davenant, in a satirical description which he gives of London at this time, in a letter to a friend, says, ‘ I would now make a safe retreat, but that, methinks, I am stopped by one of your heroic games, called foot-ball, which, I conceive (under your favor), not very conveniently civil in the streets,

especially in such irregular and narrow roads as Crooked Lane. Yet it argues your courage, much like your military pastime of throwing at cocks; but your metal would be much magnified (since you have long allowed these two valiant exercises in the streets), to draw your archers from Einsbury, and during high market let them shoot at butts in Cheapside.' The citizens (under favor to Davenant) had some reason to complain, that the streets alone were left them to exercise in ; and it was thought prudent probably, to allow their feelings on the subject to die away, before the municipal government interfered to put a stop to what must indeed have been a great nuisance.

The most celebrated holiday of early times was JNI ay-day. A may-pole, or shaft, used to be erected on that occasion in the middle of the street, before the church of St. Andrew Undershaft, of such height, that it overtopped the steeple ; and hence it was that the parish, which was originally called St. Andrew only, acquired the addition of Undershaft. Chaucer, describing a lofty braggart, says, he bears his liead as high as the great shaft of Cornhill.

The arrival of this day of festivity used to be anticipated by th.e people with such eagerness, that Shakspeare speaks of them as being unable to go to sleep on ˆlay-eve. One evil May-day, however, occurred, and never again did May morn come to the citizens of London wreathed in its usual smiles. In consequence of an insurrection which broke out in London, on INIay-eve, 1517, the sports of JNIay-day were long suspended ; nor were they, ever after, more than very partially resumed.

The game in universal use within doors, for many centuries, was that most seductive of all

games of hazard — dice; nor is it possible, that it '.ould have been indulged in to the extent we /iiid it was, without being attended widi all the most ruinous consequences of gaming. When Henry Picard had the honor of feasting four kings at his house in Cheapside, in the year 1363, we are told, that after these illustrious guests were gone, he

kept his hall for all comers that were willing to play at dice and hazard; and that, in like manner, tlie lady Margaret, his wife, kept her chamber to the same intent. During the Christmas holidays of 1377' a party of the citizens, to the amount of 130, went a mumming, as it was called (in masks, representing kings, emperors, &c.) to Kennington, in order to pay their respects to llichard, the son of the Black Prince, who was residing there with his mother. After the mummers were introduced to the young prince, they put a pair of dice on the table, and invited him to try his luck with them. The first stake they proposed was a bowl of gold ; the second a cup of gold ; the last a gold ring; and it was so managed that the prince won every throw. The prince's mother, his uncle, the duke of Lancaster, and many other noblemen who were present, were also successively invited to take the chance of the die for a gold ring; and as certainly as they tried they won. It must be allowed, that there was an air of gallantry in all this ; but what can be said for the moral sentiments of an age when false dice could be made the passports to princely favor? The vice of gaming did not confine itself to private society ; for we find that, as early as the beginning of the sixteenth century, there were public gaming houses in the city, to which habitual gamblers resorted in great numbers. They were situated chiefly about the Exchange, in the parish of St. Bennet Finke. In 1551 an information was laid against one of these houses in .the Exchequer, and five of the parties concerned in it fined 40s. each. James I. seems to have thought that this mode of amusement was as commendable as any other, for he granted a privilege to his groom porter, Clement Cottrel, to license, within the limits of London and Westminster, and two miles thereof, no fewer than forty taverns, ' for honest and reasonable recreation of good and civil people, who for their quality and ability n;iy lawfully use the games of bowling, tennis, dice, cards, tables, nine-holes, or any oiher game hereafter to be invented.'

PART II. CIVIL AND MODERN HISTORY.

F.arly civil government. — The civil government of the city has varied considerably under the successive domination of the Romans, Sax-ons, Danes, and Normans. In the early period of the Rom-an sway in Britain, it,was entirely military ; but tlie growing importance of the city soon raised it to the rank of a colony, which entitled it to peculiar privileges. The government then became assimilated to that of Home ; the chief magistrate was a prefect, appointed by tlie parent state, and the inhabitants were considered as Roman citizens.

Under the dominion of the Saxons, and of our

great lawgiver Alfred, the civil institutions of V.\e metropolis, like those of all the rest of the country, appear to have been modelled anew, and in a manner so wise, that diey have retained the form then given them through all succeeding ages. It was Alfred who first divided the kingdom into shires or counties, the counties into hundreds, and the hundreds into tythings, in or-der that, by this subdivision of jurisdiction, peace and order in the community might be the better preserved ; and, though our histories are silent as to the extension of this system to the metropolis of the kingdom, the evidence of analogy is strong enough to warrant us in concluding, tliat it was from Alfred also that London firˆt derived its sheriff (shire-reve), and its division into wards and precincts, under the government of ealdermen or aldermen, and their deputies. When it is considered, likewise, that every search which has been made into the antiquity of these offices has reached back to the Saxon time, and there stopped, all doubt must vanish as to the source from which they sprung. The civil government of London, and that of the country at large, can have had but one common parent — the great, the good, the enlightened Al-fred.

The office of sheriff being purely executive, and the aldermen all of equal power, it became necessary, for the completion of the municipal scheme of polity, that there should be one supreme governor or magistrate (the eldest among the aldermen), who might superintend the conduct of the rest, in their respective jurisdictions, preside over them in their collective deliberations, be the organ of the city's will, and, more peculiarly than any other, the guardian of its interests. The officer on whom this power was conferred was styled, by tlie Saxons, the port-geref or portreve. The duration of his of-fice was limited to one year ; but it does not appear whether he was elected to it by the citizens themselves, or nominated by the king. The Normans retained the portreve, but appear on some occasions to have associated with him another officer, called a provost. Of the manner in which the duties of the office were divided between them we have no account. No instance of the chief magistracy being thus put in commission occurs later than the accession of Henry II.

In the first year of Richard I., according to Stow (1189), the city 'obtained to be governed by two bailiffs, which bailift's are, in divers ancient deeds, called shrives,' i. e. sheriffs ; and it has been from this hastily inferred, by some writers, that these bailifls superseded both portreve and provost. The statement appears to us, however, to mean only that the office of slierifV had been tlicn first split into two ; for it

is a vulgar error which prevails that it is because of the annexation of the sheriffalty of ˆliddlesex, to that of London, that there are two sheriffs. The division of the office took place some years anterior to that annexation ; and the reason for it was, that London is by charter both a city and a county wHhin itself. It is certain that, in the fourth year of Richard's reign, only three years after this supposed innovation of the two

bailiffs, the chief magistracy was vested in one person as usual ; for it was in that year tliat Henry Fitz Alwyn, being then governor or portreve, assumed the title of mayor, and placed himself first in that long line of worthies who have done honor to the name and ofhce. Wliile Fitz Alwyn lived the mayoralty remained, by a sort of courtesy, vested in his person, and was filled in a maimer free from reproach ; but on his death, in the twenty-fourth year of his civic administration, tlie citizens manifested a very proper anxiety to have tlie ofhce placed on a more constitutional basis. King John was desirous of conciliating their good will at this time, and they obtained from him, without difficulty, a charter, by whicli the crown conceded to them the liberty of choosing a mayor annually out of their own body, and continuing him at their own pleasure from year to year.

The oppressive conduct of John towards the city at a later period, put its rights in jeopardy for a season, but served in the end to bring about a course of events which placed them on a still surer foundation. In the great charter it was declared, among otlier things, that the 'city of London should have all its ancient priuileges, and free customs, as well by land as by water.'

In the ignominious times of Henry III., and particularly when that monarch was under the influence of the justiciary Hubert de Burgh, the privileges of the citizens of London were repeatedly invaded, in the most wanton manner, by the crown. In consequence of the tumult which we have before related (Ancient Sports and Pastimes), for inciting which Constantine Fitz Ar-nulph and others were executed, the justiciary thought proper to degrade the mayor and aldermen from

tlieir functions, on the] > relence of their not having exerted themselves sufficiently to preserve the peace. He then transferred the government of the city to a custos or keeper of his own nomination, and selected thirty of the principal inhabitants, whom he obliged to sign a bond for the future good conduct of their fellow citizens. The real character of these measures may be gathered from tlie fact, that in a short time after the citizens were permitted to purchase back the rights of which they had been thus violently deprived. Stowe says, tliat the price amounted to ‘ many thousand marks.’ The whole of Henry’s conduct towards the citizens of London was, in fact, one continued system of extortion and oppression. After granting them five charters, four of which were merely confirmatory, and the fifth of small importance, he exacted from them, by way of fine for these -five grants, a fifteenth of all their personal estates. At another time he obliged them to make him a present of 5000 marks, because they had given a like sum to prince Louis of France, when, along with the barons, they sided with that prince against king John. At Christmas he would take up his abode in the city, and comjiel the citizens, not only to present him with valuable new years’ gifts, but to feast tlie whole court in the most sumptuous and extravagant manner. Not a single act of misgovernment, whether proceeding from the worst or the lightest of motives, was suffered to pass without being made the pretext for some

new exaction, some new punishment. Twice was the government of the city again taken out of the hands of its own magistrates and transferred to custodes, nominated by the king ; and as often was it restored to them on the usual condition of paying handsomely for getting back their own. When such deprivations had not the effect contemplated by royal cupidity, the magistrates were cast into prison, and detained there till presents of plate and money appeased the anger of their sovereign. Neither person nor property was safe from the grasp of the tyrant. Apprehensive, at last, that he would strip them of all they possessed, they collected £10,000 of their money, and deposited it in the treasury of the knight’s templars at the New Temple, conceiving that from the sanctity of the place it would there be safe from spoliation. Prince Edward, the king’s son, however, immediately went and broke open the treasury, and took away the whole of the money. The citizens could be quiescent no longer; and immediately flew to arms, resolved on asserting their undoubted right of resistance to a reign of plunder and oppression. The barons had already unfurled their banners, and the citizens of London joined them in great numbers. In the battle of Lewes there were 15,000 of them

present, who suffered mo6t severely; for, though the king's army was defeated, the Londoners reaped none of the laurels. Prince Edward, having made the city column the object of his principal attack, put it to the route and pursued it with relentless slaughter for four miles ; but while thus absent from the field, Simon de Montfort and his brother barons were gaining advantages, which ultimately decided the victory in tlieir favor. The affairs of the king were, however, retrieved by the triumph at Evesham in the following year, and vengeance now fell with a heavy hand on all who had been concerned in this luckless effort for freedom.

A parliament was assembled at Westminster, by which it was enacted, ' that the city of Lon-don for its late rebellion should be divested of its liberties, its posts and chains taken away, and its principal citizens imprisoned and left to the mercy of the king.' The citizens endeavoured in vain to propitiate that ' mercy' to which they were thus consigned, by the most humble supplications. The act of parliament had been purposely so framed, that the king might again rob and oppress them to the utmost; and never had a wicked law a more zealous executor. He seized on the estates, houses, and personal effects of many of the chief citizens, and consigned four of the richest to dungeons till they paid enormous sums for their ransom. Nor did he stay the work of spoliation, till the citizens came forward with a general contribution of 20,000 marks, which, owing to the exhausted state of the city, was collected with so much difficulty, that even servants and lodgers were obliged to be included in the assessment. The pardon which it procured from Henry amounted after all to no more tlian an exem])tion from farther pillage ; for the chartered rights of the citizens Henry still withheld. Four custodes were appointed to rule the city, according to their own discretion ; and the citizens were left without

the smallest share in the direction of its affairs. After they had remained three years under this arbitrary sway, the king so far relented, that, by a charter, dated in March, 1268, he remitted all past

offences, and confirmed all the ancient privileges of the city, with this important exception, that they should continue deprived of tlie right of electing their own magistrates. In 1270, however, prince Edward, being appointed governor of the city, prevailed with the king to concede also the excepted privilege, and thus restored the citizens to the full enjoyment of all their ancient institutions.

On the accession of Edward I. Gregory de Kokeslie was mayorof London, and a man of so much talent and consideration, that the king employed him to execute a foreign mission of considerable importance, in preference to many dignitaries in church and state, who solicited the appointment. In order to provide for the government of the city, during the mayor's absence, the king addresed a writ to the corporation, directing them ' to appoint four respectable and discreet persons, whom he might commission, during the mayor's absence, to preserve peace and good order, and to administer justice within •he city's jurisdiction.' It would seem that Rokeslie bad subsequently fallen into disfavor, for we find tiiat, in his person, the dignity and privileges of the mayoralty were afterwards very grossly violated. In 1286 the mayor, sheriffs, aldermen, and other eminent citizens, were summoned to make inquisition at the tower, before John de Kirkeby, treasurer, and other justices of the king. It was, however, one of the ancient privileges of the city, thattlie corporation should not be bound to make inquisition in the tower, nor appear there, pro judicio, unless oa a previous notice of forty days. The mayor, therefore, previous to obeying the summons, resigned the common seal of the city ta Stephen Aswy, and other aldermen : and at J3arking church, which is on the eastern verge of the city, laid down the insignia of his office. He then entered the tower, not as mayor but as a private individual, and, when an explanation of this conduct was demanded from him, he asserted firmly the riglus of the city.

Tiie treasurer immediately declared the office of mayor and the liberties of London forfeited to the king, giving as a reason, the odious fiction, that, as Rokeslie had divested himself of the seal and insignia of office, the city had no longer any chief magistrate. Eighty of the principal citizens repaired to Westminster Ilall, to remonstrate against this usurpation, but for their temerity were arrested, and thrown into prison. For four days were this numerous and respectable deputation thus immured, and then, without apology or explanation, dismissed to their homes. The king now appointed Sir Iladulph de Sandwich, knight, custos»in place of the mayor, with orders at the same time to govern the city according to its ancient customs and liberties. Sir Radulph and Sir John Rreton were altcrnalely custodes, until the year 1-29B, when the king allowed the citizens again to choose their own

mayor, thoiigli not till they had made him a gift of 20,000 marks. Hut many years were jiot suffered to elapse before

the citizens had again to complain of infractions of their rights ; arising in this instance, however, not from external aggression, but from corruption among themselves. The mayor and aldermen began to assume the right of continuing themselves in office during pleasure; and wl;en tiiey resigned it was but for a season, for the sake of preserving appearances, and to persons of their own appointment. They imposed taxes too upon the citizens, and disposed of the money derived from them, as well as of the whole revenue of the city, in any manner they pleased. From 1315 to 1 322 the discontents and upbraidings, whicli these lawless usurpations occasioned, kept the city in a state of continual ferment. In 1318 articles of agreement were,through the mediation of the king (Edward II.), entered into between the citizens and their magistrates, for a redress of grievances ; but, if observed at all, it was only for a short period. No permanent redress followed, and the city still continued a prey to the tyranny of a self-elected few. 'Edward, at length, on the specious pretext of putting an end to this state of things, took the government of the city into his own hands. Shortly after, indeed, he gave permission to the alderman and commonalty to elect their own mayor; but a gift of £2000, which they immediately presented to him, told the price at which their rights were redeemed from this double usurpation.

When the attachment of Edward to his favorites, the Spensers, drove his queen, Isabella, and the barons, into rebellion, the citizens of London having evinced a disposition to take part witli the latter, the king again seized upon the government of the city, and appointed Walter Stapleton, bishop of Exeter, custos. The bishop proceeded accordingly to demand the keys from the mayor; but the citizens, assembling in great numbers around their chief magistrate, not only obliged him to maintain possession of the symbols of authority, but, laying hold of the unlucky prelate, proclaimed him a traitor and cut off his head.

The citizens now declared openly for the queen ; seized and executed a number of])ersons whom they supposed to be her enemies ; made themselves masters of the tower; dismissed all the king's officers ; and placed both the city and tower at the command of those who were engaged in the righteous cause of freeing the country from the bondage of favoritism. The king, unable to stem the torrent of popular indignation, was defeated, taken prisoner, and deposed. Isabella

entered London in triumph, and transferred to her son, Edward III., that crown which his father had so unworthily worn.

In return for the services which the citizens liad rendered at this crisis, Edward III., within two months after his accession, granted them a most ample confirmation and enlargement of their corporate privileges. He not only confirmed all the ancient rights of the city, whether founded upon charter or custom, and annulled every innovation upon them that had been made from the earliest times, and in whatever manner; but, in order to jirevent any future infraction or suspension of diem, on account of any real or pretended misc(jndMct of persons temporarily in-

vested with llie administration of the city government, it vv;is expressly declared, ‘ that for any personal transgression, or personal judgment of any minister of llie same city, the liberty of this city sliould not be taken into the hands of tlie king, or his heirs; nor a custos be deputed on tliat occasion in the same city.’ Edward continued, throughout his reign, to pay a strict regard to the privileges wliich he had thus solemnly confirmed and extended. In the daysof his dotage, a report prevailed, that it had been proposed in coiuiciUto abrogate or suspend tliem, on account of the part which the citizens took against the celebrated Wickliff; but, though there is evidence of their having ojjposed the spread of the reformation, there is none of their having received the punishment which tiieir bi-gotry deserved. A synod had been held at St. Paul’s, to pass judgment on ˆVicklifl[‘ for the iiesv opinions winch he then maintained in religious matters. The apostle of reform made his appearance before the tribunal, accompanied by the duke of Lancaster and the earl marshal of England, as his friends and protectors. In the course of the proceedings, a dispute arose between the duke and the bishop of London, in which the citizens espoused the cause of their spiritual cliief so warmly, that tiie duke and earl marshal thougiit it prudent to withdraw witii the accused. A rumor was next day spread abroad that tiic duke, out of resentment, had moved in council, that the city

privileges should be taken yway, the office of lord mayor abolished, and the government of the city entrusted to the earl marshal. Tiie citizens immediately assembled, in a most tumultuous manner, broke open the marshal's prison (the marshalsea), and liberated the prisoners; then proceeded to the duke of Jˆancaster's palace, in the Savoy, which they plundered, and, missing the prince himself, made prize of his coat of armour, which they dragged along the streets in token of their detestation of the owner. Had no proposition of the kind been agitated in council, such conduct was of itself sufficient to provoke the most exemplary punishment. The duke, however, contented, himself with insisting on the degradation merely of tlie mayor and certain of the aldermen, who appeared not to have exerted themselves with sufficient vigor in quelling the riot.

In the time of Richard II. tlie reign of rapacity returned, and the citizens of London were again doomed to suffer largely in their property for the preservation of their privileges. In one of the many pecuniary difficulties in which this prince was involved, by his prodigal habits, he made a demand on the city, for the loan of i'lOOO. Tiie city not only refused the money, but when a Lombard merchant, of more exuberant loyalty, offered to make the advance out of liis own purse, they chastised him severely for his officiousness. They seem to have been actuated less by a regard for the money itself, than an honest desire to check the profusion in which Richard indulged to a degree beyond all preceding example. The moral censorship which they chose to exercise, cost them, however, dear. Richard called his nobles together, to whom he represented, in indignant terms, the presumption

and maliciousness of ' these Londoners,' and with their concurrence suspended the mayor, aldermen, and sheriff's, from their offices ; revoked and annulled the whole of the rigiits and privileges of the city; removed the courts of law to York and Nottingham ; ordered the magistrates to pay into tiie rojal treasury tiie sum of 3000 marks, and tiie commonalty the more enormous sum of £100,000 (Kymer's Tcedera, 'ol. VIL p. 78.5), and in the mean time committed the mayor and other principal citizens to different and distant prisons, there to remain till these fines were paid. Nor were they even then to expect restoration to favor; for it was decreed, that in future the citizens should have no government of their own; but that the king should appoint one of his knights to be ruler of the city.

It was not long before the king showed a disposition to commute these

severe penalties; which seem indeed to have been made thus se-vere for the very purpose of enabling his majesty the more readily to turn the remission of them to profitable account. The citizens appreciated the character of his majesty's proceedings quite correctly, when, as Stowe informs us, they concluded that, ' the end of these things was a money matter.' They first tried the cupidity of the king with an offer of £10,000 for a restoration of their privileges, but this proposal was not thought worthy of an answer. Soon after, however, they were informed that the king had taken compassion on tiiem, and meant, with his queen, to pay the city a visit, when they would have an opportunity of showing, by the reception they gave their majesties, how far they were deserving of the royal favor. Richard, having set out on this visit of conciliation fi'om his palace at Sheen, was metat Wandsworth by 400 of the principal inhabitants, mounted on horseback, who tendered the humble submission of the city, and besought his majesty's gracious pardon for all its past offences. As he entered the city his coming was greeted with the acclamations and blessings of assembled thousands; in all the streets through which he passed the houses were decorated with cloths of gold, silver, and silk ; the conduits ran with the choicest wines; and at every step the most costly gifts were heaped on the monarch and his queen. Crowns and tables and vessels of gold ; horses proudly caparisoned : cloths of the richest fabrics ; coins, jewels, and precious stones; are enumerated among the offerings made on this occasion by an injured people, to appease the wrath of their sovereign. Well might the citizens imagine, that their pardon was now secure ; yet, profuse as they had been, Riciiard wa.s still unsa-tisfied, lie insisted on having a further gift of . £'10,000 in money; and not until this sum was collected by an assessment on the inhabitants, and paid into the royal coflTers, would he consent to restore the city to its privileges, and remit the fines of 3000 marks and £100,000, which he had originally imposed on the magistrates and commonalty. Such is the compassion of tyrants; such the ' good old times,' which ounht to make the citizens of London reckon, as above all price, the constitutional liberty which they now enjoy. Every care was taken not to furnish Richard with any new pretext for interfering with the city ; but,

when he coulJ no longer plunder it under disguise of the royal prerogative, he did not hesitate to have recourse to open force. In 13'.t7, witliout any pretext whatever, he extorted from the city, in its corporate capacity, 10,000 marks, and in tlie following year levied still larger sums from individual citizens. The tyranny of Richard, however, was now drawing to its termination. The universal disuffection which it had produced encouraged Henry of Bolingbroke to hoist the standard of rebellion ; Richard was in an instant hurled from his throne; and those streets which had been so lately paved, as it were, wit'i diamonds at his approach — where he had witnessed far more loyalty than he knew how to appreciate — saw him led captive to the tower, without one token of that commiseration which the fall of greatness usually inspires.

Henry IV. gave the citizens no cause to regret his accession to the throne; while he lived he respected their institutions, and granted them several new privileges highly conducive to the good government of the city, particularly a more absolute control than they had yet possessed over the different gates and posterns. During the splendid reign of Henry V., and that of his son Henry VL, while under the beneficentˆprotectorate of the great duke of Bedford, the government of the city was left, without interference, in the hands of its own magistrates, and never, perhaps, was that government more ably or prosperously administered.

When the turbulent cardinal Beaufort endeavoured, in the absence of the protector in France, to wrest the reins of power from the hands of the deputy protector, the good duke Humphry of Gloucester; he commenced with an attempt to get possession of London by surprise, while the citizens were engaged in the annual festivity of welcoming their chief magistrate into office ; but through the vigilant and spirited conduct of the mayor, Sir John Coventry, the design was happily frustrated.

After the assumption of che sceptre by Henry VI., the loyalty of the citizens of London was assailed by many temptations; but they were slow in participating in the party feuds which the misgovernment of this imbecile prince produced. The good service which they rendered Henry on the occasion of Jack Cade's, or rather Richard duke of York's insurrection, as already related appears to have arisen, more from a wish to rid the city of a troublesome guest than from any affection for the prince himself; nor was it till a considerable time after war was openly declared, between the rival houses of York and Lancaster, that

they declared for either. In 1458 it was selected as a sort of neutral ground where the chiefs of the adverse parties might meet to treat of terms of accommodation ; and the manner in which its magistrates conducted themselves, on the occasion, did singular honor to their impartiality and firmness. From a distrust of each other's good faith, the leaders of both parties came to the conference attended by numerous retinues of armed men; and, to preserve the peace of the city from the imminent danger to which it was exposed by so numerous a confluence of hostile spirits, the mayor, Sir Godfrey

Boleyn (ancestor to t'le fpieens, Ann Roieyn and Elizabeth), caused a guard of 5000 well armed citizens to keep watch day and night. So imposing a force kept both the Yorkists and Lan-castrians in awe, while it showed that possession of the city was a prize to be hoped for, at present, by neither. After many communings, articles of reconciliation were at length agreed to, and celebrated with abundant solemnity in St. Paul's cathedral ; but founded in mutual insincerity and deceit, the parties separated only to appeal anew to the decision of arms.

The citizens now thought it mcumbent on them to depart from that line of neutrality whicli they had hitherto observed. The miseries of civil war were no longer to be averted ; and they felt, as all true patriots must feel in such cases, that it was their duty to throw their weight where it might have most influence in bringing these miseries to a speedy termination. The side which the Londoners espoused was that, in fact, which ultimately trium])hed. The duke of York was established on the throne, by the title of Edward IV., and manifested his gratitude to the citizens, for the services they had rendered to his cause, by several important grants, which added considerably both to the jurisdiction and to the revenue of the corporation.

The union of the houses of York and Lancaster, though in its general results auspicious to the nation, was less immediately so to the citizens of London, than to any other portion of the community. The reign of the first of the Tudors, though distinguished by a policy well suited to the character of the times, was stained by many acts of grievous oppression towards the citizens of London. The master passion of Henry's breast was avarice; and, to fill his coffers, he had recourse to modes of extortion quite as odious as those by which Henry III. and Richard II. fed the streams of their thriftless prodigality. He did not, like them, traflic in taking away privileges that he might make money by restoring them ; he showed every respect for the

ancient and undoubted right of the citizens to elect their own magistrates, but took the liberty at the same time of asserting his own right to determine whether their magistrates did their duty, and to fine them smartly for whatever, in the om:iipotence of his discrimination, he chose to brand with the name of malversation. The ingenuity of this mode of spoliation was considerable; since it made the citizens themselves the purveyors, and, the worse the magistrate, the more certain he was to enrich the sovereign. Civic honors became now the greatest of all individual misfortunes; to be elected into office was to be marked out as a victim foi royal rapacity. Sir W. Capel, who filled the mayoralty in 1503, was, five years after, on a general allei;ation of remissness in his official duties, fined £‘2000 ; aiifcl, because he refused to submit to the iniquitous exaction, was committed a close prisoner to the tower. Sir Thomas Kniesworlh, who was mayor in 1505, and his two sherifl’s, paid the sum of £1400 to escape a similar fate. Sir Lawrence Aylmer. who filled the mayoralty in 1507, and his two sheriffs, preferred the example of Capel, and followed

him to prison raiher thuu pay llie heavy tines which were demanded from them. An al4erman (if tlie name of Uawes was also imprisoned for some pretended misconduct in his official capacity, wliich aftected iiim so much tliat he died of a broken heart.

Tlie accession of Henry VIII. opened the prison gates to Capel and the other victims of Ills piedecessor’s tyranny ; while Empson and Dudley, who had been the chief agents in these schemes of extortion, expiated by their lives the infamy of their employment. With ‘ a generous magnanimity, not uncommon in the world, the new king gave up the offenders, and profited by tlie offence; sent the collectors to the scaffold, and kept the money in his treasury.’

During this reign, despotic and sanguinary as it was, the corporate privileges of the city of London were more respected than they had been for many a preceding age. The events of Evil May-day exhibited as remarkable an example of misgovernment as is perhaps to be found

in the city annals; but though there was humiliation, and shame, and reproach, in the treatment which the magistrates experienced from Henry on the occasion, it was attended with no resumption, no infringement of charters. The citizens, too, went farther than they had ever yet done, in opposing the pretensions of the crown to levy taxes of its own authority ; but with the exception of one stubborn patriot, who was seized and sent to the wars on account of the lead which he took in this opposition, they suffered no harm for their spirited conduct ; Henry even withdrew his pretensions, and disavowed the authoiity by which they had been put forward.

In the reign of INIary, the civil government of the city suffered a temporary suspension during the formidable rebellion of Sir Thomas Wyatt. The Londoners were suspected, and not without reason, of being favorable to the cause of the rebels. The city was, therefore, placed under the military command of lord William Howard, as her majesty's lieutenant; and it was by his spirited conduct in defending it, when attacked by the insurgents, that the rebellion was ultimately defeated.

When Elizabeth succeeded to the throne, she administered the government of the kingdom, in all its parts, so arbitrarily, and yet so well, by the mere force of her personal talents, that the privileges of the city of London, like every other free institution of the country, were lost to the sight, amid the glories of her unrivalled reign. The metropolis was at all times an object of her peculiar care ; and, in her own person, she may be said to have at once united the various functions of counsellor, alderman, and chief magistrate. The persons who filled the different civil offices, during her reign, were in general the mere instruments of her will. The power she exercised was unlimited ; but tempered with so steady a regard to the interests and honor of her people, as to gain her their unanimous esteem and confidence. The numerous and large demands which were made on the city, during her reign, for men and money, were obeyed with an alacrity, which showed that she had dieir hearts and purses equally at her command. It is remarked by historians, as a smgular circumstance, that such devotion, as the citizens of London displayed to Elizabeth, should not have been rewarded by any new privileges, nor even by a confirmation of those which had been granted to them by her predecessors. The fact, however, is but in harmony with the character of her reign. Slie ruled well, not by virtue of wax and parchment. She made the days forgotten when charters were worth caring about, by showing how easy it is for a good and wise monarch to make a people happy without them ; and she left besides, in her example, what ought to have been of more weight with her successors than 10,000 charters.

James I., with talents for ruling vastly inferior to those of Elizabeth, endeavoured to govern the kingdom on the same absolute principle ; but governing it weakly, and ingloriously — exerting power more for its own sake than for any good it could confer — he brought odium on himself, and disaster on his race, by the experiment. The citizens of London, however, were among those who suffered the least from his arbitrary pretensions ; for, sensible of the importance of cultivating their good opinion, he treated them at all times with peculiar kindness and respect. He became a member of several of their companies ; he honored their public feasts with his presence ; he borrowed repeatedly large sums of money from them, which he repaid punctually, though in his general habits careless and profuse; and he extended and confirmed the city's jurisdiction by more than one valuable charter. Tlie local government of the city, which had been in a manner superseded during the reign of Elizabeth, now resumed its functions; and, in one remarkable instance, we find it even opposing itself to the general government of the sovereign. — After James had published his Book of Sports, by which a general toleration was given to break the Lord's day, his majesty happening one Sun-day to drive through London during divine service, in contempt of one of the city's regulations, the lord mayor (the Right Hon. George Bolles) had the spirit and firmness to order the king's carriages to be stopped. 'What!' exclaimed James, swollen with rage, ' I thought there had been ne'er a king in England but myself.' He immediately despatched a messenger to the lord mayor, with his royal commands to let the carriages pass. ' While it was in my power,' replied the worthy magistrate, 'I did my duty; but, that being taken away by a higher power, it is my duty to obey.' It is said that James had the good sense to do justice to the spirit which dictated this conduct, and thanked the mayor for knowing the duties of his office so well.

Charles I., acting upon his father's extravagant notions of the kingly prerogative, while the advancing intelligence of the age was daily rendering them more and more intolerable, the patience of the people became at length exhausted, and they had recourse to arms to re-assert their violated liberties. In this necessary eflbrt, the city of London, which had suflered more than any other])art of the kingdom from the oppression of the king, took a leading and important part; from first to last it was the life and soul of the independent cause ; and, but for its perseverance,

firmness, and sacrifices, it seems more than probable that the nation would, at this time, have sunk at the feet of despotism. From being so directly under the eye of the star chamber and hiˆh connnission courts, it had opportunities of witnessing too many of those ‘ fantastic tricks,’ which make ‘ even angels weep,’ to abandon easily the attempt to be free. — It had seen its most venerated institutions set at nought ; martial law substituted for civic rule ; trade and industry made matters of privilege and monopoly; the property of the citizens plundered by illegal exactions ; the richer sort thrown into prison when they refused compliance, and the poorer dragged to serve in the army and navy. It had seen the king repenting himself of these severities, %vhen he found them less productive to his treasury than he expected, and by a formal charter (18th October, 1638) confirming and restoring to the citizens ‘ every right, immunity, franchise, and privdege, which they had ever enjoyed ;’ and yet, immediately after, violating all of them as wantonly and perfidiously as ever. The sword of the lord mayor was at last ordered to be taken from him ; and four of the aldermen were committed to different prisons, because they refused to be the instruments of exacting from their fellow-citizens a forced loan oF £‘200,000. Submission had now reached its limits ; and, in turning the sword of the city against the tyrant who demanded its surrender, the citizens did but their duty. The attempt, it is true, was far from end-ing in the attainment of that liberty and security for which the citizens took the field ; for, after years of anarchy, they but exchanged one despotism for another — that of the king for that of the commonwealth ; yet, though defrauded of the fair harvest which promised to crown their la-bors, the spirit is not the less to be commended which made them foremost in the fight when liberty seemed the prize. The destruction of the monarchy formed no part of the views which guided the more rational and respectable portion of the London citizens — they desired only to see it restored to a constitutional basis. When parliament passed the ‘ act for the eheredation of the royal line, and the abolition of monarchy in the kingdom,’ Sir Abraham Reynardson, the lord mayor, refused to proclaim it in the city ; and, for doing so, was degraded from his office, fined .£‘2000, and committed to the tower.

The last to submit to the usurpation of Cromwell, the citizens of Iˆondon were also the first to co-operate with Monk in his plans for

the restoration of the exiled family. They made him the major-general of their forces, for the purpose of adding to his weight at this important crisis ; and the lord mayor, Sir Thomas Adams, formed one of the deputation which went over to Breda, to invite the return of Charles II. The restored monarch evinced at first a just sense of the claims which the city had established to his kindness and protection. He granted them a charter, since called the Great Charter of Confirmation, in which all the privileges, liberties, rights, and customs, granted to the city by former sovereigns, were carefully recited, and now solemnly confirmed, ‘ in return for the late tokens of loyalty discovered in the said city

towards his person and government, by their effectual aid to restore him to tlie crown.’ The gratitude of Charles, however, was but of brief duration. Neither the unhappy fall of his father, nor his own misfortunes, nor all the lights of the age, had been able to purify his nature from that love of arbitrary power which formed the hereditary vice of his race. Scarcely had the shouts which welcomed his return ceased to vibrate in the ear, when he entered on a similar career of misgovernment to that which had led his predecessor to the scaffold. Again were the citizens of London driven, by the course of events, to stand forward in defence of the rights of the subject; and, had the nation only supported them as well on this as they had done on former occasions, our history might have been spared the ‘ disgrace’ which, in the opinion of an enlightened statesman, was cast on it by the impunity with which Charles II. was suffered to pursue his career of tyranny to its end. — Fox’s Life of James II. When, in 1681, parliament was dissolved because of its refusal to proceed with the supplies till the bill for the exclusion of the duke of York from the throne, on account of his Catholic tenets, was passed, the citizens of London assembled in common hall, and, after voting thanks to their representatives for the share they had in this refusal, they resolved, ‘ by God’s assistance, to stand by them with their lives and fortunes ; being confidently assured, that the said members for the city will never consent to the granting any money or supply, till they have effectually secured them against popery and arbitrary power.’ The same sentiments were re-echoed in the resolutions of other corporate bodies, in all parts of the country ; yet when Charles, rather than accept of supplies on such terms, resolved to govern without a parliament at all, and became a pensionary to France for the means of supporting his state as an English monarch, no general effort was interposed to save the country from this declension into absolute despotism, and the citizens of London were left to be overwhelmed by

the vengeance of the court, for the single example which it had presumed to offer of resistance to its will. ‘ The city of London,’ says iMr. Fox, ‘ seemed to hold out for a certain time like a strong fortress in a conquered country ; and, by means of this citadel, Shaftesbury and others were saved from the vengeance of the court, liut this resistance, however honorable to the corporation who made it, could not be of long duration. The weapons of law and justice were found feeble when opposed to the power of a monarch, who was at the head of a numerous and bigoted party of the nation, and who, which was most material of all, had enabled himself to govern without parliament.’ The court first succeeded in wresting from the livery of London, partly by corruption and partly by violence, the election of their mayor and sheriffs. As soon as it had thus obtained unlimited control over tlie administration of justice— the power of packing juries who would decide as they were ordered, and of nominating magistrates who would shrink from the execution of no iniquity — it began to maltreat and plunder, under color of law, all who had shown

themselves most forward in assorting the rights of the people. A fine of £1000 iiaci hitherto been thought enormous; hut such was the thirst of revenge wliich now animated the court party, that the fines imposed by venal judges, for what venal juries chose to pronounce offences against law, were increased to £lO,000, £40,000, and even £100,000 ! Alderman Pilkinglon, and two other citizens, Colt and Oates, were fined £100,000 each, for speaking disrespectfully of the duke of York ; Sir Patience Ward, who was lord mayor in 1G81, was found gudty of perjury because he had sworn tliat he did not hear tlie words ascribed to Pilkiiigton ; nor could the just and mild princi]5les wliich characterise the criminal law of Euiiland, protect even the lives of such men as Sidney, Russel, and Armstrong, ‘ when the sacrifice was called for by the policy and vengeance of the king.’ Incredible as it may seem, something more was still wanted to com-])lete the schemes of tyranny wliich the court was now triumphantly pursuing. It had got into its hands, as we have seen, the appointment of the mayor and sheriffs ; but as the annual election to these offices,

according to tiie chartered usages of ttie city, niigiit, in some evil hour, give an opportunity to tiie disaffected to contest the power of nomination with success, it was decided to be necessary tliat the corporate privileges of the city should be abrogated entirely, and the government of it rendered simply and absolutely dependent on the king. — The citizens were served with a writ of quo warranto, calling upon them to show that they had not forfeited, by certain acts of malversation imputed to t'lem, the various rights wliich the charters of a long line of sovereigns had conferred on them.

In the pretexts employed to obtain the cloak of a judicial decision, for this predetermined extinction of the corporation, a good deal of wicked ingenuity was displayed. When the crown, said the king's lawyers, conferred the privileees of a corporation on the citizens, they were of course intended to operate for the good of the crown; if employed for a different purpose, it was but right that they should revert to it ; and that they had been so, was clear from the resolution which they had published after the dissolution of the parliament in 1681, to support, ' with their lives and fortunes,' the members who opposed the king. The charters of the city, moreover, had not conferred on it the right of taxing the lieges ; and yet it had, of its own authority, imposed certain tolls on all goods brought thither for sale. Tiie corporation had, in short, 'both scandalised the king's government and oppressed their fellow-subjects ; and ' as the common council was the body of the city chosen by all the citizens, so they were all involved in what the common council did.' The council for the city had one invincible xmswer to make to all these arguments, namely, that whatever might be the character of the resistance which the cor])oration of 1681 had offered to the king, and however illegal the tolls which that or other corporations had ihiposed, yet they were but personal misdemeanours ; and by the celebrated provision of Edward III. confirmed by every succeeding sovereign, it had been expressly declared, that 'the liberties of the city

could not be taken into the king's hands for any personal trespass or judgment of any minister of the said city.'

Defence, however, was unavailing, where judg.ment had previously been signed. In Trinity term, 1683, the court of king's bench declared it to be tiieir opinion, that the malversa-tions of the common council must be considered as acts of the whole city; and that the two points set fortli in the pleadings of the crown were just grounds for the forfeiture of the city's charter. Tiie attorney-general did not, however,

enter up judgment mimediately; in the hope, as it would seem, that, when the corporation saw their fate tiius dependent on the nod of the king, they migiit be induced to come forward with some offer of compromise, by agreeing to which, the crown might probably gain more than it could hope to accomplish by the absolute resumption of the city's rights. The court party in the city, with a ready perception of what was expected from them, immediately called a court of com-mon council, wˆhere they succeeded in procuring the adoption, by a considerable majority, of a petition to the king, in which the corporation fully acknowledged tiie misgovernment ascribed to them, solicited pardon, promised constant loyalty and obedience for the future, and placed themselves entirely at the disposal of his majesty.

The lord mayor, at the head of a numerous deputation from the council, presented this petition to the king. When Charles had read it, he handed it to the lord keeper North, desiring him to state the conditions on which his majesty would accede to the prayer of the petitioners. The conditions were — 1. That no lord mayor, sheriff, recorder, common serjeant, town clerk, or coroner of the City of London, or steward of the borough of Southwark should be capable of, or admitted to, the exercise of their respective ofiices, before his majesty had approved them under his sign manual. 2. That if his majesty should disapprove the choice of any person to be lord mayor, and signified the same under his sign manual, the citizens should, within one week, proceed to a new choice, and, if hi? majesty should also disapprove of the second choice, that he might himself nominate the lord mayor for the year ensuing. 4. That the lord mayor and court of aldermen might, with the leave of his majesty, displace any alderm.an or other officer of the city.

5. That on the election of an alderman, if the court of aldermen did not approve of him, the ward should be obliged to choose again; and, if the second choice was also disapproved, that the court might themselves fill up the vacancy. And

6. That all justices of the peace, within the bounds of the city, should be appointed by the king's commission ; in other words, that no officer of the city should be ex-officio a justice. ' If these regulations are made,' continued the lord keeper, ' his majesty will not only stop this prosecution, but confirm your charters in all other respects. The term, my lord mayor, draws towards an end, and Midsummer is at hand, when some of the officers used to be chosen ; whereof his majesty will reserve the approbation. It is, therefore, his majesty's pleasure that you return

to the city, and convene the common council, that he may speedily know your resolutions thereupon, and give his directions accordingly. That you may see the king is in earnest, and the matter is not capable of delay, I am commanded to let you know, that his majesty has given orders to his attorney-general to enter up judgment on Saturday next, unless you prevent it by vour compliance in all these particulars.'

On the return of the deputation to the city, a court of common council was immediately summoned to consider of the king's propositions. The debates which it produced were warm and tempestuous. Numbers there still were devotedly attached to liberty, who declared,that they would rather sacrifice all that was dear to them, than consent to such slavish conditions. ' If we must,' said they, ' sink unoer oppression ; let us at least have the consolation left us, that it was by no act of our own that we lost our birthright ; that we became slaves not through choice, but by force.' Other sentiments, unhappily, prevailed with a larger party of the council ; and the degradation of the city was consummated, by the consent of a majority of eighteen, to all that the king required. Cliarles appears, however, to have disdained the triumph he had achieved ; for to the surprise and mortification of the servile crowd, who had thus proclaimed themselves his willing slaves, he refused to set his seal to the arrangement, and preferred entering up the judgment which had been pronounced on the quo warranto. It has been generally supposed, that he followed this course from a wish to heap degradation and insult on the city ; but the inference is superficial and improbable. Charles had no cause to be displeased with his own friends and partizans — with the majority who voted for submission to his terms — and it was on them alone all the igno-miny of such treatment fell ; while, to those who opposed concession, it must have been a source of just pride to witness the shame and confusion of its advocates. The circumstance which in all probability determined the conduct of Charles, was the smallness of the majority by which the acceptance of his propositions was carried ; for, while so numerous a party remained hostile to the pretensions of the crown, any attempt to conduct the government of the city, through the

medium of the citizens themselves, must have been attended with per|)etual embarrassment, and not altogether exempt from the chance of utter failure.

The judgment on the quo warranto having been entered up, the king, by a commission under the great seal, appointed the creatures of the crown who then filled the offices of mayor and sheriffs, to hold the same during pleasure ; and nominated another individual of the same cast to the recorder, in place of Sir George Treby, who, as counsel for the city, had advocated its privileges with honesty and zeal. The fate of London spread a general alarm among the corporations throughout the country; and in the vain hope of esca[)ing the general sweep which they supposed to be meditated, by a spontaneous submission to the will of the king, most of them resigned their charters into his hands, with a re-rjuest rather slightly expressed, that his majesty

would be pleased to remodel them in such manner as he might in his wisdom think meet. The king accepted the surrenders ; but, in all the new charters which he gave, reserved to the crown the nomination to every place of power and profit, and for the few indifferent privileges which they contained, exacted large sums.

The duke of York, by whose advice the gay and dissolute Charles chiefly acted in these oppressive measures, at length succeeded him in the throne; and being now enabled to give full scope to his inclinations, he speedily filled up that measure of iniquity which led so deservedly to his own downfall, and to the final expulsion of his house. One of the earliest victims of the tyranny of James II. was alderman Cornish, who, in discharging his official duties, when Sheriff", in 1680, had particularly exerted himself in the detection and prosecution of wliat was called the Popish plot, the reality of which, his majesty, with a view to the introduction ot popery, was now using every possible endeavour to discredit. Cornish was now accused of being concerned in the Ryehouse plot, for which lord William Ilussel suffered, and on suborned testimony, to which no man gave serious credit, was found, by a packed jury, guilty of high treason. That the vengeance inflicted on this illfated gentleman might inspire the greater terror in the community, the merciless JeflTeries ordered that he should be hanged, drawn, and quartered, not at the usual place of execution, but in front of his own door, at the end of King Street, Cheapside. On the 23d of October, 1685, the citizens beheld with horror and dismay this barbarous sentence literally carried into execution. James had no sooner glutted his monstrous revenge, than

conscience appears to have begun her upbraidings. In the memoirs of his life, which Dr. Clarke has compiled from James's own p"pers, we read that ' although Cornish had been a furious stickler in these times, and that no f\ne doubted his guilt, yet when his majesty heard that one of the witnesses against him did not so positively reach to what is criminal in the case, he was troubled that the least formality in the law should have been infringed for his security, and therefore declared he was sorry he had suffered, and (marvellous compassion !) ordered his quarters to be taken down, and given to his relations to be decently buried.' Life of James, vol. 1. p. 45. Never, perhaps, were guilt, confusion, and shame more apparent than in these few lines. At first, we are told ' no one doubted his guilt,' and next, that his majesty had ' heard that one of the witnesses (as there were but tvi'o, the failure of the one destroyed the whole case), did not so positively reach to what was criminal in the case.' And so for want of this slight ' formality,' the mere want of evidence that he had done any thing ' criminal,' any thing meriting punishment at all, far less a fate so cruelly ag-nnvated as that which befel him, is the conscience of the tyrant 'troubled!' A succeeding age did more justice to the real character of this transaction, when it pronounced the execution of Alderman Cornish to be among the most odious cruelties of James's reign, restored his estate to his family (for, vvitli all his compassion, James

scrupled not to beg5ar the children whom his cruelties liad made fatherless) ; and condemned the witnesses against iiim to be lodged in remote prisons for the remainder of their lives.

When at length the nation rose, as one man, to expel their oppressor, James became as mean and pitiful in his concessions, as he had been proud and arrogant in his usurpations. Among other steps which he took, to avert the impending ruin, he directed that intimation should be made to the lord mayor and aldermen of the city that he bad resolved (out of ' tender regard' merely) to restore to tliem, by a new charter, all the ancient franchises and privileges on which they had

been deprived by the decision of the quo warranto. He sent at the same time for Mr. William Kyffin, a merchant of great weight and eminence in the city, who still mourned the loss of two grandsons, who had been executed for the rebellion in tlie West, with circumstances of peculiar cruelty ; and in the hope of conciliating him, by such honors as it was yet in his power to bestow, told him, that 'he had put down his name as an alderman in the new charter.' ' Sir/ answered Kyffin, ' 1 am a very old man ; I have withdrawn myself from all kind of business for some years past, and am incapable of doing any service, in such an affair, to your majesty or the city. — Besides, sir,' continued the old man, fix-ing his eyes stedfastly on the king, while the tears ran down his cheeks, ' the death of my grandsons gave a wound to my heart which is still bleeding, and never will close but in the grave.' — (Hughes's Letters.) — O bitter reproach ! O most just retribution ! Not even the name of this venerated sufferer, however, nor the names of all the city sufferers from James's tyranny together, could have sufficed to obtain respect for a charter thus meanly tendered in the hour of desperation. The time for reconciliation and compromise had for ever passed. The citizens of London — the wliole nation — saw safety only in revolution ; James was forced to abdicate tlie throne whicli he had disgraced, without a single arm being raised in his defence ; and the vacant diadem was transferred to the Prince of Orange and his consort, on terms by which liberty and happiness were once more restored to the country ; and the relative rights of sovereign and subject placed on a surer and more lasting basis than they had ever yet been.

One of the first acts of the first parliament of William the third, was to do justice to the city of London. The judgment given on the quo warranto, by this was pronounced to be illegal and arbitrary ; every right, charter, and indemnity, anciently conferred on the city, was restored ; and all grants prejudicial to them, which had been made by the two last sovereigns, were declared null and void. ' Glorious,' indeed, this revolution deserves to be called by the citizens of London. Nearly a century and a half have since elapsed, and during all this period they have as freely enjoyed as they have spiritedly maintained their municipal privileees.

The citizens were not insensible to the benefits thus gained, and lost no opportunity of showing how ready they were to support a government founded on the principles of liberty. William

having suppressed the rebellion in Ireland, and consolidated his

government at home, resolved, in 1691, to pay a visit to his Dutch dominions, leaving his illustrious and amiable consort, queen Mary, regent. Scarcely had his majesty quitted the British shores, however, when a report was raised by the Jacobite faction, that t'le French were on the point of invading England with a large force, in order to restore the exiled James. No circumstance could have been more fortunate for the house of Orange, since it proved its stability on the throne ; for the threats of invasion excited no alarm, but much preparation. The city of London increased its military force, and, well knowing that money was the sinew of war, the common council voted an advance of £200,000 to the queen.

So much had the city suffered from a popish monarch, that the strongest prejudices existed at this time against the Roman Catholics, so that in the years 1697, 1699, and 1700, proclamations were issued, fixing tlieir residence within certain limits, and empowering the magistracy to seize all arms and ammunition found in their possession. But no attempts were made in London to disturb the public tranquillity, although the violence of party was often manifested in a strong degree. An instance of this occurred in 1710, when the intemperate Dr. Sacheverell attempted to revive the principles which had been the cause of hurling the Stuarts from die throne. The Dr. preached two sermons, in which he censured the act of toleration, and vindicated the doctrine of non-resistance to the government to the utmost ex-tent. The house of commons took up this business, and after declaring his sermons to be 'malicious, scandalous, and seditious libels,' appointed a committee to draw up articles of impeachment against him. The house of lords, however, thought the matter had been treated too seriously, and, although they condemned Sacheverell by a majority of seventeen voices, he was merely restrained from preaching for three years. During these proceedings the Dr., who was of the high church party, became a great favorite with a considerable portion of the populace of London, who considered him as the champion of the established church, and suffering for its sake. They conducted him in triumph from Westminster Hall to his house, and testified their zeal in his cause, by attacking the dissenting meeting-houses, particularly the chapel of the eccentric Daniel Burgess, in New Court, Carey Street. They tore down the pulpit, the pews, and benches, and made a fire of them in Lincoln's-Lin-fields.

The accession of the house of Brunswick to the throne was hailed in the metropolis and through Great Britain as the last act of the great drama of the revolution ; for, although queen Anne was popular, it was known that in her lat-ter days she wavered as to her successor,

and, could she have possessed sufficient power to influence the appointment, it was believed she would have recalled a member of her own family. No sooner had George L arrived than he received the warm congratulations of the city, and in his answer to their address complimented them on their importance, and assured them that he

would Uike tlieir privileges and interests under his particular protection. On the ensuing lord mayor's day, the king and the royal family dined in the city ; on which occasion he created the lord mayor, Sir William Humphreys, a baronet, and gave £1000 to be applied for the relief and discharge of poor people imprisoned for debt.

The rebellion of 1715 excited some sensation in the metropolis, but did not in the slightest degree affect the citizens, who, in an address to liis majesty, declared their unalterable adherence to the royal person and government. In 1721 the plague raged so furiously at Marseilles, tliat strong measures were taken by the legislature to prevent its being introduced into this country. One of the clauses in the law enacted, that 'every infected place should be enclosed and shut up by a line or trench, in order to cut off all communication, and that all persons endeavouring to escape from the said infected place, without having regularly performed quarantine, should suffer death as felons, without benefit of clergy.' The corporation of the city, ever watchful of the privileges of their fellow citizens, presented a petition against this bill ; and, although unsuccessful in the first instance, they procured its repeal in the following year. Nor was it to matters of a local nature that the city limited its interference, wisely considering every infringement on the liberties of any class of individuals, as an at-tack on the liberties of all.

Widr this feeling, in the year 1733, the court of common council resisted the extension of the excise laws, by Sir Robert Walpole. On the day fixed by the minister to propose the obnoxious measure, the citizens in great numbers thronged the avenues leading to the house of commons, when Sir Robert, with an indiscretion not usual with him, insinuated that the multitude who liad assembled had been gathered togetiier unfairly, and applied to them the legal term of '■ sturdy beggars.' The patriotic Sir John Barnard, at that time one of the members for the city, resented with becoming spirit this attack of the minister. ' The right honorable gentleman,' he said, ' talks of sturdy beggars : I do not know what sort of people, Mr. Speaker, may now be

at your door, because I have not been lately out of the house, but I believe they are the same sort of people that were there when I entered the house ; and then, sir, I can assure you, that I saw none but such as deserve the name of sturdy beggars as little as the right honorable gentleman himself, or any gentleman whatever.' When, finally, the sheriffs, who were accompanied by the chief citizens in 200 carriages, presented the petition of the lord mayor, aldermen, and common-council, against the bill, at the bar of the house ; the minister took the alarm, and, perceiving the unpopularity of the measure, abandoned it.

In the rebellion of 1745 the city of London again exhibited its firm attachment to the protestant succession. Addresses were presented by the corporation, and by the merchants of the metropolis, who proceeded, in 140 coaches, to declare their fidelity to the throne. The military preparations were prompt and vigorous; and when the duke of Cumberland, after putting

down the rebellion, returned to London, he was presented wiUi the freedom of the city in a gold box.

Ready, however, as the cit:zens were, at all times, to support the government, and to sanction every measure consistent with the honor and interests of the country, they never ceased to watch over their own liberties. A proof of their vigilance in this respect occurred in the year 1749, when the government suspecting that an attempt would be made to rescue two men, who had been principals in a riot in the Strand, ordered a party of the foot-guards to attend at llolborn Bars, and assist the civil authorities in guarding the prisoners to Tyburn. The sheriff, Mr. Janssen, knowing that the constitution and usages of the city precluded the interference of the military, civilly dismissed the guard, and-, heading his own body of police, secured the due execution of the law without molestation.

The early part of the reign of George III. was agitated by the well-known proceedings against VVilkes, who was committed to the tower on a warrant (afterwards declared to be illegal) from the secretary of state, for a libel in No. XLV. of the North Briton. On being liberated, by the decision of lord chief justice Pratt in his favor, Mr. Wilkes brought an action against the under. secretary for illegally seizing his papers, and obtained £1000 damages. He afterwards reprinted the obnoxious No. of the North Briton, when the house of commons expelled him, and a prosecution was commenced against him in the

court of king's bench, in which the publication was adjudged a libel, and, on his not appearing to receive sentence, he was outlawed. The pub-lic now manifested a strong feeling in favor of this demagogue ; and, when the house of commons ordered the libellous number of the North Briton to be burnt by the common hangman, the populace assaded the sheriff and city officers, wlio attempted to carry the order into effect at the Royal Exchange, and broke the glass of sheriff Ilarley's carriage. They also snatched the libel from the flames, and proceeded to Temple Bar, where they made a bonfire, into which they threw a large jack boot, in allusion to lord Bute, then prime minister.

In 1768 Wilkes, who had retired to France, suddenly made his appearance on the hustings at Guildhall, at the general election, and offered himself as a candidate to represent the city ; failing in this object, he determined to stand for the county of Middlesex, and was elected by a large majority; when his partizans, not having the discretion to enjoy their triumph in (piiet, committed several outrages. Mr. Wilkes had been committed to the king's bench prison, on a sentence against luin for the libel. On the 10th of May, when the parliament met, an opinion prevailed that he could not be detained, and a great concourse of people assembled, ready to convey hirn in triumph to the house of commons; but finding there was no prospect of his liberation they became very clamorous. Tliis alarmed the Surry magistrates, w-ho called in the aid of the military and read the riot act. The mob, incensed at what they deemed an unnecessary interference, assailed the soldiers with stones and brick-bats ; when the latter, who were principally

Scotchmen, became irritated, and one of tlieni, wantonly di:scharg;ing his niiisket, shot Mr. Allen, tl>e son of a livery stable keeper, at the door of iiis father's cow-house. Tlie soldiers were afterwards ordered to fire, and upwards of twenty persons were killed ai.d wounded.

The death of Allen, who had not participated in the riot, excited a great sensation, not only in the metropolis, but in 'he country ; and tlie c(!lebrated Ilornc Tooke strained every nerve to bring the offender

to justice, but without effect.

Tiie house of coi.ir.>ons, as we have seen (article GiiKAT Buitain) now annulled Wilkes's election, and the Middlesex freeholders, twiee m tl'.e course of six weeKs, reelected him. A third writ was issued, when colonel Luttrel was induced to offer himself; and although liis rival was again returned, by a majority of 830 votes, the house of connnons declared tlie colonel the sitting member. Petitions were presented from the city of London, as well as from the iuhabi-tˆmts of tlie county, against these proceedings, but without effect, until the great question as to tˆie legality of general warrants was decided in the court of common pleas, in November 176i:', by Wilkes obtaining a verdict of £4000 against the earl of Halifax then secretary of state. In the month of April following, the former who had previously been elected aldˆ-rman of the city was liberated ; on which occasion the metropolis was illuminated. His triumph was not yet, however, complete, and it was noi, until after a long struggle that the legality of his seat in the liouse of commons was admitted, and the proceedings against him ordered to be erased from the journals.

The tumults of this period of the history of London were not always of a political nature : tlie Spitalfields weavers, who felt aggrieved by the introduction of foreign manufactures and the low rate of wages, had long exhibited symptoms of discontent, and on more than one occasion been guilty of excesses. Towards the close of the year 1769 these proceedings became more serious, and a party of the guards was called in to seize some of the ringleaders, at the Doljthin public-house. On entering the house, the weavers, who were armed, attacked the soldiers, one of whom they killed ; the soldiers returned the ?.re, killed two of the rioters, and took four others prisoners. Two of these were capitally convicted ; and government deeming it necessary to display its rigor, in order to deter future offenders, by an exemplary]Hinishment, ordered them to be executed near Bethnal Green church. The sheriffs, doubting how far they were authorised to deviate from the sentence])ronounced in the Old Bailey, sent several memorials to the minister, ana the convicts were respited until the opinion of the judges could be taken on the subject, when, they having declared, that ' the time and place of execution are in law no part of the judgment, and that the recorder's warrant was a lawful authority to the sheriffs as to the time and place of execution,' the criminals were executed at the place fixed upon by the government.

Two other events occurred at this period, which strongly marked the watchfulness of the city magistrates in preserving the liberties of the

citizens. During the riots in Spitalfields, the soldiers had passed through the ciiy unmolested, until the commanding otHcer on one occasion marched his men to the sound of the drum and fife through all the public streets. Tlie patriotic Beckford, tlien lord mayor, immediately wrote to lord Barrington, the secretary of state, to request an explanation, which was promptly and satisfactorily given. ‘ I am very clear in opinion,’ said his lordship, ‘that no troops should march through the city of London, in the man-ner described by your lordship, without previous notice given to the lord mayor.’ His lordship added, that he would take such measures as he trusted for the future would ‘ prevent any just offence being given to the city or its chief magistrate.’ In later times, however, the city has become less scrupulous in this respect, though the right to exclude the military remains undisputed.

In 1771 the city made a strong effort to oppose the authority of the house of commons in cases of breach of privilege. Messrs. Wheble and Mil-ler, the printers of two newspapers, had been ordered to the bar of the house, on a charge of having violated its privileges, by the publication of reports of parliamentary proceedings. The Serjeant at arms failing in taking them into custody, a royal proclamation was issued, offering a reward for their ai)prehension. Mr. Wheble was then taken by a journeyman printer, and brought before Mr. Wilkes, the sitting alderman at Guildhall, who, not recognising the authority of the proclamation, discharged Wheble, having first bound him over to prosecute the man who had arrested him. Mr. Miller was arrested at his own house, by a messenger from the house of commons; but he gave him in charge to a constable, and had him carried to the mansion-house, where the lord mayor, Brass Crosby, esq., and the aldermen Wilkes and Oliver were sitting. The Serjeant at arms attended, and in the name of the house of commons demanded Miller and the messenger. The lord mayor refused on the ground that the warrant was illegal, not having been indorsed by a city magistrate, and ordered the messenger to enter into recognisances to an-swer the assault at the nsxt sessions in Guildhall. The house of commons, indignant that the city should thus beard its authority, ordered the lord mayor and the two aldermen to appear before them. Wilkes refused to attend, unless lie was summoned as member for Middlesex ; but the commons, not having acknowledged the legality of his election, would net do this, and, in order to avoid any farther contest with a man who had so often foiled them, adjourned over the day fixed tor his appearance. The aldermen Crosby and Oliver appeared to the order of the house, and were committed to the tower, where they

remained until the prorogation of parliament.

The citizens, however, so far approved of the conduct of their magistrates, that a committee was appointed to procure their liberation by an ap-peal to the courts of law, but the judges refused to interfere with the privileges of the house of commons. On their liberation, they were saluted at the Tower gate by a salute of twenty-one guns, and were escorted to the Mansion House by the artil-

lery company and several of the most eminent citizens ni fifty-three coaches. Silver cups were voted by the common council and livery to these puhlic spirited magistrates ; and the printer who had arrested Mr. Wheble was tried at Guildhall for the assault, when he was sentenced to two montii's imprisonment in the compter, and to pay a fine of one shilling.

In a subsequent year the city made a formidable opposition to the obnoxious system of impressment, but the decision of lord Mansfield was not in their favor, although his lordship vindicated tlie measure rather on the principle of necessity than of law.

It is to be regretted, that, while the city magistracy manifested such watchful jealousy of their liberties, a party of misguided men should be guilty of such acts of intolerance and outrage as disgraced the metropolis in the year 1780. We refer for the details of them to our article Great Britain. Dr. Johnson, in his Letters to Mrs. Thrale, when giving what he calls a journal of 'a. week's defiance of government,' unhesitatingly states that if the mob had attacked the bank ' at the height of the panic,' on Tuesday instead of the Wednesday night, ' when no resistance had been prepared, they might have carried irrecoverably away whatever they had found.' Wilkes headed the party who drove the rioters away, and this was the first effectual resistance they encountered.

Certainly the ministers had become so obnoxious, that scarcely any measure that originated with them could give satisfaction. War is

seldom unpopular while it is successful, but the contest with the colonies in America was not only considered as impolitic, but the ill success which attended it generated a mass of discontent in the metropolis, which manifested itself on all occasions. Strong remonstrances were presented to his majesty from the city in 1781, deprecating all further perseverance in ‘ a system of measures which had proved so disastrous to the country,’ and intreating him to dismiss, from his presence and councils, all those persons who had deluded him into an ‘ unfortunate and unnatural war.’ It has been the maxim of the citizens to speak their sentiments boldly, and to bear to the throne their grievances, but tiiey have still always been foremost in loyalty to the sovereign, and in support of the government when it required their aid.

Many opportunities have occurred in which they have manifested both. When, in the year 1786, the wretched maniac Margaret Nicholson, attempted to stab our late venerated sovereign, the citizens of London were the first to express their congratulations on his majesty’s escape; and three years afterwards, when the king had recovered from the dreadful malady with which lie had been afflicted, th” metro])olis was one scene of gaiety and joy ; when the first moments of exultation had subsided, they crowded to the altar, and joined their majesties in returning thanks to that Being who has the hearts, of kings in his keeping, and who chasteneth those whom lie loveth.

The early appearances of the French rovolu-li. 11 were hailed with transport in a country X’OL. XIII.

which had long been considered as the natural and political enemy of France ; but as, in times of political effervescence, some ardent minds will overstep the bounds of discretion, it was not to be surprised that a portion, even of the population of London should sigh for institutions they had been led to believe more liberal than their own. Political associations were formed, which, at a less critical moment, would have excited no alarm; and individuals were prosecuted, whose plans miˆht have been sufficiently watched and defeated by a vigilant police, yet it is difficult to censure the government even for an unnecessary vigor in preserving the country from the horrors of a revolution. The prosecution of Tooke, Hardy, Thelwall, and Bonney, in 1794, on a charge of high treason, was, perhaps, ill-advised, though the result proved a triumph to civil liberty ; for it was on this trial that the doctrine of constructive treason, which, in a darker period of our

history had sent many to the block, was overturned by the eloquence of an Erskine and a Gibbs. A less exceptionable mode of counteracting the spread of sedition was afterwards adopted by the formation of loyal associations. The dread of an insurrection in this country, when the scenes, which had been acted in Paris, might be re-acted in the British metropolis, now excited alarm, and a meeting was held at Merchant Tailors' Hall, of 3000 of the principal merchants, bankers, and traders of the capital, who agreed to a declaration of attiichment to the constitution, which, in a few days, was signed by upwards of 8000 individuals, the most respectable for rank, character, and property.

But nothing tended so much to heal the political dissensions which, at this period, distracted the country as well as the metropolis, as the war which commenced between this country and France. The court of common council now addressed his majesty, to thank him ' for his paternal care in the preservation of the public tranquillity,' and assured him of ' the readiness and determination of his faithful citizens to support the honor of his crown, and the welfare of his kingdoms, against the ambitious designs of France.'

A few tumults, but not of a political nature, occurred about this time, in which some crimp-ing houses, and decoy houses for recruiting, were destroyed by the mob : the pop-gun plot, in which three persons were apprehended for a conspiracy to assassinate the king, also excited some alarm, but, after the persons had been confined a few months, they were liberated ; not but that there were individuals capable of committing the most daring outrages, even on their sovereign, who, in proceeding to open the parliament, in October, 1795, was beset by a mob, said to amount to 100,000 persons: they assailed his majesty with seditious cries; several stones were also thrown at the royal carriage, and one of the glass pannels was broken by a bullet either of lead or marble.

While a misguided populace were thus insulting one of the best of monarchs, tiie nionied interest of London was manifesting the strongest marks of confidence in his majesty's conduct. The

exigencies of the times requiring extraordinary supplies, iMr. Pitt, who calculated largely, but not erroneously, on the disposition of the city, proposed raisnig a voluntary loan of £l 8,000,000, and on the 1st of December, 1790, communicated his project to the lord mayor, requesting him to make it known to the corporation and public companies. Had tiie minister offered to lend the sum, instead of asking to borrow it, he could not have been answered more promptly. The bank lent £1,000,000, and in four days the whole sum was subscribed, so that when the court of common council voted £100,000, on the morning of tjie fifth day, it was only admitted as a favor. Two years afterwards the merchants, bankers, and traders of London determined on aiding government with a voluntary subscription, which, in the course of a few hours on the day it was proposed in the Royal Exchange, amounted to £46,500 ; the bank added £200,000, and the court of common council £10,000; and, in the course of a very short time, the subscription amounted to nearly £2,000,000.

The vigor with which the war was prosecuted, the patience with which the people submitted to every privation, and the joy with which peace was hailed, are events which belong to the iiistory of Great Britain, and not to London in particular. The peace was, however, of short duration, and the government found the people ready for new sacrifices.

The domestic history of this period was marked by a conspiracy to overturn the constitution, when colonel Despard, and other persons of the lower class of society, were arrested at a public-house — the Oakley Arms, Oakley Street. In the month of February, 1803, ten of them were convicted of high-treason, and on the 21st of that month Despard and six others were executed on the top of llorsemonger gaol, Southwark; their heads were cut off and exhibited to the crowd, but the other part of the sentence on traitors was remitted.

During the long war that ensued, party politics were carried to a great length, not only in the senate, but also in the city council, and on more than one occasion the citizens were divided in their sentiments, as to the measures of government : a new call for men or money, or a new opportunity of testifying their loyalty, was however sure to unite all ranks and parties, and no loyalty could be less equivocal than that which was manifested in the metropolis on the 25th of October, 1809, when his late majesty entered the fiftieth year of his reign, and which v/as celebrated as a jubilee. The arms of France had triumphed over every continental power, and England, left to continue the struggle single-handed, had swept the ocean of her enemies, and sighed for new worlds to conquer — or a new stage on which to renew the combat, vvhen the Spaniards began to shake oft' the lethargy which had placed them beneath the yoke of the Gallic emperor. England was not backward in her aid, and the city of London, equally prompt, opened the subscription for the Spanish army, which, in the course of a few weeks, amounted to upwards of £50,000. The contest was obstinate, and the issue long doubtful, v.hen a domestic event created an alarming sensation in the metropolis. On the evening of the 11th of May, 1812, as Mr. Percival; the chancellor of the exchequer, was entering tlie lobby of the house of commons, he was shot by a person of the name of John Bellingham. In the first moment of alarm it was feared that this sanguinary act might only be part of a deep laid and extensive conspiracy against government, but it was soon discovered that it was the single act of an assassin, who had become desperate by misfortune, and imagined that government had not afforded him the protection to which he was entitled in his commercial intercourse with Russia. The wretciied man, who made no attempt to escape, was taken into custody, tried and convicted at the Old Bailey, on the Friday morning, and on Monday the 18lh he was executed.

From the time that his present majesty was appointed regent, in January 1811, in consequence of the malady with which his royal sire was afflicted, the success of the British arms be-came as signal on land as it hitherto had been at sea ; and often were the tranquil pursuits of the citizens interrupted by the roar of the park and tower guns, announcing some new victory obtained by our gallant troops in the Peninsula under the illustrious Wellington, until even victory lost its novelty, and the people of England felt more joy in giving peace to France than they had done in all their triumphs over her.

The treaty concluded at Paris, on the 30th of]VIay 1814, gave peace to Europe, after a war of more than twenty years' duration ; and, on the 8th of the following month, the emperor of Rus-sia, the king of Prussia, and two of his sons, with several of the Austrian, Russian, and

Prussian generals who had most distinguished themselves, visited London, and were treated by the court and the city with true English hospitality.

The war which had been for some time carried on between Great Britain and the United States of America, was terminated by the treaty of Ghent ; but scarcely had the nation felt the iDles-sings of peace, when Napoleon, the emperor of France, who, on his abdication, had chosen and been allowed the Isle of Elba for his residence, returned to France, and, in a march to Paris which has no parallel in history, overturned the government of the Bourbons, and reseated himself on the imperial tlirone, without drawing a sword, or firing a musket. The clangor of arms again resounded through Europe. The British troops, under the command of the duke of Wellington were cantoned in the Netherlands, and the Prussians soon marched to their support. The battle of Waterloo followed — the anxiety in Lon-don for tidings of its results was unbounded ; we need not repeat what they were : the allied armies again entered Paris; Buonaparte surrendered himself to the British nation, and was sent to the Island of St. Helena, where the imperial exile died on the 5th of May 1821.

Domestic calamities and domestic dissensions succeeded the war ; the])rincess Charlotte of Wales, who had been married to prince Leopold of Saxe Coburg, in the preceding year, died on the 6th of November, 1817, in childbed, to the great grief of the whole nation ! and never per-

haps <Tk! {lis metropoTTs wear an aspect of such profound and sincere grief as on the day of her funeral : all business was suspended, and the churches and chapels were unable to contain the numbers that crowded to acknowledge their submission to the will of the divine Being.

Some time previous to this period several meetings had taken place in Spa-fields, and other places, for the avowed purpose of petitioning or remonstrating with the government. One of these was held on the 2d

of December 1816, and was followed by riots in the city. Some pawn-brokers' and gunsmiths' shops were robbed, and several outrages committed. Four persons were arrested for high-treason, and tried,)3ut were acquitted. One of the rioters was, however, convicted and executed.

The metropolis was still in an unsettled state, and in January 1818 it was deemed necessary to suspend the Habeas Corpus Act, which for some time restrained the disaffected ; until the Cato Street conspiracy was discovered in 1820, when nine persons were secured in a small stable-loft, where they had assembled on the night fixed upon for assassinating his majesty's ministers, while assembled at dinner at the house of lord Harrowby. The ring-leaderThistlewood,whohad been tried for high treason in 1817, at first escaped, but was taken next day, and, together with five of his associates, tried and executed at the Old Bailey, 29tli of April. Since this occurrence the tranquillity of the metropolis has been undisturbed by any political events of moment.

Remarkable Distinct Events.

There are some few events in the history of London so remarkably distinct from the general occurrences of our narrative, that we have thought they would prore more acceptable to our readers as separate addenda.

1. Eart/i(juakes and hwrkanes, as natural calamities, first demand our attention. London has been but four times visited with any shocks of the former kind, and they have been remarkably slight. The first of them known in history occurred on Valentine's Eve, in the year 1247, but the damage done was trifling; as was that of two others in 1601 and 1692; a severer shock was experienced in 1580, when Stowe assures us several churclies were shattered, and the bells struck agaitist the hammers. Two other shocks were felt on the 8th of February and 8th of March, 1751, which the fears of the inliabitants appear to have magnified excessively — for the only damage that they did was what is done by a high wind every year, throwing down a few chimneys and some old houses, which ougiit to have been condemned. The earthquake of 1751 afforded one Bell, a life-guards-man, the opportunity to practise on the credulity of the people, by prophesying, that ' as the second earthquake had happened exactly four weeks after the first, so there would be a third precisely four weeks after the second, which would lay the cities of London and Westminster in ruins.' So great v>'as the panic, that, a few days before the threatened destruction, the inhabitants began to quit the town in great numbers. ' Many persons,' say the newspapers of the day, < left their

houses

and walked in the fields, or lay in boats all night, many people of fashion in the neighbouring villages sat iu their coaches till day break ; others went to a greater distance, so that the roads were never more thronged, and lodgings were hardly to be procured at Windsor ; so far, and even to their wit's end, had their superstitious fears, or their guilty consciences, driven them.'

But this metropolis has frequently and severely suffered by hurricanes : on one occasion more severely than by any other calamity, except bv the great fire. The most remarkable storms have been those of the years 1440, 1445, 1599, 1703, 1739, 1740, 1788, 1790, 1794, 1797, 1798, and 1801 ; but, with the exception of that of 1703, none of these were very destructive. The last mentioned hurricane, which is often denominated the high wind of 1703, began about ten o'clock on the night of the 16th of November, and raged with unabated fury until seven o'clock next morning. Such a scene of devastation was scarcely ever witnessed as in a few hours had been committed in London, where 2000 stacks of chimneys were blown down, and the lead torn from the roofs of several churches, or rolled up like skins of parchment. Two turrets, which had been built a short time before on the church of St. Mary, Aldermary, the four pinnacles of St. Michael's in Cornhill, and one of the spires of St.ˆSaviour's, Southwark, were blown down ; the guard room, at Whitehall, was completely unroofed ; the vanes and spindles of the weathercocks on nearly all the churches were broken to pieces; upwards of thirty houses in Moorfields and other parts of the town were entirely blown down, and several hundreds more were dilapidated. Twenty-one persons were killed, and upwards of 200 severely wounded by the falling of chimneys and houses. All the ships in the river Thames, except four, broke from their moorings, and were cast on shore, principally between Shadwell and Limehouse; sixty barges were driven, with great fury, against London-bridge, many of which were sunk or staved, and nearly 500 wherries were entirely lost. The loss sustained in London was estimated at £2,000,000 sterling, and such was the demand for tiles for covering the dilapidated houses, that the price was advanced from £l Is. to £6 6s. per 1000, and bricklayers' labor rose in an equal proportion. It was in this storm that the Eddystone lighthouse was blown down.

2. liemarkable fires. — The first fire in London we find noticed is by the Iceni under Boadicea, who laid Colchester, St. Albans, and

London, waste by fire and the sword. In the years 764, 798, and 801, also, London suffered severely from conflagration, particularly in 798, when the city was almost burnt down, and many of the inhabitants perished in the flames. In 982 a fire accidentally took place, which nearly destroyed the whole city; but, according to “the Saxon chronicle, ‘ tlie greatest casual fire that till this time befel the city’ was iu 1077, < when the greatest part of it was laid in ashes.’

We find, however, the city rebuilt, and a prey to a still greater fire in the year 1086, which Stowe says, ‘ spread over almost all the principal cities of England : the church of St. Paul’s, in London, was burnt, with the most port of tlie

citie, which fire began at the entry of the west U-itc, and consumed to tl)e east gate.’ Another lire in 1090 destroyed a considerable part of the city; wliich in 1135 again fell a prey to the flames. This began near London Stone, and burnt eastward as far as Aldgate, and westward to St. Paul’s. The fire of 1212 belongs rather to the account of London Bridge. See our Part III. of this article. In 1232 and 1483 London was visited with fires; in the latter, which began at Leadenhall, Stowe says, ‘ much housing was burnt, and all the stocks for guns, and other like provision, belonging to the city.’

The great fire of London, as it has been most-appropriately called, broke out at one o’clock on Sunday morning Sept. 2d, 1666, at the house of one P’arryner, a baker, iu Pudding-Lane, Fish Street Hill. Whether it originated in accident or design is a point on which historians by no means agree, while all concur in representing it as atonce more destructive in its progress, and ultimately productive of more beneficial eflects, than any conflagration recorded in history. It is even the opinion of more than one respectable writer, that the fire was almost necessary to promote the complete extinction of the plague, which had the year before dealt desolation with such an unsparing hand in the metropolis, that the very air had become

tainted with the putrefaction of the dead; we are far from thinking this to have been the case, but it is not too much to infer, that, had it not been for some such calamity as the great fire, London might long have suffered by that dreadful scourge of humanity, which its crowded streets, by confining the circulation of the arr, and the want of cleanliness on account of the scanty supply of water, seemed so well calculated to promote. It is true that a city was destroyed and property to an unparalleled amount was lost ; but the result was, a new city, im))roved in wealth, grandeur, and all the conveniences of life, which otherwise would not have been obtained for ages : and, however fatal the calamity must have been to the age in which it happened, it has been productive of the most lasting benefits to posterity. The part of the town where it began is now very confined, but it was much more so at that time, when the neighbourhood consisted of nothing but narrow lanes and passages, and the houses were principally of wood, or lath and plaster The fire soon spread to the adjacent houses, and defied the power of buckets, for the engines could not be brought to bear upon it with any degree of success, on account of the narrowness of the streets. It was then suggested to the lord mayor. Sir Thomas Bludworth, who arrived on the spot at three o'clock in the morning, that it would be advisable to pull down several houses, in order to intercept the progress of the flames ; but he refused to allow of so prudent a measure, and is said to have expressed his opinion of the insignificance of the fire in flippant and indelicate terms. By eight o'clock in the morning it had reached Lon-don Bridge, ' and there dividing, left enough to burn down all that had been erected on it since the fire in 1633, and, with the main body pressed forward into Thames Street,' which was charged with combustible materials that aticme?ited it

very considerably, raging with great fury the \%liole day, and striking the inhabitants with such terror, that, says Lord Clarendon, ' all men stood amazed as spectators only, no man knowing what remedy to apply, nor the magistrates what orders to give.'

The amiable Evelyn, who has lefl a most nervous and unaff"ected narrative of this great calamity, says, ' the conflagration was so universal, and the people so astonished, that from the beginning, I know not by what despondency or fate, they hardly stirred to quench it, so that there was nothing heard or seen but crying out and lamentations, running about like distracted creatures, without at all attempting to save even their goods, such a strange consternation there was upon them.' At first the fire took an easterly direction, and

proceeded so rapidly, that considerable fears were entertained it would reach the tower, to prevent which several houses were pulled down : but on the night of Monday it became directed to other quarters. The wind changed, and blew with ‘so great and irresistible violence, that it scattered the fire from pursuing the line that it was in with all its force, and spread it over the city, so that they who went late to bed, at a great distance from any place where the fire prevailed, were awakened before morning with their own houses being in a flame.* On Monday, Gracechurch Street, and part of both Lombard Street and Fenchurch Street, were in flames ; the fire then was burning in the form of a bow.

\Vhen the first panic was over, and the fire spread so rapidly that no person could calculate on the safety of his house, great exertions were made to remove the property into the adjacent fields, which, for many miles round, were strewed with all sorts of moveables. F’ive, ten, and even fifty pounds were given for a cart, to remove some valuable property about to be consumed — the boats and barges on the river were all laden; and ‘scarcely a back, either of man or woman, that had strength, but had a burden on it in the street.’

The night of Monday was more dreadful than the preceding one ; the fire shone with such a fearful blaze, that the streets were as light as from the sun at noon-day. After spreading, in one line westward, along the banks of the Thames,. as far as Queenhithe, and in a parallel direction along Cornhill to the Royal Exchange, and northward to Dowgate and Watling Street, it divided itself into four branches, which united in one great flame at the eastern end of Cheapside : on Tuesday the whole of that street was in flames, and the fire was seen ‘ leaping from house to house, and street to street, at great distance one from the other.’ The impetuous flames now advanced with lawless power to the cathedral of St. Paul’s ; ‘ the stones of which,’ says Evelyn, * flew like granados, mealting lead running downe the streetes in a streame, and the very pavements glowing with a fiery rednesse. so as no horse nor man was able to tread on them, and the demolition had stopped all the passages, so tliat no help could be ajiplied.’ The re’ghfourin<x stref-ts shared the same fate, and t!:e writer just riuottd dra\s a vivid feature of

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the appalling scene : ‘ Oh the miserable and calamitous spectacle!’ he exclaims, ‘such as haply the world had not seene the like since the foundation of it, nor be outdone till the universal conflagration. All the skie was of a fiery aspect, like the top of a burning oven, the light seene above forty miles round about for many nights. God grant my eyes may never behold the like, now seeing above 10,000 houses all in one flame ; the noise and cracking and thunder of the impetuous flames, the shrieking of women and children, the hurry of people, the fall of towers, houses, and churches, was like an hideous storme, and the aire all about so hot and inflamed, that at last one was not able to approach it, so that they were forced to stand still and let the flames burn on, which they did for neere two miles in length and one in breadth. The clouds of smoke were dismall and reached, upon computation, neere fifty miles in length. Thus I left it this afternoone burning, a resemblance of Sodom, or the last day. London was, but is no more.’

On Tuesday night, the devouring element continued its destructive havoc, sweeping away Ludgate HUl, the Old Bailey, the whole of Fleet Street, and the Inner Temple, and threatening even the Court at Whitehall, which now began to be alarmed, and gave directions to blow up several houses with gunpowder — a plan which, if adopted at the commencement of the fire, ■when it was suggested by some seamen, might have saved half the city ; but this ‘some tenacious and avaricious men, aldermen, Jcc, would not permit, because their houses must have been of the first.’

On Wednesday morning, when the inhabitants of Westminster and the suburbs were preparing to flee from the flaming sword which seemed to pursue them, the wind was hushed, the fire was stayed, and a remnant of London was saved. The first effectual check that the fire encountered was the brick buildings of the Temple, which were only partially consumedˆ and although the fire broke out again here on the Thursday evening, the duke of York, who watched there the whole of that night, caused the houses in front of it to be blown up, by which means the flames were extinguished.

To aggravate the ruin and distress in which the citizens were involved, by the loss of their houses and their property, the most alarming reports were spread. It was rumored that persons had been taken with fire balls and matches, in the act of attempting to set fire on the city in

other places. This so enraged the multitude, that they kibed a poor woman who had something ‘concealed in her apron, which they conceived to be fire balls, and wounded several other persons, paiticularly French and Dutch, against whom they felt very indignant. A more alarming rumor was circulated on the Wednesday night ; when the inhabitants were lying in tents in the neighbouring fields, it was reported, that ‘ the I’rench were coming armed against them to cut their throats, and spoil them of what they had saved out of the fire.’ Despair roused the citizens, and, fired with indignation, they prepared to defend themselves; but Tiioming dispelled their uneasiness, and brougiit

with it the joyous prospect that the fire was subdued, and that no new calamity threatened them.

Nothing could exceed the zeal and activity of the king and the duke of York during the whole of the dreadful scene : they traversed the city night and day, encouraging the laborers, where they thought there was the slightest chance of arresting the progress of the flames, and personally directing every measure for that purpose ; to this energy, and to a corresponding vigilance on the part of the magistracy and the train bands, must be attributed the circumstance, that so few lives were lost, and so few outrages committed.

The extent of the ravages covered a space of 436 acres ; as the boundaries are fixed in the official account of the fire, which appeared in the London Gazette of the 10th of September. It is here stated, that a stop was put to it at ‘ the Temple Church, near Hoiborn Bridge, Pye Cor-ner, Smithfield ; Aldersgate, Cripplegate, near the lower end of Coleman Street, at the end of Basinghall Street, by the postern at the upper end of Bishopsgate Street, and Leadenhall Street, at the standard in Cornhill, at the church in Fenchurch Street, near Clothworkers’ Hall in Mincing Lane, at the middle of Mark Lane, and at the Tower Dock.’

In the British Museum there are forty-one folio volumes of the Decisions of the Commissioners on the claims of the persons who had suffered by the fire, but they do not furnish any account of the aggregate loss, nor could it, in-deed, be very accurately ascertained. The inscription on the monument, founded on the reports of the surveyors, states that of the six and twenty wards it utterly destroyed fifteen, and left eight others shattered and half burnt ; that it consumed 400 streets, 13,200 dwelling houses, eighty-nine churches,

beside chapels, four of the city gates, the Guildhall, with several public buildings, hospitals, schools, libraries, and a vast number of stately edifices. In a tract, printed in the Harleian Miscellany, there is an estimate of the value of the property destroyed, in which the number of houses is calculated at 12,000; they are valued, one with another, at £23 per annum, which, at twelve years' purchase, make the whole amount to £3,600,000. The cathedral, the churches, and other public buildings, are valued at £1,800,000; the personal property and goods at a similar sum; £20,000 in wharfs; and £150,000 in boats and-barges, cart loads of furniture, &c. ; making in the whole £7,370,000 : but it is supposed, that this calculation is much too low, and that the property destroyed could not be less than £10,000,000 sterling.

Great as the calamity was, and convinced as the citizens were that it had been the work of incendiaries, yet they bore it with patience and resignation, and thought only of repairing their loss and restoring the city, which they did so successfully, that Burnet says : ' to the amazement of all Europe, London was, in four years time, rebuilt with so miich beauty and magnificence, that we, who saw it in both states, before and after the fire, canuot reflect on it, without wondering where the wealth could be found to bear so vast a loss as was made by the fire, and

so prodijrious an expense as was laid out in re-Duilding the city.' It is very remarkable thai, during tiie whole time of the lire, and amidst nil the alarm and confusion it occasioned, nor more than six persons perished, and those principally by veuturing incautiously over the ruins; nor do the bills of mortality appear to have been increased by the houseless condition to which so many thousands of persons were reduced, when compelled to live in huts erected in Smithfield, Finsbury, and Moorfields, and other places in ihe vicinity of the metropolis.

' Although so indiscriminate and so dreadful an act of vengeance, as that of destroying a whole city, can scarcely be supposed to be

harboured by any human being, yet there is strong reason to believe,' say the brothers Percy, 'that the city was set on fire by incendiaries, and that in more places than one. The Roman Catholics have always stoutly denied it, and compare the accusation to that of Nero against the Christians, whom he charged with setting fire to Rome ; and Pope, knowing that an invective or an assertion is better recollected and lives longer in verse than prose, has, in two lines on the monument, declared, that the accusation against the Roman Catholics is false. If, however, the circumstances were to be decided according to the rules of circumstantial evidence, we believe it would be fully established, that the fire was not accidental. Lord Clarendon, who certainly cannot be suspected of any illiberal prejudices, and would rather attribute the fire to chance than design, says, ' the breaking out of the fire in several places, at so great distance from each other, made it evident, that it was by conspiracy and combination ;' that ' it could not be conceived how a house, that was distant a mile from any part of the fire, could suddenly be in a flame without some particular malice ; and this case fell out every hour.' The noble author next alludes to Herbert, who .was executed for the crime ; and although his examination was somewhat contradictory, yet his confession was sufficiently explicit ; for, when he was taken by the committee to identify the place, he pointed out the site of the house where the fire commenced as that winch he and his accomplices had set on fire. Even lord Clarendon, who maintains Herbert's innocence, furnishes very strong proof of his guilt, in his account of his confession : he says, ' the house, and all which were near it, were so covered and buried in the ruins, that the owners themselves, without some infallible mark, could very hardly have said where their own houses had stood ; but this man led them directly to the place, described how it stood, the shape of the little yard, the fashion of the door and windows, and where he first put the fire; and all this with such exactness, that they who dwelt long near it, could not so perfectly have described all particulars.'

Farryner, the baker, in whose house the fire originated, confidently asserts that it was set on fire; but whether Herbert was really guilty or not, or was, as his advocates contend, insane, there is evidence which is more than presumptive, that the city was wilfully burnt ; it is not the deposition of prejudiced persons after the

fire happened, but evidence that the design existed many months before it was carried into effect. In the London Gazette, No. 4B, for April 30th, 1666, there is an account of the conviction at the Old Bailey sessions, of John Rathbone, * an old army colonel,' and several

others, for conspiring the death of his majesty, and the overthrow of the government ; and it states that ‘ the better to effect this hellish design, the city was to have been fired, and the portcullis to have been let down to keep out all assistance; the horse-guards to have been surprised in the inns where they were quartered, several ostlers having been gained for that purpose. The Tower was accordingly viewed, and its surprise ordered by boats over the mote, and from thence to scale the wall. One Alexander, who is not yet taken, had likewise distributed sums of money to these conspirators ; and, for the carrying on of the design more effectually, they were told of a council of the great ones that sate frequently in London, from whom issued all orders ; which council received their directions from another in Holland, who sate with the States ; and that the 3rd of September was pitched on for the attempt, as being found, by Lillie’s almanack and a scheme erected for that purpose, to be a lucky day, a planet then ruling, which prognosticated the downfal of monarchy.’ The account concludes with stating, that ‘die evidence against these persons was very full and clear, and they accordingly were found guilty of high treason.’

At first the following inscription was placed on the house built on the site of Farryner’s ; but the number of persons it attracted to the spot caused it afterwards to be removed. ‘ Here, by the permission of heaven, hell broke loose upon this Protestant city, from the malicious hearts of barbarous Papists, by the hand of their agent Herbert ; who confessed, and on the rums of this place declared the fact for which he was hanged, *viz.* that here began the dreadful fire which is described and perpetuated on and by the neighbouring pillar, erected anno 1681, in the mayoralty of Sir Patience Ward, Knight.’

There have, since the above period, been some serious conflagrations in London, particularly the fire in Thames Street on the 15th of January 1715, when upwards of 120 h.ouses, and an immense quantity of merchandise, were destroyed. This calamity was aggravated by the death of more than fifty persons, who perished in the flames, and by other accidents.

On the 25th of March, 1748, a most destructive fire broke out at a peruke-maker’s shop in ‘Change Alley, Cornhill, which continued for twelve hours, and totally destroyed nearly 100 houses, twenty of which were in Cornhill. Mr. Eldridge, his wife, children, and servants, all perished in the flames, and several other persons were killed by various accidents. The loss occasioned by this fire was estimated at £200,000.

On the 7th of November, 1765, a fire broke out in the house of a peruke-maker, in Bishopsgate Street, whicli destroyed, or greatly in;ured, 100 houses. All the houses from Cornhdl to the church of St. Mary Outwich, in Bishopsgate

Street, were burnt down : as was the White Lion Tavern, which had been purchased only on the preceding evening for £3000 ; several persons were killed by the fire, and by the falling of chimneys; and the next day a gentleman, thinking that some persons were buried among the ruins, got the firemen to work with their pickaxes, when, on removing fne rubbish, they drew out two men, tiiree women, and a child about six years old, all alive.

During the riots of 1780, the King's Bench, Fleet, and Bridewell prisons vvere set on fire, as well as several houses in various parts of the metropolis. In 1793, on the 2d of December, an extensive range of warehouses, near Hermi-tage Bridge, Wapping, was destroyed by fire, togetiier with several adjoining houses. Three vessels lying in the dock were also burnt. The goods destroyed consisted principally of sugar, rum, and hemp. Of the sugar, 1400 casks were melted into one mass by the intense heat, arid flowed through the streets in a brilliant stream of liquid fire.

But the greatest conflagration known in Lon-don since 1666 was the fire in Ratcliff", which broke out at Cock Hill, on the 23d of July 1794. It was caused by the boiling over of a pitch kettle at a boat-builder's, from whose warehouses it communicated to a barge laden with saltpetre and other stores, and thence extended to several other vessels. The warehouses of the East India Company were also consumed, and nothing could arrest the progress of the destructive element, until, having reached an open space of ground towards Stepney, the flames ceased for want of materials. It was calculated that, out of 1200 houses, of which the hamlet consisted, not more than 570 were left standing. A calamity so sudden and so fatal called for the immediate and the liberal aid of both the government and the public, and it was freely given : 150 tents were forwarded from the

tower, and pitched in a vacant piece of ground near Stepney Church. Provisions were supplied, in the first instance, by the parish to the poor sufferers. A subscription was opened at Lloyd's Coffee-house for their relief, and several gentlemen, who attended near the ruins to solicit the assistance of the benevolent, were so successful, that on the Sunday immediately after the fire upwards of £800 was thus collected, of which £426 was in copper, including £38 14s. in farthings; exhibiting a singular instance how universal tlic feelings of sympathy and benevolence must have been. The whole sum subscribed in various ways for the relief of the sufferers was more than £ 16,000.

Several other fires, which have done considerable damage to various parts of the metropolis, have occurred, but those above noticed nre the principal ones. The more substantial and less inflammable nature of materials used in building, the widtli of the streets, the regulation of the building act as to party-walls, and the more ready supply of water, are all guarantees that London will never again be visited with tliose calamities, which have laid it in ashes, in the course of a few hours. Tlˆe fires in London have 'nore fruiiucntly originated in accident than de-

sign : and so convinced was the legislature of this, that in the act of 1708 it was enacted, ' that every servant, by whose negligence or carelessness a fire should be occasioned, should forfeit £l00, or, in default, be imprisoned and kept to hard labor 'luring eighteen months.'

3. Wat Tyler's insurrtction has already been recorded in our article England. After finding himself at the head of 100,000 men, this incendiary aimed at the subversion of the government, and marched to London, breatiiing vengeance against the nobility and the members of the legal profession. The public gaols, which were opened, added to the rebel army, now so numerous, some men of a determined character, and with talents well calculated for keeping alive the flame of rebellion, which had been so successfully kindled. Among those gaol recruits was the famous John Ball, the priest, who now became chaplain-general to the army. Wat Tyler had for associates several other daring men, who, making a merit of their humble occupations, assumed the fictitious names of Jack Straw, Hob Carter, and Tom Miller.

In their route to London they committed many excesses, putting to death several peers and gentlemen, and every lawyer that had the

misfortune to fall into their hands. In their hostility to the duke of Lancaster, they bound themselves by an oath, never to acknowledge for king any man whose name was John. When the rebels arrived at Blackheath, the princess of Wales, the king's mother, who was returning from a pilgrimage to Canterbury, passed through the midst of their encampment. The rebels permitted her to proceed on her journey, though some of the most insolent of them obliged her to kiss them, and maltreated her retinue. /

The rebels now sent a deputation to the king, who had taken refuge in the Tower, and desired to have an interview with him. For this purpose Richard sailed down the river in his barge; but, on approaching the shore, and witnessing many instances of tumult and confusion, he did not think proper to land, but returned to the Tower. The king then sent to know the object of their assembling, and what it was they asked. Wat Tyler was reviewing his army when the king's messenger arrived, and, confident in the numbers of the men he saw marshalled before iiim, he sent back an insolent message, stating, tliat their business was of such importance as only to be communicated to the king, whom they desired to meet them. This request having been refused, agreably to the determination of the king's council, the rebels marched towards Lon-don, and were soon masters of Southwark, which tliey plundered. London bridge might have offered some obstruction to their progress ; but the mob, on the city side, opened the gates in spite of the magistrates, and Wat Tyler and his army entered the city, wliere they committed the most wanton excesses. The duke of Lancaster's palace in the Savoy, tlie archbishop of Canterbury's palace, the Temple, the hospital of St. John's Clerkenwell, and the housed of the judges and principal citizens (but more particularly those of the Flemings) wore razed to the ground.. Against the Flemings (lioir rage was unhonndtd :

they drrniged them from the chuiclics where they had taken sanctuary, and massacred them in tlie open streets. I'lunder, the usual attendant of])ublic tumult, was certainly repressed, as much as

possible, by the leaders of the insuirection, wiio even threw into the tire, amongst a heap of burning wealth, one of their followers, wlio endeavoured to secure a piece of plate.

The rebels now approached the Tower, where the king, with his mother, the archbishop of Canterbury, the lord treasurer, and several of the nobility had taken refuge, when Richard sent word, that he would give them a meeting on Mile-End Green, and thither a large body of them, chiefly of the Essex party, accordingly repaired. As he was about to leave the Tower, however, a chosen band of Wat Tyler's followers rushed into the fortress, cut oti' the heads of the archbishop, the lord treasurer, Sir Robert Hales, and the chancellor, and pillaged the royal apartments. Wat Tyler remained near tlie Tower at the head of 30,000 men. Consternation now seized on the go'ˆernment, and, after some discussion, It was deemed advisable to offer the re-bels a charter; not, however, confirming the privileges of the people, or redressing their grievances, but abolishing villainage, and offering a general pardon for all crimes committed during the insurrection. This charter, which was dated the 16th of June, was in the following terms : — ' Richard, &c. Know, ye, that of our special grace, we have manumitted or set free all and singular our liege subjects, and others of the county of Essex ; and them and every of them from all bondage do release and acquit, by these presents. And also we pardon to our said liege men and subjects, all manner of felonies, treasons, transgressions, and extortions by them, or any of them, in any manner whatsoever done or committed.'

Ar.med with this charter, the young king proceeded to MUe-End, where his offers were accepted by the Essex men, who immediately dispersed to their homes. The success which had here crowned the efforts of Richard, induced him to attempt a negociation with the principal rebel leader. For this purpose he repaired to Smithfield, with a few attendants, and sent Sir John Newton to desire Wat Tyler to meet him. Wat Tyler would only, however, attend at the head of his troops. When entering Smithfield, he was met by the same kn'ght, with another message from the king, but the bearer, delivermg it without dismounting from his horse, so offended the dignity of Wat Tyler, that he raised his sword to strike him down. The king, however, interposed, and cried out to Sir John to dismount. In the conference that ensued, Tyler demanded much more than had been yielded to his fellow insurgents. Tiesides a general enfranchisement of bond-men, he required that all warrens, parks, and chases should be made free and common to all, so that the poor, as well as the rich, shoidd have liberty to fish, fowl, and hunt in all places throughout the kingdom. It is, however, worthy of remark, that none of the rebels asked for the

slightest modification of the poll tax, the grievance in which the insurrection had originated.

The msolence of Wat Tyler, who is said, du-

ring the conference, to ha\e frequent!) raised hh sword, did not provoke the resentnant of the king ; but it so roused the indignation of the lord mayor, Wˆilliam Walworth, that, with u sword or dagger, he struck the rebel dead at his feet, and thus termmated the rebellion. See England. Richard immediately knighted on the field the lord mayor, Walworth, and several of tlie aldermen, for their important services at this difficult crisis.

Thus terminated oneof the most extraordinary and most formidable insurrections that London ever witnessed. Like most other popular commotions, it presented instances of private revenge, more striking than those of public feeling, and that too, in two of the most prominent characters who figured in it, Wat Tyler and Sir William Walworth. The former had been in the service of Richard Lions, an eminent wine merchant, and sheriff of London, who had inflicted personal chastisement upon him. When the rebel chief reached London, he caused his old master to be beheaded, and his head carried before him on the point of a spear, tiiough it is, perhaps, too much to charge this act on Wat Tyler's resentment, since to be rich was a sufficient crime to insure the punishment. As for Sir William Walworth, whose name is perpetuated in a populous suburb, his loyalty is, perhaps, as questionable as WatT\ler's patriotism. He was a principal sufferer by the insurrection, which had levelled to the ground a number of tenements which this citizen possessed on the bank side, and which wˆere let out for the very worst of purposes. It is not too much, therefore, to suspect, that private feeling may have prompted his activity to put down the rebellion, and punish its leader.

4. Jack Cade's Rehdlion. — Shakspeare, who ' exhausted worlds and then imagined new,' has rendered the insurrection of Jack Cade, in 1450, better known in the second part of his play of Henry \T. than it would have been had it been recorded only in history. With that license, which to poets is never denied, he has turned into ridicule an event, which occasioned no ordinary degree of alarm at the time, and has, by the extravagancies which he makes its leaders commit, thrown a discredit on popular insurrections, from which it is difficult to divest them. Not content with demolishing public buildings, and the houses of the wealthy, our bard makes Jack anxious to burn all the records of

the realm, that his mouth may be ‘ the parliament of England. Denying that

‘ ignorance is the curse of God,

Knowledge the wing wherewith we fly to heaven,’

Cade is represented as having a particular enmity to learning. He makes it one of his most serious charges against lord Say and Sele, that he had ‘ most traiterously corrupted the youth of the realm in erecting a grammar school,’ and adds this more sweeping accusation : ‘ whereas before, our forefathers had no other books but the score and the tally ; thou hast caused printing to be used, and, contrary to the king, his crown, and dignity, thou hast built a paper mill. It will lie proved to thy face, that thou hast men

about thee, that usually talk of a noiui and a verb, and such abominable words as no Christian ear can endure.’

Whatever designs Jack Cade might have had after striking his sword on London stone, and exclaiming ‘now is Mortimer lord of this city,’ he was, in the first instance, only the tool of others. The struggles of the rival houses of York and Lancaster, though not terminated, had a momentary cessation, when Richard, duke of York (whose son succeeded to the throne, under the title of Edward I'.) aspired to the crown. He was at this time in Ireland ; and although the disasters of the government, in the loss of Normandy, had increased the number of his adherents, yet he did not choose himself to hazard an attempt to seize the crown. He enlisted Jack Cade, a daring Irishman, in his service, who, well supplied with money, and assuming the name of John Mortimer, of the house of March, executed in the early part of the reign, proceeded to Kent, where the duke had many friends. Here, in May, 1450, he hoisted the standard of insurrection, which was soon so numerously attended, that Jack Cade was strong enough to insult the city, and encamp as near it as Blackheath.

The king, determining to put down the insurrection by force of arms, assembled a body of 15,000 men, with which he marched against them. On his approach Jack retired, and lay in ambush in a wood near Sevenoaks. The king, i.nagining the rebels were dispersed, sent a detachment after them, under the command of Sir Humphrey .Stafford. This detachment (see England) falling into the ambush was cut to pieces, and the commander, as well as his brother, killed.

Cade now marched towards London, while the king and his court hastily fled to Kenilworth, leaving a garrison in the Tower, under the command of lord Scales. The city of London open-ed her gates to the rebels, and Cade entered in triumph at the head of his troops ; but he prohibited, under the severest penalties, any injury being done to the inhabitants. He did not, liuvvever, take up his residence in the city, but in the borough of Soutliwark. On the second day he seized on the lord treasurer, lord Say, and had him beheaded. The Londoners seemed on very good terms with his followers, until some of the soldiers committed a riot in the city; the next morning, when Cade was about to enter the city as usual, he found the gate on London Bridge shut against him : a severe battle now ensued, which lasted all day. In the night a proclamation was issued by the government, offering a free pardon to all who laid down their arms. This being actively circulated tlirough Soutliwark, next morning Jack Cade was deserted by his followers, and fled into Sussex, where he was killed by Alexander Iden or Eden as we have already stated. Many of his followers were executed.

5. The Bastard ¥ulconhridge s atlack. — The bastard of Falconbridge, eldest son, as Shakspeare says,

To lioboit Falconbridge, A soldier by the lionoi-giving lianil Of Ca'ur-dc Lion, knighted in the field,

having collected, in Essex and Kent, a considerable force of ships and men, sailed up the Thames to London, resolving, as at Anglers, to beat

' The flinty ribs of this contemptuous citv,

« » »■'

Even till unfenced desolation Should leave them naked as the air.'

Falconbridge, however, found the ' saucy walls of London too much even for his 'heavy hand. The citizens flew to arms in great numbers,

and defended themselves gallantly. The bastard made his first attack by the river side of the city, which, in consequence of the ruin into which tlie walls in that direction had been suffered to fall, presented the least chance of resistance ; but he found so many stout hearts arrayed in defence of every breach, that all his attempts to effect ar entrance on this side were unavailing. After firing some houses on London Bridge, he returned down the river, and, at some distance b© low the Tower, landed his forces, amounting tc. about 5000 men, with the view of attacking the city, by land from the eastward. On Sunday, the 11th of May, the assault was made at Aldgate ; the bulwarks were won ; and the assailants were pushing boldly forward, when the portcullis wa? let down, and such as had entered the city were cut to pieces. Robert Basset, the alderman of Aldgate Ward, who commanded at this point, animated with a spirit as valiant as tliat of the bastard himself, was not, however, content with repulsing the enemy ; for we are told, that he ‘ commanded, in the name of God, the portcullis to be drawn up ; which being done they issued out, and with fierce fight drove their enemies back as far as St. Botolph’s Church.’ The lieutenant of the Tower, observing the success of this spirited sally, issued forth with the earl of Rivers, at the iiead of a fresh company, and joining the brave alderman Basset, assisted him to put the enemy completely to the route. The pursuit was continued as far as Stratford ; many of the enemy were slain, and many taken prisoners. The bastard only escaped, with the wreck of his forces, on board of his ships.

C. IVte plague years. — Li former ages scarcely ten years elapsed in London without the visitation of this tremendous scourge. The narrow streets in which the current of air was either obstructed by architectural projections, or by the signs across them, together with the want of cleanliness, owing to the inefficient sup])ly of water, and the want of regulations to prevent the accumulation of filth in the streets, did much to increase if not even to generate that disease, which under this name occupies so prominent a place in the severe calamities of the British metropolis.

In the middle ages the church yards are said to have groaned with the bones of the dead, piled up, and exposed to the air which they corrupted — the streets were filled with garbage and filth which no exercise of authority could compel the inhabitants to remove — die sewers, which generally ran al)ove ground, were in a neglected stale, while the slutlishness within doors corresponded with the filthiness of the streets without. As early as the fourteenth century wc find the plague altribuled to want of cleanliness ; for when, in

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•lie year 13G1, it was dreaded that the plague, which made its ajipearance in Fiance, would cross the channel, the king sent a letter to the mayor and sheriffs of London, commanding that cattle should not be killed nearer than Stratford-le-Bow or Kensington. Even as lale as the memorable years 1625 and 1665, the plague was attributed to this want of cleanluiess ; and the tracts of tlie time are full of complaints on the subject. ‘ Let not carcasses of horses, dogs, cats, and other animals,’ says tlie author of a pamphlet, entitled Certain Rules, Directions, and Advertisements on the Plague, printed in London in 1()25, ‘ lye rotting and poisoning the air, as they have done in More and Finsbury Fields, and elsewhere, round about the citie.’ Another author of the same period distinctly attributes the plague to all sorts of unsavory stenches, proceeding either from carrion, ditches, and rotten dunghills, vaults, sinks, nasty kennels, and streets strewed with all manner of filth, seldom cleansed ; these foetid smells are the maintaining cause of the contagion.

Although there is strong reason to believe, that for some centuries, the city was not wholly free from tiie plague ; yet there have been particular years when it has broken out with singular fury, and which on this account have been denominated plague years. Lidependently of those which have been general to the country, we find London has suffered more immediately on several occasions. The year 1348 is distinguished by a dreadful pestilence, which is said to have originated in India, and thence spread over all the globe. Historians relate, that it fell with so much force on London, as scarcely to leave a tenth person of all sorts alive. The ordinary cemeteries were insufficient, and burial grounds were . opened in several])laces beyond the walls of the city, where the dead were heaped in indiscriminate confusion: .50,000 persons perished in London alone. The years 1361 and 1369 were also plague years, but less fatal to London than that of 1407 ; when 30,000 were swept from tlie metropolis. The plague of 1479, though of short duration, only from September to November, was very destructive, but nothing equal to that of 1499 — 1500, when another 30,000 of the citizens of London were hurried to a premature death. The king and court, taking the alarm, removed from place to place, and lastly to Calais, then

belonging to England, in order to avoid tlie infection. In a former year, 1485, if we are to believe Hall, a sweating sickness killed two mayors and six aldermen in one week. The pestilences of 1513, 1525, and 1548, were also severe. During that in 1525, Michaelmas term was adjourned, and the king removed to Eltham, where he kept his Christmas with so unusually small a court, that it was called the still Christmas.

In the plague of 1563-1564, 20,000 persons died in London, and the lawyers suspended one term, and removed the sittings of anotiier to Hereford Castle ; wliile, in that of 1574, the city banquet at Guildhall on the installation of the new lord mayor, 'was dispensed with by order of tlie queen. The plague of 1582 carried off nearly 7000 persons, and that of 1592 more than

11,000.

Almost every succeeding plague exceeded its predecessor in severity; that which followed in 1603, on tlie succession of James VL of Scotland to the throne, was particularly fatal. The citizens had welcomed the king to London in great trium[)l), and conducted him to the Charter House, where he had a most royal entertainment for four days, given to him by lord Thomas Howard. Great preparations were also made in the city for the coronation, but these were interrupted by the plague, which was by tliis time considerably increased. The coronation indeed took place, but it was stripped of the pomp and circumstance of a city pageant. Their majesties rode not through the city in royal manner as had been accustomed, nor were the citizens permitted to behold the ceremonial at Westminster, being forbidden by proclamation to repair thither, with the exception of the lord mayor, and such of the citizens as, by virtue of the ancient claim, assisted the chief butler at the coronation.

Tiie courts of law were removed ; Michaelmas term was held at Winchester, and the courts of exciiequer at Richmond. Bartholomew fair and all fairs within fifty miles of the metropolis were suspended; and .lames issued several proclamations for preventing any further increase of buiM-ings.

The great plagues have not been wanting in historians. That of 1603 has found an eccentric, but by no means inelegant chronicler, in a black letter tract, entitled The Wonderful Yeare 1G03, wherein is showed the picture of London, lying sicke of the plague. At the end of

all (like a merry epilogue to a dull play), certaine tales are cut out in sundry fashions, of purpose to shorten the lives of the long winter nights, that lye watching in the darke for us. The author gives a most vivid description of this horrible jiestilence. He compared the citie to a vast silent charnel house, with lamps dimly and slowly burning, where the pavement, instead of green rushes, is strewed with blasted rosemary, widiered hyacinths, fatal cypress, and yew thickly mingled with heaps of dead mens' bodies; the bare ribs of a father that begot him lying there ; here the chaplesse hollow sculle of a mother that bore him, round about him 1000 corses ; and even such he says was the city :

' For he that durst, in the dead hour of gloomy midnight, have been so valiant as to have walkt through die still and melancholy streets, what thinke you should have been his musicke. Surely the loud groanes of raving sicke men : the strug-ling pangesof soulcs departing. In every house griefe striking up an alarum; servants crying out for masters, wives for husbands, parents for children, children for their modiers; here he should have met some frantickly running to knock up sextons ; there others fearfully sweating with cofiins, to steale forth dead bodies, least the fatal hand writing of death should scale up tlieir doores.

' How often,' continues this writer, * hath the amazed husband waking, found the comfort of his bedde lying breathlesse by his side ; his children at the same instant gasping for life ; and his servants mortally wounded at the heart by sickness, the distracted creature beats at death's doores, ex-

claimes at windows, his cries are sliarp enough to pierce Iieaven, but on earth no eare is opened to receive them ! And in tliis manner do the tedious minutes of the night stretch out the sorrow of 10,000.

' It is now day, let is looke forth and try what consolation rises with the sun ; not any, for be-fore the jewel of the morning be fully set in silver, 100 hungry graves stand gaping, and every one of them (as at a

breakfast) hath swallowed down ten or eleven lifelesse carcasses: before dinner in the same gulfe are twice so many more devoured : and before the sun takes his rest, those numbers are doubled. Threescore, that not many houres before had every one several lodgings here very delicately furnisht, are now thrust altogether into one close room — a little noisome roome not full ten feet square.'

The tales which the author introduces, to shorten the lives of long winter nights, are many of them as pathetic as his general description, though some of them have touches of humor, which show that he was no ordinary master of the passions. One of the most affecting is that of a young couple who went to church to get married, when the bride was so ill, that, ' had not the holy officer made haste, the ground on which she stood to be marryed might easily have been broken up for buryall.' She was led not like a bride, but rather like a corse to her bed, and died in a few days.

The number of persons who fell victims to the plague, is during this year, estimated by some historians at 30,561; and by others at 30,578; but, as tiie total number of deaths in the ""ity from March to December was 37,294, it is probable that a larger portion of them fell by the plague than is here assigned to it.

The plague of 1625 was still more destructi%'e, sweeping off from a city already half desolated 35,000 persons in one year. Tlie coronation of Charles I., like that of his father, king James, was shorn of its accustomed honors, particularly the procession through the city from the tower. In VVhitelocke's Memorials we find a curious anecdote of the terror created by this dreadful scourge. He says, ' When the plague was somewhat assuaged, and there died in London but 2500 in a week, it fell to judge Whitelocke's turn to go to Westminster Hall, to adjourn Michaelmas term to Reading ; and accordingly he went from his house in Buckinghamshire to Ilorton, near Colnbrooke, and the next morning early to Hyde Park Corner, where he and his retinue dined on the ground, with such meat and drink as they brought in the coach with them ; and afterwards he drove fast through the streets, which were empty of people, and overgrown with grass, to Westminster liall, where the officers were ready, and the judge and his company went strait to the king's bench, adjourned the court, returned to his coach, and drove away presently out of town.'

In the MSS. in the British Musuem there are several original letters written during the time of this plague, by]\Ir. Mead to Sir Martin Stnte-ville, one of his friends, which give some curiotis particulars relating to this malady which have escaped the historians of the time.

Mr. Mead lived at Christ Church, Cambridge, at the time ;

but he appears to have had letters every week from Dr. Meddus, the rector of St. Gabriel's, Fenchurch. In a letter, dated July 2d, 1625, Mr. Mead states that there were fifty parishes infected within the walls; and, as an instance of the very sudden manner in which the hand of death was laid on individuals, he mentions that ' My lord Kussel (afterwards fourth earl of Bedford), being to go to parliament, had his shoemaker to pull on his boots, who fell down dead of the plague in his presence, whereupon he abstains from that honorable assembly, and hath sent the lords word of this accident.'

In a letter, written the week after, Mr. Mead enumerates the deaths by the plague as in one week 593, and states that the intercourse between Cambridge and London was stopped. Hobson the famous carrier, of ' Hobson's choice' memory, had gone his last journey in the preceding week. The infection appears to have been at its height in the latter end of July : the deaths during that week were 3583, of whom 2471 were allowed to have died of the plague ; and Mr. Mead attributes the deaths of the greatest part of the remainder to what he calls the invisible plague.

Dr. Meddus, in one of his letters to Mr. Mead, relates the following very credible anecdote: ' A woman near the Old Swan, removing into Surrey for fear of the plague, when she was come on the hill, near Streatham, in the way to Croydon, turned back, looked on the city,' said, ' Farewell London and farewell plague, but soon after was taken sick, had the tokens on her breast, and these words to be distinctly read, 'It is in vain to fly from God, for he is every wiiere.' Mr. Mead, in communicating this anecdote to Sir M. Stuteville, adds, ' You may judge of this or suspend it as you please.'

This gentleman was not however exempt from the superstitions of the time, for in another letter, dated September 4th, he says ' We have some here,make an observation that the firsi abatement of the plague was the week next following that, wherein came out the proclamation against papists, and it is true by the date thereof: but let me add my observation too, that, as the walls of Jericho fell down, when the priests with the ark of God had compassed it, blowing trumpets seven days or times; so is the fall jf the sickness, after the seventh general fast, accounting that general representative of the whole parliament for one.'

The plague in tlie year 1C36 was less destructive ; though this does not appear to have been in the least owing to an improved mode of trertt-ment, or that necessary means of preventing it, cleanliness in the houses and streets, since at a much later jieriod, we find complaints on this account as strong and as frer|uent as ever. During this year, from A])ril to December, the number of persons who died was 23,357, of whom only 10,400 are supposed to have perished by the plague.

At length the metropolis was consigned for a whole year to a pestilence more obstinate in its na-ture, and more dcstruotive in its efl'ects, than any that had preceded it. Although the plagueof 1605, the Great Plague as it is called, to distinguish it from all others, is generally suiipt>sed to iiave

been brought, from the Levant in some goods imported througii Holland by a tradesman in Long Acre ; (yet, independently of the doubt, winch exisls as to tliis disease being at all importable), there is strong reason to believe that it is to be attributed to the same causes, that produced those '.vhich preceded it, the narrow streets, confined air, and want of cleanliness. This seems ttie more probable, as for a long period London had not been wholly free from the plague. IMaitland says, for live and twenty years previous to 1665, it had not been clear of the malady, and that even from the year 1603 until 1670, tlie bills of mortality exhibit but tliree years, in which Lon-don, more or less, was not afflicted with the plague.

Even in 1665, when it broke out with unresisting fury, the populace considered it only as one of the judgments of tiie Almighty, to which sub-Tiission was all they could offer, and conceived that to oppose it would be a mockery, or an in-sult to the deity. The very fears and superstitions of the people were no inconsiderable auxiliaries to the plague ; and they considered themselves as doomed to destrviction, by the appearance of the heavens, and by a tliousand indications, which, though as nothnig in the eyes of philosopliy, bring to tlie timid and superstitious confirmations strong as proofs of Holy Writ. A CO "net, which had appeared some months before the plague, was, when it

broke out, considered as having foretold a judgment slow but severe, terrible and frightful.

These apprehensions were much increased by the pretended prophecies and astrological calculations of a set of impostors, who pretended to be lietter acquainted with the future than their neighbours. They fabricated stories of malignant conjunctions of the planets, and levied from the credulous no inconsiderable sums, until the hand of death, which respected not their knowledge, levelled them with the dupes of their artifice. So eager were the people to consult fortune-tellers and conjurors, that ‘ if but a grave fellow,’ says the author of the History of the Great Plague, attributed to Defoe, ‘ in a velvet jacket, a band, and a black coat, wliich was the habit those quack conjurors generally went in, was but .seen in the streets, the people would follow them in crowds, and ask them questions as they went along. The almanacks too proved a source of terror, and tlie coming plague was thought to have been fixed in Lilly’s Almanack, Gadbury’s Astrological Predictions, and Poor Robin’s Almanack.

Fanatics or visionaries are said also to have run through the streets, agitated and agitating by their oral denunciations and predictions. One man ran about in a state of wild disorder, crying day and night like the man mentioned by Josephus, whose Woe to .Jerusalem preceded and foretold its fall; he walked quickly, and, with a voice and countenance beaming with horror, continually ejaculated ‘ O the great and dreadful God.’ Another man, pretending a more than human authority for preaching to the city, went about like Jonah in the city of Nineveh, crying out ‘ Yet a few days aiid Iˆondon sliall be destroyed.’ However imaginary these liorrors were, a fearful tvality was soon experienced.

The plague first began in Long Acre, towards the close of the year 1664, when, two or three persons suddenly dying in one family, the timid neighbours took the alarm and removed into the city, whither they are supposed to have unfortunately carried the infection. Here it gathered slrengdi from the denseness of the population, and soon its ravages became extensive. The lower classes were seized with a panic ; and entertaining an absurd, but very general notion, tiiat the plague visited London every twenty years, they took no means to counteract it.

A frost, which set in in December, and continued tliree months, if it did not exterminate the distemper, suspended its destructive effects ;

but, no sooner had a thaw succeeded, than it burst forth with increased force. From the month of February the plague began to advance; and, when it was discovered that it had extended to several parishes, the magistrates issued an order, dated 1st July, 1665, to shut up all the infected houses, which were marked with a red cross, bearing this inscription, ‘ Lord have mercy upon us.’ Guards were constantly in attendance, to supply the sick w ith the necessary food, and to prevent their quitting their houses until forty days after recovery. This precaution is thought to iiave done much injury. Dr. Hodges, in his Loimologia, says, he verily believes that ‘ many who were lost might have been alive, had not the tragical mark upon their door driven proper assistance from them.’ The same author adds, that what greatly contributed to the loss of the people thus shut up was, the wicked practice of nurses. ‘ These wretches,’ says he, ‘ out of greedi-ness to plunder the dead, would strangle their patients, and charge it to the distemper in their throats ! Others would directly convey the pestilential taint from sores of the infected to those who were well.’ This is a serious charge, but it is not without a parallel in our own times ; for, during the last Russian campaign, some Jews who were employed in clearing the hospitals of Wilna of the dead, at a certain sum per head, were actually detected in throwing the sick and wounded out of the window, in order to augment the number.

The plan of shutting up the houses nad been first adopted in the plague of 1603, when an act of parliament was passed to authorise it, entitled An Act for the charitable Relief and ordering of Persons infected with the Plague. If, on the one hand, it might be contended, that, by suffering persons to leave houses infected by the plague, they might extend its ravages, it must on the other be allowed as more than probable, that in many cases whole families fell victims to it, who might have lived, had they been allowed to quit the house on the first appearance of infection in any one of the family.

If the destroyer, when only stalking forth among men free to fly from his approach, and to shrink from contact with him, committed such havock, it may be imagined how fell his ravages must have been among persons thus pent up together. Even those who retained full possession of health might calculate the hours they had still to live ; those who to-day turned out the bodies of their lifeicss companions, might lay

their certain account with following them on the morrow ; no hope of escape being left to any, all must have prepared to die; and this consolation at least they must have had, that neither fear nor apprehension could any longer interfere with the tender offices of friendship and affection. The surviving son needed not to shrink from closing the eyes of his dying parent, nor the widowed wife from pillowing her head on the cold breast of her departed spouse.

Rigorous as the prohibition to quit an infected house was, yet some were found to brave it. In the City Remembrancer, for 1665, it is related that 'a citizen broke out of his house in Aldersgate Street, and attempted, but was refused, going into the Angel or the White Horse at Islington. At the Pyed Horse he pretended going into Lincolnshire, that he was entirely free from infection, and asked lodgings for the night. They had but a garret bed empty, and that but one night, expecting drovers with cattle next day. A servant showed him the room, which he gladly accepted. He was well dressed; and, with a sigh, said he had seldom lain in such a lodging, but would make a shift, as it was but for one night, and in a dreadful time. He saˆ down on the bed, desiring a pint of warm ale, which was forgot. Next morning, one asked what was become of the gentleman ? The maid, starting, said she had never thought more of him ; he bespoke warm ale, but I forgot it. A person going up, found him dead across the bed ; his clothes were pulled off, his jaw fallen, his eyes open, in a most frightful posture ; the rug of the bed clasped hard in one hand. The alarm was great, having been free from the distemper, which spread immediately to the houses round about. Fourteen died of the plague that week in Islington.'

In the months of May, June, and July, the plague had continued with more or less severity ; but in August and September it quickened into dreadful activity, sweeping away 3000, 4000, 5000, and sometimes 8000 persons in a week. Then it was that the whole British nation wept for the miseries of the metropolis. In some houses, carcases lay waiting for burial, and in others, persons in their last agonies; in one room w«re heard dying groans, and in another the ravings of delirium, mingled with the wailings of relations and friends, and the apprehensive shrieks of children. Infants passed at once from the womb to the grave. ' Who would not,' says Dr. Hodges, ' burst with

grief, to see the stock for a future generation hang upon the breast of a dead mother, or the marriage-bed changed the first night into a sepulchre, and the unhappy pair meet with death in their first embraces ? Some of the infected ran about stagger-ing like drunken men, and fell and expired in the streets; while others lie half dead and coma-tose, but never to be waked but by the last trumpet.'

The divine often received the stroke of death in the exercise of his sacred office ; the physician, finding no assistance in his own antidotes, died while administering them to others. The soldiery, retiring from an enemy with whom human power could not cope, encamped in tlie suliurbs of the

city; but were overtaken, and tell unres'iting victims of the great destroyer. Busn.ess was suspended ; and if in the market a solitary m-dividual was seen purchasing the means of life, tliat life was often terminated ere he reached his home. The bells seemed hoarse with tolling; and the sextons were not sufficient to bury the dead, with which the churchyards were so glutted, that they were thrown into pits, in heaps of thirty or forty together.

In the month of September the disease was at its height, and more than 12,000 perished in one week. Some persons recommended fires in the streets, and they were kindled for th:ee days, though many of the physicians were against it ; but, ' before the three days were quite expired, the heavens both mourned over so many funerals, and so wept for the fatal mistake, as to extinguish even the fires with their showers.' A fatal night succeeded, in which more than 4000 persons expired.

Those moving sepulchres, the ' dead carts,' continually traversed the streets ; while the appalling cry, 'Bring out your dead,' thrilled through every soul not yet dead to feeling. Then it was that parents, husbands, wives, and children, saw all tliat was dear to them thrown with a pitchfork into a cart, like the oflal of the slaughter-house, to be conveyed without the walls, and flung in one promiscuous heap, without the rites of sepulture, without a coffin, and without a shroud. Single graves were no longer dug in churchyards, but huge pits, sufficient almost to entomb a whole army. In Aldgate churchyard, after several pits capable of holding sixty or 100 bodies, had been dug and filled, the churchwardens caused one to be formed so large, that they were blamed, as making preparations to bury the whole parish. It was about forty feet in length, and fifteen or sixteen feet broad, and in

some parts about twenty feet deep. Into this gulf they begen to throw the dead on the 4th of September, and by the 20th of that month they had cast into it 1 1 14 dead bodies, when they were obliged to fill it up, as it was within six feet of the surface. In other churchyards similar pits were dug, till they were choked with the dead, and additional burial grounds were formed in several parts of the town, some of which have ever since been used for the same purpose, while others hav? no trace of the dread calamity which first marked them out as sepulchres.

The burial ground in Bunhill-fields, in whicli many a nonconformist rests in peace, was first appropriated to that purpose during the plague. A piece of ground near the streot called Old Bethlem, in Moorfields; and the plot at the top of Holywell Street, Shoreditch ; and a third in Goswell Street, were also used as temporary burying grounds on this melancholy occasion. Stepney, though at this time it had three distinct burying grounds, overcharged them all with its dead; and there were no fewer than five other pieces of ground devoted to this purpose. On two of these the parish churches of St. Paul, (Shadwell, and St. John, Wapping, have since been built. A green field at the upper end (if Hand Alley, Bishopsgatc Street, was enclosed

for ilie parish of St. IJotolpli alone, though tlie inhabitants of some courts beyond its precincts \ve:e allowed to bring tiieir dead to it. Two or three years after the plague, a scene took place here which seemed to bring back all the horrors of that dreadful period. The ground was purchased by Sir Robert Clayton, who immediately let it out on building leases. In diggmg the ground for the foundations, numberless bodies were dug up ; ‘ some of them,’ says the author of lleflections on the Hills of Mortality, ‘ remaining so plain to be seen, that the women’s skulls were distinguished by the long hair, and of others the flesh was not quite])erished.’ On complaint being made, the bodies were removed to anothet” place in the same ground, where ‘ the ground,’ says the same author, ‘ is palisadoed off in a lit-tle

square, where lie the bones and remains of 2000 bodies, carried by the dead carts to the grave in one year.' Horrible as these pits were, constables were obliged to be placed near them during the plague ; for it was not unusual for persons infected, either seized by a fit of delirium, or, what is more probable, anxious to mingle with the bodies of all that was dear to them, to steal from their houses unobserved, or obtain an egress by bribing the watchmen, and wrapped in blankets and rugs, to throw themselves among the dead.

In this wreck of a city, which v/as half entombed, delirium hurried many even to a premature death. * People,' says Defoe, 'in the torment of their swellings, which was indeed intolerable, running out of their own government, raving and distracted, and oftentimes laying violent hands upon themselves, throwing themselves out at their windows, shooting themselves, &c. Motliers murdering their own children in their lunacy, some dying of mere grief and passion, some of mere fright and surprise, without any infection at all ; others frightened into despair and lunacy; others into melancholy madness.' Many were the cases in which the mother and her unborn offspring perished at once ; in others where they died for want of proper assistance in the hour of nature's sorrow. Others frequently sucked the fatal poison from the lips of their dying infants.

The plague readied it? height in August, and during that month and September 50,000 perished.

It was now that the dead carts were insufficient for the ofhce, and the houses and streets were rendered tenfold more pestilential by their unburied dead. All who had survived now made the attemj)! to escape, and eighteen or twenty watchmen were killed in opposing the people when fleeing from the infected houses.

The change which now took place in the feelings of the people is thus vividly described by Defoe. ' As I have mentioned how the people were brought into a condition to despair of life, and abandon themselves, so this very thing had a strange effect among us for three or four weeks ; that is, it made men bold and venturous; they were no more shy of one another, or restrained within doors, but went any where and every where, and began to converse. One would say to another, * I do not ask you how you are, or say how 1 am. It is certain we siiall

all go; so 'tis no matter who is sick or wlio is sound ;' so they run

deliberately into any place or company.' ˆ

The mori.l lesson conveyed in the following passage is worthy of being kept in everlasting remembrance. ' As it brought the people into public company, so it was surprising how it brought them to crowd into the churches ; they enquired no more whom they sat near to, or far from, what offensive smells they met with, or what condition the people seemed to be in ; but, looking upon themselves all as so many dead corpses, they came to the churches without the least caution, and crowded together, as if their lives were of no consequence, compared to the work which they came about. Indeed, the zeal which they showed in coming, and the earnestness and affection they showed iu their attention to what they heard, made it manifest, what a value people would all put upon the worship of God, if they thought every day they attended at the cliurch that it would be their last. Nor was it without other strange effects ; for it took away all manner of prejudice at, or scruple about, the person whom they found in the pulpit, when they came to the churches. It cannot be doubted, but that many of the ministers of the parish churches were cut off among others in so common and so dreadful a calamity ; and others had not courage enough to stand it, but removed into the country as they found means to escape. As then some parish churches were quite vacant and forsaken, the people made no scruple of desiring such dissenters as had been a few years before deprived of their livings, by virtue of the act of parliament, called the act of uniformity, to preach in the churches ; nor did the church ministers in that case make any difficulty of accepting their assistance ; so that many of those whom they called silenced ministers had their mouths opened on this occasion, and preached publicly to the people.' It will be remembered how well the zeal and fidelity of these ministers was requited when the danger was over, by the act of uniformity.

The dead now were no longer numbered ; for the parish clerks and sextons perished in the execution of their office. In the parish of Stepney alone, 1 16 sextons, grave-diggers, and carters employed in removing the dead bodies, died in one year; 10,000 houses were at once deserted, and it is said that, during the plague, not fewer than 20,000 persons quitted the metropolis.

Empty the streets in uncouth verdure clad Into the worst of desarts sudden turned The cheerful haunts of man.

In the last week of September, the plague began somewhat to abate, and the bills of mor-taUty fell from upwards of 8000 to little more than 6000 weekly. Every succeeding week the number of victims

diminished ; so that by the month of February, in the following year, the pestilence had wholly ceased. The number that perished during this plague, according to the returns, was 68,590; but Defoe asserts, that the number was at least 100,000. The lives of a great many persons were preserved by means

of the shipping on toe Thames, into which the infection did not reach except in a very tew instances.

Even the survivors of this dreadful calamity would have perished of famine, but i'or the bounty of the affluent. The money svibscribed is said to have amounted to £100,000 a week, to wliich Charles II. humanely gave £lOOO weekly. In the parish of Cripplegaie alone the disbursements to the poor amounted to £l 7.000 a week. Bui, even when the poor had obtained the money, they feared to lay it out in provisions, lest they should by this means catch the infection. If they boueht a joint of meat in llie market, tliey would not receive it from the butcher, but took it off the hooks themselves ; the butcher, equally cautious, would not touch the money, but had it dropt into a pot with vinegar kept for the purpose. \'orkraen were equally cautious with their masters, and even members of the same family with each other.

The conduct of the magistracy, «uring the prevalence of calamity, did them infinite honor. Darwin has celebrated the heroic devotion of Sir John Lawrence, 'London's generous Mayor,' who,

When Contagion, with mephitic breath, And wither'd Famine urg'd the work of death,

\ ith food and faith, with med'cine and with prayer, Rais'd the weak head, and stay'd the parting sigh ; Or with new life relum'd the swimming eye.

* The vigilance of the magistrates,' says the account ascribed to Defoe, ' was put to the ut-most trial, and, it must Ye confessed, can never be enough acknowledged ; whatever expense or trouble tliey were at, two

things were never neglected in the city or suburbs either. First, provisions were always to be had in full plenty, and the price not much raised either hardly wortli speaking. Secondly, no dead bodies lay unburied, or uncovered ; and, if one walked from one end of the city to another, no funeral, or sign of it, was to be seen in the day-time, except a little in the three first weeks in September.'

For the security of the country dealers by land, new markets were established on the out-skirts of the metropolis, and proper regulations made to ensure the safety of those who attended tliem. Either the lord mayor, or one, or both of the sheriffs, went every marketday on horseback to see these orders executed. The necessitous were likewise furnished with food and money gratuitously, and the aldermen frequently rode through the streets on horseback, to enquire whether the wants of the people in the streets or houses were duly supplied.

In tiiis year of desolation tlie most appalling scenes were continually occurring, which language would in vain attempt to depict. Many were the instances in which bodies were found stripped naked by thieves ; and others, where the stupor of disease was mistaken for the sleep of death, and bodies yet warm and breathing were buried in the general mass. Tradition relates a narrow escape of a poor piper, which has been further immortalised by that treat sculptor, Gibber, in a statue well knov.n in

Tottenham Court Road. It represents a Highland piper playing on his pipes, with his dog and keg of liquor by his side. The piper, as the story goes, usually took his stand at the bottom of Holborn Hiil, near St. Andrew's church, and, having one day met with some of his countrymen, he drank rather freely, and sought a couch on the steps of the church. As this was no time to sleep in the infected streets, when the dead cart arrived, one of die men did not hesitate to put his fork into the piper's belt, and transfer hmi to the cart. The piper's dog attempted to prevent his master from being carried off, but, unable to do this, he determined to accompany him, and, leaping into the cart, began howling most piteously over the body of his master. The shaking of the cart along the rugged pavement, and the howling of the dog, at length awoke the piper, who, instinctively turning to his pipes, struck up a lively Scotch tune, to the great terror of the carters, who fancied they had got a cargo of ghosts, until, lights having been procured, the piper was released, and his narrow escape was commemorated by one of his benefactors, who employed Cibber to execute a statue of him.

PART III.

DESCRIPTION OF MODERN LONDON.

This will embrace its site and climate ; its rivers, canals, docks, and bridges; thˆ tower and military defences; public buildings, civil, ecclesiastical, and charitable; streets, and squares; tiieatres and places of amusement ; and the improvements in progress.

Situation and general plan. — The city of London stands entirely on the north bank of the Thames. St. Paul's is in lat. 51° 30′ 49″ N., and long. 3′ 30″ W. of Greenwich observatory. Its distance from the other capitals of Europe is, from Edinburgh 395 miles south; from Dublin 338 south-east; from Amsterdam 190 miles west ; from Paris 225 miles N. N.W. ; from Copenhagen 610 miles south-west ; from \ ienna 820 north-west ; from Madrid 8G0 miles north-east by east; from Lisbon 850 miles; from Rome 950 miles N.N.W.; from Constantinople 1660 miles; from INIoscow 1660 miles E. S. E. ; from Stockholm 750 miles ; from Petersburgh 1140 miles; and from Berlin 540 miles.

The ancient city, or London within the walls, is about a mile and half in length, and some-tliiuˆ more than half a mile in breadth. During tiie last century its population has diminished nearly one-half; a circumstance to be attributed to the widening of the streets, to the many public buildings that have been erected, and to the fjeneral extension of its suburbs. London without the walls, being merely the expansion of the ancient city which it surrounds, is governed by the city magistrates.

The greater part of London stands upon rising ground ; the soil is sound and dry ; the lower parts are freed from moisture by subterraneous sewers or drains : and, from the vast quantities of water with which the inhabitants are constantly supplied, by means of the Thames and of the New River, great sweetness and cleanliness are preforved. The drains here mentioned are large

vaulted channels, beneath the pavements, communicating with each house by smaller ones, and with the respective streets by ^‘ratings, to carry oH’ such as may be conveyed in that manner into the river. Mud, and other rubbish, are taken away in carts, by persons constantly employed for that purpose.

Considered in the aggregate, London comprises the city and its liberties, with the city and liberties of Westminster, tlie borough of Southwark, and nearly thirty of the contiguous villages of Middlesex and Surrey. The greatest portion of the whole is built on the northern bank of the Thames, or in Middlesex; whilst Southvvark, with Lambeth, and several connecting Tillages, extend along the southern shore of the same river, in the county of Surrey. The extent east and west, from Poplar to Knightsbridge, is full seven miles and a half; while its breadth from north to south, or from Newington Butts to Islington, is nearly five miles. The circumference of the whole, allowing for various inequalities in the extension of streets, Sec, at the extremities, is upwards of thirty miles. Hence it may be fairly estimated, that the buildings of this metropolis cover at least eighteen square miles, or 11,520 square acres. The river Thames occupies, for seven miles, a space of about one quarter of a mile, or 400 yards in width; or 1120 square acre*.

This metropolis may be said to consist of five great parts or portions ; *viz.* the west end of the town, the city, the east end of the town, Westminster, and the Borough. The west end of the town is popularly regarded as extending from Charing Cross to Hyde-park, and from St. James’s park to Paddington. It is considered the superior and most fashionable part of the town, is the general abode of the court, and is laid out in two great thoroughfares, Oxford Road or Street, and Piccadilly and Regent Street ; with various handsome squares and streets, chiefly occupied by the town houses of the nobility and gentry, and fashionable shops. The city includes the central part, and is the emporium of commerce.

The east of the town is also devoted to commerce, to ship-building, manufactures, and various collateral branches of merchandise ; and here vast commercial docks and warehouses have been formed and constructed. The southern bank of the Thames, from Deptford to Lambeth, bears a great resemblance to the east end of the town ; being occupied by persons engaged in commercial and maritime concerns; and docks, wharfs, and warehouses are abundant. This part of London abounds likewise with iron-foundries, glasshouses, soap-boilers, dye-houses, boat-buil- ders, shot and hat manufactories, &c.

Southirark, a borough, once entirely independent of the city, but now forming the ward called Bridge Without, was, up to the reien of Edward III., so notoriously the resort of felons, robbers, and divers other malefactors, and di'sturbers of the peace,' that the king, with the consent of the parliament, granted the city of London ' the said village with all its appurtenances,' for the sum of £lO, to be paid annually. This grant, however, Richard, his successor, refused to con-

firm ; and the corporation wais unable, for several reigns, to establish its jurisdiction here. But, the privileges of the religious houses being at length renewed, the regents under Edward VI. (the great obstacle in their way), confirmed the complete annexation of the borough to the city by letters patent, dated 23d April, in the fourth year of that monarch's reign.

Many improvements have of late years been made, and many respectable houses erected in St. George's Fields. Hither also has been brought the Bethlem hospital for lunatics, formerly in Moorfields. Another part of the metropolis, the most regular and systematic of the whole in its arrangement, is tiie northern side, comprehending a large mass of new buildings between Holborn and Somers-town, and in the parishes of i\Iary-le-bone, and Paddington.

Amongst the many proofs of the early and extreme fondness for legislation which marks our history, may be mentioned the various laws which have been passed to prevent the growth of Lon-don. Queen Elizabeth led the way in this sage endeavour, and a statute of her reign commands (we believe it is not yet repealed), that ' persons of livelihood and 7iieuns should reside in their countries, and not abide or sojourn in the city of London, so that countries remain unserved.' James I. predicted that ' England would shortly be London and London England ; ' and, in one of his numerous addresses to the people, stigma-tises ' those swarms of gentry who, at the instigation of their wives, or to new-model and fashion their daughters (who if they were unmarried marred their reputations, and if married lost them), did neglect their country hospitality, and cumber the city, a general nuisance to the kingdom.' He urged the Star-chamber to regulate ' the exorbitancy of the new buildings about the city, which were but a shelter for those %\ho, when they had spent their estates in coaches, lacqueys, and fine clothes, like Frenchmen, lived miserably in their houses like Italians.' A manuscript writer of the times complains of the breaking up of old family establishments, all crowding to ' upstart London.' ' Erery one,' says he, ' strives to be a Diogenes in his house,

and an emperor in the streets : not caring if they sleep m a tub, so they must be hurried in a coach, giving that allowance to horses and mares, that formerly maintained houses fall of men ; pinching many a belly to paint a few backs, and turning all the treasures of the kingdom into a few citizens' coffers, their woods into wardrobes, their leases into laces, and their goods and chattels into guarded coats and gaudy toys.'

The government, however, did not confine itself to mere fulminations on this subject ; for new buildings were not only forbidden within ten miles of London, but even pulled down when they had been erected. Charles I. issued various proclamations, in which he complained of the continued residence of the nobility and gentry in town, which raised the price of provisions, increased the number of mendicants, and brought so many loose and disorderly people into the metropolis, that it could not be governed by ordinary magistrates.' He ordered that persons of alt ranks, who vere not connected with

public offices, should resort to tlieir several counties, and tliat ' they should not put themselves to unnecessary charge m providing themselves to return in winter to the said cities, as it was the king's firm resolution to withstand such great and growing evil.' Proclamations proving ineH'ectual, the Star-Chamber determined that they should no longer remain a dead letter; an inquisitorial examination of all strangers was ordered, and an account taken of their time of residence and departure. Prosecutions were instituted by the attorney-general; and one gentleman, a Mr. Palmer, from Sussex, was fined £1000 for disobeying the proclamation which ordered a residence in the country; and, to discourage all other gentlemen from living in town, the proclamation prohibited any pheasants, ducks, partridges, or hares, from being dressed or eaten in any inn. It is true, that these rigorous proceedings rendered the government obnoxious, and proved ineffectual ; yet they were attempted to be renewed even after the Restoration.

What must the weak and tyrannical Stuarts have felt, had they, for the

castigation of the country, continued to rule over us to the present times, when more houses are frequently built in a single year, than during the whole of their united reigns! It appears by the census of 1821, that London, including the borough of Southwark, contained the vast number of 161,905 houses, and that 3437 other houses were then building; and, when we consider that every month brings a large addition, it probably would not be too much to estimate the metropolis as containing at present 180,000 houses ; nor are its limits, though the rage for building was partially stopped last year, likely here to stop, according to present appearances.

Cliiiiuite. — It would seem pretty well established that the climate of this country was in early times far more genial than at present. A writer of the thirteenth century tells us that a ‘ continued fall of showers throughout England for three days terrified many.’ In ancient times, according to Mr. Bagford, there were vineyards in Hatton Garden, St. Giles, and East Smithfield ; and tlie many Vine Streets in Westminster, Bloomsbury, Lambeth, and the borough, seem to have derived their name from the same source. This change, which the climate has undergone, appears to have chietly taken jilace dur-ing the last century. (Charles 11., whose daily habits of walking about the metropolis gave him opportunities of correct observation on the subject, used to say, that there never was a day in which it rained so incessantly that a person could not take a dry walk for one hour out of the twenty-four.

The inhabitants of London, however, have less reason to complain of the deterioration of tlie climate than perhaps any other part of this coiuitry. We have noticed, article Ekolanp, the circumstance, not, perhaps, generally known, that the temperature of the air in the metropolis is raised by the artificial sources of heat existing in it, no less than 2° on the annual mean above that of its immediate vicinity ; and the reader will there Vol. XIII.

find a table of tiie London temjierature in the twelve different months of the year.

The usual range of the thermometer in Lon-don is from 5^^ to 95°. Even in the coldest seasons, however, the medium of the tweniy-four hours, upon a long average, does not fall below the freezing point. Continued frost in winter is always an exception therefore to the general rule of the climate.

The most severe frosts of which we have any record were those of 1683, 1716, 1739, 1766, 1768, 1785, 1789, 1795, and 1814. Few of these, however, were peculiar to London ; the greater number were, more or less, common to the whole of the north of Europe.

The frost of 1683, which is the first great one of which we have a particular account, appears to have been one of the most intense. The Thames was frozen to such an extent and depth, that even as far down as Woolwich the heaviest loaded carriages passed securely over it. From the Temple to Southwark it was covered with temporary shops and booths, arranged in streets and squares, where hackney-coaches plied as safely as on the terra firma of the metropolis. Shows and pastimes of all sorts diversified the scene ; and the merry monarch himself, Charles XL, mmgled with his subjects in celebrating the novelty of a frost fair. In the night time the cold was so severe, that large fires were kept burning in Cheapside, Fleet Street, and other principal streets, to save from perishing those whose necessary avocations called them abroad ; but notwithstanding this humane precaution, and the most commendable exertions on the part of the rich and benevolent to provide the poor with fuel at their own homes, many were the instances of persons in the lower walks of life being frozen to death. Wild ducks and other water fowl, driven from their native fastnesses to seek shelter in the haunts of men, dropped down dead in the public streets; and so general was the havoc among the feathered tribe, that in the ensuing summer scarcely a bird was to be seen. In other parts of Europe the cold was as severe as it was in lingland ; particularly in Germany and France, where the number of human beings frozen to death appears to have been much greater tiian in England, owing, no doubt, to the inferior condition of the people of these countries, in all that regards the comforts and charities of life.

Next to the frost of 1683 in its disastrous consequences vvas that of 1739, which was also com-mon to the whole of the north of F-urope. The Thames was again completely frozen, but in : few days after so high a wind arose as to sweep every thing moveable from its surface. The number of tiie shipping in the river happened to be unusually great ; and, lockeii up by the ice, they opposed a resistance to tlie fury of the wind, which made its ravages only the more destructive. Numbers were blown to pieces, and sunk ; and ;‘ll were, more or less, stripped and siiaitered. Never had the Thames, in the memory of tliosc living, presented a more dismal scene of wreck and destruction. The damage done between London Bridge and the Med way was comi>ufed at not less than £100,000. Many

were the lives also lost upon this occasion; and severe the sufferings of the lower classes of people, althougli charity was again both active to save, and most liberal ni its benefactions.

The frost of 1814 was, in some respects, even more memorable than those of 1683 ami 1739. It was probably not so severe as either, and the injury which it committed was inconsiderable ; but it served to exhibit in a remarkable manner the progress which a free people have made in those attainments, which help us to set tlie seasons themselves at defiance. As in the days of the gay Charles, mirth and jollity again joined hand in hand to soften the rigors of the icy year ; but, among other novelties, we beheld what in Charles's days would have been more dreaded than even perpetual frost — a free press erected on the now solid deep, to commemorate the wonders of liie scene.

River Tliamea. — The conservancy of the Thames belongs to the city of London westward as far as Staines, a little above which it enters the county of Middlesex. See Th.\mes. Nothing can be more picturesque than its now devious course towards the metropolis, graced with * such fields, such woods, such stately piles, and such gardens.

That Thames with Roman Tiber may compare.'

At Putney and Battersea, the Thames, which has received the tributary streams of the Colne, the ˆVey, the Crane, the Brent, and the Wandle, has become a large and busy stream, and at these places is crossed by two wooden bridges. At 'auxhall it is crossed by a light and beautiful iron bridge, and between this place and tlie tower by four other bridges.

After running through the metropolis the river rolls onward past Dejitford, Greenwich, and Gravesend, until, joined by tiie Medway,

they pay their joint tribute to the ocean, at the Nore. In London it is from 800 to 1500 feet, and at the Nore seven miles broad. It is navigable nearly 143 miles above London Bridge: its whole length is upwards of 180 miles ; and the tides, wliicli ebb and flow twice every twenty-four hours, afTect it upwards of eighty miles from the sea. The Thames has also its spring tides, and is remarkable for tlie inequality of its tides, a subject much dwelt upon by the early historians, who considered every deviation from the ordinary flow and ebb as a prodigy. It is related, that on the 12th of October, 1411, and on the 17th of September, 1550, the Thames flowed thrice in one day. In the years 1564, 1574, 1608, 1609, 1622, 1653, 1654, and 1660, similar])henomena occurred, all of which might, no doubt, have been traced to very natural causes had they been observed at the time.

The Thames has sometimes overflowed its banks considerably in the metropolis. The most memorable instance of this sort was on the 1st of September, 1555, when, in consequence of heavy rains and a high wind, the river was forced into the king's palace at Westminster, and into Westminster Ilali, a circumstance jrarticularly unfortunate, as it was tlie day on wliich thu lord mayor of London had to present the sheriil's to the barons of the exciiequer. Stowe says,

' all Westminster Hall was full of water,' but he does not inform us whether the city magistrates pKScnted the sheriff's in a boat or not, though he informs us by report that morning, that, ' a wherrie man rowed with his boate over Westminster Bridge into the Palace Court, and so through the staple gate, and all the wooll staple into the king's streete.' All the marshes on the Lambeth sides were also so overflowed, that ' the people from Newington Church could not pass on foote, but were carried by boates from the said church to the Pinfold, neere to St. George's in Southwark.'

In 1774 was another great overflow ; and again on the 2d of February, 1791, when considerable damage was done to the wharfs along both sides of the river. Westminster, which always suffered most from an inundation of the Thames, saw boats plying, instead of hackney coaches, in Palace Yard and Privy Gardens, like Egypt watered by an over-bountiful river.

In the winter of 1821 the Thames again burst its bounds ; though neither promoted by an easterly wind, nor a sudden thaw. It appears by an official report presented by officers appointed to make a survey of the river, that the flood rose four inches higher than it did in 1774,

as recorded by a stone let into a wall at Islewortli. The editor of the present work had on this occasion to pay a severe penalty for his general enjoyment of a very pleasant situation on the banks of the river. Its classic stream was not at this time ‘ strong without rage,’ for it burst every barrier with which his cottage could be fenced; and flooding his library, to the depth of eighteen inches, scattered his papers remorselessly on the surface of six successive tides. Considerable damage was done above Wˆestminster Bridge, yet the navigation of the river in the city district was never an hour impeded.

At Staines (Sax. stana a stone) is a stone which marks the limits of the city’s authority, and bears the early date of 1280. During the mayorality of Sir Watkin Lewes, in 1781, it was placed on a new pedestal. The city jurisdiction extends eastward to Yendal or Yenleet, and includes also part of the Medway and the river Lea.

The conservancy of the Thames has been claimed by the city of London ever since the reign of Richard I., who, for a sum of 1500 marks, granted a charier which empowered the city to remove all weirs from the river. The authority claimed under this charter was afterwards confirmed by more explicit enactments. Tlie power of the citizens not merely extended to the water and the fish, but to the actual bed of the river, so that, according to a manuscript in the papers of lord Burleigh, quoted by Strype, they have the ground and soil under the river, ‘ whereupon if any that hath a house or land adjoining do make a strand, stairs, or such like, they pay forthwith a rent to the city of London.’

‘rhe authority of the city was long «lisputed by the lord high admiral of England, until tlie decision of a court of justice, and the confirmatory charter of .lames I., fixed the conservatorship of the Thames in the hands of the city, to be exercised by the lord mayor for the time being, or iiis deputy, an officer with the title of water bailiff”,

who protects the rights of the city, and its authority over the river.

The lord mayor holds a court of conservancy eight times a year, at any place he pleases within the city jurisdiction, on the banks of the river, either in Middlesex, Surrey, Essex, or Kent. The jury attendant on the court is always sum-moi;ed from the county in which it is held. In order to hold the court, the lord mayor, with the necessary officers, proceeds in state in the city barge, and is often accompanied by some of the barges of the companies, who render it an agreeable aquatic excursion. Once in every seven years his lordship traverses the whole limits of his jurisdiction on the Thames and the Medvvay.

A material part of the duty of the water bailiff is to regulate the watermen who ply on the river, and who are a very numerous body, amounting to upwards of 12,000, two-thirds of whom are freemen of the city. As far back as 1556, they were incorporated by act of parliament, and have their rulers and overseers ; but the general government and superintendance of the body is vested in the city magistracy, who are empowered, by a statute passed in the 34th of George III., to make rules and orders for the government of watermen, wherrymen, and lightermen, between Gravesendand Windsor, and to enforce observance of them by penalties and forfeitures. The wherries belonging to this fraternity are required to be twelve feet and a half long, and four feet and a half broad in the midship; they are all numbered, and the rates of fare fixed, for any exaction beyond whicii the offender may be punished, on complaint being made at Watermen's Hall (on St. Mary's Kill). In point of fact, however, but little regard is paid to the established list of fares, which are very generally exceeded, and as generally acquiesced in, from a feeling, we believe, that they are rather less than they ought to be. Among other regulations for the good conduct of the watermen, they are particularly cautioned against the use of improper and immodest language ; and offenders in this respect are punishable by fine. By an act of parliament of the 11th & 12th of William III. the lightermen were united to the watermen, and placed equally under the jurisdiction of the city magistrates.

The Thames westward has several locks, without which, owing to the great number of shoals, it would not be navigable in summer. The locks within the city's jurisdiction, according to a return made to an order of the house of commons, yielded to the city a revenue of . £12,506 7s. Id. for the year ending the 29th of September, 1822. Upwards of £1000 had, however, to be deducted for the incidental repairs. The profits of the locks have been a good deal injured by canals, yet the interests of the city have been protected ; since we find, in the same parliamentary return, that the Grand Junction ('anal Company paid to the city £600 for compensation for loss of toll that

year ; tlio Regent's Canal Company £450; and even ihe Surrey Iron Railway ('ompany £lO.

The immense property continually lying in shipping in the river Thames was long subject 'o the most daring depredation. Tlie rnbbcis

were indeed so numerous, that they were divided into classes. The river pirates formed the most desperate class. They plundered ships and small craft in the night; and have been known to weigh a ship's anchor, and hoist it with the cable into the boat; and when discovered, to tell the captain what tliey had robbed him of, and row away bidding him a good night. The night plunderers consisted of watchmen, who, formed into gangs of five or six each, used to lighten every vessel they could get to of some portable articles of her cargo, while a receiver was always in readiness to purchase the spoils of the night. These night plunderers have frequently been known to cut lighters adrift, and follow them down the river, to a place where they could more successfully carry off the cargo, which they have sometimes done completely. The light horsemen confined their depredations to West India ships, and originated in the connivance of the revenue officers at a connexion established between the mates of the vessels and some receivers on shore. In all West India ships there is a quantity of sugar spilt in unloading the cargo, which is claimed as a perquisite by the mates, and sold. The purchasers of these sweepings, however, by a bribe of forty or fifty guineas, often succeeded in getting on board the ships, and opening the hogsheads and taking as much as they could, by the assistance of coopers and watermen, carry away with them. "They were provided with black bags, which they call-ed black strap, and these were often filled and emptied during a night. Puncheons of rum were also drawn by means of a small pump, The heavy horsemen, another class of river plunderers, went on board ships, either by connivance, or in the day, under the pretext of selling some articles. They were provided with peculiar dresses, which had pockets all round, and bag bladders and pouches affixed in various parts, which they filled with sugar, coffee, cocoa, or any portable articles they could lay their hands on. In the night they would frequently plunder more largely, and boats, rowed by what were called game watermen, were constantly near the ships, ready to receive the stolen property and conduct them on shore. So active were the heavy horsemen, that they frequently made five guineas a night ; and an apprentice to the game waterman has been known to keep a country house and a sad-dle horse. The mud larks, the scuffle hunters, the copemen, and several other classes of depre-

dators, were not confined to any particular branch of plunder, but were ready, either as principals or auxiliaries on all occasions.

The coal-heavers, of whom there were 1200 or 1400 constantly engaged on the river, were in the constant practice of each man taking his sack of two or three bushels of coals when he went on shore during the unloading of a ship. Neither the captain nor the owner of the ship and cargo durst resist their taking what they considered as a perquisite, and when they found a boat ready to .sink with their plunder, they conceived themselves the injured party.

Some idea may be formed of the success o-" these plunderers, when it is slated, that the loss of various classes of property on the river, preN 2

vious to tlie formation of the docks and the es-taljlisinent of marine police, was £500,000 aii-niuilly, of which, according to an averaged estimate of some years, the West India trade suffered annually to tlie amount of £232,000 ; the Kasl Indies, £25,000; the United States, £30,000 ; and the coal trade alone, £20,000.

Such was the state of the carj,oes m the river Thames, until, in the year 1797, Mr. Harriott formed a plan of maiine police, which, by the aid of Mr. Colquhoun, he was enabled to carry into effect ; and so successful was the system thus formed that in the first year the savmg to the West India merchants alone was upwards of £100,000, and to the revenue more than half that sum. In the same period, no less tlian 2200 culprits were convicted for misdemeanors on the river ; while now the instances of street robberies are so rare, or so unimportant, that they are scarcely ever recorded.

Various amusements have at different times taken place on the Thames, adapted to the taste and character of the age. The water quintain has, however, altogether ceased, and at present lowing and sailing matches seem the only spoits with which it is occupied. Of these, one of tlie most remarkable is the competition for a coat and

silver badge, which Dogget tlie player appointed to be rowed for, annually, by six watermen, on the 1st of August, being the anniversary of the accession of the House of Hanover to the throne. The competitors set out on a si2;nal given, .at that time of the tide when the current is strongest against them, and row from the Old Swan, near London Bridge, to the \ hite Swan, in Chelsea. Smaller rivers and supply of water. — Nothing has contributed so essentially towards preserving the health of the inhabitants of London from disease, or their property from conflagration, as the abundant supply of water with which every street, and even every house, is furnished. Be-fore the metropolis had become extensive, it was watered by several small brooks, independent of the Thames. One of these, which was successively called the river of Wells, Tunimill Brook, and the river Fleete, or Fleet Ditch, ran from Baenigge Wells, through Clerkenwell, between Saff'ron Hill and Tunimill Street, under Holborn Bridge, and down I-'leet Market into the Thames, it was once very considerable, turned a great number of mills in its course, and must have been navigable from the Thames to Holborn at the least; for, in a y)arliament, held at Carlisle in 1307, the earl of Lincoln complained, that ' whereas, in times past, the course of water running at London under Oldbourn-bridge and I'leet-bridge into the Thames, had been of such breadth and depth, that ten or twelve ships' navies at once, with merchandizes, were wont to come to the aforesaid bridge of Fleet, and some of them to Oldbourn Bridge; now the same course, by filth of the tanners and such otliers, was sore decayed.' Tradition would carry the navigation much higher, since it relates, that an anchor was found in this river at I'ancras-w.ish, where the road branches off" to Somer's-town. This river is now, by rapid rains or sudden thaws, sometimes much overrtow(, > d, as was the case in 1809 and 1817-18.

Another small river, called Wallbrook, from tlie wall tiirown over it, ran through the city in a serpentine direction, from the iiortii down by the present Mansion House, and the street now called Wallbrook, into tiie Thames. This brook, whicii was neces.sarily crossed by numerous bridges, was vaulted over with brick, and in many parts covered with houses.

A third rivulet, which was called Langbourn, on account of its length, originated in an overflowing spring in Fenchurch Street, which ran down Lombard Street, and turned south down Sherbone Lane (then called Sharebourne, from its sharing or dividing the bourne or brook into small rills of water), whence it flowed into the Thames. This brook was stopped at the source, though its name is still retained in

Langbourn-ward.

Oldbourn, now Holborn, was a brook which issued from a spring near Middle Row, and ran down at Holborn Bridge, into the river Fleet.

In the suburbs were several very excellent wells, as Holywell, Skinner's-well, Clement's-well, Clerkenwell (so called from the parish-clerks of London assembling there annually to act plays or interludes, founded on Scripture), with several other smaller wells. To the wells and the brooks are to be added pools, which, though not contributing to the health of the city, supplied water for various uses. Of these the principal was in Smithfield, and was called Ilorsepool, on account of the inhabitants watering horses there. This pool, which was at one time walled round with brick, was filled up in the improvements that took place in Smithfield after the fire of London. Near St. Giles's church, Cripplegate, there was a large pool, in which Anne of Lodbury was drowned in the year 1244. North of Holywell there was a pool, called Agnes le Clair; and, not far from it, anoth.er sheet of water, which was called Perilous Pond, on account of several youths who went to swim in it having been drowned. This Perilous Pond has since been converted into a bath, under the name of Peerless I'ool.

The pools being filled up, and the brooks covered, the inhabitants found it necessary to look to other sources, for a supply of water. In 1236 one Gilbert Saiulford obtained a grant from Henry III., to allow him to convey water from tlie town of Tyburn, by pipes of lead, into the city. The work was soon carried into effect, and a leaden pipe, of six inches bore, conveyed the water, from six wells in the neighbourhood of Tyliurn, to conduits that were erected to receive it in various parts of the city. The first, and one of the principal conduits, was in West Cheap, now Cheapside, and was erected in 1285: it was a cistern of lead, castellated with stone. Other conduits and bosses were erected in several parts of the town.

In 1438 Sir William Eastfield, knight of the Bath, then lord-mayor, brought water from Highbury Barn, as well as from Tyburn, to London, and caused conduits to be erected in Fleet Street, Aldermanbury, and Cripplegate.

In 1.535 the common council granted a sum of money for bringing water from Hackney to Aldgate, where a conduit was erected ; and,

tliis being insufficient, fresh supplies were afterwards obtained from St. Mary-le-bourn, Hackney, Hampstead Heatli, INluswell Ilill, &,c. One of tiie principal conduits wˆas between Snow Hill and Holborn, and was built, or rather rebuilt, by William Lamb, a gentleman of the chapel to king Henry V'lII. in 1577, at an expense of £l500. This conduit was supplied from anotlier, erected by the same gentleman at the north end of RedLion Street, called Lamb's Conduit.

The conduits were formerly visited and inspected, with great ceremony, by the lord mayor and corporation. Strype relates, that, on the 18th of September 1,502, the lord mayor, aldermen, and many worshipful persons, after inspecting the conduit heads, hunted a hare, which tliey killed, and then proceeded to a dinner at the head of the conduit, where they were hand- .somely entertained by the chamberlain. After dinner they went to hunt the fox : 'there was,' says he, ' a great cry for a mile, and, at length, the hounds killed him at the end of St. Giles's, widi great hallowing and blowing of horns at his death.' But, though the number of conduits was considerable, they were found insufficient, and many citizens were obliged to fetch their water from the Thames. In those times, persons were regularly employed to convey water from ihe river, or the conduits, to the houses, whicii they did in vessels, called tankards, that held about three gallons. They were hooped round, like a pail, and were, in figure, like the frustum of a cone. Tiiey had a small iron handle at the upper end, like an alehouse pot, and, being fitted with a bung or stopple, were easily portable. These water-bearers and their tankards are alluded to in Ben Jonson's comedy of ' Every Man in his Humor.'

In the year 1582 one Peter Maurice, a Ger-man, proposed to supply the city with water by means of machinery. In order to prove his skill, Maurice made an experiment before the lord mayor and aldermen, by throwing the water over the steeple of St. Magnus's church, with whicli they were so much pleased that they granted him the use of the Thames water, and one arch of London Bridge, on lease for 500 years, on condition of paying 10s. yearly to the city. He tlien erected his water-works on the north side of the river ; and, finding that he luid not room enough, he procured, two years afterwards, the grant of another arch of the bridge for a similar term. By these works, which .-supplied a considerable portion of the east of the city, Maurice and his

descendants made a large fortune. In the year 1701 the proprietor sold his right in the London Bridge water-works for .i38,000 to Richard Soams ; who, obtaining a renewal of the leases from the city, and t!ie libeity of occupymg two more arclies of tiie bridge, divided tlie property into ,‘500 shares of £500 eacii, an operation by wiiicii he made a clear profit of above £100,000.

During the reigns of queen F.lizabeth and king James I. acts of parliament were granted for the better supplying of the metropolis with water; but they were not carried into eti’ect, until Mr. Hugh Middleton, a n;itive of Denbigh, and goldsmith of London, undertook to bring the water

from Chadwell and Amwell, near Ware in Hertfordshire, a distance of upwards of twenty miles. The work was begun on the 28th of February, 1608, and concluded in five years. The course of the river extends about thirty-nine miles, being in a serpentine direction, and there are upwards of 200 bridges over it. The great reservoir, called the New-River Head, is at Islington, into which the water was first let in, on Michaelmas day 1G13, the day on which Sir Thomas Middleton, the brother of Sir Hugh, was elected mayor. On the opening of the basin, the lord mayor, the lord mayor elect, the aldermen, &c., rode to see it; when a company of sixty laborers, well and uniformly clothed, preceded by drums, and accoutred with spades, shovels, and pickaxes, marched twice or thrice round the cistern, and tlien presented themselves before the visitors, when one of the workmen delivered an address, written for the occasion, which tlms concluded : —

Now for the fruits ; then flow forth, precious spring, So long and dearly sought for, and now bring Comfort to all that love thee ! Loudly sing. And with thy crystal murmurs struck together. Bid all thy true well-wishers welcome hither.

At the conclusion of these words, ‘ the flood-gate flew open, and the stream ran swiftly into the cistern, with drums and trumpets sounding, and guns firing in a triumphant manner.’

The main pipes of the New River company were originally of wood, but they are now almost entirely of cast iron. A large basin has been constructed in the Hampstead-road, which receives its water from Islington, in order to sup])ly the western parts of the town. The number of houses supplied by the New River is upwards of 56,000, which is continually increasing, particularly since the water-works

have been recently taken down at London Bridge.

The New River was, however, long an unprofitable speculation, and, for nineteen years after it was finished, the seventy-two shares, into which it was divided, did not yield a profit of more tlian 12.s-. each. These shares, in the course of time, were sold as high as £l4,000 each ; and although, at the present moment, they are unproductive, in consequence of the great expense incurred in substituting iron for wooden pipes, yet they are considered valuable. As for the projectorof this great work, his only reward wa'» a ruined fortune, and a barren title. Mr. Middleton was created a baronet, and there is an entry in one of the Cottonian MSS. in the British Museum, stating, that the fees of the creation were to be remitted to him.

There are several other water comjianies in London and its suburbs, the relative importance of which will be seen from the (piantity iif water su])plied by each, which we are enabled to collect from the evidence adduced before a commil-tee of the house of commons in 1821 .

In 1B08 and 1809 the New River, on an average of tlic two years, supplied London witii 78,1 10,000 hhds., or 4,2 17,940,000 galls, of water annually, to 59,058 houses and buildings, occupied by 42,000 tenants, wlio paid an annuii;

rental to the company of £80,782. In 1820 the New River, incliKling the York Building water-works, establislieJ in the reign of Charles II., supplied 67,000,000 hhds. to 52,082 houses, and 38,335 tenants, on a rental of £68,297.

In the same year the Chelsea water-works, which were formed in 1721, supyjlied 7,533,900 hhds. ; the London Bridge works 26,322,705 ; the East London works 29,516,333; the Grand Junction water company 13,104,100; and the West Middlesex works 11,904,000. These form an aggregate, in the year 1820, of 155,381,038 hhds. of water, supplied to 120,732 houses, and yielding

a re.ntal of £175,890 annually. So effective is the machinery of these water-works, that they can force water into the rooms of every house, to the height of 100 feet if required.

The (locks. — Connected both with the commerce of the metropolis and the river is the establishment of closed docks, which have been of the most decided service to the revenue and trade of the country — to quote the words of the report of the parliamentary committee on the West fndia docks, in June 1823, ‘ the value of these institutions, whether in giving facility to commerce, in securing the collection of the revenue, or in protecting the interests of the merchants, is so unquestionable, that it would be an unnecessary waste of time to enter into any detailed discussion on the subject.’

The insecurity in which the property of the river was placed, and the daring plunder committed on it, which has already been noticed, no doubt first led to the formation of the commercial docks. The most important of these are the East India, the Vv’est India, and the London docks; there is also the East Country dock at Rotherhithe, near the king’s victualling-office, which is appropriated to the Baltic and American trade, the fisheries, &c. It will contain eighty ships.

The West India docks are situated in that peninsular part of the environs of London called the Isle of Dogs, and they communicate with the Thames at Limehouse on the west, and at Blackwall on the east. They were commenced on the 12th of June 1800, and finished in August 1802. The docks, and the ground belonging to them, occupy an area of 204 acres. The dock for unloading inwards is 2600 feet long, 510 ■wide, and twenty-nine feet deep ; it is built round with brick-work five feet thick: the dock for loading outwards is similarly constructed, and of the same dimensions except in the width, which is only 400 feet narrower than the other. The entrance basin at Blackwall, which communicates by means of two locks with tlie import and export docks, occupies a space of six acres : the basin on the Limehouse side, which also has a communication with both docks, is somewhat smaller. The warehouses which surround the docks are necessarily of immense magnitude, and they are built in a style of neatness that would render them an ornament to any part of the metropolis. The expense of these docks, which have rendered an inestimable service to its trade, was £1,200,000.

During the construction of these docks, the ballast which formed a barrier between the dock

and the Thames was driven away, and, the water rushing in from the river, several persons were killed. The largest dock was completed and opened for the reception of the water on the 3d of August 1802; and such is the extent of this artificial lake, that, although the water flowed in at the rate of from 500 to 1000 gallons in a second, yet the great dock was not completely filled a sufficient depth until six o'clock the next morning, being ten hours. On the 3d of September the grand ceremony of receiving the first ship took place, when the Henry Addington, a new-built West India vessel of 350 tons burden, was towed in by ropes amidst the cheers of at least 10,000 spectators.

The proprietors of the West India docks are an incorporated body, under the title of the West India Dock Company, and they are reimbursed by a tonnage on the vessels that enter the docks, and a per centage for landing, weighing, and warehousing the cargoes. Near the docks is a school, established by the company for the accommodation and instruction of apprentices in the West India trade during tlie time that the vessels are in dock. The boys are taught reading, writing, and arithmetic, and the elementary principles of mathematics and navigation.

Parallel with the docks there is a canal, which enables vessels to save a distance of a mile and three quarters by avoiding the circuitous navigation round the Isle of Dogs. This canal, which is three quarters of a mile in length, and 200 feet in width, was cut pursuant to an act of parliament passed in 1799, at an expense of £133,849 12s. Qd. For the first three years after it was formed a small duty was charged on all vessels that passed through it.

The East India docks are farther down the river than the West India docks, though at no great distance from them : they consist also of an import and an export dock ; the former, covering an area of eighteen acres and a half, is 1410 feet long, 560 wide, and thirty feet deep; the latter, which is of equal depth, is 780 feet long, 520 wide, and covers a space of nine acres and a half. The entrance basin occupies an area of two acres and three quarters. The largest dock is sufficiently capacious to admit at the same time twenty-eight East Indiamen, with double that number of smaller vessels. When the goods are landed, they are conveyed along the East India dock and Commercial Roads to the com[)any's warehouses in covered waggons, which are well secured against all depredations. The London dock, situated in the parish of St. John, Wapping, was formed for tlie same purpose as the East and West India docks — the facilitating tlie unloading of vessels, and the safe custody of the cargoes. This dock, which is not confined to any particular branch of commerce, is 1262 feet long by 699 wide,

and in depth twenty-nine feet. It is capable of containing 200 sail of merchantmen, and was constructed at an expense of £1,200,000. The dock, which is enlereil tlirough a basin, opposite Wapping Old Stairs, capable of containing several sail, was opened on the 1st of February 1805, when the Perseverance of Liverpool, the oldest vessel in the Opoito trade, decorated witli the flags of all

nations, not excepting the French, with vvliom we were at war, sailed majestically into the dock, ■whicii is nearly surrounded by a quay of 100 feet in width. The warehouses are immense, particularly two appropriated to the reception of tobacco, which are under the direction of the officers of the customs. One of these warehouses is 762 feet long and 160 wide ; the other 250 feet long and 200 wide. Underneath these warehouses are cellars, in which there are seldom le«;s than 7000 pipes of wine. The London dock water is said to be very injurious to health, and a modern historian of tlie metropolis gravely assures us, that it ‘ never fails of provmg fatal to persons long immersed in it,’ a quality not peculiar entirely to the London dock water : certainly, however, the verdigris generated here will act as a poison on the stomach ; and it is remarkable that a person, who was only eight minutes under water, was not long since drowned.

The Bridges. — At what period a bridge was first thrown over the Thames, between London and Soutlnmik, seems doubtful. The first notice we have of its existence occurs in the laws of Ethelred IL, which fix the tolls to be paid on all vessels coming up to the bridge. William of Malmsbury also mentions this bridge, in his account of the sieges which the city sustained on the invasion of England by the Danes, under Sweyn and Ca-nute. That the bridge was erected between the years 993 and 1016 is inferred from the circumstance, that in the former year, Unlaf tiie Dane is said to have sailed much higher up the river ; and that, in the latter year, Canute’s progress was impeded by it.

The first bridge, which consisted entirely of timber, was not, as Stowe afiirms, constructed by the convent of St. Mary Overy, but at the

public expense, and in a different place from the present one, as we learn from a charter of William the Conqueror to Westminster Abbey, which mentions it as directly opposite to St. Bo-tolpli's gate and wharf. The bridge was burnt in 1136, but not totally destroyed; it was repaired, but decayed so rapidly, that in the year 1163 it was taken down, and entirely rebuilt of timber. The expense of keeping it in repair was, however, so great, that in 1176 a new one of stone was begun to be erected on the present site. The most active promoter and superintendent of this building was a priest, called Peter of Colechurch, who was well skilled in architecture, and who has hence acquired the credit of being its founder; but the king, Henry ll.,tlie archbishop of Canterbury, and several merchants of London, contributed largely to it. The aii! granted by Henry IL to the bridge was in the form of a tax on wool, levied for the purpose; and hence arose a vulgar tradition, that ' London-bn(lˆ;e was built on woolpacks.' It was constructed on piles, principally of elm, which have remained for six centuries without material decay. On the piles, long beams of timber, ten inches thick, were placed, strongly bolted together, and the lowermost stones were embedded in pitch, in order to resist the water.

In 1202 king John appointed Iscnbcrt of Xainctes to finish the. bridge, Peter of Colechurch being either dead or incapaci fated from

attending to it. The same monarch gave the profits and rents of several plots of ground, sold or let for building, towards the building and repairing of the bridge ; and, during the same reign, the master mason built a large chapel on the centre arch, at his own expense, which was dedicated to St. Thomas a Becket.

The erection of chapels on bridges is of the highest antiquity, and, no doubt, originated from the custom of making sacrifices on bridges, whence Plutarch has derived the word Pontifex. The most remarkable bridge of this sort was at Droitwich, where the high road passed through the chapel, and divided the congregation from the reading-desk and pulpit. The priests attached to the chapels were commissioned, as an indispensable part of their office, to keep the bridge in repair; and hence, although Stowe is wrong in stating, that London Bridge was built by the priests of St. Mary Overy, it is not improbable that they were enjoined to repair it, in accordance with the ancient custom. The chapel on London Bridge was at first endowed for two priests and four clerks, and in the reign of Henry VL it maintained four chaplains.

Four years after the bridge was finished, it was the scene of a very tragical accident. In the night of the 10th of July, 1213, a fire broke ouf in Southwark; when the bridge became crowded with people, all hastening from the city, either to witness or extinguish the conflagration. The flames, catching St. Mary Overy 's church, were, by a strong southerly wind, extended to the Southwark end of the bridge : those who were foremost in the advancing throng endeavoured, but vainly, to fall back from the destroying element; the multitude on the London side, ignorant of the danger, continued to press unyieldingly forward, and, in this tumultuous conflict, numbers were trampled to death ; others leaped into the river, to find only a watery grave; while many more perished miserably m the flames. Not less than 3000 lives are stated to have been lost on the occasion. It is supposed, that at tliis period the only building on the bridge was the chapel of St. Thomas a Becket ; nay, it has been said, that even as late as 1395, ' the bridge, at that time, was only coped on each side, and not replenished witii houses.' (Seymour and Mar-chant). That, at least, the last statement is erroneous, is, however, quite certain ; for among the records, preserved in the tower, there are letters patent of Edward I., by which, in 1280, he authorises a collection to be made throughout tiie realm, for the repair of Loudon BridgC; which is there described to be in such a ruinous condition, that ' unless speedy remedy be put, not only tiie sudden full of the bridge, but also the destruction of innumerable people dwelling on it, may suddenly be feared.'

The subscriptions obtained under the letters patent of Edward 1. being found inadequate to the execution of the repairs wˆanted, Edward,, in 1281, ordered a toll to be levied, during three years, on all jicrsons crossing the bridge with merchandise, and on ' every saleable pack.'

Whenever it was necessary for the sovereign to cross the bridge, he was treated with great magnificence by the citizens. Uichard 1 1, and

his young queen, Anne of Boliemia, were met liy the citizens ' at the gate of the brigge of Lon-flon,' says an old chronicler, ' where tliey presented him with a mylk-white stede, sadled and bridled, and

trapped with cloth of gold and rede parted togedre ; and the (juene, a palfry all white, and in the same way trajjped with wliite and rede, while all tlie condites were rounen with wyne, bothe whyte and rede, for all maner of peple to drynke of.'

In 1282, on the breaking up of the river after a great frost, five arches of the bridge were carried away ; and, though these appear to liave been immediately restored, yet in 1289 the bridge was again so much decayed, that people were afraid to pass over it. A new collection was, therefore, made tiirougliout the kingdom for its repair, and that yiehiing, as before, but little, it was found necessary, in 1298, to revive the toll on goods and passengers.

The bridge was now so encumbered with houses, that the broad way between them did not exceed twelve feet in breadth ; yet it appears to have been employed as a sort of joint mart for the inhabitants of tlie city and those of the borough. The first order of common council upon record is one of 1277, prohibiting ' any market from being held on London Bridge.' What had been a theatre for the quarrels of costermongers, became afterwards the chosen spot of jousts of a higher order. On St. Geo'ge's day, 1395, there was a grand jousting match upon London Bridge, at which the lord Wells engaged to maintain the renown of England against all comers. A stout Scotsman, David, earl of Crawford, entered the lists, and at the third course, threw the English ciiampion out of his saddle.

In 1471, when Falconbridge was repulsed in his attempt to seize the city, several houses on the bridge were burnt down by the disappointed invaders. The next remarkable conflagration took])lace in 1632, when forty houses were destroyed. The Thames being frozen over at the time, water could not be obtained, and the fire continued burning in tiie vaults and cellars upwards of a week. All the houses destroyed on this occasion had not been replaced, when the great fire of 166G caused a still greater devastation.

Amidst the general improvements for which that calamity paved the way, the bridge was not neglected. The whole of the houses, from one end to the other, were taken down, with the exception of one house at the north end, which had been constructed in Holland, and was called the Tower of London Bridge, or the Nonsuch, from its not having a single nail in it, but being pinned together with wooden pegs. New ones were erected of a uniform breadth and elevation ; and three vacancies left at ecjual distances, from which a view of the river might be obtained. The Nonsuch occupying the whole breadth of the bridge, the archway under it was raised to the height of two stories, and over

it the following inscription was placed : —

Anno MUCLXXX'.,et primo Jarobi 11. Tlegis.

This street was opened and enlarged from twelve to

the width of twenty I’eet.

Sii James Pniith, knight, Lord iMayor.

The bridge itself consisted, as at present, of nineteen arches, the highest of which rises sixty feet above the water level.

The three widest of these arches used to be called The Navigable Locks, from their being the only ones which afforded an easy passage for vessels. The one nearest to the London side was particularly distinguished by the name of the Rock Lock, m consequence of a strange imagination among the vulgar, that there was a growing or vegetating species of rock beneath the water at this spot. It appears, from many subsequent observations, that this growing rock was nothing more than a collection of fallen materials ; some former arch or coping — which, by serving as a nucleus for the deposits of millions of tides, has given rise to the popular and metaphorical notion.

The arch nearest of all to the London side was formed of a drawbridge; and, as late as 1722, such were the ideas which then prevailed of the means by wliich the invasion of enemies is best resisted, that the corporation did not grudge the expense of laying down a new one, nor the pub-lic the interruption occasioned by this idle project for adding to the security of the capital.

Besides the Nonsuch Tower at the city end of the bridge, there was another at the Southwark end, and to each there were gates with posterns for foot passengers. It was on the last of these towers that the heads of traitors in later times were exposed, when the citizens of London, falling into a distaste for such marks of civilisation, chose to remove them from their own end of the bridge. As late as 1598 Ilentzner, the German traveller, relates, that he counted on it above thirty heads.

In 1756 an act of parliament was obtained for improving the bridge, and a temporary wooden bridge was constructed while the repairs were going on ; but, with the fate common to wooden bridges, the latter was destroyed by fire the lltii Aprd, 1759. The two centre arches

of the stone bridge were now thrown into one ; and the remaining houses, which were principally occupied by pin and needle makers, were taken down, and the bridge put into that state in which it now appears.

On the opening of the great arch, the excavation around and under the starlings was so considerable, that the bridge was thought to be in great danger of falling. Mr. Smeaton, the engineer, was then in Yorkshire, but an express was sent for him, and he arrived with the utmost despatch; when the apprehensions of the bridge falling were so general, that few persons would pass over or under it. Mr. Smeaton having ascertained the state of the starlings, and called the committee together, recommended that they should re-purchase the stones that had been taken from the middle])ier, then lying on Moorfields, and throw them into the river to guard the starlings. Nothing shows the fears entertained for the stability of the bridge more than the alacrity with which his advice was adopted. The stones were le-purchased that day, and on the following morning the work commenced, which in all probability preserved the bridge from falling, and secured it until more efleclual methods could be.

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taken. We need hardly add, that it is now under sentence of deatli ; and that its successor is likely to claim our attention before tiiis work closes.

London Bridge is tlie greatest thoroughfare across tiie river. When the Southwark Bridge was projected, the directors attended one day in July, 1811, in order to ascertain the extent of this thoroughfare. On that day 89,640 foot passengers, 769 waggons, 2924 carts and drays, 1240 coaches, 485 gigs and taxed carts, and 764 horses, passed over it.

It is in no small degree surprising that a city like London, which had grown to such magnitude and opulence, and extended for miles along both banks of a mighty stream, should, till so late a period as the middle of last century, have had but one bridge across the river. It makes probable a statement of Strype's, which seems at first sight very exaggerated, namely, that in liis time there were no less than 40,000 watermen upon the rolls of the watermen's company ; now they do not much exceed 2000. The great inconvenience which the inhabitants of Westminster suffered from the want of a bridge at that end of the metropolis, led them at length, in 1734, to apply to parliament for powers to erect one from New Palace Yard to the opposite shore in the county of Surrey. Strong opposition was made to the measure by the city, the inhabitants of Southwark, the watermen, and the west country bargemen, who were all liable to suffer in their peculiar interests by such an erection ; but the interest of the public very properly prevailed, and the act was granted. The first stone of the bridge was laid on the 29th of Januai'y, 1738-9, by Henry, earl of Pembroke, and the last on the 10th of November, 1750, by Thomas Lediard, esq. It is from wharf to wharf about 1223 feet long; the width is about forty feet, and on each side there is a high balustrade of stone, with semi-octangular alcoves, to serve as places of shelter from the rain. The free water way under the arches extends to 870 feet ; the arches are fifteen in number ; the centre one is seventy-six feet wide; the others diminisli in width by four feet equally on each side ; the two smallest ones close in shore to tiie abutments are each about twenty-five feet wide. The whole edifice is of stone, and rests upon a gravel bed, the piers having been sunk for tiiat purpose to from five to fourteen feet under the bed of the river. When the work was nearly finished, in consequence of tlie incautious removal of some gravel

from the bed of the river, immediately joining one of the piers, it sunk so far as to damage the incumbent arch to such a degree, tliat it was thougiit jiropor to have it pulled down and rebuilt. But for this interruption, ‘the bridge would have been finished three years earlier. The total expense of the bridge, which was defrayed by])arliament, amounted to £389,500. Tlie architect was an ingenious Pre.ichman of the name of Labelyc.

While Westminster Bridge had no rival but that of London, or only Blackfriars, it was esteemed one of the noblest structures of the kinfl in the known world ; but sir.ce the erection near it of Waterloo Bruise, it seen.s to have lost

much of the grandeur which it possessed ; and, although not a century old, it has suffered greatly from the decomposition of its stone.

When a person whispers against tiie wall of any of ttie alcoves of this bridge, the sound is very distinctly conveyed across to the corresponding alcove on the opposite side, notwithstanding all the noise occasioned by the passing of carriages, &c.

Blackfriars, originally called Fitt’s Bridge, was begun in 1760, and occupied nine years in its erection. ‘On the last day of October,’ says an inscriinion on a tin plate on the foundation stone of the edifice, ‘in the year 1760, and in the beginning of the most auspicious reign of George III., Sir Thomas Cliitty, knigiit, lord mayor, laid the first stone of this bridge, undertaken by the common council of London (in the height, of an expensive war), for the public accommodation and ornament of the city; Robert iVIylne being the architect; and that there may remain to posterity a monument of this city’s affection to the man, who by the strength of his genius, the steadiness of his mind, and a kind of happy contagion of his probity and spirit (under the divine favor and fortunate auspices of George II.). recovered, augmented, and secured the British empire in Asia, Africa, and America, and restored the ancient reputation and influence of his country among the nations of Europe ; the citizens of London have unanimously voted this bridge to be inscribed with the name of William Pitt.’ How evanescent a thing is this city affection! Of all the thousands who now pass this bridge daily, how few are aware of the fact which this inscription records ! The comyˆliment which the citizens of 1760 unanimously voted, the citizens of later times have refused to confirm, and Pitt’s bridge is now styled, beyond all hope of alteration, Blackfriars.

The expense of this bridge was small when compared with that of Westminster, and still more with other bridges erected at a later period. The total cost was only £260,000, which was all defrayed by a toll imposed on passengers for several years. Blackfriars bridge is shorter and not so high as Westminster, but the differences are not so great as to account for the latter hav-ing cost above £100,000 more. The length of this bridge from wharf to wharf is 995 feet; and its width forty-two. It has nine elliptical arches^ the centre one of which is 100 feet wide. Over each pier there is a square recess, supported by Ionic pillars and pilasters, which have a very light and ornamental effect on the ajipearance of the bridge, when viewed from the river. Blackfriars, unlike Westminster Bridge, rests on piles driven under water, and cutoff level with the bed of the foundations, by a machinery of Mr. Mylne the architect's invention.

The erection of this bridge was attended with corresponding im])roveinents of great importance to the adjacent parts of the metroi)olis. What is now called Bridge Street, one of the most spacious and elegant in the metropolis, was of old the channel of one of its greatest nuisances; anil thither, as to the veriest sink in town, has Pojie made the genius of Dulness dismiss hei children : —

I'y]5r;dcwell all dascend,

(^As morn'iug prayer and flagellation ^nd), To where Fleet ditch, with disemboguing streams, Kolis the large tribute of dead dogs to Thames ; Tiie king of JJykes ! than whom no sluice of mud AVith deeper sable blots the silver flood.

In 1734 and 1737 this ditch had been arclied 'iver as far as the obelisk at the commencement of the present Bridge Street; and the archin < 4 being; now continued onward to the bridge, every visible trace of the ' sluice of mud' was removed. Aliogetiier, this forms by far the finest en trance into the metropolis. When a strange: ascends the brid^je, the views of the city which burst upon him on either hand are singularly grand and picturesque. Before iiim, on the right, he beholds the

mighty dome of St. Paul's, and beyond it spires and turrets thickening into a very forest towards the east; on the right, the lofty terraces of Somerset House and the Adeiphi, Westminster Abbey's venerable towers, and Waterloo, the first of bridges. As the opening of tliis bridge entirely ruined a Sunday ferry, established at this place for the benefit of the poor of the fraternity of watermen, the bridge committee very handsomely agreed to transfer £l 3,650 consolidated 3 per cents, to the rulers of the company by way of recompense for the loss : the interest of which is now appropriated to the same uses as the profits which were derived from the ferry.

To defray the expense of lighting, watching, cleansing, and repairing this bridge, there is a particular fund set apart, consisting of a small balance of consolidated 3 per cent, annuities, left after payment of the expense of erecting the bridge, the rent of some premises, and £l5,000 raised by bonds in the credit of the Orphan's Fund, by virtue of an act of the 52 Geo. III., and assigned to the chamberlain for this special purpose. The revenue of this fund in the year 1821-2 was £882 12s. lOˆc/. ; the expenditure only £522 IG.s". 6d.

It has been well observed, of Waterloo Bridge, that it is ' a work not less pre-eminent among the bridges of all ages and countries, than the event which it will commemorate is unrivalled in the annals of ancient or modern history.' The celebrated Canova, when on a visit to this country, declared that it was worth a journey from the remotest corner of the earth to behold it. M. Dupin, another intelligent foreigner, describes it as a monument worthy of the Sesostrises and the CsEsars. The original projector of this bridge was Mr. George Dodd ; but quarrelling with the company, who subscribed the capital to carry the plan into effect, he was put aside as soon as real business commenced, and the execution of the work confided to Mr. Rennie. It was at first proposed that it should be of wood, and that with the profits arising from a toll on this bridge, which were expected to be immense, one of stone should be afterwards erected ; but, after struggling for tliree sessions to carry a bill to this effect through parliament, the company found the opposition to it so strong, that they abandoned the project, and, having agreed to undertake the building of one of stone, obtained the necessary powers. For this purpose they

increased their capital from .£'100,000 to .£500,000 ; and so sanguine were tliey of being still amply remunerated by the tolls, tiiat the additional capital was all raised among themselves, and shares were at

a guinea premium next day. The expense of the building, however, so much exceeded the estimate, that the company was under the necessity of raising about £500,000 more, by means of ammities on the tolls ; and any chance of a dividend on the original shares has been thus postponed to so remote & period, that they have sunk in the market to a merely nominal price.

Waterloo, or Strand Bridge, as it was first called, consists of nine elliptical arches, each ot" 120 feet span, and thirty-five feet elevation. It is of the same width exactly as Blackfriars, and longer within the abutment? than Westminster bridge by nineteen feet. The roadway is perfectly level, and in this respect the bridge has a decided advantage over every other on the river. The arches and piers are built of large blocks of granite, with short counter-arches over each pier. The adjustment of the equilibrium throughout the whole structure is said to be singularly perfect, the curve of equilibrium passing every where extremely near to the middle of the blocks. In building the arches, the stones were rammed together with great force, so that, on the removal of the centres, none of the arches sunk more than an inch and a half. In short, ' the accuracy of the whole execution seems to have vied with the beauty of the design, and witli the skill of the arrangement, to render the bridge of Waterloo a monument, of which the metropolis of the British empire will have abundant reason to be proud for a long series of successive ages.'

The rapidity with which this great work was erected is not the least remarkable feature in its history. The foundation stone was laid on old l\lichaelmas-day in 1811, and on the 18th of June, 1816, the first anniversary of the battle of W'aterloo, the glorious memory of which it is designed to commemorate, it was opened with great pomp by the prince regent in person, accompanied by his royal brother, the duke of York, the duke of Wellington, and a long train of persons of the first distinction.

]"uuxhaU Bridge, near Vauxhall Gardens, and hence called 'auxhall Bridge, was the first iron bridge over the Thames, and die project of Mr. Ralph Dodd, the father of the projector of Waterloo Bridge; but, alike in their fates, he also was deprived of the satisfaction of executing hi? design. On his dismissal, in consequence of some disagreement with the committee of persons who subscribed for its erection, the aid of Mr. Rennie was called in, and an act of parliament procured for the construction of a bridge according to a design which he proposed, and which was universally approved of at the time. Before operations commenced, however, a new plan was brought under the notice of the committee by Sir Samuel Bentham ; and, after

much discussion, and, it is said, not a little intrigue, it was resolved to adopt it in preference to the other. Mr. Rennie on this withdrew from any further concern in the undertaking, and the work was begun under the direction of Sir Samuel Ben-LONDON.

iham. In a short time, however, the successful knight was dismissed in liis turn, and it was left to Mr. J. Walker, an engineer of eminence, to complete the structure. The first stone was laid in 1813 by prince Charles, now duke of Brunswick. It is said to have cost £300,000. See Iron Bridges.

Southwark Bridge. — The great extension of buildings in the borough of Southwark, St. George's Fields, and other parts on the south of the river bearing immediately on London Bridge and Biackfriars, and consequent increase in the thoroughfare over these bridges, suggested the expediency of erecting an intermediate one from the bottom of Queen Street, Cheapside. The projectors of the undertaking were at the pains to obtain an accurate account of the persons, veliicles, and horses, that passed over these two bridges in the course of a day, and the following were the returns; the first taken on the 16th of October, and the second on the 22d of October,

1810.

London Bridge.

Persons …. 56,180

Coaches and Chaises . . 871

Gigs and Taxed Carts . . 520

Waggons …. 587

Carts and Drays … 2,576

Horses 472

Blackfriars Bridge.

Persons …. 37,280

Coaches and Chaises . . 626

Gigs and Taxed Carts . . 526

Waggons …. 389

Carts and Drays Horses .

1,269 433

Calculating that one-sixth of these passengers would prefer the new bridge, the projectors saw in the toll that migiit fairly Ije imposed an ample return for the capital required for its erection. A toll of Id. from that proportion of footpas- sengers alone would produce upwards of £60,000, which would be more than sufficient to pay fifteen per cent, on a capital of £400,000, for which sum Mr. Rennie estimated that a bridge of cast-iron with stone piers might be executed, which, though of less costly materials, would rival in magnificence and splendor that of Waterloo itself.

An act of parliament was accordingly obtained, in 1811, for the erection of the proposed bridge ; but a provision was inserted, that operations should not be commenced until £300,000 of the £400,000 admitted to be required were subscribed. The unexpected calls which had been made on the Waterloo Bridge Company had however so far damped the ardor for such speculations, that three years elapsed before the requisite sum was made up, and die work actually begun.

Tiie Southwark Bridge consists of three im-Ti'icnse arches of cast iron; the span of the centre one is 240 feet, and of the two side ones 210. Tlie abutment is of fine masonry connected by dowels to prevent its sliding; and rests on grat-ings of timber su])ported by oblique piles. The piers stand on fnundations nine or ten feet 'rtelovv the present bed of the river, and are abun-

dantly secured by a flooring of timber placed on piles. ' Wˆhen we

consider,' says M. J3upin, ' the extent and elevation of the arches of the bridge, and the magnitude of the elements that compose it, what an idea does it not give to us of the power of man! We exclaim involuntarily, while we gaze on the chef d'oeuvre, ' Behold the Bridge of Giants !'

The subscribers are allowed by their act of incorporation to receive ten per cent, annually on their shares ; and the remainder of the receipts is to be laid by and to accumulate until it shall become sufficient to pay each proprietor double the sum he subscribed, after which the bridge is to be made free to the public.

The Tower. — Antiquaries are very eager to give the tower of London a Roman origin ; and from the circumstance of an ingot of silver having been discovered, in digging the foundations for a new ordnance-office, have inferred, that it was not only the capital fortress of the Romans, but their treasury and their mint. One historian, more minute than the rest, even considers this identical ingot as a portion of the last treasure sent into Britain for the payment of the Roman forces ! That the Romans might have fortified tiie banks of the Thames, on this spot, is by no means improbable ; but there is not the slightest evidence that they ever did so; nor is there any proof of a building having been erected here, until the time of William the Conqueror, who built the White Tower. In an age when ecclesiastics were the principal architects, and bishops exchanged their crozier for a baton, and marched at the head of armies, it was not surprising that those who possessed the talents should employ them in military architecture. Hence the tower was actually built by Gundulph, bishop of Rochester; but so obscure is every thing connected with the early history of this fortress, that even the date of its erection is unknown, though it must have been begun about the year 1080.

Whether any thing more than the White Tower was built in the reign of William seems doubtfid ; but his successors, William Rufus and Henry I., are known to have made considerable additions to the original structure, and the for-mer surrounded tlie tower witli a wall in the year

1096.

Though the first object of the tower might be as a fortress, yet its history is much more interesting as a palace and as a state])rison. As a fortress, it has never had to defend itself against a foreign enemy,

though in the domestic troubles, which at an early period of our history agitated the metropolis, the tower was always considered of importance, and its garrison sometimes called into action ; and Mandeville, in whose family the custody of the tower was at first made hereditary, defended it successively against tiie Londoners in the time of Stephen, and even made a sortie from it as far as Pul-ham, carrying off the bishop of London from his palace.

Longcham[)s, bishop of I'.ly, who was made keeper of the tower during the absence of Uicliard I. in the Holy Land, found it a place of refuge when his tyranny had roused the no-

bles to resistance. He increased its fortifications, and surrounded tiiem witii a deep ditch ; and, luid he not been as cowardly as he was tyrannical, might have maintained a long resistance ; he liowever surrendered the fortress, and sought personal safety in flight, disguised as a female. Prince John, who had assisted the barons in overthrowing the despotism of Longchamps, assuming the tyrant liimself, had no sooner gained the throne than he had to defend tiie tower against them. At the commencement of hostilities, the barons, to whom the citizens had given the charge of the capital, laid siege to the tower, which, though feebly garrisoned, defended itself until the promise of a charter of liberties was wrested from the reluctant monarcli. The archbisliop of Canterbury was appointed to hold the tower, in trust, until the king fulfilled his promise, and signed Magna Charta. In his subsequent attempts to violate the com-jiact he had signed, he was not able to gain possession of this fortress, which was kept by the archbishop until the arrival of prince Louis of France, who had been invited to the English throne, and to whom the tower was given up. While .lohn lived, and England was torn by intestine wars, the French prince entertained hopes of the crown ; but, on the death of that weak and perfidious monarch, loyalty to the native princes returned, and Louis was compelled to give up the tower to Henry HL who augmented its fortifications with an additional line, and built the great hall, the royal chapel, a state chamber, &c. This monarch was

anxious to make it suitable as a royal residence, by the splendor and convenience of its apartments ; lie was equally careful to render it secure, as a place of retreat from the growing turbulence of the barons. Some works of considerable magnitude had been raised, and were barely completed, when, on St. George's day, in the year 1240, the foundations gave way, and the walls and bulwarks, with a grand portal, fell down ; they were immediately rebuilt ; when, if we are to believe Matthew Paris, on the following year, and on the same day and hour, the whole again fell down.

All design of enlarging or strengthening the tower was now suspended for some time ; and indeed the king was unable to keep possession of it ; for in 1258 the parliament of Oxford wrested the sceptre from his feeble hands, and established a government of twenty-four barons, and seized upon the tower. The measure was, liowever, too violent, and the king resumed his au-ihurity ; but the tower was now rather a fortress, where he could defend himself, than a palace ; and he at length yielded to the commands of the refractory barons, by subscribing conditions more humiliating than even the parliament of Oxford had demanded. He yielded up all the castles and fortresses, and consented that all foreicners who were obnoxious to the twenty-four barons, who were thus reinstated in power, should be banished. The queen, who possessed more spirit than her husband, indignant at a treaty which banished aliens, (piitted the tower before the barons entered, and endeavoured to reach Windsor, where her son, prince Edward,

had a strong garrison of foreign troops. She left the tower in a barge ; but had scarely reached London Bridge, when a mob collected, and not only assailed her with the most indecent language, and cries of ' drown the witch,' but they actually pelted her with every thing they could lay hold of, which compelled her to return to the tower.

On the restoration of Henry to his authority, Otho, the pope's legate, fixed his residence in the tower, and had soon to sustain a very vigorous attack made by the earl of Gloucester, whose new insurrection again endangered the king's crown. Otho, assisted by the Jews, who had taken refuge in the tower, maintained the fortress until relieved by the king, who had marched from Cambridge, and, being joined by his son from the north, invested the city with 60,000 men. He threw succours into the tower, and carried off the legate ; but it was not until a large fleet of Gascoigns sailed up the Thames, and lay before the tower, that the rebels sued for peace, which was granted.

Edward L completed the fortifications commenced by his father, erected some additional outworks to the west, and enlarged the moat considerably. His son and successor, Edward IL, fearing attacks from the barons, who had become provoked by his favoring the oppressions of Piers Gaveston and the De Spensers, endeavoured to make the tower impregnable by additional fortifications, and by reinforcing the garrison. He did not, however, venture to de-fend it against the conspiracy of Mortimer and queen Isabella; but on their approach to the capital, having failed in rousing the Londoners to resistance, he left the tovver in charge of the bishop of Exeter. The citizens only waited for the king's departure, to display that rebellious spirit which was too manifest ; they took the tower by surprise, seized the amiable prelate, and several other persons attached to the king, and cut off their heads. The king was soon afterwards made prisoner, and the two De Spencers hung. The queen entered the city in triumph, accompanied by prince Edward, and a parliament was called, which transferred the crown from Edward II. to his son.

During the victorious reign of Edward III. the tower is only interesting on account of its illustrious prisoners, the kings of France and Scotland, who for some time were its inmates.

When tlie fatal insurrection of Gloucester threatened the power of llichard II., and the tower was blockaded, he invited the leaders to a conference within its walls. They refused, fearing they might be surprised ; until the weak monarch, in order to remove all suspicions, sent them the keys of the gates and the strong turrets, and offered to admit 200 armed men. The proposal was too favorable to be refused, and the rebels agreed to the conference. The king received them in a splendid pavilion, and agreed to go to Westminster, where he was compelled to submit to the execution of many of his most faithful followers : he soon saw the result of his weakness, and although he returned to the fortress it was only as a prisoner, to abdicate the throne to his rival.

Jack Cade, whose insurrection has already been noticed, on entering

London, attempted to besiege the tower ; but it was, at that time, defended by a strong garrison, and commanded by a brave governor, lord Scales, who was very active in putting down tlie insurrection.

During the wars between the houses of York and Lancaster the tower was vigorously besieged by the Yorkists. Sir John Wenlock carried on the siege on the eastern side of the fortress ; artillery was planted to the south, on the opposite side of the river ; and lord Cobham, with some city aldermen, conducted the siege on the west. Lord Scales, unable to defend the place against such a force, left the tower by water, but he was seized and killed, and his naked body thrown on the bank of the river.

From this time the tower ceases to be interesting as a fortress; for, during the civil wars, it was successively occupied by the different parties, without a sword being drawn or a shot being fired; and, when James IL quitted the capital, it was secured immediately for the prince of Orange. In times of alarm, measures have been taken for strengthening the city fortress, as was the case so late as 1792, when the garrison was increased ; ‘ several hundred men,’ says Bayley, in his History of the Tower, * were employed in repairing the fortifications, opening embrasures, and mounting cannon ; and, on the western side of the fortress, a strong barrier was formed with old casks, filled with earth and rub-ble : the gates were closed at an early hour, and no one but the military allowed to go upon the ramparts.’ But from the time that the tower was first erected, until the reign of queen Elizabeth, it was frequently used as a palace where our monarchs ‘ kept open household and frank resort,’ and where the royal court, and even parliaments, were held. From the tower all processions and pageants generally proceeded, whether it was to a tournament or a coronation : and the kings of England, from the reign of Richard IL to the accession of James IL, al-ways proceeded from the tower to Westminster to be crowned, in grand procession, with the exception of Charles I. who was prevented by the plague.

Gorgeous as the procession of queen Elizabeth appears to have been, it was surpassed at the coronation of Charles II. ; at least so Heath would have us believe, for he assures us, in his Chronicle, that ‘ all the world that saw it, could not but confess, that what they had seen before, was but solemn muminery to the most august, noble, and true glories of this great day : even the-vaunting French confessed their pomps of the late marriage with the infaiita of Spain, at their majesty’s entrance into Paris, to be inferior in state, gallantry, and riches, to this most glorious cavalcade from the tower.’

The fortifications of the tower occupy a space of about twelve acres, and consist of a citadel, or keeji, encompassed by an inner and outer ward, and surrounded by a moat supplied with water from the Thames. There are four entrances : the principal one is over a stone bridge at the south-west angle of the enclosure, where there was formerly a large drawbridge.

In addition to the two drawbridges on the south side, which separate the fortress from the quay, or terrace, on the banks of the Thames, there is also a private entrance by water, under a strong tower, which is called die Traitor's Gate, on account of its being the way by which state prisoners were brought to the tower. The barbican, which furmerly stood beyond the ditch on the west, no longer exists. Tlie entrance to the principal bridge is protected by a strong tower flanked with bastions ; and the fortress is so constructed as to aflbrd many precautions against sudden surprise, or a full capture of the place, even if the outer works should be occupied. The principal royal apartments were in the inner ward, which was formerly enclosed by a lofty wall of stone, about forty feet high, and from nine to twelve feet thick. It was also embattled and strengthened with thirteen small towers, most of which, as well as a considerable part of the wall, still remain.

The White Tower, though the largest, the most ancient, and the most complete, is by no means the most interesting part of this fortress. It is a massive edifice of a quadrangular form, 116 feet long, ninety-six broad, and ninety-two feet high ; it is embattled, and has a turret at each angle; one of these turrets was used by Flamstead as an observatory, previous to the establishment of the royal observatory at Greenwich. On the first floor of the White Tower are two large rooms, one of which is at present used as a repository for cavalry arms, and the other as a tool house. There are also a vaulted room and a cell evidently intended for ˆjrisons: and tradition relates, that in one of these cells Sir Walter Raleigh wrote his History of the World. Here, too, were confined several of the persons connected with Sir Thomas Wyat's rebellion in 1553-4, two of whom have left the following inscription on the sides of the door-way leading to the cell. * He that indvreth

TO THE ENDE SHALL BE SAVED. M. 10. R.

RvDSTON Dar. Kent. Ano. 1553.' — ' Be

FAITHFVL VNTO THE DETH AND I WILL GIVE

THE A CROWNE OF LIFE. T. Fane, 1554,' and underneath the inscription is ' T. Cvlpepper of Darford.'

On the second 'floor are two rooms used as armories, and an apartment commonly called Caesar's chapel, which Mr. Bayley, to wliose History of the Tower we acknowledge ourselves indebted, says, ' may justly be said to exhibit one of the finest and most perfect specimens of the Norman style of architecture now extant in this country.' When the sovereign held his court in the tower, this chapel was used for the private devotions of the royal family and household. A chajjlain regularly performed service here, whose salary, in the reign of Henry III., who greatly ornamented the chapel, was fifty shillings a year. The chapel, which was dedicated to St. John the Evangelist, has long ceased to be a sacred room, and is now ajipropriated as one of the rooms of the record office. The uppermost story of the White Tower exhibits a massive timber roqf of great antiquity. The jirincipal room on this floor is fraditionally reported to have been the council chamber; and

here tlie duke of Gloucester, afterwards llichard III., IS said to have ordered the execution of h)ru liastiiicjs, and the arrest of the arclibishop of York, the bishop of Ely, and lord Stanley.

In addition to the chapel already noticed, there is another in the fortress which was erected in the reign of Edward I., and was dedicated to St. Peter ad Vincula. It is a plain building quite destitute of ornament, and derives its sole interest from its being the cemetery where so many noble and distinguished personages at last found repose, after falling tlie victims of the tyranny or jealousy of Henry VIII., whose soul must have been appalled at the recollection of tlie cliapel of St. Peter, could the consciousness of guilt appal it.

Here rest the remains of the lovely Anne Boleyn, whose absence the monarch once declared, ' gave greater pains to his heart, than angel or

scripture could express;' and yet he sent her, and her innocent brother, George Boleyn, lord Ilochford (who is also buried here), to the block. If the spirits of the dead could be disturbed by the vicinage of crime, tliose of the queen and her brother might be so, for here the wife of the latter, the wretched agent of the king in tlieir death, is buried. She was an accomplice in tiie crimes of queen Catharine Howard, another of Henry's wives, and with her was executed and buried. The pious prelate, John Fisher, bishop of Rochester, who was reduced to the melancholy situation of begging food, a shirt, and other clothes, and who, when found to survive this treatment, was beheaded, sleeps in the same tomb as his patron, Tliomas Cromwell, earl of Essex, so long the favorite of the king ; and with them rests, in eternal peace, the virtuous Sir Thomas More, lord chancellor. All these w'ere sacrificed to the tyranny, jealousy, or caprice of Henry VIII. The last of the Plantagenets, Margaret, countess of Salisbury ; Ed-ward Seymour, duke of Somerset, lord protector, who was executed in 1552; and his brother, the haughty Thomas Seymour, baron Sudley, whom he had three years before sent to the block, sleep in peaceful amity, with the ambitious .Tohn Dudley, duke of Northumberland, the enemy of their house, who raised himself on the ruin of Somerset, and, like him, fell a victim to his ambition.

Here also reposes the victim of paternal and fraternal affection, Gerald Fitzgerald, ninth earl of Kildare, lord deputy of Ireland, who died of a broken iieart, a short time before his son, and five of his brothers, who were executed for participating in the treason with which he was charged.

Here also are entombed two of the victims of queen F.lizabeth's jealousy, Thomas Howard, duke of Norfolk, executed for aspiring to a union with ,Mary queen of Scots, and the once favorite Essex. The illfated James, duke of Monmouth, is also buried here, as are the three Scottish peers who joined in the rebellion of 1745; the lords Kilmarnoc, Balmerino, and T>ovat, who are all buried in the same grave. Tlie leaden plates which had been fixed on their coffins are still preserved in the chapels, and bear similar inscriptions, with the alteration

of the name and age of the parties. That on lord Lovat is

Frazer de Lovat

Decollat. Apr. 9, 1747

jlitat. suae, 80.

Se'oral officers of the Tower are also interred in this chapel, and, among others, that faithful guardian of the rej;aha Talbot Edwards, who defeated colonel Blood's attempt to steal the crown. The advowson of this chapelry is in the crown, and the annual stipend £ll5 5s.

In the lieutenant's house, a large and inconvenient old building, usually occupied by the major, or resident governor, there is a monument recording the gunpowder plot conspiracy.

The Bell Tower is of a circular form, with a curious vaulted roof. It was in this tower that Fisher, bishop of Rochester, was confined; and tradition, without any good ground, also marks it as the place of queen Elizabeth's confinement. It is now used as one of the domestic offices of the governor.

Connected with the Bell Tower, by a paved footway, is the Beauchamp, or Cobham Tower, which has always been one of the principal state prisons. It takes its double name from Tiiomas de Beauchamp, earl of Warwick, a prisoner here in 1397, and from the Cobhams, who were also its inmates for Wyat's conspiracy. The Beauchamp Tower consists of two stories, whose walls bear numerous records of the misery of those who were confined within them, and, destitute of books or paper, beguiled the time in inscribing memorials of their sufferings on their walls.

Among the distinguished prisoners in this tower was Philip, earl of Arundel, son of the duke of Norfolk, whose execution has already been noticed. The earl, who had been arrested on frivolous charges, and condemned on very questionable evidence, was reprieved by Elizabeth, and, after lingering ten years in confinement, died on the 19th of October, 1595, in the fortieth year of his age. His principal crime was that of being a staunch papist ; and it is said t'lat the descendants of the family consider him so much a martyr to the Roman Catholic religion, tliat a late duchess procured the skull, and had it enchased in gold, as a valuable relic. This earl has left several inscriptions on the walls of this tower, expressive of his innocence.

John Dudley, earl of Warwick, who died in this tower in 1553, has left

a piece of well executed sculpture near the fire-place, representing the bear and ragged staff (the family arms), surrounded with a border of oak sprigs, roses, and other flowers.

Another prisoner, Charles Bailly, an adherent of Mary queen of Scots, w-ho once suffered the tortures of the rack without making any disclosure of importance, has left some moral reflections neatly inscribed on the walls of his prison. Here Dr. Story, who was executed at Tyburn in 1571, has also inscribed his name on the walls. A singular circumstance attended his execution : he was cut down before his senses had left him ; and is reported to have

S'.ruggled with the executioner, while the latter was carrying into efiect that revolting part of tlie punislnnent of traitors (now repealed) tearing out his bowels. One of the charges against Dr. Story was, for consulting witli a noted magician agairst the queen's life, and for having cursed her daily in his grace at meals !

Pious ejaculations, moral reflections, worldly advice, and records of personal suffering, form the subjects of nearly all the inscriptions ; and only one individual has left a memorial of his attachment to the sex ; it is that of a prisoner whose name is only known from the circumstance, and of whose crime there is no record. A bleeding heart, with the initials, T. W. and P. A., are subcribed with the following words : ' Thomas Wyllingar goldsmith — My hart is yours till dethe.'

The Beauchamp Tower is traditionally said to have been the prison of Anne Boleyn and Lady Jane Grey; but, though there is no evidence to support it, it is by no means improbable, as it was long more used as a prison than any of the towers. Some of the state prisoners of 1794 were confined here.

The Jewel Tower, where the regalia are now kept, was formerly known by the name of the Martin Tower.

The Broad Arrow Tower is of smaller dimensions than the Beauchamp

Tower, but, like it, has been much used as a prison, and its walls contain numerous inscriptions, few of which are of interest; indeed, our prison albums are much less interesting than those discovered in the Bastile, on its demolition in 1789.

The Salt Tower contains a very singular and hieroglyphical device by one ‘ Hew Draper, a tavern keeper at Bristol,’ who was committed here on the 21st of March, 1560, on the accusation of ‘ one John Man, an astronomer, as a suspect of a conjurer or sorcerer, and thereby to practice matter against Sir William Lowe and my ladie ;’ a lamentable instance of the facility, with which life and liberty could, in those days, be sacrificed.

The Lanthorn Tower was of considerable antiquity, and formerly contained the king’s bed chamber. It communicated with the great hall, the scene of many a royal banquet in tlie reigns of our Henries and our Edwards. The Lanthorn Tower was considerably damaged by fire in 1788, and soon after its remains were taken down. The site of this tower, and of several other parts of the ancient palace, are now occupied by the buildings of the Ordnance office.

The Bloody Tower is thought to have derived its appellation from tiie circumstances of the two princes, Edward V., and his brother, Richard, duke of York, who are supposed to have been put to death here, by order of their uncle, the duke of Gloucester. Mr. Bayley, who doubts whether the royal brodiers were murdered in llic tower, and ridicules the idea of calling it bloody when the children were smothered, infers, that if tliey were put to deatli in this fortress at all, it must have been at a different part of it ; as tlie bones discovered in the time of Charles II., which, on account of their appearing to be tliose of children, had afterwards royal interment in

Henry VH.‘s chapel, were found on the south side of the \ hite Tower, which is at a considerable distance from the place where the deed is supposed to have been perpetrated. In addition to the towers thus described, there were several otliers, of some of which notliing but the foundation remains; nor is the history of tliem interesting even in their ancient state.

The history of the tower of London forms a black page in the early annals of this country, as, on account of the security it presented, the most illustrious prisoners have always been confined within its walls.

A lamentable catastrophe attended one of the first prisoners of royal blood that tenanted it. This was Gryffydd, the eldest son of Llewelyn, prince of Wales, who attempted to make his es-cape from this prison in 1244. He had formed a rope of the hangings, sheets, and table cloths, with which he let himself down from the top of the Tower; but, being a very corpulent man, the rope broke, and he was dashed to pieces. In the reign of Edward III., two sovereigns, taken prisoners in two distant wars, were confined in the tower — John, king of France, and David, king of Scotland ; both were treated with the highest respect, and even with delicate attention, by Edward, and his gallant son, the Black Prince.

It was in the tower that lady Arabella Stuart died the victim of grief. This amiable princess was an object of unjust suspicion with both Elizabeth and James, though guilty of no other crime than that of marrying a man she loved, William Seymour, grandson of the earl of Hertford. For this offence, she was committed to the tower, while herhusband was also committed to prison. Both the prisoners contrived to escape, and intended to pass over to France, but were seized and brought back to prison. The lady Arabella was more strictly watched than ever; and it appears by her autograph letters, of wliich there are several in the possession of lord Wey-mouth, as well as in the British Museum, that she was even deprived of necessary comforts. In a letter to viscount Fenton, she entreats his lordship to make known to the king her ‘ most discomfortable and distressed state ;’ and in anoth.er part of the letter, which she had afterwards cancelled, she complains that she cannot get any thing but ordinary diet, and tliat unfit for a person suffering under sickness, as she was. It was in vain that she presented memorials to the king, and sought the good offices of the queen, and such of the nobility as she thought had influence with his majesty — for the relentless .lames left her to perish in the tower. In tlie Harleian MSS., vol. 7003, there is a fragment of one of her letters to the king, which forcibly exhibits her humility, and the unfeeling character of James.

During tlie civil wars of Charles I., the protectorate, and after the restoration of Charles H., the tower was not wanting in inmates.

in a collection of pamphlets, which were presented by his late majesty to the British Museum, there is a folio sheet, printed in September, 1617, wiiicli gives us a list of the prisoners in the tiiwrr at that time. It is entitled ‘ A Loyall Song

of llie Uoyall Feast, Kept l)y the i'lisoners in the Towie, in August last, wiili the names, titles, and character of every prisoner, liy Sir F. W ., Kiiiijht and Baronet, prisoner.'

The song, whicli contains twenty-five stanzas, is curious, as showing the staunch loyalty of tiie j)risoners, and the humor of one of them at least, even in his confinement. It thus commences : —

' (iod save the best of kings, King Charles,

The best of queens, Queen Mary, The ladies all, Gloster and Yorke,

Prince (Charles so like old Harry;

(iod send the king his own again,

His Towre and all his coyners, And bless all kings who are to reigne

From traytors and purloyners.

The king sent ns poor traytors here

(But you may guesse the reason,) Two brace of bucks to mend the cheere ;

Is't not to eat them treason!'

The writer of the song, which is an imitation of the ballad of Chevy Cliace, enumerates the names of tlie prisoners, all of whom he eulogizes for their good conduct.

The tower still continues to be used as a state prison ; here the last victims of attachment to the exiled house of Stuart perished ; and here, in 1794, Mr. Home Tooke, Hardy, and the other persons charged with high treason, were confined : one of them, John Augustus Bonney, has inscribed, on the walls of his prison, an epitaph on a cat, which, with true republican feeling, he called citizen, and the following epitaph on a goldfinch.

Where Raleigh pined, witliin a prison's gloom, I cheerful sung, nor murmured at my doom ; Wheie heroes bold, and patriots firm could dwell, A goldfinch in content his note might swell ; I5ut death, more gentle than the laws decree. Hath paid my ransom from captivity.

Buried, June 23, 1794, by a fellow-prisoner, in the Tower of London.

The last time that the tower of London was used as a state prison, and may it long continue the last, was in the year 1820, when Thistlewood, and his associates in the plot, known by the name of the C'ato Street Conspiracy, for massacring the whole of the king's ministers, were confined here. During their trial they were brought every morning from the tower to the Old Bailey, and conveyed back again in the evening. When five of them had been found guilty, and sentenced to death, they were executed in front of Newgate, and not on Tower Hill, as was formerly the custom.

Within t/ie walls of the tower arc the Mint, the Jewel OfSce, the Armoury, the Ordnance Office, the Record OflSce, and the Menagerie.

The Ordnance Office, of which his grace the duke of \N ellington is at present master, superintends the supplying of arms, ammunition, and other warlike stores recjuired in the service. When the principal arms consisted in the bow, tiie officers of this establishment were called the bowyer, the cross-bowyer, tlie armourer, &c. In lane of war, the number of officers, clerks, and

wardens, in tlie Ordnance Oftice, exceeds 300, exclusive of porters, servants, and other attendants.

The Record Office contains the parliamentary rolls, from the reign of king John to that of Richard III.: a survey of the manors of England, and a register of the ancient tenures of all the lands; ancient perambulation of forests; a collection of ciiarters granted to colleges and corporations ; tiie book of prayer under the great seal, printed and sanctioned by Charles II., on his restoration, together with several state papers, and documents of great antiquity.

The public records of Scotland, which Oliver Cromwell seized on, were placed in the lower, where they remained until the restoration, when Charles II., intending to return them to Edinburgh Castle, sent them in a vessel, which was wrecked near Holy Island, and the valuable documents were lost.

The Royal Menagerie in the tower, where our monarchs formerly amused themselves with seeing the combats of wild beasts, is not remarkable either for the number or the rarity of the animals it contains; tˆnd, as a collection of natural history, is unworthy of a great nation, whose fleets and armies would enable thein to collect all that is wonderful in nature or art from every clime.

The government of the tower is vested in a constable, a lieutenant, and other subordinate officers. The opening and shutting of the gates, in the morning and evening, is done with great ceremony, and is almost the only circumstance that reminds the inhabitants of London that they have a fortress within their walls regulated by a military government. The warders, who attend at the tower, and wear the livery of the yeomen of the guard, were appointed to their office by Henry VIII. The king, after residing in the tower some months on the death of his father, left fifteen of his body guard, and gave them the name of warders ; and afterwards, in consequence of their attention to the protector, duke of Somerset, when confined there, he procured them the honor of wearing the same livery as the yeomen of the guard.

Tlie Jeuel Office. — It is probable that, from the moment the tower became a royal residence, it was the place where the regalia were deposited, though the first evidence on record, of its being used as a jewel office, is an order made in the fourteenth year of Henry III., to the bishop of Carlisle, directing that the four coffers of the king's jewels should be 'laid up in the tower.' F'rom this time the regalia appear to have been kept in the White Tower until about the middle of the seventeenth century, when they were removed to a stone room near the grand store house, wliich has since been known by the name of the Jewel Office.

The situation of keeper of the regalia was formerly considered an office of great honor and dignity, as well as trust. In the reign of Edward III. John Flete, the first keeper of the jewels, whose name has been preserved, had an allowance of twelve pence per day, which was, in succeeding reigns, gradually increased, so that, in the time of Henry VIII., it was £50 per

annum. The smallness of this salary might in-duce an opinion that the office was not of much importance, did we not find it held by persons of consideration, among whom was Tiiomas Cromwell, the favorite and victim of Henry 'III. This officer was formerly styled Master and Treasurer of the Jewel House; and, in addition to the care of the crown jewels in the tower, he had the purchasmg and custody of the royal plate — the appointment of the king's goldsmiths and jewellers — the supplying of plate to ambassadors, See. His emoKiments amounted to £l 300 a year in the reign of diaries II., although they had then undergone considerable reduction. It was during the time that Mr. Edwards held this office, that colonel Blood made the daring attempt to carry off the crown of England, in which he so nearly succeeded. See Blood.

The value of the regalia in the jewel-office in the tower is estimated at £2,000,000 sterling. The most prominent and the most costly article is the new imperial crown, first used on the coronation of his present majesty in 1821. This splendid crown, which is unrivalled in value and elegance, is enclosed in a glass globe, which is made to revolve by some ingenious machinery, invented by]\Ir. ˆlarch, the resident officer of the board of works in the tower. By this means, the spectators see every part of it, whde six powerful argand lamps are so disposed as to throw upon the jewels every hue their prisms can exhibit.

In the jewel office there are four other crowns, and seven sceptres. One of the sceptres, with a dove on it, was discovered in 1814 behmd a part of the old vvainscotting of the jewel-house, where it must have remained several years. It is thought to have been the sceptre made for <}ueen Mary, who was not only the queen consort of William III., but also queen regnant conjointly with her husband. Here, also, are the golden orb, which the King holds in his right hand at iiis Cf.ronation ; the swords of mercy and of justice; the large golden salt cellar, which forms a model of tlie white tower; a grand sdver font, used at the baptism of the royal family, and the banqueting plate used at the coronation feast; the ampulla, or golden eagle, for the consecrated oil with which the king is anointed, and all the other regalia used at the splendid ceremonial of a coronation. See Coronation.

The ai'nioury. — Until the last age of chivalric splendor, the sixteenth

century, we read of no armouries in Europe. Then Henry VIII., Francis I., Charles V., and Maximilian I., laid the foundations of four of the best in Europe: yet their collections were all modern; and Dr. IMey-rick, in his valuable work on the origin of ar-mour, has very satisfactorily proved, ‘ that although in private families a few suits of earlier date had been preserved in Italy, that of Maximilian, with its steel lamboys, and that of Henry VII., resembling it, are the oldest specimens in Germany and England.’ Such a declaration is greatly at variance with all preceding descrip-Uons of the armour in the tower, and most of the pretensions of such collections: hence the Ambras collection, now at Vienna, though containing armour of the same period as the suits in the \i)i.. XIII.

tower, has equally with it been asserted to possess specimens of great anticjuity, exhibiting the suits pretended to have been worn by the Ger-man emperors from the time of Albert I., emperor of the Romans, down to the period when body armour was principally relinquished.

It appears from a survey made by order of Charles II. in October, 1660, that the principal armour now in the tower was then at Greenwich, whence it has subsequently been removed. Dur-ing the civil distractions of the preceding reign, the armoury in the green gallery, at Greenwich, was despoiled by the soldiers, and what remained was afterwards transferred to the tower. In this survey, which is signed by Sir John Robinson, lieutenant of the tower, and other officers, appointed to make the investigation, there is not the slightest mention of the Spanish armoury, or the thumb-screws, racks, and wire-whips, which now form so attractive a feature in this exhibition; and yet the surveyors give a very minute list of every thing found in the armouries of the tower and Greenwich. The Spanish armoury must, therefore, have been made up subsequent to the reign of Charles II., and its genuineness consequently becomes more than doubtful. In Barghley’s State Papers, a lottery of foreign armour, probably that of the Armada, is said to jiiave been drawn in the twenty-ninth year of Elizabeth, and if the instruments of torture, and the Catholic banner, now exhibited, are really spoils of the Armada, they must|have been collected at least a century after they were dispersed by the lottery. There is, however, so little reason to believe, that any portion of the armour, called Spanish, is really so, that little faith can be placed in the authenticity of the instruments of torture which tlie growing enmity to the Roman Catholics would readily ascribe to them. The targets with pistols in them, exhibited as Spanish, were in the tower in the reign of Edward VI., and therefore could not

have belonged to the Armada; the pikes, shov.n as Spanish, were common to the English soldiery, as well as the Spaniards ; and the glaives, bills, halberds, &c., which principally form this collection, were used in England in the reign of Henry VIII. But then there is queen Elizabeth, in the very armour, we are told, which she wore when she rode on a steed, richly caparisoned, to review her forces at Tilbury Fort. Unfortunately, however, for the correctness of this statement, tl'.ere is not the slightest evidence of her majesty having worn armour on this memorable occasion ; and it farther appears, that the fluted breast-plate, and the guardc-de-reine, in which her figure is now environed, belonged to her father, and that they could not have been worn in a sitting posture ; and the armour for her arms is| of the time of Charles I. Nor are the other parts of the equestrian exhibition of armour in the tower more correct : the armour attributed to William the Conqueror is of Edward VI. 's time, or of the early part of Elizabeth's reign ; the suit worn by l-'dward I. in the tower is also of the reign of tlie sixth Edward, with the addition of a martel de fer, of the time of James I., placed in his hand. Edward III. wears a suit of white armour of Henry VIII. 's time, and llenrv IV. is

encased in anotlicn-suit of tlie time of Edward VI. The armour of Henry V'., wliicli we are assured he wore at tiie battle of Agincourt, is composed of various pieces, some of wliicli were not made imtil two centuries after this memorable victory :

swords of the Pretender, the shield of the earl of JNIar, or the axes with which Anne Boleyn, and the earl of Essex, Elizabeth's favorite, were beheaded : but for the authority of which we will not vouch, since, with respect to Ann Boleyn,

the upper part of the armour is of the time of Stowe assures us, that her head was severed from Charles 1., while the legs, which, like those of her body at one blow with a sword.

old Jacob Tonson, are not fellows, are of the reign of Henry VII. Henry 'I. and Edward IV. have also each borrowed a pair of legs from Henry VIII., and a suit of body armour from

Tower Hill. — At what period Tower Hill was first fixed upon as a place for public executions is by no means certain ; but it does not appear to have been used as such until long after the for-

Charles I. : while Edward Vˆ. wears a rich and tress had become a state prison ; for we find that,

highly decorated suit, which appears to have been in the year 1196, William Fitz Osbert, who had

made for that promising youth, Henry, prince of been tried and condemned in the tower, for

Wales, son of James I. Henry '1I., no doubt, ‘ seditiously moving the common people to seek

wears his own armour, and it is one of the greatest liberty,’ was drawn by the heels to the elms at

curiosities in the tower, for the lamboys, or Smithtield, and tiiere hanged. A similar instance

puckered petticoat, is so contrived, as to reach occurred in the year 1330, when Roger Morti—

the saddle behind, and then fall on each side, mer, earl of March, who had been imprisoned in

Henry \ III. wears what may be fairly considered the tower, ‘condemned by his peers, and yet

his own proper armour, — the legs perhaps ex-never brought before them,’ was hanged on the

cepted. Edward \T. wears a suit, which seems common gallows at Smithfield. to have been made for prince Henry, son of One of the earliest executions on Tower Hill

James I., but, in compliment to the piety of the appears to have been that of the accomplisiied

young king, a variety of scriptural subjects are Sir Simon de Burley, the tutor of Richard II.,

engraved on it indifferent compartments. James who was sent to the block in the year 1388.

I., who would not easily have been induced to From this time the quadrangle and green-yard

trust himself in a suit of armour, is encased in within the Tower Hill were the places where

one which belonged to the earl of Warwick, state-prisoners generally

suffered, about the time of Elizabeth or Mary. King In 1495 Sir William Stanley, chamberlain to

Charles I. wears a rich suit of gilt armour, which Henry VII., whom he had faithfully served, was

was presented to him by the city of London when here beheaded for no other crime than that of

prince of Wales. His son and successor, Charles having said, that ‘ if he certainly knew Perkin

II., wears a splendid suit, of the time of Edward Warbeck was tiie undoubted son and heir of

VI.; as does William III., while George I. and king Edward I'. he would never fight or bear

George II. wear the armour of the time of Henry 'III. ; the former having the addition of Turkish bridle.

Thus, of the seventeen monarchs who appear

arms against him.’

Henry VIII. had not long been seated on the throne before the axe on Tower Hill was employed ; nor did he suffer it to rust. Had he,

in armour in the tower, only three wear that of however, been guilty of no worse act than that of the period in which they lived : and in the small sending Empson and Dudley to the scaffold, his armoury, the figures which represent king John, name and memory had not been stained with

Henry III., Henry V., and Henry VI., are all in suits of cavaliers’ armour, of the time of Charles I., with flaming swords which are of a still later date.

De Courcy, the ancestor of the earls of Kin-sale, of whose strength and

prowess so many anecdotes are related, wears the armour of a demi-lancer of the time of Edward VI., with a helmet of Henry 'II. ; John of Gaunt, ‘ time

guiltless blood. They were beheaded on the 18th of August, 1510, for arbitrary exactions and embezzlement of money ; and several of their agents were set in the pillory here with labels on their heads relating their crime.

In the same reign were executed here the duke of Buckingham, sacrificed by cardinal Wolsey ; Fisher, bishop of Rochester, for denying the king’s supremacy ; Sir Thomas More ; lord

honoured Lancaster,’ wears a gigantic suit of Rochford, the brother of Ann Boleyn, who two

armour, seven feet high, of the time of Henry days before had sutl’ered within the tower, and

VIII.; Charles Brandon, duke of Suffolk, and four alleged accomplices of the queen’s guilt,

the jester. Will. Somers, wear suits of the time Several illustrious victims followed in the persons

of Charles I. or II. ” of the marquis of Exeter, the earl of Devonshire,

But although the armour in the tower is thus lord Montacute, and Sir Edward Nevil.

inappropriately displayed, it is sufficiently rich Lord Leonard Grey, deputy of Ireland, was

and varied to admit of a correct arrangement of executed for having connived at the escape of

several perfect suits, and it is much to be wished, his nephew, lord Dazey; Thomas lord Crom—

that such a classification of it were made. well, Thomas Seymour lord high admiral, the

The tower armoury is highly curious and in-protector duke of

Somerset, the duke of Suffolk,

teresting, not only for these relics of antiquity, father of lady Jane Grey, Sir Thomas Wyat, and

but for the ingenious and tasteful manner in Thomas duke of Norfolk, successively perished

which 100,000 stand of modern arms are dis-beneath the axe on Tower Hill.

played. The royal train of artillery, capable of dealing destruction on all around, is also an ob-iect of wonder and awe ; but the curious will probably be more gratified in \iewing the state

During the reign of James I. the only execution on Tower Hill was that of Sir Gervas Elwas, lieutenant of the tower, and one of the accomplices in the horrible murder of Sir Thomas

Overbury within its walls. Sir Walter Raleigh did nut suffer near the prison, where he had been confi:.* .1 for nearly fourteen years, but was executed in Old Palace-yard. The infamous earl of Castlehaven here met a just punishment ; and here perished the earl of Stafford, Sir Alexander Carew, Sir John Ilobbam and his son, archbishop Laud, Mr. Love the minister, and captain Brown Bushel, who fell victims of the civil and religious feuds of the times.

Of the regicide judges, on whom Charles II. revenged his father's death. Sir Henry Vane was the only one executed on' Tower Hill ; but the accomplished earl of Strafford, and the patriotic Algernon Sidney, here paid their debt before nature had demanded it.

The illfated duke of Monmouth, when led to the scaflTold on Tower

Hill, was attended by a very strong guard, on account of his known popularity. The executioner seemed to feel dismayed at his office ; for, after giving three blows with his axe, on the neck of the unfortunate duke, who bore them all without moving any thing but his eyes, as if reproaching him, he threw down the fatal weapon, nor did he resume it until the sheriff" by threats urged him to go on, and twice again, was his strength exerted ere the head was severed from the body.

The next individual who suff'ered on Tower Hill was Sir John Fenwick, in 1696, who waˆ detected in a plot to assassinate king William.

Although some of the old maps of London represent a gallows on Tower Hill, and more than one historian relates, that there was one erected there, yet there are considerable doubts of the fact; for we invariably find that even pri_ soners in the tower, when condemned to be hanged, were eithertaken toSmithfield or Tyburn; nor was there ever a permanent scaffold here.

The rebellion of 1715 gave a few of the faithful adherents of the house of Stuart to the block : although, considering the extent of the treason, and the daring character of the individuals who were principals in it, no subdued insurrection was ever followed with greater clemency. Two Scottish Peers, who, among several others, had been taken, suff'ered on Tower Hill, the earl of Derwentwp.ter and lord Kenmure. The earl of Nithisdale, ordered for execution at the same time, escaped from the tower in female apparel, through the excellent management of his wife. Sir Robert Walpole, who has been accused as a corrupt minister, declared, that £'60,000 was off'ered to him if he could save the life of the earl of Uerwentwater, but that he refused it. The last executions were lord Balmerino and lord I.ovatfor the rebellion of 1745, and Charles RatcliflNe, brother to lord Derwentwater, who suff'ered by himself on Little Tower Hill.

Tlic military defence of hondon. — As far back 'is the reign of Alfred, the citizens of London were so imbued with the national spirit, that they were known amongst their fellow countrymen by the name of ' the brave]>ondoners.' \Mien the patriot king was opposing a great body of the l'".ast Anglian Danes, who had thrown off" his authority, and landed in the west of F-ngland from the north ; the Knglish army left London,

accompanied by a body of citizens, ntlacki'd the Danes under Hastings

who had fortified Bani-flete, overpowered the garrison, and carried off˜ the wife and two sons of this celebrated ciiief.

In the reign of Ethelred the Londoners successfully resisted three attacks by the Danes ; and thrice also was Canute repulsed when he laid siege to the city, nor did he ultimately gain possession of it, until, by a compromise with his rival, a division of territory was agreed upon. With equal spirit did the citizens refuse to admit William the Conqueror, when his arms had been victorious over Harold's army, until the clergy and the men of rank set the example of submission. It is true that Domesday Book, the oldest record of military service extant, does not mention the Londoners, but the reason of this is to be found in the peculiar nature of their civic privileges. The citizens did not, like other persons under the feudal system, hold their possessions by the tenure of military service ; London was the ' king's own chamber,' where all were free, and all service was spontaneous. But, though not bound to furnish any particular quota of fighting men, the Londoners always mustered in great force, when an enemy was in the field ; in-deed it would seem from their numerous arrays, and the indiscriminate manner in which they turned out at every call to arms, that in early times every citizen was a soldier. We know that playing at bucklers, and practising feats of arms, was one of the most ancient and favorite amusements of the London apprentices. The Ludus Trojse or Troy game, practised by the Roman youths, so called because it is said to have been derived from the Trojans, was also a favorite exercise with the citizens in the reign of Henry II. ' Every Sunday in Lent,' says Fitzstephen, ' immediately after dinner, it was customary for great crowds of young Londoners mounted on war horses, well trained, to perform the requisite turnings and evolutions, to ride into the fields in distinct bands, armed with shields and headless lances, where they exhibited the representation of battles, and went through a variety of warlike exercises.' He adds, that young noblemen from the king's court, and from the houses of the barons, often joined the citizens in the trial of their skill in arms. Numerous exploits are recorded, which attest the spirit and promptness with which the skill tlius accuhrcii was, in maturer life, exerted in the defence of the city and kingdom. During what are called the Barons' wars, in the reigns of Stephen, John, and Henry lU., Fitzstephen says, that there went out of the city to a general muster no less than 20,000 horsemen and 60,000 foot; and though unquestionably there must have been included in these numbers many vassals of the noblemen, who had then castles and inns within the city, and of others who had sought the protection of its walls ; yet it is clear, from the preponderance which the Londoners invariably gave to the party, whose cause they espoused at

this period, that they must have constituted a very considerable portion of the force.

Often did the citizens contend in arms against »lie power that sought to oppress them in the

reitjn of Henry III., and on one occasion, Stovve relates, tliey ‘ fortitied the city with iron cliains, drawne overthwarte their streets, munited the cittie, and did marvellous things.’

The manufacture of armour must, at tliis period, have been very considerable; for when Louis the Dauphin contended for the crown of England against Henry III., in the year 1216, the city of London sent him 600 knights and (30,000 coats of mail.

In the time of Edward II., the queen having been refused admittance mto Leeds Castle, Kent, the king called to him ‘the commons of Essex and J^ondon,’ by whose assistance it was speedily reduced ; but, that this demand on the Londoners for military service might not be construed into an admission of their ordinary liability to such requisitions, the king, by his letters patent, declared ‘ that the circumstance should not be prejudicial to them, nor drawn into precedent for time to come.’ Anotiier event, which occurred sliortly after, places the military independence of the citizens in a still stronger light. In 1326, when tlie queen had taken part with the barons, the king demanded from the citizens a supply of men and money. The answer they made was, that ‘ they would not go out of their city to fight, except they might, according to their liberties, return home again the same day before the sun-set.’

During the French wars, in the reign of Ed-ward III., the quota of troops contributed by London was comparatively small. In 1346 they furnished only 100 men at arms, and 500 foot soldiers; and in 135.5 twenty-five men at arms and 500 archers. Probably more were not required, for these wars were popular; and, on the triumphal entry of the Black Prince into London with the king of France, we are told that

the citizens ‘ displayed with peculiar exultation, from their windows and balconies, the implements and ornaments of war. ‘ On the breaking out of Wat Tyler’s rebellioti, in the ensuing reign, we have a remarkable instance of the strength in which the citizens could instantly muster, on any emergency. After Wat Tyler had been struck dead by the hand of Sir W’illiam \‘alwonh, and while the king was amusing the rebellious multitude, by affecting to fill their leader’s place, Walworth rode into tlie city, calling out aloud for succour for the king, when immediately 1000 well armed men obeyed the summons ; and, being led forth in good array, spread such terror among the rebels, that they fled in all directions.

It is a singular fact, that, very shortly after the Londoners had thus distinguished themselves, their courage should for the fˆrst time stand impeached. When, in 1385, Charles 11. of France made preparations to invade En<j;land, Stowe alleges that the Londoners ‘ trembling like leverets, fearful as mice, seek starting holes to hide themselves in, even as if the citie were now to be taken, and they that in times past boasted they would blow all the Frenchmen out of I’ngland, hearing now a vaine rumor of the enemies’ coming, they run to the walls, break down the houses adjoining, destroy and lay them flat, and do all things in great fear, not one

Frenchman yet having set foot on ship-boc.rd. ‘ What would they have done,’ he adds, ‘ if the battel had been at hand, and the weapons over tlieir heads?’ Froissart is supposed to aflTord some countenance to Stowe’s aspersion, by remarking, that, when the French expedition was abandoned, the citizens, ‘ with a joy unexpres-sih/le, began to regale themselves and friends in a most sumptuous manner.’ But is the invasion of our houses and firesides, by a foreign enemy, so little to be cared for, that even brave men should not rejoice at its being relinquished?

During the contest between the rival houses of York and Lancaster, the military defence of the capital became an object of great importance, and appears to have been duly appreciated. When tlie leaders of each party met in London in 1458, attended by a great number of their followers, in order to attempt a reconciliation, Sir Godfrey Boleyn, the lord mayor, kept watch daily with a guard of 5000 citizens completely armed; while three aldermen, with another body of 2000, continued the watch during the night.

The conduct of the citizens in the subsequent affairs of Jack Cade and

Falconbridge, as before related, was such as showed that they had lost nothing of their ancient spirit.

Henry VII., having been very partial to archery in his youth, gave it every encouragement when he ascended the throne, in preference to the cross bow, although he sometimes amused himself with it, as we find by the following me-moranda, in an account of his expenditure preserved in the Remembrancer's Office. ' Lost to my lord Morging, at the buttes, 6a'. 8rf.' and 'paid to Sir Edward Boroughe, 13s. 4d., which the kynge lost at buttes with his cross bow.' From these entries it would appear that the king was not so skilful a bowman as his sons, particularly the eldest, prince Arthur, who frequently exercised with the society of London bowmen at Mile End, and was so expert, that the captain, and every expert shooter, was called by his name.

Tlie military art, and especially the practice of archery, continued to be cultivated as much as ever. At a general muster of ' the most able men between the ages of sixteen and sixty,' which took place twice by order of Henry VIII. in 1532; and again on the 8th of May, 1539, when there appeared no less than 15,000, ' all in bright harness :' — ' Most of the citizens of any quality or office,' Strype says. ' were clad in white satin or white silk coats, with chains of gold, and some had rich jewels.' The king expressed himself highly pleased with their martial appearance. From this period, archery, so long the pride and glory of the London citizens, fell into disuse, principally, no doubt, from the introduction of muskets. IloUinshed bewails, that in this time, we had ' given over that kind of artillery,' the long bow, in which, in times past, the chief force of England consisted ; and bishop Latimer equally laments the change that had taken place. In his sixth sermon, he says, 'The art of shutynge hath been in tymes past much estemed in this realme, it is a gyft of God, and he hath given ns to excell all other nations wvth-L O N D 0 N.

all. It hath bene Godde's instiumente whereby ne hath gyven us manye victories ugaynste oure enemyes.' He then points out the necessity of callingupon the justices, and charging tliem ' upon heir allegiance, that tliys singular benetit of God may be practised.'

In the popular insurrection of the Kentish men, under Sir Thomas

Wyatt, in the reign of Mary, the queen requested from the city an aid of 500 footmen, well harnessed, to go against the rebels. It was immediately granted, the men were made ready the same night, and on the morrow marched into Kent. It soon appeared, however, that their ardor sprung from another source than attachment to the queen ; for after joining the royal forces under the duke of Norfolk, the Londoners went over in a body to the rebels, and their example was followed by more than three part? of the army, not excepting the queen's guard itself. The city, notwithstanding, still held out for her majesty, but probably owing more to its being temporarily placed under the command of lord William Howard, a devoted servant of the queen's, than to the loyalty of the citizens themselves, who participated largely in the discontent which Mary's marriage to Philip of Spain had excited.

In the second year of Elizabeth's reign, there was a muster of the citizens before her majesty, a'ld the French and imperial ambassadors in Greenwich Park ; but it seems, from the comparatively small number assembled, to have consist:- ed of some select companies only. Tiiere were ' 1400 men, whereof 800 were pikemen, all in fine corslets, 400 harquebuts in shirts of mail with merins, and 200 halberdiers in almayne rivets ; ihey had to every 100 two wliifflers richly apparelled, and twelve wardens of the best companies, riding in coates of black velvet, to conduct them, with drums and fifes, and six ensigns, all in jerkins of white Bruges satin, cut and lined with black sarsnet, with caps, hozen, and scarfs according.'

When, in 1572, Elizabeth began to be disturbed in her government by maciiinations, foreign and domestic, she sent an order to the lord mayor, sheriffs, and aldermen, recommending to them renewed diligence in training up tiie young citizens to the use of arms for the defence of the capital : and particularly to the use of musketry, which was now beginning to supersede the bow and arrow. The order was obeyed with so much alacrity, that, within two months after a choice body of 3000 pikemen and gunners, completely armed and disciplined, mustered before the queen in Greenwich Park ; and these were independent of the city archers, who were estimated to amount to 4000 more.

The preparation in the ports of Spain of the boasted Armada, which was to effect the conquest of I",ni;land and the re-establishment of poi)cry called for still greater exertions on the part of the citizens of London. From a report of the arrangements made for the defence of the kingdom on that occasion, recently compiled from the records in the tower (primed, but not published), it appears, that London then

contained 20,096 able householders within the wards, besides ‘J’S’A Grangers lit for service; and that of this number no less tlian 10,000 were actually embodied.

Altiiough the lords of the council ordered Ed-mund York, a brave oihcer, who had served in the Low Countries, to point out tlie best means of putting the city ma good state of defence, yet the lord mayor had the supreme command and authority to appoint colonels, captains, and other inferior officers under him. ‘Such an honor,’ says York, ‘and such a gracious favor, never happened to any people, neither was the like heretofore done unto them.’

York recommended that the city should be divided into sections, containing 1500 men, ‘ all inhabitants, which shall be either the householder, his Sonne, or continued servant.’ Every night at six o’clock, five companies of different regiments were to assemble in the Exchange. ‘ and there stand in battell a quarter of an hour.’ After the countersign was given to every officer, says York, ‘ a prayer for her majesty’s estate and kingdome, and the Lord’s prayer, shall be said.’ Five billets were next to be put into a hat, which the captains were to draw, to determine their respective stations for the night. So much reliance had the cjueen upon tiie courage and attachment of the citizens, tliat she selected 9000 of them to be her body guard. The remaining 1000 were sent to the camp at Tilbury Fort.

The usual place of training the city bands at this period, was the old Artillery Garden or Ground, the site of which is commemorated by tiie names of several streets and lanes on the east side of Bishopsgate Street, as Artillery Street, Artillery Lane, Fort Street, &c. 500 of the most expert, who had ‘ experience botli abroad and at home,’ were selected to drill the rest, and we are told, that ‘very sufficient and skillful they were to train and teach common soldiers the managing of their muskets, pikes, and halberds, march, counter-march, and ring.’ These masters of the art military formed a company by themselves, of which ‘ every man by turn bore orderly office, from the corporal to the captain.’ Some of these were sent to the camp at Tilbury, to assist in drilling the new levies, and were tlu”ˆii known by t!ie name of the captains of tlie artillery gar-den. Such was the rise of that respectable body, still subsisting at the present day, the Artillery Company.

The military ardor which the Spanisii Ar-mada called forth, was succeeded by a long pe-riod of ease. The whole of the city corps were disembodied, and the exercises in the artillery garden entirely

discontinued; so that, when the queen wanted an aid of men from the city, to send to the relief of Calais in 1596, she was obliged to resort to the mode of impressment, and that in a way not altempl-ted perhaps either before or since. Un the forenoon of Easter Monday, the lord mayor and aldermen received orders to provide instantly, for tiie queen's service, 1000 able bodied men. 'J'lie day and hour were conveniently chosen; the churches, as is usual on this festival, were filled ; and thitlier the magistrates immediately repaired with their proper officers, made fast all the doors, and in a few minutes executed the required levy on the assembled congregations. 'The men were forthwith furnished with armour, weapons, and all things necessary,' and marched

off to Dover before night. Tlie system of pressing, tliougli not in the same indecorous manner, was afterwards repeatedly resorted to during Klizabeth's reign.

A material change in the military exercises of the London citizens took place at the close of Elizabeth's reign, with which the use of the sword and buckler seems to iiave ended. Stowe relates that, in his time, ' the art of defence and use of weapons was tauglit by professed masters,' and that the young Londoners, after liie evening prayer on holidays, were permitted to exercise themselves with their wafters and bucklers before their masters' doors. The wafters here mentioned were swords with the flat part placed in the direction of the edge. Shakspeare and all the writers of his time mention schools for teaching the use of weapons as common in London ; but when the alarm of outward danger had been dissipated, and the pusillanimous reign of James had commenced, military exercises were naturally discountenanced by a king, who had an instinctive horror at the sight of a naked sword ; and who praised armour, rather because, as he said, it prevented the wearer from hurting others, than for the protection it gave him.

The danger which might arise from such an habitual neglect of military exercises, at length roused some patriotic spirits to exert themselves to revive the ancient trainings in the artillery gar-den. In

IGIO Philip Hudson, lieutenant of the artillery company, and divers other gentlemen and citizens of London, considering the inconveniences which had been suffered by many ‘ late populous and flourishing neighbour cities, prin-ci])ally by reason of their neglect of that most noble exercise of arms and martiall discipline in times of wealth and peace ; they, like loving sons to so glorious a city,’ undertook, ‘ at their own private or particular charge, a weekly exercise of arms and military discipline after the mo-dern and best fashion and construction then in use;* and for their better ease and more convenience, ‘ they erected a strong and well furnished armoury in the said ground, in which are arms of several sorts ; and of such extraordinary fashion and goodness for service, as are hard to be matched elsewhere.’ Four years after, James L commanded a general muster of all the horse and foot soldiers throughout England ; and such was the progress which the citizens of London had by that time made in their military re-orctanization, that no fewer than 6000 of them assembled on the occasion. They were commanded by twenty captains, selected of the most active and forward citizens, and unto every one of them were allotted 300 shot and pikes, being, for the most part, all householders bravely furnished ; and such of them as were not formerly of the Martial Society, and practice of the Artillery Garden, became then admitted of that warlike company.

Although the reign of James continued to the last undisturbed by war, the artillery company laudably persevered in their exercises. In 1638 the common council passed an order * that the trained bands should be made perfect in disci-])iine, and that the greatest care should be taken thac low and indigent persons do not impose tneinselves as officers, but that they be selected

from the most respectable gentlemen, and also from tiiose who are capable and expert.’

When the civil wars broke out, in the reign of Charles I., the trained bands of London, as they were then called, espoused the cause of tne peo-ple, and are universally allowed to have contributed mainly to its ultimate triumph. After Charles made his rash attempt, in 1642, to seize on Pym, Hampden, and the other obnoxious members of the house of commons, whom he had caused to be accused of high treason ; and when these champions of liberty took refuge in the city, and the grand committee of])arliament it-self was obliged to transfer its sittings to Guildhall, the trained bands placed themselves under the command of major general Skipton, for the purpose of protecting

them in the exercise of their parliamentary privileges.

The appeal to arms was at length made, and Charles advancing towards London, defeated colonel Ilollis's regiment at Brentford, and took possession of that town. Every possible exertion was then made to prevent his entrance into the capital; 'with unspeakable expedition,' says Clarendon, ' the army, under the earl of Essex, was drawn together, and the trained bands of London led out, in their brightest equipage, upon the heath next Brentford, where they had, indeed, a full army of horse and foot, fit to have decided the title of a crown with an equal adversary.' The parliamentary forces did not amount to less than 24,0U0 men, ' stout, gallant, proper men, as well habited and armed, as were ever seen in any army, and seemed to be in as good courage to fight the enemy.' 'The good wives and others,' says Whitelock, ' mindful of their husbands and friends, sent many cart loads of provisions, and wines, and good things to Turnham Green, with which the soldiers were refreshed and made merry, and the more, when (after a short time) they understood that the king and all his army were retreated.' Next year the citizens not only repaired and strengthened their walls, but erected an outer line of trenches and fortifications, which included the whole of the suburbs from the end of Shored itch on the east, to Hyde Park Corner and \ auxhall on the west, and from the end of Kent Street, Deptford Road, on the south, to Bloomsbury on the north. Nothing could exceed the ardor with which these fortifications were prosecuted. Thousands of men, women, and children, assisted by the trainbands, and headed by several members of the common council, were constantly at work. The different trades went out in a body on alternate days, as appears by the statements in the ' Diurnals,' and other newspapers of the time. One day, between 2000 and 3000 porters gave their labor, another day 4000 or 5000 shoemakers left their gentle craft to assist in the new fortifications ; and the tailors, to the number of 6000, lent their willing and unsolicited aid to the same purpose. The fortifications consisted of a strong earthen rampart, planted with bastions and redoubts. The expense of these works was defrayed by a general levy on the inhabitants, and a loan of £60,000 from the city companies.

The king's affairs taking for a time a])rosperou,s turn, and the city of Gloucester, which had de-

clared for tlie parliament, being hard pressed by his troops, great exertions were made to send the earl of Essex with an army to its relief; and to encourage the recruiting, for this purpose, the London magistracy had recourse to the vigorous measures of ordering, that all shops, within their lines, should ‘ be shut up, and continue so till Gloucester was relieved.’

The Londoners accordingly, besides furnishing two regiments of their trained bands, sent forth four auxiliary regiments, three of foot and one of horse. The parliamentary army now marched towards Gloucester, but the king, hearing of their approach, raised the siege and advanced to meet them. The hostile forces met at Newbury, and in that sanguinary tight (albeit tliey were but keepers of shops), gave signal proof of their hereditary resolution and prowess. ‘ The London trained bands and auxiliary regiments,’ says lord Clarendon, < of whose inexperience of danger or any kind of service, beyond the easy practice of their postures in their artillery garden, men had till then too cheap an estimation, behaved themselves to wonder, and were, in truth, the preservation of that array that day ; for they stood as a bulwark and rampire to defend the rest, and, when their wings of horse were scattered and dispersed, kept their ground so steadily, that though prince Rupert himself led up the choice horse to charge them, and endured their storm of small shot, he could make no impression upon their stand of pikes, but was forced to wheel about.’ In the subsequent affair at Cheriton Downs, the Londoners acquired fresh laurels. Two of their strongest auxiliary regiments fought under Sir William Waller, on that occasion, and, as Whitelock tells us, ‘ did very brave service ; they drove the enemy from the hedges, which they had lined with musketeers, and gained the passage to a wood, which stood the parliamentary forces in great stead, and shortly after put the enemy to a rout ; which was so total, that scarcely ten of them were left together.’

The city shortly after increased the number of troops they had in the field against the king to 8400 ; four regiments were under the earl of Essex, and three under Sir William Waller.

Although they continued foremost, in the struggle between the crown and the people, the Londoners, when the parliament and the army quarrelled, and Cromwell rose on the bucklers of the latter to supreme power, fell into the back ground, and suffered but too many affronts

and hardsiiips at the hands of those whom they had been the principal means of placing in the seat of royalty. The works about the city were ordered to be demolished ; the trained bands were discharged; the treasuries of different city companies were robbed, in order to pay arrears due to Cromwell's soldiers; particularly that of the weavers' company, from which £20,000 were carried off; and, when these were found insufficient for the purpose, bands of these satellites were quartered on the city, not only in the inns, but in private houses, till the deficiency was made up.

During the quarrel between the army and the parliament, the services of the London trained bands were frequently called for to suppress tumults : nor were those of a political nature the

most dangerous to the existing government. In April, 1648, a riot was begun in Moorfields, on account of tlie infraction of the parliamentary ordinance against tippling and gaming on the sabbath, which required all the energy of Fairfax to suppress. The first party of the trained bands sent to quell the tumult were overpowered by the rioters, who seized their arms, drums, and colors, and daringly beat up for recruits. A mob in a populous city is like a rolling snow ball, increasing as it proceeds ; and the rioters were soon so formidable as to be enabled to act on the offensive. The prisons of Newgate and Ludgate were surprised during the night; and next day they attempted to seize Whitehall, but were repelled by the soldiers. They, however, were more successful in the city, where they attacked the mansion house, and carried off a piece of artillery, called a drake. Ammunition was obtained from the magazine, in Leadenhall Street, where tliey made a stand against the only two regiments then in London, nor did they give way until several of them were wounded, and others taken prisoners.

When the question of the restoration came, after the death of Cromwell, to be agitated, the citizens had their revenge. The king's restorer, Monk, found them well disposed to Second his views, and, being appointed major general of their forces, he speedily re-embodied both the trained bands and auxiliary regiments, and, at a grand review in Hyde Park, apjieared at the head of no fewer than 18,600 ' brave Londoners,' a greater force than the city had mustered for some centuries. It was composed of six regiments of trained bands, six auxiliary regiments, and one regiment of horse. The mere demonstration of such a force, on the order of royalty, at this juncture of affairs, was sufficient. The restoration immediately followed.

\ˆery shortly after, the restored monarch issued a commission of lieutenancy for the city of London, which vested the commissioners witli similar powers to those possessed by the lords lieutenant of counties. The city regiments were by them new modelled, and augmented, the foot to 20,000, and the horse to 800.

The insurrection of the fifth-monarchy men, which took place in the following year, is justly regarded in history as an act of frenzy in a deluded few ; but it deserves notice 1-ere, as a sort of frenzy which could only have happened in a community inured, as we have seen that of London was, to the use of arms. A body of not more than sixty men, but all well armed, sally forth from a meeting house in Swan Alley, Coleman Street, under the guidance of one 'enner, tiieir preaclier, and a mad colonel of the name of Cox, to proclaim ‘ King .Tesus.’ They encounter a party of the trained bands, in the interest of ‘ k;ng Charles,’ led on by Sir Richard Brown, the lord mayor, and put them to the rout. They inarch triumphantly up and down the city, kill a hcadborough by way of exercise, and then, learning that a body of horse is coming against them, retire for the night to Caen Wood, near Ilampsiead. Here they are attacked at break of morn; some of them are taken, and the rest dispersed. But next day they rally, return into the

city, and fight a severe battle in Wood Street, nothing in the picture but that his soldiers were with a body of regular horse and a party of the ridiculed, expressed great displeasure; and the trained bands; two of their best men are slain, print was dedicated to the king of Prussia, and Venner, the leader, wounded and made An age of tranquillity succeeded, and the mi-prisoner; the remainder, under colonel Cox, litary force of London was kept up more for retire fighting towards Cripplegate : a party of parade than service, until the French revolution ten take post in a neighboring ale house, and broke out. As the danger approached, the ne-defend it with such resolution, that it is not cessary preparations were made with zeal and carried before seven of them are killed ; nor alacrity. It was at first proposed, that tˆvo until twenty of the whole number, being at least regiments of

militia should be raised by ballot, more than the one-half, and twice as many of and placed under the commission of lieutenancy; their opponents, have apparently bit the dust. but this mode was found inconvenient; and in

The trained bands, ‘ of whose inexperience in 1796 a new act ot parliament was passed, au-danger, or of any kind of service beyond tlie easy thorising the city to raise two regiments of 600 practice of the artillery garden,’ Clarendon men each, by enlistment, the expense of which says, ‘ men had too cheap an estimation,’ were was to be defrayed by a small assessment on each long the favorite force of the metropolis ; and on ward. Each regiment was commanded by a every occasion, when their services were called colonel, lieutenant-colonel, major, ten captains, upon, proved themselves worthy of the covi’l-ten lieutenants, and ten ensigns, all appointed by dence of their fellow citizens. Previous to the the great officers of the city, who formed the civil war, as appears by a tract in tlie Harleian commission of lieutenancy. The authority of MSS., containing an account of their musters in the crown over the two militia regiments was 164.3, their force, including auxiliaries, exceeded very limited. His majesty could only order one 18,000 men. This species of force, which was regiment to march out of the city, and that not -•eglected during the protectorate, was remodelled further than a distance of twelve miles. The by Charles II., and the trained bands alone aug-success of tlie French arms in Italy and Ger-mented to 20,000 men. As the restored govern-many, and the threatened invasion of Great ment found itself secure, this force was reduced, Britain, redoubled the military ardor, and volun-and may be said to have been almost disorganised, teer associations were raised in every part of the when the rebellion of 1715 induced the govern-kingdom. In London they consisted principijially ment to issue an order for it to muster, and be of citizens, and other respectable tradesmen, who in readiness to suppress any tumults that might formed themselves into companies in their re-arise. The trained bands were still nominally spective wards and districts, electing their own kept up, although six auxiliary regiments and officers, finding their own clothing, arms, and some troops of horse were reduced. accoutrements, and devoting their time and their

The rebellion of 1745 again roused the military money to the service of their country. These spirit of the metropolis : the trained bands were military preparations were very actively carried kept in readiness, and the militia embodied ; two on in the year 1798.

regiments were raised at the expense of the mer-The anniversary of the birth of his late majesty chants, and corps of volunteers

incorporated. The was celebrated on the 4th of June, 1799, by one lawyers exchanged their briefs for muskets, and of those spectacles which a free country could the judges their wigs for helmets; the weavers alone present. His majesty on that day reviewed of Spitalfields laid aside their shuttle and distaff 15,000 men, of whom upwards of 8000 were for the pike and the bayonet ; and even the ma-citizen soldiers, who had, from motives of the nagers of the theatres offered to form a corps of purest patriotism, formed themselves into mili- * his majesty's servants,' ready to quit the mimic tary associations, and relincjuished for a moment combats of the stage for the tented field. Large their peaceful occupations, to learn ' the trade subscriptions were raised for supplying the troops of war," at their own expense, for the purpose of with the necessary clothing and the munitions of guarding their own and their sovereign's rights, war, towards which the corporation of the city should they have been attempted to be endan-gave £ 1000, and several of the city companies gered by the threatened invasion. After the troops contributed liberally. Even the (juakers so far had gone dirouab their evolutions, much to the overcame their religious scruples as to raise a satisfaction of his majesty, and the firing was considerable sum for the purchase of woollen concluded, the whole line waved their caps in the waistcoats for the soldiers ; and, had the danger air, and gave three hearty huzzas, which were been more imminent, it is probable they might have echoed and re-echoed by upwards of 150,000 been induced to go farther, and, like the Qu.akers persons who attended the review. of America at the commencement of the revolu-The military spirit and patriotism of the city of tion, have subscribed for gunpowder, under the London had not yet, however, fully developed equivocal denomination of grain, or for muskets, itself. Every year, every month, and we might under the name of fire irons. The approach of say every day, increased the loyal associations, the rebels to Derby increased these preparations : of which the nucleus only had as yet been found the city gates were guarded ; and a large train of artillery was sent from the tower to a camp formed on Finchley Common, where it was determined to raise the royal standard. This circumstance gave rise to Hogarth's admirable pic

In the month of October, 1803, a succession of renews took place, in which more than 30,000 volunteer troops were reviewed ; and this num-ber, large as it was, fell far short of the actual force of the metropolis, which, including a few of

ture, the March to Finchley, for which he sought the adjacent villages within the bills of mortality, the royal patronage ; but the king, who saw where distinct corns had also been formed.

amounted to a force of 46,000 men. His royal highness the duke of York, the commiinder in chief, observed, in his general orders, ‘ His majesty perceives, with heart-felt satisfaction, that tLe spirit of loyalty and patriotism, on which the system of the armed volunteers throughout the kingdom was originally founded, had risen with the exigencies of the times, and at that mo-ment formed such a bulwark to the constitution and liberties of the country as will enable us, under the protection of providence, to bid defiance to tJie unprovoked malice of our enemies, and to hurl back, with becoming indignation, the threats which they have presumed to vent against our independence.’ At the peace of 1814 the military force of the metropolis was reduced to the artillery company and the two regiments of militia which had superseded the trained bands.

Churches, Public Buildikgs, &c. — We may now advert to the buildings of this great metropolis, and of these, the churches of the establishment, necessarily, take tlie lead, on account of tlieir magnificence, as well as their antiquity.

The cathedral of St. Paul’s is the noblest of Protestant churches. Some historians endeavour to prove that it occupies the site of an ancient temple of Diana : but this Sir Christopher Wren discredits; observing that ‘ having changed all tile foundation of old St. Paul’s, and upon that occasion rummaged all the ground thereabouts, being very desirous to find some footsteps of such a temple, he could not discover any.’ It is not before the time of Augustine we find any trace of a structure here. When he found a patron in Etlielbert, king of Kent, this monarch, in 1619, first founded the cathedral, dedicated it to St. P;iul, and endowed it with the manor of Tilling-ham and other lands. It was of wood ; but for the period no mean structure : Dugdale assures us that, in 1675, Erkenwald, then bishop of London, ‘ bestowed great cost on the fabric tiiereof, augmenting its revenues very much with his

own estate.'

During the he])tarchy, this church flourished. Kenred, king of Mercia, declared it to be as free in all its rights as he himself desired to be at the day of judgment. Athelstan endowed it with 106 farms, messuages, &c. Edgar gave it twenty-five mansions, besides a considerable sum in money; and his wife, Egleflede, two lordships. All these grants were confirmed by the charters of Ethelred and Canute, which solemidy denounce curses on all who dare to violate this jjlace of worship. Edward the Confessor, also, endowed it liberally, so that ' great was the esteem that this cathedral then had.' On the landmg of William I. he seized on some of the ruveniies of St. Paul's ; but no sooner was he seated on the throne than he restored them, and confirmed all its privileges.

In 1086 the wooden cathedral was laid in ashes, by a conflagration which destroyed the greater part of the city ; but this event made way for a more magnificent building than had ever been raised for the purposes of devotion in this kingdom. To the pious zeal of the bishops, Maurice and De Belmeis, London was chiefly indebted for this new edifice. The latter is said

to have devoted the whole of his revenue to the undertaking. The steeple, which was of timber, was finished in 1221 ; tlie quire in 1240 ; and, in 1283, the cathedral, nearly as it stood in point of magnitude previous to the great fire, was finally completed, with tlie exception of the pavement, which was not made until the year 1312, when the whole was paved with ' good and firm mar-ble, which cost fivepence the foot.' About this period an exact survey was made of the church ; and its dimensions, according to Dugdale, were stupendous.

In length it measured 690 feet ; and in breadth] 30 feet ; the height of the body of ttie church was 150 feet ; and the space of ground comprehended within the walls was three acres and a half, one rood and a half, and six perches. Tiie height of the tower and spire from the level ground was 520 feet; the ball, above the head of the spire, was so large, that it would contain within it ten bushels of corn ; tlie length of the cross, above the ball, or porael, was fifteen feet ; and the traverse of the cross six feet.

Dugdale enumerates no fewer than seventy-six chantry chapels within this sacred fane, and sixty endowed anniversary obits: not fewer than 200 priests are supposed to have been required to perforin the various

duties of these establishments.

The building was in the Norman style, and is supposed to have presented one of the earliest and finest examples of the use of pointed arches. Tlie decorations within, corresponded in richness and splendor with the magnificence of the exterior. The high altar shone all over with precious stones, and was surrounded with images, ‘ beautifully wrought.’ At the right side of it there was an oil painting of St. Paul, ‘ placed in a tabernacle of wood,’ which is said to have been a masterly performance, having been executed in 1398, at a cost of £12 6s. Near the altar was the splendid shrine of St. Erkenwald, which was for many ages a favorite resort of the pious. Another shrine, nearly as celebrated, was that of Roger Niger, who was made bishop in 1229 ; Matthew Paris records, that miracles were frequently wrought at it.

Among the uncanonised, but perhaps not less truly eminent personages, to whom monuments were erected in this cathedral, were ‘ old John of (Jaunt, time-honored Lancaster:’ the gallant Syijiiey, author of the Arcadia; Dean, Colet, the founder of St. Paul’s school ; and 'an-dyke, the painter. Here too reposed the ashes, of Sir Francis Walsingham, but without a stone to mark the spot. He died so poor that his body was buried by stealth, to prevent its being arrested. The celebration of obsequies for persons of rank once formed a peculiar and a very profitable privilege of St. Paul’s. The ambassadors of foreign princes, and many of our ucbility, according to Dugdale, the knights of tlie garter, the lord mayor, and the several companies of London, all attended with great devotion at these ceremonies.

St. Paul’s was the place where, in the reign of Edward III., tlie flagellants, to the number of 120 men and women, exercised their castigations. ‘ Each day,’ says Dr. Lingard, ‘ at the appointed

)iour, they assembled, ranged themselves in two lines, and moved slowly through the streets, scourging their naked shoulders, and chanting a hymn. At a known signal, all, witli the exception of the last, threw themselves flat on the ground. He, as he passed by his

companions, gave each a lash, and then also lay down. The others followed in succession, till every individual, in his turn, had received a stroke from the whole brotherhood. The citizens gazed and marvelled, pitied and commended ; but they ventured no farther.'

After the battle of Bosworth-field, which gave the crown to the earl of Richmond, llie king, on arriving in London, rode through the city to the cathedral church of St. Paul (says a MS. in the Lansdown collection, No. 250), where he offered three standards.

On the 6th of April, 1592, the nobles, with the lord mayor and corporation, attended St. Paul's in great state, when Dr. JNIorton, archbishop of Canterbury, and lord chancellor, addressed them in a long oration, on occasion of the king of Spain having taken Granada from the Moors. Te Deum was sung and great rejoicings followed.

Queen]\Iary seems to have had particular attention paid to her at St. Paul's. On one occasion, when the queen rode through the city to \V estminster, as she passed through tiie churchyard, a Dutchman of the name of Peter stood on the weathercock, holding a streamer in his hand, five yards long, and, waving it, stood some time on one foot, at the same time shaking the other ; *and then,' says Stowe, ' kneeling on his knees, to the great marvaill of all the people.' The city gave him twenty-five marks for his* cost and paines.' On her marriage with Philip of Spain, when the king and queen passed the churchyard, ' a fellow,' says Stowe, ' came slip—

i)ing upon a cord, as an arrow out of a bow, from 'aul's steeple to the ground, and lighted with his head forwards on a sort of feather bed, and after he climbed up the cord again, and did certain feats,' all of which were repeated on the coronation of Edward 'I.

Old St. Paul's was the scene, however, of far more important ceremonies. It was here that the pusillanimous king John signed the resignation of his crown and kingdom to the haughty legate of the pope. Here, too, queen Elizabeth publicly returned thanks to the Deity, for the victory over the Spanish armada; and the colors taken from the enemy still stream in triumph, under the dome of the cathedral.

In the reign of Philip and INIary, we find that the cathedral was a place of common resort and thoroughfare ; and that, not only porters and carriers of goods, but beasts of burden were suffered to pass through it. The dean and chapter, too, instead of checking ihis concourse, turned it to their profit, by imposing a toll on each

passenger. The abuse at length became so flasrant, that an act of common council was issued to restrain it. Many shops, and houses too, were built against the outer walls of the ca-thnlral ; and even a playhouse is said to have 1 cfii among the erections here.

The Hurnynge of Paules Church in London,

an old tract written in the year of our Lord 1561, points out the different places vvhere business of various sorts were carried on. ‘ The south alley for usurye and poperye ; the north for simony and the horse faire; in the middest, for all kind of bargains, metinges, brawlings, murthers, conspiracies; and the font, for ordinary paiements of money, are so well knowen to all menne, as the beggar knows his dishe.’

The simony and trading in benefices, carried on in St. Paul’s, appears to have been long known. Chaucer alludes to them in the prologue to his Canterbury Tales, and bishop Hall, in one of his satires, broadly mentions them as notorious. Advertisements were openly posted on the doors, for the sale and purchase of benefices, beginning usually with tiie words Si quis, a circumstance thus alluded to by bishop Hall : —

Saw’st thou ever Si quis patch’d on Paul’s church door, To seek some vacant vicarage before “! Who wants a churchman, that can service say, Read, fast and faire, his monthly homiley. And wed and bury, and make Christian scales? Come to the left side alley of Saint Paules, Thou servile foole.

The description of the satirical bishop has many illustrations: ‘I bought him in Paul’s,’ says Falstaff, in speaking of Bardolph. Massinger, also, in his City Madam, thus alludes to it as a notorious thieves’ sanctuary.

‘ Dining with duke Humphrey’ was applied at this tmie, to persons who walk about for lack of a dinner to sit down to. ‘ Are they none of duke Humphrey’s furies? Do you think they devised this plot to get a dinner?’ (Mulco at Midnight.) That is, one of the aisles of St. Paul’s was called duke Humphrey’s Walk, from a popular notion, that the good duke Humphrey of Gloucester was buried there ; though the fact is, that the duke was buried at St. Alban’s, and , the monument which the vulgar supposed to be erected to his memory was one placed over the remains of Sir John Beauchamp, son of Guy Beauchamp, earl of W arwick.

We cannot here detail the further history of the old building. Large sums of money were collected under king James L commission, and considerable quantities of building materials actually provided for its repair ; but the reign of James elapsed without the work being commenced. The duke of Buckingham is said to have borrowed some of the latter for the erection of the water gate at York House. On the appointment of Laud to the see of London, this prelate exerted himself with great vigor and success in favor of the neglected building, and set on foot a new subscription, which produced in a short time £“101,330 4s. 8d. The celebrated Inigo Jones was employed to superintend the repair; but, before any thing material was effected, the great fire came, and reduced it to a heap of ruins.

The subscriptions for building a new cathedral, which commenced soon after the fire, amounted, in the course of ten years, to £126,000; a new duty was laid on coals for the same purpose, which produced £5000 a year; and king Charles L contributed £1000 annually, \^‘ren was

ordered lo prepare designs for tlie inspection uf the king, and, fixing upon one of lliem, his majesty commanded a model of it in wood to be prepared on a large scale. Of this model, which is suffered to remain in a dilapidated state in an apartment in the cathedral, where it is exhibited, a living architect (Mr. Elmes) says, ‘ it possesses an originality peculiarly striking; copied from no other building, it exhibits judgment and invention in every turn.’

Excellent as the plan was, it was rejected, on ‘he ground that it differed too much from the preconceived notion of cathedral churches ; the secret appears to ha\e been, that it was not adapted to the ceremonies of the Roman Catholic church, which the duke of York hoped to restore, and therefore he used his influence to get the plan rejected. It was witli the same view that the duke obtained the addition to the plan that was adopted, of the side oratories, which so much broke in upon the design, that the architect is said to have shed tears when he was compelled to admit them.

The commission for rebuilding the cathedral was issued under the great seal, dated November 12th, 1673. The business of taking down

the ruins of the old structure was one of considerable labor and difficulty. To the middle tower, the ruins of which were 200 feet high, a blast of eighteen pounds of gunpowder was applied, under the direction of tlie architect; and, com-])aratively small as this force was, it raised the whole angle of the tower, with several adjoining arches ; visibly lifting the vast mass, which was not less than 3000 tons in weight, about nine Indies, when, tumbling back again suddenly, it dropped into a heap of ruins, but with such a concussion, that the inhabitants in the neighbourhood took it for an earthquake. Sir Christopher also now resorted to that ancient engine of war, the battering-ram ; a beam of timber forty feet long, well secured with ferrules, and suspended from a triangle, was vibrated by tiiirty men for a wliole day against a part of the wall without any apparent effect, but on the second day the whole was thrown down.

Tlie first stone of the new cathedral was laid on tlie 21st of .luue, 1675, by the great architect himself, who lived to see his son, then only a few months old, thirty-five years afterwards, deposit the highest stone of the lantern on the cupola.

In 1693 the walls of the new choir were finished, and the scaffolding removed ; and on the 2d of December, 1697, it was opened for flivine service, on occasion of the thanksgiving for the peace of Ryswick. The morning prayer chapel was opened for divine service the 1st of February 1699. It is remarkable that this mighty fabric was begun and finished by one architect. Sir Christopher Wren ; one principal mason, Mr. Strong ; and during one bishopric, that of Dr. Henry Comjitoii, bishop of London.

The total expense of the building was £736,752 2X. 3ˆ/.

Tiie dimensions of this cathedral, compared with that of St. Peter's, are, according to the I'arentalia, as follows ; —

Length within Greatest breadth Height .

St. Pati.'s. «t. Peters. . 500 669ft.

. 223 442

. 340 432

In the construction of the edifice, the architect was forced to observe the general shape of a cross, and yet it exhibits little or none of the awkwardness of that form of building. By means of an additional transept or arm he has given due breadth to the west end or principal front ; the east end terminates in a projecting semicircle ; and at the extremities of the principal transept there are also semicircular projections for porticos, while the angles of the cross are occupied with square appendages, which serve as buttresses to a magnificent dome or cupola.

The front of the building on the west presents a grand portico of the Corinthian and Composite orders, surmounted by a spacious pediment, with a lofty tower or steeple of great elegance and richness on each side. In the tympanum, the conversion of St. Paul has been well sculptured in basso relievo, by Birt; on the apex is a colossal statue of St. Paul, and on either hand, at different distances along the summit of this front, are similar statues of St. Peter, St. James, and the four evangelists. The semicircular porticos at each end of the principal transept are of the Corinthian order, and are also crowned by statues of the apostles. The tympanum of that on the north side, exhibits a sculpture of the royal arms and regalia, supported by angels ; and that of the other the phoenix rising from the flames, as before mentioned. The side walls of ˆhe building present the appearance of a two storied structure ; there being two ranges of pilasters all round, one of the Corinthian, and the other of the Composite order; the intervals between which are occupied with windows. The dome or cupola is the most striking feature of the whole edifice. A plain circular basement rises from the roof of the church to the height of twenty feet ; above that there is a Corinthian colonnade of thirty-two columns; and every fourth intercolumniation is filled with masonry, so dispersed as to form an ornamental niche or recess, while, at the same time, the projecting buttresses of the cupola are thus concealed. The entablature of the peristyle supports a handsome gallery surrounded with a balustrade. Within this rises an attic story, with pilasters and windows, from the entablature of which springs the exterior dome. Round an aperture on tlie summit of the dome there is another gallery, from the centre of which ascends an elegant lantern,

surrounded with Corinthian columns, and surmounted by a ball and cross richly gilt. When viewed, especially, from any of the lieights round the metropolis, such as Ilampstead,or Uighgate, or Shooter's Hill, its dome has a very noble appearance ; though there, perhaps, it is ratiier to be regarded as a cupola to the vast metropolis itself, than to any single edifice. ' Considered in this light,' as Mr. E. Aikin remarks, ' the coldest critic, the most rigid theorist, could not wish to sul)tract a [)arlicle fioin its rich exuberance.'

The adoption of the two ouleis of architecture,

it must be remembered, was a matter not of clioice but necessity. The quarries of tlie Isle of Poitlaiul, from vvlucli alone the stones for the buiklin.; could, be procured, could not furnish blocks of magnitude enough to enable the architect to raise his series of pillars all of one order; that is, to make the losvest order of the necessary elevation.

On entering the building, there is one discrepancy vvhicli strikes a stranger more forcibly than any that can be remarked in the exterior. Contrary to what he has been led to expect, from the di. ision of the walls on the outside, into two stories, he finds no such corresponding division within. Although disappointed, however, he is far from being displeased. The unexpected loftiness of the vaulting, and of the long range of columns and piers which burst on the sight, add still farther to those ideas of vastness and magnificence which the exterior has inspired. Sir Christopher chose the hemispherical manner of vaulting, as being ' demonstrably much lighter' than diagonal cross vaults ; and that demonstration we have here before us. 'The whole vault of St. Paul's consists of twenty-four cupolas, cut off semicircular with segments to join to the great arches, one way, and which are cut across t!ie other way with elliptical cylinders to let in the upper lights of the nave ; but, in the aisles, the lesser cupolas are both ways cut into semicircular sections, altogether making a graceful geometrical form (distinguished by circular wreaths.)' — Faientalia.

The great dome over the central area is supported by eight stupendous

piers, four of the arches formed by wiiich open into the side aisles. It has been so constructed as to show a spacious concave every way ; and, from the lantern at the top, the light is poured down with admirable eft'ect over the whole, as well as through the great colonnade that encircles its basement, 'llie in-side is divided into light compartments, in which there are as many paintings of subjects from scripture, by Sir James Thonihill ; but, though originally executed with much animation and relief, the colors are now so faded, that they present to the eye of the observer below only a confused mass of stains. Sir Christopher Wren wished to have beautified the inside with the more durable monument of mosaic work ; but in this, as in other instances of correct foresigiit, lie was unhappily over-ruled. The choir is separated from the body of the church by handsome iron railings. (Jver the entrance to it is the organ gallery, and an organ in it supposed to be one of the finest in the kingdom. It was erected in 1694 by Bernard Schmydt, or Smith, for £2000. On the south side of the choir is a throne for the bishop ; on the north another for the lord mayor ; and, besides these, there is on each side a long range of stalls. The whole are richly ornamented with carvings. In the chancel, or semicircular recess at the east end, stands the communion table. What is called the altar piece, has four fluted pilasters painted in imitation of lapis lazuli, and is besides ornamented with a])rofusion of uildiiig ; but its appearance is on the whole insiuiiificant. It is due, however, to the memory of \ ren to notice, that he had

other designs for this part of the building than tliose which liave been realised. Tlie pulpit and reading desk are both splendid objects; the for-mer was designed by JNIyliie, and is richly carved and gilt ; and the latter consists entirely of brass gilt, and is very light and airy. In the south end of the western transept there is a chapel for morning prayers, and in the north the consistory ; both are divided from the aisles by screens of insulated columns, and ornamental carved work.

In the spaces between the great pilasters of the nave, Sir Christopher Wren has omitted inserting, as is usual, the architrave and frieze of the order, and this apparently for the purpose of raising the summits of the arches above the level of the architrave. We learn from the Parental ia, however, that he did not consider this to be any deviation from the strict rules of art; he always insisted that he had the ancients on his side, and would refer to the Temple of Peace, to the great halls of the Baths, for proofs that in large structures of three aisles this is done, and for this reason, that, in such wide inter-columinations, ' the architrave is not supposed to be from one great column to another,

but from the column to the wall of the aisle, so that the end of it only will appear upon the pillar of the inside of the great navis.'

In 1773 Sir Jos'nua Reynolds made an offer from himself, and a number of other painters of the first eminence, including West, Barry, Ci-priani, Kauffman, Dance, &c., to paint various pictures, free of charge, to adorn the naked walls ; but the offer, so honorable to them, was declined, on the ground (which, considering the Protestant riots'of a later period, cannot be considered as altogether fallacious), that popular clamors would be excited by the idea, that ' po-pery and the saints were again to be admitted into our churches.' At a later period, a proposition for the introduction of monumental sculptures was attended with more success; and, considering that the same objection scarcely applies to them, it is surprising that it should not have been made earlier.

The first statue erected in St. Paul's was that of our great lexicographer. Dr. Johnson. Since then, about forty other monumental tributes to the illustrious dead of this country have been added ; and, being all of white marble, and generally well distributed, they unquestionably contribute greatly to the relief and embellishment of the architecture. The monuments have in themselves, however, little to boast of.

It is due, at the same time, to the artists, to observe, that there is but too much reason to think that they have not always been allowed the free exercise of their own judgments, but have been often obliged to embody the gross conceptions of ignorant committees of superintendence and direction. When the dean and chapter first came to the resolution of admitting monuments into the cathedral, they resolved that no monument should be erected without the design being first approved of by a committee of the Royal Academicians ; but it is asserted, that, ' from the influence of some unexplained imperium in im-])erio, the ultimate decision was not intended to be given to the committee.' A vindicator of

Chantrey from his share in the allegorical mania, says, that the design in which it occurs was made entirely in deference to the powers who sit in judgment on these occasions, and under the certain conviction, that without submission to the prevailing taste his model would have been thrown aside, as he had before repeatedly experienced. — Britton’s lUustratiens of the Pub-lic Buildings of London.

But few of the persons to whom monuments are erected in the cathedral, have been really buried here. Among the number, the first who claims our notice is the great architect of the building, Sir Christophen Wren. Descending to the vaults by a broad flight of steps, you see beneath the south-east window, inscribed on a low tomb, the following simple epitaph : ‘ Here lies Sir Christopher Wren, Knight, builder of this Cathedral Church of St. Paul, who died in the year of our Lord MDCCXXIIL, and of his age XCL’ On the wall, above, there is an additional inscription in Latin, with which the public are more familiar, and which may be thus translated : ‘ Beneath lies Christopher Wren, the builder of this church, and of this city, who lived upwards of ninety years, not for himself, but for the pub-lic good. Reader would’st thou search out his monument? Look around. He died •25th February, 1723, aged ninety-one.’

At the suggestion of the late Mr. Mylne, the architect, it has been repeated on a tablet in front of the organ gallery in the choir ; yet even there the efl’ect is incomplete. Considering that Wren was in truth the builder, both ‘ of this church and this city,’ the reader should be enabled, to ‘ look around’ on both, to behold ‘ his monument.’

In these vaults, also, repose the mortal remains of the immortal Nelson, and of his friend and companion in victory, lord Collingwood, both of which were deposited here with all those funeral honors which a sorrowing country could bestow. Here too lie interred those eminent masters Reynolds, Barry, and Opie, in contiguous graves ; the eloquent and sagacious Loughborough ; the learned and pious Dr. Newton, bishop of Bristol; Dr. Boyce, the organist and composer; the eccentric disciple of animal magnetism, Mainan-dot ; and a few others of inferior note.

After examining all that is to be seen in the lower part of the cathedral, the visitor has still to make the ascent to the summit, to examine the interior of the vast dome, and to enjoy the magnificent views, which the outside galleries furnish of this vast metropolis. You ascend by a spacious circular stone staircase, to a gallery which encircles the lower part of the interior of the dome, and is called the whispering gallery, from the circumstance, that the lowest whisper breathed against the wall, in any part of this vast circle, may be accurately distinguished by an attentive ear on the very opposite side. The paintings within the dome, you find, even on this nearer inspection, scarcely distinguishable. All the lower parts have perished utterly, and the rest are in a state of rapid obliteration. The subjects were all chosen from the life of St. Paul, as recorded in the Scriptures, from his miraculous conversion near Damascus, to liis shipwreck at Melita.

Branching off from the circular staircase, at tiiis place, there are passages which lead to other galleries and chambers over the side aisles. One conducts you to the Library of the chapter, which is immediately over the consistory. The floor of this apartment is a great curiosity, being entirely constructed of small pieces of oak, without either nail or peg, and disposed into various geometrical figures, with the utmost nicety. Above the chimney there is a good half length portrait of the protestant bishop Dr. Compton, who bequeathed the whole of his books to the library, which is not however of much value as a collection. Over the morning prayer chapel, at the opposite end of the transept, is a room called the Trophy Room, from being hung round with various shields and banners used at the ceremony of lord Nelson's funeral. In this room are kept the rejected model, according to which Sir Christopher Wren first proposed to erect this cathedral, and also the unexecuted model of the altar piece. From the whispering gallery, the visitor ascends to the stone gallery, which surrounds the exterior dome above the colonnade; and from this elevation, when the atmosphere is clear, the view around is magnificent. As the staircase above this becomes very steep, narrow, and dark, not many visitors can prevail on themselves to go higher; and yet there is much to repay both the trouble and apprehension attending the ascent. In the crown of the dome there is a circular opening, from which the superstructure of the cone and lantern, and cross, rise nearly 100 feet higher. Around the exterior base of the cone there is a railed gallery, called the golden gallery, from which you have a more extended, and, on account of the increased diminution of individual objects, a more curious view of the busy world beneath. If your head is steady enough to master the

feeling of dizziness which overpowers most people at so great an elevation, and makes them feel that the only pleasure in going up is the pleasure of coming down again, you may even ascend by ladders into the lantern itself, and, from the bull's eye chamber, extend your survey far into the country on every side. Here did a most ingenious and persevering artist, Mr. Thomas Hornor, pass the whole summer of 1821, in taking a panoramic view of this vast metropolis and its environs, which he is now understood to be preparing for public exhibition in the Regent's Park.

When the visitor has reached the bull's eye chamber, it will not cost him much additional exertion of courage to mount into the ball which crowns the lantern. It is six feet two inches in diameter, and capacious enough to contain eight persons with ease. The weight of it is stated to be 5G00 lbs. The cross, which is solid, weighs 3360 lbs.

In descending from this lofty perambulation, the visitor, when he reaches the whispering gallery, may return to the lower part of the church by a different staircase from that by which he ascended, called the geometrical staircase. It is, however, seldom used, and is chiefly resorted to by the curious in architectural matters, on account of the singularity and skilfulness of its construction. The stairs ro round the concave

in a spiral direction ; and the base is a circle in-laid witli black and wliite marble, in the form of a star. The lowers or steeples, which have been before described, as forming part of the western front, serve, one as tlie belfry, and tlte other as the clock tower. The great bell of St. Paul's, which is of some celebrity, never being tolled except at the deaths and funerals of members of the royal family, or of the bisliops and lord mayors of London, when the sound of it is heard at a great distance, is stated to weigh four tons and a quarter. It has these words inscribed on it, Ricliard Phelps made me, 171G.

In the area before the west front of the cathedral there is a statue of queen Anne, by Bird, on a sculptured pedestal, representing Britannia,

Hibernia, America, and France. Neither the statue nor the pedestal does much credit to the artist.

Church of Saint Faith. — In early times, there stood, near the east end of St. Paul's cathedral, a separate church belonging to St. Faith's parish; but it was taken down on the rebuilding of the cathedral, after the fire of 1086, in order to give greater room for the new fabric ; and, in place of it, the parishioners of St. Faith's had assigned to them, that part of the crypt or vaults of St. Paul's situated immediately under the choir, which was formed into a distinct place of worship, and called Ecclesia Sancta? Fidei in Cryptis. It became hence a common saying

This church needs no repair at all, For Faith's defended by St. Paul.

In the reign of Edward VI. the parishioners of St. Faith's removed into another place of worship in the crypt, which had then been suppressed, called Jesus chapel ; and the church of St. Faith was occupied by the Stationers' company, as a repository for their goods. After the great fire of London, the parish of St. Faith was united to that of St. Augustine ; and, on the rebuilding of the cathedral, there was allotted to the parishioners of St. Faith a portion of the new crypt, for the purpose of interments, as also a large portion of the outer burial groumd.

Churches Erected Previously to the Great Fire.

In London there are not above twenty churches which date their erection prior to the great conflagration of 1666. This fire destroyed eighty-nine churches, besides chapels, and threatened to annihilate every venerable edifice in the metropolis. * One of the most ancient of those buildings which remain is the church of St. Peter ad Vincula, in the tower, already described. Several of the others are entitled to a brief notice.

St. John the Baptist. — This church is almost the only remains of the ancient palace of the Savoy, in the Strand, which was built in the year 1245. It does not appear that the chapel suffered by the riots of the Kentish rebels, already noticed, but a considerable part of the palace was demolished, and the whole was repaired in 1509, The roof of this church is very fine, being divided into pannels, on which numerous ri.'ligiousand heraldic devices are carved.

This church, which was very tastefully repaired in 1820, contains several ancient monuments of the Willoughby, Howard, and C'ompton

families, as well as of other persons.

St. Dumtana in the West. — No church in London is perhaps so well known as St. Dunstan's, in Fleet Street; not certainly on account of its external elegance, but for the equivocal celebrity it has acquired by the two wooden figures placed on a pediment in front, in 1671, representing savages, who indicate the hours and quarters by striking a bell with their clubs. As they are very visible in the street, ' they are,' says an historian, * more admired by many of the populace on Sundays, than the most elegant preacher from the pulpit within.' Charity induces us to hope better, particularly as Dr. Donne, the celebrated Richard Baxter, and the pious llomaine, were preachers at St. Lˆunstan's. There is no evidence wlien this church was erected : Stowe records burials in it so early as the year 1421.

St. Giles', Cripplegate, is one of the best Gothic buildings in London, and was erected in 1546, on the site of the ancient church, built by Alfune, the first master of Bartholomew Hospital in 1090, and burnt down in the year 1545. It is a light, airy, well-proportioned structure, which will always be attract ve to the antiquary and the poet, on account of its being tlie place where Speed the historian. Fox the martyrologist, and INIilton, were interred. Oliver Cromwell and his wife, Elizabeth Boucher, were married in this church.

St. Bartholomew the Great. — This church, part of the ancient priory of St. Bartholomew, in Smithfield, owed its foundation to Raherus, • a witty gentleman, and therefore in his time the king's minstrel,' about the year 1202. JNIatthew Paris relates a singular rencontre which took place in this priory, when Boniface ar.ˆ'iliislop of Canterbury, in a visitation, thought fit to go out of his diocese, and visit it. The canons, though willingto receive him as a guest, would not on this occasion acknowledge his authority; whereupon the bishop called the said canons ' English traitors,' and, after striking the sub-prior in the face, ' the archbishop,' honest Mathew adds, ' with oaths not to be recited, rent in pieces the rich cape of the sub-prior, and trod it under his feet, and thrust him against a pillar of the chancel with such spiritual violence that he had almost killed him.' The archbishop was, in his turn, knocked down ; but his men came to his assistance, and routed the canons, who ' ran bloody and miry, rent and torn, to the bishop of London, to complain.' The church was rebuilt about the year

1410.

St. Bartholomew the Less. — This church, which IS entered through Smithfield, appears to be of considerable antiquity, as there are monuments in it of as early a date as the year 1438. The sculpture in the interior, which is in the Saracenic Gothic style, is very antiquated.

St. Helen's, Bishopsgate, so called on account of its being dedicated to the mother of Constantine, was originally a priory of black nuns, founded anterior to the reign of Henry III. The church, which is a light Gothic structure, with a

tower, built in 1669, is honored with llie remains of Sir Julius Ccesar, Sir Thomas Gresham, Sir John Crosby, Hooke the astronomer, and other worthies. The parsonage was leased o»it by queen Elizabeth, m lieu of a pension, to captain Nicholas Oseley, who, while in Spain, gave the first intelligence to the English court of the fitting out of the Spanish armada.

St.And'-cvj Undershaft . — This church, which is situated in Leadenhall Street, is so called on account of a JVIay-pole, or shaft, having formerly been raised here every year on the 1st of May, which was higher than the church-steeple, until Sir Stephen, a bigot of St. Catherine's church, preaching at St. Paul's Cross, called it an idol, when the inhabitants, over whose doors it had been suspended on iron hooks, retOrrned home, and cut it to pieces. This church was rebuilt in the year 1525, at the expense of William Fitz-william, the founder of the noble house of Wentworth.

St. Olave, Hart Street, Crutched Friars, is a church wJiich has nothing but its antiquity to recommend it. The first record of it is in 1319, since which time it has neither had external or internal grandeur to boast of; nor does it ippear that a single individual of note sleeps within its walls.

Near the tower stood, till 1825, the Church of St. Catharine's Square, so called to distinguish it from St. Catharine Cree, already noticed. It formerly belonged to an hospital founded in 1148 by Matilda, consort

to king Stephen. The church, which was collegiate, was a neat Cothic building, with several very handsome stalls ; an elegant east window, which distributed a flood of light on all around ; an octagonal pulpit, which represented, on its sides, the ancient building, and the several gates of the hospital ; and an altar, which was the finest specimen of the Gothic style in England. The organ, which was erected in 1778, was fine toned and of great power. This church, after escaping the fangs of Henry VIII. and the Puritans, had nearly fallen a prey to the rioters of 1780, who, headed by a soldier of the name of Macdonald, and two women, were proceeding to demolish it, on the ground that it was built in the times of popery. But some of the members of the London Association arrived in time to save this venerable pile from destruction ; and Macdonald and the women, who were afterwards arrested, were executed on Tower Hill. This church was, however, obliged to he taken down in the year 1825, to make room for the new dock, called St. Catharine's Dock.

St. Saviour s, Southwark. — This church, which was originally founded previous to the arrival of tlie Normans in this country, was successively a house of sisters, a college of priests, and a priory of canons regular, and was supported by a ferry across the river. The church, wliich was formerly, and is now sometimes, called St. Mary Overy, was rebuilt in the year 1400. John Gower, the poet, the friend of Chaucer, and author of the Confessio Amantis,was a liberal benefactor, and was interred within its ancient walls. When the priory had been surrendered to Henry V'lll., or rather seized upon by that monarch, the inhabi-

tants of Southwark purchased it, with a charter which constituted the churchwardens a corporation. At a subsequent period this corporation appear to have manifested very little regard for their purchase, and to have actually let a part of it oui for sixty years as a common bakehouse.

This church, which is very spacious, with three aisles and a cross aisle, like a cathedral, is of the ancient Gothic order; twenty-six pillars, in two rows, support the roof of the church ; and the chancel, and the galleries in the walls of the choir, are adorned with pillars and arches, similar to Westminster Abbey. The tower, which is erected on four very strong pillars, with the spire, is 150 feet high, and contains twelve of the finest bells in Great Britain. It is memorable from its being the place whence Hollar took his views of London.

Gower is not the only poet who has been buried in this church, for here sleep, in one grave, Philip Massinger, and Fletcher. The celebrated cashier of the Bank, Abraham New-land, is also interred in an obscure corner of this church.

The Church of St. Pancras, wiiich was built in the fourteenth century, is of small size and rude architecture ; it consists of a nave and chancel, in which are several monuments; and no church or churchyard, in or near the metropolis, affords a last home to such a diversity of characters as are buried within its precincts. Jeremy Collier, the non-juror, and Father O'Leary, the amiable friar of the order of St. Francis ; Pascal Paoli, the Corsican patriot (who has a monument in Westminster Abbey) ; Woollet, the engraver ; Cavallo, the Neapolitan philosopher; and Chevalier D'Eon, the knight-errant of the last age', have all been buried in the church or churchyard, where a plain square monumental pillar, with a willow tree on each side, bears an inscription which records, tiiat here also lie the remains of the pliilosophic Mary Wollstonecraft Godwin. The churchyard is remarkable for the great number of Roman Catholics interred in it ; and the church was the last in England where mass was performed.

Allhallows, Barking. — This church, which escaped the fire, was built in 1651, at the corner of Seething Lane, (Jreat Tower Street. It formerly belonged to the abbess and convent of Barking in Essex, whence its name is derived. It is a spacious church, and contains a mixture of Tuscan and modern Gothic architecture.

St. Ethelburga is a small church on the east side of Bishopsgate. It is supposed to have been erected in the year 1420; and a charity was founded here in 1436. It is a Gothic building, with a small spire; and, among other monuments, contains one in memory of a person of the name of Williams, who had attended on forty-two lord-mayors, and died in 1583.

St. James's, Duke's Place. — This church, which is very small, and built of brick, was erected in 1622 on the site of the priory of the Holy Trinity, founded by the empress Maud in llOJ? As it was the richest priory in England, it was (mc of the first that was dissolved.

Churcues built after the Great Fire by Sir CiiuiSTOPUER When.

Tl > is great arcliitect erected fifty new churclies, between the years 1668 and 171H, a list of which, chronoloj;ically arranged, is subjoined.

St. Olave, Jewry, formerly called St. Olave, Upvvell ; situated in the Old Jewry, and erected after tiie fire of 1666.

St. Dunstan's in the East, St. Dunstan's Hill. — This church was only partially destroyed by the great fire. The body, which remained, has since been rebuilt, in 1820, under the direction of Mr. Lain'j;, who was enabled to preserve tiie singularly beautiful tower and spire erected by Sir Christopher. The spire is raised on four Gothic arches, and presents a light and airy appearance.

St. Micliaers, Wood Street. — So early as the year 1359 the church of St. Michael's was liberally endowed : and tradition reports, that the head of James IV. of Scotland was buried here, after the battle of Flodden field. The new church, which is of tlie Ionic order, was erected in 1669. The old turret has since been altered into a clumsy spire.

Si. Sfep/icn's , Walbrook. — This church is more celebrated on the continent than the cathedral of St. Paul's or Westminster Abbey. — Although there was a church in this parish so early as the year 1135, yet the site on wliich the present beautiful edifice is erected was not thus occupied until the year 1429. The first stone of the new church was laid in 1672, and in 1679 it was completed. The interior is allowed to be of the most beautiful and matchless architecture.

St. ISIari/, Aldermanbury, was erected on tire site of an old church, which appears to have stood five centuries and a half, when the fire of London destroyed it. The infamous judge JefTeries was buried in this church.

St. Kic/iolas, Cole Abbey, Old Fish Street. — • A plain stone building, with a square tower.

St. George, Botolph Lane. — A small neat church, of Grecian architecture : indeed, a large church is quite unnecessary, as the parish, according to the census of 1821, only contained thirty-three houses, two of which were uninhabited, and a population of 101 persons.

St. Bartliolemew, Bartholomew Lane. — Rebuilt in 1670.

St. Stephen, Coleman Street. — A chapel belonging to the deans of St. Paul's ; rebuilt in

1670.

St. Michael, Bassishavv, Basinghall Street. — An ancient rectory, which, in 1140, was in the presentation of the prior and canons of St. Bartholomew's. The old church, which was taken down in 1460, is said to havebeen very beautiful. Two centuries after it was rebuilt it was destroyed by the great fire, and succeeded by the present edifice.

St. Michael, Queenhithe. — Built in 1677. St. Ann and St. Agnes, St. Anne's Lane. — A plain edifice with a square tower; built in 1685. St. j \Iari/-nt-inil, Lower Thames Street, was only partially destroyed by the great fire. It is surmounted by a plain square brick tower, built in 1670.

St. Christopher-Ie-Stock. — This church, which was rebuilt by Sir Christopher Wren, was taken down after the riots of 1780; and its site has since been occupied by the additional buildings to the bank of llngland.

St. I'edust, Foster Lane : dedicated to a bishop of Arras in 464 ; rebuilt in 1698.

.SY. Sepulchre s, Skinner Street. — It is not known when this church was first erected, but there are records of its existence in the middle of the thirteenth century ; and it is probable that it is one of the oldest foundations in London. The church that was erected in 1440 was not entirely destroyed by the great fire, but it was almost entirely rebuilt in 1670.

St. Mary Woolnoth, Lombard Street — Although this church is entered in the MS. of Sir Christopher Wren, yet it was built by his pupil, Nicholas Ilawksmoor, probably from some designs by his master, particularly the interior. The Rev. John Newton, the friend of Cowper the poet, was rector of this parisii. St. il///f/m/'.s, Poultry, 1676. St. Bennett Fink, Threadneedle Street, 1673. St. Murj/ le Buu\ Cheapside. — This church, which is supposed to have been erected in the reign of \'illiam I., was the scene of many interesting events. It was unroofed

in 1090 by a tempest, and in 1271 a great part of the steeple fell down, when several persons were killed. Five years afterwards, when Fitz-Osbert, commonly called Long Beard, had raised an insurrection, he sought refuge in this church, and fortified it.

When the church had been destroyed, by the fire of 1666, Sir Christopher Wren, who had intended to raise two arches over the pavement, was compelled to erect the edifice to range with the street, when, in digging to the depth of eighteen feet, he found a Roman causeway four feet thick on which he laid the foundation. The principal ornament of this church is its steeple, which combines the five orders of architecture, and is considered as one of the chef-d'ceuvres of this master. It is 225 feet high, and is surmounted with a gilt ball and dragon. The inside contains two Corinthian and two semi-pillars in length, against each of which are two pilasters; and it is from those that the arches between the nave and side aisles are turned. Their capitals are foliage, and the arches have cherubim on the key stones. They reach to the great cornice of the order continued round the church, and consequently the architecture and frieze are confined to the columns. 1 In 181R, a survey having been made of this church, the steeple was deemed vinsafe, and it was determined that it should be taken down and rebuilt, which has since been done, and the church otherwise substantially repaired.

St.]\Hchiiers, Cornhill — This church dates its origin beyond the year 1133, when it was presented to the abbot and convent of Evesham. The present church which is justly admired for its beautiful (Jothic tower, and the admirable symmetry with which the various orders of architecture are combined, was erected in 1672. Fabian the alderman and historian has a mcnu-ment in this church.

St, Magnia, London Bridge, 1676.

St. Edmund, Lombard Street. 1690.

St. Lawrence, Jewry. — Edward L gave the patronage of this church to

Baliol College, Oxford, which now possesses it. Tlie church was re-buih in 1677. It is a handsome building, and tlie interior has lately been rendered very elegant. A monument of archbishop Tillotson adorns this church.

St. Bride s, Bride Lane, Fleet Street, is another of those churches on which Sir Christopher Wren bestowed the greatest care. The church is a plain but neat structure; but it is in the lofty spire that the taste and skill of the architect are displayed. This spire was much injured by lightning on the 18th of June, 1764, when several large stones were forced from their places, one of which fell through the roof into the north gallery, and another was thrown into a house in Bride Lane. It was, however, soon repaired, though at an expense of £3000. This spire was again struck by lightning in 1805, and, in repairing it, the steeple was somewhat lowered. Li 1822 — 3 this cimrch, which the parishioners guard with just pride, was substantially repaired, and a rich window of stained glass added. Since this period advantage has been takeu of a fire to throw open the view of this church from Fleet Street. Among the eminent persons buried, are Samuel Richardson, the author of Pamela ; Sir Richard Baker, the author of the Chronicle of the Kings of England ; Pope's Corinna, Mrs. Elizabeth Thomas ; and Wynken de Worde, the famous printer.

St. Dionis, Back Church, Lime Street, Fenchurch Street, rebuilt 1674-84.

St. James, Garlick Hill, rebuilt in 1683.

St. Peter s, Cornhill. — This church is of very ancient foundation, and very richly endowed. The present plain edifice was rebuilt immediately after the great fire. There is a plain monument in this church to the memory of seven children, the whole offspring of James and Mary Wood-mason, who were burnt to death in a house in Leadenhall Street, in 1782.

St. Bennet, Paul's Wharf, built in 1181, and rebuilt in 1682. Inigo Jones is said to have been buried in this church, but there is no record of the circumstance.

St. Martin, Ludgate, 1684.

Allhallows the Great, Tliames Street, 1683.

St. Sivithin's, Cannon Street. — A small but elegant church, built in 1680, on the ruins of one of very ancient foundation. This churcli is memorable from the celebrated ' London Stone ' being placed in front

of it.

Chriitchurch, Newgate Street. — Previous to the dissolution of the monasteries, tiiis was the church of Gray Friars, and one of the most superb conventual houses in the metropolis. It v/as built in the beginning of the fourteenth century, and was consecrated in 1325. The ancient church, which was burnt down in the fire of London, was of large dimensions, being 300 feet long, eighty-nine broad, and sixty-four feet high. Tlie only part that has been rebuilt is the choir, to which has been added a tower, not remarkable for its exterior grandeur. It is an elc'jant and commodious church, which is ■\or.. MIL

much frequented on account of the scholars of Christ's Ilospital regularly attending divine service here. NV'eever, in his Funeral Monuments, relates that the old cluuch was honored with the sepulture of four queens, nineteen of the nobility, and thirty-five knights. Allhal/ows, Bread Street, 1684. St. Austiyis, or St. Augusti7ie"s, Watling Street,

1695.

St. Antho)ii/'s, Budge Row, built by Cart-wright, from designs by Wren, 1682. St. Mildred's, Bread Street, 1683. St. Bennet, Gracechurch Street, of which there are records as early as the year 1190, was rebuilt in 1685.

St]\Ian/, Abchurch Lane, 1686. Si!. Mary Magdalen, Old Fish Street, 1685. St. Matthew, Friday Street, rebuilt 1669. Dr. Lewis Bayly, author of the Practice of Piety, and afterwards bishop of Bangor, was rector of this church in 1647. St. Clement's, East Cheap, 1686. St. Alban's, Wood Street, was originally founded by Athelstan, the Saxon king, who is said to have resided in a house adjoining, and whose name, somewhat corrupted and abridged, is preserved in Addle Street, formerly called King Adel Street. This church was rebuilt in 1634, destroyed by fire in 1666, and the present edifice, of the Gothic order, erected in 1685. It contains a richly ornamented altar piece, and a pulpit finely carved.

St. Margaret Pattens, Rood Lane, rebuilt in 1687. Some carvings in the altar piece of this church are by the celebrated Grinlin Gibbons.

St. Michael's, Crooked Lane. — This church, which was rebuilt in 1688-98, stands in Miles Lane. Sir William Walworth, who killed Wat Tyler, was buried in tliis church, to whicli Walter Warden bequeathed the Boar's Head, East Cheap ; the identical house in which Falstaff kept his revels, as recorded by Shakspeare. St. Margaret, Lothbury, an ancient foundation, rebuilt in 1690. It is a plain but neat church, with a handsome exterior, and a font beautifully ornamented with several historical subjects from the Old and New Testaments.

St. Mart/ Somerset, Upper Thames Street, first erected" about the year 1335, and rebuilt in

1695.

Allhallows, Lombard Street. — A church was standing on this site so early as the year 1053; the present edifice was built in 1694.

St. Andrew's Wardrobe, more frequently called St. Anne's, Blackfriars, built in 1692. there is a fine monument to the memory of the Rev. W. Romaine in this churcli, where he preached for many years. It is allowed to be one of Bacon's best performances.

St. Michael Pattrnos/rr Rot/al, College Hill. — A college was founded here by the celebrated Sir Richard Whittington, which has since been converted into almshouses, for thirteen poor men. A church was standing here so early as the year 1285. It was rebuilt by Sir]{ichard, who was interred here, and had a splendid mo-numput, which was violated by the sacrilegious cupidity of a priest, named Mountain, who, disappointed of finding money in the tomb,

carried away the leaden coffin in wliicli tlie body was enclosed.

QuF.EN Annf.'s Churches. — Afewof these are entitled to notice, which must, however, be brief, although tliey embrace some of the

most interesting specimens of ecclesiastical architecture, from the time of the fire to the commencement of tlie nineteenth century.

St. Martins church, St. Martin's Lane, built by .Tames Gibbs, between the year 1721 and 1726, is a beautiful edifice, and will be seen to great advantage, now that the wish of Mr. Ralph, 'that a view might be opened from the Mews to St. JVIartin's church,' wdl be realised. The west entrance has a very noble portico of Corinthian columns, the entrance to which is by an ascent of a long flight of steps. This church unites the light and picturesque beauty of the modern temple with tlie sober grandeur and solidity of Grecian architecture, and the spire is light and elegant. On the 1st of .lune, 1727ˆ Mr. \olante, an Italian, descended head foremost by a rope, with his legs and arms extended, from the top of the steeple of St. Martin's church, over the houses in St. Martin's Lane, to the farthest side of the Mews, a distance of about 300 yards in half a minute. The crowd was immense, and the young princesses with several of the nobility were in the mews.

.S';. P«u/',s-, Covent Garden, was erected by Inigo Jones, at the expense of the earl of Bedford, who, in giving his directions, said, ' a barn would do.' ' Then,' said Jones, 'you shall have the most magnificent barn in England.' On the 17th of September, 1795, this church was burnt down, but it was rebuilt according to the plans of Jones. It has a noble massy portico, of the Tuscan order, and the interior boasts of great neatness and simplicity. Butler, the admired author of Iludibras, Dr. Wolcot, and a continual succession of the children of Thespis, have been buried in the churchyard.

Si. Giles's in the Fiilcls. — This church is built on the site of a hospital, founded by Matilda, wife of Henry L The present building was erected in 17.30, the former edifice having become so ruinous as to render it necessary that the whole should be taken down. Over the north-west gate, leading to the churchyard, there is a representation of the Resurrection finely sculptured, which belonged to the old church. Andrew MarvoU, the Yorkshire patriot. Sir Roger L'Estrange, and Richard Pendrell, the preserver of Charles IL, are buried m this church or churchyard.

St. George's, Bloomsbury. — This church was built by llawksmoor, the pupil of Sir Christopher A'ren, and so closely did he calculate the expense that he only exceeded tl;e estimate by £3. It is a sineular, but by no means harmonious, compound of the Tuscan and Ccrinthian orders, with a good portico in the front. The steeple, whicli is pyramidical, is surmounted by a statue of George I., a circumstance that has been rather happily alluded to, in an epigram which states,

that the i)ope only made Henry VIII. head cf the church, but that king George's good people made him head of the steeple.'

St. Manj le Strand. — This church does credit

to the taste and skill of Gibbs, who iiad just returned from Italy when he was called upon to erect it. Though somewhat thwarted in his original design, and urged by the commissioners for building the fifty new churches to spare no pains in beautifying it, whence he has been lavish of ornament, yet it is a superb edifice. On the proclamation of peace, in 1802, a serious accident occurred at this church, when one of the stone urns, which ornament the railing round the roof, fell and killed three persons, wounding several others.

New Churches. — Lender the head of new churches we include such as have been erected since the commencement of the present century, and these are sufliciently numerous to have given a character to the architecture of the age, did they not ' have no character at all.'

Within little more than a century and a half three great occasions have occurred to the respective architects of the times — the rebuilding of London after the fire of 1G(36, when England had an arch'tect worthy of so vast a field — the building of liftv churches in the reign of queer< Anne; and the numerous and extensive buildings in the metropolis during the last twenty years.

In the year 1818 a commission was appointed by royal patent, pursuant to a previous act of parliament for building, and promoting the building, of additional churches in populous parishes. The commissioners recommended the erection of several churches and chapels in Lon-don and its immediate neighbourhood, and no time was lost in carrying the proposed measure into effect. Previous to the parliamentary commission, a chapel of ease had been erected in the New Road, for the parish of Mary-la-bonne, which was afterwards enlarged and raised to the dignity of a parish church; a tower was substituted for a small cupola, a portico with six Corinthian columns added to its front which was extended, and several other alterations made, under the direction of JMr. Hardwicke the architect. The interior is fitted up with an upper and lower gallery, but it is decorated in a style much too gaudy for a place of worship. Mr. West, the historical painter, presented the church with a very fine picture of the Nativity, for an altar piece.

One of the first, and the largest, as well as the most expensive of the churches erected under the parliamentary commission, was that of St. Fancras, which was built at the cost of £70,000, by Mr. Inwood. The exterior is formed in imitation of tlie temple of Erectheus, at Athens, so far as regards its portico of six Ionic columns. The wings are on the model of the Pandrosium, which was attached to the temple of Erectheus, but they are too profusely ornamented. The eastern end is semicircular — though the original, whence the building purports to be copied, is square. The steeple, which is 165 feet high, is an avowed imitation of the temple of the Winds — with this difference, however, that the Athenian temple had no windows, and only four columns, wliile that of St. Pancras new church has fifteen. The interior of this church is tasteful and elegant ; above the communion table are six

splendid antique Scagliola columns, with bases and capitals of white statuary marble. The windows are on the Grecian model, and the pulpit and reading desk are formed of the celebrated Fairlop oak.

If economy in the expense, correctness of de-sion, and elegance of execution, are recommendations in a public building, the church of St. Paul, Shadwell, built in the year 1820, under tiie direction of Mr. John Walters, would stand at the head of modern ed.tices, since, althousjh it only cost £l 4,000, yet the building is simply neat and elegantly chaste. Tlie steeple is peculiarly beautiful ; and m correctness of design, and in the simple harmony of its several parts, scarcely yields to the most admired object of the kind in the metropolis. Another church, which boasts some degree of neatness, has been erected at Hackney : it is of the Doric order, with a portico and cupola. The interior is titted up with taste and simplicity, and the altar of Scagliola marble is elegant, though somewliat too profusely ornamented.

Several other churches have been completed, but they add so little credit to the architects and to the age, that the historian who passes them over will do no injury to the individuals, or to the national taste. It appears by the reports of the commissioners, laid before parliament in the years 1821, 1822, and 1823, that it was inteiid-ed to build

twenty-four nevˆ churches in tlie diocese of London, several of which were in progress.

Dissenters' Chapels. — In a country where every person may worship his Creator according to the dictates of his own conscience, chapels and meeting houses are necessarily numerous, and increase in proportion to the growth of tlie metropolis. In London there are six Jewish synagogues, the chief of which is in Duke's place — six meeting houses of the Quakers or Friends ; in one of these, in White Hart Court, Gracechurch Street, which was burnt down in 1721, the great founder of the sect, George Fox, as well as the no less celebrated William Penn, preached. There are fifteen Roman Catholic chapels; one of these erected in Moorfields is remarkable for the elegance of its interior. Nineteen Foreign Protestant churches and chapels accommodate those who have embraced the reformed religion, and wish to attend divine worship in their respective languages. In one of these, the Dutch chapel in Austin Friars, several autograph letters of Calvin and other celebrated reformers are preserved.

The chapels of the Whitfieldian and Wesleyan methodists, and the various classes of protestant dissenters, exceed 160 in number, and are continually increasing. Many of these are remarkable for the popularity of the present, or the recollection of former eminent ministers. A building in Zoar Street, Borough, now used as a national scliool-room, is the place where John Bunyan preached, when in town ; and such was his celebrity, that a few hours no-tice was sufficient to fill the chapel when he mounted the pulpit, even at seven o'clock in the dark mornings of winter. The chapel in Bury Street, St. Mary Axe, was the place where Dr.

Watts officiated ; and New Court meeting, m Carey Street, among other distinguished pastors, has had the eccentric nonconformist Daniel Burgess, who preached with an hour glass by his side, and his no less celebrated or eccentric successor, Tiiomas Bradbury. The methodist chapel in the City Road was erected by John Wesley ; and the Tabernacle, at a short distance from it, was built by George Whitfield. Here these celebrated and pious men promulgated their respective tenets, with the zeal of apostles, and the confidence of martyrs. Providence chapel Gray's Inn Lane, was built by the well-known William Huntington. This singular man, in a sermon which he preached soon after the destruction of Drury Lane and Covent Garden theatres in 1808 or 1809, congratulated his audience that ' two of the devil's temples had been burnt down ;' when, a few weeks after, his

own chapel fell a prey to the flames. He was soon, however, enabled by subscription to build a much larger edifice in Gray's Inn Lane. Simplicity and neatness are the general characteristics of the dissenting chapels.

We now come to the chief specimens of civil and municipal architecture, and here the Man-sicm House, as die abode of supreme city authority, takes the lead. It was not until July 1734 that the common council came to the resolution of appropriating the fines, paid into the chamber for not serving the office of sheriff, to the purpose of erecting a suitable mansion house, for the special use of the lord mayor for the time being. At this period there was not less than £18,000 in the chamberlain's hands, which had been derived in this easy way ; and it was ordered, that this sum should in the mean time be invested in the three per cent, annuities, and that the growing interest thereon should be added to the capital every year, till the money was required for the proposed building. Previously to this, his own mansion, or the hall of some of the large companies hired for the purpose, was the residence of his lordship.

The site fixed upon was tliat anciently occupied by the stocks market, a structure for which the city was indebted to the liberality of Henry de Walleis, who was lord mayor from 1281 to 1285. It had been selected as a market place, because of its being in the midst of the city ; and was now on the same account thought the best site that could be chosen for the residence of the chief magistrate. Although the corner stone was laid on the 25th of October, 1739, the building was not completed till the year 1753, in the mayoralty of Sir Crisp Gascoyne, who was the first chief magistrate that made it his residence. This delay was principally occasioned by its being found necessary to raise the whole structure upon piles. The total expense of the erection, including the purchase money of the old buildings, was £42,638 18s. P,d.

The mansion house, built from a design by Mr. George Dance, is a spacious and stately edifice, of rather heavy aspect. A bold flight of steps leads to a fine portico in front, composed of Corinthian columns, which spring lightly from a massy rustic basement, and nre surmounted by a pediment; the tympanum of which exhibits a

piece of sculpture id alto relievo, by Taylor, emblematic of the dignity and opulence of the city of London. The general body of the building presents two tiers of lofty windosvs, and over these an attic story surmounted by a balustrade ; the cornices are rich and deep, and supported Ijy Corinthian pilasters. Were nothing more presented to the eye than the parts we have now described, the edifice, though lowly situated and too closely surrounded with buildings, could not fail to be pronounced elegant and complete; but, viewing it from the front, we behold, heaped as it were on the roof, and stretching crossways along the front, an ark-like pile of building, which tiirows an air of clumsy incongruity over the whole. Originally, there was a corresponding erection or hump towards the back of the building, but it was taken down a few years ago. Its companion cannot follow it too soon,

The interior is laid out with taste and judgment. Entering by the great door, you pasS through a spacious saloon into what is called the Egyptian hall (for what reason, however, it would require Egyptian cunning to divine, for there is nothing of that character about it), a magnificent banqueting room, about ninety feet long from east to west (occupying the entire width of the house), and sixty broad, with a lofty concave roof displayed into compartments and richly ornamented. At the sides of the sa-loon there are also a justice room, a sword bearer's room, and a very handsome room called Wilkes's parlour. The area above the roof of the Egyptian hall being left open, the apartments of the upper stories form a surrounding quadrangle, with galleries of communication. The principal of these apartments are the ball room, ^hich is about the satiie length as the Egyptian hall, but considerably narrower ; a withdrawing room, and chief bed room provided %vith a splendid state bed.

The Guildhall, or common hall of the corporation, is situated at the upper end of King Street, Cheapside.

In 1411, during the mayoralty of Sir Thomas Knolles, the foundation of this edifice was laid ; but only tiic great hall was at that time completed. Other parts of the building were added at subsequent periods of the fifteenth and sixteenth centuries, as the liberality of companies or individuals induced them to advance the means. At the

great fire of 1666 the whole of the interior and outer offices were destroyed ; but the walls were of such remarkable solidity, that they survived the fury of the raging element. The renovation of the interior was completed v/ithin three years after the fire, and at an expense of not more than £3000. It underwent a considerable repair about the beginning of the eighteenth century; again in 1780, when it received its present facade, and lastly in 1814.

nie ancient front of the building appears, from the accounts and drawings of it, to have been in a style of considerable richness and grandeur. Some traces of its style may yet be seen in the interior of the present porch, the only part that has been preserved in its ancient state. The old front was ornamented by some remarka-blv fine statues. Engravings of some of them

may be consulted in Carter's Ancient Sculpture ami Painting.

Tile present facade exhibits a tasteless jumble of the pointed, Grecian, and Oriental styles of architecture ; parts multiplied to infinitude, and combined without the least relatioiisiiip. On a pannel over the porch are the arms of the city (as represented in our first page), with the motto beneath them, Domine Dirige Nos, as suitable an inscription for a place of popular deliberation as could have been well selected.

The porch conducts us into what is called the , great hall. It is 154 feet in length, and fifty-two in breadth; two magnificent windows of painted glass, at the east and west ends, diffuse over the whole a strong but mellowed light ; and on each side are clusters of tall columns with gorgeous capitals, surmounted by a corresponding range of double piers, supporting a roof fifty-five feet high. From 6000 to 7000 persons may be contained within this hall, and on some important occasions the numbers we have seen assembled in it could not be less. The floor is of stone, furnished originally by the executors of the celebrated Wliittmgton. The roof is supposed, with great i)robability, to have consisted, previously to the fire, of open-worked timber, similar to the roof of Westminster hall; it is now flat, and divided into large pannels.

At the east end of the hall there is an enclosed platform several feet higher than the pavement, and surrounded with a pannelled wainscotting, which is set apart for the accommodation of the lord mayor, aldermen, sheriffs, and other principal members of the corporation, at the meetings of the livery, and serves as a liustings at

all elections. The more the great window over this platform is examined, the more it will be found deserving of admiration. Its divisions and subdivisions are all in the best harmony; their ornamental garniture light and elegant. In the compartments of painted glass there are well executed representations of the royal arms and supporters, and the stars and jewels of the Or-ders of the Garter, Bath, Thistle and St. Patrick.

Passing down the hall, the attention is attracted to a number of statues and pictures which occupy the spaces between the clusters of columns on each side, and call many interesting and appropriate recollections to the mind.

The first is a monument to die memory of the celebrated Beckford, who was lord mayor in 1763, and 1770. This magistrate is represented in the erect attitude in which he addressed to the king his celebrated reply, now known to have been written by Mr. liorne Tooke.

In another compartment, on the same side of the hall, is a still more splendid monument, to the memory of the earl of Chatham : executed by Bacon, who was paid the very handsome sum of 3000 guineas for his labor.

The sculptor has shown a remarkable degree of judgment in presenting us with a monumental groupe,whicli contradicts, as far as it possibly can, the notions of political economy conveyed by the inscription. The illustrious senator is exhibited in a Roman costume, standing upon a rock ; his left hand rests on the helm of state; his right is energetically placed on the shoulder

of Comineice, who is presented to his protection by a female, whose mural crown bespeaks lier the representative of the city of London ; Britannia, reposmg on her lion, occupies the foreground, and near her are four infants, emblematic of the four quarters of the world, pouring into her lap the cornucopia of Plenty. No demons, nor furies, nor do2;s of war, figure here ; four infants denote, as truly as expressively, that

it is by peace and amity among all the nations of the earth tliat the horn of plenty is most certain of pouring its treasures into the lap of England.

()p])osite to lord Chatham's monument, on the other side of the hall, is one to the memory of his son William Pitt, by Bubb ; the sculpture not so good, the inscription better. The attitude of Mr. Pitt is appropriately oratorical ; but, viewed with relation to the surrounding objects, it is an abstract conception, not well harmonized. From tlie turn given to the head, the face of the son seems as if purposely averted from that of his sire, which frowns on him from the opposite side in all its characteristic sternness.

At the lower end of the hall, on tlie north side, there is a monumental trophy to the immortal Nelson : — a huge heap of allegory, with a small profile of the great hero in the middle ; only rescued from contempt by the admirable inscription from the pen of Richard Brinsley Sheridan. We come now to the statues of those two high and renowned personages, Gog and Magog, which are situated at the foot of the hall, at the sides of the great western window. Each measures above fourteen feet high ; and, being elevated on an octagon stone column, presents a right gigantic appearance. Which is Gog and which Magog, antiquarians have not yet been able to determine, though many and indefatigable their researches into this curious matter have been. Tlie points of similarity between them, however, are so numerous, that we presume no great injustice can be done to either, should he chance to be called by his brother's name. Both are very huge and mishapen; have their brows encircled with wreaths of laurel, and their feet bound in sandals : they have long flowing beards, and still longer flowing sashes; both have been alike indebted to the bedauber of pink and blue, and green and yellow ; each has a spear or pole in his hand, and a sword by his side ; nor could any thing be more kin-like tlian the pensive dignity with whicii they look down on the emmet gazers beneath them. Who these worthies were, and why statues of them should Iiave been placed in the Guildhall of the corporation of J.ondoii, are two points about which the learned have long been divided in opinion. The autlior of a curious little work in 2 vols. G4mo., entitled. The (iigantic History of the two famous Giants in (Juildhall, London, 1741 (third edition), following the most respected authorities, assures us, that one represents Corina:us, a ginnt of Trojiin descent, who came over with Brutus, the greut grandson of Eneas, and won this country from the iiands of

Tiiose mightie people born of giants' brood, That did possess lliis ocean-bounded land ; and tlie other Gogmagog, ihe last of the British

giants. When Philip and Mary made their en-

trance into London, these giants figured conspicuously in the pageant exhibited on the occasion at London Bridge ; and tliey have occasionally travelled before or behind a royal or civic dignitj since. Mr. Hone, whose researches have thrown much light on the history of these ancient relics, assures us, from personal examination, that ‘ they are made of wood, and hollow within, but too substantially budt for the purpose of being [often] either carried or drawn, or any way exhibited in a pageant.’ The construction of them he has also pretty clearly traced to’ the year 1707, and to a trainband captain of the city, of the name of Saunders, who received £70 for the pair.

Li 1706 queen Anne made a present to the city, to be put up in this hall, of twenty-six standards, sixty-three colors, and a kettle-drum, all trophies of the memorable victory of Ramillies : but these have all disappeared. ‘ Had any other than a cobweb sweeper decided their fate,’ says a spirited writer, ‘ not one of them would have been removed while a single tatter remained.’

Opposite to the porch, of this hall there is a flight of steps whicii leads to a number of separate chambers, appropriated to the lord mayor and aldermen, the common council, the courts of the lord mayor and common pleas, the court of king’s bench, and the chamberlain. The common council court is well worthy of a particular visit.

Somerset House, in the Strand, is the most spacious and the most elegant building in the metropolis, appropriated to public offices. It occupies the site of an extensive palace, which was erected about the year 1549, by Edward Seymour, duke of Somerset, who despoiled several churches and chapels in order to furnish materials for the structure.

This palace was occasionally occupied by queen Elizabeth, Anne of Denmark queen of James L, the consort of Charles IL, and several queens dowager; and it has also sometimes been appropriated as a residence for foreign ambassadors. It appears to have been splendidly fitted up and furnished, for the period, and even when the building was taken down, about half a century ago, many vestiges of a royal residence were found. The original palace had received considerable additions by Inigo Jones, but even these were compelled to give way to modern improvement, when, in 1774, it was determined to erect a large suite of government offices on this spot. Sir William Chambers

was selected as tli<-! architect, and although the economical spirit of the government, rather than the want of money, when it was undertaken, prevented him from completing his design, yet the building is such as to do credit to himself, and to the age in whicii he lived. It consists of a spacious quadrangle; the soutli front, on the banks of the river, has a very fine terrace, raised fifty feet above the bed of the river, and fifty feet broad, on arches of massive rustic work ; the centre arch, or wa-ter-gate, is ornamented with a colossal mask of the 'J'haines in alto relievo. The whole building is nearly 800 feet long, and 340 feet wide ; the quadrangular court is 340 feet long, and 210 feet wide. The north and south fronts of the

quadrangle are formed by massive buildinjcs of rustic work. The centre of the south side is ornamented witli an arcade of four columns, with two pilasters on each side ; on the columns rests a pediment, in the tympanum of which is a basso relievo, representing the arms of the royal navy, supported by a sea nymph. On the corners of the pediments are military trophies, and above the columns are very elegant vases. The east and west are nearly similar, but not so profusely ornamented. The front in the Strand is only 135 feet long. It consists of a rustic basement, formed of nine arciies, three of which in the centre, are open, and form the entrance into the quadrangle. The three arches on eacli side of the entrance are tilled with windows of the Doric order, and adorned with pilasters, pediments, and entablatures. On the key-stones of the arches, Ocean, and eight of his principal tributary streams, are exhibited in emblematic masks, in alto relievo. Tiie basement is surmounted by ten lofty Corinthian columns (comprising two floors) on pedestals, with regular entablatures ; the lower windows are surrounded with plam architraves, but the upper ones have a balustrade in front, and are ornamented with Ionic pillars, pediments, and entablatures. The three central windows have large tablets, covering part of the architrave and frieze, on which, in basso relievo, are medallions of their late majesties, as well as of their son, our present sovereign. The attic extends over three intercolumniations, and is divided into three parts by four colossal statues, placed over the

columns of the order, emblematic of Justice, Truth, X'alor, and Moderation. The whole is surmounted with a grcup, consisting of the arms of the British Empire, supported on one side by the genius of England, and on the otlier by Fame. The vestibule, which forms the only entrance, is closed at night by iron gates. It is decorated with columns of the Doric order. Over the side doors in the vestibule, leading to the Royal Academy and the Society of Antiquaries, are two busts, by \'alton: that over the academy entrance represents Michael Angelo Buonarotti, and the other is a bust of Sir Isaac Newton.

Tlie principal public office in Somerset House is tliat of the receiver-general for stamps, one of the least oppressive and most prolific sources of revenue, yielding upwards of £6,000,000 annually. Here also are the tax and navy offices, the offices for the lottery, the duchy of Cornwall, the privy seal, the surveyor of crown lands, the victualling office, the signet office, and several others, in which several hundreds of clerks are employed.

We now conduct the reader to the lioj/al Exchange.— The jjlace where the merchants of Lon-don commonly met for the transaction of business, for some centuries, was in Lombard Street, in which the Lombard Jews, from whom the street derives its name, and who were originally the bankers of all Europe, resided. Here too they probably kept their benches or banks.

At length, in 1534, Sir Richard Gresham (for Pennant is more than partial in giving the honor of the suggestion to his countryman, Clough), who was agent for Henry VTIL, at Antwerp, and

had been much struck with the advantages attending the bourse or exchange of that place, prevailed with his royal master to send a letter to the mayor and commonalty of London, recommending to them to erect a simdar building on part of their manor of Leadenhall. The court of common council, however, were of opinion that such a removal of the seat of business would be impracticable, and liie scheme was therefore dropped.

Sir Richard was succeeded in the Antwerp agency, and in his public spirit, by his son, Sir Thomas Gresham, who, in 1564, proposed to the corporation, that, if lliey would procure a central and commodious site for an exchange, he would himself be at the cost of its erection. The corporation met the proposal in a spirit of equal liberality, and immediately purchased eighty houses, forming two little alleys leading

from Cornhill into Threadneedle Street, wliich they pulled down, and then assigned the space on which they stood to Sir Thomas, for the erection of his proposed exchange.

On the 7th of June, 1566, the foundation of tliis edifice was laid, and with such activity did Sir Thomas]5roceed, that it was wholly completed before the November of the following year.

About two years after the building had been opened queen Elizabeth signified her intention of paying it a visit ; but so many of the shops still remained unoccupied, that Sir Thomas found it necessary, two days before the promised visit, to go round among the shopkeepers, and beseech them ‘ to furnish and adorne with wares ai:d wax lights as many shoppes as they either coulde or woulde, and diey should have all those so furnished rent free for that yeare.’ — Stowe. Her majesty was so much pleased at the appearance of the edifice, that she commanded that instead of the foreign name bourse, by whicii die citizens had begun to call it, it should be styled in plain Enalish The Royal Exchange.

With those enlightened and humane views which the mercantile profession is known so often to inspire, Gresham now determined that whatever revenue might arise from the establishment siiould be devoted to the support of a free literary institution, to be denominated Gresham College, and to the sick and poor of the city. He executed a deed, by which he assigned for ever to the corporation of London and the Mercers’ Company, in a joint trust, a dwelling-house which he possessed in Broad Street, for the accommodation of seven gratis lectures on divinity, astronomy, geometry, music, law, medicine, and rhetoric ; and the w hole produce of the Exchange buildings, for the payment, in the first place, of the salaries of the lecturers and other expenses of the college ; and, secondly, of certain annual sums to different hospitals, prisons, and almshouses.

In the great fire of 1(566 the Royal Exchange was among tlie many proud fabrics which that calamity reduced to ashes. ‘ What quick work,’ says an eye-witness (the Rev. Samuel Rolle), can sin aiid fire make! How did that strong building vanish as of a sudden, as if it had been but an apparition! How quickly was it taken down, as if it had been but a slight tent, the

cords whereof are presently luoseneJ, and the stakes removed. So fell that noble structure condemned by craft and covetousness, and overladen with pride and prodigality.'

When this lamentable disaster took place, the funds in the hands of Sir Thomas Gresham's trustees amounted to no more than £234 8s. 2d. ; but, with a spirit beyond all praise, they resolved on making up from tlieir own resources whatever might be the sum of money necessary for rebuilding the Exchange, in a style which might do honor to the age, and still farther honor to the name of Gresliam. The king gave his cordial cooperation to the undertaking; and by an exertion of the royal authority, which deserves no place among the sins of the house of Stuart, so controlled the erection of new houses on the contiguous grounds, as to enable the trustees to give to the approaches of the new exchange a breadth and oppenness which the original one by no means possessed. His majesty, his brother the duke of York (afterwards James II.), and prince Rupert, went personally at different times and laid the foundation stones of the principal pillars of the building.

On the 28th of September, 1669, it was finally completed, and opened to the merchants, who had in the interval been accommodated with Gresham College as a place of meeting. The total cost of the building was £58,962, which the city corporation and the Mercers' Company defrayed equally between them. In the front of the building, immediately over the grand entrance, the following inscription commemorates the events we have been relating : —

Hoc Gresiiamii Peristylium,

Gentium Commerciis sacrum,

Flammis Extinctum, 1666.

AUGUSTIUS E CINERE ReSURREXIT, 1669,

WiLLM° Turnero, Milite, Pk.etore.

The plan of the new exchange is similar to that of the ancient one ; and both took that of Antwerp for their model. An open area, 144 feet

long by 117 broad, is enclosed by a quadrangle of lofty stone buildings, with a broad piazra inside and outside, except on the east and west sides of the exterior. The principal entrance is by an arched gateway at Cornhill, of magnificent pro|)ortions, and surmounted by a tower, 178 feet high, which has a clock in tiie middle story, and terminates in a cu])ola and globe with a gilt grasshoy)per (the crest of the Gresham family) as a vane. On the north or opposite side of the quadrangle there is another arched gateway of nearly equal dimensions. Tiie interior area is neatly paved with small square Turkey stones, said to have been the gift of a Turkey merchant; and is divided, as well as the surrounding piazza, into what are called walks, to each of which the merchants of some particular nation, or branch of business, are in the hai)it of resorting, so that, though all the world may be said to meet on the exchange of London, you may always know where to find, at once, the person with whom you htive business to transact.

In the centre of tiie area there is a good statue of Charles II. by Spiller, set up in place of a former one by Quellin of Antwerp ; and in

niches of tlie surrounding buildings there are statues of most of our other monarchs from the time of Edward I. to George III. The statues of all the earlier sovereigns, as far as Charles 11., are from the chisel of Gabriel Cibber; those of George I. and II. were done by Rysbrach, and tiiat of George III. by Wilton. Some have been much injured by time; and whatever merit any of them may possess, as pieces of sculpture, it is sadly obscured by the sable shrouds in wiiich our sea-coal atmosphere has enveloped them. In two niches under the piazza there are statues of the great founder of the building. Sir Thomas Gresham, and of Sir John Barnard, anot'.ier eminent citizen, wiiose merit as a merchant, a magistrate, and a faithful representative of the city in parliament, his fellow cit.zens have thus sought to commemorate.

The interior of the excliange buildings, both above and below, was originally intended to be occupied as a bazaar, and it was so for a considerable pe-riod. The piazzas, both on the inside and outside, were lined with shops, and so also was the upper gallery. ‘ Robin Conscience,’ in his progress through court, city, and country, 1683, tells us. that after visiting the merchants on the area, where he got much abused for intruding him.self. he

Did walk upstairs, where on a row, Brave shops of ware did make a

show,]\Iost sumptuous.

Tiie whole of the shops have now, however, been entirely removed, except those of the exterior basement of the quadrangle. The upper part of the buildings, to which there is access by two spacious flights of ste])s under the north and south fronts, are occupied by difl'erent public companies, such as Lloyd's, the Royal Exchange Assurance, Merchant Seamen's, &c., and by private merchants and underwriters of respectability. The architecture of the exchange is of a mixed character ; it is chiefly of the Corinthian order, and therefore not without considerable elegance; but the taste for ornament, which led to its adoption, has in many parts of the building run into profusion. The interior area is open to the pub-lic from eight in the morning till four in the afternoon, at which time precisely the gates are shut.

The Bank of EiiglaucL For the origin of this all-important establishment, see ourarticle Hank. The business of the bank of England was carried on at Grocers' Hall until the year 1734, although the increase of the establishment had long rendered larger premises desirable. At length, in 1732,1* was determined to erect a new building of sufficient magnitude, and the site chosen was the house and garden of Sir Jolin Houblon, the first governor of the company, in Tlireadneedle Street. The original building has since' received so many additions, tiiat it becomes more difficult to trace the architectural than the commercial growth of the establishment. Tne first edifice, which formed but a small portion (f the vast fabric which now constitutes the bank of England, was raised under the direction, and according to the designs, of Mr. George Sam])son, and was opened for business on the 1st of June,

1734.

This building was soon found insufficient fov the increasing business of the company ; and, some adjoining houses and ground having been obtained, wings were added under the direction of Sir Robert Taylor. In 1788 Mr. Soane succeeded as architect to the bank, and to him is

the present building indebted for its principal ornaments, particularly the rotunda, lie has recently added what may justly be considered the most splendid portion of this noble edifice. This consists of a new wing at the east end of the bank ; the elevation forms a colonnade of six flutud Corinthian columns, which connect two pavilions ; the columns do not form a portico, being barely insulated from the wall. Tlie entablature, wiiich is surmounted with a very fine parapet, has its frieze enriched with 'itruvian fret. The whole possesses much novelty, boldness, and elegant effect. The building altogether occupies an area of nearly four acres. The centre of tiie soutii front, erected by Sampson, is eighty feet long, and is of the Ionic order. The two wings added by Sir Robert Taylor were copied from a building by Bramante in the Belvidere gardens at Rome, and, although neat, did not harmonize with the centre. The north and west fronts have been erected by Mr. Soane, who in this, as well as in several other parts of the bank, has indulged in his favorite attachment to the Grecian architecture, which he has introduced in the purest style.

It is, howevˆer, in the interior of the bank that the skill of the architect is displayed to the greatest advantage. Tiie rotunda, where the money-changers daily assemble to traffic in real or fictitious stock, is a fine octagonal room, fifty-seven feet in diameter, and covered by a dome ; the whole building being of stone. It was erected in 1795, under the direction of jNIr. Soane. The court-room, the pay-hall, the offices for the several kinds of stock, the hall, the apartments for the accommodation of the governor, the directors, and the casliiers, with the various offices requisite for the accommodation of 1100 clerks, who are now employed in the bank, are all admirably suited for the purposes for which they are constructed, and notliing can exceed the order and regularity with which the business is conducted.

Over the hall of the bank there is a curious clock, wiiich, by communicating rods, indicates the march of time in sixteen distinct offices, where dial plates are placed ; thus obviating the inconvenience which migiit arise in the transacting of business in the funds by the variation of difierent clocks. The affairs of the bank are managed by a governor, deputy-governor, and twenty-four directors, who are chosen annually.

The Stock Kxcliauge is in Capel Court, once the residence of Sir William Capel, lord mayor in 1504. The first stone of this edifice was laid on the 18th of May, 1801, and the funds were raised by subscription : the plate which has been placed in the first stone bears an inscription, which after ages may consider as a questionable prco” of national prosperity. Of national good faith it is certainly an

indisputable memorial. It states that the public funded debt was tiien upwards of £500,000,000. There is nothing in the

building itself to excite particular altention, although It is conveniently and handsomely fitted up; but there is no place in tlie world where money transactions are carried on to such an ex-tent: an assertion wiiich will scarcely be doubted by those who consider the fluctuations which must occur in a funded property of £800,000,000 sterling.

In the stock exchange great pains are taken to exclude improper persons ; and no one is allowed to transact business unless admitted a member by ballot. Four days a week the commissioners for tlie redemption of the national debt attend to purchase stock.

A singular custom, worthy only of the cupidity and intolerance of a barbarous age, is connected with this house. The number of Jew brokers admitted is limited to twelve, and these only on condition of purchasing tiie privilege by a liberal gratuity to the lord mayor for the time being. During the mayoralty of Wilkes, one of the Jew brokers was taken seriously ill, and his lordship is said to have calculated pretty openly on the advantage he would derive from filling up the expected vacancy. The son of the broker, meeting the lord mayor, reproached him with wishing his father's death. ' My dear fellow,' said Wilkes, with that sarcastic humor which was peculiar to him, ' you are completely in error, for I would rather all the Jew-brokers were dead than your father.'

Lloyd's Coffee-Hmise is over the northern piazza of the royal exchange, and is the centre of British commerce — the point where it concentrates, and whence it diverges over the globe. A bank post-bill does not obtain a readier currency than an article of intelligence from Lloyd's, and to name this house as an authority is quite decisive with every person who knows the means of information it possesses, and its accuracy. It is also the great mart for maritime insurance.

The East India House is in Leadenhall Street, and here the directors hold their courts, and the chief business of the Company is transacted. It is a spacious building, a portion of whicii was built in 1726, but was not enlarged to its present dimensions until the year 1799. It cannot boast of much architectural neatness, although the front is crowded with ornaments. It consists of a portico, with six fluted Ionic columns, and two wings ; the latter, which are extremely plain, are surmounted

by a neat balustrade. The interior is fitted up in a manner which combines elegance and convenience : several of tlie rooms are very spacious. The museum is rich in oriental curiosities, as the library is in Asiatic literature : in the former are numerous trophies of British conquests in India. The library is frequently visited by oriental scholars from the continent, who are admitted by the directors with a liberality and a facility that shows a strong contrast to the unbending obstinacy with which public buildings are too frequently closed to the y>ublic in the metropolis.

The Po!:t Ofiice. — Posts appear to have been established in England so early as the reign of Richard III., but they must then have been an object of comparatively little importance ; and the first mention we find of a post-master, in

Englaml, is in the year 1581, when Sir Thomas Randolph, an able diplomatist, who had been employed in no less than eighteen distinct embassies, filled the office. On the union of Scotland with England, in 1710, a general post-office was established by act of parliament, wliich included not only Great 13ritain and Ireland, but our West Indian and American colonies. This extension increased the revenue of the post-office to £111,4(51.

The most remarkable event in the history of the post-office is the plan first suggested by Mr. Palmer, in 1784, of sending the letters by the coaches, instead of the old custom of transmitting tliem by post-boys on horseback. From this moment the prosperity of the post-office commenced ; and tlie revenue which, after the progress of nearly two centuries, in 1783 only produced £146,400 annually, thirty years afterwards yielded a net revenue of nearly £1,700,000. Nor was it only in increasing the revenue that Mr. Palmer's plan was beneficial ; for, to use the words of the parliamentary committee on the subject, ' at the same time that the revenue is augmented, answers are returned to letters in half the time, and with a degree of punctuality never experienced before : the expense is at a less rate per mile than upon the old plan ;' and, when the plan had been so far carried into ef-fect

that the mail-coaches had travelled above 40,000,000 of miles, ‘not a single robbery had been committed, or a passenger insulted.’

The post-office consists of three branches; the genera) or inlai.d, the foreign, and the two-penny post-offices. The general post-office is necessarily the most extensive and the most important, and some idea may be formed cf tiie number of letters that pass througli it, when it is known that the amount of])ostage on the letters delivered in London from this office sometimes exceeds £2500 in a single morning. Numerous as the letters are, such is the admirable arrangement that the whole business of the day is done in about six hours. On the day that a committee of the house of commons attended at the general post-office, tc examine the details of the business, the number of letters amounted to 44,000, the whole of which were sorted and charged, by 105 persons, in the space of forty-five minutes. As auxiliaries to the general post-office, there are sixty receiving-houses, which are kept open until five o’clock every day.

The business of the foreign post-office, the in-land letter-carrier’s office for newspapers, and tiie ship letter-office inAbcliurch Lane, is conducted in a similar manner, with a difference as to the days on which letters are made up, and the hours of attendance, as on foreign post days the oir.ce is open for receiving letters until twelve o’clock at night.

The two principal offices for the two-penny post are in i.ombard Street and Gerard Street ; there are also upwards of 120 receiving-houses in various parts of the metr()])olis, which are continually adding to tlieir nuniber as new buildings are erected. The number of letters circulating in a population of 1,250,000 may readily be conceived to be immense ; but there is one day in the year in which they are increased beyond any

thing that imagination could calculate — this is St. 'alentme’s-day ; it appears by tlie oliicial returns, that on the 14th of February, 1821, the number of letters which passed tiirough the two-penny post-office in London exceeded the usual daily average by 200,000 !

The present situation of the general post-office in Lombard Street, thougii possessing the advantage of being in a centrical situation, is inconvenient for business so extensive ; and more than ten years ago it was determined to erect a new office on a larger scale, and more wortliy of this great city, on the site of St. Martin’s-le-Grand. The first

money raised was expended in purchasing the leases of the houses, and, after they were removed, the ground remained unoccupied. The building, however, has been “or some time proceeding on a magnificent scale, and will be completed probably in the ensuing year.

The Exche Office, established ir 16ˆ3, wrj formerly kept in the Old Jewry, and afvˆiwards transferred to Broad Street, —ˆ , . ; a spacious and plain, but by no mean i .ciegant building, was erected on the site of (iresham College and almshouses in the year 1768. In this office the superior and local business of the excise is transacted by nine commissioners, with numerous officers and clerks under them. The gross amount of the excise in the year 1820 was £31,714,935 lOj. 9d., of which a sum of £3,092,687 Os. Gˆd. was paid in drawbacks, discount, and charges of management, leaving a net revenue to the country of £28,622,248 lOs. 2|c/.

The Mint is a very elegant building of modern date, which has been erected on Tower Ilill, for the purpose of coining and issuing all monies, so necessary to the commercial intercourse of every civilised nation.

The business is conducted by a master and worker, who has a salary of £3000 a year, a deputy master and worker, comptrollers, assay masters, and a number of other officers, whose aggregate salaries, including that of the master, amount to upwards of £l 2,000 a year. The salaries of the officers, which are now liberal, were formerly very low, making every allowance for the times : in the reigns of Henry III., and Edward III., the warden’s salary was two shillings a day ; in the reigr. of Henry \T. it was only two shillings and sixpence, and the engraver had only £20 a year ; now the warden has upwards of . £‘400, and the enaraver £500 per annum.

The new mint on Tower Hill, designed by Mr. Smirke, and erected under his directions, is one of the most elegant structures in the eastern division of the metropolis. The building is of pure Grecian architecture, combining a modest grandeur with the convenience of being admirably suited to business. In the interior the arrangements are so complete as to exhibit one of the most remarkable proofs of the advanced state of the fine and mechanical arts to be met with in any part of the kingdom.

Corn hlxcliaiiˆc. — The busine>ˆs of a corn bro-ker, or factor, is one of modern growth and doubtful utility. Formerly the farmers of Kent and Essex used to send their grain up the river.

and attend a sort of market at Bear Quay ; but, about the middle of tbe last century, when grain was ciiea]), the farmers often returned home without selling their grain. Those from Essex chiefly used the Bull Inn, Wliitechapel; and the landlord, who was of an enterprising spirit, proposed that the samples, with the prices, should be left with him, in order that he might try to dispose of the grain in their absence. This man, whose name was Johnson, and who was originally the boots of the inn, soon got so much business in this way, tltat he opened an office at Bear Quay as a corn-factor, and amassed a fortune. The business of corn-factors afterwards increased so mucli, thai they erected a market in INJark Lane, wiiich is called the corn exchange. The building, wit!i which two coffee-houses are coimected, is of the Doric order ; and the quadrangle, where the samples of grain are exhibited, is capacious. The brokers at first wished to rer.der the corn exchange a private market ; but, on an application to parliament, it was thrown open. Auxiliary to this market is a much neater though smaller structure, called the new Exchange for Corn and Seed

The Coal Exchange.. — Coals appear to have been first used in London about ihe year 1307 ; but the smoke was supposed to corrupt the air so much, that in 1373 the use of them was prohibited by a royal proclamation : the quantity now consumed is immense, althoush in the metropolis they are subject to an impost, from wiiich nearly every other ‘part of England is ex-empt. The first duty on coals was Is. per chaldron, which was imposed immediately after the great fire, in order to raise wharfs along the river. In 1G70 an additional duty of 2.s. per chaldron was laid on all coals entering the port of London, for the purpose of rebuilding churches, &c. ; and those duties, though for a specific pu;pose and a limited period, have been increased until they amount to 9s. Ad. per chaldron. Legislative enactments have frequently been deemed necessary in order to regulate the coal trade, and otiiers are still called for. In 1804 it was resolved to erect a regular market for vending coals, and premises in Thames Street were purchased for the purpose, where the present coal exchange, which contains a handsome front and a neat rotunda, was erected. Since the

extensive application of steam-engines in factories, and the introduction of gas, the consumption of coals in London has been much increased. In 1801 the quariity imported into the port of London was 884,339 chaldrons; and in 1823 it was nearly double, being 1,437,251, the duty on which amounted to £670,717 2.?. M.

Gurrawuifa and the Auction Mart are other p.iblic commercial resortv of immense business, but of little a chitectura. importance.

The Inns of Court are important adjuncts to thr .-metropolis. Fortescue inclines to the opinion, that they were called so at first, not because the persons resident there followed the profession of the law, but simply from their being the inns, hospitals, or hotels, where young men of family and oUier persons attached to the court were wont to reside.

Among the very ancient inns, of which there is no longer any trace, one called Chester inn is

said to have been situated on the spot where Somerset House now stands ; a second at Dowgate ; a third in Paternoster Row ; and a fourth somewhere still nearer St. Paul's cathedral, which in the days of its profanation was the great place of business for lawyers. Eacii practitioner had his own pillar m the cathedral, where he took his stand at stated hours of the day, with a pen and paper book, ready to receive the instructions of clients. So perfectly, indeed, was the practice recognised, that on the making of a sergeant, it was usual for the whole body of sergeants to walk in their robes to St. Paul's, to invest their new brother with his particular])illar of buˆjiness.

Tlie number of these inns of court appears in the reign of Henry III. to have been so much on the increase, tliat it was thought nescessary to restrain tiiem by proclamation. Some which now exist were however erected after this prohibition. The number remaining is thirteen, nine of which are within, and five without the liberties of the city, and all (we believe) extra parochial.

The inns were anciently of three classes ; two of these might properly liave been designated the outer and inner; the third bore the name of Serjeants' Inn. The outer were called Inns of Chancery, from their being places of elementary instruction, where young men were taught the nature of chancery writs, which were then considered as developing the first principles of law. Such were Clifford's, Thavie's,

Barnard's, Staple's, Clement's, Lyon's, New Inn, and some other inns now extinct. In the reign of Henry VI. there were ten of these lesser inns, each of which contained not less than 100 students. When persons had made some progress at these inns, they were then admitted into the superior or inner courts, where they perfected their degrees. Of these courts there were four, namely, the Inner and JMiddle Temple, Gray's Inn, and Ijncobr's Inn, v.luch still retain the pre-enui > ence they originally possessed. At the period of which we have spoken none of these inns of court had less tlian 200 members.

Tlie Serjeants' Inns, of which formerly there were tliree, were of a still higher order than any of the others, being occupied solely by the lawyers who had been advanced to the dignity of the coif, including the judges, who, though promoted to the bench, siill style every serjeant their ' brother.' One of these, which was situated about the middle of Fleet Street, was held on a lease from the dean and chapter of York ; and on the expiry of the lease it was not thought proper to renew it. The place, though now differently occupied, still retains the name. Anotiier inn, for the use ofserjeants only, was situated in Scroop's court, llolborn, near St. Andrew's church. The only Serjeants' Inn, at the present day, is situated at the foot of Chancery Lane.

College of Doctors of Law. — The doctors of the civil, canon, and maritime laws, practising in the ecclesiastical and admiralty courts, have a college of their own, situated in Knight Rider Street, usually called Doctors' Commons, from their Cf-mmoning together in a collegiate manner, as in the inns of court. At first the doctors resided in a mean house near Paternostˆjr Row,

wliich is now a tavern, known by the name of the (•ineen's Arms. Afterwards Dr. Henry Harvey, clean of the arches, purchased an old stone structure in Kniglit llider Street, held on lease by lord Mountjoy, from tlie dean and cliapter of St. Paul's, and fitted it up for the accommodation of the fraternity. Here they resided till its destruction by the great fire ; when they removed to Essex House, which they occupied till 1672, when the present commodious buildings were

erected.

As yet, the members, though professionally associated togetlier, were not legally incorporated; nor was it till 1768 that an act for this purpose wasobtaineJ.

The college has a handsome liall, where the diti'erent courts in which its members officiate hold their sittings. The doctors or advocates sit on the same bench with the judge ; and eacli has a particular seat assigned to him on his admisdon, which he always keeps.

The principal eclesiastical court is the Cuii7-t of Air/its, said to be so called from its having been anciently held in the crypt of Bo\w church, which was originally built upon the arches. The thirteen parishes in London, which are peculiars of tlie archbishop of Canterbury, are under the immediate jurisdiction of thejudge of this court, who is hence styled the dean of Arches. The Prerogative Court is guardian of the various riglits of succession to property. It has a registry attached to it, in which all original wills are deposited : and grants letters of administration to executors and next of kin. The Office of Faculties and Dispcnsiitions empowers any one to do that which in law he could not otlierwise do ; as, for instance, to marry wiUiout the pul/lication of banns, to succeed a father in an ecclesiastical benefice, &cc. The Court of Delegates is the higliest of all the ecclesiastical courts of the province ot Canterbury. Appeals lie to it from any of the other courts, and the decisions are generally considered final. The king has it in his power, in-deed, to grant a commission of review under the broad seal, but this is rarely exercised. The Court of Admiralti/ tsˆkes cognizance of all offences on the higli seas, questions relating to seamen's wages, right of salvage, &c. It was erected in the reign of king Edward III. and was originally held in Southwark. When the causes before it relate to offences committed at sea, it does not hold its sittings here, but at tlie se;>sions house in tlie Old Bailey ; and any barrister at common law may then plead before it. The doctors of law have an excellent library at-tactied to their college.

The Rolls. — The master of the rolls is ex officio lord of a liberty of itself, exempt from the power of the sheriff of Middlesex, and of every other officer, except with leave of the master. Hero he has a splendid house to reside in, from which *he can pass into the court where he officiates, as from one room into another ; and behind it there is a large garden, where, in the midst of a crowded city, he may enjoy sometliing of the pleasures of rural retirement. Hero also lie has a chapel of his own, the minister of wliich is of his n6inination.

The chapel is an ancient structure, of a mixed character, and is supposed to have been designed

by Inigo Jones. It contains several monuments to the memory of persons who have filled the office of master; one by Torregiano, in honor of Dr. Young, who died in 1616, is particularly admired.

In 1717 Sir Joseph Jekyll, on being appointed master, found the houses belonging to the liberty in so ruinous a condition, that he was induced to rebuild no less than thirty-nine of them at his own expense; although, by an act of parliament, the master is restrained from granting leases for a longer period than forty-one years. The cost of these erections was not less than £30,000.

The total amount of the rˆnts of houses in the liberty of the rolls, as charged to the poor rates some years ago, was £7282.

We noviT turn to the charitable o'ectiojis of this great city. Institutions. — In the metropolis there are thirty-nine principal religious societies form-ed for the purpose of disseminating religious instruction to every nation and to every people. Some idea of the extent of the pious benevolence of England — for, it is proper to acknowledge that the whole sum is not collected in London, though principally so — may be formed from the following statement of the receipts of the religious charities in the year 1822 : —

£ s. d. British and Foreign Bible society 97,062 11 9 Society for promoting Christian

Knowledge . - . .57,566 19 5 Church Missionary society . . 35,000 0 0

Wesleyan Missionary society . 31,748 0 0 London Missionary society . .31,266 1 11

Moravian Missionary society (in

London) …. 2,691 8 3

Home Missionary society . . 4,311 1 9 Society for the Conversion of

Jews 11,400 9 10

Religious Tract society . . 8,854 9 4

Church of England Tract society . 636 8 8 Female Penitentiary society

. 3,219 4 0

Society for the Relief of Pious

Clergymen …. 2.282 8 2 Prayer Book and Homily society . 2,082 9 6 British and Foreign School society 2,053 16 11 Naval and Military Bible society . 1,929 2 9 Sunday School Union society . 1,746 19 2 Continental society … 1,536 7 2

African Institution … 1,134 2 1

Society for promoting Religious

Knowledge among the Poor . 825 15 7 Society for Encouragement of Fe-male Servants …. 819 18 6 Merchant Seamen's Bible society . 648 10 2 Sunday Scliool society . 540 4 6 Society for Building Churches and Chapels, total from commencement 61,913 3 10

Ditto, annual subscriptions . 630 14 0

Hibernian society … 8,984 13 o

Hibernian Bible society . . 4,343 0 1 1 Irish Religious Book and Tract

society ….. 3,750 7 7 Irish Evangelical society ■- . 2,275 2 3 Sunday Scliool society for Ireland 1,883 17 o Irish Baptist society . . • 1,771 0 0 Irish Society of London . 403 6 7

£385,302 8 7

Nor does this sum, large as it is, include all tlie money collected for religious charities, as there are various other societies, whicli, like tributary streams, flow into the ocean of benevolence. In a preceding year some of the institutions produced more money than in the year 1822, particularly the Bible society, the receipts of vviiich, in the year 1821, amounted to £103,802 17s. U.

There are twenty-four hospitals for the sick, the lame, for children, for the cure of particular complaints, as diseases of tiie eye, or the ear, &c. ; — numerous almshouses for the maintenance of the aged, and upwards of thirty dispensaries for the gratuitous supply of medicine and medical aid to tlie poor, G0,000 of whom are thus annually relieved. Injustice to the medical profession it ought also to be said, that not only several apothecaries, but even physicians and surgeons of the highest rank, give advice gratuitously to the poor once or twice a week. Reserving for a distinct notice some of the most prominent of the London charities, it may be necessary to give a cursory view of the

beneficial influence and effects of others.

Of all the institutions in London, there is not one more humane or more useful than the Society for the IJisc/iarˆe and Relief of Persons imprisoned for Small Debts, which was established HI 1772, principally through the means of the unfortunate Dr. Dodd. — Within the first fifteen months after this society was formed, 986 prisoners were liberated through its means ; and the number discharged and relieved in 1818, from various prisons in London and the country (for its benefits are not confined to the metropolis), was 1138 persons, who had 823 wives, and 2187 children. The sum with which so much good was achieved is comparatively trifling ; the average expense of the liberation of each prisoner, including every incidental expenditure relating to the charity, being only £2 17s. 2|fi?.

The West minster Hospital, or public infirmary, which was established in 1719, was the first institution of the kind in England, and may be considered as tlie parent of all the subscription hospitals in the kingdom. Since its formation it has afforded comfort and relief to more than 174,000 of the sick and afflicted poor.

The Citˆ Dispensari/, in CJrocers' Hall Court, Poultry, is an institution of the utmost usefulness. Since its establishment, in 1789, 138,302 patients have been admitted. Of these 136,442 have been cured or relieved, 393 discharged for irregularity, and only 1467 died : 50,346 persons iiave been attended at their own habitations, and several thousands relieved without the formality of a letter of recommendation. The number of persons who receive medical or surgical assistance from this institution, every year, is nearly 5000.

The Xational Vaccine Establishment is another institution of extensive utility ; many diseases have their thousands of victims every year, but the smallpox had its tens of thousands. What an alteration is there now, not only in the human countenance, but in the aggregate duration of human life, which has been increased more than two years by vaccination alone ! It appears by

the last report of the vaccine establishment, that, within the five years ending in 1823, 34,275 persons have been vaccinated in London ; and the total number vaccinated ni Great Britain during ihe same period was 327,521 persons.

The Jloi/ul Humane Society was instituted in 1774, for the recovery

of persons apparently drowned or dead, by ditfusing a knowledge of the best means to be resorted to in such cases, and by rewarding with honorary medals such individuals as have exerted themselves to save the life of a fellow creature. One of these medals, which may be compared to the most honorable reward the Romans could bestow — the corona civica, — was given to the emperor Alexander of Russia, who was instrumental in saving the life of a peasant, and wiio was more honored by this mark of distinction, than if ‘ stuck o’er with garters and hung round with strings.’ The society has twenty receiving houses in the metropolis, where persons are in attendance with the necessary apparatus to be employed. Since the commencement of this establishment, it has been the means of saving the lives of 5500 persons, who were apparently dead; and more than 21,000 persons have been rewarded for their exertions in endeavouring to save the lives of others, principally in cases of shipwreck.

Fifty institutions, similar to that of the Royal Humane Society, have been formed in various parts of Great Britain; and the example is already adopting in most of the nations of Eu-rope.

The Royal Universal Dispensary for Children, which is open, in cases of danger, to a first application for relief widiout recommendation, was instituted in the year 1816 ; and since that time 60,000 children have been attended, only one in sixty of whom died. Since this dispensary was instituted, the number of children in Londonj under ten years of age, that have died, is 5000 less than in the preceding seven years.

The Royal Infirmary for Diseases of the Eye, though an infant establishment, has preserved the sight of thousands. It appears from the report of this institution, in 1822, that since the opening of the charity in 1805, 32,400 poor persons have received the benefit of the charity: and of this number (which is upwards of 2000 annually) 30,250 have been discharged, cured, and relieved ; and 888 deemed incurable. During tiie same period 1252 operations, for the removal of the cataract, had been performed, 1174 of which terminated successfully, although of this number of cases 122 persons had been born blind.

There are fourteen hospitals in London, expressly appropriated to females during a period, when, of all others, they most require assistance. Some of these are for attending married women, at their own habitations, gratuitously ; others for affording them pecuniary relief, or the loan of linen, &c. : and a third class of hospitals is for admitting in-door patients. The City of Lon-don Lying-in Hospital, in

the City Road, which is perhaps the largest of these establishments, was founded in 1750, and Dr. Sherlock was one of its earliest patrons. From this period, to the year 1809, 24,902 poor married women were

assisted, and 25,196 children oorn within ..he walls of the hospital. A singular instance of the advantage of having all the departments of a public institution filled ˆ»‘ith persons duly qualified for their office occurs in the history of ti s charicy.

The Uritish Lying-in Hospital, in Brownlow Street, was instituted in 1749, and a remarkable instance of the advancement of medical science is exhibited in the records of this charity. During the first ten years after its establishment one woman in forty-two died; and, in the fifth ten years, only one in ‘288. In the first ten years one child in every fifteen died, but in the fifth ten years the number of deaths was reduced to one in seventy-seven, and afterwards to one in ninety-two.

The Strangers’ Friend Societi/ was formed for the purpose of relieving the distressed. The principles on which this truly charitable institution is founded are the most benevolent and disinterested. Neither country nor religion is considered as an obstacle to its relief; and, in carrying on this work of mercy, 300 visitors are employed ‘ to enquire the wretched out,’ whether living in garrets or cellars, and well do they discharge this painful and laborious duty, without any other reward than that which arises from the consciousness of doing good.

Such are a few of what are considered the minor benevolent institutions of the metropolis — to do justice to their history would require limits much more extensive than we can assign to them.

Aims-Houses. — Independent of the charitable institutions of the several corporate bodies of the city of London, they are the guardians or trustees of several other charities.

There are in London 110 dift’erent foundations of almshouses, in which upwards of 1500 persons of both sexes are comfortably

maintained, in a degree of comparative independence. The Drapers' Company, whose charitable donations are upwards of £4000 a year, have almshouses which contain 113 persons, either founded by themselves, or by individuals who have appointed them guardians ; and among the charities, the administration of which is vested in the Drapers' Company, is ' queen Elizabeth's College,' at Greenwich, which was founded for twenty-four persons, in 1376, by William Lambarde, the author of the Perambulation of Kent, and is said to be the first hospital which was founded by a protestant. In the parish registry of Greenwich, there is a singular instance of marriage and longevity connected with these almshouses. It states, that on the 18th of November, 1685, John Cooper, alms-man, in queen Elizabeth's ('oUege, aged 108, was married to Margaret Thomas, of Charlton, aged eighty, by leave oi the governors of die drapers.

Bridewell Hospital. — The recollection of Mendicity almost involuntarily associates itself with Bridewell, since the latter was one of the first institutions formed with a view tb relieve and suppress it. The site on which this hospital is built was anciently occupied by a royal palace, which must liave been built long anterior to the time of William the Conqueror, as during tlie

reign of that monarch it was so much dilapidated that he gave some of its materials towards the rebuilding of St. Paul's. Henry I. despoiled it for the same purpose; but the palace still remained, and was long a royal residence. Cardinal Wolsey, who budt as well as occupied royal palaces, resided here in 1552; and, when the emperor Charles announced his intention of visiting England, Henry VIII., with a celerity unusual in those days, had it taken down and rebuilt for that sovereign's reception, in the course of six weeks. For some reason, which is not recorded, his imperial majesty did not reside in the palace, and it was appropriated to the officers of his suite.

Although historians relate that the palace was rebuilt in a magnificent manner, yet this seems doubtful, as in the succeeding reign bishop Rid-ley, in a letter to Sir William Cecil, secretary to Edward I\^, describes it as a wide, large, empty house, ' that would wonderfully well serve to lodge Christ in, if he might find such good friends in the court to procure in his cause.' The pious bishop says, many lie in the streets 'both hungry, naked, and cold,' that the citizens were willing to refresh them, but they lacked lodging; and he adds, as a climax to the misery he paints, that * in some one house, I dare say, they are fain to lodge three famdies under one roof!'

The king granted the petition, and the house from that time has been employed ‘for the correction and punishment of idle vagrant people, and for setting them to work, that they might, in an honest way, take pains to get their own livelihood.* Bridewell is one of the royal hospitals which Edward VI. endowed with 700 marks of land, formerly belonging to the Savoy, which had been suppressed. It is at present used as a house of correction for the dissolute, as a refuge for the destitute, and as a manufactory for the industrious.

St. Bart/ioloniew’s Hospital. — Five hospitals in London are termed royal on account of their having been founded or endowed by English sovereigns ; these are St. BarUiolomew’s, St. Thomas’s, Bethlem, Bridewell, and Christ’s Hospital. St. Bartholomew’s, in West SmiUi-field, may claim as a benevolent institution an antiquity of more than seven centuries, it having been originally founded in 1102, by llaherus, who is said to have been a minstrel to Henry I. and established a jiriory of black canons near it. The endowment which was for ‘ brethren and sisters, sick persons, and pregnant women,” was £305, and it received several additional bequests, which were given previous to the time of Henry VIII., who, while he suppressed the monastery, preserved the hospital, and gave 500 niarKs a year to it, on condition that the city should give an equal sum. The citizens repaired the ruinous houses the monarch had bequeathed, at an expense of £1000, and provided the means of receiving 100 persons into the hospital so early as the reign of Edward VI., who incorjjorated it. The expenses of the hospital at this period amounted to £795 a year ; the king’s endowment, after the rei > airs made by tlie city, pr - educed tl e 500 marks, — a similar sum was

given by the corporation, and the deficit was raised by the citizens. No sooner did the funds admit of an increase of patients, than it was made so, that in tlie year 1660 the hospital maintained upwards of 300 sick or lame persons at an expense of £2000 a year. The hospital fortunately escaped tlie dreadful conflajfralion of 1660, althouijjli several houses constituting a portion of its revenues were destroyed, but they were ahiiost immediately rebuilt by the citizens, and then became more productive than ever. Thus the hospital continued until the . year 1730, when it was deemed necessary to rebuild the whole by a subscription raised for tlie purpose.

The building forms a quadrangle, with an inner court of considerable dimensions. The prnicipal entrance in Smith field, erected in 1702, is of tile Doric order of arciiitecture, and consists of a large arch, surmounted by a statue of its nominal founder, Henry VIII. The royal arms, and two figures representing sickness and lair.eness, also ornament the front. The interior of the hospital is spacious and well arranged. Tlie hall, which is large, contains several paintings, particularly one, representing St. Bartholomew holding the knife by wliich he was flayed alive, a portrait of Henry VTIL, and another of Dr. llatcliff, who was a great benefactor to the hospital. The staircase is indebted to the gratuitous pencd of Hogarth, who has enriched it with a picture of the cripple at the pool of Bethesda, and another of the good Samaritan, as well as other paintings, in return for which he was elected a governor. St. Bartholomew's Hospital, which formerly had two auxiliary establishments, in Kingsland Road, and Kent Street, in Southwark, is open to accidents at all times, and there is considerable facility given to the admission of patients, who receive the best medical and surgical advice. The number of in-patients is al)out 5000, and that of out-patients nearly 6000 annually.

St. Thomas" s Hospital, in Southwark, devoted to the same objects as that of St. Bartholomew, under t!ie same government, that of the lord mayor and aldermen, or a select portion of them, owes its royal foundation to the same prince, and extends relief to the same extent; the num-ber of poor admitted as in or out door patients in 1820 being 11,4,')1.

This hospital owes its origin to two similar charities, founded in the early part of the thirteenth century — a hospital built in 1207, by the canons of tlie priory of St. Mary-over- Rhe, and an almonry or almshouse, erected by Richard Prior of Bermondsey, for the reception of indigent children, and necessitous proselytes. In the year 1538 it was surrendered to tlie crown ; and in 1551, when the mavor and citizens]nirchased the manor of Southwark of Edward \. for the sum of £647 2s. !</., they repaired and enlarged the hospital, so as to render it capable of receiving 260 poor, sick, and helpless objects.

In 1693 it was deemed necessary to rebuild the hospital, which was done in three quadrangles by subscription. The benevolent Thomas Guy built three of the wards at his own expense, and Thomas Frederic, esq., one of the governors,

built three others. Anotlier quadrangular court with several wards and

offices, was added in 1732, which increased the number of wards to nineteen, containing nearly 500 beds. Sir Robert Clayton, who was lord mayor in 1680, was a great benefactor to this excellent charity.

Though not honored with the appellation of ‘ royal,’ the foundation of Giii/s Hospital was an act of more princely liberality than either of the preceiling. It is one of the most munificent ˆifts that an individual ever presented to the public; and although it may be contended, that Guy (see that article), gave his money in public charity out of pique, yet the whole life of this man was such a scene of continued beneficence, that it is fair to presume he would, under any circumstances, have appropriated a considerable portion of his fortune to works of charity. It has been seen by his munificence to St. Thomas’s llosjntal, that he was an individual by no means of ordinary benevolence ; nor was the hospital, which bears his name, an act of posthumous charity, but, on the contrary, erected during his life, at an expense of £l 8,793 16s. Id., although he did not live to see it finished. The foundation was laid in 1722, and two years afterwards Mr. Guy died, having endowed the hospital with the vast sum of .£‘219,499 Os. 4d. ; he also left a perpetual annuity of £400 a year to Christ’s Hospital, and £lO0O for discharging such poor prisoners as could be released at an expense of £5, by which above 600 persons were set at liberty ; nor was Guy unmindful of the claims of kindred, for he bequeathed annuities for life to them of £870, and legacies to the amount of £75,589. Guy’s Hospital, which possesses no architectural claims to particular notice, consists of a centre and two wings, which includes thirteen wards. The number of in and out patients admitted annually, varies from between 4000 and 5000.

The governors of tlie hospital are incorporated, and, by an act passed in the year 1808, it is joined with the royal hospitals, the Foundling, the Universities, and Colleges of Eton, Winchester, and Westminster, in the clause of exemption from the tax on servants.

Bethlem Hospital was not originally in IMoor-fields, hut was formed out of a priory on the site of the street in the ward of Bishopsgate, now called Old Bethlem, built by Simon Fitzmary, a sheriff of London, in the year 1247. Three centuries afterwards, Henry \ III. granted the lands and revenues of the priory to the corporation of London, for the reception and maintenance of lunatics. The number of tiiese unfortunates increasing considerably, a more spacious building became requisite, when the corporation appropriated a plot of ground in iMoorfields for the purpose, and a new building was erected in 1676 by subscription, at an expense of £17,000, to which two winiis were added in 1733.

The hospital becoming ruinous, and its removal consequently desirable, in order to make the projected improvements in Moorfields, it was determined to erect a more magnificent building for the purpose, on the site of the Uog and Duck Tavern, in George's Fields. The building, which was begun in 1812, and com-

pleted within a short period, is a very magnificent structure, extending, the centre and wings included, to the length of 38J feet in front. Tlie centre has an Ionic portico of six columns; and the building is surmounted by a neat dome. The hospital was designed by Mr. Lewis, and cost •ipwards of £95,000.

It appears from a return made by the physicians of this hospital to the governor, in January 1822, that the number of patients in the hospital was 346; of whom 210 were deemed curable ; seventy-seven incurable, and fifty-nine criminals who were to be confined for life, among whom were Margaret Nicholson and Hadfield, the two individuals who attempted to assassinate his late majesty.

Bethlem Hospital does credit to the talents of the architect, and is an ornament to this part of the metropolis. The two celebrated statues of raving and melancholy madness, by Caius Gib-ber, "which formerly stood on each side of the gates in the hospital in Moorfields, are now placed in the hall.

St. Luke's Hospital. — So early as the year 1731, in consequence of the insufficiency of Bethlem Hospital to contain the lunatics for whom admission was sought, a few benevolent individuals resolved on erecting a new asylum for their accommodation. A house was first built on the north side of Upper Moorfields, and opened for the reception of patients ; but it was soon found not to meet the number of deserving applications, and in 1786 a more extensive building was erected at the corner of Old Street, at an expense of £55,000. It is a large and well-built edifice, extending nearly 500 feet in length ; and is capable of holding upwards of 300 patients. In the vicinity of London are several private asylums for lunatics, on a larger scale than

either Bethlem or St. Luke's ; and, although some of them are respectable and well managed, yet there is strong reason to believe that there are others of a very different character. But this subject is at length before a committee of the house of commons.

Foundling Hospltiil. — Tn London, the proposal for a foundling hospital, which originated in the reign of queen Anne, and was strongly recommended by Addison, in the Spectator, was suffered to slumber for many years ; nor was it until the year 1739 that captain Thomas Coram, who s])ent the whole of his fortune in the benevolent object, on presenting a memorial to his majesty, signed by twenty-one ladies of the first rank, and several noblemen and gentlemen, olHained a royal charter for its incorporation.

As the hospital was to be raised and supported by subscriptions, and a large sum was necessary in order to commence the cliarity on a scale suf-ficienlly extensive, some time was necessary in order to raise the requisite funds. In 1740 the committee appointed to carry the measure into effect purchased fifty-six acres of land of the earl of Salisbury, on the northern side of Ormond Street, and extending to (Cray's Inn, for the trifling sum of £7000 : out of which the carl liberally gave £500 to the charity. On the 16th of September, 1742, the first stone of the new building was laid ; benefactions continuing to

flow in, a chapel was built, to which Handel gave an organ, and the benefit of his oratorio of the .Messiah ; and, as lie conducted the performance himself, he, in the course of a few years, produced to the charity £6,700.

Liberal as the subscriptions were, they did not keep pace with the demands on the hospital, which, before the end of tlie year 1752, had received 1040 infants, of whom 559 v.ere then under its protection. Four years afterwards parliament voted a sum of £lO,000 in aid of this charity, declaring that tlie enabling the hospital to receive ail the children that should be ofiered was t!ie only method to render the charity of lasting and general utility. The 2d of June was fixed for the general reception, and on that day 117 children were received; and the number increased so rapidly, that, before the 31st of December in the following year, the number amounted to 5510, and in 1760 to 6000. The indiscriminate admission of children, under a certain age, was found attended by an evil consequence, and in 1760 the law which autliorised it was repealed.

Parliamentary aid stiil continued to be given to the hospital, until the improvement of its revenues, by letting ground on building leases, no longer rendere.‘l this necessary. The annual receipts of the hospital now amount to upwards of £l3,000 a year, a sum which is considered as sufficient to maintain 500 children.

The foundling hospital is built of brick, and coiisists of two wings, with a chapel in the centre ; the gardens and playground for the children are very large, and the situation is altogether as Jiealthy as could be found in the heart of so large and so populous a city as London. 2V(e Asi/lum, and London Orphan Asylum. — The foundling hospital is limited to the reception of infants — the asylum for female orphans at Lambeth, and the London orphan asylum for boys and girls, have been founded for the reception of destitute children, who are admitted at a more advanced age. Those of the Lambeth asy-lum, which originated with Sir John Fielding, between the age of nine and twelve ; and, at the London orphan asylum, from seven to ten. They are both excellent institutions. The children are educated and industriously employed, until sufficiently old to be apprenticed out, when the utmost care is taken thar they are provided with suitable situations.

Magdalen Hospital. — This excellent institution \Vas commenced principally through the exertions of the Rev. Dr. Dingley, Henry Fielding, esq., and the unfortunate Dr. Dodd.

Since the institution of this society, on the 10th of August, 1748, to the 3d of January, 1822, 4986 young women who had strayed from the patlis of virtue have been admitted, of whom 2343 have been restored to their friends, or placed in service ; and it is an invariable rule, that no female shall be discharged unless at her own de-sire, or for misconduct, until means have been provided by which she may obtain an honest livelihood.

Since the Magdalen, which is situated in Blackfriars’ Road, was instituted, two auxiliary societies have been formed in London ; the Fe-

tnale Penitentiary at Pentoiiville, which was instituted in 1807, and the Guardian Societj/, for the preservation of the public morals, which, lhou<;h an infant society, has admitted 681 females into the asylum in St. George's in the East, of whom 170 have been placed in service, 166 restored to their friends, and thirty-six sent to tiieir respective parishes.

Asiiluin for the Dtitf and Dumb. — It appears from medical enquirers on the subject, that in every country one person in less than 3000 is boru deaf, and consequently grows up dumb. In France, an institution, under the venerable al)b(i I'Epce, had long been formed for the instruction of persons in such a state of mental destitution with the happiest effects, but it was not until the year 1792 that a similar establishment was formed in London.

The attention of the British public was first called to the deaf and dumb, by the Rev. John Townsend, and through his exertions an institution formed for their relief; and since the esta-blislimenl ef tiie deaf and dumb asylum in Kent Iload, between 500 and 600 children have been instructed in writing, aritiimetic, and tlie principles of religion. They have also been taught some useful manual occupation, by which, when they leave the asylum, they can earn a livelihood. School for the Indigent Blind. — Several bequests have been made by benevolent individuals in London for the relief of the blind. Mr. Came, the gentleman who left annuities for the deaf and dumb, placed at the disposal of the Cordwainer's Company a fund for the relief of the blind ; and Mr. Hetherington also left a large sum ' for the relief of blind persons of sober life and conversation, not receiving alms, nor being common beggars, nor having any annuity or in-come of £20, and resident in England.' To this fund, which is vested in Christ's Hospital, other benefactors have contributed, so as to enable the trustees to relieve 450 persons with an annuity of £10 each : another humane individual bequeathed annuities of the same sum to 175 blind persons, which are distributed by the Paper-stainers' Company.

Tiie law of the school for the indigent blind, established in St. George's Fields in 1799, is to instruct persons, thus deprived of one of Heaven's best blessings, in a trade by which they may be able to provide for their existence. The establishment contains about sixty persons, who are employed in the manufacture of baskets, mats, thread, lines, &c., in which they can earn upwards of £600 a year, and thus afford a very essential return to the charity for the benefits they receive.

Pliilantliropic Reform Societies. — The investigations which of late years have taken place, on the subject of the criminal laws, have led to the establishment of several institutions in London, with the view of correcting offences by other modes than those of direct punishment ; and for giving instruction to the most debased. The society for the improvement of Prison Discipline has in a few years effected a moral reform in our gaols, and established order and decency where vice rei'jned uncontroled. The institution has also been instrumental in rescuing a

great number of juvenile offenders from the haunts of crime, and of preventing many distressed youths from resorting to criminal practices for support.

The Philanthropic Society, in St. George's Fields, was established in 1788, for the reform of discharged juvenile offenders, and the offspring of criminals, by providing them with suitable employment, and training them to habits of vir-tue and industry. Nearly 200 children of both sexes are admitted into this excellent institution, and instructed — the boys in printing, book-binding, shoemaking, &c., and the girls in needle-work, and other duties, to qualify them for household situations.

Another institution, of a similar nature to the preceding, is the Refuge for the Destitute. Although the object of this establishment is the reformation of juvenile offenders, of whom it is calculated there are 8000 in London, yet adults are sometimes admitted to its benefits : they are almost all criminals, who have either been recommended by the judges on their trial, or by the magistrates ; or are so young, that it would be improper to inflict upon them the punishments annexed by law to their offences. In the early period of the institution, out of 131 that were admitted, forty-six proved incorrigible; but a better system of instruction and discipline has been adopted ; and it appears, by evidence given before a committee of the house of commons, that nine-tenths of the criminals admitted are restored useful members to society.

Marine Society. — This excellent society, for fitting out boys for sea service, and affording an asylum to destitute sailors, was established in 1756. A ship is moored off Deptford for the reception of the boys, who are clothed, fed, instructed, and qualified for sea service; and so extensive have been the benefits of this charity, which was incorporated in 1792, that, since its establishment in 1756, 33,171

boys have been fitted out ; and the number of men and boys who have been clothed and relieved by the institution is 72,531. The boys, who have the advantage of the instruction of the Marine Society's Scliool, are invariably the best sailors, whether employed in the navy, the East India Company's service, or in merchant ships.

Institutions devoted to the general promotion of literature in London are not numerous. At the west end of the town is the Royal Institution, formed for the purpose of promoting science, and no establishment was ever better patronised in the outset, or more successful in its progress. It was first projected by count Rumford, in the year 1790, for the purpose of teaching, by courses of philosophical lectures and experiments, the principles of science, and their application to the improvement of arts and manufactures as well as the common conveniences of life. The society now])ossesses a valuable scientific apparatus, by means of which Sir Humphrey Davy made those experiments on the nature and properties of flame, which led to the discovery of the safety lamp ; the library of the institution, though not large, is very valuable ; and the courses of lectures which are annually delivered on science and literature are well attended.

Royal Societi/ of Literature. — Towards the close of the year 1820, it was suggested to his majesty, that a society of literature, somewhat similar to the French Academy of Belles Lettres, might prove advantageous to the country ; the king immediately expressed his approbation, and authorised the establishment of such a society under his immediate patronage. The objects of this institution are, to extend and unite the general mterests of literature, to reward literary merit by patronage, to excite literary talent by premium, and to promote literary education, by bestowing exhibitions at the universities and public schools m cases of distinguished merit.

The patronage of his majesty has not been nominal ; for, with that munificence which is a leading feature in his character, he has assigned to it a sum of 1000 guineas annually, to be divided among the associates distinguished for their learning, who are to contribute,

witliin the year after their election, a literary essay to be printed in the Society's Memoirs of Literature.

London Institution. — Though commerce, like arts, is a jealous mistress, and requires almost undivided attention, yet the London merchants have not been so absorbed in the pursuit of gain as to neglect those refinements which have ever been attendant on commercial prosperity. In the year 1805 a number of gentlemen connected with the city associated together, for the purpose of forming an institution, calculated to promote science, literature, and the arts. The number of subscribers was limited to 1000; and the shares seventy-five guineas each; the subscription list was soon filled, and the institution opened with a good library in January, 1806, in a house, which formerly belonged to Sir Robert Clayton, in the Old Jewry; the library was afterwards removed to King's Arms Yard, Coleman Street, where it remained until a new and magnificent building was erected for the institution in Moorfields, under the direction of Mr. Wm. Brooks, the architect. This building is 108 feet in length, with two wings of sixteen feet each ; the centre has a handsome portico, with pillars of the Tus-can and Corinthian orders, surmounted by a neat pediment. The interior arrangement is admirable; on the ground floor, in addition to the entrance halls, there are separate reading rooms for newspapers, magazines, and reviews, as well as for meetings of the committee, &c.,and a noble staircase leads to the library on the first floor, which is ninety-seven feet long by forty-two wide; and the lecture room is sixty-three feet by forty-four. The library consists of a very extensive collection of modern works, and is particularly rich in topography ; several courses of lectures on a variety of subjects are annually delivered, and in general are well attended.

The Russcl Institution, in Coram Street, embraces the same objects on a smaller scale.

Tiie Red Cross Stixet lAbrury was founded by Dr, Daniel Williams, a dissenting minister, who dying in 1715 — 16, left it for tlie use of the ministers of his own persuasion. The library has been since considerably increased, and now contains nearly 17,000 [volumes, comjjrising many valuable works on theology. Several interesting portraits of the nonconformist ministers and Vol. XIIL

curious manuscripts have since been added, to which persons are admitted under certain limitations, on procuring an order from one of

the trustees.

Sion College, London Wall, is both a charitable and a literary institution. It was originally a hospital for blind paupers ; and, after passing-through various hands, was purchased for the purpose of erecting Sion College, for the use of the London clergy, who were incorporated by Charles I. The purchase was made in consequence of the will of Dr. Thomas White, vicar of St. Dunstan's in the West, who left £3000 for the purpose. The library was the gift of the Rev. John Simp-son, rector of St. Olave's, Hart Street, one of Dr. White's executors; but it was afterwards considerably increased, both before and after the fire of London, which destroyed a considerable number of the books.

The College of Fhysicians was established in the re;gn of Henry VIII., when the number of members was limited to thirty. Charles II. increased the number to forty, and James IT. extended it to eighty. The first charter was granted by Henry VIII. in the tenth year of his reign, in order, as the preamble states, to restrain the boldness of some wicked people, who all profess physic more for their own covetousness than out of any good conscience, when many inconveniences may arise to the ignorant, credulous, and common sort. This charter was ratified by an act of parliament four years afterwards, which enacted, that 'no person of the said political body and commonalty be suffered to exercise physic, but only tliose persons that be profound, sad, and discreet, roundly learned and deeply studied in physic'

Towards the close of the seventeenth century the College of Physicians established three dispensaries, in many parts of London, for the purpose of supplying the poor with drugs at a low rate. Two physicians also attended at each of these dispensaries, in order to give advice to the poor gratis ; but these benevolent views do not appear to have been long continued.

The College of Physicians was first held in Knightrider Street, afterwards in Amen Corner ; and, when the latter house was destroyed by the fire of 1666, they purchased some ground to the west of Warwick Lane, where Sir Cliristopher Wˆren erected an extensive building in Warwick Square ; here the meetings of the society continue to be held, although a new college in Pall Mall East is one of the recent improvements of the metropolis.

Hoi/ul College of Surgeons. — Although the surgeons obtained an act of parliament in 1745, to separate from the Barbers' Company, with

which they had been incorporated from the reign of Henry V'lIL, yet it was not until the year 1800 that they obtained a new charter, erecting tiiem into a distinct college. The business of the new society was for some time carried on in the Old Bailey ; but a new hall, of the Ionic order, has since been erected, on the south side of Lincoln's Inn Fields, which is enriched with a valuable museum, library, &c. Among its treasures is the extensive 'collection of the celebrated John Hunter.

LONDON.

Vflciinurij College. — Until of late years tiie art oi’ iiiniery was lel’t to tlie most ignorant and vulgar class of society, who..,un3cquainted with the principles of the science, or the properties of medicine, followed the mode of treatment which had been traditionally handed down to them, witiiout any attempt at improvement, or enquiry how far it was proper. In 1791 a college for farriery was erected at the bottom of Gray’s Inn Lane. The great object of this institution is, to form a school of veterinary science, in which tiie. anatomical structure of quadrupeds of all kinds, horses, cattle, sheep, dogs, and the diseases to which they are subject, and the remedies proper to be applied, may be investigated and regularly taught. Parliament has frequently afforded liberal support, in order to prosecute this ob-ject. The building consists of a theatre for lectures and anatomy; a school, where from thirty to forty pupils are instructed in the veterinary art ; and stables for sixty horses.

Education. — Independent of endowed schools, the parish schools, the Sunday schools, and those on tiie system of Bell and Lancaster, there are upwards of 4000 private schools in the metropolis and its immediate vicmity. The number of children educated in the last class, though not easily ascertained, can scarcely be less than

100,000.

According to a return, made to parliament in 1819, llie proportion of scholars who are educated gratuitously, and those who pay for their instruction, in the several schools in Aliddlesex (which may be a fair estimate for London, as Southwark is not included), is 16,130, of whom 480 pay ; the number educated in the unendowed schools is 24,289, of whom 6742 pay. The total number educated in the endowed and unendowed schools is 30,419, of whom 32,196 are

educated gratuitously. In addition to the ^^reat number of poor children that are thus educated gratuitously, there are between 40,000 and 50,000 more, who are taught in the Sunday schools, which belong to almost every church and chapel, of whatever denomination, in the metropolis. The teachers of the Sunday schools, who amount to between 4000 and 5000, are all gratuitous, and very assiduous in their attendance.

Westmimter School is certainly the first in point of rank in the metropolis. It is supposed to have been founded towards the close of tiie eleventh century, and to have been one of the public schools alluded to by Fitzstephen. It appears, however, to have declined ; since Elizabeth restored or refounded it, in the year 1590, for the education of forty boys, who, in her honor, were called Queen's Scholars. From this period the school has been distinguished for its masters. See VVestmixster.

C/uist's Hospital. — The foundation of Christ's Hospital was the last act of Edward VI.'s charity. It was only two days before his death that he si)4nc'd the charter of incorporation for this school, when, with a sort of pro])hetic consciousness of its future benelits, he exclaimed, ' Lord, I yield thee most hearty thanks that thou hast given me life tlius long to fmissh this work, to the glory of thy name.' It was erected '■ for the

education and maintenance of the poor children of decayed merchants and tradesmen of the city of London,' on the site of a convent of Gray Friars, which had been annihilated by Henry VIII. Uobbs, the benevolent lord mayor, and the pious bishop Ridley, were among the earliest patrons of the hospital, and had no inconsiderable share in its formation.

Soactive also were the citizens in seconding the views of the monarch, that in less than six months the whole monastery of Gray Friars was converted into a hospital, capable of accommodating 340 boys. From this time the school has been continually increasing both in size and importance, so that the 340 scholars have been augmented to the number of 1150. The establishment will now accommodate 1156 children, including eighty girls who are provided for, without any expense to their parents or friends, and furnished witii everything necessary to forward their education. In the year 1809 there were only 1065 children upon the foundation, of whom sixty-five weie girls. Of the 1000 boys, 161 were presented by companies, parishes, &.c., 498

were sons of freemen, 239 were sons of non-freemen, and 102 sons of clergymen. The hospital was at first particularly intended for orphans; and, although their state of destitution is no longer an indispensable qualification, yet it is a strong recommendation ; so that, of the 1000 boys in the school in 1809, there were 360 who were either orphans or had lost one of their parents. About a third part of the children, including all the girls, are educated at an auxiliary branch of Christ's Hospital, at Hertford, whence the boys, when sufficiently advanced in their studies, are transferred to London.

In 1672 Charles II. founded the mathematical school, for the instruction of forty boys in navigation, endowing the hospital at the same time with a sum of £lOOO a year, for seven years. This school has seven exhibitions for Cambridge, and one for Oxford, in every seven years.

The government of Christ's Hospital, or the Blue Coat School, as it is more familiarly called, is vested in the lord mayor and aldermen, and twelve common-council-men chosen by lot ; benefactors to the amount of £400 are also governors. There are four schools, for grammar, writing, mathematics, and drawing ; the boys admitted to the mathematical school are compelled to" go to sea, and, when their education is finished, they are placed widi commanders of vessels by the governors, and equipped for their situation at the expense of the hospital.

The Cliurter House, situated on the north side of the square to which it gives its name, occupies the site of an ancient monastery for Carthusian monks, called the Grand Chartreux. It was part of the estate of the hospital of St. John of Jerusalem. Sir Walter de Manny, of Ilainault, one of those gallant knights who served in the wars of Edward III., and one of the first that were honored with the order of the garter, and Michael de North burgh, bishop of London, built and endowed the priory for twenty-four monks, in the year 1361. The monastery was suppressed in 1533; notwithstanding the obstinate resistance of the monks.

After the di3f?olution, the liouse passed into the hands of the Howard family, who resided at the house ; and James I., on entering liis new capital, on the 1st of May, 1604, paid his visit here to lord Thomas Howard, who entertained his majesty and suite for four days. Seven years afterwards lord Howard, who had been created earl of Suffolk, sold this estate, for the sum of £13,000, to Thomas Sutton, esq., citizen, and girdler, the founder of the present noble establish-nie;it. This he eftected at the outlay of £20,000, independent of an endowment of £4403 I9s. lOd. per annum. Mr. Sutton intended to preside as master of the hospital, but he died on the 12th of December 1611, six months after he had obtained the charter for its incorporation. The benevolent intentions of the founder were followed by the governors, who, in 1613, made an order, that no one should be admitted into the hospital, but only ‘ such poor persons as can bring good testimony of their good behaviour, and soundness in religion,’ and ‘ no children whose parents have any estate in lands to leave unto them, but only the children of poor men that want means to bring them up.’

During the civil wars Cromwell was elected governor, and attended several of the meetings ; since that period no event has occurred to injure this extensive charity. The number of scholars educated is seventy-three ; of whom forty-four are on the foundation, and twenty-nine students at the universities, with an allowance of £20 per annum for eight years. Boys who give no pro-raise of getting a living by their education, are put out apprentices, and have each a sum of £40 on leaving the school. Eighty pensioners are maintained on the endowment, who live in handsome apartments, and have all the necessaries of life provided for them ; in order to enable them to clothe themselves, they have each an allowance of £14 a year, and a gown. The hospital is managed by a master and sixteen governors.

The charter house, though a venerable pile, has few vestiges of the ancient conventual building : the chapel is built principally of brick, and lined with wainscot; it has two aisles with Go-tiijc windows; two of these, in the north wall, contain the arms of Mr. Sutton, in painted glass. There are several monuments in the chapel, particularly the tomb of the founder, which was erected at the expense of £400. The old court room is of the age of Elizabeth, and contains a profusion of coloring; the hall is spacious, and the apartments for the master convenient. The grounds, which are large, and well laid out, afford a fine promenade, though not one to which the public have access: and extensive additions are now making to the buildings of the establishment.

St. Paul's School was founded by Dr. .lolin Colet, the eloquent dean of St. Paul's cathedral. So early as the reign of Henry I. there was a school here, and indeed it appears to have been an appendage to every cathedral ; for, at a general council held at Rome in 1176, it v/ as decreed that, ' every C3.theflral church should have its school - master to teach poor scholars and others, ns had been accustomed, and that no man should take any reward for license to teach.'

Upon the foundation of this ancient school, dean Colet erected the present seminary, in 1509, for the education of 153 boys. He for this purpose conveyed the whole of his estate in Lon-don to the Mercers' Company, to whom he left the perpetual care of the school, and, when asked the reason of committing such trust to tl.em, he observed, ' that there was no absolute certainty in human affairs; but, for his mind, he found less corruption in such a body of citizens than in any other order or body of mankind.' The company have always managed this fund most unex-ceptionably.

The rules for the government of the sc'iool, which are very minute, were drawn up by the dean himself, wiio directed that in the grammar school, tliere should be a high master, chosen b}' the warden and assistants in the Mercers' Company; he was to be 'a man hole in body, honest and vertuous, and learned in good and cleane Latin, literature, and also in Greke, as such may be gotten!' If a priest, he was to be one who had ' no benefice with cure, and no service that may lett the due business in the schole.' Although dean Colet only lived ten years after he had founded the school, yet he had the satisfaction of receiving the congratulations of Sir Thomas More on its prosperity.

The only charge is Is. on the admission of each scholar. After a classical education, on the foundation, the Mercers' Company have an indefinite number of exhibitions, of £50 a year to each, to either of the universities. In addition to the original fund of the dean, the school has had also several bequests of considerable amount, and a donation of £l 6,000 three per cents., by viscount Camden, for exhibitions of £lOO a year each, at Trinity College, Cambridge.

The original school was destroyed by the great fire, and was rebuilt by the Mercers' Company ; but the latter structure has given way to the mouldering hand of time, and is succeeded by a more elegant and more convenient building.

St. Paul's school has ranked among its scholars, Camden the

antiquary, Milton the poet, the great duke of Marlborough, the philosophic earl of Orrery, Strype, the editor of Stowe's London, Dr. Edmund Halley, the celebrated astronomer ; and several other distinguished persons.

Merchant Tai/lui's' School is one of the most eminent seminaries of education in England. It was founded by the company in 1561, on a spot of ground on the east side of Suffolk Lane, Thames Street, formerly called the Manor of the Rose, belonging to the duke of Buckingham. The statutes of this institution provide that 100 boys shall be taught here at 5,s. per quarter, fifty at 2s. 6d. per quarter, and 100 or upwards for nothing. The number on the establishment is seldom less than 300. The boys are instructed by a master and three ushers, in Latin, Greek, Hebrew, and other branches of useful and polite learning.

Sir Thomas White, who was a member of this company, and lord mayor in 1553, anxious , 'to make stitl further provision for the youth educated at this establishment, founded St. John's College, Oxford, the scholarships of whii:Vi are regularly supplied from merchant laylors' school.

A grand public examination of the scholars is held for the purpose every year, by the president and Fellows of St. John's College.

In order to provide exhibitions for the more intelligent of the unsuccessful candidates for these scholarships, an anniversary feast was be-gun in 1698, by gentlemen who had been educated at the school, which has, with a short interruption, been continued to the present time. The collections on this occasion are often extremely liberal.

Among the pupils of this school have been three archbishops, i. e. Jiuxon, Dawes, and Gilbert : eight bishops, several judges, and a host

of piiysicians, and men of literary eminence.

PiiisoNS. The King's Bench. — Besides the four-principal prisons in the metropolis for debtors, are the King's Bench, Fleet, Whitecross Street, and iNIarshaisea (the latter of which is of a mixed character) ; there are others belonging to minor courts, and numerous lock-up houses, which are a sort of]Hirgatory through which the debtor passes to prison, unless he eitlier settles with his creditor, or agrees to remain in the custody of the sheriff, which he can only do at a ruinous expense.

The king's bench prison, Southwark, is principally appropriated to the confinement of debtors, although persons convicted of libels and misdemeanors are sometimes confined here, as was the case with lord Cochrane, who contrived, however, to scale die walls, and take his seat in the house of commons.

At what time a prison for the court of king's bench was first erected in Southwark is unknown ; but it was formerly customary for the court to be held in different places, and the prisoners to be confined in the nearest gaol. That there has been a prison on or near this spot, fcr some centuries, we learn from Stowe, who states that, in the reign of Elizabeth, several persons died there of what was called ' the sickness of the house,' which was occasioned by a large number of prisoners being confined in very small apartments.

The king's bench prison, which is surrounded by a lofty wall, contains 200 rooms, in which upwards of 600 persons have been confined at one time. Prisoners, who can give the necessary security, are permitted, during term, to go out for one day, and others may purchase the privilege, in a certain limited district, without the walls, which rules are denominated the rules of the king's bench; tliey include a space of nearly a mile square; it is not always, however, that the debtor restricts himself to these limits; for, when an application was made, some years ago, to the lord chief justice of the court, that the rules should be extended, he replied, that they were extensive enough, for that, ' to his knowledge, they reached to the West Indies. The emolument of the marshal of the king's bench prison, as appears by t)ie Report of the Parliamentary Committee in 1815, amounted to £3590 a year, of which £872 arose from the sale of beer in the prison, and £2823 from the rules.

Fleet Pimm. — Tlie earliest record we have of the Prisona de la Fleet, as it was then called, is in the year 11G9, although it is probable that it is of greater autic^uity. The Fleet was at this

period, and for some centuries after, used as a state prison. It was long the receptacle for victims of the court of star chamber, and, when that odious court was abolished, was appropriated to debtors and persons committed for contempt of the court of chancery. In the riots of 1780 the prison of Fleet was almost wholly demolished. It has since been rebudt, and protected in Fleet Market by a high wall. It consists of four stories of 180 feet each, containing 109 rooms, and is calculated, says a very recent iiistorian of London, ‘ to hold comfortably 250 jjersons.’

The most serious evil formerly attending this prison was the facility with which illicit marriages might be performed here. Complaints having reached parliament, a committee of enquiry was appointed, who, on investigating tlie subject, ascertained on evidence that, from the 19th October, 1704, to 12th February, 1705,— 2954 marriages were celebrated in this way in the Fleet, without either license or certificate of banns, besides others that were known to be omitted. Twenty or thirty couple were sometimes joined in one day, and their names concealed by private marks, if they chose to pay an extra fee. Pennant, at a later period, confirms this account of the daring manner in which the nefarious traffic was carried on. He says, in walking by tlie prison, in his youth, he has been often accosted with ‘ Sir, will you please to walk in and be married ?’ and he states that painted signs, containing a male and female hand conjoined, with the inscription, ‘ Marriages performed withui,’ were common along the building. A dirty fellow, outside, generally conducted you to tlie parson, a Bardolph looking fellow, in a tattered night-gown, who, if he could not obtain more, would marry a couple for a glass of gin or a roll of tobacco, though he has sometimes been known to marry twenty or thirty couple at from 10.S”. to £l each. This glaring abuse was only put an end to by the marriage act in 1753.

Munhuisea Friso7i. — The court of marshalsea was at first instituted for determining the causes of the king’s menial servants, and was under the control of the knight marshal of die household. It now has a jurisdiction extending twelve miles round Whitehall (the city of London excepted), for actions, debts, damages, and trespasses. The prison is appropriated to pirates and debtors ; but it is small, inconvenient, and unhealthy, on account of the crowded state it frequently is in. A benevolent debtor, a Mr. Allnutt, who was for some time a prisoner in the marshalsea, had a large estate bequeathed to him during his confinement. He had learned sympathy by his sufferings; and, feeling for others’ woes, left £100 a year for the

discharge of poor debtors from this prison, by which means, every year, many obtain their liberation. The average number of debtors in this prison is stated, in the Parliamentary Report of 1815, to be about sixty.

Whitecross Street Prison. — When so much humanity has of late years been manifested by the legislature, in mitigating the severity of the laws against debtors, it is much to be regretted that the last prison erected for their confinement should unfortunately be of a very opposite description. The committee of the house of

commons appointed in 1815, to enquire into the state of the prisons of the metropolis, say ‘ liiey have much to regret, that those who iiave had the management of this building should have suffered a prison to be undertaken upon a plan so little likely to answer its object.’ Whitecross Street is calculated to hold 400 prisoners, who are separated into different wards, accordingly as they are city or county prisoners.

Neuigate. — So early as the year 1218 Newgate (so called from its being later built than the rest) was used as a prison, and continued as such until finally removed in 1777; but, although the gate was frequently rebuilt, yet there seems to have been no attempt at improving the apartments ; and, so late as the year 1750, a pestilential disorder, called the gaol fever, broke out among the prisoners, owing to so great a number being confined in so small a space ; the infection extended from the gaol to the sessions house, when Sir Samuel Pennant, lord raayor, alderman Sir Daniel Lambert, the chief justice of the court of common pleas, Sir Thomas Abney, Mr. Baron Clerk, Mr. Cox, under sheriff, several barristers, and nearly the whole of the jury, and several spectators, fell victims to this pestilential disease. Notwithstanding this melancholy event, twenty years elapsed before the first stone of a new prison was laid by alderman Beckford ; and scarcely was the building finished, when the whole of the interior was demolished, during the disgraceful riots of 1780. To repair the damage that was done in a few days by those * lords of misrule,’ a

London mob, £30,000 was necessary, which was chiefly supplied by parliament.

Newgate is now a massy and somewhat su-perb building, and perhaps the exterior appearance of no structure ever better corresponded with the purpose for which it is intended ; there is a sort of gloomy grandeur and terror-striking uniformity in its outer walls, which would at once point it out as the abode of crime or misery. The interior of the prison is equally suitable to its objects ; the cells for condemned maleflictors are dark as the grave itself; and such is their impression, even on the most hardened, that Mr. Howard says, ‘ I was told by those who attended me, that criminals who had affected an air of boldness during their trial, and appeared quite unconcerned at the])ronouncing sentence upon them, were struck with horror, and shed tears when brought to these darksome solitary abodes.’ Since the debtors have been removed to the new prison, in Whitccross Street, there is a better opportunity of classifying the prisoners; but they are still too numerous to enable the keeper to do this effectually : the average number of prisoners in Newgate is 420.

Adjoining the prison is the Scasions House, wliere there is a gaol delivery eight times a year, and yet the prisoners are so numerous that each session generally continues a fortnight or three weeks.

Giltspur-Street Compter, Newgate, was built according to a plan suggested by the benevolent Howard. It is confined solely to the city of London, and is a prison for offenders before trial, and a house of correction for such as have

been convicted and sentenced to various terms of imprisonment, of from one month to two years. It is also used for persons committed for assaults, night charges, disorderly persons, vagrants, and prisoners remanded for future examination ; and numerous indeed are tiie persons who run the gauntlet of at least one night’s lodging in Giltspur Street Compter ; as it appears by the evidence of Mr. Teague, the keeper, that from the 1st of January, to the 31st of December, 1818, inclusive, 4581 persons were committed to this prison, of whom 1 1 76 were for felonies, 637 for assaults, 1721 for misdemeanors, and 1407 as vagabonds.

Cold Bath Tictds. — This prison, which is called the house of correction for the county of Middlesex, was, like Giltspur compter, built on the suggestions of Mr. Howard, though it is to be doubted,

whether his benevolent objects have been realized.

It contains nearly 300 sleeping cells, and even these are sometimes found insufficient ; so that barracks of wood, in each of which from fifteen to thirty persons sleep, are erected in the yard. In the year 1818, 3902 persons were committed to this prison, of whom 748 were females : and the average number of prisoners is about 400. The prison is almost entirely used as a house of correction ; the prisoners were employed in picking old rope for oakum, until the year 1823, when a tread-mill capable of working 320 individuals was introduced. The annual expense of maintaining this prison is about £7000.

Clerkemvell Prison. — Bridewell was anciently not only the prison for the city, but for Middlesex also, and all offenders were sent there by the justices ; but, says an old historian, 'These mis-creants so increased that Bridewell could not contain them, nor employ them, neither were the governors willing to receive them.' It was therefore, in the year 1615, found necessary to build a new prison, and Clerkenwell was fixed upon as the spot. The building which, together with the ground, cost £2500 was defrayed by the justices and the inhabitants. The governors of Bridewell gave £500, which was principally expended in furnishing the prison. Previous to the erecting this prison there had been a sort of large watch-house called the cage, which was taken down in 1614.

The present Clerkenwell prison, which is nearly on the site of the old one, is a sort of auxiliary to Newgate, and includes prisoners waiting the Old Bailey sessions, who are always removed to Newgate on the Thursday previous to their commencement — others for petty larcenies who are detained for the Middlesex sessions, and]irisoners committed for re-examination. The prison is capable of holding 350 prisoners, and, in the year 1818, 4012 persons were committed to the new prison Clerkenwell.

Tolhill-fields Bridcuxll.—V pwards of 3000 persons are annually committed to this prison, and the average number of inmates is about 100, who for a day room have only one apartment, which measures no more than twelve feet by twelve and a half. This prison is wrotchodly deficient in size and means of classification, and tlie place where it stands is unhcaltli} .

Tlie Borough Compter is equally defective ia point of classification, as prisoners of all ages, and of every grade in crime, are compelled to herd together.

The Surrey Coimty gaol, in Horsemonger Lane, was built in 1781, and is appropriated to the confinement of debtors as well as felons. Adjoining to the prison is the sessions house, where all misdemeanors are tried, and the assizes for the county are sometimes held. On the top of tliis prison colonel Despard and his associates were executed in 1803.

The Club Houses belong to the west end of the-tov.-u : we can only here find room for a brief notice of one or two of our older London taverns. No prince, or even knight, is now found to indulge in open revels, as prince Ilal and Falstafi', and all 'the merry men of Eastcheap,' did at the Boar's Head ; nor would our Raleighs, our Shakspeares, our Ben Jonsons, Beaumonts, Fletchers, or SeLlens (had we any such) pass their evenings in taverns in Aldersgate Street, Fleet Street, or Cornhill, as the worthies we have just named, were in the habit of doing. Yet while it is remembered that Shakspeare, Ben Jonson, Beaumont, and others of their contemporaries used to assemble at the Mermaid tavern, Cornhill, and that under Sir Walter Raleigh an intellectual and convivial society of the spirits of the age was formed, called the Mermaid club, which, says Mr. Gifford, ' combined more talent and genius, perhaps, than ever met together, be-fore or since, an interest will be attached to these spots.' Beaumont in a poetic epistle, from the country to Jonson, has described the 'r.it combats,' as Fuller calls them, which in those days took place at the Mermaid tivern.

Ben Jonson was a great frequenter also of the Devil Tavern, by Temple Bar (now occupied by Child's Place), and the Swan Tavern, near Charing Cross. ' Rare Ben' appears to have owed much of his inspiration to sack and canary : in a MS. preserved at Du'wich, and said to be his journal, he ascribes the failure of some of his pieces to the death of the ' honest Ralph,' when lie appears to have left the house ; for, says he, ' I and my boys drink bad wine at the Devil.' This, however, was not always the case ; for in another memorandum he says, 'The first speech in my Catiline, spoken to Sylla's ghost, was writ

after I had parted witii my friends at the Devil Tavern ; I had drank well that night, and had brave notions.'

At a later period we find the men of genius mixing together at a tavern, many allusions to which are made in the Spectator, the Tatler, and other essays of the early part of the last century. Sir Richard Steele was fond of a tavern, and however ridiculous his uxoriousness may, and must appear, yet we have always thought a passage of one of his letters to his wife, written from a tavern, particularly expressive, when he assures her that he will be with her, not in half or a quarter of an hour, but ' within half a bottle of wine.'

The Kit Cat Club, ' the patriots who saved Britain,' as Horace Walpole designates them, originally met at the house of a pastry cook, in Shire Lane; yet they soon enabled Christopher

Cat, their liost, to accommodate them better at the Fountain in the Strand, where their principal meetings were held.

A more ancient tavern, however, than any of these, was the Tabard, in the Borough (now the Talbot) t!ie place whence Chaucer's pilgrims set out.

The taverns of the present day can scarcely boast of any literary associations ; and although professor Porson frequented a house in the neighbourhood of Coveiit Garden, which now displays his portrait, it was rather to indulge his unfortunate propensities unrestrained than to seek society.

T/ie first T/ieatres. — When dramatic representations ceased to be founded on religious subjects, they were no longer performed in churches, as was the case sometimes with the mysteries and moralities, and playhouses be-came necessary. The convenient form of the inns (still preserved in many of them) in London, with an o])en area in the centre, and a gallery on each side of the quadrangle, presented itself as a theatre ready made, with the exception of the stage : this was easily raised, either in the centre or on one side of the court, and thus many of our early dramatic pieces were performed. Even the first theatres were but a very slight improvement, for the aiea or pit was generally exposed to the air.

The first company of players that received the sanction of a patent was that of James Burbidge and others, the servants of the earl of Leicester, to whom queen Elizabeth granted a patent in

1574.

It appears from Stowe tliat the first players were ‘ ingenious tradesmen and gentlemen’s servants,’ who united in a company of themselves ‘ to learn interludes, to expose vice, or to represent the noble actions of our ancestors ;’ but that in process of time it became an occupation, when the players j)ublicly ‘ uttered popular and seditious matters, and shameful speeches ; and, these plays being commonly acted on Sundays and festivals, the cliurches were forsaken, and the playhouses thronged.’

When the first I>ondon theatre was built, or where it was actually situated, seems doubtful ; but, early in the reign of Elizabeth, the Curtain, the Red Bull, and the Globe theatres, were all flourishing. Pennant was so anxious to identify Shakspeare witli the Globe Theatre, that in a map he has given, purporting to be a plan of London and Westminster in the year 1563, he has introduced the singular anachronism of ‘Shakspeare’s playhouse,’ although the immortal bard was not born until the following year, — nor the Globe Theatre built on the site of an amphitheatre for bear-baiting in Bankside, Southwark, until tiie year 1596, 1598. The Globe was burnt down on St. Peter’s day, the 29th of June 1613. The fire originated, according to Win-wood, with the mimic discharges in Shakspeare’s play of Henry VUL, when the rushes of the roof caught fire; and he adds, that the attention of the audience was so much engaged with the actors, that they did not notice it.

Near the Globe in Southwark, which seems to have been the first refuge of the regular drama.

were tlie Swan and the Rose, two very early theatres, and they appear to have been very attractive, if the assertion of Taylor, the water poet, can he relied on, that ‘ about the year 1596, the players began to play on the Bankside, and leave playing in London and Middlesex for the

most part.' There were also either then, or soon after, six other theatres on the ˆMiddlesex side of the Thames.

If the Globe was rendered memorable by Shakspeare's connexion with it, the Curtain Theatre near Shored, tch, the name of which is preserved in the Curtain Road, had a similar distinction, by its being the place where ' rare Ben Jonson ' acted, before he obtained celebrity as an author; yet the Curtain Theatre never appears to have flourished, although it had as an actor, Dick Tarlton, one of the best comedians of the time of Elizabeth. We can only further name the Red Bull in Clerkenwell, the Fortune, Barbican, the Blackfriars and the Whitefriars, as early play houses.

The first theatre in Drury Lane was a cock-pit, which, hoisting a phcjenix for a sign, was sometimes called by that name ; it was not, however, until after the restoration of Charles II. that a house suitable for the accommodation of the public was erected. It soon shared the too common fate of the London theatres, and was burnt down in 1671 ; and three years afterwards it was rebuilt under the direction of that great architect. Sir Christopher Wren. This fabric, which was of considerable dimensions, and excellent in its internal arrangements, remained undisturbed until the year 1791, when it was determined to take it down and rebuild it on a scale better adapted to the increased population, and more refined taste of the age. In building the new theatre, in 1793, the architecture fell into an opposite extreme ; the house was so enlarged in its dimensions as to be a theatre for spectators rather than hearers ; and as the audience lost all those advantages which a convenient distance from the speaker gave in seeing the expression of his countenance, and hearing the varied modulations of his voice, the love of spectacle, which had already manifested itself, began to predominate.

As so many theatres had been destroyed by fire, it was determined to take every precaution against such a calamity in future. An iron curtain, which resisted the force of a sledge hammer, was constructed so as to let down in a moment of danger, and separate the audience from the st;ige, while a reservoir was formed on the top of tlie house, filled with water sufficient, as the epilogue spoken at the opetiing of the theatre, by IMiss Farren, gave assurance, to * drown the audience in a minute.' On the first night the iron curtain was let down, and the stage was filled with water, on which a man rowed round with a boat ; the managers bosisted of their reservoirs,

A firm reliance, Whose streams set conflagration at defiance.

But these were ‘ luckless words,’ a ‘ bootless boast;’ for, fifteen years afterwards, the whole fabric was burnt to the ground. This calamity

occurred on the 24th of February, 1809, and so rapid were the flames, that, although the fire did not break out until 11 o’clock at night, the immense edifice was reduced to a pile of ruins in less than three hours.

So various and so conflicting were the interests in the property of the theatre, that it was long before they could be reconciled ; at length it was determined to rebuild it on a somewhat diminished, but more magnificent scale, and Mr. B. Wyatt was appointed architect for the purpose. From his plan, and under his direction, the present edifice was raised, and opened to the public on the 10th of October, 1812.

The rebuilding the interior of the theatre cost upwards of £14,000, and was executed in the short period of two months. It is due to the proprietors to state, that every alteration, while it adds something to the comfort of the audience, renders the ornamental decorations more chaste and elegant, and it is difficult to conceive a more beautiful structure in its interior than Drury Lane Theatre. The grand entrance, in Brydges Street, is through a spacious hall into a rotunda of great beauty ; two noble staircases lead to the boxes, and to a saloon eighty-six feet in length, the walls of which are nearly covered with looking-glasses : the lobbies are spacious, and the house, which is lighted with gas, is well aired and ventilated. The exterior of the theatre is plain, but by no means inelegant. To the front, which is of the Doric order, a portico, surmounted by a statue of Shakspeare, was added in 1820, which is infinitely beneath the dignity of so noble a structure. Both the theatres of Drury Lane and Covent Garden enjoy the privilege of a royal patent, which authorises them to act dramas of every description, from tragedy, comedy, farce, operas, ballots, or spectacles of every class, provided they have previously been submitted to, and authorised by, the lord chamberlain.

In its general management, in the character of the performance, and in the periods at which the house is opened and closed every season, Covent Garden Theatre resem.bles that of Drury Lane ; and while there is an honorable rivalry in the elegance of their respective structures, in the spirit with which new pieces are produced, or new actors of eminence are obtained, the proprietors are mutually accommodating to each other.

Covent Garden Theatre possesses a patent, originally granted to Sir William Davenant, and under which successive companies acted at the theatres in DorsetStreet and Lincoln's Inn Fields ; nor was it until 1733 that a theatre was built in Bow Street, Covent Garden, when Wr. Hicli, who had formerly had the direction of Drury Lane Theatre, and afterwards that of Lincoln's Inn fields, removed to the new theatre, over which he presided until the year 1761, having been for fifty years the manager of a company under the patent granted by Charles II. In 1767 Mr. Harris, a young man w!io had not attained his twenty-first year, became a principal])roprietor of this theatre, a considerable share of which remains in his family. Various improvements were made in the interior of this

theatre, and m 1792 Mr. Harris expended £25,000 upon it, when tlie prices of admission were raised. For some years Drnry Lane liad an advantage over Covent Garden, in possessing the talents of Mrs. Siddons, and her brother John Philip Kemble, who did so much to rescue the stage from the ridiculous and barbarous costume whicli had hitherto disgraced it ; but in the year 1800 this company gained a great accession of strength in the person of George Frederick Cooke, whose debut on a humbler stage has already been noticed, and whose talents and dissipation made him so long an object of public admiration and regret.

On the 2d of September, 1808, this theatre, with all that it contained, was completely burnt to the ground,— and so rapid were the flames, that they threatened destruction to the whole neighbourhood, several houses caught fire, and were reduced to ruins, and the walls of the theatre falling twenty persons were killed. No time was lost in rebuilding this theatre, the first stone of which was laid on the 31st of December, 1808, by his present majesty, then prince of Wales. In ten months this immense edifice was finished, and opened to the public on the 18th of September, 1809, when a new danger threatened the proprietors, who, having built the theatre at an expense of £150,000, sought an indemnity, by raising the price of admission. This was

warmly resisted by the public ; and for more than a month the theatre was a scene of continued riot and confusion, which is known by the name of the ‘ O. P. (old prices) war.’ At length a compromise was effected ; but the injury done to the theatre, and the loss sustained from other causes, was long felt by the proprietors. This theatre, like that of Drury Lane, is continually receiving some new alteration or improvement in Its interior, which is at once elegant and convenient.

King’s Theatre, Bay market.— The opera had become so popular early in the last century, that a theatre was built for it in the Haymarket by Sir John Vanburgh, the architect. It was raised by thirty persons of rank, principally of the whig party, if we may judge by their inscribing the first stone with the words ‘ Little Whig,’ in compliment to lady Sunderland, a celebrated beauty of the day. The money subscribed was £l00 each, and the theatre opened on the 9th of April, 1 705, with an Italian opera, which was far from being successful ; it, however, continued under various managers, and witli doubtful success, until the year 1720, when a sum of £50,000 was raised by subscription to support the Italian opera, which has ever since ranked as one of the favorite amusements of the fashionable world.

Tlie Opera House was burnt down on the 17th of June, 1789; and on the 3d of April, in the followmg year, the first stone of the present structure was laid, by the earl of Uuckingham-shire, with numerous inscriptions, one of which, ‘ Praevalebit justitia,’ is excessively common place, and more applicable to a court of law, than a theatre erected for singers and dancers. Although the interior of the ‘ king’s theatre,’, as it was now called. 1, woll ronstructed, yet in its external ap-

pearance it was one of the most gloomy and clumsy buildings of the metropolis, until, in the recent improvements in this part of the town, a fine colonnade was added to the fronts in Pall Mall and the Haymarket, and the whole exterior remodelled, covered with stucco, and embellished with a relievo, by Mr. Budd.

The interior of the king’s theatre is magnificent and extensive. It contains 172 boxes, of which sixty-eight are said to be private property. *^

The little theatre in the Haymarket, as this house was called, to distinguisli it from the opera-house, has long possessed an uninterrupted and extensive share of public favor. This theatre owes

its rise to a speculating mechanic of the name of Potter; it was first raised in 1720, without any specific object beyond that of leasing it to the French players, as the foreign plav-ers and singers were then called, be their°country what it miglit. It was opened on the 29th of December in that year. Foote had the old theatre taken down, and a new one built ; but whether this was an improvement or not may be fairly doubted, as a more disagreeable or inconvenient structure can scarcely be conceived than the late theatre, opened in May, 1767. In nothing was the house more disadvantageously constructed than in the entrances, which were extremely narrow ; a melancholy proof of this occurred on the 3d of February, 1794, when, his majesty having bespoken the play, the rush to the pit on the opening of the doors was so great, that fifteen persons were killed, and more than' twenty others dreadfully injured. It has been severally under the management of Foote, the two Colmans, and Thomas Dibdin, all gentlemen of such talents, and so intimately acquainted with the detail of a theatre, as to ensure its success.

In 1821 the old theatre was taken down, and a neat, as well as a more commodious buildinp-was erected, from designs by Mr. Nash. In the front is a portico, supported by six columns: above the portico are nine circular columns, which are ornamented and connected with the entablature. The interior of the theatre, though it is not very conveniently arranged for comfort, is creditable to the artist, particularly the boxes' which are capable of little improvement.

English Opera House. — ˆThe Lyceum, or, as it has since been called, the English opera house, in the Strand, was opened in June, 1809. It did not at first meet with the patronage to which so laudable an attempt was entitled, and the plan has since been extended so as to include farcical burlettas and serious melo-dramas, as well as operas.

The lyceum was rebuilt a few years ago under the directions of Mr. Reazely, an architect whose talents in this line have been successfully exercised on several occasions in London, as well as in Dublin. A neat portico has recently been erected in the front.

It has of late years been rendered particularly attractive by the comic talents of Mr. INIatthews. The Snney Theatre, in Blackfriars' Road, formerly called the lloyal Circus, was built about the year 1779 for burlettas and equestrian exercises.

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and was for some time under the direction of the British Tyrtaeus, Charles Dibdm. In 1805 it was burnt down, but was immediately rebuilt. It has recently been remodelled in the interior, and is one of the largest and most elegant of the minor theatres.

Astlei/‘s Royal Amphitheatre, Westminster Bridge (for it will not easily lose its name, although Astley is no more, and he is succeeded by Mr. Davis), was first opened about the year 1767 as a riding-school by Mr. Peter Astley, who had served in the army, and was a remarkably good horseman. The skill he disy)layed in managinp; the noblest of all quadrupeds attracted public attention, and Mr. Astley thought he might turn it to advantage by receiving money as an exhibition. An information was soon lodged against him, when, fortunately for him, his late majesty was riding over Westminster Bridge on a spirited horse, which proved restive and unmanageable even by the king, who was an excellent horseman. jNIr. Astley happened to see him come up, and soon convinced liis majesty of his skill in the managing of horses ; the result was, that Mr. Astley got rid of the information, and in a few days obtained a license. The amphitheatre is now principally celebrated for its equestrian spectacles and gymnastic exercises.

The Cobourg Theatre, in Waterloo Bridge Road, which indicates its recent origin by its name, is an elegant little theatre, and was built in 1817. It is more remarkable for the beauty of the scenery than the merits of the dramas produced, or the talents of the actors.

Sadler’s]VellH Theatre was long celebrated for its Naumachia, which it exhibited by means of having a large current of water to flow under the stage. The real water, so long its greatest attraction, is now very seldom resorted to ; and melo-dramas, burlettas, and pantomimes, are the favorite performances : in the latter description of pieces, Sadler’s Wells theatre had, for many years, the benefit of Grimaldi’s talents as clown. A dreadful occurrence took place at this theatre on the 15th of October, 1807, when some per-son, from mere wantonness, it is supposed, called out ‘ a figlit,’ whicli was mistaken for tlie word * fire.’ In vain did the manager come forward to assure the audience of the mistake, — they ruslied from the gallery with dread impetuosity; and many, finding the avenues blocked up, leaped into the pit ; in

consequence of which, eighteen persons were killed, and several others wounded. The managers granted free benefits to tlie relatives of the deceased.

The Adelphi Theatre, formerly the Sans Pareil, in the Strand, and the Olympic Theatre, in Wych Street, erected by Mr. Astley in 1800, are small, but neat theatres, where burlettas and pantomimes are performed; and such arc c;enerally the amusements of the Wed London Theatre, in Tottenham Street, Tottenham Court Road, allhouwh it has occasionally been used for I'rench subscrijHion plays.

The]ioi/alli/,oT FmsI hondon Theatre, in Well Street, Wellclose Square, presented many amusing scenes during the war, of real, and not of inimic life, on account of the company by wliich it was frequented being principally sailors,

whose eccentricity could not be restramed by the decorum of a theatre. This theatre was built in 1787, with a view of performing ihe regular drama, which it was supposed the magistrates of the Tower Hamlets, in whose precincts it was, could authorise. Mr. John Palmer tried the experiment, which was only permitted one night. The performances were then confined to pantomimes and pantomimic burlettas, and that very rigidly. It was burnt down in the course of last year, and is now rebuilding.

Royal Academy of Music. — Numerous as the literary and scientific institutions in the metropolis are, and highly conducive as they have been in promoting the objects for which they were established, one was yet wanting devoted exclusively to music. Such an institution has recently been formed under the immediate patronage of his majesty ; and, though yet in its infancy, it promises to rank with the most flourishing institutions in the country. The object of the institution, which was founded in 1822, is ' to promote the cultivation of the science of music, and afford facilities for attaining perfection in it, by assisting in the general instruction of the natives of this country, and thus enabling those who pursue this delightful branch of the fine arts to enter into competition with, and rival the natives of other countries, and to provide for themselves the means of an honorable and comfortable livelihood.'

In order to attaio these objects, a number of pupils, male and female, proportioned to the funds of the institution, are admitted, between the ages of ten and fifteen, and instructed by the best masters. The

students pass an examination to ascertain if they possess a decided aptitude or disposition for music, before they can be admitted as candidates, and the election takes place by ballot ; the subscribers voting according to the amount of their contributions. Each student, on being admitted, pays fifteen guineas to the funds, and ten guineas annually ; but the fees of the children of professors of music are somewhat modified.

The noble mansion lately occupied by the earl of Carnarvon, in Tenterden Street, Hanover Square, has been fitted up for the purposes of the Academy. The rooms are of large dimensions, two of them being upwards of seventy feet each in length, and the other apartments aflTord every convenience. The professors, selected to superintend this establishment, are gentlemen of acknowledged talent.

Concerts. — So great is the love of music among the British nobility, or so liberal is their patronage of its professors, that the mansions of several noblemen are not only thrown open to their friends, vviiom they entertain with a concert, but they permit eminent musicians to take a benefit at their houses, which they cause to be fitted up for the])urpose — a compliment not])aid to any other class of individuals.

Independent of these concerts, and of those given by subscription at taverns and public rooms, there are several buildings in London devoted almost exclusively to musical entertainments ; and numerous associations formed to jiromotc the science. The Argyle Rooms, iii

lleo’ent Street, which were rebuilt in a splendid juanner in 1818, were first appropriated to pub-lic entertainments by colonel Gre'ille. They now consist of a grand concert-room, fitted up with an orchestra at one extremity, and boxes at tlie other, a ball-room of large dimensions, a tJravving-room, and ante-room, and other apartments. These rooms are let for balls, concerts, and masquerades; and here the Royal Harmonic Institution, which is as much of a trading as a scientific association, is established. This society, wliich is managed by musical professors, gives lectures, publishes musical works, and

purchases and disposes of harps, piano fortes, and other musical instruments. The Pliilharmonic Socicfi/wdS established in 1813. Other minor, but meritorious musical societies, we have not room to particularise.

Fltiu.ic Gardens. — Vauxhall is the only one of tliose once popular places that retains its original character, ilie others having either entirely disappeared, and their sites been occupied with buildings, or they have sunk into common tea-gardens, where the humbler classes of society relax on a Sunday eveni.g in summer, and in- <]uhe t'p.emselves witli a ˆlass of ' home-brewed ale,' or their wives and families with a cup of tea.

The most celebrated of the modern public gardens was Ranelagh, near Chelsea, once the seat of a nobleman of that name. On his death, in 1733, the estate was sol J, and fell into the hands of some speculative gentlemen, who determined on forming it into a place of public amusement, similar to Vauxhall, which had just risen into popularity. In the fitting up the gardens, a magnificent rotunda was erected, 150 feet in diameter, in which was an orchestra, with numerous boxes and seats for the audience. The entertainments principally consisted of vocal and instrumental music. The rotunda was opened with a public breakfast in April 1742, which was followed by a concert. The inhabitants of London "".rs, however, too much occupied to assemble in sufficient numbers for entertainments in the day, and the morning concerts at Ranelagh were soon relinquished for evening amusements. For some years the tide of fasliion set strong in favor of Ranelagh, which was one of tlie most attractive resorts of the gay world; but afterwards, ceasing to be popular, the proprietors, in 1803, rased the building to the ground and sold the materials. The price of admission was half-a-crown.

M(iri/-la-Honnc Gerdenx occupied the site of Manchesttp Square ; they were not formed into a place of regular amusement until the year 1737, when Mr. Gough the proprietor, who had before kejjt them gratuitously open, charged a shilling to each person, who in return received a ticket, which enabled him to have victuals or liquor to the full amount of the money paid on entering the gardens. Charles Dibdin and Charles Bannis-ter made their debut, when youths, in Mary-la- Bonne Gardens, where very splendid fˆtes were frequently given, particularly on the birth-day cf his late majesty. Fire-works, and a representation of Mount A'tna, were among the amusc-ment.s. A sort of fair was once held in the gar-

dens, which were on that occasion fitted up with numerous shops and booths.

hlirigfon was long celebrated for its public gardens; for, in addition to Wiiite Conduit House, and Bagnigge Wells, now mere tea-gar- dens, there were t!ie New Tunbridge Wells, or Islington Spa, and Sadler'sW ells, which have been erroneously confounded as the same by most of the London local historians. The Islington Spa, a spring of chalybeate water, now in a small garden in Lloyd's Row, near the New River Ilead, was discovered about the year 1690, and was opened to the poor gratis, provided they did not go out of mere curiosity, but with a certificate from a surgeon or an apothecary. A few years afterwards, as we learn by an advertisement of tlie year 1700, there was ' music for dancing all day long every Monday and Thursday during the summer season,' but, with a due regard to public morals, no masks were admitted. In 1733 the Islington Spa rose to the very height of popularity. Their royal highnesses the princesses Amelia and Caroline, having been recommended the use of chalybeate waters, repaired to Islington daily during the season of that year. Their example was soon followed by the nobility and gentry to such an extent, that the proprietor frequently took £;'0 in a single morning.

W/iite Conduit House, where the humbler class of the inhabitants hie, merry-hearted, on a Sunday, is one of the most celebrated of all the tea-gardens in the neighbourhood of London, numerous as they are. The house takes its name from an old stone conduit, erected in the year 1641, which supplied the charter-house with water through a leaden pipe. The garden of White Conduit House is very spacious, and a neighbouring field was formerly attached to it as a cricket-ground, where a club of noblemen and gentlemen assembled to practise that game. This house was some years ago occupied by a Mr. Christopher Bartholomew, a gentleman whose unconquerable passion for gaming in the lottery reduced him to beggary, notwithstanding he was at one time worth £50,000, and had several lucky hits, one of which he celebrated by a f^te champetre in these gardens, * to commemorate the smiles of fortune,' as the tickets of admission expressed it ; it was, however, no wonder that he was ruined, as he sometimes spent 2000 guineas a day in insurance in the lottery, selling his stacks of hay or any diing to raise the money. The last thirteen years of his life were passed in great poverty, yet still his passion never forsook him ; and wlien towards the close of his life he got about £600 by a new adventure in the lottery, and had purchased an annuity with the money, he sold it again to indulge in his fatal propensity.

There are several other tea-gardens much frequented on Sundays, but

they appear rapi< <ly declining in jiopular.ty ; and Bagnigge Wells, once the residence of the celebrated favorite of Charles II., Nell Gwynne, is by no means respectably attended.

On the Surrey side of the Thames was formerly the Bermondsey Spa, in Grange Road Bermoudsey. The spring, which was chalybeate, was discovered in 1770; but, some years previous

to this time, Mr. Thomas ˆKeyse, the proprietor of the gardens, a self-taught artist, rendered them attractive by exhibiting a collection of his own paintmgs, principally subjects of still life, which possessed considerable merit. Keyse afterwards obtained a license for opening his gardens with musical entertainments during the summer sea-son. Burlettas were also sometimes performed on small temporary stages, erected in the gar-den. Fire-works were occasionally introduced ; and one season Mr. Keyse constructed an immense model, which covered four acres of ground, of Gibraltar, in order to represent the memorable siese of that place in 1782. The height of the rock, was upwards of fifty feet, and the exhibition was as popular as it was creditable to tlie mechanical ingenuity of Mr. Keyse, but his talents were almost thrown away from the unfavorable situation in which they were exerted.

Independent of the public gardens in the immediate environs of the metropolis, attempts have been made to introduce them at some distance from town ; and in the year 1742 Ruckholt House, Layton, Essex, which is said to have been once the mansion of queen Elizabeth, was opened by Mr. Carton, the proprietor, with pub-lic breakfasts, weekly concerts, and occasional orations, but the dist;mce from town was unfavorable, and tlie entertainments vv’ere not continued more than four years.

Several of the taverns near London have larre gardens, which are much frequented in the sum-mer season, although they possess no attractions beyond the sale of refreshments.

ˆModern improvements. — If during a war, un-exampled in Its

duration, and in the expense at which it was sustained, the British metropolis continued not merely to add bouse to house, but street to street, and to increase in magnificence, it was to be expected that, ‘ the piping time of peace’ would give a new impulse to improvement. Such, indeed, is the case ; and with the exception of the west end of the town, where Hyde Park seems to say, ‘ hitherto shalt thou go, and no farther,’ we see London stretching out its Bria-rean arms in every direction, swallowing up every villa in its environs, and making them a part of tiie great capital. Islington has long been connected with London, which still, unsatiated, stretches northward. Somers’ Town has no other division from the rest of the metropolis than a mad, and Kentish Town, and Camden Town, will soon be closely connected with it. Hackney can scarcely be Called a distinct village ; and eastward we find a chain of buildings erecting, which will soon unite the adjacent villas with ‘ enlarged and still increasing London ;’ if we turn to the soutii we shall find the buildings increasing so rapidly, that Greenwich road will soon become one continued street.

Nor is it in the environs of London only that the spirit of improvement has gone forlli, since it pervades almost every])art of the metropolis. Within a few [years Moorfields has been changed from a barren field to a neat circus ; the Hank has been enlarged ; the only private house remaining, built by Sir Christopher Wren, formerly the civic palace, restored in a style appropriate to its original grandeur, and numerous

other improvements in hand, and in contemplation. At the west end of the metropolis, the change is still more manifest. Charing Cross the only memorial of the aff’ection of Edward I. for his beloved Eleanor, reinuining in London, still retains its form, as does the equestrian statue of Charles I., cast by Le Soeur, but the alterations in the immediate neighbourhood are immense. NVhere the royal stables formerly stood (the Mews) splendid buildings are arising, and the church of St. INIartin’s in the fields will no longer remain like a candle hid under a bushel. Scotland Yard (so called from the kings of Scotland having a palace there, when they visited London) is nov,’ occupied by a fine street stretching towards tlie river, and the cathedral of St. Paul’s can now be viewed from the admiralty.

Regent Street, which extends from Carlton House to Portland Place, though of varied architecture, some of which is not in good taste, is still a noble street, and leads to one of the greatest ornaments of tlie metropolis, the Regent’s Park, around which noble terraces are springing up, as if by magic. This park, which is very spacious, is

beautifully laid out; the grounds exhibiting a charming variety of lawns, lakes, shrubbe-ries, &c. Sucli are a few of the improvements which have taken place under the auspices of George IV. ; and if it cannot be said, of his majesty, as of the Roman emperor, that he found a city of brick, and left one of marble, it cannot be denied that, while he has sustained the national honor abroad, he has done more to patron-ize literature, to advance the fine arts, and to improve the metropolis, than any sovereign that ever wielded the Bristish sceptre ; and should providence spare his majesty to complete his designs, and preserve the peace of Europe, we may anticipate that England will continue to be the first country, and London the first city, in the world : and in the last words of Paolo Sarpi, in speaking of his native Venice, we shall say of London, Esto perpetua !

PART IV. GOVERNMENT OF TIIE CITY OF LONDON.

The olfice of lord mayor, as we have seen, was first recognised about the commencement of the thirteenth century.

According to the charter of king John the right of electing the mayor was vested in the citizens at large. After the common council was established, they appear for a time to have usurped tiie place of the general body of freemen ; but, returning to a jusler sense of the rights of their constituents, they passed,- in 1475, a declaratory act of council, by which the election to the oflice was declared to belong to the mayor, aldermen, and common council, and the masters, wardens, and liverymen of the city companies, or, in other words, to the citizens at large, according to the fair acceptation of the terms, and thus it lias ever since continued.

This right of election was accompanied with the discretionary power of continuing the same individual in office from year to year; the first lord mayor, Henry Fitz Alwyn, continued in oflice twenty-three years. The qualifications for

i\e office of lord mayor are, that tlie nominee sliall be free of one of

the twelve principal city companies ; have served the office of slieriff (whence the saying, that such an one will be mayor before he is slicriff, meaning deridingly ihat he is not fit to be either) ; and be at the time of election an alderman of one of the wards of tlie city.

The election takes place on Michaelmas day, at a court of hustings held in the Guildhall, under the presidency of the sheriffs. All tlie aldermen who have not passed the chair, but iiave served the office of sheriff, are proposed successively in the order of their seniority, and the livery testify, l)y a show of hands, the degree of favor in wlucii each is held. The sheriffs make a return to the court of aldermen, of the two members of their body, who have united the greatest number of suffrages; and it remains with tluit court to determine on which of the two the election has fallen. The candidates are not, however, absolutely bound by the show of hands, for it is open to any of them or their friends to demand a poll ; a privilege which has, of late years, been frequently exercised.

The lord mayor, though elected by the citizens, must be approved by the king, or as has been invariably the case since Henry III., in the 7th of his charters to the city, permitted the altern— tive, by the lord chancellor on his majesty's be-Ivalf. Although the crown, however, does possess this veto, there is no instance of its having exercised it since the revolution.

The royal approbation having been obtained, the mayor elect, on tlie 8th of November, takes the oath of faithful administration, in presence of the citizens assembled in the Guildhall ; and next day he is finally installed into office, by the barons of exchequer at Westminster.

The titles of right honorable, and lord, are generally believed to have been first given to the mayor of London by Edward III. in the last year of his reign, when a general subsidy was levied, in which individuals were assessed according to their rank and condition in life. The chief magistrate of London was, on this occasion, styled the Right Honorable the Lord Mayor.

The prerogatives of this office are of great extent and importance. As the sovereign's immediate representative, the lord mayor takes yirecedence of every other subject within the limits of the city. At a grand entertainment given about 1463, by the sergeants at law, at Ely House, Holborn, the lord treasurer, baron lluthven, refusing to yield the most honorable place at table to the lord mayor, his lordship instantly withdrew, followed by the aldermen, sheriffs, and all the other citizens present on the occasion.

The monarch is, in England, but the first magistrate of a free people, elected by the people ; and on his demise the lord mayor of London, as the greatest functionary next to the king, whoso power is derived from the same source — as the acknowledged representiitive of a larger portion of tlie national will than any other officer of the stale — takes the first place in the privy council, until the new sovereign is proclaimed, and, at liii coronation, acts as chief butler.

As civil governor of the city, the lord mayor is the supreme head, without whose concurrence no act of the corporation is valid. lie is, moreover, within the limits of the city and liberties, perpetual coroner and escheator, and chief justice in all commissions for trial of felony and gaol delivery. He is also judge of all courts of wardmote for the election of aldermen; conservator of the river Thames and INIedway ; and perpetual commissioner in all affairs relating to the river Lea. In the military government of the city, his lordship is first commissioner of the lieutenancy, which is invested with similar powers to those possessed by the lord lieutenants of counties.

The costume of the lord mayor is of a splendor becoming one filling so many higli and dignified functions. His constant badge of office is a double chain of gold, or rich collar of SS. with a costly jewel appendant. On state occasions he is habited in a knotted gown, like that of the lord chancellor, or in one of crimson velvet. His more usual vesture is, in winter, a cloth scarlet gown witli velvet hood ; and, in summer, one of mazarine blue silk; both richly furred. In all processions wiiere he is officially present the city's sword and mace are carried before him. By a grant of Edward III. the mace is permitted to be of gold or silver, a distinction conferred, we believe, on no city of England besides, except the archiepiscopal city of York. When on foot, his lordship's train is supported by a page. When he rides, it is in a state coach, of large dimensions and gorgeous appointments ; richly carved and gilt; exhibiting in the pannels a variety of emblematic pictures, and drawn by four horses.

The person of the lord mayor is said to have been formerly held sacred and inviolable, but the instance chiefly relied on by historians scarcely warrants such an inference. It appears that, in the year 1399, Thomas Haunsart and John le Brewere, having forcibly resisted the mayor and sheriffs, in their endeavours to suppress a riot, were apprehended, tried at Guildhall, condemned to die, and beheaded in Cheapside ; but it is much more yirobable that they wore convicted for aiding and abetting the riot, tlian for any personal contempt of the chief

magistrate.

A more unequivocal proof of the respect in which the chief magistrate's person was anciently held occurred in 1479, when Richard Byfield was fined £50 for presuming to kneel too close to his lordship at St. Erkenwald's shrine !

The lord mayor is allowed a numerous suite of oflicers, for the support of his state and dignity ; a chaplain, remembrancer, sword bearer, huntsman (called the common hunt), serjeant carvers, Serjeants of the chamber, ?vc. In former times he had also Ids poet laureate and merry andrew, to assist in the productions of pageants on great occasions ; but since these shows have gone out of fashion, neither poetry nor foolery appears to be any longer in request in city halls. On flie list of lord mayor's laureates we meet with no less a name than that of Rare Ben ; yet so unworthily had his merits been appreciated that, in a letter of that bard's which is still extant, he complains of the corporation for withdrawing

from him tlieir ' chandlery pension for verjuice and mustard.' The pension, however, vvtis not quite so chandlery, for it amounted to £33 6s. 3d. a sum whicli may at least stand comparison with what has been at any time allowed other laureates of higher degree. It was much more than was allowed even to the king's laureate in Ben Jonson's days ; for, till 1630, the pension was but 100 marks, without a sip of the canary.

Previous to the fifteenth century, the lord mayor used to proceed by land to Westminster, to be sworn into office by the king, or, as latterly ordered, by the barons of exchequer ; but in 1453 Sir John Norman introduced the custom of going by water. That he meant this aquatic excursion to serve as an emblem of the lord mayor's sovereignty over the Thames, in the same manner as the dukes of Venice used to wed the ocean, though sometimes averred by city poets, we dare not historically affirm ; yet it is certain, that the mariners of the Thames felt so highly the honor conferred on their favorite element by Sir

John, that they composed a song of triumph on the occasion, in which he thus figures as the hero : —

Row thy boat, Norman, Row to thy Lemman, &c.

Meaning by ‘ lemman,’ as it would seem, his fair one or bride the Thames.

In 1301 Sir John Shaw revived the custom of riding to Westminster Hall ; and, for about two centuries, equestrian cavalcades were the fashion. In the reign of queen Anne the long-neglected barges were recalled into use, and ever since the procession has been by water. In recent times there was an instance of a lord mayor choosing to return by land ; but such deviations, unless resorted to occasionally, for the purpose of showing the mere existence of the right, are not perhaps to be commended.

After this species of spectacle had fallen almost for more than half a century into disuse, the common council were all at once seized witli are-turning fondness for it; and in 1760 came to are-solution, recommending that pageants should be again exhibited for the entertainment of their majesties on lord mayor’s day. The recommendation does not appear, however, to have been carried into effect, nor can it well be a subject of regret, that the city magistrates found then, as they have ever since done, more rational methods of manifesting their wealth and spirit.

The manner of celebrating the lord mayor’s day at present is still sufficiently splendid to make it an object of attraction to the multitude. About noon, the lord mayor elect, the past lord mayor, the aldermen, siieriffs, and other official dignitaries, after attending divine service at the parish church of St. Lawrence Jewry, proceed in their carriages from the Guildhall to the Three Crane Stairs, where they embark on ‘board a magnificent state barge, provided for the use of the chief magistrate ; and being joined by tlie different city companies, in barges of their own, and all more or less gorgeous, the aquatic procession moves forward to Westminster, witii bands of music playing, and flags and pendants flying from every mast. When the ceremony in the court of exchequer has been gone th.rough, the civic fleet

returns to lilack friars Bridge, w’aere the mayor and citizens land, and are received by the Armourers’ Company, wiiich takes the lead in the

procession back to the Guildhall. The armourers are generally preceded by two or three persons on horseback, in different sorts of showy armour; and these form now by far the most attractive part of the spectacle. Tiie other companies follow on foot ; the mayor and sheriffs in their state coaches; the aldermen and other persons of distinction in their private carriages ; and these, with their numerous officers and attendants, in their various motley ware, make up what is now called the lord mayor's show.

At Guildhall a sumptuous dinner is provided at the expense of the lord mayor and the sherifls, which is generally graced with the presence of some of the princes of the blood and ministers of the crown, the foreign ambassadors, and a number of the most distinguished nobility and gentry. Sliould it be the first lord mayor's day after a coronation, it has been customary for the sovereign himself to honor the banquet by partaking of it. The number of persons invited is seldom less than 1 200, and the usual cost of the feast is about £3000. When the king is present tiie expense is much greater. The entertainment given to George II. cost £4890; and that to George III., which was of singular magnificence, £6898. All the companies give besides sumptuous entertainments at their respective halls, which are supposed to cost £10,000 more.

The festivities of the day, at Guildiiall, are concluded by a grand ball, at which the lady mayoress presides. Among the entertainments anciently provided for this part of the evening, the lord mayor's fool had a very singular feat to perform. He was bound by the tenure of his office, to leap in his motley robes into a large bowl of custard, a jest so exactly suited to the taste of former times, that it was not easily made stale.

In 1810 the regular expenses of the mayoralty were found to be about £12,000 and his official receipts, including a sum allowed to him liy the city, and the value of some appointments in liis gift, did not exceed £6500. The common council, on receiving this report, voted an additional allowance of £1500 per annum.

The city remembrancer is the lord mayor's mo-nitor; a part of his duty being to remind his lordship of *he days on which he has to proceed with the aldermen on city business. He is also a guardian of tiie city rights, and is appointed to attend the sittings of parliament, to see that the privileges of the city are not infringed, or its interests injured by the proceedings of the legislature.

Sword bearer. — The sword is an emblem of authority as well as of

justice, and is borne before the lord mayor to express that tiiey are botli united in his office. A writer on armoury, who distinguishes how swords of state should be borne before persons of different ranks, says that ‘ the city sword bearer must carry tiie sword upright, the hilt being liolden under iiis bulk, and the blade directly up the midst of his breast, and between his brows.’ The sword bearer has his table at the expense of the lord mayor, to whom

£1000 a year is allowed for the purpose, exclusive of a sura of money for the residence of tliesworJ bearer.

Aldermen. — The division of the city into -.vards, and the appointment of aldenneii to uoveni them, were undoubtedly, as before observed, of Saxon origin ; but it would seem not to have been long before the office assumed a cliaracter someˆvhat foreign to the genius of Alfred’s institutions. So wise a prince could not have intended that an office of this importance should be tilled witliout any regard to merit or capacity ; and yet almost the first thing we read of the office is, that it might be acquired by any one, either by uiheritance or purchase. So much, in-deed, was this the case, that the wards were called after their respective proprietors, and changed names as they changed ; thus the ward of Castle Biiynard was once called Simon Hade-stock’s Ward ; the ward of Cheap, Henry de Frowyike’s Ward; the Tower Ward, William de Nadestocke’s Ward, &c. The abuses whicli necessarily arose, from this proprietary system, led to repeated ettbrts on the part of the citizens to change the tenure of the office ; and at length, from one of those coalitions between t!ie crown and the people which are not uncommon in the history of revolutions, the right of property was in the reign of Edward II. wrested from the aldermen, and the citizens of each ward were declared to have the power of electing annually the alderman who was to preside over it. So frequent an exercise, however, of the elective privilege, had also its peculiar inconveniences ; and in 1394 it was ordered by parliament that in future the alderman should continue in office during life or good behaviour, and so the law still continues. .

In elections for aldermen, the right of voting is confined to freemen who are resident householders of the ward paying scot and lot, and an annual rent of not less than £lO a year.

It is not necessary, however, that the person elected should be a resident of the ward. Citizens of eminence often become candidates for the aldermanship of wards with which they have previously had no particular connexion. Should a person decline the office of alderman when elected to it (which is, however, rarely the case) he may be fined ; there is even a precedent for imprisonment.

Each alderman his the active direction or wardenship of the affairs of his ward, under the general superintendence of t!ie lord mayor; and is assisted. by one or more deputies, appointed by himself from among the common councilmen of the ward. Every ward, too, has its court of wardmote or common iiall, with which the alderman may advise on all matters touching the common welfare.

The privilege of acting as magistrates in the city was formerly confined to the lord miyor, the recorder, the aldermen who had passed the chair, and the nine senior aldermen below it; but in the year 1741 George II. by letters patent empowered all the aldermen of London, without distinction, to act in fature as justices of the peace within the city and its liberties

The dignity of alderman, like that of the lord

mayor, had once more than ordinary protection, and ill those turbulent times, when personal feeling and resentment usurped the place of lav/ and justice, it is recorded that a citizen was imprisoned and his right hand cut oH" for assaulting an alderman. Resistance lo the authority of an alderman was commonly punishable with the loss of freedom, and imprisonment for a year and a day.

The costume of the aldermen is a cloth gown of violet or scarlet, lined with silk or furred according to the season. On one occasion an alderman, who neglected to line his cloak according to the established mode, was condemned by his brethren to a summary punishment, amusingly characteristic of the claims of th.s respectable body to the character which S!»akspeare has given of them, as being with fat capoii lined. They decreed that the whole court should go and breakfast with him.

Wards. — The city and liberties are divided into twenty-six wards or

aldermanries ; which., considered with respect to t!ie number of members they respectively return to the common council (excepting Bridge Ward without, which has no representatives), rank in the order in which we shall here take notice of them. The number of councillors for each ward is denoted by the numbers within a parenthesis.

The wards of Farringdon within and without formed originally but one ward, the aldermanry of which was purchased by William Faryngdon, goldsmith, and sherifl' in 1279, and remained in his family for upwards of eigiuy years. The tenure by which it was held was, the presentation at Easter of a slip of gilliflower, then a flovver of considerable rarity. In consequence of a great increase in the population of this portion of the city, it was, in the seventeenth of Uichard II., divided into two wards, and a separate alderman assigned to each. Farringdon Within (seventeen common councilmen) comprehends that part of the city which lay immediately within the walls on the western side. Its locality is well marked by a small stone monument in Pannier Alley, representing a young Bacchus seated astride a pannier or basket, with this inscription underneath,

WHEN YE HAVE SOUGHT THE CITY ROUND, YET STILL THIS iS THE HIGHEST GROUND, AVGVST THE 27,

1688.

Farringdon Without (sixteen) includes all that part of the city which lay without the walls to t'e westward, as far as Temple Bar. Till 1484, Serjeants' Inn was called ' Faryngdon's Inn.'

Bridge Ward Within (fifteen) is of extensive limits ; and includes the spot * Where London's column, pointing to the skies,' does not lie so utterly as Pope's lines have made it the fashion to believe. It was one of those wards entirely destroyed by the fire ; it takes its name from London bridge, the whole of which from the Southwark end it includes.

Bishopsgate Ward derives its name from the

a I'.e vviiiuh formerly divided it, and wliidi is supposed to have been constructed by some of the earlier bishops of London. Though the gate no linger exists, yet the boundary is still marked by the appellations of Bishopsgate Within and Bishopsgate Without. The buildings in this ward are among the most ancient of the metropolis, the great tire not havuig extended its ravages far in this direction, and not at all to the parts Without the gate. During the course of more than a century, every alderman who has presided over this ward has served the office of lord mayor.

Bread Street Ward (twelve), which is nearly in the centre of the city, takes its title from the breail market, which formerly stood on tiie present site of Bread Street : for, in ancient times, tlie bakers of London were not allowed to sell bread in their shops or houses, but only in the open market. At a still earlier period, this ward appears to have been the domain of that notable hero of fable, Gerard the Giant. In Gerard's Ilall (now occupied as an inn) t'lere vas kept, for a long time, an immense fir pole, some thirty or forty feet long, with which this redoubtable monster used to sally forth to battle, as also a ladder by which he occasionally permitted the pigmy order of mankind to ascend tc tiie 'top of ills faulchion, to take a bird's-eye view of the metropolis ! Stowe has made sad havoc with this pretty story. ' Gerard's Hall,' he says, ' is a corruption of Gisor's Hall, once the property of John Gisors, mayor of London in 1311 ; the giant's faulchion, nothing but an old JNIaypole ; and the ladder, the same which was used to deck the said Maypole, when erected on the green.'

Clieap Ward (twelve) takes its name from t'le Saxon word chepe, a markel; applied to our present Cheapside, which was formerly called 'West Chepe,' to distinguish it from another market in East Cheap. Before the stream, called Walbrook, which intersects this ward, was covered in, it is said, that barges used to be towed up it, from the Thames, as far as Buck-lersl)ury. The Standard or Cross, in Cheap, is ftimiliar to the readers of history, as the ancient place for execution within the city.

Tower Street, Broad Street, and Cripplegale, wards hold the same rank in the city representation as those of Bread Street and Cheap, each returning twelve members to the common council.

Langbourn Ward (ten) takes its name from a brook which formerly ran

from Fenchurch Street, where it broke out, to the Thames. The stream spread so much near the head of the spring that the neighbourhood received the name of ‘ Fenny-about,’ and this circumstance is still perpetuated in Fenciuirch Street.

Castle Baynard Ward (ten) takes its title from the ancient castle of that name, which stood on the site of the present Cannon Wˆharf, and was originally built by William Baynard, a soldier of fortune, vvlio accompanied the Norman William to England. It passed afterwards into the hands of the Fitzwaltors, who occupy a prominent part in llie early history of London. They possessed in virtue of this castellary the

honor of being hereditary standard bearers oJ tiie city. When in times of war the banner of St. Paul was unfurled, it was consigned with great ceremony by the lord mayor and aldermen to the hands of the knight of castle Baynard, at the great west door of St. Paul’s, the mayor addressing him in these word : ‘ VVe give you, as to our Banneret of fee in this city, the ban-ner of this city to bear and govern to tlic honor and profit of this city, to your power.’

Castle Baynard was entirely destroyed in the great fire of 1666, but before that had become greatly dilapidated.

Billingsgate Ward (ten), which ‘the ladies of the British fishery,’ as Addison has liumorously designated them, have rendered of si;ch notoriety, boasts of having had for alderm.an the patriotic Beck ford.

Vintry Ward (nine) comprises a part of the north bank of the river Thames, where the merchants of Bourdeaux formerly bonded and sold their wines.

Dowgate Ward (eight) take its name from dwyr-gate, the ancient water gate, which is by Stowe supposed to have been the W’atling Street ferry across the Thames. The patriotic Sir John Barnard was alderman of this ward.

Candlewick (now Cannon) Street, the name of which is preserved in the ward of the city (eight) was formerly much occupied by wax and tallow chandlers, trades of some importance in London, until the year 1548, wiien, by order of Henry VIIL, the burning of candles in the church on Candlemas day was ordered to be discontinued.

Cordwainers’ Ward (eight) derives its title from Cordwainers’ Street (now Bow Lane), which formerly was a great mart for curriers,

shoemakers, and other workers in leather.

Walbrook Ward (eight) was so called from the brook which intersected the c:ty wall at Dowgate, and flowed into the Thames.

Aldersgate Ward (eight) takes its name from one of the oldest gates of the city, and, like that of Bishopsgate, includes streets and lanes botii within and without the walls.

Cornhill Ward (six) took its title from the corn market, formerly held in this street, or ra-ther in the churchyard of St. Michaei's, adjacent to it.

Aldqrate Ward (six) consists of a soke, which was originally attached to the gate of that name, on the east of the city. When Matilda, or i \laude, the queen of Henry L, founded the priory of the Holy Trinity, called Christ Church, on the ruins cf which the present St. James's church. Duke's Place, was erected, she assigned for its support, with the consent of the king, her husband, the port and soke of Aldgatc. The priors do not appear, however, to have ever claimed, or been admitted to a place among the magistracy of the city, on account of the soke-nianry; but iiaving afterwards obtained a grant of the Knighten Guilde, a lay corporation, since better known by the name of Portsoken Ward, the prior of Christ Church became, in virtue of that knighten guilde, an alderman of the city. When he sat or rode with the alderman, he doffed his spiritual habiliments, and wore the

costume of his lay brethren. Eustacius, who was prior in 1264, having some scruples about this occasional divestiture, appointed Theobald Fitz Jonis to be the alderman of Portsoken Ward, under him. It is in allusion to this duality of office that in the inscription over tlie door on the north side of the chancel of St. James's church, Duke's Place, ' consecrated,' as we are told, ' to the eternizing the memories' of the worthies by whom it was erected, the parish clerk (for who else could pen such strains ?) thus proceeds : —

And, since I touch antiquity so near, Observe what notes remarkable appear ; An alderman of London was, at first, Tiie prior of this church ; falling to th' worst, 'Tis new raised by th' encouragement and care Of a lord mayor of London, which is rare.

(ˆueenhithe Ward (nine) takes its name from the harbour of Queenhithe, which was formerly a principal place for loading and unloading goods, and was so called because the customs payable there were assigned by king John to Eleanor his queen, and to her successors in the queenly dignity, for their own separate use. The ground, for a considerable space around the harbour, formed a soke which was governed by the queen's bailiffs. In the time of Henry III. it came into the hands of Richard, earl of Cornwall, who conveyed it for an annuity to the mayor and commonalty of London.

Coleman Street Ward (six) is supposed to derive its name from a family of the name of Coleman, who lie buried in the church of St. Margaret, Lothbury. Stowe and his continuators suppose the first of the Colemans to have been a builder ; but is it not as probable that he might have purchased tiie Aldermanry, and given his name to it, as William Faryngdon did to the wards of Farringdon ?

Portsoken Ward (five) is situated beyond the ancient city walls, and is of considerable length, extending from Aldgate to Whitechapel Bars, and from Bishopsgate to the river. The origin of the ward of Portsoken, which signifies 'franchise at the gate,' is by Stowe ascribed to the age of king Edgar. He relates that thirteen knights or soldiers, who were well-beloved by the king for services they had done, besought from him the grant of a portion of land on the east of the city, which had been left desolate and forsaken by the inhabitants 'by reason of too much servitude,' witli ' the liberty of a guild for ever.' The king granted their request, on condition ' that each kniglit should victoriously accomplish three combats ; one above the ground, one under ground, and the third in. the water ; and after this, at a certain day, in East Smitlifield, that they' should run with spears against all comers ; all which,' adds Stowe, ' was gloriously performed. The king accordingly incorporated the knights, by the name of the Knighten Guilde.' The southern boundary of the ward was fixed in a manner as singular as the conditions on which tlie whole was granted ; it was to extend as far into tbe Thames as a horseman, riding into the river at low water, could throw his s])ear. This grant of Edgar to the knights was confirmed by Edward

the Confessor, and afterwards by William Rufus, and Henry I. During the reign of the latter monarch, in 111.5, tiie brethren of this guild, who were then called ‘ burgesses of London,’ gave the entire soke and its appurtenances to the church of the Holy Trinity, witliin Aldgate ; and the whole possessions of tiie guild were afterwards by royal charter confirmed to the brotherhood of that church, the prior of which was invested with great ceremony, and allowed to govern the ward, and exercise the duties and participate in tlie honors of an alderman of Lon-don. Since the suppression of the monasteries, however, the ward of Portsoken has had a lay governor, in tlie person of its alderman.

Lime Street Ward (four), though without a cliurch, or a complete street, runs tlirough several parishes. It is so small, and used to be thought of so little account, though now the seat of as much wealth as any ward of the city, that in 1371, when the city was assessed in £63-5 12s. for the war in France, the proportion required from Lime Street ward was only £l 14s. It is generally said to have derived its name from be-ing a place for ‘ the making and selling of lime ;’ but the conjecture, v;e suspect, has no other authority than the identity of the name. The circumstance of the ward’s running stragglingly through so many parishes is opposed to such an origin ; besides, lime was not a commodity in sucli general use, five centuries ago, as to give a name to a market. . May the ward not have had as sylvan a parentage as the village of Limehouse, which is a corruption of Limehurst, the Saxon term for a grove of lime trees? It is not more unlikely that the manor of Leadenhall, which lay chiefly in this ward, should of old have boasted of its limes, than that that present sink of filth and wretchedness, Petticoat Lane, should once have been, as thus described by Stowe; with ‘ hedge rows and elm trees on both sides,’ and ‘ pleasant fields to walk, insomuch that gentlemen used to have houses there for the air.’

Bassishaw Ward is the smallest ward in the city ; its name is a corruption of Basinges-haugh or hall, a large mansion, formerly belonging to the Basinges, a family, as Stowe assures us, of ‘ great anti(iuity and renown.’ In the reign of Edward III. Basinghall became the residence of Thomas Bakewell, who gave it his name ; and, in the succeeding reign, it was purchased by the city, together with another house, two shops, two gardens, and other appurtenances in the adjoining parishes of St. Laurence and St. Micliael, for the small sum of £50. It was converted by the city into an exclusive market for the sale of woollen cloth, under the name of ‘ Blackweli Hall,’ and its privileges secured by severe penalties. The whole of Bassishaw Ward is comprised in the two precincts of Basinghall Street.

Bridge Ward, without, includes the principal part of the borough and liberties of Southwark, and a much larger population than any of the other wards; it gives also the title of * Father to the City,' to the alderman who rules over it ; and yet it is totally unrepresented in the court of com-mon council. Soutiiwark, although so long annexed to London, has never been incorporated with it ; its civil government is managed by a

bailifr appointed by the court of mayor and aldermen ; and the office of alderman, being a mere titular sinecure, is always given to the senior alderman of the city, as the best entitled to enjoy the otium cum dignitate.

The court of lord mayor and aldermen, besides having the power of appointing the recorder and several other city officers, and suspending them for misconduct, possesses also a considerable portion of the executive authority, for by this court all leases and otiier instruments that pass the city seal are executed.

The court of aldermen is not an open court, but its proceedings on political questions, or any others of general interest, invariably transpire ; and, indeed, while the press possesses as it does at present the eyes of Argus, with the hands and heads of Briareus, it is difficult to conceal any subject of importance from the public.

According to the institutions of Alfred, the sheriff's throughout the whole kingdom were elected annually by the community at large ; in the counties by the freeholders, and in London by the citizens, without distinction. This privilege however has been often invaded. The freeholders of Middlesex, for example, were arbitrarily deprived of their right of appointing their own sheriff, when Henry I. transferred it in perpetuity to the corporation of London ; and the citizens of London themselves paid to king Stephen 100 marks of silver for the right of nominating the sheriffs for the city and county of London. But, when the more general usurpation of Edward IL took place, the sheriffalties of London and Middlesex were the only ones exempted.

For a considerable time the ri':ht of voting for sheriff remained, as at first, with the general body of the citizens ; but. a change to a more manageable order of things was desired, and the mayor began accordingly with summoning, to the meeting for the election of sheriffs, only a few of the ' wealthiest' and ' discreetest' men out of each ward ; ' sometimes more, sometimes less.' This select number he was pleased to style ' the commonalty.' At first the number of select citizens summoned from each ward was only two ; but, in the sixth of Edward 11. , we find that it had been increased to twelve. This increase led, however, to some apprehensions for the stability of the system, and the number was again reduced in most of the wards; in some to ten and eight, and in the smaller wards to six. The commonalty of London having at length found favor at court, by the services which they rendered in elevating Edward 1\^. to the throne, that monarch so far restored the election of sheriffs to its ancient footing as to direct that it should in future be vested in the mayor, aldermen, common council, and liverymen of the different companies ; and thus it has remained to the present day.

A mere freeman of London is excluded from voting : he must have taken up his livery to be entitled to the privilege. An unsuccessful effort was made, in the time of the commonwealth, to have the election thrown open to all freemen ; but the limitation appears ever since to have had the sanction of popular approbation. The election, as it now stands, is certainly on a broad Vol. XIIL'

enough basis, for every useful purpose. When 7000 or 8000 resident liverymen can be polled, at a disputed election, the addition of 1000 or 2000 votes of mere freemen might oftener endanger than strengthen the popular side of a question.

After the mayors had been thus deprived of the absolute appointment of the sherifl's, tiie citizens allowed them, out of courtesy, to nominate one of the sheriffs. So far did tlie citizens carry this courtesy of theirs, that, from the days of Edward IV. to the year 1641, they appear never once to have rejected the sheriff nominated, or, as the fiishion was, drunk to, at some previous city feast, by the lord mayor for the time being.

From so invariably approving for so long a period of the mayor's nomination, it is not surprising that it should at last have been considered as a matter of course, that the person drunk to by his lordship should be one of the sheriffs. So much was this the case, that,

in the time of queen Elizabeth, there are instances of the mayor's nominee signing the usual bonds to hold the office before he was confirmed by the livery. When at length, however, the open attempt of Charles L to establisli despotism in the country made it of importance to shut up every avenue to undue influence, the citizens showed that they had not forgotten that the right of rejecting tiie nomination of the mayor was one which they might still exercise. From 1641 to 1663 they uniformly rejected the person nominated by the mayor, and appointed two sheriffs of their own selection. The Restoration having brought for a time courtesy again into fashion, the lord mayor's nominees were for many years, with but one exception, confirmed by the livery. \i\ 1680 the citizens again made their own choice. They rejected the nominee of the lord mayor, and cliose Slingsby Bethel and the unfortunate alderman Cornish as sherifis, both of them persons distinguished for their opposition to the court. It was during their sheriffalty that lord Stafford was condemned to the block, for his supposed share in the popish plot; and the sentence ordered to be executed with all those horrid aggravations, the stain of which it remained to the present age to remove from the statute book. The king thought fit to commute the sentence into bc-iieading merely ; the sherifis Bethel and Cornish protested against the right of the king to order any such mitigation of the sentence; and it was not till the house of commons had declared that they would be ' content' with the head of their victim, that the sheriffs yielded the point.

The court jiarty having, in the interval between the election of these sheriffs and the election of mayor, mustered in unusual strength, they succeeded in raising to the mayoralty Sir John Moore, a person so completely under Mr. Secretary Jenkins's management, that it was resolved to push the old usage about the nomination of sheriffs to its utmost possible extent. ' Wiien the day came,' says Burnet, who relates the facts with great impartiality, ' in which the mayor used to drink to one, and to mark him out for sherifl', he drank to ^'orth, a merchant, that was brother to the chief justice. Upon that, it was

uretended that tliis ceremony was not a bare nomination wliicli the common liall might receive or refuse, as they had a mind to it ; but that this made the sheriff, and that tiie common hall was bound to receive and confirm him in course as the king did the mayor. So he claimed it on Midsummer-day, and said the common hall were to go and elect one sheriff, and to confirm the other that had been declareˆ by him. The hall on the other hand said, that tlie right of choosing both was in them. The old sheriffs (Pilkington and Shute) put it, according to cus-tom, to a poll ; and, it was visible, the much greater number was against the lord mayor. The mayor on this adjourned the court, which, they said, he had no power to do, and went on with tlie poll. There was no disorder in the whole progress of the matter, if that was not to be called one. But, though the mayor's i)arty carried themselves with great insolence to the other party, yet they showed on this occasion more temperance than could have been expected from so great a body, who thought their rights were now-invaded. Tlie mayor upon this resolved to take another poll ; and it was resolved that his poll should be that by which the business should be settled : and, tliough the sheriff's poll exceeded his by many hundreds, yet order was given to return those on the mayor's poll, and that they should be sworn. Box, who was chosen, however, had no mind to serve upon so doubtful an election. So it was necessary to call a new common hall and to proceed to a new election : and then, without any proclamation made as was usual, one in a corner, near the mayor, named Rich, and about thirty more applauded it; those in the hall, that was full of people and of noise, hearing nothing of it. Upon this it was said that Rich was chosen without contradiction, and so North and Rich were returned and swurn sheriffs for the ensuing year.'

The court was not even satisfied with thus forcibly depriving the citizens of the appointment of their sheriffs; for, with singular wantonness, they prosecuted Pilkington and Shute, and twelve aldermen and principal citizens of the popular party, for opposing the

usurpation of the mayor; and having new juries, as well as judges, at their command, had them condemned in large fines.

One of the earliest victims to this new mode of appointing sheriffs was the illustrious Russel, who observed, in his dying moments on the scaffold, ‘ that, from the time of electing sherffs, he concluded the heal in that matter would produce sometliing extraordinary, and was not much surprised to find it fall upon him.’

The livery recovered entirely the right of election, however, at the revolution. Not long after, indeed. Sir John Parsons, who was mayor i;i 1704, revived the custom of nominating persons for the approbation of the livery, and ever since the election of sheriffs has been thus conducted ; but so abundantly qualified is the power now conceded to the mayor, that the exercise of it has become altogether harmless His lordship usually nominates not fewer than fourteen respectable citizens for the office of sheriffs; but the livery are not bound to approve of one of them, and

have often appointed others of their own selection. Any person being a freeman of London is eligible to the office ; and whoever is elected is bound to serve, unless he can swear that he is not worth £lo,000. The penalties for refusal are £400, to be paid into the city chamber, and £l3 6s. 8d. to the ministers of the city prisons. A citizen, after payment of these fines, is exempted for three years ; but an alderman only for one : no person, however, after being once drunk to by the lord mayor, can be drunk to again by any subsequent mayor, unless he becomes an alderman. Whoever serves is obliged to give a bond to tlie corporation for £lOOO.

The election of sheriffs takes place annually on Midsummer day, and they come into office at Michaelmas. When chosen, they are sworn into office at Guildhall, and two days afterwards in the court of exchequer at Westminster liall, a ceremony which, though much ridiculed on account of the supposed test of the sheriff’s talents in counting hobnails and chopping of sticks, is solemn and impressive. These services are of feudal origin, and respect the possession of lands in St. Clement’s Danes. The usual process now is, when the sheriffs are in attendance at the exchequer to be sworn, the owners of the laivd are called to do their suit and service, when an officer of the court, in the presence of the senior alderman, produces six horse shoes and sixty-one hobnails, which he counts over in form before the cursitor baron, who on this occasion is the immediate representative of the

sovereign. The chopping of sticks originated in a similar manner. The tenants of a manor in Shropshire, held by the city of London, are called upon to do their service, when the senior alderman below the chair steps forward and chops a single stick, in token of its having been customary for the tenants of that manor to supply their lord with fuel. For the duties of the Sheriff, see that article.

The recorder of the city of London is appointed by the lord mayor and aldermen for life. The qualifications declared in the city books to be essential to the office are, that ‘ he shall be, as he is wont to be, one of the most skilful and virtuous apprentices of the law of the whole kingdom : a chief man, endued with wisdom, and eminent for eloquence.’ He is the first law officer of the city. chief councillor to the magistracy ; himself a justice of peace for the city, and one in all commissions of oyer and terminer, ^^‘hen on the bench, he delivers the sentences of the court; he also reads the addresses of the city to the king, and reports to his maiesty, after each session of the Old Bailey, the number of persons capitally convicted. In point of rank, he takes the precedence of all aldermen who have not passed the civic chair. A singular instance of the difference in the value of money, and the salaries of public officers, is exhibited in the pay of the recorder. In the reign of Edward I. it was ‘ only £lO sterling, by the year,’ and ‘ twenty pence for each charter written, and each testament enrolled.’ It was afterwards raised to 100 marks, and has since gradually advanced to its present liberal allowance of £2500 a year. The mayor of the city was originally c/iaiuber

lain, and the office was held of the crown. Tn 1204 the right of appointin;r to the cliamberliiin-ship was purchased from the crown ; and the office became ever after distinct from that of mayor. The cliamberlain ranks next to the recorder in the order of precedence; he is the city treasurer, and receives all the money belonging to tlie corporation ; he has also the charge of all its bonds and securities. The chamberlain is usually selected from such aldermen as have passed the chair. The livery have the appointment of the office; but, though the

chamberlain is annually chosen on Midsummer-day, yet he generally continues to hold his situation during life.

The origin of the common council has been partly developed in tracing the history of the sheriffs. The custom of summoning certain of the discreeter and wealthier men of each ward, as representatives of the commonalty, which was at first surreptitiously introduced for the purpose of restricting the right of electing the sheriffs, was afterwards continued for better purposes in the establishment of that body, known by the name of the common council. However expedient it might be that the whole body of tlie citizens sliould be convened for the election of their principal magistrates, the mayor, sheriffs, chamberlain, &c., and on other extraordinary occasions, for the manifestation of the general will, it was obviously not of equal expedience that they should meet on every matter of ordinary concern. By an act of council of tlie Gth October, 1692, it was declared, ‘ that it is, and anciently hath been, tlie right and privilege of the freemen of the said city, only being householders paying scot and bearing lot, and of none other whatsoever in their several and respective wards, from time to time, as often as there was or should be occasion to nominate aldermen and elect common councilmen for the same respective wards ;’ but it is not affirmed, for that would have been to af-firm what was contrary to the fact, that tlie right and usage had been the same. lYeitiier is it all householders who have now the privilege of voting for common councilmen ; for, by act of parliament passed in 172,5, it is restricted to those who occupy a house of the annual value of £lO.

When tiie right of electing the common council-men thus reverted to the freemen of the different wards, tlie rule which the mayors had last observed with respect to the number summoned from each, and which, as we have before seen, had some regard to their relative population, appears to have been adhered to with but few variations. The number is at present fixed at 230 for tlie whole of the wards; in 1209 it was but thirty-two. I’arringdon within, which returns the largest number, has seventeen representatives; l.ime Street and liassishaw but four. The office of common council is annual, and instances of removal are not infrequent. The election for each ward takes place on St. Tiiomas’s day ; the alderman as presiding officer, decides on the reception of disputed votes, and declares the return.

The representatives of the wards, being uniied to tiie lord mayor and aldermen, constitute what IS ciljod the court oi” common council.

This court has the entire disposal of the funds of llie corporation ; makes what bye-laws it thinks necessary for the better regulation of its concerns ; and possesses the right of nomination to several of tlie subordinate city offices. It has no stated periods of meeting, but is convened by the lord mayor whenever he sees occasion.

The common serjeanl is the second law officer in the city, and assists the recorder in all legal questions afl'ecting its interests ; he also acts in a judicial capacity, as an assistant to the recorder, to whose office his own is generally probation-ary. He is usually chosen from one of the citv pleaders ; but the right of election is vested in the common council, who have sometimes raised to the office individuals who had no connexion with the city. It is the duty of the common ser,eant to attend the lord mayor and court of aldermen, botii in council and on court days, on all occasions, whether within or without the precincts of the city. To him are committed the general care and management of the orphans' estates until they have passed the lord mayor and couit of aldermen.

Common Hall. — In all the earlier charters of the city of London, the freemen are spoken of in a general sense; not, as since distinguished, by the different appellations of freemen, liverymen, and common councilmen, but as tlie ' citizens of London,' ' men of London,' ' the commonalty at large.' Nothing at all is said of councils, or any thing in the shape of a representative body. The only public bodies, on the contrary, which are mentioned in the great confirmatory charter of Henry L, are the court of hustings, composed of the mayor, aldermen, sheriffs, and recorder ; and the folkmote, or folk-meeting, meaning obviously the people in the aggregate.

The usual mode of electing these folkmotes was by the tolling of a great bell, which was hung in a belfry near the east end of St. Paul's church. The name of folkmote was subsequently changed to that of common-hall ; and the right to a vote in it restricted to the livery.

The more usual purposes for which common-halls are now assembled are the election of the lord mayors, sheriffs, and other officers, whose nomination remains with the livery ; but they are also frecjuently convened, in order to take into consideration measures of the government or parliament, affecting the interests of the country or of the city in particular; and still, as of old, tlie resolutions of the livery of London continue to have a leading influence in giving a tone to national opinion.

The citu companies, though branches of the general corporation, have

each a distinct government, and pccnliar liberties and privileges grantc(i to tiiem by their respective charters. Most of them have separate halls for their place of meeting, either to transact business or for their banquets ; and each company has a master, wardens, assistants, clerks, and other subordinate officers, for tlie general management and gt)vernmeiit oi its affairs.

The companies are nearly 100 in number; and their several rights and privileges would fill a vo-lume of ample size ; we can only here add, that there are twelve which isre called I'.ie principal

and sometimes styled honorable, though there are some of the minor order, such as the Stationers' Company, whicli rival them in real importance. Tiie twelve' are, the mercers', grocers', drapers', fishmongers', golds niths', skinners', merchant taylors', haberdashers', sailers', ironmongers',vintners', and clotli workers'. The lord mayor elect must always lielong to one of these companies; if not at the time of his election, at least before he is sworn into ottice.

There are no less than forty nine halls belonging to the incorporated companies of traders and artizans, c ty of London. Many of these may be found interesting objects to strangers, either for their architecture, or their magnitude, and expression of opulence. Among the best are ironmon,vrs' hall, iii i'enchurcli Street; merchant taylors' hall, in Thre.idneedle Street; goldsmiths' hall, in Foster Lane ; grocers' hall. Grocers' Hall Court, Poultry; drapers' hall, Throgmorton Street; stationers' hall. Stationers' Court, Lndgate Street; and apothecaries' hall, Blackfriars.

The citizens constituting these societies never forget, in the midst of their abundance, the wants of others. The sums distributed annually to the indigent, by the city companies, from various funds uiven for the purpose, amount to above £30,000.

Ecclesiastical Goveunment. — In the list of ecclesiastics who formed the second general council held at Aries, in France, in 326, we have the presence of a bishop of London recorded in these terms : ‘ Ex Provincia Britanniae Civitate Londinensi lleslitutus Episcopus.’ Joceline of Fumes, in his book of British bishops, says, that this Restitutus was the twelfth bishop of London; but little dependence can be placed on the accuracy of his list. In 610 London was, however, anew erected into a bishop’s see, and .St. Paul’s cathedral founded.

Of the bishops who filled this see, till the arrival of the Normans, the only one whose name still lives in the memory of men was the noted St. Dunstan. No less than three churches in and around London have been dedicated to him.

William, the first bishop under the Norman line, was held by the citizens of London in grateful remembrance for many centuries, for his good offices in prevailing with William I. to grant them the ample recoijnition which he did of their ancient rights and franchises. His remains were interred in St. Paul’s catliedral, and a monument erected to his memory by the corporation, on which they inscribed in warm terms the obligations which he had conferred on the city —

Reddita libertas duce

Te ; donataq ; multis, Te duce, res fuerat Publica muneribus. For a long time the corporation made it one of their principal duties, on lord mayor's day, to do homage at the shrine of this restorer of their liberties.

Gilbert Foliot, who succeeded in 1163 to the bishopric of London, is described as the first English bishop that was ever canonicallv translated from one see to another.

In 1292 there occurred a remarkable instance of collision between the claims of the bishop of this diocese and the citizens. The bishopric had a manor attached to it, situated in the parish of Stepney, on which there grew 'two faire woods.' llichard de Gravesend, the bishop at that period, w.shed to enclose these woods for a deer park, and With that view obtained a grant of free war-ren from the king. The mayor, aldermen, and commonalty, however, would not permit the project to be carried into execution, contending successfully that time, out of memory, ' they had used to take and hunt within the aforesaid woods and without, hares, foxes, conies, and other beasts, where and when they would.'

In 137G Wickliff was, by the command of the pope, summoned before the archbishop of Canterbury and bishop of London, to answer for the tenets contained in what was called the Lollards' Creed ; he appeared before them, accompanied by his friends and protectors, the duke of Lancaster and earl marshal

The duke is said on this occasion to have tiireatened to drag the bishop by the hair of the head out of the church ; when a crowd of citizens interposed, to protect the latter from the execution of this indecent threat ; and the duke and earl marshal were glad to retreat.

At the council of Constance, in 1414, Robert Clifford, bishop of London, and several other eminent ecclesiastics, attended as the representatives of the Church of England. He was one of the thirty cardinals-extraordinary created on that occasion, and was even nominated to the purple oil the deposition of the three rival popes of that period, but lost the election, which terminated m favor of cardinal Odo Calonna, pope Martin V.

Henry VIII. gave to this diocese the equally saufjuinary Bonner. On the

establishment of the reformed religion, under Edward V'L, he was displaced by tlie pious Ridley ; but on the restoration of popery, under Mary, the ' high priest of blood, as he had been well named, was reinstated in the see, and Ridley exchanged his mitre for a crown of martyrdom. When Elizabeth came to the throne, Bonner was among the bishops who hastened to tender their allegiance to the new queen, as she was on her way from Hatfield to London; but her majesty, shocked with the recollection of his cruelties, refused to see him. He was degraded from his office and thrown into the Marshalsea, where he perished miseral)ly.

John King, who was promoted to be bishop of London by James I., was remarkable for his eloquence in the pulpit, and hence styled by that facetious monarch the king of preachers. His successor (George Mountain) was of name still happier in a punning ase ; for it is said to have enabled the king to effect a miracle, by throwiui; a mountain into the sea. (see)

The next bishops of London were Laud and Juxon.

In the Catholic reign of .lames II. Henry Compton, bishop of London, was styled, by way of pre-eminence, the Protestant bishop, on account of the nobis stand which he made in defence of the rights of the Protestant

church against the encroachments of that prince. Among the bishops of London, since the restoration, the names of Sherlock, Lowth, and Porteus, have been justly distinguished for those qualities which, in times of domestic peace and tranquillity., do most honor to tiie clerical character, learning, and piety.

The bisl)op ranks, in dignity, next to the archbishop of Canterbury and York. The diocese compreliends not only Middlesex, Essex, and part of Hertfordshire, but tlie British plantations in America. Tiie following parishes in die city are, however, exempt from the !)ishop'sjurisdiction, being peculiars, under the immediate government of the

archbishop of Canterbury . *viz.* AUhallows, Bread Street ; AUhallows, Lombard Street ; St. Dionis, Back church ; St. Dunstan in the East; St. John the Baptist ; St. Leonard, Eastcheap ; St. Mary Aldermary ; St. Mary Bothau ; St. Mary le Bow; St. ˆlichael Royal; St. Pancras, Soper Lane ; and St. 'edast, Fos-ter Lane. The chapter consists of the bishop, a dean, a precentor, or chanter, a chancellor, a treasurer, five archdeacons (styled of London, Middlesex, Essex, Colchester, and St. Albans), thirty canons or prebendaries, twelve minor canons, six vicars choral, a subdean, and other inferior officers.

The election to the bishopric, in cases of vacancy, is vested in the dean and chapter ; but the right is now reduced to a mere matter of form, the person recommended by the king's writ of conge d'elire being" invariably chosen. The sum at which the see is entered in the king's books is £1000 ; but it is estimated to be worth, at least, £12,000 per annum,

St. Piiul's Crosx stood in the midst of the church yard, on the north side towards the east end. Of the period of its erection we have no account; Stowe says, it was of 'unknown antiquity.' Tlie first mention made of it is in 12.59, ■when a folkmote was assembled at Paul's cross, to hear the complaints that had been made to the king against the mayor and rulers of the city. It appears to have consisted of a hexagonal pul-pit of wood, raised upon a flight of stone steps with a leaden canopy surmounted by a large cross. In the picture, in theSociety of Antiqua- • ries, mentioned in the precedin'..' article, it is represented as enclosed by a low brick wall, with-in which there are people taking notes of the sermon. The greater part of the audience sat or stood in the open air: but there were probably, as on the occasion of king .James's visit, covered galleries for the accommodation of more distinguished auditors, such as, the members of the royal family, the nobility, the lord mayorand aldermen. At the side of the church there was a covered space, called the shrouds, to which the preacher and cimgregation both resorted in in-clement weather.

The cross was demolished in 1643, by an or-der of parliament, and was never after restored.

PART V.

COMMERCE, :\I.\UFACTIKES, POLICE, &r.

At what period London became celebrated for its commerce is uncertain ; Tacitus says, in his

time it was * a famous mart of foreign and domestic trade ; ‘ and, as the Romans were no encou-ragers of trade; it is not improbable that an active intercourse with the Phoenicians, and the Greek colony at Marseilles, might have been carried on by tlie Loi. doners long before. Witii the arrival of the Romans, the foreign commerce of London appears to iiave fallen, and we have scarcely any record of its existence for s’>me centuries afterwards. In the middle of the fourth century, however, its trade must have become pretty extensive, as 800 vessels were employed in the exportation of corn only.

After the Romans had quitted it, the foreign trade was for some time almost wholly suspended ; nor was it until some time after the Norman invasion that it was revived. Fitzstephen, assures us, however, that in his day ‘ no city in the world exported its merchandise to such a distance.’

Previous to 1268 the Cologne merchants had established themselves in London ; and in 1296 a regular commercial company, under the title of merchant adventurers, was incorporated by Ed-ward I. This company, obtaining permission from the duke of Brabant, joined an establishment at Antwerp, where they carried on an extensive manufacture of cloth from wool imported from this country. Edward III., with true national feeling, seeing that England derived but half the advantage from her industry, caused manufactories to be established here, prohibited the exportation of wool, and, producing finer cloths than weie to be met with elsewhere, monopolised the principal woollen trade of Europe.

The merchants of London now became too formidable to be kept down by the jealousies of the Genoese and Ilanseatic associations, although, in the year 1412, the former had the audacity to seize a quantity of wool and ot.er goods to the value of £24,600, which had been shipped on board several vessels for the JNlediterranean. The whole was sold at Genoa ; but no sooner was this outrage known than our Henry I'. issued a proclamation, in which he prohibited nil commercial intercourse witii Genoa., until the merchants, to whom he had granted letters of Uiarque, should capture a sufficient number of Genoese vessels to reimburse them the .£24,000 they had lost, and £l 0,000 more for damages.

The commerce of England had long before this period been of sufficient importance to tempt the Jews to settle here in large numbers ; and they were treated with a degree of cruelty which marked the

illiberal spirit of the age. The Ilanse merchants, who iiad an establishment in London at a very early period, were scarcely less popular, and encountered various persecutions, until they were finally extinguished as a company in the reign of queen Elizabeth.

The spirit of commercial enterprise had, previous to this period, been awakened among the Londoners, and several trading companies formed. One of these, consisting of 240 share-holders, who subscribed a sum of .I'eooo, employed the celebrated navigator, Sebastian Cabot, to superintend the filling out of thiH'e vessels for the purpose of making new discoveries. These ships were tlie means of opening a maritime in-

tercourse with Russia, and in the succeedin-,' leign tlie English obtained an exclusive grant ot" the whole trade of tliat country. This intercourse led the way to the association of tiie Muscovy merchants; and several others were afterwards formed, particularly the Eastland Company, the Spanish Company, and the Levant Company ; the latter undeceived the grand seignior, who had hitherto considered England a province of France.

Tiiut the merchants of London must have been wealthy at tliis period may be inferred from their fitting out thu-ty-nine ships, all amply furnished, to repel the threatened invasion of the invincible armada ; and at the same time they had 135 ships of 500 tons and upwards engaged in trade. In the following reign, in 1613, we find that the city paid three-fourths of the whole customs of the country. The discoveries of a Drake, a Raleigh, a Hawkins, a Cavendish, and a Krobisher, in the reign of Elizabeth, opened new sources of commerce, which liie pacific though inglorious reign of James in some degree improved ; and a mure active intercourse was also opened with Spain, Portugal, and France. Howe, in his edition of Stowe, enumerates the various countries with which London traded at this period, and the articles imported, adding, that it was ' one of the best governed, most richest, and flourishing cities in Europe, plenteously abounding in free trade and commerce with all nations.'

The reign of our first James was also favorable to commerce ; X'irginia, the Bermudas, Barbadoes, and Newfoundland, which had become colonies of Britain, opened new markets to tlie London merchants, and to the honor of the king it must be said, that he gave them every encouragement. He abolished monopolies, which in the preceding reign had been so injurious, and issued a commission for establishing a board of trade, with a view to the extension of commerce and the forming of a better code of navigation laws.

Witii the increase of foreign trade the naval strength of the country improved. While our commerce was limited to the neighbouring shores of Fˆurope, small vessels were found sufticient ; but t!ie discovery of tlie East and West Indies soon suggested the necessity of having larger ships for long voyages, that would require provisions in proportion to the period it would require to perform them. The Portuguese, who were the first to form FLuropean settlements in India, introduced into the trade carracks of 1600 and 1700 tons; and our own East India Company, following the example, built two vessels, the James of 1000 tons, and tlie Trade's Increase of 1100 tons, which were larger than any ships at tliat time employed in the royal navy.

During the early part of the reign of Charles I. peace continued to promote the growth of commerce ; and wlien the necessities of the misguided monarch urired him to make illegal requisitions on his subjects, the London merchants were called upon to fit out seven ships of war, and in addition to this the city, now becoming affluent, afterwards agreed, in 1643, to make a weekly payment of £10,000 for the use of parliament. The establishment of posts, the com-

mencement of price currents, or ' weekly bills of the prices of all commodities in the principal cities of Ciiristendom,' which had long been customary abroad, and the formation of banking houses, are all evidence of the growing commerce of the reign of Charles I. It is true that tliis monarch afterwards, in revenge for the resistance which the city offered to his arbitrary conduct, endeavoured to destroy what he had assisted to raise, and issued a proclamation, declaring all persons traitors who had any dealings with the citizens ; but the decree proved, as might be expected, a dead letter.

The reduction of the rate of interest from ten to eight per cent., in the year 1625, had proved highly beneficial to trade ; and Sir Josiah Child relates, that ten years afterwards * there were more merchants to be found upon 'change, worth each £1000 and ujiwards, than were

formerly, that is, before 1600, to be found worth £lOOeach." This rate of interest continued till the year 1651, when Cromwell, who, having firmly established his power, found leisure to apply his mind to civil affairs, and enforce those plans from which the commerce of England drew such great advantages, lowered the interest to six per cent. One of the first measures of the reign of Charles II., on his restoration, was to confirm this act of Cromwell, and with every reduction of interest commerce improved so much that the writer already quoted says, ' Now, since interest has been for twenty years at six per cent., notwithstanding our long civil wars, and the great complaints of the dullness of trade, there are more men to be found on the exchange now worth £10,000 than were then of £1000 ;' and Sir Josiah adds, 'our customs are much improved, I believe above the proportion of six to one, which is not so much by an advance of the rate of goods as by the increase of the bulk of trade.'

The navigation act, which had been proposed by James L, but was not passed into a law until the protectorate, was also of signal advantage to commerce. Trade rapidly advanced, nor did the great plague, and the equally destructive fire in the following year, do more than give it a tern - porary check, from which it recovered in a few years, increasins; more than ever, until the wars of William III. with France. That our trade was then extensive is evident from the losses it was capable of sustaining, the French having, in the course of two years, captured 3000 sail of trading vessels belonijing to this country. So much was commerce depressed during this eight years' war, that the tonnage of the shipping-cleared outwards from the port or London was 96,766 ions less in 1696 than it was in 1688; and the value of the merchandise exported had fallen in the same period from £-1,086,087 to £'2,729,520. The restoration of peace, by the treaty of Ryswick, gave back to London its former trade, which generally formed three-fourths of that of the whole kingdom. In the year 1711 it appears to have been more, the amount of the customs in London being £1,268,995, while those of all the out-ports were only .£343,381.

The South Sea bubble, the 'Scottish rebellion of 1715, and the Spanish war three years after

LONDON.

2-i;

wards, were all so many checks on tlie progress of commerce during tlie reign of (‘eorge I,, and the same maybe said of the wars of his successor, and ihe unhappy struggle in the reign of his late majesty, which terminated in the independence of our flourishing colonies in North America. Commerce, however, can scarcely be said to have suffered by the change; for in the year 1784 tiie value of the exports to America amounted to £3,397,500. Being nearly £332,000 more tlian they were in any year previous to the war.

From this period, to the commencement of tlie revolutionary war with France, the trade of the metropolis increased most rapidly ; and the exports, which in 1784 were little more than £3,000,000, were in 1792, £16,762,516 13s. 4d. In commerce there is an elasticity which overcomes all depression ; and, although the exports were £2,000,000 less during the first year of the war with France, yet no sooner was the continent embroiled in the contest, than the trade of Lon-don was augmented so much, that in the year 1726 the exports were nearly £18,500,000, and the imports nearly £15,000,000. Large as this sum may appear, it has since been more than quadrupled.

During the war our vessels had nearly the whole carrying trade of Europe, and Great Britain became the entrepot of all the products from beyond sea, destined for the consumption of

to £80,232,767, and our exports to £77,392,056, but on the return of peace, when this country ceased to be the route for the conveyance of foreign productions to continental Europe, the amount of exports and imports became considerably less. Ceasing then to be a channel for distributing the productions of other countries, and o(scanty resources for export, Britain depends more than ever for commerce on the skill and ingenuity of her inhabitants in the useful and elegant arts, and in all that can give dignity to trade, and comfort to the people. ‘ It is on her manufactures,’ as an able writer observes, ‘ that the great commercial importance of the country rests; on that technical talent, possessed by its inhabitants, of working up rude produce; of va-ryiivg the wrought commodity in every imaginable form; of giving beauty, brilliancy, and durability of color, to every diversity of texture, and combination of material ; this labor is the source of all that is enjoyed of elegance and convenience in life.’

It is true that our exports are less than during the war, yet our

commerce has assumed a more healthy and a more permanent character. Our foreign trade is increasing in the most satisfactory manner ; as also the export of our domestic manufactures. The following official document exhibits the state of our commerce at a recent period : —

Europe. Hence our imports in 1811 amounted

Abstract of Accounts of the Trade and Navigation of the United Kingdom, during each of the three years ending the 5th of January, 1821, 1822, 1823.

1821

1822 1823

Value of

Imports into the

United Kingdom,

calculated at

the Official rates

of Valuation.

Value of Exports from the United Kingdom, calculated at the Official Rates of Valuation.

£ s. d

32,438,650 17 3

30,792,743 4 10

30,500,094 17 4

Produce

and

Manufactures

of the

United Kingdom.

Foreign and

Colonial Mercha-.,dise.

£ s. d. £ s. d

38,395,555 7 2 10,555,912 10 3

40,831,744 17 5ll0,629,689 5 8

44,236,533 2 4 9,227,589 7 11

TOTA L

Exports.

£ .S-. d

48,951,467 17 5

51,461,434 3 1

53,461,122 9 3

Value of the Produce and jManufactures of the United Kingdom exported therefrom, according to the real and declared value thereof.

£ s. d

36,424,652 13 11

36,659,681 3 0

36,968,964 9 9

The actual exports and imports, to and from the port of London alone were many years ago estimated at £70,000,000 sterling annually; and the number of vessels which every year entered the port was not less than 15,000, allowing for the several voyages made by the same vessels. In the foreign trade alone the number employed

was, during the last year, 3587, amounting, in tonnage, to 635,799 tons. The following statement exliibits the relative proportion of the commerce of the port of London with foreign countries, and our own colonies, independent of the coasting trade, which is necessarily

imnˆense : —

■248

L O N D O N.

The Number and Tonnage of all ships that have arrived during the year 1823, at the port of London, distinguishing British from foreign ships.

No. of ships

Countries.

Tonnage

Brit. ! For.

Trance

114

59

18,428

Russia

320

—

06,434

Prussia, Denmark, Norvv?y,

and Sweden

144

310

110,744

Holland, Germany, &c.

208

173

51,632

Italy, Sicily, and other

places in the Mediterranean

204

1

28,675

Spain, including the Canary Islands

220

15

27,432

Portugal, including the

Azores

27.5

11

27,704

Turkey ….

50

—

8,187

East Indies .

85

—

46,472

China ….

19

—

25,000

West Indies

419

—

120,682

United States of America

19

40

16,900

South America

55

2

9,944

Canada ….

225

—

71,505

Cape of Good Hope, Sierra

Leone, New S.W ales, &c.

78

—

15,148

Ireland ….

460

—

42,280

Guernsey, Jersey, &c. . Total .

27

—

2,465

2922

en

689,632

London has always been, and must be, from its situation, the centre of British commerce ; and although the liberal spirit of the age, in throwing more open the portals of the trade, may bring other ports into competition, yet the London citizen may always exclaim with pride, in the words of Cow per,

Where has commerce such a mart, So rich, so thronged, so drained, and so supplied. As London ?

The Custom House. — The whole produce of the customs, on the exports and imports of England, were for many years farmed at £20,000. In the year endmg the 5th of January, 1823, they amounted to £10,662,847! Such has been the growth of British commerce during a period of less than two centuries and a half. The levying of duties on ships and merchandise is generally attributed to Ethelred, and is said to have been first resorted to by that king in 979, ■when all vessels trading to London paid certain duties at Billingsgate, or Belin's gate, as it was then called.

The principles upon which the revenue of the customs, which were originally on exports only, were vested in the king were, first, because the king was bound of common right to maintain and keep up the])orts and havens, and to protect the merchants from pirates ; and, secondly, because he gave the subject leave to depart the kijigdom, and to carry his goods aloivjc with him.

In 1274 the custom duties were sanctioned, as a source of revenue, by the parliament of Ed-ward I., but the fees must have been very small for more than three centuries afierwords, for in

the year 1590 queen Elizabeth farmed them to one Thomas Smith for £20,000 a year. The queen was induced to do this in consequence of the representations of a person of the name of Caermarthen to her majesty, that she had lost £96,720 3:s. 7d. in the customs, during the preceding eight years. Smith, who had been a collector of the customs,

well knew their value, for he gained upwards of £10,000 by the contract.

In the year 1613 the customs amounted to £148,075 7s. 6d., of which London alone paid £100,572 18s. 4d. In 1666 they were farmed at £390,000; and in 1692 they amounted to £897,551. During the first half of the last century the customs remained nearly stationary, altiiough commerce had greatly increased. The late reign was one, however, in which great skill and ingenuity were displayed in inventing means to increase the revenue : and although the 'ofE-cial value of the goods ' is still computed, with reference, not to the prices they bear in the current year, but to a standard fixed so long ago as 1696, yet in 1798 a duty of two per cent, was levied on our exports, the value of which was taken, not by the official standard, but by the declaration of the exporting merchants.

The first house for the ' receipt of custom ' in London was built in 1385, by John Churchman, one of the sheriffs. This building appears to have been succeeded by another, which was destroyed in the great fire of 1666 ; a new cus-tom-house on a large scale was erected in 1668, at an expense of £10,000, which was also burnt down by fire in Thames Street, in 1715. Three years afterwards, another custom-house, more spacious in its dimensions, and more regular in its structure, was raised, in which the business was conducted, until a fire which broke out on the morning of the 12th of February, 1814, laid the whole building in ashes, destroying severa'l documents relating to the customs, as well as property to an immense amount. Two poor orphan girls, servants to the housekeeper, perished in the flames, and one man was killed by an explosion of some barrels of gunpowder in the vaults, which occasioned a shock similar to that of an earthquake. Previous to the destruction of the custom-house, which had be-come very inadequate to the increased business required to be transacted in it, the lords of the treasury had determined on erecting an edifice on a larger scale, and had actually adopted a plan, submitted by Mr. David Laing, the architect, under whose direction the present custom-house was erected.

The new custom-house, which is situated on the banks of the Thames, east of London Bridge, exteniis in length 489 feet, and in breadth 107 feet ; the grand front facing the river, from which il is separated by a terrace, is of Portland stone. The centre is quite plain to the height of the ground floor of the building ; but above the windows there is an entablature, divided into two compartments, ornamented with figures in ailo relievo. In one compartment the commerce and industry of the country, and the arts and sciences connected with them, are

allegorically represented ; and in the other the costume and cluuacter of the various nations witii which we

traffic are delineated. These groups are boldly executed ; and, the height of the figures being nearly five feet, they can easily be distinguished from the terrace. Between die entabl:itures is an inscription recording the date of tlie erection, surmounted by a large sun-dial, which is sustained by two recumbent figures of Industry and Plenty. Each wing has six columns of the Ionic order ; these give a grandeur to the edifice, which, on so extended a scale, might appear as carrying the simplicity of architecture too far. There is one great disadvantage in viewing the custom-house from the terrace, because it is much too narrow to include the whole building in one coup d'oeil; and it can only be seen to advantage from the river.

The interior of the building is admirably constructed. Tliere are necessarily several entrances to this noble pile ; the two principal ones are in Thames Street. They lead through halls rather commodious than large to the grand staircase, which, by a double flight of steps, leads to lobbies at each end of the long room. This room, which is in the centre, is 190 feet in length, and sixty-six in width ; it is divided into three quadrangular compartments by eight piers, surmounted by tliree domes, through which the rooms are ventilated. In addition to the long room there are upwards of 100 offices, appropriated to distinct branches of the business of the customs, as well as several private rooms. All the passages, lobbies, and the floor of the long room, except where the clerks sit, are of stone groined in brick. They are lighted by vertical lantern lights ; and the communication between the most important parts of the house is by iron doors, which slide into a groove in the wall, and are closed at night, when they atibrd a good barrier against accidental fire. The wliole building is well ventilated, and in winter is warmed by means of air-stoves. Several fire-proof rooms have been constructed, into which the books and most valuable papers are every night placed.

The first stone of the new custom-house was laid by the earl of

Liverpool, the first lord of the treasury, and the Right Hon. Nicholas V'ansit-tart, cliancellor of the exchequer, on the 2.5th of October, 1813; and tlie whole was finished, and opened for public business, on the 12tli of May, 1817, at an expense of nearly £200,000. Its foundations have, we are sorry to add, since given way, and it is now in a state of general repair.

The business ot the customs is under the direction of thirteen commissioners, two of whom fill tlie offices of chairman and deputy chairman ; a secretary, "clerks, and a great number of officers.

Connected with the commerce of London, in-deed of the whole country, is ttie noble institution of the Trinity House. This society was first incorporated by a royal charter of Henry '1II. the 20th of May, 1514, granting to the shipmen and mariners of the realm autliority to erect and estabiisTii a guild or fraternity, as well of men as of women, in the parish church of Deptford Strond, in the county of Kent, under the name and title of * the master, wardens, and assistants of the guild

or fraternity of the most glorious and undivided Trinity.' They were empowered to make laws and statutes among themselves, for the relief, increase, and augmentation of the shipping of England ; to levy fines or subsidies on offenders; to acquire lands and tenements to a certain amount; to maintain a chaplain, and to do and perform other acts of piety, and to enjoy all the franchises and privileges shipmen and mariners of the realm have used and enjoyed.

This charter was successively confirmed by Edward VI., queen Mary, and queen Elizabeth. The act of Elizabeth, after confirming to the society the general supervision of the buoys, beacons, and ballastage, enacts, that the corporation of the Trinity House may at their own cost make, erect, and set up any beacons and signs for the sea, on such places of the sea shore, or uplands near the coast, or forelands of the sea, only for sea-marks, as to them shall seem meet. The same act declares it penal to disturb those marks ; and further authorises the master of the Trinity house to licence mariners to row on the Thames. By another act, in the 36th ,of die same reign, the queen granted to the corporation the lastage and ballastage of all vessels upon the river, which was then held by the lord high admiral, lord Howard, who surrendered it for the purpose. Some defects in the preceding patents and acts induced James I. to grant a new charter to the corporation of the Trinity House, giving them more ample powers for their government.

Few chartered companies in the metropolis are of more importance to the commerce and naval power of the country than the corporation of the master and wardens of the Trinity House; to whom is entrusted, in addition to the authority over the beacons and sea-marks, the examination of the masters of the navy, the appointment of pilots for the river Thames, with power to fine, in the penalty of £20, every person who shall act as pilot without their approbation, — the settling the rates of pilotage, — the preventing of aliens from serving on board British ships without their license, — the punishing of seamen in the merchant-service for mutiny or desertion, — the hearing and determining of all complaints of officers and seamen in the merchant-service, subject to an appeal to the high court of admiralty,— the granting of licenses to poor seamen, who are not freemen of the city, to row on the river Thames; and the examination of the mathematical pupils in Christ's Hospital. Such are the duties of this society, which is also charged with the clearing and deepening of the river Tiiames, in which service sixty barges are employed ; and the supplying all ships that require it with ballast.

Tlie revenues of tlie corporation are dispensed in charity. Independent of dieir almshouses, upwards of 3000 decayed seamen, their widows and orphans, are annually relieved by this society, and the almshouses of the corporation are twenty-eiglit in number. There are also two hospitals at Deptford belonging to the society.

Its business is transacted in an elegant structure on Great Tower Hill, built of rortland stone. It consists of a rustic basement, but the general order of architecture is Ionic. The

interior displays much good taste and characteristic neatness, particularly the court-room, which is neat and spacious. It was built under the direction of Mr. Samuel Wyatt; the first stone was laid September 12th, 1793, and it was opened for business two years afterwards. The master of the Trinity House is usually one of his majesty's ministers, and not unfrequently tiie premier.

Breweries. — In no article of general consumption does London maintain so great a monopoly and supremacy as in the brewing of porter, which is not oidy forwarded to the most remote parts of the kingdom, but exported to our colonies,— to the I'nited States of America, and many of the continental states. So early as the reign of Elizabeth, the consumption of beer must have been very considerable; for in 1580 Sir Thomas Gorges, in applying for the office of gauger, stated to lord treasurer Burleigh that ' tliere was a deceit to the buyer of beer and ale, both in the assise of the vessels, and in the not tilling them up; and that the buyers taken altogether were deceived hereby £30,000 a year.' There is also evidence of the quantity of beer brewed in London, in a calculation made in the year 15B5 by order of lord Burleigh. It appears from this account, tliat there were at that time twenty-six brewers in the metropolis, of whom one-half were stated to be foreigners. They generally brewed six times a week, and the whole quantity brewed in London in one year, in small and strong beer, was 648,960 barrels.

Before we quit the ' olden time,' we may observe that the charge of adulteration, now so frequently made, w'as also urged against the brewers of the sixteenth century, who are said to have put ' darnel, resin, lime, and chalk, into the ale or beer, which making the drinkers thirsty, they might drink the more ;' and that, when hops were dear, ' they put into their drink broom, bay-berries, ivy-berries, and sucii like things.' It is due, however, to the brewers to say, that these charges were never verified by the surveyors.

Altliougli the excise duties, and the general introduction of tea and coffee, as a substitute for malt liquor at breakfast, must have operated for some time as a drawback on the consumption, yet it seems lately to have received a new impulse. In 1761 the quantity of porter made in London, by fifty-two brewers, was only 975,217 barrels, of thirty-six gallons each ; now a single firm, that of Barclay and Co., brews upwards of 330,000 barrels in a year; and the quantity made by the twelve principal breweries has amounted, in one year, to the astonisliing num-ber of 1,500,000 barrels. What proportion of this quantity is consumed in London it would be difficult to ascertain.

Some of the principal breweries are among the curiosities of London, which every stranger should see. That kriown by the name of Whit-bread's brewery, in Ciiiswell Street, the plant of which was a few years ago sold for nearly £1,000,000, was deemed worthy of a royal visit at a time that its business was not so extensive, nor its arrangements so complete, as at present. On the 2Rth of May, 1787, his late majesty, (I'corge III., accompanied by his illustrious con-

sort and the three princesses, and attended by several lords and ladies in waiting, visited this brewery.' That of Messrs. Barclay is on an equally magnificent scale. See Brewing.

The ale and small beer breweries, and the distilleries in London, are on a great scale, though inferior to the porter breweries.

The iiwniifui-lures of London are scarcely in proportion to its commerce. In the sUk trade alone, however, 50,000 persons, or one-sixtieth of the whole population, are said to be employed; and in most of tlie light manufactures the num-ber is proportionably great. It is no disparagement to the rest of the country, that London excels in its manufactures, since where the best price is paid the best workmen will be attracted ; and it is due to the country to say, that to it London is constantly indebted for a succession of artists and mechanics, by whose ingenuity she is not only rendered celebrated but enriched. See Silk.

Many years ago, Sheffield, justly celebrated for its culleri/, challenged London to a trial of skill, by sending a knife of a very curious construction to the cutlers' company, with an insertion on one of the blades, defying competition. The London cullers, ambitious for the honor of their trade, made a pen-knife, containing one well-tempered blade, in which was introduced a piece of straw. On the blade were some lines, stating the fact ; and the Sheffield cutlers, who might well feel incredulous, broke the blade, and found the straw entire and unsinged, — a piece of ingenious art for which they acknowledged themselves unable to account; and yet Sheffield was celebrated for its cutlery so far back as the time of Chaucer, whose monk ' a Sheffield whittle bore he in his hose.'

In the more scientific manufactures, such as machinery, optical and mathematical instruments, London has always been celebrated. It was in the metropolis that Mr. Penn made his celebrated burning-glass, of such power, that iron, steel, flint stone, and even the diamond itself, yielded to its almost magic power ; and here Dolkmd carried into effect, if he did not originate, that most important scientific discovery the achromatic glasses ; and a Mudge, an Ar-nold, and a Brockbank, made chronometers, which seem to have approached perfection, as far as it can possibly be attained.

It is highly honorable to the operative mechanics and artists of the metropolis, that amidst all the fluctuation of trade, 'such a thing as a

journeyman, tradesman, or any of his family, begging is almost unknown, and may with certainly be pronounced as one of the rarest of contingent events.'

Retail Traders. — A foreigner, in looking over a London Directory, and finding a list of between 30,000 or 40,000 trading firms, will be apt to consider the assertion of Buonaparte, that we are * a nation of shopkeepers,' true to the let-ter; and if he is informed that this list, numerous as it seems, does not contain more than one-third of the shopkeepers in the metropolis, he will suspect that there are almost as many sellers as buyers. Still more would a stranger be astonished at learning how lucrative a business shop-

keeping is in London — where u pastry-cook has been knovvn to die worth .£iOO,000, and a dealer in shell fish, who spent the best years of his life in selling oysters in public houses, has left to his heirs a sum of £40,000. Yet such is the case ; nor are these solitary instances of success in life. The list of individuals, who have risen from])0-verty and obscurity to high rank and splendid fortunes, would 'stretch to the crack o'doom,' and it is unnecessary to quote instances to show that in London the road to preferment, honor, and fortune, is open to the humblest aspirant.

That such fortunes are amassed in London is the more astonishing, when we considei the great expense with which large establishments are maintained ; that the rent and taxes of many a retail trader amount to more than £lOGO a year, and that tiie smallest house, if in a great thoroughfare, will let at the most extravagant rate. A shop, not more than three yards square, with a room above it of the same dimensions, has been known to be let as a snuff shop at a rental of .180 a year, and several other houses equally dear.

Of all the retail traders, the Haberdashers, though dealing in such small wares, seem to carry on business to the greatest extent. One single house in the city is known to take, on an average, £l,500,00U sterling a year, or more than 4000 guineas a day — one-half of this vast sum is received in cash for goods sold at the counter, and the other wholesale at a short credit. There are at least two other houses in the same business whose returns are £1000 a day. The proprietor of one of these establishments, which is necessarily large on account of the business being almost wholly retail, always gives the persons in his employment an extra allowance for supper when the receipts of the day amount to £1000 ; thus expressing his own gratitude, and rewarding and encouraging the exertions of those around him. Nor are haberdashers the only tradesmen who carry on extensive business, or amass large fortunes ; there is Exeter Change, long celebrated for its cutlery and hardwares. Sac, where the prince of retail dealers, the eccentric Thomas Clark, amassed £1,000,000 sterling, and while he paid £7000 a year to government as income tax, spent only a shilling on his own dinner.

About ten or a dozen years ago a number of es-ta])lishments somewhat similar to Kxeter Change, which is not confined to any one particular branch of trade, sprung up in London, to which the oriental term of bazaar was given, which literally means a market. Of these, only two re-main— the western bazaar, in Bond Street, and that of Mr. Trotter, in Soho Square. The latter is a very extensive and well regulated establishment. Several large rooms are fitted up with counters, drawers, shelves, &.C., for the sale of almost every species of light articles, where between 500 and 600 females attend and trade on their own account in the various articles of domestic manufacture. The price paid is in proportion to the space occupied. The utmost care is taken that none but persons of the strictest moral character are admitted, and that they shall not be subject to any insult from the idle and dissolute loungers of the other sex.

Two other marts for retail trade have been formed, the Burlington Arcade, in Piccadilly, and the Royal Arcade, in Pall Mall ; both are elegant architectural improvements, but they are too recently established to enable us to speak decisively of their success.

The streets most celebrated for retail trade are Fleet Street, Ludgate Hill, St. Paul's churchyard, Cheapside, the Poultry, and Cornhill, in the city ; in the Strand, King Street, and Henrietta Street, Covent Garden; Cockspur Street, Pall Mall, St. James's Street, Piccadilly, Oxford Street,

and Bond Street, at the west end of the town. The recent improvement, in opening a communication from Carlton House to the llegent's Park, has created a new and spacious street for retail business, called Regent Street and the Regent's quadrant, which has on each side a grand colonade.

Clarke ts and suppli/ of Provisions — Smith field is the grand mart for the sale of live stock, w lich is held on Mondays and Fridays. Newgate and Leadenhall markets take the le;id for butc er's meat, poultry, &c., although there are se eral other markets in various parts of the metrop dis, where the business is equally respectable tho igb not so extensive. Covent Garden market i celebrated for the early and abundant suppiy of fruits, vegetables, herbs, and flowers. The only fish-market in London is that of Bdlingsgate, which is supposed to have derived its name from Belinus, the son of Dunwallo, who built a gate here, which he ordered to be surmounted with an urn containing his ashes, after his death. It has long been a matter of regret that the sale of fish should be confined to one market, as, owing to the monopoly thus established, tiie supply of that article is neither so abundant nor so reasonable as it would otherwise be. In the mackarel season, if that fish is very plentiful, the dealers will rather throw their cargo overboard, or sell it for manure, than, by bringing it to town, re-duce the price. Salmon, which is often very plentiful, and sold as cheap as at Berwick, or in Yorkshire, and Durham, whence it is supplied, is brought to London packed in ice. Turbot, though caught in great quantities on the Yorkshire coast, and sold there at about 4d. a pound, is always extravagantly dear in London — so dear, indeed, as to render it a luxury attainable only by the wealthy.

The fruits and vegetab es consumed in the metropolis are principally produced in the environs ; and it is calculated that there are upwards of 6000 acres of ground cultivated as gardens within twelve miles of the metropolis, giving employment to 30,000 persons in winter, and three times that number in summer. It is the opinion of the intelligent author of the Poma-rium Britannicum, that gardening has conferred a great blessing on the metropolis, in the prevention of pestilential diseases, by making cleanliness a matter of profit, and giving a ready sale and liberal price for the soil, which might otherwise be sufiercd to accumulate.

Numerous calculations have been made of the annual consumption of food in the metropolis, but this is not easily ascertained, as, although we may know the number of cattle and sheep, yet

we have no means of learning their weiglit, which, by the modern improvement in feeding, has been considerably increased.

Of the quantity of cattle sold in Smithfield market there are hov/ever accurate returns ; and we find that, in the year 1822, the immbers were 149,885 beasts, 24,009 calves, 1,507,090 sneep, and 20,020 pigs. Eut tliis does not by any means form the total consumed in London, as large quantities of meat in carcases, particularly pork, are almost daily brou;4ht from tlie counties around the metropolis. It would a[)pear that the inhabitants of l.cmdoii have become more partial to mutton tiian formerly, for the quantity of cattle consumed has not increased m proportion to that of sheep ; the quantity of cattle sold at Smithfield in the year 1701, being 88,304, or more than half the number sold in 1822, while the number of sheep was 480,000, or less than a third sold in the latter year. The total value of the cattle sold in Smithfield is calculated at £8,500,000. It is supposed that £1,000,000 a year is expended in fruit and vegetables ; the consumption of wheat amounts to 1,000,000 of quarters annually; of this four-fifths are supposed to be made into bread, being a consumption of 04,000,000 of quartern loaves every year in the metropolis alone. Until within the last few years the price of bread was regulated by assize, and it may afford some idea of the vast amount of money paid for this ‘ staff of life,’ when it is stated, that an advance of one farthing on the quartern loaf formed an aggregate increase in expense for this article alone, in Lon-don, of upwards of £13,000 a week.

The annual consumption of butter in Lon-don amounts to 11,000, and that of cheese to 13,000 tons. Tiie money paid annually for milk is sup.posed to amount to £1,250,000, although the number of cows kept in the neighbourhood of the metropolis does not exceed 10,000. One grazier at Islington keeps between 600 and 700 cows, and another between 400 and

500.

The quantity of poultry annually consumed in London is supposed to cost between £70,000 and £80,000 ; that of game depends on the fruitfulness of the season and the kindness of country friends. There is nothing, however, more surprising than the sale of rabbits. One salesman in Leadenhall maikut, during a considerable portion of the year, is said to sell 14,000 rabbits weekly. The way in which he disposes of them is, by employing between 150 and 200 men and women, who hawk them through the streets.

It appears, from the Northumberland House book, that, in the early part of the sixteenth century, the stores for the household for a whole year were usually purchased at fairs. Far different, however, are the fairs held in the metropolis and its neighbourhood, where

raree shows are seen, and Punch's feats,

And pockets picked in crowds, and various cheats.

Three of these fairs were formerly held in the metropolis, Bartholomew fair, Southwark fair, and May fair; the two latter have been abolished, and the former shorn of much of its ancient

glory. SouthvTark fair commenced on the 8th of ISi.ptember, on which day the lord mayor and sheriffs were vront to ride in their scarlet gownsˆ after dinner, at two o'clock, to St. Magnus's church, where they were met by the aldermen. After evening prayer, they all rode through the fair as farasiNewin'4ton bridge, and tlien retiring to the bridge house they ' refreshed themselves with a banquet.'

Plays were enacted at St. Bartholemew fair, and Rich is said to have met willi Walker, the original Maciieaih, at this fair, playing in a booth : upon being struck with his talents, he engaged him for the Lincoln's Inn theatre. This fair used to continue for upwards of a week ; but in September, 1743 it was limited to three days, on which the proprietors of booths, who usually made a colleclioii for the prisoners in the Mar-shalspa, declared tliey could no longer afford it. This so incensed the prisoners, that they pulled up the pavement, and threw stones over the wall on the bowling-green adjoining the prison, by which a child was killed and several persons wounded. The high constables and magistrates now determined on putting down the fair; but proprietors of booths and stalls removed to the Mint, a place that had long claimed peculiar privileges on account of the palace which

formerly stood there, built by Charles Brandon, duke of Suffolk. Here the fair was held for some time, until, in the year 1763, it was entirely suppressed.

ˆ1(11/ Fair, which commenced on the 1st of i\Iay and continued for sixteen days, was held near Piccadilly and Park Lane, on the site now occupied by May Fair Chapel and the adjacent mansions, formerly called Brook Fields.

Buit/iultiwcw Fair, that annual scene of disorder, is still continued, though reduced in duration from a fortnight, to which it had extended, to three days, the time originally fixed ; and it is declining so rapidly that, in a few years, it will probably be discontinued altogether without any positive suppression, as has been the case with the fairs in the environs of London. Indeed some doubts are entertained of the legality of suppressing the fair, as it is held under a charter granted by Henry U. to the priory of Bartholomew, and confirmed by succeeding monarchs.

Two other fail s were held in London, in Tot-hill Fields, and at Stepney ; but these have been suppressed, as have those of Bow, Fdinonton, Brook Green, and West End, all in the immediate neighbourhood of London. There is another fair which, though at some distance from town, claims a notice on account of its popularity with almost all ranks in the metropolis. This is I'airlop fair, which is held on the first Friday of .luly, in Hainault forest. This fair was founded by Daniel Day, an eminent block-maker in Wapping, who, having an estate in Essex, used to assemble a few friends around him on the 1st of .July, under a huge oak in the forest, to dine on beans and bacon. Public curiosity was at length attracted to the spot from this circumstance, and a fair established which, in fine weather, is frequented by thousands from the metropolis.

Tfic Police. — In a large metropolis, such as

London, the subordinate l)rancli of the civil government, the police, is of tlie utmost importance; and, where this is not well organised, tlie inhabitants go unprotected, and crimes pass unpunislied. In France the police system is supposed to have attainec its greatest perfection ; but the domiciliary visits and the espionage that are there practised would

not be permitted in this country, where it is the proud boast of every man, that ‘his house is his castle,’ and that ‘he cannot be punished but by the laws.’

Of the municipal regulations of the city of London, from the time of Alfred to that ot the conquest, historians are not very communicative; but we learn that, when Henry L had aholisiied the obnoxious curfew, robbery and murders be-came frequent in the night. Hoveden, and Walter of Coventry, give us a lamentable picture of the metropolis at a period somewhat later. From these accurate historians we learn that, in 1175, a brother of the earl Ferrers was not only privily slain in London during the night, but that * it was then a common practice in the city, that 100 or more in a company of young and old would make nightly invasions upon the houses of the vvealthy, lo the intent to rob them ; and, if they found any man stirring in the city within the night, they would presently murder him, in so much that, when night was come, no man durst venture to walk in the streets.’ From the same historians we learn that, among the burglars and assassins of this period, there was ‘ a certain citizen of great consequence, credit, and wealth, surnamed John the Olde, who, when he cOuld not acquit himself by the water ordeal, offered the king 500 marks for his life.’

Intoxication also appears to have been an early vice in the metropolis; for Fitzstephen, a native of London, who was not disposed to slander his fellow citizens, after stating that ‘ there is no city that hath more approved customs, either in frequenting churches, honoring God’s ordinances, observing holidays, giving alms, entertaining strangers, and fulfilling contracts,‘adds, ‘ the only plagues are the intemperate drinking of foolish people, and the frequent fires.’

But, frequent as robbery and other outrages had become in the metropolis, it was not until the year 1253 that the protection of a nightly watch was thought of. To Henry III. we are indebted for this institution, and it was this monarch also who revived an old Saxon law, wbich is still partially in force, so far as relates to injuries committed by riotous assemblages, ‘that if any man chanced to be robbed, or by any means damnified by any thief or robber, he to whom the charge of keeping that county, city, or borougli, chiefly appertaine<l, where the robbery was done, should competently restore the loss.’

The pageant or cavalcade of setting the ‘ marching watch*, in addition to the standing watches was an imposing spectacle. It was dressed ‘all in bright harness,’ and traversed the principal streets in the city, to the extent of ‘ 3-200 taylor’s yards.’ The marching watch amounted to

2000 men ; but in course of time it got so relaxed in discipline, and so expensive lo the city, that it was abolished by Henry VHI. ;and, thougii afterwards revived by Edward VI., it soon sunk into disuse.

Elizabeth took the advantage of some riots 'to ajjpoint a provost martial, with sufficient authority to apprehend all such as should not be readily reformed and corrected by the ordinary otticers of justice; and, then without de-lay, to be executed upon the gallows, by order of martial law,' Nothing could be more summary than the process of the provost martial, Sir Thomas Welford, who rode through the city with a number of armed men, arrested all vagrants and idle persons, and five of these who were accused of a riot on Tower Hill, wcie condemned and executed on the spot where they had offended. The martial law of Elizabeth was not long in force, and the police of the metropolis, without undergoing any very violent change, lias ever since been improving, until it has attained its present state : which is so far from being considered perfect, that new regulations have very recently been made. The subject has of late years occupied much of the attention of parliament, and, in the session of 1822, a select committee was appointed to enquire into the state of the police of the metropolis.

In the metropolis there are eight police offices, independent of those of guildhall and the mansion-house in the city. At the mansion-house the lord mayor presides ; the aldermen attend in rotation at guildhall. lu order to the convenience of the magistrates, the city is divided into two districts. All cases which occur eastward of King Street are taken to the lord mayor, and all cases to the westward are referred to the sitting alderman at guildhall. The officers appointed to conduct the business of the police of the city, under the lord mayor and aldermen, are two marshals, at salaries of £500 and £450 a year ; six marshal men receiving £l 30 a year, each ; and 1099 patrols, watchmen, constables, &c., the expenses of which, in the year ending 1822, were £28.004 per annum ; but, as the returns were not complete, it is probable that it considerably exceeds that sum.

The number of parish constables, patrols, watchmen, &c., in the several |)arishes in the city of Westminster, and the counties of iMiddlesex and Surrey, within a circuit of five miles, is 2945 ; and the expense, so far as it was made out in the return to parliament, in 1822, was £66,700 S.s., making the whole number of local police in the metropolis 4044, independent of the horse and foot patrol, and the officers under the direction of the magistrates at the several police

offices.

At each of these offices, of which that at Bow Street takes the precedence, there are three magistrates, two clerks, and eight officers, with the exception of the Thames police office, where, instead of the eiuht officers, tiiere are seventeen surveyors, six land constables, and forty-five river constables, with six river surveyors, and twenty watermen employed above bridge, and at Black wall.

Under the superintendance of the chief magistrate, at Bow Street, there are the horse patrol, mounted and dismounted ; the foot patrol, and a clay patrol. The horse patrol was formed in the year 1805, in consequence of the frequency of highway robberies. It is stationed on the principal roads leading to the metropolis, and within

a distance of twenty miles. Tlie foot patrol was established in the time of Sir John Fielding, on account of the great number of footpad robberies : they were originally employed in traversing the principal roads within a distance of four miles from the metropolis ; but, in consequence of the great number of street robberies in 1821, it was deemed necessary to confine the exertions of the foot patrol within narrower limits, and to employ them in the streets of the metropolis, while a body of what is called ‘ the dismounted patrol’ was employed in the suburbs. Since that time, an active day patrol lias been established, at the suggestion of the parliamentary committee, which has already proved of great service in preventing and detecting the more open depredations committed in this great city.

Numerous as the various branches of the police are, and great as the expense is at which it is maintained, it is yet susceptible of improvement ; not only in its general constitution, but in its details. In consequence of its being under the control of different and unconnected authorities, there is a want of that union which is necessary to a well regulated or complete system of police. It is also desirable that the watchmen should be more efficient than they are at present. They are principally old men, or men who, on account of the

small allowance for their nightly duties, are compelled to work in the day ; and thus they doze when they should possess the eyes of Argus, for

■ Weariness

Can snore upon tlie flint, when resty sloth

Finds the down pillow hard.

Coachei; and sedans. — We read of whirlicotes or open chariots at an early period of ancient history : but the covered coach, which is a luxury of modern invention, was not known in England before the reign of queen Elizabeth.

In 1625 captain Badey, an old sea officer, first set up coaches to ply for hire, which were hence styled hackney coaches, and not as some have supposed from their having been chiefly employed in conveying the citizens to their villas at Hackney. lie began with four, whose customary station was at the Maypole in the Strand, where the new church now stands. The drivers were dressed in elegant liveries, and left in tliis respect an example which their successors might do well not so entirely to disdain.

In 1G35 the number of hackney coaches had so much increased as to be regarded in the light of a nuisance by the court. In that year there was an order passed by the king in the star chamber which proceeds in tliese terms : — ‘ His majesty, perceiving that of late the great number of hackney coaches was grown a STcat disturbance to the king, queen, and nobdity, through the streets of the said city, so as the common passage thereby was hindered and made dangerous, and the rates and prices of hay and provender and odier provisions of the stable thereby made exceeding dear, hath thauaht fit, with the advice of his privy council, to pulilish ins royal pleasure for reformation tljeroin ‘ His majesty then commands that ‘ none should be used therein except they be to travel at the least three miles out of towfi, and that no person should go in tliem except the owner constantly keep, within the cities or suburbs, four sufficient able horses or geldings fit for his majesty’s service, whensoever his occasion shall require them.’

Two years after, however, Charles had so far chanered his views that he granted a special commission to the marquis of Hamilton, master of the horse, to license fifty hackney coachmen in and about London and Westminster, with liberty to each to keep twelve, but not more, good

horses for the purpose of tlieir business. The number of hackney coaches required at this time would seem, from the number of horses allowed to each coachman, to have been about .300. At present, for the regulating of hackney coaches and chairs in London, there are several statutes, *viz.* : 9 Ann. c. 23, made perpetual by 3 Geo. I. c. 7, and enlarged as to the number of coaches by 1 1 Geo. III. c 24 : 42 Geo. III. c. 78, so as to make the whole number to be licensed 1100, and enlarged also as to chairs by 10 Ann. c. 19. and 12 Geo. I. c. 12, making the whole numbei of those 400. By 48 Geo. III., c. 87, the fares were increased.

By 54 Geo. III., c. 147, 200 hackney chariots were allowed to be licensed as part of the 1100 ; and, by 55 Geo. III. c. 159, 200 additional hackney chariots were allowed, and several regulations made as to the fares. The other statutes now in force are, 12 Ann. stat. 1, c. 14 : 1 Geo. I. c. 57: 30 Geo. II. c. 22 (see Carts): 4 Geo. III. c. 36 : 7 Geo. III. c. 44 : 10 Geo. III. c. 44: 11 Geo. III. c. 24, 28: 12 Geo. III. c. 49: 24 Geo. III. Stat. 2, c. 27: 26 Geo. III. c. 72 : 32 Geo. III. c. 47.

Population. — L'litil the general census of the population v'as taken, in 1801, political economists differed widely in their estimates of the number of inhabitants the metropolis contained, and of the progressive ratio of increase. In the year 1377 London is said to have contained about 35,000 inhabitants. Howell, in his Londinopo-lis, says that, when Charles I. wished to ascertain the number of papists and strangers resident in the city, he sent a precept, in 1636 — 7, to Sir Edward Bromfield, then lord mayor, who caused a census to be taken of the whole population within the city walls, which at that time is said, tliough erroneously no doubt, to have amounted to 700,000. Howell, having no suspicion of the inaccuracy of this calculation, and inferring that the population had increased one-third, during the twenty years that had elapsed before he published his work — and adding to this the population of the city of Westminster and the suburbs, estimates the whole to amount to 1,500,000 of men, women, and children.

Sir W'illiam Petty, whose knowledge of political economy must ever entitle him to respect, formed an equally fallacious opinion as to the increase oˆ population in London. In 1682 he calculated the number of houses at 84,000; and that there were eight persons in each house, which would give a population of 672,000. Sir William expected that London would go on increasing until the year 1800, when he thought tie population would amount to 5,359,000 persons !

An historian, who wrote in 1746, calculated

the number of houses ai 124,000, and the population at 992,000; but Dr. Bra ken bridge, eight years after, fixed it at only 751,812 persons, and there is strong reason to believe that this estimate was nearly correct.

But, to come to more certain data, we find that, according to the census of 1801, London at that time contained 121,229 houses, inhabited by 216,073 families, making 864,845 persons. In 1311 it had increased to 1,099,104; and, in 1821 to 1,225,960 persons. Tlie last census is very minute in its details, and perhaps as accurate as it can well be made. It states that tlie city of London, within the walls, contains 7938 houses, inhabited by 11,571 families, or 56,174 persons, of whom 27,506 are males and 28,668 females. Two families are stated to be employed in agriculture ; 9609 in trade or manufactures, &c. : and 1960 families not comprised in either of these two classes. Thirty-two houses were building, and 560 uninhabited.

The city without the walls, including the inns of court and chancery, comprises 9232 houses, inhabited by 16,497 families, of whom fifty-five are employed in agriculture, 11,592 in trade, &c.,and 4850 families in neither trade nor agriculture. The number of males is 34,441, and of females 34,819, making a total of 69,260. Seventy-three houses are returned as buildmg, and 455 as uninhabited.

The city and liberties of Westminster contain 18,500 inhabited houses, 382 uninhabited, and 391 building. The population consists of 41,558 families, or 182,085 persons, of whom 85,082 are males and 97,003 females. Of the families, 308 are engaged in agriculture, 25,126 in trade, and 16,120 in neither the one nor the other.

The borough of Soutiiwark contains a population of 85,1‘05 persons, of whom 41,690 are males and 44,215 are females. The number of houses inhabited is 12,477; the families 21,207, of whom 272 are employed in agriculture, 15,075 in trade, and 5860 are not comprised

in either of these classes. In 1821 there were 208 houses building, and 502 uninhabited.

A considerable portion of the population of the metropolis does not, however, come under any of these divisions, but belongs to what may be called the suburbs in the hundred of Ossul-stone, which is classed into four divisions : Finsbury, Holborn, Kensington, and the Tower. These parts of the town are every year rapidly increasing ; and, at the time the last census was taken, not fewer than 2260 houses were building in this hundred, of which upwards of 1000 were in the Tower division alone. While the population rapidly increases, in every other part of London, it decreases in the city. In 1701 it amounted to 139,300, in 1750 to 87,000, and at the la:t census did not exceed 56,174 persons

London Missionary Society. — The formation of this religious institution, whose object is the dissemination of Christianity throughout the world, may be dated about the year 1794. The .extensive plan of benevolent exertion proposed might have impressed many minds, and occupied many hearts at the same moment ; but it is the province of the historian to collect and present to the reader those facts and events which made known to the world the grand design of the projectors, and called the attention of the people at large to the moral necessities of their fellow-beings. In this view the public voice has given to the late Rev. David Bogue, an independent dissenting minister at Gosport, the proud and honorable title of the Founder of the London Missionary Society. Three years before the rise of this institution Mr. Bogue made a vigorous effort to gain attention to this benevolent object ; for in a discourse which he preached at Salters' llall, jˆondon, in 1792, before the correspondent board of the society in Scotland, incorporated by royal charter for Propagating Christian Knowledge in the Highlands and Islands, we have a most perfect specimen of a missionary sermon. About this time a conversation with one of his hearers, the widow of his predecessor the Rev. Mr. Williams, was followed up on her part by sending a small sum as her first contribution towards this object, which she pressed him immediately to undertake. The daughter of this lady, wiio wrote some of the first missionary hymns, used to exult in say-ing that if Mr. Bogue was the fatiier, Mrs. Williams was the mother of the Missionary Society. But a visit made by Mr. Bogue to Bristol, in

August 1794, to preach at the tabernacle, erected there by the celebrated Whitefield, gave rise to the actual determination to unite the various bodies of Christians in the grand and benevolent scheme. There Mr. Hey, pastor of the independent congregation at Castle Green, Bristol, joined with Mr. Bogue and Mr. Steven, minister of the Scotch church at Covent Garden, London, who was Mr. Bogue's colleague in the tabernacle pulpit at this time, to attempt to rouse the public mind to the neglected duty. In j)ursuance of this object Mr. Bogue inserted in the Evangelical Magazine for September, 1794, an address to those evangelical Dissentersjwho practise infant baptism ; which produced a powerful effect, and the attention of Christians was kept alive by constant reference to the subject in the same magazine. The associated ministers of Warwickshire, through their organ. Dr. Edward Williams, then minister at Carr's Lane, Birmingham, and afterwards president of the independent college at llotherham in Yorkshire, were among the first echoes to this awakening voice. Dr. W. had previously made an effort to gain the cooperation of his brethren in the grand cause.

But a meeting had been held in London, at the Dissenters' Library, Red Cross Street, wliere a conversation took place between the Rev. .1. Eyre,of llomerton, and several Scotch ministers in London, Messrs. NVaugh, Love, and Steven, on a publication by the Rev. M(jlvillc Ilorne, to rouse attention to missions. Mr. I'-yre, on his return from the library, called on the Rer. Matthew Wilks, minister of the Tabernacle, yMoor-fields, and communicated to him the conversation. These two ministers resolved to meet airain

and each to bring a friend with Iiini. Their number having augmented to seven or nine persons, ihey agreed to meet once a fortnight at the Castle and Falcon in Aldersgate Street, for prayer and reading of the Scriptures on tliis subject. After several meetings they gave publicity to the affair ; addressed Mr. Bogue on tlie bul)ject, and invited leading men in the several counties of the kingdom to co-ojierate.

In the month of July 1795 the Evangelical Magazine announced tliat a

meeting would be held in London, in September, to form a missionary society; and a circular letter was extensively dispersed among ministers both in town and country.

On Monday morning, September the 21st, several ministers met at the Castle ami Falcon, Aldersgate Street, to make preparatory arrangements. They opened a subscription, amongst themselves, amountuig to £740. In the evening a general meeting was held in the same place ; at which Sir Egerton Leigh, Bart., presided ; and, cordial cooperation being tendered from all quarters, the formation of the society was determined. On Tuesday morning, September 22d, a numerous assembly, including about 200 ministers of different denominations, met at Spa F'ields chapel, where Mr. Haweis, rector of Aid-winkle, preached from I\Iark xvi. 15, 16. After the service a kind of constituent assembly was held in the area of the chapel. Mr. Kingsbury, of Southampton, was chosen moderator, and a committee, consisting of Messrs. Bogue, Eyre, Greathead, Haweis, Hay, Hill, Kingsbury, Lambert, Love, Reynolds, Saltern, Steven, and Waugh, were appointed to bring forward the plan of the new society. In the evening Mr. Burder of Coventry preached in the Scotch church. Crown Court, Covent Garden, from Jonah iii. 2. The next morning Mr. Greathead, of Newport Pagnel, preached at Haberdashers' Hall, on the question ' Who is my neighbour?' In the evening Mr. Iley of Bristol on Ephesians i. 10. On Thursday morning Mr. Rowland Hill preached at Surrey Chapel on Matthew xxi. 14; and the last public service was at Tottenham Court Chapel, on Thursday evening, when Mr. Bogue preached from Haggai i. 2. In the afternoon of Friday, September 25th, the general meeting took place, for the last time, at the Castle and Falcon. The Rev. Mr. Percy having been called to the chair, and the blessing of the Almighty solemnly invoked, Joseph ilardcastle, esq., a merchant of London, was nominated treasurer. The meeting then proceeded to the election of twenty-five directors, and the following gentlemen were unanimously chosen : — The Rev. iNIessrs. Bogue, Boden, Brooksbank, Burder, Eyre, Greathead, Haweis, Hey, Hill, Lambert, Legh, Love, Mends, Parsons, Piatt, Reynolds, Steven, Waugh, and Wilks ; also, Messrs. Foyster, Neal, Stokes, West, John Wilson, and Thomas Wil-son. The following gentlemen were afterwards added, with the entire approbation of the society. Rev. Messrs. Audley and Saltern, and Messrs. Alday, Campbell, Cowie, Steven, and Taylor. Tiie Rev. Mr. Love and Mr. Shrubsole were elected secretaries. At the first meeting of the

members of the society it was resolved to recommend and

countenance public meetings for prayer, to be held on the evening of the first Monday in every month. This recommendation lias been received and practised to a great ex-tent ; and to maintain these monthly meetings has become the usage of Christians in almost every part of the British empire, in various parts of the continents of Europe, Asia, Africa, and America, and in many islands of the sea.

The admirable simplicity which characterised the constitution of this society was adapted to render it popular : as its object was to send the gospel to the heathen, and the ultimate end proposed the conversion of the world to God by the diffusion of the truths of Christianity, the code of laws ibr the regulation of its members and affairs was considered as made by the great head of tlie church, and contained in the New Testament : it therefore recognised no worldly alliances, it placed the members of the society under no president but him who is head of the church, and anxiously avoided every political and ecclesiastical party in the kingdom, while from the catholicity of its fundamental principles it opened the door and invited the cooperation of tiie wise and wealthy of every communion.

When such a scheme was proposed it was not only natural but right that persons should hesitate and enquire before they decided, when it is considered how far the different denominations had previously stood from each other, how frequently they spoke of the defects of each other's system, and how warmly they eulogized the excellencies of their own, how little intercourse had existed between them, and how perfectly novel was the experiment of uniting Episcopalians, Presbyterians, Independents, and others, in one active and harmonious society, without acknowledging the peculiarities or superiority of any of them : it is indeed no matter of surprise that • such a scheme should to the minds of some have appeared absurd and impracticable ; but the experience of the Society has confirmed the reasonable expectations of its projectors, and it has long enrolled upon its lists active and zealous Christians of nearly all communions. As it became generally known, auxiliary societies were formed in different parts of tlie kingdom, and thus by tributary streams the tide of life flows onward and forward to fer-tilize the desert and solitary place. After a series of years had elapsed, during which the society had become thoroughly aware of the difficulties which were presented to the success of its labors by the language, manners, and peculiarities of heathen nations, it was determined to establish a seminary or college for the purpose of qualifying young men for the special work of missionaries. At first the directors cheerfully received and sent out those pious men whose zeal constrained them to offer their services to the cause ; but time and reflection produced an almost unanimous

opinion that a seminary was absolutely requisite for the credit and success of their labors. Gosport was chosen as the appropriate spot whereon to commence this iniititution ; and in selecting the Rev. Dr. Bogue, as the first tutor, the conduct

of the directors was marked Ijy equal wisdom and kindness; his capacious mind, sound judgment, religious heart, and ardent zeal, rendered him eminently valuable in such a station. For nearly thirt)' years he presided over t'.ie seminary ; and at his deatii it was removed to Iloxton, and is now under the superintendence of the Rev. Dr. Henderson, whose labors for the British and Foreign Bible Society, in Russia, form so conspicuous a part of the history of that institution. The society tlms formed, and prepared for use-ful service, selected the South Sea Is/u7uls as the first scene of its benevolent labors, amongst a race of' people in the most deplorable state of ignorance, and wliose beautiful country was filled with habitations of cruelty ; subscriptions to a considerable amount were raised for this purpose, a committee of examination formed; and, a number of zealous persons having tendered their services, on the 16th of August, 1796, thirty missionaries, with six women, and three children, embarked from London on board the Duff, a vessel purchased by the society for £5000, commanded by captain W'ilson. After various delays and disappointments they sailed from England on the 25tb of September, and arrived at the harbour of liio Janeiro: here they refitted, and procured a variety of seeds and plants which it was supposed would be use-ful for cultivation at Otaheite. The latter part of the voyage was attended with considerable danger. At length, however, on Saturday, the 4th of JNIarch, the island of Otaheite was discovered at a considerable distance, and by seven o'clock the next morning they got abreast of the district of Ataboroo. They were received by the inhabitants with astonishment and apparent delight. A solemn service of thanksgiving was performed, at which the natives behaved with great quietness and attention. The Duff then proceeded to anchorage in Matavai Bay ; and a few days after their arrival captain Wilson obtained an interview with Otto, the king, and stated to him the object for which they had visited his island. A house was now given to the missionaries, and as much land as they thought proper ; the next day they went ashore with their beds, chests, &c., and took possession. On the following Sunday the brethren directed the attention of the

people to the object of their mission, and Mr. Jefferson addressed them tiirongh the medium of an interpreter; some of them enquired whether the messages of God were sent to the servants as well as the king and chiefs. They replied in the affirmative. Otto the king was present on the occasion, but the discourse did not appear to make any impression upon him. The next Sunday Kelso and Harris, who had chosen the islands of Tongatoboo and Christinia, were solemnly set apart to their work at the mission house, and the sacrament of the Lord's supper administered, the 1)read fruit of Otaheite being used as the symbol of the body of Christ.

The first effort of the brethren was made to prevent the destruction of new born infants, by proposing to take every child that had been born amongst a society called Arroies, where this habit prevailed, into their own care, and provide a

house for the mothers during confinement. "I'hcy succeeded in some degree. Anxious to imjart the blessings of civilisation, the missionaries began early to initiate the Otaheitans in the most useful arts : they therefore constructed a saw-pit, and in the month of April completed the erection of a forge. This caused great astonisliment and some fear. Pomarre, the king's son, who was present, was so completely charmed, that he caught the blacksmith in his arms and joined noses with him, as a sign of his highest satisfaction. Captain Wilson having conveyed some of the missionaries to the islands of Tongatoboo and Christinia now returned to Otaheite, and, finding the brethren most hospitably treated, bade them farewell and arrived in England in the beginning of July, 1798.

On receiving the gratifying intelligence of the first successful voyage, the directors, at a special general meeting, resolved to employ a ship belonging to the society in anotlier voyage to the Pacific Ocean, to supply the brethren with assistance in their arduous undertaking; they in consequence sent ten married couples, seven children, and 419 single brethren. On this occasion captain Robson commanded ; they embarked in October, and were detained at Portsmouth several weeks by contrary winds ; at length on the 20th of December they weighed anchor, and sailed under convoy of the Amphion frigate. On the 2d of January, 1799, they lost their convoy, and the following day were alarmed by the appearance of a strange sail ; this proved to be an American brig. On the 19thof February when they came insightof

Cape Frio, and expected to anchor in a short time at Rio Janeiro, a strange vessel which liad been rapidly approaching fired a gun to bring them to. This shot was soon succeeded by a second ; and the result was a communication to the captain of the Duff, that his vessel was a prize, and that all her men must instantly quit her, and place themselves at the disposal of the enemy ; the vessel in which they were now confined was a French privateer, and they soon learnt that the Duff could not be ransomed, as she was to be taken to the Spanish port of Monte Video in South America : a second and third prize captured, they sailed irnmediately and entered the Rio de Plata on the morning of the 12th of March. Here they met their several families who had been brought thither in the Duff. During tiiese detentions they were treated with every possible civility ; until a passage was procured for them to Rio Janeiro: whither, after tlie lapse of a month, they had nearly arrived, when they were doomed to suffer a second capture, owing to the Portuguese vessel in which they sailed, having been purchased without having been regularly condemned. There they suffered considerable hardships, being divided into two parties, those on board the Amazon were treated with great humanity, while the brethren onboard the Medusa were at the mercy of unfeeling and brutal tyrants. After some severe gales, and giving chace to several strange vessels, they arrived at Lisbon on the 22nd of September obtained tlieir liberty, and with the exception of one female, who died and was buried there, they all returned to their native land safelv.

We now revert to tlie affairsofOtalieite, where a circumstance had occurred which induced most of the l)relhren to ab.indon the scene of tlieir hibors. Early in the month of iMarch, 1703, the ship Nautilus anchored in the Matavai Bay to undergo repairs and take in water, when two of the seamen and five natives of Owyhee who happened to be on board escaped, and concealed themselves on the shore. The brethren were prevailed upon to send a deputation to the king that the fugitives might be delivered up. On tiiis occasion they were surrounded by about thirty natives, and some of them stripped and maltreated : one narrowly escaped assassination. They however

arrived in the evening of tlie day at the u.ission house, to the great joy of the brethren wlio had heard of the outrage: the next day an offering of atonefnent was presented with a promise to restore the articles of wiiich tiiey had been plundered ; eleven of the missionaries, however, conceiving their lives to be in imminent danger, had agreed with captain Bishop of the Nautilus to convey them to Port Jackson, whither they arrived after six weeks voyage. Here, however, more severe trials awaited some of them ; one was robbed and dangerously wounded, another inhumanly murdered in the vicinity of Syd-ney. Thus was the aspect of the Otaheitan mission rendered extremely gloomy ; but, notwithstanding the departure of their brethren, seven of the missionaries continued at their post.

Twelve new missionaries were sent out in the Royal Post Admiral, a ship with convicts for Port .lackson; during the voyage a putrid fever broke out amongst tliem, to which about forty persons, including Mr. Taylor the surgeon, and one of the brethren, fell untimely victims ; the rest arrived in safety at Otaheite on the 10th of July 1801. In the beginning of the year 1802 the missionaries were able to]jreach in the language of the country, but at first without apparent effect ; on the ;}d of September, 1803, Pomarre died almost suddenly, and the death of so powerful a protector excited many apprehensions ; they, however, received the assurances of the new king and his mother of every protection. During 1804 and 1805 the missionaries continued to preacii the gospel : they also began to form a regular Otaheitan vocabulary, comjirising upwards of 2000 words, and applied themselves to the instruction of the native children ; the king, who on the demise of his father assumed the name of Pomarre, under the instruction of the missionaries learnt the art of writing, and in 1807 composed a letter to the Missionary Society in London.

The most interesting results followed the la-bors of the missionaries in this island, notwithstanding the repulsive and discouraging circumstances which attended the commencement of their labors. A rebellion having broken out in Ma'ivai, in November 1808, six of the missionaries with their families retired to Huahine in a brig which happened to touch at Otaheite, and the remaining four, Ilayward, Nott, Scott, and Wilson, continued with the king; they all, however, excepting Nott and Ilayward, subsequently retired to New South Wales ; and the mission to the Soutli Sea Islands was to all outward appear-

ancefinally given up; but, during their residence in New South Wales, Pomarre wrote repeatedly entreating them to return; which,

tnuKjuillity being restored between him and his subjects, they accordingly did. This was the dawn of that brigiit day, which was to shed the light of Christianity on these benighted people. On their return they found that the king had cast away his idols and observed the Christian sabbath ; that he entertained clear views of the gospel ; expressed great contrition for his former errors; exerted his influence to convince his relatives of the error of their superstitions, and was extremely anxious to erect an edifice for the worship of the true God. lie moreover was very desirous fo make his public profession of faith by receiving C'luistian baptism : this, however, was prudently deferred for some time that he might be more perfectly instructed in the truths of revelation. During the years 1813, 1814, more than rifty nations renounced their idols and desired to be considered as worshippers of Jehovah. Messrs. Nott and Ilayward now visited the islands Huahine, Ilaitea, and Taha, and at the former place a young chief abjured his false gods and professed his faiti).

In 181 J liie congregation at Gimeo was increased to about 300 ; conversions to tiie Christian faith, and the destrudion of idols, went on rapidly at Gimeo, Otaheite, Raitea, Huahine, and Tapua Mann, and at the commencement of the year 1818 fifty places of worship had been erected. On the 13th of May, 1818, a general meeting was convened in the district of Papetoia, Eimco, in imitation of the meeting held in Lou-don, when about 2000 of the natives assembled and formed an Otaheitan Auxiliary Missionary Society ; shortly after this interesting meeting the brethren, who had recently arrived from England, were conveyed to their several stations in the A'indward and Leeward Islands.

The month of May 1819 was a season replete with pleasure at Otaheite; the king had erected a very extensive building at Papara, in tiie district of Para, and devoted it to the meeting of the Missionary society; it was called the Royal Mission Chapel : it is 712 feet long, and fifty-four wide ; the middle is supported by thirty-six massy pillars of the bread fruit tree, and the outside pillars are 280 ; it has 133 windows with sliding shutters, and twenty-nine doors, the ends are circular; there are three square pulpits about 200 feet distant from each other ; it is filled with forms, except an area before each pulpit, and laid with clean grass : the rafters are covered with a fine kind of fringed matting, which is neatly bound with cords of various colors ; the whole building is surrounded with a strong fence of wood ; the space between it and the building being filled up with gravel. After a preparatory meeting: on the 10th, the Royal Chapel was opened on the 11th by three services at the same time; the king was present ; the whole congregation stood up and san?. On Thursday the r2th the new

laws were publicly]u-omulgatcd in the centre of this chapel by the king in person, and unanimously approved by the raising u]) the right hand. On Eriday, the 13th, die 7iew Missionary Society met in th" "hapel : — the king as pre-LONDON M I S S I O N A R Y SOCIETY.

sident, ami all the governors, officers, and members. On Sunday, the 16th, the congregations assembled again for divine service, and the king was publicly baptised, and received an address entreating him to walk worthy of his high profession. After the service, Pomarre shook hands affectionately with all the missionaries, who were stationed by his desire on his right and left hand ; he then returned to his camp.

In May, 1821, the Rev. D. Tyerman and George Bennet esq., were deputed to visit these islands and ascertain the state of the mission ; and on the 21st of Sepember they arrived safely at Otaheite. Their report was of the most favorable kind ; civilisation, instruction, and translations were all going on admirably : but during their visit king Pomarre was taken ill, and on the 7th of December Mr. Crook one of the brethren v/as sent for, and arrived in time to speak a few words, witness his departure, and listen to his last words. He reminded the king that Christ was a great Saviour, and could alone support in the article of death. The king replied emphatically, ' Jesus alone,' and sunk into a stupor, which terminated his life in a few hours.

Tongatoboo. — After the first missionaries were landed at Otaheite captain Wilson sailed for the Friendly Isles, and on the 10th of April, 1797, the Duff was moored in the harbour of this is-land; and on the 12th ten missionaries took up their residence in a house prepared for their reception : here, however, three were murdered by the natives, the remainder departed to Port Jackson in January 1800, and with one exception subsequently arrived in England. After captain Wilson had settled the missionaries at Tongatoboo, in 1797, he sailed for St. Christina one of the Marquesa Islands, with two of the brethren who had chosen it as the scene of la-bor; one however, disgusted with the people and place, refused to remain, and Mr. Crook a devoted and vilified missionary was left alone to pursue his work in this island. He remained seven months and returned to England in May 1799, thinking that he might render the best service to these islands by representing their real state to the directors.

It may here be worthy of observation that, at the commencement of the operations of the society, the directors expressed their intention of sending the tidings of salvation to the inhabitants of the Sandwich Isles; but the probai)ility of so doing was precluded till the visit of tlie dejiutation to the South Seas, where those wiio had been appointed to a different station were irresistibly led to this scene of usefulness. Mr. Ellis communicated these particulars in his letters to the directors in London : he went to reside there at the earnest invitation of the king and chiefs, as well as some American brethren, wlio were already settled in this extensive field of la-bor. This took place in February 1823 : in the autumn of tite same year the king, Tamehamcha, resolved to visit his Britannic majesty, and embarked in November being accompanied by liis vjueen Kameliamara, a chief named Boki and his wife with others. Previously to their introduction to the king, however, both Tamehamelia and his consort were seized with the measles,

and died within five days of each other : their bodies received a temporary interment in St. Martin's church, but were afterwards conveyed by the Blonde to their native land.

South Africa and its adjacent islands. — Encouraged by their success, in the islands of the Pacific, the London Missionary Society were led to direct their attention in the next place to the continent of Africa; notwithstanding the failure of an attempt in conjunction with other societies to establish a mission in the country of the Fou-lahs, and the colony of Sierra Leone. The subsequent conquest of the Cape of Good Hope by the arms of his Britlannic majesty seemed to present a favorable opportunity of access to the extensive regions of South Africa ; but the natural obstructions to their success were very numerous and great. The number of nations and tribes into which the whole population is divided — their perpetual variances and wars — their indolent and wandering habits — the sterility of vasˆ districts — the uncertainty of the climate — and the frequent and long continued droughts, all combined to impede the establishment of Christian churches, and their advancement in civilisation. Much, however, was done in the discovery of what is necessary to be done; and when the number of direct instances of usefulness are collected and brought into one view it will appear very satisfactory and encouraging. Dr. Vanderkemp, the son of a worthy minister of the Dutch church, in Rotterdam, being converted and called to the work of the ministry, was induced to offer his services to the society, and in company with the Rev. Messrs. Hickerer Edmonds, and Edwards, sailed for the Cape

of Good Hope in the month of December, 1798, on board a_transport vessel laden with convicts forNew South Wales. It was the choice of the brethren to go in this vessel that they might commence their benevolent labors amongst the most miserable and abandoned of their fellow creatures ; they were during the voyage exposed to great personal danger from the refractory character of the prisoners ; but they became instrumental in doing much spiritual good to these wretched victims of depravity and crime : their lives also were in great jeopardy from a violent storm, but they arrived safely at the Cape and were received with great cordiality. A favorable opening soon occurred to introduce the gospel among the Boschmen, a savage and cruel nation of Hottentots, and Messrs. Hickerer and Edwards were deir.ied to this walk, while Dr. 'aiiderkemp and Mr. Edmonds should pursue their original plan of endeavouring to plant the standard of the cross in Cafiraria. Dr. 'anderkempand his colleague loft Cape Town on the 29th of INIay, and bcinj. furnished with letters of recommendation to tht landrost proceeded to Graaf Reinet. There they remained a few days, then resumed their journey to the frontier of Caffraria, and after a toilsome and dangerous route reached the residence of Gcitlia the king, on the 20th of September : after some disputes relative to their continuance the king granted them a tract of land on the other side of tlic river Keiskamina, and on the 20th of October they took possession. In December, however, not considering themselves safe in Caf-S 2

fraria, the colonists resolved to escape, and Dr. Vanderkeinp accompanied llieni ; they arrived on the 14th of May 1801 at Graaf lleinet, where two new missionaries were anxiously awaiting the arrival of Dr. Vanderkemp to whose assistance they had been sent out : here they remained till fresh outrages and internal commotions led tlu-m to quit Graaf lleinet in I'cbruary 1802, and they proceeded with lO'J Hottentots undA the escort of major Sherlock, to Bota Place in the vicinity of Aigoa Bay, where they had apparently reason to hope for a permanent settlement. But hence also they were obliged to flee, and they removed to Fort Frederick. The Cape be-in" now restored to the Dutch, they waited here till the new government should assign some other spot for their residence ; and on a visit from the new governor, in April 1803, he kindly assigned them a tract of land for a settlement about seven miles northward of Fort Frederick in the vicinity of a small river, which the Hottentots call Kooboo.

On their arrival at this new station Dr. 'anderkemp gave it the name of Bethelsdorp, or the village of Bethel : here they planted gardens, erected a temporary church, and houses for their own accommodation ; and, in the beginning of July, commenced public worship and opened a school. Their labors were rendered successful in general, and especially in the conversion of Cu-pido, Boezak, and Sampson : but, in the nˆonth of April 1803, in consequence of false representations and unfounded charges made against the missionaries by the Dutch boors, the governor sent for Dr. Vanderkemp, and he and Mr. Read repaired to Cape Town, and were detamed there till January 1806, when the British once more took possession of the colony. Sir D. Baird now sent for Dr. Vanderkemp, and treated him with marked respect : he soon afterwards gave the Dr. permission to return by sea to Bethelsdorp, and both himself and Mr. Read were received by their people with every demonstration of joy. In Aprill81 1 Dr. Vanderkemp and ˆIr. Read were summoned before an extraordinary commission, appointed by the governor at Cape Town ; and comnuinicated to the commissioners more than 100 cases of Hottentots said to have been murdered. On the 13th of September five German brethrenˆ with a converted black from Demerara, arrived in safety at the Cape, and were gladly received. They were considering on an arrangement for the disposal of the missionaries, when they were visited with the distressing loss of their venerable and apostolic friend Dr. A'anderkemp, who died on the loth of December, 1811.

In consequence of this event, and the increasing importance of these stations, the society deputed one of their ov/n body, the Rev. John Campbell of Kingsland, to visit the Cane, where he arrived on the ‘24th of (Jctober, 1812; and, on the 20th of March in the ensuing year, at Bethelsdorp, he found that civilisation had made considerable progress ; that the natives exercised the various businesses of smiths, carpenters, saw-yers, basket-makers, brush-makers, thatchers,coo-pcrs, lime-burners, &c.; he also saw cultivated fields two miles in length, on both sides of a river, and was informed that their cattle had increased

from 218 to 2 200. The beneficial effects o(Christianity were apparent in this despised spot in a variety of excellent institutions formed by the Hottentots ; and they had contributed, during the preceding twelve months, thesumof seventy-s’X dollars, in aid of the London Missionary Society. When, on his second visit to these parts, Mr. Campbell, with Dr. Philip, called at Bethelsdorp in June 1819, they were much gratified at finding that the Hottentots had erected asubstari-tial place of worship and several good houses. In 1822 and 1823 very considerable improvements were made in the erection of superior habitations : a public store was opened to preclude the necessity of the natives going to distant places to purchase goods ; and, in the report communicated to the general meeting in London, in May, 1824, the accounts of their progress in industry and instruction were highly satisfactory. On the 28th of December, 1823, his majesty’s commissioners of enquiry arrived at Bethelsdorp, accompanied by their secretary : they attended divine service at the mission chapel, when Mr. Ketchingman preached from Psalm cxxvi. 3. After the sermon about twenty Hottentots read the third chapter of St. John’s Gospel, and were examined as to their knowledge of the scriptures : the children read a chapter, and were catechised. The Englisii class then read a few easy lessons ; when all was finished the object of the visitors was announced, and some of the old men belonging to the institution rose up to thank the king of England and them, for the interest they took in the poor Hottentots at Bethelsdorp : the honorable commissioners expressed their lugh satisfaction with tlie progress of the people, both in civilisation and the knowledge of the truths of Christianity.

Having given this sketch of the proceedings of the missionaries in the colony, near the Cape, we may observe that those beyond it, among the Caffres, Geogiras, Bushmen, Bootchuanas, and Namaquas, and in the African Islands, Madagascar and INIauritius, exhibit great patience and perseverance ; an examination of the published accounts of their

proceedings and labors will furnish ihe reader with many instances of gratifying success. The remarkable conversion, the honorable life, and the happy death of the CafTre chief, Africaner; tiie formation of Christian churches in seven or eight stations within the colony ; and the establishment of an auxiliary missionary society at the Cape ; are encouraging proofs of the utility and efficiency of such benevolent exertions : they establish, beyond tJie power of contradiction, that there is not a natural incajjacity in the minds of Hottentots for civil, moral, and religious improvement. Much remains to induce deep and painful commiseration, but much may be anticipated to justify the assurance of hope. The other principal settlements in South Africa are Bethany, .situated in Great Namaqua Land, about fifty-five miles north of the Orange River, where a mission was commenced in 1815; Steinkopff, ia Little Namaqua Land, where the gospel was introduced in 1817; the Pearl, in the district of Stellen-bosch, first occupied in 1819 ; and Cape Town, where a number of heathens attend the ministry of Dr. Phillip.

LONDON MISSIONARY SOCIETY.

We next direct the attention of the reader to llie labors of the society in Asia, including the luist India Islands, with the extensive country of China. In the month of February, 1304, some missionaries sailed from England to commence their work on the coast of Coromandel; they selected \ˆizagapatam, the capital of one of the five districts into which the northern clrcars are divided. In 1808 they were joined by a converted brahmin, named Ananderayer, who, in the October following, went on a missionary tour to the southward, and preached the gospel to many hundreds of his countrymen. In 1809 the ilev. George Cran, one of the missionaries, died; and two, Messrs. Gordon and Lee, arrived by way of America, to join Mr. Des Grayes, who by the decease of his coadjutor had been left alone. Mr. Rengletaube, who sailed to India in 1804, selected the Tinivelly country as the scene of labor; but being precluded from going thither till February, 1806, he extended his labors into Travancore, and made that kingdom the principal seat of the mission. After laboring faithfully at this station for several years, ill-health compelled him to relmquish it; in

1816 other persons succeeded him, and in 1818 and 1819 nearly 3000 of the natives placed themselves under religious instruction. In the spring of 1810 the Rev. J. Hands arrived in India with the hope of commencing a mission to Seringapatam ; but, as he could not gain access, he was induced to direct his attention to Bellary, in the northern part of the province of Mysore. In 1816 he was joined by Mr, Reeve; many additions were made to the church. In January, 1819, a Juvenile Bible Society was formed in this place ; and during the year the gospel was carried several hundred miles through the dark villages, and several thousand tracts were distributed. Messrs Hands and Reeve are advancing witii the Canara version of the Old Testament ; and Mr. Reeve has undertaken a compilation of a Canarese and English Dictionary. Besides these stations, others have been established in various parts of the East Indies, as at Chinsurah, Madras, Surat, Calcutta, Bangalore, Benares, Belgaum, Quilon, Cuddapat, and Seringapatam.

China. — In order to convey the glad tidings of the Christian salvation to this populous and beniglited empire, the London Society resolved to attempt a translation of the Holy Scriptures; the Rev. Robert Morrison was selected for this arduous work, and was assisted in London by a native of China in learning the language and transcribing a harmony of the gospels and other parts of the New Testament from a MS. copy in the British Museum. His attention was also directed to mathematics and astronomy. In the month of January, 1807, Mr. Morrison sailed from England, and arrived in safety at Canton, where he remained till, from a misunderstanding between the European residents at Canton and the Chinese government, all intercourse with foreigners was prohibited. Mr. Morrison, therefore, retired in the beginning of November to Macao, where he applied himself unremittingly to the study of the language. Matters being amicably arranged, our missionary returned to

Canton, and in 1809 was appointed Chinese translator to the English factory. lie found the ideas of the Chinese exceedingly obscure with respect to the nature of the true and living God. In September, 1810, I \Ir. Morrison sent the Acts of the Apostles carefully revised with the Greek text to a Chinese printer, and agreed to pay him 521 dollars for 1000 copies, including the cutting of 30,000 characters, the wood on which they were to be cut, the paper, printing, and binding. When this little work was completed, three ambassadors from the Le-ki-yo islands, coming to China with tribute, arrived just in time to be presented with some copies. The vernacular tongue of these islands is

a dialect of the Chinese language, which is read by the literati. In April, 1812, Mr. Morrison, who had previously forwarded a translation of the Gospel by St. Luke, and a Chinese tract on the way of salvation, now sent a translation of a Chinese edict, declaring the printing of books on the Christian religion in China a capital crime. In the summer of 1814 Mr. Morrison travelled, in the suite of the British embassy, through six provinces of China. This occupied about six months ; the embassy arrived at Canton on its return in January, 1817. In September, of the same year, Mr. Morrison says, in a letter to the society, ‘ I have translated the morning and evening prayers of the church of England, as helps for devotion. The church of Scotland supplied us with a catechism : the congregational churches with a form for Christian assembly. We are of no party ; we recognize but two divisions of our fellow-creatures, the righteous and the wicked, those who love our Lord Jesus Christ, and those who do not.’ In a letter dated March, 1819, Dr. Morrison observes, that he had recently written a small book, called A Voyage Round the World, to this he added a map of the world ; but the printer, in copying that part in which Judea was mentioned as the place where Jesus the Saviour was born, obliterated the name of Jesus, probably through fear. In 1820 Dr. Morrison opened at Macao a dispensary for the Chinese sick poor ; it became very popular; but, after the return of his family from Europe, our missionary found his time inadequate to its continuance. From the year 1813 the gospel has been more or less regularly preached both in English and Chinese at Macao or Canton ; and, besides the advantages derived by European or American residents, these services have not been destitute of beneficial results to some Chinese themselves. In 1823, on the 9th of December, Dr. Morrison embarked for England, where he arrived in safety on the 20th of March ; he was presented to the king by the president of the Board of Control, and permitted to lay before his majesty the Chinese version of the Holy Scriptures, made by himself and the late Dr. Milne, and an account of the Anglo-Chinese College at Singapore. His majesty was pleased to convey the expression of his marked approbation. Dr. Morrison had intended to return to China about the latter end of 1824, but consented to remain in England for the purpose of communicating elementary instruclioiis in the Chinese language

and conferring with those who might be desirous of becoming acquainted with it for sacred purposes, or objects of general knowledge and literature.

Malacca. — In the autumn of 1812 the Rev. W. Milne sailed from England to assist Dr. Morrison in his missionary labors in China : hp was, however, through the influence of some Catholic priests, obliged to retire from Macao to Canton. lie afterwards visited Java, and, having distributed books in great numbers in Batavia, he made a tour through the east of Java and the island of Madura. On his return to China he determined, with the concurrence of Dr. Morrison, to settle at Malacca ; accordingly he and Mrs. Milne embarked in April 1815, and, on the 22nd of May, arrived at his destination ; he commenced his labors with a charity school for poor Chinese boys, who were instructed in the elementary books common in China, together with writing and arithmetic according to the Chinese method. In January Mr. Milne paid a visit to Penang, or Prince of Wales' Island, and, durmg his stay, distributed tracts, testaments, 8cc. On his return to Malacca, in February, he opened two new schools, containing about eighty boys, and introduced the method of writing in sand. In April Mr. Milne distributed some tracts and testaments on board some junks from Siam and Cochin China ; in November a Chinese, named Leang Kung Fah, was baptised ; in the course of the same month he opened a Thursday evening lecture in the temple Ta-pek- Kung. On the 11th of November, 1818, major Farquhar, commandant of Malacca, laid the foundation stone of an institution called the Anglo-Chinese College, in the presence of the governor of the colony ; the chief objects of this institution are the cultivation of Chinese and English literature, and the diffusion of Christianity in the countries and islands eastward of Penang: it owes its origin to Dr. Morrison, who generously devoted the sum of £lOOO sterling to the erection of the building, and promised an additional sura of £100 annually, for the first five years, commencing from the opening of the college. Tiiis establishment is to be known in future by the name of the Singapore Institution; and in that promising seat of learning the five principal languages of the inhabitants of that part of the globe are to be taught, spoken by not fewer than 300,000,000 of the human race. In March, 1819, Mr. Milne lost his amiable and pious wife; and in 1822, at the beginnincc of the year, the society sustained the severe loss of his own death. In the month of January, 1819, Mr. Medhurst, who had previously assisted

Dr. Milne at Malacca, embarked for Penang; and in 1 823 a chapel was erected by subscription for Chinese, Malay, and English worship ; the estimated expense was 6000 Spanish dollars : nearly half the sum was raised on the spot, including a donation of 400 dollars from his excellency governor Piiillips. The foundation stone was laid on the 11th of June ; and, in the course of the summer, the chapel was attended by large and respectable congregations.

Java. — The society, anxious to circulate Dr. Morrison's translations of the Holy Scriptures,

and extend the knowledge of ChristiL-iiity through the island of Java, the retidence of about 100,000 Chinese, sent out missionaries to Batavia, the principal city, and they embarked accordingly on the 31st of Deceinber, 1813: these missionaries saw the fruit of the books circulated by Mr. Milne; and here, as well as in the island of Amboyna, prosperity followed their labors. In October, 1819, Mr. INIilton removed from Malacca to Singapore, the town and principality of which were originally founded by some adventurers from the island of Sumatra, but wiiich had recently been ceded to the English. Here Mr. Milton established a Christian mission, and his design received the patronage of Sir Stamford Raffles, and W. Farquhar, esq., who gave a piece of land for the object. In 1822 Mr. Thomson removed to this station to take charge of the Malay department, and a place of worship was commenced for services both in the Chinese and Malay languages. In January, 1823, Dr. Morrison visited this station in his way to Malacca, and had several interviews witii Sir S. Raffles, who expressed an earnest desire for the removal of the Anglo-Chinese College to Singapore, and that it should be united with a Malayan college to be founded in the settlement, which was eventually done ; and the Singapore institution thus formed was to consist of the following departments : 1. A scientific department for the common advantage of the several colleges that may be established ; 2. A literary and moral department for the Chinese ; and, 3. A literary and moral department for the Siamese, Malay, &c. In the same year Mr. INIilton went to Calcutta to purchase presses and other articles for printing; and, on his return, the printing of a Siamese version of Genesis was immediately commenced. About this time the government ordered 200 acres of land to be enclosed for settling and employing such persons as might be desirous of receiving Christian instruction ; and directed that converts to Christianity should be admitted to burial in the European cemetery.

The mission to Demerara commenced in December, 1807; that to Madagascar in 1818.

A few particulars may be stated respecting each. The success which attended the preaching of the gospel in Demerara, during the year 1808, continued to increase and abound ; so that, early in the ensuing spring, the number of slaves admitted into the church by baptism amounted to twenty-four. Mr. Wray had been sent hither at the solicitation of Mr. Post, a respectable and pious Dutch planter, who resided on the east coast of the colony ; this excellent man died on the 29th of April, deeply mourned, and deservedly lamented. Mr. Wray says, ‘ a more affecting scene was perhaps never presented ; more than 500 negroes of his own, and from other estates, bitterly lamenting his loss.’ Mr. Post secured to the use of this mission the chapel and dwelling house of the minister; and assigned the sum of £100 sterling toward the minister’s supjiort, so long as the London Society shall continue to provide a missionary for that station who shall preach the doctrine of the reformed church. On the 25th of May the colonial sovernment issued a proclamation prohibiting

tiic slaves, undei severe penalties, from as-semblini; together before sun-rise or after sun-set; this regulation had an injurious influence in circumscribing the usefulness of the missionary, and i\Ir. Wray paid a visit to England that a respectful representation of this grievance might be laid before his majesty’s government ; an official letter was in consequence transmitted to the governor of Demerara, signifying the determination of the government at home that slaves should be allowed to meet every Sunday for worsliip and instruction, from five in the morning to nine in the evening ; and, on other days, from seven to nine in the evening, provided they had permission of their respective masters. This interposition was immediately and readily attended to by the governor, who expressed himself very favorable to the missionaries and their exertions, and it was followed by very salutary effects among the slaves. Mr. Wray, with the consent of the directors, afterwards removed to Berbice; and in January, 1817, Mr.

John Smith was sent out by the directors to fill the vacant station, which he continued to occupy, with much usefulness and prosperity, till May 1823, when circumstances arose, of a very painful nature, which have been before the public in all their affecting details, and which led to the terminafion of his valuable services and life, in the month of February, 1824. The sensation occasioned by this event was communicated to the whole British nation, and it occupied the consideration of the British parliament; and, from the opinions expressed by the leading members of government on that occasion, it is believed the cause of Christian missions will derive important and lasting benefits.

The mission to Madagascar was commenced by Bevan and Jones in 1818. They opened a sciiool at Tamatave, and every thing appeared promising and auspicious; but, in the space of a few months, five individuals were carried to an untimely grave, and Mr. Jones, after a partial recovery from the Malaegache fever, was compelled to return to the Mauritius. In September, 1820, Mr. Jones returned in company with Mr. Hastie, a gentleman sent by the governor to negociate with king Radamaforthe abolition of the slave trade in his dominions. He consented to the proposed treaty, on condition that he sliould be allowed to send some of his people to the Mauritius and England for instruction, and that artificers should be sent over to him; this request was repeated, and lie finally determined to agree in all respects, on condition tliat Mr. Hastie would take twenty of his subjects for instruction, ten to proceed to Mauritius, and ten to England, and thus a wide door vvas opened to civilisation and Christianity in Madagascar, llis majesty addressed a letter to the directors of tlic London Missionary Societyj to solicit missionaries and artisans; and at the annual meeting in London, in May 1R21, the directors and members had the gratification of seeing among them prince Rataflfe, the brother-in-law and prime niinislcr of Kadama, who had been previously presented to his Britannic majesty at tlie drawing room. He was attended, on this occasion, by his secretary and interpreter, and four of the youths who

had been sent to England for instruction. These youths were subsequently placed, at tiie expense of government, in the British and Foreign School, with a view to tlieir learning to read and write the English language. On the 6th of August, in the same year, prince Ratafl'e, accompanied by the Rev. J. Jefferies and four artisans, sailed to Madagascar. On the 6th of May following they landed at Tamatave, and proceeded, on the 21st, to the interior, where they were received

by tiie king in the most gracious manner, and land was allotted to their use. Of the Malagache youths, one died in England in 1824, leaving behind pleasing evidence of conversion, and three left England for their own country, of whom two were in ill health, which rendered their return indispensable; one was baptised previously to his embarkation ; and the remaining three are diligently employed in acquiring a knowledge of their respective trades.

In addition to various stations already noticed the society has sent out laborers to many other parts of the globe : it has devoted missionaries at St. Petersburg and Selinginsk, in Russia; at Corfu and Malta, in the Mediterranean ; at George Town, in Demerara; at New Amsterdam, in Berbice ; and at the island of Mauritius.

The present state of the missions, considered as a whole, is highly satisfactory. According to the returns received from the South Sea Islands the number of baptised, for the year ending May 1827, was upwards of 300, and the additions to the churches between 300 and 400. Pomarre III., and two native distinguished warriors, died dur-ing the year, converts to the Christian faith. The gospel by Mark has been printed ; also the epistles to the Galatians, Philemon, and Hebrews, and of James and John. The book of Revelation is in the press ; the Book of Judges, and tlie two Books of Samuel, have been revised. Isaiah, the Psalms, and some other epistles, are under revision.

From the islands of Raivavai, Harvey Islands, Marquesas, Friendly Islands, Sec, the intelligence is satisfactory and encouraging.

Sandwich Islands. — The mission in this groupe continues to flourish greatly. The labors of the Tahitian teachers are very useful, and meet the approbation of the American missionaries.

New South Wales. — Considerable progress is made in the language of the aborigines; but the great expense, unless aid can be obtained from the local government, renders its continuance doubtful.

L'ltra Ganges. China. — Dr. Morrison has arrived safely at Macao. During his absence Leangafa had composed notes on the Epistle to the Hebrews; an Essay on the true Principles of the World's Salvation ; and An Account of Interesting Conversations with his Countrymen. Malacca. — Native Schools are seven, containing about 250 boys, who make good progress. Tiie number of students in the Anglo-Chinese College, in June 1826, was nearly thirty. Java has three Chinese schools. The Chinese, INIalayan, and English, services are continued. The subjects of tlic mission publications are now dis-cus.sed by the

Chinese themselves in the absence of the missionary. Amboj/uu. — Seven native

■eachers have been lately sent hence to different islands of the Malayan Archipelago. Mr. Kam's translation of the first volume of Mr. Burder's Village Sermons is in circulation.

East Indies. Calcutta. — In the Christian seminary, whicli has been restricted to the descendants of native Christians, three youths are under instruction, and a speedy addition to their number is expected. In Bengal the mission schools make encouraging progress; the stated native services are continued in the towns, and occasional preaching in surrounding villages. 3Ir Mundy has composed, in Bengalee, a concise View of the Christian Religion, and a Cate-chetical Exposition of the Gospel by St. Mark. Bcrhamporc. — Here are inveterate prejudices to overcome. There are eight schools; six for boys, containing 280, and two for girls, containing forty. About thirty persons have become converts, and a Christian church has been formed. Bena7-es. — Here are four native schools, containing 206 boys, all in a prosperous state : a substantial mission-house has been erected. Sural. — Six native schools; boys under instruction about 350. A society has been formed at Bombay called the Bombay Missionary Union; the remaining stations are Madras, 'izagapatam, Com-booconum, Cuddapah, Chitoor, Belsjaum, Bellary, and Bangalore in South Travancore, Nager-coil, and Quilon.

AruicA. — The Rev. Dr. Phillip still remains in this country. I\Ir. JNIiles has visited several missionary stations in the interior, and extended his journey to Caffreland, and the country of Tambookies. Caffraria presents a promising field for missionary enterprise. At Bethelsdorp the amount of subscriptions to the auxiliary society, for the year ending ilay 1826, was 260 rix dollars. The stations here are numerous : — Paarl, Tulbach, Roschefield, Pacaltsdorp, Han-key, Bethelsdorp, Theopolis, Caffraria, Griqua Town, Campbell, Philippolis, Lattakoo, Africaner's Kraal, Bethany, Steinkopf, Pella, and the Islands of Mauritius and Madagascar. In the latter island his majesty Radama

continues to take a lively interest in the mission ; and the rapidly advancing importance of this station has induced the directors to accept the services of the Ivev. J. J. Freeman, late minister of the Gospel at Kidderminster, on the principle of limitedservice.

West I^^dies. — At Demerara the labors of Mr. Davies, lately deceased, were attended with success : the average attendance at his chapel in George Town was about 400 negroes, the num-ber in church fellowship 130, and in the school 300 adults and 100 children. At Berbice ihe num-ber of adults baptised during 1826 was forty-one ; the number in the school, at the close of 1826, was 230, and many have since been admitted. The total number of children in the native schools, in connexion wiUi the several missionary stations, besides numerous adults, is upwards of

12,000.

London, New, a county of Connecticut, in the United States. Its population is 34,707. Its <hief towns are New London and Norwich; the former situated on the west bank of the Thames, three miles above its mouth. It has an excel-

lent harbour defended by two fort«, and is one of the most commercial towns in Connecticut. It is fifty-four miles east of Newhaven, and 237 north-east by east of Philadelphia.

Also a post town of the United States, inRock-kingham county. New Hampshire, containing a respectable and well endowed academy. It is twenty-five miles S. S. E. of Concord, and thirty-five W. S. W. of Portsmouth.

LONDONDERRY, a county of Ireland, is bounded on the south by Tyrone ; on the west by Donegal; on the north by the Scottish Sea; and on the east by Antrim, from which it is separated by Lough Neagh, and the river Bann. Its figure is that of an irregular triangle about forty English miles from north to soutii, and about thirty-one in breadth, including an area of 511,688 English acres, and 798 square miles. It is divided into four baronies, Teerkerin, Ke-naught, Loughlinsholin, and Coleraine, and thirty-one parishes. About a fourth part of the county is bleak mountains and glens; and even half the remainder is mountainous, a range of mountains running from the northern coast the whole length of the country southwards. But fertile

plains and valleys are interspersed between the mountains, composed of rich loams, and gravels, clay, marl, and moor. The mountainous region is diversified by many alpine tracts, interspersed with spots of peat, many of which are reclairaable. There are schistose ridges on the western side of the Roe, near the bed of %vhicii marly flats run along almost the whole length of the river. Near Lough Foyle and Lough Neagh they are in general sandy or loamy. These are much occupied as rabbit warrens, which yield, on an average, about 36,000 rabbits annually, the sale of whose skins produces a large revenue. Good pasturage has been produced by the burning of the heathy soils in some places ; and excellent crops of oats are raised on the low lands, by the same practice. The principal mountains are, in the north, Benyevenagh, which is 1250 feet high; Sawel, towards the south, 1600 feet in height; Benbro-dah, in the centre of the county, 1300 feet in height; Alt English, at some miles distance, of the same height; Slieve Gallen, 1250 feet in height; Donald's hill, 1200 feet.

The system here adopted of letting land on short leases is not calculated to promote agricultural improvement. The arable land is divided and subdivided into the smallest portions, from 250 to a single acre. The great proportion of it is let in parcels containing from three to thirty acres Irish. Potatoes is the principal crop; but on some of the clay grounds wheat is raised, and oats, barley, flax, and rye, occasionally appear. The land is every where destitute of fences, but small plantations are met vyith in many places. The minerals of this county deserve attention. Basaltic layers, with veins of white lime, clays, zeolite. Sec, are found to the east of the river Roe ; granite is often found, and in the interior of the county freestone and sandstone ; also the beautiful rock crystals, called Irish diamonds. Iron is also in great abundance throughout the cnunty ; but the only work ever established for

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smelting it was afterwards abandoned. Small quantities of copper and lead have been also found, and coal seems to appear in various parts. Tiie linen manufacture is the staple of the county : and woollen cloth is manufactured at home by the poorer part of the peasantry. The principal rivers are the Foyle or Green River : it is a wide and deep stream ; and, after having divided the counties of Tyrone and Donegal, enters this county, a little above tlie city of Londonderry, and, passing it, expands into the large lake known by the name of Lough Foyle. The Bann, or the White River, flows from Lough Neagli towards the town of Coleraine, four miles below which it meets the sea, over a shallow bar. The Faughan and Roe, which rise in tlie Cairntogher Mountains, flow into Lough Foyle. Among the streams which join the Bann in its course, or increase the waters of Lough Neagh, is the Mayola. Lough Foyle affords a tolerably good harbour, though there is some difficulty of entering it when a strong wind blows from the west. It is a large oval basin, twelve miles long, and nearly seven broad in the widest part, but it i\as only one deep channel in the middle, between long banks of sand. The Bann affords a harbour for small vessels up to Coleraine ; but Portrush, four miles below it, is generally preferred for vessels of burden. The chief towns, besides Londonderry, are Coleraine, Newton-limavady, Magherafelt Dungiven, Mo-neymore, Castle-Dawson, Maghera, Garvagli, Desartmartin, &c.

LoxDONDEURY, the capital of the above coun-ty, is situated on the west bank of the Foyle, and contains four main streets, which cross at right angles within the walls, and form, with the smaller streets and lanes, a sort of parallelogram, extending 1273 feet by 035. The streets issue from the exchange, and terminate at a gate denominated from them. The ground on which the town stands is hilly and uneven ; but great attention has been paid to the paving and lighting of tlie streets. The old walls, which were built in the year 1G14, still remain. On the top of the rampart is a platform covered wth a noble parapet. The cathedral is a Gotl)ic structure, built in the year 1633. The tower was lately ornamented, or at least surmounted, with a spire; it has an organ vviiich is esteemed valuable. There are, beside the cathedral, a chapel of ease, two presbyterian meeting houses, and a Roman Catholic chapel. Tlie central market house, or town hall, was built in 1692, over which were the courts of justice; but it has been superseded by a spacious and handsome architectural structure, recently erected for these purposes. The new gaol is esteemed one of

the best in tlie north of Ireland ; and tlie episcopal palace is spacious. Schools for the education of the lower classes have been recently built, and an infirmary has been lately erected on a very larcte scale. There is a small theatre and linen hall. The chief •wharfs and quays, with a good portion of the city, are without tiie walls. In 1790 a very handsome wooden bridge, upwards of 1000 feet in length, and forty in breadth, was here tlirown across the Foyle, a great part of which was thrown dov.n by the ice in 1813. An extensive commercial intercourse is carried on be tween Londonderry, the West Indies, and America. The imports are West India produce, hardware, eartlienware, flax seed, iron, and timber : the exports yarn, linen, Ike. In the liarbour there is at all times fourteen fathoms of v't'ater.

Both the abbey and town of Londonderry are of great antiquity ; and are said to have been burned by the Danes in the year 783. In 1153 it was made an episcopal see ; and the cathedral was erected six years afterwards. In 1515 its charter was granted to the London Company. In 1608 it was burned by an Irish chieftain, but the walls were soon reerected ; and in 1641 it was besieged and rescued from the Irish, by whom, however, it was taken in 1649. In 1688 it sijˆ- tained from the Irish forces, under king James, a sieˆe, which lasted from, the month of December 1638 till August 1689 ; and it was on the eve of being surrendered by the governor, when the inhabitants chose for their governors the Rev. George Wˆalker, an episcopal clergynjan, and m;ijor Baker. Under these intrepid chiefs the town resisted to the last, and until all the efforts of king James's forces proved abortive. The corporation consists of aldermen, a mayor, twenty-four burgesses, one chamberlain, and two sheriffs. It is 115 miles N. N. W. of Dublin, and fifty-eight W. N. VV. of Belfast.

LONE, at//. -N FromAi.ONE. Solitary;

Lone'liness, n. s.i single ; unfrequented : Lone'ly, flf/;. ^^ loneliness and loneness Lone'ness, n. s. I mean solitude; solitary Lone'some, adj. J disposition : lonely, solitary, or addicted to solitude : lonesome, dreary ; dismal.

I go alone, Like to a lonely dragon ; that liis fen Makes feared and talked of more than seen.

Shakspeare. 1 see The mystery of your loneliness, and find Your salt tears' head'. Id.

If of court-life you knew the good, You would leave loneness. Donne.

\ hy thus close up the stars That nature hung in heaven, and filled their lamps ^\ ith everlasting oil, to give due light To the misled and lonelii traveller ! Milton.

The huge and sportful assembly grew to liini a tedious loneliness, esteeming nobody since Daiphan-tus was lost. Sidney.

Time has made you dote, and vainly tell Of arms imagined in your lonely cell. Dryden.

When, fairest princess. You lonchi thus from the full court retire. Love and the graces follow to your solitude.

liowc. You either must the earth from rest disturb, Or roll around the heavens the solar oil) ; Else what a dreadful face will nature wear T How horrid will these lonvsowe seats a; pear !

Bldckmore. Here the lone hour a blank of life displays.

Si rage. Thus vanish sceptres, coronets, and balls, And leave you in lone woods, or empty walls.

I'ojn: There is a pleasure in the pathless woods, There is a rapture on the lonely shore,

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‘I’here is society, where none intrudes,

By the deep sea, and music in its roar. Byron.

That man of loneliness and mystery, Scarce seen to smile, ard seldom heard to sigh ; Whoso name appals the fiercest of his crew, And tints each swarthy cheek with sallower hue; Still sways their souls with that ■commanding art ‘I’liat dazzles, leads, yet chills the vulgar heart. Id.

LONG, adv. Sax. selanj, a fault. By the fault; by the failure. Obsolete, but a ‘truly English’ word, says Dr. Johnson.

Respective and v < ary men had rather seek quietly their own, and wish that the world may go well, so it l)e not /ojij,’- of them, than with pains and hazard make themselves advisers for the common good.

Hookei

Maine Blois, Poictiers, and Tours are won away

Long all of Somerset, and his delay. Shakspeare.

Mistress, all this coil is long of you. Id.

If we owe it to him that we know so much, it is perhaps lony of his fond adorers that we know so

Glanville.

\ Sax, lonj ;

I Gothic, lang ; Fr. long; Ital. longe ; Latin, longus. Pro-

{ˆ traded ; of

r considerable length in

I space, time, or measurement;

! not soon terminating or

little more.

Long, adj. & adv. Longanim'ity, n. s. Longboat, n. s.

LONOEv'lTY, n. s. Longim'anous, adj. Longim'etry, n. s. Long'some, adj.

LoNG-SCl'lEKrNG, «<//". & U. S. 1

Long'taii, W.S. I

Long'ways, adv. Long-wixu'ed, adj. \

Long'wise, adv. J

ceasing ; hence dilatory, tedious ; as an adverb, to a great lengtli ; not soon ; at a distant point of 'time ; continuously, throughout : longanimity and long-suflering mean forbearance; patience of offence, or suffering : longevity (Lat. loiig(evus), length of life : longirtianous (Lat. longbnanus), longhanded : longimetry, the art of measuring lengths or distances : longsome, tedious : longtail, in Shakspeare, ' cut and longtail', a cant term for one or another. ' A plirase, I believe, taken from dogs, which, belonging to men not qualified to hunt, had their tails cut.' — Johnson. Longways and longwise, in a longitudinal direction : long-winded, long-breathed ; dilatory ; tedious; wordy.

But I seie as longe tyme as the eyr is a littel child, he diuersith no thing fro a seruaunt whanne he is lord of alle thingis. Wiclif. Gal. iv.

lie fed me uU my life long to this day.

Genesis xlviii. 15. W hen she could not longer hide him, she took for iiim an ark of huUrushes. Eiodus ii. 3.

W hen the trumpet soundeth lotig, they shall come up to the mount. Id. xix. 13.

Honour thy father and thy mother, that thy days may he tony upon

the land. Id. xx. 12.

f'oity years long was I grieved with this generation. Psalms. Women eat their children of a span long.

Lam. ii. 20. He talked a long while, even till break of day.

Acts XX. Not long after there arose against it a tempestuous wind. Id. xxvii. 14.

For here I mny no longir now ahide, liut 1 must follow the grete company I'hat ye may se yondir before you ride.

Chaucer.

Them anrong 'I'here sat a man of ripe and perfect age, Who did them meditate all his life /i>'(ˆ.

Faerie Queene. Some say, that ever 'gainst that season comes. Wherein our Saviour's birth is celebrated. The bird of dawning singeth all night long, And then, they say, no spirit walks abroad.

Shakspeare. lie will maintain you like a gentlewoman. — Aye, that 1 will, come cut and longtail under the degree of a squire. Id. Merrii Wives of]l'indsor.

They found the war so churlish and longsome, as they grew then to a resolution, that, as long as England stood in state to succour those countries, they should but consume themselves in an endless war. Bacon's War ivith Spain. With mighty barres of ioiiˆ-enduring brass.

Fairfax-. Doubts and fears are the sharpest passions : through these false opticks all that you see is like the evening shadows, disproportionable to the truth, and strangely lunger than the true substance. Suckling.

He was laid upon two beds, the one joined longwise unto the other, both which he filled with his lengtli. Uahvwill.

Certainly, God is wonderfully gracious, as he is also infinitely just, even to those that will needs incur damnation, having tendered unto them many powerful helps to their repentance ; which he hath with much patience and longaniniitii expected.

Bp. Hall. That innocent and holy matron had rather go clad in the

snowy white robes of meekne<s and longanimity, than in the purple mantle of blood.

lionet's England's Tears. These, as a line, their long dimensions drew. Streaking the ground with sinuous trace. Milton. They open to themselves at length a way Up hither, under long obedience tryed. Id.

Long and ceaseless hiss. Id.

But first a long succession must ensue. Milton. It had overcome the patience of Job, as it did the meekness of Moses, and surely had mastered any but the longanimity and lasting sufferance of God.

Browne's Vulgar Errours. The villainy of this Christian exceeded the persecution of heathens, whose malice was never so longi-manons as to reach the soul of their enemies, or to extend into the exile of their elysiums. Browne.

We made the trial in a long-neckei phial left open at the top. Boyle.

If the world had been eternal, those would have been found in it, and generally spread long ago, and beyond the memory of all ages. Tiitotson.

And long it was ere he the rest could raise. Whose heavy eyelids yet were full of night.

Vryden. The martial Ancus Furbished the rusty sword again, Resumed the /oHˆ-forgotten shield. Id,

No man has complained that you have discoursed too long on any subject, for you leave us in an eagerness of learning more. Id.

They first betray their masters, and then, when they find the vessel sinking, save themselves in the longtjoat. L' Estrange.

it may help to put an end to that /o».9-agitated and unreasonable question, whether man's will be free or no ? Locke.

Eldest parents signifies cither the eldest men and women tiiat have had children, or those who have longist had issue. ■'<'•

Tliat those are countries suitable to the nature of man, and convenient to live in, appears from the lontjevity of the natives. Ray on the Creaiion.

Say, that you once were virtuous long ago! A frugal, hardy people. Fki'dp's Briton.

'1 his island stands as a vast mole, which lies long-W'jys, almost in a parallel line to Naples.

Addison on Italy. Reduce, my muse, the wandering song ; A tale should never be too long. Prior.

When chilled by adverse snows and beating rain. We tread with wearied steps the lonesome plain.

Id. At the first descent on shore, he did countenance the landing in his longboat. IVotton.

We infer from the mercy and longstifferin'g of God, that they were themselves sufficiently secure of his favour. Rogers.

The instances of longevity are chiefly amongst the abstemious. Arhuthnot on Aliments.

Our two eyes are like two different stations in Iniqimetrii, by the assistance of which the distance between two objects is measured.

Chevne's Philosophical Principles. A ponderous mace. Full twenty cuijits long, he swings around. Pope.

Heaven restores To thy fond wish the /oHiz-expected shores. Id.

]\Iy simile you minded. Which, I confess, is too loniˆirAndvd. Swift.

Long sentences in a short composition aie like large rooms in a little house. Shenstonc.

Absurd longevity ! IMore, more, it cries : More life, more wealth, more trash of every kind.

\ oung. But Beatoun had enjoyed powers too long to be a favourite of the nation.

Robertson's History of Scotland. Fain would I hide what I fear to discover, Yet long, long too well have I known :

All that has caused this wreck in my bosom. Is Jenny, fair Jenny alone. Burns.

Another consequence of such a bill would be a longer residence of the bishops in their several dioceses. Bp. Watson. And if we do but watch the hour, There never yet was human power Which could evade, if unforgiven. The patient search and vigil long Of him who treasures up a wrong. Byron.

Long, v. n. & adj. -\ Sax. lanjiaiijof Germ.

Long'ing, n. s. iˆgelangen, to ask ; beg. —

Long'ingly, adv. i Skinner, Ex Gal. luhig,

ho hg'ly, adv. J i. e. longinquam. — Min—

plieii. To desire eagerly or earnestly, takinii—

J'ov or lifter before the object : as an adjective

it sijjnifies desirinj;; eager. Longly is used for

longing by Shakspeaie.

And thine eyes shall look and fail with longing for tliem. Dent, xxviii. 32.

The great master perceived that Khodes was the place the Turkish tyrant longed nfter. Knolles.

Master, you looked so loiigit/ on the maid. Perhaps, you mark hot what's the pith of all.

Shakspeare. Fresh expectation troubled not the land With any longed for change, or better stale. Id. I have a woman's longing, An appetite tliat I am sick withal. To see great Hector in the weed.i of peace. Id.

If the report be good, it causetli love, And longing hope, and well-assured joy.

Davies.

When within short time I came to the degree of uncertain wishes, and that those wishes grew to un-quiet longings, when 1 would fix my thoughts upon nothing, but that within little varying they should end with Fhiloclea. Sidney.

Praying for him, and casting a longing look that way, he saw the galley leave the pursuit. ‘ Id.

His sons, who seek the tyrant to sustain, And long for arbitrary lords again. He dooms to death deserved. Dryden’s JEneid. To his first bias longingly he leans. And rather would be great by wicked means.

Dryden. The will is left to the pursuit of nearer satisfac-tions, and to the removal of those uneasinesses which it then feels in its want of, and bngings after them .

Locke.

There’s the tie that binds you ;

You long to call him father : Marcia’s charms

Work in your heart unseen, and plead for Cato.

Addison’s Cato.

Else whence this pleasing hope, this fond desire,

This longing after immortality 1 Id.

Nicomedes longing for herrings, was supplied with fresh ones by his cook, at a great distance from the sea. Arbntlijivt.

To thee my soul shall pour its prayer. And ere the dawn has streaked the sky. To thee direct its longing eye.

Merrick’s Psalms. — then, even then, I longed, and was resolved to speak ; But on my lips they died again,

The accents tremulous and weak. Until one hour. Byron.

Long (Roger), D. D., a native of Norfolk, was educated at Cambridge ; where he became master of Pembroke Hall, and Lowndes professor of astronomy. He was also rector of Cherryhinton in Huntingdonshire,

and of Brad-well in Essex ; and was author of a Treatise of Astronomy, and the inventor of a very curious astronomical machine, thus described by himself:— ‘ I have, in a room lately built in Pembroke Hall, erected a sphere of eighteen feet diameter, wherein above tliirty persons may sit conveniently ; the entrance into it is over the south pole liy six steps ; the frame of the sphere consists of a number of iron meridians, not complete semicircles, the northern ends of which are screwed to a large round plate of brass, with a hole in the centre of it; through this hole, from a beam in the ceiling, comes the nortli pole, a round iron rod about three inciies long, and supports the upper parts of the sphere to its proper elevation for the latitude of Cambridge ; the lower])art of the spiiere, so much of it as is invisible in England, is out off; and the lower or southern ends of the meridians, or truncated semicircles, terminate on, and are screwed down to, a strong circle of oak, of about thirteen feet diameter ; which, when the sphere is])ut into motion, runs upon large rollers of lignum vitto, in the manner that the tops ot some windmills are made to turn round. Upon the iron meridians is fixed a zodiac of tin painted blue, whereon tlie ecliptic and heliocen-tric orbits of the planets are drawn, .and the constellations and stars traced : the (>reat and Little Bear and Draco are already painted in tlieir])laces ro\iiid the nortli pole; the rest of the constellations are proposed to follow ; the

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whole is turned round with a small winch, with as little labor as it takes to wind up a jack, though the weight of the iron, tin, and wooden circle, is about 1000 lbs. When made use of, a planetarium will be placed in the middle. The whole, with the floor, is well supported by a frame of large timber. All the constellations and stars of the northern hemisphere, visible at Cambridge, are painted in their])roper places upon plates of iron joined together, which form one concave surface.' Dr. Long published a Commencement Sermon in 1728; and an answer to Dr. Galley's Pamphlet on Greek Accents. He died December 16th 1770, aged ninety-one.

Long (Edward), the liistorian of Jamaica, ■was born at St. Blaize in Cornwall, in 1734, being the son of a gentleman who possessed estates in that island. lie was brought up to the law; and on the death of his father, in 17J7, proceeeded to .Jamaica, where he became secretary to Sir Henry Moore his brother-in-law, and lieutenant governor of the island. In 1769 he was obliged to return to England for his health, where he devoted the remainder of his life to literary pursuits, and particularly to the completion of his Ilistoi'y of Jamaica, published in 1774, in 3 vols. 4to. In 1797 he resigned his office, and died March 13th, 1813, at the house of his son-in-law, Henry Howard Molyneux, esq., of Arundel Park, Sussex. Mr. Long also wrote a collection of essays, entitled The Pra-ter; a novel called The Antigallican ; Letters on the Colonies ; and various minor pieces.

Long (James Le), a French writer of the seventeenth century, born in Paris in 1665. He ■was a priest of the oratory, and librarian of St. Ilonore. He published, 1. Bibliotheca Sacra, 2 %ols. folio, 1723; 2. Bibliotheque de la France, folio; 3. A Historical discourse on Polyglott Bibles. He died at Paris in 1721.

Long Island, an island in Penobscot Bay, on the coast of Maine ; twelve miles long, and two broad. Also a sm.all island near the coast of Virginia, at the mouth of York River. Long. 76° 35' W., lat. 37° 16' N.

Long Island, an island belonging to the state of IS'ew York, extending east from the city of New York 140 miles. It is not more than ten miles in breadth on a medium, and is separated from Cotmecticnt by Long Island Sound. The island is divided into three counties; King's,

Queen's, and Suffolk. Long. 72° to 74° W., lat. 40° 50' N. Population 48,751. Sag-Har- bour is the principal port. The south side of the island is flat land, of a liˆht sandy soil, bordered on the sea coast with large tracts of salt meadow. The soil, however, is well calculated for raising grain, especially Indian corn. The north side of the island is hilly, and of a strong soil, adapted to the culture of grain, hay, and fruits, and the eastern part is remarkably adapted to the groA'th of wood, and supplies, in great part, the city of New York with this article. The principal towns and villases on the island are Brooklyn, Jamaica, Sag-llarbour, Flatbush, Flushing, Satauket, and Huntingdon.

Long Island, or Hamote, an island on the coast of New Zealand, in Queen Charlotte's Sound, about forty miles long. It has much

wood and large flocks of sea and other fowl, are also seen about the cliffs. Nine miles south of Port Jackson. — Also an island about forty miles with current on the coast of Papua or New Guinea.

Long Island Sound, a kind of inland sea, from three to twenty-five miles broad, and about 140 long, extending the whole lengtli of the island, and dividing it from Connecticut. It communicates with the ocean at both ends.

Longevity. Immediately after the creation, when the world was to be peopled by one man and one woman, the ordinary age was 900 and upwards. See Antediluvians. Immediately after the flood, when there were three persons to people the vvorld, their age was shortened, and none of those patriarchs, but Shem, arrived at 500. In the second century we find none that reached 240: in the third none but Terah that came to 200 years : the world, at least a part of it, by that time being so well peopled, that they had built cities, and were cantoned out into distant nations. By degrees, as the ni.mber of people increased, their longevity dwindled, till it came down to seventy or eighty years ; and there it has continued to stand ever since the time of Moses.

That the common duration of man's life has been the same in all ages, since the above period, is plain both from sacred and profane history. Yet instances of lives greatly exceeding that period are not only to be found in the history of all ages and countries, but even in our own country and in the present age. Mr.Whitehurst, in his Enquiry into the Origin and Strata of the Earth, has given a list (since enlarged by Dr. Fothergill) of thirty-two persons, who died between 1635 and 1781,

all of whom had lived above a century, most of them considerably longer, and one who was living in 1780 had attained the astonishing age of 175 ! Lord Bacon assures us, from the most incontestable evidence, that in A. D. 76, when a general taxa-tion was made over the Roman empire, by 'es-jiasian, there were found living in Italy, between the Appennines and the Po, no fewer than 124 persons aged 100 and upwards. Of these fifty-four were 100 years old, fifty-seven were 110, two 125, four 130, four 136, and three 140 years old each ; besides nineteen others in Parma, Placentia, Faventia, Rimino, Sec, of whom six were 110 years old, seven 120, one 125, two 130, one 131, one 132, and one 150. And, in our own age and country, Sir John Sinclair's Statistical Account affords numerous and authentic evidences, that longevity is far from being uncommon. In proof of this, we mˆight, if room permitted, give quotations from above 400 of the 938 parochial, accounts in that work ; but we shall content ourselves with only one f.'om that of Crossmichael in Galloway: — 'Within these twenty years,' says the Rev. J. Johnstone, ' at least twelve persons have died in the lower parts of Galloway, from 100 to 115 years old. William Marshal, a tinker in this place, is now 118. He might pass for sixty. His faculties are unimpaired, and he walks through the country with ease.' From the various instances of longevity given by Mr. Whitehurst and others, we shall only select a few of the most remarkable.

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Names.

Ages.

Places of birth or abode.

Living or dead abo\it

Hippocrates .

Isle of Coos

358 A. A.

C.

Democritus ….

109

Abdera ….

361

Galen

140

Pergamus

271 A. D.

Marcus Aponius

150

Rimino ….

Titus FuUonius

150

Bononia ….

150

Ethiopia ….

Lewis Cornaro

100

Venice ….

1566

Shropshire

1635

152

Killingworth

1656

Henry Jenkins

169

Yorkshire . .

1670

126

Yorkshire

1670

James Sands ….

140

Staffordshire

Countess of Desmond

140

Ireland ….

Countess of Eccleston

143

Ireland ….

1691

Margaret Scott

125

Dalkeith . ‘.

R. Elakeney, esq. .

114

Armagh ….

Marquis of Winchester .

106

Hampshire

Katharine M’Kenzie

117

F”owlis, Ross-shire .

Colonel T. Winslow

146

Ireland ….

1766

John Mount ….

136

Scotland ….

1766

150

Yorkshire

1768

Francis Bons ….

121

France ….

1769

C. J. Drakenberg .

146

Norway ….

1770

Kenneth Munro of Inveran

100

Kiltearn, Ross-shire .

1775

Margaret Patton

138

Lochwinnoch .

Mary Yates ….

128

Shropshire

1776

A. Goldsmith

140

France ….

1776

Countess of Loudoun

100

Loudoun

1779

M. Laurence

140

Orkney ….

Janet Taylor ….

108

Fintray ….

1780

Louisa Truxo, a negress .

175

Tucomea, South America .

1780

Jane Reeves ….

103

Essex ….

1781

145

Caermarthenshire

1782

John Wilson ….

116

Suffolk ….

1782

J. Brown, esq.

107

Fowlis Ross-shire .

1782

Alexander Ewart

104

Dumfries-shire

1789

John Jacobs ….

121

Mount Jura

1790

Helen Gray ….

105

Fifeshire ….

1791

Matthew Tait

123

Ayrshire ….

1792

Donald M’Leod

104

Isle of Sky .

1792

LONGFORD, an inland county in the province of Leinster, and kingdom of Ireland, bounded on the north by the counties of Lei-trim and Cavan: on the south and east by Westmeath county : and on the west by Roscommon. It extends about twenty-six miles in length, and measures about twenty-four in breadth. Its superficial contents are 134,15-2 acres, which are subdivided into twenty-three parislies, and six baronies, the latter called Longford, Granard, Ar-diigh, Moydoe, Rathclinc, and Abbeyshruel. Longford is rather a level country, much intermixed with bog, the northern angle alone being occupied by hills, which are bleak and barren. In tlie townland of Lisardowling is a small hill or moat called the centre of Ireland.

The chief rivtrs are, the Shannon, whicli forms its western boundary, the Inny, the Camlin, and the Fuller; the swellings of these, besides the in-imdations of Lough (Jawnagli, lay great parts of the country occasionally under water, and considerably obstruct tillage. The articles of manufacture produced here are yarn, and good biown

linen ; and the agricultural export consists chiefly of oats. The chief towns are Longford, Granard, Lawsborough, Johnstown, and Edge-worthtown, near which is the residence of that elegant and moral writer, Miss F'dgewortli. Longford formed part of the ancient district of Annaly or Angalia, the coimtry of the O'Fcrrals, who were dispossessed by the ILnglish settlers, the Delamares, and Tuites.

LoNGFOKD, the chief or assizes town of the county of the same name in Ireland, is situated on the river Camlin, in the barony of Longford,

at the distance of about seventy Flnglish miles from the city of Dublin. It is a inaiket, post, and fair town, consisting of one principal street, with a market-house, new gaol, court house, infirmary, diocesan school, permanent barrack, a good inn, and biewery. The situation is flat, exposed, marshy, and unhealthy ; tlie only elevated ground in the vicinity is the hill of Fenagh-fadd, wiiich rises to a height of about 200 feet only. The trade of this little town, as well as the salubrity of its climate, would derive material

benefit, by a branch from hence to tlie cunul at KiUasliee, only four miles distant. The family of Pakenham derive the title of earls from this place.

Longing is a preternatural appetite in pregnant women, and in some sick persons when about to recover. It is called pica, from the bird of that name, which is said to be subject to the same disorder. It consists of a desire of unusual things to eat and drink, and in being soon tired of one and wanting another. It is called malacia, from naXaKOc, weakness. Chlorotic girls, and men who labor under suppressed hemor-rhoids, are very subject to tliis complaint, and are relieved by promoting the respective evacuations. In general, whether this disorder is observed in pregnant women, in persons recovering from an acute fever, or in those who labor under obstructions of the natural evacuations, this craving of the appetite should be moderately indulged.

LQNGINUS (Dionysius), a celebrated Greek critic of the third century, by some said to have been born in Athens, by others in Syria. His father's name is unknown, but by his mother he was allied to the celebrated Plutarch. His youth was spent in travelling with his parents, which afforded him an opportunity of collecting knowledge, and of improving his taste. After h.is travels, he fixed his residence at Athens, and with the greatest assiduity applied to study. Here he published his Treatise on the Sublime; which raised his reputation to such a height, and gave the Athenians such an opinion of his judgment and taste, that every work was received or rejected by the public,

according to his decisions

lie seems to have staid in Athens a longtime; here he taught the academic philosophy, and among others had the famous Porphyry for his pupil. But it was at lengtii his fortune to be drawn from Athens, and to mix in more active scenes; to train up young princes to virtue and glory ; to guide the busy passions of the great to noble objects ; and at last to die in the causo of liberty. Zenobia, queen of the east, prevailed on him to take the education of her sons; and he soon gained a great share in her esteem. That princess was at war with Aurelian : and being defeated by him near Antiuch, was compelled to shut hersalf up in Palmyra, her capital city The emperor wrote her a letter, in which he ordered her to surrender ; to wiiich she returned an answer, drawn up by Longinus, whicli filled him with resentment. The emperor laid siege to the city ; and the Palmyrians were at length obliged to surrender. Tiie queen and Longinus endeavoured to fly into Persia; but were overtaken and made prisoners when on the point of crossing the Euphrates. The queen, intimidated, weakly laid the blame of vindicating the liberty of her country on its true author ; and the brave Longinus, to the disgrace of the conqueror, was immediately executed. The writings of Longinus were numerous, some on philosophical, but the greater part on critical subjects. Dr. Pearce has collected the titles of twenty-five treatises, none of which have escaped the depredations of time and barbarians. The best edition of his works is that of Tollius, printed at Utrecht, in 1694, cum notis variorum. It has been translated into English by Mr. Smith.

LONGITUDE.

LON’GITUDE, n. s. ? Fr. longitude ; Lat.

Longitu’dinal, ac//. S longi’udo. Length; the ■greatest dimension ; the earth’s circumference measured from a given meridian ; the distance of any part of the earth east or west of any other given place.

To conclude ; Of longitudes, what other way have we, But to mark when and where the dark eclipses be?

Donne.

The ancients did determine the longhude of all rooms, which were longer than broad, by the double of their latitude. Wotlon.

Some of Magellanus's company were the first that did compass the world through all the degrees of lon-gilude. Abbot.

The longitude of a star is its distance from the first point of numeration towards the east, which first point, unto the ancients, was the vernal equinox. Browne's Vulgar Errours.

His was the method of discovering the longitude by bomb-vessels.

Arhiilhiiot and Pope's Martin Scriblerius.

The variety of the alphabet was in mere longitude only, but th.' thousand parts of our bodies may be diversified by situation in all the dimensions of solid bodies ; which multiplies all over and over again, and overwhelms the fancy in a new abyss of unfa-thomable niimher. lientley.

Longitudinal is opposed to transverse; these vc.:i-

cula; are distended, and their longitudinal diameters straightened, and so the lengtii of the whole muscla shortened. Cheyne.

Longitude, in geography and navigation, is the angle at the pole, included between the meridian of any place, and the first meridian; and it is generally measured on the equator ; though, considered in itself, it may with equal propriety be measured on any yiarallel of latitude ; but, when diflerence of latitude and dift'erence of lon-uitude are to be composed, it is expedient that they should be estimated on circles of equal radii, therefore in navigation longitude is measured on the equator.

The method of finding the longitude is a problem of such importance and such difficulty, and has occupied so large a space in the application of science to the business of practical life, that an account of the circumstances which have contributed to bring its solution to the state in which we now have it, cannot fail to be in a high decree interesting. We sliall therefore give a brief sketch of the various methods which have been proposed for discovering it, the principles on which they depend, with directions for putting in practice such of them as have been found useful, and illustrate the whole with appropriate examples.

History of the Attempts which have been MADE to Discover the Longitude at Sea.

in time corresponds to a dift'erence of 15° of longitude.

The time at the place of observation can gene No sooner had navigators ventured out of sight rally be obtained vviih great ease and exactness, of land, than the importance of some method of so that the chief difficulty in the solution of this finding the longitude as well as the latitude by problem lies in hnding the time at the first me-

observation began to be felt. In 1598 Philip III. of Spain offered a reward of 1000 crowns to any one who could give a solution adequate to the wants of seamen ; and soon after the states general offered a reward of 10,000 florins. The British parliament passed an act in 1714, empowering certain commissioners to make such experiments as they might deem necessary to facilitate the solution of tliis problem, and assigned £2000 to defray any expenses that might attend the experiments : and further granting a reward to the person who might make any progress

in the solution, proportionable to the degree of from Greenwich.

idian.

Gemma Frisius in 1530 seems fist to have suggested the method of finding the longitude at sea by means of watches or time keepers, which machines he says were then but lately invented.

Such a machine being regulated, to Greenwich time, for example, would always show the time of day at Greenwich wherever it might be carried to, and the difference between this time and that at the place found by observation would give, as we have shown above, the longitude of the place

accuracy which might arise by the solution in practice; £l0,000, £15,000, and £20,000, being the rewards offered, if the proposed solution should be capable of determining the longitude to a degree of a great circle, two-thirds of a de-gree, or half a degree respectively.

The improvements in nautical science which the preceding munificent rewards induced phi-

The same method was soon after attempted by jVIetius, and some others, but the art of watch-making was at that time too imperfect to enable them to succeed. Dr. Hook and Mr. Huygens, about the year 16G4, applied the pendulum spring to watches which were employed for the purpose of discovering the longitude at sea. Dr. Hooke's indeed, from his having quarrelled with

losophers, mathematicians, and artists, to labor the ministry, were never put on trial at sea, but at accomplishing, having ultimately been so far many experiments were made with those con-successful, that the highest reward was adjudged structed by Huygens. Major Holmes in particular, to one individual; it was represented to parlia-in a voyage from the coast of Guinea in 16G5, ment, in 1818, that the longitude could now by predicted, by the aid of one of tliese watches, the at least two separate methods be found at sea longitude of the island of Fuego to a conside-within the limits which had been previously sperable degree of accuracy. Experience however cified, a new act was passed empowering the soon convinced Huygens that unless some method

commissioners for the discovery of the longitude to propose from time to time to his majesty in council, to establish three stales of proportionate rewards to be paid to any one who shall by any principle not yet made public, ascertain the longitude within three

new corresponding scales of limit and condition, those rewards not respectively ex-

could be found of correcting the irregularities caused in the going of these watches by the effects of heat and cold, they could be but of little practical use in finding the longitude.

A method of finding the longitude was proposed by Whiston and Ditton, which, though perfectly useless for determining the longitude at

cecding £5000, £7500, and £10,000 ; and giving sea, has been successfully practised for finding it

also to the board of longitude very liberal on land. In the improved method of putting it

powers to reward any discovery tending to benefit in practice, rockets are fired perpendicularly at

navigation ; and finally permitting the board to some intermediate place between those whope

recompense any person who may propose or con-difference of longitude it is proposed to deter—

trive any thing ingenious in itself and useful in mine, and the time at each place, when the rocket

science, and which may deserve encouragement, is seen to explode in the air, being noted, the dif—

even though the results which it furnishes may ference|of those times gives the element lequircd.

not come within the limits of that exactness to The relative situations with respect to longitude,

which his majesty may be recommended, to adhere of some of the observatories on the continent,

in adjudging the preceding rewards. have been determined by this method, and very

Encouraged by such offers, the talent which recently a series of experiments of this kind have

lias been employed on this problem is not to be been successfully concluded for determining tiie

wondered at. In 1635 John Morin, professor of difference of longitude between the observatories

mathematics at Paris, proposed a inetliod of of Greenwich and Paris.

solving it to cardinal Richelieu ; and though, from In 1714 Henry Sully, an Englishman, print—

the then imperfect state of the lunar tables, the ed a small tract at Vienna, upon the subject of

commissioners employed to examine this method watch-making. Having afterwards removed to

judged it insufficient, Cardinal Mazarin in Paris, he applied himself to the improvement of

1645 procured a pension of 2000 livres for the time-keepers for the discovery of the longitude,

author. III.' taught the famous Julian de Roy ; and this

The many attempts that have been made at the gentleman, with his son, and M. Berthoud, are

solution of this problem may all be said to de-the only persons, who, since the days of Sully,

pend on the same principle, the determining the have turned their thoughts this way. But, though

difference of time between two meridians ; for tiiis experiments were made at sea with some of their

time is the same])ait of twenty-four hours, that watches, they were not able to accomplish any

the angle included between those meridians is of thing of importance with regard to the principal

four right angles. Hence one iiour of diflerence point.

LONGITUDE.

Tlie first who succeeded in any considerable deijree was ˆIr. John Harrison; who, in 17‘2G produced a watch which went so exactly, that for ten years together it did not err above one-second in a month. In 1736 it was tried in a voyage to Lisbon and back again, on board one of his majesty’s ships ; during which it corrected an error of a degree and a half in the computation of the ship’s reckoning. In consequence of this he received public encouragement to go on ; and, by the year 1701, had finished three time-keepers, each of them more accurate than the former. See IIakrison.

The last turned out so much to his satisfaction that he now applied to the commissioners of longitude for leave to make an experiment with Iiis watch in a voyage to the VVest Indies. Permissio:i being granted his son Mr. William Harrison to set out in his majesty’s ship the Deptford for Jamaica in the montii of November 17G1, this trial was attended with all imaginable success. The longitude of the island, as determined by the time-keeper, differed from that found by astronomical observations only one minute and a quarter of the equator; the longitude of places seen by the way being also determined with great exactness. On the ship’s return to England, it was found to have erred no more during the whole voyage than 1’ 54j” in time, little more than twenty-eight miles in distance; which being within the limits prescribed by the act, the inventor claimed the £‘20,000 offered by government. Objections, however, were started. Doubts were pretended about the real longitude of Jamaica, as well as the manner in which the time had been found both there and at Portsmouth. It was alleged also that although the time-keeper happened to be right at Jamaica, and after its return to England, this was by no means a proof that it iiad always been so in the intermediate times; in consequence of which allegations another trial was appointed in a voy-age to Barbadoes.

Precautions were now taken to obviate as many of these objections as possible. The commissioners sent out proper persons to make astronomical observations at that island ; which, when compared with

others in England, would ascertain beyond a doubt its true situation. In 1764, then, j\lr. Harrison junior set sail for Barbadoes; and the result of the experiment was, that the difference of longitude betwixt Portsmouth and Barbadoes, was shown by the time-keeper to be3/ i.5o/«. 3s; and by astronomical observations to be 3/i. 54?«. 20s; the error being now only 43” of time, or 10′ 45″ of longitude. In consequence of this and the former trials Mr. Harrison received one-half of the reward promised, upon making a discovery of the principles upon which his time-keepers were constructed. He was likewise promised the other half of the reward as soon as time-keepers should be constructed by other artists, which should answer the purpose as well as those of Mr. Harrison himself At this time he delivered up all his time keepers, the last of wliich was sent to Greenwich to be tried by Mr. Nevil jNIaskelyne the astronomer royal. On trial, however, it was found to go with much less legularity than had been expected; but Mr. Harrison attributed this to his having made some

experiments with it which he had not time to finish when he was ordered to deliver up the watch. Soon after this an agreement was made by the commissioners with Mr. Kendall to construct a vvatcii upon Mr. Harrison’s principles ; and this upon trial was found to answer the purpose even better than any that Harrison himself had constructed. This watch was sent out with captain Cook in 1772 ; and durmg all the time of his voyage round the world in 1772, 1773, 1 774, and 1775, never erred quite 14ˆ” per day : in consequence of which the house of commons, in 1774, ordered the other £10,000 to be paid to Mr. Harrison. Mr. Harrison had also at different times received other sums of money as encouragement to continue his endeavours, from the Board of Longitude, the East India Company, and from many private individuals, Mr. Arnold, Mr. Mudye, Mr. Ernshaw, and many others have since made many good watches for the same purpose. In 1821 government directed the astronomer royal to receive on trial whatever chronometers might be sent to him for that purpose, and agreed to purchase at a liberal price, every year the three best, provided their going was within certain assigned limits of exafˆtness. In consequence there are always now at the observatory a great number of chronometers sent by the makers on trial, many of which perform most admirably ; and indeed it may be said that the great price of chronometers is now the only obstacle to their introduction into general use.

Several astronomical methods have been proposed for finding the time

at the first meridian ; and any celestial phenomenon, whose times of happening can be predicted, may theoretically be made subservient to that purpose. But, in actual practice, tlie phenomenon must be such as can without extraordinary difficulty 1)e observed with sufficient nicety ; and those depending on the motions of the moon, and the rotation of the satellites of Jupiter round their primary, have been found to be the only ones of any practical value.

The principle on which all astronomical methods of finding the longitude rest is, that the difference between the time of day at meridian, and the time of day at the place of observation, is the longitude of the meridian of that))lace in time. Now apparent time signifies, or is measured by the angle at the pole included between the meridian of any place and the meridian on which the sun is at that instant. Mean time is the angle included between the meridian of the place, and the meridian on which the mean place of the sun might at the instant be conceived to be. Siderial time is the angle included between the meridian of any place, and the meridian on which the first point of Aries is at the instant.

Let A in the annexed figure represent the first point of Aries; S and S', the true and mean places of the sun ; G Greenwich, and B, C, any other two places, P being the pole. Then G P A, G P S, and G P S', are respectively the siderial, apparent, and mean time at Greenwich ; B PA, B P S, and B P S', the siderial, apparent, and mean time at B; CPA, CPS, and C PS', the siderial, apparent and mean time at C Now GPA— BPA, or GPS — B PS, o.- G P S'— B P S', = B P G the longitude of B, or

of any place on the meridian P B, westeny. And CPA— GPA, or C PS— GPS, or CPS'— GPS',z:GPC, the longitude of C, or of any place on the meridian PC, and easterly. Hence it appears that the difference between the siderial time at tlie first meridian and the siderial time at any other meridian is the longitude of that meridian ; and that the difference between the mean times, or between the apparent times at the first meridian and that of any other place is the longitude of that other meridian ; easterly when the time at the first meridian is behind,

and westerly when before the time at the meridian whose longitude it is proposed to find.

If eclipses of the moon happened more frequently they would afford one of the easiest methods of finding the longitude that can be conceived. For the time at the place of observation being noted when the eclipse begins or ends, and compared with the Greenwich time of the corresponding phenomenon as given in the Nautical Almanac, the difference of the times gives the required longitude. It must, however, be observed on this method, that the beginning or end of a lunar eclipse can seldom be determined by observation, to nearer than two or three minutes of time, owing to the gradual shading off of the sliadow ; and therefore in any single observation the longitude cannot be depended on to nearer than half or three-quarters of a degree.

The eclipses of Jupiter's satellites have been of great use in settling within reasonable limits of exactness the longitudesof places on land; but at sea it has been found impracticable to manage telescopes of sufficient power to note the times at which the eclipses happen. Mr. Irvin invented what he called a marine chair, in wliich he conceived that even on shipboard a telescope adequate to making such observations miglit be used with success ; but Dr. Maskelyne, who tried it in a voyage to Barbadoes, found that he could derive no benefit from tlie use of it.

The first and second satellites of Jupiter, as they circulate most rapidly round their primary, are best adapted to the purpose of finding the longitude, but the tables even of tlieir motions arc not sufficiently accurate to satisfy the wants of the present state of science. From the observations of the late colonel Bcaufoy it appears that the predicted and actual times of an eclipse of the first satellite sometimes differ more than two minutes, though they generally differ less than twenty seconds of time ; and with respect to the second satellite the difference in some cases Vol. XIII.

has been found to amount to nearly three minutes. The method of finding the longitude, from the eclipses of Jupiter's satellites, may therefore be characterised as one which, though easy of apjilication, cannot be depended on as affording results of any very great degree of exactness. Of course the utility of the method will be increased by every improvement in the tables of the motions of the satellites, and every advance that is made in perfecting the construction of telescopes.

The time of the moon's transit ove^ the m.eridian has also been made subservient to finding the longitude of that meridian. It .appears to have been first mentioned by Purchas in his account of Hall's discovery of Greenland ; and soon after (in 1635) it was clearly explained in Carpenter's Geography. It is mentioned by Dr. Maskelyne, in his instructions relative to the transit of Venus in 1769; by Bernoulli, and by the abbe Toaldo, in a pamphlet published in 1784 ; and lastly by Mr. Pigott, who, without knowing that the method had been thought of before, recommended it very strongly to the public, in a paper published in the Philosophical Transactions.

On land, the time of the moon's transit may be determined with great precision with the aid of a transit instrument fixed in the plane of the meridian, and this method is always practised in regular observations. It may also be determined with tolerable accuracy by observing equal altitudes of the moon with a sextant and an artificial horizon, making allowance in the time of the transit, deduced from equal altitudes, for the change of declination in the interval between the observations.

Eclipses of the sun, and the analogous phenomena of occultations of stars by the moon, have also been applied to the finding the time at the first meridian. Mr. F. Baily, in a recent volume of the Memoirs of the Astronomical Society of London, has brought forward, in a new and greatly improved form, the method of finding the longitude from the moon's meridian transit. We merely notice it here as connected with one department of the history of this important problem ; and shall recur to it again in a subsequent part of this article.

We have purposely omitted till now, in this historical sketch, to refer to by far the most ingenious and useful method that has ever been proposed for solving this important problem, the method of deducing the longitude from the moon's observed distance from the sun or a star, with the altitudes of both objects. This is commonly called a lunar observation, and from the improvements that liave been made in the lunar tables, and in instruments for observing the distance and altitudes, it has been brought to a de-gree of perfection which fifty years ago could not have been anticipated.

The method consists simply in deducing from the altitudes of the objects, and their distance, with their parrallaxes", and llie refractions corresponding to their altitudes, what their distance would have been if the observer had been at the centre of the earth; and this distance, compared with those comiiutcd avul given for

Greenwich time in tlie Nautical Almanac, enables the computer to fmd tlie instant at (Jreenwich when his observation was made; and this time, compared with the time at the place at which he is, gives the required longitude.

John Werner, of Nuremberg, appears to have been the first who proposed this method of finding the longitude in his annotations on tlie first book of Ptolemy's Geography, printed in 1514. It was recommended by Oronce Fine of Brian-con, and again by tJemma Frisius in 1.54.') ; and the celebrated Kepler was fully persuaded of its utility. Almost every writer on astronomy down to tl;e time of Flamstcod adverted to it; but even in his day, setting aside the imperfections of the instruments of observation, such was the state of the lunar tables, that he says, * we find the best tables extant erring sometimes twelve minutes or more from the moon's apparent place, \vliich would cause a fault of half an hour, or 7° 30' HI the longitude, deduced by comparing her place in the heavens with that given by the tables.' This method, therefore, though it appeared to be the only one likely to be applied successfully at sea, was at that time abandoned as impracticable.

But, when-Dr. Maskelyne succeeded to the situation of astronomer royal in 17G5, such advances had been made in astronomical science, that under his auspices this method of finding the longitude was again brought forward, and after devoting a great portion of his long and valuable life to bring the method to perfection, and to introduce it into practice at sea, he had the satisfaction of seeing his meritorious exertions crowned with almost complete success.

One of the great obstacles to its introduction into general practice was the difficulty in making the necessary calculations from the tables and formulas which the labors of astronomers had supplied ; but this formidable objection was completely obviated by the publication of the Nautical Almanac, which, on Dr. Maskelyne's suggestion, was undertaken by the board of longitude in 1766, and it has ever since been continued annually, and is generally published three or four years in advance for the convenience of mariners going on long

voyages. Similar publications have since been brought out in several countries in Europe, under the patronage of their respective governments. The French Connaisance de Toms, the Jar Book of Vienna, and the Coimbra Ephemeris, are all similar, and valuable compendiums; and two separate and large editions of the English Nautical Almanac are annually published in America.

But before mariners in general could be materially benefited, by all these efforts for their advantage, it was requisite that they should be furnished with such instruments for observing as they could use with readiness, and depend upon with confidence ; and with simple as well as appropriate rules for making the necessary computations after their observations were completed. The artists of this country answered well to the call which this consideration made upon their talents, anfl devised such improvements in the construction and craduation of quadrants.

sextants, and circles, for nautical observations, that little appears left to be desired on the subject; and, in all the useful problems of nautical astronomy, the methods of calculation have been so simplified that it is not easy to conceive for what situation, connected with the navigation of a ship, the person is fitted who is incapable of applying them.

Practical Directions for Finding tHE Longitude.

1. By a chronometer. — The error of the chronometer must be found for some known meridian, and its rate or its daily gain, or loss. Call this error e, the rate r, and the number of days from the time tliat the chronometer had the error e, till it is used for finding the longitude, d, and call the longitude of the place for which the error e was found, *; then the true mean time T at the meridian of Greenwich may he found from t, the time shown by the chronometer, by the following formula : 'T: = :t--e--dr-- , e being negative when the watch is fast, >• negative when the watch is gaining, and* negative in east longitude. And this time, being compared with the mean time at the place as deduced from observation, will give the longitude of the place ; west, if the Greenwich time is be-fore, but east if the Greenwich time is behind the time at the place of observation.

Example. If at sea, on October 11th, I find by observation that the mean time is Ah. 2;«. 4Cs. when a chronometer (which on September 14th was 20m. 2s. fast for mean time at Constantinople, and gaining

4s. per day) showed 7A. 2m. 12s., required the longitude here d rz 27, r z=

— 4s., e—— 30ot. 2s., and *rz 1 2° 35', E =: — 50*«. 20s. Hence T =z 7h. 2m. 12s. — 30m. 2."!.

— l/«. 40s. — 50ot. 12s. =. 6/i. 40/n. 18s; and 6h. 40771. 18s. — 4h. 2m. 40s. =z 2//. 37ot. 38s. =z 39" 24′ 30″, the recpaired longitude west.

2. By the eclipses of Jupiter s satellites. — Let the Greenwich time of the expected immersion or emersion be looked for in the Nautical Almanac, and subtract the supposed longitude of the place of observation from this time, if west, but add it if east, and the result will give the time about which the phenomenon expected ought to be looked for. Let the observer then be settled to his telescope a few minutes before this time, and wait attentively for the instant in which the satellite either enters the shadow, or emerges from it ; note the precise instant in mean time at the place when the immersion or emersion is observed ; and the difference between that time, and the Greenwich time of the observation as given in the Almanac, will be the longitude of the place of observation in time.

Or if at any time afterwards the lime at which the eclipse was observed at Greenwich should happen to be know-n, the difference between that time and the time of the place of observation will give the longitude more exactly than it can be expected to be obtained from a comparison with the computed times in the Nautical Almanac. The eclipses, which in favorable weather may be observed at Greenwich, are marked in the Nautical Almanac with an asterisk.

Example. — On April lllli I observed by the Nautical Almanac, that the first satellite of Jupiter would emerge from his shadow at 11 A. 28w. 4s. Greenwich mean time ; I conceived my longitude to be about 9° west, and therefore at about IQh. 45;«. I sat down to the telescope, and waited till 10/(. 53m. Is., when I saw the satellite emerge, I

therefore concluded that my longitude was U/i. 28//). 4s. — lO/i. 53/?/. Is. = 35/t 3s. = 8° 4534’ west.

3. By the 7noons transit over the meridian. — If the meridian of a given place, say that of Greenwich, produced to the heavens, were to pass through the sun, the moon, and a fixed star, in the next instant the sun by its motion in right ascension will separate itself from the star, and the moon by her greater motion in right ascension will separate herself still further from the star ; or, in other words, at any time after these objects %vere on the meridian, the star will be the most west of the meridian, the moon least, and the sun in an intermediate position.

The meridian after quitting these bodies will again pass through the star after describing 360° in 23/(. 56///. 4‘09s., through the sun, after describing 360° 59’ 8-3’, in 24ˆ., and through the moon in an interval greater than 24//., depending on the daily increase of the moon’s right ascension. A spectator on a different meridian would note similar effects ; but less in degree as his distance from the first meridian is less. He will note an increase of the sun’s right ascension or a separation of the sun from the fixed star, but less than 59/n. 8‘3i., an increase in the moon’s right ascension, but less than its increase between two successive transits ; and consequently an excess of the increase of the moon’s right ascension above that of the sun’s, but less than the excess in the interval between two successive transits of the moon over the first meridian.

Hence, if the increase of the sun or moon’s right ascension were known in the interval between two successive transits (and from the Nautical Almanac they can readily be obtained), an observer who could by actual observation determine their right ascensions at the time at which they passed his meridian, might by simple proportion find his longitude, either by comparing the sun and star, the mcon and star, or the moon and sun. But, on account of the slow motion of the sun, the first of these methods is of no use in practice ; wp shall therefore consider only the two latter.

Let A, a, be the respective increases of the right ascensions of the sun and moon in 24A. ; then the interval between two successive transits of the moon over any given meridian is 24//.

{.+ˆ” + (ˆ”)’+(ˆ)Vc..

and the retardation in 24/!. is A — « -f (A — «)’ (A — a)\ , . , , .

— t- — -^^^ - &c., and the mcrease

24

24 = *

of A due to her retardation is — (A — o) 4-

(A — af(K — d)\ “^ ^ — 0I2 — ‘ ^ consequently E,

the increase of her right ascension between two

24

+

successive transits i > A -f-A,

Hence, if i be the ohs..‘rved increase of the moon’s right ascension bet \eeu her passing the first meridian and that of tie place of observation, then the longitude of that place is 24 e -^- A. I A — a /A — a \3 ,A — a\3^ ,

In the case of the sun E’ = r A — a +

(A — a)» . (A — n)3

+

&c. ; and e’ rr e

24 ‘ 242

representing the star’s acceleration proportional to the time corresponding to the difference of meridians. Hence the longitude zr 24 ‘ f — «

c A~a /A — ax2 /A— av’

- -^-«- J ‘ +—^ + (-^) + (-^)

&c. I

The moon’s right ascension is given in the Nautical Almanac for every 12A. ; we may therefore employ — - — , the difference of the increases

of right ascension in 12A., instead of A — a, the difference for 24//., using accordingly in the formulae 12h. instead of 24^.

Though the above divisors in the formulae for the longitude are infinite series, it will be sufficiently accurate in practice to take the sum of three of their terms.

Example. — If, on April 8th 1800, the right ascension be observed when on the meridian of Greenwich to be 12A. 36//^. 26-6s., and on a meridian to the west of Greenwich 12h.A7m. 56-7s. required the longitude of that meridian.

Here 12h. 36///. 26-6s. ^ 12//. 47m. 56-7s. = llw. 30-Is. z: e, and by the Nautical Almanac we have A zz. 52m. 6s., and a zz 3///. 39-3s., whence A — a rz 48?//. 26-7s. ; and time of moon’s describing A — a zz 50??/. 7-8s., for which time the proportional increase of 52m. 6s. is 1/?/. 48-8s. ; hence E zz 52///. 6s. -f-1/?/. 48-8s. zz 53?//. 54-8s. ; and consecjuently 53??/. 54‘8s. ; 11??/. 30-ls. : : 24A. : 5 • 1200//. =r 5//. 7??/. 12-25s., the required longitude in time.

Mr. Francis Baily, a gentleman who stands at the head of astronomical science in this country, has, in part I. vol. 2 of the INIemoirs of the Astronomical Society of London, greatly improved the method of finding the longitude, by the method now under consideration. This method consists in observing with a transit instrument the difference of right ascension between the border of the moon and certain fixed stars previously agreed upon ; restricting the observations to such stars as differ very little from the moon in declination. ‘It is evident,’ he observes, ‘that this method is quite independent of the errors of the lunar tables, except as far as the horary motion of the moon in right ascension is concerned, and which in the present case may be depended on with sufficient confidence : that it does not involve any question respecting the compression of the earth : that a knowledge of the correct position of the star is not at all

reqxiired ; and finally liiat an error, even of several seconds, in the state of the clock, is of no consequence. Consequently a vast mass of un-satisfactory computation is avoided.'

Since the publication of Mr. Daily's memoir, lists of stars proper to observe with the moon for this purpose have been published in Schumacher's Astronomia Nachrichten, and Mr. liaily himself has also published some in this country, the last of which was for the first six months of 1823. These stars have been called moon culminating stars, and several distinguished astronomers have determined the longitude of their observatories by means of them ; and lieutenant Forster, the astronomer employed by government in captain Parry's second voyage, applied the method successfully in determining the longitude of Port Bowen.

Let the diflerence between the time of the transit of the moon's limb and of the fixed star previously agreed on, at the observatory situated most westerly, be denoted by t, and at the observatory situated most easterly by r. These values will be positive when the transit of the star precedes that of the moon ; otherwise they will be netˆative. Then t — r will denote the increase in the right ascension of the moon's limb, in the interval between the observations.

Let us denote, for the apparent time of the moon's culmination at the western observatory, her true radius as seen from the earth by r ; her true declination by d ; and let those quantities at the time of her culmination at the east-em observatory be respectively denoted by p and

d. Then(ˆ-7) ± -i (ˆ

P \ _

) = -

ˆcos. d COS. £■ will be the true difference of right ascension of the moon's centre for the two instants of observation; the upper sign being used when the western border of the moon is observed ; and the lower sign when the eastern border is observed. But when the diflerence of meridians is not great we may use the formula in the simple form / — r zz A. The semidiameter and declination

of the moon above alluded to are such as they are supposed to be if seen from the centre of the earth. In all cases the longitude required may be supposed to be approximately known ; to say within a minute of time. Call this approximate longitude /, and the true longitude . Let the apparent time (at the meridian for which the ephemeris employed is computed) of the culmination at the western observatory be denoted by c, and the moon's true right ascension at that time by a; and let the corresponding time and right ascension at the culmination observed at the eastern observatory be denoted respectively by ˆ and s; then a — x : c — x '■ '■ 'ˆ '• 'ˆ'ˆˆ angle in time described by the western meridian in the interval of the observations ; that is equal to the difference of longitude added to A. Whence

we have \ — (ˆ — 1) A ; or expressing

— jT in time instead of one, we have X zz.

(\S • ˆ — l) A. Or to reduce the time

c — X, which is apparent, into siderial time, let

represent the value of a solar day in siderial

time, and then X z = .(—- • 15 • ' l) A

' \ 24A-a — J ˆ

3:; / _i_ • r - — 1) A ; or resuming the

\ 576U a — X value of A we have finally X ~

Uˆˆˆ-T5(z£rd"c'irr)A ˆ

C_J .• ˆJZjf — 1 I ; on which formula it may 57GO a — .r J

be remarked that when more stars than one have been observed on any given night, t — r must be taken equal to the mean of all the comparisons made at the same culmination of the moon. Example. — ˆL Nicolai at Manhcim, and M, Strucer at Dorpat, observed the culmination of the first border of the moon on the 3d of March, 1822 ; the observations are as under : —

Stars. INlanheim. Dorpat. Diff—

tZZ TZZ t T —

1822. 309 jNlayer, + 13m. l8-.30s. -\r 10/«. 17-56s. 3m. OTls.

March 3d, 82 Gemin, -- 8 9-43 -h 5 8-25 3 088

/Cancri!- 9 41-11 -12 41-89 3 0-78

As the timej of the moon's culmination are not here given, we must deduce them from an ephemeris. In the Con. des Terns we find that the moon passed the meridian of Paris on that day at 8/(. rAm. Consequently the Paris time of her culmination at Manheim, (in longitude by estimation 0/i. 24w. 31x. east from Paris), and at Dorpat (in longitude by estimation 1//. 37m. 28s. east from Paris) will respectively to the nearest minute of time be:

Manheim. Dorpat. ˆDiff.

1822 c — J- = c—x —

March 3d, 8ˆ. 26m. 7h. — 10m. 1//. - - 10m.

The true semidiameter and declination of the moon at Manheim and Dorpat, at the above hours, Paris time, will be :

Mean = 3 080 = 180-8s.

Manheim. y n 1 5m 44-4$. d— 23° 51′ 42″

Dorpat. p = 15m. 44-8i.

S z=. 24° -2′ 18″

And consequently-ˆ. (ˆ-ˆ —ˆˆˆ - “

0-123S. whence A = -f 180-8s. — 0-123s. =

180-677.

To find the values of a and x we must compute by means of second differences the true rifˆht ascension of the moon, for the apparent times denoted by c and .r ; and the difiierence between them will be the true motion of the moon in the interval c - x. The following are the values deduced from the Con. des lems:—

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c — 8/i.

u— IIG’ˆ 49′ 24-4″ X— 116 4 7-6

c. — jr=: 1 16 a — a-n: 45 16-8

The length of a solar day, or the value of s was 8G6”23-4s. ; hence we have,

X— 1ˆ0-ana. (ˆ-ˆˆˆˆ X 1-67845— 1\ = 1/,. I, 5760 /

\2m. 59*45s.,the difference of longitude hetween Manheim and Dorpat.

By occuUatiuns. — The observations requisite in this method are of the simplest possible cliaracter, and, tiirough the skill of modern astronomers, the computations have been greatly simplified. All that is requisite in making the observation is an ordmary telescope, with a watch, or chronometer, and an instrument to find its error for time at the place of observation. Mr. Galbraith of Edmbiirgh, in his truly valuable Mathematical and Astronomical Tables, has given the following rules for making the computations, being, with a few alterations, the same as those given by Dr. Inman in his Navigation.

From the time at the place of observation, and the estimated longitude, find the estimated Greenwich time ; and for that time taken from the Nautical Almanac, the true right ascension of the sun and moon, the moon's true declination, with its change for 10s., for the purpose of repeating the observations if necessary; and the moon's semidiameter, as well as her horizontal parallax, corrected for the figure of the earth. Take also the moon's true right ascension for 3A. after the first estimated time ; and take from the Nautical Almanac, or other tables, the apparent right ascension and declination of the star, and correct the latitude for the figure of the earth, and find in the usual way the star's meridian distance, which is equal, apparent time -}- sun's li. A. — * 's R. A.

Make four columns and number them (1) (2) (3) (4), and under each write the proportional logarithm of the reduced horizontal parallax. Under (1) and (2) put the secant of the reduced latitude; under (3) the cosecant of the same; under (1) the cosecant of the star's meridian distance («), and take the sum of the numbers now under (1). Below that sum put the constant logarithm 1-17609 and the cosine of the star's declination ; at the same time put under (2) the cosecant, and under (3) the secant of the same ; the sum of the three logarithms under (1) will be the proportional logarithm of one first, or the parallax in R. A. in time nearly, one half of which {b) is to be subtracted from (a) giving (a — b)i\ti corrected hour angle.

Under (2) put the secant ˆof the hour angle thus corrected. The sum of the logarithms under (3) will be the proportional logarithm of the first part of the parallax in declination, and that under (2) the second part. The first part must be applied with such a sign as to diminish the star's distance from the elevated pole: the second must be applied with the same sign as the first when the hour angle and polar distance are of different affections, otherwise with a contrary sign ; and the result will be the true declination of the observed point of the moon's

limbs. Take the difference between this true declination of the observed point and the declination of the moon's centre, found from the Nautical Almanac ; under which put the moon's semidiameter properly corrected, and take the sum and difference. Add together the proportional logaritlims of this sum and difference, and to half the sum add the cosine of the mean between tiie moon's true declination and that just found, and the sum will be the proportional logarithm of the moon's semidiameter in right ascension nearly.

Under (4) put 1-17609, the first sum under (1) and the cosine of the declination of the observed point, and the sum will be the proportional logarithm of the exact parallax of R. A. in time, which being^added to the star's R. A. when west of the meridian, but subtracted if east, will give the true R. A. of the point observed. To the true R. A. thus obtained add the moon's semidiameter in R. A. or subtractit according as the re-appearance or disappearance of tlie star has been observed, and the result will be the true right ascension of the moon's centre deduced from the observation. If this differs considerably from the R. A. taken from the Nautical Almanac, alter the moon's declination by as many seconds as will make a corresponding variation in the first R. A. such as the Nautical Almanac would give for the same alteration in the declination. Re-peat the operation till this is the case, and the last R. A. will be that required.

Under this put the moon's (1) R. A. taken from the Nautical Almanac for the Greenwich time, and then the moon's R. A. three hours afterwards. Take the difference between the second and each of the others, and, from the proportional logarithm of the less difference, subtract the proportional logarithm of the greater, and the remainder will be the proportional; logarithm of a portion of time which must be added to the Greenwich time when the first right ascension is greater than the second ; otherwise subtracted, and the result will be the Greenwich apparent time; the difference between which and the apparent time at the place of observation, will be the longitude of that place in time.

Example— On March 3d, 1823, at Bahia, in latitude 12° 57′ 17″ S., longitude by estimation 38° 30' W., the re-appearance of Antores from the dark limb of the moon, was observed at 15h. 30iii. 0-35. ; required the true longitude? Bahia, March 3d 15/(. 30w.

Longitude in time 2 34

Greenwich estimated time 18 4

To this time we have the sun's R. A. 22/i. 56/rt. 58-64S., * R. A. 16/(. 18w. 35-8s., *'s declination 26° l' 50-1" S.,) 's R. A. 244° 27′ 29-75″, declination 25° 55′ 15-6″ S., variation for lOs. 0-63" S., scmidiameter 14′ 50″ reduced parallax 54′ 26″ ;) 's R. A. 3/i. after 246° 6′ 16-82″; reduced latitude of Bahia 12° 52′ 17″ S. Hence jf: 's meridian distance zr apparent time + O's R. A.* — 's R. A. =: 22A. 8m. 2312.?., which taken from 24/j. leaves 1//. 51;/*. 36-88S. =: 27° 54′ 13-2″ = a.

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Calculation (1) (2) (3) (4)

C 's hor. p' 0° 54′ 26″ P. L.0-51941 P. L. 051941 P. L. 0-51941 C. L. 117609

Red. lat. 12 52 17 sect. 001104* 's Declin. S. i 0-01 104 cosec. 0-65216

* nier.dist.27 54 13' 2 cost. 0-32976 26° l' 50-1" [• 0-35768 sect. 0-04645

cosect. y ….

0-86021 ….

*'s declin. 26 1 50-1 cosine 995345 (2) 10′ 53-7″ S.

Const, log. 1-17609

26° 12 43-8

ii:02l

1-21802

Arc (1), 0/*. 1/H. .50-6.<;. P. L. 1-98975

Half 0 0 55-3 (b)

Diff. 1 50 41-6 {a—b — 27° 40′ 24″

0-05276

(3) 9-95405

0

25 25

20 37-5

N.

(4 *

T

39 66

0-94089 P. L.

‘. L.

:‘244)

244 244

246

> ‘s true declm.

52 6-3

55 15-6

3 9-3 14 50-0

) Qh. \m. 50s. -4 P ‘s R.A. 16 18 35-8

9-94515

> ‘s reduced declin.

1-99045

Diff) ‘s seraid.

.R.A. IG 16 45-4 =

°11′21″

1-00028 P. L. 1-18790 P. L,

17 59-3 11 40-7

3-732: 0-260

(5:

T. R. A.)‘s centre 1st: R. A. 2nd R. A.

P. L. 1st. diff.

P. L. 2nd diff.

P. L.

Estimated time

Greenwich time Bahia time

16 7

2-18818 semi.

27 28

27 30 6 16

1-09409 half >‘s true declin. 25° 52’ 6-3)‘s red. declin. 25 55 15-6

0

1

0 2

Mean 25 53’ 410 cos.

38 46

(5) 16′ 6-7″ P. L. 1-04814

3-47173

0 18

0 3-7 4 0

18 15

3 56-3 30 0-3

Longitude time In degrees VV.

2

38°

23 56 0

29′ 0″

Lieutenant Drinkwater of the royal navy has lately communicated to the astronomical society of London another method of making the preli-piinary computations for deducing the longitude from an occultation. In his method the sun's right ascension, the moon's declination, horizontal parallax, and semidiameterare taken as in the above method from the Nautical Almanac, for the approximate Greenwich time; the star's meridian distance found, and the latitude and parallax corrected for the earth's ellipticity. Then calling the reduced horizontal parallax P, the star's meridian distance M, its polar distance;;, and the latitude *; lie computes arc A, from tan. A zz. cos. M. cot. I ; arc B from B:=. p -|- A ,- C the principal effect of parallax in polar distance, from C ˆ: P sin* sin B. sect A (— when it is less than p, otherwise +, unless when I\I exceeds six hours, when it is always —) ; D the parallax in right ascension, from D r= P. cos. /. sin. M. cosect p, (— when the star is east of the meridian, otherwise +) ; and E, the final correction

of declination from E zz-

D' sin 2 p sin 1

always — .

And, having thus found the declination of the point of occultation, the difference between it and that of the moon's centre is known ; and, from this difference, the moon's semidiameter, and the declinations of both objects, the difference between the right ascension of the point of occultation, and th-at of the moon's centre is found exactly in the same way as in the method given above. Hence the right ascension of the moon's centre is known, and thence, by interpolating in the Nautical Almanac, the Greenwich time of occultation is found. The methods above given for finding the longitude astronomically, require fixed instruments, and particular conjunctions for putting them in practice ; we have now to explain the method of finding the longitude by means of the moon's distance from the sun or a star, a method in which neither the observer nor his instrument is requireil of necessity to be steady, but may be practised under almost any conceivable circumstances of difficulty, and in the absence of clouds may be resorted to whenever the moon is above the horizon, except for two or three days before and after her change.

We have already remarked that the Nautical Almanac was formerly intended to facilitate the finding of the longitude by this particular me-thod ; and that in its pages are found the distance of the moon from the sun and certain stars, for every three hours of Greenwich time. It is evident, therefore, that if by any means whatever, instrumental or computative, an observer could determine at any instant the distance of tiie moon from the sun, or any of the stars for which the Greenwich times, corresjtonding to her distances, are on the day of observation given in the Nautical Almanac; he may, by referring to that publication, find either at once, or by simple proportion, the precise instant of Greenwich time ; and he might thus make the moon serve as the pointer of a Greenwich clock whose face

was contained in the pages of the Nautical Almanac. But the distances given in the Nautical Almanac are such as the objects would appear to have if the observer were at tlie centre of the world ; and, as all observations must of necessity be made on the surface, we must determine by computation what they would have been if observed at the centre, before any comparison can be instituted between them and those given in the Nautical Almanac, for the purpose of determining the Greenwich time. This computation is what is known in nautical astronomy by the problem of clearing the lunar distance.

All celestial objects are elevated by refraction above the place in which they would appear if refraction had no existence, and those at which the radius of the earth subtends any sensible an-gle appear lower, on that account, when observed at the surface, than they would do if they could be viewed from the centre of the earth ; this latter deviation of the apparent place of a celestial ob-ject from its true place is called the parallax of the object, and varies, as does also the refraction, with the altitude of the object, both vanishing when the object is in the zenith. The moon's jiarallax varies from a little less than 54' to a little more than 61', according to her distance from the earth. The sun's parallax fluctuates a small fraction of a second above or below 8-75", and may, for the purposes of computation in this]iroblem, be taken equal to 9". The parallaxes of the planets vary according to their distances: that of Venus when nearest the earth is about 30", and when most remote is about 5"; Mars's varies from 21" to about 5"; Jupiter's from 2" to about 1"; and Saturn's from 1' to about 8", and that of the fixed stars is altogether insensible. The moon's, which is by far the largest, as well as tlie most variable, is given with her semidiameter in the Nautical Almanac for every twelve hours of Greenwich time.

The parallax of an object, when it appears in the horizon, is called its horizontal parallax, and it is that which is meant in the above statement of tlie parallax of the leading planets in the solar ."system. When a celestial object is above the horizon, the angle which the radi \is of the earth on which an observation may be made, subtends At the object, is called the parallax of the object

in altitude. In the annexed fi-gure, let C be the object in the horizon, D its place at the altitude D A C, and B the cen-tre of the earth, then C is the horizontal parallax, and D the parallax in altitude. Now, as with the same planet C B and B D are equal, we have C B : B A ; : B D " B A ; but C B : B A : : rad. : sin. C, and B D : B A : : sin. BAD, or cos. CAD:

sin. D ; hence rad. ; sin. C ; ; cos. CAD; sin. D ; or as radius is to sine of the horizontal parallax ; so is cosine of the apparent altitude to the sine of the parallax in altitude. To this proportion the parallax in altitude may be computed when the horizontal parallax is obtained from the Nautical Almanac, or any similar publication.

The difference between the refraction and parallax of a celestial object is called its correction of altitude ; and, the parallax of the moon at any altitude being greater than the refraction at the same altitude, her correction of altitude is additive to her apparent altitude to obtain her true altitude. But, with respect to the sun or any planet, the parallax at any altitude is less than the corresponding refraction, and, therefore, for the sun or a planet, the correction of altitude is subtractive from the apparent to obtain the true altitude. And, as the fixed stars have no sensible parallax, the refraction is the sole correction of their altitudes, and subtractive. From what has just been said, we may infer generally that the true place of the moon is above her apparent place, and that the true place of any other celestial object is below its apparent place.

Now the distance of the moon from the sun or a star, being measured with a sectant circle, or other appropriate instrument, the apparent altitudes of the objects must either be taken at the same instant, or determined by calculation, and the problem then occurs to determine from the apparent altitudes and distance (the parallaxes of the objects and the refractions corresponding to the altitudes being also known), what their true distances would be if viewed from the cen-tre of the earth.

In the first place we may remark that the true and apparent places are always in the same vertical circle ; and, therefore, that the two spherical triangles formed one by the apparent distance of the objects and their apparent distances from the zenith, and the other by the true distance of the objects and their true distances from the zenith, have the angle included between the vertical circles on which the objects are observed common to both triangles.

Let Z, in the annexed figure, be the zenith, A the apparent place of the moon ; M its true place ; B the apparent place of the sun or a star ; and S its true place; and let C D be the arc of tne

horizon, included between the vertical circles Z C and Z D ; then A C is the moon's apparent altitude, B D the sun's or star's apparent altitude, M C the moon's, and S D the sun's or star's true altitude, A INI the moon's, and B S the sun's or star's correction of altitude, or the difierence between the parallax and C" refraction ; A Z is the moon's apparent, and INI Z her true zenith distance; and

simplify the computations of this very simple problem. The time occupied in taking proportional parts for seconds, in die simple and obvious solution above pointed out, it has been thought might be well spared ; and the risk, of error in a problem, where seconds of one are important, ought by all practicable means to be diminished. It would be needless to attempt a sketch of many of the expedients which have been devised for this purpose. We shall content ourselvas with giving the investigation of two or three of the most practical, and refer to works professedly treating on navigation and nautical astronomy, those who may be desirous of farther

B Z, S Z, are respectively the true and apparent information on the subject, zenith distance of the sun or star. The first which we shall give is that of the The computation of M S from the given data chevalier Bonda, which requires no tables ex-is therefore exceedingly simple ; for we have cept the common one of logarithmic sines and only witli the apparent zenith distance A Z and cosines.

B Z (the complemeuts of A C and B D) and the apparent distance A B, to find the angle Z ; and then, in the spherical triangle M Z S, we have given the angle Z, and the true zenith distances M Z and S Z, to find the true distance M S. Much time and talent have been applied to

rrn. 1 , o,r,,, r, COS. D — sin. A . sin Then in the triangle SZM, cos. Z zz r

Let D n the true distance MS (see the above figure) ; d zz the opponent distance AB, A, a, (•90° — Z M, 90° — ZS), the true altitudes ; and il, /;, (90°— Z ‘ ””

titudes.

■ZA, 90° — ZB), the appareiU aJ-

cos. D — sin. H . sin. h

cos. H d — sin. II . sin. h) cos. A . cos. a

cos. h cos. A

; and in the triangle A Z B, cos. ; and by equating these two expressions we have cos. D zz (cos.

cos. /()

COS. H . cos. h

zz 2 . COS,

H . COS. h U + h + d

-- sin. A . sin. a — (cos. d -- cos. H + A — cos. H II -- h IT) d cos. A . cos. a

cos. H . COS. /i

— (cos. A . COS. a — sin.

A . sin. a). But the last term zz cos. A -f-a; subtract both sides of the equation from 1 ; then,

2 D 2 A -f-a

since 1 — cos. D r: 1 sin. — -, and 1 + cos. A + azz2 cos. — — ; we have, after dividing

by 2, and putting F :=

cos A . cos.

2 D

cos. H . cos. A'

2 A + a COS. - —- •

II + h + d

U + hcAid

X F — COS.

2A +

. COS.

0 —

II + h + d H ^‘h^d

n + h + d H + h <M d

2 A -f-a

2 A + g

2

2 D

0, we shall have sin.

2

And if we take

2 A-l- «

COS. ‘ 9, or

sin. •— - — COS.

COS. 0.

2

D A-H a

-rzcos.-ˆ

The method which J. de Mendoza Rios selected, and which he compiled his extensive and most valuable collection of tables to facilitate, depends on the same principles as the preceding.

Equating as above, tne two expressions for cos. Z, we have ^°ˆ-ˆ~ sin. A . sin. a =

COS. d — sin. H. sin. A , ,. cos

■; adding to each, we have

cos. H . cos. h

cos. II cos. II

COS. h , cos. d — sin. H . sin. h

cos. Ii

+

COS. H . COS. h

cos. A . COS. a COS. D + COS. A +

COS. A COS. I COS. D — sin. A

COS. A whence, cos. D zn (cos. d — cos. irT^^”” ^ ” ^°” “

COS. A . COS. a

COS. d — COS. H -|- A COS. II . COS. A COS. A . COS. a

COS. A

COS. H . COS. A COS. a . sect. H . sect. A

2 cos. N ; or let cos. N —

. 2iad.3

cos. H -f A) 2 COS. N — cos. A + a = 2 cos. d

- COS. A + a. Put ., . —

COS. II . COS. A

; then we have cos. D ~ (cos. d —

COS. N — 2 cos. II + A . COS. N — cos. A + a

_ cos. ri -f N -f-cos. (/ </) N -f cos. (II + A -f-N) -{- cos. {H + h y} N) — cos. A + «,

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1 — COS. D = 1 + COS. A -(- u

d + N — COS. d j-i iN” — COS. (II + A + N) — cos.

(H + *(ˆ N), or, vers. D = s cos. A -f a — cos. d + N — cos. d ˆ N — cos. (H + A + N) — COS. (II* + i 72 N). (Jr adding 4, to reduce the cosines to versed sines, and deducting 4 from the same, vers. D = s cos. A + a + vers, d + N -j-vers, d (/> N -- vers. (li -(- *t -f N) + vers, (li* -|- *A t*} N) — 4 — , an expression which requires only the addition of five versed sines.

If the time of the sun’s passing the meridian be noted, the error of the clock, either fur mean or apparent time, will be known.

But it is in few places, whose longitude it is

The simplification in this solution depends chiefly on having the auxiliary arc N computed and tabulated, which has been done in a very convenient form. — See llio's Nautical Tables, Inman's Tables, and Riddle's Navigation and Nautical Astronomy.

The true distance being computed by the methods pointed out above, or by any other of the many formula that have been contrived for the purpose, seek in the Nautical Almanac for the distances of the moon from the object whose distance from her has been computed, between which that distance falls, — call the first distance a, and the second, or that three hours after, b, and the time of tha first distance t ; then the time corresponding to the true distance D will be

t + -. The numerical result from the

aJˆ b second part of this theorem is greatly facilitated by the use of proportional logarithms. See Logarithms in this work.

After this account of the various methods by which the time at the first meridian may be found, we shall add an account of the chief methods which may be employed for finding the time at the place of observation.

With a transit instrument, which moves in the plane of the meridian, we have simpl-y to notice the time at which a known star com.es to the meridian, and the difference between that time and the star's right ascension is the error of the chronometer for siderial time. Call the time by the clock at which the star passes the meridian T, the star's right ascension r, and the [sun's right ascension R, and the equation of time e, then T~</) r, T (/! r (/) R, and T (/) (r y) R + e) are the errors of the clock for siderial, apparent, and mean time respectively. This observation being repeated on several stars, the error of the clock and its rate may be ascertained with great precision.

. a -- I -- p 2 II sect. I . cosect. p . sm. •

required to determine, that tlie observer has time to make the delicate adjustments which a transit instrument requires before it can be applied with any advantage in determining the times. Recourse must therefore in general be had to other methods. One of the simplest and best is to take equal altitudes of the same star, east and west of the meridian, noting the times by the clock when each altitude is observed, and half the sum of those times will be the time by the clock when the star is on the meridian ; hence the error of the clock is

known; and consequently the true time may be known by it, at any given instant, by allowing for the known error, on the time which it shows.

The time may also be found from equal altitudes of the sun observed east and west of the meridian ; but, the declination of the sun being variable, a correction on that account, called tiie equation of equal altitudes, must be applied to the middle time, to obtain the time at which the sun was on the meridian. This correction depends both on the sun's declination, its change m the interval, and the latitude of the place of observation, whereas the two preceding methods are independent of them all. But considerable accuracy in the result will be obtained, without any very exact knowledge either of the latitude or declination, if the change of declination in the interval be exactly known.

If the latitude of the place has been correctly ascertained, the time may be deduced from the altitude of any known celestial object. Let I = the latitude, a the altitude of the object, r its right ascension, R the sun's right ascension, and H the object's meridian distance, then

sin. {

a + I + p

“);

and r -+■ 11 = siderial

time ; the upper sign being used when the object point on the limb at which the zero division of

is westward of the meridian, or when the altitude is decreasing, and the lower sign when the object is eastward of the meridian, or when the altitude is increasing. Turther, we have 7' ± II — R iz the

apparent time, and tiiis corrected for the equation of time, gives mean time when the altitude was observed.

On the Method of adjusting the Sextant.

The adjustments of which this instrument ad-mits are, to make the index and horizon mirrors perpendicular to the plane of the instrument, and the telescope parallel to the same plane ; and it is also necessary, previous to making any deductions from observations made with the instrument, to ascertain its iudex error, that is the

the index stands when the mirrors are parallel.

The index mirror is generally fixed by the maker firmly in its proper position, and in some instruments there are no direct means of adjusting it if it should happen to get out of order.

A B in the annexed figure represents a section of the mirror, and A F B the plane, by which it is attached to the index by means of the three screws C, I), and E. The mirror is known to be in adjustment when the image of the limb of the instrument, seen in it by reflection, is in the same plane with the limb itself; the index

being placed any where on the arch. If tlie reflected image of the limb appears to incline downward from the pkne of the limb, the plane of the limb inclines backward ; and, if the instrument has no other means of adjustment, the screws C, D, and E, must be slackened, and a piece of paper, or other thin compressible matter, put below the plane A F B at F, and the screws so tightened that the reflected image of the limb and the limb itself may appear as one continuous plane. If the reflected image appears too iiigli, then a slip of paper must be put below A B, and the screws tightened so that the adjustment may be perfect.

In some instruments the screw E is not a fastening but an adjusting screw, pressing on the plane of the index when screwed in, and consequently giving the plane of the mirror an inclination forward ; and the converse when it is slackened. In other instruments the adjustment is efi'ected by a screw acting on a spring, against which the top part of the mirror rests.

The best method of examining the adjustment of the horizon mirror is (having previously adjusted the index reflector) to look at the sun, and, moving the index slowly backwards and forwards, to observe whether the sun, as seen directly, is exactly covered by his reflected image, in passing. If it does the instrument is adjusted.

In the annexed figure let A represent the sun as seen directly, and let

B, C, D, be the image of ,.•- ••.

tiie sun as passingA, from / \

ttie motion of the index. ^[j

If the instrument were in \ y*

exact adjustment,C would completely cover A. If •■' It does not, the screw, • which gives vertical mo-tion to the glass, with reference to the plane of yj/ the instrument, must be turned ^ill C and A exactly concide.

This screw is differently placed, according to the ,. fancy of the maker. For example : A B representing the plane of the mirror; C D F E the apparatus by which it is attached to the t_

l)lane of the instrument ; 1 — es—

tlien the vertical adjustment is made by means of a screw placed as at G, H, I, or K inditferently.

To make the telescope parallel to the plane of the instrument, turn its eye piece till the wires in the focus of it are parallel to the plane of the instrument ; then bring tlie sun and moon, when at a great distance from each otlier, in apparent contact on the wire nearest the instrument, and immediately bring t!»em on the opposite wire, on which, if ttiey also appear in apparent contact, the line of coilimation, or the axis of the telescope, is properly adjusted. If the images should appear to separate or overlap, slacken one of the sunk screws in the collar into which

the telescope is screwed, and lighten the other till the contact of tlie images is perfect on both wires, when the adjustment will be perfect.

It remains now only to ascertain tlie index error of tlie instrument, or the position of the zero of the index, when the index and horizon mirrors are parallel. Tiiis may be done in various vvays : 1st, Move forward ihe index till the direct and reflected images of tlie distant horizon appear as one" line; then, if the zero of the index stands on tlie left of the zero on the limb, what it does so stand to the left is the index error, subtractive. If on the contrary, the index error is additive, 2dly, j\lake the direct and reflected images of the sun coincide, and the position of the zero will, as above, show the index error. The same may also be efi'ected by making the direct and reflected images of the moon or a bright star coincide. 3dly, Move the index forward, till th.e reflected image of the sun, as B, exactly touch the limb of the sun. A, as at C ; then the

difference between the position of the zero of the index and tlie sun's diameter, as given in the Nautical Almanac, will be the index error; — additive when the diam.eter is the greater, but otherwise subtractive. 4thly, Bring the limbs of the sun and his

reflected image .- ■.'Oˆ \Fj

in contact alternately right and i R J A Jl. C left, as at D and E in the annexed figure, and half the difference of the readini;- will be the index error, when the zero of the index stands on different sides of zero on the limb ; otherwise half the sum of the readings will be the index error; and additive when the greater reading is on the right of the zero on the limb, but subtractive when the greater reading is on the left.

This last is by far the best and most independent method of ascertaining the index error, and it besides aff"ords the observer an excellent opportunity of judging of his skill in estimating a contact ; for the distance of the two points at which the index stands, when the reflected image of the sun is in contact with his limb, is double the sun's diameter; hence, by comparing this difference with the known diameter of the sun, an observer may readily discover whether there is any peculiarity or defect in his method ot estimating a contact, and he may accordingly endeavour to correct any faulty habit of observing, which such an experiment may show him to have acquired.

The instrument being adjusted, the next object IS to take the requisite observations for obtaining the data necessary in the solution of the problem. Theseare generally the distance of the moon from the sun or a star, with the altitudes of both objects at the same instant. The altitudes are taken in the usual vvay, either with a quadrant or sextant ; the most important element, the distance, requires to be taken with the utmost nicety. Look in the Nautical Almanac for the distance in a rough way between the moon and the required object

at the time of observation, and set the index any way not far from that distance; then look through the telescope at the dimmer object, and turn round the instrument till its plane coincides with one passing through the eye, and the two objects whose distance it is required to measure, and the reflected image of the brighter object will readily be found. Then turn down such screens as may appear necessary, and bring the limbs in contact in the centre of the fieldof viewof the telescope, and the observation will be completed ; and the altitudes with the time of observation, as noted by an assistant observer, being read and entered, the observations may be repeated, till half a dozen or more sets are obtained ; and the mean of the whole maybe taken as a single observation. If the dimmer object is to the right of die brighter one, there are many persons who find it extremely difficult to hold the instrument in the manner in which it must be then held, if the telescope be pointed as above directed to the dimmer object. Let then the contact be nearly

completed, and screw down the telescope towards the plane of the instrument, turndown the proper screens before the horizon glass, and remove them before the index glass ; then look toward the brighter object, and turn the instrument round till the image of the dimmer one is seen, and complete the contact; which, in this position of the instrument, can be done with much greater ease.

It may be observed, however, that this method cannot be satisfactorily practised if the dimmer object is very dim ; as the moon during the day at three days old; or as a Arietis near the moon at full. But it is of great importance that whatever difficulties may attend taking this delicate observation should not be increased by mechanical difficulties attending any particular manner of holding the instrument, when these difficulties may be avoided.

For practical examples on the metliods of finding the longitudes by observation at sea, see the article Navigation.

LONGLAND, or Langlande (Robert), a secular priest, fellow of Oriel College, Oxford, in the fourteenth century, supposed to have been the author of The Vision of Pierce Plowman, and Pierce Plowman's Crede. He is said to have been a disciple of Xyycliflfe, his poems being satires on the vice and lu.xury of the Romish clergy. He hazarded such remarkable prophecies of an impending reformation, in the church, that Warton declares he should have supposed them to have been foisted into the copies, since the suppression of monasteries in England, if he had not seen them in MSS. as old as the beginning of the fifteenth century.

LONGOMONTANUS (Christian), a learned astronomer, born in a village of Denmark in 1562. He was the son of a ploughman, and was obliged to suflfer during his studies many hardships, dividing his time, like the philosopher Cleanthes, between the cultivation of the earth and the lessons he received from the minister of the place. At laat, when he was fifteen, he left his family, and went to Wiburg, where there was a college, in which he spent eleven years ; and, though he was obliged to earn a livelihood, he studied with such ardor that he learned the mathematics in great perfection. He afterwards went to Copenhagen; where the professors of that university recommended

him to the celebrated Tycho Brahe. He lived eight years with that famous astronomer, and was of great service to him in his observations and calculations. Aj length, being extremely desirous of obtaining a professor's chair in Denmark, Tycho Brahe consented to part with him, and furnished him with money for the expense of his journey. He obtained a professorship of mathematics in the university of Copenhagen in 1605 ; and discharged tlie duty of it worthily till his death, in 1647. He wrote many learned works : the chief of which is his Astronomia Daiiica; 1640, folio. He also endeavoured to square the circle, and thought he had made that discovery: but Dr. John Pell, an English mathematician, proved that he was mistaken in his calculations.

LONGUEIL (Christopher de), a learned writer, born at Malines in 1490. He was much in favor with several princes. He was employed by pope Leo X. to write against Luther. He wrote also Commentaries on Pliny's book of Plants ; and Observations on the Civil Law. He died in 1522.

LONGUERUE (Louis de), a learned Trench divine, born at Charleville in 1652. He' wrote, 1. A Latin dissertation on Tatian ; 2. La Description Historique de la France; 3. Annales Arsacidarura ; 4. A Discourse on Transubstantia-tion ; and 5. Remarks on the Life of Cardinal Wolsey.

LONGUS, a Greek sophist, author of a book entitled UotrvtttKa, or Pastorals ; and a romance containing the loves of Daphnis and Chloe. Huetius, bishop of Avranches, speaks very highly of this work, but censures some passages as obscene. As no ancient author mentions Longus, the time when he lived cannot be ascertained. J. Craggs, esq., secretary of state, translated his work into English.

LONICERA, honeysuckle, in botany, a genus of the monogynia order, and pentandria class of plants : con. monopetalous and irregular: berry polyspermous, bilocular, and inferior.

L. alpigena, the upright red-berried honeysuckle, rises with a shrubby, short, thick, upright stem, branching strongly and erectly four or five feet high; largish, spear-shaped, leaves, in pairs, opposite ; and from the sides of the branches many red flowers by twos on long foot-stalks, each succeeded by two red berries, joined together at their base : it flowers in August, and the berries ripen in autumn.

L. caTulea, the blue-berried upright honeysuckle, rises with a shrubby upright stem, branching moderately three or four feet high, with many white flowers proceeding from the sides of the branches; appearing in May, and succeeded by blue berries joined together at their base.

L. caprifolium, the Italian honeysuckle, rises with shrubby declinaled stalks, sending out lonˆj

slender trailing branches, terminated by verticillate or whorled bunches of close-sitting flowers, very fragrant; and white, red, and yellow, colors.

L. periclymenum, the common climbing honeysuckle, has two principal varieties, *viz.* the Enˆlisli wild honeysuckle, or woodbine of our woods and hedges; and the Dutch or German honeysuckle. The former rises with shrubby, M'eak, very long, slender stalks, and branches trailing on the ground, or climbing round a support; all terminated by oval imbricated heads, furnishing smallish flowers of white or red colors, and appearing from June or .Tuly till autumn. The latter rises with a shrubby declinated stalk, and long trailing purplish branches, terminated by oval imbricated heads, furnishing large beautiful red flowers of a fragrant odor, appearing in June and July.

L. sempervirens, the evergreen trumpet-flower- ed honeysuckle, rises with a shrubby declinated stalk, sending out long slender trailing branches, terminated by naked verticillate spikes, of long, unrertexed, deep scarlet, flowers, very beautiful, but of little fragrance.

L. xylosteum, the fly lioneysuckle, rises with a strong siirubby stem, branching erect to the lieight of seven or eight feet; with erect white flowers, proceeding from the sides of the branches ; each succeeded by large double red berries, joined together at their base. The flowers appear in June, and the berries ripen in September. The easiest method of propagating all these plants is oy layers and cuttings. In both cases they readily emit roots, and form plants in one year fit for transplantation. Some sorts are also propagated by suckers and seed.

LONS Le Saulnier, a large town of France, the capital of the department of the Jura. It is agreeably situated on the river Solvan ; and has salt springs which ebb and flow, and which have given rise to salt works of considerable extent in the neiglibourhood. Here is also a silver mine. Population 7000. Sixty-two miles south-east of Dijon, and 269 south-east of Paris.

LONTAR PuLO Isle, an island in the Indian Ocean, separated by a narrow strait from the peninsula of Malacca. Its inhabitants derive their subsistence from the sea, and appear wholly ignorant of agriculture : the rice they use is procured from the JMalays in exchange for fish. Long. 99° 0’ E., lat. 70° 30’ N.

LOO, n. s. From the French palace of Loo, probably. A game at cards.

A secret indignation, that all those affections of the mind should be thus vilely thrown away upon a hand at loo. Addison,

In the fights of Zoo. I’ope.

LOO’BY, rt. s.) Welsh //flic— Junius. Or

Loo’bily, acii;. S see Lob. A stupid, clumsy fellow.

The plot of the farce was a grammar school, the master setting his boys their lessons, and a tuohily country fellow putting in for a part among the scholars. L’ Estrange. The vices trace From the father’s scoundrel race. A\ ho could give the Innhu such airs? Were they masons, were they butchers 1

Siiift.

LOOCHOO, Lewchew, Liqueo, or Lieou-Kiou Islands, are a group of islands in the Eastern Ocean, to the south of Japan, and about 400 or 500 miles east of China. Tliey consist, according to the accounts of .Mr. M’Leod and captain Hall, of thirty-six islands, of which the one called the Great Loochoo is of considerable dimensions, being about fifty miles long, and from twelve to fifteen broad. Its existence was scarcely known to Europeans till it was visited by captains Maxwell and Hall, in their return with lord Amherst from the embassy to China. The part visited by the ships is called Napa-kiang or Napafoo, and is only five miles from Kin-tching, the capital and residence of the king. Towards the northern extremity of the island is one of the finest harbours in the world, somewhat similar, but far superior, to port

Mahon. It was surveyed by captain Hall, and named by him port Melville. Captain Maxwell used every means that prudence would allow to obtain an interview with the king, but this could not be granted, as he did not come in any official character. The king, however, wrote a letter to the prince regent in the Chinese character, which was unfortunately lost when the Alceste was wrecked. It was written in a tone of great humility ; hoping that the attentions which had been shown to the ships — ‘ the great ship and her little child,’ — would be satisfactory to the king of the En-gelees.

The whole island exhibited a gentle ascent from the sea, on which ‘ the grounds were disposed more like the finest country-seats in England than those of an island so remote from the civilised world.’ They anchored in front of a town. The climate and soil are among the happiest on the globe. The sea breezes, blowing continually over it, preserve it from the extremes of heat and cold ; while its configuration supplies it with rivers and streamlets of excellent water. The fruits and vegetables are consequently of the most exquisite kind : and those of distinct regions are found in a flourishing state. The orange and the lime, the banyan of India, and the Norwegian fir, all thrive here : but the chief object of cultivation is rice. They have also a very nourishing species of sweet potatoe : our ships left them some English ones. The animal creation is of diminutive size, their bullocks sel-dom weighing more than 350lbs. though plump and well conditioned, and the beef excellent; their goats and pigs are also diminutive, but the poultry large and excellent. The bull is used in agriculture. Few wild animals are seen. The whole coast is surrounded with coral reefs, but abounds in good harbours.

The inhabitants present, however, the most interesting feature of contemplation. They are a small race, the average height of the men not exceeding five feet two inches : but, though small, they are sturdy, well-built, and athletic. They are as fair as the southern Europeans, and have no trace either of Indian or Chinese features.

Captain Hall tells us that numerous parties came off” from the shore, and that the deportment of all was modest, polite, timid, and respectful. They had the address however to amuse tiieir visitors a whole fortnight, parrying with

considerable ingenuity every proposal that was made to go on shore, and setting aside witii great adroitness every allusion to that subject; giving t!iem at the same time every thing they could possibly want in the way of provisions, and even anticipating their .wishes. At length, however, a greater number of boats than usual were observed coming off in a kind of procession, and it was soon discovered that a great man was in one of them. He appeared to be about sixty, ‘ and had a cheerfulness of expression and a liveliness of manner remarkable for a man of that age ; his manners were graceful and elegant, and from the first moment he seemed to be quite at his ease ; every thing about him indicated good breeding, and a familiarity with good society.’ He examined every part of the Alceste with the greatest attention, and seemed to be highly entertained with what he saw. Still, however, there was a strong jealousy exhibited of any attempt to land.

The departure of the Lyra, however, to examine the coast, produced the desired effect ; the chiefs hastened on board the Alceste to enquire what was become of the little ship. Captain Maxwell told them that they had trifled with him so long, and refused to let him land his casks and stores with such obstinacy, that he found it necessary to look out for some more favorable place at which to refit. On hearing this they entreated that he would not think of moving from Napa-kiang ; adding that he should have store-rooms on shore for whatever he desired ; and that he and his officers might land where they pleased, and walk to the top of the hill without being guarded. In short they now assigned for their immediate use an oblong enclosure, sixty yards by forty, surrounded by a wall twelve feet high. Of this prison (for such it might be considered) they kept undivided possession during the remainder of their stay, which was about a month.

Into the interior of their town, however, the English were never admitted, and even their walks were limited to a certain space. When any attempt was made to pass these bounds, the sentinels interposed by a polite request, and by representing the reproach which would fall upon themselves if the orders of the court were transgressed. Some overtures were made for an audience with the king ; but this was declined, on the ground that no embassy or letters were brought from the kind of England. When captain Maxwell toasted the king of Loochoo, they appeared gratified, and in return gave the king of England, whom they appeared to consider as at least his equal. They appeared to live with each other in a very social manner, holding

frequent pic-nic parties in the fields ; the dinner being carried about in little japanned boxes, with sliding drawers, fastened to the end of a bamboo. A re-past to which the English were invited consisted of hard boiled eggs, colored and sliced, fish dried in butter, sliced pork smoked, sliced pig's liver; then tea, which, being new, tasted like an infusion of hay. A dish consisting of a mass of coarse, soft, black sugar, wrapped up in unbaked dough, and powdered over with rice flour, dyed yellow, was the only unpalatable one; the intervals were filled up with sackee, pipes and tobacco ; and every thing passed off with the greatest good humor. Tlie Juiglish saw also specimens of their dancing, winch might rather be called hopping, as they jump about on one foot, keeping the other up, clapping their hands, and making a number of extravagant motions ; at the same time singing a tune.

Not a single instance of theft occurred during the whole stay of the ships : one striking peculiarity, which may perhaps in part account for this, consists in their being apparently quite strangers to the use of fire-arms, so that the mus-quetry and shot of the English were objects of great wonder and awe. Tiiey appear to have been shocked, however, to see them shooting tlie birds, but merely requested that they would desist, saying, that they were glad to see them flying about their houses, and offering at the same time a larger supply of fowls. They appeared also to have no money.

Among three or four persons who constantly attended them there was an individual of the name of Madera, whose character is drawn with great ability by captain Hall.

' Two of the natives,' he says, 'have been studying English with great assiduity and with considerable success. One is called Madera, the other Anya. They carry note books, in imitation of Mr. Clifford, in which they record in their own characters every word they learn. They are both keen fellows, and are always among the strangers. From the respect occasionally paid to them it is suspected that their rank is higher than they give out, and that their object in pretending to be people of ordinary rank is to obtain a more free intercourse with all classes on board the ships. INKidera, by his liveliness and propriety of manners, has made himself a great favorite ; he adopts our customs with a sort of intuitive readiness, sits down to table, uses a knife and fork, converses and walks with us ; in short, does every thing that we do, quite as a matter of course, without any apparent effort or study. He is further recommended to us by the free way in which he communicates every thing relating to his country ; so that as he advances in English, and we in Loochoo, he may be the means of

giving us much information. As an instance of his progress in English, it n]ay be mentioned that one day he came on board the Eyra, and said, ‘ The Ta-yin speak me, you go ship, John come shore;’ by which we understood that captain Maxwell had sent him on board the brig for the interpreter. This was about three weeks after our arrival.’

We cannot resist the temptation of adding this further extract. ‘ Madera has made great improvement in English, and his character is altogether more devel’oped. He is quite at his ease in our company, and seems to take the most extraordinary interest in every thing belonging to us; but his ardent desire to inform himself on all subjects sometimes distresses him a good deal; he observes the facility with which we do some things, and his enterprising mind suggests to him the possibility of his imitating us ; but, when he is made sensible of tlie number of steps by which alone the knowledge he admires is to be attained, his despair is strongly marked. He

sometimes asks’us to read English aloud to him to which he always listens with the deepest attention. One day, on shore, he saw me with a book in my hand : he begged me to sit down under a tree and read : Jeeroo was the only chief present, but there were several of the peasants in attendance upon him ; they all lay down on the grass, and listened with an attention and interest which are natural enough : every one expressed himself pleased and satisfied except Ma-dera, whose anxiety was to read in the same manner himself From the earnest way in which he enquired into every subject, we were sometimes inclined to think that he must have been directed by the government to inform himself on these topics ; and certainly a fitter per-son could not have been selected ; for he adapted himself so readily to all ranks, that he became at once a favorite, and every person took pleasure in obliging him.

‘ Jeeroo is esteemed in another way ; he is uniformly good humored and obliging, and not without curiosity; but he is not clever, and has none of the firejand enthusiasm of]\Iadera. We all think kindly of Jeeroo, and shake him cordially by the hand when we meet him ; but

Ma-dera is admired and' respected, as well as esteemed, and his society is courted for his own sake.

Madera is about twenty-eight years of age, of a slender figure, and very active ; his upper teeth project in front over the lower ones, giving his face a remarkable, but not a disagreeable expression. He is always cheerful, and often lively and playful, but his good sense prevents his'ever going beyond the line of strict propriety. When required by etiquette to be grave, no one is so immoveably^ serious as M4dera, and, when mirth rules the hour, he is the gayest of the gay : such indeed is his taste on these occasions, that he not only catches the 'outward tone of his company, but really appears to think and feel as they do. His enterprising spirit and versatility of talent have led him to engage in a number of pursuits ; his success, however, is the most remarkable in his acquisition of English. About a month after our arrival, he was asked what had become of his companion Anya; he replied, Anya, him mother sick, he go him mother house ;' and when asked if he would return, he said, ' Two, three day time, him mother no sick, tie come ship.' With all these endowments and attainments he is unaffectedly modest, and never seems aware of his being superior to the rest of his countrymen. We were a long time in doubt what was his real rank ; for at first he kept himself back, so that he was well known to the midshipmen before the officers were at all acquainted with him ; he gradually came forward, and, though he always worej the dress of the ordinary respectable natives, his manners evidently belonged to a higher rank, but he never associated with the chiefs, and disclaimed having any pretensions to an equality with them. Notwithstanding all this, there were occasional circumstances, which, by showing his authority, almost betrayed his secret. One morning a difficulty arose about some supplies which the chiefs had engaged to procure, but which they

had neglected to send : as soon as Mddera was told of the circumstance, he went to captain Maxwell, and undertook to arrange it to his satisfaction, at tlie same time begging that if any difficulty occurred in future, he might be applied to. Whatever may be Madera's rank in his own society, it is highly curious to discover, in a country so circumstanced, the same politeness, self-denial, and gracefulness of behaviour which the experience of civilised nations has pointed out as constituting the most pleasing and advantageous form of intercourse.

' The great interest which Madera took in the English, and the curiosity he always expressed about our customs at home, suggested the idea of taking him with us to England, where he would have been

an interesting specimen of a people so little known ; and he also might have carried back knowledge of the greatest use to his country. When it was proposed to him, he paused for some” minutes, and then, shaking his head, said, ‘ I go Injeree, — father, mother, childs, wife, house, all cry ! not go ; no, no, all cry !’ This interesting individual they afterwards found to be a chief of considerable rank. A few days before they sailed the prince of Loochoo, about fifty years old, and heir to the throne, paid a visit to the Alceste, and invited the officers to an entertainment on shore. The bidding a last farewell to this interesting and amiable people was an affecting event.

* Sunday, 27th of October. — At day-break we unmoored, and the natives, on seeing us take up one of our anchors, thought we were going to get under weigh immediately, and give them the slip, which was not at all intended. This alarm, however, brought the chiefs off in a great hurry; not in a body in their usual formal way, but one by one, in separate canoes. Old Jeema called on board the Lyra on his way to the frigate ; he was a good deal agitated, and the tears came into his eyes when I put a ring on his finger. He gave me in return his knife.

‘ The other chiefs called alongside on their way to the frigate, but went on when I lold them that I was just going to the Alceste myself. In the mean time M4dera came on board, with the sextant in his hand ; he was in such distress that he scarcely knew what he was about. In this distracted state he sat down to breakfast with us, during which he continued lighting his pipe and smoking as fast as he could; drinking and eating whatever was placed before him. After he had a little recovei-ed himself, he asked what books it would be necessary to read to enable him to make use of the sextant ; I gave him a nautical almanac, and told him that he must understand that in the first instance : he opened it, and, looking at the figures, held up his hands in despair, and was at last forced to confess that it was a hopeless business. He therefore put the sextant up and bade us farewell. Before he left the Lyra he gave Mr. Clifford his pipe, tobacco pouch, and a crystal ornament; saying, as he held out the last, * You go Ingeree, you give this to your childs.’

‘ Mr. Clifford gave him a few presents in re-turn, and expressed his anxiety to be considered his friend. Madera, with the tears streaming

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down his cheeks, pl;iced his hand several times upon his heart, and cried, ‘ Eedooshee, edoo-siiee !’ My friend, my friend !

‘ To nie he gave a fan and a picture of an old man looking up at tlie sun, drawn, he said, by himself; he probably meant in his picture some allusion to my usual occupation at the observatory. After he liad put off in iiis boat, he called out, ♦ Ingeree noo choo sibittee yootoosha,’ 1 shall ever remember the English people. VViien he went to the Alcestfe, one of the cliiefs remarked that he had neither his hatchee-matchee on nor his robes, and told him that it was not respectful to wait upon captain Maxwell, for the last time, in his ordinary dress; particularly as all the others were in full array. JNIadera, who, poor fellow, had been too much concerned about other matters to think of dress, was shocked at this apparent want of politeness, and went immediately to apologise to captain Maxwell, who took him by the hand, and gave him a present, telling him, at the same time, that he was always too happy to see him to notice what dress he had on.

* On going into the cabin, I found the chiefs seated in a row, all very disconsolate, and apparently trying to conceal emotions different, in all probability, from any which they had ever before experienced. Captain Maxwell had made them his parting present, and I, therefore, gave to each chief some trifle, receiving from them in return, their knives, pipes, pouches, and fans. In the mean time the anchor was hove up, and, every thing being ready for making sail, the chiefs rose to take leave. Ookooma wished to say something, but was too much affected to speak, and before they reached their boats they were all in tears.

‘ MAdera cried bitterly as he shook hands with his numerous friends, who were loading him with presents.

‘ The chiefs, as well as the people in the numerous canoes which had assembled round ti)e ships, stood up, and continued waving their fans and handkerchiefs till we were beyond the reefs, and could see them no longer.’

* Polygamy,’ says captain Hall, * is not allowed in Loochoo as in China ; they invariably spoke with horror of the Chinese practice, which allows a plurality of wives, and were much gratified on learning that the English customs in this respect were similar to those

of Lo'o-clioo.' Su-poa-quang asserts, on the contrary, that polygamy is allowed as in China ; but that the young men and women see each other before marriage, and choose for themselves. The complete state of degradation in which the females are, from both accounts, indeed, placed, detracts not a little from the many good qualities of these islanders.

LOOE, East, or East Low, an ancient borough of Cornwall, incorporated by charter from queen Elizabeth, twelve miles west of Plymouth and 233 i W. S. W. of London. It has two fairs, and a battery of four guns; and is connected with West Looe by a large stone bridge of fifteen arches. It is governed by a mayor, recorder, aldermen, and nine burgesses. It sends two members to parliament, who are chosen by the

mayor, burgesses, and freemen, in number about fifty. The corporation has the toll of the market, and holds the manor of the town of the duchy of Cornwall, at a fee-farm rent of 205. per annum. The surrounding coimtry is well furnished with gentlemen's seats, and a little higher up the tin works begin. Market on Saturday.

LooE, West, or West Low, a borougli of Cornwall, opposite to East Looe. It has a fair. It is a boiough, and sends two members to par-l.ament, the right of election being in the mayor, burgesses, and freemen, in number about fifty-five. West Looe has sent members to parliament ever since the 6th of Edward VI. The corporation, by Elizabeth's charter, consists of a mayor, twelve burgesses. Sec. West Looe is also called Port Pigham. The manor anciently belonged to the crown, and was annexed by Henry III. to the duchy of Cornwall, of which it is now held by the corporation. Although the harbour is not large, it is commodious, and is defended by a strong battery ; the river is navigable for vessels of 100 tons.

LOOPED', adj. From aloof. Gone to a distance.

She once being locft, Antony

Claps on his seawings, like a doating mallard,

Leaving the fight.

Shakspeare, Antony and Cleopatra.

LOOK, V. n., V. a. & n. .9."^ Sax loc, locan ;

Look’er, n. s. >Teut. lug, lugen ;

Look’ing-glass. S Belg. louken. To

see; have the power of vision; seem; have or assume any kind of appearance, air, mien, or manner ; to direct the mind’s eye or expectation ; to watch ; take care : as an active verb, to seek ; search ; regard ; influence by looks. It takes almost any of the prepositions after it. The so-called interjection look is clearly the imperative mood of the verb. Look, as a substantive, means air or contour, particularly of the face ; the act or exercise of looking or vision. A looker, one who is practising it ; a ‘ looker on ;’ a mere spectator.

And .Thesus answeride and seide to hem, loke ye that no man disceyveyou. Wiclif. Mutt. 24.

Abimelech looked out at a window, and saw Isaac.

Genesis.

He was ruddy, and of a beautiful countenance, and goodly to look to. 1 Sam. xvi. 12.

Let us look one another in the face.

2 Kiniˆs, xiv. 8.

Thou wilt save the afflicted people, hut wilt bring down higli looks. Psalm’win. 21.

He had looked round about on them with anger.

Mark iii.

If we sin wilfully, after that we have received the knowledge of the truth, there remainetli no more sacrifice for sins, but a certain fearful looking for of judgment. Heb. x.

Looking my love, I go from place to place, I.iko a young fawn that late had lost the hind, And seek each where. Spenser.

Being a labour of so great difficulty, the exact performance thereof we may rather wish than looh for. Hooker.

Such labour is then more necessary than pleasant, both to them which undertake it, and for the lookert on. Id

She Lwkn as c car As morning roses newly washed with dew.

Shakspeare.

Nay, /oofc not big, nor stamp, nor stare, nor fret,

I will be master of what is mine own. Id.

Your ([ueen died, she was more worth such gazes

Than what you luok on now. Id. Winter's Tale.

The gods look down, and the unnatural scene They laugh at. Id. Coriolanus.

What haste looks through his eyes 1 Slwkspeare. His nephew's levies to liim appeared To be a preparation against the Tolack ; 15ut, better looked into, he truly found It was against your highness. Id. Hamlet. Thou Shalt feel our justice, in whose easiest passage Look fur no less than death. Id. Winter's Tale.

Let this fellow be looked to: let some of my people have a special care of him. Shakspeare.

Thou cream-faced loon ! Where got'st thou that goose look ?

Shakspeare. My business in this state Made me a looker on here in Vienna ; Where I have seen corruption boil and bubble Till it o'er-run the stew.

Id. Pleasure for Measure. Command a mirror hither straight, That it may shew me what a face I have, — Go some of you and fetch a looking-glass.

Shakspeare. Tlie state would cast the eye, aia look about to see whether there were any head under whom it might unite. Bacon.

In regard of our deliverance past, and our danger present and to come,

let us look up to God, and every man reform his own ways. Id. New Atlantis.

In dealing with cunning persons, it is good to say little to them, and that which they least look for.

Id. Essays. Some come to meet their friends, and to make merry ; others come only to look ivi. Bacon.

Look, when the world hath fewest barbarous people, but such as will not marry, except they know means to live, as it is almost every where at this day, ex-cept Tartary, there is no danger of inundations of people. Id-I'-ssays.

t;an these, or such, be any aids to us? Look they as thev were built to shake the world, Or be a moment to our eiiterprize? Ben Jonson. Did not this fatal war affront thy coast, Yet sattest thou an idle looker on ? Fairfax.

It will import those men who dwell careless to look about them ; to enter into serious consultation, how they may avert that ruin.

Decay of Pietp. Pride ever looks at the highest. Bp. Hall.

If you find a wasting of your flesh, then look about you, especially if troubled with a cough.

Harveii on Consrimptio7is. Inordinate anxiety, and unnecessary scruples in confession, instead of setting you free, which is the benefit to be looked for by confession, perplex you the more. Taylor.

Each seemed to act that part he came to see. And none was more a looker-on than he. Denham.

If he long deferred the march, he must look to fight another battle before he could reach Oxford.

Clarendon. This mistake was not such as they looked for ; and, though the error in form seemed to be consented to, yet the substance of the accusation might be still insisted on. Id.

That which was the worst now least afflicts me ; IMindness, for had I sight, confused with shame. How could 1 once look up, or heave the head 1

Milton. Look now far no enchanting voice, nor fear The bait of honied words. Id.

Casting my eye upon so many of the general bills as next came to hand, I found encouragement from them to look imt all tlie bills I could. Graunt.

Shepherds your pipe, when his harsh sound testifies anguish, into the fair looker on, pastime not passion enters. Sidney.

Do we not all profess to be of this excellent religion 1 but who will believe that we do so, that sliall look upon the actions, and consider the lives of the greatest part of Christians] Tillotson.

We are not only to look at the bare action, but a*. the reason of it. Stillingjieet.

Piety, as it is thought a way to the favour of God ; and fortune, as it looks like the effect either of that, or at least of prudence and courage, beget authority.

Temple. Fate sees thy life lodged in a brittle glass. And looks it through, but to it cannot pass.

Drpdcn. Thus pondering, he looked under with his eyes, And saw the woman's tears. Id. Knight's Tale.

Beitran ! if thou darest, look out Upon yon slaughtered host.

Id. Spanish Frpar. Cowards are offensive to my sight ; Nor shall they see me do an act that looks Below the courage of a Spartan king.

iruden. I must with patience all the terms attend, Till mine is called ; and that long looked for day Is still encumbered with some new delay. Id.

Look o'er the present and the former time. If no example of so vile a crime Appears, then mourn. Id. Juvenal.

Such a spirit must be left behind ! A spirit fit to start into an empire,

And look the world to law. Id. Cleomenes. Then on the croud he cast a furious h>ok. And withered all their strength. Drpden.

Them gracious Heaven for nobler ends designed, Their looks erected, and their clay refined.

J. Dry den, jun. They'll rather wait the running of the river dry, than take pains to look about for a bridge.

L' Estrange. The dog's running away with the flesh, bids the cook look better to it another time. Id.

We should make no other use of our neighbour's faults, than as a looking-glass to mend our own manners by. Id.

They will not look beyond the received notions of the place and age, nor have so presumptuous a thought as to be wiser than their neighbours.

Locke. Intellectual beings, in their constant endeavours after true felicity, can suspend this prosecution in particular cases, till they have looked before them, and informed themselves, whether that particular thing lie in their way to their main end. Id.

Every one, if he would louk into himself, would find some defect of his particular genius. Id.

He that gathered a hundred bushels of apples, had thereby a property in them : he was only to look that he used them before they spoiled, else he robbed others. '.

Politeness of manners, and knowledge of the world, should principally be looked after in a tutor.

Id. on Education.

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To complain cf want, and yet refuse all offers of a supply, looks very sullen. liuniˆt.

lie looked «/)0H it as morally impossible, for persons infinitely proud to frame their minds to an impartial consideration of a religion that tauglit nothing but self-denial and the cross. South.

There is none so homely but loves a looking-glass.

Id. A solid and substantial greatness of soul looks down with a generous neglect on the censures and applauses of the multitude. Addison.

Should I publish any favours done me by your lordship, I am afraid it would look more like vanity than gratitude. Id.

lie wished he had indeed been gone, And only to have stood a looker on.

Id. Olid. If a harmless maid Should ere a wife become a nurse, Her friends would look on her the worse.

Prior. Though I cannot tell what a man says ; if he will be sincere, I may easily know what he looks.

Collier. Is a man bound to look out sharp to plague himself ? Id.

Look yon I we that pretend to be subject to a constitution, must not carve out our own quality ; for at this rate a cobler may make himself a lord.

Id. on Pride. The optick nerves of such animals as look the same way with both eyes, as of men, meet before they come into the brain*; but the optick nerves of such animals as do not look the same way with both eyes, as of fishes, do not meet. Newton’s Opiirks.

It will be his lot to look singular, in loose and licentious times, and to become a by-word.

Atlerburi). The more frequently and narrowly we look itito the works of nature, the more occasion we shall have to admire their beauty. Id.

John's cause was a good milch cow, and many a man subsisted his family out of it : however, John began to think it high time to look about him.

Arbuthnoi's History of John Bull. Those prayers you make for your recovery are to be looked upon as best heard by God, if they move him to a longer continuance of your sickness.

Wake's Preparation for Death. Where a foreign tongue is elegant, expressive, and compact, we must look out for words as beautiful and comprehensive as can be found.

Felton on lite Classics.

This makes it look the more like truth, nature being

frugal in her principles, but various in the effects

thence arising. Clieijne.

Late, a sad spectacle of woe, he trod

The desart, sands, and now he looks a god.

Pope. The curious are lookinrrout, some for flattery, some for ironies, in that poem, the sour folks think they have found out some. Swift.

From the vices and follies of others, observe how such a practice looks in another person, and remember that it looks as ill, or worse, in yourself.

Watts. Look out of your door — take notice of that man; see what disquieting, intriguing, and shifting, he is content to. go through, merely to be thought a man of plain dealing ; three grains of honesty would save him all his trouble : — alas ! he has them not.

Sterne. The present life is a state of trial, \vheicin virtue or holiness is necessary, not only to entitle as to that • salvation which, through the mercy of God and the Vor. XIII.

merits of his Son, Christians are taught to look for; but also to prepare us, by habits of piety and benevolence, for a reward, which none but the pure in heart can receive, or could relish. Beatiie.

The sick penitent, therefore, should be often reminded of this : — that

nothing will be looked ufjou as true repentance, but what would terminate in a holy life. Paleu.

Shakespeare paints so very close to nature, and with such marking touches, that he gives the very look an actor ought to wear when he is on his scene.

Cumberland. I've looked on Ida with a Trojan's eye .

Athos, Olympus, ˆ-Etna, Atlas, made

These hills seems things of lesser dignity.

Look out. There is always a look-out kept on a ship's forecastle at sea, to ˆvatcll for any dangerous objects lying near her track, and to which she makes a gradual approach as slie advances: the mate of the watch accordingly calls often from the quarter-deck, ' Look out afore there !' to the person appointed for this service.

Looking-glasses. See Glass.

LOUL, in metallurgy, a vessel made to receive the washings of ores of metals. Tiie heavier or more metalline part of the ores remain in tlie trough in which they are wasiied ; the lighter and more earthy run ofT with the water, but settle in the lool.

Loom, n.s. Swed. lorn; Dan. loom ; French lumma. A sea-fowl.

A loom is as big as a goose ; of a dark color, dappled with white spots on the neck, back, and wings ; each feather marked near the point with two spots : they breed in Farr Island. Crew.

LOOM, n..s. Sax. ioma ; Goth, iom, which also signify Limb, see that word. A jointed frame or instrument of weaving. Minerva, studies to compose

Her twisted threads, the web she strung.

And o'er a loom of marble hung. Addison.

A thousand maidens ply the purple loom,

To weave the bed, and deck the regal room.

Prior.

He must leave no uneven thread in his loom, or by indulging to any

one sort of leproveable discourse himself, defeat all his endeavours against the rest. Government of the Tongue.

Breathe still softer, or be chid ; And other worlds send odours, sauce, and song. And robes, and notions, framed in foreign looms.

Young.

These men never destroyed their looms till they were become useless, worse than useless; till they were become actual impediments to their exertions in obtaining their daily bread. Byron.

Loom, in weaving, is a machine whereby many distinct threads are woven into one piece. Looms are of various structures, accommodated to tiic various kinds of materials to be woven, and the various manner of weaving them : *viz.* for woollens, silks, linens, cottons, cloths of gold ; and other works, as tapestry, ribands, stockintrs, ?tc., which will be found under their proper heads. See Weaving. Tlie weaver's loom-engine, otherwise called the Dutch loom-ongine, was brought into use from Holland to London, in or about 1G76.

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LOON, 11. s. Sax. lun, lean; Golh. faun ; Teut. lu/in (liire); Scot. loun. A servant; ;i country fellow ; a low fellow.

Thou cream-faced loon ! Where got'st thou that goose look 1

'Sliaksjieare. Macbeth. The false loon, who could not work his will r>y open force, fiiiployed his flattering skill : 1 hope, my lord, said he, 1 not oHend ; Are you afraid of me that are your friend? Di-ˆdcn. This young lord had an old cunning rogue, or, as the Scots call it, a false *"n*i of a grandfather, that one might call a Jack of all trades.

Arbuthiiol's History of John Bull.

LOONGIIEE, a town of the Burmese empire, on the Irrawaddy river, across whicii isareniurk-able ridge of rocks that tiie natives have a tradition is a petrified cable. The neighhourliood is famous for its fine cattle. Long. 91° 55' E., lat. J9°41'N. LOOP, n.s. •\ Goth, laup ; Belg. loop. Looped', adj. (ˆloopen, to run. A running Locr'noLE, n. s. i knot, or noose ; the doubled Loop'noLED, adj. J part of a string : hence any ornamental double, or fringe consisting of dou-l>les : loophole, an aperture, or hole to give passage : hence evasion ; shift; mental doubling.

Fifty loops shalt thou make in the one curtain, and fifty loops shalt thou make in the edge of the curtain that is in tiie coupling of the second, that the hmps may take hold one of another. Exod. xxvi. 5.

\or anie skil'd in workmanship embossed Xor anie skil'd in loupes of fingering fine. Might with their diverse cunning ever dare, W ith this so curious net-worke to compare.

Spenser, IMake me to see't, or at least so prove it. That the probation bear no hinge, nor/oo/j, To hang a doubt on. Shakspcare. Othello.

Poor naked wretches, wheresoe'er you are. That 'bide the pelting of this pitiless storm ! flow shall your houseless heads and unfed sides, Your looped and windowed raggedness, defend you From seasons such as these 1 Id. King Lear.

The Indian herdsman, shunning heat, Shelters in cool, and tends his pasturing herds. At loopholes cut through tiiickest shades. Milton. Ere

the blabljing eastern scout. The nice morn on the Indian steep, From her cabined loophole peep. Id.

This uneasy loopholed gaol, In which y' are hampered by the fetlock. Cannot but put y' in mind of wedlock.

Hudibras. Walk not near yon corner house by night ; for there are blunderljusses planted in every loophole, that go off at the squeaking of a fiddle.

Drudcns Spanish Fryar. An old fellow shall wear this or that sort of cut in his cloaths with great integrity, while all the rest of the world are degenerated into buttons, pockets, and loops. Addison.

Looi', in the iron works, is a part of a sow or block of cast iron broken or melted off from the rest, and prepared for the forge or hammer. The usual method is, to break off" the loop of about three-fourths of a hundred weight. This loop they take up with their slinging tongs, and beat it with iron sledges upon an iron plate near the fire, that so it may not fall to pieces, but be in a condition to be carried under the hammer, it is then placed under the hammer, and, a

little water being drawn to make the hammer move but softly, it is beaten very gently, and by this means tiie dross and foulness are forced oflf; and after this they draw more and more water by degrees, and beat it more and more till they bring it to a scjuare mass, of about two feet long, which they call a bloom.

LOOPING, in metallurgy, a word used by the miners of some counties of England to express the running together the matter of an ore into a mass. 111 the roasting or first burning, intended only to calcine it so far as to make it fit for powdering. This accident, which gives the miners some trouble, is generally owing to the continuing the fire too long in this process.

LOORD, n.s. ˆ Belg. and Teut. herd; Fr. lourdunt ; Erse, liirdan. A heavy, stupid, or witless fellow: obsolete. Spenser's Scholiast says, loord was wont, among the old Britons, to signify a lord ; and therefore the Danes, that usurped their tyranny here in Britain, were called, for more dread than d'lgmty, lurdaiit, i e. lord Danes, whose insolence and pride was so outrageous in this realm, that if it fortuned a Briton to be going over a bridge, and to see the Dane set foot upon the same, he must return back till the Dane was clean over, else he must abide no less than present death : but, being afterwards expelled,

the name of lurdane became so odious unto the people whom they had long oppressed, that, even at this day, they use for more reproach to call the quartan ague the fever Iw'dane. So far the Scholiast, but erroneously. From Spenser's own words, it signifies stupid dulness ratlier than magisterial arrogance. A drone.

Siker, thou's but a lazy loord, And rekes much of thy swinke,

That with fond terms and witless words To bleer mine eyes do'st think.

Spenser's Pastorals.

LOOSA, in botany, a genus of the monogynia order, in the polyandria class of plants : cal. pentaphyllous, superior; there are five subovate, cucuUated, and large petals; the nectarium consists of five leaves, gathered into a conical figure, each termanated by two filaments : caps, is turbinated, unilocular, and trivalved at top; the seeds are very numerous; and there are three linear and longitudinal sinuses.

LOOSE, V. a., v.n.,udj., &; n.s.~\ Sax.leaj,

Loose'lv, af/t;. 'leran;Goth.

Loos'en, v.n., V. a., & adj. L laiis ; Swed.

Loose'n ESS, n.s. J Tout, and

Belg. los ; Dan. loes; Gr. Xwffjc, \vTio. To make or set free ; unl)ind ; imtie ; detach ; disengage : hence, to deliver from obligation, perplexity, or trouble : as a neuter verb, to set sail or depart by loosing anchor: as an adjective, unshackled ; unbound ; detached ; not fast, fixed, tied, or close : unconnected ; hence, free in any sense, not rigid, or accurate ; not enslaved or bound to ; not strict in expression ; vague, indeterminate, or immoral ; unchaste ; wanton : to break loose is to obtam liberty with more or less of violence; to set loose; to place in a state of liberty or freedom from restraint of some kind : loose as a substantive is a barbarous synonyrae of liberty; Bacon uses it for dismission fror-.

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restraint : to loosen is to separate, part asunder, or lead to separation ; also, as a verb active, to relax; make less compact or coherent; free from restraint ; make less costive •, the adverb and ncun substantive, looseness, follow these senses. And let the living bird loose into the open field.

Lev. xiv. Canst thou loose the bands of Orion ? Job. Lo ! I see four men loose walking.

Dan. iii. 25. The captive hasteneth that he may be loosed. Isaiah. Loose him, and bring him to me. Luke. The shoes of his feet I am not worthy to loose.

Acts. Ye should have hearkened, and not have loosrd from Crete. Id.

Art thou loosed from a wife ? seek not a wife.

1 CoriiithiuHi. Who is worthy to loose the seals thereof ?

Rev. V. 2. Courtly court he made still to his dame, Poured out in looseness on the grassy ground, Both careless of his health and of his fame.

Spenser. Fair Venus seemed unto his bed to bring Her, whom he waking evermore did ween To be the chasted flower that ay did spring On earthly branch, the daughter of a king. Now a loose leman to vile service bound.

Id. Faerie Queene. Her golden locks for haste were loosely shed About her ears. Id.

Because conscience, and the fear of swerving from that which is right, maketh them diligent ol)server3 .of circumstances, the loose regard whereof is the nurse of vulgar folly. Ilooker.

We have not looselif through silence permitted things to pass away as in a dream. id.

The emperor loosing from Barcelona, came to the port of Mago, in the island of INIinorca. Knolles.

But in what habit will you go along ? — Not like a woman ; for I

would prevent the loose encounters of lascivious men. Sliakspeare.

If he should intend his voyage towards my wife, I would turn her louse to him ; and, what he gets more of her than sharp words, let it lie on my head.

Id. A prince should not be so loosely studied, as to remember so weak a composition. Id.

Loosing thence by night, they were driven by contrary winds back into his port. Raleigh.

A bishop, living loosely, was charged that his conversation was not according to the apostles' lives.

Camden. It is but a loose thing to speak of possibilities, without the particular designs ; so is it to speak of lawfulness without the particular cases. Bacon.

Air at large maketh no noise, except it be sharply [iCrcussed ; as in the sound of a string, where air is percussed by a hard and stifl' body, and with a sharp loose. Id,

Fear lonsenelh the belly ; because, the heat retiring towards the heart, the guts are relaxed in the same manner as fear also causeth trembling.

Id. ISIatural History. The cause of the casting of skin and shell should seem to be the looseness of the skin or shell, that sticketh not close to the flesh. Id.

He endeavoured to win the common people, both by strained curtesy and by looseness of life.

Hauward. He Irrse.d anil set at liberty four or five kings of the people of tliat countrv that Berok kept in chains.

Abbot.

1 account this body nothing but a close prison to my soul ; and the eartii a larger prison to my body. I may not break prison, till I be loosed by death : but 1 will leave it not unwillingly when I d.m loosed.

Bp. Hall. We ourselves make our fortunes good or bad, and when God

lets loose a tyrant upon us, or a sickness, if we fear to die or know not to be patient, the calamity sits heavy upon us. Taylor.

With extended wings a host might pass, With horse and chariots ranked in loose array.

Milton. From their foundation loosing to and fro, They plucked the seated hills with all their load.

Id. Part loosely wing the region, part more wise In common, ranged in figure, wedge their way. Id. When loose epistles violate chaste eyes, She half consents who silently denies.

Dryden's Ovid.

Ay ; there's the man, who, loosed from lust and

pelf.

Less to the pretor owes than to himself. Id.

She breaks her back, the loosened sides give way.

And plunge the Tuscan soldiers in the sea. Id.

Like two black storms on either hand. Our Spanish army and the Indians stand ; This only space betwixt the clouds is clear, ˆVhere you, like day, broke loose from both appear.

Id. Come, and forsake thy cloying store. And all the busy pageantry That wise men scorn, and fools adore : Come give thy soul a loose, and taste the pleasures of the poor. Id. Horace.

The chiming of some particular words in the memory, and making a noise in the head, seldom happens but when the mind is lazy, or very loosely and negligently employed. Locke.

If to break loose from the conduct of reason, and to want that restraint of examination which keeps us from chasing the worse, be liberty, madmen and fools are the only freemen. Id.

If improvement cannot be made a recreation, they must be let loose to the childish play they fancy ; which they should be weaned from, by being made surfeit of it. Id.

What hath a great influence upon the health, is going to stool regularly : people that are very loose have seldom strong thoughts, or

strong bodies.

Id. On Education. He has within himself all degrees of perfection that exist loosely and separately in all second beings.

Norris. This is to cut the knot, when we cannot loose it.

Burnet. Fame makes the mind loose and gayish, scatters the spirits, and leaves a kind of dissolution upon all the faculties. South.

Now I stand Loose of my vow ; but who knows Cato's thoughts ?

Addison's Cato, Lucia, might my big swoln heart Vent all its griefs, and give a loose to sorrow, Marcia could answer thee in sighs. Id.

The fiery Pegasus disdains To mind the rider's voice, or hear the reins ! When glorious fields and opening camps he views, He runs with an unbounded loose. Prior.

A general looseness of principles and manners hath seized on us like a pestilence, that walketh not ii > darkness, but wasteth at noon-day. Atterbury.

Fat meats, in phlegmatick stomachs, procure looseness and hinder retention.

Arbulhnol on Aliments,

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When the polypus appears in the throat, extract !t tliat way, it buingmore ready to looseit when pullinl in that direction than by the nose. Sharp's Siiriˆen/.

If an author be lonse and diffuse in his style, the translator needs only regard the propriety of the •anguaˆ'e. Felton.

Tiiose few that clashed might rebound after the collision ; or, if they cohered, yet by the next conflict might be separated again, and so on in an eternal vicissitude of fast and loose, thougii without everconsociating into the bodies of planets. Beiitley.

The stage how loosehi does Astrnca tread, Who fairly puts all characters to bed ! Pope. Vario spends whole mornings in running over loose and unconnected pages, and with fresh curiosity is ever glancing over new words and ideas, and yet treasures up but little knowledge.

Walts on the Mind. O ye, to Pleasure who resign the day.

As loose in Luxury's clasping arms you lie, O yet bt pity in your breast bear sway. And learn to melt at ilisery's moving cry.

Beattie. Loose waved behind her golden train of hair. Her sapphire mantle swam diffused in air.

Daruin. Though slight was the grasp so mortal cold. He could not loose him from its hold. Biiron.

The treacherous current works its noiseless way. The fibres loosen, and the roots decay ; Prostrate the beauteous ruin lies ; and all That shared its shelter, perish in its fall. Canning.

LOP, y. «. &. 71. s. Goth, leipa ; Swed. lopn, from Teut. laub, a leaf, as Skinner thinks : but Sax. loˆa is 'any sudden manner of cutting,' Thomson. To cut off" the branches of trees ; to cut off" abruptly in any way or respect : that which is lopped off".

Or siker thy head very tottie is, So on thy corbe shoulder it leans amiss ; Now thyself hath lost both lop and top. As my budding branch thou would'st crop.

Spenser. Gentle niece, what stern ungentle hands Have lopped and hewed, and made thy body bare Of her two branches, those sweet ornaments ?

Shahspeare. The gardener may lop relis;ion as he pleases.

Houell. The plants whose luxury was lopped. Or age with crutches underpropped.

Cleaveland. Like two pillars, Or hollowed bodies, made of oak or fir, With brandies topped in wood, or mountain felled.

Milton. So long as there's a head. Hither will all the mountain spirits fly ; lop that bud off. Drtjden's Spanish Fryar.

'I'he oak growing from a plant to a great tree, and then lopped, is still the same oak. Locke.

Nor siiould the boughs grow too big, because tliey give opportunity to the rain to soak into the tree, which will quickly cause it to decay, so that you must cut it down, or else both body and lop will be of little value. Mortimer.

Rhyme sure in needless bonds the poet ties, Procrustes like, the ax or wheel applies. To lop the mangled sense, or stretch it into size.

Smith. All that denominated it paradise was lopped off by the deluge, and that only left which it enjoyed in common with its neighbour countries.

Woodward's Katiiral Historu.

The hook she bore, instead of Cynthia's spear. To lop the growth of the luxuriant year. Pope.

The stoical scheme of supplying our wants, by lopping off our desires, is like cutting off" our feet when we want shoes. Swijt.

You call these men a mob, desperate, dangerous, and ignorant ; and seem to think that the only way to quiet the ' Bellua multorum capitum,' is to *o*)off a few of its superfluous heads. Btiron.

LOP, a lake and city of Central Asia, on the great road from Cashgar to China. It is situated on the west side of the desert of Shamo, or Gobi. Marco Polo described the caravans as usually stopping here, in liis

tmie, to prepare for crossing that extensive tract.

LOPE, pret. of leap. Obsolete.

With that sprang forth a naked swain, With spotted wings like peacock's train. And laughing lope to a tree.

Spenser's Pastorals.

LOPIIUS, or LoPHius, fishing-frog, toad-fish, or sea-devil ; a genus of the branchiostegous order of fishes, wliose liead is in size equal to all the rest of the body. The most remarkable species is L. piscatorius, the common fishing-frog, an inhabitant of the British seas. Tliis singular fish was called by the ancients /3nrpaxoc, and rana, for the same reason that we call it the fisliing-frog ; because it resembles the frog in a tadpole state. Plmy takes notice of the artifice used by it to take its prey : ' It puts forth the slender horns it has beueatli its eyes, enticing by that means the smaller fish to play round, till they come witliin reach, when it springs on them.' Tlie fishing-frog grows to a large size, some be-ing between four and five feet long. The fishermen on tliat coast have a great regard for this fish, from a supposition that it is a great enemy to the dog-fish ; and, whenever they take it with their lines, set it at liberty. It is a fish of very great deformity : the head is much bigger than the whole body ; is round at the circumference, and flat above, the mouth of a prodigious wide-ness. Mr. Pennant mentions one taken near Scarborough, whose mouth was a yard vvide. The under jaw is much longer than the upper : the jaws are full of slender sharp teeth ; in the roof of the mouth are two or three rows of the same : at the root of the tongue, opposite eacli other, are two bones of an elliptical form, thick set with very strong sharp teeth. The nostrils do not appear externally, but in the upper part of the mouth are two large orifices that serve instead of them. On each side tlie upper jaw are two sharp spines, and oltiers are scattered about the upper part of the head. Immediately above the nose are two long tough filaments, and on the back three others ; these are what Pliny calls cornicula. Along tiie edges of the head and body are a multitude of short fringed skins, placed at equal distances. The aperture to the gills is placed behind ; each of these is very wide, so that some writers have imagined it to be a receptacle for the young in time of danger. The body grows slender near the tail, the end of which is (|uite even. The color of the upper part of this fish is dusky, the lower part white ; tile skirf smooth.

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. LOQUA’CIOUS, adj. I Lat. luquux, loqua-LoQL’Ac’iTY, n.s. S citus. Full of talk or

tongue.

\Vhy loquacity is to be avoided, the wise maa gives

sufficient reason : for in the multitude of words there

wanteth not sin. iˆuy—

To whom sad Eve,

Confessing soon ; yet not before her judge

liold, or loquacious, thus abashed, replied.

Milton. In council she gives licence to her tongue,

Loquacious, brawling, ever in the wrong.

Drydeu.

Blind British bards, with volant touch Traverse loquacious strings, whose solemn notes Provoke to harmless levels. I’lulips.

loo great loquacity, and too great taciturnity by fits. Arbulhnot.

LORANTHUS, in botany, a genus of the mo-rogynia order, in the hexandria class of plants : natural order forty-eighth, aggregatae : germen inferior : gal. none : cor. sexfid and revoluted ; the stamina are at the tops of the petals : berry xnonospermous. There is only one species, a native of America, discovered by F. Plumier, and found growing naturally at La Vera Cruz by Dr. Houston. It rises with a shrubby stalk, eight or ten feet high, dividing into several branches, having at their ends clusters of small scarlet-colored flowers, succeeded by oval berries with a pulpy covering, and a hard shell with one cell, enclosing several compressed seeds. It is propagated by seeds, which should be sown soon after they are ripe ; otherwise they are very apt to miscarry, or lie a year in the ground without germinating. The plants require always to be kept in a bark stove.

LORAllII, among the Romans, officers whose business it was, with whips and scourges to com-pel the gladiators to engage. They also punished slaves for disobedience.

LORCA, a large town of Murcia, Spain, divided into the Upper and Lower towns, the latter of wiiich is tolerably regular and well built. It has nine churches and several monasteries. The convents worthy of attention are those of St. Jago and St. Domingo. The front of the great church is also elegant. The inhabitants are descendants of the converted Moors. The manufactures of saltpetre are of great extent : and the public walks are considered beautiful. In 1802 this town suffered materially from the bursting of a reservoir in the neighbourhood. It is forty miles S.S.W. of Murcia, and forty-seven west of Carthagena. Long. 1° 22' W., lat. 37" 25' N.

LORD, n. s. & V. n. Saxon jjlapoji't),

Lord'ing, n. s. J laveojit), of lopian,

Lord'ling, f to exalt, and ward,

Loru'lingness, / or weorth, dignity.

Lord'ly, adj. & adv. \ Superior ruler ;

Lord'siup. governor; monarch;

the Supreme Being : a nobleman ; a tyrant ; a husband ; an honorary title of various offices and dignitaries: to lord is to domineer; assume excessive or despotic authority : lording and lordling are diminutives of lord, used in ridicule or contempt: lordliness, dignity; elevated station ; pride ; hauteur : lordly, befitting or aping a lord : lordship, power ; dominion; superiority ;

seignority ; a tide of the British and other peerages, and a compellation of judges; the mayors of London and York, &,c.

The Lord said unto my Lord, sit thou at my right hand. Psalm ex.

What euer seruauntis ben undir ghoke deme thei her lordis worthe al onour lest the name of the Lord and the doctrine be blasfemed. Wiclif. 1 Tymo. 6. The seruaunt is not grettere than his lord.

Id. Jon. 13. They which are accounted to rule over the Gentiles,

exercise lordship over them, and their great ones exercise authority upon them. Mark x. 42.

Thinke on the woman Cananee, that saide That whelpes eten som of the cromes alle That from her lordes table been yfalle.

Chaucer. The Second Noiines Tale, v. 15528. Grant harvest lord more by a penny or two, To call on his fellows the better to do. Tusser.

Unrighteous lord of love ! what law is this. That me thou makest thus tormented be ?

The whiles she lordeth in licentious bliss Of her free will, scorning both thee and me.

Spenser. How can those grants of the kings be avoided, without wronging of those lords which had those lands and Zwcds/i ipi given them? Id. On Ireland.

I'll question you Of my lord's tricks, and yours, when you were

boys. You were pretty lordings then.

Shakspeare. Winter's Talc. Thou vouchsafest here to visit me. Doing the honour of thy lordliness To one so weak. Id. Antony and Cleopatra.

Bad as yourself, my lord ; An't like your lordly lord protectorship 1

Shakspeare. Now being assembled into one company, rather without a lord than at liberty to accomplish their misery, they fall to division. liayuard.

Needs must the lordship there from virtue slide.

Fairfax. I assure your lordship. The extreme horrour of it almost turned me To air, when first I heard it. Ben Jonson.

There is lordship of the fee, wherein the master doth much joy, when he walketh about his own possessions. Wotton.

Nor were the crimes objected against him so clear, as to give convincing satisfaction to the major part of both houses, especially that of the lords.

King Charles. What a little lord hast thou made over this great earth. Rp. Hall.

Those huge tracts of ground they lorded over, begat wealth, wealth ushered in pride. Howel.

They had by this possessed the towers of Gatli, And lorded over them whom they now serve.

Milton. Man over man He made not lord. Id.

Of me as of a common enemy, So dreaded once, may now exasperate them, I know not : lords are lordliest in their wine. Id.

It being set upon such an insensible rising of the ground, it gives the eye lordship over a good large circuit. Sidney.

He was confounded and disanimated at his presence, and added, How can the servant of my lord talk with my lord ? Boyle's Seraphic Love.

'Tis death to fight, but kingly to controul Lord-Vike at ease, with arbitrary power. To peel the chiefs, tlic people to devour. Drydcn.

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But if thy passion lord it in thy breast, Art thou not still a slave ? Id. Pershis.

So when a tyger sucks the bullock's blood, A famished lion, issuing from the wood, Hoars luudli/ fierce, and challenges the food.

l)it/den. What lands and lordships for their owner know My quondam barber, but his worsliip now. Id.

SVe have our author's only arguments to prove, that heirs are lords over their Itretliren. Luckc.

The valour of one man the afflicted throne Imperial, tl>at once lorded o'er the world. Sustained. Philips.

I should choose rather to be tumbled into the dust in blood, bearing witness to any known truth of our Lord, than by a denial of truths, through blood and perjury wade to a sceptre, and lord it in a throne.

South. Lordly sins require lordly estates to support them.

Id. They called their lord Actaeon to the game, He shook his head in answer to the name.

Addison. I oft in bitterness of soul deplored My absent daughter, and my dearer lord.

Pope. To lordlings proud I tunc my liy, Who feast in bower or hall ;

Though dukes they be, to dukes I say, That pride will have" a fall. Swift.

Traulus, of amphibious breed, By the dam from lordlings sprung, By the fire exhaled from dung. Id.

O'er love, o'er fear, extends his wide domain, Unconquered lord of pleasure and of pain.

]aiiitti of Human]Viihes.

AH hail ! inexorable lord !

At whose destruction-breathing word The mightiest empires fall !

Thy cruel, woe-delighted train,

The ministers of grief and pain,

A sullen welcome, all ! Burns.

The sutl that overhangs yon moors,

Out-spreading far and wide. Where hundreds labour to support

A haughty lordling's pride. Id.

Lord is a title of honor given to those who are noble, either by birth or creation, amounting to much the same as peer of tiie realm. The title is by courtesy also given to all the sons of dukes and marquises, and to tlie eldest sons of earls. The Saxon word, hlaford, is abbreviated from illaford to lafovd and lord. ' The etymology of the word,' says J. Coates, ' is well worth observing ; for it was composed of illaf, a loaf of bread, and ford, to give or afford ; so that illaford implied a giver of bread ; because, in those ages, such great men kept extraordinary houses, and fed all the poor; for whicli reason they were called givers of bread, a tiling now much out of date, great men being fond of retaining the title, but few regarding the practice for which it was first given.'

Lords," House or, one of the three estates of parliament, composed of the lords spiritual and temporal. The following are among the peculiar privileges of the house of lords: — 1. One very ancient privilege is declared by the charter nf the forest, confirmed in parliament by 9 Hen. III.: *viz.* that ev6ry lord, spiritual or temporal, summoned to parliament, and passing through ihe king's forests, may, both in going and

returning, kill one or two of the kirig's deer without warrant ; in view of the forester if he be present, or on blowing a horn if he be absent; that] lie may not seem to take the king's venison by stealtii. 2. They have a riglit to be attended^ and constantly are, by the judges of the court of king's bench and common pleas, and such of the barons of the exchequer as are of tlie degree of the coif, or have been made Serjeants at law; also by the king's learned counsel, being Serjeants ; and by the masters of the court of chancery, for their advice in point of law, and for the greater dignity of their proceedings. The secretaries

of state, with the attorney and solicitor general, also used to attend the house of peers, and have to this day (together with the judges, &c.) their regular writs of summons issued out at the beginning of every parliament, ad tractandum et consilium inipendendum, though not ad consentienduin : but whenever, of late years, they have been members of the house of commons, their attendance in the house of lords has fallen into disuse. 3. Every peer, by license obtained from the king, may make another lord of parliament his proxy, to vote for him in his absence ; a privilege which a member of the other house can by no means have, as he himself is but a proxy for a multiUide of otlier people. 4. Each peer has a right, by leave of the house, when a vote passes contrary to his sentiments, to enter his dissent on the journal of tlie house, with the reasons for such dissent ; wliich is usually styled his protest. 5. All bills, that may in their consequences in any way affect the rights of the peerage, are by the custom of parliament to have their first rise in the house of peers, and to suffer no changes or amendments in the house of commons. 6. There is also one statute peculiarly relative to the house of lords, 6 Ann.c. 13, which regulates the election of the sixteen representative peers of North Britain in consequence of the twenty-second and twenty-third articles of the union :. and for that purpose prescribes the oaths, &c., to be taken by the elecˆ tors; directs the mode of balloting; prohibits the peers electing from being attended in an unusual manner; and expressly provides that no other matter shall be treated of, in that assembly, save only tiie election, on pain of incurring a prae-munire; and a similar act was passed in 1800, regulating the elections of the Irish peers. See Peers of England, and” Great Britain, and Law.

LORE, 71. s. Saxon leeji, Isejian, to learn ; Goth. lar. Learning; doctrine; lesson; instruction.

This markis yet his wife to templen more To the uttereste presse of hire corage. Fully to have experience and lore If tiiat she were as stedfast as before.

Chaucer. Cant. Tales.

And, for the modest lore of maidenhood. Bids me not sojourn with these armed men, Oh whither shall 1 fˆy ? Fairfax.

The law of nations, or the lore of war. Irf*

Calm regions once, And full of .peace ; now tost, and turbulent ! For understanding ruled not ; and the will Heard not her lore ! but in subjection now To sensual appetite. Milton’s Paradite Lost.

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Lo ; Rome herself, proud mistress now no more Of arts, but thundering against iieathen lore. Pope.

liut why should foresight thy fond heart alarm ! Perish the lore that deadens young desire ! Beattie.

LOR'EL, n. s. Sax. leojian. An abandoned scoundrel. Obsolete.

Silker thou speakest like a lewd lorell Of heaven to deemen so :

How be 1 am but rude and borrel, Yet nearer ways 1 know. Spenser's Puitorals. Thus sayst thou, lorel, whan thou gost to bed. And that no wise man nedeth for to wed.

Chaucer. Cant. Tales.

LORENZO, San, a town of Mexico, in New Biscay, termed tbe vineyard of Cohahuila, the whole population (about 600) pursuing no other occupation than the cultivation of the grape. Its gardens are delightfully interspersed with figs, vines, apricots, and a variety of other fruits.

LORETTO, a remarkable town of Italy, in the papal states, near the mouth of the river Mu-sone. It is situated on the Adriatic, on a commanding eminence, and is surrounded with a rampart and deep ditcii, defended by towers. The principal street is a double row of mean shops ; and the other edifices are little worth notice. It owes its celebrity entirely to the Santa Casa, or house said to have been inhabited by the Virgin Mary of Nazareth, conveyed hither, as tradition reports, in 1221, by a band of angels. In the journey from Galilee the same authority gives these distinguished carriers a resting place in Dalmatia. The precious relic now occupies a conspicuous situation in the cathedral, and is surrounded with a case of the finest mar-ble, ornamented with beautiful bas reliefs. The Casa also contains an image of the Virgin, profusely adorned with preciotis stones. On the invasion of Italy, the French republicans desjˆoiled this church of its treasures; and even the image of the 'irgin was removed to Paris, but restored in 1802. The town has, it is said, of late fallen greatly into decay. Population 6000. Twelve miles S. S. E. of Ancona, and 115 of Rome.

LORICA, in Roman antiquity, was a cuirass, brigantine, or coat of mail, in use among the soldiers. It was generally made of leather, and its name is supposed to be derived from lorum, a thong. The lorica; were set with plates of metal in various forms; sometimes in hooks or rings like a chain, sometimes like feathers, and sometimes like the scales of serpents or fishes, to which plates of gold were often added. There were many other lighter cuirasses, consisting only of many folds of linen cloth, or of flax made strong enough to resist weapons. Such soldiers as were rated under 1000 drachms, instead of the lorica now described, wore a pecto-rale. The Roman lorica was made like a shirt, and defended the wearer both before and boliind, but was so contrived that the back part could be occasionally separated from the front. Some of the lorica; were made of cords of hemp or flax, closely set together ; whence they are called thoraces, bilices, trilices, &c., from the number of the cords fixed one upon another ; but these were used rather in hunting than in battle.

LOR'ICATE, v.a. Lat. lorica, a crust or layer of plaster. To plate or plaster over.

Nature hath loricated, or plaistered over, the sides of the tympanum in animals with ear-wax, to stop and entangle any insects that should attempt to creep in there. Ray,

LORME (Philibert de), one of the most celebrated architects in the sixteenth century, was born at Lyons. Queen Catherine de Medicis gave him the supermtendauce of buildmgs; and he had the direction of those of the Louvre, the Thuilieries, the castle of St. Anet, St. Germains, and other edifices erected by her orders. He wrote several books of architecture, which are esteemed : and died about 1577.

L'ORIENT, a fortified modern sea-port of the north-west of France, and department of the Morbihan, situated on the bay of Port Louis, at the influx of the Scorf. It is built with considerable regularity, and the streets are both long and wide ; tiie public squares spacious and handsome; and the harbour large and secure. Ships of war anclior here in safety, and the trade of the town was very flourishing under the French East India Company, vvbo at one time made it the exclusive entrepot of their imported goods. It was declared a free port in 1784, a privilege which, however, was abrogated at the revolution. It is still a place of importance, on account of its magazines for the use of the navy. Salt is the principal manufacture. An unsuccessful attack was made on it by some British ships, under general Sinclair and admiral

Lestock, in 1746. Population 18,000: 340 miles west by south of Paris.

LORN, adj. Sax. lope, lojiian ; Relg. lior , S wed. /ora. Distressed; forsaken; lost.

Thus hath the kite ray love in hire service, And I am lorn withouten remedy.

Chancer. Cant. Tales. Who after that he had fair Una lorn, Through light misdeeming of her loyalty.

Faerie Queene.

LORRAIN (Henry de), third duke of Guise, was the son of duke Francis, and grandson of Claude, the first duke of Guise; and born in 1550. He was a great general, but of an ambitious and turbulent disposition. He formed the rebellious association called tlie league, first planned by his uncle, the cardinal of Lorrain. Under pretence of defending the Catholic faith, he acted in open rebellion against Henry III., who at last had him assassinated at Blois, whither he had summoned the duke to appear before him on the 23d of December 1587. See France.

LoRRAtN (Robert de), an eminent sculptor, born at Paris in 1C6G. He made so rapid a progress in the art of designing, that, at the age of eighteen, the celebrated Girardon intrusted him with tiie care of teaching his children and correcting his disciples. He committed to him also, in conjunction with Noulisson, the execution of tlic famous tomb of cardinal Richelieu in the Sorbonne, and his own tomb at St. Laiidreu in Paris. On his return from Rome, he finished several pieces at Marseilles, which had been left imperfect by the death of Mr. Puget, He was received into tlie academy of sculpture m 1701.

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His masterpiece is Galatea, a work universally admired, lie afterwards made a Bacchus for tlie gardens at V'ersadles, a Faun for those of JNIariy, and several bronzes, among wliicli is an Andromeda. This artist succeeded chiefly in heads ; particularly in those of young girls, which he performed with incomparable delicacy and trutii. He died governor of the academy in

1712.

L{)11R.\INE, an extensive district of the north-east of Trance, between Champagne and Alsace, and divided into the four departments of La Meuse, La Moselle, La Meurthe, and Les 'osges. See these articles.

LOS EsTEaos Bay, a bay of the coast of New California, of which the shores fall back about five miles from the ocean. Its north point, Porto del Esteros, is about thirteen miles distant from its southern, which is formed by steep cliffs. Long, of the north point 239° 22' E., lat. 35" 31' N.

LOSE, V. a. ˆ Sax. leopian, loj-ian; Goth. Lose'able, adj. I ticcsan ; Swed. lisa. To Lo'sEL, n. s. [miss ; part with ; expend ; Los'sER, 71. s. (be deprived of; forfeit ; alien-Loss, 1 ate ; abandon : as a neuter Lost, part, adj.) verb, not to win ; to fail ; decline : loseable is subject to loss or privation : losel is an abandoned vvortliless fellow : loss is privation; detriment; diminution, or forfeiture of good; pa'-licnlarly the sliipwreck of a vessel ; uselessness; fault or puzzle, as in the phrase ' at a loss :' lost, abandoned; imperceptible.

If salt have lust its savour, wherewith shall it be salted 1 Mattliew.

The fear of the lord goeth before obtaining of authority ; but roughness and pride is the losing thereof.

Ecclus. X. 21.

He that wole make his lyf saaf schal leese it, and he that schal leese his lyf for me schal fynde it.

Wielif. Matt. xvi. Uy Cambridge a towne I do know, Whose losses by

lossels doth shew More heere then is needful to tell.

Tusser's Husbandry. A losel wandering by the way, One that to bounty never cast his mind, Ne thought of honour ever did assay His baser breast. Faerie Queeiie.

The only gain he Jsurchased was to be capable of loss and detriment for the good of others. Hooker. Be not with work of losels wit defamed, Ne let such verses poetry be named.

Hubbcrd's Tale. He lost his right hand with a shot, and, instead thereof, ever after, used a hand of iron. KnuUes.

1 will go lose myself And wander up and down to view the city.

Sliukspeare. We'll hear poor rogues Talk of court news, and we'll talk with them too. Who loses, and who wins ; who's in, who's out. Id. A gross hag ! And, losel, thou art worthy to be hanged, That wilt not stay her tongue. Id.

With the losers let it sympathize, For nothing can seem foul to those that win. Id. There succeeded an absohite victory for tlie Kng-Vish, with the slaughter of above two thousand of the enemy, with the loss but of one man, though not B few hurt. Baron.

Nor are constant forms of prayer more likely to flat and hinder the spirit of prayer and devotion, than unpremeditated and confused variety to distract and lose it. ^^“‘n Charles.

1 am impoverished with losses ; that was never thoroughly good that may be lost. Bp. Hall.

If thou hast lost thy land, do not also lose thy constancy ; and, if thou must die a little sooner, yet do not die impatiently.

Taiflor's Rule of Liviiij^ Holif.

No man can be provident of his time that is not prudent in the choice of his company ; and if one of the speakers be vain, tedious, and trifling, he that hears, and he that answers, are equal losers of their time. Id.

These sharp encounters, where always many more men are lost than are killed or taken prisoners, put such a stop to]Middleton's march,

that he was glad to retire. Clarendon.

Although indeed man was by his fault a great loser, and became deprived of great advantages, yet the mercy of God did leave him in no very deplorable estate, simply considered, as to his life here.

Barrow.

The passages through which spirits are conveyed to the members, being almost infinite, and each of them drawn through so many meanders, it is wonderful that they should perform their regular destinations without losing their way. Glanville,

By them I lost not what I lost, rather by them I gained what I have gained, and with them dwell Copartner in these regions of the world. If not disposer. Milton.

Wisdom in discourse with her

Loses discountenanced, and like folly shews. Id.

Tiiey have lost their trade of woollen drapery.

Graunt.

Consider whether motion, or a propensity to it, be an inherent quality belonging to atoms in general, and not loseable by them. Boyle.

It cannot last, because that act seems to have been carried on rather by the interest of particular countries, than by that of the whole, which must be a loser by it. Temple.

How should you go about to lose him a wife he loves with so much passion 1 Id.

The lightened coursers ran ;

They rushed, and won by turns, and lost the day.

Driide7i.

Who conquered him, and in what fatal strife The youth, without a wound, could lose his life.

Id.

Her fellow ships from far her loss descried : But only she was sunk, and all were safe beside.

Id.

Reason is always striving, and always at a loss, while it is exercised about that which is not its proper object. Id.

When the mind pursues the idea of infinity, it uses-the ideas and repetition of numbers, which are so many distinct ideas, kept best by number from running into a confused heap, wherein the mind loses itself. - Locke.

The abatement of price of any of the landholder’s commodities, lessens his income, and is a clear loss.

Id.

Losers and malcontents, whose portion and inheritance is a freedom to speak. South.

Not the least transaction of sense and motion in man, but philosophers are at a loss to comprehend.

Sou tit's Sermons. His seely back the bunch has got Which Edwin lost before. I'ariwL

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We should never lose sight of the country, though sometimes entertained with a distant prospect of it.

Addison. In spite of all the virtue we can boast, The woman that deliberates is lost. Id.

It would be loss of time to explain any further our superiority to the enemy in numbers of men and horse.

Id. The coast Where first my shipwrecked heart was lost.

Prior. To lose these years which worthier thoughts require. To lose that health which should those thoughts inspire. Savage. Fame — few, alas ! the casual blessing boast, So hard to gain, so easy to be lost ! Pope.

13 ut if to honour lost, ‘tis still decreed For you my bowl shall flow, my flocks shall bleed ; Judge and assert my right, impartial Jove. Pope, Like following life in creatures we dissect, We lose it in the moment we detect. Id.

He has merit, good-nature, and integrity, that are too often lost upon great men, or at least are not all three a match for flattery. Pope’s Letters.

But rebel with deserts thee oft in vain, Lost in the maze of words he turns again. Id. I do more complain, Time, health, and fortune are not lost in vain. Id. Oft in the passions’ wild rotation tost, Our spring of actions to ourselves is lost. Id. In seventeen days appeared your pleasing coast, And woody mountains, half in vapours lost. Pope.

When men are openly abandoned, and lost to all shame, tliey have no reason to think it hard, if their memory be reproached. i Swift.

0 1 tiTst to virtue, lost to manly thought Lost to the noble sallies of the soul ! Who think it solitude to be alone. Young.

A man may sometimes be at a loss which side to close with. Baker on Learning.

When you have started a good thought, pursue it ; do not piesently lose sight of it, or sufl’er any trifling suggestion that may intervene to

divert you from it.

Mason . These pleasures, by repetition, lose their relish.

Paleu. Is this man as much overjoyed with gain, and mortified by losses, as he was the first day he opened iiis shop. Id.

lie made no wars, and did not gain New realms to lose them back again. Byron.

LOT, n.s. ˆv. a.) Sax. \3\0T; Goth, hit;

Lot'teiiy. S Fr. loterie ; Belg. and Fr.

lot ; Swed. loll ; Ital. lotto, all signifying chance. See Light. Portion ; fortune ; fate or proj)prty assigned : a die, or any thing by which chances are determined: see the quotation from the book of Proverbs. Shakspeare uses it for a good or vvished-for chance : lot, as a verb, means to dispose of by chances or lot : lottery is a game or adventure decided by real or supposed chances.

Aaron shall cast lols upon the two goats : one lot for the Lord, and the other lot for the scape-goat.

Lev. xvi. 8. The lot is cast into the lap, but the whole disposal thereof is of the Lord. Proverbs.

If you have heard your general talk of Home, And of his friends there, it is lots to blanks .T\Iy name hath touched your ears ; it is Menenius.

Shakspeare.

Let high-sighted tyranny range on, - Till each man drop by lottery. Id.

The lotteru that he hath devised in these three chests of gold, silver, and lead, will never he chosen by any but whom you shall rightly love. Id.

Every warrior may be said to be a soldier of fortune, and the best commanders to have a lottery for their work. South.

Kala at length concludes my lingering lot : Disdain me not, although 1 be not fair. Who is an heir of many hundred sheep. Doth beauty keep which never sun can burn. Nor storms do turn. Sidney.

Their tasks in equal portions she divides, And, where unequal, there by lots decides.

Dryden. Fortune, that with malicious joy Does man, her slave, oppress, Still various and inconstant still. Promotes, degrades, delights in strife, And makes a lottery of life. Id. Horace.

Our own lot is best ; and, by aiming at what we have not, we lose what we have already.

U Estrange. Prepared I stand ; he was but born to try The lot of man, to suffer and to die.

Pope's Odyssey. Ulysses bids his friends to cast lots, to shew that he would not voluntarily expose them to so imminent danger. Broome.

In a like comparative sense, compared, that is, with the general lot of mankind, we call a man happy who possesses health and competency. Paley.

Poland ! o'er which the avenging anger past, But left thee as he found thee, still a waste, Forgetting all thy still-enduring claim, Thy lotted people and extinguished name. Thy sigh for freedom, thy long flowing tear, That sound that crashes in the tyrant's ear. —

byron. And here and there a chestnut stood. The strong oak, and the hardy pine ;

But far apart — and well it were, Or else a different lot were mine. — Id.

Lot, IDl'?, Ileb. i. e. joined together, the son of Haran, nepliew of Abraliam, and progenitor of the Moabites and Ammonites. Ilis separation from Abraham, his captivity by Chedorlao-mer, his restoration by tlie bravery of his uncle, bis extraordinary hospitality, his deliverance from the destruction of Sodo\n, his wife's metamorphosis, with his fatal intoxication, and involuntary incest, are recorded in Genesis xiii. xiv. and xix. His righteous character is particularly taken notice of by the apostle Peter : 2 Ephesians ii. 7, 8- Some trace the immodest worship of Baal-peor, the god of the Moabites and Ammonites, to the involuntary incest of their ancestor. See Baal-Pi oil.

Lot, a department of France, consists of the ancient (ˆuercy, a dependency of tl>e former province of Guienne, and takes its name from the river l>ot, wiiich crosses it from east to west. Tile principal

place of this prefecture is Cahors ; it contains three arrondissements or subprefec- tures; Cahors having 113,110 inhabitants, Figeac a.'),473, and Gourdon 76,713; making a total population of 275,29(5 souls, on an area of 3058 square miles. It is subdivided into twenty-nine cantons and 440 communes ; yields a territorial

revenue of 11,306,000 francs; forms the twen-Tietli military division, having a royal court at Agen, and a bishopric at Cahors ; and is divided into four electoral arrondissements, which send five members to the chamber of deputies.

This departmen* is bounded on the north fcy tiiat of Correze; on the east by those of C'antal and of Aveyron ; on the south by that of Tani-et-Garonne, and on the west by those of Lot-et-Garonne and Dordogne. It is very liilly; some of the hills are bare, but others are covered with wood and vines, that produce very excellent wine : the plains and valleys yield abundance of corn, hemp, tobacco, and highly esteemed fruits. The pastures feed numerous flocks of sheep, which constitute a great part of the commerce. Game, poultry, and fisii, are very plentiful. Part of the wme of the country is made into brandy. The climate is healthy but rather cold. The soil, consisting of fat and rich earth, is cultivated vviUi horses, and yields more than sufficient for its population. There are about 23,000 hectars of forests, and 47,000 of vineyards ; producing eighteen francs, tifty-seven cent., for each hectar of arable land.

Iron and coal mines are found here, as well as quarries of marl)le of every color, granite, alabaster, graystone, millstones, lithographic stones, calcareous spar, fullers' earth, and clay for glasshouse crucibles. At Mien there are mineral waters. The manufactures are ratteens, coarse serges, hats, cotton stuffs, linen for veils, and lace. Tiie trade consists in corn, flour, wine, brandy, walnut oil, hemp, Imens, woollen stuffs, cattle, leather, salt, iron, plank timber, haberdashery, grocery, ˆc.

Tills department is watered by the Lot and the Dordogne, which are

here navigable, and the medium of great .maritime commerce, the Selly, the Tarn, the Averyron, the Cere, and the Azou. It is crossed by the great roads of Toulouse and Limoges.

Lot, THE, a river in France, which rises in the Cevennes Mountains, near the village of Bleymard, arrondissement of Mende, in the department of Lozere. It passes by Bleymard, Bag-nois-les-Bains, Mende, Chanac, St. Geniez, St. Cosme, Espalion, Kstaing, Entraygues, Livignac, Bouillac, Capdenac, Cajarc, St. Cirq, Cahors, St. Vincent, Luzech, Puy-L'ev£que,'Duravel Libos, Villeneuved'Agen, St. Livrade, Castel-inoron, Clairac, and Aiguillon, below which it falls into theCiaronne. The Lot is navigable for timber rafts from St. Laureiit-de-Ilivedolt to St. Genioz in the department of Aveyron, and navigable from Enlrayques to its mouth. In its course, which is about 180 miles, it receives the Truyere, the Dourdon, the Celle, the Almance, and several other smaller rivers.

Lot-et-CJauonne, a department of France, is formed out of the Agenais, a dependency of the former province of Guienne, and derives its name from the rivers Garonne and Lot, which flow through it, the first from south to north-east, and the second from north-west to west. The chief place of the prefecture is Agen; it contains four arrondissements or subprefectures, Agen having 84,210 inhabitants; Marmande 99,240; Nerac

57,878; and Villeneuved'Agen 92,789, comprising a total])opulation of 330,121 souls, on a superficies of 25G5 square miles. It is further subdivided into thirty-eight cantons and 369 communes, yielding a revenue of 20,943,000 francs. It forms a part of the twentieth military division, has a royal court and bishopric at Agen, and contains three electoral arrondissements which send five menbers to the chamber of deputies.

This department is bounded on the north by that of Dordogne ; on the east by those of Tarn-et-Garonne and Lot ; on the south by that of Gers, and on the west by those of Laudes and the Gironde. It is intersected by cultivated plains, barren hills, uncultivated lands, marshes, and fine fruitful valleys, watered by the Lot and the Garonne. These valleys overlooked by pleasant elevations planted with fruit trees and vities, which yield tolerably good wines, produce corn in abundance, fruits of all kinds, hemp of an extraordinary tall growth, and tlie best tobacco in France. Its pastures are but indifi'erent, and artificial meadows are little known. Towards the south, at a little

distance from the Garonne and on the banks of the Lot, the hills become very rugged and utterly incapable of cultivation ; in fine, the landes or deserts, which amount to one-eighth part of the whole department, consist of scarcely any thing else than moveable sands, or a scanty vegetation of rye and panic, produced by means of enriching the earth with manure.

The climate of this department is rather temperate, and ihe air generally healthy, except in the neighbourhood of the marshes. Although the sky here is regarded as the most delightful in France, it is subject to great varieties of rain and drought, which often derange the course of the seasons, and very much injure the harvests. A sort of meteor, called brouiUard, is frequently the pest and destruction of tlie crops. The land being much covered widi heath is cultivated with oxen, yielding not quite sufficient for the inhabitants. There are about 26,026 hectars of forests, chiefly oaks, elms, and pines, and 60,000 of vineyards, producing on an average about thirty-four francs sixty centimes per hectarof arable land.

There is here also abundance of great and small game (wild boars, hares, red partridges, &c.), plenty of fresh water fish (salmon, lam])reys, shad, and salmon trout) ; a nursery for the department at Agen; a royal depot of .standard measures at X'llleneuve and quarries of freestone, plaster, marl, potter's clay, &c. The inhabitants carry on extensive manufactures ot Imon cloth for veils, table linen, cotion goods,]irinled cottons, and serges ; they have also cotton-spinning factories, brandy distilleries, blast furnaces, forges, foundries, flatting-mills, lime-kilns, glasshouses, many paper-mills, tan-yards, currying-shops, dye-houses, &c. Their trade consists in excellent flour, brandy, tobacco, flax, hemp, Agen prunes, bundles of cork, caulking slutt", and tar. The principal rivers that water this department are the Garonne, the Lot, and the the Baysc navigable ; the Dropt, the Barguelone the Auvignon, the Avance, the Almance, the Lfede,

the Gelise, the Gers, the Seine, and the Garonne. It is crossed by the great roads of Mantauban, Auch, and Bourdeaux.

LOTE, Lotos Tree, or nettle tree, n. s. A plant.

The leaves of the lote tree are like those of the nettle. The fruit of this tree is not so tempting to us, as it was to the companions of Ulysses : the wood is durable, and used to make pipes for wind instruments : the root is proper for halts of knives, and was highly esteemed by the Romans for its beauty and use. Miller.

‘i’he trees around them all their food produce. Lotos, the name divine, nectareous juice. Pope.

LOTHIAN, a name common to the three counties of Scotland, otherwise called Haddington, Edinburgh, and Linlithgow shires ; or East, Mid, and West Lothian.

Lothian, East, or Haddingtonshire, is bounded on the north-west by the Frith of Forth ; on the east by the German Sea ; on the south-east by Berwickshire ; and on the west by the county of Edinburgh. It extends about twenty-five tniles from east to west, and, where broadest, nearly fifteen from north to south. The coast, advancing northward into the Frith, forms an irregular curve. This is one of the most fruitful counties in Scotland, producing great quantities of wheat, and all sorts of grain ; and being well watered, and plentifully supplied with fish, fowl, fuel, and all the necessaries of life. It is intersected by numerous streams, but the Tyne is the principal river, which falls into the German Ocean between Berwick and Dunbar. It abounds with towns, villages, and farms, interspersed with a great number of elegant houses belonging to persons of rank and fortune. For cultivation, populousness, and fertility, this shire may vie with any tract of land in Great Britain. The inhabitants on tiie sea-coast employ themselves in the fishery, salt-making, and foreign trade ; and the more inland inhabitants in the linen and •woollen manufactures. Great numbers of sheep are fed on the hills of Lammermuir. Preston-pans has a considerable manufacture of oil of vitriol, and sal-ammoniac. It abounds with excellent coal, freestone, and limestone, and produces also some iron and lead.

LoTuiAN, Mid, or Edinljurghshire, is about thirty-five miles long, but varies in its breadili, in different places, from five to sixteen miles. It is bounded on the east by East Lothian ; on the south by the county of Peebles ; on the west by that of I^inlithgovv ; and on the north by part of West Lothian and the Frith of Forth. The aspect •of the coimtry is in general level and pleasant, interspered with a few hills. It is well watered with rivers, and shaded with woods ; and produces coal and lime stone in abundance, a soft black marble, and some copper ore.

The soil, naturally fertile, is finely cultivated, and yields as plentiful harvests of excellent wheat as are found in any part of North Britain. The whole ■county is interspered wit!i houses and plantations, belonging to noblemen and gentlemen of fortune; and the farmers ?re successful agriculturists. The land is generally occupied by tenants on leases for a term of years, excepting the comparatively small portion possessed by the proprietors themselves, or let for the season in grass. Round Edinburgh the cultivation of farms is conducted with a view to the wants of that mar-ket ; and potatoes, turnips, and clovers, are found more profitable than grain. The manure for raising them is amply supplied by the streets and stables of the city, which sells at 3s. a cubic yard, or more. The street soil, a few years ago, was let out to one individual, and brought the city a clear revenue of £2000 a year. The rent of farms, of from 50 to 100 acres, within a mile of the city, is in some instances so high as £8 or £lO an acre. Beyond this circle the system of cultivation is nearly the same as in the other Scottish counties. The extent of the natural wood has been estimated at 3000 acres, and of plantations about 14,000. The manufactures of the county, inclusive of those of the metropolis and Jˆeith,are not considerable. Distilleries and paper-mills on the Esk, iron-works at Cramond, potteries and salt-pans at Inveresk, and gunpowder works at Temple, on the South Esk, are the principal. Tlie communication between Edinburgh and Glasgow, by means of the Union Canal, promises to be of great utility to this county. The canal itself is five feet deep, and at the surface thirty-seven feet wide, contracting to twenty-two feet at the bottom. It begins at the Lothian Road, west of Edinburgh, and, crossing the Water of Leith at Slateford, passes the villages of liatho, Broxburn, and Winchburgh, and the towns of Linlithgow and Falkirk, and joins the Forth and Clyde Canal at Lock No. 16, near the village of Camelon, after a course of thirty miles. The aqueducts are, one over the Water of Leith, at Slateford, 500 feet long and fifty feet high; and another of twelve arches of fifty feet span, over the river Avon, two miles above Linlithgow Bridge, 835 feet long, and ninety feet in height above the bed of the river.

The places worthy of note in this county (for it has no town beside Edinburgh of ai'.y consequence) are the villages of Mid-Calder, Corstor-phine, and Cramond, north-west; Pennicuik, T3alkeith, Laswade, Loanhead, and (iiUnerton, east and south ; and Musselburgh (sometimes called the Montpelier of Scotland), includinsi the villages of Inveresk and Fisherrow, Portobello and Newhaven, on the Frith of Forth. Portobello is a pleasant bathing village, lately built. Hot and cold baths have been constructed upon an elegant plan. Dalkeith, the most populous of these places, is distinguished for its great weekly

grain market.

Loth I A N , W r.sT, or Linlithgowshire, is bou nded on the north by the I’rith of Forth ; by the Almond, which divides it from Mid-Lothian, on the east On the south-west it joins the county of Lanark ; and on the west it is sc])aratod from Stirlingshire by the Avon. Its form, though irregular, ap-])roaches to a parallelogram. It measures from north-cast to south-west nearly twenty miles. Its breadth, except on the shore of the Frith, does not exceed twelve : its contents are taken at 112 square miles, ov 51,00(5 acres. The country is pleasant and fertile, abounding in corn and pasturage: in the reign of James 'l. it had a rich silver mine. Linlithgow contains two royal burghs, vi/.. Linlithgow and (ˆuecnsferry ; and

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the towns of Borrowstounness, Whitburn, Balli-gate, and Kirklisloun. It is divided into thirteen parochial districts. The shire is but scantily .supplied with running water, the Avon and Al-mond being the only streams which deserve no-tice. It abounds, however, with mineral riches, particularly coal, limestone, and lead ore. Iron-stone is found in almost every parish ; and wrought to a great extent in tliat of Bathgate. The chief articles of commerce are lime, freestone, salt, and coal. There are volcanic appearances in many places, especially in Uundas Ildl, wi Dalnieny, where there is a bold front of basaltic rocks, and various regular basaltic colunms.

LOTION, U.S. Fr. lotion; Lat. lotio. A medicinal wash.

A lution is a form of medicine compounded of aqueous liquids, used to wash any part with.

Quincy.

In lotions in women's cases, he orders two portions of hellebore macerated in two cotylae of water.

Arbuthnot on Coins.

A Lotion is, strictly speaking, such a washing as beautifies the skin, by cleansing it of those deformities which a distempered blood throws upon it. Medicines of this kind, however, are for the most part insignificant, and sometmies very dangerous ; the only proper method of treating these disorders is, by administering such medicines as tend to correct that morbid state of the constitution whence they arise.

LOTOPIIAGI, in ancient geography, a peo-ple of the Ilegio Syrtica, so called from their liv-ing on tlie lotus; inhabiting between the two Syrtes, from the Cinyphus to the Triton. The lotus was said to be a food so luscious, as to make strangers forget their native country. A sweet wine, according to Pliny, was expressed from it, which did not keep above ten days. See Meninx.

The Lottery, or the State Lottery, a kind of public gaine at hazard, formerly frequent in Britain, as well as France and Holland ; to raise money for tlie service of the state. It was appointed with us by the authority of parliameiit, and managed by commissioners appointed by

the lords of the treasury for that purpose. It consisted of great numbers of blanks and prizes, which were drawn out of wheels, one of which contained the numbers, and the other the corresponding blanks or prizes. The Romans invented lotteries to enliven their Saturnalia. This festival began by the distribution of tickets which gained some])rize. Augustus made lotteries which consisted of things of little value; but Nero established some for the people, in which 1000 tickets were distributed daily, and several of those who were favored by fortune, got ricii by them. Ueliogabalus invented some very singular lotteries ; the prizes were either of great value, o'r of none at all ; one gained a prize of six slaves, and another of six flies ; some got valuable vases, and others vases of common earth. A lottery of this kind exhibited an excellent picture of the inequality with which Fortune distributes her favors. The first English lottery we find mentioned in history was drawn A. D, 1 ")00. It consisted of 400,000 lots, at 10.?. each lot : the prizes were plate ; and the profits were

to go towards repairing the havens of this king • dom. It was drawn at the west door of St. Paul's cathedral. The drawing began on the 1 1th of January 15G9, and continued incessantly drawing, day and night, till the 6th of May following ; as Maitland informs us in his History vol i. p. 257. There were then only three lottery offices in London. The proposals for this lottery were published in 1567 and 1568. It was first intended to have been drawn at the house of Mr. Dericke, her majesty's servant (i. e. her jeweller), but was afterwards drawn as above mentioned. Dr. Ilawlinson showed the Antiquarian Society, ˆ in 1748, one of the original proposals for this state lottery, printed by Henry Bynneyman, in 1568. In 1612 king James, in favor of the plantation of English colonies in Virginia, granted a lottery, to be held at the west end of St. Paul's ; w hereof one Thomas Sharplys, a taylor of London, had the chief prize, which was 4000 crowns in plate.

In the reign of queen Anne it was thought necessary to suppress lotteries, as nuisances to the public. After that time, however, they were again licensed by an act of parliament, under various regulations. The act passed in 1778 restrains any person from keeping an office for the sale of tickets, shares, or chances, or for buy-ing, selling, insuring, or registering, without a license; for which licence each office keeper must pay £50, to continue in force for one year, and the produce to be applied towards defray-ing the expenses of the lottery. And no person is allowed to sell any share or chance less than a sixteenth, on the penalty of £50. All tickets divided into shares or chances are to be deposited in an office, to be established in London

by the commissioners of the treasury, who are to appoint a person to conduct the business thereof; and all shares are to be stamped by the said officer, who is to give a receipt for every ticket deposited with him. The numbers of all tickets so deposited are to be entered in a book with the names of the owners, and the numbers of shares into which they are divided ; and 2d. for each share is to be paid to the officer on depositing such tickets, who is therewith to pay all expenses incident to the office. All tickets deposited in the office are to remain there three days after the drawing. And any person keeping an office, or selling shares, or who shall publish any scheme for receiving moneys in consideration of any interest to be granted in any ticket in the said lottery, &c., without being in possession of such ticket, shall forfeit £500 and suffer three months' imprisonment. And no business is to be transacted at any of the offices after eight in the evening, except on the evening of the Saturday preceding the drawing. No person is to keep any office for the sale of tickets, &c., in Oxford or Cambridge, on penalty of £20. Within these few years, however, the immoral tendency of this species of state gambling has been so strongly urged upon the ministers that in 1824 they thought proper to abandon it, and lotteries are now therefore discontinued.

LOTUS, or bird's foot trefoil, in botany, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, papi-lionacca; : legume cylindrical and very erect:

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the alM closing upwards longitudinally: cal. tubulated. There are many species, but only six are usually cultivated in our gardens ; *viz.*

L. Creticus, the Cretan silvery lotus, with slender under shrubby sialic, rising by support three or four feet high, ornamented with trifoliate, bright, silvery leaves ; and branches terminated by several yellow flowers succeeded by subternate pods.

L. dorcynium, white Austrian lotus, or shrub trefoil of Monlpelier, has under shrubby smooth stalks, branching three or four feet high, and the branches terminated by aphyllous heads of small white flowers, appearing in June, succeeded by small pods.

L. edulis, sends forth several trailing stalks about a foot long, furnished at their joints with trifoliate, roundish, smooth leaves, having oval stipulse. The flowers come singly from the sides of the stalks, on long peduncles, with three oval floral leaves, the length of the flower : the latter is small, yellow; and is succeeded by a thick arched pod, having a deep furrow on its outside. This species is an annual, and a native of Italy, where the pods are eaten, like kidney beans.

L. hirsutus, the hairy Italian lotus, has upright hairy stalks branching a yard high ; and terminated by heads of whitish hoary-cupped flowers appearing in June, and succeeded by oval pods full of seed, which ripen in autumn.

L. Jacobseus, the lotus of St. James's Island, with upright herbaceous stalks, branching two or three feet high; and, from the upper part of the branches, long slender foot-stalks, terminated each by three or five yellowish purple flowers, and succeeded by subternate pods filled with plenty of seeds. These five species may be propagated either by seeds or cuttings, but require to be kept in pots in the green-house du-ring winter.

L. tetragonolobus, or the winged pea, has trailing, slender, branchy stalks, about a foot long, garnished with trifoliate oval leaves ; and, from the axillas of the branches, large, papilionaceous red flowers, one on each foot-stalk ; succeeded by tetragonous solitary pods, having a membranous wing or lobe running longitudinally at each corner. It flowers in June and July, and they ripen in autumn. It is a hardy

annual, and is easily raised from seed sown between February and May ; requiring only to be kept from weeds. It was formerly cultivated here as an esculent ; for its young green seed-pods may be dressed and eaten like peas, or kidney beans ; and are used so still in the north of England.

Lotus, the lote tree. See Celtis.

Lotus, in mythology, a name generally appropriated to the Egyptian nymphoea lotus, but also applied to the Kvaˆog or sacred bean of India, to some African tree on which certain people have chiefly depended for their support, and also to several herbaceous plants essential to the maintenance of domestic cattle in countries sparingly furnished with grass. The origin of this word uas been much disputed. Those who have sought for its etymology in the Greek language, have derived it from Xw, to will or do-sire, alluding to its being greatly esteemed.

Others have thought tliat l;oth tlie Xarog of thp Greeks and the lotus of the Latins had one com-mon Egyptian origin inscrutable to us.

This plant is tlius noticed by Herodotus. ‘When the river Nile is become full, and all the grounds round it are a perfect sea, tiiere grow a vast quantity of lilies, which the Egyptians call lotus, in the water. After they have cut them, they dry them in the sun ; then having parched the seed within the lotus, which is most like the poppy, they make bread of it, baking it with fire. The root also of the lotus is eatable, easily becoming sweet, being round, and of the size of an apple.’ M. Savary mentions it as growing in the rivulets and on the sides of the lakes; and there are two sorts or varieties of the plant, the one with a white, the other with a bluish flower. ‘ The calyx,’ he says, ‘ blows like a large tulip, and diffuses a sweet smell, resembling that of the lily. The first sort produces a round root like that of a potatoe ; and the inhabitants of the banks of the lake Menzel feed upon it. The rivulets in the environs of Damietta are covered with this majestic flower, which rises upwards of two feet above the water.’

It is not improbable that this flower became sacred to superstitious veneration, in that country, in consequence of its resemblance to the East India lotus, a kind of bean. The latter, from the mode of its vegetation, was adopted, in the most remote ages, to serve as an emblem of fertility; but thenymphaea lotus exhibits nothing which could originally have excited such an idea. It seems therefore a sort of

substitute or type; and perhaps strengthens the theory of the mythology of Egypt having migrated thither from India. Among the Brahmins, and enthusiastic Hindoos, no object in nature is looked on with more superstition than the lotus ; and their books abound with mystical allusions to this lovely aq\iatic. In the northern parts of India the pe-tals of the lotus are blue, as well as red and white ; while in the southern provinces the blue flower is not seen : the poets have hence feigned that the crimson hue was imparted to it by the blood of Siva issuing from tiie wound made by the arrow of Kama, when the god of love daringly endeavoured to inspire the ‘ king of dread’ with an amorous passion, for wliich presumption he was reduced to ashes, or, as some say, to a mental essence, by the fire which issued from the forehead of the ‘ three-eyed god.’ The following extract from the curious and learned dissertation of major Wilford, On the sacred Isles of the West, will serve to show the wild extravagance of 1 lindoo my thologists : ‘The nympha:‘a, or lotus, floating on ti\e water, is an emblem of the world ; the whole plant signifies both the earth and its two principles of fecundation. The stalk originates from the navel of Vishnu, sleeping at the bottom of the ocean ; and the flower is the cradle of Iirama, or mankind. The germ is both Mcru and tiie Linga ; the petals and filaments are the mountains which encircle Meru, and are also the type of the Yoni.’ (Asiatic Researches, vol. viii.)

Lotus Glycycalamus, a name given by the ancient Greeks to an Egyptian plant according to some, and, according to others, to a rare plant, found only occasionally-The whole account

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lˆiven of it, by the earliest writers, is no more than that it was of a very sweet and pleasant tasti;. JNIyrepsus uses the term frequently, and his interpreters understand him to mean the cassia fistula by it. But Homer asserts that the followers of Ulysses were detained by eating the lotus giy-cycalamus ; and it is not at all probable that the cassia fistula could be the thing meant by tlie ■word in this place. The cassia fistula is the fruit of a tree : but this glycycalamus, we find in Homer himself, was an herbaceous plant. Quintilian calls it expressly a kind of grass, gramen ; and from the other accounts of its growing in the form of reeds, and in wet places, it seems probable that it was the sugar-cane that they called by this name. See Diosi'vros. LOUD, adj. -1 Sax. lu-B ; Goth, litd, of Loud'ly, adv. [• Goth, hlj/da, to hear ; Swed. Loud'xess, «. s. J liud ; Teut. laut. Sounding ; remarkable for force or vehemence of sound ; noisy ; clamorous : the adverb and substantive corresponding.

She is loud and stubborn ; her feet abide not in her house. Proverbs.

The soldier that philosopher well blamed, Who long and loudly in the schools declaimed.

Denham. Children m.iy be frighted into compliance by loud and severe increpations, but men are to be allured by rational persuasion backed with courteous usage.

Barrow. Had any disaster made room for grief, it would have moved according to prudence, and the proportions of the provocations : it would not have sallied out into complaint or loudness. South.

The numbers soft and clear. Gently steal upon the ear ; Now louder, and yet louder rise, And fill with spreading sounds the skies. Id. I read above fifty pamphlets, written by as many presbyterian divines, loudly disclaiming toleration.

Suift. Sir, when I flew to seize the bird In spite of your command,

A louder voice than yours 1 heard. And harder to withstand. Cowper.

Like a scarce awakened ocean. Then with stronger shock and louder Till the rocks are crushed to powder. Byron.

LOVE, V. a. &cn. s

Lovf.‘hood, n. s. Love’letter, n. s. Love’lily, adv. Love’lixess, n. s. Love’ LORN, adj. Love’ly,

Love’monger, n. s. Lov’er, Love’seemly, Love’sick, adj.

LOVF.‘SOME,

Love’song, n.s. Love’s LIT, Love’tale, Love’thoughts, Love’toy, Love’trick, Lov’iNG, part. adj. Lov’ingkind’ness, Lov’ixgly, adv.

I.OV’INGNESS, n. S.

“) Sax.lupa, lupian ; Goth, love, Hub ; Belg. lief; Swed. luif; Teuton, leebe. The affection between the sexes ; courtship ; tenderness ; liking or affection of any kind ; good will ; friend- «~.ship ; an endearing compellatjon ; an object beloved ; a picturesque representation of love : as a verb it signifies to regard with sexual passion or affection ; regard or be pleased with in a general sense, and in varying degrees

of attacbment, esteem, or reverence, according to the object. Lovely means amiable ; exciting love ; beautiful. Lovesome is used in the same sense by Dryden. Loving is fond ; kind ; affectionate. Lovingkindness, favor ; tenderness ; mercy : applied particularly to that of the Divine Being. ‘Jlie other compounds are sufficiently explained by the extracts.

This is my commaundement, that ghe loue togidre as I louyde ghou : no man hath more loue than thisi that a man putte his lyf for hise frendis.

Wiclif, Jon XV. Love the Lord thy God with all thine heart.

Deut. vi. 5. Saul and Jonathan were lovely and pleasant in their lives, and in their death they were not divided.

2 Sumuel. Remember, 0 Lord, thy tender mercies, and thy lovingkindnesies. Psalm xxv. 6.

God brought Daniel into favour and tender love with the prince.

Daniel i. 9.

The king took her in his arms till she came to herself, and comforted her with loving words.

Esther XV. 8. Shall I come unto you with a rod, or in love, and in the spirit of meekness] 1 Cor. iv. 21.

The one preach Christ of contention, but the other of love. Phil. i. 17.

Great pity was it, as it thought hem alle. That ever swiche a chance shulde befalle, For gentilmen they wer of grit estat, And nothing but for love was this debat.

Chaucer. Cant. Tales. Hearken to the birds /ore-learned song, The dewie leaves among ! Spenser's Epilhulamium,

Good shepherd, tell this youth what 'tis to love. — It IS to be made all of sighs and tears ; It is to be made all of faith and service ; It is to be all made of fantasy. All made of passion, and all made of wishes , All adoration, duty, and obedience ; All humbleness, all patience, all impatience. All purity, all trial, all observance. Shahspeare. Demetrius Made love to Nedar's daughter Helena, And won her soul. Id. Mids. Night's Dream If you will marry, make your loves to me, My lady is bespoke. Id. King Lear.

He is not lolling on a lewd love bed. But on his knees at meditation. Shakspeare, Come, love and health to all ! Then I'll sit down : give me some wine; fill full.

Id. Lovers say, the heart hath treble wrong. When it is barred tlie aidance of the tongue. Id. Have I escaped loveletlers in the holyday time of my beauty, and am 1 now a subject for them? Id. The breast of Hecuba, When she did suckle Hector, looked not lovelier Than Hector's fore head. Id. Corivlunus.

Thou art an old lovemonger, and speakest skilfully,

Shakspeare. Poor Romeo is already dead ! Stabbed with a white wench's black eye, Run through the ear with a lovesong. Id.

His lovesuit hath been to me As fearful as a siege. Id. Cymheline.

Away to sweet beds of flowers, Lovethoughts lie rich when canopied with bowers.

Shakspeare. So loving to my mother. That he would not let even the winds of heaven Visit her face too roughly. Id. Hamlet.

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Fish used to sail water delight more in fresh ; we see tiiat salmon and smelts luve to gel into rivers, though against the stream.

Bacon s Natural Hhto-y. The enquiry of truth, which is the /oue-making or wooing of it ; the knowledge of truth, the preference oi it ; and the belief of truth, the enjoying of it, is the sovereign good of human nature. Bacon.

This earl was of great courage, and much loved of his soldiers, to whom he was no less loviii < r again.

Ha y ward . Lovesflng weeds and satyrick thorns are grown, Where seeds of better arts were early sown. Donne, Other disports than dancing jollities ; Other luvetricks than glancing with the eyes. Id. A lovesick brain adores, in romantic strains, the lovely idol of his heart, or sighs in real misery at her fancied frowns. Burton.

All earthly love supposeth some kind of equality, or proportion at least, betwixt the person that loves, and is loved. Bp. Hall.

The good wife is none of our dainty dames, who lore to appear in a variety of suits every day new ; as if a good gown, like a stratagem in warre, were to be used but once. Fuller.

I could not love, I'm sure. One who in love were wise. Cowley.

Wit, eloquence, and poetry. Arts which I loved. Id.

The love to sin makes a man sin against his own reason. Taylor.

The love of God makes a man chaste without the laborious arts of fasting, and exterior disciplines ; he reaches at glory withojit any other arms but those of tove. Id.

It is no great matter to live lovingli) with good-na- tured and meek persons ; but he that can do so with the frovvard and perverse, he only hath true charity.

Id. Love is of two sorts, of friendship and of desire ; the one betwixt friends, the other betwixt lovers ; the one a rational, the other a sensitive love: so our love of God consists of two parts, an esteeming of God, and desiring of him. Hammond.

The flowers which it had pressed Appeared to my view,

More fresli and lovelii than the rest. That ill the meadows grew. Denham.

What need a vermil-tinctured lip for that, £oi>e-darting eyes, or tresses like the morn 1

Milton. Zoye-quarrels oft in pleasing concord end, Not wedlock treachery, endangering life. Id. When I a])proa(hed Tier loveliness, so absolute she seems, That what she wills to do, or say. Seems wisest, virtuousest, discreetesl, best. Id. The love-lorn nightingale Nightly to thee her sad song mourneth well. Id. The lovetale Infected Sion's daughters with like heat ; Whose wanton passions in the sacred porch Ezekiel saw. Id. Paradise Lost.

I rue love is nothing else but goodness exerting itself, in direction toward objects capable of its influence. Barrow.

('arrying thus in one person the only two bands of good-will, loveliness tind lovinrˆness. Sidneii.

The new king, having no less lovingli/ performed all duties to him dead than alive, pursued on the siege o*' his unnatural brother, as much for the revenge of his father, as for the establishing of iiis own quiet. ,.

Thou lookest Lovelihj dreadful. Olway's Venice I're.e-vcd.

This leaf held near the eye, and obverted to th<j light, appeared so full of pores, with such a transparency as that of a sieve, a piece of cypress, or loce-liood. Boyle on Coloars.

No reli'jiion that ever was, so fully represents the goodness of God, and his tender love to mankind, which is the most powerful argument to the love of God. Tillotson.

The Christian religion gives us a more lovely character of God than any religion ever did. Id. You know y' are in my power by making love.

Dryden. The banished never hopes his love to see. Id.

The lovely babe was born with every grace ; Such was his form, as

painters, when they show Their utmost art, on naked loves bestow. Id.

‘Tis no dishonour, trust me, love, ‘tis none ; I would die for thee. Id. Don Sebastian,

Let it be never said, that he whose breast Is filled with love, should break a lovtr’s rest.

Dryden. What danger, Arimant, is this your fear 1 Or what lovesecret which I must not hear ? Id.

To the dear mistress of my lovesick mind. Her swain a pretty present has designed. Id.

Nothing new can spring Without thy warmth, without thy influence bear, Or beautiful or lovesome can appear. Id.

i\Ien in love with their opinions may not only suppose what is in question, but allege wrong matter of fact. Locke.

To be good and graciotˆs, and a hver of knowledge, are suitable things.

Burnet’s Theory of the Earth. Love is the great instrument of nature, the bond and cement of society, the spirit and spring of the universe : love is such an affection as cannot so properly be said to be in the soul, as the soul to be in that : it is the whole man wrapt up into one de-sire. South.

The jealous man wishes himself a kind of deity to the person he loves ; he would be the only employment of her thoughts. Addison.

The children are educated in the different notions of their parents ; the sons follow the father, while the daughters read loveletteri and romances to their mother. ‘ Id. Spectator.

If there is such a native loveliness in the sex, as to make them victorious when in the wrong, how resistless is their power when they are on the side of truth ?

Id. Cato’s a proper person to entrust A lovetale with. Id

The fair With cleanly powder dry their hair ; And round their lovelu breast and head Fresh flowers their mingled odours shed.

Prior. A love potion works more by the strength of charm than nature. Collier on Popularity.

Jle has adapted the arguments of obedience to the imperfection of our understanding, requiring us to consider him only under the amiable attributes of goodness and lovingkindness, and to adore him as out friend and patron. Rogers.

In youth, of patrimonial wealth possest, The love of science faintly warmed his breast.

Fenton. Now I behold the steed curvet and bound. And paw vvitii restless hoof the smoking ground, ‘J”he dew lapped bull now chafes along the plain, \ hile burning love ferments in every vein. Gay.

Has liiis amorous gentleman presented iiimse!f witli any lovctous, such as gold snuff-boxes ?

Jrhulhnot a)id Pope.

LOUIS.

Let mutual joys our mutual trust combine, And lave, and /ure-born confidence be thine.

Pope. The lover and the love of human kind. Id.

Sae wistfully she gazed on me, And lovelier was than ever: Quo’ she, a sodgerancel loed,

Forget him shall I never. Burns.

What is life when wanting ii’i’«?

Night without a morning: Love’s the cloudless summer sun,

Nature gay adorning. Id.

That love of praise can never be criminal, that excites and enables a man to do a great deal more good than he could do without it. Mason.

Love is not pedlar’s trumpery bought and sold : lie will give freely, or

he will withhold ; His soul abhors a mercenary thought, And liim as deeply who abhors it not. Cov:per,

Prospects, however lovelu, may be seen Till half their beauties fade. Id.

Oh ! ever loving, lovely, and beloved ; How selfish sorrow ponders on the past. And clings to thoughts now better far removed ! But Time shall tear thy shadow from me last.

Byron, Thou lovcdst me Too much, as 1 loved thee : we were not made To torture thus each other, though it were The deadliest sin to love as we have loved. Id.

Here is a loveliness in death, That parts not quite with parting breath : But beauty with that fearful bloom, That hue which haunts it to the tomb ; Expression's last receding ray, A gilded halo hovering round decay, The farewell beam of feeling past away ! Id. LOUGH, n.s. Sax. luh, laju; Goth, laug ; Teut. luc/i ; Irish loch. A lake or body of stand-.'iig water.

A people near the northern pole that won, Whom Ireland sent from hughes and forests hore. Divided far by sea from Europe's shore. Fairfax. Lough Ness never freezes.

Philosophical Transactions. LOUGHBOROUGH, a market town of Leicestershire, the second in the county. In the time of the Saxons it was a royal village. The chief manufactures are stockings, and cotton-spinning. The district of Charnwood Forest, westward of the town, extends ten miles in length and six in breadth. It is full of hills, woods, and rocks, and was disforested by Henry III. Its market is on Thursday ; and its fairs are on April 25th, May 28th, August 1st, and November 2d. It has a large church, a free scliool, and two charity schools for eighty boys, and twenty girls. It has been much reduced by fires ; but is stdl a very agreeable town, and is seated on the Fosse, which runs almost parallel with the Soar. The new canal has made its coal trade very extensive. It is eleven miles north of Leicester, and 109 north-west by west of London.

Loi'GH F.ARNE. See Earxe. Lough Neagh. See Neagh. Lot'Gii Stranoi-ord. See Strangford. LOUIS, or Lewis, the name of eighteen kings of France. See France. Of these we shall here only take notice of the following :—

Louis \TI., A. D. 11 37, was the first who had the courage to oppose the encroachments of the popes on the regal authority : pope Innocent

excommunicated him for appointing an archbisho]) of Bourges; but Louis defended his prerogatives, and put the priests to death who had been the authors of the quarrel. In 1147 he marched with an army of 80,000 men against the Saracens, bat was defeated ; and, returning by sea, was taken by the Greeks, but rescued by Roger king of Sicily. He died in 1180, aged sixty.

Louis IX., or St, Louis, one of the greatest monarchs of France ; equally memorable for his valor and his virtues, but unfortunately, mis-led by the superstition of the times, he sacrificed his own repose, and the welfare of his kingdom, to the folly of crusading. He succeeded his father in 1226. In 1248, leaving France to the care of his mother, he embarked for Egypt, attended by his queen, his three brothers, and the flower of the French nobility. At first his victories were rapid ; he took Damietta in 1249 ; but in 1250 was defeated and taken prisoner by the Turks, with all his nobles, and \he greatest part of his army. The sultan demanded an exorbitant sum for his ransom, and his answer deserves to be recorded : ‘ Tell the sultan, that a king of France is not to be ransomed with - money ; I will give the sum required for my people, and Damietta for myself.’ These terms were accepted, and a peace of ten years ensued. Upon his return to France, he diminished the taxes, revoked those which the financiers had introduced; issued several salutary edicts; founded several cliurches and hospitals ; and efl’ectually overturned the ecclesiastical jurisdiction of tiie court of Rome, by his Pragmatic sanction in 1269, which established the independency of the Gallican church. Thirteen years residence in his capital indemnified his subjects for his absence; but his pious zeal prevented the enjoyment of this happiness : he embarked for the sixth crusade in 1270 ; and died the same year, at the siege of Tunis, aged fifty-five.

Louis XII. A. D. 1492, styled the .Tust, and the father of his people, is memorable for his valor in the field, and his wisdom in tlie cabinet. He was undoubtedly a great general, though unfortunate towards the end of his reign, when he did not command his troops in person : his orders transmitted from home were misunder-stood, or wilfully disobeyed; and he had the mortification, before he died, to see the total expulsion of the French from the possessions he had acquired for them by his personal bravery. At fifty-three years of age he married the princess iVIary of England, sister of Henry VIII. and died about two months after his nuptials, in

1515.

Louis XIIL, A. D. 1610, increased the military reputation of his country, and made considerable additions to its domains. The beginning of his reign was occupied in civil wars with his mother and his protestant subjects ; which he was excited to continue by his celebrated minister cardinal Richelieu, who attended him to the siege of Rochelle, the bulwark of the llugonot party; which surrendered in 1628, after a siege of more than a year. Upon this and other occasions the king gave proofs of great personal bravcrv. His attachment loliis ally the duke de •

Nevers, who succeeded to the duchy of Mantua, but was refused the investiture by Charles VI. emperor of Germany, involved him in a war with tliat prince, the Spaniards, and the duke of Sa-voy; in which Louis was victouous; and obtained a treaty of peace, by wliich the duke of Mantua was guaranteed in tlie possession of liis dominions. In 1635 a new war broke out between France and Spain, and tlie emperor took part with the latter : it lasted thirteen years against the emperor, and twenty-five against Spain, with various success ; and the military experience acquired by the different armies in the Low Countries, on the frontiers of France, and in Italy, paved the way for the successes of Louis XIV. Louis XIII. died in 1643, aged forty-one.

Louis XIV., falsely styled the Great, became king at five years of age, in 1643. He was at first styled Dieu-donne, the French considering him as the gift of heaven, granted to their prayers after tlie queen had been barren twenty-two years. Tiiis princess (Anne of Austria) was declared regent by Louis XIII. , and saw herself under necessity of continuing the war against I'hiHp IV. king of Spain, her brother. The duke d'Enghien was made general of the French ar-mies ; and so signal was the success of this renowned warrior (afterwards prince of Conde), that his victories brought on the advantageous treaty of Munster in 1648, between France, the emperor Ferdinand III. and

Christina queen of Sweden : the basis of the aggrandisement of France in this reign, the principal events of wliich, and of the next, will be found related imder the articles Great Britain, Frajsce, &c. Louis XIV. died in 1715, aged seventy-seven.

Louis XV., great-grandson of the preceding, succeeded in 1715. He was styled, in the course of his reign, the well beloved, which he lost some years before he died, and was destested and despised by his subjects for his shameful attachment to Madame Pompadour, the wife of M. D'Etoiles, who, by the ministry of her patron the duke d'Aiguillon, governed the kingdom, and invaded the rights of the people. He died in 1774, in the sixty-fourth year of his age, and fifty-ninth of Ills reign.

Louis XVI., one of the most unfortunate, and yet one of the most deserving of the I'rench monarchs of the race of Capet, and house of Bourbon, succeeded his grandfather in 1774. The principal events of this reign are related under the article F'rance. His character is universally allowed to have been such as, in times of less disturbance, would have insured him a high degree of popularity to the end of his life. He was naturally of a mild and humane disposition ; and had the merit of having been the first who instituted a society for the instruction and employment of tiie blind ; an example of benevolence which has been since successfully followed in this and other countries. He was also an au-thor, and translated 5 vols, of Gibbon's History, and \ alpole's Historical Doubts, into French. His last will and testament, written by himself, exhibits a strong picture of his piety, resignation, and affection for his relations. At his trial he showed an uncoiTimon degree of spirit, recol-VoL. XUL

lection, and undaunted fortitude. On the 21st of January, 1793, this unfortunate monarch fell by tlie guillotine, a sacrifice to that democratic jealousy,— thai popular fury, — which only exhausted its rage by destroying many of the greatest men in France.

Louis XVIII. (Stanislaus Xavier de France), second son of the dauphin, the son of Louis XVˆ, and brother of the unfortunate Louis XVT., was born at Versailles, November 17th, 1755. He is said as a boy to have manifested a timid and reserved disposition, united witli a more decided turn for literary pursuits than eitlier of his brothers. On the accession of his elder brother to the throne, he presented him with a pamphlet of his own writing, entitled Mes Pensees; which appears to have given but little satisfaction to that prince. The count de

Provence, as Louis was then styled, fled from Paris to Coblentz, on the 20th of June 1791, and took a principal share in the organisation of the emigration. The progress of the revolution afterwards compelled him to retire to Turin, and subsequently to Verona, under the name of tlie count de Lille, a title wliich he long retained. In 1796 he joined the army of Conde, then at Reigal, and two years afterwards was acknowledged as king of France by the emperor Paul of Russia, at whose invitation he took up his residence in the ducal castle of Mittau in Courland. Soon however he received orders to quit the Russian territories in a week, and took refuge at Warsaw, whence the king of Prussia finally compelled him to retire, as a last resource, to England. Here he was hospitably received and provided for at Hartwell, a seat belonging to the marquis of Buckingham, where he remained till the fall of Napoleon in 1814; when he was publicly received in London as king of France. Again driven from his throne, by the return of Buonaparte from Elba, he retired into the Netherlands, till the battle of Waterloo. He survived this second elevation nine years, and died in his sixty-ninth year, on the 16th of September, 1824. F'or a considerable time previously, a dry erysipelas in his legs had deprived him of the power of walking, and, together with a natural tendency to corpulency, produced a paralysis of the lower extremities which became the immediate cause of his dissolution. This prince acted with great temper and policy on his second return to France, when it required no small skill to render the intrusion of the foreign armies palatable to the people. Besides the pamphlet already mentioned, he was the author of Le Marriage Secret, a comedy in tiiree acts, in which he is reported to have been assisted by his secretary Uucis, the imitator of Shaksi)earc. Two operas also were the offspring of his pen, Panurge, and the Cara-vane du Caire, to which Gretry composed the music. His other writings are an account of his journey to Coblent/, and a few political articles in the Journal de lˆiris, during the year 1814.

Louis (St.), a city of Brasil, South America, the chief town of the island of Maranham. It is the see of a bishop, and built upon very unequal ground, extending from tiie water's edge, to the distance of about a mile and a half. It comprises some broad streets and squares, but is

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a very straggling place. This, however, gives it an airy appearance in so warm a climate ; the streets are mostly paved, and the houses are many of them neat, but in the smaller streets the windows are not glazed. The churches are numerous, and gaudily decorated ; there are also Carmelite and Franciscan convents. Tiie governor's palace stands upon rising ground, fronting the town, and is a long stone building, like most of the rest, of one story only in height. The western end joins the town-hall and prison, and tiic oblong piece of ground in its front, covered with grass, gives to it on the whole a handsome and striking appearance. There is a, fort in the adjoining hollow close to the water ; the other extremity is nearly closed by the cathedral. The ground upon .which the whole place stands is said to be composed of a soft red stone. This city also contains a custom-house and treasury. The harbour is formed by a creek in the island, and entered from the bay of St. INIarcos. The channel is narrow but of sufficient depth for common sized merchant ships. Population, including nearoes, about 12,000. Long. 43° 37' W., lat. 2^" 30' S.

Louis (St.), a lake of North America, twelve miles long, by six broad ; formed at the junction of the Ottawa with the St. Lawrence.

Louis (St.), a river of North America, navigable 1.50 miles, which has its source near the head waters of the Mississippi, and falls into Lake Superior, on the west shore. Long. 91° 52' W., lat. 46° 44' N.

Louis (St.), a river of Lower Canada, wliicli falls into the St. Lawrence, where its waters form Lake St. Louis.

Louis d'Or, a French coin first struck in the reign of Louis XIII. in 1640, but laid aside at the revolution. Its original value was twenty-four francs, 20s. English. Anew Louis d'or of twenty francs is now current, and its value, at par, is 16s. 8(/. Entrlish.

Louis, Fort, a barrier fortress in the north-east of France, in Alsace. It is situated on the island of Giessenheim, on the Rhine, and was constructed by the famous Vauban. In November 1793 it was taken by the Auslrians, who blew up the works : but the French soon after restored them. Twelve miles east of Haguenau.

Louis, Fort, a French settlement near the mouth of the Coza in Florida, sixty miles north-east of the mouth of the Mississippi. It was the

residence of the governor of Louisiana, till the peace in 1673.

Louis, Kmgmts of St., a military order in France, instituted by Louis XIV. in 1693. The annexed diagram represents the cross of this order ; the king was their grand mas-ter ; and there were in it eight great crosses, and twenty-four commanders ; the number of knights was not limited. At their institution, the king charged his revenue witli a fund of 300,000 livres for the pen-sions of the commanders and knights.

LOUISA, a county in the centre of Virginia, North America, bounded north by Orange and Spotsylvania counties, east by Hanover county, south by Goochland and Fluvanna counties, and west by Albemarle county : 1 16 miles from Washington.

Louisa, Lo.-ij.GO, a large river of Loango, in Western Africa, which falls into the Atlantic, in lat. 5° 30’ S. Captain Tuckey found only one river here bearing this name, though two have been generally laid down in the maps.

LOUISBlUG, the capital of Cape Breton, is situated on a point of land on the south-east side of that island. Its streets consist for the most part of stone houses, regularly built, with a larje parade at a little distance from the citadel; the inside of which is a fine square, whose sides measure 200 feet. The town is about half an English mile in length, and two in circuit. It has an excellent harbour, four leagues deep, and fit for the largest fleets, but it is closed by ice from November to May. The entrance is but 400 yards wide, between two islands, one of which is fortified, and its fires cross with those of batteries on the main. In the nortli-east part is a fine careening wharf to heave down ; and very secure from all winds. On the opposite side are fishing stages, for 2000 boats to cure fish. Sometimes the frosts set in soon, and are more intense; as particularly in 1745, when by the middle of October a great part of the harbour was frozen.

The principal tradehere is the cod fishery, which may in general be continued from April to the end of the year. Louisburg was taken from the French by the English under Sir Peter ˆVarren and our American forces, commanded by Sir William Pepperel, in the year 1745 ; but afterwards restored to France by the treaty of Aix-la-Chapelle. It was retaken by the English, under admiral Boscawen and lieutenant-general Amherst, on the 27th of July 1758, and its fortifications demolished. Long. 59° 50’ W., lat. 45° 55’ N.

LOUISIADE, an archipelago of islands in the Eastern Seas, lying to the south-east of New Guinea, and about 400 miles in length, by 160 in extreme breadth. The centre of them isnearly under 10° of S. lat. and 152° 25 E. long. They are interspersed with dangerous shoals and reefs, the principal of which received names from the French in 1793, in the voyage in quest of La Perouse. Some of the islands are fertile and populous, the inhabitants being of a deep copper color, with woolly hair ; and wearing a cord wound several times round their middle. Many smear their faces with charcoal, and use personal ornaments. They are fond of war, and fight with slings, darts, tomahawks, and a large wooden shield. There seems reason to conclude that they are cannibals ; and the French found them of a perfidious disposition; their canoes have both outriggers and sails. Their huts stand six or eight feet from the ground on posts ; one of their canoes was thought by the navigators who visited them tube fifty feet long. They appear to set little value on iron. None of the islands composing this archipelago exceed thirty-five miles in length.

LOUISIANA.

LOUISIANA, a country ceded to the United States of America by France in 1805, for 15,000,000 dollars, is bounded north by unsettled country. The northern part of tiie eastern boundary is formed by Red River, a branch of the Assiniboin, which rises near the sources of the Mississippi. The boundary line, proceeding south to the sources of the Mississipi, follows that river down tolat. 31° N., thence proceeds due east to the Perdido, thence down that stream to its mouth. The gulf of Mexico forms the south boundary ; the Spanish provinces form a part of the west and south-west, and the Pacific Ocean the north part of the west boundary. Long. 89° to 126° 30’ W., lat. 26° to 49° 37’ N. From north to south, about 1380 miles, and from east to west 1680; containing about 1,500,000 square miles. The boundaries of this country are not accurately defined, and its extent not well ascertained. Spain maintains that it extends no farther east than the outlet of Lake Pontchartrain, and no farther west on the gulf of Mexico than the Sabine River; but the government of the United States claims to the Del Norte, including the province of the Texas. The claim of the United

States to the country watered by the Columbia and its branches, lying between the Rocky Mountains and the Pacific Ocean has also been contested.

A small portion of this country is incorporated into the state of Mississippi, the south-east part forms the state of Louisiana, and the remainder is formed into a government by the name of Missouri Territory. But a very small part of this immense territory is yet purchased of the natives. It embraces a great variety of climate, soil, and productions. The face of the country is very various ; towards the south it is level, and in many parts overflown ; towards the north elevated and hilly ■ and towards the west abounding in lofty mountains. The principal mountains are the Rocky Mountains.

West of the Rocky Mountains the principal rivers are die Columbia and its branches, the Multnomah, Lewis's River, and Clark's River. The principal rivers east of the Rocky Mountains are Missouri, Osage, Bighorn, La Platte, Kansas, Yellowstone, Arkansaw, Ked River, White River, St. Francis, Ouachitta, Moines, St. Peter's, Sabine, Brassos de Dios, Colorado, Guadaloupe, and Del Norte. See Missouri and Texas.

Louisiana, one of the United States formed in 1812, is bounded north by Missouri Territory ; east by the state of Mississippi and the gulf of INIexico. The boundary line is formed by the river Mississippi from lat. 33° to 31° N., thence by the parallel of 31° to Pearl River, thence by that stream to its mouth. The uulf of Mexico forms the southern boundary, and Sabine River the western, from its mouth to lat. 32° N. ; thence the boundary line proceeds due north to lat. 33°, thence due east to the Mississippi, Long. 89° to 94° 5' W., lat. 29° to 33° N. ; 240 miles long from north to south, and 210 broad, containing 48,220 square miles. The number of militia in 1817 amounted to 9233.

At the time of the census, in 1810, this state was styled the territory of Orleans, and contained

twelve districts, and 75,556 inhabitants, of whom 34,660 were slaves. Since that time it has been erected into a state, with the annexation of a part of West Florida, containing the parishes of New Feliciana, East Baton Rouge, St. Helena, and St. Tammany.

The parishes, square miles, and population, in 1810, are exhibited in the following 'Table : —

Parishes.

Square

Popula—

miles.

tion.

Ascension

350

2219

Assumption …

500

2472

Avoyelles

700

1109

Baton Rouge, (West)

850

1463

Concordia

2100

2875

Iberville ….

350

2679

Interior of La Fourche

2500

1995

Natchitoches

10600

2870

(Juachitta

4000

1077

Ocatahoola

2000

1164

Orleans ….

1300

24,552

Plaquemines

1500

1549

Point Coupee .

600

4539

Rapides . . • •

2300

2300

St. Bernard

400

1020

St. Charles

300

3291

St. James

170

3955

St. John Baptiste

150

2990

St. Landre, Opelousas

7600

5048

St. Mary’s and St. Martin’s, ˆ

5100

7369

Attacapas … S

Baton Rouge, (East) .

500-v

New Feliciana .

1050 f

10 000

St. Helena

1300 (

1. VjW w

St. Tammany

Total

2000 3

48,220

86,556

New Orleans is the capital, and the only large town. The most considerable towns west of the Mississippi, are Natchitoches, St. Martinsville, and Alexandria. There are five banks in this state, all at New Orleans. The legislature is composed of a senate of seventeen members, and a house of representatives, of thirty-four members. In 1818 eight of the senators, and twenty-one of the representatives were French : and the others Americans. A large proportion of the inhabitants are French and Spanish. The principal rivers are the Mississippi, Red, Quachitta, Black, Tensaw, Sabine, Calcasiu, Mermentau, 'ermil-lion, Atchafalaya, Teche, Pearl, Amite, and Iberville. The largest lakes are Pontchartram, Maurepas, Borgne, Chetimaches, Mermentau, Calcasiu, Sabine, Bisteneau, Bodcau, and Ocatahoola. .

All the southern part of this state is of warm temperature, and a vast alluvial tract of low chani])aign country, extending from Lake Borgno to Sabine River, and from the gulf of Mexico to Baton Rouge and Red River, about 250 miles long, and from seventy to 140 wide. This extensive tract is intersected by numerous rivers, bays, creeks, and lakes, dividing the country into a great number of islands. The country about

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the Balize is one continued swamp, destitute of trees, and covered with a species of coarse reeds, from four to five feet high. Nothing can be more dreary than a prospect from a ship's mast while passing this immense waste.

A large extent of country in this state, is annually overflowed by the Mississippi. According to Mr. Darby, the average width of overflown lands above Red River, from hit. 31" to 32" N., may be assumed at twenty miles, equal to 2770 square miles. Below lat. 31° to the efflux of the La Fourche, about eighty miles in extent, the inundation is about forty miles in width ; equal to 3200 square miles. All tlic country below the efflux of the La Fourche is liable to be inundated equal to 2370 square miles. From this calculation it appears that 8340 square miles are liable to be inundated "by the overflowing of the Mississippi ; and if to this be added 2550 square miles, for the inundated lands on Red River, the whole surface of the state, liable to inundation, will amount to 10,890 square miles. Of this extent, not one-half is actually covered annually with water. The immediate banks of all the streams are seldom, and many of them never, inundated ; and they afford strips of rich tillable land, from a mile to a mile and a half wide.

The country between the Mississippi, Iberville, and Pearl Rivers, is an important part of the state. The southern half is a level country, yet highly productive in cotton, sugar, rice, corn, and indigo. The northern part, presents an undulating surface, covered with a heavy growth of timber, consisting of white, red, and yellow oak, hickory, black walnut, sassafras, magnolia, and poplar. The district of New Feliciana has been considered by some as the garden of Louisiana.

The south-western part of the state, comprising the districts of Opelousas and Attacapas, consists mostly of extensive prairies. Some of these prairies ar« detached, but tlie lines of woods between them are generally very narrow ; and they may be considered as forming one immense mea-dow. A large portion of these tracts are barren ; but some parts, particularly that bordering on the Teche, are very fertile, and contain flourishing settlements. It has been estimated, that the prairie lands in the state, including the swamps along the gulf of Mexico, constitute one-fifth of its whole surface.

The country on both sides of Red River, from its mouth to the limits of the state, is intersected with lakes, which are more than forty in number, and ail communicate with the river. The bottoms on the river are from one to ten miles wide, and of very fertile soil. The timber on the bottoms is willow, cotton woods, honey locust, &c.; on the rich uplands, elm, ash, hickory, mulberry, walnut, and grape-vine; on the sandy uplands are pitch and yellow pines, and oak. The staple productions are cotton, sugar, and rice.

LOUISVILLE, a town of Kentucky, United States, the capital of .Jefferson county ; it is pleasantly situated on tiie Ohio, at the head of the Rapids, being built on an eminence seventy feet high, and gently descending to a narrow plain. The principal streets run parallel with the river. A company has been corporated here oy the legislature, for the purpose of opening a

canal on the Kentucky side of the Rapids. An extensive commerce is now carried on from this town witii Natchez, New Orleans, and St. Louis. It is a flourisliing town, and has two banks, an academy, and excellent rope walks : 122 miles from Cincinnati, and fifty-two west of Frankfort. Inhabitants about 6000.

LOUNGE, V. 71. } Belg. lunderen ; Teut.

Loun'ger, w. s*. Slungeren. To linger; idle away time ; live or behave lazily.

The tounsers are satisfied with being merely part of the niimbei of mankind, without distinguishing themselves from amongst them. They may be said rather to suifer their time to pass than to spend, it without regard to the past, or prospect of the future.

Spectator,

LOUR, or -^ Belg. louren ; Teut.

Low'er, u. ?j. Sc?j. s. >/ai<re?j, to frown. To Low'eringly, wf/t;. 3 look dark or gloomy; applied to the appearance of the sky as well as countenance ; to pout ; look sullen : as a substantive, gloominess ; sourness of look. Now is the winter of our discontent Made glorious summer by this sun of York , And all the clouds that lowered upon our house. In the deep bosom of the ocean buried.

Shukspeare. There was Diana when Actaeon saw her, and one of her

foolish nymphs, who weeping, and withal lowcr'mg, one might see the workman meant to set forth tears of anger. Sidney.

Hhiloclea was jealous for Zelmane, not without so mighty a lower as that face could yield. Id.

He mounts the throne, and .Tuno took her place, But sullen discontent sat lowering on her face ; Then impotent ()f tongue, her silence broke, 'I'hus turbulent in rattling tone she spoke.

Drydcn. The lowering spring, with lavish rain. Beats down the slender stem and bearded grain.

Id. When the heavens are filled with clouds, and all nature wears a lowering countenance, I withdraw myself from these uncomfortable scenes. Addison.

If on Swithin's feast the welkin lours. And every penthouse streams with hasty showers. Twice twenty days shall clouds their fleeces drain.

Guy. Their lowering and pouring,

Tlie storm no more I dread ; Though thickening and blackening

Round my devoted head. Burns.

Ask what is human life. — the sage replies, With disappointment louring-in his eyes, A painful passage o'er a restless flood, .'V vain pursuit of fugitive false good, A scone of fancied bliss and heart-felt care. Closing at last in darkness and despair. Camper.

Above, the frequent feudal towers Through green leaves lift their walls of grey And many a rock which steeply lours, And noble arch in proud decay, J^ook o'er this vale of vintage-bovvers. Byron,

LOURISTAN, a mountainous but fertile district of Irak, in Persia, bordering upon Khu-sistan.. It is abundantly watered, and tliis pasture is most luxuriant ; but agriculture is quite neglected. The pastoral tribes of the country trace their origi-n to a remote antiquity, though tliey admit that tlieir ancestors have become mingled with several Turkish hordes. They are savage, fearless, and nearly independent. They reside

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even through the winter in black tents. The only town is Korumabad.

LOUSE, n. s. & V. a.-\ Plural lice. Saxon

Lous'iLY, a£*v. 'l"r5 Goth, lus ; Teut.

Lous'iNESs,n. s. i luiis : Belg. lui/s. Min—

Lous'y, adj. J sheu traces it into more

learned company; a Gr. Xvu, Xvcto*, he says, i. e.

solve, nati enim in cute earn erodunt. A body

insect of the genus pediculus : to louse is, oddly

enough, used by some of our quainter writers for

to free from lice : lousy, for mean ; low-born :

in a mean, paltry way.

There were lice upon man and beast.

Ejod. viii. 18. As for all other good women, that love to do but little work, how handsome it is to louse themselves in the sunshine, they that have been but a while in Ireland can well witness. Spenser on Ireland.

I pray you now, remembrance on the lousy knave, mine host. — A lousy knave, to have his gibes and his mockeries.

Shakspeare. Frogs, lice, and flies, must all his palace fill With loathed intrusion. Milton.

Let him be daubed with lace, live high and whore, Sometimes be lousy, but be never poor. Dryden.

Sweetbriar and gooseberry are only lousy in dry times, or very hot places. Mortimer s Husbandry.

It is beyond even an atheist's credulity and imprudence to atHrm, that the first men miglit proceed out of the tumours of trees, as maggots

and flies are supposed to do now, or might grow upon trees ; or perhaps might be the lice of some prodigious animals, whose species is now extinct. Bentley.

Not that I value the money the fourth part of the skip of a louse. Suifl.

You sat and loused him all the sunshine day.

Id. Louse, in zoology. See Pediculus. LOUT, V. n., V. a. 8c n. s. “^ Saxon jˆlutan, to Lout’ish, ;• bend ; Belg. and

Lout’isiily, adv. J Lent, /ofse, aclown.

To bow ; to stoop ; stoop awkwardly : hence a low servile, clownish fellow. Shakspeare uses the active verb for to overpower or over-influence, or perhaps, circumvent.

He fond this holy old Urban anon Among the saintes buriels louting.

Chaucer. Cant. Tales. He fair the knight saluted, louting low. Who fair him quitted, as that courteous was.

Spenser. This lowt, as he exceeds our lords, the odds Is that we scarce are men, and you are gods.

Shakspeare. I have need of such a youth. That can with some discretion do my business ; For ‘tis no trusting to yon foolish loul. Id.

I am lowted by a traitor villain. And cannot iielp the noble chevalier. Id. The palmer, grey with age, with countenance fou;<- ing low, His head even to the earth before the king did bow.

Drayton. Under the sand bag he was seen, Louting low, like a forester green.

Ben Jonson.

Pamela, whose noble heart doth disdain, that the

trust of her virtue is reposed in such a lout’s hands,

and yet, to shew an obedience, taken in shepherdisii

apparel. Sidney.

This Itnittdi clotni b sudi, that you never saw so

illfavoured a visor ; liii behaviour such, that he is be-yond the degree of ridiculous. Sidney. Thus wailed the louis in melancholy strain.

Gay,

If after all some headstrong hardy luut

Would disobey, thougli sure to be shut out,

(ˆould he with reason murmur at his case.

Himself sole author of his own disgrace 1

Cowper.

LOUTH, a market town of Lincolnshire, one of tiie handsomest in the county. It contains about 4000 inhabitants ; and has a canal to the sea at Tilney, about eight miles long, a charity school for forty children, and a free school founded by Edward IV., together with a large church, and a fine steeple, 288 feet high. The other public buildings are the town-hall, the mansion-house, the assembly room, the theatre, and several dissenting meeting-houses. The principal manufactures are those of carpets and blankets. The town is incorporated under a warden and six assistants. It has markets on Wednesday and Saturday, and fairs on May 24th and August 16tli. It is twenty-seven miles north-east of Lincoln, and 148 north of London.

Louth, a county in the province of Leinster, and kingdom of Ireland, bounded on the north by the counties of Monaghan and Armagh, on the south by Meath, on the east by the Irish Channel, and on the west by Cavan. It extends twenty-three miles in length, and sixteen in breadth. Its area contains 1 1 0,750 acres, which are divided amongst sixty-one parishes, and five baronies, these are called Ardee, Dundalk Baronies, Upper and Lower Ferrand, and Louth. Its chief towns are Dundalk, the Assizes town, Ardee, Carlingford, remarkable for its beds of excellent oysters; Dunleer ; Castle-Bellingham, famous for its malt liquor ; Louth ; and Gallon, the beautiful and improved residence of the right honorable lord Oriel, to whom it owes its origin, as well as its present condition. Besides these, part of the county of the town of Drogheda is properly in this county (see Drogheda), the Boyne being the natural boundary between Meath and Louth.

The surface of Louth is singularly undulating and well watered, and the soil remarkably fertile. INIuch corn is grown here, for which there

is an immediate sale at Drogheda; and good coarse linen was formerly manufactured throughout the county, but this trade has passed out of this district into Yorkshire. This county abounds in military and ecclesiastic antiquities; and many ancient raths or artificial mounts, generally attributed to the Danes, exist here (vide Wrigjit's Louthiana), besides numerous beautiful monastic ruins. The sea-coast affords some advantages of exportation, but might be made to yield still greater. Carlingford Bay is more serviceable to the adjacent county than to Louth. Dundalk Bay is much in want of improvement ; and tiie trade of Drogheda would be multiplied tenfold, by a small expense in deepening the mouth of the river. The town of Louth, in the same county, contains only a population of GOO persons. Here are the ruins of an ancient abbey, founded by St. Patrick ; the possessions of which, at the general dissolution, were grafted to Sir

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Oliver Plunket, whoso descendants now enjoy the title of barons of Louth.

LUl 'AIN, a city of the Netherlands, on the river Dyle, in the old province of Austrian Brabant. The walls are nine miles in circumference, but not above a third part of the ground is built on, the rest being laid out in gardens, fields, and vineyards. The castle stands on a high hill, surrounded with fine gardens, and has a charming prospect. The town contains nine market places, 12G streets, sixteen stone bridges, numerous water mills, and several handsome palaces. The town-house is a veneral)le Gothic building, adorned with statues on tlie outside ; and the churches are handsome, particularly the collegiate church of St. I'eler; but the principal ornament is the university, founded in 1426 by John IVˆ duke of Brabant. It contains about forty colleges, among which are four called Ptedagogia; and an English college of friars, preachers, established by cardinal Howard, brother to the duke of Norfolk, who was originally chaplain to queen Catharine, consort to Charles II. The Irish have likewise a seminary, erected in part under the care of Eugenius Matthajus, titular archbishop of Dublin, 1623. In 1743 the inhabitants amounted to 12,000. At the beginning of the fourteenth century, under John III., Louvain had a flourishing "manufacture of woollen cloth : 400 houses being occupied by substantial clothiers, who employed an incredible number of weavers. In 1382 these weavers took up arms, and rebelled against duke Wenceslaus, throwing from the windows of the town hall seventeen of the aldermen and counsellors, and afterwards proceeded to lay waste great part of Brabant ; but being besieged, and reduced to great extremities, they implored mercy, which was granted after the execution of several of the ringleaders. But the greater part took refuge in England ; where they introduced, or at least improved, the woollen manufacture. From that period the manufacture declined, and little or no cloth of any account is now made. Upon the ruins of these looms was also formed the cloth manufacture of Limbourg, which is still carried on with advantage. The old draper's hall is now converted into public schools, where lectures in divinity, philosophy, law, and physic, and the public acts are made. Adjoining to these is the university library.

Louvain was anciently the cay)ital of the province. It has often been besieged, but seldom taken. In 1542 it was besieged by the Guel-dians

; in 1572 by William, prince of Orange; in 1635 by the Dutch and French united; and in 1710 by the French; but on all these occasions the enemy were obliged to retire with loss. In 1746, however, it was taken by the French ; and again in 1792 by the French republicans under Dumourier, but evacuated on the 22d of March, 1793. It was at last retaken and long annexed to the republic in 1794. Population 25,000. It lies fourteen miles noilh-east of Brussels, and twentv-one south-east of Antwerp.

LOUVEIITUIIE (Toussaint), a negro chief, who by his intelligence, bravery, and activity, had nearly accomplished th.e independence of St. Domingo. In 1796 general Uocliambeau

confided to him the command of a division of the French army, destined to oppose the English, and from this period he appears to have conceived a project of becoming independent. He expelled from the island the French commissary Sanlhonax, and proceeded with great artifice towards the execution of his designs. In 1799 the colony became the prey of intestine divisions, and a civil war took place between Toussaint and the mulatto general Rigaud, in which the former proved triumpliant. On the accession of Buonaparte, this negro chief, by alternate submission and hostility, endeavoured to secure his authority, until, at length, general Leclerc, with a French fleet and army, in F'ebru^^y 1801, put an end to his temporising policy : after a sliort but brave resistance, he was compelled to sub-mit. He was now transported to I'rance, and confined, first in the temple at Paris, and then in the fortress of Joux, where he died in 1803, not witiiout suspicion of violence being used.

LOU"ET (John Baptist), a celebrated French senator, and literary character, a considerable sufferer during the course of the most bloody part of the French revolution. From an interesting sketch of his life, written by himself in the caverns of Jura in 1794, and published in 1795, our limits permit us only to select the few following particulars : — He passed most of Iiis time in the country, composing works of literature ; and his love of independence had led him to banish luxury so completely, that 800 francs per annum (about £34 sterling) sufficed for his maintenance. The first seven volumes of his first work. The Adventures of the Chev. de Faublas, increased his income ; and the publication of six more, in spring 1789, added to it still farther. But the profits of his next novel were diminished by the revolution, which, by the demand it occasioned for political writings, stifled the taste for frivolous pieces. Mounier having in October, 1789, published a

pamphlet, accusing the Parisians of the crimes of the Orleans faction, Louvet wrote an answer, entitled, Pans Justified ; which was so well received, that he was immediately admitted a member of the Jacobin club, which, however, he but seldom attended. He soon after produced two comedies. In the one, of five acts, entitled L' Anobli Con-spirateur, ou le Bourgeois Gontilhomme du 18me siecle, he attacked the prejudices concerning nobility. The other was a pointed satire on the mummeries of the court of Rome, entitled L' Election et L' Audience du Grand Lama Sispi. These, however, being thought too bold, were not performed ; but his farce entitled La Grande Revue des armees noires et blanches, written in ridicule of the army of Coblentz, was represented twenty-five times. In December, 1791, Louvet presented a petition against the princess to the legislative assembly ; which, with other two of his petitions, were printed by order of the assembly. In 1702, in the debate respecting a war with Austria, which gave rise to the schism between the Brissotines and Robespierre's faction, Louvet joined the former, reduced Robespierre himself to silence, and from tiiat moment was proscribed by him. Mean time Louvet became editor of the paper called

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tlie Sentinel, of wliich 20,000 copies were sometimes printed, and in one number of which lie attacked the conduct of Dumourier. After the bloody 2d of September he denounced Robespierre, and, had he been supported by Petion, would have prevented the rise of tiiat tyrp.nl's power and the horrors that followed. lie, however, published a letter addressed to INIaximilian, Robespierre, and his Royalists. On this occasion h'^ was expelled the Jacobin club, together with Roland and other eminent Brissotines. At the trial of Louis XVI. he supported the motion of Salle for an appeal to the people ; and not long after waˆi proscribed. After providing for the safety of Lodoiska his wife, and being five weeks secreted by two friends, he left Paris June 24th; and after passing sometimes for a smuggler, sometimes for a soldier, at other tiroes for a deserter, and at all times for a violent Jacobin, or Maratist, and running a thousand risks of being detected, he at last obtained a safe and impenetrable asylum in one of the caverns of Mount Jura ; where he remained till the end of July, 1794, when his wife brought him the news of the Thermidorean revolution ; soon after which he returned to Paris, was welcomed to his seat by the convention, and not long after elected president. After this he commenced bookseller, but died in 1797.

LOUYS, or Louis (John), an eminent engraver, who flourished about the middle of the sixteenth century. According to Basin, he was a native of Flanders. lie learned the art from Peter Soutliman, at the time that Suyderhoef studied under him ; and his usual style of engraving boars some resemblance to that of his master. One of his best prints is Diana, with her nymphs, reposing after the chase ; a middling-sized plate, from Rubens.

LOW, adj., adv. & v. a. '] Sax. leˆl? ; Goth.

Lovv'er, v. a., V. 11. & n. s. legli ; Swed. Teut.

Low'land, Low'lily, Low'liness, Low'ly, adj. & adv. LowN, n. s. Low'n ess, low'spirited,

Lov/THOUfiUTED, udj.

and Belgic lag, Dan./«Mi, arecon-1 nected, probably, [with the Goth, la, leggiu. To lay or deposit. See Lay. Near the ground ; J under the ground ;

deep ; depressed ; not high or elevated on any scale of admeasurement, rank, price, honor, time, intellect, or sound : hence subdued ; impotent; humble; submissive: it is used adver-bially in tiie same variety of signification : the phrases ‘ low water,’ low ebb,’ clearly relate to the depth of the suiface of the water, from the land or some given plane, and not to its siiallow-ness, as Dr. Johnson supposes by defining low, in this sense, ‘ as not deep.’ Swift uses lowed for lowered, barbarously : to lower is to make or bring low ; lessen; grow less: lowland is flat, marsiiy land : lowly and lowliness are used metaphorically only, i. e. for humbly or meanly ; liumility or meanness : lown, is ‘an obsolete name of a vessel, or low fellow : lowness is ap-rJied both literally and metapliorically in one or ther of the senses noted above. F’or each that enhaunseth him schal be inaad huv, and he that mekith him schal be enbaunscd.

ˆViclif. l.uli xviii.

It became a spreading vine of low slalure.

Eˆ k. xvii. 6. Take my yoke upon you, and learn of me ; fori am meek and lnwly in heart. Matt. xi. 29.

For who can fain in under lowliihede Ne failith not to find in grace and spede.

Chatuxi-. Loe, unto the time of Constantine, by the space of above three hundred yeerse after our Saviour Christ, when the Christian religion was most pure, and in-deed golden, Christians had but loxu poore conventi-cles, and simple oratories, yea caves under the ground, called cryptiB, where they for feare of persecution assembled secretly together. Homilies. The third Part of Sermon against Idolatry.

A noble heart is like the sun, sheweth its greatest countenance in its lowest estate. Sir P. Sidnei/.

Long tost with storms, and beat with bitter winds>

High over hills, and low adown the dale,

She wandered many a wood, and measuied many a

vale. Faerie Queene.

They continued in that lowliness until the division

between the two houses of Lancaster and York arose.

Spenser. O mighty Caesar ! dost thou lye so low ! Are all thy conquests, glories, triumphs, spoils, Shrunk to this little measure 1

Shakspeare. Julius Cesar. To be worst, The lowest, most dejected thing of fortune, Stands still in esperance. Shakspeare.

King Stephen was a worthy peer, His breeches cost him but a crown.

He thought them sixpence all too dear, And therefore called the tailor lown. Id.

They know By the height, the lowness, or the mean, if dearth Or foizon follow. Id. Antony and Cleopatra.

iVow I must To the young man send humble treaties, And palter in the shift of lowness. Shakspeare. This is the prettiest low-bovri lass, that ever Ran the greensord. Id. JVinier's Tale.

The present pleasure. By revolution lowering, does become The opposite of itself.

Id. Antony and Cleopatra.

The king-becoming graces. As justice, verity, temperance, stahleness, Bounty, perseverance, mercy, lowliness. Devotion, patience, courage, fortitude ; I have no relish of them. '</. Macbeth.

'Tis bettor to be lowly born.

And range with humble livers in content.

Than to be perked up in a glistering grief,

And wear a golden sorrow. Id. Henry VIII,

The lowtiess of the bough where tlie fruit cometh,

maketh the fruit greater, and to ripen better ; for you

shall even see, in apricots upon a wall, the greatest

fruits towards the bottom. Bacon.

Plants have tlieir seminal parts uppermost, living creatures have them lowermost.

Id. Natural History. He did liend to us a little, and put up his arras abroad : we of our parts saluted him in a very lowly and submissive manner, as looking that from liiin we should receive sentence of life or dealli. llicon.

They take their course either high to the north, or /<)«• to tlie south.

Abbot's Description of the World. ;\Ioscs was a meek man but a severe master ; his face did not more shiiic in God's aspect upon him, than it lowered in hir-I'.sjjLCt to men. Bp. Hall.

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Vast yellow offsprings are the German's pride ; But hotter climates narrower frames obtain, And /oif-built bodies are the growth of Spain.

Creech. It will also happen, that the same part of the pipe which was now luwermost will presently become higher, so that the water does ascend by descending ; ascending in comparison to the whole instrument, and descending in respect of its several parts.

Wilkins. Equal in days and nights, except to those Beyond the polar circles ; to them day Had unbenighted shone, while the low sun, To recompense his distance, in tlieir sight Had rounded still the' horizon, and not known Or east or west. Milton.

The lowest bottom shook of Erebus. Id.

So high as heaved the tumid liills, so low, Down sunk a hollow bottom, broad and deep, Capacious bed of waters. Id.

His volant touch Instinct through all proportions low and high I'led and pursued transverse the resonant fugue.

Id. Yet sometimes nations will decline so low From virtue, which is reason, that no wrong But justice, and some fatal course annexed, Deprives them of their outward liberty. Their inward lost. Id.

Heaven is for thee too high To know what passes there ; be lowli/ wise : Think only what concerns thee, and thy being.

Id. Above the smoak and stir of this dim spot, Which men call earth, and with lowlhoughted care. Strive to keep up a frail and feverish being. Id. From the tree her step she turned. But first low reverence done, as to the power That dwelt within. Id.

There under Ebon shades and iou)-browed rocks. As ragged as thy locks.

In dark Cimmerian desert ever dwell. Id.

Eve, With lowliness majestick, from her seat. And grace, that won who saw to wish her stay. Rose. (. Paradise Lost.

To keep them all quiet, he must keep them in greater awe and less

splendor ; which power he will use to keep them as low as he pleases, and at no more cost than makes for his own pleasure.

Graunt. A’ˆever the earth on his round shoulders bare, A maid trained up from high or low degree, That in her doings better could compare Mirth with respect, few words with curtesy.

< Sidney.

As when in open air we blow, The breath, though strained, sounds flat and low: But if a trumpet take (he blast, It lifts it high, and makes it last. Waller.

Some people know it is for their advantage to loirer their interest. Child on Trade.

His spirits are so loiv his voice is drowned, He hears as from afar, or in a swoon. Like the deaf murmur of a distant sound.

Dryden. His stile is accommodated to his subject, either high or low ; if his fault be too much lowness, that of Persius is the hardness of his metaphors. Id.

JMy eyes no object met But Zou’-hung clouds, that dipt themselves in rain. To shake their fleeces on the earth again. Id.

What a devil is lie? His errand was to draw the lowland damps.

And noisome vapours, from the foggy fens, Then breathe the baleful stench with all his force.

Id. The lowliness of my fortune has not brought me to flatter vice ; it is my duty to give testimony to virtue.

With cries they filled the holy fane ;

Then thus with lowli) voice ilioneus began. Id.

As two men were walking by the seaside, at loio water, they saw an oyster, and both pointed at it together. L’Estranye.

The blessings of fortune are the lowest : the next are the bodily advantages of strength and health ; but the superlative blessings, in fine, are those of the mind. Id.

Try in men of low and mean education, who have never elevated their thoughts above the spade.

Lorlii'.

In that part of the world which was first inhabited, even as low down as Abraham's time, they wandered with their flocks and herds. Id.

The kingdom will lose by this lowering of interest, if it makes foreigners withdraw any of their money.

Id.

Severity, carried to the highest pitch, breaks the mind ; and then, in the place of a disorderly young fellow, you have a lowqiinted moped creature. Id.

Who can imagine that in sixteen or seventeen hundred years time, taking the lower chronology that (he earth had then stood, mankind should be propagated no farther than Judcea? Burnet.

The name of servants has of old been reckoned to imply a certain meanness of mind, as well as lowness of condition. South.

Lucia, speak low, he is retired to rest. Addison.

He has not so many thoughts that are low and vulgar, but, at the same time, has not so many thoughts that are sublime and noble. Id.

The theatre is so well contrived, that, from the very deep of the stage, the lowest sound may be heard distinctly to the farthest part of the audience ; and yet, if you raise your voice as high as you please, there is nothing like an echo to cause confusion.

Id. on Italij.

In Gothick cathedrals, the narrowness of the arch makes it rise in height, the lowness opens it in breadth. Addison.

Though he before had gall and rage. Which death or conquest must assuage ; He grows dispirited and low. He hates the fight, and shuns the foe. Prior. As our high vessels pass their watery way,;

Let all the naval world due homage pay ;

With hasty reverence their top-honours lower.

Confessing the asserted power. Id.

When water issues out of the apertures with more than ordinary rapidity, it bears along with it such particles of loose matter as it met with in its passage through the stone, and it sustains those particles till its motion begins to remit, when by degrees it lowers them, and lets them fall. Woodward.

The heavens are not pure in his sight, and he charges even his angels with folly ; with how lowly a reverence must we bow down our souls before so excellent a Being, and adore a Nature so much superior to our own ! Ilogers.

1 1 is lotv ebb sure with his accuser, when such pec-cadillos are put in to swell the charge. Atterbury.

If with a true Christian lowliness of heart, and a devout fervency of soul, we perform them, we shall find that they will turn to a greater account to us, than all the warlike preparations in which we trust.

Id.

In comparison of these divine writers, the noblest wits of the heathen world are low and dull. Fellon.

LOW

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Another crowd Preferred the same request, and lowly bowed.

Pope. Oh grace serene ! Oh virtue heavenly fair ! Divine oblation of lowihoughted care ! Fresh blooming hope, gay daughter of the sky, And faith our early immortality ! Id.

Corruption, like a general flood. Shall deluge all ; and avarice creeping on. Spread like a low-hoxn mist, and blot the sun.

Id. For from the natal hour distinctive names, One common right the great and Lowly claims.

Id. Whenever I am turned out, my lodge descends upon a /i>uj-spirited creeping family. Swift.

The value of guineas was lowered from one-and- twenty shillings and sixpence to one-and-twenty shillings. Id.

O, had she but been of lower degree, I then might hae hoped she wad smiled upon me ! O, how past describing had then been my bliss. As now my distraction no words can express !

Burns. Without a stone to mark the spot,

And say, what Truth might well have said. By all, save one, perchance forgot.

Ah wherefore art thou lowly laid? Byron.

LOW, V. n. Sax. jjlojiati ; Belg. loegen, of old Goth, loa, to sound. To bellow as an ox.

Doth the wild ass bray wlien he has grass ; or loweth the ox over his fodder ! Job vi. 5.

The maids of Argos, who, with frantick cries. And imitated loicings filled the skies. Koscommon. Fair lo graced his shield, but '6 now. With horns exalted stands, and seems to /otc.

Driiden. Had he been born some simple shepherd’s heir, Tˆhe lowing herd, or fleecy sheep his care. Prior. The curfew tolls the knell of parting day. The lowing herds wind slowly o’er the lea. The

ploughman homeward plods his weary way. And leaves the world to darkness and to me.

Gray's Eleyy.

LOW-BELL is a name given to a bell, by means of which they take birds in the night, in open champaign countries, and among stubble, in October. The method is to go out about nine o'clock in a still evening, when the air is mild, and the moon does not shine. The low-bell should be of a deep and hollow sound, and of such a size that a man may conveniently carry it in one hand. The person who carries it is to make it toll all the way he goes, as nearly as possible, in that manner in which the bell on tlie neck of a sheep tolls as it goes on and feeds. There must also be a box made like a large lantern, about a foot square, and lined with tin, but with one side open. Two or three great lights are to be set in this : and the box is to be fixed to the person's breast, with the open side forwards, so that tlie light may be cast forward to a great distance, and distinctly sliow to the person that carries it, whatever birds roost uy>on the ground in the large space over which it extends. Two persons must follow him who carries the box and bell, one on each side, so as not to be within tlie reach of the !i'j,lit to show tliemselves. Each of these is to have a hand net of about three or four feet square, fastened to a long pole; and on which ever side any bird is seen at roost, the person who is nearest is to lay

his net over it, and take it with as little noise as possible. W'iien the net is over the bird, the person wlio laid it is not to be in a hurry to take the bird, but must stay till he who carries the light is got beyond it, that his motions may not be discovered. The blaze of the light, and the noise of the bell, terrify and amaze tlie birds in such a manner that they remain still to be taken; but tlie people must be very quiet. Some people go on this scheme alone. The person then fixes the light box to his breast, and carries tlie hell in one hand, and the net in the other ; the net in this case may be somewhat smaller, and the handle shorter. W'hen more than one are out at a time it is always proper to carry a gun; as it is no uncommon thing to see a hare when on tliis expedition.

Lower (Richard), M. D., an eminent English physician in the seventeenth century, born in Cornwall, and educated at Westminster and Oxford. He practised physic under Dr. Thomas Willis, and in 1674 they discovered the medicinal waters at Astrop in Northamptonshire ; which, upon their recommendations, became very much frequented.

In 1666 he followed Dr. Willis to London; practised physic under him ; and became fellow of the Royal Societyˆ and of the college of physicians. In 1669 he published Tractatus de Corde ; also de Motu et Dolore Sanguinis, et Chyli in eum Transitu. After the death of Dr. Willis, in 1763, he was esteemed the most eminent physician in London, lie died in 1691.

LOWERING, among distillers, a term used to express the debasing the strength of any spirituous liquor, by mixing water with it. The standard and marketable price of these licjuors is fixed, in regard to a certain strength in them, called proof; this is that strength which makes them, when shaken in a phial, or poured from on high into a glass, retain a froth for some time. In tliis state, spirits consist of about half pure or totally inflammable spirit, and half water; and if any foreign or home spirits are to be exposed to sale, and are found to have that proof wanting, scarcely any body will buy it, till it has been distilled again, and brought to that strength ; and, if it is above that strength, the proprietor usually adds water to it, to bring it down to tliat standard. There is another kind of lowering among the retailers of spirituous liquors, by reducing it under the standard proof. Whoever has the art of doing this, without destroying the bubble proof, which is easily done, by means of some addition that gives a greater tenacity to the parts of the spirits, will deceive all that judge by this proof alone. In this case, the best way to judge of liquors is by the eye and tongue, and the hy-grometer.

LOWRIE (Wilson), F.R.S., an engraver of great skill and intelligence, was the son of Mr. Strickland Lowrie, a portrait painter of White-haven, and born there. January 24th, 1762. At the age of fifteen he displayed a decided partiality for his future profession, although circumstances jirevonted his ininicdiately acting upon his determination to follow it. After a youthful freak, which induced him to quit his paternal roof in company wjtli a friend, he wandered up to Loif

don, both suppoitiii.; themselves on the road by acting occasionally as

house-painters. lie, however, returned to liis friends, and commenced, in the neighbourhood of Worcester, an acquaintance with Mr. Ross, an engraver of some ingenuity, from whom he received his first instructions. Again visiting London, in his eighteenth year, he was fortunate enough to obtam the no-tice of the late alderman Boydell, by whom he was employed and introduced to Sir William Blizard. The latter finding, as he tiiought, a strong predilection in Lowrie for medical studies, procured him gratuitous access to the best anatomical lectures ; but, after several years attendance at the hospitals, Sec, Mr. Lowrie took a distaste to the profession, and returned with great ardor to engraving. He soon distinguished himself for his skill in drawing tiie human figure, and made a rapid progress, at the Royal Academy, in his art. Among other inventions with which he benefited, may be reckoned a ruling machine for engraving successive lines, either equidistant or in just gradation, from the greatest required distance to the nearest possible. Upon this instrument, invented in 1790, he made various improvements, and constructed one capable of drawing lines to a point, and of forming concentric circles. lie introduced, in 179i5, the use of diamond points for etching, and was the first person who succeeded in what is technically termed ‘ biting steel in’ well. Mr. Lowrie, hav-ing now attained the highest rank in his peculiar line of art, was employed in 1800 on Dr. llees’s Cyclopa-‘dia, which, for nearly twenty years, occupied a large portion of his attention; Wilkins’s Vitruvius, and Magna G rate ia; Nicholson’s Architectural Dictionary, &c. His chef-d’oeuvre is considered to be an engraving from the Doric Portico at Athens, in Nicholson’s Architecture. Of his engravings of machinery that of Rams-den’s Sextant, given gratuitously with the instrument, is the best. Mr. Lowrie, who was elected a fellow of the Royal Society in 1812, was a favorer of the Rerkeleyan system, and published in the Imperial Magazine, January 1820, an ingenious letter on the Mosaic account of the de-luge. He died July 1824.

J-,OVVTH (Dr. \ illiam), a learned divine, born in London in 1661, was the son of an apothecary, and took his degree of D. D. at Oxford. His learning recommended him to Dr. JNlew, bishop of \N’inchester, who made him his chaplain, gave him two livings in Hampshire, and conferred on him a prebend in the cathedral of Winchester. Few were more deeply versed in critical learning ; there being scarcely any ancient author, (Ireek or Latin, profane or ecclesiastical, that he had not read, constantly accompanying his reading with critical and philosbi)hical remarks. Of his collections in this way, he was upon all occasions very communicative : hence his notes on Clemens Alexandrinus, inserted in Potter’s edition ; his remarks on Josephus,

communicated to Hudson for his edition ; and those numerous annotations on the Ecclesiastical Historians, inserted in Reading's edition of them at Cambridge. , He also assisted the author of Ribliothpca Biblica; and Dr. Chandler, late bishop of Durham, in his Defence of Christianity. His

piety, diligence, hospitality, and beneficence, rendered his life highly exemplary, and enforced his public exhortations. He married Margaret, daughter of Robert Pitt, esq., of Blandford, by whom he had two sons and three daughters. He died in 1732. He published, 1. A Vindication of the Divine Authority and li spiration of the Old and New Testament : 2. Directions for the Profitable Reading of the Holy Scriptures; 3. Commentaries on the Prophets ; and other works.
LowTH (Robert), D.D. and F. R. S., son of the preceding, and bishop successively of St. David's, Oxford, and London, was born on the 29th of November, 1710. He studied at Winchester College, where his exercises were distinguished by their elegance ; and in 1730 he went to New College, Oxford, where he continued his studies, and took the degree of M. A. June 8th, 1737. In 1741 he was elected by the university professor of Hebrew poetry, reelected in 1743, and, whilst he held that office, he read his admirable lectures De sacra poesi llebraeoruni. In 1744 bishop Hoadley appointed him rector of Ovington in Hants; in 1750 arciideacon of Winchester, and rectorof East Weedhay in 17.53. In 1754 the university created him 1). D. by diploma. Having, in 1749, travelled with lord George and lord Frederick Cavendish, the duke being, in 1755, lord lieutenant of Irel.i.nd, Dr. Lowth went to that kingdom as his grace's first chaplain. Soon after this, he was offered the bishopric of Limerick ; but, preferring a less dignified station in his own country, he exchanged it with Dr. Leslie, prebendary of Durham and rector of Sedpefield, for these preferments. In November, 1765, he was chosen F. R.S. In June, 1766, he was, on the death of Dr. Squire, raised to the see of St. David's ; and in October translated to that of O.xford. In April 1777 he was translated to the see of London, on the death of bishop Terrick ; and in 1783 he declined the ofli'er of the archbishopric of Canterbury. After having been long afflicted with the stone, he died at Fulham, November 3d, 1787. He had married, in 1752, Mary, daughter of Lawrence Jackson of Christ Church, Hants, esq., by whom he had two sons and five daughters ; of whom two and his lady survived him. His literary character may be estimated from the value and the importance of his works. Besides his Prelections on the Hebrew Poetry, which have been read with applause abroad and at home, he published, in 1751, The Life of William of Wykeham, Bishop of

Winchester, with a dedication to bishop Hoadley; which involved him in a dispute concerning a decision which that bishop-had made respectinc; the wardenship of Winchester College. In 1762 was first published his Short Introduction to English Grammar, which has since gone through many editions. In 1778 he published his last great work, A Translation of Isaiah. Several occasional discourses were also published by himself, worthy of their author. Of his poetical pieces, none display greater merit than 'erses on the Genealogy of Christ, and The Choice of Hercules, both written very early in his life. He wrote a spirited Imitation of an Ode of Horace, applied to the alarming situation of Britain in 1745: and

Kome Verses on the Death of Frederick Prince of Wales, with a few smaller poems. Learning and taste, however, did not constitute bishop Lowth's highest excellence. His amiable manners rendered him an ornament to his station, whilst they endeared him to all with whom he conversed; and his zeal for tlie interest of religion made him promote to places of trust and dignity such clergymen as he knew were best qualihed to till them; and, whilst virtue and learning are esteemed, the memory of Lowth will be respected.

LOXA, a large town of Spain, in Granada, situated in a romantic position on the Xenil, at the foot of the mountains wl)ich enclose the plain of Granada. Its streets rise above one another on tlie side of the mountain; crowned by a Moorish castle. It has some salt-works, and manufactures of copper. Inhabitants 9000. Thirty miles west of Granada, and eighteen S. S. E. of Cordova.

LoxA, a province and town of Quito, South America, abounding in bark and grain, cows and mules. Cochineal is also plentiful here. It abuts northward on Guayaquil. The town was founded in 1546, and is 237 miles south of (ˆuito. Inhabitants 10,000.

LOXIA, in zoology, a genus of birds of the order of passeres : the distinguishing characters are these : the bill is strong, convex above and below, and very thick at the base ; the nostrils are small and

round ; the tongue is as if cut off at the end ; the toes are four, placed three before and one behind; exceptingr in one species, which has only two toes before and one behind. There are ninety-three species, besides many varieties, ‘i he following are among the most remarkable :

L. Abyssinica, the Abyssinian ijrossbeak, is about the size of the hawfinch ; the bill is black ; tile irides are red ; the top and sides of the head, tiiroat, and breast, are black ; the upper parts of the body, belly, and thighs, pale yellow, inclining to brown where the two colors divide : the scapulars are blackish; the wing-coverts brown, liordered with gray ; the quills and tail brown, edged with yellow : the legs are of a reddish-gray. This bird is found in Abyssinia, and makes a curious nest of a pyramidal shape, which hangs from the ends of branches. The opening is on one side, facing the east; the cavity is separated in the middle by a partition, up which the bird rises perpendicularly about half-way, when descendiiv.;’, the nest is witiiin the cavity, on one side. The brood is thus defended from snakes, squirrels, monkeys, and other mischievous animals, besides being secure from rain, which in that country sometimes lasts for six months together.

L. Bengalensis, the Bengal grossbeak, is a trifle bigger than a house-sparrow ; the bill is of a flesh-color; the irides are whitish ; the top of the head is of a golden yellow; the ujipcr parts of the body are brown, with paler edges ; the sides of the head and under parts rufous white ; across the breast is a brown band, uniting to, and of the same color with, the upper parts of the body ; the legs are of a pale yellow, the claws gray. This bird is exceedingly common in Ilin- , dostan ; he is astonishingly sensible, faithful, and do’::lt, never voluntarily deserting the place

where his young were hatched, but not averse, like most odier birds, to the society of mankind, and easily taught to perch on the hand of his master. In a state of nature he generally builds his nest on the highest tree that he can find, especially on the palmyra, or on the Indian fig-tree, lie makes it of grass, which he weaves like cloth, and shapes like a large bottle, suspending it firmly on tlie branches, but so as to rock with the wind, and placing it with its entrance downwards to secure it from birds of prey. His nest usually consists of two or three chambers; and it is-the popular belief that he lights them with fire-flies, which he catches alive at night, and confines with moist clay or with cow-dung. That such flies are often found in his nest, where pieces of cow-dung are also stuck, is indubitable ; but, as their light

could be of little use to him, it seems probable that he only feeds on them. He may be taught with ease to fetch any small thing that his master points out to him. The young Hindoo women at Benares, and in other places, wear very thin plates of gold, called ticas, slightly fixed by way of ornament between their eye-brows ; and when they pass through the streets it is not uncommon for the youthful libertines, who amuse themselves with training bayas, to give them a signal, which they understand, and send them to pluck the pieces of gold from the foreheads of their mistresses, which they bring in triumph to the lovers. The baya feeds naturally on grasshoppers and other insects ; but will subsist, when tame, on pulse macerated in water.

L. CEerulea, the blue grossbeak, is the size of the bullfinch : the bill is strone, brown, and the base of it surrounded with black feathers, which reach on each side as far as the eye : the plumage is in general a deep blue, except the quills and tail, which are brown, with a mixture of green, and across the wing-coverts a band of red : the legs are dusky. They inhabit South America, but are sometimes found in Carolina, where they are seen only in pairs, but disappear in winter. Their song consists only of a single note.

L. cardinalis, the cardinal grossbeak, is nearly eight inches in length. The bill is stout, and o a pale red color ; the irides are hazel ; the head is finely crested, the feathers rising up to a point when erect; round the bill, and on the throat, the color is black ; the rest of the bird is of a fine red; the quills and tail duller than the rest, and brownish within ; the Um.ts are the color of the bill. The female differs from the male, being mostly of a reddish-brown. This species is met with in several parts of North America; and has attained the name of nightingale, from the sweetness of its song, which resembles that of the nightingale, fn spring, and for the greater part of the summer, it sits on the tops of the highest trees, singing: early in the morning, and piercing the ear with its loud pipe. They are fond of maize and buckwheat; and will collect together large hoards of these, often as much as a bushel, which they artfully cover with leaves and small twigs, leaving only a small hole for entrance into the mnga;.iiie. They are also fond of bees They come in the beginninc;- of April

into New York and the Jerseys : in autumn tliey depart towards Carolina. They are pretty tame, frequently hopping along the road before the traveller ; but are not gregarious, scarcely ever more than three or four being met with together.

L. chloris, the green finch, is a wuU known bird : the general color is a yellowish-green, palest on the rump and breast, and inclining to white on the belly ; the quills are edged with yellow, and the four outer tail-feathers are yel-low from the middle to the base ; the hill is pale brown and stout ; and the legs are of a flesh color. This species is common in Britain, and flies in troops during winter. They make their nests in some low busli or hedge, composed of dry grass, and lined with hair, wool, &c., laying five or six greenish eggs, marked at the larger end with red-brown ; and the male takes his turn in sitting. These birds soon become tame; even old ones being familiar almost as soon as caught ; they live five or six years. Like the chaffinch, they grow blind if exposed to the sun. This species is also pretty common every where on the continent, but not very frequent in Russia; and is not at all found in Siberia, though it has been met with in Kamlschatka.

L. coccothraustes, the hawfinch, is in length about seven inches, breadth thirteen : the bill is funnel-shaped, strong, thick, and of a dull pale pink color ; the breast and whole under side are of a dirty flesh-color; the neck ash-colored; the back and coverts of the wings of a deep brown, those of the tail of a yellowish bay ; the greater quill-feathers are black, marked with white on their inner webs ; the tail is short, spotted with white on the inner sides; and the legs are of a flesh-color. This species is ranked among the British birds ; but they only visit these kingdoms occasionally, for the most part in winter, and never breed here. They abound more in France, coming into Burgundy in small flocks about the beginning of April; and soon' after making their nests between the bifurcation of the branches of trees, of small dry fibres, intermixed with liverwort, and lined with finer materials. Tlie eggs are of a roundish shape, of a bluish-green spotted with olive-brown, with a few irregular black markings interspersed. They are also common in Italy, Germany, Sweden, and the west and south parts of Russia, where the wild fruits grow. They feed on berries, kernels, he, and, from the great strength of its bill, crack the stones of the fruit of the haws, cherries, i<cc., with the greatest ease.

L. curvirostra, the common cross-bill, is about the size of a lark, and is known by the singularity of its bill, brth mandibles of which curve

opposite ways and cross each other. The general color of the plumage in the male is of a red-lead, inclining to rose color, and more or less mixed wˆith brown ; the wings and tail are brown ; the legs black. The female is of a green color, more or less mixed with brown in those parts where the male is red. This species inhabits Sweden, Germany, Poland, Switzerland, Russia, and Siberia, where it breeds ; but migrates sometimes in vast flocks into Britain and other countries ; for, though in some years

few are met with, yet in others they have visited us by thousands, fixing on such spots as are planted with pines, for the sake of the seeds, which are their natural food. They hold the cone in one claw like the parrot. They also visit North America and Greenland; and make their nests in the highest parts of fir-trees, fastening them to the branches with the resinous matter which exudes from the trees.

L. enucleator, the pine grossbeak, is about nine inches long. The bill is strong, dusky, and forked at the end ; the head, back, neck, and breast, are of a rich crimson ; the bottoms of the feathers ash-color ; the quill-feathers and tail dusky, their exterior edges of a dirty white ; the legs are black. This species frequents the most northern parts of this kingdom, being only met with in Scotland, especially the Highlands, where they breed, and inhabit the pine-forests, feeding on the seeds, like the crogs-bill. They also abound in the pine-forests of Siberia, Lapland, and the north of Russia ; and are common about St. Petersburgh in autumn, where tliey are caught in great plenty for the table. They return north in spring. They are likewise com-mon in the north parts of America, appearing at Hudson's Bay in May, and feeding on the buds of the willow.

L. orix, the grenadier grossbeak, is about the size of a house sparrow. The forehead, sides of the head, and chin, the breast and belly, are black ; the wings are brown, with pale edges ; and the rest of the body is of a beautiful red color; the legs are pale. These birds inhabit St. Helena, and the Cape of Good Hope ; frequenting watery places that abound with reeds, among which they are supposed to make their nest. These birds, among the green reeds, fronr the brightness of their colors, appear like so many scarlet lilies.

L. pensilis, the pensile grossbeak, the toddy bird of Fryer, is about the size of the house sparrow : the bill is black, the irides are yellow ; tlie head, throat, and fore part of the neck, the same; from the nostrils springs a dull green stripe, which passes through the eye and beyond

it, where it is broader ; the hind part of the head and neck, the back, rump, and wing coverts, are of the same color ; the quills are black, edged with green ; the belly is deep gray, and the tail and legs are black. This species is found at Madagascar, and fabricates a nest of a curious construction, composed of straw and reeds interwoven in shape of a bag, the opening beneath. It is fastened above to a twig of some tree; mostly to those growing on the borders of streams. On one side of this, within, is the true nest. The bird does not form a new nest every year, but fastens a new one to the end of the last ; and often as many as five in number, one hanging from another. These build in society like rooks, 500 or 600 being often seen on one tree.

L. Philippina, the Philippine grossbeak, is about the size of a sparrow : the top of the head, the hind part of the neck and back, and the scapulars, are yellow, the middle of the feathers brown ; the lower part of the back is brown, with whitish margins ; the fore part of the neck

and breast are yellow ; and thence to tlie \z-xit yellowish white ; the wing coverts brown, edged with white ; the quills are brown, with pale rufous, or whitish edges ; and the tail the same; the legs are yellowish. These birds inhabit the Philippine Islands, and are noted for making a most curious nest, in form of a long cylinder, swelling out into a globose form in tlie middle. This is composed of the fine fibres of leaves, &lc., and fastened by the upper part to the extreme branch of a tree. Ttie entrance IS from beneath ; and after ascending the cylinder, as far as the globular cavity, the true nest is placed on one side of it; where this little architect lays her eggs, and hatches her brood in perfect security. A variety of this species, the baglafechat, an inhabitant of Abyssinia, makes a very curious nest like the former, but a little different in shape, which is said to have somewhat of a spiral form, not unlike that of a nau-tilus. It suspends it, like the other, on the extreme twig of some tree, chiefly one that hangs over some still water; and always turns tlie opening towards that quarter wlience least rain may be expected.

L. pyrrhula, the bullfinch, is well known. The head, wings, and tail, are black ; the breast and belly red ; the upper tail coverts and vent white; and the breast ash-color. The female differs in having the under parts of a reddish brown. This species is common in most parts of the continent, and throughout Russia and Siberia, where it is caught for the table. They are pretty common in England, and build in bushes, five or six feet from the ground. The nest is composed chiefly of moss ; and the eggs, which are five or six in number, are dirty bluish white, marked at the large end with dark spots. The time of breeding is about the end of May, or beginning of June. In summer they frequent woods and retired places. In winter they approach gardens and orchards, and make havock among the buds of trees. The bullfinch, in its wild state, has only a plain note, but when tamed it becomes remarkably docile, and may be taught any tune after a pipe, or to whistle any notes in the justest manner; it seldom forgets what it has learned ; and will become so tame as to come at call, perch on its master's shoulders, and, at command, go through a difficult musical lesson. They may be also taught to speak, and some thus instructed are annually brought to London from Germany.

L. socia, the sociable grossbeak, is about tlie size of a bullfinch : the general color of the body above is rufous brown, the under parts yellowish ; the beak and muzzle are black ; the legs brown, and the tail is short. It inhabits the interior country at the Cape of Good Hope. These birds live together in large societies, and their mode of nidification is extremely uncommon. They build in a species of mimosa, which grows to an uncommon size, and which they seem to select for that purpose, as well on account of its ample head, and the great strength of its branches, calculated to admit and to support the extensive buildings which they have to erect, as for the tallncss and smoothness of its trunk, which their great enemies, the serpent

tribe, are unable to climb. The metliod in which the nests themselves are fabricated is highly curious. In one described by Mr. Patersou there could be no less a number, he says, than from 800 to 1000 residing under the same roof. He calls it a roof, because it perfectly resembles that of a thatched house; and the ridge forms an angle so acute and so smooth, projecting over the entrance of the nest below, that it is impossible for any reptile to approach them. The industry of these birds 'seems almost equal,' says our author, ' to that of the bee ; througliout the day they appear to be busily employed in carrying a fine species of grass, which is the principal material they employ for the purpose of erecting this extraordinary work, as well as for

additions and repairs. Many trees I have seen borne down with the weight, and others I have observed with their boughs completely covered over. One of the deserted nests I had the curiosity to break down, so as to inform myself of the internal structure of it, and found it equally ingenious with that of the external. There are many entrances, each of which forms a regular street, with nests on both sides, at about two inches distance from each other. The grass with which they build is called the bosh-man's grass ; and I believe the seed of it to be their principal food ; though, on examining their nests, I found the wings and legs of different insects.'

L. tridactyla, the three-toed grossbeak, the guisso balito of Buffon, has only three toes, two before and one behind. The bill is toothed on the edges : the head, throat, and forepart of the neck, are of a beautiful red, which is prolonged in a narrow band quite to the vent ; the upper part of the neck, back, and tail, are black ; the wing coverts brown edged with white ; quills brown, with greenish edges ; and legs a dull red : the wings reach half way on the tail. This species inhabits Abyssinia; where it frequents woods, -and is a solitary species. It feeds on kernels of seeds, which it breaks with ease with its bill.

LOXODROM'ICK, n. s. Gr. XoKoq, obliquo and Spoixog, a course. Oblique sailing.

LMfldromick is the art of oblique sailing by the rhomb, which always makes an equal angle with every meridian ; that is, when you sail neither directly under the equator, nor under one and the same meridian, but across them : hence the table of rhombs, or the transverse table of miles, with the table of longitudes and latitudes, by which the sailor may practically find his course, distance, latitude, or longitude, is called baodromick. Harris.

LOY'AL, adj. ˆ Fr. loˆ/ul, hi {law) ; Ital.

Loy'alist, n. s. (kale (le) ; Span, leal (le).

Loy'ally, ado. i Strictly, attached or obe—

Loy'alty, n. s. J dient to the laws of one's country, and hence to the sovereign ; faithful to vows or engagements of any kind. A loyalist is an adherent to the king or sovereign power. Iˆoyalty (l'"r. loiaut'c), fidelity to prince or country; or any object of vows or attachment.

The regard of duty in that most loital nation overcame all other diiliculties. hiwlki.

LOZ

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Of Gloster's treachery, And of tlie loyal service of his son, \ hen 1 informed him, then he called me sot.

aiiakspeure. Though loyuUu, well held, to fools does make Our faith mere folly ; yet he that can endure To follow with allegiance a fallen lord, Does conquer him that did his master conquer. Id.

What though you be L'ljal to earthly kings and their crowns and kingdoms, yet if you he traitors and rebels against the King of his church, Jesus Christ, and the sceptre of his kingdom ; not suffering him by his laws and oiKcers to reign over you,' shall your hyiiUy towards men excuse your treasons against the l.ord. Bp. Hull.

'J he cedar, by the instigation of the lomlists, fell out with the honiebians. Hovel's Vocal Forest.

He had never any veneration for the court, but only such loiidlly to the king as the law required.

Clarendon. Hail wedded love ! by thee Founded in reason loiiul, just, and pure. Milton. Abdiel faithful found Unshaken, unscduced, unterrified. His loiialty he kept. Id.

Vorloifaltu is still the same, AV'hether it win or lose the game ; True as the dial to the sun, Although it be not shone upon. Hndihms. There Laodamia with Evadne moves. Unhappy both, but *(ii«/* in their loves. Drydeu.

J.yi/(ii subjects often seize their prince. Yet mean his sacred person not the least ofTence.

Id. The circling year I wait, with ampler stores. And fitter pomp, to hail my native shores ; Then by my realms due homage would be paid. For wealthy kings are louallit obeyed.

Pope's Odysseu. The most inviolable attachment to the laws of our country is every where acknowledged a capital vir-tue ; and, where the people are not so happy as to have any legislature but a single person, the strictest loyally is, in tiiat case, the truest patriotism.

Hume. We too are friends to loyally. W'c love The being, who loves

tlie .aw -espects his bounds, And reigns content within tt.em. Coivper.

LOYOLA (Ignatius), tlie founder of the order of the Jesuits, was born at tlie castle of Loyola, in Giupuscoa, in 1491 : and became first pa^^e to Ferdinand V., king of Spain, and llien an olficer in iiis army. In tliis last capacity he signalised himseif by liis valor; and liad his riglit leg broken by a cannon ball, at the siege of Pam-peUina, in 1521. While confined by his wound, a Life of the Saints was put into his hands, which determined him to forsake the military for tlie ecclesiastical profession. His first de-vout exercise was to dedicate himself to the Blessed Virgin as her knight, lie then practised the most severe mortifications for above a year; after which he went a pilgrimage to the Iloly Land ; and, on his return to Europe, he continued iiis tiieological studies in the universities of Spain, tliough he was tlieii thirty-three years of ago. Tn 1.526, upon commencing preacher, he was imprisoned at Alcara and Salamanca, and impeached before the inquisition. After this he went to Paris, and laid the foundation of his new order; the institutes of whicli he presented to pope Paul IIL, who made many objections to them, but at last confirtned the institution in l.'»40. He died in Rome, July 31st 155G, aged sixty-six; and left his disciples two celebrated works; 1. Spiritual Exercises; 2. Constitutions, or Rules of the Order. But, though these avowed institutes contain many privileges obnoxious to the welfare of society, the most objectionable are contained in tlie private rules entitled INIoiuta Secreta, which were not discovered till the close of the seventeenth century ; and most writers attribute these, and even tlie Constitutions, to Laynez, the second general of the order.

LOZ'ENGE, n. s. Fr. losenge , Gr. Xo^of, oblique. A rhomb; a preserved fruit, or medicinal cake, of this form.

Not icladde in silke was he, But all in flowris and flowrettes, I painted all with amorettes, And with losinsis and scochons. With birdis, liberdes, and lions. And othir bestis wrought ful well.

Chaucer. Romaunt of the Eose. The best builders resolve upon rectangular squares, as a mean between too few and too many angles ; and, through the equal inclination of the sides, tliey are stronger than the rhomb or losenge.

Wotlon's Architecture. They are of two sorts, square and lozenge: the first is used in cutting very broad strokes, the other for fainter and more delicate lines.

Imison's Elernents.

Lozenge, in heraldry. See Herald ry-Thougii all heralds agree that ladies are to place their arms on lozenges, yet they differ with respect to the causes tliat gave rise to it. Plutarch says, in the life of Tlieseus, that in JNIegara, an ancient town of Greece, the tomb-stones, under which the bodies of the Amazons lay, were of that form. S. Petra Sancta says, this shield represents a cushion, on which women used to sit and spin. Sir J. Feme thinks it is formed from the shield called Tesra, which the Romans finding unfit for war, allowed women to place their ensigns upon, with one of its angles always uppermost.

Lozenges, among jewellers, are common te brilliant and rose diamonds. In brilliants they are formed by the meeting of the skill and stat facets on the bezil ; in the latter by the meeting of the facets in the horizontal ribs of the crown. See Facet.

LOZERE, a department of France, is formed of the ancient district of the Gevaudan and part of the Cevennes dependent on the former province of Languedoc, and takes its name from a small chain of mountains, being part of those called the Cevennes mountains. The chief place is Mende ; it consists of three arrondisscments or subprefectures, Alende containing 43,821 inhabitants ; Florae 39,453; Marvejols 50,GCiO ; making a total population of 133,934 souls, on an area of 2421 square miles. It is subdivided into twenty-four cantons, and 191 communes, yielding a territorial revenue of 5,904,000 francs, is in the ninth military division, with two electoral arrondissements, which send two members to tlie chamber of deputies. It has a royal court at Nismes, and a bishopric at Mende. This department is bounded on the north by those of Cantal and tlie I’pper Loire; on the east bv

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tliosc of ArdecilO and the Gurd ; on the south by the Cianl, and on the west by that of the Aveyron. It is intersected by mountains, on which are many lakes abounding in fish, and by valleys and plains of moderate extent and not very fertile. It is divided by nature into three parts, known by their respective names of Montagues, Causses, and Cevennes ; the first of which produces rye, a small quantity of barley and oats and forage ; the second, which is tiie most fertile, yields wheat, small grain, forage, and fruits; the third produces a little rye, chestnuts, and a great quantity of potatoes. Tlie Cevennes mountains extend over part of this department, from one of the peaks of which, the mountain of Lo-zere, it derives its name ; they are covered with snow during a part of the year. Among the])lants which grow spontaneously in these mountains, are many that are useful in pharmacy. Great flocks of sheep are reared here, and a great number of mules; during the summer also they receive flocks from Lower Languedoc. In some parts the mulberry tree is cultirated v.ith tolerable success. The temperature of the atmosphere is very variable ; at some periods, and at certain degrees of altitude, two or three different temperatures are experienced in the same day. In the north the winter lasts for six months, and in some years even nine; but towards the south it scarcely continues four months. The height of the sun and the numerous waters render this country cold and damp, and this is the common temperature of the department ; the winters are usually severe, the spring seasons rainy, tlie summers often stormy, and the autumns fine only towards the end. This mountainous country is cultivated with oxen, and does not yield a sufficient supply for its inhabitants. There are 21,681 hectars of forests and vei-y few vineyards; the mean produce of every hectar of arable land is ten francs ninety-four centimes.

Here are also mines of iron, lead, antimonj, silver, and copper, and quarries of marble, granite, porphyry, and plaster. At Bagnols there are mineral waters. The manufacture of serges, and cotton spinning, is carried on successfully ; mines of copper and lead are worked, and various foundries. A number of workmen annually emigrate to the soulli, to attend the cultivation of the silk-worm, and at the same time to labor at the hay making and the harvest. The people trade in wine, chestnuts, oil, coarse cloths, serges, and cotton yarn.

The principal rivers are the Tarn, the Lot, the Allier, the Garden, the

Chassezat, the Truyere, the Bez, the Tarnon, the Mimente, the Jaute and the Cologne. It is crossed by none of the great royal roads; but fourteen different cross roads serve to promote the communication; goods are chiefly conveyed on mules.

LozERE, The, a high mountain in the Cevennes, situated at the eastern extremity of the department, 1o which it gives its name. It is about 1473 metres above the level of the sea, and has a plat of granite on the top, in shape bearing resemblance to the back of an ass, about ten or twelve miles long, covered with fine pastures and thick forests.

h' , n. s. A game at cards See Loo.

LUB'BARD, 71. s. \ Perhaps from Lou,

Lub'ber, 2ˆ which see. There

Lub'berly, adj. & adv. J are also Belg. lobben, emasculated, and luyurd, a lout, probable derivations. A sturdy, lazy fellow. Lubberly is awkward ; clownish.

For tempests and showers deceiveth a many, And lingering lubbers loose many a penie. 1 usser. They clap the lubber Ajax on the shoulder, As if his feet were on brave Hector's breast, And great Troy shrinking.

Shakspeare. Troilus and Cresudii. A notable lubber thou reportest him to be.

Shakspeare. I came to Eaton to marry Mrs. Anne Page ; and she's a great tublierly boy. Id.

These chase the smaller shoals of fish from the main sea into the havens, leaping up and down puffing like a fat tuhber out of breath. Carew. Tell how the drudging goblin sweat ; His shadowy flail hath threshed the corn, That ten day labourers could not end ; Then lies him down the lubber fend. Milton. Merry Andrew on the low rope copies lubberly the same tricks which his master is so dexterously performing on the high. Dryden. Venetians do not more uncouthly ride, Than did your lubber state mankind bestride.

Id. How can you name that superannuated lubber?

Congreve. Yet their wine and their victuals those curmudgeon

lubbards Lock up from my sight in cellars and cupboards.

Swifi.

LUBEC, or Lubeck, a city and port of Germany, in Lower Saxony. It is seated at the conflux of the Trave with tiie Steckenitz, the Elbe, the Wackenitz, Sec, twelve miles from the Baltic, where it has a tine harbour. By the Steckenitz and the Elbe it communicates with the German Ocean. The city lies on the side of a hill, with the Trave, increased by the Steckenitz on the one side, and the Wackenitz on the other ; and is strongly fortified with bastions, walls, and ramparts ; the last of which are planted v.ith trees, and for man agreeable walk. Lubec, being formerly the chief of the lianse Towns was very powerful, but a great part [of its trade is now transferred to Hamburg : however, it still employs 100 ships, and has a fair share of the Baltic trade. It is about two miles long, and more than one broad. The houses are of stone. Several of the streets have on each side rows of lime trees, with canals in the middle. The chief public structures are the cathedral, the church of St. !\Iary's, several Lutheran churches, a nunnery with an abbess, and prioress ; a poor's house, an almshouse, or])han house,' a hospital dedicated to the Holy Giiost, a house in which poor travellers are entertained three days, and then sent forward with a pass, or provided with medicine if ill ; a Calvinistic church, and Catholic Chapel. Tiie deputies of the Hanse Towns used to meet in tlie town house of Lu-bec. Inhabitants .5.”),000. It is forty miles north-east of Hamburg. In 1802 Lubec had seventy to eighty merchant vessels of burthen, and in the same year there entered 13G8 vessels, and cleared out 1234. It has manufactories of cordage and sail-cloth, sugar refineries and to-LUB

bacco manufactories, and builds merchant vessels. Travemunde is a village of fishermen and pilots, on the north bank of the river ; it has a fortress mounting forty cannons. Its port, where vessels above 200 tons lighten to ascend to Lubec, can hold sixty sail. A packet sails between this place and Petersburg.

LUBIENITSRI (Stanislaus), a Polish gentleman, born at Cracow in 1623, and educated by his father. lie became a celebrated Socinian minister; and endeavoured to obtain toleration from the German princes for his brethren. His labors, however, were ineffectual; being himself persecuted by the Lutheran ministers and banished from place to place, until at length, in IG?.'*, he was poisoned with his two daughters, his wife narrowly escaping. He wrote, 1. A History of the Reformation in Poland ; 2. A History of Comets, from the Flood to 1G65 : and other works in Latin.

LUBIN (Augustin), according to Dr. Watkins, or Nicholas Lubin according to others, geographer to Louis XIV., and an Augustine monk, was born in 1624. He wrote a description of Lapland ; Sacred Geography ; and several other works. lie died in 1695, aged seventy-one.

LuEix (Elihard), a Protestant divine, born at Westersted in Germany, and educated at Leipsic. He became professor of poetry in the university of Rostock, in 1595: and in 1605 professor of divinity. He wrote notes on Anacreon, Juvenal, Persius, &c., and several other works; but his most celebrated production is a treatise on the nature and origin of evil, entitled Phosphorus de Causa prima etNatura Mali, printed at Rostock in 1596; in which we have a curious hypothesis to account for the origin of moral evil. He supposed two co-eternal principles; not matter and vacuum, as Epicurus did : but God, and Nihilum or Nothing.

LlˆBLIN, a considerable town of Poland, capital of the palatinate of the same name, with a citadel, a bishop's see, a university, a Jewish synagogue, and judicial courts. It has three fairs, frequenter! by merchants from all nations. It is seated on the Bystrzna. Long. 22° 31' E., lat.

■ˆ Lat. lnhricus. To

make smooth, slippe-

[ry, or of easy move—

fment. Lubricity is

s. j smoothness ; aptness

J to move or glide ea-

51° 26 N;

LU’BRlCATE,i;.a.

LUBRFC’ITY, n. S.

Lu’bric, adj.

Lu’bricous,

Lubrifica’tion, 7

Lubrifac’tion. sily ; slipperiness ; uncertainty ; wantonness. Lubric and lubricous are, smooth ; slippery ; loose ; unsteady ; wanton. Lubrification and lubrifaction, the act of making smooth or lubricous.

The cause is lubrifaction and relaxation, as in medicines emollient ; such as milk, honey, and mallows.

Bacon .

I will deduce nim from his cradle through the deep and luhrick waves of state, tUl he is swallowed in the gulph of fatality. Wutlon.

A throng Of short thick sobs, whose thundering volleys float And roll themselves over hur lubrick throat In panting murmurs. Crashaiv.

lie that enjoyed crowns, and knew their worth, excepted them not out of the charge of universal

vanity ; and yet the politician is not discouraged at the inconstancy of human affairs, and the Inhnciiy of his subject. Glanvillc’s Apology.

The judgment being the leading power, if it be stored with labricoui opinions instead of clearly conceived truths, and peremptorily resolved in them, the practice will be as irregular as the conceptions.

Id. Scepsis.

The manifold impossibilities and luhricities of matter cannot have the same conveniencies in any modification. More.

From the letchery of these fauns, he thinks that satyr is derived from them, as if wantonness and luhriciti/ were essential to that poem which ought in all to be avoided. Dryden.

Why were we hurried down This lubrick and adulterate age ;

Xay, added fat pollutions of our own, T' increase the steaming ordures of the stage "! Id.

A state of tranquillity is never to be attained, but by keeping perpetually in our thoughts tlie certainty of death and the lubricity of fortune.

L' Estrange.

Both the ingredients are of a lubricating nature ; the mucilage adds to the lubricity of the oil, and the oil preserves the mucilage from inspissation.

Ray on Creation.

A twofold liquor is prepared for the inunction and luhrifiration of the heads of the bones ; an oily one, furnished by the marrow ; a mucilaginous, supplied by certain glandules seated in the articulations.

Id.

The parts of water being voluble and lubricous, as well as fine, it easily insinuates itself into the tubes of vegetables, and by that means introduces into them the matter it bears along with it.

Woodward's Natural History.

There are aliments which, besides this Inhricating quality, stimulate in a small degree.

Arbuilinot on Aliments.

The patient is relieved by the mucilaginous and the saponaceous remedies, some of which lubricate, and otiiers both lubricate and stimulate. Sharp.

To trace in Nature's most minute design

The signature and stamp of power divine ,

Contrivance intricate, expressed with ease.

Where unassisted sight no beauty sees ;

The shapely limb and lubricated joint,.

Within the small dimensions of a point,

Muscle and nerve miraculously spun ;

His mighty work, who speaks and it is done.

Coicpn-.

LUCANIA, a country of Italy, and a part of Magna Grascia ; bounded on the north by the Silarus, by which it is separated from the Picentini, and by the river Bradanus, by which it is parted from the Apuli Peucetii ; on the south by the Laus, which separated it from the Bruttii ; on the east by the Sinus Tarentinus ; and on the west by the Tuscan Sea.

LUCANUS (Marcus Anna;us), a Latin poet, born at Corduba in Spain, about A. D. 39. He was the son of Anna;us Mela, the youngest brother of Seneca : and was conveyed to Rome at , the age of eight months. At Rome he was educated under the Stoic Cornutns, so warmly celebrated by his disciple Persius the satirist, who was the intimate friend of Lucan. In the close of his education, Lucan is said to have passed some time at Athens. On his return to R mt he rose to the office of questor, before he had attained the legal age. He was afterwards enrolled among the augurs ; and married a lady of

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noble birth. Lucan had for some time been admitted to familiarity with Nero, wlien tlie emperor chose to contend with him for poetical honors by the public recital of a poem he had composed on Niobe. Lucan had the hardiness to repeat a poem on Orpheus, in competition with that of Nero ; and the judges of the contest were just and bold enough to decide against the emperor. Hence Nero became the persecutor of his successful rival, and prohibited him to produce any poetry in public. The well known conspiracy of Piso against the tyrant soon followed ; and Tacitus concludes that Lucan engaged in the enterprise from the poetical injuries he had received. His firmness and intrepidity are very forcibly displayed in the picture of his death which Tacitus has given us. He was condemned to have his veins opened, as his uncle Seneca had before him; and, ‘ while his blood issued in streams, perceiving his feet and hands to grow cold and stiffen, and life to retire by little and little from the extremities, while his heart was still beating with vital warmth, and his faculties nowise impaired, he recollected some lines of his own, which described a wounded soldier expiring in a manner that resembled this. These lines he rehearsed ; and they were the last words he ever uttered.’ The critics differ concerning the verses of the Pharsalia which the author repeated. Some think the verses were v. 810 to 814, lib. ix., but Lipsius contends, that the passage occurs in lib. iii. v. 635 — 638 ; thus translated jy Mr. Rowe :

No single wound the gaping rupture seems, Where trickling crimson swells in slender streams ; But, from an op’niug horrible and wide, A thousand vessels pour the bursting tide : At once the winding channel’s course was broke ; Where wandering life her inasy journey took ; At once the currents all forgot their way, And lost their purple in the azure sea.

Such was the death of Lucan, before he had completed his twenty-seventh year. His wife, Polla Argentaria, is said to have transcribed and corrected the first three books of his Pharsalia after his death. Quintilian disputes the title of Lucan to be classed among the poets ; and Scaliger says, that he seems rather to bark than to sing. But the most elevated poetic spirits have been his warmest admirers ; in France he was idolised by Corneille, and in England translated by Rowe. The severest censures on Lucan have proceeded from those who have ‘unfairly compared his language to that of Virgil; but how unjust

is such a comparison! How difi’erently should we think of 'irgil as a poet, if we possessed only the verses which he wrote at that period of life when Lucan composed his Pharsalia! In the disposition of his subject, in the propriety and elegance of diction, he is undoubtedly far inferior to Virgil : but if we attend to the bold originality of his design, and to the vigor of his sentiments; if we consider the Pharsalia as the rapid and uncorrected sketch of a young poet, executed in an age when the spirit of his countrymen was broken, and their taste in literature corrupted ; it may be justly esteemed one of the most noble and most wonderful productions of the human mind. Lucan wrote

several poems, but none remain besides his Pharsalia.

Lucan us, the stag-beetle, in zoology, a genus of insects of the order coleoptera. The antennae end in a club or knob, which is compressed or flattened on one side, and divided into short laminae resembling the teeth of a comb ; the jaws fee porrected or advanced before the head, and are dentated. See Entomology.

L. cervus is the largest as well as the most singular species. It has two large moveable maxillae, resembling the horns of a stag, which project from its head, and have acquired it the appellation of stag-beetle. Those maxillae, broad and flat, equal to one-third of its length, have in the middle, towards their inner part, a small branch, and at their extremity are forked. They have also several small teeth throughout their length. The head that bears these maxillae is irregular, very broad, and short. The thorax is something narrower than the head and body, and margined round. The elytra are very plain, without either streaks or lines. The whole ani-mal is of a deep brown color. It is commonly found upon the oak, but is scarce in the neighbourhood of London ; and, though the largest of coleopterous insects to be met with in this part of the world, it is much smaller than those of the same species that are found in woody countries. It is strong and vigorous, and its horns, with which it pinches severely, are carefully to be avoided. The jaws are sometimes as red as coral, which gives this insect a very beautiful appearance ; the female is distinguished by the shortness of the jaws, which are not half so long as those of the male. The females deposit their eggs in trunks of decayed trees, such as the oak and the ash. The larva lodge under the bark, and in tlie hollow of old trees, which they eat into and reduce into fine powder, and there transform themselves into chrysalids. They are common in Kent and Sussex, and are sometimes met with in other parts of

England. The porrected jaws are particularly useful to these animals, in stripping off the bark from trees, and affixing themselves thereby to the tree, while they suck with their trunk the juice that oozes from it.

LUCARIA, from Lat. lucus, a grove, a feast celebrated at Rome, on the 18th of July, in me-mory of the flight of the Romans into a wood, where they found an asylum from the Gauls. This wood was situated between the Tiber and the Via Salaria. On this festival, Plutarch informs us, it was customary to pay the actors with the money arising from the felling of wood. This money was called lucar.

LUCAS (Richard), D. D., a learned English divine, born in 16-48, and educated at Oxford; after which he took orders, and was for some time master of the free school at Abergavenny. Being esteemed an excellent preacher, he be-came vicar of St. Stephen's Coleman Street, and lecturer of St. Olave's in Southwark. In 1696 he was installed prebendary of Westminster. His sight began to fail in his youth, and he totally lost it in his middle age. He was greatly esteemed for his piety and learning ; and published several works, particularly; 1. Practical

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Christianity; 2. An Enquiry after Happiness; 3. Several Sermons ; 4. A Latin translation of the whole Duty of Man. ile died in 1715.

Lucas Jacobs, or Lucas Van Leyden, an eminent artist, called also Hugense, was born at Leyden in 1494. He received his first instructions in painting from his father Ungues Jacobs : but completed his studies under Cornelius En-gelbrecht. A few years before his death, it is said that during a journey through Zealand and Brabant a painter of Flushing, envious of liis great abilities, gave him poison at an entertainment, which, though slow, was fatal in its effects, and put an end to his life, after six years languishing under its cruel influence. Otiiers, however, attribute his death to his incessant industry. The superiority of his genius manifested itself very early ; for his works, even when but nine years of age, were so excellent as to excite the admiration of all contemporary artists ; and, when he was about fifteen, he painted a St. Hu-bert which gained him great applause. His tone of coloring, Mr. Pilkington observes, is good; his attitudes are well chosen ; his figures have a considerable expression in their faces ; and his pictures arc very highly finished. He endeavoured to proportion the strength of his coloring to the different degrees of distance in which his objects were placed : for, in that early time, the true principles of perspective were but little known. In the town-hall at Leyden his finest picture, the Last Judgment, is preserved with great care ; the magistrates having refused very large sums for it. Lucas painted not only in oil, but also in distemper and upon glass. Nor was he less eminent for his engraving. The strokes are as delicate upon the objects in the front, as upon those in the distances; and this want of variety, joined with the feebleness of the masses of shadow, gives his engravings, with all their neatness, an unfinished appearance. He was attentive to the minutiae of his art. He gave great expression to the heads of his figures ; but in his works the same heads are too often repeated. The hands and feet are rather mannered than correct; and, when he attempted to draw the naked figure, he succeeded but indifferently. He made the folds of his draperies long and flowing ; but his female figures are too often excessively loaded witli girdles, bandages, and other ornamental trappings. He engraved on wood, as well as on copper; but his works on the for-mer are not numerous. They are, however, very spirited ; though not equal, upon the whole, to those of his friend Albert. Lucas's prints are pretty numerous, but seldom met with complete. The following are among the principal : 1.

Mahomet sleepin'.:, with a priest murdered by his side, and another figure stealing his sword ; a middling-sized upright plate, 1508. 2. An ecce homo, a large plate, lengthwise, 1510. 3. The crucifixion on Mount Calvary, 1510. 4. The wise men's offering, on Mount Calvary, 1513. 5. Return of the prodigal son, middling-sized, lengthwise, 1518. 6. The dance of Magdalen, large, lengthwise, 1519. 7. His own portrait, small, upright, 1525. 8. David playing before Saul, a middling^sized, upright, very fine print. 9. A print called Ulespiegle, which is the scarcest

of all his works. It was in the collection ot the king of France ; and said by Maroljies to be unique ; but Mariette had also an impression of it. It represents a travelling bag-piper with his family, consisting of his wife, seven children, a little dog, &c., in a singular group. This rare print is dated 1520, and has been sold for sixteen louis d'ors. It is nearly seven inches and a half high by four and three-quarters broad ; and has been twice copied.

LUCCA, Duchy of, is a small principality created a duchy by the congress of Vienna in 1815, and given in full sovereignty to her majesty the Infanta Maria Louisa of Spain, and her descendants in the direct male line. It is encompassed by Tnscany, Modena, and the Mediterranean, and contains about 430 square miles. Much of it is mountainous, and its scenery is picturesque and beautiful, while the industry of the inhabitants has covered numerous hills to their very summits with vines, olives, chestnuts, and mulberry trees. The atmosphere has all the mildness aud serenity of Italy, and the delightful plain on which the capital stands, and the valleys in other parts of the ducliy, are composed of black alluvial soil, abounding with rich pasturage. Some grain is produced, but wme, oil, and silk, are the chief products. Inhabitants 124,000.

Lucca, the capital, is situated near the southern confines, on the river Serchio. It is about three miles in circumference. Its ramparts are planted with trees. Several of the churches are built of Carrara marble. The cathedral and St. Michael's are the most elegant. The princess's palace is a large structure surrounded with trees, and many of the nobility have elegant mansions in the vicinity. Here are a university, an academy of arts and sciences, and a celebrated establisliment for the education of females of noble birth. There are likewise manufactures of cloth and silk, but the principal trade is in oil. The baths of Lucca are on the banks of the Serchio, near the town and much frequented. The religion is Catholic, the army about 800, and

the yearly income of the duchy nearly £65,000. The inhabitants, who are a moral and industrious race, amount to about 18,000.

LUCE, 7j. s. Lzt. lupus. A pike full grown. Ful many a fat partrich had he in mewe,

And many a breme and many a luce in stew.

Chaucer, Cant. Tales.

They give the dozen white luces in their coat.

Shakspeare,

Luce, in ichthyology. See Esox.

LUCENA, a large inland town of Cordova, in the south of Spain. It contains three infirmaries a foundling hospital, and eleven poor houses ; and it has manufactures of linen, cloth, and soap, besides the adjacent salt works of Jarales. Population 12,000: thirty-two miles S. S. E. of Cordova. Long. 4° 29’ W., lat. 37” 32’ N. There are two other small towns of this name in Andalusia, and Valencia.

LU’CENT, «(/;. -v Lzt. lucens, lucidus; Ft.

Lu’ciD, ” i lucidc. Bright; shining;

Lucin’iTY, w. s. V resplendent ; clear; pel—

LuciF’r.uous,«r/;. i lucid: applied metapho—

Lucif’ic. / rically to clearness or

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brightness of intellect as opposed to insaviity : luciferous is giving liglit : lueific, maknij, or creating light.

The long dissensions of the two houses, which, ;;!- though they had had lucid intervals and happy pauses, yet they did ever hang over the kingdom, ready to break forth. Bacon.

1 meant the day-star should not brighter lise, Nor lend like influence from his lucent seat.

Ben Jonson. A spot like which perhaps Astronomer in the sun's lucent orb, Through his glazed optick tube yet never saw.

Milton. Over his Incid arms A military vest of purple flowed ; Livelier than JNIalibcean. Id.

On the fertile banks Of Abana and Pharpar, lucid streams. Id.

The experiment is not ignoble, and luciferous enough, as shewing a new way to produce a volatile salt. Boifle.

Some beams of wit on other souls may fall, Strike through and make a lucid interval ; But Shadwell's genuine night admits no ray, His rising fogs prevail upon the day. Drxiden. It contracts it, preserving the eye from being injured by too vehement and lucid an object, and again dilates it for the apprehending objects more remote in a fainter light. Ray.

When made to converge, and so mixed together ; though their lucijick motion be continued, yet by interfering, that equal motion, which is the colorifick, is interrupted. Grew.

I believed him in a lucid interval, and desired he would please to let me see his book. Tatler.

A few sensual and voluptuous persons may, for a season, eclipse this native light of the soul ; but can never so wholly smother and extinguish it, but that, at some lucid intervals, it will recover itself again, and shine forth to the conviction of their conscience.

Bentley. The pearly shell its lurid globe unfold. And Phoebus warm the ripening ore to gold.

Pope. On the transparent side of a globe, half silver and half of a transparent metal, we saw certain strange figures circularly drawn, and thought we could touch them, till we found our fingers stopped by that lucid substance. Gulliver's Travels.

Beneath the hedge or near the stream,

A worm is known to stray, That shows by night a lucid beam.

Which disappears by day. Cowper.

Nymphs ! on that day ye shed from lucid eyes, Celestial tears, and breathed ethereal sighs ! When llichman reared, by fearless haste betrayed. The wiry rod in Nieva's fatal shade. Darwin.

The sun-born blood suffused her neck, and threw O'er lier clear nut-brown skin alucid hue, Like coral reddening through the darkened wave, Which draws the diver to the crimson cave. Byron.

LUCERA, an inland town of Naples, in the Capitanata. Strabo says, ' It had lost much of its splendor in the time of Augustus.' The only relic of Roman architecture now to be seen is a tower in the middle of the castle ; but medals are frequently found. It is the see of a bishop. Population 8400 : tliirty-two miles north-east of Benevento.

LUCl'RES, in Roman antiquity, the third in order of the three tribes into which Romulus divided the people, including foreigners ; so

called from the lucus or grove where Romulus opened an asylum.

LUCERIA, in ancient geography, a town of Italy, in Apulia; whicn in Strabo's time still exhibited marks of Diomed's sovereignty in those parts. It is called by i'tolemy Nuceria ; now Nocera de Pagani, in Naples.

LUCERNA, a small town and citadel of Piedmont. Population 1200; six miles south of Pinerolo.

LUCERNE, a canton in the heart of Switzerland, adjacent to those of Zurich, Schweilz, and Unterwalden. Its superficial extent is about 740 square miles. It is one of the flattest portions of Switzerland, the north consisting of large plains, while the south, though less level, contains only a part of the mountains that border on the lake of Lucerne. Both the soil and climate are favorable to agriculture, and it is watered by

the Reuss, Emme, Entlen, Weger, Wyna, Sur, and Esjhenbach. It contains several small lakes, such as Sempach, Mauen, Rei-chen, and the Red Lake. Cattle, horses, goats, sheep, and hogs are reared, as well as corn, in abundance ; as also flax and hemp, vines, &c. Several of the towns drive a good carrying trade. Lucerne is the most pov/erful of the Catholic cantons, and a papal nuncio has resided at the capital ever since the reformation. The canton is divided into the five districts of Lucerne, Entlibuch, Willisau, Sursee, and Ilochdorf; each district is subdivided into four quarters. Population 87,000.

Lucerne, the capital of the canton of that name, is situated on the Reuss, where it issues from the lake of Lucerne. The town stands on both sides of the river, over which are four bridges. The view from these bridges is very picturesque. The town stands on a gentle eminence, at the foot of Mount Pilate, surrounded by a wall and towers, and contains several handsome edifices, and neat groups of houses on the lake. The chief public buildings are the town-hall, watch-tower, and arsenal, in all of which there are curious antiquities. The churches are of Gothic architecture ; and there are in the town several monasteries and convents. Here is also a college or high school, belonging formerly to the Jesuits, who were restored in the year 1819, contrary to the wishes of many of the inhabitants. There are various collections of books, paintings, and curiosities in Lucerne ; but the most remarkable is the model or map on relief of Switzerland, by general Pfyfi'er. Its commerce is chiefly in corn, and a transit business. Population nearly 7000 : forty-two miles east of Berne, and sixteen west by north of Schweitz.

Lucerne, called also the lake of Waldstadte, a lake of Switzerland, between the cantons of Underwalden, Lucerne, Schweitz, and Uri. Its length is about twenty-five English miles, but its breadtii is unequal, as it consists of a luimber of detached parts, some of them of considerable size, and forming in a manner separate lakes. The largest of them take their 'names from the chief places on their banks ; thus the lake of Lucerne Proper, the lake of Alpnach, the lake of Stanz, and" the lake of Uri. Its general breadtii

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is two, I’iree, or tour miles ; tlie elevation of its surface above that of the sea 1380 feet ; and its depth is in some])lace.s 600 feet. It is the largest lake in tiie interior of Switzerland, and, though its banks are not enlivened by towns or luxuriant vegetation, the scenery is striking. From different spots on the surface of the lake may be counted more than twenty-five mountains, comprising some of the highest of the Alps, such as the Pilatusberg, Mount Kighi, and the Furca. While these form promontories and cliffs, which increase the beauties of the scenery, they give rise to blasts, wliich sometimes render it dangerous to navigate the lake.

LUCIA (St.), or St. Alousie, one of the Caribbee Islands, is about twenty-two miles long and twelve broad ; Carenage, the chief town, being in lat. 13° 57’ N., and long. 61° 7’ W. It was first settled by the French in 1650; but was reduced by the English in 1664, who evacuated it in 1666. The French immediately resettled the island, but were again driven away by the Caribs. As soon as the savages were gone, the former inhabitants returned for a short time ; but, being afraid of falling a prey to the first privateer that should visit their coasts, they removed to otlier French settlements that were stronger, or might be better defended. There was then no regular colony at St. Lucia ; it was only frequented by tlie inhabitants of Martinico, who came thither to cut wood, and to build canoes, and who had considerable docks on the island. In 1718 it was again settled by the French ; but four years after it was given by the British court to the duke of Montagu, who was sent to take possession of it. This occasioned some disturbance between the two courts; which was settled, however, by an agreement made in 1731, that, till the respective claims should be finally adjusted, the island should be evacuated by both nations, but that both should l.ave wood and water there. This agreement furnished an opportunity for private interest to exert itself. The English no longer molested the French in their habitations; but employed them as their assistants in carrying on with richer colonies a smuggling trade, which the subjects of both governments thought equally advantageous. This trade continued more or less considerable till the treaty of 1763, when St. Lucia was ceded to the crown of France. After that time the colony flourished. In the beginning of 1772 the number of white people amounted to 2018 souls, men, women, and children; that of the blacks to 663 freemen, and 12,795 slaves. The cattle consisted of 928 horses and mules, 2070

horned cattle, and 3184 sheep and goats. There were thirty-eight sugar plantations, which occupied 978 pieces of land ; 5,395,889 coffee-trees ; 1 ,321,600 cocoa plants ; and 367 plots of cotton. There were 706 dwelling places. The annual revenue at that time was about £175,000, which, according to the abbe Kaynal, must have increased one-eighth yearly for some time. It was taken by the British fleet, under admirals Byron and Barrington, in 1779, but restored to France at the peace of 1783. It was again taken by the British troops, under Sir Charles Grey and Sir -Tohn Jervis, in 1794; but in 1795 the French,

negroes, and mulattoes rose, and were so successful, that in April, 1795, they were in possession of the whole island, e.\ce])t Morne Fortune which surrendered in May. But on the 26th oi' May, 1796, that fort and the whole island were recovered by general Abercrombie, after an obstinate resistance ; and 2000 men taken prisoners. It was ceded to the French by the treaty of peace in 1801-2, and retaken in the late war, which began the year after. The soil of St. Lucia is tolerably good, even at the sea side ; and is much better further up the country. The whole of it is capable of cultivation, except some high and craggy mountains, which bear evident marks of volcanoes. In one deep valley there are still eight or ten ponds, the water of which boils up, and retains some of its heat at the distance of 6000 toises from its reservoirs. The air in the inland parts is unwholesome; but becomes less noxious as the woods are cleared. On some parts of the coast the air is still more unhealthy, by tlie waters of the rivers, which spring from the foot of the mountains, not having sufficient slope to wash down the sands with which the ocean stops up their mouths.

Le Carenase, the chief place of the island, is about the middle of the west side. Nature has here formed a spacious and secure harbour, in which thirty sail of the line may lay in perfect safety during the hurricane months, and the largest ships may heave down by the shore. The entrance is so narrow that but one ship can enter at a time, and, the wind blowing constantly out, she must be towed or warped in.

Llcia (St.), one of the Cape de Verd Islands-, is three leagues from St. Vincent, the two islands having three or four rocky inlets between them, is twenty-four miles long, mountainous, and uninhabited. On the south-east is a good road within two small islands called Round and White Islands. On the west side there is no water. It abounds with goats, sea and land fowl, tortoises, &c.

LUCIAN, or Lucianus, a celebrated Greek author in the first century, born at Samosata, in the reign of Trajan. He studied law, and practised some time as an advocate ; but afterwards commenced rhetorician. He lived to the time of Marcus Aurelius, who made him register of Alexandria in Egypt ; and, according to Suidas, he was at last worried by dogs, in his ninetietli year, A. D. 180. His Dialogues and other works are written in elegant Greek. In these he has joined the useful to the agreeable, instruction to satire, and erudition to elegance. He has been censured as an impious scoffer at religion ; but surely religion consists neither in the theology of the Pagan poets, nor in the extravagant opinions of philosophers, which he justly ridicules.

LUCIANISTS, or Lvcanists, a religious sect so called from Lucianus, or Lucanus, a heretic of the second century, a disciple of JNIarcion, whose errors he followed. Epiphanius, says he, abondoned Marcion, teaching that people ought not to marry, and yet other authors mention that he held this error in common with Marcion and other Gnostics. He denied the immortality of the soul, asserting it to be material.

LUCIFER, in astronomy, is the bright planer

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Venus, which either goes before the sun in the morning, and is our morning star, or in the evening follows the sun, and then is called Hesperus, or the evening star.

Lucifer, in ecclesiastical history, a celebrated bishop of CagUari, in Sardinia, wlio gave rise lo a schism, by not admitting the decree of the council of Alexandria, A. D. 362, for receiving the Arian bishops, who i-ecanted their errors. He was banished by Constantius for defending the Nicene doctrine concerning the Trinity. He diefl A. D. 370. His works were published at Venice

LUCIFERA, in mythology, a surname given to Diana, under which title she was invoked by the Greeks in childbed. She was represented as covered with a large veil, interspersed with stars, bearing a crescent on her head, and holding in her hand a lighted flambeau.

LUCIFERIANS, a religious sect, who adhered to the schism of Lucifer. See LuctFER. St. Augustine intimates that they believed the soul, which they considered as of a material na-ture, to be transmitted to the children from their fathers. They increased greatly in Gaul, Spain, Egypt, &c. There were but two Luciferian bishops, but a great number of priests and deacons. They bore a great aversion to the Arians.

LUCILl'US (Caius), a Roman knight and Latin poet, was born at Suessa in Italy, about 140 B.C. He served under Scipio Africanus, in the war with the Numantines, and was in ureal favor with that celebrated general, and with Lajlius. He wrote thirty books of satires, and some learned men ascribe the invention of satire to him ; but M. Dacier insists, that Lucilius only gave a more elegant turn to that kind of poetry, than his predecessors Ennius and Pacuvius had done. From Horace, who refers to them several times in his own satires, it ajjpears that he imitated the old Greek comedians in marking out by his censure individuals notorious for their vices, even those of the very highest rank. Though superior to his poetical predecessors at Rome, and though he wrote with great roughness and inelegance, he gained many admirers. By Horace he is compared to a river which rolls upon its waters precious sand, accompanied with mire and dirt. Of his thirty books of verses only a few scattered fragments are come down to modern times. His fragments have been carefully collected by Francis Douza at Leyden, in 1.599, with notes.

LUCINA, a goddess among the Romans, who presided over women in labor. Some take iier to be Diana, others Juno, others make her a distinct goddess, daughter of .Tupiter and Juno. She is called Lucino, because she brought children to light; from the Latin lux, light. The Greeks called her Ilithyia.

LUCK, n. .s. A Sax. luc; Goth, lucka ;

LucK'iLY,ac/D. / Belg. luk ; Tent, glucli,

Luck'iness, n. a. \glucke ; ii Gr. y\vKv, dulce,

Luck'less, adj. i Minsiieu. Fortune, par—

Luck'y. J ticularly good fortune ;

«hance ; accident: luckily is happily; by good hap or fortune : luckiness, happiness ; happy hit : luckless, unhappy, unfortunate : lucky, fortunate, ' happy by chance,' if such luck there be.

Glad of such hick, the luckless Inckti maid A long time with that savage people staid, To gather breath in many miseiius. Spenser.

But 1 more fearful, or more luckii wight. Dismayed with that deformed, dismal sight, Fled fast away. Faerie Queeiie.

Farewel, good luck go with thee.

Shahpeai e ■ I did demand what news from Shrewsbury, He told me that rebellion had ill hicli. And that young Harry Percy's spur was cold.

1,1.

Never shall my thoughts be base. Though luckless, yet without disgrace.

Suckling, He forced his neck into a noose, To shew his play at fast and loose ; And, when he chanced to escape, mistook. For art and subtlety, his luck. Hudibvaa.

Some such method may he found by human industry or luck, by which compound bodies may be resolved into other substances than

they are divided into by the fire. Boyle.

That part of mankind who have had the justice, or the luck, to pass, in common opinion, for the wisest have followed a very different scent.

Temple. It is the pencil thrown luckilii full upon the horse's mouth, to express the foam, which the painter with all his skill could not form. JJryden's Dufresnoii .

What else but his immoderate lust of power. Prayers made and granted in a luckless hour.

Dry den. He who sometimes lights on truth, is in the right but by chance ; and 1 know not whether die luckiness of the accident will excuse the irregularity of his proceeding. Locke.

The guests are found too numerous for the treat. But all, it seems, who had the luck to eat, Swear they ne'er tasted more delicious meat. Taie.

Such, how highly soever they may have the luck to he thought of, are far from being Israelites indeed.

South. Perhaps some arm more luckij than the rest. May reach his heart, and free the world from bondage. Addisou'e Caio. It happens luckily for the establishment of a new race of kings upon the British throne, that the first of this royal line has all high qualifications.

Addisoa. As little reckt I sorrow's power.

Until the flowery snare O' witching love, in luckless hour.

Made me the tin-all o' care, Burus.

Patron of all those luckless brains, 'J'hat to the wrong side leaning, Indite much metre with much pains.

And little or no meaning. Couper.

LUCKNOW, a district of the province of Oude, Hindostan, situated between the twenty-sixth and twenty-seventh degrees of north latitude. The soil, though in general sandy, when well watered, is very productive, and yields cot-ton, and all the grains of India except rice. Here also abound excellent vines, mulberries, and oranges. The inhabitants are intelligent, and considerably cidtivated.

LucKNOw, a city of Hindostan, capital of the province of Oude, is situated on the south bank of the Goomty, which falls into the Ganges

between Binaras and Ghazypore, and is navigai)le for middling-sized boats at all seasons of the veur. It is an ancient city, but, after being for?

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longtime the residence of il>e nabobs of Outit, was abandoned by Sluijau ad Dowleh, after tlie battle of Baxar, for Tyzabad, vvliich he made liis capital. On his death, however, in 1774, his successor returned to Lucknow, and expended large sums on his palace and the other public buddings. He also added an iron bridge across the river. The streets are still narrow and very irregular. In the vicinity, however, is the dwelling of the Britisli resident, and other European inhabitants ; and adjoining to the palace is the cantonment of one of the East India Company's regiments. The gilt domes of the mosques, and the mausoleum of Asoi>h ad Dowleh, give it a showy appearance ; but the situation of the place is bad, and the soil is a white sand, which, in the hot weather, is driven about by the wind, and penetrates every thing. The nabob's gardens are handsome. His army lias been much reduced ; but few princes can make a greater display of pomp on state occasions ; and his repositories and library contain a number of curiosities. In the vicinity are numerous Hindoo and Mahommedan sacred tombs. Population about 300,000. Long. 80° 55' E., lat. 26° 24' N. LUCKNOWTY. See Gour. LUCKPUT Bunder, a town of Hindostan, province of Cutch. It is situated about thirty miles up the Lory River, which is only navigable by small vessels. It is defended by a good fort, and belongs to the Ameers of Sinde. Long. 68° 58' E., lat. 23° 47' N.

LUCKY Bay, a bay on the south coast of New Holland, in the Archipelago de Recherche. LUCKYPORE, a town of Bengal, in the district of Tipperah, is situated inland from the east bank of the Megna, with which it communicates by a small river. The East India Company have an extensive factory here, for the manufacture or purchase of baftahs and other coarse cot-ton cloths.

LUCON, or LucoNiA, the most considerable of the Philippine Islands, in the Indian Seas, is so called from a native word luson, written lucou by the Spaniards, the name of a kind of pestle used by the natives to free their rice from the husk, and which the first discoverers took for a war club. The Indians, or Malays, of the Philii-)pines are divided into many nations, the two principal of which are the Tagalls, in Luconia, and the Bissayas, in the central islands. The Tagalls believe themselves to be descended from a colony of Bornean Malays: one writer makes the Malay population of Luconia, subject to the Spaniards, 1,500,000.

The island is of very irregular shape, the southern extremity being

formed of a number of peninsulas, making two great bays, that of Manilla on the west, and of Lampoon on the east. A great portion of the tract between these bays is occupied by the lake of the bay, forty five leagues in circuit, and which is formed by the waters of fifty to sixty rivers and rivulets, and empties itself into Manilla Bay, by the river Passig. The lake is navigable by large boats, and in it is an island nine leagues in circuit, which, though very fertile, is uninhabited. It would appear that the lake has a communication v.iih some of the vulcanues that suriound it, its

waters being at times strongly impregnated with sulphur, which destroys the fish. There are also many hot springs in its vicinity. The shores of the lake to the feet of the mountains are well cultivated, producing abundance of rice, indigo of a superior quality, pepper, cocoa, and areca nuts, and logwood. The uncultivated plains abound in wild buffaloes, deer, and hogs.

Luconia produces iron, copper, and gold, of which the latter only is collected in small morsels. The east coast is very mountainous and little productive, the strong easterly winds and atmosphere of the sea destroying vegetation. The mountains on this side are chiefly occupied by the natives, who have fled from the Spanish dominion. The north-east point of the island is Cape Engano, and the north-west Cape Bojador. Manilla, the chief city of the island, and of the Spanish possessions, is situated near the mouth of the Passig, which issues from the lake of the bay. See Manilla and Philippines. LU'CRE, 71. s. ˆ Latin lucrum. Gain ; Lu'cRATivE, arf;. > profit; pecuniary emolu- Llcrif'erous. j ment : generally used in a bad sense : yet lucrative (of which lucriferous is an obsolete synonyme) does not partake this character; as it is quite clear that being lucrative is not the least recommendation of numerous pursuits.

'i'aking the oversight thereof, not by constraint, but willingly ; not for filthy lucre, but of a ready mind. 1 I'et. v. 2.

Malice and lucre in them Have laid this woe here.

Shukspeare. Cymheline. The trade of merchandize, being the most lucrative, may bear usury at a good rate : other contracts not so. Bacon.

Should we not farther, honestly comparing things, easily discern, that it is no such indispensable business, but rather indeed some base

dotage on lucre, some inveigling bait of pleasure, some bewitching transport of fancy, that crosseth our devotion.

Barrow. They all the sacred mysteries of Heaven, To their own vile advantages shall turn Of lucre and ambition. Milton's Paradise Lost. Silver was afterwards separated fiom the gold, but in so small a quantity, that the experiment, the costs and pains considered, was not lucriferous.

Boyle. A soul supreme in each hard instance tried. Above all pain, all anger, and all pride. The rage of power, the blast of publick breath. The lust of lucre, and the dread of death. Pope.

The disposition of Ulysses inclined him to pursue the more dangerous way of living by war, than the more lucrative method of life by agriculture. Broome. Her lucrative task she pursues.

And pilfers with so much address. That none of their odour they lose,

Nor charm by their beauty the less. Cmvper. LUCRETIA, a celebrated Roman lady, the wife of Tarquinius Collatinus. Being ravished by Sextus, the eldest son of Tarquin II., she stabbed herself, A. A. C. 509. Her dead body, with the bloody poniard, exposed to the senate, was the signal of Roman liberty ; the expulsion of the Tarquins, and abolition of the regal dignity, was instantly resolved on, and carried into execution. See Rome.

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LUCRETIUS Carus (Titus), a celebrated Latin poet, descended of an ancient and noble lloman family. He studied at Athens, where he become an Epicurean, and acquired great reputation by his learning and eloquence ; but in the flower of his age fell into a frenzy, occasioned by a philtre given him by his wife, who was distractedly fond of him. Lucretius, during the intervals of his madness, versified the doctrines of Epicurus, and composed his six books De Rerum Natura, which are still extant. It is said that he killed himself in a fit of madness, A. A. C. 54, when fifty-one years old. The most correct edition of Lucretius is that of Simon de Coline. His celebrated poem De Natura Re-rum, though among the earliest classics given to the world by the invention of printing, though published by many successive editors, and though translated into all the modern languages of Eu-rope, has not, till very recently, been purified with much success from innumerable corrupt readings which had accumulated through time and ignorance, to the obscurity and essential in-jury of the text. This was the more to be lamented, since the originality and superlative beauty of this poet are not the only attractions he possesses. It is a fact, says the late Dr. Ma-son Good, no less remarkable than true, that the inductive method of Bacon, part of the sublime physics of Newton, and various of the chemical discoveries of our own days, were to a surprising degree anticipated, as to their principles and many important results, by the philosophical poet of Rome. The principal editions of Lucretius are,

Ferrandus Brixire ; . fol.

Fridenberger . X'eronae . fol. 1486.

Aldus . . Venet . . 4lo. 1500.

Ibid . . Ibid . . 8vo. 1515.

Baptistae Pii . Bonon . . fol. 1511, &c.

Lambini . Paris . . 4tJ. 1563, &c.

Ibid . . Ibid . . Bvo. 1565, &c.

Oisanii . . Antwerp . Bvo. 15G3, &c.

Ibid . . Lug. Bat. . Bvo. 1595.

Fabri . . Salmur . . 4to. 1662;

Creechii . Oxon . . Bvo. 1695.

Tonson . . Lond… fol. 1712.

Ilavercanfipi . Lug. Bat. . 4to. 1725.

Bipont . . Bvo. 17B2.

Wakefieldi . Lond… 4to. 1796.

Eichstadtii . Lipsice . . Bvo. IBOl.

Of these editions we would particularly specify those of Tonson, liavercamp, and \‘akefield. The latter is a very beautiful and correct work, in 3 vols. 4to. The small paper copies sold at £5 5$.; and the large paper, of which only fifty copies were taken off for subscribers, at £20 each. This is now an extremely scarce work ; as the principal part of the edition was consumed by fire. This circumstance greatly enhances tlie value of the translation of Lucretius by Dr. Good, published in 2 vols. 4to. in 1H05; for in this edition the translator printed tlie Latin text of his author from Wakefield’s edition, on corresponding pages to his version. Dr. (iood f;ir-ther enriched his work with an interesting preface, and mar.y valuable notes.

LUCRINUS L.icus, a lake of Campania, be-

tween Baia? and Puteoli, famous for oysters. — Horace, Martial, Juvenal. ‘ A long neck of land,’ says Dr. Clarke, ‘prevents the waves from washing into a sedgy pool the poor remnant of theLucrine Lake, once so renowned for the abundance and flavor of its shell fish, of which large beds lined the shallows, while a deep channel in the middle afforded riding and anchorage for vessels, and a passage into the inner basin of Avernus ; a small canal now serves to discharge the superabundant waters. I suppose that originally the Lucrine was only a marsh overflowed by the sea, till Hercules gave it extent and depth, by rising a mound across, and damming out the salt water; that afterwards Augustus formed the Julian port, by raising this wear to a sufficient level, and thereby procuring depth of water for a navy to float in.’

LU’CUBRATE, z;.fl.ˆ Lat. lucubror, lucu—

Lucubra’tion, ?2. s. ˆbratio. To watch or

Lu’cuBRATORY, «(//”. J Study by night: lucubration is nocturnal study ; any thing composed by night : lucubratory, composed by candle-light.

Thy hicifbrations have been perused by several of our friends. Tatler.

You must have a dish of coffee, and a solitary candle at your side, to write an epistle lucubratory to your friend. Pipe.

LU’CULENT, adj. luculcutus. Clear ; transparent; lucid: hence certain ; evident.

They are against the obstinate incredulity of the Jews, the most luculent testimonies that Christian religion hath. Hooker.

And luculent along The purer rivers flow.

Thomson’s Winter.

LUCULLUS (Lucius Licinius), a Roman general, celebrated for his eloquence, his victories, and his riches. In his youth he pleaded at the bar ; and being afterwards made quastor in Asia, and prsetor in Africa, governed those provinces with great moderation and justice. Scarcely was he known as a military man, when he twice conquered the fleet of Hamilcar, and gained two great victories over him. Being made consul with Aurelius Cotta, during the third war witli Mitliridaies, king of Pontus, he was sent against this prince ; and this expedition was attended with a series of victories, which did him less honor than an act of generosity towards his colleague; who, willing to take advantage of his absence to signalise himself by some great exploit, hastened to fight Mithridates; but was defeated and sluit up in Calcedonia ; where he must have perished, if Lucullus, sacrificing his resentment to liis patriotism, had not flown to his assistance, and disengaged him. All Pontus then submitted to Lucullus ; who, being continued in his government of Asia, entered the territories of Tigranes, the most powi’rful king in Asia. Tha* prince marched witli a formidable army against Lucullus: who defeated liim with a handfiil of men, and killed great numbers of his forces ; took Tigranocertes, the capital of his kingdom ; and was ready to put an end to tlie war, when the intrigues of a tribune got him deposed, and Pompey nominated in his room.. Lucullusˆ, having brought home prodigious riches, now

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gave himself up to excessive luxury; and his table was served with a profusion till that time unknown. He brought from the east a great rumber of books, which he formed into a library, and gave admittance to all men of learning, who frequented it in great numbers. To-ward the end of his life he fell into a kind of madness ; and LucuUus his brother was appointed his guardian. He is said to have been the first who introduced cherries into Europe, having brought the grafts from Pontus.

LUCUS, a wood, or grove, sacred to a deity, so called a lucendo, because a great number of lights were usually burning in honor to the god ; a practise common with idolaters, as we learn from Scripture : hence Homer's ayXaov aXaoQ.

LUD, a British king mentioned in old chronicles, and said to have reigned about A.M. 3878. He is reported to have enlarged and built walls about Troynovant, or New Troy, where he kept his court, and made it his capital. The name of London is hence derived from Lud's town ; and Ludgate, from his being buried near it : but other derivations are at least as probable. See London.

LUDAMAR, a country of Central Africa, bounded by Kaarta and Bambarra on the south, and by the Sahara or Great Desert on the north. The inhabitants are Moors of the most bigoted character, who murdered major Houghton, and kept Mr. Park in long captivity. They are al-most entirely strangers to agriculture, and depend for subsistance on their cattle, and the women weave cloth from goat's hair, and transform the skins of the cattle into saddles, bridles, pouches, &c. They likewise make up the native iron into spears and knives : but import their muskets and ammunition from Europe. Each soldier furnishes his own horse and equipments, which consist in a large sabre, a double barrelled gun, a small red leather bag for balls, and a powder-horn. He supports himself entirely by plunder. Though rigid ˆMusselmans they have no mosques, but perform their devotions in an enclosure of mats. The priests officiate as schoolmasters, so far as to teach the males reading and writing, but the education of the women is entirely neglected. Tiieir idea of a fine form is, like the Hottentots, that of extreme corpulence. The king, who personaay administers justice, is only distinguished by a finer cloth and larger tent: but he will be seen eating out of the same bowl, and sleeping in

the same bed with his camel driver. He defrays his expenses by a tax on his subjects, and duties upon the merchandise passing through the kingdom.

LUDEHAUNAT, a town and fortress of Hindostan, situated in the Seik country, on the north-west boundary of the province of Delhi, and on the south bank of the Suttelege. It is the most remote British military station in Hindostan. It is a post of defence against the Afghauns, and has a cold climate for four months ; but, during the summer, the winds are hot. It is 180 miles N.N.W. of Delhi.

LU'DIClIOUS, adj. -^ Lat. ludicer. Laugh—

Lu'dicuously, adv. > able ; or exciting

Lu'dicrousness, n. s. j laughter ; burlesque ; sportive.

Plutarch quotes this instance of Homer's jatlg-

ment, in closing a ludicrous scene with decency and instruction. Broome.

A gentleman solicited Pope to endeavour a reconciliation by a ludicrous poem. Johnson.

I have been at a loss, in all the pictures I have seen of hell, whether the painter did not intend something ludicrous. Burke on the Sublime. Me oft has fancy ludicrous and wild Soothed with a waking dream of houses, towers Trees, churches, and strange visages expressed In the red cinders, while with poring eye I gazed, myself creating what i saw. Cowper. LUDIUS, a celebrated painter, who lived in the reign of Augustus, and excelled in large compositions. He was the first who painted the fronts of houses in the streets of Rome ; which he beautified with great variety of landscapes, and other subjects.

LUDLOW (Edmund), son of Sir Henry Lud-low, was born at Maidenhead, and educated in Trinity College, Oxford. His father opposing king Charles I.'s interests, he joined the same party, and was present at the battle of Edgehill, as a volunteer under the earl of Essex. Upon the death of his father he was chosen M. P. for Wilts, and obtained the command of a regiment of horse for the defence of that county. He was one of the king's judges ; after whose death he was sent by parliament into Ireland, in quality of lieutenant-general of the horse ; which employment he discharged with diligence and success

till the death of the lord deputy Ireton, when he acted for some time as general, though without that title : Cromwell, who knew him to be sincerely in the interest of the commonwealth, contriving to. prevent the parliament from conferring on him that title. The last stroke had been given by Ludlow to the Irish rebellion, if the usurpation of Cromwell had not prevented it. Under him he never acted ; and, though Cromwell used his utmost efforts, he remained inflexible. After Cromwell's death he endeavoured to restore the commonwealth; but, Charles H. being recalled, he concealed himself, and escaped into Switzerland, where he settled at \^evay. After the revolution he came over into England, to be employed in Ireland against king James; but, appearing publicly in London, an address was presented by Sir Edward Seymour to king William III. for a proclamation in order to apprehend colonel Ludlow, attainted for the murder of king Charles I. Upon this he returned to Vevay, where he died in 1693. During his retirement in Switzerland he wrote his Memoirs, which were published in 3 vols. 8vo., and 1 vol. folio.

Ludlow, a market and borough town of Shropshire, at the conflux of the Tame and the Corve, twenty-nine miles from Shrewsbury, and 142 from London. The president of the council of the marshes, established by Henry VIIL, generally kept his courts in it, by which the town was much bvnefited. But these courts were abolished in 1688. Its neighbourhood to Wales makes it a great thoroughfare. It was incorporated by Edward I'. and has the privilege of trying and executing criminals. It is one of the neatest towns in England ; and has walls and seven gates. It is divided into four wards, and is governed by two bailiff's, twelve aldermen.

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twenty-five common councilmen, a recorder, town-clerk, steward, chamberlain, coroner, &c. From the castle, on the top of the hill on which the town stands, is a most delightful prospect. In an apartment of the outer gatehouse Butler is said to have written the first part of his Iludibras. This castle was besieged and taken by king Stephen. Some of the offices are fallen down, and great part of it turned into a bowling-green ; but part of the royal apartments and the sword of state are still left. The battlements are very high and tiiick, and adorned with towers. It has a neat chapel, where are the coats of arms of many Welsh gentry, and over the stable doors are the arms of queen Elizabeth, the earls of Pembroke, &c. This castle was a palace of the prince of Wales. The Tame has a good bridge, several wears, and turns many mills. The town-house is an elegant building of hewn stone. The church is an ancient and venerable structure, built of stone, standing in the upper part of the town. It is in the Gothic style, with large and lofty windows of painted glass, and has a high tower and spire, with eight bells. In the choir is an inscription relating to prince Arthur, elder brother to Henry VI LI., who died here. In the market place is a conduit, with a long stone cross on it, and a niche wherein is the image of St. Laurence, to whom the church was dedicated. It has an almshouse for thirty poor people, and two charity schools for fifty boys and thirty girls. Its principal market is on Monday. The country round is exceedingly pleasant, fruitful, and populous, especially that part called the Corvesdale, being the vale on the banks of the Corve. Lud-low sends two members to parliament.

LUDOLPII (Job), a very learned writer of the seventeenth century, born at Erfurt inThuringia, 13th June 1624. His merit raised him to the rank of counsellor of state, and, after eighteen years service, to that of honorary counsellor. He died at Frankfort, in 1704, aged eighty. He publislied A History of Ethiopia, in 1681, folio ; an Ethiopic Grammar, and many other valuable works.

LtJDOLPH (Henry William), nephew of Job, was born at Erfurt in 1655. He came over to England as secretary to M. Lenthe, envoy from the court of Copenhagen to that of London; and, being recommended to prince George of Denmark, was received as his secretary. He enjoyed this office for some years, until he was incapacitated by ill health ; when he was discharged with a handsome pension ; after he recovered, he travelled into Russia where he was well received by the

czar, and where he was supposed by the Russian priests to be a conjuror, (ˆn his return to Lon-don, in 1694, he wrote a grammar of the Russian language. lie then travelled into the east, to inform himself of the state of the Christian church in the Levant; the deplorable condition of which induced him after his return, with the aid of the bishop of Worcester, to print an edition of the New Testament in the Romaic or vulgar Oreek, to present to the Greek church. In 1709, when great numbers of Palatines came over to England, Mr. Ludolph was appointed by queen Anne one of the commissioners to manage the charities raised for them; but he died early in

1710. His collected works were published in 17 12.

LUDWIGIA, in botany, a genus of the m(y-moiiogynia order, and tetrandria class of plants ; natural order seventeenth, calycanthemiE : cou. tetrapetalous : cal. quadripartite, superior: CAPS, tetragonal, quadrilocular, inferior and polyspermous.

LUDWIGSBURG, a well-built town of Wir-temberg, on the left bank of the Neckar, the chief place of the department of the Enz. It is situated mostly on a rising ground, with gardens below; and has a charitable institution for the education of young children, with which the workhouse and a woollen manufactory have been connected. It was founded in 1715 ; the court removed to it in 1727, and it rapidly increased ; but in 1733, on the death of the reigning duke, the public offices were brought back to Stuttgard, and Ludwigsburg has since been only an occasional residence of the court. Its population is little more than 5000. The palace and opera-house are both fine buildings. Seven miles north of Stuttgard.

LUES, in medicine, is in general used for a disease of any kind ; but in a more particular sense is restrained to contagious and pestilential diseases : thus the lues Gallica, or venerea, signifies the venereal disease. See Medicine.

LUFF, or LooF, v. n. Sax. lupt ; Dan. luff ; the wind. To keep close to the wind. A sea term.

Contract your swelling sails, and *i*/to wind.

Brijden.

To Luff signifies to put the helm towards the lee side of the ship, in

order to make the ship sail nearer the direction of the wind. Hence the pilot's orders to the steersman, luff round, or luff a-lee, is the excess of this movement, by which it is intended to throw the ship's head up in the wind, in order to tack her, &c. A ship is accordingly said to spring her luff when she yields to the effort of the helm, by sailing nearer to the line of tlie wind than she had done before. Luff Tackle, a name given by sailors to any large tackle that is not destined for a particular place, but may be variously employed as occasion requires. It is generally somewhat larger than the jigger tackle, although smaller than those which serve to hoist the heavier materials into and out of the vessel, wliich latter are the main and fore tackles, the stay and quarter tackles, 8cc.

; LUG, V. a. & V. 71. Sax. aluccan, lujstan, to pull ; Swed. Iii<:ˆa ; Dan. luge. To hale or drag; to pull with violence ; to come along heavily.

Vou gods ! why this Will lug your priests and servants from your side.

Shukspcare. Thy bear is safe, and out of peril, Though lugged indeed, and wounded very ill.

Hudihras. When savage bears agree with hears, Siiall secret ones hig saints by tiie' ears! Id. My flagging soul flies under her own pitch, jˆike fowl in air, too damp, and lugs along, As if she were a body in a body. Dryden.

Either every single animal spirit must convey a whole representation, or else they must divide the image amongst them, and so lug off every one his ,.|,arf>_ Collier.

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Luc, n.«. Belg. log; Scot. lug. A small kind of fish ; a small worm ; also a land measure of about a pole or perch in length. That ample pit, yet far renowned For the large leap which Debon did compel Ceaulin to make, being eight lugs of ground.

Spenser. They feed on salt unmerchantable pilcliards, tag worms, lugs, and little crabs. Carew.

Lug, n. s. Scot. lug. The ear. An anxious ee I never throws Behint my lug, or by my nose ; I jouk beneath misfortune's blows

As weel's I may ; Sworn foe to sorrow, care, and prose,

I rhyme away. Burns. LUGANO, or Lauis, a trading town of Switzerland, the capital of the canton of the Ticino, stands on the north side of the lake of Lugano, and has an extensive traffic in silk, and some much-frequented fairs. Population 43.50. Sixteen miles north-west o" Como.

Lugano, a lake in the canton of Ticino, south of Switzerland, is twenty-five miles in length, from three to six in breadth, and of great depth. The elevation of its surface above the JNIediter-ranean is computed at 930 feet. It communicates with the lake Maggiore by the Tresa, and the lake Piano by the Canale Nuovo. The banks, at the base of two mountain ranges, are steep and craggy, displaying a scene of uncora mon magnificence. In the bay near Lugano they slope down to the edge of the water, and discover the town surrounded by meadows, corn-fields, and vineyards, while the Alps form a grand semicircular boundary to the lardscape.

LUGDUNUM, in ancient geography, the capital of the Segusiani, in Gallia Celtica, situated at the conflux of the Arar and Rhodanus, on an eminence, as the Celtic terra dune signifies; built by Manucius Plancus, while commanding under Augustus in that part of Gaul ; and whither he led a colony. It is now called Lyons.

LucDUNUM Batavorum, in ancient geography, a town of the Batavi in Gallia Belgica; now called Leyden.

LuGDUNUM Convenarum, in ancient geography, a town of Gallia Narbonensis, in Aquitania, at the foot of the Pyrenees. Now called St.

Bertrand.

LUGEDS Lacus, in ancient geography, a lake of Japydia, in Illyricum, south of the Save, near the head of the Arsia.

LUG'GAGE, n. s. Either from lug, to pull ; or a corruption of loadage. Any thing cumbrous or heavy ; any thing of more weight than value. Come, bring your luygage nobly on your back.

ˆhakspeare. What do you mean To doat thus on such luggage?

Id. Tempest. Think not thou to find me slack, or need Thy politick maxims, or that cumbersome Luggage of war there shewn me.

Miltun's Paradise Regained. How durst fhou with that sullen luggage ()' th' self, old ir'n, and other baggage, T' oppose thy lumber against us ? Hudibras. The mind of man is too light to bear much certainty among the ruffling winds of passion and opi-

nion ; and, if the I'iggage be prized equally with the jewels, none will be cast out till all be shipwrecked.

Glanville. A lively faith will bear aloft the mind,

And leave the luggage of good works behind.

Dryden.

I am gathering up my luggage, and preparing for my journey. Swift to Pope.

LUGO, a neat city of Galicia, Spain, near the Minho. It stands on an eminence, and is more than three miles in circuit. It is of great antiquity, having been the capital of a conventus or district, under the Romans, who knew it as Lucus Augusti. It is now a bishop's see, and has a cathedral of Gothic architecture, with several other churches and convents. The walls are in good preservation ; and it has some small woollen manufactures. Inhabitants 5000. Fifty-one miles east of Santiago.

Lugo, a town of Italy, in the ecclesiastical state, province of Ferrara, on the river Senio. In 1796 ii was pillaged by the French. Inhabitants 5000. Fifteen miles south of Ferrara.

LUGO (John), a learned Jesuit, bom in Madrid, and educated at

Salamanca. He was professor of divinity at Valiadolid, and afterwards in Rome, where Urban VIII. made him a cardinal. He was the first who introduced the Jesuits' bark into France, in 1650. He died in Rome in 1660. His works on theology were printed iu Rome in 7 vols, folio.

LUG-SAIL, a square sail hoisted occasionally on the mast of a boat or small vessel, upon a yard which hangs nearly at right angles with the mast. These are more particularly used in the barca longas, navigated by the Spaniards in the Mediterranean.

LUGU'BRIOUS, adj. Fr. lugubre ; Lat. lu-guhris. Mournful ; sorrowful.

A demure, or rather a lugubrious look, and a whm-ing tone, make up the sum of many men's humilia-tions. Decay of Piety.

LUITPRAND, a celebrated Lombard historian of the tenth century, born in Pavia. He was secretary to Berengarius, who, in 948, sent him ambassador to Constantine VIII. ; but, having afterwards disgraced him, Otho I. drove Berengarius from the throne, and madeLuitprand bishop of Cremona. In 968 he was sent ambassador to the emperor Nicephorus Phocas. He died in Italy. His history was printed at Antwerp in 1640, in folio.

LUKE (St.), the evangelist, and the disciple of the apostles, was originally of Antioch in Syria, and by profession a physician. He particularly attached himself to St. Paul, and was his faithful companion in his travels and labors. He went with him to Troas in Macedonia, about A. D. 51. He wrote his Gospel in Achaia about 53; and, in 63, the Acts of the Apostles, which contains a history of thirty years. Of all the inspired writers of the New Testament, his works are written in the most elegant Greek. It is believed that St. Luke died at Rome, or in Achaia.

Luke (St.) the Gospel of, a canonical book of the New Testament. Some think that it was properly St. Paul's Gospel ; and that, when the apostle speaks of his gospel, he means what is

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called St. Luke's. Irenxus says, that St. Luko digested in writing what St. Paul preached to the Gentiles ; and Gregory Nazianzen tells us, that St. Luke wrote with the assistance of St. Paul.

LUKE'WARM, adj. -\ Sax. jjlasc ; Dan.

Luke'warmly, flfZu. ylunk; Bclg. foaw;

Lukf/warmness, »j. s. jTeut. lew; Scot. lew. As Mr. Thomson suggests, perhaps breathwarm. Moderately warm ; hence indiflerent ; wanting zeal or decision.

A dreary corse, whose life away did pass,

All wallowed in his own yet lukewarm blood,

I'hat from his wound yet welled fresh alas !

Faerie Queene.

May you a better feast never behold, You knot of mouth friends ! smoke and lukewarm

water Is your perfection. Shakspeare. Tirnon of Athens.

Some kind of zeal counts all merciful moderation lukewurmness. King Charles.

God loves this heat of zeal, in all the carriages of his servants ; and if it transport us too far, he pardoneth the errors of our fervency, rather than the indifferences of lukeicarmness. Bp, Hall.

I consider further, that, without the superinducing a contrary state of good to the former state of evil, we cannot return, or go off from that evil condition that Ood hates, I mean the middle state, or the state of lukeiviirmness. Bp. Taylor.

If some few continue stedfast, it is an obedience so luheicarm and languishing, that it merits not the name of passion. Dry den.

This sober conduct is a mighty virtue In lukewarm patriots. Addison's Cato.

The defect of zeal is luhe.warmness, or coldness in religion ; the excess is inordinate heat and spiritual fury. Spratt.

Whence is it but from this attractive power, that water, which alone distils with a gentle lukewarm lieat, will not distil from salt of tartar without a great heat? Newton's Opticks.

Bathing the body in lukewarm water is of great advantage to contemperate hot and sharp humours.

Wiseman's Surgery.

Go dry your chaff and stubble, give fire to the zeal of your faction, and reproach them with lukewarm-ness. Swift.

. Shall heaven which gave us ardour, and has shewn Her own for man so strongly, not disdain What smooth emollients in theology, lietnmbent 'irtue's downy doctors, preach, Tf.at prose of piety, a lukewarm praise 1 Rise odours sweet from incense uninflamed ? Devotion when lukewarm is undevout. Young.

Moderation is a great and important Christian virtue, very diflerent from that bad quality of tlie rr.ind under which it is often misrepresented and disguised, *viz.* hikewarniness and indifference about the truth. The former is very consistent with a regular and well-corrected zeal ; the latter consists in the total want of it. Mason.

LULL, i;.«. "i Dan. lulle; Swed. lullu;

Lui/r.AiiY,n. s. 3 Ital. *y/«*;].at. lullo, lullua. To soothe or compo.se to sleep by pleasing sounds ; compose or beguile in any way : lullaby is a song to still or compose babes.

And in her barme tins litil child she leid Witli fu! sad face, and gan the child to blisse, And lulled it, and aftir gan it kiss.

Chaucer. Cant. Tiilcs. Tiiere trickled .softly down A jjCnllc btrcam, whose muinmiiiig wave did play

Amongst the pumy stories, and made a sound To lull him soft asleep, that by it lay.

Faerie Queene. Philomel with melody, Sing in your sweet lullaby ; Lulla, lulla, lullaby ; lulla, lulla, lullaby.

Shakspeare. — Marry, Sir, lullaby to your bounty till 1 come again. / (‘.

Only that noise heaven’s rolling circles kest, Sung lullabii, to bring the world to rest. Fairfax.

Such sweet compulsion doth in musick lie, To lull the daughters of necessity. Milton.

To find a foe it shall not be his hap. And peace shall lull him in her flowery lap. Id. How hard soe’er it be to bridle wit. Yet memory oft no less requires the bit: How many hurried by its force away, For ever in the land of gossips stray ! Usurp the province of the nurse to lull, Without her privilege of being dull !

Stillingfleet. Drinking is the lullaby used by nurses to still cry-mg children. Locke on Education.

No more these scenes my meditations aid. Or lull to rest the visionary maid. Pope.

By the vocal woods and waters lulled. And lost in lonely musing in a dream.

Thomsm. To the silent hours How often I repeat their rage divine, To lull my griefs, and steal my heart from woe.

Ycurii). What neither yields us profit nor delight Is like a nurse’s lullaby at night ; Guy Earl of Warwick and fair Eleanore, Or giant-kdling Jack, would please me more.

Cowper. Deep in the silent vale, unseen.

Beside a lulling stream, A pensive youth, of placid mien.

Indulged this tender theme. Beattie.

Or my guitar, which still thou lovest to hear. Shall sooth or lull — or, should it vex thine ear, We’ll turn the tale, by Ariosto told. Of fair Olympia loved and left of old. Byron.

LULL! (John Baptist), the most celebratea musician that has appeared in France since the revival of learning, was Lorn at Florence. lie was taken to France when very young, and he carried the art of playing on the violin to the highest perfection. Louis XIV. made him superintendant of music. Some time after, Perinna having introduced

operas into France, and quarrelling with his company, he resigned his privilege to Lulli. Operas were then carried to the utmost perfection by him, and were attended with continual applause. Lulli gave a piece of his own composition annually till his death, in

1687.

LULLY (Raymond), a celebrated writer, surnamed tiie Enlightened Doctor, was born in Majorca in 1225. lie applied himself with indefatigable labor to tlie study of the Arabian philosopliy, to ciicmistry, physic, and divinity ; and acquired great reputation by his works. He at length went to preach the gospel in Africa ; and was stoned to death in Mauritania, at the age of eighty. He is honored as a martyr in Majorca, wlnther his body was carried. He wrote many tr(? atises on the sciences, in wliicli lie shows much study and subtilly, but little

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jud2;ment or solidity. A complete edition of his works has been printed at JNIentz.

LUMBA'GO, «. s. Lat. /«w6i, the loins. Pain of tlie loins.

Luinbagos are pains very troublesome about the loins, and small of the back, such as precede ague fits and fevers ; they are most commonly from fulness and acrimony, in common with a disposition to yawnings, sluulderings, and erraiick pains in other parts, and go off with evacuation, generally by sweat, and other critical discharges of fevers. Quincy.

Lumbago. See Medicine, Index.

LUM'BER, 7(. s., V. a. Sc v. n. Sax. loma, je-loma, household-stuff; Belg. and Teut. loriip, lump. Any thing useless, cumbersome, or un-sorted : any thing of more bulk than value : to heap things irregularly; to move in a heavy, sluggish, or noisy manner.

The very bed was violated By the coarse hands of filthy dungeon villains, And thrown amongst the common lumber. Otwciy. One son at home

Concerns thee more than many guests to come. If to some useful art he be not bred,

lie grows mere lumber, and is worse than dead.

Dry den. First let them run at large, Nor lumber o'er the meads, nor cross the wood. Id.

If God intended not the precise use of every single atom, that atom had been no better than a piece of lum,ber. Grew.

In Rollo we must have so much stuff lumbered together, that not the least beauty of tragedy can appear. Rymer.

The poring scholiasts mark ;

Wits, who, like owls, see only in the dark ;

A lumber-house of books in every head. Pope. And gods and goddesses

discarded long,

Like useless lumber or a stroller's song.

Are bringing into vogue their heathen train.

And Jupiter bids fair to rule again. Cowper.

A man that knows himself will have a regard to the furniture of his memory ; not to load it with trash and lumber, a set of useless notions or low conceits, which he will be ashamed to produce before persons of taste and judgment. Mason.

LUMBRICUS, the worm, in zoology, a genus of insects belonging to the order of vermes intestina. The body is cylindrical, annulated, with an elevated belt near the middle, and a vent-hole on its side. There are sixteen species of this animal.

L. marinus, the marine worm, or lug, is of a pale red color, and the body is composed of a number of annular .joints ; the skin is scabrous, and all the rings or joints are covered with lit-tle prominences, which render it extremely rough to the touch. It is an inhabitant of the mud about the sea shores, and serves for food to many kinds offish : very large ones are to be met with about the Bognor rocks in Sussex. The fishermen bait their hooks and nets with them.

L. terrestris, the earth or dew worm, Mr. Bar-but observes, differs extremely in color and external appearance in the different periods of its growth, which has occasioned people little acquainted with the variations of this kind of animals to make four or five different species of them: The general color is a dusky red. Tiiey live under ground, never quitting the earth but af\er heavy rains or at the approach of storms, and in. the season of their amours. The method

to force them out is, either to water the ground with infusions of bitter plants, or to tranipie on it. The bare motion on the surface of the soil drives them up, in fearof being surprised by their formidable enemy the mole. The winding progression of the worm is facilitated by the inequalities of its body, armed with small, stifle, sharp-pointed bristles ; when it means to insinuate itself into the earth, there oozes from its body a clammy liquor, by means of which it slides down. It never damages the roots of vegetables. Its food is a small portion of earth, which it has the faculty of digesting. The superfluity is ejected by way of excrement. Earth worms are hermaphrodites, and have the parts of

generation placed near the neck ; their copulation is performed on the ground ; nothing being more usual than to see it full of holes, which holes are thought to be made by those kind of worms coming to the surface in quest of females. LU'MINARY, n. s. "i Fr. lumimdre ; Lat. lu-Lumina'tion, n. s. yminare, lumen. A body Lu'minous, adj. j emitting light ; any thing or person that affords mental light, intelligence, or instruction : lumination is emission of light : luminous, shining ; bright with light ; enlightened.

Fire burneth wood, making it first luminrm, then black and brittle ; and, lastly, broken and incinerate.

Sir John Graham, I know not upon whai lumi-narieshe espied in his face, dissuaded him from marriage. Wet ((III. The great luminary Dispenses light from far. Milton. Earth may, industrious of herself, fetch day. Travelling east ; and, with her part averse From the sun's beam, meet night ; her other part Still lumiuous by his ray. Id. Paradise Lost.

The most luminous of the prismatick colours are the yellow and orange ; these affect the senses more strongly than all the rest together. A'ewtou.

The circulation of the blood, and the weight and spring of the air, had been reserved for a late happy discovery by two great luminaries of this island.

Bentley. How came the sun to be luminous? Not from the necessity of natural causes. Id.

Not all these luminaries, quenched at once. Were half so sad as one benighted mind. Which gropes for happiness, and meets despair.

Young. The state of the possessor of humble virtues, to the affecter of great excellencies, is that of a small cottage of stone, to the palace raised with ice by the empress of Russia ; it was for a time splendid and luminous, but the first sunshine melted it to nothing.

Johnsou. O ! what a fund of genius, pent

In narrow space, is here ! This volume's method and intent

How luminous and clear ! Cowper.

LUˆIISDEN (Andrew), esq., a late eminent antiquarian and man of letters, born in Aberdeen in 1720. He was of the family of Cushnie, in

Aberdeenshire, and, in the early period of his life, travelled into Italy, and resided a considerable time at Rome ; during which he wrote a work, entitled Remarks on the Antiquities of Rome and its environs ; wherein he descrioes the venerable antiquities of that ci-devant metropolis of the world with equal fidelity and elegance

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He afterwards spent many yCTir in Paris, but died in his native town in 1801

LUMP, n.s. & v.a. LuMi”iKG, adj. LuMp’isH, adj. LuMP’iSHLV, adv.

LuMI»‘lSHNESS, K. S.

lump is to take in

Belg. lo?)ip, klomp. A mass ; an unformed or • undistinguished body or collection of things; the whole system : to the gross or wholesale : lumpin.j and lumpish, gross; massy; heavy; inactive; inert: lumpy, abounding in lumps or excrescencies.

And Isaiah said, Take a lump of figs.

2 Kings XX. 7. Hence, heap of wrath, foul indigested Ittmp ; As crooked in tliy manners as thy shape.

Shakspeare. All men's honours Lie like one lump before him to be fashioned Into what pinch he please. Id. Henry VIIl.

Sylvia is lumpish, lieavy, melancholy.

Shakspeare. Out of the earth was formed the flesh of man, and tlierefore heavy and htmpish. Raleigh.

I'lie weed kal is by the Egyptians used first for fuel, and then they crush the ashes into lutnpi like a stone, and so sell them to the Venetians. Bacon. Love is all spirit : fairies sooner may e taken tardy, when they night-tricks play. Than we ; we are too dull and lumpish.

Suckling. Without this various agitation of the water, how could lumps of sugar or salt cast into it be so perfectly dissolved in it, that the lumps themselves totally disappear ? Boyle.

Every fragrant flower, and odorous green. Were sorted well, with lumps of amber laid between.

Dryden. How dull and how insensible a beast Is man, who yet would lord it o'er the rest ! Philosophers and poets vainly strove In every age the lumpisli mass to move. Id.

To conceive thus of the soul's intimate union with an infinite being, and by that union receiving of ideas, leads one into as gross thoughts, as a country-maid would have of an infinite butter-print, the several parts whereof being applied to her lump of butter, left on it the figure or idea there was present need of.

Locke. One of the best spades to dig hard lumpy clays, but too small for light garden mould. Mortimer.

Little terrestrial particles swimming in it after the grossest were sunk down, which, by their heaviness and lumpish figure, made their way more speedily.

Burnet. Why might there not have been, in this great mass, huge lumps of solid matter, which, without any form or order, might be jumbled together?

Keil against Burnet. A wretch is prisoner made Whose flesh torn oft" by lumps, the ravenous foe In morsels cut. Tate.

If my readers will not go to the price of buying my papers by retail, they may buy them in the lump.

Addison. The expences ought to be lumped together.

Ayliffe's Parergnn. It is rare to find any of these metals pure : but copper, iron, gold, silver, lead, and tin, all promiscuously in one lump. Woodward's Natural History. Nick, thou slialt have a lumping pennyworth.

Arhuthn>:t. Other epidemical vices are rife and predominant unly for a season, and must not be ascribed to human nature in the lump. Bentley.

In malice to proud wits, some proudly lull Their peevish reason, vain of being dull ; AVhen some home joke has stung their solemn souls. In vengeance they determine — to be fools ; Thro' spleen, that little nature gave, make less. Quite zealous in the ways of heaviness ; To lumps inanimate a fondness take. And disinherit sons that are awake. Young,

LuMPFiSH. See Cyclopterus.

LUNA, in astronomy, the moon. See Astro

KOMY.

Luna, in alchemy, signifies silver; from the supposed influence of the moon upon that metal.

Luna, in ancient geography, a forest of Germany, near the Ilercynia ; below v.hich were the Boemi : it was therefore in Moravia near the springs of the Marus, now March, which runs into the Danube over

against Carnutum.

Luna, a town and port of Liguria, at the mouth of the Macra. The town was but small, but the port large and beautiful, according to Strabo. Its ruins are called Luna distrutta. It was famous for its quarries of white marble, thence called Lunense ; and for its large cheeses, each weighing lOOOlbs. It lies two miles south of Sarzana.

Luna (Alvaro, or Alvares de), the favorite of John II. king of Castile, was natural son of Don Alvaro de Luna, lord of Canete, in Arragon, by a woman infamous for unbounded lust. He was born in 1388, was introduced into court .'n 1 408, and made a gentleman of the bedchamber to king John, with whom he grew into high favor. In 142 r he was obliged to retire; tlie courtiers complaining that a man of no military skill or virtue should be advanced to the highest authority. Accordingly Alvaro was banished from court eighteen months; but this was the greatest affliction imaginable to the king ; who showed every mark of distress upon his removal, and spoke of nothing but Alvaro. He was therefore recalled ; and, being invested with his usual authority, revenged himself upon his enemies, by persuading the king to banish them. Of the forty-five years he spent at court, he enjoyed for thirty of them so entire an ascendancy over the king, that nothing could be done witliout his or-ders. In short, he wanted nothing but the name of king; he had all the places in the kingdom at his disposal ; lie was master of the treasury, and by bounties had so gained the hearts of the subjects, tliat the king, though his eyes were now opened, and his affections sufficiently turned against hiin, durst not complain. At last, however, he was seized and imprisoned. During his confinement he made several attempts to speak to tlie king in person ; but, not being able to effect this, he sent a letter to the king, which however produced no effect in his favor, for he was tried and condemned to lose his head. Luna Cornea. See Chemistry and Silver.

LU'NACY, n. s. Lu'nar, adj. Lu'NARY,rt(//. & n. s.

Lu'natep, Lu'natic, adj. 5c n. s. Luna'tion, n. s. Lune, n. s. Lunette'.

From litiia the moon. A kind of madness influenced by the moon ; madness in general, f Lunar and lunary, as adjectives, signify relating to, or under the influence of the moon :

us a substantive lunary is moon-wort, a plant. Lunated, horned, as the moon. Lunatic, mad; a madman. Lunation is the revohition of the moon. Lune, any thing of the shape of a half-moon. Lunette, a small half-moon. Herbes coude I tell eke many on, As egremoine, valerian, and lunarie, And other swiche. Chaucer. Cant. Tales.

Then sprmkles she the juice of rue With nine drops of the midnight dew. From lunarii distilling. Drayton s Niimphki.

I.ove is merely madness, and deserves as well a dark house and a whip as madmen do ; and the rea-son why they are not so punished and cured is, that the lunacy is so ordinary, that the whippers are in love too. Shakspeare. As Yuu Like It.

Bedlam beggars, from low farms, Sometimes with lunatich bans, sometimes with

prayers. Enforce their charity. Shakspeare.

The lunatick, the lover, and the poet. Are of imagination all compact : One sees more devils than vast hell can hold : The madman. Id. Midsummer Night's Dream.

These dangerous unsafe lunes o' the' king ! be-shrew them ! He must be told on't, and he shall : the office Becomes a woman best. Id. Winterˆs Tale.

They that have resolved that these years were hut lunarii years, *viz.* of a month, or Egyptian years, are easily confuted. Raleigh.

They have denominated some herbs solar and some lunar, and such like toys put into great words. Bacon's Natural History.

There is a difference of lunacii : I had rather be mad with him, that, when he had nothing, thouglit all the ships that came into the haven his, than with you who, when you have so much coming in, think you have nothing. Stickling.

I dare ensure any man well in his wits, for one in the thousand, that

he shall not die ulunatick in bed-lam within these seven years ; because not above one in about one thousand five hundred have done so.

Gratint's Bills.

He restored lunatic persons to their right wits, and dispossessed evil spirits. Barrow.

The figure of its seed much resembles a horse-shoe, which Baptista Porta hath thought too low a signification, and raised the same into a lunary representation. Browne's Vulgar Errours.

If the lunations be observed for a cycle of nineteen years, which is the cycle of the moon, the same observations wall be verified for succeeding cycles for years. Holder on Time.

Then we upon our globe's last verge shall go, And view the ocean leaning on the sky ;

From hence our rolling neighbours we shall know, And on the laiuir world securely pry. Dryden,

Lunette is a covered place made before the cour-tine, which consists of two faces that form an angle inwards, and is commonly raised in fosses full of water, to serve instead of a fausse braye, and to dispute the enemy's passage : it is six toises in extent, of wliich the parapet is four. Trevoux.

The ordinary method of making a tragic hero is to clap a huge plume of feathers upon his head, which rises so very high, that there is often a greater length from his chin to the top of his head, than to the sole of his foot. For my part, when I see a man uttering his complaints under such a mountain of feathers, I am a])t to look upon him rather as an unfortunate/i(»n(ic than a distressed hero. Addison.

See the blind beggar dance, the cripple sing, 'J he sot a hero, lunatick a king. Pope,

The residue of the yearly profifs shall be laid out in purchasing a piece of land, and in building thereon an hospital for tlie reception of ideots and lunaticks. Swift.

A troop of Janizaries strewed the field, Fallen in just ranks or wedges,

lunes, or squares. Firm as they stood. IValts.

Ye train I'ierian ! to the lunar sphere. In silent hour, address your ardent call For aid immortal, less her brother's right.

Young.

Lunacy, in law. If a man in his sound me-mory commits a capital oH'ence, and before arraignment for it he becomes mad, he ought not to be arraigned for it : because he is not able to plead it with' that advice and caution that he ought. And if, after he has pleaded, the prisoner becomes mad, he shall not be tried ; for how can he make his defence? If, after he be tried and found guilty, he loses his senses before judgment, judgment shall not be pronounced ; and if, after judgment, he becomes of nonsane memory, execution shall be stayed : for, perad-venture, says the humanity of the English law, had the prisoner been of sound memory, he might have alleged something in stay of judgment or execution. Indeed, in the bloody reign of Henry VIII., a statute was made, which enacted, that if a person, being compos mentis, should commit high treason, and after fall into madness, he might be tried in his absence, and should sufl'er death, as if he were of perfect me-mory. But this savage and inhuman law was repealed by the statute 1 & 2 Philip and Mary c. 10. For, as is observed by Sir Edward Coke, 'the execution of an offender is for example, ut pjena ad paucos metus ad omnes perve-niat ; but so it is not when a mad man is executed : but would be a miserable spectacle, both against law, and of extreme inhumanity and cruelty, and can be no example to others.' But if there be any doubt whether the party be compos or not, this shall be tried by a jury. And if iie be so found a total idiocy, or absolute insanity, excuses from the guilt, and of course from the punishment, of any criminal action committed under such deprivation of the senses ; but, if a lunatic has lucid intervals of understanding, he shall answer for what he does in those intervals, as if he had no deficiency. Yet, in the case of absolute madmen, as they are not answerable for their actions, they should not be permitted the liberty of acting unless under proper control, and, in particular, they ought not to be suffered to go loose, to the terror of the king's subjects. It was the doctrine of our ancient law, that persons deprived of their reason might be confined till they recovered their senses, without waiting for the forms of a commission or other special authority from the crown ; and now, by the vagrant acts, a method is chalked out for imprison-ing, chaining, and sending them to their proper homes. The matrimonial contract likewise can-not take place in a state of idiocy. It was formerly adjudged, that the issue of an idiot was legitimate, and his marriage valid. A strange determination ! since

consent is absolutely requisite to matrimony, and neither idiots nor lunatics are capable of consenting to any thing.

And therefore the civil law judged much more sensibly, when it made such deprivations of rea-son a previous impediment, though not a cause of divorce if they happened after marriage. And modern resolutions have adhered to the sense of the civil law, by determining that the marriage of a lunatic, not being in a lucid interval, was absolutely void. But as it might be difficult to prove the exact state of the party's mind at the actual celebration of the nuptials, upon this account (concurring with some private family reasons), the statute 15 Geo. II. c. 30, has provided, that the marriage of lunatics and persons under phrenzies (if found lunatics under a commission or committed to the care of trustees under any act of parliament) before they are declared of sound mind by the lord chancellor, or the majority of such trustees, shall be totally void. Idiots and persons of nonsane memory, as well as infants and persons under duress, are not totally disabled either to convey or purchase, but sub modo only. For their conveyances and purchases are voidable, but not actually void. The king, indeed, on behalf of an idiot, may avoid his grants or other acts. But it has been said that a non compos himself, though he be afterwards brought to a right mind, shall not be permitted to allege his own insanity in order to avoid such grant : for that no man shall beal-lovved to stupify himself, or plead his own disability. The progress of this notion is somewhat curious. In the time of Edward I. non compos was a sufficient plea to avoid a man's own bond ; and tliere is a writ in the register for the alienor himself to recover lands aliened by him during his insanity ; dum fuit non compos mentis sua), ut dicit, &c. But under Edward III. a scruple began to arise, whether a man should be permitted to blemish himself, by pleading his own insanity ; and, afterwards, a defendant in assize having pleaded a release by the plaintiff since the last continuance, to which the plaintiff replied (ore tenus, as the manner then was) that he was out of his mind when he gave it, the court adjourned the assize ; doubting, whether, as the plaintiff was sane both then and at the

commencement of the suit, he should be permitted to plead an intermediate deprivation of reason ; and the question was asked, how he came to remember to release, if out of his senses when he gave it? Under Henry VI., this way of reasoning (that a man shall not be allowed to disable himself, by pleading his own incapacity, because he cannot know what he did under such a situation) was seriously adopted by the judges in argument, upon a question, whether the heir was barred of his right of entry by the feoffment of his insane ancestor ? And from these loose authorities, which Fitzherbert does not scruple to reject as being contrary to reason, the maxim, that a man shall not stultify himself, has been handed down as settled law : though later opinions, feeling the inconvenience of the rule, have in many points endeavoured to restrain it. And, clearly, the next heir, or other person interested, may, after the death of the idiot or non compos, take advantage of his incapacity, and avoid the grant. And so too, if he purchases under this disability, and does not afterwards, upon recovering his senses, agree to the purchase, his heii may either waive or accept the estate at his op-tion. In like manner, an infant may waive such purchase or conveyance, when he comes to full age; or, if he does not then actually agree to it, his heirs may waive it after him. Persons, also, who purchase or conrey under duress, may affirm or avoid such transaction whenever the duress has ceased. For all these are under the p rotection of the law; which will not suffer them to be imposed upon through the imbecility of their present condition ; so that their acts are only binding, in case they be afterwards agreed to when such imbecility ceases. Yet the guards or committees of a lunatic, by the statute 11 Geo. III. c. 20, are empowered to renew in his right, under the directions of the court of chancery, any lease for lives or years, and apply the profits of such renewal for the benefit of such lunatic, his heirs, or executors.

LUNiE MoNS, in ancient geography, a promontory of Lusitania, now called the rock of Lisbon.

LunjE Mons, a mountain of Ethiopia, from which the Nile was supposed to take its rise.

LuNiE PoRTUS, a very extensive port, or rather a bay of Liguria, between Portus Veneris and Portus Ericis, twenty miles in compass ; now called the Gulph of Spezia, on the east coast of Liguria.

Lunar Caustic. See Chemistry.

Lunar Iris, or Lunar Rainbow, a rainbow formed by the reflection of the rays of light from the noon. This phenomenon is seldom observed.

Aristotle is said to have been the first who observed a lunar iris, and says they are never seen but at full moon. They never appear un-less the moon be near the opposition. See Rainbow.

Lunar Month. See Chronology and Month.

A Lunar Year consists of 354 days, or twelve synodical months. See Year.

LUNARE Os, in anatomy, the second bone in the first row of the carpus ; so named because one of its sides is in form of a crescent.

LUNARIA, satin flower, honesty, or moon-wort, in botany, a genus of the siliculosa order, and tetradynamia class of plants : natural order thirty-ninth, siliquosse : silicula entire, elliptical compressed, plane, and pedicellated with the valves equal to the partition, parallel and plane : CAL. leaves alternately fritted at the base. This plant is famous in many places for its medicinal virtues, though it is not received in the shops. The people in the north of England dry the whole plant in the oven, and give as much as will lie on a shilling for a dose twice a day in hemorrhages of all kinds, particularly in the too abundant flowing of the menses, and with great success. The Welsh, among whom it is common, make an ointment of it, which they use externally, in dysenteries.

LUNARIUM, in ancient geography, a promontory of Ilispania Citra, between Blanda and Ba?tulo ; commonly called the Cape of Pa-lafugel, or of Tosa, in Catalonia, on the Mediterranean.

A Lunatic is properly one that has lucid in-

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tervals; sometimes enjoying his senses, and sometimes not ; and that supposed to depend on the influence of the moon.

LuKATic, in law. Under the general term of non compos mentis (which Sir Edward Coke says is the most legal name) are comprised not only lunatics, hut persons under frenzies, or wiio lose their intellects by disease , tliose tiiat grow deaf, dumb, and blind, not lieing born so; or such, in short, as are judged by the court of chancery incapable of conducting their own affairs. To tliese also, as well as idiots, tiie king is guardian, but to a very different purpose. For liiR law always imagines, itiat these accidental misfortunes may be removed ; and therefore only constitutes the crown a trustee for the unfortunate persons, to protect their property, and to account to them for all profits received, if they recover, or, after their decease, to their representatives. And therefore it is declared by Stat. 17 Edw. II. c. 10, that the king sliall provide for the custody and sustentation of lunatics, and preserve tlieir lands, and the profits of them for their use when they come to their right mind ; and the king shall take nothing to his own cise ; and, if the parties die in such estate, the residue shall be distributed for their souls by the advice of their ordinary, and of course (by the subsequent amendment of the law of administrations) shall now go to their executors or administrators. On the first attack of lunacy, or other occasional insanity, when there may be hopes of a speedy restitution of reason, it is usual to confine the unhappy objects in private custody, under the direction of their nearest friends and relations : and the legislature, to prevent all abuses incident to such private custody, has interposed its authority, by 14 Geo. III. c. 49, for regulating private madhouses. But when the disorder is grown permanent, and the circumstances of the party will bear such additional expense, it is thought pro-per to apply to the royal authority to warrant a lasting confinement. The method of proving a person non compos is very similar to tiiat of proving him an ideot. The lord chancellor, to whom, by special authority from the king, the custody of idiots and lunatics is intrusted, upon petition or information, grants a commission in the nature of the writ de idiota inquirendo, to enquire into the party’s state of mind ; and, if he be found non compos, he usually commits the care of his person, with a suitable allowance for his maintenance, to some friend, who is then called the committee. However, to prevent sinister practices, the next heir is seldom permitted lobe of this committee of the person ;

because it is his interest that the party should die. But, it has been said, there lies not the same objection against his next of kin, provided he be not his heir; for it is his interest to preserve the lunatic's life, in order to increase the personal estate by savings, winch he or his family may hereafter be entitled to enjoy. The heir is generally made the manager or committee of the estate, it being clearly his interest by good management to keep it in condition : accountable, however, to the court of chancery, and to the non compos himself, if he recovers ; or otherwise to his administrators. See LvNACY.

LUNCH, n. s., or) Span, lonja a longwcu-Lun'cheo.v. ji dine. — Minsheu. A handful ; or small quantity of food

When hungry tliou stood'st staring, like an oaf, I sliced the luncheon from the barley loaf; With crumbled bread 1 thickened well the mess.

Gay.

LUND, or LuNDEN, a town in the province of Scania, or Schonen, Sweden ; five miles from the Baltic. A university was founded here in 16G6 by Charles XL, wiiich is still attended by above 300 students, and has fifteen professors. It has a library of above 20,000 volumes. The celebrated Puffendorf was a professor here. Po-])ulation 3300 : twenty-one miles east of Copenhagen, and thirty-eight south-west of Christianstadt.

LUNDY, an island of England, fifty miles off the north-west coast of Devonshire, five miles long and two broad, but so encompassed with inaccessible rocks diat it has but one entrance, so narrow that two men can scarcely go abreast. It is reckoned in the hundred of Branton. It had anciently a fort and a chapel. Tlie soil on the south is pretty good, but barren on the north, where it has a high pyramidical rock called the Constable. Horses, kine, hogs, goats, sheep, and rabbits, abound in it ; but the chief commodity is fowls, and their eggs are very thick on the ground at the season of breeding. In the reign of Henry VIII. one William Morisco, who had conspired to murder him at Woodstock, fled to this island, which he fortified, turned pirate, and did much damage to this coast, but was at last taken, with sixteen of his gang, and put to death.

LUNEBUKG, a north-east province of Hanover, once a separate principality of the empire, lies chiefly along the left bank of the Elbe. A small part on the right bank now belongs to Denmark.

Hanoverian Luneburg has a territorial extent of 4236 square miles, and has several rivers besides the Elbe, *viz.* the Aller, Ilmenau, Oker, Jeetze, Fuhse, &,c. Its shape is rectangular and nearly square: it maybe said indeed to forma great plain, sloping insensibly on one side towards the Elbe, on the other towards the Aller. It has no mountains; but in tiie centre is an elevation forming a large headi, called, from its barrenness, the Arabia of Germany. Ilere, however, sheep are fed, and bees reared ; which are in such numbers as to produce honey and wax for export, to the annual value of £30,000. Here also are produced juniper berries, and even bilberries, both in such quantities as to form articles of export. Wherever the soil has any elevation it is sandy, and apt to run into heath ; but on the banks of the rivers there are many fertile districts. These low grounds produce corn, particularly buckwheat, hops, and good pasturage, on which horses of large size are reared. The manufactures are chiefly of woollens, linen, and wax. For these the vicinity of Hamburgh affords a ready de-mand. Luneburg is governed by its own states and courts of justice. At Zell there is a court of appeal for the whole Hanoverian states. Inhabitants 246,000.

LiNEBURO, a town of Hanover, the capitpl of ti;e province of this name, stands on the Ii-

menau, here navigable. The town is not attractive to a stranger, having dark and narrow streets, and old fashioned houses, surrounded by walls of no great strength, and six gates. Here are also four churches, with an equal number of hospitals, an orphan house, gymnasium, a military school, in which young men of family and others receive their education. In the market place is the palace of the prince, a good building; and opposite to it the church of St. Michael, where many of the dukes of Luneburg are buried. Luneburg formerly held a leading rank among the Ilanse tov.ns, and is, after Embden, the most busy place at present in the Hanoverian states. It carries on a considerable trade in horses, above 70,000 being brought here annually ; and it has also a fine salt spring. On the west side of the town is a hill, called the Kalkberg, from which above 20,000 tons of

lime are procured annually. One quarter of the town, called the Sulze, is surrounded by a distinct wall and governed by its own magistracy. Population 10,000.

LUNENBURG, a post town of Worcester county, Massachusetts, twenty-five miles N. N. E. of Worcester, and forty-five north-west of Bos-lon. Population 1371.

Lunenburg, a county in the south part of Virginia, bounded north by Prince Edward and Nottoway counties, east by Brunswick county, south by Mecklenburg county, and west by Charlotte, and Prince Edward counties. Population 12,265.

LUNENSE Marmoe, in the natural history of the ancients, a species of white marble, now called Carrara marble, and distinguished from the statuary kind byits greater hardness and less splendor. It is, and always was, much esteemed in building and ornamental works. It is of a very close and fine texture, of a very pure white, and much more transparent than any other of the white marbles. . It is still found in great quantities in Italy. See Luna.

Lunette, in the manege, is a half horse-shoe, or such a shoe as wants the sponge, i. e. that part of the branch which runs towards the quarters of the foot.

Lunette is also the name of two small pieces of felt, made round and hollow, to clap upon the eyes of a vicious horse that is apt to bite and strike with his fore feet, or that will not suffer his rider to mount him.

LUNEVILLE, a large and populous town of France, in the department of the Meurthe, and ci-devant duchy of Lorrain, seated in ai)lain between the Meurthe and Vezoul, which unite below it. It has an ancient castle, converted into barracks, where the dukes of Lorrain kept their court; as did afterwards king Stanislaus, who founded a military academy, an hospital, and a large library in it. In this town the convention was held, and treaty of peace concluded, be. ween the emperor Francis IL and the I'reiich republic, in October 1801. In the centre of tiie town is the large and handsome church of St. .lames's, ornamented by Stanislaus, and the Ho-tel de Valor. The town has also flourishing manufactures of lace, muslins, stockings, gloves, and pottery. Popidation 10,000. Twelve miles E.S. E. of Nantz, and eighty west of Strasburg. Vol. XHI.

LUNGS, n. s. ˆ Sax. lunjen ; Teut. and

Lung’ed, «<//. ˆDan. lunge; Belgic long.

Lung’-grown, J The organs of breathing. Lunged, furnished with or having tlie nature of lungs. Lung-grown is explained in the extract.

INIore would I, but my luiiiˆs are wasted so, That strength of speech is utterly denied me.

Shakspearf

The lungs sometimes grow fast to the skin that lines the breast within ; whence such as are detained with that accident are lung-grown. Hai-vey.

As a man coming into a pestilential air, does not suck in death at every motion of his lungs, but by little and little, the spirits are poysoned, and at last enter into their portion of death ; so it is in a vicious custom. Bp. Taylor.

The bellows of his lungs begin to swell,

Nor can the good receive, nor bad expel.

Dry den.

Had I a hundred mouths, a hundred tongues. And throats of brass inspired with iron lungs ; I could not half those horrid crimes repeat. Nor half the punishments those crimes have met.

Id.

The smith prepares his hammer for the stroke. While the lunged bellows hissing fire provoke. Id.

Lungs. See Anatomy.

Lungs, Inflations of. Various have been the instruments contrived with a view to restore the action of the lungs of drowned persons; and in a country like our own, surrounded by the ocean and intersected by rivers and canals, accidents are but too frequently happening which call them into use. A very useful instrument of this sort was invented by M. Goncy, physician to the military hospital. New Busack, which is thus described in the Journal de Medecine : — This instrument consists of a double pair of bellows, BCLM, in the diagram, tiie two different parts of which have no communication with each other. In the lower side, B M, is an aperture, A, for a valve constructed on the principles of those of Nairne's air-pump. It consists of a rim of cop-per, closed at one end by a plate of the same metal, in which plate are seven small holes placed at equal distances. This plate is covered with a piece of silk coated with elastic gum, in which are six transverse incisions of two or three lines in length. Each incision is so made as to be situated between two of tlie holes, and at an equal distance from each. The silk must be made very secure, by a thread passing several

times round the rim. A stream of air, applied to that side of the plate which is opposite the silk, will pass through the holes, and, lifting up the silk, escape througli the incisions. On the contrary, a stream of air applied to the other side will press the silk upon the plate, and thus close the holes, so tiiat it will be impossible for it to pass through them. This valve opens internally, so as to admit the air from without. At B is another valve, on the same construction, but opening in a contrary direction, thus permitting the air to escape out of the lower part into the tube EI", but preventing its entrance. At C is another valve, opening internally to admit the air from the tube EF: and at D there is a fourth opening externally, to discharge the air from the upper part. The flexible tube EF, screwed on at the end CB, being introduced into

One of the nostrils, whilst the mouth and tlie other nostril are closed by an assistant, if we Separate the two handles L, M, which were close together at tiie introduction of the tube, it is evident that the air in tlie lungs will rush into the upper part through the valve C, whilst the external air will fill the lower part through the valve A: the two handles being again brought into contact, the atmospheric air will be forced into the lungs through the valve 13, and at the same time the air in the upper part will be discharged at the valve D. Thus, by the alternate play of the double bellows, the lungs will be alternately filled and emptied as in respiration. In using the instrument care should be taken not to be too violent ; as the more perfectly the natural motion of respiration is imitated the better. There is a handle, K, to the partition in the middle, in order that, if it be at any time necessary to use either of the divisions alone, the other may be confined from acting.

pan, C, somewhat resembling that of a musket, to receive a drop of ether, which, entering into tlie cylinder along with the ingress of atmospheric air, expands and diffuses itself therein on the elevation of the piston, and thus operates on the lungs with all the stimulus of nitrous oxide. In cases of asphyxia, by carbonic acid gas, a drop of ammonia may be serviceable ; while, in that of the septic poison, sulphureted hydrogen, a solution of chlorine might prove of benefit. D is the orifice by which the [partition is supplied with heated water.

Fig. 2 exhibits a section of the apparatus, where A is the piston-rod, accurately adapted to the cylinder in which it moves. This inner cylinder has one concentric with it which forms a partition, the recipient of the heated water ; and the base, which limits the descent of the solid plunger, has a simple aperture without any valve. B is a toothed quadrant attached to a lever, and moving on a fulcrum, for

the purpose of elevating and depressing the piston. C is a check which regulates the altitude of the piston ; and thus apportions its elevation to the capacity of the lungs, whether the subject be an adult or of tender age. D is a partition surrounding the inner cylinder, and supplied with water at a temperature sufficient to maintain the air propelled into the lungs at the usual animal temperature, of 98° Fahrenheit. E represents a thermometer for more accurate adjustment, and F a pipe communicating with the interior cylinder, and to which the flexible tube is attached.

The best instrument of this kind, however, is that of Mr. Murray, of which the following account, communicated by himself to the Edinburgh Philosophical Transactions, may not be unacceptable to our readers.

The diagram, fig. 1, represents the apparatus as it appears externally ; in which A is a stop-cock for the efflux of heated water contained between the concentric cylinders, when the operation has closed. B is a stop-cock, with index, attached to the flexible pipe, which extends to the larynx to renew the air when required. When the index points in the direction of the lungs, or parallel with the pipe, tlie communication between the lungs and cylinder is open ; and, when at right angles, that with the lungs is shut, and the cylinder then communicates only with the free atmosphere. Hence, when the piston-rod is raised, and the index points to the lungs, the canal being open, the air reposing on the lungs passes to the cylinder ; and when the index is moved the quadrant of a circle, or at right angles with the former position, the aperture which leads to the lungs is closed, and that which conducts into the free atmosphere uncovered; consequently, on the descent of the piston-rod, the air drawn from the lungs is expelled into the atmosphere, while a fresh supply is received on elevating the piston ; and, the in-dex being turned into its former position, the descending piston propels it into the lungs, and the alternations of its movements assimilate to the beautiful isochronisni of natural respiration. To the lateral aperture is attached a concave

LuNG-woRT, in botany. See Pulmonaria.

Lung-wort, Cow’s. See Verbascom.

Lung-wort, Golden. See Hieracium.

LUNISOLAR Year, in chronology, is the space of 532 common years; found by multiplying the cycle of the sun by that of the moon. See Chronology.

LUPKRCALIA, feasts instituted in ancient Rome, in honor of Pan. They were celebrated on the fifteenth of the kalends of March. They are supposed to have been established by Evander. ()n the morning of this festival the luperci, or priests of Pan, ran naked through the streets of Home, strikin'^ the married women they met on the hands and stomach with a strap of goat's

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leatlier, which was Iield an omen promising them fecundity and happy deliveries. See Lui'erci. This feast was abolished in the time of Augustus, but afterwards restored, and continued in the tune of the emperor Anastasius. iJaronius says it was abolished by pope Anastasius in 49(3.

LUPERCI, the priests of the god Pan. See Iapercai ia. They were the most ancient order of priests in Rome ; they were divided into two colleges, called Fabii and Quintilii. To these Caesar added a third, called Julii.

LL'TINE, 71. s. Ft. lupin ; Lat. iupinus. A kind of pulse.

When Protogenes would have undertaken any excellent piece, he used to diet himself with peas and lupines, that his invention might be quick and refined. Peacliuin uii Drauiiig.

Some antiquity of traditions hath dieted St. Peter with lupines. ■ Bp. Hall.

Where stalks of lupines grew.

The' ensuing season in return, may hear

The bearded product of the golden year, Dryden .

It has a papilionaceous flower, out of whose empalement rises the pale, which afterwards turns into a pod filled with either plain or spherical seeds : the leaves grow like fingers upon the foot stalks.

Miller.

Lupine, or Lupin us, in botany, a genus of the decandria order, and diadelphia class of plants: natural order thirty-second, papilio-naceac: cal. bilabiated : there are five oblong and five roundish antherce : the legumen is coriaceous. There are several species ; all easily raised from seed ; and succeeding in any open borders, where they make a fine variety. The seeds of the white lupine have a leguminous taste accompanied with a disagreeable bitter, and are said to be anthelmintic, both internally taken, and applied externally. Caspar Hoffman cautions against their external use, and tells us that They

have sometimes occasioned death : and Simon Pauli says, that he saw a boy of eight or ten years of age, after taking a dram of them in powder, seized with exquisite pains in the abdomen, a difficulty of respiration, and almost total loss of voice ; and that he was relieved by a glyster of milk and sugar, which brought away a vast quantity of worms. But M. Geoffroy justly observes, that either these symptoms were owing to the worms, or that the seeds, if they have any noxious quality, lose it, with their bitterness, in boiling ; as they were used among the Greeks as food, and recommended by Galen as very wholesome.

LUPUS, the wolf. See Canis.

Lupus, in astronomy. See Astuonomv.

LURCH, w. s., u.«. & > Derived by Skin—

Lur'ciier, n. X. [?;.«. 5 ner from I'ourchc, a ganve of draughts, much used, as he says, among the Dutch; but the Belgic language has loeren, to shift or play falsely at any game : also her, Tent, luertsc/i, to miss or lose in a game of chance. To leave in the lurch, is to leave a loser ; or in a forlorn or deserted condition ; to leave without help : to lurch is to shift ; play tricks ; deceive; disappoint: a lurcher, man or dog that watches for his game or prey.

1 myself, sometimes leaving goodness on my left hand, and hiding mine honour in my necessity, am faia to shuffle, to hedge, and to lurch. Hhakspeare.

He waxed like a sea, And, in the brunt of seventeen battles since, lie luichl all swords o' tli' garland. Id.,

Will you now to peace incline, And languish in the main design. And leave us in the lurch ? Denkam.

But though thou'rtof a different church, I will not leaie thee in the lurch. Hudibras.

It is indeed hard for a man without charity, not to be worse than an innocent beast ; not at least to be as a fox, or a wolf; either cyxnnmgly lurching or violently ravening for prey. Barrow.

While the one was upon wing, the other stood lurching upon the ground, and flew away with the fish. h' Estrange.

Have a care how you keep company with those that, when they find themselves upon a pinch, will leave their friends in the lurch. Id.

I cannot represent those worthies more naturally than under the shadow of a pack of dogs, made up of finders, lurchers, and setters. Tatler.

This is a sure rule, that will never deceive or lurch the sincere communicant. Sauth,

Flirts about town had a design to cast us out of the fashionable world, and leave us in the lurch, by some of their late refinements.

Addison s Guardian, His thefts some tradesman spies. Swift from his play the scudding lurcher flies : Whilst every honest tongue stop thief resounds.

Guy. Can you break your word with three of the honestest best meaning persons in the world 1 It is base to take advantage of their simplicity and credulity, and leave them in the lurch at last.

Arbuthnot. Shaggy, and lean, and shrewd, with pointed ears And tail cropped short, half lurcher and half cur. His dog attends him. Cowper.

There was no light in heaven but a few stars.

The boats put off" o'ercrowded with their crews ; She gave a heel, and then a lurch to port, And going down head foremost — sunk, in short.

Byron.

LURCH, V. a. Lat. lurcor. To devour ; to swallow greedily.

Too far oflf from great cities may hinder business ; or too near lurcheth all provisions, and maketh every thing dear. Bacon.

Lurcher, a kind of hunting dog much like a mongrel greyhound, with pricked ears, a shagged coat, and generally of a yellowish-white color : they are very swift runners, so that if they get between the burrows and the conies they seldom miss ; and this is their common practice in hunting : yet they use other subtleties, as the tumbler does, some of them bringing in their game and those are the best. A lurcher will rua down a hare at stretch. They are supposed to be mules produced from a cross between the shepherd's dog and the greyhound, which, from breeding in and in with the latter, has so refined upon the original cross, that very Vittle of the shepherd's dog is retained in its stock, its

docility :md fidelity excepted. They are the favorite dogs of small farmers, since they can both act the part of a sheep dog, and occasionally trip up tlie heels of a leveret three parts grown. They are also the constant companions of professed and notorious poachers, being admirably adapted to such a kind of service : they equal, if not ex-ceed, any other kind of dog in sagacity ; and

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ire easily taught any thing tliat an animal of this description can acquire. Some of them are very little inferior in speed to well bred greyliounds : hares they frequently run up to : rabbits they kill to a certainty, if the latter be at any distance from home ; if near a warren, the dog invariably runs far the burrow, by doing which, he seldom fails in his attempt to secure liis aim. His qualifications go still farther: in the nocturnal excursions of poachers, he will easily pull down a fallow deer, as soon as the signal is given for the pursuit; which done, he will explore his way to his master, and conduct him to the game, where-ever he may have left it.

LURE, n. s., V. n. k.v. a. Belg. loore ; Teut. leurre ; Fr. Icurrc. A bait or enticement ; particularly applied* to* the enticement of hawks : to call a hawk; and generally to entice; draw; enveigle.

With empty hond men may no haukes lure.

Chancers Cant. Tales. My faulcon now is sharp and passing empty, And, till she stoop, she must not be full gorged. For then she never looks upon her lure.

Sfiukspeare. A great estate to an heir is a lure to all the birds of prey round about to seize on him. Bacon.

Standing near one that lured loud and shrill, I had suddenly an offence, as if somewhat had bro-ken, or been dislocated in my ear, and immediately after a loud ringing. Id.

This stiffnecked pride, nor art nor force can bend, Nor high-flown hopes to reason’s lure descend.

Denham. How many have with a smile made small account Of beauty and her lures, easily scorned All her assaults, on worthier things intent !

Milton. A man spent one day in labour, that he might pass the other at ease ; and, lured on by the pleasure of this bait, when he was in vigour he would provide for as many days as he could. Temple. A falc’ner Henry is, when Emma hawks ; With her of tarsels and of /tires he talks. Prior.

Volumes on sheltered stalls expounded lie. And various science lures the learned eye. Gay.

Should you lure From his dark haunt, beneath the tangled roots Of pendant trees, the monarch of the brook. Behove you then to ply your finest art.

Thomson . Luxury Held out her lure to his superior eye. And grieved to see him pass contemptuous by.

Madden. Some minds by nature are averse to noise. And hate the tumult half the world enjoys. The lure of avarice, or the pompous prize, That courts display before ambitious eyes ; The fruits that hang on Pleasure's flowery stem, Whate'er enchants them, are no snares to them.

Coujier. Vain, then, the enlivening sound of Fames

alarms, P'or hope's exulting impulse prompts no more : Vain even the joys tliat lure to pleasure's arms, The throb of transport is for ever o'er. Beattie.

And leads him on from flower to flower, A. weary chase and wasted hour ; Then leaves him, as it soars on hioh. With panting heart and tearful eye : So beauty lures the full-grown child, W ith liue as bright, and wing as wild. Byron.

A LuRF., in falconry, a device of leather in the shape of two wings, stuck with feathers, and baited with a piece of flesh, to call back a hawk when at a considerable distance. See FALCONRr. LU'RID, «(/;'. Lat. luridus. Gloomy; dis-mal.

Slow settling o'er the lurid grove. Unusual darkness broods. Thomson's Summer. LURK, V. n. -A Fieri potest a Greek Lurk'er, iXopSou), curvo, inflecto,

Lurk'ing-place, lˆsays Minsheu. More or Ambush. 3 probably from Lurch, which see. To lie in wait.

Take knowledge of all the lurking-places where he hideth himself. 1 Sam. xxiii. 23.

If sinners entice thee, consent not ; if they say, let us lay wait for blood, let us lurk privily for the innocent. Prov. i. 11.

They lay not to live by their worke. But theevishly loiter and lurke.

Tusser's Husbandry, Far in land a savage nation dwelt. That never tasted grace, nor goodness felt ; But like wild beasts, lurking in loathsome den. And flying fast as roebuck through the fen, AH naked. Faerie Queene.

Milbrook lurketh between two hills, a village of some eighty houses, and borrowing his name from a mill and little brook running there through.

Carew's Survey of Cornwall. The wife, when danger or dishonour lurks. Safest and seemliest by her husband stays.

Milton. Dotli not in every corner a Momus lurk, from the venom of whose spiteful or petulant tongue no eminency of rank, dignity of place, or sacredness of office, can protect any person. Barrow.

See The lurking gold upon the fatal tree.

Dryden's JEneid. The king unseen Lurked in her hand, and mourned his captive queen; He springs to vengeance. Pope.

I do not iurk in the dark : I am not wholly unknown to the world : I have set my name at length.

S,n>i. Seeds of merciless disease

Lurk in all that we enjoy ; Some that waste us by degrees,

Some that suddenly destroy. Cowper. But one fair night, some lurking spies Surprised and seized us both. Byron.

LUS, a district of Persia, in the eastern part of the province of Mekran. It is of a circular form, bounded on three sides by immense mountains. The face of the country is flat and sandy, but fertile in every species of grain. There are four passes through the mountains, two of which lead into Sinde, one into Mekran, and one into Ba-louchistaii. The chief can bring into the field 4000 irregular troops, and draws a revenue of .'50,000 rupees. The towns and districts are governed by petty independent chiefs, owning the supremacy of the khan of Lus. The capital is Bayla; the chief maritime port is Sommeany. Lus is supposed to be the ancient Oritse.

LUSAN, a town of the province and government of Buenos Ayres, situate on the great road from Buenos Ayres to Cordova, about thirty

miles west from the forir>er city. Long. 59° 20’ W., lat. 34° 36’ S.

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LUSATIA, a raargraviate large province of the German empire, lying between the Elbe and the Oder, and surrounded by Brandenburg, Bohemia, Silesia, and part of Saxony. It is divided into Upper and Lower Lusatia, formerly two distinct states, but which became subject to Saxony, since 1815. The superficial area of the whole is about 4250 square miles. Population 405,000.

Upper Lusatia is the southern and larger part, and consists in great part of a sandy plain ; but a mountain ridge, called the Wohlische Kamm, runs along its south frontier. All the rivers here have their rise in these mountains, flow northward, and fall into the Oder or Elbe. The principal here are the Black Elster, which receives the Schwarz-wasser, the Spree, and the Neisse ; the Pulsnitz, which divides Upper Lusatia from Misnia ; and the Queiss, which divides it from Silesia. Upper Lusatia supplies hardly the half of what is consumed by its inhabitants. Flax is cultivated, but it is necessary also to import a certain quantity for the use of the manufactures. The cattle are good, and the sheep have been improved of late by the introduction of merino rams ; horses likewise are reared. Other objects of care are the rearing of poultry, particularly geese, and the breeding of bees ; in the forests of the north, resin, pitch, and tar, are manufactured. The only mines are a few of iron in this part ; but there are quarries of granite, basalt, lime, and freestone.

The wealth of this country is in its manufactures ; of these, woollens are an important branch, and those of linen have improved, as well as those of cotton, leather, stockings, gloves, hats, wax, and tobacco. The government of Lusatia has been hitherto a limited monarchy, with a representative body, consisting of the four great lords called dynasts, theprelates, nobles, and deputies from free towns; but there is every reason to believe that this will not be continued. By the treaty of Vienna, the half of this province was annexed to Prussia, and is subjected to the new organisation of that monarchy, being included in the government of Liegnitz in Silesia. The part remaining to Saxony is computed only at 1170 square miles, and the population at 170,000.

Lower Lusatia, the northern part of the mar-graviate, now belongs entirely to Prussia. Its surface is computed at 1040 square miles. A great part of it is covered with sands ; and on the sides of the rivers are a number of marshes. The principal rivers are the Oder, tlie Spree,

and the Neisse. Some wheat, barley, millet, and buckwheat are exported, and the culture of tobacco, flax, and hops, is considerable ; but agriculture is considered in a backward state. The number of horses and cattle is small. Bees are reared in abundance; and there is no want of wood, the Spreewald being a forest of some note. The minerals are iron, clay, and chalk ; the principal manufactures linen and woollen; of the two, the former is the more considerable.

LUS'CIOUS, adj. 1 Skinner says, from

Ltrs'ciouSLY, adv. nxurioiis, ' corruyitly

Ll's'ciousness, n. s. 5 pronounced.' Olliers more probably from Cir. jXvkvq, sweet. Sweet in a great or immoderate degree.

The food that to hnn now is as luscious as loclies, sliall shortly be as bitter as coloquintida.

Shahspeare. Can there be a greater indulgence in God, than to imbitter sensualities whose lusrinusness intoxicates us, and to clip wings which carry u.s I'rom him ?

Decaij irf' Pietxi. With brandished blade rush on him, break his glass. And shed the luscious liquor on the ground.

MUtnii. Blown roses hold their sweetness to the last, And raisins keep their luscious native taste.

Dry den. Peas breed v/orms by reason of the Itaciousness and sweetness of the grain. Mortimer's Husbandry.

He will bait him in with the luscious proposal of some gainful purchase. I'iouih.

See Louvet, patriot, pamphleteer, and sage ; Tempering with amorous tire his virtuous rage, Formed for all tasks, his various talents see, The lusriow novel, the severe decree. Camnvg.

LUSH, adj. Ital. liscio. Of a dark, deep, full color, opposite to pale and faint.

How lush and lusty the grass looics ; how green !

Shahspeare . LUSK, adj. -\ Goth, losk ; Fr. lasclie.

Lusk’ish, >Lazy; idle; worthless.

Lt’sk’ishness, n. s.j Obsolete. LUSO’RIOUS, adj.) Lat. lusorius. Used Lu’soRY, adj. S in play.

Things more open to exception, yet unjustly condemned as unlawful ; such as the lusorious lots, dancing, and stage-plays. Bishop Sanderson.

There might be many entertaining contrivances for the instruction of children in geometry, and geography, in such alluring and lusorij methods, as would make a most agreeable and lasting impression.

yVutls on the Mind.

LUS’T, n. s. & V. 7i.”| Lust’ful, adj. Lust’fully, adv.

LuST’fULKESS, 71. s

Lust’ihed, or Lust’ihood, Lust’ily, adv.

LuSt’iNESS, 71. s.

Lust’less, adj. Lust’y.

Sax. lupr ; Swed. luxt ; Goth. lost. Desire ; car-nal desire ; any irregular or vehement desire ; vi- {^ gor ; power : as a verb, f to desire ardently, car-nally, or irregularly ; to like : lustful is, apt or provoking to lust ; libi-dinous: lustihed and

lustihood, vigor : bodUy strength or ability ; sprightliness : lustily, stoutly ; strongly; with unusual vigor or strength : lustiness, stoutness, sturdiness ; corporal vigor : lustless, destitute of such strength or vigor: lusty, strong in health ; stout ; vigorous.

I will divide the spoil ; my lusl shall be satisfied upon them. Exodus xv. 9.

The mixed multitude fell a lusting ; and the children of Israel also wept, and said, Who shall give us flesh to eat? Ninnhers.

‘i’heir eyes swell with fatness ; and they do even what they lust. Psalm

Ixxiii. 7.

The spirit that dwelleth in us lusteth to envy.

James iv. 5. At the last out of a grove evin by That was right godcly and pleasant to sight I se where tliere came singing *«s((7)* A world of ladies, but to tell aright Ther beauty grete lyith not in my might.

Chancer For he, wliichc had his full paunche Of all lustes at horde,

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Ne deigneth not to speake a word, Onliclie a cromme for to yeue, Whereof this poure might leue Upon the yefte of his almesse.

Goner. Coiif. Am., book vi. fol. 134. Turning wrathful fire to lustful heat, With beastly sin thought her to have defiled.

Faerie Queene. A goodlv personage. Now in his freshest Hower of lustyhed. Fit to inflame fair lady with love's rage.

Spenser. Fresh Clarion being ready dight. He with good speed began to take his flight Over the fields in his frank lustiness. Id.

This lusty lady came from Persia late, She with tlie Christians had encountered oft. Id. The Christian captives in chains could no way move themselves, if they should unadvisedly Imt after liberty. Knolles.

Barbarossa took upon him that painful journey, which the old king lustily performed. Id.

This our court, infected with their manners, Shews like a riotous inn ; epicurism and lust Make it more like a tavern or a brothel. Than a graced palace. Shakspeare. A'uij Lear. Reason and respect Make livers pale and lustihood dejected.

Shakspeare. I determine to light lustili/ for him. Id.

If lusty love should go in quest of beauty, Where should he find it fairer than in Blanch ?

Id. Where there is so great a prevention of the ordinary time, it is the lustmess of the child ; but when it is less, it is some indisposition of the mother.

Bacon's Natural History. Trees will grow greater, and bear belter fruit, if you put salt, or lees of wine, or blood, to the root ; the cause may be, the increasing the lust or spirit of the root. Bacon.

Mrtue was represented by Hercules : he is drawn offering to strike a dragon ; by the dragon are meant all manner of lusts. Feacham on Drawing.

They are immoderately given to the Zusf of the flesh, making no

conscience to get bastards. Abbot.

Eve saw, and/ vsted, so did they ; this also was a for-bid.len fruit (mixed marriage), they lusted, tasted, sinned, died. Bp. Hall.

AVIien a temptation of lust assaults thee, do not resist it by disputing with it, but fly from it, that is, think notat ail of it. Taylor's Holy Living.

Thence his lustful orgies he enlarged.

Milton. To have subdued their lustK, and mastered their passions, would have proved far more difl'icult, than to get advantage in scuffles with armed men.

Barrow. Giving sometimes prodigally ; not because he loved them to whom he gave, but because he lusted to give. Sidney.

Inconstant man, that loved all he saw, And Uisted after all that he did love.

Rosccrmmon. We yet may see the old man in a morning, Ltistxi as health, come ruddy to the field, And there pursue the chace. Otivay.

There is no man that is intemperate or lustful, but besides the guilt likewise stains and obscures his

soul. TillotsdU.

All weigh our acts, and whate'er seems unjust, Impute not to necessity, but lust. Dryden.

Cappadocian slaves were famous for their lustiness, and being in good liking, were set on a stall to shew the good habit of their botly, and made to play tricks

before the buyers, to shew their activity and strength-

(. Persius. He has fought lustily for her, and deserves her.

Southenie. The lust of lucre. Pope.

Yet, pure from lust of blood their fire. And from ambition's wild desire, They triumphed but to save. Bcaitie.

Last noon beheld them full of lusty life, Last eve in Beauty's circle proudly gay, The midnight brought the signal -sound of strife. The morn the marshalling in arms, — the day Battle's magnificently stern array ! Byron.

LUSTRAL, «c/y. J Lnt. lustralis. Used for Lustra'tion, n.s. y purifying: purification by water.

Job's religious care His sons assembles, whose united prayer, Like sweet perfumes, from golden censers rise : He with divine lustrations sanctifies. Sandys.

That spirits are corporeal seems a conceit deroga-tive unto himself, and such as he should rather la-bour to overthrow ; yet thereby he establisheth the doctrine of lustrations, amulets, and charms.

Browne's Vulgar Erroun. Should lo's priest command A pilgrimage to Meroe's burning sand ; Through deserts they would seek the secret spring. And holy water for lustration bring.

Dryden's Juvenal. What were all their lustrations but so many solemn purifyings, to render both themselves and their sacrifices acceptable to their gods'! South. His better parts by lustral waves refined. More pure, and nearer to aethereal mind. Garth. By ardent prayer, and clear lustration. Purge the contagious spots of human weakness ; Impure no mortal can behold Apollo. Prior.

Lustral Day (dies lustricus), in antiquity, tlie day on which the lustrations were performed for a child, and its name given; usually the ninth day from tlie birth of the boy, and tJie eighth from that of a girl. Over this festival the goddess Nundina was supposed to preside ; tiie midwives, nurses, and domestics, handed the child backwards and forwards, around a fire burning on the altars of the gods, after which they sprinkled it with water ; hence this feast had the name of amphidromia. The old women mixed saliva and dust with the water. The whole ended with a sumptuous entertainment. The parents received gifts from tlieir friends on this occasion. If the child was a male tlie, door was decked with an olive garland ; if a female with wool, denoting tlie work about which women were to be employed.

Lustral Water was used by the ancient? in their ceremonies to sprinkle and purify the peo-ple. From them the Roman Catholics probably borrowed the holy water used in their churches.

Lustrations, in antiquity, were ceremonies by which the ancients purified their cities, fields, armies, or people, defiled by any crime or

impurity. Some of these were public, others private. There were three methods of performing lustration, *viz.* by fire and sulphur, by water, and by air ; which last was done by fanning and agitating the air round the thing to be purified. Some of these could not be dispensed with ; as lustrations of houses in the time of a plague, or

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upon the death of any person : others were done at pleasure. The public lustrations at Rome were celebrated every fifth year; when they led a victim thrice round the place to be purified, and in the mean time burnt a great quantity of perfumes. Their country lustrations, which they called ambarvalia, were celebrated before they began to reap their corn : in those of the armies, which they called armilustria, some chosen soldiers, crowned with laurel, led the victims, which were a cow, a sheep, and a bull, thrice round the army ranged in battle array, in the field of Mars, to whom the victims were afterwards sacrificed, after pouring out many imprecations upon the enemies of the Romans. The lustrations of their flocks were performed thus: the shepherd sprinkled them with pure water, and thrice surrounded his sheepfold with a composition of savin, laurel, and brimstone set on fire; and afterwards sacrificed to the goddess Pales an offering of milk boiled, wine, a cake, and millet. Private houses were lustrated with water, a fumigation of laurel, juniper, olive tree, savin; and the victim commonly was a pig. Lustrations made for particular persons were commonly called expiations, and the victims piacula. In their lustratory sacrifices, the Athenians sacrificed two men, one for the men of their city, and the other for the women. They cast into the river, or at least out of the city, the animals, Sec, that had served for a lustration or sacrifice of atone-ment ; and thought themselves threatened with some great misfortune when by chance they trod upon them. Part of these ceremonies were abolished by Constantine and his successors ; the rest subsisted till the Gothic kings were masters of Rome ; under whom they expired.

LUSTRE, n. s. ˆ Fr. lustre. Splendor;

Lus’trou?, at/;, i brightness ; glare; glitter: hence a sconce bright with lights, or designed to hold them ; eminence; renown.

You have one eye left to see some mischief on him, — Lest it see more, prevent it ; out, vile jelly ! Where is thy lustre now? Shakspeare. King Lear.

Noble heroes, my sword and yours are kin, good sparks and lustrous. Shakspeare.

‘i’he more lustrous the imagination is, it filleth and fixeth the better. Baco7i’s Natural HUtory.

To the soul time doth perfection give, And adds fresh lustre to her beauty still. Davies. Neither doubt L hut that, as metals receive the more lustre with often rubbing, this truth, the more agitation it undergoes, shall appear every day more glorious. IˆP-Hull.

Charity hath a good eye, which is not offended or dazzled with the / ii«(re of its neighbour's virtue, or with the splendour of his fortune, but vieweth either of them steadily with pleasure, as a very delightful spectacle.

Barrow. The scorching sun was mounted high, In all its lustre, to the noon-day sky.

Addison s Odd. Hjs ancestors continued about four hundred years, rather without obscurity than with any great lustre.

Wotton. Pass but some fleeting years, and these poor eyes, Where now without a boast some lustre lies, No lonoer shall their little honours keep, But only be of use to read or weep. Prior.

All nature laughs, the groves are fresh and fair, The sun's mild lustre warms the vital air. I'cpc.

Ridotta sips, and dances till slie see The doubling lustres dance as quick as she.

Id. I used to wonder how a man of birth and spirit could endure to be wholly insignificant and obscure in a foreign country, when he might live with lustre in his own. Swift.

With various lustres these light up the world, AVhich death puts out, and darkens human race.

Youn(/. Their proficiency will make your defects the more obvious to yourself: and by the lustre of their virtues you will better see the deformity of your vices.

Mason. Before the eastern flame Rose crimson, and deposed the stars. And called the radiance from their cars. And filled the earth, from his deep throne, With lonely Itisfre all his own. Byron.

Unheeding, unthankful, we bask in the blaze.

While the beams of the sun in full majesty shine ; When he sinks into

twilight, with fondness we gaze, And mark the mild lustre that gilds his decline.

Canning. LusTKE, in commerce, denotes the gloss on any thing, particularly on manufactures of silk, wool, or stuff'. It is likewise used to denote the composition or manner of giving that gloss. The lustre of silks is given them by washing in soap, then clear water, and dipping them in alum water cold. To give stuffs a beautiful lustre : for every 8 lbs. of stuff allow \ lb. of linseed ; boil it half an hour, and then strain it through a cloth, and let it stand till it is turned almost to a jelly : afterwards put 1| oz. of gum to dissolve twenty-four hours ; then mix the liquor, and put the cloth into this mixture, take it out, dry it in the shade, and press it. If once doing is not sufficient, repeat the operation. Curriers give a lustre to black leather, first with juice of barberries, then with g-um arable, ale, vinegar, and Flanders glue, boiled together. For colored leather, they use the white of an egg beaten in water. Moroccoes have their lustre from juice of barberries, and lemon or orange. For hats, the lustre is frequently given with common water; sometimes a little black dye is added ; the same lustre serves for furs ; except that for very black furs they sometimes prepare a lustre of galls, cop-peras, Roman alum, ox's marrow, and other ingredients.

LUSTRUM, in Roman antiquity, a .'general muster and review of all the citizens and their goods, which was performed by the censors every fifth year, who afterwards made a solemn lustration. See Lustration. This custom was first instituted by ServiusTullius, about A. U.C.

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LUTA'RIOUS, flrf;. Lax. lutarius. Living in mud ; of the color of mud.

A scaly tortoise-shell of the lutarious kind.

Grew. LUTE, n. s.hv.a.7 Fr. lidh, lut. A stringed Lu'tanist. 5 instrument of music.

And before them went minstrels many. As harpis, pipes, lulls, and sautry, .\ in grene. Chaucer.

Orpheus with his lute made trees, And the mountain tops that freeze. Bow themselves when he did sing.

Way musl be drawn with a sweet countenance, upon his head a garland of roses, in one hand a lute.

Peachum. A lute string will bear a hundred weight without rupiure, but at the same time cannot exert its elasticity. Arbullinot. In a sadly pleasing strain. Let the warbling Ixtle complain.

Pope's St. CiEcilia, Lands of singing or of dancing slaves, Love-whispering woods, and /u(e-resounding waves.

Dwiciad.

Lute, ^^.s &y.«. Yr. lul ; ha.t.lulum. A composition like clay, with which chemists close tiieir vessels: to close up vessels with luting.

Take a vessel of iron, and let it have a cover o' iron well luted, after the manner of the chemists.

Bacon's Xahiral History. Iron may be so heated, that, being closely luted in a glass, it shall constantly retain the fire.

IVilkiiis's Mathematical Mar/ick. Some temper hite, some spacious vessels move, These furnaces erect, and those approve. Garth.

Glaziers' putty is a very good lute for all the com-mon purposes of a laboratory .

Parkes's Chemical Catechism.

The Lute consists of four parts, *viz.* the table, the body or belly, which has nine or ten sides ; the neck, vvhicli has nine or ten stops or divisions, marked with strings ; and the head or cross, where the screw for raising and lowering the strings to a proper pitch of tone are fixed. In the middle of the table there is a rose or passage for the sound ; there is also a bridge tiiat the strings are fastened to, and a

piece of ivory between the head and the neck, to which the other extremities of the strings are fitted. In playing the strings are struck with the right hand, and with the left the stops are pressed.

LUTETIA, or Lutetia Pahisiorum, in ancient geography, a town of the Parisii, in Gallia Celtica, situated in an island in the Sequana, or Seine. It received its name, as some suppose, from the great quantity of clay (lutum) in its neighbourhood. Julius Casar fortified and embellished it, from which circumstance some authors call it Julii Civitas. Julian the apostate resided there for some time : it is now Paris.

LUTIIEll (Martin), one of the most intrepid and most successful of reformers, was the son of a German miner, and born at Eisleben in Saxony, November 10th, 1484. He was educated at the university of Erfurt, for the legal profession, but he suddenly imbibed a distaste for the world, and entered a convent of Augustine friars. He here distinguished himself by his zeal for the established faith ; and is said to have declared that he would have brought the first faggot to burn Erasmus, who had written against ecclesiastical celibacy, the invocation of saints, and other of the Romish superstitions. A journey which he himself, however, made in 1510 to Rome, as a delegate from the friars of his order, is said to have convinced him of the prevailing corruptions of the church ; and this appears to have been increased by his becoming acquainted with the writings of Huss. In 1512 Luther was made professor of divinity in thenewly established university of Wittemberg ; and he began to propagate his opinions in his public lectures. His personal character had no slight influence in the great revolution which -he was instrumental in accomplishing. Of a bold natural temper, animated and supported by a primitive faitli, he possessed also an ardent imagination, good eloquence, an unwearied pen, and a perseverance of disposition wiiicli on all great occasions, set opposition at defiance. Thus qualified, his lectures procured him very extensive influence, more especially as the purity of his life was in entire correspondence witli his instructions, so that many excellent men were thus strongly pre-disposed to comply with tiie changes which he soon after suggested.

While Luther was thus engaged, a Dominican friar of the name of Tetzel came into the neighbourl'.ood of Wittemberg, publishing indulgencies. There appears to be no just foundation for the surmise that has been thrown out by some writers, that he was influenced in this conduct by a petty jealousy for the credit of his order, the sale of indul<ˆencies having been in this instance entrusted to the Dominican friars, of whom Tetzel was one, rather than to the Augustinians ; neither is there any decided evidence that these latter were

accustomed to have the sale of indulgencies committed to them. The truth is, that this business was conducted in the most flagrant and shameful manner, and Luther had by this time too full an acquaintance with the Holy Scriptures, not to perceive the antichristian character and immoral tendency of these practices. He did not rest satisfied with preaching against them ; he published twenty-five theses, expressive of his views on the subject, stating them as matters of disputation and enquiry, and inviting the learned to disprove them either by personal conference or writing. At first no opponent appeared, but a host of champions soon arose to defend those opinions, in favor of which the wealth and power of the church were united. Tetzel assembled his monks to aid him in writing against Luther, publicly denounced him as a heretic, and committed his propositions to the flames ; threatening their au-thor with a like fate. These proceedings, however, did not serve his cause ; the intrepid reformer only now found himself compelled to enter more fully into the matters of dispute, and though he as yet did not suspect the change that was about to be effected, he was provoked by his adversaries to discuss not only the subject of indulgencies, but the sacraments, the distinction between divine and human laws, the nature of vows, &c. In addition to'this Eckius, in order to expose him to the full tide of ecclesiastical wrath, brought forward the question of the pope's supremacy. The people too began to discuss the authority of the canon law, and even that of the pope himself

The court of Rome at first despised these new doctrines, and considered the whole contest as nothing else than the squabbles of monks. It was not long, however, before Leo X. was roused from his lethargy, and Luther was summoned to appear before him at Rome ; but, Frederick the elector of Saxony interposing in his behalf, the pope referred the matter to the judgment of cardinal Cajctan,then the papal legate at Augsburg. It was during the conferences that were held at this place, that Luther wrote to Melancthon in the following terms, at once illustrative of the true

motives which actuated him, and die courage with which he was endowed. ‘ There is nothing new or remarkable here, unless it be that the whole city is full of the rumor of my name, and every one is desirous of seeing this modern Erostratus, this new incendiary. Persevere manfully in what you are doing for the right instruction of youth ; for my part I am ready, if such be the will of God, to suffer any thing for you, and for them. I would rather die than recant any part of tlie truth that I have spoken, or furnish those with an occasion of disparaging the most useful studies, who are both the silliest and bitterest enemies of sound learning. Italy is plunged in the profoundest Egyptian darkness; all are ignorant of Christ, and the things that are Christ’s. Yet these are the lords and masters of our faith and morals ! Thus the anger of God is evinced in the accomplishment of that prediction, ‘ I will give children to be their princes, and women shall rule over tiiem.’ Farewell, my dear Philip, and pray fervently, that the divine displeasure may be averted.’

The endeavours of Cajetan to reconcile Luther to the Roman see were unsuccessful ; but Miltitz, who succeeded him in his mission, prevailed on the reformer to write to the pope in submissive terms. Tiie violence, however, of the papists frustated these endeavours, and led Luther to proceed in the investigation of truth, and to redouble his efforts in its propagation. At this time he seems not to have entertained a doubt of the authority of the pope ; but the haughty conduct of Cajetan, and the arrogant requisition that Luther should retract what he had uttered against indulgencies, made the friends of the latter very fearful about his safety; they therefore prevailed on him suddenly to withdraw from Augsburg to Wittemberg. Before his departure he appealed from the pope ill informed at tliat time concerning his cause, to the pope when he should be better informed : and soon after from the pope himself to a general council. Incensed at Luther’s departure, and at the appeal which he had publislied, Cajetan called upon the elector to send him prisoner to Rome, or to drive him from his dominions ; but Frederick declined submitting to this injunction, and openly testified his concern for the safety of the reformer. Leo in the mean time fulminated his anathemas, against all who should teach any doctrines opposite to the virtue of indulgencies, and the reformer might have fallen a victim to the rage of his enemies, iiad not the death of the emperor Maximilian turned off their attention to a subject of much greater importance at present, the election of his successor. During the discussions and negociations which took place on this occasion, Luther had so many opportunities of observing the corrupt state of the Romish court, that he soon began to suggest doubts of the divine origin of the pope’s authority, and of

the veryfoundations of the wealtli and power of the clergy. It was then that Leo, perceiving tliere was no longer any hope of reclaiming so incorrigible a heretic, proceeded with the assistance of his cardinals to prepare the sentence of excommunication against him, which was published on the loth of June, 1520. Forty-one propositions, taken from our

reformer's works, were condemned as heretical, scandalous, and offensive to pious ears; all p sons whatsoever were prohibited from readiv his writings under the penalty of excommunication, and ordered, if they possessed any of them, to commit them to the flames ; he himself was called upon publicly to retract his errors within sixty days, and burn his books, or be pronounced contumacious, excommunicated, and delivered to Satan : while all secular princes were required to seize his person, that he might be punished as he deserved. Luther, nothing daunted by this sentence, appealed again to a general council, denounced the pope as antichrist, declaimed against his tyranny more vehemently than ever, and, having called together all the professors and students of Wittemberg, he, in the presence of a great multitude of spectators, threw the books of the canon law, with the bull of excommunication, into the flames ; extracting at the same time from the canon law those parts in which the pope's power was set forth in the most extravagant terms, and publishing them with remarks to point out the wickedness of such doctrines, and their manifest tendency to the subversion of civil government.

The situation of our reformer soon became very critical ; Charles V., the new emperor, desirous of securing the pope's favor, was disposed to treat him with great severity; he therefore was ready to yield to the wishes of the papal legates in Germany, who urged the immediate condemnation of Luther by the diet then sitting at Worms. The diet, however, considering so abrupt a measure as altogether unjust and without precedent, insisted that he should make his appearance in person, and declare his adherence to, or rejection of, those sentiments which had brought upon him the displeasure of the church. The emperor and all the princes through whose territories he had to pass promised him a safe conduct ; and though his friends, anxious for his safety, would have persuaded him not to adventure himself into such an assembly, Luther persisted in his determination to go, declaring with his characteristic bcldness, tliat he would go in the name of the Lord, tliougli there should be as many devils in Worms, as tliere were tiles on the houses. At Worms the reception he met with was most flattering; multitudes crowded to see him, he was daily visited by

princes and persons of high rank, and no man, however elevated his station, could be held in greater consideration. On appearing before the diet, he candidly ad-milted tliat he had been too acrimonious in his publications, refusing at the same time to renounce his opinions, unless he should bo convinced of their falsehood by an appeal to tlie word of God. Some of the clergy proposed to deal with him in the same manner as the council of Constance had done with lluss and Jerome ; but the diet would not consent to so base an act, after the promise of safe conduct which they had given him ; Luther therefore departed in safety. He had not long left the city before a decree was issued in the name of Charles and the authority of the diet, pronouncing him an obstinate heretic, deprivnig him of all his rights as a suV)jecl, and calling upon every one to seiie

him, as soon as the term of his protection should expire. In this extremity, the kindness and address of his friend, the elector of Saxony, suggested a prudent stratagem for the preservation of l.uther. As lie was returning from the diet, near Altenstrain in Thuringia, a body of horsemen in masks suddenly rushed out of a wood, where tiiey had been lying in wait, surrounded him, and after dismissing his attendants, carried him to the strong castle of Wortburg, or Wartenburg, not far distant. Here he continued for nine months, being supplied by the elector's order with every thing he needed, or which might be agreeable to him ; and the place of his retreat being carefully concealed. During this time he once secretly visited Wittemberg, being urged to this step by some evils which were beginning to discover themselves among his friends, especially the conduct of Carlostadt. This reformer held some important truths, in which lie differed from Luther, particularly with regard to the sacrament, on which point the Lutherans symbolised greatly with the papists; but he was too violent in his measures to promote the cause of the reformation, and appears chargeable with no small degree of envy at Luther's growing popularity. The latter could not restrain his im[)atience at these circumstances, and hastened therefore on the 3d of March, 1522, to Wittemberg. In his solitude at VVartenburg, which he called his

Patmos, he was engaged in writing several treatises to confute his adversaries, and revive the spirit of his followers, whom the suddeii disappearance of their leader had contributed greatly to discourage. He also at the same time made preparations for the greatest and most useful work he had yet attempted, the translation of the Holy Scriptures into the German language. With a view to this important labor, he had during the preceding summer applied himself assiduously to the study of the Greek and He-brew tongues. Several versions had appeared previously to this, particularly at Nuremberg, in the years 1477, 1483, 1490,and'in 1518 at Augsburg, but they were so badly executed that they were not permitted to be read. Luther first published the gospels of Matthew and INIark ; these were followed by the epistle to the Romans; the other books succeeded, until about the month of September 1522 the whole New Testament was put into circulation. He next proceeded to the translation of the Old Testament, on which he and his coadjutors bestowed incredible pains, and one book after another was published, until the whole of this laborious work was completed in the year 1530. His principal fellow laborers in this great undertaking were Melancthon, Cas-par Cruciger, Justus Jonas, John Bugenhagius or Pomeranus, Matthew Auregallus ; and the corrector of the press, George llorarius.

In tlie year 15:21 Luther was called to enter the lists against no less an opponent than Henry VIII., king of England. This monarch then inflamed with violent zeal for the doctrines of the church of Rome, and for showing his own skill in ♦heological polemics, wrote a treatise Of the »even Sacraments, in answer to Luther's work, entitled Of the Captivity of Babylon. He presented hi3 bock t(Leo, who was so well pleased

with it, that he conferred on il.<! author the title of Defender of the Faith. Luther answered him with considerable severity, treating him and his work with great contempt. Our reformer now declared open war with the pope and the clergy; and published attacks upon the pope's bull, and against the order of the bishops. He wrote also a letter to the assembly of the Bohemian slates, exhorting them to continue stedfast, and not to return to the Romish communion. Ferdinand archduke of Austria, and some other princes, having issued severe edicts against all who should read his translation of the New Testament, he published a treatise. Of the Secular Power, in which he designated them as tyrants and impious persons. At the diet, which was this year held at Nuremburg, Adrian VI., who had succeeded Leo, sent his brief, in which he inveighs most bitterly against Luther for

still continuing to teach and publish his heretical doctrines; declares, that he thinks it very strange that a na-tion so religiously disposed should be seduced by a wretched apostate friar, and calls upon the diet to compel him and his adherents to return to their duty, or if they remained obstinate, to treat them according to the laws of the empire, and the edict of the diet of Worms. Another hostile edict was published on the 6th of Marcii 1523; but it availed little in checking Lutherani.im, which still triumphed on every side. Luther wrote many pieces this year, among which may be particularly mentioned one on the Dignity and Office of the Supreme Magistrate, with which the elector of Saxony is said to have been much pleased. About this time also he wrote a letter to the Waldenses, or Pickards of Bohemia and Moravia, who had requested his opinion 'about worshipping the body of Christ in the eucharist. He also addressed to the senate and people of Prague a work on the Institution of Ministers of the church ; drew up a form of saying mass, and publislied a satirical work, entitled an Example of Popish Doctrine and Divinity, directed against monastic vows and those who professed them. In consequence of another piece, which he wrote against the vows of virginity, in the preface to his commentary on 1 Cor. viii., nine nuns, one of whom was Catharine de Bore, left the nunnery at Nimptschen, and aided by Leonard Coppen, a citizen of Torgau, came to Wittemberg. Luther wrote a book in the German language, in which he highly commended this act, and compares the deliverance of these nuns to that of the souls which Jesus Christ has delivered by his death. This year two of his followers were burned at Brussels in the month of July, being the first that suffered martyrdom for the reformed doctrine. On this subject Luther wrote a treatise ; he also sent a letter of consolation to three noble ladies, who on account of reading his books had suffered banishment from the duke ot Saxony's court.

In the year 1524 our reformer published Re marks on the Canonisation of Benno, bishop ot !\Ieis.?en, in the time of Gregory VII. : the work was entitled. Against the New Idol and Old Devil set up at Meissen. This year also the dispute on the freedom of the will commenced between him and Erasmus. The bold, uncompro-

mising spirit of the reformer could ill brook the timid and trimming policy of Erasmus, who, although he discovers in some of his writings, his contempt of the priests, had not sufficient courage to take part with the friends of truth, and too frequently lent himself to subserve the designs of their enemies. Urged by the papists to write against Luther, and desirous to free himself from the suspicion of heresy, he produced what he called a diatribe or conference about free will. Luther replied to him in rather severe terms, entitling his book a Treatise of the Servitude of Man's Will, which produced a rejoinder from Erasmus, entitled Hypersapistes. About the end of this year Luther threw ofl" the habit and obligations of a monk, and thus prepared the way for his marriage, which took place a few months afterwards. In the mean time he lost two of his friends, whom he much valued, Nesenus, who was suddenly drowned in the Elbe, and Henry von Gutphen, who was called to suffer martyrdom for the truth, and perished by the rage of the clergy as he was returning from Ilolstein, whither he had gone to preach the reformed doctrines. On the 5th of JNIay, 1525, he was called to mourn over a still greater loss in the death of Frederick, the elector of Saxony, who finished his course with that peaceful serenity wliich was highly creditable to his new faith. As this wor-thy prince, however, was succeeded by his brother John, an equally warm friend to the reformed religion, but more bold and decided in its support, Luther met with no opposition, but was rather encouraged in all his plans ; so that a new order of worship and administration of tiie sacraments, in the German tongue, was approved by him and introduced gradually into the Saxon churches. Of Luther's marriage, which took place on the 13th of June in the same year, many of his friends disapproved : some considering it at least untimely, as the death of the elector was yet recent, and as Germany was at this time involved in all the miseries of war. Luther, however, boldly defended himself; 'I took a wife,' says he, ' in obedience to my father's commands, and hastened the consummation, to prevent impediments and stop the tongues of slanderers.' lie also stated (and this was sufficiently probable) that he did it to further his grand design of opposing the popish corruptions. He was very happy in this union. His activity, however, did not at all abate; he was still as zealously as ever employed in the great cause he had undertaken ; and held a conference at this period with Zuinglius and the Swiss divines on the subject of the sacramental controversy. Both parties, perhaps, too stiffly contended for their particular views ; but it is to their honor, that each retired from their discussion, manifesting Christian affection for their brethren, and imploring the divine blessing upon

them.

The year 1530 was rendered remarkable by the assembling of the diet of Augsburg, to which the reformers presented their confession of faith and practice, well known by the name of the Augsburg Confession (see the articles I'kotestant and Reformation). Thougliit was not deemed prudent that Lutlier, who had been proscribed by the edict of Worms, should make his appear-

ance at Augsburg; yet he was in waiting nt Coburg, in Franconia, for the purpose of consultation, if necessary, and he revised the copy of the Confession, which had been previously drawn up by Melancthon. During the discussi6n that ensued, and particularly after the distressful conclusion of the conference and the severe decree of the diet, his counsel was of essential benefit to his brethren. The cause of the Reformation had now taken so deep a root that the united efforts of the pope and the emperor were unable to stop its progress, and Luther had comparatively little to do, JDUt to contemplate the great work he had been the instrument in effecting; to exhort and advise the princes, and states, that had adopted his doctrines ; and to publish such works as might be necessary for the confutation of his enemies and the encouragement of his friends. His undaunted spirit disregarded alike the threats of the emperor and the bulls and anathemas of the pope ; although Melancthon and others were at timgs very much shaken by these things. In 1533 we find him employed in penning a letter of consolation to the citizens of Oschatz, who had suffered much for their adherence to the x\ugsburg confession ; and nearly at the same period he engaged in a controversy with George, duke of Saxony, so bitter an enemy to his doctrin'es, that he had even compelled his subjects to swear they would never embrace them. Notwithstanding this sixty or seventy of tlie citizens of Leipsic, having " conferred with Luther on some point of difficulty, ventured to desert the Catholic system ; on which the duke bitterly complained to the elector John. In 1534 he began to print his version of the Bible in the German language, under the sanction of the elector. It was published early in the next year ; about which time he also wrote a piece against masses and the consecration or priests, in which he mentions a conference, he supposes he had with the devil on these subjects. In February 1537 he was called to attend a meeting of the confederated protestant princes at Smalkald, but was unable to go in consequence of a serious indisposition, with which he was seized. It was a severe attack of the stone, notwithstanding which, he would set out on his journey. As he was

c::rried along, he made his will, leaving to his friends his hatred of popery, agreeably to a saying he often used, Pestis eram vivus, moriens eromors tua, papa. He, however, began to amend the very first night after he set out, and soon afterwards recovered. Pope Pius III., being now sensible that the Protestants could not be compelled to retract their opinions, began t) advise a reform of the church and clergy ; and even talked of calling a council for the purpose. This Luther ridiculed in a frontispiece to one of his works, representing the pope on a throne, with his cardinals around him, having foxes tails, and, as Melchior Adam expresses it, seeming Sursum et deorsum repurgare. About the same period he j)ublished a Confutation oE the pretended grant of Constantine to Sylvester, bishop of Rome : and some of John Huss's letters to the Bohemians, written from the prison of ('onstance. In 1540 he paid a visit to Melancthon, who had been taken very ill on his way to the diet of Ilaguenavv, and lay at Vinaria in a

state of extreme weakness and dejection ; his counsels and prayers on this occasion were of great service to his friend, who was soon after restored to him.

But the departure of our great reformer himself was now hastening. It occurred in the year 1546, just at the time, when, owing to the persecuting measures which were then beginning to be concerted, his presence was apparently most necessary to the Reformation. In tlie lat-ter part of the former year he paid a visit to l)is native country, in company with JNIelancthon; and, soon after his returnˆwas summoned thither again, at the earnest request of the earls of Mansfeldt, to adjust some differences that had arisen about the limits of their territories. Hav-ing, therefore, preached for the last time at Wittemberg on the 17th of January, he left it on the 23d, and staid three days at Halle in Saxony with Justus Jonas. Passing the river on the 28th, accompanied by his three sons and his friend Dr. Jonas, they were in some danger; on which -he said rather facetiously to the doctor, ' Do not you think it would rejoice the devil exceedingly, if I and you, and my three sons

should be drowned?' On entering the territory of ˆMansfeldt he was received very honorably, and attended by more than 100 horsemen, but was now so extremely ill that it was apprehended he would die on the road. Repeated attacks of the stone had gradually undermined his constitution, and he expired early in the morning of the 18th of February at Eisleben, his native place. His body was put into a leaden coffin, and carried with great pomp to the church, where his friend Dr. Jonas preached. It was the wish of the earls of INIansfeldt that his remains should be buried in their dominions ; but, us the elector of Saxony insisted on their being removed to VVit-temberg, he was removed and interred there with the highest honors that had ever been paid to a private individual; princes, nobles, and students, attending the procession, and Melancthon delivering his funeral oration. Numberless lies were propagated by the papists about his death ; some even asserting that the devil strangled him. After his decease his works were published at Wittemberg in 7 vols, folio. He had three sons by his wife Catherine de Bore, who survived him several years.

•LUTHRRANISM, the sentiments of Martin Luther. This system has undergone some alterations since the time of its founder. Luther at one time rejected the epistle of St. James, thinking it inconsistent with the doctrine of St. Paul, in relation to justification ; he had also doubts about the Apocalypse : both of these books are now received as canonical in the Lutheran church. He reduced the number of sacraments to two, *viz.* baptism and the eucharist : but he believed the impanation, or consubstantiation, that is, that the matter of the bread and wine remains in conjunction with the body and blood of Christ ; and in this article the main difference between the Lutheran and English churches consists. Luther maintained, however, the mass to be no sacrifice ; exploded the adoration of the host, auricular confession, meritorious works, indulgencies, purgatory, the worship of images, and other errors, which had crept in during the corrupt times of the Romisii church. He also ojjposed the doctrine of free will, maintained predestination, and asserted that justification is solely by the imputation of the merits and satisfaction of Clirist. He likewise opposed the Romish fasts, monastic vows, the celibacy of the clergy. Sec.

LUTHERANS, the Christians who follow the opinions of Martin Luther. See Luther. The Lutherans differ least of all Protestants from the Romish church ; as they affirm that the body and blood of Christ are materially present in the sacrament of the Lord's supper, though in an incomprehensible manner ; they likewise represent some religious rites and institutions, as ti)e use of images in churches, the

distinguishing vestments of the clergy, the private confession of sins, tlie use of wafers in the administration of the Lord's supper, the form of exorcism in the celebration of baptism, and other ceremonies of the like nature, as tolerable, and some of them even useful. With regard to the divine decrees they maintain that they respect the salvation or misery of men, in consequence of a previous knowledge of their sentiments and characters, and are not free and unconditional, or founded on the mere will of God. Towards the close of the seventeenth centuiy the Lutherans began to entertain a greater liberality of sentiment than they had before adopted ; though in many places they persevered longer in severe and despotic principles than other Protestant churches. Their public teachers now enjoy an unbounded liberty of dissenting from the decisions of those creeds which were once deemed almost infallible rules of faith and practice, and of declaring their dissent in the manner they judge most expedient : and too many of them it is to be feared have abused this liberty into absolute latitudi-narianism in doctrine. Mosheim attributes this change in their sentiments to the maxim which they generally adopted, that Christians are accountable to God alone for their religious opinions ; and that no individual can be justly punished by the magistrate for his erroneous opinions, while he conducts himself like a virtuous and obedient subject, and makes no attempt to disturb the peace and order of civil society. Protestantism on the continent has certainly declined considerably from the standard of the Reformation. See PR0TEST.\NriSM.

LUTHERN, in architecture, a kind of win-dow over the cornice, in the roof of a building; standing perpendicularly over the naked of a wall, and serving to illuminate the upper story. Lu-therns are of various forms ; as square, semicircular, round, called bull's eyes, flat arches, &c.

LUTTERWORTH, a market town of Leicestershire, seated on the Swift, with a handsome church, and lofty steeple, containing above 1600 inhabitants. The whole church was repaired in 1740, and the interior made new, except the pulpit, which is preserved with great veneration, in memory of the reformer Wickliff, who was rector of this place, and died suddenly in 1387, whilst hearing mass. The chair in which he expired is also preserved with great care ■ his

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body was buried in the church, but afterwards taken up and burned. It has a market on Mon-day, and is fourteen miles south of Leicester, and eighty-eight N. N. W. of London.

LUTTI (Benedict), an eminent painter, born at Florence in 1666. He was the disciple of Antonio Dominico Gabiani, and was judged equal to his master ; he painted easel pieces, and his works were much valued in England, France, and Germany. The emperor knighted him ; and the elector of Mentz sent him a cross set with diamonds. Lutti was never satisfied with finishing his pictures; yet, though he often retouched them, they never appeared labored. He died in 1724.

LUX, or "^ Fr. luxer ; Lat. luxo. To

Lux'ate, v.a. ^put out of joint; to dis—

Luxa'tion,'/!. s. 3 joint.

If it be such pain to die, what is it to be ever dy-ing 1 and, if the straining and luxation of one joint can so afPiict us, what shall the racking of the whole body, and the torturing of the soul, whose animation alone makes the body to feel and complain of smart.

Bp. Hall.

Descending careless from his couch, the fall Luxed his joint neck, and spinal marrow bruised.

Philips.

Consider well the luxated joint, which way it slipped out ; it requireth to be returned in the same manner. Wiseman,

The undue situation or connexion of parts, in fractures and luxations, is to be rectified by chirurgi-cal means. Floyer.

LUXE, n. s. "^ Fr. luxe; Lat. luxus,

Luxu'RtANCE,?i. s. I loosed. Voluptuousness: I luxuriance, luxuriancy, I exuberance of growth : j luxuriant, exuberant ; superfluous in growth : to I luxuriate is to grow or J shoot forth in this man-

Luxu’riancy,

LUXU RIANT, adj. LUXU RIATE, v.n. Luxu’rious, adj. Luxu’riously, adv.

LUX’URY,72.S.

ner : luxurious is either administering or addicted to voluptuous pleasure : luxury, pleasure ; delicious or luscious fare ; lewdness. Urge his hateful luxury, His beastly appetite in change of lust. Which stretched unto their servants, daughters, wives. Sliakspeare.

She knows the heat of a luxurious bed : Her blush is guiltiness, not modesty. Id.

Hotter hours you have Luxuriously picked out. Id.

Young trees of several kinds set contiguous in a fruitful ground, with the luxury of the trees will incorporate. Bacon.

A fluent and luxurious speech becomes youth well, but not age. Id. Essays.

Envy is a weed that grows in all soils and climates, and is no less luxuriant in the country than in the court. Clarendon.

Egypt with Assyria strove In wealth and luxury. Milton.

Till more hands Aid us, the work under our labour grows Luxurious by restraint. Id. Paradise Lost,

Luxurious cities, where the noise Of riot ascends above their loftiest towers.

Milton, The mantling vine gently creeps luxuriant. Id. Than in England, there is no where more true leal in the many forms of devotion, and yet no where more knavery under the sliows and pretencos.

no where more abandoned libertines ; more refined luxurists. .Sir W. Temple,

If the fancy of Ovid be luxuriant, it is his character to be so. Bryden's Preface to Ovid's Epistles. llepel the Tuscan foes, their cities seize. Protect the Latians in luxurious ease. Dryden. Where mice and rats devoured poetick bread, And with heroick verse luxuriously were fed. Id.

Flowers grow up in the garden in the greatest luxuriancy and profusion. Spectator.

He cut the side of the rock for a garden, and, by lay-ing on it earth, furnished out a kind of luxury for a hermit. Addison.

The power of wealth I tried. And all the various luxe of costly pride.

Prior, A fungus prevents healing only by its luxuriancy.

Wiseman, Prune the luxuriant, the uncouth refine. But show no mercy to an empty line. Pope,

What a luxurious man in poverty would want for horses and footmen, a good-natured man wants for his friend or the poor. Id.

While through the parting robe the' alternate breast In full luxuriance rose. Thomsoji's Summer.

You cannot spend money in Zitrury without doing good to the poor. Nay, you do more good to them by spending it in luxury — you make them exert industry, whereas, by giving it, you keep them idle.

Johnson. The soft luxuriance of his fancy was already shooting, and all the gay varieties of diction were ready at his hand to colour and embellish it. Id, The tune, unheeded, sped away,

While love's luxurious pulse beat high, Beneath thy silver-gleaming ray.

To mark the mutual-kindling eye. Bums. Althaea with the purple eye ; the broom. Yellow and bright, as bullion unalloyed. Her blossoms ; and luxuriant above all The jasmine, throwing wide her elegant sweets.

Cowper, Nor is the 'luxury of woe,' that we read of in poetry, a mere figure of speech; but a real sensation, wherewith every person of humanity is acquainted by frequent experience. lieattie.

Nor dint of hoof, nor print of foot. Lay in the wild luxuriant soil ; No

sign of travail — none of toil ; The very air was mute. Byron,

LUXEMBOURG (Francis Henry de Mont-morenci), duke of, and marshal of France, a renowned general in the service of Louis XIV. was born in 1628. He was the prince of Condc at the battle of llocroy, in 1643 ; and in 1668 distinguished himself at the conquest of Franche Comptc. In 1672 he commanded in chief the I'rench army in Holland; when he defeated the enemy near Woerden and Bodegrave, and was universally admired forthe noble retreat he made in 1673. He became marshal of France in 1675; gained the battle of Fleurus in 1690, that of Stecnkirk in 1692, and that of Nerwind in 1693. His uniform success, when contending with king William III., rendered him an object of jealousy to that prince, and in the bitterness of his heart he one day called him ' a little hump back.' This being reported to the marshal he coolly said, ' And how can he know any thing of my back, I am sure he never saw it?' He died at Versailles in 1695k

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LUXEMBUllfj, a considerable province of or entirely excluded, are the stamina or chives, the south-east part of the Netherlands, enclosed See Botany. Many natural orders of plants do by the Prussian states on the Rhine, a part of not in any circumstances produce luxuriant the French front;er, and the Belgic provinces of flovˆers. Of this kind are the masqued flowers Namur and Liesjo. ll has a territorial extent of of Tournefort, excepting calfs-snoul ; the 2400 square miles; and contains 226,000 inhabi-rough-leaved, umbelliferous, starry plants, and tants, composed of Germans, French, and Wal-such as flower at the joints, of Ray; some um-loons, the major part professing the Catholic belliferous flowers, however, are prolific. The religion. The face of the country is mountainous pea bloom, or butterfly-shaped flowers, are and woody, bein;ˆ' traversed by several branches rarely rendered double; some instances, how-of the Ardennes. It is watered by the Moselle, ever, of luxuriance, are observed in a species of the Sure, the Semoys, the Else, and the Our. lady's-finger, coronilla and broom. All luxu-Its climate is cold ; and corn is not raised suffici-riant flowers are vegetable monsters. Such as ent for the consumption; but potatoes and flax are perfectly full cannot be propagated by seeds; are raised in larue quantities, and wine on the because these, for want of impregnation, can borders of the Moselle. Cattle forms an im-never ripen. Full flowers, therefore, are deno-portant object of industry ; but greater sources miuated by Linnaeus eunuchs. The highest degree of traffic are found in its forests, which occupy of luxuriance is very common in carnation, 466,000 acres. The only mineral product is lychnis, anemone, stock, Indian cress, rose, iron. The few manufactures are of woollen, marsh marigold, ranunculus, violet, pceony, and leather, and iron ; and its exports are to a small narcissus. Flowers which do not exclude all extent in wood, of wool, cattle, tallow, and the stamina perfect their seeds. Of this kind leather. By the congress of Vienna Luxemburg are poppy, fennel-flower, campanula, and some was erected into a grand duchy, and ceded, as a others. Some flowers, as those of the water-compensation for territory, to the king of the lily, fig-marigold, and cactus, have many rows Netherlands, who takes the title of grand duke, or series of petals, without tlie number of stall is divided into three districts, *viz.* Luxemburg, 87,000 inhabitants; Dietkirch, 47,000; and Neufchateau 9'2,000.

LvxEMBuuG, the capital of the ?grand duchy of this name, is situated on the river Alsetz, or Elsetz, not far from the French frontier. It is

mma being in the least diminished. Such flowers are by no means to be reckoned luxuriant.

Luxury may be defined an extravagant indulgence in diet, dress, and equipage. It among the Romans prevailed to such a degree.

reckoned one of the strongest places in Europe, that several laws were made to limit it. The

and is divided into the Upper and Lower Town, extravagance of the table began about the time

The former is built in the form of a heptagon, of the battle of Actium, and continued in great

and stands chiefly on a steep rock, out of which excess till the reign of Galba. Peacocks,

the fortifications are excavated. The latter is cranes of Malta, nightingales, venison, wild and

situated in a deep valley, separated from the tame fowl, were the principal delicacies. A

Upper Town by the river. The chief public profusion of provisions was the reigning taste.

building is the governor’s castle ; but both the town and the environs are of interest to the antiquary, from the various Roman antiquities. The manufactures are woollen cloth, stockings, and fine earthenware, and hardware.

Whole wild boars were often served up, and filled with various small animals, and birds of different kinds : this dish they called the Trojan horse, in allusion to the wooden horse filled with soldiers, fowls and game of all sorts were

Luxemburg is said to have had originally served up in whole pyramids, piled up in dishes

a castle, built by its early inhabitants, and en-as broad as moderate tables. Lucullus had a

larged by the Romans. The town was gradually particular name for each apartment; and, in

formed under its protection. In 1684 it fell into whatever room he ordered his servants to prepare

lhe hands of the French, who enlarged its forti-the entertainment, they knew by tlie direction

ficutions, but restored it to Germany at the peace the expense to which they were to go. \Vlien

of Ryswick. In the summer of 1794 it was he supped in the Apollo, the expense was fixed

besiecjed by the armies of France, and capitu-at 50,000 drachmae, that is £l250. M.Antony

lated on the 17th of June following. It was provided eight boars for twelve guests. Vitel—

finally lost by France in 1814. The population lius had a large silver platter, said to have cost

is about 10,000: 130 miles south-east of Brus-1,000,000 of sesterces, called Minerva's buckler,

sels, and 220 south-east by south of the Hague. In this he blended together the livers of gilt—

Lt.'XEMBURG, P'rench, a ci-devaut province of heads, the brains of pheasants and peacocks, ihe France, comprehending part of the ancient tongues of phenicopters, and the milts of lam-duchy, ceded to France in 1659, by the peace of preys. Caligula served up to his guests pearls the Pyrenees, and including the districts and of great value dissolved in vinegar; the same towns of Thionville, Montmedy, Marville, Che-was done also by Clodius, the son of ˆEsop the vancy, Carignan, and Damvilliers. It now tragedian. Apicius laid aside 00,000,000 of

form? the department of the Moselle.

LUXURL\NS Flos, a luxuriant or double flower, a flower some of whose parts are increased Hi number, to the diminution or entire exclusion o’f others. The parts that are augmented or multiplied, in luxuriant flowers, are the flower-cup and petals; the parts that are diminished.

sesterces, besides a mighty revenue, for no other purpose but to be sacrificed to luxury. The Roman laws to restrain luxury were Lex Orchia, Fannia, Didia, Licinia, Cornelia, and many others: but these were ineffectual ; for, as riches increased among them, so did sensuality.

LUYA AND Chillaos, a province of Peru

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bounded north and north-west by the province of Jaen, the river Amazons running between them, east by the mountains, and south-east by Caxa-marca. It is eighteen leagues long, and about eight broad, containing 3500 inhabitants. The capital is of the same name, in long. 77ˆ 41’ W., lat. 5° 33’ S.

LYCˆ-EUM, AvKHov, in antiquity, a celebrated school or academy at Athens, where Aristotle explained his philosophy. The place was composed of porticos, and trees planted in the quincunx form, where the philosophers disputed walking. Hence * philosophy of the Lyca-um’ is used to signify the philosophy of Aristotle, or the Peripatetic philosophy. Suidas observes that the Lycseum took its name from its having been originally a temple of Apollo Lycjeus; or rather a portico or gallery built by Lycseus the son of Apollo : but others mention it to have been built by Pisistratus or Pericles.

LYC7EUS, in ancient geography, a mountain of Arcadia, sacred to Jupiter; whence Jupiter Lycaeus (Pliny) : sacred also to Pan (Virgil) : and hence Lyceea, the rites performed to Pan on this mountain ; which, Evander carrying with him to Latium, were called Lupercalia (Virgil).

LYCAN’THROPY, n. s. Fr. Ij/canthropie ; Gr. XwKoc, the wolf, and av0j)a>7roc-A kind of madness in which men have the qualities of wild beasts.

He sees like a man in his sleep, and grows as much the wiser as the man that dreamt of a lycanthropii , and was for ever after wary not to come near a river.

Taylor.

LYCAON I., in fabulous history, the first king of Arcadia, son of Pelasgus and Melibcea. lie built a town called Lycosura, on the top of Mount Lycaeus, in honor of Jupiter. He had many wives, by whom he had fifty sons and a daughter called Callisto. He was succeeded by Nyctimus, his eldest son. He lived about A!a. C. 1820.

Lycaon II., king of Arcadia, noted for his cruelties. He was changed into a wolf by Jupiter, because he offered human victims on the altar of Pan. Some attribute this metamor-phosis to another cause. The sins

of mankind, as tiiey relate, were become so enormous, that Jupiter visited the eartli to punish wickedness and impiety. He came to Arcadia, where he was announced as a god, and the people began to pay proper adoration to his divinity. Lycaon, however, who used to sacrifice all strangers to his wanton cruelty, laughed at the pious prayers of his subjects; and, to try the divinity of the god, he served up human flesh on his table. This impiety so irritated Jupiter that he immediately destroyed the house of Lycaon, and changed him into a wolf.

LYCAON I A, in ancient geography, a small country of the Hither Asia, bounded by Pamphylia on the south, Cappadocia on tlie north, Pisidia and Phrygia on the west, and Armenia Minor on tl:° east. This country, thougii situated very near mount Taurus, and])art of it on it, yet the Romans reckoned it in Asia intra Taurum.

LˆCIJNIS, in botany, the Cduipion, bachelor's-button, catch-fly, &c. ; a genus of the pen-

tagynia order, and pentandria class of plants ; natural order twenty-second, caryophyllete : cal. monophyllous, oblong, and smooth ; there are five unguiculated petals; with the segments of the limb almost bifid : caps, quinquelocular.

1. L. Chalcedonica, the Chalcedonian scarlet lychnis, has a fibrated perennial root; upright, straight, hairy, annual stalks, rising three or four feet high ; garnished with long, spear-pointed, close-sitting leaves, by pairs opposite ; and the stalk crowned by a large, compact, flat bunch of beautiful scarlet or flame-colored flowers, appearing in June or July. Of this there are varieties, with single scarlet flowers, with large double scarlet flowers, of great beauty and elegance, with pale red flowers, and with white flowers. Of these varieties, the double scarlet lychnis is superior to all for size and elegance; the flowers being large, very double, and connected into a very large bunch, exhibit a charming appearance ; the single scarlet kind is also very pretty; and the others effect an agreeable variety with the scarlet kinds.

2. L. dicEcia, the dioecious lychnis, commonly called bachelor's-button, has fibrated perennial roots; upright stalks, branching veiy diffuse and irregularly, two or three feet high ; having oval, acute-pointed, rough leaves, by pairs opposite; and all the branches terminated by clusters of dioecious flowers of different colors and

properties in the varieties : flowering in April and May. The varieties are the common single red-flowered bachelor's button, double red, double white, and single white flowered. The double varieties are exceedingly ornamental; the flowers large, very thick, and continuing long in blow; the single red sort grows wild by ditch sides and other moist places in many parts of England ; from which the doubles were accidentally obtained by cultures in gardens. The flowers are often dioecious, i. e. male and female in distinct plants.

3. L. flos cuculi, the cuckoo-flower lychnis, has fibry perennial roots; upright, branchless, channelled stalks, nearly two feet high ; garnished with long, narrow, spear-shaped leaves, in pairs opposite ; and terminated by branchy foot-stalks, sustaining many purple, deeply quadrifid flowers ; appearing in May. The flowers having eacli petal deeply quadrifid in a torn or ragged like maimer, the plant obtained the cant name of ˆRagged Robin. There are varieties with single and double flowers. Tiie double sort is a large, very multiple, fair flower; it is an improved variety of the single, which grows wild in most of our moist meadows, and is rarely cultivated ; but the double, being ornamental, merits culture in every garden.

4. \ˆ. viscaria, the viscous German lychnis, commonly called catch-fly, has fibry perennial roots ; crowned by a tuft of long grassy leaves close to the ground ; many erect, straight, single stalks, rising a foot and a half or two feet higli, exuding from their upper part a viscous or clammy matter; garnished with long narrow leaves, by pairs opposite ; and terminated by many reddish-purple flowers, in clusters one above another, forming a sort of long loose spike ; all the flowers with entire petals; flowering in May. There

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arc varieties with sinsjle red flowers, with double red flowers, and witli wliite flowers. The double variety is considerably the most eligible for general culture, and is propagated in plenty by parting tiie roots. All the varieties of this species emitting a glutinous liquid matter from their stalks, flies happening to light tliereon sometimes stick and entangle themselves, whence tlie name catch-fly. All the four species and respective varieties are very hardy ; all fibrous-rooted ; the roots perennial ; but are annual in stalks, which rise in spring, flower in summer, succeeded in the singles by plenty of seed in autumn, by which all the lingle varieties may be raised in abundance, but the doubles only by dividing the roots, and some by cuttings of the flower-stalks.

LYCIA, a country of Asia Minor, bounded by the Mediterranean on the south, Caria on the west, Pamphylia on the east, and Phrygia on the north. It was anciently called Milyas, and Tremile, from the Milya;, or Solymi, a people of Crete, who came to settle there. It was named Lycia from Lycus the son of Pandion, who established himself tliere. The inhabitants were greatly commended by the ancients for their sobriety and justice. They were conquered by Crcesus king of Lydia, and afterwards by Cyrus. Though they were subject to the power of Per-sia, yet they were governed by their own kings, and only paid a yearly tribute to the Persian monarchs. They became part of the Macedonian empire, when Alexander came into the east, and afterwards were ceded to the house of the Seleucidse. The country was reduced into a Roman province by Claudius.

LYCIUM, in botany, a genus of the monogynia order, and pentandria class of plants ; natural order twenty-eighth, luridoe : cor. tubular, having its throat closed up with the beard of the filaments : berry bilocular. There are eleven species, natives of yarious countries.

LYCODONTKS, in natural history, the petrified teeth of the lupus piscis, or wolf-fish, frequently found fossile. They are of different shapes ; but the most common kind rise in a semiorbicular form, and are hollow within, somewhat resembling an acorn cup; this hollow is found sometimes empty, and sometimes filled with the stratum in which it is immersed. Rlany of them have an outer circle, of a different color from the rest.

LYCOMEDES, in fabulous history, a king of Scyros, an island in the ˆTigean Sea. lie was son of Apollo and Parthenope. He was secretly entrusted with the care of young Achilles, whom his mother Thetis had disguised in wo-men's clothes, to remove him from the Trojan war, where she knew he must unavoidably perish. lie is infamous for his treachery to Theseus, who had implored his protection, when driven from his throne by the usurper iNInest-lieus. Lycomedes, either envious of the fame of his illustrious guest, or bribed by Mnestheus, led Theseus to an elevated place, on pretence to show him the extent of his dominions, and perfidiously threw him down a precipice, where he was killed.

LYCOPERDON, in botany, a genus of the

natural order of fungi, and the cryptogamia class of plants. The fungus is roundish, and full of farinaceous seeds. There are several species ; the following are the most remarkable.

1. L. bovista, the common puff-ball, is frequent in meadows and pastures in the autumn. It varies exceedingly in size, figure, superficies, and color. In general, it consists of a sack or bag, having a root at its base, and tlie bag composed of three membranes, an epidermis, a tough white skin ; and an interior coat, which adheres closely to the central pitii. The pith in the young plants is of a yellowish color, at first firm and solid, but soon changes into a cellular spongy substance, full of a dark dull-green powder, which discharges itself through an aperture at the top of the fungus, which aperture is formed of lacerated segments, in some varieties reflexed. The powder is believed to be the seeds, which through a microscope appear of a spherical form, and to be annexed to elastic hairs. Among the numerous varieties of this fungus, the glabrum is most remarkable. It is a smooth sessile kind, of a nearly spherical form, puckered or contracted at the root. This sometimes grows to an enormous size. It has been found in England as big as a man's head ; and at Carrara, near Padua in Italy, specimens have been gathered, weighing twenty-five pounds, and measuring two yards in circumference ; but its more ordinary size is that of a walnut or an apple. The varieties of tiiis species have no limits, being frequently found to run into one another ; the scaly, warty, and echinated coats turning smooth as the plants grow old, and the neck of the fungus having no determinate length. Tiie natural color of the puff-ball is either white, gray, or ash-colored; but sometimes yellowish, tawny, and brownish. The internal spongy part of it, applied to wounds, is esteemed good to stop bleedings.

Pressed and dried in an oven, the puff-ball becomes a kind of tinder, the smoke of which is said to intoxicate bees. Marsigli says the Italians fry the great variety, and indeed any of the others when young, and eat them with salt and oil.

2. L. tuber, truffles, or subterraneous puflT-balls, a native of woods both in Scotland and England. It grows gradually in clusters three or four inches under ground, without any visible root. The figure of it is nearly spherical, the size that of a potato ; the exterior coat at first white, afterwards black, and studded with pyramidical or polyhedrons tul)ercles ; the internal substance solid and callous, of a dirty white or pale brown color, graineˆl like a nut-meg with serpentine lines; in which, according to Micheli, are imbedded minute oval capsules, containing each from two to four round warted seeds. The truffles of Great Ikitain seldom ex-ceed three or four ounces in weight ; but in Italy, and some other parts of the continent, they are said to have been found of the enormous weight of from eight to fourteen pounds. They are used at table, either fresh and roasted like potatoes, or dried and sliced into ragouts. They have a volatile and somewhat urinous smell ; and are reputed to be aphrodisiacal. Dogs are with much pains tauught to hunt for them by the

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scent, and to scratch up the ground under which lliey lie.

LYCOPERSICON. See Solanum.

LYCOPHRON, a famous Greeic poet and grammarian, born at Colchis in Euboea, who flourished about A. A. C. 304, and, according to Ovid, was killed by an arrow, A. A. C 230. He wrote twenty tragedies ; but all his works are lost, except a poem entitled Cassandra, which contains a long train of predictions, which he supposes to have been made by Cassandra, Priam's daughter. This poem is extremely obscure. The best edition of it is that of Dr. Potter, printed at Oxford in 1697, folio.

LYCOPODIUM, club moss, a genus of the natural order of musci, and cryptogamia class of plants. The anthers are bivalved and sessile ; there are no calyptra. There are twenty-four species ; the following are the most remarkable : —

1. L. clavatum, the common club moss, abounds in dry and mountainous places, and fir forests. The stalk is prostrate, branched, and creeping, from a foot to two or three yards long; the radicles woody. The leaves are numerous, narrow, lanceolated, acute, often incurved at the extremity, terminated with a long white hair, and every where surround the stalk. The peduncles are erect, firm, and naked (except being thinly set with lanceolate scales), and arise from the ends of the branches They are generally two or three inches long, and terminated with two cylindrical yellowish spikes, imbricated wilii oval acute scales, finely lacerated on the edges, and ending with a hair. In the ala or bosom of the scale is a kidney-shaped capsule, which bursts with elasticity when ripe, and throws out a light yellow powder, which, blown into the flame of a candle, flashes with a small explosion. The Swedes make mats of this moss to rub their shoes upon. In Russia and some other countries, the powder of the capsules is used in medicine to heal galls in children, chops in the skin, and other sores. It is also used to powder over officinal pills, and to make artificial lightning at theatres. The Poles make a decoction of the plant, and, dipping a linen cloth into it, apply it to the heads of persons afflicted with the disease called the plica polonica, which is said to be cured by this fomentation.

2. L. selago, fir club moss, is common in the Highland mountains of

Scotland, and in the Hebrides. The stalk at the base is single and reclining; but a little higher is divided into upright dichotomous branches, from two to six inches high, surrounded with eight longitudinal oblique series of lanceolate, smooth, rigid, imbricated leaves. Near the summits of the branches, in the alse of the leaves, are placed single kidney-shaped capsules, consisting of two valyes, which open horizontally like the shells of an oyster, and cast out a fine yellow powder. These capsules Liima-us supposes to be antliera;, or male])arts of fructification. In tlie ala; also of many of the leaves, near the tops of the branches, are often found wiiut ho calls fe-male flowers, but which llaller esteeiws to be only gems or buds of a future plant. They consist, first, of four slitf, lanceolate, incurved, mi-VOL. XIII.

nute leaves, one of tlie outeimost longer -.ur' larger than the rest. These are supposed to correspond to the calyx in regular flowers. Again, at the bottom of this calyx are five small pellucid substances, resembling leaves, visible only by a microscope, which are supposed analogous to pistils. These, in time, grow up into three large broad leaves, two of the five united together like the hoof of an ox; with a third narrower one annexed at the base, and two other minute ones opposite to the other three. These five leaves are joined at the base ; and in au-tumn, falling from the calyx, vegetate, and produce a new plant. See a dissertation De Semi-nibus Muscorum, Ameenit., Academ. II. p., 261. In the island of Raasay, near Sky, in Ross-shire, and some other places, tlie iniiabitants make use of this plant instead of alum, to fix the colors in dyeing. The Highlanders also sometimes take an infusion of it as an emetic and cathartic : but it operates violently ; and, unless taken in a small dose, brings on giddiness and convulsions. Linnaeus informs us, that the Swedes use a decoction of it to destroy lice on swine and other animals.

LYCOPSIS, in botany, a genus of the monogynia order, and pentandria class of plants : natural order forty-first, asperifolitB : cor. has an incurvated tube. Species nine ; chiefly natives of the Levant and of Palestine.

LYCOPUS, in botany, a genus of the mono-gy nia order, and diandria class of plants : natural order forty-second, verticillatte : cor. quadrifid, with one of the segments emarginated ; the stamina standing asunder, with four retuse seeds.

LYCURGUS, the celebrated legislator of the Spartans, was the son of

Eunomes king of Sparta. He travelled to Greece, to the isle of Crete, to Egypt, and even to India, to converse with the sages and learned men of those countries, and to learn their manners, their customs, and their laws. After the death of his brother Polydectes, king of Sparta, his widow offered the crown to Lycurgus, promising that she would make herself miscarry of the child of which she was pregnant, provided he would marry her; but Lycurgus nobly refused heroffiers, and afterwards, contenting himself with being tutor to his nephew Charillus, restored him the government when he came of age ; but, notwithstanding this regular and generous conduct, he was accused of a design to usurp the crown. This calumny obliged him to retire to the island of Crete, where he studied the laws and customs of nations. On his return to Lacedemon he reformed the government ; and, to prevent the disorders occasioned by lux-ury and the love of riches, he prohibited the use of gold and silver; placed all the citizens in a state of equality ; and introduced the strictest temperance, the most exact discipline, and those admirable laws which (a few excepted) have been celebrated by all historians. It is said that, to engage the Lacedemonians to observe them inviolably, he made them swear not to change any part of them till his return; and that he afterwards went to the island of Civte, wiieie he killed himself, after ordering his aslies to be thrown into the sea, lest, if his body should be carried to Sparta, the Lacedemonians should

think themselves absolved from their oath. He flourished about A. A. C. 870.

LVCUS, in ancient geography, a river of Phrygia, which disappears near Colossai, and rises again about four stadia from it, after which it falls into the Ma;ander.

LVDDA, in ancient geography, a town and district of Judaea, fourteen miles north-east of Joppa and thirty-two west of Jerusalem, originally belonging to the Ephraimites, but afterwards to the Benjamites. In the

time of the Maccabees it was taken from Samaria. It was famous for a college of the Jews, which produced many celebrated rabbles.

LYDGATli, (John), called the monk of Bury ; not, as Cibher conjectures, because he was a native of that place, for he was born about 1380, in the village of Lydoate, but because he was a monk of the Benedictine convent at St. Ed-mund's-Bury. After studying some time in the English universities, he travelled to France and Italy ; and, having acquired a competent knowledge of the languages of those countries, he returned to London, where he opened a school, in which he instructed the sons of the nobility in polite literature. At what time he retired to the convent of St. Edmund's-Bury does not appear; but he was there in 1415, and was living in 1446, aged about sixty-six ; but when he died is not known. Pits says, he was ' an elegant poet, a persuasive rhetorician, an expert mathematician, an acute philosopher, and a tolerable divine.' He was a voluminous writer ; and his language is less obsolete, and his versification more harmonious, than that of Chaucer, who wrote about fifty years before him. He wrote, 1. History of the Theban War, printed at the end of Chaucer's works, 1561, 1602, 1687. 2. Poemation of good Counsel, Ibid. 3. The Life of Hec-tor, London 1594, folio, printed by Gross, dedicated to Henry V. 4. Life of the Blessed Virgin, printed by Caxton. 5. The Proverbs of Lydgate upon the fall of Princes, printed by Wink. Word., London, 4to. 6. Dispute of the Horse, the Sheep, and the Goose, Caxton, 4to. 7. The Temple of Brass, among the works of Chaucer. 8. London Lick-penny : see Stowe's History, &c. Besides an incredible number of other poems and translations preserved in various libraries, and of which the reader will find a catalogue in bishop Tanner's works.

LYDIA, in ancient geography, a celebrated kingdom of Asia Minor. AH the ancient writers tell us, that Lydia was first called Mrconia or Meonia, from Meon king of Phrygia and Lydia ; and that it was known under no other denomination till the reign of Atys, when it beˆan to be called Lydia, from his son Lydus. Bochart finding in his learned collection of Phoenician words the verb luz, signifying to wind, and observing that Lydia is watered by the Mreander, so famous for its winding, concludes that it was thence named Lydia or Ludia. The ancient name of Maeonia, he takes to be a Greek translation of the Phoenician word Lud ; wherein he agrees in some measure with Stephanus, who derives the name of Maeonia from Maeon, the ancient name of the Mseander. Some take the word Maeonia

to be a translation of a Ilebresv word signifying metal, because that country, say they, was iu former times enriched with mines. .Though Lydia and Maeonia are by most authors indifferently used for the same country, yet they are sometimes distinguished ; that part w'.iere mount Tmolus stood, watered by the Pactolus, being properly called Maonia ; and the other, lying on the coast, Lydia. This distinction is used by Homer, Callimachus, Dionysiuj, and other ancient writers. In after ages, when the lonians, who had planted a colony on the coast of the .ˆgean Sea, began to make some figure, that part was called Ionia, and the name of Lydia given to the ancient Maeonia. Lydia, according to Pliny, Ftolemy, and other ancient geographers, was boundejl by Mysia Major on the north, by Caria on the south, by Phrygia Major on the east, and Ionia on the west, lying between 30° and 39ˆ lat. N. The kingdom of Lydia was not confined within these boundaries, but extended from Halys to the iF.gean Sea. Pliny's description includes jEolia, lying between the Hermus and the Caicus.

Josephus, and after him all the ecclesiastical writers, derive the origin of the Lydians ifrom Lud, Shem's fourth son, from the similitude of the names. Some will have the Lydians to be a mixed colony of Phrygians, Mysians, and Ca-riaus. Others finding some conformity in religious ceremonies between the Egyptians and Tuscans, who were a Ly.dian colony, conclude them to have been originally Egyptians. All we know, for certain, is, that the Lydians were a very ancient nation, as is manifest from their very fables ; for Atys, Tantalus, Pelops, Niobe, and Arachne, are all said to have been the children of Lydus. And Zanthus, in his Lydiaca, quoted by Stephanus, informs us, that the ancient city of Ascalon, one of the five satrapies of the Philistines, mentioned in the books of joshiia and the Judges, was built by one Ascalus, a Ly-dian, whom Achiamus, king of Lydia, had appointed to command a body of troops which he sent into Syria. The Heraclidae, or kings of Ly-dia, descended from Hercules, began to reign before the Trojan war ; and had been preceded by a long series of sovereigns, sprung from Atys, and hence styled Atyadae : a strong proof of the antiquity of that kingdom. The Lydians began very early to be ruled by kings, whose government seems to have been despotic, and the crown hereditary. They had three distinct races of kings, *viz.* the Atyadae, the Heraclidae, and the Mˆmnad K. The Atyadcc were so called from Atys, the son of Cotys, and grandson of Manes, the first Lydian king. But the history of this family is obscure and fabulous. They were succeeded by the Heraclidae, or descendants of Hercules. For Hercules, being, by the direction of the oracle, sold as a slave to Omphale, queen of Lydia, and relict of king Tmolus, to expiate the murder of Iphitus, had, during his captivity, by one of her slaves, a son named Cleolaus,

whose grandson Argon was the first of the Heraclidao that ascended the throne of Lydia. Others say that Omphale herself, astonished at the valor of Hercules, fell in love with him, married him, and had tvr-o sons by him named Agelaus and La-L V D I A.

mon ; the eldest of whom succeedeJ lier, and gave rist:; to the new royal race. Tliis race is said to iiave reigned 505 years, the son succeeding the fuiher for twenty-two generations. They began to reign about tlie tune of tlie Trojan war. The last of the family was Candaules, who was^ contemporary with Romulus, and who lost both his life and kingdom by his imprudence. iFor, accordnig to Herodotus and Jus-tin, he was so vain of his wife's beauty, that he showed her naked to Gyges, his favorite minister, which enraged the queen so much, that she conspired with, or rather ordered, Gyges to murder him; which he accordingly did, while Candaules was asleep, married the queen, and took possession of the kingdom, in which he was confirmed by the oracle at Delphi. Gyges showed his gratitude by sending many rich presents to the oracle, particularly six cups of gold, weigliing thirty talents. lie made war on Miletus and Smyrna, took Colophon, and subdued the whole country of Troas. In his reign, and by his permission, the city of Abydos was built by the Milesians. Plutarch, and other writers, relate his accession to the crown in a different manner, and tell us, without mentioning the queen, that Gyges rebelled against Candaules, and slew him in an engagement. In Gyges began the third race, called Mermnadae ; who \vere also Heraclidae, being descended from the other son of Hercules by Omphale. Gyges reigned thirty-eight years, and was succeeded by his son Ardyes, who carried on the war against the Milesians, and possessed himself of Priene, in those days a strong city. In his reign the Cimmerians invaded and overrun all Asia Mi-nor. Herodotus informs us, that they even took Sardis, the metropolis of Lydia, but could never reduce the castle. Ardyes reigned forty-nine years, and was succeeded by his son Sadyattes, who reigned twelve years, and was engaged in war with the Milesians for the greater part of his reign. To him succeeded his son Alyattes II. who for five years continued the war against the Milesians, ravaging their country, and about harvest time carrying away all their corn yearly, in order to oblige them, for want of provisions, to surrender thtir city, which he could not re-duce any other way, the Milesians being then masters of

the sea. In the twelfth year of this war, the Lydians having set fire to the corn in the fields, the flames were carried by a violent wind to the temple of Minerva at Assessus, and burnt it down to the ground. Not long after, Alyattes, falling sick, sent to consult the oracle at Delphos ; which refused to return any answer till the king should rebuild the temple of Minerva. Alyattes, therefore, sent ambassadors to Miletus, to conclude a truce with the JMilcsians till the temple should be rebuilt. On t!ie arrival of the ambassadors, Thrasybulus, then king of Miletus, commanded all the corn in the city to be brouglit into the marketplace, ordering the citizens to banquet in public, and revel as if the city were plentifully stored with provisions, that the ambassadors, seeing such plenty, and the people every where revelling, might acquaint their mas-ter with their affluence, and divert him from pursuing the war. His stratagem had the desired

effect ; for Alyattes. receiving this account from his ambassadors, cliaiiged tlie truce into a lasting peace, and ever afterwards lived in friendship with Thrasybulus and die Milesians. He was succeeded, after a reign of fifty-seven years, by his son Croesus, whose uninterrupted prosperity, in the first years of his reign, far eclipsed the glory of all his predecessors. He made war on the Ephesians, wliose city he besieged and took, notwithstanding their consecrating it to Diana, and fastening the walls by a rope to her temple, which was seven stadia distant from the city. After this he attacked the lonians and iEolians, obliging them, and all the other Greek states of Asia, to pay him a yearly tribute. Having met with such^ extraordinary success by land, he resolved to render his power equally conspicuous by sea ; but was dissuaded from this enterprise by Bias of Priene, or, as others say, by Psittacus of Mytilene. He therefore determined peaceably to enjoy the laurels he had won, and began now to consider himself as the happiest of men. But his happiness was soon alloyed by the death of his favorite son, Atys, who was unfortunately-killed at the chase of a wild boar. For this loss he continued disconsolate for two years, and in a state of inaction, till the conquests of Cyrus, and growing power of the Persians, again roused his martial spirit. He apprehended that the success which attended Cyrus, in jail his undertakings, might at last prove dangerous to himself, and therefore resolved to put a stop, if possible, to his progress. In this resolution he was encouraged by the oracle of Apollo at Delphi; to whom he sacrificed 3000 oxen, and adorned his shrine with dedications equally valuable for the workmanship and for the materials ; precious vessels of silver, ewers of iron, beautifully inlaid and enamelled ; various ornaments of pure gold, ^jarticularly a cold lion, Vi'eighing ten talents; and a female

figure three cubits, or nearly five feet high. In return for these magnificent presents the oracle, in ambiguous language, flattered Croesus with obtainins an easy victory over his enemies, and with enjoying a long life and a prosperous reign ; enjoining him to contract an alliance with the most piowerful of the Grecian states ; and assuring him, that, if he crossed the Halys, he would overthrow a great empire ; which he concluded to be that of Persia. Elevated with these favorable predictions he formed an alliance with the Lacedemonians, then the most powerful state in Greece ; to whom he had formerly made a present of a large quantity of gold for a statue of Apollo, in return for which they now sent him a large brazen vessel capable of containing 300 amplioras (above twelve hogsheads) elegantly carved. Croesus had formerly made an alliance with Amasis king of Egypt, and Labynitus, or Belshazzar, king of Babylon; and, having now obtained the friendship of tlie most warlike nation of Europe, the newly raised power of Cyrus and the Persians seemed incapable of resisting such a formidable confederacy. Elevated with these ideas. Croesus waited not to attack the Persian dominions until he had collected the strength of his allies. The impetuosity of his temper precipitated him into measures no less ruinous thandar-2 A 2

iiig. AftenJed only by the arms of Lydia, and a band ot mercenaries, he marched towards the llalys ; and, liaving crossed that deep and broad stream, entered Cappadocia, the western frontier of Media. That unfortunate country soon experienced all the calamities of invasion. The Pterian plain, the most beautiful and tiie most fertile district of Cappadocia, was laid waste; the ports of tiie Euxine, as well as several inland cities were plundered ; and tiie inhabitants were either put to the sword or dragged into captivity. Meanwhile, the approach of Cyrus afforded the Lydian king an opportunity of bringing the war to a speedy issue. Such was the rapidity of his movement, after being informed of the ravages of Cappadocia, that he arrived from the shores of the Caspian to those of the Euxine Sea before the army of Crasus had provided necessaries for their journey. That pruice, when apprised of the neighbourhood of the Persians, encamped on the

Pterian plain; Cyrus likewise encamped at no great distance; and a general engagement was fought with equal fury and perseverance, and only terminated by the darkness of the night. The loss on both sides hindered a renewal of t!ie battle. Tiie numbers, as well as the courage of the Persians, much exceeded the expectation of Croesus. As they discovered no intention to harass his retreat, he determined to move back towards Sardis, to spend the winter in his palace, and, after summoning his numerous allies to his standard, to take the field early in spring, with such increase of force as seemed sufficient to overpower the Persians. But this design was defeated by the vigilance of Cyrus, who waited until Croesus had re-entered his capital, and had disbanded the foreign mercenaries, who composed the most numerous division of his army. Cyrus then put his Persians in motion, and such was his celerity, that he brought the first news of his own arrival in the plain of Sardis. Crcesus's firmness was not sliaken by this unforeseen dan-ger ; though his mercenaries were disbanded, his own subjects served him from attachment, had been long accustomed to victory, and were animated with a high sense of national honor. Ttie Lydians in that age fought on horseback, armed with long spears ; the strength of the Persians consisted in infantry. They were so little accustomed to the use of horses, that camels were almost the only animals whicli they employed as beasts of burden. As the troops on both sides approached to join battle, the Lydian cavalry, terrified at the unusual appearance of the camels, mounted with men in arms, were thrown into disorder, and endeavoured to escape. Croesus, who perceived the confusion, was ready to despair of his fortune, but the Eydians, abandoning their horses, prepared with uncommon bravery to attack the enemy on foot. Their courage deserved a better fate ; but unaccustomed to this mode of fighting they were received and repelled by the Persian inf\intry, and obliged to take refuge in Sardis. The walls of that city bid defiance to the art of attack then practised by the most warlike nations. If the Persian army should invest it, the Lydians had provisions for several years ; and they expected that in a few months, or even weeks, they should receive

such assistance from Egypt, Babylonia, and Sparta, as would oblige the Persians to raise the siege. The valor of tlie Spartans might have saved the sinking empire of Lydia ; but, before their armament could sail. Creeps was no lon-ger a sovereign. Notwithstanding the strength of Sardis, tiiat city was taken by storm on the 20tii day of the siege ; the walls having been scaled in a quarter, which, appearing altogether inaccessible, was too carelessly guarded. Hyreades a Mede accidentally observed a Lydian sentinel descend part of the rock to

recover his helmet. Hyreades, being accustomed to clamber over the dangerous precipices of his naffve country, tried to pass this rock, and easily accomplislied it. The bravest of the Persians followed his example, and were supported by greater numbers of their countrymen ; the garrison of Sardis was surprised; the citadel stormed; and the rich capital of Lower Asia subjected to the rapacity of an indignant victor. Thus ended the ancient kingdom of Lydia, which continued subject to the Persians till they also were conquered by the Macedonians. For the fate of the Lydian monarch, see Crcf.sus.

LYDIAT (Thomas), a learned English divine, born in 1572, and educated at Oxford. About 1609 he became acquainted with Dr. Usher, afterwards archbishop of Armagh, who took him to Ireland. He was at college in Dublin two years, after which he returned to England ; and, the rectory of Alkrington becoming vacant, he was presented to it : but at length, being engaged for the debts of a near relation, which he was un-able to pay, having before spent his patrimony in printing several books, he was sent to prison ; and was confined at Oxford, in the king's bench, and elsewhere, till Sir William Boswell, Dr. Robert Pink, warden of New College, bisliop Usher, and Dr. Laud, discharged the debt. In the civil wars he suffered mucli in his rectory of Alkrington from the parliamentary party ; was four times pillaged to the value of at least .£70, and was forced for three months to borrow a shirt. lie died in 1646. lie wrote some pieces in English, and many works in Latin, on chronology and natural history.

LYDIUS Lapis, in the natural history of the ancients, the touch-stone for trying gold and sil-ver, called by some Ileraclius lapis ; both of which names were also applied by the ancients to the loadstone ; and hence has arisen no small ambiguity in their works, as Pliny has observed. The true lapis Lydius, or touch-stone, was anciently found only in the river Tmolus ; but was afterwards found in many other places, and is now very common in many of the German ri-vers. The ancients give us very remarkable and circumstantial accounts of tiie uses they made of it ; and it is plain they were able to discern the alloys of gold by means of it with very great exactness. Several different stones are now used under this name, for this purpose. In, Italy a green marble called verdello is most frequently used ; and with us, very frequently small pieces of the basaltes. See Basaltes.

LYE or Lie. Vr. lie. A body impregnated with some extraneous qualities ; generally applied to fluids.

LYM

do/

Chamber lie breeds fleas like a loach.

Shakspeare.

Answerable whereunto, but beyond it, was the diet of Valentine, a rigorous votary, who, ("or ten years togetlier, would eat nothing but bread dipt in water, wherein wormwood was steeped : and of other his fellow, who steeped his bread in Iqe, that he might eat ashes with the prophet. Bp. Hall.

All liquid things concocted by heat become yellow ; as bie, wort, &c. Peacham on Dnncing.

He will know how to make use of the waste lues, SO as to decompose the salts which they contain, and convert them to good and serviceable alkali, tit for future operations. Parkes's Chemical Catechism.

T ' i See Lie. Lying. 5

LYE (Edward), M. A., a learned antiquary, born at Totness in Devonshire, and educated at Oxford. He puldished, 1. An Anglo-Saxon and Gothic Dictionary, in 2 vols, folio, 1762 ; 2. A Grammar of these languages ; and other pieces. lie died in 1769.

LYGEUM, in botany, a genus of the monogynia order, and triandria class of plants, natural or-der fourth, gramina; spathanionophyllous ; there is a pair of coroUce upon the same germen ; the nut is bilocular.

LYGII, LiGii, LuGii, or Logiones, in ancient geography, a people of Germany, west of the Vistula, where it forms a bend like a crescent (Dio, Strabo, Zosimus). Their name Lugii is derived from their close confederacy. The Vistula was their boundary upon the north, east, and south, and Mount Asciburgius on the west. The whole of that country now lies in Poland, on this side the Vistula.

Lying to, or Lying by, the situation of a ship, when she is retarded in her course, by arranging tlie sails in such a manner as to counteract

each other with nearly an equal effort, and render the ship almost immoveable, with respect to her progressive mot on or head way. A ship is usually brought to by the main and fore top sails, one of which is laid aback, whilst the other is full; so that the latter pushes the ship forward, whilst the former resists this impulse by forcing her astern. This is particularly practised in a general engagement, when the hostile fleets are drawn up in two lines of battle opposite each other. It is also used to wait for some otiier ship, either approaching or expected ; or to avoid pursuing a dangerous course, especially ini dark or foggy weather, &c.

LYME, or Lyme Regis, a sea-port, borough, and market town of Dorsetshire, near the sea, on the borders of Devonshire, in a cavity between two rocky hills which make it difficult of access. As it lies on the declivity of a hill, the houses make a good appearance ; some of them are built of freestone, and covered with blue slate. The corporation consists of a mayor (wlio is justice of peace during his mayoralty and two years after), a recorder, fifteen burgesses, and a town clerk. This place had formerly a very flourisliing trade to i'rance, Spain, the Straits, Newfoundland, and the West Indies; during which the customs amounted in some years to £16,000. But it stands on such a higli sleep rock, that the merchants are obliged to load and unload their goods at a place a quarter of a mile off, called

the Cobb, originally built in the reign of Edwai I III., which costs a great sum to maintain, but forms an excellent harbour, the ships being sheltered by a high thick stone wall, raised in tiie main sea a good way from the shore, broad enough for carriages and warehouses. The materials of its rude pier consist of vast stones weighed out of the sea, arranged in such a manner as to break the violence of the tide, which, notwithstanding, has made great encroachments, the clifi's being composed of a kind of marl and blue clay, incorporated with lime. The point of the first, or main wall, is the entrance into the port, and the opposite wall breaks the violence of the sea from the entrance, and the vessels being defended from all winds ride as secure as in a wet dock. The cellars of the low part of the town, near the sea, are however often overflowed by the spring tides ten or twelve feet. There are guns planted for defence of the Cobb and the town. The custom house stands on pillars, and the corn market under it. There are an almshouse, and a Presbyterian and a Baptist meeting-house. The church stands at the east end of the town on a rising ground. The market is on Friday, and there are two fairs. In 774 the Saxon king Kinwulf gave land here to the church of Sherbon, for boiling of salt. At

this place the duke of Monmouth landed in 1685. About fifty years ago above £2000 worth of gold and silver coins of Charles Land II. were discovered by some laborers. It is twenty-eight miles east by south of Exeter, and 143 W. S. W. of Lon-don.

LYMINGTON, a sea-port, borough, and mar-ket town of Hampshire, about a mile from the channel, between the main land and the Isle of Wight ; with a harbour for vessels of considerable burden. The tide flows nearly a mile above tiie town. There are two sets of baths, one at the bottom of the town, the other above half a mile from it ; of late they have been made very convenient, and are much frequented during the season. The borough is a corporation by prescription, consisting of a titular mayor, aldermen, and burgesses witihout limitation. It has sent two members to parliament since the 27th of Elizabeth, the right of election being in the mayor and burgesses only. The number of voters is about sixty. It has a market on Saturday, and two fairs. It is eighteen miles south-west of Southampton, and eighty-eight of London.

LYMPH, n.s. “^ Fr. Ij/mphe ; Latin

Lymi’uat’ic, «(/;’. ^li/mpha. Water; trans-LvMi’n’Eni’tTs, n. s. ,) parent colorless liquor : the anatomical terms are ex])lained by the extracts.

The glands. All artful knots, of various hollow threads, AVhich iymphediicli, an artery, nerve, and vein, Involved and close together wound, contain.

Blacbmore.

When the chyle passeth through the mesentery, it is mixed with the hjmpli, the most spiritut^ui. and elaborated part of the blood. Arbutlinut on Aliments.

Upon the death of an animal, the spirits may sink into the veins, or lifmpnatichs, and glandules.

The lymphatichs are slender pellucid tubes, whose (Tavities are contracted at small and iinecjua' distances : they are carried into the ˆdands ot tlie mesentery, receiving first a fine thin Iwnjilt from the lymphatick ducts, which dilutes the chylous fluid

Cheyne.

Where now the vital energy, that moved. While summer was, the pure and subtle lymph Through the imperceptible meandering veins Of leaf and flower? It sleeps ; and the' icy touch Of unproiific winter has impressed A cold 3tagnatii>n on the intestine tide. Cowper.

LYMPHATI, a name given by tlie Romans to such as were seized vvitli madness; supposed to be used [for Nympliati, because the ancients imagined that every person who bad tlie misfortune to see a nymph was instantly struck with phrenzy. Lymphati may indeed signify madmen, as derived from lymplia, water, over whicli element the nymphs were thought to preside. But it appears most likely that distracted people were called lymphati, from tlie circumstance of mad-men being affected with the hydrophobia or dread of water after the bite of a mad dog; for this peculiarity, in cases of canine madness, was not unknown to the Romans

LYNCEUS, in fabulous history, the only one of the fifty sons of .'Egyptus who was saved from being murdered by the fifty daughters of Danaus. See Danaides and Danaus.

Lynceus, the son of Aphareus, one of the Argonauts. He was of great use, by enabling thein to avoid the sand-banks and rocks in their way. The poets say, that he had so piercing a sight that it could not only penetrate the earth, and to the bottom of the sea, but even to hell. Some suppose that this fable is taken from Lynceus's skill in observing the stars, and discovering the mines of gold and silver concealed in the earth.

LYNCHBURG, a town of Virginia, in Campbell county, 100 miles west of Richmond, and IGO south-west of Washington. These distances are expressed in right lines. The distance from Richmond by the road is 120, from Washington 20G miles. Long. 79° 22' W., lat. 37° .30' N. Population, in 1818, estimated at 5500. It is situated twenty miles below the great falls, where James River breaks tlirough tlie Blue

Ridge. It is one of the most flourishing and commercial towns in the state, and contains a court house, a gaol, two clerks' offices fire proof, a market house, two banks, a masonic hall, a Lancasterian school, a female academy, several other literary seminaries, a circulating library, two printing offices, which issue, one a weekly and the other a semi-weekly newspaper, and three houses of public worship, one for Presbyterians, one for Metliodists, and one for Baptists. Tiiere is also in the vicinity a Friends' meeting-house. A large proportion of the houses are of brick, of |two, three, and four stories. Here is a toll bridge across the river, and a free bridge is now building.

The town contains seven public warehouses, in which from 10,000 to 12,000 hogsheads of tobacco are annually inspected, four tobacco manufactories, five tobacco stemmaries, thirty-two stores for dry goods, thirty-one for groceries, seventeen taverns, eight commission houses, and numerous other establishments for trade and manufactures, also flour and cotton mills.

LYNCURHIM, astone thoughttobe the same with the tourmalin. The name is derived from \vyX, lynx, and ovpov, urine.

LYNN, or Lynn Regis, alarge well-built sea-port, borough, and market town of Norfolk, which sends two members to parliament, it was a borough by])rescription in 1298. King John, on account of its adiierence to him against tlie barons, made it a free borough with extensive privileges; and gave it a silver cup of seventy-three ounces, doubly gilt and enamelled, and a large silver sword, that is carried before the mayor ; though, some say, this last is Henry VIlL's sword, which he gave to the town when he became possessed of it by exchange witli the bishop of Norwich ; after which it was called Lynn Regis or King's Lynn, instead of Bishop's Lynn. Henry IIL made it a mayor town for serving him against the barons. It lias had fifteen royal charters ; and is governed by a mayor, two stewards, recorder, twelve aldermen, and eighteen common councilmen. It has two churches, besides St. Nicholas's chapel ; a Presbyterian and a Quakers' meeting-house, with a bridewell, several almshouses and a free school. In September 1741 tlie spires of both its churches were blown down by a storm ; and that of St. Margaret, which was 193 feet high, having beat down the church, it was rebuilt ; towards which king George II. gave .£1000, and Sir Robert Walpole £500. This church was formerly an abbey. The town-house called Trinity Hall, and the exchange, are noble fabrics. The exchange has a bell tower of freestone, and an octagonal spire over it, 170 feet from tlie ground. There is a library in

it, and another at St. Margaret's. The Gray friars' steeple is a noted sea mark. The situation of this town, near the mouth of the Ouse, gives it a commercial communication with eight counties ; by whicli Peterborough, Ely, Stamford, Bedford, Huntingdon, Northampton, Cambridge, St. Ed-mundsbury, the north part of Bucks, and the in-land parts of Norfolk and Suffolk, are supplied with heavy goods. Of coals and wine, this is the greatest port for importation of any place on all the east coast of England. In return Lynn receives all the corn exported from these counties, and sends more ofit abroad than any port except Hull. Its foreign trade is great, to Holland, Norway, the Baltic, Spain, and Portugal. The harbour is safe, but difficult to enter by reason of many flats and shoals in the passage: but good pilots are always ready. The town consists of about 3000 houses, and appears to have been anciently very strong from its ruins. St. Ann's platform at the north end has twelve great guns, and commands all the ships passing near the harbour, and towards the land there are a wall and a ditch. Four rivulets run through the town ; and the Ouse is about as broad as the Thames at London Bridge. In the great marketplace a statue was erected in 1686 of James H. In another marketplace is a statue of William III., and a fine cross with a dome and gallery supported by sixteen pillars. The market-house is of freestone, supported by sixteen columns ; and is seventy feet high, erected on four steps neatly adorned with statues, &c. On the first Monday of every month the mayor, aldermen.

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preachers, &;c., meet to endeavour to settle all quarrels amicably, and prevent lawsuits. This was established in 1588, and is called the Feast of Reconciliation. The markets are on Tuesday and Saturday; and there are two fairs: one beginning February 14th lasts fourteen days, and is called Lynn mail; the other is a cheese fair October 6lh. During the csvil wars this town held out for Charles I., and sustained a siey;e by 18,000 men for above three weeks ; but was obliged to surrender, and to pay IOa'. a head for every inhabitant, and a month's pay to the soldiers, to save it from plunder. It abounds so much with provisions that Spelman says, ' Ceres and Bacchus seem to have established their magazines in it.' The king's quay, where the imported wines are chiefly landed, is a handsome square, with brick buildings, and a statue of king James I. in the centre. Persons pass hence over the famous washes into Lincolnshire; but accidents often occur to the boats. Besides the churches here are places of worship for dissenters. The Guildhall is an ancient stone building, containing apartments for business and amusements. The theatre is commodious, and the new mall is about 340 yards long, very neatly planted with a quickset hedge on each side, having, at convenient distances, semicircular recesses and benches. At the east end of the town is a mound, on which are some strong fortifications. Lynn Regis lies forty-four miles north-west of Cambridge, and ninety-six north of London.

Lynn, a post town of Essex county, Massachusetts, six miles south-west of Salem, and nine N.N. E. of Boston. Populatici 4j87. It contains a bank, a larˆˆe dyeing establishment, and five houses of public worship : two for ˆMethodists, one for Congregationalists, one for Friends, and one for Baptists, and is famous for the manufacture of shoes. No less than 1,000,000 pair of ladies' shoes were made here in 1811. There is a mineral spring in this town, near which is a house for the accommodation of visi-ters. Saugus has been set off from this town, and incorporated since the last census. Lynn Beach, which connects the peninsula of Nahant 10 the main land, is regarded as a curiosity. LYNX, n. $.ˆ } Lat. A spotted beast, re-Lynce'an, adj. ˆ markable for speed and sharp sight : lyncean, like the lynx.

I beseech you, when you hear my name traduced, learn of mine accusers, whose lyncean eyes would seem to see further into me than my own, what singular offence 1 have committed.

lie that has an idea of a beast with spots, has hut a confused idea of a leopard, it not being thereby sufficiently distinguished from a tt/nx. Locke.

What modes of sight betwixt each wide extreme, The mole’s dim curtain, and the tini’s. beam.

Pope,

Lyon King of Arms, for Scotland, is the second king at arms for Great Britain. See IIe—

lliVLDRY.

LYONET (Peter), F. R. S. &c., an ingenious naturalist, born at Maestricht, and descended from a very ancient family of Lorrain. He had scarcely attained his seventh year before he dis-]day’.’(l an uncommon strength and agility in all

bodily exercises; and he was no less diligent in the improvement of his mind. He studied chronology, Latin, Greek, and French, Hebrew, logic, and the Cartesian physics. He understood no less than nine languages. In the university of Leyden he studied the Newtonian philosophy, geometry, algebra, Sec. ; as well as divinity, in obedience to his father who was a clergyman. He also studied anatomy, music, and drawing; and, having attained the degree of candidate in divinity, he studied law with such success that he was promoted at the end of the first year. At the Hague he studied the art of decyphering; and became secretary of the cyphers, translator of the Latin and Frenc’n languages, and patent master to their high inightinesses. INIeanwhile he undertook an historical description of such insects as are found about the Hague ; collected materials for several volumes ; and enriched his work with a great number of plates, universally admired by all who had seen them. In 1742 was printed at the Hague a French translation of a German work, The Theology of Insects, by Mr. Lesser. Mr. Lyonet, having deferred the publication of his work, made some observations on tliat of Lesser, to which he added two beautiful plates, engraved from his designs, which made his merit universally known. The celebrated Reaumur had Lesser’s translation reprinted at Paris, chiefly on account of Mr. Lyonet’s observations ; on which he bestowed the highest encomiums. Lyonet afterwards executed drawings of the fresh-water polypus for Mr. Trembly’s beautiful work, 1744. The ingenious

Wandelaar had engraved the first five plates ; when Lyonet, who had never seen this operation, having experienced difficulties in getting the remaining eight finished in the superior style he wished, resolved to perform the task himself. He accordingly took a lesson of an hour from Mr. Wandelaar, engraved three or four small plates, and immediately began upon the work itself; which he performed in such a manner as procured the highest praise, both from Mr. Trembly and the celebrated Van Gool ; who declared that the performance astonished the most experienced artists. In 1748 he was chosen F. R. $. of London. In 1749 he beoan his amazing collection of horns and shells, which, according to the universal testimony of all who visited it, was the most beautiful, and one of the most valuable in Europe. In 1753 he became member of the Dutch Society of Sciences at Haerlem ; and in 1757, after the celebrated M. le Cat, the anatomist, had seen his incomparable Traite Anato-mique de la Cheneile qui ronge le BoisdeSaule, with the drawings belonging to it, he was elected member of the Royal Academy of Sciences at Rome. In 1760 he was made a member of the Royal Academy of Sciences of Berlin; in 1761 of the Imperial Academy of Naturalists; and, in 1762, of the Imperial Academy of Sciences at St. Petersburuˆ. To enable such as might wish to follow him in his astonishing discoveries respecting me structure of this animal, ho jiublished, in the Transactions of the Dutch Society of Sciences at Haerlem, a description and a plate of tlie instrument and tools he had invented for dissection, and of his method of ascertainin;; the

degree of slrenjitli of Ins magnifying glasses. During the last fifteen or twenty years of liis life he added to his valuable treasure of natural curiosities a most superb cabinet of paintings, consisting of more than 560 articles ; among which are many of the works of the first Dutch masters. He also wrote some pieces of Dutch poetry. He died of an mflammation in his breast, at the Hague, in January 1789, aged eighty-three.

LYONNOIS, a district and ci-devant province in the south-east

ofFrance, situated on the west side of the Saone and Loire, and bounded by the Bressi, the Beaujolois, Forez, and Dauphiny, about thirty miles in length and seventeen in breadth. It is fertile in wine, corn, and fruit ; and contains the towns of Lyons, Tarare, La Bresle, St. Cliamont, Condrieu, and Ance. It now forms part of the departments of the Rhone and the Loire.

LYONS, the ancient Lugdunum, one of the finest, richest, and most considerable towns of France, is the chief place of the department of the Rhone (Lyonnois), having a royal court for the departments of the Ain, the Loire, and the Rhone ; a tribunal and chamber of commerce ; an exchange ; a royal lottery ; a royal academy of sciences, belles lettres, and arts; a unirersity ; a royal college; a school and museum of the fine arts ; a veterinary college ; an institution for the deaf and dumb ; an agricultural society ; a society for natural history and the fine arts ; and a theological faculty. It is a post town and an archbishopric, and has a population of 147,000 souls. The arrondissement, of which it forms a part, contains 128 communes, and 262,960 inhabitants.

This city is beautifully situated, at the confluence of the Rhone and the Saone; on the north the mountains of Fourvifere and St. Sebastian rise over it in the form of an amphitheatre : it is surrounded with delightfully picturesque scenery ; on one side the eye reposes on hills covered with vines, gardens, and country seats ; on the other it wanders over fruitful plains, adorned with meadows and corn fields ; while in the distance are seen the snowy summits of the Alps, which like white clouds skirt the horizon. Divided by the Saone into two unequal parts, and partly built on hills and partly on a level surface, Lyons presents little appearance of regularity ; the inner part of the city is composed of very lofty houses, and narrow, crooked, and steep streets. There are also some fine parts, particularly those on the banks of the Saone, and others which extend along the Rhone, as well as those in the neighbourhood of Bellecour Square and the Terreaux, which are magnificent. Next to Paris this is the first city in France, and one of the most commercial places in Europe. It has four fauxbourgs, 24.5 streets, fifty-six public squares, twenty -five quays, and seventeen wharfs. The suburbs are pleasant, and contain a great number of country houses and charming walks.

In the front of the place Bellecour is an immense prospect, including the course of the Rhone, the vast plains of Dauphiny, the mountains of Chartreuse and Chamberry. There are numerous wooden bridges in this city, which strike the traveller with the boldness of their

construction : the most remarkable is that of Moraud, built over the Rhone, and leading from the squares of St. Clair to the walk and fauxbourg of Bratteaux.

Lyons was founded in the year of Rome 712, about forty years before the Cliristian era, by the consul Lucius Minutius Plancus, and peopled by some Roman citizens whom the natives of the country had driven from V'ienne. It immediately became the metropolis of all Celtic Gaul, the principal quarters of the legions, the market for sixty commercial nations, and the point from which the four great roads, made by Agrippa, opened into Gaul. One of these led to the Pyrenees by the Cevennes mountains, Auvergne, and Aquitain ; another to the Rhine ; the third to the ocean by Beauvoisis and Picardy ; and the fourth to the Mediterranean by Narbonese Gaul. The city was built at first on the declivity of the mountain which stretciies on the right of the Saone : it was embellished by Claudius, but laid waste by the barbarians : reduced to ashes in a single night, by lightning, it was rebuilt in the reign of Nero on its present site. Among the ancient monuments are to be observed the ruins of an aqueduct and a theatre, a fish-pond in good preservation, several pieces of mo-saic work, and two columns of immense size, which decorated the famous altar of Augustus. Two general councils were held here in the thirteenth and fourteenth centuries. In the reign of Francis I. the Genoese laid the foundation of those silk manufactures which have since reached so high a degree of prosperity. In 1793 it was besieged by an army of 60,000 men, by order of the national convention, and defended itself for two months with the most heroic courage ; but it was at length obliged to capitulate, after having suffered the horrors of famine and a most tremendous bombardment. It was afterwards subject to all tlie miseries of a city taken by storm; its principal edifices were demolished, and its name changed into that of 'ille Affranchie. It has now become more flourishing than ever.

Marcus Aurelius, Caracalla, and Claudius, were born here : as were also de Couston and de Coisevox, celebrated sculptors: de Linguet; de Jussieu, the celebrated botanist; de Bergasse, Morellet, Philippon la Madelaine, Prud'homme, and Degerando, men of letters ; de Patrin, the naturalist; de Rozier, and marshall Suchet.

The manufactures of this city consist of silks of all kinds, gold and silver stuffs, shawls, crapes, hats, printed linen, cotton tissues, embroidery, gilding, silk millinery, gold and silver lace, and painted papers. It also has considerable manufactories of liqueurs, mineral

acids and chemicals, dye-houses, metal and type foundries, machines for drawing gold and silver wire, glasshouses, delf factories, plaster-mills, tan-yards, and curriers' shops. The inhabitants carry on a traffic in all the above articles, as well as in all sorts of grain, wines, brandies, and such colonial produce as is not prohibited ; they also deal in oils, chestnuts, soap, and salt. The Rhone, the Saone, and the Loire, present great facilities for the transport of goods. Among the public institutions may be reckoned its lilnary, the finest in all tlie departments, containing

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106,000 volumes, among which are more tlian 800 MSS. in different languages ; its museum of pictures and antiquities ; its fine botanical garden ; its town hall, the handsomest in France ; the gallery of the fine arts ; its hospital built on the quay of the Rhone, witii a grand front of the Ionic order, and a quadrangular dome rising over it, adorned with the emblems of medicine; the church of St. John, with its fine clock ; the custom-house ; the theatre ; the archbishop's palace, &c. ; besides the squares, the finest of which is that of Bellecour, with an equestrian statue of Louis XIV. This city is about 354 miles south-east from Paris, 123 south-west from Geneva,seventy-two westof Chamberry, eighty-one north-west of Grenoble, and fifty-one south of Macon ; in lat. 45'" 45', long. 2° 29' E. of Paris.

Lyons (Israel), an eminent botanist and mathematician, the son of a learned Polish Jew, who was a jeweller, and published a Hebrew Grammar, and observations on Scripture History. Israel was bom at Cambridge in 1739 In 1758 he published a Treatise on Fluxions: in 1763 Fasciculus plantarum circa Cantabrigiam nascentium. He read lectures at Oxford ; and, in 1773, accompanied captain Phipps (afterwards lord Mulgrave) to the north pole, by order of the board of longitude, who rewarded several of bis inventions. He had a salary of £100 a year for calculating the Nautical Almanac. He married, and died at London, in 1775.

LYRA (Nicholas de), so called from the place of his birth, Lyre, in Normandy. He was a converted Jew of the fourteentli century, whose wrong-headed zeal in defence of the communion he had embraced, as the Catholic writers assert, contributed not a little to the progress of the reformation. ' If this lyre had not played,' they say, *' Luther never would have danced.' Of his works, whicii consist principally of annotations on the Bible, there are two editions extant; that of Rome, 5 vols, folio, and that of Antwerp in 6 vols. De Lyra, on renouncing Judaism, assumed the tonsure; and died in 1340, at Paris, where he iiad for some time been a lecturer on theology.

LYRE, U.S. ~\ Fr. li/re ; Lat. Ij/ra. A

Lvd'ic, n. s. & adj. (hai>^j ; a musical instru-Lyr'ical, adj. i ment to which poetry is Ly'rist, n..s. J supposed to be sung:

lyric and lyrist, are those who compose or play for or to the lyre.

With other notes than to the' Orphean lyre.

Milton. All his trophies hung and acts enrolled In copious legend, or sweot birick song. Id. Somewhat of the purity of Knglish, somewhat of more equal thoughts, somewhat of sweetness in the numbers ; in one word, somewhat of a finer turn, and more lyrical verse is yet wanting. Dryden.

The greatest concjueror in tliis nation, after the manner of the old CJrccian liirirlis, did not only compose the words of his divine odes, but set them to niusick himself. Addison.

My softest verse, my darling lyre, Upon Euphelia's toilet lay. Prior.

He never touched his lyre in such a truly ciiroma-t'lck manner as upon that occasion. Arhutttnot.

His tender theme the charming liirist chose

Minerva's anger, and the direful woes

Which voyaging from Troy the victors bore.

Pope, The lute neglected, and the lyrick muse,

Love taught my tears in sadder notes to flow,

And tuned my heart to elegies of woe. Jd.

If Young be not a lyrick poet ; he is at least a critick in that sort of poetry ; and, if his lyrick poetry can be proved bad, it was first proved so by his own criticism. Johmcm.

The author of Davideis is commended by Dryden for having written it in couplets, because he discovered that any staff was too lyrical for an heroic poem. Id.

So should an idiot, while at large he strays. Find the sweet lyre on which an artist plays, AVith rash and awkward force the chords he shakes. And grins with wonder at the jar he makes.

Cowper.

Fair Spring advancing calls her feathered choir. And tunes to softer notes her laughing lyre ; Bids her gay hours on purple pinions move.

And arms her Zephyrs with the shafts of Love.

Darwin..

In vain my lyre would lightly breathe ! The smile that sorrow fain would wear ;

But mocks the woe that lurks beneath, Like roses o'er a sepulchre. Byron.

Lyre. All ancient authors agree that the lyre was invented by Mercury ; but they diff'er much respecting the number of strings with which it was furnished. Some assert it was only three ; that the sounds of the two remote were acute, and that of the intermediate one a mean between them. Others say that the lyre had four strings ; that the interval between the first and fourth was an octave, that the second was a fourth from the first, and the fourth the same distance from the third, and that from the second to the third was a tone. Others contend that llie lyre of Mercury had seven strings. Ni-comachus, a follower of Pythagoras, says, ' The lyre made of tlie shell was invented by Mercury; and the knowledge of it, as it was constructed by him of seven strings, was transmitted to ()rpheus: Orpheus taught the use of it to Thamyris and Linus : the latter taught it to Hercules, who communicated it to Amphion the Theban, who built the seven gates of Thebes to the seven strings of the lyre.' He adds, ' that Orpheus was afterwards killed by the Thracian women ; that they cast his lyre into the sea, which was afterwards thrown up at Antissa, a city of Lesbos ; that certain fislicrs finding it, they brought it to Terpander, who carried it to Egypt, greatly improved ; and, showing it to the Egyptian priests, assumed to himself the honor of its invention.' The ditlerence among authors seems to have arisen from their confounding together the l'>gyptian and the Grecian Mercuries. The invention of the primitive lyre with three strings was due to the first Keyptian Hermes. The lyre attributed to tlie Grecian Mercury is described by almost all the poets to be an instrument of seven strings. See Mr.RcunY. ^'incent Galilei has collected the various opinions of the (Jreek writers, who have mentioned the invention of the chelys, or testudo ; and .Mr. Spcnce has done the same in a very circumstantial manner. The substance of the lp;;cnd he quotes

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is ‘ that Mercury, after stealing some bulls from Apollo, retired to a grotto, at the foot of a mountain in Arcadia; found a tortoise feeding at tlie entrance, killed and eat the tlcsh of it ; and, as he was diverting himself with the shell, observed the noise it gave from its concave figure ; on which he cut several tliongs out of the hides he had stolen, fastened them as tight as he could to the sliell, and thus invent»ˆd a new kind of music witli them.’ The most ancient representations of this instrument agree very well with this account of its invention. The lyre was represented as made of one entire shell of a tortoise ; that of Amphion in the celebrated group of tiie Dirce or Toro, in the Farncse palace at Rome, which is of Cireek sculpture, and very higli antiquity, is figured in this manner. There have, however, been many other claimants to the seven-stringed lyre. For, though Mercury invented this instrument, Ho-mer says, he afterwards gave it to Apollo (who was the first that played upon it with method, and accompanied it with poetry) as a peace-offering for the oxen he had stolen from him. Diodorus informs us, that Apollo, repenting of the cruelty with which he had treated Marsyas (see Maksyas), broke the strings of the lyre, and put a stop for a time to any further progress in the practice of that new instrument. ‘ The Muses,’ adds he, ‘ afterwards added to this instrument the string called mese ; Linus, that of lichanos ; and Orpheus and Thamyras, those strings which are named hypate and parhypate. Many ancient authors tell us, that, before the time of Terpander, the Grecian lyre had only four strings. Suidas says, it remained in this state 856 years, from the time of Amphion, till Terpander added to it three new strings, which extended the musical scale to a heptachord, and supplied the player with two conjoint tetrachords. About 150 years after this, Pythagoras added an eighth string to the lyre, to complete the octave, which consisted of two disjoint tetrachords. Boethius tells us, that the system did not long remain in such narrow limits as a tetrachord. Choriebus, the son of Atys, king of Lydia, added a fifth string; Hyagnis a sixth; Terpander a seventh ; and Lycaon of Samos an eighth. But all these accounts are irreconcil-able with Homer’s hymn to Mercury, where the chelys, |or testudo, the invention ol which iie ascribes to that god, is said to have had seven strings. Tliere are many claimants among the musicians of ancient Greece to the strings that were afterwards added to these, by whicli the scale, in the time of Aristoxenus, was extended to two octaves. Athenaus speaks of the nine stringed instrument ; and Ion of Chios, a tragic and lyric poet, wlio recited his pieces in the eighty-

second Olympiad, 452 B. C, mentions, in some verses quoted by I'.uclid, the ten-stringed lyre ; a proof that the third conjoint tetrachord was added to the scale in his time, which was about fifty years after Pytliagoras constructed the octachord. The different claimants to the same musical discoveries only prove, that music was cultivated in different countries; and that the inhabitants of each improved their own instruments, some of which, happening to resemble those

of other parts of Greece, led historians to attribute the same invention to different persons. Thus the single flute was given to Minerva and to Marsyas; the syrinx or fistula to Pan and Cybele ; and the lyre or cythera to Mercury, Apollo, Amph on, Linus, and Orplieus.

Lyric PoiviRv, sucli as the ancients sung to the lyre or harp. It was originally employed in celebrating the praises of gods and heroes, and its characteristic was sweetness. It was much cultivated by the Greeks; and Horace was the first who attempted it in the Latin language. Auacreon, Alcaeas, Stesichorus, Sappho, and Horace, were the most celebrated lyric poets of antiquity.

LYRODI, among the ancients, musicians who played on the lyre and sung at the same time. This appellation was also given to such as made it their employment to sing lyric poems composed by others.

LYSANDER, a famous Spartan general, who conquered the Athenians at /Egospotamos, and subjected their city to thirty tyrants. See Athens and Spakta.

LYSANDRIA, a Saraian festival, celebrated with games and sacrifices in honor of the Lacedemonian general Lysander. It was anciently called herea; but this name the Samians abolished by a public decree.

LYSIARCH, an ancient magistrate, who superintended the sacred games, and presided in matters of religion in the province of Lycia. He was created in a council consisting of deputies from the twenty-three provincial cities. The lysiarchs were both heads of the council and pontiffs of the province.

LYSIAS, an ancient Grecian orator, born in Syracuse in the 80th Olympiad. At fifteen he went to Thurion, a colony of the Athenians ; and, when grown up, assisted in the administration of the government many years. When about forty-seven years of age, he returned to Athens; whence, being afterwards banished by the thirty tyrants, he

went to Megara. He taught oratory, and though he did not plead at tlie bar, he supplied others with speeches. ‘ Fuit Lysias in causis forensibus non versatus,’ says Cicero, *sed egregie subtilis scriptor atque elegans,’ &;c. Quintilian gives him a similar character. Plutarch and Photius relate, that 425 orations were formerly exliibited under the name of Lysias; of which only thirty-four are now extant. The best edition is by Dr. John Taylor at London, 1739, 4to. ; Cambridge, 1740, 8vo.

LYSIMACHIA, loosestrife, in botany, a genus of the monogynia order, and pentandria class of plants ; natural order twentieth, rotaceaj : cor. rotaceous : caps. globular, beaked, and ten-valved. There are several species, but only four are commonly|cultivated in gardens. These are hardy herbaceous perennials and biennials, rising with erect stalks, from eighteen inches to two or three feet high ; garnished with narrow entire leaves ; and terminated by spikes and clusters of monopetalous, rotated, five-parted, spreading flowers, of white and yellow colors. They are easily propagated by seeds, and thrive in any soil or situation.

LYSIPPUS, a celebrated Greek statuary, born

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at Sicyon». He was first a locksmith, afterwards a painter; but at last applied himself entirely to sculpture; in which he acquired an immortal reputation, and made a number of statues that were the admiration of the people of Athens and Rome. His grand statue of the sun, represented in a car drawn by four horses, was worshipped at Rhodes. He made several statues of Alexander and his favorites, which were brought to Rome by Metellus, after he had reduced the Macedonian empire ; and the statue of a man wiping and anointing himself after bathing, being particularly excellent, was placed by Agrippa before his baths in that city. He lived in the time of Alexander the Great, about 334 B.C.; and left three sons, all famous statuaries.

LYSONS (Samuel), an eminent British to-])ographer and antiquarian. He was born in 17(53, in Gloucestershire; and, after finishing his early studies, became a student of the Middle Temple, and was called to the bar. In 1804 he succeeded Mr. Astle as keeper of the records in the tower, which office he held till his death in 1819. Mr. Lysons' publications relate principally to the Roman antiquities of Britain, including Figures and Descriptions of Mosaic Pavements discovered at Horkstow in Lincolnshire, 1801, folio ; Remains of two Temples, and other Roman Antiquities, discovered at Bath, 1802, folio; Roman Remains discovered at Woodchester in Gloucestershire, folio. He also published a volume of miscellaneous antiquities of Gloucestershire ; and, in conjunction witli his brother, the Rev. Daniel Lysons, the earlier volumes of the Magna Britannica, many of the plates of wliich were etched by himself.

LYTHRUM, purple loosestrife, in botany, a genus of the monogynia order, and decandria class of plants ; natural order seventeenth, calycanthemse : cal. cleft into twelve parts; and there are six petals inserted into it: caps, bilocular and polyspermous. There are many species, of which the most remarkable are,

1. L. Hispanum, the Spanish loosestrife, with a hyssop leaf, grows naturally in Spain and Portugal. It has a perennial root. The stalks are slender, not more than nine or ten inches long, spreading out on every side. The lower part of the stalk is garnished with oblong oval leaves placed opposite. The flowers come out singly from the side of the stalks at each joint ; they are larger than those of the common sort, and make a fine appearance in July, when they are in beauty. It is

propagated by seed's brought from those countries where it is native.

2. L. salicaria, the common purple loosestrife, with oblong leaves, is a native of Britain, and pn"ows naturally by the sides of ditches and rivers. It has a perennial root, from which come forth several upright angular stalks, rising from three to four feet high, garnished with oblong leaves, placed sometimes by])airs ; but sometimes there are three leaves at each joint standing round the stalk. The flowers are y)urple, and produced in a long spike at tlie top of the stalk : making a fine appearance. This species is propagated by partins; the roots in autumn, in a moist soil.

LYTTELTON (Edward), lord Lyttelton, keeper of the great seal in the reign of Charles

I., was eminent for his probity and moderation at the commencement of that monarch's disputes with his subjects. Without forfeiting his fidelity to the king, he preserved the esteem of the parliament till 1644, when he was made colonel or a regiment in the king's army at York. He died in 1645. Besides several speeches, which have been printed, he wrote reports in the common pleas and exchequer, printed in London in 1683, in folio; several arguments and discourses, &,c.

Lyttelton (George), lord, eldest son of Sir Thomas Lyttelton, bart., descended from the great judge of that name, was born in 1700, at seven months; and the midwife, supposing liim to be dead, threw him carelessly into tiie cradle; where, had not some signs of life been observed by one of the attendants, he might never have recovered. He received the elements of his education at Eton, where he showed an early inclination to poetry. His pastorals, and some other light pieces, were originally written in that seminary; whence he was removed to the university of Ox-ford, where he sketched the plan of his Persian Letters, a work which afterwards procured him great reputation, not only from the elegance of their style, but from the excellent observations they contain on the manners of mankind. In 1728 he set out on the tour of Europe ; and, on his arrival at Paris, became acquainted with M. Poyntz, then minister at the court of Versailles; who employed him in many political negociations, which he executed with great judgment and fidelity. About this time he wrote his poetical epistles to Dr. Ayscough and Mr. Pope, which show singular taste and correctness. After continuing a considerable time at Paris with M. Poy.ntz, he proceeded to Lyons and Geneva ; and thence to Turin, where he was honored with marks of friendship by his Sardinian

majesty. He then visited Milan, Venice, Genoa, and Rome, where he applied himself to the study of the fine arts. He soon after returned to his native country, and was elected M. P. for Okehampton in Devonshire. In 1744 he was appointed one of the lords commissioners of the treasury, which gave him an opportunity of exerting his influence in rewarding merit and ability. He was the friend and patron of Henry Fielding, Thomson (author of the Seasons), Mr. Mallet, Dr. Young, Mr. Hammond, Mr. We.st, and Mr. Pope, and a correspondent of M. Voltaire. On the death of Thomson, who left his affairs in a very embarrassed condition, Mr. Lyttelton took that poet's sister under his protection. He revised the tragedy of Coriolanus, which that writer had not finished ; and brought it out at the theatre-royal, Covent Garden, with a prologue of his own writing, in which he so pathetically lamented the loss of that delightful iiard, that almost the whole audience burst into tears. His masterly Essay on the Conversion and Apostleship of St. I'aul was written in 1747, at the desire of Gilbert West, esq. In 17,54 he was made cofferer to his majesty, and a privy-councillor ; previous to which he had married Elizabeth, daughter of field-marshal Sir Robert]{ich, whose conduct however was so indiscreet, that they separated by mutual consent a few years after. After being ap]!ointed chancellor

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and under-treasurer of the exchequer, lie %vas, on the 19th of November, 1757, created a peer. His speeches on the Scotch and mutiny bills in 1747, on the Jew bill in 1733, and on the privilege of parliament in 1763, showed sound judgment, powerful eloquence, and indexible integrity. His last works were Dialogues of the Dead, in whicii the morality of Cambray and ihe spirit of Tontenelle are happily united ; and the History of Henry II., which he published in 1764. He was seized with an inflammation of the bowels, of which he died at Hagley 22d of July, 1773. A complete collection of his works has been since published by his nephew George Ayscough, esq.

Lyttleton (the honorable Charles), LL. D., third son of Sir Thomas, was educated at Eton and Oxford, entered of the Inner Temple, and called to the bar; but afterwards took orders, and was made chaplain to king George II. in ir47; in 1748 dean of Exeter, and in 1762

bishop of Carlisle. He was many years president of the Society of Antiquaries, and contributed many valuable articles to the Archffi-ologia. He died in 1762.

LyttletOxV (Thomas), lord, the son of lord Lyttleton, a young nobleman of promising talents, but dissipated manners. He was born in 1744, and died in 1779, aged thirty-five. His death was preceded by a very singular circumstance: he saw in a dream a young woman dressed in white, who told him that he would die within three days. On the third day he had a party of friends invited to spend the evening with him; to whom, about the hour predicted, he said, *I believe I shall jockey the ghost;' but in a few minutes he became faint, and was carried to bed, where he soon breathed his last. A collection of Letters, bearing his name (for we have reason to doubt whether they were written by him), was published at London in 1780, 8vo.

M.

M is used, 1. as a letter; 2. as a numeral; and 3. as an abbreviature. I.

As a letter, M is the twelfth in the alphabet, the ninth consonant, and the second liquid. It is pronounced by striking the upper lip against the lower; in which its pronunciation agrees with that of b ; the only difference consisting in a slight motion made in the nose in pronouncing m, and not in b ; whence those who have caught cold, for m ordinarily pronounce b ; the nose in that case being disabled from making the necessary mo-tion. The names of all consonants are formed with the aid of vowels ; in em the vowel precedes, in be it follows. Quintilian observes, that m sometimes ends Latin words, but never Greek ones ; the Greeks always changing it into 11, for the sake of the sound. II. As a numeral, M was used among the ancients for a thousand. When a dash is put on the top of it thus (M) it signifies 1000 times 1000, or 1,000,000. III. As an abbreviature, M stands for Manlius, Mar-cus, Martins, Mucius, and Monsieur : M. A. signifies magister artium, or master of arts ; A. M. anno mundi, or the year of the world ; M. D. doctor of medicine; MS. manuscript; and MSS. manuscripts, &c. M, in astronomical tables, &c., is used for meridional, or southern ; and sometimes for meridian or raid-day. M, in medicinal prescription, is frequently used for a maniple or handful ; it is also often put at the end of a recipe, for misce, mingle; or for mix-tura, a mixture. Thus m.f. julapium, signifies mix and make a julep.

M, in law, formerly the brand or stigma of a person convicted of manslaughter, and admitted to the benefit of his clergy.

MAADIE, a lake and village of Lower Egypt, V)etween Aboukir and Alexandria. The lake communicates on one side with the Mediterranean, and on the other with the Lake Mareotis, by narrow channels. The village is not far from Aboukir.

MAATLUYS, a large town of the Netherlands, in South Holland, situated on the Sluis-diep, an arm of the Maese. Its chief pursuit is the cod and herring fishery. Population 6300. Ten miles west of Rotterdam.

MABA, in botany, a genus of the triandria order, and dicEcia class of plants. Perianth of the male trifid ; that of the female as in the male ; the fruit a plum two-celled superior. Species one, a native of the Friendly Isles, hav-ing small vellous flowers.

MABILLON (John), a learned French writer, born at Pierre-monte, on the frontiers of Champagne, in 1632. He was educated in the university of Rheims, and afterwards entered into the abbey of the

Benedictines of St. Remy. In 1663 he was appointed keeper of the monuments of France at St. Dennis. In 1664 he went to Paris, and assisted F. D'Acheri in compiling his Spicilegium. Soon after he revised from the MSS. and published an edition of St. Bernard. In 1683 Colbert sent him into Germany, to search the archives and libraries of the ancient abbeys, for what would contribute to illustrate the history of the church. He published an account of this journey. In 1685 he undertook another journey into Italy, by order of the king of France ; and returned in 1686 with a collection for the king's library, of above 3000 volumes of rare books, printed and in MS. He composed two volumes of the pieces which he had discovered in that country. He was highly esteemed for his virtues as well as his learning.

MABLY (Gabriel Bonnot,abbˆ de), a modern French political and historical writer, was born at Grenoble in 1709. He only rose in the church to the order of sub-deacon ; and though related to the cardinal deTencin, with whom he lived as secretary, avoided preferment. He even declined admission into the academy, and gave up an annuity to his relations : but the court settled upon him a pension. He died in 178j. His works

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of which the Discourses upon History are best known in England, were collected in 15 vols. 8vo., 1794.

MACAO, an island and town of China, separated from the continent by a narrow channel of the bay of Canton. It is the only European settlement withm the limits of the celestial em-pire ; and was first allowed to be formed by the Portuguese, in consequence of tlie protection they afforded to the empire from a band of pirates. The territory is about three miles in length, and half a mile in breadth ; the istlimus connecting it with the rest of the island being crossed by a wall, projecting on both sides into the sea, where the Chinese keep a gate and guard-house. Beyond this boundary Europeans are seldom permitted to pass. The streets of Macao are narrow and irregular, but the houses are built of stone, on the European plan, and are interspersed with a due portion of churches and convents. The senate-house is at the end of the only spacious and elegant street in the town. The governor's house is near the landing-place, and the English factory is a plain building contiguous to it : the United States also, and other nations, have factories here. The fortifications are numerous, but principally detached. The fortified convent of N. S. de la Guie, on the summit of a hill, commands a part of the city ; and on another hill is also a fortified convent, formerly belonging to the Jesuits. These, and several batteries commanding the entrance of the harbour, mount heavy guns, and are garrisoned by from 200 to 300 troops, principally Indian Portuguese sent from Goa.

The population of Macao is estimated at 1400 males, mostly born in the city and of mixed breed ; the number of Europeans being very trifling. The females are reckoned at 2400, a great portion of whom are Tartars by birth, purchased in infancy, and adopted by the Portuguese as future wives for their sons. The village of Moa, which adjoins the city, is inhabited entirely by Chinese, to the supposed number of 25,000, and those who live in the boats in the harbour may be 5000, making the whole population of the peninsula 33,800.

Macao presents the phenomenon of a city under two distinct and very opposite governments ; for, though the full sovereignty of the peninsula nominally belongs to the Portuguese in virtue of the original grant, the Chinese have gradually encroached on their privileges, until at last they have usurped the entire authority de facto, and,

commanding as they do the supply of provisions, the whole place is completely at their mercy. Originally the Portuguese were authorised to oblige the Chinese to quit the peninsula at sunset; but, this precaution being neglected, the Chinese have not only fixed themselves in the village of Moa, but even claim a great authority within the city, so that the Portuguese cannot even repair their houses without permission from the mandarin ; neither can they cultivate the scanty portion of soil of which they are the nominal proprietors, the Chinese having covered every spot unbuilt on witii tombs ; an(l, by their religion and custom, the spot of ground

in which a body is interred immediately becomes the sacred property of tlie family of tlie deceased, and is for ever held inviolate. Tlie Portuguese government of Macao consists of a governor, a king's lieutenant, or disembaicador ; the first sent from Goa for three years, and tii', latter from Lisbon for five. The bishop, who is suff"ragan of Goa, is the tliird person in the government. The municipal government is in a senate, which assumes the pompous title of the august senate of the noble city of Macao. The mandarin of Hong-Chang-foo, a town of 100,000 inhabitants, seven leagues west of Macao, has the immediate superintendance of the Chinese government of Macao.

The harbour of Macao is formed by the west side of the peninsula, and the east side of an island; it can receive vessels eighteen or nineteen feet draft. Four miles south of the city is another port, named the Typa, formed by four rocky islands, and fit for vessels of twenty feet.

No stranger can leave Macao without visiting the grotto in which Camoens is supposed to have composed his Lusiad ; and, indeed, the situation is capable of inspiring a poetical feeling, commanding an extensive and magnificent view of the sea and neighbouring islands. As no European woman is permitted to set foot on the Chinese territory, all those who may be on board ships going into the river of Canton are always landed at Macao, to wait the return of the ship.

JMacao was at one time a place of the greatest importance to the Portuguese, being the centre of their trade with China, Japan, Siam, Cochin-China, and all the countries in this part of Asia. Since the general decline of their Indian trade, which has been prosecuted by other nations witli such superior success and activity, it has sunk into comparative insignificance. Long. 113° 32' E., lat. 22° 10' N.

Macao, in ornithology. See Psittacus. MACARIA (MaKflpta, i. e.

happiness), in mythology, daughter of Hercules and Dejanira. During the war between Eurystheus and the Heraclidae, who were supported by the Athenians, she devoted herself to death, to insure victory to her brethren, according to the response of the oracle. The Athenians, therefore, decreed divine honors to her, and worshipped her as the goddess of happiness. See Eei.k itas.

MACAIIIANS, in ecclesiastical history, the followers of Macarius, an Egyptian monk, who was distinguished, towards the close of the fourth century, for his saiK'tity and virtue. In his writings there are some superstitious tenets, and certain opinions tainted with Origenism.

Macauians was also the name of another sect, the followers of Macarius, a native of Ireland, who, about the close of the ninth century, yjropagatud in I'rance tlie error afterwards maintained by Averihoes, tluit one individual intelligence or soul jierformed the sjjiritual and rational functions in all the human race.

MACAIIONIAN, or 'Macaronic, a kind of burlesque poetry, consisting of a jumble of words of different languages, with words of the vulgar tongue Latinised, and Latin words mo-dernised. Some derive the word from French

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macaron, or macaroon, a kind of cake, wliich, from being composed of various ingredients, occasioned this kind of poetry, whicli consists of Latin, Italian, Spanish, French, llnglisli, Sec, to I e called by its name. Folengio, a Bene.lictme monk, was the first who invented this kind of verse. See Folexgio. The best pieces of this kind are, the Baldus of Folengio, and Macaronis Forza, by Stesonio a Jesuit, among the Italians ; and the Ileatus veritabilis, &c., among the I'rench. Rabelais first transferred the macaro-nic style out of tlie Italian verse into French prose, in his Pantagruel. We have little in English in the macaronian way, but some pieces collected in Camden's remains. But the Germans and Netherlanders have had their macaro-nic poets. Cˆrtamen Catholicum cum Calvinistis, by Niartinus Hamconius Frisius, contains about 1200 verses, all the words whereof began with C Drummond of Ilawthornden's Polemo-Middinia is reckoned to be equal to any thing written in this style. The following lines may serve as an example : —

Archelos pistoliferos furiamque manantum, Et grandem esmentam quffi inopiaum facta ruelle

est : Toxinuraque alto troublantem corda clochero, ike.

MACAROON, 7!.s. Ita. macerona. A coarse rude fellow.

Like a big wife, at sight of loathed meat, Ready to travail ; so I sigh and sweat, To hear this inacanxin talk on in vain. Bonne.

MACARTHEY (Sir Charles), an Irish officer, late governor of Sierra Leone, was, in 1796, an officer in the Irish brigade, and in 1821 lieutenant-colonel in the African corps. On the war breaking out with the Ashantees he went to Cape Coast, and the king of those barbarians is said to have sent him a message, expressing his hope to have his head as an ornament for his great war drum. This message made a considerable impression on the mind of Sir Charles, and he frequently mentioned it in conversation. At length, in 1823, hostilities commenced, and he marched against the Ashantees with a mixed force of Europeans and blacks, the latter of whom ran away, and, the whites being defeated, their commander was captured by the Ashantee chief, who realised his menace, January 21st, 1824. In a subsequent battle, this trophy, however, was recovered, and conveyed to his relations.

MACARTNEY (George earl of) was born at the family mansion of Lissanoure, in Ireland. \ hen very young he was placed under the charge of a clergyman. At the age of tiiirteen he was admitted a fellow commoner of Trinity College ; and, in 1759, he took the degree of mas-ter of arts. From Dublin he went to London, and was entered of the society of the Middle Temple, where he formed an intimacy with Mr. Burke, and many other characters then rising into eminence. In 1764 Mr. Macartney was appointed envoy extraordinary to the empress of Russia; and his zeal and penetration, in the exercise of his high office, gave ample evidence that the choice had been judiciously made. Upon his returit from St. Petersburgh, a mission to tlie

court 01 Pekin was suggested by lord Melville, then president of the board of control, and Macartney was named by ministry with a salary ot £15,000 a-year. The obstacles which were raised, by the absurd jealousy and prejudices of the Chinese, to a free commercia'. intercourse with this country, as well as the general failure of the leading objects of the embassy, are well known to all our readers. Our ambassador, accordingly, left the court of China on the 17tii of March, 1794, and landed at Portsmouth on tlie 5tli of September of the same year. Whatever was his success in foreign countries, his exertions were not overlooked at home ; for the king had, by patentdated tlie 1st of March, 1794, advanced; him to the title of earl of Macartney, in tlie county of An-trim. His lordship died tlie 3 1st of March, 1806.

3IACAS, a woody district of the province of Quixos and ˆlacas, in Soutii America, being tlie most easterly part of (juito. It is bounded on the south by the province of Jaen de Bracamores, and west by those of Riobamba and Cuenˆa, from which it is separated by the eastern chain of the Andes. The nearness of Macas to the An-des causes a sensible difi'erence betwixt its temperature and that of Quito. The winter begins here in April, and lasts till September, which is the time of summer betwixt the Cordilleras; and at Macas the fine season is in September. It is hot and moist, and its territory is fertile in seeds and fruits, sugar and cotton ; but the principal produce is a very fine tobacco. This province is exposed to frequent ravages from the Indians. xVmong the great variety of trees, the most remarkable are the storax and cinnamon, which last is said to be of a superior quality to that of Ceylon. Copal and wild wax are also brought from Macas ; but the latter is of little value, as it never indurates, and the smell is very strong.

Macas, the capital of the province of that name (formerly called

Sevilla del Oro, on account of its gold mines), is now but a small place. Population, cliiefiy people of color, 700 : 138 miles south of tjuito.

iNIACASSAR, a former kingdom of the island of Celebes, on the south-west coast, extended along the coast from Boeleboele, in the bay of Boni, to the point of Lassum, or Lassoa, and thence westward to the point of Touralti, or Tanakeke, and along the west coast northward to Tanette, or Aganondje : reaching inland as far as Boni and Soping. Its power was at the highest about the middle of the last century, when its princes had rendered Loma, Mandelly, Bima, Tambora, Dompo, and Sangar, tributary to them ; and had conquered Bouton, Bungay, Gapil, Sumbawa, and the Xulla Islands. They also held the government of Saleyer, which had been given to Macassar by Baab Ullach, king of Ternate ; were in strict alliance with the inhabitants of Bali, and coined gold coins (probably the gold mas), of the value of sixty Dutch sti-vers. The empire of Macassar was not entirely subverted by the Dutch until 1778.

Macassar, or Fort Rotterdam, the chief Dutch settlement in the island of Celebes, is situated on tlie south-west coast, and was built by the natives, with tlie assistance of the Portuguese. It is about 800 feet from the beech,

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opposite to the road, where a pier extends, whicli serves for unloading the ships, and close to which there are fifteen or sixteen feet water. The bay is full of small islands and sand-banks. The walls of the fort are of rock-stone, high and strong ; and without the land-gate is a large plain, on the north side of which is situated the town. Towards the sea is also a strong battery, which commands the roads to a great distance. The streets, wiiich are broad, cross each other at right angles, pointing to the four cardinal points; at the end of one of them is the orphan-house, a large building, but in a ruinous state : the houses, generally, are respectable. The Chinese all live together in one street. The town is palisadoed .ill round, and is at night closed by gates. Tiie governor's house stands without the town, to the outhward. The church has been rebuilt within these few years. Tlie environs form an extensive plain, extending eight or ten miles, and which reaches to the foot of a range of high mountains. The country is considered high and healthy. The settlement is flourishing ; and Chinese junks from this place carry on a direct trade with China, so that the mixed population is very considerable. The beef here is good and of reasonable price ; rice, poultry, deer, and wild hogs, are also in plenty : water is generally procured from a small rivulet which runs near the town ; but the best is from the wells, and can be readily shipped from the pier. Abundance of excellent fish are caught in the roads. This island was discovered by the Portuguese about 1525, who obtained permission to establish themselves, where they remained quiet till about 1660, when they were driven out by the Dutch. The English established a factory here in 1615, which they were under the necessity of abandoning. The Dutch have frequently been engaged in contests with the natives for the possession of the country ; but they always succeeded in repelling them. In 1810 the settlement surrendered to the British, but was retunred to tlie Dutch in 1814. Long. 119" 48' E., lat. 5° 9' S.

Macassar, Straits of, separate the islands of Borneo and Celebes, and are about 350 miles long, and from 110 to 140 miles wide, except at the north entrance, where they are contracted to fifty miles. This part of the eastern seas is much frequented by ships bound to China late in the season : but it abounds in shoals and rocks. In January and February strong northerly winds prevail.

MACAULAY (Catharine), a celebrated female historian, daughter of

John Sawbridge, esq. of Ollaiitigh, in Kent. She was married June 13th, 1760, to George Macauiay, M. D., who left her ri. widow with one daughter. In 1778 she married a younger brother of the famous empiric Dr. Graham. Siie wrote, 1. The History of England, from the Accession of James 1. to the Ilevolution; the first volume of wiiich appeared in 1763, 4to, and the eighth and last in 1783. This work was very popular at tliis time, and the observations of the author are often acute and ingenious ; but her republican prejrdices deprive It of all claim to impartiality. 2. A Modest Plea for the Property of Copy Right. 3. Observations on a Pamphlet, entitled Thoughts on

the Causes of the present Discontents, 1770, 8vo. 4. Remarks on Mr. Hobbes's Rudiments of Government and Society, 8vo. 5. Addres«i to the People of England, Scotland, and Ireland, on the present important crisis of affairs, 1755. 6. History of England, from the Revolution to the present time, in a series of letters to the Rev. Dr. Wilson, 1778, 4to. 7. Treatise on the Immutability of Moral Truth, 1783, 8vo. and 8. Letters on Education, 8vo. 1790. She was a keen republican. Dr. Wilson made her a present of a handsome house, called Alfred House, in Bath ; and erected a statue of her while living, iv the character of liberty, in his parish church of Walbrook. She died at Bin-field, in Berks, 23d of June, 1791.

MACAW, n. s. From Macao probably. A tree. See Phcenix.

MACBETH, a Scotch nobleman of the blood royal, who murdered Duncan I. king of Scotland, A. D. 1046 ; and chasing Malcolm Can-more, his son and heir, into England, usurped the crown. Siward, earl of Northumberland, whose daughter Duncan had married, undertook, by order of Edward the Confessor, the protection of the fugitive prince, marched with an army into Scotland, defeated and killed Macbeth, and restored Malcolm to the throne of his ancestors. Shakspeare has made this transaction the subject of one of his finest tragedies.

MACBRIDE (David), Dr., an eminent physician and philosopher, descended from an ancient Scotch family in the county of Galloway. His grandfather and father were presbyterian clergymen in -Ireland : the former at Belfast ; the latter at Ballymony in Antrim, where he married, and where our author was born in April 1726. After the usual education, and having studied some time under an eminent surgeon in his native place, he was sent to the university of Glasgow, and afterwards to that of Edinburgh. He then went on board the navy as a

surgeon's mate, and after some time was raised to the rank of surgeon. Although in this situation, he acquired practical experience, yet, having been rather young when he first attended the classes, he returned to I'^.dinburgh, and resumed his academical pursuits, under Dr. Monro. The celebrity of the medical teachers in London led him also to visit that capital, wliere he studied under Dr. Hunter and Dr. Smellie. Tlius qualified for the exercise of his profession, about the end of 1749, he fixed his residence in Dub-lin. His first publication, entitled Experimental Essays on Medical and Philosophical Subjects, appeared in 1764. Having thus equally distinguished himself as an ingenious philoso|)hcr and able practitioner, his name was enrolled witii honor in the lists of many learned societies; and the iniiversity where iiis studios had commenced conferred upon liim tlie degree of M. 1). — Nor were his talents confined to the advancement of medicine alone. He publislied, first, An Account of a New Method of Tanning; and afterwards, Instructions for carrying on tlie New Method of Tanning. As a testimony of respect for his ingenuity, prize medals were now conferred upon him by the societies of arts both in London and Dublin. His last and most ex-MAC

tensive publication was, A Methodical Introduction to the Theory and Practice of Medicine. Most, if not all, of these publications went through various editions, and were translated into different languages. Meantime his practice increased so rapidly, that he had more business than he could transact. In this situation, he was attacked with a fever, which put an end to his life on the 13th of December, 1778, in the tifty-third year of hisage. During his residence in Dublin he was twice married, and had children by both his wives, none of whom survived him.

MACCAB/EUS (Judas). See Jews.

IMACCABEES, two apocryphal books, containing the history of the Maccabees and their wars against the Syrian kings, in defence of their religion and liberties, so called from Mat-tatliias, or his son Judas Maccabeus, who was so named from the word ‘JDQ, formed of the initials of nin> sVxo non:: ‘», q. d., Who is like unto thee, O Lord, among the gods ; which was the motto of his standard ; whence those who fought under his standard were called Maccabees. The first book of the Maccabees is an excellent history, and comes nearest to the style of the sacred historians of any extant. It was written originally in the Chaldee language, of the Jerusalem dialect, and was extant in ,this language in the time of Jerome. From the Chaldee it was translated into Greek, and from the Greek into Latin. It is supposed to have been written by John Ilyrcanus, the son of Simon, who was prince and high priest of the Jews nearly thirty years, and began his government at the time where this history ends. It contains the history of forty years, from the reign of Antiochus Epiphanes to the death of Simon the high priest, that is, from A. M. 3829 to 3869 ; A. A. C. 131. The second book of the Maccabees begins with two epistles sent from the Jews of Jerusalem to the Jews of Egypt and Alexandria ; both reckoned spurious. After these follows the preface to the history, which is an abridgment of a larger work, composed by one Jason, a Jew of Cyrene, who wrote in Greek the history of Judas Maccabeus and his brethren, and the wars against Antiochus Epiphanes, and Eupator. This book does not equal the accuracy of the first. It contains a history of about fifteen years, from the execution of Heliodorus’s commission, who was sent by Seleucus to carry away the treasures of the temple, to the victory obtained by Judas Maccabreus over Nicanor ; that is, from A. M. 3828, to the year 3843, or A. A. C. 147. There are in the

Polyglot bibles, both of Paris and London, Syriac versions of both these books ; but they, as well as our Eng-ligh version, are translated from the Greek. There is also a third book of the Maccabees, containing the history of the persecution of the Jews in Egypt, by Ptolemy Philopater, and their sufferings under it. It seems to have been written by some Alexandrian Jew in Greek, soon after the time of Jesus, the son of Sirach. It is in most of the ancient MS. copies of the Greek Septuagint, particularly in the Alexandrian and Vatican, but was never inserted into the vulgar Latin version of the bible, nor consequently into any of our English copies. And Josephus's

history of the martyrs, that suffered under Antiochus Rpiphanes, is found in some MS-Greek bibles, under the name of the Fourth book of the Maccabees.

Maccabees, the followers of Judas Macca-baeus. The name was generally applied to all who suffered in the cause of true religion, under the Egyptian and Syrian tyrants.

MACCLESFIELD, anciently written Max-field, is a large manufacturing borough and market-town district, eighteen miles and a half south from Manchester, twelve from Stockport, and 1673 north-west from London. Radal, earl of Chester, first constituted it a borough ; and in or near the year 1261, the prince of Wales, afterwards king Edward I., made it a free borough, and granted the burgesses a mercatorial guild. By the conditions of this charter, the burgesses were required to grind at the earl's mill only, and to bake at his oven. This oven, or bakehouse, is still vested in the crown, and a lease of it wa-s granted in 1791, for twenty-four years and a half. By a charter of queen Elizabeth's, the corporate body was to consist of twenty-four capital burgesses ; but a later charter, from king Charles II., names a town-clerk, a coroner, two Serjeants at mace, &c., as part of the corporation. Among other articles delivered into the custody of the Serjeants at mace, in the year 1620, was ' a bridle for a curst queane.' In the town-box is preserved a copy of a petition sent to Henry VII. soon after the battle of Bosworth, praying that the citizens might not lose their charter, although unable to fill up the due number of aldermen, having lost so many of their principal inhabitants in that battle in his service. The corporation are entitled to all springs and water-courses in the manor of Macclesfield for supplying the town with water, from which sources, with the tolls of the market and fairs, considerable emolument is derived. A court of record is held once a month for the liberty of the hundred, and another for the manor and forest ; a court

leet is also held for these jurisdictions. This town is the head of the hundred of Macclesfield-forest, where the sessions are held at Michaelmas and Easter, to try persons charged with misdemeanors; an inferior court is held weekly by the mayor and justices.

Macclesfield contains two churches and several chapels. St. Michael's is a handsome building; the tower, which has a peal of eight bells, is seventy-two feet high. The parochial chapel was originally built by king Edward I., in the year 1278 ; it was almost rebuilt, and greatly enlarged in 1740. On tiie south side of this chapel is an oratory, or burial chapel, which belongs to the Savage family ; several of whom were interred here. It now belongs to the earl of Cholmondeley. In the Legh chapel are some sepulchral memorials of the family of Legh of Lyme. A new chapel was erected in the year 177.5 by Charles Roe, esq. ; and an act of parliament was obtained in 1779, when it was called Christ's Church, or chapel, and the living was made a perpetual cure, or benefice, to be subject to the bishop of Chester. In the chancel is a handsome marble monument of the founder, by Bacon.

M A C E D O N.

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In Uiis town are meeting-houses for Methodists, and for the Presbyterians, Quakers, and Independents. A grammar-scliool was founded here by Sir John Perceval, knt. Edward VI. increased its revenues, by giving lands and houses in and near the city of Chester. An act of parliament was obtained in 1768, to regulate the management, and detine the constitution of this noted seminary. The property left to it ori-jji- nally brouglit in an income of but £'25 per annum, it now produces £900.

From the abundance of coal and othe'" minerals, in the neighbourhood, the manufactures of Macclesfield have become very considerable. These at one time consisted chiefly of wrouglit buttons, of silk, mohair, and twist, of which trade this town has always been 'he centre. This business, however, having declined, the cotton manufacture succeeded to it. There are about thirty silk mills for making sewing silk, and silk for the manufacturers. Coals are found in the immediate neighbourhood, and not far from the town is a

considerable breweiy. There are also numerous cotton factories : goods are also manufactured in private houses ; and there are several muslin, silk-weaving, and twist factories. The weaving of silk handkerchiefs, and the making of ferret and calico, are increasing manufactures; here are five or six dye-houses, principally for silk, a tape manufactory, and a bleaching ground. The new regulations concerning the silk manufactures have considerably increased the trade of this town.

MACDIARMID (John), an ingenious miscellaneous writer, was born in 1779 at Weem, in Perthshire, of which parish his father was minister. He was educated for the church, but on coming to London became editor of the St. James's Chronicle. He published in 1803 An Enquiry into the System of Military Defence, 2 vols. Bvo. ; which was followed by An Enquiry into the Nature of Civil and jMilitary Subordination. His last and best work was entitled Lives of British Statesmen, 4to. He died in

1808.

MACE, /;. s. Sax. mace ; Span, maza ; Ital. viazza ; Er. masque ; Lat. massa ; Gr. fiaiˆa-A heavy weapon, or metal club ; an ensign of authority.

With him ther wenten knightes many on Som wol ben armed in an habergeon,

Som wol ben armed on his legs wele,

And have an axe, and som a mace of stele.

Charicir. Canterbury Tales. He mightily upheld that royal mace, \ hich now thou bearest. Faerie Queene.

The Turkish troops breaking in with their scy-mitars and heavy iron maces, made a most bloody cexecution. Knollca.

O murtherous slumber ! Layest thou thy leaden mace upon my boy That plays the musick ?

Shakspeare. Julius Cfcsar. Death with his mace petrifick smote. Milluu.

With his mace tlieir monarch stnick the ground ; With inward

trembling earth received the wound. And rising streams a ready passage found.

Drydeti. The mighty maces with such haste descend.

They break the bones, and make the annniir liˆnd.

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I was placed at a quadrangular table, opposite i.) the mace-hearer. Spectator.

The crown, a mark of dignity and symbol of power, like the mace and sceptre, was also taken from the JMay : being the representative of the garland or crown, which then hung on the top of the May, or pole, it was the signal of convening the people.

Brand’s Antiquities.

Mace, n. s-i Fr. Ital. and Lat. macis. A

Mace’ale. J kind of spice : maceale is, ale spiced with mace.

Water, vinegar, and honey, is a most excellent sudorifick : it is more efi’ectual wiih a little mace added to it. Arhuthnut.

1 prescribed him a draught of maceale, with hopes to dispose him to rest. Wiseman’s Surgertf.

The nutmeg is inclosed in a threefold covering, of which the second is mace : it is thin and membranaceous, of an oleaginous and yellowish colour : it has an extremely fragrant, aromatick, and agreeable smell, and a pleasant, but acrid and oleaginous taste. Hill’s Materia Medicu.

The Mace was anciently much used by the cavalry of all nations. It was commonly made of iron ; its figure much resembles a chocolate-mill; many specimens may be seen in the tower. It was with one of these that Walworth, mayor of London, knocked the rebel Wat Tyler from off his horse in Sraithfield, for approaching the young king Richard II. in an insolent manner; and, as he fell, he despatched him with his dagger. In modern times it has changed its form ; and, being no longer an instrument of war, is made of copper or silver gilt, ornamented with a crown, globe, and cross, and is now the chief ensign of authority throughout Great Britain. Similar to the ancient

maces were those staves at the end of which iron or leaden balls armed with spikes were suspended by chains ; they were till lately carried by the pioneers of the trained bands or city militia.

]Mace, in the materia medica, the second coat or covering of the kernel of the nutmeg, is a thin and membranaceous substance, of an oleaginous nature, and a yellowish color; being met with in flakes of an inch or more in length, whicli are divided into a multitude of ramifications. It is of an extremely fragrant, aromatic, and agreeable flavor ; and of a pleasant, but acrid oleaginous taste. It is carminative, stomachic, and astringent ; and possesses all the virtues of nutmeg, but has less astringency. The oils of mace and nutme<jr, whether prepared by distillation or expression, are so much of the same nature, that they may be indiscriminately used for one another on all occasions. They give ease in cholics, and often in nephritic cases, taken internally from one drop to five or six of the distilled oil, or an equal quantity of the expressed; and externally, they are of use to rub paralytic limbs : they also assist digestion ; and will often stop vomitings, and hiccough'*, only by being rubbed on tlie region of the stomach.

MACEDOX, or Macedonia, a celebrated kingdom of antiquity, bounded on tlie cast by the yi'.gean Sea ; on the south by Thessaly and Epirus ; on the west by the Ionian Sea or Adriatic ; and on the north at first by the Strymon and the .Scardian mountain.'^-, but afterv.ardn by the Nessus.

The kingdom of Macedonia extended in a direct line only l.OO miles in length; but the windings of tlie coast lengthened it out to three times that extent ; m whicli almost every convenient situation was occupied by a Grecian sea-port. The country was uaturaily divided by the Thermaic and Strymonic gulfs, into the provinces of Pieria, Chalcis, and Pangseus. The middle region, which took its name from a city of Eu-boea, whence it was originally peopled, was very fertile and

pleasant; the inland country being diversified by lakes, rivers, and arms of the sea, was extremely convenient for inland navigation, while the towns of Amphipolis, Potidaea, Acanthus, and many others, afforded marts for the commerce of the republics of Greece, as well as of Thrace and Macedon. On one side of this district were the mountains of Pangseus, and on tiie otner the plains of Pieria. The Pangaean mountains, which extended ninety miles towards the east on the river Nessus, though proper neither for corn nor pasture, produced plenty of limber for ship-building ; while the southern branches of the mountain contained rich veins of gold and silver ; but these, though wrought successively by the Thasians and the Athenians, were only brought to perfection by king Philip II., who extracted from them gold and silver to the value of £200,000 sterling annually. Pieria extended fifty miles along the Thermaic Gulf, to the confines of Thessaly and Mount Pindus. The inland part of the country was beautifully diversified with shady hills and fountains ; and so admirably calculated for retirement, that the ancients looked upon it to be the favorite haunt of the muses, and accordingly bestowed upon them the title of Pierides. In the most early times this country was called iF.mathia from ˆEmathias, one of its princes. The name of Macedon is said to have been derived from Macedo, a descendant of Deucalion ; though others suppose it to have been only a corruption of Mygdonia, a district of the country. In those remote ages, Macedon was divided into a great number of petty principalities, of which scarcely even the names are now known.

All authors agree, that Caranus was the first who established any permament sovereignty in Macedon. He was an Argive, a descendant of Hercules, and about 814 years B. C. conducted a small colony of his countrymen into the inland district of Macedon, then called .ˆmathia. This territory was about 300 miles in circumference. On the soutli it wa.s separated from the sea by a. number of (>reek republics, of which the most considerable were those of Olynthus and Amphipolis ; and on the north-east and west was surrounded by the kingdoms of Thrace, Pceonia, and lUyricum. According to the traditions of those times Caranus, having consulted the oracle on the success of his intended expedition, was commanded to be directed by the goats in the establishment of his empire. For some time he proceeded at random, without knowing what to make of the oracle’s answer; but happening to enter the small kingdom of yEmathia, at that time governed by king [Nlidas, he oberved a herd of goats running towards Edessa the capital, llecollecting then the answer of the oracle, he

attacked and took the cily by surprise, soon after making himself master of the whole kingdom. In memory of this remarkable event he called the city .Egea, and the people iEgiates, from the goats who conducted him, and made use of the figure of a goat in his standard. This fable accounts for the figure of a goat on the coins of Philip and his successors. The little colony of Argives led into vEmathia by Caranus would soon have been overwhelmed by the barbarous nations who surrounded it, had not this prince and his subjects taken care to ingratiate themselves with their neighbours, rather than to attempt to subdue them. They instructed them in the Grecian religion and government, and in the knowledge of many useful arts ; adopting themselves, in some degree, the language and manners of the barbarians. Thus they gradually associated with the fierce and warlike tribes in their neighbourhood ; and this prudent conduct, being followed by succeeding generations, may be look-ed upon as one of the causes of the Macedonian greatness. Caranus dying, after a reign of twenty-eigiit years, left the kingdom to his son Ccenus in 786, who, having considerably enlarged his dominions, was succeeded by Thurymas in 774 ; and he by Perdiccas I. in 729. This last prince is by Thucydides and Herodotus accounted the founder of the Macedonian monarchy ; but his history is so obscured by fable tliat nothing certain can now be known concerning it. In process of time, however, the good luiderstanding which had subsisted between the Macedonians and their barbarous neighbours began to be interrupted ; and in 691 B. C. the kingdom was for the first time invaded by the Illyrians. At first they did considerable damage by their ravages ; but Argaeus the son and successor of Perdiccas 1., hav-ing decoyed them into an ambush, cut off great numbers, and obliged the remainder to leave the kingdom. In the reign of his successors, however, they returned, and often proved very troublesome enemies. Arg?cus was succeeded by his son Philip I., in 640 B. C, and he by his son Europas in 602 ; who left the kingdom to his son Alcctas in 576.

Alcetas ascended the throne about the time that tlie Persian monarchy was founded, and had the dexterity to preserve his dominions from the encroachments of the Greeks on the one hand, and of the Persians on the other ; biit in the reign of his son Amyntas I., who succeeded him in 547, a formal demand was made of submission to the great king Darius, by sending him a present of earth and water. Seven ambassadors were sent on this errand by Megabyzus, one of the officers of Dnrius. They were sumptuously entertained by Amyntas; but, having attempted to take some indecent liberties with the Macedonian women, Alexander the king’s son caused them all to be murdered. This rash action had almost proved the ruin of the kingdom

; but Alexander pacified Bubaris, the general sent against him by Megabyzus, by means of his sister Gygxa, a very beautiful woman, with whom the Persian fell in love, and afterwards married her. From this time the ˆMacedonians were accounted the faithful allies of the Persians ; and Alexander obtained the country in the neighbourhood of

Mount Ilseraus and Olympus, at the same time that the city of Alabanda in Phrygia was given to Amyntas. The Macedonians distinguished themselves in the time of the Persian invasion of Greece, by furnishing their allies witli 200,000 recruits : though some cities, particularly Potidaea, Olynthus, and Pallene, adhered to the Grecian interest. The last two were taken and razed, and the inhabitants massacred by the Persians ; but Potidsea escaped by reason of the sea breaking into the Persians' camp, where it did great damage. Alexander, however, afterwards thought proper to court the favor of the Greeks by giving them intelligence of the time when Mardonius designed to attack them. Tiie remaining transactions of this reign are entirely unknown, farther than that he enlarged his dominions to the river Nessus on the east, and the Axius on the west.

Alexander I. was succeeded, in 454, by his son Perdiccas II., whose reign was a series of unsuccessful intrigues for the destruction of the Athenian influence in Olynthus, and the establishment of that of Macedon in its stead. Perdiccas II. was succeeded about 417 B. C. by his son Archelaus, who enlarged his dominions by the conquest of Qydna, and other places in Pieria, though his ambition seems rather to have been to improve his dominions than greatly to extend them. He facilitated the communication between the principal towns of Macedon, by cutting straight roads through the country : built walls and fortresses in such places as afforded favorable situations ; encouraged agriculture and the arts, particularly those subservient to war ; formed magazines of arms ; raised and disciplined a considerable body of cavalry ; and, in a word, added more to the solid grandeur of Macedon than had been done by all his predecessors. Nor was he

regardless of the arts of peace. His palace was adorned by the works of Grecian painters. Euripides was long entertained at his court; Socrates and other men of merit and ge-nius were invited to reside in Macedon, and treated with distinguished regard by a monarch attentive to promote his own glory and the happiness of his subjects. This great monarch died after a reign of forty-one years, but according to others of six ; and after his death the kingdom fell under the power of weak princes and usurpers. A number of competitors appeared for the throne : and these by turns called in to their assistance the Thracians, Illyrians, Thcssalians, the Olynthian confederacy, Athens, Sparta, and Thebes.

Bardyllis, an active and daring chief, who, from being head of a gang of robbers, had become sovereign of the Illyrians, entered Macedon at the head of a numerous army, deposed Amyntas II., the grandson of Alexander I., and set up in his place one Arga;us, who consented to become tributary to the Illyrians. Another candidate for tlie throne, named Pausanias, was supported by tl«e Thracians ; but, by the assistance of the Thessalians and Olynthians, Amyntas was restored in :197. After his restoration, liowever, the Oiyntliians refused to deliver up several places of impoilance belonsing to Macedon, which Amyntas had either entrusted to their care

or which they had taken from his antagonist. Amyntas complained to Sparta; and that republic sent first 2000 men under Eudamidas, and afterwards a powerful reinforcement under his brother Phcebidas; but these last were detained till tire season for action was past. Eudamidas, IvDwever, with his small army, performed essential service. The appearance of a Spartan army encouraged the subjects and allies of the Olynthians to revolt ; and the city of Potidaa surrendered soon after his arrival. But being too much elated with his success, Eudamidas approached so near Olynthus, that he was attacked, defeated, and killed in a sally of the citizens. He was succeeded by Teleutias the brotlier of Agesilaus, who commanded a body of 10,000 Spartans, and was assisted by king Amyntas and Derdas his brother, the governor of the most westerly province of Macedon, which abounded in cavalry. By these formidable enemies the Olynthians were defeated” in a number of battles, and obliged to shut themselves up in their city ; on which Teleutias advanced with his whole forces to invest Olynthus. But his excessive eagerness to destroy his enemies proved his ruin. A body of Olynthian horse passed the Amnias in sight of the allied army, though so much superior in number. Teleuties ordered his targeteers to at-tack them ; the

Olynthians, having retreated across the river, were closely pursued by the Lacedemonians, great part of whom also passed the river; but the Olyndiians, suddenly turning upon them, killed upwards of 100, with Tlemo-nidas their leader. Teleutias, exasperated at this disaster, ordered the remainder of the targeteers and cavalry to pursue ; while he himself advanced at the head of the heavy armed foot with such celerity that they began to fall into disorder. But the Lacedemonians imprudently advancing just under the battlements of the city, the townsmen on the walls discharged upon them a shower of missile weapons, while the flower of the Olynthian troops sallied forth and attacked them with such violence, that Teleutias was slain, the Spartans defeated, and the whole army at last dispersed with great slaughter, and obliged to shelter themselves in Acanthus, Apollonia, Spartolus, and Potidcea. The Spartans, undismayed by this terrible disaster, continued their operations under their king Agesipolis, and after his death under Polybiades, an experienced general, with so much success, by sea and land, tliat the Olynthians, after holding out for ten months, at last submitted on very humiliating conditions. They formally renounced all claim to the dominions of Chalcis ; they ceded the Macedonian cities to their ancient governor ; and in consequence of tliis Amyntas left the city of iEgea or Edessa, where till now he had held his royal residence, and fixed it at Pella, a city of great strength and beauty, situated on an eminence, whidi, together with a plain of considerable extent, vVas defended by impenetrable morasses, and by the rivers Axius and Lydias. It was about fifteen miles from the /Ivican Sea, with which it communicated by these rivers. It was originally founded by Greeks, who had lately conquered and peopled it : but, in consequence of the misfortunes of ‘)ivnllius, it now became

the capital of Macedon, which it continue;! ever after to be. Amyntas, thus fully estahlished iu his dominions, continued to enjoy tn.nquillity during the rest of his life, and was succeeded by his son Alexander II. in 371 B. C.

The reign of Alexander II. was short, and disturbed by invasions of tlie Illyrians; from whom he was obliged to purchase a peace. His two brothers, Perdiecas and Philip, being botii very young, Pausanias again usurped the throne; but was soon deprived of it by the exertions of Ipiiicrates the Athenian ; who, in gratitude for favors he had formerly received from Amyntas and his queen Eurydice, expelled the usurper, and established Perdiecas, the eldest son, on the throne. During the minority of Perdiecas, however, his bastard brother, Ptolemy Alorites, who was his guardian, usurped the throne; but was deposed by the Theban general Pelopidas, who reinstated Perdiecas in his dominions, in 366 B. C. ; and, to secure the dependence of Macedon upon Thebes, carried along with him thirty JNIacedon youths as hostages; among whom was Philip the king's younger brother. Perdiecas now, elated by the protection of such powerful allies, forgot Iphicrates and the Athenians, and even disputed their right to Amphipolis, whicli had been decreed to them by the general council of Greece. He also refused to Bardyllis, the Illyrian, the tribute which the Macedonians had agreed to pay him, which occasioned a war with that nation, wiierein the ˆMacedonians were defeated with the loss of 4000 men, Perdiecas himself being taken prisoner, and dying soon after of his wounds. The kingdom was now left in the most deplorable state. Amyntas HI., the son of Perdiecas, was an infant; the Thebans, in whom Perdiecas had placed so much confidence, were deprived of the sovereignty of Greece ; the Athenians, justly provoked at the ingratitude of the late monarch, showed an hostile disposition ; the Illyrians ravaged the west and the Ptconians the north quarter of the kingdom ; the Thracians supported Pausanias, and proposed to send him into Macedon at the head of a numerous army : while Argaius, the former rival of Amyntas, renewed his pretensions to the throne, and, by flattering the Athenians with the hopes of recovering Amphipolis, easily induced them to support his claims; in consequence of which they fitted out a fleet, with 3000 heavy armed soldiers, which they sent to the coast of Macedon. Philip, the late king's brother, no sooner heard of his defeat and death, than he set out privately from Thebes ; and, on his arrival at Macedon, found matters in the situation above described. Naturally ambitious, he had acquired, during the time he was an hostage, ahigh degree of that knowledge of men and manners, whicli was most suited to insure his success. From the age of fifteen he had been much in the family of Epaminondas : and in his travels through Greece he had cultivated an acquaintance with Plato, Isocrates, Aristotle, and other great philosophers. His appearance in Macedon instantly chanˆˆed the face of afifairs. In the name of his nephew, Amyntas III., he treated with the Pajonians and Thracians ; whom, by bribery and fair promises, he

prevailed upon to abandon Pausanias, and withdraw their forces.

as the Illyrians had already done. And, having thus got rid of these barbarians, he was now at liberty to o]ipose the Athenians, who supported Argteus, and threatened a very formidable invasion. The appearance, however, of the Athenian fieti jefore Methone, with that of Argasus at tiie head of a numerous army in Pieria, having filled the whole country with consternation, Philip took the opportunity of getting Amyntas set aside, and himself declared king : for which the danger of the times aflbrded a very plausible pretext

Argaius, in the mean time, having advanced with his Athenian allies towards Edessa, Philip, after cutting off" great numbers of his men, defeated him in a general engagement ; in which Argaeus, with the flower of his army, was cut in pieces, and the rest taken prisoners. As, amon;ˆ these prisoners, there was a great number both of Macedonians and Athenians, he determined, by his treatment of them, to ingratiate himself with both parties. The former were called into his presence, and, after a gentle reprimand, admitted to swear allegiance to him ; the latter were entertained at his table, dismissed without ran-som, and their baggage restored. The prisoners were just allowed time to return home, and spread abroad the news of Philip's generosity, when they were followed by ambassadors from Macedon with proposals for peace. As he knew that the loss of Amphipolis had greatly irritated the Athenians, he now renounced his jurisdiction over it, and declared it free, and subject only to the government of its own laws. This artful conduct so wrought upon the Athenians, that they consented to the renewal of a treaty which had formerly subsisted between them and his fa-ther Amyntas II. Thus he removed all jealousy of his ambition, and even induced them to ensjage in a ruinous war with their allies, which occupied their attention until Philip had an opportunity of getting himself so well established on his throne, that it was impossible to overthrow him. — Being thus left at liberty to regulate his domestic concerns, he beaan to circumscribe the power of his chiefs ; who, especially in the more remote provinces, paid very little regard to the authority of the kings of Macedon. To counteract their ambition, Philip chose a body of the bravest Macedonian youths, whom he entertained at his own tabic, and honored with many testimonies of his friendship, giving them the title of his companions, allowing diem constantly to at-tend him in war and hunting. Their intimacy with the sovereign, which was considered as an indication of their merit, obliged them to superior diligence in all the severe duties of military discipline ; and the young nobility,

eager to participate such high honors, vied with each other in their endeavours to gain admission into this distinguished order; so thai, while on the one hand tliey served as hostages, on the other they formed a useful seminary for future generals, by whom both Philip and Alexander were afterwards greatly assisted in their conquests. About this lime Philip is said to have instituted the Maccr donian phalanx ; but this is disputed by Dr. Gillies. Instead of this, Philip, according to our author, procured arms, horses, and other ne-M A C E D O N.

ce&saries for war; and introduced a more severe and exact military discipline than liad formerly been known in Macedon. While he thus took the best methods to render himself secure at home and formidable abroad, the Pseonians again began to make incursions into the kingdom. The death of Agis their king, however, who was a man of great military skill, deprived them of almost every power of resistance when they were attacked. Philip, in consequence, overran their country with little opposition, and reduced them to the state of tributaries to JNIacedon. No sooner was this accomplished, than lie undertook a winter's campaign against the Illyrians, who had long been the enemies of Macedon. They now extended their territory to the east by which means the Macedonians were excluded from the harbours on the coast of the Adriatic. This was a grievance to Philip, who seems early to have meditated the raising of a naval power; neither could he hope to be in safety, should the kingdom be left open to the incursions of a barbarous enemy ; Jor which reasons he determined at once to humble those enemies so completely, that ihey should no longer give him any disturbance. After an ineffectual negociation, he was met by Bardyllis at the head of a considerable body of infantry, but with only 400 horse. They for some time made a gallant resistance, but were at last defeated with the loss of 7000 men, among whom was Bardyllis, who fell at the age of ninety. The consequence was, the cession of a considerable part of their territory, and subjection to an annual tribute. Philip now began to put in execution greater designs than any he had yet attempted. The ricii coasts to the south of Macedon, inhabited chiefly by Greeks, presented a strong temptation to his ambition and avarice. The confederacy of Olynthus, after having thrown off the yoke of Sparta, was become more powerful than ever, and could send into the field an army of

10,000 armed troops, besides a number of cavalry. Most of the towns in Chalcidice were become its allies or subjects ; so that this populous province, with Pangseus on the right and Pieria on the left, formed a barrier against any incursions of the Macedonians. But Philip, anxious to establish a navy, considered the conquest of Ainphipolis as more immediately necessary, as, besides its naval and commercial advantages, it would open a road to the woods and mines of Pangseus. The Amphipolitans, alarmed at the hostile designs of I'hilip, put themselves under the protection of the Olynthians, who readily received them into the confederacy, and sent ambassadors to Athens, requesting their assistance against Philip. But the Macedonian sent his agents to Athens, with such expedition, that they arrived before any thing could be concluded with the Olynthian deputies. Having gained over the popular orators, he flattered the senate in such an artful manner, that a negociation was set on foot, by which IMiilip engaged to conquer Amphipolis for the Athenians, upon condition that they surrendered to him the fort ol Pydna. Thus the Athenians, deceived by tlieir own magistrates, and outwitted by the policy of Philip, rejected the offers of the Olynthians. T"he

ambassadors of Olynthus returned higiily dis gusted with their reception, but had scarcely communicated the news to their countrymen, when Philip's army arrived at Olynthus; and, pretending to condole with them on the affront they had received at Athens, expressed their surprise that they should court the assistance of that distant and haughty republic, when they could avail themselves of the power of JNIacedon, which wished to enter into alliance with their confederacy. As a proof of his sincerity, Philip offered to put them in possession of Anthemus, an important town in the vicinity, and to reduce for them the cities of Pydna and Potidaea. Thus he prevailed upon the Olynthians not only to abandon Amphipolis, but even to assist him ; after which he pressed that city so closely, that, unable to defend itself alone against so powerful an enemy, it surrendered at discretion, A. A. C.

357.

Though the obstinate defence of the Amphipolitans might have furnished a pretence for severity, Philip contented himself with banishing a few of the popular leaders from whom he had most cause to dread opposition, treating the rest of the inhabitants with great

clemency ; but took care to add Amphipolis to his own dominions, notwithstanding his promises to the Athenians. Finding it against his interest at this time to at-tack the Olynthians, he cultivated the friendship of that republic with great assiduity ; took the cities of Pydna and Potidrea, which he readily yielded to the Olynthians, though tliey had given him but little assistance in the reduction of these places. Potidaa had been garrisoned by the Athenians, and these the artful king sent back without ransom. He next took possession of the gold mines of Thrace by the conquest of Crenidee, which he made a Macedonian colony, and named Philippi ; and drew annually from its coal mines nearly 100 talents, or. £200,000 sterling. The coins struck here were likewise called Philippi . Philip next took upon him to settle the affairs of Thessaly, \ihere every thing was in confusion. This country had been greatly oppressed by Alexander tyrant of Pherae, as well as by Tissiphor-nus, Pitholaus, and l.ycophron, his brothers-in- law, who had murdered him. By the united efforts of the Thessalians and Macedonians, tiiese usurpers were easily overthrown, and the Thessalians, out of a mistaken gratitude, surrendered to lˆhilip all the revenues arising from their fairs and towns of commerce, as well as the conveniences of their harbours and shipjiing. Having thus not only established his sovereignty, but rendered himself very formidable to his neighbors, he formed an alliance with Arybbas king of Epirus, and in A. A. C. 357 married Olympias, his sister. The nuptials were solemnised at Pella with great pomp, and several months were spent in shows and diversions : during which Philip showed such])roneness to vice of every kind, as disgraced him in tiie eyes of his neighbours, and probably laid tiie foundation of his domestic un-ha]5piness. So much was his behaviour taken notice of by tlic neighbouring stales, that the Vxo-nians and Illyrians threw offthe yoke, and engaged in their schemes Cotys king of Thrace. But Philip giving up his dissipation, early in the spring of 350,

took the field with tiie flower of his troops, and, marchinc; in person against the Pseonians and Thraciaiis, despatched Parmenio into Illyria. Both enterprises proved successful ; and, ˆvhile Pliilip returned

victorious from Thrace, he received an account of Parmenio's victory ; a se-cond messenger informed him of a victory gaine'd by liis chariot at the Olympic games ; and a third that Oiympias had been delivered of a son at Pella. This was tiie celebrated Alexander, to whom the diviners prophesied the highest prosperity and glory, from his being born in such auspicious circumstances. Soon after Alexander's birth, Philip wrote the following letter to Aristotle : ' Know that a son is born to us. We thank the gods not so much for their gift, as for bestowing it at a time when Aristotle lives. We assure ourselves that you will form him a prince worthy of his father, and worthy of Macedon.' Pa'onia was now one of his provinces ; on the east his dominions extended to the sea of Thasos, and on the west to the lake Lychnidus. The Thessalians were in effect subject to his jurisdiction, and Amphipolis secured him many commercial advantages; he had a numerous and well disciplined army, with plentiful resources for supporting such an armament, and carrying on his other ambitious schemes. His first scheme was the reduction of Olynthus, the most populous and fertile country on the borders of Macedon ; after which his ambition prompted him to acquire tl;e sovereignty of all Greece. He had deprived the Athenians gradually of several settlements in Thrace and Macedon; bˆ*^^ he took care always to give such appearance of justic ? to his actions, that his antagonists could hardly find a plausible pretext for engaging in A'ar against him. He perceived that the affairs o:- the Greeks were drawing to a crisis, and he determined to wait the issue of their dissensions. The Phocians ploughed up the lands consecrated to Apollo, and the Amphictyons fulminated a decree against them, commanding the sacred lands to be laid waste, and imposing a heavy fine upon the community. Their resistance to this decree involved all Greece in a new wˆar. Philip, at the beginning of this Phocian or sacred war, as it was called, was engaged in Thrace, where a civil war had taken place among the sons of Cotys. Philip interfered, and his encroachments at length be-came so enormous, that Kersobletes, the most powerful of the contending princes, ceded the Thracian Chersonesus to the Athenians, who sent Chares with a powerful armament to take possession of it. He took Sestos by storm, and treated the inhabitants cruelly; while Philip reduced Methone in Pieria, but during the siege lost his right eye. All tl.is time the Phocian war raged with fury, and involved in it all the states of Greece. J-vco])hron, one of the Thessalian tyrants, whom Pnilip had deprived of his authority, had again resumed it ; and, his countrymen having taken part with the Phocians, Lycophron called in Onomarchus the Phocian general to protect him against Philip ; who, however, defeated Phyalhis the brother of Onomarchus, whom the latter had sent into the country with a detachment of 7000 men. After

this he besieged .aod took the city of Pegasa, driving the enemy

towards the frontiers of Phocis. Onomarchus then advanced with the whole army; and Philip, being inferior in numbers, was at first repulsed, and his troops harassed in their retreat by rocks rolled down from precipices. But returning soon with 20,000 foot and 500 horse, whom he encouraged by reminding theni that they were fighting in the cause of the gods against sacrilegious wretches, the Phocians were utterly defeated; upwards of 6000 perished in the battle and pursuit, and 3000 were taken prisoners. The body of Onomarchus, being found among the slain, was hung up on a gibbet as a mark of in-famy, on account of his havincr polluted the tem-plpi and those of the rest were thrown into the sea. After this victory, Philip set about the settlement of Thessaly ; and, having detached Kersobletes from the interest of the Athenians, he established him in the sovereignty of Thrace, with a view to destroy him when a proper opportunity offered. Were he once possessed of the dominions of that prince, the way to Byzantium was open to him ; and, to pave the way for this conquest, he attacked the fort of Heraeum, a small and unimportant place, but valuable by its neighbourhood to Byzantium. The Athenians at last began to perceive the designs of Philip, and determined to counteract them ; but, too readily giving credit to a report of his death, they discontinued their preparations, and directed their whole attention to the sacred war, which, instead of being ended by the death of Onomarchus, now raged vvith double fury. Phyallus, above-mentioned, undertook the cause of the Phocians; and, his affiirs becoming every day more desperate, he converted into ready money the most precious materials belonging to the temple at Delphi, and with this treasure doubled the pay of the soldiers. By this new piece of sacrilege, he purchased the assistance of 1000 Lacedemonians, 2000 Achseans, and 3000 Athenian foot, with 400 cavalry, which enabled him to take the field with great prospect of success. Philip now thought it time to throw off the mask entirely, for which the proceedings of the Athenians, particularly their league with Olynthus, furnished him with a plausible pretext; and the revenging such horrid sacrilege as had been committed at Delphi seemed to give him a title to march at the head of an army into Greece. The superstition of the Greeks, however, had not yet blinded them to such a degree but they could perceive that Philip’s piety was a mere pietence, and that his real design was to conquer the whole country. The Athenians no sooner heard of the march of the Macedonian army, than they despatched a strong guard to secure the pass of Thermopyla; ; so that Philip was obliged to re-turn, greatly chagrined and disappointed. Their next step was to call an assembly to

deliberate upon the measures proper to be taken to restrain Philip's ambition ; and this assembly is memorable for the first appearance of Demosthenes as an orator against Philip. Athens for some time had been in a very alarming situation. They were deeply involved in the sacred war ; their northern possessions were plundered by Philip ; while his mercenary partisans drew off the public attention to such a degree, that, instead of taking measures to counteract that ambitious prince, they amused

themselves abotit the designs of the Persian monarch, who was preparing for war against the Cy-prians, Egyptians, ˆnd PhcEnicians. Isocrates the orator, and Phocion the statesman, joined the multitude, from a sense of the unsteady conduct of the Athenians, who they were sure could not contend with so active a prince as Philip, and therefore exhorted them to cultivate his friendship. Their arguments were violently opposed by Demosthenes, who, in his addresses to the people, exhorted them to awake from their indolence, and assume the direction of their own affairs ; to abandon all romantic schemes of ambition ; and, instead of carrying their arms into remote countries, to prepare for repelling the attacks which might be made upon their own dominions. He insisted also upon a better regulation of their finances, a more equal distribution of the public burdens, and upon retrenching many superfluous expenses. He told them, that they were not yet prepared to m.eet Philip in the field ; they must begin with protecting Olynthus and the Chersonesus, for which it would be necessary to raise 2000 light armed troops, with a due proportion of cavalry, which ought to be transported to the islands of Lemnos, Thasos, and Sciathos, in the neighbourhood of Macedon. Rut all his rhetoric could not prevail upon the indolent Athenians to provide for their own safety. They appear, indeed, at this time, to have been sunk in effeminacy and dissipation; which disposition Philip took care to encourage. There was an assembly in the city called the Sixty, who met expressly for the purposes of extinguishing all care about public affairs, and to intoxicate themselves with every kind of pleasure. To this assembly Philip sent money to support their extravagances; and so

effectually did tliey answer his purposes, that all the eloquence of Demosthenes could not countcact the speeches of orators much his inferiors, when backed by Macedonian gold. The destruction of Olynthus soon followed. The city, which held the balance of power betwixt Athens and Macedon, was taken and plundered, and the inhabitants sold for slaves.

Philip's chief hopes now depended on putting an end to the Phocian war. For this purpose he affected a neutrality that he might thereby be-come the arbiter of Greece. His hopes were well-founded; fortheThebans,who were at.the head of the league against the Phocians, solicited him on the one side, and the states confederated with the Phocians did the like on the other. He answered neither, yet held both in dependence. In his heart he favored the Thebans, or rather placed his hopes of favoring his own cause in that state ; for he well knew that the Athenians, Spartans, and other states allied with Phocis, would never allow him to pass Thermopylae, and lead an army into their territories. So much respect, however, did he show to the ambassadors from these states, particularly Ctesi])hon and Phrynon, from Athens, lliat they believed and reported him to be in their interest. The Athenians, therefore, sent ten plenipotentiaries to treat of peace, among whom were Demosthenes and yp.schines ; but, though they were treated w'ith tlic utmost civility by Philip, they returned, after three months, without cominr' to anv conclusion. In the mean time, he took from the Athenians such places in TIrrace as might best cover his frontiers. At last a peace was concluded, but the ratification was deferred till Philip had possessed himself of Pheraea, and saw himself at the head of a numerous army ; he then dismissed the plenipotentiaries with assurances thdt lie should be ready at all times to give the Adienians proofs of his friendship.; On their return to Athens,. Demosthenes gave it as his opinion that the promises of Philip ought not to be relied on. /Eschines, however, was of an opposite opinion ; the rest of the plenipotentiaries concurred with yEschines ; and the peo-ple, desirous of quiet, and addicted to pleasure, decreed that the peace should be kept. Philip, while the Athenians were in this humor, passed Thermopylse, and entered Phocia with an air of triumph ; which so terrified the Phocians that they gave up all thoughts of defence, submitted to his mercy, and the judgment on them was remitted to the Amphictyons. Philip paid the most profound respect to the council ; and, when he had performed its commands, returned peaceably with his army to Macedon. At Athens alone, the justice and piety of Philip was not understood. They saw, that now the Phocians were destroyed ; Philip was master of Thermo-mylai, and might enter Greece when he pleased; that, in abandoning

their allies, they had abandoned their own interest; and that, in all probability, they might soon feel the weight of his power whom they had so foolishly trusted ; they therefore began to take new and hostile measures ; to repair their walls and forts, &c. Diopithes, who had the command of the Athenian colonies in Thrace, did not stay for instructions from home ; but, having raised with much expedition a considerable body of troops, entered the adjacent territories of Philip, and wasted them, with fire and sword. The kine, who, on account of the operations of the campaign in the Cher-sonese, was not at leisure to repel Diopithes by force, contented himself with complaining to the Athenians of Diopithes ; but I3emosthenes defended him, and moved that, instead of disowning what Diopithes had done, they should send him over recruits, and show the king of Macedon that they knew how to protect their territories and to maintain the dignity of their state. A decree was accordingly made conformable to this motion. While affairs stood thus, the lllyrians recovering courage, and seeing Philip at such a distance, harassed the frontiers of Macedon, and threatened a formidable invasion : but Phi-lip, by quick marches, arrived on the borders of Illyrium, and struck the barbarian? with such a panic, that they were glad to compound for their depredations at any price. Most of the Greek cities in Thrace now sought Philip's friendship, and entered into a league with him. About litis time the Argives and Messenians, weary of the tyranny of the Spartans, applied to Thebes for assistance ; and the Thebans, from their aversion to Sparta, sought to open a passage for Pliili|) into the Peloponnesus, that, in conjunction with them, he might humble the Lacedemonians. Philip readily accepted the offer, and resolved to procure a decree from the Amphictyons, di-reclin'T the Lacedtmonians to leave Arun? and

Messene fiee ; which, if they complied not with, he, as the lieutenant of the Amphictyons, might, with great appearance of justice, march with a body of troops to enforce their order. When the Spartans had intelligence of this, they immediately applied to the Athenians, earnestly entreating assistance, as in the common cause of (ireece. The Argives and INIessenians, on the other hand, labored assiduously to

gain the Athenians to their side ; alleging that, if they were friends to liberty, they ought to assist those whose only aim it was to be free. Demosthenes, at this juncture, outwrestled Philip, to borrow that king's expression ; for, he not only determined his own citizens to become tiie avowed enemies of the king, but also made the Argives and INIessenians afraid of him as an ally ; which, when Philip perceived, he laid aside all thoughts of this enterprise for this time. He next turned his arms against Eubcea, and demolished Porth-mos. Soon after this he took Oreus ; but, the Athenians interfering, Philip thought it prudent to abandon the project, and prosecute his conquests in Thrace, for which he made extraordinary preparations. His son Alexander was left regent, and he himself with 30,000 men laid siege to Perinlhus, one of the strongest cities in the country. But he was soon obliged to raise it with great loss, as the inhabitants were assisted not only by the Athenians, but also by the king of Persia, who was now become jealous of the power of the Macedonian monarch. They were likewise assisted by the Byzantines, who considered it their interest to preserve Perinthus for their own security. That the reputation of the I\Iacedonian arms might not sink by this disgrace, Philip made war on the Scythians and Triballi, both of whom he defeated ; and then formed a design of invading Attica, to effect which he had recourse to his usual intrigues. He excited the Locrians to insult the Amphictyons ; and when the latter called upon all Greece to avenge their wrongs, and to raise an army for that purpose, the number of troops sent to the rendezvous, for that purpose, was so inconsiderable, that .Eschines and his other creatures easily prevailed upon the deputies from the different states to elect Philip their general, with full power to act as he thought fit against such as had opposed the authority of the Amphictyons. Thus of a sudden Philip acquired all that he sought ; and, having an army ready in expectation of this event, he immediately marched to execute the commands of the Amphictyons in appearance, but in reality to accomplish his own designs. For, having passed into Greece with his army, instead of attacking the Locrians, he seized upon Elatea, a large city of Phocis, upon the Cephisus. The Athenians in the mean time were in the utmost confusion on the news of Philip's march. However, by the advice of Demosthenes, they invited the Thebans to join them against the common enemy of Greece. Philip endeavoured as much as possible to prevent this confederacy from taking place, but all his efforts proved ineffectual. "The Athenians raised an army, which marched immediately to Elensis, where they were joined by the Thebans. An engijgement ensued at Cheronaia, vl.erein

Alexander commanded one wing of tlie Macedo-ˆ nian army, and his father Philip the other. The confederate army, in the beginning of the battle, had the advantage ; but Philip, drawing his men up very close, retired to a neighbouring eminence, whence, when the Athenians were eager in their pursuit, he rushed down with impetuosity, and broke and routed them with prodijious slaughter. This victory decided the fate of Greece ; and from this time we may reckon Philip supreme lord of all the Grecian states. The first use he made of his power was to con-voke a general assembly, wherein he was recognised generalissimo, and with full power appointed their leader against the Persians. Having settled a general peace among them, and appointed the quota that each state should furnish for the war, he dismissed them ; and, returning to Macedon, began to prepare for this new expedition. His pretence for making war on the Persians at this time was 'the assistance they had formerly given to Perinthus. In the mean time, however, the dissensions which reigned in his family made him miserable. He divorced his wife Olympias, and married another woman, named Cleopatra. This produced a quarrel bet\yeen him and his son Alexander ; which also rose to such a height, that Alexander retired into Epirus with his mother. Some time afterwards, however, he was recalled, and a reconciliation took place in appearance ; but in the mean time a conspiracy was formed against tiie king's life, the circumstances and causes of which are very much unknown. Philip, having given a public audience to the ambassadors of Greece, was proceeding in state to the theatre, when he was stabbed at the door, by one Pausanias; who, endeavoring to escape, was overtaken, but instead of being secured, to discover his accomplices, was killed on the spot. As to the character of Philip, he was certainly one of the greatest monarchs that ever sat on a throne. The history of .tlie reign of Alexander the Great is already noticed under that title.

By the death of Alexander fell the glory of the Macedonians, who very soon relapsed into a situation as bad, or worse, than that in which they had been before the reign ,of Philip. This was occasioned principally by his not having distinctly named a successor, and having no child come to the years of discretion to whom the kingdom might seem naturally to belong. The ambition and jealousy of his mother Olympias, his queen Iloxana, and especially of the great commanders of his army, not only prevented a successor from being ever named, but occasioned the death of every person in the least related to Alexander. To have a just idea of the origin of these disturbances, it is necessary, in the first place, to understand the situation of the Macedonian affairs at the time of Alexander's death. When Alexander set out for Asia, he left Antipater in Macedon, to prevent any

disturbances that might arise either there or in Greece. The Greeks, even during the lifetime of Alexander, bore the superiority which he exercised overthera with great impatience ; and, though nothinj5 could be more mild than the government of Antipater, yet he was ‘exceedingly hated. One of

the last actions of Alexander’s life set all Greece in a flame. He had, by an edict, directed all the cities of Greece to recal their exiles; which edict, when publislied at the Olympic games, created much confusion. Many of tlie cities were afraid that, when the exiles returned, ihey would change the government ; most of them doubted Iheir own safety if the edict took place ; and all of them held this peremptory decree to be a total abolition of their liberty. No sooner, therefore, did tlie news of Alexander’s death arrive than they prepared for war. In Asia the state of things was not much better; not indeed through any inclination of the conquered countries to re-volt, but through the dissensions among the corc-manders. In the general council which was called soon after the death of Alexander, after mucii confusion and altercation, it was at last agreed, or rather commanded by the soldiers, that Aridffius the brother of Alexander, who had always accomiianied the king, and had been wont to sacrifice with him, should assume the sovereignty. — This Aridaeus was a man of very weak mind, and for this reason Perdiccas, Ptolemy, and most of the cavalry officers, resented his promotion to such a degree, that they quitted the assembly, and even the city. However Meleager, at the head of the phalanx, vigorously supported their first resolution, and Arida-us was made king by the name of Philip. The Macedonians, besides tlieir regard for the deceased king, soon began to entertain a personal love for Philip III. on account of iiis moderation. It is remarkable, that notwithstanding all the favors which Alexander had conferred upon his officers, and the fidelity with which they had served him during liis life, only two of them were attached to the interests of his family after his death. These were Antipater and Eumenes the Cardian, whom he had appointed his secretary. Antipater, being embroiled with the Greeks, could not assist the royal family, who were in Asia; and

Eumenes had not as yet sufficient interest to form a party in their favor. In a short time, however, Perdiccas procured the murder of Meleager ; by which means the supreme power for a time fell into his hands. His first step was to distribute the provinces of the em-pire among the commanders in the following manner, in order to prevent competitors, and to satisfy the ambition of the principal generals of the army. Aridaeus, and Alexander the son of Roxana, born after the death of his father, were to reign in Rlacedon. Antipater had the government of the European provinces. Craterus had the title of protector. Perdiccas was general of the household troops in the room of l!epha;stion. Ptolemy Lagus, the natural son of Philip, had Egypt, Libya, and that part of Arabia which borders upon]'>gypt. Cleomcnes, a man of infamous character, whom Alexander had made receiver general in I'.gypt, was made Ptolemy's deputy. Leomedon iiad Syria; Piiilotas, Gilicia ; Pithon, Media ; I'Aimcnes, Cappadocia, Paph-lagonia, and all the country bordering on the Euxine Sea, as far as Trapezus ; but these were not yet conquered, so that he vvas a governor without a province. Antigonus had Pamphylia, Lycia, and Phrygia Major; Cassander Caria;

Menander, Lydia; Leonatus, Phrygia on th; Hellespont. In the mean lime not only Alexander's will, but Alexander himself, was so much neglected, that his body was allowed to remain seven days before any notice was taken of it, or any orders given for its being embalmed. The government, in the hands of Perdiccas and Roxana, quickly degenerated. Alexander was scarcely dead when the queen sent for Stalira and Drypetis, the two daughters of Darius, the former of whom iiad been married to Alexander and the latter to Hep!ia3stion ; but, as soon as they arrived at Babylon, caused them both to be murdered. Sysigambis, the mother of Darius, no sooner heard that Alexander was dead than she laid violent hands on herself, being apprehensive of the calamities which were about to ensue.

In the year 321 B.C. the Greeks confederated against Antipater, who was defeated, with the army under his command • and Leonatus being sent into Asia with a considerable army, to his assistance, both were overthrown with great loss, and Leonatus killed. Soon after, however, Craterus arrived in Greece with a great army, which, when joined to that of Antipater, amounted to no fewer than 40,000 foot, 3000 archers, and 5000 horse ; while tliat of the confederates amounted only to 3000 horse and 25000 foot. Tlie Greeks were therefore defeated, and forced to sue for peace ; which they obtained on condition of their receiving Macedonian garrisons into their chief

cities. At Athens also the democratic government was abrogated ; and such a dreadful punishment did this seem to the Athenians, that 22,000 of them left their country, and retired into Macedon. Disturbances began also to arise in Asia and Thrace. The Greek mercenaries, dispersed through the inland provinces of Asia, despairing of ever being allowed to return home by fair means, determined to attempt it by force. For this purpose they assembled to the number of 20,000 foot and 3000 horse ; but were all cut off by the Macedonians. In Thrace, Lysima-chus was attacked by one Seuthus, a prince of that country, who claimed the dominions of his ancestors, and had raised an army of 20,000 foot and 8000 horse. But, though the Macedonian commander was forced to engage this army with only 4000 foot and 2000 horse, yet he kept the field of battle, and could not be driven out of the country. Perdiccas in the mean time, by pretending friendship to tlie royal family, had gained over I'.umeiies entirely to his interest; and at last put him in possession of the province of Cappadocia by llie defeat of Ariarathcs, king of tliat country, whom he afterwards cruelly caused to be crucified. His ambition, however, now began to lead him into difficulties. At the first division of the provinces, Perdiccas, to strengthen his own authority, had proposed to marry Nica-a the dauglitcr of Antipater; and her two brothers, .lollas and Archias, conducted her to him, in order to be present at the nuptials. But Perdiccas now had difierent intentions. He had been solicited by Olympias to marry her daughter Cleopatra, the widow of Alexander, king of Epirus, and who then resided at Sardis in Lydia. Eumenes promoted this match to tht:

utmost ot l.is power, because he tliouglit it would be for the interest of the royal family ; and his persuasions had such an effect on I*erdic';as, that he was sent to Isardis to compliment Cleopatra, and to carry presents to her in the name of her new lover. In tlie absence of Eumenes, however, Alcetas, the brother of I'erdiccas, persuaded him to marry Nicaa ; but, in order to gratify his ambition, he resolved to divorce her immediately after marriage, and marry Cleopatra. By this last marriage he hoped to have a pretence for altering the government

of iMacedon; and, as a necessary measure preparative to these, he laid plots for destroying Antigonus. But all his schemes were ruined by his own jealousy and precipitate cruelty. Cynane, the daughter of Pliilip by his second wife, had brought her daughter Adda, afterwards named Eurydice, to court, in hopes that king Aridceus might marry her. Perdiccas, from some political motives, had conceived such an umbrage against Cynane, that he caused her to be murdered. This raised a commotion in the army; which alarmed Perdiccas to such a degree, that he now promoted the match between Aridxus, and Eurydice ; to prevent which he had murdered her mother. But in the mean time Antigonus, knowing the designs of Perdiccas against himself, fled with his .son Demetrius to Greece, there to take shelter ■unde-. .\ntipater and Crateras, whom he informed of the ambition and cruelty of the re-gent. A civil war was now kindled. Antipa-tei, Crateras, Neoptolemus, and Antigonus, were como'ned against Perdiccas; aud it was the misfortune of the empire in general, that Eumenes, the most able general, as well as the most virtuous of all the commanders, was on the side of Perdiccas, because he believed him to be in the interest of Alexander's family. Ptolemy, in the mean time, remained in quiet possession of Egypt; but without the least intention of owning any person for his superior. However, he acceded to the league formed against Perdiccas ; and thus the only person in the whole empire who consulted the interest of the°royal family was Eumenes. It was now thought proper to inter the body of Alexander, which had been kept for two years, during all which time preparations had been making for it. Aridseus, to whose care it was committed, set out from Babylon for Damascus, in order to carry the king's body to Egypt. This was much against the will of i'erdiccas; for there was a superstitious report, that, wherever the body of Alexander was laid, that country would be most prosperous. Perdiccas, therefore, out of regard to his native soil, would have it conveyed to the royal sepulchres in Macedon ; but Aridseus, pleading the late king's express direction, was determined to carry it into Piˆypt, thence to be conveyed to the temple of Jupiter Ammon. The funeral was accordingly conducted with all imaginable magnificence. Ptolemy came to meet the body as far as Syria; but, instead of burying it in the temple cf Jup'ter Ammon, erected a stately tem-ple tor It m Alexandria; and, by tba respect he showed for his dtad master, induced many of the iMacedonian veterans to join him, who were afterwards of the greatest service to him.

Perdiccas now marched against Ptolemy, Lu was slain by his own men, wlio, after the death of their general, submitted to his antagonist

; and thus Eumenes was left alone to contend against all the other generals who had served under Alexander. In this contest, howev.er, he would by no means have been over-matched, had his soldiers been attached to him; but, as they had been accustomed to serve under those very generals against whom they were now to fight, they were on all occasions ready to betray and desert Eumenes. However, he defeated and killed Neoptolemus and Craterus, but was still obliged to contend with Antipater and Antigonus. Antipater was now appointed protector of the kings, with sovereign power; and Pumenes was declared a public enemy. A new division of the empire took place. Egypt, Lybia, and the parts adjacent, were given to Ptolemy, because they could not be taken from him. Syria was confirmed to Leomedon ; Philoxenus had Cilicia ; Mesopotamia and Arbiletus were given to Amphimachus ; Babylon was bestowed on Seleucus ; Susiana fell to Antigonus, who commanded the Macedonian Argyraspidas, or Silver Shields, because he was the first who opposed Perdiccas ; Peucestas held Persia ; Tlepolemus iiad Caramania; Pithon had Media as far as the Caspian Straits; Stasander had Aria and Drangia; Philip, Parthia; Slasonor, Bactria and Sogdia; Sybirtius, Aracopa ; Oxyar-tes, the father of Roxana, Paropamisus; Another Pithon had the country between this province and India ; Porus and Taxiles held what Alexander had given them ; Cappadocia was assigned to Nicanor ; Phrygia, Major Lycaonia, Pamphvlia, and Lycia, were given to Antigonus ; Caria lo Cassander ; Lydia to Clytus; Phrygia the Less to Aridteus. Cassander was appointed general of the horse ; while the command of household troops was given to Antigonus, with orders to prosecute the war against Eumenes. Antipater, liaving thus settled every thing as well as he could, returned to Macedon with the two kings, to >lie great joy of his countrymen, hadng left his son Cassander to be a check upon Antigonus in Asia. Affairs now seemed to wear a better aspect than they had yet done; and, had Eumenes believed that his enemies really consulted the interest of Alexander's family, there is not the least doubt that the war would Jiave been immediately terminated. lie sa %v, however, that the design of Antigonus was only to set up for himself, and therefore he refused to submit. From this time, therefore, the Maced)nian em-pire ceased in Asia; and an account of the transactions of this part of the world will be recorded under the article Syria. The Macedonian affairs are now entirely confined to the kingdom of Macedon itself, and to Greece. Antipater had not long been returned to Macedon when he died ; and the last action of his life completed the ruin of Alexander's family. Out of a view to the public good, he had appointed Polysperchon, the eldest of Alexander's captains at hand, to be protector and governor of Macedon. This failed not to disgust his son Cassander, who thought he had a natural right

to these offices, and of course kindled a new civil

wvir in Macedon. This was indeed tiiglily promoted by his first actions as governor. He began with attempting to remove all the governors appointed in Greece by Antipater, and to restore democracy wherever it had been abolished. The immediate consequence of this was, that the people refused to obey their magistrates ; the governors refused to resign their places, and applied for assistance to Cassander. Polysperchon also had the imprudence to recal Olympias from Epirus, and allow her a sb.are in the administration ; which Antipater, and even Alexander himself, had always refused her. The consequence of all this was, that Cassander invaded Greece, where he prevailed against Polysperchon ; Olyrnpias returned to JVIacedon, where she cruelly murdered Aridxus and his wife Eurydice ; she herself was put to death by Cassander, who afterwards caused Roxana and her son to be murdered, and Polysperchon being driven into Etolia, first raised to tlie crown Hercules the son of Alexander by Statira, and then by the instigation of Cassander murdered him, by wliich means the line of Alexander the Great became totally extinct. Cassander, having thus destroyed all the r03'al family, assumed the regal title, as he had for sixteen years before had all the power. He enjoyed the title of king of Macedon only three years ; after which he died about 298 B. C. By Thessalonica, the daughter of Philip II., he left three sons, Pliilip, Antipater, and Alexander. Philip IV. succeeded him, but soon after died of a consumption. A contest immediately began between the two brothers, Antipater and Alexander. Antipater seized the kingdom; and, to secure himself in it, murdered his mother Thessalonica, if not with his own hand, at least the execrable deed was committed in his presence. Alexander invited Pyrrhus king of Epirus, and Demetrius the son of Aiitigonus, to assist him and revenge the death of his mother. But Pyrrhus being bought off, and a peace concluded between the brothers, Alexandjer, being afraid of having two many protectors, formed a sclieme of getting Demetrius assassinated. Instead of this, however, both he and Antipater, the two last of Alexander's relations, were put to death ; and Demetrius became king of Macedon four years

after the death of Cassander.

In 287 B. C. Demetrius was driven out by Pyrrhus, who was again driven out by Lisima-chus two years after, who was soon after killed by Seleucus Nicator; and Seleucus, in liis turn, was murdered by Ptolemy Ceraunus, who be-came king of Macedon about 280 15. C. The new king was in a short time cut off, with his wliole army, by the Ciauls ; and Aniigonus Go-natus, the son of Dem.etrius Poliorcetes, became king of Macedon in 278 B. C. He proved successful against the (JauLs, but was driven out by Pyrrluis, king of Epirus ; who, however, soon provoked his subjects to such a degree, that Aniigonus recovered a great part of his kingdom. In a little time, Pyrrhus being killed at the siege of Argos, Antigonus was restored to the whole of Macedon ; but scarcely was he seated on the throne, when ho was driven from it by Alexander tlie son of Pyrrhus. This new invader was, in

his turn, expelled by Demetiius the son of Antigonus, who, though at tliat time but a boy, had made himself almost master of Epirus. By a stratagem he made himself master of the city of Corinth, and from that time began to form schemes for the thorough conquest of Greece. Tlie method he took to accomplish this was, to support the petty tyrants of Greece against the free states; which indeed vreakened the power of the latter, but involved the whole country in many calamities. About 243 B. C. he died, leaving the kingdom to his son Demetrius II. Neither Demetrius, nor his successor Antigonus Doson, performed any thing remarkable. In 221 B. C. the kmgdom fell to Philip V. the son of Antigonus III. To him Hannibal applied for assistance after the battle of Cannae, which he refused ; and the same imprudence which made him refuse this assistance, prompted him to embroil himself with the Romans ; and at last to conclude a treaty with them, by which he in effect became their subject, being prevented from making peace or war but according to their pleasure. In 179 B. C. he was succeeded by his eldest son Perses, or Perseus, under whom the war with the Ro-mans was renewed. The Macedonians were still terrible in war, and their phalanx, when properly conducted, seems to have been almost invincible by any method of making war then known. The Romans bad never enco \intered such a terrible enemy ; and in the first battle, which happened 171 B. C, they were defeated witli the loss of 2200 men, while the Macedonians lost only sixty. The generals of Perseus now pressed him to storm the enemy's camp; but he being naturally of a cowardly disposition refused to comply, and thus lost his opportunity. Still, however, the Romans gained little or no advantage, till the year

168 B. C. when Paulus iEmi-lius, a most experienced commander, was sent into Macedon. Perseus now put all upon the issue of a general engagement ; and yEmilius,_ with all his courage and experience, would havj been defeated, had the Macedonians been commanded by a general of any courage or conduct. The light armed Macedonians charged with such vigor, that after the battle some of their bodies were found within two furlongs of the Roman camp. Wheu the phalanx came to charge, the points of their spears, striking into the Roman sliields, kept the heavy armed troops from moving; while, on the other hand, Perseus's light armed men did terrible execution. Tlˆnilius was ready to give up all hopes, when perceiving, that, as the phalanx gained ground it lost its or-der in several places, he caused his own liuht-armed troops to charge in those places, whereby the Macedonians were put into confusion. Perseus tied witii his horse, and the infantry at last did the same, but not till 20,000 of them had lost their lives. This liattle decided the fate of Macedonia, which immediately subuiitted. The cowardly Perseus took refuge in the island of Samothrace, but was at last obliged to surrender to the Roman consul, by whom he was carried to Rome, led in triumph, and afterwards most barbarously used. Some pretenders to the throne appeared afterwards ; but, being imable todefentl ihemsolvcj against the Romans, the country was

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reduceil to a Roman province in 148 B.C. To them it continued subject till A. U. 1375, when U was reduced by the Turkish sultan Baazet I. See Turkey and Giif.ece.

MACEDONIANS, in ecclesiastical history, the followers of Macedonius, patriarch of Constantinople, who, through the influence of the Eunomians, was deposed by the council of Constantinople in 3(30, and sent into exile, lie considered the Holy Ghost as a divine energy diffused throughout the universe, and not as distinct from the Father and the Son. The sect of Macedonians was crushed before it had arrived at Its full maturity, by the council assembled by Theodosius in 381, at Constantinople.

MACER (.Emilius), an ancient Latin poet, born at Verona, who flourished under Augustus Caesar. Eusebius relates that he died a few years after 'irgd. Ovid speaks of a poem of his, on the nature and quality of birds, serpents, and herbs. There is extant a poem upon the nature and power of herbs under Macer's name ; but it is spurious. He also wrote a supplement to Homer, as Quintus Calaber did afterwards in Gree'<.

MACERATA, a town and delegation of Italy, in the states of tJ,ie church. It is situated at the top of a beautiful hill, contiguous to the river Chienti ; and the place is said to be noted for its superior society. Here are a university, founded in the end of the thirteenth century, a Jesuits' college, two academies, and a public school. It is likewise the see of a bishop. Population 10,000. Twenty miles south of Ancona, and 100 N.N.E. of Rome.

MACERATE, v. a. 3 Fr. maccrer ; Lat. mu—

Macera'tion. Scero. To steep ; infuse ;

soak ; exhaust ; make lean.

Covetous men are all fools : for what greater folly can there be, or madness, than for such a man to macerate himself when lie need not ?

Burton on Melancholy.

Recurrent pains of the stomach, megrims, and other recurrent head-

aches, macerate the parts, and render the looks of patients consumptive and pining. Harveii uii Coiisumpticms.

The saliva serves for a maceration and dissolution of the meat into a chyle. liaij on the Creation.

Out of an excess of zeal thay practise mortifications ; they macerate their bodies, and impair their health. Fiddes.

In lotions, in women's cases, he orders two portions of hellebore macerated in two cotylas of water.

Arbuthnot.

Maceration is the steeping of a solid body in a fluid in order to soften it, without impregnating the fluid. Parkes's Chemical Catechism.

MACH/'ERUS, in ancient geography, a citadel on the other side Jordan, near the mountains of Aloab near the lake Asphaltites, on the north side. It was the south boundary of the Peraa, situated on a mountain encompassed round with deep and broad valleys ; built by Alexander, king of the Jews, destroyed by Gabinius in the war with Aristwbulus, and rebuilt by Herod, with a cognominal town round it. Here John 'he Baptist was beheaded.

MACHALA, a town of SoutJi America, in the audience of Quito. The environs produce cacao, reckoned the best in all Guayaquil ; and

mangrove-trees, whose branches and thick trunks seem to cover the plains ; which are frequently overflown. The wood of the mangrove, when used ill ships, ^'C, is very durable, being subject neither to split nor rot. Fifty-five miles N. N. VV. of Loxa. Long. 79. W.

MACHAON. a celebrated physician among the ancients, son of / Esculapius, and brother to Podalirus. He went to the Trojan war with the inhabitants of Trica, Ithome, and (Echalia. According to some, he was king of Messenia. He was physician to the Greeks during the Trojan war. Some say he was killed before Troy, by Euryplus, the son of Telephus. He received divine honors after death, and had a temple in Messenia.

MACIIIAVEL (Nicholas), a famous political writer of the sixteenth century, of a distinguished family at Florence. He wrote in his native language with great elegance and politeness, though he understood

very little Latin. He composed a comedy upon the ancient Greek model ; in which he satirised many of the Florentine ladies, and which was so well received that pope Leo X. caused it to be acted at Rome. He was secretary, and afterwards historiographer, to the republic of Florence. The house of INIedicis procured him this last office, with a handsome salary, to pacify his resentment for having suffered the torture upon suspicion of being an accomplice in the conspiracy of the Soderini against that house, when Machiavel bore his sufferings heroically without making any confession. He was also strongly suspected of being concerned in another conspiracy against cardinal Julian de IMedicis, afterwards pope by the name of Clement VII. However, they carried on no proceedings against him ; but from that time he turned every thing into ridicule, and gave himself up to irreligion. He died in 1530. Of all his writings, the most celebrated is a political treatise entitled the Prince; which has been translated into several languages, and written against by many authors. The world is not agreed as to his motives in writing this work ; some think he meant to recommend tyrannical maxims ; others, that he only delineated them to excite abhorrence. He also wrote Reflections on Titus Livius, which are curious ; The History of Florence, from 1205 to 1494; and a 4to. volume of poems, &c.

MACHINE', ?j.s. ˆ Yr. machine, mac hiner,

Mach'in ATE, V. a. i Lat. machina, macldnor ;

Machina'tion, n. s.yGx.fiaxctva. An engine;

Machin'ery, Mach'in 1ST.

a compound of mechanical contrivances : to

machinate is, to plan ; contrive : machination, the contrivance, scheme, or plan ; often applied to bad plans or schemes: machinery, mechanical workmanship : machinist, the contriver or con-structor of such workmanship.

O from their machinations free, That would my guilty soul betray ;

From those who in my wrongs agree, And for my life their engines lay

Sayidus.

If you miscarry, Your business of the world hath so an end, And machination ceases.

Shakspeare. hiixj Liar.

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Be frustrate all ye stratagems of hell. And devilish machinalions come to nought.

Milton. How were they zealous in respect of their temporal governours ˆ Not by open rebellion, not by private machinations ; but in blessing and submitting to their emperors, and obeying them in ail things but their idolatry. Sprat.

In the hollow side, Selected numbers of their soldiers hide ; With inward arms the dire machine they load. And iron bowels stuff the dark abode. Vri/den. We are led to conceive this great machine of the ■world to have been once in a state of greater simplicity, as to conceive a watch to have been once in its first materials. Burnet.

In a watch's fine machine, The added movements which declare How full the moon, how old the year. Derive their secondary power From that which simply points the hour.

Prior. The marvellous fable includes whatever is supernatural, and especially the machines of the gods.

Fo-pe. I have enjoyed all the pleasures of the world, I appraise them at their real worth, which is in truth very low ; those who have only seen the outside al-ways overrate them, but I have been behind the scenes. I have seen all the coarse puUies and dirty ropes which move the gaudy machines, and I have seen and smelt the tallow candles which illuminate the whole decoration, to the astonishment and admiration of the ignorant audience. Chesterfield.

It might, metliinks, somewhat abate the insolence of human pride, to consider that it is but increasing or diminisiiing the velocity of certain fluids in the animal ma liine, to elate the soul with the gayest hopes, or sink her into the deepest despair ; to depress the hero into a coward, or advance the coward into a hero. Fitzosbome.

Are we a piece of machinery, which, like the -ˆolian harp, passive, takes tiie impression of the passing accident? Burns.

To calculate the power of a machine, it is usually considered in a state of e < [uilibriiim ; that is, in the state when the power which is to overcome the resistance just balances it. Imisoyi's Elements.

Machine, in general, signifies any thing that serves to augment or to regulate moving powers: or it is any body destined to produce motion, so as to save either time or force. The word comes from the Greek fiaxavt], invention or art: and hence, in strictness, a machine is something that consists more in art and invention than in the strengtli and solidity of the materials. Machines are either simple or compound. The simple ones are the seven mechaiucal powers, *viz.* lever, balance, pulley, axis and wheel, wedge, screw, and inclined plane. See Michanics. From these the compound ones arc formed by various combinations, and servo for different purposes. See Machinery.

Machinf-s uskd in war, amongst the Greeks, were principally these: 1. KXi/iaKig, or scaling ladders; 2. The battering ram ; 3. The helepo-lis; 4. The iˆˆtXojvj;, or tortoise, called by the Romans tcstudo; 5. The xwˆa, or aˆger, wh ch was faced with stone, and raised higher than the wall; 6. Upon the x'"/"" were built Trvpyoj, or towers of wood ; 7. r«ppai, or osier hurdles ; 8. Catapultce or KarairfXrai, from which they threw

arrows with amazing force ; and, 9. The Xt0o/3o\oj, TrsTpojSoXoi, or a(piTr)pia, from which stones were cast with great velocity. Tlie principal warlike machines made use of by the Romans were the ram, the lupus or wolf, the testudo or tortoise, the balista, the catapulta, and the scorpion.

Machinery, in epic and dramatic poetry, is when the poet brings some supernatural being upon the stage, to solve some difficulty, or perform some exploit out of the reach of human power. The ancient dramatic])oets never made use of machines, unless where there was an absolute necessity for so doing : whence the precept of Horace ;

Nee Deus intersit, nisi dignus vindice nodus Inciderit.

It is quite othe'ˆwise with epic poets, who introduce them ia every part of their poems. In Milton's Paradise Lost the greater part of the actors are supernatural personages: Homer and Virgil perform nothing without them; and, in 'oltaire's Henriade, the poet has made excellent use of St. Lewis.

MACHUL, an instrument of music among the Hebrews. Kircher apprehends that the name was given to two kinds of instruments, one of the stringed and the other of the pulsatile kind. That of the former sort had six chords; though there is great reason to doubt whether an

instrument requiring the aid of the hair-bow, and so much resembling the violin, be so ancient. The latter was of a circular form, made of metal, and either hung round with little bells, or furnished with iron rings suspended on a rod or bar that passed across the circle. Kircher supposes that it was moved to and fro by a handle fixed to it, and thus emitted a melancholy kind of murmur.

MACHYNLETH, an ancient market town of North Wales in Montgomeryshire, 200 miles from London, and thirty from Montgomery. It has a market on Monday, and fairs. It is seated on the Douay, over whicii there is a large stone bridge, leading into Merionethsliire. Here Owen Glyndower exercised the first acts of his royalty in 1402; here lie accepted the crown of Wales, and assembled a parliament; and the house wherein they met remains, but is divided into tenements. The town-hall is a plain building; and here is a grammar-school. A considerable tanning business is carried on, and also tiie manufactures of flannels and cottons.

]MACK (Charles, baron 'on), an Austrian general, famous only for his defeats, was born in Franconia in 1732. He was well educated ; but, on leaving college, enlisted as a private in a regiment of dragoons. In the war with Turkey he was noticed by marshal Lascy, who gave him a commission. The spirit of enterprise which he now displayed procured him the favor of Lau-dohn, who made him his aide-de-camp, and recommended him to the emperor. On the war with France, Mack was appointed quarter-master-general of the army of the prince of Cobourg, and directed the campaign of 1793. He was afterwards employed in negociating with Dumouriez. He again served under the prince of Cobourg in the Netherlands ; and in

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17ˆ»7 s\ ccpeded the archduke Charles in the com-inaiiJ ff the army of the Rhine. Tiie following year he was sent to Naples, and boasted that he would soon drive the enemy out of Italy ; but being beaten, and suspected of treason by the Neapolitans, he fled to the French camp, and was sent prisoner to Dijon. He was afterwards removed to Paris on parole, and in April, 1800, made his escape to Vienna. Finding means to justify his conduct, he was in 1804 constituted commander-in-chief in the Tyrol, Dalmatia, and Italy. In 1805 lie was opposed to Buonaparte, who forced him to retreat beyond the Danube, and to submit to the famous capitulation of Ulm, by which 28,000 Austrians became prisoners. Mack was permitted to go to A'ienna, where he was tried before a military tribunal, and received the sentence of death. His doom, however, was commuted by the emperor for imprisonment ; and he was, after a time, released, and died in obscurity.

MACKENZIE (Sir Geoige), of Roystoun, F. 11. S., first earl of Cromarty, was born in ˆ630. His father dying, in 1654, he raised some ♦loops and joined lord Middleton, to attempt the jestoration of king Charles II., but, being defeated by colonel Morgan, he made an honorable capitulation. After the restoration he was employed in several public offices. In 1678 he was appointed lord justice general ; in 1681 he was made a lord of session, and lord register. He now purchased Roystoun, and continued to have the chief rule in Scotland, during the reigns of Charles II. and James II., by whom, in 1685, he was created lord viscount Tarbat ; but, by his arbitrary proceedings, rendered himself very unpopular ; notwithstanding which, he was, in 1692, restored by William III. to his office of lord register. In 1695 he resigned upon a pension of £400 a year ; but upon queen Anne's accession he was appointed secretary of state ; and, in 1703, created earl of Cromarty. In 1704 he resigned, and was made lord justice general, which he held till 1710. He died at New Tarbat on the 17th of August, 1714. He was an original and useful member of the Royal Society, and wrote many valuable papers in the Philosophical Transactions. He also published, 1. A Vindication of King Robert III., Edinburgh, 4to. 1695; 2. and 3. Two Letters on the Union ; 4. A short Explication of Daniel's Prophecy, and St. John's Revelation, Edinburgh, 1706, 4to.; 5. Historical Account of the Conspiracy of the Earl of Cowrie and R. Logan of Restalrig, against James VI., Edinburgh, 1713, 8vo. ; and some other tracts.

Macke.nzik's Rivee, a river of North America, issuing out of Hum Lake, and emptying itself into the Frozen Ocean in lat. 70° N., and long. 135° \V. It derives its name from Mr. Mackenzie, who first discovered it on hiˆ journey to the Frozen Ocean, and has since been frequently visited.

MACK'EREL, n. s. > Fr. mcquereau; Belg.

Mack'erei.-oai.f.." S mackereel ; Teut. niack-ercll ; all perhaps of Lat. macula, a spot. A well known spotted fish: mackerel-gale, a hard gale, sucii as brings mackerel.

Some fish are gutted, split, and kept in pickle"; as whiting and imirkerel. Curew's i>nneii of Coriiwali, lˆaw ordered that the Sunday should have rest ; And that no nymph her noisy food should sell. Except it were new milk or mackerel.

King's Cook., They put up every sail, The wind was fair, but blew a muckrel-gale.

Dryden. Sooner shall cats disport in water clear, And speckled iiinckrels graze the meadows fair, Than 1 forget ray shepherd's wonted love. Gat/. 1 am living fast to see the time when a book that misses its tide shall be neglected, as the moon by day, or like mackrel a week alter the season.

Swift.

MACKEY (John), employed by the government as a spy upon .fames IL, after the revolution, was author of Memoirs of James's court at St. Germaine, and of the court of England in the reigns of William III., and queen Anne, in which are many curious anecdotes not to be met with in any other work. He died in 1726.

MAC KLIN (Charles), a celebrated actor and dramatic writer, born in the north of Ireland in 1698. His original name was Maclaughlin. He became a performer in Lincoln's Inn company in 1725 ; and not long after was tried for killing a brother comedian in a quarrel, and found guilty of manslaughter. His features were so extremely harsh, that (ˆuin rather profanely said of him, 'If God writes a legible hand, that fel-low's a villain.' He was, notwithstanding this, a man of humanity and extensive liberality. He wrote two plays, which are esteemed, *viz.* Love a-la-mode, and The Man of the World. He died in 1797. His principal character was Shy-lock, which he performed with so much

perfection, that Pope said of him,

This is the Jew — that Shakspeare drew.

MACKNIGHT (James), D. D., a learned clergyman of the church of Scotland, one of the ministers of Edinburgh, and author of several valuable works on theology. In 1772 he was appointed minister of lady Yesler's church ; and in 1779 one of the ministers of the old church, Edinburgh. He published, 1. The Harmony of the Four Gospels, in 4to. 1756 ; 2. The Truth of the Gospel History, 1764 ; 3. Translation of, and Commentary on, the Epistles, 1787. He died January 13th, 1800.

MACLAURIN (Colin), F.R.S., an eminent mathematician and philosopher, was the son of a clergyman, and born at Kilmoddan in Scotland in 1 698. He was sent to the university of Glasgow in 1709,where he studied five years. His great talents for mathematics appeared so early as at twelve years of age ; when, having accidentally met with an Euclid, he became in a few days master of the first six books without assistance : and in his sixteenth year he had invented many of the propositions afterwards published under the title of Geometria Organica. In his fifteenth year he took the degree of M. A., when he composed and defended a thesis On the Power of Gravity, with great applause. After this he retired to a country seat of his uncle, where he spent two or three years, as his parents were

dead. In 1717 he stood candidate for the professorship of mathematics in the JMarischal College of Aberdeen, and obtained it after a ten days' contest with a very able competitor. In 1719 he went to London, where he became acquainted with Dr. lioadly, then bishop of Ban-gor, Dr. Clarke, Sir Isaac Newton, and otlier eminent men, and was admitted F. R.S. In another journey, in 1721, lie contracted an intimacy "jvith Martin Folkes, esq. P. II. S. which lasted to his death. In 1722 lord Polwarth, plenipo-tentiary to the congress of Cambray, engaged him as a tutor and companion to his eldest son, on his travels. After a short stay at Paris, and visiting other towns in France, they fixed in Lorrain ; where Maclaurin wrote his piece On the Jˆercussion of Bodies, which gained the prize of the Royal Academy of Sciences for 1724. But his pupil dying soon after, at Montpelier, he returned immediately to Aberdeen, where he was hardly settled when he received an invitation to Edinburgh, to supply the place of Mr. James Gregory. He had here many difficulties to encounter, arising from competitors, which, however, were all surmounted, partly by the assistance of Sir Isaac Newton; and, in November 1725, he was introduced into the university. In 1733 he married Anne, daughter of solicitor Stewart, by whom he had seven children, of whom five survived him. In 1734 Berkeley, bishop of Cloyne, published a piece called The Analyst; in whicli he took occasion, from some disputes that had arisen concerning the grounds of tlie fluxionary metliod, to explode the metiiod itself, and to cliaige mathematicians in general witii infidelity in religion. Maclaurin thought himself included in this charge, and began an answer to Berkeley's book ; but, as he proceeded, so many new theories and problems occurred to him, that, instead of a vindicatory pamphlet, he published A Complete System of Fluxions, with their Application to the most Considerable Problems in Geometry and Natural Philosophy; F.dinburgh, in 1742, 2 vols. 4to. He also published many useful tracts in the fifth and sixtii volumes of the Medical Essays, in Edinburgh ; as well as in the Philosophical Transactions. In the midst of these studies, he was ready to lend his assistance in promoting any scheme for the service of his country. Under his direction the geography of the Orkney and Shetland Islands was first accurately ascertained in 1739. In 1745, having been very active in fortifying the city of Edinburgh against the rebel army, he was obliged to fly to the north of l'".ngland ; where lie was invited by archbishop Herring to reside with him during his stay ; but, being in this expedition exposed to cold and hardships, he contracted an illness which put an end to his life, in June 1746, at the age of forty-eight. On various occasions Maclaurin served his friends and his country by

his great skill. Frequent disputes having arisen concerning the gauging of vessels, he presented to the commissioners of excise two elaborate memorials, with their demonstrations. He made als9 calculations relating to the provisions established by law for the children and widows of the Scottish clergy, and of the professors of the uni-3S3 MAC

versities, entitling tiiem to certain annuities, upon the voluntary annual payment of a certain sum by the incumbent. He gained the prize of the Itoyal Academy of Sciences in 1724; and in 1740 the academy adjudged him a prize for •solving the motion of the tides from the theory of gravity ; a question whicli had been given out tlie former year without receiving any solution He had only ten days to draw up this paper' He afterwards revised the wiiole, and inserte'l it in his Treatise of Fluxions; as he did also tlie substance of the former piece. After his death two volumes more appeared ; his Algebra, and his Account of Sir Isaac Newton's Philosophical Discoveries.

MACON, an ancient post-town, the chief place of the department of the Saone et Loire in Fiance. It has civil and commercial tribunals, a philosophical society, and one for the arts and belles lettres; with 10,411 inhabitants. This town is situated in a very pleasant and feitile country on the right bank of the Saone, at the foot of a hill, but is very irregularly built, and with narrow streets: it is, however, daily improving by the addition of modern buildings. Since the demolition of its walls it has been surrounded with agreeable walks. The quays are remarkable, as well as a bridge of thirteen arches over the Saone said to have been built in the time of Ceesar. Its origin goes farther back than the conquest of Gaul ; the Romans established magazines in it and fortified it. It once belonged to the Burgundians, and then passed into the hands of die successors of Clovis It is the native country of Dombay, the celebrated botanist The manufactures are woollen counterpanes, linens, hats, and dried confectionary; there are also some iron foundries. It carries on a considerable trade in Burgundy wines, corn, flour, hoops, timber, 8ˆc. Among its pub-lic buildings may be mentioned the town-hall, the batiis, the triumphal arch, the ruins of the temple of Janus, and the ancient bishop's palace. It is about 300 miles south-east of i'aris

MACPHERSON (James), esq. M.P., a Scottish writer of considerable celebrity, born in 1737. His first and most celebrated work was A Translation of Ossians Poems; the authenticity of whicli was attacked by Dr. Johnson and others, and their merit ascribed to Macpherson himself; who wrote a threatening letter to the doc-tor, which he answered in terms equally indignant. See OssiAX. In 1773 he

published a translation of the Iliad into heroic prose. He also wrote A History of (Jreat Britain from 1G60 to the accession of the house of Hanover, in 2 vols, 4to. ; and an Introduction to the History of (Jreat Britain and Ireland. He published likewise some pamphlets in defence of lord North's administration, on whose side he voted in the house of commons. He died in February 1796, aged fifty-nine.

MACQUAIIRIE Isi.ANn, an island of the South Pacific Ocean, discovered in 1811, by some resolute seal-fishers from New Holland. It is eighteen miles in length from north to south, and about six in bre: 1th. At the distance of eight leagues other smaller islands were discovered, which were called the Judge and his

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Clerks ; and several others in a south direction, whicli were called tl»e iiisliop and his Clerks. The first adventurers killed not fewer than 80,000 seals here. Long. 109° E., hit. 52° 41’ S.

MAC(iL E,Il (Peter Josepli), was born in Paris, 9th of (Jctober, 1718. lie was descended from a respectable family, and was a member of the Academy of Sciences, and professor of pharmacy. He was engaged in the Journal des Sfavans for the articles medicine and chemistry, and had a share in the Pharmacopeia Parisiensis, published in 1758, in 4to. His other works are, 1. Elemens de Chimie Theorique; Paris, 1749, 1753, 12mo. ; which have been translated into English and German. 2. Elemens de Chimie Pratique, 1751, 2 vols. 12mo. These two works were republished together, in 1756, in 3 vols. 12mo. 3. Plan d’un Cours de Chimie Experimentaleetraisonnee, 1757, 12mo.; in whicli he was associated with]M. Beaume. 4. Formulce Medicamentorum Magistralium, 1763. 5. L’Art de la Teinture en Soie, 1763. 6. Dictionnaire de Chimie, contenant la Theorie et la Pratique de cet art, 1760, 2 vols. Bvo; which has been translated into German with notes, and into English with notes, by Mr. Keir. Macquer, by his labors and writings, contributed very much to the improvement of chemistry. He died at Paris, February 16th, 1784.

Macquer (Philip), brother to the above, was born in Paris, 1720, and became advocate of the parliament of Paris. A weakness in his lungs ■having prevented him from pleading, he dedicated himself to literary pursuits. His works are, 1. L’Abrege Chronologique de I’Histoire Ecclesiastique, 3 vols. Bvo. 2. Les Annales Romaines, 1756, 8vo. : a very judicious compilation. 3. Abrege Chronologique de I’Histoire d’Espagne et de Portugal, 1705 ; 2 vols. 8vo. He died on the 27th of January 1770, aged fifty. He had also a share in the Dictionary of Arts and Professions, 2 vols. 8vo., and the Translation of the Syphilis of Fracastor, published by Lacombe.

MACRINUS, one of the best Latin poets of the sixteenth century, was born at Loudon. His real name was John Salmon ; but he took that of Macrin, from his being frequently so called in ridicule by Francis L on account of his extraordinary leanness. He was preceptor to Claudius of Savoy, count Tende ; and to Honorius, the count’s brother; and wrote several pieces of poetry in lyric verse, ‘which were so admired, that he was called the Horace of his time. He died of old age, at Loudon, in

MACROBII, from ˆoKpoq /3ioc, long life. 1. A people of Ethiopia, celebrated for their justice and the innocence of their manners, as well as for their uncommon lonijevity. See Ethiopia. 2. A people in the island of Meroe. 3. The Hy-perboreans were also called Macrobii.

MACROlilLS (Ambrosius Aurelius Theodosius), an ancient Latin writer who flourished about the end of the fourth century. His country and religion are uncertain. Erasmus, in his Ciceronianus, seems to think he was a Greek ; and he himself tells us, in the preface to his Saturnalia, that he was not a Roman, but labored under the inconv£uience of writing in a lansruPTe

which was not natural to him. Barthius reckons him a Christian ; but Spanheini and Fabricius suppose him to have been a pagan. It is however certain that he was of consular dignity, and one of the chamberlains to Theolosius. He wrote a commentary upon Cicero's Somnium Scipionis, and seven books of Saturnalia, which treat of various subjects, and are an agreeable mixture of criticism and antiquarian research. He made great use of other works, borrowing not only their materials, but even their language, for which he makes an apology at the commencement of his work. ' I shall here,' says he, 'imitate the bees, who suck the best juices from all sorts of flowers, and afterwards work them up into various forms and orders, with some mixture of their own proper spirit.' The Somnium Scipionis and Saturnalia have been often printed to which has been added, in the later editions, a piece entitled De DifFerentiis et Societatibus Grasci Verbi.

MACROCEPHALUS, from ˆa/cpoc, great, and Ktˆa Xi), head, denotes a person with a head larger or longer than the common size. Macro-cephali is a name given to a certain nation who, according to the accounts of authors, were famous for the unseemly length of their heads . yet custom so far habituated them to it that, instead of looking on it . as a deformity, they esteemed it a beauty, and, as soon as the child was born, moulded and fashioned its head to as great a length as possible, and afterwards used rollers and bandages for the same purpose.

MACROCNEMUM, in botany, a genus of the monogynia order, and pentandria class of plants ; natural order thirtieth, contorta'.

Mactation, Latin mactatio, was performed either by the priest himself, or some of his inferior officers, called popas, agones, cultrarii, and victimarii ; but, before the beast was killed, the priest turning himself to the east, drew a crooked line with his knife from the forehead to the tail. Among the Greeks this ceremony was performed most commonly by the priest, or in his absence by the most honorable person present. If the sacrifice was offered to the celestial gods, the victim's throat was bent upwards towards heaven ; if to the infernal, or to heroes, it was killed with its throat towards the ground. The manner of killing the animal was by a stroke on the head, and, after it was fallen, thrusting a knife into its tiiroat. Good or ill success was predicted from the struggles of the beast, or its quiet submission to the blow, fronx the flowing of the blood, and the length of time it lived after the fall, &c.

MACULA, «. A. ˆ Lat. macula. A spot;

Mac'ulati:, u. a. > to stain or mark with

Macula'tion. ˆ spots.

I will throw my glove to death himself. That there's no maculatiun in thy heart.

Shakspeare.

And lastly, the body of the sun may contract some spots or macula: greater than usual, and by that means be darkened.

Burnet's Tlieory of the Earth.

Macul;e, in astronomy, dark spots appearing on the luminous surfaces of the sun and moon, an I pvca some of the planets. See Astronomy.

MADAGASCAR.

MAD, adj., V. a. & v. n.~] Sax. maa'ˆ, ˆemaa'ˆ ;

Mad’brain, adj. Mai/brained, Mad’cap, n. s. Mad’den, v. ri; &c. Mad’house, n. s. Mad’ly, adv. Mad’man, n. s. Mad’ness.

Modern Ootli. mod ; I {Goth, mcida, to di-I vide?) Distracted or ˆdisordered in mind ;

deranged ; lunatic ; I hence, enraged ; fu-I rioiis ; violently af-J fected with desire,

taking on, after, of, or Jo?; before tlie object ; to mad is to make or be furious ; make or be mad: madbrain and madbrained, disordered or distracted ; hot-headed : madcap (taking the cap for the head) a madman : to madden, to be-come or behave as deranged. The other derivatives seem obvious in their meaning.

And manye of hem seiden, he hath a deuel, and maddith. Wiclif. Jon. 10.

It is the land of graven images, and they are mad upon their idols. Jer. i. 38.

They shall be like madmen, sparing none, but still sporting. 2 Esdr. xvi. 71.

Richesse a robe of purple on had, Ne trowe not that I lie or mad. For in this world is none it liche, Ne by a thousand dele so riche.

Chaucer. Cant. Tales. O villain ! cried out Zelmane, madded with finding an unlooked-for rival. Sidney.

Alack, sir, he is mad. — ‘Tis the time’s plague when madmen lead the blind.

Sliakijieare. This will witness outwardly, As strongly as the conscience does within, To the madding of her lord. Id. Cymheline. I give my hand opposed against my heart, Unto a madbrain rudesby, full of spleen.

Shakspeare. He let fall his book, And, as he stooped again to take it up, This madbrained bridegroom took him such a cuff. That down fell priest and book. Jd.

The nimble-footed madcap prince of Wales, And his comrades, that

daft the world aside. And bid it pass. Id. Henry IV.

The power oi God sets bounds to the raging of the sea, and restrains the madness of the people.

King Charles. Holy writ represents St. Paid as making havock of the church, and persecuting that way unto the death, and being exceedingly mad against them.

Decay of Piety. We must bind our passions in chains, lest, like mad folks, they break their locks and bolts, and do a'! the mischief they can.

Ta\}lors Worthy Communicant, Cupid, of thee the poets sung, Thy mother from the sea was sprung ; But they were mad to make thee young. Denham.

His gestures fierce He marked, and mad demeanour when alone.

Milton. The madding wheels Of brazen chariots raged : dire was the noise Of conflicts ! Id. Paradise Lost.

Madmen ought not to be mad ; But who can lielp liis fren/.y !

Dri/den's Spanish Friar. The woild is running mad after farce, the extremity of bad poetry, or ratiier the judgment that is fallen upon dramatic writing. Vriiden.

This 7nads me, that perhaps ignoble hands Have overlaid him, for they could not confU'cr. (. Vol.. XTII.— Paih '2.

She, mixing with a throng

Of madding matrons, bears the bride along. (, He waved a torch aloft, and madlu vain.

Sought godlike worship from a servile train. Id. He raved with all the madness of despair,

He roared, he beat his breast, and tore his hair.

Id.

A bear, enraged at the stinging of a bee, ran like mad into the bee-garden, and overturned all the hives. L'Estrange.

A fellow in a madhouse being asked how he came there ? VVhy, says he, the mad folks abroad are too many for us, and so they have mastered all the sober people, and cooped them up here. Id.

lie that eagerly pursues any thing, is no better than a madman. Id.

There are degrees of madness as of folly, the disorderly jumbling ideas together, in some more, some less. Locke.

The people are not so very mad of acorns, but that they could be content to eat the bread of civil persons. Bymer.

Delusive ideas are the motives of the greatest part of mankind, and a heated imagination the power by which their actions are incited : the world, in the eye of a philosopher, may be said to be a large mad-hcnse. Mackenzie.

He who ties a madman's hands, or takes away his sword, loves his person while he disarms his frenzy.

South.

But some strange graces and odd flights she had, Was just not ugly, and was just not mad. Pope. The dog-star rages, nay, 'tis past a doubt,

All Bedlam or Parnassus is let out ;

Fire in each eye, and papers in each hand.

They rave, recite, and madden round the land.

Id. Such madd'ning draughts of beauty.

As for a while o'erwhelmed his raptured thought.

Thomson.

As a man inebriated only by vapours, soon recovers in the open air, a nation discontented to madness, without any adequate cause, will return to its wits and allegiance, when a little pause has cooled it to reflection. Johnson.

A crowd gather rmmd a dog suspected of madness, and they begin by teazing the devoted animal on every side ; if he attempts to stand upon the defensive, and bite ; then he is unanimously found guilty, for a mad-dog always snaps at every thing ; if, on the contrary, he strives to escape by running away, then he can expect no compassion, for

mad dogs always run straight forward before them.

Goldsmith. Goading the wise to madur.is ; from the dull

Shaping out oracles to rule the world

Afresh, for they were waxing out of date.

And mortals dared to ponder for themselves,

To weigh kings in the balance, and to speak

Of freedom, tlie forbidden fruit. Byron.

Maii, n.s. Sax. maSu. An earth worm.

MADAGASCAR (or Mahegasse, a native-name). Madagascar seems first to have been made vaguely known to Europeans by Marco Paulo, who received some inforinatiou respecting it by its present name, from tlie Ara!)s. The ancients were probably wholly unacquainted witli it. It also escaped the notice of De tiama, who coasted along Africa ; and was first seen by Lorenzo Almeida in lˆOfi, from wliom it received tlie name of St.]>avvrcnce,wiiich it retained until the reign of Henry I\ˆ, when some I'rcnch navigators gave it tliat of Isle Danpliin.

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This is one of the largest islands of the world, being 240 leagues long, from north to south, and from forty to seventy leagues broad. It is separated from the coast of Africa by the channel of Mosambique, from eighty leagues to 120 broad. A ridge of mountains (said to have an elevation of 10,000 to 12,000 feet) runs through the island from north to south, containing various valuable minerals and fossils; and also gives rise to a vast number of rivers and rivulets, which reacli tiie sea, and abound in fisli. In no region of the globe is vegetation more luxuriant than in this island, where nature abandoned to its own fertility produces the most various productions. The hills are covered

to their summits with immense timber trees, and the plains or vast savannahs, are clothed with a ricli herbage, affording pasture to innumerable cattle and sheep. Rice is cultivated to a great extent, and all the other vegetables and fruits of the tropics grow spontaneously. Unfortunately, however, this smiling scene is generally more than counterbalanced by the e.vtreme unhealthiness of the climate, which renders it the almost certain grave of Europeans.

The wild animals of the island are of few species, there being neither lions, tigers, nor elephants, nor does it possess the horse.

At present Madagascar affords few objects of commerce, and its exports are almost totally confined to rice and cattle to the Mauritius. The Arabs export some of the species of fruit called sea cocoa-nut, or cocoa-nut of the Maldivas, (nux medica of botanists). The tree which affords this fruit is a species of palm, and is found on the Isle of Palms, on the coast of Madagascar only ; at least, it has not hitherto been discovered in any other part of the world. The nuts picked up on the shores of the Maldiva islands are probably conveyed there in the south-west monsoon, when the currents between]Madagascar and these islands set to the north-east.

The nuts of the Ravensera have also been exported : they are of an acrid aromatic nature, and used by the natives to season their food. The other objects of commerce are eagle or aloe wood (agallochum), which may be procured in any quantity, but of which little or none is taken off. The island affords cotton, and many useful gums and resins, amongst which is the elastic gum, or India rubber (iatropha elas-tica).

The island of Madagascar is inhabited by various tribes or castes, whose piiysical and moral characteristics denote their being descended from very different races. 1. The Betsimicaracs, or negro race, who inhabit the north-east coast, are in general stout and well made, and the women handsome ; but the men are drunkards, cowards, and thieves. Tlie Antibanivouls, neighbours of the last named caste, arc more laborious and less debauched, but also more stupid and ignorant. The Betalimenes employ themselves chiefly in raising cattle. 2. The Hovas, who inhabit the province of Ancove, near the middle of the island, differ entirely from the above tribes. They are tall and well made, though rather slender, and much resemble the natives of India, having long black hair, aqui-line noses, and thin lips : there is also some difference in their dialect. This caste is by far the most advanced in the arts, being acquainted with the manner of forging iron, and are correct imitators of the nicest European works in metal : their chains of gold and silver are particularly fine. They

inhabitthe mostheallhy province of the island, being from its elevation so cold in winter that fires are necessary; but, the province producing neither tree nor shrub, they use the straw of a gramineous plant as fuel. '.i. The Antama-houris form another peculiar caste, whose language differs from that of the other tribes, being a dialect of the Malay, and their features also denote their being descended from the Malay race. In the centre of the island is said to exist a race of dwarfs, named Kimos, who do not ex-ceed three feet and a half in height, whose arms are extremely long, with paws like those of the ape, and the females totally without breasts, nourishing their infants with cows' milk, of whicli animals they breed great herds. A Kimos wo-man was sold to the French at Fort Dauphin in 1768, and is the only individual of the species ever seen by Europeans. A detail of the subdivisions of all these races would lead us far be-yond the limits we have prescribed to ourselves, and we must therefore confine our notice to a few of the prominent and general traits in the Madagasse character.

The inhabitants taken generally are lazy, spending three-fourths of their time in their huts, stretched on a mat, and playing on the marou-vaiie, or tritri. Their only serious employments are the chase, fishing, and occasionally looking after their cattle. Careless of the future, the Madagasse little fears the frowns of fortune, and, as he is unacquainted either with love or friendship, he has little to disturb the tranquillity of his mind. His religion extends to the acknowledgement of a preserving deity, to whom he pays no devotion, but, on the contrary, loads him with invectives, when any misfortune happens to him. lie also believes in an evil spirit, whose habitual residence is in burying places, and hence he will not approach a grave during the night. In general his youth is spent in de-bauchery, and it is not until the middle of his career that he takes a wife to accompany him the rest of the way. The marriage ceremony consists in killing a bullock, and feasting the two families. All ages are addicted to excess of spirituous liquors, and to their own intoxicating mixtures. A Madagasse accused of sorcery is confined in a solitary hut without victuals for tyvo or three days, when he is obliged to undergo an ordeal by swallowing a poisonous infusion, which if he keeps down is sure to destroy, at the same time that it convicts him, but if lie lias the good fortune to throw it up, by the natural exertion of the stomach alone, he lives and is acquitted. The same trial is ordered to persons of both sexes, accused of incestuous intercourse, as well IS in cases of doubtful robbery ; for, where the fact is proved, the criminal is condemned to slavery.

The professions of priest and physician are here, as amongst rost savage nations, united in the same person, and are practised only by

in-

dividuals of the Arab tribes. The dress of the women consists in a girdle, or kind of petticoat, and a long piece of cloth, one end of which is folded round the hips, while the other covers tl.e shoulders, and head in wet weather : a corset closed both before and beliind like a banyan, and which leaves tlie bosom bare, completes the dress. The ornaments of the women are neck-laces and bracelets of glass beads, or gold and silver chains. Both sexes wear amulets of bits of certain woods, &c., enveloped in cloth on their necks and wrists, to defend them from the effects of sorcery. Tlie leaves of the ravensera serve the purposes of plates, dishes, and spoons. The various estimations of the population of IMadagascar make it from 1,000,000 to 1,500,000 souls.

The western side of Madagascar has many bays and rivers, but very few of tb.em are ever visited by European ships, and consequently are very little known. The most frequented is St. Augustine's Bay, at the south-west extremity of the island, which is a safe road where may be had any quantity of refreshments, particularly bullocks, goats, fowls, Guinea fowls, oranges, limes, plantains, pumpkins, yams, and sweet potatoes. They are procured from the natives in exchange for gunpowder, looking-glasses, muskets, pistols, brass and iron pots, knives and scissars, nails, flints, &c. Water is filled in the boats four or five miles up a river, named Dart-mouth, which falls into the bay, and which abounds (as well as the bay) in fish, but is also infested by the alligator. The chief of this part of the island resides in a mud-built town twelve miles from the bay ; most of the natives who go on board ship to barter speak a little English, and have taken English titles, such as the prince of Wales, duke of York, &c.

Morundava Bay, in latitude 20° 16', is sometimes visited for refreshments ; it is exposed from north-west to south-west and has several shallow barred rivers falling into it. A village of huts is on the north side of the bay.

Bembatook Bay in 15° 43' is large and safe, and represented as one of

the most eligible places in the island for a European settlement. Bullocks and rice are very abundant, as well as other objects of commerce. The French purchased slaves and cattle here for the use of the Isle of France ; wliich were driven across the island to Foul Point, where the slaves were embarked and the cattle slaughtered and salted. The natives are friendly to stranger-; ; and tiie Arabs of the continent visit this port for purposes of trade. The town, from which the bay has its name, is three leagues within the entrance of the bay, and on a cove entirely land-locked • and accessible to ships.

New Masseliege is a large town on a barred river accessible only to small craft. It is protected by a mud fort with many cannon ; and the king's residence is built in the European manner with two stories, with an armoury and many articles of European furniture, as tables, ciiairs, looking-glasses, &c. Many Arabs reside here, and trade to Arabia and Persia. Opposite the river's mouth is an island, about four miles long, on which the French had once an establishment.

Manigara River is said to be six miles broad at the entrance, with six and seven fathoms three leagues up.

The bight or bay of Astada is a large indentation at the north-west end of the island, with several islands before it. Mere is Morigambo harbour, described as capacious and safe.

Passandava, at the north-west extremity of the island, is a large bay running seven leagues to the south. It abounds in provisions, wood and water.

Fort Dauphin, once the principal establishment of the French, is near the south-east extremity of the island, on a cove capable of receiving five or six vessels, land-locked. It is situated on high ground commanding theioad,and is a lono-square surrounded by a wall of lime and gravel coated with cement. Two leagues south of the fort is a large river, which at a short distance from its mouth expands into a lake, fifteen miles in circuit; the mouth of the river is however, as well as most others on the east coast, barred against the entrance of ships. This part of the island is populous, and under a great many chiefs : their villages are on eminences, fortified with parapets of turf, pallisades, and ditches. Bullocks, poultry, and provisions are abundant, but good water is only found at some distance from the shore, where are excellent springs. The bay of St. Luce is within several islands and reefs : on its south point the French formed a

pallisaded establishment in 1787.

Manooro River, in latitude 20°, is much frequented by the French of tlie ˆMauritius for rice and cattle. The natives manufacture fine mats and cloth from the fibres of a plant, as well as cloth from the cotton of the island. There is a village at the mouth of the river, and before it good anchorage within a reef.

Hy Vondron is a considerable village, and great rice market, tliree leagues south of Tamatave. This latter is on a lagoon, named Nossebe; landing is difficult, from a high surf. The French had a post here to procure cattle and rice for their islands, but which was taken by the English in 181 1 ; it was on a high point of land and considered healthy. The Isle of Prunes is three leagues from Tamatave, small but covered with wood, and has fresh water. Between Tamatave and Foul Point are several villages on the shore.

Foul Point ('oulu-'oulu of the natives), another establishment of tlie French, is on a cove within a reef, which shelters the anchorage. The settlement consists of a piece of ground, surrounded by pallisades, with a house for tlie resident, siieds, &c. A large native village is close to it, where is llie king's residence, consisting of a story, raised from the ground, ascended to by a ladder, and surrounded by the huts of his attendants and women. Slaves and cattle are procured here in exchange for musquets, powder and shot, flints, knives, &c.

St. Mary's Island (Nossi llirahirn of the natives) is two leagues from the main ; the east side is lined widi breakers, but the west side forms a good port, with depth and capacity for the largest fleets. The country abounds in provisions, and spars for masts may be had here. The French formed an establishment here in

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i740, but the persons in it were all massacred by the natives. In 1743 they renewed it, but it was abandoned in 17G0, on account of its unhealthiness. This island was the rendezvous of the European pirates that infested the Indian seas in liie beginning of the last century.

Antoiigil Bay (Manghabees of the natives) is eight or nine leagues wide, and fifteen deep ; its shores are elevated, and towards its head are some islands, within which is an excellent harbour, called by tlie French Port Choiseul. Several rivers fall into the bay, but they are all barred against the entrance of any thing but boats, though deep within. This is one of the most fertile parU of the island, but also the most unhealthy : the tide rises three or four feet. Here the French attempted to form an establishment conducted by the celebrated adventurer Beniwowsky.

Port Louquez, at the north-east extremity of the island, is a capacious and secure harbour for the largest fleets ; it is also said to be healthy and abundant in provisions.

The chief capes of .Madagascar are. Cape St. Mary, the south point; Cape St. Andrew, the north-west ; Cape Ambre, the north; and Cape East, the east.

Tananarive is at present considered as the capital of the island, and is the place where the king Kadama resides, and the late treaty for the abolition of the slave trade was concluded. Mr. Jones, who was present on this occasion, says ‘ their houses are built exceedingly neat and convenient— are high and very airy, and supported by strong timbers, resembling the masts of a ship. Tlie apartments of the royal palace are ornamented with silver mirrors; and are in neatness equal to any rooms that I have seen in the government-house at Port Louis.’

Governor Farquhar, writing to the direcKas of the London JNIissionary Society, represents the natives as ‘ a people without any national religion, or superstitions of consequence to combat, consisting of above 4,000,000 of souls, ready, as well as capable, of receiving instruction under the will of a monarcli, who is as eager to obtain it for them, as you can be to grant it.’ See our article LoxnoN Missionahy Society. From the manner in which he acted in reference to the late treaty, the royal authority appears to be absolute, and the present sovereign deserves to be considered the father of his people; for after

h?ving fully discussed the slave trade in several conferences with Mr. Hastie, the British commissioner, lie consulted his ministers on tlie subject, who were all greatly averse to its abolition.

When the Portuguese first visited India, they kept too close to the continent to discover Madagascar. In \rj06 it was visited by Tricstan d'Acunha, but as they could not find it produced either gold or silver, which were the chief objects of their research, they paid little attention to the discovery. When the French had formed the settlements of Bourbon and Mauritius, they turned their attention to Madagascar, as a place whence the wants of their new colonies on the smaller islands might be supplied. With this view they sent several expeditions to various parts of the island, but they were repeatedly

driven out. The most celebrated of their establishments for a time was that attempted by count Benyowsky, at the north-west extremity ; but this daring adventurer soon involved hmiself in a war with the natives, in which he was killed, and the establishment altogether ftxiled. The most permanent footing they gained was at Fort Dauphin, on the south-east coast, where their influence was maintained until the loss of Bour bon and Mauritius in the late war.

The entire])opulation of Madagascar is difficult to estimate, from the great number of small states into which it is divided. Flacourt does not suppose it to exceed 1,000,000; Ilochon heard it estimated at 4,000,000, though he considers this amount to be exaggerated.

MAD'AM,7i.s. Yr.inudaihe, my dame; Ital. mudania. A term of compliment used in address to ladies of every degree : anciently pronounced as in French, with the accent upon the last syllable.

Certes, madam, ye have great cause of plaint.

Spenser.

Madam, once more you look and move a queen !

Philips.

MADAN (Martm;, an English divine of a respectable family, born about 1726, and bred for the bar, which he relinquished for the church, though he obtained no preferment. The chapel of the Lock Hospital was built chiefly through his exertions, and he officiated as chaplain many years gratis. He was long a very popular preacher, but

incurred much obloquy by publishing a work entitled, Thelyphthora, oraTreatise on Female Ruin ; in 3 vols. 8vo. 1781; wherein he defended the lawfulness of polygamy, in cases of seduction. He also published a translation of Juvenal and Persius, in 2 vols, Bvo. He died in 1790. He was a man of great abilities, and unimpeachable morals.

MAD-APPLE. See Solamm.

MADDEN (Samuel), D. D., an Irish divine of French extraction, educaied at Dublin. He had some church preferments in Ireland. In 1729 he published Themistocles, or the Lover of his Country, for which he received a library from his bookseller. In 1731 he pro ected a scheme for promoting learning in Dublin College by premiums. In 1732-3 he published Memoirs of the Twentieth Century ; .being original letters of State under George \ 1. in 6 vols Bvo., London. This work was called in and suppressed. In 1740 he set apart £l00 a-year, to be divided into three premiums for encouraging arts and manufactures in Ireland. In 1743 or 1744 he published Boulter's Monument, a Poem. He died December 30tb, 1765.

M AD'DEIl, n. s. Sax. matepe ; Teut. maddar. A plant. See below.

The flower of the madder consists of one single leaf, which'is cut into four or five segments, and expanded at the top ; the flower-cup afterwards becomes a fruit, composed of two juicy berries closely joined together, containing seed for the most part hollowed like a navel ; the leaves are rough, and surround the stalks in whorles. Miller.

Madder is cultivated in vast quantities in Holland : what the Dutch send over for medicinal use is the root, which is only dried ; but the greatest quantity is used by the dyers, who have it sent in coarse pov.der.

HiU.

Maddhr. See Rubia. It is yellow at first, but grows red and dark with age. It should be chosen of a fine saffron color, in very hard lumps, and of a strong though not disagreeable smell. The best roots are about the thickness of a goose quill, or at most of the little tinger : they are semitransparent, and of a reddish color; tliey have a strong smell, and the bark is smooth. Madder is also cultivated in Smyrna, and some other countries of Turkey in Asia. It is more esteemed than the best Zealand madder ; and experiments have shown that it is superior to any other kind as a dyeing ingredient. The tine color of these madders, however, has been attributed to their being dried in the air, and not in stoves. The root of madder impregnates water with a dull red color, and alcohol with a deep bright red. This root, when eaten by animals with their food, tinges their urine, and their bones, of a deep red. Wool, previously boiled in a solution of alum and tartar, receives from a hot decoction of madder and tartar a very durable but not a very beautiful red color. Wool would receive from madder only a perishable dye, if the coloring particles were not fixed by a base, which occasions them to combine with the stuff more intimately, and which in some measure defends them from the destructive influence of the air. For this purpose, the woollen stufls are first boiled for two or tliree hours with alum and tartar, after which they are left to drain ; they are then slightly wrung and put into a linen bag, and carried into a cool place, where tliey are suffered to remain for some days.

The quantities of alum and tartar, as well as their proportions, vary much in different manufactories. Hellot recommends five ounces of alum and one ounce of tartar to each pound of wool ; if the proportion of tartar be increased to a certain degree, instead of a red, a deep and durable cinnamon color is produced, because, as we have seen, acids have a tendency to give a yellow tinge to the coloring jiarticles of madder. Berthollet found, that, by employing one-half tartar, the color sensibly bordered more on the cinnamon than when the proportion was only one-fourth of the alum. In dyeing with madder, the bath must not be permitted to boil, because that degree of heat would dissolve the fawn-colored particles, which are less soluble than tlie red, and the color would be different from that which we wish to obtain. If wool be boiled for two hours with one-fourth of sulphate of iron, then washed, and afterwards put into cold water with one-fourth of madder, and then boiled for an hour, a coffee color is produced. Bergmann adds, that if tlie wool have not been soaked, and if it be dyed with one part of sulphate of iron, and two of madder, tljf brown obtained borders upon a red. Bertliollet employed a solution of tin in various ways, l)Oth in the preparation and in the maddering of clotli. lie used different solutions of tin, and found that the tint was always

more yellow or fawn-colored, though sometimes brighter tlian that obtained by the common process. Mr. Guliliclie describes a process for dyeing silk with madder : for one pound of silk he orders a bath of four ounces of alum, and one ounce of a solution of tin; the

liquor is to be left to settle, when it is to be decanted, and the silk carefully soaked in it, and left for twelve hours ; and after this preparation it is to be immersed in a bath containing half a pound of madder softened by boiling with an infusion of galls in white -\ine : this bath is to be kept moderately hot for an hour, after wiiich it is to be made to boil for two minutes. When taken from the bath, the silk is to be washed in a stream of water, and dried in the sun. Mr. Guhliche compares the color thus obtained, which is very permanent, to the Turkey red. If the galls be left out, the color is clearer. A great degree of brightness may be communicated to the first of these, by afterwards passing it through a bath of brasil wood, to which one ounce of solution of tin has been added : the color thus obtained, he says, is very beautifui and durable. The madder red of cotton is distinguished into two kinds : one is called simpie madder red ; tlie other, which is much brighter, is called Turkey or Adrianople red, because it comes from the Levant, and has seldom been equalled in brightness or durability by our artists. Galls or sumach dispose thread and cotton to receive the madder color, and the proper mordant is acetate of alumina. The nitrate and muriate of iron as a mordant produces a better effect tlian the sulphate and acetate of the same metal ; they afford a beautiful, well saturated violet color. The Adrianople red possesses a degree of brightness, wliich it is difficult for us to approach by any of the processes hitherto mentioned.

Some years ago, Mr. Papillon set up a dye-house for this red at Glasgow ; and in 1790 ihe commissioners for manufactures in Scotland paid him a premium, for communicating his process to the late professor Black, on condition of its not being divulged for a certain term of years. The time being expired, it has been made public, and is as follows : —

Step. 1. — For 100 lbs. of cotton, you must have 100 lbs. of Alicant barilla, 20 lbs. of pearl ashes, 100 lbs. of quicklime.

The barilla is to be mixed with soft water in a deep tub, which has a small hole near the bottom of it, stopped at first with a peg. This hole is to be covered in the inside with a cloth supported by two bricks, that the ashes may be prevented from running out at it, or stopping it

up, while the lie filters through it. Under this tub must be another, to receive the lie, and pure water is to be passed repeatedly through the first tub, to form lies of different strength, which are kept separate until their strength is examined. The stroncest required for use must Hoat an ego;, and is called the lie of six degrees of the I'rench hydrometer. The weaker are afterwards brought to this strength by passing them through freˆh barilla ; but a certain quantity of the weak, which is of two degrees of the above hydrometer, is reserved for dissolving the oil, the gum, and the salt, which are used in subsequent parts of tiie process. This lie of two deoˆreos is called the weak barilla liquor ; the other the strong.

Dissolve the pearl ashes in ten pniN, nf four gallons each, of soft water, and the lime in fourteen pails. I.ct all the liqu' -s stand till tli'y

become quite clear, and then mix ten pails of eacli. Boil the cotton in this mixture five hours, then wash it in running water, and dry it.

Step. 2. Buiii bis, or gray steep. — Take a sufficient quantity (ten pails) of the strong barilla water in a tub, and mix with it two pailfuls of sheep's dung ; then pour into it two quart bottles of sulpliuric acid, one pound of gum-arabic, and one pound of sal ammoniac, both previously dissolved in a sufficient quantity of weak barilla water ; and lastly, twt.'nty-fivc pounds of olive oil, previously dissolved, or well mixed with two pails of the weak barilla water. The materials of this steep being well mixed, tread down the cotton into it until it is well soaked ; let it steep twenty-four hours, then wring it hard and dry it. Steep it again twenty-four hours, and again wring and dry it. Steep it a third time twenty-four hours, after which wring and dry it ; and, lastly, wash it well, and dry it.

Step. 3. Tkc ichitc steep. — This part of the process is precisely the same with the last in every particular, except that the sheep's dung is omitted in the composition of the steep—

Step. 4. Gall steep. — Boil twenty-five pounds of bruised galls in ten

pads of river water, until four or five are boiled away ; strain the liquor into a tub, and pour cold water on the galls in the strainer to wash out of them all their tincture.

As soon as the liquor is become milk-warm, dip your cotton, hank by hank, handling it carefully all the time, and let it steep twenty-four hours. Then wring it carefully and equally, and dry it well without washing.

Step. .5. First alum steep. — Dissolve twenty-five pounds of Roman alum in fourteen pails of warm water, without making it boil, scum the liquor well, add two pails of strong barilla water, and then let it cool until it is lukewarm. Dip your cotton, and handle it hank by hank, and let it steep twenty-four hours ; wring it equally, and dry it well without washing.

Step. 6. Second alum steep. — This is in every particular like the last; but, after the cotton is dry, steep it six hours in the river, and then wash and dry it.

Step. 7. Dyeing steep. — The cotton is dyed by about ten pounds at once, for which take about two gallons and a half of bullock's blood, mix it in the cop])er with twenty-eight pails of milk-warm water, stir it well, add twenty-five pounds of madder, and lastly, stir all well together. Then having beforehand put the cotton on sticks, dip it into the liquor, and move and turn it constantly one hour, during which gradually increase the heat until the liquor begins to boil at the end of the hour. Then sink the cotton, and boil it gently one hour longer; and lastly, wash it and dry it.

Take out so much of the boiling liquor, that what remains may produce a milk-warm heat with the fresh water with which the copper is again filled uj), and then proceed to make up a dyeing liquor, as above, for the next ten pounds of cotton.

Step. 8. T/ie fixing steep. — Mix equal parts of the gray steep liquor and of the white steep liquor, taking five or six pails of each. Tread down the cotton into this mixture, and let it stee])

six hours : then wring it moderately and equally and dry it without washing.

Step. 9. Brightening steip. — Ten pounds of white soap must be dissolved very carefully and completely in sixteen or eighteen pails of

warm water : if any little bits of the soap remain undissolved, they will make spots in the cotton. Add four pails of strong barUla water, and stir it well. Sink the cotton in this liquor, keeping it down with cross sticks, and cover it up ; boil it gently two hours, then wash it and dry it, and it IS finished.

MADDISON, a county of the United States, in Georgia. Chief town, Danielsville. IMaddi-son springs are in this county : .five miles from Danielsville. The waters are chalybeate.

Maddison, a county of the Alabama territory, United States. The chief town IluntsviUe.

Maddison, a county of the United States, in New York, erected from Chenango county, in 1806. It is bounded north and north-easterly by Oneida lake and county, east by about ten miles of Otsego county, south by Chenango county, west by about four miles on Cortland county, and twenty-seven on Onondaga county. The area is 616 square miles, or 394,240 acres. The surface is uneven in the south part ; the northern part is quite level. Its manufactures are of importance, although a large proportion of the inhabitants are husbandmen. It sends three members to the house of assembly. Population 25,144.

Maddison, a central county of the state of Virginia, is bounded north-east by Culpepper county, south by Orange county, and W. N. W. by Shenandoah county. Population 8381, of which 3970 are slaves.

Maddison, a county cf Ohio, United States, west of Franklin county. Population 1603. The chief town is London.

Maddison, a county of the United States, in the state of Illinois. Edwardsville the chief town.

Maddison, a county of the United States, in Kentucky. Population, in 1815, 15,540, including 3037 slaves. Richmond the chief town. Maddison, a post town of the United States, and capital of Morgan county, Georgia.

INIaddison, a town of the United States, the chief town of Jeff'erson county, in the state of Ohio. It is situated on the Ohio, thirty miles below Vˆevay. — Also a recently established town of the United States in Indiana.

MAD'EF Y, v. «. } Lat. madejio. To Madefac'tion,?j.s. J moisten; make wet: the act of wetting.

To all madefaction there is required an imbibition.

Bacon.

MADEIRAS.— The Madeira Islands, two in number, Madeira Proper and Porto Santo, are situated between lat. 32° 22’ and 33° 10’ N.,and long. 17° 30’ and 16° 20’ W., and 150 leagues from Cape Blanco in Africa. See Porto Santo.

Madeira is sixty miles long and twenty broad, containing 407 square miles, or 260,480 square acres. It is one immense mountain, at the sum-mit of which is an excavation, supposed to have been the crater of a volcano. It is now covered

with grass. The quantity of lava and other volcanic matters found on the island are a sufficient proof of the former existence of subterranean fires. The various branches of this mountain aie separated by narrow glens, the sides of which are thinly covered with soil, but nevertheless fully reward the high cultivation they have received. Many of them have neat villages and hamlets, and all possess rivulets of fine water.

The climate is mild and temperate, and often recommended in pulmonary complaints. The different elevations, however, afford every variety of temperature, from the scorching heat of the torrid zone, to the moderate cold of middle Europe. In January the summit of the mountain is covered with snow, while at Funchal the thermometer is at 64ˆ. The minimum is not lower than 55° ; the maximum (except with a south-east wind, when it rises at times to 95°) does not exceed 76°.

The importance of Madeira as a colony is derived solely from its vineyards, which are enclosed •with hedges of the prickly pear, wild rose bushes, myrtle, and pomegranate. The wild grape is the most generally cultivated, but there is also a red grape winch gives a white wine, called batardo, and another white grape which produces a

reddish wine, called tinto, known in the English market by the name of London particular. The quantity of wine annually produced is estimated at an average of 25,000 pipes, of 120 gallons each, of which 15,000 are exported, *viz.* to England 4500 : to the East Indies 5500 : to the West Indies 3000 : to the United States, &c., 2000. The remaining 10,000 pipes are consumed in the island. About 500 pipes of a sweet wine, called Malmsey, is also made. The price of wine on the island has been of late on the increase. In 1790 the first quality of the dry wine sold for £32. In 1804 it was risen to £45. In the former yearapipeof INIalmsey soldfor.£60.

Tile other vegetable productions of the island are the eddoe root, on which the poor class chiefly subsist, and the leaves of which are given as food to their hogs. Sweet potatoes is another article of common food, as well as chestnuts, which are planted in the high parts of the island unfit for vines. Wheat and barley are sown in the vineyards, when the vines are nearly worn out; but the whole produce of these grains does not exceed three montlis' consumption, the deficiency being made up from the Azores, and North and South America. Sugar cane is also cultivated on this island, from whence it is said to have been first carried to America. The island also produces the mastic tree, and other gums, together with the cinnamon, cedar, S>:c. The gardens produce most of the European fruits, as well as the plantain, guava, &c., of the tropics.

The only wild animal is the rabl)it, and the only reptile the lizard ; but common domestic animals are in abundance. The custom of turning the hogs into the woods, to seek their food, has produced a half-wild breed, which are hunted. The population of tiie island is from 80,000 to 90,000, according to Mr. Barrow and lord Macartney ; but other estimates make it as Iiigh as 110,000 and even 130,000.

Negro slavery, to the great credit of Portugal, is not permitted in this island, so that the body of the people are of Portuguese descent : and the peasantry are a remarkably fine and healtiiy race ; but a great deal of distress and mendicity is said to be visible at times. The middling class in Funchal are clothed in black. Tiie Portuguese gentry live in a proud retired manner, associating little with the English, or any strangers : and the poverty which prevails in the country is not suff'ered to appear in the edifices and establishments of the Catholic religion. The city abounds in churches, and in the country a chapel is said to be found at every fifty yards. Many of these are handsomely built. In the city, tlie most opulent part of the inhabitants consists of

British merchants, who live in a splendid hospitality : it is upon them also that the Portuguese poor chiefly depend.

The military force in 1790 consisted of 150 infantry of the line, 150 artillery, 2000 regular militia, clothed, armed, and exercised, and 10,000 irregular militia. The island is divided into two captaineries, named Machico and Funchal. The English have twenty commercial houses at Madeira, whose union forms the British factory, and who almost monopolise the whole trade. The exports, besides wine, are insignificant, consisting of some wood, mastic, and other gums, honey, wax, and orchilla.

The whole value of exports is estimated at £500,000, of which England and her colonies take £400,000, the United States £90,000, and Portugal only £l 0,000. The imports are, from England, manufactures for £300,000 ; from the United States, lumber, corn, &c., for £100,000; and about the same value from Portugal, the Brasils, and Azores, so that the imports and exports balance each other. The revenue consists of one-tenth of the produce of the vineyards, and a duty of ten per cent, on imports, and eleven per cent, on exports, producing altogether about £100,000, the annual expenses being about £70,000 ; a nett revenue consequently remains to the crown of 30,000, but some years this sura is said to be reduced to one-third.

Funchal, the only town of Madeira, is situated on the south coast, on a large open bay, but which has, at no season, convenient anchorage. See Funchal.

Madeira is said to have been early visited by an English vessel, which left here a gentleman of the name of INIacham or Machim, and a I'Vench lady to whom he was attached. Mr. Bowles has founded upon tiiis story, says lord Byron,

— a gentle episode :

And gravely tells (attend each beauteous miss; When first JNIadeira trembled to a kiss.

Of course our author meant to say, what appears to have been the truth, that ˆMadeira was uninhabited when first discovered: the Portuguese made the first settlement hero, and have ever since retained the sovereignty.

The first landing was made in 1419; and in 143] Don Henry of PortugalsentTristanTcssora, and Gonsalvo Zarco, with a colony, to take possession of the island. Thev now divided it into

the two districts Machico and Funchal; but its prosperity is said to liave been seriously retarded by a tire whicii was kindled among the forests witli which the island was covered, and which continued to ra2,e for five or six years. When, however, it was extinguished, the ashes had so far increased the fertility of the ground, on which the soil was in many parts very thin, that its produce soon became valuable. The first staple was sugar ; but, when this became cultivated in the West Indies, it ceased to be equally profitable with their wines, which have ever since furnished the basis of a flourishing commerce.

In 1801, when it was apprehended that France might attempt to seize upon it, it was taken temporary possession of by a British squadron, but restored at the peace of Amiens. In 1807, however, when the Portuguese government were compelled to emigrate, Britain again occupied the island in trust, and in that capacity held it. The duty on Madeira wine in England, when imported in British vessels, is £96 12s. 6.^. per tun; on whicli, when exported to the East Indies and China, a drawback is allowed of £86 2s. per tun. For vessels stopping here, provisions and refreshments are exorbitantly dear. Beef and mutton are from Is. 3d. to Is. 6d. per lb., and of very indiii'erent quality ; and fowls, equally bad, cost a Spanish dollar each. Fruit and vegetables are also ill supplied.

MADIGUERY, a town and fortress of India, belonging to the rajah of INIysore. On the fall of the Bijanagur sovereigns it came into possession of a Hindoo family, who retained it till conquered by one of the Mysore rajahs. The IVlahratta general, Bulwunt Row, besieged it for five months, without effect. Long. 77° 13' E., lat. 13° 33' N.

MADIGIIESIIY, a fortress of the south of India, also belonging to the Mysore rajah, is situated on a rock, and is a place of great strength. At the foot of the rock is a fortified town, containing about 200 stone houses. This place originally belonged to a Hindoo family, and is named after one of the ladies who immo-lated herself on her husband's tomb ; in consequence of which Madigheshy was for a long period governed by females. They were, however, subdued by one of

the Mysore rajahs. Long. 77° IG' E., lat. 13° 48' N.

MADISCRODIC, a post town of Louisiana, near the entrance of the river Chifieneti, into lake I'ontchartrain, twenty-seven miles north of New Orleans. It stands on the best harbour of the lake.

Mauxf.ss, a most dreadful kind of delirium without fever. See Medicim:.

MADOX (Dr. Isaac), a worthy Enghsh prelate, born July 27th, 1697, of obscure pare, ts, who died during his infancy. He was pui to school by some friends, and completed his studies at Aberdeen. He entered into orders; and being made chaplain to Dr. Bradford, bishop of Chichester, he married his niece, in 1731. After this he was made king's chaplain, clerk of the closet to queen Caroline, and, about 1736, bishop of St. Asaph; whence, in 1743, he was translated to Worcester. He was an excellent preacher, and a great promoter of public chari-

ties, particularly the Worcester infirmary, and the hospital lor inoculating the small pox at London. He published some sermons, and a Defence of the Doctrine' and Discipline of the Church of England, in answer to Sir. Neale's History of the Puritans. Dr. Madox died in

1759.

Madox (Thomas), a learned and indefatigable I'^nglish antiquary, born in tiie seventeenth century. He])ublished, in 1702, A Collection of Antique Charters and Instruments, taken from the originals, from the Norman Conquest to the end of ihe reign of Henry \TII. In 1711 he published a work of still more importance, *viz.* The History and Antiquities of the Exchequer of the kings of England, from the conquest to the end of the reign of lulward II., &c., in folio, which was reprinted in 1769 in 4to. This was dedicated to queen Anne, with a long pre-fatory epistle to lord Somers ; and procured him the office of historiographer royal. His last work was Firma Burgi, or An Historical Essay concerning the cities, towns, and boroughs of England ; dedicated to king George I. He also compiled a valuable collection of transcripts, in 94 vols, folio and 4to., consisting chiefly of extracts from records in the Exchequer, the rolls in the Tower, the Cottonian Library, &c., intended to afford materials for a feudal history of England from the earliest times. These volumes, which cost him thirty years' labor, were presented by his widow to the British JNIuseum.

MADRAS, or Fort St. George, the chief settlement of the F],nglish on the Coromandel coast, and second of the three presidencies, is a regular fortification on the beach, one of its bastions being washed by the waves : it mounts about 2500 guns, having three tiers toward the sea, where, however, they seem to be of no other use than very inefficiently to protect the shijis in the road. Within the fort are all the public oflSces of the company, counting-houses of the private traders, one church, assembly-room, &c. The Black Town is separated from the fort by an esplanade, two miles in extent, and is said to contain 80,000 persons ; Hindoos, Mussulmans, Armenians, native Portuguese, and a few English. It is surrounded by an entrenchment. The population of Fort St. George and the Black Town, exclusive of Indians, is about 5000 Europeans, the same number of half caste, and 300 Armenians.

The road of Madras is the worst in India, the shore being perfectly straight. The swell is at all times considerable, and the surf so great that ship's boats can never land, and therefore all communication with the shore is by boats of a peculiarly buoyant construction, named Masula boats ; composed of broad boards, the edges of which are sewed together with fibres of coir, without any frame-work, but with thofts for the rowers. 'The pilots of these boats chaunt a song, to the cadence of which the rowers keep time with their oars, quickening or retarding the motion of the boat according to the nature of the surf. The rowers also join in chorus. All the dexterity and experience of the boatmen (who are bred from their infancy to the business) are sometimes incff'eclual, and a

year seldom passes without an accident. Wlicii the surf is unusually high, a catamaran, or raft of three pieces of wood lashed together, wiili two men on it, attends the]\lasula boats with passengers, and has often saved lives when the boat has been swamped. These catamarans, furnished with a sail, are also used for fishing, and go out to sea several leagues with the morning land wind, and return with the sea breeze. Upwards of 1000 species of tish are found at Madras

and along the Coromandel coast; but the numbers of each species is not great, doubtless from the agitation of the waters.

To the south of Madras is a level plain, called the Choultry, where the English have a great number of elegant iiouses ; and at the south extremity of the plain is Chepauk, the palace of the nabob of Arcot, almost concealed in a grove. Ennore is a village on a salt lake, eight leagues north of Madras. The lake abounds in fish and oysters ; with which latter it supplies the English of Madras, who also make parties of pleasure to fish and sail on the lake.

Armagon, or Duraspatam, before the establishment of Madras was the chief settlement of the English on the Coromandel coast, in 1628 being described as mounting twelve guns round tlie factory, with a a-uard of twi;nty-thrt:e factors aiid soldiers.

The Madras territory is now at least 700 miles in length, but of disproportionate breadth. The first important accession it received was the Jagier district of 108 miles in length, by forty-seven in breadth, obtained from Mohammed Aly, the nabob of theCarnatic, in 1750. It next obtained, in 1769, the live provinces, called tiie Northern Circars, from the great Mogul. In the wars with Tippoo Sultan several districts were added by cession from the Nizam and others ; and finally the whole of the Carnalic was taken possession of in 1801, except a small portion assigned to the nabob Azeem al Omrah for his private estate.

The countries subject to this presidency, comprehend nearly the whole of India south of the river lustnah, and the extensive province denominated the Nortliern Circars ; within these boundaries, however, there are three native princes, the rajahs of Mysore, Travancore, and Cochin, whocollect revenues, and exercise a certain degree of authority ; but, with reference to external politics, are wholly dependent on the Britisli government, are protected by a military force, and pay a large annual tribute. The rest of the country is under the immediate jurisdiction of the governor and council at Madras ; and has been subdivided into the districts of Arcot, Bellary, Canara, Chingleput, Chittore, Coimbatoor, Combaconum, Cuddapah, Ganjam, Guntoor, Madras, Madura, Malabar North, Malabar South, Masulipatam, Nellore, llajahinun-dry, Salem, Serin’j:apatam, Tanjore, Tiimevelly, Tritchinopoly, Veniacliellum, and 'izaij;apatani, over each of wliicli there is a European jud’j;e, and collector, witii tlie requisite establishments. There are also four provincial courts of circuit and appeal, to which the above mentioned judges are subordinate, and a supreme court of appeal at Madras. The commerce of the East India

Company is carried on here by a certain number of their civil servants, denominated presidents, each of whom has the superintendance of a factory in different parts of the country, and receive their orders from the board of trade. The revenues arise principally from the land, which tiiroughout India is considered generally as the property of government. The customs, exc.se, and post othce, also yield a considerable revenue ; but the charges lately exceeded the receipts by ±‘500,000 sterling.

MADREPOUA, in natural history, a genus of submarine substances; the characters of which are, tiuit they are almost of a stony iiard-ness resembling the corals, and are usually divided into branches, and pervious by many holes or cavities, which are frequently of a stellar figure. In the Linnsean system this is a genus of lythophyta : the animal that inhabits it is the Medusa. According to Donati, the color is white when polished ; its surface is lightly wrinkled, and the wrinkles run lengthwise of the branches ; in the centre there is a sort of cylinder, which is often pierced through its whole length by two or three holes. Erom this are detached about seventeen laminae, which run to the circumference in straiglit lines, and are trfi.usvei-s:*ly intiirst’cted by other lamina;, forming many irregular cavities ; the cellules, which are composed of these laminae ranged into a circle, are the habitations of little polypes, which are extremely tender animals, generally transparent, and variegated with beautiful colors. M. de Peyssonel observes, that those writers who only considered the figures of the submarine substances, denominated that class of them which seemed pierced with holes, pora; and those, the holes of which were large, they called madrepora. He defines them to be all those marine bodies which are of a stony substance without either bark or crust, and which have but one apparent opening at each extremity, furnished with rays that proceed from the centre to the circumference. He observes, that the body of the animal of the madrepora, whose flesh is so soft that it divides upon the gentlest touch, fills the centre ; the head is placed in the middle, and surrounded by several feet or claws, which fill the intervals of the partitions observed in this substance, and are at pleasure brought to its head, and are furnished with yellow papilhr. He discovered that its head or centre was lifted up occasionally above the surface, and often contracted and dilated itself like the pupil of the eye : he saw all its claws moved, as well as its head or centre. When the animals of the madrepora are destroyed, its extremities become white. In the madrepora, he says, the animal occupies the extremity; and the substance is of a stony but more loose texture than the coral. This is formed, like other substances of the

same nature, of a liquor which tiie animal discharges ; and lie adds, that sf)me species of the polype of the madrepora are produced singly, and others in clusters.

MADIJID, the capital of the Spanish monarchy, is situated near the centre of Sjiain on several low hills, part of die table land of New Castile bounded on the north by the mountains

of Guadarama, and stretching to a distant horizon in all other directions. The neighbourhood is dry, and, and naked ; being almost wholly destitute of trees and towns, but watered by the Manzanares, which in summer is frequently dry. This metropolis, though not commercial or the seat of any important manufactures, contains a number of handsome squares, streets, and buildings. Tile first amount to forty-two in number, mostly very small ; but the Plaza JNIayor and Puerta del Sol, when ligiited, have a striking coup d'oeil. The latter resembles a star, being crossed by five of the prinoipal streets; the former is in the centre of ˆladrid, and is a regular oblong, surrounded by porticoes on freestone pillars ; the houses are uniform, and five stories high, with balconies to each window. In the middle of one of the sides, is the palace called dela Panaderia, where the royal family come to witness public exhibitions ; and on such occasions, particularly at the bull fights, still a favorite amusement, the view of this square is said to be magnificent. Most of the streets in the old town are narrow and crooked, paved with sharp pointed stones, and some of the principal ones have foot paths only wide enough for one passenger; but in the modern parts of the town the streets are wide and straight ; and the whole city is well lighted. The street of Alcala, entered by the gate of that name, is the handsomest in Madrid, and will admit ten carriages abreast. Several of the pub-lic buildings are elegant structures. The Palazio Real, which stands on an eminence at the western extremity of Madrid, has four extensive fronts, adorned with pillars and pilasters. The audience chamber, consisting of a double cube of ninety feet, is much admired, and the whole interior is highly ornamented. It contains a large collection of paintings by the

best Spanish, Italian, and Flanders masters. The churches deserve attention, rather for the decoration of the interior than for their general architecture. The number of churches and chapels in Madrid, including those which belong to the monasteries, convents, &c., exceeds 130 ; and tlie ground they occupy, including those establishments, is very extensive. The custom-house, the post office, the state prison, the town hall, the council house, and the academy of St. Ferdinando, together wit!) several of the hospitals, are worth notice. Another royal palace, the Buen Retire, stands at the eastern extremity of Madrid, encompassed with handsome and extensive grounds. The houses of the first grandees are only distinguished from those of private citizens by their magnitude ; their entrances and staircases are narrow, auk-ward, and mean. The palaces of the families of Berwic, Aitamira, and X'eraguas (the last belonging to the descendants of Columbus), are perhaps exceptions ; and the interior of the great houses is generally in a better style; many of them contain master pieces both of painting and sculpture. Madrid has also several promenades beyond the walls, and the Prado within the city. It is a sjiacious area, laid out in public roads and walks, provided with chairs and benches, em-bellisiied with statues, and adorned with avenues of fine trees. The concourse of people here is sometimes prodigious, but it presents a tiresome

uniformity ; the ladies of high rank always keep in their carriages in the middle walk, while those who walk in the alleys are enveloped in their man-tilla or large veil.

The great school, formerly the Jesuits' college, has sixteen masters, and teaches the classical and Hebrew languages, law, logic, natural and experimental philosophy, and ecclesiastical discipline. There is also a seminary, on a comprehensive plan, for the sons of the nobility and gentry. A botanic garden was laid out about the year 1770, for teaciiing the elements of that science; also a chemical school, and classes for engineer-ing, for anatomy, and the practice of medicine; and there are academies for the study of history, painting, sculpture, and architecture ; also for the Spanish language. This last has published a very superior dictionary on the plan of Ur. Johnson. The royal library contains above 100,000 volumes; and the cabinet of natural history has specimens of natural objects from various parts of the world, but chiefly from the Spanish colonies. Madrid contains a considerable number of book shops, but they have very few new works. The Escurial had for many years the exclusive privilege of printing. Female education, as in several Catholic countries, is chiefly

conducted in the convents. The elevated site of the city, and the mountains that skirt the northern limits of the plain, being almost perjietually covered with snow, render the climate cool, and little inconvenience is experienced from the iieat of summer ; but it is also changeable and comparatively humid. The population, including tlierailitary and strangers, is estimated at 170,000. The chief manufactures of Madrid are those of tapestry. Mosaic work in stone, and porcelain, all belonging to the king, and consequently unproductive. In the midst of an unpropitious soil, destitute of arts, manufactures, and commerce, and almost of industry, it could not, it is said, procure subsistence from the adjacent country for ten days. It is, therefore, absolutely dependent on remote provinces, or foreign countries, for every article of utility or ornament, for all the luxuries, and even the necessaries of life. It is, in fact, only preserved from poverty and desertion by the expenditure of the court.. The Spanish government has even discouraged, by heavy imposts, the culture of wine in the neighbourhood of the capital.

Madrid is first mentioned in history as a castle belonging to the king of Castile, which was sacked by the Moors in 1109: the court of Spain was not permanently fixed here till 1563. During the war of the succession (from 1702 to 1713) Madrid took a decided part in favor of the 13ourbon against the Austrian claims. In 1808 it was early occupied by French troops ; and, when the last members of the royal family were removing from the capital, the people burst into open insurrection, and a dreadful conflict took place between the F'rench soldiery and the inhabitants.

Dr. Southey says ' Tflere is no other instance upon record of an attempt so brave and so utterly hopeless, when all the circumstances are considered. The Spanish troops were locked up in their barracks, and prevented from assisting their

countrymen. Many of the I-'rench were massacred before they could collect and bring their force to act: but what could the people effect against so great a military force, prepared for such an insurrection,

and eager, tlie leaders from political, the men from personal feelings, to strike a blow which should overawe the Spaniards and make themselves be respected?'

We must insert ihe rest of his eloquent description of this horrid scene : it cannot but endear to Englishmen the peace and liberties which have certainly cost them much. ' Tlie French poured into the city from all sides, tlieir flying artillery was brought up, in some places the cavalry cliarged the populace, in others the streets were cleared by repeated discharges of grape-shot. The great street of Alcala, the Puerta del Sol, and tiie great square, were the chief scenes of slaughter. In the latter the people withstood several charges, and the officer who commanded the French had two horses killed under him : General Grouchy also had a horse wounded. The infantry fired volleys into every cross street as they passed, and fired also at the windows and balconies. The people, when they felt the superiority of the French, fled into the houses; the doors were broken open by command of the generals of brigade, Guillot and Daubrai, and all within who were found with arms were bayoneted ; and parties of cavalry were stationed at the diff'erent outlets of Madrid to pursue and cut down those who were flying from the town. A part of the mob, seeking an unwortiiy revenge for their defeat, attacked the French hospital ; and some of the Spaniards who were employed within, encouraged at their approach, fell upon the sick and upon their medical attendants. But these base assailants were soon put to flight.

' At the commencement of the conflict Murat ordered a detachment of 200 men to take possession of the arsenal. Two oflncers happened to be upon guard there, by name Daoi? and Velarde, the former about thirty years of age ; the latter, some five years younger, was the person v.ho had been sent to compliment Murat on his arrival in Spain. Little could they have foreseen, when they went that morning to tlieir post, the fate whicli awaited them, and the renown which was to be its reward ! Having got together about twenty soldiers of their corps, and a few countrymen wiio were willing to stand by them, they brought out a twenty-four pounder in front of the arsenal, to bear upon the straight and narrow street by which the enemy must approach, and planted two others in like manner to command two avenues wliich led into the street of the arsenal. They liad received no instructions, they had no authority for acting thus, and, if they escaped in the action, their own government would witliout doubt either pass or sanction a sentence of deatii against them for their conduct; never, therefore, did any men act with more perfect self-devotion. Having loaded with grape, they waited till the discharge would take full eff'ect, and sucli havoc did it make, that the French

instantly turned back. The possession of the arsenal was of so much importance at this time, that two columns were presently ordered to secure it : they attempted

it at the cost of many lives, and the Spaniards fired above twenty times before the enemy could break into tlie neighbouring houses, and fire upon them from tlie windows. 'elarde was killed by a musket-ball. Daoiz had his thigh broken; he continued to give orders sitting, till he received three other wounds, the last of wliich put an end to his life. Then the person to wiiom he left the command off'ered to surrender : while they were making terms a messenger arrived bearing a wliite flag, and crying out tiiat the tumult was appeased. About two o'clock die firing had ceased every where, tlirough the personal interference of the Junta, the council of Castile, and other tribunals, who paraded the streets with many of the nobles, and with an escort of Spanish soldiers and imperial guards intermixed. It might then have been hoped that the carnage of this dreadful day was ended ; the slaughter among the Spaniards had been very great; this, however, did not satisfy Murat; conformably to the system of his master, the work of death was to be continued in cool blood. A military tribunal under general Grouchy was formed, and the Spaniards who were brought before it were sent away to be slaughtered with little enquiry whether they had taken part in the struggle or not. Three groupes of forty each were successively shot in the Prado — the great public walk of Madrid. Others, in like man-ner, were put to death near the Puerta del Sol, and the Puerta del S. Vicente, and by the church of N. Senora de la Soledad, one of the most sacred places in the city. In this manner was the evening of that 2d of May employed by the French at Madrid. The inhabitants were ordered to illuminate their houses, and through the whole night the dead and the dying might be seen distinctly as in broad noon-day, lying upon the bloody pavement. Wher morning came the same mockery of justice was continued, and fresh murders were committed deliberately with the forms of military execution during several succeeding days. D. Alvaro Florez listrada says, that care was not taken to despatch these victims of an atrocious system, — that their groans were heard through the night, and that to strike the more terror, permission was not given to remove the bodies for interment till after they had lain there two days.'

On the 20th of .fuly Joseph Buonaparte maiie his public entry as king of Spain ; but, on the 27th of the same montli, found it necessary to retreat. He re-entered Madrid on the 5th of December, and remained till lord Wellinuton's operations in 1812 made it requisite for him to

go to the assistance of Marmont. Tlie battle of Salamanca was now fought ; and Madrid being entered l)y a body of British troops, on tlie I2th of August, was occupied by them, until marshal Soult advanced from Andalusia. It now remained in possession of the I'reiich till the year following, when the battle of X'ittoria led to its final liberation. 650 miles S.S.W.of Paris, and 8.)0 west by south of Rome.

MAD'UI Kit, U.S. Fr. wadrier. A plank used

in ofl'ence and defence by besiegers. See below.

Madrier, in vvar, is a thick plank, aimed wilh iron

plates, having a cavity sufticient to receive the mouth

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of tlie petard when charged, with which it is applied against a gate, or other thing intended to be broken down. Bailey.

Mudiier also denotes a long and broad plank, used for supporting the earth in mining, carrying on saps, making caponiers, galleries, and the like. There are also madiitis lined with tin, and covered with earth ; serving as defences against artificial fires, in lodgments, ixc, where there is need of being covered over head. Dr. A. Rees.

M.VD'llIGAL, Fr. madrii'al ; Ital. wundr'wle ; Lat. mandra ; Gr. fiavˆpa (a fold, or cattle stall). A pastoral song ; any liulit, airy, piece of poetry. W aters, by whose falls Bird.; sing melodious madiiifuls. ˆhakspeare. His artful strains have oft delayed The huddling brook to hear his madrigal.

Mil tan.

Their tongue is light and trifling in comparison of the English ; more proper for sonnets, madriijuts, and elegies, than heroick poetry. Driiden.

A iiiadvi'ˆal is a little amorous piece, which contains a certain number of unequal verses, not tied to the scrupulous regularity of a sonnet, or subtility of an epigram : it consists of one single rank of verses, and in that difleis from a canzonet, which consists of several strophes, which return in the same order and number. Bailey.

MADURA, Mathuua, or Madru, a district in the Southern Carnatic, chiefly situated between 9° and 10ˆ of N. lat. To the north it is bounded by Dindigul and the Polygar territory, to the south by Tinevelly, on the east by the district of iMarawas, and on the west by Dindigul. The chief rivers are the 'aygaroo and Candaroo; and the principal towns Madura and Scholavanden.

The ancient sovereigns of this country were of the Pandian race : it is supposed to have been the Pandion Mediterraneum, and Madura Regia Pandionis of Ptolemy. In conjunction with Trichinopoly it forms the Hindoo geographical division of Madru.

This district never attained the cultivation of Tanjore and some other of the neighbouring districts, until transferred to the British in 1801

by the nabob of Arcot. During the early Carnatic wars, from 1740 to 1760, a great proportion of it was covered with forests and thick jungle, in the recesses of which the independent polygars had their castles. It is comprehended in the Diiidigul coUeclorship, and, having long enjoyed tranquillity, is rapidly rewarding the care of the British government.

Maduka, a city of the Southern Carnatic, the capital of the district of Madura, stands in lat. 9° .51' N., long. 78ˆ l.'j' E., the four sides fronting nearly the four cardinal points. The river, passing from the north-west, washes the walls at the north-east angle; and the bed, unless immediately after heavy rains, lies in dry flats of sand, on some of which are buildings with channels between them. This town, during the Carnatic wars, sustained many sieges, and was often in the hands of refractory polygars. The fortress has not of late been thought worth maintaining. Travell ing distance from Seringapatam 240 miles, from Madras .307.

Maui RA, an island in the Eastern Seas, situated off" the north-east coast of.fava, from which it is separated by a narrow strait, is in length about

100 miles,])y sixteen the average breadth. The channel of tlie straits, where it narrows, is only eighty-three fathoms wide, and marked with buoys ; at the entrance thure are but three fathoms water, yet ships of a large size can pass it, the bottom being soft mud, which is easily worked through with a light breeze. In 1747 the Dutcli invaded and subdued this island, and in 1775 it contained 30,000 tjatgars, or families. At that period a Dutch junior merchant resided here, at Samanap, the capital, but the commerce was of little account.

The languai;e is a dialect of the Javanese; but the greater part of tlie natives profess the religion of their ancr-stors, and resemble the Hindoos in their looks, the mark on their forehead, and the suttees of their women. They are particularly addicted to tiie worship of Indra, Surya, and X'ishnu. They appear to have ideas of a future life, but not as a state of retribution ; conceiving immortality to be the lot of the rich, rather than of good men. The inhabitants of the interior possess a considerable knowledge of vegetable poisons, wiiich tliey apply to their arrows, and then blow them through tubes of bamboo. Samanap is on the south-east coast : eighty-two miles distant is Bancallan, at which tlie sultan resides. Parraacassan is also a chief town of the interior. The island is said to be fertile, but thinly peopled.

M.EANDER, in ancient geography, a celebrated river of Asia IMinor, rising near Celsenee. It flows through Caria and Ionia into the .I'lgean Sea between Miletus and Priene, after receiving the waters of the Marsyas, Lycus, Eudon, Le-thaeus, &c. It is celebrated among the poets for its numerous windings, and hence windings in general are called mseanders.

M/EAT/E, or M.eats, an ancient people of Britain, who inhabited the middle part of the island. Their territories lay between the two Roman walls, and comprehended the country since called Northumberland, and the territories between it and the Firths of Clyde and Forth. Dunbritton or Dunbarton was their capital ; and they liad kinss of their own till the Norman conquest. Such is Dr. Anderson's account of the Masata; ; but others say their territories comprehended only the district now called Lauder-dale.

Mˆ.CENAS (Caius Cilnius), the great friend and counsellor of Augustus, and the celebrated and liberal patron and protector of men of letters. He was descended from the kings of Etruria, but his immediate forefathers were only of the equestrian order. He is supposed to have been born in Rome, as his family lived there; but nothing is known of him previous to the death of Ca;sar, A. U. C. 709 ; when Octavius Cfpsar went to Rome to take possession of his uncle's inheritance, and Miecenas became first public'y known. From that time he accompanied him through all his fortunes, so that Paˆdo Albinovanus called him Caesar's right hand. In A. U. C. 710 Mcecenas distinguished himself by his courage and military skill at the battle of Modena, as he did afterwards at Phi-li])pi. After this last battle began his memorable friendship with Horace, who was a tribune

in the army of Brutus, and was tuken prisoner. Maecenas recommended him to Augustus, who restored to him his estate with no small additions. The league made at Brundusium, between Antony and Augustus, was negociated by Maecenas on tlie part of the latter. (See Ilor. Sat. v.

1. 1.) In A. U. C. 717, when Augustus and Agrippa went to Sicily to Sextus Pompeius by sea, Maecenas, who accompanied them, was sent back to appease some commotions at Rome. After tlie battle of Actium he was placed over the military aflfairs of tlie empire ; and, while Augustus was extinguishing the remains of tlie civil war in Asia and Egypt, Maecenas detected a conspiracy to assassinate the emperor on his return to Rome, and put to death young Lepidus the founder of it. The civil wars being ended, Augustus returned to Rome; and from this time Alrecenas indulged himself in literary amusements. Ilis house was open to all the learned of his time ; Virgil, Horace, Propertius, Varius, Fuscus, Aristius, Asinius Pollio, and many others, whom it would be tedious to mention. All these dedicated their works, or parts of them, to Maecenas, and celebrated his praises; and Plutarch says, even Augustus himself inscribed his commentaries to him and to Agrippa. Mfficenas continued in favor with Augustus to the end of his life, but not without interruption, the emperor formin? an intrigue with Maecenas's wife. It is to the honor of Augustus that he received the private admonitions of INIacenas in the same friendly manner in which they were given, and he was not displeased with the liberty which he once took of sending to him a paper with these words written upon it, ' surge carnifex,' ' rise butcher,' while he was sitting on his judgment seat, and betray-ing revenge and impatience in his countenance. He was struck with the admonition, and left the tribunal without passing sentence of death on the criminals. Maecenas died in the year 8 B C. or 745 A. U. C, but at what age is not known. He is often called an old man by Ptedo Albinove.nus, a contemporary poet, whose elegy upon him is extant, lie made Augustus his heir; and

recommended his friend Horace to him. Though he was on the wliole a virtuous character, yet he was very luxurious and effeminate. But his name will ever be venerated by men of letters, on account of the disinterested patronage and support he gave to all the wits and learned men of his time, whence his name has become almost an appellative for a patron of learning and genius. He was also an author himself; as he wrote, 1. A History of Animals :

2. A .Journal of the Life of Augustus : 3. A Treatise on Precious Stones: 4. Octavia : and, 5. Prometheus, Tragedies : with several other works : but they are all lost.

MAKLSTIU)\I, a danijorous whirlpool on the coast of Norway, near the island of Moskoe, whence it also has its name of Moskoe-strom. Betwixt Lofoden and Moskoe the depth of the water is betwˆeen thirty-six and forty fathoms ; but on the other side, towards V'er, the depth decreases so as not to afford a convenient passage for a vessel, without the risk of splitting on the rocks, which happens even in the calmest

weather. When it is flood, the stream runs up the country between Lofoden and Moskoe with a boisterous rapidity ; but the roar of its impetuous ebb to the sea is scarcely equalled by the loudest and most dreadful cataracts ; the noise being heard several leagues off; and the vortices or pits are of such an extent and depth that, if a ship comes within the attraction, it is inevitably absorbed and carried down to tiie bottom, and there beaten to pieces against the rocks ; and, when the water relaxes, the fragments thereof are tiirown up again. But tliese intervals of tranquillity are only at the turn of the ebb and flood, in calm weather ; and last but a quarter of an hour, its violence gradually returning. When the stream is most boisterous, and its fury heightened by a storm, it is dangerous to come within a Norway mile of it; boats, ships, and yachts, having been carried away, by not guarding against it before they were within its reach. It likewise happens frequently that whales come too near the stream, and are overpowered ijy its violence; and then it is impossible to describe their bowlings and bellowings in tlieir fruitless struggles to disengage themselves. A bear once attempting to swim from Lofoden to Moskoe, with a design of preying upon the sheep at pasture in the island, afforded a similar spectacle ; the stream caught him and bore him down, whilst he roared so terribly as to be heard on shore. Large stocks of firs and pine trees, after being absorbed by the current, rise again broken and torn to pieces. This plainly shows the bottom to consist of craegy rocks, among wliich they are whirled to and IVo. This stream is regulated by

the flux and reflux of the sea ; it being constantly high and low water every six hours. In 1645, early in the morning of Sexagesima Sunday, it raged with such noise and impetuosity that, on the island of Moskoe, the very stones of the houses fell to the ground. When this whirlpool is agitated by a storm its vortex will reach vessels five or six miles distant.

M/EMACTERIA, sacrifices offered to Jupiter at Athens, in the winter month Ma;macterion. The god, surnamed Msemactes, was entreated to send mild and temperate weather, a-he presided over the seasons and was the god of the air.

M.F.MACTERION was the fourth month of the Athenian year, containing twenty-nine days, and answering to the latter part of our September and the beginning of October; so named from the festival Ma'macteria. It was called by the Bn?otians Alalcomenius.

M.I-'.NALUS, in ancient geography, a mountain of Arcadia, sacred to Pan, and greatly Ire-quented by shepherds. It received its name from Manalus a son of Lycaon. It was covered with pine trees, whose eclio and shade have been ureal ly celebrated by all the ancient poets.

M.-KONIA, or Moioma, a country of Asia Minor, forniin<r part of Lydia : *viz.* the neighbourhood of Mount Timolus, watered by the Pactolus. The rest, on the sea coast, was called Lydia. See Lydia.

M/EONID;E, a name given to the Muses, because Homer, their greatest and worthiest favorite, was supposed to be a native of M.tonia.

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MiEONIDES, a surname of Homer, because, according to some writers, he was born in Mao-nia, or because his father's name was M;eon.

iVLEOTICA Palus, Maigticus Lacus, or Mjeotis Pall's or Lacus, a large lake or part of the sea between Europe and Asia, at the north of tlie Euxine, with which it communicates by the Cimmerian Bosphorus. It was worsliipped as a deity by the Massagetne. It extends about 390 miles from south-west to north-east, and is about six miles in circumference. It is now called tlie sea of Asoph or Zaback ; and reaches from Crim Tartary to the mouth of the Don. See Asoi'H.

MAESE, a considerable river of Europe, which has its source in the department of the Upper Marne, France, enters the Netherlands to the north of Charleville, and falls into the Ger-man Ocean below Rotterdam. In its course, of about 400 miles, it is joined by the Mouzon, Sambre, Ourthe, Lesse, and Ruhr, and various inferior streams; on its junction with the Waal, the united river takes the name of Merwe. It passes 'erduii, Sedan, and ilezieres, in France; Charlemont, Namur, Iluy, Liege, Maestricht, Ruremonde, 'enloo. Grave, Gorcum, Dort, Rotterdam, and Briel, in the Netherlands ; and exhibits in parts of its course, on a smaller scale, all the romantic scenery of the Rhine.

MiESTLIN (Michael), in Latin, Mcestlinus, a celebrated German astronomer, born in the duchy of Wittembers; : but vvho spent his youtli in Italy, where he converted Galileo from the Aristotelian to the Copernican system. He afterwards returned to Germany, and became professor of mathematics at Tubingen ; where, among his other pupils, he educated the great Kepler. Mcestlin published many mathematical and astronomical works; and died in 1590.

MAESTRICHT, a large central town of the Netherlands, the capital of the province of Lim-burg, is situated on the Maese, near the junction of that river with the left bank of the Jaer. It stands in a valley surrounded with hills, in a fertile neighbourhood, and communicates with the suburbs of N\ yck, on the opposite side, by means of a stone bridge 500 feet in length. The whole is tolerably well built, and the principal street, consisting chiefly of shops, extends from the bridge to tlie other extremity of the town. There are two good squares ; and of the public buildings, the chief are the town-hall, and the church of St.

Gervais ; the college, once occupied by the .(esuits ; the theatre, and the arsenal, are also worth a visit.

Maestricht is considered one of the strongest places in the kingdom of the Netherlands. It is surrounded by walls and ditches ; but its strengtli consists in a number of detached bastions. It is also defended by the fortress of St. Pierre, on a neighbouring height. The ramparts and banks of the river above the town form pleasant promenades. The manufactures consist in leather, flannel, stockings, hardware, and coarse clotiis. Here are also extensive breweries and distilleries. In a neighbouring mountain are stone quarries, with subterraneous passages of considerable extent. From this town vessels sail at stated hours to all the chief places higher

up on the Maese. It was besieged by the French in 174R, at the period of the peace of Aix-ta- Chapelle, and taken by them in 1794. Population 18,500. Fourteen miles north by east of Liege, and fifty-six east of Brussels.

MAFF/EUS (John Peter), a learned Jesuit, born at Bergamo in 1536. He wrote a Life of Ignatius Loyola; a History of the Indies: and other works. He died at Tivoli in 1503.

MAFi'.tus ('ego), a Latin poet, born in Lombardy in 1407, greatly admired in iiis time. He wrote epigrams, and a humorous supplement to X'irgil, which he called the Thirteenth Book of the zEneid, and which has been as humorously translated into English by Mr. Ellis. JNIaff'iEUS wrote also some prose works. He was chancellor of Rome about the end of the pontificate of Martin V.; and died in 1458.

Mai-f.'Eus, or Maffei (F'rancis Scipio), a celebrated Italian poet, of an illustrious family, born at Verona in 1675. He distinguished himself by his valor at the battle of Donawert; and was a member of the academy of the Arcadi at Rome, and an honorary member of that of Inscriptions at Paris. He wrote many works in verse and prose, which are esteemed ; particularly, 1. The tragedy of Merope : 2. Ceremony, a comedy : 3. A translation, into Italian verse, of the first book of Homer's Iliad. 4. Many other pieces of poetry, in a collection entitled Rhyme and Prose, 4to. : 5. Verona lUustrata : 6. Istoria Diplomatica ; 7. Scienza Cavalleresca, an excellent work against duelling: 8. An edition of Theatro Italiano: 9. An edition of Cas-siodorus on the Epistles, &;c. : 10. Gallice Anti-quitates quasdam Selectse : and several othe r works. These last six are in prose. He died in

MAGADA, in mythology, a title under which \enus was worshipped in Lower Saxony ; where she had a famous temple, which was treated with respect even by the Huns and 'andals when tliey ravaged the country. It was destroyed by Charlemacrne.

MAGADOXA, an inhospitable town on the eastern coast of Africa, capital of a country of the same name. It is watered by a large river, the course of which, as well as the whole district, is little known to Europeans. The inhabitants ever opposed a most determined resistance to the Portuguese; and their jealousy of the people has been extended to all Europeans. In 1707 the Albemarle, East Indiaman, sent a boat on shore, which was seized, and all attempts to recover it proved fruitless. The greater part of the inhabitants are Mahommedans, though there are said to be some Abyssinian Christians here. The town is known from the coast by three remarkable mosques which rise in its centre. A reef of coral, lined by a sand-bank, fronts this place. Long. 46° 30’ E., lat. 2° 5’ N.

MAGAS, from juayacˆiˆttv, to sing or play in unison or octave, a musical instrument in use among the ancients. There were two kinds of Magades, the one a stringed instrument, formed of twenty chords arranged in pairs, and tuned to unison or octave so that they yielded ten sounds, the invention of which is ascribed by some to Sappho, by others to the Lydians, and by some to

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Timotlieus of Miletus. The other was a kind of flute, wlncli at the same time yielded very high and very low notes. The former kind was much improved by Timotheus of Miletus, who is said to have been impeached, because, by increasing the number of chords, he spoiled and discredited the ancient music.

MAGAZINE', n. s. Fr. maguzin ; Ital. mogaz-zino; Arab. 7nakza7i, a storehouse; Heb. TIPD. — Minsheu. A depository of treasures, provisions, or military stores ; hence any repository or metaphorical storehouse of ideas, discoveries, &cc.

If it should appear fit to bestow shipping in those harbours, it shall be very needful thai there be a magazine of all necessary provisions and ammunitions. lialeigh's Essay Plain heroick magnitude of mind Their armories and magazines contemns.

Mil I on. If our passions are unruly, if our appetites are outrageous, if temptations be violent, and threaten to overbear us, it leadeth us to a full maqasine, whence we may furnish ourselves with all manner of arms to withstand and subdue them. Barrow,

Some o'er the public magazines preside, And some are sent new forage to provide.

Drgden. His head was so well stored a magazine, that nothing could be proposed which he was not master of. Locke.

Useful arms in magazines we place. All ranged in order, and disposed with grace.

Pupe. Hast thou e'er scaled my wintry skies and seen Of hail and snows, my northern magazine'! Young.

When the stamp-officers demanded to stamp the last half sheet of the magazines, Mr. Cave alone defeated their claim, to which the proprietors of the rival magazines would meanly have submitted.

Johnso)i

A Magazine, in a fortified town, ought to contain stores of all kinds ; i. e. not only arms, ammunition, and provisions, but materials and tools

by which smiths, carpenters, wheel-wrights, &c., may make every thing belonging to the artillery ; as carriages, waggons, &c.

A Magazine, on shipboard, is a close room or storehouse, built in the fore or aft part of the hold, to contain the gunpowder used in battle. This apartment is strongly secured against fire, and no person is allowed to enter it with a lamp or candle : it is therefore lighted as occasion requires, by the candles or lamps in the light-room contiguous to it.

Magazine, Artillery. In a siege the magazine is about twenty-five or thirty yards behind the battery, towards the parallels, and at least three feet under ground, to hold the pow-der, loaded shells, port-fires, &c. Its sides and roof must be well secured with boards to prevent the earth from falling in : a door is made to il, and a double trench or passage is sunk from tiie magazine to the battery, one to go in and the other to come out at, to prevent confusion. Sometimes traverses are made in the passages, to prevent ricochet shot from plunging into them.

Magazine, Powoer, is that where gunpowder is kept in very large quantities. Authors differ greatly both with regard to the situation and ronstniction ; but all agree that they ought to

be arched and bomb-proof. In fortifications they are frequently placed in the rampart ; but of late they have been built in different parts of the town. The first })owder magazines were made with Gothic arches: but M. Vauban, finding them too weak, constructed them in a semicircular form, whose dimensions are sixty feet long within and twenty-five broad ; the foundations are eight or nine feet thick, and eight feet high from the foundation to the spring of tlie arch ; the floor is two feet from the ground, which keeps it from dampness. An engineer of great experience had observed that, after the centres of semicircular arches are struck, they settle at the crown and rise up at the haunches, even with a straight horizontal extrados, and still much more so in powder magazines, whose outside at top-is formed like the roof of a house, by two inclined planes joining in an angle over the top of the arch, to give a proper descent to the rain.

MAGDALENA, a considerable river of South America, in New Grenada, rises in the province of Popayan, and runs a northerly course of 400 miles in the valley between the ridges of the Andes. It receives the tribute of numerous subordinate streams. A great trafl[ic is carried

on throughout its course by means of large flat-bottomed boats, but tlie navigation is exceedingly irksome, not only on account of the heat, but through the great number of inusquitoes with which the river is infested. On its entrance into the sea it forms a small isle or rock, called the Isla Vˆerde. The waters do not embody themselves with the sea for a distance of more than twenty leagues ; and as far as this they are perfectly pure and sweet to the palate. Its mouth is in lat. 11° 2’ N.

MAGDALENE’S Cave, a cave of Germany, in Carinthia, ten miles east of Gortz. It appears like a chasm in a rock, and at the entrance torches are lighted to conduct travellers. It has several divisions, with a vast number of natural pillars, white as snow, and almost transparent, which give it a beautiful appearance. The bot-tom is also formed of stalactite, so tiiat it has been likened to the ruins of an enchanted castle, surrounded with magnificent pillars, some entire and others broken.

MAGDALENETTES, a name given to divers communities of nuns, consisting generally of penitent courtezans. Such are those at Metz, established in 1452; those at Paris, in 1492; those at Naples, first cstaidished in 1324, and endowed by queen Sancha; and those of Rouen and Bourdeaux, which had their original among those of Paris in 1018. In each of these monasteries there are three kinds of persons and congregations: 1. Those wlio are admitted to make vows, and who bear the name of St. Magdalen; 2. The congregation of St. Martha, composed of those wliom it is not judged proper to admit to vows ; 3. The congregation of St. Lazarus, composed of such as are detained there. The religious of St. Magdalen at Home were established by pope Leo X. Clement \TII. settled a revenue on them ; and farther appointed tiiat the effects of all public prostitutes, dying intestate, should fall to them; and that the tes-MAG

laments of the rest should be invalid unless they bequeathed a portion of their effects, at least a fifth part, to them !

MAGDl'-BUllG, a government of the Prussian States in Lower Saxony, comprising a part of tlie Old Mark on the left side of the Elbe, tlie principality of llalherstadt, the abbey of (Jued-linburg and its domam, Wernigerode, Schauen, and the bailiwics of Barby, Gommern, and Kloetze : or the fifteen circles of

Magdeburg,

Kalbe,

Wanzleben,

Wolmerstadt,

Neuhaidensleben,

Jerichow Loburg,

Genthin,

Aschersleben,

Ilalberstadt,

Oclierslebeii,

Osterwick,

Stendal,

Salzwedel,

Osterburg,

Gardeleban.

The old duchy should not be confounded with the province of tliis name, since, though apartot it is included in the latter, another part belongs to the Prussian province or government of Merseburg. The area of the duchy was 2060 square miles; its population 290,000: that of this province 4400 square miles, and the population -ˆ46,000.

It is fertile in corn, which is exported in considerable quantity : flax, hemp, and chicory, for making coffee, are also raised to some extent; wood, however, is scarce. The principal minerals are coals in various parts ; metals in the mountains of the Ilartz; salt; and porcelain earth. The silk-worm has been introduced here with some success; and, although woollen and linen constitute the chief fabrics, silk has become, in consequence, a considerable manufacture. The Elbe traverses this government from north to south. Magdeburg is the chief emporium of trade.

Magdeburg, the capital of the above government, and formerly of all Germany, is a fortified city of great trade and strength, and very ancient. Its name signifies the maiden city; which, some ima2;ine, took its rise from an ancient temple of Venus, which stood here. The founder of the city is said to have been Otho I., or his empress Editha, daughter of Edmund I. of England. Otho also founded a Benedictine convent, which he afterwards converted into an archbishopric, of which the archbishop was a count palatine, and had great privileges. The city is pleasantly situated amidst fruitful plains on the banks of the Elbe. It has suffered greatly by fires and sieges; but by none so much as tliat in 1631, when count Tilly took it by storm, plundered, and burnt it, except the cathedral and convent. Of 40,000 burghers, not above 800 escaped. The soldiers committed the most shocking barbarities. It was formerly one of the Hanse and imperial towns. Editha, on wliom it was conferred as a dowry, among many other privileges, procured it the grant of a yearly fair.

Tiie city is now populous, large, and well-built, particularly the broad street and cathedral square, being divided into five parts; tlie Old Town ; the Neumaikt ; the I'riedrichstadt, or tower fort ; the ISew Town ; and the quarter called Sudenburg, which have their own mac;is-

trates, and are treated by the government as separate towns. The whole contained in 1816 a population of 30,250, of whom 28,000

were Protestants, the rest Catholics and Jews. The New Town lies on the Elbe, to the north-east of the Old Town, from which it is separated by fortifications. The principal squares are the cathedral square ; the old market, ˆith a statue of the emperor Otho the Great; and tlie prince's market, adjoining the public walks. The exciiequer, the court-house, the ducal palace, the regency house, government house, and the new and old arsenals, are the most remarkable public buildings. The cathedral is of freestone, with two spires. Magdeburg has also three houses of council or assembly, a Catholic church in the citadel, twelve Protestant churches, one Catholic and three Protestant convents, five hospitals, two orphan-houses, a house of correction, and workhouse. Principal public walks are the prince's rampart, the freemasons' garden, and the banks of the Elbe. Here are courts of justice for Prussian Saxony ; the offices for the civil affairs of the government of Magdeburg; a Protestant consistory ; the Lutheran establishment of Notre Dame, which serves as a gymnasium; a medical board ; cathedral school, and town gymnasium; two mercantile schools ; and a school of midwifery. Magdeburg has also various public libraries, literary clubs, and collections of paintings. It is accounted on the whole a pleasant residence. A German theatre belongs to the town, and anodier to a private society. The environs are also pleasant. At a short distance from the town is the Bergen monastery, and the salt works of Schoenebeck, producing about 30,000 tons annually. Like other towns in the north of Germany, Magdeburg contains extensive breweries and distilleries. The manufactures of the place derived, in the seventeenth century, much advantage from the number of Protestant emigrants who settled here from France and the Low Countries. The largest are of woollen and linen, stockings, hats, leather, tobacco, wax, and soap. Magdeburg was entered by the Frencii in 1806, and annexed to the kingdom of Westphalia. In 1813, on the retreat of the French from Germany, it was occupied by a strong garrison, and did not surrender till the fall of Buonaparte. It is seventy-five miles W. S.W. of Berlin, sixty-two N. N.W. of Leipsic, and 120 S. S. E. of Hamburgh.

MAGIX)LUM, or Magdalum, in ancient geography, a town of Lower Egypt, twelve miles south of Pelusium (Herodotus, Antonine) ; reckoned the Migdol or Magdol of Jeremiah.

MAGELHAENS (John Hyacinth de), a learned Portuguese ecclesiastic, who was a member of several foreign academies, as well as F. R. S. London. He came to London, and resided here many years, till his death in 1790. He published several useful tracts on experimental nhilosophy.

MAGELLAN (Ferdinand), a celebrated Portuguese mariner in the sixteenth century. He entered into tlie service of the emperor Charles V., and sailed from Seville with five vessels in 1519, when he discovered and passed through the straits to which he gave name, and sailed throrgh the

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South Sea to the l.adrone Islands, wliere, according to some, he was poisoned in 1520; though others say that he was killed in a mutiny of his people in the island of JMutan, on account of his severity. His voyage round the world has been often printed in English.

Magellax, Straits of, form a passage between the Atlantic and Pacific oceans, at the southern extremity of the continent of America, upwards of 300 miles in length : that is, reckoning from Cape 'irgin in the Atlantic, to Cape Desire in the Pacific Ocean. In some places they are several leagues over, in others not more than half a league. These straits were discovered, and passed through, in the year 1320, by Ferdinando Magellan, a Portuguese in the service of the crown of Spain, and hence derive their name. Though they possess many harbours affording wood, water, and fish, the heavy gales of wind that prevail liere, and the strength of the currents, have caused tliem to be almost entirely abandoned as a route between the two oceans, ships finding it both more safe and more expeditious to double Cape Horn. Westerly winds are the most prevailing, while the current usually sets from the Atlantic : at the entrance the tide rises twenty-eight feet.

MAGELLANIC Clouds, whitish appearances like clouds, seen in the heavens towards the south pole, and having the same apparent motion as the stars. They are three in number, two of them near each other. The largest lies far from the south pole; but the other two are about 11° distant. Boyle supposes that, if these clouds were seen through a good telescope, they would appear to be multitudes of small stars, like the milky way.

MAGGEROE, or Bare Island, a large island on the coast of Lapland, on which is the North Cape, thus named by Burroughs in 1556. It is separated from the main by a sound of the same name. The cape is an enormous block of granite, projecting far into the sea, and which, being exposed to all the fury of the waves, crumbles away continually. ‘ Here,’ says an intelligent traveller, ‘ every thing is solitary, every thing is sterile, every thing is sad and despond-ent ; the shadowy forest no longer adorns the brow of the mountain ; the singing of the birds, which enlivens even the woods of Lapland, is no longer heard in this scene of desolation ; the ruggedness of the dark gray rock is not covered by a single shrub ; the only nusic is the hoarse murmuring of the waves, ever and anon renewing their assaults on the huge masses

that oppose them. The northern sun, creeping at midnight along the horizon of the immeasurable ocean, at ‘he distance of five diameters, in apparent contact with the skies, forms the grand outline of the sublime picture presented to the astonished spectator. The incessant cares and pursuits of anxious mortals arc recollected as a ilream, the various forms and ener<:rics of animated nature are forgotten, the earth is contemplated only in its elements, and as constituting a part of the solar system.’ Lat. 71° 11’ N., long. 26° 0′ 45″ E. MAGGI, or Magus (Jerome), one of the most learned men of the sixteenth century, was born at An£;hiari in Tuscany. He applied him-VoL. Mil

self to the sciences, and distinguished himself so much in the art of war, that the 'enetians sent him into Cyprus as judge of the admiralty. When the Turks besieged I’amagusta, he invented mines and machines for throwing fire, by means of which he destroyed all the works of the besiegers, and in an instant overthrew what had cost the Turks infinite labor. But they obtained revenge ; for, taking the city in 1571, they plundered his library, carried him loaded with chains to Constantinople, and treated him in the most barbarous manner. He nevertheless, after passing the whole day in the meanest drudgery, spent the night in writing. He composed, from memory alone, treatises filled with quotations, which he dedicated to the Imperial and French ambassadors. These ministers, moved by compassion for this learned man, resolved to ransom him ; but, while they were treating for his delivery, Maggi made his escape to the imperial ambassador’s house ; when the grand vizier, enraged at his flight, seized, and caused him to be strangled in prison in 1572. His principal works are, 1. A Treatise on the Bells of the Ancients. 2. On the Destruction of the World by Fire. 3. Commentaries on ˆmilius Probus’s Lives of Illustrious Men. 4. Commentaries on the Institutes. 5. A Treatise on the Wooden Horse. These works are written in elegant Latin. He also wrote 6. A Treatise on Fortification, in Italian ; and 7. A book on the Situation of Ancient Tuscany.

MAGGIORE, Lago, a lake of tapper Italy, separating the Austro-Italian government of Milan, from the states of Sardinia, and extending from Sesto northwards to Locarno. Its length is upwards of thirty miles, its breadth between seven and eight ; its medium depth 160 feet, and its elevation above the level of the sea 1800 feet. It is traversed by the river Ticino ; and its waters, which are clear as crystal, contain various kinds of fish ; its banks abound in jiicturesque objects of every kind, and are adorned with a number of villages and towns. It contains several small islands, the most remarkable of which, the Bor-romean,

are the admiration of all travellers.

MAG’G0T,ri.5. (Sax.ma3Se,mosSe;Wel.

Mag’cottv, adj. S mageod,magrod; Goih.mad-ka. A small worm or grub; any embryo: any whimsey or fancy. The metaphorical use is low.

Taffata phrases, silken terms precise, Three-piled hyperboles, spruce affectation,

Figures pedantical ; these summer flies Have blown me full of maggot ostentation :

I do forswear them. Henceforth my wooing mind shall be exprest In russet yeas, and honest kersy noes.

Hhakspearc. To reconcile our late dissenters. Our hrethren though by other venters, I’nite tliein ami tiieir difTerent maggnts, As long and short sticks are in faggots.

Hiidihras. Out of the sides and back of the common caterpillar we have seen creep out small tmiggois.

Rail oil Crnition. To protend to work out a neat sciicine of thoughts with a maggoltji unsettled head, is as ridiculous as to think to write straight in a jiunbling coach. Nonii.

i D

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V'lom tlie sore altliouglj the insect iiies, II leaves a brood of maggots in disguise. Garth. She pricked his imiggol, and touched him in tlie tender point ; then he broke out into a violent passion. Arliutltnot. For bankrupts write when ruined shops are shut, As maggols ciawl from out a perished nut : His hammer this, and that his trowel quits, -Ind, wanting sense for tradesmen, serve for wits.

Young,

Maggot, or the fly-worm, is bred in flesh, from the egg of the great blue flesh-fly. Notwithstanding the distaste for this uniinal, its anatomy is worth attending to ; and may serve as a general history of tlie class of worms produced from the eggs of flies. It is white and fleshy ; its body is composed of a number of rings, like tlie bodies of caterpillars, and is capable at pleasure of assuming different figures, more or less extended in length, and consequently more or less thick. Although it lias no legs, it is able to move itself very swiftly ; and, in its f rst attempt to move its body, is extended to its greatest length, and assumes something of the figure of a pointed cone. The pointed part of the cone is the head of the animal, and is not separated from the next ring liy any deeper fur-row than the rest of the rings are from one another. Sometimes two short horns are thrust out from the head ; but more generally two scaly hooks are observable : these are, however, sometimes hid, and have each a case or sheath, into which the animal can retract tiiem at pleasure. These hooks are bent into an arch, the concavity of whicli is towards the plane on which the creature is placed; and they are thickest at their insertion in the head, and thence diminish gradually, till they terminate in a fine sharp point. They are placed parallel, and can never come together, and therefore cannot serve in the place of teeth for grinding the food; but merely to pull and sever it in pieces, that it may be of a proper size for the mouth. The maggot has also a kind of dart, at an equal distance between these hooks, about one-tiiird of their length. This also is brown and scaly like them ; it is quite straight, and terminates in a fine point. The hooks have two scaly thorns at their points; and this dart seems intended, by reiterated strokes, to divide and break the pieces of flesh these have separated from the rest into smaller yjarts. Immediately below the apertures for the egress of the hooks is placed the mouth, which the creature does not show unless pressed, when something like a tongue appears. The hooks supply the place ooth of

teeth and legs; as by fastening these iiooks into the substance on which it is placed, and then drawing up its body to it, it pulls itself along. Tiie back lowers itself by degrees as it approaches the extremity of tlie belly; and, near the place where the back begins to lower itself, are placed the two principal or-gans of respiration ; which are two small roundisii brown spots, easily distinguishable by the naked eye, as the rest of the body is white. Viewed through a microscope, each of these spots appears to be a brown circular eminence raised a little above the rest of the body. On each of them there are also three oblong oval cavities, of the shape of button-holes, each situated in a parallel

direction to each other; and their length nearly perpendicular to that of tlie body of the animal. These apertures admit the air. It has six of these, three uii each side of its body. The great transparency of its body shows that it has on each side a large white vessel running the whole length of the body. These vessels are most distinct towards its hinder part; and tliey terminate each in the brown spot above mentioned : hence they seem to be tiie two principal traclietc. The ramifications of these are very beautiful in this creature, especially on its belly : but no vessel analogous to the great artery in tiie caterpillar class can be discovered in these. See Entomology.

MAGI, or Magians, an ancient religious sect in Persia, and other eastern countries, who maintained that there were two principles, one the cause of all good, the other the cause of all evil : and, abominating the adoration of images, tiiey worshipped God only by fire ; which they looked upon as the brightest and most glorious symbol of Oromasdes, or the good god ; as darkness is the truest symbol of Anmanius, or the evil god. This religion was reformed by Zoroaster, who maintained that there was one supreme independent being ; and under him two principles or angels, one the angel of goodness and light, and the other of evil and darkness : that there is a perpetual struggle between them, which shall last to the end of the world ; that then the angel of darkness and his disciples shall go into a world of their own, where they shall be punished in everlasting darkness; and the angel of light and his disciples shall go inio a world of their own, where tiiey shall be rewarded in everlasting ligiit. The priests of the magi were the most skilful mathematicians and philosophers of the ages in which they lived, insomuch that a learned man and a magian became equivalent terms. The vulgar looked on their knowledge as supernatural ; and those who pretended to a knowledge of sorcery, divination, &c., taking upon themselves the name of magians,

originated the signification which the word magician now bears among us. This sect still subsists under the denomination of gaurs, or guebres, in Persia, where they watch the sacred fire with the greatest care, and never suffer it to be extinguished. They are divided into three classes, of whicli tlie first and most learned neither eat nor kill animals; but adhere to the old institution of abstaining from all living creatures. The magi of the second class refrain only from tame animals ; nor do the last kill all indifferently, it being the firm and distinguishing settled notion of them all, ri/v fiirtiiˆoxoxsiv £ivat,ˆthat there is a transmigration of souls.

MAG'IC,«.s.&«rf;.~\ Lat. mugia, magicus, Mag'ical, arfy". (from Gr. fiayoq; Pers.

Mag'icallv, adv. Imajus, mugh (a magi-Magic'ian, n. s. 3 cian). The pretended art of influencing or putting in action spirits, evil or good ; sorcery ; enchantment : the magician was the operator in tliis far famed art. J)oun of his hors Aurelius light anon, And forth from this magician is gon Home to his hous, and made hem wel at ese ; Hem lacked no vitaille that might hem plese.

Chaucer. Cunt. Tales.

MAGIC SQUARE.

I'll humbly signify what, in his name, That magical word of war, we have eflfected.

Shakspeare. She once being looft, The noble ruin of her mayick, Antony, Claps on his seawing.

Shakiyeare. Antony and Cleopatra. What black magician conjures up this fiend. To stop devoted charitable deeds? Sliakspeare.

'1 he writers of natural magick attribute much to the virtues that come from the parts of living creatures, as if they did infuse immaterial virtue into the part severed. Bacun.

In the time of Valens, divers curious men, by the falling of a ring, magically prepared, judged that one Theodorus should succeed in the empire. Camden.

If they savour not strong of magical receits, let the indifferent judge. Bp. Hall.

Pharaoh's curiosity carries him away quite from the sense of the judgment : he would rather send for his magicians to work feats, tlian to humble himself under God for the removal of this plague. Id.

And the brute earth would lend her nerves, and shake, 'Till all thy magick structures, reared so high. Were shattered into heaps. Milton.

An old rnagician, that did keep The' Hesperian fruit, and made the dragon sleep ; Her potent charms do troubled souls relieve. And, where she lists, makes calmest souls to grieve.

IValler. They beheld unveiled the magical shield of your Ariosto, which dazzled the beholders with too much brightness ; they can no longer hold up their arms.

Dryden. There are millions of truths that a man is not concerned to know ; as whether Roger Bacon was a mathematician or a magician. Locke.

By the use of a looking-glass, and certain attire made of cambrick upon her head, she attained to an evil art and magical force in the motion of her eyes.

Tutler. What charm, what magick, can over-rule the force of all these motives? Rogers.

Like castles built by magick art in air. That vanish at approach, such thoughts appear.

Granville. Every movement of the theatre, by a skilful poet, is communicated, as it were, by magic to the spectators. Hume.

Magic, Gr. MAFEIA, in its ancient sense, is the science or discipline and doctrine of the magi, or wise men of Persia. See Magi. The origin of magic and the magi is ascribed to Zoroaster. Salmasius derives the very name from Zoroaster, who, \v: says, was surnamed Mog, whence Magus. Others make him only the restorer and improver of the Persian])iiilosopliy, alleging, that many of the Persian rites in use among tlie magi were borrowed from the Zabii :imong the Chaldeans, who agreed

in many things with the magi of the Persians ; whence some make the name magus common both to tlie Chaldeans and Persians.

In a modern sense, magic is a science which teaches to perform wonderful and surprising efTects. The word originally carried with it a very innocent, nay laudable meaning ; being used purely to signify the study of wisdom, and the more sublime parts of knowledge; but as the ancient magi engaged also in astrology, divination, sorcery, &c.,the term magic in time became odious, and was only used to signify an unlawful

and diabolical kind of science, depend im, on the assistance of tlie devil and departed souls. Agrippa divides magic into three kinds ; *viz.* natural, celestial, and ceremonial or superstitious.

Magic, Natural, is, in fact, no more than the application of natural active causes to passive things or subjects ; by means of which many surprising, but yet natural, eflects are produced.

Magic, Celestial, borders on judiciary astrology ; it attributes to spirits a kind of rule, or dominion over the planets : and to the planets a dominion over men ; and on these principles builds a ridiculous kind of system. See Astrology.

Magic, Superstitious, or Geotic, consists in the invocation of devils or deemons ; its effects are usually evil and wicked, though very strange, and seemingly surpassing the powers of nature : tliey are supposed to be produced by virtue of some compact, either tacit or express, with evil spirits ; but the truth is, these supposed com-])acts iiave not the power that is usually imagined; nor do tltey produce half those eflPects ordinarily ascribed to them.

Magic Lantern. See Optics.

Magic Square, a square figure, formed of a series of numbers in mathematical proportion ; so disposed in parallel and equal ranks, as that the sums of each row, taken either perpendicularly, horizontally, or diagonally, are equal. Let the several numbers which compose any square number(for instance, 1, 2, 3, 4, 5, &c. to 25, inclusive, the square number), be disposed, in their natural order, after each other in a square figure of twenty-five cells, each in its cell ; if now you change the order of these numbers, and dispose them in the cells in such manner as that the five numbers which fill an horizontal rank of cells, being added together, shall make the same sum with tlie five

numbers in any other rank of cells wiiether horizontal or vertical, and even the same number with the five in each of the two diagonal ranks: this disposition of numbers is called a magic square, in opposition to tlie former disposition, which is called a natural square : Thus

Natural Square.

iVIagic Sq

aare.

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13

Moschopulus, a Greek author of no great antiquity, is the first that appears to have spoken of magic squares; and, from the age in which he lived, there is reason to imagine he did not look on them merely as a mathematician. However, he has left us some rules for their construction. But, as magic squares have not hitherto been found of importance in mathematics, we shall refer to tlie works of Bachet, I'renicle, Poignard, and De La Hire, for tlie various me-

2 1)2

thods of constructing these curious arrangements of numbers. Tlie latest writer upon tlie subject was Dr. Fraiiklm, who constructed what he called a maˆic scjuare of squares, and a magic circle of circles, whicii may be seen in tlie works of the ingenious Mr. Fergusor.. We are favored with the following original methods of tilling a magic square by an ingenious correspondent : — The following method of filling up a magic square of odd numbers, i. e. containing nine, twenty-five, forty-nine, eighty-one, 121, &c. cells, after numbers have been placed by A in any two cells, has never before been published. It also possesses the new properties of admitting of fractional, and of plus and minus numbers.

Fig. 1.

F

g-2.

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1

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17

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1

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1,5

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Fiff. 3.

Fig, 4.

Fis. 5.

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35

7

Fiff. 6.

Fisr. 7.

Fiff. 8.

7|

5i

7

G

6f

H

6J

8

■H

2

11

14

i

■ ■ vii

8 11

5

2

17

Fig. 1 contains nine cells : fi'.T. 2 twenty-five- In both the ratio is 1 ; that is to say, the progression is by one at a time from 1 to 9, or from

I to 25. And they both show where tlie lowest, the intermediate, and the highest numbers must be placed.

The order of progression is diagonal, e. g. imagine these two figures to be linen or cotton prints, and then place duplicates, triplicates, &c., of fig. 1, over and under it, and at each side, &c. ; and do the same by No. 2. You will find that, in fig. 1, 2 is the diagonal of 1, and 3 of 2 ; and that, in fig. 2, 2 is the diagonal of 1, 3 of 2, 4 of 3, and 5 of 4. The diagonal course will be equal to the number of cells in a row. At the end of eacli course, place the next number in the cell below the last number of the course, and begin a new course, and so on till the square is filled up. Thus, in fig. 2, 6 will be under 5,

II under 10, IG under 15, and 21 under 20 ; and 6, 11, 16, and 21, will begin new courses.

lluLE. — When A has inserted his two numbers, divide their difl'erence by the difference between the two cells. If it be a three-rowed square, fig. 1 (which you must have at hand for inspection) will show the number of A's two

cells ; or, if a five-rowed square, fig. 2 will do the same. If it be a seven-rowed square, you must be prepared witii that square filled up in a similar manner, and so on for a square containing any odd number of rows, for similar inspection. Having divided as above, the quotient will be the ratio.

Example 1. — Fig. 3 is a three-rowed square, containing A's two numbers. The diH'erence of numbers is 16 ; by inspecting fig. 1 you

will find the difference of cells to be that of 3 and 7, which is 4 ; the quotient, or ratio, therefore, will be 4. By inspecting fig. 1 you will also see that Cell 3 is the end of the course. You must therefore add 4 to 1 1, and place 15 in cell 4, 19 in cell 5, and 23 in cell 6, as in fig. 4. In tins example the numbers are all integers, and the sum 57, or the central number multiplied by the number of cells in each row.

Example 2. — In fig. 5 the difference of numbers IS 1, which divide by the difference between the cells, i. e. between 3 and 6, which is 3. Tiie quotient or ratio will be 0ˆ. Fill up, therefore, as in fig. 6. This example contains fractional numbers. The sum is 20, or 3 X 6§.

Example 3. — In fig. 7 the difference of numbers is nine ; of cells three ; and the quotient or ratio three. But, in filling up and diminishing from cell 4 to cell 3, you will be obliged to put i. minus into cell 3, iv. minus into cell 2 ; and vii. minus into cell 1. Tiiese minus numbers, in reckoning the number in each row, must be subtracted. In this example the sum is 15. See fig. 8.

Remarks. — 1. Every example admits of being filled up two different ways, e. g. in example 1, 27 may be considered as placed either in cell 7 or in cell 1.

2. As you have your choice of two ways, try both, and choose tliat which is the most easy and natural.

3. The central number being known, the sum will be known by multiplying by the number of cells in a row. When, therefore, you have half filled up a three-rowed square, you may finisli it by placing in the remaining cells the numbers whicli will complete the sum.

4. JJo not let A see your process, but perform it on a separate paper.

Magical Drum, an instrument of superstition used in Lapland, and made of beech,))ine, or fir, split in the middle, and hollowed on the fiat side, where the drum is to be made. The hollow is of an oval figure ; and is covered with a skin clean dressed, and painted with figures of various kinds, such as stars, suns and moons, animals and yilants, and even lakes and rivers ; and, since the preaching of Christianity among them, the acts and sufferings of our Saviour and his apostles are often added among the rest. All these figures are separated by lines into three regions or clusters. There is besides these parts of the drum, an index and a hammer. The index is a bundle of brass or iron rings, the largest of which has a hole in its middle, and the smaller ones are hunc; to it. The hammer or drum-stick is made of

the horn of a rein deer; and with this they beat the drum so as to make th»se rings move, they being laid on the ton fo' that pur-M A G I N D A N A O.

pose. In the motion of these rings, about the pictures figured on the drum, they fancy to themselves some prediction in regard to the subject of their enquiries.

MAGINDANAO, or Mindanao. The name is a compound of Mag, related to — in, country — and danao, a lake, sisinifying Relations living in a country round a lake. It is the third division of the Philippine Islands, being next to Luconia in extent: it has nearly 300 leagues of circuit, but very irregular, being deeply indented by a gulf, enclosed by a peninsula on the west. The interior is occupied by lofty ridges of mountains, separated by plains and covered with forests of teak and poon. Its minerals are little known, but some gold dust is brought to market and talc is abundant. The island is profusely watered, containing more than twenty navigable rivers, and near the south is a lake sixty leagues in circuit which discharges its waters by a large river. The soil is extremely fertile, producing rice and sago in abundance, and a species of cinnamon, but inferior to that of Ceylon, is indigenous. The forests swarm with wild horses, bullocks, buffaloes, goats, and hogs. The sea-coasts are occupied by JNIalay Mahommedans, who speak the Bissayan dialect as well as the Malay. In the interior is a race of negroes named Haraforas, who have little communication with the Malays.

The island is politically divided into three sovereignties. The first, under the sultan, is the most cr.nsiderable, and occupies the south-east portion of the island ; his residence is at Selan-g-an, on th-e east shore of the Great lUano Bay, and on the large river Pelangy, which empties itself by two branches, whose mouths are crossed by bars with two and three fathoms at high water. The town consists of about 100 houses, with a fortified palace of the sultan, and several wooden castles of the datoos or nobles. The passage of the river is also defended by a large pallisaded fort with many cannon and swivels. A number of Chinese are settled here. This is one of the chief residences of the pirates, and where they build their vessels.

The second sovereignty of tlie island is the Illano country, and is of a feudal nature, being under many chiefs. The third and smallest portion, chiefly comprehending the sea coasts of the western peninsula, is subject to the Spaniards, whose principal establishment is Samboangan, on the south-west extremity of the])eninsula. It consists of a fort of masonry surrounded by a rampart of earth ; its ordinary garrison is about 150 men: it seems to be of little other use to the Spaniards than as a place of transportation of their convicts from the other islands.

Misamis, the second Spanish establishment, is on the north side of the island, and has a garrison of 300 men. Correga, the third and last, is ar) insignificant post on the east.

llindostan cloths sell well here, especially long cloth ; white, blue, and red handkerchiefs, of all kinds; c'lintz with dark grounds; Surat goods of most sorts, particularly pittolies ; and all kinds of European cutlery. Chinese articles, carried from Sooloo to Magindanao, are kangans, Lf'ads, gongs, china basins with red edges, deep

brass plates five in a set, deep saucers three and four inches diameter, brass wire, and iron. Gold is produced in many parts ; besides which wax, rice, cassia, rattans, tobacco, and pepper, are exported.

The sultan is the head of the state, and next to him is his successor. There are various otiier state functionaries, with extensive powers ; six judges named by the sultan ; and six amba rajahs, or asscrtors of the people's rights. Their office is hereditary. The sultan's vassals possess great estates. They are sometimes INIahom.me-dans, though they are mostly native inhabitants. The latter only may be sold with the lands. They are more oppressed than the Mahom.me-dans, who are bound to accompany their lords ; but the Haraforas, being in a great measure excused from such attendance, pay certain yearly taxes which are not expected from the Mahommedan vassals.

The inhabitants of Magindanao areall addicted to piracy, and frequently extend their depredations to Java, Sumatra, Borneo, and Celebes. When the prow is large they strike the mast and hide among the rocks or up a creek. Canoes are then detached to plunder, and the proceeds are brought to the large vessel. When they at-tack the Dutch possessions they will make slaves even of persons of their own religion. Their intercourse with Europeans has given the inhabitants a knowledge of some of tlie European arts : in others they are

remarkably deficient, their blacksmiths being incapable of mˆaking any thing more complicated than a common nail. Their culinary utensils they procure from China. The male inhabitants pluck their beards out with pincers. They are remarkably fond of cock-fighting. The women, who are of stately appearance and manners, do not suffer the same strict confinement as in other Indian countries, being frequently present at audiences and public exhibitions. At the age of thirteen they have their teeth filed thin, and stript of the enamel, that they may be stained with black. The ladies visit each other with great ceremony on this occasion, and with a numerous train of attendants, who, as they approach the house, notify their approach by a disagreeable howl. They amuse themselves with' playing at draughts, dancing, kc, on which occasion they move slowly round in a circle. The dress of the women consists of a jacket, com-mon to both sexes, and a kind of petticoat. The men wear, besides the jacket, a cloth bound about the middle, coming up between the thighs. They tie up their hair in a singular manner, fixing it round a piece of wood five or six inches in diameter. The women tie their hair behind, and plait it like the Gentoo dancing girls. They also wear brass rings round the wrist, knee, and on each arm and leg. They are fond of wearing beads about their necks, and brass rings or beads dangling at their ears, which in l/Oth sexes are very wide and long.

Magellan first touched at this island on Easter day, in l.ˆ'il, and took possession of it 'n the name of Charles V. of Spain. The .Spaniards afterwards made settlements here, and subdued 'he northern coast, but never made any farther

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pTtogress : they now with difficulty retain the feeble colonies they planted. It was visited by the Poitnguese about 1537, and by the Dutch in 1607, lfilt3, anil 1627. In 1689 an envoy was sent by the Dutch East India Company, for permission to build a fort, which was refused. The Dutch made a sort of survey of it in 1693, and it was much frequented by English piratical vessels, which swarmed at this period in the Indian seas. The intercourse of the British here has not been frequent, and generally not very amica-ble. In 1758 the pirates from this island had the temerity to attack the settlement at Prince of Wales's Island, but were repulsed with loss ; and in 1798 the sultan seized a boat's crew belonging to the La Sybylle frigate, which had been sent on shore. They were afterwards liberated, but not until a ransom of 4000 dollars had been paid. In 1803 tbey fitted out a fleet of forty prows, with the intention. of invading the India Company's settlements in Celebes, but were met by the Swift cruizer, and defeated. Long. 119° 30' to 125° E., lat. 5° 40' to 9° 55' N.
MAGISTE'RIAL, flJj. ˆ Latin magister, Magiste'rially, adv. \ magistratus ; Fr. MAGiSTE'raALNESS, n. s. Inuigistrat ; Its.]. ?»a-Mag'istracy, (gistrato. Befitting

Mag'istrally, flc/u. I or appertaining to

Mlfc'iSTRATE, n.s. J a magistrate ; hence

lofty ; arrogant : magistracy, the office or dignity

A downright advice may be mistaken, as if it were spoken mugisUriullii. Bacon't Advice to Villiers.

Peremptoriness is of two sorts ; the one a fnagis-terialness in matters of opinion, the other a positive-ness in relating matters of fact : in the one we im-pose upon men's understandings, in the other on their faith. Ciovemment if llie Tongue.

Some have disputed even against magistrarii itself.

Atterlmrii.

The punishment of evil-doers, and the praise ot them that do well, is

the true intent of mugistracy, and will be the care of them who rightly understand the nature and honour of their oflice.

Dcddridge.

Duelling is not only an usurpation of the divine prerogative, but it is an insult upon vtughlracy and good government. Clarissa.

Unless a love of virtue light the flame,

Satire is, more than tliose he brands, to blame ;

He hides behind a magisterial air

His own offences, and strips others bare.

Cnwper.

MAGTSTERY, h. s. “i Of Lat. magisler ; be-Mag’sterially. > cause this procedure made known the principal ingredients. An obsolete term for what is now called the precipitate of certain bodies.

Paracelsus extracteth the magtslerii of wine, exposing it unto the extremity of cold ; whereby the aqueous parts will freeze, but the spirit be uncongealed in the centre Bronne.

The magisterii of vegetables consists but of tlie

of a public administrator of the law : magistrate, jˆore soluble and coloured parts of the plants that

the officer so administering the law : magistrally is an abbreviation of magisterially.

They chuse their magistrate! And such a one as he, who puts his shall. His popular shall, against a graver bench Than ever frowned in Greece.

Shakspeare. Corinlanns. You share the world, her magistracies, priesthoods. Wealth and felicity, amongst you, friends.

Ben Jonson. Such a government is maternal, not magisterial.

King Charles. I treat here of those legal punishments which magistrates inflict upon their disobedient subjects.

Decay of Pieit, Ye that are magistrates, not for God's sake only, but for your king's sake, whose deputies ye are, as he is God's ; — rouse up your spirits, awaken your Christian courage, and set yourselves heartily against the traitorly sins of the times. Bp. Hall.

What a presumption is this for one, who will not allow liberty to others, to assume to himself such a licence to controul so magisteriaUit '

Bratnhull against Hobbes. We are not magisterial in opinions, nor, dictator-like, obtrude our notions on any man.

Browne's Vulgar Errours. He had no other intention but to dissuade men from magistracy, orundertaking the publick offices of tongue, and, in a short time, became master of state. Browne. the Hebrew. His memory was very tenacious.

He bids him attend as if he had the rod over him , A gentleman lent him a MS. he was going to and uses a magisterial authority while he instructs print, and, some time after it was returned, the him-Drijden. gentleman, coming to him with a melancholy

Pretences go a great way with men that take fair …

words and magisterial looks for current payment.

L' Estrange. Those men are but trepanned who are called to govern, being invested with authority, but bereaved of power ; which is nothing else but to mock and betray them into a splendid and magisterial way of bting ridiculous. South.

afford it. Boj/te.

Of corals are chiefly prepared the powder ground upon a marble, and the magisterial salt, to good purpose in some fevers : the tincture is no more than a solution of the magisterial salt. Crew.

Magistery is a term made use of by chemists to signify sometimes a very fine powder, made by solution and precipitation ; as of bismuth, lead, &c., and sometimes resin and resinous substances ; as those of jalap, scamony, &c. ; but the most genuine acceptation is to express

that preparation of any bodj , wherein the whole, or most part, is, by the addition of somewhat, changed into a body of quite another kind ; as when iron or copper is turned into crystals of JNIars or Venus. Quincif.

This precipitate, washed and dried, is what has been called magistery of bismuth, or pearl-white.

Parkes's Chemical Catechism.

MAGLIABECIII (Anthony), was born at Florence in 1633. His father died when he was only seven years old, and his mother placed him as an apprentice with one of the best goldsmiths in Florence. When about sixteen years of ace his passion for learning began to show itself; and becoming acquainted with Michael Ermini, librarian to tlie cardinal de Medicis, he soon perfected himself, by his assistance, in the Latin

countenance, pretended it was lost, and requested Magliabechi to recollect what he could of it ; upon which he wrote out the whole without a single omission. He generally shut himself up the whole day, and in the evening received literary men who came to converse with him. Cosmo 111., grand duke of Florence, made him hi.ˆ

librarian ; but lie still continued negligent in his dress, and simple in his manners : an old cloak served him for a morning gown in the day, and for bed-clothes at night. The duke, however, provided for him a commodious apartment in his palace, which he was with difficulty persuaded to take possession of; but which he quitted four months after, and returned to his house. His dinner was commonly three hard boiled eggs, with a draught of water. He spent some hours in each day at the palace library, but is said never in his life to have gone farther from Florence than to Pratz, whither he once accompanied cardinal Norris to see a MS. He had a small window in his door, through which he could see all those who approached him, and if he did not wish for

their company iic would not admit them. He patronised men of learning; assisted them with his advice and information, and furnished them with books and MSS. Though he lived a most sedentary life, he reached the eighty-first year of his age ; enjoying, during the latter part of his life, such affluence as few have ever procured by their learning. He left a very fine library to the public, with a fund for its support.

MAGLOIRE (St.), a native of Wales. He embraced a monastic life, and went into France, where he was made abbot of Dol, and after that a provincial bishop of Brittany. He afterwards founded a m.onastery in the island of Jersey, where he died October 14th 575, aged eighty. His remains were transported to the suburbs of St. Jaques, and deposited in a monastery of Benedictines, which was ceded to the fathers of the oratory in 1628. This saint cultivated poetry with considerable success : the hymn which is sung at the feast of All Saints was composed by him; Ccelo quos eadem gloria consecrat, &c.

MAGNA Chart A, the great charter of the liberties of England, signed and sealed by king John at Runnemede, between Windsor and Staines, June lOth, t‘215 ; and confirmed by Henry III. and Edward I. This charter may be said to derive its origin from king Edward the Confessor, who granted several privileges to the church and state by charter : these liberties and privileges were also granted and confirmed by king Henry I. by a celebrated great charter. By this charter lie restored the Saxon laws which were in use under Edward the Confessor, but with such ‘ emendations as had been made in them by his father, with the advice of his jiarliament,’ at the same time annulling ‘ all evil customs and illegal exactions, by which the realm had been unjustly oppressed.’ Some of these grievances were specified in the charter, and the redress of them expressly enacted. According to one of our greatest antiquaries. Sir Henry Spelman, ‘ this was the original of king John’s Magna Charta, containing most of the articles of if, either particularly expressed, or in general, under the confirmation it gives to the laws of Edward the Confessor.’ So mistaken are they, says lord Lyttleton, who have supposed that all the privi-_ ‘eges granted in magna charta were ‘ innovations’ extorted by the arms of rebels from king John ! Matthew Paris also tells us, that, in the year 1215, the barons came in arms to king John at London, and demanded of him that certain

liberties and laws of king Edward, wiili other liberties granted to them, and to the kingdom and church of England, should be

confirmed, ‘as they were contained and set down in the charier of king Henry I., and in the laws above-mentioned.’ And the same historian, where he mentions the ‘ capitula,’ or rough draught of the great charter, delivered ta John by the barons, says, that the articles thereof ‘ were partly written before, in the charter of king Henry I. and partlv taken out of the ancient laws of “king Edward”.’ These passages, and also what he says before, of the barons having sworn at St Edmund’s Bury, to make war on the king, till he should confirm to them, by a charter under his seal, the laws and liberties granted in the charter of Henry I., sufficiently show, that they understood and intended this charter to be the original and foundation of that which they demanded and obtained from John. Besides, the first charter of Stephen ‘ confirms the liberties and good laws, which his uncle king Henry gave and granted, and all good laws and good customs, which the nation had enjoyed in the time of Edward tiie Confessor,’ words which evidently refer to the charter. It was also confirmed more expressly by king Henry II. Henry III., after having caused twelve men to make enquiry into the liberties of England in the reign of ilenry I., granted a new charter; which was the same as the present magna charta. This he several times confirmed, and as often broke; till, in the thirty-seventh year of his reign, he went to Westminster Hall, and there, in the presence of the nobility and bishops, who held lighted candles in their hands, magna charta was read, tiie king all the time holding his hand to his breast, and finally swearing solemnly faithfully and inviolably to observe all the things therein contained, &c. Then the bishops extinguishing the candles, and throwing them on the ground, they ail cried out, ‘ Thus let him be extinguished, and stink in hell, who violates this charter.’ It is observed that, notwithstanding the solemnity of this confirmation, king Henry, the very next year, again invaded the rights of his people, till the barons entered into a war against him ; when, after various success, he confirmed this charter, and the charter of the forest, in the fifty-second year of his reign. This charter confirmed many liberties of the church, and redressed many grievances incident to feu-dal tenures, of no small moment at the time; though now, unless considered attentively and with this retrospect, they seem but of trifling concern. But, besides these feudal provisions, care was also taken therein to protect the subject against other oppressions, then frequently arising from unreasonable amercements, from illegal distresses or other process for debts or services due to the crown, and from the tyrannical abuse of the prerogative of purveyance and pre-emption. It fixed the forfeiture of lands for felony in the same manner as it still remains ; prohibited for the future the grants of exclusive fislierics, and the erection i)(new bridges so as to oppress the neighbourhood. With i-espect to private

riglits, it established the testamentary power of tlie subject over part of his personal estate, tlie rest being distributed among his wife and children ; it laic' down the-law of dower, as

it has continued ever since ; and prohibited the appeals of women, unless after the death of their husbands. In matters of public police, and national concern, it enjoined a uniformity of weights and measures; gave new encouragements to commerce, by the protection of merchant strangers; and forbade the alienation of lands in mortmain. With regard to the administration of justice, besides prohibiting all denials or delays of it, it fixed the court of common pleas at Westminster, that the suitors might no longer be harassed with following the king's person in all his progresses ; and at the same time brought the trial of issues home to the very doors of the freeholders, by directing assizes to be taken in the proper counties, and establishing annual circuits; it also corrected some abuses then incident to the trials by wager of law and of battle ; directed the regular awarding of inquest for life or member; prohibited the king's inferior ministers from holding pleas of the crown, or trying any criminal charge, whereby many forfeitures might otherwise have unjustly accrued to the exchequer: and regulated the time and place of holding the inferior tribunals of justice, the county court, sheriff's torn, and court-leet. It confirmed and established the liberties of the city of London, and all other cities, boroughs,towns, and ports of the kingdom. And lastly (which alone would have merited the title that it bears of the great charter), it protected every individual of the nation in the free enjoyment of his life, his liberty, and his property, unless declared to be forfeited by the judgment of his peers, or the law of the land. This excellent charter, so equitable and beneficial to the subject, is the most ancient written law in the kingdom. T3y the 2.'jth Edward I. it is ordained, that it shall be taken as the common law ; and by the 43d Edward III. all statutes made against it are declared to be void.

MAGNAL'ITY, n..s. Lai. magnalia. A great thinii ; something above the common rate : a word now happily out of common use.

Too greedy of nmgnaUties, we make but favour-able experiments concerning welcome truths.

Brouiie.

MAGXANBI'ITY, n. s. •% Fr. magmniwitc , M.\GNAN'rM0US, arf/. >Lat. nuignaniinus.

Macnan'imoi'sly, «(/y. 5 Greatness or elevation of mind ; bravery : the adjective and ad-verb corresponding.

Confidence in one's self is the chief nurse of inaq— nanimitti. Sir P. Sidney.

With deadly hue, an armed corse did lye, In whose dead face he read great magnanimity.

Spenser. Let but the acts of the ancient Jews be but indifferently weighed, from vvho?e rnagitanimitft in causes of most extreme hazard those strange and unwonted resolutions have grown which, foi all circumstances, no people under the roof of heaven did ever hitherto match. Hooker.

They had enough revenged . having reduced Their foe to misery beneath their fears ; The rest was mngnanimitit to remit, If some convenient ransom was proposed.

Milton. To give a kingdom hath b«4.'n thought Greater and nobler done, and to lay down Far more mag7ianimouf, than to .tssune. Id.

In strength All mortals I excelled, and great in hopes, Witli youthful courage, and magnanimous thoughts Of birth from heaven foretold, and high exploits.

fd. A complete and generous education fits a man to perform justly, skilfully, and magnanimouslu, all the othces of peace and war. Id. on Education.

Magnanimous industry is a resolved assiduity and care, answerable to any weighty work.

Greu's Cosmologia. Exploding many things under the name of trifles is a very false proof either of wisdom or magnanimili/ , and a great check to virtuous actions with regard to fame. Swift.

I have yet found among them, in not a few instances, some of the noblest virtues, magnanimilu, generosity, disinterested friendship, and even modesty. Burns.

jNIagxesia, in chemistry, one of the primitive earths, having a metallic base called magnesium. It lias been found native in the state of hydrate. Magnesia may be obtained by pouring into a solution of its sulphate a solution of subcarbonate of soda, washing the precipitate, drying it, and exposing it to a red heat. It is usually procured, in commerce, by acting on magnesiau limestone with the impure muriate of magnesia, or bittern of the sea-salt manufactories. The muriatic acid goes to the lime, forming a soluble salt, and leaves behind the magnesia of both tlie bittern and limestone. Or the bittern is decomposed by a crude subcarbonate of ammon-a, obtained from the distillation of bones in iron cylinders. Muriate of ammonia and subcarbonate of magnesia result. The former is evaporated to dryness, mixed with chalk, and sublimed. Subcarbonate of ammonia is thus recovered, with which a new quantity of bittern may be decomposed; and thus, in ceaseless repetition, forming an elegant and economical process. 100 parts of crystallised Epsom salt require, for complete decomposition, fifty-six of subcarbonate of potash, or forty-four dry subcarbonate of soda ; and yield sixteen of pure magnesia after calcination.

Magnesia is a white soft powder. Its specific gravity is 2‘3 by K’irwan. It renders the syrup of violets, and infusion of red cabbage, greeoi, and reddens turmeric. It rs infusible, except by tlie hydrogen blow-pipe. It has scarcely any taste, and no smell. It is nearly insoluble in water; but it absorbs a quantity of that liquid with the production of heat. And, when it is thrown down from the sulphate by a caustic al-kali, it is combined with water, constituting a hydrate, which, however, separates at a red heat. It contains about one-fourth its weight of water.

When magnesia is exposed to the air it very slowly attracts carbonic acid. It combines with sulphur, forming a sulphuret.

The metallic basis, or magnesium, may be obtained in the state of amalgam with mercury, by electrisation, as is described under Barh m ; but a much longer time is necessary. Sir 11. Davy succeeded also in decomposing magnesia, by passing potassium, in vapor, through it, heated to whiteness in a tube of platinum out of the contact of air. lie then introduced a small quantity of mercury, and heated it

gently for some time in the tube. An amalgam was obtained, which by distillation, out of the contact of the atmosphere, afforded a dark-gray metallic tllm, infusible at the point at whicli plate-iilass softened, and which iu the process of the distdlation of the mercury rendered the glass black at its point of contact with it. This film burned with a red light when heated strongly, and became converted into a white powder, which had the character of magnesia. When a portion of magnesium was thrown into water it sunk to the bottom, and effervesced slowly, becoming covered with a white powder. By adding a little muriatic acid to the vvater the effervescence was violent. The metal rapidly disappeared, and the solution was found to contain magnesia.

When magnesia is strongly heated, in contact with two volumes of chlorine, this gas is absorbed, and one volume of oxygen is disengaged. Hence it is evident that there exists a combination of magnesium and chlorine, or a true chloride. The salt called muriate of magnesia is a compound of the chloride and water. When it is acted on by a strong heat, by far the greatest part of the chlorine unites to the hydrogen of the water, and rises in the form of muriatic acid gas ; while the oxygen of the decomposed water combines with the magnesium to form magnesia.

Magnesia is often associated with lime in minerals, and their perfect separation becomes an interesting problem iu analysis. Mr. Longchamp has published a valuable paper on the subject, in the twelfth volume of the Ann. de Chim. et de Phys.

Magnesia is chiefly used as an antacid, purgative, and liihontriptic, in medicine. When incautiously used for a long time it may produce very serious evils, of which a remarkable case is narrated by Mr. Brande, in the first volume of his Journal. A lady was recommended to take magnesia, in consequence of some very severe nephritic attacks, accompanied with the passage of gravel. She was desired to take a tea-spooi.- ful every night; and Henry's calcined magnesia was preferred, as that alsvays operated upon the bowels, and ' carried itself off,' wiiich other magnesia did not, but on the contrary felt heavy and

uneasy on the stomach. The dose was gradually increased to two tea-spoonfuls, in order to produce effect upon the bowels, wliich this quantity ne%ˆcr failed to do The symptoms for which it was ordered were soon removed, but the plan was persevered in for two years and a half, with littli! intermission; so that as tlie average weigiit of a tea-spoonful is at least forty grains, and the average dose was a tea-spoouful and a half, it may be presumed that she took, during the above period, between nine and ten pounds troy. * In the course of the last autumn she became sensible of a tenderness in tlie left side, just above the groin, connected witli a deeply seated tumor, obscurely to be felt upon pressure, and subject to attacks of constipation, with painful spasmodic action of the bowels, tenesmus, and a highly irritable state of stomach. These attacks recurred every two or three weeks, varying in violence, but requiring the use of ictive remedies. Several irregular lump.s, of a soft light-brown substance, were voided, having the

appearance of a large mass broken down, and when dry extremely friable. A part of each was subjected to analysis, and found to consist entirely of subcarbonate of magnesia, concreted by the mucus of the bowels, in the proportion of about forty per cent. Siie was cured by the use of other purgatives.' Another case is mentioned, in which not only large quantities of a concretion of a similar description were voided, but upon examination after death, which took place perhaps six months after any magnesia had been taken, a collection, supposed to be from four to six pounds, was found imbedded in the head of the colon, whicli was of course much distended.

Magnesia, Hydrate of, in mineralogy. This mineral was discovered by Dr. Bruce of New York, in small veins in serpentine at Hoboken, in New Jersey. Color white. Massive. Lus-tre pearly. Fracture foliated or radiated. Semitransparent in the mass ; transparent in single folia. Soft, and somewhat elastic. Adheres slightly to the tongue. Specific gravity 2"13. St-luble in acids. Its constituents are magnesia 70, water 30, which approaches to one prime equivalent of each. — Jameson.

Magnesia, in ancient geography, a maritime district of Thessaly, lying between the south part of the Sinus Thermaicus and the Pegasseus on the south, and to the east of the Pelasgiotis. Magnesius and Magnessus, the epitliet. Horace.

Magnesia, a town of Asia Minor, on t'le Mseander, about fifteen miles from Ephesus. Themistocles died there : it was on*; of the tliree towns

given him by Artaxerxes, ‘to furnish his table with bread.’ It is also celebrated for a battle fought there, 190 years before the Cliristian era, between the Romans and Ant ochus king of Syria. The forces of Antiochus amounted to 70,000 men according to Appian, or 70,000 foot and 12,000 horse according to Livy, winch lias been exaggerated by Florus to 300,000 men ; the Roman army consisted of about 28,000 or 30,000 men, 2000 of whom were employed in guarding tlie camp. The Syrians lost 50,000 foot and 4000 horse; and tlie Romans only 300 killed, with iwenty-five horse. It was founded by a colony from Magnesia in Thessaly.

Magnesia ad Sipyeum, a town of Tantalis, the residence of Tantalus, and capital of Ma;onia, vviiere now stands tlie lake Sale ; seated at the foot of mount Sipylus, east of the Hermus. It was adjudged f’rce under the Romans, but was destroyed by an earthquake in the reign of Tiberius.

MAONESITF. Color yellowish-gray, or yellowish-white, and marked with spcts. It occurs massive, tuberose, rcniform, and vesicular. Surface rough. Dull. Fracture conchoidal. I’ragments rather sharp-edged. Opaque. Scratched by fluor spar, but it scratclies calcareous spar. It adheres pretty strongly to the tongue. It feels rather meagre. Streak dull. Rather easily Frangible. Specific gravity 2.881. Infusible ; but before the blow-pipe it becomes so hard as to scratch glass. Its constituents are, 46 magnesia, .51 carbonic acid, 1 alumina, 0*25 fcrrugmous manganese, 0‘16 lime, 1 water. — Bucholz. It is found at Ilrubschitz in Moravia, in serpentine rocks.

MAGNETISM.

MAG’NET, H.s. -V

Magset’ic, adj. fvrjraq. Mayv>;Jia, tlie

Lat. mugnes ; Gr. jxay—

VTfTUQ.

Magnf.t'ical, ˆcountry where mainets]Mag'netism, M.S. ' were rirst, as it is saiil, discovered. The loadstone; the stone ihat attracts iron ; any ore or metal thus attractive : magnetic and ma-jˆnetical, having the power of a magnet; attraction in any way: magnetism, tlie power of the loadstone ; attraction generally ; the science that teaches the nature of magnetic powers or operations.

The moon is magnetical of heat, as the sun is of cold and moisture. Bacon's Xatural Jiislort/.

She should all parts to reunion bow ; She that had ;dl tmisnetic force alone • To draw and fasten hundred parts in one.

Dome. They, as they move towards his all-chearing lamp, Turn swift their various motions, or are turned By bis magnetick beam. 3Iiltoii's Paradise Lost.

Draw out with credulous desire, and lead At will the manliest resolutest breast. As tiie magnetick hardest iron draws. Milton. Many other magnetisms, and the like attractions through all the creatures of nature. Browne.

Two magnets, heaven and earth, allure to bliss, The larger loadstone that, the nearer this. Driiden.

It may be reasonable to ask. Whether obeying the magnet be essential to iron ! Locke.

i'he magnet acts upon iron through all dense bodies not magvetick, nor red hot, without any diminution of its virtue ; as through gold, silver, lead, glass, water. Neicton's Opticks.

Review this whole magnetick scheme.

Blackmore. By the magnetisms of interest our affections are irresistibly attracted. Glanville's Scepsis.

Magnetism coincides with electricity in so many important points, that the existence of two magnetic ethers, as well as of two electric ones, becomes highly probable. Darwin.

Magnetism. This science may justly be considered as yet but in its

infancy, although the facts elicited since the commencement of the nineteenth century, by Barlow, Morichini, and Davy, bid fair to throw considerable light ou some of its more recondite principles.

The theory of magnetism bears a very strong resemblance to tiiat of electricity, and this analogy has been pretty fully examined under the article devoted expressly to Electro-Mag- netism. We have seen the electric fluid not only exerting attractions and repulsions, and causing a peculiar distribution of neighbouring portions of a fluid similar to itself, but also excited in one body, and transferred to another, in such a manner as to be perceptible to the senses, or at least to cause sensible effects, in its passage. The attraction and repulsion, and the peculiar distribution of the neighbouring fluid, are found in the phenomena of magnetism; but we do not perceive any actual excitation, or perceptible transfer of the maL,nctic fluid from one body to another; and it has also this striking peculiarity, that metallic iron is very nearly the only substance capable of exhibiting any strong indica- tiofis of its presence.

A magnet, whether natural or artificial, is always possessed of the following characteristic properties, whicli are inseparable from its nature ; so that a body cannot be called a magnet, unless it be possessed of all those properties at the same time. 1. It attracts iron and other ferruginous bodies. 2. When a magnet is placed so as to be at liberty to move itself with sufficient freedom, it turns one, and constantly the same, part of its surface towards the north pole of the earth, or towards a point not much distant from it ; and, of course, it turns the opposite part of its surface towards the south pole of the earth, or towards a point not much distant from it. Those parts on the surface of the magnet are therefore called its poles; the former being denominated its north pole, and the latter its south pole. This property itself is called the ‘ magnet’s directive power,’ or the ‘ magnetic polarity;’ and when a magnetic body places itself in that direction, it is said to traverse. A plain perpendicular to the horizon, and passing through the poles of a magnet when standing in their natural direction, is called the magnetic meridian ; and the angle which the magnetic meridian makes with the meridian of the place where the magnet stands, is called the declination of the magnet, or more commonly of the magnetic needle, at that place ; because the artificial magnets, mostly used for observing this property, are generally made of a slender shape, and sometimes real sewing-needles, rendered magnetic, are used for this purpose. 3. When two magnets are placed so that the north pole of one of them is opposite to the south pole of

the other, then they attract each other ; but if the south pole of one magnet be placed opposite to the south pole of the other, or if the north pole of the one be brought near to the nortli pole of the other ; in either case, a repulsion takes place. In short, magnetic poles of the same name repel each other; but those of different names attract each other. 4. When a magnet is situated so as to be at liberty to move itself with sufficient freedom, it generally inclines one of its poles towards the horizon, and of course it elevates the other pole above it. This is called the inclination, or dipping of the magnet, or of the magnetic needle. 5. Any magnet may, by proper methods, be made to impart those properties to iron, or to steel, or, in short, to most ferruginous bodies.

The earliest theories of magnetism partook of the systematic ideas that prevailed among the philosophers of the day. The vortices of Descartes captivated the mind to such a degree, that attempts were made to introduce them every where. They were given to electric bodies, and the magnet must also have its share. Afterwards the idea suggested itself of simple effluvia of magnetic matter, the moleculae of which advanced towards each other, or took a retrograde motion, according to the manner in which the respective effluvia of two magnets met. There were supposed to be in the iron a kind of small hairs that performed the office of valves, to aid

he passage of tho fluid in one ˆvay, and to op-pose its passage when it presented itself in a contrary direction. Such was, amonij; others, the opinion of Dufay; and this phdosopher, who had seen so clearly the principle of electric motion, when he came to apply it to masjuetism, presented a machine of his own invention, instead of the mechanism of nature.

jT,pinus was the first, who, to explain the phenomena of magnetism, made use of simple powers subjected to calculation. The idea which served as the basis of his theory was suggested to him while holding a tourmalin in his hand. He had discovered that the effects of this stone were the result of electricity, and had remarked that it repelled on one side, and attracted on the other, a small electrised body. To these two sides he gave the name of poles, and this appellation, which might have passed for a convenient mode of expression only, became the word really expressive of the thing. He saw in the tourmalin a kind of small electrical magnet, and, comparing the phenomena of real magnet, with those of idio-electric bodies, he found that the action of the two fluids might be reduced to the same laws ; and thus added to the merit of having improved the theory of electricity, and created, as it were, the theory of magnetism, that of combining in the same link these two grand portions of the chain of human science.

We may thus more simply illustrate the theory of ˆ‘Epinus. He imagined that there must exist a fluid capable of producing all the phenomena of attraction and repulsion, and with a subtilty so great, as to penetrate the pores of all bodies ; and also of an elastic nature, its particles being repulsive of each other. At the same time he imagined a mutual attraction between the magnetic fluid and iron, or other ferruginous bodies. According to this hypothesis, iron and all ferruginous substances contain a quantity of magnetic fluid, which is equally dispersed through their substance, when those bodies are not magnetic ; in which state they show no attraction or repulsion towards each other, because the repulsion between the particles of the magnetic fluid is balanced by the attraction between the matter of those bodies anil the same fluid, in which case those bodies are said to

be in a natural state ; but when, in a ferruginous body, the quantity of magnetic fluid belonging to it is driven to one end, then the body becomes magnetic, one extremity of it being now overcharged with magnetism, and the other extremity undercharged. Bodies thus modified, or rendered magnetic, exert a repulsion between their overcharged extremities, in virtue of the repulsion between the particles of that excess of magnetic fluid which is more than overbalanced by the attraction of their matter. There is an attraction exerted between the overcharged extremity of one magnetic body and the undercharged extremity of the other, on account of tho attraction between that fluid and the matter of the body ; but, to explain the repulsion which takes place between their undercharged extremities, we must either imagine that the matter of ferruginous bodies, deprived of its magnetic fluid, must be repulsive of its own particles, or that the undercharged extremities appear to repel each other, only because either of tiieui attracts the opposite overcharged extremities; botli which suppositions are embarrassed with difliculties. A ferruginous body, therefore, is rendered magnetic by having the equable difi"usion of magnetic fluid throughout its substance disturbed, so as to have an overplus of it in one or more parts, and a deficiency of it in the remainder, and it remains magnetic as long as its impermeability prevents the restoration of the balance between tlie overcharged and undercharged parts.

Such was the state of our knowledge as to tliis subject, when on Coulomb the task seems to have devolved of estimating those very small forces discoverable only by the most delicate attention. This philosopher took two magnetic bars which he so disposed on a right line that their opposite poles were about twenty-five millimetres from each other. In the intermediate space he placed, successively, a number of small cylinders made of different materials, and from seven to eight millimetres in length. Each cylinder was suspended freely to a silk thread, such as it comes froii the silk-worm. Coulomb observed that this cylinder, of whatever material it was composed, always arranged itself exactly according to the direction of the bars, and, if it were moved out of that direction, it invariably returned to it again after a certain number of oscillations. Gold, silver, copper, lead, glass, chalk, the bones of animals, and different kinds of wood, were tried, and all these bodies felt the action of the magnetic bars.

Two ways suggested themselves of explaining these phenomena : the first, by supposing that all the elements which enter into the composition of our globe were, by their nature, susceptible of the magnetic virtue, but that in most bodies it is so trifling as to be nearly nugatory ; and has scarcely been observed except in iron, which

possesses it in an eminent degree. The otiier explanation supposed that the magnetic action exerted by the bars, in tlie experiments we have cited, was owing to molecule of iron, pervading in an imperceptible manner the different natural substances, and eluding die strictest investigation of chemical analysis. Coulomb, who was favorable at first to the former explanation, appears to have wavered since between the two, and has devised a set of experiments, which he has in part executed, the object of which is to measure the action of the bars on the different bodies, and ascertain, relative to the mass of each, what quantity of iron must be disseminated in its interior, to produce the number of oscillations made in a given time.

However that may be, the fact we have stated is the more interesting, as it leads us to consider \he terrestrial globe, taken in its whole extent, as an entire magnet, the force of whicli is the aiigre-gated amount of all those exerted by the molecula; that enter into its composition. This fact being once fully established, with regard to all terrestrial bodies, would advantageously compensate for the hypothesis of an individual magnetic nucleus, which has the appearance of having been invented by naturalists, ralherto support their own theories, than to give a fair representation of nature

We shall remark here, that 3\I. Prevost liad previously asserted that, to explain natural magnetism, it was not necessary lo iiave recourse to llie supposition of a particular nucleus. It is sathcient, according to this naturalist, that the decomposition of llie fluid, which is only effected in tlic interior of the iron, by means in our own power, may have place even out of that metal from natural causes more powerful than the agents of art, and whose permanent influence would keep the two poles of tl>e globe in two states of opposite magnetism.

The magnetising power of the more refrangi-ble rays of light has long been a subject of deep interest to the scientific world, but it lias unfortunately been involved in a degree of uncertainty which is seldom attached to a point of experimental enquiry. Dr. Moricliini, a respectable physician at Rome, discovered this remarkable property of

the violet ray. His experiments were successfully repeated by Dr. Carpi of Rome, and the marquis Cosimo Ridolfi, at Florence ; but as jM. Dhombre Firmas, who resides at Alais, and professor Configliachi of Pavia, had both failed in obtaining any magnetic effect from violet liglit ; and as M. Berard, a most skilful experimenter, had observed only casual indications of magnetism, the discovery of Morichini was brought into considerable discredit both in F'rance and England.

Fortunately, however, for the reputation of the Italian physician, his experiments were performed both before Sir Ilumjihry Davy, and professor Playfair; before the former in 1814, and the latter in 1817. Sir Humphry Davy stated, that he had paid the most diligent attention to one of Morichim's experiments, and that '.e saw an unmagnetised needle rendered dis-tmctly magnetic by violet light.

When professor Playfair was at Rome, he saw the experiment performed by Dr. Carpi, in the absence of Morichini, before a party of Knglish and Italian gentlemen. The following account was drawn up by an observer from a conversation wliicli he had with that philosopher :

' The violet light was obtained in tlie usual manner, by means of a common prism, and was collected into a focus by a lens of a sufficient size. The needle was made of soft wire, and was found, upon trial, to possess neither polarity nor any power of attracting iron filings. It was fixed horizontally upon a support, by means of wax, and in such a direction as to cut the magnetic meridian at right angles. The focus of violet rays was carried slowly along the needle, proceeding from the centre towards one of the extremities, care being tai<en never to go back in the same direction, and never to toucli the oilier half of the needle. At the end of half an hour after the needle was exposed to the action of the violet rays, it was carefully examined, and it had acquired neither polarity nor any force of attraction ; but after coiitmumg the operation twenty-five minutes Innuer, when it was taken off and placed on its point, it traversed with great alacrity, and settled in the direction of the magnetical merilian, with the end over which the rays had passed turned towards the north. It also attracted and suspended a fringe of iron

filings. The extremity of the needle that waˆ exposed to the action of the violet rays repelled the north pole of a compass-needle. This effect was so distinctly marked as to leave no doubt, in the minds of any who were present, that the needle had received its magnetism frt)m

the action of the violet rays.'

Such was the state of this subject when Mrs. Somerville directed her attention to it ; and it is no slight praise to say, that she has set to rest a question on which the scientific world was divided, and that, by the sagacity and ingenuity with which this lady has conducted her experiments, she has rendered visible, even in the northern climate of Scotland, one of the most delicate of the magnetic influences, whici), it was agreed, on all hands, required for its develope-ment the serene sky of an Italian climate. The following is a general outline of these interesting experiments : — Having obtained the prismatic spectrum, by means of an equiangular prism of flint-glass placed in a hole in the window-shutter, Mrs. Somerville took a sewing-needle, about an inch long, and entirely devoid of magnetism. This was ascertained by its attracting indifferently either pole of a sewing-needle magnetised in the usual way. This magnetised needle was pushed through a piece of cork, in which was inserted a glass cap, and it was in that state made to revolve freely on the point of another sewing-needle. Conceiving that no polarity would be superinduced if the whole needle was exposed to its action, she covered one half of it with pa-per, and exposed the other half to the violet rays of the spectrum, cast upon a pannel at the distance of five feet. In about two hours the needle had acquired magnetism, the exposed end exhibiting north polarity. This experiment was often repeated, and always with the same result. By a simdar process, Mrs. Somerville ascertained that the indigo rays had nearly as great an eftect as the violet, and that the blue and green rays likewise produced the same effect, though in a less degree.

Mrs. Somerville next tried the yellow, orange, and red rays ; but neither in them nor the calo-rific rays was the slightest effect produced, even when the experiments were continued for three successive days. Mrs. S. now applied the same method to pieces of clock and watch springs, about one inch and a half long, and from one-eighth to one-fourth of an inch broad, and they were found to receive a stronger degree of magnetism from the violet rays ; an effect which was attributed to their blue color, and their greater extent of surface. Bodkins were not affected. When the violet ray was concentrated by a lens, the magnetic influence was imparted to the needles in a shorter time.

In order to give additional confirmation to these results, Mrs. Somei-ville exposed magnetised needles, half covered as formerly, to the sun's rays transmitted through glass colored blue by cobalt, and they were distinctly magnetised as before. Needles exposed inider green glass received the same property. Mrs. Somerville now enclosed

unmagnetised needles in pieces of blue and green riband, one-half of each being covered with paper, and after they liad hung a day

in the sun's rays behind a pane of glass, they had acquired magnetic polarity, the exposed ends being north poles, as in the former experiments. When red, orange, or yellow riband was used, no magnetic influence was imparted. In performing tiiese experiments, Mrs. Somerville found that the most favorable time of tlie day was from ten to one o'clock ; and that, as the season advanced, the magnetism acquired was less permanent, as the needle required a longer exposure to acquire tlie same degree of magnetic virtue.

Mr. Cavallo made several experiments, with a view of ascertaining the magnetism of brass, and investigating the cause of it. The result he gives is as follows : — It appears, he says, ' 1st. That most brass becomes magnetic by hammering, and loses tlie magnetism by annealing or softening in the fire, or at least its magnetism is so far weakened by it as afterwards to be only discoverable when set afloat on mercury. 2dly. That the acquired magnetism is not owing to particles of iron or steel imparted to the brass by the tools employed, or naturally mixed with tlie brass. 3dly. Those pieces of brass which have that property, retain it without any diminution after a great number of repeated trials, *viz.* after having been repeatedly hardened and softened. But I have not found any means of giving that property to such brass as had it not naturally. 4thly. A large piece of brass has generally a magnetic power somewhat stronger than a small piece ; and the flat surface of the piece draws die 'leedle more forcibly than the edge or corner of it. 5thly. If only one end of a large])iece of brass be hammered, then that end alone will disturb the magnetic needle, and not the rest. 6thly. The magnetic power which brass acquires by hammering has a certain limit, beyond which it cannot be increased by farther hammering. This limit is various in y)ieces of brass of different thickness, and likewise of difi'erent quality. 7thly. Though there are some pieces of brass which have not the property of being rendered magnetic by hammering, yet all the pieces of magnetic brass that I have tried lose their magnetism so as no longer to aflect the needle, by being made red-hot; excepting indeed when some pieces of iron are concealed in them, which sometimes occurs ; but, in this case, the piece of brass, after having been made red-hot and cooled, will

attract the needle more forcibly vvith one part of its surface than with the rest of it ; and hence, by turning the piece of brass about, and presenting every part of it successively to the suspended magnetic needle, one may easily discover in what part of it the iron is lodged. 8thly. In the course of my experiments on the magnetism of brass, I have twice observed the following remarkable circumstance: — A piece of brass which had the property of becoming magnetic by hammering, and of losing the magnetism by softening, having been left in the fire till it was y)artially melted, I found, upon trial, that it had lost the property of becoming magnetic by hammering ; but, having been afterwards fairly fused in a crucible, it thereby acquired the proprrty it had originally, *viz.* that of becoming

magnetic by hammering. Othly. I have likewise often observed, that a long continuance in a fire, so strong as to be little short of melting-hot, generally diminishes, and sometimes quite destroys, the property of becoming magnetic in brass. At the same time the texture of the metal is considerably altered, becoming what some workmen call rotten. From tins it appears that the property of becoming magnetic in brass, by hammering, is rather owing to some particular configuration of its parts, tlian to the admixture of any iron ; which is confirmed still farther by observing, tliat Dutch plate brass, which is made, not by melting the copper, but by keeping it in a strong degree of heat whilst surrounded by lapis calaminaris, also possesses that property; at least all the pieces of it, which I have tried have that property. From these observations it follows, that when brass is to be used for the construction of instruments wherein a magnetic needle is concerned, as dipping needles, variation compasses, 8cc., the brass should be either left quite soft, or it should be chosen of such a sort as will not be made magnetic by hammering, which sort, however, does not occur very frequently.'

From what we have already stated i'. will be perfectly evident that magnetic effects are produced by quantities of iron incapable of being detected either by their weight or by any chemical tests. Mr. Cavallo found that a few particles of steel adhering to a hone, on whicii the point of a needle was slightly rubbed, imparted to it magnetic properties ; and Mr. Coulomb has observed that there are scarcely any bodies in nature which do not exhibit some marks of being subjected to the influence of magnetism, although its force is always proportional to the quantity of iron which they contain, as far as that quantity can be ascertained ; a single grain being sufficient to make twenty pounds of another metal sensibly magnetic. A combination

with a large proportion of oxygen deprives iron of the whole or the greater part of its magnetic properties ; finery cinder is still considerably magnetic, but the more perfect oxides and the salts of iron only in a slight degree ; it is also said that antimony renders iron incapable of being attracted by the magnet. Nickel, when freed from arsenic and cobalt, is decidedly magnetic, and the more so as it contains less iron. Some of the older chemists supposed nickel to be a compound metal containing iron, and we may still venture to assume this opinion as a magnetical liypothrsis. There is, indeed, no way of demonstrating that it is impossible for two substances to be so united as to be incapable of separation by the art of the chemist ; had nickel been as dense as platina, or as light as cork, we could not have supposed that it contained an considerable quantity of iron, but in fact the specific gravity of these metals is very nearly the same, and nickel is never found in nature but in the neighbourhood of iron ; we may therefore suspect, with some reason, that the hypothesis of the existence of iron in nickel may be even chemically true. The aurora borealis is certainly in some measure a magnetical phenomenon, and, if iron were the only substance capable of ex-414

hibiting magnetic effects, it would follow that some ferruginous particles must exist in the upper regions of the atmosphere. Tlie light usually attending tliis magnetical meteor may possibly be derived from electricity, which may be the uiimediate cause of a change of the dis-tril)ution of the magnetic fluid contained in the ferruginous vapors that are imagined to float in the air.

M. Arago's beautiful experiment on the magnetic ert'ects of different metals is now well known ; and, as it deserves, attracts attention every where. The following are some results obtained by M. M. Prevost and CoUadon, which, as they vary slightly in certain points from those as yet publislied in this country, will be interesting to such as pursue tliis brancli of science. A disc of glass covered with lead, or a single leaf of tin glued on to wood, sensibly deviated the needle. Wood alone, or sulphur, or a disc of peroxide of iron, had no appreciable effect. A screen of copper, or copper and zinc interposed, diminished the effect without destroying it. Tiie diminution was greater as the screen was thicker, or placed nearer to the needle. A screen of glass iiad no influertce. If the interposed metallic screen was pierced by an aperture

equal in diameter to the length of the needle, its effect was very nearly the same. A vertical magnet suspended in the centre of a cylinder of copper remained unmoved, whatever the direction or rapidity of rotation of the ring. VV'lien two needles were fixed together in a similar direction, the effect increased; wiien they were placed with thei-opposite poles together, it ceased entirely. A needle magnetised, so as to have similar poles at its two extremities, was the apparatus most sensible to the motion of the discs. It was one of this kind which they used m tlieir delicate experiments. The conclusion arrived at by M. M. Prevost and CoUadon is, that the efl'ects are due to a transient magnetisa-tion of the discs, which, not being able to modify itself with a rapidity proportional to tliat by which the difi'erent points of the disc are dis-])hiced by rotation, are transported to a small angular distance from the needle before they are changed, and draw it after them. This is the same explanation in efi'ect as that of Messrs. Herschel and Babbage. Experiments made with care, to determine the influence of the velocity and the distance of tlie discs, indicated that the angles of deviation, and not their sines, augmented proportionally with tlie velocity, at least within certain limits, and that the sines of the angles of deviation increased in an inverse ratio of the power, two and two-tenths of tiie distance. They were careful to employ, in this determination, discs having diameters very great in comparison to the length of the needle.

There are some important circumstances which require attention, in order to enable us to ascertain the best method of constructing artificial magnets. The nature of the body must be adapted to the power which is to render it magnetic; remembering, tliat soft ferruginous bodies both acquire and lose magnetism more easily than those which are harder. Several magnets are much preferable to a single one, for the pur-

pose of communicating magnetism , in the application of which it must be remembered that the south pole of the magnet produces a north pole in the part of tlie ferruginous body to which it is first applied, while tlie north pole of the magnet produces a south pole.

The late Dr. Gowin Kni(;ht practised a me-thod, which he never published, of communicating to iron a very considerable magnetic virtue, and also of increasing that of feeble magnets. From a report, delivered to the Royal Society in 1744, it appears that he had prepared a small eight-coined bar of steel, tliree inches and almost seven-tenths long, and about half an ounce troy in weight, whicii

lifted by one of its ends about eleven of the same ounces ; that another plain bar of steel, and a parallelopiped form, five inches nine-tenths long, four-tenths oi an inch broad, and two-tenths of an inch thick, weighing two ounces eight pennyweights and a half, lifted in like manner, by one of its ends, twenty troy ounces ; that a steel bar, almost of the same form as the last, but only four inches in length, capped, or armed with iron at each end, cramped with silver, and weighing altogether one ounce fourteen pennyweights, lifted by the feet of the armour full four pounds troy; and that a single block of steel, of a parallelopiped form, almost four inches long, and one inch and two-tenths high, and four-tenths of an inch thick, armed with iron, cramped with brass, and suspended by a ring of the same, and weighing altogether fourteen ounces one pennyweight, lifted by the feet of the armour fourteen pounds two ounces and a half troy weight. He also exhibited a compound artificial magnet, consisting of twelve bars of steel armed, which lifted by the feet of the armour, as the last, twenty-three troy pounds two ounces afid a half. At the same time he presented belbre the society a small armed loadstone, which with its armour weighed seven pennyweights fourteen grains, and which could scarcely lift two ounces; but, improved by his method, it sustained six ounces eighteen pennyweights and three grains.

Mr. Canton's process must now be adverted to. This ingenious philosopher was able, in about half an hour's time, to communicate to six bars of hardened steel, at first entirely destitute of any magnetic virtue, the utmost virtue they were capable of receiving, and that without the mediation or assistance of any natural loadstone, or of any artificial magnet. Mr. Canton has published a descrijition of his process, with such directions, that any person may readily perform the same. For this purpose procure a dozen bars ; six of soft steel, each three inches long, one-fourth of an inch broad, and one-twen- tieth of an inch thick, with two pieces of iron, each half the length of one of the bars, but of the same breadth and thickness : and six of the hard steel, each five inches and a half long, half an inch broad, and three-twentieths of an inch thick, with two pieces of iron of half die length, but the whole breadth and thickness of one of the hard bars; and let all the bars be marked with a line quite round them at one end. Then take an iron poker and tongs, or two bars of iron, plate Magnetism, fig. 1, the larger they

are, and the longer they have been used tlie bet-ter; and, fixin<ˆ’ the poker upriglit between tlie knees, hold it near to tlie top of one of the soft bars having its marked end downward, by a piece of sewing silk, which must be pulled tight with the left haiid, that the bar may not slide ; then grasping the tongs with the right hand a little below the middle, and laymg them nearly in a vertical position, let the bar be stroked by the lower entl, from the bottom to the top, about ten times on each side, which will give it a magnetic power sufficient to lift a small key at the marked end ; which end, if the bar was suspended on a point, would turn towards the north, and is, therefore, called the nortli pole, and the unmarked end is, for the same reason, called the south pole of the bar. Four of the soft bars being impregnated after this manner, lay the other two, fig. 2, parallel to each other, at the distance of about one-fourth of an inch between the two pieces of iron belonging to them, with a north and a south pole against each piece of iron ; then take two of tlie four bars already made magnetical, and place them together so as to make a douijle bar in thickness, the north pole of one being even with the south pole of the other; and the remaining two being put to tliese, one on each side, so as to have two north and two soutli poles together, separate the north from tlie south poles at one end by a large pin, and place them perpendicularly with that end downward, on the middle of one of the parallel bars, the two north poles towards its south, and the tw-o south poles towards its north end. Slide tliem backwards and forwards three or four times over the whole length of the bar, and, removing them fvom the middle of thisˆ place them on the middle of the other bar as before directed, and go over that in the same manner ; then turn both the bars with the other side up-ward, and repeat the former operation : this being done, take the two from between the pieces of iron ; and, placing the two outermost of the touching bars in their room, let the other two be the outermost of tlie four to touch these ; and this process being repeated till each pair of bars has been touched three or four times over, which will give them a considerable magnetic power, put the half dozen together after the manner of tlie four, fig. 3, and touch with them two pairs of the hard bars, placed between the irons, at the distance of about half an inch from each other : then lay the soft bars aside, and with the four hard ones let the other two be impregnated, fig. 4, holding the touching bars apart at the lower end nearly two-tenths of an inch, to which distance let them be separated after they are set on the parallel bar, and brought together again after they are taken off; tiiis being observed, proceed, according to the

method already described, till each pair has been touched two or three times over. But, as this vertical way of touching a bar will not give it quite so much of the magnetic virtue as it will receive, let each pair be touched once or twice over, in their parallel position between the irons fig. 5, with two of the bars held horizontally, or nearly so, by drawing at the same time the north of one, from the middle, over the south end of a parallel bar :

then bringing them to the middle again, without touching the parallel bar, give three or four of these iiorizontal sWokes to each side. The horizontal touch, after the vertical, will make the bars as strong as they possibly can be made ; as appears by their not receiving any additional strength, when the vertical touch is given by a greater number of bars, and the horizontal by those of a superior magnetic power. This whole process may be gone through in the space of half an hour, and each of the larger bars, if well hardened, may be made to lift twenty-eight troy ounces, and sometimes more. And when these bars are thus impregnated they will give to a hard bar of the same size its full virtue in less than two minutes; and will, therefore, answer all the purposes of magnetism in navigation and experimental philosophy, much better than the loadstone, which is well known not to have sufficient power to impregnate hard bars. The half dozen being put into a case fig. 6, in such a manner as that two poles of tiie same denomination may not be together, and their irons with them as one bar, they will retain the virtue they have received ; but if their power should, by making experiments, be ever so far impaired, it may be restored witliout any foreign assistance in a few minutes. And if˜ out of curiosity, a much larger set should be required, these will communicate to them a sufficient power to proceed with, and they may in a short time by the same method be brought to a full strength. Mr. Cp.nton, by the same process, communicated magnetic virtue in two large bars, each half an inch square, ten inches and a half in length, and weighing nearly ten ounces twelve pennyweights, to such a degree, that one of them lifted by one of its ends seventy-nine ounces and nine pennyweights : and a flat semicircular magnet, weighing an ounce and twelve pennyweights, was made to lift, by applying its two ends together to an iron wedge, ninety troy ounces. The same ingenious gentleman could also readily deprive his beirs of their virtue; and change the poles of a natural loadstone, by placing it in an inverted direction, between the contrary poles of his larger bars, laid down at some distance from each other, in the same straight line continued at the distance of about a quarter of an inch from either of the poles, without touching the stone with either of the bars.

The method in which the steel he made use of was hardened is as follows: — Having cut a sufficient quantity of the leather of old shoes into very small pieces, an iron pan is provided, which a lit-tle exceeds the length of a bar, and is wide enough to admit of two bars side by side without touching each other on the pan, and at least an inch deep. This pan is nearly half filled with the bits of leather, upon which are laid the two bars, having fastened to the end of each a small wire for taking them out: the pan is then cjuite filled with the leather, and placed on a gentle flat fire, being covered and surrounded with charcoal. The pan, being brought to something more than a red heat, is kept about half an hour; and the bars are suddenly quenched in a large quantity of cold water. Mr. Home, in his Essays on Iron and Steel, p. 147, claims the

merit of directing this process for hardening Mr.

Canton's bars.

Captain Scoresby furnishes us with some very valuable information relative to the mode of making artificial magnets. ' Being desirous,' says he, ' of applying my process to the cou-btruction of powerful artificial magnets, I prepared (with tiie assistance of the armourer on bo;>rd) six bars of steel, and bars properly tempered, suitable for a large compound magnet. The soft steel bars were nearly eight inches long, half an inch broad, and a sixth of an inch thick. The bars for the compound magnet, seven in number, which were of the horse-shoe form, were each two feet long before they were curved, and eleven inches from the crown to the end when finished, one inch broad, and three-eighths thick. These bars were combined by three pins passing througli the whole, and screwing into the last ; and any number of them could be united into one magnet by means of a spare set of pins screwed throughout their length, and furnished with nuts. In addition to these bars, &c., 1 provided separate feeders or conductors of soft iron, suitable for connecting the poles of each of the bars of the compound magnet, and also another conductor, fitted to the whote when combined. With this apparatus, I proceeded to give the magnetic

virtue as follows : — I took a rod of soft steel, which I considered better than a poker, and hammered it for a minute or two, while held vertically upon a large bar of soft iron in the same position. This gave considerable magnetism to the steel rod. On the top of this, I then hammered each of the six bars of soft steel, until the accession of lifting power ceased. Then fixing two of them on a board, with their different poles opposite and formed, by a feeder at each end, into a paralellogram, I rubbed these after the manner of Canton, by means of the other four bars, and found the:r magnetism greatly augmented. The other four bars were operated upon in pairs, in a similar way, those already strengthened being used for strengthening the others, and each pair heing successively changed until all the bars were found to be magnetised to saturation. A pair of them now possessed a lifting power of two pounds and a half.

‘ The next step was to touch the bars intended for the compound magnet, by means of these six bars now magnetised. For this purpose, the six bars were combined into two magnets, by tying three of them together, with similar poles in contact; these two were then placed with opposite poles, in connexion, and tied together at one end, but separated about the third of an inch at the other, so as to form one compound niagnet, and a conductor was kept constantly applied to the open end of it, when not in use, to preserve the power from being lost. One of the bars of the horse-ˆhoe magnet, with a conductor placed across the poles, was now placed on a board, in a groove cut so as to hold it fast under the operation. The straight bar magnet was then placed erect on the middle of it, with the separated poles downward, and rubbed against the horse-shoe bar, from the middle to one of its poles, until the north pole of the one

was in connexion with the pole intended to become the south of the other ; thence it was rubbed back again, with the south oole of fhe magnet in advance, as far as the other extremity, or that intended for the north pole of the horse-shoe bar. Two or three strokes of this kind being made from end to end of the i)ar, on each side of the bar, the north and south poles of the magnet being always directed to the north and south poles of the bar respectively, the magnet was slipped sideways otf, when at the pole of the bar, and the bar was found to have acquired such a magnetic power as to enable it to sustain a weight of several ounces, hung from the conductor. Each of the bars of the horse-shoe magnet was treated this way in succession, and then the first five bars of the magnet, being combined by the screws, were employed in the same way as the soft steel magnet had been used, for

increasing the power of the sixth and seventh bars, by which they were rendered capable of carrying above two pounds weight each. These were then substituted, in the combined magnet, for the fourtli and fifth bars, whde the latter underwent the touch of the other five in combination ; and, in their turn, the second and third, and then the seventh and first, were subjected to a similar treatment. After these operations, which occupied forty-three minutes, the compound magnet, with all the seven bars in connexion, lifted ten pounds.

‘ After a second series of the same kind of manipulations, five of the bars in combination carried fifteen pounds ; and, after a third series, eighteen pounds ; but as, on trying a fifth series, little augmentation took place, the process was discontinued. The whole of the operations, from l-.eginning to end, occupied above foui hours; bu* as I generally rubbed each bar witii twelve strokes on each side, instead of one or two, which I afterwards found sufficient, and in other parts of thp process spent a great deal of time and labor which turned to no account, I doubt not but the whole might have been completed, beginning without the smallest perceptible magnetism, and ending with a lifting power of twenty or thirty pounds, in the space of two hours, or less.’

Mr. Michell’s method of making artificial magnets may be thus described : — Prepare ? dozen bars of steel, of about one ounce and three-quarters weight each, six inciies long, and half an inch broad : let these be hardened by immersion into water at a red heat. The size and shape of the bars maybe varied at pleasure, provided that the length be proportioned to the thickness. The best sort of steel is that which has no veins of iron in it, and Mr. Michell found the common blistered steel at least equal to any other. In order to preserve the bars, they must be placed in a box furnished with two pieces of iron, about an inch long each. These pieces of iron may be about a quarter of an inch square, and should be filed perfectly smooth on the ‘•ides. Aciainst these are to be placed, with their edges towards them, the twelve magnetical bars, six on one side, with their south or north poles one way, and six on the other side,

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with the same poles the contrary way. It is necessary to observe that

these bars must neither be taken out, nor put in, all, or too many on a side at once ; for if two only be left with their poles of the same denomination the same way, without one or more on the other side to counterbalance their effects, they will injure each other. In order to make the marked ends of these bars south poles, and the other ends north poles, place six of them in a line north and south, bringing the unmarked end of one to touch the marked end of the next throughout; the marked ends lying towards the north, which will be some advantage to them. Then take an armed magnet, and placing it with both poles upon one of the bars, the north pole towards the marked end, which is to be a south pole, and the south pole towards the unmarked end, which is to be a north pole, slide it backwards and forwards from end to end of the whole line of bars three or four times, taking care that they all touch. Then, taking it off, remove the two endmost bars into the middle, and pass over them again three or four timt*i. Having thus touched the bars, it will not be improper to turn them with the other side uppermost, and to magnetise again on that side as before, omitting the endmost bars, till they are removed into the middle, when they must undergo the same process.

Professor Steinhauser has ascertained, that if, by the process of Canton, we unite, in the form of a square, two steel bars, and two contacts of iron, it is better to operate by the double touch in a circle, than by a motion backwards and forwards. Again, when we combine these bars in a square, the force of that which we wish to magnetise ought to increase in proportion as the other magnet has become more energetic. In magnetising horse-shoe magnets, it is much more advantageous to place two of these bent bars, with their friendly poles so situated, as that the magnetic circle sliall be completed ; and that we should then touch circularly, with the magnet destined to communicate the power. When the two horse-shoe bars are separated, they lose usually a considerable part of their force, if wc do not previously decompose the great circuit into two smaller ones, by applying each coQtact to its curved magnet before the separation. In this way the two separated magnets lose little or nothing of their power ; and two may be touched in the same time that one is on the usual plan.

Among artificial magnets, those which are bent into the form of a horse-shoe, and therefore termed horse-shoe magnets, are reckoned the most powerful. To render such a shaped piece magnetic, place a pair of magnetised bars against the ends of the horse-shoe, with the south end of the bar against that of the horse-shoe which is intended to bo north, and the north end of the oar to that which is to be the south ; the lifter, of soft iron, to be placed at the other end of tiic bars.

Also rub the surfaces of the horse-shoe with the pair of bars, disposed like the legs of compasses when a little open, or with another horse-shoe magnet, turning the poles properly to those of the proposed magnet; and being careful that these bars never touch the ends of the straight bars. To prevent a sudden separation Vol. XIII.

of the bars from the horse-shoe, which woul 1 considerably diminish the force of the latter, slide on the lifter, or support, to the end of the horse-shoe magnet, but in such a manner that it may not touch the bars ; they may t!ien be taken away, and the support slid to its place.

A A, tig. 7, represents a magnet thus contrived, and A F the armature or pieces of iron, the projections for which are at F F, and to which the cen-tra! piece of iron D is made to adhere. The dotted line represents a brass box, having a ring O at its upper part, by which the armed magnet may be suspended. Thus the two poles of tlie mag-net, winch are at F and F, are made to act on every part alike, and the straight piece of iron D may be conveniently applied for supporting a weight.

The variable power of a magnet may be shown by suspending iron to it, in the following manner : — Suspend a magnet in a place that is not much shaken, and apply to it as much weight of iron as it will just support. Let a hook or a scale, like those used for a balance, be fastened to the iron slide. On the day following the operator may put a little more weight into the scale, which the magnet will support. One or two days after a little more weight may be added, and so on ; the power of the magnet increasing daily ; and though this increase of power is neither unlimited nor very regular, being aifected in some measure by the vicissitudes of heat and cold, yet, upon the whole, the power of a mag-net will be considerably increased by this contrivance.

It is very remarkable, that if, in the course of the operation, the iron were to drop from the magnet, on replacing it, you will find that the magnet will no longer support as much weight as it did a moment before ; so that now you must diminish the weight, though in the course of the ‘following days you may increase it gradually again ; hence, in placing the weights into the scale, or upon the hook, care must be taken not to give it any jerk, so as to cause the iron to fall off, otherwise a great deal of the work will be lost.

The reason of this experiment is, that the iron, being rendered magnetic, tends to strengthen the magnetism of the raannet in the

same manner as any other magnet endeavours to render magnetic any ferruginous substance that is placed within its sphere of action. When the iron falls ofl" the magnet loses part of the acquired power, especially if the magnet had acquired more than its point of saturation, there having been removed the cause which kept it up ; and, when the iron is replaced, the macˆnet will not recover the lost power very readily, because there is required a considerable time to communicate a certain de-gree of magnetic power to a hard ferruginous substance, as the magnet is, especially when that magnetism must be communicated by the action of a proportionably weak magnet, like the iron weight.

According to i'F-pinus's hypothesis of the magnetic fluid, this experiment is thus explained : — The magnetic fluid in a magnet is not equally dispersed through its substance, but one pole or half of it is overcharged, and the other under—

charged. There is a strong attraction between the undercliargetl part and the superfluous quantity of magnetic fluid in the overcliarged part, and the restoration of tlie balance is in a great measure prevented by the hardness or some other quality of the magnet. Now, when the iron is affixed to the magnet, it becomes magnetic, *viz.* that oart of it which is contiguous to the overcharged pole of the magnet becomes undercharged, and the opposite one becomes overcharged. In this situation the undercharged part of the iron, endeavouring to draw the magnetic fluid of the magnet towards itself, accumulates or draws it still nearer to that overcharged pole of the magnet ; and, on the other side, the overcharged part of the iron being contiguous to the undercharged pole of the magnet, tends continually to drive the magnetic fluid away from that undercharged pole of the magnet; but the power of the mag-net, according to the hypothesis, depends on the unequal distribution of the magnetic fluid, therefore the action of the iron, by endeavouring continually to increase tliat unequal distribution, must increase the power of the magnet.

It follows from this experiment, that a magnet is apt to lose much of its power when kept witiiout any iron aflixed to it.

As heat is observed to destroy magnetism, so it may also be employed to induce it on substances that are susceptible of magnetism. Dr. Gilbert says, that the ores of iron, which are in that particular metallic state which he considers as most susceptible of magnetism, will acquire it by long continuance in a red heat, if laid in the magnetic direction, and that their polarity is conformable to their position, that end of the mass which is next the north becoming the north pole. He also made many experiments on iron and steel bars exposed to strong heats in the magnetical direction. Such experiments have been made since Gilbert's time in great numbers. Dr. Ilooke, in 1684, made experiments on rods of iron and steel, one-fifth of an inch in diameter, and seven inches long. He found them to acquire permanent magnetism by exposure to strong heat in the magnetic direction, and if allowed to cool in that direction. But the magnetism tlius acquired l)y steel rods was much stronger, and more permanent, if they were suddenly quenciied with cold water, so as to temper them very hard. He found that the end which was next to the north, or the lower end of a vertical bar, was always its permanent north pole. Even quenching the upper end, while the rest was suffered to cool gradually, rendered it a very sensible soutli pole. No magnetism was acquired if this operation was performed on a rod lying at rir;lit an'^Mes to tlie ma'j,netical direction.

Mr. Scoresby has invented a very useful y)ioce of apparatus called a magnetimeter. This instrument consists of a small table of brass, about four inches square, and three inclies high, having a plate of brass attached to it by hinges, and moveable by means of a wheel and pinion, through an arc of 250° of a vertical circle. This plate has a small straight groove running from end to end, for the purpose of receiving bars of metal, tlie polarity of which is to be detennined. These bars are readily fixed to the plate, by being

slipped through a circular aperture in the end of a spring, which, perforating the moveable plate, is marked by a graduated circle, screwed on the side of the table. On the brass table is placed a moveable flat plate of brass, divided into degrees, and furnished with a magnetic needle with an agate cap traversing on a brass or steel point. The needle can be changed according to the nature of the circumstances ; a very light and strongly magnetised one being used in delicate experiments. The compass, or plate carrying the needle, being

moveable, its distance from the bar resting on the moveable plate, can be varied at pleasure. The centre of the hinge is one-tenth of an inch above the level of the table ; and the bars in use, being one-fourth of an inch in diameter, are sunk in the groove of the moveable plate, to such a depth that their axis, or centre, precisely corresponds with the centre of the hinges; hence the middle of the extremity of each bar is at the same elevation, and at the same distance from the needle in every position of the moveable limb. To give firmness to the instrument, in making experiments, the table is fixed by the feet to a mass of lead, of seven or eight pounds weight. By means of this plate of lead, which has a screw at each corner, the whole apparatus is readily put into a horizontal position. With this apparatus, Mr. Scoresby made a series of experiments, which are fully detailed in theTransactions of the Royal Society of Edinburgh, vol. ix., and of which the follov>‘ing are the principal results.

1. Iron bars become magnetical by position, except when placed in the plane of the magnetic equator, the upper end, as regards the position of the magnetic equator, becoming a south pole, and the lower extremity a north pole.

2. No attraction or repulsion appears between a magnetised needle and iron bars; the latter being free from permanent magnetism, whenever the iron is in the plane of the magnetic equator; consequently, by measuring the angle of non-attraction, in a bar placed north and south, we discover the magnetic dip.

3. Before a magnet can attract iron, that is totally free from both permanent magnetism and that of opposition, it infuses into the iron a magnetism of contrary polarity to that of the attracting pole.

4. A bar of soft iron, held in any position, except in the plane of the magnetic equator, may be rendered magnetical by a blow with a hammer or other hard substance ; in such cases, the magnetism of position seems to be fixed in it, so as to give it a permanent polarity.

5. An iron bar, with permanent polarity, when placed any where in the plane of the magnetic equator, may be deprived of its magnetism by a blow.

G. Iron is rendered magnetical if scoured or filed, bent or twisted, when in the position of the magnetic axis, or near this position ; the upper end becoming a south pole, and the lower end a north pole ; but the magnetism is destroyed by the same means, if the bar be held in the plane of the magnetic equator.

7. Iron heated to redness, and quenched in water, in a vertical position, becomes magnetic;

the upper end gaining south polarity, and the lower end north.

8. Hot iron receives more magnetism of position than the same when cold.

9. A bar-magnet, if hammered when in a vertical position, or in the position of the magnetic axis, has its power increased, if the south pole be upward, and loses some of its magnetism if the north end be upward.

10. A bar of soft steel, without magnetic virtue, has its magnetism of position fixed in it, by hammering it when in a vertical position ; and loses its magnetism by being stiuck when in the plane of the magnetic equator.

The application of magnetism to nautical purposes must now be noticed. The history of the compass is involved in much obscurity, as the Chinese appear to have possessed this important instrument long prior to its use in Europe. See Compass.

A common sewing-needle, rendered magnetical, and simply laid upon water, or fastened to a cork or straw, &c., and so laid upon water in a glass, or earthen or wooden cup; or else suspended by a very flexible thread, which must be fastened to its middle, forms a simple, but imperfect compass ; and such, in ail probability, was one of the first modes of constructing the compass, whence the magnetised steel wire, or bar, has ever since been called the magnetic needle. The defects of the last-mentioned construction are too evident to need any particular remarks. The needle laid upon water, is continually running to the sides of the cup, the water is liable to be spilt, or, if a thread be used, the stiffness of it will always influence the action of the needle.

A mariner’s compass, or compass generally used on board of ships, is

represented in fig. 8. The box, which contains the card or fly with the needle, is made of a circular form, either of wood, brass, or copper. It is suspended within a square wooden box by means of two concentric circles, called gimbals, so fixed by cross axes a, a, a, a, fig. 9, plate II., to the two boxes, that the inner one, or compass-box, shall retain an horizontal position in all motions of the ship, whilst the outer or square box is fixed with respect to the ship. The compass-box is covered with a pane of glass, in order that the motion of the card may not be disturbed by the wind. What is called the card is a circular piece of paper which is fastened upon ti.e needle, and moves with it. Sometimes there is a slender rim of brass which is fastened to the extremities of the needle, and serves to keep the card stretched. The outer edge of this card is divided into 360 equal parts or degrees, and within the circle of these divisions it is again divided into thirly-two equal parts, or arcs, which are called the points of the compass, or rhumbs, each of which is often subdivided into quarters. The initial letters N., N. E., &c., arc annexed to those rhumbs, to de-note the north, north-east, 8cc. The middle part of the card is generally painted with a sort of star, whose rays terminate in the above-men- tioned divisions. To avoid confusion, those letters are not drawn in the figure.

The magnetic needles which are commonly used at sea are between four and six inches long ;

but those which are used for observmg the daily variation, are made a little longer, and their extremities point the variation upon an arch or circle, properly divided or affixed to the box.

The best shape of a magnetic needle is represented in figs. 1 and 2, plate II. Magnetism ; the first shows the upper side, and the second shows a lateral view of the needle, which is of steel, having a hole in the middle, to which a conical piece of agate is adapted by means of a brass piece O, into which the agate cup (as it is called) is fastened. Then the apex of this hollow cap rests upon the point of a pin F, which is fixed in the centre of the box, and upon which the needle, being properly balanced, turns easily. For common purposes, those needles have a conical perforation made in the steel itself, or in a piece of brass which is fastened in the middle of the needle.

It is commonly imagined that the agitation of the compass is communicated by friction at the points or edges of suspension, and the compass-maker has accordingly exerted his ingenuity to diminish this

friction, by contrivances similar to that of a conical cap balanced on a point, and itself affording another point to support the needle. But it may be readily proved by experiment, that the greatest disturbance of the needle is produced by the quantity of horizontal progressive motion, and not by the mere inclination or angular motion. A compass-needle, supported on a simple point, will suffer very little agitation from any angular motion, or moderate deviation from perpendicularity in the pin ; but it will instantly begin to vibrate if moved horizontally. Thus the common experiment of tilting the compass-box in all positions, while its centre remains immoveable, is fallacious.

It appears, therefore, that the steadiness of a needle which vibrates slowly, is the consequence not only of the length of time it allows for alternate actions to operate, and destroy each other; but also of the difficulty with which it yields to such impressions. If the centres of suspension and of gravity in the needle were coincid(!nt, no angular motion would be produced by any action of the pin, excepting by the effects of friction; and the angular motion produced in other cases will be less, the shorter the distance between these two centres, or the lever by which it is proyjagated.

The simple suspension of the needle on a point has been applied to the compass-box, for which it is little suited, not only because of tiie wear upon so small a surface, but also because it ailmfts the box to traverse horizontally; an effect which is inconvenient, and cannot be remedied by any means not calculated in some respect to increase the effects of agitation. The method most generally employed, and in fact the <)ne best adapted to the purpose, consists in emp loying gimbals.

This well-known contrivance consists of a hoo]i supported upon two pins diametrically opp osite to each other, and issuing from the extern al surface of the ring in such a direction that boti I lie in the same diameter line. When the hoo p is suspended on these pins, it is at liberty to f urn freely round the diameter of which thcv

constitute the prolongation. Tiie notches or holes of support are disposed horizontally. The compass-box itself is {)laced in a similar ring, willi two projecting pivots; and these pivots are inserted in holes made in the former ring at an equal distance from each of its pivots. If, therefore, we suppose the hole to be left at liberty, the compass-box may vibrate upon the diametral line of the outer ring, and also upon a line formed by its own pivots, at right angles to that diametral line. The consequence of this arrangement is, that the centre of gravity of the compass-box will dispose itself immediately beneath the intersection of both lines, on which it is at liberty to move : — that is to say, if t!ie weight of the box or its parts be properly disposed, the compass will assume a position in which its upper surface shall be horizontal.

The same principles which were applied [to tiie sintjle centre of the magnetic needle will also apply to the axis of the gimbals. If tlie centre of gravity of the compass-box be so placed with respect to ei;her axis as that its vibrations shall be quick, every horizontal action will greatly disturb it, and it will not speeddy setde. The most favorable position of the pivots or edges of support in the gimbals will be when tliey all lie in the same plane, and the centre of gravity of the compass-box is very little below that plane. The following valuable results, relative to the best mode of constructing the compass-needle, form part of an admirable paper, by captain Kater, inserted in the Transactions of the lloyal Society : — 1 . That the best material for compass-needles is clock-spring; but care must be taken, in forming the needle, to expose it as seldom as possible to heat, otherwise its caj)ability of receiving magnetism will be much diminished. 2. That the best form for a compass-needle is the pierced rhombus, in the proportion of about five inches in length to two inches in width, this form being susceptible of the greatest directive force. 3. That the best mode of tempering is, first to harden the needle at a red heat, and then to soften it from the middle to about an inch from each extremity, by exposing it to heat sufficient to cause the blue color, which ari.ses, to disappear. 4. That in the same plate of steel, of the size of a few square inches only, portions are found varying considerably in their capability of receiving magnetism, though not apparently differing in any other respect. 5. That polishing the needle has no effect on its magnetism. 6. That the best mode of communicating magnetism to a needle api)ears to be by placing it in the magnetic meridian, joining the opposite poles of a pair of bar magnets (the magnets being in the same line), and laying the magnets so joined, flat upon the needle, with their poles upon its centre ; then

having elevated the distant extremities of the magnets, so that they may form an angle of about two or tliree degrees with the needle, they are to be drawn from the centie of the needle to the extremities, carefully preserving the same inclination; and, having joined the poles of the magnets at a distance from the needle, the operation is to be repeated ten or twelve times on each surface. 7. That in nei3dles

from five to eight inches in length, their weights being equal, the directive forces are nearly as the lengths. 8. That the directive force does not depend upon extent of surface, but, in needles of nearly the same lengtli and form, is as the mass. 9 That the deviation of a compass-needle, occasioned by the attraction of soft iron, depends, as Mr. liarlow has advanced, on extent of surface, and is wholly independent of the mass, except a certain thickness of the iron, amounting to about two-tenths of an inch, which is requisite for the complete development of its attractive energy.

The improved mariner's compass contrived by Mr. Pope, for which he has taken out a patent, is too important to be passed unnoticed. Its great merit consists in suspending the magnetic needle in such a manner as to combine the advantages of the dipping needle with those of tlie ordinary mariner's compass ; the needle, from the peculiar mode in which it is suspended, being perfectly at liberty to dip in all latitudes, from the equator to the poles; while the card retains its horizontal position.

Fig. 3 represents the card, with the needle lying across it, in an orifice cut completely through the card from north to south. The card is perforated with a number of holes, to allow a free circulation of the air.

In fig. 4 the compass is seen in perspective, supported on an agate centre, and the needle dipping, while the card remains horizontal.

The advantages of this admirable invention are at once great and simple : in the first place, this compass increases its power of magnetic force where in others it diminishes, and that iu every latitude from the equator to the poles ; secondly, it retains its force even situated nearly over the polar point, where all others entirely lose it, and become useless; thirdly, it is more steady on its point, a circumstance of the first importance, when the agitation is increased by the motion of the vessel.

A few remarks by way of elucidation will prove the above ; the first property it gains from its peculiar construction, by which the magnet is placed more in harmony with nature ; and among many particulars, the principal point consists in the needle falling in a line with the attractive affluvia; this is effected by uniting the nature of a dipping-needle with that of a horizontal steering card ; by virtue of which it has power to alter its own elevation, to every de-gree of latitude it may be placed in, and of course stands nearly in the line of attraction ; this it performs without taking the card out of the horizontal position. The second it may be said to retain from the dip of the needle ; for at the poles the dipping needle is found to increase its power, when that of the horizontal one is invariably lost. The third property it acquires by the manner of connecting the needle with the card ; for when the motion is increased, and the compassexceedinglyagitated,thisncedle quits the card, and attains a perpendicular motion, which serves most effectually to counteract that of the card ; so that, between the motion of the card and the needle, the whole is brought to an equipoise ; this in connexion with the card of the

compass being perforated, thereby admitting the •-lir that is below the card, to pass freely above, without taking the card with it, renders it much steadier ; and, being placed deeply in the box, it IS not liable to strike against the glass like the common card.

It scarcely need be remarked that all compasses hitherto in use diminish their power every degree they are removed from the equinoctial line, which, the inventor of the present patent presumes, is occasioned solely by an erroneous system in the manufacture of the needle, as follows, *viz.* the mechanic is iirst careful to make it equally heavy at both ends, so as to swing parallel with the horizon on iis point or centre; this done, the needle is further completed by touching it on the magnet for the purpose of gaining the magnetic poles ; when it instantly requires a different position, falling from the horizontal to an oblique direction: to prevent this, and bring it parallel again, he is reduced to the alternative of loading the south end, either of the

magnet or the card, which effectually performs the intention of the mechanic, but not of nature ; for, thus encumbered, the needle is eventually so impeded, that, when it is brought near the poles, its efibrts are fruitless, the card falling all around without any direction, from the single circumstance of being lifted beyond its natural inclination: and the magnet also is hereby drawn by main force above the magnetic line, and is obliged in its own defence to hang either on the left or right of it, in order to form a greater angle ; for it is the distance from the poles only that enables the horizontal needle to act at all; and hence the variation may apparently be much increased hereby.

It may be suggested against this needle (from the fact that it is capable of being drawn nearly perpendicular when situated over the poles), that it will have no purchase or power over the card, and therefore cannot turn it round to its point : this would be correct but for the consideration of the poise of the needle, whicii always prevents a steering dipping-needle from falling to its due depression or dip, leaving a sufficient power for the purpose of turning the card ; this is also provided for, by hanging the needle below its bearing.

The improvements in the new compass are evident, not only for the high north and south latitudes, but for the East and West India services, as being less subject to get out of re-pair and lose the power of the attractive force, and also more proof against local attraction, &c. This will apiˆear more certain when it is recollected that all metallic substances (partly the cause of the variation) are contained nearer to the surface than the centre of the earth : they stand in the horizon; therefore, the common mariner's needle being poised horizontally, the metallic lodgments (in the horizon) have power to attract a horizontal needle, whereas this new dipping steering needle points below that line, and forms nearly a true junction vVith the attractive influence, which is deep in the poles ; hence this valuable instrument is not so subject to local ;Utraction. Mr. Pope has adapted the nrinci'i'>

of the azimuth to the steering compass, which is so constructed as to be capable of steering by, and of taking an azimuth of the sun ; thus making use of one compass alone, both to steer by and to take the azimuth.

This compass is furnished with a temporary verge (or glass) to shift on when steering, which leaves the face of tire azimuth as clear to see the

points and steer by as the common steering compass, and with the same facility performs both operations. He recommends it, therefore, to general use, in preference to his steering compass; but, When the latter is used, one only should be in tlie bianacle to steer by, instead of two as is customary at piesent; for there must be local attraction where two compasses are so close together.

In cases where the common compass becomes entirely useless, the able navigator is driven to -he alternative of steering by the stars alone, wfiich are not always to be seen, in consequence of thick vveather, &c. For this reason, the addition of the dipping-needle to the mariner's compass is a matter of the first consequence to the instrument, and was never effected before the present time. From some experiments made by Mr. Pope, he is of opinion that the central part of the earth is one immense spherical mag net, extending from the centre to 40^^, the remaining 50° being composed of strata surrounding that nucleus, and arranged from east to west. Now when the mariner's magnetic needle, which is a subject of the principal one (the earth), is brought up to latitudes above G0°, the magnetic north being deep in the earth, the dipping-needle in high latitudes is drawn almost perpendicular; and as it is now harnessed so as to be free of the card, and possesses both the advantages of the dip and of carrying the fly horizontally, its powers remain ; whereas the old needle of tiie compass being riveted to the Hy, and the fly being loaded at the south end to make it poise, it is thereby forced against its natural inclination, and brought up to a horizontal position. It then turns its back on its principal, the magnet of the earth ; and herein, according to the inventor's opinion, consists the cause of the different effects of the old and new compasses.

Mr. Wales, who accompanied captain Cook in his second voyage, appears to have been the first person who observed the eflects of the iron employed in ship building, upon the action of the magnetic needle. This subject was further investigated by captain Flinders, who, in iiis survey of the coast of New Holland, succeeded in applying a correction for the use of his own vessel. From an account of the survey, published some time afier tiiis navigator's return, it appeared that in captain Flinder's vessel, ami iiuleed in every ship, a compass would diHVr very materially from itself, in being removed from the head to the stern. This was found to arise from the iron which surrounds the compass becoming magnetic, and its entire attractive force is thus concentrated into one powerful focus. Of this, the principal south pole is situated near the middle of the upper deck. This focus of attraction so influences the compass-needle, lliat it is subject to a considerable varia-422

tion from the true meridian, different from what is observed by a compass on shore ; the north point of the compass being constantly drawn towards the focus in our hemispliere, and the soutli point in the opposite hemisphere.

With these facts in view, professor Barlow commenced a series of experiments to remedy the defective apparatus. Having procured a solid iron ball, thirteen inches in diameter, he found, on placing the compass above it, that the north end of the needle was attracted by the upper part of the ball ; that, when placed below the ball, the south end was attracted ; and that when the needle was raised or depressed, in any vertical around the ball, it always passed through a point in which both attractions became neutralised. The next step in his investigation was to ascertain whether tiiese points of no attraction were all in the same plane ; and, if so, to determine correctly its inclination to the horizon, — since it had become obvious, from the care with which the trials had been made, that it was not parallel to it. This question was soon decided : by a series of experiments it was demonstrated that the points were all in the same plane, and that the inclination of the plane itself to the horizon was about 20ˆ, declining directly from the magnetic north point to the south, approaching very nearly to the complement of the dip of the needle. This circle Mr. Barlow now traced on his iron ball, assuming as its principal axis the direction of the dipping needle ; and, imaginmg circles of latitude and longitude to be described around the whole ball, he had thus an ideal magnetic sphere, which would readily indicate the relative position of the iron and the compass in his subsequent experiments. Plate II., fig. 5, will enable the reader to form a correct idea of the nature and properties of this magnetic sphere. O is supposed to represent an iron ball, and AAA a sphere circumscribing it, and within which its influence is active ; S, N, being in the magnetic meridian. The line N S, in the plane S, E., N, \V, denotes the natural direction of the dipping needle, in those latitudes where its inclination to the horizon is about 70° 30’. Now, conceiving Q, E, Q’, W, to represent a plane, passing through the centre of the ball, and being perpendicular to the axis IN S, it Viˆill be the plane of no attraction, which lias this remarkable property, that if lines be drawn in it (as for example,the lines O C, 0,C’, O C, &c.) and a compass be placed any where in those lines, or indeed in any point of the plane Q, E, Q’,W, it will be

uninfluenced by the :ron ball, and will preserve its natural magnetic direction.

As soon, however, as the compass is removed out of this plane, the needle is found to deviate from its original bearing, — its south end being attracted towards the ball when the needle is below the plane, and its north end when it is above ; and in every case the deviation follows a determinate law, so that, the amount being given in any one case, it may be ascertained for all others.

Suppose, for example, any two other planes, passing through the centre of the ball, each being perpendicular to Q, E, Q', W, of which let M,

O, S, L, represent quadrants ; then supposing a compass placed in each of these planes, at equal distances from the centre, at L, we sliall have M L, for the latitude, and E I\I, E M', for the longitude of position of those pomts ; then will the following proportion express the law in question : — The tangent of the deviation of the compass at Lis, to the tangent of the deviation of the compass at L', as the rectangle of tlie sine of 2 L M -|- cosine E M to the rectangle of the sine of 2 L' M' -}- cosine of E INI', E, being the east point of the horizon.

Pursuing this enquiry, Mr. Barlow next ascertained, by a series of experiments, the law of attraction at diff'erent distances of the compass from the iron ball ; and which he thus states : — That, while the position as to latitude and longitude is the same, tiie tangents of the angles of deviation are reciprocally proportional to the cubes of the distances.

Still, however, there remained an important question to be solved, *viz.* when the position and distance are the same, what is the law of deviation as it respects the mass of the attracting body ? And here a most unexpected result was obtained. From the first experiments, which were made with a solid iron ball of ten inches in diameter, it appeared, as Mr. Barlow seems to have anticipated, that the tangents of the deviations are proportioned to the cubes of the diameters, all other things being the same ; but happening at this time to make trial of an iron wheel of the same diameter as the ball, but only three-fourths of its weight, he was not a little surprised to find the results in both cases the same. ' In fact,' he remarks, ' it appeared that the power of attraction resided on the surface, and WPS independent of the mass.'

Before it was discovered that the power of an attracting body resides in its surface, INIr. Barlow had anticipated a great impediment in the way of final success, arising from the mass of iron which he considered as necessary to produce the desired effect. It now, however, readily occurred to him, that, as surface is the principal thing to be attended to, a light, globular shell of iron, or a simple circular plate of the same metal, would be amply sufficient for the purpose. A plate of this description was accordingly tried ; it was fifteen inches in diameter, and weighed only 4lbs. 13oz. With this plate Mr. Barlow repeated tlie series of experiments that had been made with the ball, and had the satisfaction of finding tliat its power was far greater than would be requisite for doubling the effect of the guns of any vessel in the navy, altlioufjh applied to the exterior of the binnacle, and fifteen inches distant from the pivot of the needle. The precise situation for this correcting plate is, of course, a matter of essential importance, and cannot be fixed on until the local attraction of the vessel has been ascertained. This is effected in the following manner : — The ship being so moored as to admit of her head being directed to each point of the compass successively, and there steadied whilst the bearing of as remote an ob-ject as can be found is taken, it will then be found that the bearings thus taken vary from each other, according to the attractive power of

the vessel, sometimes as much as 28°, which difference is caused by the iron of the ship drawing the needle from its proper direction to the eastward with the ship's liead east, and to the westward with the head to the west. It will also be found that two of the bearings, taken at opposite points of the compass, nearly agree with each other, and the mean of these is to be taken as the true magnetic bearing of the object. By these points, also, will be indicated the line of no attraction in the vessel, which in general is found to be nearly fore and aft, and in this line the plate is ultimately to be placed. This being accomplished, a pedestal or compass-stand is then taken ashore, and by trying different situations for it, and turning it about till the same deviations are produced by the plate at each point, as had been

observed in the vessel. But this process, which is very troublesome, is now rendered unnecessary, the end being much more readily accomplished by means of a printed table, which is given with the correcting plate ; and which comprises a series of attractions obtained by the plate, including all possible limits for every class of vessels. Corresponding to each degree of local attracti:n are given two numbers, the one indicating the distance of the centre of the plate below the pivot of the needle, and the other its distance from the centre line of the pedestal, and at this deptli and distance the plate must be fixed, either fore or aft the compass ; if the former, the eflect of the vessel will be exactly doubled, — and if the latter it will be neutralised. When the plate is applied in front, which is reckoned preferable in southern voyages, it is not a fixture, but is applied at pleasure ; but when placed behind, as recommended in northern voyages, where the disturbance from local attraction is very considerable, it is fixed in its place during the voyage, and the needle is thus left free to obey the influence of the magnetic power of the earth only.

It now remains to give some account of the plate itself. The plate employed by Mr. Barlow in his experiments, as well as those which he sent out by captains Parry and Sabine, consisted of two circular pieces of sheet iron, weighing about 3lbs. per square foot, screwed together in such a manner as to combine any strong irregular power of one plate, with a corresponding weak part on the other, by which means a more uniform attraction is produced ; he is, however, of opinion that a single plate of iron, weighing about 6lbs. per square foot, would answer the purpose equally well. In diameter the plate may vary from twelve to sixteen inches, according to the power of the vessel. When the plate is made double, there is a circular board of the same size inserted between the iron discs, for the purpose of increasing the thickness, without adding much to the weight. The two plates thus separated are found to be more powerful than either a single plate, or two plates in immediate contact. The plates are perforated in the centre, and through this opening is passed a brass socket with a broad head, and having an exterior screw and nut, by which the two iron plates, and the interposed plate of wood, are compressed together. Fig. G represents the

brass pin, socket, plate, pedestal, and compass, combined, as in action on shipboard.

It appears from a curious paper by Mr. Fisher, on the errors in

longitude as determined by chronometers at sea, that a sudden alteration takes place in their rate when taken on shipboard, an eflect which has been generally ascribed to the motion of the vessel. He ascribes the acceleration which takes place to tlie ‘ magnetic action exerted by the iron in the ship, on the inner rim of the balance, which is made of steel ;’ and in proof of this, he found that analogous effects took place in chronometers when under the influence of magnets placed in different positions with respect to their balances. ‘Upon the whole,’ says Mr. Fisher, ‘ it appears that chronometers will be generally accelerated (particularly if their balances have received polarity by the too near approach of any thing magnetical) on shipboard. It appears probable, likewise, that the force of the balance-springs is affected in the same way, since it is well known that chronometers having gold balance-springs, although more difficult to adjust, yet keep better rates at sea than others.’

The use of the chronometrical compass stand, contrived by captain Scoresbyˆ is to preserve the rate of a chronometer, although magnetic properties may have been imparted to it. The instrument represented in fig. 7 consists of a slender cross of brass, supported on a long point of brass, or steel, in a compass-bowl, from which is suspended a rhomboidal compass-needle. On the centre of the brass cross there is a light, case of card paper, fitted to the pocket chronometer, to be carried by it. The case for the chronometer slips upon two pins, riveted to a moveable plate upon the cross, which, being made to slide in different directions, may be so placed as to adjust the chronometer fairly over the centre of the needle, and is then fastened by screws. In this state, the magnetic needle below it causes the cross and chronometer to traverse with great celerity. It therefore has the property of keeping the chronometer invariably in the same position, and, being suspended on gimbals, of preserving it from the bad effects of the motion of the ship at sea. The magnetic needle was hung five or six inches below the chronometer, so that its influence on the instrument was not greater than that of the earth ; and, being in an opposite direction, has a tendency to neutralise rather than add to this disturbing cause.

The azimuth compass is nothing more than the mariner’s compass already examined, to rt’hich two sights are vlapted, throughout which the sun is to be seen, in order to find its azimuth, and thence to ascertain the declination of the magnetic needle at the place of observation. The particulars in which ij differs from the usual compass are, the sights FG hg. 8; in one of which, G, there is an oblong aperture with a perpendicular thread or wire stretched through its middle ; and in the other sight, Iˆ there is a narrow perpendicular slit.

The thread or wire, li I, is stretched from one edge of the box to the opposite. The ring A B of the gimbals rests willi its pivots on the semicircle CD, the foot, K, of which turns in a socket, so that whilst the box,

KLM, is kept steady, the compass may be turned round, in order to place the sights, F, G, in the direction of the sun.

There are, on the inside of the box, two lines drawn perpendicularly along-tlie sides of the box, just from the points where the thread II I touches the edge of the box. These lines serve to sliow how many degrees the north or soutli pole of the needle is distant from the azimuth of the sun ; for which purpose tlie middle of tiie apertures of the siglits F, G, the thread II I, and the said lines, must be exactly in the same vertical plane. The use of the thread HI, which is often omitted in instruments of this sort, is likewise to show the degrees between the magnetic meridian and the azimuth, when the eye of tlie observer stands perpendicularly over it. On the side of the box of this sort of compasses there is generally a nut or stop, which, when pushed in, bears against the card and stops it, in order that the divisions cf the card, which coincide with the lines in the box, may be morecommodiously read off.

If the magnetic poles always agreed with the astronomical poles of the globe, the compass-needle must of necessity point due north and south in every part of the earth. This, however, is not the fact, as the needle is found to vary considerably, not only after the lapse of ages, but also at stated periods, witiiin a few hours of its maximum in eitiier direction. In otlier words, the magnetic meridian, and the real meridian, sel-dom coincide. The angle which they make is called the angle of declination, and this is said to be east or west, according as the north pole of the needle is eastward or westward of the true meridian of the place. From the minuteness of the daily variation, and the extreme difficulty of measuring it, excepting with the nicest instruments, its laws, and consequently its cause, are still undiscovered.

The following are a series of axioms respecting the variation of the magnetic needle collected by L. Cotte; to whicli he adds others respecting the northern lights ; as being concerned in the movements of the needle.

1. The greatest variation of the needle from the north towards the west takes place about two in the afternoon, and the greatest approximation of it towards the north about eiglit in the morning ; so that, from the last mentioned hour till about two in the afternoon, it endeavours to remove from the north, and, between two in tiie afternoon and the next mornmg, to approach it.

2. The annual progress of tlie magnetic needle is as follows : — between January and March it removes from the north ; between March and May it approaches it; in June it is stationary; in July it removes from it ; in August, September, and October, it approaches it; its declination in October is the same as in May ; in November and December it removes from the north ; its greatest western declination is at the vernal equinox, and its greatest approximation to the north at the autumnal equinox.

3. Tiie declination of the magnetic needle is different, according to the latitude: among us it has always increased since 1657; before that ppiiod it was easterly.

4. Before volcanic eruptions and earthquakes, the magnetic needle is often subject to very extraordinary movements.

5. Tlie magnetic needle is agitated before and after the appearance of the northern lights : its declination on those occasions is about noon greater than usual.

6. The greater or less appearance of these northern lights is variable ; some years this phenomenon is very frequent, in others uncommon.

7. Tiie northern lights are more frequen about the time of tiie equinoxes than at other periods of the year.

8. This phenomenon is almost constant dur-ing the long winter in the polar regions, and is the more uncommon the nearer the equator.

9. Southern lights have been observed also in the regions near the south pole.

10. The northern lights are often accompanied with lightning, and a noise like that of electricity ; while the lightning proceeds partly from the middle of the northern lights, and partly from the neighbouring clouds.

It happens tliat the declination is sometimes subject to interruptions, so that tlie needle manifestly remains stationary for a while. For example, at Paris tlie needle experienced no alteration from the year 1720 to 1724, during which it was constantly at 13’^ from the meridian.

Observation proves, also, that the variations of the declination compared with one another, in different points of the globe, follow different relations. But there is a fact extremely worthy of atteiition, that has been remarked by the celebrated Halle on the mere inspection of the table of declination published by 'an Swinden, whose notice it had escaped. In’ the table, three places are pointed out where the needle has experienced the greatest declination : and these are, first, in the middle of the Indian Ocean, from 10° to 1.50of south latitude, and from 82° 87° of east longitude (reckoning from the island of Ferroe), where the variation, from the year 1700 to that of 1756, was from 11° to 11° 15’. Secondly, in the .T-‘.thiopian Ocean, from 5° of north to 20° or 25° of south latitude, and in the interval of 10°, 15°, and 20°, of east longitude ; the variation relative to this space, dur-ing the same period of time, was from 10° to 10° 45’, principally under the line, and to 5° southward. Thirdly, at 50° north latitude, and between 17° of east and 10° of west longitude ; where, again, in the same period, there was a variation of from 11° to 11° 45’.

Looking at 'an Swinden’s table, Halle perceived that these three places formed, as it were, three centres, round which the numbers indicating the quantities of variation insensibly decreased in proportion as we departed from each centre ; so that we have here a new order of observations, answering to the places where the Tariation was least in the same course of years.

These places are, first, the whole American Ocean, without including the gulf of Mexico, that is to say, I’rom the eastern point of Africa to the farthest of the Bermudas Islands. And here also we must remark, that, in the ocean between Africa and Nortli America, the variation is much kss towards the American than towards the

African coasts. Secondly, tlie environs of the isle of Madagascar, and purl of tlie coast of Zan-guebar. Thirdly, that part of the ocean whicli is to the south and south-east of the Sunda Islands between those islands and New Holland. And, lastly, in the same sea, about the fourth decree of south latitude, and the ninety-seventli of cast longitude, that is, in the middle of the space comprised between the western angle of New Holland and the southern point of Africa. In all these different places the declination of tlie needle has not varied, during the whole fifty-six years, as much as one degree.

if similar observations had been made in the Pacific Ocean, in the northern and southern oceans, and even the principal divisions of large seas, such as the Baltic, the Mediterranean, the Gulf of Mexico, &c., these places would probably have furnished similar points : and how greatly would the study of natural magnetism be facilitated, by referring to a series of such facts in subordination to a number of centres round which they would range themselves according to the order of their respective relations.

A memoir was presented to the French National Institute, by Humboldt and Biot, ‘ On the variations of the terrestrial magnetism in different latitudes.’ These philosophers, having first determined the position of the magnetic equator by direct observations, proved that the magnetic force must increase in proceeding from that equator to the poles; and the same distinguished foreigners have given a mathematical hypothesis, which, when reduced to a formula, accords with all the inclinations of the needle hitherto observed.

As to the position of the magnetic equator, siTppo! > ing it to be a great circle of the terrestrial sphere, an hypothesis which is conformable to observations : the inclination of this plane to the astronomical equator is equal to r2-2025ˆ of the decimal division (10° 58′ 56″ of the com-mon division), and its occidental node on that equator is at 133-3719° (120° 2′ 5″) longitude west from Paris, that is, a little beyond the continent of America, near the Gallipagos, in the South Sea; the other node is at 06-6281° (59° 57′ 55″) eastward of Paris, that is to say, in the Indian Seas. The points where the axis of the magnet’c equator pierces the earth’s surface, are, the nonhern point at 87-7975° (79° 1′ 4″) of norlh latitude, and at 33-3719° (30®

2′ 5″) of longitude west from Paris ; the so;ithern point is situated in the same latitude south, and 166-6281ˆ (149° 67’ o5”) of longitude east from Paris. It is remarkable that this determination of the magnetic equator agrees almost perfectly with that given half a century back, by Wilke and Lemonnier.

With respect to the intensity of the magnetic force, in different parts of the earth, these philosophers have ascertained that it varies in different latitudes ; its increase proceeding from the equator towards the poles. The needles of Humboldt’s compass, which, at his departure, gave at Paris 245 oscillations in ten minutes, gave no more in Peru than 211, and it constantly varied in the same direction ; that is to say, the number of the cscillaticns always dec’eased by approaching the magnetic equator, and always increased by advancing towards the north. The differences can neither be ascribed to a diminution of magnetic force in the compass, nor to the effects of heat or of time ; for, after three years’ residence in the warmest countries of the earth, the same compass gave again in Mexico oscillations as rapid as at Paris.

There are some anomalies, however, occasioned by local causes. Tims Biot, having in the summer of 1804 carried to the Alps the magnetic needle employed in one of his previous aerial excursions, found that its tendency to return to the magnetic meridian was constantly stronger in these mountains than it was at Paris before his departure, and than it had been since his return. This needle, which made at Paris 83-9 oscillations in ten minutes of time, gave oscillations as below, at the places mentioned, in the same interval of ten minutes : *viz.* Paris, be-fore departure, 83-9; Turin 87-2; on Mount Genevre 88-2 ; Grenoble 87-4 ; Lyons 87-3 ; Geneva 86-5; Dijon 845; Paris, after his re-turn, 83-9. It appears to result from these observations, that the action of the Alps has a perceptible influence on the intensity of the magnetic force. Humboldt observed analogous effects at the bottom of the Pyrenees, for instance, at Perpignan. It is not improbable that they arose from the mass of these mountains, or the ferruginous matters contained in them; but, whatever may be the cause, it is hence manifest that the general action of terrestrial magnetism is sensibly modified by local circumstances, the differences of which may be perceived in places very little distant from each other.

The important discovery of the inclination or dip of the magnetic needle was made about the year 1576, by Robert Norman, a compass

maker, residing in VVapping, who in 1580 published a pamphlet entitled, ‘The Nevve Attractive, showing the Nature, Propertie, and manifold Vertues of the Loadstone; with the Declination of the Needle, touched therewith, under the Plaine of tlie Horizon. Found out and discovered by Robert Norman.’ The sole credit of the discovery was awarded to him by Dr. Gilbert and Mr. William Burrows, contemporary writers on the subject of magnetism. ‘Fhe Newe Attractive was dedicated to Mr. Burrows, and Dr. Gilbert speaks of the author in the following terms : ‘ This is that Robert Norman, that skilful sea-man, and ingenious -artificer, who first found out the inclination of the magnetic needle.’ Mr. Bond also assures us, about a century after the invention, ‘ That he himself saw an inclinatory needle of one Dr. Merrets, which was made Ly this Robert Norman, A. D. 1578, and which he fitted up for the Dr’s use.’ This curious]iamplilet was reprinted in 1720 by I\Ir. William Whiston, and subjoined to a work of his own on the discovery of the longitude and latitude by the inclinatory or dipping needle.

The attraction or repulsion of two magnets decreases as the distance increases, but not according to any ratio of the distance. On this account a magnctical bar, which is at liberty to assume any horizontal position, as, for example, a needle floated on \satcr by rncans of cork, oi

the needle of a mariner’s compass, being brought into the vicinity of another magnet, will assume such a situation as shall conform to the attractive and repulsive powers as much as possible. Thus, if a suspended magnetical needle be brought near another magnet, it will place itself in a position parallel to the axis of the magnet, if the poles of contrary names in each be mutually equidistant ; but, if the north pole of the suspended needle be nearer the south pole of the magnet than the two other poles are to each other, its north end will be most attracted, and consequently must incline, so that the axis of the two magnets will form an angle greater or less, according to circumstances. Suppose now a small magnetical bar, suspended so as

to be capable of assuming any position whatever, be placed upon, or near, tlie surface of a very large globular magnet. It is evident, in this case, that t.he two ends of the small bar, being respectively attracted by the contrary poles of the globe, will always be found in a plane passing through these poles; or in other words, if circles or meridians be supposed to be described on the globe, intersecting each other in those poles, the magnetical bar must always be in the plane of one of them. But its situation, with regard to the spherical surface, will be governed by the excess of attraction in the nearest pole. If the bar be suspended immediately over the nortii pole of the magnet it must stand perpendicularly, with its south end downwards ; but, if it be 'gradually removed along the surface towards the south pole, the increasing action of this last pole will cause it gradually to incline that way. At the equator it will rest parallel to the surface ; and, in approaching still nearer the last mentioned pole. Us north end will incline towards the surface, till at length it will stand perpendicularly over the south pole of the great magnet, with its north end downwards. For the sake of conciseness, the poles of the great magnet are supposed to be equally strong; which, however, is seldom the case.

This reasoning may be exemplified by placing a small piece of a sewing needle on the surface of a splierical magnet or loadstone. Its position is found to vary according to its situation with respect to the poles. For the same reasons, steel tilings gently dusted through a rag upon a mag-7iet, adhere to it in a very curious and amusing manner. The filings, acquiring magnetism by the contact, adliere together, and form a number of small magnets, which arrange themselves in conformity to the attractions of the poles of the original magnet.

From observations of this nature, it was very early supposed, that the globe of the earth acts as a large magnet, upon all other magnets : whence tliey naturally tend to conform to the meridian or line which joins the poles of the earth. And the dipping of the needle is readily shown to arise from the vicinity, and consequent stronger attraction of the pole towards which the inclination is made.

The dipping needle, though of late much improved, is still, however, far from perfect. The general mode of constructing it is to pass an axis quite through the needle, to let the extre-

mities of the axis, like those of the beam of a balance, rest upon its supports, so that the nee-dle may move itself vertically round, and, when situated in the magnetic meridian, may place itself in the

magnetic line. When it is used at sea it is suspended by a ring. When it is placed upon a stand a spirit-level is attached to it.

The greatest imperfection in this instrument is in the balancing of the needle, and the difficulty of ascertaining whether the needle retains its equipoise. In observing the dip of the nee-dle, at any particular place, the best method to avoid the error arising from the want of balance is, first to observe the dip of the needle, then to reverse its magnetism, by the magnetic bars, so that the end of the needle which before was elevated above the horizon may now be below it ; and, lastly, to observe its dip again; for a mean, of the two observations will be pretty near the truth, though the needle may not be perfectly balanced.

From a series of numerous and accurate experiments made by captain Sabine, he obtained the following measures of the dip of th*e magnetic needle at London : —

By ten experiments with Tobias Mayer's

needle rC'i'O"

By the times of oscillation in the magnetic meridian, and in the plane perpendicular to it. Mean by three needles 70 4 0

By the times of vertical and horizontal

oscillation 73 2 6

Mean

70 3 2

Hence captain Sabine concludes, that 70° 3’ was the mean dip of the needle at London, in August and September 1821, within a few hours of noon.

As the observations of Nairne and Cavendish give 70° 25’ for the dip in 1774, we obtain 3′ 02″ as the mean annual rate of diminution betweju 1774 and 1821.

Taking Mr. Whiston’s determination of the dip in 1720 at 75° 10’, which Mr. Cavendish considered as accurate, the annual diminution is

3′ 05″.

Having thus illustrated the nature of the magnetic dip, it may now be advisable to notice Biot’s hypothesis, in which he attempts to d - termine the law which regulates the inclination of the needle in different parts of the globe. M. Biot supposes two centres of attraction, or northern and southern poles, situated at equal distances from the centre of the earth, and in the axis of the magnetic equator. He then calcu-culated the effects which ought to result from the action of these centres upon any point of the earth’s surface, assuming the attractive force in the reciprocal ratio of the squares of the distances ; and the result was, that the nearer these assumed poles were brought to each other, the more perfectly did the calculation agree with experiment.

The following table of the magnetic dip in the Pacific Ocean, north of the equator is too important to be passed unnoticed : —

By whom observed in 1776

Lat.

Long.

Dip.

By whom observed in 1776

Lat. Long. Dip.

to 1780.

N.

E.

N.end

to 1780.

N. E. N.end

Cook, Dec. 23, 1777,

0 44

203 05

O ‘

8 42

Bayly,

O ‘ , O ‘ 0 »

44 51 229 20 68 31

Bayly, Dec. 25,

1 57

203 00

I’l 29 1 i Cook, March 16,

44 56 234 56 68 19

Cook, Dec. 22,

1 58

203 00

11 54

! March 19,

44 57 234 10 67 20

Dec. 24,

2 05

202 56

10 53

Bayly, Oct. 16, 1779,

45 08 154 l0 57 28

Jan, 4, 1778,

4 08

203 16

16 16

Cook, Oct. 15,

46 30 156 01 57 10

Bayly,

4 50

202 55

15 40

Bayly, March 24, 1778,

47 44 235 OU 70 00

Cook, Jan. 8,

7 45

205 18

23 01

Cook, Oct. 14, 1779,

48 17 156 15 59 20

Jan. 9,

8 12

205 34

23 37

Bayly, March 28, 1778,

49 27 233 50

,71 53

Bayly, Jan. 10,

10 31

205 00

26 49

Cook, April 5, 1778,

49 36 233 47

72 35

Cook,. Jan. 12,

12 17

204 36

29 54

Bayly, April 20, 1779,

49 47 161 23

60 55

Sept. 17, 1776,

12 40

201 54

37 38

Oct. 12,

50 55 157 42

63 38

Jan. 12, 17Z9,

18 35

204 51

38 30

April 27,

52 22 159 23

04 57

Bayly, Jan. 15, 1778,

19 00

201 10

39 49

Cook, Sept. 15,

53 00 159 14

03 01

Cook, in Bay of Oeyhea,

10 28

204 00

40 32

June 7,

53 00459 14

63 08

Feb. 3, 1779,

19 28

204 00

41 14

Bayly, Aug. 17,

53 50 168 41

66 03

March 26,

19 48

183 39

37 00

Oct. 3,

53 54 194 00

69 11

March 25,

19 57

184 42

38 52

Cook, June 30,

53 54 194 00

68 20

Bayly, March 25, 1779,

19 59

104 35

38 47

Oct. 12, 1778,

53 55 196 00

69 23

Cook, March 21,

20 37

192 43

41 25

Bayly, May 1,

54 40 225 00

73 34

Bayly, J\Iarch 19,

21 12

194 40

42 10

Aug. 12, 1779,

55 24471 30

67 47

Cook, Jan. 18, 1778,

21 17

201 18

42 10

Cook, June IB, 1778,

55 24 201 20

70 57

Jan. 28,

21 21

200 30

42 23

June 21, 1779,

55 51|164 21

65 31

Bayly, Jan. 18,

21 46

201 00

42 36

Bayly, June 21,

56 02,164 40

66 40

Jan. 31,

21 47

200 25

42 36

July 5, 1778,

56 31[199 30

71 01

Cook, March 6, 1779,

21 56

216 46

43 11

June 10,

57 10207 53

73 49

April 2,

22 36

177 50

38 00

Cook, July 14, 1780,

58 12,199 15

72 22

Bayly, Feb. 13, 1778,

24 30

199 44

45 43

Bayly, July 13, 1778,

58 12ll98 48

73 06

Cook, Feb. 4,

24 31

200 00

45 52

Cook, May 14, 1780,

58 22

221 22

75 20

Nov. 14, 1779,

24 36

142 30

29 31

Bayly, Sept. 27,

58 38

189 08

73 34

April 3,

24 38

175 51

38 52

May 5, 1778,

58 47

221 33

76 26

Bayly, Nov. 14,

24 50

141 20

31 58

Cook, June 25, 1779,

59 07

169 17

68 25

Nov. 13,

25 56

143 46

31 27

Aug. 7,

59 33

183 20

71 25

April 5,

25 57

174 17

43 10

Bayly, July 19, 1778,

59 37

197 45

73 03

Cook, Feb. 6, 1778,

27 41

201 00

49 42

June 27, 1779,

59 56

176 00

70 26

Bayly, Feb. 5,

27 43

200 30

48 51

Cook, May 17, 1778,

60 50

213-26

78 32

Cook, Feb. 8, 1778,

30 18

201 37

51 25

Bayly,

60 5”1

213 08

77 07

April 8, 1779,

30 39

167 34

42 55

May 31,

61 12

209 10

76 09

Bayly,

30 54

167 02

43 35

Cook, June, 30, 1779,

61 48

181 00

71 57

Feb. 9, 1778,

31 16

203 18

53 47

Bayly,, July 1, “

61 52

182 10

72 18

Feb. 14,

31 34

306 17

53 10

Cook, July 3,

63 36

187 01

74 12

April 9, 1779,

32 16

167 09

43 47

Bayly,

63 42

188 00

74 59

Feb. 14,1778,

31 .35

206 43

52 12

Cook, Aug. 2,

64 03

189 20

76 07

Nov. 17,

32 26

207 30

54 54

Bayly, Sept 7, 1778, Sept. 13,

64 20

195 40

76 36

April 10, 1779,

33 30

166 30

45 37

64 21

198 30

76 58

Bayly, Nov. 15, 1778,

33 34

107 32

56 03

Cook, Aug. 1, 1779,

64 23

189 32 j

76 03

Cook, Nov. 7, 1779,

33 52

148 35

42 50

.Sept. 13, 1778,

64 33

1 97 50

76 25

Bayly, Feb. 17, 1778,

35 04

206 30

56 53

Bayly, Awj;. S,

64 35

192 54

76 40

Nov. 1, 1779,

35 09

142 16

46 35

July 31, 1779,

65 09

189 57|

76 17

Cook, Oct. 31,

35 30

142 20

45 00

Aug. 11, 1778,

66 30

191 13

77 10

Aug. 30,

36 41

142 26

46 26

Sept. 2,

06 30

189 30

77 15

Feb. 18, 1778,

36 53

206 32

55 19

Cook, Aug. 13,

60 32

192 27

77 07

Cook, Nov. 28, 1779,

38 06

142 .30

48 10

July 18, 1779,

67 08

189 49 78 48

Bayly, Feb. 20, 1778,

38 10

208 15

59 32

Bayly, July 27,

07 30

189 07 78 15

Cook, Feb. 21,

39 06

210 15

59 15

Cook, July 10,

68 01

188 45 78 30

Bayly, Oct. 26, 1779,

40 04

142 44

51 34

.luly 9,

69 12

188 35 79 00

Cook Oct. 22,

40 50

148 47

51 53

Bayly, .luly 8.

09 23

194 30 80 03

Feb. 22, 1778,

41 00

215 40

G2 54

July 1,3,

69 26

188 48 80 05

Cook, Nov. 9, 1779,

41 40

147 03

40 03

Cook, Aug. 26, 1778,

69 36

185 44 79 35

Bayly, April 15,

41 53

160 10

53 58

July 14,

69 36

188 45 79 00

Cook, April 16,

42 12

160 11

53 34

Bayly, Aug. 26,

69 37

182 40 79 04

April 17,

43 18

158 67

54 15

July 17, 1779,

69 56

195 45 79 52

Bayly, Feb. 26, 1778,

43 20

222 30

65 48

Cook, Aug. 19,

70 06

1 97 00 79 40

March 6,

44 30

235 50

68 29

July 18,

70 26

196 22 79 58

Cˆk, March 1,

44 40

228 29

07 25

Bayly, Aug. 18,

70 30

198 15ˆ81 46

428

M A G N E T I S M.

Magx?tism, Animal, a fancied sympathy said by some persons to exist between the magnet and tlie human body : by means of whicli the former became capable of curinjj many diseases in an unaccountable manner. The fanciful system, to call it by no worse name, of animal magnetism, appears to have originated in 1774, from a Ger-man philosopher, named Father Hehl, who greatly recommended the use of the magnet in medicine. M. Mesmer, a physician of the same country, by adopting the principles of Hehl, be-came the direct founder of tlie system ; but afterwards, deviating from the tenets of his instructor, he

lost his patronage, as well as that of J3r. Ingenhousz, which he had formerly enjoyed. Mesmer had already distinguished himself by A Dissertation on the Influence of the Stars upon the Human Body, which he publicly defended in a thesis before the university of Vienna; but he was so unable to stand before the opposition of Helil and Ingenhousz, that his system fell almost instantly into disrepute. Mesmer appealed to the Academy of Sciences at Berlin ; but they rejected his principles as destitute of foundation, and unworthy of the smallest attention. He tiien made a tour through Germany, publishing every where the great cures he performed by means of his animal magnetism, while his opponents every where pursued him with detections of the falsehood of his assertions. Mes-mer, still undaunted by so many defeats, returned to Vienna; but meeting there with no better success than before, he retired to Paris in the beginning of 1778. Here he met with a very ditferent reception. He was first patronised by the author of the Dictionnaire des Merveilles de la Nature ; in which work a great number of his cures were published, Mesmer himself receiving likewise an ample testimony of his candor and solid reasoning. He soon collected patients, and, in April 1778, retired with them to Cretail, whence he in a short time returned with them perfectly cured. His success was now as great as his disappointment had been before. Patients increased so rapidly, that he was soon obliged to take in pupils to assist him in his operations. These pupils succeeded as well as Mesmer himself; and so well did they take care of their own emolument, that one of them, named M. Deslon, realized upwards of £100,000 sterling. In 1779 Mesmer pulilished a Memoir on Animal Magnetism, promising afterwards a complete work upon the subject, which should make as great a revolution in philosophy as it had already done in medicine. The new system now gained ground daily; and soon became so fashionable, that the jealousy of the faculty was thoroughly awakened, and an application concerning it was made to government. In consequence of this, a committee was appointed to enquire into the matter, consisting partly of physicians, and partly of members of the Royal Academy of Sciences, with Dr. Benjamin Franklin at their head. This was a thunderstroke to the supporters of the new doctrine. — Mesmer himself refused to have any communication with the committee; but his most celebrated pupil Deslon was less scrupulous, and explained the principles of his art in the following manner : ‘ 1 . Animal matrnetism

is a universal fluid, constituting an absolute plenum in nature, and the medium of all mutual influence between the celestial bodies, and

betwixt the earth and animal bodies. 2. It is the most subtile fluid in nature; capable of a fiux and reflux, and of receiving, propagating, and continuing all kinds of motion. 3. The animal body is subjected to the influences of this fluid by means of tlie nerves, which are immediately aflected by it. 4. The human body has poles and other properties analogous to the magnet. 5. The action and virtue of animal magnetism maybe communicated from one body to another, whether animate or inanimate. 6. It operates at a great distance without the intervention of any body. 7. It is increased and reflected by mirrors; communicated, propagated, and increased by sound ; and may be accumulated, concentrated, and transported. 8. Notwithstanding the universality of this fluid, all animal bodies are not equally affected by it ; on the other hand, there are some, though but few in number, the presence of which destroys all the effects of ani-mal magnetism. 9. By means of this fluid nervous disorders are cured immediately, and others mediately ; and its virtues, in short, extend to the universal cure and preservation of mankind. From this extraordinary theory, Mesmer, or M. Deslon, had fabricated a paper, in which he* stated that there was in nature but one disease and one cure, and that this cure was animal magnetism. To ascertain the truth of these assertions, the committee attended M. Deslon, in the room where his patients underwent his magnetical operations. The apparatus consisted of a circular platform made of oak, one foot and a half high; with a number of holes at the top, in which were iron rods with moveable joints, for the purpose of applying them to any part of the body. The patients were placed in a circle around it, each touching one of these rods, and joined to one another by a cord passing round their bodies. Each of them held an iron rod in his hand ten or twelve feet long, to concentrate the magnetism. M. Deslon also called in the aid of music from a piano-forte : on which some airs were played, accompanied with songs ; alleging that music is a conductor of animal magnetism, which is transmitted to the patients by the sounds. The internal part of the platform was said to concentrate the magnetism, and was the reservoir whence the virtue was diffused among the patients. The committee satisfied themselves, by means of a needle and electro-meter, that neither common magnetism nor electricity was concerned. Deslon also communicated the magnetism by his finger, and a rod which he held in his hand, and which he carried about the hce, head, or such parts of the patient as were diseased. His principal application, however, was by pressure of his hands or fingers on the lower regions of the stomach. The effects of these operations upon his patients were very different. Some felt nothin* ; others spit, coughed, perspired, and felt, or pretended to feel, extraordinary heats in different parts of the body Many women, but very few men, had convulsions, which Deslon

called their crisis, &c. The commissioners at last finding they could come to

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no satisfactory conclusion, while they attended in this public way, determined to try the experiments themselves privately. Accordingly, they, 1. Tried the effects of animal magnetism upon themselves, and felt nothing. 2. Seven of Des-lon's patients were magnetised at Ur. Franklin's house, of whom four felt nothing ; three felt, or affected to feel something. 3. Several persons in a higher sphere of life were magnetised, and felt nothing. 4. The commissioners now determined to discover what share imagination had in this business, blindfolded several of the com-mon people, and made them sometimes think that tliey were magnetised ; at other times they magnetised them without letting them know that they did so ; the consequence was, that when they supposed themselves magnetised, they likewise thought they felt something, and vice versa. 5. A magnetised tree was said to produce convulsions ; a young man, blindfolded, fell into convulsions, when he imagined himself near the tree, though he was really at a considerable distance from it, Deslon accounted for this on the principle of all trees being magnetic ; but in this case, every one, susceptible of magnetism, would be seized with convulsions when he approached a tree. The same influence of imagination was observed in a woman accustomed to have convulsions when magnetised. They came on when nothing was done to her, on being told, when blinded, that she was magnetised. Other instances were given, from which it was evident, either that tlie patients were impostors, or in such a wretched state of debility, both of mind or body, that the most trifling effects of the former had the most powerful effects on the latter. The commissioners therefore entirely disapproved of the whole. The touch, imitation, and imagination, they concluded, were the great causes of tiie effects produced by M. Deslon's operations; and by means of these they supposed that convulsions, whicii in themselves are a very violent disorder, might be spread much fartlier than could be wished, even through a whole city. It was observed, that the operator sometimes pressed strongly, and for a long time, upon the hypo-chondria and pit of the stomach; and it is well known, that a strong pressure on these parts will produce disagreeable sensations in those who enjoy perfect health. Mesmer complained of the report of the commissioners, petitioned parliament, and was bj' them commanded to discover the mysteries of his doctrine ; which is now universally exploded. The conclusion of the academicians concerning it was, that it is not entirely useless to pliilosophy ; as it affords one fact more to be added to the history of the errors and illusions of the human mind, and a

signal instance of tlie power of imagination.

MAGNIEZ (Nicholas), a learned and laborious ecclesiastic, who died in 1 749 at an ad vanced age. He compiled an excellent Latin dictionary, entitled Novitius, printed at Paris 1721 and 1733; 2 vols. 4to. This dictionary, besides classical words, contains all those which occur in the Bible, the breviary, and ecclesiastical authors, the terms of art, the names of great men, bishops, councils, heresies, &c. ; in short, more than 6000 words which are not to be found in the common dictionaries.

iMAG'NIFY, v.«. Magnifi'able, adj. Magnif'ical,

M vgnif'ic,

MAGNIF'lCENCE,n.S.

Magnif'icent, a(//. Magnif'icently, adv. Magnif'ico, n.s. Mag'nifieu, Mag'nitude.

"l \j...magnifico,magˆ uijicus, viagtiijlccntia, inagniludo ; Fr. mag nijier, magnificence magnifiqut; Ital. an Fort, mugnificenza ; Span, magnijicencia ; Ital. Span, and Port. mugjiijico. To make

J great; exalt; elevate;

increase in apparent bulk or size: hence to am-plify; exaggerate; praise ; extol : magnifical and magnific mean grand ; great; illustrious: magnificence, grandeur ; splendid appearance : the adjective and adverb, magnificent and magnificently, correspond : magnifico is an Italian title, a grandee of Venice : a magnifier, a medium or instrument of magnifying, as a particular kind of glass ,* also an encomiast, one who praises or ex-tols : magnitude is greatness ; bulk ; grandeur.

For thai drawen abrood her falateries and magny-fien hemmes, and thai loven the firste sittynge placis in soperis. Wiclif. Matt, xxiii.

The house that is to be builded for the Lord musˆ he exceeding mag nijical, of fame and glory throughout all countries. 1 Chron. xxii. 5.

If ye will magnifxi yourselves against me, know now that God hath overthrown me. Job xix. 5.

He shall magm*‘y himself in his heart.

Dan. viii. 5.

He shall exalt and magnify himself above every god. Daniel.

Provision is the foundation of hospitality ; and thrift the fuel of magnificence. Sir P. Sidney.

The duke himself, and the magnificoes

Of greatest port, have all proceeded with him.

bhakspeare.

This tree hath no extraordinary magnitude, touching the trunk or stem ; it is hard to find any one bigger than the rest. Raleigli.

The ambassador, making his oration, did so inag-nify the king and queen, as was enough to glut tlie hearers. Bacon.

Never repose so much upon any man’s single counsel, fidelity, and discretion, in managing affairs of the first magnitwh, that is, matters of religion and justice, as to create in yourself, or others, a diffidence of your own judgment. iˆing Charles.

The prodigal man, while he spendeth, is magnified ; when he is spent, is pitied : and that is all his recompence for his lavished patrimony.’ Bp. Hall.

They magnified their own services ; That having found the kingdom groaning under these difficulties, which seemed to be insuperable, they had by the di-vine providence ovccome them all. Clarendon. He with plain heroick magnitude of mind,

And celestial vigour armed,

‘I’lieir armories and magazines contemns. Milton.

\Vlien I behold this goodly frame, this world. Of heaven and earth consisting ; and compute Their magnitudes ; this earth, a spot, a grain. An atom, with the firmament compared. Cireatcr now in thy return, Than from the giant-angels ; thee that day Thy thunders magnified ; but to create Is greater than created to destroy. Not Babylon,

Nor great Alcairo, such magnificence

Fqualled in all her glories to inshrine

Pehis or Serapis, thuir gods; or si’at

‘i’lieir kings, when Egypt with -Assyria strove

In weallli and luxury. Jd. Paradise Lost.

Id.

Id.

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Man he made, and for him built Hldgnijiceut this world. M.

Thrones, dominations, princedoms, virtues, powers! If these miigtiifick titles yet remain, Not merely titular. Id.

Can so magnijicent and so massy a fabric of com-mendatioa stand firm upon such foundations as these ?

Burrow. Number, though wonderful in itself, and suHiciently magnitiable from its demonstrable artection, hath yet received adjections from the multiplying conceits of men. Broinw.‘s Vulgar Ernnirs.

The primitive mugnijlers of this star were the Egyptians, who notwithstanding chiefly regarded it in relation to their river Nilus. Browne.

If he were magnificent, he spent with an aspiring intent : if he spared, he heaped with an aspiring in-tent. Sidiietj. Convince the world that you’re devout and true ; Whatever be you’re birth, you’re sure to be A peer of the first magnitude to me. Dryden.

Beauty a monarch is, Which kingly power magnijicentlii proves. By crowds of slaves and peopled empires loves. Id.

How these red globules would appear, if glasses could be found that could magnify them a thousand times more, is uncertain. Locke.

It is suitable to tiie magnijicent harmony of the universe, that the species of creatures should, by gentle degrees, ascend upward from us toward his pcrfertioo, as we see they gradually descend from us downwards. id.

ˆVe can never conceive too hignly of God ; so neither too magnificenUy of nature, his handy work.

Grew’s Cosmologia. jNIy governess assured my father I had wanted for nothing ; that I was almost eaten up with the green sickness : but this magnijied but little with my father.

Spectator. One may observe more splendour and magnificence in particular persons’ houses in Genoa, than in those that belong to the

publick. Addison on Italy.

Immortal glories in my mind revive. When Rome's exalted beauties I descry. Magnificent in piles of ruin lie. Addison.

Conceive these parin,les of bodies to be so disposed amongst themselves, that the intervals of empty spaces between them may be equal in magnitude to them all ; and that these particles may be composed of other particles much smaller, which have as much empty space between them as equals all the magnitudes of these smaller particles. Newton. By true reflection I could see my face ; Why brings the fool a magnifying glass ?

Granville. The greatest magnifying glasses in the world are a man's eyes, when they look upon his own person.

Pope, As things seem large which we through mists descry, Dulness is ever apt to magnify.

Pope's Essay on Criticiitm. By nature's hand magnificently fed. His meal is on the range of mountains spread.

Young. Asa glass, which magnifies objects by the approach of one end to the eye, lessens them by the application of the other, so \ ices are extenuated by the inversion of that fallacy by which virtues are augmented.

Johnson. Less worthy of applause, though more admired, Because a novelty, the work of man. Imperial mistress of the fur-clad Russ, Thy most magnificent and mighty freak, The wonder of the North. Couper.

MAGNISA, anciently Magnesia, a towr; of Asia Minor, once the capital of the Greek em-pire, is situated at the foot of a lofty mountain. Its environs were formerly celebrated for the production of loadstone, and so have given it the name of Ma(j net, which see. It is a large and populous town, chiefly inhabited by Turks. Twenty miles N. N. E. of Smyrna.

MAGNOLIA, the laurel-leaved tulip tree, in botany, a geims of the polygynia order, and polyandria class of plants : natural order fifty-second, coadnatae: CAL. triphyllous; petals nine : CAPS, bivalved and imbricated : seed pendulous, and in the form of a berry. Species thirteen.

1. M. acuminata, with oval spear-shaped pointed leaves, is a native of the inland parts of North America. The leaves are near eight inches long, and five broad ; ending in a point. The flowers come out early in spring, and are composed of twelve white petals ; the wood is of a fine grain, and an orange color.

2. JVI. glauca, the small magnolia, is a native of Virginia, Carolina, and other parts of North America. In moist places it rises from seven or eigiit to fifteen or sixteen feet high, with a slender stem. The wood is white and spongy ; the bark smooth, and of a greenish-white color ; the branches garnislied with thick smooth leaves, of an oval slupe, sraootti on the'r edges, and wliit* underneatii. The flowers, produced at the extremities of the branches, are white, composed of six concave petals, and have an agreeable scent. The fruit increases in size till it becomes as large as a walnut with its cover ; but of a conical siiape, having many cells round the outside, in each of which is a flat seed about the size of a small kidney-bean, and of a brown color. The seeds are discharged from their cells, and hang by a slender thread. This species generally grows in a poor swampy soil, or on wet meadows. The English and Swedes in Pennsylvania and New Jersey call it beaver tree, because the root of it is the food of beavers, which are caught by its means. It drops its leaves early in autumn, though some of the young trees keep them all the winter. It is seldom found north of Pennsylvania, where it begins to flower about the end of May. The scent of its blossoms is exquisite, and may be perceived at the distance of three-quarters of an English mile. They retain their flowers for three weeks, or longer, according to the soil, spreading their odoriferous exhalations. The berries likewise look very handsome, having a rich red color, and hanging in bunches on slender stalks. Tliey are greatly extolled for their salutary eflfects in consumptions. The bark put into brandy, or boiled in any liquor, is said to give great relief in cases of cold.

3. M. grandiflora, the great magnolia, is a na-tive of Florida and South Carolina. It rises to the height of about eighty feet, with a straight trunk above two feet in diameter, and a regular head. The leaves resemble those of the laurel, but are larger, and continue green throughout the year. The flowers are produced at the ends of the branches, and are of a purplish white color.

4. M. tripetala, the umbrella tree, is a na-tive of Carolina. It rises with a slender trunk,

to sixteen or twenty feet ; the wood is soft and spongy ; the leaves very large, and produced in horizontal circles, somewhat resembling an umbrella ; whence the inhabitants of those countries have given it this name. The flowers are composed of ten or eleven white petals, hanging down without order. The leaves drop off at the beginning of winter. All these species are propagated by seeds, which must be procured from the places where they grow naturally. They should be put up in sand, and sent over as soon as possible ; for they seldom grow if long kept out of the ground.

MAGNUS (Albertus), a Dominican friar, afterwards bishop of Ratisbon, was one of the most learned men and most famous doctors of the thirteenth century. He is said to have acted as a man midwife. A book entitled De NaturS. Rerum, of which he was the reputed author, gave rise to this report. Albertus Magnus was a man of a most inquisitive turn of mind, which gave rise to other accusations ; such as, that he labored to find out the philosopher's stone; that he was a magician ; and that he made a macliine in the shape of a man, which was an oracle to him, and explained all the difficulties he proposed. He died at Cologne, November 15th, 1280. His works were printed at Lyons, in 1631, in 21 vols, folio.

M AON us (John), archbishop of Upsal, was born at Linkioping in 1488. Being made apostolical nuncio, he used his utmost endeavours to prevent Gustavus Vasa from becoming king of Sweden, and the consequent introduction of Lutheranism into his dominions. He died at Rome in 1545. He wrote a History of Sweden, and a History of the Archbishops and Bishops of Upsal.

M ACINUS (Olaus), archbishop of Upsal, succeeded his brother in 1544. He appeared at the council of Trent in 1546, and suffered much afterwards for the Catholic religion. He wrote a History of the Manners, Customs, and Wars of the Northern Nations of Europe.

Magnus Bay (St.), a commodious bay of the mainland of Shetland, with good anchorage and from seven to twenty-two fathoms of water.

MAG'PIE, U.S. Lat. pie, pica, and mag, contracted from Margaret, as

phil is used for a sparrow, and poll for a parrot. — Johnson. Mr. Thomson says from masculus pica. A bird sometimes taught to talk.

Augurs, that understood relations, have By magpies, and by choughs, and rooks, brought

forth The secretest man of blood. Shakspeˆre. Macbeth.

Dissimulation is expressed by a lady wearing a vizard of two faces, in her right hand a mayjiic, which Spenser described looking through a lattice.

Pcurluuii ()» Drawing. So have I seen in black and white, A prating thing, a magpie hight,

ftlajcstically stalk ; A stately worthless animal. That plies the tongue, and wags the tail, All tiulter, pride, and talk. Swift.

Magpik. See Corvus. MAHABALKPURAM, a town of the Carnatic, Hindostan, near which are the celebrated ruins of tiie Seven Pagodas, dedicated to Vishnu. Several of them are cut out of isolated rocks, and

covered with images. Onan adjoininghill is an important statue of Vishnu, cut out of the solid rock, in a recumbent posture, with a huge snake folded round him. The town is said to" have extended many miles to the eastward, into what is now covered by the sea. Long. 78° 18' E., lat. 12° 23' N.

MAHANTANGO, a river of the United States, in Pennsylvania, running west into the Susquehannah, eighteen miles below Sunbury. — There is another of the same name, which runs east into the Susquehannah, two miles above.

Mahantango, a township of the United States, in Northumberland county, Pennsylvania. Population 1605.

MAHE, a neat trading town of Malabar, is situated a short distance from Tellichery, on the south side of a river where it joins the sea, and which is navigable for large boats. Small vessels can cross the bar, and find a secure harbour. This place was taken by the French in 1722, and by the British in 1761. It was restored at the peace of Paris, but again taken by the British in 1793, and retained. It is now the station of the East India Company's commercial agent; the trade is in pepper. Long. 75° 38' E., lat. 11° 42' N.

MAHMOODSHI, an extensive district of Bengal, on the southern bank of the Ganges. It is intersected by innumerable branches of that river, and contains several towns. The mulberry tree is cultivated, and some silk-worms bred here; but its staple commodity is rice.

MAHIE, the name given by the inhabitants of Otaheite, or George's Island, to their bread-fruit when made into a kind of sour paste, which, in consequence of having undergone a fermentation, will keep a considerable time, and supply them with food when no ripe fruit is to be had. When, therefore, they see a great show of new fruit on the trees, they strip them all at once of their former crop, of which they make mahie. This succedaneum for ripe bread-fruit is thus made. They gather the fruit before it is perfectly ripe, and laying it in heaps cover it closely with leaves. In this state it ferments, and becomes disagreeably sweet ; the core is then taken out entire, and the rest of the fruit thrown into a hole in their houses, dug on purpose, and neatly lined in the bottom and sides with grass. The whole is then covered with leaves, and heavy stones are laid upon them. In this state it undergoes a second fermentation, and becomes sour, after which it will suffer no change for many months. It is taken out of this hole, as it is wanted for use; and, being made into balls, it is wrapped up into leaves and baked, and thus dressed it will keep for five or six weeks.

MAHOMET, or Mohammed, the celebrated Arabian prophet, and founder of the Mahommedan religion, was born in the reign of Aiui-shirwan the Just, emperor of Persia, A. D. 571. His father Abdallah was a younger son of Abdal-motalleb ; and, dying very young, left his wido\7 and infant son in narrow circumstances, his whole property consisting but of five camels and one female slave. Abdalmotallcb was ihorefoio obliged to take care of his gtandchild, which he not only did during his life, but at his deadi en-

joined his eldest son Abu Taleb, brother to Abdallah, to provide for him afterwards. Tliis he very affectionately did, and instructed iiim in the business of a merchant, for which purpose he took him to Syria when he was only thirteen. He afterwards recommended iiim to

Khadijah, a rich widow, for her factor ; in whose service he behaved so well, that she married and raised him to an equality with the richest in Mecca. According to the tradition of his companions, Mahomet was distinguished by the graces of his person and manners, so that before he spoke he engaged in attachment and interest the affections of a public or private audience. His attendants applauded hiscommanding presence, his majestic aspect, his piercing eye, his gracious smile, his flowing beard, his countenance that painted every sensation of the soul, and each gesture that enforced every e.vpression of his tongue. In the intercourse of private life he blended, with respectful attention to the affluent and powerful, condescension and affability to the poorest citizens of Mecca; the frankness of his manner concealed the artifice of his views ; and the habits of courtesy were imputed to personal friendship or personal benevolence. His memory was capacious and retentive ; his wit easy and social; his imagination sublime; his judgment clear, rapid, and decisive. He possessed, says one of his biographers, the courage both of thought and action ; and, although his designs might probably expand with his success, the first idea which he entertained of his divine mission bears the stamp of an original and superior ge-nius. Educated amidst the noblest race, he acquired a fluency of speech in the purest dialect of Arabia; and he had the art, on proper occasions, of observing a discreet silence. Notwithstanding all these accomplishments, he was an illiterate barbarian ; insomuch that his youth had never been instructed in the arts of reading and writing. After his advantageous match he first conceived the scheme of establishing a new religion, or, as he expressed it, of replanting the only true and ancient one professed by Adam, Noah, Abraliam, Moses, Jesus, and all the prophets ; by destroying the gross idolatry into which.ˆhe generality of his countrymen had fallen, and weeding out the corruptions and superstitions which the Jews and Christians had, as he said, introduced into their religion, and reducing it to its original purity, which consisted chiefly in the worship of one God. But, before he made any attempt abroad, he resolved to begin with the conversion of his own household. Having therefore retired with his family, as he had done several times be-fore, to a cave in Mount Hara, he there opened the secret of his mission to his wife ; and acquainted Jier, that the angel Gabriel had appeared to him, and appointed him the apostle of God : he also repeated to her a passage which he pretended had been revealed to him by the angel, with those other circumstances of this first appearance, which are related by theMahommedan •writers. Khadijah received the news with great joy; and immediately communicated what she had heard to her cousin Warakah ,Ebn Nawfal, who, being a Christian, was tolerably well versed in uiti

scn[)tures, and soon became a believer, assuring her that the same angel who had formerly appeared unto Moses was now sent to Mahomet. The first overture the prophet made was in the month of Ramadan, in the fortieth year of his age, which is therefore usually called the year of his mission. He soon made proselytes of those under his own roof, *viz.* his servant Zeid Ebn Haretha, to whom he gave his freedom on that occasion ; and his cousin and pupil Ali, the son of Abu Taleb, though then very young ; who was styled the first of believers. The next person Mahomet applied to was Abdallah Ebn Abi Kohafa, surnamed Abu Beer, a man of great authority among the Koreish, and one whose interest he knew would be of great service, as it soon appeared : for Abu Beer, being converted, prevailed on Othman Ebn Affan, Abdalraham Ebu Awf, Saad Ebn Abbi Wakkas, al Zobeir Ebn al Awam, and Telha Ebn Obeidallah, all principal men of Mecca, to follow his example. These men were the six chief companions, who with a few more were converted in three years : at the end of which INIahomet, having as he hoped a sufficient interest to support him, made his mission no longer a secret, but gave out that God had commanded him to admonish his near relations ; and, to do it with greater prospect of success, he directed Ali to prepare an entertainment and invite the sons and descendants of Abdalmotaleb, intending then to open his mind to them. This was done, and about forty of them came ; when he announced his mission, and offered them happiness both in this life and in that which is to come. ‘ Who, therefore,’ said he, ‘ among you will be assistant to me herein, and become my brother, and my vice-gerent?’ All of them hesitating, Ali rose up and declared that he would be his assistant ; and vehemently threatened those who should oppose him. ˆlahomet upon this embraced Ali, and desired all who were present to obey him as his deputy ; at which the company broke out into laughter, and told Abu Taleb that he must now pay obedience to his son. This repulse, however, was so far from discouraging Mahomet, that he began to preach in public to the people ; who heard him with patience till he began to upbraid them with their idolatry, obstinacy, and perverse-ness ; which highly provoked them. The chief of the Koreish warmly solicited Abu Taleb to desert his nephew, remonstrated against the innovations he was attempting, and threatened him with an open rupture, if he did not prevail on Mahomet to desist. On this Abu Taleb earnestly dissuaded his nephew from pursuing the affair any farther, representing the great dan-ger he and his friends must otherwise run. But Mahomet told his uncle plainly, that if they set the sun against him on his right hand, and the moon on his left, he would not abandon his enterprise: and Abu Taleb, seeing him so firmly resolved to proceed, promised to support him acainst all opposition. The

Koreish then tried what they could do by force, using Mahomet's followers so cruelly, that it was not safe for them to continue at Mecca : whereupon Mahomet gave leave to such of them as had not friends to protect them to seek for refuge elsewhere. And accordingly, in the fifth year of his mission.

twelve men aud four women fled into Ethiopia; among wliom were Othman Ebn Assan and his wife Rakiah, Mahomet's daughter. Tliis was the first flight; but afterwards they were followed by eighty-three men and eighteen women, besides children. These refugees were kuidly received by the Najashi, or king of Ethiopia; who refused to deliver them up to the Koreish, and, as the Arab writers unanimously attest, professed the Mahommedan religion. In the sixth year of his mission, Mahomet had the pleasure of seeing his party strengthened by the conversion of his uncle Hamza, a man of great valor and merit ; and of Omar Ebn al Kattab, a person highly esteemed, and once a violent opposer of the prophet. Isiamism now made so great a progress among the Arab tribes, that the Koreish to suppress it effectually, in the seventh year of Mahomet's mission, made a solemn league against the Hashemites and the famdy of Abdalmotaleb, engaging themselves to contract no marriages with any of them, and to have no communication with them; and, to give it the greater sanction, reduced it into writing, and laid it up in the Caaba. Upon this the tribe became divided into two factions : and tlie family of Hashem all repaired to Abu Taleb as their head : excepting only Abdal Uzza, surnamed Abu Laheb, who, out' of hatred to his nephew and his doctrine, went over to the opposite party, whose chief was Abu Sosian Ebn Harb, of the family of Ommeya. The families continued thus at variance for three years : but, in the tenth year of his mission, Mahomet informed Abu Taleb, that God had manifestly showed his disapprobation of the league which the Koreish had made against them, by sending a worm to eat out every word of the instrument except the name of God. Of this accident Mahomet had probably some private notice; for Abu Taleb went immediately to the Koreish and acquainted tliem with it ; offering, if itproved false, to deliver his

nephew up to them; but, in case it were true, he insisted that they ought to lay aside their animosity, and annul the league they had made against the Hashemites. To this they acquiesced ; and, going to inspect tlie writing, to their great astonishment found it to be as Abu Taleb had said : and the league was thereupon declared void. In the same year Abu Taleb died, aged above eiglity ; and many writers say he died an infidel : thougli others assert, that when he was at the point of death lie embraced Mahommedanism ; and in proof of this produce some passages out of his poetical compositions. About a month, or as some write, three days after his uncle's death, Mahomet had the additional mortification to lose his wife Klia-dijah ; whence this year is called the year of mourning. The Koreish began now to be more liostile than ever to the prophet, and especially some wlio had formerly been his intimate friends; insomuch that he found himself obliged to seek for shelter elsewhere, and first pitched upon Tayef, about sixty miles east of Mecca, for the place of his retreat. Thither therefore he went, accompanied by his servant Zied, and applied himself to two of the chief of the tribe of Thakif, who were the inhabitants of that place; but they received him very coldly. He however staid Vol. XIII,

tliere a month ; but the slaves and inferior peo-ple rose against him, and obliged him to return to Mecca, where he pui himself under the protection of Al Moiaam Ebn Adi. This repulse greatly discouraged his followers. However, Mahomet boldly continued to preach to the public assemblies at the pilgrimage, and gained several proselytes ; and among them six of the inhabitants of Yathreb of the Jewish tribe of Kliazraj ; who, on their return home, failed not to speak much in commendation of their new religion, and exhorted their fellow citizens to embrace it. In the twelfth year of his mission ftlahomet gave out that he had made his miraculous night journey from Mecca to Jerusalem, and thence to heaven. Dr. Prideaux thinks he invented it either to answer the expectations of those who demanded some miracle as a proof of his mission; or else, by pretending to have conversed with God, to establish the authority of whatever he should think fit to leave behind by way of oral tradition, and make his sayings to serve the same purpose as the oral law of the Jews. But it does not appear that Mahomet himself ever expected so great a regard should be paid to his sayings as his followers have since done : and, seeing he all along disclaimed any power of performing miracles, it seems rather to have been a stroke of policy to raise his reputation, by pretending to have actually conversed with God in heaven, as Moses had heretofore done in the mount, and to have received several

institutions immediately from him, whereas before he contented himself with persuading them that he had all by the ministry of Gabriel. However this story seemed so absurd and incredible, that several of his followers left him upon it; and it might probably have injured rather than benefited his cause, had not Abu Beer vouched for his veracity, and declared, that, if Mahomet affirmed it to be true, he verily believed the whole. This retrieved the prophet's credit, and contributed to raise his reputation to that great height to which it afterwards arrived. In this year, called by the Mahommedans the accepted year, twelve men of Yathreb or Medina, came to Mecca, and took an oath of fidelity to JNIahomet at Akaba, a hill on the north of that city. This oath was called the woman's oath ; not that any women were present at this time, but because it was the same oath that was afterwards exacted of the women, *viz.* That they should renounce all idolatry; and they should not steal, nor commit fornication, nor kill their children (as the Pagan Arabs used to do when they apprehended they should not be able to maintain them) ; nor ibrge calumnies ; and that they should obey the propliet in all things that were reasonable. When they had solemnly engaged to all this, Mahomet sent one of his disciples, named Masab Ebn Omair, home with them, to instruct them more fully in his new religion. Masab being arrived at Medina, by the assistance of those who had been formerly converted, gained several proselytes, so that there was scarcely a house wherein there were not some who had embraced Mahometanism. In the thirteenth year of Mahomet's mission, Masao returned to Mecca, accompanied by seventy-three men and two women of Medina who had

professed Islamisni, besides some others who were as yet unbelievers. On their arrival they immediately sent to Mahomet, and offered him their assistance, of which he was now in great need ; for his adversaries were by this time grown so powerful in Mecca, that he could not stay there without imminent danger. Wherefore he accepted their proposal, and met them by night at Akaba, attended by his uncle Abbas; wherein he told them, that as Mahomet was obliged to quit his native city, and seek an asy-lum elsewhere, and they had offered him their protection, they would do well not to deceive him; that, if they were not firmly resolved to de-fend and not to betray him, they had better let him provide for his safety in some other manner. Upon their protesting their sincerity, Mahomet swore to be faithful to them, on condition that they should protect him against all insults as heartily as they would their own wives and families. They then asked what recompence they were to expect if they should happen to be killed in his quarrel ; he answered, Paradise. Whereupon they pledged their faith to him, and so returned home; after Mahomet had chosen twelve of their number, who were to have the same authority among them as the twelve apostles of Christ had among his disciples.

Mahomet having provided for the security of tiis companions as well as of himself, by the league offensive and defensive which Ivs concluded with those of Medina, directed them to repair thither, which they accordingly did; but he himself with Abu Beer and Ali staid behind. The Koreish, fearing the consequence of this new alliance, began to think it absolutely necessary to prevent Mahomet's escape to Medina; and, having held a council, came to a resolution that he should be killed ; and agreed that a man should be chosen out of every tribe for the execution of this design; and that each man should have a blow at him with his sword, that the guilt. of his blood might fall equally on all the tribes, to whose united power the Hashemites were much inferior, and therefore durst not attempt to revenge their kinsman's death. This conspiracy was scarcely formed,

when the news of it readied Mahomet, who gave out that it was revealed to him by the angel Gabriel, who ordered him to retire to Medina. Whereupon, in order to amuse his enemies, he directed Ali to lie down in his place, and wrap himself up in his green cloak, which he did ; and Mahomet escaped to Abu Beer's house, unperceived by the conspirators, who had already assembled at the prophet's door. They, in the mean time, looking through the crevice, and seeing Ali, whom they took to be Mahomet himself, asleep, continued watching till morning, when Ali arose, and they found themselves deceived. From Abu Beer's house Mahomet and he went to a cave in mount Thur, south-cast of Mecca. In this cave they lay hid three days to avoid their enemies, whom they very narrowly escaped : for some say that the Koreish were struck with blindness, so that they could not find the cave ; others, that after Mahomet and his companions had entered, two pigeons laid their eggs at the entrance, and a spider covered tlie mouth of the cave with her web, which made them look no farther. ' We are

only two,' said the trembling Abu Beer: 'There is a third,' replied the propliet, ' it is God himself.' Tlieir enemies having retired, they left the cave, and set out for Medina by a by-road ; and, having fortunately escaped some who were sent to pursue them, arrived safely at that city, whither Ali followed them in thiee days. The first thing Mahomet did after his arrival at Medina was to build a temple for worship, and a house for himself, which he did on a parcel of ground which belonged to Salial and Soheil, the orphan sons of Amru. Mahometan writers say that the young men insisted he would accept the ground as a present ; while others affirm that he actually bought it, and tiiat the money was paid by Abu Beer, Mahomet, being thus settled at Medina, began to send out small parties to make reprisals on the Koreish ; the first consisting of only nine men, who plundered a caravan belonging to that tribe, and took two prisoners. But what established his reputation, and laid the foundation of his succeeding greatness, was the battle of Bedr, fought in the second year of the Hegira. Some reckon no less than twenty-seven expeditions in which Mahomet was personally present, in nine of which he gave battle, besides several others in which he was not present. His forces he maintained partly by the contributions of his followers, which he called zacat, or alms, and the paying of which he made an article of his religion ; and partly by ordering one-fifth of the plunder to be brought into the public treasury for that purpose. In a few years, by the success of his arms, he considerably raised his credit and power. In the sixth year of the Hegira he set out with 1400 men to visit the

temple of Mecca, not with any intention of committing hostilities, but in a peaceable manner. However, when he came to Ilodeibiya, which is partly within and partly without the sacred territory, the Koreish sent to let him know that they would not permit him to enter Mecca ; whereupon he resolved to attack the city ; but the people of Mecca sending Arwa Ebn Masud, prince of the tribe of Thakif, as their ambassador, to desire peace, a truce was concluded for ten years, by which any person was allowed to enter into league either with Mahomet, or with the Koreish, as he thought fit. The veneration which the Mahometans had by tliis time for their prophet, appears from the account which the above-mentioried ambassador gave the Koreish of the extraordinary respect which they showed him. In the seventh year of the Hegira, Mahomet began to think of propagating his religion beyond the bounds of Arabia ; and sent messengers to the neighbouring princes, with letters inviting them to embrace his doctrine. Nor was this project without some success. Khosru Parviz, then king of Persia, received his letter with great disdain, and tore it in a passion, sending away the messenger very abruptly ; which when Mahomet heard, he said, God shall tear his kingdom : and soon after a messenger came to Mahomet from Badhan, king of Yemen, who was a dependent on the Persians, to acquaint him that he had received orders to send him to Khosru. Mahomet put off' his answer till the nex<, morning, and then told the messenger it had been revealed to him that night that Khosru was slain by his son Shiruyeh ; add-

ing that he was well assured his new religion and empire would rise to as great a height as that of Khosru; and therefore bid him advise his master to embrace Mahometanism. The messenger being returned, Badhan in a few days received a letter from Shiruyeh, informing him of his father's death, and ordering him to give the prophet no further disturbance : on which Badhan and the Persians with him embraced Mahometanism. The emperor Heraclius, as the Arabian historians assure us, received Mahomet's letter with great respect, laying it on his pillow, and dismissed the bearer honorably. Mahomet wrote to the same effect to the king of Ethiopia, though he had been converted before, according to the Arab writers ; and to Mokawkas, governor of Egypt, who gave the messenger a very favorable reception, and sent several valuable presents to Mahomet, and among the rest two girls,

one of whom, named Mary, became a great favorite with him. He also sent letters of the like purport to several Arab princes, with varied success. The eighth year of the Hegira was a very fortunate year to Mahomet. In the beginning of it Khaled Ebn al Walid and Amru Ebn al As, both excellent soldiers, the first of whom afterwards conquered Syria and other countries, and the latter Egypt, became proselytes to Mahometanism. And soon after the prophet sent 3000 men against the Grecian forces, to revenge the death of one of his ambassadors, who, being sent to the governor of Bosra on the same errand as those who went to the above-men- tioned princes, were slain by an Arab of the tribe of Ghassan, at Muta, a town in the territory of Balka in Syria, about three days journey east of Jerusalem, near which town they encountered. The Grecians being greatly superior in number (for, including the auxiliary Arabs, they had an army of 100,000 men), the Mahometans were repulsed in the first attack, and lost successively three of their generals, *viz.* Zeid Ebn Haretha, Mahomet's freedmau ; Jaafar, the son of Abu Taleb ; and Abdallah Ebn Rawaha ; but Khaleb Ebn al Walid, succeeding to the commacd, orer-threw the Greeks with great slaughter, and brought away abundance of rich spoil ; on occasion of which action Mahomet gave him the title of Self min soyuf Allah, one of the swords of God. In this year also Mahomet took the city of Mecca, the inhabitants whereof had broken the truce ; for the tribe of Beer, who were confederates with the Koreish, attacking those of Khozah, who were allies of Mahomet, killed several of them, being supported in the action by a party of the Koreish themselves. Tiie consequence of this violation was soon apprehended ; and Abu Sosiau himself made a journey to Me-dina on purpose to heal the breach and renew the truce ; but in vain, for Mahomet refused to see him ; whereupon he applied to Abu Beer and Ali; but, they giving liim no answer, he was obliged to return to Mecca as he came. Mahomet immediately ordered preparations to be made, that he might surprise the Meccans while they were unprovided to receive him ; in a little time he began his march thither, and by the time he came near the city his forces were increased to 10,000 men. Those of Mecca, being unable to

defend themselves against so formidable an army surrendered at discretion; and Abu Sosian saved his life by turning Mahometan. About twenty-eight of the idolaters were killed by a party under the command of Khaled, but contrary to Mahomet's orders, who, when he entered the town, pardoned all the Koreish on their submission, except six men and four women, who had apostatised, and were solemnly proscribed by the prophet himself; but of these only three men and

one woman were put to death, the rest being pardoned on their embracing Mahometanism, and one of the women making her escape. The remainder of this year Mahomet employed in destroying the idols in and round Mecca, sending several of his generals on expeditions for that purpose, and to invite the Arabs to Islam-ism. The next year, being the ninth of the Hegira, the Mahometans call the year of embassies, for the Arabs had been hitherto expecting the issue of the war between Mahomet and the Koreish ; but as soon as that tribe, the principal of the nation, and the genuine descendants of Ishmael, whose prerogatives none offered to dispute, had submitted, they were satisfied that it was not in their power to oppose Mahomet ; and therefore began to come in to him in great numbers, and to send embassies to make their submission to him, both to Mecca, while he staid there, and also to Medina, whither he returned this year. Among the rest five kings of the tribe of Hamyar professed Mahometanism, and sent ambassadors to notify the same. In the tenth year, Ali was sent into Yemen to propagate the Mahometan faith there ; and, as it is said, converted the whole tribe of Hamdad in one day. Their example was quickly followed by all the inhabitants of that province, except only those of Najranˆ who, being Christians, chose rather to pay tribute. Thus was Mahometanism established, and idolatry rooted out, even in Mahomet's lifetime, throughout all Arabia, except only Yamania, where Moseilama, who set up also for a prophet as Mahomet's competitor, had a great party, and was not reduced till the khalifat of Abu Beer ; and the Arabs being then united in one faith, and under one prince, found themselves in a condition for making those conquests which extended the Mahometan faith over so great a part of the world.

Till the age of sixty-three, Mahomet retained a vigor of constitution which enabled him to en-dure the corporal and spiritual fatigues of his mission. The last conspicuous act of his life was his pilgrimage to Mecca. His healtii had been declining for four years previous to his death ; and he ascribed this change to poison administered to him at Cliaibar, by a Jewish female, from a motive of revenge, as some have said, or, according to others, from a desire of putting his prophetic character to the test. However this may be, his mortal disease was a fever of fourteen days, which at intervals deprived him of tlie use of his reason. During the intermissions of his disorder he employed himself in haranguing his disciples from the pulpit, and performing other religious duties of his function, and in giving instructions with regard to the measures that were fit to be pursued after his decease. He be-

held, it is said, witU firmness the approach of death, satisfied tlie demands of liis creditors, enfranchised his slaves, directed the order of his funeral, moderated tlie grief of his weeping friends, on whom he bestowed the benediction of peace, and regularly performed the exercise of public prayer till the third day before his dissolution. The choice of Abubeker to supply his place indicated his respect for this ancient and faithful friend, as he seems to have thought him a fit successor m the sacerdotal and regal office. If any credit may be given to the traditions of his wives and companions, lie maintained, to the last moments of his life and in confidential intercourse witli his family, the dignity of an apostle and the faith of an enthusiast ; describing the visits of Gabriel, and expressing his lively confidence, not only in the mercy, but the favor, of the Supreme Being. In a familiar discourse he had mentioned his special prerogative, That the angel of deatli was not allowed lo take his soul till he had respectfully asked the permission of tlie prophet. The request being granted, Mahomet fell into the agony of dissolution, and expired m the arms, or on a carpet near the feet of his favorite wife Ayesha, the daughter of Abubeker, in the month of June, A. D. 632, Hegira 11, at the age of sixty-three. Some of ‘ds followers would not for a time believe the reality or possibility of his death, till Abubeker calmly reasoned them out of their delusion. He was interred at Medina, in a grave dug beneath the bed on which he expired, over which a magnili-cent building was erected by one of the caliphs. Mahomet II., surnamed the Great, was born at Adrianople, the ‘24th of March, 1430; and succeeded his father Amurah II. in 1431. He took Constantuiople in 1453, and thereby drove many learned Greeks into the West, which was a great cause of the restoration of learning in Europe, as the Greek literature was then introduced here. He conquered two empires, twelve kingdoms, and 200 considerable cities : and he was the first of the Ottoman emperors whom the western nations dignified with the title of grand seignior, which posterity has preserved to his descendants. Italy had suffered greater calamities, but had never felt a terror equal to that which this sultan’s victories imprinted. The inhabitants seemed already condemned to wear the turban; and pope Sixtus IV., dreading the fate of Constantinople, thought of escaping into Provence, and transferring the holy see to Avignon. Hence the

tidings of Mahomet's death, which happened the 3d of May, 1481, were received nt Rome with the greatest demonstrations of joy. Mahomet appears to have been the first sultan who was a lover of arts and sciences, and cultivated polite letters. He studied the history of Auijustus and the other Caesars ; and he perused those of Alexander, Constantine, and Theodosius, with more than ordinary pleasure, because they had reigned in the same country with himself. lie was much addicted to astrology, and used to encourage his troops by giving out, tiiat the influence of the heavenly bodies promised him the empire of the world. Contrary to the genius of his country, he delighted so much in foreign languages, lliat he not

otdy spoke the Arabian, but also the Persian, Greek, and French. Landin, a knight of Rhodes, collected several of his letters, written in Syriac, Greek, and Turkisli, and translated them into Latin. Where the originals are is unknown, but the translation has been published at Lyon?, 1520, in 4to. ; at Basil 1354, 12mo. : in a collection by Oporinus, at Marpurg, 1604, in 8vo. ; and at Leipsic, in 1690, 12mo. Professor Melchior Junius published at Montbeliard, 1595, a collection of letters, in which there are three written by Mahomet II. to Scanderbeg.

Mahomet IV. was born in 1642, and succeeded in 1649, on the murder of his father Ibrahim I. He was unsuccessful in most of his enterprises. He took Candia from the Venetians in 1669, but lost 100,000 men in the siege. He look several towns in Poland, but was repeatedly defeated by king John Sobieski. In 1683 he besieged Vienna, but was completely routed by the Poles and Austrians. In 1687 he was deposed by the Janizaries, and succeeded by Soly-man III. He died in prison in 1693.

MAHOMETANISM, or Mahometism, the system of religion broached by Mahomet, and still adhered to by liis followers. See Mahomet, and Alcoran. Mahometanism is professed by the Turks, Persians, several nations among the Africans, and many in the East Indies. The Mahometans divide their religion into two general parts, faith and practice ; of which the first is divided into six distinct branches : belief in God, in his angels, his scriptures, his prophets, in the resurrection and final judgment, and in God's absolute decrees. The points relating to practice are, prayer with washings, &c., alms, fasting, pilgrimage to Mecca, and circumcision. I. The Mahometans, at least those wlio are reckoned orthodox, profess to believe in and worship the true God, the God of the Jews and Christians. 2. The existence and purity of angels

are, in the Koran, required to be believed ; and he is reckoned an infidel who denies there are such beings, or hates any of them, or asserts any distinction of sexes among them. They believe them to have pure and subtile bodies, created of fire; that they neither eat nor drink, nor propagate their species; that they have various forms and offices, some adoring God in different postures, others singing praises to him, or interceding for mankind. They hold that some of them are employed in writing down the actions of men ; others in carrying the throne of God, and other services. The four angels whom they look on as more eminently in God's favor are, (iabriel, to whom they give several titles, particularly those of the holy spirit, and the angel of revelations, supposing him to be honored by God with a greater confidence than any other, and to be employed in writing down the divine decrees ; Michael, the friend and protector of the Jews ; Azrael, the angel of deatli, who separates men's souls from their bodies ; and Irasil, whose office it will be to sound the trumpet at the resurrection. They also believe that two guardian angels attend on every man, to observe and write down his actions, being changed every day, and therefore called al Moakkibat, or the angels who continually succeed one another.

The devil, whom Mahomet names Eblis, from his despair, was once one of those angels who are nearest to God's presence, called Azazil; and fell, for refusin*^ to pay homage to Adam at the command of (jod. Besides angels and devils, the Mahometans believe in an intermediate order of creatures, which they call jin or genii, created also of tire, but of a grosser fabric than angels, as they eat and drink, and propagate their spe-cie<, and are subject to death. Some of these are supposed to be good and others bad, and capable of salvation or dainnation as men are; whence Mahomet pretended to be sent for the conversion of genii as well as men. 3. As to the Scriptures, the Koran teaches that God, in divers ages of the world, gave revelations of his will in writing to several prophets, the whole and every one of which it is absolutely necessary for a good Moslem to believe. The number of these sacred books were, according to them, 104; of which ten were given to

Adam, fifty to Seth, thirty to Edris or Enoch, ten to Abraham ; and the other four, being the Pentateuch, the Psalms, the Gospel, and tlie Koran, were successively delivered to Moses, David, Jesus, and Mahomet; winch last being the seal of the prophets, those revelations are now closed, and no more are to be expected. All these divine books, except the four last, they agree to be now entirely lost, and their contents unknown ; though the Sabians have several books which they attribute to the antediluvian prophets. And of these four, the Pentateuch, Psalms, and Gospel, they say, have nndenrone so many alterations and corruptions, that, though there may possibly be some part of the true word of God therein, yet no credit is to be given to the present copies in the hands of the Jews and Christians. The Mahometans have also a gospel in Arabic, attributed to St. Barnabas. See Barnabas. Of this gospel the Moriscoes in Africa have a translation in Spanish. It appears to be no original forgery of the Mahometans; though they have no doubt altered it since, e. p. instead of the paraclete, or comforter, tliey have in this apocryphal gospel inserted the word periclyte, *i.e.* the famous or illustrious ; by which they pretend their prophet was foretold by name, that being the signification of Mahomet in Arabic; and this they say to justify thai passage of the Koran where Jesus Christ is formally asserted to have foretold his coming under his other narneof Ahmed, which is derived from tlie same root as Mohammed, and of the same import. I'rom these, or some other forgeries of the same stamp, the Mahometans quote several passages, oi which there is not the least vestige in the New Testament. The number of the prophets, from time to time sent by God into the world, amounts to no less than 224,000 according to one Mahometan tradition; or to 124,000 according to another: among whom 313 were apostles, sent with special commissions to reclaim mankind from infidelity and superstition; and six of them brought new laws or dispensations, which successively abrogated the preceding : these were Adam, Noah, Abraham, Moses, Jesus, and Mahomet. All the prophet-; in general the Mahommedans believe to have been free from great sins, and professors of the

same religion, *viz.* Islam, notwithstanding the different laws and institutions which they observed. Tiiey hold some of thera to be more excellent and honorable than others. The first place they give to the revealers of new dispensations, and the next to the apostles. In this great number of prophets, they not only reckon divers patriarchs and persons named in Scripture, but not recorded to have been prophets, as Adam, Seth, Lot, Ishmael, Nun, Joshua, &c., and introduced some of them under different names, as Enoch, Heber, and Jethro, who are

called in the Koran, Edris, Ilud, and Shoaib ; but several others whose names do not appear in Scripture, as Saleb, Khedr, Dkulkefl, &c. 5. They believe in a general resurrection and a future judgment. When a corpse is laid in the grave, they say he is received by an angel, who gives him notice of the coming of the two examiners, who are two black livid angels, of a terrible appearance, named Monker and Nakir. These order the dead person to sit upright, and examine him concerning his faith, as to the unity of God, and the mission of Mahomet : if he ilnswer rightly, they suffer the body to rest in peace, and it is refreshed by the air of paradise ; but if not, they beat him on the temples with iron maces, till he roars out for anguish so loud, that he is heard by all from east to west, except men and genii. They then press the earth on the corpse, which is gnawed and stung till the resurrection by ninety-nine dragons, with seven heads each; or, as others say, their sins become venomous beasts, the grievous ones stinging like dragons, the smaller like scorpions, and the others like serpents ; circumstances which some understand in a figurative sense. As to the soul, tiiey hold, that, when it is separated from the body by the angel of death, who performs his office with ease and gentleness towards the good, and with violence towards the wicked, it enters into that which they call al berzakh, or the interval between death and the resurrection. If the departed person was a believer, they say two angels meet it, who convey it to heaven, that its place there may be assigned, according to its merit and degree. For they distinguish the souls of the faithful into three classes; *viz.* 1. Prophets, whose souls are admitted into Paradise immediately: 2. Martyrs, whose spirits, according to a tradition of Mahomet, rest in the crops of green birds, which eat of the fruits and drink of the rivers of paradise ; and 3. Other believers, concerning the state of whose souls before the resurrection there are various opinions. Though some Mahometans have thouglit that the resurrection will be merely spiritual, and no more than the returning of the soul to tiie place whence it first came (an opinion defended by Ebn Sina, and called by some tlie o])inion of the jjliilosophors) ; and others, who allow man to consist of body only, that it will be merely corporeal ; the received opinion is, that both body antl soul will be raised ; and their doctors argue strenuously for tlie possibility of tlie resurrt>ction of the body, and dispute with great subtlety concerning the maimer of it. But Mahomet has taken care to pres.ˆrve one part of t!ic body, whatever becomes of flic rest, to serve

for a basis of the future edifice, or rather a leaven for the mass which is to be joined to it. For he taught, that a man's body was entirely consumed by the earth, except only the bone called al ajb, which we name the os coccygis, or rump-bone ; and that, as it was the first formed in tlie human body, it will also remain uncorrupted till the last day, as a seed whence the whole is to be renewed : and this, he said, would be effected by a forty years' rain, wliich God should send, and which would cover the earth to the height of twelve cubits, and cause the bodies to sprout forth like plants. Herein also is Mahomet beholden to the Jews, who say the same things of the bone luz, excepting that what he attributes to a rain will be effected, according to them, by a dew impregnating the dust of tlie earth. The time of the resurrection the Mahometans allow to be a perfect secret to all but God alone ; the angel Gabriel himself acknowledging his ignorance in this point, when Mahomet asked him about it. However, they say, the approach of that day may be known from certain signs which are to precede it. These signs they distinguish into two sorts, the less and the greater. The less signs are, 1. The decay of faith among men. 2. The advancing of the meanest persons to eminent dignity. 3. That a maid-servant shall become the mother of her mistress (or master) ; by which is meant, either that towards the end of the world men shall be much given to sensuality, or that the Mahometans shall then take many captives. 4. Tumults and seditions. 5. A war with the Turks. 6. Great distress in the world, so that a man, when lie passes by another's grave, shall say, would to God I were in his place. 7. That the provinces of Irac and Syria shall refuse to pay tlieir tribute. And 8. That the buildings of Midian shall reach to Ahab, or Yahab. The greater signs are, 1. The sun's rising in the west. 2. The appearance of the beast, which shall rise out of the earth, in the temple of Mecca, or on mount Safa, or in the territory of Tayef. This beast, tliey say, is to be sixty cubits high ; though others, not satisfied with so small a size, will have her reach to the clouds and to heaven; and tliat she will appear for three days, but show only a third part of her body. They describe this monster, as to her form, to be a compound of various species ; having the head of a bull, the eyes of a hog, the ears of an elephant, the horns of a stag, the neck of an ostrich, the breast of a lion, the color of a tiger, the back of a cat, the tail of a ram, the legs of a camel, and the voice of an ass. Some say this beast is to appear three times in several places, and that she will bring with her the rod of

Moses, and the seal of Solomon ; and, being so swift that none can overtake or escape her, will with the first strike all the believers on the face, and mark them with the word mumen, i. e. believer; and with the latter will mark the unbelievers on the face likewise, wiih the word cafer, i. e. infidel; that every person may be known for what he really is. They add that the same beast is to demonstrate the vanity of all religions except Islam, and to speak Arabic. 3. War with the Greeks, and the taking of Constantinople by

70,000 of the posterity of Isaac, who shall not win that city by force of arms, but the walls shall fall down wiiile they cry out. There is no God but God ; God is most great 1 As they are dividin'.; the spoil, news will come to them of the appearance of Antichrist; whereupon they shall leave all and return back. 4. The coming of Antichrist, whom the Mahometans call Masib al Dajjal, i. e. the false or lying Christ, and simply al Dijjal. He is to be one-eyed, and marked on the forehead with the letters C. F. R. signifying cafer, or infidel. They say that the Jews gave him the name of Messiah Ben David; and pretend he is to come in the last days, and to be lord both of land and sea, and that he will restore the kingdom to them. 5. The descent of Jesus on earth. They pretend that he is to descend near the white tower to the east of Damascus, when the people are returned from the taking of Constantinople: that he is to embrace the Mahometan religion, marry a wife, beget children, kill Antichrist, and at length die, after forty years, or, accordmg to others, twenty-four years continuance on earth. Under him they say there will be great security and plenty in the world, all hatred and malice being laid aside ; when lions and camels, bears and sheep, shall live in peace, and a child shall play with serpents unhurt. 6. War with the Jews ; of whom the Mahometans are to make a dreadful slaughter, the very trees and stones discovering such of them as hide themselves, except only the tree called gharkad, which is the tree of the Jews. 7. The eruption of Gog and Magog, or, as they are called in the east, Yajiij and Majuj; of whom many tilings are related in the Koran and the traditions of Mahomet. These barbarians, they tell us, having passed tlie lake of Tiberias, whicli the vanguard of their vast army will drink dry, will come to Jerusalem, and there greatly distress Jesus and his companions ; till, at his request, God will destroy them, and fill the earth with their carcasses, which, after some time, God will send birds to carry away, at the prayers of Jesus and his followers. Their bows, arrows, and quivers, the Moslems will burn for seven years together, and at last God will send a rain to cleanse the earth and make it fertile. 8. A smoke which shall fill the whole earth. 9. An eclipse of the moon. Mahomet is

reported to have said, that there would be three eclipses before the last hour ; one to be seen in the east, another in the west, and the third in Arabia.

10. The returning of the Arabs to the worship of AUatandal Uzza, and the rest of their ancient idols, after the decease of every one in whose heart there was faith equal to a grain of mustard seed, none but the very worst of men being left alive. For God, they say, will send a cold odoriferous wind, blowing from Syria Damas-cena, which shall sweep away the souls of all the faithful, and the Koran itself, so that men will remain in the grossest ignorance for 100 years.

11. The discovery of a vast heap of gold and silver by the retreating of the Euphrates, which will be the destruction of many. 12. The demolition of the Caaba, or temple of Mecca, by the Ethiopians. 13. The speaking of beasts and inanimate things. 14. The breaking out df

fire in the province of Uejaz ; or according to otliers in Yemen. 15. The appearance of a man of the descendants of Kahtan, who shall drive men before him with his staff. 16. The coming of the Mohdi, or director ; concerning whom Mahomet prophesied, that the world should not have an end till one of his own fa-mily snould govern the Arabians, whose name should be the same with his own name, and wliose father's name should also be the same with his father's name, and who should also fill the earth with righteousness. This person the Siriites believe to be now alive, and concealed in some secret place ; for they suppose him no other than the last of the twelve Imams, named Mahomet Abulkasem, as their prophet was, and the son of Hassan al Askeri, the eleventh of that succession. He was born at Sermanrai, in the 255th year of the Hegira. From this tradition it is to be presumed, an opinion pretty current among the Christians took its rise, that the Mahometans are in expectation of their prophet's return. 17. A wind which shall sweep away the souls of all who have but a grain of faith in their hearts, as has been mentioned under the tenth sign. These are the greater signs, which, according to their doctrine, as Mr. Sale so ably exhibits it in the introduction to his translation of the

Koran, are to precede the resurrection, but still leave the hour of it uncertain ; for the immediate sign of its being come will be the first blast of the trumpet, which they believe will be sounded tiiree times. The first they call the blast of consternation ; at the hearing of which all creatures in heaven and in earth shall be struck with terror; not only all buildings, but the very mountains shall be levelled, the heavens shall melt, the sun be darkened, the stars fall (on the death of the angels, who as some imagine hold them suspended between heaven and earth), and the sea shall be troubled and dried up; or, according to others, turned into flames. The Mahometans believe that this first blast will be followed by a second, which they call the blast of exinanition ; by which all creatures, both in heaven and earth, shall die or be annihilated, except those which God shall please to exempt from the common fate ; and this, they say, shall happen in the twinkling of an eye, nay in an instant; nothing surviving, except God alone, with paradise and hell, the inhabitants of those two places, and the throne of glory. The last who shall die will be the angel of death. Forty years after this will be heard the blast of resurrection, when the trumpet shall be sounded the third time by Israfil, who, together with Gabriel and Michael, will be previously restored to life; and, standing on the rock of the temple of Jerusalem, sliall, at God's command, call together all the dry and rotten bones, and other dispersed parts of the bodies, and the very hairs, to judgment. This angel, having, by the divine order, set the trumpet to his mouth, and called together all the souls from all parts, will throw them into his trumpet, whence, on his giving the last sound, at the command of God, they will fly forth like bees, and fill the whole space between heaven and earth, and then repair to their respective bodies, which the opening earth will

suffer to arise ; and the first who shall so arise, according to a tradition of Mahomet, shall be himself. For this birth the earth will be prepared by the rain above mentioned, which is to fall continually for forty years, and will resemble the seed of a man, and be supplied from the water under the throne of God, which is called the living water ; by the efticacy of which the dead bodies shall spring forth from their graves, as they did in their mother's womb, or as corn sprouts forth by common rain, till they become perfect; after which breath will be breathed into them, and they will sleep in their sepulchres, till they are raised to life at the last trump.

When those who have risen shall have waited the limited time, it is believed God will at length appear to judge them ; Mahomet undertaking the oflSce of intercessor, after it shall have been declined

by Adam, Noah, Abraham, and Jesus, who shall beg deliverance only for their own souls. They say, that on this solemn occasion God will come in the clouds, surrounded by angels, and will produce the books wherein the actions of every person are recorded by their guardian angels, and will command the prophets to bear witness against those to whom they have been respectively sent. Then every one will be examined concerning all his words and actions uttered and done by him in this life. The particulars of which they shall give an account, as Mahomet himself enumerated tliem, are, of their time, how they spent it; of their wealth, by what means they acquired, and how they employed it; of their bodies, wherein they exercised them; of their knowledge and learning, what use they made of them ; each endeavouring to excuse himself, by casting the blame of his evil deeds on others ; so that a dispute shall even arise between the soul and the body ; the soul, according to this sapient prophet, saying, ‘ O Lord, my body I received from thee ; for thou createdst me without a hand to lay hold with, a foot to w-alk with, an eye to see with, or an understanding to apprehend with, till I came and entered into this body; therefore punish it eternally, but deliver me.’ The body, on the other side, mak-ing this apology : ‘ O Lord., ‘hou createdst me like a stock of wood, having neither hand that I could lay hold with, nor foot that I could walk witli, till this soul, like a ray of light, entered into me, and my tongue began to speak, my eye to see, and my foot to walk ; tlierefore punish it eternally, but deliver me.’ But now will be pro-jjounded to them the following parable: — ‘A certain king having a pleasant garden, in which were ripe fruits, set two persons to keep it, one of whom was blind, and the other lame ; the former not being able to see the fruit, nor the latter to gather it; the lame man, however, seeing the fruit, persuaded the blind man to take him upon his shoulders, and by that means he easily gathered the fruit, which they divided between them. The lord of the garden coming some time after, and enquiring after his fruit, each began to excuse himself: the blind man said he had no eyes to see with ; and the lame man that he had no feet to approach the trees. But the king, ordering the lame man to be set on the blind, passed sentence on and punished them both.

And in the same manner will God deal with the body and the soul.' At tliis examination, tliey also believe, that each person will have the hook wherein ail tiie actions of his life are written delivered to him; wliicli books the rigliteous will receive into their right hand, and read with ‘ˆreat pleasure and satisfaction; but the ungoilly will be obliged to take them against their wills, in their left, which will be bound behind their backs, tlieir right hand being tied up to their necks. To show the exact justice which will be observed, on this great day of trial, the doctors describe the balance, wherein all things shall be weighed They say it will be held by Gabriel ; and that it is of so vas' .1 size, that its two scales, one of which hangs over paradise, and the other over hell, are capacious enough to contain botli heaven and hell. Hut some are willing to understand what is said in the Koran concerning this balance allegorically, and only os a figurative representation of God's equity ; the more ancient an i orthodox opinion, however, is that they are to be taken literally. They say that the books wherein the actions of men are written will be thrown into the scales, and, according as those wherein tiie good or evil actions are recorded shall preponderate, sentence will be given; nor will any one have cause to complain that God suffers any good action to pass unrewarded, because tiie wicked, for the good they do, have their reward in diis life, and therefore can expect no favor in tlie next.

This examination being past, mutual retaliation will follow, according to which every creature will take vengeance one of another, or liave satisfaction made them for the injuries they have sufiered. And, since there will then be no other way of retvirning like for like, the manner of giving this satisfaction wdl be by taking away a proportional part of the good works of him who offered the injury, and adding it to those of him who suffered it. Which being done, if the an-gels (by whose ministry this is to be performed) say, 'Lord, we have given to every one his due, and there remaineth of this person's good works so much as equalleth the weight of an ant,' God will, of his mercy, cause it to be doubled unto him, that he may be admitted into paradise; but if, on the contrary, his good works be exhausted, and there remain evil works only, and there be any who have not yet received satisfaction from him, God will order that an equal weight of their sins be added unto his, that he maybe punished for them in their stead, and he will be sent to hell laden with both. Brutes shall likewise take vengeance of one another, wiien God will command them to be changed into dust; while wicked men, being reserved to more grievous punishment, shall cry out, ' would to God we were dust also.' As to the genii, many Mahometans are of opinion, that such of them as are true believers will undergo the same fate as the irrational animals, and have no

other reward than the favor of being converted into dust ; and for this they quote the authority of their prophet. Their trial being over, those who are to be admitted into paradise will take die right-hand way, and those who are destined to hell the left ; but both must first pass the bridge called in Arabic

al Sirat, which they say is laid over the midst of hell, and describe to be finer than a iiair, and sharper than the edge of a sword. Tlie Motazalites reject the account of tliis bridge as a fable ; though the orthodox tiiink it a sufficient proof of the truth of this article, that it was seriously affirmed by him who never asserted a falsehood, meaning tlieii prophet; who, to add to the difficulty of the passage, has likewise declared, that al Sirat is beset on eacii side with briars and hooked thorns : which will, however, be no impediment to the good ; for they shall pass with wonderful ease and swiftness, like lightning, or the wind, Mahomefand iiis Moslems leading the way ; whereas the wicked will miss their footing, and fall down headlong into hell, which is gapmg beneath them. Tliis, the Mahometans are taught, is divided into seven stories or apart-raerrts, one below another, designed for the reception of as many distinct classes of the damned. The 1st, Jehennam, they say, will be the receptacle of those who acknowledge one God, that is, the wicked Mahometans ; wiio, after having been there punished according to tlieir demerits, will at lengtii be released. The 2d, named Ladha, they assign to the Jews; the 3d, al Ilo-tama, to the Christians ; the 4th, al Sair, to the Sabians ; the 5th, Sakar, to the Magians ; the 6th, al Jahim, to the idolaters; and the 7th, which is tlic lowest and worst of all,and is called Ilawyat, to the hypocrites, or those who outwardly professed some religion, but in their hearts were of none. Over each of these apartments they believe there will be set a guard of angels, nineteen in number, to whom the damned will confess the just judgment of God, and beg them to intercede with him for some alleviation of their pain, or that they may be delivered by being annihilated. Mahomet has, in tiie Koran, been very exact in descrdiing the various torments of hell, in which, according to him, the wicked will suffer both from ‘intense heat and excessive cold. But infidels alone will be liable to eternal damnation. The time which the true believers shall be detained there, a’ccording to a tradition handed down from the prophet, will not be less than 900 years, nor more than 7000. They will be released by the mercy of God, at the intercession of Maiiomet and the blessed.

The righteous, having surmounted the difficulties, and passed the sharp bridge above-menti- oned, before they enter paradise, will be

refreshed by drinking at the pond of their prophet, who descriljes it to be an exact square of a month's journey in compass; its water, which is supplied by two pipes from al Cawthar, one of the rivers of paradise, being whiter tlian milk or silver, and more odoriferous than musk, witli as many cups set round it as there are stars in the firmament ; of which water whosoever drinks will thirst wo more for ever. This is the first taste which the blessed will have of their future and now near approaching felicity. Though paradise be so very frequently mentioned in the Koran, yet it is a dispute among the Mahometans whether it be already created, or to be created hereafter; the Motazalites and some other sects asserting, that there is not at present any such place, and that the paradise which the righteous will inhabit in

l!ie next life will be different from that from ■which Adam was expelled. However, many of the orthodox profess the contrary, maintaining that it was created even before the world. They say it is situated above the seven heavens (or in the seventh heaven), and next under the throne of God ; to express the amenity of the place, they tell us, that the earth of it is of the finest wheat-flour, or of the purest musk ; that its stones are pearls and jacinths, the walls of its buildings enriched with gold and silver, and that the trunks of all its trees are of gold : among which the most remarkable is Tuba, or the tree of happiness. Concerning this tree, they say, that it stands in the palace of Mahomet, though a lirancii of it will reach to the house of every true believer ; that it will be laden with pomegranates, grapes, dates, and other fruits, of surprising bigness, and o'f tastes unknown to mortals. So that if a man desire to eat of any particular kind of fruit, it wdl immediately be presented him ; or, if he choose flesh, birds ready dressed will be set before him, according to his wish. They add, that the boughs of this tree will spontaneously bend down to the hand of the person who would gather of its fruits ; tiiat it will supply the blessed not only witii food, but also with silken garments, and beasts to ride on ready saddled and bridled, and adorned with ricli trappings (which will burst forth from its fruits); and that this tree is so large,

that a person, mounted on the fleetest horse, would not be able to gallop from one end of its shade to the other in 100 years. The Koran often speaks of the rivers of paradise as a principal ornament: some of these, tiiey say, flow with water, some witli milk, some with wine, and others with honey ; all taking their rise from the root of the tree tuba. Even these glories however will be eclipsed by the resplendent and ravishing girls of paradise, called, from thei" large black eyes, Hur al oyun, or houries, the enjoyment of whose company will be a principal felicity of the faithful. These, they say, are created, not of clay, as mortal women are, but of pure musk; being free from all natural impurities and defects; of the strictest modesty, and secluded from public view in pavilions of hollow pearls, so large, that one of them wdl be no less than four parasangs (or sixty miles) long, and as many broad. The name which the Mahometans usually give to this happy mansion is al Jannat, or the garden ; sometimes they call it Jannat al Ferdaws, the garden of paradise ; Jannat Aden, the garden of Rdcn ; Jannat al Mawa, the garden of abode; Jannat al Nairn, the garden of pleasure, &c., by which appellations some understand so many different gardens, or places of different degrees of felicity, of which they reckon no fewer than 100. The Mahometans believe in God's absolute decree and predestination both of good and evil. The orthodox doctrine is, that whatever hatli or shall come to pass in this world, whether good or evil, proceedeth entirely from the divine will, and is irrevocably fixed and recorded from all eternity in tiie preserved table : God having predetermined not only the adverse and prosperous fortune of every person in this world, in the most minute particulars, but also his faith or infidelity, his obedience

or disobedience, and consequently his everlasting happiness or misery after death; which fate or predestination it is not possible by any foresight or wisdom to avoid. Of this doctrine Mahomet made great use for the advancement of his designs, encouraging his followers to fight without fear, and even desperately, for the propagation of their faith, by representing to them, that all their caution could not avert their inevitable destiny, or prolong their lives for a moment ; and deterring them from disobeying or rejectmg him as an impostor, by setting before them the dangers they might thereby incur of being, by tiie just judgment of God, abandoned to seduction, hardness of heart, and a reprobate mind, as a punishment for their obstinacy. It is quite clear that this doctrine has been llie chief basis of the desperate courage of his followers for ages.

Mahometan Religious Practice. — The first point of religious practice

in the creed of Mussulmans is *jraˆer*, under which are comprehended those legal washings which are necessary preparations for it. Of these there are two degrees, one called ghost, being a total immersion or bathing of the body in water: and the other called wodu, which is the washing of their faces, hands, and feet, after a certain manner. The first is required in some cases only, as, after approaching a dead body ; women are also obliged to it after their courses or childbirth : the latter is the ordinary ablution before prayer, and must necessarily be used by every person before he can enter upon that duty. Mahomet is said to have declared that the practice of i elision is founded on cleanliness, which is the one-half of the faith, and the key of prayer, without which it will not be heard by God. Al Ghazali reckons four degrees of purificat on ; *viz.* 1st, cleansing of the body from all pollution, filth, and excrements ; 2dly, cleansing the members of the body from all wickedness and injustice ; 3dly, cleansing the heart from all blameable inclinations and odious vices; and, 4thly, purging a man's secret thoughts from all affections which may divert their attendance on God. Circumcision, though it be not once mentioned in the Koran, is yet held by the Mahometans to be an ancient divine institution, confirmed by the religion of Islam, and, though not so absolutely necessary but that it may be dispensed with in some cases, yet highly proper and expedient. The Arabs used this rite for many ages before Mahomet, having learned it from Ishmael their ancestor. The Ishmaelites circumcised their children when about twelve or thirteen years old, at which age their father undfrwent that operation ; the Mahometans imitate them so far as not to circumcise their children before they be able, at least, distinctly to pronounce thai profession of their faith, There is no God but CJod ; Maliomet is the apostle of God. They generally perform the operation between six and sixteen.

Prayer Mahomet thought so necessary a duty, that he used to call it the pillar of religion, and the key of paradise ; and when the Thakisites, who dwelt at Tayef, sending, in the 4'.Uh year of the Ilegira, to make their submis>ion to the prophet, after the keeping of their favorite idol had been denied them, begged, at least, that they

iniglil be dispensed with as to their saying of their appointed prayers, he answered, That there could be no good in that religion wlierein was no prayer. That so important a duty, therefore, might not be neglected, JNlaliomet obliged his followers to pray Hve times every twenty-four hours, at certaui stated times; *viz.* 1. in the morning before sun-rise ; 2. When noon is past, and the sun begins to decline from the meridian; 3. In the afternoon, before sun-set; 4. In the evening, after sun-set, and before day be shut in; and, 5. After the day is shut in, and before the first watch of the night. At these times, of which public notice is given by the muedhdhins, or criers, from the steeples of their mosques (for they use no bells), every conscientious Moslem prepares himself for prayer, which he performs either in the mosque or any other place, provided it be clean, after a prescribed form, and with a certain number of praises or ejaculations (which the more scrupulous count by a string of beads), and using certain postures of worship ; all which have been particularly set down and described, and must not be abridged, unless on a journey, or preparing for battle, &c. It is also requisite that they turn their faces, while they pray, towards the temple of Mecca; the quarter where the same is situated being, for that reason, pointed out within their mosques by a niche, which they call al Meiirab ; and without, by the situation of the doors opening into the galleries of the steeples : there are also tables calculated for the ready finding out their keblah, or part towards which they ought to pray, in places where they have no other direction.

2. Alms are of two sorts, legal and voluntary. The legal alms are of indispensable obligation, being commanded by the law, which directs and determines both the portion which is to be given, antl of what things it ought to be given ; but the voluntary alms are left to every one's liberty, to give more or less, as he shall see fit. The former kind are called zacat, either because they increase a man's store by drawing down a blessing thereon, or because they purify the remaining part of one's substance from pollution, and the soul from tlie filth of avarice : the latter sadakat, hecaiise they are a proof of a man's sincerity in the worship of God.

3. Failing is also a duty of so great moment, that Mahomet used to say it was the gate of religion, and that the odor of the mouth of him who fasteth is more grateful to God than that of musk; (Jhazali reckons fasting one-fourth part of the faith. According to the Mahometan divines, tliere are three degrees of fastine ; 1. The restraining the belly and other parts of the body from satisfying their lusts ; 2. The

restraining the ears, eyes, tongue, hands, feet, and other members, from sin ; and, 3. The fasting of the heart from worldly cares, and restraining the thoughts from every thing besides God. The Mahometans are obliged, by the Koran, to fast tiie whole month of Ramadan, from the new moon till the next new moon ; during which they must abstain from eating, drinking, and women, from dav-break till night or sun-set. And tliis injunction they observe so strictly, that, while they fast, they suffer nothing to enter tlieir mouths,

or other parts of their body, esteeming the fast broken and null, if they smell perfumes, take a clyster or injection, bathe, or even purposely swallow tlu'ir spittle : the fast is also deemed void, if a man kiss or touch a woman. But after sun-set they are allowed to refresh tliemselves, and discontinue the fast till day-break ; though the more rigid begin it again al midnight. This fast is extremely rigorous when the month of Ramadan happens to fall in summer (for, the Arabian year being lunar, each month runs through all the different seasons in the course of thirty-three years), the length and heat of the days making the observance of it much more difficult than in winter. The reason given why the month Ramadan was pitched on for this purpose is, that in that month the Koran was sent down from heaven.

4. The pilgrimage to Mecca is so necessary a point of practice, that, according to a tradition of Mahomet, he who dies without performing it may as well die a Jew or a Christian. The tem-ple of Mecca stands in the midst of the city, and is honored with the title of Masjad al elharam, *i.e.* the sacred or inviolable temple. What is principally reverenced here, and gives sanctity to the whole, is a square stone building, called the Caaba ; to which every INIahometan, who has health and means sufficient, ought, once at least in his life, to go on pilgrimage; nor are women excused. The pilgrims meet at different places near Mecca, according to the different parts wlience they come, during the months of Shawal and Dhulkaada; being obliged to be there by the beginning of Dhulhajja; which month is set apart for the celebration of this solemnity. At these places the pilgrims properly commence such ; when the men put on the Ibiam or sacred habit, which consists of two woollen wrappers, one wrapped about their middle, and tlie other thrown over their shoulders, having their heads bare, and a kind of slippers which cover neither the heel nor the instep, and so enter the sacred territory in their way to Mecca. ^^ hile they have this habit on, they must neither hunt nor fowl (though they are allowed to fish); which precejit is so punctually observed, that they will not kill even an insect on their bodies : there are some

noxious animals, however, wliicii they have permission to kill during the pilgrimage. During the pilgrimage it behoves a man to have a constant guard over his words and actions ; to avoid all quarrelling, and all converse with women ; and to apply his wlnjle attention to the good work he is engaged in. The pilgrims, being arrived J>t Mecca, immediately visit the temple ; and then enter on the performance of the prescribed ceremonies, which consist chiefly in going in jirocession round the Caaba, in running between the mounts Safa and Merwa, in making the station on mount Araf, and slaying the victims, and shaving their heads in the valley of Mina. So often as they pass by the black stone, they either kiss it, or touch it with their hand and kiss that. The running between Safa and iNIerwa is performed seven times, partly with a slow pace, and partly running. On the Othof Dhulhajja, after morning prayer, the pilgrims leave the valley of Mina, whither they came the

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day before; and proceed in a tumultuous and nishins manner to mount Arafat, where they perform their devotions tdl sun-set; then they go to Mozdalifa, an oratory between Arafat and Mina, and there spend the night in prayer and reading-the Koran. The next moniinix, by day-break, they visit al Mashar al Karam, or the sacred monument ; and, departing thence before sun-ris,e, haste by Batn Mohasser to the valley of Mina, where they throw stones at three marks or pillars, in imitation of Abraham, who, meeting the devil in this place, and being by him disturbed in his devotions, was commanded by God to drive him away by throwing stones at him. This ceremony being over, on tlie same day, the 10th Dhulhajja, the pilgrims slay their victims in the valley ; of which they and their friends eat part, and the rest is given to the poor. The sacrifices being over, they shave their heads and cut their nails, burying them in the same place ; after which tlie pilgrimage is regarded as complete: though many again visit the Caaba, to take their leave of that sacred building.

The rapid success which attended the propagation of this religion was owing to causes that are plain and evident, and must remove all surprise when they are attentively considered. The terror of Mahomet's arms, and the repeated victories which were gamed by him and his successors, were, no doubt, the irresistible arguments that persuaded multitudes to embrace his religion, and submit to his dominion. Besides, his law was artfully and marvellously adapted to the corrupt nature of man ; and, more particularly, to the manners and opinions of the eastern nations, and the vices to which they were addicted : for the articles of faith which it proposed were few in number, and extremely simple ; and the duties it required were neither many nor difficult ; nor such as were incompatible with the empire of appetite and passions. It is to be observed farther, that the gross ignorance under which the Arabians, Syrians, Persians, and the greatest part of the eastern nations, labored at the time, rendered many an easy prey to the artifice and eloquence of this bold adventurer. To these causes of the progress of Mahometanism we may add the bitter dissensions and cruel animosities that reigned among the Christian sects, particularly the Greeks, Nestorians, F.utychians, and Monophysites ; dissensions that filled a great part of llie east vvith carnage, assassinations, and such detestable enormities, as rendered tlie very name of Cliristianity odious. It is well known that the Monophysites and Nestorians, full of resentment against the Greeks,

from whom they had suti'ered the most injurious treatment, assisted the Arabians in the conquest of several provinces, into which, of consequence, the religion of Mahomet was afterwards introduced.

MAHOMMPLD-AMEENPORE, a large district of 700 square miles, on the western bank of the Bhaggarutty, in Bengal, comprehending Hoogly, and all the other European towns on the western side of the river.

MAHRATTAS, a native Ilindostan race possessing till recently a territory in India, which extended across the peninsula. Their original country is said to have been Khandeish ; but

little is known of their history, till the middle of tlie seventeenth century, when they possessed a narrow tract on the western side of Hindostan, extending from the fifteenth to the twenty-first de-gree of latitude. The first distinguished chief of this nation was Sevajee, born about the year 1626 ; he and iiis descendants asserting that they were of the same family as the rajahs of Odey-pore, who claim a descent from the celebrated Noushirvaii, king of Persia, who reigned in the seventh century. The father of Sevajee named Sahoo Bhosila, or Bhoonsla, was an officer in the service of the last Mahommedan king of Bejapore ; and his son, who succeeded to his command, taking advantage of the Mogul invasion retired with his followers to the mountains of the sea coast, whence he returned to carry his ravages into the heart of the Bejapore territories. He also carried on a successful war against the Moguls, and obtained possession of several portions of that empire. He died in 1680, and was succeeded by Sambajee, who was taken prisoner and put to death in the year 1689 by the emperor Aurungzebe. Sahoo Rajah, the son of Sambajee in a reign of nearly fifty years extended his dominions from sea to sea, and had possession of fortresses reaching from the province of Agra to Cape Comorin. This monarch was succeeded in the year 1740 by Ram Rajah, his son, a weak prince, who was confined in the fortress of Saltarah by the two cliief officers of the state, *viz.* the peishwa, or prime minister, Bajeerow, and the paymaster-general Ragogee. The former fixed his residence at Poonah, and the latter founded a new kingdom at Nagpore, which see.

In order to conciliate other chiefs, they granted them extensive independent principalities, the foundations of all the modern Mahratta states. Bajeerow died in 1759, and was succeeded by his son Ballajeerow, when the office of peishwa became hereditary. In 1761

the Mahrattas, having extended their conquests to the city of Delhi, were on the 7th of January opposed and totally defeated by tlie united Mahommedan armies under the command of Ahmed Shah Abdally. Balajee died soon after tliis event, and was succeeded by his son Madhoorow, who died in 1772, and grandson Narrain-row murdered in the following year, at the instigation of his uncle Ragobah ; the latter, having been disappointed in getting possession of tiie throne, fled to Bombay, a circumstance which brounjit on a war between the JNIahrattas and the British. See our article India.

A posthumous son of Madhoorow, of the same name, succeeded to the pcislnvaship, but died in 1795. On this event the two sons of Ragobah contended for the office, and the cause of tlie eldest brother, named Bajeerow, was espoused by Scindia, who fixed him on the throne in a nominal sovereignty. In 1802 llolkar defeated the united armies of Scindia, and the peishwa; and the latter, having been compelled to take refuge in the British territory, entered into the treaty of Bassein, with the Bombay government, by which he agreed to receive intu his pay a force of 6000 infantry, with their usual proportion of artillery, and gave an assignmenl of ter-

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ritory for their support. In consequence of this treaty the peishwa was in the month of May 1803 reinstated at Poonah. Lord Lake's defeat of Scindia, the overthrow of Ilolkar, and the peace conchided with tlie Mahralta chiefs in 1805, are detailed in the article India. It will be seen that in 1817 the peishwa made a fresh attempt at independence: a circumstance which raiy be said to have annihilated his authority ; as the descendant of Ram Rajah has been since brought out from his confinement, and placed on the throne of his ancestors under British protection.

The Mahrattas are not very scrupulous Hindoos, all of them but the Brahmins being careless of what they eat except beef. They are fond of horses, and their army was almost entirely composed of cavalry, the celerity of whose motions and sudden incursions alone rendered them formidable : their arms were a sword and spear, and their only camp equipage blankets or horse cloths. They would march at the rate of fifty miles a day ; and not content with plunder of-ten carried away children into slavery, and used the female sex barbarously. Their Brahmins are many of them polished and insidious merchants.

MAIA, in fabulous history, the daughter of Atlas and Fleione. She was the mother of Mercury by Jupiter. She was one of the Pleiades, and the most luminous of the seven sisters.

Maia, a surname of Cybele. MAID, or ˆ Sax. may, maeben,

Maid'en, 7J.S. mrE3'ˆen; Goth mai/,

M aid'eshaiu, n. s. wejd; Belg. megdˆnicid; Maid'enhead, or Teut. magd, the femi-Maid'enhood, n. s. [nine of mag, mac, a son. Maid'exly, arf;. (A girl; an unmarried Maid'hood, 71.S. I woman; a virgin ; a fe-Maidma'rian, male ; a female servant:

MAro'-PALE, adj. \ maidenhair is a plant, Maio'-seuvaxt,/?. S.J the Adianthum, which see: maidenhead, maidenhood, or maidhood, virginity ; purity ; and, in an obsolete sense, new-ness; freslmess: maidenly, like or becoming a maid; gentle; timid; delicate: maidmarian, a species of buftbon-dance : maid-pale, pale with sickness, or a trifling complaint : maid-servant, a female servant.

If she bear a maid child. lev. xii. 5.

Your wives, your daughters, Your matrons, and your maids, could not fill up The cistern of my lust. Shakspeure. Ulacheth.

This is a man old, wrinkled, faded, withered, And not a maiden, as thou say'st he is. Shahxpeare. I\Iy maid Nerissa and myself, mean time, Wdl live as maids and widows. He fleshed his maiden sword.

'Tis not maidenly ; Our sex, as well as I, may chide you for it. The devil and mischance look big Upon the maidenhood of our affairs. By maidhood, honour, and every thing, I love thee. Id. Twelfth Night.

Example, that so terrible shews in the wreck of maidenhood, cannot for all that dissuade succession, but that they are limed with the twigs that threaten them. Shuhiˆpeare.

Id.

Id.

Id.

Id.

Change the complection of her maidpak peace To scarlet indignation. Id.

And, for tiie modest lore of maidenhood. Bids nie not sojourn with these armed men.

Oh whither shall I Ay >. what sacred wood Shall hide me from the tyrant ! or what den?

Fairfax, She hated chambers, closets, secret mewes. And in broad fields preserved her maidenhead.

Id. Some, who attended with much expectation, at Jieir first appearing have stained the maidenhead of their credit with some negligent performance.

Wotlon. She employed the residue of her life to repairing of highways, building of bridges, and endowing of maidens. Carew.

June is drawn in a mantle of dark grass green, upon his head a garland of bent, king s-cup, and maidenhair. Peacliam.

Hope's chaste kiss wrongs no joys maidenhead, The spousal rites prejudge the marriage-bed.

Crashaw. Maidenhood she loves, and will be swift To aid a virgin. Mdton.

A set of morrice-dancers danced a maidmarian with a tabor and pipe. Temple

Let me die, she said. Rather than lose the spotless name of maid,

Dryden, Old Tancred visited his daughter's bower ; Her cheek, for such his custom was, he kissed, Then blessed her kneeling, and her maids dismissed.

Id. Her closet and the gods share all her time. Except when, only by some maids attended. She seeks some shady solitary grove. Rowe.

Nor was there one of all the ilymphs that roved O'er Maenalus, amid the maiden throng. More favoured once. Addisoyi'n Ovid.

A thousand maidens ply the purple loom. To weave the bed, and deck the regal room.

Prior. It is perfectly right what you say of the indifference in common friends, whether we are sick or well ; the very j»iaic/*c'(iaii(s in a family have the same notion.

Swift. 'Tis all mere sharper's play ; He likes your house, your house-mnirf, and your pay ; Reduce his wages, or get rid of her, Tom quits you, with — Vour most obedient. Sir.

Cot/jper.

MAI DA, a town of Calabria Ultra, Naples, nine miles W. S. W. of Squillace, chiefly remarkable as the scone of a gallant action between the British and French, 4th of July 1806; in which the latter were defeated. Population 3000.

Maiden. See Maid.

Maiden, or MAYnEN,an instrument anciently used in Scotland for beheading criminals, similar to the Guillotine, which see.

Maiden is also the name of a machine first used in Y'orkshire, and since introduced into other places, for washing linen; consisting of a tub nineteen inches high, and twenty-seven in diameter at the top, in which the linen is put, with hot water and soap, to which is adapted a cover, fitting it very closely, and fastened to the tub by two wedges ; through a hole in the middle of the cover passes an upright piece of wood, kept at a proper height by a peg above, and furnished with two handles, by which it is turned backward and forward : to the lower end of this upright piece

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is fastened a round piece of wood, in which are fixed several pieces, like cogs of a wheel. The operation of this machine makes the linen pass and repass quickly through the water.

Maiden-Rents, in old English writers, a noble paid by the tenants of some manors on their marriage. This was said to be given to the lord for his omitting the custom of marcheta, whereby he vvas to have the first night's lodging with his tenant's wife ; but it seems more probably to Iiave been a fine for a license to marry a daughter.

M.ˆiDENHAiR. See Adianthum.

MAiDENHAin, Golden. See Polytricuum.

Maidenhead, a town of Berkshire, twenty-six miles from London, with a stone bridge over the Tiiames. It is governed by a high steward, a mayor, a steward, and ten aldermen, two of whom are appointed bridgemasters every year. The mayor is justice of the peace, coroner, and clerk of the market : he is also judge of a court which he must hold once in three weeks, exclusive of two sessions in the year. The town stands partly in the parish of Bray and partly in that of Lookham, and has a chapel belonging to the corporation, the minister of which is chosen liy the inhabitants and not obliged to attend the bishop's visitation. It has a gaol, with several almshouses and charities. The barge-pier bridge IS maintained by the corporation, for which they are allowed the tolls over and under it. This town has a great trade in malt, meal, and timber, which are brought in barges to London. As this is the great thoroughfare from London to Bath, Bristol, &c., the adjacent wood has been noted for robberies. There is a market on \S ednesday, three fairs, and horse-races.

MAIDSTONE, the county town of Kent, is advantageously situated on the eastern bank of tlie Medway, over which is an ancient stone bridge of seven arches, which has been lately widened and improved. Some antiquaries have considered it as the Vagniacae of Antoninus. The Saxons termed it Medwegestun, from its situation on the Medwedge, or Medway. In the record of Domesday the name is written Med-destane. The town is pleasant, large, and pojjulous, consisting of four principal streets, which intersect each other near the site of the ancient market cross. This fabric was taken down about twenty years ago, and in its place a euminodious fish-market was erected, wliere is

an ample reservoir of spring water, conducted from ilie opposite side of the river.

The town was governed by a portreve and twelve brethren, till Edward VI., in his third year, newly incorporated it by the style and title of tfic mayor, jurats, and commonalty, of Maidstone. Their privileges were soon afterwards, however, forfeited by rebellion in the first year of queen Mary. But queen Elizabeth, in her second year, re-incorporated it, as before; and granted some additional privileges. A third charter of incorporation, with new privileges, was granted in 1604 by .lames I.; and a fourtii in 1619. King Charles II., in his thirty-fourth year, incorporated it anew by the above style and title ; which charter was in force until the revolution in 1688, after which it was laid aside.

In 1748, the corporation being dissolved by judgment of ouster agaii.st its principal members, a new charter was granted by king George II., in which it is stated, that the inhabitants shall be one body politic and corporate, by the name of 'the mayor, jurats, and commonalty, of the king's town and parish of Maidstone, in the county of Kent,' and by that name have perpetual succession, and acquire and hold lands. Sec, and alien the same; that by the aforementioned name they are to plead and be impleaded, &c. ; under a common seal, and might break, change, and new make the same at their liking ; that there should be thirteen inhabitants of the toviˆn and parish, who should be chosen jurats of the same, one of whom should be mayor; and that there should be forty of the remaining principal inhabitants chosen common councilmen, all of whom, *viz.* mayor, jurats, and common councilmen, duly assembled, should have power upon public summons to make jjye laws. By the above charter the corporation at present act. Queen Elizabeth, in her second year, granted to the mayor, &c., a market on a Thursday weekly, with all tolls, customs, and other profits, and also four fairs. King James regranted and confirmed the fairs and markets, and other liberties and privileges ; and further granted that it should be lawful for the mayor to extend the market be-yond the marketplace, or to hold it in any other place within the town.

Queen Elizabeth also granted the mayor, jurats, and commonalty, full power to hold a court in the town, from fourteen days to fourteen days, on a Tuesday, * for pleas, as well of assize of novel disseisin, as other pleas, actions, and suits, concerning lands, &c., in the town and parish, although they should or should not exceed the sum of 40s '

And the mayor, jurats, and recorder, as steward, annually hold a court leet, or law day, formerly called the portmote, at which among other business the peace officers are chosen, *viz.* a high constable for the town and parish, and a borsolder for each of the three boroughs of Week, West Street, and Stone, into which the town and parish are divided.

This town and parish, with others in the neighbourhood, were formerly bound to contribute to the repair of the fifth pier of Rochester Bridge.

The chief source of the wealth of this town has arisen from the cultivation of hops, in which pursuit the principal inliabitants are engaged : but no species of natural produce is subject to such abrupt and decisive vicissitudes. — The manufacture of linen Uiread was introduced here from Flanders, in the reign of Elizabeth, and is still continued. Within tiie last fifty years also it has been famous for the distillation of a spirit termed Maidstone Geneva : but this is now discontinued.

This town derives great advantage from the navigation of the river Medway, as a considerable traffic is carried on by it from hence to Rochester, Chatham, and London ; and, from tlie many large corn mills, abundance of meal and flour is shipjjed off" to the above towns, as well as to London. Tiie paper-mills, in and near this town, are also considerable. Great quantities of

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timber brought hither from the Weald of Kent, and its neighbourhood, by land carriage, are conveyed by the navigation of the ISIedway to the dock at Chatham, and more distant parts. Besides which there are several large hoys which sail to and from London weekly. The Medway is navigable as far as Tonbridge.

The church stands at the western part of the town, and is a spacious and handsome structure, formerly collegiate ; consisting of a nave, chancel, and two side aisles, with a handsome well-built tower at the west end. It is one of the largest parochial churches in the kingdom, and was chiefly erected in the reign of Richard II., by archbishop Courteney. The stalls for the warden and fellows of the college are still remaining. In the middle of the great chancel there is a tomb-stone, raised a little, above the pavement, with the marks of the portraiture of a bishop in his mitre and robes, and an inscription round it; but the brass of the whole is torn away. This is supposed to be the cenotaph of archbishop Courteney. The college founded by this prelate was an extensive pile of stone, and most of the buildings, with the great gate, are standing, on the south side of the church, but are now occupied by an agriculturist, who uses some of the apartments as an casting house. There are, also, many other vestiges of ancient religious buildings in this town and its vicinity. A stock market is held on the second Tuesday in each month in a place called the Meadow, close to the Medway : the fairs are also held in this place on the 13th of February, 12th of May, 20th of June, and 17th of October.

In the year 1648 the town held out some time for Charles I., but at last general Fairfax took it by storm.

Amongst the public buildings of Maidstone, its gaol stands pre-eminent. This ponderous and extensive fabric was commenced in the year 1811, and completed in 1818. It is intended as a prison for the use both of the county and town. The ground comprised within the walls is between thirteen and fourteen acres, and the building is capable of holding 450 prisoners. The structure of brick is faced with rag stone chiefly dug from the site which it occupies. The plan on which it is arranged would appear to be extremely judicious. Each class of prisoners has a distinct airing-yard, and each prisoner a separate sleeping cell. The expense of the erection was about £180,000. In front has been added a handsome sessions house of

Portland stone, with a spacious area, surrounded by iron railing. The whole cost the county, it is said, upwards of £30,000. In the vicinity is also an extensive depot, in which are trained the cavalry destined for the East India service.

The chief part of this town has been greatly improved since the year 1791, at which time an act was obtained for lighting and newly paving the principal streets : gas lights are now introduced. Among the many charitable institutions, for the benefit of the poor, are a grammar school, five charity schools, and a savings bank.

Maidstone sends two members to parliament, who are elected by all freemen not receiving alms or charity ; of these there are about 800.

The newly erected Kent fire office forms a very prominent feature in the High Street opposite the town hall : it is an extensive building fronted with Portland stone ; a uniform frontage is continued beyond the office, the upper part of which forms a part of a new tavern, and the lower part is used as a corn market. Behind stand the poultry, meat, fish, and vegetable markets, lately erected at a great expense, and extending into East Street. The different mar-ket buildings which before stood in the High Street are now all taken down.

About a mile south-east of the town is a seat termed the Mote, belonging to the earl of Rom-ney. The ancient house on this estate was taken down some few years back, and the present structure erected on a knoll commanding some fine views. The park is extensive, and is enriched by much venerable timber. On the 1st of August 1 799 the late lord Romney (then lord lieutenant of the county) entertained his majesty George III., several other branches of the royal family, many of the cabinet ministers, a numerous company of the principal noblemen and gentlemen of the kingdom, and the whole of the volunteers of the county. A stone building is erected on the spot where the king’s marquee stood.

MAJESTIC, or -^ Lat. majestas ; Gr.

Majes’tical, at/;. f/ityac, great. August;

MAJEs’TiCALLY,a<iy. i grand ; sublime; ira—

Maj’esty, n. s. J perial ; regal : majesty

is dignity ; grandeur ; regal or imperial sway ; a title of those who

bear such sway ; great or awful appearance, or effect.

In lyk maner also these that defoulea the fleasche, and dispisen lordschip, and blasfemen maiestee.

Widif. Jud. 1.

Thine, O Lord, is the power and majesty.

1 Chron. xxix.

The voice of the Lord is full of majesty.

Psalm xxix. 4.

He gave Nebuchadnezzar thy father majesty.

Dan. V. 18.

It was no mean thing which he purposed ; to perform a work so majestical and stately was no small charge. Hooker.

INIost royal majesty, 1 crave no more than what your highness offered, Xor will you tender less. Shakspeare. King Lear. They made a doubt

Presence majestical would put him out :

For, quoth the king, an angel shall thou see,

\ et fear not thou, but speak audaciously.

Shakspeare. Get the start of the majesiich world, And bear the palm alone.

Shakspeare. Julius Ceesar.

Which passage doth not only argue an infinite abundance, both of artizans and materials, but likewise of magnificent and majestical desires in every common person. II otfon.

The hugeness of thy work, O God, is little inferior for admiration to the rnajesty of it Bp. Hall.

In his face .^ate meekness, heightened with majestick grace.

Denham.

He, who had been always believed a creature of the queen, visited her majesty but once in six weeks.

Clarendon. Amidst Thick clouds, and dark, doth Heaven's all ruling Sire Chuse to reside, his glory unobscured,

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And with the iiuijesty of darkness round Covers his throne. Milton' i Paradise Lost.

I have a garden open to the sea, From whence 1 can your majesty convey To some nigh friend. IValler.

The first in loftiness of thought surpassed, The next in majesty. Drydtn.

The least portions must be of the epic kind ; all must be grave, majestical, and sublime. Id.

From Italy a wandering ray Of moving light illuminates the day ; Northward she bends, majesticallii bright, And here she fixes her imperial light.

Granville. Great, without pride, in sober majestu. Pope.

A royal robe he wore with graceful pride. Embroidered sandals glittered as he trod, And forth he moved, mujestick as a god.

Pope's Odyssey. So have I seen in black and white, A prating thing, a magpie hight.

Majestically stalk ; A stately worthless animal, That plies the tongue, and wags the tail. All flutter, pride, and talk. Swift.

Wherefore darts the mind, \ ith such resistless ardour to embrace Majestic forms. Akenside.

Gi't with many a baron bold. Sublime their starry fronts they rear ; And gorgeous dames, and statesmen old, In bearded majesty appear. Gray.

Majesty is derived from major, Lat. greater, and status, state. The emperor of Austria is called his imperial apostolic majesty. The king of Spain, his most Catholic majesty ; and the king of Portugal, his most Faithful majesty. The king of France is called his most Christian majesty. As to other kings, the name of the kingdom is prefixed; as his Britannic majesty, his Sardinian majesty, &c. ; before the reign of Charles V. the king of Spain had only the title of highness; and before that of Henry VIII. the kings of England were only addressed under

the titles of grace and highness. Under the Roman republic, the title majesty (majestas) belonged to the wtiole body of the people, and to the principal magistrates : so that to diminish or wound the majesty of the commonwealth was, to be wanting in respect to the state or to its ministers. But, the power afterwards passing into the hands of a single person, the appellation of majesty was transferred to the emperor and the imperial family. Pliny compliments Trajan on his being contented with the title of greatness ; and speaks very invidiously of those who aflect-ea that of majesty.

MAIGNAN (Emanual), a religious minim, and one of the greatest philosophers of his age, was born of an ancient and noble family at Thoulouse in 1601. Like the famous Pascal, lie became a mathematician without a teacher ; and filled the professor's chair at Rome in 1636, where, at the expense of cardinal Spada, he published his book De PerspectivtX Ilorariil. He returned to Thoulouse in 1650, and was created provincial : and the king, who in 1660 often entertained himself with the machines and curiosities in his cell, made him offers through cardinal Mazarine, to induce him to fix his residence in Paris ; but he preferred his cloister. He pub-

lished A Course of Philosopliy, 4 vols. 8vo., at Thoulouse; to the second edition of which he added two treatises, one against the vortices of Descartes ; and tlie other on the speaking trumpet invented by Sir Samuel Morland. He is said to have studied even in his sleep, ' his very dreams being employed in theorems, the demonstrations of which would awaken him with joy !' He died in 1676.

MAIHIDPORE, a town of Hindostan. in the province of Malwah, situated on the batiks of the Soprah. In the vicinity was foujiit on the 21st of December 1817 a severe battle between the troops of Holkar and the British, in wliich the former was defeated with the loss of all his artillery. It is twenty miles north of the city of Oojain, the capital of Scindia.

MAII Inductio, an ancient custom for the priest and people of country villages to go in procession to some adjoining wood on a May day morning ; and return in a kind of triumph, with a May pole, boughs, flowers, garlands, and other tokens of the spring. This May game, or rejoicing at the coming of the spring, was long observed, and is so still in some parts of England ; but bishop Grosthead thought there was so much ' heathen vanity' in it, that it was condemned and prohibited within the diocese of Lincoln.

MAIL, 7j. s. & V. a. Fr. maille ; Ital. maglia ; Belg, maelis ; Span, malla. Skinner derives our word from the Ital. mdlle, the mesh of a net: but the Goth, inal (Swed. malja) a link or division, is more probably suggested by Mr. Thomson. A coat of armour; to cover with ar-mour ; or as in defence.

I am thy married wife.

And thou a prince, protector of this land ;

Methinks I should not thus be led along,

Mailed up in shame, with papers on my back.

Shakspeare. The mailed Rlars shall on his altar sit Up to the ears in blood. Id. Henry IV

Some shirts of »na;/, some coats of plate put on, Some donned a curace, some a corslet bright.

Fairfax.

Being advised to wear a privy coat, the duke gave tliis answer. That against any popular fury, a shirt of mail would be but a silly defence. Wotion.

Some wore a coat-armour, imitating scale, And next their skin were stubborn shirts of tnail ; Some wore a breast-plate. Drydent Kniglit's Tale.

We strip the lobster of his scarlet mail. Gai/.

At full my huge Leviathan shall rise. Boast all his strength, and spread his wondrous size : Who great in arms, e'er stripped his shining mail. Or crowned his triumph with a single scale.

Youjig. Then let them wield the thunder,

Fell is their dint who're mailed in despair.

Let mortal might fever the grasp of Bertiam.

Matiirin

MAIL, n. s. I Fr. jnale, mulktte. Or pro-MAtL-cOACH. S bably from the use of mail armour as a close covering. A bag or portman-teau ; a postman's bundle or bag ; the collection of letters belonging to a postman, or despatched from the post-oftice : mail-coach, the modern and most excellent invention for transporting them.

This goth aright ; unbockled is the male.

Chaucer. Cant. Tales.

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But, sires, o word forgate I in my ‘ale ;

I have reliques and pardon in my male

As faire as any man in Englelond,

\Vhich were me yeven by the pope’s bond. Id.

The same prince erected a letter-office for England and Scotland, under the direction of the same Thomas Witherings, and settled certain rules of postage : but this extended only to a few of the principal roads, the times of carriage were uncertain, and the post-masters on each road were required to furnish the mait with horses at the rate of 2ˆd. a mile.

JJr. A. Rees.

ˆIr. Palmer’s modern invention of mail-cuuches has been found highly convenient and useful, not only for the safe and expeditious conveyance of letters, but also of passengers, iiiose who have travelled in these vehicles need not be informed of their rapid motion. id.

Mail, or Maill, on shipboard, a square machine composed of a number of rings interwoven net-wise, and used for rubbing off the loose hemp wiiicli remains on white cordage after it is made.

Mail, or Maille, in old English writers, a small kind of money. Silver halfpence were likewise termed mailles, 9 Henry V. By indenture in the mint a pound weight of old sterling silver was to be coined into 360 sterlings or pennies, or 720 mads or halfpennies, or 1440 farthings. Hence the word mail was derived, which is still used in Scotch law for an annual rent.

Mail, or Mall, also signifies a round ring of iron ; whence the play of pall-mali, from palla, a ball, and maille, the round ring through which it is to pass.

Mail Coaches. See Coach.

Mail, Coat of. It is called also an habergeon. Anciently they also wore shirts of mail under the waistcoat, to serve as a defence against swords and poniards. They wore also gloves of mail. See Aumour.

?il ALLAH, a river of the Bled-el-Jereede, which rises to the south of Algiers, and falls into the desert plain called the Shott.

MAILCOTTA, a town of the Mysore, Hindostan, situated on a hill which commands a view of the extensive valley watered by the Cavery. It is a celebrated place of Hindoo worship, and possesses a large temple surrounded by a colonade containing a large reservoir, on the banks of which are numerous buildings for the reception of pilgrims. The idols of this temple are covered with jewels ; and such is the veneration in which it is held, that Tippoo Sultan would not venture to plunder it. In the vicinity the Mahrattas gained a complete victory over Hyder Aly in the year 1772; and it was here that the Mahratta chief's joined lord Cornwallis in 1791. The town consists of about 400 respectable houses occupied by Brahmins. Long. 76° 52' !•:., lat. 12° 38' N.

MAILL.V (Joseph-Anne-Marie de INIoyriac de), a learned Jesuit, born in the castle of Maissac in Bugey, 1C70, and appointed a missionary to China, whither he went in 1703. At the age of twent)-eight he had acquired considerable skill in the characters, arts, sciences, mythology, and ancient books of the Chinese, and was greatly esteemed by the emperor Kara-Hi, who died in 1722. He and other mission-

aries were emplo)ed by that p'ince to draw a chart of China and Chinese Tartary, which was engraved in France in 1732. He likewise drew charts of some of the Chinese provinces ; with which the emperor was so pleased, that he settled the author at his court. The annals of China were also translated into French by Mailla, and his MS. was transmitted to France in 1737. This work was published in 12 vols. 4to., under the inspection of M. Crosier, and is the first complete history of that extensive empire. F. Mailla, after having resided forty-five years in China, died at Pekin on the 28th of June 1748, in the seventy-ninth year of his age. Kien Long, the emperor, paid the expenses of his funeral.

MAILLET (Benedict de), descended from a noble family in Lorraine, was born in 1G59, and appointed in 1692 consul-general for Egypt. He fulfilled this office for sixteen years with great ability, supported the king's authority against the janizaries, and greatly extended the trade of France into that part of Africa. As a recompense for his services, Louis XIV. bestowed upon him the consulship of Leghorn. Being appointed in 1715 to visit the sea-ports in the Levant, and on the coast

of Barbary, he was so successful, that he was permitted to retire with a considerable pension. He settled at Marseilles; where he died in 1738, in the seventy-ninth year of his age. He was a man of a lively imagination, gentle manners, and the strictest probity. He paid particular attention to natural history, and was anxious to investigate the origin of our globe. On this important subject he left some curious observations, which have been published in 8vo. under the title of Telliamed. An Indian philosopher is introduced as explaining to a French missionary his opinion concerning the nature of the globe, and the origin of mankind. His great object is to prove that all the strata of which this globe is composed, even to the tops of the highest mountains, arose originally from the bosom of the waters. He dedicated his book to the illustrious Cyrano de Bergerac, author of Travels to the Sun and Moon. A Description of Egypt was collected from his memoirs by Mas-crier in 1743, 4to., or in 2 vols. 12mo.

MAIM, II. s. & V. a. Goth, maitan; Ital. mnidlunn ; Old Fr. tuaimis, to mutilate. A mutilation or defect ; privation of some essential part; injury : to maim, to inflict such injury.

The multitude wondered when they saw the dumb to speak, the maimed to be whole, and the lame to walk; and they glorified God. 3/ a«/ieu; xv. 31.

Surely there is more cause to fear, lest the want thereof be a inaim, than the use a blemish.

Hooker, Humphry, duke of Glo’ster, scarce himself. That bears so shrewd a maim ; two pulls at once ; A lady banish’t, and a limb lopt off?

Shakspeare, You wTOUght to be legate ; by which power You maimed the jurisdiction of all bishops. Id. Not so deep a maim, As to be cast forth in the common air Have I deserved. Id. Bichard. II.

A noble author esteems it to be a maim in history that the acts of parliament should not be recited.

V Hay ward.

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Maim, Maihem, or Mayhem, in law, a wound by wliicli a person loses the use of a member that miglit have been a defence to him ; as when a bone is broken, a foot, hand, or other member cut oft", or an eye put out; though the cutting off' an ear or nose, or breaking the hinder teeth, was formerly held to be no maim. A maim by castration was anciently punished with death, and other maims with loss of member for member ; but afterwards they were only punislied by fine and imprisonment. It is now enacted, by the statute 22 and 23 Car. II., that if any peison, from malice aforetliought, shall disable any limb or member of any of the king's subjects, with an intent to disfigure him, the offender, with his aiders and abettors, shall be guilty of felony without benefit of clergy, but shall not corrupt tlie blood, or occasion forfeiture of lands, &c. By stat. 5. Henry IV. c. 5, to reme-dy a mischief which then prevailed, of beating, wounding, or robbing a man, and then cutting out his tongue, or putting out his eyes, to prevent him from being an evidence against the off'enders, this offence is declared to be felony, if done of malice prepense ; that is, as Coke explains it, voluntarily, and of set purpose, though done upon a sudden occasion. Next in order of time is stat. 27 Henry VIII. c. 6, which directs that if a man shall maliciously and unlawfully cut off the ear of any of the king's subjects, lie shall not only forfeit treble damages to the party grieved, to be recovered by action of trespass at common law, as a civil satisfaction ; but also £lO by way of fine to the king, which was his criminal amercement. The last statute, but by far the most severe and effectual of all, is 6tat. 22 and 23 Car. II. c. 1, called the Coventry Act ; being occasioned by an assault on Sir John Coventry in the street, and slitting his nose, in revenge (as was supposed) for some obnoxious •words uttered by him in parliament. By this statute it is enacted, that if any person shall, of malice aforethought, and by lying in wait, unlawfully cut out or disable the tongue, put out an eye, slit the nose, cut off a nose or lip, or cut off or disable any limb or member of any other person, with intent to maim and disfigure him, such person, his counsellors, aiders, and abettors, shall be guilty of felony, without benefit of clergy ; though no attainder of such felony shall corrupt the blood, or forfeit the dower of the wife, or lands or goods of the offender.

If a man attack another, of malice aforethought, in order to murder him, with a bill, or any such like instrument, which cannot but endanger the maiming him, and in such attack happen not to kill, but

only to maim him, he may be indicted of felony on this statute ; and it shall be left to the jury, on the evidence, whether there was a design to murder by maiming, and consequently a malicious intent to maim as well as kill, in which case the offence is within the statute.

In a case where a gentleman had apprehended a pickpocket, an accomplice followed and gave the gentleman a wound across the nose with a knife ; this was held to be a slitting of the nose, and a maiming within the statute. It has been determined, that if a man deliberately

watches an opportunity, and carries his iutention into execution, he may be said to lie in wait ; but where a person went up to a man stealing turnips, who immediately cut him in the face, this was thought not to be a lying in wait within the statute. A wound or incision in the throat has been held not to be a maim inc.

MAIMBOUKG (Lewis), a celebrated French Jesuit, born in 1610. He joined the Jesuits in 1626; and acquired great reputation both as a teacher and a historian. He published Histories of Arianism ; of the Iconoclastes ; of Calvinism; of Lutheranism; and of the Crusades. The Jansenists criticised the first two of these, and the third was violently opposed ; but he made no reply. In 1682 he was, by order of pope Innocent XI., expelled the Society of Jesuits, for his zeal in defending the liberty of the Galilean church against the Ultramontanes, but Louis XIVˆ made him amends by a large pension. He retired into the abbey of St. 'ic-tor, where he died in 1686.

MAIMONIDES (Moses), or Moses the son of Maimon, a celebrated rabbi, called bv the Jews the eagle of the doctors, was horn of an illustrious family at Cordova in Spain, in 1131. He is also called Closes iEgyptius, because he settled in Egypt, where he spent his life as physician to the sultan. He also opened a school, which was soon filled with pupils from Alexandria, Damascus, Sec, who spread his fame over all the world. He was no less eminent in philosophy, mathematics, and divinity, than in medicine. His reputation was so great that he was applied to for advice and counsel by persons of the very first rank. Among others, the rabbi Aben Tybbon proposed to pay him a visit, that they might discuss some important subjects at length in conversation. To which Maimonides replied, that nothing would afford him greater pleasure than such an interview : nevertheless his own time was so fully occupied that he could scarcely promise him his company for a single hour, either in the day or at night : ‘ t live,’ said

he, ‘at the distance of nearly two sabbath-days’ journey from Al-Cairo, where the king resides. On him the duties of my appointment require a very regular attendance. I generally visit iiim every morning; but when either himself, or any of his children, or of his concu-bines, are sick, I am not allowed to stir from the palace, so that I very often spend the whole day at court : if I find nothing amiss at court, I return home towards noon, but when arrived at my house, almost famished for want of food, I find all the approaches to it crowded with Gentiles and Jews, men of all ranks, who have been impatiently waiting my return. No sooner have I alighted from my horse, and washed my hands, than I humbly request the indulgence cif the multitude till I have appeased my craving appetite. As soon as I have dined, I examine the cases of my patients, and prescribe for them. This employment commonly lasts fill night, when I am so overcome with the fatigue of hearing, speaking, and prescribing, that I can scarcely speak any longer, or even keep myself awake.’ Maimonides died at the age of seventv, in the r204ih vear of the Christian era, and vv?.s

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interred, with the highest funeral honors, in Upper Galilee. For three whole years did the people at large bewail his death : they called the year in which it took place, lamentum lamenta-hile; and in speaking of him, they used to say that, from the time of Moses the prophet, no one approached so near to him in wisdom and sound learning as Moses the son of Maimon. Notwitlistanding his avocations as a physician, he devoted much of his time to the composition of learned works, a few of which may be mentioned : the first he produced was iiis Pirush llomishnah, or a commentary on the Mishna, ■which he began in Spain, when he was in the twenty-third year of his age, and finislied in Egypt when he was about thirty. It was written in the Arabic language, and translated into Hebrew by rabbi Aben Tybbon. The best edition of this work is published with the ˆlishna, at Amsterdam, in 1698, in 16 vols, folio. His next work is entitled Jad Chazekeh, or Strong Hand, which is also named iNIishna Ilathora, or tlie Reception of the Law : it consists of a compendium of the Talmud, and presents a complete code of Jewish, civil, and canon law, with a commentary. The best edition is that of Amsterdam, in 1702, in 4 vols, folio. The principal work of this great man is entitled INIore Nevo-chim, or Guide to the Perplexed, which is partly critical, partly philosophical, and partly theological ; its design being to illustrate and explain the meaning of the Scriptures. It was translated from th« Arabic into Hebrew by rabbi Aben Tybbon in the year 1351, and published at Venice ; liuxtorf the younger gave an excellent version of it in the Latin tongue, which was published at Basil in 1029. Another important work of Maimonides is his Sepher liamitzoth, Book of Commandments, containing an exposition of the Mosaical law. The titles of his other works may be seen in Wolfii Biblioth. Hebr. MAIN, adj. & 72. s.”ˆ Old Fr. magne, of Lat. Main’land, n. s. OTflgjiMS, great. There is Main’ly, adv. also aGoth. mcgn, magn;

Main’mast, n. s. (ˆ Saxon mejne ; Teut. Main’sail, (megin. Great; huge;

JMain’sheet, mighty; chief; principal;

INIain’top, I leading; gross; impor—

Main’yard. Jtant: as a substantive,

the bulk ; sum total ; whole ; greatest part ; power; vigilance; the ocean; great and open sea: mainland, continent; a large expanse of

land : mainly, follows the various senses of main : mainmast is the chief or middle mast of a sliip : mainsail and mainsheet, the sail of that mast : maintop, its top ; and mainyard, its yard. They committed themselves unto the sea, and hoisted up the mainsail to the wind, and made towards shore. Acts. He ‘gan advance With huge force, and importable main.

And towards him with dreadful fury prance.

Spenser. Ne was it island then, But was all desolate, and of some thought By sea to have been from the Celtick mainland brought. Id,

In every grand or main publick duty which God requireth of his church, there is, besides that matter and form wherein the essence thereof consisteth, a

certain outward fashion, whereby the same is in de-cent manner administered. Hooker. There is a history in all men’s lives, Figuring the nature of the times deceased; The which observed, a man may prophesy, With a near aim, of the main, chance of things. As yet not come to life. ShuJispeare. Henry IV.

Think you question with a Jew : You may as well go stand upon the beach. And bid the main flood bate his usual height.

Shakspeure. We ourselves will follow In the main battle, which on either side Shall be well winged with our chiefest horse.

Id, Where’s the king ? — Bid the wind blow the earth into the sea. Or swell the curled waters ‘bove the main. That things might change. Id. King Lear. In 1589 we turned challengers, and invaded the main of Spain. Bacon’s War with Spain.

When a man’s stock is come to that, that he can expect the prime of markets, and overcome those bargains, which, for their greatness, are few men’s money, and be partner in the industries of younger men, he cannot but increase mainly. Bacon.

This young prince, with a train of young noblemen and gentlemen, but not with any main army, came over to take possession of his new patrimony. Davies on Ireland. They allowed the liturgy and government of the church of England as to the main. King Charles.

That vessel, that seemed very small upon the main, seems a tall ship

upon the Thames.

Bp. Hall. These flaws, though mortals fear them, As dangerous to the pillared frame of heaven. Or to the earth's dark basis underneath. Are to the main inconsiderable.

Milton's Paradise Lost. I should be much for open war, O peers, If what was urged.

Main reason to persuade immediate war. Did not dissuade me most. Id.

That, which thou aright Believest so inain to our success, I bring.

Milton. A brutish vice. Inductive mainly to the sin of Eve. Id.

With might and main He hasted to get up again. Hudibras.

They are mainly reducible to three. More. Our main interest is to be as happy as we can, and as long as possible. TiUotson.

Nor tell me in a dying father's tone. Be careful still of the main chance, my son ; Put out the principal in trusty hands ; Live on the use, and never dip thy lands.

Dryden. He fell, and struggling in the main, Cried out for helping hands, but cried in vain.

Id. With might and main they chaced the murderous fox, With brazen trumpets, and inflated box. Id.

Those whom Tyber's holy forests hide, Or Circe's hills from the mainland divide. Id. One dire shot Close by the board the prince's mainmast bore.

Id. Strike, strike the topsail ; let the mainsheet fly, And furl your sails. Id.

From their maintop joyful news they hear Of ships, which bv their mould bring new supplies.

All creatures look to tlie main chance, that is, food and propagation. UK&hanf^e.

A iJutciiman. upon breaking his leg by a fall from a. mainmast, told the standers-by it was a mercy it was not his neck. Spectator.

Dictys could the ma»j((ip-mast bestride, And down the ropes with active vigour slide.

A ddison . Say, why should the collected main Itself within itself contain ? Why to its caverns should it sometimes creep, ^ And with delightful silence sleep >

On the loved bosom of its parent deep ? 5

Prior. The metallick matter, now found in the perpendicular intervals of the strata, was originally lodged in the bodies of those strata, being interspersed amongst the matter whereof the said strata mainly consist. Woodward's Natural Ilistorii.

With sharp hooks they took hold of the tackling which held the mainmrd to the mast ; then rowing they cut the tackling, and brought the mainyard by the board. Arhuthnot.

j\or is it only in the main design, but they have followed him in every episode. Pope.

Whilst they have busied themselves in various learning, they have been wanting in the one main thing. Baker.

Have you beheld how, from the distant main, The thronging waves roll on, a numerous train. And foam, and bellow, till they reach the shore. There burst their noisy pride, and are no more 1

Young. But why o' death begin a tale ? Just now we're living sound and hale. Then top and maintop crowd the sail,

Heave care owre side ! And large, before enjoyment's gale.

Let's tak the tide. Burns.

Main, 7j. s. "1 Lat. vianus, the

Mainpernor, Miand. A hand at

Main'prise, n.i.&v. a.'dice: mainprise is of French origin ; i. e. of main (Lat. maims) and pris (captus), taken ; and signifies the delivery of a man into friendly custody; bail: the mainpernor is the receiver of a person into such custody.

Were it good. To set the exact wealth of all our states All at one cast ; to set so rich a main In the nice hazard of one doubtful hour?

Shakq)eare. He enforced the earl himself to fly, till twenty-six noblemen became mainpernors for his appearance at a certain day ; but, he making default, the uttermost advantage was taken against his sureties.

Da vies on Ireland. Sir William Bremingham was executed for treason, though the earl of Desmond was left to mainprize.

Davies. Give its poor entertainer quarter ; And, by discharge or mainprize, grant Delivery from this base restraint. Hudibras. To pass our tedious hours away. We throw a merry main. Earl Dorset's Song.

Writing is but just like dice. And lucky mains make people wise : That jumbled words, if fortune throw 'em. Shall, well as Dryden, form a poem. Prior. Main is usually applied by seamen to what-e>er is principal, as opposed to whatever is secondary. Thus the main land is used in contradistinction to an island or peninsula ; and the

main mast, the main wale, the main keel, and the main hatchway, are distinguished from the fore and mizen masts, the channel wales, the false keel, and the fore and aft hatciiways, &c.

MAINA, a mountainous district of the Morea, Greece, comprising the south-eastern part of the ancient province of Laconia, but inhabited by a brave and very •s;uperior race of men. See an ample account of them

in our article Greece, vol. X. p. 637. It is the least fertile part of the peninsula.

MAINE, District of, forming a part of the state of Massachusetts, North America, is bounded north-west and north by Lower Canada, east by New Brunswick, south-east and south by the Atlantic, and west by New Hampshire. Its length on the northern frontier is 280 miles, on the eastern 210; greatest length from north to south 225, and greatest breadth from east to west 195 ; and it is estimated to contain 32,628 square miles.

The counties, number of towns, population, and chief towns, are exhibited in the following table :—

Counties.

Towns.

Population.

Chief Towns.

Cumberland

24

42,831

Portland

Hancock

21

22,560

Castine

Kennebeck

33

32,564

Augusta

Lincoln

,33

42,992

Wiscasset

Oxford

28

17,630

Paris

Penobscot

20

7,471

Bangor

Somerset

26

12,910

ˆ Norridge-t wock

Washington

10

7,870

Machias

York

22

41,877

S York (Alfred

Total

217

228,705

Portland is the chief town. The other most considerable towns, excepting the county towns exhibited in the preceding table, are Bath, Hallowell, Kennebunk, Saco, Cnirdiner, Waterville, Belfast, Frankfort, Bucksport, Eastport, Brunswick, South Berwick, and Fryeburg.'^ There are thirteen banks in this district.

There is a college at Brunswick, theological schools at Hampden and Waterville, and academies have been established at the following places, Augusta, Bath, Belfast, South Berwick, Bloomfield, Bluehill, Bridgeton, Bristol, China, Farmington, Fryeburg, Gorham, Hallowell, Hampden, Hebron, Limerick, Machias, Monmouth, Newcastle, North Yarmouth, Portland, Saco, Warren, and Wiscasset. Most of these academies have but small funds, and they arc not all in operation. Good schools are supported in all those parts of the district that have been long settled.

The most numerous denominations of Christians in the district of Maine are, Congregationalists, who have 115 Churches; and Baptists, who have 112 churches. The Friends have thirty-two meetings. There are some Methodists, and a few Episcopalians. The citizens of Maine are under the same government, and have the same rights and privileges as the citizens of Massachusetts Proper. ' ^ iG2

MAIN E.

This district sends seven representatives to congress.

The principal rivers are the Penobscot, Kennebeck, Androscoggin,

Saco, St. Croix, and St. Johns. The principal bays are Casco, Penobscot, Frenchman's, Englishman's, Machia's, and Passamaquoddy. The most noted lakes are Moosehead, Umbagog, Sebago, Schoondic, and several others farther in tlie interior.

Maine is rather an elevated country, having generally a diversified surface. A tract commencing on the west side of the district, east of the White Mountains in New Hampshire, and holding a north-east direction as far as the heads of the Aroostic, about 160 miles in length and sixty in its greatest breadth, is mountainous. Kalahdin Mountain, in this range, is supposed to be tiie highest land between the Atlantic and the St. Lawrence. There is also a small mountainous tract in the northern extremity. The remainder of the district may be considered, generally, as a moderately hilly country.

The tract of country along the sea-coast, from ten to twenty miles wide, embraces all the varieties of sandy, gravelly, clayey, and loamy soils, frequently interspersed at short distances ; sel-dom very rich ; in many places tolerably fertile, but generally poor. Of this section Indian corn, rye, barley, grass, &c., are the principal productions. In the tract lying north of this, and extending fifty miles from the sea in the western, eighty in the central, and ninety in the eastern part, the same kinds of soil are found, but they are less frequently diversified, and generally more fertile. The surface rises into large swells of generally good soil, between which, on the margin of the streams, are frequently rich intervals, and in other places sandy or gravelly pine plains, or spruce and cedar swamps. Of this section the principal productions are grass, Indian corn, wheat, barley, rye, flax, &c.

The country beyond the limits above specified is but little settled. It exhibits great diversities in the appearance of its soil, growth of timber, and also in climate. The land on the Kennebeck, and between tiiis river and the Penobscot, is accounted the best in the district. It is well adapted to tlie various purposes of agriculture, and, as a grazing country, it is one of the finest in New England.

An estimate of the quantity of grain produced annually, and of the average product per acre in six of the counties, is exhibited in the following table :

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23

Counties.

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— O

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York

12,350

122,307

26,860

14

Oxford

14,508

42,346

115,792

18

Cumberl.

10,993

03,887

29,127

15

Lincoln

20,188

82,564

24,426

18

Kenneb.

29,003

73,559

14,409

19

Somerset

9,828

21,842

7,734

Average

18 17

Thougli the climate of Maine is subject to great extremes of heat and cold, yet the air in all parts of the country is pure and salubrious. The summers in most parts are favorable to the growth of all the vegetable productions of the northern states. In some parts, however, Indian corn, and some other plants of a more tender kind, are frequently injured, and sometimes destroyed, by frosts late in the spring and early in autumn. The cold of winter is severe, yet the serenity of the sky, and the invigorating influence of the atmosphere, during the same season, make amends, in some degree, for the severity of the weather. It is said that an inhabitant on Kennebeck River requires more clothing in win-ter to keep him comfortable in Boston than at home. Maine enjoys great facilities for commerce. The coast is indented with bays, abounding in excellent harbours. All the settled parts of the country lie near a market, and the produce of the farmer is readily exchanged for money, at a good price. When the attention of the inhabitants of this district shall be more generally turned towards improvement in agriculture, and the resources of the country more fully developed, Maine will doubtless rise in the scale of comparison with other parts of New England. The principal article of export is lumber. Vast quantities of boards, shingles, clapboards, masts, spars. Sec, are transported to the neighbouring states, to the W'est Indies, and to Europe. Much of the firewood consumed in Boston, and Salem, is brought from Maine. Dried fish and pickled salmon are considerable articles of export. Beef, pork, butter, pot and pearl ashes, and some grain, are also among the exports. Great quantities of lime are annually exported to Thomastown. Limestone and bog iron ore abound in many places.

In manufacturing articles of prime necessity Maine greatly exceeds her proportion, when compared with the average of the United States. The principal manufactures consist of cotton and woollen cloths, hats, shoes, boots, leather, iron, nails, distilled spirits, and cordage.

Maine, one of the large rivers of Germany, has its course in the west of the empire, and is formed by the union of the Red and Wiuie JMaine, which rise among the mountains of Franconia, and unite near

Steinhaus. It now takes a meandering course through the Bavarian circles of the Upper and Lower Maine, flows by Frankfort, and falls with a wide channel into the Rhine, opposite to Mentz. In its course it is joined by a number of rivers, the principal of which are the Franconian Saale, the Regnitz, the Tauber, and the Rodach. The Maine is navigable to Bamberg.

]VIaine, Lower, a province of the Bavarian states, comprising the territories in Franconia acquired by the treaty of Vienna in 1815 and tiie exchanges consequent on that treaty, is the grand duchy of Wurzburg, the principality of Fulda, and portions of the grand duchies of Hesse and Fulda. The whole form an extensive province adjoining Baden, Hesse-Cassel, and Hesse-Darmstadt, having an area of about 3000 square miles, and a population of 423,000: it is subdivided into districts, like the rest of the Bavarian states. The surface is hilly, except in the neigh-

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bourliood of ^^‘urzbul•g, oue of die most beautiful and fertile parts of Germany. Among the hills, especially on the woody tract of the Spessart, it is much less productive. Wine is the principal product; but the country about Wurzburg produces com for exportation. The only mineral found in abundance is salt: the manufactures are trifling. The chief forests are those on the hills of the Rhoen, the Steigerwald, and the Spessart. The chief religion is the Catholic, but there are many Lutherans, and some Anabaptists. The chief town is Wurzburg.

Maine, Upper, a circle or province of the Bavarian states, comprising the principalities of Bamberg, Upper Bayreuth, and the northern])art of the Upper Palatinate. It adjoins Bohemia and Saxony, and has an area 3460 square miles, and 434,000 inhabitants. The chief town is Bayreuth, but a court of appeal sits at Bamberg. This province contains the extensive range called the Fichtelgebirge, and has all the characteristics of a hilly country, such as a keen but pure air, mines, and a light soil, more adapted to pasturage, the cultivation of hemp or flax, and the growth of timber, than to corn. But in the neighbourhood of Bamberg the soil is of great fertility. Manufactures of the articles produced in the province, *viz.* the metals, flax, and timber, are conducted with great activity. The last, in particular, afl”ords the means of an active traffic. All religious sects are tolerated, and the two great parties are pretty equally divided, the Protestants being most numerous in Bayreuth, and the Catholics in the rest of the province.

Maine et Loire, a department of the west of France, comprising a portion of Anjou, and the western part of Touraine, and contiguous to the department of the Mayenne, the Sarthe, and the Lidre and Loire. Its extent is nearly 4000 square miles : its population about 400,000. This territory is intersected by hills; the intervening tracts, with the exception of a few marshy districts, are fertile; the soil consisting of a mixture of black rich mould with a lighter sort of earth. The principal rivers are the Loire, the Mayenne, the Sarthe, the Authion, the Layon, and the V’erzee. The products are corn, flax, liemp, fruit, and wine. Of vines, the quantity raised is not inconsiderable ; but they are for the most part made into brandy. Coal is found to the annual amount of about 3000 tons, and considerable quantities of linen are manufactured. The department belongs to the twenty-second military division, and is divided into five arrondissements, *viz.* Angers (the capital), Segre, Bauge, Saumur, Beaupreau : these are subdivided into

tiiirty-four cantons, and 385 communes.

Maine andTaurer, one of the ten circles of Baden, It comprehends the north-oast corner of the grand duchy, and a small tract on the Maine, at some distance from the rest. The population is about 96,000. It is divided into eight bailiwics: the chief town is Werlheim.

Mainland, or Pomona, the largest of the Orkney Islands, which see.

Mainland of Shetland, the largest of the Shetland Isles, which see.

M.\INOUR, Manour, orMEiNorn.frnm the

French manier, i. e. manu tractare, m a legal sense denotes the thing that a thief taketh away' or stealeth ; to be taken with the mainour is to be taken with the thing stolen about him : and again it was presented, that a thief was deli vered to the sherift' or viscount, together wit! the mainour. If a man be indicted, that he feloniously stole the goods of another, where, in truth, they are his own goods, and the goods be brought into court as the mainour ; and if it be demanded of him, what he saith to the goods, and he disclaim them : though he be acquitted of the felony, he shall lose the goods. If the defendant were taken with the mainour, and the mainour be carried to the court, they, in ancient times, would arraign him upon the mainour, without any appeal or indictment. — Cowel. Blackst. Commeyit.

MAINPERNORS diff-er from bail in that a man's bail may imprison, or surrender him up before the appointed day of appearance ; mainpernors can do neither, but are barely sureties for his appearance at the day: bail are only sureties, answerable for the special matter for which they stipulate; mainpernors are bound to produce him to answer all charges whatever.

Mainprise, or Mainprize. See Imprisonment. The writ of mainprize, manucaptio, is a writ directed to the sheriff" (either generally, when any man is imprisoned for a bailable offence, and bail has been refused ; or specially, when the ofience or cause of comment is not properly bailable below), commanding him to take sureties for the prisoner's appearance, usually called mainpernors, and to set him at Urge.

MAINTAIN', V. a. & v. n.-\ Fr. maintenir ;

Maintain’able, flrf;. (ˆItal. mantenare ;

Maintain’er, n. s. i Span, mantener ;

Main’tenance. 3 Port. /nrmfcr: all

of Lat. Jiianu tcnere. To uphold ; sup])ort, preserve ; keep ; keep up ; defend ; continue : maintainable is, defensible ; justifiable : maintainer, he who supports ; defends; preserves : maintenance is used by Chaucer for carriage ; general behaviour : in modern times it follows the sense of the other derivatives.

If a woman maintain her husband she is full of anger and much reproach. Ecchis. xxv. 22.

It was my swete right al her selve ; She had so sfedfast countenaunce, So noble porta and maintenaunce.

The Dreme of Chaucer. He dedicates the work to Sir Philip Sidney, a special maintainer of all learning.

Spenser s Pastorals. The beginning and cause of this ordinance amongst the Irish was for the defence and moiHifnaJifp of their lands in their posterity. Id. on Ireland.

It was St. Paul’s choice to maintain himself, whereas in living by the church’s maintenance, as others did, there had been no offence committed.

Hooker. They knew that no man might in reason take upoa him to determine his own right, and according to his own determination proceed in maintenance thereof.

Id. If any man of quality will maintain upon Edward carl of Gio’sfer, that he is e iianifold traitor, let him nppear. Shakˆprnre.

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Maintain talk with llie duke, that my chanty be not of hi'.i jjcrcuiveii. Id. Kin:; I ear.

1 seok not to wax g;reat by others warning ;

Sufficeth, that I have maintains my state,

And sends the poor well pleased from my gate.

Sliakspeare.

These possessions, being unlawfully gotten, could not be maintained by the just and honourable law of England. Davies.

Being made lord lieutenant of Bulloinc, the walls sore beaten and shaken, and scarce maintainable, he defended the place against the dauphin.

I lav ward.

Lord Roberts was full of contradiction in his temper, and of parts so much superior to any in the company, that he could too well maintain and iustify those contradictious. Clarendon.

'I'he ingredients being prescribed in tlieir substance, maintain the blood in a gentle fermentation, reclude oppilations, and mundify it. Harvey.

indigent us before lier marriage. Her friends endeavoured to get lier husband's pension continued to her, and presented so many petitions to the king, all begiiniing with * the widow Scarron most humbly prays your majesty, &c.' that he was quite weary of them, and would exclaim, ' must I always be pestered with the widow Scarron?' At last, however, through the recommendation of JMadame de Montespan, he settled a much larger pension on her, and afterwards appointed her to take care of the education of the young duke of Maine, his son by Madame de Montespan. The letters she w-rote on this occasion attracted die attention of the king, and were the origin of her advancement. lie bought her the lands of Maintenon, the only estate she ever had, and called her publicly Madame de Maintenon ; he came

to her apartment every day after dinner, before and after supper, and continued there till midnight : here he transacted

This place, these pledges of your love, maintain.

In tragedy and satire, I maintain againstˆsie ‘of business with his ministers, while she engaged in our modern criticks, that this age and the last have readmg or needle-work, never showed any desire

excelled the ancients. Id. Juvenal.

God values no man more or less, in placing him high or low, but every one as he maintains his post. Gretu’s Cosmotogia. It is hard to maintain the truth, but much harder to be maintained by it. Could it ever yet feed, cloath, or defend its assertors? Smth.

Tlie maiutainers and cherishers of a regular devotion, a true and decent piety. Id. Sermojis, Here ten thousand images remain Without confusion, and their rank maintain,

Blackmore.

to interfere with state affairs. About the end of 1685 it is said that Louis XIV. married her, he being then in his forty-eighth and she in her fiftieth year. She prevailed on him to found a religious community for the education of 300 young ladies of rank at St. Cyr, whither she frequently retired as a relief from that melancholy of which she complains so pathetically in one of her letters, and which few will suppose she should have been liable to in such an elevated situation. Louis, however, died before her in 1715 ; when

Those of better fortune not making learning their she retired wholly to St. Cyr, and spent the vest maintenance, take degrees with little improvement. of her days in acts of devotion. W hat is most

Swif’t. surprising is, that Louis left no certain provision Nothing can be more unphilosophical than to be for her, only recommending her to the duke of positive or dogmatical on any subject ; and even if

Orleans. She would accept no more than a pen-excessive scepticism could be maintained, it would gjon of 80,000 livres, which was punctually paid not be more destructive to all just reasoning and in-y^^j. jjn ^^^ ^^^^^ j,^ ^j^g ^^ collection of her

letters has been published, and translated into English ; from which her character will be best known.

Maintenon, a town of France, in the department of the Eure and Loire, on the Eure. Population 1600. Eleven miles north of Char-

quiry.

Hume.

Maintenance, in law, bears a near relation to Barretry ; being an officious intermeddling in a suit that does not belong to one, by maintaining or assisting either party, with money or otherwise, to prosecute or defend it. This is an offence against public justice, as it keeps alive strife tres.

and contention, and perverts the remedial pro cess of the law into an engine of oppression. By the Roman law, it was a species of the crimen falsi to enter into any confederacy, or do any act, to support another's lawsuit, by money, witnesses, or patronage. A man may lawfully, however, maintain the suit of his near kinsman, servant, or poor neighbour, out of charity and compassion. Otherwise the punishment by com-mon law is fine and imprisonment ; and by stat. 32 Hen. \ lU. a forfeiture of £l0.

MAINTENON (Madame de), was descended of an ancient family, and her proper name was Frances D' Aubigne. She was born in 1635, in a prison at Paris, where her fatlier had been incar-cerated ; and her mother being unable to support her, she fell to the care of her fatlier's sister, Madame Vilette. To dence, she married the who himself subsisted on a pension allowed him by the court. She lived with him many years : but when he died, in 1660, she found herself as

MA’JOR, adj. & m. s.ˆ Lat. major. Greater, JMajora’tion, n. s. i in any respect : as a INIajokdo’mo, > substantive the field

Ma’jor-6en’erai,, i officer above the cap-Major’ity. J tain ; a principal civil

officer in towns and cities; the first proposition of a syllogism : majoration is used by Bacon for enlargement; increase : major domo (Fr. mujeur dome) is the principal officer of a domestic establishment : major-general, a general officer next in rank to a full general : majority, the greater number ; the slate of being greater : seniority of rank ; full age or manhood ; also, in an obsolete sense (Lat. majores), ancestry.

They bind none, no not though they be many, saving only wheh they are the major part of a gene-more in are Hooker.

escape this state of depen- “I assembly, and then their voices, being mor celebrated abbe Scarron, “•™»*eˆ ”””ˆˆ oversway then-judgments who

fewei .

Fall Greek, fall fame, honour, or go or stay, My major vow lies here. Shakspeare.

Tvl A J O R.

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Douglas, whose high deeds.

Whose hot incursions, and great name in arms.

Holds from all soldiers chief majority,

And military title capital. Id. Henry IV.

There be five ways of majoration of sounds : enclosure simple ; enclosure with dilatation ; communication ; rerieciion concurrent ; and approach to the sensory. Bacons Natural History.

During the infancy of Henry the Hlrd, the barons were troubled in expelling the French : but this prince was no sooner come to his majority, but the barons waged a ciuel war against him. Duvies.

The true meridian is a major circle passing through the poles of the world and the zenith of any place, exactly dividing the east from the west. Browne.

Of evil parents an evil generation, a posterity not unlike their majority ; of mischievous progenitors, a venomous and destructive progeny. Id.

The major of our author's argument is to be understood of the material ingredients of bodies. Boyle.

It is not plurality of parts without majority of parts that maketh the total greater.

Grew's Cosmologia.

Major-general Ravignan returned with the French king's answer. Taller.

It was highly probable the majority would be so wise as to espouse that cause which was most agreeable to the i)ublic weal, and by that means hinder a sedition. Addison.

As in senates so in schools, Majority of voices rules. Prior,

Decent executions keep the world in awe ; for that reason the majority of mankind ought to be hanged every year. Arbuthnot.

In common discourse we denominate persons and things according to the major part of their character : he is to be called a wise man who has but few follies.

Watts' s Logick.

As to bribery and corruption, Sir, if it were possible to influence, by such base means, the majority of the electors of Great Britain, to chuse such men as would probably give up their liberties ; if it were possible to influence by such means a majority of the members of this house to

consent to the establishment of arbitrary power, I would readily allow that the calculations made by the gentlemen of the other side were just, and their inference true.

Sir Robert Walpole.

Whether the majority of the members of any civil community have a right to compel all the members of it to pay towards the maintenance of a set of teachers appointed by the majority, to preach a particular system'of doctrines, is a question which might admit a serious discussion. Bp. Watson.

Major, in law, a person who is of age to manage his own aflfairs. By the civil law a man is not a major till the age of twenty-five years ; in England he is a major at twenty-one ; in Normandy at twenty, &c.

Majou, in logic, is understood of the first proposition of a regular syllogism. It is called major, because it has a more extensive sense than the minor proposition, as containing the principal term.

Major, in the art of war, is the title of several officers of very different ranks and functions ; as, Drum-ynajor, who has the same authority over his drummers as the corporal has over his squad. lie instructs them in their different beats ; is daily at orders with the Serjeants, to know the number of drummers for duty ; and marches at their head when they beat in a body. In the day of battle, or at exercise, he must be very attentive to the

orders given him, that he may regulate his beats according to the movements ordered. Fife-major, he that plays best on the fife. He has the same authority over tiie fifers as the drum-major has over the drummers. He teaches them their duty, appoints them for guards, Sec.

The Major-Gen Eu AT, is the next officer to the lieutenant-general. His chief business is to receive orders from the general, or m his absence from the lieutenant-general of the day; which he is to distribute to the brigade-majors, with whom he is to regulate the guards, convoys, detachm.ents, &c. On him rests the whole fatigue and detail of duty of the army roll. He is charged with the encampment of the army; places himself at the head of it when they march ; marks out the ground of the camp to the quarter-master-general; and places the new guards for the safety of the camp. When the army is to march, he dictates to the field-officers the order of the march, which he has received from the general, and on other days gives them the parole. In a fixed camp he

is charged with the foraging, with reconnoitring the ground for it, and posting the escorts. In sieges, if there are two separate attacks, the second belongs to him ; but if there is but one, he takes, either from the right or left of the attack, that which the lieutenant-general has not chosen. When the army is under arms he assists the lieutenant-general, whose orders he executes. If the army marches to an engagement his post is at the head of the guards of the army, until they are near enough to the enemy to rejoin their different corps ; after which he retires to his own proper post: for the major-generals are disposed in the order of battle as the lieutenant-generals are ; to whom, however, they are subordinate for the command of their divisions. Ths major-general has one aid-de-camp paid for executing his orders.

Major of a Regiment of Foot, the next officer to the lieutenant-colonel, generally promoted from the eldest captain. He is to take care that the regiment be well exercised, to see it march in good order, and to rally it in case of being broken in action : he is the only officer among the infantry that is allowed to be on horseback in time of action, that he may the more readily execute the colonel's orders.

Major of a Regiment of Horse, as well as of foot, ought to be a man of integrity, courage, activity, experience, and address : he siiould keep a detail of the regiment in every particular ; he should be skilled in horsemanship, and ever attentive to his business ; one of his principal functions is, to keep an exact roster of the officers for duty : he should have a perfect knowledge in ail the military evolutions, as he is obliged by his post to instruct others, &c.

]\Iajor ok Artillery, is the next officer to the lieutenant-colonel. His post is very laborious, as the whole detail of the corps rests with him'; and therefore all the non-commissioned officers are subordinate to him, as his title of serjeant-major imports : in tliis quality they must render him an exact account of every thing which comes to their knowledge, either regarding tlie duty or wants of the artillery and soldiers. He should possess a perfect knowledge of the

jower of artillery, together with all its evolutions. In the field he goes daily to receive orders from ihe brigade-major, and communicates them with the parole to his superiors, and then dictates them to the adjutant. He should be a very good mathematician, and be well acquainted with every thing belonging to the train of artillery.

Major of Brigade. See Brigadf-Major. He is appointed only in camp : he goes every day to head-quarters to receive orders from the adjutant-general : thence he goes to give the orilers, at the place appointed, to the different majors or adjutants of tlie regiments which compose the brigade, and regulates with them the number of officers and men which each are to furnish for the duty of the army ; taking care to keep an exact roster. In short, the major of brigade is charged with the particular detail in his own brigade, in much the same way as the adjutant-general is charged with the general de-tail of the duty of the army. He sends every morning to the adjutant-general an exact return, by battalion and company, of the men of his brigade missing at the retreat, or a report expressing that none are absent: he also mentions the officers absent with or without leave.

Major OF Engineers, cornmotdy called sub-director, should be well skilled in military architecture, fortification, gunnery, and mining. He should know how to fortify in the field, to attack and defend all sons of posts, and to conduct the works in a siege, &c. See Engineer.

MAJORCA, an island of the Mediterranean belonging to Spain, is nearly a square, the parallel sides lying north-east, and south-west, and W. N. W., and E. S. E.: the former are nearly straight, without indentation of consequence ; but the latter are deeply indented by gulfs. The greatest length is fifty, and the medium breadth forty miles, containing a surface of 1440 square miles.

In general this island is mountainous and rocky, particularly on the north-west, where are the two conspicuous elevated mountains of Pugg-major and Galatz. On this side the shore is formed of precipices, furiously beaten by the sea, and has no place of shelter for a vessel, ex-cept the insignificant port of Sollcr. The island has no stream tiiat deserves the name of river, but is sufficiently watered by the torrents from the mountains, many of which find their way to the sea. The climate is temperate, and in general healthy. The mountains of the north coast shelter the rest of the island from the cold north winds, which blow with great violence out of the gulf of Lyon, and also arrest the clouds, which condense into light rains and dews, that animate vegetation and moderate the heats of summer, during which season the atmosphere is also re-treshed by sea breezes. The mountains,

however, often create transient storms of great violence.

The mineral productions are coal (veins of which are found in several places, but none are worked), limestone, marbles, slate, and millstones. Near Campos is the only mineral spring in the island, which is sulphurous. The vegetables are similar to those on the opposite coast

of Spain. Tlie quantity of wheat and barley produced is insufficient for the consumption of the island by 50,000 fanegas, to make up which it depends on Barbary, &c. This deficiency does not, however, proceed from the infertility of the soil, so much as from the imperfect state of cultivation, and the quantity of waste land.

The only wild quadrupeds are hares, rabbits, and a few foxes : the domestic animals, in 1805, were 2000 horses, 9000 asses and mules, 6000 head of horned cattle, 61,000 sheep, 34,000 goats, '\5,000 hogs. The horses are weak and ill-shaped ; the asses and mules strong and hardy ; the horned cattle poor and weak; the sheep large and their wool fine, their milk as well as that of the goats is made into cheese ; the hogs are large and fat, and their flesh is the most common animal food. Common fowls are plentiful, but geese and ducks very scarce.

The population of the island is estimated at 136,000 souls, of whom 2000 are priests and monks, and 1200 nuns. The manufactures are confined to some coarse linens and woollens, sail-cloth, and a little silk : the woollen girdles fabricated here are sent to Italy and Malta, the sail-cloth to Carthagena for the navy.

The island has two cities, thirty villages, and twenty hamlets. The most conspicuous points of the coast are those which form the angles of the square, *viz.* Cape Pera the north-east. Cape Salinas the south-east, Cape Dragonera the south-west, and Cape Formentor the north-west. In the topographical description we shall commence at Cape Pera, and make the circuit of the island by the south. JNIanacor, two leagues south of this cape, is on a small cove, with good anchorage and fresh water, which issues from a grotto eighty yards from the beach. Cala Longo affords shelter to small vessels in bad weather ; on it is the hamlet of Colomb. Port Pera can receive five or six moderate sized vessels, which may lie sheltered from all winds but south-east ; on the left hand entering is a ruined castle. Cala Figuera, north of Cape Salinas, is only fit for long boats. Campas west of Cape Salinas. The Gulf of Palma is four leagues deep, with good bot-tom all over it,

but exposed to south-west winds, which throw in a great swell, prolonging its west shore. The first place is Fort St. Carlos on a point, to which succeeds Port au Pins, a cove protected by its fort on its north point, in which frigates may anchor close to the shore, tolerably sheltered from all winds in ten fiithoms. Here is also a haven for vessels of twelve feet, the entrance of which may be closed by a chain. Next to Port au Pins is Belew Castle, of considerable size, on a hill, and with a garrison in war of 150 men. Attached to it, on the north, is a tower, which serves as a state prison. The lazaret, between this castle and Palma, is built on the side of a hill, and is in very bad order.

Palma, the capital of the island, is at the head of the gulf, built semicircularly on a rising ground. It has 33,000 inhabitants, the streets in general narrow and ill-paved, and the houses large but plain. The chief buildings are the palace of the captain-general, a cathedral, five churches, ten convents of men and eleven of

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women, the exchange, a town house, four hospitals, and a theatre. The town is surrounded by a wall fourteen palms thick, and flanked by thirteen bastions,, several of which have redoubts, with two half moons and a horn-work. On the land side is a wide dry ditch, and towards the sea a narrow fausse bray. It has five gates towards the land, and three from the sea. Its haven is only fit for small vessels, who make fast alongside a narrow mole, 500 yards long, on the extremity of which is a battery. One of the most considerable streams of the island, called la Iliera, runs past the walls of the city ; it is only a mountain torrer.c, which nearly dries in summer, but in winte' -s often much swollen, and does considerable damage. Palma is also the seat of government of the isles Baleares^ and Fityuses, which is composed of a captain-general for the military, and a royal audience of eight persons for civil affairs: these authorities are independent of each other, but are both immediately accountable to the supreme council of Castile. Palma has a society for tlie encouragement of agriculture, manufactures, &c., and two printing presses ; from which, however, there issues only government orders and advertisements of sales and local news.

Port Pasquet, west of Cape Figuera, and the west point of the gulf of Palma, has good anchorage in three to six fathoms, but is exposed to the south-west. Off its soutli-east point are two islets, which shelter it in that direction. Andraceio, or Andraig, is a well built town of 4000 inhabitants : near it is a cove, two miles deep, and a musket shot broad, which serves as its port, but admits only small craft. Friou, south of Cape Dragonera, is an open road. Banalbufar, north-east of Cape Dragonera, is a town of 5000 inhabitants, on the summit of a mountain. Soller Cove, nearly in the middle of the north-west side of the island, is at the extremity of a beautiful valley, bounded by barren hills : its entrance is difficult, and is protected by a battery of four guns : it is only visited by small craft, to load oranges, which the valley produces in abundance and which are shipped from the village of St. Catharine. Polenza Bay (Portus Minor), between Cape Formentor on the west and Cape Pinor on the east, has also good anchorage all over it, from twenty-seven fathoms at the entrance to tin-ee near its head. It has a land-locked cove, in which one ship may anchor in four fathoms, under a tower with some cann on ; south of which is a good watering])lace. The open town of Polenza is two miles from the shore, at the head of the bay, and behind a hill : it has 6000

inhabitants. Alcuida Bay (Portus Major) is separated from Polenza Bay by a peninsula, whose north point is Cape Pinar, and the south Cape Mi-norca, or Alcuida. Cape Ferroul is the east point of the bay, within which is good anchorage for large ships. About thirty vessels of easy draft may lay perfectly sheltered at the head of the bay, near a small island, within which, on the main land, 200 yards from the shore, is a hole in a rock, with fresh water.

The city of Alcuida, the second of the island, is on the peninsula that separates the two bays, and situated on an eminence, two miles from the

shore of Alcuida Bay. Its population is at present but 800, being deserted in consequence of its unhealthiness, from a stagnant lake in the vicinity : it is surrounded by old walls and a dry ditch, with two forts and a garrison of thirty men.

Dragonera Island is but a quarter of a mile distant from Cape Dragonera, the west point of the island ; and in the middle of the passage is a ledge of rocks, level with the water, but with a deep channel on each side. Cabrera is three leagues south-west of Cape Salinas.

MAIPO, a large river of Chili, in the province of Rancagua, noted for the number of persons drowned in it. It runs with such force, that, at the time of its floods, no bridge can be found to resist its impetuosity. Its waters are also impregnated with salt, and on this account are not fit for drinking. It abounds in trout, and enters the Pacific Ocean in lat. 33° 43′ 2″ S.

MAIRAN (John-James D'Ortous de), an eminent French writer, descended of a noble family at Besiers, and born in that city in 1678. He was one of the most illustrious members of the Academyof Sciences, and of the French Academy, In 1641 he succeeded Fontenelle as secretary to the academy. This station he filled with the most distinguished success till 1744. The chief of his works are, 1. Dissertation sur la Glace, 1749, 12rao., since translated into German and Italian. 2. Dissertation sur la Cause de la Lu-miere des Phosphores, 1717, 12mo. 3. Traite Historique et Physique de I'Aurore Boreale, r2mo. 1733; afterwards much enlarged in 4to. in 1754. 4. Lettre au Pere Parennin, contenant Diverses Questions sur la Chine, l2mo. 5. A great number of the papers in the Memoirs of the Academy of Sciences, of which he published some volumes. 7. TheEloges of the

Academicians of the Academy of Sciences, who died in 1741, 1742, 1743, in 12mo., 1747. His reputation extended into foreign countries. He was a member of the Imperial Academy at Petersburg, of the Royal Academy of London, of the institution at Bologne, of the royal societies of Edinburgh and Upsal, &c. The chancellor, Da-guesseau, appointed him president of the Journal des Sˆavans; a station which he filled very much to the satisfaction of the public. He was ready at rejiartee. Being asked what an honest man was, ‘ an honest man, said he, is one whose blood is refreshed with the recital of a good action.’ He died at Parisof a defiuxion of the lungs, in 1771, aged ninety-three. ‘MAIRE, La, Straits of, a narrow channel or passage from the Atlantic to the Pacific, between Terra del Fuego and Staten Land, so called from the name of a navigator, who discovered it in the year 1616. It is about fifteen miles long, and as many broad. According to Cook, the entrance of the straits should not be attempted, but with a fair wind and moderate weather, and upon the very beginning of the tide of flood, which happens here at the full and chanue of the moon, about one or two o’clock : and it is best to keep as near to the Terra del Fuego shore as the winds will admit.

MAISTRE (Louis Isaac le), called also Sacy, was born at Paris in 1613. He was made priest

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Ln 1648, and soon after chosen director of the religieuse of Port Royal des Champs. As these were accused of Jansenism, the Jesuits persecuted them; and in 1661 he was obliged to conceal himself; and in 1666 was committed to the Bastile. During his confinement he is said to have composed the book Figures de la Bible. To le INlaistre's confinement tlie public are indebted for a French translation of the Bible, finisiied in 1668, the evening before the feast of All Saints; wiien he recovered his liberty, after an imprisonment of two years and a half. He was presented to tlie king and the minister; and, all t!ie favor he asked from them was, that they would send several times a year to examine the state of tlie prisoners in the Bastile. He continued at Pans till 1075, when he retired to Port lloyal, whicii place he was again obliged to leave in 1079. lie then settled at Pompone, where he died January 4th, 1684, aged seventy-one. Ilis works are, 1. La Traduction de la Bible, with explanations of the spiritual and literal meaning from the fathers ; chiefly by Du Fosse, Ilure, and Tourneaux. This is one of the best French translations that have yet appeared, and the best edition is that of Paris in 32 vols. Bvo. 1682, &c. 2. Une Traduction des Pseaumes selon 1' Hebreu et la X'ulgate, in 12 mo. 3. Une Version des Homelies de St. Chrysostome sur St. Matthieu, 3 vols. Bvo. 4. La Traduction de ITmita-tion de Jesus Christ (sous le nom de Beuil, prieur de St. Vˆal), Paris, 1663, Bvo. 5. Celle de Phedre, 12mo. (sous le nom de St. Aubin). 6. De trois Comedies de Terence, in 12mo. 7. Des Lettres de Bongars (sous le nom de Brian-ville). 8. Du Poeme de St. Prosper sur les ingrates, in 12mo. en vers et en prose. 9. Les Enluminures de I'Almanach des Jesuites, 1654, 12mo., and 1733. 10. Ileures de Port-Royal, in 12mo. 11. Lettres de Piete, Paris, 1690, 2 vols. 8vo.

J\IAITE.\, the native name of a small but populous island of the South Pacific Ocean, supposed to have been discovered by Quiros in 1606, who called it Dezana; Bougainville called it Boudoir; captain Wallis, who visited it in 1769, called it Osnaburg. It is in subjection to the sovereign of Otaheite, and belongs to the chief of Teiarraboo. It is situated to the east of that peninsula, at the distance of more than twenty leagues ; and, being lofty, is always observed by ships which approach Otaheite from the eastward. It is not above three miles in circuit: the southern side descends gradually, and has a border of low land next the sea. Pearls are procured here in exchange for iron. To the eastward it is enclosed by a coral reef. Long. 148" 12' \V., lat.

17°53’S.

MAITLAND rSir Richard), a Scottish poet and eminent public character, born in 1496. He was educated at St. Andrews, and went to P’rance to study the laws. Upon his return, says Mackenzie, he became a favorite of James v., and was made an extraordinary lord of session in 1553. By a letter of James VI. it appears that ‘ Sir Richard had served his grandsire, goodsire, goodam, his mother, and himself, faithfully, in many public offices.’ He became blind before 1561, or his sixty-fifth year ; not-

withstanding which he was made a senator of the college of justice, by the title of lord Lethington, November 12th 1561; and on the 20th of December, 1562, one of the council and lord privy seal, which last office he lield till 1567, when he resigned it in favor of John his second son. Sir Richard continued a lord of session during all the troublesome times of the regents, in the minority of James \T., till 1584, when he resigned: he died March 20tli 1586.

IMaitlam) (William), F. R. S., an eminent Scottish antiquarian, born in Brechin in 1693. He was originally brought up as a hair merchant, but gave up business and came to London, where he published an extensive history of this metropolis, in one volume folio, which was reprinted after his death, with additions, in two volumes. Ilis other works were, The History of Edinburgh, in one volume folio; and a treatise on the History and Antiquities of Scotland, in one volume folio. A second volume of this-work was afterwards published by Dr. Granger. Mr. Maitland travelled into some of the northern countries of Europe, and died at Montrose in 1757, unmarried.

MAITSHA, a district of Abyssinia, in the province of Gojara, consisting of the country on both sides of the Abyssinian Nile, previous to its falling into the lake of Dembea. It is flat and marshy, and has been abandoned by the Agows, its original possessors, to colonies of the Galla. It produces little or no corn, but depends entirely for subsistence upon a plant called ensete. The inhabitants rear large fine cattle, and some indifferent horses.

MAITTAIRE (Michael), A.M., a learned writer, born in 1668. Dr. South, canon of Ciirist Church, m’ade him a student of that house, where he took the degree of A. M. March 23d 1696. From 1695 till 1699 he was second master of Westminster school. In 1706 he published Graeca; Linguae Dialecti, in usum Scholae

VVestmonasteriensis, 1706, Bvo. ; reprinted at the Hague in 1738; and in 1712 the English Grammar, applied to and exemplified in the English Tongue, Bvo. In 1711 he published Remarks on Mr. Whiston's Account of the Convocation's proceedings with relation to himself, Bvo. ; and An Essay against Arianism, and some other Heresies; or a Reply to Mr. W. Whiston's Historical Preface, &c., Bvo. In 1709 he gave the first specimen of his skill in typographical antiquities, by publishing Stephanoruin Histori Vitas Ipsorum ac Libros Complectens, Bvo. Tins was followed, in 1717, by Ilistoria Typographorum aliquot Parisiensium, Vitas et Libros Complectens, Bvo. In 1719 Annales Typographici, ab artis invents origine, ad an-num MD. 4to. The second volume, continued to 1536, was published at the Hague in 1720; wilJi an introductory letter of John Toland da Prima Typographise Inventione : as was also the third, continued to 1556. and by an Appendix to 1664, in 1725. In 1733 was published at Amsterdam the fourth volume, continued to 1662. In 1741 the work was completed at London, by the publication of tlie fifth and last volume, with an index to the whole. These last four volumes were in two parts each. In the

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intermediate years he was employed on various useful works. In 1713 he published, by subscription, Opera et Fragmenta Veterum Poetarum, in 2 vols, folio. In 1714 he published a Greek Testament, in 2 vols. The classics, which he published separately, with indexes, came out in the following order: — In 1713 Christus Patiens, Justin, Lucretius, Phaedrus, Sallust, Terence. In 1715 Catullus, TibuUus, Propertius, C. Nepos, Florus, Horace, Juvenal, Ovid, Virgil. In 1717 Csesar, Martial, Q. Curtius. In 1718, and 1725, Velleius Paterculus. In 1719 Lucan. In 1720 Bonefonii Carmina. In 1721 BatYachomyomachia Grasce ad Veterum Exemplarium fidem Recusa: Glossa Grseca; va-r. lect. vers. Lat. &c. illustrata, 8vo. In 1722, Miscellanea Grfficorum aliquot Scriptorum Carmina, cum vers. Lat. et Notis, 4to. In 1725 and 1741, Anacreon in 4to. In 1724 he compiled, at the request of Dr. Freind, an index to the splendid folio edition of Aretaeus, in 1723. In 1726 he published Petri Petiti liledici Parisiensis in tres priores Aretaei Cappadocis Libros Commentarii; nunc primum editi, ito.; a work found among the papers of .Graevius. From 1728 to 1733 he published Marmorum Anmdelianorura, Seldenianorum, aliprumque Acad.Oxon. Donatarum, una cumCommentariis et Indice, folio, with an Appendix. His Epistola ad D. P. des Maizeaux, in qua Indicis in Annales Typographicos Methodus explicatur, &c., is printed in the Present State of the Republic of Letters, August 1733, p. 142. His life of R. Stephens in Latin, with a complete list of his works, is prefixed to the improved edition of R. Stephens's Thesaurus, 4 vols, folio, in 1734. In 1736 appeared Antiquae Inscriptiones duae, folio ; being a commentary on two large copper tables discovered near Ilera-clea in the bay of Tarentum. .In 1739 he addressed to Anne, empress of Russia, a small Latin poem, entitled Carmen Epinicium Au-gustissimas Russoruni Imperatrici Sacrum. In 1741 he published anonymously Plutarch's Apophthegmata, 4to. His last publication was Senilia, sive Poetica aliquot in Argumentis varii Generis Tentamina, in 4to., 1742. He died in 1747, aged seventy-nine. His valuable library, which had been fifty years in collecting, was sold by auction in 1747 and 1748.

MAIZE, n. s. A native name for Indian wheat.

The whole maize, plant has the appearance of a reed. This plant is propagated in Pˆngland only as a curiosity, but in America it is the principal support of the inhabitants, and consequently propagated witii great care. Miller.

Maize affords a very strong nourishment, but more viscous than wheat. Arbuthnot on Aliments.

Maize, or Indian corn. See Zea.

MAKE, V. «., V. n. &, n. s.-\ Sax. macan,

Makebate, m. s. i machian ; Tent.

Maker, n.s. \ iiHtchen ; Belg.

Makepeace, \7neken, as Mr.

Makeweight. J Thomson suggests, from Goth, mciga, to have power or efficiency. To create ; form ; produce ; compose ; force; effect; establish; incur; gain; incline or tend to; amount to; reach; put or place; give;

regard. The following are idiomatic phrases derived from this important word : — 'To make away,' which is, to transfer; 'f.o make away with,' to expend : * make account.,' or make account of,' to reckon, esteem, or regard : ' make free with,' to treat unceremoniously or rudely :

* make good,' maintain ; fulfil : *make light of/ consider lightly, or as of no consequence : ' make much of,' to treat as important or of consequence; cherish: 'make of,' to understand respecting ; consider :* make over,' to transfer ; settle : * make out,' clear ; exphiin ; prove :

* make up,' to gather together ; compose ; shape; also to reconcile; repair; compensate. As a neuter verb, to make signifies to operate; contribute; have effect; travel; tend: *to make away with,' to destroy :* make for,' advantage ; favor : ' make up for,' to compensate : ' make with,' to concur: make, as a substantive, is form; nature; appearance ; stature. Lir. Johnson well observes, ' This is one of the w-ords so frequently occurring, and used with so much latitude, that its whole extent is not easily comprehended, nor are its attenuated and fugitive meanings easily caught and restrained. The original sense, including eidier prc<luction or formation, may be traced through all the varieties of application.'

A makebate is a breeder of quariels : makepeace, a reconciler of them : makeweight, any small substance designed to make up a given weight.

And thei seyden to him whi the disciplis of Jon . fasten ofte and maken preieris, also and of the Farisees, but thin eten and drynken “? Lnli. v.

Alle thingis weren maad by hym, and withouten him was maad nothing, that thing that was maad.

Wictif. Jon.

Let us make man in our image. Gen. i. 26.

Joseph raatfe ready his chariot, and went up to meet Israel. Genesis.

She made haste, and let down her pitcher.

Gen. xxlv. 46.

I have made thee a god to Pharaoh.

Fxod. vii. 1,

He fashioned it with a graving tool, after he had made it a molten calf. Exod. xxxii. 4.

He shall make amends for the harm that he hath done. Leviticus.

Joshua and all Israel made as if they were beaten before them and fled. Josh. viii. 15.

Give unto Solomon a perfect heart to build the palace for the which I have made provision.

1 Cbron. xxix. 19.

Wealth maketh many friends ; but the poor is separated from his neighbour. Piov. xix. 4.

I sought for a man among them that should make vp the hedge, and stand in the gap befon: me for the land. Ezcliiel.

They made light of it, and went their ways.

Mdtth. xxii.

They all began to tnake excuse. Lnk,ˆ xiv. 18. ‘I’lie man hath servid you of his conninges

And forthrid well your law in his makinˆ‘irs.

Chaucer. Leyende of Good Women.

You he indeed makers or marrers of all men’s manners within the realm. Ascham’s Schoolmaster.

He will not let slip any advantage to make auay him whose just title, ennobled by courage and goodness, may one day shake the seat of a never-secure tyranny. Sidnni,

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The king, heiring of their adventure, suddenly falls to take priile in truikhig much of them, extolling them with infinite praises. Id.

Love in her passions, like a right makebate, whispered to both sides arguments of quarrel. Id.

Clarence w is, by practice of evil persons about the king his brother, called thence away, and soon after, by sinister means, was clean made awau.

Spenser on Ireland. There lavish nature, in her best attire. Pours forth sweet odours, and alluring sights ; And art with her contending, doth aspire T" excel the natural with made delights. Spenser. Seeing they judge this to make nothing in the world for them. Hooker.

Whatsoever, to make up the doctrine of man's salvation, is added as in supply of the scripture's insufficiency, \ve reject it. Id.

She may j.'ive so much credit to her own laws, as to make their sentence weightier than any bare and naked conceit to the contrary. 1 1.

Antiquity, custom, and consent, in the church of Go.l, making with that which law doth establish, are themselves most sufficient reasons to uphold the same, unless some notable publick inconvenience enforce the contrary. Id.

I\Iy mother I slew at my very birth, and since have made awau two of her brothers, and haply to make way for the purposes of others against myself.

Hay ward. Make on, upon the heads Of men, struck down like piles, to reach the lives Of those remain and stand.

Ben Jonson's Catiline. The Aˆenetians, provoked by the Turk with divers injuries, both by sea and land, resolved, without delay, to make war likewise upon him. Knotles.

The grand master, guarded with a company of most v:aliant knights, drove them out again by force, and made gnod the place. Id.

Xaycus was wonderfully beloved, and made of, by the Turkish

merchants, whose language he had learned. Id.

One of my fellows had the speed of him ; Who, almost dead for breath, had scarcely more Than would make up his message. Shakspeare. He's in for a commodity of brown pepper ; of which he made five marks ready money. Id.

If I suspect without cause, why then make sport at me ; then let me be your jest. Id.

This is the night. That either makes me, or fordoes me quite. Id, A hundred pound or two, to j)iake merry withai.

Id. Some undeserved fault I'll find about the making of the bed. Id.

He may have a likely guess. How these were they that made away his brother.

Id. This letter doth make gnod the friar's words. Id. The bird is dead 'i'hat we have made so much on !

Id. Cumbeline. The reasons you alledge do more conduce To the hot passion of distempered blood, Than to make up a free determination 'Twixt right and wrong.

Id. Troilus and Cresiida. Is not the lady Constance in this troop 1 — I know she is not ; for this match made up, Her presence would have interrupted much.

Shakspeare. Oh me, lieutenant ! what villains have done this? — I think, that one of them is hereabouts, And cannot make awau. Id.

To be a makepeace shall become my age. Id.

You must make a great difference between Hercules's labours by land, and Jason's voyage by sea for the golden fleece. Bacon.

Lye not erect but hollow, which is in the making of the bed ; or with the legs gathered up, which is the more wholesome. Id.

The wind came about, and settled in the west for many days, so as we could make little or no way.

Id.

The king went to Latham, to make merrxi with his mother and the earl. Id. Henru VII.

i'rajan would say of the vain jealousy of princes that seek to make airny those that aspire to their succession, that there was never king that did put to death his successor. Bacon.

They made no account but that the navy should be absolutely master of the seas.

Id. War with Spain.

Warily provide, that while we make forth to that which is better, we meet not with that which is worse. Id. Emails.

A wonderful erroneous observation that maketh about, is commonly received contrary to experience.

Bacon.

None deny there is a God, but those for whom it maketh that there were no God. Id. Elssays.

A gentleman and his wife will ride to make merry with his neighbour, and after a day those two go to a third ; in which progress they encrease like snow-balls, till through their burlhensome weight they break. Carew's Surveij of Cornwall.

Behold : to have made the least clod of nothing is more above wonder than to multiply a world.

Bp. Hall.

It wAikes to this purpose, that the light conserving stones in Italy must be set in the sun before they re-tain light. Dighy.

All the actions of his life were ripped up and surveyed, and all malicious glosses made upon all he had said, and all he had done. Clarendon.

He was the more inflamed with the desire of battle with Waller, to make even all accounts. Id. Ilemember'st thou

Thy making, while the Maker gave thee being?

3Iilton. I have made way

To some Philistian lords, with whom to treat.

Id. I was assured, that nothing was designed

Against thee but safe custody and hold ;

That made for me, 1 knew that liberty

Would draw thee forth to perilous enterprises.

Id.

On Wednesaay the general account is made up and printed, and on Thursday published. Graunt.

The Phoenicians made claim to this man as theirs, and attributed to him the invention of letters.

Hale.

Making any similitudes in order to worship is pro* hibited. Barrow.

Widows, who have tried one lover. Trust none again till th' have made over.

Hiulibras.

I borrowed that celebrated name for an evidence to my subject, that so what was wanting in my proof mio-ht be made up in the example. Glanville.

Those mercurial spirits which were only lent the earth to shew men their folly in admiring it, possess delioˆhts of a nobler make and nature, which antedate immortality- •'".•

A pint of salt of tartar, exposed unto a moist air, will rnake more liquor than the former measure will contain. Browne.

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‘ Arosfa recordeth, they tliat sail in the middle can make no land of either side.

Browne’s Vulgar Ei-rours. Give poets leave to ntake themselves awaii.

Roscommnn. The heaven, the air, the earth, and boundless sea, Make but one temple for the Deity. Mailer.

Debtors, When they never mean to pay, To some friend make all away. Id.

When he comes to make good his confident undertaking, he is fain to say things that agree very little with one another. Boyle.

A thing may make to my present purpose. Id. We are to vindicate the just providence of God in the government of the world, and to endeavour, as well as we can, upon an imperfect view of things, to make out the beauty and harmony of all the seeming discords and irregularities of the divine administration. Tillotson’s Sermons.

The stone wall which divides China from Tartary is reckoned nine hundred miles long, running over rocks, and making way for rivers through mighty arches. Temple.

J’he easy and the lazy Tnake mtich of the gout ; and yet, making much of themselves too, they take care to carrj’ it presently to bed, and keep it warm.

Id. I passed the summer here at Nimeguen, without the least remembrance of what had happened to me in the spring, till about the end of .September, and then I began to feel a pain 1 knew not what to make of, in the same joint of my other foot. Id.

Both combine To make their greatness by the fall of man.

Dryden.

What hope, O Pantheus ! whither can we run ?

AVhere make a stand ? and what may yet be done ?

r ^”^-

While merchants make long voyages by sea To get estates, he cuts a shorter way. Id.

I bred you up to arms, raised you to power. Permitted you to fight for this usurper ; All to make sure the vengeance of this day. Which even this day has ruined. Id.

I've made the port already, And laugh securely at the lazy storm. Id. Now mark a little why Virgil is so much concerned to make this marriage ; it was to make way for the divorce which he intended afterwards.

Id. JEneid. Deep in a cave the sybil makes abode.

Dryden. Each element his dread command obeys, W ho makes or ruins with a smile or frown. Id. The loss was private that I made ; 'Twas but myself I lost ; I lost no legions.

I will neither plead my age nor sickness In e.vcuse of the faults which I have made. Id.

Gomez ! what makest thou here with a whole brotherhood of city-bailiffs 1 Id. Spanish I'ruar. "'11 either die, or I'll make good the place.

Dryden, Makes she no more of me than of a slave 1 Id.

Make out the rest, — I am disordered so, I know not farther what to say or do. Id.

The wise betimes make over their estates. Id. The bull His easier conquest proudly <lid forego; And making at him with a furious bound. From his bent forehead aimed a double wound.

Id. Is our perfection of so frail a make, As every plot ran undermine and shake T Id.

Upon the decease of a lion the beasts met to cliuse a king : several put up, but one was not of make for a king ; another wanted brains or strength.

L' Estrange.

Our desires carry the mind out to absent good, according to the necessity which we think there is of it, to the making or encrease of our happiness.

… Locke.

In respect of actions withm the reach of such a power in him, a man seems as free as it is possible for freedom to make him. /^_

How will the farmer be able to make up his rent at quarter day ? /^/ _

‘Ihey mow fern green, and, burning of them to ashes, make the ashes up into balls with a little water. Mortimer.

Me lonely sitting, nor the glimmering liaht 0{ makeweight candle, nor the joyous task Of loving friend delights. Phillips.

A monstrous boar rusht forth ; his baleful eyes Shot glaring fire, and his stiff-pointed bristles Rose high upon his back ; at me he made. Whetting his tusks.

Smith’s Phedra and IlippoUtus. I desired he would let me see his book : he did so, smiling : I could not make any thing of it.

Taller. Zeal should be made up of the largest measures of spiritual love, desire, hope, hatred, grief, indignation. Sprat.

j\Ien of wit and parts, but of short thoughts and little meditation, distrust every thing for fiction that is not the dictate of sense, or made out immediately to their senses. Burnet.

Egypt, mad with superstition grown, Makes gods of monsters. Tate’s Juvenal.

He is to encounter an enemy made up of wiles and stratagems ; an old serpent, a long experienced deceiver. South. ‘J’hose who are wise in courts. Make friendships with the ministers of state. Nor seek the ruins of a wretched exile. Howe. Old mouldering urns, racks, daggers, and distress Make up the frightful horror of rhe place. Garth.

These are the lineaments of flattery, which do together make up a face of most extreme deformity.

Government of the Tongue. Make some request, and I, Whate’er it be, with tliat request comply.

Addison. How happy each of the sexes would be, if there was a window in the breast of every one that makes or receives love. Id.

What multitude of infants have been made awarj by those who brought them into the world ! Id.

There is another statue in brass of Apollo, with a modern inscription on the pedestal, which I know not what to make of. Id.

My w aist is reduced to the depth of four inches b} what I have already inade over to my neck.

Id. Guardian. Oh he was all made up of love and charms ; Whatever maid could wish, or man admire.

Addison. The women of Greece wore seized with an unaccountable melancholy, which disposed several of them to make awaii with themselves. Id.

Several lies are produced in the loyal ward of I'ortsoken of so feeble a make, as not to bear carriage to tlio lioyal Exchange. Id. Freeholder.

Did I but purpose to embark with thee, ˆVhilc gentle zcpliyrs play in prosperous gales ; liut would forsake the ship, and make \he shuar, When the winds whistle, and the tempests roar.

Prior.

Age and youth cannot be made over: nolliiug but time can take away years, or give them. Collier.

lie was to nud-e up his accounts with his lord, and by an easy undiscoverable cheat he could provide against the impending distresis. l{ot;ers's Senmms.

In the passages from divines, most of the reasonings wliicli make out both my propositions are already suggested. Alterburu.

There must needs be another state to make up the inequalities of this, and to solve all irregular appearances, ˆd.

Were it permitted, he should make the tour of the whole system of the sun. Ailnithnot.

If it is meant of the value of the purchase, it was very high ; it being hardly posiiible to make so much of land, unless it was reckoned at a very lovv price.

hi.

A catapotium is a medicine swallowed solid, and most commonly made up in pill:;. Id. On Coins.

It is the unanimous opinion of your friends, that you mnke as if you hanged yourself, and they will give it out that you are quite dead. Arbuthnot.

Thus wisely she makes tep her time. Mis-spent when youth was in its prime.

Glancille.

Antiquaries malie out the most ancient medals from a letter with great difficulty to be discerned.

Felton.

The second mejcy made over to us by the second covenant, is the promise of pardon. Hammond.

The same who have made free with the greatest names in church and state, and exposed to the world the private misfortunes of families. Dunciad.

It may be with superior souls as with gigantick, which exceed the due proportion of parts, and, like the old heroes of that vrnke, commit something near extravagance. Pope.

This the divine Cecilia found. And to her Maker”s praise confined the sound. Id.

I dare promise her boldly what few of her makers of visits and compliments dare to do. Id. Letters.

You conceive you have no more to do than, having found the principal word in a concordance, introduce as nmch of the verse as will serve your turn, though in reality it makes nothing for you.

ˆwift.

Upon one side were huge pieces of iron cut into strange figures, which we know not what to make of.

Moor, to whom that patent was made oiet, was forced to leave off coining. Id.

I dare engage to make it out, that they will have their full principal and interest at six per cent. Id.

The parties among us are made up on one side of moderate whigs, and on the other of presbyterians.

Id.

Blinded he is by the love of himself to believe that the right is wrong, and wrong is right, when it makes for his own advantage. Id.

Outrageous party-writers are like a couple of makehates, who inflame small quarrels by a thousand stories. Id,

The child taught to believe any occurrence to be a good or evil omen, or any day of the week lucky, hath a wide inroad made upon the soundness of his understanding, iruˆs.

The power of reasoning was given us by our Maker to pursue truths. Id. Logick.

He is not that goose and ass that Valla would make him. Baker,

Nature no such hard task enjoins : she gave A make to man directive of his thought ; A make set upright, pointing to the stars. As who shall say, ‘ Kead thy chief lesson there.’

Young.

Make, n. s. Sax. niaca, jemaca. Companion ; favorite. Obsolete.

And if so fall the chevetain be taxe On eyther side or elles sleth his make. No longer shall the to urnaying ylast.

Chaucer, Cant, Talei, The elf wherewith astonied. Upstarted lightly from his looser make, And his unsteady weapons ‘gan in hand to take. Faerie Queene, Bid her therefore herself soon ready make, To wait on love amongst his lovely crew ; Where every one that niisseth then her make, Shall be by him amearst with penance due.

Spenser. For since the wise town, Has let the sports down. Of j\Iay games and morris. The maids and their makes, At dances and wakes, Had their napkins and posies, And the wipers for noses.

Ben Jonion’s Owls,]\IAKO, a market town and bishop’s sec of Hungary, in the palatinate of Csanad, on the river Marosch. The Greeks and Calvinists have churches here ; and the population is estimated at 7000. It is nine miles west by north of Csanad.

MAKOOA, a people of Eastern Africa, described by the Portuguese as inhabiting the country behind jVIotambique. They are very warlike and barbarous, but have gained a knowledge of musketry, which they use skilfully, as well as spears and the bow : they tattoo their skins, file their teeth, and have on the whole a most forbidding appearance,

MAKRI, a sea-port of Asia Minor, situated on a gulf of the same name. The harbour is excellent, and the gulf affords deep and safe navigation. At this place, travellers from Constantinople, and

expresses sent by the Turkish government, embark for Egypt, Firewood is also sent to that country; and timber, tar, cattle, and salt, to Rhodes, “There is therefore always a good deal of shipping here. Provisions are cheap, and easy to be procured. The air, however, is unhealthy ; and a complete malaria prevails. When Sir Sidney Smith was there, in the Tigre, he had in one week 100 placed on the sick list. This unhealthiness appears to arise partly from the ruins with which its site is covered, and partly from the high mountains which, rising on all sides, place it as it were in the bottom of a pit. The most remarkable object in the town of Makri consists of the ruins of Telmessus, upon which it is built, and of which an immense theatre alone remains conspicuous. It was built on the side of a mountain, to whose shelving sides the structure is adapted. In front extended a noble terrace, to which a magnificent flight of steps conducted from the sea. The sides of the mountains appear also hewn into magnificent tombs ; not only the chambers, but the columns in front, being cut out of the solid rock. The stones enclosing the place where the bodies are deposited have been so nicely joined, that it is now impossible to discover the place where the entrance had been. There are also large vaulted caves, in the comer

of which is a recess, wlience it is supposed the ancient soothsayers uttered responses, which appeared supernatural to the credulous votaries who came to consult them.

No place was more renowned in antiquity than this for the art of divination. There is also a monument, consisting of huge masses of stone, placed together without cement, and bearing every appearance of having supported some enormous obelisk or pyramid. Dr. Clarke tliinks this may not impossibly have been the mausoleum of Artemisia. Nothing can exceed the gloomy grandeur of the aspect of this part of Asia JNIinor. The inhabitants are remarkably rude, lawless, and daring ; which calls for peculiar precautions in the vessels which come here for water or provisions. 125 miles south-east of Smyrna. Long. 29° 30’ E., lat. 30° 58’ N.

MALABAR, a maritime province of Hindostan, situated between 10° and 13° of N. lat. It is bounded on the north by the province of Canara, on the south by the rajah of Cochin's territories, to the east it has the chain of lofty mountains denominated the Western Ghauts, and on the west it is washed by the sea. That portion of this province which borders on the sea is a level and of a poor soil ; but many of the hills and intervening valleys of the interior are extremely fertile. This country is intersected by a number of mountain streams which overflow their banks during the rainy season; but their channels are frequently dry, except as far as the tide reaches, and their courses generally short. The chief produce is timber, sandal-wood, cocoa nuts, coir, and black pepper. The principal towns Calicut, Tellichery, and Cana-nore. The villages are numerous, and neatly built of mud, washed with lime, and thatched with palmira leaves.

This was the first part of India visited by Europeans ; Vˆasco de Gama having landed at Calicut in the month of May 1498. He found the country governed by different Hindoo princes • the principal of whom is called by the Portuguese the Zamorin rajah. Previously to this there seem to have been several colonies of oriental Christians, Jews, and Mahometans, established here, each .of whom have since increased in number. The bulk of the inhabitants are, however, Hindoos of various castes ; as the Nam-bourine Brahmins ; the military tribe of Nairs, of which are the rajahs, and among whom exist the systems of polyandri, and the inheritance devolving to the children of the sister, no m.an knowing his own child. The inferior caste is the Parian or Pariar; contemned by all the rest, arwl being in great proportion slaves. There, however, exists a yet more wretched class, tlie Niadis, who are not permitted to enter towns or villages, but reside in the woods, and live by hunting and robbing.

The descendants of Europeans, particularly the Portuguese, are numerous ; as also those of the Arabic Mussulmans, or their converts called Mapillas. About the year 1706, Malabar was subdued by Hyder Aly ; during the war the rajah of Calicut committed suicide, and the other chiefs were compelled to abandon their territories, and take refuge in the mountains. In

the war between Tippoo Sultan and the British, in 1790, several of these chiefs joined our army ; and, when Tippoo had been compelled to relinquish a large portion of his territories, the province of Malabar was placed under the government of Bombay ; on which tlie diflerent Nair chiefs were reinstated in their former possessions, but they failed

in all their engagements as to the revenues, and their mode of government A^‘as found to be wretched in the extreme. Tiiey were in consequence deprived of authority, and allowed one-fifth of tiie revenues for their support. On their subsequent revolt, the province was transferred to the government of Madras, which have divided it into two collectorships ; and since this arrangement the country has been much improved: in the year 1807 it yielded a revenue of nearly twenty-five lacs of rupees.

Malabar Cape, or Sandy Point, a strip of land projecting out from the south-east part of Cape Cod, in Massachusetts, about eight miles south by west. Long. 70° 3’ W., lat. 41° 33’ N.

Malabar Poikt, a promontory on the island of Bombay, near which there is a celebrated Hindoo temple, the object of pilgrimage, and a rock containing a fissure, by passing through which the superstitious believe they are purified from sin. The neighbouring village is inhabited by Brahmins.

MALACCA, or Malaya, a considerable country of India, beyond the Ganges, south-east of Siam, is 200 leagues long and forty in its greatest breadth. Its absolute limits are not, however, strictly defined ; the narrow tract that separates the bay of Bengal from the gulf of Siam, called the istinnus of Kraw, is its connecting point in that country. The interior is occupied by mountains, covered with impenetrable forests, and apparently almost uninlrabited ; the highest sumrrit is that named Mount Ophir, south-east of Malacca. These mountains contain tin mines, and give rise to numerous rivers, most of which are navigable by small vessels, and sonre of them for vessels of burden. The coasts seem to be divided into seven petty sovereignties, of which Queda, Pera, Salangore, are on the w^est ; Johore at the east extremity; and Pahang, Tringano, and Patany on the east. The first place on the west coast is Bangri in 9°; it has a considerable native trade, but is seldom visited by Europeans.

Queda, or Qualla Batrang, one of the chief trading places of tlie peninsula, is iri 6° N. Its river’s moutii is crossed by a mud bank with twelve feet water at spring tides, but vessels of 300 tons can ascend it. ‘The banks of the river are swampy, and covered with jungle towards its mouth. Seven miles up it is a brick fort and village, named Allostar, the residence of the rajah. It contains about 300 houses, inhabited by Chinese, Malays, and Chulias. (Chinese are indeed found established in almost all tlic principal Malay towns. Its trade has greatly declined since the establishment of Prince o’ Wales’s Island. Provisions, particularly bullocks and poultry, with fruit and vegetables, are

abundant here.

Qualla Moorba, six leagues south of (iueda, is a large, deep, and rapid river, with a great

sand-bank before it; it descends from mountains abounding in tin. Fry River succeeds, and has a Mala} town at its entrance, whicli, togetlier with a district eighteen miles up the river, and three miles in breadth, was ceded in 1800 by the rajah of Queda to the East India Company, and is dependent on Prince of Wales's Island.

Malacca, the chief town of the peninsula, is situated on the small river Crysorant, which can only be entered by the Malay proas. The fort or citadel of St. Paul, built by the Portuguese, is on an elevation on the left bank of the river, and contains all the government buildings, and a garrison of 500 troops. The town on the opposite side of the river (which is crossed by a briflge of several arches) is surrounded by entrenchments, to protect it from the Malays : it contains about too Europeans, 250 half caste, 5000 Chinese, 6000 Malays, and 600 Chulias. The road is entirely open, and large ships are obliged to anchor three miles from the town, from the shoalness of the water closer m. The country a little way inland is hilly; and to the east of the town rises the lofty mountain of Ledang, also called Queen's Mountain, and Ophir. The land near the shore is low, and tliickly covered with wood, which it might be supposed would render the town unhealthy ; on the contrary, however, it is one of the most healthy places of India, in no part of which are there more instances of longevity. Malacca was formerly a great trading place for tin, but which is now carried to Prince of Wales's Island. It is, however, an excellent place for ships to touch at, provisions being in great abundance, and fruits in an unparalleled profusion and variety. Amongst them is the delicious mangustine, of which this seems to be the western limit.

.lohore River is near the extremity of the Malay peninsula; it is of considerable size, with two channels in, formed by tiie large island of

Sincapore. The town where the rajah resides is twenty miles up the river, and is a considerable Malay native trading place, but seldom visited by 1-luropeans.

Point Romania, Oojong Tanah of the Malays, is the south-east point of the peninsula, and is a low point with a hummuck, named Mount Barbucet, west of it. Off it is a cluster of rocky islets, and on the west side of the point is Romania River, with but two or three feet at its narrow entrance at low water.

Point Romania is also the east limit of the strait of Sincapore, which forms the communication between the strait of Malacca and the China Sea. This extremity of ttie peninsula is uninhabited and covered with wood, the retreat of w ild elephants, buffaloes, deer, hogs, monkeys, peacocks, &c. The rivers are full of alligators and guanas, and the rocks covered with oysters. In the middle of the strait of Sincapore is Pedro Branco, or the White Rock, named from its being whitened by the dung of sea birds. It is surrounded by sunken rocks.

Malacca has a partial dependence upon Siam. Formerly the Siamese monarchy had its supremacy owned by the whole peninsula; but, since it sunk under the power of the Burmans, all the southern part has shaken ofi" the yoke. The

Malays are well known, and widely diffused throughout all the east. They are said, however, not to have been natives of this country, originally, but to have come from the district of Pa-lembang in Sumatra, en the banks of the river Malaya, and thence to have founded the city of Malacca in 1252. The supreme internal power resides in a rajah, who assumes the title of sultan, and who has under him a number of dattoos or nobles, but tiie whole system is of a very precarious and particular character. The people are the terror of Asia as pirates. In the pursuit of plunder or conquest, they show themselves daring, vindictive, and insatiable; merciless to enemies and strangers, and capricious to their friends and associates. Tliat which can be construed into an insult drives them to fury ; and has often impelled them to deeds of frenzy, known by the name of running amok, peculiar to themselves. He who has resolved upon this, begins by taking a dose of opium, till he is half intoxicated ; he then throws loose his long black hair, draws his crise, and rushes into the streets, crying ' kill, kill,' and in fact kills every one that encounters him in his career. But under the British government this practice has generally disappeared. Some writers indeed wholly attribute it to the

oppressions of their former conquerors, and assert that the Malays possess higher sentiments of honor, greater fidelity to their word, and upon the whole a more estimable character than the natives of India. ‘ They are even mild and courteous in their domestic deportment, and, to masters who treat them well, make faithful and attached domestics. Piracy is the irregular habit which is most deeply rooted in their nature ; to it their ideas attach no disgrace ; on the contrary its successful prosecution is considered as glorious.’

Their language is distinguished for its smoothness and softness, and appears to have a basis of Sanscrit, with a tincture of Arabic. It has become, like the French in Europe, a sort of current dialect over all the sea coasts, and in all mercantile societies of the east.

Besides tlie Malays, who inhabit the coasts, the peninsula in its interior tracts, maintains another race, conceived to have been its original inhabitants, who seem to be a variety of the Papuas or oriental negroes. They have the woolly hair, jet black skin, thick lip, and flat nose, of the African, and are called by the Malays Samangs. Those established in the lower districts, plant a little rice, and exchange the resin, bees’ wax, and honey of their forests for clothes and food. The Samangs of the mountains, on the contrary, are said to be complete savages, who have no’fixed abodes. They subsist entirely by hunting and plunder. Malacca also contains colonies from several of the neighbouring countries and islands.

MALACHI, Ileb. obxO) i. e. my messenger, the last of the twelve minor prophets. He prophesied about 300 years before Christ, reproving the Jews for their wickedness after their return from Babylon, and condemning the priests for being careless in their ministry; at the same time encouraging the few who maintained their integrity. He distinctly prophesies of the Mes-

siah, as well as his forerunner, who should come in the spirit and power of Elijah.

MAL'ADY. Fr. maladie. A disease; distemper; sickness.

Better it is to be private In sorrow's torments, than ty'd to the pomp of a palace, Nurse inward maladies, which have not scope to

be breathed out. .b'irfnev.

Physicians first require, that the malady be known ihoroughly, afterwards teach how to cure and redress it. Spenser.

Say, can you fast ? your stomachs are too young : And abstinence engenders maladies, Skakspeare. Love's a malady without a cure ; Fierce love has pierced me with his fiery dart ; He fires within, and hisses at my heart.

Dryden. An accidental violence of motion has removed that malady that has baffled the skill of physicians.

South. Unnumbered maladies his joints invade, Lay siege to life, and press the dire blockade ; But unextinguished avarice still remains, And dreaded losses aggravate his pains. Johnson.

MALAGA, a considerable city of Spain, in the kingdom of Granada, on the coast of the Mediterranean. It is said to be the third city of Spain in commercial importance, and stands at the head of a deep bay, having a large plain to the north, and being sheltered east and west by lofty mountains.

Mr. Jacob, who visited it from Gibraltar dur-ing the late peninsular war, has given the best modern description of it with which we are acquainted. Like all Spanish towns, he says, it is a most beautiful object at a distance, but will not bear a near inspection. The Alameyda is the only part of the town which is handsome, and that is truly magnificent. It consists of a foot-walk in the middle, about eighty feet wide, witli orange and oleander trees planted on each side : without these are good carriage roads, md on both sides a row of sumptuous and elegant houses. When the trees grow to a size large enough to afford shade it will be a charming spot, but at present they are not much taller than shrubs. At the end of this walk is placed a beautiful nˆarble fountain, consisting of three basins ranged above each other, and gradually diminishing in size : from the lower basin a column rises, supported by beautiful female figures, on which the second rests : the third basin is raised on a similar column, supported by other groups of figures, and the whole work is beautifully executed. It is said to have been a present from the republic of Genoa to the emperor Charles Vˆ.; on its passage it was captured by an Algerine corsair, and

afterwards retaken by Don Berandina dc Mendoza, who landed it at this city.

The streets of Malaga are very narrow, wIuIa ■each house, surrounding a court into which the windows look, is very large. There is only one square in the town, and that is neither spacious nor handsome ; and the churches and convents are so crowded among the houses, that whatever beauty they may possess is nearly concealed. An ancient castle in good preservation, built by the Moors, called Gibralfaro, stands on the side of a hill communicating with the city : from many Vol. XIII.

Roman inscriptions found here, especially by our countryman Carter, it is evident that this fortress was the site of a Roman temple and castle, and the bricks, in some parts of tlie foundation, are manifestly the work of that people; but the whole superstructure is purely Arabic. The entrances are protected by a contrivance generally found in the Moorish fortresses ; over each door and window a kind of chimney is constructed the bottom of wliich is level v/ith the upper part of the entrance, and the top terminates at the parapet ; through these chimneys the besieged could shoot their arrows on the heads of their assailants, and be themselves secure from their attacks. The modern art of fortification, if applied to this castle, would make it impregnable; and, as it commands the city, it would be of the greatest military importance. During the wars in 1487 the capture of this castle, and the submission of the Moorish garrison to the arms of Ferdinand, caused the ultimate success of the Christians. There is another Moorish building which is outwardly in great perfection ; it was formerly a kind of dock, in which the Moorish gallies were laid up, but it is now converted into storehouses. An Arabian palace, the Alcasaba, stood formerly near the shore, but it has been partly destroyed, to make room for a modern structure, which is now nearly completed : it is the new custom-house, and stands near the water ; the style is purely Spanish, and is very beautiful.

The cathedral is a fine object, and said to be as large as St. Pauls. Its style of building is a mixture of Roman and Gothic, though it was erected long after the power of those nations was extinct; for it was begun in 1529, and consecrated in 1588. Being closely surrounded with houses, it is not seen to advantage. ‘ Catholic churches generally,’ says our traveller, * appear less in size than Protestant cathedrals, from the choir being placed in the centre, and the higii altar in another part of the building. The number of chapels also, as well as

the images and pictures, which abound in the former, contribute to this effect. The interior of this church is finished with exquisite taste : it is an oblong spheroid, with a row of Corinthian pillars, around which is the nave ; these pillars support a lofty roof of well turned arches, witli the sky painted in the compartments. The high altar and the [lulpit are of beautiful Hesh-colorcd marble, and the choirs so singularly fine, that Palomino, the biographerof Spanish artists, calls it theeighdi wonder of the world. It contains about fifty stalls, curiously carved in cedar and mahogany, and a consideral)lc number of statues of saints, the work of Alonzo Cano, and of his pupil I'odro de Mcna, wiiose celebrity is little inferior to that of his master. Tlic paintings in this church are but inferior. Tliere are some few marble inonunients, particularly one to the me-mory of the late bishop, Don Jesse de Molina, who is celebrated for having exjicnded in church plate, and in ornamenting this edifice, the enormous sum of 1,500,000 reals, or nearly £20,000 sterling: the revenue of the see Mr. Jacob found to be about 100,000 dollars annually, principally derived from tithes on wmc-2 ii

which are soil by auction just before the vintage.

There arc two fine organs in this catliedral, whicli add much to its beauty; the pipes are not perpendicular, but project from the instrument, and their terminations are in the form of the large end of a trumpet, so tliat they appear like a range of trumpets over the top of the choir, diminishing gradually in length. Tiie church, vviiiiin the walls, is 400 feet in length, and 260 in breadth; the heigiit, from tie floor to tho arches, is 140 feet. The palace of the bishop forms one side of a small square in front of tlie cathedral, but the majestic height and grand dimensions of the latter make the])alace, whicli in another situation would appear a handsome building, look small. The other churches and monasteries contain nothing worth, describing.

‘ It is not, however, the edifices constructed by human labor that render Malaga an interesting spot,’ says Mr. Jacob, * but the benign climate and fruitful soil with which providence has blessed it, and which tlie industry of the people has been exerted to improve. The rivers Gua-dalmedina and Guadalorce, which empty themselves at this place into the ocean, wind round the mountains, and pass through valleys the richest and most fertile in the world; and it is upon the banks of these rivers that the prodigious quantity of figs, almonds, oranges, lemons, olives, sumach, juniper berries, wax, and honey, are produced, which, with the dried raisins and wines from the mountains, and the cork of the hills, form the foundation of the natural external commerce of Malaga. The productions with which Europe is supplied from the western world, such as coffee, cotton, cocoa, indigo, and pimento, had been all cultivated in this part of Spain for many ages before America was discovered ; and, though it has only been of late years that any great increase in their cultivation has taken place, yet, from the productiveness of the soil, from the specimens that have been produced, and the political prospects of the world, the hope is entertained that this part of Spain may in time be rendered capable of superseding the nece?sity of cultivating the West India Islands by the labor of slaves.’

The commerce of Malaga was very flourishing during the year f/f its

closer intercourse with Great Britain. The peace with England opened a vent for its commodities, which was improved with assiduity, and the exports of wines and fruits during 1809-10, amounted to nearly three times as much as in any preceding year. In all periods the trade to America from Malaga was much less extensive than from Cadiz, but, in proportion to its extent, of far more benefit to the country ; because eleven parts in twelve of its exports consist of native productions; whereas, at Cadiz, the goods imported from foreign countries constitute rather more than three-fifths of its exports. Malaga may, as we have said, in point of commercial consequence, be considered as the third port in Spain; Cadiz having been very far before every other at all periods ; Barcelona follows; then this city. But one singular diff”arence exists between them : the exports in this place exceed the imports, because there is much to part with, and few wants to be supplied. But at Cadiz, Bacelona, Corunna, St. Andero, and even Alicant, the imports from America have every year exceeded the exports.

Several manufactured articles, exported hence, are made in this city and Granada. The flax and hemp grown here are remarkably good, and a considerable quantity of linen and sail-cloth is sent to the colonies. The silk in this part of the country is manufactured into sattins, velvets, lafl’eias, ribands, and silk stockings (principally at Granada indeed) for home consumption, and some part is exported. There are also manufactories of paper, leather, soap, hats, tapes, and woollen cloths, but all on a small scale. The port of Malaga is very good for shipping; and within the last thirty years an additional mole has been constructed, which encloses on three sides one of the best artificial harbours in the world : it is not large, but tiiere is sufficient depth of water for a ship of the line, which may lie close to the pier. The fishermen are very skilful in the management of their boats, and form a numerous body.

Malaga was built by the Phcenicians several centuries before the Christian era, and is said to have been called Malacha, or Malaca, on account of the great quantities of salt fish sold here. In process of time it passed under the dominion of the Carthaginians, Romans, Goths, and Moors. Strabo says a great quantity of salt, manufactured in its environs, was disposed of on the opposite coast of Africa. That it was a place of importance, under the Romans, we may infer from the monuments that have been discovered in its vicinity. It was not till the year 1487 that Ferdinand and Isabella recovered it, after an obstinate resistance, from the dominion of the Moors . and its importance has been ever since as well appreciated as any of the advantages of this fine country.

MALAGRIDA (Gabriel), an Italian Jesuit, born in 1686. He was appointed to conduct missions into Portugal. To great eloquence he added the most ardent zeal for the interest of the society. He soon became respected as a saint, and consulted as an oracle. When a conspiracy was formed by the duke of Aveiro against the king of Portugal, it is said that he and other two Jesuits were consulted concerning the measure, and gave it as their opinion, that it was only a venial crime to kill a king who persecuted the saints. About that time the king of Portugal banished the Jesuits from his kingdom ; and three of them were apprehended, *viz.* Malagrida, Alexander, and Matlios, who were accused of having approved his murder. But either tlie trial could not be proceeded in without the consent of the pope, or no proof could be sufficient to condemn Malagrida ; and he therefore was delivered to the inquisition, as having formerly advanced some propositions bordering on heresy Two publications which he acknowledged, and which gave the fullest indications of complete insanity, were the foundation of these suspicions. The one was written in Latin, entitled Tractatus de vita et imperio Antichristi ; the other in Portuguese, entitled The life of St. Anne, composed with the assistance of the blessed Virgin Mary and her most holy Son,

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Tliey are full of exiravaccance and absurdity. This enthusiast pretended to have the gift of miracles. He told the judges of the inquisition, that God himself had declared him his ambassador, apostle, and prophet ; that he was united to God by a perpetual union ; and that the Vˆirgin Mary, with the consent of Jesus Christ and of the whole Trinity, had declared him to be her son. For such extravagances this unfortunate wretch was condemned by the inquisition ; but his death was hastened by a vision which he eagerly revealed. Upon the death of the marquis of Tancourt, commander of Estremadura, discharges of cannon were made in honor of him by the castle of Lisbon, and by all the forts on the banks of the Tagus. These being heard by Malagrida in his dungeon, he supposed, from their happening durmg the night, that the king was dead. Next day he demanded an audience from the members of the inquisition, when he told them that he had been ordered by God to show the minister of the holy office that he was not a hypocrite, for the king's death had been revealed to him, and he had seen in a vision the torments to which his majesty was condemned for having persecuted the religious of his order. This was sutficient to accelerate his punishment; he was burnt on the 21st of September, 1761, in his seventy-fifth year, not as a conspirator, but as a false prophet.

MALAGUETTA, a name that has been sometimes given to the Grain or Pepper Coast, a country of Guinea, bounded by Sierra Leone on the west, and the Ivory Coast on the south-east, extendmg about 300 miles along the Atlantic.

MALANGARA, C.ˆpe, anciently called 01-mi<e, a promontory of Greece, in the isthmus of Corinth, forming a sort of peninsula.

MALAR, or Maler, a long and irregular lake of Sweden, to the north and west of Stockholm, about eighty miles in length, and of various breadth. It is said to contain upwards of 1200, great and small, islands ; and forms a variety of gulfs and bays. It communicates with the Baltic at Stockholm, and on the south side a canal has been made, which communicates with an inlet of that sea at Suder-Telge.

MAL'APERT, adj. Mai and pert. Saucy ; impudent.

Beware your conntlnaunce be sene, Nor ovirlight, ne rechelesse, ne bolde, Ne malapert, ne rennyng with your tong, For she will you

obeisin, and be liolde.

Chaucer s Court of Love. Peace, master marquis, you are malapert ;

Your fire-new stamp of honour is scarce current.

Sliakspeare.

If thou dar’st tempt me further, draw thy sword. — What, what? nay, then, I must have an ounce or two of this malapert blood from you.

Id. Twelfth Ni/iht.

Are you growing malapert? Will you force me to make use of my authority 1

Dryden’s Spanish Fniar.

MALATE, a salt formed by the combination of the Malic acid with various bases. See Chemistry.

MALATIA, the ancient Melitene, once the capital of Armenia Minor, atownof Asia Minor, about fifteen mdes to the west of the Euphrates.

It stands in a fine plain, between that river and the Melas, and contains a considerable population. The spot is celebrated for a great battle fought in 572, between Justinian and Chosroes. Ninety miles W.N. W. of Diarbekir.

MALDA, a small district or hundred of Ben-gal, situated in Ilajemahal, on the north-east side of the Ganges. Its principal towns are Malda and Pundua, called aJso Purrua, which in the fourteenth century was the capital of Bengal.

Malda, the chief town of the above district, the residence of the commercial agent of the East India Company, is a modern place, and has been built out of the ruins of Gour. The vicinity abounds with mulberry trees, on which are reared an immense number of silk-worms. It carries on a very considerable trade in raw silk, and mixed cotton and silk goods. The East India Company established a factory here early in the seventeenth century. Long. 88° 4’ E., lat. 23° 3’N.

MALDEN, or Maldon, a borough and mar-ket town of Essex, seated on an eminence at the conflux of the Chelmer and Blackwater, where they enter the sea. It is thought by some antiquaries to have been the

ancient Camelodunum, the first Roman colony in Britain. The town consists of one principal street, nearly amile long, with another smaller, from which run several lanes. It was besieged, plundered, and burnt, by queen Boadicea; but the Romans repaired it. It was again ruined by the Danes, but rebuilt by the Saxons. It is governed by two bailiffs, six aldermen, eighteen capital burgesses, a steward, recorder, and above 400 commoners, who all vote for its members of parliament. It has a convenient haven for vessels of 400 tons ; and carries on a good trade in coals, iron, corn, and deals. It has two parish churches, and a large library for the use of the minister and the neighbouring clergy. The custom of Borough English is still preserved here ; that is, the youngest, and not the eldest son, succeeds to the burgage tenure at the death of his father. Here formerly stood a Carmelite priory, and an hospital for lepers. The town was incorporated in the reign of Philip and Mary, and has sent two members to parliament ever since the 2nd of Edward III. Here is a grammar school, a charity workhouse, a market on Saturday, and a fair on the IBth of September. Maiden Water is navigable up to the town, which lies eight miles east of Chelmsford, and thirty-seven north-east of London.

MALDIVA Islands. The Maldiva Islands are a large chain, lying south-west of Cape Comorin, between the latitude of 7° 30’ N. and the equator. They are said to be upwards of 1000 in number, divided into several groups, called by the natives attolons, of which there are thirteen principal ones. Though so near the coast of India, this archipelago is very little known to us, and the only account we have been able to procure of it is contained in tiie relation of the shipwreck of Pyrard, a Frenchman, and which we shall translate in his own manner. ‘ It is marvellous,’ says he, ‘ to see each of these attolons encompassed by a great bank of rock all round, there being no human artifice which could so well shut with walls a space of ground like this.

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These attolonsare all round or oval, having each thirty leagues circumference, some a little more, others a little less, and are all close to each other, without any of them touching; between each two are channels of the sea, some broad, others very narrow. Being in the middle of an attolon, you see round you this great bank of rocks, which, as I have said, surrounds and defends the islands against the impetuosity of the sea. But it is a friijhtful thmg, even to the most courageous, to approach this bank, and to see, coming from a great distance, tiie waves, breaking with fury all around ; for this, 1 assure you, is a thing that 1 have seen an infinity of times. The surf is greater than a house, and as white as cotton ; so that you see round you like a white wall, principally when the tide is at the full.' He also adds, that each separate island is surrounded by its own reef; and that the currents which set through these narrow channels are so violent, that it would be impossible for the inhabitants to communicate from island to island, if nature had not provided for this purpose. Each attolon is divided by two channels, which cut it diagonally, and of which the extremities unite with the great channels that separate the attolons ; so that to pass from one attolon to another, when the current sets from the west, you quit the attolon you are on by the eastern diagonal channel, where the water is smooth, and you are carried by the current to the opposite attolon, which you enter by the diagonal channel on the west. There are several ship channels between the attolons, of which those best known are the Cardiva Channel on the nortli, tlie Kqui-iioctial Channel, and the One and Half Degree Ciiannel.

The inhabitants are Mahommedans, in their appearance resemblin<ˆ the JNloors of India, and are considered quiet and inoffensive. They trade in their own boats, made of cocoa-nut trees, and of the burden of thirty tons, to Bengal, and other places ; exchanging the produce of their islands, consisting of cocoa-nuts, coir, cocoa-nut oil, cowries, and tortoise-shell, for betel-nut, china-ware, opium, coffee, iron, and other articles of domestic consumption ; they also send large quantities of dried bonito to Achen. They make very fine mats for sleeping on.

The principal island is named Male, or King's Island, being the residence of a chief, whose house is two stories high ; the dwellings of his subjects are scattered about the island, built of wood, and covered with the leaves of the cocoa palm. There are many cannon on this

island, particularly near the king's residence, where is their principal magazine. The anchorage is very close to the shore, on a coral bottom ; die native boats lie inside the rocks, the channels being closed by booms at night.

The following account of the currents among these islands is from Mr. Ilorsburgh's Directory. ' In March and April tlie current sets generally to the E.N. E. about the south attolon, from the equator to latitude 4° or 5° S., and extends far to the east and west of the meridian of the islands. This current is sometimes strong, from fifty to sixty miles in twenty-four hours, at other times weak and fluctuating. From the equator

in the same months, to latitude 8° or 9° N., the current sets mostly to the south-west. In May the current sets strong to the eastward near the equator, sometimes from fifty to seventy miles in twenty-four hours, in the track near the Maldivas, from latitude 2° N. to 2° S., the winds being then variable, but mostly from the westward. In the latter end of June and July, when the south-east trade approaches the equator, the currents set often to the W.N.W. about the south end of the Maldivas, particularly to the south of the equator. In October, November, and December, the current sets strong to the west, at times in the track between Ceylon and these islands.'

MALDONADO, a small river of the province of Buenos Ay res, which enters the sea in the bay of Maldonado.

Maldonado, an island of the Atlantic Ocean, situated near the coast of Buenos Ayres, at the entrance of the La Plata.

Maldonado, a town of Buenos Ayres, South America, is situated on a bay formed by a neck of land, exposed to the south-west winds. The isle Goretta, off the bay, is strongly fortified with four batteries mounting twenty-four pounders, which command the whole bay and the ship channel on the east, between the island and neck of land. The population of Maldonado is about 2000 ; it was founded in 1730.

MALDONAT (John), a Spanish Jesuit, born in 1534. He was accused of heresy, and of procuring a fraudulent will, by seducing tiie president St. Andre at Paris to bequeath his estate to the Jesuits. Peter Gondi acquitted him of the first charge, and the parliament of Paris of the other. He retired after these troubles to Bourges; but went to Rome, by order of pope Gregory XIII., to superintend the publication of the

Septuagint; and there, after finishing his commentary on the Gospels in 1582, he died in the beginning of 1583. He also wrote commentaries on Jeremiah, Baruch, Ezekiel, and Daniel ; a treatise on the sacraments, on grace, on original sin ; and several other pieces printed at Paris in 1677, in folio. His style is clear, lively, and easy. He does not servilely follow the scholastic divines; but is free, and sometimes singular, in his sentiments.

MALE, adj. & n. s. Fr. male. Masculine : one of the masculine sex.

As it is writun in the lawe of the Lord, for every ynale kynde openynge the wombe schalle be clepid holy to the Lord. Wiclif. Luk. ii.

Male and female created he them. Gen. i.

In most the male is the greater, and in some few the female. Bacon.

We are no sooner born thine than we are persecuted. If the church travail and bring forth a male, she is in danger of the Dragon's streams.

Bp. Hall.

There be more males than females, but in different proportions. GrawU's Bills of Mortality.

Which shall be heir of the two male twins, who, by the dissection of the mother, were laid open to the world ! Locke.

You are the richest person in the commonwealth ; you have no male child ; your daughters are all married to wealthy patricians. Swifl.

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Male, an island in the Indian Ocean, the principal of the Maldives, about lour miles in circumference, and situated nearly in tlie centre. It is the most fertile, and contains a town, which is the residence of the prince. Long. 73° 10’ E., lat. 6° 20’ N.

MALEADMINISTRA’TION, n. s. Lat. male ; old I’r. mule, bad. Bad management of aHairs.

A general canonical denunciation is that which is made touching such a matter as properly belongs to the ecclesiastical court, for that a subject denounces his superior (or maladministration , or a wicked life. Aiiliffe’s I’arergun.

From the practice of the wisest nations, when a prince was laid aside for ma/adminis/rai/oH, the nobles anil people did resume the administration of the supreme power. Swift.

MALEBRANCHE (Nicholas), an eminent French metaphysician, the son of Nicholas Malebranche, secretary to the French king, was born in 1638, and admitted into the congregation of the oratory in 1660. He at first studied philology and history; but afterwards, meeting with Des Cartes’s Treatise on Man, he applied himself entirely to philosophy. In 1699 he was admitted an honoiary member of the Royal Academy of Sciences at Paris. Although of a delicate constitution, he enjoyed tolerable health till he died in 1715, aged seventy-seven. He meditated with his windows shut, to keep out the light, which disturbed him. His worksare celebrated ; particularly his Recherche de la V’erite, *i.e.* Search after truth. Locke styles him an ‘ acute and ingenious author;’ who has ‘ many very fine thouglits, judicious reasonings, and uncommon reflections, in his Recherche,’ yet he refutes the chief principles of his system. Malebranche wrote many other pieces, to confirm his doctrine, and to clear it from objections.

MALECA, or Melecca, a cape on the north coast of the island of Candia, anciently the Pro-montorium Ciamum. Long. 24° 4’ E., lat. 35° 32’ N.

MALECONTENT’, adj. -% Male and con—

Malecontent’ed, > tent. Discon—

Malecontent'edness, n.s. j tented ; dissatisfied.

Brother Clarence, how like you our choice,

That yoii stand pensive, as half malecontent ?

Shahspeare. Poor Clarence ! Is it for a wife

That that art malecontent 1 I will provide thee.

Id.

The king, for securing his state against mutinous and tnalecontenled subjects, who might have refuge in Scotland, sent a solemn ambassage to conclude a peace. Bacon.

The other mutiny was of some few malecontents, perliaps those strangers which sought their own protection under the wing of Israel. Hi'. Hall.

The malecontent is neither well full nor fasting ; and, though he abound with complaints, yet nothing dislikes him but the present; for what he condemns while it was, once passed, he magnifies, and strives to recal it out of the jaws of time. id.

They would ascribe the laying down my paper to a spirit of mulecmtenlednesx. Sjiectator.

They cannot signalize themselves as makcvntents, without breaking through all the softer virtues.

Addison's Freeholder.

The usual way in despotick governments is to confine the malecontent to some castle. Addison.

MALEDICTION, n. s. Fr. malediction; Lat. fualedictio. Curse ; execration ; denunciation of evil.

Then let my life long time on earth maintained

be. To wretched me, the last, worst malediction.

Sidney. The true original cause, divine malediction , laid by the sin of man upon these creatures which God hath made for the use of man,

was above the reach of natural capacity. Hooker.

In Spain they staid near eight months, during which liuckingham lay under millions of maledic-tions ; which, upon the prince's arrival in the west, did vanish into praises. Wotton.

MALEFACTION, n. s. Lat. male and fucio. A crime; an offence.

Guilty creatures at a play Have, by the very cunning of the scene. Been struck so to the soul, that presently They have proclaimed their malefactions.

Shakfpeare. A jaylor to bring forth Some monstrous malefactor.

Id. Antony and Cleopatra. God uses not the rod, where he means to use tlio sword. The pillory or scourge is for those malefacton wiiich shall escape execution. Bp. Hall.

Fear his word. As much as malefactors do your sword.

Roscommon. If their barking dog disturb her ease. The unmannered malefactor is arraigned.

Dry den. The malefactor goat was laid, On Bacchus' altar, and his forfeit paid. Id. It is a sad thing when men shall repair to the ministry, not for preferment but refuge ; like malefactors flying to the altar, only to save their lives.

South.

MALEF'IC, adj. i Lat. maleficus. Mis-Malefique'. Jchievous; hurtful.

MALESHERBES (C. W. de Lamoignon de), a French statesman and advocate, descended from a family eminent for its talents and probity, was tlie son of William de Lamoignon, chancellor of France, and born at Paris in 1721. He studied at the Jesuits' college, and first became a counsellor in the parliament of Paris. He succeeded his fatlier in 17.50 as president of the court of aids, and was made at the same time superintendant of the press. On the suppression of parliaments, and of the court of aids, Malc-sherbes was exiled to his country seat, where he devoted his leisure to the study of statistics and agriculture. On the accession of Louis XV'I. he resumed his presidentship over the revived tribunal, and was appointed a minister of state in 177.0; but, finding his plans counteracted, he resigned his office in the May of the following year, and went to Switzerland. Recal kd to the king's councils, in 1786, he drew up memoirs, 'On the Calamities of France

and the Means of repairing tliem ;' but, his advice being rejected, he took a final leave of the court. In 1790 he published An Essay on the Means of accelerating the Progress of Rural Ixonomy in France; and took no part in the public jnoceed-iiigs of the government, until the decree of the

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National Convention for the trial of the king, wtien he nobly offered himself us the advocate of his unfortunate master. This generous attachment naturally excited the jealousy of the demagogues now in power ; and scarcely had he returned home, when his daughter, madame Lepeltetier Rosambo, and her husband, were arrested and conducted to Paris ; and his own arrest, and that of his grand-children, soon followed. I\Iale-sherbes himself was beheaded April 22d, 1794, and bore his sufferings with an equanimity becoming his character. His bust was afterwards ordered to be placed with those of the great men who have reflected honor upon France. Besides the tracts above named he was the author of Observations sur I'Histoire Naturelle de Buffon, 2 vols. 8vo., published after his death.

MALEVOLENCE, n. s."^ Lat. mahvolentia.

M.\LEv'oLENT, «<//'. Sill Will; incHna-

^LvLEv'oLENTLY, udv. 3 tion to hurt Others ; malignity.

The son of Duncan

Lives in the English court ; and is received

Of the most pious Edward with such grace,

That the malevdence of fortune nothing

Takes from his high respect.

Shakspeare. Macbeth.

The oak did not only resent his fall, but vindicate him from aspersions malevolentli/ cast upon him.

Ilowel. i iiave thee in my arms,

Thongh our malevolent stars have struggled hard,

And held us long abunder.

Dryden's King Arthur.

This frequently cuts off charity from the greatest objects of compassion, and inspires people with a malevolence towards those poor decrepit parts of our species, in whom human nature is defaced by infirmity and dotage. Addison.

MALIIERBE (Francis de), the first French poet of his age, was born at Caen about 1556, of a noble family. He quitted Normandy at seventeen years of age; and went into Provence, where he attached himself to the family of Henry D'Angouleme, tlie natural son of king Henry IL, and was in the service of that prince till he was killed in 1586. Cardinal de Perron, being informed of his merit and abilities, introduced him to Henry IV., who took him into his service. After that monarch's death, queen i\Iary de Medicis settled a pension of 500 crowns upon our poet, who died at Paris in 1628. The best and most complete edition of his works is that of 1666, with Menage's remarks. Boileau con-s ders him as the father of French poetry; but he composed with great difficulty.

MALIC Acid, an acid abounding in the juice of unripe fruits, particularly in apples; so named from Latin malum, an apple. See Cue-

.MISTRY.

MAL’ICE, ?!. s. & V. a.ˆ Fr. malice; Lat. Malic’ious, aJ;. (ˆmalUia. Evil inten—

Malic’iously, adv. (tion; badness of de-Malic’iousness, n. s.) gard with ill will.

The cause why lie this fly so maliced, Was that bis mother whicii him bore and bred. The most fine-fingered workman on the ground, .’\rachne, by his means, was vanquished.

Spemer.

sign ; grudge ; to re-

Duncan is in his grave ; Malice domestick, foreign levy, nothing Can touch him further ! Shakspeare, Macbeth,

1 grant him bloody, .Sudden, malicious, smacking of every sin That has a name. Id,

We must not stint Our necessary actions in the fear To cope inaliciflus censures ; which eve As rav’nous fishes do a vessel follow That is new-trimmed. Id. Henry VIII.

Malice scorned, puts out Itself; but argued, gives a kind of credit To a false accusation. Massinger.

jNot out of envy or malicioiisness. Do I forbear to crave your special aid.

Herbert. When Satan, who late fled before the threats Of (jabriel out of Eden, now improved In meditated fraud and malice bent On man’s destruction, maugre what might hap Of heavier on himself, fearless returned. Milton.

Thou knowest what malicious foe, Envying our happiness, and of his own Despairing, seeks to work us woe and shame.

Id. God hath forgiven me many sins of malice, ami therefore surely he will pity my infirmities.

Taylor’s Holy Living. The air appearing so malicious in this morbifick conspiracy, exacts a more particular regard.

Harveif on Consumptions. 1 have loved ! W at can thy ends, malicious beauty, be ? Can he who killed thy brother, live for thee ?

Dry den . A man might do this now if he were maliciouslt) disposed, and had a mind to bring matters to extremity. Id.

An intrigue, between his majesty and a junto of ministers maliciouslti bent against me, broke out, and had like to have ended in my utter destruction.

Swift.

ˆV'it loses its respect with the good, when seen in company with malice. S.'ieridan.

jMalice, in ethics and law, is a formed design of doing mischief to another ; it differs from hatred. In murder, it is malice makes the crime ; and if a man, having a malicious intent to kill another, in the execution of his malice kills a person not intended, the malice shall be connected to his person, and he shall be adjudged a murderer. Tiie words ex malitia praecogitata are necessary to an indictment of murder, &c. And this malitia praecogitata, or malice prepense, may be either express or implied. Express malice is, when one, with a sedate, deliberate mind, and formed design, kills another; which formed design is evidenced by external circumstances, discovering that intention; as ly-ing in wait, antecedent menaces, former grudges, and concerted schemes to do him some bodily harm. Besides, where no malice is expressed, the law will imply it ; as where a man wilfully poisons another : in such a deliberate act the law presumes malice, though no particular en-mity can be proved. And if a man kills anotlier suddenly, without any, or without a considerable provocation, the law implies malice : for no person, unless of an abandoned heart, would bo guilty of such an act upon a slight cause.

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Fr. muligne ; Lai. rnalignus. Evil disposed ; ^-unfavorable ; ina-I licious : to regard I with envy or ill J will : hence to ca-used as synonymous

MALI(;N', adj. & V. a. Malio'nancy, «. .?. Mali'g.vant, adj. k. n.s Malig'nantly, adv. Malion'er, n. s. Malig'nity, Malig'nantly, adv lumniatc : malignant

with malign, as also for dangerotft or destruc live ; also for a person of evil dispositions : historically it was a cant word of opprobrium in the civil wars for the adherents of Charles I. and the church of England.

Strangers conspired together against him, and tmiligned him in the wilderness. Ecclus. xlv. 18.

The people practise what mischiefs and villanies they will against private men, whom they malign, by stealing their goods, or murdering them.

Spenser on Ireland. It is hardly to be thought that any governor should so malign his successor, as to suffer an evil to grow up which he might timely have kept under.

/d. Occasion was taken, by several mulignants, secretly to undermine his great authority in the church of Christ. Hooker.

My stars shine darkly over me ; the malignancy of ray fate might, perhaps, distemper yours ; therefore I crave your leave that I may bear my evils alone. Shakspeare.

0 malignant and, ill-boding stars! Now art thou come unto a feast of death. Id. Not friended by his wish to your high person. His will is most malignant, and it stretches Beyond you to your friends. Id. Henry VIII.

Now arriving At place of potency, and sway o' the state, If he should still malignantlii remain Fast foe to the plebeians, your voices might Be curses to yourselves. Id. Coriolamis.

Witchcraft may be by operation of malign spirits.

1-idCon . He that turneth the humours back, and rnaketh the wound bleed inwards, endangereth malign ulcers and pernicious imposthumations. Id. Essai/s.

Whether any tokens of poison did appear, reports are various ; his physicians discerned an invincible malignitii in his disease. Hayward.

No redress could be obtained with any vigour proportionable to the malignity of that far-spread disease. ˆi’”.’/ Charles.

Then it follows that original sin is of less malignity than the least actual sin in the world.

Jeremii Taylor. They inveighed against the malignant party, that had sought to cause jealousies between them and their brethren of Scotland. Clarendon.

If in the constellations war were sprung. Two planets, rushing from aspect ww/(ˆ)i Of fiercest opposition, in mid sky Should combat, and their jarring spheres confound.

Milton. To good malignant, to bad men benign. Id.

Such as these are philosophy’s maligners, who

ijronounce the most generous contemplations need-ess unprofitable subtleties. (Iranville.

They hold, that the cause of the gout is a malignant vapour that falls upon the joint ; that the swelling is a kindness in nature, that calls down humours to damp the nalignily of the vapoiirs, and thereby assuage the pain. Temple

Let the learned begin ‘ihc enquiry, where disease could enter in ;

How those uiiltgnant atoms forced their way. What in the faultless frame they found to make their prey ! Dryden.

If it is a pleasure to be envied and shot at, to bo maligned standing, and to be despised falling ; then is it a pleasure to be great, and to be able to dispose of men’s fortunes. South.

Of contempt, and the malign hostile influence it lias upon government, every man’s experience’ wd! inform him. Id.

This shews the high malignily of frauil, that in the natural course of it tends to the destruction of common Ufe, by destroying trust and mutual confidence. Id.

The infection doth produce a bubo, which, according to the degree of its malignancy , either proves easily curable, or else it proceeds in its venom.

, Wiseman's Surgery. Deeds are done which man might charge aright On stubborn fate, or undiscerning might. Had not their guilt the lawless soldiers known, And made the whole vmlignity their own. Ticket. Lest you think I rally more than teach. Or praise malignly arts I cannot reach ; Let me for once presume to instruct the times.

Pope. I thought it necessary to justify my character in point of cleanliness, which my maligners call in question. Su-ijt.

They have seen all other notions besides their own represented in a false and malignant light ; whereupon they judge and condemn at once.

Watts's Improvement of the Mind. Where shrieks, the roaring flame, the rattling chain. And all the dreadful eloquence of pain, Our only song ; black fire's malignant light. The sole refreshment of the blasted sight. Voiutg.

MAL'KIN, n. s. From mal, moll, Mary, and kin the diminutive termination. A kind of rag-mop made for sweeping ovens ; thence any scare-crow figure ; thence a dirty wench.

The kitchen malkin pins Her richest lockram 'bout her reechy neck, Clamb'ring the walls to eye him.

Shakspeare. Coriolamis,

') Lat. ?»alleus, a hara-I mcr; Fr. viulleable. [Mall and mallet are f both used for a kind I of heavy club or ham-J mer: Spenser uses the former for a heavy blow : other writers have used it as a verb for to strike or beat with a mall : malleable is, capable of, or apt to, spread by beating; ductile : Uutler uses it satirically for cowardly : malleability and malleableness, the quality of enduring or spreading under the hammer : to malleate is to forge or shape by tiie hammer.

With mighty mall, The monster merciless him made to fall.

Faerie Queeiie. Make it more strong for fall.s, though it come not to

the degree to be wullcahle. liaron.

(jive that reverend head a mall Or two, or three, against a wall.

Ilndibras. The beaten soldier proves most manful, That like his sword endures the anvil ; And justly's held more formidable. The more his valour's malleable. lit.

MALL, n. s. & v.

Mall'eable, adj.

MaLLEABIl'iTY, 71. s.

Malt/eableness, Mai.i/eate, v. a. Mall'et, n.s.

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The vessel soldered up was warily struck with a wooden mallet, and thereby compressed. Boyk.

Their left hand does the caulking iron guide, The rattling mallet with the right they lift.

Dry den.

Supposing the nominal essence of gold to be a body of such a peculiar colour and weight, with tiie malleahility and fusibility, the real essence is that constitution on which these qualities and their union depend. Locke.

The bodies of most use that are sought for out of the earth are the metals which are distinguished from other bodies by their weight, fusibility, and malleableness. Id.

He took a mall, and after having hollowed the handle, and that part which strikes the ball,, he enclosed in them several drugs.

Addison s Spectativ.

If the body is compact, and bends or yields inward

to pression without any sliding of its parts, it is hard and elastick, returning to its figure with a force rising from the mutual attraction of its parts : if the parts slide upon one another, the body is malleable or soft. Neivton’s Opticks.

He first found out the art of melting and malleating metals, and making them useful for tools.

Derham.

Mall, n. s. Goth, and Swed. ?}ial, is an enclosed place : another origin of this word may be, a level ground for playing with malls and balls; a promenade or public walk.

This the beau monde shall from the rnall survey, And hail with musick its propitious ray. Pope.

Malleability. Different metals are possessed of this quality in different degrees. The following table of their malleability and ductility from Thenard may be found useful.

Arranged nearly in the

Arranged nearly in the

Ductile and INIalleable

Brittle in alphabetical

order of facility with

order of facility with

in alphabetical order.

order.

which they pass through

which they pass through

the wire-plate.

the laminating cylinders.

Cadmium

Antimony

Gold

Gold

Copper

Silver

Silver

Gold

Bismuth

Platinum

Copper

Iridium

Cerium

Iron

Tin

Iron

Chromium

Copper

Platinum

Lead

Cobalt

Zinc

Zinc

INIercury

Columbium

Tin

Iron

Nickel

Manganese

Lead

Nickel

Osmium

Molybdenum

Nickel

Palladium?

Palladium

Rhodium

Palladium?

Cadmium ?

Platinum

Tellurium

Cadmium ?

Potassium

Tungsten

Silver

Titanium

Sodium

Tin

MALLEOLI, or Pyroboli, in the ancient art of war, were bundles of combustible materials, set on lire to give light in the night, or to annoy the enemy : when they were employed for the latter purpose they were shot out of a bow, or fixed to a javelin, and thus thrown into the enemy's engines, ships, &c., in order to burn them. Pitch was always a principal ingredient in the composition.

Malleoli, in anatomy, the ancle bones. See Anatomy.

MALLET, or Malloch, (David), an English poet, but a Scotchman by birth, born about 1700. By the])cnury of his parents, he was compelled to be janitor of the hish school at Edinburgh ; but he surmounted the disadvantages of his birth and fortune; for, when the duke of Montrose applied to the college of Edinburgh for a tutor to educate his sons, Mallet was recommended. When his pu[iils went abroad, they were entrusted to his care; and, having conducted them through their travels, he returned with them to London. While residing in their family, he began to give specimens of his poetical talents. In 1733 he publ shed a poem on 'er-hal Criticism: in 1740 he wrote a Life of Lord 3acon, which was prefixed to an edition of his

works. After the death of Pope, lord Bolingbroke employed Mallet to blacken his memory, in revenge for clandestinely printing his Patriot King, in reward for this service, his lordship left him his works, whicii in 1754 he published in five volumes, quarto, but which not only involved him in difticulties, on account of certain sentiments contained in them subversive of the principles of revealed religion, but which did not produce to the editor any profit. Tiie old duchess of Marlborough assigned in her will the task of writing the duke's life, to Glover and Mal-let, with a reward of .£l 000, and a prohibition to insert any verses. Glover is said to have rejected the legacy with disdain, so that the work devolved upon Mallet; who had also a pension from the duke's son to promote his industry, and was continually talking of the discoveries he had made, but left not, when he died, any historical labors behind him. When Frederick prince of Wales was driven from the palace, and kept a separate court by way of opposition, to increase his popularity by patronising literature, he made Mallet his utider secretary, with a salary of £'200 a year. Thomson, likewise, had a pension ; and they were associated in the composition of the masque of Alfred, which in its original state was

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played at Cliefden in 1740. It was afterwards almost wholly changed by Mallet, and brought upon the stage of Drury Lane in 1751, but with no great success. He had before published two tragedies; Eurydice, acted at Drury Lane in 1731; and Mustapha, acted in 1739. It was dedicated to the prince, and well received, but never revived. His next work was Aniyntor and Theodora, 1747, a long dull story in blank verse ; but in which there is elegance of language and vigor of sentiment. In 1753 his masque of Britannia was acted at Drury Lane, and his tragedy of Elvira in 1763, when he was appointed keeper of tlie book of entries for ships in the port of London. In the beginning of the French war, in 1756, when the nation was exasperated by ill success, he was employed to turn the public vengeance upon admiral Byng, and wrote a letter of accusation under the cha-ter of A Plain Man. This paper was with great industry dispersed, and Mallet was rewarded with a considerable pension, which he retained to his death. Towards the end of his life he went with his wife to France ; but, finding his health declining, he returned alone to England, and died in April 1765. He was twice married, and by his first wife had several children. His stature •was diminutive, but, being regularly formed, his appearance, till he grew corpulent, was agreeable, and his conversation elegant and easy. * Nothing,' says his biographer, ' elevated or dignified can be discerned in his character or principles. As a poet he may lay claim to elegant diction, splendid imagery, and pathetic sentiment, but he is deficient in energy and judgment.' — Johnson's Lives of the Poets.

Mali.et (Edmund), was born at Melun in 1713, and enjoyed a curacy near that place till 1751, when he went to Paris to be professor of theology in the college of Navarre, of which he was admitted D. D. Boyer Bishop of Mirepoix, who had been at first much prejudiced against him, conferred upon him the see of Verdun. Jansenism had been imputed to him by hi? enemies, and the Ecclesiastical Gazette accused him of impiety ; both imputations equally ground-less. He died in Paris in 1755, at the age of forty-two. The principal of his works are, 1. Principes pour la lecture des Poistes, 1745, 2 vols, 12mo. 2. Essai sur I'Etude des Belles Lettres, 1747. 12mo. 3. Essai sur les bienseances ora-toires, 1753, 12nio. 4. Principes pour la lecture des Orateurs, 1753, 3 vols. 12mo. 5. liistoire des Guerres civiles de France sous les regnes de Francois II , Charles IX., Henri III., et Henri IV, translated from the Italian of D'Avila. His style, like his mind and

manners, was easy and unaffected ; and his attachment to his friends, his candor, moderation, gentleness, and modesty, rendered him truly amiable. He • •was employed to write the articles on theology and the belles lettres in the Encyclopedia. He was preparing two important works, *viz.* Une liistoire generale de nos Guerres depuis le commencement de la Monarchie ; and Une liistoire du Conseil de Trente, in opposition to that of Father Paul, when lie died in Paris in 1755.

Mallet du Pan (Jaques), a modern political writer, was the son of a clergyman of Geneva,

and born in 1749. Having completed his education at college, he first entered on the study o. law, but soon deserted it for the belles lettres. He was invited in 1772 to fill the chair of history and French literature at Cassel. Not long after we find him in Switzerland, where he published a political and literary journal, and olfier works of reputation : so that he was invited to Paris to conduct the political department of the Mercure de France. Here he continued during the years 1789, 1790, and 1791, animadverting with freedom on the public affairs; but he found it necessary to quit France in May 1792, and retired to his native city ; and afterwards to Berne, where he published several tracts. His apprehensions from the French Directory induced him finally to take refuge in England, where he published, under high patronage, a journal entitled Mercure Britannique, ˆi-om 1796 till the 15th of March 1800. He died the 10th of May, in the latter year, at Richmond, Surrey.

JVIallet, Mall, or Maule in ancient armour, was a weapon much used both by the English and Scots. In the memorable combat fought in Bretagne, in the year 1515, between thirty champions on the part of the English and the like number on that of the French, one of the English champions named Billefort, was armed with a leaden mallet weighing five-and-twenty pounds. We learn also from father Daniel, that the English archers continued to use mallets in the time of Louis XII. , who began his reign in 1515, and died in 1524. In the ancient poem of the battle of Flodden, the mention of leaden mallets often occurs : —

Then on the English part with speed

The bills slept forth, and bows went back ;

The Moorish pikes and malls of lead Did deal there many a dreadful thwack.

Ralph Smith equips an archer with a ‘ maule of lead, five feet long, and a pike with die same, hanging by a girdle with a hook;’ meaning, probably, by this description, that the handle of the mall should be of this lengtii, the end armed with a pike or spike ; and this implement, we may imagine, was worn at the back, huni,’ by a hook fixed in the centre of its handle, with a loop, or some other contrivance to keep it nearly perpendicular. This weapon seems to iiave been of French extraction ; for we find that in the reign of Charles \T.,on occasion of a riot, the populace forced open the arsenal, and armed themselves chiefly with mallets, whence they were styled ‘ Mailliotins.’ Mallets were tremendous weaoons in the hands of strong active men.

Mallets are much used by artificers who work with chisels, as sculptors, masons, and stone cutters, whose mallet is ordinarily round ; and by carpenters, joiners. Sec, who use it square. There are several sorts of mallets used for different purposes on shipboard. The caulking mallet is chiefly employed to drive the oakum into the seams of a ship, where the edges of the]danks :are joined to each other in tiie sides, deck, or bottom. The head of this mallet is long and cylindrical, being hooped with iron to prevent it from splitting in the exercise of caulk-

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mg. There is also the serving mallet, used in serving the rigging, by binding tlie spun yarn more firmly about it than could possibly be done by hand, which is performed in the following manner : the spun yarn being jireviously rolled up in a large ball or clue, two or three turns of it are passed about the rope, and about the body of the mallet, which for that purpose is furnished with a round channel in its surface, that conforms to the convexity of the rope intended to be served. The turns of the spun yarn being strained round the mallet, so as to confine it firmly to the rope, which is extended above the deck, one man passes ttie ball continually about the rope, whilst the other, at the same time, winds on the spun yarn by means of the mallet, whose handle acting as a lever strains every turn about the rope as firm as possible.

MALLK'OLU, or M.\t.licollo, one of tlie New Hebrides of captain Cook, is an island of the South Pacific Ocean, south-east of Espritu Sancto. It is ten leagues long, mountainous, well wooded and watered. The natives appear to be a different race from the other inlanders, and are described as more nearly resembling baboons than human beings. Their hair is friz-zled ; and their language a barbarous combination of consonants, aspirations, and hissings, that defy the vocal organs of a European to imitate. They are probably of the New Holland race, some individuals of which chance might have tiirown on this island. The other islands of this archipelaso form a closely connected chain, beginning with the Sir Joseph Banks's Islands of captain Edwards, on the north. The harbour of Sandwich, on the north-east side of Mallicolo, is in long. 167° 57' E., lat. 16° 25' S-Mallow, a manor and borough town of Ireland, in Cork, about 120 miles from Dublin. It was incorporated by cliarter in 1688, and sends one member to the imperial parliament. It is pleasantly situated on the north bank of the Blackwater, over which there is an excellent stone bridge. It has a good church, a market house, and barracks for a troop of horse. Not far distant is a fine sjiring of moderately tepid water, which bursts out of the bottom of a fine limestone rock, and approaches very near in all its qualities to the hot well waters of Bristol. Mallow is a post town, and has five fairs-Mai.i.ow, in botanv. See Malva. MAL'LOVVS, 71. s') Sax. maelejje; Lat. Mal'vaceous, adj. S malva ; Gr. ftaXaxv- ^^])lant : malvaceous is, relating to, or like, mallows.

Shards or malhm s for the pot, That keep the loosened body sound.

Dryden. MALMET)Y, a town of the Prussian province of the Lower Rhine, in the government of Aix-la-Chapelle, on the Recht. It has considerable tanneries, and manufactures of cotton stuffs. Twenty miles south of Aix-la-Chapelle. Population 4400.

MALMOHUS-LAN, or Govf.rnmf.nt of Malmohts, one of the new divisions of Sweden, lies along the Soimd and the Baltic, in the south-west of the kingdom, including a great part of tiie ancient Schonen or Scania. Its area is

about 1380 square miles. Population 137,000. The arable land forms about a third of the whole.

MALMSBURY, a town of Wiltsiiire, ninety-five miles from London, situated on a hill, with six bridges over th.e river Avon at the bottom ; with which, and a brook that runs into it, it is in a manner encompassed. It formerly had a castle and walls, which were pulled down to enlarge the abbey, whose abbots sat in parliament. The Saxon king Athelstan granted the town large immunities, and was buried under the high altar of the church : his monument stdl remains in the nave of it. The memory of the celebrated Aldhelm, its first abbot, is still kept up by a meadow near this town, called Aldiielm's Mead. By charter of king William III. tlie corporation consists of an alderman, chosen yearly, twelve capital burgesses, and four assistants. There is an alms house for four men and four women, and near the bridge an hospital for lepers, where it is supposed there was formerly a nunnery. This town cairies on a considerable trade in wodlen manufactures, has a market on Saturday, and three fairs. It has sent members to parliament ever since the twenty-sixth of Ed-ward I.

MALM'SEY, n. s. From the island Malvn-sia : a sweet wine.

MALO (St.), or St. Maclou the son of a British gentleman, and cousin to St. Magloire, was educated in a monastery in Ireland, and afterwards chosen bishop of Gui-Castel, a dignity which his humility prevented him from accepting. The people wishing to compel him he went into Brittany, and put himself under t'le direction of a holy anchoret, called Aaron, in the neighbourhood of Aleth. Some time after, about 541 he was chosen bishop of that city. He afterwards retired to a solitude near Xaintes, where he died November 15th, 565. From him the city of St. Malo derives its name ; his body having been carried thither, after the reduction of Aleth to a small village called Guidhalet or Guichalet, and the tranference of the episcopal see to St.

Malo.

MALOES, or Maio (St.), a sea-port in the department of the Ille and Vilaine, France. It is situated on the island of Aaron, which communicates with the continent by means of a mole or causeway of three-quarters of a mile in length, but only fifty-foiu' feet in breadth. The entrance to the town at the end of the mole is defended by a castle, flanked with towers, which, together with four bastions and the ramparts around the town, render it a place of considerable strength. t)n the north side it is inaccessible, in consequence of rocks and the fortifications erected on them. The town is of an oblong form, its length being from north to south. The houses are high, and in general of stone. The principal public buildings, as the cathedral, the hotel de villa, and the epi.scopal palace, are in the market place. The harbour is larjie and well frequented, but difficult of access. The trade is chiefly with England, Holland, Spnin. the north of Europe, the colonies, and in the Nc%vr'uundland fishery. It exports the products of the surrounding country, and a few manufactures of s'nnv, thread

woollens, and linen. Population 10,000. Tlie adjacent town of St. Servan, separated by an inlet of the sea, and situated on higher ground, IS sometimes reckoned a suburb of St. Maloes. Forty-five miles north by west of Rennes, and 225 west of Paris.

MALONE (Edmund), was born in Dublin on the 4th of October, 1741, and educated at the scliool of Dr. Ford in Moleswortli Street. He went tlience in the year 1756 to the university of Dublin, where he took the degree of bachelor of arts. Here his talents very early displayed themselves ; and he was distinguished by a successful competition for academical lionors with several young men, who afterwards became the ornaments of the Irish senate and bar. In 1763 he became a student in the Inner Temple; and in 1767 was called to the Irish bar. With a view to those superior opportunities for information and study, and the society which London affords, he soon after settled in tliis metropolis; and, among the many eminent men with whom he became acquainted, he was naturally drawn by tlie entlmsiaslic admiration which he felt for Shakspeare, and the attention which he had already paid to the elucidation of his works, into an intimate connexion with Mr. Steevens. This gentleman having published a second edition of his Shakspeare in 1778, Mr. Malone, in 1780, added two supplementary volumes, which contained some additional notes, Shakspeare's poems,

and seven plays, which have been ascribed to him. There appears up to this time to have been no interruption to their friendship ; but, on the contrary, Mr. Steevens, having formed a design of relinquishing all future editorial labours, most liberally made a present to Mr. INIalone of his valuable collection of old plays, declaring that he himself was now become a dowager commentator. While Malone, however, was engaged on Shakspeare, he received from Mr. Steevens a request of an extraordinary nature. To a third edition of Johnson and Steevens's Shakspeare, which had been published under the superintendance of Mr. Reed in 1785, Mr. Malone had contrilmted some notes, in which Mr. Steevens's opinions were occasionally controverted. These he was now desired to retain in his new edition, exactly as they stood before, in order that Mr. S. miglit answer them. Malone replied, that he could make no such promise ; that he must feel himself at liberty to correct his observations, wliere they were erroneous; to enlarge them, where they were defective; and even to expunge them altogether, where, upon further consider-atmn, he was convinced they were wrong ; in short, he was bound 'to present liis work to the public as perfect as he could make it. But lie added, that he was willing to transmit every note of that description in its last state to Mr. Steevens, before it went to press. But Steevens persisted in requiring that they sliould ap])ear with all thf^ir iinjierfpctions on their liead ; and, on this being refused, declared that all communication on the subject of Shakspeare was at an end between them. In 1790 Mr. Malonc's edition at last appeannl ; and was sought ai'lcr and read with ilie greatest avidity. In 1795 lie

was called upon to display his zeal in defence of his author, against the fabrications with which the Irelands endeavoured to delude the public. Mr. Malone, it is said, saw through the falsehood from its commencement; and laid it open in a volume wliich was written in the form of a letter to his friend lord Cliarlemont. Although his attention was still principally directed to Shakspeare, and he was gradually accumulating a most valuable mass of materials for a new edition of that poet, he drew together from various sources the prose works of Dryden, which had lain scattered about, and published them in 1800. In 1808 he prepared for the press a few productions of his friend William Gerard Hamilton, with which he had been entrusted by his executors; and prefixed to this also a brief but elegant sketch of his life. When he was just on the point of going to the press with a new edition of his Shakspeare, he was interrupted by an illness, which proved fatal on the 25th of May, 1812, in the seventieth year of his

age.

MALOUIN (Paul James), a French physician, born at Caen in 1701, was professor of medicine in the Royal College of Paris, physician to the queen, and a member of the Academy of Sciences of Paris, and fellow of the Royal Society of London. He strictly practised the preservative part of medicine, which is much more certain in its effects than the restorative. To this regimen he was indebted for a healthy old age and an easy death. He died at Paris of an apoplexy, 3d of January 1778, aged seventy-seven. By his will he left a le-gacy to the faculty, on condition of their holding a public meeting annually, and gi.ving an account of his labors and discoveries. His principal works are, 1. Traite de Chimie, 1734, r2mo. 2. Chimie Medicinale, 2 vols. 12mo. 1755; a book full of curious observations. 3. Some of the Arts in the Collection jniblished by the Academy of Sciences. 4, The Chemical articles in the Encyclopaedia. He was a laborious chemist, and well informed for the age he lived in.

MALMESBURY (James Harris, earl of), K B., was the son of the author of Hermes, see Harris; and born at Salisbury in 1746. He was educated at Merton College, Oxford, where he was created" doctor of civil law, and in 1768 was sent as secretary of embassy to Madrid. He was afterwards minister at Brussels ; and went envoy extraordinary to Berlin in 1772. In 1776 he was appointed to the same post at St. Petersburgh ; and in 1784 ambassador to the Hague. In this quality he signed the treaty with Prussia and Holland in 1794 ; and was next employed to negociate the marriage of his present majesty, then prince of Wales, with the late unfortunate princess Caroline of Brunswick. In October, 1796, he became minister jilcnipotcntiary to the I'rencli republic ; but his mission in that character to Paris, and his negociations at Lisle, were alike fruitless. He was, however, created earl of Malmesbury in IBOO, and appointed governor of the Isle of Wight, and lord-lientenanl of Hampshire in 1807. His death took place in 1820. Lord Malmesbury was the author of .'\n Introduction to the History of the Diitch lunub-476

lie; and a memoir of the life of his father accompanying an edition of his works in 2 vols. 4to.

MALPIGIII (Marcellus), an eminent Italian physician and anatomist in the seventeenth century. He studied under Massari and Mariano. The duke of Tuscany invited him to Pisa, to be professor of physic. In this city he formed an intimate acquaintance with Borelli. He went back to Bologna, the air of Pisa not agreeing with him. Cardinal Antony Pignatelli, who had known him while he was legate at Bologna, be-ing chosen pope in 1G91, under the name of Innocent XII., immediately sent for him to Rome, and appointed him his physician. He died in 1694; and his works, with his life, written by himself, prefixed, were first collected and . printed at London, in folio, in 1667. See Anatomy.

MALPIGHIA, Barbadoes cherry, a genus of the trigyiiia order, and decandria class of plants; natural order twenty-third, trihilatfe : cal. pentaphyllous, with melliferous pores on the outside at the base. There are five petals, roundish, and anguiculated : the berry unilocular, trispermous. There are many species, all shrubby evergreens of the warm parts of America, rising with branchy stems from eight or ten to fifteen or twenty feet high, ornamented with oval and lanceolate entire leaves, and large pentapetalous flowers, succeeded by red cherry-shaped, eatable berries, of an acid and palatable flavor. Three of these species are reared in our gardens, and make a fine variety in the stove. They retain their leaves all the year round; and begin to flower about the end of autumn, continuing in constant succession till the spring ; after which they frequently produce and ripen their fruit, which equals the size of a small cherry. The flowers are of a pale red or purple color. These plants are propagated by seeds, which must be sown in spring, in pots of rich earth; then plunged into a hot-bed, and, vvhen three or four inches high, put in separate small pots, watered and plunged in the bark-bed of the stove ; where, after they have remained a year or two, they may be placed in any part of it. They may even be placed in the open air during a month or two of the hottest weather in summer”: but must be carefully supplied with water during the whole year.

iMALPLAQUET, a village of France, in the department of Gemappes, famous for a most bloody battle fought on the 11th of September, 1709, between the French under marshal Viilars’ and the allies under prince Eugene and the duke of iVIarlborough. The French army amounted to 120,000 men; and were posted behind the woods of La iVIarte and Tanicrs, in the neighbourhood of Malplaquet. They had fortified their situation in such a manner with lines, hedges, and trees laid across, that they seemed to be quite inaccessible. In this situation they expected certain victory ; and even the soldiers were so eager to engage, that they flung away the bread which had just been given them, thoutrh they had taken no sustenance for a whole day before.

The allied army began the attack early in the morning, favored by a thick fog.

Malt’dust, n.

Malt’flour,

Malt’horse,

Malt’man,

Malt’ster.

Their chief impression was made upon the left of the enemy ; and with sucli success, that, notwithstanding their lines and barricadoes, the French were, in less than an hour, driven from their entrenchments. But on the right the com-bat was sustained with much greater obstinacy. The Dutch, wiio carried on tiie attack, drove them from their first line, but were repulsed from the second with great slaughter. The prince of Orange, who headed that attack, persisted in his effbrts with incredible perseverance and intrepidity, though two horses had been killed under him, and the greater part of his officers slain and disabled. At last, however, the French were obliged to yield, Villars being dangerously wounded ; but they made an excellent retreat under Boufflers, and took post near Guesnoy and Valenciennes. MALT, n.s. & v.n,-ˆ Sax, mealt; Swed. Malt’drink, n. s. malt ; Belg. mout ; Teut. I maltz. Grain steeped ˆand dried in preparation for brewing: to I make or be made malt: . J the malthorse appears

m Shakspeare’s times to have been often hard-ridden, and so have become proverbial for a dull, doltish person : the other compounds explain themselves. See Maltikg.

You peasant swain, you whoreson, you malthurse drudge. Slmlapeare. Taming of the Shrew.

Mome, malthorse, capon, coxcomb, idiot, patch. „ Shdkspeare.

iˆeer hath malt first infused in the liquor, and is afterwards boiled with the hop.

Bacon’s yutural Historn. Malt -dust is an enricher of barren land, and a

trreat improver of barley. Mortimer's Husbandrv.

Lmpty the corn from the cistern into the m'alt-

■^"Z- , Id.

lo house it green it will mow-burn, which will make it malt worse. ,^

All malt-drinks may be boiled into the consistence of a shmy syrup. Floyer on the Humours.

Sir Arthur the maltster ! how fine it will sound !

1 enderness, or friability in malt, is a property "that is indispensable ; for, unless the whole interior of the seed be converted into a farinaceous or mealy substance, the unmalted part of the grain will deteriorate, by absorbing part of the extract.

Ihynoldson on Malting.

MALTA, an important island of the Mediterranean, twelve leagues distant from Cape Pas-saro, in Sicily, the passage between being called the Channel of Malta. It is about twenty miles in length, by twelve broad; and is in long. 14° 12' E., and lat. 35° 50' N. An act of the British parliament has declared it to belong to Europe.

The base of the island is a white free stone, abounding in petrifactions, fossil shells, and remains of enormous fishes ; it is generally level, but with some hills. The soil is, in few spots, more than six inches deep, and has been in great part brought from Sicily. It is, however, exceedingly fruitful, producing corn for six months' consumption of its population, which, for its ex-tent, is greater than that of any other part of the world, being, in 1798, 90,000 souls. The island has no river, but some good springs ; and water is to be had by digging, but rain water preserved

in cisterns is most generally used. Besides corii and vines, the island

produces a considerable quantity of cotton, and the finest oranges in the Mediterranean ; together with a variety of otiier fruits, roots, and herbs in great profusion. The rocks washed by tlie sea afford abundance of the fucus proper for dyeing (fucus venucosus tinctorius). It has no venomous reptiles, which the inhabitants ascribe to the miraculous intervention of St. Paul, who, when he visited it, delivered it for ever from all animals of this kind ! Tlie west and nortli-west coasts are bounded by perpendicular precipices, forming a natural fortification. The climate is healthy, though very warm. Malta or Maleta is a small place in the middle of the island.

Malta was given, by the emperor Charles V., to the knights of St. John of Jerusalem, when driven out of Rhodes by the Turks in 1530. Tlicy were required to be of noble birth by both parents for four generations, and were under vows of celibacy and perpetual war with tlie infidels. The grand master was elected for life, and possessed the attributes of a sovereign prince. They were divided into eight langues, or torgues, of which three were Frencli, two Spanish, one Italian, one German, and originally one English; but, on the Reformation, succeeded by the Anglo Bavarian. The number of knights was unlimited : the badge of the order, a white cross of eight points, worn on the left side. The gradual relaxation of the discipline of the order paved the way for its dovvnfal ; luxury succeeded to the noble simplicity of warriors, and the effeminacy of cities to the hardihood of camps. The war with the Turks had long been reduced to a phantom, and the summer cruises of their galleys had become parties of pleasure. These vessels were at last profusely ornamented with carved work and gilding; the sails striped blue and' white, with a large red cross on each. Some of them carried 800 men. The defence of this vast fortress was entrusted to foreign mercenaries; and the energy of union, on which the renown of the order had been founded, being extinguished, the French found it easy to corrupt the chiefs, and, in 1798, made an almost unresisted conquest of the island. After a two years' blockade it capitulated to the English. By the treaty of Amiens it was stipulated, that the island should be restored to the knights under the guarantee of Russia : and the non-compliance with this stipulation by the English was the ostensible cause of France commencing hostilities in 1803. Some abortive projects for reviving it have been since agitated.

Tlic IMaltese are partly of Arabic origin, and speak that language mixed with Italian. They are described as generally temperate, industrious, and brave, but also vindictive and jealous of their wives, who, by a natural reaction, seek and find not nnfrequent opportunities to be unfaithful.

The ancient capital, named Citta Notabile, or the city of nolilos, but more commonly Citta Vecchia, or the old city, is situated on the highest point and nearly in the centre of the island. The modern capital is La 'aletta, so named from the grand master its founder, and has about 30,000 inhabitants. It is near the middle of

tlie north-east side, and built on several rocky points projecting into five of the finest liarbours in the world : the entrance, wliich is not a quarter of a mile broad, is defended by immense fortifications, as is the town, so that the whole island may be considered as an impregnable fortress, to be reduced only by famine.

The other principal landing places are Melcha Bay; St. Paul's Bay, sheltered by the group of Solomon's Island, with a depth of two to six fathoms; old and new Salt Ports; Port St. Man : all on the north. Port Magdalen, Marza Scala, and Port St. Thomas, on the north-east. Marza Scirocco, on the south-east, is a bay divided into two branches by a projecting point. In the east branch the depth is eight fathoms, and in the west twenty-two fathoms. The whole island contains about 70,000 inhabitants. Gozo (Galus or Guadus) is five miles north-west of Malta. It, as well as Malta, has considerable manufactures of cotton. In the channel between Malta and Gozo are the little islands Cumino (Heppestia) and Cuminotta : the passage between them and Malta is called the Strait of Friuli. The islands ofLampedosa (Lipadusa) and Lampion belong to Malta, between which and the coast of Africa they are situated.

This island was anciently called Melita ; and is supposed by Cluverius, from its situation and other particulars, to be either Ogygia, or Hyperia, mentioned by Homer, which last is most probable, as the poet places the mountain Melita in that island. See Hyperia. The most ancient possessors of Malta, of whom we have any certain account, were the Carthaginians; from whom it was taken by the Romans : and yet, during the vvhole time that it continued under the power of these nations, it was almost entirely barren. Its chief products were figs, melons, honey, cot-ton, and some few other fruits and commodities, which the inhabitants exchanged for corn. It labored also under great scarcity of water and fuel. According to an ancient tradition, Malta was first possessed by an African prince named Battus, an enemy to queen Dido, from whom it was taken by the Carthaginians, as may be inferred from several Punic inscriptions to be seen on stone pillars and other monuments yet standing. The Arabs seized it in 828 ; and were driven out of it in their turn by Roger the Norman, earl of Sicily, who

took possession of it in 1190; from which time it continued under the dominion of the Sicilian princes till the time of Charles v., when it fell under his power, along with Na-ples and Sicily.

The knights of Rhodes, afterwards of Malta, originated from a religious military order, called Hospitallers of St. John of Jerusalem. Some time before the journey of Godfrey of Bouillon into the Holy Land, some Neajjolitan merchants, who traded to the Levant, obtained leave of the caliph of Egypt to build a house for those of their nation who came thither on pilgrimage, upon paying an annual tribute. Afterwards they built two churches, and received the pilgrims with great zeal and charity. This example being followed by others, they founded a church in honor 01 St John, and an hospital for the sick; whence they took the name of hospitallers. A

little after Godfrey had taken Jerusalem, in 1099, t!iey be2;an to he distiusuislied by black habits and a cross with eight points ; and, besides the ordinary vows, tliey took another, to defend the pilgrims against the insults of thcintidels. This foundation was completed in 1104, in the reign of Baldwin ; and so their order became military. Many persons of quality entered into it, and changed their name of hospitallers into that of knigiits. When Jerusalem was taken, and the Christians lost their power in the east, tlie knights retired to Acre or Ptolemais, wiiich they defended valiantly in 1290. Then tiiey followed the king of Cyprus, who gave them Limisson in his dominions, where they staid till 1310. That same year they took Rhodes, under the grand master Poulques de 'illaret, a Frenchman ; and next year defended it against an army of Saracens : since which the grand masters have used these four letters, F. E. R.T. i. e. Fortitudo ejus Rhodum tenuit; and the order was thence called knights of Rhodes. In 1522, Soliman II. having *‘iken Rhodes, the knights retired into Candia, and thence into Sicily.

In 1530, being destitute of a home, they accepted the offer made them by Charles V. of the island of Malta ; which they took possession of on the 26th October. At this time neither Villiers, the grand master, nor

the knights his companions, had any intention of making this island tlie place of their residence. But having made an attempt on Modon, a rich and populous town of the Morea, which was attended with no other success than the acquisition of considerable plunder, and the capture of 800 women, they considered the issue of their enterprise as an indication of the wdl of heaven, and set about fortifying Malta as their future abode. After tliis the first expedition they engaged in was against the Turks, in 1532 and 1533, under the celebrated Andrew Doria; when they took Coran. In 1534 the grand master Villiers died, and Perino de Ponte, a native of Ast in Italy, was elected his successor. About this time the successes of the pirate Barbarossa, in Africa, had f^iven just cause of alarm. The new grand mas-ter, therefore, sent an embassy to the emperor Charles V., which, with another from Muley Hassen the deposed king of Tunis, easily prevailed upon him to carry his arms into Africa. A great number of the bravest knights embarked, with eighteen brigantines of different sizes, four of the best Maltese galleys, and their vessel called the great carrack. In this expedition the knights distinguished themselves in an eminent manner. At the siege of Goletta, after having made a breach by their cannon in the great tower, they jumped out of the galleys into their long boats, and thence into the sea sword in hand, marched with the greatest resolution through a galling fire, and showers of all kinds of missile weapons; and, having gained the shore, quickly ascended tlie breach, on the top of which they planted their great standard. The emperor declared that the taking of Goletta was ciuefly owing to their valor. The city of Tunis soon after surrendered; whereupon the emperor, de- •■igning to return to Europe, took his last dinner on board the great carrack. They were now

allowed to import corn and other provisions from Sicily, without paying duty ; and the emperor engaged that none of the order should enjoy any of the estates or revenues due to the Maltese knights throughout his dominions, unless they were lawfully authorised by the grand master and his council. Mean time the grand master died, and was succeeded by Didier de Tolon de St. Jalle, a native of Provence, then grand prior of Tiioulouse,a man of great conduct and bravery, which he had shown at the siege of Rhodes. During his mastership the knights assisted Boti-gella, prior of Persia, in repulsing the Turkish corsairs, who had attempted, under Hayradin, lord of Tagiora, the brother of Barbarossa, to take Tripoli. They afterwards raised the strong tower of Alcaid ; captured Adabus ; on their way back took a rich Turkish galley, worth 160,000 crowns; and landed in triumpli, loaded with plunder. Soon after this John de Ilomedes became grand

master. The Maltese still continued to behave with their usual valor against the Turks ; but, through the negligence of Charles \^, almost all the places held by the Christians on the African coast were reduced by the infidels, and the valor exerted by the Maltese served only to destroy great mumbers of them. At last the emperor's affairs in Africa were totally ruined by his unsuccessful expedition against Algiers : but to the last the Maltese knights behaved with great intrepidity. The Maltese commander, with the remains of his knights, arrived in three shattered vessels at the port of]Malta, about the end of November 1548. The island was, during this expedition, terribly annoyed by Turkish and ottier corsairs : but they soon avenged themselves, and their admiral Simeoni sent home a great number of the corsair captains in chains. Having learned that great preparations were made by the Turks at Tachora for the siege of Tripoli, they applied to the emperor, to cause the fortifications of Tripoli to be repaired ; till at last Soliman resolved to expel the knights from Malta, as he had before done from Rhodes. La 'aleite, the grand master, being apprised of Soliman's designs, ordered every member of the order to repair to Malta, which they did to the amount of 600, attended by retinues of servants tliat were excellent soldiers, and a body of above 2000 foot from Italy. Those whom age or sickness prevented from attending personally, sold their most valuable effects, to assist in the defence of the island ; and Don Garcia, viceroy of Sicily, was ordered by the king of Spain to have 20,000 men ready to co-operate with the Maltese. On the 18th of May, 1565, the Ottoman fleet appeared, consisting of 159 large galleys, and carrying above 30,000 effective men, besides slaves, under Mustapha Basha, an experienced but cruel commander. This formidable force landed near St. Borgo, and ravaged all the neighbouring country with fire and sword, but met with a check from de Copier, marshal of the order, who, falling unexpectedly on detached parties, cut off 1500 Turks with the loss of only eighty men. Meantime Mustapha, dreading the arrival of the Spanish reinforcement, and desirous to get possession of a harbour where his troojis could place themselves in a better posture of de-M A L T I N G.

fence, attacked the port of St. Elme. The garrison was soon reduced to such extremity, t!iat tiie knights sent to the grand master for [>ermission to evacuate the place. To this lie would by no means consent, but sent them every night fresh supplies of men and

ammunition. The Turks, however, whose numbers were increased by the arrival of twenty galleys with above 2500 troops on board, raised new batteries in the most advantageous situations, and kept up a continual fire on the fort. The besieged, on the other hand, had their courage renewed and excited to the highest pitch, by the arrival of numerous volunteers from the town, under Constantine Castriot, a Greek prince, de-ˆ scended from the celebrated Scanderbeg. The master also supplied them with a new kind of fire-works, called burning-hoops, which, when set on fire and thrown among the besiegers, did dreadful execution. In spite of these new and dreadful engines of destruction, however, the Turks cast a bridge over the ditch, and began to undermine the wall. From the 17tli of June to the 14th of July, not a day passed without some rencounter, but the Turks were repeatedly repulsed. At length Mustapha adopted the desperate measure of extending his trenches and batteries on the side next the town, though he thus exposed his troops to the double fire of St. P21me and St. Angelo ; he succeeded, however, in his great object of cutting off all communication between the fort and the town. On the 21st he made four different assaults, but was as often repulsed by the valor of the knights ; at last, on the 23d, he took the fort, though not till every man of the garrison had perished at his post. The few sick and wounded who remained were barbarously massacred by the inhuman victor, who caused them to be ript up alive, their hearts torn out, and, as an insult to their religion, their bodies were gashed in the form of crosses. In retaliation for this barbarity. La Valette massacred his Turkish prisoners, and, putting tneir heads into his largest cannon, shot them into the Turkish camp. In this siege the order lost about 1500 men, including 130 of the bravest knights; but

the loss of the Turks was incalculable. Mustapha, however, being reinforced by Uassem, the son of iJarbarossa, with 2500 select soldiers called the bravoes of Algiers, resolved to attack Fort St. Angelo, and entrusted the assault of Fort St. Michael to Hassem, and his lieutenant Candelissa, an old corsair, who attacked it by sea, while Hassem made an assault by land. But the knights defended the fort with such deiermined resolution, that, although equal valor was displayed by the Turks, the latter were every where repulsed with immense slaughter, so that of 4000 men scarcely 500 remained. Nor was Mustapha himself more successful in the siege of St. Angelo, although at one period a majority of the knights were of opinion, that the town was not tenable. This, however, was denied by La Valette, to whose determined courage and resolution (though in his seventy-first year), the preservation of the town and island was owing. At this crisis, Don

Garcia sent over a body of Spaniards, on the report of whose arrival the Turks immediately raised the siege and embarked. Learning, however, after going on board, that the number of the Spaniards was only 6000, they again disembarked, and gave them battle ; bet were driven to their ships with the loss of 2000 men. Such, after four months' continuance, was the conclusion of the siege of Malta, which will be for ever memorable as a display of the most heroic valor on the part of the knights ; by which, though so few in number, they were enabled to baffle the most vigorous efforts of one of the most powerful monarchs in the world. Congratulations were sent them from every part of Christendom ; and in many states public rejoicings were celebrated on account of their success. We have already adverted to the modern history and the dissolution of the order.

MALTHA. The mineral tallow of Kirwan, said to have been found on the coast of Finland. It resembles wax. Its specific gravity is 0-77. It is white, brittle, stains paper like oil, melts with a moderate heat, and burns with a blue flame and much smoke. It dissolves readily in oil, and imperfectly in hot alcohol.

Maiˆting, as a commercial pursuit, may be considered as an artificial mode of inducing vegetation in certain grains, terminated by exposure to the heat of a drying kiln. The grain most commonly malted is some species of Iiord-eum, or barley.

We know of no pursuit, of equal commercial and financial importance, to which so little of scientific attention has been directed. Yielding the largest reverme of all our internal imposts to government, it is unfortunately fettered by those legal restrictions which debar all ex[)eriment and improvement, and are calculated, as has been plainly seen of late, to diminish the consumption of malt-liquor : while its connexion with the fluctuations consequent on the wretched sys-tem of our corn laws, renders any steady reliance on a commercial profit in this trade impossible. We look, however, to the liberality of the legis-

lature for speedy and important alterations in both respects.

The best malts are required for the brewing of fine, pale ale, the strength of which will not per-mit a deterioration of the grain on the floor, nor the color an exposure to excessive or ill-managed heat on the drying kiln. The writer of this article had the happiness of a long personal acquaintance with the managing maltster and brewer of a considerable a’e establishment of this kind ; and to the practical observations derived from this source, connected with his personal attention to malting for some years, the present paper principally owes its origin.

It were a fruitless endeavour to attempt to de-fine the various changes induced by the living process of germination, seeing that they differ essentially from those changes which are produced by chemical affinities on inanimate sub-

stances. The seed possesses, iu embryo, all the characteristics of the perfect plant : and tliat food which nature has provided for its ‘nourishment and sustentation is, by a peculiar attraction and decomposition, under the salutary influence of a proper temperature, ingrafted into llie very na-ture, and forms a part of the seed itself, if due supplies of nourishment be withheld, at proper intervals, the plant becomes languid ; disease and deatli ensue of course. No person would attempt to explain what that power is, winch enables a vegetable to produce these changes; such a power however there is. — It may be said to bear some resemblance to the vital power of living animals, by which their food is converted into chyle, and that chyle into blood ; which gives out many secretions containing compounds by no means to be obtained from the aliment they receive, or by any other agency, even when the air which they breathe is also taken into the account.

The boldest barley with a full skin is always to be preferred for malting : and weight is a more certain test of the value of barley than of malt. Barley being in its simple unaltered state, it may fairly be admitted that the heaviest is the best. That which is bold, of a fine skin, and perfectly dry, will necessarily be heavier than in thnse instances where any of these properties are deficient. The counties of Nottingham, York, and Lincoln, produce barleys of a quality equal to any in the kingdom ; but Kent, Essex, Norfolk, and Suffolk, principally supply the London market.

Maltsters and brewers generally concur in opinion that barley from light land is the best in quality. However on tliis circumstance our sentiments are different; though it must be allowed there is scarcely any general rule without some exception ; but the reverse is the fact ; particularly under the genial influence of a fruitful season, and a dry harvest. Small enclosed fields and the high management of aral)le land, so generally introduced into the practice of husbandry of late years, have greatly contributed to deprive us of those bold barleys which were the produce of the open fields. There is however a difference which deserves attention between the barleys that are thin from a luxuriant crop, by the forcing influence of rich manure liberally administered, and the barleys that are slender from the impoverishing effects of a light sandy soil, as is the case with a great part of the Norfolk barley ; or from a poor unkind clay soil, which may be found in some particular parts of tiie northern counties. Farmers in general prefer the seed for their future crops more on

account of its ‘ clearness’ than from a regard to its boldness.

There is an essential difference between lean barley from an enriched soil, and barley which is thin from its natural type ; and as the future crop must necessarily partake of the features and properties of the seed, all the properties of the seed should be duly appreciated. However it is manifest that the boldest seed will endure the greatest vicissitude, and will more generally in-sure a productive crop to the farmer than barley of a meagre cast, especially if its impoverished shape be the result of a natural conformation.

Malting may now be considered under the

successive processes of steeping, couching, floor management, and drying.

L Of Steeimng the Barley. — It must be granted, that the boldest and heaviest barleys will require more water in tlie cistern, a greater length of time to meliorate them in the process of malting, and an additional supply of water by sprinkling, to bring them to the greatest perfection. Were the quick growing barleys of Hertfordshire and of the other southern counties to be immersed in water sixty hours, the time necessary for the stouter barleys of Lincolnsliire, Notting-hamshire, and Yorkshire, it would greatly deteriorate their quality. On the contrary were the maltsters in those northern counties to conduct the malting process without sprinkling, when the barleys were injured in the field, their malt would be little better than a heap of putrid vegetables. It may clearly be deduced, from the varieties of barleys, arising from diffisrent management of the lands — from tlie variation of the soils — and from different climates, as well as from the great difference with respect to the condition of the grain at the time of steeping, that no particular period can be limited for its being immersed in water. Yet the legislature directs that barley shall not be steeped less than forty hours; although it might be shown that this time is by no means sufticient to secure the duty which it ought to pay to the revenue. Good barley, which has been well harvested, continues to rise in the cistern at leasl sixty hours ; and, as the duty is charged from the greatest gauge, the maltsters who steep their barley but forty hours will not pay so much as those who sleep it sixty. Those maltsters who consider tiie profits of their trade as the principal object of their pursuit, rather than the quality of their malt, will avail themselves of this advantage; hence tlie revenue suffers, the public are deceived, and the fair trader is deprived of the opportunity of vending his

manufacture.

\Vhen barley has been gathered too hastily, before it was sufficiently dry (either with rain or dew upon it), it has been found necessary to ex-pose it a short time to a very gentle heat upon the kiln ; this will dispel tiiat morbid moisture which ben ”"^bs the vegetative principle, and prevents the barley from absorbing its necessary portion of fresh water in the cistern ; but it is a very delicate operation, and the purchaser of barley for malting should avoid this kind of grain.

It was formerly a custom with maltsters to examine their barley during the time of steeping; and when, on pressing the two ends of the grain between the finder and thumb, the skin separated from the kernel, they judged it had been sufticienlly steejjed. But since the law regulating the time of the day for steeping has been enacted, tliis test has gradually fallen into disuse; and maltsters are now more governed by the act of parliament in steeping it the shortest time possible which the law permits. The reason is very obvious : the malt thus made will evidently pay less duty; but it certainly cannot be so good.

For making perfect malt it is necessary that the barley should be completely saturated with water in the cistern. The water absorbed there

by the pores of the skin is destined for the formation of the root. If the barley come short of a complete saturation, the injury can never be repaired ; because no water administered on the floor, particularly before the root is formed to attract it, can be equally distributed — some of the grains will get too much, and others will come short of their proper portion. Indeed to sprinkle water upon the grain before the root is completely formed is a most pernicious practice. But unless the barley be steeped its proper time the assistance of sprinkling must be resorted to, or it would get too dry ; and, under such precarious management, the roots at best will be extremely irregular and imperfecdy formed.

New barley requires to be steeped longer than old ; and many maltsters were formerly in the habit of changing the water once or twice during the steeping, but here again the legislature interferes ; the maltster is obliged to give notice when he will ‘ change liquor,’ as it is called, and is only ordinarily suffered to do it once. While in the steep-cistern the exciseman repeatedly gauges the grain.

In this stage of the process, a considerable quantity of carbonic acid is evolved. ‘ If the steep-water be mixed with lime-water,’ says Dr. Thomson, ‘ the whole becomes milky, and carbonate of lime is deposited. If the steep-water be agitated, it froths on the surface like ale. If it be heated, it gives out carbonic acid gas, which may be collected over mercury. In general, there is reason to believe, that nearly all the carbonic acid evolved in the steep remains in solution in the water, or at least is extricated from the water in an imperceptible manner. From the observations of Saussure, it seems probable, that the formation of carbonic acid in the steep is owing to the oxygen gas held in solution by the steep-water.’

II. Of the Couching. — This is but a transi-tory and comparatively unimportant stage of the process ; except that, in England, the average gauges of the couch have, until lately, furnished the data upon which the malt duty has been charged. The couch is a rectangular frame, generally made of moveable boards, erected edge-wise round a certain portion of the malt-floor near the cistern. Here the grain is thrown and levelled, remaining in this stage about twenty-six hours. Dr. Thomson says, the duty is seldom levied for the couch gauge. We suppose he means in Scotland.

III. Of the Floor Management. — When the barley has remained its appointed time in the frame it is turned out, and is then called a floor. The skill of the maltster is now most loudly called for. On his management the formation of the root depends, and to the formation of a perfect root all the future perfections of the malt are indebted. In this moist state, were the barley heaped too thick, or were it to remain unturned too long, an undue heat would be generated, •which would cause the radicle, or root, suddenly to send forth long and weak shoots, or fdaments, and the work would be injured. The heat of the young pieces upon the floors should never exceed 43° by Fahrenheit’s scale.

Some maltsters keep their young floors thick to retain the moisture : but, instead of tliis, were they permitted to have the advantage of a renewal of water, when that which was absorbed in the cistern was expended, there would be no necessity to pursue such a measure ; which evidently tends to the deterioration of the malt in the most critical period of its growth.

Premising that the barley has been duly steeped, the working maltster will find it necessary gradually to spread his young pieces thin, and to turn them very frequently, never less than three times in the course of the day ; in warm weather, or when the root shows a prompt disposition to send forth its filaments, they will require turning more frequently. In some pajts of the kingdom the maltsters make use of a piece of wood of a particular form (by them called a plough), which they run along the floors, to stir them up, as a substitute for turning. In the older pieces, when the roots are most apt to en-twine round each other, this practice is very defective ; to the young pieces it can only be of little use. The plough is but a temptation for the working maltster to neglect the turning of his floors ; by which alone the form of the root can be duly preserved, the proper degree of heat be retained, and the process of germination, for the obtaining the most valuable properties of the malt, can be conducted to perfection.

Some object to the production of a large root, contending that it exhausts the grain. However, if the root be diminutive, it is a certain proof that the barley has not had sufficient moisture. The form of the root, more than either the weight or dimensions, should engage our attention. A short and bushy radicle, which sends out many fibres, is the only root from which good and tender malt can be made. But if at any time the young piece acquires too much heat, the shoots will be long and weak. The roots of barley in the field do not receive their nourishment from any considerable depth in the earth ; but from the moisture near to the surface : therefore their most perfect form, as just described, is best suited to their situation : the more numerous, short, and strong, are the filaments, the greater portion of pabulum will they impart to the plumula.

If malting be an imitation of the process of germination while the grain remains in the earth, and if new accessions of moisture be not needful after the root is formed, then the moisture of the ground (whence the root is extracting constaiit su])])lies of nourishment) is certainly injurious.

Under the salutary influence of the mimic shower of the watering pan, the powers of vegetation, when they begin to languish from the

ex]ienditure of its absorbed moisture in the cistern, [would now perform important functions. But here excise philoso))liy foriˆids the furtiier conformity to nature; and, destitute of moisture, the roots become of no use.

It is important to remark, that the generation or accumidation of heat durinsi the malting process, as in fermentation, should be gradual. The greatest heat of the youngest piece, as we have already observed, should not exceed 45°. If early watering were nermitled, a greater evposur?

to the air, and a lower heat, wouid be preferable. The heat of the oldest piece ought not to ex-ceed .50°.

The smell of the sjrain, as well as t!|ie appearance of tlie floors, will always indicate to the experienced maltster when his malts ouˆht to be turned. When they are closely bedded together, the application of the shovel is indispensable. The flours should be turned even, which can only be performed by tiie peculiar art of a dexterous maltster, by wiiicli the malt is spread like the drop-; of rain from a descending shower. Thus opened, and exposed to the atmospheric air, tlie floors will be lit;ht.; and the air, as well as the water, will perform its important office in the work assigned to it. A continued retention of moisture would be pernicious to the malt. When, therefore, a supply is administered, sufficient to furnish the imperative demands of every part of the floor, the malt should be frequently turned : and it should be spread and laid so light in the act of turning, that the air may co-operate with the water, in order that the germination may be perfect, and the malt be complete.

When the newly steeped barley smells sour, as it frequently does in the spring, the process of germination will soon convert the unsavory

acid into an agreeable smell. But when the older floors begin to smell unpleasantly, and the odor of youthful effusions is gone, it is evident a recruit of water is necessary. The unpleasant smell is occasioned by the emission of hydrogen, which can only be retained by the judicious renewal of those principles which water, in combination with the atmospheric air, yields to the organic plant.

It is evident to ail who understand the process of malting, and give it that attention which is necessary to the attainment of perfection in the operation, that the uninterrupted influence of water and air is absolutely necessary throughout the whole process.

The charge of forcing is strongly urged against the sprinkling system, to prove that it is pernicious. But the mere sound of words must not assume the province of fair and liberal discussion. If by the act of forcing, the application of heat, above the medium prescribed by the laws of nature, as best adapted to organic life, be the thing intended — then, a greater heat must necessarily be excited when water is withheld than wlien it is applied to the floors. If hastening the process by an improper excitement of heat under the powerful cooperation of water, by which the exciting power is more rapid in its effects, such a practice would be highly injurious. But if it be asserted that the sprinkling is a forcing system, merely because the interior of the grain is thereby more speedily malted, we deny the])Osition. The fact is, if water, air, heat, and light, be freely admitted, and a due proportion be preserved of the native and combined influences of water, of heat (light may be admitted, but it cannot be influenced), and of the atmos])heric air, the process of germination, and the gradual, but progressive and uninterrupted, growth of the acrospire must necessarily ensue. But if water be denied, which is its principal food, the growth of the acrospire

will cease — the unmalted part of the grain can then be made friable only by excessive heat (which certainly is forcing), the process is rendered more tedious, and the acrospire is despoiled of the treasure it had reserved for the most essential purposes of the brewing process. That the collision or operation of more principles than one, in their decomposition by the vital action, is the efficient cause, by which the interior of the grain is converted into a compound sac-charum, is abundantly evident.

It may here also be remarked that the supposed danger of extending the acrospire of small barley to the end, must arise from the difficulty

of preserving an equal vegetation in such grain ; for so long as the blade remains within the husk, whether the grain be large or small, the farther it extends, and the bolder it is, so much more will the malt be nourished.

It has been intimated that the heat acquired by germination, in the making of malt, should be progressive. If at any time the floors get too warm, the operation may be impeded by a sud-den exposure to the air; but notwithstanding the utmost eflbrts of the manufacturer, and all the management of which he is capable, the malt will be unkind or flinty. The maltsters of the old school may perhaps feel displeased to find that their favorite practice is discountenanced; but yet faithfulness demands of us to bear a testimony against the system of withering malt on the floor : and especially against the still more pernicious practice of heaping it, before it is removed to the drying kiln. Both these practices were adopted for the purpose of making malt tender; and that it might 'brew dead in the tub.' To the subject of tenderness, as a perfection in malt, we have paid particular attention ; that those modes might be hereafter disused which are adopted in the malting office, to the evident injury of the article. It has been remarked that, for the benefit of the brewer, water ought to be administered sufficiently to answer the demand of the languishing seed, after the root is formed We are not advising a departure from the exist ing, though galling, restrictions of the legislature, but we here write in the hope of these restrictions being in due time removed. In thai case, the method of supplying the malt with water, that it may be as regularly saturated as possible, will become a subject of no inferior consideration. The roots, possessing a powerful attraction for moisture (the natural food of the plant), will readily combine with it, and by this mean it will prevent its settling to the bottom of the floor. But when it is understood that as much as three quarts of water ought to be administered, by the watering pan, to every bushel of the bold barleys of the midland and northern counties, particular care should be taken that every part of the malt may receive an equal supply. In order that the water be equally distributed, one-half of the quantity intended to be sprinkled should first bo applied ; after which, the malt being turned over, it will be ready for the remainder ; and, that it may be well opened, another immediate turning will be necessary. It will then fall and continue light on the floor, giving the roots every possible opportunity of absorbing a needful supply. This

operation ought always to be performed early ill tlie morning in the first place ; and then in a little time (suppose immediately after breakfast) it will again be necessary to turn the newly watered malt. In mild weatlier it will require to be turned three or four times in the course of the first day of watering ; and in cold weather still oftener, because the disposition of the roots to attract liie water is weakened ; and consequently without more frequent turning it would subside, and injure the malt by an unequal operation. Hence it must necessarily be inferred, that when the malt is fully saturated with water, on being removed from the cistern, or when it has been replenished with the watering pan, close attention and frequent turnings are indispensable.

It is impossible to accelerate the progress of the floors, further than the gradual operations of nature will admit, without manifest injury to the malt. By keeping the floors immoderately thick, too much heat is generated ; and to apply a profusion of water by way of correcting tlie error, must certainly be very injudicious. If due attention is not paid in regularly turning tlie floors, when necessary, the malt of course cannot be so good. When the floors are of a proper thickness, and well managed by regularly turning, a judicious maltster will know the necessity of sprinkling with propriety. Where the sprinkling system is practised great attention is necessary ; where it is not practised tlie malt is unavoidably injured; because without sprinkling the barley cannot be rendered friable or floury.

Some maltsters prefer sparing and frequent sprinklings. Perhaps this method might be less dangerous, and equally beneficial, were we permitted to sprinkle after the sixth or seventh day. Malt from the stoutest barleys might, by such early application of water, when the roots are completely formed, be matured in about fourteen days, without the smallest degree of forcing; and the blade by that time would be bold and completely worked up. From the sixth, there would be eight complete days : in three of which sprinkling might be occasionally repeated. In tlie other five days, the moisture would be sufficiently expended for the malt to be exposed to a gentle fire upon the drying kiln, liut, as the law now stands, the maltster must make the best use of his time. When the malt has been deprived of water for nine days, there is considerable difficulty in keeping the whole alive. An immediate and equal application of water is indispensrCble to

renovate the drooping powers of vitality, that time may be gained to prepare the malt for tlie fire of the kiln.

Some maltsters who dislike the system of watering upon the floors (for want of knowing bet-ter) contend, that by a contrary practice they actually])rcserve the principle of vitality in full perfection, until their malt is sufticiently tender for drying. But, when mere assertions contradict the unequivocal testimony of the operation of the laws of nature, we need not seek for any farther proof of their futility. Further, some maltsters from jirejudirc and ignorance confidently assert, that if they were to sprinkle their malt, it would turn mouldy. Now the very acknowledg-

ment that their malt turns mouldy from the application of water, is a direct proof that vegetatation had ceased previously to the mould taking place ; and that the putrefactive process had actually commenced. It is truly wonderful that such a manifest error should exist in this age of general enquiry and information.

There is no doubt hut that much .njury may be done by sprinkling, without considerable attention and judgment. If, from an avaricious principle, maltsters do not supply their barley in the cisterns with a sufficient quantity of water, but instead of it an early and profuse application on the floors, by the watering pan, is substituted for that purpose, the consequence is evident: the malt must be materially injured. But the advantages that may be derived from the use of water in the making of malt, administered at proper times, are not to be lightly estimated. By sprinkling it acquires an increase of bulk of one in ten ; and, with this increase, it also treasures up a valuable portion of tlie inflammable principle. The malt being thus swelled by absorption will produce as much saccharine matter per quarter, ascertained by the instrument, as malt that has not been sprinkled ; aUhough the weight of the latter per bushel is considerably more. Therefore, if we only calculate by mere weight and measure, one quarter of barley in ten is lost to the community, in all instances, when the Hertfordshire system of making malt is adopted.

Will not the brewer, who makes his own malt, likewise reflect that he can procure eighty-eight pounds of fermentable matter from a quarter of malt (ascertained by Mr. Richardson’s instrument) while he could only gain eighty pounds were he not to adopt die sprinkling system ?

The brewer who buys his malt, when he finds that he can save 8s. per

quarter, and the sprinkled malt will yield him as much saccharine mat-ter, of a sweeter, richer, and vastly superior fla-vor; he will, of course, by all the saving in the price of the malt, be enabled to bring his liquor cheaper to market.

A gentleman, in his evidence before the committee of the house of commons said, tiiat the])ale malts he brewed produced eighty -four pounds of fermentable matter per quarter : but when he was requested to inform them of the mode by which his worts were weighed, he answered, ‘ by Quin’s instrument.’ It appeared, from a further enquiry, that (Ruin’s hydrometer varies from Mr. Itichardson’s as much as five per cent, and that in fact, the eighty-four pounds of extracted fermentable matter, were but eighty. To reconcile such apparent disparity with respect to the weight of the worts by diflerent inslru-ments, is by no means the object of the present work. Those who are solicitous for more copious information must eiKjuire for themselves.

Competition between different persons produces a kind of necessity to abandon many customs, which had obtained a sort of privilege, from those prejudices which have been adopted from our ancestors. It is from prejudice contracted in Uiis way, that maltsters and brewers long re-tain their])rovincial habits : hence the iinmmer—

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able methods of making malt, and brewing malt liquor, which of course give occasion to an equal variety of the qualities and flavors of those respective manufactures, which arc to be found in different parts of the kingdom. But it is the united province of natural philosopliy and of chemistry to rescue the manufacture of these valuable productions from the hands of fastidious ignorance, and to establish certain rules, founded upon rational principles, for the uniform attainment of that]ierfection in the art, which the subject will admit. This question therefore ought to undergo an immeiliate and a thorough investigation, by unprejudiced and intelligent minds.

NV'hen we consider the health of individuals in this populous country, together witl\ the best use that might be made of the produce of so great a part of the land, which the growth of barley necessarily requires ; and further, when we contemplate, that a most important branch of the public revenue is also immediately connected with the art of making malt and brewing malt liquor, surely tliese are considerations not unworthy the attention of the legislature.

If one uniform method were established, for conflucting the process of germination in making malt according to the sprinkling system, we may venture to aflirm, that the article might be brought to market eight shillings a quarter lower, and likewise of a superior quality to malt made by a contrary process : consequently it would be a saving to the public of so much money. It would be a means of easing tlie burden of the present heavy, though necessary tax on malt ; and, to descend lower in the scale of public utility, the individual consumer would also ob-tain his siiare of those advantages already enumerated, particularly in having his malt liquor cheaper, and of a better quality by one penny per gallon (or nearly so) and in many instances by twopence. Ale brewed from malt manufactured according to the sprinkling system (judiciously managed) is more nutritious and invigorating, in consequence of its abounding more with the inflammable principle, or ardent spirit ; which is an essential constituent in brewing ale of a prime quality-Vegetation is the first agent employed, in separating the inflammable principle from its mix-ed and neutral combination with the other elements ; and which necessarily constitutes so valuable a part of those liquors which are designed to renovate the vital powers of man. By fermentation, the decomposition is rendered as perfect as the etl'orts of art can perform.

The following practical observations on this part of the subject occur in the able Report of Drs. Thomson, Hope, and Coventry, to the Excise Board of Scotland : —

While the malt is on the floor, a variety of interesting changes happen. 1. The grain, at a certain period, becomes moist and exhales at the same time an agreeable odor. 2. Soon after this period the roots begin to make their appearance. 3. The plumula, future stem, or acrospire, begins to swell, and gradually advances under the husk from the same end of the seed where the roots are observed to spring, till it reaches the other extremity. 4. The kernel becomes

dryer, friable, opake, white, and sweet-tasted. 5. Each grain of corn

loses a certain portion of its weight. The whole secret of malting depends upon the proper regulations of these changes. This is done chiefly by, 6. Keeping the temperature as equal as possible ; which again depends on 7. Tiie time and number of the turnings. It will be necessary to take a short view of each of these particulars, in order to form precise notions of the nature of malting.

1. After the grain has been cast out of the steep, and put into the couch, it gradually becomes dry externally, the moisture that adhered being either dissipated or absorbed. The temperature in tlie mean time gradually rises, and in about ninety-six hours will usually be found to have increased about 10°. This rise of temperature in the heat depends in some measure on the state of the atmosphere. If the air has become colder since the period of casting, tlie malt does not become so warm as it would otherwise do ; while, on the other hand, if the air has become milder, the temperature of the malt experiences a corresponding increase : 10° may be stated as nearly the medium of the different experiments. Hie smallest rise observed was 5°, the greatest 18°; the most common from 8° to 12°. It must be observed, however, that the rise of temperature depends greatly upon the choice of the maltster, who can check it at pleasure, by turning over the grain, and spreading it thinner upon the floor.

About ninety-six hours after casting, the grain which had become seemingly quite dry on the surface of the husks, turns again so moist, that it will wet the hand if we thrust it into the malting heap. The appearance of this moisture, which happens regularly after the malt has been some days on the floor, is called sweating by the maltsters : it continues for one day or two, and then disappears. During its continuance a pretty strong odor is exhaled, rather agreeable, and not unlike that of apples. If at this period a portion of tiie malt be distilled, in a steam bath, a little spirits will be found in the liquid v \ihich comes over. They may be made more apparent by mixing this liquid with sulphuric acid, and distilling a second time.

Unless the malt be turned pretty frequently, as soon as the sweating comes on, the temperature increases with great rapidity. In one case, the turning was omitted for about fourteen hours, and the temperature was observed as high as 80°.

It is just about the time of the sweating that the roots begin to make their appearance; each, at first, like a small white prominence at the bottom of the seed, which soon divides itself into three rootlets, and at last into four, five, or even seven. These roots are, at first, very soft and tender; but in a few days they begin to wither and to acquire

hardness. Many of them are broken off during the turning of the malt, and, in that case, new roots generally succeed them, at least in the earliest stages of the process of malting. When the radicles have divided themselves into three roots, and have acquired some length (which usually happens in one, two, or three days after their appearance, according to

circumstances), tlie apple-like smell goes ofrˆ and is succeeded by another not unlike that of the common rush, when newly pulled. This smell continues during the whole time that the malt is on the floor ; unless it be overpowered by a peculiar mouldy smell, which happens only when the grain is bad, and contains seeds incapable of germinating ; or when a part of the malt has been bruised during the turning, from the carelessness of the workmen. The length, number, and progress of the roots called commings by the maltsters, vary much according to circumstances. It is well known that when bar-ley is sown in a good soil, of a proper texture, the roots continue moderately short, and tlie chief effort of vegetation seems to be directed to the advancement of the stem ; but, in loose ground, the former shoot out to a greater length, and the latter makes a less rapid progress. In malting again, the roots have a much greater tendency to lengthen than even in the poorest or most open soils. Accordingly, if allowed to take their course on the malting floor, in a moist, warm heap, they grow to a great length ; in some cases not less than two or three inches. The prime object of the maltster is to check this inordinate length, and this he accomplishes by frequently turning over the malt. By such treatment its temperature is kept uniform, and the moisture is equally exhaled. There is, however, a considerable difference in the practice of maltsters in this respect. Some allow the roots to get to seven-eighths of an inch long ; others never wish to see them above half that length, .ˆs the roots are afterwards separated from the mall and thrown away, and as their length does not contribute to the progress of malting, the latter method seems preferable.

The fourth or fifth day from the casting, and about a day after the

sprouting of the roots, the rudiment of the future stem may be seen to lengthen. It rises from the same extremity with the root, and, advancing within the husk, at last issues from the opposite end of the seed, and assumes the form of a green blade of grass. Rut the process of malting is brought to a conclusion some time before the stem has made so much progress as to burst the husk. This rudiment of the stem is called by botanists plumula, but maltsters give it the name of acrospire. The progress of the acrospire is at first very rapid, like that of the roots. By the eighth day after casting it will have usually reached rather more than one-half the length of the grain. But after this time its progress becomes much more slow, so that frequently another week elapses, or even more, before it has made its way to near the end of the seed, when it is understood to be])ropcr to finish the malting : were the malt allowed to lie longer on the floor, the progress of the acrospire becomes again rapid, so that it soon pushes its way out of the husk and puts on a leafy appearance. When grain is in tiie earth, the progress of the acrospire is much more uniform and rapid. In that case the supply of nourishment is abundant and constant, whereas, on the malt floor, the very contrary is the case.

As the acrospire shoots along the grain, the appearance of the kernel, or mealy part of the torn, undergoes a considerable ciiangc. The

glutinous and mucilaginous matter, which perhaps bind together the starchy particles, is taken up and removed. The color becomes white, and the texture so loose that the kernel crumbles to powder bstween tlie fingers. This change is progressive : it begms at that end of the seed where the roots are, and gradually proceeds on-ward to the other extremity ; so that one portion of the kernel often appears in a friable state, while the other still retains the appearance of raw barley. It is the common opinion of maltsters, that this change of the grain always keeps pace with the acrospire; each seed being altered as far as the point of the acrospire extends, and no further. And this opinion has been rather confirmed by our observation. The whole object of malting is to produce this change in the ker-nel. As soon as it has taken place, the seed is no longer in the state of raw grain, but of malt. The kernel is originally composed chiefly of starch, the particles of which seem to be enveloped by a species of gluten and mucilage. This cement (or, perhaps, cellular membrane) is taken up and expended, in the first place, for the purposes of vegetation, and thus the starch is set at liberty, not, however, in the state of com-mon starch, for its taste is somewhat sweetish, and it is completely soluble in water, which is not the case with the other. The object of malting

being to procure this modified or altered starch, the process ought to be stopped as soon as it is fully disengaged and prepared. If the process has been rightly conducted, this object will be attained, as already mentioned, by the time the acrospire has come within a little of the end of the seed ; but, if it proceed farther, a sud-den and very considerable loss occurs. Shortly after the acrospire has made its way out of the seed, the starchy matter undergoes a farther change, becomes milky, and is very soon absorbed ; leaving nothing but the empty husk.

While the malt lies on the floor each corn loses a certain portion of its weight. A part of this loss is only apparent, and occasioned by the exhalation of the moisture wiiich had been imbibed in the steep ; but, Iiesides this, there is also a real loss of weight. If a given weight of the corn, 500 grains troy, for example, while malting, be taken daily from the floor, weighed accurately, and then dried upon a sf cam-bath till it ceases to lose weight, the loss at first will be considerably more than two-thirds of the weight ; but, as the malting advances, the loss becomes less, and at last a])proaches very nearly to two-thirds.

‘ The loss of weight, as well as the progress of the malting, depends much upon the tem]ierature; two things respecting whicli require attention : — 1 . To keep it as equal as possible ; and, 2. To keep it at the proper pitch, neither too high nor too low. Unless the first i>recaution be attended to, the progress of the malt is very uneciual, some j)arts being fully ready before others have advanced half way. This inequality is attended with a great loss of weight, because many of the farthest advanced corns must be sacrificed to the progress of the rest. It is chiefly prevented by keeping the thickness of all parts of the malt as e(|ual as possible, and by turning it over without delay, whenever on inequality < >f temperature can be detected ni any portion of it.

‘ A high temperature is more injurious at tlie beginning ‘ of the flooring,’ than after tlie malt lias made some progress. Should the heat be in excess, tiie radicles advance too rapidly while the kernel does

not undergo the vvished-for change, but becomes clammy, like birdlime, a condition which is most apt to su.pervene in the early stage of the process, when the grain is very moist, llence the proper temperature may be judged of pretty correctly, from the rootlets or * coramings.' If they be pretty equal, and do not exceed half an inch in length, we may consider the temperature as having been proper ; but, when they lengthen suddenly and unequally, there must have been an excess of heat.'

1'. Oi-Kiln-drying. — Fire is an agent so powerful in its operations, that without the greatest watchfulness all the skill and labor bestowed on tlie previous work would be defeated in the destruction, or deterioration, of those properties which are the first characteristics of perfect malt. And here the construction of the kiln — the nature of the fuel employed — the state of the malt at the time of its first exposure to the fire — the proper times for turning the malt, with the pro-per management of the fire at those times — are considerations of great moment.

1. In the first place the construction of the dry-ing kiln demands our particular attention. The floor of the kiln on which a given quantity of malt can be dried, with the least fuel in the shortest time, witliout injuring the color, is undoubtedly the best.

Every maltster knows that a drying kiln is composed of an open area, or room, about twelve or fourteen feet high, having a floor of perforated tiles, or iron, on which the malt is dried. In the centre of the area, and in proportion to its dimensions, there is an enclosure, for the purpose of retaining the heat of the fire, that the whole may be regularly distributed to every part of the drying floor.

In order to construct the fire-place to the most advantage, so that there be no profuse expenditure of fuel, nor delay of time (both of which are pernicious to the malt, yet moist upon the kiln, and subject to the action of the fire), it should be so contrived that no more fresh air be admitted in that direction, than is necessary to preserve the free and uninterrupted combustion of the fuel. The grate should also be brought forward into the area of the room, beneath the dry-ing-floor, projecting from the enclosure intended to confine the heat : because, the fresh fuel being laid chiefly in the front of the fire, a great portion of the sul[)hur will be consumed, in passing over the intenser heat at the back of the fire.

For the drying of jiale malts it is of consequence to obtain the modifying influence of the external air. And in order that it may be

sufficiently difi'used, and equally heated, before it reach the malt floor, it is necessary that two small apertures be made ; the dimensions of which may be from eight to twelve inches square : one on each side of the grate below the fire, and as near to the ground as possible. The external air, entering by these apertures, will mix with the current of heated air from the fire ; when the v\hole, being of one temperature, will be quali-

fied to effect the operation of drying, without risk of injuring the color of the malt. These apertures being constructed witli sliding doors, the admission of air may be regulated at the pleasure of the maltster, for all the purposes of his business.

If tlie fire be placed at a proper distance from the drying-floor, which ought to be sufliciently elevated above the kiln, there will be no necessity for a spark stone to difl'use the heat equally; the malt itself, being spread upon the floor, is quite adequate to perform this necessary part of the work. If the draught of a drying kiln be so violent and irregular as to require foreign aid to modify the current, it is constructed upon erroneous principles. It is therefore obvious that the old plan of the fire-grate being within the enclosure, which retains the heat, is not calculated to preserve the purest and most valuable properties of malt; for, in such instances, the sulphuric fumes of a fire newly replenished with fuel, will rise in that state, and impregnate the malt, to the manifest injury of its flavour.

A drying kiln, formed on the plan here recommended, having the room where the malt is dried well secured from the external air ; and sufficiently ventilated to facilitate the escape of the heated air, will produce every shade of color that may be required. But, in order that the draught of heated air, properly modified, may be sufficiently copious and regular, the area beneath should be liberally supplied with atmospheric air, by large or numerous apertures (for the above mentioned purpose) which should be so situated, that the air flowing in may not disturb the regular operations of the fire.

2. Of the nature of the fuel employed, it is only needful to remark that the finest, containing the least sulphur, is the best; wood and straw are inadmissible, except in the making of porter malt ; and then they should be used but sparingly.

3. To the state of the malt, at the time it is first exposed to the action of the fire, particular attention should be directed. That the malt on

the working floor should not be so much exhausted of moisture as to interrupt the process of germination, will not admit a dispute : and, in proportion as the moisture abounds, the dangers to be apprehended from the influence of the fire are multiplied. The exact medium cannot be well described, farther than, in reference to the primary injunction not to stop the growth of the malt; that it be as free from moisture as this precaution may admit.

It is scarcely necessary to repeat that the acrospire should be worked to the end of the grain : for, except the malt has been withered, or heaped, that part of the grain which the blade has not reached is barley. Withering, or heaping the malt, will make such parts tender, in-deed, without the aid of the acrospire; but then, strictly speaking, it is not malt : nor does it ap-pear that friability, produced in this way, will yield such a portion of spirit in the li(|uor as might otherwise be expected ; and consequently it will be deficient in those exhilarating (jualities so highly esteemed by the consumer.

4. The best and most lively malts being

moist, when they are first exposed to the action of the fire, of course the heat of the kihi, at the commencement of the operation of drying, should be very moderate ; and it may be increased, progressively, as the moisture is liberated. At the first, frequent turning is absolutely indispensable : and it is also equally necessary to observe, that the malt should always be not only laid upon the kiln, and turned at proper times, but finally discharged, when the fire is perfectly clear. Neither should the fire be neglected, nor the kiln get cool, before the malt be turned ofl'; the warmer it is heaped together, after drying, the more perfectly will it be cured, or deprived of all its moisture : and the more securely will it be preserved from the subsequent action of the atmosphere. When the draught of the kiln is rapid, and the heated air is regularly diffused, the surface of the malt will be nearly as warm as the interior part; and, through the action of the circulating air, it will be light on the floor.

Under these combined circumstances and salutary precautions, when the roots of the malt are short, bushy, and strong, the fire will have free access to the malt, surrounding every individual grain. By the powerful influence of the fire the moisture, constantly exuding, will be regularly dissipated; and the dry iieated air, from beneath, following in regular succession. Thus the work, without interruption, under good management of the fire, will go on until the malt be perfectly dry.

Upon a kiln where you can have a powerful draught, which may be modified and regulated at discretion, any tint or shade of color may be obtained, which is necessary for the various purposes of the brewer.

It is scarcely necessary to remark, that high dried malt, wiiich has obtained a deep color by heat, is of less value than pale malt : because a portion of that principle which affords spirituosity to the beverage is destroyed, to the injury of the fermentation; consequently, the higher the shade the greater is the loss sustained in proportion. A current of dry heated air must constantly be passing in a regular and rapid succession through the volume of the malt, to carry off' the moisture without the least interruption ; because, during the process of drying, the moisture ought to be constantly evaporating ; therefore, when heated plates are used, or any other mode of drying is practised, without such current of air to carry off" the evaporation, the malt will be entirely spoiled, and rendered unfit for the purposes of the mash tun.

There is a medium, necessary to be observed, as to the thickness of the volume of malt on the kiln: too much would impede the draught; and, if it were laid too thinly upon tlie kiln, the action of fire upon every part might produce a sudden fixation of the interior parts, before all the moisture was dissipated. Where there is a good' draught, the malt may be about four inches deep upon the kiln. The time required for completely drying the palest malts is from sixty to seventy hours.

It has been intimated, that the heat upon the kiln, as well as upon the floor, should be increased progressively. In the drying of malts,

for every shade of color, particular attention should be paid to tiie state of tlie fires, for the first twenty-four hours. Deej) colored malt is obtained when the moisture is nearly expended. A sudden application of heat is injurious when malt is moist ; it partially fixes the kernel, and imprisons a part of the moisture, by the action of an increased

heat, uniformly applied at the conclusion of the work. By such injudicious mode of drying the malt, it is converted into a hard substance, which by the maltsters is called flint.

The business of the drying kiln seems to consist in completely evaporating the moisture, which otherwise would propel the acrospire be-yond the limit of the husk, and, consequently, impoverish the malt beyond all calculation.

Heat and moisture are absolutely necessary to vegetation. As the proportions between these two agents vary, the process will be more or less perfect. Without moisture, heat will only contribute to the fixation of the parts : and, without the proper degree of heat, moisture would abstract the mucilage from the seed, and dissolve its substance. By this we learn that fire dissipates the moisture, when the business of germination is accomplished, for the production of malt : and that those principles, which were necessary to constitute its utmost perfection, become fixed, ana cannot be altered or disturbed but by the influence of heat, of moisture, or of the air of the atmosphere. Malt, therefore, when perfectly cured, cannot be kept too thick, nor too close.

But the general rule respecting heat, air, and moisture, applies as well to the working of malt upon the floor, as to the process of drying it upon the kiln. If water be withheld, in tiiat proportion which may be necessary to supply the demands of the vegetable fibres, and to conduct the process to perfection, the floors must be kept thick. In this case excess of heat can only produce friabdity in the malt, in combination with the diminished portion of moisture that still remains.

Again, if moisture be applied too profusely, or at improper intervals, through the vital influence, it will increase a disposition to generate heat; and, consequently, the conducting of the process will be rendered more difficult, and more dangerous. When, therefore, the malt is saturated with water, either on its recent removal from the cistern, or when it has just been sprinkled, its appearances and propensities should be diligently watched, that the desired effects may be obtained. In this stage of the business the influence of skilful management, dictated by the unchanging laws of nature, will be necessary to conduct the operation with propriety.

It may not be unnecessary to observe, as the administration of water furnishes the growing malt with greater jiowers to exercise its functions, and to perform its appointed work — that greater

watchfulness will be rcfiuircd iNulerthcsprinklinff system, than when such energies are not aroused into action. When sprinkling is not used, and the malt gets tolerably dry, the floors may re-main unmolested for a whole day ; nothing more being needful than to lighten them up with a

plough, an instrument formed for that purpose : and, so long as such malt is preferred at the market, we need not wonder that both master and servant should adhere to a mode of operation, which is attended with the least trouble and attention, and which seems to claim its preference from the prescriptive right of ancient custom.

U hether these pages may, in any degree, contribute to shorten tiie reign of the instrument for ploughing malt, is not for the auilicr to anticipate. The power of reason, and the demonstrations of truth, are fretiuently incompetent to effect the salutary changes ti)ey propose, for the general advantage and comfort of mankind. But what reason cannot achieve, necessity will perform.

‘ The last process,’ say Drs. Thomson, Sec, ‘ is the cleaning of the malt. \N hile still warm upon the kiln, it is usually trodden upon by the workmen, to separate the radicles or commings ; which are at that time brittle, but soon become tough by absorbing moisture. The commings, thus detached, are afterwards separated by passing the malt through the common fanners ; or, instead of this mode of cleaning, an instrument called the harp, well known to the brewers, is employed. The quantity of rootlets and broken parts of husks, thus detached from the malted grain, varies according to circumstances, but is always considerable. The malt thus obtained weighs about one-fifth less than the raw grain from which it was produced ; but this diminution of weight varies somewhat according to the temperature of the kiln ; the least in our trials was nineteen per cent., the greatest twenty-seven, the average about twenty-three.

‘A great part of this loss of weight is to be ascribed to the kiln-drying ; and consists of nothing less than the moisture which previously

existed in the raw grain, and of which it would have been deprived by the heat of the kiln, as well as the malt. In order to ascertain how much of the loss was owing to this cause, the raw grain should have been kiln-dfied and weighed just before it was put into the steep. In that case, the difference between the weight of the malt and of the kiln-dried grain, would have indicated the quantity of loss of substance really sustained by grain during the process of malting. As this method was not practicable in pursuing trials on a large scale, we had recourse to another, less precise indeed, but sufficient to give us a no-tion of the loss of weight actually sustained by the malt. Portions of the raw grain, and of the newly dried malt, were exposed to the same temperature upon a steam-bath. The loss of weight sustained by thctrrain beinc called a, and that by the malt b, it is obvious that a — b represents the loss of weight which the grain would have sustained, had it been dried on the kiln at the same temperature as the malt. This subtracted from the difference between the weight of the raw grain and the malt, gave the real loss of weight sustained by the grain durinfc the process of malting. The difference between the raw grain and the malt may be called the apparent loss, as much of it was owin'j to moisture, which the malt gradually imbibes again when exposed to the air.

‘ In the trials made by the authors of the Scotch report, the loss of weight proceeding from the dissipation of moisture, varied from eight to eighteen per cent., and the real loss from six to twelve according to the process. The average loss, from the dissipation of moisture, may be considered as fourteen per cent., and the average real loss may be stated at eight per cent. About four-tenths of this loss must be ascribed to the commings which are separated by cleaning the malt. If they be deducted, the loss sustained in malting does not exceed an average of five per cent. If we reckon the loss in the steep at one per cent, and a half, there will remain three per cent, and a half for loss upon the floor ; but for this, one per cent, and a half may be safely reckoned for waste, consisting chiefly of small corns and commings, lost during the kiln-drying, and the transporting of the malt from place to place. From this statement, it follows that, at an average, 100 pounds of barley will yield seventy-eight of newly dried malt ; so that there is a loss of about twenty-two pounds. Of this loss, fourteen pounds are to be ascribed to moisture, a considerable portion of whicli the malt receives again by standing. The real loss consists of the remaining eight pounds, which ate thus accounted for : —

Lost in steep Lost in floor Commings . Waste

3 3 04

‘ The bulk of the malt generally exceeds that of the raw grain, though this does not always happen. The average, for instance, of all our makings of Scotch barley gave almost exactly bulk for bulk, yet, in some instances, 100 bushels of barley yielded 109 of malt. Others, of course, must have fallen as much short. The average of the English barley was 105 bushels of malt from 100 of grain ; that of the bigg ninety-nine. The greatest produce was 112 bushels of malt from 100 of barley ; the least ninety-three. Probably, too, the inequality might be owing partly to the unequal degrees in which, in different cases, the nialts, or both the grain and malts, had been cleaned. In our trials, the bigg did not deviate so far from equality as the barley. The weight of the malt varies also considerably ; but in general a bushel of good malt, when newly dried, weighs about three-fourths of a bushel of the raw grain.’

The late Mr. Baverstock, in vindication of the public breweries, makes the following remarks founded on his own very considerable experience : —

‘ It is well known to chemists, to distillers, (and to the rightly informed among the brewers), that it would not be more futile to attempt to make bread from chalk, than to make any sort of vinous liquor (such as beer, wine, or intoxicating spirits), from any matters whatsoever, except from some substance that is ‘ saccharinp.’ For no other matters will yield an extract, or solution, that is capable of the vinous fermentation. Without such fermentation no spirituo’-ity, or strength, can be produced : and, pro-

vided the fermentations be properly and similarly conducted, the quantity of vinous spirit obUiined is ever in proportion to the quantity of ♦ sweet,' contained originally in, or drawn from, tlie subject or matter employed. Of all the saccharine and fermentable matters, whetiier native or foreign, that are procurable in these kingdoms, the three cheapest are ' malt, treacle, and sugar.' The portion of the desirable matter for producing beer, or spirit, from these three subjects, IS discoverable with ease, and to certainty, by the specific gravity of the solutions of any given quantity of each or either of them. And the question, as to which is the cheapest, is then decided by the ' quantum of fermentable matter yielded, in conjunction with a consideration of their respective costs.'

' Barley, in its raw or unmalted state, consists chiefly of mucilage, with but a very small portion of saccharine matter. By the germination in malting it the greatest part of the mucilage i? converted into sugar, which then becomes so abundant as to form six parts in ten of the actual weight of the malt. The remaining four parts consist of mucilage, with the husks, or drafi', of the grain. The saccharine property in malt is so much more readily extracted, in brewing, than the mucilage (under due precautions with regard to the heats of the water applied in the several mashings), that the latter may be disregarded, as affecting the gravity of the solution. Wort may, therefore, be considered as consisting of sugar dissolved in water, and the strength of wort is always proportioned to the quantity of the saccharine matter contained in a given measure of the liquid. And hence the gravity of worts, when compared with the gravity of water, may, in all cases, be received and trusted to, as the measure of their value; which is confirmed, incontrovertibly, in the practice of both distillers and brewers. The first of whom find the proportion of proof spirit, obtained from any given quantity of their wash, to be in an exact ratio to the gravity of such wash, under correct uniformity in all the parts of the process. And, under the same circumstances, the brewer obtains a greater or less price for his beer, according to the gravity of his worts; or, (which is the same) according to the quantity of malt allotted to make such worts.

' A bushel of ripe and well-cleaned barley will weigh from fifty to fifty-two pounds ; of which weight one-fifdi part is lost by germination and evaporation in malting, and not more, provided it be malted with a view to the quality, rather than to an injurious increase of measure. In the latter case, a full fourth part of the original weight of the barley is lost in the malting. From a bushel of perfect malt, weighing forty to forty-two pounds, may be drawn twenty-five pounds of solid extract, of equal value for the purposes of making beer and distilled spirits, as

twenty-five pounds of dry powder sugar, or thirty pounds of treacle. Or each and either of them will make a barrel of wort, of ten pounds to eleven y)ounds heavier than water, because the water, which is displaced by the extract (viz. six quarts) weighs fiftcon pounds. Estimating the costs of the several

quantities at the wholesale prices of each article, and according to the terms on which a brewer can, at this time (September 1813) purchase 100 or 500 quarters of malt, *viz.* at 96s. the quarter, trt:acle at 48s. and sugar at 90s. the 112 pounds of each, it will be found that to equal a quarter of malt, at 96s., will require 240 pounds of treacle, costing 103s., or 200 pounds-of sugar, costing 165s.

‘ Until this statement can be disproved, or until some article, equally saccharine and fermentable as malt, can be discovered, and obtained at less cost, it may be submitted to the reader, whence can arise any temptation to a brewer to exchange malt for any other matter to make beer. Sugar is, by act of parliament 1812» permitted to be used in the breweries, but treacle is still prohibited, under such penalties as would be ruinous. No pale beer brewer could use treacle without discovery, by the color and taste of the beer.

‘ Sugar being manufactured uniformly by boiling it to a given and equal consistence, very little or no variation is found in a given weight of the same sorts of it, although the quality of the cane juice, from whence it is made, differs greatly, according to the wetness, or dryness of the season in the West Indian Islands ; and the same may be said, or nearly so, of the treacle : but the malts from barley differ very much, according to the condition of the grain, and the skill and integrity of the maltster. The prices also of all the three are, we know, continually fluctuating, yet the advantage will be found to remain with the malt, by those who will take the trouble to make calculations on the contemporary prices of each. And this, either with or without taking into consideration, that if sugar or treacle were to be used, in but a trifling proportion in the breweries, the prices of them would be immediately and greatly advanced^ and malt would be in a proportionate degree cheaper. But, although sugar has been allowed to be used in the breweries for more than a year past (as also on some former occasions), it has not been found that any consumption of it takes place among the well-informed part of the trade, to make beer.

The statement here given of the comparative value of the three ‘ sweets,’ difi’ers so widely from the notions generally entertained by

the public, that it is to be expected the correctness of it wdl be doubte'd. The truth of it, however, is proved by distillation ; for, so very exact is the proportion of vinous spirit producible from the wort, to its gravity in its first state, that the practical distillers may ascertain, to a single gallon, what will be the produce of proof spirit, from 10,000 gallons, or any greater or less quantity of their fermented liquor, previously to committing it to the stills; which rule is founded on the known number of pounds of fermentable matter required to produce each gallon of spirit, whether the fernunt-nble matter were drawn from malt, from sugar, or from treacle. The whole of which would be impracticable, if there were any distinction in the vinous properties of the different extract ■ˆ ; or if the gravity of the worts were not, a. all

tlie cases, a correct criterion of their value. This rule extends also to, and is practicable in, the brewery.'

On the subject of instruments he afterwards adds : — ' By simple evaporation, malt wort is brought first to the consistence of treacle, and iinally to a fixed and solid extract. Dycas's hydrometer shows the exact number of pounds of such extract, which is contained in thirty-six gallons of wort, each pound whereof occupies the space of -06 parts of a gallon of the water. (Ruin's, Richardson's, and Dring's instruments show, merely, the addition of gravity in a barrel of wort, caused by the difference between the weight of tiie extract and tiie weight of the water so displaced. All of the last three instruments dill'er in a slight degree from each other in tiieir indications, yet not so materially but that all of them may be made similarly useful in the hands of judicious practitioners in the distilleries or breweries.

'Taking the average indications of Quin's, Richardson's, and Dring's hydrometers, each pound of additional gravity (to the water) shows the existence of two-sixths of a pound of extract according to Dicas's rule. And thus a wort of tliirty pounds per barrel heavier than water contains seventy-eight pounds of saccharine extract, which is shown at one view, by Dicas's instrument. Driiig and Page's improved

instrument, constructed according to the principles laid down by J)r. Thomson in the valuatjle report before alluded to, shows by means of a sliding rule, given with it, the quantity of dry extract per cent., contained in any given quantity of malt.

‘ A barrel, or thirty-six gallons, beer measure, of rain water, should weigh 367-2 pounds at the rate of 1000 ounces for each cubic foot, which is concluded to be the precise specific gravity of such water. But, that which is in general use being somewhat harder and heavier, it will be nearer the truth to fix it on 369 pounds as the weight of a barrel ofwater in the breweries. Hence, what is called a barrel of wort of thirty pounds, weighs actually 399 pounds: *viz.* 369 pounds the water, and thirty pounds additional for the v/ort.])icas’s instrument shows that the constituents of a barrel of such wort are seventy-eight pounds of fermentable extract, which, occupying the space of 4-68 gallons of the liquid, at -06 for each pound, leaves 31-32 gallons of water, the ■weight whereof, at 10-25 pounds per gallon, amounts to 321 pounds, to which, adding the extract of seventy-eight pounds, we find tlwe total weight to be 399 pounds, as by the others. An exact quart of raw wort, 76-5 pounds, by t)icas, was evaporated to di-yness ; and, as the extract could not be cleanly separated from the vessel employed, the whole was put into a scale and weighed 24-25 ounces. The vessel (when perfectly cleaned with hot water, which brought the extract again to the state of sweet wort) weighed 15-75 ounces, thereby showing that the actual quantity of extract contained in the quart of wort

was 8-5 ounces, which, multiplied by 144, the quarts in tiiirty-six gallons, gives 1224 ounces, which, divided by sixteen, gives 76-5 pounds; four ounces of powder-sugar, on being dissolved in a giazed earthen vessel ([ircviously weighed), and brought to a solid exiracl, lost o’ne-eighth part of its weight, by evaporation in the process. We may hence reasonably conclude that each pound of malt extract is of equal value and usefulness to a distiller or to a brewer, as one pound of sugar, in the state that the last is sold in. the shops. For the saccharine matter contained in the extract of malt, is not more fif so much) diminished by the very small portion of mucilage, which mingles with it, when running from the mashing-tun, than the sugar is weakened by its hydrogenous or watery particles; and, if this be granted, it follows that Dicas’s hydrometer shows, at once, the number of pounds (or half pounds; of ‘ sugar,’ contained in each thirty-six gallons of malt wort. Further, if the exhausted grains in a brewing of malt were deprived of their moisture, by drying them on a kiln, it

would be found that a bushel of them would be so much lighter than the malt (in its dry state) as the amount of the extract, drawn from each bushel, *viz.* :— i

Say Malt. Extract. Grains. > u i, i 40lbs. 25lbs. 15lbs 5 per bushel.

‘ This has been proved satisfactorily, and may be experienced in little time, and without much trouble, because on a small scale. And such examination of the separate parts of a bushel of malt is further satisfactory, inasmuch as it confirms the amount of fermentable matter extracted from this, or any given quantity of malt, as the same may have been shown by Dycas’s hydrometer.’

JVIalt Duties. — In June, 1802, the whole amount of the duties on malt was only 10s. 6d. per quarter ; it was then raised to the following sums per bushel :

s. d. English malt . . 4 4 or 100 Malt of Scotch barley . 3 8J or 84-856 Malt of Scotch big . 3 Oi-or 69-472

But 2s. of this was considered a war-tax, and to continue only to six months after a general peace. In 1816 therefore it was taken off”; but in 1819 a new duty was imposed which raised it to 28s. per quarter. Since which the 3d Geo. IV., c. 18, has reduced it to 8s. per bushel, or 20s. per quarter. The new Malt Consolidation Act was so extravagant in its provisions and restrictions, that it prevented the whole of the respectable part of the maltsters commencing operations at the usual period in 1827, and diminished the quarter’s revenue, we understand, full, £60,000. Under these circumstances the lords of the treasury have seen it .proper to suspend a considerable part of its provisions; and the whole measure is to be remodelled at the meeting of parliament.

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MALTON, a borough, and market town in the North llidino; of Yorkshire, seventeen miles and a half north-east from York, and 217 north by west from London, situate on the river Derwent, over which it has a handsome stone bridge. The town is about half a mile long, and has two parish churches, besides three places of worship for Quakers, Presbyterians, and Methodists. Here are also a handsome suite of public rooms and a theatre. The river is navigable up to the town, by which larjje quantities of corn, butter, and haras, are sent to different parts of the kingdom. Malton has returned two members to parliament ever since the twenty-third of Edward I., the right of election being vested in the holders of burgage tenures. The town is governed by a bailiff. It has two iron foundries, and the manufactures of malt, linen, hats, and gloves, are carried on here. Markets on Tuesday and Saturday.

MALVA, the mallow, a genus of the polyandria order, and monadelphia class of plants ; natural order thirty-seventh, columniferae : gal. double, exterior one triphyllous ; the arilli numerous and monospermous. There are numerous species ; consisting of herbaceous perennials, biennials, and annuals, for medical, economical, and ornamental uses; rising with erect stalks from about half a yard to ten or twelve feet high, garnished with large, roundish, lobated leaves, and quinquepetalous flowers. They are all raised from seed.

M. communis, the common mallow. The leaves are reckoned the first of the four emollient herbs : decoctions of them are sometimes employed in dysenteries, heat, and sharpness of urine ; and, in general, for obtunding acrimonious humors : their principal use is in emollient glysters, cataplasms, and fomentations. The leaves enter the ofTicinal decoctions for glysters, and a conserve is prepared from the flowers.

M. crispa, Maurisiana, and Peruviana, when macerated like hemp, aiTord a thread superior to hemp for spinning, and which is said to make more beautiful cloths and stuffs than even flax. From the crispa, which affords stronger and longer fibres, cords and twine have also been made. From these species, likewise, a new sort of paper was fabricated by M. de ITsle. On this invention, Messrs. Lavoisier, Sage, and Ber-thoUet, in name of the Academic des Sciences, observe, that *

it is not probable the paper made by M. de I'lsle will be substituted for that made from rags, either for the purpose of printing or writing. Yet paper from the mallows may be used for these purposes, if we can judge from a volume printed on it presented to the .academy. The great utility of M. de I'lsle's invention is for furniture, which consumes a great quantity of rags ; and his papers have a natural hue, much more solid than can be given by coloring matter, and this hue may serve as a ground for other drawings.'

MALVASIA, an island of Greece, on the east coast, famous for Malmsey and other wines; fifty miles south-east of Misitra, and seventy-five south of Athens. Napoli is the capital.

MALVERN Cmase, an extensive district of England, containing upwards of 7000 acres in

Worcestershire, 600 in Herefordshire, and 100 in Gloucestershire.

Malvekn, Great, a town of Worcestershire, in which was formerly an abbey, whereof nothing remains but the gateway .and church. Part of it was a religious cell for hermits before the conquest; and the greatest part, with the tower, built in the reign of William L Its outward appearance is very striking. It is 171 feet in length, sixty-three in breadth, and sixty-three in height. In it are ten stalls ; and it is supposed to have been rebuilt in 1171. The nave only remains in part, the side aisles being in ruins. The windows have been beautifully enriched with painted glass, and in it are remains of some very ancient monuments.

Malvern Hills, lofty mountains in the south-west part of Worcestershire, rising one above another, for about seven miles, and dividing that county from Herefordshire. On these hills are two medicinal springs. They run from north to south, the highest point 1315 feet above the surface of the Severn at Hanley, and appear to be of limestone and quartz. On the summit of these hills is a camp with a treble ditch, supposed to be Roman, and situated on the Herefordshire side of the hills.

Malvern, Little, a town of Worcestershire, seated in a cavity of the above hills, three miles from Great Malvern. It had an elegant abbey and church. Henry VII., his queen, and his two sons were so delighted with tliis place, that they beautified the church and windows, part of which remain, though mutilated. In the lofty south windows of the

church are historical passages of the Old Testament; and in the north windows are pictures of the principal events of our Saviour's life, from his birth to his ascension. Our Saviour's passion is painted in the east window of the choir, at the expense of Henry VII., who is represented with his queen. In the west window is a noble piece of the day of judgment.

MALVERSATION, w. s. Fr. malvtnalion. Crookedness of conduct ; artifice; trick.

The malversation of the unjust steward is not exhibited for our imitation, but his prudence.

J.essoiii of PriiJence.

MALVEZZI (Virgil), marquis of Malvezzi, was born at Bologna in 1.599, and became LIˆ.D. in 1619. lie was well versed in literature, music, law, physic, and mathematics. He served also in a distinguished post in the army of Phi-lip IV. of Spain, and was employed by him in some important negociations. He died at Bologna, in 1654, leaving several works in Spanish and Italian. His Discourses on the First Book of Tacitus have been translated into English.

MALUS (Stephen Louis), a military engineer in the French service, was born at Paris in 177.ˆ>. At seventeen years of age he produced a tragedy on Tiie Death of ("ato, but chiefly devoted himself to the mathematics, and was admitted into the school of engineers. When, however, he was about to obtain a commission some political obstacle occurred, and he entered the army as a private soldier. Shortly after, his abilities being observed, he was .sent to the Polytechnic school, of which he became a professor, and accompanied the expedition of Buonaparte to Egyjil,

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as an officer of engineers. Having on his return called tlie attention of the Institute of France to the phenomenon of double refraction, tliey made it the subject of a prize, whicli Malus gained ; and made some important experiments on the polarity. This gained him admission into the Institute. He also wrote a memoir on a discovery he made of a branch of the Nile, forming part of the first volume of La Decade Egypti-enne. Malus died in 1812.

MALWAH, a province of Ilindostan, situated between 22° and 23° of N. lat. On the north it is bounded by Ajmeer and Agra, on the east by Allaiiabad and Gundwaneli, on the south by Khandeisli and Berar, and on the west by Ajmcer and Gujerat, being in length about 250 miles, and in breadth 1,50. Till recently it was in the occupation of the Mahrattas, and con-lamed the capitals of Dowlet Row Scindia, and ilolkar. Numerous rivers have their sources here : as the Chumbul, Narbudda, Sopra, and Cane: the land is fertile, the soil being in general a fine black mould, and produces cotton, indigo, opium, sugar, fine tobacco, and all the grains of India. Here is also pasture for numerous herds of cattle, and flocks of sheep. It has two harvests, the first or superior ending in April, the second in October. The tobacco, jjarticularly that of the district of Bilsah, is carried to all parts of the east.

Bickermajeet, a famous rajah of Hindostan, reigned over Malwali, and overran so many other provinces, that the Hindoos have adopted his reign as one of their eras. It commenced fifty-seven years before the birth of Christ. His capital was about a mile to the northward of Oujain. The Mahommedans conquered this province in the middle of tlie thirteenth century; but on the death of the emperor Balin, in 12H6, Dilavur Klian rebelled, and laid the foundation of an independent kingdom, which lasted upwards of 170 years. Its capital was Mundu, an extensive city, situated in the hills, south of (Jujain. Malwah was subdued by the Mogul emperor Homayon, in the year 1534, and remained annexed to Delhi till after the death of Aurungzebe in 1707, when it was by degrees taken possession of by the Mahrattas, by whom it was divided into several states. See Maii-iiAiTAS. The ancient landholders, called Gras-siab, yet retain possession of some of the hill forts.

MAM, H. 5. \ Lat. maiinnu; Gr. fiaufxa;

Mamie’, ‘ Arab, and Heb. mam ; Pers. mu—

Mamma’, ima. All the eastern, and most

Mam’mkt. ˆ of the northern languages, have this kind of compellaiion for mother: manomet is a doll or puppet.

Kate ! this is no world

To play with mammets, and to tilt with lips.

aluiksjirare. Poor Cupid sobbing scarce could speak ;

indeed, jiiuniiiia, 1 did not know ye; Alas ! Iiow easy my mistake, ,1 took you for your likeness Chloe. Piiar.

Little masters and misses are great impetlimenls to servants ; the remeily is to briiie them, that they may not tell tales to papa and mumma. Swift.

And now she works her mamie’s wark.

And aye she sighs wi’ care and pain ; Yf’t wistna what her ail miu’ht he,

Or what wad niak her weel again. Bums.

MAMBllUN (Peter), a learned French Je-suit, born in Clermont in 1581. He was one of the most perfect imitators of Virgil in Latin poetry, and his poems are of the same kind. Thus he wrote Eclogues, Georgics, together with a heroic poem entitled Constantine, or Idolatry overthrown. He showed also great critical abilities in a Latin Peripatetical Dissertation on Epic Poetry. He died in 1661.

MAMERTINI, a mercenary band of soldiers who passed from Campania into Sicily at the request of Agathocles. When they were in the service of Agathocles, they claimed the privilege of voting at the election of magistrates at Syracuse, and had recourse to arms to support their demands. The sedition was appeased by some leading men, and the Campanians were ordered to leave Sicily. In their way to the coast they were received with great kindness by the people of Messana, and soon returned perfidy for hospitality. Tiiey conspired against the inhabitants, murdered all the males in the city, married their wives and daughters, and rendered themselves masters of the

place. After this violence they assumed the name of Mamertini, and called their city iMamertum, or Mamertium, from a provincial word which in their language signified martial or warlike. The Maraerlines were afterwards defeated by Hiero.

MAMM/E. See Anatomy, Index.

MAMMALIA, in natural history, the first class of animals in the Linnean system, divided into seven orders. See Zoology.

MAMMOCK, 71. s. & V. a. Span, machan, or Ital. muccarl, to pound ; beat small. A shapeless mass : to break, or tear to pieces.

I saw him run after a gilded butterfly ; and he did so set his teeth, and did tear it! Oh, I warrant, how he mammockt it. Shak < peare. Coriolaiius.

The ice was broken into large mammocks.

Jameis Voltage.

MAM'MON, n.s. (Gr. /tainwvac, of Heb.

Mam'monist. S TOK. niches. Milton naakes him a fallen angel, but few retain more power.

Ye cannot serve God and niammon. Matt. vi. 24.

MdiiiiiKm is so proud a boaster, that his clients, which believe in him, cannot chuse but be confident of him ; for what doth he not brag to do ? Vet, if we weigh his power aright, we shall conclude of mammon, as Paracelsus doth of the devil, that he is a base and beggarly spirit. Bp. Hall.

That great mammonist would say, he is rich that can maintain an army ; a poor man would say, according to that Italian inscription, ' He is rich that wants not bread.' Id.

MAMMOTH, Mammuth, or American elephant, a huge animal, now unknown, if not extinct, to which have belonged tusks, bones, and skeletons of vast magnitude, which have been often found in different parts of Siberia, Russia, (iermany, and North America. Many specimens of ihein are seen in the Imperial cabinet at Petersbnrgh; m the British, and Dr. Hunter's museums, and in that of the Royal Society. Mr. Pennant thinks it ' more than probable, that it still exists in some of those remote parts of the vast new continent, impenetrated

yet by Europeans.' The Ohio Indians have the most absurd and ridiculous traditions respect. ng it, and pre-

tend lliat it rtquireJ an exerlioii of even omnipotent power to txtirpate them. Sir Hans Sloane, Ginelin, Daubenton, Buffon, and other eminent naturalists, are of opinion that these prodigious bones and tusks have really belonged to elephants; and many modern philosophers have held the mammoth to be as fabulous as the centaur. The great difference in size they endeavour to account for as arising from difference in age, sex, and climate: and the cause of their being fouud in those northern parts of the world where elepiiants are no longer natives, nor can even long exist, they attribute to the great revolutions which have happened in the earth, by earthquakes and inundations. In 1767 Dr. Hunter, with the assistance of his brother Mr. J. Hunter, investigated more particularly this part of natural history, and proved, that these fossil bones and tusks are not only larger than the generality of elephants, but that the tusks are more twisted, or have more of the spiral curve, than elephants' teeth ; and that the thigh and jaw bones differ in several respects from those of the elephaat : but what put the matter beyond all dispute was the shape of the grinders, which clearly appeared to belong to a carnivorous animal, or at least to an animal of the mixed kind ; and to be totally different from those of the elephant, wmcu is well known to be of the graminivorous kind. North America seems to be the quarter where the remains abound most. On the Ohio, and in many parts farther north, tusks, grinders, and skeletons of unparalleled magniiude, which can admit of no comparison with any animal at present known, are found in vast numbers, some lying on the surface of the earth, and others a little below it. A Mr. Stanley, taken prisoner by the Indians near the mouth of the Tennessee, relates, as Mr. .Tefferson informs us, that after being transferred through several tribes, from one to another, he was at length carried over the mountains, west of Missouri to a river which runs west ; that tlsese bones abounded there ; and that the natives described to him the animal to which they belonged as still existing in the northern parts of their country. Bones of the same kind have been

found some feet below the surface of the earth, in salines on the north Holston, a brancli of the Tennessee, about lat. 36° 30’ N. Where-ever the grinders are found, there also we find the tusks and skeleton ; but no skeleton of the hippopotamus nor grinders of the elephant. Mr. .Jefferson urges the following among other decisive arguments, that the mammoth is quite a different animal : 1. ‘ The skeleton of the mammoth Ijcspeaks an animal of five or six times the cubic volume of the elepliant, as M. de Buffon has admitted. 2. The grinders are five times as large, are square, and the grinding surface studded with four or five rows of blunt points : whereas those of the elephant are broad and thin, and their grinding surface flat. 3. 1 have never heard an instance of the grinder of an elephant being found in America. 4. From the known temperature and constitution of the elephant, h(> could uevei have existed in those reirions where the remains of the mammoth have been found. The elephant is a native only of the torrid zone

and Its vicinities : if, with the assisance of warm apartments and warm clothing, he has been preserved in life in the temperate climates of Europe, it has only been for a small portion of what would have been his natural period, and no instance of his multiplication in them has ever been known. But no bones of the mammoth have been ever found farther south than the salines of the Holston, and they have been found as far north as the arctic circle.’ Mr. Jetferson concludes, that, ‘ To whatever animal we ascribe these remains, it is certain such a one has existed in America, and that it was the largest of all the terrestrial beings of which any traces have ever appeared.’ Notes on the State of Virginia, p. 65. MiiMMOTH Cave, a stupendous cavern of Kentucky, near Green River, 130 miles S.S.W. of Lexington. An interesting account of it has been published by Dr. Nahum Ward. Having determined to explore this subterranean phenomenon, he provided himself with gufdes, lamps, a compass, and refreshments, and descended a pit about forty feet deep, which leads to the mouth of the cavern. This is about forty or fifty feet high, and thirty feet wide, but soon grows narrower, after which it expands again to nearly the same width, but only about half the height, which dimensions it preserves for about a mile, when it reaches the first hoppers, where a manufacture of saltpetre lias lately been established. From this place to the second hoppers, about two miles from the entrance, the widtli of the gallery is forty feet, and its height sixty. Along nearly the whole of this length walls have been built, of loose limestone, and the bottom is smooth and hard. In all the galleries, indeed, which the Dr. traversed, the sides were nearly perpendicular, and the arches regular,

and so strong that they have even withstood the shocks of earthquakes. In 1802 these phenomena were severely felt in this part of Kentucky ; and the workmen stationed at the second iioppers, about five minutes before each shock, heard a heavy rustling noise, like a strong wind, rushing from the cave. Wiien that ceased, the rocks cracked, and the whole appeared as if upon the point of immediate destruction. Large rocks also fell in some parts of the cavern, but none of the men were injured.

I'rom this part the passage runs for about a mile towards tlie west, and then clianges to south-west till it reaches the chief area or city, about six miles from the mouth of the cave. I'rom tiie second hoppers to this place the gallery is nearly 100 feet high, and of a corresponding width. The floor is level, and is covered with loose stones and saltpetre earth. Dr. W. then observes, ' when I reached this immense area (called the chief city), which contains upwards of eight acres, without a single pillar to support the arch, which is entire over the whole, 1 was struck dumb with astonishment. — Nothing can he more sublime and grand than this place, of which but a faint idea can be conveyed, covered with one solid arch, at least 100 feet high, and to all ap- [)eaiance entire.' Having explored this area, five passages were found leading from it, and varying in width from sixty to 100 feet, and generally about forty feet high.

The first of these galleries they entered, after several winding avenues, tiie extent of whicii tiiey estimated at five miles, brought tiiem again to tiie city. Here they rested a short time, and, having trimmed their lamps and taken some refreshments, they entered another of tlie openings, and after about two miles arrived at the second city. This was covered witii a single arch, nearly 200 feet liigh in the centre, and was similar to the great area they had just left, except in liaving only two outlets instead of five. One of these they entered, which, after nearly a mile, brought them to a third area, whicli was a square of ai)out 100 feet each way, and fifty in heigiit, with a stream of pure water issuing from one side of the well, about thirty feet high, and

falling upon a broken surface of stones, where it was lost. A few yards beyond this sheet of water, the party found the end of the avenue. Having returned a short distance, they entered another gallery wliich branched from that they had passed, and after having traversed this and another passage uncommonly black, for more than a mile, a steep ascent brought them to the fourth city, which was not inferior to the second, and was canopied by an arch that covers at least six acres. In this last avenue, the extremity of which they thought could not be less than four miles from the chief city, and ten from the mouth of the cave, tliey found more than twenty large piles of saltpetre earth on one side, and heaps of broken limestone on the other, which were evidently the work of human hands. Having returned once more to the chief area, though past ten at night, the Dr. entered the fifth and last avenue that leads from it, and, proceeding about 900 yards, he reached the fifth area, the arch of which covers more than four acres of level ground, strewed with limestones, and having fire-beds of uncommon size, with brands of cane interspersed. Another avenue, on the opposite side, led to one of much greater dimensions, the walls of which were more perfect tlian they had yet been seen. This was level, and about a mile and a lialf long, and covered with an elegant arch. Towards the end a kmd of vertical passage was found, which led into a chamber at least 1800 feet in circumference, and the centre of its arch 150 feet high. It was midnight when the Dr. entered this chamber of eternal darkness, and when he reflected that he was several miles buried in the recesses of this awful cavern, which most likely had been the grave of millions of human beings, he felt a kind of shivering horror at his situation. The avenue or passage that led to the opposite side of this chamber was as large as any of the others lie had passed through ; but, after having been sixteen liours in the cave, his lights were almost exhausted, and he could not trace it to its source; he therefore made the best of liis way to the chief area, trimmed his lamps for the last time, and reached the entrance of the cavern about three in the morning, after nineteen hours constant fatigue. The air of the interior is rendered very pure by the nitre contained in the cave ; and the Dr. says his pulse beat stronger, but not so quick, while he exhaled it, as when he breathed tlie atmospheric air. It is supposed that the Green Kiver, a stream which is navigable for several

hundred miles, passes over three of the branches of this noted cave, yet no sympton of its oosing tlirough the strata seems to have been discovered. Here Dr. W. observes, that he has scarcely described half the cave, as he has not given any account of the avenues that branch oft' between the mouth and the second hoppers. These include many

passages and galleries, some of which have obtained particular names ; as the ‘ Glauber-salt room,’ from the salt of that kind being found there; tlie sick-room, the flint-room, and the bat-room, with a winding passage that branches off” near the second lioppers, and runs between the west and tlie south for nearly two miles. This is called the ‘haunted chamber,* from the echo that is heard within it. The arch is beautifully in-crusted with limestone spar ; and in many places elegant columns of the same materials extend from the top to the floor. Near the centre of this chamber there is a dome apparently fifty feet high, which appears as if hung with drapery fes-tooned in tlie most fanciful manner, and reflecting the light of tlie lamps in the most brilliant colors. In the vicinity of the ‘ haunted chamber’ a cataract is heard ; and, at the extremity of the avenue, is a reservoir of water, very clear and grateful to tlie taste, but without any apparent outlet. Near tliis were found columns of the most brilliant description, sixty or seventy feet high, and standing in basins of water, which tlie Dr. considers unrivalled. He brought with him a mummy from the second hoppers, whither it had been removed from another cave for preservation. It was presented to him by his friend Mr. Wilkins, the proprietor of the cavern, with its apparel, jewels, music, and whatever was about it, and is now in the Washington Museum.

This is certainly one of the most singular and stupendous caverns yet discovered ; but whether the gloom through which tlie Dr. must have seen the large areas he describes (having only two lamps) may not have induced him to think them greater than they really are, must he left for the judgment of the rea<ler ; one fact deserves particular attention, it is that he traversed the cave with very little intermission for nineteen hours, a fact of itself that gives it an indisputable claim to the most extensive subterranean wonder yet known.

INIAINIORE, a large river of Quito, in the province of Moxos. According to some accounts it has its rise in an interior lake, and, after being joined by various rivers, enters the Madera on the west side, in lat. 11° 55’ S. ; by other accounts it assumes the name of Madera, after passing 14° of S. lat. There is also a river of this name in the province of Santa Cruz de la Sierra.

MAMORONI, a river of South America, in the plains wiiich border the Amazons. It runs east, and enters the Madera.

MAMKK, an Amorite, brother of Aner and Eshcol, and friend of Abraham. (Gen. xiv. 13). See Aner. Mamre dwelt near Hebron, and communicated his name to great part of the country round about. Hence we read (xiii. 18, xxiii. 17, &C-) that Abraham dwelt in Mamre,

and in the plain of Mamre. But it is observed, that what we translate the plain should be rcn-

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vlered tlie oak, of Mamre, because the word elon signifies an oak or tree of long duration. Sozo-nien says, that this tree was still extant, and famous for yjilgrimages and annual feasts, even in Constantine's time; that it was about six miles from Hebron ; that some of the cottages which Abraham built were still standing near it; and that there was a well likewise of his digging, whereunto both Jews, Christians, and Heathens, did at certain seasons resort, either out of devotion or for trade, as a great mart was held there. To these superstitions Constantine the Great put a stop.

Sax.man, mon; Goth.

MAN, n. s. Sc V. a. " Man'-eater, 71. s. Man'ful, adj. Man'fully, adv.

Man'fULNESS, 71. $.

Man'iiatek, Man'head, Man'hood, Man'ikix, Man'killer, Mankind', Man'less, adj. Man'like, Man'lixess, n.$. Man'ly, adj. Man'nish, Man'quelleu, Man'slaughter, Man'-slayer, Men, plu. Men-pleaser. man (Belg. mamiiken)

Swed. and Arm. 7nan ; perhaps of Goth, munnc, 77iag«, strength. A human being ; and used generi-cally for all mankind : a human being of the male sex ; a full grown human male; a servant, or attendant : a term of J^familiar address ; any one ; a well-qualified or wealthy man : hence, perhaps, ' a man of war,' a ship well qualified in this way : to man is to furnish, guard, assault, or strengthen with men ; to attend ; to tame (as a hawk, particularly). Manikin is a diminutive mannish, masculine ;

bold : man-queller, a man-killer, or murderer

manslaughter is explained at length below : the

other compounds seem obvious in their meaning.

What profitith it to a man if he wynne al the world and suffre peyring of his soul ? or what chaungyng schal a man give for his soul ?

Widif. Matt. xvi.

But whanne the benygnyte and the manheed of our sauvyour god apperide, not of werkis of rightwise-nesse that we diden, but bi his merci he maad us saaf.

Id. Tyte iii.

Every man child shall be circumcised.

Gen, xvii. 10.

Cities for refuge for the manslnyer. Numbers.

Thou art but a youth, and he a man of war. from his youth. 1 Sam. xvii. 33.

God hath made muw upright; but they have sought out many inventions. Fxcles. vii. 29.

Servants be obedient to them that are your masters : not with eye-service, as men-plcusers ; but as the servants of Christ, doing the will of God from the heart. Eph. vi. 6.

Al her limmis so wel answering Werin to womanhodc, that creature
Was never lesse mannishe in seeming.

Chaucer. Troilus and Crescide.

Manners maketh man. William of Wickam.

The whole pleasure of that book standeth in open mansla lighter and bold bawdry. Ascham.

Wits live obscurely, men know not how; or die obscurely, men mark not when. Id.

Such a right manlike man, as nature often erring, yet shows she would fain make. Sidneii.

Nature had proportioned her without any fault ; yet altogether seemed not to make up that harmony that Cupid delights in ; the reason whereof might seem a wannish countenance, which overthrew that

lovely sweetness, the noblest power of womankind, far titter to prevail l)y parley than by battle. Sidneij.

Nothing so hard but his valor overcame ; wliich he so guided with virtue, that although no man was spoken of but he for manliood, he was called the courteous Amphialus. Jdˆ

W'hat a piece of work is man ! TIow noble in rea-son ! How infinite in faculties ! In form and rnovino-, how express and admirable ! Sliakspeure.

My brother's servants Were then my fellows, now they are my 7nen. Id. I had so much of inan in me, But all my mother came into mine eyes. And gave me up to tears. Id. Henri) V.

You may partake of any thing we say : We speak no treason, man. Id. Richard III.

Bring forth men children only! For thy undaunted metal should compose Nothing but males. Id. Macbeth.

I dare do all that may become a man ; Who dares do more is none. *(*.

There would this monster make a man ; any strange beast there makes a man. Id. Tempest.'

Your ships are not well manned ; Your mariners are muleteers, or reapers.

Shakspeare. See, how the surly Warwick itians the v/all. Id.

Man but a rush against Othello's breast, And he retires. ,. Othello,

A mankind witch ! hence with her, out o' door : A most intelligency bawd ! Id. Winter's Tale.

As did /Eneas old Anchises bear, So I bear thee upon my manly shoulders.

Sliakspeare. I slew him manfullii in fight. Without false 'vantage, or base treachery. Id. Tetchy and wayward was thy infancy ; Thy school days frightful, desp'rate, wild, and furious ; Thy prime of manhood daring, bold, and venturous.

Id. A woman, impudent and mannish grown. Is not more loathed than

an effeminate man. Id. Such gentlemen as are his majesty's own sworn servants should be preferred to the charge of lug majesty's ships ; choice being made of men of valour and capacity rather than to employ other 7iieii's 7nen. Raleigh's Essays. Their ships go as long voyages as any, and are for their burdens as well manned. Id.

In Seth was the church of God established ; from whom Christ descended, as touching his manhood.

l{alii,,h. Plato witnesseth, that soon after mankind began to increase they built many cities. Id.

lie had manned it with a great number of tall soldiers, more than for the proportion of the castle.

liacon. Sir Walter Raleigh was wont to say, the Spaniards were suddenly driven away with scjuibbs , for it was no more but a stratagem of fire-boats mantf.is, and sent upon the Armada at Calais by the favour of the wind in the night, that put them in such ter-ror, as they cut their cables. Id.

It hath been agreed, that either of them sliotdd send certain ships to sea well manned, and ap])aielled to fight. Haiiward.

They distil their husbands' land In decoctions, and are manned With ten enipiricks in tiieir chamber, Lying for the spirit of amber.

Ben .fonsmi's Forest. A Flemish man of war lighted upon them, and overmastered them. Carew's Surini of Cornwnll.

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Artemisia behaved herself manfully in a great fight at sea, when Xerxes stood by as a coward.

Abbot. Glasses that are once cracked, are soon broken : sucli is a tjKni'* good name, once tainted with just reproach. Bp. Hall.

\ navy, to secure the seas is manned; And forces sent. VauieVt Civil War.

1 and my man will presently go ride Far as the Cornish mount. Cnuleu.

No man shall dare to say at doomsday unto God. that he made him to sin, or made it unavoidable.

Jer. Taylor. In man the god descends, and joys to find The narrow image of his greater mind. Creech. He thought fit that the king's affairs should entirely be conducted by the soldiers and men of war.

Clarendojt. Advise how war may be best upheld. Manned by her two main nerves, iron and gold, In all her equipage. Miltun.

Erewhile perplexed with thoughts what would be-come Of me and all mankind ; but now I see His day, in whom all nations shall be blest. Id. Not therefore joins the Son Maiilwnd to Godhead, with more strengtli to foil Thy enemy. Id. Paradise Lost.

To overcome in battle, and subdue Nations, and bring home spoils with infinite Mandaaghter, shall be held the highest pitch Of human glory. Id.

A handful It hath devoured 'twas so manful. Hudibras. They tnan their boats, and all their young men

arm. Waller.

A man in an instant may discover the assertion to be impossible. More's Divine Dialogues.

What poor man would not carry a great burthen of gold to be made a man for ever ! Tillotsnn.

He is a good-natured inan, and will give as much as a man would desire. Stillingfleet.

A creature of a more exalted kind Was wanted yet, and then was man designed. Conscious of thought. Drydcn's Ovid.

Ceneus, a woman once, and once a mitn, But ending in the sex she first began.

Id. Mneid. .Serene and manlii, hardened to sustain The load of life, and exercised in pain. Dryden.

'Tis in my pow'r to be a sovereign novv,_ And, knowing more, to make his manhood bow.

Id. To kill manhillers man has lawful power, Kut not the extended licence to devour. Id.

When mannish Mevia, that two-handed whore, ,\stride nn horseback hunts the Tuscan boar. Id.

A combination of the ideas of a certain figure with the powers of motion and reasoning joined to substance, make the ordinary idea of a vian.

Lock*. Young master, willing to shew himself a man, lets himself loose to all irregularities ; and thus courts credit and manliness in the casting off the mod«ˆsty he has till then been kept in. (.

He that witli thisChristian aimour manfully fiˆhta against, and repels, tlie temptations and assaults of ills spiritual enemies ; he that keeps his conscience void of offence, shall enjoy peace here, and for ever. Jiay 0)1 the Creation. The summons take of the same trumpet's call. To sally from one port, or man one publick wall.

Tate. The pleasure of the religious man is an easy and portable pleasure, such an one as he carries about in

his bosom, without alarming either the eye or the envy of the world. South.

Will reckons he should not have been the man he is, had not he broke windows, and knocked down constables, when he was a young fellow.

Addison's Spectator.

The 'enetians could set out thirty men of war, a hundred gallies, and ten galeases ; though I cannot conceive how they could man a fleet of half the number. Id. on Italy.

What hinders then, but that you find her out. And hurry her away by manly force? Id. Cuto.

Theodosius, having manned his soul with proper reflections, exerted himself in the best manner he could, to animate his penitent. Id. Spectator.

On human actions reason though you can.

It may be reason, but it is not man.

Pope’s Epistles. All mankind alike require their grace. All born to want ; a miserable race.

Id. Odyssey. By fraud or force the suitor train destroy.

And, starting into manhood, scorn the boy. Pope.

A long time since the custom began, among peo-ple of quality, to keep men cooks of the French na-tion. Su-ift.

How is it possible to expect that mankind will take advice, when they will not so much as take warning I Id.

In matters of equity between man and man, our Saviour has taught us to put my neighbour in the place of myself, and myself in the place of my neighbour. Watts’s Logick.

Whenever man is put over men, as the better nature ought ever to preside in that case more particularly, he should as nearly as possible be approximated to his perfection. Burke.

It is not from his form, in which we trace Strength joined with beauty, dignity with grace, That man, the master of this globe, derives His right o(empire over all that lives. Cowper.

Man, the head of the animal creation, is a being who feels, reflects, thinks, contrives, and acts ; who has the power of changing his place upon the earth at pleasure ; who possesses the faculty of communicating his thoughts by speech ; and who has dominion over all other creatures on the face of the globe. Animated and enlightened by a ray from the divinity, he surpasses in dignity every material

being. He spends less of his time in solitude than in society, and in obedience to those laws which he himself has framed. See Homo; and Anatomy, an article devoted of course to the human anatomy, principally.

The Isle of Man is situated in the Irish Channel, within sight of the three kingdoms of England, Scotland, and Ireland, at the distance from the point of Ayre, its north point, to Bees-head in Wˆales, of ten leagues ; from the same point of Ayre to Burrovvhead in Scotland of five leagues; and from the south-west coast to Kerry Point in Ireland of nine leagues. Snaflfield Hill, near the east coast, is the highest point of the island, being 1740 feet above the sea.

The island is ten leagues long, and three to four broad, containing about 30,000 inhabitants in seventeen parishes. The hilly tracts afford only pasture, but the low land is well cultivated. It has mines of iron, lead, and copper, none of which are worked ; but the quarries of marble, slate, and building stone, particularly the last

two, are produotivt;. The climate differs little from that of the north of England, and is generally healthy.

In the middle ages the Isle of Man was the rendezvous of the Scandinavian pirates, in their descents on the neighbouring toasts of Great Britain and Ireland, and the kings of Man were for some centuries masters of these seas. About 1623 Alexander king of Scotland, having defeated the Danes, obliged Owen, or John, king of Man, to do homage, and the island continued tributary to Scotland till reduced by Edward I.; since when the kings of England have been the paramount sovereigns, though it continued to be governed by the descendants of its Danish princes until Edward III. dethroned the last queen, and bestowed the island as a fief on Montagu earl of Salisbury, whose honors and estate being forfeited, Henry bestowed]\Ian first on the Percy family, which being also attainted, then on Sir John Stanley, earl of Derby, whose descendant earls of Derby enjoyed it till by failure of heirs male it devolved on the duke of Athol, as husband

of the sister and heiress of the last earl of Derby.

The position of this island, between the three kingdoms, long rendered it the emporium of smuggling, on which account the British government in 1765 pjurchased the regalities of the island from the duke of Athol for £70,000, the duke retaining his territorial property, and the island some of its privileges, particularly that of freedom from arrest for debts contracted in England, and hence it is the asylum of many insolvent debtors. The Manks language, still spoken by the common islanders, is a corrupted Erse.

The island, besides herrings, exports some corn, cattle, butter, bacon, lead, kelp, coarse linen, and spun cotton. Barley and oats are raised in considerable quantities ; and the Laugh-ton breed of sheep in this island is admired for its wool. Poultry of all kinds is also cheap and abundant. The boats engaged in the herring fishery exceed 400 in number, and are called, collectively, the Manks fleet, and are under the command of an admiral and vice-admiral, who are annually chosen for the season, and receive a small allowance from government. These boats seldom exceed eight tons burden, and cost, with the whole of their outfit, about eighty guineas each. The fishery generally occupies 4000 or 5000 of the male population, in whose absence, their wives and children attend to the labors of the field, particularly the culture of potatoes. The fishermen shoot their nets at night, one edge being buoyed up by inflated bladders, made of dried skins, and smeared over with tar. The herrings are caught in such numbers that a boat frequently returns with 2,i,000 or 30,000 ; and one successful night's fishing, of the whole fleet, sometimes yields a produce of from £'3000 to £,'R)00 in value.

The Isle of Man is now subject to the king of England as land proprietor, and is ruled by a governor, a council of public affairs, and the house of keys, the representatives of the people. These together form what is called a Tynwald court, whose accordaˆnce is essential to every legislative act. The members of the house of Vol. XI n.

keys are twenty-fuur m number. They were at one time elected by the piˆ.ople, but now form a permanent self-elected body. For the administration of justice, the island is divided into two districts, over which preside the two deemsters, or chief judges of the island, who are officers of great dignity, the cue in the northern, the other in the southern division, and each holding a court of justice weekly. These districts are subdivided into six sheadings, over each of which is

appointed a coroner, with very extensive powers, analogous in many respects to those of our sheriffs. The other courts are the court of chancery, the court of general jail delivery, the court of exchequer, the common law court, the court of admiralty, and the courts of the high bailiffs at the four towns; and from these courts an appeal lies to the house of keys, to the staff of government, and to the king in council. The whole island is under the ecclesiastical jurisdiction of a bishop, who is styled bishop of Sodor and Man, is sole .baron of the isle, and possesses other important privileges. All exports to Great Britain and Ireland are duty free, as are all imports for the use of the manufactures. Castletown, the seat of the government, is at the south-east extremity, and is a neat town with wide and clean streets ; in the middle of the town is Castle Rusher, a magnificent fortress of freestone, the ancient residence of the kings of Man. Douglas, at the mouth of a rivulet, is the most populous and commercial place in the island, having 4000 inhabitants, and a good pier haven for vessels of 500 tons. The bay also affords shelter in winds from nortli-west to south. There is a handsome lighthouse on the pier. Ramsea is a neat town of 300 houses at the north-east side of the island, at the mouth of the river Selby, which falls into a fine bay sheltered from all winds but north-east, having on the south Maughold's Head, a bold rocky promontory, under which is a celebrated well. In this bay an excellent port might be made for the largest ships, by running out a mole to a rock. Small craft enter the Selby, and lie dry at low water. Here is a liˆht-'-ouse, Laxey is a group of cottages in a glen at the bottom of a creek, opening into an extensive bay, which might be made a good harbour. Peel, on the west side of the island on the river Neb, is a neat town of 280 houses; the south extremity of its bay is bounded by Peel Island, with a castle and the ruins of a cathedral.

Derby Haven, on the south-east end nortii of Castletown, is formed by St. Michael's Island, joined to the main island by a causeway 100 yards long. Off the south end of the island is the islet called the Calf of Man, three miles in circuit, and surrounded by rocks. Here a great number of sea fowl are found.

M.\NAAR, an island ofl" tlic north-west coast of Ceylon, to which it is almost united at low water. A bank of sand also runs from it to Rarniseram, twelve leagues off, called Adam's Bridre, said by the Hindoos to have been constructed by their god Ram, when he invaded Ceylon. Between these two islands small boats constantly ply. It was occupied by the Portuguese in the year 1560, and taken from them by the

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Dutch in 1658, who made it a place of banishment for criminals. Long 79 = ” 58’ E.,lat. 9° 6’N. MAN’ACLES, n, s. ˆ Fr. vianiclcs ; Lat. Man’acle, V. a. i w/flJiictf, from vianiis.

Chain for the hands ; shackles : to manacle is to bind with chains.

Doctrine unto fools is as fetters on the feet, and like manacles on the right hand. Ecclus. xxi. 19. For my sake wear this glove ; It is a manacle of love.

Shakspeare. Cumbeliiie. Thou Must, as a foreign recreant, be led With manacles along our streets.

Id. Coriolanus. I’ll manacle thy neck and feel together.

Shakspeare. The law good men count their ornament and protection ; others, their manacles and oppression.

King Charles. Learn, O vain men, that there is nothing but impotence, nothing but greaves and manacles in the freest sins. -Bjo. Hall.

Is it thus you use this monarch, to manacle and shackle him hand and foot ? ArbuUinot and Pope. MAN’AGE, V. a., v. n., & n.s. “ˆ Fr. meim-Man’ageable, adj. ger, menase—

Man’ageableness, n.s. [rie; of Lat.

Man’agement, n.s. Cmunn-agere ;

Man’ager, 1 Span, manc—

Man’agery. J ;■«?•. To conduct; train; guide; wield; continue; govern; husband : as a neuter verb, to superintend aflairs ; transact : manage is an obsolete synonyme of management, which signifies, guidance ; administration; and particularly able or prudent administration of affairs: managery is another(deservedly obsolete) synonyme of thisˆsignification : manageable is tractable ; easy to be managed.

He rode up and down gallantly mounted, managing his horse, and charging and discharging his lance. Knotles.

For the rebels which stand out in Ireland, Expedient manage must be

made, my liege, Ere further leisure yield them further means.

Shakspeare. In thy slumbers I heard thee innrmui tales of iron wars, Speak terms of numage to the hounding steed, fd. '5'oung men, in the conduct and manage of actions, embrace more than they can hold, and stir more than they can quiet. Bacun.

The conditions of weapons and their improvement are, that they may serve in all weathers ; and that the carriage may be light and manageable.

Id. Essays. The horse you must draw in his career with his manage and turn, doing the curvetto. L'eacham.

The court of Rome has, in other instances, so well attested its good managery, that it is not credible crowns are conferred gratis. Decay of Piety.

They who most exactly describe that battle, give so ill an account of any conduct or discretion in the managery of that affair, that posterity would receive little benefit in tlie most particular relation of it.

Clarendon. This name, or title, Sabaoth, primitively seems to import God's universal conduct and managery of all creatures. Barrow.

This disagreement may he imputed to the greater or less exactness or manageableness of the instruments employed. Boyle.

The fathers had managed the charge of idolatry against the heathens. StiUingJieet.

A prince of great asp'ring thoughts : in the main, a manager of his treasure, and yet bountiful, from his own motion, wherever he discerns merit.

Temple. There is no more to manage ! If I fall. It shall be like myself ; a setting sun Should leave a track of glory in the skies.

Dryden.

IMark with what management their tribes divide ;

Some stick to you, and some to t'other side. Id.

Tlie most severe censor cannot hut be pleased with the prodigality of

Ovid's wit ; though he could have wished, that the master of it had been a better manager. Id.

Whenever we take a strong bias, it is not out of a moral incapacity to do better, but for want of a careful manage and discipline to set us right at first.

L' Estrange. The conduct of our lives, and the management of our great concerns, will not bear delay. Locke.

The plea of a good intention will serve to sanctify the worst actions ; the proof of which is but too manifest from that scandalous doctrine of the Jesuits concerning the direction of the intention, and likewise from the whole manage of the late rebellion.

South. A skilful manager of the rabble, so long as they have but ears to hear, needs never enquire whether they have any understanding. Id.

Notwithstanding it was so much his interest to manage his protestant subjects in the country, he made over his principality to F' ranee. ylddison.

The manager opens his sluice every night, and distributes the water into the town. Id.

He had great management with ecclesiasticks in the view of being advanced to the pontificate.

Id. on Italy. Let her at least the vocal brass inspire, And tell the nations, in no vulgar strain, What wars I manage, and what wreaths I gam.

Prior. Long tubes are cumbersome, and scarce to be easily managed. Neuion.

A'ery long tubes are, by reason of their length, apt to bend, and shake by bending so as to cause a continual trembling in the objects, whereas by contrivance the glasses are readily manageable. Id.

Let us stick to our point, and we will manage]5ull I'll warrant you. Arbuthnot's John Bull.

An artful manager, that crept between His friend and shame, and was a kind of screen.

Pope, The wrong management of the earl of Godolphin was the only cause of the union. Swift.

They vault from hunters to the managed steed.

Voting. MANASSEII, Heb. r'^:y2, *i.e.* not forgotten, the eldest son of Joseph, and grandson of the patriarch .Tacob (Gen. xli. 50, 51.), was born A. M. 2290, and A. A. C. 1714.

Manasseh, the fifteenth king of Judah, the son and successor of Hezekiah. His acts are recorded in 2 Kings xx. xxi., and 2 Chron. xxxiii.

Manasseh, the Tribe of, the descendants of the patriarch. They came out of Egypt, in number 32,200 men fit for battle, upwards oˆ twenty years old, under the conduct of Gama-liel, son of Pedahzur. Numb. ii. 20, 21. This tribe was divided at their entrance into the land of Canaan. One half had its portion beyond

the Jordan, and the other half on this side of it. The half tribe of Mauasseh whicli settled be-yond the river possessed the country of Baslian, from the river Jabbokto mount Libanus (Numb. xxii. 33, 34, &c.), and the other half tribe of Manasseh, on this side Jordan, obtained for its inheritance the country between the tribe of Ephraim on the south, and the tribe of Isaachar on the nortii, having the river Jordan on the east, and the Mediterranean Sea on the west. Josh. xvi. xvii. MANATI, in zoology. See Tricuecus. MANATOULIN Islands, a series of islands, which stretch easterly from the western shore of Lake Superior, for 160 miles, many of them measuring from twenty to thirty miles in length, by ten, twelve, and fifteen in breadth, on some of which the land rises into considerable elevations. Long. 81° 50’ to 84° W., lat. 45° 20 to 45° 49’ N. MAN Bote, in the Anglo-Saxon laws, compensation for killing a man. In king Ina’s laws, rates are fixed for the expiation of this crime according to the quality of the person slain.

MANCA, in English antiquity, was a square piece of gold coin,

commonly valued at thirty pence : and mancusa was as much as a mark of silver, having its name from manucusa, being coined with the hand (Leg. Canut.) But the manca and mancusa were not always of that value ; for sometimes the former was valued at six shillings, and the latter, as used by the Anglo-Saxons, was equal in value to our half crown. Manca sex solidis aestimetur, Leg. II. 1, c. 69. Thorn, in his Chronicle, tells us, that mancusa est pondus duorum solidorum et sex denariorum ; and with him agrees Du Cange, who says, that twenty mancaj make fifty shilliigs. Manca and mancusa are promiscuously used in old books for the same money.

MANCENILLA, a large bay on the north of the island of St. Domingo, about 4000 fathoms long from west to east, and 2800 broad from north to south. ‘ The river Massacre, the former point of separation between the Spanish and French colonies on the north of the island, enters the east part of this bay, in long. 71° 50’ W., lat. 19° 50’ N.

MANCENION, i. e. the place of tents, an ancient town of South Britain, which stood on the site of the present Castlefield, near Manchester. Relics of the castle wall and ditch are still visible. Knock castle was the seat of the Ro-man castrum. See Manchester.

MANCESTER, a village in Warwickshire, anciently a Roman station on Watling Street, where ancient Roman coins are still found. It lies near Atherston.

MANCHA, La, a central province of Spain, lying to the soutii of Old Castile, and to the nortli of Andalusia. It is surrounded with mountains, and contains an area of 8000 square miles, and 206,000 inhabitants. It is divided into the Upper and Lower La Mancha ; the chief of the former being Ciudad Real, and of the latter Ocana. It has, however, no large rivers; tliough traversed by the Tagus, the Guadiana, and the Xucar, for none of them are of large size in this part of their course. The interior consists al-Tiost entirely of a barren flat, without trees,

shelter, or water. Tiie soil is a liglit sand, but wheat and barley are cultivated, thougli not sufficiently for the wants of the thinly scattered inhabitants. Tiie Mesa is a large fertile plain, and olives and the oak thrive in some places. The quantity of wine is also pretty large. Other vegetable productions are honey, saffron, and spartum or bass-weed, which is used in makino-mats. The flocks of sheep and mules are numerous ; but the traveller is generally conveyed in a cart drawn by

oxen, “rhe most extensive meadows lie between Ciudad Real and Santa Cruz de Mudela. Otlier principal towns are La Guardia, Almagro, Terrablique, and]Manzanares. The minerals are silver, iron, ochre, rock crystal, calamine, antimony, and cinnabar. The chief natural curiosity is the disappearance of the Guadiana under ground. See Guadiana. The manufactures are very limited ; but the spinning of wool gives employment to nearly 16,000 persons; and the yarn is exported. Lace is made at Almagro, soap at Ocana, and flannel at Almagro, Ocana, and Campo de Criptana.

MANCIIE, La, or the Channel, a department of the north-west of France, taking its name from the English Channel, by which it is bounded west and north. On the south-east it joins the departments of Calvados ; on the south that of lUe and Vilaine. Its superficial extent is 2500 square miles ; and its population 583,500. This department, comprising tlie western part of Normandy, is long and narrow, and contains a number of small towns and large villages. The face of the country is but partly hilly. The principal promontory is Cape la Ilogue. It is watered by the Taute, Vire, SouUe, Coesnon, and Douve, and has a few small lakes and marshy tracts. The climate is temperate, but humid : the products are corn, fruit, flax, and hemp. Of mineral productions salt is the most extensive ; but iron and copper are found. The department is well fitted for pasture, and accordingly rears great numbers of cattle and horses. A great quantity of cider is made, and the fisheries on the coast are prosecuted with success. The chief manufacture and export is linen; other articles of export are butter, cheese, horses, cattle, cider, and dried fruits. The department belongs to the fourteenth military division, to tiie diocese of Coutances, and the jurisdiction of the cour royale of Caen. It is divided into six arrondissements, *viz.* St. Lo (the capital), Cˆoutances, Cherburg, Valogne, Avranches, and Mortain ; which are subdivided into forty cantons, and 668 communes. St. Lo is the cai)ital, lint Cherburg liie largest town.

MANCHESTER, a market town in the hundred of Sal ford and county of Lancaster, tlie cliief emporium of tiic cotton trade, and the most considerable manufacturing town in the kingdom. In an historical point of view, the annals of Manchester are not important. Whitaker, however, considers it to have been an ancient British station, settled 500 years before the Christian era. After the invasion of this island by the Romans, it became one of the fortified retreats of the un-disciplined natives, and was called Mancenion, or ‘ the place of tents :’ Agricola, who conquered

it A. D. 79, changed its name to Mancunium ; afterwards written .Mandiiesueduin, and]Man-castie. The Romans built a noble castle on the spot still called Castle Field, situated near tiie conflux of the Medlock and Irwell ; but every vestige of the building has disappeared. After having retained it for more tlian four centuries, the declinin'^' fortunes of the empire compelled the Roman conquerors of Manchester to abandon it to its old possessors, who soon again yielded It to new conquerors and tyrants in the Danes and Saxons. ^Manchester was notv several times the scene of military contlict, being seated on the conlinesof the Northumbrian kingdom; and Edward the Elder, king of the Mercians, fortified and rebuilt a considerable part of it. In the time of William the Conqueror, according to the Domesday survey, two churches existed hpre, called St. Mary's and St. Michael's ; and Albert de Gresley obtained from the Conqueror the lordship of the manor. Ilis grandson Thomas granted, in 1301, a charter to 'his burgesses of Manchester,' constituting the town afreeboroui;h. Lord de la Warr, the last male heir of this family, laid the foundation of the collegiate church in 1422, and endowed it Liberally. This town was one of the eight places of sanctuary to which that privilege was confirmed by Henry V'HI. But in 1541 this privilege was removed toCiiester, which the statute says ' had a strong gaol and a mayor, and had not the wealth, credit, great occupings, and good order which Manchester had.' On the breaking out of the civil wars of Charles I's. reign, Manchester espoused the cause of the parliament, and resisted several sieges of the royal army. The inhabitants, however, seem to have rejoiced heartily in the restoration of Cliarles II.

The present town stands on both sides of the river Irwell, which receives the Irk at the north-west angle of the town, near the collegiate church. Salford is a distinct township, the Soutliwark of Manchester, with which it communicates by three bridges. The Old, ' Hanging,' or Salford Bridge, is supposed to have been a Roman foundation : the principal part of it was erected in the time of Edward III.; but in 1778 it underwent a thorough repair. There is Blackfriars

Bridge of wood, flagged with stone, for foot passengers only : and a very superior structure, called the New Bailey Bridge, which was founded in 1785, and constructed wholly of stone. It consists of three large arches, and a fourth of smaller dimensions, left open in support of the duke of Bridgewater's right to a towing path : in 1822 an act of parliament was obtained for improving Market Street, and building a fourth bridge across the Irwell from Water Street. There are six bridges also across the Irk, and nine over the Medlock, which runs through the south suburb : various other bridges cross branches of the canal navigation, which penetrate the town ; and at Knotmill, near the Cas-tle-(|ield, is a noble tunnel, through which the Rochdale Canal passes. Tlie town altogether is about two miles and a half long, by two wide ; divided into fourteen parocliial districts. It did not contain a fifth part of its present population, nor a twentieth part of its present wealth, at the commencement of the eighteenth century.

The Old Town is a motley assemblage of nar-row streets and new and old houses : even the streets of modern parts of Manchester have been injudiciously restricted in breadth; but, among the latter, Portland Place and Grosvenor Square rival those of London itself; Mosley Street is also of imposing appearance, and Ardwick Green, and Salford Crescent, are pleasant and genteel residences.

The collegiaˆte church is a handsome structure in the richer Gothic style, ornamented with a beautiful carved roof, rich remains of painted windows, and several family chapels Jtnd chan-t- ries. The collegiate body consists of a warden, four fellows, two chaplains, two clerks, four choristers, and four singing men ; and the great rise in the appropriated property has rendered it a very opulent ecclesiastical establishment. St. Mary's cliurch is also an elegant structure, built originally at the expense of the clergy of the collegiate church: the spire is much admired. The lantern is particularly striking, being composed of eight noble Ionic pillars, surmounted by a large globe, upon which is placed a massy cross. St. John's church is in the modern Gothic style. In the vestry are several pictures, and a beautiful window of stained glass. Two of the windows in the body of the church have also fine painted glass. Other churches worth notice are St. Paul's in Turner Street; St. James's in George Street; St. Michael's in Angel Street; St. Clement's in Lever Street ; St. Stephen's near Bolton Street; St. George's near Newton Lane ; and St. Peter's, which terminates the prospect down Mosley Street. At Salford are "Trinity church and St. Stephen's, besides a spacious Catholic chapel. Friends' meeting-house, and chapels, as in Manchester, for all the principal Dissenting

denominations.

The various excellent charitable institutions of Manchester evince that the benevolence and public spirit of its inhabitants have fully equalled their mercantile prosperity. Among these, Chetham's Hospital, commonly called the College, is first deserving of notice. It owes its existence and chief support to the munificent bequest of Humphrey Chetham, esq., of Clayton, by will dated the 16th of December 1651. 'The number of boys clothed and educated here amounted at first only to forty ; but, from an increase in the value of lae estates, the number was augmented more than forty years ago to eighty. The hospital is situated on a lofty rock, near the confluence of the rivers Irk and Irwell, immediately adjoining the collegiate church on the spot, where as Mr. Whitaker supposes, was placed the Roman prjetorium, or summer camp. Here is a public library, founded by Mr. Chetham, which now contains upwards of 15,000 volumes in almost every branch of science or literature, besides some valuable]\ISS. The infirmary, dispensary, lunatic hospital, and asylum, are included in one spacious building, in Lever's Row, the foundation of which was laid in 1753, for the reception of forty patients ; but the num-ber was soon afterwards doubled. The lunatic hospital was opened in 1766 ; the dispensary in 1792; the lying-in hospital in 1790. The an-nual subscriptions, for the support of these insti-MANCHESTER.

tutioiis, amount to several thousand pounds. Here are also two poor-houses, one of which was trected in 1792, on the side of the Irk, nearly opposite the college ; and the other built tlie year following, at the upper end of Grecngate in JSalford. Both of them are fine buildings, and admirably fitted up. Tlie free grammar school, endowed by Hugh Oldliam, bishop of Exeter, and a native of Manchester bears the name and appearance of a college. The new prison is a spacious biuldinjj, erected on the])lan of the piiilanthropic Howard. — Nor is ManLhcster de-iicient in literary institutions. Of the latter description is the literary and philosophical society, which was instituted in 1781, and has published several volumes of valuable Memoirs.

In 1767 was established the Manchester Agricultural Society ; it publishes annual reports of its premiums. Institutions connected with the])ublic business of the town are, the exchange, a very fine and spacious Doric building, fronting the marketplace in Exchange Street, and erected by subscription in 1808. In the lower floor is llie news-room, a magnificent hall, comprising an area of 4060 feet. The upper rooms, for public dinners, meetings, &c., are on a noble scale. The

portico is a beautiful Ionic building, built in 1803, and much frequented by professional gentlemen ; it contains a very commodious news-room. The theatre is a very neat building, and the company which performs very respectable. The circus, for equestrian exhibitions, is also a handsome erection. Here are two marketplaces, the old and the new, which are well supplied on Tuesdays and Saturdays; the latter is the principal, the former being mostly for transacting tlie manufacturing business of the town and country traders. The town is abundantly supplied with water from a reservoir, about two miles from the marketplace, containing, wlien full, upwards of 212,000 tons of water.

Of tiie manufactures, to which Manchester owes its opulence, by far the principal, and the source of most of the rest, is tliat of cotton ; of which the raw material is transported hither upwards of 2000 miles, most of it to be returned, in a finished state, to the place of its production. To perform its various operations, this trade has given birth in this place to the greatest and most complete system of machinery that ever existed ; and which besides employs, next to agriculture itself, more people than any other trade in tlie kingdom. Manchester is also the general depot from which the raw material is distributed through all parts of tlie district, and in wiiicli all this scattered merchandise is again collecled, when finished, into a centre, to be again exi);inded over a wider circle ; to be sent to Hull, Liverpool, and London, and thence all over the world.

The principal articles of manufacture here at present are velvets, velverets, fustians, dimities, calicoes, checks, tickings, jeans, shirtings, ging-hams,quiltings, handkerchiefs, nankeens, diapers, muslinets, muslins, cambrics, and every kind of fancy cotton, and cotton and silk goods. The spinning trade is becoming every year more extensive, and almost entirely performed by machinery, aided by a number of boys and girls. Ths

cotton, carried to the mill in its rudest state, is made to pass through a succession of rollers, spindles, &;c., and to undergo the various operations of cleaning, carding, drawing, stretching, and twisting, until the mass of chaotic fibres comes out a continuous thread of the utmost fineness, of very great strength, and of value augmented a thousand fold. \Veaving is also carried on to a great extent ; and power-looms, worked by machinery, have extended it considerably. Even the erection and keeping up of this various and complicated machinery is itself a source of very great business, and gives riss to

iron foundries, steam engine, and other factories, and works of a similar kind, as well as to the invention even of new machines. Of these the wire-card manufactory is one of the most curious. The printing, dyeing, and bleaching businesses are also carried on to a very great extent in and around Manchester; the hat manufacture, and several well-managed sulphuric acid, or oil of vitriol works. The silk manufacture has also been taken up here of late with great spirit.

Manchester, notwithstanding its extent and importance, is not a corporate town, the government being vested in a headborough, called the' boroughreeve, and two constables. These are chosen annually by a jury impannelled by the steward of the manor, at the courts leet, which are held by the lord of the manor twice every year at Easter and Michaelmas. The boroughreeve is usually one of the gentlemen who has served as constable for the preceding year. His chief duty is to preside at public meetings, and to distribute certain charities, all the judicial functions connected with the police being executed by the constables and deputies. A court of requests is held every month for the recovery of small debts; and every Wednesday and Saturday respectable magistrates sit in the court-room of the New-Bayley for the administration of justice in pleas of almost every description, whether civil or criminal. Quarter sessions also are held four times a-year. Manchester is 186 miles from London, by Derby and Leek, and 188 by Lichfield.

Manchester House, a factory of the Hudson Bay Company, 100 miles west of Hudson's House, and serenty-five south-east of Buckingham House, in the north-west part of Nortli America. It stands on the south-west side of Saskashawan River. Long. 109" 20' W., lat. 53° 14′ 18″ N.

MAN'CIIET, n. x. Fr. JWiVAf^.— Skinner : or more probably from Fr. manche, a sleeve. A small loaf of fine bread.

Take a small toast of manchet, dipped in oil of sweet almonds. Bacon.

I love to entertain my fiiends with a frugal collation : a cup of wine, a dish of fruit, and a munchct. Mare's Dittlogues.

MANCHINLEL tree. See Hippomani-,.

MAN'CIPATE, V. «. J Lat mancipo. To

]\Ian'cipaiion, n. s. i enslave; bind; tie. — Seldom used.

Although the regular part of nature is seldom va-ried, yet the meteors,

wliicii are in themselves more unstable, and less mancipnted to stated motions, arc oftentimes employed to various ends. itati\

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MANCll’ATK), a term used iii the ancient Roman law, which may be llms explained : — Every father i»ad such a regal authority over I’lis son, timt, before the son could be released from his subjection and made free, he must be three times over sold and bought, his natural fatlier being the vender. The vendee was called pater fiduciarius. After this ficticious bargain, the pater fiduciarius sold him again to tlie natural father, who could tiiun, but not till then, manumit or make liim free. The imaginary sale was called mancipalio; and tlie act of giving liberty or setting him free after this was called emanci-patio.

M.\NciPATio also signifies the selling or alienating of certain lands for money paid by weight, in the presence of five witnesses. This mode of alienation took place only among Roman citizens, and that only in respect to certain estates situated in Italy, which were called mancipia.

MA’NCIPLE, n. «. Lat. ?««?K-eps. The steward, or purveyor of a commv-iiity, pˆrticularly used of the purveyor of a college.

A gentil manciple was ther of a temple

Of wliicli acliatours mighten take ensemple

For to ben wise in byiag; of vitaille.

Chaucer. Cant, Tales.

Their manciple fell dangerously ill, Bread must be had, their grist went to the mill : This simkin moderately stole before, Their steward sick, he robbed them ten times more. Betterton’s Miller of Trompingham.

Manciple means also a clerk of the kitcben. An officer in the inner temple seems anciently to have been so called, according to the above extract from Chaucer, the ancient English poet, some time a student of that house.

MANCUS (from manu cusus), in antiquity, an Anglo-Saxon gold coin, equal in value to two solid i, and a half, or thirty pence, and in weight to fifty-five Troy grains. The first account of this coin that occurs in English history is about the close of the eighth century, in an embassy

of Kenwulf king of Mercia, to Leo III., requesting the restoration of the jurisdiction of the see of Canterbury : this embassy was enforced by a present of 120 mancuses. Ethelwolf also sent yearly to Rome 300 mancuses; and these coins are said to have continued in some form or other till towards the conclusion of the Saxon government. The heriots of the nobility are chiefly estimated by this standard in Canute's laws. It came originally from Italy, where it was called ducat ; and is supposed to have been the same with the drachma or miliarensis ˆcurrent in the Byzantine empire.

A MANDAMUS issues out of the court of king's bench, and is sent to a corporation, commanding them to admit or restore a person to his office. This writ also lies where justices of the peace refuse to admit a person to take the oaths to qualify himself for any post or office ; or where a bishop or archdeacon refuses to grant a probate of a will, to admit an executor to prove it, or to swear a churchwarden, &c.

MANDANES, an Indian prince and])hilosopher, who, for the renown of his wisdom, was invited by the p.mbassadors of Alexander the

Great to the banquet of the son of Jupiter. A reward was promised him if he obeyed, but he was threatened with punishment in case of a refusal. Equally unmoved by both, the philosoplier dismissed them with observing, that, tliough Alexander ruled over a great part of the universe, he was not the son of .lupiter, and that he cared not for the presents of a man who possessed not wherewithal to content himself. ' 1 despise his threats,' added he ; ' if I live, India is sufficient for my subsistence, and to me death has no terrors ; for it will only be an exchange of old age and infirmity for the happiness of a better life.'

MANDARINS, a name given to the magistrates and governors of provinces in China, who are chosen out of the most learned men, and whose government is always at a great distance from the place of their birth, See China.

MAN'DATARY, n. s.-\ Latin, tiumdo, to Man'date, 'command. A maii—

Mand'ator, i datary is an ecclesius—

Man'datorv, adj. J tic, to whom the pope has by his prerogative given a mandate for his benefice : mandate is command ; precept ; commission ; charge: mandator, director; commander : mandatory, of the natuie of a command.

Her force is not any where so apparent as in express mandates or prohibitions, especially upon ad-vice and consultation going before. Hooker. ˆ\ ho knows, If the scarce-bearded Ca;sar have not sent His powerful mandate to you. Shakspeare.

This Moor, Your special mandate for the state affairs, Hath hither brought. Id. Othello.

The necessity of the times cast the power of the three estates upon himself, that his mandates should pass for laws, whereby he laid what taxes he pleased. lloweCs Vocal Forest.

He thought the mandate forged, your death concealed. Dryden.

‘I’his dream all-powerful Juno sends, I beai Her mighty mandates, and her words you hear. Id.

A person is said to be a client to his advocate, but a master and mandator to his proctor. Aiilijle.

Mandate, in the canon law, a rescript of the pope, commanding an ordinary collator to put the person therein named in possession of the first vacant benefice in his collation.

MANDATS, or Man cats Territoriaux, a species of paper currency issued by the French government, to supply the place of the assignats, in March 1796, when they had lost credit and suffered an enormous depreciation. See Assignats. To prevent jobbing, they were ordered to be taken at par with specie; and instead of resting their credit on the whole national properly, as the assignats had been, they were bottomed upon so much of it as was equivalent in value to the amount of the mandats issued. A list of the lands thus appropriated, which could be immediately acquired by the holders of mandats, was printed, and copies dispersed through the republic. ‘l”he mandats thus operated a temporary restoration of the credit of the republic.

MANDATUM, in Roman antiquity, was a fee or retainer givtn the procuralores aud ad\o-

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cati. It was a necessary condition, without which they liad not the liberty of pleading.

MANDA'IA, a large and strong town of Ilindostan, in the province of Cutch, on the north-east shore of the Indian Ocean. It carries on trade with Bombay and Arabia, in clarified butter, grain, and cotton ; its principal imports are sugar, pepper, spices, raw silk, and piece goods. It is subject to the Balooch chief of Cutch.

MANDELIQUE, Mandalig, or Devil's Rock, an island about half a league from the north coast of Java. In the east monsoon ships are detained long here by contrary winds. The passage between this and the coast has three and a half or four fathoms water; but is too narrow to be safe. Long. 110° 56' E., lat. 6° 27' S.

MANDEVILLE (Bernard de), M. D., an eminent writer of the eighteenth century, born in Holland, where he studied physic, and took his degree. He afterwards came over into England, and in 1714 published a poem, entitled The Grumbling Hive, or Knaves turned Honest; he afterwards republished it with additions, un-der the title of The Eable of the Bees, or Private Vices made Public Benefits ; with an Essay on Charity and Charity Schools, and a Search into the Nature of Society. This book was presented by the jury of Middlesex in July the same year, and severely animadverted upon, in A Letter to the Right Hon. Lord C, printed in the London Journal of Saturday, July 27, 1723. Our author published a Vindication. His book was attacked by several writers. He published other pieces, and died in 1723.

M ANDEViLLE (Sir John), an English physician, celebrated for his travels, was born at St. Alban's, about the beginning of the fourteenth century. He had a liberal education, and left England in 1332. He did not return till 1364. His friends, who had long supposed him dead, did not know him when he appeared. He had travelled through almost all the east, and made himself master of a great variety of languages. He particularly visited Scythia, Armenia the Greater and Less, Egypt, Arabia, Syria, Media, Mesopotamia, Persia, Chaldea, Greece, Dalmatia, &c. His disposition even after this did not sufi'er him to rest; for he left his own country a second time, and died at Liege in the Netherlands in 1372. He wrote An Itinerary, or an Account of his Travels, in English, French, and Latin, so amply stored with

marvellous relations and events, that the name of Mandeville is become proverbial for a fabulous and exaggeratinn-tra- veller. But what he himself observed is worth attention ; and he makes many remarks which show an able and scientific mind.

MANDEURE, a town of Trance, in the late principality of Montbeliard, anciently the capital of the Mandubii ; five miles south of Montbeliard ; now in the department of the Maritime Alps.

MAN'DIBLE, n.s.-\ Lat. mandibulu, mari-Mandib'ulah, tdiico, of 7na/ ido, to chew.

Man'ducate, v.a. f The jaw: mandibular is Maxduca'tion. * relating, or belonging to, the jaw : manducate, to chew ; eat.

Either we inandncate the accidents only, or else substance of bread, or the substance of Christ's body. If we manducate only the accidents, then how do we eat Christ's body? If we manducate bread, then 'tis capable of all the natural alterations, and it cannot be denied. Jer. Taylor.

As he who is not a holy person does not feed upon Christ, it is apparent that our manducathm must be spiritual, a .d therefore so must the food, and consequently it cannot be natural flesh.

Taiilors IVortliii Communwaut.

He saith only the crocodile moveth the upper jaw, as if the upper mandible did make an articulation with the cranium. Grew.

Manducation is the action of the lower jaw in chewing the food, and preparing it in the mouth be-fore it is received into the stomach. Quinct/.

MANDING, or Maxdixgo, a territory of Central Africa, bounded on the east by Bambarra, on the north by Fooladoo, and on the south and west by Gadou and Jallonkadoo. The country is hilly, rocky, and barren, and contains no town of consequence, except Kamalia. Gold dust is found in the sands of the rivers, which the women extract by agitation. The whole re-gion is watered by the Niger, and Mr. Park was told that the source of that river was at Sankari, in Manding. It is divided into a number of small republics, each village, with a territory around it, being nearly independent.

The Mandingoes, who derive their name from this territory, are widely spread over other parts of Africa, and are, perhaps, the most numerous race of negroes in the western regions of that continent. They are tall, slender, and not so bright a black as the Jalofl's. Though subject to few diseases they seldom attain old age. A gay, lively, inquisitive, and credulous people ; like their neighbours, the JaiofTs, they are very dexterous in appropriating any thing which they fancy to their own use. The females appear to be distinguished by kindness and humanity. Many of the Mandingoes are INIahommedans, and in most^of their towns there are two public buildings, the mosque, and a large kind of stage, under some tree, where the common business of the village is transacted. Their houses consist of a circular wall of earth, about four feet high, roofed witli bamboo, and covered with grass or leaves. Polygamy is common ; and, as eacii wife has a separate hut, several generally belong to the same family, and the group is usually enclosed with a fence. Both sexes among the Mandingoes are further removed from barbarism than many of the other tribes, and are clothed in cottons of their own manufacture. The dress of the men consists of a loose shirt or frock, with drawers, a cap, and sandals. The females make use of two pieces of cloth, one of which they wrap round the waist, the other is thrown over the shoulders. Besides their common domestic avocations, they are employed in dressing and spinning cotton, which is woven into cloth, and died of a rich permanent blue, by means of indigo. The men are partially occupied in agriculture, hunting, and fishing. Many of them are also engaged in commerce, and almost every district of Western Africa is traversed by troops of Mandingo merchants. Their language is, therefore, widely diffused, and is one of tiie most copious and poMAN

‘ished of tlic negro dialects. They are said to have bards who sing the praises of their cliiefs. The taste of the negroes, and particuUirly the Mandingoes, for poetry of the most simple and plaintive kinds, has been proved by many examples; but it will be sufficient to refer to that well-known song, on ‘ the poor white man, faint and weary,’ sung extempore over the distressed Park. Tiie only regular trades among them are working in leather and metals, both of which they execute with dexterity. Many of those who have not become converts to the faith of Mahomet seem to have some notion of a Supreme Being, and a future state of rewards and punislmients ; but on this, as well as on all abstract subjects, their ideas are but confused.

MANDINGA, a river of Panama, South America, which runs east until it enters the large and well-sheltered bay of Mandinga. There is a settlement of the same name on the banks of the river, where there is a watch-tower, to give notice to the governor of Panama of vessels that may appear.

MANDIOLY, one of the Gilolo Islands, in the Eastern Seas. It is of a semicircular form, and may be estimated at twenty miles in length by four the average breadtli. It is separated from the west coast of Gilolo, by the straits of Patientia. The equinoctial line crosses near the centre. Long. 124° E.

MANDOE, Old and New, two small islands belonging to Denmark, on the west coast of Sleswick. Long. 8° 32’ E., lat. 55” 10’ N.

MANDOW, or Muxnu, adistrict of Hindostan, in Malwah, situated among the Vindaya Mountains, between the twenty-second and twenty-third degrees of northern latitude. It is much infested by freebooters ; on which account it is not so well cultivated. Its chief towns are Mimdu, Bajulpoor, and Dectan.

Mandow, or Mc.Nou, the capital of the above district, and formerly the capital of an Afghaun dynasty. With its suburbs and gardens, it was once twenty-two miles we are told in circumference. The fortress, situated on a mountain, formerly contained many handsome monuments and mosques. In 1534 it was attacked by the emperor llomayon, and during the night, 300 Moguls having scaled the walls, the garrison, consisting of several thousand men, took flight. The works are now fallen much to decay, and the town is in ruins. Twenty-

five miles south of Oujein.

MANDRAGORA, in botany. See Atropa. MANDRAGORITIS, a surname of 'enus. MAN’DRAKE. Lat. mandragora ; Greek fiai’coayopag. A plant. See below.

And Reuben went, in the days of wheat harvest, and found mandrakes in the field. Gen. xxx. 14. Not poppy, nor mandragora. Nor all the drowsy syrups of the world, Shall ever med’cine thee to that sweet sleep. Shakipenre. And shrieks like mandrakes, torn out of the earth, rhat living mortals, hearing them, run mad. Id.

Among other virtues, mandrake has been falsely celebrated for rendering barren women fruitful : it has a soporifick quality, and the ancients used it when they wanted a narcotic!: of the most powerful tind-Hill’s Materia Medica.

Mandrake, in botany. See Atropa and

MUSA.

MA’NDREL, n. s. Fr. mamlrin. An instrument to hold in a lathe tlie substance to be turned.

Mandrels are made with a long wooden shank, to fit stiff into a round hole that is made in the work that is to be turned ; this mandrel is a shank, or pin-mandrcl. Moron.

A Mandrel is a kind of wooden pulley, and member of tiie turner’s lathe. Of these there are several kinds ; as flat mandrels, wiiich have three or more little pegs or points near the verge, and are used for turning flat boards on. Pin mandrels, which have a long wooden shank to Pt stiff into a round hole made in the work to be turned. Hollow mandrels, which are hollow of tliemselves, and used for turning hollow work. Screw mandrels, &c.

MANDUKIA, an ancient town of Naples, in the Basilicata. • It was formerly called Casale Nuovo, which name it retained till 1790, when the inhabitants petitioned the king to change it to the ancient name of Manduria. It suffered in 1783 severely from an earthquake. Inhabitants 4000. Six miles north-east of Cassano.

MANDUBII, a people of Gaul, who inhabited the country afterwards called Burgundy. Many of them served in Ca;sar’s army. Caˆs. de Bell.

Gall. 5, c. 20.

MANDUBRATIUS, a British prince, who joined Csesar in Gaul, his fatiier being killed by Cassibelan. MANE, n. s. } Goth, and Belg. 7naen ; Maned', at//, i Teut. maline ; Swed. mahn; Dan. man. (Goth, maen, is the neck). Tiie flowing hair of horses', and other animals' necks.

A currie comb, viaine come, and whip for a jade.

Tusser. Dametas was tossed from the saddle to the mane of the horse, and thence to the ground. Sidney.

The horses, breaking loose, ran up and down with, their tails and manes on a ligiit fire. Knolles.

When his eyes did her behold, Her heart did seem to melt in pleasures manifold.

Spenser. For, quitting both their swords and reins. They grasped with all their strength the manes.

Hudibras. A lion shakes his dreadful mane. And angry grows. Waller.

Man-eater. See ANTUROPornAcr, and Cannikal.

MA'NES, n. r. Lat. manes. S]nrit ; ghost ; shade. See below.

Hail, O ye holy manes ' hail again, Paternal ashes ! Dri/den's Virgil.

Manes, or Manich.t.us, one of the Persian Magi, who, having embraced Christianity, mingled his own philosophical opinions with its doctrines, and thus became the founder of the Manichican system. See MANrrH.iir.]\Ianes flourished about A. D. 277. St. Epiphanius says, his original name was Cubricus, and that he changed it for manes, which, in the Persian or Babylonish language, signifies vessel. A rich widow, whose servant he had been, dying without issue, left him her fortune ; after which he assumed the title of theapo'^tleor envoy of .'esus

MANGANESE.

io:

Christ. He next assumed that of the Paraclete, whom Christ had promised to send ; which Augustine explains by saying, that Manes endeavoured to persuade men, that the Holy Ghost did personally dwell in him with full authority. He left several disciples, and among others Addas, Thomas, and Hermes. These he sent in his lifetime into several provinces to preach his doctrine. Manes, having undertaken to cure the son of Sapor king of Persia, and not succeeding, was put in prison upon the young prince's death, whence he made his escape ; but was apprehended soon after, and flayed alive. However, the oriental writers, cited by D'Her-belot and Hyde, tell us, that Manes, after having been protected in a singular manner by king llormizdas, who succeeded Sapor, but who was not able to defend him against the united persecutions of the Christians, the Magi, the Jews, and the Pagans, was shut up in a strong castle to preserve him from his enemies. They add, that after the death of Hormizdas, Varanes I., his successor, first protected Manes, but afterwards gave him up to the fury of the Magi, whose resentment against him was owing to his having adopted the Sadducean principles, as some say ; ■while others attribute it to his having mingled the tenets of the Magi with the doctrines of Christianity. However, it is certain that the Manicheans celebrated the day of their master's death. St. Epiphanius gives a catalogue of several pieces published by Manes, and adds extracts out of some of them. These are the Mysteries, Chapters, Gospel, and Treasury.

jNIakes is a poetical term, signifying the shades or souls of the deceased. The heathens used a variety of ceremonies and sacrifices to appease the manes of those who were deprived of burial. See Lemures.

Maxes Dii were the same with Inferi, or the infernal gods, who tormented men ; and to these the heathens offered sacrifice to assuage their indignation. . The heathen theology is a little obscure with regard to the gods manes. Some hold, that they were the souls of the dead ; others that they were the genii of men ; which last opinion suits best with the etymology of the word. The heathens, in fact, used the word in several senses ; sometimes for ghosts of the departed, sometimes for the infernal or subterraneous deities ; and in general for all divinities that presided over tombs. Tiie evocation of manes of the dead seems to have been very frequent among the Tliessdlians ; but it was expressly prohibited by the Romans. See Lares.

MANETHO, an ancient Egyptian liistori < an, who pretended to take his history from the sacred inscriptions on the pillars of Hermes Trismegis-lus. He was high priest of Heliopolis under Ptolemy Philadelphus, at whose request he wrote his history in Greek, beginning from their gods, and continued it down to near the time of Darius Codomanus. His history of Egypt is a celebrated work, often quoted by Josephus and other ancient authors. .Julius Africanus gave an abridgment of it in his Chronology. Manetho's work is however lost ; and there only remain some fragments, extracted from Julius Africanus, whitii are to be found in Eusebius's Chronica.

MANFREDI (Eustace), a celebrated mathematician, born at Bologna in 1674, where he was elected mathematical professor in 169S. He was made a member of several academies, and acquired great reputation by his Ephemerides, 4 vols. 4to, as well as by other works. He died in 1739.

MANFREDONIA, a town of Naples, m the Capitanata, on the bay of Manfredonia. It was founded in the thirteenth century, has a good harbour, and exports corn. Population 5000. 110 miles W.N. W. of Naples.

MANGALORE (Codeal Bunder) is a large town of Hindostan, in the province of Canaro, built round the shores of a peninsula, in the elevated centre of which is a citadel. This peninsula projects into an extensive salt lagoon, separated from the sea by a narrow beach of sand, in which was formerly an opening capable of admitting vessels of burden, but recently this channel has diminished in depth, so as to admit only vessels of ten feet ; and a second one has been formed, which has still less water. Tlie lake abounds with fish. Two peaked hills rise behind it, called by seamen the Ass's Ears. Mangalore was the chief port of Tippoo's dominions, where his navy rendezvoused, and wiiich at one time consisted of several frigates, besides line-of-battle ships building. It cliiefly exports rice by Arab vessels to the Persian Gulf and Red Sea, pepper, areka, &c. Ulala is a large town on the south shore of the lagoon of Mangalore. Mangalore was early known to the Arabs; but does not appear to have been subject to the Mahommedan power in India until 1763, when it was taken by Hyder Aly. Tlie British took it once from Hyder (in 1768), and once from Tippoo (1783), but it was restored. It came finally into our possession in 1799, and is the stationof a judge, collector, &c., of South Canaro.
MANGANESE, a metal of a dull whitish co-lor when broken, but which soon grows dark by oxidation, from the action of the air. It is hard and

brittle, though not pulverisable, and rough in its fracture; so difficultly fusible, that no heat yet exhibited has caused it to run into masses of any considerable magnitude. Its specific gravity is 8-0. When broken in pieces, it falls into a powder by spontaneous oxidation.

Manganese, heated in oxygen or chlorine, takes fire and forms an oxide or chloride. It has been thought difficult to decide on the oxides of manganese. According to Sir H. Davy there are two oxides only, the olive and the black ; Mr. Brande has three, the olive, dark red, and black; M. Thenard has four, tlie green, the white (in the state of hydrate), tlie chestnut-brown, and the black; Berzelius has five, the first gray, the second green, the third and fourth are not well defined, and the filth is the black.

Two oxides, however, are well known. 1. The first oxide may be obtained by dissolving common black manganese in suljihuric or nitric acid, adding a little sugar, and precipitating by solution of potash. A white powder is obtained, which being heated to redness, out of the contact of air, becomes yellow, puce-colored, and lastly red-brown. To be prcservcil, it should

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be washed in boiling water, previously freed from air, and then dried by distilling ott" tlie moisture in a retort filled witii hydroiˆen. The dark olive oxide, when examined in large quantities, appears almost black ; but when spread upon white paper, its olive tint is apparent. It takes fire when gently heated, increases in weight, and acquires a browner tint. It slowly absorbs oxygen from the air, even at common temperatures. It dissolves in acids without effervescence. The white powder obtained above is the hydrated protoxide. The different tints which it assumes by exposure to air are ingeniously supposed by Sir II. Davy to depend on the formation of variable quantities of the black-brown oxide, which probably retains the water contained in the white hydrate, and is hence deep puce-colored.

2. The black peroxide. Its specific gravity is 4. It does not combine with any of the acids. It yields oxygen when heated ; and by intense ignition passes in a great measure into the protoxide. According to Sir H-Davy, the olive oxide consists of —

Manganesium …79 Oxygen …21

And the black oxide of —

Manganesium …69 Oxygen, about . .31

He considers the first as a deutoxide, whence the prime equivalent is inferred to be 7-533.

The olive oxide . . 7-533 met. + 2* ox. Or … 80- -H20—

The black oxide will be 7-533 + 3—

Or … 71-5 +28—

The compound of the first

Willi water is a deuto—

hydrate, or . 7-533 + 225 w.

The olive oxide becomes green by the action of potash, whence Sir H. accounts for the mistakes of chemists relative to a green oxide. See Cameleon Mineral.

By Dr. Thomson's experiments, with which Dr. Ure's also agree, the protoxide consists of 3-5 metal -- 1 oxygen ; the second of 3*5 -|- 2 ; whence the prime equivalent appears to be 3-5.

The chloride may be conveniently obtained by igniting the muriate of manganese. It thus appears as a pale pink-colored substance, semitransparent, and ill brilliant scales. According to Dr. John Davy it is a compound of 3-766 metal -f-4-6 chlorine.

Sir H. Davy is inclined to believe that the olive oxide is the only one which enters into combination with vitrifiable substances.

The salts of manganese have been little studied. They are mostly soluble in water.

I-"erroprussiate of potash gives a white precipitate, llydrosulphuret . . white

Sulphurated hydrogen . 0

Gallic acid …0

Succinate and benzoate of ammonia 0

Concentrated sulphuric acid attacks manganese, at the same time that hydrogen gas is disengaged. If sulphuric acid be added, and drawn off by distillation several tiuKs from the black

oxide, by a heat nearly approaching 'to ignition, in a glass vessel, it is found that oxygen gas is disengaged toward the end of each process, and part of the oxide is dissolved. The solution of the sulphate made from the metal itˆself is colorless. If it be made from the black oxide, it is a purplish-red ; but this color is destroyed by the light of the sun, and again restored by removing the solution into the dark. Sulphurous

acid dissolves the oxide, taking part of its oxygen, which converts it into sulphuric acid, thus forming a sulphate with the remaining oxide. Nitric acid dissolves manganese with effervescence, and the escape of nitrous gas. A spongy, black, and friable matter remains, which is a carburet of iron. The solution does not afford crystals. The oxide is more readily soluble in nitrous acid. Manganese is dissolved in the usual manner by muriatic acid. The solution of manganese in muriatic acid scarcely affords-crystals ; but a deliquescent saline mass by evaporation, which is soluble in alcohol. In the dry way, the oxide of manganese combines with such earths and saline substances as are capable of undergoing fusion in a strong heat. These experiments are most advantageously performed by the Blow-Pipe, which see. This metal melts readily with most of the other metals, but rejects mercury. Gold and iron are rendered more fusible by a due addition of manganese ; and the latter metal is rendered more ductile Copper becomes less fusible, and is rendered whiter, but of a color subject to tarnish.

The ore of manganese, which is known in Derbyshire by the name of black wadd, is remarkable for its spontaneous inflammation with oil. It is of a dark brown color, of a friable earthy appearance, partly in powder, and partly in lumps. If half a pound of this be dried before a fire, and afterward suffered' to cool for about an hour, and it be then loosely mixed or kneaded with two ounces of linseed oil; the whole, in something more than half an hour, becomes gradually hot, and at lengtii bursts into flame. This effect wants explanation. It seems, in some measure, to resemble the inflammation of oils by the nitric acid.

Manganese was used chiefly bv glass-makers and potters, but the important discovery of chlorine has greatly extended its utility. See Bleaching.

MANGE, n.s. } Fr. demangeaison, itching.

Man'gy, adj. \ The itch or scab in cattle.

The sheep died of the rot, and the swine of the

mange.

Ben Jonson.

Away thou issue of a mangy dog ! I swoon to see thee.

Sliahpeare. Timon of Athens. Tell what crisis does divine The rot in sheep, or mange in swine?

Hudihras. Mange. Dogs are subject to the mange from being fed too high, and allowed no exercise or any opportunity of refreshing themselves with dog-grass ; or by being starved at home, which will cause them to eat the vilest stuff abroad, such as carrion, or even human excrement; or by want of water, and sometimes by not being kept clean in their kennel, or by foundering and melting ii.

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their grease. Any of these will heat the blood to a great degree, and make them mangy. The cure may be effected by giving brimstone, powdered fine, eillier in milk or mixed up with butter, and rubbing them well every day for a week with an ointment made up of some of the brimstone and pork lard, to which add a small quantity of oil of turpentine. Or, boil four ounces of quicksilver in two quarts of water to half the quantity ; bathe them them every day with this water, and let them have some of it to lick till the cure is perfected. Or, a small quantity of trooper's ointment rubbed on the parts on its first appearance will cure it. It will also free lousy puppies from their lice. Or, take two ounces of euphorbium, flour of sulphur, Flanders oil of bays, and soft soap, each four ounces. Anoint and rub the dog with it every other day ; give him warm milk, and no water. The cure will be performed in about a week. Or, take two handfuls of wild cresses, and as much ele-campane, and also of the leaves and roots of roerb and sorrel, and two pounds of the roots of fodrels ; boil these well together in lie and vinegar; strain the decoction, and put into it two pounds of gray soap, and when it is melted rub the dog with it four or five days, and it will cure him.

MANGEART (Thomas), a Benedictine of the congregation of St. Vanne and St. Hidulphe, whose learning was an ornament to his order, and procured him the offices of antiquarian, librarian, and counsellor, to Charles duke of Lorrain. He was preparing a very considerable work, but died, A. D. 1763, before he had quite finislied it ; and it was then published by abbe Jacquin, in 1763, entitled Introduction a la Science des MedaUles, pour servir a laconnois-sance des Dieux, de la Religion, des Sciences, des Arts, et de tout ce qui appartienta I'Histoire ancienne, avec les preuves tirees des Medailles. The elementary treatises on the numismatic science were not sufficiently extensive, and tlie particular dissertations were by far too prolix. His work may serve as a supplement to Mont-faucon's Antiquity Explained. He likewise wrote a volume of Sermons ; and a Treatise on Purgatory; Nancy, 1739, 2 vols. I2mo.

MANGEEA Island, an island of the South Pacific Ocean, south of Wateeoo, in long. 201° 53', and lat. 21° 57' S., is five leagues in circuit, rising in the middle to hills, visible ten leagues. The south-west shore is composed of cliffs of sandstone ten feet high, with many caverns worn by the sea. The north shore is composed of broken land,

with ravines and intervals of sandy beach. Captain Cook found neither anchorage nor landing place. Tiie natives resemble those of \‘ateeoo and the Society Isles.

MANGKL-WURZEL, or the root of .scarcity, a root mucl) celebrated as food for cattle. It is a species of beta. See Beta. It is a biennial plant ; the root is large and fleshy, sometimes a foot in diameter. It rises above the ground several inches, and is thickest at the top, tapering gradually downward. The colors of the roots vary ; being white, yellow, and red. It is good fodder for cows, and for rabbits ; and produces great plenty of leaves, which are very palatable

ana wnolesome for cattle. It is chiefly cultivated in Germany.

MAN’GER, 71. s. Fr. 7iMngcoire, manger ; Lat. mando, to cut. The place or vessel in which animals are fed with corn.

Ye shall find the babe wrapped in swaddling clothes, lying in a manger. Luke ii. 12.

I’here lies the babe in the stable, crying in the manner, whom the angels came down from heaven to proclaim. Bp. Hall.

A churlish cur got into a manger, and there lay growling to keep the horses from their provender.

L’ EUrange.

Manger, in a ship of war, is a small apartment, extended athwart the lower deck immediately within the hause-holes, and fenced on the after-part by a partition, which separates it from the other part of the deck behind it. This partition serves as a fence against the water, which occasionally gushes in at the hause-holes, or falls from the wet cable whilst it is heaved in by the capstern. The water, thus prevented from running aft, is immediately returned into the sea by several small channels, called scuppers, cut through the ship’s side within the manger. The manger is therefore particularly useful in giving a contrary direction to the water that enters at the hause-holes, which would otherwise run aft in great streams upon the lower deck, and render it extremely wet and uncomfortable, particularly in tempestuous weather, to the men who mess and sleep in different parts of it.

MANGET (John James), an eminent physician, born in Geneva, in

1652. The elector of Biandenburgh made him his first physician in 1699; in which post he continued till he died, at Geneva, in 1742. He wrote many works; the most known of which are, 1. A collection of several Pharmacopceias, in folio; 2. Bibiiotheca Pharmaceutico-JNIedica ; 3. Bibiiotheca Anatomica ; 4. Bibiiotheca Chemica; 5. Bibiiotheca Chirurgica; 6. A Bibiiotheca of all the Authors who have written on Medicine, in 4 vols, folio. All these works are in Latin. Daniel le Clerc, the author of a History of Physic, assisted him in writing theiu.

MANGIFERA, the mango tree, in botany, a genus of the monogynia order, anil the pentandria class of plants: cor. pentapetalous ; the plum kidney-shaped. There is but one species, a na-tive of many parts of the lˆast Indies, whence it has been transplanted to Brasil and other warm parts of America. It grows to a large size ; tiie wood is brittle ; tlie bark rough when old ; the leaves are seven or eight inches long, and more tlian two inches broad. The flowers are produced in loose panicles at tlie ends of the branches, and are succeeded by large oblong kidney-shaped plums. Tin; fruit, when fully ripe, is greatly esteemed in the countries where it grows; but in F,urope we have only the uiu'ipe fruit brought over in pickle. All attempts to propagate the plant have hitlierto proved ineffectual; and Miller is of oiunion tiiat the stones-will not vegetate unless they are planted sooi» after they are ripe. He thinks theri'fore that the young plants ought to be brought over in boxes of earth ; after which they may be kept in the tan-bed of the stove.

MAN'GLE, V. a. & n. s. -ˆ Swed. mangia, Man'clf.r, ra. s. yjiHingel: Texit. uian—

Mang'ling, n. s. j gen, mangeln of

Goth, manga, to mutilate. L. B. mangonule was a powerful warlike machine, and hence probably applied to the heavy machine tliat presses linen. To cut in piece-meal ; lacerate ; tear ; to press or smooth linen under a loaded machine. Cassio, may you suspect Who they

should be, that thus have nmngled you?

Shakˆieure. Your dishonour Mmifjles true judgment, and bereaves the state Of that integrity which should become it. Id. Thoughts, my tormenters, armed with deadly stings, Mangle my apprehensive tenderest parts. Exasperate, cxulcerate, and raise Dire inflammation, which no cooling herb. Or medicinal liquor can assuage.

Milton's Agonistes. Mangle mischief. Don Sebastian.

The triple porter of the Stygian seat, With lolling tongue, lay fawning at thy feet. And, seized with fear, forgot his mangled meat.

Bri/den. What could swords or poisons, racks or flame. But innngle and disjoint this brittle frame ? More fatal Henry's words; they murder Emma's fame. Prior.

Since after thee may rise an impious line. Coarse manglers of the human face divine ; I*aint on, till fate dissolve thy mortal part, And live and die the monarch of thy art. Tickel. It is hard, that not one gentleman's daughter should read her own tongue ; as any one may find who can hear them when they are disposed to mauale a play or a novel, where the least word out ol tne common road disconcerts them. Swift.

They have joined the most obdurate consonants without one intervening vowel, only to shorten a syllable ; so that most of the books we see now-a- days, are full of those manglings and abbreviations.

Id. Inextricable difficulties occur by mangling the sense, and curtailing authors. Baker on Learning,

MAN'GO, n. s. Fr. mangoslen. A pickled fruit.

The fruit with the husk, when very young, makes a good preserve, and is used to pickle like mangoes.

Mortimer. ˆVhat lord of old would bid his pook prepare SLuigoes, portargo, champignons, cavare ! King.

iNIATvIIKIM, or MANNiiEiM,the capital of tlie circle of the Neckar, in the grand ducliy of Ba-den, is situated at the confluence of the Neckar and the Rhine: over tlie former is a bridge of boats, and a flying bridge over the Rliine. It is built with great restularity, in four partj ; and has been called the finest town in Germany. Of an oval form, it was v.t

one time surrounded with ramparts. The.se were levelled by the Frencii in the end of the last century, and are now laid out in gardens. The palace of the grand duke occupies the bank of the Rhine, and is built of a red stone intermixed with a white, and is said on the whole to resemble in external appearance that of Hampton t'nnrt. In the bombardment of 179.5 it was greatly injured ; and has suffered by neglect since the court has been withdrawn to Munich ; but it still contains a gallery of paintings, cabinets of antiquities and natural

history, and a library of 60,000 Tolumes. The observatory is a noble building, with a curious tower. The custom-bouse, surrounded with cc-lonades, under which are shops, is also a very superior building. Other public buildings are, the secularised convents of the Augustines and Capuchins; the arsenal; tiieatre ; merchants' hall ; the Lutheran, Calvinist, and Catholic churches; the three hospitals; the workhouse, and orphan house ; and the Jesuits' church. Here is also a gymnasium, with drawing and music schools ; and a mercantde school ; a society for the cultivation of German literature ; an academy of painting and sculpture ; and military and surgical academies. JNlanheim has been thought well situated for trade; but it has never flourished in this respect : when the court were here it was noted for its manufecture of gold tinsel ; and aromatic waters ; the latter is still a considerable article of commerce. The chief manufactures are linens, shawls, ribands, tobacco, and playing cards : there are also some large tanneries, and bleaching grounds. Population 18,000. It is thirty-four miles north of Carlsville, and thirty-six south by west of Mentz. It was first chosen for the site of a town in 1606 by the reigning elector palatine, and colonised by emigrants from the Netherlands. In the war terminated by the peace of Westphalia, in 1648, JNIanbeim underwent a siege, and fell into the vindictive hands of count Tilly. A succeeding elector palatine was induced, in 1719, to leave Heidelberg on account of religious disputes, and to make Manheim his residence. The palace, still remaining, was now built, and the town fortified according to the plan of Coehorn. The extinction of the palatine family, in 1777, caused the incorporation of their states with Bavaria and the removal of the court from this place to Munich. The provincial offices only remained : and the military operations in tlie war of the French revolution were still more injurious. In 1795 it was bombarded by the French, to whom it surrendered : it was afterwards besieged and taken by the Austrians. In 1802 it was assigned to the grand duchy of Ba-den. Manheim presents a very fine view from a distance.

MA'NIAC, n. s. & adj. 1 Lat. nianiacits ; Gr.

Mani'acal, adj. S fiavia. Raging with

madness ; mad to rage : a maniac is a furious madman.

And in his gere, for al the world he ferd Nought only like the lover's maladie Of Kreos, but rather ylike manie. Engendered of humours melancolike, Beforne his bed in his celle fantastike.

Chaucer. Cant. Tales. Epilepsies and maniacal lunacies usually conform to the age of the moon. Crew's Cusmolngia.

MANICILTJ, ManichEans, or Maniciiees, a sect of ancient heretics, who asserted two principles; so called from their author Manes or Manicbieus. See Manf.s. This heresy bad its first rise about A. D. 277, and spread principally in Arabia, Egypt, and Africa. St. Epiphanius treats of it at great length. It was a motley mixture of the tenets of Christianity with tho ancient philosophy of the Persians, in which

Manes ha'J been instructeJ during liis youtli. He combined these two systems, and applied and accomodated to Jesus Christ tlie chaiacters and actions which the Persians attributed to the god Mithras. lie estabhshed two principles, a ccood and an evil one : tlie first a most pure and subtile matter, which lie called light, did nothing but good ; and tlie second a gross and corrupt substance, which he called darkness, nothing but evil. This philosophy is very ancient; and Plutarch treats of it at large in his Isis and Osiris. Our souls, according to Manes, were made by the good principle, and our bodies by the evil one ; these two principles being, according to him, co-eternal and independent of each otiier. Each of these is subject to the dominion of a superintendent being, whose existence is from all eternity. Tlie being who presides over the light is called God ; he that rules the land of darkness bears the title of hyle or dtcmon. The ruler of the light is supremely happy, and in consequence thereof benevolent and good : the prince of darkness is unhappy in himself, and desirous of rendering others partakers of his misery, and is evil and malignant. These two beings have produced an immense number of creatures, resembling themselves, and distributed tiiem through their respective provinces. After a contest between the ruler of light and the prince of darkness, in which the latter was defeated, this prince of darkness produced the first parents of the human race. The beings engendered from this original stock consist of a body, formed out of tlie corrupt matter of the kingdom of darkness ; and of two souls, one of which is sensitive and lustful, and owes its existence to the evil principle : the other rational and immortal, a particle of that divine light which had been carried away in the contest by the army of darkness, and immersed into the mass of malignant matter. The earth was created by God out of this corrupt mass of matter, in order to be a dwelling for the human race, that their captive souls might by degrees be delivered from tlieir corporeal prisons, and the celestial elements extended from tlie gross substance in which they were involved. With this view God produced two beings from his own substance, *viz.* Christ and the Holy Ghost : for the Manicheans held a consubstantial Trinity. Christ, or tlie glorious intelligence, called by the Persians !\Iithras, subsisting in and by himself, and residing in the sun. appeared in due time among the Jews, clothed with the shadowy form of a human body, to disengage the rational soul from ihe corrupt body, and to conquer the violence of malignant matter. The Jews, incited by ttie jirince of darkness, put him to an ignominious death, which he suffered not in reality, but

only in a])pearance, and according to the opinion of men. W'licn tlie purposes of Christ were accomplished he returned to his throne in the sun, appointing apostles to propagate his religion, and leaving his followers the promise of the Paraclete or Comforter, who is the Persian Manes. Those souls who believe Jesus Christ to be the son of Cod renounce the worship of the god of the Jews, who is the prince of darkness, and obey the laws delivered by Christ, and illustrated

by Manes the comforter, are gradually purified from the contagion of matter; and their jmriti-cation being completed, after having passed tlirough two states of trial, by water and fire, first in the moon and then in the sun, their bo-dies return to the original mass — for the Manicheans derided the resurrection of bodies — and their souls ascend to the regions of light. Hut the souls of tiiose who have neglected the salutary work of purification pass after death into the bodies of other animals or natures, wliese they remain till they have accomplished their probation. Some, however, more perverse and obstinate, are consigned to a severer course of trial, being delivered over for a time to the power of malignant aerial spirits, who torment them in various ways. After this a fire shall break forth and consume the frame of the world ; and the prince and powers of darkness shall return to their primitive seats of anguish and misery, in which they shall dwell for ever. These mansions shall he surrounded by an invincible guard, to prevent their ever renewing a war in the regions of light. Manes borrowed many of his tenets from the ancient Gnostics; on which account many authors consider the]\Ianicheans as a branch of the Gnostics. In truth, the Manichean doctrine was a system of philosophy rather than of religion. They made use of amulets, in imitation of the Basilidiaiis; and denied that Jesus Christ, who was only God, assumed a true hu-man body, and maintained that it was only imaginary; and therefore denied his incarnation, deatii, &c. They pretended that the law of Moses did not come from God, or the good principle, but from the evil one ; and that for this reason it was abrogated. The rest of their errors maybe seen in St. Epiphanius and St. Augustin : the latter, having been of their sect, may be presumed to have been thoroughly acquainted with them. The rule of life and manners, which Manes prescribed to his followers, was most extravagantly rigorous and severe. He, however, divided his disciples into two classes; one of which comprehended the perfect Christians, under the name of the elect; and the otlicr the imperfect and feeble, under the title of auditors or hearers. The elect were obliged to observe a rigorous and entire abstinence from flesh, eggs, milk, fish, M'ine, all intoxicating drink, wedlock, and all amorous gratifications;

and to live in a state of the severest penury, nourishing their emaciated bodies with bread, herbs, pulse, and melons, and depriving themselves of all comforts. The auditors were allowed to possess houses, lands, and wealth, to feed on flesh, to enter into the bonds of conjugal tenderness; but tliis liberty was granted them with many limitations, and under the strictest conditions of moderation and temperance. The general assembly of the Manicheans was headed by a presidoiil, who represented Jesus Christ. There were joined to him twelve rulers or masters, who were designed to represent the twelve apostles, and these were followed by seventy-two bishops, the images of the seventy-two disciples of our Lord. These bishops had presbyters or deacons under them, and all the members of these religious or-ders were chosen out of the class of the elect.

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Their worship was simple and plain ; and consisted of prayers, reading the Scriptures, and hearing public discoui-ses, at which both the auditors and elect were present. They observed baptism and the eucharist; and kept the Lord's day, observiijg it as a fast. Tiiey likewise i<ept Easter and Pentecost. Towards the fourth century tlie Municheans concealed themselves under various names, which they successively adopted and changed in proportion as they were discovered by them. Tims they assumed the names of Encratites, Apolactics, Saccophori, llydropa-rastates, Solilarii, and several others, under which they lay concealed for a certain time ; but could not, however, long escape the vi:ˆilance of their enemies. About tlie close of the sixth century this sect gained very considerable influence, particularly among the Persians. Towards the middle of the twelfth century the sect of Manichees assumed a different aspect, one C'onstari-line, an Armenian, taking upon him to suppress the reading of all other books besides tlie Evangelists and the Epistles of St. Paul, whicli he explained to contain a system of Manicheism. He entirely discarded all the writings of his predecessors ; rejecting the chimeras of the V'alentinians, and their thirty aeons ; the fable of Manes with regard to the origin of rain, and other dreams; but still retaining the impurities of Basilides. In this manner he reformed JMa-nicheism, insomuch that his followers rejected Addas and Terebinth, the contemporaries and disciples, as some say, and, according to others, the predecessors and masters of Manes; and even Manes himself, Constantine being now their great apostle ; he was at last stoned by order of the emperor. This sect prevailed in Bosnia and the adjacent provinces about the close of the fifteenth century ; propagated their doctrines with confidence, and held their religious assemblies with imjiunity.

jMANICHORD, or Manicordox, a musical instrument in form of a spinet ; with forty-nine or fifty stops, and seventy strings ; which, like those of the clavichord, are covered with little pieces of cloth to deaden as well as to soften their sound, whence it is also called the dumb spinet. The strings bear on five bridges.

MANTFEST, adj. n. s. &, »;. a. "ˆ Lat. viani—

Manifesta'tiok, n. s. /est us. Clear;

Manifest’able, adj. [ˆ plain; open;

Man’ifestly, adv. (detected;

Man’ifestness, 72. j. uscd byDiy—

Manifes’to. J den with of:

a declaration : to make clear, or plain ; to ex-pose ; discover : manifestable is capable or easy of manifestation : manifesto, symnymous with manifest, n. s.

He that loveth me I will love him, and manifest myself to him. John xiv. 21.

That which may be known of God is manifest in them ; for God hath shewed it unto them.

Rom. i. 19.

They all concur as principles, they all have their forcible operations therein, although not all in like apparent and manifest manner. Hooker.

Though there be a kind of natural right in the noble, wise, and virtuiius, to govern them which are of ser\ile disposition ; nevertheless, for manifestation

of this their right, the assent of ihem who arc to l;e governed seemeth necessary. hooker.

Thy life did jninifrst thou lov’dst me tot ; And thou wilt have me die assured of it.

Shakspeare. We see manifestli) that scundo zre-carried vnth

wind. Bacon.

The Knglish did believe his iiame was therein abused ; which he manfested to be true, by disavowing it openly afterwards. Hayward. He full Resplendent all his father manifest Expressed. Mittuu’s Paradise Lost. This is mlinifeslible in long and thin plates of steel perforated in the middle, and equilibrated.

Broil ne. As the nature of God is excellent, so likewise is it to know

him in those glorious manifestations of himself in the works of creation and providence.

Tittotson. I saw, I saw him 7nanifest in view, Plis voice, his figure, and his gesture knew.

Dry den Calistho there stood manifest of shame, And, turned a bear, the northern star became. Id.

You authentick witnesses I bring Of this my manifest : that never more This hand shad combat on the crooked shore.

It may be part of our employment, in eternity, to contemplate the works of God, and give him the glory of his wisdom manifested in the creation.

Ray on tlie Creation. It was proposed to draw up a manifei}'), setting forth the grounds and motives of our taking arms.

Addison. The secret manner in which acts of mercy ought to be performed requires this public manifestation of them at the great day. Atterbury.

He was pleased himself to assume, and manifest his will in our flesh, and so not only as God from heaven, but God visible on earth, to preach reformation among us. Hammond.

Sects, in a state, seem to be tolerated because they are already spread, while they do not manifestly endanger the constitution. Swift.

MANTFOLD, adj. ˆ Of Many (which see) Mak'ifolded, ˆandfold. Many in num—

Man'ifoldly, arfu. J ber, or species; complicated.

They receive manifold more in this present time, and in the world to come life everlasting.

Luke xviii. 3tˆ. Thoy were manifoldly acknowledged the savers of that country. Sidney.

When his eyes did her behold, Her heart did seem to melt in pleasures manifold.

Spenw. Terror of the torments manifold, In which the damned souls he did behold. Id.

His puissant arms about his noble breast. And manifolded shield, he bound about his wrist. Fatr-ie Queene. If that the king Have any way your good deserts forgot, Which he confesseth to be manifold, He bids you name your griefs. Shakspeare.

If any man of quality will maintain, upon Ed-ward earl of Glo'ster, that he is a manifold traitor, let him appear. Id.

To represent to the life the manifold use of friendship, see how many things a man cannot do himself

Bacon's Essays.

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They not obeying

Incurred, what could they less ! the penalty ;

A.nd vianij'old in sin deserved to fall. Milton.

My scope" in this experiment is manifold. Boyle.

We are not got further than the borders of the mineral kingdom, so very ample is it, so various and manifold its productions. Woodaard.

MANILIUS (Marcus), a Latin poet, whose poem lay buried in the German libraries, and was never heard of till Poggius, about 1580, published it from some old MSS.he found there. There is no account to be found of liim liut what can be drawn from his poem, which is called As-tronomicon ; and contains a system of the ancient astronomy and astrology, together with the philosophy of the Stoics. It consists of five books ; but there was a sixth, which has not been recovered. The best editions of Manilius are, that of Joseph Scaliger in 1600 ; and that of Bentley, at London, in 1738.

MANILLA, the chief city of Lacon, one of the Philippines, and of the possessions of Spain in this part of the globe, is situated near the mouth of the river Passig, which issues *'rom the lake of the bay, and which was formerly navigable for the largest ships to Manilla, but at present it is crossed by a sand-bank, with but fifteen feet at high water. The streets of Manilla are wide and straight: the basements of tlie houses only are of stone, on which is erected a superstructure of wood, put together like the frame of a ship, so as to cede to the shocks of earthquakes, which are almost continual here. The population is chiefly composed of Spanish Creoles, Chinese, and Ma-: lays, in the proportion of 1200 Spaniards and 35,000 Malays. The Chinese who newly arrive, and intend to remain, are obliged to get themselves baptised, when they are allowed to marry a Malay Christian woman, never br'nging their women with them, and to carry on the professions of shopkeepers or mechanics, for they are prohibited from being proprietors or cultivators of land.

The fortifications of Manilla are irregular, having been built at different periods, without any original plan. The castle is separated from the town by a ditch, and is surrounded by a wall with outworks : the usual garrison is 400 to 500 regular troops, of whom one-third are seldom Europeans. The port of Cavita, two leagues from the town, is sheltered by a point of land on the south-west ; and vessels when obliged to quit the road of Manilla, in the south-west monsoon, find

perfect security moored close under the walls of Cavita, a town containing about 200 Spaniards and half-caste, and 1000 Chinese. It has two churches, and three immense convents of monks. The royal naval arsenal is situated on the point of the tongue of land that forms tlie port : it is strongly fortified and protected by the citadel of St. James.

The naval force stationed at Manilla during the late wars never exceeded four sail of the line, five frigates, and some small vessels, with a flotilla of thirty to sixty gun boats. The latter are intended to cruize against the pirates, but they seldom venture out of harbour, and the ships of war are badly equipped and not half manned.

The exports from Manilla are cordage, resin.

pitch and tar, tobacco, cloths, rushes, rattans, indigo, rice, and cotton. The sugar-cane thrives well, but is little cultivated. Tobacco is manufactured into cigars, principally for the use of the ladies of the place. Cocoa too is much cultivated and consumed. To Bengal Manilla exports copper, indigo, and cocliineal, with a large portion of treasure. In 1645 great part of this city was destroyed by an earthquake, and 3000 people perished. In 1762 it was taken by the English ; when, to save it from destruction, it sas agreed to pay £1,000,000 sterling for its ransom. Long 120° 54’ E., lat. 14° 38’ N.

MANILLE, in commerce, a large brass ring in the form of a bracelet, either plain or engraven, flat or round. The natives of the Gold Coast wear them as ornaments on the small of tlie leg, and on tlie thick part of the arm above the elbow. The chiefs wear manilles of gold and silver; which are made in the country by the natives.

MANIPULE, Manipulus, among the Ro-mans, was a small body of infantry, which in the time of Romulus consisted of 100 men ; and in the time of the consuls, and first Csesars, of 200. The word properly signifies a handful ; and, according to some, was first given to the handful of hay which they bore at the end of a pole, as an ensign, before the custom was introduced of bearing an eagle for their ensign ; and hence also the phrase, * a handful of men.’ But Vegetins, Modestus, and Varro, gave other etymologies of the word : the last derives it from manus,a small body of meu following the same standard. According to the former, this corps was called ma-nipulus, because they fought hand in hand or all together. Each manipule had two centurions or captains, called manipularii, to command it; one

whereof was lieutenant to the other. Each cohort was divided into three manipules, and each manipule into two centuries. Aulus Gellius quotes Cincius, an old author, who lived in tlie time of Hannibal (whose prisoner he was}, and who, writing on the art of war, observes, that then each legion consisted of sixty centuries, of thirty manipules, and of ten cohorts. \^arro and Vegetius mention it as the least division in tlie army, only consisting of the tenth part of a century ; and Spartian adds, that it contained only ten men. This shows that it was not always the same.

MANIPULUS, in ecclesiastical affairs, an ornament worn by the priests, deacons, and sub-deacons in the Romish church. It consists of a little fillet in form of a stole, three or four inches broad, and made of the same stuff" as the cha-suble ; representing a handkerchief, which the priests in the primitive church wore on the arm, to wipe off" their tears for the sins of the people. There still remains a mark of this usage in a prayer rehearsed by those who wear it ; Mereor, Doniine, portare nianipulum fletus et doloris. The Greeks and Maronites wear two manipules, one on each arm.

Manipulus, among physicians, is used to signify a handful of herbs or leaves, or so much as a man can grasp in his hand at once ; and is often denoted by the abbreviature M, or ;//.

MANIS, the scaly lizard, in zoology, a genus

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of quadrupeds belonging to the order of bruta, the characters of whicli are these : tliey have no fore teeth ; the tongue is long and cylindrical ; tlie snout is long and narrow ; and the body is covered with hard scales. There are according to Dr. Gmelin two species.

1. M. pentadactyla, the five-toed or short-tailed manis, with live toes on each foot. The iiead is smaller than the neck ; the eyes are very small ; the length of the body, including the tail, IS from six to eight feet. The whole body is covered with hard scales, excepting the under part of the head and neck, the breast, the belly, and tlie internal side of each leg. Betwixt the scales of this animal there are some hairs like the bristles of a liog, brownish at the points. The scales are of a reddish color, very hard, convex above, and concave below. All the parts wiiich want scales are naked. The scales are unconnected ; and the animal can raise or lower them at pleasure, like tlie quills of the porcupine. When irritated he erects his scales, and rolls himself up like a hedgehog. In this situation, neither the lion, tiger, nor any other animal, can hurt him. It is said to destroy the elephant by twisting Itself round his trunk, and compressing that tender organ with its hard scales. It feeds on lizards and insects ; turns up the ground with its nose ; walks with its claws bent under its feet; grows very fat; and is esteemed delicate eating ; and makes a noise like a kind of snort-ing. It is a mild inoffensive creature, is slow of motion, and has no other method of escaping the pursuit of man, but by concealing itself in cran-nies of rocks, and in holes which they dig in the' ground, and where they bring forth their young. It is a native of tl;e East Indies, and is very rare. It lives in woods and marshy places ; feeds on ants, which it takes by laying its long tongue across their paths, which is covered with a viscous saliva, so that the insects which attempt to pass over it cannot extricate themselves.

2. M. tetradactyla, the four-toed or long tailed manis, with four toes on each foot. This species is very similar to the former; only the tail is much longer in proportion; and such parts as want scales, instead of being naked, are covered with a soft hair. It inhabits Guinea, and is also found in the East Indies.

MANLEY (Mrs.), the celebrated author of the Atalantis, was the daughter of Sir Roger Manley, the reputed author of the first volume of the Turkisli Spy, and l)orn in Guernsey. She lost her parents very

early ; and having been deluded into a false marriage by her guardian, who was her cousin, and afterwards deserted her, she was patronised by the duchess of Cleveland (mistress of Charles 11). But the duchess, being a woman of a very fickle temper, grew tired of Mrs. Man-ley in six months ; and discharged her upon a suspicion that she intrigued with her son. After this she wrote her first tragedy, called Royal Mischief, which was acted with great applause in 1696; and, her apartmentbeing frequented by men of wit and gaiety, she soon engaged in various amours. She now became as licentious in her writings as in her morals; and a prosecution was commenced against her for her first mentioned work, but, those in power being ashamed

to bring her to trial, she was discharged; and, u total change of ministry ensuing, Mrs. Mauley lived in high reputation and gaiety, amusing herself with the conversation of wits, and writing plays, poems, and letters. After this she wrote Lucius king of Britain, a tragedy ; letters and ether works. She died in 1724.

MANLIUS, Capitolixus (Titus), a renowned Roman consul and general, who saved the capitol when it was attacked by the Gauls in the night ; being alarmed by the cries of geese, which were ever after held sacred. But, being afterwards accused of aspiring at the sovereignty, he was thrown from the Tarpeian rock. See Rome.

Manlius Torquatus (Titus), a celebrated consul and Roman general, had great wit, but a difficulty in expressing himself, which induced Manlius Imperiosus, -his father, to keep him almost by force in the country. Pompey, tribune of the people, enraged at this instance of severity, formed a design of accusing Manlius the father before the judges; but young Manlius, being informed of it, went to that tribune, and, with a poniard in his hand, made him swear that he would not proceed in that accusation againsthim to whom he owed his life. At length Manlius was made military tribune, and killed a soldier of the Gauls in single combat, from v/hose neck he took a gold cliam, whence he was surnamed Torquatus. He was consul iu the war against the Latins ; when he ordered his own son to be belieaded, for fighting contrary to his orders, tliough he had gained the victory. He conquered the enemies of the republic, and was several times made consul ; but at last refused the consulship, saying, ‘ That it was no more possible for him to bear with the vices of the people, than it was for the people to bear with his severity.’

MAN’NA, ?2.s. Arab. 7«anra; Heb. JO; Gr. fiavvu, first used in the

Septuagint. Josephus says, Antiq. lib. iii., The Hebrews call this food manna ((lavva), for the particle nxm in our language is the asking of a question, 'What is this V An extraordinary kind of food with which the Israelites were supplied in the wilderness. See Exod. xvi. A gum. See below

It would be well inquired, whether manna doth fal'. but upon certain herbs, or leaves only. Bacon.

The outward manna full not at all on the Sabbath.

Bp. Halt.

The same hand that rained manna upon their tents, could have rained it into their mouths and laps. God loves we should take pains for our spiritual food. Id.

The manna in heaven will suit every man's palate.

Locke.

Manna is properly a gum, and is honey-like juice concreted into a solid form, seldom so dry but it adheres to the fingers : its colour is whitish, or brownish, and it has sweetness, and with it a sharpness that renders it agreeable ; manna is the product of two different trees, both varieties of the ash : when the heats are free from rain, these trees exsudate a white juice. It Is but lately that the world were convinced of the mistake of manna being an aerial produce, by covering a tree with sheets in the manna season, and the finding as much manna on it as on those which were open to t!ie air. Ihll.

MANNA.

Manna, in sacred history, a miraculous kind of food which fell from heaven for tlie support of the Israelites in their passage through the wilderness, being in the form of coriander seeds, its color like that of bdellium, and its taste like honey. Asaph styles it the bread of heaven, and the food of angels, Psal. Ixxviii. 25. The autiior of the Book of

Wisdom says, xvi. 20, 21, that manna so accommodated itself to every one's taste, that every one found it pleasing to him ; and that it included every thing that was agreeable to the palate and fit for good nourishment ; which expressions some have taken in the literal sense, though others understand them figuratively. Critics are divided about the original of the word manna. Some think that man is put instead of the Hebrew word mah, which signifies, ' What is this?' and that the Hebrews, then first seeing that new food which God had sent them, cried to one another xm yo, man-hu, instead of mah-hu, What is this ? iMr. Saumaise, Burckhardt, and others, maintain, that the Hebrews very well knew what manna was ; and that, seeing it in great abundance about their camp, they said one to another, Man-hu, This is manna. They imagine that the manna which God sent the Israelites was nothing else but that fat and thick dew which still falls in Arabia, which presently condensed, and served for food to the people ; that this is the same thing as the wild honey, mentioned Matth. iii. 4, wherewith John the Baptist was fed ; and that the miracle did not consist in the production of any new substance, but in the exact and uniform manner in which the manna was dispensed for the maintenance of such a great multitude. But, the Hebrews and Orientals believe, that the fall of the manna was wholly miraculous. The Arabians call it the sugar-plums of the Almighty ; and the Jews pronounce a curse against all who deny the interposition of a miraculous power. Our translation, and some others, make a contradiction in relating this miracle, by rendering it thus: And when the children of Israel saw it, they said one to another, It is manna ; for they wist not what it was : Exodus xvi. 15. Whereas the Septuagint, and several authors ancient and modern, have translated the text according to the original : * The Israelites seeing this, said one to another. What is this? for they knew not what it was.' The word by which they asked, what is this? was in Hebrew man, which signifies likewise meat ready provided ; and therefore it was always afterwards called man or manna. It was truly miraculous ; because 1. It fell but six days in the week. 2. It fell in such a prodigious quantity, as sustained nearly 3,000,000 souls. 3. There fell a double quantity every Friday, to serve them the next day, being Sabbath. 4. What was gathered on the first five days, stunk and bred worms if kept above one day ; but that which was gathered on Friday kept sweet for two days. And, lastly. It continued falling while the Israelites abode in the wilderness, but ceased as soon as they came out of it, and had corn to eat in the land of Ca-naan.

Manna, in the materia medica, the juice of several diflerent trees of the ash kind, either na-turdly concreted on the plants, or exsiccated

and purified by art. Tiiere are several sorts of manna in the shops. The larger pieces, called flake manna, are usually preferred ; though the smaller grains are equally good, provided they are white, or of a pale yellow color ; very light, of a sweet, not unpleasant taste, and free from any visible impurities. Some injudiciously pre-fer the fat honey-like manna, but this has either been exposed to a moist air, or damaged by water. This kind of manna is said to be sometimes counterfeited by a composition of sugar and honey mixed with a little scammony ; there is also a factitious manna, which is white and dry, said to be composed of sugar, manna, and some purgatiye ingredient, boiled to a proper consi'Stence. This may be distinguished by its weight, solidity, untransparent whiteness, and by its taste, which is different from that of manna. Manna is a mild agreeable laxative; and may be given with safety to children and pregnant women : though, in some constitutions, it produces flatulencies and distensions of the viscera ; but these inconveniences may be prevented by the addition of any warm aromatic. It operates so weakly, that it does not produce the full effect of a cathartic, unless taken in large doses ; and hence it is rarely given by itself. It may be commodiously dissolved in the purging mineral waters, or joined to the cathartic salts, senna, rhubarb, or the like. Geoffrey recommends acuating it with a few grains of emetic tartar ; by this management, he says, bilious se-rum will be plentifully evacuated, without any nausea, gripes, or other inconvenience. Vallis-nieri says, that the efficacy of this drug is greatly promoted by cassia. See Cassia.

Manna Tree, a species of the ash, and a na-tive of Calabria. See Fraxinus. The shoots of this tree are much shorter, and the joints closer together, than those of the common ash ; the small leaves are shorter, deeper sawed on their edges, and of a lighter green. The flowers come out from the side of the branches, which are of a purple color, and appear in the spring before the leaves come out. The tree is of humble growth, seldom rising more than fifteen or sixteen feet high in this country. A great quantity of fine manna is gathered at Carini in Sicily, oozing from a kind of ash tree with a bark similar to that of the ebony, and a leaf somewhat like the acacia. M. Denon says, it is produced from young trees about seven or eight years old, when only about eight feet high. Incisions are then made horizontally in the bark, a"nd from these the manna flows. These are made from the earth to the top of the tree, and are repeated every two days from the end of July till the cir-oilation is st()p])ed in tlie course of the year, or till the

manna becomes worse in quality. It exudes first as a wiiite frotliy liquor extremely light, pleasant to the taste, and of an agreeable flavor, which is coag\iIated by the heat of the sun, and assumes an appearance somewhat resembling stalactites. Tliis is the best kind, and by the people of that country is called lachrymatory or cane manna. The inferior kind appears first in the form of a glutinous and higher colored liquor, which is received on the leaves of the Indian fig, placed for that purpose at the foot ot

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the tree This also congeals by the heat of the ble danger ; of corruption of religion, and deprava—

sun ; tliough it is more heavy, purgative, and of tion of manners, both capital. Id.

much less value than the former. It is called It can hardly be imagined how gre it a difference

fat manna • in this part only resides the faint and was in the humour, disposition, and mamier, of tho

disacr'reeable flavor observable in manna ; for the army under Essex, and the other under VVˆaller

cane manna is of an agreeable flavor, and is an excellent stomachic. It is got off from the bark of the tree by bending and shaking it. In rainy seasons it must be gathered every day, which both lessens the quantity and renders it of inferior quality. When the stem of tiie tree is entirely covered with incisions, they cut it down close to the ground ; after which it pushes out new tufts, one or two stems of which are preserved, and at a proper age])roduce manna as before. This tree is propagated by seed, and afterwards transplanting it. The wood is hard and heavy, of a bitter taste, and recommended in the dropsy. It thrives only in hot climates, and requires to be exposed to the north winds to make it productive; but M. Denon is of opinion that it might be propagated, and would produce manna, in Provence in France. The Sicilian manna is dearer and more esteemed than tliat of Calabria, though the latter is more generally known and cultivated. The tree does not grow

Clarendon,

This universe we have possest, and luled, In a mtinner at our will, the affairs of earth.

Milton. Others out of mannerliness and respect to God though they

deny this universal soul of the universe, yet have devised several systems of the universe.

Hale's Origin of Mankind. In my divine P<milia make me blest. Find thou the manner, and the means prepare ; Possession, more than conquest, is my care.

Dry den. Good manners bound her to invite The stranger dame to be her guest that night.

Id. Every fool carries more or less in his face the signature of his manners, more legible in some than others. L'Estrange.

The real honest man, however plain or simple he appears, has that highest species, honesty itself, in view ; and, instead of outward forms or symmetries, is struck with that of inward character, the harmony and numbers of the heart, and beauty of the affec-

in any other part of the island excepting about tions, which form the manners and conduct of a truly

Carini, where it is a native

MAN'NEll, M. s. -\ Fr. manure ; Ital. Man'nerly, «<//. {ˆmunierl; Span, ma—

Man'nerliness, n. s. i neire, manera. Mode; Man'ners,/)/m. J method; habit; custom; peculiarity of any kind; hence sort; kind; character of the mind, or behaviour; proper behaviour. 'Taken in the manner' seems written for taken in the mainour. See Mainour.

And thei clipiden hem and denounciden to hem, that on no maner thei schulden speke, neither teche in the name of ihesus. Wiclif. Dedis. iv.

What manner of men were they whom ye slew!

Judges. Tlie bread is in a manner common.

1 Sam. xxi. 5. It is in a manner done already ; For many carriages he hath dispatched To the seaside. Sliakspeare. King John.

All manner of men assembled here in arms against God's peace and the king's : we charge you to repair to your dwelling-places. Id. Henrii

VI.

Our griefs and not our manners reason now. Id.

Ungracious wretch, Fit for the mountains and the barbarous caves. Where manners ne'er were preached. Id.

Dear Kate, yow and I cannot be confined within the weak list of a country's fashion: we are the makers of manners, Kate. ■'"•

Tut ; tut ; here's a mannerly forbearance. *(*. If the envy be general in a manner upon all the ministers of an estate, it is truly upon the state it-self. Baco7i's Essaiis.

The kinds of musick have most operation upon manners : as, to make them warlike ; to make them soft and effeminate. Bacon.

If 1 melt into melancholy while I write, I shall be taken in the manner ; and I sit by one too tender to these impressions. Donne.

The same act varies in the manner of doing, and in the intention of the doer. Bp. Hall.

What must our complete traveller stake down for this goodly furniture of his gentry? If not loss, danger ; danger of the best part, if not all

dou-

social life. Shaftesbury.

None but the careless and the confident would rush rudely into the presence of a great man : and shall we, in our applications to the great God, take that to be religion, which the conunon reason of mankind will not allow to be mannersl South.

His princes are as much distinguished by their manners as by their dominions ; and even those among them, whose characters seem wholly made up of courage, differ from one another as to the particular kinds. Addison.

Fools make a mock at sin, affront the God whom we serve, and vilify religion ; not to oppose them, by whatever mannerly names we may palliate the offence, is not modesty but cowardice, and a traitorous

desertion of our allegiance to Christ. Rogers.

The temptations of prosperity insinuate themselves after a gentle, but very powerful, manner.

Atterbury. As a n»an is known by his company, so a man's company may be known by his ma7i)ier of expressing himself. Swift .

Your passion bends Its forces against your nearest friends ; Which manners, decency, and pride, Have taught you from the world to hide. Id. Some men have a native dignity in their manners, which will procure them more regard by a look, than others can obtain by the most imperious commands.

Clarissa. Augustinus does in a manner confess the charge.

Baker. It is with books as with women, where a certain plainness of manner and of diess is more engaging, than that glare of paint, and airs, and apparel, which may dazzle the eye, but reaches not the affections. Hume.

The force of his comick scenes has suffered little diminution from tiie changes made by a century and a half in manners or in words.

Johnson. Preface to Sliakspeare. Fear, being an apprehension of pain or death, it operates in a manner that resembles actual lain.

Burke.

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When Cromwell fought for power, and while lie reigned The proud protector of the power he gained, Religion harsh, intolerant, austere, Parent of manners like herself severe. Drew a rough copy of the Christian face, Without the smile, the sweetness, or the grace.

Couper.

Manner, in painting, a habitude that a mau acquires in the three principal parts of painting, the management of colors, lights, and shadows ; which is either good or bad according as the painter has practised more or less after the truth, with judgment and study. But the best painter is he who has no manner at all. The good or bad choice he makes is called gout.

MANNHARTSBERG, a mountain cliain in Austria, extending from north to south, beginning at the frontier of Moravia, and terminating at the Danube. It divides the part of Lower Austria lying to the north of the Danube, into the quarter above and tiie quarter under the Mannhartsberg ; the former comprehending the tract extending from the above mountain on the east, to the frontier of Upper Austria west, and having an area of 1850 square miles. It is well cultivated and populous; the chief products being corn, saffron, and an inferior wine. The Danube forms its southern boundary, and the principal town is Crems.

The quarter under the Mannhartsberg extends between the above mountain on the west, and the Hungarian frontier. Its form is square ; its area about 1900 square miles, and its productions similar to those of the above quarter : but in the south-east district an immense quantity of poultry is bred for Vienna. It is watered north by the Theya, south by the Danube, and east lˆy the March. The chief town is Kloster-Neuburg. MANNING (Owen), a celebrated antiquarian writer, was born at Orlingbury in Northamptonshire in 1721. He received his education at Queen’s College, Cambridge, of which society he became fellow, and took the degree of B. D. in 1753. In 17C0 he obtained a prebend in the catliedral of Lincoln. In 1763 he was presented to the living of Godalming, and in 1769 to that of Pepperharrow in Surrey. He died in If’Ol. Mr. Manning published the Saxon Dictionary, begun by Mr. Lye ; Illustrations of the Will of Alfred ; and two sermons. After his death his History and Antiquities of the County of Surrey was

completed by Mr. Bray, in 3 vols, folio.

iV'Ianning the Varus (Fr. ranger du monde sur les vergues), the act of ranging the people on the yards, rigging, &,c., either in honor of some illustrious visitor, upon hoisting the flag of some favorite admiral, or in commemoration of some splendid victory. This exhibition has often proved fatal to some of our brave seamen, and therefore ought to be dispensed with, unless upon very particular occasions, as from its very nature it must always be attended with consider-ablt- danger ; and it is well known lliat many of our admirals are too firmly convinced of the attachment of their tars to require such a testimony of their zeal or affection ; and, mucli to •'^eir credit, have forbidden such a compliment lO be paid them.

MANOMETER, or Manoscope, from^ovoc, rare or thin, and fitrptw, to measure; an instrument to show or measure the alterations in the rarity or density of the air. The manometer differs from the barometer in this, that the latter only serves to measure the weight of the atmosphere, or of the column of air ovgr it; but the former, the density of the air in which it is found ; which density depends not only on the weight of tlie atmosphere, but also on the action of heat and cold, &o. Authors, however, generally confound the two together; and Boyle himself gives a very good manometer, under the name of a statical barometer. Manometers of a different kind were made use of by colonel Roy, in his attempts to correct the errors of the barometer. 'They were,' says he, 'of various lengths, from four to upwards of eight feet : they consisted of straight tubes, wliose bores were commonly from one-fifteenth to one-twenty-fifth of an inch diameter. The capacity of the tube was carefully measured, by making a column of quicksilver, about three or four inches long, move along it from one end to the other. These spaces were severally marked with a fine-edged file on the tubes ; and transferred from them to long slips of pasteboard, for the subsequent construction of the scales respectively belonging to each. The bulb, attaclied to one end of the manometer at the glasshouse, was of the form of a pear, whose point being occasionally opened, dry or moist air could be readily admitted, and tlie bulb sealed again, without any sensible alteration in its capacity. The air was confined by a column of quicksilver, long or short, and with the bulb downwards or upwards, according to the nature of the proposed experiment. Here it must be observed that, from the adhesion of tiie quicksilver to the tube, the instrument will not act truly, except it be in a vertical position ; and even then it is necessary to give it a small degree of motion, to bring the quicksilver into its

true place ; where it will remain in equilibrio between the exterior jiressure of the atmosphere on one side, and the interior elastic force of the confined air on the other. Pounded ice and water were used to fix a freezing point on the tube ; and, by means of salt and ice, the air was farther condensed, generally 4°, and sometimes 5° or 6° below zero. The thermometer and manometer were then placed in a tin vessel among water, which was brought into violent ebullition ; where having remained a sufficient time, and motion being given to the manometer, a boiling point was marked thereon. After this the fire was removed, and the gradual descents of the piece of quicksilver, corresponding to every 20° of temperature in the thermometer, were successively marked on a deal rod applied to the manometer. It is to be observed, that both instruments, wiiile in the water, were in circumstances perfectly similar; that is, the ball and bulb were at the bottom of the vessel. In order to be certain that no air had escaped by the side of the quicksilver, during the operation, the manometer was frequently placed a second !ime in melting ice. If the barometer had not altered between the beginning and end of the experiment, the quicksilver always became

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stationary at or near the first mark. If any sud-den change had taken place in the weight of tiie atmosphere, during that interval, the same was noted, and allowance made for it in afterwards proportioning the spaces. Long tubes, with bores truly cylindrical, or of any uniform figure, are scarcely ever met with. Such, however, as were used in these experiments generally tapered in a pretty regular manner from one end to the other. The observed and equated manometrical spaces being laid down on the pasteboard containing the measures of the tube, the 212° of the thermometer, in exact proportion to the sections of the bore, were constructed alongside of them ; hence the coincidences with each other were easily seen, and the number of therraometrical degrees answering to each manometrical space readily transferred into a table prepared for the purpose.'

MAN'OR, 71. s. Old Fr. manoir ; barbarous Lat. manerium . A legal rule or government. See below.

Trouthe him selfe over al and al Had chose his manor principal In her, that was his resting place.

Chaucer's Dreme. My parks, my walks, my maiwrs that I had,

Ev'n now forsake me ; and of all my lands

Is nothing left me. Shakspea re . Heia-y Tl.

In these days, a manor rather signifies the jurisdiction and royalty incorporeal, than the land or site : for a man may have a manor in gross, as the law terms it, that is, the right and interest of a court-baron, with the perquisites thereto belonging.

Coil ell.

If parliament were to consider the sporting with reputation of as much importance as sporting on ma-nors, and pass an act for the preservation of fame, there are many would thank them for the bill.

Sheridan.

Manor, from maneo, to stay, as being the usual residence of the owner, seems to have been a district of ground held by lords or great

personages ; who kept in their own hands so much land as was necessary for the use of their families. These lands were called terra dominicales, or demesne lands ; being occupied by the lord, or dorainus manerii, and his servants. The other, or tenemental lands, they distributed among their tenants ; which, from the different modes of tenure, were called and distinguished by two different names. 1st. book land, or charter land, which was held by a deed under certain rents and free services, and in effect differed nothing from free soccage lands ; and hence have arisen most of the freehold tenants who hold of particular manors, and owe suit and service to the same. The other species was called folk land, which was held by no assurance in writing, but distributed among the common folk at the pleasure of the lord, and resumed at his discretion ; being indeed land held in villenage. See ViLLENAOE. The residue of the manor, being uncultivated, was termed the lord's waste, and served for public roads, and for common of pasture to the lord and his tenants. Manors were formerly called baronies, as they still are lordships; and each lord or baron was empowered to hold a domestic court, called the court baroD, for redressing misdemeanors and nuisances within the manor, and for settling disputes of property among the tenants. This court is an mseparable ingredient of every manor ; and if the number of suitors should so fail as not to leave sufficient to make a jury or homage, that is, two tenants at the least, the manor itself is lost. See Court. In early times the king's greater barons, who had a large extent of territory held under the crown, granted out frequently smaller manors to inferior persons to be held of themselves; which therefore now continue to be held under a superior lord, who is called in such cases the lord paramount over all these manors ; and his seignory is frequently termed an honor, not a manor ; especially if it has belonged to an ancient feudal baron, or has been at any time in the hands of the crown. In imitation whereof these inferior lords began to carve out and grant to others still more minute estates, to be held as of themselves, and were so proceeding downwards in infinitum, till the superior lords observed that, by this method of subinfeudation, they lost all their feudal profits of wardships, marriages, and escheats, which fell into the hands of these mesne or middle lords, who were the immediate superiors of the terre tenant, or him who occupied the land ; and also that the mesne lords themselves were so impoverished thereby, that they were disabled from performing their services to their own superiors. This occasioned, first, that provision in the thirty-second chapter of Magna Charta, 9 Hen. III., that no man should either give or sell his land, without reserving sufficient to answer the demands of his lord ; and, afterwards, the statute of Westminster 3, or quia emptores, 18 Edw. I. c. 1, which directs that, upon all sales, or

feoff-ments of land, the feoffee should hold the same, not of his immediate feoffer, but of the chief lord of the fee, of whom such feoffer himself held it. But, these provisions not extending to the king's own tenants in capite, the like law concerning them is declared by the statutes of praerogativa regis, 17 Edw. II. c. G, and of 34 Edw. fll. c, 15, by which last all subinfeudations, previous to the reign of Edward I., were confirmed; but all subsequent to that period were left open to the king's prerogative. Hence it is clear, that all manors existing at this day must have existed as early as Edward I., for it is essential to a manor that there be tenants who hold of the lord ; and, by the operation of these statutes, no tenant in capite since the accession of that prince, and no tenant of a common lord since the statute of quia emptores, could create any new tenants to hold of himself. See Villenage.

MANRESA, MiNOROSA, or Manxes, a large town of Spain, in Catalonia, on the river Car-dener, which a little below this place falls into the Llobregat. It has a castle, six convents, and a church, together with various manufactures of silk (on an extensive scale), hats, gunpowder, sugar of lead, and hair-cloth. Population 9000. Twenty-nine miles N. N. W. of Barcelona.

MANS, Le, a considerable town of France, the capital of the department of the Sarthe, stands on an eminence by the side of that river. The streets, though narrow, are airy and clean ; the marketplace is spacious ; and there are several

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agreeable promenades. The public buildingo and institutions worth notice are the cathedral, and other churches, a public library, and muse-um, and the hospital*. Here are considerable manufactures of linen, sail-cloth, serge, Hannel, drug’ˆets, and wax candles ; and smaHer manufactures of leather, gloves, paper, and soap. This town was a place of consequence in the reign of Charlemagne, and has suffered severely from fires, and the civil wars of the thirteenth and sixteenth centuries. Population 18,500. Twenty miles south of’Alenˆon, and seventy-five west by north of Orleans.

MANSAROWAR, Manas-sarowar, or, as it is called by the Tartars, Mapang, the lake of Brahma, is situated on the northern side of the Himmalaya Mountains, and is considered by the Hindoos one of the most sacred of tiieir various places of pilgrimage. In the mythological poems mention is frequently made of two lakes, situated among the Himmalaya Mountains, named the Mana Sarovara and the Vindu Sarovara, from which issue several of their sacred rivers. According to Prawn Poory, a travelling devo-tee, the Mansarowar Lake is situated on an elevated plain, covered with long grass, to the north of which is a conical hill, dedicated to Mahadeva. The Tartars are said to carry a portion of the ashes of their friends from a very great distance, to be thrown into the]\Ia-pang. For a long period it was supposed that this lake was the source of the Ganges ; but it has been well ascertained that that river rises from under a bed of snow on the south side of the Himmalaya chain. See Ganges.

Mr. Moorcroft visited this lake in 1812, and is of opinion that it has no considerable outlet. His stay was, however, too short to allow of his making the complete circuit of it; and it has been conjectured, that although no river runs from it, it may nevertheless have some drains which carry off its superfluous waters into the Rawan Lake, situated some miles to the west, and from which the river Suttelege, or Sutlege, has its rise. Mansarowar, or Mapang, is supposed to be situated about 31° of N. lat., and 81° of E. long. It is of an oval form ; being about fifteen miles in length from east to west, and eleven broad from north to south. The water is very clear and wholesome.

MANSE, ra.s. 3 Lat. jwarisio. A residence;

Man’sion. 5a farm and farm-house; parsonage-house : the lord’s house

in a manor; any important house or abode.

All these are but ornaments of that divine spark within you, which, being descended from lieaven, could not elsewhere pick out so sweet a mansion.

■Siilney.

A fault no less grievous, if so be it were true, than if some king should build his maHsiojj-house by the model of Solomon's palace. Iluukcr.

To leave his wife, to leave his babes, His mansion, and his titles in a place From whence himself does fly ! he loves us not.

Shakspeare. These poets near our princes sleep,

And in one grave their mansions keep. ' Venbam.

Thy mansion wants thee, Adam ; rise. First man, of men innumerable ordained ;

First father ! called by thee, I come thy guide

To the garden of bliss, thy seat prepared, lyiltou.

A mansiun is provided for thee ; more fair Than this, and worthy Heaven's peculiar care. Not framed of common earth. Dryden.

Nor fears to crave Death, instant death, impatient for the grave, That seat of peace, that mansion of repose. Where rest and mortals are no longer foes.

Young. And such in ancient halls and mansio7is drear May still be seen ; but perforated sore. And drilled in holes, the solid oak is found, By worms voracious eaten through and through.

Coicper. MANSFELD (Peter Ernest), count of, was descended from one of the most illustrious families in Germany. In 1552 he was taken prisoner at Ivoy, where he commanded. He was afterwards of great service to the Catholics at the battle of Montcontour. Being made governor of Luxemburg, he maintained tranquillity in that province, while the rest of the Netherlands was a prey to civil war. He was afterwards appointed to the command of the Netherlands, and made a prince of the empire. He died at Luxemburg March 21st, 1604, aged eighty-seven. His mausoleum in bronze, in the chapel bearing his

name, at Luxemburg, is an admirable work. Abbe Schannat wrote his life in Latin, Luxemburg, 1707.

Mansfeld (Ernest de), the illegitimate son of the count, by a lady of Malines, was educated at Brussels in the Roman Catholic religion. He was employed in the service of the king of Spain in the Netherlands, and in that of the emperor in Hungary, together with his brother Charles, count of Mansfeld. He was legitimated on account of his bravery by Rodolphus 11. ; but his father's posts and possessions in the Spanish Netherlands having been refused him, contrary to promise, he, in 1610, joined the Protestant princes. Being now become a most dangerous enemy of the house of Austria, who called him the Attila of Christianity, he placed himself in 16 18 at the head of the insurgents in Bohemia, and obtained possession of Pilsen inl612. Though his troops were defeated in several battles, he]ienetrated into the palatinate, took several towns, ravaged Alsace, made himself master of Haguenau, and defeated the Bavarians. At length he was totally defeated by VValstein at Dassau, in April, 1626. He gave up the command of Jiis remaining troops to the duke of Weimar, intending to pass into the Venetian states, but died in a village between Zara and Spalatro, A.D. 1626, aged forty-six. He was bold, intrepid in danger, and the most skilful negociator of his age. He possessed a natural eloquence, and knew how to insinuate himself into the hearts of those whom he wished to gain. He was greedy of others' wealth, and prodigal of liis own. Not wishing to die in his bed, he dressed himself in his finest robes, put on his sword, sat up,leaning upon two domestics, and in tiiis position breathed his last. Having received information that Cazel, in whom he placed the greatest confidence, had communicated his plans to the Austrian chief, he gave him 300 rix-dollars, and sent him to count Buquoy, with a

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letter in these words, ‘ Cazel being attached to you and not to me, I send him to you, that you may have the benefit of his services.’

Mansfeld, a district of Saxony, to the west of Leipsic, formerly a county of the German e;npire, and dependent, as a fief, on Magdeburg and Saxony. The area is 420 square miles, and population 60,000.

Mansfeld, or Thai. Mansfeld, a town of Prussian Saxony, on the Thalbach, in the government of Merseburg. Population 1300. Forty-two miles W.N. W. of Leipsic.

MANSFIELD, a market town of Notting-hamshire, in the forest of Sherwood, 139 miles from London. It was anciently a royal demesne. It has a market on Thursday, and two fairs. By an ancient custom of this manor, the heirs were declared of age as soon as born. It is a well-built town, and carries on a good trade in malt. Its market is well stocked with corn, cattle, &c. It has a charity-school for thirty-six boys. It has a small manufactory of stockings, and was formerly noted for its soap.

]\IANSIO, a term often mentioned in itinera-ries, denoting inns on the public roads to lodge in, at the distance of eighteen miles from each other. (Lactantius.) In the lower ages it came lo denote an encampment for one night. (Lam-pridius.)

Mansio, or jNIansus, was sometimes also used in tlie same sense with hide ; that is, for as much land as one plough could till in a year.

MANSIR, a beautiful town of Hindostan, in the province of Lahore, belonging to the Seiks. It is situated on the side of a large siieet of water, containing a variety of fishes, which are held sacred, and live unmolested by the natives. Long. 74° 20’ E., lat. 32° 50’ N.

Manslaughter may be either voluntary, upon a sudden heat; or involuntary, but in the commission of some unlawful act. These were called, in the Gothic constitutions, homicidia vulgaria; qua; aut casu, aut etiam sponte com-raittuntur, sed in subitaneo quodam iracundiae calore et impetu. Hence, in manslaughter, there can be no accessories before the fact; because it must be done without premeditation.

MAKSLAUf.HTEn, IxvoLUNTARV, differs from homicide excusable by

misadventure, in this : that misadventure always happens in consequence of a lawful act, but this species of manslaughter in consequence of an unlawful one. As if two persons play at sword and buckler, unless by the king's command, and one of them kills the other : this is manslaughter, because the original act was unlawful; .but it is not murder, for the one had no intent to do the other any personal mischief. So where a person does an act, lawful in itself, but in an unlawful manner, and without due caution and circumspection ; as when a workman flings down a stone or piece of timber into the street, and kills a man ; this may be either misadventure, manslaughter, or murder, according to the circumstances under which the original act was done. If it were in a country village, where few passengers are, and he calls out to all people to have a care, it is a misadventure only : but if it were in London, or other populous .owns, where people are continually passing, it

is manslaughter, though he gives loud warning; and murder, if he knows of their passmg and gives no warning at all, for then it is malice against all mankind. In general, when an involuntary killing happens in consequence of an unlawful act, it will be either murder or manslaughter, according to the nature of the act which occasioned it. If it be in prosecution of a felonious intent, or in its consequences naturally tending to blood-shed, it will be murder; but, if no more was intended than a merely civil trespass, it will only amount to manslaughter.

Manslauoiitei;, 'ollktary. If, upon sudden quarrel, two persons figlit, and one oi them kills the other, this is manslaughter : and so it is if they, upon such an occasion, go out and fight in a field ; for tiiis is one continued act of passion : and the law pays that regard to human frailty, as not to put a hasty and deliberate act upon the same footing with regard to guilt. So also if a man be greatly provoked, as by pulling his nose, or other great indignity, and immediately kills the aggressor; though this is not excusable se defendendo, since there is no absolute necessity for doing it to preserveˆ himself; yet neither is it murder, for there is no previous malice; but it is manslaughter. But in this, and in every other case of homicide upon provocation, if there be a suflˆcient cooling-time for passion to subside and reason to interpose, and the person so provoked afterwards kills the other, this is deliberate revenge, and not heat of blood, and accordingly amounts to murder. So, if a man takes another in the act of adultery with his wife, and kills him directly upon the spot; though this was allowed by the law of Solon, as likewise by the Roman civil law (if the adulterer

was found in the husband's own house), and also among the ancient Goths; yet in England it is not absolutely ranked in the class of justifiable homicide, as in case of a forcible rape, but it is manslaughter. It is, however, the lowest degree of it ; and therefore in such a case the courtdirected the burning in the hand to be gently inflicted, because there could not be a greater provocation. Manslaughter, therefore, on a sudden provocation, differs from excusable homicide se defendendo in this : that in one case there is apparent necessity, for self-preservation, to kill the aggressor ; in the other no necessity at all, being only a sudden act of revenge.

Manslaughter, Punishment of. As to the punishment of this degree of homicide : the crime of manslaughter amounts to felony, but within the benefit of clergy ; and the offender shall be burnt in the hand, and forfeit all his goods and chattels. But there is one species of manslaughter, which is punished as murder, the benefit of clergy being taken away from it by statute; namely, the offence of mortally stabbing another, though done upon sudden provocation. See Stabbimg and ˆluRDER.

MANSOURA, a considerable town of Lower Egypt, built by the Saracens in the time of the crusades. It was the scene of several actions sustained by the French and English; and is supposed by Dr. Pocock to be the Zoan or Tanis of more ancient times. Lord Valentia speaks of it as beautifully situated on ahighbank of the Nile, and adorned witli numerous mosques. The

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streets narrow, and the houses built of brick ; out a fourtli part of it is in uiins. The trade is carried on by Syrian Christians, wlio export fine rice from the lake Menzaleh, and sal ammoniac. Hatching chickens, by means of ovens, is carried on here to a great extent. Twenty-four miles S. S. W. of Damietta.

MANSOURAH, a river of Algiers, anciently the Sisaris, which falls into the sea, about eighteen miles to the east of Boujeiah. There was foraierly a town of the same name at its mouth.

MANSTEIN (Christopher Herman de), was born at Petersburgh, September 1st, 1711, and served long with great distinction as a colonel in the Russian armies. In 1745 he entered into the service of the king of Prussia ; was appointed major-general of infantry in 1754; and distinguished himself on all occasions by his bravery and military knowledge. He was wounded at the battle of Kolin, and soon after killed near Leutmeritz, in 1758. He devoted his leisure moments to study, and was acquainted with al-most all the languages of Europe. He wrote Historical, Political, and Military Memoirs of Russia, in French; published at Lyons, 1772, in 2 vols. 8vo., with plans and charts. These memoirs commence with the death of Catherine I. 1727, and end in 1744. A suppleme.it is added, which goes back to the times of the ancient Czarz. Mr. Hume caused these memoirs to be translated into English, and published at London ; and soon after a German translation was published at Hamburgh ; a French edition was published by M. Huber at Leipsic, in 1771 ; and a new and enlarged edition in 1782.

MAN’SUETE, adj.) Lat. mansuctus. Tame; Man’suetude, 71. s. ji gentle; not ferocious or wild : tarneness ; gentleness.

The angry lion did present his paw, Which by consent was given to mansuetude ;

The fearful hare her ears, which by their law Humility did reach to fortitude. Herbert.

This holds not only in domestick and munsuele birds, for then it might be thought the effect of ci-curatioD or institution, but also in the wild.

Ray on the Creation. MANSUS. See Manse. Mansus Presbyteri is a

parsonage or vicarage house for the incumbent to reside in. This was originally, and still remains, an essential part of the endowment of a parish church in Scotland, together with the glebe and tythes. It is sometimes called Presbyterium.

MANTA, in ichthyology, a flat fish mentioned by UUoa, and others, as exceedingly hurtful to the pearl-fishers, and which seems to be the same with that which Pliny has described under the name of nubes or nebula : ipsi ferunt (Uri-natorcs) et nubem quandam crassescere super capita, planorum piscium similem, prementem eos, arcentemqnc a reciprocando et ob stilos praeacutos lineis annexos habere sese ; quia nisi perfossae ita, non recedant caliginis et pavoris, ut arbitror, opere. Nubem enim sive nebulam (cujus nomine id malum appellant) inter anima-lia hand ullam reperit quisijuam. (Hist. Nat. lib. ix. cap. 46). This account is much the same with that whicli the divers in the American seas give of the manta, and the name of nubes, or the cloud, is perfectly applicable to il, as it really

seems to be a cloud to those who are in tlie water below it : the swimmers likewise carry long knives, or sharp sticks, to defend themselves against these fish.

Manta, Bay of, on the west coast of South America, in the province of Guayaquil, and kingdom of Quito. It is twenty mdes south of the equator, and had formerly pearl fisheries of considerable extent and success. The fish called manta abounds here, and is said to have deterred t'le fishers from diving.

MANTEGNA * Andrev/), was born in a village near Padua in 1451, and at first employed in keeping sheep. He was placed with a painter, who adopted him, and made him his heir. At the age of seventeen he was employed to paint the altar of St. Sophia in Padua, and the four evangelists. James Bellini, who admired his talents, gave him his daughter in marriage. Mari-tegna painted, for the duke of Mantua, the Triumph of Caesar, which is his chief-d'oeuvre, and has been engraved in nine plates. The duke made him knight of his order. The invention of engraving prints with the graver is ascribed to Mantegna. He died at Mantua in 1517.

MANTEL, or -\ Sax. maen—

Man'tle, n. s., v. a. & r. 72. f^il; Swed. and Mantelet', ^Teut. mantel ;

Man'tel-tree. ' Old Fr. mantel; Ital. and Span, inanta; barbarous Lat.

man-tellum. A cloak or cover: mantel and mantel-tree are the cover or work that conceals a chimney ; a particular kind of fortification : to mantle is to cover ; disguise ; protect ; spread or difl'use ; gather on a surface ; to spread out the wings : mantelet is a diminutive of mantel.

His cote arraure was of a cloth of tars, Couched with perles white, and round and grete ; His sandel was of brent gold new ybete ; A mantelet upon his shoulders hanging Bret-ful of rubies red, as fire sparkling.

Chaucer. Cant, Tales. By which the beauty of the earth appears, The divers-coloured mantle which she wears.

Saudijs. We, well-covered with the night's black mantle. At unawares may beat down Edward's guard, And seize himself. Shakspeare. Henri/ VI.

Poor Tom drinks the green rnantle of the standing pool. Id. King Lear.

As the morning steals upon the night, Melting the darkness ; so the rising senses Begin to chace the ignorant fumes, that mantle Their clearer reason. Id. Temp

There are a sort of men whose visages Do cream and mantle like a standing pond ; And do a wilful stillness entertain, With purpose to be drest in an opinion Of wisdom, gravity, profound conceit. Shakspeare.

My frail fancy fed with full delight])oth bathe in bliss, and manlleth most at ease ; Ne thinks of other heaven, but how it might Her heart's desire with most contentment pluasc.

Spenser. The herald and children are cloathed with mantles of sattin ; but the herald's mantle is streamed with gold. Bacon.

It drinketh fresh, flowereth, and inantleth exceedingly. . "^•, from the Italians we may learn how to raise fair mantels within the rooms, .nid how to disguise the shafts of chimniis. M'otlon.

npeit.

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Their actions were disguised with mnniles, very usual in times of disorder, of religion and justice.

Hay ward. The swan with arched neck, Between her white wings mauiling, row.; Her state with oary feet. Milton's Faradise Lost. The pair that clad £ajch shoulder broad, came mantling o'er his breast With regal ornament. Id.

The matitUiig vine Lays forth her purple grape, and gently creeps Luxuriant. Id.

Before the sun, Before the heavens thou wert, and at the voice Of God, as with a mantle didst invest The rising world of waters dark and deep, AVon from the void and formless infinite. Milton. I saw them under a green mantling vine, That crawls along the side of yon small hill, Plucking ripe clusters. Id.

Upon loosening of his mantle the eggs fell from him at unawares, and the eagle was a third time defeated. L'Estrange.

When mantling blood Flowed in his lovely ciieeks ; when his bright eyes Sparkled with youthful fires ; when every grace Shone in the father, which now crowns the son

Smith. A specious veil from his broad shoulders flew. That set the unhappy Phaeton to view ; The flaming chariot and the steeds it shewed, And the whole fable in the mantle glowed.

Addison. Dan Pope for thy misfortune grieved, With kind concern and skill has weaved A silken web ; and ne'er shall fade Its colours : gently has he laid The mantle o'er thy sad distress. And Venus shall the texture bless. Prior.

You'll sometimes meet a fop, of nicest tread. Whose manlliny peruke veils his empty head. Gay. And where his mazy waters flow, He gave the mantling vine to grow A' trophy to his love.

Fenton's Ode to Lord Goioer. If you break any china on the mantletree or cabinet, gather up the fragments. Swift.

From plate to plate your eye-balls roll. And the brain dances to the

mantling bowl. Pope.

His friends around the deep affliction mourned. Felt all his pangs, and groan for groan returned, In anguish of their hearts their mantles rent. And seven long days in solemn silence spent.

Young. Earth receives Gladly tlie thickening mantle ; and the green And tender blade, that feared the chilling blast. Escapes unhurt beneath so warm a veil. Coicper. Mantel, or MantleTree, in architecture, the lower part of a chimney, or that piece of timber which is laid across the jambs, and sustains the compartments of the chimney-piece.

MANTES, a well built town in the department of the Seine and Oise, and on the banks of the former river. The principal street is terminated by an elegant bridge ; and a fine chateau is embosomed in woods, on the other side of the Seine. Population 4300. Thirty-one miles W. N. W. of Paris.

MANTICHORA, a name given by the Roman authors to a fierce and terrible creature, which they describe from the Greeks, who call it sometimes also mantichora: but, when they write more

correctly, martichora and martiora. The name man-tiger is formed on the sound of* the Roman name, though expressmg a very different sense. The wliole story of this animal seems founded on that afiection for the marvellous so common to travellers ; and probably the mantichora was only a s]iecies of the large hyaena, which being at first ill described, afterwards more and more wonders were added, till all shadow of truth was lost.

MANTINCEA, in ancient geography, a town situated in the south of Arcadia, on the confines of Laconia (Ptolemy), called afterwards Antigonea, in honor of king Aiitigonus. It is memorable for a battle fought in its neighbourhood, between the Thebans and Spartans, in winch fell the celebrated commander Epaminondas. See Theees.

MANTIS, in entomology, a genus of jisects belonging to the order of hemiptera, the characters of which are these: the head is unsteady, and appears, from its continual nodding motion, to be but sligiitly attached to the thorax : the moutii is armed with jaws, and furnished with filiform palpi : the antennae are setaceous : the four wings are membranaceous, and wrapped round the body ; tlie under ones folded : the anterior or first pair of feet are compressed, armed on the under

side with teetli like a saw, and terminated by a single nail or crochet : the four hindermost are gressorii, or formed rather for advancing slowly than for performing quick movements. The thorax is extended to a considerable length, nar-row, and throughout of equal size. The name mantis denotes soothsayer, because it has been imagined that this insect, by stretching out its fore feet, divined and pointed out those things that were asked of it. Tiie insect often rests on its four hinder legs only, and, holding the two fore ones raised up, joins them together, which has occasioned its being called by the people of Languedoc, where it is very common, pregadieu, as if it prayed to God. They also say, that this creature shows the way when asked, because it stretches its fore legs sometimes to the right, and sometimes to the left : and indeed it is considered as almost sacred, and must not be hurt. Its color is all over of a brownish green. The young ones have more of the green, the old more of the brown, cast. It deposits its eggs collected into a hemispherical parcel, flat on one side ; and containing two rows of oblong eggs placed transversely, and one row of shells placed longitudinally, in form of a roof, one over the other, which cover the joining of the two rows of eggs. The whole parcel is light, and as it were composed of very thin parchment. The insects, in their most perfect state, are generally of very beautiful green colors, which soon fade, and become the color of dead leaves. Their elytra, bearing so strong a resemblance to the leaves of some, plants, have procured them the name of creeping or walking leaves. See Entomology.

Mantle, or Mantling, in heraldry, that appearance of folding of cloth, flourishing, or drapery, which in any achievement is drawn about a coat of arms. See Heraldry.

MANTO, in fabulous history, the daughter of Tiresiaj, and like her father strongly inspired with prophecy. She was so highly esteemed, that,

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when the Argives pillaged Thebes, they thought they could not acquit their vow of consecrating to Apollo the most precious thing in their plunder, without offering to him this young woman. She was therefore sent to the temple of Delphi. But this did not engage her in any vow of contin-ency ; for she bore a son called Amphilochus to Alcmeon, who had been generalissimo of the army which took Thebes ; and a daughter named Tisiphone. These children were the fruits of aii amour carried on during the madness which had seized Alcmeon, after he had put his mother to death. Virgil says she went into Italy, and had a son who built Mantua.

MAN'TUA, n. s. } Fr. manteau ; Spanish Man'tuamaker. S manto, a mantle. A lady's gown or dress : a dress maker.

By profession a mantuamaher : I am employed by the most fashionable ladies. Addison's Guardian.

Not Cyuthia, when her mantua's pinned awry, E'er felt such rage, resentment, and despair, As thou, sad virgin ! for thy ravished hair. Pope.

How naturally do you apply your hands to each other's lappets, ruffles, and mantuas. Swift.

Mantua, a province of Austrian Italy, adjoining the duchies of Parma and Modena. It nas a superficial extent of 880 square miles ; and a population of 214,000. The surface of the country is level and fertile, being watered by the Po, the Oglio, the Mincio, the Sechio, and several smaller streams. The chief products are corn, rice, hemp, flax, fruit, and vines. Little wood is found in this province; and some marshy tracts are unproductive : the mineral productions are also inconsiderable. The former duchy was of larger extent than the present province of tiiis name. The Gonzaga family acquired it in the fourteenth century, and continued to govern it until the war of the Spanish succession, when the reigning duke espoused the Bourbon cause, and lost this territory to Austria in 1706. In 1796, being seized by the French, it was formed into the department of the Mincio, in the temporary kingdom of Italy, but was restored to the empire in 1814.

Mantua, in ancient and modern geography, a city of Italy, and now the capital of the Austrian districtor delegation of this name. It

wasanciently a town of Gallia Transpadana, and situated on the Mincius, a river running from the lake Bena-cus. It is said to have been founded even before Rome, by Bianor or Ocnus, the son of Manto ; and was the ancient capital of Etruria. When Cremona, who had followed the interest of Bru-tus, was given to the soldiers of Octavius, Man-tua also, which was in the neighbourhood, shared the common calamity, and many of the inhabitants were tyrannically deprived of their possessions. Virgil, who was among them, and a native of the town, applied for redress to Augustus, and obtained it on account of his poetical talents.

In modern times it has always held a distinguished rank, and is a large city, having eight gates and about 20,000 iiiliabitants. The' streets are broad and straight, and the houses well built. It is very strong by situation as well as by art; lying in the middle of the Lago di Mantua, formed by the river Mincio. This lake

is twenty miles in circumference, and two broad having four different ramifications, called tiie lakes of Mezo, Paivolo, Sopro, and Sotto. There is no access to the city but by two causeways which cross this lake, and which are strongly fortified ; so that the city has been considered as one of the strongest in Europe ; and the allies in 1 745, though tiieir army was in the duchy, durst not undertake the siege. On the main land opposite is the important suburb of Cerese. Mantua was besieged, however, by the French in 1796, and first invested by order of Buonaparte on the 4th of June. On the 16th of July the garrison made a sortie, but were forced to retreat with the loss of 600 men. On the 18th the French opened their trenches, and on the 19th set fire to the city in various places. On the 29th general Wurmser attacked the French lines, destroyed tlieir trenches, relieved the fort, raised the siege, and took 140 pieces of cannon. But on the 24th of August following, the French, under general Sahuguet, again blockaded the town; and on the 15th of September forced the Austrians to retire into it, with a loss of 2500 men, twenty cannon, &c., and took Fort St. George. On the 23d of November general Wurmser made a third sortie, with the loss of 200 men; and at last, after having been reduced to such straits that 5000 horses were killed and eaten during the siege, he surrendered it to the French by capitulation, on the 2d of February 1797, with 559 cannon, 17,115 small arms, a vast quantity of other military stores, and the whole remains of his army. In July 1799 Man-tua was again besieged by the Austrians under general Kray, to whom it at last surrendered. The public squares are spacious and elegant. Of the latter, the most noted is the Piazza di Virgilio, used as a

promenade. In its centre is a column of marble called 'irgirs monument, resting on a pedestal of the same material, wiili n bronze statue of tiie poet at top. On the four sides of the pedestal are suitable inscriptions. The cathedral of Mantua is a beautiful building, nearly on the same plan as the church of Santa Maria Maggiore at Rome. It is surmounted by a fine dome, and adorned in the interior with Corinthian pillars, and a number of paintings. Of the other churches of the city the only one that deserves notice is that of St. Andrew, the interior of which is finely painted. The other buildings are tliu Palazzo della Gius-titia; the palace of the Cionzaga family ; the one which, from its shape, bears the name of the Palazzo di T. ; and tiie Corte with its hall. Besides these, may be mentioned the university, an arsenal, the Jewish synagogue, and the public library. Mantua also contains several valuable collections of])aintings, and a gallery of antiquities, belonging to the Academy of Arts.

Between 4000 and 5000 Jews live in a distinct quarter of the town, and have a considerable share of the trade : which in the silk manufactory and its adjuncts is still considerable; those of leatiier anti woollens are also of importance. In summer and autumn, from tl>e slag-nation of the waters of the lake, the air becomes unhealthy, and the better classes retire to the neighbouring shores. It is seventy niilei W.S.

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.—v All of Lat. maniis, f the hand. Manual ˆ is, performed or used } by the hand ; a small

W, of Vˆienna, and the same distance E. S. E. of Milan.

MANTUAN (Baptist), a famous Italian poet, born at Mantua in 1448. lie took his name from the town, Iieing an illegitimate child. In his youth, he applied to Latin poetry, which he cultivated all his life. He entered amon> >’ the Carmelites, and became general of the order; tiiougli he quitted that dignity upon some disgust in 1515, and died the year following. The duke of Mantua, some years after, erected a marble statue to his memory crowned with lau-rel, and placed it next to that of Virgil. His works were collected and published at Paris, in 3 vols, folio, in la 13, witli the commentaries of St. Murrhon, S. Brant, and I. Badius.

MAN’UAL, adj. & n. s.-ˆ AH of Lat. mams,

Man’uary,

Manu’buium,

MANunuc’riON. ˆ by i

book, or one that may be conveniently carried in the hand : manuary is used as a substantive, by Bishop Hall, as synonymous with manual : manubrium, a handle: manuduction, guidance by the hand.

For what learning is that, which the seas, or Alps, or Pyrenees have engrossed from us 7 what profession, either liberal or manuary, wherein the greatest masters have not been at least equalled by our home-bred islanders ?_ Bj). Hall.

The treasurer obliged himself to procure some declaration under his majesty’s sign manual.

Clarendon.

This manual of laws, stiled the confessor’s laws, contains but few heads.

Hale's Common Law of England.

That they are carried by the manuduction of a rule, is evident from the constant regularity of their mo-tion. Glanrille.

We find no open tract, or constant rnanudiictfoji, in this labyrinth. Browne's Vulgar Errours.

Though the sucker move easily enough up and down in the cylinder by the help of the manubrium, yet, if the manubrium be taken off, it will require a considerable strength to move it. Boyle.

In those prayers which are recommended to the use of the devout persons of your church, in the manuals and offices allowed them in our own language, they woidd be careful to have nothing they thought scandalous. Stillingjieet.

The speculative part of painting, without tiie assistance of manual operation, can never attain to that perfection which is its object. Dryden's Dnfresnoy.

This is a direct manuduction to all kind of sin, by abusing the conscience with undervaluing persuasions concerning the malignity and guilt even ot the foulest.

South.

Manual is a service book used in the church of Rome, containing the rites, directions to the priests, and prayers used in the administration of the sacraments, the form of blessing holy water, and the service used in processions.

The Manual and Platoon Exf.rcise, in the army, no longer makes a regular part of a review, but only is gone through, when particularly called for by the reviewing general. Sentries posted with shouldered arms are permitted afterwards to support, but not to slope them. On the approach of an officer they immediately carry their arms, and put themselves into their proper position, which is not to be done at the

instant he passes, but by the time he is within twenty yards of tlieir post, so tliat they may be perfectly steady before he comes up. Corporals marching with reliefs, or commanding detach-ments, or divisions, will carry their arms advanced ; for which purpose, a soldier, when promoted to tliat rank, must be taught tlie position of

advanced arms. There are some peculiar words of command at the manual exercise of the grenadiers, wiien apart from the battalion, and also for tlie cavalry and artillery.

MANUDUCTOR, from Latin, maniis, hand, and duco, I lead, an ancient officer in the Latin church, who, from the middle of the choir, gave tlie signal for the choristers to sing, and marked tlie measure, beat time, and regulated the music. The Greeks called him Mesachoros, because seated in the middle of the choir.

MANUEL (Pierre), a demagogue of the French revolution, born in low life, was yet well educated, and, going to Paris young, commenced his career as an author, by publishing Essai Historique et Politique sur la Vie de St. Louis. He then became tutor in a banker's fa-mily, from which he obtained a small pension. Resuming his pen, he produced several pamphlets, among which was one called La Police Devoilee, for which he was sent for a short time to the Bastile. On the occurrence of political commotions, he became a partizan of the jacobin principles. In 1789 he had an office under the municipality of Paris; and in November 1791 obtained the place of attorney of the commune. He was for a time one of the most active and dangerous enemies of royalty, and appears to have been deeply implicated mi tl:e massacres which took place in tlie beginn ng of September 1792. Immediately after he was nominated a deputy to the national convention, when he detached himself from the jacobin party; and on tlie trial of the king voted for his imprisonment during the war. Other unpopular measures which he advocated obliged him to resign in .lanuary 1793, and he retired to Montargis his native place, we believe, where he narrowly escaped being assassinated : a few months after he was arrested, and sent to the scaffold November 14th, 1793.

MANUFACTURE, n.s. Scu. a. "^ Fr. ma-Manufac'tory, n. s. > nufacture ■,

Manufac'tureu.) Lat. »?««!«,

and facio, to make. The art or practice of constructing any piece of workmanship; any thing made by art : to make by art or labor ; employ in work, or work up : a manufactory is a place where such work is ordinarily performed : a manufacturer, the proprietor, conductor, or workman.

Heaven's power is infinite : earth, air, and sea. The manufacture mass the making power obey.

l)ri/den.

The peasants are cloathed in a coarse kind of can-vas, tlie manufacture of the country. Addison.

In the practice of artificers and the manufacturers of various kinds, the end being proposed, we find out ways of composing this for the several uses of human life. Watts.

May not the peaceable, the industrious inhabitant of Manchester say, I call upon the laws to afford mc

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protection ; and, if the laws in this country cannot afford it, depend upon it, 1 and my marttifactures must emigrate to some country where they can.

Canning. MAN'UMISE, v.a.f Lat. manumitto. To Manumis'sio\, n.s. >set free ; dismiss or dis-Manumit', u.a. J charge from bondage: the first of these verbs seems altogether redundant ill our language: manumission is the act or instrument whereby liberty is given.

A constant report of a danger so imminent run through the whole castle, even into the deep dungeons, by the compassion of certain manumlsed slaves.

Knottes. Slaves wore iron rings until their 7})anumission oi preferment. Browne's Vulgar Ernmrs.

He presents To thee, renowned for piety and force. Poor captives manumised, and matchless horse.

Waller. Thou wilt beneath the burden bow, And glad receive the manumitting blow On thy shaved slavish head.

Dryden's Juvenai.

Manumit and release him from those drudgeries to

vice, under which those remain who live without God.

Government of the Tongm.

The pileus was somewhat like a night-cap, as the

symbol of liberty, given to slaves at their manumission.

Arbuthnot. Happy day that breaks our chain ; That manumits ; that calls from exile home.

Young.

Manumission is derived from the Latin manus, hand, and mittere, to send ; quia servus mittebatur extra manum seu potestatem domini sui. Some authors define manumission an act by which a lord enfranchises

his tenants, who till that time had been his vassals, and in a state of slavery. Among the Romans, the manumission of slaves was performed three ways : 1. When, with his master's consent, a slave had his name entered in the census or public register of the citizens. 2. When the slave was led be-fore the praetor, and that magistrate laid his wand, called vindicta, on his head. 3. When the master gave the slave his freedom by liis testament. Servius TuUius is said to have set on foot the first manner ; and P. Valerius Pub-licola the second. A particular account is given of the third in Justinian's Institutes. It was not necessary that the pra;tor should be on his tribunal to perform the ceremony of manumission : he did it any where, in his house, in the street, Sec. He laid the rod on the slave's liead, pronouncing these words, Dico eum libornm esse more (Juiritum, ' I declare him a freeman, after the manner of the Romans.' This done, he gave the rod to the lictor, who struck the slave witli it cm the head, and afterwards with his hand on his face and back ; and the notary or scribe entered the name of the new freeman in the register, with the reasons of his manumission. The slave had likewise his head shaved, and a cup given him by his master as a token of freedom. TertuUian adds, that he had then also a third name given him : if this were so, three names were not a token of nobility, but of freedom. Constantine ordered tlie manumissions at Rome to be performed in the churches. Of manuniission there have also been various forms

in England, in the time of William I. villeins were manumitted, by the master delivering them by the right hand to the viscount, in full court, showing them the door, giving them a lance and a sword, and proclaimnig them free. Others were manumitted by charter. There was also an implicit manumission ; as, when the lord made an obligation for payment of money to the bondman at a certain day, or sued hmi where he might enter vvithout suit, and the like.

MANURE', v.a. & n.s.-\ I"r. nianouvrtrr ;

Manu'kable, adj. f Lat. mann operor.

Manu'rance, n.s. ˆ To cultivate or dress

Manure'ment. 'by manual labor:

hence to dung, or fatten land by art ; the dung or compost so used : manurable is capable of or fit for cultivation : manurance and raanuremer.t, cultivation ; improvement.

As the fertilest ground must be manured ; so must the highest flying wit have a Daedalus to guide him.

Sir P. Sidneii.

Although there should none of them [fall by the sword, yet they being kept from manurance, and their cattle from running abroad, by this hard restraint they would quickly devour one another.

Spenser on Ireland.

The manurement of wits is like that of soils, where, before the pains of tilling or sowing, men consider what the mould will bear. Wotton on Education.

They mock our scant manuring, and require JVIore hands than ours to lop their wanton growth.

Milton.

This book gives an account of the manurable lands in every manor. Hale's Origin of Mankind.

When the Nile from Pharian fields is fled,

The fat manure with heavenly lire is warmed.

Dryden.

]\lud makes an extraordinary manure for land that is sandy. Mortimer's Husbandry.

Revenge her slaughtered citizens.

Or share their fate : the corps of half her senate

Manure the fields of Thessaly, while we

Sit here, deliberating in cold debates. Addison.

Fragments of shells, reduced by the agitation of the sea to powder, are used for the manuring of land.

Woodward .

Manure. See Rural Economy.

MAN’USCRIPT, n.s. Fr. manuscrit ; Latin jnannscriptum. A written book ; any writing.

Any Tnamiscript roll, written by the hand of a fa-mous man, is laid up amongst our jewels.

Bp. Hall.

Her majesty nas perused the manuscript of this opera, and given it her approbation. Dryden.

A collection of rare maiu/scnpf*, exquisitely written in Arabick, and so\ight in the most remote parts by the diligence of Krpenius, the most excellent linguist, were upon sale to the Jesuits. Wotton.

He grinds divinity of other days

Down into modern use : transforms old print

To zig-zag manuscript, and cheats the eyes

Of gallery critics by a tiiousand arts. Cowper

A Manuscript is a book or paper written with the hand; by which it stands opposed to a printed book or paper. A ma-iuscript is usually denoted by MS. and in tlie plural by I\ISS. : public libraries are principally valuable for the number of ancient MSS. deposited in thom. In examining MSS. that were written before the invention of printing, it is necessary to know

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Iheir nature, to be able to read them freely and without error, and to judge of tlieir antiquity. As there are scarcely any of the ancient codes now remaining written on the Egyptian paper, or on wood, ivory, &c., we have only to consider those that are written on parchment or vellum, raembraneos, and such as are written on paper, chartaceos. The former are in most esteem. With regard to the character, these codes are written either in square and capital letters, or in half square, or round and small letters. Those of the first kind are the most ancient. There are no intervals between the words, no letters different from the others at the beginning of any word, no points, nor any other distinction. The codes that are written in letters that are half square resemble those we have in Gothic characters, as well for the age as the form of the letters. Such as are written in round letters are not so ancient as the former, and are not older than the ninth or tenth century. These have spaces between the words, and some punctuation. They are likewise not so well written as the preceding, and are frequently disfigured with comments. The codes are divided, according to the country, into Lombard, Italian, Gaulic, Franco-Gaulic, Saxon, Anglo-Saxon, &c. In the ancient Greek books, they frequently terminated the periods of a discourse, instead of other divisions, by lines; and these divisions were called in Latin versus, from vertendo : for which reason these lines are still more properly named versus than line;^. At the end of a work, they put down the number of verses of which it consisted, that the copies might be more easily collated : and it is in this sense we are to understand Trebonius, when he says, that the pandects contain 150,000 pene versuum. These codes were likewise vel probce vel deterioris notae, more or less perfect, not only with regard to the calligraphy or beauty of the character, but to the correction of the text. In ancient codes, tlie abbreviations are distinguished according as they have been used in different centuries. Thus, for example, A. signifies Aulus ; C. Cains ; D. Decimus; Ap. Appius; Cn. Cneius; Aug. Imp. Augustus Imperator. The characters that are called notte are such as are not to be found in the alphabet; but which, notwithstanding, signify certain words. All these are explained in a copious manner by 'ossius, and in the Chro-nicon Gotvicense. See AnBui;viATiON. Lastly, the learned divide all the ancient codes into codices minus raros, rariores, editos, et anecdotes.

MANUTIUS (Aldus), the first of those celebrated Venetian printers wiio were as illustrious for their learning as for their great skill in

their profession. He was born at Bassano in Italy about the middle of the fifteenth century ; and hence is sometimes called Bassianus, though generally better known by the name of Aldus. He was the first who printed Greek neatly and correctly ; and acquired so much reputation by it, that whatever was finely printed was proverbially said to liave * come from the press of Altius.' He pulilished a (Jrcek grammar ; with Notes upon Homer, Horace, &c. He died at ˆ‘enice in 1516.

Manutius (Paul), the son of Aldus, was brought up as a printer, and acquired, by a con-tiimal reading of TuUy, such a purity in writing Latin, that even Scaliger allows has been scarcely ever exceeded. Pope Pius IV. placed him at the head of the apostolical press, and gave him the charge of the 'atican library. His Epistles are highly labored and very correct. He had also a very profound knowledge of antiquity ; and he puldished an edition of Cicero’s works, with Commentaries, in 4 vols, folio, Venice, 1523. He also published an original work, De Legibus Romanorum ; which is reckoned his masterpiece. He died in 1574.

Manutius (Aldus), the Younger, the son of Paul, was esteemed one of the most learned men of his time. Clement VIII. gave him the direction of the Vatican printing-house; but probably the profits of that place were very small, as JManutius was obliged to accept of a professorship of rhetoric, and to sell the excellent library which his father and uncle had collected witli extraordinary care, and which contained 80,000 volumes. He died in Rome in 1597. He wrote, 1. Commentaries on Cicero. 2. A Treatise on Orthography. 3. Three books of Epistles; and other works in Latin and Italian, which are esteemed.

ˆ Sax. ma;nij ; written also in Saxon, ac-

MAN’Y, adj. & n. s. Man’y-colored, adj. Man’ycornered, Man’yheaded,

M An’y-LANG U AGED,

Man’y-peopled, Man’y-times, adv.

to Mr. Lye, maenejeo,

ˆmaeneˆo, msnijeo,

maenijo, maniju,

msenio, maemu, mae—

nyjeo, manejeo, ma-

niju, manije, maniˆo, menejeo, meneso, me-ne3U, menijeo, menijo, meniˆu, memo, ineniu: all of which Mr. Thomson traces to the Goth. 7ria, much, and ajiig, some or any. Numerous; several; considerable or indefinite in number; powerful : a multitude ; a large number, taken collectively : the compounds do not seem to require explanation.

For mani/e schulen come in my name, and schiilen S€ye, I am Crist ; and tliei schulen dissreyve mauye. WicliJ'. Miitih. XXIV. Both men and women, as many as were willing-hearted, brought bracelets. Ejodiis xxxv. 22. He from the mainipeopled city flies; Contemns their labours, and the divers cries.

Sundifs. Some of the wiser, seeing that a popular licence is indeed the manxiheadcd tyranny, prevailed with the rest to make Musidorus their chief. Sidney.

After him the rascal many ran, Heaped together in rude rabblement.

Faerie Queene. The proud Duessa came, High mounted on her manyheaded beast. Id, () thou fond many! with what loud applause Did'st thou beat heaven with blessing Bolingbroke.

Shuksfeare. A care-craz'd mother of a nwnv children. Id. Thou art a collop of my flesh, Y\nd for thy sake have I shed many a tear. Id. He hears not me, but on the other side, A matiycolourtd peacock having spy'd, Leaves him and me. Donne.

\'lien nutny atoms descend in the air, the same cause which makes them be many, makes them he light in proportion to their multitude. Diijliy.

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The tnaniilteaded beast hath broke, Or shaken from his head, the royal yoke.

Denhiwi. This yet I apprehend not, why to those Among whom God will deign to dwell on earth, So many and so various laws are given ; So many laws argue so mani/ sins. Milton.

The vulvar and the manij are fit only to be led or driven, but by no means ifit to guide themselves.

Siiuth.

So many, and many more than I can express, vastly great and precious advantages do accrue from piety. Barrow.

The apostles never give the least directions to

Christians to appeal to the bishop of Rome for a

determination of the many differences which, in

those times, happened among them. Tillutson.

Broad were their collars too, and every one

Was set about vnth many a costly stone.

Dry den. There, parting from the king, the chiefs divide, And wheeling East and West, before their many ride.

Id. Search those manycornered minds. Where woman's crooked fancy turns and winds.

Id. Those were the preludes of his fate. That formed his manhood to subdue The hydra of the manyheaded hissing crew. Id. He is beset with enemies, the meanest of which is not without many and many a way to the wreaking of a malice. L' Estrange.

Many a child can have distinct clear ideas of two and three long before he has any idea of infinite.

Locke. iSeeing a great many in rich gowns, he was amazed to find that persons of quality were up so early.

Addison's Freeholder. They are Roman catholick in the device and legend, which are both manylimes taken out of the Scriptures. Addison.

The hoary majesty of spades appears ; Puts forth one manly leg, to sight revealed. The rest his manycoloured robe concealed. Pope. Seek Atrides on the Spartan shore ; He, wand'ring long, a wider circle made. And manylanguaged nations has surveyed. Id. Near yonder copse, where once a garden smiled. And still where many a garden flower grows wild ; There, where a few torn shrubs the place disclose, The village preacher's modest mansion rose.

Goldsmith. Thus many a sad to-morrow came and went, Till, all my stock of infant sorrow spent, I learned at last submission to my lot. But, though I less deplored thee, ne'er forgot.

Coir per.

MAOUNA, or Massacre Island, one of the Navigator's islands of the South Pacific Oceau, discovered by Bougainville, and visited by La Perouse, who calls it a beautiful and fertile island, producing the bread-fruit, orange trees, cocoa-nut, banana, guava, and plenty of fowls, hogs, and dogs. In the space of twenty-four hours he procured 500 hogs here, and an immense quantity of fruit. But the inliabitants, when M. Langle, commander of the Astrolabe, landed, attacked him ; and, in the course of the conflict which ensued, he and ten companions were killed, and twenty oUiers wounded. Va- wards calls this island Otutuela. Long, of the a-ichoring place 189° t' E., lat. 14° 22' S.

MAP, n. $. Si, V. a.ˆ Barb. Lat. mappa, a Map'pery, or > table cloth ; Ital. Span.

Map'ping, n. s. 3 and Port, mappa; Fr. mappe ; Belg. viap. A delineation or picture of some part of tlie earth's surface : and hence of the heavens ; to delineate, or draw such picture ; mappery and mapping mean the art of making maps.

Zelmane earnestly entreated Donis, that he would bestow a maj) of his little world upon her, that she might see whether it were troubled with such unha-bitable climes of cold despairs, and hot rages, as hers was. Sidney.

I will take the map of Ireland, and lay it before me, and make mine eyes my schoolmasters, to give my understanding to judge of your

plot. Spenser.

I am near to the place where they should meet, if Pisanio have mapped it right.

Shakspeare's Cymbeline. The still and mental parts,

That do contrive how many hands shall strike

When fitness calls them on ;

They call this bedwork, mappery, closet war.

Sluikspeare.

Old coins are like so many maps for explaining the ancient geography. Addison on Ancient Coiru. O'er the map my finger taught to stray.

Cross many a region marks the winding way ,

From sea to sea, from realm to realm I rove.

And grow a mere geographer by love. Tichel. Opening the map of God's extensive plan.

We find a little isle, this life of man ;

Eternity's unknown expanse appears

Circling around and limiting his years. Cowper.

Maps are amongst the contrivances of art not strictly scientific : being designed to represent on a plane surface that which is in reality spherical, i. e. some portion or the whole of the earth's surface. It is clear that on a globe alone can such a representation be accurately made ; but, on a scale which would make the map of England extend only about six inches from north to south, i. e. giving one degree of latitude to an inch, the diameter of a globe, on which the whole surface of the earth should be delineated, \would be upwards of nine feet and a half; while such a map must omit all the minute divisions of the countries of the earth ; together with a vast body of geographical and statistical distinctions, invaluable to geography as a science. For all the ordinary purposes, therefore, of representation, and even for the proper investigation and communication of numerous geographical discoveries, recourse has been had to the various descriptions of plane maps ; and the most eminent geographers have devoted their attention to the projection or arrangement of the

proportional parts of them. The principal projections that have been suggested, are, 1. By development; 2. The orthographic ; 3. The stereographic ; 4. The globular; 5. Mercator's. The central projection, so called because it places the eye of the sjiectator in tiie centre of the sphere and the plane of projectioa tangential to its surface, may be also here mentioned; but it so distorts by enlargement the portions of land and sea near the margin of the map, tliat it is rarely used.

1 . The projection by development demands our first consideration, not from its being in such constant use as those which follow, but for its

nearer approximation to the actual form of the earth's surface. It is therefore the basis of the construction of tlie spindles or gores of artificial globes. See our article Globks.

Tlie cone and the cylinder are both approximations in shape to the sphere ; and, in regard to maps, as Mr. Jamieson observes, each' has its advantage and disadvantage as a basis of development. The conic method of development is best adapted to represent countries to any extent in the difference of longitude, or round the whole circumference of the earth, if required to a certain extent in difference of latitude ; and the cylindric method is well adapted to represent countries contained between any two parallels of latitude, but not having any considerable difference of longitude.

The conical projection is, however, the most simple and easy of construction, on account of tlie facility of describing the parallels of latitude in concentric circles, and the meridians in straight lines. In comparing a spherical zone to a truncated cone, in order to construct its development, we view the parallels as circles described from the summit of the cone taken as a common centre ; and the meridians are right lines subjected to pass through that point. It is evident that the result will approacli the nearer, in proportion as the map shall embrace less extent in la*-tude.

In this projection it may be supposed that the cone is tangential to the middle parallel of tlie map, and in consequence exterior; or that it may be in part inscribed in the sphere, that is to say, formed by the secants in the meridians. In the first case, the map will only be exact on the middle parallel, which will preserve in its development the length which it really possesses on the sphere ; but the parallels placed above and beneath will exceed those on the sphere, which are correspondent. Tiie Rev. Patrick iNIurdoch proposes (I'hilos. Trans, vol. 50, Part II., for 1758, p. 553), to substitute to the tangent cone, a cone partly inscribed and determined by this condition, ' that the part of the area compreliended in the map should be equivalent to that of the spherical zone which it represents.'

It may be difticult, at first sight, to conceive that the surface of the globe can be represented by a part of the surface of a cone ; yet, we may easily form the surface of a cone, of any plain piece of paper cut into a circular form or base; and can as easily conclude, that if a cone, about twice the height of the semidiameter of the globe, were to be conceived as standing on the same base with the hemisphere, namely, on the equator, the surface of such a cone would in part lie within the surface of the globe ; and then, that the surface of the globe, at so small a distance from the surface of the cone, might be very easily projected or delineated on it; and, in such a case, tlie projection of the countries and tlieir bearings, distances, &c:., will be very nearly the same on the surface of the included part of the cone, as on that of the globe itself.

Mr. Murdoch observes, that when any portion of the earth's surface is projected on a plane, or transferred to it by whatever method of description, the real dimensions, and often the figure

and position of countries, are much altered and misrepresented. In most works of this kind we find the linear dimensions visibly false, and the intersections of the circles oblique ; so that a quadilateral space shall often be represented by an oblique angled rhomboid figure, whose diagonals are very far from equal ; and yet, by a strange contradiction, you shall see a scale of distances inserted in such a map.

' The last of these blemishes,' says Mr. Jamieson, ' is removed, and the other lessened, in some maps of Schenk's of Amsterdam, a map of the Russian empire, the Germania Critica of the famous professor Meyer, and a few more. In these the meridians are straight lines, converging

to a point, from which, as a centre, the parallels of latitude are described, and a rule has been published for the drawing such maps. But, as that rule appears to be only an easy and convenient approximation, it remains still to be enquired, what is the construction of a particular map that shall exhibit the superficial and linear measures in their truest proportions?'

In answer to this question he proposes the following construction : — Suppose that APR (fig. I. plate 1, Mapping) is one half of a sphere or globe of one inch and nine-tenths in diameter, and that we are to develope one-half of this half sphere on a plane surface ; the development would be one-half of the whole sphere or globe, of which A P R is a half. But, were this iialf sphere cut in two, A P 11 would be its plane of projection, being the plane of that meridian in which the semi-sphere was bisected, and we should then consider APR merely as an arc of a great circle of the sphere ; it would be a semicircle. Let, then, this semicircle be bisected by the perpendicular K P; let the quadrant AP be divided into nine equal parts in the points B,C, D, &LC.; let the radii KB, KC, &c., be drawn ; and draw also the tangents B 6, C c, &c., to meet the perpendicular K P produced indefinitely towards S. Now from A as a centre (fig. 2), with a division of the quadrant, fig. 1, set off on fig. 2 the equal spaces AB, BC, CD, &c. With the radius A P, fig. 2, describe the semicircle *P*, and this semicircle shall be a development of the semi-spheric surface APR; that is, *P* shall be a development of the fourth part of that sphere of which A PR is one-fourth part. For, if we draw chords to the divisions or arcs, A B, BC, &c., fig. 1, the quadrantal arc AP will then circumscribe the fourtii part of a polygon of thirty-six sides ; and if we transfer those chords to fig. 2, by the distances AB, BC, &c., the whole line AP, fig. 2, shall be equal to the sum of all the chords of the arc of the quadrant A P, fis. 1 ; and, therefore, the semicircle 1 1' I, fig. 2, shall be a development of the spheric surface APR, fig. 1.

To draw the parallels in the semicircle, fig. 2, produce AP indefinitely beyond P, and on this line transfer tlie tangents of latitude, that is Bt, Cr, Df/, &c., from fig. 1, and they will be centres about which to describe the parallels of fig. 2. Thus, for example, the tangent Bt, fig. 1, being the radius of the parallel that passes through B, fig. 2, you must in AP (fig. 2) produced, set off with your compasses a space equal

to the tangent Bb, fig. 1; and from the point beyond P, tig. 2, as a centre, describe the parallel passing through B. Do the same by the others, and all the parallels will be drawn.

To describe the iiieridiuns, divide A I, A/, each into nine equal parts; do the same with each of the other parallels, and draw curvilinear lines through the corresponding divisions of the parallels; so shall the meridians be drawn for fig. 2.

Fig. 3 shows how a map of this kind may be constructed, when you are not going to develope any given spheric surface. From O as a centre, with any radius OC, describe the semicircle A PC ; draw O P at right angles to AC ; divide the radii OA, OC, OP, each into nine equal parts ; through the points of division in O P draw from the point A the diverging lines A 10, A 20, &c. ; and from O draw the radii 0 10, O 20, &c., to the points where those diverging lines are terminated by the arc C P. Then, from the extremities of the radii O 10, 020, &,c., draw the tangents 10, 20, &c., meeting OP produced m-definitely; so shall the points 10, 20, .30, &c., in OP produced, be centres, about which to describe the parallels of latitude.

Having drawn these parallels, divide each of them into nine equal parts, and through the corresponding divisions of each parallel draw curvilinear lines, which will be the meridians required. The other semicircle, following the same process, will complete the planisphere according to the method of development. But it must be observed that, as the meridians are not subject to any geometrical problem for describing a circle, they must be drawn with a steady hand through their respective points.

‘This is a very near approximation to the truth,’ says our author, ‘a very near development of the surface of the globe. All the meridians and parallels intersect each other at right angles. The successive quadrilaterals between any two meridians are nearly equal in area, and similar to those on the globe ; those adjoining the central meridian are almost exactly the same as their correspondents on the sphere. Every parallel of latitude is equally divided by the meridians as they are on the globe ; and every parallel, as terminated by two meridians on the map, is exceedingly near the same length as the

corresponding part on the globe itself. It must, however, be observed, that the meridians are here represented of difi”erent lengths, all longer than those on the globe, except A P, the central one. In this respect the method of development is the converse of every meridional projection of the sphere, every meridional projection diminishing tlie meridians as they approach the centre of the map : but even in this respect it is less defective in the lengths of the meridians than is Mr. Murdoch’s with respect to the parallels of latitude. However, since the central meridian answers as a scale, the length of every meridian can be correctly ascertained ; and the method of development may, upon the whole, be considered the most correct and the easiest of construction of any yet published. It may be employed in the construction of the largest maps as well as the smallest, and will be the more exact, in proportion as the difference of longitude is less.’

Euler investigated the properties of the conical projection, with a design to render the errors at the two extreme parallels of the map equal to those at the middle parallel. That these conditions might be fulfilled, he found that the distance of the common centre of all tiie parallels from the surface of the sphere should be equal to 5° of lat. ; that the angle comprised between two meridians, which include 1° of lat. on the globe, is reduced on the map to 48′ 44″ ; and that the difference between the arc of a great circle, which measures tlie least distance between two points on the globe, and the right hue which represents it on the map, is such, that an arc of 90° has upon the map a length equal to 90°-7’J.

Some geometers, as Delisle (in the construction of his general Map of the Russian Empire), adopted for the cone, the surface of which was to be developed, that which cut the sphere in two parallels of latitude, equidistant from the e::- tremes and the middle parallel. By this means the map had the same extent on these two circles as upon the corresponding parts of tlie globe ; and the extent of the whole map ditfere d little from that of the spherical surface it was designed to represent; the excess towards its extremities being nearly compensated by the defect in the middle, which formed the inscribed portion of the conical surface. Del isle’s map extended from the lat. of 40° to 70° ; the middle parallel, therefore, answered to 55°, and the two parallels common to the map and the globe were those of 47° 30’, and 62° 30’. Tiiis pw-jection presents several advantages in maps of considerable extent, as those of a large empire. Then if L and L’ denote the latitudes of the two parallels which are common to the map and die globe, it

has been shown (Puissant's Topographic) that the radii, R and 11', of the respective parallels are expressed by the following formula, *viz.*

Tˆ cosine L , ■,., cosine L'

Rziz- , , and R :=-

sine ˆ {L+L'f sine 3 (L + L')

Hence, if L denote the latitude of the greater of the two parallels above-mentioned, and the radius of the globe be considered as unity, we shall have the radius of the projection of that parallel in known terms, or

cos. 47ˆ 30'. sine 55° 2. The orthographic projection suppose the eye of the spectator at an infinite distance from the plane of the projection, and as tliis plane passes through the centre of the globe, and is perpendicular to all the visual rays, they, according to the su])posed situation of the eye, are parallel to each other. The surface of a hemisphere is thus reduced to that of a great circle of the sphere, or only half its hemispherical area; and consequently all \y.\x\s of that surface are contracted, while eciual parts of the spherical surface are not reduced to equal sjiaces on the map. Indeed, while the parts near the central ray experience but a small contraction, this, on a])]iroaching the extremities, becomes rapidly increased ; so that liiis projection, though it is occasionally used for astronomical purjioses, is almost exploded in the construction of geogra-628

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phical maps. Fig. 4, plate I., will exhibit this : the arc a h is represented by the line uU : 6 c by V c', and so on in succession, until, at A, t A diminishes into notiiing.

3. The stcrfographic projection supposes the eye to be situated somewhere upon the surface of the sphere to be represented, and looking towards the opposite concave surface. That is, if we imagine there is before us a glass sphere, hung, like the terrestrial globe, in the position of a right sphere; that this glass sphere has cut upon its circumference all the lines and circles of the globe, and that these

lines and circles are opaque ; that within this glass sphere there is a glass plane, coinciding with the points Aries and Li-bra, and, by consequence, with the wooden horizon of the frame in which the sphere is supposed to be hung; then this glass plane meeting the inner surface, or circumference, of the sphere, would represent the plane of a great circle of the sphere passing through Aries, the north pole, Libra, and the south pole. Let us imagine, also, that there is a perpendicular drawn from the cen-tre of this glass plane or circle, to meet the surface of the sphere precisely where the meridian of 90° is intersected by the equator, reckoning the degrees to commence at the first point of Aries. Suppose then that the eye is placed in this point of the surfece, that is, exactly at the extremity of the aforesaid perpendicular, and that we are looking towards the opposite hemisphere, on which we should see all the opaque meridians and parallels, and that straight lines were drawn from those meridians and parallels respectively to the eye, those straight lines would necessarily pass through the glass plane within the sphere, and on this glass plane would be drawn the true representation of all the lines upon the surface of the concave hemisphere. Tliis then would be the stereographic projection jf the sphere : and, when we look at a skeleton planisphere, we have before us this identical picture.

The globular projection is the most useful and important modification of the stereographic, originally suggested by La Hire. We adopt Dr. Myers' able description of it. Instead of conceiving the eye to be placed at the surface of the sphere, this supposes the radius of the globe, perpendicular to the plane of projection, to be produced, and the pomtof view to be in this line, and at a distance from the surface of the sphere equal to tlie sine of 45°. By this means the radius of t!ie plane of projection is bisected by the line which joins this point and the division of the arc answering to 45°. If C E, plate II. Mapping, fig. 1, beˆ produced to P, till E P be equal the sine of 45°, and the quadrantal arc A D be bisected in F, and P F be joined, then A C will also be bisected in G ; and, by drawing lines from P to every 10° of the quadrant, all the other])arts of the line A C will also be nearly equal to each other. But, as the sine of 45° is equal to ˆ r ˆ 2, where r is the radius of the circle, its value is always an irrational quantity, and therefore the line E P, which is to be equal to this quantity, cannot be set off with accuracy. This, however, is no real inconvenience in practice, for ˆ r .y 2 —

•7071 r; and, consequently, if EP be made equal -7 r, or -71 r, it will not introduce any sensible error into the construction. Another easy

method of finding the point P is to construct an equilateral triangle A B P, on the diameter A B, which will also give the point P with sufficient accuracy for any practical purpose; for in that case CP = iABˆ3 — rˆ3 — 1-732/-.— Hence CP — CE = EPz: 1-732 r — r — •732;-; which only differs from the sine of 45° by -0249 r, a quantity which is too small to introduce any material error into the construction.

M. Parent observed that, though the radius of the plane of projection was bisected by the line P E, it still required to be ascertained where the point P must be placed that the inequalities between the divisions of the diameter A B might be the least possible. To answer this condition, he found EP — -595 r, for which six-tenths of the radius may be taken in any practical case. The same geometer also found that, when it is required that the zones of the hemispherical map should occupy spaces respectively proportional to those they have on the sphere which they represent, the point of view P must be removed to 1-105 r beyond E, that is, EP must be made equal to 1-105 r, or very nearly eleven-tenths of the radius. Hence it may be observed, that while these modifications of the stereographic projection sacrifice the advantage of the meridians and parallels of latitude, cutting each other at right angles, .and change the circles into ellipses, they do not accurately preserve the equality of the space, or the similarity of the configurations.

In the globular projection, however, or in either of M. Parent's modifications of it, these inequalities are much reduced, for the divisions on the equator and the central meridian are equal to each other; and therefore equal spaces on the sphere are represented by nearly equal spaces on the map ; a circumstance which renders this projection the most proper for geographical purposes. The meridians and parallels of latitude, being ellipses of such small eccentricity, they are generally made circular, which facilitates the construction, without distorting the map. Since the late invention of the excellent instrument for drawing ellipses, however, this approximation has been rendered unnecessary, by the facility with which these curves of any size and eccentricity may now be drawn.

The stereographic projection has been considered as embracing three distinct cases, in reference to the plane of the primitive circle. 1. That upon the plane of the equator, which is called the polar projection because the eye is supposed to be in one of the poles. 2. That upon the plane of the meridian, (generally that of the island of Ferro), which divides the globe into two hemispheres, the one containing the old and the other the new continent. This is usually called the meridional

projection. 3. Tiiat upon the plane of the rational horizon of any place whatever, which supposes the eye to be situated at that place. This is the horizontal projection. The method of constructing each

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shall therefore be explained, after tlie elegant constructions in Puissant’s Topographie as abridged by Myers.

Construction of the polar projection. — In this projection the eye is supposed to be in one of the poles, and consequently in the point where all the meridians intersect each other. As the plane of the equator is the plane of projection, the meridians are necessarily represented by radii of that circle; and, as the parallels of latitude are all parallel to the equator, they are represented as concentric circles, the common centre of which IS that of the primitive circle.

To project the meridians. — Let AP (fig. 2) represent the radius of the terrestrial sphere, and ACBD one of the great circles of that sphere; then the centre P being taken for the projection of the optic axis, or the point of view which is placed at the pole, the circumference ACBD will be the projection of the equator. Now, as the planes of the meridians all intersect each other in the axis of the earth, the projection of the first meridian may necessarily be represented by any diameter of the primitive circle. Let this diameter be AB ; and divide the circumference ACBD into the required number of equal parts, in

the points a, b, c, &c., and a', b', c', &c. If the meridians and parallels are to be drawn to every 10°, the number of these parts will, of course, be nine in each quadrant. Then, through the centre P, and each pair of these corresponding points, draw the diameters aa, bb', cc, &c., and they will be the meridians required. Hence, the difference of longitude of each pair of consecutive meridians will be measured by the arcs Jo, ab, be; or Ba', a'b', //c', &c.

To project the parallels. — To describe the parallels, corresponding to the above division, draw the diameter CD perpendicular to A B, and join the points D«, Db, Dc, &c. ; then these lines will cut the diameter A B in the points n, n\ n", &c. With P as a centre, and Pn, Pn, Pn", &c., as radii, describe circles, and they will be the parallels required. If Cp be set off equal to 23° 30' and Dy) be joined, cutting A P in p, and with P as a centre, and Pp' as a radius, if a circle be described, it will be the projection of one of the polar circles. In this method D is the point of view, and the points ti, n', n, &c., are the stereographic projections of the corresponding points a, b, c, &c., belonging to the required parallels; for if the circle ACBD be conceived to turn about the diameter A B, until it make a right angle with the plane of the figure, the ra-dius PD will be perpendicular to that plane, the point C will be the pole opposite the point of view D, and the arcs A«, Ab, Ac, &c., will be the respective latitudes of the parallels a, b, c, &c. Consequently, the traces ?i, ii', n", &c., of the visual rays D K, Dn', D/ f", &c., will represent the points a, b, c, &.C., upon the perspective plane ACBD. Having thus constructed the hemisphere, it only remains to mark the positions of places according to their latitude and longitude, to delineate the contours of lakes and seas, and to trace the courses of rivers, according to the same data. In this projection the meridians and parallels of latitude cut each other in the same manner as on the surface of the sphfrc. Vol. XJII.

But it should be remarked that, though the spaces contained between two meridians and two consecutive parallels, near the centre of the map, are represented on the plane of projection without much defect, those that are situated near the margin are greatly enlarged, in consequence of the increased obliquity of the visual rays as they recede from the optic axis.

Construction of the meridional projection. — When the primitive circle is a meridian, the point of view is upon the circumference of the equator, the projection of which is a right line, perpendicular to the axis of the earth, or to the central meridian of the map. This

construction also embraces two d'istinct operations, the projection of the meridians, and that of the parallels of latitude.

To project the meridians. — Let AB (fig. 3) be the projection of the equator, P P' the axis of the earth, and C the centre of the map, or the projection of the point of view P, upon the plane of the meridian APBP', considered as the primitive circle. All the meridians have P P' for their common intersection, and their projections being circles, the circumferences of these circles will necessarily pass through the points P and P'. When the distance between each pair of the meridians is to be 10°, divide the arc B P' into nine equal parts in the points a, b, c, 8cc., and join Pa, Pb, Pc, &c.; then the points 1,2, 3, &c., where these lines intersect C B,will be the points in that line through which the meridians must respectively pass. Consequently, the method by which they are to be drawn is reduced to that simple problem in the elements of geometry, by which a circle is described through three given points. Now, if P'l be joined, the angle Al F, will evidently be equal to the angle Al P, and consequently the line A B, which bisects the angle P 1 P', will pass through the centre of the circle described through the three points. The same is also true with respect to the angles P2P', P3P', Sec, and therefore the centres of all the meridians will be in the right line AB, or in that line produced. If the lines Pi, P2, P3, &c., be bisected, and perpendiculars drawn to these lines, at the points of bisection, it is evident, from the princples of geometry, that these perpendiculars will pass through the centres of the circles described through these points; and, since the line AB also passes through the centres of the same circles, their intersections will necessarily determine these respective centres. Now, since a line drawn parallel to the base of any triangle cuts the other two sides proportionally, bisect PC in p, and draw pq parallel to C B, which will evidently bisect all the lines P 1, P2, P3, Sic, in the points q, r, s, &c. From these points draw the perpendiculars qo, ro', so", &C., intersecting A B in the points o, o', o", &c., then will these points be the centres required. — Hence, with the points o, o', a", ice, as centres, and the lines o 1, o'2, o" 3, &c., as radii, describe the circles Pt I", P2P', P3P', &c., which will be the meridians of the required hemisphere-Prom the syninictry of the figure, it is obvious that, if the distances Co, Co', Co", &c., be set off on the line C B, from C towards B, and circular arcs be described from P to P', on the op-2M

posite side of P P, they will be tlie meridians corresponding to V 1 l”, P2P’, P3P’, &c.

To project the parallels. — Divide the quadrants 1*A and PB, so as to make the parts Pa’, a b’, b’c’, &c., respectively equal to the parts Ba, ab, be, &c. ; tlien, since the parallel circles ou.,‘iit to piiss through the corresponding points a’ a, b’b’, it is evident that their centres will be upon the axis P’P, produced. Join Ca’,Cb’, Cc’, &c., and draw the lines an, U n, c’n”, &c., perpendicular to Ca’, Ct’, Cc’, &c., and then it may easily be proved, by the elements of geometry, that these lines u n, b’n’, c’n”, Sec, are the radii of the respectiˆ/e parallels a a, b’b’, c’c’ˆ &c. Hence with n, n, n”, &c., as centres, and the lines na, n’b’, 7i”c’, as radii, describe the circles a a, b’b’, c c, &c., which will be the parallels required. IfCP be produced, and the distances P«, Pk’, P«”, &c., be set off from P’, tliey will give the centres of the corresponding parallel.-; to be described about the pole P’.

The following elegant construction is given, by M. Puissant, in his Topography. To project the meridians. — Let A B (tig. 4) be the projection of the equator, P P’ the axis of the earth, and C the centre of the map, or the projection of the point of view upon the plane of the meridian APBP’, considered as the primitive circle. Then the centres of all the meridians will be in the line A B as before. — Divide the arc AP into any number of equal parts Ac, ab, be, &c. ; draw the diameter a a, and through its extremities draw P’a and P’a’, which will cut A B, and A B produced, respectively, in the points ?t and 7n. These points will be the respective projections of the extremities of that diameter of tlie meridian passing through a point, of which the longitude, with respect to the first meridian P A P’, is measured by the arc A a. If, therefore, from the middle of mri, as a centre, and with a radius equal to half mn, the arc P?jP’ be described, it will be the projection of the required meridian. Employing the same construction for the points b’, c’, Ike, we evidently liave the projections of the other meridians; and, in consequence of the symmetry of the figure, the same method which answers for the semicircle PAP’, will also serve for P B P’. The meridian which has its plane perpendicular to the plane of projection, AP B, will evidently be represented by the axis PP’. If any difficulty be experienced in comprehending this construction, it will only be necessary to conceive, as in the preceding case, the circle AP B P’ to turn about A B, so as to take a position perpendicular to the plane of the figure ; then the radius C P’ will be

perpendicular to that plane, I" representing tlie])oint of view, and the circle APBP' the equator, divided into any given number of equal parts. When the meridians are to be drawn through every 10°, the number of these parts will be 36. Now, if through the points of division a, b, c, &.C., we suppose the visual rays P'«, P'6, P'c, &c., to be drawn, their traces n, n, n", &c.,u]ion the place of projection, will represent the corresponding points of the meridians.

To project the parallels. — These circular cu-rves ought to pass through the corresponding points of division hh', gg', ff', &c.,and their centres will

necessarily be situated on the prolongation of the axis PP', and may be determined as follows. Draw the right lines B/t and B/j', the first cutting P P in ?•', and the other in r, and rr will be the diameter of the parallel. Since the three points *(, r', /'*, are upon the parallel hh', all is given that is necessary for describing it. Therefore, if with (), the middle of rr, as a centre, and a radius equal to uh', the arc hr'li be described, it will be the parallel answering to t,lie latitude h; and consequently if each of the divisions be 10°, it will be that to latitude 80°. The same construction will gire all the other pa-ta.\e\s gg',ff',kc.

Construction of the horizontal pi'ojection. — In this construction the rational horizon is the plane of projection ; the point of view is the pole of that horizon, and the meridian which passes through the place for which the map is to be constructed is a right line, and is called the principal meridian.

To project the meridians. — Let AD BE (fig. 5) be the horizon of the place ; its centre C will be the projection of the point of view, or of the pole of that horizon. Let A B, also, be the diameter which represents the principal meridian, or that which passes through the middle of the map. If the angle PC A be equal to the height of the pole, and D E perpendicular to A B, the right line P E cuts AB in a point p, which will be tlie projection of the elevated pole of the globe P. If EP' be drawn and produced to meet the prolongation of A B in p', this point will be the projection of the depressed pole P'. The projection of the meridians, all which intersect each other in the points p and p', have their centres upon the right line SS', perpend'cular to the middle of *I*)', at F. This line SS' is called the line of tiie centres of the meridians ; and it is remarkable that C F is equal to AT, which is the tangent of tlie arc that measures the height of the pole. To render the principles of this construction more evident, suppose, as in the preceding cases,

tlie circle AD BE to be turned about AB, till it becomes perpendicular to its primitive position. In that state, PP' will represent the axis of tlie earth, the radius C E will be perpendicular to the plane of the figure, the point E, considered as the point of view, will be projected into C ; and the visual rays E P and EP' will evidently meet the plane of projection in the points p and p. To determine the projection of the meridians, a third point is requisite, and is thus found. The meridian that has its plane perpendicular to the principal meridian AB, cuts the horizon in the riijht line D E, which is perpendicular to AB. Therefore, if from the point F as a centre, and with the radius FD, the arc DpE be described, it will be the projection of the meridian passing through 90° of longitude, reckoned from the principal meridian AB. The projection of the equator does not present greater difficulty ; for, if the diameter (i Q' be drawn perpendicular to PP', it will be that of the equator and its projection upon the map will be qq'. Consequently, if from the middle of the line qq', as a centre, and with a radius equal to ˆ qq', or equal to the cosecant of the latitude from the centre of the map; ihearcDˆEbe described.

tlijs arc will be the projection of half the equator.

(Jne of the properties of the stereographic projection being that the angle formed by the pro- -ections of two meridians, is equal to the angle formed by these meridians on the surface of tlie sphere, or rather by the intersection of their planes in the axis of that spliere, from the point p, as a centre, and witii any arbitrary radius, as p F, for example, describe a circle, divide it into as many equal parts as there are meridians to be drawn, commencing at AB; if these are to be 10° from each otiier, the number will be 36. Through all the points of division, draw radii, prolonging them till they meet the line of centres SS', in the points ,r, x', x", &c., which will be the centres of the projections of the meridians. It is evident, however, from the symmetry of the figure, that it will be sufficient to draw the radii in the first quadrant of the circle. But this process becomes inconvenient in practice, on account of the great increase of the radius, when the

divisions approach the extremities of the quadrants. In this case, the points where the meridians meet the plane of projection may be determined in the following manner. From any point in the line A B, or its prolongation, as F, for instance, let fall a perpendicular FA", upon the line P P', and set otf F *c from F to k' ; tiien with this last point, as a centre, and a radius equal to k'F, or with any other radius taken at pleasure, but rather large, describe a circle, and divide it into the same number of equal parts as before. Next, draw the secants* c'?«, /c'n', k'n", &c., through all the points of this division, and their extremities, n, li, n", &.c., in the line SS'are upon the projections of the planes of the meridians. Therefore, draw the right lines nCu, n'Cu', n"C u", &c., and the diameters tim, u in, u" m", &c., will be the projections required. We shall consequently have three points u, p, m, &c., in each meridian of the map, from which tiie curves themselves are easily drawn, by the me-thod already explained.

To project the pundlch. — The parallels of latitude in this projection are easily described ; for, their planes being perpendicular to the principal meridian A B, the diameters of their projections are obtained in the same manner as that of the equator itself. Hence, after having divided the circumference into the given number of equal parts, draw right lines from the point of view E to every two corresponding points of the division. In the present instance F 1, and El'. The interval v v, intercepted between these right lines, taken upon the meridian A B, will be the diameter of a parallel. Here it evidently belongs to the parallel drawn through the first division from the pole, or 80*^, since the arc A 1* measures the height of the pole. But, for the jrarallels which are very distant from the elevated pole P, this construction caimot be practised, because the])oint V is then so distant from the centre of the map. To obviate this inconvenience, tlie intersections of the planes of the parallels with the plane of projection AD BE may be traced. These are necessarily parallel to 1) I*', and their distance from it is

sin. latitude of the parallel.

cos, altitude of the pole.

When the latitude is south, the pole P being the north pole, the value of .r becomes negative ; then, instead of setting oft" the value on CIA, it must be set off on C B. It follows from this that, if at the distance x from the line D E of the diagram the parallel dc be drawn, the points d

and c, which are common to that parallel, and the circumference AI) B P^, belong to the parallel required; but this circle also passes through a point, as v, determined by the preceding me-thod. We have, therefore, the three points necessary for describing the arc.

The inequality of the spaces as given by the stereographic projection, observes Dr. Myers, does not admit tiie employment of a rectilineal scale for measuring the distance fiom one place to another, which is always the arc of a great circle, but, by means of the gradnation itself, the distance between the centre of the map and any other place may always be determined. Thus, in a horizontal projection for London, the distance between that capital and any other place in the hemispliere of which it is the centre may be readily found, by means of this graduation. This property results from the circumstance tliat all the great circles passing through the centre of the map cut eacli other in the optic axis, and have right lines drawn through this centre for their projections. Hence they admit of a similar graduation to that of the equator, in the hemispheres constructed on the plane of the meridian.

Construction of the globular projection. — According to the explanation of this projection, and its advantages, the distance EP, plate 11. fig. 1, being equal to V g, which is the sine of 46°, let the arc B D be divided into any number of equal parts (10° each, for example) in tiie points u,b,c, &c., and join P«, P /), Pc, &c. Then these lines will cut the diameter AB in the points 1, 2, 3, &.C., and make the several divisions nearly equal to each other. If, therefore, circles be described through the points D 1 E, D 2 E, D 3 E, &c., by the methods already explained, they will constitute the meridians required. I'or, tiiough these meridians are not actually circles, the eccentricity of tlie ellipses is so small that it is usually neglected ; but the elli])tic meridians may be easily drawn when the recpiired accuracy renders it necessary. The cuivature of the circular meridians near the middle of the map becomes so small, and their radii, in consequence, so great, that recourse must frequently be had to methods of drawing them without compasses. One of

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llie mostconvonieiU instruments for tliis purpose is two rulers, AC md B C (fig. 25), united together by a joint at C, so as to permit tliem to form any given angle with eaeli other, Wiien this simple machine is to be used, a steel pen, or other suitable instrument for drawing lines, must be fixed in the centre of motion C ; and, the map being stretched upon a smooth surface, this centre is made to coincide with the point n (fig. 22) ; the edges of the rulers A B and B C resting against two pins of metal fixed at the poles P and P'. Tlien, witiiout varying the angle A C B, tlie point C is to be moved from 7j to P and P' respectively, while the edges of the rulers are still pressed against the pins at these two points, and it will describe the arc P«P' required. With the new instrument already mentioned, the elliptic meridians may be drawn with great facility. In order to describe the parallels of latitude, let AB (fig. 1) be produced to P' till B P' be equal to Fg. Divide the quadrant A E like BD, into any number of equal parts in the points a, b', c, &c. Then if P'o', V b\ V c, &c., be joined, these lines will cut C E in the points r, 2', 3', &c., through which the parallels of latitude are to be drawn as before. As no construction can represent a spherical surface with accuracy on a plane, that which preserves the greatest equality of ratio between the spaces themselves and their representatives should be preferred for geographical purposes. On this account, the suggestions of M. Parent, for dividing the diameters AB and DE (fig. 1) of the plane of projection, as well as the circumscribing circle AE BD, into equal parts, deserve particular attention in constructing maps of all extensive regions.

Mercators projection is chiefly confined to navigation charts. In this projection the meridians, parallels, and rhumbs, are all straight lines ; but, instead of the degrees of longitude being every where equal to those of latitude, as is the case in plain charts, the degrees of latitude are increased as we approach towards either pole, being made to those of longitude in the proportion of radius to the sine of the distance from the pole, or cosine of latitude ; or, what is the same thing, in the secant of the latitude to ra-dius. Hence, all the parallel circles are equal and parallel straight lines ; and all tlie meridians are parallel lines also ; but these increase indefinitely towards the poles. This proportional increase of the degrees of the meridian makes the length of an arc of the meridian, beginning at the equator, proportional to the sum of all the secants of the latitude ; or the increased meridian bears the same proportion to its true arc, as the sum of all the secants of the latitude to as many times the radius. The increased meridian is

also analogous to a scale of the logarithmic tangents, though this is not at first very evident.

The meridian line in the chart is, therefore, a scale of logarithmic tangents of half co-latitudes. The differences of longitude on any rhumb are the logarithms of the same tangents, but of a diff'erent species ; those species being to each other as the tangents of the angles made with the meridian. Ilencc, any scale of logarithmic

tangents is a table of tlie difierences of longitude to several latitudes upon some one determinate rhumb ; and, therefore, as the tangent of the angle of such a rhumb ; tangent of any other rhumb *. \ the difference of tiie logarithms of any two tangents ; difference of longitude oa the proposed rhumb, intercepted between the two latitudes, of whose half complements the logarithmic tangents were taken.

This projection, it is clear, cannot be used for ascertaining the distances of countries, or their true figure, for the regions distant from the equatorial line are enlarged prodigiously ; in the solution of geographical questions relative to a ship's course, this, however, is not material. The meridional increase is now generally calculated by tables of increasing latitude. See Latitude.

Roads on maps are indicated by two parallel lines, either plain or doited, or frequently by only one plain line. Rivers by undulating lines ; and both banks shown when the breadth is sufficient to be measured from the scale. This is often the case near their mouths, where the estuary becomes greatly enlarged. Canals are distinguished from natural rivers by representing them by lines devoid of inflections. Coasts are variously expressed ; as by a single line, or a line accompanied by shading towards the water; but, in nautical cliarts, the shading is towards the land. The boundaries of kingdoms, states, and provinces, are usually marked by dotted lines ; and, to make these divisions still more conspicuous, different colors are frequently employed.

' In estimating the extent of a country or kingdom,' observes Dr. Myers, ' the two following cases must be distinguished from each other. When the projection represents equal regions on the surface of tlie earth by equal spaces ou the map, their areas are calculated, like those of plane figures, by inscribing rectangles or triangles in the spaces included within their boundaries; or, by reducing tiiem, by

approximation to the case of regular figures. In the other instance, when equal regions on the globe are not represented by equal spaces on the map, the superficies must be estimated by means of the quadrilaterals formed by the meridians and parallels.'

iMaps also exhibit the face of the country, by showing the form and variations of the terrestrial surface, as the principal chains, or groups, of mountains, the insulated summits, the lakes, and other appearances. Various methods of denoting the elevations have been devised. Buache adopted the method of sections or profiles, drawn according to given lines, to represent the inequalities of the terrestrial surface. Dussain Triel devised the method of tracing lines on the map through all the points of the same altitude above the level of the sea, and which would evidently become coasts, could the sea by any means be elevated to the altitudes at which these lines are traced, in the same manner as the lines, which join the equal soundings in nautical charts, would become banks if the ocean were to sink to that level. But into the minute delineation of these, and other methods which have been devised for this purpo.se, we cannot enter.

M A R A C A I B O.

53:

MAPALLA, a convenient bay on the coast of the Pacific, in the province of Ficaragua, and not far from the lake of that name.

MA'PLE, n. s. Sax. mapel ; Goth, mappel. A tree of the acer genus. See Acer.

The platane round, The carver holme, the mapple seldom inward sound.

Spenser. The pris'ner with a spring from prison hroke ; 'I'hen stretched his feathered fans with all his might, And to the neighb'ring maple winged his fliglit.

Drt/den. Of the rottenest maple wood burnt to ashes they make a strong lye. Mortimerˆs llusbandn/.

The muple-lree hath jagged or angular leaves ; the seeds grow two together in hard-winged vessels ; there are several species ; the greater maple is falsely called the sycamore tree : the common maple is frequent in hedge-rows. Miller. His dwelling a recess in some rude rock, Book, beads, and ma/)/e-dish, his meagre stock; In shirt of hair and weeds of canvass dressed. Girt with a bell-rope that the Pope has blessed.

Cow])er.

Maple. See Acer.

MAPLETOFT (Dr. John), descended from a good family in Huntingdonshire, was born in 1631. He studied physic, was educated at Trinity College, Cambridge, and in 167.5 was chosen professor of medicine at Gresham College. He translated Dr. Sydenham's Observationes Medicie circa Morborum Acutorum Historiam et Curationem into Latin, and Sydenham dedicated them to him. He married in 1679, and soon after studied divinity, took orders, obtained the vicarage of St. Lawrence Jewry, with the lecture-ship of St. Christopher's in London ; and, having been a considerable benefactor to Sion College, was in 1707 elected president. He continued to preach till he was above eighty years of age ; and, in 1710, published The Principles and Duties of the Christian Religion, &c., 8vo. ; and sent a copy to every house in his parish. Besides other piecis on moral and theological subjects, there are, in the Appendix to Ward's Lives, three of his Latin lectures on the origin and history of medicine.

MAP PA, in the public games of the Roman circus, was a napkin hung out at the prxtor's or other great magistrate's seat, as a signal for the race or other diversions to begin. The mappa was received by the mapparius, from the consul, praetor, or other great officer. Notice was anciently given by sound of trumpet; but Nero is said to liave introduced the mappa, by tlirovving his napkin out of the window to satisfy the peo-ple, who grew noisy at the delay of the sports while he was at dinner.

MAPPARIUS, in Roman antiquity, the officer who gave the signal to the gladiators to begin fighting, by throwing a handkercliiof that he had received from the emperor or other magistrate.

MAR, V. a. Sax. mejipan, amyppan ; Belg. m'Mrcn; Span. ??iarr«7- ; Gr. apaprtu), sen afiap-ravw, Minsheu. To spoil; hurt; injure; da-mage.

His visage was so marred more than any num.

ha. lii. 14. The master may here only stumble, -ind in’rchancu

fall in teaching, to the marring and maiming of the scholar in learning. Ascham’s Schoolmaster.

Loss is no shame, nor to be less than foe, But to be lesser than himself, doth mar Both loser’s lot, and victor’s praise also.

Speiiser’i Faerie Queene. I pray you mar no more trees with writing songs in their barks.

— 1 pray you mar no more of my verses with reading them illfavouredly. Sfmkspeare.

The ambition to prevail in great things is less harmful than that other, to appear in every thing ; for that breeds confusion, and marrs business, when great in dependencies. Bacon’s Essays.

O I could we see how cause from cause doth spring ! How mutually they linked and folded are : And hear how oft one disagreeing string The harmony doth rather make than ma rr. Daiies.

Beware thinp honour, be not then disgraced, Take care thou mar not when thouthink’st to mend.

Fairjuu:. How too like is this (cracked) bell to a scandalous and ill-lived teacher ! His calling is honourable ; his noise is heard far enough ; but the flaw, which is noted in. his life.nwrs his doctrine, and offends those ears which else would take pleasure in his teaching.

Bp. Hall. Aumarle became the man that all did mar. Whether through indiscretion, chance, or worse.

Daniel. Ire, envy, and despair, Marred all his borrowed visage, and betrayed Him counterfeit. Milton’s Paradise Lust.

Mother ! ‘Tis much unsafe my sire to disobey : Not only you provoke him to your cost, But mirth is marred, and the good cheer is lost.

Drmkn. An envious World will interpose its frown. To mar delights superior to its own ; And many a pang, experienced still within, Reminds them of their hated inmate, Sin.

Cowper, And where the future mars or makes,

Its glance dilate o’er all to he, While sun is quenched or system breaks, Fixed in its ov/n eternity. Byron.

MARACAIBO, or MARACAvno, a province ot Colombia, South America, which surrounds the lake of that name. It is bounded on the west by Santa Marta in New Grenada; on the east by Coro and Venezuela ; on tlie north by Santa Marta and the Gulf of Maracaibo, and on the south by Merida and Santa-Marta. Owing to the great extent of the lake, this province extends but a short distance inland to the east and west : its length is about 100 leagues.

The soil is unfruitful on the banks of the lake. The east shore is dry and unhealthy; and, on the west, the land does not begin to be fertile for more tiuui twenty-five leagues south of the city. South of the lake, the country may vie with the richest lands of this continent. The climate is in general hot and imhealthy, excepting in the southern parts, wliicii border on the snowy mountains of Merida.

Ni.‘ar the borders of the lake, west, notwithstanding the heat of tlie climate, and the insalubrity of the air, .several whites haTC fixed their habitations to cultivate cacao; they are much scattered, but have a chapel placed in the centre

of their settlement, to which they all occasionally resort.

Tlie lake is navigable for vessels of any burden ; but this advantage is sometimes rendered useless by a dangerous sand-bank across tl>e entrance, wliicii is narrow, and on wliich vessels drawing twelve feel water will occasionally touch ground. Several small rivers empty themselves into this lake ; but tlie country is uninhabited excepting by Indians ; and, immediately on the shores, notliing is known with accuracy concerning them. The savage Goahiros from l.a Hacha prevent all access on the western side, and keep the settlers in alarm. It was from the Indian towns, built on posts of iron-wood on the lake of Maracaibo, that tlie .Spaniards gave the country the name of 'entzuela, or Little X’enice. Four of tliese are yet standing, the iron-

wood on which they are founded becoming like a mass of stone from the petrifying quality of the water. These villages are situate on the east part of the lake, at unequal distances from each other, and have a church, whicli is also built in the water on piles, and to wliich the inhabitants of the villages resort. The population of this province is estimated at 174,000 souls. The chief towns, beside the capital, are Truxillo, Gibraltar, La Barbacos, and San Pedro.

JMaracaibo, a city of Colombia, and the chief town of the above province, is situated in N. lat. 10° 30', and W. long. 71° 46', on the western side of the strait wliich leads into the lake, at about six leagues from the sea. The soil of the neighbourhood is sandy, and the climate so much the more hot, as the sea breezes here are faint, and far from regular. The soil is not watered by any kind of running stream. From the month of'lNIarch to October the heats are excessive ; but those of August and July are in-supportable. The air breathed at this period appears as if it had issued from a furnace. The trade-winds blow in general from the commencement of March till June or July. August and September are calm months, unless when they are interrupted by the south wind, which in the country they denominate, on account of its insa-lubrity, t/ie destioi/er. They remark tiiat, when the l)reezes are moderate, the year is rainy; and, when violent, that they are succeeded by droughts. INIaracaibo is very siibjpct to tempests. Tlie tliundpr breaks with frightful explosion, and the li','htninir sometimes strikes and consumes houses, -ships, and every thing which it meets. Tliey do not, however, experience earthquakes, nor those furious hurricanes which often seem to threaten the very existence of the Antilles. The deluges of rain, which some of these tempests produce, are so great, that they form a torrent, which traverses the city with a rapidity which is inconceivable, bearing trees along with it, and causing, in proportion to its rise, desolation to houses, and every tiling in its course.

The principal part of this town is on the shore of a small gulf, a league in length, which extends, Oii the south, towards the broad part of the lake: the other part is built on the neck to the north, where the lake is only three leagues in width. The place where the town begins is named Maracaibo Point; thatwhere the gulf commences.

Arieta Point ; and opposite to that is Point Santa Lucia.

Many of the houses, built of lime and sand, are in good taste; but most of the inhabitants adhere obstinately to the opinion, that tiles render

the houses destructive to the persons who inhabit them, and continue in the custom of covering the handsomest houses with a kind of reed, called by the Spaniards enea. This mixture of houses, covered with tiles and reeds, gives to the city the air of a village, and offers to the flames food that keeps it in constant danger. INIaracaibo contains one parish church, a chapel, and a convent of Franciscans.

As there are neither fountains, wells, nor river, the people drink no other water than that of the lake, which in taste is not agreeable, but in quality by no means bad, except during the breezes of the months of March and April. These drive up the water of the sea agauist the current, and ren-der that of the lake excessively brackish. The poor can, in this case, quench their thirst only with water which they procure by excavations in the earth ; but this is very far from wholesome. The higher ranks have cisterns or jars in their houses to collect the rain water. It was calculated, in 1807, that Maracaibo contained 25,000 inhabitants. Certain noble families here boast of having descended from the first conquerors of the province ; but there are very few of these primitive houses that now enjoy even an easy mediocrity. Almost all experience so much misery, that the idea of their illustrious origin is the most grateful support with which they are fed ; for a Spaniard of that kind, once reduced to indigence, is so for life. The shame of labor, and love of indolence, makes him brave like a hero all the horrors of want. The whites, not noble, are Europeans or Creoles. This is the class that lives with the greatest comfort, because it is the only one which labors, and applies itself to agriculture, navigation, commerce, the fisheries, &c. The number of negroes at Maracaibo does? not exceed 5000. They exercise all kinds of trades, — are joiners, tailors, shoemakers, carpenters, masons, and smiths. The natives of the town have, in the Spanish colonies, the reputation of being very witty, llie Jesuits had a college here, which produced some distinguished scholars, and it became the literary town of America ; but, with that order of clergy, their establishments fell.

‘ In allowing that the inhabitants of Maracaibo have activity, courage, and genius,’ says Depons, ‘we have notliing more to say in their favor. They are reproached with having very little re-gard to their word, and with thinking themselves not bound by their signature, until after they have in vain endeavoured to release themselves from it by law. Their reputation in this respect is so well established, that all strangers, whom business draws to Maracaibo, say it is much better to form connexions of interest with the women than with the men, because they alone have there that good faith and firmness which, in every other part, is the peculiar heritage of the men. Since the course of description has led me,’ he adds, ‘to speak of the women of

Maracaibo, I ought not to let it be unknown that they

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are io tlieir youth paragons of modesty ; and, in marriage, faithful wives, and excellent mothers of families. Affection for their husbands, the cares of their households, and the education of their children, are the objects which divide all their moments, and occupy all their solicitude. They know not, however, before marriage, any other amusement than music. Their favorite in-stiuraent is the harp. There are few houses in wiiich the harmonious sound of this instrument is not heard every evening, and every day of festival.'

Maracaibo, we should add, is thought, on the whole, a healthy residence. There are no epidemic complaints ; and a man once seasoned to the climate preserves his health as well and better than in many other places where the heats are less intense, and the means of refreshing himself more multiplied. In July and August the most usual preventive for the ill effects of the climate is constant bathing in the lake.

The citizens of INIaracaibo contract from their infancy a taste for navigation, and repair in crowds to Porto Cavello, Guayra, and the other ports. They perform, with equal ability, coasting or longer voyages. In those intervals when war suspends their commercial enterprises they em-bark on board privateers. The neighbourhood of the lake, in the waters of which they exercise themselves in their early years, renders them as excellent swimmers as expert divers. Those who resist the attractions of the sea, raise herds of cattle, or take care of those of their fathers. Nothing better evinces their aptitude to this occupation than the immense number of beasts with which the savannahs of Maracaibo are covered. The principal ones are those of Jobo, Ancon, Palmares, and Cannades. We ought to mention, that there is more merit in raising cattle in the savannahs of Maracaibo than in any other place in these provinces, because, having neither rivers nor ponds that never dry up, drought occasions the death of many, in spite of the precautions they take, in cases of this sort, to drive them towards those parts where they can with convenience water them.

At this port a bar of sand, which is but ten or twelve feet under water, entirely excludes large vessels, and with difficulty admits small ones. Neither should any attempt to enter without a pilot. As soon as she clears the bar, a vessel has plenty of water, and good harbour. Three

foTli protect the harbour. The best schooners which sail on the Spanish Main are built in this city.

RIARACANDA, in ancient geography, the capital of Sogdiana ; now thought to be Samarcand, a city of Usbec Tartary, the royal residence of Tamerlane. See Samarcand.

MARACAY, or Moracao, a town of Colombia, in the province of Venezuela, and situated on the east side of the lake 'alencia, in the valley of Aragoa. Its sandy soil renders it, like Maracaibo, healthy, but hot. Three-fourths of the houses are built of stone, and with considerable elegance as well as solidity : but the streets are not paved. There is but one parish church. The inhabitants are active and irulus-trious, possessing numerous plantations of cotton, indigo, coffee, corn, iVc. Population 3400.

MARAGA, a well-built city of Persia, in Aderbijan, pleasantly situated in a low valley, opening to the large lake of IJrumea, from which it is distant about twelve miles. It has a spacious bazaar, a glass manufactory, and a handsome public bath; and is encompassed with a high wall. Inhabitants 15,000, of the Turkish tribe of Mukudim. The gardens and plantations are watered by canals, communicating with a small river, over which there are two bridges. The place is distinguished by the tomb of Ilola-kon, or Hulagon, a prince of the dynasty of Zinghis Khan, who made this the place of his residence. He built an observatory on a mountain, close to the city, for the use of Naserul Deen, the most famous astronomer of his age, and the author of tables of latitude and longitude. Maraga has also several extensive excavations, dedicated to religious purposes. It is sixty-eight miles north of Tabreez.

MARALUI (James Philip), a learned mathematician and astronomer of the academy of sciences at Paris, born in the county of Nice, in 1665. His mother was Angela Catharine Cassini, the sister of the famous astronomer. Hiis uncle Cassini sent him to France in 1687, where he acquired great reputation by his observations. He made a catalogue of the fixed stars, which is more exact than Bayer's ; and gave a great num-ber of interesting observations in the Memoirs of the Academy ; particularly on bees and petrifactions. He also assisted his uncle in constructing the great meridian through France. He died in 1729.

MARANA (John Paul), an ingenious writer of the seventeenth century, of a distinguished family, born in Genoa, where he was educated, and

made great progress in the sciences. Having been engaged in the conspiracy of Raphael della Terra, to deliver up Genoa to the duke of Savoy, he was in 1670, when twenty-eidit years of age, imprisoned in the tower of that city. Being liberated, in 1674, he was ordered to write the history of that conspiracy ; but, when finished, he was forbidden to publis!) it. When the republic of Genoa was at variance witli the court of France, Marana, afraid of being imprisoned a second time, retired to Monaco, where he again wrote the history of the conspiracy in Italian ; and, in 1682, went to Lyons to get it printed. From Lyons he went to Paris, where his merit soon acquired him powerful friends. Here he spent the rest of his life in the society of men of learning: and died in 1693. His history of the conspiracy contains many interesting anecdotes, no where else to be found. He also wrote several other works ; the best known of which is the Turkish Spy, in 6 vols. 12mo., which was, in 1742, augmented to 7 vols. Of this ingenious work there is an excellent English translation.

MAKANHAM, or Mauanan, a province of Brasil, comprehending the island of that name, and part of the adjacent continent. It is bovnid-ed on tlie east by Scara, north by the Brasilian Sea, west by Para, and south by the country inhabited by tlie Indians. There are annexed lo it, l>esi(]es Maranham, the islands of Sipotuba, Santa Ana, and Ygara])atoe. The climate, though the country is so nearly under the Kpiinoctial

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iir.e,is pleasant and healthy, producing all kinds of grain and fruits, cotton, sugar, and rice : of maize there are two crops in the year; and the dye woods are excellent. The tree which produces the annatto is also common.

Maranham,the Island of, inthegreatgulph of the same name, is twenty-six leagues in circuit, extremely fertile, and has 25,000 inhabitants. The city of St. Louis, founded by the French in 1612, is on the south side of the island, and contains 10,000 inhabitants. It is the seat of government of the three northern provinces, and the centre of their commerce with Europe : vessels of burden not venturing up to Para.

MAIIANTA, Indian arrow root, a genus of the monogynia order, and raonandria class of plants ; natural order eighth, scitamineae : cor. ringent and quinquefid, with two segments alternately patent. There are three species, *viz.*

M. arundinacea, comosa, and galanga, all herbaceous perennial exotics of the Indies, kept here in hot-houses for curiosity : they have thick, knotty, creeping roots, crowned with long, broad, arundinaccous leaves, ending in points, and upriglit stalks, half a yard high, terminated by bunches of monopetalous, ringent, five-parted flowers. They are propagated by parting the roois in spring, and planting them in pots of light rich earth, and then plunging them in the bark bed. The root of the galanga is used by the Indians to extract the virus communicated by their poisoned arrows ; from whence it has its name of arrow root. The arundinacea, or starch plant, rises to two feet, has broad pointed leaves, small white flowers, and one seed. It is cultivated in gardens and in provision grounds in the West Indies; and the starch is obtained from it by the following process described by Dr. Wright : ‘ The roots, when a year old, are dug up, well washed in water, and then beaten in large deep wooden mortars to a pulp. This is thrown into a large tub of clean water. The whole is then well stirred, and the fibrous part wrung out by the hands, and thrown away. The milky liquor being passed through a hair sieve, or coarse cloth, is suffered to settle, and the clear water is drained off. At the bottom of the vessel is a white mass, which is again mixed with clear water and drained : lastly, the mass is dried on sheets in the sun, and is pure starch.’ A decoction of the fresh roots, the doctor informs us, makes an excellent ptisan in acute diseases.

MARASA, or Marasna, a central town of Mrica, described by the Arabian writers of the twelfth century as of great magnitude, and situated on the southern branch of the Niger, which encompasses Wangara.

MARAS'MUS, n. s. Gr. napafffioQ from fiapaivw, to turn flaccid. A consumption, in which persons waste mnch of their substance.

Pining atropliy, Marasmus, and wide-wasting pestilence. Milton.

A marasmus iiiiporls a consumption following a fever ; a consumption, or withering of the body, by reason of a natural extinction of the native heat, and an extenuation of the body, caused through an immoderate heat. Harveij.

MARAT (Jean Paul), one of tiiC most bloody of the French revolutionists, and a deputy to the

national assembly. He was assassinated in Iiis own house, while bathing, by Charlotte Cordˆ,on the evening of the 13th of July, 1793. Marat was the most violent enemy to the Brissotines, and, on the 12th of April 1793, proi)osed to exterminate the conspirators. He was the conductor of an inflammatory Journal, which increased the discontents of tiie people, and contributed much to the bloody scenes that followed. As to his talents, he seems to have been rather a man of activity than of genius ; rather quick than profound, and possessing more pene-traiion than judgment.

MARATEA, a town of Naples, in Basilicata, 3ituated on the gulf of Policastro, and divided mto Maratea Inferiore, with 3600 inhabitants, and Maratea Superiore, with 500. Ten miles south-east of Policastro.

MARATHON, in ancient geography, one of the hamlets of Attica; about twelve miles north-east of Athens, towards Boeotia, near the sea. The plain of Marathon, famous for the victory of Miltiades over the Persians, is long and nar-row, but consists chiefly of level ground, and therefore admits the operations of cavalry, which formed the main strength of the barbarian army, and with which the Greeks were very poorly provided. Here the Persians, under Datis, pitched their camp, by the advice of Ilippias the banished king of Athens, who had solicited the expedition, and had a perfect knowledge of the country. The Persian army consisted of 100,000 infantry, and 10,000 horse. The Athenians were in the utmost consternation. They had, upon the first appearance of the Persian fleet, sent to implore assistance from

the other nations of Greece ; but some had submitted to Darius, and others trembled at the very name of the Persians. The Lacedemonians alone promised troops ; but various obstacles prevented them from immediately forming a junction with those of the Athenians. This city, therefore, could only rely on its own strength, but it possessed three brave generals, *viz.* Miltiades, Aristides, and Themistocles, who, by their patriotic exertions, kindled the flame of heroism in the minds of the Athenians. Levies were immediately made. Each of the ten tribes furnished 1000 foot soldiers with a commander. No sooner were the troops assembled than they marched into the plain of Marathon, where the inhabitants of Plataea in Bceotia sent them a reinforcement of 1000 infantry. Scarcely were the two armies in sight of each other, when Miltiades proposed to at-tack the enemy. Aristides and several others warmly supported this measure ; but the rest, terrified at the excessive disproportion of the armies, were for waiting for the succors from Lacedacmon. Opinions being divided, they had recourse to that of the polemarch, or chief of the militia, to decide the matter. Miltiades addressed him with the ardor of a man deeply impressed with the importance of the existing circumstances :— ‘ Athens,’ said he, ‘ is on the point of experiencing tlie greatest of vicissitudes ; ready to become the first powerof Greece, or subjected to the lyraimy and fury of Ilippias. From you alono, r’allima-ˆhus, she now awaits her destiny. If v\e suffer the ardor of the troops to cool, they

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will shamefully bow beneath the Persian yoke ; but, if we If ud tlieiii on to battle, the gods and victory will favor us. A word from your mouth must now precipitate your country hito slavery or preserve iier liberty.' Callimaclius gave his suffrage, and the battle was resolved on. To in-sure success, Aristides, and the other generals after h-is example, yielded to Miltiades the honor of the command which belonged to them in rotation. Miltiades drew up his troops at the foot of a mountain, on a spot of ground scattered over with trees to impede the Persian cavalry. The Platieans were placed on the left wing ; Callimachus commanded the right ; Aristides and Themistocles were in the centre, and Miltiades every where. An interval of nearly a mile separated the Grecian army from that of the Persians. At the first signal the Greeks advanced over this space running. The Persians astonished at a mode of attack so new, for a moment remained motionless ; but to the impetuous fury of the enemy they soon opposed a more sedate and not less formidable fury. After an obstinate conflict, of some hours, victory began to declare for the Grecian army. The right wing dispersed the enemy in the plain, while the left drove them back on a morass that had the appearance of a meadow, in which they stuck fast and were lost. Both these bodies of troops now flew to the succour of Aristides and Themistocles, ready to give way before the flower of the I'ersian troops in the centre. From this moment t!ie rovite be-came general. The Persians, repulsed on all sides, found their only asylum in the fleet. The conquerors pursued them witli fire and sword, and took, burnt, or sunk the greater part of their vessels : the rest escaped by dint of rowing. The Persians lost about 6400 men ; the Athenians only 192. Miltiades was wounded; llippias was left dead on the field, as were Stesileus and Callimachus, two of the Athenian generals. Scarcely was the battle over, when a soldier, worn out with fatiorue, resolved to carry the first news of the victory to the magistrates of Athens, and, without quitting his arms, he runs, flies, arrives, announces the victory, and falls dead at their feet. This tattle was fought on the sixth of Boedromion, in the third year of the seventy-se- cond Olympiad, or 29th September, A. A. C. 490. The next day 2000 Spartans arrived, who, in three days and nights, had marched 1200 stadia. The Athenians neglected nothing to eternise the memory of tliose who fell in the bat-tle. It had been usual to inter the citizens who perished in war, at the public expense, in the Ceramicus, without the city ; but these were deemed uncommonly meritorious. They were buried, and a barrow was erected on the spot

where their bravery had been manifested. Their names were engraven on half columns erected on the plain of Marathon. In the intervals between them were erected trophies bearing the arms of the Persians. An artist of eminence painted all the circumstances of the battle in one of the most frequented porticoes of the city : Miltiades was there represented at the head of the generals, exhorting the troops to fight for Ihoir country. Pausanias examined the field of battle about 600 years after this event ; and found, on the barrow (f the Athenians, pillars containin;ˆ

tlK> names of the dead under tliose of the tribes to which they belonged ; anollicr fortlie Plata-en- sians and slaves; and a distinct monument of Miltiades, who survived the battle. The Mara-thonians worshipped those who were slain in battle. Many centuries have elapsed since the age of Pausanias ; but the principal barrow still towers above the level of the plain. It is of light fiue earth, and has a bush or two growing on it.

MARATI, a nation of pirates, who inhabit the northern coast of Madagascar, and have almost laid desolate the Comorro Isles. They have canoes forty-five feet long, by ten or twelve broad, carrying from fifteen to thirty-five men. In common years they send only thirty canoes ; but every fifth year they make a grand expedition of 100, and once occupied and destroyed one with the (ˆuerimba Islands. They have even threatened Mosambique. They wear crises like the Malays, and use them dexterously.

MARATTI (Charles), a celebrated painter, born at Camorano, near Ancona, in 1625. He came a poor boy to Rome, when only eleven years old ; and at twelve recommended himself to Andrew Sacchi, by his drawings, after Raphael in the Vatican. Sacchi received him into his school, where he coutinued twenty-five years till his master’s death. He was often employed in painting madonas and female saints. From the finest statues and pictures, he made himself master of the most perfect forms, and the most charming airs. He produced a noble variety of draperies, more artfully managed, mure richly ornamented, and with greater propriety, than even the best of the moderns. He was inimitable in adorning the head, and the disposition of the hands and feet. In his younger days he etched a few prints, with equal spirit and correctness. It would be endless to enumerate his celebrated paintings. Innocent XI. appointed him keeper of the paintings in his chapel and the 'atican. Maratti erected two noble monuments for Raphael and Hannibal Caracci, at his own expense, in the pantheon. He died at

Rome in 1713, aged eighty-eight.

MARATUBA, a cluster of six islands in the Eastern Seas, off' the east coast of Borneo. The largest is about twenty-four miles in length from north to south. It varies in breadth from twelve to four miles. Long. 1 18° 3.5' E., kit. 2° 15' N.

MARAUDERS, in a military sense, a party of soldiers, who, without any order, go into the neighbouring houses and villages, wlien the army is either in camp or garrison, to plunder and destroy, &c. Marauders are a disgrace to the camp, to the military profession, and deserve no better quarter from their officers than they give to the))oor peasants, J<c.

MARAVEDI, a little Spanish copper coin, worth somewhat more than a French denier, or half a farthing iMiglish. The S))aniards still calculate by maravedis, both in commerce and in their finances, thougii the coin itself is no longer current among them. Sixty-three maravedis are equivalent to a rial of silver ; so thai the piastre, or piece of eight rials, contains 504 ; and theˆ pistole of four pieces of eiglit, 2010 maravedis. Ill tlif laws of Spain, we meet with several kinds ot maiavedis; Alpiioiisinc maravedis, white

maravedis, maravedis of good money, maravedis Combruiios, black maravedis, and old maravedis. When we find maravedis alone, and wiiliout any addition, it is to be understood of those mentioned above. The rest are different in value, 'fineness of metal, time, &c. Mariana asserts, that this coin is older than the IMoors ; that it came from the Gotiis ; that it was anciently equal to a third])art of tiie rial, and consequently of twelve times the value of the present maravedi. See Coins.

MARAN'l, a lake and country of Eastern Africa, behind Mosambique, extending])arallel to the coast of the Indian Ocean, at the distance of about 300 miles. The breadth of the lake is reported not to exceed thirty or forty miles ; its len'j;th is not known, nor any details of the

country.

rilARAWAS, RIaravasa, a district of Hindostan, in the Southern Carnatic, situated principally between 9” and 10° of N. lat. To the north it lias Tanjore and the Polygar territory; to the south Tinnevelly; to the west Madura; and on the east the sea. In length it may be estimated at eighty miles, by thirty the average breadth. It is comprehended in the collectorship of Dindigul.

This district possesses great advantages for external commerce from its maritime situation, and the permanent establishment of a large public investment of cloth which employs its manufactures. The southern division is well supplied with water from streams and tanks. Near the coast the country is in general well cultivated, and is uniformly flat. This district exhibits many magnificent remains of the ancient Hindoo religion. At small distances on the public roads are choultries and pagodas, in the front of which are gigantic figures of ornamented horses, formed of bricks covered over with chunam, and shaded by fruit and lofty banyan trees. The principal towns are Kamnad, Shevagunga, Armacotta, and Tripatoor. It belonged at a remote period to the Hindoo Pandean empire ; in modern times it first is traced into the possession of the rajahs of Shevagunga and Ramnad ; the first of whom was called the Great Marawa, and the second the Little Marawa, both tributary to the nabob of the Carnatic. The East India Company collected the tribute of the two Marawas from the year 1792; and, in 1801, by treaty with the nabob of Arcot, obtained the complete sovereignty.

MARBURG, a town of Germany, the capital of that part of Upper Hesse which belongs to Hesse-Cassel, is situated chiefiy on the right side of the Lahn, on the side of a hill. At the top is a fortified castle, in which the landgrave once resided. It has a Lutheran, Calvinist, and Catholic church, a hospital, two infirmaries, an orphan-house, and a workhouse, with a school of industry. A university was established here in 1527, which has still 200 students, and large revenues; and attached are a library, a botanical garden, a lying-in-hospital, a chemical laboratory, and a veterinary school. Population 6500. Forty-five mil’-s south-west of Cassel.

Marburg, a town of Styria, in Austria, on the river Drave. It is the capital of a circle of tliis name, and iias a large old castle, a gymnasium, and a higii school. It has also a brisk

trade in corn and wine, and well-frequented annual fairs. Inhabitants 5000. The circle lies between those of Gratz and Cilley, has an area of 1330 squire miles, and 173,000 inhabitants. 116 miles south by west of Vienna,

MAR'BLE, n.s., adj., & u. a. 3 Fr. marbre; Maruleheahtld. 5 Lat. marmor.

A superior species of limestone, used in elegant buildings and in statues ; a small globe of stone, used in play : made of marble; variegated ; also, metaphorically, hard ; unfeeling : to marble is to variegate or make like marble.

There were white, green, and blue hangings, fastened with cords of fine linen and purple, to silver rings and pillars of marble : the beds were of gold and of silver, upon a pavement of red, and blue, and white, and black marble. Ktdt. i. 6.

Thou marble hewest, ere long to part with breath. And houses rearest unmindful of thy death. Sandqs.

Shall I see far-fetched inventions i shall I labour to lay marble colours over my ruinous thoughts'! or rather, though the pureness of my virgin mind be stained, let me keep the true simplicity of my word.

Sidnei/. He plies her hard, and much rain wears the nuirhla.

iilialispeare. Ingratitude ! thou marblehearted fiend, More hideous when thou shewest thee in a child, Than the sea monster. (. A'/zio-Ltar.

What pity it was to see those goodly cedars of the temple flaming up higher than tliey stood in Lebanon ! to see those curious nuirbles, which never felt the dent of the pickaxe or hammer in the laying, wounded with mattocks, and wounding the earth in their fall ! Bp. Hall.

A greater favour this disorder brought Unto her servants, than tiieir awful thought Durst entertain, when thus compelled they prest The yielding marble of her snowy breast. IValler, Pigmalion's fate reverst is mine. His marble love took flesh and blood,

All that I worshipped as divine, That beauty now 'tis understood, Appears to have no more of life Than that whereof he framed his wife. Id.

Very well sleeked marbled paper did not cast any of its distinct colours upon the wall with an equal diffusion. Boyle.

Some dry their corn infected with the brine. Then grind with marbles, and prepare to dine.

Dry den. The two flat sides of two pieces of marble will more easily approach each other, between which there is nothing but water or air, than if there be a diamond between them ; not that the parts of the diamond are more solid, but because tiie parts of water, being more easily separable, give way to the approach of the two pieces of marble. Locke.

Marian Marbled with sage the hardening cheese she pressed. And yellow butter Martin's skill professed. day.

Marbles taught them percussion, and the laws of motion ; nutcrackers the use of the leaver.

Arbuthnot and Pope. The appendix shall be printed by itself, stitched, and with a marble cover. Swift.

A fourth as marble, statue-like and still. Lay in a breathless, hushed, and stony, sleep. Byron.

Marble, in natural history, a genus of fossils, being bright and beautiful stones composed of small separate concretions, moderately hard, not giving fire with steel, fermentinti with and soluble in acid menstrua, and calcining in a slight fire.

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The Latin word marmor is derived from the Greek napnaipnv, to shine or sclitter. The co-lors by wliich marbles are distinguished are almost innumerable; but the most remarkable are, 1. Tlie black marble of Flanders. 2. Plain yellow. 3. Yellow with some white veins. 4. Yellow with black dendrites. 5. Yellow with brown figures resembling ruins. 6. Black and yellow. 7. Black and white. 8. Pale yellow, with spots of a

blackish-gray color. 9. Yellow, white, and red. 10. Pale yellow. 11. Olive color, with deeper colored cross lines, and dendrites. 12. Brownish red. 13. Flesh-colored and yellow. 14. Common red marble. 15. Crmison, white, and gray. 16. Reddish-brown lumps on a whitish ground. 17. Bluish gray. 18. Snowy white. The varieties of marble, numerous as they are, have been improperly augmented by virtuosos, and some people who collect specimens for tlie sake of gain. The Italians are particularly curious in this way; and most of the names imposed upon marbles are given by them. Every marble brought from an unknown place is called by tliem antico ; when distinguished by a number of bright colors it is called brocatello, or brocatellato. When they want some of the originals to complete a whole set of marbles they either substitute others which have the nearest resemblance to them ; or, lastly, they stain white marbles according to iheir own fancy, and impose them on the world as natural. The finest solid modern marbles are those of Italy, Blankenburg, France, and Flanders. Very fine marble is also found in some of the Western Islands of Scotland. Those of Germany, Nor-way, and Sweden, are of an inferior kind, being mixed with a kind of scaly limestone ; and even several of those above mentioned are partly mixed with this substance, though in an inferior degree. The specific gravity of marble is from 2700 to 2800 ; that of Carriera, a very fine Italian marble, is 2717. Black marble owes its color to a slight mixture of iron. Mr. Bayen found some which contained five per cent, of the metal ; notwithstanding which the lime prepared from it was white, but in time it acquired an ochry or reddish-yellow color. Marble, when chemically examined, appears to consist of calcareous earth ; and is, like limestone or chalk, capable of being converted into a strong quicklime. Dr. Black derives the origin of marbles, as well as limestone and marl, from the same source, *viz.* from the calcareous matter of shells and lithophyta. In one kind of limestone, known by the name of Portland stone, and consisting of round grains united together, it was supposed to be composed of ihe spawn of fish ; but comparisons of other i)henomena have explained it. It is plain that it has been produced from a calcareous sand, which is found on the shore of some of the islands in the southern climates. By the constant agitation the softer parts are worn off, and the harder parts remain in tlie form of particles that are highly polished, and which are afterwards gradually made to concrete together by causes of which we have yet no knowledge. There are indeed some few of the limestones and marbles in which we cannot discover any of the relics of the shells ; but there are many

signs of their having been in a dissolved or liquefied state ; so we

cannot expect to see the remains of the form of the shells; but, even in ni;iny of the marbles that have the greatest appearance of a complete mixture, we still find often the confused remains of the shells of which they have been originally composed. We should still find it difficult to conceive how such masses should have derived their origin from shells; but, considering the many collections that we have an op])ortunity of seeing in their steps towards this process, and a little concreted together, so that by their going a step farther they might form limestone and marbles, we may see the possibility of their being all produced in the same manner. Thus vast quantities of shells have been found in the ci-devant province of Touraine in France : and indeed there is no place where they have not been found. The lithophyta likewise seem to be a very fruitful source of this kind of earth. In the cold climates, where the moderate degree of heat is not so productive of animal life, we have not such an opportunity of observing this ; but in the hot climates the sea as well as the land swarms with innumerable animals ; and, at the bottom, with those that produce the corals and madrepores. We learn, from the history of a ship that was sunk in a storm in the Gulf of Mexico, the vast growth there is of these bodies. About thirty years after they attempted to dive into it, to get out a quantity of silver ; but they found great ditficulty in getting it, from the ship being overgrown with coral. Sir Hans Sloane in the Philosophical Transactions, and in his History of Jamaica, observes that the ship's timber, the iron, and money, were all concreted by the growth of the calcareous matter. So in a tract of many thousands of years the quantity of it should be very great ; and, as this is going on through a very great extent of the bottom of the sea, it will produce very extensive as well as massy collections of calcareous matter. According to Sir William Hamilton, many variegated marbles and precious stones are the produce of volcanoes. See Philosophical Transactions, vol. Iviii. 12.

Marble, ARXinciAL. The stucco of which they make statues, busts, basso-relievos, and other ornaments of architecture, ought to be marble pulverised, mixed in a certain proportion with plaster; the whole well sifted, worked up with water, and used like common plaster. See Stucco. A kind of artificial marble is also made of the fiaky selenites, or a transparent stone resembling plaster ; which becomes very hard, receives a tolerable])olish, and may deceive a good eye. This kind of selenites resembles Muscovy talc. Another kind is formed by corrosive tinctures, which,]ienetrating into white marble to the depth of a line or more, imitate the various colors of dearer marble. There is also a pre])aration of brimstone in imitation of marble. To do this, provide a flat and smooth piece of marble ; on this make a border

or wall, to encomjiass either a square or oval ta-ble, which may be done either with wax or clay. Then, having several sorts of colors, as white, lead, vermilion, lake, orpinient, niasticot, smalt, Prussian blue, &c., null on a slow fire some

brimstone in several glazed pipkins; put one particular sort of color into each, and stir it well together ; then, having before oiled the marble all over within the wall, with one color, quickly drop spots upon it of larger and less size ; after this take another color, and do as before, and so on till the stone is covered with spots of all the colors you design to use. When tliis is done, consider what color the mass or ground of the table is to be ; if of a gray color, then take fine sifted ashes, and mix it up with melted brimstone; or if red, with English red ochre; if white, with white lead ; if black, with lamp or ivory black. The brimstone for the ground must be pretty hot, that the colored drops on the stone may unite and incorporate with it. \V hen then the ground is poured even all over, put a ihin wainscot board upon it, while the brimstone is hot, making also the board hot, which ouglit to be thoroughly dry, to cause the brimstone to stick the better to it. When the whole is cold, take it up, and polish it with a cloth and oil, and it will look very beautiful.

Marble, Coloring. This is a nice art; and, to succeed in it, the pieces of marble on which the experiments are tried must be well polished, and free from the least spot or vein. The harder the marble is, the better will it bear the heat necessary in the operation ; therefore alabaster and the common soft white marble are very improper for performing these operations upon. Heat is always necessary for opening the pores of marble, so as to render it fit to receive the co-lors : but the marble must never be made red hot ; for then the texture of it is injured, and the colors are burnt, and lose their beauty. Too small a degree of heat is as bad as one too great ; for in this case, though the marble receive the color, it will not be fixed in it, nor strike deep enough. Some colors will strike even cold ; but they never sink in so well as when a just degree of heat is used. The proper degree is that which, without

making the marble red, makes the liquor boil upon its surface. The menslruums used to strike in the colors must be varied according to the nature of the color to be used. A lixivium made with horses' or dogs' urine, with four parts of quicklime and one of potashes, is excellent for some colors ; common lye of wood ashes is very good for others ; for some spirit of wine is best ; and lastly, for others, oily liquors, or common white wine. The co-lors which succeed best with the peculiar menstruums are these :_Stone blue dissolved in six times the quantity of spirit of wine, or of the tirinous lixivium, and litmus dissolved in com-mon lye of wood ashes. An extract of saffron, and that color made of buckthorn berries, called by painters sap green, both succeed well when dissolved in urine and quicklime, and tolerably well when dissolved in spirit of wine. Vermilion, and a very fine powder of cochineal, also succeed very well in the same liiiuors. Dragons' blood succeeds in spirit of wine, as does also a tincture of logwood in the same spirit. Alkanet root gives a fine color; but the only menstruum to be used for it is oil of turpentine ; for neither spirit of wine nor any lixivium will do with it. There is another kind of sanguis draconis commonly called dragons' blood in tears, which, mixed witli urine, gives a very elegant color. There are other colors which must be laid on dry and unmixed. These are — dragons' blood, of the purest kind, for a red ; gamboge for a yellow ; green wax for a green ; common brimstone, pitch, and turpentine, for a brown color. The marble for these experiments must be made considerably hot, and then the colors are to be rubbed on dry in the lump. Some of these co-lors, when once given, remain immutable, others are easily changed or destroyed. Thus the red color given by dragons' blood, or by a decoction of logwood, will be wholly taken away by oil of tartar, and the polish of the marble not hurt by it. A fine gold color is given in the following manner : — Take crude sal ammoniac, vitriol, and verdigris, of each equal quantities. White vitriol succeeds best ; and all must be thoroughly mixed in fine powder. The staining of marble to all the degrees of red or yellow, by solutions of dragons' blood or gamboge, may be done by reducing these gums to powder, and grinding them with the spirit of wine in a glass mortar. But, for smaller attempts, no method is so good as mixing a little of either of these powders with spirit of wine in asilverspoon, and holding it over burning charcoal. A fine tincture may thus be extracted, and, with a pencil dipt in this, the finest traces may be made on the marble while cold ; which on heating it afterwards, either on sand or in a baker's oven, will sink very deep, and remain distinct on the stone. It is very easy to make the ground color of the marble red or yellow, and leave white veins in it. This is to be done by covering the places where the whiteness is to re-main with some white paint, or even with two or three folds only of

paper ; either of which will prevent the color from penetrating. All the degrees of red are to be given to marble by this gum alone ; a slight tincture of it, without the assistance of heat to the marble, gives only a pale flesh color; but the stronger tinctures give it deeper: to this the assistance of heat adds greatly. The addition of a little pitch to the tincture gives it a tendency to blackness, or any degree of deep red that may be desired. A blue color may be given also to marble by dissolving turnsol in lixivium, in lime and urine, or in the volatile spirit of urine ; but this has always a tendency to purple, made in either of these ways. A better blue is furnished by the Canary turnsol, which needs only to be dissolved in water, and drawn on with a pencil : it penetrates very deeply into the marble, and the color may be increased by drawing tlie pencil, wetted afresh, several times over the same lines. This color is apt to difi'use itself irregularly, but may be kept in regular bounds by circumscribing its lines with beds of wax, or any such substance. It should always be laid on cold, and no heat given even afterwards to the marble. One great advantage of this color is, that it is easily added to marbles already stained with other co-lors, is a rery beautiful tinge, and lasts a long time.

Marble, Elastic, an extraordinary species of fossil, of which there are several tables preserved in the house of prince Borghese at Rome, and

shown to ll:e curious. K. Jaquer, a celebrated mathematician, has given a description in the Literary Gazette of Paris. There are five or six tables of it; their length is about two feet and a half, their breadth about ten inches, and tlie thickness a little less than three. Tiiey were dug up, says abbe Fortis, in the feod of Mondrapjone; tlie grain is either of Cararese marble, or of the finest Greek. They seem to have suffered some attack of fire. They are very dry, do not yield to external impression, resound to the hammer like other congenerous marbles, and are perhaps susceptible of a polish. Being set on end, they bend, oscillating backward and forward; when laid horizontally, and raised at one end, they form a curve, beginning towards the middle : if placed on a table, and a piece of wood, or any thing else, is

laid under them, they make a salient curve, and touch the table with both ends. Notwithstanding this flexibility, they are liable to be broken if indiscreetly handled; and therefore one table only, and that not the best, is shown to the curious. Formerly they were altogether in the prince's apartment on the ground floor.

Marbles, Arundel. See Aeundelian Marbles.

Marbles for playing, or Marble Bowls, are mostly imported from Holland ; where it is said they are made by breaking the stone alabaster, or other substance, into pieces or chips of a suitable size; they are put into an iron mill which turns by water : there are several partitions with rasps within, cut floatways, not with teeth, which turn constantly round with great swiftness ; the friction against the rasps makes them round, and, as they are formed, they fall out of different holes, into which size or chance throws them,

Marbled Cuin a-ware, a species of porcelain or china-ware, which seems to be full of cemented flaws. It is called by the Chinese, who are very partial to it, tsou tchi It is generally plain white, sometimes blue, and has exactly the appearance of a piece of china which had been first broken, and then had all the pieces cemented in their places again, and covered with the original varnish. The manner of preparing it is easy. Instead of the common varnish of the china-ware, which is made of what they call oil of stone and oil of fern mixed together, they cover this with a simple thing made of a sort of coarse agates, calcined to a white powder, and separated from the grosser j)arts by water, after long grinding in morlars. When the powder has been thus prepared it is left moist, or in form of a sort of cream, with the last water that is suffered to remain in it, and this is used as the varnish. Our crystal would serve full as well as those coarse agates. The occasion of the singular appearance of this sort of porcelain is, that the varnish never spreads evenly, but runs into ridges and veins. Those often run naturally into a sort of Mosaic work, which can scarcely be taken for the effect of chance. If the marbled china be desired blue, they first give it a general coat of this color by dipping the vessel into a blue varnish, and, when this is thoroughly dry, they add another coat of this agate oil.

MARBLEII FAD, a post town and sea-port of Essex county, Massachusetts, four miles and a half south-east of Salem, sixteen north-east of Boston, and from Washington 456 miles. Population 5900. It contains a bank, a custom house, two insurance offices, a

market house, alms house, two rope” walks, an academy, and five houses of public worship, two for Congregationalists, one for Episcopalians, one for Methodists, and one for Baptists.

Tlie academy was incorporated in 1792, and is a respectable and flourishing seminary, having a limited number of pupils, thirty of each sex, under the care of a preceptor and preceptress. The building is a spacious and handsome edifice. The bank house is a superb edifice, erected in 1766 for a private mansion, at the expense of £lO,000 sterling, including furniture. It is sixty-six feet long, forty-four broad, and thirty-five high, of three stories ; and contains the bank, the cujtom house, and an insurance office.

This town is much more largely concerned in the bank fisheries than any other in the United States, and the business is carried on with great spirit and enterprise. There are now employed in the bank and coast fisheries 103 vessels, carrying 7739 tons, and giving occupation to 760 men ; eighty of these vessels, of sixty tons and upwards, are engaged in the fishery of the Grand Bank and of Newfoundland. The shipping employed in foreign commerce amounts to 3794 tons. The total amount belonging to this port is 12,301 tons. The harbour lies in front of the town, a mile long from north-east to south-west, and half a mile wide, and is formed by a narrow strip of land making a semicircle at the south-west. It is very excellent, and may be entered at all times, but is considerably exposed to north-east storms. It is defended by fort Sewall, which stands on a point near the entrance of the harbour, and is one of the finest forts in the country. It is formed by two angular batteries of earth and stone, with a stone and brick wall in their rear. The pieces mounted are two twenty-four, and ten eighteen pounders. The barracks, which are bomb proof, are capable of accommodating a garrison of sixty or seventy men, which is about the number now stationed here.

Few towns in the United States suffered so much as this during the revolutionary and the late war. At the peace of December, 1814, no fewer than 500 of her sons were in foreign prisons. The situation of the town is remarkably salubrious. The average number of births in a year is about 200 : of deaths, including those abroad,

MARBLETOWN, a town of Ulster county, New York; ten miles south-west of Kingston. Population 3363.

MARBLING, the art of preparing and coloring marbled paper. There are several kinds of marbled paper; but the principal difference of thera lies in the forms in which the colors are laid on the ground : some being disposed in wiiirls or circumvolutions: some in jagged lengths; and others only in spots of a roundish or oval figu-e. The general manner of managing each kind is, nevertheless, the same ; the paper is dipped in a

solution of gum tragacanth, or, as it is commonly called, guin-dragou ; over wliich the colors, previously prepared with ox-gall and spirit of wine, are first spread. The peculiar apparatus necessary for this purpose is, a trough for containing the gum tragacanth and the colors ; a comb for disposing them in the figure usually chosen ; and a burnishing stone for polishing tlie paper. The trough may be of any kind of wood ; and must be somewhat larger than the sheets of paper, for marblinjj which it is to be employed ; but the sides of it need only rise about two inches above the bottom; for, by making it thus shallow, the less quantity of the solution of the gum will serve to fill it. The comb may be also of wood, and five inches long, but should have brass teeth, wliich maybe about two inches long, and placed at about a quarter of an inch from eacii other. The burnishing stone may be of jasper or agate ; but, as these stones are very dear when of sufficient size, marble or glass may be used, provided their surface be polisiied. The solution of gum tragacanth must be made by putting a sufficient proportion of the gum, which should be white, and clear from all foulnesses, into clean water, and letting it remain a day or two, frequently breaking the lumps, and stirring it till the whole appear dissolved and equally mixed with the water. The consistence of the solution should be nearly that of strong gum water used in miniature painting; and, if it appear thicker, water must be added ; or, if thinner, more of the gum. When the solution is thus brought to a due state, it must be passed through a linen cloth; and, being then put into the trough, it will be ready to receive the colors. The colors employed for red are carmine, lake, rose pink, and vermilion ; but the last two are too glaring, unless they be mixed ■with rose pink or lake,

to bring them to a softer cast ; and carmine and lake are too dear fur com-mon purposes. For yellow, Dutch pink and yellow ochre may be employed : for blue, Prussian blue and verditer : for green, verdigris, a mixture of Dutch pink and Prussian blue, or verditer, in different proportions : for orange, the orange lake, or a mixture of vermilion, or red lead, with Dutch pink : for])urple, rose pink and Prussian blue. These colors should be ground with spirit of wine till they be of a proper fineness; and then, at the time of using them, a little fish-gall, or tlie gall of a beast, should be added, by grinding them over again with it. The proper proportion of the gall must be found by trying them ; for there must be just so much as will suffer the spots of color, when sprinkled on the solution of the gum-tragacanth, to join together, without intermixing or running into each other. The solution of the gum-tragacanth must then be poured into the trough ; and the colors, being in a separate pot, with a pencil appropriated to each, must be sprinkled on tiie surface of the solution, by shaking tlie pencil, charged with its proper color, over it ; and this must be done witti the several kinds of color desired, till the surface be wholly covered. When the marbling is proposed to be in spots of a simple form nothing more is necessary : but, where the whirls or snail-shell figures are wanted, they must be made by a quill ; which must be put among the spots

to turn them about, till the effect be produced Tiie jagged lengths must be made by the comb, which must be passed tiirough the colors from one end of the trough to the other, and will give them that appearance : but, if they be desired to be pointed both ways, the comb must be again passed through the trough in a contrary direction ; or, if some of the whirls or snail-shell figures be required to be added, they may be yet made by the means before directed. The paper should be previously prepared for receiving the colors, by dipping it over-night in water, and laying the sheets on each other with a weight over tiiem. Tiie whole being thus ready, the paper must be held by two corners, and laid in the most gentle and even manner on the solution covered with the colors ; and there softly pressed with the hand, that it may bear every where on the solution : after which it must be raised and taken off with the same care, and then hung to dry across a proper cord, subtended near at hand for that purpose; and in that stale it must continue till it be perfectly dry. It tlien remains only to give the paper a proper polisli : in order to which, it is first rub-bed with a little soap ; and then must be thoroughly smoothed by the glass polishers, such as are used for linen, and called the calendar glasses. After which it should be again rubbed by a burnisher of jasper or

agate, or of glass highly polished ; for on the perfect polish of the paper depend in a great measure its beauty and value. Gold or silver powders may be used, wiiere desired, along with the colors, and require only the same treatment as they, except that they must be first tempered with gum water.

Marbling of Books or Paper is performed thus : dissolve four ounces of gum arable into two quarts of fair water ; then provide several colors mixed with water in pots or shells ; and, with pencils peculiar to each color, sprinkle them by way of intermixture upon the gum water, wliich must be put into a trough, or some broad vessel ; then with a stick curl them, or draw them out in streaks, to as much variety as may be done. Having done this, hold the book or books close together, and only dip the edges in, on the top of the water and colors, very lightly ; which done, take them off, and the plain impression of the colors in mixture will be upon the leaves ; doing the ends and the front of the book m the same manner.

Marbling the Covers of Books is performed by forming clouds with aquafortis or spirit of vitriol mixed with ink, and afterwards glazing the covers. See Book-binding.

MARC A (Peter de), one of the greatest ornaments of the Galilean church, was born in Beam, of an ancient family, in 1594. He first studied the law, was made president of the])arliament of Beam, and, going to Paris in 1639, was made a counsellor of state. His literary merits appear from his History of Beam. By the king's order he published a work, De Concordia Sacerdotii et Imperii, sive de libertatibus Ecclesiae Gallicae, in refutation of a book that appeared under the title of Optatus Gallus : and on this account, when, on the death of his wife, he was nominated bishop of Conserans, the pope refused the bulls in his favor, until by another work he explained

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away all he had said to the limitation of the papal power. He obtained his confirmation, after seven years suspense, in 1G48; was translated to the archbishopric of Thoulouse in 1652 ; and was made minister of state in 1658. He was made archbishop of Paris in 1662 ; and died there soon after. His Posthumous Works, with prefaces, notes, &c., were published by M. Ba-luze. He is deservedly censured for accommodating his learning and talents to his views of interest and ambition.

MAR'CASITE, n. s. Fr. marcassite. An old and exploded term for various ores difficult of reduction. See below.

Here marcasites in various figures wait.

To ripen to a true metallic state.

Garth's Dispensatory.

The acid salt dissolved in water is the same with oil of sulphur per campanam, and abounding much in the bowels of the earth, and particularly in viar-casites, unites itself to the other ingredients of the marcasite, which are bitumen, iron, copper, and earth, and with them compounds alum, vitriol, and sulphur : with the earth alone it compounds alum ; with the metal alone, and metal and earth together, it compounds vitriol ; and with the bitumen and earth it compounds sulphur : whence it comes to pass, that marcasites abound with those three minerals. Newton's Opticks.

The writers of minerals give the name pyrites and marcasites indifferently to the same sort of body : I restrain the name of pyrites wholly to the nodules, or those that are found lodged in strata that are separate : the marcasite is part of the matter that either constitutes the stratum, or is lodged in the perpendicular fissures. Woodward.

The term marcasite has been very improperly used by some for bismuth, and by others for zinc : the more accurate writers, however, always express a substance different from either of these by it, sulphureous and metallick. The marcasite is a solid hard fossil, naturally found among the veins of ores, or in the fissures of stone : the variety of forms this mineral puts on is almost endless. There are, however, only three distinct species of it ; one of a bright gold colour,

another of a bright silver, and a third of a dead white : the silvery one seems to be peculiarly meant by the writers on the Materia Medica. Marcasite is very frequent in the mines of Cornwall, where the workmen call it mundick, but more in Germany, where they extract vitriol and sulphur from it. Hill.

Marcasite, in mineralogy, is a name that haˆ long been given indifTerently to all sorts of minerals ; to ores, pyrites, and semimetals. Lately it seems to be confined to pyrites ; and Wallerius proposes to confine it to such pyrites as are regularly formed. See Pyritls.

MAIICKL (G.), advocate to the parliament of Paris, a Trench chronological writer of the seventeenth century. He published, 1. Tablettcs Chronologiques, Contenant, avec ordre, I'etat de I'Eglise en Orient et en Occident ; Amsterdam, 1696, 16mo. 2. Tablettes Clironologiques, Contenant la suite des Papes, Kmpereurs, et Hoys, qui out Regne depuis la naissance de .Tesus Clirist en Europe, jusq'au present: 24mo. Paris, 1699, elegantly engraved on copper; both dedicated to Louis XIV.

MARCELLIANS, a sect of ancient heretics who flourished about the end of tlie second cen-

tury, so called from Marcellus of Ancyra, their leader, who was accused of reviving the errors of Sabellius. St. Epiphariius observes, that there was a great deal of dispute with regard to the real tenets of Marcellus; but that, as to his followers, it is evident they did not own the three hypostases ; for Marcellus considered the Son and Holy Ghost us two emanations from the divine nature, which, after performing their respective offices, were to return again into the substance of the Father; an opinion altogether incompatible with the belief of tliree distinct persons in the Godhead.

MARCELLO (Benedict), a celebrated musician, descended from one of the most illustrious families in Venice. He lived in the beginning of the eighteenth century, and composed anthems, cantatas, and other works, which the con-noisseurs rank as high as any of the musical compositions which the Italian school has produced. ' He is the Pindar of music,' says M. de la Borde. ' In analysing his works we discover a profound knowledge and great address ; but there is a difficulty attending the execution of them which is almost insurmountable. It requires a voice possessed of great powers, and accustomed to the most extraordinary intervals.'

MARCELLUS (Marcus Claudius), a famous Roman general, who, after the first punic war, conducted an expedition against the Gauls. Here he obtained the Spolia Opima, by killing, with his own hand, Viridomarus, the king of the Gauls. This success rendered him popular, and soon after he was entrusted to oppose Hannibal in Italy. He was the first Roman who obtained some advantage over this celebrated Cartiiaginian, and showed his countrymen that Hannibal was not invincible. The troubles wliich were raised in Sicily by the Carthaginians, at the death of Hieronymus, alarmed the Romans; and Marcellus, in bis third consulship, was sent with a powerful force against Syracuse. He attacked it by sea and land ; but his operations proved long ineffectual, and the invention and industry of Archimedes baffled all the efforts, and destroyed all the stupendous machines and military engines of the Romans during three successive years. The perseverance of Marcellus at last obtained the victory. After this conquest Marcellus was called to oppose Hannibal a second time. In this campaign he behaved with greater vigor than before ; the greatest part of die towns of the Samnites, which had revolted, were recovered by force of arms, and 3000 of the soldiers of Hannibal made prisoners. Some time after, in an engagement with the Cartiiaginians, Marcellus had the disadvantage ; but on the next day a more successful skirmish vindicated his military cliaracter and the honor of tiie Konian soldiers. Marcellus, however, was not sufficiently vigilant against the snares of his adversary. He imprudently separated himself from his camp, and was killed in an ambuscade, in the sixtieth year of his age, in his fiftli consulship, A. U. C. 544. His body was honored with a magnificent funeral by the conqueror, and his ashes were conveyed in a silver urn to his son.

Marcf-lliis, apost town of Onondaga county, New York, ten mdes west of Onondaga, and 157

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west of Albany. Population 472.'>. This is a large and valuable agricultural town, has some manufacturing establishments, and contains two considerable villages, Marcellus and Skenea-tiles.

MARCH, V. n., v. a., & 7i. s. Sax. meajic; Fr. marcher ; as Junius thinks, from Mars, the god of war ; others, from '.he Goth, wurkga, to go in a measured pace. See]M.\rk. To move in an orderly or military manner : put in military or regular movement : such movement, a soldier's journey ; a signal to march ; a deliberate or laborious walk.

lie marched in battle array with his power against Arjihaxad. Judges i. 13.

IMexirtus finding that, if nothing else, famine would at last bring him to destruction, thought bet-ter by humbleness to creep where by pride he could not inarch. Sidney.

The drums presently striking up a march, they make no longer stay, but forward ihey go directly.

KnoUes. \Vell march we on, To give obedience where tis truly owed.

Shakspeare. Doth York intend no harm to us, That thus he marched with thee arm in arm ? Id.

Our bodies every footstep that they make, March towards death, until at last they die.

Davies. These troops came to the army harassed with a long and wearisome march, and cast away their anns and garments, and fought in their shirts.

Bacon's]Var with Spain. Who is there so incurably heartless, so desperately sluggish or stupid, whom the sight of a valiant leader, marching before into the mouth of danger, will not infuse fire and vigor into? Burrow,

('yrus tnarching his army for divers days over mountains of snow, the dazzling splendor of its whiteness prejudiced the sight of very many of his soldiers. Boyle on Colors.

My father, when some daˆˆs before his death lie ordered me lo march

for Utica, Wept o'er me. Addison's Cato.

We came to the roots of the mountain, and had a very troublesome march to gain tlie top of it.

Addison ua lialii. March them again in fair array, And bid them form the happy day ; The happy day designed to wait On William's fame, and Kurope's fate. Prior, Who should command, by his Almighty nod. These chosen troops unconscious of the road, And unacquainted with the appointed end. Their marches to begin, and thither tend. Blackm. AValler was smooth, but Dryden taught to join J The varying verse, the full resounding line, >

Tiie long majestic march, and energy divine. j

Pope. In a fortnight or three weeks, added my uncle Toby, smiling, he might march — He will never 7nu)-t7/, an' please your honour, in this world, said the corporal.— He will march, said my uncle Toby, rising up from the side of the bed, with one shoe off: — An' please your honour, said the corporal, he will never march but to his grave. Sterne.

Had he continued in that station, I must have marched off to be one of the little underlings about a farm-house. Bums.

MAncn, n. a. T,at. martiits, of Mars. See below. Fr. Mars ; Teut. Mertz. The third month of the year.

March is drawn in tawny, with a fierce aspect, a helmet upon his head, to shew this month was dedicated to iVIars. I'eacham.

Mapxii, Martius. Among the Romans, March was the first month ; and in some ecclesiastical computations that order is still preserved ; particularly in reckoning the number ot years from the incarnation of our Saviour, from the 25th of March. Romulus divided the year into months ; to the first of which he gave the name of his supposed father, Mars. Ovid, however, observes, that tiie people of Italy had the month of March before Romulus's time; but that they placed it very differently, some making it the third, others the fourth, some the fifth, and others the tenth month of the year. In this month the Romans sacrificed to Anna Perenna ; began their comitia; adjudged their public farms and leases ; the mistresses served the slaves and servants at table, as the masters did in the Saturnalia; and the vestals renewed the sacred fire. This month was always under the protection of

Minerva, and consisted of thirty-one days. The ancients held this an unhappy month for marriage, fearing lest, as in some of our modern dwellings, Mars should intrude himself amongst the household gods.

March, in the military art. In the marches of the Jewish armies they made use of trumpets, to the diff'erent sounds of which they prepared them by packing up their baggage, putting themselves in readiness, and attending at the standards to wait the signal for marching. The Rabbles suppose that the Israelites marched in the same order they were placed in the camp. The Greeks never marched against their enemies till favorable omens encouraged their enterprise. An eclipse of the moon, or any untoward accident, or the intervening of what they esteemed an unlucky day, entirely prevented their march. But of all the Greeks the Lacedemonians were the most nice and scrupulous. The heavenly bodies directed all their motions ; and it was an invariable maxim with them never to march be-fore the full moon. The Greeks are particularly remarked by Homer for marching in good order and profound silence ; whereas the barbarian forces were all noise, clamor, and confusion. The marches of the Roman armies were performed with the greatest order and despatch, insomuch that their unexpected presence often damped the spirits of their enemies. The Ro-man soldiers were inured to the military pace, that is, to walk twenty miles in five hours, though they carried burdens of sixty pounds weight. Of all the mechanical parts of war, in modern times, none is more essential than that of marching. It may be justly called the key which leads to all sublime motions and manoeuvres of an army ; for they depend entirely on this point. A man can be attacked in four different ways; in the front, on both flanks, and in the rear ; but he can defend himself, and annoy the enemy, only when placed with his face towards him. Hence it follows that the general object of marching is reduced to three points only ; to march forwards, and on both sides, because it is impossible to do it for any time backwards, and by that means face the enemy wherever he pre-MAR

sents himself. The order of march of the troops must be so disposed, that each should arrive at their rendezvous, if possible, on the same day. The quarler-master general, or his deputy, with an able engineer, should reconnoitre the country, to obtain a perfect knowledge of it and the enemy, before he forms his routes. Before a march, the army generally receives several days' bread. The quarter-masters, camp color-men, and pioneers, parade according to orders, and march immediately after, commanded by the quarter-master general or his deputy. They are to clear the roads, level the ways, mak-e preparations for the march of the army. Sec. The general, for instance, beats at two o'clock, the assembly at three, and the army is to march in twenty minutes after. Upon beating the general, the village and general officers, guards, quarter and rear-guards, join their respective corps ; and the army pack up their baggage. Upon beating the assembly, the tents are to be struck, and sent, with the baggage, to the place appointed, &c. Tlie companies draw up in their several streets, and the rolls are called. At the time appointed, the drummers are to beat a march, and fifers play at the head of the line, upon which the companies march out from their several streets form battalions as they advance to the head of tli€ line, and then halt. The several battalions are formed into columns by the adjutant'general, and the order of march, &c., is given to the general officers who lead the columns. The cavalry generally march by regiments or squadrons. The heavy artillery always keep the great roads in the centre of the columns, escorted by a strong party of infantry and cavalry. The field pieces accompany the columns. Each, soldier generally marches with thirty-six round of powder and ball, and two good flmts; one of whicti is to be fixed in the cock of his firelock. Tlie routes must be formed so that no columns cross one another on the march.

MARCHAND (John Lewis), a native of Lyons, who shares with the celebrated D'Aquin the glory of having carried the art of playing on the organ to the highest perfection. When very young he went to Paris; and, happening to be in the chapel of the college of Louis XI'. when they were waiting for the organist, he offered to supply his place. His playing gave so great satisfaction, that the Jesuits kept him in the college, and supplied him with every facility for improvement. lie continued to play the organ of their chapel; and, though many advantageous places were offered liiin, he refused to accept them. lie died in Paris in 1732, aged sixty-three. lie composed two books of

Pieces for the Harpsichord, much esteemed by the con-noisseurs.

MARcirAND(Prosper), was brought up in Paris to the profession of a bookseller, and in the knowledge of books. He corresponded with several learned men, among whom was Bernard, the continuator of the Nouvelles do la Ilepnblique des Lettres, and furnished him with the literary anecdotes of Prance. Marchand, having embraced tlie Protestant religion, went to join Bernard in Holland, where, by his knowledge of books, he was so eminently distinguished, that Vol. XIII.

he was consulted from all parts of Europe. He was also one of the principal authors of the Journal Literaire, and furnished extracts for the other journals. He died at an advanced age, June 14th, 1756, and left his fortune to a society instituted at the Hague for the education of poor people. His library and MSS. were left by his will to the University of Leyden. He wrote, 1. The History of Printing; a work full of erudition and critical discussions ; Hague, 1740, 4to. Abbe Mercier, of Saint-Leger de Soissons, gave, in 1776, 4to., a supplement to this history, which is equally curious and accurate. 2. A Historical Dictionary, or Memoirs Critical and Literary; Hague, 1738, 2 vols, folio. 3. A new edition of Bayle's Dictionary ; and, 4-. Letters on the Cymbalum Mundi, &c.

Mauchand Island, an island of the South Pacific Ocean, discovered by captain Marchand, and forming one of a group called by him Revolution Islands. It was only seen at a distance, and appeared to be mountainous. Long. 142° 19' W., lat. 9° 21' S.

MARCHANTIA, in botany, a genus of the natural order of algae, and cryptogamia class of plants : male cal. peltated, and covered be-low witli monopetalous corollat ; the anthers are multifid : female cal. sessile, campanulated, and polyspermous. There are eight species, the most remarkable are,

1. M. conica, or conic mushroom merchantia, with warted leaves, grows on moist shady banks by the sides of rivulets. The leaves are broad, flat, about two inches long, dichotomous, obtusely lobed, and lie upon one another. Their surface is of a pale green glossy color, curiously tessellated with rhomboidal and hexagonal tubercles, each having a white vesicle in the centre, with a puncture on its head. The leaves have a peculiarly strong fragrant smell, and acrid aromatic taste. They are said to possess the same attenuating quality as the polymorpha, but in a higher degree. They are also recommended as

antiscorbutic.

2. M. polymorpha, or great star-handed mar-chantia, is a native of Britain, growing on the banks of rivulets, on shady moist rocks, the sides of wells, and sometimes bogs. The leaves are about three inches long; from half an inch to an inch broad, lying flat on the ground, and adhering closely to it by numerous downy radicles, which grow out of the middle and base of the leaf on the under side. These leaves are situated on their edges, their upper surface of a dark, .shining, green color, reticulated with numerous, minute, rhomboidal, or lozenge-like scales ; variously divided into obtuse lobes, and in th;-‘ middle by a blackish purple vein; their under side is paler, and their substance coriaceous, atid nearly opaque. There are three varieties, from one of whicii is produced a yellow powder, showing a most curious mechanism by the microscope. The leaves liave a strong aromatic smell, and acrid taste ; and are recommended, in a decoction of skimmed milk, for the jaundice and disorders of the liver.

MARCHE, a town of the Netherlands, in the province of Liege. Population 1400. Thirty miles south of Namur.

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MARCHERS, or Lords Marchers, were iio-blenicii who liveil on tlie inarches of Wales or Scotland, and, according to Camden, had their laws and potestalem vita;, &c., like petty kiii'^s, which are abolished by the stat. 27 lien. VIII., c. 26, and 1 Edw. VI. c. 10. In old records the lords marchers of Wales were styled Marchiones de Marchia Wallia;.

MAllCU'ES, n.s. } Sax. meajac, Fr. marcht ;

Maucu'i:r, Ji.s. 3 Goth, marcu. Borders; limits; confines: tliC marcher was thornier or president of the marches.

They of those marches Shall be a wall sufficient to defend Our inland from the pilfering borderers.

Shakspeare.

The English colonies were enforced to keep continual guards upon the borders and marchei round them. Dalies.

:\Iany of our English lords made war upon the Welshmen at their own charge ; the lands which they gained tliey held to their own use ; they were called lords imtrchers, and had royal liberties. Id.

Marches (marchia, from the German march, i. e. lines, or from the French marque, a sign), the notorious distinction between two countries or territories. Marches, in British geography, are the limits between England and Wales, or "between England and Scotland, which last are divided into west and middle marches; by 4 Hen. V. c. 7; 22 Ed. IV. c. 8; 24 Hen. VIII. c. 9. There was formerly a court called the court of the marches of Wales, where i)leas of debt or damages, not above the value of £50, were tried and determined ; and if the council of the marches held pleas for debts above tliat sum, &c., a prohibition might be awarded.

MAllCHET, or Marchetta, a pecuniary fine, anciently paid by the tenant to his lord, for liie marriage of one of the tenant's daughters. This custom 'obtained, with some difference, throughout all England and Wales, as also in Scotland ; and it still continues to obtain in some places. According to the custom of the manor of Dinover, in Caermarlhenshire, every tenant at the marriage of his daughter pays

10s. to the lord ; which, in the British language, is called gwahrmercned, i. e. maid's fee. In Scotland, and the north of England, the custom was for the lord to pass the first night with the bride of his tenant; but this abominable usage was abrogated by king Malcolm III., at the instance of his queen ; and instead thereof a mark was paid by the bridegroom to the lord ; whence it was called marchetta mulieris. See Borough, English.

MARCiriONESS, >. s. From Lat. marc/iio. The lady of a marquis.

I thought 1 wol with other maidens stond,

That ben my felawes, in our dore, and see

The marchisease. Chaucer. Cant. Tales.

The king's majesty Does purpose honour to you, no less flowing Than inarchioness of Pembroke.

Shakspeare. Henry VIII. From a private gentlewoman he made me a marchioness, and from a marchinness a queen, and now he intends to crown my innocency, with the glory of martyrdom. Bacon's Apovhthe^mi,

The lady marchioness, his wife, solicited very dUi-gently the timely preservation of her husband.

CLirenihn.

MARCH'PANE, n.s. Fr. masscpane. Corrupted from Lat. iiiassapanis. A kind of sweet bread or biscuit.

Along whose ridge such bones are met,

Like comfits round in marchpane set. Sidney.

MARCIANUS I., emperor of Constantinople, a native of Thrace, born of an obscure family. After he had for some time served in the army, as a common soldier, he was made private secretary to one of the officers of Theodosius. His address and talents raised him, and on the death of Theodosius II., A. D. 450, he was iriYesled with the imperial purple. He showed himself active and resolute ; and when Attila, the barbarous king of the Huns, demanded the annual tribute, which his cowardly predecessors had regularly paid, he firmly said, that ' he

kept his gold for his friends, but that iron was the metal which he had prepared for his enemies.' In the midst of universal popularity Marcianus died, after a reign of six years, in the sixty-ninth year of his age, as he was making preparations against the barbarians that had invaded Africa. His death was long lamented ; and his reign has been called the golden age. He married Pulcheria the sister of Theodosius. In the years of his obscurity he found a man who bad been murdered, and had the humanity to give him a private burial : from which circumstance he was accused of the homicide, imprisoned, and condemned to death ; and the sentence would have been executed had not the real murderer been discovered.

MAR'CID, arf;. Lat. rnarcidus. Lean; pin-ing; withered.

A burning colliquative fever, the softer parts being melted away, the heat continuing its adustion upon the drier and fleshy parts, changes into a marcid fever. Harvey.

He on his own fish pours the noblest oil ;

That to your marcid dying herbs assigned,

By the rank smell and taste betrays its kind.

Bryden,

MARCION, the founder of the Marcionites, a native of Pontus, and son of a bishop. He at first made profession of the monastic life, but was excommunicated by his father, who would never admit him again into the communion of the church. On this he abandoned his own country, and retired to Rome, where he began to preach. He laid down two principles, the one good, the other evil; between these he imagined an intermediate kind of deity of a mixed nature, who was the creator of this inferior world, and the god and legislator of the Jewish nation. The other nations, who worshipped a variety of gods, he supposed to be under the empire of the evil principle. These two conflicting powers exercise oppressions upon rationHl and immortal souls ; and therefore the supreme God, to deliver them from bondage, sent to the Jews a being more like unto himself, his son Jesus Christ, clothed with a certain shadowy resemblance of a body : this celestial messenger was attacked by the prince of darkness, and by the god of the Jews, but without efl'ect. Those

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who follow the directions of this celestial conductor, mortify the body by fastings and austerities, and renounce the precepts of the god of the Jews, and of the prince of darkness, shall after death ascend to the mansions of felicity and perfection. The rules which Marcion prescribed to his followers were excessively austere, expressly prohibiting wedlock, wine, flesh, and all the external comforts of life. Marcion denied the real birth, incarnation, and passion of Jesus Christ, and held them to be all apparent only. He denied the resurrection of the body; and allowed none to be baptised but those who preserved their continence ; but these might be baptised three times. In many things he followed the sentiments of Cerdon, and rejected the law and the prophets. He pretended the gospel had been corrupted by false prophets, and allowed none of the evangelists but St. Luke, whom also he altered in many places, as well as the epistles of St. Paul.

MARCIONIST/E, Marcionists, or Marci-ONiTES, a very ancient and popular sect of heretics, who, in the time of St. Epiphanius, spread over Italy, Egypt, Palestine, Syria, Arabia, Per-sia, and other countries : so named from their author IMarcion.

MARCOMANNI, an ancient people of Germany, who seem to have taken their name from their situation on the marches, east of the Upper Rhine, and north of the Danube. Cluverius allots to them the duchy of Wurtemburg, a part of the palatinate between the Rhine and the Neckar, the Brisgau, and a part of Suabia, lying between the springs of the Danube and the Bre-gentz : they afterwards removed to the country of the Boii, whom they drove more to the east, occupying what is now called Bohemia. — Strabo, Villeius.

MARCOSIANS, or Colobarsians, an ancient sect in the church, a branch of the Valentinians. St. Irenoeus speaks at large of the leader of this sect, Marcus, who was reputed a great magician. The Marcosians had a great number of apocryphal books, which they held canonical.

MA’RCOUR, ra.s. Lat. marcor. Leanness; the state of withering; waste of flesh.

Considering the exolution and languor ensuing the action of venery in some, the extenuation and mar-cuur in others, it much ahridgeth our days.

Broivne's Vulgar Errours.

A marcour is either imperfect, tending to a lesser withering, which is curable ; or perfect, that is, an entire wasting of the body, excluding all means of cure. Harvei/.

]VIARE, n.s. Sax. majie; Dan. mar; Goth. mer (while, oddly enough, Goth. 7 > iare is a horse). The female of a horse.

A pair of coursers born of heavenly breed. Whom Circe stole from her celestial sire, By substituting mares, produced on earth, Whose wombs conceived a more than mortal birth.

Drt/den.

Mare, n. s. Sax. maifie; Goth, wot; Dan. and Teut. mare. Also designated as the night mare, or incubus ; an oppression felt on the stomach in sleep. The northern nations called any female elf or phantom bv the name of

mare. Minsheu says ' because they that be troubled with this disease in the night are so pressed that they seem to have a \ hole horse laid on them; or that horses, or chiefly mares, are troubled herewith, that in the morning you shall find them all in a sweat.'

Mab, his merry queen by night. Bestrides young folks that lie upright. In elder times the mare that hight, Which plagues them out of measure.

Draijtoii. Mushrooms cau.se the incubus, or the mare in the stomach. Bacon's Natural Historic.

Mare. See Equus, and Horse. Before a mare is covered, she should be in the house about six weeks, during which time she should be well fed with good hay, and oats well sifted ; and, to vender her conception the more certain, nearly a quart of blood may be taken from each side of her neck, about five or six days before covering. Another method to bring a mare in season and make her retain is to give her, for eight days before you bring her to the horse, about two quarts of hemp seed in the morning, and as much at night ; and, if she refuses to eat it, to mingle it with a little bran or oats, or else to let her fast for a while. After covering, let her, for tiiree or four weeks have the same diet as before, and be kept clean m the stable, with her feet well pared and thin shod. If the mare has but little milk, boil as much as you can get

from her with the leaves of lavender and spike, and bathe the udder with it warm, till the knobs and knots are dissolved. She should now drink only white water, which is bran put into water ; give her also sweet mashes, and, a month after foaling, let her have a mash with some brimstone or savin in it.

MARECHAL (Peter Sylvanus), a miscellaneous French writer, born at Paris in 1750, was brought up to the bar. He was librarian to the Mazarin College, but towards the close of his life retired into the country, and died at Montrouge in 1805. His principal works are, Livre echappe au Deluge, a collection of Psalms, which was the pretext of his dismissal from his office of librarian to the Mazarin College ; Pro-phetie d'Arlamek ; Eragmens d'un Poeme IVIoral sur Dieu, ou la Nouvelle Lucrece; Tombeau de J. J. Rousseau ; De Bergeries ; Le Temple de ITIymen ; Bibliotheque des Amans ; Le Livre de tous les Ages ; L'Age d'Or ; Paris, et la Province : ou Choix des plus beaux Monumens d'Architecture en France ; Le Pantheon, ou les Figures de la Fable avec leurs llistoires; Almanac des IlonnCtes Gens, a publication for which he was imprisoned ; Dictionnaire d'A-mour ; Tableau de la Fable ; Costumes civils actuels de tous les Peuplcs; iiccueil des Poetes moralistes Franˆ-ais ; Catechisme du Cure Mes-lier ; Dictionnaire des Atiioes ; Voyage de Pythagore ; Decades du Cultivateur; Sec.

MAREMMA La, a long tract of country in Italy, extending from Leghorn on the north along the south-west coast as far as Terracina on the Neapolitan frontier. It is marshy, and much affected with the malaria.

MARENGO, a village now belonging to the Sardinian states, in the Milanese, on the Bor—

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mida. It stands at tlie entrance of a great plain, on which was fought, on the 14lh of June 1800, the important battle of Marengo, between the French under the command of Buonajiarte and the Auslrians under general Melus. Tiie battle was contested until noon, when the I'reach began to retreat, and continued till six P. M. At this hour they were joined by Dessaix, when they rallie/i, and drove tlie Austrians from their position with great slaughter. Dessa;x was mortally wounded, but an armistice followed, which terminated in the peace of Luneville. Population 2200. Five miles south-east of Alessandria, and fifty east by south of Turin.

MARFNNFS, a trading town of France, in the department of the Lower Charente, at the mouth of the Seudre. It carries on a brisk traffic in brandy, wine, and salt. Population 4700. Twenty-five miles south of Rochelle.

MARFXriTS, a lake of Egypt, to the south of Alexandria, running parallel to the Mediterranean, on a narrow strip of land near which that city stands. On the east it is separated by a neck of land equally narrow from the lake of Aboukir ; and through this space flows the canal of Alexandria, which the British army, during the siege of that city, united with the lake so as to cause tlie waters of the one to flow into the otlier, and prevent them from reaching Alexandria. This cut was open at a recent period.

MAR'ESCTIAL, n.s. Fr. mareschal. Derived by Junius from mare, the female of a horse. But see Marshal. A chief commander of an army.

O William, may thy arms advance, That he may lose Dinant next year,

And so be mareschal of France. Prior,

MARGARET, countess of Richmond and Derby, the learned and pious mother of Henry VII., was born at Bletsoe, in Bedfordshire, in 1441 ; and was the sole heiress of John Beaufort duke of Somerset, grandson to John of Gaunt. Her mother was the heiress of lord Beauchamp of Powick. While very young she was solicited by tiie king for his half-brother Edmund earl of Richmond, to whom she gave her hand. Henry VII. was the sole fruit of this marriage, his father dying when he was but fifteen weeks old. Her second husband was Sir Henry Stafford, Knight, second son to the duke of Buckingham, by whom she had no

issue Soon after his death, in 1482, she married a third husband, Thomas lord Stanley, who was created earl of Derby by her son. He died in 1504 without issue, being then high constable of England. She died at Westminster in June 1509, aged sixty-nine, and was buried in Henry VII.‘s chapel; on the south side of which was erected to her memory an altar tomb of black marble, with her statue of brass. Bishop Fisher, her confessor, says, ‘ she possessed almost all things that were commendable in a woman.’ She understood the French language perfectly, and had some knowledge of the I-atin. She was devout even to austerity, in humility romantic, and profuse in the encouragement of learning. She wrote, 1. The Mirroure of Golde for the sinful Soule ; translated from the French, London, 4to., with cuts on vellum. 2. Translation of tlie

fourth book of Dr. Gerson’s Imitation of our Saviour, 1504. 3. A Letter to the King, in Howard’s collection. She also made the orders for great estates of ladies and noble women, for their precedence, and wearing of barbes at funerals, over the chin and under tlie same.

Margaret, duchess of Newcastle, a lady famous for her voluminous writings, was born about the end of king James I.‘s reign. She was the youngest sister of lord Lucas, and married the duke of »Newcastle abroad, in 1‘645. On their return after the Restoration she wrote the life of her husband; with a great number of plays, poems, &c., amounting to about 12 vols, folio. She died in 1673.

Margaret of Anjou, daughter of Regnier of Anjou, king of Naples, and wife of Henry VL, king of England; an ambitious, enterprising, courageous woman. Intrepid in the field, slie signalised herself by heading her troops in several battles against the house of York ; and if she had not been the authoress of her husband’s misfortunes, by putting to death the duke of Gloucester his uncle, her name would have been immortalised for the fortitude, activity, and po-licy with which she supported the rights of her husband and son, till the fatal defeat of Tewks-bury ; which put an end to all her enterprises. She died at Anjou in 1482. See England-.

Margaret (St.), a celebrated virgin, who is said to have suff’ered martyrdom at Antioch, A. D, 275. The ancient martyrologists make no mention of her name, and she did not become famous till the eleventh century. There is no more foundation for what is said concerning her relics and girdles, than for the stories which are told of her life. A festival, however, is still held in honor of her memory on the 20th of

July. The orientals pay reverence to her by the name of Saint Pelagia, or Saint Marina, and the western church by that of Saint Geruma, or Saint Margaret.

MARGARITA, an island and government of Colombia,separate from that of Cumana, on whose shores it lies. It is dependant on Caraccas, and lies in N. lat. 10° 56', and in 64° and 65' W. long. It is sixteen marine leagues in its greatest length ; six in its greatest breadth ; in some parts only two or three leagues broad; and its surface is thirty-one square leagues.

It was first discovered by Columbus in 1498. The pearls found on the coasts of this and the neighbouring isle of Cubagua soon rendered it famous ; and the fishery was carried on at the expense of vast numbers of Indians, who lost their lives here. The Dutch at last burnt the town and fort of this island.

The island is divided into two parts, which communicate with each other by a natural causeway, that is scarcely more than from eighty to 100 paces broad, and in some parts from ten to twelve feet only above the level of the sea. The mountain of Macanon, the most elevated part of the island, is above 2000 feet high according to Humboldt, who measured if trigonometrically, and is composed of micaceous schistus. It is an important point for navigators to make who go from Eurojje, or from North or South America,

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to Cumana, Barcelona, and La Guayra, as they are obliged to sail between Margarita and the islet of Coche, to avoid running the risk of being carried to leeward by the currents.

The possession of Margarita is an object of sonae consequence: it forms the channel through which all vessels, coming from Europe or wind-ward to Cumana, Barcelona, and La Guayra, must pass; a channel not navigable in its whole breadth ; the rocky island Coche, between it and the continent, leaving only a narrow pass of two leagues, but which is seldom dangerous, owing to the general calmness that reigns in this part of the Caribbean Sea. It might become, under a system of free commerce, the general entrepot of Cumana, Barcelona, Caraccas, Guayra, and all the cities of the interior.

Margarita has three ports. The most important is that of Pampatar, situate on the south-east coast. It is a large and fine basin, in which vessels are defended from winds and tempests. Its entrance is protected on one side by a fortress, and on the other by batteries. These are the principal fortifications of the island. Pueblo de la IMar another port, or, to speak more correctly, an open roadstead, is a place of little trade, and is situate at a league and a half westward of Pampatar. Pueblo del Norte is, as its name indicates, a village situate in the northern part of the island. A coral reef renders the entrance of this port difficult to mariners who are not accustomed to it Two batteries defend its entrance against privateers. Near this port is a village inhabited only by fishermen.

Along the coast of Margarita the land is in general rocky and steep; but the interior is more fertile, and covered with groves. Its climate though very hot is wholesome ; the greatest inconvenience experienced by the inhabitants being a want of good fresh water.

Asumpcion is the capital and the residence of the governor. It has two parish churches, and a convent of Recollets. The valleys of San Juan, Santa Margarita, and Los Robles, have each a village which bears their name.

Margarita had, in 1807, a population of 8000 whites, 5500 mixed blood, 1800 Indians, and about 900 Negroes; making a total of 16,200 persons. The island has only three rivulets, which, however, are

sufficiently large to turn mills. Tlieir waters are limpid. That of the little river which runs by tlie town of Asumpcion, and which in some places passes over a bed of amphibolic schistus, contains s\Uphureted iron, magnesia, &c. The inhabitants prefer drinking the turbid water from ponds.

The agriculture scarcely suffices for the maintenance of its inhabitants. Maize, cassava, and bananas, are their principal resources. The bananas are excellent, but very small, owing to the aridity of the soil and dryness of the climate. The inhabitants cultivate, in small proportions, and for their own consumption only, all the productions of the Antilles — the sugar-cane, coffee and cocoa trees. They rear a great many goals and sheep, which, tiiough loan, give delicious milk, owing to the aromatic herbs on which they feed. They have all kinds of fowls at u very trifling price. Living is said to be still

cheaper at Margarita than at Cumana or Caraccas.

Fowls, turkeys, and all kmds of poultry, are exported to the continent by the lower classes ; and the island is celebrated for its beautiful parrots and other curious birds. They fabricate cotton stockings, and hammocks of a very superior quality.

The fisiieries produce the principal object of trade here : they are placed at the islet of Coche, which belongs to government, and the product is said to be immense. Two merchants of Mar garita had the privilege of this fishery in 1807; and they carried it on at Coche. The men who were employed in it were Indians of Margarita. It was not freely, but by order of government, that those natives worked in the fishery at the scanty pay of a real (fivepence) per day, and bread of maize or cassava. They ate also as much fresh or salt fish as they chose. More than 300 Indians of both sexes and all ages were employed there in 1807. The salt works of Margarita are also important.

MAR'GARITE, n. s. Fr. marguerite ; Latin murgarita. A pearl.

The kyngdom of hevenes is lyk to a merchaunt that seehith gode margaritis, but whanne he hath founde so precious margarite, he wente and solde all thingis that he hadde and bought it. Wiclif. Matt. 13.

Silver is the second metal, and signifies purity ; among the planets it holdetli with luna, among precious stones with the margarite or pearl.

Peacham on Blazoning.

MARGARITI, the ancient Gytana?, a town of European Turkey, in Albania, situated about two miles from the sea coast. Population 6000.

MARGATE, a market town and sea-bathing place on the coast of Kent, in the parish of St. John in the liberties of Dover and Isle of Thanet, is sevent^'-two miles east from London. The town is seated on the ascent of two hills ; that part of it which was originally the little fishing town, called St. John, being now the High Street. There was another detached village, lying in a valley called Lucas-Dane, but it is now also attached to the town by some handsome buildings. The principal improvements of Margate have taken place since 17B7, when an act of parliament was obtained to rebuild the pier, a theatre was constructed, and the town underwent considerable improvements. After tiiis, from the increase of company, new buildings became necessary, and almost a new town has sprung up to the southward of the old one. The pier having suff'ered greatly by storm in January, 1808, which swept away tiie bathing rooms, and part of the High Street, a sum of £5000 was granted by parliament for repairing the loss: the inhabitants, in 1810 and 1812, also obtained leave of [)arliament to increase the droits and pierage, in order to pay the interest of the sums borrowed for these improvements, and a new pier has since been completed at the expense of .t'90,000. On it there is a handsome raised and enclosed walk, which forms the fashionable promenade, for which the conn)uny j)ay id. per day. Steam packets arc so largely rin])loyed in sailing daily to and lioni London ; that the sailing vessels are superseded. Tiiis easy

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and expeditious conveyance has much contributed to the support of the town : tlie packets on Saturday frequently bringing down 1000 persons. There are fourteen marble warm baths tilled from the sea, which may be brought to any temperature. The church of St. John stands about half a mile from the lower end of the town, and is a targe building of flint, rough cast, consisting of three long low aisles. At the west end of the north aisle is a square tower, with a low spire, containing six bells. It has many monuments of antiquity, with a good organ. Here are also meeting-houses for the Baptists and Wcsleyans. Among the public buildings is Cecil Square, erected in 1769, consisting of very spacious houses, and commodious shops ; Ilawley Square m a contiguous field; the Union Crescent, opposite Cecil Square, is perhaps the most elegant among the new buildings. Northward of the town, on a spot called the Fort, which had formerly a battery, Neptune Square has been erected. On Hooper's Hill, opposite, are also various good buildings. The assembly room, belonging to Howe's London Royal Hotel, stands at the south corner of Cecil Square, and is eighty-seven feet long, and forty-three broad ; it is adorned with busts of his late majesty, and the late duke of Cumberland; attached are corresponding tea-rooms, card-rooms, billiard-rooms, &c., and the house is one of the best conducted and largest taverns in the kingdom. The York Hotel, on the Marine Parade, is another excellent tavern. A general sea-bathing infirmary was opened in 1796, at Westbrook, under the patronage of the king, and projected by Dr. Lettsom. Persons are admitted during the season, after having been examined by the medical board, at the court-room of the London workhouse, and remain eight weeks, adults being provided with board at 5s. per week, and cliildren at 2s. 6d. The libraries are in the first style of elegance. That situated at the north-west corner of Hawley Square is a new and fine structure ; a second is on the north-east side of Cecil Square, and the third at the lower end of High Street, commanding a most delightful prospect of the sea. Attached to the Prospect Hotel, on Hooper's Hill, is a large bowling-green, fitted jp for tea-parties. Draper's Hospital, standing on a rising ground, erected in 1709, by a quaker, has nine dwellings, and the generality of the pensioners are of that community. Li tlie middle of tlie building is a meeting-liouse. About a mile and a half from the town stands Dandelion, where are the renjains of an ancient fortification, of great strength. Between tiiis place and Draper's Hospital is the mansion of Salmstone, formerly belonging to Christ

Church, Canterbury; the lessee of which is bound to pay several charities, amonˆjst others a dish of peas to every poor person wlio claims them between the 3d of May and 24tii of .lune. The mayor of Dover appoints a deputy for Margate, but he is invested with no other power than that of constable. This appointment has been often opposed by the inhabitants. Market on Wednesday and Saturday, which is well supplied with all sorts of provisions. An act was passed in May, 1824, for lighting the town with

gas. To the ordinary number of inhabitants, about 8000, there are added in the season about 40,000 visitors.

MARGE, n.s. ˆ L,.xt. margo. A border; Mar'cent, # brink; edge: marginal is

Ma'rgin, % written in or pertaining to

Mar'gikal, adj. i a margin: marginated, hav-Mah'ginated. ˆ ing a margin.

He drew his flaming sword, and struck At him so fiercely, that the upper marge Of his sevenfold shield away it took.

Faerie Queene. We cannot better interpret the meaning of these words than pope Leo himself expoundeth them, whose speech concerning oar Lord's ascension may serve instead of a marginal gloss. Hooker.

As much love in rhlme. As would bo crammed up in a sheet of paper Writ on both sides the leaf, marge at and all.

Shali$peare. An airy crowd came rushing where he stood, fVhich filled the maryin of the fatal flood.

Dry den. All the advantage to be gathered from it is only from the evenness of its margin ; the purpose will bo as fully answered by keeping that under only.

Sharp's Surgery. Reconcile those two places, which both you and the margins of our bibles acknowledge to be parallel.

Hammond. He knows in law, nor text, nor margent.

Swift. What remarks you find worthy of your riper ob. servation note with a marginal star, as being worthy of your second year's review.

Watts.

MAR'GRAVE, n. s. Teut. march and graf, a title of sovereignty in Germany ; in its original import, keeper of the marches or borders.

The reigning margrave of this principality (Ans-pach) has a seat and a voice in tlie council of the princes of the empire, and is also co-summonary prince of the circle of Franconia. Dr. A. Rees.

MARGUENAT (Anna Theresa de), marchioness of Courcelles, an elegant moral writer, was the only daughter of Stephen Marguenat lord of Courcelles. In 1666 she married Henry de Lambert, lieutenant-general of the army; and afterwards remained a widow with a son and a daughter, whom she educated with great care. Her house was a kind of academy, to which persons of distinguished aliilities resorted She died in Paris in 1733, asjed eighty-six. Her works, which are written with much taste, judgment, and delicacy, are printed in 2 vols. The advices of a Mother to her Son and Daughter are particularly esteemed.

MARGUERITE, a small island of the Mediterranean belonging to France, and included in the department of Var. It is opposite to Antibes, and has a strong castle, where the * man ill the iron mask' was for some time confined. Long. 7° 3' E., lat. 43° 31' N.

MARIAMNE, the daughter of Alexandra, grand-daughter of Hyrcanus II., nnd the beloved wife of Herod the Great; who, however, murdered her and most of her relations. See

IlEnOD.

MARIAN, or Ladrone Islands. See La—

nRONE.

MARIANA (John), a learned Spanish historian, born atTalavera, in the diocese of Toledo.

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He entered among the Jesuits in 1554, at seventeen years of atˆe ; and became one of the most learned men of his time. lie was a great divine, and profoundly versed in civil and ecclesiastical history. He taught in Rome, Sicily, Paris, and in Spain ; and died at Toledo in 1624. His principal works are, 1. A History of Spain in thirty books ; which he wrote first in Latin, and afterwards in Spanish. 2. Scholia, or sI)ort notes on the Bible. 3. A Treatise on tiie changes the specie has undergone in Spain ; for which he was imprisoned by the Spanish minister. 4. A Treatise de rege et regis instiiutione, which was condemned by the parliament of Paris, to be burnt by the hangman, for his asserting that it is lawful to murder tyrants. 5. A work on the faults of the government of the society of Jesuits, which has been translated into Spanish, Latin, Italian, French, &c.

MARIA Santa, a cape of the western extremity of the island of St. Domingo. — 2. A cape which forms the south point of entrance into the La Plata, on the coast of Brasil. — 3. An island near the coast of Brasil, in the province of Rio Janeiro, between the city of this name and Punta Negro. — 4. An island on the coast of Chili, at the mouth of the entrance into Conception Bay. It is about four miles in length ; and there are on it many wild horses and hogs. Lat. 37” 10’ S.

Makia’s Island, an island of the southern ocean, lying off the east coast of Van Diemen’s Land. It is penetrated by two deep bays, on opposite sides ; that on the east side, called Oyster Bay, being both safe and capacious. Part of tlie east coast presents lofty granitic walls, rising from 300 to 400 feet perpendicularly, and penetrated by deep caverns, into which the sea rolls witli great noise. On the opposite side the shore is flat, and here the navigator finds an immense quantity of sea-weed, which grows from the bottom of the sea, to the height of 250 or 300 feet, and covers the surface. Seals and zoophytes abound on the shore. The inhabitants, who wear only a slight covering of skin thrown over their shoulders, are of a lively but treacherous disposition. This island was first discovered by Tasman in 1642. Long. 14.3° 29’ E., lat. 42° 42’ S.

Maria’s Isi-and is also the name of three considerable islands of the North Pacific Ocean. The largest and most northern is thirteen miles long, its high part toward the south, whence it gradually descends, and terminates in a long low point. A small low detached islet, and a

remarkably steep white cliffy rock, lie off this y.oint, whose shores are also composed, particularly on its south-west side, of steep white rocky clifl's: the same substance seemed to be its principal component part. The next in size. Prince George's island, is about twenty-four miles ; and the third, or southernmost, about nine miles in circuit. Between Prince George's and the north-westernmost island, is a passage about six miles wide, with soundings of from twenty to forty fathoms, sandy bottom. These islands were visited by A'ancnuver in a boat, who found the soil on I'rincc fieorge's Island to be of a sandv nature, on wliich the most valuable production

was lignum vitae ; besides which was an almost impenetrable thicket, and some plants of the orange and lemon tribe, the whole growing close to the water side. Some of the lignum vitas which was cut close to the beach, and brought on board, worked up full eight inches diameter at heart; was very ponderous, and of a close black grain. Many birds were seen ; and turtle tracks, but no quadrupeds. A variety of fish, common to the tropical regions, were also in great numbers about the shores, particularly some very daring sharks, but no traces of human beings. Long, of anchoring place 253° 54' E., lat. 21° 28' N.

Marias las Tres, on the shore of Guadalax-ara, Mexico. The three Maria Islands lie north of St. Bias. The middle, named St. George, is nine miles long, and has good anchorage on the east ; St. John's, the northernmost, u thirteen miles long. These islands are elevated, covered with wood, particularly lignum vita;. Between them and the main are some small islands named Isabellas. The south cape of the eastern-most of the Tres Marias is in lat. 21° 16' N., long. 106° 17' W.

■ MARIENBERG, a mining town of Saxony. Silver, iron, vitriol, and tin, are still wrought, though considerably declined. lis situation is at the height of nearly 2000 feet. Population 2600: thirty-five miles south-west of Dresden.

MARIENBURG, a town of West Prussia, in the government of Dantzic, on the river Nogat. It is surrounded by a rampart; but on the outside are two suburbs and its castle, formerly the residence of the grand master of the Teutonic knights. Here are some small manufactures of woollen, cotton, linen, and leather, and extensive breweries and distilleries. There is also a brisk traffic in corn, timber, fish, quills, and hogs' bristles. In one of the suburbs are the Muhlengraben, or town mills, on the principle of the old German hydraulics. It contains 7200 inhabitants, Lutherans, and Catholics : twenty-six miles S. S. E. of

Dantzic.

MARIENWERDER, one of the two modern governments of West Prussia, consists of a long tract of country, lying to the north of Poland, south of Pomerania, and the government of Dantzic. Its area is 6880 square miles, and population 302,000. It is divided into the circles of

Marienwerder, Michelau, Deutsche Kron, Calm, Konitz, Neuenberg,

Thorn, Kammin, Christburg.

See Prussia, West.

Mauienwerder, a neat town of West Prussia, he capital of a government and circle, stands on an eminence on the Nogat, about three miles from the Vistula. It has four suburbs, and contains 5100 inhabitants. It has some manufactures of woollens, hats, soap, and leather, but its breweries and distilleries are more considerable : forty-three miles south of Dantzic, and ninety south-west of Konigsberg.

IMARIENZELL, a town of the Austrian States, in Upper Styria, near the borders of Austria Proper. It is insignificant in size, but of some note as the resort of pilgrims. The crowds who come to a chape I here are immense.

being said to amount to 80,000 persons annually, and the offerings made were formerly of great value. Joseph II. suppressed the iustitution,\nd seized the property : still the number of pilgrims who resort hither is great.

MAllIGALANTE, an island of the West Indies, one of the least of the Caribbees, twelve miles south of Guadaloupe. The soil, produce, and climate, are much the same as the other Caribbees. Colup-‘bus discovered it in his second American voyage in 1483, and called it by the name of his ship, Maria Galanta, or Gallant Mary. It is about six

leagues long, and between three and four broad. 'iewed at a distance, from on board a ship, it appears like a floating island, because, as it is for the most part flat, the trees seem to swim ; but a nearer])rospect shows it to be intersected by some rising grounds, whicli give a fine variety to the landscape. The French settled here in 1647; and it was taken by the English in 1691, but the French soon got possession of it again. It was retaken by the British in 1759, but restored at the peace of 1763. Once more taken by us in the late war, it was restored to France at the general peace. It was thought, on its first discovery, to want water; but a running stream has been discovered, on the banks of which are some wealthy planters, and excellent plantations of sugar, indigo, and tobacco. A litde village in a small bay is the capital of the island, and here the commandant resides. The whole island is very capable of improvement; the soil being almost all equally good, and the land risinˆ nowhere too high. The coast affords many little bays, and safe anchorage and shelter to ships. Long. 61° 15’ W., lat. 16° 32’ N. The official value of the imports in 1810 was £7832.

MAR’IGOLD, 71. s. Mary and gold. Latin cu/t/ia. A yellow flower, devoted, I suppose, says Dr. Johnson, to the virgin.

Your circle will teach you to draw truly all sphe-ncal bodies. The most of flowers : as, the rose and ”’”’■‘i’”’ˆ- Peacham.

ˆ Ihe marigohl, whose courtier’s face Echoes the sun, and doth unlace Her at his rise. Cleaveland.

fair K the manyold, for pottage meet. Gaq.

The marigold hath a radiated discous flower; “the petals of them are, for the most part, crenated’ the seeds crooked and rough ; those which are uppermost long, and those within short ; the leaves are lono-, intire, and for the most part succulent. Miller?’

Marigold. See Calendula. Marigold, African. See Tagetes. Marigold, Corn. See Chrysanthemum. MAR’INATE, v. a. Fr. mariner. To salt fish, and then preserve them in oil or vinegar. Why am I styled a cook, if I’m so loath To marinate my fish, or season broth ?

King’s Cook. MARINE’, adj. & n.s. J Lat. niurinus ; Fr. Mar’iner, 71. s. i 7iiarin, 7narine. Of or

belonging to the sea; a sea soldier: mariner is a seaman or soldier.

The merry mariwrs unto his word Soon hearKened, and her painted boat straightway I’lirned to the shore. Faerie Qneme.

‘J he king was desirous that the ordinances of Kng.

land and France, touching marine affairs, mi < Tht bo reduced into one form. Haylard.

I he stubbornest Israelite and the most “godless manner could call upon God in his trouble.

AV r ■ • BP-Hall.

\ e ott deceive ourselves, as did that mariner who, mistaking them for precious stones, brought home his ship fraught with common pebbles from the Indies.

Glanville, His busy mariners he hates, His shattered sails with rigging to restore.

ˆr 1 ˆ. Dry den.

iNo longer Circe could her flame disguise. But to the suppliant God marine replies. Gaith. Nearchus who commanded Alexander’s fleet and Onesicrates his intendant-general of marine, have both left relations of the state of the Indies at that

.,., Arhuihnot.

What mariner is not afraid. To venture in a ship decayed ? Swift.

Marine is a general name for the navy of a kingdom or state ; the whole economy of naval affairs; and whatever respects the building, rigging, arming, equipping, navigating, and fighting ships. It comprehends also the government of naval armaments, and the state of all the persons employed therein, whether civd or military. The history of the marine affairs of any one state is a very comprehensive subject See Navy. “ˆ

Marine Acid, or Muriatic Acid. See Muriatic Acid.

Marine Chair, a machine invented by Mr. Irwin, for viewing the satellites of Jupiter at sea, and of course determining the longitude by their eclipses. An account of it is giv’en in the Journal Estraiiger for March 1760. ˆAn account of its accuracy was published in 1761 by M. de risie, astronomer in! the Imperial academy of Petersburg : but, notwithstanding the encomiums bestowed upon it by this gentleman,

it has never come into general use.

Marine Discipline is the training up soldiers for sea-service, in such exercises as the various positions of the firelock and body, and teaching them every manoeuvre that can be performed on board ships of war at sea.

Marine Forces, or Marines, a body of soldiers raised for the sea-service, and trained to fight either in a naval engagement, or in an action a-shore. The great service of this useful corps was manifested frequently in the course of the German war, particularly at the siege of Bellisle, where they acquired a great character, although lately raised, and hardly exercised in military discipline.

The first authentic account of a regiment of this description appears in the Army List of 1 684, and from the return of the general review on Putney Heath, on the 1st of October in that year: but neither the exact era of its establishment, or that of the other maritime forces, is clearly ascertained. The return above-mentioned runs thus : ‘ The lord high admiral of England, his royal highness the duke of York and Albany’s Maritime regiment of foot, commanded by the Hon. Sir Charles Littleton, called also the Admiral’s Regiment.’ This regiment consisted of twelve companies, without any grenadiers; the oflicers of which were, one colonel, one lieutenant-

colonel, one major, twelve captains, twelve lieu-tenaats, twelve ensigns, one adjutant, one quarter-master, one surgeon, and one surgeon’s-mate.

They had yellow coats lined with red, and their colors were, a red cross with rays of the sun issuing from each of its angles. They stood the third in seniority in the line of that day ; and it may be presumed from its subsequent reduction, that a step was obtained in it by the 4th, then the regiment of Holland, commanded by John, the second lord Mulgrave, and now called the Old Buffs.

Between 1687 and 1698 there were several maritime regiments raised for the purposes, and under the regulations, before mentioned. They were colonels Mordaunt, Colt, Seymour, and Brudenell's ; also Sir Cloudesley Shovel's, my lord Torrington's, and the marquis of Carmarthen's ; all of which were disbanded during the currency of 1697 and 1698.

In the early part of 1756 the French had collected immense forces upon their coasts, with the avowed object of invading England ; consequently measures of precaution and defence were adopted by a regular and annual increase of seamen and marines. The following are tlie numbers of marine corps voted by parliament for the service, from 1756 to 1763, both years inclusive: —

Year. Marine Corps. For 1756 9,138

1757 11,419

1758 14,845

1759 14,845

1760 18,355

1762 19,061

1763 4,287

The naval establishment for the year 1762 consisted of 70,000 seamen, including the 19,061, or thirty-six companies of marine corps.

The merits of the latter became conspicuous by the most zealous and spirited services, on either element; but it was not until the year 1771 that the corps of marines felt the fostering influence of a steady patron in earl Sandwich, then at the head of the admiralty. From him originated the colonels commandant of divisions, and many of those interior regulations, which, for their economy and wisdom, do honor to the establishment. His lordship, by a memorial to the throne, soon after his accession to power, obtained an order in council to enlarge the number of field officers. By a train of considerate attentions the corps was placed on a respectable footing ; its discipline be-came much improved; and his lordship soon saw those objects of his tender

care surpassed by no troops in the world, for subordination, intrepidity, and cool valor.

From the era of 1764 may be dated the Altai American revolution

The total number of marine corps voted by parliament for the service, from 1778 to 1782, both years inclusive, were : —

Year. Marine Corps. For 1778 11,000

1779 17,389

1780 18,779

17B1 20,317

1782 21,305

At the close of ttie last year a general peace was ratified between America and Great Britain, and all her contending powers.

Towards the close of the year 1792 a small addition was granted to the corps of marines, and a much greater took place the following year, in consequence of the intermeddling policy of France, and the war which succeeded it.

The narrow views that had influenced so great a reduction, at the peace of 1782, were bitterly felt at the commencement of hostilities. It is to the faithful marine soldier, wlio knows not the meaning of desertion, that the nation, under such sudden emergencies, is often obliged to have recourse in equipping, as well as manning her fleets ; for it is not in human nature to place confidence in that man who has been constrained to serve, and who recognises neither a voluntary will nor a sacred obligation to discharge his allotted duties.

Several additional companies were now deemed absolutely necessary to the marine corps. The following are the numbers voted by parliament for the service, from 1794 to 1801, both years inclusive : —

Marine Corps.

12,115

15,000

18,000

20,000

20,000

30,000

Year. For 1794

1795 1796 1798 1800 1801

The latter num.ber was kept up till INIarch

1802. On the 29th of April following, liis majesty, in order to mark his approbation of the very meritorious and loyal conduct of the marine corps, during the late war, was graciously pleased to direct that, in future, the corps shall be styled ‘The Iloyal Marines.’

Besides the many useful reforms adopted by earl St. 'incent, for the internal economy of the navy, his lordship turned his attention to tiie royal marine corps. On the 18th of March,

1803, a new code of instructions was publisiied for their regulation when on shore, which vests in the four senior captains of each division the management and superintendence of many concerns that had formerly been placed under separate departments.

In the early part of 1803 we again took up arms in defence of our dearest birthrights; wnen the lords of the admiralty judged it necessary to augment the royal marine corps to the war establishment; it having been reduced, during tlie short peace of 1802, to 100 companies, eacii containing 100 men, exclusive of officers.

In August, 1804, three companies of artillery (being one to each

division) were ordered to be formed for the purpose of serving afloat, with additional pay for officers and men. The officers belonging to this small corps wore not seijarateil from the general marine list, iiciiiier were tliey promoted, exce])t in tlieir turn with the others. On attaining the rank of full major, they lost their appointment in tiio artillery.

By a warrant from the admiralty, dated the 15th of August 1805, anotherdivision was established, called the 4th, or Woolwich division,

consisting of forty-one companies, including one of artillery. It had the same number of field officers, pay captains, &c., as the other divisions.

Few alterations of material consequence took place from tiiat period to the end of the war, except that, during the administration of lord IMulgrave, four additional colonel commandants on second were appointed, one to each division, making the whole number of second commandants eight: and forage was allowed for one tiorse for lieutenant-colonels, majors, and adjutants.

The entire establishment of royal marines in January 1813 was 32,668; including ten boys to each company, or 1830.

The Complement of Royal Marines in Each Rate.

Rates.

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170

First Rate, 100 guns if a flag …

1

2

4

4

2

156

Do. without a flag .

—

3

4

4

2

156

170

Second Rate, 98

—

3

3

3

2

138 150|

Tiiird Rate, 80 . .

—

2

3

3

2

130

141

Ditto, 74 … .

1|-

2

3

2

115

J25

Ditto, 64 … .

—

2

2

2

82

90

Fourth Ratp, .iO . .

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2

2

2

52

60

Ditto, 44 … .

0

1

2

2

47

54

Fifth Rate, 38 . .

0

1

2

2

41

48

Ditto, 32 …

0

0

38

42

Sixth Rate, 28 . .

0

0

27

31

Ditto, 20 …

0

0

26

30

Sloops … .

0

0

0

0

18

20

Gun-brigs …

0

0

0

0

13

15

Ma uiNE Insctrance. The laws relating to ma-rine insurance comprise a very important branch of the commercial code, and especially of that part which respects foreign commerce. Marine transactions constitute the most material department of insurance, being, indeed, almost co-ex- tensive with the vast trade carried on by the shipping of this country, either along the coasts of Great Britain or to parts beyond the sea. The object of these insurances, by dividing the risk, is to prevent the ruinous loss which would fall upon the individual owners of the property insured. Theefl'ect is highly beneficial to trade in general; for by judicious management those fluctuations in the property of individuals are avoided which must necessarily take place, if each incurred the risk of the whole adventure; and, though the profit is diminished of a successful voyage, the larger portion is absolutely secured ; and, in case of loss, the amount, being divided amongst a considerable number of persons, falls with comparative lightness on each. By this means, also, commerce is greatly extended, since, by protecting the capital embarked, the trader is encouraged to enlarge and continue his ship-ments.

The persons who engage to pay the loss are called the underwriters or insurers. Those whose

property is secured are termed the assured or insured. The contract by which the insurance is made is called the policy. The other terras used in these transactions will be explained successively under their proper heads in the course of the present article.

The law relating to the parties who may enter into these contracts has of late been verv materially altered. As it stood prior to the year 1824, namely, by the 6 Geo. I. c. 18, charters were granted to the Royal Exchange Insurance Company, and the London Assurance Company; and the statute prohibited any other society or partnership from

underwriting policies of insurance. Consequently insurances were eflfected either with these companies or with individual underwriters, and all others were void. Even a company of ship owners, engaging to insure each others ships, was held to be illegal. The eflect of this statute vvas to grant a monopoly in marine insurances to these companies, the policy, as well as justice of which, like all other monopolies, is very questionable. The evil, however, was much diminished, and a considerable degree of competition introduced, by the extensive business transacted at Lloyd's Coffee House, by individual underwriters, to whom the insurance brokers and other connexions introduced a vast mass of insurances.

Now by the 5 Geo. IV. c. 1 14, the previous statute is so far repealed as to allow any other corporation, or any persons in partnership, to grant policies of insurance on ships or goods at sea, and also to make contracts of bottomry.

The subjects f)f marine insurance are usually ships, cargoes, freight, and sometimes commissions. Bottomry and respondentia, as well as expected profits and bounties msiy also be insured ; but they must be specifically named in the policy.

Property of some kinds is not insurable, fcr the particulars of which see sect. V.

In proceeding to state the principal details of the subject, we shall consider the nature of the contract of insurance — the losses total and partial for which the insurers are liable — the procedure to enforce payment — and, lastly, insurances which are void and illegal.

Sect. I. — Or the Nati re or the Contract or Insurance.

1 . Of the 'poUcy, its comlifions, and construction.— it is necessary, by 28 Geo. III. c. 5G, that the name or firui of one or more of the oarties interested in the insurance should be inserted in the policy, or the name or firm of the consignor or consignee, or of the person receiving the order for or effecting the insurance; or of tlie])erson giving directions to effect the same. Policies without some one of these requisites are void.

The names of the ship and master must also be stated, unless the insurance be general : that is, that the goods may be shipped on board of 'any ship or ships,' which should accordingly be so expressed in the contract. The description of the property insured must be specified, whether on the ship, goods, or merchandise. A policy on goods does

not include goods lashed on deck, the captain's clothes, or the ship's provisions.

But a policy on the ship and furniture includes the provisions for the use of the crew. It is also necessary to state the name of the place at which the goods are to be laden, and to which they are bound, and the ports or places at which the vessel may touch or stay. Next, it is essential to specify the time when the risk commences and when it is to end. Again, the various perils against which the underwriter insures are to be enumerated, namely, perils of the sea, fire, enemies, &c., and all other perils. In tlie next place, the premium, or consideration for the risk, is expressed to be received at the time of underwriting, though, according to the usage of trade, the broker who effects the policy keeps an account with the underwriter in which he enters the premium. The date of the execution of the policy is the next requisite. Lastly, the policy must be duly stamped, according to the amount of the sum insured.

The conditions comprised in a policy consist of the warranty that a certain thing shall hap-pen or be done, otherwise there is no valid contract. Thus it may be engaged that the ship shall be safe on a certain day. There is a material distinction between a representation and a warranty. The warranty must be expressed in the policy. A detached paper operates only as a representation ; and a representation made without fraud, if not false in a material point, does not vitiate the contract; whilst a warranty must be strictly fulfilled, whether material or not.

The general cases of warranty are, the time of the vessel's sailing ; the sailing with convoy ; the neutrality of the property.

(1.) Upon a warranty to sail on a particular day, the insurer is discharged if the vessel sails subsequently ; and the effect is the same if the condition be to sail after a certain time and she sails previously. It is not yet decided, but it seems, that Gravesend is the limit of the port of London, from which the departure must take place on the day

stipulated. It is there that vessels receive their final clearance by the cus-tom house regulations.

(2.) A ‘ convoy’ means a naval force under the command of the person whom government or any one authorised by them may appoint. A departure from Spithead with convoy is held within the meaning of a warranty from the port of London. The convoy must continue throughout the voyage, though the words in the contract are ‘depart or sail with convoy only.’ An unforeseen separation, however, from the convoy does not exempt the insurer; and, even if the vessel insured be entirely prevented by tempestuous weather from joining the convoy, still the insurance is valid.

(3) The condition of neutral property is very strictly enforced. If not fulfilled, the contract is void ab initio for fraud, because, as the fact must be known at the time of the insurance, the misrepresentation is a deliberate falsehood. If, however, the property be neutral when the risk commences, the iinderwriter takes upon him the chance of war during the voyage.

A policy, being a contract of indemnity, is const ruofl as nearly as possible according tf> the

intention of the parties, and not according to the strict meaning of the words; and the usage of trade is generally the rule by which ˆsuch questions are guided. According to the authority of lord Mansfield, ‘ the insurer, at the time of underwriting, has under his consideration the na-ture of the voyage, and the usual manner of doing it; and what is usually done by such a ship, with such a cargo, in such a voyage, is understood to be referred to by every policy.’ And on another occasion the same learned judt,‘e observed, that ‘ every underwriter is presumed to be acquainted with the practice of the trade he insures; and, if lie does not know it, he ought to inform himself.’ Still these contracts are con-stroed by the same rules as other instruments, unless, by the known usage of trade, certain words have acquired a peculiar sense, distinct from the ordinary and popular sense.

1. Of the commencement of the risk. — When an insurance is ‘ at and from ‘ any place, it protects the vessel not only during her preparation for the voyage, but from her first arrival.

An insurance from a port commences when the ship breaks ground ; and if it set sail, and be driven back and lost in the port, the

underwriters are liable.

An insurance on freight commences when the goods are put on board.

The risk on goods does not terminate in general till they are landed. If sent on shore by the longboat they are protected in their transit ; but if removed to another vessel, or sent on board a lighter, they are no longer at the risk of the underwriter. When the words in the policy are * till moored twenty-four hours in safety,' the insurance of course expires with the period specified.

2. Of the atsurances and double assurances. — By the 19 Geo. II., c. 37, re-assurances are declared unlawful, unless the assurer or underwriter should be insolvent, become a bankrupt, or die ; in either of which cases such assurer, his executors, administrators, or assigns, may make re-assurance to the amount before by him assured, expressing in the policy that it is a re-assurance, and the statute extends to re-assurances on foreign ships previously insured by foreign underwriters.

3. Double insurances of the same sum upon the same property, are not void, but considered as an increase of the security ; yet only one satisfaction, to the amount of the real loss, can be recovered. The assured may recover against which set of underwriters he chooses, and the set which pays the loss may call upon the others to contribute in due proportion. Different persons, however, may insure their several interests in the same properly, and each to the whole value of his interest ; as the master for wages, the owner for freight ; one person for goods, and anotlier for bottomry, &c.

It is said in the I'.ncyclopredia Britannica (but we do no find the authority on which the statement rests), that if there be several jiolicies or the same subject of different dates, the eailiesi one is valid, and the others must be vacated, and if they be of the same date they must be vacated ill CfMial proportions.

In general, wlien a loss occurs, the actual va-lue, at prime cost, of the property must be proved ; but the parties may provide otlierwise by wiiat is termed a ‘ valued policy,’ the effect of which is the same as if tlie value were admitted at the trial

Sect. II. — Of Total Losses.

Tptal losses may happen by capture, by barratry, by detention, or by the general perils of the sea.

1. By capture, that is, when the ships or goods of one country are taken by another in a state of public war, and they are considered as lost, though not condemned or carried lo any port or fleet of tiie enemy, and the underwriter must j)ay the loss. If tlie vessel be retaken, the owner may recover tiie salvage which he has paid ; and, if an iMiglish sliip retake tiie vessel, the owner is entitled, on payment of salvage, to restitution. If the loss be paid, tiie underwriter stands in tlie place of the assured, and is equally entitled to restitution. The rigiit of the original owner, upon re-capture, continues for ever, upon paying from one-eighth to lialf the value to the re-cap- tors, according to the time during which it has been in possession of the enemy. See Salvage, Sect. III.

2. Bi/ barratry, which is defined any act of tlie master or mariners, of a criminal nature, or which is grossly negligent, tending to their own benefit, to the prejudice of the owners of the ship, and without their consent or privity. It is barratry in the master to smuggle on his own account, and so also, perhaps, is the breach of an embargo, unless the act be done for the benefit of his owners. It is not barratry if the act of the captain be with the knowledge of the owners of the ship, though without that of the owner of the goods. If the master be also the owner, he can-not be guilty of barratry : the crime can only be committed against the owner of the ship. The moment the ship is carried from the proper track, with an evil intent, barratry is committed. If the owner of a ship freight it for a specific voyage, the freighter is considered as owner pro hac vice ; and it is barratry if the master act criminally without his privity, though with the knowledge of the original owner.

3. By detention, or, as expressed in the policy, ‘damages arising from the arrests, restraints, and detainments of kings, princes, or people.’ Embargoes by the authority of a state are included in this provision, though it be a neutral state. Detention of a neutral ship for the purposes of search is within the policy, and the underwriter is liable to the expenses. For detention on account of non-payment of customs,

tiie insurer is not liable. Particular ordinances, not a part of the general law of nations, under which a detention occurs, form a risk within the policy. It is not decided, though it is probable, that a detention by the state to which the ship belongs is included in the risk. Tiie owner must abandon to the underwriter all claim to the property insured, before he can recover a loss for detention. If a seizure be made for transgressing the laws of a foreign country, the underwriters are not liable for the detention.

4. By perils of the sea, that is to say, by accidents ha;i;)ening by the force of wind or waves; by thunder and lightning, by driving against rocks, or by the stranding of the ship, or any other violence that human prudence could not foresee, nor human strength resist. Losses occasioned by these means fall upon the underwriters. Amongst the exceptions to this general rule, may be mentioned the following : — The captain of a slave-ship missed the island for which he was bound, and, water being deficient, some of the slaves were thrown overboard to preserve the rest. It was held that the mistake of the captain was not a peril of the sea. So the death of slaves by failure of provision, occasioned by extraordinary delay from bad weather, is not a loss within the policy.

A ship which is never heard of after hei departure, shall be presumed to have perished at sea. According to the usage of merchants, a vessel is deemed lost if not heard of within six months after .departure for any port of Europe, or within twelve if for a greater distance. If the vessel arrives, the underwriter may recover back the money paid by him.

Sect. III. — Of Partial Losses.

Partial losses consist of damages which the ship may have sustained from some of the perils enumerated in the policy, or which the cargo may have suffered from storm &c., although the whole or greater part may arrive in port. According to the terms of the policies used in London, the underwriters are liable only when the loss amounts to three per cent., unless the claim be a general average or contribution to a general loss. For the partial damage, the underwriter must pay in proportion to the prime cost. The rule of calculation is the difference between the gloss and not the nett proceeds. The underwriter is not liable to fluctuations in the market or to charges after the arrival at the port of destination. Where the property isof various kinds, an account must be taken of the value of the whole, and the insurers are

liable for the due proportion of the amount of the goods lost.

The underwriters by express stipulation usually exempt themselves from any partial loss to perishable commodities, as corn, fish, salt, fruit, flour, or seed, unless it arise by way of general average or in consequence of standing. The two insurance companies do not make the latter exceptions It has been determined that so long as these commodities specifically remain, though wholly unfit for use, the loss shall not be deemed total so as to charge the insurers.

Of averages. — Small or petty average consists of such charges as the master is obliged to pay, according to custom, for the benefit of the ship and cargo, as pilotage, beaconage, &c. These charges do not fall upon the underwriter.

General average arises when goods are thrown overboard in a storm to lighten the ship, and the owners of the ship and goods saved are to contribute to those whose goods have been ejected. To render tlie destruction legal, that which is condemned must be 1. in consequence of a voluntary deliberate concurrence both of the mas-ter and men. 2. The ship must be in actual

distress and the sacrifice necessary. 3. The saving the shi[) and cargo must be owing to the means used with tliat view. If the ship, being once preserved by such means, be afterwards lost, the property, if any, saved from t!ie second accident, must contribute to the loss occasioned by the former.

Diamonds and jewels must contribute according to their value, if they form part of the cargo. But jewels belonging to the person, wearing apparel, and ship provisions, are not liable to contribute. Nor are sailors' wages, or bottomry, or respondentia bonds, liable.

The calculation of the average is thus made : taking the value of the whole ship, freight, and cargo, if no jettson (or throwing over) had taken place, then the ship, freight, and cargo, are to bear an equal and proportionable part of the loss.

Of salvage, which is an allowance for saving a ship or goods from the perils of the sea, fire, or enemies. By the law of England reasonable

salvage, to be ascertained by three justices of the peace, shall be allowed to those who save the ship or any of the goods.

On re-capture the salvage is regulated by act of parliament. If retaken by one of his majesty's ships the amount is one-eighth of the value. To a privateer, when the ship has been in possession of the enemy twenty-four hours, also one-eighth ; if above twenty-four and less than forty-eight hours one-fifth ; if above forty-eight, and under ninety-six hours, one-third ; and if above ninety-six hours, a moiety or half part. If the ship retaken has been fitted out by the enemy as a ship of war, the salvage in all cases is a moiety.

The wearing apparel of the master and seamen is excepted from the allowance of salvage.

Of abandonment. — The property insured, or the residue of it, must be abandoned to the underwriter before a total loss can be claimed. The underwriter, having discharged his liability, stands in the place of the assured, and is entitled to the ship or goods, if not totally lost or afterwards restored by re-capture.

The abandonment must be made within a reasonable time after the receipt of the intelligence which justifies it, otherwise the right is waived and a total loss cannot be recovered. It has been held that notice given five days after information received of the loss was too late. Where tiie salvage is high, and the object of the voyage defeated, the assured may abandon. But a loss of voyage by perils of the sea is not a ground of abandonment where the cargo is in safety and not of a perishable nature.

Of returning the premium. — It is not clearly settled whether the assured be entitled to a re-turn of premium in case the insurance be void for fraud. Where the insurance is declared illegal by statute, it seems the premium cannot be recovered, nor where the fraud is of a gross na-ture; but if the fact or circumstance which vitiates the policy, though termed in strictness of law a ' fraud,' be a mistake, or an act not wilful the premium ought, it a]ipears, to be returned. Insurances may be classed into void and illegal. — In the latter no premium can be reclaimed.

In the former tlie right depends upon the question whether the transaction were bona or malft fide.

If the value of the property be less than the sum insured, the assured may claim a return of piemiunr in proportion to the excess.

The underwriters are entitled to retain half per cent, for their trouble when the policy is vacated.

Sect. III. — Of the Procedure to Enforce Pay.ment of Losses.

There was formerly a particular court for the trial of insurance causes in a summary way. The judge of the admiralty, the recorder of London, two doctors of the civil law, two common lawyers, and eight merchants, constituted the court, and an appeal was allowed to the court of chancery. These questions are, however, now decided like all others by a jury in the courts of common law. Those of equKv have no jurisdiction, the demand being clearly a demand at law. The policies of the Royal Exchange, and London Assurance companies are under s'^al. The actions therefore must be in debt or covenant. Against other underwriters, who merely sign the policy, the action is indebitatus assumpsit.

By a regulation introduced by lord Mansfield, called a consolidation rule, all the actions which are brought on the same policy against the individual underwriters, except one, may be stayed, by which great expense is saved. The underwriters, in return foi this advantage, engage not to file any bill in equity or bring any writ of er-ror for delay. The underwriters are also enabled to pay into court so much money as they deem proper, and if the assured does not recover a larger sum he is liable to the costs of the defendant.

The form of the pleadings, in such actions, it is unnecessary to state in a work of this nature. Of the evidence, however, a few particulars may not be inappropriate. The assured must prove his interest in the property insured by the usual documents, which consist of bills of sale of the ship, and of bills of parcels, and bills of lading of the cargo. In a ' valued' policy it is only necessary to prove that the goods were on board. It is then open to the defendant to show that the interest was only colorable or the goods greatly overvalued. The next point is that the voyage insured has been performed, so far as it extended, according to the terms of the policy. Tlie])roof of the loss must be in exact conformity to the way in which it is alleged in the pleadings to have taken place. Tiie sentences of foreign courts of admiralty are frequently received as evidence. These must be properly authenticated

; and if they have issued from a competent tribunal, and ap-pear complete in themselves, the courts here will not receive evidence to disturb the decision. The coquet, which is a document issued by the custom house, should be produced to show that the goods were actually siiipped. The evidence of a vessel having sailed with convoy is the production of the sailing orders which are given to the master.

MARINE INSURANCE.

Sect. IV. — Of Void Insurances.

1. Of fraud by misrepresentation and concealment.— Both parties are bound to disclose the true state of the circumstances within their knowledge so far as they enhance the risk. The assured must state the accidents that have befallen the vessel. The underwriter, if he knows that it has safely arrived, must disclose the fact. Frauds are divided into 1. the alleˆatio falsi ; 2. the suppressio viri ; and 3. misrepresentation, which though not wilful yet if in a material point equally vitiates the insurance.

Of the first kind are representations that the property insured belongs to a neutral when in fact it belongs to an enemy.

Of the second class is the concealment of material circumstances, such as that a ship described like the one proposed for insurance was taken, or was spoken to at sea in a leaky state, or any causes of more than common danger.

But there are several things which the assured need not communicate because they either are or ought to be known by the underwriter. For the latter is bound to know all perils depending on war or peace — the nature and danger of the voyage, &c. Witli respect to other information, it is enough to communicate the facts : the underwriter is not entitled to know the assured's conclusions, nor his fears and apprehensions.

As to the third kind of fraud, it consists not of wilful falsehood, nor suppression of the truth ; but of a material mistake in the representation made. The underwriter, having computed the risk upon a certain state of things, is released from his obligation if they have been misrepresented, however innocently. The misrepresentation of an agent is equally fatal as that of the principal, even though unknown to the latter.

The fraud must be fully and satisfactorily proved in order to set aside the policy, and the burthen of proof lies on the party who seeks

advantage from it.

2. Of a deviation in the voyage ; which is a voluntary departure, without necessity, or reasonable cause, from the usual course. By this the underwriters are discharged. To support this defence, it is not necessary that the loss should have happened in consequence of the deviation, because the voyage has been determined by the change ; and it is immaterial whether the owner consented or not to the deviation. Putting into an unusual port, or staying an unusual tima, is a deviation. The deviation for a single hour is fatal.

The justifications for a deviation are: to re-pair the vessel, — to avoid an impending storm, — to escape from an enemy, — or to seek convoy. When that is done which is for the general benefit of the parties concerned, the act is within the policy. The motives, end, and consequence of the act are the grounds of determining whether the deviation be justifiable or liCt. An intention to deviate does not affect the policy.

3. Changing the ship, or substituting another for that mentioned in the policy, befere the voy-age commences, annuls the contract ; and if during the vqvage the proj)ertybe removed from

one ship to another, witnout the underwriter's consent, or unavoidable necessity, the implied condition is broken.

4. Of luiseaworthincss. — Every ship, by an implied warranty, must be able to perform the voyage, unless some accident should occur ; and if she have a defect, though unknown to the owner, the contract is vacated. If, however, the decay did not commence till after the insurance, the liability of the insurer will attach however soon the loss may happen. Seaworthiness includes every necessary equipment. The want of a pilot, where the navigation usually requires one, will discharge the underwriter. The vessel must also be properly manned, that is, she must have on board a sufficient number of skilful mariners for the usual purposes of navigation.

Sect. V. — Of Illegal Insukances.

It is necessary tliat the risks which are insured against should be such as may legally be incurred. The contract may, in the very terms and nature of it, be illegal. The voyage during which the danger is incurred may also be contrary to law. And, lastly, the property sought to be insured may be of a prohibited nature. Of these each in its order.

1. Of u'agcr policies, or policies upon interest or no interest. The performance of a voyage in a reasonable time is here the only object of insurance, and they were always looked upon with great jealousy by the courts of law. The courts of equity considered them as absolutely void. The statute 19 Geo. II., c. 37, declares them illegal, but contains an exception for insurances on private ships of war fitted out solely against his majesty's enemies, and also provides for the insurance of merchandise from any ports in Europe or America in the possession of the crowns of Spain and Portugal. It has also been decided that the act does not extend to insurances of foreign property.

2. Of illegal voyages, or such as are expressly prohibited by the common, statute, or maritime law, and which are consequently void. In those cases it is not material whether the underwriter knew that the voyage was illegal or not. Even a neutral ship cannot be insured when the voyage is prohibited by embargo.

3. Of prohibited goods, insurances upon which are illegal, the importation of them being prohibited. These consist of such foreign merchandises as are declared contraband. The insurance of articles prohibited from being exported is also void, as wool, woolfels, &c. So also insurances which in any way defraud the revenue, obstruct the navigation acts, or contravene the royal proclamation in time of war, or relate to things which in their nature are contraband, as arms or ammunition to an enemy, are null and void. An insurance of prohibited goods against the risk of seiz.ure by the government is void. Lastly, slaves and the property of enemies are not insurable, and no action can be maintained thereon. For respondentia and bottomry, see Respondentia.

Marine Surveyor, a machine contrived by Mr. II. de Saumerez for measuring the way of h ship in the sea. This machine i-* in the form of

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the letter Y, and is made of iron or any other metal. At each end of the lines whicli constitute the angle, or upper part of that letter, are two pallets, resembling the figure of the log; one of which falls in the same proportion as the other rises. The falling or pendant pallet, meeting a resistance from the water, as the ship moves, has thereby a circular motion under water, which is faster or slower according as the vessel moves. This motion is communicated to a dial within the siiip, by a rope fastened to the tail of the Y, and carried to the dial. The motion being thus communicated to the dial, which has a bell in it, it strikes exactly the number of geometrical paces, miles, or leagues which the ship has run. Tlius the ship's distance is ascertained ; and the forces of tides and currents may also be discovered by this instrument ; which has, however, been very little used.

MARINELLA (Lucretia), a Venetian lady of the seventeenth century, who published, 1. The Life of the Virgin Mary ; 2. The Life of St. Francis; and, 3. A curious tract in which she maintains the superiority of the female sex over the male : with several other works.

MARINGUES, a manufacturing and trading town of France, in the department of the Puy de Dome. It has a brisk trade in corn, and 3800 inhabitants ; fourteen miles north-west of Thiers.

MARINO (John Baptist), a celebrated Italian poet, born at Naples in 1569. His father, who was an able civilian, obliged him to study the law; at which, being disgusted, he left his parents, and retired to the house of Sieur Manzi, who was a friend to all men of genius. He at length became secretary to IMatthew of Capua, great admiral of Naples, and contracted a friendship with Tasso. He went soon after to Rome, and entered into the service of cardinal Aldobran-dini, nephew to pope Clement VIII., who took him with him to Savoy. Marino was in great favor with the court of Turin ; but afterwards created himself many enemies there, the most furious of whom was the poet Gaspard Murtola, who, attempting to shoot him with a pistol, wounded one of the duke of Savoy's favorites. Marino, being obliged to leave Turin, went to Paris at the desire of queen Mary de Medicis, and published there his poem on Adonis. He afterwards went to Rome, where he was made prince of the academy of the humoristi ; and thence to Naples, where he died while he was preparing to return home. He had a very lively imagination, but littk judgment. His works, which are

numerous, have been often printed.

Marino (St.), a.native of Dalmatia, originally brought up a mason, who flourished in the fifth century ; and, having turned hermit, retired to the mountain which still bears his name. His devotion and austerity soon procured him such a liigh reputation for sanctity, that the ItP.lian princess, on whose property the mountain was situated, made him a present of it; whereupon great numbers of people, out of veneration for the saint, took up their residence upon it, and thus laid the foundation of the town and republic of St. Marino. lie is venerated as the greatest of the saints, next to the Virgin Mary,

and to speak disrespectfully of him is punished as blasphemy.

Marino (St.), a small republic of Italy, said to be founded by the saint above named, and consisting only of a mountain, a town, and a few hills about the bottom of it, six miles in extent. The number of the inhabitants is about 7000. The mountain yields good wine, but they have only rain or snow water. In the whole territory there are only three castles, three convents, and five churches. The largest of the churches is dedicated to the saint, and contains his ashes and his statue. All that are capable of bearing arms are exercised. In the ordinary course of government, the administration was in the hands of the council of sixty, which, however, consisted only of forty members, one half of whom are of noble families, and the other of plebeian. On extraordinary occasions, however, the arengo, or great council, in which every house has its representative, is called together. The two principal officers are the capitaneos, who are chosen every half year; next to them is the commissary, who judges in civil and criminal matters, and is joined in commission with the capitaneos. When an ambassador is sent to any foreign state, he is allowed about Is. a day. In the year 1100 the republic purchased the castle of Pennarosta, and in 1170 that of Casalo. About 1460 it assisted pope Pius II. against Malatesta lord of Rimini; in return for which he made over to it the forts of Serravale, Faetano, Mont Giardino, and Florentino. During all the late various revolutions of Italy this republic preserved its liberty and a nominal independence ; upon the peace, in 1802, the citizens new-modelled their constitution, by adding one-fourth to the number of the little council, and increasing that of the great council to 300. It acknowledges the pope as its protector.

MARINUS, an engraver who flourished about 1630, and resided principally at Antwerp. His plates are executed in a very singular

style, with the graver only :' the strokes are very fine and delicate, and crossed over each other in a lozenge-like form, which he filled up with thin long dots. His prints, though generally very neat, are defective in the determination of the folds of the draperies and the outline of the human figure ; the extremities of which are heav.y, and not marked with precision. Fine impressions from his best plates are, however, much sought after by collectors ; those especially after Rubens and Joardens are held in very high estimation.

MARION AND Crozf.t's Islands, four island* in the Indian Ocean, discovered by Marion and Crozet, French navigators in 1772, by whom they were called Cavern Island (situated in long. 32° 11' E., lat. 46° 45' S.), Bold Island, Possession Island, and Arid Island. They were afterwards seen by captain Cook in 1776.

MA'RJORAM, n.s. Lat. vuujorana ; Fr. marjolaine. A fragrant plant.

The nymphs of the mountains wen Id be ilrawn, upon their heads garlands of honcysiKkles, woodbine, and sweet marjoram. Pcacham.

Marjoram, in botany. Sott Origanvm.

MARIQUITA, a city of South America, in New Granada, formerly celebrated for its mines

of gold and silver, These, however, having been long abandoned, its population is much reduced. It has a good parish church, and several other edifices. Eighty miles south of Santa Fe.

MAilTSH, ra.s. Fr. marais; Sax. mejipc ; Belg. maersche ; Teut. march. A bog ; fen ; swamp; morass; moor. See M.\rsii.

When they had avenged ihe blood of their brother, they turned again to the marisk of Jordan.

1 Mac. ix. 42.

The fen and quagmire so marish by kind,

Are to be drained. Tusser's llmbandry.

His limbs he coucheth in the cooler shades ;

Oft, when heaven's burning eye the fields invades.

To marishes resorts. ˆandys's Paraphrase.

Lodronius, carried away with the breaking in of the horsemen, was driven into amuWs/i ; where, being sore wounded, and fast in the mud, he had done the uttermost. KnoU.es.

From the other hill To their fi.\ed station, all in bright array. The cherubim descended ; on the ground Gliding meteorous, as evening mist Kisen from a river, o'er the marish glides. And gathers ground fast at the labourer's heels.

Milton. It hath been a great endangering to the health of some plantations, that they have built along the sea and rivers, in marish and unwholesome grounds.

Bacon's Essays. The flight was made towards Dalkeith ; which way, by reason of the marish, the English horse were least able to pursue. Hayuard.

INIARITAGIUM, in the feudal customs, as contradistinguished from matrimonium, signifies the power which the lord or guardian in chivalry had of disposing of his infant ward in matrimony. For, while the infant was in ward, tlie guardian had the power of tendering him or her a suitable match without disparagement or inequality; which, if the infants refused, they forfeited the value of the marriage, valorem maritagii, to their guardian; that is, so much as a jury would assess, or any one would bona fide give to the guardian for such an alliance : and if tlie infants married themselves without the guardian's consent, they forfeited double the value, duplicem valorem maritagii.

MAR'ITAL, (idj. Lat. maritus. Of, or pertaining to, a husband.

If any one retains a wife that has been taken in the act of adultery, he incurs the guilt of the crime of bawdry. I'ut because repentance does consist in the mind, and since Christian charity, as well as marital affection, easily induces a belief thereof, this law is not oijserved. Ayliffe.

It has been determined, by some unpolite professors of the law, that a husband may exercise his marital authority so far, as to give his wife moderate correction. Art of Tormenting.

MARITTMAL, uf/;. ˆ Lat. maritimus ; Fr. Mar'm IMF, «(//. \vturitinie. Performed

on, or pertaining to, the sea; bordering on the sea ; marine.

I discoursed of a maritimal voyage, and the passages and incidents therein. Raleigh's Essays.

The friend, the shores maritimal Sought for his be , and fouivd a place upon which

played The murmuring billows. Chapman's Iliad.

At the parliament at Oxford his youth, and want of experience in maritime service, had somewhat been shrewdly tonrli'ˆ:!. Wotton.

Ercoco, and the less maritime kings Monbaza and (ˆuiloa. Milton.

j\ eptune upbraided lliem with their stupidity and ignorance, tiiat a maritime town should neglect the patronage of him who was the god of the seas. Addison.

Maritime Law. Under the article Law v/e have briefly enumerated the courts maritime, and the general nature of the injuries cognizable therein. It remains for us in this place to present the reader with a summary of the legal provisions which relate to foreign trade ; the registry of ships; their hire and mortgage; the liabilities of the master ; the mutual obligations of the several owners of ships and cargo ; and the lien of creditors upon the ship, and other remedies.

Sect. I. — Of the Laws relating to Foreign Trade. The objects or policy of the navigation acts of Great Britain are slated to be the following : first, to secure to our own shipping the carrying trade. Secondly, to confine our trade to the capital of our own merchants, -by excludmg foreigners from being intermediate negotiators, except those who are the subjects of the countries of which the articles are the produce or manufacture. Thirdly, to encourage our own manufactures by checking the introduction into the same market of foreign articles.

These objects are in a very considerable de-gree attained by enforcing

the employment of British shipping under the regulations prescribed by the several navigation acts.

It may be necessary to state that * a British-built ship' is legally defined to be such as has been built in Great Britain or Ireland, Guernsey, Jersey, or the Isle of Man, or in some of the colonies, plantations, islands, or territories, in Asia, Africa, or America, which, at the time of building the ship, belonged to, or were in the possession of, the crown of England ; or any ship whatsoever which has been taken and condemned as lawful prize. But a British built vessel, captured by an enemy, and afterwards purchased by a subject, cannot be registered as a British ves-sel, though ships actually re-captured may be so registered.

By the 6 Geo. IV., c. 109, no goods are to be exported from the United Kingdom to any British possession in Asia, Africa, or America, except in British ships.

It is also required, by the same statute, that British registered ships must be navigated, dur-ing the whole voyage, by a British master, and three-fourths of the crew are also to be British seamen. On a coasting voyage, or in passing between Guernsey, .fersey, Sark, Alderney, or Man, the whole of the crew must be British. A penalty of £lO is inflicted for each foreign seaman beyond tiie proportion.

Goods cannot be imported into any British settlement in Asia, Africa, or America, in any foreign ship, unless it belong to the country where the goods were produced.

Amongst other regulations, in the maritime law, it may not be immaterial to mention the following, which relates to the carrying of passengers between Great Britain and Ireland.

According to the provisions of the 4 Geo. IV., c. 88, merchant-vessels of not more than 100

tons burthen are not to carry more than ten passengers. Those of not more than 200 tons are limited to twenty passengers. The penalty for each person beyond these numbers is £5. 'es-sels are licensed by the collector of the customs from die port of sailing in the following proportions: tive adult persons, or ten children under fourteen years, or fifteen children under seven, for every four tons burden. If the vessel be partly laden, the same proportion takes place for every four tons unladen. The penalty for carrying more than twenty, witliout license, is £50; and, if licensed, £5 for each person beyond the above proportion.

Sect. II. — Of the Laws relatiku to Ships.

1. Of their regisfri/.— The 6 Geo. IV., c. 110, provides for the registry of vessels with the collector and comptroller of the customs, without wliich the ship is not entitled to the privileges of British shipping under the act for its encouragement, and vessels are liable to forfeiture which exercise the rights of registered ships before they are duly registered. The name of the vessel must be painted on the stern under a penalty of £l0, and no change can take place in the name without a new register. A document called ‘ the ship’s register,’ or certificate of registry, is granted by the custom-house, which, whilst the vessel continues to belong to the original owner, is the best evidence of title. When a transfer takes place, the ven-der executes a ‘ bill of sale,’ which must be registered at the custom-house, and the transfer indorsed on the ship’s register, within a certain time, when in port or after her arrival.

As often as the master of a ship is changed a memorandum must be indorsed on the certificate of registry.

If the certificate be lost or mislaid, or if a ship be altered in form or burden, or from one denomination of vessel to another, by rigging or fitting, it must be registered de novo, and a new certificate obtained. Tiie masters of ships must produce the certificate of registry, on demand, to the principal officer in any port within the king’s dominions, or to the British consul, or chief olficer, in any foreign port. For refusal they are liable to a penalty of £l00.

2. Of letting and luring the ship. — This is effected by a contract, termed a charter party, between the master and freighters, in which the sh’ip and voyage is described, and the time and conditions of performing it are ascertained. The freight is most frequently determined for the whole voyage, without respect to time. Sometimes it depends on the time. In the former case it is either fixed at a certain

sum for the whole cargo ; or so much per ton, barrel bulk, or other weiglit or measure, or so much per cent, on the value of the cargo. The invoices are produced to ascertain the value. The burden of tlie ship is gone-rally mentioned in the contract, in this manner, loo tons or thereabouts; and the number mentioned ought not to differ above five tons, at most, from the exact measure. If a certain sum be agreed on, for the freight of the ship, it must ail be paid, althougli the sliip, when me;isured, should prove less, unless the burden be war-

ranted. If tlie ship be freighted for transporting cattle, at so much a head, and some of them die on the passage, freiglit is only due for such as are delivered alive; but, if for lading them, it is due for all that were put on board. When a whole ship is freighted, if the master suffers any other goods besides those of the freighter to be put on board he is liable for damages. It is common to mention the number of days that the ship shall continue at each port to load or unload. The expression used is work weather days; to signify that Sundays, holydays, and days when the weather stops the work, are not reckoned. If the ship be detained longer a daily allowance is often agreed on in name of demurrage. If the voyage be completed in the terms of the agreement, without any misfortune, the master has a right to demand payment of the freight before he delivers the goods. But, if the safe delivery be prevented by any fault or accident, the parties are liable according to tlie following rules. If the merchant do not load the ship within the time agreed on the master may engage with another and recover damages. If the merchant load the ship, and recal it after it has set sail, he must pay the whole freight ; but if he unload it before it sets sail he is liable for damages only. If a merchant loads goods which it is not lawful to export, and the ship be prevented from proceeding on that account, he must pay the freight notwithstanding. If the shipmaster be not ready to proceed on the voyage at the time agreed on, the merchant may load the whole, or part of the cargo, on board another ship, and recover damages. If an embargo be laid on the ship before it sails, the charter party is dissolved, and the merchant pays the expense of loading and unloading; but, if the embargo be only for a short limited time, the voyage shall be performed when it expires, and neither party is liable for damages. If the shipmaster sails to any other port than that agreed on, without necessity, he is liable for damages ; if through necessity, he must sail to tlie port agreed on at his own expense. If a ship be taken by the enemy, and retaken or ransomed, the charterparty

continues in force. If the mas-ter transfer the goods from his own ship to another, without necessity, and they perish, he is liable for their value ; but, if his own ship be in imminent danger, the goods may be])ut on board another ship at the risk of the owner. If a ship be freighted out and home, and a sum agreed on for the whole voyage, notliing is due till it return ; and the whole is lost if the ship be lost on the return. If a certain sum be specified for the homeward voyage, it is due, altliough the factor abroad should have no goods to send home.

3. Of pledging or hypothecating the ship. — The master of the sliip has power to pledge or hypo-thecate the ship, and also the goods, or either of them, in case tlie vessel springs a leak at sea, or is in danger from any other cause of being lost. But his authority extends only to instances in which tiie safety of the ship and the due prosecution of the voyage is concerned. Consequently the master cannot incumber either the ship or goods for his own debt, lie is at liberty con-

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sistently with tins principle to pledge the ship for necessary repairs during a voyage ; and this mortgage or hypothecation is implied by the maritime law, when such debts are contracted. This regulation is necessary, and is therefore adopted by all commercial nations ; for, otherwise, the master might not find credit for necessary repairs, and the ship might be lost. If repairs be made at different] > laces, the last which are made are preferable. The relief against the ship is competent, to the court of admiralty in England, only when repairs are furnished during the course of a voyage, for the necessity of the case extends no further.

Sect. III. — Of the Liabilities of the Master.

The master is liable, 1st. for damages or loss sustained by the non-performance of the charter party ; 2dly, for the debts he incurs on behalf of the ship, but which, as already stated, he has power to secure by its hypothecation.

In the case of a ship freighted to Madeira, Carolina, and home, a particular freight was fixed for the homeward voyage, and an option reserved for the factor at Carolina to decline it, unless the ship arrived before the 1st of March. The shipmaster foreseeing he could not arrive there within that time, and might be disappointed of a freight, did not go thither at all. He was found liable in damages, as the obligation was absolute on his part, and conditional only on the other. If the goods be damaged, without fault of the ship or master, the owner is not obliged to receive them and pay freight, but he must either receive the whole, or abandon the whole, he cannot choose those that are in best order, and reject the others. If the goods be damaged through the insufficiency of the ship, the master is lialjle ; but, if it be owing to stress of weather, he is not accountable. It is customary for ship masters, when they suspect damage, to take a protest against wmd and weather at their arrival. But, as this is the declaration of a party, it does not bear credit unless supported by collateral circumstances. If part of the goods be thrown overboard, or taken by the enemy, the part delivered pays freight. The shipmaster is accountable for all the goods received on board by himself or mariners, unless they perish by the act of God, or of the king's enemies. Shipmasters are net liable for leakage on liquors ; nor accountable for the contents of packages, unless packed and delivered in their presence. Upon a prmciple of equity, that the laborer is worthy of his hire, differences arising with regard to freight, when th Jcase is doubtful, ought rather to be determined in favor of the shipmasters.

Sect. IV. — Of the Mutual Obligations of the Owners or Ship and Cargo.

There is a mutual obligation which subsists between the owners of a ship and cargo. In time of danger, it is often necessary to incur a certain loss of part for the greater security of the rest; to cut a cable; to lighten the ship, by throwing part of the goods overboard ; to run it ashore, or the like ; and, as it is unreasonable that the owners of what is exposed for the common

safety should bear the whole loss, it is defrayed by an equal contribution among the proprietors of the ship, cargo, and freight. This is the famous lex llhodia de jactu, and is now called a general average. The custom of valuing goods which contribute to a general average is not uniform in all places. They are generally valued at the price they yield at the port of destination, charges deducted ; and goods thrown overboard are valued at the price they would have

yielded there. Sailors' wages, clothes, and money belonging to passengers, and goods belonging to the king, pay no general average; but proprietors of gold and silver, in case of goods being thrown overboard, contribute to the full extent of their interest. The following particulars are charged as general average : Damage sustained in an engagement with the enemy ; attendance on the wounded, and rewards given for service in time of danger, or gratuities to the widows or children of the slain ; ransom, goods given to the enemy in the nature of ransom ; charges of bringing the ship to a place of safety when in danger from the enemy, or waiting for convoy ; charges of quarantine ; goods thrown overboard ; masts or rigging cut; holes cut in the ship to clear it of water ; pilotage when a leak is sprung; damage when voluntarily run aground, and expense of bringing it afloat; goods lost by being put in a lighter; the long boat lost in lightening the ship in time of danger; hire of cables and anchors ; charges of laying in ballast, victualling, and guarding the ship when detained ; charges at law in reclaiming the ship and cargo : interest and commission on all these disbursements. Though goods put on board a lighter, and lost, are charged as a general average ; yet if the lighter be saved, and the ship with the rest of the goods be lost, the goods in the lighter belong to their respective proprietors without being liable to any contribution. If part of the goods be plundered by a pirate, the proprietor or shipmaster is not entitled to any contribution. The essential circumstances that constitute a general average are these; the loss must be the effect of a voluntary action, and the object of that action the common safety of the whole.

Sect. V. — Of the Rights of the Ship's Creditors.

Of their hen on the ship, and their remedies against the owners. — When debts are contracted for provisions or repairs to a ship, or arise from a failure in any of the obligations stipulated in the charter party, the ship and tackle, and the owners are liable for the debt, as well as the master. By the mercantile law, the owners are liable in all cases without limitation; but by statute they are not liable for embezzlement, be-yond their value of ship, tackle, and freight.

If a ship be repaired at home (e. g. upon the Tay or Thames) the creditor is only entitled to relief at common law. The creditor may sue either the jnaster or owners ; but, if he undertook the work on the special promise of the one, the other IS not liable. If the master buys provisions on credit, the owners are liable for the debt, though they have given him money to pay for them. If a ship be mortgaged, and afterwards lost at sea,

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the owners must pay the debt ; for the mortgage is only an additional security, though there be no express words to that purpose in the covenant. If a ship be taken by the enemy, and ransomed, the owners are liable to pay the ransom ; tliough *he ransomer die in the hands of the captors.

The ship owners are not liable for more than the value of the ship and freight, on account of damages sustained by the loss of goods. Where there are several owners, and one disagrees from the voyage, he is not liable to any action subsequently for miscarriage or otherwise.

For other branches of the maritime law, see Marine Insurance, Quarantine, Respondentia, Wreck, &c.

MARIVAUX (Peter Carletde), a French dramatic writer, born of a good family in Paris in 1683. A fine unaerstanding, improved by education, distinguished him early. He met with the highest success in comic productions, which, with the merit of his other works, procured him a place in the French Academy. He died in Paris in 1763, aged seventy-five. His works consist of 1. Pieces de Theatre, 4 vols. 12mo, ; 2. Uomere travesti, 12mo. ; 3. Le Spec-tateur Francais, 2 vols. 12mo.; 4. Le Philosophe Indigent, 12mo. ; 5. 'ie de Marianne, 2. vols. 12mo.; one of the best romances in the French language; 6. Le Paysan Parvenu, 12mo. ; 7. Pharsamon.

MARIVELAS, or Marivelle, one of the smaller Philippine Islands, with a village on it of the same name, consisting of about forty houses, built of bamboo. The floor of these houses is also made of small bamboos, which do not touch each other, and which give them the appearance of bird cages. The mode of ascending them is by a ladder. The island was invaded by the Moors in 1810, who destroyed the village, and made slaves of all the Indians. Since this pe-riod, the inhabitants have never applied to industry ; and are wretchedly poor.

MARIUPOL, a town of European Russia, on the sea of Azoph, in the government of Ekaterinoslav, at the mouth of the Kalmius. Population 2000. 140 mdes south-east of Ekaterinoslav. MARIUS (Caius), a Roman general, and seven times consul, but who sullied his great military reputation by savage barbarities. Ho was born at Arpinum, of obscure parents. He signalised himself under Scipio, at the siege of Numantia. The Roman general saw his courage and intrepidity, and

foretold his future greatness. By his intrigues at Rome, while he exercised the inferior offices of the state, he first rendered himself known; and his marriage with Julia, who was of the family of the Caesars, contributed to raise him to consequence. He went to Africa as lieutenant to the consul Metellus against Jugurtha, and tliere ingratiated himself with the soldiers ; and having raised enemies to his benefactor, he returned to Rome and canvassed for the consulship. By his extravagant promises to the people, and his malevolent insinuations against Metellus, ho proved successful. Ho was appointed to finish the war ai,ainst .Tngurtha, and showed his military talents by defeating Jugurtha. See Jugurtha. The Roman provinces biing suddenly invaded by an army of 300,000

barbarians, Marius was elected consul, and sent against the Teutones. The war being prolonged, Marius was a third and fourth time invested with the consulship. At last two engagements were fought, and not fewer than 200,000 of tiie forces of the Ambrones and Teutones were slain in the field of battle, and 90,000 made prisoners in A. U. C. 650. In 6.51 tlieCimbri, another horde of barbarians, were defeated; 140,000 of them were slaughtered by the Romans, and 60,000 taken prisoners. After these victories Marius, with his colleague Catullus, entered Rome in triumph ; and Marius received the appellation of the third founder of Rome. He was elected consul a sixth time; but his restless ambition began to raise seditions, and to oppose the power of Sylla. This was the foundation of a civil war. Sylla refused to deliver up the command of his forces, witii which he was empowered to prosecute the Mithridatic war ; and considered the demand as arbitrary and improper. He marched to Rome, and Marius was obliged to fly. Adverse winds prevented him from seeking a retreat in Africa, and he was left on the coast of Campania, where Sylia's emissaries discovered him in a marsh, into which he had plunged iiimself, leaving only his mouth above the surface for respiration. He was dragged to the neighbourmg town of Minturnae; and the magistrates, being in the interest of Sylla, passed sentence of death on their illustrious prisoner. A Gaul was commanded to cut off his head in the dungeon ; but the stern countenance of Marius disarmed the courage of the executioner: and when he heard him say. Tune, homo, audes occidere Caium Marium? the dagger dropped from his hand. Such an adventure moved the compassion of the inhabitants of Minturnaˆ. They liberated Marius, and favored his escape to Africa, where he joined his son, who had been arming the princes of that country in his cause. Marius landed near the walls of Carthage, but his retreat was soon known ; and the governor of Africa, to conciliate the favor of

Sylla, compelled Marius to fly to a neighbouring island. He soon after learned tliat Cinna had embraced his cause at Rome, where tlie Roman senate had stripped him of his consular dignity, and bestowed it upon one of his enemies. Ma-rius set sail to assist his friend at the head of only 1000 men. His army, however, was soon increased, aud he entered Rome like a conqueror. His enemies were inhumanly sacrificed to his fury; Rome was filled witii blood ; and he, who once had been called the father of his country, marched through the city, attended by a number of assassins, who slaughtered all those whose salutations were not answered by their leader. When Marius and Cinna had surticiently gratified their rage they made themselves consuls : but Marius, already worn out with old age and infirmities, died sixteen days after he had been elected consul the seventh time, A. U. C. 666, and A. A. C. 86. Brought up in poverty, and among peasants, he always retained his native rusticity, and despised in others those polished manners which education had denied him. Being himself illiterate, he hated the conversation of the learned; and his sobriety and temperance were

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owing to the obscurity in which he had lived at Arpinum. His countenance was stern, his voice firm and imperious, and his disposition untractable. He was ui his seventietli year when he died ; and Rome rejoiced at tlie fall of a m;ui whose ambition had proved so fatal to many of her citizens. His only qualifications were those of a great general ; and these rendered him the most powerful of the Romans, because lie was the only one whose ferocity seemed able to op-pose that of the barbarians.

M.iRius (M. Aurelius), a native of Gaul; who, from being a blacksmith, became one of the generals of Gallienus, and at last caused himself to be saluted emperor. Three days after this elevation, a man, who had shared his poverty without partaking of his prosperity, assassinated him with a sword which Marius himself had made in his obscurity. JNIarius has been celebrated for his great strength ; and it is reported that he could stop, with one finger only, the wheel of a chariot m its most rapid course.

jMarius, an ancient British monarch, the son of kin'jT Arviragus, whom he succeeded A. D. 74. He conquered the Picts, and erected a stone upon .Stanmere in memory of his victory. Dr. Anderson says he married a daughter of the celebrated queen Boadicea. He died A. D. 125, after having reigned fifty-one years.

MARIZZA, or Marissa, the ancient Hebrus, a river of European Turkey, in Romania, which has its source in the Hsemus ˆMountains, passing by Philippopoli, Adrianople and Trajanopoli, and discharging itself by two mouths into the Gulf of Enos. Its banks are in general fertile, and in Us course it receives the waters of various small rivers.

MARK, n. s., v. a., & u. n. i Sax. meafice ;

Marks'man, n. s. j Belg. mercke ;

Teut. and Swed. tnark ; Fr. marque ; Ital. marca. A sign; token; proof; notice; butt ; impression; hence a coin of the value of 13s. 4d: to mark is to impress, or notify, by, or as by, a sign or token ; to note ; heed : as a neuter verb, to take notice : a marksman is a skilful man at hitting a mark.

Worclie ye not mete that perischeth, but that dwellith into

euerlastinge lyf, which mete mannes sone schal geue to you : for God the father hath murkyd him. Wiclif. Jon vi.

Mark them which cause divisions contrary to the doctrine which ye have learned, and avoid them.

Romans xvi. 17. Once was proclaimed throughout all Ireland, that all men should mark their cattle with an open several viark upon their flanks or buttocks, so as, if they happened to be stolen, they might appear whose they were. Spenser on Ireland.

The laws Stand like the forfeits in a barber's shop, As much for mock as nuirk. Shakspeare.

We give thee for reward a thousand marks. Id.

In sadness, cousin, I do love a woman. — I aimed so near when I supposed you loved. —A right good nuirksman. Id.

Alas, poor country ! Where sighs, and groans, and shrieks, that rend the

air. Are made, not marked. Id. Macbeth.

At two years old cometh the mark of tooth in horses. Bacon s Natural History.

'Men mark when they hit, and never mark whea they miss, as they do also of dreams. Id. Essays

Whom nothing can procure, ˆVhen the wide world runs bias from his will, To writhe his limbs, and share, not mend the ill :

This is the marksman, safe and sure, \ ho still is right, and prays to be so still. Herbert.

Thirty of these pence make a mancuss, which some think to be all one with a tmirk, for that manca and maucu.sa is translated in ancient books by marca.

Camden's Remains.

France was a fairer mark to shoot at than Ireland, and could better reward the conqueror. Daiies.

L’pon the north sea bordereth Stow, so called, per eminciitiam, as a place of great and good mark and scope. Carew’s Survey of Cornwall.

i’hat which was once the index to point out all virtues, does now mark out that part of the world where least of them resides. Decay of Piety.

Be made the mark For all the people’s hate, the prince’s curses

Denham.

Incurable are the wounds which the slandeier in-flicteth, irreparable the damages which he causeth, indelible the marks which he leaveth. Barrow.

But cruel fate, and my more cruel wife, To Grecian swords betrayed my sleeping life ; These are the monuments of Helen’s love. The shame 1 bear below, the marks I bore above.

Dry den. Here are marriage vows for signing ; Set your murks that cannot write. Id.

Mark a little why Virgil is so much concerned to make this marriage ; it is to make way for the divorce which he intended afterwards. Id.

Now swear and call to witness

Heaven, hell, and earth, I murk it not from one

That breathes beneath such complicated guilt.

Smith.

For our quiet possession of things useful, they are naturally marked where there is need.

Grew’s Cosmologia.

In the present form of the earth there are certain marki and indications of its first state ; with which, if we compare those things that are recorded in sacred history, we may discover what the earth was in it3 first original. Burnet.

The Argonauts sailed up the Danube, and from thence passed into the Adriatick, carrying their ship Argo upon their shoulders ; a mark of great ignorance in geography among the writers of that time.

Arhnthuot on Coins.

Lorenzo signed the bargain with his mark.

Young.

And, if he doom that people with a frown, And mark them with a seal of wrath pressed down, Obduracy takes place ; callous and tough. The reprobated race grows judgment proof. Cowper.

Mark is used among us for a money of account, and in some other countries for a coin. See Money. The Scottish mark is 13ˆrf.

Mark, or Marc, denotes also a weight used in several states of Europe, and for several commodities, especially gold and silver. When gold and silver are sold by the mark, it is divided into twenty-five carats.

Mark (.St.), the evangelist, was descended of the tribe of Levi. He is supposed to have been converted by St. Peter, to whom he was a constant companion in all his travels, supplying the place of an amanuensis and interpreter. He was by him sent into Egypt, fixing his chief residence at Alexandria, where he converted

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great muUitiides. He afterwards removed westward, towards Lybia, travelling through Mar-morica, Pentapolis, &c., where, notwithstanding tlie barbarity and idolatry of the inhabitants, he planted the gospel. Upon his return to Alexandria, he set in order the affairs of tliat church, and there suffered martyrdom. About Easter, when the solemnities of Serapis were celebrated, the idolatrous people broke in upon St. Mark, while he was performing divine service, and, binding him with cords, dragged him through the streets, and thrust him into prison. Next day they dragged him about till he expired under their hands. Some add, that they burnt his body, and that the Christians interred his bones and ashes near the place where he used to preach. This happened A. D. 68. Some say tliat his remains were afterwards translated from Alexandria to Venice, where he has a rich and stately church erected to his memory, being the patron of the state. He is author of the gospel that bears his name.

Mark, (St.), Canons of, a congregation of regular canons founded at Mantua by Albert Spniola, a priest, towards the end of the twelfth century. .Spinola formed rules for tliem, which were approved, corrected, and confirmed by several succeeding popes. About the year 1450 they were reformed, and followed only the rule of St. Augustine. This congregation, having flourished by the space of 400 years, declined by degrees, and is now become extinct.

Mark (St.), Gospel of, a canonical book of the New Testament, one of the four gospels. St. Mark wrote his gospel at Rome, whither he accompanied St. Peter, A. D. 44. TertuUian and others assert that St. Mark was only amanuensis to St. Peter, who dictated this gospel to liim ; odiers affirm that he wrote it after St. Peter's death. Nor are the learned less divided as to the language it was written in ; some affirming that it was composed in Greek, others in Latin. Several of the ancient heretics received only the gospel of St. Mark : others, among the Catholics, rejected the last twelve verses of this gospel.

Mark, (St.), Knights of, an order of knighthood in the state of Vˆenice, under the protection of St. Mark the evangelist. The arms of tiie order were, gules, a lion winged or ; witi) this device. Pax tibi Marce Evangelista. This order was never conferred but on those who had done some signal service to the commonwealth. The badge of the order is represented in the annexed diagram.

Mark, a county of Westphalia, in the Prussian states, bounded on the north by the principality of Munstcr, and on the south and west by Berg. It is about sixty-seven miles long, and forty-five broad, and has a superficial extent of about 667 square miles. It is traversed by the Lippe and lloer, and several inferior rivers. The Roer was rendered navigable in 1775, and divides the county into two parts, called the Hel-

weg and the Sauerland. The former is a fertile level of meadows and arable land, in which corn, leguminous plants, rape, and turnip seed, and flax and hemp abound. The ;outhern division is bleak and rugged, its principal riches being the minerals of the mountains, wliich yield coal, iron, lead, copper, and a little silver" ore. This county in 1806 fell into tiie hands of the French; but in 1814 was restored to Prussia. Inhabitants 132,000. The chief town is Hamm, MAR'KET, n. s. & i'. a. '\ Sax. maˆcet ;

Mar'ketable, adj.

Mar'ketbell, n.s.

Mar'ketbeter,

Mar'ketcross,

Mar'ketday,

Mar'ketfolk,

Mar'ketman,

Mar'ketmaid,

Mar'ketplace,

Mar'ketprice,

Mar'ketrate,

Mar'ket-town,

Danish, market ; Swed. markand ; Teutonic, marckt, from Mark (an assigned place of >-meeting), wliich see. A public place, or time, for buying and selling; act of purchase or sale ; rate ; price ; to

deal at a market : marketable, is saleable; current in the market : markel-beter, according to Upton, means, in Chaucer, one who raises the market price : marketman and maid are servants, or agents attending a market : market-rate, the current price of a commodity at market. The extracts will explain the other compounds.

They are like unto children sitting in the marketplace and calling one to another, and saying, we have piped unto you and ye have not danced.

Luk. vii. 32.

They counted our life a pastime, and our time here a market for gain. Wisd. xv. 12.

Round was his face and camuse was his nose. As pilled as an ape was his skull : He was a market-beter at the full.

Chaucer. Cunt. Tales.

The king, thinking he had put up his sword, because of the noise, never took leisure to hear his answer, but made him prisoner, meaning the next morning to put him to death in the market -‘place.

Sidneij.

It were good that the privilege of a market were given, to enable them to their defence ; for there is nothing doth sooner cause civility than many market-towns, by reason the people repairing often thither will learn civil manners. Spenser

Mistress, know yourself, down on your knees. And thank Heaven, fasting, for a good man’s love ; For 1 must tell you friendly in your ear, iSell when you can, you are not for all markets.

Sliakspeare.

Enter, go in, the marketbell is rung. Id.

Poor marketfolks that come to sell their corn. Id

Be wary how you place your words. Talk like the vulgar sort ot niarkelmcn, That come to gather money for tlieir corn. Id.

These things you have articulated. Proclaimed at marketcrosses, read in churches, 'I'o face the garment of rebellion With some fine colour. *(*. Ilcnry W.

You are come A marketmaid to Home, and have prevented The ostentation of our love.

Id. A niony and Cleopali-a.

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The pretorian soldiers arrived to that impudence, that after the death of I'ertinax they made open sale of the empire, as if it had been of common marketable wares. Decaii of I'iety.

With another year's continuance of the war, there will hardly be money left in this kingdom to turn the common markets or pay rents. Temple.

Fool that 1 was, 1 thought imperial Rome

Like -Mantua, where on marketday.'i we come,

ˆnd thither drive our lambs. Dryden's Virgil. The precious weight

Of pepper and Sabaian incense take.

And with post-haste thy running nuirket make.

Be sure to turn the penny. Id. Persitis.

The gates he ordered all to be unbarred.

And from the marketplace to draw the gtiard.

Drifden.

Money governs the world, and the market-price is the measure of the worth of men as well as of fishes.

L' Estrange.

If one bushel of wheat and two of barley will, in the market, be taken one for another, they are of equal worth. Locke.

The marketable value of any quantities of two commodities is equal, when they will exchange one for another. Id.

The eye of God is upon men, not only when they are at church praying and heaiing, but when they are in their inarkets and fairs, and upon the exchange, buying and selling. Henrii.

He ordered all the Lucquese to be seized that were found on a

marketday in one of his frontier towns. Addison ou Italy.

No, no, the pope's mitre my master Sir Roger seized, when they would have burnt him at our market-town. f"']/-

Behold the marketplace with poor o'erspread. The man of Ross divides the weekly bread. Pope.

The Market, Clerk of iue Court of, an officer incident to every fair and market in England, to punish misdemeanors therein. A court of pie-poudre is to determine all disputes relating to private or civil property. The object of this jurisdiction (see stat. 17 Car. II. cap. 19; 22 Car. II. cap. 8; 23 Car. II. cap. 12), is principally the cognisance of weights and measures, to try whether they be according to the true standard thereof or no : which standard was anciently committed to the custody of the bishop, who appointed some clerk under him to inspect the abuse of them more narrowly ; and hence this officer, though now usually a layman, is called the clerk of the market. If they be not according to the standard, then, besides the punishment of the party by fine, the weights and measures themselves ought to be burnt. This is the low-est court of criminal jurisdiction in England.

INIARKLAND (Jeremiah), one of the most learned scliolars and critics of his age, was born in 1692, and educated in Christ's Hospital. He becdme first publicly known by his Epistolae Criticae, addressed to bishop Hare. In this he gave manj proofs of his extensive erudition. He afterwards published an edition of Statins, and some plays of Euripides ; and assisted Dr. Tay-lor in liis editions of Lysias and Demosthenes, by notes. He also elucidated some passages in the New Testament, which may be found in Mr. Bowyer's edition of it; and was author of a very valuable volume of remarks on tlie epistles of Cicero to Brutus, and of an e-'xellent treatise

entitled QutestioGrammatica. lie died in 1775 at Milton, near Dorking, in Surrey ; uid was ecjually valued for his learning and primitive simplicity of manners.

rˆIARL, 71. s. & V. a. Sax. mepˆ is marrow, says Dr. Johnson, to which he traces this word : but the root marg or margel is found to express its exact modern signification in all the Gothic dialects. A fat clay used as manure : to manure with marl.

So ferd another clerk with astronomic ;

He walked in the feldes for to prie

Upon the sterres, what ther shulde befalle.

Till he was in anwr/e pit yfalle

He saw not that. Chattcer. Cant. Tales.

Marl is the best compost, as having most fatness, and not heating the ground too much. Bacon.

Uneasy steps

Over the burning marl not like those steps

On heaven's azure. Milton.

Improvements by marling, liming, and draining, have been since money was at five and six per cent.

Child. Sandy land marled will bear good pease.

Mortimer.

The oak thrives best on the richest clay, and will penetrate strangely to come at a marly bottom.

Id.

Marl is a kind of clay, which is become fatter, and of a more enriching quality, by a better fermentation, and by its having lain so deep in the earth as not to have spent or weakened its fertilizing quality by any product. Sfarl is supposed to be much of the nature of chalk, and is believed to be fertile from its salt and oily quality. Quincy.

Several others, of different figures, were found ; part of them in a rivulet, the rest in a marlpit in a field. Woodward.

We understand by the term marb simple native earths, less heavy than the boles or clays, not soft and unctuous to the touch, nor ductile while moist, dry and crumbly between the fingers, and readily diffusible in water. Hill.

Marl, or Marle, a kind of calcareous earth, very much used in agriculture as a manure. Marl is dug in many places of Great Britain and Ireland. In digging for it in Ireland they meet with horns and other curious fossils. The marl always lies in the bottoms of low bogs, and is found by boring with augers made for that purpose. It usually lies at five, seven, or nine feet deep. The obtaining it in many places is attended with very considerable expense in draining off the water. The manner of digging for it is this : six able laborers and a supernumerary cut up a hole of twelve feet square, which is a pit that this number of men can manage in one day. Two men dig, two throw it up, and two throw it by, and the super-numerary man supplies defects on all occasions. For the first three feet they dig through a furzy earth, fit for making turf or fuel. Under this lies a stratum of gravel, of about

half a foot; under this often, for three feet more, there is a more kindly moss, which would make better fuel. This lower stratum is always full of fossil wood, which is usually so soft that the .spade cuts as easily through it as through the earth it lies in. Under this, for the thickness of about three inches, is found a series of leaves, princi-I)ally of the oak. These appear very fair to the

eye, but fall to pieces on being touclied ; and tiiis stratum is sometimes interrupted by vast heaps of seed, of broom, or furze. In some places there appear berries of different kinds, and in others several species of sea-plants ; all lying in the same confused manner as the oak leaves. Under this vegetable stratum lies one of blue clay, half a foot thick, and usually full of sea-shells. This blue clay is not so tough as common clay ; but is thrown carefully up, and used as marl in some places. Under this always appears the true marl ; the stratum of which is usually from two to four feet thick, and sometimes much more. This marl looks like buried lime, and is full of shells, which are usually of a small size, and of the periwinkle kind ; but there are several other sorts at times found among them. Among this marl, and often at the very bottom of it, are found great numbers of very large horns of the deer kind, vulgarly called elks' horns. These, where they join to the head, are thick and round ; and at that joining there grows out a branch, which is about a foot long, and seems to have hung just over the creature's eyes ; it grows still round for about a foot above this, and then spreads out broad, and terminates in branches long and round, terminating with a small bend. There are also at times found the leg-bones and other parts of the skeletons of the same beasts ; but this more rarely, only a few together, and but in few places. Black is of opinion that all kinds of marl derive their origin from the calcareous matter of shells and lithophyta. Shell marl, says he, is composed of the shells of aquatic animals, which are sometimes very entire, and often decayed or mixed down with other earthy substances. Examining this matter, as occurring in different places, it may be distinguished into fresh water raarl, and the marl of sea-shells. Of the first we have an example in the meadow at Edinburgh. Wherever the soil is turned up,

to the depth of six inches, a quantity appears. It is composed of the shells of a small fresh-water- snail or welk. This animal, when alive, is not easily discernible, the shell being much of the same obscure color as the stones covered with the water. But we can observe a great number of them in all running brooks and other collections of fresh water; and, as the animal dies, the stiells are deposited where tiie water stagnates in very great quantities. That composed of sea-shells constitutes greater collections, that are found in innumerable places now far removed from the sea. That most particularly described by Reaumur is a collection of this kind, in a province of France, and at Turin. That part of the country where it is found is computed to contain eighty square miles of surface ; and, wherever they dig to a certain depth, they find this collection of shells: the country at present is 108 miles from the sea. They find the marl eight or nine feet below the surface, and thoy dig it to the depth of twenty feet. It is still deeper, but they find it too expensive to search for it. lie supposes it to be only eighteen feet deep ; and even at tliis deptii tlie quantity will appear enormous. It will amount to 140,000,000 of cubic fathoms of shells that are mostly decayed

and broken into fragments, and mixed with other marine productions, as mille])ores, madrepores, and other coralline bodies, which are all productions of the sea. The qualities of marl have been proved by chemical analysis to be precisely the same with those of lime.

MARLBOROUGH, an ancient borough and market town of Wiltshire, near the source of the Kennet, at the foot of a chalky hill ; so named from its chalky marly soil. It was a Roman station. In 1627 a parliament was held in the castle here, whence tliose laws are called Marlborough statutes. There are still some remains of its walls and ditch. The town is an ancient borough by prescription, and sends two members to parliament. It is governed by a mayor, two justices, twelve aldermen, twenty-four burgesses, a town clerk, 8cc. It consists chiefly of one broad street, with piazzas all along one side of it, two churches, and several commodious inns, being the grand thoroughfare from London to Bath and Bristol. At the western extremity of the High Street stands the guildhall, supported on pillars, which enclose a space for the corn, cheese, and butter market, and above which are the council chamber, sessions-hall, and elegant assembly rooms. To the south are some relics of a priory, and the site of a Roman castrum, where Roman coins have been discovered. The ditch is still in some parts twenty feet wide ; and towards the river, without the garden walls, one angle of the castrum is very visible, with the rampart and

ditch entire. The mount at the west end of the town, which was the main-guard of the castle, is converted into a handsome spiral walk, at the top of which is an octagon summer-house. This town has often suffered by fire, particularly in 1690. It has markets on Wednesday and Saturday, and a charity school, erected in 1752, for forty-four children. It lies forty-three miles east of Bristol, and seventy-four west of London.

Marlborough (John Churchill, duke of), one of the greatest generals and most famous statesmen of this, or perhaps any, country, was the son of Sir Winston Churchill (distinguished for his attacliment to Charles I. and II.), and was born at Ashe, in Devonshire, on Midsummer-day, 1650. He was educated in his father's house under the care of a clergyman : and, when only twelve years old, his father took him to court. He became page and favorite to the duke of York ; and, when sixteen years of age, was]iresented with a pair of colors in the guards. His first actual service was at the siege of Tangier, and from this time he seems to have devoted himself to tlie military profession. On his re-turn to England, he continued his attendance at court, and received from tlie king, as well as from the duke, marks of kindness and favor. The duchess of Cleveland made him a present of . £'5000, with which he immediately purchased an annuity; and his favor with tlie duke of York was secured by means of his sister, the mistress to that prince. In 1672, the duke of Monmouth commanding a body of F-nglish auxi-liariL's in the service of I'raiice, Mr. Ciiurchill attended him, and soon after became captain of grenadiers in his grace's regiment. He was en-568

gaged in all the actions of that campaign, and, at the siege of Nimeguen, so distinguished himself, that he obtained tlie particular notice of marshal Turenne. For his conduct at Maestricht he received the public tlianks of the king of Franco; and the duke of Monmouth, in relating to his father what had happened at the attack, acknowledged that he was indebted to captain Churchill both for his glory and his life. On his return home he was promoted to a lieutenant-colonelcy by the king, and tlie duke made him gentleman of his bedchamber. As a courtier, he now acted his part with great wariness. In 1669 and 1670 he attended the duke of York to the Low Countries, and into Scotland, where he received every respect from tlie nobility : a regiment of

dragoons was at tliis period given him; and in a short time afterwards he married the beautiful Sarair Jennings, then an attendant upon the princess Anne. In the spring of 1682 he suffered shipwreck with the duke of York in a passage to Scotland. In the same year he obtained other preferments ; and, on the accession of James II. to tlie throne, was sent ambassador to France, to notify the event. In a short time afterwards he was raised to an English peerage by the title of baron Churchill of Sundridge. He now with great prudence avoided public business, and, for a considerable time, hesitated to declare himself. At length, when it was impossible for a person of his rank to remain neuter, he joined in the invitation to the prince of Orange. To obviate the charge of ingratitude, it is generally believed that he had often declared, if the king attempted to overturn the established religion he would leave him. James, however, all this time, had no doubt of his fidelity, and entrusted him with the command of 5000 men to oppose the progress of the prince, ^^'hen first informed of his disloyalty, the infatuated king gave no credit to the report, till he, with the duke of Grafton and some other officers, withdrew from the royal quarters; and, by his advice, prince George of Denmark and the princess Anne took the same step. Lord Churcliill was received with due marks of respect by William, and in the ensuing year was rewarded with the earldom of JNIarlbo-rough. Having assisted at the coronation of that prince, he was soon after appointed to command the English forces in Holland, and displayed great military talents at the battle of Walcourt : the next year he served in Ireland with his usual reputation. The ensuing cam])aign he was on the continent, and penetrated tlie enemy's designs of besieging JVIons, in which the Dutch deputies had been deceived. Suddenly he received a message, that the king had no further occasion for his services, followed by his commitment to the tower, on a charge of high treason. He was bailed, and no proceedings were followed up against him, the principal author of the accusation, then a prisoner in Newgate, being convicted of perjury, and punished. It is now, however, believed that a correspondence had been carried on at this time between him and the exiled king. On the death of queen TSIary, Churchill was made a privy counsellor, and, in 1698, appointed governor to the duke of Gloucester : when the king is stated to hare said to him, ' My lord,

make him but what you are, and my nephew will be all I wish to see him.' He continued, during the remainder of this reign, to receive constant expressions of the royal regard.

On the accession of queen Anne m 1702 the earl of IVIarlborough was

created a duke, had a pension granted him by tiie queen for her life, and received the thanks of parliament for his conduct. His good fortune was clouded, however, by the loss of an only son, a youth ot eighteen, then at Cambridge, when he sought re-lief in the high duties of his high station. Of his ever-memorable campaigns, it has been said, that he never drew his sword but victory attended him. That of 1704 was, however, so celebrated, that we must -je allowed to exhibit it somewhat in detail. Having marched in iifty days from the frontiers of Holland, lie arrived, unexpectedly, at the lines of Schellenburgh, defended by 20,000 men, which he instantly attacked, and forced ; bringing oˆn the famous battle of Hocstett, or Blenheim, fought August 2nd, between the allied army, under his own command, and that of prince Eugene, and the French and Bavarians, commanded by marshal Tallard and the elector of Bavaria. Nothing could be more complete than the. victory of the allies. See Bi,enheim. The pride of the French monarch received a check which it never recovered ; the French were pursued till they crossed the Rhine; Landau was taken, and France itself was put in jeopardy. Tiie substantial expressions of his country's gratitude consisted in the public gift of the honor ot Woodstock and hundred of Wotton to his grace, and the erection of a magnificent palace for his abode. The duke employed the latter end of the next year in visiting the courts of Berlin, Hanover, and Vienna, where his talents for negociatioii were very useful to the common cause : the emperor Joseph presented him with the principality of]\Iindelheim, and the title of prince of the empire. At last he was able to meet the French under marshal Villeroy; and on the 11th of May, 1706, gained the decisive battle of Ramillies, followed by the reduction of all Brabant, Antwerp, Ostend, Menin, Dendermonde, and Aeth, The duke was now at the climax of his fame; and a bill was passed to settle his honors on the male and female issue of his daughters.

In 1707 he was opposed to the duke of Vendome, over whom he was able to gain no material advantage, and was much mortified, in a conference at Frankfort, at the coldness of the allies. On returning to England, he had the mortification of finding his duchess supplanted in the affections of lier mistress. Once more, in conjunction with prince Eugene, he made, in 1708, a successful campaign against the French, who were commanded by the dukes of Burgundy and Vendome. They were defeated at the battle o. Oudenard ; Lisle was afterwards invested, and, though it resisted several months, at length surrendered. The duke also recovered Ghent, Bruges, and several places of inferior consideration, taken by the French at the opening of the campaign. Next year, after an abortive negociation for peace, the duke of Marlborough was opposed to marshal 'illars, whom he

defeated at the battle of ˆlalplaquet, fought on the 31st ot

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August. This was one of the most destructive and decisive actions of the war. It cost the al-lies 18,000 men, killed and wounded : Mons was captured ; but the English nation began to be weary of such dear and unprofitable contests: a total breach had also now taken place between the duchess of Marlborough and the queen. The duke took the field again, however, early in 1710, and captured several places of importance ; but his visits to England became increasingly mortifying. His influence at court was destroyed, yet he seemed willing to retain his command in the army. At length he was charged, in the house of commons, with peculation, and removed from that command he had so nobly sustained. His enemies, jealous of his power, were determined to heap every possible indignity upon him : no serious charge, however, could be supported ; but, to escape the personal mortifications he was exposed to, he paid a visit, in 1712, to the Low Countries. Upon the accession of George I. he was again summoned to court, reinstated in the supreme military command, and his advice was taken and acted upon in the rebellion in 1715. This business vvas the last in which he engaged. His faculties now began to droop, and at length he sunk into second childhood. This great man died at Windsor Lodge, 16th of June, 1722, leaving behind Inm a numerous posterity by his four daughters.

MAR'LINE, «..•-? Fr. merlen ; Belg. ?«o;/-

Mar'linespike. Sirtg. Hemp-wreaths dipped or smeared with pitch : an iron for fastening ropes together.

Some the galled ropes with davvby marline bind. Or searcloth masts with strong tarpawling coats.

Vrxiden.

MARLOE (Christopher), an English dramatic author, who studied at Cambridge; but afterwards, turning player, trode the same,stage with Shakspeare. He wrote six tragedies, one of which, called Lust's Dominion, or the Lascivious Queen, was altered by Mrs. Behn, and acted under the title of Abdelazar, or the Moor's Revenge. Some time before his death he had made a considerable progress in a poem entitled Hero and Leander ; afterwards finished liy George Chapman. Anthony Wood represents liim as a deist, and gives tiie following account of his death: — Falling deeply in love with a -low girl, and

having for his rival a fellow in livery, Marioe, imagining that his mistiess granted him favors, was fired with jealousy, and rushed upon him in order to stab him with his dagger; .but the footman avoided the stroke, and, seizing his wrist, stabbed him with his own weapon ; of which wound he died in 1593.

MARLOW, a town of Buckinghamshire, Tinder the Chiltern Hills, in a marly soil. It is a large borough, and has a bridge over liie 'Jliamcs, near its conflux witii Wycomb ; a handsome church and town hall, and a charity school for twenty boys. It first sent members to parliament in the reign of Edward 11. Bone lace is its chief manufacture. The Thames brings goods hitiier from the neighbouring towns, great quantities of meal and malt from High Wycomb, and beech from several parts of the country. In the neighbourhood are fre(juent horse races;

and here are several com and paper mills, particularly on the river Loddon, between this town and High Wycomb. Tliere are, besides, the Temple mills, for making tiiimbles, and for pressing oil from rape and flax seeds. Its market is on Saturday, and fair October 29th. It is seventeen miles soutii of Aylesbury, and thirty-one west of London.

MAR'MALADE, 72.5. Yr. marmaluie ; Port. mariiielada ; Span, mermeluda : perhaps of Port. jiiarmels, a quince. A conserve of oranges or quinces.

Mannalade is the pulp of quinces bailed into a consistence with sugar : it is subastringent, grateful to the stomach. Quincy.

MARMARICA, a country of Africa, anciently inhabited by the Lybians. It was bounded on the east by Egypt, on the west by Cyrenaica, on the south by Sahara, or tiie desert of Lybia Interior, and on the north by the Mediterranean ; and was reckoned a part of Egypt. There is no distinct history of the country.

MARMONTEL (John Francis), a celebrated miscellaneous French writer, was born in 1723 at Bort, a small town in the Limousin. The eldest son of a large family, in a humble situation of life, he owed to his mother his early mental cultivation; and by her means he was sent to a Jesuits' College. At the age of fifteen his father placed him with a merchant; but, hav-ing expressed his dislike of h'is 'situation, he was enabled to obtain admission into the college of Clermont, where he took pu])ils ; and, his fatlier soon after dying, he took upon himself

the care of the family. He now engaged as a teacher of philosophy at Toulouse, and became a distinguished candidate for the prizes at the Floral games, which acquired him the notice of 'oltaire. At his recommendation he went to Paris in 1745, and after some vicissitudes brougiit out a tragedy in 1748, which at once raised him to celebrity as an luthor. The less honorable fame of various amours belongs also to this part of Marmontel's life : the celebrated actress, mademoiselle Clairon, was tiie heroine of one of them. Having been recommended to madame Pompadour, he was appointed secretary of the royal buildings, under her brotlier, the marquis de Marigny, and now wrote liis well known tales to assist his friend Boissy, then editor of the Mercure de France. On the death of the latter it was given to our author, who resigned for it his post of secretary, and took up his abode with madame Geofl'rin. He afterwards lost this paper by repeating in company a joke upon the duke d'Aumont, and was even committed to the lias-tile, for some days, because he would not cive up tlie autiior. In 17tJ3, after much vexatious opposition, he succeeded Marivaux as a member of the French Academy. His next production was Belisaire, which, -in consequence of its liberal sentiments, was censured by tiie Sorbonne. lie now worked up several little stories into comic operas, which were all acted willi great success; and was so far restored to favor, that on the death of Duclos, without any solicitation en his own part, he was appointed to succeed him, as iiisto-riographer of France. At the ag(> of fifty-four h-' married a young lady of eigliteen. On the

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death of d'Alembert, in 1783, he was elected secretary to the academy. On the breaking out of the revolution lie was for a short time a mem-ber of the electoral assembly; but, his income being diminished, he retired, when the political confusion increased, to a cottage in Normandy. Here he engaged in the composition of a series of tales of a serious cast ; together with Memoirs of his own Life. In April 1797, he was chosen representative to the National Assembly, for the department of the Eure. But, the election being declared null, he finally retired to his cottage, where he died of an apoplexy in December 1799, in the seventy-seventh year of his age. Marmontel's character has been ably drawn in a modern periodical work. E. R. p. 386, 7.

MAli'MUSET, n. s. Fr. marmoustt. is. small

monkey.

I will instruct thee how To snare the nimble marmozet.

Shakspeare. Tenipeit. MARMOT, or > j^^j See below. Marmot TO, n.s. S

The marmotto, or mus alpinus, as big or bigger than a rabbit, which absconds all winter, doth live upon its own fat. Ray.

Marmotto, Marmota, or Marmot, a genus of quadrupeds of the class mammalia, and order of glires, ranked by Linna;us under the genus of mus, or murine quadrupeds, but separated and described as a distinct genus, under the name of arctomys, by Pennantˆ Gmelin, and Kerr. See Arctomys.

MARNE, The, a considerable river of France, which rises about three miles south of Langres, in the department of the Upper Marne ; and passing by Chaumont, Joinville, Chalons sur Marne, Epernay, Chateau, Tierny, Meaux, Lagny, and Pont de St. Maur, falls into the Seine at Charenton. This river is navigable from St. Dizier to its mouth ; and serves for the transport of the wines of Champagne, vegetables, corn, fruit, hay, timber both whole and in planks, firewood, charcoal, iron, and different sorts of stone. Its course is about 240 miles, in which it receives the Rognon, the Orgain, the Ourcq, the two Morins, and several other streams.

Marne, a department of France, consists of a great part of the old province of Champagne, and takes its name from the river Marne, which divides it nearly into two equal parts. The principal place of this prefecture is Chalons ; it contains five arrondissements or subprefectures, Chalons having 36,995 inhabitants ; Epernay 83,519; Rheims 108,176; St. Mene-hould 32,617; and Vitry sur Marne 48,137; comprising a total population of 309,444 souls, on a superficial extent of 3645 square miles. It is in the second military division, yielding a revenue of 16,290,000 francs, belongs to the royal court at Paris, has an archbishopric at Rheims, and is divided into three electoral arrondissements, which send five members to the chamber of deputies. This department is bounded on the north by that of the Ardennes ; on the east by that of the Meuse ; on the south liy those of the Upper Marne and tiie Aube,

and on the west by those of the Seine-et-Marne and the Aisne.

Two-thirds of the surface of this department present only vast plains, covered with an almost barren soil ; attempts have been made for years to plant these chalky and dry lands with wild pines and Scotch firs, and there is some reason to hope that such attempts will succeed, and that one day these immense districts where we scarcely meet with a single shrub, or a few poor withered trees, will be covered with fine woods, that before the end of the century may become a source of great riches to this part of France. The remainder of this country although generally unproductive in corn, yields rye of a tolerably good quality, barley and other small grain, pot herbs and excellent fruit. There are some pools well stocked with fish, and on the banks of the Marne numerous meadows, with extensive forests rising beyond them. The greatest riches of this department, however, consist in its vines, which produce wines justly renowned for their quality, and much in request among all tlie surrounding nations. These are cultivated in all the arrondissements ; but it is in those of Rheims and Epernay tliat the most esteemed red and white Champagne is made. Their wines are distinguished into those of the river, the best of which are those of Marcuil, Ay, Dizy, &c., and the inferior sorts those of Avenay, Menil, Avise, &c. ; and those of the mountain, such as those of Ambonay, Bouzy, Villers, Marmery, &c. ; of which those of Sillery are the most esteemed. The soil, which is cultivated with horses, yields a very insufficient supply for its population; there are 81,589 hectars of forest land (chiefly oak and birch), and 20,600 of vineyards, producing twenty francs sixteen centimes per hectar of cultivated ground. The hectar is one-fifth less than an English acre.

Besides the productions already mentioned, there are various sorts of vegetables, onions, melons, mushrooms, white mustard, rape seed, chestnuts, curious plants, hemp, flax, different sorts of forage, game, horses, black cattle, merino and other sheep, cashmere goats, and bees. They have also turf pits and fine quarries of the best millstone in Europe, graystone, chalk, and white and gray potters' clay. There is a botanical garden at Chalons. The inhabitants carry on manufactures of woollen counterpanes, cloths, coarse stuffs called eversins, merinoes, flannels, shawls in imitation of cashmere, hats, bolting cloths, horse girths, leather, paper, wax candles, soap, oil, and gingerbread. They have also large woollen and cotton spinning factories, dye houses, potteries of different kinds, glass houses, forges and blast furnaces, as well as chemical laboratories for various acids. There is likewise a royal school for arts and manufactures. A considerable trade is carried on in the above articles, in colonial produce, and wood and charcoal for the supply of the metropolis.

The principal rivers of this department are, the Marne and the Aube navigable ; the Aisne, the Suippe, the Vesle, the Ardre, the Cole, the Auge, and the Great and Little INIorin. It is crossed by the great roads of Troyes, Chaumont, Metz, Laon, and Paris.

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Marne, The Upper, a department of France, is formed out of the former province of Champagne, and takes its name from its physical situation, the river Marne rising in it. The chief place of this prefecture is Chaumont, and it is divided into three arrondissements, Chaumont containing 77,295 inhabitants ; Langres 94,435 ; and Vassy 61,528; being a total population of 233,258 souls, on a superficial extent of 2835 square miles. It also contains twenty-eight cantons and 552 communes, forms part of the eighteenth military division, yields a territorial revenue of 13,652,000 francs, has a royal court, or court of the second order, and a bishopric at Dijon, and consists of two electoral arrondissements, sending four members to the ciiamber of deputies. This department is bounded on the north by that of the Meuse, on tlie north-west by that of Marne, on the east by tliat of the Vosges, on the south-east by that of the Upper Saone, on the south-west by that of Cote d'Or, and on the west by that of the Aube.

This country is generally elevated and intersected by many small mountains, at the foot of which several rivers take their rise. Between these are fine valleys abounding in excellent pasturage, plains fruitful in grain of every kind, and small hills covered with vines, that yield tolerably good wine. Forests of considerable extent spread over a great part of this territory ; but its principal riches consist in its iron mines, which are both very abundant, and excellent in the (juality of the metal ; fifty-one blast furnaces, supplied from these mines, are constantly at work, and furnish more than 320,000 quintals of cast iron annually ; and these, through the me-dium of forges, flatting mills, foundries, &c., supply every year 190,000 quintals of forged iron and steel articles, that employ the labor of 6000 workmen. The soil is cultivated with horses, and yields a sufficient supply for its inhabitants, containing 215,910 hectars of forest land, chiefly oak and beech, and 17,600 of vineyards, every hectar of cultivated ground producing about sixteen francs ninety-three centimes.

This country also supplies dry vegetables, turnips, rape seed, black and white mustard, mushrooms, hemp, dyers' weed, gentian, and other plants, cherry and walnut trees, roebucks, stags, wild boars, foxes, wolves, small game, fine fresh-water fish, horses, good milch cows, small sheep renowned for the delicate flavor of their flesh, goats, bees, and turkeys. It has quarries of marble, mock alabaster, grindstones, paving stone, gypsum, potters' clay, marl, pyrites, and

turf. Bourbon ne les Bains is much frequented on account of its warm springs; and at Montier-en-Der there is a depot of standard measures. The inhabitants have manufactories of drugget, leather gloves, knit woollen stockings, much esteemed cutlery, ironmongery, brandy, and wax candles, as well as bleaching houses for wax, woollen yarn factories, brass foundries, vinegar breweries, lanyards, curriers' shops, paper mills, Sec. Tiiey likewise carry on a considerable trade in all the above articles. The principal rivers that water this department

are, the I\Iarne, which is here navigable, tlie Meuse, the Aube, the Aujon, the Blaise, and the Ilognon ; and it is traversed by the great roads of Troyes, Dijon, Besanyon, Vesoul, Nancy, and Bar-le-Duc.

MAROBUDUM, in ancient geography, the royal residence of Marobuduus, king of the Mar-comanni ; and hence the appellation. Supposed now to be Prague the capital of Bohemia.

MAROLLES (Michael de), born in 1600, was the son of Claude de Marolles, a French military hero. Michael entered early into the church, and by the interest of his father obtained two abbeys. From 1619, when he published a translation of Lucan, to 1681 the year of his death, he was constantly employed in writing and printing ; but his translations of ancient Latin writers, especially the poets, are deficient in taste and spirit. He was certainly, however, a man of great learning, and was one of the first who paid any attention to prints. He collected about 100,000, which made part of the ornaments of the late French king's cabinet ; and are now in the National Museum. He wrote memoirs of his own life, which were published by the abbe Goujet, 1755, in 3 vols.

MARONITES, in ecclesiastical history, a sect of eastern Christians, who follow the Syrian rite, and are subject to the pope ; their principal habitation being on Mount Libanus. Mosheim says, that the doctrine of the Monothelites, condemned by the council of Constantinople, was adopted by the Mardaites, a people who inhabited Mounts Libanus and Antilibanus, and who, about the conclusion of the seventh century, were called Maronites, after John Maro their first bishop, who was originally a monk in the famous convent of St. Maro, upon the banks of the Orontes. Tyrins and others inform us, that the Maronites retained the opinions of the Monothelites until the twelfth century, when, renouncing their doctrines, they were re-admitted, in 1182, into the Roman church. Faustus Nairon, a Maronite settled at Rome, has published an apology for Maron and the rest of his nation.

He says that they took their name from Maron, who lived about A. D. 400, and is mentioned by Chrysostom, Theodoret, and in the Menologium of the Greeks. He adds, that the disciples of this Maron spread themselves throughout all Syria; that they built several monasteries, and, among others, one that bore the name of their leader; that all the Syrians who were not tainted with heresy took refuge among them ; and that for this reason the heretics of those times called them Maronites. Mosheim says, that the subjection of the Maronites to the spiritual jurisdiction of the Roman pontiff" was agreed to, with this express condition, that the pope should not pretend to change or abolish any thing that related to their ancient rites, moral jirecepts, or religious ojiinions ; so that in reality tiiere is nothing among the Maronites that savors of popery, if we cxrcpt their attachment to the Roman pontiff, who pays very dear for their friendship. For, as the Maronites live in the utmost poverty, under the tyrannical yoke of tlie Mahommedans, the jiopc is under the necessity of furnishing them with such subMAR

sidles as may appease tlieir oppressors, procure a subsistence for their bishop and clergy, provide for the support of tlieir churches and the exercise of public worship, and contribute in general to lessen their misery. One body, however, of the nonconforming Maronites retired into the valleys of Piedmont, where they joined the Waldenses ; another, above 600 in number, with a bishop and several ecclesiastics at fheir head, fled into Corsica, and implored the protection of the republic of Genoa against the violence of the inciuisitors. Tlie Maronites have a patriarch, who resides in the monastery of Cunnubin, on INIount Libanus, and assumes the title of patriarch of Antioch, and the name of Peter, as successor of that apostle, lie is elected by the clergy and the people, but confirmed by the pope. lie observes a perpetual celibacy, as well as the bishops his suffragans ; but the rest of the ecclesiastics are allowed to marry before ordination, though the monastic life is in great esteem among them. Their monks, are of tlie order of St. Anthony, and live in the most obscure places in the mountains. As to their faitli, they agree principally with the eastern church. Their priests do not say mass singly, but all together, standing round the altar. They communicate in unleavened bread; and the laity partake in both kinds. In Lent they eat nothing after sun-rising : their other fastings are very numerous.

To MAROON, to put one or more sailors ashore upon a desolate island.

M Alios VA3ARIlELY,0rSzEKELYVASARHELy,

or Neumark, a large town of Transylvania, the capital of the district of Marosch. It is agreeably situated, partly on an eminence surrounded with walls, and partly in an open plain. It has several elegant buildings : among others, the pa-lace of count Teleky, with a library of 60,000 volumes, and a good collection of minerals, which are open to the public. The number of inhabitants is about 10,000, principally Calvinists; and the town is the seat of tiie college belonging to the Calvinists, founded originally at ˆV'eissenburg. It has also a Catholic gymnasium and seminary. Fifty-two miles north-east of Carlsburg.

MA ROT (Clement), the first Frtench poet of his age, was born at Cahors in l-i9o; and was the son of John Marot, valet de ciiambre to Francis I., and poet to queen Ann of Brittany, lie enjoyed his father's

post, and in lj‘21 followed Francis I. into Italy, and was wounded and taken prisoner at the battle of Pavia. On his return to Paris he was accused of heresy, and imprisoned ; but delivered by Francis I. He retired to Navarre, and afterwards to Ferrara, and in 1536 returned to I’aris ; but, declaring for the Calvinists, he was obliged to fly to Geneva: and, retiring to Piedmont, died in Turin in 1,544, agpf} fifty. He translated part of the psalms into verse which were continued by Beza, and are still sung in tlie Pro’testant churches abroad.

MAlKiUARD (Freher), an eminent German civilian, born at Augsburg in 1.56.’>. He studied at Bourges, under the learned Cujas ; and acquired great skill in literature and law. At his return to Germany, he became counsellor to the

elector palatine, and professor of law at Heidel-burg; and was afterwards sent by the elector Frederic IV\, as his minister, into Poland, to Mentz, and several other courts. He died at Ileidelburg in 1614. He wrote many works which are esteemed; the principal of which are, 1. De Re INIonetariˆ Veterum Romanorum, et hodierni apud Germanos Imperii. 2. Rerum BohemicarumScriptores. 3. Rerum Germanico-rum Scriptores. 4. Corpus Historic Franciae, &c.

MARQUE, or L?:tters of Mauque, in military affairs, are letters of reprisal, granting the subjects of one prince or state liberty to make reprisals on those of another. They are so called from the German marcke, i. e. limit, frontier : as being jus concessum in alterius principis marckas sen limites transeundi, sibique jus faciendi ; as being a right of passing the limits or frontiers of another prince, and doing one’s self justice. Letters of marque are also extraordinary commissions granted by authority for reparation to merchants taken and despoiled by strangers at sea; and reprisals are only the retaking, or taking of one thing for another. The form in these cases is, the sufferer must first apply to the lord privy seal, and he shall make out letters of request under the privy seal ; and if, after such request of satisfaction made, the party required do not, within convenient time, make due satisfaction or restitution to the party grieved, the lord chancellor stiall make him out letters of marque under the great seal ; and by virtue of these he may attack and seize the property of the aggressor nation, without hazard of being condemned as a robber or pirate.

INIakquesas, Marquis of Mendoza’s Is-LAXDS,orI\lENDOCA’s IsLANDs, a cluster of islands discovered by Mendana, a Spanish navigator, in

1595, in the South Pacific Ocean, who named them Marquesas de Mendoˆa, in honor of Men-doˆa, viceroy of Peru. Captain Cook touched at them in 1774 ; and they have been since visited. They consist of five in number : San Pedro, or 0-Niteo, in the language of the country ; Santa Christina, or Wahitaho ; and La Dominica, or 0-hivahoa, fi)rming a group ; La Madalena, at the distance of eight leagues to the south by east, from the middle of the group ; and Hood's Island, distant five leagues and a half from the most eastern point of La Dominica. This group extends from 138° 45' to 140° 30' of W. long., and from b" 30' to 10° 30' S. lat. They have a bold and almost rugged as-pect. Some voyagers represent them as fertile and beautiful in the extreme ; while later visitors describe them as high and mountainous, of a barren aspect, and exhibiting numerous volcanic appearances. In most, if not in all of them, there are bays, or coves, which afford harbour for shipping ; but access to them is difficult, owing to the frequent sudden squalls of wind. According to captain Cook, the trees, plants, and other productions of these islands are nearly the same as those of the Society Isles. The inhabitants are said to be a beautiful race, but dirty in their habits. Their canoes are very far inferior in structure and appearance to those of the Otabei-tans, and composed of three pieces, rather rudely wrought, badly sewed together, and leaking

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throughout. They are from twenty to thirty feet long, by a foot or eighteen inches broad ; their stem being terminated by a projecting piece, which imitates very imperfectly the flattened liead of a fish : t! ie stern is formed by two planks four inches in lliickness, placed an-end, and rising under tlie figure of an S, elongated and reclined. Sometimes two of these canoes are joined together. The inhabitants have been estimated at about 40,000.

MARQUETRY, or inlaid-work, is composed of pieces oi hard fine wood of dirterent colors, fastened ;n thin slices on a grou.nd, and sometimes enriched with other matters, as tortoise-shell, ivory, tin, and brass. Tliere is another kind of marquetry made, instead of wood, of glasses of various colors ; and a third, wliere nothing but precious stones and the ricliest marbles are used : but these are more properly called mosaic-work. The art cf inlaying is .very ancient ; and is supposed to have passed from t!ie east to the west as one of the spoils brought by the Romans from Asia. Indeed it was then very simple, nor did it arrive at any tolerable perfection till the fifteenth century among the Italians; It however arrived at its height in the seventeenth century among the French. Till John of 'erona, a contemporary with Raphael, the finest works of this kind were only black and white, white are what we now call Marescoes ; but he stained his wood with dyes or boiled oils, which penetrated it. He went no farther, however, than representing buildings and perspectives, which require no great variety of colors. Those who succeeded him not only improved his invention of dyeing the wood, by a secret which they found of burning them without consuming, which served exceedingly well for the shadows, but had also the advantage of a number of fine new woods of naturally bright colors, by the discovery of America. With these assistances the art is now capable of imitating almost any thing; whence some call it the art of painting in wood. The wood to be used, being reduced into leaves, of the thickness of a line, is either stained with some color, or made black for shadow ; the contours of the piece are formed according to >the parts of the design they are to represent. The last is the most difficult part of marquetry, and that wherein most patience and attention are required. The two chief instruments used herein are the saw and the vice ; the one to hold the matters to be formed ; the other, to take off re-dundances from the extremes. The vice is of wood, having one of its chaps fixed ; the other moveable, and isiopened and shut by the foot, by a cord fastened to a

treadle. The leaves to be formed (for there are often three or four of the same kind formed together) are put within the chaps of the vice, after being glued on the outermost part of tlie design whose profile they are to follow : then the workman, pressing tlie treadle, and thus holding fast the piece, with his saw runs over all the outlines of the design. — By thus joining and forming three or four pieces together, they not only gain time, but the svood is likewise the better enabled to sustain the efforts of the saw; which, how delicate soever it may be, and how lightly soever the workman may conduct it,

without such a precaution would be apt to raise splinters, to the ruin of the work. When the work is to consist of one single kind of wood or of tortoise-shell, on a copper or tin ground, or vice veri;\, they only form two leaves on one another, i. e. a leaf of metal, and a leaf of wood or shell : this they call sawing in counter parts ; for, by filling the vacuities of one of the leaves by the pieces coming out of the other, the metal may serve as a ground to the wood, and the wood to the metal. All the pieces thus formed with the saw, and marked to know them again, and the shadow given in the manner already mentioned, they veneer or fasten each in its place on the common ground, using for that purpose the best English glue. The whole is put in a press to dry, planed over, and polished with the skin of the sea dog, wax, and shave-grass, as in sim-ple veneering ; with this difference, however, that in marquetry the fine branches, and several of tl.e more delicate parts of the figures, are touched up and finished with a graver.

INIA'RQUIS, 7J. s. ˆ Fr. inarqids; Lat. mar—

Mar'qiisate. S c/iio. In England one of

the second order of nobility; next in rank to a

duke: Shakspeare uses it for marchioness : the

state or dignity of a marquis.

You shall have Two noble jwrtners with you : the old duchess Of Norfolk, and the lady marquess Dorset.

Sbakspeare, None may wear ermine but princes, and there is a ceitain number of ranks allowed to dukes, inarquisses, and earls, which they must not exceed.

Peacham on Drawing.

Marquis. The office of a marquis was to guard the frontiers and limits of the kingdom, which were called the marches, from the Teutonic word marche, a limit ; as, in particular, were the marches of Wales and Scotland, before their union with England. The persons who had command there were called lords marches, or marquesses; whose authority was abolished by stat. 27 Hen. VIII. c. 27, though the title had long before been made a mere honor, Robert 'ere earl of Oxford, being created marquis of Dublin by Richard II., in the eighth year of his reign. A marquis is created by patent ; his mantle is double ermine, three doublings and a half; his title is most honorable; and his coronet has pearls and strawberry leaves intermixed round, of equal height.

MAllRACCI (Lewis), a very learned Italian, bornatLucca in 1612. He entered into the congregation of regular ‘clerks of the iiiother ot God,’ and distinguished himself early by his learning and merit. He taught rhetoric seven years, and attained the knowledge of the Greek, the Hebrew, the Syriac, the Chaldee, and the Ara-bic ; which last he taught at Rome. Pope Innocent XI. chose him for his confessor. He died at Rome in 1700, aged eighty-seven. He was the author of several tracts in Italian ; but tlie work which has made him deservedly famous is his edition of the Koran, with a Latin version, notes, and confutation of his own. It was beautifully printed in 2 vols, folio, at I’adua in 1G98. His Latin version of it, with notes, and a synop-sis of the Mahommedan religion, was published

by Heineccius at Leipsic, 1721, in 8vo. Mar-racci had also a hand in the Biblia Sacra Ara-bica ; Roma, 1671, in 3 vols.J”olio

MAR’RIAGE, n.». ■

Mar’riageable, adj.

Mar’RIAGE-BEI), 71. s. Mar’ RIAGE-CU AMBER,

Mar’riage-day, Mar’riage-iiour, Mar’riage-tie, Mar’uied, adj. Marry, v. n. & v. a. it for capable of union.

Fr. marriage; Ital.

maritaggio ; barbarous Lat. maritagium, of Lat. inarito, to)>marry. The conjugal union: marriage-I able is of age, or fit I to be married : Mil-J ton beautifully uses See below. Married

IS conjugal; connubial; belonging to the marriage state: to marry, to enter into the conjugal state. The numerous compounds of this word are obvious in their meaning.

Let them marry to whom they think best.

Numbers xxxvi. 6. As a mother shall she meet him, and receive him as a wife married to a virgin. Ecclus. xv. 2.

Thou shall come iato the marriage cliamber.

Tob. vi. 16. Have you ever seen pure rose-water kept in a crys-stal glass ? How fine it looks, how sweet it smells, while the beautiful urn imprisons it! Break the glass and let the water take its own course ; doth it not embrace the dust, and lose all its former sweetness and fairness ? Truly so are we, if we have not the stay, rather than the restraint of marriage.

Sir P. Sidney. Neither her worthiness, which in truth was great, nor his own suffering for her, which is wont to en-dear affection, could fetter his fickleness ; but, before the marriage-day appointed, he had taken to wife Baccha, of whom she complained. Sidney.

You’d think it strange if I should marry her.

Shakspeare. The marriage with his brother’s wife Has crept too near his conscience. Id.

I by the honour of my marriage-bed, After young Arthur claim this land for mine. Id. When Augustus consulted with Mecaenas about the ;Han-wˆe of his daughter Julia, ˆlecsnas took the liberty to tell him, that he must either jnarry his daughter to’ Agrippa, or take away his life ; there was no third vv-ay, he had made him so great. Bucon.

The French king would have the disposing of the marriage of Bretagne, with an exception that he should not 7narry her himself. Id.

To those whom death again did wed. This grave's the second marriage-bed. For though the hand of fate could force 'Twixt soul and body a divorce, It could not sever man and wife. Because they both lived but one life. Crashau-. Some married persons, even in their marriaye, do tjetter please God than some virgins in their state of virginity : they, by giving great example of conjugal affection, by preserving their faith unbroken, and by educating children in the fear of God, please God in a higher degree than those virgins whose piety is not answerable to their opportunities. Taylor.

There on his arms and once-loved portrait lay, Thither our fatal marriayc-bed convey. Denham. They led the vine To wed her elm : she spoused, about him twines Her marriageable arms, and with her brings Her dower, the adopted clusters, to adorn His barren leaves. Milton.

Every wedding, one with another, produces four children, and that is the proportion of children,

which any marriageable man or woman may be presumed shall have. Graunt.

\irgil concludes with the death of Turnus ; for, after that diffic^ulty was removed, /Eneas might marry, and establish the Trojans.

Dryden's Dufresnoy, I propose that Palamon shall be In marriage joined with beauteous Emily,

Dryden.

Give me, to live and die,

A spotless maid, witliout the marriage-tie. Id.

Thus have you shunned the married state. Id.

I am the father of a young heiress, whom I begin

to look upon as marr'uigeable. Spectator.

In a late draught of marrm^e-articles, a lady stipulated with her husband, that she shall be at liberty to patch on which side she

pleases. Id.

What! shall the curate controul me 1 Tell him, that he shall marry the couple himself.

Gay's What d'ye call it. Virgin, awake ! the marriage-hour is nigh. Pope. When the girls are twelve years old, which is the marriageable age, their parents take them home.

Swift. Were a man not to marry a second time, it might be concluded that his first wife had given him a disgust to marriage; but, by taking a second wife, he pays the highest compliment to the first, by showing that she made him so happy as a married man, that he wishes to be so a second time…lolinson.

A thousand hearts beat happily ; and when IMusic arose with its voluptuous swell. Soft eves looked love to eyes which spake again. And all went merry as a marriage-bell ; But hush ! hark ! a deep sound strikes like a rising knell ! Byron.

Marriage is a contract, both civil and religious, between a man and a woman, by which they engage to live together in mutual love and friendship for the ends of procreation, &c. See jMoral Philosophy. It is part of the law of nations, and is in use among all people. The Romanists account it a sacrament. The first inhabitants of Greece lived together without marriage. Cecrops, king of Athens, is said to have been the first author of this honorable institution among that people. After the commonwealths of Greece were settled marriage was very much encouraged by their laws, and the abstaining from it was discountenanced and in many places punished. The Lacedemonians were remarkable for their severity towards those who deferred marriage beyond a limited time, as well as to those who wholly abstained from it. The Athenians had an express law, that all commanders, orators, and persons intrusted with any public affair, should be married men. Polygamy was not generally tolerated in Greece. The time of marriage varied in different places. The Spartans were not permitted to marry till they arrived at their full strength, that the children might be strong and vigorous : and the Athenian laws are said to have once ordered that men should not marry till thirty-five years of age. The season of the year was the winter, and particularly the month of Ciamelion, or .January. The Greeks thought it scandalous to contract marriage within certain degrees of consanguinity ; whilst most of the barbarous nations allowed incestuous mixtures. j\Iost of the Grecian states, especially such as made any figure, required their citizens.

should match witli none but citizens, and the children were not allowed to marry without the consent of their parents. The usual ceremony in promisir fidelity was kissing each other, or giving their right hand, which was a general form of ratifying all agreements. Before the marriage could be solemnized the gods were to be consulted, and tiieir assistance implored by prayers and sacrifices, which were offered to some of the deities that superintended these affairs, by the parents or nearest relations of the persons to be married. When the victim was opened the gall was taken out and thrown behind the altar, as being the seat of anger and malice, and therefore the aversion of all the deities who had the care of love, as well as those who became their votaries.

The Romans, as well as the Greeks, disallowed polygamy : a Roman might not marry a wo-man who was not a Roman. They esteemed the kalends, nones, and ides of every month unlucky for the celebration of marriage, as well as the feast of the parentalia, and the whole month of May. The most happy season in every respect was that which followed the ides of June. The Roman laws speak of secon d marriages in very hard and odious terms : Matre jam secundis nuptiis fu-nestata, L. iii. C. de sec. nuptiis. By these la«s it was enacted, that the effects of the husband or wife deceased should pass over to the children, if the survivor should marry a second time. By the law Hac edictali (Cod. de sec. nupt.), the survivor, upon marrying a second time, could not give the person he married a portion more than equal to that of the children. In the primitive church the affected respect to chastity was carried so high, that a second marriage was accounted a kind of legal whoredom, or a species of bigamy ; and there are some ancient canons which forbid the ecclesiastics from being present at second marriages. Marriage, by the Mosaic law, was subject to several restrictions; thus, by Levit. xviii. 15, a man was forbidden to marry his brother's widow unless he died without issue; in which case it became enjoined as a duty. So he was prohibited to marry his wife's sister, while she was living, ver. 18 ; which was not forbidaen before the law, as appears from the instance of Jacob. The ancient Roman law is silent on this

head ; and Papinian is the first who mentions it, on occasion of the marriage of Caracalla. The lawyers who came after him stretched the bonds of affinity so far, that they absurdly placed adoption on the same footing with nature.

Marriage-laws. — In our general article Law the analysis of the voluminous system of English jurisprudence was necessarily very concise. W'e now propose to fill up an essential part of the outline, and in the present, and the subsequent articles of Mastf.r anu SKIlVAˆT, Paulnt anu Child, &c., to furnish our readers with a compendium of ' the rights of persons in their private relation,' or, in other words, the domestic law. We collect a considerable part of our materials from Sir William Blackstone's (,'ommentaries, which, however, v/e venture to dis])Ose in a diflerent order, and to which we have added, from the recent acts of parliament, and the numerous reports of cases adjudged in the several

courts of law and equity, a considerable mass of information, that, we trust, will be generally interesting or useful.

Sect. I. — Of the Legal Requisites of jNIarriage.

The law of England considers marriage in no other light than as a civil contract. The holiness of the matrimonial state is left entirely to the ecclesiastical law. The temporal courts have no jurisdiction to consider unlawful marriage as a sin, but merely as a civil inconvenience. The punishment, therefore, or annulling of incestuous or other unscriptural marriages, is the province of the spiritual courts. Taking it thus in a civil point of view the law treats it as it does all other contracts : allowing it to be good and valid in all cases where the parties at the time of making it were, in the first place, willing to contract; secondly, able to contract; and lastly, actually did contract, in the proper forms and solemnities required by law.

First, They must be willing to contract. ' Con-sensus, non concubitus, facit nuptias,' is the maxim of the civil law in this case : and it is adopted by the common lawyers, who indeed have borrowed (especially in ancient times) al-most all their notions of the legitimacy of marriage from the canon and civil laws.

Secondly, They must be able to contract; that is, they must labor under no disability or incapacity.

Tiiirdly, The parties must not only be willing and able to contract, but

must actually contract themselves in due form of law, to make it a good civil marriage. Any contract made per verba de praesenti, or in words of the present tense; and, in case of cohabitation, per verba de futuro also, between persons able to contract, was formerly deemed a valid marriage to many purposes; and the parties might be compelled in the spiritual courts to celebrate it in facie ecclesia;. But these verbal contracts are now of no force, to compel a future marriage. Neither is any marriage at present valid, that is not celebrated in some parish church, or public chapel, unless by dispensation from the archbishop of Canterbury. It must also be preceded by publication of banns, or by license from the spiritual judge. Many other formalities are likewise prescribed by the statutes, the neglect of which, though penal, does not invalidate the marriage. It is iield to be also essential lo a marriage, that it be performed by a person in holy orders, though the intervention of a priest to solemnize this contract is merely juris positivi, and not juris naturalis aut divini. But, as the law now stands, we may upon the whole collect, that no marriage by the temporal law is ipso facto void, that is celebrated by a person in orders, — in a parish church, or public chapel (or elsewhere by special dispensation), in pursuance of banns or license, between single persons— consenting, — of sound mind,— and of the age of twenty-one years; — or of the age of fourteen in males and twelve in females, vvitl. consent of parents or guardians, or without it in case of widowhood. And no marriage is voidable by the ecclesiastical law after the death of either of the parties; nor during their lives, un

less for the canonical impediments of pre-con- tract (if tliat indeed still exists), of consanguinity, and of affinity ; or corporal imbecility subsisting previous to the marriage.

We deem it necessary to add, to this general outline, some particulars collected from the several marriage acts which have been passed during the present reign.

1. According to the late act, 4 Geo. IV. chap. 76, the bmitis must be published in an audible manner in the parish ciiurch, or a public

chapel belonging to the parish wiiere the parties re-side, upon three Sundays preceding the marriage, during the morning service, immediately after the second lesson ; or the evening service if there be none in the morning. If the parlies reside in different parishes the banns are to be published in both. The names, places, and time of abode of the parties, must be given to the minister seven days prior to the publication.

2. By the 5 Sc G Cieo. IV., marriages are declared legal which are solemnized in any otlier place than the parish church and chapel, to which other place the bishop of the diocese may have granted a license for the solemnization of marriages.

3. If the marriage be not solemnized within three months after the first publication, it is necessary they should be republished. The same period is prescribed in the case of an intended marriage by license.

4. The license can only be granted for the parish or cliapelry in which one of the parties has resided for fifteen days next before the granting of the license. One of the parties must personally swear before the surrogate that he or she believes there is no impedimentof kindred, or alliance,or any other lawful cause,nor any suit pending to hinder the marriage. It must also be sworn that one of the parties has had his or her usual place of abode for fifteen days immediately preceding the license within the parish or chapelry, where the marriage is to be solemnized. In case either of the parties, not being a widow or widower, is under twenty-one years, it must be sworn that the consent of the person, whose consent is requisite, has been obtained. And, if there be no person having authority to consent, then upon oath to that effect, by the party requiring the license, such license may be granted.

5. Bi/ special license, or dispensation, from the archbishop of Canterbury, marriages may be celebrated at a private house, out of canonical hours in the evening, or in other parish churches than where one of tlie parties resides.

6. The solemnization is prohibited during Lent and on fasting days ; but persons may marry under license during Lent although the banns cannot then be published.

7. When the solemnisation has taken place, whether after publication of banns, or under license, it is not only unnecessary to give evidence tiiat the usual place of abode of one of the parties for the lime required by the act was in the parish where the marriage took place, but no evidence can be received to the contrary in any suit regarding

the validity of such marriage. 4 Geo. IV. chap. 76, sec. 26.

8. Marriages must be solemnized before two

or more credible witnesses besides the minister who celebrate;? the same. Ibid. sec. 28.

9. Immediately after the celebration of the marriage an entry is to be made in the Register book, in which must be expressed that the marriage was by banns or license, and, if the parties were under age, with consent of the parents, &c. ; such entry to be signed by the minister, and by tiie parties married, and attested by the two witnesses. Ibid.

10. Grettui Green, and other places in Scotland. — The marriages which take place there are deemed valid, if the consent of the parties be fairly, and not fraudulently obtained, and if the ceremony be performed according to the mode required by the law of Scotland.

Sect. II. — Of Canonical Impediments.

In general all persons are able to contract themselves in marriage, unless they labor under some particular disabilities and incapacities, canonical or civil. Such as are canonical are deemed sufficient by the ecclesiastical laws to avoid the marriage in the spiritual court; but these in our law only make the marriage voidable, and not ipso facto void, until sentence of nullity be obtained. Of this nature are precontract, consanguinity, or relation by blood; and affinity, or relation by marriage; and some particular corporal infirmities. And these canonical disabilities are either grounded upon the express words of the divine law, or are consequences plainly deducible from tliem : it llierefore being sinful in the persons, who labor under them, to attempt to contract matrimony together, they are properly the object of the ecclesiastical magistrates' coercion; in order to separate tiie offenders, and inflict penance for the offence, pro salute animarum. But such marriages not being void ab initio, but voidable only by the sentence of separation, they are esteemed valid to all civil purposes, unless such separation is actually made during the life of the parties. For, after the death of cither of tliem, the courts of common law will not suffer the spiritual court to declare such marriages to have been void ; because such declaration cannot now tend to the reformation of the parties.

These canonical disabilities being entirely the province of the

ecclesiastical courts, our books are perfectly silent concerning them. But there are a few statutes, which serve as directories to those courts, of which it will be proper to take notice. By statute 32 lien. VIII., c. 38, it is declared, that all persons may lawfully marry, but such as are prohibited by God's law ; and that all marriages contracted by lawful persons in the face of the church, and consummated with bodily knowledge, and frui-t of children, shall be indissoluble. And (because in the times of popery a great variety of degrees of kindred were made impediments to marriage, which impediments might however be bought oft" for money) it is declared by the same statute, that nothing (God's law excepted) shall impeach any marriage but wjthin the Levitical degrees ; the farthest of which is that between uncle and niece. By the same statute all impediments, arising from precontracts to other persons, were abolished acd

declared of none effect, unless they had been consumuiated with bodily knowledge : in which case the canon law holds such contract to bo a marriage de facto. But this branch of the statute was repealed by statute 2 & 3 Edward VI. c. 23.

It is to be observed, however, that 4 Geo. IV. c. 76, sect. 27, enacts 'that in no case whatsoever shall any suit or proceedings be had in any ecclesiastical court, in order to compel a celebration of any marriage i-n facie ecclesioe, by reason of any contract of matrimony whatsoever, whether per verba de praesenti, or per verba de futuro.' There was a similar provision in the previous general marriage act of 26 Geo. II. c. 33, which Blackstone observes might collaterally extend to revive the clause of Henry VIII. 's statute, and thus abolish the impediment of precontract.

Of the prohibited degrees. — Marriage is prohibited'under the fourth degree of consanguinity according to the civil law, except in the ascending or descending line. It is scarcely possible, however, that any one should marry his issue in the fourth degree. Between collateral branches, all who are in the fourth, or any higher degree, are permitted to marry. Thus first cousins are in the fourth degree ; a

nephew and great aunt are in the fourth degree; and, though a man may not marry his grandmother, he may marry her sister.

These rules apply to the same degrees of affinity by marriage ; but the affinity must be in a direct Hue : thus the relations by consanguinity of the luisband are not related to those of the wife, and consequently two brothers may marry two sisters ; or a father and son a mother and daughter.

Sect. III. — Of Civil Impediments.

The other sort of disabilities are those which are created, or at least enforced, by the municipal laws. And, though some of them may be grounded on natural law, yet they are regarded by the laws of the land, not so much in the lisht of any moral off"ence, as on account of the civil inconveniences they draw after them. These civil disabilities make the contract void ab initio, and not merely voidable ; not that they dissolve a contract already formed, but they render the parties incapable of forming any contract at all : they do not put asunder those who are joined together, but they previously hinder the junction. And, if any persons under these legal incapacities come together, it is a meretricious, and not a matrimonial, union.

1. Prior marriage. — The first of these legal disabilities is a prior marriage, or having another husband or wife living; in which case, besides the penalties consequent upon it as a felony, the second marriage is to all intents and purposes void.

2. Want of age. — This is sufficient to avoid all other contracts, on account of imbecility of judgment in the parties contracting ; a fortiori, therefore, it ought to avoid tliis, the most important contract of any. Therefore if a boy under fourteen, or a girl under twelve years of age, marries, tills marriage is inchoate and imperfect; and, when either of them comes to the age of

consent aforesaid, they niay disagree and declare the marriage void, without any divorce or sentence in the spiritual court. This is founded on the civil law. But the canon law pays a greater regard to the conslilutiou than the age of tlie parties; for, if they are habiles ad matriinonium, it is a good marriage, whatever their age may be. And in our law it is so far a marriage, that, if at the age of consent they agree to continue tooˆe-ther, they need not be married again. If the

husband be of years of discretion, and the wife under twelve years of age, when she comes to years of discretion, he may disagree as well as she may : for in contracts the obligation must be mutual ; both must be bound or neither : and so it is vice versa, when the wife is of years of discretion and the husband under.

3. TI'a?iˆ of consent of parents or guardians. — By the common law, if the parties themselves were of the age of consent, there wanted no other concurrence to make the marriage valid, and this was agreeable to the canon law. But, by several statutes, penalties of £100 are laid on every clergyman who married a couple either without publication of banns (which may give notice to parents or guardians), or without a license, to obtain which the consent of parents or guardians must be sworn to; and, by the 4 Geo. VL c. 76, persons solemnising marriage, under the pretence of being in holy orders, shall be transported for fourteen years.

By the stat. 4 & 5 P. & M. c. 8, whosoever married any woman child under the age of sixteen years, without consent of parents or guardians, was subject to fine, or five years' imprisonment : and her estate, during the husband's life, went to the next heir. The civil law required the consent of the parent or tutor at all ages ; unless the children were emancipated, or out of the parents' power ; and, if such consent from the father was wanting, the marriage was null, and the children illegitimate ; but tire consent of the mother or guardians, if unreasonably withheld, might be redressed and supplied by the judge, or the president of the province ; and, if the father was non compos, a similar remedy was given.

Under the act 4 Geo. IV. c. 76, sect. 22, marriages are declared void, in case the persons knowingly and wilfully marry in any other place than a church or chapel where banns may be lawfully published (unless by spiritual license), or knowingly and wilfully, marry without due publication of the banns or license from the pro-per authority ; or, knowingly and wilfully, consent to the solemnisation by a person not in holy orders.

In all other cases of fraud or false swearing, or other irregularity, the marriage itself is valid, though the parties are liable to punishment, and forfeiture of property. Though fraud is sometimes a ground for annulling a marriage, as in the instance of using a false name in the license or publication of banns ; yet if the name was not assumed to defraud the other party, or the parents, the fictitious name will not invalidate the marriage.

By the 23d section when a valid marriage is solemnised between parties, under age, contrary to the act, by false oatli, or fraud, tlie guilty party

forfeits, for the benefit of the imiocent))arty, or the issue of tiie marriage, in such manner as a court of equity may direct, all property accruing from the marriage.

4. Want of reason. — Without a competent share of reason, as no other, so neither can the matrimonial contract, be valid. It was formerly adjudged lliat the issue of an idiot was legitimate, and consetjuently that liis marriage was valid. But uindern resolutions have adliered to the reason of the civil law, by determining tliat the marriage of a lunatic, not being in a lucid interval, was absolutely void. But, as it might be difficult to i)rove the exact state of the party's mind at the actual celebration of the nuptials, upon this account (concurring with some private famUy reason. < i), the stat. 15 Geo. II. c. 30 has provided, that the marriage of lunatics and persons under phrenzies (if found lunatics under a commission, or committed to the care of trustees by any act of parliament), before they are declared of sound mind by the lord chancellor, or tiie majority of such trustees, shall be totally void.

Sfxt. IV. — Of Marriages Celebrated Abroad.

By the 4 Geo. IV. cliap. 01, sect. 1, marriages solemnised by a minister of the Church of England in the chapel or house of any Britisii ambassador, or minister residing within tlie country, to the court of which he is accredited, or in the chapel of any British factory abroad, or in the house of a Britisii subject residing at such factory, are declared valid. So also are marriages solemnised within the British lines by any cliaplain or officer, or other person officiating under the orders of the commanding officer of a British army serving abroad.

But, in order to affect property in foreign countries, the marriages of British subjects must take place according to the laws of those countries. Thus, in France and the Netherlands, it is necessary that the consent of both the parents, if alive, be given for each party, and, if dead, the certificates of their burial must be duly authenticated by tiie foreign consul resident in England.

Sect. V. — Of the Dissolution of Marriages.

We are next to consider the manner in which marriages may be dissolved ; and this is either by death or divorce. There are two kinds of divorce, the one total, the other partial ; the one a vinculo matrimonii, the other merely ii inensa et thoro. 1. Tiie total divorce, a vinculo matrimonii, must be for some of the canonical causes of impediment before mentioned; and those existing before the marriage, as is always the case in consanguinity ; not supervenient, or arising afterwards, as may be the case in affinity or corporal imbecility. For, in cases of total divorce, the marriage is declared null, as having been absolutely unlav;ful ab initio; and die parties are therefore separated pro salute animarum : for which reason, as was before observed, no divorce can be obtained, but during the life of the parties. The issue of such marriage as is thus entirely dissolved are bastards. Of late years

divorces ;\ vinculo matrimonii, by reason of adultery, have frequently been grunted by act of parliament.

2. Divorce a mensa et thoro is when the marriage is just and lawful, and therefore the law is tender of dissolving it ; but, tor some supervenient cause, it becomes improper or impossible for the parties to hve together : as in the case of intolerable ill temper* or adultery, in cither of the parties. For the canon law, which the com-mon law follows in this case, deems so highly and with such mysterious reverence of the nuptial tie, that it will not allow it to be unloosed for any cause whatsoever tliat arises after the union is made. And this is said to be built on tiic divine revealed law; though that expressly assigns incontinence as a cause, and indeed tiie only cause, why a man may put away his wile, and marry another. The civil law, which is partly of pagan original, allows many causes of absolute divorce ; and some of them pretty severe ones (as if a wife goes to the theatre or the public games, without the knowledge anil consent of the husband); but among tliem adultery is the principal, and with reason named the first. But with us in England adulter) is only a cause of separation from bed and board : for which the best reason that can be given is,

that, if divorces were allowed to depend upon a mat-ter within the power of either of the parties, they would probably be extremely frequent ; as was tiie case when divorces were allowed for canon-, ical disabilities, on the mere confession of tlie parties, which is now prohibited by the canons.

3. In case of divorce, li mensa et thoro, the law allows alimony to the wife, which is that allowance which is made to a woman for her support out of the husband's estate ; being settled at the discretion of the ecclesiastical judge, on consideration of all the circumstances of the case. This is so;netimes called her estovers; for which, if he refuses payment, there is (besides the ordinary process of excommunication) a writ at common lav,, de estoveriis haben-dis, in order to recover it. It is generally proportioned to the rank and quality of the parties. But in case of elopement, and living with an adulterer, the law allows her no alimony.

Sect. VI. — Of the Rights and Liabilities consequent upon Marriage.

Having thus shown how marriages may be made and dissolved, we come now to the legal consequences of such making or dissolution. By marriage the husband and wife are one per-son in law : that is, the very being or legal existence of the woman is suspended during the marriage, or at least is incorporated and consolidated into that of the husband : under whose wing, protection, and cover, she performs every thing; and is therefore called in our law-french

* It is doubtful whether ill temper alone is a sufficient cause for a divorce. Marriage is considered indissoluble, and the courts are not accustomed to interfere, unless there exists sometliing which renders cohabitation unsafe, or likely to be attended with injury to the person, or to the health, of the party applying.

a feme covert, fcEinina viro co-operta, is said to be coverl-baroii, or under the protection and influence of her husband, her baron, or lord ; and her condition during l>er marriage is called lier coverture. '

Upon tliis principle, of a union of person in husband and wife, depend almost all the legal rights, duties, and disabilities that either of them acquire by the marriage.

As TO THE Husband. 1. 0/ his rig/its to property/.— Tlie freehold or right of possession of the wife's lauds, vests in the husband immediately upon the marriage, but the right of property is still preserved to her. 1 Just. 351.

If the husband survives his wife he may administer, and is entitled for his own benefit to all her chattels real, things in action, trusts, and every other species of personal property, whether actually vested in her and reduced into possession, or contingent, or recoverable only by action or suit.

He may dispose of chattels real during the wife's life, and, if he survives her, they vest in him absolutely ; but if he makes no disposition, and she survives, they belong to her.

Where a woman conveys her property before marriage, without the privity of the intended husband, it is fraudulent and may be set aside. 2 Ves. 194. And the husband is entitled to the income of his wife's equitable interest, unless he has received some fortune with her, or has misbehaved, as by running away with a ward of the court. 4 Ves. 15. Where the wife permitted the husband to receive her separate income from lime to time, the court will only order an account for one year. 11 Ves. 225.

2. 0/ his power. — The husband (by the old law) might give his wife moderate correction. For, as he is to answer for her misbehaviour, the law thought it reasonable to intrust him with this power of restraining her, by domestic chastisement, in the same moderation that a man is allowed to correct his apprentices or children; for whom the master or parent is also liable in some cases to answer. But this power of correction was confined within reasonable bounds, and the husband was prohibited from using any violence to his wife, aliter quam ad virum, ex causa regi-minis et castigationis uxoris suae, licitc et ratio-nabiliter pertinet. The civil law gave the husband the same, or a larger, authority over his wife ; allowing iiim for some misdemeanors, flagellis et fustibus acriter verberare uxorem ; for others ‘^u.ly modicam castigationem adhibere. But with us, in the politer reign of Charles II., this power of correction began to be doubted : and a wife may now have a security of the peace against her husband ; or in return a husband against his wife. Yet the lower rank of people, who were always fond of the old common law, still claim and exert their

ancient privilege, and the courts of law will still permit a husband to restrain a wife of her liberty, in case of any gross misbehaviour.

A man cannot grant any thing to his wife, or enter into covenant with her, for the grant would be to suppose her separate existence; and to covenant with her, would be only to covenant with himself: and therefore it is generally true that all compacts made between husband and wife, when single, are voided by intermarriage.

A woman, indeed, may be attorney for her husband ; for that implies no separation from, but is ratiier a representation of, her lord.

3. Of his liabilities. — The husband is bound to provide his wife with necessaries by law, as much as himself; and, if she contracts debts for them, he is obliged to pay them; but, for any thing besides necessaries, he is not chargeable. The husband is also liable to pay the debts of his wife before marriage ; for he has adopted her and her circumstances.

And Avhere a husband goes abroad and leaves his wife, who dies in his absence, a tliird person who voluntarily pays the expenses of iier funeral (suitable to the rank and fortune of her husband), though without the knowledge of the husband, may recover from him the money so laid out, especially if such third person be the father of the wife. 1 H. Black. 90. But it is doubtful whether such third person can recover from the husband money which he has expended after the death of the wife in discharging debts which she had contracted in her husband's absence.

The husband must answer for the trespass of his wife : if a feme covert slander any person the husband and wife must be jointly sued and execution will be awarded against him. There are instances of a husband being committed to prison till his wife should perform a certain act ; but, where he made it appear that he could not prevail on her, he was discharged. 5 Ves. 848.

4. Of the exceptions to the general liabiliti/ of a husband. — He is not liable in an action for the use and occupation of a house byˆ his wife whilst unmarried. 1 Taunt. & B. 50. Nor is he bound to maintain the wife's children by a former husband, though they were maintained by the widow before her second marriage, at which time the second husband acquired her former means. 4 East's R. 76. ' A husband is not bound to receive, nor is he liable to pay for necessaries found to his wife after she has committed adultery, though he has before

committed adultery himself and turned her out of doors without any imputation on her conduct. 6 Term. II. 603. But where the wife having committed adultery and the husband left her in his house with two children bearing his name, but without making any provision for her in consequence of the separation, and she continued in a state of adultery, the court of common pleas held that the husband should be liable for necessaries furnished to her, unless it appear that the creditor know or ought to have known the circumstances under which she was living. 1 Bos. & Pul. 226.

It is a question of fact whether a tradesman, who furnishes goods to a wife, gives credit to her or her husband. If the credit is given to her, tiie husband is not liable, though the wife lives with him, and he sees her in possession of some of the goods. 5 Taunt. 356. No ill treatment by the husband of the wife, short of personal violence, or such as to induce a reasonable fear of it, will enable a stranger to maintain an action auainst the husband for necessaries supplied her subsequently to leaving his house. 3 Taunt. 421. if a husband makes his wife an allowance for clothes, kc, which is constantly paid her, it is said lie shall not be charged. 1 Sid. 109. And,

if he forbids particular persons to trust her, he will not be charjxeable ; but a prohibition in general not to trust her, by advertisement in the newspapers, is no legal notice. 1 Vent. 42. If the wife pawn her clothes, and afterwards borrow mo-ney to redeem them, the husband is not chargeable, unless he were consenting, or that the fi^^t sum came to his use. 2 Show. 283. If she take up goods, and pawn them before made into clothes, the husband shall not pay for them, because they never came to Ids use ; but it is otherwise if made up and worn. 1 Salk. 118.

As TO Tii r. Wife. 1 . Of lier righti, privileges, ami disuliililies.— In the civil law the husband and the wife are considered as two distinct persons ; and may have separate estates, contracts, debts, and injuries;

and therefore, in the ecclesiastical courts, a woman may sue, and be sued, without her husband.

2. A woman may, before marriage, with the consent of her intended husband, convey all her stock in trade and furniture to trustees, to enable her to carry on her business separately ; and if the husband do not intermeddle with them, and there be no fraud, such effects (though fluctuating) are not liable to his debts. But whether the trade be carried on solely by the wife, or jointly with the husband, is a question of fact for the jury ; and, if they determine the latter, the stock in trade is liable to the debts of the husband. But, even in such a case, the furniture is not liable, though removed to the husband's house. And it is no objection to -such a settlement that there is no inventory of the goods intended to be thus settled. The question in all such cases is, whether the possession is consistent with the deed. 3 Term Rep. 618, 20.

A bond, conditioned for the payment of money, after the obliger's death, made to a wo-man, in contemplation of the obligor's mairying her, and intended for hpr benefit, tf she should survive, is not released by their marriage.

ˆ. A wife may sue a supplicavit in Chancery against her husband, and to find sureties not to beat or evd intreat her. 13 East. 172, u. And, where there are articles of separation between the husband and wife, if the husband afterwards confine her, she may have a habeas corpus, and be set at liberty. 13 East. 173, n.

4. Though our law in general considers a man and wife as one person, yet there are some instances in which she is separately considered as inferior to him, and acting by his compulsion. And therefore all deeds executed and acts done by her, during her coverture, are void, except it be a fine, or the like matter of record, in which case she must be solely and secretly examined to learn if her act be voluntary. She cannot by will devise lands to her husband, unless under special circumstances ; for at the time of making it she is supposed to be under his coercion. And in some felonies, and other inferior crimes, committed by her, through -constraint of her husband, the law excuses, her ; but this extends not to treason or murder.

5. Ifthe wife be injured, in her person orher property, she can bring no action for redress without her liusband's concurrence, and in his name, as well as her own ; neither can she be sued, without

making the husband a defendant. There is indeed one case where the wife shall sue, and be sued, as a feme sole, *viz.* where the husband has abjured the realm, or is banished ; for then he is dead ia law; and the husband being thus disabled to sue for, or defend the wife, it would be most unreasonable if she had no remedy, or could make no defence at all.

6. But in trials of any sort they are not allowed to be evidence for, or against, each other; partly, because it is impossible their testimony should be indifferent; but principally because of the union of person ; and, therefore, if they were admitted to be witnesses for each other, they would contradict one maxim of law, ‘ nemo in propria causa testis esse debet;’ and, if against each other, they would contradict another maxim, ‘ nemo tenetur seipsum accusare.’ But, where the oflence is directly against the person of the wife, this rule has been usually dispensed with ; and, therefore, by statute 3 Hen. V’ll. c. 2, in case a woman be forcibly taken away and married, she may be a witness against such her husband, in order to convict him of felony. For in this case she can with no propriety be reckoned his wife ; because a main ingredient, her consent, is wanting to the contract; and also there is another maxim of law, that no man shall take advantage of his own wrong; which the ravisher here would do, if, by forcibly marrying a woman, he could prevent her from being a witness, who is perhaps the only witness, to that very fact.

Neither the husband nor wife can be called in any case to give evidence even tending to crimmate each other. Thus in a case of settlement, where a marriage in fact had been proved between two paupers, the first wife of the husband is not a competent witness to prove a or-mer marriagG with him, becausfi such eviden e shows him to have been guilty of bigamy. But husband and wife may prove their own marriage on a question of settlement. 2 Term. R.

263.

■The point is at least doubtful whether a wo-man living with a man as his wife, and having children by him, be admissible evidence to prove the fact of her never having been actually married to him. 1 Price, 81.

7. A feme covert was discharged out of custody, because she was arrested without her husband, though the writ was sued out against both, on which the sheriff had returned, that the husband was not to

be found. 1 Term. R. 48G. And a married woman, arrested on common process, is entitled to be discharged out of custody on filing common bail, although her husband had absconded, and the debt had been incurred by her while a feme sole. 1 Barn. & A. 165. So if she be held to bail (for the penalties incurred by insuring in the lottery) slie may be discharged on an affidavit of her coverture. 2 II. Black. 17. And the court will,' discharge a woman under arrest, if the plaintiff knew her to be covert at the time of contracting the debt. 6. Term. R. 451. Or if she mistakenly allege she believes her husband to be dead. 1. East. 16. Or if the plaintiff knew she had a husband living abroad, though under terms of separation. 1 East. 17, note. And

the common pleas will now discharge a feme covert, though she contracted the debt as a feme sole, and was trusted by the plantiff as such, unless she represent herself to be single. 1 New. R. 54.

8. A feme covert cannot be sued as a feme sole, unless she be separated from her husband and have a fixed certain allowance secured to her as a maintenance. 5 Term 11. 679. If a woman married de facto to one whom she knows to have another wife, executes a deed as his wife, jointly with him, she is bound as a feme sole. 3 Aust. 833. Where the husband (a foreigner) resided abroad, and the wife traded and obtained credit in this country as a feme sole, the common pleas held that she was liable for her own debts. 1 Bos. & P. 357, It has been solemnly determined in the exchequer chamber, that a feme covert sole trader, in the city of London, is not liable to be sued as such in the courts at Westminster; and, even in the city courts, the husband must be joined for conformity. 2 Bos. & P. 93. Where a married man was transported for felony, the king's bench decided that the wife might be sued alone for a debt contracted after the transportation. 1 Terra R. 9.

9. The wife of an attorney is not entitled to be discharged out of custody on mesne process, if arrested with her husband. 1 Taunt. 254. Nor will the court discharge a woman under arrest, as being married, if she obtained credit pretending that she was single. 5 Term. R. 191.

And in tlie following case the court of common pleas refused to discharge the woman, although the plaintiff appeared to have been acquainted with her coverture : — a Frenchwoman and her husband came over to England ; the husband gave her a power of attorney, and went to Hamburgh ; she cohabited with another man, and traded on lier own account with the plaintiff, by whom she was arrested. 1 Bos. & P. 8. Where a married woman has been arrested as accep-tor of a bill of exchange, at the suit of an indorse, the common pleas will not order the bail bond to be cancelled, on an affidavit that the drawer, when he drew the bill, knew the defendant to be a married woman. 2 Marsh. 40. And in another case, where a woman was arrested as drawer of a bill of excliange at the suit of an indorser, that court refused to discharge her on the affidavit of a third person that she was a married woman. 2 iVIarsh. 385.

Effect of marriage on previous wills. — Marriage, and the birth of a posthumous child, amount to an implied revocation of a will of lands made before marriage. But the subsequent birth of a child is not of itself sufficient. 5 Term R. 49, 51. And where after marriage a man made his will, and devised to his niece, and afterwards died, leaving his wife ensient with a daughter, which was unknown to him, it was held that the birth of a daughter was not a revocation of the will. 4 Maule & S. 10.

Sect-VII. — Of Injuries to the IIi'sband.

1. Bi/ ahduclion. — The abduction, or taking a man's wife either by fraud and persuasion, or open violence/ is remediable by action of tres-

pass, or writ of ravishment. The offender, according to 3 Edw. *I.e.* 13, may be imprisoned two years, and fined. Damages may also be recovered in an action on tiie case at the suit of the husband against those who persuade or entice the wife to live separate from him without sufficient cause.

2. By criminal conversation. — For this in-jury an action can be maintained, and though, according to the technical form of the proceedings, the injury is described to consist in the loss of the society and services of the wife, the jury, sanctioned by the concurrence of the courts, are accustomed to measure the damages by all the circumstances which have accompanied the act complained of; many of which relate to the moral conduct of the husband and wife pre-

riously to the commission of the offence.

There are some instances in which the husband is altogether deprived of his remedy for the injury sustained.

Thus no action for crim. con. can be brought for any act of adultery after a separation between husband and wife. 5 Term R. 357. But according to another case, where there was a settlement providing previously to the marriage for the maintenance of the wife in case of separation, it was held that the husband was not precluded from maintaining an action for adultery committed while the wife was in fact living apart from him. 6 East 244.

It is now determined that, if the husband consent to die adultery, it will bar the action. And, if the woman is suffered by her husband to live as a common prostitute, no action will lie at the suit of the husband ; but, if he does not know this, it will go only in mitigation of damages. 4 Terra R. 657.

Sect. VIII. — Of Forcible akd Clandestine Marriages, Breach oi-Contract to Marry, &c.

1. Of forcible marriages. — According to the statute 3 Hen. VII. c. 2, if any person shall for lucre take any woman, being maid, widow, or wife, and having substance either in goods or lands, or being heir apparent to her ancestors, contrary to her will; and afterwards she be married to such niisdoer, or by his consent to another, or defiled ; sucli person, his procurors, and abettors, and sucli as knowingly receive such woman, shall be deemed principal felons.

By the 39 Eliz. c. 9, such felons were denied the benefit of clergy. But this act is repealed by 1 Geo. IV'. c. 115, and persons convicted on the statute of 3 Hen. 'II. are to be transported for life, or any term not less than seven years ; or imprisoned with or without hard labor for any term not exceeding seven years.

The indictment for this offence must allege that the taking was for lucre. In order to show this, it must be proved that the woman has substance either real or personal, or is an heir apparent. It must appear she was taken away against her will. And lastly tliat she was afterwards either married or defiled. Though tlie marriage or defilement might be by her consent, yet it is felony if the first taking were against her will. And so if she originally con.sent, but

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afterwards refuse to continue, and be forced against her will, the construction of law is the same as if she had never consented.

2. Of clandestine marriages. — Persons who knowingly solemnise matrimony in any other place tlian where banns may be lawfully published, or at any other time than between the hours of eight and twelve in the forenoon, unless by special license, or solemnise matrimony without publication of banns, unless a license be obtained, or persons falsely pretending to be in holy orders and solemnising matrimony, are deem-ed guilty of felony, and liable to be transported for fourteen years ; and the parties are punishable at common law, independently of tlie statute.

Although where the parties are underage, and have not been previously married, it is necessary the parent or guardian should consent to the marriage ; yet if the banns have been regularly published, though without the consent of parents or guardians, and the minister has received no notice of dissent, the minister who solemnises the marriage is not punishable. The banns, however, are void, if the dissent be publicly declared.

3. Of breach of promise of murriage. — For the breach of mutual promises to marry each other, made between unmarried persons, an action will lie. But a promise by one party to pay a sum of money in case he or she shall marry another, is held to be a restraint of marriage, and consequently void : and a wager for fifty guineas that the party would not marry within six years was held to be void on the same principle. It is observable, however, that upon mutual promises between a minor and an adult, the former, though not bound by the promise, may maintain an action against the latter.

These contracts need not be in vvriting, un-less they extend to an agreement to pay money, or make a settlement in consideration of marriage.

4. Sale of v;ives. — The practice which is frequently tolerated of a man selling his wife, with a halter round her neck, is clearly a misdemeanor, and all parties are liable to punishment by fine and imprisonment. Lord ISIansfield directed a prosecution where a husband had assigned his wife over to another man on the ground that such a transaction was contrary to decency and good manners.

MAll’llOW, 71. s. -\ Sax. moji^, me-Mau’rowbone, 7J. s. >riepe; Swed-marg; Mar’rowless, «</;’. 3 Dan. inarw; Welch,

mer; all, perhaps, of Heb. yiJD, to strengthen.

The oleaginous substance, or pith, of the bones.

Though buying and selling doth wonderful wel, Yet chopping and changing I cannot commend With theef or his mnrroic for fuar of ill end. Tvsser.

Would he were wasted, marrow, bones, and all, That from his loins no hopeful branch may spring.

Shakspeare. Avaunt!

Thy bones are niarrmcless, thy blood is cold ;

Thou hast no speculation in those eyes

Which thou dost glare with. Id. Macbeth.

The skull hath brains as a kind of marrctv within

it : the back bone hath one kind of marrmv,

and other bones of the bodv have another : the inw-

bones have no marrow severed, but a little pulp of marrow diffused. Bacon.

Pampered, and edified their zeal

^Vith marrow puddings many a meal. Hudihras.

Down on your miirrow-bones, upon your allegiance ; and make an acknowledgment of your offences ; for I will have ample satisfaction.

DrxidfriS Spanish Fryar.

Upon this he fell down upon his marrowbones, and oegged of Jupiter to give him a pair of horns.

L’ Estrange.

He bit the dart, and wrenched the wood away, The point still buried

in the marrow lay. Addison.

All the bones of the body which have any considerable thickness have either a large cavity, or they are spongious, and lull of little cells ; in both the one and the other there is an oleaginous substance, called marrctv, contained in proper vescicles or membranes, like the fat : in the Inrger bones this fine oil, by the gentle heat of the body, is exhaled through the pores of its small bladders, and enters some narrow passages, which lead to some fine canals excavated in the substance of the bone, that the marrow may sup-ply the fibres of the bones, and render them less apt to break. Quincy.

MARRUBIUM, white horehound, a genus of the gyranospermia order, and didynamia class of plants; natural order forty-second, verticil-lata; : cal. salver-shaped, rigid, and ten-striated: COR. upper lip bifid, linear, and straight. There are nine species, the most remarkable of which is the

M. vulgare, a native of Britain, growing naturally in waste places, and by way sides near towns and villages, but not common. It has a strong and somewhat musky smell, and bitter taste. It is reputed attenuant, and resolvent ; an mfusion of the leaves in water, sweetened with honey, is recommended in asthmatical and phthisical complaints, and most other diseases of the breast and lungs.

J\IARS, in astronomy, one of the six planets, and of the four superior ones ; its place being between the earth and Jupiter. See Astronomy.

Mars, in mythology, the god of war. He was, according to some, the son of Jupiter and Juno ; while others say that he was the son of Juno alone, who, being displeased at Jupiter's having pj-oduced Minerva from his brain, conceived, without the assistance of the other sex, by touching a flower shown to her by Flora in the plains of Olenus, and became the mother of this formidable deity. The amours of Mars and A'enus, and the manner in which 'ulcan caught and exposed them to the laughter of the other gods, have been described by several of the ancient poets. lie is represented as having several wives and mistresses, and a considerable number of children. He was held in the highest veneration by the Romans, both from his being the reputed fiuhcr of Romulus their founder, and from their inclination to conquest; and magnificent temples were erected to him at Rome. INIars is usually represented in a chariot, drawn by furious horses. He is completely armed, and extends his spear with the one hand, and grasps a sword, imbrued in blood, with the other. He has a fierce and savage aspect. Discord is represented preceding his car; and Cla-mor,

Fear, and Terror, appear in his train. Tlie victims sacrificed to him were the wolf.

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the horse, the wood-pecker, the vulture, and the

cock;

Mars, among alchemists, denotes iron ; that metal being snpposed to be under the influence of the planet Mars.

MARSAIS (Caesar Chesneau du), was l)orn at Marseilles in 167G. He became a member of the congregation of the oratory, but soon left it and went to Paris, where he married, and became advocate, in which profession ho met with great success. Disappointed, however, in his expectations of making a speedy fortune, he abandoned the law also. He next became tutor in several families; and after this he kept a boarding academy, but was at last reduced to extreme indigence. In this situation he was found by the editors of the Encyclopedic, and made a partner in conducting that great work ; for which he wrote the article Grammaire, and several others. The count of Lauraguais was so much affected with the distresses, and so much convinced of the merit of Du Marsais, that he procured him a pension of 1000 livres. Du Marsais died in Paris, June 11th, 1736, in his eightieth year, after he had received the sacrament; though during his life he had been a professed deist. His principal works are, 1. Exposition de la Doctrine de I'Eglise Gallicane par rapport aux Pretensions de la Cour de Rome, 12rao. This did not appear till after his death. 2. Exposition d'une Methode Raisonnee pour apprendre la Langue Latine, 12mo. 1722, rare. 3. Traite des Tropes, 1730, 8vo.; reprinted inl771,12mo. ■1. Les Veritables Principes de la Grammaire raisonnee pour Apprendre la Langue Latine, 1790, 4to. There was only the preface of this work published, in which he introduced the greatest part of his JNIethode Raisonnee. .5. Labiege de la Fable du Pere Jouvenci, arranged after the manner of the original plan, 1731, 12mo. 6. Logique, ou Reflections sur les operations de I'Esprit. It was reprinted in Pans, in two parts, together with the articles which he had written for the Encyclopedia, 1762. He also wrote some tracts, of less merit, in favor of scepticism.

MARSALA, a town of Sicily, in the Val di Mazzara, at the western extremity of the island, on the promontory of Lilybaeum. It is supposed to occupy the site of the ancient town of this name, and is tolerably well built, having a spacious street, called the Cassaro. It is

surrounded with a wall and dry ditch, flanked by bastions. There was formerly a good harbour here, destroyed in 1562, to prevent its affording shelter to the Turkish galleys. It exports wine, barilla, oil, and wheat. Inhabitants 10,000. Forty-five miles south-west of Palermo.

MARSEILLE, or Marseilles, formerly Massilia, a very ancient, large, and beautiful city, the chief place of the department of the Mouths of the Rhone, in the south-east of France. It has a lower court, and is tlie seat of the royal court of Aix, besides a tribunal of commerce and an exchange; is the chief place of the eight!) military division, and the residence of diflTerent foreign consuls, has a royal marine observatory, an academy of sciences, a school of liydrography, and an institution for the deaf and

dumb, a royal college, a school of medicine, another for drawing, and a third for music; as well as a free course of lectures on chemistry. It is the see of a bishop, and has also a reformed consistorial court, and a synagogue. It is a post town, containing 116,000 inhabitants. This city is situated at the bottom of a gulf covered and defended by several islands, on the declivity and at the foot of a hill between the sea and a chain of mountains, forming a semicircle, and enclosing a rich valley, with more than 5000 houses. The elevated part of the town between the port and the race ground, is but indifferently built; but the new town, which reaches nearly to the sea, and forms about one-third of the whole, is very beautiful ; all the streets are broad, straight, and bordered with foot pavements and elegant houses. Marseilles is furnished with many beautiful squares and fountains ; the tovvn-hall near the port, the port itself, the magnificent quays that run along it, the exchange, the arsenal, the assembly room, and the rope-yard, are especially worthy of attention. From the top of the observatory, one of the finest buildings in Marseilles, a most extensive view is presented to the eye, taking in at once the city, the surrounding country, and the sea. On the coast, at a little distance, is the hospital, one of the larges* and best regulated buildings of the kind ; it iˆ enclosed with a double wall, and seems like a small town : on the return of the expedition from Egypt it received within its enclosure a whole army. The port is one of the finest in the kingdom, and is capable of containing 1200 vessels ; it forms an oval basin of nearly GOO fathoms in length, by about 160 in breadth, and presents a haven for every kind of ship that navigates the Mediterranean. Here the colors of every nation may be seen flying, and the inhabitants of various parts of the world in their diflTerent costumes.

This city is said to have been founded by the Phoceans, about 500 years before the Christian era, and soon became one of the most commercial cities in the west, renowned for its government, and the wisdom of its laws. Cicero styled it the Athens of Gaul, and Pliny the mistress of the sciences. Julius Caesar took it after a long and terrible siege. In the year 473 the Saracens sacked it ; but it was re-united to the French crown by Clotaire, and afterwards became a separate sovereignty. It sliook oft" the yoke and became a republic in 1214, but it enjoyed its liberty only till 1251, when the counts of Provence subjected it to their dominion. Louis XII. united it to the crown again in 1482. Louis XIV'., taking a journey into Provence in 1660, deprived it of some of the privileges it liad enjoyed until his reign, and built a citadel. In 1720 a vessel from Seide introduced a horrible plague, which carried off between 60,000 and 70,000 of its inhabitants.

The principal manufacturesare those of stockings and Tunis caps, soap, olive oil, brandy, spirits, choice liqueurs, glue, white lead, chemicals, perfumery, wax candles, and straw hats. Cotton spinning, sugar refining, the preparation of sulphur, starch making, tanning, and the niaimfacture of tobacco, are also pursued to u

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considerable extent; and the inhabitants have an import and export trade with Italy, Spain, the coasts ot Africa, the Levant, and tlie difierent ports of the Black Sea and the Mediterranean ; as well as with America and the East Indies. This city had the honor of giving birth to Petro-nius, Honore d'Urfe, author of the Astrea; to Paget, a famous painter and sculptor : to Da-marsais; to M. Pastoret, the president of the legislative assembly ; to general Gardane ; and to Lantier, a well-known literary character. There are here a library of 60,000 volumes, a picture gallery and museum of natural history, a royal botanical garden, and many ancient monuments. This city is situated in long. 3° 2' E. from Paris, and in lat. 43° 17' N. ; being about 615 miles south-east of Paris, 162 south-west of Nice, forty-five W.N.W. of Touion, 126 E. S. E. of Montpelier, eighty-seven south-east of Nismes, and eighty-one south-east of Avignon.

MARSH, n. s.) Sax. mejirc. See Marish.

Mar'shy, at/;', i A fen ; bog; swamp; watery ground.

In their courses make that round, In meadows and in marshes found, Of them so called the fayry ground, Of which they have the keeping. Drayton.

We may see in more conterminous climates great variety in the people thereof; the uplands in England yield strong, sinev/y, hardy men ; the marsh-lands, men of large and high stature. Hale.

Worms for colour and shape, alter even as the ground out of which they are got ; as the marsh worm and the stag worm. Walton.

Though here the marshy grounds approach your fields. And there the soil a stony harvest yields. Dryden. Feed

With delicates of leaves and marshy weed. Id.

Your low meadows and marsh lands you need not lay up till April, except the spring be very wet, and your marshes very poachy. Mortimer's Husbandry.

It is a distemper of such as inhabit vuirshy, fat, low, moist soils, near stagnating water. Arhuthnot. The fens and marshes are his cool

retreat.

His noon-tide shelter from the burning heat.

Young. Marsh (Narcissus), a learned and accomplished prelate, born at Ilannington in Wiltshire, ill 1638. He was made principal of St. Alban's Hall, (Oxford, in 1673 ; provost of Dublin College in 1678 ; bishop of Leighlin and Ferns in 1682 ; archbishop of Cashel in 1690; of Dublin in 1694, and of Armagh in 1703. He built a pub-lic library in Dublin, filled it with choice works, and settled a provision for two librarians. He repaired, at his own expense, several decayed churches, besides buying in many impropri-ations, and presenting a great number of oriental MSS. to the Bodleian library. He was well versed in sacred and profane literature, in mathematics, natural philosophy, languages (especially the oriental), and music. He published, 1. Institutiones Logica;. 2. Manuductio ad Logicam, written by Philip de Trieu ; to which he added the CJeerk text of Aristotle, and some tables and schemes. 3. An introductory essay on the doctrine of sounds, &c. He died in 1713.

MARSHAL, U.S. & i'. a. Er. t/ianschal ; low Lat. mareschallus, accordiiiEC to Minsheu, from old Fr. marescalc (compoundi.d of maro, a horse,

and scale, a sort of servant) ; one that has the charge of horses. Dr. Johnson adopts this etymology. A chief officer of arms; any one who regulates feasts or combats : to marshal, to array in, formal or military order ; to lead.

Her face, wiien it was fairest, had been but as a marshal to lodge the love of her in his mind, which now was so well placed as it needed no help of outward harbinger. Sidney. Through the hall there walked to and fro

A jolly yeoman, marshal of the same.

Whose name was Appetite; he did bestow

Both guests and meats, whenever in they came,

And knew them how to order without blame.

Faerie Queene.

Thou marshaVest me the way that I was going.

Shakspeare. The duke of Suffolk claims

To be high steward ; next the duke of Norfolk

To be earl marshal. Id.

Multitude of jealousies, and lack of some predominant desire, that should marshal and put in order all the rest, maketh any man's heart hard to find or sound. Bacon.

Anchises looked not with so pleased a face, In numbering o'er his future Roman race, And marshalling the heroes of his name, As in their order next to light they came. Dryden. Dares their pride presume against my laws

As in a listed field to fight their cause ?

Unasked the royal grant ; no marshal by.

As kingly rights require, nor judge to try. Id. O William, may thy arms advance. That he may lose Dinant next year.

And so be mareschal of France. Prior.

It is as unconceivable how it should be the direc-trix of such intricate motions, as that a blind man should marshiit an army. Glanville's Scepsis.

Dryden was the great refiner of English poetry, and the best marshaller of words. Trapp.

Behold Destruction yawns; his spacious jaws unfold, And, marshalled round the wide expanse, disclose Teeth edged with death, and crowded rows on rows.

Young.

I cannot consider all these things without blessing that wise and beneficent policy, which brought England with timely speed to the aid of such a nation, to call forth its energies— to 7narshal its resources — to support and invigorate its unyitlding constancy, and, after its own deliverance was achieved, to lead it forth in pursuit of its oppressor. Canning.

Marshal, or Mareschal (marescallus), primarily denotes an officer who

has the care or the command of horses. Nicod derives the word from polemarchus, *i.e.* master of the camp; Matthew Paris from Martis sensecallus. In the old Gaulish language march signified horse; whence marchal might signify him who commanded the cavalry. Other derivations have been given by different authors; and the name itself has been applied to officers of very different employments.

SIarshal of England, Earl, is the eighth great officer of state. This office, until it was made hereditary, always passed by grant from the king, and never was held by tenure or ser-jeantry (by any subject), as the offices of lord high steward and lord high constable were sometimes held. The title is personal, the office honorary and officiary. They were formerly styled lord marshal only, until king Richard II., June 20tli

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1397, granted letters patent to Thomas Mow-bray, earl of Nottingham, and to tlie heirs male of his body lawfully begotten, by the name and style of earl-marshal; and further gave them power to bear in their hand a gold truncheon, enamelled with black at each end : having at the upper end of it the king's arms engraven thereon, and at the lower end his own arms. See Chivalry.

Marshal of Scotland, Earl. Ilis office •was to command the cavalry, whereas the constable commanded the whole army. They seem, however, to have had a sort of joint command, as of old all orders were addressed ' to our constable and marischal.' The office of earl marischal has never been out of tlie noble family of Keith. It verged in the crown, benig forfeited by the rebellion of George Keith, earl marischal, in 1715.

. Marshal of the King's Bench, an officer who has custody of the king's bench prison, in Southwark. lie gives attendance upon the court, and takes into his custody all prisoners committed by the court; he is finable for his absence, and non-attendance incurs a forfeiture of his office. The power of appointing the marshal of the king's bench is in the crown.

Marshal of the King's House, or knight marshal, an English officer, whose business, according to Fleta, is to execute the commands and decrees of the lord steward, and to have the custody of prisoners committed by the court of verge. Under him are six marshal's men, who are properly the king's bailifls, and arrest in the verge of the court, when a warrant is backed by the board of green-cloth. The court where causes of this kind, between man and man, are tried, is called the marshalsea, and is under the knight marshal. See Marshalsea. This is also the name of the prison in Southwark : the reason of which may probably be, that the marshal of the king's house was wont to sit there in judgment, or keep his prison.

Marshal (Thomas), a learned English divine in the seventeenth century, educated at Oxford. This city being garrisoned, upon the breaking out of the civil wars, he bore arms for the king. He afterwards had several successive preferments in the church ; and died in Lincoln College, of which he was rector. By his will he left all his books and MSS. to the University of Oxford, and money to Lincoln

College for tlie maintenance of three scholars. He was a. noted critic, especially in the Gothic and Anglo-Saxon tongues ; and eminent for his piety. lie wrote, 1. Observationes in Evangelioram Versiones per antiquos duos, Goth, scilicet et Anglo-Sax., &c. 2. Notes on the Church Catechism, &c.

MARSHALL (Stephen) a presbyterian divine, of some eminence in the middle of the seven-teentli century. He was born at Godmanchester, in Huntingdonshire, and was educated at Emanuel College, Cambridge, where he took the degrees of B. A. and B. IX He became minister of Finchfield in I'ssex ; but, on the triumpli of the puritan party, settled in London. Tlie quaint Fuller says, ' In the late long lasting parliament, no man was more gracious with the principal members thereof. In tiicir sickness

lie was their confessor, in tlieir assembly their councellour, in their treaties their chaplain, in their disputations their champion.' He died in 1655, and was buried in Westminster Abbey. He was one of the authors of Smectymnuus, and wroteaTreatiseon Justification,which is still read. MARSHALLING a Coat, in heraldry, is the disposal of several coats of arms belonging to distinct families in one and tlie same escutcheon or shield, together with their ornaments, parts, and appurtenances. See Heraldry.

MARSHALSEA, the Court of, and the yja-lac-e court at Westminster, though two distinct csuris, are frequently confounded together. The former was originally holden before the steward and marshal of the king's house, and was instituted to administer justice between the king's domestic servants, that they might not be drawn into other courts, and thereby the king lose tlieir service. It was formerly held in the aula regis ; and, when that was subdivided, remained a distinct jurisdiction, holding plea of all trespasses committed within the verge of the court, where only one of the parties is in the king's domestic service (in which case the inquest shall be taken by a jury of the country) ; and of all debts, contracts, and covenants, where both of the contracting parties belong to the royal houseˆ hold ; and then the inquest shall be composed of men of the household only. By act of 13 Rich. II. Stat. 1, c. 3. (in affirmance of the com-mon law), the verge of the court in this respect extends for twelve miles round the king's place of residence. And, as this tribunal was never subject to the jurisdiction of the chief justiciary, no writ of error lay from it (though a court of record) to the king's bench, but only to parliament, till the statutes of 5 Edw. III., c. 2, and 10 Edw. III., Stat. 2, c. 3. which

allowed such writ oferror before the king in his place. But this court being ambulatory, and obliged to fol-low the king in all his progresses, so that, by the removal of the household, actions were frequently discontinued, and doubts having arisen as to the extent of its jurisdiction, king Cliarles I., in the sixth year of his reign, by his letters patent, erected a new court of record, called the curia palatii, or palace-court, to be held before the steward of the household and knight marshal, and the steward of the court, or liis deputy; with jurisdiction to hold plea of all manner of personal actions whatsoever, which shall arise between any parties within twelve miles of his^ majesty's palace at Whitehall. The court is now held once a week, together with the ancient court of marshalsea, in the borough of Southwark ; and a writ of error lies from thence to the court of king's bench. But, if the cause is of any considerable consecjuence, it is usually removed on its first commencement, together with the custody of the defendant, either into tlie king's bench or common pleas, by a writ of habeas corpus cum caus;\ ; and the inferior business of the court has of late years been much reduced by the new courts of conscience erected in the environs of London ; in consideration of wiiich the four counsel belonging to these courts had salaries granted them for their lives, by stat. 23 Geo. n.c. 27.

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MARSHAM (Sir John), a learned English writer in the seventeenth century. lie studied the law in the middle temple, and was sworn one of the SIX clerks in the court of chancery in 1638. In tiie beginning of the civil wars he followed the kinˆ to Oxford ; for which he was deprived of his place by the parliament at Westminster, and plundered. After the death of the king he returned to London ; compounded, among other royalists, for his real estate; and betook himself wliolly to his studies and a retired life, the fruits of which were some excellent works. He wrote I Jiatriba Chronologica ; Ciironicus Canon, it”-gyp-ticus, Ebraicus, Gracus, N:c. He died in 1685.

MAllSn-?iI ARIGOLD, n. s. Lat. populago. A flower consisting of several leaves, placed circularly, and expanding in form of a rose, in the middle of which rises the pointal, which becomes a membraneous fruit.

Arid set soft hyacinths with iron-blue, To shade manh-marigolds of shining hue. Driideit.

Marsh Marigold. . See Caltha.

Marsh Rocket. See Sisymbrium.

MARSI, an ancient nation of Germany, who afterwards settled in Italy, where they occupied the territory in the environs of the Fucine Lake. They at first proved inimical to the Romans, but in process of time they became its firmest supporters. They were allowed by the Romans to be the most intrepid soldiers of their legions when in friendship, and the most formidable of their enemies when at variance ; and it was a common saying, that Rome could neither triumph over the Marsi nor. without them. They are particularly celebrated for their courage and intrepidity during the civil war, which from them was named the Marsian war. The contributions made to support the interests of Rome, and the liuir.bei of men which they continually supplied to the republic, rendered them bold and aspiring ; and th(y claimed, with the rest of the Italian states, a share of the honors and privileges of Roman citizens. This petition, though supported by the interest, the eloquence, and the integrity of the tribune Drusus, was received witli contempt by the Roman senate; upon whicii, in A. U. C. 662, the Marsi put themselves at the head of the social war, one of the

most obstinate and dangerous oppositions ever made to the progress of the Roman power. They obtained several victories, but were at last defeated ; though the war was not terminated but by a grant of those privileges which the senate had refused.

MARSIGLI (Lewis Terdinand, count), an Italian, descended from an ancient and noble family, was born at Bologna in 1658. He acquired great knowledge in the art of war and fortification ; served under Leopold II. against tlie Turks, by whom he was taken prisoner in 1683, but redeemed in 1684. In the Spanish succession war, Marsigli, being in the fortress of Brisac, surrendered it to the duke of Burgundy in 1703, tliough it was thought able to hold out much longer ; he was therefore stripped of all his commissions, and had his sword broken over him ; and the commander Arco was beheaded. Marsigli now sought consolation in the sciences, and founded the institute of Bologna. He had formed a rich collection of instruments, aitrono-

mical and chemical, plans of fortifications, mo-dels of machines, &c., all which he presented to the senate of Bologna in 1712, forming at the same time out of tiiem the institute of the arts and sciences. His object was principally to promote the improvement of various branches of science, *viz.* astronomy, chemistry, natural history, physics, and military architecture. He spared no pains nor expense in obtaining instruments adapted to the illustration and advancement of science, and having obtained the pope's consent to a new foundation, and having fixed its laws and regulations, he solemnly confirmed the gift in 1712. The senate of Bologna purchased the principal palace in the city for its accommodation, and an observatory was erected in it, and professors were appointed. The gratitude of his fellow-citizens, for this and other liberal acts performed for them, was expressed in a decree for placing his statue in some conspicuous situation, but he steadily refused the honor. He also founded a printing-house, and furnished it with the best types for Latin, Greek, Hebrew, and Arabic, wiiich he presented in 1728 to the Dominicans at Bologna, on condition of tlieir printing all the writings of the institute at prime cost ; this was called tiie printing house of St. Thomas Aquinas. After this he visited Holland and England, and in the course of his journey formed an acquaintance with Newton and Halley, Boerhaave and Muschenbroeck ; he became a member of the Iloyal Society of London, and returned laden with books and specimens of natural history for the institute. At Amsterdam, the booksellers agreed to print the workw'hich he had been preparing several years, and which was published under the title of Historic Physique de la Mer, in the year

1725. In the following year he printed another great work, which was regarded as the most valuable of all his publications, entitled Danubius Pannonico-Mysicus, in 6 vols. fol. This is a description of the Danube in its Hungarian and Turkish course. His other writings on philosophical subjects are numerous and valuable, in Latin, Italian, and French. He died in 1730.

MARSOLLIER (James), a French historian, born in Paris, 1647. He wrote a Life of Cardinal Ximenes, 2 vols. 2. History of Henry VII. king of England, 2 vols. 3. History of the Inquisition ; all in 12mo. 4. A Life of St. Francis. He died archdeacon of Usez, 1724.

MARSYAS, in fabulous history, a celebrated musician of CelaensE, in Phrygia, son of Olympus, or of Hyagnis, or (Eagrus. He was so skilful in playing on the flute, that be is generally deemed the inventor of it. According to some, he found it when Minerva had thrown it aside, on account of the distortion of her face when she played upon it.]Marsyas w-as enamoured of Cy-bele, and travelled with her as far as Nysa, where he challenged Apollo to a trial of his skill as a musician. Ihe god accepted the challenge, and it was mutually agreed that he who was defeated should be flead alive by the conqueror. The Muses, or (according to Diodorus), the inhabitants of Nysa, were appointed umpires. Each exerted his utmost skill, and the victory with much difKculty was adjudged

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to Apollo. Tiie god upon this tied his antagonist to a tree, and Head him alive. See Apollo. The death of Marsyas was universally lamented ; the Fauns, Satyrs, and Dryads, wept at his fate ; and from their abundant tears arose a river of Phrygia, well known by the name of Marsyas. Marsyas is often represented on monuments, tied with his hands behind his back to a tree, while Apollo stands before him with his lyre. In independent cities, among the ancients, the statue of Marsyas was generally erected in the forum, to represent the intimacy which subsisted between Bacchus and Marsyas as the emblems of liberty. At Celacnsc the skin of Marsyas was shown to travellers.

MART, n.s. & v. a. Belg. and Teut. murcht, cr contracted from Market, which see. A place or time of public sale and traffic : bargain ; purchase : to purchase or sell.

Christ could not suffer iliat the temple should serve for a place oi mart, nor the apostle of Christ that the church should be made an inn. Hooker.

If any born at Ephesus Be seen at Syracusan marts and fairs. He dies. Shakspeare.

I play a merchant’s part, And venture madly on a desperate mart. Id. Cassius, you yourself Do sell and vmrt your offices for gold To undesen’ers. Id. Julius Ceesav.

Kzechiel, in the description of Tyre, and the exceeding trade that it had with all the East as the only mart town, recileth both the people with whom they commerce, and also what commodities every country yielded. Raleigh.

Many come to a great mart of the best horses.

Temple. The French, since the accession of the Spanish monarchy, supply with cloth the best mart we had in Europe. Addison.

Shall pompous banquets swell with such a prize? And the bowl journey round his ample size; Or the debating merchants share the prey And various limbs to various maris convey. Young.

A Mart is a great fair held every year for buying and selling goods.

Public marts, with the tolls thereunto belonging, can only be set up by virtue of the king's grant, or by long and immemorial usage and prescription, which presup-poses such a grant.

Makt, Letters of, written for Letters of Marque, which see.

No man needs letters of mart against one that is an open pirate of other men's credit. Marvell.

MARTEAU, the name given by French naturalists to a peculiar species of oysters, called also malleam by others. It is one of the most curious shells in the world. Its figure is that of a ham-mer, with a very long head, or rather of a pick-ax. It has a body of moderate thickness, and two long arms. It is of a brownish color, with a beautiful tinge of a violet-blue. Notwithstanding the strange shape of these shells, they close very exactly.

MARTHA, Santa, ˆ province of Colombia, South America, bounded on the west by Carthagena, from whicli it is separated by the great river Magdalena; on the north by the Spanish Main or Carribbean Sea ; on the east by Maracaibo and the Rio de la llacha ; on fhc soiitli

by Santa Fe. It is about 300 miles in length, and 200 in breadth, and full of lofty and im-])racticable mountains, which form part of the ridge of the Caraccas. Many of these rise to the enormous elevation of 16,000 feet above the level of the sea. It is for the most part of a moist and hot temperature, but the winds from the cold and elevated regions serve, in some de-gree, to moderate the heat of the plains. It produces tobacco, cotton, palm wine, cacao, Brasil wood, sugar, vanilla, and maize, and a tree whose leaves afford a substance used here as soap. The mines here are of little importance. The pearl fishery was formerly carried on at Carrizal, about forty miles east of St. IMartlia, and was very productive. It is still followed on different parts of the coast. The valleys feed immense herds of cattle, and some mules are reared. The province is watered by the Magdalena, Santa Mar-tha, and Pompatao.

Martha, Santa, the capital of the above province, is situated near the Guaira, which supplies it with excellent water. It has a large and convenient harbour, protected by lofty ridges, a fertile neighbourliood, and has in front a round hill defending it on the side of the mountains. This city, founded in 1554, was made the magazine of Ximenes de Quesada, from whence he explored and conquered

Granada. Sir Francis Drake reduced it to ashes in 1596. The harbour has two forts ; but the town has declined of late years. It is 100 miles north-east of Carthagena.

Martha's Vineyard, an island of the United States, near the coast of New England, belonging to Duke's county, Massachusetts. It is nineteen miles long, and from two to ten broad. The greatest part is low, level, and comparatively barren; but Indian corn is raised for exportation, and rye in sufficient quantities for the consumption. The trees on the island are small : the principal manufactures are those of wool and salt. The island contains three towns, Edgartown, Fisbury, and Chilmark. Eight miles south of Falmouth, and twelve W. S. W. of Nantucket.

MAR'TIAL, ndj. I Fr. martial ; Lat. mur—

Mar'tialist, n.s. 3 tlalis. Warlike; given to war ; brave : a warrior or fighter. Into my feeble breast Come gently, but not with that mighty rage

Wherewith the martial troopcs thou dost infest And hearts of great heroes dost enrage.

Faerie Queeve.

Let his neck answer for it, if there is any martid law in the world. Slui/tspeare. Henry V.

They proceeded in a kind of martial justice wiili enemies, offering them their law before they drew lˆncii sword. Bacon.

The queen of marliais. And Mars himself conducted them.

Chapman.

Many brave adventurous spirits fell for love of her ; amongst others the high-hearted wariialisl. who first lost his hands, then one of his chiefest limbs, and lastly his life. Ilowel.

See His thousands, in what martial equipage They issue forth ! SU'd bows ami shafts their arms Of ('(|\Ki] dread in flight or iu pursuit. Milton

'i'iie natures of the fi.Ncd stars aio astrologically

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differenced by the planets, and esteemed martial or

jovial according to the colours whereby they answer

these planets. Bacon.

His subjects called aloud for war ;

But peaceful kings o'er martial people set.

Each other's poize and counterbalance are.

Dry den. When our country's cause provokes to arms, How VHirlial nmsick every bosom warms. Fo])e.

The army of the sciences hath been of late, with a word of martial discipline, drawn into its close order, so that a view or a muster may be taken of it with abundance of expedition. Swift.

'I'licre, where a sceptered Pictish shade Stalked round his ashes lowly laid, I marked a martial race, pourtrayed

In colours strong ; Bold, soldier-featured, undismayed

They strode along.

Byron. Martial, in tlw old cheraichal nomenclature, was often used to express preparations of iron. See CiiEMisTaY.

Martiai, Law is the law of war that depends upon the just but arbitrary will and pleasure of the king, or his lieutenant ; for, though the king doth not make any laws but by common consent in parliament, yet, in time of war, by reason of the necessity of it to guard against

Fr. viartinet. A kind of

MARTIN, n. s. ˆ

Mar'tinet, n.s. > Makt'let. j swallow.

This guest of Summer, The temple-haunting martlet, does approve,]?y his loved mansionary, that heaven's bre'ath Smells wooingly here. No jutting frieze, Buttrice, nor coigne of vantage, but this bird Hath made his pendant bed, and procreant cradle. Where they most breed and haunt, I have observed The air is delicate. SJiahspeare. Macbeth.

A churchwarden, to express St. Martin's in the Fields, caused to be engraved on the communion cup a mart m, a bird like a swallow, sitting upon a mole-hdl between two trees. Peacham.

As in a drought the thirsty creatures cry.

And gape upon the gathered clouds for rain , Then first the martlet meets it in the sky.

And wuh wet wings joys all the feathered 'train.

DrijdeH.

Martin, in ornithology. See Hirundo.

Martin, in zoology. See Mustela.

Martin (Benjamin), one of the most eminent artists and mathematicians of his age, was born in 1704. After publishing a variety of ingenious treatises, and particularly a periodical work entitled Martin's General Magazine of \rts and Sciences, and carrying on for many years a

dangers that often arise, he useth absolute power, sciences, and carrying on for many years ;

so that his word is a law. But the martial law """l extensive trade as an optician and globe

(according to chief justice Hale) is in reality not ™ „ ![". '?^ ^^'^V ^^'^ infirmities of age co.ua law, but something indulged rather than allowed I n. withdraw from the active part of

'• • - business. Trusting to the integrity of others he,

as a law ; and it relates only to members of the army, being never intended to be executed on others, who ought to be ordered and

governed by the laws to which they are subject, though it be a time of war. And the exercise of martial

though previously possessed of a capital more than sufficient to pay all his debts, became a bankrupt. In a fit of despair he attempted to destroy himself, and the wound, though not immediately mortal, hastened his death, which hap-

law, wherebv any person might lose his life, or “^^^‘f^ly mortal hastened his

member, or liberty, may not be permitted in P’^”^^ J^^^™^/y 19th, 1782, in his seventy-eighth

time of peace, when the king’s courts are open ^ ^”^ , ^ valuable collection of fossils and

for all persons to receive justice curiosities, which, after his death, were sold by

‘r MARTIALIS (Marcus Valerius), a celebrated “*”? V°” ™”^” ^“J^” ^”^”” ^^^^^ H’^ principal

itin poet, born at Bilbilis. in Arraaon .vn. F^i^lications are. The Philosophical Grammar,

Latin poet, born at Bilbilis, in Arragon, was one of the equestrian order. He went^to Rome at the age of twenty-one, and staid there thirty-five years, under Galba and the succeeding emperors, till the reign of Trajan; and, having acquired the esteem of Titus and Domitian, he was created tribune. But, finding that he was neglected by Trajan, he returned to Bilbilis, where he married a wife, and lived with her several years. He commends her, as being alone sufficient to supply the want of every tlmig he enjoyed at Rome. ‘ Romam tu mihi sola facis,’ says he. Lib. xii. Epig. 21. She appears likewise to have been a ladv of a very large fortune ; for, in Lib. xii. Epig. 31, he extols the magnificence of the house and gardens he had received from her. There are still extant fourteen books of his epigrams, many of which are excellent ; many are of the middling kind ; but, as he said of his own works,

Sunt bona, sunt quajdam mediocria, sunt mala plura. There is also ascribed to him a work on the spectacles of the amphitheatre ; but the most learned critics think it was not written by Martial. The best editions of Martial are those in TTsum Delphini, 4to., Paris, 1617, and cum Notis Variorum, 1619.

1 735, 8vo. ; A new, complete, and universal System of Decimal Arithmetic, 1735, Bvo.; The Young Student's Memorial Book, or Patent Library, 1735, 8vo. ; Description and Use of both the Globes, the Armillary Sphere and Orrery, Trigonometry, &c., 1735, 2 vols. 8vo. ; Memoirs of the Academy of Paris, 1740, 5 vols. ; System of the Newtonian Philosophy, 1759, 3 vols. • New Elements of Optics, 1759; Mathematical Institutions, *viz.* Arithmetic, Algebra, Geometry, and Fluxions, 1759 ; Natural History of England, with a map of each County, 1759, 2 vols. ; Philology, and Philosophical Geography, 1759; Mathematical Institutions, 1764, 2 vols.; Lives of Philosophers, with their Inventions, &c!, 1764; Introduction to the Newtonian Philosophy, 1765; Institutions of Astronomical Calculations, 2 parts] 1765; Description and Use of the Air-pump) 1766,; Description of the Torricellian Barometer, 1766; Appendix to the Description and Use of the Globe, 1766; Philosophia Britannica, 1778, 3 vols. ; Gentleman and Lady's Philosophy, 3 vols.; Miscellaneous Correspondence," 4 vols.; System of Philology ; Philosophical Geography; Magazine complete, 14 vols.; Principles of Pump-work; Theory of the Hydrometer; Doctrine of Logarithms.

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Martin (St.), was born at Sabaria in Pannonia, in the beginning of the fourth century. His father was a military tribune ; and he himself was obliged to carry arms. Soon after, being baptised, he renounced the military profession for the monastic. After passing many years in solitude, he returned to Pannonia, converted his mother, and with great zeal opposed the Arians, who governed the church in Illyria, for which he was publicly whipt. He afterwards retired to the neighbourhood of Poictiers, where he remained, till he was elected bishop of Tours in the year 374. He built the celebrated monastery of Marmoutier, near Tours, between the Loire and a steep rock. He afterwards became the apostle of all Gaul ; diffused the doctrines of Christianity among the heathens, and destroyed their temples. The emperor Valentinian, and the tyrant Maximus, treated him with distinguished honor. He used his influence with the latter to preserve the Priscillianists, who were prosecuted by Ithace and Idace, bishops of Spain. He died at Candes, Nov. 8th, 397; or, as others say, on the 11th November, 400. He is the first of the saints confessors whom the Latin church idolised by offering public prayers to him. His life is written in elegant Latin by Fortunatus, and Sulpitius Severus, one of his disciples.

Martin (St.), an island of the West Indies, in long. 63° 8’ W. and lat. 18° 4’ N., is five leagues long, east and west, and three broad. Though the soil is stony, light, and badly watered it is tolerably fertile, producing the best tobacco of t’he Caribbees : in its woods is the candle tree, whose splinters lighted give a fragrant smell, with several trees affording gums. The north side was occupied by the French, and the south by the Dutch ; the former, about forty years since, were 400 white families and 10,000 slaves ; the Dutch only sixty families and 200 slaves. The chief place of the latter is on the north-west side, and is named the Harbour ; it is defended by a small fort. On the south-east side are three salt ponds, affording a considerable quantity of this object for commerce. The small islands attached to St. Martin are, Mid-dleburg Key, close to the north point, and the four Mangrove Keys on the east.

MARTINIQUE, or Martinico, one of the largest of the Caribbee Islands, is thirty-six miles long and seventeen broad. The south coast presents high and steep mountains, without wood. Irregular ramifications of these mountains cross the general chain, and, projecting into the sea,

form bays, called by the French Culs de Sac. It is about fifty miles from north-west to south-east, about sixteen broad, and 140 in circumference. Three mountains rise above the smaller eminences : the highest bearing indelible marks of a volcano. The woods with whicli it is covered continually attract the clouds, and occasion noxious damps, which contribute to make it inaccessible, while the two others are in most parts cultivated. From these issue the many springs that water the island, and which are clianged into torrents on the slightest storm. The principal productions are sugar, cofl'ee, cassia, cotton, indigo, cocoa, ginger, &c. It is

well adapted to trade, from the number of its bays and harbours, whicii possess the advantage of affording a certain shelter from the hurricanes of these latitudes. Witli all tiiese advantages, however, Martinico, tliough in greater forwardness than the other F'rench colonies, had made but little progress at the end of the seventeenth century. In 1700 it contained only 6397 whites. The savages, mulattoes, and free negroes, men, women, and children, amounted to 507. The number of slaves to 14,566. In 1732 the black population amounted to 72,000, and the value of the exports to £700,000 per annum. Tliis trade annually brought into the ports of the island 200 ships from France, fourteen or fifteen fitted out by the mother country for the coast of Guinea, sixty from Canada, ten or twelve from the islands of Margarilta and Trinidad ; besides the English and Dutch ships that came to cany on a smuggling trade. The navigation from the island to the northern colonies, the Spanish continent, and to the Windward Islands, employed] 30 vessels from twenty to seventy tons burden, manned with 600 European sailors of all nations, and 1500 slaves long inured to the sea service. The war of 1744 terminated this prosperity ; and Martinico fell into the hands of the English : the island was soon after infested with vast swarms of ants, which destroyed every vegetable. It was restored in July 1763, sixteen months after it had been conquered, but deprived of all its means of prosperity. In 1769, 1788, and 1810, the exports and imports were : —

Imports. Exports.

1769, £588,412 £536,631

1788, 1,195,111 1,201,875 1810, 635,664 791,773

In 1794 Martinico was taken by the British under Sir John Jervis and Sir Charles Grey, and restored to the French at the treaty of Amiens in 1802. It was again taken by tlie British on the 24th of February 1809, and once more reverted to its former masters at the general peace in 1815. The population according to a return made to the house of commons in 1810, when it was in possession of the British, was: — •

Slaves 78,577

Free persons of color . . 8,630

Number of white inhabitants . 9,206

96,413

Fort Royal, the chief place, is on the middle of the west side, on a narrow neck of. land projecting out from the bottom of a deep bay. This neck, which bends round in the form of a man's arm, together with another called Monk's Island, forms a safe harbour, the entrance of which is protected by forts on each point, whose fires cross. The harbour is also commanded by I'ort Bourbon, on a hill, behind the town. Tiie situation is unhealthy, being surrounded by marshes.

St. Pierre, seven leagues north-west of Port Royal, is the second place of the island : its road is open, and consecjuently unsafe in the hurricane months; and besides ships are obliged

lo anchor a considerable distance from the town. The latter is built on a narrow strip of low land, which forms the beach ; the hills rising so closely behind it, as nearly to overhang the houses. It contains three streets parallel to the beach, and some transverse ones ; but these latter are so steep as not to admit carriages. The hills are furrowed by deep ravines, through which descend little torrents, tlie waters of which are conducted through the streets, and both keep them clean and refresh the atmosphere, which would otherwise be intensely hot, from the sea breeze being interrupted by the hills. The houses are plain, built of stone, and with one or two stories. Trinity Bay, on tlie west side of the island, has safe anchorage in the hurricane months. It has a flourisliing town.

Robert's Bay, on tlie east, is a good port, formed by two islands. Off the north-west point is a large rock, called the Pearl ; and off the south-west three-quarters of a mile, another culled the Diamond (Devil Island, or Isle de Barque of the French), which has the shape of a sugar loaf, with the top broken off, and has only a boat's passage between it and the main. This rock is 600 feet high, and one mile in circumference. The south, south-west, and east sides are inaccessible, rising perpendicularly from the sea; and the west side, where is the only landing, is lined by breakers. It was taken possession of by the English in 1804, while blockading Martinique; and, with immense labor, three batteries mounting twenty-four pounders were constructed on it, to command the whole bay.

MA'RTINMAS, n. s. Martin and mass. The feast of St. Martin; the eleventh of November; often corrupted to martilmass or raartlemas. Martilmax beef doth bear good tacke, When countrey folke do dainties lacke.

Tusser.

Martlets, in heraldry, little birds represented without feet ; and used as a difference or mark of distinction for younger brothers, to put tliem in mind, says Guillim, that they are to trust to the wings of virtue and merit, in order to raise themselves, and not to their feet, they having little land to set their foot on. See Heraldry^.

MARTYN (Henry), an able and interesting missionary, born at Truro in Cornwall, in 1781, was educated at the grammar-school of Truro, and removed, in 1797, to St. Jolin's College, Cambridge. He was chosen fellow in 1802. The following year he took orders; and in 1805 ■went, as a chaplain to the East India Company, to India. Here he distinguished himself by his rapid acquirement of tlie Sanscrit; translated the Common Prayer into Hindostance; and performed divine service publicly in that language. From India he proceeded to Shiraz in Persia; had conferences with the most learned Mahommedan doctors ; and translated the Psalms and New Testament into the Persian tongue. His health failing, he died of a decline, on his road to England, Octolier 16th, 1812.

MARTYNIA, in botany, a genus of theangios-permia order, and didynamia class of plants; natural order tenth, personatae : cal. quinquefid :

con. ringent : r.irs. ligneous, covered with a bark, with a hooked beak, trilocular, and bivalved. There are four species; both tender, herbaceous, flowery plants of South America ; one an annual, the other a perennial, rising with erect stalks, from a foot to two feet high, garnished with oblong simple leaves, and terminated by short spikes of large monopetalous, bell-shaped flowers, of blue and purple colors. They flower in July and August, and are very ornamental, but require always to be kept in the hottest parts of the stove.

MARTYR, »!.s. -N Fr.tnartiˆr; Gv.ˆaprv(), Mar'tyrdom,!'.*/. ˆa witness. One wiio by Marty rol'ogv, i his death bears witness to]\Iartyrol'ogist. J the truth, (see the extract from South :) hence a sufferer in any cause; to put to death for virtue or religion : martyrdom, the act of dying as, or testimony of, a mar-tyr: martyrology and martyiologist are, respectively, a history or historian of martyrdoms.

If an infidel should pursue to death an heretick professing Christianity only for Christian profesiˆioa sake, could we deny unto him the honour of martyrdom 'f Hooker. You could not beg for grace. Hark, wretches, how I mean to tnaityr you ; This one hand yet is left to cut your throats.

Shiikspeare. Now that he hath left no higher degree of earthly honour, he intends to crown their innoceucy with the glory of martyrdom. Bacon.

If to every common funeral, By your eyes marti/red, such grace were allowed. Your face would wear not patches, but a cloud.

Suckling. Pra3'ers and tears may serve a good man's turn ; if not to conquer as a soldier, yet to suffer as a martur.

King CJwrles. Herod, whose unblest Hand, O ! what dares not jealous greatness? tore .•V thousand sweet babes from their mother's breast. The blooms of martiirdom. Crashaw,

Wars, hitherto the only argument Heroick deemed, chief mastery to dissect, \Vith long and tedious havock, fabled knights In battles feigned ; the better fortitude Of patience and heroick martyrdom I'nsung. Milton.

Thus could not the moutlis of worthy martyrs be silenced. Browne.

In the Roman martyrolo;iy we find at one time many thousand martyrs destroyed by Dioclesian, being met together in a church, rather than escape by offering a little incense at their coming out.

Stillingfieet Nearer heaven his virtues shone more bright," Like rising flames expanding in their height. The martyr's glory crowned the soldier's fight.

Dryden . What mists of providence are these ? So saints, by supernatural power set free. Are left at last in martyrdom to die. Id.

To be a martyr signifies only to witness tlie truth of Christ : but the witnessing of the truth was then so generally attended with persecution, tliat martyrdom now signifies not only to witness, but to witness by death. South's i'ernjons.

The first martyr for Christianity was encouraged, in his last moments, by a vision of that divine per-son for wliom he suffered. Addison. Martyred with the gout. Pope.

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Socrates, Truth's early champion, martyr for liis God.

Thompson.

Martyii properly signifies a witness, and is applied, by way of eminence, to tliose wlio suflfer in witness of tlie truth of the gospel. Tl)e Christian church has abounded in martyrs, and liistory is filled with accounts of their singular constancy and fortitude under the cruellest torments human nature was capable of suffering. The primitive Christians were accused by their enemies of pay-ing a sort of divine worship to the martyrs. Thus when the Jews, at the martyrdom of Polycarp, desired the heathen judge not to suffer the Christians to carry off his body, lest they should /save their crucified master and worsliip him in his stead, the C'hristians of the Smyrna church answered, * we can neither forsake Christ nor worship any other; for we worship him as the Son of God, but love the martyrs as the disciples and followers of the Lord, for tiie great affection they have shown to their King and Rlaster.' A similar answer was given at the martyrdom of Fructuosus, in Spain, by Eulogius his deacon. Many of the Christians of this period believed that the martyrs enjoyed very singular privileges; that upon their death they were immediately admitted to a state of bliss, while other souls waited for the completion of their happiness till the day of judgment, &c. The churches built over the graves of the martyrs, and called by their names, to preserve the memory of their sufferings, were distinguished by the title martyrum confessio, or memoria. The festivals of the martyrs are of very ancient date in the Christian church, and took their rise about the time of Polycarp, who suffered martyrdom about the year 168. On these days the Christians met at the graves of the martyrs, and offered thanksgivings to God for the examples they had afforded them : they celebrated the eucharist, and gave alms to the poor; which, together with a panegyrical oration or sermon, and reading the acts of the martyrs, were the spiritual exercises of these anniversaries. Of the sayings, sufferings, and deaths of the martyrs we have but very little left, the greatest part of them having been destroyed during the dreadful persecution carried on by Dioclesian for ten years against the Cliristians ; when diligent search was made after their books and papers, and all that were found were burnt. Eusebius, indeed, composed a martyrology, but it has been lost; and those since compiled are received with just caution. From the eighth century,

several Greek and Latin writers endeavoured to make up the loss by compiling, witii vast labor, accounts of the lives and actions of the ancient martyrs, but which consist of little else than a series of f ibles. Martyr (Peter), a celebrated divine, born in Florence in 1500. He studied])hilosophy and the languages at Padua and Bononia, was a regular Augustine in tb.e monastery of Fiscoli, and was esteemed one of the best preachers in Italy. The works of Zuinglius and Bucer gave him a good opinion of the Protestants, and his conversation with Valdez confirmed it. lie for some time preached that doctrine at Rome in private; but, being impeached, fled to Naples, and thence to Lucca, where he brought over to the protestant interest Emanuel Tremellius, Celsus, Marti-nengas, Paul Lasicius, and Jeremiah Zanchy. He was sent for to England by king Edward 'l., and made pi'ofessor of divinity at Oxford in 1549. In queen Mary's reign he returned to Strasburgh, and was present at the conference of Poissy. He difl'ered from Calvin concerning Christ's presence in the eucharist. He wrote a great number of works, and died in 1562.

JVIAll'VEL, n.s. & v. n.'\ Fr. rnaveUk, nier—

Mau'vellgus, adj. 9 veil la- ; of Lat. rnira—

Mar'vellously, adv. I bills, miro, to won—

Mar'vellousness, n. s. J der. A wonder ; astonishing event : to wonder ; be astonished : marvellous is, strange ; unusual ; wonderful ; incredible; the adv. and n.s. corresponding.

This is the Lord's doing ; it is marvellous in our eyes. Psalms.

The countries marvelled at thee for thy songs, proverbs, and parables. Ecclu.;. xlvii. 17.

A marvel it were, if a man could espy, in the whole scripture, nothing which might breed a probable opinion, that divine authority was the san.e way mclinable. Hooker.

I am scarce in breath, my lord. — No marvel, you have so bestirred your valour, you cowardly rascal ! Shakspeare. King Lear.

You make me marvel. Shakspeare.

The army marvelled at it. Id.

She has a marvellous white hand, I must confess.

Id. You look not well, seignior Antonio ;

You have too much respect upon the world :

They lose it that do buy it with much care.

Believe me, you are marvellouslii changed. .,

i\]ine eyes and ears can witness, with what ap-proof and applause divers of the Catholics royal, as they are termed, entertained the new translated liturgy of our church ; as marvelling to see such order and regular devotion in them, whom they were taught to condemn as heretical. Bp. Hull.

The encouragement of his two late successes, with which he was ‘marvellously elated. Clarendon.

The marvellous fable includes whatever is supernatural, and especially the machmes of the gods.

Pope’s Preface to the Iliad.

MARVELL (Andrew), an ingenious writer in tlis seventeenth century, bred at Cambridge. Ho travelled through most of Europe, and was secretary to the embassy at Constantinople. His firstap-pearance in public business at home was as assistant to Milton when Latin secretary to the protector. A little before the Restoration he was chosen by his native town, Kingston upon Hull, to sit in that parliament, which began at Westminster April 25th, 1660; and is recorded as the last member who received the wages anciently paid to representatives by their constituents. He sel-dom spoke in parliament, but he had great influence without doors upon the members of both houses ; and made himself very obnoxious to the government by bis actions and writings : notwithstanding which, king Charles II. took great deliglit in his conversation, and tried all means to win him over to his side, althoug’i Marvell was far from being in affluent circumstances. He died, not without strong suspicions of being poisoned, in 1678, aged fifty-eight. In 1688 the town of Kingston upon Hull contributed a sum of money to erect a m-mumcnt over him in the church of St. (Jiles in the Fields, where

he was interred, and an epitaph composed by an al)le hand ; but tlie ministry of that church forbad both tlie inscription and monument to be placed there. lie wrote The Rehearsal Transposed ; A short Historical Essay concerning General Councils, Creeds, and Impositions in Matters of Religion, &.c. ; also Poems and Letters.

INIARVELLA, or Marbella, a sea-port town of Spain, on the road from Gibraltar to Malaga. Its harbour is fortified but small, and the town is surrounded widi walls, having a neat square, and a fountain in the centre. The town house and church are good buildings. In the environs sugar, wine, cotton, and cofl'ee, are raised. Population 8000. Eighty-four miles W. S. W. of Granada, and thirty-four N. N. E. of Gibraltar.
MARULLU S (Michael), Tarchanistis, a learned Greek who went to Italy, after the taking of Constantinople. He wrote poems in Greek and Latin.. He was a soldier as well as a poet, but an atheist, and a great admirer of Lucretius. He was drowned in the C'jecina in Tuscany.

MARWAR, a large district of Hindostan, in the province of Ajmeer, situated between 26° and 28" of N. lat. It belongs to the rajepoot rajah of Joudpore, whose family have possessed it from time immemorial. It is a strong, but not a fertile province. See Joudpore.

MARY I., queen of England, was eldest daughter of Henry X'lll. by his first wife Catharine of Spain, and born at Greenwich, in February 1517. Her mother was very careful of her education, and provided her with proper tutors. Her first preceptor was the famous Linacre, who drew up for her use the Rudiments of Grammar, and afterwards De emendata slructura, Latini ser-monis libri sex. On Linacre's death, in her sixth year, Lewis Vives, a learned man of V'alenza in Spain, became her next tutor ; and composed for her De ratione studii puerilis. Under the direction of these learned men she became mistress of the Latin language ; and Erasmus commends her for her epistles in that language. King Edward 'I., her brother, dying on the 6th of July 15.53, slie was proclaimed queen the same month, and crowned in October. Upon her accession she declared, in her speech to the council, that she would not persecute her Protestant subjects ; but in the following month she prohibited preaching witliout a special license ; and, before the expiration of three months, the Protestant bishops were excluded the house of lords, and all the statutes of Edward 'I., respecting the Protestant religion, were repealed. In July 1554 she was married to prince Philip of Spain ; and began that

persecution against the Protestants for which her memory is so deservedly infamous. See England. Some have supposed, that the queen was herself passionate and hu-mane ; and that most of those barbaiities were committed Ity herbisliops without her knowledge. But among numberless instances that might be adduced in proof of the contrary, we need only mention her ungrateful treatment of archbishop Cranmer, who in reality saved her life. Burnet says, ‘ that her firm adherence to her mother’s cause and interest, and her backwardness in submitting to” the king her father, were thought crimes of such a nature by his majesty, that he came to a resolution to put her openly to death ; and ti)at when all others were unwilling to run any risk in saving her, Cranmer alone ventured upon it,’ and urged such arguments as prevailed on the old tyrant to preserve her. In return for this favor the ungrateful bigot condemned and burned the worthy prelate for heresy. In 1556 the persecution became general ; and Protestants of all ranks and ages, and of both sexes, fell victims to papal fury. See England. She died November 7th, 1558, aged forty-three, of an epidemic fever, having long previously been a prey, if not to remorse, at least to chagrin, arising from her having no children, the absence and unkindness of her husband, the loss of Calais, &.c. Strype has preserved three cieces of hers, *viz.* 1. A prayer against the assaults of vice. 2. A meditation touching adversity. 3. A prayer to be read at the hour of death. In Fox’s Acts and Monuments are printed eight of her letters to king Ed-ward and the lords of the council, on her nonconformity, and on the imprisonment of her chaplain Dr. Mallet. In the Sylloge epistolarum are several more of her letters, extremely curious. In Hayne’s State Papers are two in Spanish, to the emperor Charles V. There is also a French letter, printed by Strype from the Cottonian library, in answer to a haughty mandate from Philip, when he intended to marry the lady Elizabeth to the duke of Savoy, against the inclination both of the queen and princess ; it is written in a most abject manner, and a wretched style. She likewise translated a considerable part of Erasmus’s paraphrase on St. John’s gospel, winch was completed by Dr. Mallet, and is preserved in the first volume of Erasmus’s paraphrase on the New Testament : printed at London, 1548, in folio.

Makv I. queen of Scotland, daughter of king James V., was born in the royal palace of Linlithgow, December 8th, 1542. Her mother was Mary, the eldest daughter of Claude duke of Guise, and widow of Lewis duke of Longueville. Her father dying, a few days after her birth, she scarcely existed before she was hailed queen, and a regency was appointed, though not in the most able hands. At six years of age IMary was conveyed to France, where she received her education in

tlie court of Henry II.; and became one of the most beautiful and accomplished ladies of her age. She not only spoke the French, Italian, and Spanish tongues, with ease and propriety, but made herself mistress of the dead languages, and devoted much of her time to the study of history. Whilst she resided in the court of Henry II. her personal charms made a deep impression on the Dauphin. The constable Montmorency in vain opposed their marriage. Tiie importance of her kingdom to France, and the power of her uncles the princes of Lorrain, counteracted his intrigues ; and the Dauphin obtained the most beautiful princess in Christendom. His father, Henry II., dying soon after, they mounted the throne of France. In that elevated station the queen did not fail to distinguisli herself, and there she learned the first lessons of royalty. But this scene of gran-MARY.

deur and felicity was of short duration. Her husband, Francis II., died unexpectedly, after a reign of only sixteen months. “The disgrace of her uncles, the princes of Lorrain, which followed, and the coldness of the queen mother, induced her to accept the invitation of her Scottish subjects, to take possession of the crown to which she had been born. In Scotland she at first gave satisfaction to almost every class of people. She tolerated Protestantism, requiring only a like indulgence for her own faith, and took the politic measure of ingratiating herself with her natural brother, the prior of St. An-drew’s, who had placed himself at the head of the reformers. By his aid she crushed an early and formidable rebellion ; and in reward for his services conferred upon him a large estate, and created him earl of Murray. For a few years her reign was prosperous, and her administration applauded by all her subjects ; but a queen, young, beautiful, and accomplished, an ancient hereditary kingdom, and the expectation of a greater inheritance, were objects to excite the love and ambition of the most illustrious personages. Mary, however, constantly rejected every offer of a foreign alliance ; and, swayed at first by prudential motives, and afterwards by love, she, on the 29th of July, 1565, gave her hand to Henry Stuart, lord Darnly, the son of the earl of Lennox. Tliis nobleman, whose elegance of person and manners were only equalled by the depravity of his mind, owed liis good fortune not solely to the affection of the queen. Mary was indeed extravagantly attached to him; but one motive that considerably swayed her to accept him as a husband was, that after herself he was the nearest heir to the crown of

England, as well as the next in succession to that of Scotland, after the earl of Arran. She conferred on him the title of king, shared her dignities witli him, and paid him all the attention that could have been shown by the fondest wife. Yet he had not been married seven months, wlien he entered into a conspiracy to deprive her of the government, and even to endanger her life. With this view he headed a band of factious nobles, who entered her chamber at night; and, though she was then far advanced in pregnancy, murdered her secretary, Rizzio, in her presence, whilst one of the ruffians held a pistol to her breast. Such an outrage, together with his frequent amours, could not fail to alienate the queen's affections, and to open her eyes to the glaring defects of his character. Yet she still treated him with respect, and labored to fashion him to tlie humor of her people. This was labour in vain. His preposterous vanity and aspiring pride roused the resentment and the scorn of the nobles ; while his folly and want of dignity made him despised by the people. He deserted the conspirators with whom he had been leagued in the assassination of the secretary ; and had the extreme imprudence to threaten publicly the earl of Murray, who, from his talents and popularity, possessed the greatest power of any man in the kingdom. The consequence was, that a combination was formed for the king's destruction; and, on the 10th February 15G7, the house in which he then residcil " Vol.. XIII.

was early in the morning blown up with gunpowder, and his naked body, without any marks of violence, found in an adjoining field. Such a daring murder filled every mind with horror and astonishment. The queen, who had been iu some measure reconciled to her husband, was overwhelmed with grief, and took every method in her power to discover the regicides ; but for some days nothing appeared which could lead to the discovery. Papers, indeed, were posted on the most conspicuous places in Edinburgh, accusing the earl of Bothvvell of the crime ; and rumors were industriously circulated that his horrid enterprise was encouraged by the queen. Conscious, it is presumed, of her own innocence, Mary was the less disposed to believe the guilt of Bothwell, who was accused as having only acted as her instrument ; but, when he was charged with the murder by the earl of Lennox, she instantly ordered him on his trial. Through the management of the earl of Morton, and other of his friends, Bothwell was acquitted of all share and knowledge of the king's murder ; and, what is still more astonishing, procured, by the same influence, a paper signed by the majority of the nobles recommending him as a fit husband forthe queen! Armed with this, which he weakly thought sufficient to defend

iiim from danger, Bothwell soon afterwards seized the person of his sovereign, and carried her a prisoner to his castle at Dun-bar. It has indeed been alleged by the queen's enemies, that no force was employed on the occasion ; that she was seized with her own consent; and that she was even privy to the subscribing of the bond by the nobles. But it has been well observed by j\Ir. Tytler, that * her previous knowledge of the bond, and her acquiescence in the seizure of her person, are two facts in apparent opposition to each other. Had the queen acted in concert with Bothwell, in obtaining the bond from the nobles, nothing remained but, under the sanction of their unanimous address, to have proceeded directly to the marriage. Instead of which, can we suppose her so weak as to reject that address, and rather choose that Bothwell should attempt to seize and carry her off by violence ? — an attempt which many accidents might frustrate, and which at all events could not fail to render him or both of them odious to the whole nation. Common sense then, as well as candor, must induce us to believe, that the scheme of seizing the queen was solely the contrivance of Bothwell and his associates, and that it was really by force that she was carried to Dunbar.' Being there kept a close prisoner for twelve days, having as there is reason to believe actually suflered the indignity of a rape, perceiving no appearance of a rescue, and being shown the infamous bond of the nobles, Mary promised to receive her jailor for a husband, as, in her opinion, the only refuge for her injured honor. Every man who feels for the sulTicrings, and respects the memory of Mary, must regret that she had not fortitude to resist every attempt to Ibrce upon her as a husband the profligate and audacious villain, who had offered her such an insult. This, however, is only to regret that she was not more than human ; that she, who possessed so many

perfections, should have had them blended with one defect. The marriage, thus inauspiciously contracted, was solemnised on the 15tli of May, 1567 ; and it was the signal for revolt to Morton, Lethington, and many of the othei nobles, by whose wicked policy it had been chiefly brought about, and who had bound themselves to em-ploy

their swords against all persons who should presume to disturb so desirable an event. As liothwell was justly and universally detested, and as the rebels pretended that it was only against him and not against the queen that tiiey had taken up arms, troops flocked to them from every quarter. The progress and issue of this rebellion will be seen in our history of Scotland: suffice it to say here, that upon the faith of promises the most solemn, not only of personal safety, but of receiving as much honor, service, and obedience, as ever was paid by the nobility to the princes, her predecessors, the queen delivered herself into the hands of the rebels, and persuaded her husband to fly from the danger which threatened his life. These promises were instantly violated. The faithless nobles, after insulting their sovereign, hurried her as ?. prisoner to Loch-leven castle, where she was committed to the care of the mother of her bastard brother ; who, with the insolence of a prostitute, says Mr. Whitaker, asserted the legitimacy of her own child, and the illegitimacy of Mary ; and who stript her of her royal ornaments, and dressed her in a coarse brown cassoc. In this distress the queen's presence of mind did not forsake her. Siie made her escape, and soon found herself at the head of 6000 men. This army, however, was defeated; and, in opposition to the advice and intreaties of all her friends, she formed the imprudent resolution of taking refuge iu England. The archbishop of St. Andrew's accompanied her to the border; 'and, when she was about to quit her own kingdom, he laid hold of her horse's bridle, and on his knees conjured her to return : but INIary proceeded, fully relying on Elizabeth's friendship, which had been offered her while a prisoner, and of the sincerity of which she harbored no doubt. That princess, however, who had never forgiven her assumption of the title and arms of the queen of England, while she was wife to the dauphin of France, now dreaded her talents, and envied her charms. She, therefore, under various pretences, and in direct violation of public faith and hospitality, kept her a close prisoner for nineteen years; encouraged her Scottish subjects to ac-cuse her publicly of the murder of her husband, allowed her no opportunity of vindicating her honor, and even employed venal scribblers to blast her fame. Under this unparalleled load of complicated distress, Mary preserved the magnanimity of a queen, and jiractised with sincerity the duties of a Christian. Her sufl"erings, her dignified aff'ability, and her gentleness of disposition, gained her great popularity in England, especially among the Roman Catholics ; and as she made many attempts to procure her liberty, and carried on a constant correspondence with foreign powers, Elizabeth became at last so much afraid of her intrigues, tliat she determined to tut her off. ^^'ith this view she prevailed upon

her servile parliament to pass an act which might make Mary answerable for the crimes of all who should call diemselves her partizans ; and, upon that flagitious statute, she was tried as a traitor concerned in the conspiracy of Babington. See Scotland. Though the trial was conducted in a manner which would have been illegal, even if she had been a subject of England, and though no certain proof appeared of her connexion with the conspirators, she was, to the amazement of Europe, condemned to suffer death. The fair heroine received her sentence with great composure; saying to those by whom, it was announced, ‘ The news you bring cannot but be most welcome, since they announce the termination of my miseries. Nor do I account that soul to be deserving of the felicities of immortality, which can shrink under the sufferings of the body, or scruple the stroke that sets it free.’ On the evening before her execution, for which, on the succeeding morn, she prepared herself with religious solemnity and perfect resignation, she ordered all her servants to appear before her, and drank to them. She even condescended to beg their pardon for her omissions or neglects ; and recommended it to them to love charity ; to avoid the unhappy passions of hatred and ma-lice, and to preserve themselves stedfast in the faith of Christ. She then distributed among them her money, her jewels, and her clothes, according to their rank and merits. She wrote her will with her own hand, constituting the duke of Guise her principal executor; and to the king and queen of France she recommended her son. In the castle of Fotheringay she was beheaded on the 8th of February, 1587, in the forty-fifth year of her age ; and her body, after being embalmed and laid in a leaden coffin, was buried with royal pomp in the cathedral of Peterborough. Twenty years afterwards her bones were, by order of her son king James I., removed to Westminster, and deposited in their proper place among the kings of England. The character of Mary has furnished matter of controversy for 200 years. She is universally allowed to have had considerable talents, and a mind highly cultivated. By one party she is painted with more virtues, and with fewer defects, than almost any other woman of the age in which she lived. By another she is represented as guilty of the grossest crimes wliich a woman can commit — adultery, and the murder of her husband. By all it is confessed, that, previous to her connexion with the earl of Bothwell, her life as a Christian was exemplary, and her administration as a queen equitable and mild ; and it has never been de-nied, that she bore her tedious sufferings with such resignation and fortitude as are seldom found united with conscious guilt. These are strong presumptions of her innocence. The moral characters of mankind

change by degrees ; and it seems hardly consistent with the known principles of human nature, that any person should at once plunge suddenly from the sum-mit of virtue into the depths of vice ; or, when sunk so low, should by one effort recover his original state of elevation. But in this controversy presumptions must go for nothing. Ttie positive evidences brought against the queen of

Scots are so conclusive, tliat, if they be genuine, she must liuve been guilty ; and, if they be spurious, there can be no doubt of her innocence. They consisted of a box with letters, contracts, and sonnets, said to be written by lierself and sent to the earl of Bothwell. In addition to these, the supposed confessions of the criminals who had suffered for the king's murder were originally urged as proofs of her guilt ; but these confessions are now admitted by all parties to be either wholly forged, or so grossly interpolated that no stress whatever can be laid upon them ; and during Mary's life it was affirmed by her friends, and not sufficiently contradicted by her enemies, that the persons who had accused Bothwell, and were doubtless his accomplices, instead of criminating, the queen, had openly protested her innocence in their dying moments. The letters made their first appearance in a secret council assembled by the earl of Murray on the 4th of December, 1567; and the reason there assigned by the confederates for their unwillingness to produce them was, ' That luif they beare unto hir person, and the reverrance of his majestic, whais moder she is.' And ihey proceed to say, that they would not have produced them at all, 'gif otherwise the sinceritie of their intentions and proceedings from the beginninge myglit be known to forrein nacions, and the inhabitants of this ile satisfiet and resolvit of the richtesness of their quarrel, and the securitie of them and theire posteritie be ony other meane might be providit and established.' In this act of council the rebels discover the greatest anxiety for their pardon and security, as appears from their declaration: — 'The lords of secrete council, &c., desire it to be found and declarit be the estates and haill body of the parliament, that the cause and occasion of the tacking of the queen's per-son, upon the 15th dale of Junii last by

past, and holding and detaininge of the same within the hous and place of Lochlevin continewallie sensyne, presentlie, and in all tymes comyng; and generally all other things inventit, spokin, writtin, or donne be them, or ouny of them, sen the tent dale of February last by past unto the dale and date heirof, towiching the saied queen hir person : that caus, and all things depending theiron, or that onie wise mai apperteine theire-to, &c., was in the saied queen's awin default, in as far as be divers hir privie letters written and subscrivit with hir awin hand, and sent by her to James Eril Bothwell, &c. — and be her un-godlie and dishonorable proceedings in a pri-vait marriage, soddanlie and unprovisitly, it is most certain, that she was previe, art and part, and of the actual devise and deid of the for-mencionit murther of the kinge, her lavvchfull husliand, our sovereine lorde's father, committit be the said James Eril Bothwell, &c.' Had the letters been really genuine, into the absurdity of this declaration no man of common sense could possibly have fallen. Truth is always consistent : but in a series of forgeries contradictions are scarcely avoidable. The confederates rose in rebellion against the queen on the 10th of June ; they faced her in rebellion at Carberrie hill on the 15th ; they sent her away to prison on the 16th; yet they afterwards justified all

that they had done since the 10th of February by letters, which, they said, they had not till the 20th of June ! 'Tins,' says Mr. Whitaker, ' if we consider it as folly, is one of the most striking and eminent acts of folly that the world has ever beheld. But it ought to be considered in a light much more dishonorable to the rebels ; and, as a piece of knavery, it is one of the rankest that has ever been attempted to be imposed upon the sons of men.' On the 4th of December they had not fixed any day for the discovery of the letters. The story of the seizure of Dal-gliesh with the casket was not thought of till nearly a year afterwards ; and when it was invented, they had certainly forgotten the date of their act of council. In that act, therefore, they were free to rove at large ; but they roved very incautiously. By grounding upon the letters, proceedings prior to the 10th of June, they plainly declare the discovery of these fatal papers to have been antecedent to the 20th. By grounding upon them their secret messages for sedition, their private conventions for rebellion, and ' every thing inventit, spokin, written, or done be them, or onny of them, respecting the queen, Bothwell, or Darnley, sen the tent dale of February last by past,' they even intimate the discovery to have been previous to the murder of the king ; and yet by their own accounts some of the letters were then actually unwritten. This is astonishing, and shows the extreme difficulty of carrying to any length a consistent series of falsehoods.

Even Murray, Morton, and Lethington, could not do it. This act of council had been formed and managed with a view to the approaching convention of the estates. It was a preparation for the parliament in which the conspirators had secured the fullest sway, and where they proposed to effectuate their pardon and security, and to establish the letters as decisive vouchers against the queen. Accordingly, upon the 15th of December, 1567, the three estates were assembled. The conspirators invited no candid or regular investigation. The friends of the nation and of the queen were overawed. Every thing proceeded in conformity to the act of council. The conspirators, by a parliamentary decree, received a full approbation cf all the severities which they had exercised against the queen. Under one form, therefore, the letters were certainly exhibited before the council, and under another form they were produced in parliament; but, had they been genuine, they would have appeared uniformly with the same face. Tlic clerk of the council was Alexander Hay, a notary public accustomed to draw up writings and to attest them ; and, what puts his accuracy with respect to the letters beyond all possibility of doubt, his description of them is authenticated in the fullest manner by tlie signatures of Mur-ray, Morton, and others, wiioXormcd the secret council. The letters, therefore, were actually presented to the secret council with the customary appendage of subscription to them. But, when these artificers of fraud came to reflect more closely on the approach of parliament, and to prepare their letters for the inspection of the friends of Mary, they began to shrink at th(i - thoughts of what they had done. To substantiate

the charge by letters under her own hand, they had naturally annexed her own subscription, a letter unsubscribed being a solecism in evidence. But, most unfortunately for the cause of complete forgery, Mary was still in possession of her own seal ; and he who fabricated the letters was not an engraver. For this reason, ‘ the allegit writings in form of missive letters or epistles,’ says the bisiiop of lloss, in an

address to Elizabeth, ‘ are not sellit nor signetit.’ They were neither attested by her subscription at the bottom, nor secured by her seal on the outside. In the secret council, where all were equally embarked in rebellion, these omissions were of no importance. But that letters, containing intimations of adultery and of murder, should be sent by the queen to the earl of Bothwell, with her subscription to them, and yet witliout any guard of a seal upon them, so far exceeds all the bounds of credibility, that they could not expect it to gain the belief of parliament. They were struck with the absurdity of their])lan, and dreaded a detection. They were under the necessity of altering it ; but they could not supply the defect of the seal. They, tiierefore, wrote over the letters anew, and withheld tile subscription. These letters were now as complete as the conspirators wished tiiem; yet in this state, while they were unsubscribed and unsealed, they wanted other formalities which are usual in despatches. They were without directions, and they had no dates. They must, therefore, have been sent by the queen to Bothwell as open and loose papers ; yet they contained evidence against herself, and against him, of the most horrid wickedness ; and Nicholas Hubert, tlie person who is said to have carried most of them, was of the lowest condition, and, as Dr. Robertson characterises him, ‘ a foolish talkative fellow.’ lie would, therefore, surely read those papers, which are polluted from end to end with open and uncovered adultery, and as surely report their contents to others. These are most incredible circumstances, on the supposition that the letters are authentic, unless the queen was, what none of her enemies ever represented her, ar. absolute idiot. The letters, in their composition, bear no resemblance to the other writings of the queen. They have a vulgarity, an indelicacy, and a coarseness of expression and manner, that by no means apply to her. Tiiey breathe nothing of the passion of love besides the impulses of the sensual appetite; and represent a que«i highly accomplished acting with all the sneaking humility of a cottager to a peer. ‘ Such,’ says Mr. \ hittaker, after quoting several expressions, with which we will not pollute our work, ‘ was the coarse kirtle, and the homely neckatie, in which these wretched repre-senters of Mary dressed themselves up, for the exhibition of a queen dignified, refined, and elegant;— a queen whom, according to their own account, * (jod had indowit with mony gude and excellent gifts and virtues!’ The letters have come down to us in the French, the Scottish, and the Latin languages. Dr. Robertson, the ablest and most persevering of all Mary’s enemies, supposes tliat the French originals are lost, but that two or three sentences of each of these originals were retained, and prefixed to the Scottish translation; and that the I’rench editor, observing this, foolishly concluded that the letters had been written partly in French and partly in Scottish. The

Dr's. observatiovis have been examined by Mr. Whitaker; who makes it clear, we think, that the learned historian has occasionally mistaken the sense of the Latin, the French, and even the Scotch ; and that he has forgotten to point out either the elegance or the spirit of any particular clauses in his pretended originals. The same masterly vindicator of Rlary turns his antagonist's artillery against himself; and demonstrates, that such variations as he has thought sufficient to prove the existence of a former French copy, are diffused over all the letters.

But in Murray's receipt, in September 1568, there is mention of other vouchers beside the letters. He acknowledges tliat he also received from Morton contracts and sonnets or love-verses. These remarkable papers, though said to have been found upon tiie 20th of June 1567, appeared not till September 1568. The general arguments which affect the authenticity of the letters apply to tliem in full force ; for, as the original letters were undoubtedly in Scotch, the original sonnets were as certainly written in French. This has been completely proved by Dr. Robertson, and is fully admitted by Mr. ˆVhitaker. The sonnets have every external and internal evidence of forgery in common with the letters, and tiiey have some marks peculiar to themselves. In particular they make the love of Mary still more gro-velling than the letters made it; and, with a degree of meanness, the author of the sonnets has made the queen consider it as ' na lytill honor to be maistres of her subjects's gudis !' The sonnets, though undoubtedly spurious, prove the full conviction in the minds of the rebels, of what in an unguarded moment they actually confessed to Throgmorton, and was manifest to all the world : *viz.* that ' the queen their sovereign was led captive, and by fear, force, and other extraordinary and more unlawful means, compelled to become bed-fellow to another wife's husband.' ' The makers of these papers,' says IMr. Whitaker, * have broken through all the' barriers of their own history. They have started aside from the orbit of their own chronolocry. They have taken a flight beyond the bounds of their own creation.' This mass of forgery was clandestinely shown to Elizabeth's commissioners during the conferences at York. See Scotland. It was shown again to the same commissioners and others during the conferences at Westminster. But neither Mary nor her commissioners could ever procure a sight of a single letter or a single sonnet. By the bishop of Ross and lord Ilerries she repeatedly demanded to see the papers said to be written by her; but that request, in itself so reasonable, I'lizabeth, with an audacity of injustice, of which the history of mankind can hardly furnish a parallel, refused. Mary then instructed her commissioners to de-mand copies of the letters and sonnets; and offered, even from these, to

demonstrate, in the])resence of the F'nglish queen and parliament, and the ambassadors of foreign princes, that the pretended originals were palpable forgeries. Even this demand was denied her; and there is undoubted evidence still exislin?. that neither

she nor her commissioners had so much as a copy of these criminal papers, till after tliose important conferences had for some time been at an end. When Tytler's Enquiry into the Evidence, produced by the Earls of Murray and Morton against iNIary Queen of Scots, was first published, it was reviewed in the Gentleman's IMagazine by tlie late Dr. Johnson. The review, after giving a brief analysis of the work, with reflections on the force of the evidence, concludes thus: — 'That the letters were forged is now made so probable, that perhaps they will never more be cited as testimonies.' The character of Mary may therefore be left to tlie reflection of the reader. To such as wish for farther satisfaction we would recommend the study of the writings of Buchanan, bishop Leslie, Goodal, Robertson, Hume, Tytler, Sir David Dalrymple, Stuart, and Whitaker. Mr. Laing has at a more recent period revived this controversy; but we cannot feel that he has added much to the previous evidence. His work, however, should also be consulted. Queen Mary wrote, 1. Poems on various occasions, in the Latin, French, and Scots languages. One of her poems is printed among those of A. Blackwood ; another in Brantome's Dames Illustres, written on the death of her first husband Francis. 2. Consolation of her long Imprisonment, and Royal Advice to her Son. .". A copy of verses, in French, sent with a diamond ring to queen Elizabeth. There isa translation of these verses among the Latin poems of Sir Thomas Chaloner. 4. Genuine Letters of Mary queen of Scots, to James earl of Bcthwell ; translated from the French, by E. Simmonds, 1726. There are, besides, many other of her epistles to queen Elizabeth, secretary Cecil, Mildmaye, &-c., which are preserved in the Cottonian, Ashmolean, and other libraries.

Mary 1L queen of Great Britain, eldest daughter of James IL, by his first wife, was born at St. James's in 1662. She was educated a

protestant, and married to William IIL of Nas-sau, then prince of Orange, in the sixteenth year of her age. She staid in Holland with her husband till February 12th, 1689, when she came over, and was proclaimed queen of England, &:c. She was an equal sharer with her husband in all the rights belonging to the crown ; but the administration was lodged solely in the king. She studied much, and devoted much of her leisure to architecture and gardening. She was zealou.!, for a reformation of manners, and charitable in the highest degree, without ostentation. This excellent queen died on the 28th of December, 1695, at Kensington, of the smallpox, aged thir-ty-three. In her the arts lost a protectress, the unfortunate a mother, and the world a pattern of virtue. She was tall, of a majestic graceful mien, her countenance serene, her complexion ruddy, and her features beautiful.

Mary df. Mf-dicis, wife of Henry IV., king of France, was declared sole regent of the kingdom in 1610, during the consternation which the assassination of that king had occasioned. See France. By Iier ambitious intrigues, the nation lost all its influence abroad, and was torn to pieces at home by contending factions. After several vicissitudes of fortune, she was abandon-td by her son Louis XUL, whose reign IkkI

been constantly disturbed by the civil commotions she had occasioned ; and died in indigence at Brussels, in 1642, aged sixty-eight. She built the superb palace of Luxembourg at Paris, and embellished that city with aqueducts and other ornaments.

]\1ARY'S (St.), a county of Maryland, United Slates, bounded north-east by Calvert county, east by Chesapeake Bay, south-west by the Potomac, and west by Charles county. Chief town Leonard's Town.

Mary's (St)., a river of the United States, which divides Georgia from East Florida, and runs into the sea. ' Long. 81° 40' W., lat. 30° 43' N. A town of tlie same name stands at its mouth, the frontier town of Georgia, and a place of considerable trade during the late wars. It is 130 mdes S. S. W. of Savannah. Long. 81" 43' W., lat. 30° 43' N.

Mary's River (St.), or St. Mary's Straits, a river or strait of North America, connecting lakes Huron and Superior. It is seventy miles in length, and divided into several channels. There are two forts on it.

Mary's Falls (St.), a cataract in St. Mary's river, between lake Superior and lake Huron. These falls do not descend perpendicularly, as those

of Niagara, but consist of a rapid, which continues nearly three quarters of a mile, over which canoes, well piloted, may pass. At the bottom nature has formed a most commodious station for catching the fish, which are taken here ill immense shoals.

MARYLAND, one of the United States of North America, bounded north by Pennsylvania and Delaware, east by Delaware and the Atlantic, south-west and west by 'irginia. It is 196 miles long, and 120 broad; containing 13,950 square miles. Population, in 1790, 319,721; in 1800 349,692; and in 1810 380,546; of whom 111,502 were slaves, and 33,927 free blacks. The number of the militia, in 1811, amounted to 32,189.

The counties, population, and chief towns are exhibited in the following table : —

Counties.

Pop.

Chief Towns.

Alleghany

6,909

Cumberland.

Ann Arundel

26,668

Annapolis.

Baltimore

75,810

Baltimore.

Cecil ….

13,066

Elkton.

Calvert …

8,005

St. Leonard’s.

Caroline …

9,454

Denton.

Charles …

20,245

Port Tobacco

Dorchester . .

18,103

Cambridge.

Frederick . .

34,437

I’ledericktown.

Harford …

21,258

Harford.

Kent ….

11,450

Chester.

Montgomery

17,980

Unity.

Prince (jcorge

20,589

Marlborough.

Queen Ann’s

10,648

Centreville.

St. Mary’s . .

12,794

Leonardlown.

Somerset . .

17,195

Princess Anne.

Talbot …

14,230

Easton.

Washington . .

18,730

Hagarstown.

Worcester . .

16,971

Siiowliill.

380,.546

Annapolis is the seat of government. Baltimore is much the largest town. The other most considerable towns are Fredericktown, llagarstown, Easton, Cumberland, SnowhiU, Ciiester-town, and Williamsport. There are twenty-four banks and brandies of banks in Maryland ; ten of which are at Baltimore.

Here are also a number of respectable literary institutions. Colleges have been established at Annapolis, Abingdon, and Cliestertown, but they are not at present in operation. Academies have been established at Easton, Fredericktown, Charlotte Hall, Cambridge, Elkton, and some other places.

Maryland was originally settled by Roman Catholics, who are the most numerous denomination of Christians in the state. The other denominations are Presbyterians, Methodists, Fpiscopalians, who have thirty-seven ministers, Baptists, who have thirty-three congregations. Friends, who have twenty-eight meetings, Lutherans, Dutch Reformed, Mennonists, &c. The legislature is composed of a senate, and consists of fifteen members, chosen for five years, by electors, and a house of delegates consisting of four members from each of the counties, and two from each of the two cities, Baltimore and Annapolis, chosen annually, on the first Monday in October. The governor and an executive council of five persons are chosen annually, by a joint ballot of both houses, on the second Monday in November. The assembly meets annually on the first Monday in November. This state sends nine representatives to Congress.

Maryland is intersected from north to south by Chesapeake Bay. On the eastern shore of the Chesapeake there are eight counties, Cecil, Kent, Queen Ann, Talbot, Caroline, Dorchester, Somerset, and Worcester. The rest are on the western shore. The principal rivers are the Potomac, which divides this state from Virginia, Susquehanna, Patapsco, Paluxent, Elk, Sassafras, Chester, Choptank, Nanticoke, and

Poco-moke. The country on the eastern side of the Chesapeake, with the exception of a small part of the northern extremity, is an extensive plain, low and sandy, and much intersected by rivers and creeks, having but few springs, and abounding in many places witii stagnant water. In this part the air in summer is moist, sultry, and disagreeable, and the inliabitants are subject to agues and intermittent fevers, and many of them have a sickly appearance. The Maryland part of the peninsula, included between the Delaware and Chesapeake Bay, is much lower and more uniformly level than the Delaware part. It is also more intersected by rivers and creeks, and the land is of better quality. The soil is well adapted to raising tobacco, wheat, Indian corn, and sweet potatoes. The genuine white wheat, which is said to be peculiar to this state, is raised in some of the counties on the eastern shore.

The country on the western shore of the Chesapeake, below the falls of the rivers, is similar to that on tlie eastern shore. Above these falls the country becomes gradually uneven and hilly and in the western part of the state it is

mountainous. The western part is crossed by ranges of mountains, which pass through Pennsylvania and 'irginia, under various names, as South Mountain, North Mountain, Sideling Hill, Warrior's Evit's, Wills, and Alleghany mountains. The hilly and mountainous parts abound in springs of excellent water, and the climate is highly salubrious and agreeable. The soil is generally a red clay or loam, and much of it is excelleut, producing good crops of wheat, Indian corn, hemp, and fiax. Here are also fine orchards ; and apples, pears, peaches, plums, and cherries are abundant. Of peaches, the inhabitants make large quantities of peach brandy, and of apples, apple brandy and cider. The forests abound in nut-bearing trees, which feed great numbers of swine. These swine run wild, and, when fattened, are killed, barelled, and exported in great quantities. Beef and mutton are also plentiful. Some cotton for domestic use is raised in this state, but it is of inferior (juality.

The most considerable export from this slate is that of flour; and, next to this, that of tobacco. The otlier exports are iron, lumber, Indian corn, pork, flax-seed, beans, &c. The total amount of exports, in 181 6, was 7,338,767 dollars. The trade of tiie state is principally carried ur> from Baltimore with the other states, with the West Indies, and various parts of Europe.

This state abounds with mines of excellent iron ore, and has also some coal. Furnaces have been erected in various parts for the manufacture of pig and bar iron, hollow ware, cannon, stoves, &c. There are a number of glass works, paper mills, &c. Vast quantities of rye are distilled into whiskey, but the most considerable production is flour.

MASAFUERO, an island of the South Pacific Ocean, situated to the west of Juan Fernan-dez about ninety-three miles, both being nearly in the same latitude. It is high and mountainous, of a triangular form, and about twˆelve miles in circumference. The south part is much the highest. The author of the account of Anson's voyage mentions only one part of this island as afi"ording anchorage, wliich is on the north side and in deep water ; but Carteret says he saw no part where there was not anchorage. There is plenty of wood, water, and fish all round ; but the approach to the shore is bad, from the quantity of stones at the bottom.

MASBOTH/EI, JNIaˆsblth.!:!, or MESBOTiisr, the name of a sect, or rather of two sects ; for Eusebius, or rather Ilegesippus, whom he cites, mentions two different sects of Masbothseans. The first was one of the seven Jewish sects before the birth of Christ : the other was one of the seven sects that arose out of Judaism, and proved very troublesome to the church. The name is derived from the Hebrew nsw schabat, to rest or repose, and signifies idle, easy, indolent people. Eusebius supposes they had been so called from one Masbotheus their chief; but it is more probable that their name is Hebrew, or Chaldaic, signifying a Sabbatarian, or one who professes to keep the sabbath strictly. 'alesius makes them two distinct sects; tiie former a sect of Jews before, or at least contemporary with Christ; and the latter a sect of heretics

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descended from tliem. Rufmiis distinguishes them in their names : the Jewish sect he calls Masbuthfei ; and the heretics Masbuthttani. They were a branch of the Simonians.

MASCAT, a considerable sea-port of Arabia, the best of all those on its eastern coast : all the others, indeed, from Rosalgate to the entrance of the gulf, are tributary to it. Originally tributary to Ormus, it was taken in 1507 by Albuquercjue, after an obstinate defence, and continued for nearly 150 years in the possession of the Portuguese. About 1648, however, they were obliged to yield it back to the natives. At the close of the seventeenth century, the Arabs of Mascat became such formidable pirates, as to give alarm to the English, who formed plans for possessing themselves of the place. Since that time they have become more commercial. The trade is now extensive with the British settlements in India, the Malay peninsula, the Red Sea, and the east coast of Africa, and the government of the Imaum is the most civilised of any in this neighbourhood : a stranger it is said may walk the streets without molestation even during the night ; and goods lie exposed and untouched night and day. The town is strongly fortified, and none but Arabs and Banians are allowed to reside here; strangers must occupy mat houses without the gates. 'essels are not allowed to depart or enter after dark. The harbour, formed by high land on one side and Mascat Island on the other, is entered from the north and defended by three forts. A large fleet may lie here in safety. Long. 59° 15’]•:., lat. 23° 38’ N.

MASCLEFF (Francis), was at first a curate in the diocese of Amiens, the place of his birth, and afterwards theologian to the virtuous bishop De Brou. He was appointed to the charge of a seminary of learning under that prelate, which he merited both from his piety and learning. The oriental languages were as familiar to him as his native tongue. He was made canon of Amiens in 1706. But his opinions on the Jansenist controversy were so offensive to Sabbatier, that he was removed from the seminary and from almost every other public office which he held. He then devoted himself to study with so much ardor, that he contracted a disease of which he died November 14th, 1728, aged sixty-six. His principal works are, 1. A Hebrew grammar in Latin ; Paris, 1716, 12mo. 2. Les Conferences Ecclesiastiques du diocese d’Araiens, in 12mo. 3. Le Catechisme d’Amiens, in 4to. 4. Une I’hilosophie et uneTheologie, in MS.

MAS’CULINE, adj. ˆ Fr. niasculin ; Lat.

Mas’cuhnely, adv. ˆimisculhnt!;. Male;

Mas’culineness, 71. s. y virile ; pertaining to, or resembling the male sex ; bold ; vigorous : niasculinely, like a man : masculineness, manliness.

Pray God, she prove not mascidine ere long !

Sliaksjieare.

Aurelia tells me, you have done most musculinelii. And play the orator. Ben Jmison’s Catilinr.

liis long beard noteth the air and fire, the two

miisnilitu; clunicnts, exercising their operations >ipon

nature, being the feminine. I’eacham on Drciwiiitj.

O ! why did Clod,

Creator wise, that peopled highest heaven

With spirits masculine, create at last

This novelty on earth, this fair defect Of nature I Milton’s I’aradise Lost,

\ ou find something bold and vuisctdiiie in the air and posture of the first figure, which is that of Vir-tue. Addison.

Masculine. See Male.

Masculine, in grammar. See Guammar. In Latin, Greek, French, Sec, most nouns are ranged under the masculine or feminine genders. This, in many cases, is merely arbitrary, and varies according to the languages, and even according to the words introduced from one language into another. Thus the names of trees are generally feminine in Latin, and masculine in the French. The genders of the same word are also sometimes varied in the same language. Thus alvus, according to Priscian, was anciently masculine, but is now feminine ; and navire, a ship, in French, was anciently feminine, but is now masculine. See Grammar.

Mascueine Signs. Astrologers divide the planets and signs into masculme and feminine by reason of their qualities, which are either active, and hot or cold, accounted masculine; or passive, dry, and moist, which are feminine. On this principle, they call the sun, Jupiter, Saturn, and Mars, masculine ; and the moon and Venus feminine. Mercury, they suppose, partakes of the two. Among the signs, Aries, Libra, Gemini, Leo, Sagittarius, Aquarius, are masculine; Cancer, Capricornus, Taurus, Virgo, Scorpio, and Pisces, are feminine.

MASERES (Francis), cursitor baron of the Exchequer, and an accomplished scholar, was born in the year 1731. He received the earlier part of his education under Dr. Wooddeson, of Kingston-upon-Thames, whence he removed to Clare Hall, Cambridge, of which society he afterwards became a fellow. In 1752 he and Dr. Porteus, afterwards bishop of London, obtained the two chancellor's medals. Afterwards entering at the Temple, and being called to the bar, he obtained the appointment of attorney-general of (Quebec, from which situation he was, some years after, on his return to England, raised to the dignity of cursitor baron of the exchequer. He was a distinguished mathematician, and published in 1759 a treatise on the Negative Sign. He also printed" a collection of Scriptores Logarithmici, a work in 6 vols. 4to. : A Treatise on Life Annuities, with several historical tracts ; and by his lilierality induced the Rev. Mr. Ilellins to undertake his edition of Colson's translation of Agnesi's Instituzioni Analytiche. This valuable work appeared in 1804. Baron Maseres, who was distinguished for his fine and strong sense and liberality, died at Reigate, in May 1824, aged ninety-three.

MASH, 7J.S. & V. «. Saxon mij-cunˆ; Tent. misc/ihifi ; I"r. maachcr ; Dan. mask. A mixture of grains for medicine, or in brewing: to beat into, or make such mixture.

l"he pressure would be intolerable, and they would even mush themselves and all things else apieccs.

More.

When mares foal, they feed them with mashes, and other moist food. Morlitner's Ilushaiidrii.

What was put in the first 7»i((s/iiH.(7-tuh draw off, as also tlr.it liquor in the second mnˆliimj tub. Id.

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Put half a peck of ground malt into a pail, then put to it as mucii scalding water as will wet it well ; stir it about for half an hour till the water is very sweet, and give it the horse lukewarm : this mask is to be given to a horse after he has taken a purge, to make it work the better ; or in the time of great sickness, or after hard labour. Furrier's Dictiitiktry.

To break the claw of a lobster, clap it between tlie sides of the dining-room door : thus you can do it without mashing the meat. Swift.

Mash, or j Saxon max; Belgic maschc ;

Mesh, n. s. jTeut. inuschcr, hom Goth, nieisu, to divide. The space between the threads of a net.

To defend against the stings of bees, have a net knit with so small mashes, that a bee cannot get through. Mortimer.

NLVSHAM (Abigail), a favorite of queen Anne, and noted in history for her court intrigues, was tlie daughter of Mr. Hill, a rich merchant of London, who married the sister of Mr. Jennings, the father of the duchess of Marlborough. Her father becoming a bankrupt, she was obliged to become the attendant of a baronet's lady, whence she removed into the service of lier relative, lady Churchill, who procured her the place of waiting-maid to the princess Anne. After her mistress ascended the throne, she retained her situation, and possessed great influence with her. Her marriage with Mr. Masham, in 1707, occasioned an open quarrel with lady ˆlarlborough, who was in consequence of it deprived of lier majesty's confidence. Harley, afterwards earl of Oxford, now connected iiim- '^elf with the new favorite ; a change of ministry took place, and in 1711 Mr. Masham was raised to the peerage. He and his wife appear to have been actively engaged in the intrigues in favor of the house of Stuart. Lady Masham outlived the queen many years, and died at an advanced age.

MASINISSA, a king of Numidia, who at first assisted the Cartliaginians in their wars against Rome ; but afterwards joined the Ro-mans, and became the firmest ally they ever had. See C.\RiUAGE and Numieia. He died in his ninety-seventh year, and ninetieth of his reign, A. A. C. 149.

MASK, 71. s., v.a. & V. n. > French masque ;

Mask'er, 7J.A-. 5 Belgic masclieric;

Span, mascara, mascarada ; of Arab, iiiaskh. A disguise, particularly of the face; a visor; hence an entertaintment at which the guests appear in visors, atid a particular dramatic performance ; any shufHe, subterfuge, or pretence : to mask is, to disguise with a visor; cover; hide: as a neuter verb, to revel ; play in mask: a masker is one who thus revels or performs.

Now Love pulled off his mask, and shewed his face unto her, and lold her plainly that she was his prisoner. Sidney.

What will grow of such errors as go masked under the cloke of divine authority, impossible it is that the wit of man should imagine, till time have brought forth the fruits of them. Hooker.

Since she did neglect her looking-glass.

And throw her sun-expelling mask away ;

The air hath starved the roses in her cheeks.

And pitched the lily tincture of her face.

Shakspeare.

Will you prepare for this masque to-night'? Jd. 'lis not my blood W'herein thou see'st me masked.

Id. Coriolanus, 1 to your assistance do make love, Maskiny the business from the common eye. For sundry weighty reasons. Id. Macbeth.

Tell false Kdward, That Lewis of France is sending over maskers, To revel it with him and his new bride.

Shakspeare. Let the scenes abound with light, and let the maskers that are to come down from the scene have some motions upon the scene before their coming down. Bacon.

The maskers come late, and I think will stay. Like fairies, till the cock crow them away. Donne.

Thus I have broken the ice to invention, for the lively representation of iloods and rivers necessary for our painters and poets in their pictures, poems, comedies, and masks. Peacham.

As when a piece of wanton lawn, A thin aerial veil is drawn O'er beauty's face, seeming to hide, i\Iore sweetly shows the blushing bride : A soul whose intellectual beams No mists do mask, no lazy steams. Crashaw. There is no villainy so great, but it will mask itself under a show of piety. Bp. Hall.

They in the end agreed. That at a masque and common revelling, Which was ordained, they should perform the deed.

Daniel. This thought might lead me through this world's vain mask, Content, though blind, had I no other guide.

Milton. Could we suppose that a mask represented never so naturally the general humour of a character, it can never suit with the variety of passions that are inci dent to every single person in the whole course of a play. Addison on Italy.

Too plain thy nakedness of soul espyed, AVhy dost thou strive the conscious shame to hide. By masks of eloquence, and veils of pride 1 Prior. Masking habits, and a borrowed name, Contrive to hide my plenitude of shame. Id. MASKELYNE (Nevil), D. D., was born in London in 1732, and educated at Westminster school, whence he removed to Catherine Hall, and next to Trinity College, Cambridge, where he obtained a fellowship. He took his degree of M. A. in 1757 ; and that of D. D. in 1777. In 1761 he was appointed by the Royal Society to proceed to St. Helena to observe the transit of Venus ; in which voyage he determmed the method of finding, by lunar observations, the longitude at sea. In 1763 he undertook another voyage to Barbadoes, to ascertain the longitude of that island, and to prove the accuracy of Harrison's time-keeper. On his return home, he succeeded Mr. Bliss as royal astronomer ; and in 1767 first published the Nautical Almanac, and a volume of Explanatory Tables. In 1774 Dr. Maskelyne was employed in making observations on the eclipses of Jupiter's satellites at Greenwich ; and went the same year to Scotland, to ascertain the gravitative attraction of the mountain Schehallien, in Perthshire. His death took place February 9th, 1811. He was the author of the British Mariner's Guide; containing complete and easy instruc-MASONRY.

tions for the discovery of the longitude at sea and land, 1763, 4to. ; and Astronomical Observations made at the Royal Observatory at Greenwich, 1784-88, 3 vols, folio; besides numerous papers in the Philosophical Transactions.

MASKINONGE River, a large river of Low-er Canada, issues from a lake of the same name, in that ridge of mountains which runs west from Quebec. It is navigable for boats some miles, and falls into the St. Lawrence, near lake St. Peter.

MA'SON, U.S. I Fr. maˆon : Lat. machinor ;

Ma'sonry. S Greek nrjxavos-A builder, particularly vvitli stone : masonry is the art or act of building in this way or generally.

Many find a reason very wittily before the thing be true; that the materials being left rough, are more manageable in the mason's hand than if they had been smooth. Wottoii.

A niason that makes a wall, meets with a stone that wants no cutting, and places it in his work.

More.

There is a sort of masonru in poetry, wherein the pause represents the joints of building, which ought in every line and course to have their disposition va-ried. Shenstone.

A Mason is a person employed, under the direction of an architect, in raising a stone building. His chief business is to make the mortar ; raise the walls from the foundation to the top, with the necessary retreots and perpendiculars ; to form the vaults, and employ the stones as delivered to him. When the stones are large, the business of hewing or cutting them belongs to the stone-cutters, though these are frequently confounded with masons : the ornaments of sculpture are performed by stone-carvers or sculptors. The tools or implements principally used by them are the square, level, plumb-line, bevel, compass, hammer, chisel, mallet, saw, trowel, &c. See Square, &c. Besides the common instruments used in the hand, they have likewise machines for raising great burdens and conducting large stones ; the principal of which are the lever, pulley, wheel, crane, &c.

Mason (William), an elegant English poet, the son of a clergyman in Yorkshire, educated at St. John's College, Cambridge, and elected a fellow of Pembroke Hall, in 1749. In 1748 he published a poem entitled Isis, which, being an attack on the university of Oxford, produced a poetical answer from Mr. Warton, entitled the Triumphs of Tsis. In 1754 he took orders, and was appointed chaplain to the king; and afterwards obtained the livin? of Aston, and the pre-centorship of York ; which led him to compose a work on Church Music. He was the intimate friend of Gray the poet, who appointed him one of his executors, and wliose life and elegy he wrote. He also wrote Llfrida and Caractacus, and the English Garden, botii much esteemed ; and he translated into English verse Du Fresnoy's Art of Paintin-jr, to which Sir Joshua Reynolds added valuable notes. He was a zealous whig, and an admirer of the French revolution, till the horrors that accompanied it ab.ited the warmth of his attachment to democracy. He died April ,')lh, 1797, in consequence of a fall from his carriage.

Mason (John), a dissenting minister of the last century, was educated at an academy at Kibwortii in Leicestershire. After being private tutor in the family of governor Peaks, he became pastor of a congregation at Dorking in 1730; and in 1746 removed to Cheshunt. Here he died in February 17G3. He was the author of a treatise on Self Knowledge, and four volumes of sermons, published under the title of Lord's Day Evening Entertainment, both which became very popular. He also published some tracts on Elocution.

Masonry, in practical architecture, includes the hewing of stones into the various shapes required in the multiplied purposes of building, the uniting them together by joints, level, perpendicular or otherwise, by the aid of cement, iron, lead, &c., which requires much practical dexterity, witli some skill in geometry and mechanics. In our article Architecture we have noticed the rise and progress of this art in Egypt, Greece, and Italy. Modern masonry is confined more to tiie working in freestone than in marble, in the former of vvhicli these islands abound, which offer many facilities arising from the nature of its quality in reducing it to all the required shapes in modern construction. At Bath, and in all the western counties, they saw it by a toothed saw into smaller scantling, which is again cut by the mason with a hand-saw, and afterwards hewn by an axe ; then dragged and smoothed in the same way, according to the required situation or the quality of the proposed work for which the stone is intended. The workman's tools consist of a hand-saw similar to what is made use of by carpenters ; a drag, which is commonly nothing more tlian a piece

of an old saw. He has also his chisels and gouges, and gauges and moulds for his sunk and moulded work, which are all afterwards cleaned up by the drag. In Gloucestershire the masons often use planes for their mouldings, the stones there being more crisp and not intersected by shells. Sec, which prevent their general adoption with regard to many other freestones.

Portland freestone is the common stone made use of by the masons in London, which is brought from the island of that name, in blocks of almost all dimensions, roughly hewn. Its hardness gives it many requisites to produce exquisite masonry. It is sawn into scantling by the friction of sharp siliceous earth and water, and by means of a framed plate saw of iron. It is afterwards worked by the mallet and chisel to the required form, and then rubbed to a smooth face by hand with sand or grits. Most of our public buildings are composed of this stone ; and it has been the practice to make use of it in private ˆnes for the kerns, strings, fascias, columns, cornices, and balustrades, when all the other parts were of ot'.ier materials. Internally for the floors of halls, vestibules, staircases, Sec. Portland stone is decidedly the handsomest freestone known, and capable of bearing as fine an arras in moulding as marble, which is the probable reason of its preference, although many other freestones might be obtained at half the original cost and without its great additional expense of freight and duty. The latter, how-602

ever, lias risen so higli of late that the Gloucestershire stone is now at the wharfs as its competitor, and is daily coming more into use : it having been already employed in several works of consequence.

The granites of Cornwall, and that called Dundee stone from North Britain are now cm-ployed for all works in which great solidity and ■wear are required. It has been sought for and used at the several docks, also at the new bridges. Its excessive hardness is as much the terror of the London masons as the Gloucestershire stone is for its softness ; on account of whicii has arisen th£ necessity of bringing to London the workmen as well ;is the stone, there not having been found persons in London who would undertake to work it. The bringing of these granites to London, and other places, arose in the first instance from the necessity of finding something more solid and

durable for the locks and basins of canals ; and hence it is that now all these different qualities of stone are regularly to be found in the market. Modern masons, therefore, will have the credit of effecting more lasting works than those from freestone, by a judicious blending and arrangement of all the several qualities of stones to the various purposes of strength and ornament. A substantial foundation is of the first importance in masonry, without which no work can be considered as durable. However, in modern construction, this vital part of a building is too often intrusted to the carpenter and bricklayer ; the former for the purpose of piling such ground as is found inferior, soft, and marshy, and the latter to raise the needful walls in the substructure in which little or no masonry is employed.

The walls of modern buildings are sometimes built for ornament, but more often both it and solidity are required. In London they are regulated by a specific act of parliament ; but, the act having been framed more as a protection from fire than as a security against dilapidation, a prudent builder finds it eligible to trust to the law to avoid inconvenience, but to strengthen his walls beyond the law to prevent their ruin. It is too much to ask for specifics in regard to the thickness of walls ; they must be regulated, first, in reference to the nature of the materials to be employed; and, secondly, to the magnitude of tiie fabric to be erected. Walls of stone may safely be made one-fifth thinner than those of bricks ; and brick walls, in the basement and ground stories of buildings of the first rate, should be reticulated with stone to prevent their splitting, a circumstance too much disregarded by our present builders.

A plinth, in masonry, is the first stone inserted above the ground ; it is in one or more pieces, according to its situation, projecting beyand the wall above it about an inch ; its projecting edge sloped downwards, or moulded, to carry off the water that may fall on it.

Ashltring is a term used by masons to designate the plain stone-work'of the front of abuilding, in which all that is regarded is getting the stone (wliich is commonly no more than a casing to the wall) to a smooth face, called its plain-work. The courses should not be too high, and the

joints should be crossed regularly, whicii will improve its appearance, and add to its solidity.

The fascia is a plain course of stone, gene-> rally about one foot in

height, projecting before the face of the ashlering about an inch, or in a line with the plinth of the building ; it is fluted on Its under edge (called by the workmen throating), as a check to prevent the water from running over the ashlering ; its upper edge is sloped downwards for the same purpose. It is commonly inserted above the windows of the ground stories, *viz.* between them and those of the principal story.

Cills. — These belong to the apertures of the doors and windows, at the bottom of which they are fixed ; their thickness is various, most commonly about four inches and a half; they are also fluted on their under edges, and sunk on their upper sides, projecting somewhat beyond the ashlering, commonly about two inches.

Imports. — These are insertions of stone with tlieir front-facings commonly moulded, and sometimes left plain,, and when so left they are prepared iu a similar way to the fascias above described. They form the springing stones to the arches in the apertures of abuilding, and are of the greatest utility.

Co/nice. — This forms the crown to the ashlering at the summit of a building ; it is frequently the part which is marked particularly by the architect to designate the particular order of his work, and, when so, it is moulded to that character ; hence there are cornices wrought after the three known orders in architecture, *viz.* the Doric, Ionic, and Corintliian, when perhaps no column of either is employed in the work, the cornice alone designating the particular style of the edifice. In working the cornice the mason should prepare the top or upper side, by splaying it away towards its front edge, that it may more readily convey off the water which may fall on it. At the joints of each of the stones of the cornice, throughout the whole length of the building, that part of each stone which comes nearest at the joints should be left projecting upwards a small way, called, by workmen, saddling the joints; the intention of which is to keep the rain water from entering them, and washing out the cement ; such joints, however, should be chased or indented, and such chases should be run full of lead. When dowels of iron are employed they should be fixed by melted lead also.

Blocking co2irse. — This is a course of stone traversing the top of the cornice, to which it is fixed : it is commonly in its height equal to the projection of the cornice. It is of great utility in giving support to the latter by its weight, and to which it adds grace. It at the same time admits of gutters being formed behind it to convey away the superfluous water from the covering of the building. The joints in it should always cross those of the cornice, and should be plugged with lead, or

cramped on their upper edges with iron. The Romans sometimes dove-tailed the joints of such courses of stone.

Parapets. — These are of great ornament to the upper part of an edifice. They were used by the Greeks, and afterwards by the-Romans, and

are composed of three parts, *viz.* the plinth, which is the blocking course to the cornice; also the shaft, or die, which is the part immediately above the phnth. It has a cornice, which is on its top, and projects in its mouldings sufficiently to carry off the rain-water from the shaft and plinth. In buildings of the Corinthian style the shaft of the parapet is perforated in the parts immediately over the apertures in the elevation, and balustrade enclosures are inserted in the perforations. The architects have devised the parapets with reference to the roof of the building which it is intended to obscure.

Pilasters. — In modern design these are frequently very capriciously applied. They are vertical shafts of square-edged stone, having but a small projection, with capitals and bases like columns : they are placed by us often on the face of the wall, and with a cornice over them. In Greek architecture they are to be met with commonly on the ends of the walls behind the columns, in which application their face was made double the width of their sides, their capitals differed materially from those of tlie columns which they accompanied, they were somewhat larger at bottom than at top, but without any entasis or swell. Tiie best examples are to be found in Steuart's Ruins of Athens, *viz.* to the Propylea, temple of Minerva Polias, &c. &c.

Architraves adorn the apertures of a building, projecting somewhat from the face of the ashlering ; they have their facing sunk with mouldings, and also their outside edges. When they traverse the curve of an arch they are called archivolts. They give beauty to the exterior of a building, and the best examples of them are to be found in the ancient Greek buildings, and in many also in Italy.

Rusticating, in architecture and masonry, consists in forming horizonatal sinkings or grooves in the stone ashlering of an elevation, intersected by vertical or cross ones, perhaps invented to break the plainness of the wall, and to denote more obviously the crossing or bond of the stones. It is often formed by splaying away the edges of the stone only; in this style the groove forms the elbow of a geometrical square. Many arcliitects omit the vertical grooves in rustics, so that their walls present an uniform series of horizontal sinkings. The French architects have been very fond of this metliod, as may be seen in the l)uildings at Paris ; and the bank of England is an instance of it in this country. There are abundance of ancient examples in each of the three manners.

Colii/iins. — These comprise, generally, a conoi-dal shaft, with a small diminution upwards to their upper diameter, amounting generally to about one-sixth less than the lower diameter. They have sometimes a swell or entasis in their whole height (see article ARCirrTECTUur,), but this practice is by no means general. The Greek ruins do not seem to countenance sucli a departure from nature, nevertheless it is found to have been commonly practised among the Roman buildings. The proportions of columns from the Egyptians to the Greeks have varied but little : the columns of the former, in their laige temples, as at Thebes amount to about four and a half

diameters only in their height. The columns of the Partlienon, at Athens, are little more than five. In the best Roman examples they were increased to upwards of seven diameters. The columns of the Grecian remains are fluted, and the fluting differs in each example. The Doric shafts have their flutes in very flat segments finished to an arris. To the other columns to the temples of Erectheus, Minerva Polias, &c. (both of the Ionic style), flutings of the semi-ellipsis shape with fillets were adapted. But, for detailed particulars of the proportions and construction of columns, see our article Architecture, part II.

The mode of erecting columns into screens or porticoes remains to be treated on. The Doric co-lumn was effected in Greece without a base, it hav-ing a large diameter which compounded for this deficiency. This column was approached by three steps, the third or last forming the floor on which it was built. The lower shafts, as well as the intended intercolumniation, were accurately marked out on the floor, and on the parts to which the columns were designed to be placed. A circle was drawn about two-sixteenths of the diameter of that of the

column, which was sunk down. The lower shaft was accurately shaped at its lowest extremity to the proposed diameter, leaving it so much longer as to fit into the sinking in the upper step, which formed for it a kind of rebate ; by thus fixing all the shafts in the floor their intercolumniations were exactly preserved. The column is composed of blocks of at least a diameter in height, exactly jointed, and, by the Greeks, without the least cement between them. In the centre of each joint were made square sinkings for the purpose of putting in a joggle ; this joggle enters both the upper and lower shafts, and serves to prevent the moving or fracture of the column by any lateral thrust it might receive. The joggles in the columns of the Parthenon were of olivewood ; they are commonly with us of iron painted over, or of lead ; and, in columns of marble, they are copper, the latter metal being preferred by reason of its not being so liable to oxydate as the former, and consequently not so liable to stain the stone, which is too often the case by iron joggling.

The joining of columns in freestone has been found more difficult tlian in marble, and tlie French masons have a practice to avoid the failure of the two arrisses of the joint, wliich might be borrowed with success for the constructing of columns of some of our softer freestones. It consists in sinking away the edge of the joints, by which means a groove is formed at every one, throughout the whole height of the column. Travellers, who have seen their porticos, have compared them to (heeses piled one on the other, the courses appearing, by this practice, to be so regularly marked. This method is not had recourse to but for plain shafts ; it is not altogetlier of modern invention, as tliere are some ancient remains in which it a])])ears, but in them it may be conjectured to have been for a very difierent purpose. It served to admit the shafts, being adorned by flowers and other insignia on the occasion of their shows and games. In the French capital they even now, on their public

illuminations, affix rows of lamps on their columns, making use of these grooves to adjust them regularly, which produces a very good

effect.

The shafts of columns, in large works intended to be adorned by flutes, are erected plain, and tlie flutiu!ˆ chiselled out afterwards. The ancients commonly formed the two extreme ends of the fluting-previously, as maybe seen in the remaining columns of the temple of Apollo, in the island of Delos, a practice admitting of great accuracy and neatness. The finishing the detail of both sculpture and masonry on the building itself was a universal practice among tlie ancients : tiiey raised their columns first in rough blocks, on them the architraves and friezes, and surmounted the whole by the cornice, finishing such parts only down as were not conveniently to be got at in tlie building; hence, perhaps, in some measure, arose that striking proportion of parts, together with the beautiful curvature and finish given to all the profiles in Grecian buildings.

Pavements have occupied considerable attention in architecture, and consequently in masonry. The Greek temples were paved with white mar-ble, tiie same as that of which the temple itself was constructed ; and consisted of large squares joined with great precision, and of such thickness as secured their stability. There does not, however, appear in Greece such marks of luxury and extravagance in tlie decorative parts of their buildings as the opulent Romans displayed, who, not content with inserting in their floors pieces of marble of the most beautiful kind, had them painted and varied with different co-lors. This custom commenced under Claudius. Under Nero they began to cover the marble with gold, thus the marble of Numidia was gilded, and that of Phrygia was stained with purple.

Arching is that in which the modern mason has certainly excelled tlie ancient. The masonry of an arch, herein to be treated of, is so intimately connected with the theory, that it appears almost impossible to explain the one without uiving some information respecting the other; in theory, an arch may be explained as follows, *viz.* to consist of series of stones, called voissoirs, in the shape of truncated wedges, which resist each other, through their inclined sides, by means of that weight whereby they would otherwise fall, and are suspended in the air without any support from below, where a concavity is formed. The voissoirs are subject to forces which arise from their own weiglit, from external pressure, from friction, and the cohesion of matter: all these forces compose a system which ought to be in equilibration ; and, moreover, that state ought to have a consistence firm and durable. It was not fill near the end of the seventeenth century, wiien the Newtonian mathematics opened the road to true mechanical science, that the mathematicians directed any

part of their attention to the tlieory of arches. Dr. Hook gave tlie first hint of a principle, when he affirmed, that the figure into which a chain i.r rope, perfectly flexible, will arrange itself wlien suspended ifrom two hooks, becomes, when inverted, the proper form for an arch constituted of stones of uniform weigh*. iisJ size. The re;',son on which he

grounded his assertion, is, simply, that the forces with which the parts of a standing arch press mutually on each other, in the latter case, are precisely equal and opposite to those with which they pull each other in the case of suspension. This principle, true as far as it goes, gave rise to most of the specious theories of the mathematicians ; for tliey did not consider tiiat, though an arch of equal voissoirs might be thus balanced, it would require much other matter to be placed over it, to fill up the space between the extrados and a roadway, if used for the purpose of a bridge, and that this superincumbent mass must necessarily destroy the equilibrium previously existing in the unloaded arch. There is a certain thickness in tiie crown which will put the catenaria in equilibrio, even with a horizontal roadway ; but this thickness is so great that the pressure at the vertex is equal to the horizontal thrust ; the only situation, therefore, in which the catenarian would be proper, is in an arcade, carrying a height of dead wall above it. During these discussions, on the celebrated catenaria, a new system of arching developed itself. It was deduced from the consideration of the arch-stones being frustrums, or parts of wedges; hence the mathematical properties of the wedge were introduced into the science, and employed to establish the theory of what were called balanced arches ; this practice was taught in France by La Hire, Parent, A'arignon, Belidor, Riou, &c., and some bridges were formed on its principles, *viz.* Pont La Concorde at Paris, and also one arch at Nieully. It required that the arch-stones should be as long as economy would admit, and, if possible, to fill up all the space between the intrados and extrados of the bridge ; and further, they are all to be locked together by bars and wedges of iron, which will prevent the possibility of their sliding, or the arch quitting the centering ; a circumstance not before accomplished in arching. The theorist, not yet having brought the practical architect to adopt his visions, raised another system, which is said to secure a perfectly equilibrated structure, by making an ecjuality at every point of the curve The deduction from this theory consists in mak-ing the heigiit of the wall incumbent on any point of the intrados, directly as the cube of the secant of the curve's inclination to the horizon at that point, or inversely as the radius of curvature there. It must be added, that this

theory expects the joints of the voissoirs to be perfectly smooth, and not be connected by any cement, and therefore to sustain each other merely by the equi-librmm of their vertical pressure ; and the theorist says, ‘ an arch which thus sustains itself must be stronger than another which does not; because, when in imagination we suppose both to acquire connexion by cement, the first preserves the influence of this connexion unimpaired ; whereas, in the other, part of the cohesion is wasted in counteracting the tendency of some parts to break off” from the rest by want of equilibrium.’ From tiiese systems have been made tables for forming arches to equilibrate, by which the na-ture of each voissoir may be found to any degree of curvation, and Dr. Mutton has simplified it for practical men.

MASONRY.

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The practical mason, however neat in the execution of his work, finds it extremely difficult to get the joints of the arch-stones so smooth as is required by these systems ; and, even if he succeeds in doing so, circumstances may take place in the construction of the work to render it useless ; for instance, the abutments may sink a little, and one may retire more than another, hence wdl arise an alteration in the arcii, and, consequently, in the shape of the joints : but, there are other circumstances to be anticipated, known to the practical architect (if even a sinking of tiie abutments should not take place), which is an alteration in the centre on whicli the masonry is raised. It is ascertained that, liowever firmly it may be constructed and supported, its curvature will vary as it receives tlie weight of the stone arch. The impossibility that the centre could be loaded all at once, proluces this variation ; but, even if the centre should be so constructed as to remain firm and unalterable, a sinking will ensue on its removal ; this, as the pract’ce is, is done gradually, and all the arch-stones in some measure follow it ; the middle ones squeezing the lateral ones aside, which compresses all between them; hence the latter arcii stones alter their shape, a sinking of the ciovvn ensues, consequently a general chanire of form of not only tlie joints, but of tlie arch also. Some architects, to secure as little friction in the joints as possible, have covered their surfaces with sheet-lead, and this practice was followed

in the bridge of Blackfriars, at Norwich, by Mr. Soane. It cannot be too strongly recommended, to the mason concerned in arching, to make all tiie joints meet as correctly as possible, using the least possible quantity of cement between them : the practice of wedging in the voissoirs at the crown of the arch, commonly practised, should be done with caution ; for, instead of preventing a sinking, it may endanger the whole arch. Pe-ronet, who was architect to so many bridges in France, and whose experience and sagacity in this branch of practice had developed more than a wˆhole college of tiieorists could do, rejected it. His rejection of it did not apply however to the principle, but to the uncertainty in the persons employed to perform it; he conceived that the stones might be so fractured in forcing them in, that no two flat surfaces would present themselves in that part of the arch. Nieully, one of the finest bridges he built, and which the writer of this article has repeatedly examined, is of a very superior construction; the road occasions very little elevation, no more than sufficient to keep it dry. The arches and piers are quite unique in their shape, of considerable span, and so ai>parently flat and thin in the crown, as at first s.ght to create a doubt if they be of stone. It is a principle in the French bridges that the passeiiffers may see their roadway from ‘one end to the other. It would not be endured by them to be ascending mountains over the inland waters.

The figures of arches are as various in their shape as the most fastidious ideas of convenience can require; they were, in the bridges of the Romans, semicircles; by the moderns, of every form and curyature fancy can suggest, or geometry

delineate; but the practical mason should endeavour, in effecting arches, if he expects the praise of intelligent men, to protect them by some reference to known pnnci|)les. Every arch of curvature (and it cannot be an arch without it, although it may be a lintel), should be described by its praxis in known geometry, and if it require one, two, or more centres to develope its form, the workman should not for.et that t’.ese points once ascertained are his guides to find the shape of tlie voissoirs or arch-stones. The joints of an arch are all traced from the centres of their curvature, so that as a general axiom it may be assumed, for instance, speaking of a semicircle, that its centre supplies the principle of giving form to t le voissoirs ; if a segment, the centre of the circle of which it is the segment, be its versed sine what it may. If an ellipsis, which is neither more nor less than three segments, the arch-joint must be drawn from the centres of each correspondent circle, and so on to the parabola, hyperbola, &cc. : if these principles

were attended to by the practical mason, the failure of so many arches in the smaller works would be prevented, and the arch itself appear more neat ; inasmuch as principle would be oi)posed to that which is most commonly done by chance, as may be seen by an attentive observer, on looking at the arches in some of our buildings.

Of domes. — A dome is said to be less difficult of construction than an arch, because the tendency of each part to fall is counteracted not only by the pressure of the parts above and be-low, but also by the resistance of those which are situated on each side. A dome may therefore be erected without any temporary support, like the centre which is required for the construction of an arch, and it may at last be left open at the summit, without standing in need of a key-stone.

The Greeks seem no more to have employed domes than they did arches, one (the monument of Lysicrates at Athens) only having been preserved, and in that there is nothing to require any of the principles of the taiubour-wall, as it is composed of a single piece. The Romans certainly affected domes, in which they developed great enterprise, genius, and taste. Vitruvius says nothing about them, though he gives proportions for his monoptereal buildings, as. probably, they were but little employed in his time ; but we have still existing the pantheon of Agrippa, over which there is a beautiful hemis]iherical roof, and it is probable that all their round temples were so roofed ; indeed, in the remains of the Sybil's temple at Tivoli, there are evident marks of such a covering.

The masonry of domes must be conducted on similar principles to those recommended for archinc:, excepting only that the figure of each \()issoir or wedge will be so shaped as to fit the void in a sphere instead of its sections. The w(T.;ht of masonry in a dome, however, will require all the force of mind in the architect and mason to prevent its forcing out its lower parts; for instance if it rises in a direction too nearly vortical, with its form spherical, and its tUTckness equable, it will require to be confined

by a chain or hoop, as soon as the rise reaches lo about eleven-fourteenths of the wliole diameter; but, if the precaution be taken of diminishing the thickness of the masonry as it rises, it will not require to be so bound.

At Constantinople the church of St. Sophia was covered by a dome, and its history will furnisli a useful lesson to the unscientitic and careless mason. Anthemius and Isidorus, wliom the emperor Justinian had selected as architects the most proper for conducting the works of this celebrated edifice, seem to have known but little of the matter. Anthemius had boasted to Justinian that he would outdo the magnificence of the Roman pantheon, for he would hang a greater dome tiian it aloft in the air ; accordingly he attempted to raise it on the heads of four piers, distant from each other about 1 15 feet, and about the same iieight. He had probably seen the magnificent vaultings of the temple of Mars the Avenger, and also of the temple of Peace, at Rome, the thrusts of the vaultings of which were withstood by two masses of solid wall, which joined the side walls of the temple at right an-gles, and extended sideways to a great distance. It was evident that the walls of this temple could not yield to the pressure of the vaulting, without pushing these immense buttresses along their foundations ; he therefore in imitation placed four buttresses to aid his piers. They are almost solid masses of stone, extending at least ninety feet from the piers to the north and to the south, forming, as it were, the side walls of the cross, and efi'ectually secured them from tlie thrusts of the two great arches of the nave which supported the dome : but there was no such provision against the thrust of the great north and south arches. Anthemius trusted for this to the half dome which covered the semicircular east end of the church, and which occupied the whole eastern arch of the great dome : but, when the dome was finished, and had stood a few months, it pushed the two eastern piers, with their buttresses, from the perpendicular, making tiiem lean to the eastward, and the dome and half dome fell in. Isidorus afterwards erected some clumsy buttresses on the east wall of the square which surrounded whole Greek-cross, and these were roofed in with it, forming a sort of cloister, leaning against the piers of the dome; and thus opposed the thrusts of the great north and south arches. The dome was now turned for the third time, and many contrivances were adopted for making it extremely light. It was offensively flat, and, except the ribs, roofed with pumice-stone; but, notwithstanding these precautions, the arches settled so as to alarm the architects, and they made all sure by filling up the whole from top to bottom with arcades in three stories. The lowest arcade was very lofty, supported by four noble marble columns, and thus preserved, in some measure, the

church in the form of a Greek-cross. The story above formed a gallery for the women, and had six columns in front, so that they did not bear fairly on those below. The third story was a dead wall, filling up the arch, and pierced with three rows of small ill-shaped windows: inthisunworkman-like shape it has remained, and is tiie oldest church in the

world ; but it is an ugly misshapen mass of deformity and ignorance, resembling any thing rather than what it was intended for, *viz.* a beautiful piece of architecture.

But diere have been domes constructed since in every part of Europe, combining and displaying, in this species of building, every requisite of beauty and strength. St. Peter's, at Rome, is a superb undertaking ; and tlie set-off to it in tliis country, of St., Paul's, is another, in which equal talent is developed ; but tiiis latter dome is more remarkable for its carpentry than its masonry.

A dome has also been erected to the rotunda of the Bank of England, in which the principles of the ancient one of the pantheon, at Rome, have been followed. It takes its spring from a wall of great thickness, on which it is bedded, furnished by many projections externally graduated like steps, whicli answer the purpose of buttresses. It is open at its summit, like that from which it is copied, and from which the interior of the building receives its light. It comj)oses, on the whole, a structure unique, and very honorable to the talents of the architect, Mr. Soane.

Masons employ certain technical phrases, by which they designate every part of their wotk employed in building, some of which have been previously noticed : the value of each description of work is ascertained by a datum to be now explained. It does not appear to have been a very early practice among tiie surveyors and masons to separate the distinct portions of labor which are employed about their hewn stone into the several different species, calculating the difficulty in each, and apportiouin.3 a value commensurate, wliich is now the universal practice. This manner of assessing the value of the labor, and also of the materials, arose in its beginning from necessity, there having been found no other means of putting down the avarice and injustice of the master artificers. On its first introduction it met with very general opposition from all mechanics ; but its rationality, together with its truth and accuracy, soon gave it tiiat ascendancy which it deserved. Hence, at this time, masonry, as well as other

artificers' works, is divided and subdivided into several distinct parts, a value being assigned to each, which is found adequately to remunerate all concerned for their toil, as well as the incidental expenses attending on the execution and erection of their several works.

In the admeasurement of mason's work the measurer is provided with two rods, commonly of five feet in length each, divided into five equal parts or feet, and each foot again subdivided into halves and quarter feet : sometimes the feet are also drawn in inches, but this latter metliod is by no means universal. When the stone to be measured approximates to fractions, the common rule is applied to ascertain tliem. All the stone is first measured, beginning at that which is fixed nearest to the top of the building, and then calculating the labor: every piece of stone which exceeds two inches in thickness is valued by the cubic foot, and all other stones under that thickness are deemed to be slabs, and are valued at per

foot superficial; these latter generally embrace the pavmg-stones of all descriptious, as well as chimney-pieces, copings, &c. There are also some portions of the labor as well as the stone which are valued by the foot measure running ; of this class are the groovings in rusticated work, llutings in the shafts of columns and pilasters, joints in gallery floors (called joggled joints), rebates in stairs, with the throatings to cills and copings, &c. &c. In the latter description may be included the various sorts of copings employed on the tops of walls and parapets, narrow slips to chimney-pieces, &c. &c. The dimensions are all accurately put down in a book, which for con\enience is ruled into three divisions on its left-hand side, the middle being about one-third ofthe width of those on its sides; this middle column is that in which the inches and parts are expressed, and in the left-hand column the feet, together witii the number of times the dimension is to be repeated or added, and the last for placing the quantities when cubed and squared : for in taking the dimensions it often happens that there may be several pieces of stone of the same size, and this the measurer

marks in his book, as well as at the same time writing down the nature of the stone, and also the species of labor about it. His dimension book stands thus:

3/6 .-0-) . ..

3 : 0 S-3 : 4J Portland landing. :9>

3/7:6 84 : 4 plain work ditto

3 : 9

3/7:6 22 : 6 groove

ditto.

By thus arranging the dimension book, every particle of stone and labor on it is ascertained with the greatest accuracy and despatch ; they are all afterwards to be abstracted, which consists in ruling out a loose sheet of paper into as many columns or divisions as are required for all the several species of work which have been measured, and writing over the head of each of the columns the particular kind to be inserted in it ; for instance, beginning with cube of Portland, all of it which has been measured is brought into the co-lumn under that head, plain-work under its head, also sunk-work, moulded work, and the several running measures, all stand respectively; and, when so separated, they are to be cast up at the bot-tom of each several column, where is to be seen the whole of the several quantities, after which they are made out into bills, beginning with the cubes first, then the superficies, and lastly the running measures. The works which are valued singly, or by their number, are similarly classed and placed last of all at the bottom of the account. For thus measuring, cubing, and scjuaring tiie quantities, and valuing and finishing the account, surveyors charge two and a half per cent, on the gross amount.

The plain-work on stone consists merely in the cleaning up of its surface, and the rule for finding how much of it is to be measured is, by observing that the mason is entitled to all that is not covered, that is, to every part of it which may be seen. Sunk-work embraces that kind of

labor to stone which requires the surface or any other portion of it to be sunk down by chiseling it away. The tops of all vvindow-cills, for instance are sunk for the purpose of more readily conveying away the water which falls on them. Moulded work consists in forming on the edges of the stone certain forms, known in architecture as mouldings, tliat is, to make it more obvious. Cornices, architraves, and such parts of an edifice in which stone is employed, are fashioned into a variety of curved or other forms. The dimensions of moulded work are ascertained by girting it with a string or piece of tape over to every one and into all its several parts, and then measuring the length of the string or tape so girted, which will be the width ofthe moulded-work ; and the length of the cornice, &c. &c., will be its length, which when squared together will give the superficial quantity of moulded-work. Masons have also their circular-work; this kind of labor is measured in the same way as has been described for the moulded-work, *viz.* by girting it all round. There are distinct valuations for every one of these difl'erent species of labor. Nevertheless, it is not deemed here essential to recite them, as they vary as the price of the workmen's wages does, except in London where they are uniform, but, in the country they are somewhat lower, the value of workmanship being less by reason of the men having mucli less wages. >

Masonuy, FiiEE, the system of mysteries and secrets peculiar to the society of Free and Accepted Masons. The origin of this society is ancient; but we have no authentic account of the time when it was first instituted, or even of the reason of such an association. In a Treatise on Masonry, published in 1792, by William Preston, master of the Lodge of Antiquity, it is traced from the creation. ' Ever since symmetry began, and harmony displayed her charms,' says he, ' our order has had a being !' By other accounts the history of masonry is only carried up to the building of Solomon's temple. In Dr. Henry's History of Great Britain we find tlie origin of this society attributed to the difticulty found in former times of procuring workmen to build the vast number of churches, monasteries and other religious edifices, which the superstition of darker ages prompted the people to raise. Hence the masons were greatly favored by the popes, and many indulgences were granted, to augment their numbers. An ancient

author, who was wftll acquainted with their history and constitution, says, ‘ The Italians, with some Greek refugees, and with them I’rench, Germans, and Flemings, joined into a fraternity of architects, procuring papal bulls for their encouragement; they styled themselves freemasons, and ranged from one nation to another, as they found churches to be built : their government was regular, and, where they fixed near the building in hand, they made a camp of huts. A surveyor governed in chief; every tenth man was called a warden, and superintended the other nine.’

The introduction of masonry to this country has been fixed at the year C74, when glass-making was first introduced : from this time

many buildings in the Gothic style were erected by masons in companies, who called themselves free, because they were at liberty to work in any part of the kingdom. Others derive the institution from a combination among the people of that profession not to work witliout an advance of wages, when they were summonetl from several counties, by writs of Edward III., directed to the sheriffs, to assist in rebuilding and enlarging the castle, together with the church and chapel of St. George, at Windsor. At this time, it is said, the masons agreed on certain tokens, by which they might kiiow and assist each other against being pressed into tlie service of the king. Preston supposes the introduction of masonry into England to have been prior to the Roman invasion ; and says, there are remains yet existing of some stupendous works executed by the Britons much earlier than the time of the Romans ; so that he lias no doubt of the existence of masonry in Britain even during tiiose early periods. The Druids are likewise said to have had among them many customs similar to those of the masons, and to have derived their government from Pythagoras ; but the resemblance cannot now be traced even by the masons themselves. Masonry is said to have been encouraged by CcEsar, and many of the Roman generals who were appointed governors of Britain. Carausius, in particular, patronised learning, and collected the best artificers from many different countries, particularly

masons, whom he held in great veneration, and appointed Albanus, his steward, the superintendant of their assemblies. Lodges or conventions of the fraternity began now, it is said, to be introduced, and the business of masonry to be retrularly carried on. The masons, through the influence of Albanus, obtained a charter to hold a general council, at which Albanus himself sat as president, and assisted at the reception of many new members. This Albanus was no less than the celebrated St. Alban, the first who suffered martyrdom in Britain for the Christian faith ! Mr. Preston quotes an old MS., which mentions that St. Alban was a great friend to masons, and 'gave them 2s. per week, besides 3J. for their cheer,' while, before that time, they had only Id. per day and their meat. The progress of masonry was greatly obstructed by the departure of the Romans from Britain ; still more by the furious irruptions of the Scots and Picts, and afterwards by the ignorance of the Saxons, whom the Britons called in as allies, but who .=;oon became their masters. After the introduction of Christianity, however, the barbarity of these conquerors began to wear off, the arts were encouraged, and masonry began to flourish. Lodges were now formed ; but, being under the direction of foreigners, were seldom convened, and never attained to any degree of importance. In this sittfation it continued till 557, when St. Austin, with forty monks, among whom the sciences had been preserved, came into England, and placed himself, according to the masonic writers, at the head of the fraternity in found. ng the old cathedral of Canterbury in 600 ; that of Rochester in 602; St. I'aul's in London in 004; St. Peter's in Westminster in 605, and many others. In

640 a few expert brethren arrived from France, and formed themselves into a lodge under the direction of Bennett, abbot of Wirral, whom Kenred, king of Mercia, soon after appointed inspector of the lodges, and general superintendant of masons. During the whole time of the heptarchy, however, masonry was in a low state; but it revived in 856, under the patronage of St. Swithin, whom Ethelvvolf employed to repair some religious houses ; and from that time gradually improved till 872, when it found a zealous protector in Alfred the Great. He appropriated a seventh part of his revenue for maintaining a number of masons, whom he employed in rebuilding the cities, castles, &c., ruined by the Danes. Under his successor, Edward, the masons continued to hold their lodges, patronised by Ethred, husband to the king's sis-ter, and Elhelwald his brother, to whom the care of the fraternity was entrusted. The latter was a great architect, and founded the university of Cambridge. The complete re-establishment of masonry in England, however, is dated from the

reign of king Athelstane : and the grand lodge of masons at York trace their existence from this period.

This lodge, the most ancient in England, dates its foundation in 926, under the patronage of Edwin, the king's brother, who obtained a charter from Athelstane, and became grand mas-ter. By virtue of this charter all the masons in the kingdom were convened at a general assembly in that city, where they established their government; and until within the last century no general meetings have been held any where else. Hence the appellation of ancient York masons is well known both in Ireland and Scotland. While prince Edwin lived the masons were employed in budding churches, monasteries, &c., and repairing those which had suffered by the ravages of the Danes ; after his death the order was patronised by king Athelstane; but on his decase the masons were dispersed, and remained in an unsettled state till the reign of Edgar ifi 960. They were now collected by St. Dunstan, who employed them in works of the same kind ; but, as no permanent encouragement was given them, their lodges soon declined, and masonry remained in a low slate for upwards of fifty years. It revived, however, in 1041, under Edward the Confessor, who superintended the execution of several great works. By the assistance of Leofrick, earl of Coventry, he rebuilt Westminster Abbey, the earl being appointed superintendant of the masons ; and by this architect many other magnificent structures were erected. After the conquest, in 1066, Gundulph bishop of Rochester, and Roger de Montgomery earl of Shrewsbury, both excellent architects, became joint patrons of the masons; and under their auspices the tower of London was begun, though finished only in the reign of Willnim II., who likewise rebuilt London Bridge, and first constructed the palace and hall of Westminster. The masons now continued to be patronised by the sovereigns of England in succession. The lodges assembled during the reign of Henry t. and Stephen; when the society were employed in building

a chapel at Westminster, now tlie liouse of commons, and several

otlier works ; the president of the lodges being Gilbert de Clare, marquis of Pembroke. During the reign of Henry 11., the lodges were superintended by the grand master of the Kniglits Templars, who employed them in building their temple in Fleet Street in 1135. Masonry continued under the patronage of this order till 1199, when king John succeeded Richard I., and Peter de Colechurch was appointed grand master. • He began to rebuild London Bridge with stone, which was afterwards finished by William Alcmain in 1209. Peter de Rupibus succeeded as grand master, and Geoffrey Fitz-Peter, chief surveyor of the king's works, acted as deputy under him.

On the accession of Edward I., in 1272, the superintendance of tlie masons was entrusted to Walter Giffard archbishop of York, Gilbert de Clare earl of Gloucester, and Ralph lord of ' Mount Hermer, the ancestor of the Montagues. By these architects the abbey of Westminster was finished. During the reign of Edward III. the brethren were employed in building Exeter and Oriel Colleges in Oxford, Clare Hall in Cambridge, &c., under Walter Stapleton, bishop of Exeter, who had been elected grand master in 1307. Edward III. not only patronised the masons, but studied the constitutions of the order, revised the ancient charges, and added several regulations to the original code. He appointed five deputies to inspect their proceedings in the lodges, which at this period (as appears from the records), were numerous. William a Wykeham was elected grand master, and continued so on the accession of Richard II. He founded both the New College in Oxford, and Winchester College, at his own expense. Under Henry IV. Thomas Fitz-Allan, earl of Surrey, was grand master, who, after the engagement at Shrewsbury, founded Battle Abbey and Fotheringay. On the accession of Henry V. the fraternity were governed by Henry Chichely, archbishop of Canterbury. In 1425, however, during the minority of Henry VI., an act was made against the meetings of masons, because by such meetings it was alleged, ' the good course and effect of the statutes of laborers were openly violated and broken, in subversion of tlie law, and to the great damage of all the commons.' But this act was not enforced, and the fraternity continued to meet as usual under archbishop Chichely. Humphrey, duke of Gloucester, brother to the regent, and guardian of the kingdom in his absence, took the masons under his protection, and they continued not only to meet in safety, but were joined by the king himself; who, in 1442, was initiated into mason'-y, and from that time spared no pains to become master of the art. He perused the ancient charges, revised the constitutions, and honored them with his sanction. The royal example was followed by many of the nobility, who assiduously studied the art. The king presided over tlic lodges in

person, and nominated William Wanefleet, bishop of Winchester, grand master; who at his own expense built Magdalene College, Oxford, and several religious houses. Eton College, near Windsor, '0L. XIIL

and King's College at ('anibridge, were also founded during this reign. Henry himself founded Christ's College, as his queen Margaret of Aiijou did Queen's College in Cambridge. About tills time also the masons were protected and encouraged by James I., of Scotland, who, after his return from captivity, became a zealous patron of learning and the arts. He honored the lodges with his presence, and settled an annual revenue of four pounds Scots (an English noble) to be paid by every master mason in Scotland, to a grand master, chosen by the grand lodge, and approved by the crown. His office entitled him to regulate every thing m the fraternity which could not come under the jurisdiction of law-courts; and, to prevent lawsuits, both mason and lord, or builder and founder, appealed to him. In his absence they appealed to his deputy or grand warden, who resided next the premises. This flourishing state of masonry was interrupted by the civil wars between the houses of York and Lancaster, which brought it almost totally into neglect. About 1471, however, it revived under Robert Beauchamp, bishop of Sarum, who had been appointed grandmaster by Edward IV. as well as chancellor of the garter, for repairing the castle and chapel of Windsor. It again declined under Edward V. and Richard III. ; but came once more into repute on the accession of Hen ry VII. in 1485. It was now patronised by tlie master and knights of the order of St. John at Rhodes (see Malta), who assembled their grand lodge in 1500, and chose Henry for their protector. On the 24th of June, 1502, a lodge of masters was formed in the palace, at which the king presided as grand master ; and having appointed John Islip abbot of Westminster, and Sir Reginald Bray knight of the garter, his wardens for the occasion, proceeded in great state to the east end of Westminster Abbey, where he laid the first stone of that excellent piece of Gothic architecture, called Henry the Seventh's Chapel. The completion of this building was celebrated in 1507. The palace of Richmond, as well as many other noble structures, was raised under the direction of Sir Reginald Bray ; and the colleges of Brazen-Nose in Oxford, and Jesus and St. John's in Cambridge, were all finished in this reign.

On the accession of Henry VIII. cardinal Wolscy was appointed grandmaster; who built Hampton Court, Whitehall, Christ Church College, Oxford, with several other noble edifices. Wolsey was

succeeded as grandmaster in 1534 by Thomas Cromwell, earl of Essex; who employed the fraternity in building St. James's pa-lace, Christ's Hospital, and Greenwich Castle. Cromwell being beheaded in 1540, JohnTouchet, lord Audley, succeeded to the office, and built Magdalen College in Cambridge, and many other structures. In 1 547 the duke of Somerset, guardian to the king, and regent of the kingdom, became superintendant of the masons, and built Somerset House in the Strand ; wliicli, on his being beheaded, was forfeited to the crown in 1552. After the duke's deatii, .lohn Poynet, bishop of Winchester, presided over the lodges till the death of king Edward VI. in 1553

From this time they continued witliout any patron till tiie reigu of Elizabeth, when Sir Thomas Sackville accepted the office of ijrand master. Lodges, however, had been held during this period in different parts of England; but the grand lodge assembled in York, where the fraternity were numerous and respectable. The queen iiearing that the masons were in possession of secrets which they refused to disclose, and being naturally jealous of secret assemblies, sent an armed force to York to break up the lodge. This, however, was prevented by Sir Thomas Sackville, who initiated some of the chief officers sent on this duty in the secrets of masonry. These joined witli their brethren, and made so favorable a report to the queen, that she countermanded her orders, and never afterwards attemjJted to disturb the meetings. In 1567 Sir Thomas Sackville resigned the grand mastership in favor of Erancis llussel, earl of Bedford, and the celebrated Sir Thomas Gresham ; committed to the former the care of the north part of the kingdom ; and the south to the latter. The general assembly, however, continued to meet at York, where all records were kept, and to decide upon appeals, &c. Sir Thomas Gresham, during his grand mastership, built the Royal Exchange and Gresham College. From this time masonry made considerable progress; lodges were held in different parts of the kingdom, particularly in London, and its neighbourhood, where the number of the brethren increased considerably. Several

other great works were carried on there under the auspices of Sir Thomas Gresham, from whom the fraternity received every encouragement. lie was succeeded by Charles Howard, earl of Effingham, who continued to preside over the lodges in the south till 1588, when George Hastings, earl of Huntingdon was chosen grandmaster, and continued in office till the queen's death. On the accession of James I. masonry flourished, and lodges were held in both kingdoms. A number of gentlemen returned from their travels, with curious drawings of the Greek and Roman architecture, as well as strong inclination to revive a knowledge of it. Among these was the celebrated Inigo .lones, who was appointed general surveyor to the king.

This distinguished architect being appointed grand master of England, and deputed by the king to preside over the lodges, several learned men were now initiated into the mysteries of masonry ; ingenious artists resorted to England in great numbers ; lodges were constituted as seminaries of instruction in the sciences and polite arts, after the model of the Italian schools ; and the annual festivals regularly observed. The many magnificent structures raised under this master we need not particularise ; among the rest he was employed, by the command of the king, to plan a new palace at Wliitehall; but, for want of a parliamentary fund, no more of it was ever finished than the banqueting-house. Inigo .lones continued grand master till 1618, when he was succeeded by the earl of Pembroke ; under whose auspices many eminent men were initiated, and the mysteries of the order held in high estimation. The earl continued m office till 1630, when he resigned in favor of Danvers, earl of Danby ; who was succeeded in 1633 by Thomas Howard, earl of Arundel, ancestor of the Norfolk family. In 1635 Francis llussel, earl of Bedford, accepted the government of the society : but Inigo Jones having continued to patronise the lodges during his lordship's administration, he was reelected in 1636, and continued in office till his death. The progress of masonry was now obstructed by the civil wars ; but it began to revive under Charles II. who had been admitted into the order during his exile. Some lodges during this reign were constituted by * leave of the several noble grand masters,' and many gentlemen and fa-mous scholars requested to be admitted into the fraternity. On the 27th of December, 1663, a general assembly was held, where Henry Jennyn, earl of St. Alban's, was elected grand master ; who appointed Sir John Denham his deputy, and Mr. Christopher Wren, afterwards the celebrated Sir Christopher, and John Webb, his wardens. At this assembly several useful regulations were made, for the better government of the lodges; and the greatest harmony prevailed among

the whole fraternity. The earl of St. Alban's was succeeded by earl Rivers in 1666, wiien Sir Christopher Wren was appointed de-puty, and distinguished himself beyond any of his predecessors, in promoting the prosperity of the lodges which remained at that time, particularly that of St. Paul's, now the lodge of Antiquity, which he patronised upwards of eighteen years. At this time he attended the meetings regularly; and during his presidency made a present to the lodge of three mahogany candlesticks, which at that time were very valuable. They are still preserved, and highly valued. The fire, which in 1666 destroyed a great part of London (See London), afforded ample opportunity for the masons to exert their abilities. Sir Christopher Wren was appointed surveyor-general and principal architect for rebuilding the city, the cathedral of St. Paul, and all the parochial churches erected by parliament. This gentleman, however, conceiving the charge to be too important for a single person, selected for his assistant Mr. Robert Hook, professor of geometry in Gresham College. In 1673 the foundation stone of the cathedral of St. Pauls' was laid with great solemnity by the king in person, and the mallet which he used on this occasion is still preserved in the lodge of antiquity. During the short reign of James 11. the masons were much neglected, and, at the Revolution, the society was in such a low state that only seven regular lodges were held in London and its suburbs ; of these only two, *viz.* that of St. Paul's and one at St. Thomas's Hospital, Southwark, were of any consequence. But in 1695 king William, having been initiated into the mysteries, honored the lodges with his presence; particularly one at Hampton Court, at which he is said to have frequently presided, during the time that the new part of his palace was building. Many of the nobility also were present at a general assemlily held in 1697, particularly Charles, duke of Richmond and Lenox, who was elected grand master for that year ;

but in 1G98 resigned liis office to Sir Christopher Wren, who continued at the head of the fraternity till king William's, death in 1702. During; the reign of queen Anne masonry made no considerable progress ; altliougii several lodges met in 1705, in the north of

England, under the direction of Sir John Tempest, bait, grand master. It was therefore determined that the privileges of masonry should not be confined to operative masons, but that people of all professions should be admitted to participate in them, provided they were regularly approved and initiated. Thus the society once more rose into esteem; and on the accession of George I. the masons, now deprived of Sir Christopher Wren, resolved to unite again under a grand master, and revive the annual festivals. Wˆith this view, the members of the four lodges then existing in London met at the Appletree tavern in Charles Street, Covent Garden; and, having voted the oldest master-mason then present into the chair, constituted themselves a grand lodge pro tempore. It was resolved to renew the quarterly communications among the brethren ; and at an annual meeting, held on the 24th of June the same year, INIr. Anthony Say er was elected grand master, invested by the oldest master-mason there present, installed by the master of the oldest lodge, and had due homage paid him by the fraternity. Before this time a sufficient number of masons met together, within a certain district, had ample power to make masons without a warrant of constitution ; but it was now-determined, that the privilege of assembling as masons should be vested in certain lodges or assemblies of masons convened :n certain places, and that every lodge to be afterwards convened, excepting the four old lodges then existing, should be authorised to act by a warrant from the grand master for the time, granted by petition from certain individuals, with the consent and approbation of the grand lodge in communication ; and that without such vyarrant no lodge should hereafter be deemed regular or constitutional. The former privileges, however, were still allowed to remain to the four old lodges then existing. In consequence of this, the old masons in the metropolis vested all their inherent privileges as individuals in the four old lodges, in trust that they never would suffer the ancient charges and land-marks to be infringed. The four old lodges, on their part, agreed to extend their patronage to every new lodse which should hereafter be constituted according to the new regulations of the society ; and, while they acted in conformity to the ancient constitutions of the order, to admit ttieir masters and wardens to share with them all the privileges of the grand lodge, that of precedence only excepted.

The brethren of the four old lodges now-considered their attendance on the future communications of tiie society as unnecessary; and therefore trusted implicitly to their masters and wardens, satisfied that no measure of importance would be adopted witliout their approbation. It was, however, soon discovered that the new lodges, being equally represented with the old ones at the comn-inications,

would at length so

far outnumber them, that, by a majority, they might subvert the privileges of tiie original ma-sons of England, which had been centered in the four old lodges ; on which account a code of laws was, with the consent of the bretliren at large, drawn up for the future government of the society. To this the following was annexed, binding the grand master for the time being, his successor, and the master of every lodge to be hereafter constituted, to preserve it inviolably: — * Every annual grand lodge has an inherent power and autliority to make new regulations, or to alter these for the real benefit of this ancient fraternity, provided always that the old land-marks be carefully preserved : and that such alterations and new regulations be proposed and agreed to at the third quarterly communication preceding the annual grand feast; and that they be offered also to the perusal of all the brethren before dinner, in writing, even of the youngest apprentice ; the approbation and consent of the majority of all the brethren present being absolutely necessary to make the same binding and obligatory.' To commemorate this circumstance, it has been customary, ever since that time, for the master of the oldest lodge to attend every grand installation; and, taking precedence of all present, the grand master only excepted, to deliver the book of the original constitutions to the new installed grand master, on his promising obedience to the ancient charges and general regulations. By this precaution the original constitutions' were established as the basis of all succeeding masonic jurisdiction in the south of England ; and the ancient land-marks, as they are called, or the boundaries set up as checks against innovation, were carefully secured fro;n the attacks of any future invaders. In 1718 Mr. Sayer was succeeded by INIr. George Payne, who collected many valuable MSS. on the subject of masonry. Another assembly and feast were held on the 24th of June, 1719, when Dr. Desaguliers was unanimously elected grand master. At this feast the old, regular, and peculiar toasts were introduced ; and from this time we may date the rise of free-masonry, on its present plan, in the south of England. Many new lodges were established, the old ones visited by many masons who had long neglected the craft, and severaj noblemen initiated into the mysteries. In 1720, however, the fraternity are said to have sustained an irreparable loss by the burning of several valuable MSS. concerning the lodges, regulations, charges, secrets, &c. This was done by some scrupulous brethren, who were alarmed ac the publication of the masonic constitutions. At a quarterly communication it was this year agreed, that, for the future, the new grand master shall be named and

proposed to the grand lodge some time before the feast; and, if approved and present, he shall be saluted as grand master elect ; and that every grand master, when he is installed, shall have the sole power of appointing his deputy and wardens according to ancient custom. In the mean time masonry continued to s|iread in the north as well as the south of I'.niiland. The general assembly, or grand lodge at York, continued to meet as usual ; and many persons of worth and character were initiated into

tiie mysteries of tlit fraternity. The greatest harmony subsisted between the two grand lodges, and private lodges were formed in both parts of the kingdom under their separate jurisdiction. The only distinction which the grand lodge in the nortli appears to have retained is in the title of the grand lodge of all England ; while llie oilier was only called the grand lodge of Rngland. The latter, however, being encouraged by some of the principal nobility, soon acquired consequence and reputation, while the other seemed gradually to decline ; but, till this period, the authority of tlie grand lodge at York was never challenged ; on the other hand, every mason in the kingdom held that assembly in the liighest veneration, and considered himself bound by the charges which originated from that assembly. But now this social intercourse was abolished, and the lodges in the north and south became estranged from each other. This is said to have been owing to the introduction of some innovations among the lodges in the south ; but for the coolness which arose between the two grand lodges another reason is assigned. A few brethren at York having, on some trivial occasion, seceded from their ancient lodge, they applied to London for a warrant of constitution. Their application was honored without any enquiry into the merits of the case ; and thus, instead of being recommended to the mother-lodge to be restored to favor, these brethren were encouraged to re-volt, and permitted, under the sanction of the urand lodge in London, to open a new lodge in the city of York itself. This illegal extension of power

offended the grand lodge at York, and occasioned a breach which has never been fully made up. We now turn to a more pleasing feature of the modern history of masonry.

The duke of Buccleugh, who in 1723 succeeded the duke of Wharton as grand master, first proposed the scheme of raising a general fund for distressed masons. This motion was supported by lord Paisley, colonel Houghton, and a few othˆr brethren ; and the grand lodge appointed a committee to consider of the most effectual means of carrying the scheme into execution. The disposal of the charity was first vested in seven brethren ; but, this number being found too small, nine more were added. It was afterwards resolved that twelve masters of contributing lodges, in rotation with the grand officers, should form the committee ; and, by another regulation since made, it has been determined that all past and present grand officers, with the masters of all regular lodges, which shall have contributed within twelve months to the charity, shall be members of the committee. This committee meets four times in the year by virtue of a summons from the grand master or his deputy. The petitions of the distressed brethren are considered at these meetings ; and, if the petitioner be considered as a deserving object, lie is immediately relieved with £5. If the circumstances of the case are of a peculiar nature, his petition is referred to the next communication, where he is relieved with any sum the committee may have specified, not exceeding twenty guineas at one time. Thus the distressed have always found ready relief from this general charity, which is

supported by the voluntary contributions of different lodges out of their private funds, without being burdensome to any member in the society; and so liberal have the contributions been, that though the sums annually expended, for the re-lief of the distressed brethren, have for a long time past amounted to many thousand pounds, there still remains a considerable sum. One of the most remarkable events, in the affairs of modern masonry, is the initiation of Omitul Umrah Bahauder, eldest son of the nabob of the Carnatic, who was received by the lodge of Trinchinopoly in the year 1779. The news being officially transmitted to England, the grand lodge determined to send a congratulatory letter to his highness on the occasion, accompanied with an apron elegantly decorated, and a copy of the book of Constitutions superbly bound. The execution of this commission was entrusted to Sir John Duy, advocate-general of Bengal ; and in the beginning of 1780 an answer was received from his highness, acknowledging the receipt of the present, and expressing the warmest

attachment and benevolence to his brethren in England. The letter was written in the Persian language, and enclosed in an elegant cover of cloth of gold, addressed to the grand master and grand lodge of England. A proper reply was made; and a translation of his highness's letter was ordered to be copied on vellum; and, with the original, elegantly framed and glazed, and hung up in the hall at every public meeting of the society.

After such a copious history of the rise, progress, and present state of masonry, it may seem natural to enquire into the uses of the institution, and for what purpose it has been patronised by so many great and illustrious personages. The profound secrecy, however, in which every thing relating to masonry is endeavoured to be kept, will prevent us from being very particular on this head. Masons themselves say that it promotes philanthropy, friendship, and morality ; that in pro])ortion as masonry has been cultivated the countries have been civilised, Stc. How far this can be depended upon, the fraternity best know. Another advantage, arising from its peculiarities, seems less equivocal, *viz.* that its signs serve as a kind of universal language, so that by means of them the most distant nations may become acquainted, and enter into friendship with each other. The late Dr. John Brown rendered the social institution of masonry subseryient to the purposes of literature, by instituting a Latin lodge at Edinburgh, in 1784, entitled The Roman Eagle ; which was carried on with great eclat for some time.

But the abb6 Barruel has attempted in his Memoirs of the History of Jacobinism, translated into English by the Hon. Robert Clifford, F. R. S. and A. S., to cast all the honor of tlie institution into shade ; and ventures to ascribe the French revolution, and the subsequent convulsions of Europe, to the principles and plans of this fraternity. He exempts indeed the English masons from his most important charges, and considers them as distinguished from those of the continent of Europe, by their charity and brotherly affection. Those of Germany, how-

ever, he says, some of ‘ the most detestable of the Jacobin crew,’ affect a contempt for tlie Englisli lodges. Yet this writer allows that for a considerable time the generality of lodges, both in France and Germany, might also have been excepted from the charge which he adduces against them. The grand objects of masonry, which he criminates, are, as he says, equality and liberty. He seems to have been enrolled a member of this society against his own inclination ; and describes the maimer in wliich he was admitted ‘ apprentice,’ ‘ fellowcrafi,’ and ‘ mas-ter,’ in one evening. The grand object which he proposed to himself of course was to learn the secrets of masonry : and these he does not scruple thus to reveal. ‘ The moment having arrived that was destined for this purpose, he was ordered to approach nearer to the ‘ Venerable :’ then the brethren, who had been armed with swords for the occasion, drew up in two lines, holding their swords elevated ; and leaning the points toward each other formed what is called the arch of steel. The candidate passed under this arch to a sort of altar elevated on two steps, at the farthest end of the lodge. The master seated in an arm chair, or a sort of throne, behind this altar, now pronounced a long discourse on the inviolability of the secret which was to be imparted, and on the danger of breakin;.^ the oath which the candidate was about to take. He pointed to the naked swords, always ready he said to pierce the breast of the traitor, and declared to him that it was impossible to escape their vengeance. The candidate then swore that, rather than betray the secret, he consented to have his head cut off, his heart and entrails torn out, and his ashes cast before the winds. Having taken the oath, the master said tlie following words, which the reader he says may easily conceive have not escaped my me-mory, as I had expected them with so much impatience, ‘ My dear brother, the secret of masonry consists in these words, equality and liberty ; all men are equal and free ; all men are brethren.’ The master did not utter another syllable ; and every body embraced the new brother equal and free. The lodge broke up, and we gaily adjourned to a masonic repast.

Our author under the name of occult lodges, or the higher degrees of masonry, comprehends all free masons, who, after having passed the first three degrees of apprentice, fellowcraft, and master, are sufficiently zealous to be admitted into the higher degrees, wliere, as he says, the veil is rent asunder, wliere emblematical and allegorical figures are thrown aside, and where the twofold principle of equality and liberty is unecjuivocally explained ‘by war against Christ and his altars, war a;/ainst kings and their thrones :’ an assertion wliich wc confess we can believe on no sucii authority. He undertakes however to demon.stratc, that such is the result of the mysteries of tlie craft.

Masonic writers in general, he says, divide free masonry into three classes, the Hermetic, the Cabalistic (comprehending the Martinists), and the Eclectic masonry ; all of which agree ill one point, *viz.* their hatred to Christianity and revelation.

The Eclectic masons are represented as the most numerous. These, after having passed through the different degrees of masonry, attach themselves to no particular system, either political or religious, but adopt from them whatever may best suit their political or religious views. They are what they please. Deists, Atheists, Sceptics, an aggregate of all the errors of the philosophism of the day ; with respect to religion, they admit that equality and liberty which deny every authority but their own reason, and reject all revealed religion ; and, a.s to governments, they admit of no kings, unless subservient to the will of the people in right of its sovereignty. Those who belonged to a sort of Eclectic masonry, established about the period of his writing in Germany, asserted that all are independent, and have a right of making their own laws. For this reason, they abolished the names of Grand Lodge and Scotch Lodge, so that they may be said to have improved upon masonic equality and liberty. Such Eclectic masons could not have been very numerous in France, as the major part of tiiem was under the inspection of the Grand Parisian Lodge, called the ‘ Grand Orient.’ All classes, and every code of masonry, Hermetic, Cabalistic, or Martinists, and Eclectic, concurred in forwarding the revolution, he adds, and it little imported to the sect which struck the blow, provided that ruin ensued.

M. Barruel attributes the origin of free masonry to the Knights Templars, who were either the authors of it, or borrowed it by tradition from the ancient mysteries of Paganism. According to his wonder-teeming statement, depositions of the Knights Templars declare, that on their reception into the order they denied Christ, trampled on the cross, and spit upon it : that Good Friday was a day particularly consecrated to such outrages; that they promised to prostitute themselves to each other for the most unnatural crimes; that every child begotten by a Templar was cast into the fire ; that they bound themselves by oath to obey, without exception, every order from the grandmaster; to spare neither sacred nor profane things ; to look upon every thing as lawful when the good of tiie order was in question; and, above all, never to violate the horrible secrets of their nocturnal mysteries, under pain of the most terrible chastisements. Somewhat inconsistently with this statement he now traces them farther back, i. e. to Manes and the Manichees, reflecting on the

Albigenses, Wuldenses, &c , of the south of France as connected with them.

He closes his account of the free masons by directing the attention of his reader to a body of men, or conspirators as he calls them, who had coalesced, under the name of * llluminees,' with the Encyclopedists and masons. They silently prejiared, he contends, the explosions of the revolutionary volcano, not merely swearing hatred to the altar of Ciirist and the throne of kings, but swearing at once hatred to every god, every law, and etery govornmeiit ; and even to all society and social compact! They even proscribed the terms ruine and thine, ackiiowleilging neither ei(uality nor lilierty, but in the ‘ eiitiio,

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absolute, and universal overthrow of all property.'

MASORA, a term in the Jewish theology, signifying a work on the Bible, performed by several learned rabbies, to secure it from any alterations wliich might otlierwise happen. Tiieir work regards merely the letter of the Hebrew text, in which they have fixed the reading by vowels and accents. Secondly, they have numbered not only the chapters and sections, but the verses, words, and letters of the text: and they find in the Pentateuch 5245 verses, and in the whole Bible 23,206. The masora is called by the Jews the hedge or fence of the law, because this enumeration of the verses, &c., is a means of preserving it from being corrupted and altered. Thirdly, tliey have marked whatever irregularities occur in any of the letters of the Hebrew text; such as the different size of the letters, their various positions and inversions, &c., and they have been fruitful in finding out reasons for these irregularities and mysteries in them. Fourthly, they are supposed to be the authors of the Keri and Chetiph, or the marginal corrections of the text in the Hebrew Bibles. The text of the sacred books, it is to be observed, was originally written without any breaks or divisions into chapters or verses, or even into words; so that a whole book, in the ancient manner, was but one continued word : of this kind we have still several ancient MS. books, both Greek and Latin. As, therefore, the sacred writings had undergone an infinite number of alterations, whence various readings had arisen, and the original was become much mangled and disguised, the Jews had recourse to a canon, which tliey jvidged infallibh;, to fix the reading of the Hebrew text ; and this rule they call ma-sora, tradition, from IDO, tradidit. For, the He-brew consonants being generally written without the vowels, the words would often bear a different signification, according to the vowels supplied ; for instance, the three letters 131, d b r, have at least five different significations, *viz.* he spake, speaking, a word, a pestilence, and a fold for sheep or cattle. Whilst the Hebrew was a living language, there is no doubt that the word composed of these three letters was understood in its different significations by the different vowels that were used in it when they uttered it. Such vowel points the Masorites have now affixed to it, by which we may knOw when and where these three letters signify one thing and when and where another. When it signifies ' he spake,' they affix the points which denote « short and c long, and say 131, daber; when it is a participle, and signifies ' speaking,' they read by their points isi, dober;

when it is a noun, and si < Tnifies a * word,' they put under it. two as short, and read 131, dabar, when it signifies a

pestilence they put two e's under, and read 131, deber; when it signifies a fold they put the points which denote a and e, and read it 131 ; and so they have done with other words.

What has been done, in this case, by the Masorites, would certainly be of great use for under-

standing the Hebrew text, if they had lived while the Hebrew was a living language, and these points iiad been then used, and we could have been assured of their knowledge of the true pronunciation of all words, according to their different significations ; but, as the Hebrew was a dead language many hundred years before this time, the true ancient pronunciation was as much unknown then as now. , We have St. Jerome's testimony, that different vowels were used in the pronunciation of the same word in diff'erent countries; and this was at least 100 years before the Masorites began the invention of their points, either for vowel, pause, or accent; and they were improving for some centuries. It is also manifest, from the LXX., that the ancient Jews read witii difierent vowels from those which the Masorites have affixed. Accordingly they say that, when God gave the law to Moses at Alount Sinai, he taught him, first, the true reading of it; and, secondly, its true interpretation; and that both these were handed down by oral tradition, from generation to generation, till at length they were committed to writing. The for-mer of these, *viz.* the true reading, is the subject of the masora ; the latter, or true interpretation, that of the mishna and gemara. The Masorites have, however, occasionally altered the text to be in accordance with their ideas of the interpretation, or at least so fixed the points as to favor their reading. In Dan. ix. 25, they put their athnach or semicolon after the seven weeks, and thus, cutting off the seven weeks from the three score and two weeks, make the prophecy wholly unserviceable to Christians ; but if they had placed a comma after seven weeks, and their athnach or semicolon after three score and two weeks, the number of years, *viz.* 483 (sixty-nine weeks) would exactly point out the time when the Christian ˆMessiah came. There is a masora printed at'enice and at Basil, with the Hebrew text in a different character. Buxtorf has written a masoretic commentary, which he calls Tiberias.

MASORITES, the compilers of the Masora. Elias Levita says, they were the Jews of a fa-mous school at Tiberias, who, about A. D. 500,

composed, or at least began, the masora ; whence they are called Masorites, and masoretic doctors. Aben Ezra makes tliem the authors of the pomts and accents in the Hebrew text, as we now find it; and which serve for vowels. The age of the Masorites has been much'disputed. Archbishop Usher places them before Jerome ; Capel at the end of the fifth century ; Father Morin in the tenth century. Basnage. says, that they were not a society, but a succession of men ; and that the masora is the work of many grammarians, who, without associating and communicating their notions, composed this collection of criticisms on the Hebrew text. It is urged that there were Masorites from the time of Ezra and the men of the great synagogue, to about A. D. 1030 ; and that Ben Asher and Ben Napthali, who, according to Basnage, were the inventors of the niasora, flourisiied at this time. Each of these published a copy of the whole Hebrew text, as correct, says Dr. Prideaux, as they could make it. The eastern Jews followed that of Ben Naphthali,and

the western that of Ben Asher ; and all that has been done since is to copy after them, without making any more corrections or masoretical criticisms. The Arahs have done the same by their Koran that the masorites have done by the Bible ; nor do die Jews deny their having borrowed this expedient from the Arabs, who first put it in practice in the seventh century.

MAS(iUE, or Mask, a cover for the face, contrived with apertures for the eyes and mouth ; originally worn chieHy by vvnmen of condition, eitiier to preserve tlieir complexion from the weather, or to prevent their being known. Pop-psea, wife of Nero, is said to have invented the masque; to guard her complexion from the sun, being uncommonly delicate with regard to her person. Theatrical masques, however, were in use both among the Greeks and Romans : Sui-das and Atliena:!us ascribe the invention of them to the poet Choerilus, a contemporary of Thespis ; Horace attributes them to .li,schylus ; but the real inventor, according to Aristotle, as well as the time of tlieir first introduction and use, was unknown. Brantome observes that the

use of masques was not introduced till towards the end of the sixteenth century.

Masque, in architecture, is applied to certain pieces of sculpture, representing some hideous forms, grotesque, or satyrs' faces, &c., used to fill up and adorn vacant places, as in friezes, tlie pannels of doors, keys of arches, &c., but particularly in grottoes.

Masque de Fer, or Man with the Iron Mask, in modern French history, were a celebrated state prisoner in the reign of Louis XIV., so called on account of his wearing a black mask over his face when he appeired before strangers. He is the Junius of this period of the French history. The public attention was first attracted to the remarkable circumstances connected with his confinement by the celebrated Voltaire, nearly fifty years after the death of the prisoner. Tiie following are the principal facts related by that writer, who, receiving the history certainly in a very imperfect state, added, it would seem, some few embellishments calculated to favor his own surmises. According to his account, a few months after the death of cardinal Mazarine, there arrived at the isle of Sainte JNIarguerite a young prisoner whose appearance was peculiarly attractive: his person was above the middle size, and elegantly formed ; his mien and deportment were noble, and his manners graceful. On the road he constantly wore a mask made with iron springs, to enable hiin to eat without taking it off. It was at first believed that tliis masque was made entirely uf iron ; whence he acquired the title of the i\Ian with the Iron Mask. His attendants had received orders to despatch him, if he attempted to take off his masque or discover himself. He had been first confined rt Pignerol under the care of the governor M. de St. Mars ; and, upon being sent thence to St. Marguerite, he was accompanied by the same person. He was always treated witii the utmost respect : he was served constantly in plate ; and the governor himself placed his dishes on the table, retiring immediately after and locking the door behind him. He never wore his hat before him, nor ever

sat down in his presence without being desired. The marquis Louvois, who went to see him at St. Marguerite, spoke to him standing, and with that kind of attention which denotes high respect. During his residence here, he attempted twice, in an indirect manner, to make himself known. One day he wrote something with his knife on a silver plate, and threw it out of his window towards a boat that was drawn on shore near the foot of the tower. A fisherman picked it up and carried it to the governor. M. de St. Mars asked the man, with great

anxiety, whether he could read, and whether any one else had seen the plate ? the man answered, that he could not read, that he had but just found the plate, and that no one else had seen it. He was, however, confined till the governor was well assured of tlie truth of his assertions. Another attempt to discover himself proved equally unsuccessful. A young man who lived in the isle one day perceived something floating under the prisoner's window ; and, on picking it up, he discovered it to be a very fine shirt written all over. He carried it immediately to the governor ; who, having looked at some parts of the writing, asked the lad, with some appearance of anxiety, if he had not had the curiosity to read it ? He protested repeatedly that he had not ; but two days afterwards he was found dead in his bed.

The Masque de Fer remained in this isle till 1698, when M. St. Mars, being promoted to the government of the Bastile, conducted his prisoner to that fortress. In his way thither he stopt with him at his estate near Palteau. The masque arrived tliere in a litter, surrounded by a numerous guard on horseback. M. de St. Mars eat at the same table with him all the time they resided at Palteau ; but the latter was always^ placed with his back towards the windows ; and the peasants, who came to pay their compliments to their master, and whom curiosity kept constantly on the watch, observed that M. de St. Mars always sat opposite to him with two pistols by the side of his plate. They were waited on by one servant only, who brought in and carried out the dishes, always carefully shutting the door both in going out and returning. The prisoner was always masked, even wiien he passed through the court; but the people saw his teeth and lips, and observed that his hair was gray. The governor slept in the same room with him, in a second bed that was placed in it on that occasion. In the course of their journey, the masque, continues this author, was one day heard to ask his keeper, whether the king had any design on his life : ' No, prince,' he replied, ' provided that you quietly allow yourself to be conducted, your life is perfectly secure.' The stranger was accommodated as well as it was possible to be in the Bastile. An apartment had l)cen prepared for him by order of the governor before his arrival, fitted up in the most convenient style ; and every thing he expressed a desire for was instantly procured him. His table was the best that could be provided ; and he was supplied with as rich clothes as he desired ; but his chief taste in this last particular was for lace, and for linen remarkably fine. He was allowed the use of such books as

he desired, and he spent much of his time in readinif. lie also amused himself with playing upon the guitar. He had the liherty of going to mass ; but was then strictly forbidden to speak or uncover his face : orders were even given to the boldiers to fire upon liim, if he attempted either; and their pieces were always pointed towards him as he passed through the court. When he had occasion to see a surgeon, or a physician, lie was obliged, under pain of death, constantly to wear his mask. An old physician of the Bastile, who had often attended him when he was indisposed, said, that he never saw his face, though he had fre<iuently examined his tongue, and different parts of his body ; and that he never complained of his confinement, nor let fall any hint by which it might be guessed wtio he was. He often passed the night in walking up and down his room. This unfortunate person died on the 19th of November, 1703, after a short illness; and was interred next day in the burying-place of the])arisli of St. I'dul. The expense of his funeral amounted only to forty livres. The name given him was Marchiali ; and even his age, as well as his real name, it seemed of importance to conceal ; for, in tlie register made of his funeral, it was mentioned that he was about forty years old, though he had told his apothecary, some time before his death, that he thought he must be sixty. Immediately after his death, his apparel, linen, clothes, mattrasses, and in short every thing that had been used by him, were burnt; the walls of his room were scraped, the floor taken up, evidently from the apprehension that he might have found means of writing any thing that would have discovered who he was. Nay, such was the fear of his having left a letter, or any mark wliicii might lead to a discovery, that his plate was melted down ; the glass was taken out of tlie window of his room and pounded to dust; the window frame and doors burnt ; and the ceiling of the room, and the plaster of the inside of the chimney, taken down. Several persons have affirmed, that the body was buried without a head ; and M. de St. Foix informs us, in his I'.ssais Historiques, tliat ' a gentleman having bribed the sexton had the body taken up in the night, and found a stone instead of the head.' See IJastile.

Among the numerous conjectures concerning the real name and condition of this remarkable personage, tlie masked prisoner was from time to time asserted to have been an Armenian patriarch, forcibly carried from Constantinople by the contrivance of the Jesuits ; Louis

count de Ver-mandois, natural son to Louis Xl'. ; the celebrated duke of Beaufort; and even James duke of Monmouth : although the Armenian patriarch was enrolled in the records of the Bastile by the name of Avedik, his face was unknown, and therefore required no concealment ; and although he had died ten years before the mask, — although de X'ermandois was believed by his father and the whole army to have perished in the camp before Dixmude, and was accordingly buried near Arras in 1693, — although, according to the belief of the Turks, Beaufort was killed, and his iiead taken off" before Candia ; and although James of Monmouth, m the imagination of the

Londoners at least, was executed on Tower Hill. Vet as no living princes were at that time missing, the silence of the grave must be disturl)ed, and the evidence of men's senses attacked as insufficient, in order to raise a personage of sufficient importance. Some, however, conceiving that to create a r.ew prince was at least as easy as to raise a ilead one, asserted that he was a son of Anne of Austria, queen to Louis XHL, and consecjuently that he was a brother of Louis XIV. The queen, it was stated, provetl with child at a time when it was evident it could not have been by her husband, who, for some months before, had never been with her in private. The supposed father of this child is said to have been the duke of Buckingham, who came to France in May, 1()2.5, to conduct the princess Henrietta, wife of Charles L, to England. Anotlier opinion is, that he was the twin-brother of Louis XIVˆ, born some hours after him. This first appeared in a short anonymous work published without date, or name of place or printer. It is therein said, 'Louis XI'. was born at St. Germains en Laye on the 5th of September, 1 638, about noon ; and the illustrious prisoner, known by tlie appellation of the iron masque, was born the same day, while Louis XIII. was at supper. The king and the cardinal, fearing that tlie pretensions of a twin-brother might one day be employed to renew those civil wars with which France had been so often afflicted, cautiously concealed his birt'i, and sent him away to be brought up privately.' This opinion was confirmed in a work called Memoires de Marechal Due de Richelieu, written by the abbe Soulavie ; in which it is distinctly asserted that, ' the birth of the prisoner happened in the evening of the 3th of September, 1638, in presence of the chancellor, the bishop of Meaux, the author of the MS., a midwife named Peroiicte, and a sieur Honorat. This circumstance greatly disturbed the king's mind ; he observed that the Salique law had made no provision for such a case. By the ad-vice of cardinal Richelieu it was therefore resolved to conceal his birth, but to preserve his life, in case, by the death of his brother, it should be necessary to avow him. A

declaration was drawn up, and signed and sv\orn to by all present, in which every circumstance was mentioned, and several marks on his body described. This document, being sealed by the chancellor with the royal seal, was delivered to the king; and all took an oath never to speak on the subject, not even in private and among themselves The child was delivered to the care of madame Peron-ete, to be under the direction of cardinal Richelieu, at whose death the charge devolved to cardinal Mazarin. Mazarin appointed the author of tiie MS. his governor, and entrusted to him the care of his education. But as the prisoner was extremely attached to madame Peronote, and she equally so to him, she remained with him till her death. His governor carried bim to iiis house in Burgundy, where he paid the greatest attention to his education. As the prisoner grew up he became impatient to discover his birth, and often importuned his governor on that subject. His curiosity had been roused, by observing tliat messengers from the court frequently

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arrived at the house ; and a box, containing letters from the queen and ttie cardinal, having one day been inadvertently left out, he opened it, and saw enough to guess at the secret. From tliat time he became thoughtful and melancholy, ‘ which,’ says the author, ‘ I could not then account for. He shortly after asked me to get him a portrait of the late and present king ; but 1 put him off, by saying that I could not procure any that were good, lie then desired me to let him go to Dijon ; which I have known since was witli an intention of seeing a portrait of the king there, and of going secretly to St. John de Lus, where the court then was, on occasion of the marriage with the infanta. lie was beautiful ; and love helped him to accomplish his wishes. He had captivated the affections of a young housekeeper, who procured him a portrait of the king. It might have served for either of the brothers ; and the discovery put him into so violent a passion, that he immediately came to rae, with tlie portrait in his hand, saying, Voila mon frere, et voila qui je suis, showing me at the same time a letter of the cardinal de Mazarin that he had taken out of the box.’ Upon this discovery his governor immediately sent an express to court, to communicate what had happened, and to desire new instructions. On this, both the prince and governor were arrested, he informs us, and continues the rest of his narrative in a manner similar to that of Voltaire.

The whole of this wonderful tale is now ex-])loded, and the masked prince, the brother of a king, is converted into an Italian politician, a crafty agent of the duke of Mantua, who, having out-mancGUvred Louis, the revengeful monarch thus imprisoned him for life.

The abbe D’Estrades, French ambassador to the states of Venice, had formed the hope of acquiring for his master the town and fortress of Casal in the territories of the duke of Mantua, and selected as his agent with Ferdinand, Ercolo Antonio Matthioli, bachelor of laws, at Bologna, and a senator of Mantua. He had been secretary of state to the former duke, and retained the confidence of the present, who sent him, after various negociations, to Paris, in order to conclude the treaty for the delivery of the fortress. All was arranged ; French forces were prepared on the frontier, under the command of M. C’ati-nat, to take possession of the place, and D’Asfeld repaired to Venice to see Ferdinand. D’Asfeld was arrested ; Matthioli wrote to I’inchesne, the deputy of D’Estrades, informing liim tliat the <luke had entered into

a treaty with Spain and Austria ; and a communication from the duchess-dowager of Savoy at length broiiglit tlie mortifying certainty that tiie (Jrand Monarque had been completely duped by the obscure agent of a petty Italian prince.

This so mortified the pride of Louis that he resolved to ruin Matthioli, and accordingly entrapped and committed him to custody. St. Mars was his keeper, and the])recautions taken tt> j)revent its l)eing known ttial the humbled jˆride of lˆouis could take such revenge, tliough probably much exaggerated, were doubtless sever* and remarkable. He travelled in a canvas chair “o tliat not even lus ‘guards could sec his

face, and St. Mars amused the inquisitive with *des contes jaunes,’ to throw them, as a huntsman would say, from the right scent. In these we doubtless may discover the origin of many of the miraculous incidents related by Voltaire. The true origin, for instance, of the narrative of the silver plate, said to be thrown from hiiˆ window by Marchiali (the name given in the Bastile to the masque), may be discovered in the following incident which occurred at St. Marguerite while he was there.* A Protestant minister, confined here at the same time, amused himself, says St. Mars, ‘ with scribbling sorry stuff (‘des pauvretes’) on his linen and pewter, which, being transformed into silver by the gossips, added considerably to the marvel of the tale.’

Those who wish to consult the evidence on which this account of the masque rests, and which consists of state papers, letters from St. Mars and Louvois, the war minister, whicii, though quite conclusive, are much too long for our insertion, may refer to the Ilistoire de I’Homme au Masque de Fer, by M. Delors, Paris, 1825 ; or, still better, to the History of the Iron Mask, by the Honorable George Agar Ellis, London, 1826. MAS QUEllADE, n. s. & v. a.) See Mask. Masquera der, n.s. S An entertainment at which the company are masked : to go in masks or disguise : a mascjuerader is a person thus disguised.

I was upon the frolick this evening, and came to visit thee in a.miisquerade. Drijdens Spaiiisli Friar.

A freak took an ass in the head, and he goes into the woods, masquerwlhiy up and down in a lion’s skin. L’ Estrange.

The most dangerous sort of cheats are but nms-queraders under the vizor of friends. <.

It is a kind of acting to go in masquerade, and a man should be able to say or do things proper for the dress in which he appears. The misfortune of tlie thing is, that people dress themselves in what they have a mind to be, and not what they are fit for.

Steele. Truth, of all things the plainest and sincerest, is forced to gain admittance in disguise, and court us in masquerade. Fclltin.

1 find that our art hath not gained much by tlie happy revival of masqueradintj among us. Swift,

What guards the puritj of melting maids, In courtly balls and midnight masquerades, Safe from the treacherous friend, and daring spark, The glance by day, the whisper in the dark ? Pope. At operas an' plays parading. Mortgaging, gambling, masquerading.

Hams. MASllAKITHA, an instrument of music among the ancient Hebrews, composed of])ipes of various sizes, fitted into a kind of wooden chest, open at the top, and stopped at tlie hotloni with wood covered with a skin. Wind was conveyed to It from the lips, by means of a jiipe fixed to the cliest : tlie pipes were of lengths musically proportioned to each other, and the melody was varied at |)leasnre, by sto|)piiig and unstopping with the fingers the apertures at the upper extremity.

I\IASS, M. s. & t;. a. Lat. missa, a mitto, A service of the Itomish church. See below : to jierfiinn mass.

MAS

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Their massiiiy furniture they took from the law, lest, having an altar and a priest, tlijy should want vest-laents. llookT.

Burnished gold is that manner of gilding-which we see in old parchment and nuns books, done by monks and priests ; who were very expert therein. Feachnm on Drawing.

INIalicious mass-priest, cast back those eniissitious eyes, to your own infamous chair of Rome ; and, if tven in tliat thou canst discern no spectacles of abominable uncleanness, spend thy spiteful censures upon ours. Bp. Hall.

Cardinal Albernolius, by his last will, took order for fifty thousand masses to be said for his soul.

Jer. Taiiior.

Ife infers, that then Luther must have been unpar-donably wicked in using masses for fifteen years.

Atterbury.

MASS, 71. s. Si, V. a.\ Yr. masse, massif; Lat. jMas'sive, adj. i massa. A body; lump;

Mas'sy, ,' bulk ; quantity ; conside—

Mas'sinf.ss, 71. s. k rable quantity; congeries; Mas'sivexess. J gross body : to accumulate in masses ; strengthen or thicken (obsolete) : massive and massy mean bulky ; heavy ; ponderous ; solid : massiness and massiveness correspond.

1 hy sumptuous buildings, and thy wife's attire. Have cost a mass of publick treasury. Shakspeare. This army of such mass and charge. Led by a delicate and tender prince.

Jd. Hamlet. If you would hurt. Your swords are now too massx) for your strength. And will not be uplifted. Id. Tempest.

He discovered to me the richest mines which the Spaniards have, and from whence all the mas of gold that comes into Spain is drawn. Raleigh.

Comets have power over the gross and mass of things ; but they are rather-gazed upon than wisely observed in their effects. Bacon.

lie had spent a huge mass of treasure in transporting his army. Dalies on Ireland.

They feared the French might, with filling or massins: the house, or else by fortifying, make such a piece as might annoy the haven. Hayicard.

Let ignorance with envy chat.

In spite of both, thou fame shalt win ; Whose mass of learning seems like that Which Joseph gave to Benjamin.

Herrick to Ben Jonson. The Creator of the world would not have framed so huge a mass of earth but for some reasonable creatures to have their habitation. Abbot.

It was more notorious for the daintiness of the provision served in it, than for the massiness of the dish.

HakeuHl. No sideboards then with gilded plate were pressed, No sweating slaves with massive dishes dressed.

Dryden, The whole knowledge of groupes, of the lights and shadows, and of those masses which Titian calls a bunch of grapes, is, in the prints of Rubens, exposed clearly to the sight. Id. Where'er thou art, he is ; the eternal mind Acts through all places ; is to none confined : Fills ocean, earth, and air, and all above. And through the universal mass does move. Id. Where flowers grow, the ground at a distance seems covered with them, and we must walk into it before we can distinguish the several weeds that spring up in such a beautiful mass of colours.

Addison,

Perhaps these few stones and siings, used with invocation of the Lord of Hosts, may countervail the massive armour of the uncircumcised Philistine.

Government ot (lie Tongue. At distance, through an artful glass, To the mind's eye things well appear ;

They lose their forms and make a mass Confused and black, if brought too near.

Prior. The intrepid Theban hears the bursting sky. Sees yawning rocks in nuissy fragments fly. And views astonished, from the hills afar, The floods descending, and the watery war. Pope.

If these liquors or glasses were so thick and fnusst/ that no light could get through them, I question not but that they would, like all other opaque bodies, ap-pear of one and the same colour in all positions of the eye. iˆewton's Opticks.

The more gross and massive parts of the terrestrial globe, the strata of stone, owe their order to the de-luge. Woodward.

Some passing into their pores, others adhering in lumps or masses to their outsides, so as wholly to cover and involve it in the mass they together constituted. Id.

If there is not sufficient quantity of blood, and strength of circulation, it may infect the whole tnass of the fluids. Arbuthnot.

The mass of the people have opened their eyes, and will not be governed by Clodius and Curio.

Swift.

Mass, in mechanics, is the matter of anybody cohering with it, *i.e.* moving and gravitating along with it; in which sense mass is distinguislied from bulk or volume, which is the expansion of a body in length, breadth, and thickness. The mass of any body is rightly estimated by its weight; and the masses of two bodies of the same weight are in a reciprocal ratio of their bulks.

Mass, in the Roman Catholic church, the prayers used at the celebration of the eucliarist, in consecrating t!ie bread and wine into the body and blood of Clirist, and offering them, so tran-substantiated, as an expiatory sacrifice for the quick and the dead. By the Roman Catholics it is in general believed to be a representation of the passion of our blessed Saviour; so every action of the priest, and every particulur part of the service, is supposed to allude to the particular circumstances of his passion and death. Nicod, after Baronius, observes that the word missa comes from the Hebrew missach, obla-tum ; or from the Latin missa, missorum ; because formerly the catechumens and excommunicated were sent out of the church, when the deacons said, Ite, missa est, after sermon and reading of the epistle

and gospel ; they not being allowed to assist at the consecration. Menage derives the word from missio, dismissing : others from missa, sent ; because, in the mass, the prayers of men on earth are sent up to heaven. The general division of masses consists in high and low. The former are sung by the choristers, and celebrated with the assistance of a deacon and sub-deacon ; the latter are those in which the prayers are barely rehearsed without singing. There is a great number of different occasional masses in the Romish church, many of which have nothing peculiar but the name ; such are the masses of the saints; that of St. Mary of the

snow, celebrated August 5lh ; that of St. Margaret, patroness of lying-in women; that of the feast of St. John the Baptist, at, which are said three masses; that of the Innocents, at which the Gloria in excelsis and the Hallelujah areomit-ted, and, it being a day of mourning, the altar is of a velvet color. As to ordinary masses, some are said for the dead, and are supposed to contribute to fetcii the soul out of purgatory: at these masses the altar is put in mourning, and the only decorations are a cross in the middle of six yellow wax lights ; the dress of the celebrant, and tlie very mass book, are black ; many parts of the office are omitted, and tlie people are dismissed without the benediction. If the mass be said for a person distinguished by his rank or virtues, it is followed with a funeral oration; they erect a chapelle ardente, that is, a representation of the deceased, with branches and tapers of yellow wax, either in the middle of tlie church or near the deceased's tomb, where the priest pronounces a solemn absolution of the deceased. There are likewise private masses said for stolen or strayed goods or cattle, for health, for travellers, &c., wiiich go under the name of votive masses. There is still a further distinction of masses denominated from tlie countries in which they were used; thus the Gothic Mass, or missa INIosarabum, used among the Goths when they were masters of Spain, wliich is still kept up at Toledo and Salamanca ; the Ambrosian mass, composed by St. Ambrose, and used only at Milan, of which city he was bishop; the Gallic mass, used by the ancient Gauls; and the Roman mass, used by almost all the churches in

the Ro-mish communion.

Mass of the Presanctified (raissa prae-sanctificatorum), is a mass peculiar to the Greek church, in which there is no consecration of the elements; but, after singing some hymns, tiiey receive the bread and wine which was before consecrated. This mass is performed all Lent, ex-cepton Saturdays, Sundays, and the annunciation. Tlie priest counts upon his fingers the days of tlie ensuing week on which it is to be celebrated, and cuts off as many pieces of bread at the altar as he is to say masses ; and, after having consecrated them, steeps them in wine, and then puts them in a box ; out of which, upon every occasion, he takes some of it with a spoon, and putting it on a dish sets it upon the altar.

MASSA, a town and duchy of Italy, situated on the Frigido, about two miles from the Mediterranean. The town stands on the great coast road leading through Tuscany from north to south, and is well built, many of the public edifices and even private houses being constructed of Carrara marble. The cathedral contains some fine pictures ; and the palace, with its gardens, is worth the traveller's notice. The chief j)ublic institution is an academy of sculpture and architecture. Olives flourish in the environs. Population 10,000: thirty miles north by west of Leghorn, and fifty south by west of Modena.

MASSACHUSETTS, forming, with the district of Maine, one of the United States of North America, is bounded north by X'crmont and New Hampshire, east by the Atlantic, south by the

Atlantic, Rhode Island, and Connecticut, and west by New York. It is 190 miles long, and ninety broad, containing 7.500 square miles. Population, in 1790, 388,727; in 1800,422,845; and in 1810, 472,040 : of whom 6737 were blacks. There are, to its great credit, no slaves in this state. The number of militia (including Maine), in 1817, amounted to 70,330.

The counties, number of towns, population in 1810, and chief towns, are exhibited in the following table : —

Counties.

Tws.

Pop.

Chief Towns.

Barnstable

14

22,211

Barnstable

Berkshire

32

35,907

Lenox

Bristol

16

37,108

Taunton

Duke’s

3

3,290

Edgartown r Salem •? Nevvburyport (.Ipswich

Essex

23

71,888

Franklin

24

27,301

Greenfield

Hampden

18

24,421

Springfield

Hampshire

22

24,553

Northampton

Middlesex

44

52,789

^ Cambridge I Concord

Nantucket

1

0,807

Nantucket

Norfolk

22

31,245

Dedham

Plymouth

18

35,109

Plymouth

Sufi-olk

2

34,381

Boston

Worcester

51

64,910

Worcester

290

472,040

Boston is the chief town. The other most considerable maritime towns are Salem, Nevvburyport, Marbleliead, Beverly, Gloucester, Charlestown, Plymouth, and New Bedford. Worcester, Northampton, Springfield, Greenfield, Pittsfield, Haverhill, Dedham, Taunton, Concord, and many others,, are pleasant and flourishing inland towns.

There are twenty-eight banks in Massachusetts Proper : seven at lioston, three at Salem, two at Nevvburyport, two at Nantucket, Sec.

There is a university at Cambridge, a college at Williamstown, a theological seminary at Andover, and academies are established at Ames-bury, Amherst, Andover, Bradford, Bridgewaler, Byfield, Deerfield,Framingliam,Groton, lladley, Ilingham, Leicester, Lenox, Marblehead, Milton, Munsen, Newburyport, Pittsfield, New Salem, Sandwich, Taunton, Westfield, Westford, and Wrentham. A number of these are well endowed, and many of them are in a flourishing state. Besides the academies, grammar schools, public and private, are constantly supported in most of the principal towns, and good schools are common throughout the state. Literary institutions are liberally patronised, and in no part of the world is information more generally ditfused. The number of congregations of tiie several denominations of Christians in this state is as follows : Congregatioiialists 305, Bajitists ninety-one. Friends thirty-two, j'.piscopalians seventeen, Universalists nine, I'rcsbyteriaus five. There artˆ also some Methodists, aivd a few Ro-man Catholics, and Shakers.

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MASSACHUSETTS.

The legislature is composed of a senate of forty members, and a house of representatives. The governor, lieutenant-governor, and senators, are chosen annually on the 1st Monday in April by the people. The representatives are chosen annually in May. Pkch town having 150 rata-ble polls sends one, and another for every additional 225 polls. The legislature assemble on the last Wednesday in May, annually, and meet also in January.

The principal rivers are the Connecticut, Merrimack, Concord, Nashua, Charles, Mystic, Neponset, Taunton, Chickapee, Deerfield, West-lield, Miller's, and llousatonic. Tlie principal canal is Middlesex Canal, connecting Boston harbour with the Merrimack, commencing in the town of Clielmsford ; twenty-eight miles in length. It was completed in 1804, and was at that time the greatest work of the kind in the United States. There are canals in this state on the Connecticut, at Montague, and at South Ilad-ley, and on the Merrimack at Patucket Falls. The principal islands are Nantucket and Mar-tha's 'ineyard. The most noted capes are Cape Ann, Cape Cod, and Cape Malabar. The most considerable bays are Massachusetts, Cape Cod, Barnstable, Plymouth, and Buzzard's bays. There are no large lakes, but there are numerous ponds.

The range of the Green Mountains passes from north to south, through the western part of this state. The principal chain takes the name of Iloosac Mountain. The highest summits are Saddle and Takonnack mountains. The former of these is the highest land in the state, and rises to the height of 4000 feet above the level of the sea. The other most noted mountains in the state are, Wachuset, in Princeton ; Mount Tom and Mount llolyoke, near Northampton; and Mount Toby, in Sunderland. The general aspect of the country is interesting, affording many highly varied and extensive prospects. There are not, however, any natural objects of curiosity that vie with those of some of the other states.

The face of the country is greatly diversified. The south-eastern part is mostly level. There are also level districts of small extent in the vicinity of the Merrimack in the north-east. Salt marshes are numerous in the maritime parts, though not very extensive. Most of that part bordering on the sea-coast, and extending into the interior as far as the county of Worcester, may be regarded as the level division, exhibiting no very considerable elevations. The five western counties of Worcester, Hampshire, Franklin, Hampden, and Berkshire, present the greatest irregularity of surface, and constitute the high-lands of the state. These counties, however, abound in vast tracts of elevated lands, diversified with gentle swells, in large districts of pine plains, in

valleys of various extent, as well as in wide intervals,])articularly on (Connecticut llivcr. The soil is exceedingly various, comprising every description from the most fertile to the most unproductive. In the south-eastern part it is mostly light and sandy, interspersed, however, with numerous fertile tracts. In the middle and northern part, toward the sea coast, it is of a much better quality, iliough not generally distinguished

for its natural fertility ; but, by excellent cultivation, a great portion of it is rendered highly productive. The middle and western parts have generally a strong rich soil, excellent for grazing, and suited to most of the purposes of agriculture. The state is almost universally well watered. Tile streams of every description are remarkably clear and beautiful. The farms generally consist of from 100 to 300 acres, and are for the most part well cultivated. In no part of the United States have there been greater advances made in agricultural improvements than in Massachusetts. The country is intersected in every direction by roads, which are kept in a good state of repair.

The principal productions are Indian corn, rye, wheat, oats, barley, peas, beans, buckwheat, potatoes, hops, flax, and hemp. Beef, pork, butter, and cheese, are abundant in most parts of the state, and of excellent quality. The county of Berkshire, in particular, is distinguished for its extensive dairies. The state abounds with orchards, and great quantities of cider are annually made, which is the common beverage of the inhabitants. The principal cultivated fruits are apples, peaches, pears, quinces, plums, cherries, and currants. Gardening is an object of attention throughout the state, and all the hortulan vegetables suited to the climate, together with a variety of domestic fruits, are, in this way, extensively cultivated.

Massachusetts is the most commercial state in the union, and, including the district of Maine, owns about one-third of the shipping that belongs to the United States. The greatest part of the fisheries in the U nited States belongs to this state. The principal articles of export are fish, beef, lumber, pork, ardent spirits, flax seed, whale oil, spermaceti, and various manufactures. The total amount, including those of Maine, in 1816, was 10,136,439 dollars. This state also holds a high rank in point of manufactures. The most considerable are those of cotton cloths, boots and shoes, ardent spirits, leather, cordage, wrought and cast iron, nails, woollens, ships, straw bonnets, hats, cabinet work, paper, oil, and muskets. There is an extensive national establishment for the manufacture of arms at Springfield. The total

amount of the manufactures of Massachusetts, in 1810, was 18,594,323 dollars; and, including Maine, 20,730,104.

The principal mines are those of iron, which are found in various parts, and there are numerous establishments for manufacturing iron. The counties of Plymouth and Bristol afford great quantities of this mineral, and there are several rich iron mines in the county of Berkshire. A lead mine is found at South lladley,and at some other places. Ochres and other fossil productions have been found in various places. (Quarries of good marble are found in Lanesborough, Stockbridge, Pittsfield, Shefheld, and sceral other places in Berkshire county. There are quarries of slate at Lancaster, Harvard, and Bernardston, and of soap-stone at Middlefield. Limestone is found in great abundance in the county of Berkshire, and freestone in all parts of the state. Great quantities of beautiful stone for building are obtained from Chelmsford and Tyngsborough.

MAS

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Tlie climate of Massachusetts is subject to the extremes of heat and cold. The air, liowever, is generally dry, serene, and healthy. The thermometer, in summer, is frequently observed to exceed 77° for forty or fifty days together ; and sometimes rises to 100”. The weather iu winter is variable, sometimes very cold.

Massachusetts Bay is a large bay of North America, between Cape Ann on the north, and (!ape Cod on the south.

MAS’SACRE, n.s. k. v. a. Fr. massacre ; of Lat. mactus and sucrare ; Ital. mazzure. Slaughter ; butchery : to butcher ; slaughter indiscriminately.

The tyrannous and bloody act is done ;

The most arch deed of piteous massacre,

That ever yet this land was guilty of. Shakspeare. I’ll find a day to massacre them all, And raze their faction and their family. Id.

Christian religion, now crumbled into fractions, may, like dust, be irrecoverably dissipated, if God do not countermine us, or we recover so much sobriety as to forbear to massacre what we pretend to love. Decay of Piety.

Of whom such massacre

Make they, but of their brethren, men of men ?

Milton.

“ˆlaughter grows murder, when it goes too far, And makes a ?nassacre what was a war. Bryden.

After the miserable slaughter of the Jews, at the destruction of Jerusalem, they were scattered into all corners, oppressed and detested, and sometimes massacred and extirpated. Atterburi/. MASSANIELLO, or Anello (Thomas), a fisherman of Naples, was born in 1623, when that kingdom was subject to Austria, and governed by a viceroy. In 1646 a new and op-jvressive tax being imposed upon all kinds of fruit it occasioned general discontent; and Massaniello, then in his twenty-fourth year, observing the murmurings that prevailed, began to entertain the idea of redressing his country’s grievances. Having imparted his design to the Banditto Perone, and his companions, they laughed at him ; but shortly after, the fish of Massaniello being seized for the tax, he went among the fruiterers, and advised them not to make any more purchases of the country dealers till the impost should be removed. He collected in the mean time a number of boys, to each of whom he gave a small cane, and taught them certain cries. The shopkeepers, agreeably to his instructions, refused to trade with the country people, and, a riot ensuing, the regent sent an officer named Anacleo to suppress it. The multitude, however, drove him from the spot of their meeting ; and, being now gathered in great numbers, Massaniello, by his harangues, induced them to burn the toll-houses, and march to the palace of the viceroy, wbich they entered and ri-fled ; the governor himself and the prince Bisig-nano escaping with difficulty. Thus left to themselves, the multitude chose Massaniello and Perone for iheir leaders. A stage was erected in the marketplace, where the former sat to give audience, and minister justice, which, it is said, he did with equal gravity and impartiality. 150,000 men at this time obeyed his orders, and an incredible number of armed women. The viceroy now applied to the archbishop, whose

mild persuasions had nearly succeeeded in restoring order, when, an attempt being made to assassinate Massaniello, the rage of the people burst forth with redoubled fury. The archbishop, however, had the

address to prevail upon Massaniello to renew the treaty, and to visit the palace, which he did with great pomp on horseback, dressed in cloth of silver, a plume of feathers in his hat, and a drawn sword in his hand, attended by 50,000 armed followers. The terms were ratified at the cathedral on the Sunday following, and every thing had an auspicious appearance ; when unfortunately Massaniello wavered : ambition induced him to violate his engagement, and his conduct all at once became capricious and tyrannical ; so that four persons undertook to despatch him. The last words which he uttered were ‘ Ungrateful traitors !’ His body was thrown into one ditch, and his head into another.

MASSENA (Andrew), prince of Essling, duke of Rivoli, and marshal of France, was born at Nice in 17.38. When young he made two voyages with a relation, the captain of a merchant ship : but, preferring the army, enlisted as a common soldier, in 1775, in the royal Italian regiment. Having only attained to the rank of adjutant, after fourteen years’ service, he returned to his own country and to a private life. But, the revolution again exciting him to action, he was nominated an adjutant-major, and in August 1792 made chief of a battalion. He now be-came successively general of a brigade, and of a division in the army of Italy, and contributed much to the success of the campaigns of 1796 and 1797. His bold and determined courage procured him the appellation of ‘ the favorite child of victory.’ In 1799 he had the chief command in Switzerland, where he completely routed the Austro-Ilussian army under the archduke Charles and general Korsakow. He was less fortunate in Italy in 1800, when he was beaten at Voltri by the Austrians, under Melas, and afterwards besieged and obliged to capitulate in Genoa. In 1805 he again partly beat the archduke Charles in Italy, on the 18th of October, near Verona. He then commanded the army which took possession of Naples ; and once more distinguished himself in the campaign in Poland in 1806. He was employed in Germany in 1809; and on the 3rd of May defeated the Austrians under the archduke John, at the battle of Ebersberg ; shortly after he signalised himself in the engagements of Essling and Wag-ram, in which his services were so conspicuous, that he was decorated by Buonaparte with the title of the prince of Essling. He was afterwards opposed to lord Wellington, in the peninsula, in 1810 and 1811, when he maintained his former reputation, but was prevented gaining any new laurels. This campaign terminated his nii’itary career ; but he survived the roitorai on of ‘.he Bourbons, dying at his seat at Ruel, near Paris, April 4th, 1R17.

MASSIEU (William), a learned French writer, member of the academy of belles lettres, and of the French academy, was born at Caen in

Normandy, in 1665, and completed his studies in Paris, where he entered among the Jesuits ; but

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afterwards left them, that he might follow his literary engagements with the greater freedom. In 1710 he was made Greek professor in the Royal College ; and enjoyed that post till he died in Paris in 17‘22. He wrote, 1. Several Curious Dissertations in the Memoirs of the Academy of Inscriptions. 2. A History of the French Poetry, in 12mo., Sec.

Mass ILIA, in ancient geography, a town of Gallia Narl)onensis, founded by a colony of Phoceans, from Phocea, in Ionia, and in confederacy with tiie Romans ; celebrated not only for its commerce and strength, but for its learning and civilisation; now iNIarseiUes.

MASSILLON (John Baptist), the son of a notary at Ilieres in Provence, born in 1663, and entered into the congregation of the oratory in 1681. His first attempts at public speaking were made at X’ienne, while he was professor of theology. His funeral oration on Henry de Villars, archbishop of that city, received universal appro])ation. This success induced F. de la Tour, tlien general of the congregation, to call him to Paris. Upon preaching his first advent sermon at 'ersailles, he received this eulogium from Louis XIV., ‘ Father, when I hear others preach, I am very well pleased with them ; but, whenever I hear you, I am dissatisfied with my-self.’ In 1717 the regent appointed iiim bishop of Clermont. In 1718, being appointed to preacii before Louis X\^, then only nine years of age, he composed in six weeks the discourses well known by the name of Petit Careme, which are the chef d’cEuvre of this orator, and indeed of the oratorical art. He was admitted into the French academy in 1719. The abbacy of Savigny becoming vacant, the cardinal du Bois procured it for him. The funeral oration of the duchess of Orleans, in 1723, was the last discourse he pronounced in Paris. He never afterwards left his diocese, where his gentleness, politeness, and humanity, gained him the affection of all who knew him. He reduced the exorbitant rights of the episcopal roll. He died on the 28th of September, 1742, aged seventy-nine. No public speaker ever knew better how to touch tiie passions. His eloquence was pathetic, and equally suited to please the man of genius and the multitude, the philosopher and the courtier. He could at once think, describe, and feel. An excellent edition of Massillon’s works were published by his nephew in Paris in 1743 and 1746, in 14 vols, large 12mo., and 12 vols, of a small size. The abbe de la Porte collected, in 1 vol. 12mo., the most striking and sublime ideas in Massillon’s works. This collection appeared at Paris in 1748, 12mo., entitled Pensees sur

Differens Sujets de Morale, de Piete, Tiroes, &c. A Selection and Translation of Massillon's Sermons, in 3 vols. 8vo., by Mr. William Dickson Edinburgh, was published at Perth in 1798.

MASSlNGl'Lll (Philip), an English dramatic poet, born at Salisbury about 1581, and educated at Oxford. He went to London, where he wrote many tragedies and comedies, which were received with great applause, and were greatly admired for the purity of the style. He was a man of abilities and of great modesty, which rendered him greatly beloved by the poets of his

time, particularly by Fletcher, Middleton, Rowly, Field, and Decker. He died suddenly at his house on the Bankside in Southwark, near the playhouse ; and was interred in the same grave with Fletcher.

MASSON (Anthony), an eminent French engraver, who flourished about the end of the seventeenth century, and resided chiefly at Paris. He sometimes amused himself with painting portraits from the life, which he also engraved. He worked entirely with the graver, and handled it with astonishing facility. He observed no kind of rule with respect to the turning of the strokes ; but twisted them about, without regard to the different forms he intended to express, making them entirely subservient to his own caprice. Yet the effect he has produced in this singular manner is not only far superior to what could be expected, but is often very picturesque and beautiful. He could not draw the naked parts of the human figure very correctly ; but where the subject required the figures to be clotlied he succeeded wonderfully. Among his most esteemed works are. The assumption of the 'irgin, a large upright plate from Rubens ; A holj family, a middling-sized plate, lengthwise, from N. Mignard ; Christ with the pilgrims at Emmaus, a large plate, lengthwise, from Titian, commonly called the table-cloth, from the table-cloth being executed in a very singular style ; Tiie portrait of count Ilarcourt, a large upright plate, reckoned a masterpiece in this class of subjects ; and another of William de Briscasier, secretary to the queen of France, a middling-sized upright plate, usually called the gray-headed man, the hair being very finely executed. Masson (Papirius), a French writer, the son of a rich merchant, and born in Forez, in May 1544. After studying the belles lettres and philosophy, he came to Paris, where he was made librarian to the duke of Anjou's chancellor, in which ofilce he continued ten years. In 1576 he was made an advocate of parliament; yet never pleaded but one cause. He was married, but had no issue. He died January 9th, 1611. He wrote four books of French annals in

Latin, printed at Paris in 1577, and 1598, 4to. He is now chiefly known by his Elogia Virorum Claris-simorum, though he published several other works. MASSOOLAH Boat, a boat used at Madras for conveying strangers ashore from on board a ship. It is of curious construction, and well calculated to elude the violent shocks of the surf, that breaks there with great violence. It is formed without a keel, flat-bottomed, with the sides raised high, sewed together with the fibres of the cocoa-nut tree, and caulked with the same material. These boats are remarkably light, and are managed with great dexterity by the natives ; they are usually attended by two kattamarans or rafts, paddled by one man each, that, should the boat be overset by the violence of the surf, the persons in it may be preserved. The boat is driven, as the sailors say, high and dry; the passengers are landed on a fine sandy beach, and immediattly enter the fort of Madras.

MAST, n. s. -\ Saxon maept ; Teut. and Mast'ful, Of/;. ˆ Belg. mast, mcsten, h Greek Mast'less. J iitaroio, saginare, Miiisheu.

The fruit of certain glandiferous plants : mastful is abundant in : niastless, wanting-such fruit.

The oaks bear niaat, the briars scarlet liips ; The bounteous housewife, nature, on each bush Lays her full mess before you.

Shalispeure. Timon of Athens.

Trees that bear mast, and nuts, are more lasting than those that bear fruits ; as oaks and beeches last longer than apples and pears.

Bacon's Aatural History.

The breaking down an old frame of government, and erecting a new, seems like the cutting down an old oak and planting a young one : it is true, the grandson may enjoy the shade and the 7nast, but the planter, besides the pleasure of imagination, has no other benefit.

Temple’s Miscellanies.

Wondering dolphins o’er the palace glide ; On leaves and must of mighty oaks they brouze. And their broad fins entangle in the boughs.

Drydea. Some from seeds inclosed on earth arise.

For thus the mastful chesnut mates the skies. Id.

Her shining hair, uncombed, was loosely spread, A crown of niastless oak adorned her head. Id.

\ hen sheep fed like men upon acorns, a shepherd drove his flock into a little oak wood, and up he went to shake them down some mast.

L’ Estrange’ s Fables.

Mast, w. s. “^ Sax. ma;j-t; Fr. Teut. Belg.

Mast’ed, af/;. J-Dan. and Swed. mast; Span.

Mast’less. y mastil ; of Goth. mcEst (tree); the biggest or chief tree (Thomson). See Mast. The upright beam or post of a vessel on which the sails, &c., are fixed ; masted is furnished with a mast or masts.

Ten masts attached make not the altitude

That thou hast perpendicularly fallen

Shakspeare.

He dropped his anchors, and his oars he plyed ; Furled every sail, ai.d, drawing dovyn the must, His vessel moored. Uryden's Vlryil.

But now there came a flash of hope once more ;

Day broke, and the wind lulled ; the masts were gone. The leak increased ; shoals round her, but no shore,

The vessel swam, yet still she held her own.

Biiron.

A Mast is a long round piece of timber, elevated perpendicularly upon the keel of a ship, to which are attached tlie yards, the sails, and the rigging. A mast, witli regard to its length, is either formed of one single piece, which is called a pole-mast, or composed of several pieces join-ed togellier, each of which retains the name of mast separately. The lowest of these is accordingly named the lower-mast, the next in heigiit is the topmast, which is erected at the head of the former; and the highest is the topgallant mast, which is prolonged from the upper end of the topmast. Thus the two last are merely a continuation of the first upwards. The lower mast is fixed in the ship by the sheers : the foot, or heel of it, rests in a block of timber called the step, which is fixed upon the kelson : and the topmast is attached to the liead of it by the cap and the trestle-trees. The latter of these are two strong bars of timber, supported by two prominences, which are shoulders on the opposite sides of the mast, a little under its upper end ; athwart these bars are fixed tlie cross trees, upon which the frame of the top is supported. Between the lower mast-head and the foremast of

the cross-trees, a square space remains vacant, the sides of whicii are bounded by the two trestle-trees. Perpendicularly above this is the foremost hole in the cap, in whose after-hole is solidly fixed the head of the lower-mast. The topmast is erected by a tackle, whose efllbrt is communicated from the head of the lower-mast to the foot of the topmast ; and the upper end of the latter is accordingly guided into and conveyed up through the holes between the trestle-trees and the cap, as above mentioned. Besides the parts already mentioned in the

construction of masts, with respect to their length, the lower masts of the largest ships are comjiosed of several pieces united into one body. As these are generally the most substantial parts of various trees, a mast, formed by this assemblage, is justly esteemed much stronger than one consisting of any single trunk, whose internal solidity may be very uncertain. The whole is secured by several strong Iioops of iron, driven on the outside of the mast, where they remain at proper distances. The principal articles to be considered in equipping a ship with masts are, 1. the number; 2. their situation in the vessel ; and 3. their height above the water. The masts being used to ex-tend the sails by means of their yards, it is evident that, if their number were multiplied beyond what is necessary, the yards must be extremely short, that they may not entangle each other in working the ship, and consequently their sails will be very narrow, and receive a small portion of wind. If, on the contrary, there is not a sufficient number of masts in the vessel, the yards will be too large and heavy, so as not to be managed without difficulty.

The most advantageous position of the masts is undoubtedly that from which there results an equilibrium between the resistance of the water on the body of the ship on one part, and of the direction of their effort on the other. By every other position this equilibrium is destroyed, and the greatest effort of tlie masts will operate to turn the ship horizontally about its direction ; a circumstance which retards her velocity. It is counterbalanced, indeed, by the helm ; but the same inconvenience still continues ; for the force of the wind, having the resistance of the helm to overcome, is not entirely employed to push the vessel forward. The axis of the resistance of the water should tliei; be previously determined, to discover the place of the mainmast, in order to suspend the efforts of the water equally, and place the other masts so as that their particular direction will coincide with that of the mainmast. See Ship-Building.

The exact height of the masts, in proportion to the form and size of tiie ship, remains yet a problem to be determined. The more the masts are elevated above the centre of gravity, the greater will be the surface of sail which they are enabled to present to the wind ; so far an additional height seems to have been advantageous. But this advantage is diminished by the circular movement of the mast, which causes the vessel to stoop to its effort ; and this inclination is increased in pro])ortion to the additional hcigiit of the mast, an inconvenience which it is necessary to guard against. To reconcile these dilfer6nce.s

it is certain that tlie hei’^lit of the mast ought to be detennined by the inclination of the vessel, and that the point of her greatest inclination siiould be tiie term of this height above the cen-tre of gravity.

PllGPORTIONS FOR THE LeNGTHS AND DlAME—

TEUS OF Masts in the Royal Navy, from Falconer.

I^erigtlis of mastx. — The length of the lower-deck and extreme breadth being added together, the half is the length of the maia-mast ; thus the length of the lower-deck of a seventy-four-gun ship is 17(5 feet ; breadth, extreme, forty-eight feet eight inches ; added together, they make 224 feet eight inches. The half, or 112 feet four inches, is the lei;glh of the mainmast ; which being determined, the other masts bear the following proportion : —

Foremast, eight-ninths of the mainmast.

Mizen-mast, 100 guns, seven-eighths ; ninety guns to fifty, six-sevenths ; forty-four guns to twenty, five-sixths of the mainmast.

In sloops, the mizen-mast is three-fourths ot the mainmast.

When tlie mizen-mast steps on the lower-deck, the depth of the hold is to be deducted from the length here given. This method is now generally practised in the royal navy.

JMain-topmast, three-fifths of the mainmast.

Fore-topmast, eight-ninths of the maintop- mast.

Mizen-topmast, three-fourths of the maintop- mast.

In sloops, the mizen-topmast is five-sevenths of the main-topmast.

Topgallant-masts, one-half the length of the topmast.

Bowsprits, of eighty-gun ships and upwards, seven-elevenths of their mainmasts. Bowsprits of seventy-four gun ships, and under, three-fifths of their mainmasts.

Brig’s mainmasts. The depth in tlie hold is added to the length and

breadth, and one-half is the length of the mainmast.

Cutter's mainmasts. Add together the lengtli of the deck, the breadth extreme, and depth in the hold ; and three-quarters of that sura is the length of the mainmast.

T/ic (liuinettrs of masts. — Main and foremasts, of ships of 100 to fifty guns inclusive, are one inch in diameter at the partners to every yard in length. Ships of forty-four to tliirty-two guns, inclusive, nine-tenths of an inch to every yard in length. And ships of twenty-eight guns, and under, seven-eighths of nn inch to every yard in the length.

Mainmasts of brigs, one inch to every yard in

length ; and the foremast nine-tenths of the dia-metei of the main-inast.

Masts of cutters, three-fourths of an inch in diameter to every yard in length.

Mizen-masts of ships of 100 to sixty-four gun.-*, inclusive, ihrce-fifths of the diameter of the mainmast. Fifty-gun ships, and under, two-thirds of the diameter of the mainmast.

Main and fore-topmasts, one inch to every yard in the length of the fore-topmasts.

Mizen-topmasts, seven-tenths of the diameter of the main-topmast.

Topgallant-masts, one-inch to every yard in their lengths.

Royal-masts, two-thirds of the diameter of their topgallant-masts.

Bowsprits of ships of 100 to sixty-four guns inclusive, two inches less than the diameter of the mainmast. In fifty gun ships, and under, the same diameter as the mainmast.

Proportions for tue Lengths and Diameters OF Booms.

Lengths of' booms. — Lower-studding sail-booms, five-ninths of the mam-yard.

Top-studding sail-booms, one-half the length of the yards they go on.

Flymg jib-boom, five-sevenths of the bowsprit.

Driver-boom, the same lengtli as the main-lopsail-yard.

Diameter of booms. — Studding sail-booms, one inch to every five feet in the length.

Flying jib-booms, seven-eighths of an inch to every yard in the length.

Driver-boom, the same as the fore-topsail- yard.

Proportions for the Lengths and Diameters OF Masts, &c., for Sloops, Smacks, and

IIOYS.

Lengths of the masts, ˆc— INIast and topmast in one, thrice and three-fourths the whole length.

Mast to the rigging-stop or hounds, three-fourths the whole length.

Mast and topmast to the stop of the topmast, forty-one parts of the whole length.

Topgallant-mast to the rigging stop, Ibur-sevenths of the length of the mast.

Boom, two-thirds of the mast.

Gaff, three-fifths of the boom.

Diameter of the masts, 4t.— Mast, one-fourth of an inch to every foot in length.

Topgallant-mast, three-eighths of an inch to every foot in length.

Boom, three-sixteenths of an inch to every foot in length.

Gaff, one-fourth of an inch to every foot in lenuth.

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MASTER, H. s. S Mas’teudom, n. s. Mas’terhand, Mas’terjest, Mas’terkey, Mas’tersinew, Mas’terstring, Mas’terstroke, Mas’terless, adj. Mas’terly, adj. & adv Mas’terpiece, n.s. Mas’tership, Mas’terteeth, Mas’terwort, Mastery. academical dignity

V. a. \ Sax. in!Ept:(chieO; Gotli. mcestur ; Teat, meisieu; Fr. maistre ; Ital. inus-tre; Lat. mugister. A cliief; governor; director ; owner ; -possessor; commander of a vessel ; teacher : hence on 3 skilled in a science or pursuit; a compellation of respect used to young gen-J tlemen ; a title of to master is to rule ; go-vern ; subdue ; execute with skill : masterdom is rule; dominion (obsolete): masterless, wanting a master or owner : masterly, with a master’s skill ; skilful ; artful : mastership and mastery, dominion ; rule ; superiority ; chief work ; skill : masterwort, a plant.

As a wise mas(er-builder I have laid the foundation, and another buildeth thereon. 1 Cor. iii. 10.

If a man strive for maaterks, yet is he not crowned except he strive lawfully. 2 Tim. ii. 5.

An unhappy master is he that is made cunning by many shipwrecks ; a miserable merchant, that is neither rich nor wise, but after so.ne bankrouts.

Ascham’s Schoolmaster. When all was past he took his forlorn weed, His silver shield now idle imisterlsss.

Faerie Qucene. But now I was the lord Of this fair mansion, master of my servants. Queen o’er myself; and even now, but now, This house, these servants, and this same myself Are yours, my lord.

Shahspeare. Merchant of Venice. Chief masier-gunner am I of this town. Something I must do to procure me grace.

Shakspeare. A sailor’s wife had chesnuts in her lap ; Her husband ‘s to Aleppo gone, master o’ the Tyger.

Id. Great, and increasing; but by sea He is an absolute master.

Id. Anton}) and Cleopatra. Master doctor, you have brought those drugs.

Shakspeare. Stand by, my masters, bring him near the king.

Id. You shall put This night's great business into my dispatch. Which shall to all our nights and days to come Give solely sovereign sway and masterdom. Id.

The foul opinion You had of her pure honour, gains, or loses, Your sword or mine ; or mafterless leaves both To who shall find them. Id. Ctjmbeline.

Thou dost speak masterly, tToung though tliou art. Shakspeare.

You were used To say extremity was the trier of spirits : That when the sea was calm all boats alike Shewed maslersliip in floating. Id. Corioluiius. If divided by mountains, they will fight for the mastery of the passages of the tops, and for the towns that stand upon the roots. fialeif/h's Essays.

I do not take myself to be so perfect in the transactions and privileges of Bohemia, as to be fit to handle that part : and I will not offer at that I can-not master. Bacon.

Some living creatures have their muster-nah indented one within another like saws ; as lions and dogs. Id.

The great mocking master mocked not then. When he said, Truth was buried here below.

Davies. The princes of Germany did not think him sent to command the empire, who was neither able to rule his insolent subjects in England, nor master his rebellious people of Ireland. Jd,

This is the masterpiece, and most excellent part of the work of reformation, and is worthy of his majesty. Id.

Very few men are wise by their ov/n counsel, or learned by their own teaching ; for he that was only taught by himself had a fool to his master.

Bo.n Jonsonˆs Discovery. He is a happy man that hath got the inastery at home ; so as he can cross his will without a mutiny, and so please it

that he makes it not a wanton.

Bp. Hall. Humility is a virtue all preach, none practise, and yet every body is content to hear. The master thinks it good doctrine for his servant, the laity for the clergy, and the clergy for the laity. Selden.

‘Tis done ; and ‘twas my masterpiece, to work My safety ‘twixt two dangerous extremes : Scylla ana Charybdis. Denham’s Sophy.

Beating up of quarters was his masterpiece.

Clarendon. Chief mastery to dissect. With long and tedious havock, fabled knights In battles feigned. Milton’s Paradise Lost.

Who shall break the masler-jest, And what, and how, upon the rest?

Hndihrns. He could attain to a mastery in all languages, and found the depths of all arts and sciences.

Tillotson. If gaming does an aged sire entice. Then my young master swiftly learns the vice.

Dry den. Spenser and Fairfax, great masters of our language, saw much farther into the beauties of our numbers than those who followed. Id.

Honour burns in me, not so fiercely bright. But pale as fires when mastered by the light. ,.

This master-key Frees every lock, and leads us to his person. Id. As for the warmth of fancy, the masterly figures, and the copiousness of imagination, he has exceeded all others. Id.

This wonderous masterpiece I fain would see ; This fatal Helen, who can wars inspire. Id.

Two youths of royal blood, renowned in fight. The mastership of heaven in face and mind Id.

To give sufficient sweetness, a mastery in the language is required ; the poet must have a magazine of words, and have the art to manage his few vowels to the best advantage. Id.

Then comes some third party, that masters both plaintiff’ and defendant, and carries away the booty.

L’ Estrange. This is the case of those that will try masteries with their

superiors, and bite that which is too hard.

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Musters and teachers should not raise (lifticultics to their scholars ; but smooth their way, and help them forwards. Locke.

No care is taken to improve young men in their own language, tiiat they may thoroughly understand, and be masters of it. ‘.

Obstinacy and wilful neglects must be mastered, ev3n though it costs l>lovvs. Id. On F.ducalion.

2 S 2

The best sets are the heads got from the very tops of the root ; the next are tlie runners, which spread tVom the iiwsler roots. Mortimer’s Hushandrii.

Masterwort is raised of seeds, or runners from the roots. Id.

Excuse The pride of royal blood, that checks my soul : You know, alas ! I was not born to kneel ; ‘I’o sue for pity, and to own a.master. PhilUpt. Wisdom and virtue are the proper (jualifications in the master of a house. Giuirdi<in.

‘i’o the Jews join the Egyptians, the first masters of learning. South.

Let those consider this who look upon it as a piece of art, and the masterpiece of conversation, to deceive, and make a prey of a credulous and well-mean- ing honesty. ˆd. He touched me Even on the tenderest point, the master-string That makes most harmony or discord to me. 1 own the glorious subject fires my breast.

Howe. When I have thus made myself master of a hundred thousand

draclims, 1 shall naturally set myself on the foot of a prince, and will demand the grand vizir's daughter in marriage. Addison.

A man either discovers new beauties, or receives stronger impressions from the masterlxj strokes of a great author every time he peruses him. Id.

In tlie first ages, when the great souls, and masterpieces of human nature, were produced, men shineil by a lohle simplicity of behaviour. J<l.

lie that does not pretend to painting is not touched at the commendation of a muster in that profession.

Collier. Ye skilful masters of Machaon's race, ˆVho nature's mazy intricacies trace: 'I'ell linw your search has here eluded been, How oft amazed and ravished you have seen The conduct, prudence, and stupendous art, And master-strokes in each mechanic, part.

Bluckmore. That clearer strokes of maste.rlii design, Of wise contrivance, and of judgment shine, In all the parts of nature. Id.

(jood men I suppose to live in a state of mortification, under a perpetual conflict with their bodily appetites, and struggling to get the mastery over them.

Jitlerbiirif. The reformation of an habitual sinner is a work of time and patience; evil customs must be wHsˆcrerf and subdued by degrees. Calomy's Sermoiis.

Master lay with his bedchamber towards the south sun ; miss lodged in a garret, exposed to the north wind. Arbulhiint.

'I'he muster-sinew is a large sinew that surrounds the hough, and divides it from the bone by a hollow jilace, wiiere the wind-galls are usually seated, which is the larsrest and most visible sinew in a horse's body ; this oftentimes is relaxed or restrained.

Farrier's Dictionunj .

() thou, my friend, my genius, come along,

Tiiou master-of the poet, and the song. Pope.

Musick resembles poetry ; in each ˆ

Are nameless graces whicli no methods teacii, >

And which a master-hand alone can reach. 3

Id. AVhere there are little masters and misses in a house, they are impediments to the diversions of the servants ; the remedy is to bribe them, that they may not tell tales. Swift.

1 read a book i I think it very vuisteriy written.

Id. An' when they meet wi' sair disasters, Like loss o' health, or want o' musters,

Ye maist wad think, a wee touch langer. An' they maun starve o' cauld an hunger.

Bnims, As christians, we are the servants of Christ ; and the various duties whicli servants owe to their masters in any degree, those we owe to him in the highest degree.. Mason.

Master, inagister, vvas a title frequent among tlie Romans ; tliey had their master of the people, magister populi, who was the dictator. Master of tlie cavalry, magister equitum, who held the second post in an army after the dictator. Under the late emperors there were also masters of the infantry, magistri peditum. A master of the census, magister census, who liad nothing of the charge of a censor, or subcensor, as the name seems to intimate ; but was the same with the propositus frunientariorum.

Master at Arms, an officer appointed to teach the ofKcers and crew of a ship of war the exercise of small arms ; to confine and plant sentinels over the prisoners, and superintend whatever relates to them during tlieir confinement, lie is also to observe that the fire and lights are extinguished as soon as the evening gun is fired, except those which are permitted by proper authority, or under the inspection of sentinels. It is likewise-his duty to attend the gangway when any boats arrive aboard, and search them carefully, together with their rowers, tliat no spirituous liquors may be conveyed into the ship, unless by permission of the commanding officer. In these several duties he is assisted by proper attendants, called his corporals, who also relieve the sentinels and one another at certain periods.

Master, Grand, a title given to the chiefs of the orders of knighthood, &c. ; such as the grand master of Malta, of St. Lazarus, of the golden fleece, of the freemasons, &c. The late emperor Paul of llussia assumed the title of grand master of Malta, upon the French taking possession

of the island ; but did not live to enforce his claim to it.

jNIaster and Servant. The English law on this subject may be thus considered.

Sect. I. — Of the Difeerent KijfDS of Servants.

1. The first sort of servants, acknowledged by the laws of England, are menial servants; so called from being intra mosnia, or domestics. Alt single men between twelve years old and sixty, and married ones under thirty years of age, and all single women between twelve and forty, not having any visible livelihood, are compellable by two justices to go out to service in husbandry or certain specific trades, for the promotion of honest industry : and no master can put away his servant, or servant leave his master, after being so retained, either before or at the end of his term, without a quarter's warning; unless upon reasonable cause to bo allowed by a justice of the peace : but they may part by consent, or make a special bargain.

The contract between servants and their masters arises upon the hiring, and Blackstone observes, that, if the hiring be general without any particular time limited, the law construes it to lie

a hiring for a year, upon a principle of natural equity, that the servant shall serve and thp master maintain him throughout all th'! revolutions of the respective seasons, as well when there is work to be done as when there is not. But, according to the general custom which has of late years prevailed, it seems that, if no special contract be made, a menial or domestic servant is entitled only to a month's warning or a month's wages in (leu of It. But a servant for moral turpitude, as mcontnience, &c., may be turned away without notice. Where a servant is hired for a year and during that time falls sick, or is disabled, in his master s service, the servant cannot be turned away nor any part of his wages deducted. J\o stamp duty is requisite on a memorandum for the agreement or hire of any laborer, artificer manufacturer, or menial servant. '

2. Another species of servants are called apprentices (from apprendre, to learn), and are usually bound for a term of years by deed indented or indentures, to serve their masters, and be maintained and instructed by them. This is usually done to persons of trade, in order to learn their art and mystery; and sometimes very laro-e sums are given with them, as a premium for such their instructions : but it may

be done to husbandmen, nay to gentlemen and to others. And children of poor persons may be apprenticed out by the overseers, with consent of two justices, till twenty-one years of age, to such persons as are thought fitting; who are also compellable to tiike them ; and it is held, that gentlemen of fortune, and clergymen, are equally liable with others to sucli compulsion ; for which purpose our statutes have made the indentures obligatory, even though such parish apprentice be a minor' Apprentices to trades may be discharged on reasonable cause, either at the request of themselves and masters, or at the quarter sessions, or by one justice, with appeal to the sessions ; who may by the equity of the statute, if they think it reasonable, direct restitution of a rateable share of the money given with the apprentice, and parish apprentices may be discharged in the same man-ner by two justices. But if an apprentice, with vvhom less than £lO hath been given, runs away rom his master, he is compellable to serve out his time of absence, or make satisfaction for the same at any time within seven years after the expiration of his original contract. Indentures ot apprenticeship must be stamped. In all corporate towns they must also be enrolled, and in London this is done in the chamberlain's of-fice.

3. A third species of servants are laborers who are only hired by the day or the week, and do not live intra mcenia, as part of the family, concerning whom the statutes before cited have made many very good regulations; 1. Directing that all persons wiio have no visible effects nny be compelled to work. 2. Defining-how long they must continue at work in summer and winter. 3. Punishing such as leave or de-sert their work. 4. Empowering the justices at sessions, or the sheriff of the county, to'settle disputes.

4. There is yet a fourth species of servants if they may be so called, being rather in a superior.

a ministerial, capacity; such rs stewards, factors and baihffs: whom, however, the law considers as servants pro tempore, willi re-ard to such of their acts as affect their master's or employer's property. '■ •'

Sect. IL— Of the Rights and Power op THE Master.

1. A master may by law correct his apprentice for negligence or other misbehaviour so it DC done with moderation; though, if the master or master s wife beats any other servant of full age. It is good cause of departure. But if any servant, workman, or laborer, assaults his master or dame, he shall suffer one year's imprisonment and other open corporeal punishment not extending to life or limb.

According to the 4 Geo. IV. c. 34, if servants in liusbandry and certain artificers and laborers contract to serve and refuse to perform such service, or absent themselves before the contract has expired or be guilty of any misconduct, tliey are liable to be committed to the house of correction to hard labor for a period not exceeding three months, or in lieu thereof the whole or a proportional part of the wages may be deducted. ■'

Apprentices misbehaving or abscond i no-may be punished, under the authority of 4 Gel. IV' c. 34, sect. 3, by the abatement of the whole or part of their wages, or be committed to the house of correction for any time not exceeding three raontiis.

2. The master may maintain, that is, abet and assist his servant in any action at law against a stranger, whereas, in general, it is an ofl^ence against public justice to encourage surts and animosities by helping to bear expense of them, and IS called in law ' maintenance.' A master also may bring an action against any man for beating or maiming bis servant: but in such case he must assign, as a special reason for so doing, his own damage by the loss of his service; and this loss must be proved upon the trial. A servant likewise may justify an assault I n defence of his master: the master because he has an interest in his servant, not to be deprived of his service : the servant because it is part of Ins duty for which he receives his wages to stand by and defend his master. Also 'if any person do hire or retain a servant, being in the service of another, from which the servant de-parteth and goeth to serve the other, the iniured party may have an action for damages against both the new master and the servant or either of them : but, if the new master did not know that die servant was retained by another, no action lies; unless he afterwards refuse to restore him upon information and demand. The reason and foundation upon which all this doctrine is built seem to be the property that every man has in' the service of his domestics ; acquired by the contract of hiring, and purchased by giving"thcm wages. ^

Sect. III.— Or the Master's LiAim.nY for THE Acts of his Servant. I. The acts which a servant may do on behalf of Ins master seem all to].rocefd upon this prin-

ciple, that the master is answerable for them, if done by iiis command either expressly given or implied, nam qui facit per alium, facit per se. Therefore if the servant commit a trespass, by tlie command or encouragement of his master, the master shall be guilty of it : though the servant is not thereby excused, for he is only to obey his master in matters that are honest and lawful If an innkeeper's servants rob his guests the master is bound to restitution ; for as there is a confidence reposed in iiim, that he will take care to provide honest servants, his negligence is a kind of implied consent to the robbery, nam qui non j)rohibet, cum prohibere possit, jubet. So likewise if the drawer at a tavern sells a man bad wine, whereby his healtli is injured, he may bring an action against the master ; for although the master did not expressly order the servant to sell it to that person in particular, yet his permitting him to draw and sell it at all is impliedly a general command.

2. In the same manner, whatever a servant is permitted to do, in the usual course of his business, is equivalent to a general command. If I pay money to a banker's servant, the banker is answerable for it. If I pay it to a clergyman's or a physician's servant, whose business it is not to receive money for his master, and he embezzles it, I must pay it over again. If a steward lets a lease of a farm, without the owner's knowledge, the ownep must stand to the bargain ; for this is the steward's business. A wife, a friend, a relation that use to transact business for a man, are quoad hoc his servants, and the principal must answer for their conduct ; for the law implies that they act under a general command ; and without such a doctrine as this no mutual intercourse between man and man could subsist with any tolerable convenience. If I usually deal with a tradesman by myself, or constantly pay him ready money, I am not answerable for what my servant takes up upon trust ; for here is no implied order to the

tradesman to trust my servant : but if I usually send him upon trust, or sometimes on trust and sometimes with ready money, I am answerable for all betakes up; for the tradesman cannot possibly distinguish when he comes by my order, and when upon his own authority.

3. If a servant by his negligence does any damage to a stranger, the master shall answer for his neglect. If a smith's servant lames a horse, while he. is shoeing him, an action lies against tlie master, and not against the servant. But in these cases the damage must be done while he is actually employed in the master's service: otherwise the servant shall answer for his own misbehaviour. Upon this principle by the common law if a servant kept his master's fire negligently, so that his neighbour's house was burned down, thereby an action lay against the master ; because this negligence liappened in his service : otherwise, if the servant, going along the street with a torch, by neLcligence sets fire to a house ; for there he is not in his master's immediate service : and must himself answer the damage personally. But now the common law is, in the former case, altered by stat. 6 Ann. c. 3, which ordains that no action shall be maintained against any in whose house or chamber any fire shall accidentally begin; for their own loss is sufficient punishment for their own or their servants' carelessness. But if such fire happens through negligence of any servant (whose loss is commonly very little) such servant shall forfeit £lOO to be distributed among the sufferers ; and in default of payment shall be committed to some workhouse, and there kept to hard labor for eighteen months. A master is lastly chargeable if any of his family layeth or casteth any thing out of his house into the street or common highway, to the damage of any individual, or the common nuisance of his majesty's liege people : for the master hath the superintendance and charge of all his household.

In all die cases here put the master may be frequently a loser by the trust reposed in his servant, but never can be a gainer ; he may frequently be answerable for his servants' misbehaviour, but never can shelter himself from punishment by laying the blame on his agent. The reason of this is still uniform and the same; that the wrong done by the servant is looked upon in law as the wrong of the master himself; and it is a standing maxim, that no man shall be allowed to make any advantage of his own wrong.

4. It has been held that a master is not liable on an implied assumpsit to pay for medical attendance on a servant who has met with an accident in his service : 3 Bos. and Pul. 247.

Sect. IV. — Of the Rights and Remedies OF THE Servant.

1. By hiring and service for a year, or apprenticeship under indentures, a person gains a settlement in that parish, wherein he last served forty days.

2. Persons serving seven years, as apprentices to any trade, have an exclusive right to exercise that trade in any part of England. This law, with regard to the exclusive part of it, has by turns been looked upon as a hard law, or as a beneficial one, according to the prevailing humor of the times, which has occasioned a great variety of resolutions in the courts of law concerning it ; and attempts have been frequently made for its repeal, though hitherto without success. At common law every man might use what trade he pleased ; but this statute restrains that liberty to such as have served as apprentices, the adversaries to which provision say, that all restrictions (which tend to introduce monopolies), are pernicious to trade. The advocates for it alledge, that unskilfulness in trades is equally detrimental to the public, as monopolies. This reason indeed only extends to such trades, in tlie exercise whereof skill is required ; but another of their arguments goes much further, *viz.* that apprenticeships are useful to the commonwealth, by employing of youth, and teaching them to be early industrious ; but that no one would be induced to undergo a seven years' servitude, if others, though equally skilful, were allowed the same advantages, without having undergone the same discipline; and in this there seems to be much reason. However the resolutions of the courts

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have in geiierul rather cuntineil lliaii extended the restriction. No trades are held to be within the statutes, but such as were in being at the making of it: for trading in a country village apprentices are not requisite, and following the trade seven years without any effectual prosecution (either as a master or a servant) is sufficient, without an actual apprenticeship.

3. By service all servants and laborers, except apprentices, become entitled to wages according to their agreement, if menial servants ; or, if laborers or servants in husbandry, according to the provisions in the statutes for regulation of such servants.

By the 1 Geo. IV., cap. 93, the custom is prohibited, which prevails in some places, of compelling workmen to receive their wages in provisions in lieu of money. And persons so offending are subject to a penalty of £20, besides other forfeitures by the previous law, and costs. By the 5 Geo. IV., c. 96, there are several salutary regulations for settling disputes, which arise respecting wages, the hours of labor, the finishing of work, the finding implements, and the compensation to be given for any new or altered manufacture. These disputes, if the parties cannot agree to submit them to a magistrate, are decided by arbitrators chosen according to the provisions of the act, and who have power to examine witnesses on oath, and magistrates may compel the attendance of witnesses, and the award may be enforced by distress and sale of goods.

4. In case of the master's bankruptcy, the servant's wages, or those of a clerk, are usually directed by the commissioners to be paid to the extent (if due) of six months' wages. And the clerk or servant may prove for the residue, and receive a dividend along with the other creditors. A commission of bankruptcy issued against the masterˆischarges the apprentice, and a proportion of the premium, under the provisions of the 6 Geo. IV. c. 16, must be repaid by the assignees according to the term remaining un-expired.

5. Apprentices are not liable to impressment in the navy. And, if they enlist into the army, they are liable to imprisonment for two years and hard labor.

6. As to the character of a servant, it appears that a master cannot be compelled to give a servant a character ; but if he give one it must be

true.

No action can be maintained if the character be given to the best of the master's knowledge, and without malice.

Giving a false character of a servant, or a false account of his service, renders the party offending liable to a penalty of £20, and 10s. costs. And a servant bringing a false character, or altering a certificate of character, is subject to tiie same forfeiture.

Master of Aˆ.ts, the first degree taken up in foreign universities, as well as in those of Scotland ; but the second in those of Cambridge and Oxford; candidates not being admitted to it till they have studied in the university seven years.

Master or a Snir, an officer to whom is

committed the direction of a merchant vessel, who commands it in chief, and is charged with the merchandises aboard. In the Mediterranean the master is frequently called patron, and, in long voyages, captain. Tiie proprietor of the vessel appoints the master; and the master provides the equipage, hires the pilots, sailors, &c. The master is obliged to keep a register of the seamen and officers, the terms of their contract, and the receipts and payments.

Master of a Ship of War is an officer appointed, by the commissioners of the navy, to take charge of navigating a ship from port to port under the direction of the captain. The management and disposition of the sails, the working of a ship into her station in the order of battle, and the direction of her movements in the time of action, and in other circumstances of danger, are 'also more particularly under his inspection. It is likewise his duty to examine the provisions, and accordingly to admit none into the ship but such as are sound, sweet, and wholesome. He is moreover charged with the stowage ; and for the performance of these services he is allowed several assistants, who are properly termed mates and quarter-masters.

Master of the Ceremonies, an officer instituted by king James I. for the more solemn and honorable reception of ambassadors and strangers of quality, whom he introduces into the presence.

Master of the Horse is reckoned the third great officer of the court, and is an office of great honor and antiquity, and always (when not put in commission) filled by noblemen of the highest rank and

abilities. He has the management and disposal of all the king's stables and bred horses. He has authority over the equerries and pages, coachmen, footmen, grooms, riders of the great horse, farriers, and smiths. He appoints all the other tradesmen who work for the king's stables; and, by his warrant to tlie avenor, makes them give an oath to be true and faithful. In short, he is entrusted with all the lands and revenues appropriated for the king's breed of horses, the expenses of the stable, and of the coaches, litters, &c. He alone has the privilege of making use of any of the king's horses, pages, footmen, &:c. ; and at any solemn cavalcade he rides next the king, and leads a horse of state.

Master of the Mimtia, magister militiac, was an officer in the lower empire, created, as it is said, by Dioclesian, who had the inspection and government of all tlie forces, with power to punish, &c., somewhat like a constable of France. At first there were two of these officers instituted, tlie one for the infantry, and the otlier for the cavalry ; but the two were united into one under Constantine. Afterwards, as their power was increased, so was their number also; and there was one appointed for the court, another for Thrace, another for the East, and another for lilyria. They were afterwards called comites, counts, and clarissimi. Their power was only a branch of that of the praifectus pra;torii, who by ttiat means became a civil officer.

Master of the Mint was anciently the title of him who is now called Warden of the Mint; whose office is to receive the silver and bullion

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which comes to the mint to be coined, and to talce care thereof.

Master of the Rolls, a patent officer for life, wl-10 has the custody of the rolls and patents which pass the great seal, and of the records of the chancery. In the absence of the lord chancellor, or keeper, he also sits as judge in the court of chancery ; and is by Sir Edward Coke called his assistant.- He hears causes in the rolls chapel, and makes orders and decrees. He is also the first of the masters of chancery, and has their assistance at the rolls : but all hearings before him are appealable to the lord chancellor. He has also his writ of summons to parliament, and sils next to the lord chief justice of England on the second woolpack. He has the keeping of the parliament rolls, and has the rolls-house for his habitation ; as also the custody of all charters, patents, commissions, deeds, and recognisances, which being madeof rolls of parchment gave rise to the name. Anciently he was called clerk of the rolls. Concerning the authority of the master of the rolls to hear and determine causes, and his general power in the court of chancery, there were divers questions and disputes very warmly agitated; to quiet which it was declared, by stat. 3 Geo. II. c. 30, that all orders and decrees by him made, except such as by the course of the court were appropriated to the great seal alone, should be deemed valid; subject nevertheless to be discharged or altered by the lord chancellor, and so as they shall not be inrolled till the same are signed by his lordship. In his gift are the six clerks in chancery, the examiners, three clerks of the petty bag, and the six clerks of the rolls-chapel where the rolls are kept. The master of the rolls is always of the privy council.

Master of the Temple. The founder of the order of the templars, and all his successors, were called magni templi magistri; and, ever since the dissolution of the order, the clerical guide and director of the house is called by that name. There were also several other officers under this denomination ; as, master of the wardrobe, with a salary of £2000 a-year ; mas-ter of the harriers, with £2000 a-year ; master of the slag-hounds, with £800 a-year ; master of the jewel office, &:c., all now abolished.

Masters of Chancery are usually chosen out of the barristers of the common law ; and sit in chancery, or at the rolls, as assistants to tiie lord chancellor and the master of the rolls. All these, so late as the

reign of queen Ehzabeth, were commonly doctors of the civil law. To them are also committed interlocutory reports, examination of bills in chancery, stating of accounts, taxing costs, &;c., and sometimes, by way of reference, they are empowered to make a final determination of causes. They have time out of mind had the honor to sit in the house of lords, though tliey have neither writs nor patent to empower them ; but tliey are received as assistants to the lord chancellor and the master of the rolls. They had anciently the care of inspectinc; all writs of summons, which is now performed by the clerk of the petty bag. When any message is sent from the lords to tiie commons it is carried by the masters of chancery. Before them also affidavits are made, and deeds and recognisances acknowledged. Besides these, who may be called masters of cliancery ordinary, being twelve in number, of whom the master of the rolls is reputed the chief, there are also.

Masters of Cuancery Extraordinary, appointed to act in the several counties of England beyond ten miles distance from London, by taking affidavits, recognisances, &c., for the ease of the suitors of the court.

Master Load, in mining, a term used to express the larger vein of a metal in places where there are several veins in the same hill. Thus it often happens that there are seven, sometimes five, but more usually three veins or loads, parallel to each other, in the same hill. Of these the middle vein is always much the largest. This is called the master load ; and the others, which lie three, two, or one, on each side of this, are called the concomitants of the master load.

MASTICA'TION, n. s. } Latin masticatio ;

Mas'ticatory. S Or. /laˆiˆao). Chewing : a medicine to be chewed.

Remember masticutorks for the mouth.

Saccm In birds there is no mastication, or comminution of the meat in the mouth ; but in such as are not carnivorous it is immediately swallowed into the crop or craw, and thence transferred into the gizzard.

Z?ai/ on the Creation. Mastication is a necessary preparation of solid aliment, without which there can be no good digestion.

Arbuthnot. Salivation and masticatories evacuate considerably ; salivation many pints of phlegm in a day, and very much by chewing tobacco. Flayer on Humors.

INlASTiCATroN is the act of agitating the solid parts of our food

between the teeth, by the mo-tion of the jaws, the tongue, and the lips, whereby it is broken into small pieces, impregnated with saliva, and so fitted for deglutition and a more easy digestion. See Anatomy.

IMASTICH, n.s. Fr. mastic; Ital. maxtko ; Lat. mastiche. A kind of gum or cement. See below.

As for the small particles of brick and stone, the least moistness would join them together, and turn them into a kind of mastich, which those insects could not divide. Addison.

We may apply intercipients upon the temples of mastich ; frontals may also be applied. Wiseman.

Mastich is a kind of resin exuding from the lentiscus tree, and brought from Chio in small yellowish transparent grains, of an agreeable smell, especially when heated or set on fire. See risTACUiA. This resin is recommended in coughs, dysenteries, weakness of the stomach, and in general in all debilities, and laxity of the fibres. Geoffroy directs an aqueous decoction of it to be used for these purposes : but water extracts little or nothing from this resin, llec-tified spirit almost entirely dissolves it, and the solution is very warm and pungent. Mastich is to be chosen in drops, clear, well scented, and brittle.

Mastich is also a kind of cement, composed of the above gum and several other ingredients, formed into cakes, for the use of the lapidaries,

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to fill up cracks in stones, &c., but on no account to be used for any medicinal purposes.

MAS'TICOT, n. s. Lat. maruni. An oxyde of lead. See Massicot.

Grind your masticot with saffron in gum water.

Peacham. Masticot is very light because it is a very clear yellow, and very near to white.

Dryden's Dufresnoy. Masticot, or yellow lead, is the calx or ashes of lead, gently calcined, by which it is changed to a yellow or lighter or deeper tint, according to the degree of calcination. Masticot is sometimes used by painters, and it serves medicinally as a drier in the composition of ointments or plasters. The masticot, which is used by the Dutch as the ground of their glazing, is prepared by calcining a mixture of 1 cwt. of clean sand, 44lbs. of soda, sold under the name of barilla, and 30lbs. of pearl ashes.

MAS'TIFF, n. s. \ Fr. mestif, originally of Mas'tives, plu. J Goth, incest, greatness ; and t(eve, a dog. A large species of dog.

As savage bull, whom two fierce mastives bait, When rancour doth witli rage him once engore,

Forgets with wary ward them to await, But with his dreadful horns them drives afore.

Spenser. When rank Thersites opes his mastifja.ws, We shall hear musick, wit, and oracle.

SImkspeare. Horror of sin, like a sleeping masliff, lies at our door ; when it awakes it will fly on our throat.

Bp. Hall. When we knock at a farmer's door, the first answer shall be his vigilant masti(j'.

Move's Antidote against Atheism. Soon as Ulysses near the enclosure drew. With open mouths the furious niastives flew.

Pope. Let the mastiffs amuse themselves about a sheep's skin stuflfed with hay, provided it will keep them from worrying the flock. .S'ltj/i.

MAST'LTN, n. s. Fr. tnestcr, to mingle ; or j)erhaps corrupted from miscellane. Mixed corn ; as wheat and rye.

The toiher for one lofe hath twaine Of mastlin, of rie and of wheat.

Txisser's Flusbandry. MASUAII, a principal sea-port of Abyssinia, situated on an island, separated from the continent by a narrow cliannel. Masuah Ray lias the town of Arkekovv (Adulis) on its southern shore, before whicli is anchorage sheltered from all winds except those between east and north. The town of Masuah has some fortifications, the houses are chiefly built of reeds lined with mats. This is the principal trading place of Abyssinia, and provisions are abundant l)ut dear : it has no water but what is preserved in cisterns from the rains, and, this not being sufficient, boats are constantly bringing this article from Arkekow.

The island itself is only about three-quarters of a mile in length, and about half that breadth, -djout one-third of wliich is occujiictd l)y houses. There are however about twenty of stone taken from the sea, and exhibiting the remains of shell-lish imbedded in it. Masuah in early times liossessed a share of the trade of India ; but, after

it fell into the hands of the Turks, this fell to de-cay. Its situation, however, lenders it the only mart for the produce of Abyssinia. Its intercourse is chiefly with Mocha and Jidda: the imports consisting of cotton wool, spices, piece goods, lead, iron, copper, tin, and European manufactures, estimated at 400,000 dollars per annum, exclusive of the cotton wool. The exports are rhinoceros' horns, gold, ivory, honey, slaves, and wax. These articles are brought from the interior by a caravan, which arrives in February. The government demands ten per cent., ad valorem, on all im])orts and exports.

MASULIPATAM, or Mlciilipatam (Fish-town), a considerable sea-port of Hindostan, in the district of CondapiUy, and the Northern Circars. It is situated in a fertile territory, and inhabited by artisans, who have long caused it to be celebrated for the fineness and brilliant color of its cotton cloths, or chintzes. It carries on a considerable traffic with China, Pegu, Bengal, Persia, and Arabia. The harbour is capable of admitting vessels of 300 tons, and is the best port on the coast of Coromandel. An oblong fort (800 yards long by 600 broad) is situated near the sea and at the mouth of a river ; the adjoining grounds may be inundated at pleasure, and this in fact constitutes its chief defence. The Black Town, a mile and a half to the north-west of the forts, may

also be inundated. Ma- .sulipatam was conquered successively by the Maliometans and the nizam of the Deccan, who made it over with the province to the French in 1751, when tliey much improved the town and fortifications. It was, however, taken by the British in April 1759, with whom it has remained. It is the residence of a judge, collector, ike, of the district. Long. 81'^ 10' E., lat. le"* 10' N. MAT, n. s. & v.a. } Saxon meatte ; Dan. Mat'ting, 7J.S. ^ and Teut. viattc ; Wei. mutt; Ital. inatta ; Lat. rnutta. A texture of sedge, flags, cord, or rushes : to cover with mats ; to weave like matting; involve: matting is synonymous with mat, n. s.

I on a fountain light, Whose brim with pinks was platted ; The banks with daffadiliies dight. With grass like sleave winmaHed. Draiiton. The women and children in the west of Cornwall make mals of a small and fine kind of bents there growing, which serve to cover floors and walls.

Carew's Surveti of Cornwall, Sometimes beneath an ancient oak, Or on the viatled grass he lies ;

No god of sk'C]) he did invoke: The stream tluit o'er the pebbles flies, Witli gentle slumber crowns ids eyes. Drydcn. He looked a lion with a gloomy stare. And o'er liis eje-brows hung his matted hair. Id. Keep the doors and windows of your conservatories well nuitled and guarded from the piercing air.

i.veii/ii's Kidendar. 'J'lie spleen conslstctii of muscular fibres, all matted, as in the skin, but in more open work.

Grew's Cosniuloi/ia . In tlie worst inn's worst room, with mat hall' hung. The iloors of plaisler, and the walls of dung.

Vape.

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Drawn from his refuge in some lonely elm, That age or injury has hollowed deep, Where, on liis bed of wool and vuitted leaves, He has outslupt the winter, ventures forth To frisk awliile, and bask in the warm sun, The squirrel, flippant, pert, and full of play.

Cowper. MATADORE', n. s. Span, matador, a murderer. One of tlie tliree principal cards in om-bre and quadrille, which are always the two black aces, the deuce in spades and clubs, and the seventh in hearts and clubs.

Now move to war her sable matadores, In show like leaders of the swarthy I\Ioors.

Pope. MATACHIN', n. s. Fr. matachin. An old dance.

Who ever saw a matachin dance to imitate fighting : this was a fight that did imitate the matachin ; for they being but tiiree that fought, every one had two adversaries striking him, who struck the third.

Sidney. MATAMBA, a country in the interior of South-western Africa, little known except by the reports of Portuguese missionaries. It is represented as mountainous, and as giving rise to the Barbela, or principal branch of the Zaire or Congo; but this is not confirmed. It is said to be about 150 miles square, partly occupied by the Giagas, a people the terror of this part of Africa. Umbe Upper and Lower, Ganghelli Upper and Lower, and Bondo, are mentioned as its provinces.

MATAIIO, a city of Spain, in Catalonia, twenty miles E. N. E. of Barcelona, near the sea. It is divided into the Old and New Town, the former being of great antiquity and preserving the walls and gates of a remote age. It appears to have been a place of note under the Romans, and is supposed to be the Illuro of Ptolemy and Pomponius Mela. The New Town lies between the Old Town and the sea, and has its streets wide, straight, and regular. Many of the houses are painted in fresco. Mataro is one of the few towns in Spain that are on the increase : its population, in 1770 only 10,000, now amounts, it is said, to 25,000. The inhabitants carry on manufactures of laces, calico, silk and cotton stockings, silk stuffs and velvets, ribands and silk twist, canvas and leather. Bay salt is collected along the shore ; and the neighbourhood affords both wine and brandy. A small stream, called La Riera, runs

through the Old Town, and the supply of water is good. Ma-taro contains an hospital, a parish church, and five chapels belonging to monasteries and convents. Long. 2° 28′ 24″ E., lat. 41° 32′ 26″ N. MATAV'AI Bay, a bay on the north side of the island of Otaheite, opening to the north-west. The entrance is between a reef and sunken rock; but ships when in are well sheltered against all winds, except those from the west and north-west. Long. 1 49° 36' W., lat. 1 7° 29' S. Matavai Point, a cape on the island of Otaheite, in long. 210° 22' E., lat. 17° 29' S.

MATCH, n.s. &v. n.-\ Saxon maca ; Goth.

RIatcii'

Matci. ..^.,..,

Match'lessli, flrfy. ia near relative). A

Matcii'makkk, v. s. J pair ; one thing or per-

- — J,- — — , — . .. _„ „.

'ClI, n.s. & V. n."N Saxon maca ; Goth. z\i \v,v.z, adj. f 7i)agds]i,i)2ake ; Danish 3h'less, y mage (the Goth, mag is

son that equals another ; hence one to be married, and a marriage : also a contest, or a person considered as equal to another in conflict : to match is to be equal to ; show or oppose as an equal ; suit ; proportion ; marry or give in marriage ; be married ; suit : matchable is suitable ; equal ; corresponding : matchless, unequalled : a matchmaker, one who contrives marriages; often a person of equal respectability witii the maker of the following article.

A thing that may luckily fall out to him that hath the blessing to match with some heroical-minded lady. Sidney.

Ye, whose high worths surpassing paragon. Could not on earth have found one fit for mate,

Ne but in heaven matchable to none. Why did you stoop unto so lowly stated Spenser. Great king, I would not from your love make such a stray, To match ye where I hate.

Shakspeare. King Lear. Shall we play the wantons with our foes, And make some pretty match with shedding tears.

Shakspeare, The match Were rich and honourable ; besides, the gentleman Is full of virtue, bounty, worth, and qualities, Beseeming such a wife as your fair daughter.

Shakspeare. No settled senses of the world can match The pleasure of that madness. Id.

O thou, good Kent, how shall I live and work To rnatch thy goodness ? life will be too short, And every measure fail rae. Id. King Lear.

1 hold it a sin to match in my kindred.

Shakspeare. She inherited a fair fortune of her own, and was very rich in a personal estate, and was looked upon as the richest nuUch of the West. Clarendon.

Thou dost protest thy love, and wouldest it show By matching her, as she would match her foe.

Donne. Unequal matches are seldom prosperous.

Bp. Hall. Them willingly they would have still retained, And matched unto the prince. Daniel's Civil War. Eter.-ial might To match with their inventions they presumed So easy, and of his thunder made a scorn.

Milton. You came to him to know If you should carry me, or no ; And would have hired liim and his imps To be your matchmakers and pimps, llrtdibras. Let poets match their subject to their strength, And often try what weight they can support.

Itoscommon. This happy day two lights are seen, A glorious saint, a matchless queen. ffaller. Love doth seldom suffer itself to be confined by otiier matches than those of its own making. Boyle. Let tygers match with hinds, and wolves with sheep, And every creature couple with his foe. Dryden. All creatures else are much unworthy thee. They mxitched, and thou alone art left for me.

Id. Much less, in arms, oppose thy matchless force, When thy sharp spurs shall urge thy foaming horse.

The goat was mine, by singing fairly won. A solemn match was made ; he lost the prize.

hi.

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With him she strove to join Lavlnia's hand. But dire portents the purposed match withstand.

Id. Tne shepherd's kalendar of Spenser is not to be matched in any modern language. Id.

The old man has met with his match.

Spectator. A senator of Rome, while Rome survived, Would n.it have matched his daughter with a king.

Addison. Governnent mitigates the inequality of power, and makes an innocent man, though of the lowest rank, a iJiatch for the mightiest of his fellow-subjects.

Id. When a man thinks himself matched to one who should be a comfort to him, instead thereof he finds in his bosom a beast. South.

No history or antiquity can match his policies and his conduct. Id.

Rline have been still Matched with my birth ; a younger brother's hopes.

Rowe. Those at land that are not matchable with any upon ovr shores, are of those very kinds which are found no where but in the deepest parts of the sea.

Woodward's Natural History. The natural shame that attends vice, makes them zealous to encourage themselves by numbers, and form a party against religion : it is with pride they survey their increasing strength, and begin to think themselves a match for virtue. Rogers.

Employ their wit and humour in chusing and matching of patterns and colours. Swift.

Match, n.s. } Fr. ineche ; lii. micchia ;

Match'maker. S Gr. hvktiq. Dried fungus ; a splinter or cord used to set fire to a candle or gun.

Try them in several bottle matches, and see which of them last longest

without stench. Bacon.

lie made use of trees as matches to set Druina a fire. Hoioel.

Being willing to try something that would not cherish much fire at once, and would keep fire much longer than a coal, we took a piece of match, such as soldiers use. Buyle.

A Match is a kind of rope slightly twisted, and prepared to retain fire for the uses of artillery, mines, fire-works, &c. It is made of hempen tow, spun on the wheel like cord, but very slack ; and is composed of three twists, which are afterwards again covered with tow, so that the twists do not appear ; lastly, it is boiled in the lees of old wines, saltpetre. Sec. This, when once lighted at the end, burns on gradually and regularly, without ever going out till the whole be consumed : the hardest and driest match is generally the best.

MATCHING, in the wine trade, the art of preparing vessels to preserve wines and other liquors, without their growing sour or vapid. The method is as follows: — Melt brimstone in an iron ladle, and, when thoroughly melted, dip uito it sli])s of coarse linen cloth; take these out and let them cool: this the wine-coopers call a match. Take one of these matches, set one end of it on fire, and])ut it into the bunghole of a cask ; stop it loosely, and thus suffer the match to burn nearly out; then drive in the bung tight and set the cask aside for an hour or two. At tlie end of this time examine the cask, and you v\iil find that the sulphur has communicated a

violent, punger.t, and suflbcating scent to the cask, witii a considerable degree of acidity. The cask may after tiiis be filled with a small wine which has scarcely done its fermentation ; and, bunging it down tight, it will keep good, and will soon clarify : this is a common and very useful method ; for many poor wines could scarcely be kept potable even a few months without it.

MATE, V. a. Fr. mat, matter ; Span, male, matur ; Pers. wiaf (confounded). To confound, astonish, subdue, crush : obsolete.

My sense she's mated, and amazed my sight.

Shakspearc. That is good deceit Which mates him first, that first intends deceit. Id.

Why this is strange ; go call the abbess hither ; I think you are all mated, or stark mad. Id.

The great effects that may come of industry and perseverance who knoweth not \ For audacity doth almost bind and mate the weaker sort of minds.

Bacon's Natural History.

Mate, n. s. & v. a. Sax. maca ; Belg. tnaet ; Isl. mat. See Match. A companion, husband, or wife: in naval afliairs a second in subordination, as the master's, surgeon's mate, &c. : to mate, is to match ; marry ; equal ; and hence to oppose.

I that am frail flesh and earthly wight. Unworthy match for such immortal mate. Myself well wote, and mine unequal fate.

Faerie Queene. Ensample make of him your hapless joy, And of myself now mated as you see,

Whose prouder vaunt, that proud avenging bey Did soon pluck down, and curb my liberty. Id. Go, base intruder ! over-weening slave ! Bestow thy fawning smiles on equal mates.

Shakspeare. I i' the way of loyalty and truth. Dare mate a sounder man than Surrey can be, And all that love his follies. Id. Henry VI II.

The hind that would be mated by the lion, Must die for love.

Id. AlVs Well that Ends Well. You knew me once no mate For you : there sitting where you durst not soar.

Milton. Part single, or with mate, firaze the sea-weed their pasture, and through groves Of coral stray. Id. Paradise Losf.

What vengeance on the passing fleet she poured, Tlic master frighted, and the mates devoured.

Koscommon . liCave thy bride alone : Go leave her with her maiden mates to play At sports more harmless, till the break of day.

Dryden. Some from seeds inclosed on earth arise, For thus the mastful chesnut mat:s the skies. <. Plmy tells us, that elephants know no copulation with any other than their own proper inate.

AylijJ'e. Tier faithful mate will share her toil, Or wi' his song her cares beguile. Burns.

Mate of a Mehchakt Ship, the oflˆicer who oomrnands in the absence of the ni;ister thereof, and shares the duty with him at sea; being (•! inrgod with every thing that regards tlie intcr-i!;il management of t.ic ship, the directing her course, and the government of her creˆˆ.

Mate of a Ship of Waii, an officer under the direction of the captain, by whose choice he is generally appointed, to assist liiin in the several branches of his dnty. Accordingly he must be particularly attentive to the navigation in his watcli, &c., to keep the log regularly, and examine the line and glasses by whicli the ship's course is measured, and to adjust the sails to tlie wind in the fore part of tlie ship. He must pay a diligent attention to the cables, and see that they are well coiled and kept clean when laid in the tier, and sufficiently served when employed to ride the ship. He must also super-

intend and assist the stowage of the hold, taking special, care that all the ballast and provisions are properly stowed therein. The number of males allowed to ships of war and merchantmen is always in proportion to the size of the vessel. Thus a first-rate man of war and an East Indiaman have each six mates ; a frigate of ten guns, and a small merchant-ship, only one each; and the intermediate ships have a greater or smaller number, according to their sizes or to the services on which they are employed.

MATER DuiiA, Mater Pia ; two membranes surrounding the brain. See Anatomy, Index.

MATERIA MlEDICA.

MATERIA Medica is a combined term which constitutes in a manner its own definition. No one who hears it announced can for a moment be at a loss in respect of its signification. In regard, however, to what the term should properly comprehend, opinion varies, some confining the materia medica to the designation of those substances which act therapeutically, or, in other words, which remedy or cure disease ; while others extend it so as to embrace every material which assists in the support of life or the nourishment of man. Then again, the term is made to apply to compounds by some, while others restrict its signification to the mere articles of medicine as presented by nature, or at least as em])loyed without being made to undergo the changes operated upon them by chemical process and combination.

In tlie present article we shall adopt tlie more limited signification of materia medica, since we have treated of thealimentaria (see Aliment) in another part of the work — and because we think that, when made the subjects of formative and chemical and combined change, medicines ought then to be considered under the word Phaumacy. In tliis separation, indeed, we are guidedby still other motives ; for we shall by adopting it prevent an undue and disproportionate length in this article, devoted to the consideration of healing powers, and, by deferring the account of pharmacy till the last moment of alphabetical permission, we shall be better enabled to carry up its alterations and improvements (for it is at this time undergoing them rapidly) to the latest date.

A history of materia medica would in some sort be a history of

medicine itself; for substances employed in the cure of diseases have been in a measure regulated by the varying opinions of the times in respect to their mode of operating. Thus although the materia medica of Hippocrates was comparatively simple, and comprising but a few articles, it was still more simplified by his follower Erasistratus, and we have had an example in ourown times of an attem]n so to reduce and simplify the agency of medicine, that the])ractitioner of this school would lessen the list of materials employed in medicine almost to nihility. Our readers will understand that we ailude to

the system of Dr. John Brown, which, were it to the letter correct, would do away altogether the distinction of medicines as to their virtues and influences, and make the materia medica a mere compilation of natural history.

To the natural historian indeed, after all, we have been more indebted for the progress of materia medica knowledge than to the medical theorists, since the former from the commencement of time has pursued the plan of observation and research, and has been less trannnelled in his observatiun-s on properties by the reigning doctrines of the times. It must, however, be admitted that, wlien to the description of plants the ancient naturalists added their medical virtues, they often did so in the spirit of extravagance and hypothesis, which very materially lessened the value of their labors.

The materia medica has further been much modified by place and circumstance, that is, accordingly as tlie therapeia of medicine was more cultivated in one than another part of the world, so were more or less copious lists of medicinal articles added to those already in use. Tims, when tlie study of medicine was principally confined to Arabia, the attention of its professors was greatly directed to additions of medicines, which their climate and their connexion with tlie nations still further east had introduced to their notice. Indeed it was in this part of the world that the first notion was given of that extravagant proposition which assumed the possibility of compounding medicinals into such a mixture as to constitute a universal medicine, or elixir vitaj. See Alcuemv and Cuemistry.

As thus the progress of the science has been influenced by the circumstances of time, place, and opinion; so has the method in which the naturals composing it should be arranged and classified been the subject of controversy : some maintaining the propriety of disposing medicinal articles according to their essential |)roperties, others

according to their therapeutic virtues ; others again have pursued the principle of natural or botanical analogies, while an alphabetical arranuement has been adopted by others under the conviction that all classification ex-cept a literal one, causes not only uncertainty but rejietition. Suppose, for example, astringeucy

to be taken as one of the headsjunderwliicli medicinal substances should be arranged, the very term itself involves an hypothesis, some contending that astringency is operated in one way, and some in another — then the plant or substance, in question, besides being possessed of an astringent property, may be endowed with other virtues, as of a tonic (if the latter principle of agency be admitted), and of course, under the word Tonic, it ought to be inserted again; so that, by the very attempt to simplify and concentrate, we should be led into complication, and diffuseness, and repetition : and it must be observed that in the present day, we are not so ready to admit of virtues and of principles of action, as was formerly the case ; so that artificial arrangements now, to satisfy, must approach to demonstrative evidence, as nearly as it is in the nature of physical investigation so to do ; otherwise they will be rejected as the schemes of fancy, rather than admitted as the oracles of truth.

It was under these impressions that the mo-dern compilers of dispensatories adopted the plan of alphabetical arrangement, as being, if not so scientific, certainly less liable to objections of the nature above adduced than any other ; and the three writers to whose labors we shall be most indebted in the compilation of the present article, Thomson, Duncan, and Paris, have pursued this method. As Encyclopedists, however, we should not 1 e doing justice to the subject without presenting in outline, at least, the principal schemes which have been proposed on other principles ; and we shall therefore in the first place give our readers a general view of those which have been the most entitled to consideration ; and at the end of the article we shall mention those writers whom the curious may consult as authorities on the science about which we are now to treat.

We select the schemes of CuUen, Parr, Darwin, and John Murray, for presentation in outline.

The first of these authors, Dr. Cullen, divides the materia medica primarily into nutrients, and medicines. Then he assumes that medicinal substances, properly so called, act eidier on the solids or the fluids ; and, with respect to those whose agency is on the solids, he proposes a subdivision into those which influence the solids as dead matter, or the simple solid as it is called in opposition to the vital. Medicines, the action of which is on the simple solid, are astringents, tonics, emollients, and corrosives ; those which act on the living solid are stumulants and sedatives, including narcotics, refrigerants, and antispasmodics.

In the second general class of medicines, or those which actupon the fluids, are included those wliich either produce alteration or evacuation; the medicines whicli produce change comprise attenuants, inspissants (mechanical or material change), and demulcents, antacids, antalkalines, and antiseptics (the changes in these last instances being rather chemical than merely formative).

Then the medicines which produce evacuation are, the errhines, sialagogues, expectorants,

emetics, cathartics, diuretics, diaphoretics, and emmenagogues.

It has, however, been remarked, by a modem writer, that Dr. Cullen's materia medica is in some sort inconsistent with his theory of medicine, since the fluids in tliat theory are supposed always to be acted upon in subordination to the solids, and not primarily. The reader, by turning to our article on Medicine, will see tiiatthis indeed constitutes one of tlie main peculiarities of Cullen's system, that it assumes the solid fibre to be the regulator of all changes in tlie body (see Medicine). Cullen's arrangement, however, is by no means a bad one, and it has been adopted by many writers on the subject of medicinal influence.

Dr. Parr, in his Medical Dictionary, proposes the following scheme of classification. He makes four general divisions, *viz.* into those which act 1st, upon the living solid; 2dly, upon the fluids ; 3dly, upon the simple solid ; and 4thly, upon extraneous bodies.

Of the first class, his divisions are into, 1st, those which increase

motion, including emetics acting upon the stomach ; cathartics upon the intestines; diaphoretics upon the extreme vessels; diuretics upon the kidneys; expectorants upon the bronchia? ; errhines upon the glands of the nose; sialagogues upon the salivary glands; emmenagogues upon the womb ; stimulants upon the whole body, which last include, cordials (cardiaca); analeptics, attractives (attrahentia), and discutients. 2dly, Those which diminish motion, in which are comprehended the refrigerants and antispasmodics. 3dly, Those which lessen tone, or sedatives. 4thly, Those which increase tone, or tonics.

The second class, or those medicines the agencyof which is upon the fluids, comprehends 1st, those which change the crasis of the fluids, which are attenuants, inspissants, and alteratives ; and those, 2dly, which correct acrimony, including demulcents, antacids, antalkalines, and antiseptics.

The thi-rd class, or those substances which operate upon the simple or dead solid, comprehend emollients, corrosives (erodentia), and astringents.

The fourth are the antipoisonous (alexiteria), the lithontriptic (medicines for calculous concretions), and the anthelmintics (worm medicines).

In defence of this arrangement, Dr. Parr introduces into his Dictionary a few remarks which we shall subjoin.

‘These classes of the materia medica are not so numerous as to require what is usually styled a methodus, and, if any thing were sacrificed to the parade of systems by this means, it would be improperly adopted. Whatever may be the merits of the scheme, it has no disadvantages; for the arrangement is exactly such as if the orders were natural and independent ; and the clavis limits the intention of the group with peculiar accuracy. The evacuants most nearly related follow each other; and, as no evacuation can take place without the excitement of the vessels as muscular organs (query?), so in the following class stimulantia, where the nervous system is

more generally affected, a general action of tlie vessels of the whole system usually accompanies (here our author is faulty in his phraseology, and we think his patliology rather questionable). Of the synonymes of stimulants, the two first, should such medicines exist, act more peculiarly on the nervous system ; the two last are topical remedies. The distinction between general and topical medicines usually admitted is at least useless, if not injurious ; for the most active internal medicines are often powerful topics.

‘ The next division is also connected with some action of the sanguiferous system, which disappears in the second class. Resolvents are truly refrigerants, for discutients occur in a subsequent part. The medicines which increase tone are included under tonica, and the astringents are referred to those medicines which act on the simple solid. Some certainly act on both, and astringents sometimes appear to be tonics. The medicines which diminish tone, diminish also sensibility and excitability ; and we have added as synonymes anodyna and irritantia; those which possess an opposite quality are associated in idea with stmiulants.

‘ We have admitted, with hesitation and reluctance any action of medicines on the fluids, adoptmg the axiom of the nervous pathologists, that the constitution forms its own fluids. Yet some complaisance is due to many excellent physicians of the Boerhaavian school, and it is at least necessary to point out the medicines which have been employed with these views. The third of the classes of the first division, the alterantia, is vague; yet the actions of medicines in scurvy, in what are styled scorbutic eruptions, in lepra, and in some other cases, must be collected into one group, and it is not easy to find a more proper place. In the second division we clearly perceive the action of demulcents on the throat, the stonˆach and alimentary canal, the urinary organs, and perhaps the oronchial glands. The antacids and antalkalines are at least useful in the stomachs, and some medicines undoubtedly act chemically as antiseptics.

‘ The medicines which act on the simple solids afford few subjects of remark. If relaxants are any thing more than ‘emollients, they bear the same reference to the sedantia that the astringents do to the tonics ; at least they seem to act through the medium of the simple solid. For these, and the other reasons assigned, the astringents are referred to this place. The last general division contains classes independent in their operation on each other. Lithontriptics may be only antacids, but they are said with confidence to dissolve the calculus. Anthelmintics

may be only drastic purgatives, but some at least kill worms.

* It is a common objection,' continues our au-thor, * to any arrangement, that some medicines possess very difl'erent powers, and that their proper places are not easily ascertained. Instances of this kind occur in mercury and steel. Repetition however is unavoidable, and those who seek for the medicine appropriated to any disease, in such catalogues, must find them in each list. The more general authors on the materia medica will treat of them under that head where their powers are most conspicuous, and the medi-

cine will again occur, where, from its preparation or exhibition, peculiar properties are discovered in it.'

To these remarks, Dr. Parr adds some others in explanation of the detail of substances which he presents to his readers ; but, as the addition of this list would unnecessarily swell the bulk of our pages, we shall omit both it and the remarks respecting it, and proceed to a sketch of Dr. Darwin's arrangement.

Tliis very ingenious but rather eccentric philosopher proposes to include in the materia medica all those substances which may contribute to the restoration of health. These, he says, may be conveniently distributed under seven articles, according to the diversity of their operations.

1. Niitrientia, or those things which preserve in their natural state the due exertions of all the irritative motions.

2. Incitantia, or those things which increase the exertions of all the irritative motions.

3. Secernentia, or those things which increase the irritative motions which constitute secretion.

4. Sorbentia, or those things which increase the irritative motions which constitute absorption.

5. Invertcntia, or those things which invert the natural order of the successive irritative motions.

6. Revertentia, or those things which restore the natural order of the inverted irritative motions.

7. Torpentia, those things which diminish the exertions of all the irritative motions.

In the first class, or nutrients, he presents the following catalogue : —

1. 1. Venison, beef, mutton, hare, goose, duck, woodcock, snipe, moor-game.

2. Oysters, lobsters, crabs, shrimps, mushrooms, eel, tench, barbolt, smelt, turbot, sole, turtle.

3. Lamb, veal, sucking pigs.

4. Turkey, partridge, pheasant, fowl, eggs.

5. Pike, perch, gudgeon, trout, grayling.

II. Milk, cream, butter, butter-milk, whey, cheese.

III. Wheat, barley, oats, peas, potatoes, turnips, carrots, cabbage, asparagus, artichoke, spi-nach, beet, apple, pear, plum, apricot, nectarine, peach, strawberry, grape, orange, melon, cucumber, dried figs, raisins, sugar, honey, with a great variety of other roots, seeds, leaves, and fruits.

IV. Water, river water, spring water, calcareous earth.

V. Air, oxygen, azote, carbonic acid gas.

VI. Nutritive baths and clysters, transfusion of blood.

VII. Condiments.

In the above succession. Dr. Darwin means to point out the progressive degree of nutrient power possessed by different substances ; he does not, however, appear to be always correct in his notions: indeed the nutritive quality of substances can scarcely be judged of in the abstract, so much dependingupon the individual, and upon the time, place, and circumstances under which food is taken. Our readers will perhaps say that, in thus including the nutrientia, we have wandered from our intention of limiting the present article to medicinal substances, but we could not hare

presented an unbroken view of Darwin's classification without so doing.

The class of excitants (incitantia) contains the following catalogue :

I. Papaver somniferum ; poppy, opium. Alcohol, wine, beer, cyder.

Prunus lauro-cerasus ; laurel, distilled water from the leaves.

Prunus cerasus ; black cherry, distilled water from the kernel.

Nicotiana tabacum ; tobacco, the essential oil, decoction of the leaf.

Atropa belladonna ; deadly nightshade, the berries.

Datura stramonium; thorn apple, the fruit boiled in milk.

Hyoscyamus reticulatus; henbane, the seeds and leaves.

Cynoglossum ; hound's tongue.

Menispermum, cocculus; Indian berry.

Amygdalus amarus; bitter almond.

Cicuta; hemlock. Conium maculatum ?

Strychnos nux vomica ?

Delphinium stavisagria ?

II. Externally, heat; electricity.

III. Ether, essential oils.

IV. Oxygen gas.

V. Passions of love, joy, anger.

VI. Labor, play, agitation, friction.

The third class, secernents, comprise the following: I. Diaphoretics.

1. Amomum zinziber, ginger. Caryophyllus aromaticus, cloves. Piper indicum, pepper. Capsicum. Cardamomum. Pimento, myrtus pimenta. Canella alba. Serpentaria Virginia, aristolochia serpentaria; guaiacum. Sassafras laurus ; sassafras. Opium. Wine.

2. Essential oils of cinnamon, laurus cinna-momum. Nutmeg, myristica moschata.. Cloves, caryophyllus aromaticus. Mint, mentha. Camphor, laurus camphora. Ether.

3. Volatile salts, as of ammoniac and of hartshorn. Sal cornu cervi.

4. Neutral salts, as those %vith vegetable acid ; or with marine acid, as common salt. Halex, red-herring anchovy.

5. Preparations of antimony, as emetic tartar, antimonium tartarizatum, wine of antimony. James's powder.

6. External applications. Blisters, warm-baths, warm air. Exercise. Friction.

7. Cold water with subsequent warmth.

II. Sialagogiies. Preparations of mercury, hydrargyrum. Pyrcthrum, anthemis pyrethrum, tobacco, cloves, pepper, cowhage, strizolobium siliqua hirsuta. Mastich, pistachia lentiscus.

III. Expectorants.

1. Squill, scilla maritima, garlick, leek, onion, allium, assafcetida, ferula assafoetida, gum ammoniac, benzoin, tar, pix liquida; balsam of Tolu.

2. Root of seneka, polygala seneka; of ele-campane, inula helenium.

3. Marsh mallow, althaea; coltsfoot, tussilago farfara ; gum arable, mimosa nilotica ; gum tragacanth, astralagus tragacantha. Decoction of barley, hordeum distichon. Expressed oils. Spermaceti, soap. Extract of liquorice, glycyr-rhiza glabra, ˆugar. Honey.

4. Externally blisters. Oil. Warm bath.

IV. Mild diuretics.

1. Nitre, kali acetatum, other neutral salts.

2. Fixed alkali, soap, calcined egg shells.

3. Turpentine, balsam of Copaiva. Resin. Olibanum.

4. Asparagus, garlic, wild daucus. Parsley, opium. Fennel, foeniculum, pareria brava, cis-sampelos?

5. Externally cold air, cold water.

6. Alcohol. Tincture of Cantharides. Opium.

V. Mild catliartics.

1. Sweet subacid fruits. Prunes, prunus domestica, Cassia fistula. Tamarinds, crystals of tartar, unrefined sugar. INIanna. Honey.

2. Whey of milk, bile of animals.

3. Neutral salts, as Glauber's salts, vitriolated tartar, sea water, magnesia alba, soap.

4. Gum guaiacum, balsam of Peru. Oletim ricini, castor oil, oil of almonds, oil of olives, sulphur.

5. Senna, cassia senna, jalap, aloe, rhubarb, rheum palmatum.

6. Calomel. Emetic tartar, antimonium tartarizatum.

VI. Secretion of mucus of the bladder is increased by cantharides, by spirit of turpentine ? Phosphorus?

VII. Secretion of mucus of the rectum is increased by aloe internally, by various clysters and suppositories externally.

VIII. Secretion of subcutaneous mucus is increased by blisters of cantharides, by application of a thin slice of the fresh root of white briony, by sinapisms, 'oy root of horse-radish, cochlearia armoracia. Volatile alkali.

IX. Mild errhines. ' Marjoram. Origanum. Marum, tobacco.

X. Secretion of tears is increased by vapor of sliced onion, of volatile alkali. By pity, or ideas of hopeless distress.

XI. Secretion of sensorial power in the brain is probably increased by opium, by wine, and perhaps by oxygen gas added to the common air of respiration.

The fourth class, or sorbentia (absorbents). I. Sorbentia affecting the skin.

1. Acid of vitriol, of sea salt, lemons, sloes, prunus spinosa, crabs, pyrus, quince, pyrus cy-donia, opium.

2. Externally calx of zinc, of lead, or of mercury.

II. Sorbentia affecting the mucous membranes.

1. Juice of sloes, crabs, Peruvian bark, cinchona, opium.

2. Externally blue vitriol.

III. Sorbentia affecting the cellularmcmbrane.

1. Peruvian bark, wormwoods, artemisia maritima, artemisia absinthium ; worm seed, artemisia santonicum ; chamomile, anthemis nobilis ; tansey, tanacetum ; buckbean, menyanthes trifoliata ; centaury, gentiana centaureum ; gentian, gentiana lutea ; artichoke leaves, cynara scolymus ; hop, humulus lupulus; salix caprea, geum urbanum, datisca cannabina.

2. Orange peel, cinnamon, nutmeg, mace.

3. A'omits, squill, digitalis, tobacco

4. Bath of warm air, of steam.

IV. Sorbentia affecting the veins.

Waterˆ cress, sisymbrium; nasturtium

aqusticum ; mustard, sinapis ; scurvy grass, cochlearia hortensis ; liorse-rudish, cochlearia arnio-racia ; cuckoo flower, cardamine ; dogs' grass, dandelion, leontodon, taraxacon; celery, apium ; cabb.age, brassica.

2. Chalybeates, bitters and opium, after sufficient evacuation.

3. Externally vinegar, friction, electricity.

V. Sorbentia affecting the intestines.

1. Rhubarb, rheum palmatum; oak galls, gallae quercinte ; tormentilla erecta, cinque foil, potentilla, red roses, uva ursi, simarouba.

2. Logwood, ha-matoxylum campecliianum, succus acacisE ; dragons' blood, terra japonica, mimosa catechu.

3. Alum, earth of alum, armenian bole ; chalk, creta ; crabs' claws, chela; cancrorum ; white clay, cimolia ; calcined hartshorn, cornu cervi calcina-tum, bone ashes.

VI. Sorbentia affecting the liver, stomach, and other viscera. Rust of iron, filings of iron, salt of steel, sal martis, blue vitriol, white vitriol, calomel, emetic tartar, sugar of lead, white arsenic.

VII. Sorbentia afTecting venereal ulcers. Mercury dissolved or corroded _by the following acids :

1. Dissolved in vitriolic acid, called turpith mineral, or hydrarjˆyrus vitriolatus.

2. Dissolved in nitrous acid, called hydrargyrus nitratus ruber.

3. Dissolved in muriatic acid, mercurius corrosivus sublimatus, or liydrargyrus rauriatus.

4. Corroded by muriatic acid. Calomel.

5. Precipitated from muriatic acid, mercurius precipitatus albus, calx hydrargyr alba.

6. Corroded by carbonic acid? The black powder on crude mercury.

7. Calcined or united with oxygen.

8. United with animal fat, mercurial ointment.

9. United with sulphur. Cinnabar.

10. Partly united with sulphur. jTi,thiop's mineral.

11. Divided by calcareous'earth. liydrargyrus cum creta.

12. Divided by vegetable mucilage, by sugar, by balsams.

VIII. Sorbentia aflPecting the whole system. Evacuations by vena-section and cathartics, and then the exhibition of opium.

IX. Sorbentia externally applied.

1. Solutions of mercury, lead, zinc, copper, iron, arsenic, or metallic calces applied in dry powder, as cerussa, lapis calaminaris.

2. Bitter vegetables in decoctions and in dry powders, applied externally as Peruvian bark, oak bark, leaves of wormwood, of tansey, chamomile flowers or leaves.

3. Electric sparks, or shocks.

X. Bandage spread with emplastrum e'miiiio, or with carpenters' glue, mixed with one-twen- tieth part of honey.

XI. Portland's powder, its continued use pernicious, and of hops in beer.

Catalogue of the invertentia (things which in-vert the natural order of the irritative motions.)

I. Emetics; ipecacuanha, emetic tartar, antimonium tarlarizatum ; squill, scilla maritima; carduus benedictus, enicus acarna, chamomile,

antliemis nobilis ; white vitriol, vitriolicum zinci ; foxglove, digitalis purpurea ; clysters of tobacco—

II. \ iolent cathartics; emetic tartar, squill, buckthorn, rhamnus caiharticus, scammonium, convolvulus scammonia ; gamboge, elaterium ; colocynth, cucumis colocynthis, veratrum.

III. Violent errhines and sialagogues ; turpith mineral, hydrargyrus vitriolatus, asarum europae-um, euphorbium, capsicum, veratrum, nauseous smells, nauseous ideas.

IV. 'iolent diuretics; nitre, squill, seneka, cantharides, alcohol, foxglove, tobacco, anxiety.

". Cold sudorifics ; poisons, fear, approaching death.

Catalogue of revertentia (those things which restore inverted

motions).

I. Inverted motions which attend the hysteric disease are reclaimed 1. By musk, castor. 2. By assafcEtida galbanum, sagapenum, ammoniacum, valerian. 3. Essential oils of cinnamon, nutmeg, cloves, infusion of pennyroyal, mentha, pulegium, peppermint, mentha piperita, ether, camphor. 4. Spirit of hartshorn, oleum animale, sponge burnt to charcoal, black snufl's of candles, which consist principally of animal charcoal, wood, soot, oil of amber. 5. The incitantia, as opium, alcohol, vinegar. 6. Externally the smoke of burnt feathers, oil of amber, volatile salt applied to the nostrils, blisters, sinapisms.

II. Inverted motions of the stomach are reclaimed by opium, alcohol, blisters, crude mercury, sinapisms, camphor, and opium externally, clysters with assafatida.

III. Inverted motions of the intestinal lymphatics are reclaimed by mucilaginous diluents, anˆ by intestinal sorbentia, as rhubarb, logwood, calcined hartshorn, Armenian bole ; and lastly by incitantia, as opium.

IVˆ. Inverted motions of the urinary lymphatics are reclaimed by cantharides, turpentine, resin, the sorbentia, and opium with calcareous earth of alum, by oil externally, warm bath.

V. Inverted motions of the intestinal canal are reclaimed by calomel, aloe, crude mercury, blisters, warm bath, clysters with assafcetida, clysters of iced water ? or of spring water further cooled by salt dissolved in water contained in an exterior vessel ? Where there exists an introsusception of the bowels in children, could the patient be held up for a time by the feet with his head downwards, or be laid with his body on an inclined plane with his head downwards, and crude mercury be injected as a clyster to the quantity of two or three pounds?

Catalogue of torpentia (those things which diminish the exertion of the irritative motions).

1. 'enffisection. Arteriotomy.

2. Cold water, cold air, respiration of air with less oxygen.

3. 'egetable mucilages.

a. Seeds. — Barley, oats, rice, young peas, flax, cucumber, melon, &c.

b. Gums. — Arabic, tragacanth, Senegal, of cherry trees.

c. Roots. — Turnip, potatoe, althaea, orchis, snowdrop.

d. Herbs. — Spinach, brocoli, mercury.

4. 'egetable acids, lemon, orange, currants, gooseberries, apple, grape, &c.

5. Animal mucus, liartshorn jelly, veal brotli, chicken water, oil? fat? cream?

6. Mineral acids of vitriol, nitre, sea-salt.

7. Silence, darkness.

8. Invertentia in small doses, nitre, emetic tartar, ipecacuanha £:ˆiven so as to induce nausea.

9. Antacids. — Soap, tin, alcalies, earths.

10. Medicines preventive of fermentation, acid of vitriol.

11. Anthelmintics. — Indian pink, tin, iron, cowhage, amalgama, smoke of tobacco.

12. Lithontriptics, lixiv. saponarium, aqua calcis, fixable air.

13. Externally, warm bath and poultices, oil, fat, wax, plasters, oiled silk, carbonic acid gas on cancers, and other ulcers.

We have thus subjoined the articles from Dr. Darwin, although we omitted them in the two former instances ; and we have done so, partly because they in some measure illustrate the views which Dr. Darwin took of medicinal action, to which we shall shortly have to refer in a more extensive enquiry into the respective medical theories that have been propounded. (See Medicine). It will be observed too,

by those conversant with the names of drugs, that we have copied our author literally without making the changes according to reformed nomenclature, as it has been thought better upon the whole to give an entire unaltered transcript of the Dr.‘s rather extraordinary lists of simple and combined substances and powers; the Linneean names it will be seen for the most part, but not invariably, succeed to the popular ones of the simples.

We shall now give Dr. J. Murray’s classification, the principles of which have something in common with those of Dr. Darwin, inasmuch as it assumes that medicines in general operate by stimulating the living fibre, or exciting it to mo-tion, not by altering directly the state of tlie living power.

In explaining the operations of medicine, says Dr. Murray, and classing them according to those operations, it is to be regarded as a first principle that they act only on the living body. The presence of life is accompanied with peculiar properties, and with modes of action inexplicable on mere mechanical or chemical principles. ˆ3ubstances acting on the living system no doubt produce effects referrible to these ; but the changes tliey produce are always so far modified as to be peculiar in themselves, and regulated by laws exclusively belonging to organised matter.

The proposition that medicines operate by stimulating the living fibre or exciting it to motion has even been stated as universal, and was received as an axiom in a sytem (Brown’s system), superior, perhaps, to any in conveying just and precise ideas on the nature of life, and the affections to which it is subject. jNIedicines, in com-mon with all external agents, are, according to this system, incapable of directly altering the state of tlie vital power ; they can only excite the parts possessed of that power to action, and, liowever diversified their effects may appear to 'C, sucli diversities are to be referred merely to the different degrees of force in which tliey Vol XIII.

exert the general stimulant power they possess.

This proposition, however, cannot be received in an unlimited sense. From tlie exhibition of different medicines very difiVrent effects are produced, which cannot be satisfactorily explained from the cause assigned — the difference in the degree of stimulant operation. They differ in kind so far, that, even in the greater number of cases, one remedy cannot by any management of dose or administration be made

to produce the efl'ects which result from the action of another.

It is therefore necessary to admit some tnodifi-cations of the general principles above stated and the following are perhaps sufficient to afford grounds for explaining the operation of remedies, and for establishing a classification of them sufficiently just and comprehensive.

1st. Stimulants are not to be regarded as differing merely in the degree of stimulant operation which they exert. An important distinction exists between them, as they are more or less diffusible and permanent in their action. A stimulus is termed diffusible, which, whenever it is applied, or at least in a very short time after, extends its action over the whole system, and quickly produces its full exciting effect. A diffusible stimulus is generally also transient in its action ; in other words the effect, though soon produced, quickly ceases. There are others, on the contrary, which, though equally powerful stimulants, are slow and permanent. These varieties, which are sufficiently established, serve to explain the diflPerences in the powers of a num-ber of the most important medicines ; and they lay the foundation for the distinction of two great classes narcotics and tonics, with their subordinate division of antispasmodics and astringents, both consisting of powerful stimulants; the one diffusible and transient, the other slow and permanent in their operation.

2d. There is a difference between stimulants, in their actions being directed to particular parts. Some, when received into the stomach, quickly act upon the general system ; others have their action confined to the stomach itself, or at least any further stimulant effect they may occasion is slow and inconsiderable; while a third class consists of those which operate on one part, often without producing any sensible effect on the stomach or general system. Some thus act on the intestinal canal; odiers on the kidneys, bladder, vessels of the skin, and other parts ; the affection they excite in these being the consccjuence, not of any stimulant operation equally extended over every part, but of one more particularly determined. This difference in the action of stimuli is the principal foundation of the distinctions of medicine into particular classes. Cathartics, for instance, are those medicines, which as stimuli act peculiarly on the intestinal canal ; diuretics those which act on the secreting vessels of the kidneys ; emmenago;iues those wliich act on the uterine system ; diaphoretics those which exert a stimulant action on die vessels of the skin. With these operations, med ici nes, at tlie same time, act more or less as general stimulants, by which each individual belonging to any class is thus rendered capable of producing peculiar eflects ; and many of

them by a peculiarity of constitu-2 T

tion in the patient, or from the mode in which they are adniinistered, frequently act on more than one part of the system, by whicli their effects are still further diversified. Medicines, when thus determined to particular parts, are sometimes conveyed to these parts in the course of the circulation ; more generally their action is extended from the stomach or part to which they are applied by means of the nervous system.

3d Medicines, besides acting as stimuli, sometimes occasion mechanical or chemical changes in the state of the fluids or solids, by which their action is more or less diversified. These operations of medicines were formerly supposed to be more extensive than they really are ; and many absurd explanations were deduced from the supposed changes which the solids and fluids underwent in disease. Though these notions are now exploded, it must still be admitted that changes of this kind take place in the living system. Chemical changes in particular, there is reason to believe, very frequently modify the actions of remedies; and some very obvious operations of this kind, as well as others of a mechanical nature, serve as distinctions for establishing particular classes.

These observations point out the principles on which the arrangement of the articles of the materia medica, from their medicinal operations, may be established.

Those stimulants which exert a general action on the system may first be considered ; of these there are two well marked subdivisions, the diffusible and the permanent ; the former corresponding to the usual classes of narcotics and antispasmodics, the latter including likewise two classes, tonics and astringents. In these there is a gradual transition passing into the one from the other, from the most diffusible and least durable stimulus to the one most slow and permanent in its action.

The next general division is that comprising local stimulants ; such are the classes of emetics, cathartics, emraenagogues, diuretics, diaphoretics, expectorants, sialagogues, crrhines, and epispas-tics. These all occasion evacuation of one kind or other, and their effects are in general to be ascribed, not to any operation exerted on the whole system, but to changes of action induced in particular parts.

After these, those few medicines may be considered whose action is merely mechanical or chemical. To the former belong diluents, demulcents, and emollients. Anthelmintics may perhaps be referred with propriety to the same division. To the latter, or those which act chemically, belong antacids, or absorbents, litlion-triptics, escharotics, and perhaps refrigerants.

Under these classes (says Dr. INlurray) may be comprehended all those substances capable of jiroducing salutary changes in the human system. Several classes are indeed excluded which have sometimes been admitted; but these have been rejected, either as not being sufficiently precise or comprehensive, or as being established only on erroneous theory.

The subdivisions of these classes may sometimes be established on the natural affinity existing among the substances arranged under

each ; on their chemical composition ; their resemblance in sensible qualities ; or, lastly, oa distinctions in their medicinal virtues, more mi-nute than those whicli form the characters of the class. In different classes one of these methods will frequently be found preferable to any of the others.

After these preliminary remarks. Dr. Murray presents his readers with the following table of classification :

A. General Stimulants.

«. Diffusible b. Permanent

ˆ Narcotics.

ˆ Antispasmodics

ˆ Tonics.

) Astringents.

B. Local Stimulants.

Emetics.

Cathartics.

Emmenagogues.,

Diuretics.

Diaphoretics.

Expectorants.

SialogogTies.

Errhines.

Epispastics.

C. Chemical Remedies.

Refrigerants. Antacids. Lithontriptics. Escharotics.

D. Mechanical Remedies.

Anthelmintics. Demulcents. Diluents. Emollients.

As, in the alphabetical arrangement which we propose to adopt, we shall have to state the medicinal qualities of the medicines enumerated, under the presumption of the reader's knowledge of the signification of such virtue, it may be necessary to give a slight preliminary definition of the terms made use of to designate these properties: and, in so doing, we may as well pursue tiie order of Dr. Murray, presented in the above tabular view.

Narcotics then, without going into any theory in respect to their mode of operating, may be defined tiiose substances or powers which tend to the production of sleep.

Antispasmodics check or subdue that irregular action in the muscular fibre which is termed spasm, or the modification of it named convulsion.

Tonics are those substances which add to the tone or strength of the body.

Astringents check discliarges.

Emetics excite vomiting.

Cathartics increase the evacuation from the intestines.

Emmenagogues promote the menstrual discharge. (Note. Some doubt whether any medicines possess this property specifically or directly, that is, independently of their stimulating, or tonic, or relaxing, or cathartic influence).

Diuretics are those medicines which promote the urinary discharges.

Diaphoretics increase the exhalations from the surface of the body.

Expectorants promote the discharge of mucus or pus, or other substances, from the trachea and lungs. (Note. Respecting these also, as possessing specific or direct powers, doubts have been expressed.)

Sialogogues increase the quantity of the salivary discharge.

Errhines occasion an increase of discharge from the nostrils.

Epispastics excite an inflammation on the skin which is followed by a blister.

Refrigerants reduce the heat of the body. Antacids obviate acidity in the first passages. Lithontriptics break down calculous concretions, or prevent their formation. Escliarotics erode the skin. Antiielmintics expel or destroy worms. Demulcents sheath from acrimony. Diluents increase the quantity of fluid in the body.

Emollients soften and take off" rigidity. Such is the simplest and most concise definition which we can give, of the terms used to indicate

medicinal effects — it will be seen that almost every one of them involves some theory in regard to its modus agendi. The extracts which we have given from Parr, ˆDarwin, and Murray, in some measure apply to this subject, which will be resumed and further discussed in the article Medicine.

We now proceed to present our readers with an alphabetical materia medica, as adopted by . the latest writers on the subject in this country, Duncan, Paris, and Thomson. It will be observed, that our article is principally abridged from the first and the last of these writers. The botanical characters of the plants ■we purposely omit, as they will be found elsewhere, and we have wished to study brevity and avoid repetition.

Aeietis Resina. For an account of the resin from the difierent species of fir, see Pinus. Absinthium. See Artemisia. Acacia (vera). Gum arable. History. The tree which yields this gum is a native of Africa. All the species, indeed, of the mimosa yield it, as well as some other trees in common with the mimosa nilotica. The gum exudes from the bark of the trunk, and in about a fortnight it thickens into oval masses about the size of a pigeon's egg. It is imported from Barbary and Morocco, in large casks. The Senegal gum, which is not unfrecjuently mixed with, and substituted for, the Barbary gum, is obtaine<l from various trees, but])riiicipally from tiie ve-reck, which yields a white gum, and the other, nebuel, which attbrds a red gum. The Arabic gum is dry and brittle; tlie Senegal is more clam-my and tenacious, more, indeed, like the gum which exudes from our plum trees.

Qualities. It is dry, brittle, and nearly tasteless. It is highly nutritious. We are told that for a lengtli of time together the Moors live al-most exclusively upon it ; and it is calculated that six ounces of it will suffice for the support of a man during twenty-four hours.

Medical properties. It is demulcent, and

therefore used to lubricate abraded surfaces, and abate the irritation connected witii inflamed parts. Dose 9j to 5j.

Acacia (catechu). Terra Japonica.

History. The tree producing the catechu extract IS a native of Ilindostan. The extract is of two kinds; one imported from Bengal, the other from Bombay. When first introduced into Europe it was called Terra Japonica. It is a decoction of the internal colored part of the

wood, evaporated and dried by exposure to the sun.

Qualities. It is of a chocolate color; that from Bombay is of a reddish-brown. It is of an astringent taste ; the extract from Bengal being more austere and bitter than the other.

Medical properties. Astringent. It is an excellent medicine in cases of discharges produced by debility. Dr. Paris and Dr. Thomson recommend it as a dentrifice ; the first proposes its combination with an equal quantity of pow-der of bark and a fourth of powder of myrrh. Dr. Thomson orders its combination with tliree parts of finely powdered charcoal, as a tooth powder. Dose 10 grs to 5fs.

Acetosa and Acetosella. See Rumex and

Ox A LIS.

AcETUM (vinegar).

History. 'inegar is well known as the product of what is called the acetous fermentation. ^‘inegar in France and Italy is principally produced from the lees of wine. With us malt is the material commonly employed in its manufacture.

Qualities. According to the material from which it is formed it is of a paler or a deeper color; that from malt being deeper than that from the lees of wine. It has a penetrating odor and acid taste.

jMedical properties. Refrigerant and moderately astringent. It is powerfully anti-narcotic. Diluted with water it forms an excellent drink in fever, when the heat is high and the powers of the system low. When given as an antidote to opium, or other narcotics, the stomach should be first emptied by an emetic. Dose 1 f. 3j to 4.

For acetic acid, whether procured from vinegar or other sources, see Phakmacy and Chemistry. For citric acid, also, see Pharmacy ; and also consult Pharmacy and Chemistry for the mineral acids, acid sulphuricum, acid niuri-aticum, and acidum nilricum, with their dilu-tions.

ArciPENSER (ruthenus). Small sturgeon (huso). The beluga or great sturgeon, or isinglass fish; See Ichthyocolea.

AcoNiTEM (neomontanum). Aconite, monks-hood, wolfsbane.

History. This is a perennial plant, found na-tive in the mountainous

parts of (icrmany. It is cultivated in our gardens. Its time of flowering is July, at which time the leaves ought to be gathered for medicinal purposes.

Qualities. Aconite leaves have not much smell, but when chewed occasion a painful acrid sensation in the moulh. The whole plant is poisonous. The leaves lose much of tiicir acrimonious (|ualily by drying.

Medical properties. Aconite is narcotic, dia—

phoretic, and, for the most part, diuretic. It has been employed in chrome rhevmiatism,sypl»ilitic afiections, schirrus, &c. Stoerk, of Viemia, introduced it into practice. Dose 1 gr. to J.

AcoRi's (calamu-;). Sweet flao;.

llistort/. This is a perennial plant, growing in niarsliy places and rivulets. It is plentiful about Norwicl), and in many of the marshy commons near London. That used in medicine has been mostly supplied from the Levant.

Qualities. The root, which is the part employed, has a warm bitterish taste, and an aromatic odor. Both its smell and taste are improved by drying.

Medical properties. Aromatic and tonic. It has been employed in intermittent fevers. Dr. Thomson thinks that its powers are not sufficiently appreciated as a stomachic in cases of dyspepsia. Dose 3j to 5j.

Anv.i's (Fat.). See Chemistry and Pharmacy.

TErugo. See Cuprum.

TEscuLus (hippocastanum). Horse chestnut.

Histcrry. Tlie horse chestnut tree is originally from the north of Asia, but it has been introduced into almost every part of Europe. It flowers in May.

Qualities. Its fruit is principally composed of fecula, and is eaten by forest animals. In times of scarcity it has been used as food by man, but its acrimony should be destroyed by fire when so employed. The bark of the tree is astringent, and slightly aromatic to the taste.

Medical properties. Tonic. It has been employed (the bark of it) as a substitute for the Peruvian bark. Dose 9j to 3j.

Agrimonia (eupatoria). Agrimony.

History. An indigenous and perennial plant, found about the borders of hedges and fields. It flowers in June and July.

Qualities. An agreeable aromatic odor and bitterish taste.

Medical properties. Tonic and deobstruent, not much employed.

Alcohol (ardent spirit). See Chemistry and Pharmacy.

Allium, (sativum) Garlic. (Porrum) Leek. (Cepa) Onion.

Histori/. Garlic is a perennial ; it grows wild in Sicily, and is cultivated in our gardens. It flowers in July. The leek is a native of Switzerland and flowers in June ; it is a biennial. The common onion also flowers in June ; it is perennial..

Qualities. The bulbs, especially of these plants, possess an offensive odor, and an acrimonious taste ; these principles are the weakest in the common onion.

Medical properties. Garlic is diuretic and stimulant, and expectorant, and anthelmintic ; the leek is principally employed as a diuretic, and onion seems to have nearly the same properties with the garlic, but in an inferior degree. Onions are recommended by some in some kinds of gravelly affections, but it is questionable whether they are otherwise useful than as a diuretic. Dose, 3i to 3ij.

Aloe, (vulgaris) Common or Larbadoes aloes. (Spicata, socotorina) socotrine or

spiked, or Cape aloes. (Caballina) feciu aloes.

History. The plant producing the aloe is pereiniial, and grows in different parts of tlie south of Europe, Asia, Africa, and America, but the spiked yields tlie best extract, and this is principally brought from the Cape of Good Hope. The greater part, however, of what are now sold as socotrine aloes are brought, we are told, from Bombay, and are the real hepatic aloes. The leaves of the plant are cut off" close to the stem in the preparation of the extract ; the juice of them is pressed out, which is boiled, skimmed, and exposed to the sun's heat, so as to get dry. It is preserved in skins, and thus imported. The fetid, or horse, or caballine aloes is only used by farriers.

Qualities. Tiie socotrine extract appears in small pieces, with a glossy varnished surface, and of a reddish-brown color. Its smell is said to resemble myrrh, others compare it to the odor of the russet apple decaying. The Barbadoes aloe is in larger pieces : its odor is miicli stronger, and has rather a fatty animal character. Its bitter taste, which is intense, is not accompanied with the aroma which characterises the socotrine species.

Medical properties. Strongly cathartic ; exerting its action principally on the lower bowel. It is a stimulant purgative, and therefore employed in sluggish habits; it is much used in chlorosis. Aloe however is for the most part employed in combination with other purgatives, which act more mildly, and upon other parts of the intestinal canal. Dose, grs. v. to xv.

Althˆa (officinalis). Marsh mallow.

History. Perennial and indigenous ; found on the banks of rivers and marshes, especially salt marshes. It flowers in June and July.

Qualities. The root of marsh-mallow is without much smell or color, it abounds with mucilage.

Medical properties. Demulcent, employed for the purpose of sheathing from irritation in urinary and bowel, and sometimes in pulmonary and cynanchial aff'ections. Ad libitum.

Alumen. (Super sulphas aluminas et po-tassifi). . Alum.

Histori/. ' It is found native in some places either effloresced on bituminous schistus, as at Gottwig in Austria • or uniting with the soil in volcanic regions, as at Solfatara near Naplfs, where the only processes requisite for its extrac-tioM are lixiviation and evaporation.'

But ahini is principally obtained from schistose clays, which have iron in their composition. The largest alum mine in this country is said to be at Ilurlett, near Paisley.

Qualities. Alum has a sweetish acidulous, and rough or astringent taste. Its form is that of a octohedral crystal, with sides of equilateral triangles. It is without odor.

]\Icdical properties. Astringent, used both externally and internally to check discharges and restrain hemorrhage. Alum whey is much employed by some in fluor albus. Dose grs. 5 to9j.

Ammonia; Murias. (Sal ammoniac).

History. I'ound native in the ncigiibourl.ood

of volcanoes. It was originally manufactured in Eˆypt by subliming tlie root of camel-dung; bu't it is now principally prepared by mixing muriate of soda with artiHcially formed sulphate of ammonia and carbonate of lime. The greater part of the sal ammoniac used in London, we are told, is now made in the north of England.

Qualities. Sal ammoniac possesses a bitterish saline taste. Owing to a degree of moist ductility it is not very easily powdered ; it is usually tormed in cakes of about an inch in thickness, ■and of an hemispherical form.

Medical properties. Sal ammoniac was formerly in considerable use as an internal remedy against obstructions and viscidities, as they are culled by the humoral pathologists. Its present employment is principally external, as a cooling, discutient, and stimulant application. Dose grs. X. to 3ft.

Am.moniacum. See Heracleum. Amygdalus (communis). Dulcis or sativa, sweet almond. Amara, bitter almond.

Histori/. The almond tree originally came from Barbary and Syria. It is

cultivated now in the southern parts of Europe, and even in England; but the fruit does i;ot well ripen here. It nearly resembles the peach. Tliere is no apparent variety in the tree which produces the two kinds of kernel.

Qualities. The sweet almond, when the ker-nel is taken off, is inodorous, and has a bland taste; the bitter almond, by trituration, gives out the odor of the peach; it contains the hy-drocyanic acid.

Medical properties. The sweet kind are more in employment as food than as medicine. They are demulcent, and a-re used in the form of emulsion. Dr. Thomson tells us that, on the ground of the bitter almonds containing the prussic acid, he has been led to employ them both in affections of the lungs and the stomach, and has found them very efficacious; he has also used the emulsion from them in some cutaneous disorders with advantage.

Amylum. See Triticum In/bernum. N. B. As starch is the fecula of wheat, so is sago of the sagu tree, one of the various species of palms (the pith). ‘lapioca of the Jatropha manihot (the roots). Hukp of the orchis muscula (the bulbs). Arrow root of the maranta arundmacea (the pith). This being the true Indian arrow root ; but the most part of what is commonly sold in tiie shops as arrow root is merely the fecula of potatoes.

Amyris (elernifera). Elemi (Gileadensis). Balsam of Ciilead.

History. The tree, from which the resin called elemi is procured, grows in Carolina and the Brasils ; the resin is obtained by making incisions into the bark ; it dries in the sun as it flows from these incisions. The Gilead balsam is obtained from a tree which is a native of Abyssinia, but which is said to have been transplanted into Judea 1730 years before Christ.

Qualifies. The elemi smells somewhat like fennel seeds: it is of a pale or yellowish co-lor, semitransparent, and brittle externally, but more soft and ductile within. Balsam of Gilead has a strong pungent odor resembling turpentine.

It is of a yellowish color, but changes by keeping; its interior is paler than its surface.

Medical p7-optrtits. Elemi is stimulant, but very rarely used as an internal medicine. The Gilead balsam is scarcely employed at all in

this country. In the east it is used as a cos-metic. Dose 3j. ad 3j.

AxcHUSA (tuictoria). Alkanet.

History. The anchusa tinctoria is a native of the south of Europe ; it is sometimes cultivated in our gardens, but the alkanet of commerce principally comes from the neighbourhood of Montpelier.

Qualities. Alkanet root has a bitterish astringent taste. To alcohol, edier, and oils, it imparts a fine red color ; to water it yields only a brown color. The coloring principle resides in the bark.

Medical properties. Astringent, but scarcely employed for any other purpose than to give color.

Anetiium (graveolens), common dill. (Fceni-culum) sweet fennel.

History. The plant which produces the dill seeds is cultivated in this country, but is a native of Spain and Purtugal ; it is an annual. The fennel is a biennial plant ; both the root and the seeds of this are employed.

Qualities. Dill seeds have an aromatic smell, with rather a pungent aromatic flavor. The roots of the fennel have not much odor, and they are but slightly aromatic to the taste. Tennel seeds are more fragrant, and have a warmer taste.

Medical properties. Dill seeds are carmina tive; the water from them is exceedingly useful as a vehicle for children's medicines, when an aromatic carminative quality is requited. Fenrel is very little used, being not at all superior to caraway or anise seed. Dose grs. 10 to 9j.

AxGKLicA (archangelica). Angelica.

History. This plant is umbelliferous and biennial ; It is chiefly cultivated in the northern parts of Europe, but has been found wild in Britain. All the parts of the plant, including the roots, are employed.

Qualities. Angelica has a fragrant aromatic smell, which is most concentrated in the roots. From the fresh roots a gum resin exudes when the roots are wounded, which is very strong in the virtues of the])lant.

Medical properlies. Tonic and aromatic, but very little used. An agreeable sweet-meat is made of the stalks. Dose, 5j. ad 5ij.

Anoi’stuua. Angustura, or bonplandia, or cusparia bark.

History. The bonplandia trifoliata which affords the angustura bark grows abundantly in South America. It is an evergreen, and rises to the height of from sixteen to eighteen feet, with leaves of two feet in length.

Qualities. Angustura or cusparia bark is very bitter, pungent to the taste, and slightly aromatic : it breaks with a short and resinous fracture. It has a peculiar odor; when powdered It is yellow.

Medical properties. Stimulant and tonic. It has been used as a substitute for cinchona bark, especially in intermittents. Dose grs. 10 to 3j. Anisvm. See Pimpinellaanisum.

ANTiiEMis(nobilis). Chamomile (pyrethrum). Pellitory.

History. The chamomile is indigenous and perennial; it is principally cultivated in physical gardens for medicinal use. The pellitory is a native of Barbary, of the Levant, and of the south of Europe ; but is occasionally cultivated in England. It is the root of this plant which is employed. The flowers of the pellitory resemble in form those of tlie chamomile.

Qualities. Tiie smell and flavor of the chamomile are well known. Tlie taste of tiie pellitory root is at first scarcely sensible, but in a very short time it occasions a burning sensation in the mouth and fauces.

Medical properties. Chamomile flowers are emetic in a large quantity, but tonic and stomachic in a smaller quantity. They are used externally for fomentations, &c. The pellitory root is chiefly employed as a sialogogue ; in tooth ache, &c. Dose 9j. to 3j.

AxTiMONiuM. Stibium. Antimony. Sulphuret of antimony.

History. Antimony has been met with in its metallic state at Stahlberg in Sweden, and more recently at AUemont in France ; but it is most

commonly mineralised with sulphur, and in this state of sulphuret it is not an uncommon production of nature. The crude antimony of commerce is the sulphuret separated from its stony parts mechanically and by fusion.

Qualities. It is without any odor, and al-most tasteless ; its foi m is that of a large gray mass, which, when broken into, appears striated and metallic. It is insoluble both in water and alcohol.

Medical properties. Sulphuret of antimony is not active unless it meet with an acid solvent in the stomach, when it becomes violent in its operation, so that its eff'ects are extremely uncertain. Its use is now principally confined to veterinary practice.

In the article Pharmacy we shall have to speak of various combinations and preparations of this medicine.

Arbutus (uva ursi). Bearberry.

History. This shrub grows wild in the heaths of Scotland, and in the north of Europe; it is an evergreen, with leaves something like the myrtle. The plant m.ust be procured in the autumn.

Qualities. Astringent and bitter, giving its qualities both to water and alcohol.

Medical properties. De Ilaen first used it in affections of the kidneys and bladder; it is occasionally employed, and perhaps deserves to be more so, in affections of the mucous surfaces which appear in the form of discharges, and in diabetes. Dr. Bourne recommended it in the hectic of phthisis. Dose, 9j. ad 5j.

Arctium (lappa). Common burdock.

History. An indigenous biennial plant, growing in waste places, and on the road-side ; it flowers in July and August. The root and the seeds are the parts used.

Qualities. Burdock root is sweetish, with a small degree of bitterness and astringency ; it is without any odor. The seeds of the plant are ˆUlrhtlv aromatic.

Medical properties. Diuretic and slightly diaphoretic. Very little used. Dose 5j. to 3ij. AuGENTUM. Silver.

History. Silver is found in its metallic state, but seldom without an alloy of other metals ; its richest mines that are known are in Mexico and Peru. Its ores are sulphurets, oxides, and salts.

Qualities. When pure it is of a brilliant white, tasteless, and without odor. Its lustre is lost by long exposure to the air.

Medical p7-operties. In its metallic state it has no medicinal powers ; combined with nitric acid it is a medicine of much efficacy both internally administered and externally applied. Dose, internally, of the nitrate of silver gr. ˆ to ij. Aristolochia (serpentaria). Serpentaria, or snake root.

History. The root of this plant, which is a native of North America, is perennial. The plant flowers in May, and its seeds ripen in September.

Qualities. The root dried has an aromatic odor, and a warm pungent bitter taste. Water extracts its qualities.

Medical properties. Stimulant, diaphoretic, and slightly diuretic; occasionally used with advantage in low fevers. Dose grs. 10 to 5ft. Armgracxa. See Cochlearia. Arxica (montana). Leopard's bane. History. A native of the northern parts of Europe, and cultivated in our gardens. It flowers in July ; the flowers, root, and whole herb, are employed in medicine.

Qualities. The flowers have a taste slightly bitter and pungent, as have the leaves ; the root tastes more acrid. The resinous part of the plant is soluble in alcohol and ether.

Medical properties. Stimulant and slightly diaphoretic. Employed by some in paralysis of long standing. The Germans recommended the root as a substitute for the cinchona bark. Dose grs. 5 to 10. Arsenicum. Arsenic.

History. This metal is found native in its metallic state, in the state of sulphuret, oxidised, and acidified. Its color is of a bluish-gray, The white arsenic of commerce, whicli is an oxide, or, as it has lately been termed, arsenious acid is principally brought into this country from Germany.

Qualities. White oxide of arsenic, or common arsenic, is without smell ; it has a sweetish taste, and after a little time time it is exceedingly corrosive. It is partly soluble in water.

Medical properties. Tonic, and externally employed as an escharotic. It

has been given with much success in intermittent fevers, and in many other aflTections where debility is conspicuous. Dose gr. -^ to 9fl.

Artemisia (abrotanum), southernwood. (Maritima) sea wormwood. (Santonica) wormseed. (Absinthium) common wormwood.

History. The southernwood is a native of the south of Europe, it is perennial, and commonly cultivated in oar gardens. The sea-wormwood is also perennial, and grows wild in salt marshes; it flowers in August. The wormseed plant is a native of Persia and Tartary, but is cultivated

in F.nglish gardens ; it flowers in September. Tlie common wormwood is indigenous, and flowers in August. The tops and seeds of the plants are the parts principally in use.

Qualities. The odor of southernwood is of well-known fragrancy ; the plant has a nauseous bitter taste. Water, and more especially alcohol, extract its virtues. The sea wormwood is slightly fragrant; it has a bitterish aromatic taste. The wormseed plant differs but little from the com-mon southernwood ; the wormwood is of a stronger odor, which is not so pleasant as the southernwood. Its taste is exceedingly bitter and very nauseous.

Medical properties. Anthelmintic and deobstruent. None of the species are at present much in use. The santonica species, as its name imports, has been principally employed as an anthelmintic. Dose, 3ft to 3j.

Arum (maculatum). Arum, or wake-robin, or cuckoo-pint.

History. A perennial and bulbous-rooted plant, growing under hedges and on bank sides; it flowers in May,_and its berries ripen in August.

Qualities. Arum-root is white and without much smell. It occasions, when chewed, a burning heat in the mouth and fauces, and, when the sliced root is applied to the skin, excoriation and vesication are

produced.

Medical properties. Stimulant and expectorant. It has been employed in obstinate rheumatism and in sympathetic head-aches. Dose grs. 5 to 3j.

AsARUM (Europasum). Asarabacca.

Historij. This is a perennial plant, growing in the northern counties of England; it loves moist and shady situations. The leaves and root are employed.

Qualities. The fresh leaves have not much smell, but they have a nauseous, bitter, and slightly aromatic flavor. They give out their qualities to water. The recent root has an aroma which is lost in drying.

Medical properties. The leaves are emetic, cathartic, and diuretic ; but they are only used as a stimulatory or errhine in modern practice, and for this purpose a little of the powder is to be snuffed up the nostrils.

AssAFˆTiRA. See Ferula assaftetida.

Asi'iniuM (filix mas). Male fern.

History. A common plant, growing in shady places, and in woods; it is perennial, and flowers in .lune and .July.

Qualities. Fern root is sweet and mucilaginous to the taste, accompanied by a slight bitter. It is without any odor, at least its smell is very weak.

Medical properties. Astringent ; it has been principally used in this country as an anthelmintic. Madam Noufer's celebrated worm specific was principally composed of it. Dose 3i to 3iij.

AsTRALAGUs (tragacantha). Tragacanth.

History. The shrub which produces the gum tragacanth is a native of Persia; the gum exudes through the heat of the summer, and is collected by the natives for exportation.

Qualities. The best gum is inodorous, and of a whitish color ; it is imported in pieces of a vermiform shape.

Medical properties. Demulcent; it is more viscid liian tiie acacia gum, and therefore better adapted for allaying mucous membrane irritations. Dose 5i to 3ij.

Atropa (belladonna). Deadly niglitshade.

History. This is a perennial and indigenous plant ; it is cultivated in gardens ; it flowers in June, and its berries ripen in September. The plant is named from the beautiful appearance of its l)erries.

Qualities. The leaves are the parts of the plant that are employed ; they are without smell, but have a slightly nauseous and acrid taste. Every part of the plant is highly poisonous; its qualities are given out to water.

Medical properties. Narcotic. It has been used for dilating the pupil of the eye previous to operation. Externally it has been employed for foul ulcers and cancerous sores. Dose, grs. ft gradually to 10.

AuRANTiuM. Orange. See Citrus.

AvENA (sativa). Oats.

History. The oat is a well-known annual plant, much cultivated in northern countries, in some of which it constitutes a great part of the common sustenance even of man. The time and mode of its first introduction into Europe seem uncertain.

Qualities. Oats are without much smell ; their taste is slightly bitter ; they seem to oe principally composed of foecula.

Medical properties. Demulcent. Grit or oatmeal gruel is very useful in catarrhs. The oat in this way is also much employed as an enema.

Baryta. Barytes.

History. This earth is found in its native state combined with carbonic and sulphuric acid. The carbonate of barytes is in the north of Britain, and the sulphate or ponderous spar in Germany.

Qualities. The carbonate of barytes is without smell or taste, but it is poisonous. It is of a dirty wliite or gray color externally, and is nearly insoluble. The sulphate is also inodorous and without taste, of a color sometimes approaching to yellow or brown, with an intermixture of red and blue.

Medical properties. It is only the muriate of barytes that is used medicinally, and this is but seldom employed. A solution of it in the dose of five or six m-inims has been administered in scrofula, &c.

Bellauonna. See Atropa.

Benzoinum. See Styrax.

BisMUTHUM. Bismuth.

This metal is only used for the preparation of subnitrate of bismuth, for which see the article Pharmacy.

BiSTORTA. See Polygonum bistortu.

Bitumen (petroleum). Barbadoes tar, rock oil.

History. Petroleum is a bituminous oil which is called naphtha when unconnected with other ingredients ; it flows from rocks of coal formation, and hence its name rock-oil. Tlio term bitumen is made to apply to several inflammable bodies of various degrees of consistency.

Qualities. Naphtha, which by exposure to air becomes petroleum, is of a pale color, inclining to yellow ; it is unctuous and very inflammable.

In its state of petroleum it becomes darker, with a less pleasant odor. It is not soluble in water, but soluble in alcoiiol, ether, and oil.

Medical properties. Stimulant and sudorific, principally employed externally, but very little in use. It lias been given in Germany as a remedy for tape-worm.

Boletus (ignarius). Agaric. Touchwood.

Hiatort). A fungus, growing upon decayed trunks of the oak and ush trees. It should be gathered in August.

Qualities. Inodorous, with a slightly astringent taste.

Medical properties. Styptic, but supposed by some to be only so from its porous sponge-like structure.

BoNPLANDiA. See Angmtuni and Cusparia.

BoswELLiA. Olibanum.

History. Dr. Thomson considers with Mr. Colebrooke that the olibanum brought from India is the produce of the boswellia serrata, a large tree growing on the Indian mountains. It had been supposed to be the produce of the Juniperus lycia. It is a gum resin : the frank-incense of the ancients.

Qualities. Olibanum is in the form of transparent little grains, with but little taste, but having a fragrant odor, especially when burnt. Alcohol and ether are its solvents.

Medical propciiies. Stimulant, diaphoretic, and slightly expectorant. Principally now used as a perfume. Dose, Bfs to 3lV

BuBON (galbanum). A gum resin.

History. The plant which produces the galbanum is a native of Africa; it is perennial. The gum resin flows out of it after incisions made into it.

Qualities. It has a strong odor, and an acrid bitterish taste ; it is diffusible, and nearly soluble in water; different parts of it yielding with more or less facility to different media. The part which is insoluble in ether being soluble in water.

Medical properties. Expectorant, antispasmodic, stimulant, and deobstruent. It is in considerable use as an emmenagogue, mixed with other ingredients. Dose ‘dH to 511.

Cajei’utus. See Melaleuca.

Calamits. See Acorus.

Calamina. See Zincum.

Calumba. See IMenispermum.

Calx. Lime.

History. Lime is scarcely found in nature without some combination. In most of the fossils in which it is met with it exists in the state of carbonate. Chalk is a soft, limestone a hard carbonate of lime.

Qualities. Chalk is well known to be white or whitish, and without smell or taste. Limestone is also inodorous and insipid, but colored according to its varieties.

Medical properties. Antacid, and, applied externally, cooling, and absorbent. (Quicklime, that is, lime in which the carbonic acid has been driven off by heat, isescharotic. See Pharmacy.

Cambogia. See •ˆlalugwalis.

CAMpnonA. See Dryobulans and Jjiurus.

CAˆcER. (Pagurus) Crabs claws. (Astacus) crabstones, vulgarly crab's eyes.

History. The claws of the crab have u crus-

taceous covering, whicii consists prmcipally of carbonate of Imie; the concretions called crabstones or crab's eyes are chiefly made up also of carbonate of lime, and are found in the stomach of the craw-fish at the lime when the external covering is changed.

Qualities. The crabstones are hard and stony, convex on one side and slightly concave on the other; tiiey are of a slightly reddish color ; they becoine soft and transparent when treated wiili acids.

Medical properties. Merely antacid, like common chalk.

Canella (alba). Canella. The bark.

}listu?-y. A common tree of Jamaica, and other of the West India Islands. The bark is sometimes confounded with that from the wintera aromatica.

Qualities. The quilled canella is paler than the flat kind ; the latter is said to be the bark of the older trees. Both manifest an aroma when broken into ; tais aroma is lost iu the watery infusion.

Medical properties. Stimulant, and slightly tonic. Some consider it antiscorbutic. Uose 9j to 511.

Canthabis. Spanish fly, or blistering fly.

History. This insect is found on several trees of Europe, particularly in tlie southern parts, namely, the ash, elder, and white poplar, &c. The largest are im|)orted from Italy, but those from Spain are preferred.

Qualities. The cantharides have an unpleasant odor, and an acrid taste ; their properties are given out both to water and alcohol.

Medical properties. Stimulant and diuretic. The tincture of them has been much employed in gleets, and other chronic discharges from mucous surfaces. They are well known as vesicatory of the skin. Camphor and mucilaginous drinks given with them in some measure modify their powerful action on the kidneys. Dose, gr. I to gr. i.

Capsicum (annuum).

History: The capsicum is an annual plant, common to both the Indies, and cultivated iQ our gardens for the beauty of its berries, which are long pendulous pods. What is called Cay-enne pepper is a mixture of the powder of the pods of many species of the capsicum.

Qualities. The berry is aromatic in its odor, and exceedingly pungent to the taste. Water, alcohol, and etlier, extract its virtues.,

Medical pro])erties. Powerfully stimulant. It has lately been much employed as a gargle in malignant sore throats. Dose grs. v. to ‘3i.

Cahho LiONi. Charcoal.

History. Charcoal is charred or burnt wood, as ivory black is of bone and ivory shavings. For medical use the charcoal is reduced to a fine powder, and heated in a crucible.

Qualities. When charcoal is quite pure, it is shining and brittle ; it is insipid and without odor. It is insoluble both in water and alcohol.

Medical pr(ij)crties. Antiseptic. It is sometimes mixed with poidtices in order to correct tlie gangrenous disposition of old and foul ulcers. It is also used either alone or in combination as a tooth powder. Dose, 911 to Jj.

Caruamine (pratensis). Cuckoo flower, lady's smock.

History. A perennial herbaceous plant, growing in moist meadows and tiowering in the spring.

Qualities. The flowers and leaves (the parts employed) are of a pungentˆ slightly bitter tas>e.

Medical properties. Flowers diuretic, and stimulant. Leaves antiscorbutic. Very little used. Dose 9j to 3j.

Cardamomum. See Malonia. Carum (carvi). Carraway, the seeds. History. The plant producing these seeds is indigenous, biennial, and umbelliferous; it is cultivated in our gardens; in May and June the flowers expand, and the seed ripens m August.

Qualities. Carraway seeds have a warm pungent flavor, and an aromatic smell. Tlie whole virtues of the plant arise in distillation with water.

Medical properties. Carminative and stomachic. Tiiey are generally employed to give warmth to purgatives. Dose 3ft to 5j. Caryophyllus. See Eugenia. Cascarilla. See Croton. Cassia, (fistula). Cassia. (Senna). Senna. History. The Cassia fistula tree is indigenous in Egypt, and of both the Indies. It rises to the height of forty or fifty feet, and has a fruit of a small cylindrical pod. It flowers in June. The tree which produces the common senna of commerce is a native of Upper Egypt; it is an an-nua! plant, and flowers in August. It grows in the form of a shrub.

Qualities. The part used of the cassia fistula is the pulp of the pods, which has a slight odor, and a sweetish taste. It dissolves both in water and alcohol : the watery solution is indeed the most complete. The leaves are the part employed of the senna tree, which have ratlier a faint smell, with a ■ bitterish, somewhat aromatic taste ; they give out their principal virtues to water, when the temperature of the water is raised to boiling.

Medical properties. The pulp of cassia is aperient. It is not at present in much use. Senna leaves are very generally used in medicine, and are actively and speedily cathartic. Dose 5II

to .!j—

Castor (fiber). The castor, beaver.

History. The beaver is an amphibious quadruped, found in northern latitudes ; the castor of commerce, which is the produce of the animal, is found in follicles by the side of its anus.

Qualities. Castor is of a strong odor, and nauseous, bitterisli taste. Alcoliol and sulpliuric ether are its best solvents.

Medical properties. Antispasmodic, and em-meiiagogue. Dose grs. y. 9j.

Ckntaurea (benedicta). Blessed thistle.

History. This plant is a native of the Grecian Islands, and of Spain ; it is cultivated in our gardens. It is an annual, and flowers in June and September, at which time the leaves of tlie luM-b shovild be cut for use.

Qualities. Carduus benedictus has a faint unpleasant odor, and an intensely bitter taste. Its virtues are given both to water and alcoliol.

Medical properties. Emetic in a strong decoction, and in smaller doses diaplioretic. It has also been used as a stomachic in dyspepsia. But it is now seldom employed. Dose xv. to 3j.

For the smaller centaury, see Chironia.

Cf.phjilis (ipecacuanha). Ipecacuan. History. Perennial, a native of South America. It flowers from December to March, and its berries ripen in May. The Indians knew this plant to possess emetic properties long be-fore their connexion with Europe. The name ipecacuan in the language of South America means vomiting root.

Qualities. Nearly inodorous in the root. Its taste is extremely nauseous and bitter ; it is also subacid. It gives out its virtues in different degrees to water and alcohol. Emetine is a name given by the French to an extract by evaporation of the tincture; and on the quantity of this it seems its medicmal virtues depend.

Medical properties. — Emetic in large doses: in smaller ones diaphoretic, expectorant, and stomachic. It is much used as a sudorific

in combination with opium and neutral salts, as in the form of Dover's powder, or the compound powder of ipecacuan of the])harmacopcEas. Dose, as an emetic, 9j to 5ft ; as an expectorant, &c., gr. i. to iij.

Cera. Wax. (Flava) yellow wax. (Alba) white wax.

History. The bee produces this useful substance, the elements of which it gathers from tlie nectaries of plants ; but some plants also secrete it ready formed. Hence it is said that wax may be considered both an animal and a vegetable substance. The yellow wax of the shops is prepared immediately from the honeycomb ; it is converted into white wax by exposure to the air and sun on an extended surface, and sprinkling the substance with water.

Qualities. Yellow wax has somewhat of the odor of honey; it is without much taste, and is of a bright yellow color. The white wax is perfectly tasteless and inodorous. It is more brittle than the yellow.

Medical properties. The yellow wax is principally used for cerates and ointments. White wax is employed as a demulcent, but its internal administration is not common. Dose 3j to 9ij.

Cervus (elaphus). The stag or hart. Horns.

History. The stag is a well known animal, principally found in the norlliern nations. Its horns fall oft' and are renewed every year, It is in the early months of the year that the shedding takes place. The horns are used medicinally ou account of their yielding a large portion of gelatine; otherwise they do not differ from common bone.

Qualities. The shavings of hartshorn are witiiout smell or taste. Water is their best menstruum.

Medical properties. Demulcent. Used much in the formation of jellies.

CERivisivii Feumentum. Yeast.

History. The scum which collects on the surface of beer during fermentation.

Qualities. A sour resinous sincll, and a bitter taste. Added to vegetable matter, coiit;.ining

sugar, it excites fermentation and evolves carbonic acid gas.

DJcdicul properties. Antiseptic. A few years since it was much employed in low fevers. It is now principally employed externally in the form of poultice to foul ulcers. Dose ˆft-Cetaceum. Spermaceti. See Physater. CniuoMA (centaureum). Smaller centaury. Flowering tops.

Histori/. Indigenous and annual, flowering between June and August.

Qualities. The leaves, stalk, and petals, are very bitter : both water and alcohol extract its virtues.

Medical properties. Tonic and antiseptic. Dose 9j to 5j.

CiNciioxA (lancifo,lia) pale peruvian bark. (Oblongifolia) red bark. (Cordifolia) yellow bark.

Histori/. The original cinchona of Peru is said to be from the lancifolia, a species of the genus cinchona ; it is still preferred in South America to all the other species. The red bark comes from the Andes ; and the yellow bark, wliich is from the heart-leaved cinchona, is a native of the mountains of Loxa and Santa Fe. Qualities. The taste of the lancifolia bark is bitter; its color is light; it has but little odor; when powdered the quilled form is lighter than that from the flat kind. The red bark has more smell than the pale ; its taste, however, is not so bitter, but sharper and more nauseous. The yellow bark is like the pale, in having but little odor; its taste is more bitter, but less sharp and astringent.

Medical properties. Tonic. When first introduced into Europe, principally employed in the cure of intermittent fever; but subsequently its use has been extended to very many diseases, which are marked by debility of fibre. Dose 9fs to 5ij.

CixNAMOMuM. See iMurus. CiTRtrs (medica). Lemon (aurantium). Seville orange.

Histori/. The lemon-tree is cultivated in the south of Europe, but it

came originally from Persia and Assyria. It is an evergreen, and is occasionally cultivated in our gardens, but the fruit does not come to perfection. The orange tree is also a native of the east, but like the lemon, cultivated in the southern parts of Europe. Both the lemon and the orange fruit are imported principally from Spain. The sweet orange which usually goes under the name of the China is a variety of the same species as the Seville orange.

Quality. The juice of the lemon is gratefully acid ; it is mucilaginous, and soon spoils. The rind is slightly aromatic and bitter; it gives out its virtues to water and alcohol. Tlie juice of the Seville orange has rather an acid taste ; its rind is aromatic, sharp, and bitter. Water extracts its qualities, as does alcohol.

Medical properties. Lemon juice is refrigerant and antiscorbutic. The rind is aromatic. Orange nice is not so agreeable, nor so generally used, IS lemon ; but the rind is more in use, as an aromatic, in composition. Dose, 5j ad ˆfj. Coccus (cacti). Cochineal.

History. Thisisaninsectbroughtfrom Mexico, NewSpain, and some of the West India islands; it feeds on the common Indian tig, and other species of the cactus ; it has the appearance of a small berry wrinkled.

Qualities. CochineaJ has ˆ mulberry color, and a bitter, rather acrid, taste ; it has a faint smell. The coloring matter, which is peculiar to It, is imparted to water and alcohol.

Medical properties. Anodyne? We thus mark it because its virtues are generally doubted by professional men. Dose grs. v. to 9j.

CocuLEARiA. Scurvy-grass. (Armoracia) Horse-radish root.

History. Scurvy-grass is an annual plant, growing on the sea-shore in several parts of the north of Europe, and cultivated occasionally in our gardens. The horse-radish is also, cultivated for use in gardens.

Qualities. Fresh scurvy-grass has a saline acrid taste, and peculiar smell; it imparts its qualities to water and alcohol. Horse-radish has a very pungent odor and taste. Both water and alcohol extract also its qualities.

JMedical properties. The supposed virtue of scurvy-grass may be inferred from its name. The horse-radish is stimulant, and slightly diuretic. It has been employed in chronic paralysis. Ad libitum.

Coccos (butyracea). Mackaw tree yielding the palm oil.

History. The mackaw is a species of palm, which is a native of South America. It is the nut or kernel of its fruit which yields the palm oil of commerce.

Qualities. Palm oil has an agreeable smell ; it is of the consistence of butter ; and, when fresh, has a fine yellow color.

Medical properties. Emollient; only used externally.

CoLCHicuM (autumnale). Meadow saffron.

History. Meadow saffron is an indigenous plant, growing in moist meadows, and flowering in the autumn ; it is bulbous rooted; for medicinal use it is taken up from June to August.

Qualities. When the bulb is dug up at the commencement of summer it is highly acrid ; but its qualities greatly depend not only upon the season, but upon the place of its growth.

]\[edical properties. Dmretic, expectorant, purgative, and narcotic, according to its dose, and the disorder for which it is administered. It has lately been much used for rheumatism and gout. Dose gr. i to iv.

CoLocYNTHis. See Cwurnis.

CoLOMBA. Calumbo. See Menispermum.

CoNiuM (maculatum). Hemlock.

History. Hemlock is an umbelliferous biennial plant, growing under hedges, and in shady moist places. It flowers in June and July. Its large and spotted stem distinguishes it from other umbelliferous plants, as well as the shining appearance of its lower leaves.

Qualities. The fresh plant has a very peculiar smell ; it has been compared to the urine of a cat; this odor goes considerably off by drj'ing; the virtues of the plant are however retained if the drying be properly effected ; and they are imparted to alcohol and ether.

Medical properties. Powerfully narcotic. It bas been much used to allay the irritation of schirrous disorders, and to mitigate morbid sensibility. It is often highly serviceable in the whoop-cough. Dose grs. ij to v.

CoNTRAYERVA. See Ihrstenia.

CoNVOLvuLis(scammoniaj. Scammony. (Ja-lapa) Jalap.

History. The scammony convolvulus is a na-tive of Syria; the greater part of that which is employed in commerce is from the mountains of Aleppo and Latachia. The root is perennial, and from this the scammony is obtained. The jalapa convolvulus is from South America ; it takes its name from Xalappa, a city of JNIexico. The root is also perennial, aid is the jalap of the shops.

Qualities. Scammony is of a light, rather shining, appearance, with a heavy disagreeable smell, and friable texture. Its taste is rather acrid. The jalap root has a nauseous smell, a pungent taste, and a hˆavy kind of odor. When powdered it is of a pale brown, while the powder of scammony is of a grayish color.

Medical properties. Scammony is a drastic purge, and jalap is a stimulant cathartic. Both are apt to occasion a griping pain in their action on the bowels, unless counteracted by admixture. Dose 9ft to 3ft.

CoPAiFERA (officinalis). Copaiba balsam.

History. ‘ The tree which produces this substance, which is improperly called a balsam, is a native of South America, and of some of the southern islands of the West Indies. The copaiba is procured by incisions made into its trunk.

Qualities. Good copaiba is clear and transparent; it becomes solid, and of a higlier color, by exposure to the ;iir. It is insoluble in water, but dissolves entirely in alcohol.

Medical properties. Diuretic, stimulant, and aperient. It is a highly useful medicine in some chronic discharges, and but for its nauseous taste might be used more abundantly. Dose9j to 5j.

CoRiANDRUM (sativum). Coriander seed.

lUstoj-y. The plant yielding these seeds is a native of Italy, but is found in some parts of this country, particularly at Ipswich. It flowers in June, and its seeds ripen in August.

Qualities. Coriander seeds, when fresh, smell strong and disagreeable; but, by carefully drying, they become more aromatic. Their active principles are not entirely imparted to water, but they are to alcohol.

Medical properties. Carminative and stomachic. Dose, Bj to 5j.

Corn t; A. See Cervus.

Creta. See Calx.

Crocus (sativus). Saffron.

History. A perennial bulbous root, wiiich grows at present wild even in Britain, but it is supposed to have come originally from the east. It is cultivated in great abundance in Essex, and in some parts of Cambridgeshire. It flowers in September. The stigmata of the flowers pressed together are the saffron of commerce.

Qualities. Saffron has a pungent, rather bitter, taste, is of a rich yellow or orange-red color, and a sort of narcotic odor. It yields its color and active principles to water, as well as to alcohol.

JMedicul properties. Cordial and stimulant. In modem practice it is not much thought of, and scarcely used except in composition. Dose 9j to 3j.

Croton (eleutheria). Cascarilla, the bark (tiglium). Croton oil.

History. The tree which affords the cascarilla bark is a native of the Bahama Islands ; it is chiefly (the bark) imported from Eleutheria. The plant yielding the croton oil seeds is from the East Indies.

Qualities. It has a pleasant aromatic kind of smell, and a warm bitterish taste. It very readily burns ; and yields, while burning, a grateful odor. Its properties are partially yielded to water, and totally to alcohol. The croton oil is of a pale reddish-brown color; its taste exceedingly acrid. It is soluble in ether and oil of turpentine, only partially in alcohol.

Medical properties. Cascarilla bark is carminative and tonic. It is also slightly expectorant, and therefore useful in some affections of the chest, in which the cinchona is objectionable. Croton oil is an exceedingly active cathartic. Dose mj to iij.

Cubeba. See Piper.

CucLMis (colocynthis).

History. The plant is an annual of the gourd kind ; it is a native of Turkey and Nubia, flowering from May till August. It is the medulla or pulp of the fruit which is employed in medicine.

Qualities. When dried it is without smell, but has an extremely nauseous bitter taste. Its virtues are imparted to water, alcohol and water.

Medical properties. Drastic purgative. Dose, grs. ij to V.

Ci'MiNtM (cyminum). Cummin seeds.

History. An umbelliferous annual plant, a native of Egypt, but cultivated in Malta and Sicily. It flowers in June.

Qualities. The seeds have a pungent taste, and rather a strong peculiar smell. Water extracts very little more than their odor ; the whole quality of the seed is given out to alcohol. Medical properties. Carminative. Dose 9j to 3j.

Cuprum. Copper.

Histojy. Copper is found native in many parts of the globe, both in its metallic state, and combined with oxygen ; the most common ore of copper is tlie sulphuret: the subacetate, and the sulphate, are the salts which are admitted into the materia medica.

Qualities. Subacetate of copper (verdigris) is without odor ; it is at first nearly tasteless, but it leaves a strong metallic flavor : it is of a beautiful color, bluish-green. It is not fully sohiI)le in water. The sulphate of copper (blue vitriol) is also without odor, and it has a very acrid styptic taste ; its color is blue; its crystals are semitransparent. It is more soluble in water than in alcohol.

JMedicul properties. 'erdigris is tonic and emetic. It is principally used externally as an escharotic. Blue vitriol is also emetic; and, when given in small doses, tonic. It is likewise employed as an escharotic.

Dose grs. J to v. As an emetic, grs. iv.

Curcuma (zedoaria). Zedoary root

History. The zedoary grows in Ceylon and

TJalabar. It is perennial. It flowers in April uiiJ May.

Qualities. Zedoaryroot sm'^Us somewhat like camphor; it liJis an acrimonious bitter taste. Its active principles are given partly to water, but more fully to alcohol.

Medical properties. Carminative and stomachic. Dose 9ft to 3j.

CusPARiA. See Angustura.

Cydonia. See Pyrus.

Daphne (mezereum). Mezereon.

Histori/. This shrub grows wild in England, and in tiie north of Europe. It is cultivated in our gardens ; and is remarkable from its flowers expanding before the leaves, the former appearing as early as March.

Qualities. The bark of the root and trunk, when chewed, is exceedingly pungent and burning. It yields its virtues to water and vinegar ; alcohol is also a solvent of it.

Meaii:al properties. Stimulant and diaphoretic. It has been employed in cutaneous and sy-pliilitic afiections of long standing. Dose grs. i. to X.

Datura (stramonium). Thorn apple.

History. Thorn apple is a native of America ; it is an annual plant and now grows even wild in this country. The whole plant excepting the

root is medicinally used.

Qualities. The whole plant has a fetid narcotic odor, and a nauseous bitterish taste. Its qualities are given out both to water and to alcohol.

Medical properties. Strongly narcotic. It lias lately been much employed in spasmodic asthma. Dose gr. fs to i. or gradually more.

Daucus (carota). Carrot.

History. The carrot is a biennial plant, growing wild in Britain, and much cultivated in our gardens. The wild plant flowers in June and July.

Qualities. The seeds, especially of the wild carrot, are pungent and warm to the taste, and smell agreeably aromatic. Their essential oil, oa which the properties depend, may be separated by distillation with water.

Medical properties. Diuretic and carminative. The root of the cultivated carrot is used principally as a poultice to allay the pain of phagedicnic, and correct the fator of foul ulcers. Dose 3j to 3j.

Delphixum (staphisagria.) Stavesacre.

Histori/. It is a biennial plant, a native of the south of Europe. It flowˆers in July and August. The seeds, which are the parts employed, are commonly imported from Italy.

Qualities. Stavesacre seeds are of a blackish color externally, and yellowish within ; they have an acrid taste, and a disagreeable smell.

Medical properties. Violently emetic and cathartic, sialogogue, chiefly employed externally as a poison to lice. Dose grs. iii. to x.

Dianthus (caryophyllus). Clove-pink. History. A perennial plant and native of Italy, growing wild in this country and the walls of ruins. When cultivated in our gardens, its varieties are increased into the numerous family of carnations.

Qualities. The odor of the aianthus is fra-

grant, the taste slightly bitter. Water and alcohol extract its qualities.

Medical properties. Supposed formerly to be stimulant to the nervous

system, but now only employed to impart color. Dose 9ft to 3fi.

13iGiTALis (purpurea). Foxglove.

History. An indigenous biennial plant, found on bank and road sides, especially where the soil is sandy and dry. It flowers from towards the end of June till the middle of Au-gust. The leaves are the parts employed ia medicine.

Qualities. Foxglove leaves have a bitter nauseous taste, and, especially when dry, a narcotic smell. Both water and alcohol extract their qualities.

Medical properties. Sedative and diuretic. It has been much used in dropsies, and seems particularly to apply to hydrothorax. We are told in a recently published work (Dr. Uwins on Indigestion, &c), that very small doses may be given with the greatest advantage in children's diseases marked by atrophy, &.c. In some maniacal cases it has been employed with much benefit in large doses. Dose gr. i. to iij. or more.

DoncHOs (pruriens). Cowhage.

H'lstory. A climbing perennial plant, a native both of the east and west. It is the hair of the pod which is medicinally used ; the pods which come into this country are principally imported from the West Indies.

Qualities. The hairs of the pods fasten upon the fingers when the pod is incautiously handled, and occasion an exceedingly troublesome itching.

Medical properties. Anthelmintic, acting as it appears mechanically. Mr. Chamberlain, we believe, was the first to point out this property of the cowhage. Dose grs. v. to x.

DoRSTEXiA (contrayerva). Contrayerva root.

History. A perennial and native of Peru, a3 well as some of the Caribbee Islands.

Qualities. A peculiar kind of aromatic smell proceeds from the root, which has also a warm and rather bitter taste. Drying does not destroy its qualities, which are imparted both to water and to alcohol.

Medical properties. Sudorific and gently stimulant. It is not at present much used excepting domestically. Dose 9ft to 3ft.

Dryobalanops (camphora). Camphor.

History. The camphor of commerce has been thought the produce of the laurus camphora, but more recent observation has determined it to be produced by the dryobalanops camphora. Dr. Thomson, however, describes the qualities and medical properties of the camphor under the head of Laurus, to which we refer.

Dulcamara. See Solanum.

Eryxgium (maritimum). Eryngo, sea-holly.

History. This plant is indigenous and perennial ; it grows plentifully on the sea-shore, and flowers in July and August.

Qualities. Eryngo has a sweetish taste, it has but little odor ; its virtues are imparted to water.

Medical properties. Diuretic ; very little used or thought of. Dose 5ij to 3iij—

Pa'oenia (caryophyllata). Clove tree.

history. The clove tree is a native of the Molucca Islands. The parts employed are tlie buds or unexpanded flowers, wliich are gathered while they are green and dried in the sun.

QualitUs. Cloves, when good, have a stronoˆ, peculiar, and grateful smell, an acrid aromatic taste, and a deep brown color. Their odor but not their taste is given to water : alcohol extracts both.

Medical properties. Stimulant and aromatic. Principally employed in composition. Dose grs. V. to 311.

Euphorbia (Officinarum). Euphorbium.

History. The substance called euphorbium is the concrete juice of a

slirubby succulent plant, which is a native of Barbary ; the plant is perennial. The euphorbia (antiquorum), and canariensis, are said to furnisii part of the eu-phorbiufli which is brought into this country.

Qualities. Euphorbium is in the form of irregular drops or tears, which are witliout smell, but which give to the tongue a very acrid sensation. Neitlier water nor alcohol dissolves the whole of their substance and properties. Ether takes up, we are told, six parts in ten, forming an opaline solution.

]\Ic(lical properties. Powerfully emetic, cathartic, and errhine. Not much used internally.

Farina. See Anii/luin and Triticum.

Ferrum. Iron.

History. One of the most common metallic productions of nature. It is found in its native state combined with other metals and with sulphur, combined with oxygen to the extent of oxidation, and acidified. Its presence is so universally diffused, tliat it has been described as even a constituent of organic being. Iron is not like the other metals positively poisonous. Metallic and oxidised iron are admitted into the materia medica.

Qualifies. The filings of iron are generally as obtained from the workshops mixed with copper filings, and other impurities; their appearance is dark and metallic, and their taste astringent ; the scales of oxidised iron which are detached by the smith's iron from the surface of the heated metal, are without much taste or smell ; when reduced to powder they assume a grayish-black color.

Medical properties. Tonic and anthelmintic. The mere filings have, however, no other than perhaps a mechanical operation, unless operated upon by the acid of the prima; via; ; the oxidised scales possess, however, positive clialybeate virtues. Dose grs. v. to 9j.

Ferula (assafoetida). Assafoelida.

History. The plant which furnisiies this substance is perennial, and a native of the south of lˆersia; the gum resin is procured by cutting transversely the top of the root after tlie stock has been twisted off. It hardens in liie sun.

Qualities. Assafoetida has a strong garlicky smell, and an acrid bitter taste ; these quaUtios it loses much by exposure to air. It is miscible

but not properly soluble in water, but alcohol and ether are solvents of it.

Medical properties. Stimulant, antispasmodic, emmenagogue, anthelmintic, ixnd perhaps liglitly expectorant. It is in considerable use l>otli

abstractly and in composition. Dose grs. xv. to 3ft.

Ficus (carica). Fig.

History. The fig tree is thought to be originally from the East, but it now grows plentifully in the south of Europe ; the figs that are used in this country are principally imported from the Levant.

Qualities. The taste of dried figs is sweet, their color brown. They vary both in taste and external appearance according to the parts from whicli they are sent.

Medical properties. Aperient and demulcent; their principal medicinal use is extern;' 1 in tlie way of cataplasm, in which case they arc roasted or boiled.

Fraxinus (ornus). Manna.

History. The ash which produces the mnnna of commerce is a native of the south of l".u-rope; other species besides the ornus produce it, particularly the rotundifolia. Manna is partly a natural exudation from the stem of the tree : it concretes into small white tears, and is scraped off for use ; but the greatest quantity is procured by incision.

Qualities. Manna has a very sweet taste \vil!i a slight mixture of bitterness; its smell is slight but peculiar. It is entirely soluble both in water and alcohol.

Medical properties. Laxative : used principally for children, and combined with other purgatives. Dose ^'^fs to [fij.

Fucus (vesiculosus). Bladder wrack.

History. This is a common sea-weed, which is much employed in manufacturing kelp.

Qualities. It has a taste like soda, and a slight but peculiar smell.

Medical properties. Deobstruent, employed in glandular swellings. Dose 9j to 3j.

Galbanum. See Buhou.

Gallve. See Quercus.

Gf.ntiana (lutea). Gentian root.

History. A perennial])lant, growing upon the Alps and other mountainous jiarts. The root is imported into this country princi[ially from Germany.

Qualities. Exceedingly bitter taste, no particular smell. Water, alcohol, and ether extract the virtues of gentian.

Medical properties. Tonic and stomacliic. Dose 911 to 3j.

Geoifroya (inermis). Cabbage-tree bark.

History. Tlie tree producing tliis bark grows in tlie low savannahs of .lamaica.

Qualities. The bark lias a mucilaginous taste and an unpleasant odor.

Medical properties. Antlielmintic, especially used against the lumbrici. Dose 9j to 9ij.

(JKUM (urbanum). Herb bennet, or avens.

History. This jilaiit is intiigenous and perenni;d, it grows wild in shady places, and flowers from May to August.

Qualities. An odor somewliat like cloves, and taste rather aromatic. On die outside the pieces of the root are dark, but tliey l>rcak with a white fracture. Its qualities are yielded to water aud ulcoiiol.

Medical properties. Tonic and ratlier astrin-crent. It has been jiroposed, by Buckiiavo, as a substitute for intermitteiits. Dose 3j to 5ij.

Glycyrriuza (glabra). Liquorice.

Histori), A perennial plant, a native of the south of Europe, but extensively cultivated in England. Liquorice root is dug up for use in November, when the plant is three years old.

Quulitii's. It has a svveetisli mucilaginous taste, without any odor. Water is a more complete solvent of it tlian alcoliol.

Mi'tlical piopcrtitt. A mild demulcent ; its extract is a well known remedy for common colds. Dose 51$ to 5j.

Granati Cortex. See Punica.

Gratiola (officinalis). Hedge hyssop.

Histori/. This plant is perennial, and a native of the south of Europe. It is cultivated in Britain, and gatliered for use in July during its flowering.

QiHilltics. It has no smell, but its taste is exceedingly nauseous and bitter. Water is a better menstruum for it than alcohol.

Midictil. properties. Drastic purgative, and emetic, llufeland in a work on scrofula, recommends its use in glandular and visceral affections. Dose3{^to9j.

Guaiacum (oflicinale). Guaiac.

Histori/. This tree is a native of some of the West India Islands. The wood, and the resin exuding from it, are the parts used.

Qualilics. The taste of the wood is rather bitter ; it is without odor ; it is of a brownish-yellow color externally, but is internally rather green. The resin, or what is commonly called guaiac, has a greenish color exteriorly, and breaks vvitii a fracture of mixed colors, and vitreous : it has a fragrant smell without mucii taste. Alcohol is its best solvent.

jiledicid properties. Stimulant, and diaphoretic. It has been much used m rheumatic and syphilitic atlections. Dose 9ls to 51s.

H.EMATOXYLOK (campecliianum). Logwood.

Histori/. A native of South America, now very common in Jamaica : it flowers in March and April.

Qufilities. Without smell, but having a sweetish, subastringent taste. It is possessed of a deep red-color, which it yields both to water and to alcoliol.

JMedicul properties. Slightly astringetit and tonic. Dose yj to 5j.

IIki.li-.uorvs (niger). Black hellebore, (feti-dus) fetid hellebore.

History. Tlie black hellebore was formerly called nielampodium. It is a native of Austria and the Appeiinines, and has been cultivated in our gardens under the name of the Christmas rose. The fetid hellebore is an indigenous plant, com-mon under hedges and in shady places.

Qualities. The fibres of black hellebore roots are about the thickness of a straw, externally black, and of a yellowish-white within. Their smell is disagreeable and taste acrid. Their properties are given out both to water and alcohol. The smell of the fetid hellebore, as its name indicates, is disagreeable also, and taste exceedingly acrid. It is the leaf of this plant that is employed.

Medical properties. Black hellebore is a drastic purgative ; it has been used as an hydragogue, and emmenagogue. ‘ Formerly it was

much employed in maniacal and melancholic affections. The fetid hellebore is principally thought of as an anthelmintic. Dose 9fs to 51s.

IIkraclevm (gummiferum). Ammoniac.

History. The plant which yields the gum ammoniac, is a native of the East Indies, and Africa. Tiiere seems to be some uncertainty with respect to its precise character. The juice which exudes spontaneously, or is occasioned to flow by incisions, hardens into a gum which i? ammoniac.

Qualities. The taste of ammoniac is a bitter-sweet ; its smell is faint, but not unpleasant ; it is diffusible through water, which is its best medium for administration. The small masses of which it is composed are yellow exteriorly, but wiutish when broken into.

Medical properties. Expectorant, and deobstruent. In large doses purgative and diuretic ; as it is stimulating it ought, in general, to be

avoided in those aflfections of the chest, which are attended by active inflammation. Dose 911 to 511.

IliRUDO (medicinalis). Medicinal leech.

Historij. The species of leech used in medicine is brought principally to the London mar-ket from Norfolk ; several other counties also supply the markets, and many are imported from France and Portugal. They are collected in spring and autumn.

Qualities. ‘ The body of the medicinal leech is about three inches long, tapering towards the head, composed of rings, and capable of being very much lengtiiened and contracted. The color of the back is dark olive.’ The belly is pale olive ; those imported from the continent ‘ differ from English leeches in having the belly of one uniform color.’ The horse leech differs from the medicinal, in being entirely brown, or only marked with a marginal yellow line. The horse leecli is said to cause more pain and irritation in drawing, and is therefore not in much use, excepting during a scarcity of the other species.

Medical properties and uses of the leech are well known.

IIoRDEt M (distichon). Barley.

Histori/. Barley has been said to be originally a native of Tartary. It is an annual plant, and extensively cultivated.

Qualities. When the husk of the barley is ground off, the pearl barley, as it is called, appears in the form of small white grains, which are without any odor, and of a slightly sweetish taste.

JMedical properties. Demulcent and nutrient. Ad libitum.

IIlmulls (lupulus). Hop.

Histori/. Hop is a perennial climbing plant. It is indigenous. The follicles of the plant are gathered about the middle of September ; it is these which are used.

Qualities. Hops have a fragrant odor, ratlier narcotic, their taste is bitter, aromatic, and astringent.

Medical properties. Narcotic and anodyne. A pillow of hops is often employed to ease the pain of rheumatic and nervous head-ache. Dr. Tliomson, and others, are doubtful of its medicinal virtues. 911 to 511.

IlYDRARGYRf M. Mcrcury, quicksilver.

Hixtory. INlercury is found in several parts both of the north, and south of Europe, and on the western continent. It is found in its metallic state, combined with sulphur, and oxidised.

Qualities. Mercury when pure and uncombined is without smell or taste ; it is of a white color, and always in a state of semifluidity (running) at the common temperature of the atmosphere.

Medical properties. Mercury in its metallic state possesses no medicinal action, excepting that which may be connected with its mechanical properties. We have seen it check stercoraceous vomiting in a case of supposed intus-susception, but its modus operandi is not very evident. In pharmaceutical combination, it is most extensively employed. Dose 5ij to ˆiv.

Hyoscyamus (niger). Henbane.

History. An indigenous and annual plant, which grows abundantly in Britain, by the road side, and flowers in July.

Qualities. Its smell is strong and narcotic ; its taste somewhat mucilaginous with a slight degree of acrimony, which qualities are lost considerably by drying. The virtues of henbane are partly extracted by water, but completely by diluted alcohol.

2Iedical properties. Narcotic. It is used in place of opium, in cases when circumstances forbid the use of the latter. Dose grs. v. to 9lli.

Hyssopus (officinalis). Hyssop.

Histori/. A perennial plant, growing wild in some parts of Germany ; cultivated in our gardens, and flowering from June to September,

Qualities. Hyssop leaves have an aromatic smell, and rather a pungent taste. The essential oil on which their qualities depend, rises with

water and alcohol.

Medical properties. Stimulant, and tonic, and expectorant ; but not much thought of or employed. Dose 9j to 5j.

Inula (helenium). Elecampane.

Histori/. Indigenous and perennial, growing in rich moist pastures, and flowering in July and August. It is cultivated in our gardens. The root is the part employed.

Qualities. An aromatic smell slightly foetid, with a glutinous, saponaceous, and alternately aromatic bitter taste. Its virtues are extracted by water, and more completely by alcohol.

Medical properties. Deobstruent and expectorant, by some considered tonic. Dose 9j to 3j.

Iris (florentina). Florentine iris.

History. Grows wild in some parts of the south of Europe, but cultivated in our gardens and flowers in May and June. The root is the part employed, which is principally imported from Leghorn.

Qualities. Taste acrid, and somewhat bitter : when dried, it gives out an agreeable violet odor.

Medical properties. Iris root when fresh is cathartic; the dry root is nearly inert. It is principally employed as a perfume.

JuNiPEucs (sabina). Savine, the leaf: (communis) common juniper, the berry.

History. Savine is an evergreen, from the Levant, hut cultivated in our gardens ; it flowers

in May and June. Juniper is indigenous growing on heaths and flowering in May.

Qualities. Savine leaf has a strong smell, and a bitter hot taste ; its qualities are given both to water and alcohol, as is the juniper which has a bitter taste.

Medical properties. Savine is diaphoretic, anthelmintic, and eramenagogue; perhaps possessing more directly the last mentioned

influence than most other substances to which the quality is ascribed. Externally it is applied to warts, &c. The juniper berries are diuretic and cordial: although the berry is principally employed, all parts of the plant possess diuretic qualities. Dose 3{\ to 3fi.

KiKo. See Pterocarpus.

Krameria (triandria). Ratanhy root.

History. A natire of Peru, flowering principally in October and November. It is the root and the bark of it that are employed.

Qualities. The taste is bitter and astringent, particularly the bark and external parts : its properties are yielded to boiling water. Its coloring part is especially extracted by alcohol.

ˆIedical properties. Powerfully astringent and stomachic. Externally applied it is styptic. Dose 9ft to 9j.

Lactuca (virosa). Strong-scented lettuce. (Sativa) garden lettuce.

History. The strong-scented lettuce, is an indigenous and biennial plant, which grows on banks and among rubbish, and flowers in July and August. The common lettuce is cultivated to a great extent in our gardens.

Qualities. The odor of the strong-scented lettuce is narcotic, its taste bitter. The lactua-rium which exudes from the garden lettuce when it is cut has likewise a narcotic smell, somewhat like opium.

Medical properties. Lactuarium is narcotic, as is also the expressed juice of the strong scented lettuce. Dose grs. v.

Laurus. (Cinnamomam) cinnamon tree. (Cassia) cassia tree. (Camphora) camphor. (Nobilis) laurel. (Sassafras) sassafras.

History. The cinnamon tree is a native of Ceylon, but is at present propagated in other parts of the East, and even of the West Indies. The honey cinnamon, the snake cinnamon, the camphor cinnamon, and the cahatte or the bit-ter astringent cinnamon, are the only four species, from a great many others, the bark of which is officially procured.

The cassia tree is very similar to the cinnamon; its bark is imported princi])ally from China. Both the buds and the bark of this tree are employed.

The species of laurel which yields camphor is a native of Japan, and of North America, but the greater part of the camphor of commerce, comes, as we have already stated, from Dr. Thomson, from the Dryobulunops (which see). NN'iien procured from the laurus camphora it is obtained by distillation.

The bay tree is a native of the south of Europe, but is cultivated with us. The leaves and the berries are the parts used.

The sassafras comes originally from the southern parts of North America ; it is cultivat-

ed for use in Jamaica, and is reared even in our gardens as an ornamental shrub. It flowers in May and June.

Qtuilttics. Cinnamon lias a very pleasant smell, and a taste slightly pungent; the las* kind is exceedingly thin, and of a light yellow color. Cassia has a fainter odor than cinnamon, and a more pungent taste ; it is much thicker than cinnamon, and breaks siiorter. Cassia buds more resemble the cinnamon in taste and smell. Cassia and cinnamon yield an essential oil by distillation. Camphor has a peculiar and very])enetrating smell, and an unctuous feel. Water suspends, but does not dissolve it; but alcohol, ether, and oils dissolve it. The bay leaves and berries have an aromatic astringent taste. They yield prussic acid by distillation. Sassafras wood, and bark, and root, have a sweetish, aromatic taste, and a somewhat fragrant smell. Water extracts the virtues of sassafras partially, alcohol completely.

Medical properties. Cinnamon is astringent and cordial, and the cassia possesses the same qualities. Camphor is sedative and narcotic ; in the first instance, and under some circumstances, slightly stimulant and cordial. The leaves and berries of the bay are narcotic. Dr. Thomson tells us that he has lately employed an infusion of them in impetiginous affections of the surface. Sassafras is stimulating, diaphoretic, and diuretic. Its virtues are, however, somewhat uncertain. Dose of cinnamon grs. v. to 9j ; of camphor grs. v. to 5ft ; of

the bay gr. i-to 3fs ; sassafras 9j to 3j.

Lavandula (spica). Lavender.

History. Lavender is a native of the south of Europe, but cultivated with us, and flowering from Midsummer to Autumn. The flowers are cut when they begin to blow.

Qualities. The odor of the lavender is agreeable, and the taste pungent and bitterish. Alcohol extracts its virtues completely; the oil is obtained by distillation with water.

Medical properties. Stimulant. The oil, however, of lavender is very little used, excepting in composition. Dose 9j to 5j.

Lf.ontodon (taraxacum). Dandelion.

History. A common perennial plant, flowering from April to the latter end of August. The whole of the plant is employed.

Qualities. Dandelion has a -bitter taste ; it is widiout much smell. Its virtues are imparted to water more freely than to alcohol.

Medical properties. Diuretic, deobstruent, and slightly aperient. It is not perhaps, in this country, appreciated equal to its merits. We have found it exceedingly serviceable in indolent affections of the liver. Dose 311 to 3j.

Lichen (islandicus). Lichen. Iceland moss.

History. This species of lichen is very com-mon in Iceland and in the northern parts of Germany; it grows upon heathy lands and upon stones.

Qualities. The taste of Iceland moss is mucilaginous and bitter ; its bitterness is yielded to water; and, by boiling, its mucilaginous part is extracted.

Medical properties. Demulcent and tonic. It has been much employed in phthisical affections. Dose 3) to 3ii.

Tiie lichen orcella. Orchel, or litmus, or turn-sole, which yields the argol of commerce, scarcely deserves to be considered as an article of the materia medica.

LiNi'M (usitatissimum) common flax. (Catharticum) purging flax.

History. This plant is supposed to have originally come from those parts of Egypt which are inundated annually by the rising of the Nile ; it now grows wild in England, and is extensively cultivated. It flowers in July. Most part of the linseed used in commerce comes from the Baltic. Tiie purging flax is an annual indigenous plant which grows in dry meadows, and flowers from June to August.

Qualities. The seeds of the common flax (linseed) are oily, and sweetish to the taste; they are without smell, and of a brown shining color. The purging flax possesses a bitter subacrid taste, and is almost without any odor. Water extracts its virtue.

Medical properties. Linseed is emollient and demulcent. Externally, the powder of it is used much in poultices. The purging flax is, as its name implies, cathartic ; but it is at present very little appreciated or employed.

Lythhum (salicaria). Loosestrife.

History. An indigenous annual plant, growing principally in moist meadows; it flowers from July till September.

Qualities. It is without o-!or when dried, and has a slightly astringent tasti'. It yields its vir-tue to water.

]\Iedical properties. Astringent. Not mucli employed in this country. Dose 3j.

Magnesia. See Pharmacy, and Chemistry.

Malva (sylvestris). Common mallow.

History. A perennial plant, very common in this country; it grows on waste grounds, by the way side, and among rubbish. It flowers from May to August.

Qualities. Mucilaginous to the taste, and without much smell. Its mucilaginous part, which is its principal one, is given to water.

IMedical properties. Demulcent and emollient. Used principally in enemata.

Manoanesium. Manganese.

History. A grayish-white brilliant metal, which is principally found

native, in a state oi' black oxide ; this oxide is met with abundantly in Devonshire and Cornwall, and at Howtli in Ireland.

Qualities. The black oxide of manganese is often crystallised, and then it has a shining appearance ; when it is amorphous it is without this appearance. Chlorine is evolved from it by mixing it with muriatic acid.

Medical properties. Only used for evolving oxygen, and diffusing chlorine in rooms, hospitals, &c., in the way of fumigation.

Manna. See Fraxinus.

Marrubium (vulgare). Horehound.

History. An indigenous perennial plant, growing wild on road sides and waste grounds, and flowering: in July.

Qualities. Taste bitter ; odor aromatic, which odor is a good deal dissipated by drying. The virtues of the plant are given both to water and to alcuiiui.

Medical properties. Laxative, deobstruent, diuretic, and sliglitly tonic. It is used by some practitioners in pulmonary affections, and much employed in a candied state as a domestic medicine. Dose 5j.

Mastiche. Mastich. See Pistacea.

AIatoma (cardamomum). Lesser cardamom.

History. The plant producing the lesser cardamom seeds is a native of India. The seeds are imported into this country from Bengal.

Qualities. The odor of the seeds is aromatic, and their taste of a spicy pungency. Their properties are given to water, but more completely to alcohol and ether.

Medical properties. Carminative and stomachic; chiefly used in composition. Dose 9j.

Mel. Honey.

History. The nectaries of flowers aff'ord honey, but the bees which collect it seem to impart something to it, although they do not change it into an animal substance ; the bee deposits the honey as a secretion from its body in the cells of its honeycomb.

Qualities. The color of honey should be pale ; that is the best which is obtained from young bees and flows spontaneously from the comb. It is called virgin honey. The taste of honey is saccharine ; it has not much odor.

Medical ■properties. Laxative, and externally detergent. Dose 5j to 3II.

Melaleuca (cajuputi). Cajeput. The oil.

History. The melaleuca leucadendion was generally supposed to furnish the cajeput oil ; but it is now considered the produce of a different species. The tree which yields it grows in the Molucca Islands. The oil is obtained by distillation.

Qualities. Cajeput oil is of a greenish color, has a camphoric smell, and is pungent to the taste. It is soluble in alcohol, as are all volatile oils.

Medical properties. Stimulant, antispasmodic, and diaphoretic. It is often used externally to ease the pain of a carious tooth.

Melissa (officinalis). Balm.

History. Balm is a perennial plant which grows wild on the Alps, and other mountainous situations, and is cultivated in our gardens. It flowers in the latter end of the summer.

Qualifies. Balm, when fresh, has a pleasant smell, and a slightly aromatic taste. When distilled with water an essential oil is yielded.

Medical properties. Slightly diuretic : principally now used as an agreeable drink in febrile aflPections. Dose 3j.

Menisi'ermum (palmatum). Calumba.

History. The menispermum palmatum of Winslow is supposed to be

the tree from whicii the Calumbo root is procured. It is a native of the south of Africa. The roots are dug up in the month of March. They are imported in transverse sections.

Qualifies. Taste very bitter and somewhat acrid. Odor aromatic. NVater takes up its qualities, as does alcohol, but))roof spirit the most completely. It yields a volatile oil by distillation.

Medi$al properties. Tonic and stomachic. It is one of the most useful of all tiie bitters. Dose 3ft to?fs.

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Mentha (viridis) spearmint. (Piperita) peppermint. (Pulegium) pennyroyal.

History. Spearmint is an indigenous and perennial plant, growing in marshy places, and flowers in August. Peppermint is also indigenous and perennial, and likewise flowers iu August ; it grows in moist places. Pennyroyal grows in heathy lands, as well as m moist meadows, and flowers in September.

Qualities. Spearmint has an aromatic odoi, and a pungent taste. Both alcohol and water extract its virtues. Peppermint has a warmer and more pungent taste than the spearmint, and has a camphor impregnation. The pennyroyal is more like the spearmint in odor ; its taste is also aromatic and slightly camphoric.

Medical properties. The mints are carmmative and stomachic. Pennyroyal has been supposed to be emmenagogue. Dose Bj to 5j.

Menyanthes (trifoliata). Buckbean, cr marsh trefoil.

Histo?y. This is a common plant in marshy situations ; it is one of the most beautiful of our indigenous flowers; the flowers appear in June and July.

Qualities. Buckbean leaves have an unpleasant faint smell, and nauseous taste ; their properties are yielded to water.

2Iedic(d properties. Purgative and diuretic. It has been used in intermittent fever and in rheumatic disorder. Dose 3j to 5j. Mezereon. See Dapline. Momordica (elaterium). Wild cucumber. History. A native of the south of Europe; it is cultivated in this country, but does

not bear our severe winters. The fruit is gathered in September just before it ripens.

Qualities. The juice, which is lodged in the centre of the fruit, and in which it appears that the virtues of the plant reside, is bitter to the taste, but nearly inodorous.

Medical pj-operties. Powerfully cathartic and hydragogue. A most useful medicine in some kinds of dropsies. Dose gr. fs to grs. iv. MoRus (nigra). Mulberry. History. The mulberry tree is a native ot Persia, but it bears the cold of our winters, and its fruit ripens in September.

Qualities. Mulberries are sweet and acidulous; they are without odor, and are of a deep red color.

Medical properties. Laxative and refrigerant. Ad libitum.

McscHus (moschiferus). Musk. History. The animal from which the musk is obtained is an inhabitant of the mountainous])arls of Asia. It is a timid solitary animal living among the rocks, and difficult to be taken. The musk-bag is between the navel and the pre-puce; and, in the adult animal, about two drachms of musk in a liquid state are found in it.

Qualities. The odor of musk is quite peculiar, and is exceedingly durable ; its taste is rather bitter, and its color of a reddish brown ; it is partly soluble in hot water, more easily in alcohol, and still more completely in etiier.

Medical properties. Antispasmotlic. V'T. Thomson thinks tliat its use in epilepsy is not

sufficiently appreciated. It has been much em-Histori/. The tree producin;ˆ this oil is a na—

ployed in obstinate iiicciip. Dose, grs. v. to 9j. live of the south of Europe and vorth of Africa.

MvuisTicA (moschata). Nutmeg. Its fruit is the olive, which is used at our tables

Histori/. The substance called nutmeji is the in an unripe state, steeped in salt. The olive

produce of a tree which grows in the Molucca oil is procured by expression from the ripe fruit

Islands. The spice called rnace is the involu-QualitUs. Good olive oil is of a pale color;

crum of the nut. it is the lightest of the fixed oils ; it will not

Qualities. The nut has a fragrant odor and combine with water, and is but partially soluble

an aromatic biste. Its virtues are imparted to in alcohol.

alcohol and ether. Mace is more pungent and Medical properties. Aperient and demulcent,

bitter than the nutmeg itself. and occasionally anthelmintic. Dose f. ˆft to

Medical properties. Carminative, and in large f. 3J.

doses narcotic. Dose grs. v. to 9j. Oniscus (asellus). Millepedes, or slaters.

-MviioxYLON (peruiferum). Lˆeruvian balsam. Hiitori/. These insects are found on roofs of

Histori/. The tree which yields the Peruvian houses, and under stones in cold moist places.

balsam grows in the w\Trmest parts of South They are killed by the vapor of spirits, and are

America. It is called quinquin by the natives, prepared for use by enclosing them in a canvas

bag in the steam of heated alcohol.

Qualities. They have a fetid odor, and a nauseous, but sweetish, taste.

Medical properties. Supposed to be expectorant, and useful in pulmonary affections, but at

The balsam which exudes after incisions are made in the wood is called white liquid bal-sam; that which is principally employed in commerce is procured by boiling the twigs of the tree in vvater.

Qualities. Balsam of Peru has a fragrant odor, present very little esteemed, and a warm bitterish taste. Ether and alcohol (Jpium. See Papuver. dissolve it, the latter less readily. Opoponax. See Pastinaca.

Medical properties. Stimulant, tonic, and in ORirjANUM (vulgare). Common marjoram, some degree expectorant. It is used, as are (Marjorana). Sweet marjoram, some of the other balsams, in chronic discharges ‘ Histori/. Thecommon marjoram is indigenous

from mucous membranes. Dose f. 5ft to f. 3j.

MvRPaiA. IMyrrh. A gum resin.

Histori/. It has not been hitherto ascertained fro:n what tree myrrh is obtained. We receive

and perennial. It grows on chalky soils, and flowers froni July to September. The sweet marjoram is a native of Portugal, but is cultivated in our gardens. It also flowers from July

it from tl.e East Indies. It seems to be an exu-to September.

dation from the plant which produces it. Qualities. The common marjoram has a pun—

Quulities. Myrrh is in the form of tears, of a gent taste, considerably like thyme. The sweet reddish yellow color. It has a fragrant peculiar marjoram is bitterish and aromatic. The mar-odor and a pungent

bitterish taste. It is but jorams are treated by distillation, in order to partially soluble in vvater, ether, and alcohol. procure their oil.

Medical properties. Stimulant and expectorant. Medical properties. Tonic and emmenagogue,

It has been supposed to be especially excitative but not much employed. Dose grs. v. to 9j. of the uterine system, and therefore administered Ostrea (edulus). Oyster, shell, as an emmenagogue. It forms, likewise, an in-Histori/. The oyster is a well-known fish

gredient in the compound iron mixture of the which attaches itself generally to shelving rocks,

pharmacopoeia. Dose Bft to 5j. but is placed artificially iii beds near the sea—

Myrtus (pimenta). shore. The shells are the only parts used offi—

History. The pimento-tree is a native of the cinally.

West Indies and South America. It is the fruit of the tree which is medicinally used.

Qualities. Pimenta is aromatic to the taste and of an agreeable smell. It has been called all-spice, from its odor resembling the combination of cinnamon, cloves, and nutmeg.

Medical properties. An aromatic stimulant. But principally employed in medicine as an adjunct in composition. Dose grs. v. to 3j.

NicoTiANA (tabacum). Tobacco.

Qualities. They are composed (the shells), of carbonate of lime and a membranous substance.

Medical properties. Antacid ; but, as they do not diflTer from other lime, their retention is unnecessary. Dose Si.

Ovis (aries). Sheep. (Fat of mutton).

Histori/. The sheep is a very well-known animal. It does not live at furthest beyond fourteen years. It delights in dry and warm pastures,

and is subject to disieases when ex-

History. This is an annual plant; a native of posed to damp. America, but brought into Europe nearly oOO Qualities. Mutton fat, or suet, is not very years ago. The leaves are the part of the plant dissimilar to other fat; it yields, however, oleic

employed.

Qiiulilies. Taste fetid and bitter : the virtues of the plant reside in an essential oil. Tiiese virtues are imparted to water by infusion, and to alcohol.

Medical properties. Narcotic and violently purgative, diuretic, and emetic. Its princijial use in medicine is as an enema in cases of bowel affection complicated with hernia. Dose, internally, gr. fs to grs. v.

Oi.f.A (Kuropoja). Olive oil.

and margaritic acid.

Medical properties. Emollient. It is principally employed to give consistency to ointments and plasters.

Ovum. See Phasiunus.

OxALis (acetosella). Wood sorrel leaves.

History. This small perennial plant grows wild in our woods and meadows; it flowers in April and May.

Qualities. Sorrel has a pleasant acidulous taste, and is without odor. The crystals ob-

tained from its expressed juice are called essential salt of lemons.

Medical properties. Refrigerant and antiseptic. Ad libitum.

Papaver (somniferum). White poppy, which yields opium. (Rhoeas). Red, or wild, poppy.

History. The white poppy is a native of the warmer parts of Asia ; from which it was probably imported into Europe and En < gland. It is an annual plant, and flowers in July. The opium of commerce is an exudation from the capsules of the plant, produced by incisions. Ail the parts of the plant contain this juice, but it is much more abundant in the capsules. The red, or wild poppy is indigenous, and grows abundantly in corn fields and waste lands. It flowers in June and July. The capsules even of this species of poppy contain a small portion of opium.

Qualities. The dried head of the white poppy is without much either of smell or color. Boiling water extracts its virtues, and the evaporated extract has much of the opiate property ; it is, however, much milder. The Turkey opium has a remarkably heavy narcotic odor, and a bitter pungent taste. The East India opium is in color much darker than the Turkey; it has an empyreumatic smell, with a more nauseous, but less bitter, taste than the Turkey. It is not nearly so strong as the latter. The active constituent of opium, together with the principles of other medicinal substances, we shall have to speak of under the head of Pharmacy. We may here say, generally, that different parts of the drug in question are acted on by alcohol, ether, and water.

Medical properties. Opium is proverbially narcotic. It/ is used in almost all affections that are characterised by violent pain, but its employment often requires to be very careful and restrictive. The poppy is principally used in syrup and extract. The red poppy is chiefly employed as a coloring syrup, as the opiate virtues of this root are very feeble. Dose of opium gr. i. to grs. v. ; of poppy extract grs. v.

Pastinaca (opoponax). Opoponax.

History. The plant producing tlie gum resin called opoponax is a species of parsnip, a native of the south of Europe, and flowers in July. The gum resin is obtained by exudation from incisions ; it is imported principally from the Levant in tears or irregular lumps.

Qualities. Opoponax has a strong disagreeable odor and an acrid

bitterish taste. It is not wholly soluble in watei. Alcohol is not its proper menstruum.

Medical properties. Antispasmodic and emmenagogue. Not much employed. Dose ‘dH to 3fs.

Petroleum. See Bitumen.

Phasianus (gallus). Dunghill fowl. The egg—

History. It has not been correctly ascertained from what country this bird originally came. It has been said to have been brought from Persia about 500 years before the Christian era. It is only the egg that is ofiicinal.

Qualities. The contents of the egg consist of .the white, which is an insipid, rjlnrv, tenacious.

fluid ; and the yolk, which has a. bland oily Mste. The shell is made up of carbonate of lime, phos-phate of lime, and animal mucus.

Medical properties. The yolk is gently aperient, and was, at one time, much used in jaundice. The white is principally employed for clarification; and the shells are antacid.

PiiYSETER (macrocephalus). Spermaceti.

History. The species of vrhale from which the spermaceti of commerce is obtained is characterised by a particularly large head. It is principally found in the South Seas. The ceta-ceum, or as it is vulgarly named spermaceti, is taken out from the cavity of the head, and purified by a long process.

Qualities. Spermaceti when purified is white, insipid, and unctuous. It is only miscible with water by the medium of mucilage or yolk of egg •. hot alcohol and ether dissolve it, but it separates upon cooling.

Medical properties. Demulcent and emollient. It is often administered as a vehicle of and adjunct to opium in mitigating the pains after child birth. Dose 9j to 3ft.

PiMPiNELLA (anisum). Anise. The seeds.

History. A native of the east, but cultivated in Europe, and even in this country for its seeds. The plant flowers in July.

Qualities. Anise seed gives out an aromatic odor, and it has a warm sweetish taste. Its virtues are imparted both to water and to a!.» cohol.

Medical properties. Carminative ; principally employed in compositirjn and in the flatulencies of children. Dose 9fs to 3j.

PrirraTO. See Myrtus.

PiNUs (sylvestrisj common turpentine. (Larix) Venice turpentine. (Balsamea) balsam of Ca-nada. (Abies) Burgundy pitch.

History. The pinus sylvestris or Scotch fir is a common tree of the north. The larch tree, from which the Venice turpentine is procured, is a native of the south of Europe and Siberia. One species comes from America. The balsamea which yields the Canada balsam is from the most northern parts of America, while the abies or spruce fir, which gives the Burgundy pitch, comes from Europe, and the north of Asia ; what is called oil of turpentine is procured by distilling the resinous exudation from the tree, the resin itself being known by the name of turpentine. Common or yellow resin is the residue of the distillation. Tar is formed by slowly burning branches of the pine. 'e-nice turpentine is procured from the larch tree by boring a hole into the tree, and suff'eriiig the turpentine to flow. Canada balsam is obtained by incisions into the body of the pinus balsamea from which it exudes. Burgundy pitch is also obtained by incisions into the tree which yields it, and the resin or Thus exudes spontaneously from the same tree.

Qualities. The above several species cf turpentine have all a great deal in common : they are pungent to the taste, have a peculiar odor, and are completely dissolved in alcohol and ether, wliile tlieir flavor only is imparted to water. The common turpentine is bitter and disagreeable to the taste, and of a strong odor;

it is more opaque than the other turpentines. X'enice turpentine is of a

less unpleasant taste and smell, of a yellowish color, and more fluid. The Canada balsam is whitish and more transparent. For the Chian turpentine, see Pis-taeia. The oil of turpentine is hot and pungent to the taste. It is, when pure, without color ; it dissolves in sulphuric ether, but sparingly and with difficulty in alcohol. Tar has a strong odor, it is partly soluble in water, and is formed into the substance called pitch by inspissation from boiling. The resins are insoluble in water, but entirely soluble in ether and alcohol. Their taste is acrid, and when they are heated they emit a slight turpentine odor. Burgundy pitch is unctuous to the feel, is of a reddish-brown color, and of a turpentme odor.

Medical properties. Turpentine and its oils are stimulating and powerfiiily cathartic. They have also a strong action upon the kidneys. Oil of turpentine has lately been employed as an anthelmintic especially against the tape worm. Tar IS used principally in chronic affections of the skin, but is not at present in much estimation. Burgundy pitch and the resins are principally confined to external use, and enter into the composition of ointments and plasters. Dose of the oil of turpentine, as an anthelmintic, f. 5j, for other purposes f. 5fs tof. 5j.

Piper. ˆNigrum) Black pepper. (Longum) long pepper. (Cubeba) cubebs.

History. The black pepper plant is a native of the East Indies. The pepper itself is the berry of the plant, two crops of which are yielded, one in December, and one in July. The white pepper is the same berry gathered when it is fully ripe and freed of its outer covering by maceration. The long pepper plant is also a native of the east. The fruit is gathered before it is ripe, and dried by the heat of the sun. The cubebs plant is a native likewise of the east. Its fruit grows in clusters.

Qualities. Black pepper is pungent to the taste, and has an aromatic smell. Its virtues are partially given to water, and entirely toalco-hol and ether. The long pepper has an exceedingly hot flavor, with a weak aromatic smell. The odor of cubebs is agreeable and rather fragrant, but the taste is pungent and slightly bitter.

Medical properties. The peppers are generally carminative. Cubebs is diuretic, and it has lately been administered in discharges from the mucous membranes both of the urinary or-gans, and the bowels. Dose of the pepper grs. V. to 9j, of the cubebs 9j to 5j.

Pistucia. (Terebinthus) Chian turpentine. (Lentiscus) mastiche.

History. The chian turpentine tree is a na-tive of Africa and the east. It is cultivated for the turpentine in the islands of Chios and Cyprus. The mastiche tree is also cultivated, especially in the island of Chios.

Qualities. Chian turpentine is of a very pale yellow color : it does not materially differ from the other turpentines. See Pixus. Mastic is merely insipid ; when heated it gives out a fragrant odor. It is soluble in ether, but not entirely in alcohol.

Medical properties. The principal use to which mastic is put is that of di\iding other medicines so as to make them more active; its combination with aloes is said to be particularly useful in this respect. It is also employed to fill up tiie 'hollow of carious teeth. Dose 3ft to9j.

Pix. See PifKis.

Plumbum. Lead.

History. Lead is a metal of a bluish-gray color : it is found native both in a metallic state and combined with oxygen in various proportions. The ore from which metallic lead is principally procured is Galena.

Qualities. Lead possesses considerable lustre, which is soon lost when the metal is exposed to the air. It is almost without taste, and has rather an unpleasant odor, especially when rubbed. It combines very readily with oxygen.

Aledical properties. Lead in its metallic state has no medicinal properties. The white lead is prepared with vinegar, and has been described as an acetate, but is generally now considered a carbonate; it is astringent; it is called generally ceruse, and is principally employed for inflamed parts and old sores. Litharge is also used as an external astringent ; it is prepared by exposing metallic lead to heat and air so as to oxydise the metal. Red lead or minium has been also employed, but is now seldom used. In this last preparation the lead is in the highest state of oxidisement. See Pharmacy and Chemistry.

PoLYGALA (senega). Seneka root.

History. This plant grows wild in North America, especially in Virginia; it is perennial. The root is the part employed.

Qualities. It is the barV of the root wiiich contains the qualities of the drug ; which is pungent to the taste, but without much smell. Alcohol

extracts the active matter of the root, which is thrown down by the addition of water.

Medical properties. Stimulant and expectorant. It is also diuretic and purgative. It has been employed in low fever when the lungs are affected, and in hydropic disorders. Dose 9j to 9ij.

Polygonum (bistorta). Bistort wood, or snakeweed.

History. This plant is indigenous, growing principally in moist lands, and flowering in June.

Qualities. The taste of the root is rough and austere ; it is inodorous. Water extracts its virtues.

Medical properties. Powerfully astringent and tonic. Not at present in much use. Dose 9fs to 3j.

PoRRUM. See Allium.

PoTASsa; NiTRAS. Nitrate of potass, nitre.

History. This salt is found native on the surface of soils in many countries; and it is prepared artificially by an imitation of nature, and exposing animal and vegetable substances to putrefy in conjunction with calcareous earth; nitric acid is one of the products which unites with the potass, that is either generated or already existent in the animal and vegetable matter employed. The sal prunelle of commerce is melted nitre cast into moulds.

Qtuditici. Nitre has a salt bitterish taste : it is inodorous. It is completely soluble in boiling-water, but insoluble in alcoliol. VVhen mixed with inflammable substances it detonates with lieat.

Medical properties. Refrigerant and diuretic. An exceedingly good medicine \n some forms of lever and inflammations. Dose 91ˆ to 9j.

PotassjE. Potash. Pearlash.

Histort/. This substance, which is an impure subcarbonate of potass, principally comes from the Baltic and from America; it is produced by burning the dried stems and branches of plants, and lixiviating the ashes or pouring water upon them so as to dissolve and separate tlie alkaline product.

Qualities. Pearlash is of a spongy texture ; It is of a grayish or greenish color, and lias a saline disagreeable taste.

Medical properties. Vegetable alkalies are antacid, and diuretic, and lithontriptic, but the pearlash of commerce is too impure to employ for medicinal purposes.

PoTASSiE Sulphas. Sulphate of potass. See Pharmacy.

Prunus (domestica). Plum tree.

Histury. This tree is originally from Greece and Asia; but it now grows wild in this country, and flowers in the beginning of May. The dried fruit is imported from the continent . tlie French prunes are considered the best.

Qualities. The taste of prunes is subacid and sweetish ; they are without much odor. They are principally composed of saccharine and mucilaginous matter, and of malic acid.

Medical properties. Laxative. They are principally employed in the composition of decoctions and electuaries.

Pterocarpus (santalinus) red sanders wood, (erinacea) kino.

History. The red sanders tree is a native of India, and grows to a great size. Its wood is brought to this country in large billets. The tree

which yields the kino is said to be of African growth, and of the species of pterocarpus which is called erinacea. The kino generally met with in the shops is extracted from the nauclea gambir ; but there seems to be considerable doubt in reference to this product and Ats source.

Qualifies. The red sanders wood is nearly insipid, but has an aromatic odor. It is of a bright red color, which is yielded to alcoliol and ether, but not to water. Kino is without odor, but is of a bitterish astringent taste, difl'er-ing according to the jiart whence it comes. It is partly soluble both in water and alcohol.

Medical properties. Red sanders wood is only used as a coloring matter. Kino is a powerful and useful astringent. Dose 911 to 5ft.

PuLEGiuM. See Mentha.

PuNiCA (granatum). Pomegranate.

History. The pomegranate tree is a native of the south of Europe and of Barbary. Its fruit does not come to perfection when cultivated in our gardens.

Quulilies. Tlie flowers which iuo nanunl ba-laustines are of an elegant red color ; without

much smell, and of a bitterish astringent taste. The bark possesses the same sensible qualities. Water extracts them.

Medical properties. Astringent, and, according to some, anthelmintic. Dose, 3ft to 3ift.

Pyrethrl'm. See Anthcmis.

Pyrl's (cydouia). Quince.

History. This tree is a native of Crete, but is cultivated with us, and its fruit rijiens in this climate.

Qualities. Quinces have an austere acid taste. Their seeds are without odor, and have a slight bitterness.

Medical properties. Aperient and demulcent. Ad libitum.

Quassia (simarouba). Simaruba bark and wood. (Excelsa), Quassia.

History. The simaruba or mountain dainsou is a native of South America. Quassia grows in Jamaica. It is the bark of tlie former and the wood of the latter which are in use.

Qualities. Simaruba is bitter to the taste, and without much odor. Its virtues are given to water and alcohol. Quassia is exceedingly bit-ter, and without odor. The bitterness of quassia is imparted both to water and alcohol.

Medical properties. Simaruba-is tonic and astringent ; it has been used in intermittent fevers and dysentery. Quassia is employed principally as a stomachic tonic. Dose of the simaruba 9j to 5j ; of the quassia 9ft to 9j.

QuERcus (infectoria) Gall. (Pedunculata) Oak bark.

History. The galls of commerce are said to be from the infectoria species of oak. The galls are produced by the cynips quercus folii, a small hymenopterous insect, puncturing the shoots of the young boughs, and depositing its eggs ; this puncture and deposit occasion an irritation which at length comes to form the excrescence called the gall. The oak is indigenous, and a well known tree.

Qualities. Galls have a bitter and astringent taste. They are without smell ; they are of a blackish or olive color, and their size varies from that of a pea to a hazel nut. They impart their properties to a certain measure of water and alcohol. The bark of the oak is inodorous, and of an astringent taste; it yields its virtues both to alcohol and water.

Medical properties. Galls are very powerfully astringent; they are principally employed as external remedies. Oak bark is astringent and tonic. Some have employed it in intermittent fevers, as a substitute for the cinchona bark. Dose of galls grs. v. to 9ft; of the oak bark 9ft to 5ft.

Rii AMIS' us (catharticus). Buckthorn.

History. An indigenous shrub, growing in hedges, and flowering in May and .lune. It is the berries which are used in medicine.

Qualities. Buckthorn berries have a disagreeable,' rather faint smell, and a nauseous, acrid, and bitter taste. Their juice is green, or of a more purple dye if gathered late in the season.

Medical properties. Powerfully cathartic Dose 5j to 5ij.

RiiEUM (palmatuin) iialmaioil riui!)arl>. (1 ‘ndulalurn) Waved-lcuvcd rhu!)arl.>.

MATERIA M E D I C A.

History. The rheum palinatum is a native of China ; in the shops three varieties of rhubarb are found, the Russian, the Turkey, and the East Indian ; the tirst two are evidently the root of tlie same species ; the East Indian rhubarb lias been thouEfht a different species (the rheum unduhitum); but we are informed by Ur. Rebman that the species is the same with the others, but tlial there is less care in the preparation.

Qualities. Rhubarb has a peculiar odor, and a nauseous slightly astringent taste. The East Tndia rhubarb is more nauseous than the Tur-key, and has a stronger odor ; its powder is of a higher red. Turkey or Russian rhubarb is said to contain ‘ more tannin, oxalate of lime, and resin ; the Chinese more extractive and gallic acid.’ Water, alcohol, and ether, are partial solvents.

21iilic(d properties. Rhubarb is purgati’ve, stomachic, and astringent in different doses.]“rom the analysis we should expect tiiat the Chinese kind had more of the last quality. Dose dfl to 5i\ ; in smaller quantities as an as-triuGjent and stomachic.

RiiODODENDUON (chrysanthum). Yellow flowered rhododendrum.

Histoit/. This shrub is a native of Siberia, and flowers in June and July. The leaves are the parts employed.

Qualities. Taste astringent, and rather bitter ; almost without smell. Water extracts its virtues.

Medical properties. Stimulant, narcotic, and diaphoretic. It has been used in rheumatism and gout Dose gre. v. to 9fs.

Rhus (toxicodendron). Sumach, or poison oak.

History. A deciduous, shrub, a native of North America. The leaves are the parts era-ployed.

Qualities. Sumach .eaves have a mawkish taste; they are without much smell. Tiieir virtues are freely imparted both to water and alcohol.

Medical properties. Narcotic. Dose gr. Is to grs. ij.

Ricixua (communis). Common ricinus, producing tiie castor oil.

History. Tiiis plant grows in both the Indies, in Greece, and in Africa ; its capsules contain a white oily kernel, from which the oil is extracted, both by expression and by boiling. The seeds are occasionally employed.

Qualitits. The genuine oil is viscid, and of a pale straw color ; it is without much smell, and occasions a slight sense of acrimony in the throat when swallowed. It is soluble in alcohol and ether.

]\Iedical properties. Mildly purgative. Dose f. 5ft to f. i).

Rosa (gallica) red rose. (Centifolia) da-mask rose. (Canina) wild dog rose.

History. The red rose is a native of the south !.>f Europe, but cultivated in our gardens, and flowering in June and July. The native place of the damask rose is unknown, but it is much cultivated in our gardens. The dog rose grows wild in hedges.

Qualities. The odor of the red rose is not so fragrant as that of the damask species. The taste of the petals is astringent and slightly but pleasantly bitter. The odor of the damask rose is exceedingly pleasant, and its taste rather acidulous. The dog rose is employed for the pulp of its fruit, or hip, as it is commonly called : the petals are fragrant, but without much of the quality which renders the cultivated species useful.

Medical properties. The red rose is astringe.it, and the Damask rose slightly laxative. The pulp of the wild rose fruit is refrigerant, and perhaps sligluly aperient. Dose Bj to 3j.

RosMARixus (officinalis). Rosemary.

History. A native of the south of Europe, but cultivated in our gardens ; it is perennial. The leaves and the tender tops are the strongest parts of the plant.

Qualities. Odor grateful ; taste pungent and aromatic. Alcohol extracts its virtues, which are only given out partially to water.

Medical properties. Stimulant, and emmenagogue. Dose 3fs to 5ft.

RuBiA (tinctorum). Madder.

History. Madder is a perennial plant, originally from the Levant, but cultivated with us. The root is the part used both in dyeing and in medicine.

Qualities. The smell of madder is disagreeable, but not very powerful ; its taste is ra-ther bitter. Water and alcohol imbibe its qualities.

J\ledical properties. Emmenagogue. Dose 5ft to 5j.

RuMEX (aquaticus) Water-dock, (acetosa) Common sorrel.

History. Water dock is indigenous and perennial, growing by the sides of ditches and rivers, and flowering in July and August. Com-mon sorrel is also indigenous and perennial, and flowers in June.

Qualities. The root of water dock is inodorous, but the taste of it is highly austere. Its qualities are imparted to water. Sorrel leaves have very little smell, but an acidulous pleasant flavor. Boiling water extracts their properties.

ˆledical properties. Water-dock is astringent. It has been used in cutaneous affections with alleijed success. Sorrel leaves are diuretic and refrigerant. Dose 3ij.

RuTA (graveolens). Common rue.

History. This is a native of the south of Europe, but much cultivated in our gardens; it flowers in June and September.

Qualities. The leaves of rue have a peculiar odor and a bitterish penetrating taste. Their volatile quality is yielded to distillation by water.

Medical properties. Stimulating, and supposed to be emmenaaogue. Dose 9ft to 9ij.

Sabina. See Juniperus.

.ˆACCHARUM (officinarum). Sugar cane.

History. The suear cane is a native of both the Indies. In the West Indies it is cultivated very extensively ; from this plant suuar is obtained, first by expressing, then boiling the juice. Molasses is that part of the juice which does not crystallise.

Qu'jlities. Sugar has a well known sweetness ;

it is inodorous. Water and alcohol dissolve it in difierent proportions. The molasses or treacle has a peculiar odor, and a sweet empyreu-niatic taste ; it is viscid, and of a brown or black color. It is more soluble in alcohol than sugar.

Medical properties. Laxative, particularly the raw sugar and the molasses.

Sagapenum. Sagapenum.

Histoiy. The plant which furnishes this concrete juice has not been ascertained; Wildenhow supposes it to he the ferula persica.

Qualities. Sagapenum comes to us in large masses or in small tears; it is of a yellowish color, has a garlicky smell, and atasle not unlike assafoetida. Proof spirit is its best solvent.

Medical properties. Antispasmodic and emmenagogue. Dose BH to 5ll.

Salix (fragilis) crack willow. (Alba) white willow. (Caprea) common willow.

History. The crack willow is indigenous, growing upon river banks, and flowering m May. The white willow grows principally in woods, as does the species called caprea. It is the bark of the tree which is employed.

Qualities. Willow bark is bitter to the taste and without odor.

Medical properties. Tonic and astringent. Some have employed it in

pulmonary afTections of a phthisical nature. Dose 9fi to 311.

Salvia (officinalis). Sage.

History. A perennial plant ; a native of the south of Europe, but cultivated in our gardens, and flowering in June.

Qualities. Sage has a fragrant odor, and an aronatic bitterish taste. The oil can be obtained by distillation.

Medical properties. Carminative and aromatic ; not so much in estimation as formerly. Dose di\ to 9ij.

Sambucus (nigra). Common elder.

History. This is a common indigenous plant, flowering in June, and ripening its berries in September.

Qualities. Elder flowers have a faint smell and bitterish taste; their qualities are imparted to water by infusion. The berries are almost ■without smell, but have a sweetish taste. The inner bark of the tree is inodorous also, and has a sweetish taste, followed by a degree of bitterness and acrimony. Water and alcohol extract their virtues. Dose grs. v. to 9j.

Sai'o. Soap. (Durus) hard soap. (Mollis) soft soap.

Histori/. Soap is of two kinds — hard, which is made of oil and soda ; soft, which is composed of oil and potassa.

Qualities. Hard soap has very little smell, and a nauseous alkaline taste; it is white (unless artificially colored) and of a firm consistence. Water and alcohol are both partial solvents of it. Soft soap principally difl'ers from tiie hard kind in being of a less firm consistence.

Medical properties. Lithontriptic, diuretic, and aperient. Soft soap is principally employed in external uses. Dose BH to oil.

Sarsai'arilla. See Smilax.

Sassafras. See Lauras.

Scammonia. See Convolvulus.

Scilla (maritima). Scpiill.

History. Squill is a perennial plant, bulbous rooted, growing in the south of Europe and north of Africa. It flowers in April and ˆlay.

Qualities. Squill has not much odor ; its taste IS bitter, acrid, and nauseous.

Medical properties. Diuretic and expectorant. In large doses emetic. Dose as an expectorant grs. V. to grs. iij ; as an emetic ‘3ft to grs. xv.

ScuopuuLARiA (nodosa). Figwort.

History. An indigenous])lant, growing in woods and under hedges, and flowering in July ; it is perennial.

Qualities. The smell of the recent leaves is fetid, and their taste disagreeable and bitterish. Their virtues are yielded to water.

Medical properties. Diuretic and sedative. Very little used.

Senega. See Polygala.

Senna. See Cassia.

Serpentaria. See Aristolochia.

Sevum. See Ovis.

Simarouba. See Quassia.

SiNAPis. (Alba) white mustard seed. (Ni-gra) common mustard.

History. The white mustard seed plant is indigenous, and grows in fields and by road sides; it is annual, and flowers in June. The common mustard is also indigenous and annual, and flowers likewise in June.

Qualities. Mustard seed when entire has very little smell ; when bruised its odor is penetrating, and taste pungent. The seeds of the common mustard are rather more pungent than the other.

Medical properties. Stimulant, diuretic, and, when externally employed, rubefacient. The whole seed of the white mustard has lately been employed extensively as a domestic medicine in cases of dyspepsia and torpid bowel. Dose 3ij to 3ft.

SiuM (nodiflorum). Water parsnip.

History. An indigenous and perennial plant, growing wild in rivers and ditches, and flowering in the beginning of August.

Qualities. Nearly inodorous, and having a sweetish taste.

Medical properties. Emmenagogue and diure-retic. At present very little employed. Dose of the expressed juice, f. ˆij.'

Smilax (Sarsaparilla). Sarsaparilla.

History. A native of the Spanish West In-dies, flowering in July and August. It is the root which is employed medicinally; but it is tliebark of the root in which the efficacy resides.

Qualities. Taste mucilaginous, and slightly bitter; scarcely any odor. Its qualities are yielded in difl'erent proportions to water and alcohol.

Medical properties. Demulcent and diuretic. It has been much employed in syphilitic and cutaneous afiections. l)ose i)j to 3j.

Soda (Impura). Carbonate of soda, barilla.

Histori/. Soda is found native in the form of a carbonate, in several parts on the surface of the earth ; but the greatest part of that employed in commerce is extracted from the ashes of some species of the alga2. What is called kelp is th# carbonate of soda obtained by burning the sea wrack.

Qualities. Barilla when good is of a grayish color; it is wiilioul niucli odor, but has a sharp alkalescent taste.

Medical proptrlics. Antacid, diuretic, and lithontriptic; but the barilla is only employed as one of the substances to furnish the pure carbonate or subcarbonate of soda. See Pharmacy.

SoD.t MuRiAS. Muriate of soda. Common salt.

History. This salt is found abundantly in nature, but it is generally mixed with earths and other ingredients. The ocean owes its saline taste to the presence of this salt.

Qualities. Pure salt is without odor, and its saline taste is without bitterness. It is soluble freely in water.

Malicai properties. Anthelmintic and stomachic. It is supposed to assist digestion in a very considerable degree. Dr. Paris, in his work on diet, iiighly lauds it on this score. Dose 9j to

3j—

SoD.ˆ; SuBBORAs. Subborate of soda. Borax.

History. Borax is found in an impure state in Persia and Thibet; in this state it is called tincal.

Qualities. Inodorous, with taste slightly sa-line. When purified it is in large white masses. Boiling water dissolves it more freely, and in greater proportions than cold water.

Medical propci'ties. Refrigerant and detergent. It is only used as a local or external application, and is much employed in the aphthrc of children.

Sod.?; SiTLPKAS. Sulphate of soda. Glauber's salt.

History. This salt is found native in several parts mixed with other matters ; but the greatest part tliat is used is manufactured.

Qualities. Taste saline and bitter, inodorous. Soluble in water to a considerable extent.

Medical properties. Purgative; but not so much used as formerly on account of its disagreeable taste. See Pharmacy.

Solan UM (dulcamara). Woody nightshade.

History. Indigenous, growing in hedges, and flowering in July. The berries ripen in the beginning of October.

Qualities. The taste of the twigs, which are the jiarts employed, are both bitter and sweet ; hence its name, bitter-sweet. They impart tiieir virtues to boiling water.

Medical properties. Narcotic and diuretic. It has been employed in

several forms of cutaneous disorder. Dose 9j to 5jfJ.

SoLiDAOo (virga-aurea) golden rod.

History. An indigenous perennial plant, growing in woods and upon heaths. It dowers from July to September.

Qualities. Odor aromatic ; taste rather as-fririgent. The leaves impart their qualities to boiling water.

Medical properties. Slightly astringent and lithontriptic. Dose 9ft to 5j.

Spartium Cscoparium) broom.

History. Indigenous, growing on dry lands, and flowering in June.

Qualities. The tops, which are the parts used, have a disagreeable smell and bitter taste. Their

quaUties are given both to water and alcohol. Medical properties. Diuretic and cathartic. Dose Uli to 3j.

Si'iGEi.iA (marilandica) Indian pink. History. A perennial plant growing wild in the lower parts of North America. It flowers in July and August.

Qualities. The root, which is the part employed, is bitter to the taste ; its virtues are imparted to boiling water.

jMedicu' properties. Anthelmintic ; principally useful in expelling the round worms. Dose 9ft to 3j.

Spiritus Vini. See Chemistry and the article Alcohol, and Pharmacy.

Spongia (officinalis) sponge.

History. Sponge is principally found in the Mediterranean and Red Seas. It is usually attached to the bottom of rocks ; it was formerly supposed to be a vegetable production, but it is now admitted to be an animal of the class zoophytes.

Qualities. Color brown, texture light and porous, absorbing fluid in which it is immersed.

Medical properties. Alterative when burnt, and useful in some

glandular tumors. Its virtues are supposed to be referrible to the quantity of iodine it contains. Dose 5ft to 5ij.

Stalagmitis (cambogioides). Gamboge.

History. The tree furnishing this gum resin is a native of the kingdom of Siam and Ceylon ; in the former place the inhabitants obtain the gatnboge by breaking the leaves and young shoots ; but in Ceylon it is extracted from tlie wood of the tree, by incisions, at the commencement of flowering.

Qualities. Gamboge has no smell, and very little taste; it is of a bright deep yellow color. It is almost entirely soluble in water, if the water be impregnated with an alkali. Alcohol and the alkalies are also solvents of gamboge.

Medical properties. Powerfully cathartic and hydragogue. Dose grs. ij to 9ft.

Stannum. Tin.

History. In some places, as in Cornwall, this metal is found native in great abundance; it occurs both in its metallic state and combined with oxygen.

Qualities. Rather disagreeable taste, and a jieculiar odor, especially when rubbed. It shows considerable lustre when first exposed to tiie air, which by this exposure is soon lost.

Medical properties. Anthelmintic. Dose 3i to 5ij.

Staphisagria. See Delphinium.

Styrax (officinale) storax balsam. (Benzowi) benzoin.

Histoid/. The storax tree is a native of the Le-vant, and flowers in July. The balsam is procured by incisions made in the bark. The benzoin, or benjamin tree, grows in Sumatra; tlu balsam is also obtained from this tree by incisions.

Qualities. Storax has a fragrant smell and an aromatic taste. Its color is reddish-brown Water dissolves it partly; alcohol and ether completely. Benzoin balsam has but little taste, but emits a very pleasant smell. Alcohol and ether readily dissolve this balsam also.

Medical properties. Storax is slightly expec-

torant. Benzoin perhaps more so. Dose 2{l.

SucciNUM. Amber.

History. Amber is a vegetable substance dug out of the earth, or found upon the sea shore in Polish Prussia and Pomerania. The greater part of what is imported into this country comes from the Baltic.

Qualities. Amber is without much taste or smell, unless rubbed or heated, when it emits an agreeable odor. It is generally of a yellow or brown color. It is insoluble in water, and only partly soluble in alcohol.

Medical properties. Antispasmodic ; but scarcely now employed. Dose 3ft to 5j.

Sulphur.

History/. This substance is found native in the neighbourhood of volcanoes ; but the sulphur of commerce is principally extracted from pyrites.

Qualities. Sulphur is of a bright yellow color, has a peculiar odor, especially when heated, and is without much taste. The roll sulplmr is crystallised. Sublimed sulphur is in the form of powder. Sulphur is insoluble in water, but soluble in a small degree in alcohol and ether.

Medical properties. Laxative and diaphoretic. Specific in scabies. It is, perhaps, more useful as an alterative aperient than is generally supposed in the regular practice of medicine. Dose 5ˆ to 3ij.

SupERTARTRAS PoTASSs; (impurus) tartar. (Purus) crystals of tartar. Cream of tartar.

History. Tartar is the saline extractive mat-ter which is deposited from new wine on the sides of the cask or bottle in which it is kept. When purified (which is effected by boiling, filtering, -and crystallising) it is

the cream of tartar of commerce.

Qualities. Cream of tartar is a bitartrate of po-tass. It has an acid roughish taste, and is soluble in thirty parts of its weight of boiling water.

Medical properties. Purgative, diuretic, and refrigerant. Much used in dropsy. Dose f 3j to 3).

Sus (scrota). Hog; the fat; hog's lard.

History-. The hog is a well known animal, inhabiting most parts of temperate regions. The wild hog and that which is domesticated are varieties of the same species. It is the fat which is employed for medicinal purposes.

Quuli/ies. Good lard is very white, without much smell or taste ; it is insoluble in water, alcohol, or ether, but capable of combination with the alkalies in the form of soap.

Medical properties. Emollient; but principally employed in the composition of ointments and plasters.

SwiETENiA (febrifuga).

History. A native of the East. It is the bark of the tnˆe which is employed in medicine. The bark of the species of swietenia, called mahogany, has likewise been employed medicinally. This tree is from the West Indies.

QiuiUties. Febrifuge. Swietenia is plcasanUy bitter anil astringent to the taste ; it is of a grayisli color without, but breaks of a light red color. The bark of the mahogany tree is very astringent nnd bitter. Water, when boiling, extracts the virtues of these barks.

Medical properties. Tonic and astringent. Both these barks have been used as substitutes for the Peruvian bark ; but they are not much employed in Britain or in Europe. Dose 9j to 3j.

Tamarindus (Indica). Tamarind.

History. The tamarind tree is a native cf both the Indies; it is also found in Ecypt and Arabia. The part employed is the fruit or pulp artificially prepared.

Qualities. Tamarinds have an agreeable acid taste. They contain citric, and malic, and tar-taric acid, witb supertartrate of potass.

Medical properties. Refrigerant and laxative. Resinous purgatives are rendered milder by their admixture with tamarinds.

Tanacetum (vulgare). Tansy.

History. Tansy is indigenous and perennial. It grows wild by road sides and on the borders of meadows, and flowers at the end of June. The leaves are the parts employed, sometimes the seeds.

Qualities. Taste acrid, and rather bitter, slightly resembling camphor. Smell, strong and peculiar. Water and alcohol extract its virtues.

j\ledical properties. Tansy leaves and seeds are considered tonic and vermifuge. An infusion of tansy has been recommended and employed to prevent the recurrence of gout. Dose 3ft to 3j.

Teucrium (marum) common raarum. (Chanifedrys) wall germander.

History. Marum, or Syrian mastich, is a na-tive of Spain and Syria, and cultivated in our gardens. The wall germander is indigenous, and shoots out on old walls, flowering in June and July.

Qualities. Marum is very pungent in its smell, readily exciting sneezing when rubbed between the fingers and held to the nostrils. The taste is bitterish and aromatic. The recent leaves of the wall germander are aromatic and pleasantly bitter; they lose their smell by drying.

Medical properties. The marum is errhine. The germander has been used as an emmenagogue, and as a stomach tonic. Dose 9ft to 3j.

ToLUTANUM (balsamum). Tolu.

History. The tree which yields the balsam of Tolu is a native of South America. It has been ascertained to be the same from which the Peruvian balsam is procured ; the tolu balsam being the white Peruvian balsam hardened by exposure to the air. Tlie tolu balsam flows from incisions made in the bark during the hoi season.

Qualities. This balsam has an exceedingly agreeable smell, and an aromatic sweetish taste. It is of a yellowish-brown color, ratlier inclining to red. It is soluble in alcohol, and yields a small portion of volatile oil by distillation with water.

Medical properties. Stimulant and expectorant. Rather less irritating than the other balsams. Dose 9ft to 3ft.

ToRMENTii.i.A (erecta). Tormentil.

History. This is a common])lant in woods and on heaths, and flowers in June and July. It is the root that is employed.

Qualities. An aromatic austere taste, and a slightly aroiwatic odor. It is knotty, and exter nally blackish, b'-caking reddish.

Medical propettics. Astringent. iMore de-serviniT of credit than many other substances tlv.it are used for the same purposes. Dose 311 to 5j.

Triticum (hybernum). Wheat. Starch.

History. Wheat was first cultivated in Sicily, but whence it came into Europe does not seem to have been ascertained. The sprinsˆ wheat is a variety. Starch is tiie fecula of wheat.

Qualities. Starch is without smell or much taste. It is insoluble in cold water, alcohol, and ether. Boiling water dissolves it.

Medical properties. Emollient ; used principally in enemas.

TussiLAGO (farfara). Coltsfoot.

Histori/. This is an indigenous plant, growing wild in moist situations, and flowering in March and April ; the leaves soon appear after the riowers. These last are the parts principally employed.

Qualities. The taste of the coltsfoot leaves is mucilaginous and subacid. When dried they are without smell.

Medical properties. Demulcent and mildly expectorant.

Valeriana (officinalis). Valerian.

History. An indigenous perennial plant, and flowering in June. One variety of valerian grows in marshy and woody parts, another in high and open ground.

Qualities. The root, which is the part employed, has a strong unpleasant smell, and a bitterish warm subacrid taste. It yields its virtues to water when boiling, and to alcohol.

Medical properties. Antispasmodic and stimulant. Some have employed it as anantlielmintic. Dose, 31ˆ to 3j.

Veratrum (album). White hellebore.

History. This plant is a native of Italy, Greece, and Germany ; it is cultivated in our gardens, and flowers in July.

Qualities. The root, when recent, has a strong disagreeable smell, and a bitterish acrid taste. The odor is dissipated by drying. The external appearance of it is of a yellowish-gniy.

Medical properties. Violently purgative. Not at present in much use internally. It is employed externally as an errhine, and is powerful. Dose, gr. i. to ij.

Veronica (beccabunga). Brooklime.

History. This plant is perennial and indigenous, common in ditches and rivulets. It flowers at the latter end of July.

Qualities. The leaves of brooklime have a bitterish taste, sliglitly astringent. They are v.‘ithout odor.

Medical properties. Antiscorbutic, but not in much repute.

Viola (odorata). Violet.

History. Perennial and indigenous, growing in shady places, and flowering in April.

Qualities. X’iolet flowers have an agreeable smell, and a slightly bitter taste. They yield their properties to boiling water.

Medical properties. Laxative, and, according to some, pectoral and anodyne. Dose 9f|.

Vixrs (vinifera). Common vine. Berries.

History. The vine grows in most temperate regions. It is cultivated in several parts of Eu-rope for the purpose of making wine with its

berries; but in England the grapes or berries of the vme are very little used but for eating. There are several varieties of the vine.

Qualities. Grapes are sweet and subacid to the taste, llaisins, which are dried grapes, are generally sweeter than the first berry.

Medical properties. Grapes are aperient and slightly diuretic. Raisins are more laxative than the grape ; they are principally employed in composition.

VˆiNUM. Wine. See Fermentation, Chemistry, and Wine.

Ulmus (campestris). Elm, the bark.

History. The elm tree is indigenous. It flowers in JMarch and April, and the leaves subsequently miibld themselves.

Qaaliti':s. Elm bark has a slightly bitter mucilaginous taste, and but very little odor. Its qualities are given to boiling water.

Medical properties. Diuretic. Some have employed it in leprous aff'ections. Dose 9j to 3j.

UvA Ursi. See Arbutus.

Winteria (aromatica). Winter's bark.

History. The tree from which this bark is procured was discovered by captain Winter in the straits of Magellan. The bark was used by him as a spice.

Qualities. The odor of this bark is aromatic, and its taste hot and spicy. It yields a volatiie oil in distillation with water.

Medical properties. Carminative and stomachic. Canella alba is frequently used for it. Dose 9j to 3ft.

Zincum. Zinc. Calamine. Tutty.

History. This metal is found in its metallic state in the ore called blende, and under several degrees of oxidation. The ore of zinc called calamine is an article of the materia inedica in Itself; it is found

abundantly in several counties of England

Qualities. Metallic zinc, when rubbed between the fingers, gives out a very peculiar odor ; its color is white, with a slight shade of blue ; it breaks lamellated and shining. Calamine appears in the form of reddish-yellow lumps, and is without “metallic lustre. Tutty, which is an impure oxide of zinc, is of a brownish color, and breaks with a smooth fracture ; it is inodorous, and without much taste.

Medical properties. Calamine is used as an absorbent eartli. The oxides are employed as tonics and antispasmodics, and externally as astringents and stimulants. Dose of the oxide of zinc grs. iij to 9ft.

ZiNziBER (ofticinule).

History. A pereiniial plant, a native of the East Indies, but now cultivated in the West India Islands, where it flowers in September. The black ginger is the root scalded in water before being dried in the sun. The white consists of the best pieces scraped and washed with care, without being subjected to boiling water.

Qualities. Ginger has rather a fragrant smell, and a hot aromatic taste. Water, alcohol, anc’ ether, extract its virtues ; and it yields a volatile oil by distillation.

Medicinal properties. Carminative, stimulant, and sialagogue. Principally employed in cooi-position. Dose 9ft to 9j.

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The principal writers on the materia medica are, of the most modern — Paris, Duncan, Thomson, Gray, and John Murray. Preceding them, CuUenand Lewis. Woodville's Medical Botany, as far as it goes, may be considered a useful

materia medica. Murray's Apparatus Medicami-num is a voluminous and elaborate work. Hermann's Cynosura has enjoyed reputation ; and Dr. Alston's, though not perhaps equally satisfactory, is a learned work.

MATE'RIAL, adj. Sc n. s.'^ Fr. materiel ; Mate'rialist, n. s. Ital. materiale ;

Material'ity, 1 Latin muterialis.

M/.te'rially, adv. ^-Consisting of, or

Mate'pvIalness, n. s. I pertaining to,

Mate'riaie, adj. | matter; corpo—

Materia'tion, «. s. J real ; weighty:

important; essential (taking to before the subject of relation) ; not formal : the substance or basis of formation ; constituent part ; generally used as a n.s. in tiie plural. A materialist is he who argues for the existence of material substances only : materiality, and materialness, corporealness : materiate, composed of matter: materiation, the act of forming it. Sep Mat-ter.

All this concerneth the customs of the Irish very materialty ; as well to reform those which are evil, as to confirm and continue those which are good. Spenser on Ireland.

What part of the world soever we fall into, the ordinary use of this very prayer hath, with equal continuance, accompanied the same, as one of the principal and most material duties of honour done to Christ. Hooker.

‘Ilie question is not, whether you allow or disallow that book, neither is it material.]Vhit<jijt.

He would not stay at your petitions made ;

His business more material.

Shakspeare. Winter s Tale.

That these trees of life and knowledge were material trees, though figures of the law and the gospel, it is not doubted by the most religious and learned writers. Raleigh.

The West-Indians, and many nations of the Africans, finding means and materials, have been taught, by their own necessities, to pass rivers in a boat of one tree. id.

It is more difficult to make gold or other metals less ponderous and less materitite, than to make silver of lead or quicksilver, both which are more ponderous than silver ; so that they need rather a degree of fixation than any condensation. Bacon.

Neither is this a question of words, but infinitely material in nature. Id. A’atural History.

When we judge, our minds we minors make. And as those glasses which material be,

Forms of material things do ordy take. For thoughts or minds in them we cannot see.

IJavies.

Considering that corporeity could not agree witli this universal subsistent nature, abstracting from all materiality in his ideas, and giving them an actual subsistence in nature, he made them like angels, whose essences were to be tlie essence, and to give existence to corporeal individuals ; and so each idea was embodied in every individual of its species.

Dilˆhil.

That lamp in one of the heathen temples tlie art of man miglit make of some such material as the stone ashestus, which being onc» enkindled will burn without being consumed. Wilkins.

Intending an accurate enumeration of medical materials, the omission

hereof affords some probability it was not used by the ancients. Brmcne.

Creation is the production of all things out of nothing ; a formation not only of matter but of form, and a materiation even of matter itself. Id.

I do not mean, that any tking is separable from a body by fire that was not materially pre-existent in it. Boyle.

The materials of that building very fortunately ranged themselves into that delicate order, that it must be a very great chance that parts them.

Tillotson.

As for the more material faults of writing, though I see many of them, I want leisure to amend them.

Drxfden.

He was bent upon making IMemmius a materialist.

Id.

1 shall, in the account of simple ideas, set down only such as are most material to our present purpose. Locke.

Simple ideas, the materials of all our knowledge, are suggested to the mind only by sensation and reflection. Id.

JVIale souls are diversified with so many characters, that the world has not variety of materials sufficient to furnish out their different inclinations.

Addison's Spectator.

David, who made such rich provision of materials for the building of the temple, because he had dipt his hands in blood, was not permitted to lay a stone in that sacred pile. South.

Though an ill intention is certainly sufficient to spoil and corrupt an act in itself materially good, yet no good intention whatsoever can rectify or infuse a moral goodness into an act otherwise evil.

In this material point, the constitution of the English government far exceeds all others. Swift. Such a fool was never found. Who pulled a palace to the ground, Only to have the ruins made Materials for an house decayed. Id,

In modest mediocrity, content With base materials, sat on well-tanned hides, Obdurate and unyielding, glassy smooth. With here and there-a tuft of crimson yarn, Or scarlet crewel, in the cushion fixed. If cushion might be called, what harder seemed Than the firm oak, of which the frame was formed.

Cowper.

Materialists, a sect in the ancient church, com])osed of persons, who being prepossessed with that maxim in the ancient philosophy, F.x nihilo nihil fit, ‘ Out of nothing nothing can arise,’ had recourse to an internal matter, on which they supposed God wrought in the creation, instead of admitting God alone as the sole cause of the existence of all things. Tertullian vigorously opposes the doctrine of the materialists, in his treatise against llermogenes, who was one of their number.

Materialists is also a name given to those who maintain that the soul of man is material; or that the principle of])crception and thought is not a substance distinct from the body, but the result of corporeal organisation. See MiTAPinr-sics. There are others called by this name, who

have maintained that there is nothing but matter ill the universe, and tliat the Deity iiimseir is material. See Spinoza.

MATEll’NAL, adj. i Fr. matemel ; Latin

JMateu’nity, 7t. s. Sinaternalis, muter. iMo—

tlierly ; befitting or pertaining ˆo a mother ; fond;

kind : maternity, tlie relation or character of a

mother.

The babe had all that infant care beguiles, And early knew his mother in her smiles : At his first aptness the maternal love Those rudiments of reason did improve. Bryden. In sucli a palace Arista;us found C'yrene, when he bore tlie plaintive tale Of his lost bees to her maternal, ear. Cowper. Though with her head discrowned, And pale, but lovely, with maternal grief She clasps a babe, to whom her breast yields no rc-ief. Byron.

MATKRNTIS de Cilano (George Christian), a learned Hungarian, born at Presburg. He wrote, 1. i)e Terras Concussionibus. 2. De Causis Lucis Borealis. 3. De Motu Humorum progressive 'eteribus non ignoto. 4? De Sa-turnaliura Origine et celebrandi Ritu apud Romanos. He died at Altena in 1773.

MATH AM (James), an engraver of considerable eminence, born at Haerlem in 1571. After the death of his father, Henry Goltzius, a celebrated painter and engraver, married his mother. From his father-in-law he learned the art of engraving. To complete his studies, he went to Italy, where be engraved a considerable nundjer of plates. On his return, he worked under the eye of Goltzius, and produced many very valuable prints, after his manner, in a clear, free style, and which are greatly esteemed.

MATHEMATICS.

MATHEMATICS, n. s. •\ Lat. mathemati—

Matiiemai'ical, ((y. icus; Gr. ˆladiifia—

Mathemat'ically, w/t;. >TiKr. The science

Matiiematic'iam, n.s. i of quantity and

Mathe'sis, n. s. J number. See below. Matbesis is the doctrine of the matliematics : mathematician, be who studies or is a proficient in them.

If a man's wits be wandermg, let him study the mathematics j for in

demonstrations, if his wit be called away never so little, he must begin again.

Bacon.

The malhematicks and the metaphysicks Fall to them, as you find your stomach serves you.

Shakiˆptare.

Mathematics is a ballast for the soul, to fix it, not to stall it ; not to jostle out other arts. Fuller.

The East and West Upon the globe, a vuithemutirk point Only divides : thus happiness and misery. Ami all extremes, are still contiguous.

Denha7n.

It is as impossible for an aggregate of finites to comprehend or exhaust one infinite, as it is for the greatest number of viathemaiick points to amount to, or constitute a body. Boyle.

One of the most eminent mathematioians of the age assured me, that the greatest pleasure he took in reading 'irgii was in examining / Eneas's voyage by the map. Addison's Sjiectatur.

1 suppose all the particles of matter to be situated in an exact and mathematical evenness. Bentleij.

We may be mathematically certain, that the heat of the sun is according to the density of the sun-beams, and is reciprocally proportional to the square of the distance from the body of the sun. Bentleii.

See mystery to mathematichs fly. Fope.

Mad matlicsis alone was unconfined. Id.

Beauty is not a ([uality of the circle. It lies not iu any part of the hue, whose parts are all equally distant from a common centre. It is only the effect which that figure produces upon a mind, whose particular fabric or structure renders it susceptible of such sentiments. In vain would you look for it in the circle, or seek it, cither by your siˆises or by mu-thcmalicul reasonings, iu all tiic properties of that figure. Hume.

Mathematics. Tiiis, like many ether terms toimectcd willi art and

science, is (it (ircciaii ori-

gin, and primarily means learning. It came in course of time to be limited to one particular description of learning, much in the same man-ner and for a similar reason as the English term learning has been appropriated to classical knowledge, or the study and ac(iuisition of the dead languages. Mathematical learning in fact held the same predominant station in the ancient that classical learning has so long held in the modern schools.

It is not possible tliat a single word should be descriptive of any complex object presented to the mind, whether that object exist in nature independently of tiie mind, or be merely one of its own inventions. Hence the term mathematics cannot be taken as a definition; nor can the definitions which have been attempted for it be regarded as any thing more than approximations to accurate indications. If, for example, we say ‘ Mathematics is that science which contemplates whatever is capable of being numbered or measured,’ or that it is the science of quantity, — or a science that considers magnitudes either as computable or measurable, all these, and similar attempts at definition, are essentially faulty, because they are not sufficiently definite and comprehensive. It would perhaps be a nearer approach to accuracy of definition, or rather indication, to say, mathematics is the art of computation and measurement. But this also is defective. The term art, however, is ra-ther more appropriate than the term science ; though neither the one nor the other is sufficient of itself for the purpose : for both art and science are necessarily included. Mathematics is neither an art nor a science, but the union of both. We are accustomed to hear of mathematical sciences, knowledge and learning; we never bear, however, of mathematical art ; and tlie expression, no doubt, seems strange. — But tliis very circumstance proves the importance of our attempt to awaken attention to wliat may in itself seem of no consequence. We are the unconscious slaves of habit or custom ; and the established usage of language is one of the last species of bondage which even a philoso[)iiic understand iiig completely shakes of)’.

It must be remembered that matliematical science, learning, art, or wliatever we clioose to call it, is wholly of human creation or invention, as much as a rule, compass, quadrant, or any philosophical instrument, apparatus, or method whatever. It has no prototype in nature : it is merely a philosophical contrivance for the purpose of better understanding and interpreting nature, or of becoming more accurately and intimately acquainted with her. If, therefore, we speak of the science of mathematics, it must be m a different sense from the use of the word when employed in direct reference to nature herself. We may speak of the properties of numbers, and magnitudes, and lines, and angles, just as we may speak of the properties of the rule, the square, the compass ; but these properties are attributes of our own creation, not of the works of God.

Mathematics are commonly distinguished into pure and mixed. Pure mathematics, it is said, consider quantity abstractedly ; and mixed mathematics treat of magnitudes as subsisting in material bodies, and consequently are interwoven every where with physical considerations. This is one of the objectionable distinctions, positions, and dePnitions, too frequently to be met with in connexion with a science which boasts of accuracy and certainty. The notion of quantity abstractedly, or separately from material bodies, and physical considerations, is manifestly absurd ; for where or how can quantity exist or be conceived of as existing but in some material body? We might philosophise about color, form, or shape, solidity, fluidity, elasticity, gravity, &c. &c., abstractedly from material bodies and physical considerations (as was long indeed attempted), and call this pure philosophy ; but it would be a pure fiction of the brain, — a mere absurdity. If pure mathematics really consisted in such abstractions, they might be defined the science of non-existents ; but, even in the most imaginary quantity of the most absolute abstraction, the imagination (to say nothing of the understanding) of the purest, or most speculative mathematician, must have something of the nature of materia firma to rest upon.

There is, without doubt, a foundation in sense and reason for the distinction intended by pure and mixed (that is, between theoretic and practical) mathematics ; but it deserves consideration how far the distinctii)n, as commonly expressed, and other distinctions, definitions, and positions which remain to be noticed, have ministered to false philosophy ; and in what respects Mathematics have retarded,

as well as accelerated, the progress of knowledge. An impartial estimate of the merits of mathematical learning shall be attempted at the conclusion of tills article, after a rapid sketch has been given of its history. Tiie brief history intended may be conveniently divided into ancient and mo-dern.

The Mathematics of the Ancients. — In contemplating the mathematics of the ancients, our curiosity is naturally invited to their invention or origin; but origins are a vexatious race of entities, especially if their nativity happened

in til-older, or rather early time of the world. We can ascertain, with a kind of infallible certainty, who obtained the last patent, or made some recent and memorable improvement in any art or science; but who will give us authentic information as to the original invention or first inventor? Even as to such recent discoveries or inventions as the mariner's compass, gunpowder, printing, the horologe, the telescope, &c. &c., how much uncertainty mocks our enquiries !

Ancient Arithmetic — If we begin with arithmetic, which may be considered the lowest but first branch of the mathematics, we have no means of ascertaining where or how it was invented or brought to the state in which it existed among the ancient Greeks. It is hardly credible that human beings should exist any where, or in any state, intellectually considered, without something deserving the name of arithmetic, that is, an art or method of com])utation ; and there is as much evidence as the nature of the case requires that it had been carried to some considerable extent at a very early period of hu-man existence.

Tlie Greeks appear to have been the first European people among whom arithmetic existed in any high degree of perfection; and the evidence seems equally strong that they received it from the Egyptians. Indeed the acknowledgments of the Greeks to the Egyptians for intellectual benefactions are singularly candid and grateful, considering the national peculiarities of the former people ; and supply the most satisfactory of all kinds of evidence on the subject, that the philosophers of Greece were the disciples of those of Egypt. Whether the arithmetic of the Greeks was exactly the same as that of the Egyptians, or in any respect either improved or deteriorated, we have now no means of ascertaining. The probability seems to he on the side of deterioration rather than on that of improvement; but if it had not been for the historical justice of the Greeks towards their

instructors, and the monuments of their science which have defied the power of time, almost the very i.ame and memorial of the most wonderful nation perhaps, intellectually considered, that ever existed, would have perished from the earth.

We have mentioned the arithmetic of the Greeks as possessing a high degree of perfection ; but this must be taken comparatively, and in reference to a ruder and more defective state of the art or method of computation ; for, in comparison with the modern arithmetic, that of the Greeks was very defective and unavailable. It is very])robablo, as M. Goguet has remarked, tliat they used, for some time at least, pebbles in their calculations; for their verb signifying to compute, or calculate, is formed upon a noun signifying a little stone ; just as our own word calculate, borrowed from the Romans, is from calculus, a little stone or pebble. The letters of the alphabet were indeed used to denote number, but in such a manner as to prove that arithmetical operations must have been excocdmuiy difficult when carried to any extent, as is abundantly manifest from the treatise of Archimedes concerning the dimensions of a circle. The mechanical contrivance called abacus was em-67G

ployed, and probably very few if any of the greatest calculators of ancient Greece could compute to any extent without its assistance. Though a very clumsy instrument or method of computation, it was far more necessary and important to the ancient, than logarithmic tables are to the modern mathematician.

Such beiui;- the defective nature of tlie ancient arithmetic, the wonder is not that the hiiˆher branches of tlie mathematics were not carried farther or rendered more available for useful purposes, but tliat they reached such a degree of perfection as they actually attained. The remarks of a contemporary are so much to our purpose that we quote them without hesitation as in perfect accordance with our oWn opinion. * To render mathematical speculations of any real use, the numerical solution of problems is indispensable; and in this we have every reason to conclude the ancients were much behind. The want of a convenient arithmetic impeded them greatly in actual calculation, and even obliged them to have recourse to a certain mechanical contrivance called the abacus, as we now see the Chinese use their

swan-pan, and the inhabitants of Mexico their knotted strings. Indeed the whole character of their geometry abundantly shows that the rule and compass were actually resorted to in practice ; that they employed their constructions not as modern geometers have done, merely to explain the theory and de-duce rules of computation, but to perform the computations themselves, and give, by measurement, the length of lines and magnitude of angles. This, though a most rude and troublesome method, might suffice to the more ordinary practical cases ; but, when the purposes of a more exact astronomy demanded greater nicety, they would find themselves much embarrassed. The construction of solid figures is next to impossible; and we may reasonably surmise that the first essays of Ilipparchus towards a system of trigonometry, consisted in the demonstration of such properties of solid angles and their including planes as would enable him to reduce the usual astronomical compulations to the construction of plane triangles ; and this again to its most simple case, the right angled triangle, and in point of ultimate difficulty, to the determining of an arc from its chord, and vice versa. Here we think it exceedingly probable that graphical estimations, founded on some mechanical contiivance, might be resorted to. Archimedes indeed, by his quadrature of the circle (the first example of the approximate solution of a difficult problem which deserves the name), had afforded a basis on whicli a tolerably exact table of chords might have been constructed, his inferior limit differing from the truth only in the fifth decimal, yet there is a difficulty how the ancients could apply this to any useful purpose without a farther insight into the artifices of computation than we have any reason to suppose they possessed. The employment of chords, as being more directly and accurately measurable than any other lines in a circle, seems to corroborate this surmise of a meclianical estimation. The remaining fragments of the two first books of Pappus suffice at least to show how inconceivably embarrassing their arithmetical computations must have been.'

Anciekt Geometry. — The geometry of the ancients is next to be directly considered, — for it has been already indirectly referred to in the foregoing remarks. Here, for the sake of a connected historical view, \ye may advert to what has been suggested in another part of this work when treating of Geometry. The etymology of tlie name is an indication of the original intention and application, as well as of tiie invention of geometry : It strongly corroborates the testimony of Herodotus, Diodorus, Strabo, and Proclus, in ascribing the origin of geometry to the Egyptians ; and in affirming that the immediate cause or occasion of its origin was the annual inundations of the Nile. Few of the old adages are more obviously just than that necessity is the

mother of invention. Indeed, as some of the greatest inventions ultimately have had the humblest and even most casual beginnings, it is not wholly improbable that geometry may owe its existence to some such circumstance as a graphic or diagrammal representation or map of the lands adjacent to the Nile. But, whatever be in this, geometry would soon be perceived to be available for other purposes, or to admit of other applications, than those contemplated in its original design ; and it would be cultivated as a mental exercise for the sake of mere speculative pleasure by the contemplative and studious who enjoyed leisure, and who were apt to feel that greatest of all miseries (and the most active minds will ever feel it most keenly), ‘ the misery of not knowing what to do.’ If the pure mathematics possess such beauties and charms as those ascribed to them by Dr. Barrow, Dr. Minto, and others, we may well suppose that pure geometry, even in her rudest shape or plainest form, found mathematical lovers in Egypt and Greece, who were not only devoted admirers themselves, but who spared no pains to render her the object of universal admiration. Indeed most of the Greek geometers were a sort of Platonic lovers of the abstract beauty of truth as existing in the properties of lines, angles, Jcc, apart from all utility. That the Greeks received geometry from the Egyptians there can be no reasonable doubt; but, as already remarked concerning arithmetic, how far it was actually improved in tlie hands of the former we have now no means of ascertaining. The Greeks might improve what they had borrowed imperfectly, and yet not carry geometry to a higher degree of perfection than that in which it had previously existed in Egypt. Thales is said to have introduced it into Greece; where it was cultivated by Pythagoras, Anaxagoras, Plato, and others. About fifty years after Plato, and 300 before the Christian era, Euclid of Alexandria is generally believed to have collected together all the theorems which had been invented by his predecessors, and digested them into fifteen books, entitled the Elements of Geometry. Next to Euclid, or whoever was the author of the Elements, stands Apolionius Per-gaeus, who flourished in the reign of Ptolemy Euergetes (who patronised him) 100 years after Euclid, and 230 before Christ. Apolionius was

one of the greatest geometers and astronomers of antiquity ; but of all Iiis works only part of his Cotiics remains ; which was first published by Commandinus at Bologne in 1566. About the same time with Apoilonius flourished the famous Arciiimedes of Syracuse, who was usefully prosecutins: the mixed, whilst many others were dreaming over the pure mathematics. He has always been regarded as the true founder of the science of mechanics. In his treatise, entitled Isoporrica, he has given a complete demonstration of the fundamental property of the lever. The theory of the inclined plane, the pulley, and the screw, which was first published in the eighth book of Pappus's Mathematical Collections, has likewise been ascribed to Archimedes ; and the honor of forty mechanical inventions has been conferred ou him by the ancients. The boastful speech about moving the earth was probably an invention or exaggeration of some of his blind admirers ; for true science and wisdom are modest.

The next in the line of the great mathematicians of antiquity, whose memorial remains, is Ilipparchus, born at Nice in Bithynia, and who died about 100 years before the Christian era. Hipparchus is one of the ancient inventors in science most justly entitled to admiration. If not the Tery first who reduced astronomy into a regular science, he was the greatest of all the ancient astronomers, whose record has descended to our times. His Catalogue of Stars is still preserved in Ptolemy's Almagest. Pliny says he foretold the course of the sun and moon for COO years, calculated according to the different manners of reckoning the months, days, and hours in use among several nations, and for the different situations of places. He also formed the lunar period which bore his name. His Commentary on Aratus's Phacnomena is extant, a correct edition of which was published by Peta-vius. Hipparchus may also be regarded as the father of trigonometry, which afterwards became a distinct branch of the mathematics in the hands of the Arabs or Moors.

The next in succession after Hipparchus known to us as a mathematician of eminence is Ptolemy of Pelusium, who lived about the year 138. The Ptolemaic System of the world, which placed the earth as the centre, derived its existence or at least its name from him ; and his Geography, and a Treatise on Astrology, are extant.

After Ptolemy comes Pappus, of Alexandria, and of the fourth century. The most considerable of his works are Mathematical Collections; a Comment on the Almagest of Ptolemy ; and Commentaries on Aristarchus concerning the Magnitudes and Distances of the Sun and Moon.

Proclus, the author of A Commentary on Euclid, may be considered the last of the ancient or Greek mathematicians. But, before proceeding vvitii our historical view, it will be proper to attempt an estimate of the merits of geometry before it was conne<;ted with the modern improvements.

That great stress was laid upon geometrical learning by the ancient philosophers is abun-

dantly evident, not only from history, but from the single circumstance of Plato having inscribed over the door of his academy, ‘ Let no one ignorant of geometry enter here.’ That geometry had attained a degree of elegance (to use tiie word so much in vogue with geometers as to have become a ki»d of cant phrase), in their hands, scarcely to be surpassed, is also abundantly evident from the place which Euclid still holds. Yet it is an estabiislied fact that, with all their geometrical attainments and idolatry, the ancient philosophers possessed little or nothing deserving the name of philosophy, but abundance of dignified absurdity and species of sophistry. We shall not stop at present to enquire how far their geometry was innocent or guilty of this; but one thing seems evident, that it was more for show or elegance than of any real utility. It was surely possible for some one ignorant of geometry to have entered the academy of Plato with more real science, sound reason, and true wisdom, than he and all his disciples put together possessed. His sublime mind was no doubt often, at least in imagination, ‘ abstracted and elevated from sensible matter,’ to quote the words of Dr. Barrow, ‘ distincdy viewing pure forms, conceiving, the beauty of ideas, and investigating the harmony of proportions ;’ yet all this had no necessary connexion with just notions or right reasoning concerning the natures and relations of things existing in the universe, independently of geometry, and of all the properties of lines, angles, squares, circles, and diagrams. Concerning the merits of the ancient geometry, as to any useful applications, we have the following judgment from one whose mathematical authority will not be disputed. ‘Among the ancient philosophers whose delight was in reasoning, and who troubled themselves little with any thing else, geometry, while it attained a degree of elegance scarcely .to be surpassed, had assumed a form singularly unfavorable to useful applications, where results are to be actually computed, and approximations made. For these purposes the most exquisite geometrical construction is often but the mockery of a solution. But even its elegance was speedily found to desert it when tried on the more difficult enquiries of the modern philosophy, while

its application to such researches was attended with a degree of intellectual exertion, a contention of mind, sufficient to deter the boldest reasoner from its use.'

Modern History of Matiiem.\tics from THF. Decline of the Ro.man I'mpire, down to THE Presfnt Time. — Mathematical learning rather existed than flourished in the Roman em-pire. It never appears to have been in mucli estimation with those subduers and masters of the world, the old Romans ; for Tacitus informs us that tlvey gave the name of mathematicians to all who were devoted to divination and astrology. Passionately fond as they were of mastery and dominion, they seem to have had no idea that mathematical knowledge is power. And, except in the person of Archimedes, there was little evidence presented to their martial minds to produce such a judgment. It is certaiidy a remarkable tact, that the miglitieit people po-

litically considered, recorded in the history of the world, did not produce a single matheinu-tician. It is, perhaps, not less remarkable, that the arts and sciences, when ready to perish in Europe, sliould have found refuse among the Arabian conquerors and the followers of Mahomet ; whose Turkish disciples have proved themselves such barbarous enemies of science and civilisation. But, strange as it might at first appear, the Arabs and JMoors were not only the means of preserving, but of improving the arts and sciences in general, and mathematical learning in particular.

They had previously received much useful knowledge from India, and they willingly availed themselves of the literaiy treasures of Greece. Many works of the Greek authors were translated into the Arabic by the most skilful interpreters ; and the contents of some of the most valuable, which would have otherwise perished, were by this means preserved. The Arabs do not appear to have any claims to our admiration as inventors, but they have many claims to our gratitude as benefactors, in preserving and conveying to us the intellectual treasures of Greece and India.

In this sudden and temporary elevation of Arabs and Moors, above what may be termed their natural level, much seems ascribable to a few extraordinary persons, possessing at once mental power and political authority ; who seem to have been raised up for the special purpose of imparting to modern Europe all the benefits of philosophy ; for, almost as soon as they disappeared, their own people relapsed into greater ignorance and barbarity than perhaps at any former period of their history. In the remarkable historical phenomenon which we are now contemplating, we find not only that princes were philosopiiers, but that almost the only philosophers of eminence were princes ; and this singular instance in the history of nations, may, perhaps, be regarded as a striking proof how insecure the dominion of phdosophy is, when she Irolds of the crown, and owes her authority and existence to the palace and the throne. A long line of Almamons or Alphonsos would be as miraculous as the preservation of the Jews. The first of these honored princes was the seventh of the Abassides. He succeeded in 813 to the caliphate of Bagdad ; where he founded a university to which he invited able professors to teach the languages and sciences. lie calculated a set of astronomical tables, and caused the works of the most celebrated Greek authors to be translated into Arabic by the most competent interpreters. Alphonso, the king of Castile, flourished about the middle of the thirteenth century ; and, as justly observed by professor Playfair, ‘ was remarkable for such freedom of Jiought, and such boldness of language, as it required his royal dignity to protect.’ lie applied himself ddigcntly to the study of astronomy; he perceived the inaccuracy of Ptolemy’s tables, and endeavoured to correct their errors by new tables of his own. His profane spirit, or boast that he could have given the Autlior of nature better counsel, may be regarded, perhaps, as levelled at the Ptolemaic system, rather than at the Creator.

We have mentioned Alplionso m connexion witli Almamon because the one is related to the other as consequent and antecedent; for Alphonso’s philosophic eminence is directly ascribable to the Moors ; and because Almamon and Alphonso, Bagdad and Castile, are to be regarded as two remarkable chronological and geographical points in the modern history of the mathematics; or rather in the space occupied by the Arabs and Moors, as the preservers and improvers of mathematical learning.

From the thirteenth to the middle of the sixteenth century, or say, for the sake of memorable association, from the time of Alphonso king of Castile to the time of Cardan mathematical professor of Milan, the

learned were diligently recovering the knowledge of geometry, and placing themselves on a level with the state of science which preceded them. The fall of Constantinople, in 1453, contributed very materially to the knowledge of the Greek language in the western parts of Europe, and consequently to an acquaintance with the ancient geometry. The Greek refugees (who had fled from Turkish cruelty), as recently French, Italian, and Spanish reftigees in this country, afforded all the facilities of viva voce instruction to a speedy and accurate acquaintance with their language. Many ancient classics were searched out and brought forth from the monasteries, in which they had found sanctuary, during that dreary period of ignorance and barbarity, commonly called the dark ages ; and, with the general revival of literature which now commenced, the Greek geometers were once more, or rather for the first time in many parts of the west of Europe, read, translated, commented on, and admired.

Thus two distinct streams of knowledge were flowing to us : the one along the southern shores of the Mediterranean from Bagdad, the other along the northern from Constantinople; the one communication entered Europe by the west, the other directly from the east. But the former, though most circuitous in its course, was not only first in the order of time, it was also of most essential importance.

As early as 980 Gerbert, afterwards pope Sylvester II., having learned of the Moors in Spain their system of arithmetic, imparted it to his countrymen the French ; and from them it rapidly spread over Europe. This was such an important acquisition as to merit more notice than it usually receives. Indeed, without this or some equivalent method of computation, it is inconceivable that the mathematics could have made much useful progress. And, if we advert to the circumstance which took Gerbert into S])ain, we shall perceive what important consequences result from antecedents which seen, of themselves too trivial to be worthy of notice. But a thousand monks might have gone into Spain (which even then seems to have been their common haunt and general home), and no such advantage have been received as from one Gerbert. ‘This Gerbert was born in Au%‘ergne of an obscure family, and bred up in a monastery ; but, hi.5 superior talents exciting the envy and hatred ol’ his companions, he withdrew from their society and went to Spain. It was there, as already

intimated, that he learned the arithmetic of the Moors, which we now employ'. The duke of Barcelona took him after liis return from Spain to Italy, wliere he was noticed by the emperor Otho, wiio gave him an abbey, which he subsequently quitted and went to Germany as preceptor to Otho III. He was afterwards tutor to the son of Hugh Capet, by whom he_ was made archbishop of llheims. By the interest of Otho he gained the papacy in 999, and died in 1003.

The admirable invention introduced by Gerbert, of the decimal arithmetic, consists as every one knows, in the simple contrivance of employing nine significant marks or characters, and making tlie same mark or character change its signification, according to a fixed rule, when it changed its position, being increased tenfold for every place tliat it advanced towards the left. We are so familiar with this simple but refined artifice, as to think little of its wonderful merits as an invention, or of its inexpressible utility in computation. But we have only to compare it with the abacus of the Greeks, the swan-pan of the Chinese, or the knotted cords of the Mex-icans to become sensible of its importance.

The Arabs and Moors] did |not claim the invention of the decimal arithmetic, but confessed that they borrowed it from the Indians; who ap-pear to have possessed it before the time of Pythagoras, who again seems to have learned it when he visited the Brahmins ; though he does not appear to have acquired it so perfectly, or to have taught it as fully and openly as Gerbert did to his countrymen after his return home. There has been not a little controversy as to the actual claims of this admirable invention, some contending for the Greeks, and others for the Indians ; and perhaps after all neither the one nor the other were actually the inventors. The following seems a candid statement of the question. The Moors and Arabs, by their own unanimous avowal, derived tliis admirable invention from the Indians, who, there is good reason to believe, were in possession of it from the time of Pythagoras. The story of this philosopher's visit to the Brahmins is well known, and a suspicion may be entertained that his time there was better employed than in picking up the ridiculous doctrine of the transmigration of souls. Boethius relates the singular fact of a system of arithmetical characters and numeration employed among ˆhe Pythagoreans, which he transcribes, and which, bears a striking resemblance, almost amounting to identity, with those now in use, and whose origin we know to be Indian. Tiie discovery (generally

so considered) of the property of the right angled triangle by the ‘same philosopher is a remarkable coincidence. This was known ten centuries before to the Chinese, if we credit the respectable testimony of Gaubil. It was well known to the earliest Indian writers of whom we have any knowledge, and who appear to have derived it from a source of niucli more remote antiquity. It is scarcely conceivable that a Greek invention, of such extreme convenience as the decimal arithmetic, should have been treated witli such neglect, remaining confined to the knowledge of a few speculative men, till, from being communicated as a mystery, it was at Vol. XIII.

last preserved but as a curiosity : but the aversion of that people to foreign habits will easily account for this on the supposition of its Indian origin. We are then strongly inclined to conclude that in the latter, as well as in tlie former instance, Pythagoras may have acted only the part of a faithful reporter of foreign knowledge, though the reverse hypothesis, *viz.* that the first impulse was given to Indian science at this period by the Greek philosopher, might be maintained.

After the introduction of the decimal arithmetic by Gerbert, towards the end of the tenth century, the next important step in mathematical history was tlie introduction of algebra by C’a-millus Leonard of Pisa, some say early in the fifteenth, others say early in the thirteenth century. ‘ As early,’ says professor Playfair, ‘ as the beginning of the thirteenth century, Leonardo, a merchant of Pisa, having made frequent visits to the east, in the course of commercial adventure, returned to Italy enriched by the traffic, and instructed by the science of those countries. He brought with him the knowledge of algebra ; and a late writer quotes a MS. of his bearing the date of 1202, and another that of 1228. The importation of algebra into Europe is thus carried back nearly 200 years farther than has been generally supposed ; for Leonardo has been represented as flourishing in the end of the four-teentii century, instead of the very beginning of the^’ thirteenth. It appears by an extract from his MS. published by the above author (M. Cossali of Pisa), that his knowledge of algebra extended as far as quadratic equations. The language was very imperfect, corresponding to the infancy of the science ; the quantities and the operations being expressed ‘in words with the help only of a few abbreviations. The rule for resolving quadratics by completing the square is dettionstrated geometrically. Tlie writings of Leonardo have remained in MS., and the fiist printed algebraic book is ^that of Lucas de Burgo, a Franciscan, who, towards the end of the fifteenth century, travelled like Leonardo, into the east, and was there instructed in the

principles of algebra. The characters employed in his work, as in those of Leonardo, are mere abbreviations of words. The letters p and ;« denote plus” and minus; and the rule is laid down, that, in multiplication, plus into minus gives minus, but minus into minus gives plus. Thus the first appearance of algebra is merely that of a system of short-hand writing, or an abbreviation of common language, by employing the initial letters of the words, applied to the solution of arithmetical problems. It was a contrivance merely to save trouble ; and yet to this contrivance we are indebted for the most philosophical and refined art which men iiave yet employed for tlie expression of their thoughts. This scientific language, therefore, like tiiose languages in common use, has grown up slowly from a very weak and imperfect state till it has reached the condition in which it is now found.

Though in all this the moderns received none of their information from the Greeks, yet a work in the Greek language, treating of arithmetical questions, in a manner that may be accounted

algebraic, was discovered in the course of tlie next century, and given to the world in a Latin Iranslalion, by Xylander, in 1575. This is the work of Dioplianlus of Alexandria, who had composed thirteen books of arithmetical questions» and who is supposed to have flourished about 150 years after the Christian era. The questions he resolves are often of considerable difficulty: and much address is displayed in stating them, so as to bring out equations of such a form as to involve only one power of the unknown quantity. The expression is that of coninioa languajre abbreviated and assisted by a few symbols. The investigations do not ex-tend beyond quadratic equations; they are, however, extremely ingenious, and prove the author to have been a man of talent, though the instrument he worked with was weak and imperfect.’

There has been considerable controversy respecting the invention of algebra, and whether that of Diopliantus is to be regarded as wholly independent of the Hindoo algebra, or related to it as antecedent or consequent, progenitor or offspring. The reader who feels any

curiosity on the subject may consult two able articles on Hindoo algebra in the forty-second and fifty-seventh numbers of the Edinburgli Review. The opinion expressed in Brewster's Encyclopaedia is, that Diopliantus has the merit of independent invention ; and that the Arabs (from whom Ca-millus Leonard and Lucas Pacioli de Burgo received it and brought it into Europe), borrowed their algebra principally from the Greeks assisted by occasional communications with Hindostan. The opinion of the writer of this article is, that what is ascribed to Diophantus was, as well as the Pythagorean arithmetic, of foreign extraction ; and that the Arabs received their algebra directly from the same quarter as they obtained by ttieir own cotifession the decimal arithmetic. But the question is not worth the arguments which might be expended upon it; especially as they would amount after all only to probability, which will be always appreciated differently by different minds, and by the same minds in different circumstances.

It has been already intimated that algebra, as imported into Italy in the thirteenth or fifteenth century, was in a very rude and imperfect state, being little more than the raw material, so to speak, of what now bears the same name. It has been justly remarked that our present algebraic notation (the same holds of all the algebraic discoveries, inventions, methods, arts, or whatever we choose to call them) * has arisen by almost insensible degrees, as convenience suggested different mark" of abbreviation to different authors ; and that perfect symbolic language which addresses itself solely to the eye, and enables us to take in at a glance the most complicated relations of (juantity, is the result of a series of small improvements made from time to time, some of which have even been forgotten and re-invented ; while in no case, till at least within a very short time from the present period, has any general and systematic view of the nature of symbols directed the choice of new ones.'

As Italy was the country which first received algebra in Europe, so there its first and greatest improvements were made. The resolution of equations speedily reached a point at which it still remains stationary. In 1505 Scipio Ferrea discovered the solution of a cubic. This soon led to other important discoveries and improvements.

Algebra owes much to Cardan Tartalea and Louis Ferrari, or rather to their bad passions ; for there is but too much evidence that, if they had been better men, they would have been worse mathematicians. We have, in their envious rivalry and malignant contention, a striking

instance of good being educed from evil, and proof as convincing as any demonstration, not only that there may be disputes among mathematicians, but that there is no necessary connexion between mathematical eminence and moral excellence. Cardan, the first named of the aforesaid triumviri, stands foremost in the fame which he coveted, or rather in the notoriety which he merited. He was born at Milan or at Pavia in 1501. He took his degree of M.D. at Padua in 1525, and at the age of thirty-three was appointed professor of mathematics at Mi-lan, where he read lectures on medicine*. In 1552 he went to Scotland, and cured the archbishop of St. Andrew's of an asthma which had baffled the skill of numerous physicians. He was next at the court of Edward VI., and calculated the nativity of that prince ; thence he rambled through various countries, and at Bologna was committed to prison. On recovering his liberty he went to Rome, where, in 1576, he starved himself to death to accomplish one of his own astrological predictions. ' He was a man,' remarks Mr. Playfair, ' in whose character good and ill, strength and weakness, were mixed up in singular profusion. With great talents and industry, he was capricious, insincere, and vain-glorious to excess. Though a man of real science, he professed divination, and was such a believer in the influence of the stars, that he died to accomplish an astronomical prediction. He remains, accordingly, a melancholy proof, that there is no folly or weakness too great to be united with high intellectual attainments.'

Having by importunate solicitations, and after binding himself by promises and oaths to secrecy, obtained some algebraical discoveries from Tartalea, Cardan soon published them as his own. However perfidious this might be, we cannot regret the mortification of Tartalea, who wished to make a mystery of knowledge, and to conceal his discoveries for purposes merely selfish. In consequence of the envious rivalry and mutual challenges between these old friends, now irreconcileable enemies, several important improvements were made in algebra. Louis Ferrari, who had been a pupil of Cardan, accomplished the general resolution of the bicpiadratic equation by a very beautiful process. The])iopertie"s of surds too now became much better understood. With Cardan originated the idea of denoting general, or as commonly termed indefinite quantities, by letters of the alphabet. The same method was adopted nearly at the

kame time by Stiefel, a German, and it was extended and rendered an essential part of algebra by Vieta in 1600. Stiefel introduced the same characters for plus and minus which are still employed. Soon after this Robert Recorde, an English mathematician, publisiied the first English treatise on algebraˆ and introduced in it the same sign of equality which is still in use. Vieta may be regarded as the person with whom the language of algebra acquired that perfection which has since rendered it such a powerful instrument of investigation. With him too originated improvements in trigonometry, and his treatise on angular sections was an important application of algebra to investigate the theorems and resolve the problems of geometry.

Algebra is allowed to have been indebted about this period to Albert Girard, a Flemish mathematician, whose principal work, Nouvelle Invention en Algebre, was published in 1669. *He appears to have been tlie first who undeV-stood the use of negative roots in the solution of geometrical problems ; and he is the author of the figurative expression which gives to negative quantities the name of quantities less than nothing ; a phrase which has been severely censured,' says professor Playfair,* by those who forget that there are correct ideas which correct lajiguage can hardly be made to express.' We will not stop at present to examine Girard's figurative expression, or Mr. Play fair's defence of It.

The person next in order, as an inventor or improver in algebra, is Thomas Harriot, an English mathematician, whose Artis Analyticae Praxis was published after his death in 1631. In this work the author brought the whole theory of equations under one simple and comprehensive view, by his discovery of the composition of polynomials by the multiplication of simple factors ; and he introduced the smaller letters of the alphaliet instead of the capitals employed by Vieta. This distinguished author was employed in the second expedition sent out by Sir Walter Raleigh to Virginia, and he published an account of that country. He appears from his MSS. to have observed the spots of the sun in December, 1610, only a month later than Galileo. He also made observations on Jupiter's satellites, and on the comets of 1607 and 1618. He was born at Oxford in 1560.

The algebraic analysis was now brought to nearly its present state of perfection, and the remark of professor Playfair in reviewing its slow progress is so wortliy of being noted and remembered as to merit transcription. ' I have been the more careful to note very particularly

the degrees by which the properties of equations were thus unfolded, because I think it forms an instance hardly paralleled in science, where a succession of able men, without going vvrong, advanced nevertheless so slowly in the discovery of a truth, which, when known, does not seem to be of a very hidden and abstruse nature. Their slow progress arose from this, that they worked with an instrument the use of wliich they did not fully comprehend, and employed language which expressed more than they were prepared to understand ;— a language, which,

under the notion first of negative and then of imaginary quantities, seemed to involve such mysteries, as tlie accuracy of mathematical science must necessarily refuse to admit.' With all our respect and deference we must be allowed to doubt the soundness of the above paragraph as to conception, or its accuracy as to expression. But it has been put down here as a memorandum for future remark.

We have now reached a memorable stage in mathematical history; for we have come to the time of Descartes, and the application of algebra to geometry ; which maybe emphatically termed a new era. There is some diversity of opinion as to the person who should have the honor of having first applied algebra to geometry. Some would say Vieta, othersourcountryman (Jughtred, whose Clavis was specially honored by the great Newtnn, and who, after having suffered much for liis loyalty, is reported to have died of joy in 1660, on hearing that the king was about to be restored ; but the greatest number of competent judges would pronounce in favor of Descartes. And when tlie most liberal allowance is made to the claims of Oughtred and Vˆieta as to absolute priority, there will be enough of distinction and pre-eminence left to the French philosopher. We will give first the statement of the case by professor Playfair, and then by the able writer of the article mathematics in Brewster's Encyclopedia, as we deem it of some importance to fix attention on this memorable epoch. ' The algebraic analysis being brought to nearly its present state of perfection, by the succession of discoveries above related, was thus prepared for the step which was about to be taken by Descartes, and which forms one of the most important epochs in the history of tlie mathematical sciences. This was the application of the algebraic analysis, to define the nature, and investigate the properties of curve lines, and consequently to represent the notion of variable quantity. The invention just mentioned is the undisputed property of Descartes,' says Mr. Playfair, ' and opened up vast fields of discovery for those who were to come after him. It is often said that Descartes was the first who applied

algebra to geometry ; but this is inaccurate ; for such applications had been made before, particularly by Vieta in his treatise on angular sections.' ' Our countryman Oughtred,' says the writer in Brewster's Encyclopaedia, ' is usually considered the first who applied algebra to geometry so as to discover new properties. Vieta had, however, before demonstrated by algebraic processes a great number of properties of the chords of multiple arcs, which form to this day a very important part of the theory of angular sections. The use of the negative roots of equations in the solution of geometrical problems was clearly pointed out by Girard, though Montucla has (in express contradiction to his own words when speaking of that geometer) attributed it positively to Descartes. The latter, however, has claim enough on the admiration and gratitude of mathematicians, in his method of representing the characterising property of a curve by an equation between two variable magnitudes. This great step, which

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brought at once the whole of geometry under the dominion of symbolic analysis, was made in his geometry, {)ublished in 1637. Tiie revolution so produced, in the way of conceiving geometrical questions, can be compared to nothing but that which the invention of losˆic produced in the ancient methods. The comprehensive genius of Descartes immediately felt the whole force of his discovery, and hastened to apply it to problems then regarded of the greatest difficulty and generality, among which were the methods of drawing tangents to all sorts of curves, and the general theoˆy of maxima and minima.

The period at which Descartes lived was pre-eminently the age of distinguished philosophers. Bacon died in 1G26, eleven years before the geometry of Descartes was given to the world ; Kepler in 16;J0; Galileo (whom Descartes visited at Florence) in 1042; Gassendi in 1655, just five years after Descartes ; and the intellectual Leviathan llobbes, aged ninety-one, in 1679.

Of the mathematical contemporaries of Descartes who contributed their respective shares of discovery, invention, or improvement, were Ca-valeri, a disciplg of Galileo and professor of astronomy in Bologna, who published his Metliod of Indivisibles in 1647; Pascal the celebrated author of tiie Provincial Letters, pronounced by Boileau and Voltaire the finest productions in the French language ; Roberval, and above all the others just named Fermat, the rival of Descartes. It could be wished that the rivalry which existed between these two great mathematicians had been less, buˆ there was, unhappily for the dignity of philosophy and for the honor of the pure mathematics, too much jealousy on the one side and too much envy on the other. We would not liken Descartes and Fermat to Cardan and Tartelia ; but we regret that they were in any measure actuated by the same spirit.

Opinion is divided concerning the amount of Fermat's claim to the admiration and gratitude of mathematicians. According to La Grange and La Place he is to be regarded as the inventor of the differential calculus. The former says, * On peut regarder Fermat comme le premier inventeur des nouveaux calculs:' the latter, ' II paroit que Fermat, le veritable inventeur du calcul differential, I'ait envisage comme un cas particulier de celui des differences.' These are high authorities, but we haughty islanders, so proud of our Cambridge and boastful of our Newton, are unwilling to bow to their decision, and ascribe it to national partiality.

Before advancing to the next memorable stage in the history of the mathematics, and to the distinguished names of Newton and Leibnitz, it will be proper to notice an arithmetical invention, to which, however, we can afford less time and space than its imjiortance merits. The reader must be aware that we allude to the invention or (if it be thought the more appropriate term) discovery of logarithms by Napier of IMerchiston early in the seventeenth century. By this time calculations connected with astronomy, &c., had become excessively burdensome.

and Napier applied his inventive mind to discover a remedy for the evil. In the course of his attempts he perceived that, whenever the numbers to be multiplied or divided were terms of a geometrical progression, the product of the quotient must also be a term of that progression, and must occupy a place in it indicated by the places of the given numbers, so that it might be found from mere inspection, if the progression were far enough continued. The resource of the geometrical progression was plainly sufficient when the given

numbers were terms of that progression ; but, if they were not, no advantage seemed derivable from it. Napier, however, perceived, though it was by no means obvious, that any numbers whatever might be inserted, and have their places assigned in the progression. The next difficulty was to discover the principle, and execute the arithmetical process, by which, the places were to be ascertained. It is in these two points that the peculiar merit of the invention consists ; and when all the circumstances are considered it discovers such inventive power as has been rarely surpassed. The able assistance of Briggs, Gresham professor of mathematics, was willingly given to Napier, and the former has no small merit, and is entitled to much praise in perfecting the invention of logarithms. Subsequent improvements in science, instead of offering any thing that could supersede this invention, have only enlarged the sphere of its utility. It was a most invaluable present to the calculator, and logarithmic tables have been applied to numberless purposes not contemplated when they were first constructed. To conclude this notice of Napier in the elegant language of his countryman Playfair, from whom indeed we have adopted the above with some slight alteration and abridgment ; ‘ Even the sagacity of Napier did not see the immense fertility of the principle he had discovered ; he calculated his tables merely to facilitate arithmetical, and chiefly trigonometrical computation, and little imagined that he was at the same time constructmg a scale whereon to measure the density of the strata of the atmosphere, and the heiglits of mountains ; that he was actually computing the areas and lengths of innumerable curves, and was preparing for a calculus, which was yet to be discovered, many of the most refined and most valuable of its resources. Of Napier, therefore, if of any man, it may safely be pronounced, that his name will never be eclipsed by any one more conspicuous, or his invention superseded by any thing more valuable.’

As coming after Descartes and Fermat, and immediately preceding Newton and Leibnitz, some notice is due to the Dutch geometers Iludde, riuygens, and Sluse, and to our own countrymen Wallis and Barrow ; though it does not appear that any thing very marked, or much ef the nature of material improvement, is attributable to them, except Wallis, Savilian professor of geometry at Oxford, and who died in 1703. He was a mathematician of the highest rank, and of great originality. ‘ In his Arithmetica Infini-torum is discovered that firm reliance on the law of continuity in analytical expressions, which has since conducted to so many brilliant general-

isations.' The above was the work, next to the elements, whicli was first put into tlie hands of Newton ; and from wliioh he may be said to have started at once i.i iiie c.u .r of discovery. Barrow was an eminent mathematician ; but he is more distinguished in mathematical history by having been the tutor of Newton and his predecessor in the Lucasian professorship at Cambridge, which he resigned to liis illustrious pupil in 1669.

We have spoken of Newton as starting at once in the career of discovery ; and the reports which we have of his mathematical movements are not only astonishing, but almost incredible to common minds. He seems to have taken up the Elements of Euclid, tlie Aritiimetica Infini-tonmi of Wallis, the Geometry of Descartes, the Clavis of Oughtred, and all such books so repulsively unintelligible at first to other mortals, with a sort of mathematical instinct, or intuitive penetration and sagacity. What others have slowly and laboriously to learn, he could read off at first sight.

But notwithstanding his wonderful powers, and ' the mighty fabric of his mathematical discoveries,' in which is included his 'binomial theorem, which proved the key to the whole doctrine of series;' his fluxions, or the infinitesimal analysis, and his being in possession ' so early as 1669 of those general analytical methods which wanted only refinement, and reduction to a regular system of calculation, to be the differential calculus ;' a mighty rival of our immortal New-ton presently appeared in the person of Leibnitz. And, unhappily for the honor of the pure mathematics, this is a third instance in tracing their history of unseemly rivalry and angry contention ; for it would seem that if any extraordinary discovery is to be brought forth in a science, which above all others ought to be peaceful and undisputalious, it must be attended with stormy controversy. As we said in the case of Descartes and Fermat, so here, we would not liken Newton and Leibnitz to Cardan and Tartalea, but we regret that there should have been any thing connected with the latter bearing the slightest resemblance to the temper and conduct of the former. The respective adherents of New-ton and Leibnitz were however seen ranged in battle

array, hurling mutual challenges and defiances, criminations and recriminations. And now at last, after much waste of matliematical talent, and much loss of temper, they have come to a drawn battle, and are willing to divide the honor, and to consent to peace on the condition that England and Germany shall remain in statu quo, and that the distinct independence of each shall be mutually acknowledged and respected. The differential calculus, which un-mathematical persons might suppose to have its name from the difference created by it, is now generally allowed to have been the independent invention both of Newton and of Leibnitz. It is amusing to see not only England and (Germany contending for this honor, but Franco advancing her somewhat late claim. According, however, to La Grange and La Place, their countryman Fer-mat was the inventor of the differential calculus.

If, as we said in the case of Descartes, and the

application of algebra to geometry, — if the absolute invention of this new calculus were taken from both Newton and Leibnitz, enough of pre-eminence and enough of claim on the admiration and gratitude of mathematicians would be left to each. Leibnitz has certainly this advantage over our illustrious countryman, that there was less appearance of reserve, mystery, or secrecy, more of frankness and straight-forwardness about him, — for he was eager to impart, and lost no time in imparting his invention and all its benefits to the world. His public promulgation of the differential calculus was made m the Leipsic acts in 1624. These acts were now continually teeming with valuable papers, improving the integral calculus also : and much do we owe to Leibnitz and the Bernoullis, his disciples and friends.

The merits of Newton are so generally known, for they are ‘^ familiar in our mouths as household words,’ and so duly appreciated, that it would be a kind of supererogation to dwell upon them. Perhaps, indeed, there is something of the nature of idolatry and superstition about our admiration and praise of this great man. But any endeavour to moderate this excess of estimation might seem envy of Newton’s fame, or the petty, peevish spirit of an artisan towards an Aristides. His Principia, published in 1687, is, we think, justly pronounced ‘an immortal work,’ which, if all his other claims to the title were deficient, must for ever stamp him the profound-est of geometers, as well as the first of natural philosophers.’ It was particularly from the time of Newton that the real value of mathematical investigation in natural philosophy appeared. And from this memorable epoch the

mixed mathematics have received the attention which their utility merits. Newton, therefore, is justly placed by the side of Bacon among philosophers. Their names are associated in our habitual thoughts, and united in our distinguishing praise of the great men who have honored England and benefited mankind.

The controversy respecting the claims of New-ton and Leibnitz to the honor of inventing the differential calculus caused a disruption and temporary estrangement between the English and continental mathematicians. ‘ They communicated little with one another,’ remarks Mr. Playfair, ‘ except in the way of defiance or reproach ; and, from the angry or polemical tone which their speculations assumed, one could hardly suppose, that they were pursuing science in one of its most abstract and pure forms.’ The consequences of this unfortunate difference about the differential calculus is admitted to have been very unfavorable for a time to mathematical progress it* this country, and the writer just quoted remarks, ‘the new analysis did not exist eve-y where in the same condition or under the same form ; with the British and continental mathematicians it was referred to different origins; it was in different states of advancement; the notation, and some of the fundamental ideas, were also different. Though the algorithm employed, and the books consulted on the new analysis were ‘different, the mathematicians of Britain and of the continent had kept pace very nearly with one. another during the period now treated

of, except 111 one brarjch, ihe iiitegratiou of differential or of fluxioiial equations. In this our countrymen had fallen considerably behind ; and the distance between them and their brethren on the continent continued to increase, just in proportion to the number and importanci; of tin; questions, pliysical and matiiematical, which were found to dtˆpend on these intec:;iatious. The 1” i.’:i of studying only our own authors on diese subjects, produced at first by our admiration of JN’ewton, and our dislike to his rivals,) and increased by a circumstance very insignificant in itself, tiie diversity of notation,

prevented us from partaking in the pursuits df our neighbours ; and cut us off in a great measure from the vast field in which the genius of France, of Germany and Italy, was exercised with so much activity and success. Other causes may have united m the production of an effect, whicli the mathematicians of this country have had much reason to regret ; but the evil had its origin in tiie spirit of jealousy and opposition which arose from the controversies that have just passed under our review. The habits so produced continued long after the spirit itself had subsided.'

Such were the results of the differential war, and of our high admiration of Newton. The whole continent was against us; and it appeared in the end that the continent was more independent of England than she of the continent; but with Newton as her prime minister, or commander-in-chief, she was prepared to contend against the whole world.

It is probably owing to the gigantic dimensions and overawing superiority of the intellect of Sir Isaac Newton, tliat we have had no mathematicians of remarkable stature after him. His immediate successors were scarcely tall enough to measure his height, or but just able, like good William Whiston, to real lectures on the Principia. The truth is, we have much reason to make frequent and emphatic mention of the immortal Newton ; nor is there any thing to distract and divide our attention, or to prevent us from consecrating the whole force of our admiration tipon one object. Brook Taylor secretary to the royal society, and Roger (ˆotes Plumian professor of astronomy and experimental philosophy at Cambridge, both contemporaries of New-ton, are not to be passed by without some notice ; but they are unknown to fame ; and by the admission of the few who have been at the trouble to read them, or who are disposed to]>raise them as profound, they are both acknowledged to be obscure. The former published his INIethod of Increments in 1715, and tiie Ilar-monia Mensurarum of the latter appeared in 1722. Cotes died in 1716, Newton in 1726, Taylor in 1731. A [blank] theorem has the name of Taylor attached to it, and is deemed of some importance in mathematical advancement.

The change which had by this time been made in the mathematics amounted to a kind of revolution, though it is not yet determined who had the greatest hand in bringing it about. Much is doubtless due to Newton, much to Leibnitz ; but more to time ' the greatest of all innovators.' If the mathematical world had not been already alm.ost, if not altogether, in possession of what

is now called the differential calculus, it is hardly conceivable that there should have been so much controversy about its origin or invention, that it should be claimed by England, Germany, and I'rance too, or that it could possibly be a moot point, whether Newton, Leibnitz, or Fermat has the best claim in this chancery suit.

The differential calculus ought to be of much importance, for we not only find an extraordinary combustion of passion and commotion of controversy respecting its actual origin, but much opposition made to its very existence. The remarks of Mr. Playfair are so just and so applicable, in reference to any revolution, reformation, or extraordinary improvement in mathematical science, that we niust agam undertake to transcribe them.

It must not be supposed that so great a revolution in science, as that which was made by the introduction of the new analysis, could be brought about entirely without opposition, as in every society there are some who tliink themselves interested to maintain things in the condition wherein they have found tiiem. The considerations are, indeed, sufficiently obvious, which, in the moral and political world tend to produce this effect, and to give a stability to human institutions, often so little proportionate to their real value, or to their general utility. Even in matters purely intellectual, and in which the abstract truths of arithmetic and geometry seem alone concerned, the prejudices, the selfishness, or the vanity of those who pursue them, not unfrequently combine to resist improvements, and often engage no inconsiderable degree of talent in drawing back instead of pushing forward the machine of science. The introduction of methods entirely new must often change the relative place of the men engaged in scientific pursuits; and must oblige many, after descending from the stations they formerly occupied, to take a lower position in the scale of intellectual advancement. The enmity of such men, if they be not animated by a spirit of real candor, and the love of truth, is likely to be directed against methods by which their vanity is mortified and their importance lessened.'

The above quotation deserves to be inscribed not only on the porch of every academy (where Plato had his memento of the importance of geometry) ; but on the gates of every college, city, and town, on the entrance to every hall of justice and every court of judicature. The able and elegant writer adds: 'though such changes as this must have every where accompanied the ascendancy acquired by the new calculus, for the credit of mathematicians, it must be observed, that no one of any considerable eminence has had the misfortune to enrol his

name among the adversaries of the new science; and that Iluygens, the most distinguished and most profound of the older mathematicians then living, was one of the most forward to acknowledge the excellence of that science (method would surely be the more appropriate word), and to make himself master of its rules, and of their application.' This excellent Dutchman and eminent mathematician visited England in 1661, and was chosen fellov.*

of the Royal Society. He died at his native place, the Hague, in 1693, about a year before Newton was made master of the mint, and resigned his professorship to his disciple William Winston.

The new analysis or differential calculus was, however, stoutly opposed. Nieuwentyt, a Dutch philosopher and mathematician of some eminence, objected to the explanation of Leibnitz, and to the notions of quantities infinitely small. Leibnitz replied, but in a manner not quite satisfactory, as admitted by Mr. Playfair. But Hermann and BernouilU are considered as completely defeating tlie adversary of the ditl'erential calculus. Rolle, a Trench mathematician, was a more powerful opponent ; but he too was vanquished by 'arignon and Saurin.

The new analysis or difi'erential calculus was next attacked by the distinguished Berkeley bishop of Cloyne, in his publication entitled the Analyst; in which he professes to prove that the mathematicians admit mysteries, and even falsities in science, particularly in their doctrine of fluxions, or, as now called, the new analysis, the differential calculus, &c. &c. Berkeley maintains that the said differentiaˆcalculus, new analysis, or doctrine of fluxions, is inaccurate in its principles; and tliat if it ever lead to true conclusions, it is from an accidental compensation of errors that cannot be supposed always to take place. No one who knows Berkeley's ability requires to be told tliat the Analyst is a masterly production ; nor can some of his arguments and charges be fairly met ; for if the matiiematicians do not receive mysteries and faiiities too, or absurdities in language at least — what are mysteries? or ■what are absurdities ? Tlie Analyst contains wit as

well as argument. Mr. Playfair is compelled to do something like justice to its acute and masterly author. *Tlie argument is ingeniously and plausibly conducted,' he says, 'and the au-thor attempts ridicule with better success than could be expected from the subject; thus, when he calls ultimate ratios the ghosts of departed quantities, it is not easy to conceive a witty saying more happily fastened on a mere mathemaiical abstraction.' Mr. Playfair with all his differential jealousies and partialities, and persuasion that there are correct ideas which correct language can hardly be made to express, admits tiiat the defenders of the calculus did not always argue the matter fairly, or exactly meet the reasoning of their adversary.

' Tlie true answer to lierkeley,' he adds, * was, that what he conceived to be an accidental compensation of errors was not at all accidental, but that the two sets of quantities that seemed to him neglected in the reasoning were in all cases necessarily equal, an exact balance for one another. The Newtonian idea of a fluxion contained in it this truth, and so it was argued by Jurin and odrers, but not in a manner so logical and satisfactory as might liave been expected. Perhaps it is not too much to assert, tiiat this was not completely done till La Grange's Theory of Functions appeared. Thus, if tiie author of the Analyst has had the misfortune to enrol his name on the side of error, he has also had the credit of proposing difficulties of which the complete solution IS only to be derived from the highest improvements of the calculus.'

After Newton and Leibnitz, the two mathematicians of greatest name are Euler, and D'Alembert. The former, the son of a Protestant minister, was born at Basil in 1707, and received his education at the university of that city with a view to the church ; but he devoted himself to mathematical studies under the famous John Bernouilli. In 1727 he followed his friends Hermann and Daniel Bernouilli to Petersburgh, and was associated with them there in the maihematical professorship. In 1741, at the invitation of the king of Prussia, he went to Berlin, where he remained twenty-five years, and then returned to Petersburgh, at which place he died in 1783, tlie same year in whicli D'Alembert departed this life.

Some opinion may be formed of Euler's matliematical distinction from the numbpr of prizes obtained by him from the French Academy of Sciences : one for a IMemoir on Fire ; another he divided with INIaclaurin and Daniel Bernouilli on the Flux and Reflux of the Sea ; another for three memoirs on the Inequalities of the Motions of the Planets; and two others for solutions of questions on the Theory of the

Moon. Having spoken of his contemporaries, Clairault and D'Alembert, the able writer of the article mathematics in Brewster's Encyclopaedia, adds, 'A hap-py medium between tlie defects, we ought radier to say a happy combination of these two very opposite geniuses, and endowed with perfections peculiar to himself, was Euler. Of his admirable qualities as a man we have striking proofs ; as a mathematician, to all the perseverance of the most determined calculator, he united a vastness of conception which tlie wildest speculator might envy, and a restless activity and variety of inventive power of which human nature has perhajis atlbided no other instance, and which never left him at a loss for means to accomplish his immediate object, though he occasionally suffered himself to be hurried aside by it from the steady pursuit of his more remote one. There are few of the great ideas which have directed succeeding analysts in these difficult researches, which Euler did not first strike upon or divide the merit of their invention.'

Euler's attention seemed directed at one and the same instant to every part of mathematical science, and as his mind wa:. rapid and comprehensife so it was patient and indefatigable in its application. In total blindness, and un«ier pain, he carried on his usual operations. There were not a few great mathematicians of the same time, as D'Alembert, Clairault, IMaclaurin, liernouilli, and others; but the greatest of all by far was Euler. Besides the memoirs already alluded to, he wrote many others ; Opuscula Analytica; Introduction to the Analysis of Infinitesimals, &c. Few men have done so much for those who were to come after as this extraordinary individual.

The next in rank of the mathematical contemporaries and compeers is without doubt D'Alembert, though Clairault almost divides the honor with him, of ranking second to Euler. C'lairault was the more profound calculator, but D'Alembert possessed more variety of excellence ; ' he was a man of extreme acutcness and subtl«tv of

reasoninsr, aud possessed a peculiar talent for comparing and estimating methods — a kind of intuitive insiglit into the advantages

and disadvantages of the various lij;hts in which a subject might be considered, and a power of predicting, as it were before hand, the effect of a long train of analytical operations. A severe and unsparing critic of the methods of others, he was yet not peculiarly happy in expressinc; liisovvn; and in his mathematical writings the classical elegance of his language is often strongly contrasted with the obscurity and want of symmetry of his analysis.'

D'Alembert is a remarkable instance of the union of mathematical and literary eminence ; or rather, perhaps we should say, of that versatility of genius, and variety of attainment and excellence, so much more characteristic of the French than of any other people, and still more of their mathematicians than of those of any other nation. The same person who is one while absorbed in mathematical abstractions and philosophical reasonings, is the next busied with Diderot in compiling the celebrated Encyclopedie, or in writing history and biography, lie could by turns write treatises on Dynamics, and on the Theory of Winds, solve the problem of the precession of the equinoxes, write phdological miscellanies, and the Elements of Music. To us the varied attainments and excellencies of a Trench mathematician seem almost incompatible with one another. If he has not tiie maccnitude or profundity and altitude of a Newton, he has infinitely more of multiformity. In this even a Leibnitz, with all his versatility of genius and diversity of mental character, must yield to a D'Alembert ; nor is this individual to be considered as an extraordinary phenomenon ; he is only a striking instance and remarkable specimen of his countrymen. Pascal, Maupertuis, Condorcet, and others are better known as elegant literateurs, and eloquent writers, than as eminent mathematicians. D'Alembert's good old nurse tartly told him on a particular occasion, * You will never be any thing but a philosopher, who is one that is neglected whilst living, and praised when dead.' And she was right in part, for D'Alembert was neglected so long as he was merely a philosopher or mathematician ; but time proved that the shrewd old Frenchwoman, with all her knowledge of the world, was out in her ;i priori reasoning as to D'Alembert; for it was demonstrated that he could become almost every thing.

Clairault has been already mentioned in connexion with D'Alembert ; and they may be considered as rivals ; at least D'Alembert was evidently jealous of Clairault, and not without reason, being actuated like most other common mortals, and even uncommon mathematicians, quite as nmch by selfish ambition as by the pure love of truth. Clairault, however, though more profound perhaps, was more limited, less comprehensive, and more exclusively a mere mathematician than D'Alembert. Consequently he is hardly known out

of the mathematical world. He is an instance of extraordinary precocity connected with progressive maturity ; for his early-attainments were not, as in so many cases, deceitful blossom; preceding permanent barren-

ness of intellect, or stationary mediocrity. He was born at Paris in 1713, six years later than Euler, thirteen later than Daniel Bernouilli, nineteen later than Maclaurin, and four earlier than D'Alembert. At the age of four years he could read and write ; at nine he made some progress in algebra and geometry, and solved several difficult problems. In his eleventh year his Memoir on Curves appeared in the]\liscul-lanea Berolinensia, with an honorable certificate of the Academy of Sciences. That learned body admitted him an associate at the age of eighteen, and he was one of the academicians who went to the North to measure a degree fo-ascertaining the figure of the earth. He wrote Elements of Geometry, and of Algebra ; a Treatise on the Figure of the Earth ; Tables of the Moon, Sec, and died in 1763 in the prime of life and vigor of his faculties.

The distinguished Maclaurin, whom we have connected with Clairault as coming into the world nineteen years earlier, and who is memorably associated with Euler and Daniel Bernouilli by having divided with them the prize on the Flux and Reflux of the Sea awarded by the French Academy of Sciences, was born at Kilmoddan in Scotland, in the year 1698, and educated at the University of Glasgow, where he applied ardently to the study of the mathematics. In 1717 (the year of D'Alembert's nativity), and at nineteen years of age, he obtained the mathematical professorship in the Marischal College of Aberdeen ; and two years afterwards was chosen fellow of tlie Royal Society. In 17'2o he succeeded Mr. James Gregory in the mathematical professorship in the University of Edinburgh. In 1742 he published his System of Fluxions, the most considerable of his works. Three years after having been active in fortifying Edinburgh against the rebels, and thus becoming a marked object of their resentment, he fled for safety into England, and took refuge with archbishop Herring at York. Whilst yet in the midst of life and full vigor of all his extraordinary mathematical powers he died of dropsy in the following year 1746.

Maclaurin was not only a great mathenwtician, but both morally and intellectually considered a great man. His peculiar merit as a philosopher was, that all his studies were directed to general utility ; and in many places of his works are found applications of the most

abstruse theories' to practical purposes for the improvement of useful arts and sciences. If England glories in her Newton; Germany in her Leibnitz ; France in her Descartes, Fermat, D'Alembert La Grange, and La Place; Switzerland in her Euler and Bernouillis; Italy in her Galileo, and Cavalieri ; Holland in her lluygens ; Scotland needs not be ashamed to glory in her Maclaurin.— And, instead of looking with jealousy or scorn on the fame of this great and good man, we glory in him too, as an honor to the age in which he lived, and to our own distinguished island ; and as a lasting monument of satisfactory proof that Newton, though the greatest, was not the last of British mathematicians worthy of ranking widi the most honored names of the mo?t distinguished countries. Besides the work

already noticed, Maclaurin wrote several papers III the Philosopliical Transactions ; Geometria Organica ; on the Percussion of Bodies ; a Treatise of Algebra; and an Account of Sir Isaac Newton's Pliilosophical Discoveries.

Daniel Bernouilii merits honorable mention in connexion with Euler, D'Alembert, Clairault, and Maclaurin. He was son of John Bernouilii, who was the brother and pupil of the distinijuish-ed James Bernouilii of Basil, and tutor of Euler, and who formed an intimacy with Boyle and other great men, when on a visit here in the course of his travels. About 1684 Leibnitz published in the Acta Eruditorum at Leipsic some essays on his new calculus differentialis, but witiiout discovering the method. James Bernouilii and his brother John found out the secret, for which they received the thanks and friendship of Leibnitz. In 1687 James Bernouilii was appointed professor of mathematics in the University of Basil; in 1689 he was chosen member of the Royal Academy at Paris; and he died in 1705, two years after the period of Newton's resigning his professorship at Cambridge to Whiston, and eleven years prior to the death of Leibnitz.

Daniel Bernouilii, nephew of James, and son of John, was born at Groningen (where his father was some time mathematical professor) in 1700. After travelling through several countries of Europe he

settled at Basil, where he became successively professor of physic and of philosophy. He gained and divided ten prizes from the academy of sciences, which were contended for by the greatest mathematicians in Europe. He divided one we have seen with Euler and Maclaurin ; and in 1734 he divided one with his father, which we grieve to relate caused a breach of natural affection. In 1748 he succeeded his father in the academy of sciences; and in 1782 he followed him to the grave: a year later than Euler and D'Alembert went also to the house appointed for all living. Besides those above noticed, there is Nicholas Bernouilii also of very high eminence and who is justly allowed to have contributed much to the recent mathematical improvements, particularly the discovery of the equations of condition, which opened the way to the partial differential calculus. It would be impossible, however, within our limits, to point out what Euler, D'Alembert, Clairault, Maclaurin, and the J3ernouillis have actually done ; or to sliow how much they cooperated in carrying forward the mathematical art or science beyond the state in which they found it prepared for them by their predecessors.

We proceed now to the last step of our progression, and to the distinguished names of La (irauge and La Place. Tiiese pre-eminent geometers were beginning to appear before 1'l.uler, D'Alembert, and the last of the Bernouillis had quitted this mortal stage. When about to treat of the new geometry, Mr. Playfair says, ' Considering some sort of subdivision as necessary, and observing in the interval which extends from the first of Newton's discoveries to the year 1818, three different conditions of the physico-mathc- matical sciences, well marked and distinguished by great improvements, 1 have divided the above

interval into three corresponding parts. Tiie first of these reaching from the commencement of Newton's discoveries in 1663 to a little be-yond his death, or to 1730, may be denominated from the men who impressed on it its peculiar character, the period of Newton and Leibnitz. The second, which for a similar reason I call that of Euler and D'Alembert, may be regarded as extending from 1730 to 1780; and the third, that of La Grange and La Place, from 1780 to

1818.'

The above is, perhaps, as near an approximation as may be to

accuracy of demarcation on such a fluxionary subject; for it is impossible to fix or find a point of absolute certainty, where a modifying process is constantly but gradually and silently at work. As early, however, as 17G7, La Grange read a memoir to the academy, impugning the authority of Fontaine's fluxio-differential calculus ; and in his memoir, which appeared in the Berlin Memoirs for 1770, he annulled poor Fontaine's claim to the discovery of the equation of condition into a negative quantity, and assigned that claim perfect and en-tire to Nicholas Bernouilii. Whether rivalry or contempt of Fontaine sharpened the mathematical wits, and spirited the analytical exertions of La Grange, it is not worth while to conjecture; but it is evident that he was already a man of weight and influence. Here we again avail ourselves of the assistance of an able writer, not a few of whose remarks we have already adopted : ' Analytical geometry, properly so called, which proceeds upon the sole consideration of the data of the question put into symbolic language, making no preparatory constructions, and either dispensing altogether with the use of diagrams or employing them merely to assist the imagination in its conception of the data-geometry in this state, is due solely to La Grange. That great man, in his memoir on pyramids (in the Berlin Memoir for 1773), first showed the practicability of treating the most complicated questions of solid geometry in this way ; and, what is very remarkable, this mode of proceeding, instead of inducing obscurity, as might at first be expected, is remarkable for the luminous and distinct conceptions it gives of geometrical questions. The principal reason of this is, the extraordinary symmetry which symbolical expressions, properly constructed, assume in geometrical enquiries. This it ;is which renders them easy of management, and at the same time facilitates their interpretation into geometrical language in a remarkable degree, rendering it indeed so obvious, that it may generally be carried on as a collateral process with the algebraic reasoning.

' There is no author whose writings furnish more striking and beautiful examples of this symmetry in his formul-.t;, which speaks to the eye, and enables us almost to predict the results without executing the operations required, than La Grange. Those whose enquiries have been confined within what we may now fairly call the narrow circle of the ancient geometry, may reject as artificial such means of discovery as de-pend rather ui > on dexterity in the management of symbols, than on that direct contention of mind thoy have been accuslomcd (o consider as

inseparable from the ahstruser parts of it ; but to one familiar with the difficulties with which mo-dern enquirers have to contend, and whose object is only to multiply the number of known truths, and to arrive at results by the shortest and least troublesome path, it will be quite superfluous to enter into any defence of the method which is now universally adopted. If the general idea of Descartes, which reduces the nature of every curve to an ahˆebraic equation, has been the source of all the power which analysis possesses in geometrical enquiries, that of determining the position of every point in space by co-ordinates at riLˆht angles to each other, which Maclaurin first brought into general notice, by showing its utility in physico-mathematical researches, has proved the origin of all it? refinement.'

Tiie claims of La Grange to modifying and improving agency in the mathematical art and science (we know not how to express our idea better), as now existing, are, by the same writer carried still farther back or higher up. ' A more consummate analyst than Clairault — a more profound reasoner than D'Alembert — a more comprehensive genius than Euler, and, though less exuberantly inventive, more perfect and effective in his inventions, had now commenced his career. Already, in 1764 (in a Memoir on the Libraiion of die Moon), La Grange had be-gun to avail himself of that powerfu. principle of virtual velocities. A fresh impulse seemed now to have been given to science, and from this period scarcely a year passed unsignalised by some new and important discovery in the system of the world ; and, by the emulous but united labors of La Grange and La Place, the state of mechanical science was by decrees brought to that pitch of perfection as that the Mecanique Ana-lytique of the former, and the Mecanique Celeste of the latter, could exist and be appreciated. The first of these immortal productions, which appeared in 1788 (precisely a century after Newton first rendered dynamics a science), is a compendium of the general formulje and analytical artifices necessary for the treatment of every problem which can be proposed on the equilibrium or motion of matter. The principle of virtual velocities, translated into an equation by means of the calculus of variations, and extended by the help of D'Alembert's principle to cases of motion as well as rest, is made to afford a simple and expressive formula,

embracing every effect the agency of mechanical power, under whatever variety of combinations, can produce. A uniform train of analytical processes is there exhibited, adapted to the particular cases of the greatest importance or most frequent occurrence, by which the consequences of this fundamental equation are developed in succession, and reduced, en derniere analyse, to the equations of total or partial differentials, on whose integration the solution of the problem radically depends.'

Having made free use of this writer's remarks as well as of Mr. Playfair's, and feeling great obligation to both, a few words at parting may beindulg d respecting their comparative merits, and their claims to our gratitude. Mr. Playfair is now beyond the reach of criticism, and alike deaf to earthly praise and blame ; but his me-

mory is embalmed in our esteem, and we should reproach ourselves as guilty of something moie criminal than a wanton violation of the old rule of speech concerning the dead, if we were to drop a single word from our pen really intended or calculated to lower him in general estimation. As to our unknown, and, \ve trust, living benefactor, he is more capable of instructing us than we are of presenting any important suggestion to him ; for we would be glad to possess a moiety of his science, and the chief motive of this vale-dictory notice is, that we may be exculpated from all imputation of even seeming to clothe ourselves with the honors of others, by borrowing from them without due acknowledgment.

Mr. Playfair's historical view of the mathematics, and that given in Dr. Brewster's Encyclopaedia, are both highly excellent ; but they possess different kinds of excellence. The former is better adapted to the general reader ; the latter to the laborious enquirer after minute and full information ; the former is more elegant and philosophic ; the latter is more able and scientific. We could wish that the writer of the former had aimed less at elegant writing, and that the writer of the latter would attend more to composition. He is not chargeable with verbiage or elegant expletives ; but there is occasionally some deficiency of precision and perspicuity, of force and simplicity. We submit, with much respectful deference and grateful desire of rendering some service to a benefactor, whether his own excellent remarks respecting the importance of simplicity, ctearness, and symmetry in analysis may not hold of synthesis also, or be transferred to composition. We quote his own words, when speaking of the principle which would alone have immortalised the name of

D'Alembert, and which put a final end to all difficulties in the science of dynamics :■ — ■' The principle, as it is now usually stated, appears of such elementary simplicity, that we wonder it should ever have proved of such momentous importance ; and it is only when we know that men of the greatest genius were embarrassed by difficulties of which, in consequence of it, we now hear no more, that we can be brought to estimate its value. It is, in fact, a striking instance of the influence the man-ner of wording an obvious truth may have on its applications.*

A cursory retrospection, of what we may term our mathematico-historical journey, suggests some reflections. It has often been remarked that great men exist about the same periods, or appear successively in groups, with w'ide spaces or long intervals between one group and another. We may remark also that they not only come in clusters, but that there are usually two of the cluster greater than the rest. Imagination indeed can do much in these matters; for we are naturally fond of the striking and the picturesque. But the eminent mathematicians would seem naturally presented to our view in pairs, or two by two like so many enthymemes : as Cardan and Tartalea; Descartes and Permat; Newton and Leibnitz ; Euler and D'Alembert ; La Grange and La Place. We are not sure that there is much in this ; nor how it ou<jht to be accounted for. Doubtless m.any specious iheo-MATHEMATICS.

ries might be started ; and the most obvious, we think, would resolve it into the])rinciple of rivalry, for we are all in some way or other, and to a certain degree, ambitious; and, if the organ of rivality or rivalship be not already in the phrenological catalogue, it deserves insertion. But the apparent fact which we have pointed out deserves to be noted as a kind of historicol-phenomenon; and, if il serve no other purpose it will assist the memory, and be some food for the principle of suggestion or mental association at any rate. If we do not convert or generalise it into a law of continuity, as an a priori principle of reasoning concerning the future, it can do no harm.

It appears also from the sketch above attempted that the countries of Europe most distinguished for mathematical pre-eminence are Italy, France, Germany, England, Switzerland, and Holland. Italy was first in

the order of time, and for a considerable period highest in rank ; but she appears to have been gradually sinking from her high station, and receding from our view. As to France, Germany, and England, it is difficult perhaps to award absolutely, or at least satisfactorily,]the mathematical pre-eminence. Perhaps they properly stand in the order in which we have named them. Monk-ridden Spain has had one Cervantes ; but, with all her advantages of monkish instruction, she has not a single mathematician or philosopher to produce since the times of king Alphonso. We may remark too that it is not Catholic, but Protestant Germany which has the honor of mathematical pre-eminence. It is not in the south, but in the north of Germany, where the Leibnitzes and the Mercators or Kauffmanns are to be found. Though there be no royal way to geometry, yet, if we may judge from its history, it is of a very royal nature ; still we do not discover any eminent geometers in the regions of Austria, or about the imperial court of Vienna. Of the Catholic countries, mathematically distinguished, France and Italy; they are those very countries in which Catholicism (or, as we are used to call it, Popery) has least dominion over the minds of the educated classes.

We must, before concluding, fulfil our promise of attempting an estimate of the merits of mathematical learning : but we approach it with caution and reluctance, as we have some unfashionable and heretical notions on the subject. We think that there is much unsotmd opinion, and not a little blind idolatry, of the mathematics which ought to be opposed, and if])ossible, removed. Tliat the mathematics are of very great importance to philosophy there is no intention of denying : the question is, to what extent are they important, and in what does their importance consist ? In as far as they are necessary or subservient to the arts and sciences, or to natural philosophy, their importance or excellence, that is their utility, is freely and fully admitted. That they fend also to improve the mind in youth by exercising it, by forming a habit of attention, and by strengthening the memory, is likewise admitted. But all this is nothing when compared with the imaginary

quantity of the abstract ‘excellence of the pure mathematics. We here quote Dr. Barrow, the mathematical tutor, and predecessor of the immortal Newton. ‘ The mathematics effectually exercise,’ he says, ‘ not vainly delude, nor vexatiously torment studious minds with obscure subtilties ; but plainly demonstrate every thing within their reach, draw certain conclusions, instruct by profitable rules, and unfold pleasant questions. These disciplines likewise inure and

corroborate the mind to a constant diligence in study ; they wholly deliver us from a credulous simplicity, most strongly fortify us against the vanity of scepticism, effectually restrain us from a rash presumption, most easily incline us to a due assent, and perfectly subject us to the government of right reason. While the mind is abstracted and elevated from sensible matter, distinctly views pure forms, conceives the beauty of ideas, and investigates the harmony of proportions ; the manners themselves are sensibly corrected and improved, the affections composed and rectified, the fancy calmed and settled, and the understanding raised and excited to more divine contemplation.'

Such are the panegyrical strains of the great Dr. Barrow on the amazing properties and won-der-working powers of the pure mathematics ; yet the converse of almost every one of his numerous positions or postulates would be perhaps a nearer approximation to pure truth. We have already adverted to the striking fact of the ancipnt geometry existing in the highest estimation in close connexion with glaring absurdity, and a species of sophistry dignified with the imposing name of philosophy ; but we are prepared to go a step farther, and to show, if our limits would permit, that the geometry was the cause or occasion, if not wholly, at least in a great measure, of the false philosophy of the ancients. There was not only a natural alliance between their geometry and their syllogistic logic ; but, if it had not been for the former, the latter would have never existed. And much of what is appended to the article I.ocic in this work, from Dr. Brown's Lectures, is applicable to geometry, and the use which has been made of it.

But for geometry, the a priori road to knowledge and course of reasoning, would, it is probable at least, never have been taken : and it is observable how fondly mathematicians still cling to that method of arriving at pure truth, or of demonstrating its existence. Even Mr. Playfair, in his admirable analysis of the Novum Organum of Bacon, almost sets np the a priori claims as worthy of the fullest confidence and highest reverence. It was from geometry too that the inveterate habit was contracted of demonstrating, or pretending to demonstrate, every thins ; even self-evident propositions. The mischievous influence and consequences of this evil habit of mind wo cannot stop to point out; but they are very obvious, and we refer the rea-der to tiie concluding part of the article Logic.

Another bad habit of the geometers is that of employing absurd language ; which, if not one of the marks of absurd geometry, as Hobbes would argue, must be of very pernicious ten-

dency in reasoninpj, and upon the principle or faculty of reason, or wlmtever it ought to be ;;alled. ^^ e have noted professor I'layfair's memorable apology, or rather sarcastic and defying defence of that whicli is now under animadversion. In speaking of what he terms th€ 'figurative expression, whicli gives to negatire quantities the name of quantities less than nothing ;' he adds, ' a phrase tliat has been severely censured by those who forget that there are correct ideas whicli correct language can hardly be made to express.' It is certainly a paradoxical postu-latum that incorrect language is the most uifallible nuncio, the most faithful witness, the most sure and certain exponent of correct ideas. But granting all this, and every thing homogeneous to it, to be absolutely and infallibly true in the mathematics (and there is much that is very unaccountable and incomprehensible about them), what is likely to be the result of such a habit of thinking and arguing ? That, unquestionably, which we find so often practically demonstrated ; for, notwithstanding the eulogistic appropriation of the expression, mathematical reasoning, in cases where the attributive cabalistic would be just as appropriate, none are more guilty of employing incorrect, indefinite, unmeaning, and absurd language than mathematicians. And we lay it down advisedly as a position that the best geometers, all other things being equal, are the worst metaphysicians ; that is they reason most inaccurately, most inconclusively, most falsely, on all subjects not purely mathematical, and exclusively physical ; and oven on physical subjects their reasoning is often sadly awry. Tlie data are so defective that we will not pronounce upon the metaphysical aptitudes and capabilities of Newton; but we know what sort of metaphysicians and theologians are the Descartes (for Descartes may be enrolled among metaphysicians), the Leibnitzes, the Maupertuis, tlie Condorcets, the Prices, the Clarkes, the Whistons, the Ilutchinsons, and the Swedenborgs. An uncommon number of mathematicians have tried their minds at metaphysics ; or rather nearly all who long passed for profound metaphysicians were also profound mathematicians. The reason is obvious ; for 'as we remarked concerning geometry and the syllogistic logic, and we might have added the Aristotelian philosophy

(the good old metaphysics of the schools), there is not only a natural alliance and homogeneous relation between the pure mathematics and the pure metaphysics ; but they are related as parent and child ; the one is tlie offspring or consequent of the other, and would have never existed without its antecedent treometry, at least with its essential properties fully brought forth, or developed in all their imaginary and negative cjuantities. Itis usual indeed to identify pure geometry with pure intellect, or to represent geometry ashaving acen-tripetal relation to the understanding, and a centri-fugal relation to the imagination, as if nothing but mutual attraction existed between A and B, and notliing but mutual repulsion between A and C; or as if nothing but mutual affection dwelt between geometry and the understanding, and muUial antipathy between geometry and the

imagination. But this is as far from the true system as the theories of Tycho Brahe, Ptolemy, and Descartes ; for geometry is in reality the most imaginative science or entity in the world; only it is pure imaginativeness, ‘ abstracted and elevated from sensible matter,’ as Dr. Barrow justly remarks.

\Ve have enumerated a considerable number of great mathematicians now generally regarded as indifferent mstaphysicians ; at least their claims in the latter character, though for a time and to a certain extent current coin, are now almost as much depreciated as assignats. And we have to oppose to them a few great philosophers who were not eminent as geometers. Kep-ler, for instance, is considered an indifferent geometer, but he was as superior to most of his contemporaries (all except Bacon and Galileo) in philosophy, as he was inferior to many of them in geometry. Hobbes, with all the odium attached to his name (too much merited indeed) is allowed by the most competent judges to have been one of tlie greatest metaphysicians that any age or country ever produced. Indeed he was about as superior to his disciple and commentator, the far-famed Locke, as Sir Isaac Newton was to William Whiston. Hobbes, however, is considered no geometer ; and though he published Six Lessons to the Professors of the Mathematics ; IMarks of absurd Geometry, &c., he has had all the mathematicians against him, and is not deemed worthy of being named in their company. Hobbes began the mathematics somewhat late in life. Had he been devoted to tliem in his youth, he would have probably excelled in them as much as Oughtred, Wallis, or even Newton ; but in that case it is almost inconceivable that he should have been tlie autiior of the book on Human Nature, &c.

A more demonstrable instance in proof of our opinion yet remains ; Bacon, we were going to say the immortal, but that as a cognomen is appropriated and somewhat hackneyed. Bacon was, in the most absolute sense, no mathematician ; he was, however, not only the first of philosophers, but the creator of philosophy itself, or the originator at least of almost all that deserves the name. Hume, indeed, in the exercise of his historico-judicial function, passes sentence of degradation upon Bacon, and he must lank, it seems, below ‘ Galileo, perhaps even Kepler,’ purely because he was ignorant of geometry. This is singularly equitable and consistent on the part of i\Ir. Hume ; that very Mr. Hume who imputes the false notions and absurd reasonings of philosophers to their addictedness to the mathematics ; which, he says, accustomed them to obscure modes of reasoning by unaccountable and unintelligible processes, that nevertheless bring them right at last, like a man groping through a dark passage into the light of day.

Another bad habit of the geometers is a theorising propensity; and even Newton, with all his exemplary caution in forming opinions and patience in ‘ waiting for thought,’ was not wholly proof against wliat may be termed tlie natural tendency of geometry, and the easily besetting sin of geometricians. Even the author of the Principia was willing to assign a subtile ether as the

cause of gravitation. It must not be ibrgotien, indeed, that tlie Newtonian system of tiie universe is only the most probable and satisfictory of all the theories yet propounded : and there are men of very respectable intellect who are incorrigible heretics as to the true system, and wlio obstinately refuse to give their unfeigned assent and consent to all its articles. We do not. impugn its orthodoxy ; but, though our faith in it be as sound and strong as can be reasonably required, there is a possibility at least that it may prove after all a Cartesian hypothesis to some other Newtonian system.

That the eminent mathematicians have, for the most part, been men of much intellect, there can be no doubt ; but the question is, whetlier

their intellectual power was necessarily the consequent of geometry, or casually connected with it. That good mathematicians should be men of strong minds is not wonderful ; for none but men of naturally strong minds are likely to lake to the mathematics in good earnest, or to make any proficiency in them. There is no doubt also, that the mental exertion or contention, as some term it, vvhich they require, must strengthen, or, as expressed by Dr. Barrow, corroborate the mind. Tiie syllogistic logic, the Aristotelian dialectics, are allowed to have wonderfully sharpened the intellects, and corroborated the minds of the schoolmen, whilst at the same time they perverted their reason, and almost deprived them of their sober senses. Were any other mental gymnastics substituted for the pure mathematics, we firmly believe that the corroborated result would come out with the same degree of accuracy, and with the same amount of imaginary quantity.

If any of our readers shall infer, from what w-e have written, that we wish to explode or depreciate the mathematics, they will be guilty either of a great error of judgment or a great breach of candor : our sole aim and endeavour have been to correct what we deem unsound opinions, and to moderate and modify what we deem a blind idolatry into a reasonable service of the understanding and of the affections. Let the mathematics be encouraged and patronised ; let them be cultivated to the fullest extent, even with considerable waste of mental power and loss of money, to discover a north-west passage in the polar regions of tluxionary creation — to find out some new calculus, wˆhether diflerential or integral. Were there no probable, or even possible, results, as to such a mixed, impure, vul-gar, entity, as utility, in contending with practicability, and penetrating to a high mathematical latitude of discovery — were it merely for the sake of ‘ the contention of mind’ (a very harndess kind of strife) — or to have it proved how far the algebraic analyst can go up out of our sight in some new-invented infinitesimal balloon : — in short, if

the mathematical progression were 1000 miles a-head of any practical purpose or advantage whatever, we would not be for terminating its career. We have spare hands enough and spare heads too ; and, as all cannot find useful employment, it is better, perhaps, that they should be out of the way of idleness and mischief by digging mathematical holes and filling tliem up again ; or in perpetual motion to discover new methods of ‘ contention of mind’ — new calculuses, new analyses, new fluxions, new infinitesimals to rival and supersede the old ones ad infinitum. Only let us know, if possible, what the

mathematics are about, and wherein their infinite quantity of excellence consists. Let us admire and praise geometry, provided always that this pure divinity of abstract excellence do not befool us as she did Plato, Aristotle, and so many others in much later times.

As really an instrument of that ‘ knowledge which is power,’ geometry must ever have a high and commanding station among civilised nations. But as it may facilitate, so also may it be made to impede, the])rogress, or to prevent the diffusion of useful knowledge. It does so, as well as in other ways, when idly intruded where it is not necessary. And algebraic cliaracters are often to be met with in books professedly for general information and instruction, where Ara-bic, Hindoo, or Chinese characters might, for any real necessity, or utility, be deemed as indispensable. This is worse than pedantry; though it be a natural result of mathematical idolatry. Comparatively few have time, inclination, or ability, to be geometers. To render useful knowledge general, therefore, it must be taken as much as possible out of the hands of geometry, and disengaged from such cabalistic signs as algebraic characters must ever be to the many — notwitlistanding all the laudable exertions of Dr. Birkbeck, and the prodigious progress of mechanics’ institutions.

If geometry is to be regarded as any thing more than a vision, or mere mythological machinery, of the brain, it is an instrument or apparatus ; but the apparatus may become so complex, unwieldy, and unmanageable, as to nullify all its excellencies into negative qualities, llerschell’s famous telescope was a wonderful object ; and we have yielded, as well as others, to wonderment in beholding it: but we believe its wonderful and amazing property defeated its])urpose. And, if its success had been as remarkable as its magnitude, the beneficial result to man’s temporal or eternal well-being would have been such a fractional minimum as it is demonstrated Archimedes would have moved the earth with in a million of years, if he had been provided with the data necessary to the problem. Abg irov trrw Kai top Koajxov kiptjooj.

MATHER (Dr. Cotton), F.Il.S., an eminent American divine, was born at Boston, New England, in 166.3. He was educated in Harvard College, and in 1684 became minister of Boston. In 1710 the university of Glasgow sent him a diploma, enrolling him D. D., and

in 1714 the Royal Society of London chose him a fellow. He died in 1728. He published Magnalia Christi Americana, or an Ecclesiastical History of New England, fi-om its first planting in 1620 to 1698, folio. But the most remarkable of all his works was that in which he defended

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the doctrine of witclicraft, entitled Tiie Wonders of the Invisible World ; being an Account of tiie Trials of Several Witches lately executed in New Ensjland, and of Several Remarkable Curiosities therein occuring ; togetlier witli 1. Observations on the Nature, the Number, and the Operations of the Devils. 2. A Short Narrative of a late Outrage committed by a Knot of Witches in Swedeland ; very much resembling and so far explaining that under which New England has labored. 3. Some Counsels directing a due Improvement of the Terrible Things lately done by the unusual and amazing llange of Evil Spirits in New England. 4. A Brief Discourse upon the Temptations which are the more ordinary Devices of Satan. This work was ‘ published by tlie special command of the governor of the province of Massachusett’s Bay in New England.’ Boston and London, 1736, 4to.

MATIN, adj.kn.s. Vr. inatin; Lat. iriatu-tintis, morniag.” Belonging to the morning : the morning ; or mornmg worship.

The glow-worm shews the matin to be near,

And ‘gins to pale iiis unetfectual fire, iihakapeare. The winged choristers began To chirp their matins. Cleaveland.

Up rose the victor angels, and to arms

The matin trumpet sung. Milton s Paradise Lost.

By the pontifical, no altar is consecrated without reliques ; the vigils are celebrated before them, and the nocturn and rnatins, for the saints whose reliques they are. SiiUinfiJieet.

That he should raise his mitred crest on high.

And clap his wings, and call his family

To sacred rites ; and vex the ethereal powers

With midnight matins, at uncivil hours. Dryden. 1 waste the matin lamp in sighs for thee ;

Thy image steals between my God and me. Pope.

MATLOCK, a town of Derbyshire, near Wirksworth, on the edge of

Derwent, noted for its bath ; and remarkable for the huge rocks in its environs, particularly those called the Tor, on the east side of the Derwent, which seem to be piled one upon another. It is an extensive straggling village, built in a very romantic style, on the steep side of a mountain, rising irregularly from the bottom to nearly the summit. The warm springs were first discovered in 1698, and were soon after enclosed, and had commodious buildings erected. Two other springs have since been discovered, about 400 yards from the old ones, and they are now a place of considerable resort during the season, which commences in April and ends in October. The waters in quality much resemble those of Bristol, but are not so warm, tiieir heat being about 68°; they are recommended in glandular affections, rheumatism, and in the early stages of consumption. There are excellent accommodations for the company who resort to the bath ; and the poorer inhabitants are supported by the sale of petrifactions, crystals, Jic. ; and, notwithstanding the rockiness of the soil, the cliffs produce an immense number of trees, whose foliage adds greatly to the beauty of the place. Near the western bank of the Derwent is a petrifying spring. The spars of Derbyshire here form a considerable traffic; which being turned into vases, and chimney ornaments, bear a variegated polish equal to the finest porphyry. Opposite to

the High Tor, but rising with a gentler ascent though to a greater elevation, is Masson Hill, wiiich appears like a pile of immense craggs. The summit of this mountain has been named the Heights of Abraham, and overlooks the country to a vast extent, besides commanding a beautiful bird's-eye view of nearly the whole dale. The lieight of this stupendous eminence is about 250 yards ; the path to its summit has been carried in a winding or rather zigzag direction, and in various places has been planted with rows of firs, which, opening at convenient distances, admit the eye to range over the scenery beneath. Near the upper end of t!ie dale is a spacious building erected for the manufacture of cotton, by Sir Richard Arkwright, whose elegant mansion, Wdlersley Castle, stands on the south side of a commanding eminence, which terminates the extensive range of rocks tliat forms the eastern boundary of the Derwent, in its course through iNIatlock dale. The castle consists of a body, in the form of an oblong square, having a circular tower rising from the centre of the roof, and a semicircular tower projecting from the front on each side of the entrance, and two wings with a round tower at each angle ; the whole structure is embattled, and the walls are of freestone.

MATO Grosso, a province of Brasil, bounded north by that of Para,

south by St. Paul's, west by the viceroyalty of La Plata, and east by Goias, between 52° and 64° of W. long., and between 10° and 23° of S. lat. This extensive country is little known to Europeans ; it is intersected by the main ridge of the Andes, which separates the rivers that run southward to the Plata from those that run in an opposite direction to the Amazons; and by these a communication is opened with the most distant parts of Brasil. Among them the river Aragua, which separates this province from Goias, is distinguished: it rises in lat. 19° S., and, flowing into the Toccautins in lat. 6° S., their united stream runs north for 370 leagues, and falls into the southern estuary of the Amazons. The Chingu is also a considerable river; which, after a course of about 1000 miles, chiefly through Mato Grosso, falls into the Amazons in long. 53° W. and lat. 42° S. The great river Paraguay, which, running south, enters the ocean under tiie appellation of the Rio de la Plata, has here also its rise. Most of these streams, while they flow through the mountainous ground, abound in gold ; and it was in search of this precious article that the province was first visited, and that settlements were afterwards established by the Portuguese. The chief of these remaining are Cuiaba, Villa Maria, St. Pedro el Rey, situated on the head streams of the Plata, and Villa Bella, near the sources of the Madera. The country is generally fertile, and similar in its productions to other parts of Brasil.

MATRASS, n. s. Er. matras ; Lat. matara (being shaped like a javelin). A chemical and gardening glass.

Protect from violent storms, and the too parching darts of the sun, your pennached tulips and ranunculus's, covering them with maira&ses.

Evelyn's Kalendar,

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Matrass is the name of a chemical glass vessel made for digestion or distillation, being sometimes bellied, and sometimes rising gradually tapered into a conical figure. Quincy.

MATRICARIA, feverfew, in botany; a genus of the polygamia superflua order, syngenesia class of plants ; natural order forty-ninth, compositx. Receptacle naked ; pappus none : CAL. hemispnerical and imbricated, witii the marginal leaflets solid, and something sharp. There are several species, but the only remarkable one is

M. parenthium, the common feverfew, with very fibrous clustering roots, crowned with numerous compound leaves^; upright stalks, branching on every side three or four feet high ; garnished with compound plain leaves of seven oval foUioles, cut into many parts ; and all the branches terminated by many compound radiated white flowers having a yellow disc. There are varieties with double flowers, witli semi-double flowers, with double fistular flowers, with a fistular disc and plain radius, with short rayed flowers, with rayless flowers, with rayless sulphur-colored heads, and with finely curled leaves. All these varieties flower abundantly in June, each flower being composed of numerous hermaphrodite and female florets ; the former compose the disc, the latter the radius or bor-der; and which, in the double and fistulous kinds, are very ornamental in gardens, but of a disagreeable odor; and are all succeeded by plenty of seed in autumn, by which they are easily propagated, as well as by parting the roots and cuttings.

M A'TRIC E, n. s. '\ ^^^ °^ ^^'- ""^"

Mat'ricide, t trix. Thewomb;

Matric'ulate, v.a. &, « s.V-hence a ^lould

Matricula'tion, ra. .s. iin which any

Ma'trix. ./ thing is formed :

matricide is the murder or murderer of a mother. To matriculate, says Ainsworth, 'a matrix, quod eS. velut matrice, contineantur militum nomina.' To enter into an academical society by inserting one's name.

If the time required in vivification be of any length, the spirit will exhale before the creature be mature, except it be enclosed in a place where it may have continuance of the heat, and closeness that may keep it from exhaling ; and such places are the wombs and matrices of the females. Bacon.

Nature compensates the death of the father by the matricide and murder of the mother. Browne.

If they be not lodged in a convenient matrix, they are not excited by the efficacy of the sun.

Id. Vuhˆar Erronrs.

He, after some trial of his manners and learning, thought fit to enter himself of that college, and after to matriculate him in the university.

Walton's Life of Siaunderson,

A scholar absent from the university for five years, is struck out of the viatriculationhook ; and upon his coming de novo to the univeisity, ought to be again matriculated. Aylijfe.

Stones that carry a resemblance of cockles, were formed in the cavities of shells; and these shells have served as matricei or moulds to them.

Woodward.

Suffer me, in the name of tho matriculates of that famous university, to ask them some plain questions.

Arbuthnot.

Matrice, or matrix, in dyeing, is applied to the five simple colors, whence all the rest are derived or composed. These are the black, white, blue, red, and yellow, or root color.

Matrice, or Matrices, used by the letter-founders, are little pieces of copjjer or brass, at one end whereof are engraven, dentwise, or en creux, the several characters used in printing. Each character, virgula, and even each point in a discourse, has its several matrix ; and of consequence its several puncheon to strike it. Engravers on metal cut or grave the matrices. When types are to be cast, the matrice is fastened to the end of a mould, so disposed as that, when the metal is

poured on it, it may fall into the creux or cavity of the matrice, and take the figure and impression thereof.

Matrices, used in coining, are pieces of steel in form of dyes, whereon are engraven the several figures, arms, characters, legends, &c., wherewith the species are to be stamped. The engraving is performed with several puncheons, which, being formed in relievo, make an indented impression, which the French call en creux.

MATRICULA, a register kept of the admission of officers and persons entered into any body or society whereof a list is made. Hence those who are admitted into our universities are said to be matriculated. Among ecclesiastical authors mention is made of two kinds of matricula;; the one containing a list of the ecclesiastics, called matricula clericorum; the other of the poor subsisted at the expense of the church, called matricula pauperum.

Matricula was also applied to a kind of almshouse, where the poor were provided for. It had certain revenues appropriated to it, and was usually built near the church ; whence the name was also frequently given to the church itself.

MAT'RIMONY, 7i. s. -ˆ Fr. matrimonial;

Mat'riaiomal, adj. Mtal., Span. & Port.

ˆ.\ivauo'ˆi\h.\,adv.j)natrimonio ; Latin, matrimonium. iMarriage ; the state or contract of marriage : matrimonial, of, pertaining, or suitable to, that state.

If any know cause why this couple should not be joined in holy matrimony , they are to declare it.

Common Prayer. If he relied upon that title, he could be but a king at curtesy, and have rather a matrimonial than a regal power, the right remaining in his queen.

Bacon's Henry VJI. So spake domestic Adam in his care. And matrimonial love. Miltoii's Paradise Lost, Since I am turned the husband, you the wife ; The matrimonial victory is mine. Which, having fairly gained, I will resign.

Dry (ten. He is so matrimonially wedded into his church, that he cannot quit the same, even on the score of going into a religious house. Aiiiiffe.

Courtship is matrimony’s running footman, but seldom stays to see the stocking thrown. Steeicns.

iMA’TRON, n. s. & adj. i Fr. jnatrone ; Lat.

Ma’tronly, uf/;. J ffjaˆnwa. A mother;

an elderly lady : both the adjectives mean motherly or elderly.

Your wives, your daughters, Your matrons and your maids, could not fill up The cigtern of my lust. Shaksjieare. Macbniti,

He had heard of the beauty and virtuous be}iavio\ir of the queen of Naples, the widow of Ferdinando the younger, being then of matronal years of seven and twenty. Bdcon.

‘I’he tnatronlu wife plucked out all the brown hairs, and the younger the white. L’ Estrange.

She was in her early bloom, with a discretion very little inferior to the most experienced malruns.

Tatler. A matron sage Supports with homely food his drooping age.

Pope. In this mimic form (/ a matron in years, How plainly the pencil of Denner appears ! The matron herself, in whose old age we see Not a trace of decline, what a wonder is she !

Coivper.

Matrons, Jury of. When a widow feigns herself witli child, in order to exclude the next lieir, and a supposititious birth is suspected to be intended, then, upon the writ do ventre in-spiciendo, a jury of women is to be impannelled to try the question, whether the woman is with child or not. So, ifa woman is convicted of a capital offence, and, being condemned to suffer death, pleads, in stay of execution, that she is pregnant, a jury of matrons is irapaniielled to enquire into the truth of the allegation ; and, if they find it true, the convict is respited till after her delivery.

MATRONALIA, a Roman festival, instituted by Romulus, and celebrated on the kalends of March, in honor ot Mars. It was kept by matrons in particular, and bachelors were entirely excluded from any share in the solemnity. Tiie men during this feast sent presents to the women, for which a return was made by them at Saturnalia ; and they gave tb.e same indulgence to their servants now which the men gave to theirs at the feast of Saturn, serving them at table, and treating them as superiors.

INIATROSS’, n. s. Lat. vmtara, a javelin. A kind of artillery soldier.

Malrosses, in the train of artillery, are a sort of soldiers next in degree under the gunners, who assist about the guns in traversing, spunging,

firing, and loading them : they carry firelocks, and march along with the store-waggons as a guard, and as assistants, in case a waggon should break. Baileij.

MATSYS (Quintin), painter of history and portraits, was born at Antwerp in 1460, and followed the trade of a blacksmith, till he was in his twentieth year. His manner was, singular, not resembling that of any other master, and his pictures were strongly colored and carefully finished, but yet they are s:jmewhat dry and hard. If he had studied the antiques and the great masters of the Roman school, he might have proved one of the most eminent painters of the Netherlands. But he only imitated ordinary life ; and seemed more inclined to copy the defects than the beauties of nature. Some of his historical compositions have great merit, particularly a descent from the cross, in tlie catiie-dral at Antwerp; which is justly admired for the spirit, skill, and delicacy of the whole. But the most remarkrible and best known of his pictures is that of the two misers in the gallery at VVindsor. He died in 1.529.

Matsys (John), the son of Quintin, painieJ

in the same style and manner, but not with a reputation ef|ual to his father ; though many of his jiictures are sold to unskilful purchasers for the paintings of Quintin. One of his most frequent subjects was the representation of misers counting their gold, or the bankers examining and weighing it.

INIAT'TER, 71. s., V. ?;., Sc v. a. } Fr. matiere ;

Mat'tkry. S Goth, mattur

(strength or substance) ; Ital. and Lat. wat-eria. Body ; substance ; material ; corrupt or putrid fluids which arise in a wound or ulcer ; the whole of a thing ; hence subject ; thing treated of; import; importance; also space or time occupied. 'Upon the matter,' a low and obsolete phrase for 'upon the whole,' or mainly : to matter is to be of importance ; to generate])us or any corrupt fluid : and, as an active verb, to regard ; think material : mattery, purulent ; generating matter.

If the craftsmen have a matter against any man, the law is open ; let them implead one another.

Acts xix. 38. Alas ! I wepyng arn constrained to begin verse of

sorowfuU matter, that whilom in florishyng studie made delitable ditees. For lo ! rendyng muses' of Poetes editen to me thinges to be writen, and drerie teres. Chancer.

The subject or matter of laws in general is thus far forth constant, which matter is that for the ordering whereof laws were instituted. Hooker. Where art thou ? What's the matter with thee.

Shahspeare. I have words to speak in thy ear will make thee dumb ; yet are they much too light for the matter.

Id. Hamlet. If I had had time to have made new liveries I would have bestowed the thousand I borrowed of you : but it is no matter, this poor shew doth better.

Id. Henry IV. The upper regions of the air perceive the collection of the matter cf tempests before the air here below.

Bacon. To help the matter, the alchemists call in many vanities out of astrology. Id. Natural Histort/.

IMany times the things deduced to judgment may be meum and tuum, when the reason and consequence thereof may trench to point of estate. 1 call matter of estate not only the parts of sovereignty, but whatsoever introduceth anj' great alteration, or dangerous precedent. Id. Essays.

In their superiors it qucncheth jealousy, and lay-eth their competitors asleep ; so that upon the matter, in a great wit deformity is an advantage to rising.

Id. If then the soul another soul do make, Because her power is kept within a bound.

She must some former stuff or mo/ter take. But in the soid there is no matter found. Duties. It matterx not, so they deny it all ; And can but carry the lye constantly.

Ben Jonsnn. It is matter of the greatest astonishment to observe the common boldness of men. Decay of Piety.

The putrid vapours col liquate the phlegmatiok humours of the body, which, transcending to the lungs, causes their mattery cough.

Hai-vey on Consumption.

T\e elder, having consumed his whole fortune, when forced to leave his title to his younger brother, left upon the matter nothing to support it.

Clarendon,

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Upon the matter, in these prayefs I do tlie same thing I (lid before, save only that what before I spake without book I now read. Bishop Saunderson. Son of God, Saviour of Men ! Thy name

Shall be the copious matter of my song. Milton.

The king of Armenia had in his company tliree of the most famous men for jitatlers of arms. Sidiiey.

Deadly wounds inward bleed, each slight sore mattereiii. Id.

He grants the deluge to have come so very near the matter, that but very few escaped. Tillotaon.

If on one side there are fair proofs, and no pretence of proof on the other, and that the difficulties are most pressing on that side which is destitute of proof, 1 desire to know, whetlier this be not upon the matter as satisfactory to a wise man as a demonstration.

I shall turn Full fraught with joyful tiding of these works. New matter of his praise, and of our songs.

Drijden. A prophet some, and some a poet cry, No matter which, so neither of them lye. From steepy Othrys' top to Pilus drove His herd. Id.

Matters succeeded so well with him, that every body was in admiration to see how mighty ricli he was grown. L' Estrange.

A fawn was reasoning the matter with a stag, why he should run away from the dogs. Id.

Away he goes to the market-town, a matter of seven miles off, to enquire if any had seen his ass.

Id. It inatters not how they were called, so we know who they are. Locke.

Upon the whole matter, it is absurd to think that conscience can be kept in order without frequent examination. South.

Some young female seems to have carried matters so far, that she is

ripe for asking advice. Spectator. If chance herself should vary, Observe how matters would miscarry. Prior. If Petrarch's muse did Laura's wit rehearse ; And Cowley flattered dear Orinda's verse; She hopes from you — Pox take her hopes and fears, I plead her sex's claim : what matters hers"? Id.

It seems probable to me, that God in the beginning formed matter in solid, massy, hard, impe'netrable moveable particles, of such sizes and figures, and with such other properties, and in such proportion to space as most conduced to the end for which he formed them : and that those primitive particles being solids, are incomparably harder than any porous body compounded of them, even so very hard as never to wear or break in pieces, no ordinary pov.er being able to divide what God himself made one in the first creation. Newton.

I have thoughts to tarry a small mo((er in town, to lea-rn somewhat of your lingo. Conijreve.

In an inflamed tubercle in the great angle of the left eye, the matter being suppurated, I opened it. Wiseman's Suryery. The herpes oeneath inattered, and were dried up with common epuloticks. Id.

Pleased or displeased, no matter now 'tis past ; The first who dares be angry breathes his last.

Granville. This is so certain in true philosophy, that it is matter of astonishment to me how it cartw to be; doubted. Cheyne.

Some have dimensions of length, breadth, and depth, and have also a power of resistance, or exclude every thing of the same kind from being in the same place : this is the proper character of matter or body. Watta's I.oqick.

' Vol.. XIII

ˆ MATTHiEI /Christian Frederick), a learned Creek scholar, born at Grost, in Thuringia, in 1744. Having studied under Ernesti, he was invited by the empress of Russia to become professor of belles lettres in the university of Mos-cow. In 1785 he returned to Germany to search for ancient MSS.; and in 1789 accepted the professorship of philosophy at \Mttemberg ; but having completed his researches h.e returned to Russia. In 1805 he became aulic counsellor, and professor of classical literature at Moscow, where he died September 1811. He is distinguished by the discovery of Homer's Hymn to Ceres ; and part

of the alleged Clytemnestra of Sophocles. Matthaei .published an edition of the New Testament in Greek and Latin, 12 vols. 8vo. 1788, and a vast number of editions of ancient authors.

MATTHEW, or Levi,ˆthe aposde and evangelist, the son of Alpheus, was of Jewish original, and probably a Galilean. Before his call to the apostleship he was a publican or tax gatherer to the Romans. His office particularly consisted in gathering the customs of all mercliandise that came by the sea of Galilee, and tiie tribute payable by passengers who went by water. Here he sat at the receipt of custom, when our Saviour called him. It is probable that, living at Caper-naum, the place of Christ's usual residence, he might have some previous knowledge of him. He continued with the rest of the apostles till after our Lord's ascension. For the first eight years afterwards he preached in Judea. Then he went to propagate the gospel among the Gentiles, and chose Ethiopia as the scene of his apostolical ministry ; where it is said he suffered martyrdom, though others say he suffered in Parthia or Persia. Baronius tells us, the body of St.]\Iatthew was transported from Ethiopia to Bithynia, and thence to Salernum in Naples, A. D. 954, where it was found in 1080, and where duke Robert built a church bearing his name.

Matthew wrote his gospel in Judea, at the request of those he had converted ; and it is thought he began it in the year 41, eight years after Christ's resurrection.

Matthew of Westminster, a Benedictine monk and accomplished scholar, who wrote a history from tiie beginning of the world to the end of the reign of Edward 1., under the title of Flores Historiarum, wliich was afterwards continued by other hands. He died in 1380.

Matthew Paris. See Paris.

MATTHIAS (St.), an apostle, chosen to fill up the place of Judas. (See Acts i). He was qualified for the apostleship, by having been a constant attendant upon our Saviour all the time of his ministry. He is supposed to have been one of the seventy disciples. After our Lord's resurrection lie])reached the gos]iel first in Judea, and afterwards in Ethiopia, where he suffered martyrdom. They pretend to show tiie relics of St. Matthias at Rome; and at tiie fa-mous abbey of St. Mattiiias near Treves. A gospel and some traditions were ascribed to St. Matthias ; but arc universally rejected as spurious.

MATTIIIEU (Peter), a French historian,

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born in 1583. lie attended Louis XIII. to the siege of Moiitauban, vvliere he fell sick, and died at Thoulouse in 1621. He wrote, 1 A History of memorable Events in tlie reign of Henry the Cireat; 2. History of tlie death of Henry IV.; 3. The History of St. Louis; and, 4. History of France from Francis L to Louis XIII., in 2 vols, folio.

MAT'TOCK, U.S. Sax. marruc ; Wei. Diutoij; ; Mr. Thomson says of Goth, ruatt, strength, and /logu, a hoe. A kind of hoe or |iicka..

The Turks laboured with mattocks aud pickaxes to dig up the foundation of the wall. Kiiolks.

Give me that mullock, and the wrenching iron.

Shahipeare. Vou must dig with mattock and with spade,

And pierce the inmost centre of the earth. Id.

To destroy mountains was more to he expected from eartlKiuakes than corrosive waters, and con-demneth the judgment of Xerxes, that wrought through mount Athos with mattocks. Browne.

This night his weekly moil is at an end. Collects his spades, his mattocks, and his hoes,

Hoping the morn in ease and rest to spend, And weary, o'er the moor, his course does hameward bend. Burns.

MATTRESS, 7i. s. French matelas ; Belg. and VVel. maltras ; Ital. matrizze ; Lat. 7uatta . Heb. niDO, lectits, a couch. A species of conch or quilted bed.

Nor will the raging fever's fire abate. With golden canopies and beds of state ; But the poor patient will as soon be found On the hard mattrass, or the mother ground.

Bruden .

Their mattresses were made of feathers and straw, and sometimes of furs from Gaul. Arhuthnot.

MATURE' V. a. & adv. -v Fr. mahirite; Ital.

Matuua’tion, # and Latin maturo ;

Mat’urative, n Span, and Port. >w«-

Mature’ly, arfy. \duro; Heb. ICD,

Matu’rity, n. s. J rain.— Minshen. To

ripen, or promote ripeness or perfection : as an adjective, ripe ; perfect ; or advancing near to perfection or ripeness : hence well-meditated or concocted ; well-disposed. Maturation is the state or act of ripening ; and, in surgery, the act or slate of approaching towards suppuration. IMaturative, conducing to a state of suppuration or ripeness. Maturely is used by Bentley, after the Latin manner, for early, soon. Maturity is ripeness ; fitness, completion.

When once he was mature for man : In Biitain where was he.

That could stand up his parallel, Or rival object be “! Shakspeare. Cymbeline.

This lies glowing, and is mature for the violent breaking out. Id. Corinlanus.

‘i’here is the maturation of fruits, the maturation of drinks, and the maturation of imposthumes, as also Other»ia(iira(io;iS of metals. Bacon s Natural Jlistory.

Prick an apple with a pin full of holes, not deep, and smear it a little with sack, to see if the virtual heat of the wine will not mature it. Id.

It may not be unfit to call some of young years to train uj) for those weighty affairs, against the time of greater matnrit’j. Bacon.

Impatient nature had taught motion To start from time, and chearfuUy to fly Before, and seize upon maturity. Crashav\

Between the tropicUs and the equator their second

summer is hotter, and more mnlwativc of fruits than the former. Browne.

Their prinre is a man of learning and viitue, mi-lure in years and experience, who has seldom vanity to gratify. Addisou.

Mature the virgin was of Egypt's race, Grace shaped her limbs, and beauty decked her face.

Pritrr.

Various mortifications must be undergone, many difficulties and obstructions cimquered, before we can arrive at a just maturitii in religion. Rogers.

Butter is maturative, and is profitably mixea with anodynes and suppuratives. Wistman's Surgery.

We have no heat to spare in summer ; it is very well if it be sufficient for the maturation of fruits.

Btntley.

We are so far from repining at God, that he hath not extended the period of our lives to the longevity of the antediluvians ; that we give him thanks for contracting the days of our trial, and receiving us more mutureli/ into those everlasting habitations above. Id.

How shall I meet, or how accost the sage.

Unskilled in speech, nor yet mature of age?

' Pope.

Love indulged my labours past,

Statures my present, and shall bound my last.

Id.

A prince ought maturelii to consider, when he en-ters on a war, whether his coffers be full, and his revenues clear of debt. Swifi.

The fruits of age, less fair, are yet more sound Than those a brighter season pours around ; And, like the stores autumnal suns mature, Through wintry rigours unimpaired endure. Cowper.

MATURIN (Charles), an ingenious clergyman, curate of St. Peter's Dublin, was the author of several popular romances, &c., some of which, as his Family of Montorio, exhibit considerable powers of imagination, with a happy command of language. His tragedy of Bertram, performed at Drury Lane theatre, with Mr. Kean as the principal character, first brought him into notice, aud is said to have

produced him £lOOO. In some subsequent dramatic attempts he not only failed but involved himself in embarrass-ments, from which he was only set free by his death in October 1825. In 1821 he published The Universe, a poem in blank verse, which brought him more-profit; and in 1824 appeared six Controversial Sermons, preached at St. Pe-ter's during Lent. These exhibit him as an able scholar, and reasoner, and he is said to have been remarkably felicitous in their delivery.

MATY (Matthew), M. D. and F. R. S., an eminent physician, born in Holland in 1718. He was the son of a clergyman, and originally intended for the church ; but in consequence of some mortifications his father met with, on account of his particular sentiments about the Trinity, turned his attention to physic. He took his degree at Leyden ; and in 1740 settled in England. In 1749 he began to publish in French an account of the productions of the English press, printed at the Hague under the name of the .lournal Britannique. This journal, which is still esteemed one of the best that have appeared since the time of Bayle, introduced him to some of the most respectable literary characters of the country. To their active friendship he owed the places he afterwards possessed. In

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17.58 lie vvai cliostia I'.R.S., and in l76o on the resignation of Dr. Bircli, who died a few months after, and made him his executor, secretary to the Royal Society. lie had been appointed o)ie of the under librarians of the Britisli Museum in 1753, and became principal librarian at the death of Dr. Knight in 1772. In 1776 a languishing disorder put an end to a life uniformly devoted to science and humanity. He was an early and active advocate for inoculation ; and tried it upon himself. He was a member of the medical club, which met every fortnifjht in St. Paul's churchyard. He had nearly finished the Memoirs of the Earl of Chesterfield; which were completed by bis son-in-law Mr. .lusta-mond, and prefixed to that nobleman's Miscellaneous works published in 1777, in 2 vols. 4to.

Maty (Paul Henry), M.A. and F. R.S., son of the Dr., was educated at Westminster and Trinity College Cambridge, and had a travelling fellowship for three years. He was afterwards chaplain to lord Stormont at Paris, and soon . after vacated his fellowship by marrying a sister of captain Clark, the coadjutor of captam Cook. On his father's death, in 1776, he succeeded him as secretary to the Royal Society, and as a librarian of the British Museum ; and was afterwards promoted to the care of the antiquities, for which he was eminently qualified. In the disputes in the Royal Society in 1784, respecting the reinstatement of Dr. Hutton in the department of secretary for foreign correspondence, Mr. Maty took a warm and distinguished part, and resigned the office of secretary ; after which he became a tutor in the Greek, Latin, French, and Italian classics. Having conceived some doubts about the articles he had suliscribed in early life, he never placed himself in the way of ecclesiastical preferment, though his connexions were such as could have assisted iiim in this manner ; and soon after his father's death he withdrew from the established church, and published his reasons in the Gentleman's Magazine. His whole life was thenceforwards taken up in literary pursuits. He received £100 from the duke of Marlborough, with a copy of the Gemmffi Marlburienses, of which only 100 copies were printed for presents ; and of which Mr. Maty wrote the French account, as Mr. Bryant did the Latin. In January 1782 he set on foot a Review of publications, princiyially foreign, which he carried on with great credit to himself, and satisfaction to tlie publ ic, for nearly five years ; when he was obliged to discontinue it from ill health. He had long labored under an asthmatic complaint, which at last put a period to his life in January

1787, at the age of forty-two, leaving one son.

MAUBEUGE, a town in the north-east of France, department of the north, situated on the Sambre. It is well built ; and has a manufacture of arms employing from 400 to 500 workmen. Woollen stuffs likewise are made here, stone-ware, and hardware. In October, 1793, this fortress sustained a blockade from the allies, who were, however, obliged to retreat suddenly across the Sambre; and this was one of the strong places occupied by the allied troops from 1813

to 1818. Population 4800. Ttiirleen miles soutli of *Mons.*

iNIAUD'LIN, n. s. As Dr. Johnson suggests, from Magdalen, because this creation of the painter is drawn with swollen eyes and a disordered look ; according to Mr. Thomson, and more probably, from muddle, to drink. Drunk, or half-drunk.

She largely, what she wants in words, supplies With maudlin eloquence of trickling eyes.

litiscommo}!..

And the kind maudling crowd melts in her praise.

Southern.

I also like to dine on becaficas, To see the sun set sure he'll rise to-morrow,

Not through a misty morning twinkling weak as A drunken man's dead eye m maudlin sorrow.

But with all heaven to himself. Biiron.

Maudlin, n. s. Probably from mad, a worm. A plant.

The flowers of the maudlin are digested into loose umbels.. Miller.

MAUDUIT(Israel),F.A.S.,acelebrated English political writer, born in 1708, and educated at Taunton, in the Academy of Dissenters, as a dissenting clergyman. He preached at the Hague, and afterwards in England ; but afterwards commenced merchant in company with his brother. In 1760 he published Considerations on tiie present German War, which had a great and rapid .sale; and, in 1761, Occasional Thoughts on the same subject. He was soon after appointed agent for

Massachusetts; and, in 1769, published A Short History of the New England Colonies. In 1774 he published The Case of the Dissenting Ministers, addressed to the Lords Spiritual and Temporal. He afterwards wrote several severe pamphlets against the ministry during the American war. He died in 1787, unmarried, leaving a fortune.

Mauduit (Michael), a learned French divine, born at Vere, in Normandy. He published, 1. A Treatise on Religion, against the Sceptics ; 2. Excellent Analysis of most of the books of the New Testament, 8 vols. 12mo. He died in 1709.

MAU'GRE, adj. Fr. mulgrc, of Latin nialu gratia. In spite of; notwithstanding. Obsolete.

Do me not to dy, Ne deem thy force by fortune's doom unjust, That hath, maugre her spite, thus low me laid in dust. Spenser.

Maiifjre thy strength, place, youth, and eminence ; Thy valour, and thy heart ; thou art a traitor.

Skakspeare.

I through the ample air, in triumph high. Shall lead hell captive ; maugre hell ! and show The powers of darkness bound.

Milton" s Paradise Lost. Maugre all which, 'twas to stand fast. As long as monarchy should last. IIudihra. < i.

He prophesied of the success of his gospel ; which after his death, immediately took root, and spread itself every where, maugre all opposition or persecution. Burnet.

MA'\TS, n. s. Fr. 7nuuvis. A speckled bird ; a kind of thrush.

The world that cannot deem of worthy things, When I do praise her, sav I do but flatlov ;

So doth the ciicko»v, when tfic mavig sings, iJegins his witless note apace to clear. Spenser.

in birds, kites have a resemblance with hawks, and black-birds with thrushes and mavises.

Bacon's Natural History.

MAUL, f . a. Scn.s. Lat. malleus. See Mall. To bruise or beat with a heavy weapon, or in a coarse manner ; a heavy hammer.

A man that heareth false witness is a maul, a sword, and sharp arrow. Frov. xxv. 18.

Will he who saw the soldier's mutton fist, And saw thee mauled, appear within the list, To witness truth ! Drmlen's Juvenal.

Excess is not the only tiling by which sin itunds and breaks men in their health, and the comfortable enjoyment of themselves thereby, but many are also brought to a very ill and languishing habit of body, by mere idleness ; and idleness is itself both a great sin, and the cause of many more. South.

Mut fate with butchers placed thy priestly stall, Aleek modern faith to murder, hack, and maul.

Pope. I had some repute for prose ; And, till tliey drove me out of date. Could maul a minister of state.

Swift's Miicellany.

MAULE, a province of Chili, bounded on the north by Calchagua, on the east by the Andes, on the south-east by Chilan, on the south-west by Itata, and on the west by the sea. It is 138 miles from north to south, and ninety from east to west ; and is watered by wumerous rivers. On its east border is the volcano Peteroa. It abounds in cattle and goats.

M.VUND, ?i. s. ˆ Saxon mau*©. ' A

Maunday-Thursday. S hand-basket. Maunday Thursday is so called, according to Spelman, because the king then gives alms (in a basket)

to tlie poor ; accor.Jing to others, from dies mandati, the day on which oar Saviour gave bis mandate. That we sliould love one another. The Thursday before Good-Friday.

MAUN'DEll, 71. s.) Fr. maudire, of Goth.

Maun'uerek. S and Teut. iniind, the

raouth. To grumble ; a grulnbler.

lie made me many visits, maundering as if I had done him a discourtesy in leaving such an opening. IVisematis Surgery.

MAUPERTUIS (Peter Louis Moreau de), a celebrated French academician, born at St. Malo in 1698. lie was privately educated at St. Malo till he was in his sixteenth year, when he was placed under the celebrated M. le Blond, in the college of la Marche, at Paris. lie soon discovered a taste for mathematical studies, particularly geometry ; and at the age of twenty entered into the army, lie first served in the Grey mus-queteers ; but in 1720 his father purchased a commission for him in the regiment of La Rocho-guyon. lie remained only five years in the army, during wluch time be pursued his mathematical studies with great vigor. In 17'2.3 he was received into the Royal Academy of Sciences, and read a memoir upon the construction and form of musical instruments, November 1.5lh, 1724. He also discovered great knowledge and dexterity in observations and experiments upon animals. He visited London, where he became a zealous admirer and follower of Sir Isaac New-ton. He next went to Ra'iil in Switzerland,

where he formed a friendship with the femous •lohn Bernouilli, which continued till his death. Gn his return to Paris he applied himself to his favorite studies with greater zeal than ever. By the Memoirs of the Academy, from 1724 to 1736, it appears that the most abstruse questions in geometry, and tlie relative sciences, were treated by him with that elegance, clearness, and precision, so remarkable in all his writings. In 1736 he was sent by Louis X'. to the polar cir-cle, to measure a degree, in order to ascertain the figure of the earth, accompanied by Messrs. Clairault, Camus, Le Monnier, abbe Outhier, and professor Celsius at Upsal. This rendered him so famous, that, after his return, he was admitted a meml)er of almost every academy in Europe. In 1740 he was invited by the king of Prussia to Berlin. He accepted Frederick's invitation the more readily, that his studies had

not wholly effaced his love for arms. He followed the king into the field, and was a witness of the di<;positions and operations that preceded the battle of Molwitz ; but was deprived of the glory of being present, when victory declared in favor of his royal patron, by his horse, during the action, running away with him. He thus fell into tlie hands of the enemy, and was but roughly treated by the Austrian soldiers ; but, being carried prisoner to Vienna, lie received the highest honors from their imperial majesties. From Vienna he returned to Berlin ; but, as the reform of the academy which the king of Prussia then meditated was not yet mature, he went again to Paris, and was chosen in 1742 director of the Academy of Sciences. In 1743 he was received into the French Academy ; and was the first per-son who was a member of both the academies at the same time. M. de Maupertuis again assumed the military character at the siege of Fri-bourg, and was chosen by marshal Cogny and count Argenson to carry the news to the French king of tlie surrender of that citadel. He returned to Berlin in 1744, when he married Madame de Borck, a lady of great beauty and merit, nearly related to de Borck, then minister of state. This determined him to settle at Berlin, as he was extremely attached to his lady, and regarded this alliance as the most fortunate circumstance of his life. In 1746 he was declared by the king president of the Royal Academy of Sciences at Berlin, an-d soon after was honored with the order of Merit. These accumulated honors only increased his ardor tor the sciences. Nor did he confine himself to mathematical studies ; metaphysics, chemistry, botany, literature, all shared his attention, and contributed to his fame. But he had a dark atrabilious humor, which rendered him miserable amidst all his honors and pleasures. This temperament contributed to engage him in several quarrels ; particularly with professor Koenig at Franeker, and with 'oltaire. Maupertuis had inserted in the Memoirs of the Academy of Berlin, for 1746, a discourse upon the lav.s of motion ; which Koenig not only attacked, but attributed to Leibnitz. Maupertuis, enraged at the impiitation of plagiarism, engaged the academy of Berlin to call upon him for his proof; which Koenig failing to pi-oduce, he was struck out of the academy, of which he was a

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member. Several pamphlets were tlie consequence of this; and V'oltaire, to the surprise of the public, engaged against Maupertuis. The constitution of the latter had long been impaired by the great fatigues in which his active mind liad involved liim, as well as by the amazing hardships he had undergone in his northern expedition. These had brought on a spitting of blood, which began at least twelve years before he died. He took several journeys to St. Malo, for the recovery of his health; and, lliough he al-ways received benefit from his native air, yet, upon his return to Berlin, his disorder returned. His last journey to France was undertaken in 1757; when he was obliged, soon after his arrival, to quit his favorite retreat at St. Malo, on account of the danger and confusion which that town was thrown into by the arrival of the British. He went thence to Bourdeaux, and then to Toulouse, where lie remained seven months. He then went to Neufcluitel, and at length arrived at Basil, in 1758, where he was received by his friend Bernouilli with the utmost affection. But, as the winter approached, his disorder returned; and, after languishing several months, lie died in 1759. He wrote in French, 1. The Figure of the Earth determined ; 2. The Measure of a Degree of the Meridian; 3. A Discourse on the Parallax of tiie Moon ; 4. A Discourse on the Figure of the Stars; 5. The Elements of Geography; G. Nautical Astronomy; 7. Elements of Astronomy; 8. A Physical Dissertation on a ˆVhite Iniiabitant of Africa ; 9. An Essay on Cosmography; 10. Reflections on the Origin of Languages ; 11. An Essay on Moral Philosophy;

12. A Letter on the Progress of the Sciences;

13. An Essay on the Formation of Bodies; 14. A Eulogium on M. de Montesquieu; 15. Letters, and other works.

MAUR (St.), Society of, a celebrated society <if Benedictines, instituted under the sanction of Gregory XV. in 1G21.

MAURA, Santa, anciently Leucadia and Neritus, an island in the Ionian Sea, on the west coast of Greece, nearly opposite the gulf of Arta, and a few miles north of Cephalonia. It is separated from the main land by a shallow strait, in some places not more than eighty or 100 paces wide. It is about fifty miles in circumference; and. has a superficial extent of 120 square miles. Its surface is rugged, particularly towards tlie centre ; but the soil, though far from fertile, is

not so barren as that of the neighbouring island, Itliaca. The climate is mild, in sum-mer very hot, and earthquakes are very frequent. The corn raised does not exceed half the consumption ; but olive-oil, wine, citrons, i)oinegra-nates, and other fruits, are produced in abundance ; and the pastures feed large numbers of sheep and goats. Game is plentiful, as well as bees, honey, and wax. The most important production of the island, however, is bay or sea-salt, of which between 5000 and GOOO tons annually are made. The iniiabitants are of the Greek church. A number of them cross to the neighbouring continent, during a part of the year, in quest of work. The capital of tiie same iianio is fortified, and nearly surrounded by the sea, hav-ing an acpieduct raised on arches; and the iˆort

is pretty good. The population is about COOO. in ancient timers, Santa Maura was celebrated for a temple of Apollo, situated in the soutii part of the island. See Leucadia and Leucata. It was conquered successively by the Turks and the Venetians. In 1797 it was ceded, by the treaty of Campo Formio, to France; but, in 1799, it was declared one of the Seven Islands composing the Ionian republic, to the assembly of which it sends four deputies. It has several good ports ; but no town of consequence except the capital. Population of the island 20,000. Long. 20° 39’ E., lat. 39° 4’ N.

MAURICE, or Mauritius (Tiberius), a na-tive of Arabissus in Cappadocia, born A.D.539. He was descended from an ancient and honorable Iloman family. — After he had filled several offices in the court of Tiberius II. he obtained the command of his armies against die Persians. To re-ward his bravery, the emperor gave him his daughter Constantina in marriage, and invested him with the purple, 13th August, 582. The Persians still continued to make inroads on the Roman territories, and Maurice sent Piiilippicus, his brother-in-law, against them. This general at first gained several splendid victories, but did not continue to have a decided superiority. Maurice accˆuired much glory in restoring Chosroes II., king of Persia, to the throne, after he had been deposed by his subjects. The empire was in his reign harassed by the frequent inroads of the Arabian tribes. He purchased peace from diem by a pension nearly equal to 100,000 crowns; but tliese barbarians took frequent opportunities to renew the war. In ditlerent engagements die Romans destroyed 50,000, and took 17,000 prisoners. These were restored, on condition that the king of the Abori should return all the Roman captives in his dominions. Regardless of his promise, he demanded a ransom of 10,000 crowLs. Maurice, full of indignation, refused the sum ; and the barbarian put the captives to

tlie sword. While the emperor, to revenge Uiis cruelty, was making preparations against the Aljari, Phocas, who from the rank of a centurion had attained the highest military preferments, assumed the purple, and was declared emperor. He pursued JNIaurice to Chalcedon, took him prisoner, condemned him to die, and massacred his five sons before his eyes. He was beheaded on the 26th November, 602, in his sixty-third year, and twentieth of his reign. Maurice merited a better fate. He restored die military discii)line, humbled the pride of his* enemies, supported the Christian religion by his laws, and piety by his example.

Mauilice, elector of Saxony, son of Henry the Pious, was born A. D. 1521. He was early remarkable for his courage, and during his whole life was engaged in warlike pursuits. He served under Charles V., in 1544, ngainst France ; and in 1555 against the league of Smalkalde ; with which, although a protestant, he would have no connexion. The emperor, as a reward for his services, in 1547, made him elector of Saxony, having deprived his cousin John Frederick of that electorate. But in 1551 he cnfeivd into a leagiiu with the oieclor of riiandenburgh, the count Palatine, the duke of Wirtemburgh, and oilier

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ymnces, against ihe emperor. Tliis league, encouraged by Henry 11. of France, was more dangerous than that of Smalkalde. The pretext for the association was to deliver the Landgrave of Hesse, whom the emperor kept prisoner. Maurice and the confederates marched, in 1532, to the defiles of the Tyrol, and put to flight the Imperial troops. The emperor and his brotlier Ferdinand narrowly escaped, and fled in great disorder. Charles having reliied into Passau, where he had collected an army, brought the princes of the league to terms of accommodation. By the famous peace of Fassau, in 1552, tlie emperor granted an amnesty to all who had borne arms against him from 1546. The protestai.ts not only obtained the free exercise of their religion, but were admitted intotiie imperial chamber, from whicli they had been excluded since the victory of Mulberg. Maurice soon after joined the emperor against the Margrave of Brandenburgh, who laid waste the German provinces. He defeated him in 1553, at Silver-shausen, but dieil of his wounds two days after. He was one of the greatest protectors of the Lutherans m Germany; and, after he had profited by the spoils of John Frederick, the chief of the Protestants, he became himself the leader of the party, and maintained the balance of power against the emperor.

Maurice of Nassau, prince of Orange, succeeded to the government of the Low Countries after the death of his father William L, who was killed in 1584 by the fanatic Gerard. The young prince was then only eighteen ; but he was appointed captain general of the United Provinces; and, in 1590, Breda submitted to him, and Zut-phen, Deventer, Hulsl, and Nimeguen, in 1591. He gained several important advantages in 1592, and made himself master of Gertrudenburg in 1593. He returned to the Netherlands by the way of Zealand. His fleet was attacked by a dreadful tempest, in which he lost forty vessels, and he himself narrowly escaped. Maurice, increasing in reputation, defeated the troops of the archduke Albert in 1597, and drove the Spaniards entirely out of Holland. In IGOO he was obliged to raise the siege of Dunkirk ; but he took ample vengeance on Albert, wliom he again defeated in a pitched battle near Ne\vi)ort. Before the ac-tion, this great general sent back the ships which had brought his troops into Flanders: * My brethren,' said he to his army, ' we must conquer the enemy or drink up the waters of the sea. Determine for yourselves; I have determined I will either conquer by your bravery, or I will never survive the disgrace of being conquered by men in every respect

our inferiors.' This speech elevated the spirits of the men, and the victory was complete. In 1598 llhinbcrg. Grave, and Kcluse, cities in Flanders, submitted to him. Maurice, however, now aimed at the sovereignty of Holland, but was opposed in his design by the])atriot Barneveldt. The zeal and activity of lliis wise republican cost him his life. He was an Arminian. Maurice defended Gomar against Arminius; and, taking advantage of the general odium under winch the latter lay, he had Barneveldt condemned in 1G19. His dealh, wholly owin'j; to the ambition of Mmirice, made a di-ep impression o;i ihc HoHanders. The truce with

Spain being expired, Spinolalaid siege to Breda in 1624; and in six months, after great slaughter of his troops, he took the place. Maurice, unsuccessful in every attempt to raise the siege, died of vexation in 1625, with the reputation of the greatest warrior of his time. ' His life,' says abbe llaynal, ' was almost an uninterrupted series of battles, sieges, and victories. Of moderate abilities in every thing else, he shone conspicuous in his military capacity.' Telescopes were first used by this prince for military purposes. He was succeeded as stadtholder by Frederick Henry his brother.

Maukice (St.), commander of the Theban legion of Christian martyrs. See Theuan Legion. He was the patron of a celebrated order in the kingof Sardinia's dominions, created by Emanuel Philibert, duke of Savoy, to reward military merit, and approved by Gregory Xlll. in 1572'.

Maurice (St.), or St. Mortizen, a town of Switzerland, in tiie Valais, nineteen miles west of Sion, between two hills, on the Rhone ; over which it has a stately stone bridge, from the one hill to the other. This pass is supposed to be the ancient Agaunum, where the Theban legion suff'ered martyrdom. It is a great thoroughfare for goods and travellers from Geneva, through 'alais, and over Mount St. Bernard.

Maurice (Rev. Thomas), was bom in 1754, at Hertford, where his father conducted the school attached to Christ's Hospital. On his death, in 1763, tlie widow took a second husband, and the subject of this article was placed in Christ's Hospital; but his health declining he was removed to F.aling; and soon after taken under the patronage of the late Dr. Parr, at Stan more. At the age of nineteen he went to St. .John's College, Oxford, and about a year afterwards removed to UniversityColiege. Having taken his bachelor's degree, he was ordained to the curacy of Woodford, Essex, when he married, and

continued to reside here till 1785, when he removed to lapping. About tliis time he devoted his attention to the iiistory and antiquities of India; and in 1790 published A Letter to the Directors, containing Proposals for a History of Hindostan. In the year following he printed the first two volumes of his Indian Antiquities ; succeeded, at intervals, by five more. In 1795 appeared the first volume of the History of Hindostan, which was completed in a third volume in 1799. In 1802 he published the first volume of the Modern History of Hindostan; and in 1804 the second. In this last year he was presented, by the chancellor, to the vicarage of Cudham, in Kent. He also obtained the pension that had been bestowed upon Cowper ; and was likewise appointed one of the librarians of the British Museum. Besides the works already mentioned, Mr. Maurice was the autiior of various Poems, Sermons, Tracts on various subjects, and latterly of his own Memoirs, from whicli this account is taken. He died March 30th, 1824, and was buried at Woodford.

MAURICEAU (Francis), a French surgeon, who applied with great success and reputation to the theory and practice of his art for several years in Paris. He afler\Vards confined himself to the disorders of pregnant women, and was at Ihe head of ail the opcratrus in iiis wav. His

Observations sur la Grossesse et sur rAccoiiche-nient des Femmes, sur leurs Maladies, et celles des Enfans Nouveaux, 1694, in 4to., is reckoned an excellent work, and has been translated into German, Flemish, Italian, and English, and by the author himself into Latin. He published some supplementary pieces on the same subject ; and died in Paris in 1709.

MAURITANIA, an ancient kingdom of Africa, bounded on the west by the Atlantic ; on tlie south by'Getulia, or Libya Interior; and on the north by the Mediterranean ; and comprehending tiie greater part of tiie kingdoms of Fez and Morocco. Its ancient limits are not exactly mentioned by any historian. This country was originally inhabited by a people called Mauri, concerning the etymology of whicli name authors are not agreed. From the Jerusalem Targum it appears that part of the Alauri may be deemed the offspring of Lud, the son of Misraim, as his descendants, mentioned Gen. x., are there called "N! D1"iQ, Mauri, or Mauritani. It is certain that this region, as well as the others east of it, had many colonies planted in it by the Phcenicians. Procopius tells us that, in his time, two pillars of white stone were to be seen there, with ihe following inscription, in the Phcenician language and character, upon them : ' We are the C'anaanites that fled from Joshua, the son of Nun, that notorious robber.' Ibnu Rachic, or Ibnu Raquig, an African writer cited by Leo, together with Evagrius and Nicephorus Callistus, assert the same thing. The earliest prince of Mauritania, mentioned in history, is Neptune; and next to him were Atlas and Antaeus, his two sons, both famous in the Grecian fables on account of their wars with Hercules. See Antˆus, and Atlas. Without adopting every particular of Sir Isaac Newton's System, it appears plain from scripture, that neither the western extremity of Libya, nor even the other parts of that region, could have been so well peopled before the time of David or Solomon, as to have sent a numerous army to invade Egypt. For Egypt and Phoenicia, whence the greatest part of the ancestors of tiie Libyans came, and which were much nearer the place whence the first dispersion of mankind was made, could not themselves have been greatly overstocked with inhabitants any considerable time before the reign of Saul. And that such an invasion happened in the reign of Neptune, or his son Anta;us, has been fully evinced by this most excellent chronologer. From the defeat of Antaeus nothing remarkable occurs in the history of Mauritania till the times of the Romans, who at last brought the whole kingdom

under their jurisdiction. See Rome.

MAURlTANIANS,the natives of Mauritania. According to Ptolemy, they were divided into several cantons or tribes. The Metagonita > were seated near the straits of Hercules, now those of Gibraltar. The Saccosii, or Cocosii, occupied the coast of the Iberian Sea. Under these two petty nations the Masices, Verues, and Verbicpe or Vervica", were settled. The Salisae, or SalinsT, were situated lower, towards the ocean ; and still more to the south tiie 'olubiliani. The Mau-retiKii and Herpidiiaiii possessed the east part of this country, which was terminated by the

Mulucha. The Angaucani or Jangacaucani, Nectiberes, Zagrensii, Baniubae, and Vacuiica-, extended themselves from the soi'th foot ol Ptolemy's Atlas Minor to his Atlas Mi.jor. Pliny mentions the Baniurae, whom Hurduiu takes to be Ptolemy's Baniubas , and Mela the Atlantes, whom he represents as possessed of tlie western parts of this district. With regard to the customs, Sec, of this people, Hyginus insinuates that they fought only with clubs, till one Belus, the son of Neptune, taught them the use of tiie sword. Sir Isaac Newton makes this Belus the same witii Sesostris, king of Egypt, who overran a great part of the then known world. All persons of distinction in Mauritania went richly attired, wearing much gold and sdver in their clotlies. Tliey took great pains in cleansing their teeth, and curled their hair in an elegant man-ner. They combed their beards, which were very long, and always had their nails pared close. VVhen they walked out in any numbers, they never touched one another, for fear of disconcerting their curls. The Mauritanian infantry, in time of action, used shields made of ele'ihants' skins, and were clad in skins of lions, leopards, and bears, which they kept on night and day. The cavalry were armed with broad short lances, and carried also shields of the same kind. They used no saddles. Their horses were small and swift, had wooden collars al)Out tlieir ne<;ks, and were so much under the command of their riders that they would follow them like dogs. The habit of the horsemen was much the same witli that of the foot. The Phuta;i, of whom tlie Mauritanians were a branch, were remarkable for their shields, and the excellent use they made of lliem, as we learn from Homer, Xenophon, and Herodotus, who intimates that the shield and helmet came from them to the Greeks. Notwithstanding the fertility of their soil, the poorer Mauritanians never manured their ground, being strangers to husbandry ; but roved about the country, in a wild savage

manner, like tlie ancient Scythians and Arabs. They had mapa-lia, or small tents; and their food was corn, herbage, &c., which they often ate green without any preparation; being destitute of wine, oil, and all the elegancies as well as many necessaries of life. “Their habit was the same in summer and winter, consisting chiefly of an old, tattered, thick garment, and over it a coarse rough tunic According to Horace, the Mauritanians shot poisoned arrows ; and this is countenanced by Ilerodian and .‘Elian, who say they were in such continual danger from wild beasts, tint they durst not stir out of their tents without tlieir ar-rows or darts. They sacrificed human victims to tlieir deities, as did the Phcenicians, Carthaginians, &c. They were early addicted to magic, sorcery, divination, &;c. Cicero and Pliny say that Atlas was the inventor of astrology, and tlie doctrine of the sphere, i. e. he first introduced liiem into Mauritania. This, according to I)io-donis Siculus, gave rise to the Aible of Atlas’s bearing the heavens upon his shoulders. He adds, tliat Atlas instructed Hercules in the doctrine of the sphere and astrology, or rather astio-iioniy ; wiio afterwards brought these sˆicncos into Greece.

MAURITIA, the ginkgo, or maidenhair treo, a genus of the order of pidmae : cal. of tliu mule monophyllous : coii. monopetalous, with six stamina. It is a native of Japan, where it is named ginan and itsio. It rists with a long, erect, thick, and branched stem, to tlie size of a walnut tree. The bark is asli-colored, the wood brittle and smooth, the pith soft and fungous. Tlie leaves are large, expanded from a narrow bottom into the tigure of a maidenhair leaf, unequally parted, streaked, without fibres ; both surfaces having the same appearance, and supported upon foot-stalks, which are compressed upon the upper surface, and extended into the leaf. From the uppermost shoots hang the flowers in long catkins filled with the fertilising powder ; to which succeeds the fruit, adhering to a long fleshy pedicle, which proceeds from the bosom of the leaves. This fruit is round, of the appearance and size of a damask plum. The substance surrounding it is fleshy, juicy, white, very harsh, and adheres so firmly to the enclosed nut as not to be separated from it, except by putrefaction. The nut, termed gineau, resembles the pistachia nut, especially a Persian species named bergjes pistai ; but is al-most double in size, and of the figure of an apricot stone. The shell is somewhat white, woody, and brittle ; and encloses a white loose kernel, having the sweetness cf an almond along with a degree of harshness. These kernels are said to promote digestion, and to give relief in surfeits ; whence they make part of the dessert in great feasts. They seem to be very hardy, and thrive in this country in the open air.

MAURITIUS, or the Isle of France, an island of the Indian Ocean, 600 miles east of Madagascar, was discovered by the Portuguese in 1.500, and named Acerno, or the Isle of Swans ; but, being neglected by them, the Dutch took p/osscssion of it in 1598, and named it Mauritius, after their stadtholder, prince Maurice. ‘ It was not, however, till 1G40 that they formed an establishment on it at Grosport, but in 1712 they again abandoned it; and, three years after, ttie French East India Company formed an establishment at Port Louis, and gave the island its present name. In 1764 the company ceded it, together with the Isle of Bourbon, to the crown.

Its greatest benefactor was the French governor de la Bourdonnais, who fortified it in such a manner as to be considered at the time almost impregnable, and rendered it the chief naval station of the French in the Indian seas. He also encouraged cultivation, and

introduced coffee, sugar, cloves, nutmegs, and cinnamon. It preserved its importance after we had annihilated the French power on the continent of India, and became then a grand privateering station against the British shipping. It was calculated that, in ten years, prizes to the value of £2,500,000 had been taken and carried into Mauritius. The vessels, after being emptied of their goods, were commonly sold to the Arabs. At length, in.l8 10, an expedition was despatched against it, wlien it was found incapable of making that defence which had been anticipated. After a short resistance the governor offered terms of capitulation, and the place was surrendered, with six frigates.

three East Indiamen, and twenty-four large merchant vessels. This settlement was retained at the peace, and may now be considered as a settled British colony.

Thi> island is fourteen leagues long, and eight i)road, being of an irregular oval figure, containing 340,000 square acres, and is surrounded by coral reefs and islets. The island gradually rises from the shore towards the centie of the island, where is a woody plain, elevated 1500 feet above the level of the sea. In the midst of this plain is a sharp conical mountain, called Le Piton de Milieu de ITsle. There are several other distinct mountains, the principal of which is named Piter Boot, surmounted by an enormous and inaccessible rock, the elevation being 3000 feet : its base is surrounded by marshes, whence the principal rivers of the island issue. These rivers .have, however, sensibly diminished]jy the indiscriminate destruction of the forests that clothed the sides of the hills, so that the island, which was formerly profusely watered, is now, particularly on the north, where the rivulets are all dried up, almost in want of it. There are some lakes among the mountains.

The vegetable productions of the island are extremely numerous, and aff”ord a vast harvest to a botanist : it is said, however, that one-half the flora of the island is composed of ferns and cryptogams. Tliough, in general, the soil is less fertile than that of Bourbon, and is every where covered with rocks that preclude the use of the plough, yet a considerable quantity of land is in cultivation, producing coffee, cotton, indigo, sugar, and some rice in the swampy spots.

The wild animals of the islands are, deer, hedgehogs, monkeys, and rats of various kinds. The horned cattle are of the small Madagascar breed, with humps ; and the horses, of Arabian extraction, much degenerated.

Birds are not numerous, and are chiefly of the smaller species. Some of them are foreigners, particularly the calfat, which is said to be propagated from some individual escaped from captivity, and the martin, purposely introduced from the Philippines to destroy the insects which devoured the vegetables. It has completely succeeded in extirpating caterpillars, grasshoppers. Sec, but these birds have also multiplied so prodigiously as to be almost as destructive as the insects to the crops ; hence every proprietor is obliged to present a certain number of their lieads, as well as those of sparrows, to the magistrates annually.

The population of the island in

Whites. People of color. Slaves. 1763 was 3000 . 500 . 15,000

1776 . 3431 . 1190 . 25,154 1806 . 7000 . 7000 . 70,000

Many of the slaves have escaped to the mountains of the interior, where they live wild.

The produce of the island is estimated as follows : —

Coffee

Cotton

Indigo

Sugar

Cloves

600,000 lbs.

500,000

300,000

5,000,000

20,000

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Tho isbnd is divided into twelve quarters, *viz.* Port Louis, Poudre d'Or, Pamplemousses (celebrated by tiie pen of St. Pierre), Flac, La Riviere des Ramparts, Trois Islets, Gros Port, Savannah, die military quarter (in the centre of the island and almost uninhabited and uncultivated), iMoka, the Plains of Willems, and the Plains of St. Pierre.

Port Louis, in the revolution called Port Liberty, Port North-west, and Port Napoleon, is the only town in the island : it contains about 5000 whites, and double that number of people of color. The houses are chiefly of wood, and few of them have more than the ground floor, in consequence of the heavy storms the island is subject to. The entrance of the port is between two reefs, running out from each point, and is so narrow that but one vessel can be warped or towed in at a time; for the south-east wind, blowing almost constantly, prevents their sailing-in, except occasionally when the south-west wind serves for an hour or two ; and a light air from the north-west also sometimes prevails, but this is very precarious. The port is capable of holding about fifty ships. Cooper's Island oft' the North Point of the entrance of the port, to which it is joined by an artificial causeway 800 feet long, is nearly level with the water, and is strongly fortified, but commanded by batteries on the main.

Port Bourbon, the ancient Gros Port, at the revolution named Port South-east, and since Port Imperial, is defended by Isle Passe, a coral rock, one league off" shore, on which is a circular battery and barracks. This island has no fresh water.

Port de la Savannah, or Souillac, on the south is a tolerable road defended by a battery. Great Black River, on the south-west, has a good road before it, within coral reefs. It is defended by some batteries, but has not water for large ships within gun-shot of them. Small craft only can enter the river.

Off the north end of the Isle of France are several small volcanic isles, *viz.* Coin de Mire, three miles and a half north of CapeMalheureux (the north point of the island), with a safe channel between : this island is entirely composed of beds of lava. Flat Island, north of Coin du Mire, is less elevated than the others; the shore is a white calcareous stone, and the other parts of a reddish color : on it is the appearance of a volcanic crater. Pigeon-House Island, a little west of Flat Island, is an

enormous lump of basallic lava, of a reddish-brown color.

Round Island rises in the form of a cone, about 200 feet high; its shores are rugged, precipitous, and inaccessible. Serpent's Island, the northernmost, is five leagues distant from the main. It has its name from small serpents being said to be found on it, although this reptile is unknown in the Isle of France, or any of the surrounding islets.

The administration of the isles of I' ranee and Bourbon was confided to a governor-general residing at the ibrmer island. Roderigue, or Diego Rays, is a dependency of the Isle of France, from wiiich it is distant 100 leagues eastward. The south-wcbt point of Mauritius is in long.

57° 16' E., lat. 20° 27' S. The north-east point is in long. 57° 35' E., lat. 19° 53' S.

MAURUS (Terentianus), a Latin poet and grammarian, who flourished underTrajan, Adrian, and the Antonines. He was governor of Syene in Upper Egypt about A. D. 140. He wrote an elegant poem, De Literis, Syllabis, Pedibus, et Metris Iloratii ; published by Mycillus at Franc-fort, in 1584, 8vo.; and by Mattaire in his Cor-pus Poetarum.

MAURY (Jean Siffrein), a modern French cardinal, was born in 1746 at Vabees, in the ancient comte of Venaisson. He studied at Lyons, and, on entering into orders, became a celebrated preacher at Paris, and obtained a place in the academy, and the government of an abbey. When the revolution broke out, he was one of the representatives of the clergy in the states-general, where he distinguished himself by his eloquence in behalf of his order, and of royalty. On the dissolution of the constituent assembly, he went to Italy, where he became bishop of Nicica, and in 1799 was made a cardinal. In 1807 he tendered his submission to Buonaparte, who in 1810 appointed him archbishop of Paris. The cardinal was obliged to leave France, it is said, on the fall of the emperor, and died at Rome in 1817. He published several works, the best of which is An Essay on Eloquence.

MAUSOLE'UM, 7i. s. Fr. mausolce ; Latin mausoleum. A name first given to a stately monument erected by his queen Artimesia to her husband Mausolus, king of Caria; a pompous funeral monument.

]Mausolus, the name of a king of Caria, to whom Artemisia, his widow, erected a most stately monument, that has since been

reckoned among the seven wonders of the world ; calling it from his name mausoleum. It was sixty-three feet long, almost 411 feet in compass, and about thirty-five feet high, surrounded with thirty-six columns, that were beautified in a wonderful manner. Pliny has described it, lib. xxxvi. Dr. A. Rees.

MAW, n. s. ~] Sax. majja; Gothic

Ma'w'kisu, adj. \nHi<;a; Swedish ?Kfln;c, •

Maw'kishness, ?i. i'. {^ Teut. ?Hai,'e«. Tiie sto—

Maw'met, [mach of animals and

Maw'mish, at/;. [craw of birds; used

Maw'worm, ?i. s. J contemptuously of the human stomach. Alawkish and mawmish, apt to excite satiety or loathing; nauseous. Mawmet (see Mammet), a puppet, or idol. INIaw-worm, a worm often found in the stomach.

So oft in feasts with costly changes clad, To crammed maws a sprat new stomach brings.

Siiiiieii.

We have heats of dungs, ahd of bellies and maws of living creatures, and of their bloods. Bucnn:

This liardmeat is for strongerm(/»s. Bp. Hall.

Ordinary gut-worms loosen, and slide ofl" from tiic intern tunick of the guts, and freeiuently creep into the stomach for nutriment, being attracted thither by the sweet chyle ; whence they are called stomach or inaw-norms. Hurcei/ on Cuusiiinplions.

Though plenteous, all too little seems.

To stuft' this wau;, this vast uuhidebound corpse.

l\liltuii.

The serpent, who his mtiw obscene had filled. The liranches in his curled embraces held. Drti'lcn.

It is one of the most nauseous, uuncinish mortifications, for a mail to have to do with a punctual, finical fop. L'EUraiuje.

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Granivoraas Wiils have the mechanis'ii of a mill ; their maw is tlie hopper which holds and softens the grain, letting it down by degrees into tlie stomach, 'vhere it is ground by two strong muscles ; in vvhicli action they are assisted by small stones, which they swallow for the purpose , Arhuthnot.

Flow, Welsted ! flow, like thine inspirer beer, So sweetly mawkish, and so smoothly dull. Pope.

MAWKS (St.), a borougli and market-town of Cornwall, on the east side of Falmoutli Haven. Tliougl) but a hamlet of the parish of St. Just, two miles off, it has sent members to parliament ever since 1562, who are returned by its mayor or iˆorlreve. It consists of one street, under a hill, fronting tlie sea, and its inhabitants subsist by fishing. Kmg Henry VHI. built a castle here, over against Pendennis, for the security of Falmouth Haven. A new chapel has been erected here, at the expense of the marquis of Buck-mgliain. It has a governor, a deputy, and two gunners, with a platform of guns ; and a market on I'Viday.

MAXENTIUS (Marcus Aurelius Valerius), son of the emperor Maximianus Herculeus, was, by the voluntary abdication of Dioclesian, and of his fatiier, raised to the purple, A. D. 306. He afterwards incited his father to re-assuine his imperial authority: and])erfidiously destroyed Severus. His successes were impeded by Galerius Maximianus, who opposed him with a powerful force; but the defeat of Galerius restored peace to Italy : and Maxentius went into Africa, where he rendered himself odious by his cruelty and oppression. He soon after returned to liome, but, being defeated by Constantine fled back to the city ; but, the bridge over the Tiber giving way, he fell' into tlie river,and was drowned, A. U. 312. His cowardice and luxuries were as conspicuous as his cruelties.

M.VXIL'LAR, a(//.) Lat. viaxillai-is . Be—

Max'illary. i longing to the jaw-bone.

I'he greatest quantity of hard substance continued is toward the head ; there is the skull, the teeth, and the maxlUary bones. Bacon.

MAX'IM, n. s. Fr. maxime ; Lat. maximum. An axiom; a great or general principle a leading truth.

This maxim out of love 1 teach. SJtakipeare.

It is a maxim in State, that all countries of new acquest, till settled, are rather matters of burden than strenglh. Bacon.

Yet, as i(i duty bound, they serve him on ;

Nor ease, nor wealth, nor life itself regard,

For 'tis their maxim, love is love's reward.

Dr\idcn.

That the temper, the sentiments, the morality of men, is influenced by the example and disposition of those they converse with, is a reflexion which has long since passed into proverbs, and been ranked among the stcinding maxinu of human wisdom.

Rogers.

It is hard to form a maxim against which an exception is not ready to start up ; so, wlien the minister grows rich, the jjublic is proporlioiiably poor, as in a private family, the steward always thrives the fastest when the lord is running out. Swifl.

It may be prudent for a writer, who apprehends that he shall not enforce his own nia.r.i. s by his domestic character, to conceal his name, that he may not injure then:. Jo'mson.

MAXI.VIIANUS (Galerius Valerius), a a'.cu-herd of Dacia, and afterwards a soldier, who wui raised bv Dioclesian, wiio gave him iiis daughter in marriage, to the unperial dignity. He con-rpiered the (ioihs, Dalmatians, and Persians. He proved a cruel tyrant; pe4'secuted the Christians; and died miserably A.D. 311. See Rome.

MAXIMILIAN I., emperor of Germany, signalised himself against the Frencli, while he was king of the Romans, and aftei he was emperor entered into the army of Heiuy VIII. of England as a volunteer against tliat nation. He was a protector of learned men, and abolished an iniquitous tribunal styled Judicium occultum Westphaliaj. He composed some poems, and Memoirs of his own life. He died in 1519, aged sixty. See Germany.

MAXIMINUS (Caius Julius Verus), the son of aThracian peasant, who,

having displayed great bravery as a soldier, rose to the highest othces, after whicli he promoted a sedition among the soldiers against the emperor Alexander Severus, and upon his murder was elected in his place, A.D. 325. But, proving a cruel tyrant, he was assassinated by his soldiers near Aquileia, A. D. 236. See Rome. He is said to have been eight feet high ; and his limbs, strength, and voracious appetite, in proportion.

MAXIMUS, a celebrated Cynic philosopher and magician of Ephesus. He instructed the • emperor Julian in magic ; and, according to some historians, from his conversation and company the apostasy of Julian originated ; as he not only visited him, but even submitted his writings to his critical inspection. Maximus, however, refused to live in the court of Julian, who, far from being displeased, appointed him high pontiff in Lydia, an office which he discharged with great moderation and justice. When Julian went into the east, the magician promised him success, and tliat his conquests would be more numerous and extensive than those of Alexander. He persuaded his imperial pupil, that, according to the doctrine of metempsychosis, his body was animated by the soul of Alexander. After the death of Julian, INIaximus was almost sacrificed to the fury of the soldiers ; but was saved by his friends, and he retired to Constaminople. He was accused of magical practices, before the emperor Valens, and beheaded at Ephesus, A. 1). 366. He wrote some philosophical and rhetorical treatises, some of which were dedicated to Julian. Tiiey are all now lost.

MAY, aux. V. i Preterite might. Sax. maˆe,

Mav-be. i maˆan ; Teut. vioge ; Gotli.

ma, tneiga, to have power. To be permitted ; be at liberty; be possible; be by chance; expressing desire : may-be signifies perhaps ; ‘ it may be that ;’ perchance.

Sin that I may not seen your Fˆmelie, I n’ain but ded ; ther n’ is no remedie.

Chaucer. Cant. Talesˆ May-be that better reason will assuage

The rash revenger’s heart, words well disposed

Have secret power t’ appease inflamed rage.

Faerie Queene.]\[aii-he the amorous count solicits her In the unlawful purpose. Shakspeare.

Be the workmen what they •/;.;// Ic, let us speak of the work. i:.:cvn'g Imiy.

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This also tendeth to no more but what the king mail do : for what he muij do is of two kinds ; what he mai/ do as just, and what he ma>/ do us possible.

Baco7i. What they offer is bare maii-he and sliift, and scarce ever amounts to a tolerable reason. Creech.

Its words are not like the words of a wise man, who is wary and careful that he slip not into mistake, interposing therefore his may-be s and perchance s. Barrow.

Mail you live happily, and long, for the service of your country. Drudeii's Dedication to the JEneid. ' lis nothing yet, yet all thou hast to give ; I'hen add those may-be years thou hast to live.

Dry den. He that is sent out to travel, with the thoughts of a man designing to improve himself, may get into the conversation of persons of distinction.

Locke on Education. How old may Phillis be, you ask, Whose beauty thus all hearts engages 7

To answer is no easy task. For she has really got two ages. Prior.

Make the most of life you may. Bourne. May, n. s. & v. 71.'] Lat. 3Iaius. The fifth May-big, h. s. month of the year; hence

May-day, tlie early or spring time

May-flower, of life : to may is to sport,

May-fly, ˆas in May-time: May-bug,

May-game, a cliafFer: May-day, the

May-lily, firstofMay: May-flower,

Maypole, a plant: May-fly, an in—

May-weed. J sect: May-lily, the lily of

the valley : May-weed, a species of camomile : May-game and

Maypole, a sport of the month of May ; a pole often danced round on the first of that month.

The Maie-weed doth burne, and the thistle doth freat, The fitches pull downward both rie and the wheat.

Tusser. When merry May first early calls the morn, With merry maids a majjiny they do go. Sidney. in the month of ˆ{ay the citizens of London (of all estates) lightly in every parisli, or sometimes two or three parishes joinmg together, had their several nuiyings, and did fetch in Maypoles.

Stowe's London. Maids are May when they are maids. But the sky changes when they are wives.

Shakspeare. My liege Is in the very May-moxn. of his youth. Ripe for exploits. /". Henry V.

'Tis as much impossible, Unless we swept them from the door with cannons, To scatter 'em, as 'tis to make 'em sleep On May-day morning. Shakspeare.

The plague, they report, hath a scent of the May-Jiower. Bacon's Natural History.

The king this while, though he seemed to account of the designs of J'erkins but as a May-yamc, yet had given order for the watching of beacons upon the coasts. Bucn».

May must be drawn witii a sweet and amiable countena'ice, clad in a robe of wiiite and green, embroidered with daffodils, hawthorns, and blue-bottles.

I'cacham. Hail ! bounteous May, that dost inspire Mirth and youth, and warm desire ; Woods and groves arc of thy dressing, Hill and dale doth bonst thy blessing. Milton. Cupid with Aurora playing, As he met her once a mayinˆ. Id.

He loves the May-jiy, which is bred of the ovidˆ worm or caddis. Walton's slngter.

Like early lovers, whose unpractised hearts Were long the M.iu-gamc of malicious arts, When once they find their jealousies were vain. With double heat renew their fires again.

Dry den. Amid the area wide she took her stand ; Where the tall Maypole once o'erlooked the strand.

Pope. The sweeping blast, the sky o'ercast,

The joyless winter-day. Let others fear, to me more dear

Than all the pride of May. Burns.

May is the fifth month in the year, reckonius; from January : and the third, counting the year to begin with March, as the Romans anciently did. It was called Maius by Romulus, in respect to the senators and nobles of his city, who were named majores ; as the following month was called Junius, in honor of the young men of Rome, in honorem juniorum, wlio served him in the war. Some think, however, that it was thus called from Maia, the mother of Mercury, to wliom they offered sacrifice on the first day of it. In this month the sun enters Gemini, and the plants of the earth in general begin to flower. — This month was esteemed favorable to love ; and yet the ancients look on it as an unhappy month for marriage. The original reason may perhaps be referred to the feast of the Lemures, whicli was held in it. Ovid alludes to it in the fifth book of his Fasti.

May, or Maius (John Henry), a Lutheran divine, born at Pfortzheim, in 1653. He was professor of Hebrew and oriental languages, and minister at Giessan, where he died in 1719. He published, 1. Historia Animalium Scrijiturae Sacras: 2. Vita Joannis Reuchlini : 3. Synopsis Theologiffi Symbolicae : 4. Historia Reformati-onis Lutheri : and other works.

May (Thomas), an Englisli poet and historian of the seventeenth century, born of an ancient but decayed family in Sussex. He was educated at Cambridge, and afterwards removed to Lon-don, where he contracted a friendship with several eminent persons. While he resided at court, he wrote five plays, which are extant. In 1622 he published a translation of Virgil's Georgics, with annotations; in 1625 a poem on Ed-ward III., and a translation of Lucan's Pharsaiia, which poem he continued down to the death of Julius Csesar, both in Latin and English verse. Upon the breaking out of the civil wars, he adhered to the parliament; and in 1647 he published The History of the Parliament of Kngland, which began November 3d, MDCXL., with a short and necessary view of some precedent years. In 1649 he pul)lished llistoriie I'arlia-menti Anglix* Breviariuni, in three parts, wliich he afterwards translated into iMiglish. He wrote the History of Henry II. in English verse. Ho died in 1650, and his death was

imputcil to his having tied his night cap too close, and tlius occasioned his suffocation ; but the facetious Andrew Marvel, in a poem of 100 hnes, makes him a martyr of Baccluis. Soon after the restoration, his body, with those of several others, was dug up, and buried in a pit in St. Margaret's churchyard ; and his monument, which wa.'*

erected by the appointment of parliament, was taken clown and thrown aside.

May, a small island of Scotland, in the frith of Forth, six mdes south from the nearest part of the coast is about one mile long, and three-quarters of a mile broad. It has a well of fine water, a small lake, and excellent pasturage for sheep. Here are the ruins of a priory, which formerly belonged to the abbey of Pittenweem ; and a chapel dedicated to St. Adrian, who was kdled by the Dunes in 870, and buried in this place. An excellent lighthouse has lately been erected upon it, by tlie commissioners of nortliern lights, wlio in 181G rebuilt the tower and fitted it up with reflectors. It abounds witii sea-fowl, and rabbits.

MAYENNE, Department of the, France, is formed out of the former province of Bas Maine, and takes its name from the river, which waters it from north to south. The principal place of this prefecture is Laval ; it is divided into three arrondissements ; Laval, containing 111,228 inhabitants; Chateau-Gontier, 72,138 ; and Mayenne 160,526, being a total population of 343,892 souls, on an area of 2349 square miles. It is subdivided into twenty-seven cantons, and 288 communes, yielding a territorial revenue of 13,093,000 francs, and forms a part of the fourth military division, is in the diocese of Mans, and belongs to the royal court of Angers. It further comprises three electoral arrondissements, which send five members to the chamber of deputies. This department is bounded by those of the INIanche, and the Orne, on the north ; by that of the Sarthe on the east ; by the Maine-et-Loire on the south ; and on the west by the Ille-et-'i-laine.

The face of the country is diversified with cultivated plains, woody mountains, extensive forests, and uncultivated and sandy heaths. There are few natural meadows, yet by the means of the fallows the inhabitants rear a great num-ber of cattle, which constitute their chief riches. The valleys, crossed by die Sarthe and the Mayenne, produce a considerable quantity of March wheat, though the coldness of the soil does not permit the growth of winter wheat. Flax and hemp, and abundance of fruit trees, particularly apples, are cultivated here, and not less than 600,000 hectoUtes of cider are nude annually. There are also some vineyards producing tolerably good wines. The soil, mostly sandy, is cultivated with horses, and generally yields sufficient for the inliabitants. It comprises 25,781 hectars of forests chietty oak, beech, and chestnut, and GOO hectars of vineyards, at an average produce of twenty-four francs seventy-eight centimes per liectar of cultivated land.

Besides the productions already mentioned this district yields very fine rye, barley, oats, buckwheat, &c. ; horses of a small size, good milch cows, numerous flocks of sheep, whose wool is highly esteemed, and a great quantity of bees. There are also iron mines, and quarries of marble, freestone, and slate. The inhabitants carry on manufactures of linen, calicoes, handkerchiefs, table-cloths, serges, thread, and cotton yarn ; they have also bleaching grounds, blast furnaces, wire forges, and paper-mills. The

trade consists chiefly in the productions already referred to, as well as honey, wax, poultry and wool.

This department is watered by the Mayenne, which is navigable, the Ernee, tlie Jouane, the Colmont, the 'icoin, the Vaise, the Oudon, and tlie Erve. The great roads of llennes, Alenˆon, Mans, and Tours, traverse it in different directions.

MayeniNe, an ancient and fine town of the department of this name, in France, the chief place of a subprefecture, having a lower court of judicature, a tribunal of commerce, and a board of manufactures. It is a post town, containing about 9556 inhabitants. Situated on the declivities of two hills, wliich rise from the banks of the Mayenne : it is irregularly built, its streets being steep and close ; but the general appearance of it is pleasing. There are two public squares, one of which is adorned with a handsome fountain. In ancient times it was a very strong town, defended by considerable fortifications, and a castle which was considered impregnable. It was taken by the English in

1425 after a siege of three months.

The inhabitants manufacture linen, hempen and cotton cloths, handkerchiefs, and calicoes ; and have cotton spinning factories, bleaching grounds, dye-houses, and many forges in the neighbourhood. They also carry on a considerable trade in these articles, and in wine, brandy, and iron, near the town. In a very picturesque situation on the right bank of the river, stands the ancient seat of the duke of Mayenne. This place is about 126 miles west of Paris, twenty-four N. N. E. of Laval, and forty-three \V. S. W. of Alenˆon.

Mayenne, a river of France, which rises at tlie village of ˆNlaine, near Lignieres-la-Doucelle, in the arrondissement of Alenjon, department of the Orne, France. It then passes on to Coup-train, Ambrieres, Mayenne, Laval, Chateau-Gontier, and Angers, and falls into the Loire at Bouche Maine, a little below Pont-de-Ce. I' is navigable as far as St. Jean for rafts; and for boats as far as Laval. This river serves for the conveyance of corn, wine, salt, hemp, flax, tim-ber, coal, earthenware, resin, caulking stuff, pitch, building materials, &c. On its junction with the Sarthe it takes the name of the Maine, and its whole course is about 125 miles, receiving on its way the Ernee, the Oudon, the Sarthe, and several other rivers.

MAYER (John Frederick), a Lutheran divine, born at Leipsic, in 1650. lie was siiperintendant of the churches in Pomerania, and professor at Stettin. lie wrote several tracts against Popery; but his principal work is his Bibliotheca Biblica ; llostock, 1713. lie died in 1712.

M.'VYERNE (Louis de), a celebrated French writer of the sixteenth century. He wrote, 1. The General History of Spain : 2. Monarchie Aristo-Democratique, dedicated to the states general. lie was a zealous protestant, and suffered much on account of his religion. He therefore retired to Geneva in 1572. He married Louisa Masson, daughter of Anthony Le Masson, treasurer of the army in Piedmont, to Francis I. and Henry II.

His son Sir Theodore de Mayerne, M. D.

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nnd baron of Aulbone, was horn In 1573. He studied physic at Montpelier, where he took his degrees ; and was made physician in ordinary to Ilenry IVˆ., who promised to promote him, provided he would change his religion. But he chose rather to accept of an invitation from king James I., of Britain, wlio made him first physician to himself and his queen, in whicli office he served the royal family till he died at Chelsea, in 1655. His works were printed at London, in folio, 1700; and contain, 1. Consilia, Epistols, et Observationes ; 2. Pharmacopceia, varireque Medicamentorum formulse. He wrote also a Dispensatory, and an Apology for his practice, against the faculty at Paris.

MAYNE (Jasper), D.D., an eminent English poet and divine in the seventeenth century, who was educated at Oxford. While king Charles I. resided at Oxford, he was one of the divines appointed to preach before him. He publisiied in 1(347 a piece entitled OxXoˆt«xta, or. The people's war examined accord mg to the principles of reason and scripture. In 1648 he was deprived of his studentship at Christ Churcii, and two livings ; but was restored widi king Charles II., who made him his chaplain, and archdeacon of Chichester; which posts he held till he died. Dr. Mayne was held in high esteem, both as a preacher and a man of strict virtue and exemplary behaviour. In his younger years he wrote two plays, *viz.* 1. Amorous War, a tragi-comedy ; 2. The City Match, a comedy; printed in Dodsley's collection, vol. 10. He also published a poem upon the naval victory by the duke of York over the Dutch, printed in 1665, and translated from the Greek part of Lucian's Dialogues.

MAYNWARING (Arthur), an eminent political writer of the eighteenth century. He studied several years at Oxford, and then went to Cheshire, where he lived some time with his uncle Mr. I'rancis Cholmondely, a gentleman attached to the house of Stuart. Here he prosecuted his studies with gi'eat vigor ; and coming up to London applied to the study of the law. He had been hitherto very zealous in anti-revo- lutional principles, and wrote several pieces in favor of king James II. : but, after being introduced to the duke of Somerset and the earls of Dorset and Burlington, began to entertain very different notions in politics. His father left liim an estate of nearly t'BOO a year, but so incumbered with mortgages that the interest amounted to almost as much as the revenue. After the peace he went to Paris,

wiiere he became acquainted with M. Boileau. On his return he was made a commissioner of the customs, in which])0st he distinguished himself by his skill and industry. He was a member of the Kil-kat Club, and was considered as one of its chief sui)ports by his pleasantry and wit. In the beginning of queen Anne's reign the lord treasurer Godolphin made him a present of a patent for tiic oflice of auditor of the imposts, vvortii about £2000 a year. He iiad a considerable share in the Med-ley, and was author of several other pieces. Sir Kichard Steele dedicated the first volume of the Tatler to him.

MAYO, a county in the jirovince of Con-

np.ught and kingdom of Ireland, bounded on the north and west by the Atlantic Ocean; on the south by Oalway county, from wiiich it is separated by tiie noble estuary of the ' Killeries,' and by the great lakes of Corrih and Mask ; on the east by the counties of Roscommon and Sligo, from the latter of which it is divided by the Moy River and Killala Bay. A careful and exact map of this county and laid down on trigonometrical principles, was finished in 1816 by Mr. William Bald : it was protracted on a scale of three inches to an English mile, for tiie county, and of four incites to the mile for the barony maps. The superficial contents amount to 836,450 acres, whicli are divided into nine baronies, *viz.* Burrishoole, Carra, Clanmorris, Costello, Erris half barony, Gallen, Kilmaine, Murrisk, Tyrawley. The number of parislies is seventy-six, and of townlands 13,260. About 10,000 cliildren receive the benefit of education at the public and private schools. The surface of this large shire is undulating, mountainous, adorned with many beautiful lakes and rivers some of the latter being subterranean, and is remarkably picturesque. The highest of the Mayo Hills, called Knock-na-]\Iulrea, attains an elevation of 2724 feet above sea level ; Nephin is but fifty-four feet lower; and the beautiful hill of Croash Patrick, so famed in story, raises his bold clifis from the swelling waves of tlie Atlantic to a height of 2528 feet. The Bar-nagee Hills derive peculiar beauty from the irregularity of their outline, and the acquisition of cultivation carried almost to their summits.

Much of this great county is at present unprofitable; the inland lakes occupy a surfoce of 35,768 acres, and the bogs cover an area of 262,420. The peasantry here are chiefly engaged in husbandry, fishing, and the manufacture of linen cloth. The northern and western baronies are in a wild and unprofitable condition : here tillage makes but slow progress, nor were its shores, or harbours, or maritime population almost accessible by land, until the formation of the new

road through Erris by Mr. Nimno : but in the southern baronies tillage now begins to supersede pasturage. The coast of Mayo, singularly adorned with islands, whose inhabitants from their natural position appear peculiarly calculated for a seafaring life, is found to be adjacent to valuable fishing banks. Here cod, hake, ling, herrings, and the sun fish o, basking shark, are taken in largo quantities The last of these once presented a prospect of occupation and of wealth to the islanders on this bold coast, but jjoverty forbad the happy consequences ; for the banks which these iish visit could not be approached by such miserable craft as the fishermen were able to j)rocurc; besides, the distance from land, and the want of an asylum harbour to escape to, on the approach of storm, rendered the undertaking in tiie highest degree perilous. The bounty of parliament , and the wisdom and judgment of the fishery board acting under its appointment, have now removed the danger of the undertaking, by the erection of break-waters, quays, piers, &,c., in the deep l)nys and creeks along the coast : vi/.

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ill the Killeries, Clew Bay, Black-sod Bay, Kil-luUa, &c. Tlie beneficial consequences of this measure of the legislature will be most fully demonstrated by a statement of the number of boats, and of hands employed in Westport alone in 1827, *viz.* of the former 1180, of the latter 5169.

The coarse linen manufacture of Mayo lias improve 1 for some years back at a regular and a rapid pace. This, probably, is attributable to the capiuilists in the north of Ireland directing their attention latterly to the cotton trade, causing thereby a tendency in the Inien manufacture lowards the western counties in search of cheaper labor. This opens a field also for the introduction and growth of flax, no soil being better adapted for that purpose than the peat of tliis coast, when manured by the calcareous sea sand which is found here in great abundance. The resources then of this county are considerable : the fisheries which, if still protected by the valuable board which may be said to have created them, wdl nowhere in Ireland be more productive: the l.nen manufacture, even now highly profitable, would be established here by the cultivation of flax. Agriculture might still be made to contribute largely to the support and employment of the people, having ample facilities of export for all produce of that description, at the noble harbours on the coast of this county. The chief towns of Mayo are Castlebar, Ballinrobe, Newport, Clare, Foxford, Swineford, Westport, Ballina, and Mayo. Newport possesses an excellent harbour : near Westport is the beautiful demesne of the marquis of Sligo. Ballina en-joys the most extensive and profitable salmon fishery in Ireland : and to Mayo there is attached much historic interest : here was a famous cathedral and university, at the latter of which those Saxon youths of rank who were converted to Christianity received their education, amongst whom are numbered Oswald, and Alfred the Great, of England. This decayed town is sometimes called « Mayo of the Saxons ;' and the ruins of the university, the cathedral and the ancient town, may still be traced. Mayo gives the title of earls to the famdy of ' Bourke.'

Mayo, one of the Cape de Verde Islands, off the western coast of Africa, about twenty-one miles in circumference, with a rocky coast, which, on the north and north-east side, is also full of shoals. On the othe— sides, Dampier says, the only danger is from the rocky promontories, which are easily avoided. There are two hills of some

magnitude, the rest ot .he island being flat and barren, and laboring under an extreme want of water. The only valuable commodity which it products is salt, evaporated in a large bay two miles in length, and half a mile in breadth, communicating with the sea by a narrow channel, through wliich the water enters only at high tides. The natives are negroes subject to Portugal, and they have adopted the Portuguese language ami manners. They are extremely poor. At one time we exported salt so largely from this place as to detain a sliip of war here to protect the trade, thirty miles south of Bonavista. I.onsr. 23° 8’ W., lat. 15° lo’ N.

I. s. “i Fr

r, J-Lat.

Mav’oralty, > Lzt. 7)iajor. The chief ma-May’ouess. 3 gistrate of a corporation: oflSce of a mayor: lady of a mayor.

When the king once heard it ; out of anger, He sent command to the lord mayor strait Te stop the rumour. Shakspeare . Henri/ VIII, There was a sharp prosecution against Sir Williani Capel, for misgovernment in his mayoralty.

Bacon’s Henry VII. It is incorporated with the mayoralty, and nameth burgesses to the parliament. Carew.

The mayor locked up the gates of the city.

Kuolles. Wou’dst thou not rather chuse a small renown , To be the mayor of some poor paltry town ?

Drydeu .

Mayor, anciently meyer, is derived from the British miret, i. e. to keep, or from the old English maier, power, from the Latin major. King Richard 1. in 1189 changed the bailiff of Lon-don into a mayor, and king John made the bailiff of king’s Lynn a mayor in 1204. Norfolk did not obtain this title for its chief magistrate till 1419, the seventh year of king Henry V., since which there are few towns of note but have had a mayor appointed. Mayors of corporations are justices of peace pro tempore, and they are mentioned in several statutes ; but no person shall bear any office of magistracy concerning the government

of any town, corporation, &c., who has not received the sacrament according to the church of England within one year before his election, and who shall not take the oaths of supremacy, &c. If any person intrudes into the office of mayor, a quo warranto lies against him, upon which he shall not only be ousted, but fined. Where tiie mayor of a corporation is not chosen on the day appointed by charter the next officer in place shall, the day after, hold a court and elect one ; and, if there be a default or omission that way, the electors may be compelled to choose a mayor, by a writ of mandamus from the king's bench. Mayors, or other magistrates of a corporation, who' shall voluntarily absent themselves on the day of election, are liable to be imprisoned, and disqualified from holding any office in the corporation. The office of mayor in England is nearly synonymous with that of provost in Scotland.

Mayor's Courts. To the lord mayor and city of London belong several courts of judicature. The highest and most ancient is that of the hustings, destined to secure the laws, rights, franchises, and customs of the city. The second is a court of request, or of conscience. The third is the court of the lord mayor and aldermen, where also die sheriffs sit : to which may be added two courts of sheriffs and the court of the city orphans, whereof the lord mayor and aldermen have the custody. Also the court of common councd, which is a court or assembly wherein are made all by-laws which bind the citizens of London. It consists, like the parliament, of two houses : an upper, consisting of the lord mayor and alderman ; and a lower, of a number of common councilmen, chosen by the several wards, as representatives of the body of the citizens. In the court of common council

are made laws for the advancement of trade, and committees yearly appo-'Ued, &c. But acts made by them are to have che assent of the lord mayor and aldermen by stat. 11 Geo. I. Also the chamberlain's court, where every thing relating to the rents and revenues of the city, as also tiie affairs of servants, apprentices, &c., are transacted. Lastly, to the lord mayor belong the court for the conservation of the river Thames ; another of gaol delivery, held usually eight times a year, at the Old Bailey, for tlie trial of criminals. There are other courts, called wardmotes or meetings of the wards ; and courts of halymote, or assemblies of tho several guilds and fraternities.

MAYOllGA, a cluster of three or four islands in the South Pacific Ocean, the largest being about sixty miles in circuit. They were discovered by Don Francisco Antonio Maurelia in 1780, and are the same islands which were visited by Edmunds in 1791, and to which, in-ohidinj several others, he gave the name of Howe's Islands. They are fertile and well cultivated, producing the various fruits and roots of the climate : they also abound in the cloth plant. The natives are tall and robust, subject to Otaheite, which sends a governor iiere—

MAYOW (John), LL. D., a learned physician, born at Cornwall in 1645. He was fellow of All Souls College, Oxford ; and, though he took his degrees in law, practised physic. He was a celebrated chemist, and his works were published at Oxford in 8vo. 1674. He died at London in 1679.

May-weed. See Anthemis. MAZA, among the Athenians, was a sort of cake made of flour boiled with water and oil, and set, as the common fare, before such as were entertained at the public expense in the prytaneum or common hall.

MAZAGAN, or Castillo Real, a sea-port of iMorocco, built in 1500 by the Portuguese, who retained it till 1762. A small dock has been formed, but large vessels must anchor nearly six miles out at sea to keep clear of Cape Azamore. This place once carried on a considerable trade in corn, but has of late sunk into insignificance. The Moors have in some instances taken away the timber of the houses, and left the walls. The air and water are said to be excellent. Long. B° 46' W., lat. 32° 54' N.

MAZAGONG, a town of Hindostan, on the island of Bombay, inhabited by descrndants of the Portuguese. It has two Catholic churches, and a dock for small vessels. The mangoes which grow here are said to be the best in the world, especially those of one large tree, which has a guard placed over it during the fruit season. This was frequently the rendezrous of the Mogul fleet, in the seventeenth century.

MAZANDHRAN, a mountainous province of Persia, on the shores of the Caspian. It abounds in swamps and forests of oak : the valleys are also fertile in the finest rear. Sugar and silk are also produced to a considerable extent. Winter and spring are healthy ; but the summer and autumnal heats cause such exhalations from the fens and marshes, as to render the air very insa-lubrious, when agues and dropsies prevail : the

natives, in genera., have a sallow and bloated appearance. Snow falls, but never lies long; and the rivers generally overflow in summer. The natives have been reckoned the most warlike in Persia. A considerable number of rivers rise here and fall into the Cas])ian, but none have a long course. The commerce is considerable, and the villages neatly built. Some of the roads are bad ; but there is a causeway, extending about 300 miles from Kisliar to Astrabad. The capital is Sari ; but Balfrush is the larger town. Fera-bad and Amul are also chief towns.

MAZ'ARD, n. s-Fr. machoire ; of Lat. mai-illa. The jaw.

Now my lady Womi's chapless, and knockt about the mazard with a sexton's spade. Sliakipeare.

Where thou might'st stickle without hazard Of outrage to thy liide and mazard. Hudibms. MAZARINE (Julius), a celebrated cardinal and prime minister of France, born at Piscina in Abruzzo, in 1602. After finishing his studies in Italy and Spain he entered into the service of cardinal Sachetts, and became well skilled in political economy, and in the interests of the princes at war in Italy. Cardinal Richelieu highly esteemed him ; as did also cardinal Antonio, and Louis XIII. who procured him a cardinal's hat in 1641. Richelieu made him one of the executors of his wdl; and during the minority of Louis XIV. he had the charge of affairs. At last he became an object of envy to the nobility, which occasioned a civil war ; whereupon Mazarine was forced to retire, a price was set on his head, and his library sold. Notwithstanding this, he afterwards returned to the court with more glory than ever ; concluded a peace with Spain, and a marriage treaty between the king and the infanta. This treaty is reckoned his masterpiece in politics, and procured him Louis's entire confidence : but at last his continual application to business threw him into a disease, of which he died at Vincennes, in 1661. He was of a mild and affable temper. He possessed at one time the bishopric of Metz, and the abbeys of St. Arnauld, St. Clement, and St. Vincent; that of St. Dennis, Clugny, and Vic-tor of Marseilles ; and of St. Michael at Soissons. He founded Mazarine College, or the college of tlie four nations, at Paris. A collection of his letters was])ublished ; the best edition is that of 1745, in 2 vols. 12mo.

MAZE, n. s. k, v.a.} Sax. mape, a whirl-Ma.'zy, ndj 5 pool; Belg.

ineiseu is

perplexity, confusion, mistake. A labyrinth ; perplexing state or contrivance; uncertainty or perplexity of mind : to maze is, to bewilder ; confuse : mazy, confused ; perplexed.

He left in himself nothing but a maze of longmg, and a dungeon of sorrow. Sidtieii.

Much was I mazed to see this monster kind, In hundred forms to change his fearful hue.

Spcitser. While they study how to bring to pass that religion may seem but a matter made, they lose themselves in the very maze o\ their own discoinsus, as if reason did even purposely forsake them, who of purpose forsake God, the author thereof. Hooker 1 have thrust myself into this maze. Haply to wive and thrive as best I may.

Shakspraie.

MAZ

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Others apart sat on a hill retired, In thoutjlits more elevate, and reasoned high Of providence, foreknowledge, will and fate. Fixed fate, free-will, foreknowledge absolute, And found no end, in wandering mazes lost.

Millon. How from that sapphire fount the crisped brooks, Holling on orient jx;arl and sands of gold, Willi mazy error, under pendant shades. Ran nectar. WFor want of this all human wisdom, was so blind and lame — nothing but confusion and dissatisfaction arising from mere ratiocination, which, being destitute of light and aid from heaven, doth ever grope in the dark, is bewildered in mazes of intricacy, wherein things lie involved. Barrow.

The Lapitha; to chariots add the state Of bits and bridles, taught the steed to bound, 'I'o run the ring and trace the mazy round. Driiden. 'I'hc ways of heaven are dark and intricate, Puzzled with muzes and perplexed with error. Our understanding searches them in vain.

Addison. He, like a copious river, poured his song O'er all the mazes of enchanted ground. Thomson.

As some must trifle away age, because they trifled

away youth, others must labour on in a maze of

error, because they have wandered there too long to

find their way out. Boliiigbroke,

While the still busy world is treading o'er

The paths they trod five thousand years before.

Thoughtless as those who now life's mases run.

Of earth dissolved, or an extinguished sun.

Young.]\IAZEIRA, an island on the eastern coast of Arabia, about sixty miles long and eight broad. There is a passage between it and the iMain, and it has a Tillage on the eastern shore, but is seldom visited by Europeans. The north point is in long. 59ˆ 40' E., and lat. 20° 35' N.

JMAZEPPA (John), ahetmanof the Cossacs, was born in I'odolia, of a. noble, but poor Polish family, and became page to the king John Casimir. An intrigue of his with a married lady having been discovered by her husband, JNIazeppa was fastened to the back of a wild horse, and left to his fate : lord Byron formed his poem of this name on this fact. The animal having been bred in tlie Ukraine deserts directed his course thither, and expiring at length with fatigue dropped beneath his 'miserable rider, who was found by the peasants of the country half dead. Their care, however, recovered him, and he took up his residence here. His talents soon raised him to eminence, and, the hetman of the Cossacs having in 1687 been deposed, Mazeppa was elected his successor. In this situation he acquired the confidence of Peter the Great, who bestowed on him the title of privy counsellor, and the cordon of St. Andrew. Created also prince of the Ukraine, he entered into a secret league with Charles XII. ; but this alliance being discovered, and his capital, Batourin, having been taken, he was obliged to join the Swedish king who was advancing towards the Ukraine. The battle of Pultowa was the result of his counsels ; after which he took refuge at Bender, where he died in 1709.

INIAZ'KIl, 71. s. Scot, and Teut. masin ; Goth. munsur ; ˆA<x. inatser ; V\ˆ(A. iiiaiˆarn. A drinking cup, often made of the knotty part of the maple.

Then, lo ! Perlgot, the pledge which I plight, A mazer y wrought of the maple ware.

Wherein is enchased many a fair fight Of bears and tigers that make fierce war. Spenser.

Virgil observes, like Theocritus, a just decorum, both of the subject and persons, as in the third pastoral, where one of his shepherds describes a bowl, or mazer, curiously carved. Urydmi.

MAZZARA, a town of Sicily, in the Val di Mazzara, remarkable for the number of it3 churches and convents. It has also an hospital, a great public school, and a Monte di Pieta, or public pawn shop. It exports brandy, wine, oil, and soda. The harbour is large, but exposed. ■ Forty-five miles south-west of Palermo. Long. 12° 28' E., lat. 37° 46' N.

Mazzara, Val di, one of the three provinces of Sicily, comprises the western and most nar-row part of the island, and is surrounded on the nortli, south, and west, by the Mediterranean. On the east it is

bounded by the Val di Noto, and the Val de Demona. Its territorial extent is computed at three-eighths of the island, or about 4700 square miles. Intersected by several chains of mountains, it is still on the whole the most fertile part of Sicily ; and produces corn, flax, hemp, and fruits. Its fisheries, particularly of tunnies and sardels, are extensive. The winds from the sea greatly counteract the excessive heats of summer. The capital of this province, and of tlie whole island, is Palermo. Inhabitants about

640,000.

ME, /)ro?j. Sax. me, micr; Goth, meig, me; Dan. 711 ij ; Span., Port., and Latin,)ne ; Gr. fiE. The objective case of I ; sometimes quaintly used for I and as an expletive, as in ‘me thinks;’ ‘ I followed me close.’

He presently, as greatness knows itself. Steps me a little higher than his vow jMade to my father, while his blood was poor.

Shakspeare.

He thrust me himself into the company of three or four gentlemanlike dogs, under the duke’s table. Id.

I followed me close, came in foot and hand, and, with a thought, seven of the eleven I paid. Id.

Ale rather had, my heart might feel your love. Than my unpleased eye sees your courtesy. Id. Me, only me, the hand of fortune bore.

Unblessed to tread an interdicted shore. Pope.

I would not have a slave to till my ground ; To carry me, to fan me while I sleep, And tremble when I wake, for all the gold That sinews bought and sold have ever earned.

Coirper.

MEACO, a city of Niphon, in Japan, formerly the metropolis of that empire; and said to have been at that time twenty miles long and nine broad. It is still the ecclesiastical capital of Japan. The temples are magnificent, and the imperial palace a species of town. Including those attached to the court, and the monks and nuns (who amount to 52,000), the whole number of inhabitants is 529,000. Meaco is the centre of all the literature and science of the empire, the imperial

almanack being printed here, as well as most of the books of the empire. A number of the finer Kianufacures, particularly japan-work, painting, carving, Sec, are also carried on. Long. 153° 30’ E., lat. 35° 24’ N.

ME A

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MKA’COCK, 71. s. & adj. Fr. mes coq. — Skinner. An uxorious or effeminate man; tame; cowardly.

‘Tis a world to see, How tame, when men and women are alone, A meacocli wretch cap make the curstest shrew.

Shaksjieare.

MEAD, n. 5. “) Sax. meed, Tnae*&4&. maeS,

Mead’ow, S mowed ; Teut. mud. From

MEADOw-SAFrp.oN. J Mow, wiiich see. That

vrhich is mowed ; a grass-field kept for mowing;

any grassy or watery ground. JNIeadow-satfron

is defined below.

Where all things in common do rest, Corne feeld with the pasture and mead, Yet what doth it stand you instead t

Tusser’s Husbandry. Paints her, ‘lis true, with the same hand which spreads. Like glorious colours, through the flow’ry meads. When lavish Nature with her best attire Clothes the gay spring, the season of desire.

Waller. A band select from forage drives A herd of beeves, fair oxen, and fair kine. From a fat meadow ground.

Milton’s Paradise Lost. Yet ere to-morrow’s sun shall shew his head. The dewy paths of meadows we will tread, For crowns and chaplets to adorn thy bed.

Dri/den. His art survived the waters ; and ere long. When man was multiplied and spread abroad In tribes and clans, and had begun to call These meadows and that range of hills his own. The tasted sweets of property begat Desire of more. Cowper.

The meadow-saffron hath a flower, consisting of one leaf, shaped like a lily, rising in form of a small tube, and is gradually widened into six

segments ; It has likewise a solid bulbous root, covered with a membranous skin. Miller.

Mead, 7J.S. Sax. rascbo; Goth, maid ; Swed. miotd ; Belg. and Pol. miod, meede ; Rus. iniodh; all perhaps of Gr. fitBv, wine. A fermented drink made of Honey and water. See below.

Though not so solutive a drink as mead, yet it will be more grateful to the stomach. Bacon.

He sheers his over-burdened sheep ; Or mead for cooling drink prepares, Of virgin honey in the jars. Dri/den.

Mead is a wholesome agreeable liquor, and was anciently much used in Britain. One of the best methods of preparing mead is as follows : into twelve gallons of water slip the whites of six eggs ; mixing these well together, and to the mixture adding twenty pounds of honey. Let .the liquor boil an hour, and when boiled add cinnamon, ginger, cloves, mace, and rosemary. As soon as it is cold put a spoonful of yeast to it, and tun it up, keeping the vessel filled as it works : when it has done working stop it up close, and bottle it off. Then deposit it in a cellar of cool temperature for six or eight months. Some prefer it without the aromatic spices. Thorley advises to put three pounds of the finest honey to one gallon of water, and two lemon peels to each gallon ; boil it half an hour, scum it well ; then put in, while boiling, lemon peel ; work it with yeast. Let it stand five or six months, and bottle it off for use. If it is to be kept for Vol. XTIL

years, put four pounds to a gallon of water. This, he adds, will equal the best foreign wine. It is still used at festivals in the western parts of the island. It is esteemed more wholesome than any of the spirits now in common use ; and, when properly kept, equals Tokay in strength and flavor.

Mead (Richard), M. D. and F. R. S., a celebrated English physician, antiquarian, and naturalist, born at Stepney, where his father had been minister. At sixteen years of age Richard was sent to Utreciit, where he studied three years under Grjevius ; and then choosing the profession of physic, he went to Leyden, where he attended the lectures of the famous Pitcairn on medicine, and of Herman on botany. Having also spent three years in these studies, he went with his brother and two other gentlemen to Italy, and at Padua took his degree of M. D. and Phil. D. in 1695. Afterwards he spent some time

at Naples and Rome; and returning home in 1696 settled at Stepney, where he married, and practised physic with great success. In 1703, Dr. Mead having communicated to the Royal Society an analysis of Dr. Bonomo's discoveries relating to the cutaneous worms that generate the itch (inserted in the Philosophical Transactions), he was chosen F. R. S. He was soon after elected physician of St. Thomas's Hospital, and employed by the surgeons to read anatomical lectures in their hall, which obliged him to remove into the city. In 1707 he received a diploma of IVL D. from the university of Ox-ford ; and being patronised by Dr. Radcliffe, he succeeded him on his death, at his house in Bloomsbury Square, and in the greatest part of his business. In 1727 he was made physician to king George II., whom he had served in that capacity while prince of Wales ; and afterwards his two sons-in-law. Dr. Nichols and Dr. Wilmoi were appointed his coadjutors. He was intimate with Garth, Arbuthnot, and Freind ; and kept up a constant correspondence with the great Boerhaave, who had been his fellow-studenl at Leyden. He caused the beautiful and splendid edition of Thuanus's history to be published in 1713, in 7 vols, folio ; and by his assiduity Mr. Sutton's invention of drawing foul air from ships, &c., was carried into execution, and the ships in his majesty's navy provided with this useful machine. During nearly fifty years he was at the head of his profession, winch brought him one year above £7000, and for several years between X.ˆOOO and £6000. His library consisted of 10,000 volumes, of which his Latin, Greek, and oriental MSS., formed an important part. He had a gallery for his pictures and antiquities, which cost him great sums. His reputation was so universally established, that he corresponded with all the principal literati in Europe. Even the king of Naples sent for a complete collection of his works ; and in return made him a present of the first two volumes of Signior Bajardi, which may be considered as the first specimen of the antiquities of Herculaneum. That prince also invited him to his palace, to show him those valuable monuments of antiquity ; and nothing but his great age prevented his accepting of an invitation so suited to his taste.

MEA

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He wrote, besides the above works, 1 A Treatise on the Scurvy. 2. De Variolis et Morbillis Dissertatio. 3 Mcdica Sacra : sive de Morbis Insignioribus, qui in Bibliis Memorantur, Com-meiitarius. 4. Monita et Praecepta Medica. 5. A Discourse concerning Pestilential Contagion, and the Methods to be used to prevent it. His Latin works were translated into English by Dr. Thomas Stack. He died February 16th,

1754.

Meadow is pasture or grass land, annually mown for hay, but more particularly applied to low lands too moist for cattle grazing on in winter, without spoiling the sward. The best lands for meadow are those of a rich soil, situated on a gentle declivity, in the vicinity of running water. To form the best meadow, six kinds of grass and two of clover should be sown. The seeds should be mixed together in the following proportions, *viz.* of meadow fescue grass (festuca pratensis) four parts : of meadow fox-tail grass (alopecurus pratensis) four : smooth stalked meadow grass (poa pratensis) two : roughish meadow grass (poa trivialis) two : crested dog's-tail grass (cynosurus cristatus) one : sweet scented spring grass (anthoxanthum odo-ratum) one : white or Dutch clover (trifolium repens) two : common or red clover (trifolium pratense) two. Of these seeds sow three bushels on an acre in rows for the convenience of hoeing. Towards the end of August, or early in September, it will be necessary to weed and thin the grasses occasionally, and also to roll tl em in the spring. If the soil be previously cleared from all noxious weeds and plants, these grasses will in two years form an excellent meadow. But, in case it be required to seed a piece of land immediately, and tlie valuable grasses cannot be procured, tlie following seeds are recommended : broad clover, or cow grass ; white clover, trefoil, rye-grass, and, if the soil be sufficiently dry, burnet. On clean tilth, they will, in a few years, present a good meadow ; as the clover and rye-grass, in the first or second year, produce ample swathe for mowing : next they will be succeeded by a luxuriant crop of the white clover and trefoil, united with the natural grasses of the soil. Grass seeds ought to be sown during moist weather, either in the summer or in autumn, after turnips, or any other hoeing crop ; for it is absolutely necessary to prepare for them a fine clean tilth. On the approach of winter the

young crop should be slightly covered with long stable dung, old khatch, or even sand, earth, or any other manure. The land ought, likewise, to be occasionally cleared of the weeds, togettier with their roots, and the vacant spot fresh seeded. In laying lands down for meadows, old turf must be uniformly broken up, by paring and burning, when it is to be sown with new grasses ; but such soils OS have been completely exhausted by successive crops of corn should first be laid dry, and diligently cleaned ; then sown with proper herbage, top-dressed, and manured for the space of two or three years ; in consequence of which they will recover their former fertility. Lastly, the operation of rolling meadows in the spring, especially such as have been watered, ought never to be omitted. The most proper time for

this purpose is the beginning o: ir.iddle of February, after the land has been laid dry for a week. Rolling prepares the grass for being cut close to the surface when mown ; which is a circumstance of considerable importance ; because the ant-hills, and other little elevations, are thus pressed close to the ground, and many inconveniences will be thereby effectually removed. An improvement in agriculture, by watering of meadows, has of late come much into use. See Rural Economy.

MEA’GER, adj.icv.n. 3 Sax.maB3er;Belg. Mea’gerness, n.s. 5 and Teut. mager ; Goth, megur ; Fr. maigre ; Ital. and Spun. ;««gro. Lean ; withered; wanting flesh: to make lean. Thou art so lean and meagre waxen late, That scarce thy legs uphold thy feeble gate.

Hubberd. It cannot be, that I should be so shamefully betrayed, and as a man meagered with long watching and painful labour, laid himself down to sleep.

Knolles’s History of the Turks. Meagre were his looks. Sharp misery had worn him to the bones.

Shakspeare. Poynings, the better to make compensation of the meageniess of his service in the wars by acts of peace, called a parliament. Bacon.

Fierce famine with her meagre face, And fevers of the fiery race, In swarms the oftending wretch surround. All brooding on the blasted ground : And limping death, lashed on by fate. Comes up to shorten half our date. Dryden. Whatsoever their neighbour gets, they lose, and the very bread that one eats, makes t’other meugre.

L’Estrange. Heaven stands absolved by vengeance on their pen, And marks the murderers of fame from men : Through meagre jaws they draw their venal breath, A.S ghastly as their brothers in Macbeth. Young.

MEAK, n. s. Ital. hak. A hook for cutting peas.

A meake kr the pease, and to swing up the brake.

Tusser.

MEAL,)t. s. Sax. male ; Gothic, Swed. and Teut. mat ; Belg. tnaal. A regular repast ; the food eaten ; a part or fragment (>«««/ is also p devourer).

Boaz said unto her, at meaZ-time, Come, eat, and dip thy morsel. Kuth ii. 14.

Give them great meals of beef, and iron and steel ; they will eat like wolves, and fight like devils.

Shakspeare. Henry V. Let both worlds disjoint, and all things suffer. Ere we will eat onv meal in fear. Id. Macheth.

That yearly rent is still paid into the hanaper, even as the former casualty itself was wont to be, in parcel tneal, brought in and answered there. Bacon.

A man that comes hungry to his meal feeds heartily on the meat set before him, not regarding the metal, or form of the platter, wherein it is served.

Bp. Hall. They made m’ a miser’s feast of happiness. And could not furnish out another meal.

Dryden. The quantity of aliment necessary to keep the ani-mal in a due state of vigour, ought to be divided into 7neals at proper intervals. Arbuthnot on Aliments. Then grudge not her temperate meals, Nor a benefit blame as a theft ;

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iiiier iiont’Y nor \vu\ vvuuiu iic iiˆii. \ˆuwyi:r,

L , n. s. Scv.a. ‘\ Sax. mela, melajje ; l’man, n.s. f Teut. meld; Dan& Belg. Lr, adj. Imeel; Arm. and Goth.

LYMOUTHED. J Vial, ffom Goth. muUi,

Since, stole she not all that she steah, Neitiier hont’v nor \vuˆ would lie left. Coiirper,

Meal , n. s. Scv.a. ˆ Sax. mela, melajje ;

Meal’

Mealy,

Mealy-to grind into small pieces. The flour of corn as first ground ; Fr. meler; to mingle. Meahnan is a dealer in meal. Mealy, having the taste, qualities, or sprinkled appearance of meal. Mealy-mouthed is tender mouthed, as horses when they are fed with bruised corn or meal.

Wˆere he mealed With that which he corrects, then were he tyrannous.

Shakspeare.

In the bolting and shifting of near fourteen years of such power and favour, all that came out could not be expected to be pure and fine meal, but must have a mixture of padar and bran in this lower age of human fragility. IVotton.

With four wings, as ail farinaceous and mealy-winged animals, as butterflies and moths. Browne.

An old weasel conveys himself into a meal tub for the mice to come to her, since she could not go to them. L’Estrans;e.

She was a fool to be mealy-mouthed where nature speaks so plain. Id.

The mealy parts of plants dissolved in water make too viscid an

aliment. Arhuthnot on Aliments.

Like a gay insect in his summer shine.

The fop light fluttering spreads his mea/y wings.

Thomson.

Meal is the flour of grain. The meal or flour of Britain is the finest and whitest in the world. The French is usually browner, and the German browner than that. Our flour keeps well with us, but in carrying abroad it often contracts dampness, and becomes bad. All flour is subject to breed worms ; these are white in the white flour, and brown in the brown : they are tiierefore not always distinguishable by the eye ; but wiien the flour feels damp, and smells rank and musty, it may be conjectured that they abound in it. The color and the weight are the two things which denote the value of meal or flour ; the whiter and the heavier it is, cseteris paribus, the better it always is. Pliny mentions these two characters as the marks of good flour; and tells us that Italy, in his time, produced the finest in the world. It was, indeed, famous be fore his time for this produce ; and the Greeks celebrated it. Sophocles, in particular, says that no flour is so white and so good as that of Italy. The corn of Italy, however, has lost much of its reputation since that time. The reason seems to be, that the whole country being full of sulphur, alum, vitriol, and bitumens, the air may have in time affected them so far as to make them diff”use themselves through the earth, and render it less fit for vegetation ; and the taking fire of some of these inflammable minerals, as has sometimes Happened, is alone sufficient to alter the nature of all the land about the places where they are.. The flour of Britain, though it pleases by its whiteness, yet wants some of the other qualities valuable in flour ; the bread that is made of it is brittle, and does not hold together, but after keeping a few days becomes hard and dry as if made of chalk, and is full of cracks in all parts ; which is a great disadvantage when it is intended

for the service of an army, where there is no baking every day, but the bread of one baking must necessarily be kept a long time. Tiie flour of the late province of Picardy is very like that of Britain; and, after it has been kept some time, is found improper for making into paste or dough. The French must either use it immediately on the grinding, or mix it with an equal quantity of the flour of Brittany, which is coarser, but more unctuous and fatty; but neither of these kinds keeps well.

The flour of almost any country will do for home consumption, as it may be always fresh ground ; but great care must be used in selecting it to send it abroad, or furnish ships with it. The saline humidity of the sea-air rusts metals, and fouls every thing on board, if great care be nut taken in preserving them. This also makes the floui damp and mouldy, and is often the occasion of its breeding insects, and being wholly spoiled. The flour of some places is found to keep better at sea than that of others ; and the whole caution needs only be to carry the flour of those places. Tiius the French find that the flour of the ci-devant provinces of Poitou, Normandy, and Guienne, all bear the sea-carriage extremely well ■, and they make a considerable advantage by carrying them to America. The next care is to preserve it in the ships ; the keeping it dry is the grand consideration in regard to this; tlie barrels in which it is put up ought to be made of dry and well-seasoned oak, and not to be larger than to hold 2 cwt. at the most. If the wood of the barrels have any sap remaining in it, it will moisten and spoil the flour ; and no wood is so proper as oak for making the bins and other vessels for keeping flour, since, when once well dried and seasoned, it will not contract humidity afterwards. The beech wood, of which some make their bins for flour, is never thoroughly dry, but always retains some sap. The fir gives the flour a taste of turpentine ; and the ash is always subject to be eaten by worms. The oak is preferable, being free from all these faults.

MEAN, adj. -\ Sax. maˆne ; Teut. mein ; Mean'ly, adv. \ Goth. mu)ig,m3.ny (i. e. the Mean'ness, n. X. 3 many or crowd). Low in rank or birth ; vulgar ; base ; spiritless ; low in any good quality ; contemptible. Meanly is, without dignity or excellence ; jioorly. Meanness, lowness ; sordidness ; want of excellence or dignity.

She was stricken with most obstinate love to a young man but of mean parentage, in her father's court, named Antiphilus ; so mean, as that he was but the son of her nurse, and by that means, without other desert, became known of her. Sidnei/.

Some things are good, yet in so mean a degree of goodness, that many are only not disapproved nor disallowed of God for them. Hooker.

The minister's greatness or mea7mess of knowledge to do other things, standeth in this place as a stranger, with whom our form of Common Prayer hath nothing to do. Id.

Let pale-faced fear keep with the ?«ean-born man, And find no harbour in a royal heart. Shakspeare.

True hope is swift, and flies with swallow-wings : Kings it makes gods, and mcumˆr creatures kings.

• Id.

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MEA

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The lands be not holJen of her majesty, but by a mean tenure in soccage, or by knight's service at the most. Bacon.

By this extortion, he suddenly grew from a mean to a mighty estate, insomuch that his ancient inheritance being not one thousand marks yearly, he be-came able to dispend ten thousand pounds.

Dalies on Ireland. French wheat is bearded, and requireth the best soil, recompensing the satnewitli a profitable plenty ; and not-wheat, so termed because it is unbearded, is contented with i meujier earth, and contenting witii a suitable gain. Carew.

The Persian state will not end\ire a king So meanli/ born. Denliam's Sophy.

It was the winter wild. While the heaven-born child. All meanly wrapt in the rude manger lies.

Milton. No other nymphs have title to men's hearts, But as their meanness larger hopes imparts.]Valler. Can you imagine I so mean could prove, To save my life by changing of my love !

Dry den. The Roman legions and great Caesar found Our fathers no mean foes. Philips.

The name of servants has been reckoned to imply a certain meanness of mind, as well as lowness of condition. South.

This figure is of a later date by the meanness of the workmansliip. Addison on Italy.

Would you meanly thus rely On power, you know, I must obey ? Prior. We fast, not to please men, nor to promote any mean, worldly interest. Smalridge's Sermons.

I have sacrificed much of my own self-love, in preventing not only many mean things from seeing the light, but many which I thought tolerable.

Pope. Our kindred, and our very names, seem to have something desirable in them: we cannot bear to have Dthers think meanly of them, Watts's Logiclt.

Mean, n. s. & flf/;.■ˆ Fr. moyen, mesne; Gr. Mean’ly, adv. iˆfnaoQ; Lat. medium. A

Mean’time, adv. i measure or instrument Mean’wiiile. 3 used to produce an end;

method; interval; revenue: as an adjective, middle; moderate; intervenin<:; in space or time. The substantive, as Dr. .Tohnson says, is often used in the plural, ‘ and by some, not very gram-matically, with an adjective singular :’ meanly, in this sense, is moderately ; in a middlinp; man-ner. ‘ By all means’ is a phrase signifying, without doubt or hesitation ; ‘ by no means’ is its direct opposite : meantime and meanwhile, both mean in the intervening time.

.\nd thei wenten out of the cytee and camen to him, in the mene while hise disciplis preieden him, end seiden, Mastir, ete. Wiclif. Jon. iv.

In the mean while the heaven was black with clouds and wind, and there was a great rain.

1 Kings xviii. 45.

Dr. Metralfe, master of St. John’s College, a man mennlu learned himself, but not meanly afFectioned to set forward learning in others. Ascham.

He saw this gentleman, one of the properest and best-grace! men that ever 1 saw, being of middle age and a mean stature. Sidney.

Pamela’s noble heart would needs gratefully make known the valiant mean of her safety. Id.

He tempering goodly well

Their contrary dislikes with loved means,

Did place them all in order, and compell

To keep themselves within their sundry reigns. Together linked with adamantine chains.

Spenser But sith this wretched woman overcome. Of anguish rather than of crime hath been, Reserve her cause to the eternal doom. And in the mean vouchsafe her honourable tomb.

Id. As long as that which Christians did v.‘as good, and no way subject to just reproof, their virtuous conversation was a mean to work the heathens’ conversion unto Christ. Hooker. Oft ‘tis seen Our mean securities, and our mere defects. Prove our commodities.

Sliakspeare. King Lear. Temperance with golden square, Betwixt them both can measure out a mean.

Shakspeare. I’ll devise a mean to draw the Moor Out of the way, that your converse and business i\Iay be more free. Id. Othello.

The more base art thou, To make such means for her as thou hast done, And leave her on such slight conditions.

Shakspeare Your meatts are slender, your waste is great.

Id. By this means he had them the more at vantage, being tired and harassed with a long march.

Bacon’s Henry III. Because he wanted means to perform any great action, lie made means to return the sooner.

Davies on Ireland. It is our shame and sin, if in these means of entireness we be no better acquainted with God, than they which in their greatest familiarity were commanded aloof. Bp. Hall’s Contemplations. Strong was their plot. Their parties great, means good, the season fit. Their practice close, their faith suspected not.

Daniel. Against her then her forces prudence joins, And to the golden mean herself confines.

Benham. Now read with them those organ ick arts which enable men to discourse and write, and according to the fittest style of lofty, mean, or lowly.

Milton on Education Mean-ichile The world shall burn, and from her ashes spring New heaven and earth. Id. Paradise Lost.

But no authority of gods or men Allow of any mean in poesie. Roscommon. There is a mean in all things, and a certain measure wherein the good and the beautiful consist, and out of which they never can depart. Dryden.

Meantime" the rapid heavens rolled down the light, And on the shaded ocean rushed the night. hi.

In the reign of Domitian, poetry was but meanly cultivated, but painting eminently flourished.

Id. Dufresnoy. Who is there that hath the leisure and means to collect all the proofs concerning most of the opinions he has, so as safely to conclude that he hath a clear and full view ? Loche.

By this means not only many helpless persons will be provided for, but a generation will be bred up not perverted by any other hopes. Sprat's Sermons.

The wine on this side of the lake is by no means so good as that on the other. Addison on Italy.

Meanwhile I'll draw up my Numidian troops. And, as I see occasion, favour thee. Id. Culo.

M E A R N S.

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Essex did not build or adorn any house ; the queen perchance spending his time, and himself his means.

Wotton.

A good character, when established, should not be rested in as an end, but only employe. I as iimeam of doing still farther good. Atterbury.

It renders us careless of approving ourselves to God by religious duties, and by that means securing the continuance of his goodness. Id.

The Roman legions were all recalled to help their country against the Goths ; meantime the Britons, left to shift for themselves, and harassed by inroads from the Picts, were forced to call in the Saxons for their defence. Swift.

Mean, v. a. & v. n.”^ Sax. rasenan ; Belg. Mean’ing, 71. s. ymeenen; Teut. meinin; Meant, par^ J Dan. meene. To purpose; intend; design; have in mind; think: meaning is, intention ; purpose ; sense ; the thing to be understood ; the power of thinking: meant is the perf. and past. part, of the verb.

Ye thought evil against me ; but God meant it unto good, to save much people alive.

Genesis 1. 20. When your children shall say, What mean you by this service ? ye shall say, It is the passover.

Exodus xii. 26. I am no honest man, if there be any good meaning towards vou. Shakspeare. Kins; Lear.

The Scripture may have more senses besides the literal ; because God understands all things at once ; but a man’s writing has but one true sense, which is that which the author meant when he wrote it.

Selden. These delights if thou canst give. Mirth, with thee I mean to live. Milton.

And life more perfect have attained than fate Meant me, by venturing higher than my lot. Id.

The meaning, not the name, I call : for thou, Not of the Muses nine. Id. Paradise Lost.

If we do presume to offer this service, we should do it in the manner appointed by himself — taking heed that our meaning be conformable to the sense of our words, and our words to tlie verity of things.

Barroic. Some whose meaning hath at first been fair, Grow knaves by use, and rebels by despair.

Roscommon. I practised it to make you taste your cheer With double pleasure, first prepared by fear : So loyal subjects often seize their prince. Yet mean his sacred person not the least offence.

Dryden. He was not spiteful though he wrote a satyr, Jor still there goes some meaning to ill nature.

Id. Whatever was meant by them, it could not be that Cain, as elder, had a natural dominion over Abel.

hocke. And he who now to ssnse, now nonsense leaning. Meant not, but blunders round about a meanin<;.

Pope. No word more frequently in the mouths of men than conscience ; and the meaning of it is, in some measure, understood : however, it is a word extremely abused by many, who apply other meanings to it which God Almighty never intended.

Swift. MFAN'DER, n. s. & v. n. I From the river Mean'drot.s. S Meander, in Pliry-

{;ia, which had a very winding course. Maze; labyrinth ; circuitous course : to wind circuitously : jneandrous, winding; flexuous.

Physicians, by the help of anatomical dissections, have searched into those various meanders of tha veins, arteries, and integrals of the body. Hale. 'Tis well, that while mankind Through fate's perverse meander errs,

He can imagined pleasures find. To combat against real cares. Prior.

While lingering rivers in meander* glide They scatter verdant life on either side ;

The valleys smile, and with tlieir flowery face. And wealthy births, confess the floods embrace.

Blackmore.

Law is a bottomless pit : John Bull was flattered

by the lawyers, that his suit would not last above a

year ; yet ten long years did Hocus steer his causa

through all the meanders of the law, and all the courts.

Arbuthnoi. While praising, and raising

His thoughts to heaven on high, As wandering, meandering.

He views the solemn sky. Burns.

MEARNS, or Kincardineshire, a county of Scotland, is bounded on the east by the German or British Ocean for about thirty-five miles, including the various indentations of a high and precipitous rocky shore ; on the north by the river Dee and part of Aberdeenshire; and on the west and south by the county of Angus, from whicli it IS separated, in almost the whole line, by the river North Esk. It is of a triangular form, and extends thirty-Uvo miles in length from south-west to north-east, and twenty-four miles where broadest from south to north, comprehending an area of 380 scjuare miles, or 243,444 acres. Dividing the whole into 100 parts, there are about thirty in full cultivation, twelve partially cultivated, eight in plantations, and one-half of such high hills or barren heaths as altogether to preclude cultivation, and even unproductive in pasture. The general aspect of this county is diversified ; but it has been divided into the five following districts, i. e. 1. The Dee-side district, on the north side of the Grampians, through which flows the river of that name. 2. The district on the coast, north of the water of Cowie, which flows into the German Ocean near Stonehaven. 3. The coast district south of this water. 4. The valley or How of the Mearns, to the south of the Grampians ; and 5. That part of the county which is occupied by the Grampians.

1. That part of the Dee district which lies north of the river Dee is between thirteen and twenty-two miles west from Aberdeen, and consists altogether of about twenty-six square miles, or 16,640 acres. It has been greatly improved by the exertions of the proprietors and tenants, though there is still not more than one-eighth part of it in cultivation. There is more land in this quarter planted with wood, in proportion to its extent, than in any other district of the county. The southern portion is partly in a state of complete cultivation, and partly in a progress towards it. It extends east and west eigliteen miles, and comprehends about fifty-four square miles, or 34,560 acres, of which not more than one-fifth is in actual cultivation.

2. The coast-district north of Stonehaven extends about fourteen miles along the coast, between that place and the Dee, and is about thre? miles and a quarter at an average breadth,

between the sea and the Grampians, where cultivation has not readied, and thus will compreliend forty-tive square miles, or 28,800 acres. Near the town of Stonehaven part of the lands is in a high state of cultivation. There are also small strips of fertile ground by the sea in the vicinity of Aberdeen ; but the great proportion of this tract is the most wretched country that can be conceived.

3. Tile district south from Stonehaven extends about eighteen or twenty miles along the sliore of the ocean. A bold ro'cky shore, from 100 to 300 feet in height, expands in general into plain fields, many of wliicTi are in high cultivation. Some of the hills (and generally the most bar-ren) approach close to the sea ; but the greater part are in the back ground. The soil in the lower parts is of every description, from the most worthless to the most valuable, oddly intermixed, the greater proportion being as productive perhaps as any in Britain, and bearing luxuriant crops of beans, wheat, clover, &c. This tract, stretching inland from four to five miles, may comprehend about eighty-five square nules, or 54,400 acres, of which one half is in cultivation.

4. The How of the Mearns lies to the west of the district last described, and immediately south from the Grampians. It is a low well-cultivated country, abounding in seats, villages, and plantations. It is about sixteen miles long from east to west, and five miles broad at the west end, but grows narrower towards the east, until at its termination at the Water-shed, about four miles west from Stonehaven, it is little more I'lan half a mile across. It comprehends altogether about fifty square miles, or 32,000 acres, of which five parts in six are in cultivation, and it is sheltered from the cold northern blasts-by the Grampians, which here present a front of from 500 to 2500 feet in height. The soil in this district, throughout the greater part, is pretty uniform. On the northern side, fronting the south, it may be defined as a gravelly loam, and on the opposite side, fronting the north, a loam derived from clay. Throughout the whole it is commonly productive.

5. The Grampian district stretches through the whole breadth of t'le

county from east to west . Commencing where cultivation ceases, this bleak and hilly country, at about three miles from the coast, increases rapidly in altitude, but on a pretty regular scale of gradation, until, at the western extremity, about twenty miles from the sea. Mount Battock, nearly 3500 feet liigh, rises above them all. The tract thus occupied is, at an average, from sixteen to eighteen miles in length from east to west, and about from six to eight miles across from south to north, comprehending altogether an area of upwards of 120 square miles, or nearly 80,000 acres.

The climate in winter and spring is here excessively severe, and the country, except in a very few places, is devoid of human iiaUitation. In summer the glens or valleys are, however, uncommonly warm, and are somewiiat enlivened by the fringe of pasture on the sides of the different brooks. But these valleys form but a small proportion of this district.

Over the whole district granite is the most prevalent stone ; and southward along the coast, sandstone, puddingstone, limestone, and rotten rock. Limestone is found in several parts of the county, but not in great quantities. Plum-puddingstone composes a principal portion of the rocks. In some places, consisting of a small gravel, it is manufactured into millstones. The noted rocks of Fowls'-heugh, about three miles south from Stonehaven, form a range along the coast, about a mile in length, and 200 feet in height. Jasper, porphyry, and specimens ol asbestos, are also observed here. Pebbles are procured in every brook ; and the Scots topaz, or cairngorum, is found among the Grampians o! Kincardine. The animals are the roe-deer, fox, hare, badger, otter, wild-cat, weasel, pole-cat, and hedgehog. Of the birds, grouse are plentiful, and partridges and sea-fowl in the low country.

The principal rivers are the Dee, which has a course of seventy-five miles, eight of which are within Kincardineshire; the North Esk, the boundary between the counties of Kincardine and Forfar; Bervie water, which falls into the German Ocean near the town of Bervie ; and the Cowie, which falls into the sea at Stonehaven. There are also the Carron, Feuch, Avon, and Dye, besides other inferior streams. There are also two lakes, which are about three miles in circumference. The chief antiquities are Fi-nella's Castle, remarkable for its vitrified walls, about a mile and a half from Fettercairn ; Queen's Castle, about a mile eastward from that town ; tlie Kame of INIathers, about six miles frora Montrose ; Whistlebury Castle, about two miles from Bervie ; and Dunnotar Castle, about a mile south from

Stonehaven ; all placed on the summits of lofty insulated rocks on the shore. The valued rent of the county is £74,921. Kincardineshire contains one royal burgh, namely, Inverbervie, or more commonly Bervie. But there are the towns and villages of Stonehaven, Johnshaven, and Laurencekirk. The county is divided into nineteen parochial districts.

INIEA'SLES, n. s.ˆ Belg. mazelen, measelen;

Mea'sled, adj. ˆTeut. masckn, muse, or

Mea'sly, adj. J ntasche ; of Lat. iiiacula, spots. An eruptive disease of man and some of the lower animals: Mortimer also finds it in trees : measled and measly are, infected, or scabbed, with measles.

My lungs Coin words till their decay, against those rrˆasles, Which we disdain should tetter us, yet seek The very way to catch them.

ShaUspeare. Coriolanus.

One, when he had an unlucky old grange, would needs sell it, and proclaimed the virtues of it ; nothing ever thrived on it, no owner of it ever died in his bed ; the swine died of the measles, and the sheep of the rot. Ben Jonson's Discovery

Thou vermin wretched, As e'er in measled pork was hatched ; Thou tail of worship, that dost grow On rump of justice as of cow. Hudibras. Fruit-bearers are often infected with the mAwicS; by being scorched with the sun.

Mortimer's Iltubandry.

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Before the plague of London, inflammations of the ungs were rife and mortal, as likewise the measles.

Arbuthnot. Last trotted forth the gentle swine, To ease her against the stump,

And dismally was heard to whine, All as she scrubbed her measly rump. Swift.

MEAS'URE, n.s. & v. a.-s Fren. mesure ; Meas'ureless, adj. f Ital. 7iiisura ; Lat.

Meas'urement, n. s. \ mcnsiira ; Hebrew

Meas'urer, i nnH:fT3. Rule of

Meas'uring, «(/;'. J dimension, proportion, or quantity ; hence sufficient quantity ; due degree or proportion ; limit; boundary; allotment; musical time; metre; tune; a stately dance ; mean of action, referring, as Johnson observes, to the necessity of measuring the ground upon which any structure is to be raised, or any distant effect to be produced, as in shooting at a mark. Hence, he that proportioned his means to his end was said to take right measures : to measure is to compute by rule, or by passing over : hence to adjust ; judge ; mark oui; allot : measuring, as an adjective, is applied by Waller to a cast not to be distinguished in its length from another but by measuring.

For not to mesure, God gyuith the spirit.

Wiclif. Jam. iii. Lord, make me to know mine end, and the measure of my days what it is, that I may know how frail I am. Psalms.

With what measure you mete, it shall be measured to you again. Matth. vii. 2.

Wine measurahlij drunk, and in season, bringeth gladness of the heart. Ecclus. xxxi. 28.

The joyous nymphs and light-foot fairies, Which thither came to hear their musick sweet.

And to the measures of their melodies Did learn to move their nimble-

shifting feet.

Spenser, Measure is that which perfecteth all things, because every thing is for some end ; neither can that thing be available to any end, which is not proportionable thereunto ; and to proportion as well excesses as defects are opposite. Hooker. Now are our brows bound with victorious wreaths, Our stern alarms changed to merry meetings, Our dreadful marches to delightful measures.

Shakspeare. He shut up in measureless content. Id.

Wooing, wedding, and repenting, is as a Scotch lig, a measure, and a cin([uc pace ; the first suit is hot and hasty, like a Scotch jig, and full as fantastical; the wedding mannerly, modest as dˆ measure, full of state and anchentry. Id.

My legs can keep no measure in delight. When my poor lieart no measure keeps in grief; Therefore no dancing, girl, some other sport. Id. , A true devoted pilgrim is not weary To measure kingdoms with his feeble steps. Id. A taylor's news, Who stood with shears and measure in his hand, Standing on slippers, which his nimble haste Had falsely thrust upon contrary feot. Told of many a thousand. *(*. King John.

Be large in mirth, anon we'll drink a measure The table round. Id. Macbeth.

Good Kent, how shall I live and work To match thy goodness 1 life will be too short, And every measure fail rae. Id. Kinfj; Lear.

Archidamus having received from Pliilij), after the victory of Cheronea, proud letters, writ buck, that if

he measured his own shadow he would find it no longer than it was before his victory. Bacon.

I have laid down, in somemeasure, the description of the old world. Abbot's Description of the World.

Had not this messenger measured David's foot by his own last, he had forborne this piece of news ; and not hoped to advantage himself by this falsehood. Bp. Hall.

Words must be fitted to a man's mouth : 'twas well said of the fellow

that was to make a speech for my lord mayor, when he desired to take measure of his lordship's mouth. Sclden.

To secure a contented spirit, measure your desires by your fortunes, not your fortunes by your desires.

Taylor.

He lived according to nature, the other by ill customs, and measures taken by other men's eyes and tongues. Id.

His majesty found what wrong measures he had taken in the conferring that trust, and lamented his error. Clarendon.

Great are thy works, Jehovah ! infinite Thy power ! What thought can measure thee, or

tongue Relate thee ? Billion's Paradise Lost.

When lusty shepherds throw The bar by turns, and none the rest out-go So far, but that the best are measuring casˆs. Their emulation and their pastime lasts.

Waller.

God's goodness is the measure of his providence.

More.

Our religion sets before us not the example of a stupid stoick; who had, by obstinate principles, hardened himself against all pain beyond the com-mon measures of humanity, but an example of a man like ourselves. Tillotson.

A concave measure, of known and denominated capacity, serves to measure the capaciousness of any other vessel. Holder.

All magnitudes are capable of being measured ; but it is the application of one to another which makes actual measure. Id.

I addressed them to a lady, and affected the softness of expression, and the smoothness of measure, rather than the height of thought. Dryden.

The vessel ploughs the sea,

And measures back with speed her former way.

Id.

As when the stars, in their ajthereal race, At length have rolled around the liquid space. From the same point of lieaven their course advance. And move in measures of their former dance. Id,

Silver is the instrument as well as measure of commerce ; and ‘tis by the quantity of silver he gets for any commodity in exchange, that he measures the value of the commodity he sells. Locke.

What thou seest is that portion of eternity which is called time, meusuredout by the sun, and reaching from the beginning of the world to its consummation. Addison’s Spectator.

Christ reveals to us the meajmrcs according to which God will proceed in dispensing his rewards.

Snuilridge’s Sermons. Amaryllis breathes thy secret pains.

And thy fond heart beats measure to thy strains.

Prior.

When Moses speaks of measures, for example, of an ophah, he presumes they knew what measure he meant : that he himself was skilled in weights and measures, arithmetick and geometry, there is no rea-sori to doubt. Arbuihnol on Coins.

f (;xpcct, from those that judge by first sight and liibh measures, to be thought fond or insolent.

(i-anviUe’s Sccpsii.

Goc’s eternal duration is permanent and invisible, not measurable by time and motion, nor to be computed by number of successive moments.

Beiitleii's Scmioiis. The numbers themselves, though of the heroick measure, should be the smoothest imaginable.

Pope. Can that arm measure, with an arm divine ? And canst thou thunder with a voice like mine ?

Young. A series of inconsistent measures has alienated the colonies from their duty as subjects, and from their natural affections to their common country.

Junius. In some measure I succeeded ; I had pride before, but he taught it to flow in proper channels. Burvs.

'Jhey think there is nothing worth pursuit, but thut which they can handle ; which they can measure with a two-foot rule, which they can tell upon ten fingers. Sheridan.

IMeasvrf, amonsc botanists. In describing the parts of plants, Tournefort introduced a geometrical scale, which many of his followers have retained. They measured every part of the plant; and the essence of the description consisted in an accurate mensuration of the whole. As the parts of plants, however, are liable to variation in no circumstance so much as that of dimension, Linnaeus very rarely admits any other mensuration than that arising from the respective length and breadth of tiie parts compared together. In cases tliat require actual mensuration, the same author recommends, in lieu of Tournetbrt's artificial scale, the following natural cale of the human body, which he thinks is nuch more convenient, and equally accurate. This scale consists of eleven degrees, which are as follows : — 1. A hair's-breadth, or the diameter of a hair (capillus). 2. A line (linea), the breadth of the crescent or white appearance at the root of the finger (not thumb), measured from the skin towards the body of the nail ; a line is equal to twelve hair-breadths, and is the twelfth part of a Parisian inch. 3. A nail (unguis), the length of a finger nail ; equal to six lines, or half a Parisian inch. 4. A thumb (pollex), the length of the first or uttermost joint of the thumb; equal to a Parisian inch. 5. A palm (palmus), the breadth of the palm exclusive of the thumb ; equal to three Parisian inches. 6. A span (spithama), the distance between the extremity of the thumb and that of the first finger when extended ; equal to seven Parisian inches. 7. A great span (dodrans), the distance between the extremity of the thumb and that of the little finger when extended ; equal to nine inches. A foot (pes\ measuring from the elbow to the basis of the thumb ; equal to twelve Parisian inches. 9. A cubit (cubitus), from the elbow to the extremity of the middle finger; equal to seventeen inches. 10. An arm-length (brachium'), from the

arm-pit to the extremity of the middle fincer ; equal to twenty-four Parisian inches, or two feet. 11. A fathom Torgya), the measure of the human stature; the distance between the extremities of the two middle fingers, when the arms are extended; equal, where greatest, to six feet.

Measure, in geometry, denotes any quantity assumed, as one, or unity, to which the ratio of

the other iiomogeneous or similar quantities is expressed.

Measure, in music, the interval or space of time which the person wiio beats time takes between the rising and falling of his hand or foot, in order to conduct the movement, sometimes quicker and sometimes slower, according to the kind of music, or the subject that is sung or played. The measure is that which regulates the time we are to dwell on each note. See Time. The ordinary or common measure is one second, or sixtieth part of a minute, which is nearly the space between the beats of the pulse or heart ; the systole, or construction of the heart, answering to the elevation of the hand ; and its diastole, or dilatation, to the letting it fall. The measure usually takes up the space that a pendulum of two feet and a half long employs in making a swing or vibration. The measure is regulated according to the different quantity or value of the notes in the piece ; by which the time that each note is to take up is expressed. The semibreve, for instance, holds one rise, and one fall; and this is called the measure, or whole measure; sometimes the measure note, or time note ; the minim, one rise, or one fall ; and the crotchet, half a rise or half a fall, there being four crotchets in a full measure.

Measure Binary, or Double, is that wherein tlie rise and fall of the hand are equal.

Measure Ternary, or Triple, is that wherein the fall is double to the rise ; or v.‘here two minims are played during a fall, and but one in the rise. To this purpose, the number three is placed at the beginning of the lines, when the measure is intended to be triple ; and a C, when the measure is to be common or double. This rising and falling of the hands was called by the Greeks aomq and Sto-if. St. Augustine calls it plausus, and the Spaniards compas. See Arsis and Thesis.

Measure is also used to signify the cadence and time observed in poetry, dancing, and music, to render them regular and agreeable. The different measures or metres in poetry are the different manners of

ordering and combining the quantities, or the long and short syllables. Thus hexameter, pentameter, iambic, sapphic verses, &c., consist of different measures. In English verses the measures are extremely various and arbitrary, every poet being at liberty to introduce any new form that he pleases. The most usual are the heroic, generally consisting of five long and five short syllables ; and verses of four feet ; and of three feet and a casura, or single syllable. The ancients, by variously combining and transposing their quantities, made a vast variety of different measures. Of words, or ra-ther feet of two syllables, they formed a spondee, consisting of two long syllables; a pyrrhic, of two short syllables ; a trochee, of a long and a short syllable ; and an iambic, of a short and a long syllable. Of their feet of three syllables they formed a molossus, consisting of three long syllables ; a tribrachys, of three short syllables ; a dactyl, of one long a'nd two short syllables; and an anaprest, of two short and one long syl-laViie. The Greek poets contrived 1-0 different

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combinations or measures, under as many different names, from feet of two syllables to those of six.

Measure, in a legal and commercial sense, denotes a certain quantity or proportion of any thing bought, sold, valued, or the like. It is necessary, for the convenience of commerce, that a uniformity should be observed in weights and measures, and regulated by proper standards. A foot-rule may be used as a standard for measures of length, a bushel for measures of capacity, and a pound for weights. There are several standards of this kind in England and Scotland. See Weights and Measures, where the history of the late important alterations in the British standards will be found ; and an ample table of ancient and modern weights and measures.

Measuring, in general, makes the practical part of geometry. From the various subjects whereon it is employed, it acquires various names, and constitutes various arts. See Geometry, and Trigonometry.

MEAT, n.s. l Sax. mete; Goth. and Svved. Meat'ed. S ˆmfe, t7iat ; Dan. w«rf ; Welsh, niaeth. Food ; animal food in particular : meated is, fed ; foddered.

But he seide to hem, I have mete to ete that ye knowen not. Wiclif. Jon. iv.

To his father he sent ten she asses laden with corn and bread, and 7neat for his father by the way.

Ge7i. xlv. 23.

Meats for the belly, and the belly for meats; but God shall destroy both. 1 Cor. vi. 13.

Strong oxen and horses, wel shod and wel clad, Wei meated and used. Tusse/s Husbandru.

Never words were musick to thine ear,

And never meat sweet-savoured in thy taste.

Unless I spake or carved.

Sbakspeare. Comedy of Errors.

Carnivorae, and birds of prey, are no good meat ; but the reason is, lather the cholerick nature of those birds than their feeding upon flesh ; for pewets and ducks feed upon flesh, and yet are good meat.

Bacon's Natural Historif.

He gives the reason of the distaste of satiety, and of the pleasure in novelty in meats and drinks. Id.

There was a multitude of excises ; as, the vectigal marelli, a ta i!])on meat. Arlmtlinot.

Meat. See Aliment, Diet, Drink, and Foon. Among the Jews several kinds of animals were forbidden to be used as food. The flesh witli the blood, and the blood without the flesh, were prohibited ; as well as the fat of sacrificed animals. Roast meat, boiled meat, and racouts, were used among the Hebrews, but they had no seasoning, except salt, bitter herbs, and lioney. — They never mingled milk in any rairont or hash, and never eat at the same meal both meat and milk, butter, or cheese. The daily provision for Solomon's table was thirty measures of fine wheat flour, sixty of common flour, ten stalled oxen, twenty pasture oxen, 100 sheep, besides venison and wild-fowl. The principal and most necessary food among the ancient (Jreeks was l)read, wliicli they called oproc, and produced in a wicker basket colled Kavfov. Their loaves were sometimes baked under the ashes, and sometimes in an oven. They also used a sort of biead called maza. Rarley meal was used

among the Greeks, which they called aXˆrot/. They had a frequent dish called Oˆnov, whicli was a composition of rice, cheese, eggs, and honey, wrapped in fig-leaves. The Mvrrmrov was made of cheese, garlic, and eggs, beaten and mixed together. Their bread, and substitutes for it, were baked in the form of hollow plates, into which they poured a sauce. Garlic, onions, and figs, seem to have been a very common food amongst the poorer Athenians. The, Greeks, especially in the heroical times, ate flesh roasted ; boiled meat was seldom used. Besides beef, mutton, venison, &c., it appears from Hippocrates that they ate the flesh of horses, asses, dogs, and foxes. Fish seem not to have been used for food in the early ages of Greece. The young people only, among the Lacedemonians, ate ani-mal food ; the men and the old men were supported by a black soup called fitXa

Ki'ixoq, which to people of other nations was always disagreeable. Grasshoppers, and the extremities of tender shoots of trees, were frequently eaten by the poor among the Greeks. Eels dressed with beet root were esteemed a delicate dish, and they were fond of the jowl and belly of salt fish. The dessert consisted frequently of fruits, almonds, nuts, figs, peaches, &c. In every kind of food salt was used. The diet of the earliest Romans consisted of milk, herbs, and root?, which they dressed with their own hands ; they also had a kind of gruel, or coarse gross pap, composed of meal and boiling water ; this served for bread : and, when they began to use bread, they had none for a long time, but of unmixed rye. Barley-meal was next eaten by them, which they called polenta. When they began to eat animal food it was esteemed a piece of luxury, and an indulgence not to be justified but by some particular occasion. After animal food had grown into common use, the meat most frequent upon their tables was pork.

MEATII, a county of the province of Leinster, in the kingdom of Ireland. It is bounded on the north by the counties of Cavan and Louth, on the east by the Irish Channel, on the south by Kildare and Dublin, and on the west by Westmeath county. There are eighteen baronies, and 147 parishes in this shire, the area of which measures .327,900 acres.

The surface of Meath, as the name imports, (Maith signifying a level country.) is almost a continued plane ; the soil is a deep loam, remarkably fruitful in the production of corn, and also yielding the richest pasturage for the fattening of heavy stock. Meath was anciently a favored province; the great hall of Tarah, where the Irish kings of old assembled, where laws were digested, and whence they were published, and with the extinction of whose honors the majesty of the Irish throne may be said to have expired, occupied a central and commanding position here. Few counties possess greater agricultural capabilities, and none in Ireland has turned those natural advantages to a better account. The staple of the county is corn, which is exported from the port of Drogheda. There are many splendid rcsidenc(;s of nobility within the boundaries of East i\Iealh, amongst which should be mentioned Slave Castle (honored

MEA

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by the visit of hk gracious majesty, king George IV. in 1821), the magnificent seal of the marquis of Conyngham ; lleadfort, the seat of marquis lleadfort ; Douth, the residence of the late lord Netterville ; Tarah, the hall of lord Tarah ; Gormanston Castle, belonging to tiie viscount Gormanston, a constant resident ; Danˆan, the estate and birth-place of the illustrious duke of Wellington; Mornington, formerly the property of the noble family of Wel-lesley, who hence derived the title of earls; Summerhill, the costly mansion of lord Langford ; Dunsany Castle, the ancient possession of the IMunkets, viscount Dunsany; and Stackallen, the picturesque seat of the lord Boyne.

The chief towns of Mealh are Trim, the assizes town, Navan, Kells, Athboy, Duleck, Oldcastle, Dunboyne, Laracor (of which parisii dean Swift was once the incumbent), Duns-haughhn, Ratoath, and Slane. The linen manufacture was formerly pursued here with much success, but husbandry appears to have expelled it to a certain extent; and the dowlass, for which this country was once famous, is now made by the great capitalists in the north of England. The rivers of Meath are the Nanny-Water and the Boyne, the latter of which flows through a rich and picturesque vein of country ; perhaps the most pleasing landscape on the banks of this noble river is at Aldbridge, the scene of that battle between kings James and William, which decided the fate of the British crown. A beautiful obelisk erected on the spot, with an appropriate inscription, commemorates the great event. Meath has been, for many years, an industrious and tranquil county, not over populous, and comparatively wealthy. Education has not mnde any very extensive progress here, not more th:iii 7000 pupds being in attendance at the public scliools.

MEATH E, n.s. Teut. meth; Wei. medd. Mead ; any similar drink.

For drink the grape She crushes, inoffensive must, and meathes From many a berry. Milton s Paradise Lost,

MEAUX, anciently Latinum, a fine city of tlie department of the Seme-et-Marne, and the principal place of a subprefecture. It is the seat of a bishop, has a lower court of judicature, a tribunal of commerce, an agricultural society, a society of arts and sciences, and an ecclesiastical school. It is a post town, containing 7400 inhabitants. This city stands on the Marne, near the Ourcq Canal, in a very fertile

country, The river, which divides it into two unequal parts, serves to work a number of mills, which grind corn chiefly for the supply of Paris. It is a well built town ; the market place is large, but of an irregular form, and it has some very agreeable walks. Here is a public library containing 10,000 volumes. In the cathedral, which is regarded as a masterpiece of architecture, the celebrated Bossuet lies interred. At a little distance from the city is the rock of Cricy, remarkable for its grottoes and petrifactions, whicli seems to have been formed by the continual dropping of a spring, that possesses very remarkable qualites.

There are here manufactories of calicoes, printed cottons, glue, saltpetre, and vinegar, tan-

yards, leather dressing shops, &c.,anda consider" able trade is carried on in corn, flour, mustard,wool, cattle, poultry, wood, coals, and cheese. The markets of Meaux are frequented by a great number of rich farmers. This city is thirty-three miles E, N. E. of Paris, thirty-nine north of Milan, and thirty-six W.S. W. of Chateau Thierry.

MEAZ'LING, part. Teut. mazelin, is spotted. See Measles. Applied to rain descending in small drops.

The air feels more moist when the water is in small than in great drops ; in meazling and soaking rain, than in great showers. Arbuthnot on Air.

MECCA, a noted city of Arabia, the capital of the province of Hedsjas, and of Mahometanism, is situated in a rocky, barren country, about a day's journey from the Red Sea. Its immediate site is a narrow valley, enclosed between mountains ; the houses following its windings, and being built partly on the acclivities on each side. The streets are sanded, level, and regular; and the houses of extremely neat appearance, and even handsome. They are of stone, and seldom less than three stories high. In the interior the rooms are large and commodious, though the stairs are generally narrow and dark. The livelihood of the inhabitants depends much on the letting of apartments. The markets are held in the streets. The prosperity derived from the pilgrimages here was at one time so great, that Mecca could boast a population of 100,000 inhabitants. This has been greatly diminished of late, we understand, partly from Mecca being exposed to the incursions of the Wahabees. It is not now supposed to contain more than 16,000 or 18,000 people; and many quarters are

abandoned and in ruins. The servants of the temple are described by Ali Bey as the most meagre and miserable people he ever saw. They are also dull and melancholy, nor did he, during his stay, hear a musical instrument or a song, unless in two or three instances from females. From every pdgrim at all opulent, however, they contrive to extract from £70 to £90 for alms and contributions ; and even from those who beg their way fees are expected. The women here are not so rigidly confined as in other Mahometan towns, and are said to be sufficiently accessible to their devotees. Mecca has also little modern reputation for learning. No regular schools are kept, except for the common branches ; but occasionally a few doctors seat themselves in the porticoes of the temple, and expound the Koran.

The great ornament of this city is its famous temple, containing the Kaaba, or house of the prophet. Strangers descend by a number of steps into a great hall, through which they are ushered into an inner square, and discover a plain square building, covered with black cloth, through which are seen patches of the dark stone of which the Kaaba is built. Tlie most sacred relic here is the stone said to be brought by the angel Gabriel to form the foundation of the building. Tlie grand ceremony of the pilgrims is that of going seven times round the Kaaba, reciting appointed verses and psalms, in honor of God and the prophet, and kissing the sacred stone each time. They ore then conducted to the

well Zemzem, in another part of the same square, of which they take large draughts, and undergo a thorourrh ablution in its waters, A final ceremony is the pilgrimage to Mount Arafat, about thirty miles to the south of the city. The climate

iiere is very sultry, and there are even instances recorded of persons being suffocated in the streets. Tlie balm of Mecca is only to be found in small quantities, but is not manufactured here. Long. 40° 15’ E., lat. 21° 18′ 9″ N.

MECHAN’IC, rtrf;. & n. s. ˆ Fr. mechanique;

Mechan’ics, n. s. Lat. viec/ianicus ;

Meghan ‘iCAL, a(i;. Gr. ft»jx«v»;- ^^e—

Mechan’ically, adv. Mating to machi—

Mechan’icalkess, n. s. nery : a construc—

Mechanic’ian, tor of machines :

Mech’anism. J mechanics is the

science or doctrine of their construction. See below. Mechanician, an adept in, or student of, mechanics or mechanical constructions : mechanism, action, or construction, according to the laws of mechanics.

Know you hot, being mechanical, you ought not to walk upon a labouring day, without the sign of your profession? Shakspeare.

Hang him, mechanical salt-butter rogue ! I will stare him out of his wits ; I will hew him with my cudgel. Id.

Mechanick slaves,

With greasy aprons, rules, and hammers, shall

Uplift us to the view. Id. Antony and Cleopatra. Do not bid me Dismiss my soldiers, or capitulate Again with Rome’s mechanicks.

Id. Coriolanus.

In the youth of a state, arms do flonrisii ; in the

middle age of a state, learning ; and then both of

them together for a time ; in the declining age of a

state, mechanical arts and merchandise. Bacon.

To make a god, a hero, or a king.

Descend to a viechanv k dialect. Roscommon.

Some were figured like male, others like female screws, a.s mechanicians s'peak. Boifle.

Many a fair precept in poetry is like a seeming demonstration in mathematicks, very specious in the diagram, but failing in the mechanick operation.

Driiden.

They suppose even the common animals that are in being, to have been formed mechanically among the rest. Hay.

A third proves a very heavy philosopher, who possibly would have made a good mechanick, and have done well enough at the useful philosophy of the spade or the anvil. South.

Dr. Wallis defines mechatiicks to be the geometry of motion, a mathematical science, which shews the effects of powers, or moving forces, so far as they are applied to engines, and demonstrates the laws of motion. Harris.

The main business of natural philosophy is to argue from phenomena without feigning hypotheses, and to deJuce causes from efiects till we come to tiie very first cause* which certainly is not mechanical ; and not only to unfold the mechanism of tiie world, but chiefly to resolve these, and such like (luestions.

Newton.

Later philosophers feign hypotheses for explaining all things mechanically , and refer other causes to metaphysicks. Id.

After the chyle has passed through the lungs, nature continues her usual mechaniim, to convert it into animal substances. Arhuth'Not (>n Alimmis.

He acknowledged nothing besides matter and motion ; so that all must be performed either by mechanism or accident, either of which is wholly unaccountable. Beniley.

As the general quality of meat-roasting, with its several modifications,

as to beef, mutton, pullets, &c., does not inhere in any one part of the jack ; so neither does consciousness, with its several modes of sensation, intellection, volition, &c., inhere in any one, but is the result from the mechanical composition of the whole animal. Pope,.

The rudiments of geography, with something of mechanicks, may be easily conveyed into the minds of acute young persons.

Watts's Improvement of the Mind.

Mechanics. In furnishing our readers with a condensed treatise on this important branch of physics, it may be advisable, in the first instance, to examine the simple mechanical powers; by means of which we are enabled to adapt animal labor to the useful arts of life: their combination in the construction of machines will then be better understood.

The tyro is frequently disposed to imagine that, by means of the mechanical powers, a real increase of power is obtained ; this, however, is not the fact. For instance, if a man be just able to convey 1 cwt. from the bottom to the top of his house in one minute's time, no mechanical en-gine would enable him to convey 3 cwt. to the same height in the same time ; but the engine will enable him to convey 3 cwt. in three minutes; which amounts to the same thing as to say that the man could, without the engine, carry the 3 cwt. by going three times to the top of the house, and carrying 1 cwt. at a time, provided the load admitted of its being so divided. Therefore the engine increases the effect of a given force by lengthening the time of the operation ; or (since uniform velocity is proportional to the time), by increasing the velocity of that force or power.

The power, or acting force, is so far from being increased by any macHiine, that a certain part of it is always lost in overcoming the resistance of mediums, the friction, or other unavoidable imperfections of machines; and this loss in some compound engines is very great.

Every machine, however complex it may be, must consist of some combination of the following simple machines, which arc commonly called the mechanical powers.

1. The lever.

2. The wheel and axle.

3. The pulley.

4. The inclined plane .’). The wedge.

G. The screw.

This classification of the elements of machinery, although very simple when considered with respect to the extent and power of tiie results which spring from it, may be still farther simplified ; not because any of the six machines, which we have just enumerated, admits of being resolved into more simple parts, but because some of them are identical in principle, and different only in appearance. We shall show, hereafter, that the wheel and axle is, in fact, a lever, and that the wedge and screw are only modifications of the inclined plane; so that it follows, that all the varieties of simple machines may be reduced to three : —

1. The lever.

2. The pulley.

3. The inclined plane.

The lever is the simplest of all machines, and is only a straight bar of iron, wood, or other material, supported on, and moveable round, a prop, called the fulcrum.

In the lever there are three circumstances to be principally attended to: 1. The fulcrum, or prop, by which it is supported, or on which it turns as an axis, or centre of motion. 2. The power to raise and support the weight. 3. The resistance, or weight to be raised or sustained.

Tiie points of suspension are those points where the weights really are, or from which they hang freely.

The power and the weights are always supposed to act at right angles to the lever, except it be otherwise expressed.

The lever is distinguished into three sorts, according to the different situations of the fulcrum, or prop, and the power, with respect to each other.

In the lever of the first kind the fulcrum is placed between the power and the resistanc^e ; in the second kind the resistance is between the fulcrum and the power; and in the third kind the power is applied between the fulcrum and the resistance; and the power gained will in all cases be in proportion to the relative lengths of the two arms in the same lever. Plate I. Mechanics, fig. 1, represents a lever of the first kind in one of its most common applications ; *viz.* raising a large stone or weight d, and when used in this way it is, in practice, most commonly called a crow-bar, or hand-spike. The entire bar ef is, however, a lever, and the stone, or block g, is the fulcrum upon which it turns ; consequently, from g to/ (where the power is to be applied) will be tlie acting part of this lever, and from ^ to e its resisting part. The power gained by this form of the lever is as the resisting is contained in the acting part, or as fg is to ge; so that if the lengths fg and ge be taken, and *g be divided by ge, the quotient will be the power gained. In the plate eg is contained twice in gf, or will gain a power of two, so that, whatever the weight of d may be, it will only appear to weigh half as much at* ; and, if the fulcrum g were removed so much nearer to e that the new distance between e and g should be contained twenty times in the distance gf, then a power of twenty would be gained, or d would be lifted at/ with a power equal to one-twentieth of its real weight. In this case, however, /“would

have to descend twenty times as far as e wouic rise, and therefore a very small motion would be communicated to d.

By the same rule, if moving the fulcrum g towards the resistance d increases the power of the lever at/ so will removing it in a contrary direction, or towards/ decrease it. Thus if ^ is supposed to be placed exactly half way between e and/ so as to make the acting and resisting arms equal, then no power at all will be gamed at/; because, whatever may be the weight placed on e, an equal power will be necessary to niove it at/; and as both e and/ will in mov-ing perform equal arcs of circles, or move through equal distances in equal times, so no power can be gaiued, this being in direct opposition to the laws of motion. Again, if the fulcrum g be supposed to be placed nearer to/ tiian it is to g, then e when moved will pass through a larger space than *therefore e will generate more momentum than can be generated at*; and consequently the apparent weight of d, as felt at *, will be increased, or a*

greater power must "be exerted at than is equivalent to the weight of d. Under such an arrangement it will be evident that, although the whole is a lever, it cannot be a mechanic power, unless it is admitted that from f to g is the resisting end, and from g to e the ac'tino-one ; in this case, the power must be applied at c instead of/ and now it will be seen that it is the same lever as in the first case, but with its ends reversed.

In speaking of the power of lerers, under all their several modifications, it must be observed that they must be considered as without weight ; and, in making accurate experiments upon them, the weigiits of their several parts must be nicely balanced, otherwise the result will be affected. Thus, in the preceding figure, if the bar e/were of equal size throughout, it is evident there would be twice as much matter in the arm g/as in the shorter one eg, and this additional quantity of matterˆ would preponderate and bear down the end/'; thus appearing to increase and assist the power. This difficulty will be met in theory by considering the whole bar e/'as without weight, and in practice or experiment it must be obviated by hanging on a weight, or making the shorter arm eg so much thicker, as to cause it to be an exact balance for the longer arm gf when the lever is not in action.

A sufficient illustration of the first form of the lever may be found by reference to an ordinary poker. This, when employed to stir the fire, will have for its axis the bar upon which it rests ; the coals are the weight to be overcome, whilst the hand may be considered as the power employed ; and it is also with reference to this mechanical power that we construct the steel-yard. BA, fig. 2, is a lever of the first kind, supported by an inflexible point O; and, as the distance from O to B is twice as great as it is from O to A, the hand C, by exerting a force of one pound, may be placed in eqnilibrio with a weight of two pounds, or twice the amount. From this it will be seen that the length of the arm OB, multiplied into the power C, equals OA multiplied into the weight D, and as such that the power and the weight must be to each other

inversely as tlieir distances from tlie fulcrum.

To further illustrate the matter let us suppose O B, the distance of the power from the prop, to be twenty inches, and OA, the distance of the weight from the prop, to be eight inches, it will then be found that a weight of five pounds may be supported by a power of only two pounds, because the distance of the weight from the t'u.cnim eight, multiplied into the weight five, makes forty, and as such the longer arm will only require a power of two, which, multiplied by twenty, will produce the same amount.

Let AG, fig. 3, represent an horizontal lever at rest. At the point B, equidistant from A and G, is placed the fulcrum D, and at the extremities A and G are hung the equal weights E and F. Then the lever will continue at rest, the weights E and F being in equilibri'\ For it is evident that, if the line AG be moved on the fulcrum B, its extremities A and G will each be carried with equal velocities in the periphery of the same circle. And, because A G is horizontal, the actions of the weights E F will be in direction at right angles to its length ; that is to say, they will act in the direction of tangents to the said circle at the points A and G ; or they will act in the direction of those particles of the periphery which may be imagined to coincide with the tangents. Each pressure, therefore, tends to move the correspondent extremity of the line AG in that very line of direction in which only it can move. Suppose the pressure at G to be removed, and the whole pressure at A will be employed in depressing the point A, or, which is necessarily in this case the same, in raising the point G: on account therefore of the equal velocities of the points A and G, the action of E at the point A will be the same as if it were exerted at G in the direction of the tangent C G. But again, suppose the equal weight F to be restored, and the point G will then be acted on by two equal and opposite forces, which, destroying each other's effect, will not produce motion, consequently the lever will continue at rest.

It is likewise evident that, if the radii A Band BG be not in a right line, the equal forces will nevertheless be in equilibrio, if they be applied in the directions of the tangents : thus, if B G be bent to the position B K, and the force F be there applied in the direction K II, the equilibrium will remain as before.

What is called the hammer lever differs in nothing but its form from a lever of the first kind. Its name is derived from its use, that of drawing a nail out of wood by a hammer.

Suppose the shaft of a hammer to be five times as long as the iron part

which draws the nail, the lower part resting on the board, as a fulcrum ; then, by pulling backwards the end of the shaft, a man will draw a nail with one-fifth part of the power that he must use to pull it out with a pair of pincers; in which case the nail would move as fast as his hand ; but with the hammer the hand moves five times as much as the nail, by the time that the nail is drawn out.

Let A C B, fig. 4, represent a lever of this sort, bended at C, which is its prop or centre of mo-tion. P is a power acting on the longer arm AC, at A by means of tlie cord DA going over

the pulley D ; and W is a weight or resistance acting upon the end B of the shorter arm C B. If the power be to the weight,' as C B is to C A, they are in equilibrio : thus, suppose W to be five pounds, acting at the distance of one foot from the centre of motion C, and P to be one pound, acting at A, five feet from the centre C, the power and weight will just balance each other.

Of levers of the first kind there are numerous instances. Scissars, pincers, snuffers, and all similar instruments, consist of two levers, of which the rivet by which they are united is the common fulcrum.

The balance, an instrument of very extensive use in comparing the weight of bodies, is a lever of the first kind, whose arms are of equal length. The points from which the weights are suspended, being equally distant from the centre of motion, will move with equal velocity ; consequently, if equal weights be applied, their momenta will be equal, and the balance will remain in equilibrio.

In order to have a balance as perfect as possible, it is necessary to attend to the following circumstances.

1. The arms of the beam ought to be exactly equal, both as to weight and length.

2. The points from which the scales are suspended should be in aright line, passing through the centre of gravity of the beam ; for by this the weights will act directly against each other, and no part of either will be lost, on account of an oblique direction.

3. If the fulcrum, or point upon which the beam turns, be placed in the centre of gravity of the beams, and if the fulcrum and the points of suspension be in the same right line, the balance will have no tendency to one position more than another, but will rest in any

position it may be placed in, whether the scales be on or off, empty or loaded.

If the centre of gravity of the beam, when level, be immediately above the fulcrum, it will overset by the smallest action ; that is, the end which is lowest will descend ; and it will do this with more swiftness, the higher the centre of gravity be, and the less the points of suspension be loaded.

But, if the centre of gravity of the beam be immediately below the fulcrum, the beam will not rest in any position but when level ; and if disturbed from that position, and then left at liberty, it will vibrate, and at last come to rest on the level. In a balance, therefore, the fulcrum ought always to be placed a little above the cen-tre of gravity. Its vibrations will be quicker, and its horizontal tendency stronger, the lower the centre of gravity, and the less the weight upon the points of suspension.

4. The friction of the beam upon the axis ought to be as little as possible ; because, should the friction be great, it would require a considerable force to overcome it; upon which account, though one weight should a little exceed the other, It will not preponderate, the excess not being sufficient to overcome the friction, and bear down the beam. The axis of motion should be formed with an edge like a knife, aTid made very hard : these edges are at first made sharp, and then rounded with a fine hone, or piece of

buff leather, which causes a sufficient bluntness, or rolling ctlge. On the regular form and excellence of this axis depends chiefly the perfection of this instrument.”

5. The pivots, which form the axis or fulcrum, should be in a straight line, and at right angles to the beam.

6. The arms should be as long as possible relatively to their thickness, and the purposes for which they are intended, as the longer they are

the more sensible is tiie balance.

They should also be made as stiff and inflexible as possible ; for, if the beam be too weak, it will bend, and become untrue.

7. The rings, or tlie piece on which the axis bears, should be hard and well polished, parallel to each other, and of an oval form, that the axis may always keep its proper bearing, or remain always at the lowest point.

8. If the arms of' a balance be unequal, the weights in equipoise will be unequal in the same proportion. The equality of the arms is of use, in scientific pursuits, chiefly in the mak-ing of weigiits by bisection. A balance with unequal arms will weigh as accurately as another of the same workmanship with equal arms, provided the standard weight itself be first counterpoised, then taken out of the scale, and the thing to be weighed be put into the scale,ˆ and adjusted against the counterpoise. Or, when proportional quantities only are considered, the bodies under examination may be weighed against the weights, taking care always to put the weights in the same scale, for then, though the bodies may not be really equal to the weights, yet their proportions amongst each other will be the same as if they had been accurately so.

9. Very delicate balances are not only useful in rice experiments, but are likewise much more expeditious than others in common weighing. If a pair of scales, with a certain load, be barely sensible to one-tenth of a grain, it will require a considerable time to ascertain the weight to that degree of accuracy, because the turn must be observed several times over, and is very small. But if no greater accuracy were required, and scales were used which would turn with 100th of a grain, a tenth of a grain, more or less, would make so great a difference in the turn that it would be seen immediately.

10. If a balance be found to turn with a certain addition, and is not moved by any smaller weight, a greater sensibility may be given to the balance, by producing a tremulous motion in its parts. Thus, if the edge of a blunt saw, a file, or other similar instrument, be drawn along any part of the case or support of the balance, it will produce a jarring, which will diminish the friction in the moving parts so much, that the turn will be evident with one-third, or one-fourth of the addition that would else have been required. In this way, a beam which would barely turn by the addition of the tenth of a grain, will turn with the thirtieth or fortieth of a grain.

The usefulness of having good balances for the weighing of substances, is not limited to the due performance of nice exi;erimeiits, hut they

also save much time in weighing when a less de-gree of accuracy is required. If a pair of scales, loaded with a certain weight, be barely sensible to one-tenth of a grain, it will require a considerable time to ascertain the weight to that degree of accuracy, because the turn must be observed several times over, and is very small ; but if scales were used which would turn with theˆjAli part of a grain or less, supposing that the weight was not required to any greater accuracy than the tenths of grains, a single tenth of a grain, more or less, would make so great a difference in the turn of the scale that it would be seen immediately.

For the determination of the specific gravity of various substances, Muschenbroek says, he used a balance which turned within a fortieth of a grain when loaded with 200 or 300 grains; hence his balance determined the weight to the 12,000th of the weight.

Mr. Bolton's larger balance (mentioned in the Philosophical Transactions, vol. 66) loaded with a pound, probably of the common avoirdupois, would turn with one-tenth of a grain ; so that the weight is determined to the 70,000th partof the weight.

J\Ir. Bolton's small balance, capable of weighing half an ounce, turned with the 100th part of a grain, which is the 24,000th part of the weight.

Mr. Reid's balance, mentioned in the same volume, when loaded with 55 lbs. avoirdupois, turned readily with less than a pennyweight, and very distinctly with four grains; so that it determined the weight to the 96,000th part of the weight in the scale ; and, although so strong, was decidedly the best common balance whose performance has been recorded.

Mr. Whitehurst's balance, mentioned in the same volume, which weighed one pennyweight, was sensibly affected with the 2000th part of a grain, or the 48,000th part of the weight.

Mr. Nicholson's balance, noticed by him in his Dictionary of Chemistry, when loaded with 12,000 grains in each scale, turned with the .ˆth part of a grain, or the 84,000di part of the weight ; so that this was a very good balance.

Mr. Alchome's balance (mentioned in the Philosophical Transactions vol. 77), with 15 lbs. at each end, turned with two grains ; these were probably troy pounds, and so the accuracy of this balance went only to the 43,200th of the weight.

Dr. G. Fordyce (in the Philosophical Transactions, vol. 75) mentions a balance, made by Ilamsden, turning on points instead of edges, which, when loaded with four or five ounces Troy, could ascertain the weight to the 160th part of a grain ; that is to say, the 30,400th part of the weight in the scale.

Mr. Magellan's balance, mentioned by Nicholson in his Dictionary of Chemistry, with a pound in each scale, showed distinctly ˆ"ˆth of a grain, or the 70,000th part of the weight.

Tiie Royal Society's balance, made by Rams-den, and turning on steel edges upon planes of polislied crystal, is said to be .sensible to the 7,000,000th part of the weight.

The comparison of the weights of different countries, as-made by Mr. Tillet, with the

standard mark in the mint at Paris, was made with a balance which weighed a mark, or 4608 grains, and turned witli a quarter of a grain, or the 18,432d part of the weight in the scale ; so that, althougli this balance might be reckoned a good one, it was in fact inferior in accuracy to any of the above mentioned, except Muschenbroek's.

Professor Theigel, in his Observations, says he used a balance, of which, when loaded with two marks, Cologne weight, at each end, the cock turned -ˆth of an inch with a richtpfenningtheil, which, according to the German weights, given in Mr. Gray's Elements of Pharmacy, is the 131,072d part of the weight in each scale; so that this balance was a very good instrument.

The balance used by INIr. Cooper (Transactions Society of Arts, vol.

41) and made by Mr. Robinson, was sensibly affected by ^‘jth of a grain, when the scales were loaded with 1000 grains at each end ; so that this balance may be esteemed of very great accuracy, and very fit for the purposes to which it was applied ; namely, the analysis of organic substances by fire.

In all researches which depend upon the accurate weighing of the articles employed, and of tiie products obtained, the accuracy of the balance employed ought to be stated, in order that it may be determined what confidence ought to be placed in the results obtained.

The mechanic will from this account of balances be able to form a proper estimate of the value to be attached to tables of specific gravity, or to chemical analysis, which depend on a supposed accuracy in weighing which is not attainable in practice. When, indeed, tables of specific gravity are given to five places of figures, the last figure is merely a guess figure; and, if they have more than five figures, the author, as Nicholson justly observes, either deceives inten-tionally, or through ignorance of decimals.

The statera, or steel-yard, fig. 5, is a lever of the first kind, whose fulcrum, or centre of motion, is at A ; the weight B is suspended always at the same distance C A from the centre of motion ; but the power, or counterpoise E, may be shifted from one point to another all along the arm AD; by which means a great variety of weights may be balanced by the same counterpoise E, whose momentum mcreases in the proportion of its distance from A. The whole length of the arm A D is marked with numbered divisions, each of which indicates the weight of B, which is balanced by the counterpoise E, when E is placed at that particular division. Those divisions are ascertained by trial ; for the two arms of the steel-yard being unequal in weight, their momentums, when loadedvvith the weights B and E, cannot be estimated merely by the products of those weights multiplied each by its distance from A.

The bent-lever balance is represented in plate, Mechanics, fig. 6. The substance to be weighed is placed in a dish 1’, sus])ended from the arm of a bent lever at L. The other arm CD is terminated in a heavy knob, which plays upon a graduated arch G 11. As the weight depresses the arm CA, it is so constructed that the leverage of II is constantly diminished; and, since D is removed up the arch, its leverage is con-

stantly increased. When D acquires such a position that it counterpoises the weight, the division to which the index points on the graduated arch expresses the amount of the weight.

To graduate this instrument, let the first division be placed at the position which the index assumes when tiie dish F is unloaded. Then let the dish be successively loaded with one, two, three, &c., pounds, or ounces, or whatever denomination of weight it is designed that the divisions should indicate; and the successive positions of the index will determine the divisions.

Commercial balances are frequently miscon-structed for fraudulent purposes, by making the arm, from which the substance to be weighed is suspended, longer than that from which the counterpoise is hung, thereby giving the counterpoise a greater leverage, and enabling it to support a weight proportionably greater than itself. The end to be attained by' the use of such a balance may be defeated in several ways. If the object be merely to detect the fraud, it will be sufficient, after equilibrium has been established between the substance to be weighed and the weights, to transpose them, and put the substance to be weighed in the dish in which the weights were, and vice versa. If the balance be honestly constructed the equilibrium will be undisturbed ; but if it be fraudulent the substance to be weighed will preponderate ; since, after the transposition, it will have the greater leverage. But, if the object be not alone to de-tect the fraud, but to ascertain the true weight of the substance, let the counterpoise, whicii will produce equilibrium after transposition, be found; and let this and the former counterpoise be reduced to the same denomination of weight, and let the two counterpoises thus expressed be multiplied together, and the square root of the product extracted ; that square root will be the true weight. Thus, for example, if one counterpoise be seven pounds, and the other nine pounds and one-seventh, the product 7 X 9.ˆ lbs., is sixty-four, the square root of which is eight. Hence eight pounds is the true weight.

To illustrate the second form of the lever, we have only to place the point of support at one extremity, employ the povVer at the other, and attach the weight at an intermediate point. In this case the hand C, fig. 7, is placed at a point equal to three times the distance from the fvilcrum O than the weight D ; so that one pound will exactly balance three pounds. A reference to this form of the lever will serve to show why two men, carrying a weight between them, share the burthen to be supported in proportion to the distances at which they are placed ; tlius, if one man beat O, and the other at B, with an inflexible pole resting upon their shoulders, the latter person will have a mechanical

advantage over the former. This is an expedient occasionally resorted to in the yoking of cattle, so that, if two horses of unequal strength are intended to pull the same vehicle, their forces may be equalised, by such a division of tlie bar to which they are attached, that the point of traction may be as much nearer to the stronger horse than to the weaker, as the strength of the former exceeds that of the latter.

The oars and rudders of Tessels are levers of the second kind : the vessel is the weight or resistance, the water is the fulcrum, and tlie man who governs tlieir motions is tlie power. A door is a lever of the second kind: the hinges are the centre of motion, tlie body of tlie door is the weight, and the hand by which it is moved is the power. A pair of bellows, nutcrackers, &c., are composed of two levers of the second kind. A chopping-knife is also an example. This instrument IS fixed at one end, the fulcrum ; the substance to be cut is placed under it, and the power is applied at the other extremity.

The third kind of lever, or that in which the power is applied between the fulcrum and the resistance, cannot be called a mechanical power, although it must be mentioned as a modification of the lever ; for since its resisting arm is in all cases, except one, longer than the acting arm, and in that one case is equal to it, so it can never gain power, but in most of its arrangements must lose it. If the power and resistance represented in fig. 8 be conceived to change places with each other, then that figure will represent a lever of the third kind ; for now b will be the power which is placed between the fulcrum a and the resistance at c, for the purpose of overcoming it; and since, if both the power and resistance were acting at c, they must be equal to each other, while the power must b? increased in proportion to its proximity at a, so it follows that this lever must lose power whenever it is applied at any other situation than c, and that even there it can gain none.

The third kind of lever is used as little as possible, on account of the disadvantage to the moving power ; but it cannot always be avoided ; an example of it is seen in rearing a tall ladder against a wall, where

the power or strength of a man is exerted at a short distance from one end, and the task cannot be performed without more effort than would be necessary to bear the lad-der.

The bones of a man's arm, and the limbs of animals generally, are levers of the third order ; for, when we lift a weight by the hand, the muscle that exerts its force to raise that weight is fixed to the bone about one-tenth part as far below the elbow as the hand is, and, the elbow being the centre round which the lower part of the arm turns, the muscle must therefore exert a force ten times as great as would be required simply for the suspension of the weight that is raised. The principle of vitality has an influence upon the stren'.lth of the muscles, for which we are wholly unable to account, and a weight, which would instantly break a muscle the moment it was dead, can be raised by that muscle while alive without the smallest pain or difficulty. Vitality, therefore, being ordained to communicate so much energy to such flexible materials as flesh and blood, a lever of the third sort became most admirably adapted to the animal frame, because, if the power be sufficient, its operations are quick, and it is exerted or resides in a small compass.

If the weight to be raised be of considerable bulk, and if it be fixed either above or below the end of the lever, it will vary in its intensity, according to the position of the lever. Let A B,

fig. 9, represent a lever having a weight fixed above it, as A, of which the centre of gravity is a, and the line of direction a h : tlien is b the point in the lever on which the weight acts: but, if the lever is moved into tlie position C D, the line of direction of the weight will fall nearer to the fulcrum of the lever, and consequently act with less force upon it; buf, if it is placed in the position E F, liie line of direction will fall further from the fulcrum, and therefore act more on the lever. On the contrary, the opposite eff'ects take place when the weight is below the lever.

If several levers be combined together in such a manner as that a weight, being appended by the first lever, may be supported by a power applied to the last, as in fig. 10, which consists of three levers of the first kind; and is so contrived that a power, applied at the point L of the lever C, may sustain a weight at the point S of the lever A, the power must here be to the weight, in a ratio, or proportion, compounded of the several ratios which those powers that can sustain the weight by the help of each lever, when used singly and apart from

the rest, have to the weight. For instance, if the power which can sustain the weight P, by the help of the lever A, be to the weight as 1 to 5 ; and if the power wliich could sustain the same weight by the lever B alone be to the weight as 1 to 4 ; and if the power which could sustain the same weight by the lever C be to the weight as 1 to 5 ; then the power which will sustain the weight by help of the three levers joined together will be to the weight in a proportion consisting of the several proportions multiplied together, of 1 to 5, 1 to 4, and 1 to 5; that is, of 1 to 100.

For since in the lever A a power equal to one-fifth of the weight P, pressing down the lever at L, is sufficient to balance the weight ; and since it is the same thing whether that power be applied to the lever A at L or the lever B at S, the point S bearing on the point L, a power equal to one-fifth of the weight P, being applied to the point S of the lever B, will support the weight ; but one-fourth of the same power being applied to the point L of the lever B, and pushing the same upward, will as effectually depress the point S of the same lever, as if the whole power were applied at S ; consequently a power equal to one-fourth of one-fifth, that is, one-twentieth of the weight P, being applied to the point L of the lever B, and pushing up the same, will support the weight : in like manner, it matters not whether that force be applied to the point L of the lever B, or to the point S of the lever C ; since, if S be raised, L, which rests on it, must be raised also ; but one-fifth of the power applied at the point L of the lever C, and pressing it downwards, will as effectually raise the point S of the same lever, as if the whole power were applied at S, and pushed up the same ; consequently a power equal to one-fifth of one-twentieth, that is, 100th part of the weight P, being applied to the point L of the lever C, will balance the weight at the point S of the lever A.

We have now to describe a combination of the lever with the axis in peritrochio, by means of wiiich the reciprocating motion of the lever is

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made useful in giving a conlinued rectilinear motion to a lieavy body, without changing tlie situation of the fulcrum of the lever. This contrivance is described by Belidor under the name of le levier de la Garousse, and is generally called m England the universal lever. F G H, fig. 11, is a straight lever, whose centre of mo-tion is G : on its extremity F hang two bars F D, F E, the former of which has a hook to catcli into the teeth of the wheel AC D, and the latter has its end slightly bent, so as to slide over tlie outer parts of those teeth. The axle A lias a cord wound about it, to the lower end of which is attached tlie weight W. Now suppose tlie end II of the lever raised from li by I, while the other end descends from F to B ; the bar F E will then push the point E of the wheel from E to C, while the hook D slides over an equal space on the other side of the wheel. After this, on the end H of the lever being brought down again by I to II, the end F ascends through B F, and the hook D raises up the left hand side of the wheel through a space equal to E C. Thus the reciprocating motion of the lever is made to communicate a continued rotatory motion to the wheel, and consequently to raise the weight W suspended from its axle by the cord. Here the advantage gained, neglecting friction and the stiffness of the cord, will be in the ratio compounded of the ratio of H G to G F, and the ratio of the radius of the wheel to that of the axle. Thus if H G were ten times G F, and the radius of the wheel ten times that of the axle, the power would then be to the weight raised nearly as 1 to 100.

This machine has been advantageously applied in drawing heavy loads along a plane nearly horizontal : in that case, the cord has been carried from A in nearly an horizontal direction, passed round a pulley p, attached to the load iv or its carriage, and its end fixed to a post as at a, or perhaps to the frame of the wheel and axle. The pulley, it is obvious, almost doubles the advantage of the power; and since the force to be overcome when the system is once put in motion is not equivalent to the load w, but merely to the friction, acd the rigidity of the rope, a very great weight may be moved in this manner by a comparatively small power. If the lever have another arm to the left of G (as it appears in the figure) equal to G II, a man may then work at each end, either by pressing upon it or by pulling downwards with a cord ; and thus the laborers will alternately relieve each other. Sometimes a heart-wheel has been combined with this universal lever : but it is not, we think, a combination to be recommended in practice.

If the centre of motion G were vertically above the centre of tlie wheel, and if another bar and hook similar and efjual in length to F I) hung from the point/", _/"G being equal to G F ; these two hooks would then catch alternately into the teeth on (he rising si<le of tlie wheel, and thus produce the continual rotatory motion : Uut this construction has a practical disadvantage; for, when both bars work on the same side of the wheel, they will be in great danger of catching together a;id impeding each other's motions.

The iplici'l and axle is sometimes, without any Vol.. XIII

impropriety, named the perpetual lever ; it being, in reality, a lever on whose arms the power aiid weight may always act perpendicularly, although the lever turns round its fulcrum. It is often constructed of the form represented in fig. 12, where C D is the cylinder, at the ends of which are the pivots F E, turning in the solid pieces of timber H F, A E ; the weight W is raisea by means of a rope, coiled about the cylinder ; the power being applied to the wheel S S B, either by the cord I I, or by the handles S, S, S. Sometimes, instead of the wheel, we find this machine made up of levers, fixed into the cylinder, as spokes into the nave of a wheel ; at others, a simple handle serves for the application of the power, as in fig. 13, but the effect is still the same, except that the rotation is less uniform. In some cases the cylinder is horizontal, as in the figures, and in some kinds of cranes ; in others it is vertical, as in the capstan, &c. But whether the cylinder be horizontal or vertical, this machine has a manifest advantage over the simple lever in point of convenience : for, by the continual rotation of

the wheel, the weight may be raised to any height, or frorp any depth ; while it could be elevated only a little way by any lever.

Fig. 14, represents a very “powerful engine, nearly of this sort. AB K I, and C I D H, are two cylinders of unequal diameters (but the difference of these diameters must not be very great), firmly connected together, and moveable by means of the handle F, round the common axis EG, whose extremities rest upon two supports. The same rope is fastened with one end at D, and is wound round the small cylinder CD; then it descends and passes round the pulley Z, to the frame of which the weight W is suspended ; and lastly, the other end of the rope is fastened at A to the large cylinder. Now, by moving the cylinders round, the rope will un-wind itself from the small cylinder, and will coil itself round the larger cjlinder, as will be apparent by a reference to the figure. If the cylinders were of equal diameters, the lower part Z of the rope, or the weiglit W which is suspended to it, would not be moved ; for in that case as much of the rope as is disengaged from one cylinder at each revolution, would be coiled round the other cylinder; but, the cylinders being of unequal diameters, it is evident that at each revolution of the handle F more of the rope will be coiled round the cylinder A B I K than will be disengaged from the cylinder C D I II ; and of course the weight W will be raised.

In the simple wheel and axle, whatever be its form or peculiarity, its mechanical efficacy depends on the ratio of the radius of the wheel to the radius of the axle; or, to speak more generally, the length of the lever by which the power acts, to the radius of the cylinder en which the rope which raises the weight is coiled. There are then two, and only two, ways in which this efficacy may be increased ; *viz.* by increasing the leverage of the power, or by diminishing the radius of the cylinder which supports the weight. Now allhough, in a theoretical view, there is no limit to our power of increasing this efficacy, since we can conceive the leverage of the power

increased without limit, or the tliickness of the cylinder diminished without limit, yet there is a practical limit to tlie increase of the mechanical efficacy of this engine.

If we attempt to increase this efficacy, by giving tc the power a considerable leverage, the machine will become unwieldy; the power will work through a most inconveniently great space, and the practical disadvantages which will arise will more tlian counterbalance any thing which can be gained by the increased power.

If, on the other hand, we attempt to increase the efficacy by diminishing the thickness of the axle, we dmiinish the strength of that part of the machine which must support the weight; and the cases in which tliis great efficacy is required are precisely those cases in which the greatest weights are to be raised, or resistances to be overcome ; and therefore where the greatest strength in those parts of the machine on which the weight or resistance acts are indispensably necessary.

In cases, therefore, where great resistances are to be overcome, it is a problem of considerable importance to assign a method by which, without rendering the machine more complex, sufficient strength may be preserved by preserving the thickness of the axle, the machine may not be rendered unwieldly by increasing very much the leverage of the power, and a high degree of power may be gained.

When heavy weights are to be raised, by means of the wheel and axis, a ratchet wheel and click or pall is employed to prevent the rope un-winding when the power is withdrawn. It will be seen, by reference to fig. 15, tliat the teeth are only inclined towards the side upon which the click rests, so that the opposite face of the tooth is nearly perpendicular to the rim of the wheel, and as such it is allowed by raising the click to turn in one direction, but its return is prevented by the end of the tooth against which it stops.

The capstan crane, and a variety of other simple mechanical arrangements, also derive their power from the wheel and axis. In fig. 16 is rejjresented a very simple capstan. Here, if tlie upper barrel A were seventeen inches diameter, and the lower B sixteen inches, the pulley C being also sixteen inches diameter; it will be obvious that this simple capstan will be equivalent to an ordinary capstan of the same length of bar E F, and diameter • of barrel B, combined with a sixteen-fold tackle of pulleys ; and at tlie same time free from the great loss by friction and bending of ropes, which would absorb at least a third of the power of a sixteen-fold tackle.

One peculiar advantage of this engine is, that the half ditterence of the radii of A and B may be diminished ad libitum, without weakening the cylinder, increasing the friction, or requiring any rapid curvature of the rope. This windlass has likewise the peculiar property of holding the weight at any part of its rise or fall, without needing a ratchet wheel and catch. Its only practical disadvantage is, that a great quantity of rope must be used to produce a moderate change in the position of the weight; but the quantity

of rope will be much less than what is requisite for an equivalent tackle of pulleys. This ingenious contrivance is generally ascribed to the celebrated George Eckhardt; and he probably invented it, without kiiowing that it had been used elsewhere ; but Dr. Gregory states that he has seen a figure (from which our present figure is merely a copy), in some Chinese drawings of about a century old.

One of the most common practical applications of tlie wheel and axle is the crane used on wharfs and in warehouses, for raising and lowering heavy parcels, Sec. ; formerly it was a very com-mon jiractice to work such cranes by a man walking in the inside of the large wheel, which was tlius put into motion in the same way that circular cages are moved by an enclosed squirrel, or tiiat the turnspit dog was formerly used for roasting meat ; this was, however, not only a dangerous, but a very disadvantageous mode of employing strength, and is now almost entirely abandoned. The best and most efficacious method of employing human power, to a vertical wheel and axle, is to cover the exterior circumference of the large wheel with float or projecting boards, like a common water-wlieel, and to permit a man or men to tread upon the boards as in walking, at the height of a line which forms the horizontal diameter of the wheel, for then the man's whole weight and power will be thrown into action at the point where it will have tlie greatest eff'ect. This application of power was invented and first used by Mr-Hardie.

A very important application of the wheel and axle will be found in the construction of the tread wheel, which consists of a wheel and axis, furnished with walking boards similar to those which are attached to tlie periphery of a water wheel. Fig. 17 illustrates a double apparatus of this description, as the wheels c e are furnished with teeth whicli work into each other, and in a similar way communicate motion to the small wheel /". The use of the tread-wheel may be traced to a very early period. Vitruvius furnishes several instances of its use, and the Chinese have employed machines of this description

from the earliest period. It may, however, be proper to state, that its most useful application has been as an instrument of prison discipline, for wiiich purpose, under projjer modifications, it appears admirably adapted.

The wheel and axle is sometimes used to multiply motion, instead of to gain power as in the multiplying wlieel of the common roasting jack, to which it is applied when the weight cannot conveniently have a long line of descent; a heavy weight is in this case made to act upon the axle, while the wheel, by its greatest circumference, winds up a much larger quantity of line than the simple descent of the weight could require, and thus the machine is made to go much longer without winding than it otherwise would do.

It is also useful for regulating unequal powers, as common watches or spring clocks, the nature of which will be found examined in their respective articles.

Tiie pulliy is a small wheel moveable upon its axis, with the circumference hollowed to receive

(he cord, which is attached on the one hand to the moving power and on the otlier to the resisting force. The wheel or pulley is commonly fixed on a block or case, which admits the rope or cord to pass freely over the circumference of the wheel and the gorge of the pulley ; that is the hollow part of the circumference, which receives the cord, is generally hollowed out angularly and not round ; so that the cord, being in some measure pinched or compressed in this angle, will not be liable to glide or slip in its motion.

Pulleys are commonly made of wood or metal, and always turn upon an axis. When they are made of wood, it is better to fix the axis to the pulley, and to let all turn together in the place which sustains the pulley. The movement then being performed upon a less surface, will be less impeded by friction, and if the space which contains the pulley becomes larger, as it is only the lower part which can be effected, the

aperture will be lengthened, the pulley will descend a little, but its circular motion will not be diminislied ; it is not so when the pulley turns upon its centre, for then, if the aperture which receives tlie axis enlarges, the enlargement is frequently not equal in all its parts.

By means of pulleys, burdens are elevated with greater ease, and in a more commodious manner, than they otherwise could be ; more commodious because the motion is continued, and its direction may be changed so as to bring the whole force which is applied to it into immediate action ; for by this means a horse, which can only exert his force in a horizontal direction, is able to overcome a vertical resistance. Burdens are moved with more ease by pulleys, because a great weight may be elevated by a small force properly applied. The power applied to a pulley draws in all directions without impediment, because the cord by which it acts is always a tangent to the circumference of the pulley, and consequently always perpendicular to the radius. The powers applied to pulleys act more forcibly in proportion as their distance from the axis is greater, whether the cords run in several groves, or several pulleys of different diameters turn upon the same axis ; those powers therefore which act at the greatest distance from the axis will have the advantage over the other.

Pulleys dite fixed and moveable. A fixed pulley has no mechanical advantage, since the power and weight are equal. This apparatus is represented in plate II. fig. 1. It is, however, very convenient in accomodating the direction of the power to that of the resistance. Thus, by pulling downwards, we arc able to draw a weight upwards. It has been already observed that, by means of this simple machine, a power in any direction whatever .may be opposed to a resistance in any otiier direction.

The single moveable pulley, sometimes called a runner, is represented in fig. 2. In this machine the same rope extends from the power P to the fixed point E, and has the same tension throughout its whole length.

It is evident that this tension is equal to the power; for in that part PB of the rope, between tlio power and the fixed pulley, the power is

supported by this tension. The weight W is supported by the pans C A and D E of the string, and must be equal to the sum of the tensions, that is to twice the tension of the rope, or to twice the power. In this machine, therefore, a power is capable of opposing a resistance of

twice its own amount.

In treating of the lever, it might have been observed, that the prop may be regarded as a third power, which keeps in equilibrium the motive force, and the resistance, or which concurs with the one, to enable it to sustain the effort of the other. If the lever of the second order, A B, fig. 3, have its fulcrum at B, the weight in the middle at C, and the power at A, half the weigiit being supported by the fulcrum, a power equal to the other half will keep it in equilibrium. This will apply to the illustration of the action of pulleys, which, when the weight is appended to the circumference, they may be considered as levers of the first kind, and when the weight is appended to the centre they may be considered as levers of the second kind : hence the ropes of the fixed pulley, hanging at equal distances from the centre (which must be regarded as the fulcrum), equal weights must be in equilibrium, exactly as they would be if placed in the scales of a common balance. But, if one weight be further from the centre or fulcrum than the other, they will balance each other only as they would in a steel-yard ; and therefore, though still a lever of the first kind, a less weight will suspend a greater. Thus if the pulley, as in fig. 4, have different gorges, and the weight R of six ounces be hung at the distance of one inch from the fulcrum r, and the weight S of three ounces be hung at the distance of two inches from the same centre, the two weights R and S, though in the proportion of two to one, will balance each other. If the vveight S were only two ounces it would produce the same effect upon R, provided its distance from the fulcrum were proportioned to the diminution of its weight, that is, if it were three times as far from the centre c as R.

We have now to show that the moveable pul-ley acts like a lever of the second order. Let the moveable pulley A, fig. 2, be fixed to the weight, with which it rises and falls. In comparing it with the lever alluded to, the fulcrum must be considered as at D : the weight acts upon the centre c, by means of the neck c. h ; the power is applied at A ; and the line A D will represent the lever. The power, therefore, is twice as far from the fulcrum as the weight, and the effect in both cases is alike, *viz.* the proportion between the power and the weight, in order to balance each other, must be as one to two. It is evident, therefore, that the use of this pulley doubles the power, and that a man may raise twice |as much by it as by his strength alone. Or, as variety in illustration will sometimes catch the attention, and familiarise a subject to some, whose ideasof it would not otherwise be distinct, the action of this pulley may be viewed in a light somewhat different from tne above. Every moveable pulley may be considered as hanging by two ropes equally stretched, and which must consequently

bear equal parts of the weight ; the rope D E being made fast at E, half the weight

i< sustained by it, and ilie otiier part of the rope, to wliicli the power is applied, has only the other half of the weight to support; consequently the advantage gained is as two to one.

N\ hen, as in fig. 5, the upper and fi.xed block or pulley-frame, contains two pulleys, which only turn upon tlieir axes, and the lower moveable iilock contains also two, which not only turn on their axes but rise witli the weight W, the advantage gained is as four to one; for each lower pulley will be acted upon by an equal part of the weight ; and, because each pulley tliat moves with the weight diminishes one-half the power necessary to keep the weight in equilibrium, the power by which \V may be sustained will be equal to half the weight divided by the number of lower pulleys ; tliat is, as twice the number of tiie lower or moveable pulleys is to one, so is the weight suspended to the power

Jiut if the extremity A, fig. 6, be fixed to the lower block, it will sustain half as much as a pul-ley ; consequently here the rule will be. As twice the number of moveable pulleys, adding unity, is to one, so is tlie weight to the power. To prevent the ropes a and b from rubbing against each other, the upper fixed pulley may have a double gorge. The pulley d does not belong to the system of pulleys, it is merely used in the plate, to separate from the ropes, and show more distinctly the power P.

If, instead of one rope going round all the moveable pulleys, the rope belonging to each of them be made fast at the top, as in fig. 7, a different proportion between the power and the weight will take place. Here it is evident that each pulley doubles the power: thus, if there are two j)ulleys, the power will sustain four times its own force or weight ; if three pulleys, eight times its own weight; if four pulleys,

sixteen times its own weight, as in the figure where the weight W, of sixteen ounces, is supported by the power P, of only one ounce. This arrangement of pulleys takes up much room, raises the weight very slowly, and is not convenient to fit up. It is therefore seldom used, notwithstanding the great power gained.

The large space occupied by pulleys, when arranged under each other, is an inconvenience that would often render them useless, and such an arrangement would increase the liability to entanglement, particularly on shipboard ; it is therefore common to place all tlie pulleys in each block on the same pin by the side of each other. The advantage and the rule for the power are the same here as in fig. 5. In this kind of tackle the ropes are not exactly parallel, a direction which should be preserved as nmch as possible ; but the defect is not very considerable.

Tiic reason of the parallel direction of the ropes being better than an oblique one is, that less power is required to sustain the same weight; and in proportion to the obliquity of the ropes must be the increase of the power. When there are many pulleys in the same block, and the end of the rope to which the power is applied terminates over one of the outside pulleys, that pulley always endeavours to get into a line with the centre of suspension or middle of the moveable jjidleys, from which the weight hangs. In con-

sequence of this, the friction of the pullejs against the sides of the block is so great as sometimes to equal the power. Hence the multiplication of pulleys thus used soon ceases to be advantau,eous ; they are seldom efiective if their number exceeds three or four.

Mr. Smeaton, for this reason, invented a sys-tem of pulleys arranged in two rows in each block, one larger and the other smaller; the force being applied in the middle, the rope passes on the larger pulleys till it arrives at the last, then returns through the whole of the smaller series, to tlie opposite side, and comes back again on the larger, to be finally attached in the middle.

By a reference to fig. 8 it will be seen that Mr. Smeaton's blocks give a force of twenty to one, the rope being ai)plied in the middle of the outer series, and following the order of the figures from one to twenty-one.

Mr. James White, with a view to remove the imperfections in the pulley, and to avoid lateral frictioii, obtained a patent for a system of

pulleys formed as in fig. 9. Each block, instead of containing separate shieves, consists of a series of shieves turned out of one solid piece, but varying in size in arithmetical proportion ; so that each series, when viewed in profile, or section, appears like so many grooves cut on the surface of a very obtuse cone. Supposing that each cone contains six grooves, this will admit of twelve suspending lines as in the figure, and, admitting each of these grooves to be separate shieves of equal diameter, as in common blocks, then, since there are twelve lines, in order to bring the two blocks together, as much line must pass over the uppermost pulley as is equal to twelve times their distance asunder ; but, from inspection of the figure, it is erident that the second pulley cannot receive the full quantity of line by as much as is equal to the distance betwixt it and the first. In like manner the third pulley receives less than the first, by as much as is the distance between the first and third, and so on to the last, which receives only one-twelfth of the whole ; for this receives its siiare of line, n, from a fixed point in the upper frame, which gives it nothing, while all the others receive the line, partly by turning to meet it, and partly by the line coming to meet them. The outermost pulley would therefore make twelve revolutions, while that which received the line, n, would make but one ; and the intermediate lines and velocities woulil be a series of arithmetical proportionals, of which, if the first number were one, the last would always be equal to the whole number of terras ; it follows, therefore, that if the diameters of certain grooves in the same substance be exactly adapted to tiie above series (the line itself being supposed incapable of stretching, and of no magnitude), the necessity of using several detached shieves in each frame or block will be obviated, and, witli that, most of the inconveniences to which the pulley, as commonly constructed, is liable. In practice the grooves cannot, however, be in true arithmetical proportion; for tlic diameter of the rope employed must be deducted from each term, without which the smaller grooves^ to which such diameter may bear a large proportion, would be too large, and would introduce worse defects

than this improved construction tends to obviate.

Mr. Gurnett proposed removing the friction attendant upon pulleys, by placing a number of small friction wheels, or rollers, round the hole in eacli shieve, so that the central pin, instead of passing through a mere hole in the shieve, would pass between these rollers. This was, however, act only found very expensive, but was liable to get out of order when great weights were raised, and consequently it has never been much used. A very considerable improvement was made in tlie pulley by Lieut. Shuldham, who adopts the conical form of Mr. White, but uses a double cone placed base to base, but in one piece ; and by thus using but one compound shieve, with an axis fixed to itself, two large friction-wheels can be admitted, and are sufficient for each block. The rope is so reeved or passed through these blocks as to end in the centre; consequently the friction is not only greatly diminished, but likewise all tendency to run to one side ; but as a double series of ropes must be used, proceeding from the outsides towards the centre of the blocks, and tlie pull is made by two ropes instead of one (of course of smaller dimensions than those generally used), there may perhaps be more danger of entanglement than with common blocks.

A plane superficies inclined to tlie horizon is another mechanical power ; its use being to raise weights from one level to another, by the application of much less force than would be necessary to raise them perpendicularly. Tims, in fig. 10, AB represents a plane inclined to the horizontal plane AC; where, if the weight D be rolled upwards from A to B, the force necessary for the purpose will be found to be much less than that which would be required to raise it directly and perpendicularly from C to B.

In this case the effect which is produced consists in the raising of the weight from the level of AC to the level of AB; but, to effect this, the power must have moved from A to B ; for the power acts in tiiat direction, whilst the weight or gravity of tlie body acts in tlie direction of the perpendicular C B ; therefore, the velocity of the weight in this engine being to tlie velocity of the power as the perpendicular heiglit BC of the plane is to its length AB, the equilibrium takes])lace when the weight is to the power as the length of the plane is to its perpendicular heiglit.

This property may be clearly shown by the following experiments : — LetA13, fig. 11, be a plane moveable upon the horizontal plane A C ; *viz.* so as to admit of its being placed at any required angle of inclination, wiiich is easily accomplished by means of a liinge at \, and a prop between the two planes. Tiie nppcr part of tlie plane must be furnished with a pulley B, over which a string may easily run. Let the cylindrical weight, I), be made to turn upon slender pins in tiie

frame F, in which the hook c is fastened ■with a string cB H, which, passing over the pul-ley D, holds the weight E suspended at its other extremity. The pulley should be so situated that the rope e B may be parallel to the plane.

This plane may be fixed at any angle of inclination, and it will always be found, that if the weight of the body E be to the weight of the body

D, together with that of its frame F, as the perpendicular height C B of the plane is to its length AB, the power E will just support the cylinder D, with its frame F upon the plane, and the least touch of a finger will cause the cylinder D to as-cend or descend; the counterpoise or power E moving at the same time the contrary way.

It is evident that the smaller the angle of inclination is, the less force is required to draw up the weight D ; and of course, when the angle of inclination vanishes or becomes notliing, the least force will be sufficient to move the body ; that is, when the plane A B becomes parallel to the horizon, or upon a horizontal plane, the heaviest body might be moved with the least power, were it not for the friction, which is occasioned by the irregularity of the contiguous surfaces, &c.

If three inclined planes be formed at different angles to the plane of the iiorizon, and as many carriages connected by threads, with weights passing over a similar number of pulleys at top, it will be found that the carriage supported by the central plane will arrive first at top ; thougii, to produce this effect, the middle plane must (as is represented in fig. 12) be twice as long as it is high.

A reference to this circumstance wUl serve to explain upon what principle the late Mr. Ilennie was enabled to construct an edifice, which, like the lighthouse of Smeaton, appears farmed to resist every attack of the warring elements.

This great national work consists of a mass of sunken stones thrown promiscuously into the water, leaving them to find their own base, which must of course be considerably extended, in most cases gradually narrowing from about 200 feet to an apex of thirty feet.

A fixed inclined plane is often of use in assisting the elevation of great weights, by means of other machinery. It is supposed that in all the edifices of remote antiquity, where great masses of stone were employed, as in the pyramids of Egpyt, and the Druidical temples of this country, these vast blocks were elevated on inclined planes of

earth, or of scaffolding, vvith the assistance also of levers and rollers. Inclined planes are frequently used for drawing boats out of one canal into another; and sometimes the local circumstances are such that this may be done with great convenience, merely by allowing a boat to descend, and turn the axis which raises an empty one. An example of this may be seen, on a large scale, in the duke of Bridgewatcr's canal. Tiiis canal is extended, above ground, for forty miles on one level ; an underground navigation, twelve miles long, joins it at Worsley, leading to the coal mines under Walkden Moor. At a height of thirty-five yards and a half above this is another subterraneous portion, nearly six miles in length. The connexion between these levels is formed by an inclined piano; the boats are let down loaded, and proceed three miles along the tunnel into the open caVial. The inclined plane is fixed in a stratum of stone, which fortunately has the most eligible inclination ofonoinfour,and is thirty-three yards in thickness, affording the most advantageous means of fixing every partof tl.e machinery with perfect security.

The whole length of the plane is 151 yards, besides a lock of eighteen yards at the upper end.

Inclined planes are also universally employed for facilitating the ascent of heights, by men or by animals ; they may either be uniform, as roads, or the general inclination of the surface may be superseded by the formation of separate steps or stairs. The inclination of the surface may be governed by the proportion of the strength of the animal to its weight, the force required to support any weight on a plane being to the whole weight as the height of the plane to its length ; and, if the plane be a little less inclined than the exact equilibrium would recjuire, the animal will be able to acquire a sufficient velocity at first to carry it easily np the ascent with a motion nearly equable. The strength of a laborer may be advantageously employed in ascending a given height by a flight of steps, and placing himself on a stage which may raise a weight by its descent; but it appears that the force of other animals is less calculated for exertions

of this kind.

A wedge is a solid figure, which is called in geo.netry a triangular prism. Its two ends are equal and similar triangles, and its three sides are rectangular parallelograms. This figure is represented in figs. 13 and 14.

The wedge is very generally used in cleaving timber, in which case its edge is introduced into a cleft already made to receive it, and it is urged at the back by percussion. Tlie friction of the faces of the wedge with the timber ought to be sufficient to prevent its recoil.

The wedge may be considered as formed by two inclined planes, placed base to base, their altitudes forming the back of the wedge. The power, being generally applied perpendicularly to the back, will be parrallel to the common base. But it is a more difficult matter to say in what direction the resistance is to be considered as acting agamst the face of the wedge.

In the theory of the wedge there are introduced so many conditions, which are perfectly inapplicable in practice, so many gratuitous assumptions and suppositions so inconsistent with practical truth, that the whole doctrine has little or no value.

One of the circumstances which creates the greatest difficulty, in the theory of the wedge, IS the very heterogeneous nature of the resistance, and the force or power by which it is overcome.

The resistance is generally that modification of force called pressure. The power, which is opposed to this resistance, is commonly that species of action called percussion. These are modifications of force so totally different as not even to admit of comparison. It has been generally thought that there is no blow or im-pact, however slight, which will not overcome a pressure, or resistance however great. From which it would seem to follow, that an infinitely small impact is equivalent to an infinitely great pressure. Be this as it may, however, the great difference between these modifications of force is sufficiently evident to demonstrate the total impossibility of establishing the condition of equilibrium of a machine in which the weight or resistance is a force of the one, and the power IS a force of the other species.

Nothing, therefore, can more plainly demonstrate the inutility of the theoiy of the wedge than that, in this tiieory, the power is supposed to

be a pressure exerted on the back of the wedge, which is supposed to be capable of balancing the effect of the resistance in producing the recoil of the wedge. In all cases, where the wedge is practically used, the friction of its faces with the resisting substance is sufficient to prevent the recoil ; so that, strictly speaking, no force whatever is necessary to sustain the machine in equilibrium, and to move it pressure is never resorted to, inasmuch as the slightest percussion is far more effective.

The only general theoretical principle respecting the wedge which obtains always in practice is, that its power is increased by diminishing the angle.

All cutting instruments, as knives, swords, hatchets, chisels, planes, &c., are wedges. In these cases the harder, in general, the substance to be divided is, the greater will be the angle of the wedge. Thus, chisels for cutting soft woods are sharper than those used for the harder species, and these, again, are sharper than chisels used for cutting metals.

The scrciv is the last mechanical power to be noticed ; it is composed of two parts, one of wˆhich is called the screw, and consists of a spiral protuberance, called the thread, which is wound or wrapt round a cylinder; and the other, called the nut, is perforated to the dimensions of the cylinder, and in the internal cavity is cut a spiral groove, adapted to receive the thread.

Let ADGE, plate III., fig. 1, represent a cylinder, and ABC any flexible substance of a thickness altogether inconsiderable or evanescent. Suppose ABC to be a triangle, having a right angle at A, and one of the legs AB, containing the right angle, to be applied to the cylinder in a line parallel to its axis. Imagine, now, the cylinder to turn on its axis so that the triangle ABC may be rolled or wrapped close on its surface. The lines BC, and all others, as IK, LR, parallel to it, will then be contiguous to, or coincident with, the peripheries of circles whose planes are all at right angles to the axis, and consequently parallel to each other. But the line AC will become a curve AQLM a NOP, &c., which is called a helix. This curve will always, or in every part, proceed from one towards the other end of the cylinder it enwraps, and will make equal angles with the generating circle of the cylinder. I'or any one of these angles, a ki, will be produced by the application of another angle AKI, always equal to the angle ACB.

Suppose the cylinder ADGE to be perpendicular to the horizon, the lines BC and its parallels, together with all their correspondent circles

on the cylinder, will then become horizontal. Let the line AC now represent an inclined plane, whose height is AB, and the helix being of the same length and height, and equally inclined to the horizon throughout, will not dif-fer in mechanical efi'cct from the inclined plane. That is to say, the tendency of a weight to descend on the inclined plane will be exactly the same as on the helix.

Let A L be the perpendicular distance between two adjacent threads. Draw the horizontal line Lll intersectinf^ AC in R. Then L 11 will bo equal to the circumference of the cylinder, and AR will be equal to one revolution of the helix. But A R represents an inclined plane, equivalent in power to the helix. Every helix, therefore, is equivalent in power to an inclined plane whose length is equal to one revolution of the helix, and height equal to tlie distance between two adjacent threads measured by a line parallel to the axis of the cylinder contained within the helix.

If the horizontal thickness of the nut be disregarded, it will not differ from a weiglit to be sustained on the helical plane. Consequently it will be kept in equilibrio by a horizontal force, which is to that of the weight as the perpendicular distance between two adjacent threads is to the circumference of the cylinder. Or, if the power be applied in the direction of the threads of the screw, the equilibrium will be had when the power is to the weight as the perpendicular distance between the two adjacent threads is to the length of one thread of the screw.

But there are few, if any, instances where the screw is used without the lever. If an arm EF, fig. 2, be applied to move the nut, the weight and the power may be considered as acting upon a lever, whose fulcrum is at the axis of the cylinder. And, therefore, the proportions last found must be compounded with the ratio of the semidiameter of the cylinder to the distance of E from the axis of motion.

It frequently happens that the lever, by which the power acts, is attached to the nut, and the screw is capable only of a longitudinal

motion. Thus, in the press represented in fig. 3, the board C, moveable between the sides of the frame, is urged by tlie screw CB, capable of moving directly upwards or downwards, but not of revolving. Tlie nut F is worked by the lever D E. Every complete revolution of the nut urges the screw ui)vvards through a space equal to the distance between two contiguous threads.

The proportion of the weight to the power, or the mecliaiiical efficacy of the screw, depends on the proportion of the circumference described by the power, to the distance between two contiguous threads. Hence it is evident that the efficacy of the screws may be increased, either by increasing the iengtli of the lever by which the power acts, or by diminishing the distance between the til reads. To both of these, there are, however, practical limits.

If the leverage of tlie power be very much increased, the power will work through an inconveniently great space, and the machine will become unwieldy. If, on the other hand, the thread of the screw be made very small and fine, it will be torn off by a great resistance in passing through the nut.

These inconveniences have been obviated by a contrivance of Mr. Hunter, the surgeon, which, while it preserves all the requisite strength and compactness in the machine, gives it an almost unlimited degree of mechanical efficacy.

A perspective drawing of this contrivance is given in fig. 4. E E is a strong frame in which

a board D moves, so that when H is forced towards the bottom, it will exert a pressure on, any substance placed between it and the bottom. To this moveable board D is attached a cylinder B, on which the thread of a screw is raised. C is a fixed nut tlirough which a screw A plays. The screw A is a hollow cylinder, the interior of which is a nut adapted to receive the screw B. Wlien the screw A is turned once round it advances through the nut C, tiirougii a space equal to the distance between two contiguous threads ; so that, if the screw B were not supposed to act, tlie board D would advance towards the bottom, through a distance equal to the distance between the tlireads of the screw A. But, while ■-he screw A advances through the nut C by its revolution, the very same cause makes the screw B move towards C through a space equal to tlie distance between two contiguous threads of B; or, by turning A, the nut contained in the inner concave surface

of A is turned upon the screw B. Now, if the threads of the two screws A and B were perfectly equal, the effect of these two motions would be, that the board D would re-tain its position, inasmuch as the effect of one screw, in moving it downwards, would be exactly equal to the effect of the other screw in moving it upwards.

But, if we suppose the interval between the threads of the screw B to be somewhat less than the interval between the threads of tlie screw A, the effect will be different. In this case, one revolution will move the screw A downwards, through a space equal to the interval between its threads, while the screw B will be moved within the screw A and upwards through a space equal to the interval between its threads. The com-ijined effect will be, that tlie screw B, and the board C to which it is attached, will be moved downwards through a space equal to the difference of the distances between the threads of the two screws.

Thus, if the screw A have twenty threads in an inch, and the screw B have twenty-one ; in one revolution, A is moved downwards through the twentieth of an inch. Suppose that the nut A did not, in this motion, turn on B, it is plain, then, that B and the board C would be moved down through the one-twentieth of an inch. Suppose, then, that the screw B was turned round once within the nut A, the screw B and the board C would be raised through the .j^st of an inch. Its position would then be below ils original position by the excess of ^^ of an incli above j'-[St of an inch; that is, by^^i^th of an inch.

To render the explanation clearer, we have here supposed things to iiappen in succession, which really happen together. The same motion which advances tlie screw A downwards draws the screw B upwards ; but the final ef-fect is the same as if these two motions took place in succession.

It is plain, therefore, that the effect of this machine is the same as that of a simple screw in which the distance between the threads is equal to the difference of the distances between the threads of the two screws A and B; and, therefore, that the ratio of the power to the weiglit is the difference bctwron the distances of

the threads of the two screws to the circumference described by the power.

The mechanical efficacy is, therefore, increased by diniinisliing the dift'erence of the distance between the threads of the screws. If tlie circumference described by the power be twenty inches, and one screw have twenty threads to an inch, and the other twenty-one, the power will be to the weight as the difference between jj and ˆ, or ˆ5 to twenty, or as I to 8400. If, however, one screw have thirty threads, and the other thirty-one to an inch, then tlie power is to the weight as the difference between 35 and 5ˆ, or 5ˆ to twenty, or as 1 to 18,600.

Tlie threads of each screw may be constructed of any size and strength which maybe required, and yet so very nearly equal that any degree of power may be imparted to the machme. Thus, by the preceding investigation, it appears that two screws, constructed witli thirty and thirty-one threads in a foot, are equivalent to a single screw with 930 threads in a foot.

A machine for showing the force or power of the screw may be contrived in the following manner. Let the wheel C, fig. 5, have a screw on its axis, working in the teeth of the wheel D, which suppose to be forty-eight in number. It is plain that for every tune the wheel C and screw are turned round by the winch A, the wheel D will be moved one tooth by the screw; and, therefore, in forty-eight revolutions of the winch, the wheel D will be turned once round. Then, if the circumference of a circle, described by the handle of the winch A, be equal to the circumference of a groove round the wheel D, the velocity of the handle will be forty-eight times as great as the velocity of any given point in the groove. Consequently, if a line G goes round the groove, and has a weight of forty-eight pounds hung to it, a power equal to one pound at the handle will balance and support the weight. To prove this by experiment, let the circumference of the grooves of the wheels C and D be equal to one another ; and then if a weight H, of one pound, be suspended by a line going round the groove of the wheel C, it will balance a weight of forty-eight pounds hanging by the line G; and a small addition to the weight II will cause it to descend, and so raise up the other weight.

If a line G, instead of going round the groove of the wheel D, goes round its axle I, the power of the machine will be as much increased as the circumference of the groove exceeds the circumference of the axle : which, supposing it to be six times, then one pound at II will

balance six times forty-eight, or 288 pounds, hung to the line on the axle : and hence the power or advantage of this machine will be as 288 to 1. That is to say, a man, who by his natural strength could lift one cwt., will be able to raise 288 cwts. by this engine. If a system of ymlleys were applied to the cord II, the power would be increased to an amazing degree. When a screw acts in a wheel in this manner, it is called an endless screw.

W hen it is not employed in turning a wheel, it consists of two parts ; the first is called the male, or outside screw, being cut in such a man-

ner, as to have a prominent part going round the cylinder in a spiral manner ; which prominent part is called the thread of the screw ; the other part, which is called the female, or in-side screw, is a solid body, containing a hollow cylinder, whose concave surface is cut in the same manner as the convex surface of the male screw, so that the prominent parts of the one may fit the concave parts of the other.

The very slow motion which may be imparted to a screw, by a very considerable motion in the power, renders it an instrument peculiarly well adapted to the measurement of very minute spaces. The manner of applying it to this purpose is easily explained. Suppose that a screw is cut so as to have fifty tlireads in an inch, and that round its head is placed a graduated circle, on which an index attached to the screw plays. In one revolution of the screw its points, or any thing moved by its point, is moved through a space equal to the fiftieth part of an inch. The circle on which the index plays may be easily divided into 100 equal parts, and it follows that the motion of the index through one of these parts corresponds to 7— part of a complete revolution : since, in a complete revolution, the screw moves through the fiftieth part of an inch, it follows that, when the index moves over one division of the circle, the screw moves through the 5000th part of an inch.

A screw constructed for this purpose is called a micrometer screw : it is used with great effect in astronomical instruments, where very minute portions of degrees or divisions on graduated instruments are to be ascertained. The limit of accuracy of any divided instrument adapted for measuring spaces or distances is primarily the magnitude of the smallest division on it. If it be required to determine the distance from any given division to a point which is placed somewhere between two divisions, it is easy to conclude that the distance sought is greater than a certain number of divisions, and less

than a number greater than that by one. But how much greater than the one or less than the other the mere graduation of the instrument does not indicate. Now, suppose that a micrometer screw is placed on the instrument, its length being parallel to the graduated face, ami that the point of the screw, or rather a wire which is moved by the point of the screw, is brought exactly opposite to one of those divisions between which the point, whose exact position is to be determined, lies. If the screw be turned until the wire is moved by its point from coincidence with the adjacent division till it coincides with the point, the number of turns of the screw, and parts of a turn, will indicate exactly the distance of the point from the adjacent division.

]\Ir. Watt's screw-wrench is a kind of lever-Tice, and is a convenient tool for securing and loosening square-headed screws, and for other similar purposes. The moveable cap of the instrument is secured at any required distance from the fixed one, sometimes by means of a screw, and sometimes by means of a short wedge driven in at the base of the sliding bar. To both these methods, however, as usually applied, there are objections arisiag from the lia-

bility of the former to be injured, and of the latter to give way under the great strain which IS sometimes put upon the instrument.

Mr. Watt's wrench is represented in fig. 6; ii is the fixed bar terminated by the fixed cliap//, jjj is an iron case enclosing and fixed firmly on the bar ii to pass through, and secured to tlie sliding bar II. It will be observed that the lower end of this bar is cut off very obliquely, so as to form a long low wedge; m n is a low wedge, st:ll longer than that just descnijed.

In order to make use of the instrument, tlie wedge mnis to be withdrawn, the chap k is to be moved on tlie bar ii, till the screw head, or other object to be acted on, is closely embraced between the two chaps; the moveable wedge is then to be inserted point foremost, and is to be driven home by a light blow or two of a ham-mer, or may be forced in sufficiently even by hand.

The long line of bearing that the two wedges have on each other renders it impossible that they should give vvay, while, at the same time, a very moderate blow on the point of the moveable wedge will be sufficient to disengage it.

It is by no means absolutely necessary to take out the moveable wedge previous to adjusting the instrument; all that is required being that the sliding bar 1 1 should move easily.

It will therefore be found convenient to drill a hole though the point of the wedge at m, and insert a small pin in order to prevent the wedge from slipping out of the case jj, and being lost.

We cannot better illustrate the practical effects produced by the mechanical powers than by reference to the Panorganon contrived by the late Richard Lovell Edgeworth, esq., and which was published in the Scientific Gazette, edited by Mr. Partington. It is thus described by its ingenious inventor ; —

We do not mean to undervalue either the application of strict demonstration to problems in mechanics, or the exhibition of the most accurate machinery in philosophical lectures; but we wish to point out a method of giving a general notion of the mechanical powers to our readers, which shall be immediately obvious to their comprehension, and which may serve as a sure foundation for future improvement. When a person perceives the effect of his own bodily exertions with different engines, and when he can compare, in a rough manner, their relative advantages, he is not disposed to reject their assistance, or to expect more than is reasonable from their application. The young theorist in mechanics thinks he can produce a perpetual motion, but if he has been accustomed to refer to the plain dictates of common sense and experience, on this, as well as on every other subject, he will not easily be led astray by such visionary theories.

To bring the sense of feeling to our assistance in teaching the uses of the mechanic powers, the following apparatus was constructed, to which we have given the name of panorganon.

It is composed of two principal parts ; a frivme to contain the moving machinery, and a vˆapstan, or windlass, which is erected on a sill

or plank that is sunk a few inches in the groundˆ the frame is by this means, and by six braces o” props, rendered steady. The cross rail, or transom, is strengthened by braces and a king-post to make it lighter

and cheaper. The capstan consists of an uprigiit shaft, upon wliich are fixed two drums, about which a rope may be wound up, and two leveis or arms by which it may be turned round. There is also a screw of iron coiled round the lower part of the shaft, to show the properties of tlie screw as a mechanical power. The rope which goes round the drum passes over one of the pulleys near the top of the frame, and unSer another pulley near the 1)ottoni of the frame. As two drums of different sizes are employed it is necessary to have an upright roller to conduct the rope in a proper direction to the pulleys when either of the drums is used. Near the frame, and in the direction in which the rope runs, is laid a platform or road of deal boards, one board in breadth, and twenty or thirty feet long, upon which a small sledge, loaded with different weights, may be drawn.

F F, fig. 7, the frame ; b, b, — braces to keep the frame steady: a, a, — angular braces to strengthen the transom, and also a king-post. S — a round taper shaft, strengthened above and below the mortices with iron hoops; L, L, — two arms or levers, by which the shaft, Ike, are to be moved round ; 1) D — the drum, which has two rims of different circumferences; R — the roller to conduct the rope; P — the pulley round which the rope passes to the larger drum, another pulley being placed to answer to the smaller drum; p 3 — a pulley through which the rope passes when the sledge is used on the road of deal boards; S — the sledge, with pieces of hard wood attached to it to guide it on the road.

Uses of the panorganon. — As this macliine is to be moved by the force of men or children, and as their force varies not only with the strength and weight of each individual, but also according to the different manner in which that strength or weight is applied, it is, in the first place, requisite to establish one determinate mode of applying human force to the machine ; and also a method of determining the relative force of each individual whose strength is applied to it.

To estimate the force with which a person can draw horizontally by a rope over his shoulder.

Experiment 1. — llang a common long scale btam, fig. 8. (without scales or chains), from the top post of the machine. Tie a rope to the hook of the scale-beam, where the chains of the scale are usually hung, and pass it through the pulley p 3, which is about four feel from the ground ; let the person pull this rope from 1, towards 2, as is shown in the first figure, turning his back to the machine, and pulling the rope over his slioulder. As the])ulley may be either too high or too low to permit the rope to be horizontal, the person who pulls it

should be placed ten or fifteen feet from the machine, which will lessen the angular direction of tiie cord, and the inaccuracy of the experiment. Hang weights to the other cud of the scale-lieam, till the person that pulls can but just walk forward, pulling fairly without propping his feet against any thing. 'I'his weight will estimate the force with which he can draw

horizontally by a rope over his shoulder. Let a child who tries this walk on the board with dry shoes ; let hiru afterwards clialk his shoes, and afterwards try it with his shoes soaped : he will find that he can pull with different degrees of force in these different circumstances ; but when he tries the following, let his shoes be always dry, that his force may be always the same.

To show the power of the three different torts of levers. — Experiment 2. Instead of pulling the cord that conies from the scale-beam, as in the last experiment, over the shoulder of the boy, hook it to tlie extreme end of the lever L, fig. 9. This lever is passed tlirougli a socket, in which it can be shifted from one of its ends towards the other ; and can be fastened at any place by the screw of the socket. This socket has two gudgeons, upon which it, and tiie lever which it contains, can turn. This socket and its gudgeons can be lifted out of the holes in which it plays, between the rail R R, and may be put into the other hole at R R, fig. 1 0. Loop another rope to the other end of this lever, and let the boy pull as before. Perhaps it should be pointed out, that the boy must walk in a direction contrary to that in which he walked before, *viz.* from 1 towards 3, in fig. 7. The height in which the weight ascends, and the distance to which the boy advances, should be carefully marked and measured ; and it will be found that he can raise the weight to the same height, advancing through the same space as in the former experiment. In this case, as both ends of the lever moved through equal spaces, the lever only changed the direction of the motion, and added no mechanical powerto tiie direct strength of the boy.

Experiments. — Shift the lever to its extremity in the socket ; the.

middle of ttie lever will now be opposite to the pulley, fig. 11 ; hook it to the rope that goes through the pulley P 3, and fasten to the other end of the lever the rope by which the boy is to pull. This will be a lever of the second kind, as it is called in books of mechanics, in using which the resistance is placed between the centre of the motion or fulcrum and the moving power. lie will now raise double the weight that he did in experiment 2,and he will advance through double the space.

Experiment 4. — Shift the lever and the socket which form the axis (without shifting the lever from the place in which it was in the socket in the last experiment), to the holes that are prepared for It at R R, fig. 10. The free end of the lever K will now be opposite to the rope, and to the pulley (over which the rope comes from the scale-beam) ; hook this rope to it, and hook the rope by which the boy pulls to the middle of the lever. The effect will now be different to what it was in the two last experiments ; the boy will advance only half as far, and will raise only half as much weight as before. This is called a lever of the third sort. The first and second kinds of levers are used in quarrying; and the operations of many tools may be referred to them. The third kind of lever is employed but seldom, but its properties may be observed with advantage, whilst a long ladder is raised, as the man who raises it is obliged to exert an increasing force till the ladder is nearly perpendicular. When

this lever is used, it is obvious from what has been said, that, as the power must always pass through less space than the thing which is to be moved, it can never be of service in gaining power. But tlie object of some machines is to increase velocity instead of obtaining power, as in a sledge-hammer moved by mill-work.

The experiments on levers may be varied at pleasure, increasing or diminishing the mechanical advantages so as to balance the power and resistance, to accustom the learners to calculate the relation between the power and the effect in different circumstances, always pointing out, that whatever excess there is in the due power, or in the resistance, is always compensated by the difference of space through which the inferior passes.

The experiments which we have mentioned are sufficiently satisfactory to a pupil, as to the immediate relation between the power and the resistance ; but the different spaces, through which the power and the resistance move when, one exceeds the other, cannot

be obvious unless they pass through much larger spaces than levers will permit.

Experiment 5. — Place the sledge on the farthest end of the wooden road in fig. 7 ; fasten a rope to the sledge, and conduct it through the lowest pulley and through the pulley P 3, so as that the boy may be enabled to draw it by tiie rope passed over his shoulder. The sledge must now be loaded, till the boy can but just advance with short steps steadily upon the wooden road ; this must be done with care, as there will be but just room for him beside the rope. lie will meet the sledge exactly in the middle of the road, from which he will step aside to pass the sledge. Let the time of tliis experiment be noted. It is ob vious that the boy and the sledge move with equal velocity, therefore there is no mechanical advantage obtained by the pulleys. The weight that he can draw will be almost half a hundred, if he weigh about nine stone ; but the exact force with which the boy draws is to be known by experiment 1.

The wheel and axle. — This simple apparatus is usually called, in mechanics, the axis in peritrochio. A hard name which might be spared, as the word windlass or capstan would convey a more distinct idea.

Experiment 6. — To the largest drum in fig. 7 fasten a cord, and pass it through the pulley P downwards, and then through the pulley to the sledge placed at the end of the wooden road, which is farthest from the machine. Let the boy, by a rope fastened to the extremity of one of tiie arms of the capstan, and passed over his shoulder, draw the capstan round ; he will wind the rope round the drum, and draw the sledge upon its road. To make the sledge advance twenty-four feet upon its road, the boy must have walked circularly 144 feet, which is six times as far, and he will be able to draw about 3 cwt. which is six times as much as in the last experiment.

It may now be pointed out, tliat the difference of space passed through by the power in this experiment is exactly equal to the difference of weight which the boy could draw without the capstan.

Experiment 7. — Let the rope be now attached to the smaller drum; the boy will draw nearly twice as much weight upon the sledge as before, and will go through double the space.

Experiment 8. — Where there are a number of persons, let five or six of them, whose power of drawing (estimated as in experiment 1) amounts to six times as much as the force of the boy at the capstan, pull at the end of the rope which was fastened to the sledge, they will balance the force of the boy at the capstan ; either they or he, by a sudden pull, may advance, but if they pull fairly there will be no advantage on either part. In this experiment the rojje should pass through the pulley P 3, and should be coiled round the larger drum. And it must also be observed, that, in all experiments upon the motion of bodies in which there is much friction, as where a sledge is employed, the results are never so uniform as in other circumstances.

The puUcj/. — Upon the pulley we shall say little, as it is in every body's hands, and experiments may be tried upon it without any particular apparatus. It should, however, be distinctly inculcated that the power is not increased by a fixed pulley. For this purpose a wheel without a rim, or, to speak with more propriety, a num-ber of spokes, fixed in a nave, should be employed, as in fig. 12. Pieces like the heads of crutches should be fixed at the ends of these spokes, to receive a piece of girth-web which is used instead of a cord, because a cord would be unsteady ; and a strap of iron with a hook to it should play upon the centre, by which it may at times be suspended, and from which at other times a weight may be hung.

Experiment 9. — Let this skeleton of a pulley be hung by the iron strap from the transom of the frame; fasten a piece of web to one of the radii, and another to the end of the opposite radius. If two boys of equal weight pull these pieces of girth-web they will balance each other; or two equal weights hung to these webs will be in equilibrio. If a piece of girth-web be put round the uppermost radius, two equal weights hung at the ends of it will remain immoveable ; but if either of them be pulled, or if a small additional weight be added to either of them, it will descend, and the web will apply itself successively to the ascending radii, and will detach itself from those that are descending. If this movement be carefully considered, it will be perceived that the web, in unfolding itself, acts in the same manner upon the radii as two ropes would if tliey hung to the extremities of the opposite radii in succession. Tiie two radii which are opposite may be considered as a lever of the first sort, where the centre is in the middle of the lever ; as

each end moves through an equal space there is no mechanical advantage; but, if this skeleton pulley be employed as a common block or tackle, its motions and properties will be entirely different.

Experiment 10. — Nail a piece of girth-wob to a post, at a distance of three or four feet from the ground ; fasten the other end of it to one of the radii, shown in fig. 12. Fasten another piece of web to tiie opposite radius, and let a boy hold the skeleton pulley suspended by the

web; hook weights to the strap that hangs from the centre. The end of the radius, to which the fixed girth-web is fastened, will remain immoveable; but, if the boy pulls the web which he holds in his hand upwards, he will be able to lift nearly double the weight which he can raise from the ground by a simple rope without the machine, and he will perceive that his hand moves through twice as great a space as the weight ascends ; he has, therefore, the mechanical advantage which he would have by a lever of the second sort, as in experiment 3. Let a piece of web be put round the under radii ; let one end of it be nailed to the post, and the other to be held by the boy, and it will represent the application of a rope to a moveable pulley ; if its motion be carefully considered, it will appear that the radii, as they successively apply themselves to the web, represent a series of levers of the second kind. A pulley is nothing more than an infinite number of such levers ; the cord at one end of the diameter serving as a fulcrum for the wheel during its progress. If this skeleton pulley be used horizontally, instead of perpendicularly, the circumstances which have been mentioned will appear more obvious.

Upon the wooden road lay down a piece of girth-web ; nail one end of it to the road ; place the pulley upon the web at the other end of the board, a-nd, bringing the web over the radii, let the boy take hold of it, draw the loaded sledge fastened to the hook at the centre of the pulley : he will draw nearly twice as much in this man-ner as he could without the pulley.

Here the web lying on the road shows more distinctly that it is quiescent where the lowest radius touches it ; and if the radii, as they tread upon it, are observed, their points will appear at rest, whilst the centre of the pulley will go as fast as the sledge, and the top of each radius successively (and the boy’s hand wiiich unfolds the web), will move twice as fast as the centre of the pulley and the sledge.

If a person, holding a stick in his hand, observes the relative motion of the top, and the middle, and the bottom of the stick, whilst he inclines it, he will see that the bottom of the stick has no motion on the ground, and that the middle has only half the motion of the top. The property of the pulley has been dwelt upon, because it elucidates the motion of a wheel rolling upon the ground; and it explains a couiiuon paradox, which appears at first inexplicable : — ‘ The bottom of a rolling wheel never moves upon the road.’ This is asserted only of a wiieel moving over hard ground, which, in fact, may be considered rather as laying down its circumference upon the road, than as moving upon it.

‘Vltcindincd plane and the ivcdˆc. — The inclined plane is next to be considered. When a heavy body is to be raised, it is often convenient to lay a sloping artificial road of])lanks, up which it may be pushed or drawn. This mechanical power, however, is but of little service without the assistance of wheels or rollers : we sliall therefore speak of it as it is apjjlied in another manner, under the name of the wedge, which is in fact a moving inclined plane.

Let one end of the lever, fig. 13, with a wheel ut one end of it, be hinged to tlie post of the frame, by means of a gudgeon driven or screwed into tlie post. To prevent tliis lever from deviating sideways, let a slip of wood be connected witli it by a nad, which shall be fast in the lever, by which it moves freely in a hole in the rail. Tlie otiier end of this slip must be fastened to a stake driven into the ground at three or four feet from the lever, at one side of it, and towards the end in which the wheel is fixed.

Experiment 11. — Under the wheel of tliis lever place an inclined planeor half wedge on the wood-en road, with rollers under it, to prevent friction ; fasten a rope to the foremost end of the wedge, and pass it through pulleys, as before shown in the fifth experiment. Let a boy draw the sledge by this rope over his shoulder, and he will find that, as he advances, it will raise the weight upwards : the wedge is five feet long, and elevated one foot. Now, if the perpendicular ascent

of the weight, and the space through which he advances be compared, he will find that the space through which he has passed will be five times as great as that through which the weight has ascended ; and that this wedge has enabled him to raise five times as much as he could raise without it, if his strength were applied, as in experiment 1, without any mechanical advantage. By making this wedge in two parts hinged together, with a graduated piece to keep them asunder, the wedge may be adjusted to any given obliquity; and it will always be found that the mechanical advantage of the wedge may be ascertained by comparing its perpendicular elevation with its base. If the base of the wedge is two, three, four, five, or any other number of times greater than its height, it will enable the boy to raise respectively two, three, four, or five times more weight than he could do in experiment 1, by which his power is estimated.

The screiv. — The screw, as is shown in fig. 14, is an inclined plane wound round a cylinder; the height of all its revolutions round the cylinder taken together, compared with the space tlirough which the power that turns it passes, is the measure of its mechanical advantage. Let the lever, used in the last experirnent, be turned in such a manner as to reach from its gudgeon to the shaft of the panorganon, guided by an attendant lever, as before. Let the wheel rest upon the lowest helix or thread of the screw ; as the arms of tiie shaft are turned round, the wheel will ascend, and carry up the weight which is fastened to the lever. As the situation of the screw prevents the weight from being exactly suspended from the centre of the screw, proper allowance must be made for this in estimating the force of the screw, or determining the mechanical advantage gained by the lever : this can be done by measuring die perpendicular ascent of the weight, which in all cases is better, and more expeditious, than measuring the parts of the machine, and estimating its force by calculation ; because the different diameters of ropes, and other small circumstances, are frequently mistaken in estimates.

The space passed through in the moving power, and by that which it moves, are infallible

data for estimating the powers of engines. Two material subjects of experiments yet remain for tlie panorganon ; friction and wheels of carriages. We repeat that, in this article, it is not intended as a part of our design to write a treatise upon science ; but merely to point out methods of initiating persons generally in the rudimeiits of knowledge, and of giving them a clear and distinct view of those

principles upon which they are founded. No preceptor, who has had experience, will cavd at the superficial knowledge' of an uninformed person upon these subjects ; he will perceive that the general view, which we wish to give our pupils of the useful arts and sciences, must certainly tend to form a taste for literature and investigation. The sciolist has learned only to talk — we wish to teach our pupils to think — upon the various objects of human speculation.

The panorganon may be employed in trying the resistance of air and water ; the force of different muscles ; and in a great variety of amusing and useful experiments. In academies, and private families, it may be erected in the place alloted for amusement, where it will furnish entertainment for many a vacant hour.

A compound engine either consists of one simple mechanical power repeated two or more times ; or it consists of several simple mechanical powers variously combined and connected with each other. In any case the power and the effect must be estimated from the result of the effects of all the component simple mechanisms separately considered, which is done in tiie following manner : —

Find what proportion the power bears to the effect in each simple mechanism ; put all those ratios one under the other, and find their sum, which sum will express the proportion between the power and the effect of the whole compound engine. Thus suppose that a machine is compounded of three simple mechanical powers, *viz.* a lever, an inclined plane, and a moveable pulley; and suppose that a power applied to one end of the lever will produce a double effect at the other end ; for instance, one pound will balance two pounds ; then the proportion of the power to the effect is as one to two. Suppose also, that, in the inclined plane, the power is to the effect as three to seven ; and lasdy, that, in the pulley, the power is to the effect as one to two. Now those three ratios being written one under the other thus,

1 : 2 3 : 7 1 ; 2

3 : 28

and multiplied, *viz.* all U»e antecedents together, and all the consequents together, the two products thence arising will exhibit the

proportion which, the power bears to the effect in the whole compound engine; *viz.* that a power of Uiree pounds will balance a weight of twenty-eight pounds.

Otherwise the effect of a compound engine may be computed by considering the velocities of the power and of the effect ; for they are to

each oihcr inversely as their velocities, *viz.* the power is to the eflect as the velocity of the lat-ter is to that of the former. Tims in a certain compound engine we find that the power must move through 500 feet, whilst the weight moves through three feet ; we therefore conclude that a power of three pounds will balance a weight of 500 pounds in that machine, and of course a little more than three pounds will raise the 500 pounds weight.

Machines are interposed chiefly for three reasons: 1. To accommodate the direction of the moving force to that of the resistance which is to be overcome. 2. To render a power which has a fixed and certain velocity efficacious in performing work with a different velocity. 3. To enable a natural power, having a certain determinate intensity, to balance or to overcome another power or obstacle, whose intensity or resistance is greater. Lach of these purposes may be accomplished in different ways, *viz.* either by machines which have a motion round some fixed and supported point, as the lever, the pulley, and the wheel and axle; or by those which, instead of being supported by a fixed])oint, about which they move, furnish to the resistance or body to be moved a solid path, along which it is impelled, as the inclined plane, the wedge, and the screw. Compound machines are peculiar combinations of the six.

Simplicity in the construction of machines cannot be too warmly recommended to the young engineer; for multiplicity of parts and of motions increases the expense of erection, augments the friction, and multiplies the danger of failure by the bending or by the inaccurate adjustment of the parts. In consequence of the effects of friction, it is

well known to all engaged in the practice of mechanics, that by no combination of wheels or levers, or other powers, can one weight be made to move anotiier with a greater or even an equal momentum; and by the multiplication of wheels, levers. Sec, the effect of the machine, instead of being increased, is diminished in proportion to the augmented friction of the moving parts. Hence it follows that, in practice, effect is lost by mechanical combination, but gained by simplification ; and that the most perfect machine is that which operates by the fewest moving parts. In order to contrive a simpler machine, to be theoretically equivalent in power to a complex one, the following rule may be observed : construct the various parts of the simple machine so that the velocity of the impelled point shall be to that of the working point in the same ratio as they are in the compound machine ; then will the effects of these two machines be the same, so far as depends upon pure theory; but in practice the simpler will be the more efficacious, in consequence of the diminution of friction.

For an example, suppose the compound machine, plate 1'. fig. 1, wore to be proposed, in order that a more simple one might be constructed to perform the same work ; let C A, the lever to which the power is applied, be ten feet, D K five feet in diameter, F, F — 2 feet, II I r: 3 feet, Gil = 5 feet, and K L r= 1 foot, the lat-ter being the cylinder on which the rope raising

the weight VV folds. Now the diameter of the circle described by the power at A is twenty feet : and to find the diameter of the circle whose circumference is equal to the space passed over by Win one revolution of the lever CA, reduce the following fraction : *viz.* DE GH ^_i_ 5 l_£ 2”AC ^ EF ^ H I — 20 ^ 2 -^ “a ~ 24

of 2 AC; consequently the velocity of the

5

weight is — of that of the power. And hence, if

a 24 ^

upon the vertical axis, C M fig. 2,awheel be fixed, the diameter kl of which is equal to 4g feet (that

is — of 2 A C), the weight W will be raised the

24 ^’ “:

same height by the simple as by the compound machine, at every revolution of the power A. So that the simple machine, AC M *c* , will be at last equal in effect to the compound one AC MDEFGIIIKL, and the wheels DE, EF, G II, H I, and K L, are extraneous, and probably prejudicial.

One of the most simple and effectual methods of equalising the irregularities, in large machines, is by the use of a Jlif-u-heel. A fly-wheel is a heavy disc or hoop, balanced on its axis, and so connected with the machinery as to turn rapidly round with it, and as to receive its motion from the impelling power. Let us suppose a case in which the impelling power is perfectly uniform, but the resistance or load is irregular and intermitting. Thus, suppose an overshot water-wheel urged by a regular and uniform fall of water, applied to work a common suction pump. Here the impelling power is constant and uniform, but the resistance only acts during the ascent of the piston, and the machine is unloaded during its descent. As the impelling power, during the descent of the piston, has nothing to overcome except the inertia of the machine, and the friction of the parts, it will urge the piston down with a rapidly accelerated force, so that at the end of the stroke the piston will have acquired a considerable velocity. But, in the ascent of the piston, the impelling power is opposed by the columns of water which the piston has to raise. This continually retards the wheel, and when the piston has reached the summit of the stroke all its former acceleration is destroyed, and the same hobbling irregular motion is continued. If a fly-wheel be attached to such a machine, almost all this irregularity will be removed. When the heavy mass of the fly-wheel has been put in rapid motion, by the impelling power, it will produce two very obvious effects; by virtue of its inertia, it will oppo.se a considerable resistance to any sudden acceleration, and also to any sudden retardation of its motion ; that is, it has a disposition to continue the motion which has been imparted to it, and to resist the reception of more. Hy this, on the ascent of the piston, tho weight of the column of water is dragged up, not alone by the energy of tho jirime mover as before, but by the moving force which has boon imparted to ‘.he fly-wheel, and which that wheel endeavours to keep. On the other hand, when the piston descends unloaded, the

action of the prime

mover upon it, which before caused its sudden and rapid acceleration, is now intercepted l)y tlie fly-wheel, wiiich, by its great inertia, refuses to receive that rapid degree of acceleration which had been before produced. The power of a fly-wheel to resist acceleration is proportional to the square of its diameter, and, therefore, by sufficiently increasing its size and weight, we may be enabled to equalise the most desultory and irregular motions in the machinery.

In the example which we have just given there was a variable resistance opposed by a uniform power. The reverse of this often happens, and a variable power is opposed to a constant resistance. Thus in the single-acting steam engine, when the piston has been forced down by the pressure of steam, it is usually drawn up again by a weight suspended from the opposite end of the beam. In this case the mover is very unequal and desultory, and would never serve any purpose in which uniformity of action is necessary. But if a fly-wheel be attached to the machine, the momentum which it acquires during the descent of the piston, it will retain by virtue of its inertia during the suspension of tlie power in the ascent; and this force will dnve the machinery or act against the resistance, whatever it be, in the intervals of the intermission of the power.

A very remarkable instance of the use of a fly occurs in the engine constructed by Mr. Vaiiloue, for driving the piles of Westminster Bridge. In this machine a heavy mass is elevated by horse-power acting upon it through the intervention of a rope and wheel-work, and when it has reached a considerable height it is disengaged, and permitted to fall upon the pile which is to be driven. Now the moment this mass is disengaged the machine, having no resistance, and the horses being relieved from the weiglit they before encountered, would immediately fall forward. This is prevented by connecting the wheel-work with a heavy fly, the inertia of which opposes the strength of the animals when they are suddenly relieved from the weight of the elevated mass.

Wheels, like pulleys, may be considered as an assemblage of levers. Of wheels there are two kinds : the first always turn in the same space upon an axis fixed to the centre of the wheel, the pivots of which turn in holes or cavities which serve as a prop: sucii are the wheels of clocks, of mills, &b. Wheels of this kind receive or transmit the movement by teeth, or cogs placed round the circumference.

Wheels of the other kind, that is, which turn upon their circumference, have their centre or axletree in a direction parallel to the plane on which they move ; such are the wheels of waggons, coaches, &c. They have, therefore, two movements ; the one of their centre which advances in a right line, and the other of all their parts which perform a circular motion round the centre.

When wheels of the first kind are put in action, it is common to place upon the same axle a great wheel and a small one, called a pinion, and sometimes a nut, the teeth of which coincide with the teeth of another large wheel. In large machines, trundles are often substituted for pi-

nions or nuts, and perform their office ; these are cylinders or spindles parallel to each other, and placed circularly in two plain pieces of wood at the top and bottom. The teeth of the wheel then catch the spindles of tlie trundle as they do the cogs of the nut or pinion. The mechanism is the same in both cases : so that it suffices to examine the manner of hooking or catching of wheels and pinions.

Wheels of the first kind, those whose motion is confined to the same place, may be considered as levers of the first order; the arms of which are the radii of the wheels and nuts, and which have their prop at the axle. Let ABC, fig. 3, be tiiree wheels, and a b c their corresponding pinions or nuts. The nut, or, what is the same thing, the cylinder a, sustains the weight P; the wheel A, which has the same axle as the cylinder a, catches the nut b ; the wheel B, which has the same axle as the nut h, catches the nut c ; the wheel C, which has the same axle as the nut c, is drawn at its circumference by the power Q: and the whole system is in equilibrium. Here the weight P acts by the radii of the nuts; but the power Q acts by the radii of the wheels. Suppose the radii of the wheels to be four times those of the nuts ; and that the first are eight inches, and the other two inches. To preserve an equilibrium, it is necessary that the power should be to the resistance as the product of the arms of the lever of resistance is to the jsroduct of the arms of the lever of power, that is, in an inverse ratio of the

length of the arms of the lever ; these products are found by multiplying the one by the other, that is, the radii of the wheels and the radii of the nuts. The first product will be 512 ; and the second eight, in which case the power Q ought to be to tiie weight P as eight is to 512, or as one is to sixty-four. Hence it follows that, to preserve an equilibrium, whatever is the diameter of the wheels and of the nuts, the power is to the resistance as the product of the radii of the nuts is to the product of the radii of the wheels.

It appears then that this form of machines is capable of giving a great advantage to the force or power over the resistance ; but this advantage is necessarily acquired at the expense of time or velocity, when the machine passes from a state of rest to that of motion. Por there is always as much lost in time as there is gained in force, and so reciprocally.

There is often occasion, especially in clock work, that the number of tlie revolutions of the wheels and that of the nuts should bear a certain proportion. This is performed by giving a convenient numVier of teeth or cogs to the wheels and nuts : as for example, if it was required that a wheel should make only one revolution while a nut should make four ; there must be four times as many teeth in the wheel as there are cogs in the nut. Suppose A B C D, fig. 4, to be four wheels, the first of which A, catches the nut b fixed to the second B ; this catches the nut r fixed to the tiiird wheel C ; this third catches the nut d fixed to the fourth D ; lastly, this fourth wheel catches the last nut e ; now to ob-tain the proportion between the number of revolutions of the first wheel A, and tl e number of

revolutions of the last nut e, multiply the num-ber of teeth of the wheel A by the number of teeth of tile wheel B ; this first product by tlie number of teeth in the wheel C, and the second product by the number of teetii in the wheel D ; then multiply the number of cogs of the nut b by the number of cogs in the nut c ; tliis first product by t.lie number of cogs in the nut d, and the second product by the number of cogs of the last nut e ; the last products of the teeth of the wheels and

the cogs of the nuts will give the proportion required.

It may then be established, as a general rule, that tlie number of the revolutions of the first wheel. A, is to the number of the revolutions of the last nut as the product of tlie cogs of the nuts is to the product of the teeth of the wheels. Hence it follows, that it is not necessary to determine the number of cogs and teeth which each nut and wheel should have in particular; it suffices that the proportion of the products of all the cogs to the product of all the teeth shall be such as is required.

In forming the teeth of wheels it is of considerable importance to determine their proper curvature, so that the motion may be communicated equally, and with as little friction as possible. Two methods of accomplishing this end have been recommended : of these the first was originally proposed by M. De La Hire, who affirmed that the pressure would be uniform if the teeth were formed into epicycloids; and M. Camus, in his Cours de Mathematiques, has pursued M. De La Hire's principle, and applied it to the various cases which are likely to arise in practice. The construction, however, is subject to a limitation; on which account a second method has been proposed, which secures the perfect uniformity of action without any such limitation. This method consists in making both teeth portions of involutes of circles. Thus, let I H F, K E B, fig. 5, be the wheels to which the teeth are to be accommodated : the acting face G C H of the tooth a must have the form of the curve traced by the extremity H of the flexible line F a II, as it is unwrapped from the circumference ; and, in like manner, the acting face of the tooth b must be formed liy the unwrapping of a thread from the circumference of the circle, K E b. The line F C E drawn to touch both circles, will cut the surfaces of the two teeth in C, the point where they touch each other: the faces of both teetli will always touch each other at a point in the common tangent to both circles, and the force arising from their mutual pressure will always act in the direction of the circumferences of the wheels at J', and F. This form, by allowing the teeth to act on each other through the whole extent of the line F C E, will admit of several teeth to be acting at the same time ; and thus, by dividing the pressure among several teeth, will diminisii its quantity upon any one of them, and therefore diminish the cause of the indentations they unavoidably make upon each other. Consetinently, a considerable number of teeth thus formed acting at once cause the communication of motion to be extremely smootli and regular.

In regulating the number of teeth in the wheel,

and the pinion which works it, it should be so contrived that the same teeth should be engaged as seldom as possible, in order to avoid inequality of wear. For example, let us suppose that the number of teeth in a wheel were exactly ten times the number of leaves in the pinion; each leaf in the pinion would engage every tenth tooth of the wheel, and would work inevitably on the same ten teeth every revolution of the wheel. If it were possible that all the teeth and leaves could be constructed with mathematical precision, and perfect and absolute similitude, and that no accidental difference, owing to any want of uniformity in the material of which they are formed, could exist, this would be a matter of no consequence, and the wear would still be even and equable. But, as these perfections never can exist, the inevitable inequalities incident, as well to the nature of the material of which wheels are constructed as to the forms they derive even from the most perfect mechanical construction, must be compensated by making the teeth and leaves work, so that each leaf shall successively engage with all the other teeth of the wheel before it engages a second time with any one of them.

This is accomplished by making the number of teeth and the number of leaves prime to each other, that is, such that no integer divides both exactly. Tiie manner in which this is commonly done is by making the number of teeth such, that it is just one more than a number which is exactly divisible by the number of leaves. This is what millwrights call making a hunting cog. Thus, suppose that there are ten leaves, and that the diameter of the wheel is about six times that of the pillion. If this were the exact ratio, there would be just sixty feet, and after each revolution of the wheel the same teeth and leaves would be continually engaged, each leaf taking every sixth tooth. But if the diameter of the wheel be made somewhat greater than six times that of the pinion, so as to admit sixty-one teeth ; tlien, after six revolutions of the pinion, the first leaf will be engaged with the tooth immediately before that in which it had worked at the commencement, and after six more revolutions it will be engaged with the tooth before that, or the second tooth from that at which the motion commenced. Thus, it is evident, that the wheel must revolve sixty-one times, and the])inion 6 X 61, or 36G times before the same teeth will be again engaged. By these means the inequalities of wear, arising from inequalities of form and material, will compensate each other.

To determine the dimensions of two conical wheels, to communicate motion in any oblique angle, the following graphic method may be

used. Suppose o b, fig. 6, to represent the shaft or axle of one wheel, and de the axle of another wheel, the angle .r in which they intersect eacli other being equal to the angle in which the mo-tion is proposed to be communicated : let it be required for the shaft deto revolve ni times while the shaft a b revolves 7i times ; and let the line a be drawn parallel to </<, at a distance equal to the radius of the base of the wheel, whose axle is dc. Then draw a line k k jiarallel to a b, and at a distance yg from it, whicli shall be to the

distance y/t as wi to 7i: through x the point of intersection of the lines iirst proposed, and _y the intersection of the two lines ii, kk, respectively parallel to the two former, draw the line xi/w, which will be the pitch line of the two conical wheels, or the line in which the teeth of those wheels act upon one another ; and gy, hy, will represent the exterior radii of the wheels, which will work one against the other after the manner shown in fig. 7, where the corresponding parts are marked by the same letters. A third shaft and wheel may easily be applied to communicate motion in a difterent direction from either of the former : as tlie shaft and wheel r st ˆ) in fig. 7.

It is manifest, from what is done above, that this is nothing more than to divide an angle bxh into two parts whose sines shall have a given ratio of m to n; a well known problem, which solved algebraically gives the theorem, 2 sin.

i e XV zz 2 ‘iin. h Rxh . So that all

which is required Iiere may be easily calculated by the common rules of plane trigonometry ; and thus the accuracy of the construction may be established.

It will be easy to show that complex wheel-work obeys the law of virtual velocities ; for, since the teeth are equal, the circumference of each wheel moves with the same velocity as that of the circumference of the puiion by which it is driven, which is equally evident if they be connected by straps or work by friction. Now, since each wheel

revolves in the same time with its axle, the velocities of their circumferences are as their circumferences, or, what is the same, as their radii-or number of teeth. Hence, the velocity of the power, or the velocity of the circumference of the first wheel, is to tliat of the first axle as their radii. But the velocity of the circumference of the first axle is equal to the velocity of the circumference of the second wheel, which is to that of the second axle as their radii ; and, by continuing this reasoning, we shall find that the velocity of the power is to that of the weight as tlie product of the radii of the wheels to the product of the radii of all the axles; and, therefore, that the power multiplied by the velocity of the power is equal to the weight multiplied by the velocity of the weight.

This will be better understood by an example. Let the number of teeth in tlie first wheel be 100, and the leaves in the first pinion nine; and let the teeth in the second and third wheels be 120 and l.‘JO, and the leaves in the respective pinions be seven and eleven. The velocity of the circumference of the first wheel being expressed by yˆ, that of the circumference of the second wheel will be iSn-This velocity is to that of the circumference of the second pinion, or third wheel, as 120 is to 7; and then.fore the velocity of the circumference of the third wheel is

9x7 100 X 120’ ■’ˆS’ˆ’”’ ˆ’ˆ’ˆ velocity is to that of the circumference of the last axle as 130 to 9 X 7 X 11

11

13

This velocity is therefore

ˆ 100.x 120 X

which verifies what we have just advanced. Wiieels are usually made of wood, of iron,

either cast or wrouglit, of steel, or of brass. The teeth of wheels of metal are generally cut l;y means of a machine ; the wheel is fixed on an axis, which also carries a plate furnished with a variety of circles, divided into different numbers of equal parts, marked by small excavations; these are brought in succession under the point of a spring, which holds the axis firm, while the intervals between the teeth are expeditiously cut out by a revolving saw of steel. The teeth are afterwards finished by a file ; and a machine has also been invented for holding and working the file.

We may readily produce a rotatory motion by means of a reciprocating one. Sup])ose, if it is required to give to the wheel S V T O, fig. 8, a rotatory motion about the centie C. In the plane of the wheel attach to a fixed point F as a centre of motion a lever F Q, which may move freely up and down : let a pin be fixed in the wheel as at 11; and let an inflexible bar Q 11 hang upon the pin at 11 at one end, while the other end is attached to the lever F Q by a stirrup ; tlie motion being quite easy at both ends. Then, while the point Q is raised upwards, the bar pulls upwards the pin R, and so continues to do until the points Q, R, and C, fall in a right line ; at that time the effort of the bar to turn the wheel; but the wheel by its anterior rotation has acquired a quantity of motion which will carry it on in the same direction, till, by the downward motion of the extremity Q of the lever, the bar begins to push forward the pin to which it is attached: thus the motion is continued till the points Q, C, and R, are again in a right line, R being now the farthest from Q : in this position the bar has no tendency to move the wheel along ; but here the effort of momentum continues the motion as before, till the bar begins to draw the point R upwards. And thus a reciprocating motion of the lever FR gives a complete rotation to tlie wheel ; and the velocity of the circumference of the wheel may be made as rapid as we please, by making the distance C R so much the smaller in comparison of C V. If the lever F Q be below the wheel, the general effect will be the same, but the particular circumstances of the motion will succeed each other in a contrary order. In practice it is common to substitute for the pin

at R the handle of a bent winch, as represented by the dotted lines in the figure. It is not absolutely necessary that the lever and wheel should be in the same plane ; but deviations from it are not often to be recommended, except in small machinery, such as common spi ming wheels worked by the feet, &c. When it is not required to have a complete rotation of the wheel, for every ascent and descent of the lever FG, we may change the relation of the two motions in any proportion, by the intervention of tooth and pinion work.

Universal jonits (invented by Dr. Ilooke) are sometimes used to communicate motion obliquely, instead of conical wheels. Fig. 9, represen.s a simple universal joint, which may be employed where the anyle does not exceed 40°, and when the shafts are to move with ecjual velocity. The shafts A and B being both connected witii a cross, will move on the rounds at the points C E and D F, and thus, if the shaft A is

turned round, the shaft B will likewise turn with a similar motion in its respective position.

The double universal joint, fig. 10, conveys motion in different directions when the angle is between 50° and 90°. It is at liberty to move on the rounds at the points G, H, I, K, connected with the shaft B ; also on the points L, M,N, T, connected with the shaft A; thus the two shafts are so connected that one cannot turn without causing the other to turn likewise. These joints may be constructed by a cross of iron, or with four pins fastened at right angles upon the circumference of a hoop or of a solid ball : they are of great use in cotton mills, where the tumbling shafts are continued to a great distance from the moving power : for, by applying a universal joint, the shafts may be cut into convenient lengths, and so be enabled to overcome a greater resistance.

The nature of friction, as it results from the motion of machinery, must now be noticed.

If a horizontal plane were perfectly smooth, a body would be free to move upon it in any direction, by the least force applied to it. But, however smooth bodies may appear to the eye, yet if you examine their surfaces with a microscope you will discover numberless inequalities ; in consequence of which the prominent parts of one body falls into the hollows of another, so as to be locked together ; and therefore, in moving them over each other, one of the bodies must be raised up, or its prominencies broken off: this is what is called friction.

Friction is greater in bodies in proportion to their weight or pressure against each other. It does not increase much in proportion to the surface, although it does in some degree. It also increases in proportion to the velocity of the moving bodies.

Wood slides more easily upon the ground, or earth, in wet weather than in dry, and more easily than iron in dry weather, but iron more easily than wood in wet weather. A cubic piece of smooth soft wood, eight pounds in weight, moving upon a smooth plane of soft wood, at the rate of three feet every second, has a friction equal to above two-thirds of its weight. Soft wood upon hard wood has a friction equal to one-sixth part of its weight ; and hard wood upon hard wood has a friction equal to about one-eigth part of its weight.

In wood rubbing upon wood, oil, grease, or black-leadj'properly applied, makes the friction two-thirds less. Wheel-naves, when greased, have only one-fourth of the friction they would have if wet.

When polished steel moves on steel, or pew-ter, properly oiled, the friction is about one-fourth of the weight ; on copper or lead one-fifth of the weight ; on brass one-sixth ; and metals have more friction when they move on metals of the same kind, than when they move on different metals.

The friction of a single lever is very little. The friction of the wheel and axle is in proportion to the weight, velocity, and the diameter of the axle ; the smaller the diameter of the axle the less will be ihe friction.

The friction of pulleys is very great, on ac—

count of the smallness of their diameters, in proportion to that of their

axes, because they very often bear against the blocks, and from the wearing of their holes and axles.

In the wedge and screw there is a great deal of friction. Screws with sharp threads have more friction than those with square threads, and endless screws have more than either.

M. Coulomb has an extensive paper on the subject of friction, in vol. 10 Des Memoires des Savans etrangers ; where he describes his experiments at considerable length, and deduces from them an elaborate theory. We cannot here enter into the detail of all ‘these experiments, but shall merely state the principal of his results.

M. Coulomb’s conclusions are widely different from INIr. V’ince’s in one important particular; for he asserts that the friction is proportional to the pressure. The mean ratios of friction to pressure, given by Coulomb’s experiments for different kinds of wood, are as follows, the pressure being denoted by unity.

Oak against oak . . 0-43

Oak against fir 0‘65

Fir against fir 0-56

Elm against elm . . 0*47

The friction being made in the direction of the threads or fibres of the wood. But when the friction is made across the grain of the wood, or so that the direction of the fibres forms a right angle with that of the motion, the friction is less than in the former case, but still in a constant ratio to the pressure ; the results being then as below.

Oak against fir . . 0‘158 Fir against fir . . 0‘167

Elm against elm . . 0-100

These ratios are constant quantities, not depending upon the velocities, except in the case of elm when the pressures are very small, for then the friction increases sensibly with the velocity.

M. Coulomb gives the following general summary.

1. ‘ The friction of wood sliding over wood (both being dry) opposes, after a sufficient time of quiescence, a resistance proportional to the pressure ; that resistance sensibly increasing in the first instant of

repose; but after some minutes it usually arrives at its maximum or its limit.

2. ‘ When wood glides dry over wood with any velocity whatever, the friction is still proportional to the ˆpressure; but its intensity is much less than that which is experienced in detaching the surfaces after some minutes of rest; it has been found, for example, that the force necessary to detach and produce a sliding motion in two surfaces of oak after some minutes of quiescence, is to that necessary to overcome the friction, when the surfaces have obtained any degree of velocity whatever, neady as nine to two.

3. ‘ The friction of metals sliding over metals, widiout oiling, is also proportional to the ‘pressures ; but its intensity is the same, whether tiie surfaces are detached after having been any time in repose, or whether they preserve any uniform velocity whatever.

ˆ 3B

4. ‘ Heterogeneous surfaces, such as woods and metals sliding the one over the other, without oiled surfaces, give for their friction results very different from the preceding ones; for the intensity of their friction relatively to the time of lepose increases slowly, and’ does not attain its limit till after four or five days, and sometimes more ; instead of which, in metals, the limit is attained in an instant, and in wood in a few minutes ; this augmentation is even so slow, that the resistance due to the friction in insensible velocities is almost the same as that which we must surmount in moving or detaching the surfaces after three or four seconds of rest. And this is not all : in wood gliding unoiled over wood, and in metals sliding over metals, the velocity has very little influence upon the friction; but here the friction increases very sensibly in proportion as the velocities are augmented ; in such manner that the friction increases nearly according to an arithmetical progression.’

The ratio of the friction to the pressure (1) when oak was made to

slide over iron, was found, from forty experiments, to be as here stated, when the velocity was almost insensible, •0894, -0773, -0785, and -078(3 : when the velocity was about a foot per second, -1698, •1722, •1817, and •1573.

‘ When metals slide upon wood, done over with grease, the friction, says M. Coulomb, appears much softened, and we may produce insensible velocities with degrees of traction less considerable than in all the other species of friction ; but, when the velocities have been a little augmented, we have found that the friction increases greatly with respect to the velocity, as was the case when we made unoiled metals slide upon wood ; and we have, for the relation of the augmentation of velocities and the degree of traction which produced that augmentation, nearly the same law with that we sought to determine in the friction of metals sliding dry upon wood ; but, if the greasing be not renewed at each experiment, it coagulates, changes its nature, and the friction successively augments.

* When the surfaces are done over with tallow, the ratio of the friction to the pressure is greater under pressures of about fifty pounds, than under greater pressures.

* With coatings (enduits, plasters) of cart-grease, the friction is never less than one-ninth of the pressure. Its resistance depends upon the consistence of the coating, and the friction augments sensibly as this coating is softer W’hen the surfaces are done over with tallow, and are of great extent, the friction corrupts or chanotes the nature of tlie tallow, and augments sensibly as we continue the motion without renewing the coating: yet it is always found less than one-eighth of the pressure. But, when the tallow is dissolved to an oil, this effect is less sensible.’ ■

When one body rolls upon another, it is very obvious that friction y)roduces much less resistance to the motion than when it slides. In this rase the parts ‘of the one surface are, in some degree, successively lifted from off the other, and the asperities act in a manner totally different from the case of a sliding motion. One, at least, of the bodies must, in this case, be bounded by

a curved surface, and therefore the surface of contact must necessarily be very small, which is another cause of the diminution of the friction. If the rolling body be cylindrical, the points of contact of the surfaces will form a straight line upon the surface of tiie cylinder, the sarface

on which the cylinder rolls being either that of another cylinder having its axis parallel to that of the former, or a plane. But if the rolling body be a sphere, a spiieroid, or any similar shape, the surface of contact will be reduced to a single point.

To explain the manner of investigating experimentally the properties of this species of friction, let us suppose two perfectly plane tables, A B, CD, fig. 11, placed exactly in the same horizontal plane. On these let a cylinder, EF, be placed with its axis at right angles to their length. At the middle of the interval between the tables, let a flexible string be passed across the cylinder, having dishes of exactly equal weight suspended at its extremities. By placing equal weights in these dishes, any required pressure may be produced upon the table. If, then, fine sand be poured into either scale until its preponderance just gives motion to the cylinder, this additional weight will be equal to the friction.

In this way the diameter and material of the cylinder, as well as the pressure it exerts against the plane, may be varied at pleasure. In making experiments it would be useful, in each trial, to pour the sand successively in each scale, so as just to make the cylinder move in each direction. If the weights which produce the motion difTer by a small quantity, a mean between may be taken to represent the friction.

The results of numerous experiments instituted in this way by Coulomb were as follow ; —

1. With the same cylinder the friction is proportional to the pressure.

2. With cylinders of the same substance, having different diameters, but equal pressures, the friction is inversely as the diameters.

3. With, cylinders of the same substance, differing both in diameter and pressure, the friction is directly as the pressures, and inversely as the diameters ; or in a ratio compounded of the di-rect ratio of the pressures and the inverse ratio of the diameters.

To explain the last two results to those who are not conversant with mathematical phraseology : — Suppose that two cylinders, one of two and the other of five ;inches diameter, exerted equal pressures on the tables, it would be found that the friction of the two-inch cylinder would be greater than that of the five-inch cylinder, in the proportion of five to two.

Again, suppose that the two-inch cylinder, exerts a pressure of three

pounds, and the five inch cylinder a pressure of seven pounds, it will be found that the friction of the two-inch cylinder will be to that of the five-inch cylinder in the proportion of the produce of five and three to the product of two and seven, or as fifteen to fourteen.

It was found that greasing the surfaces does not at all diminish this species of friction.

When a cylinder of mahogany, whose diameter was about three inches, was rolled upon a

plane of oak, the friction was about one-sixteenth of the pressure ; and, when it rolled upon a plane of elm, the friction was only .jigth of the pressure-It is evident, therefore, that between the same substances this species of friction is much less than that of sliding.

The string used in these experiments should be so flexible, that its rigidity or stiffness shall produce no sensible effect upon the results.

If a body, having any round figure, be made to revolve while it is pressed with any force against any surface, and at the same time is prevented from rolling along that surface, a species of friction will be produced different from any which we have yet considered.

To explain this friction, and the experiments by which its properties may be determined, let us suppose a solid cylindrical axis, A B (Plate V'. fig. 1), inserted in an hollow cylinder, of a diameter, C B, somewhat greater than A B, so as to permit the hollow cylinder BC to turn round it, AB. Let the cylinders be placed with their axes horizontal, and let the hollow cylinder be the centre or box of a wheel D E. Let an extremely flexible string be passed over the edge of this wheel, in a grove formed to receive it, and let scales G, II, be appended to its extremities. In consequence of the form of the axle and hollow cylinder, and the manner in which the weight of the wheel acts, the points of contact of the axle and the cylinder will be in a straight line, formed by the intersection of a vertical plane passing

through the axis of the cylmder, with the surface of the cylinder. In fact, if from the point of contact, B, a Une be conceived to be drawn perpendicular to the plane of the paper, along the inner surface of the cylinder, the axle and the cylinder will touch in that line, and in no other points. It appears, therefore, that if the hollow cylinder be supposed to revolve round the axle, as happens in a carriage wheel, every part of the surface of the hollow cylinder is successively exposed to the effect of friction; while no part of the axle suffers this effect, except the side which passes through the point, B, of its section. If, on the contrary, as sometimes happens, the axle revolve within the cylinder, the opposite effects are produced. The entire surface of the axle is successively exposed to the effects of friction, while these effects are contined to one line upon the surface of the hollow cylinder.

By loading the dishes Gil with any equal weights, the axle may be submitted to any proposed pressure. If, when they are equally loaded, some fine sand bo poured into one of the dishes until its weight just gives motion to the wheel, the weight of the sand will be sufficient to determine the quantity of friction.

The preponderating weight is not, however, in this case, the immediate measure of the friction. It is to be considered that the wheel is turned round its centre, I ; that the friction which resists this motion acts at H, and therefore with the leverage BI; while the preponderating weight which overcomes the friction acts with the leverage EI. Let the friction be F, and the preponderating weight be W ; then by the established properties of the lever we have

F: w :: EI: BI

.-. F = W^^ Bl’

that is, the friction is equal to the additional weight wiiich produces the motion, multiplied by the radius of the wheel, and divided by the radius of the hollow cylinder which plays upon the axle.

Thus it appears that the friction is greater than the preponderating weight in the proportion of the radius of the wheel to |the radius of the cylinder.

As, in the experiments to determine the friction of rolling, so here also each experiment should be tried in both dishes, and the mean of tlie results taken.

To determine whether the friction be a uniformly retarding force, a weight must be placed in one of the dishes greater tiian that wliich is necessary to overcome the friction. This will cause the dish to descend with an accelerated motion, and, by placing a graduated vertical scale near it, the rate of its acceleration may be ascertained. If it be found that the spaces through which it descends, in one, two, or three seconds, &c., are as the numbers 1, 4, 9, &c.; in other words, if the spaces be as the squares of the times, the motion is uniformly accelerated. Hence it may be inferred that the friction is a uniformly retarding force.

By a series of experiments, conducted as we have described, Coulomb found that, like the other modifications of friction, the law of the proportionality of the friction to the pressure obtained also in this case, subject however to the exception before mentioned, that in very great pressures the friction is somewhat less in proportion.

He also found that, as in the friction of sliding, great advantage was gained by greasing the surfaces. In general, fresh tallow diminishes the friction by one-half. It increases as the grease is wasted away. This effect is, however, more slow than in the friction of sliding.

This species of friction is also a uniformly retarding force, and is therefore independent of the velocity.

Like the other species of friction, the quantity of this depends on the quality of the surfaces. If iron revolve in contact with brass, the friction is one-seventh of the pressure. When both surfaces are wood, the friction is one-twelfth of the pressure.

The friction of bodies turning on pivots seems to come withm the species we are now considering. This was also examined by Coulomb, and a memoir on the subject was published by him in the Memoirs of the French Academy in 1790. A very succinct and clear account of this is given by Dr. Gregory, in the second volume of his]\Iechanics, from which we extract the following particulars : —

* Bodies which are made to turn upon pivots are usually suspended by means of a cheek, socket, or collar, of very hard matter. The collar has its cavity of a conic form, and terminated at its summit by a little concave segment, whose radius of curvature is very small. The point of the pivot

which is sustained by this collar forms at its suinniit a little convex surface, whose radius of curvature sliould be still smaller than that of the extremity of tlie cheek. Experience evinces that the curvature of the bottom of the socket is irregular, and that the friction of a collar of agate on which a pivot turns is frequently five or Jsix times more considerable than the momentum of friction of a well-polished plane of agate on which the same pivot turns.

‘ These considerations induced M. Coulomb to employ in the course of his experiments, not a cheek or a socket, but a well-polished plane, to support the body on the point of a pivot. To prevent the body from sliding, he took care |that its centre of gravity should be very low, with respect to the point of suspension : he then made the body to whirl or spin about its pivot, by impressing upon it a rotatory motion. By means of a seconds watch, he observed exactly the time employed by the body in making the first four or five turns, and he thence deduced easily a mean turn to determine the primitive velocity : after this he counted the number of turns which the body made before it stopped.

‘ Coulomb took a glass bell of forty-eight lines in diameter and sixty lines in height, which weighed five ounces. He placed itˆon the point of a pivot; and, after giving it successive degrees of velocity about that pivot, he observed very exactly the time that it employed to make the first turn, which gave him for the mean velocity that which answered to the half of such first turn. He then estimated the number of turns made by the bell before it stopped : the results were as below —

* 1st Trial. The bell made one turn in 4”, and came to rest after 34ˆ’(j turns. ‘.

‘ 2nd Trial. The bell made one turn in 6ˆ”> and stopped after li-lˆ turns.

‘ 3rd Trial. The bell made one turn in 11”, and stoppped after 4{jj turns.

‘ Now if b denote the primitive velocity, X the space described between the commencement and the end of the motion, A the constant momentum of ,the retarding force ; f^— the sum of

the products of every particle /x, by the square of its distance r from the axis of rotation, divided by the quantity a, measuring the distance from the axis of rotation to the point whose primitive velocity is b, it is easy to find the following analytical expression for the constant momentum of the vis retardatrix, *viz.*

•2\^ a

‘ But, because in the three preceding trials

the same bell was employed, the quantity/ —

/> = is the same : — must therefore be a constant

quantity if A be constant, and reciprocally. But in each trial [there was reckoned the time employed by the apparatus in performing an entire revolution. The mean velocity, or the velocity due to the half of each first revolution, will, therefore, be measured by the circumference run over. The space described up to the end of the motion will be measured by the number of turns run through from the instant where the mean velocity was determined until the end of the motion. Thus, by computing from the data furnished by the three trials, we may form the following table :

P

‘ 1st Trial. One turn in 4”, stops at 34jg turns, whence results — ˆ 5ˆ7

2nd Trial. 3rd Trial.

11’

4{h

‘ This experiment, then, shows unequivocally that the quantity — , and consequently the quantity A which expresses the momentum of friction, are constant quantities, whatever be the primitive degree of velocity ; and that, consequently, the velocity has not any influence upon the resistance due to the friction of pivots, which from this experiment is necessarily proportional to a function of the pressure.

‘ When this experiment is made in a vacuum, a much less heavy body may be employed, and of any form whatever, and the same result will be obtained.

‘ In other experiments. Coulomb bent a brass wire of nine inches in length ; the parallel branches were twenty-four lines distant from one another : the part of tiie wire curved in the form of a semicircle which joined the two branches was about three inches long : and the two vertical and parallel branches were also each three inches lonrr. To the extremity of each vertical branch was attached by means of wax a piece of metal ; and there was fixed, in like manner, in the mid-dle of the concave part of the wire, to serve for the cheek or bush, a small well-polished plane

of different substances on which the friction of the point of the pivot was to be determined: finally, there was fixed to the summit of a support a little needle of tempered steel, and whose point it was

necessary to render more or less fine, rounded, or obtuse, according to the nature of the cheeks, and to the pressure which they were to experience. The extremity of the needle first used by Coulomb, appeared, when examined by a microscope, to form a conic angle of 18° or 20°. The friction of this needle against well-polished planes of granite, agate, rock crystal, glass, and tempered steel respectively, was tried ; and the result, taking in each experiment the mean quantity represented by — (a quantity which was

always found to vary between very narrow limits), gave the momentum of friction of the point of the needle against the planes of granite, agate, &c. respectively, in the ratio of the fractions iˆ‘jg, ˆ, 7JJ, ˆ„ :iˆ : so that, the momentum of friction of the plane of granite being represented by unity, we shall have for the momentum of the friction of rotation relative to the other substances as below : — friction of granite, 1 ; of agate, 1‘214; of rock crystal, 1-313 ; of glass, 1-777 : of steel

2-257.

* Coulomb likewise employed himself, during Ihese experiments, in determining the more or less acute form which should be given to the points of the pivots. Toˆthis end he caused to be successively rounded into cones of greater or less acuteness the extremity of a steel needle, that it might tlience appear wliether the change of figure had any influence upon the friction. Thus he found that, under a certain charge, the point of the pivot being shaped to 45°, the

quantity — was, for granite, ˆ ; agate, 5ˆ ;

glass, Tiw; tempered steel, ˆ.

‘ Coulomb then gave to the point a more acute form, so that the angle of the cone which terminated it could not be more than 6° or 7° ; and he found, still retaining the same charge or

bˆ pressure as before, that the quantity — was, for

agate, ˆ; glass, ˆiˆ; tempered steel, ˆy

‘ Comparing, from these and other experiments, the momentum of friction of rotation of the point of different pivots against a plane of

agate, he found that the quantity — which varies

as that momentum, was, for a pivot of 45°, jj’gg ; a pivot of 15ˆ Tˆ‘jj ; a pivot of 6°, 5ˆ ;

* After this, Coulomb varied the charge in his experiments, and determined the relative momentum of friction of pivots under different pressures. But, without going further into de-tail, we may give the following as the principal deductions from the whole.

‘ 1. That the friction of pivots is independent of the velocities, being merely as a function of the pressure.

‘ 2. That the friction of granite is less than that of glass.

‘ 3. That the figure of the point of the pivot, as to acuteness, affects the quantity of friction, in such a manner that when we cause to whirl upon the point of a needle, a body weighing more than five or six drachms, the most advantageous angle for that point appeared to be from 30° to 45°; under a less pressure, the angle might be progressively diminished, without the friction being perceptibly augmented ; it may even without great inconvenience |be reduced to 10° or 12° with good steel, wiien the charge does not exceed 100 grains, — an important consideration in the suspension of light bodies upon cheeks or sockets.

I ‘ These rules may be useful to the makers of chronometers.’

Mr. Anstice, the author of a valuable treatise on wheel-carriages, very familiarly illustrates the advantage of wheels over sledges ; it is immediately connected with the subject of friction, and may be illustrated by reference to tlie following considerations.

1. A sledge, in sliding over a plane, suffers a friction equivalent to the distance through which it moves ; but if we apply to it an axle, the circumference of which is six inches, and that of the wheels eighteen feet, it is plain that, moving the carriage eighteen feet over the plane, the wheels will make but one revolution ; and as there is no sliding of parts between the plane and

the wheels, but only a mere change of surface, no friction can take place there, the whole being transferred to the nave acting on the axle, so that the only sliding of parts has been betwixt the in-side of the nave and axle ; whicli, if they fit one another exactly, is no more than six inches : and hence it is plain that the friction must be reduced in the proportion of 1 to 36. Another advantage is also gained by having the surfaces confined to such a small extent; by which means they may be more easily kept smooth, and fitted to each other. The only inconvenience is the height of the wheel, which must in all cases be added to that of the carriage itself.

It has been a matter of no litde consideration, whetlier the wheels of a carriage ought to be small or large. Mr. Anstice observes, that, in the overcoming of such obstacles as are commonly met with in roads, wheels act as mechanical powers, and therefore the size of the wheel must be regulated upon the principles of these powers. Thus, let the circle OTAGL, fig. 2, represent a wheel of four feet diameter, placed on the level PQ, and opposed in that line by the obstacle O, which is supposed to be 7-03 inches in height ; the line in which the carriage is drawn being, CT, parallel to the plane P Q. In this case the effort applied to the carriage is communicated to the nave of the wheel where it touches the axle. This part, therefore, represents the part of the lever to which the power is applied, and is the point C in the figure. As the turning point is that where the wheel touches the obstacle that must represent the fulcrum of the lever ; whence that arm of the lever will be represented by CO, which may be supposed a spoke of the wheel ; and as the upright spoke C L is the line which bears the whole weight from the axle, and in which it is to be lifted ; hence that part of the circumference of the wheel which is between the fulcrum and the upright spoke bearing on it must represent the arm of the lever whicli is to raise the weight. In this case neither the weight nor the power act] at right angles to their respective arms of the lever; so that we must represent their powers by the imaginary lines M O and ON. As the length of O M, therefore, is to that of ON, so is the proportion required to the weight to balance it on the obstacle, when rising over it ; and in this case the arms are equal": it is plain that the powers must be so likewise. Every obstacle, therefore, exceeding this height, which is as 7-03 to 48, will require a power acting parallel to the plane greater than the weight drawn ; and every obstacle whose height bears a smaller proportion to that of the nave, must be overcome by a smaller power.

Again, let a wheel of four feet diameter, be represented by the circle

in fig. 3, and supposed to be moved along the plane P Q, and an obstacle of twelve inches heiglit be placed before it, the real lever will then be represented by the lines LOC; which, being reduced to the imaginary ones M O N, shows that the power is greater tiian the weight. By the same rule, if an obstacle of three inches be))laced in the way of a wheel, as in fig. 4, the power required to move the wheel will be considerably less than the weight, though it is plain that the proportion of power must always

be according to the size of the wheel, the height of the obstacle, and tlie direction in which the carriage is drawn. For instance, if the line of traction in fig. 4 be raised into the direction C S, the power required to move the carriage over it will be to tlie real weight as the line CO is to the line 0 N ; and in consequence of thus altering the direction we gain as much as the length of the line C O exceeds that of C N.

This view of the manner in which the wheels of carriages act will serve to elucidate the question, whether large or small wheels are preferable for carriages ? Let the circle, fig. 5, represent a wheel of two feet diameter, and the obstacle in its way 7-03 inches in height, then will the true lever be represented by the lines C O L, to be reduced to the imaginary ones M O N. In this case, the power required to draw the carriage must be to its weight as N 0 is to O M, which is more than double, and thus the advantage of large wheels over small ones is evident. In this, however, as in all other cases where wheels act as mechanical powers, we must remember, that the same doctrine applies to them as to the powers themselves when used in any other manner, *viz.* that as much as we gain in power we lose in time ; and therefore, though a wheel of twice the diameter may be raised over an obstacle of any given height with twice the ease that would be required for one of once the diameter ; yet the large wheel would require twice the time to move over it that the small one does.

Hitherto we have considered the carriage as being drawn in a direction parallel, or nearly so, to the plane on which the wheels

move, which line is supposed to be horizontal ; but the case will be different when we suppose them to move upon an inclined plane ; for then, even though the line of traction be parallel to the ascending plane, and though the wheels act as levers, we shall find that the action of the weight will increase witli the power gained by the increase of size in the wheels ; and, consequently, that the increased size of the latter will be of no ‘ farther use than that of diminishing the friction, in the same manner as is done upon horizontal planes.

To illustrate this, suppose the larger circle in fig. 6 to represent a wheel of four feet diameter, and the smaller circle a wheel of only two, both of which are made to ascend the inclined plane L M, by powers applied in tlie directions GT and E S parallel to the elevation of the plane, which is 45° ; it will then be found, that by describing the lever, as in the former case, though the arm of the lever to which the power is applied be double the length in the large wheel that it is in the small, the other is augmented in the same proportion. Neither will the powers be augmented by varying the direction of the line of traction ; for while these are kept parallel to one another, their relative powers must always keep the same proportion to one another. The rea-son is obvious, *viz.* that when wheels of any dimension ascend or descend inclined planes of any regular elevation, the fulcrum of the lever contained in the wheels must be determined by that part of the wheel which touches the plane, and which must always be of a proportionate

height both in large and small wheels. It \s otherwise, however, with the fulcrum marked out by perpendicular or irregular obstacles upoa the plane itself; for large wheels will always have the advantage over small wheels when these are presented, for the reasons already given. In-deed, when the wheel inipinces perpendicularly upon an obstacle as high as tlie line of traction, it is plain that it cannot be drawn over it by any power whatever, unless the direction of the latter be altered.

From these considerations, Mr. Anslice draws the following conclusions. 1. That in a carriage placed upon a horizontal plane nothing more is required to produce motion than to overcome the friction which takes place between it and the plane. 2. By the application of wheels to a carriage, the friction is lessened in the proportion of the diameters of the axles and hollow parts of the naves to those of the wheels. 3. In the draught of a carriage without wheels, up a regular plane ascent, the friction must not only be overcome, but there is a power likewise to be applied sufficient to lift such a

proportion of the weigiit of the carriage as the perpendicular part of the ascending plane bears to that portion of the plane. 4. If wheels of any size be applied to the carriage in such circumstances, they have only the advantage of lessening friction ; for, though they really act as levers, yet, as each arm of the lever is lengthened in proportion to the increase of size in the wheels, the power can be no farther augmented than as the ascent may act as a mechanical power for raising up the wheels, carriage, &c., to the top. 5. Large wheels have the advantage over small ones in overcoming obstacles, because they act as levers in proportion to their various sizes. 6. The line of traction, or that in the direction of which the carriage is drawn, should always, if possible, be parallel to that in which the plane lines; for, when this is the case, the arm of the lever to which the power is applied will bear the longest proportion possible to the other. This always takes place when the line of traction is perpendicular to that spoke of the wheel which points to the obstacle. As it may not always be possible, however, to alter the direction of the line of traction to this position, it will be most proper to fix upon some medium betwixt that which commonly occurs and that which requires the greatest exertion to overcome the obstacle ; that is, betwixt a level line and one rising perpendicular to the spoke of the wheel which points to the obstacle it is likely to meet with. The greater attention ought to be paid to this at last, that all wheels, but especially small ones, are liable to sink into the ground over which they pass, and thus produce a constant obstacle to their own progress. The line of traction, it must also be observed, is not an imaginary one drawn from that part of the animal to which the traces or chains are attached to the axle of the wheel, but the real direction of the traces, to whatever part of the carriage they are attached : for the effort will be instantly communicated in the same direction from one part of the carriage to all the rest, by reason of the whole being fastened together and in one piece.

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Hitherto we have considered the whole weight of the carriages as bearing perpendicularly against tiie axles of the wheels ; but as this can-not be done in chairs, carts, and other carriages having only two

wheels, it will be necessary to have their centres, or transverse lines of gravity, as near the ground as possible. To understand this, it must be premised, that the centre of gravity is that point of any body which, if suspended, will keep all the parts of the body at rest, let the body be placed in any situation we please. Thus the centre of gravity in awheel or circle is the centre of the circumference, provided the matter of which it is composed be equally ponderous. In a square, whether superficial or solid, the centre of gravity will be a point equally distant from all its sides ; so that, if the substance be equally heavy, it will be impossible to turn it into any position in which there will not be as much matter on one side of the centre as upon the other; and in like manner every figure, however irregular, has some part round which, if it be turned, as much matter will always be upon one side as on the other.

Know any body be supported by a transverse line passing, not through the centre of gravity itself, either above or below it, the body can only be kept in equipoise while that line remains directly above or below the point ; for if the body is moved" forwards, as in two-wheeled carriages moving down hill, a greater part of the weight will be thrown forwards over tlie line of suspension than what remains behind it; and, consequently, this superfluous part must be borne by the animal which draws it. In ascending any height, just the reverse takes place ; for thus a portion of the weight is thrown backwards, and will tend to lift up the animal altogether. The consequence of this is, not only that the creature must proceed with great pain, but that the friction on the nave and axle will be augmented by laying upon them a part of the animal's weight also. If the body be suspended above the cen-tre of gravity, the effect, though the same in the main, will be reversed in the ascent and descent of the hill, as long as the body is firmly attached to the shafts ; but should the whole weight be suspended under the axle, independent of the shafts altogether, then it will always, whether ascending, descending, or moving horizontally, have the same effect as if hung directly by it.

A few illustrations of animal power must close the present article, which will be resumed under the heads of Motion and Mim.wokk.

A horse draws with the greatest advantage when the line of draught is not level with his breast, but inclines upwards, making a small angle with the horizontal plane.

A horse drawing a weight over a single pulley, can draw 200lbs. for eight hours a day, and walking at the rate of two miles and a half in an hour, which is about three feet and a half in a second ; and, if the

same horse be made to draw 240lbs., he can work but six hours a day, and can-not go quite so fast. To this maybe referred the working of horses in all sorts of mills and water-works, where we ought to know, as near as we fan, how much we make every horse draw, that

we may judge of what the effect will be, when proper allowance shall have been made for all the frictions and hindrances, before we can cause any machine to be erected.

When a horse draws in a mill or gin of any kind, great care should be taken that the horse-walk, or circle in which he moves, be large enough in diameter, otherwise the horse cannot exert all his strength ; for, in a small circle, the tangent (in which the horse draws) deviates more from the circle in which the horse is obliged to go than in a larger circle. The horse-walk should not be less than forty feet in diameter, when there is room for it. In a walk of nineteen feet diameter it has been calculated that a horse loses two-fifths of his strength.

The worst way of applying the force of a horse is to make him carry or draw up hill ; for, if the hill be steep, three men will do more than a horse; each man loaded with lOOlbs. wilj move up faster than a horse that is loaded with 3001bs. This is owing to the position of the parts of a man's body, which are better adapted for climbing than those of a horse.

As a horse, from the structure of his body, can exert most strength in drawing almost horizontally in a straight line, a man exerts the least strength that way ; as, for example, if a man weighing 140lbs., walking by a river or canal side, draws along a boat or barge, by means of a rope coming over his shoulder, or otherwise fastened to his body, he cannot draw above twenty-seven pounds, or about 5'^th of what a horse can draw in that case. Five men are about equal in strength to one horse, and can with the same ease push round the horizontal beam in a forty feet walk ; but three of the same men will push round a beam in a nineteen feet walk, which a horse (otherwise equal to five men) can but draw round.

A man turning a horizontal windlass, by a han-dle or winch, should not have above thirty pounds weight acting against him, if he is to work ten hours a day, and raise the weight at the rate of three feet and a half in a second. This supposes, however, that the semidiameter of the windlass is equal to the distance from the centre to the elbow of

the handle ; for, if there be a mechanical advantage, as there usually is, by having the diameter of the axle on which the rope winds four or five times less than the diameter of the circle described by the hand, then may the weight (taking in also the resistance, on account of the friction and stiffness of the rope) be four or five times greater than thirty pounds ; that is, so much as it rises slower than the hand moves.

In this operation, the effect of a man's force varies in every part of the circle described by the handle. The greatest force is, when a man pulls the handle upwards from about the iieight of his knees; and the least force when (the handle be-ing at top) he thrusts from him horizontally; then again the effect becomes greater as a man lays on his weight to push down the handle ; hut that action cannot be so great as when he pulls up, because he lays on no more than the whole weight of his body; whereas, in pulling, he can exert his whole strength. Lastly, he has but

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small fierce to pull the handle towards him horizontally, when at its lowest.

Let us suppose a man of moderate strengtii to weigh 140lbs., he may in the four principal parts of pushing and palling, in the whole circumference of motion, exert the following forces, *viz.* in the strongest point a force equal to 160lbs. ; in the weakest a force equal to twenty-seven pounds; in the next strong point ISOlbs.; and in the last, or second weak point, thirty pounds. Let us add all these forces together, which will make 347 ; which divide by four, and we shall have 86 jibs, for the weight that a man might lift by a winch, if he could exert his whole force continually, without stopping to take breath; but, as that cannot be, the weight must return and overpower the next weak point, especially when the handle moves slowly, as it must if a man would exert his whole strength all round. Besides, for raising sucii a weight, we must suppose the man acting always along the tangent of the circle of motion, which does not happen in the operation. Then there must be a sufficient velocity given, that the force applied at the strong points may not be spent before the hand comes to the weak ones, so that it is difficult for a man to continue that irregular motion ; and, therefore, when there are no oilier advantages, the resistance ought to be but thirty pounds. If a fly be added to the windlass when the motion is pretty quick, as about four or five feet in a second, a man may for a little while act with a force of eighty pounds, and work a whole day with a resistance of forty pounds.

If two men work at the end of a roller or windlass, as in drawing up coals or ore from a mine, or water from a well, they may more easily draw up seventy pounds (still supposing the weight and power to have equal velocities) than one man can thirty pounds, provided the elbow of one of the handles be at right angles to

the other ; for then one man will act at the strongest point when the other acts at the weakest point of the revolution; by which means the two men will mutually and successively help one another. The common way is to put on the handles opposite to one another, which cannot give, the advantage above-mentioned, though there is some

little force gained even in that position, because one man, pulling while the other thrusts, works at the strongest of the two weak points, whilst the other works at the weakest, and so helps him a little.

When a man carries a burden upon his back, he exerts a great force v«ry effectually, many muscles at once being employed in that operation ; the muscles of his neck, back, and loins, keep his body and head in the proper position to sustain the weight ; those of his shoulders and arms help to keep it in its place ; and the muscles of his legs and thighs raise the weight of all the body and burden, as the man walks along. In this way of working, three men do much more than a horse, and two often do as much, as may be observed in the daily labor of the Lon-don porters. A porter will carry 200lbs., and walk at the rate of three miles an hour ; a coal-heaver will carry ‘250lbs., but then he does not go far with his load. Chairmen do not act with the same muscles as porters; but, as.they have straps brought down from their shoulders to the poles of the chair, the muscles of the loins and back are concerned, and likewise the extensors of the legs and thighs ; two of them will walk with SOOlbs. (that is ISOlbs. each) at the rate of four miles an hour.

The last and most effectual way of a man’s exerting his strength, is in rowing a boat; he there acts with more muscles than in any other operation ; and the weight of his body also assists him.

Mechanical, in mathematics, denotes a construction of some problem, by the assistance of instruments, as the duplicature of the cube and quadrature of the circle, in contradistinction to that which is performed in a geometrical man-ner.

Mechanical Curve is a curve, according to Descartes, which cannot be defined by any algebraic equation ; and so contradistinguished from algebraic or geometrical curves. Leibnitz and others call these mechanical curves transcendental, and dissent from Descartes, in excluding them from geometry. Leibnitz found a new kind of transcendental equations, whereby these curves are defined : but they do not continue constantly the same in all points of the curve, as algebraic ones do.

MECHAIN (Peter Francis Andrew), a French mathematician and astronomer, was born at Laon in 1744, at which place his father exercised the profession of an architect. He became a correspondent of Lalande at a very early period of his life; and in 1772 was invited to

the depot of the marine in Paris, and subsequently to Versailles, where he acquired great reputation. He

calculated the orbit of the comet of 1774, and discovered that of 1781. He was admitted in 1782 a member of the academy ; and in 1790 discovered his eighth comet. In conjunction with jNI. Delambre, he undertook, in 1792, the measurement of the degrees of the meridian ; and in 1793 completed that of the triangles, between Perpignan and Barcelona. He died in September 1805.

.- MECHLIN, Mecheln, old Fr. Malines, a considerable town of the Netherlands, an archbishop's see, and the capital of a district in the province of Antwerp. It is divided into two parts by the Dyle ; it is well built for its age, and the streets are broad ; while the practice of painting the fronts of the houses gives them a fresh and clean appearance. The public square called the place d'armes, and the market place, are worth notice. The most' remarkable public building is the cathedral, whose tower, though not finished, is 350 feet in height, and aff'ords a delightful view of the town and environs. The interior is elegant, and contains a number of good paintings. Here are also an arsenal, town-house, Franciscan monastery, and a large Beguinen

house, or asylum for 800 widows and elderly women. The manufactures consist of fine Brabant lace and linen, damask, silk and woollen stuffs, leather, and hats. It has likewise considerable breweries, and a brisk trade in buckwheat. At high water, vessels of considerable draught reach the town from the Scheldt. Mechlin suffered from the war in 1793 and 1794, but still more from the stagnation of trade under Buonaparte. In 1785 it is said to have had a population of 26,000. At present the number is rather below 20,000. Thirteen miles north-west of Louvain, the same distance soutli by east of Antwerp, and nearly the same north by east of Brussels.

M blCHOAC AN, Mechoacann a, in medicine, called also white jalap, white rhubarb, and American scammony, a root, taking its name from a province of Mexico, from whence it is brought in thin transverse slices, like jalap, but larger and whiter. Mechoacan yields scarcely one-sixth part so much resin as jalap does. It is a species of bind-weed.

Mechoacan, introduced about the year 1524, was used as a purgative before jalap, though the latter is now in more general use ; yet mechoacan, being the milder and more gentle of the two, is sometimes on that account preferable. Boulduc found that it contains twelve times as much salt as resin ; but neither the saline nor resinous extract purge so freely as the substance, even though taken in larger doses. In the choice of mechoacan, prefer those pieces which are the brownest within, and whose substance is the closest, and most compact.

MECKEL (John Frederick), a celebrated anatomist, was born at Wetzlar in 1714, and studied at Gottingen and Berlin, He returned to the former university to receive his degree of M. D., when he was appointed demonstrator of the school of female accoucheurs; and in 1753 professor of midwifery. His reputation attracted a multitude of foreigners to his lectures from Strasburg and even from Paris. He quitted the chair in 1755, and died September 18th, 1744, surgeon to

the king of Prussia. He published, De quinto pare Cerebri, 4to. ; Diss.' epist. de Vasis Lymphaticis, glandulisque conglobatis, 1757, 4to., and other works.

Meckel (Philip Frederick Theodore), son of the above, was brought up to his father's profession at Gottingen and Strasburg. Having been professor of anatomy and surgery at Halle and at Strasburg, he was in 1795 invited by Paul I. to Petersburg, and nominated physician to the empress, inspector of the hospitals of that city, and privy-councillor. He died March 18th, 1803. He was the author of numerous anatomical dissertations; and a translation of Haller's Elements.

MECKLENBURG, a county on the south side of Vˆirginia, bounded north by Lunenburg county, east by Brunswick, south by North Carolina, and west by Halifax and Charlotte counties. Population 18,443. Slaves 10,204. Chief town Boydton.

Mecklenburg, a coimty in the south-west part of New Carolina. Population 14,272. Slaves 3494. Chief town, Charlotte.

MECKLENBUIIG-SCHWERIN, a grand duchy of Germany, bordering on the Baltic and

Ilolstein, is bounded on the east and south by Mecklenburg-Strelitz and the kingdom of Prussia ; and on the west by the southern extremity of Denmark. The whole area is computed at 4800 English square miles, and its population at 358,000 individuals. Mecklenburg has an agreeable variety of gentle eminences and numerous lakes, but is wholly destitute of mountains. There are also several marshy districts, and sandy tracts, scarcely susceptible of cultivation. Here are likewise some large forests. The climate is cold and moist, but has lately been improved by the progress of cultivation. The forests have been by the same means reduced, and in several places good roads are opened. The inhabitants are principally employed in agriculture : their chief exports are grain, wool, sheep, and a large and strong breed of horses.

Schwerin, the capital, contains the usual residence of the grand duke. It is situated on the western border of a lake, which almost surrounds it ; the ducal palace standing on an island, and communicating with the town by a drawbridge. Gustrow, the former residence of the dukes of Mecklenburg-Gustrow, is situated on the river Ne-bel, and is surrounded by a wall with six gates. It is noted for its breweries and

distilleries. Rostock, a handsome town on the river on the Warne, about ten miles from the Baltic, engrosses most of the commerce of the duchy, exporting about 1 50,000 ciuarters of grain annually. Large vessels load and unload at the mouth of the river. Wis-mar, another chief port of Mecklenburg, stands on a bay of the Baltic. It has one of the best harbours on the southern shores of that sea.

The exports of this duchy consist of wheat, rye, barley, oats, peas, and malt. The imports of coffee, rum, sugar, tobacco, and salt, which is an article ingreatrequest. The religion is chiefly Lutheran. The government is hereditary ; the army is composed of about 4000 men, and the annual revenue amounts to nearly £175,000. It has no manufactures of consequence.

MECKLENBURG-STRELITZ, a grand duchy of Germany, to the south-east of Mecklenburg-Schwerin. It is a flat country, full of lakes, marshes, and sandy plains : which often render the air very damp and cold. The whole of this duchy occupies about 875 square miles, and has 72,000 inhabitants. This is more in proportion than Mecklenburg-Schwerin ; but the productions, the employment of the people, the state of society, and the profession of religion, are the same in both. Strelilz, the chief town, is situation in a marshy district, at the south-east of the duchy, and contains, therefore, the duke's residence, the public offices, and the houses of the principal nobility. None of the other towns deserve notice. Tiie amount of the army, belonging to this dukedom, is not more than 700, and the an-nual revenue £70,000.

MECON, a considerable river of Asia, whicli rises in the mountains of Thibet, and has a course of aboiit 200 miles in Cambodia. It falls into the sea by three moutlis, after having been joined by a canal with the Manam, or river of Siam. The mouths assume the names of Saigong, the Japanese River, and Onsequame or Inconvenient.

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MECO’NIUM, 71. s. Gr. fiijKMviov. Expressed juice of poppy ; also tlie first excrement of children.

Infants new-born have a viecint’ium,OT sort of dark-coloured excrement in the bowels. Arbudutot.

ME’DAL, 7j. s. \ Vt. iiitilaille, mrclai/lon;

Medal’lic, adj. f Teut. mtclal ; Ital. viedag—

Mf.dal’lion, 7(.j>. iˆA’a ; Lat. metalliun. See

Mku’allist. j below. An ancient coin, or historic token ; a piece stamped in honor of some remarkable performance : medallic is of thenatureof,or pertaining to, medals: medallions, medals, not coins; see the extract from Addison: medallist, an amateur or dealer in medals.

The Roman meduls were their current money: when an action deserved to be recorded on a coin it was stampt, and issued out of the mint Addi.ion.

You will never, with all your medaUick eloquence, persuade Eugenius that it is better to have a pocket-ful of Otho’s than of Jacobus’s. Id.

Medallions, in respect of the other coins, were the same as modern medals in respect of modern money.

Id.

As a medallist, you are not to look upon a cabinet of medals as a treasure of money, but of knowledge.

Id. On Medals.

The same enthusiasm that dignifies a butterfly or a medal, to the virtuoso and the antiquary, may convert controversy into quixotism. Percival.

Medal denotes a piece of metal in the form of coin, such as was either current money among the ancients, or struck on any particular occasion, to preserve to posterity the portrait of some great person, or

the memory of some illustrious action. Scaliger derives the word from the Ara-bic methalia; a sort of coin with a human head upon it. But the opinion of Vossius is more generally received ; *viz.* that it comes from me-tallum, metal ; of which substance medals are commonly made.

Medals. Under this title several encyclo-paedists, both Scotch and English, have thought proper to give a scientific dissertation on the utility of medals in history and other sciences, their preservation and value. We prefer that of Numismatics, which will conveniently embrace the consideration of ancient coins also, and to that article refer the reader.

MED'DLE, v.n. &c v.a.'^ Belg. middelen ;

Med'dler, 7i. s. J-Dan. and Swed.

Med'dlesomf., Of/;'. j nuddele, meddela ;

Goth, medal, a medium. To interfere ; interpose, or intervene ; to interfere officiously ; have to do, followed by uith : as a verb active, to mingle ; mix (obsolete) : meddlesome is always used in a bad or reproachful sense.

Why should'st thou meddle to thy hurt?

2 Kings xiv. 10,

It is an honour for a man to cease from strife : but every fool will be meddling. Prov. xx. 8.

He that had well ycon'd his lere. Thus meddled his talk with many a tears.

Spenser,

A meddled state of the orders of the gospel, and ceremonies of popery, is not the best way to banish popery. Hooker.

For my part, I'll not meddle nor make any farther,

SJuihspeare.

Do not drive away such as bring the information, as meddlers, but accept of them in good part.

Bacon ,

With the power of it upon the spirits of men wc will only meddle. Id. Natural History.

There is much deceit in probabilities ; especially when we meddle witli spiritual matters. Bp. Hall.

How to distinguish between meddling innocently, from being blameably meddlesome, is that hard task which 1 am to undertake, but cannot liope thoroughly to perform. Barrow.

1 have thus far been an upright judge, not meddling with tlie design or disposition. Dryden.

This maybe applied to those that assume to tliemselves the merits of other mens services, meddlers, boasters, and irapertinents. L Estrange.

The civil lawyers have pretended to determine concerning the succession of princes ; but, by our author's principles, have meddled in a matter that belongs not to them. Locke.

This meddling priest longs to be found a fool.

Rove.

What hast thou to do to meddle with the affairs of my family 1 to dispose of my estate, old boy 1

Arbuthnot, Let me shake off the intrusive cares of day,

And lay the meddling senses all aside. Tfwmson.

MEDE (Joseph), a learned divine, born at Borden, in Essex, in 1586, and educated at Cambridge, where he took the degree of M.A. in 1610. His first appearance as a writer was an address to Dr. Andrews, then bishop of Ely, in a Latin tract De Sanctitate Relativa, which was highly approved of by that prelate. He was not chosen fellow of his college till after he had graduated, and even then not without the assistance of his friend, bishop Andrews ; for Dr. Gary, then master of the college, suspected that ' he looked too much towards Geneva.' Being made fellow, he became an eminent and faithful tutor. He applied himself to the study of history and antiquities ; particularly those of the Chaldeans, Egyptians, and other ancient nations ; tracing them as far as he could in their oriental figurative expressions, and hieroglyphics. He was "also a curious and laborious searcher into the

antiquities relating to the Jewish, Christian, and Mahometan religions. In 1620 he refused the provostship of Trinity College, Dublin, into which he had been elected at the recommendation of archbishop Usher, his particular friend ; as he did also a second time, in 1630. Though he had nothing but his fellowship, and a college lecture, his charity was great, and he devoted the tenth of his small in-come to charitable uses. He died in 1638, in his fifty-second year, having spent about two-thirds of his time in college. His works make one volume folio ; his Comment on the Apocalypse is much esteemed.

MEDEA, in fabulous history, a celebrated sorceress, daughter of iEetes, king of Colchis. Her mother's name, according to the more received opinion of Hesiod and Hyginus, was Idyia. She was the niece of Circe. When Ja-son came to Colchis in cjuest of the golden fleece, Medea became enamoured of him, 'and to her well-directed labors the Argonauts owed their preservation. Medea had an interview with her lover in the temple of Hecate ; where they swore eternal fidelity. When Jason had overcome all difficulties, Medea embarked with the conquerors for Greece. To stop the pursuit of her father.

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she tore to pieces her brother Absyrtus, and left his mangled limbs in the way through which JEetes was to pass. When Jason reached lolchos, his native country, the return and victories of the Argonauts were celebrated with universal rejoicings; but .Eson, tlie father of Jason, was unable to assist at the solemnity on account of his age. Medea removed zEson's weakness, and by drawing away the blood from his veins, and filling them again with the juice of certain herbs, she restored him to the vigor of youth. This sudden change of iEson astonisiied the inhabitants of lolchos ; and the daughters of Pelias also wished to see their father restored to the vigor of youth. Medea, to revenge the injuries which her husband's family had suffered from Pelias, increased their curiosity ; and led them to murder their father as preparatory to his re-juvenescence, which she afterwards refused to accomplish. This action incensed the people of lolchos ; and Medea with her husband fled to Corinth to avoid their resentment. Here they lived ten years with mutual attachment, when the love of Jason for Glauce, the king's daughter, interrupted their harmony, and Medea was divorced. Medea revenged the infidelity of Ja-son, by causing the death of Glauce, and the destruction of her family. She also killed two of her children in their father's presence ; and, when Jason attempted to punish her barbarity, she fled through the air in a chariot drawn by winged dragens. From Corinth she came to Athens, wher , after she had undergone the purification of her murder, she married king iEgeus, by whom she had a son called Medus. Soon after, when Theseus wished to make himself known to his father, Medea, jealous of his fame, and fearful of his power, attempted to poison him at a feast. Her attempts, however, failed of success, and the sight of the sword which Theseus wore by his side convinced ˆEgeus that the stranger, against whose life he had conspired, was his own son. The father and the son were reconciled ; and Medea, to avoid punishment, mounted her fiery chariot, and flew to Colchis ; where she was reconciled to Jason, and where she died. After death she married Achilles in the Elyisan fields, according to Si-monides. iElian ascribes the murder of Mer-merus and Pherus, the youngest of Jason's children by Medea, to the Corinthians, who assassinated them in the temple of Juno Acraea, for which they were punished by a pestilence. They afterwards engaged the poet Euripides for five talents to write a tragedy, which represented Medea as the cruel assassin of her own children.

MEDELPAD, a mountainous province of the north of Sweden, between the Gulf of Bothnia and Jamtland. It is 100 miles in length, and fifty in breadth ; but has only 32,000 inhal)itants. It is in general woody, but has some fertile valleys and fine lakes, and plenty of pasturage. The woods abound in game, and the lakes and rivers in fish. Sufficient corn is raised for the consumption ; and timber, flax, hemp, butter, poultry, and dried fish, are exported. Sundswall is the only port.

MEDENBLIK, atown of the kingdom of the Netherlands, in North Holland, and having a

good harbour on the Zuyder Zee. Population 2000. It is twenty-eight miles north by east of Amsterdam.

MEDEOLA, climbing African asparagus, in botany, a genus of the hexandria order, and trigynia class of plants; natural order eleventh, sarmentacese : cal. none: coR. sexpartite and revoluted : the berry trispermous. Its characters are these : the flower has no empalement ; it has six oblong oval petals, and six awl-siiaped stamina, terminated by incumbent summits, and three-horned germina terminating the style ; the germina afterwards turn to a roundish trifid berry with three cells, each containing one heart-shaped seed.

MEDFORD, a post town of Middlesex county, Massachusetts, on Mystic River, four miles north of Boston. It is a pleasant handsome town, and contains a boy's grammar-school, and four distilleries. It has a considerable ship-building business, and manufactures great quantities of bricks, leather, &c. The river is navigable for vessels of considerable size to this place, where it meets the Middlesex Canal.

MEDIA, the ancient seat of a powerful em-pire, was bounded, according to Ptolemy, on the north by part of the Caspian Sea ; south by Persia, Susiana, and Assyria; east by Parthia and Ilyrcania ; and west by Armenia Major. It was anciently divided into several provinces, *viz.* Tropatene, Charomithrene, Darites, Marciane, Amariace, and Syro-Media. By a later division, however, all these were reduced to two ; the one called i\iedia Magna, the other INIedia Atropa-tia, or simply Atropatene. Media Magna was bounded by Persia, Parthia, Hyrcania, the Hyrcanian Sea, and Atropatene, and contained the cities of Ecbatan, Laodicea, Apamea, Raga, Ra-geia, or Ragea, &c. Atropatene lay between the Caspian Mountains and the Caspian Sea. This country originally took its name from Madai, the third son of Japhel ; as is])lain from Scripture, where the Medes are

constantly called Madai. Some derive their name from Medusˆ the son of Jason and Medea ; others from a city called Media, Sextus Rufus tells tliat in his time it was called Medena, and from others we learn that it was also called Aria. The most authentic history of the Medes is as follows. — They lived in subjection to the Assyrians till the reign of Sennacherib, when they threw ofi' the yoke, and lived for some time in a state of anarchy. But about A. A. C. 699 Dejoces, who had excited a revolt from Sennaccherib, being chosen king, united the scattered tribes of the Medes, and, having applied himself to the civilisation of his barbarous subjects, left the throne to his son Phraortes, after a reign of fifty-three years. Phraortes, who was of a warlike and enterprising disposition, subdued almost all Upper Asia, lying between Mount Taurus and the River Ilalys, which runs througli Cappadocia into the Euxine Sea. Elated with tiiis good success he invaded Assyria, which was greatly weakened by the revolt of many nations which had followed the example of the Medes. Nebuchado-nosor, or Chyniladan, however, the reigning prince, having assembled what forces he could, engaged Phraortes, defeated, took him prisoner,

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and put him to death; after which, entering Media, he laid waste the country, took the metropolis Ecbatan . itself, and levelled it with the ground. On the death of I'hraortes his son Cyaxares I. was placed on the throne. He was no less valiant and enterprising than his father, and was more successful against the Assyrians. With the remains of that army which had been defeated under his father, he not only drove the conquerors out of Media, but obliged Chyniladan to shut himself up in Nineveh. To this place he immediately laid siege ; but was obliged to abandon the enterprise on account of an irruption of the Scythians into his own country. Cyaxares engaged these new enemies with great resolution ; but was utterly defeated ; and the conquerors overran not only all Media, but the greater part of Upper Asia, extending their conquests into Syria, and as far as the confines of Egypt. They continued masters of all this vast tract of country for tvventy-eigiit years, till at last Media was delivered from their yoke by a generahmassacre at the instigation of Cyaxares. After this the Medes repossessed themselves of the territories they had lost ; and once more extended their frontiers to the llalys, their ancient boundary on the west. After this they engaged in a war with the Lydians; and on the conclusion of it Cyaxares, having entered into a strict alliance with Nebuchadnezzar king of Babylon, returned in conjunction with the Babylonians before Nineveh ; which they took and levelled with the ground, putting most of the inhabitants to the sword. After this victory the Babylonian and Median empires seem to have contmued in alliance, till a little before the death of Nebuchadnezzar, when a war ensued, which was not extinguished but by the dissolution of the Babylonian empire. The Medes, under Astyages, the son of Cyaxares I., withstood the power of the Babylonian monarch ; and, under Cyrus and ('yaxares II., utterly destroyed their empire by the taking of Babylo>'. See that article. After the death of Cyaxares the kin2;dom fell to Cyrus, by whom the seat of the empire was transferred to Persia. See that article.

. MEDIASTINE', H.s. Yr. 7imUastinc ; Lat. 7nediastimm. The fimbriated body about which the guts are convolved.

None of the membranes which invest the inside of the breast but may be the seat of this disease, the mediustine as well as the pleura. Arbutbnot on Diet.

Mf.diasttnf,, Mediastinum, in anatomy, a double membrane, formed by a duplicature of the pleura; serving to divide the thorax and the lungs into two parts, and to sustain the viscera, and prevent their falling from one side of the thorax to the other. See Anatomy.

ME'BIATE, v.n.,v. a. k. adj. ˆ From Lat. Me'diately, fl<ij;. inrdius. Toin —

Media'tion, n. s. terpose ; interMedia'tor, cede; be be—

Mediato'rial, adj. ˆ tween two: to

Mediato'rially, adv. effect by medi—

RIedia'torship, n. s. ation : medi—

Me'piatory, adj. ate as an ad—

Media'trix, n. s.) jective is, middle ; interposed ; intervened ; and, in an obsolete sense, acting as means : mediately, by a second-

ary cause: mediatrix is a' female mediator; Mediator, a scriptural title of the Lord Jesus Christ. The sense of the other compounds follows that of mediate.

There is one God and one Mediator between God and men, the man Christ Jesus. 1 Tim. ii. 5.

Noble offices thou may'st effect

Of mediation, after I am duad,

Between his greatness and thy other brethren.

Shakspeare.

God worketh all things amongst us mediately by secondary means ; the which means of our safety being shipping and sea-forces, are to be esteemed as his gifts, and then only available and beneficial when he vouchsafeth his grace to use them aright.

Raleigh's Essays.

The king sought unto them to compose those troubles between him and his subjects ; they accordingly interposed their mediation in a

round and princely manner. Bacon.

You had found by experience the trouble of all men's confluence, and for all matters to yourself, as a mediator between them and their sovereign.

Id. Advice to Villiers.

The most important care of a new king, was his marriage for 7nediate establishment of the royal line.

Wotton.

As many sacrifices, so many mediators, plainly seem to put Christ out of office. Bp. Hull.

Pestilent contairion is propagated immediately by conversing with infected persons, and mediately by pestilent seminaries propagated through the air.

Harvey on Consumptions.

By being crowded, they exclude all other bodies that before mediated between the parts of their body.

Digby.

The earl made many professions of his desire to interpose, and mediate a good peace between the nations. Clarendon.

Plan's friend, his mediator, has designed, Both ransom and redeemer voluntary. Milton.

I possess chemists and corpuscularians of advantages by the confederacy I am mediating between them. Boiile.

They styled a double step, the space from the elevation of one foot to the same foot set down again, mediated by a step of the other foot, a pace, equal to five feet. Holde'-.

It is against the sense of the law to make saints or angels to be mediators between God and them.

Stilliiii; fleet.

The passions have their residence in the sensitive appetite : for inasmuch as man is a compound of flesh as well as spirit, the soul,

during its abode in the body, d»es all things by the mediation of these passions. South's Sermons.

Anxious we hover in a mediate state, Betwixt infinity and nothing. Prior.

All other effects of Christ's mediatorial office are accounted for from the truth of his resurrection.

Fiddes's Se)'mnns.

The corruption of manners in the world, we shall find owing to some mediating schemes that offer to comprehend the different interests of sin and religion.

Rogers.

A mediator is considered two ways, by nature or by office, as the fathers distinguish. He is a mcli-alor by nature, as partaking of both natures divine and human , and mediator by office, as transacting matters between God and man. IVaterland.

It is utterly inconceivable that inanimate brute matter, without the mediation of some immaterial be-ing, should operate upon other matter without mutual contact. Bentley.

MEDICI.

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MEDICI (John or Gioranne de), a wealthy merchant of 'enice, who died in 1428, having first given that memorable charge to his sons, to which Mr. lloscoe attributes all the future greatness of tliis remarkable family. He never appears to have solicited office, but was honored withseveral distinguished appointments. ' I feel,' said he, on the occasion alluded to, ' that I have lived the time prescribed me. I die content; leaving you, my sons, in affluence and health, and in such a station that, while you follow ray example, you may live in your native place honored and respected. Nothing affords me more pleasure than the reflection that my conduct has not given offence to any one ;

but that, on the contrary, I have endeavoured to serve all persons to the best of my abilities. I advise jou to do the same. With respect to the honors of the state, if you would live with security, accept only such as are bestowed on you by the laws, and the favor of your fellow-citizens ; for it is the exercise of that power which is obtained by violence, and not of that which is voluntarily conferred, that occasions hatred and violence.'

Medici (Cosmo de), a citizen and merchant of Florence, was the eldest son of the above, and born in that city in 1389. |At the period of his father's death he was already well established, and of the highest consideration among the merchants of his native city. He had also taken a considerable share in its public affairs. In 1414, when Balthasar Cossa (John XXIII.) had been elected pope, and was summoned to attend the council of Constance, he cliose Cosmo de Medici, among other men of eminence, for one of his associates. The authority enjoyed at Florence by this distinguished individual and his family, at 'this time, consisted rather in tacit influence and acquiescence than in any prescribed form of office or appointment. Their urbanity and kindness to the superior ranks of the citizens, and their unremitting attention to the interests and wants of the lower classes, acquired them those numerous and zealous partisans, whom they considered the best pledges for the continuance of their power. The government was a republic, guided by a council of ten and a chief executive officer, called the Gonfaloniere, or standard bearer chosen every two months. Sucli was the influence of the Medici,that they generally assumed to themselves these first offices of the state, or nominated such persons as they esteemed fit ; always, however, consulting the popular opinion. At length the bad success of the war against Lucca gave occasion to the rise of a party, headed by Rinaldo de' Albizi, which, in 1433, after filling the magistracy with their own creatures, ventured to seize the person of Cosmo, and to proceed against him judicially, alleging that his influence was dangerous to the state. He remained in prison several days, in constant apprehension of violence, or that his life might be attempted by poison ; until several princes and states of Italy interposed on hisiTaehalf; and, in conclusion, he and several members of his family were banished to Padua for ten years. By the Venetian government he was received with marked respect, and took up his abode in the capital of tliat state. Within a year llinaldo himself was obliged to quit Florence, and Cosmo, being recalled, returned

amidst the loud acclamations of all ranks. The gonfaloniere who had

pronounced his sentence, with a few others of that party, were put to death. The choice of magistrates was now carefully confined to the partisans of the Medici, and alliances formed with other powers for the purpose of supporting and perpetuating their system of government. From this period the life of Cosmo was an almost uninterrupted series of prosperity. The tranquillity of the republic, and the satisfaction which he experienced in the esteem and confidence of his fellow-citi- zeus, enabled him to indulge his propcHsity to the promotion of science, and the patronage and encouragement of all learned men. He assembled at Florence some of the most celebrated men of the age, and established an academy expressly for the elucidation of the Platonic philosophy, at the head of which he placed the famous Marsilio Ficino. He collected from all parts manuscripts of the Greek, Latin, and oriental languages, the foundation of the Laurentian ,library, and gave every encouragement to the arts of painting, sculpture, and architecture. He also collected statues, vases, gems, and medals, mak-ing all his treasures accessible to the curious and the public.

In the latter period of his life Cosmo withdrew, as much as possible, from the burden of public affairs to his seats at Careggi and Caffag-giolo, where he cultivated his farms with success ; but his happiest hours were devoted to letters and philosophy, and the society to which they inclined him. He was usually accompanied in these retreats, by Ficino, to whom, after having been his protector, he became a pupil in the study of the Platonic philosophy. His piety he displayed, according to the fashion, of the age, by the munificent endowment of numerous religious foundations ; and even erected a hospital at Jerusalem for the relief of distressed pilgrims. The spirit of his government was moderation; and he never assumed a state beyond that of a citizen. Being apprehensive that ambitious alliances would give rise to suspicions that he entertained designs inimical] to] the freedom of Florence, he chose to increase his interest among the citizens by the marriage of his children into the most distinguished families of the republic. Piero, his eldest son, was married to Lucretia Tornabuoni, by whom he had two sons, Lorenzo and Giuliano. His immense weaUh was not the object of envy, because he chiefly expended it upon the public ; and there was scarcely a citizen whom he had not some time obliged by loans of money, never asking the repayment.

Parties were, however, a second time formed in Florence hostile to the predominance of this family. But Cosmo's popularity was not to be shaken; and, while he witiidrew from public business, he retained the influence of liis virtues. He had lost lus second son, Giovanni, on

whom he had placed his chief expectations; his eldest, Piero, laboring under various bodily] infirmities : so that he apprehended that at his own death the splendor of the Medici would cease. A short time ibefore his death, as his attendants were carrying him through the apartments of his palace, he exclaimed ‘ This is too large a house for so small a fjimily.’ His latter days were, how-

ever, cheered by his fellow-citizens, in a public decree, conferring upon him the noble title of Father of his Country, which was inscribed on his tomb. He died, in the prospect of a happier state, we are told, August 1st, 1464, at the age of seventy-five years, deeply lamented by a vast majority of his countrymen,

Medici (Lorenzo de), called The Magnificent, was the grandson of Cosmo, and son of Piero de Medici, by Lucretia Tornabuoni. He was born January 1st, 1448, and was about sixteen years of age when Cosmo died. In early life he exhibited proofs of a superior mind, which was cultivated by a very careful education, under the direction of his mother, one of the most accomplished women of her age. That turn of mind which afterwards gave him a peculiar claim to the title of ‘ Magnificent’ was also apparent in his youth. Having received, as a present, a horse from Sicily, he sent the donor, in return, a gift of far greater value ; and, on being reproved for his profuseness, he remarked that there was nothing so glorious as to overcome others in generosity. He was not less addicted to active sports and laborious exercises than to the studies of the closet, and to polite literature. Tall in stature, and robust in form, Lorenzo had in his person a great appearance of strength ; but from his birth his sight was weak ; his voice harsh ; and he was totally deprived of the sense of smell. At the death of his distinguished grandfather it was thought proper immediately to initiate him into political life. He was accordingly sent to the principal courts of Italy for the purpose of forming a personal connexion with their rulers, and to strengthen the interest of his family. In an interview with Ferdinand of Naples he impressed him with a high idea of his early wisdom ; and the prudence and vigor of

his conduct at home were instrumental in fully restoring the influence and superiority of his house. In 1469 he married Clarice, a daughter of the family of Orsini, and in the same year Piero de Medici, his father, died, Lorenzo immediately, at the request of the citizens of Florence, took upon himself that post of head of the republic which Cosmo and Piero had successively occupied. On the accession of Sixtus IV. to the papacy, Lorenzo, with other eminent citizens, were deputed to congratulate him on the part of the republic. He was invested, on this occasion, with the oflRce of treasurer of the holy see. One of the first pub-lic occurrences after this was a revolt of the inhabitants of Wilterra: by the recommendation of Lorenzo, force was adopted, which ended in the sack of that city, a circumstance he is said to have much regreted. In 1472 he was the means of re-establishing the academy of Pisa, and took up his residence there for a considerable time, contributing to it a large sum from his private fortune. Attached to the Platonic philosophy, he took an active part in the establishment of an academy for its promotion, and instituted an annual festival in honor of the memory of Plato. While thus advancing, in the career of hme and prosperity, a tragical incident was very near depriving him of life; *i.e.* the conspiracy of the Pazzi, a numerous and distin-qiiished family in Florence. The instigators of this foul attempt, of which the object was the assassination of Lorenzo and his brother, were pope Sixtus IV., and his nephew cardinal Kiario : the archbishop of Pisa being their principal agent. Giacopo de Pazzi, the head of that family, gave also his assistance. Tlie atrocious plan was to assassinate the two brothers, while they were partaking of the hospitality of Lorenzo ; but the absence of Giuliano, through indisposition, obliged the conspirators to postpone the event. On deliberation it was resolved that the assassination should take place on the following Sunday, at the elevation of the host, in the church.

The murder of Giuliano was committed to Francesco de Pazzi and Bernardo Bandini ; that of Lorenzo to the sole hand of Montesicco. This office he had undertaken while he understood that it was to be executed in a private dwelling, but he shrunk from the idea of polluting a church with such a crime. Two ecclesiastics were therefore selected for the commission of the deed ! In the month of April, 1478, the young cardinal lliario, apostolic legate, a guest in the palace of Lorenzo, proceeded to the church of the Reharata, since called * Santa Maria del Fiore,' where the victims were present. The conspirators took their stations, and waited with impatience for the signal, when the bell rang — the priest raised the consecrated wafer — the people bowed before it, and at the same instant Bandini plunged a dagger into the breast of Giuliano. On receiving the wound, which was fatal,

he took a few steps and fell, when de Pazzi rushed upon him with incredible fury, and stabbed him in different parts of his body. Such was the violence of his rage that he wounded himself in the thigh. The priests who had undertaken the assassination of Lorenzo were not equally successful : they inflicted only a slight wound, which roused rather than disabled him. He instantly threw off his cloak, and, holding it up as a shield, with his right hand drew his sword, and repelled the assailants. Bandini came up with his dagger streaming with the blood of Giuliano, but was instantly struck down by a servant. Lorenzo's friends in the mean lime assembled round him, and conducted him home. A simultaneous attack on the palace of government, by other conspirators, failed of success, and the people attached to the Medici, collecting in crowds, put to death or apprehended the assassins. Signal and instant justice was inflicted on them. The archbishop of Pisa was hanged out of the palace' window in his robes, and Giacapode Pazzi, with one of his nephews, shared a like fate. Lorenzo endeavoured to restrain the fury of the populace, and induce them to commit to the magistrates the punishment of the guilty. In the mean time the pope, inflamed almost to madness by the defeat of his scheme, excommunicated Lorenzo and the magistrates, laid an interdict upon the whole Florentine territory, and, forming a league with the king of Naples, prepared to invade it. Hostilites began, and were carried on through two campaigns. At the close of 1479 Lorenzo took the bold resolution of paying a visit to one of these enemies, the king of Naples, and, without any previous security, trusted his liberty and life in his hands. The monarch was struck with this heroic act,

■which ended in a treaty of mutual defence and friendship. Sixtus, however, persevered in war, till a descent upon the coast of Italy by Mahomet II.

In the month of May, 1481, another attempt was made to assassinate Lorenzo in a church, but the plot was happily discovered, and the agents were seized and executed. From this time he generally

appeared in public, surrounded with a guard of friends. But the death of Sixtus IV. freed him from an adversary who never ceased to bear him ill-will, and he was able to secure himself a friend in Innocent VIII. his successor. His political conduct, as head of the Florentine republic, was chiefly directed to the preservation of an equilibrium of power between the states of Italy.

Lorenzo also was distinguished both for the encouragement of literature and the arts, and his proficiency in Italian poetry. His works are remarkable for vigor of imagination, accuracy of judgment, and an elegance of style, which entitle him, almost exclusively, to the appellation of the * restorer of Italian literature.' Some of his pieces of the lighter kind became extremely popular ; and his regard to literature in general was testified by the attention which he paid to the Laurentinian library, and especially to the enlargement of the collection of antiquities : for this purpose he employed the services of learned men in different parts of Italy, and particularly Angelo Politiano. 'I wisli,' said he to him, 'that the diligence of Pico and yourself would afford me such opportunities of purchasing books, that I should be obliged even to pledge my furniture to possess them.' Two journeys into the east by Giovanni Lascar produced a great num-ber of rare works. On his return from his second expedition, he brought with him 200 MSS., many of which he had procured from a monastery at Mount Athos ; but this treasure did not arrive till after the death of Lorenzo. On the discovery of printing, Lorenzo was immediately solicitous to avail himself of its advantages in procuring editions of the best works of antiquity ; and, when the capture of Constantinople caused the dispersion of many learned Greeks, he took advantage of the circumstance to promote the study of their language in Italy. ' Succeeding scholars,' observes Mr. Roscoe, 'have been profuse of their acknowledgments to tlieir great patron, who first formed that establishment, from which, to use tiieir own classical figure, as from the Trojan horse, so many illustrious champions have sprung, and by means of which the knowledge of tlie Greek tongue was extended, not only through all Italy, but through France, Spain, Germany, and England ; from all wiiich countries numerous pupils attended at Florence, who diffused the learning they had there acquired throughout the rest of Europe.'

Lorenzo a[)propriatcd his gardens in Florence to the establishment of an academy for the antique, which he furnished with a profusion of statues, busts, and otlier relics of art. The attention of the highest ranks was thus incited to these pursuits ; and that of the lower classes by his liberality. To this institution, more than any other circumstance, Mr. lloscoe attributes the sudden and astonishing

proficiency which,

towards the close of the fifteenth century, was evidently made in the arts, and which, commencing at Florence, extended itself throughout Europe. Here Michael Angelo Buonarotti first imbibed that spirit which was destined to effect a reformation in the arts ; while die study of architecture was encouraged by the numerous buildings which he erected, or induced others to erect, in Florence and its vicinity.

Lorenzo, though of free and perhaps licentious manners with respect to the female sex, was nevertheless an affectionate and attentive father. His eldest son Piero, designed for his successor, was sent, at the age of fourteen, to visit Rome. This close connexion with the pontiff" was with a view to a favorite point of his ambition, the elevation of his second son Giovanni to the cardi-nalate, which, by incessant applications, he prevailed upon the pope to confer upon Giovanni, at the age of thirteen. ' It was,' says one of his biographers, ' a deserved consequence of this prostitution of ecclesiastical honors, that this cardinal, when arrived at the popedom, should, by his levity and extravagance, have given the immediate occasion to that defection from the church of Rome which has so much reduced her authority.' Giuliano afterwards became allied to the royal house of France, and obtained the title of the duke of Nemours.

Having,' says he, ' now obtained the object of my cares, I trust I may be allowed to enjoy the sweets of leisure, to share the reputation of my fellow-citizens, and to exult in the glory of my native place.' This prospect of relaxation and happiness he was not destined to realise. In 1488 he lost his excellent wife; and in the year 1492 the gout, under which he labored, attacked him with such violence, that, while the attention of his, physicians was employed in administering relief, he contracted a slow fever, and sunk, before his attendants suspected danger, into such a state of debility, as precluded all hopes of recovery. Having performed the offices of the church, he had a private interview with his son Piero, with whom he held a long and interesting conversation, preserved by Mr. Roscoe, on tlie state of the republic, the situation of his family, ike. Having composed himself, after his first interview at this time with Politiano, he enquired with great kindness why Pico of Mirandola had not once paid him a visit during his sickness. Politiano apologised for his friend, by assuring Lorenzo that he had only been deterred by the apprehension that his presence might be troublesome. ' On the contrary,' replied Lorenzo, if his journey from the city be not troublesome to him, I shall rejoice to see him.' Pico came to share, for the last time, the interest of his conversation. Lorenzo

expressed his esteem for him in the most affectionate terms, and then changed die subject to [lively topics; expressing, with some degree of jocularity, his wishes tliat he could have obtained a reprieve, until he could liave completed his library. Tiie interview was scarcely terminated, when the priest Savonarolo reminded him, that it was his duty to bear death with fortitude, 'with cheerfulness,' re])lied Lorenzo, 'if sucii be the will of God.' On taking a morsel of food, and being asked how he relished it, * as a dying

man always does,' he said. . Having affectionately embraced his friends, he became absorbed in meditation, till the energies of life gradually declining, and pressing to his lips a magnificent crucifix, lie calmly expired, in the forty-fourth year of iiis age.

Mr. Roscoe sums up his character by describing him as 'a man who may be selected from all the characters of ancient and modern history, as exhibiting the most remarkable instance of depth of penetration, versatility of talent, and comprehension of mind. — Of the various occupations in which Lorenzo engaged, there is not one in which he was not eminently successful : but he was more particularly distinguished in those which justly hold the first rank in human estimation. The facility with which he turned from subjects of the highest importance, to those of amusement and levity, suggested to his countrymen the idea that he had two distinct souls combined in one body. Even his moral character seems to have partaken, in some degree, of the same diversity ; and his devotional poems are as ardent as his Ughter pieces are licentious. On all sides he touched the extremes of human character, and the powers of his mind were only bounded by that impenetrable cir-cle,'which prescribes the limits of human nature.'

Medici (Uypolitus de), natural son of Julian de Medici by a lady of Urbino, was early remarkable for the brilliancy of his wit and the graces of his person. Pope Clement VII., his cousin, made him cardinal in 1529 ; sent him as his legate into Germany to the court of Charles v., and reposed great confidence in him. He was highly instrumental

in raising Paul III. to the papal see; but afterwards conspired against him, on being refused the office of legate to An-cona, which had been promised to him in the conclave. His plot being discovered he fled, and died at Itri in 1535, in his twenty-fourth year, and was supposed to have been poisoned. His house was an asylum for the unfortunate, and often also for those who were guilty of the the blackest crimes. He had a natural son named Asdrubal de Medici, who was a knight of Malta. He never put on the habit of cardinal, except on occasions of public ceremony.

Medici (John de), on account of his bravery and knowledge of military affairs, was surnamed the Invincible. He was the son of John, or Jourdain, de Medici. He first carried arms under Laurence de Medici | against the duke of Urbino, and afterwards under pope Leo X. Upon

the death of Leo he entered into the service of Francis L, which he quitted to follow the fortunes of Francis Sforza duke of Milan. When Francis I. formed an alliance with the pope and the Venetians against the emperor, he returned to his service. He vvas woundeil in the knee at Governola by a musket-ball; and, being carried to Mantua, died in 1526, aged twenty-eight. He was above the middle stature, strong, and nervous. His soldiers, to express their grief for his loss, assumed a mourning dress and standards, which procured them the name of the black band. Cosmo the Great was his only son.

Medici (Alexander de), duke of Florence in 1530, a natural son of Laurence de Medici, surnamed the Younger, nephew of pope Clement VII. and duke of Urbino. He owed his elevation to the intrigues of his uncle, and to the arms of Charles V., who, having made himself master of Florence after an obstinate siege, conferred the sovereignty of it on Alexander, and afterwards gave him in marriage Margaret of Austria, his natural daughter. According to the terms of capitulation granted to the Florentines, the new duke was to be only hereditary doge, and his authority was tempered by councils ; which left them at least a shadow of their ancient liberty. But Alexander, who felt himself supported by the emperor and the pope, was no sooner in possession of his new dignity, than he began to go-vern like a tyrant. His excesses became at last so intolerable that a conspiracy was formed against him, and he was assasinated by his relation Laurence de Medici, on the 6th of January, 1537, in the twenty-sixth year of his age.

Medici (Cosmo de), surnamed the Great, succeeded his relation Alexander after some struggle with the Florentines, who failed in their

attempt to recover their liberty : but his government was so mild and just that they hardly felt . the loss. He joined Charles V. against the French, and as a reward for his services, the emperor, to the duchy of Tuscany, added Piom-bino, the isle of Elba, and other states. Cosmo soon after received from pope Pius IV. the title of grand duke. He died in 1574, aged fifty-five, after governing with equal wisdom and glory. In 1562 he instituted the military order of St. Stephen. His son, Francis-Mary, who died in 1587, was the father of Mary de Medici, the wife of Henry the Great and of Ferdinand I., who died in 1608.

END OF VOL. XIII.

J. Haddoa, PriaKr, Fiiisbiiry.

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Volume XIV (Medicine - Mithridate)

The London Encyclopaedia

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THE

LONDON ENCYCLOPAEDIA.

VOL. XIV.

MEDICINE TO MITHRIDATES.

J. Haddon, Printer, Castle Street, London.

THE

LONDON ENCYCLOPAEDIA,

OR

UNIVERSAL DICTIONARY

OF

SCIENCE, ART, LITERATURE, AND PRACTICAL MECHANICS,

COMPRISING A

POPULAR VIEW OF THE PRESENT STATE OF KNOWLEDGE.

ILLUSTRATED BY

NUMEROUS ENGRAVINGS, A GENERAL ATLAS,

AND APPROPRIATE DIAGRAMS.

Sic oportet ad librum, presertim miscclauei generis, legendum accedere leclorem, at solct ad convivium conrira civilis. Convivator annltitur omnibus satisfacere ; et tamen si quid apponitur, quod huju» aut illiui palato non reipondeat, et hie et ille urbane dissimulant, et alia fercula probant, ne quid contristent convivatorem. Eraimtu.

A reader should >it down to a book, especially of the miscellaneous

kind, as a well-behaved mitor does to a banquet. The master of the feast exerts himself to satisfy his guests; but if, after all his care and pains, something should appear on the table that does not suit this or that person's taste, they politely pass it over without notice, and commend other dishes, that they may not distress a kind host. TVaiuiarion.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITAN A,

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

IN TWENTY-TWO VOLUMES. – VOL. XIV.

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1837.

THE

LONDON ENCYCLOPAEDIA.

MEDICINE.

Lat. medicus, me- dicina; Fr. mede- cine. Physical, or relating to the heal- ing art. Medica- >ment is any thing " used in that art ; a topical application. To medicate, to tincture or impreg- nate with medicine

MED'ICAL, adj.

MED'ICALLY, adv.

MEDIC'AMENT, n.s.

MEDIC AMEN'TAL, adj.

MEDICAMEN'TALLY, adv.

MED'ICATE, v.a.

MEDICA'TION, n.s.

MEDIC'INABLE, adj.

MEDIC’INAL,

MEDIC’INALLY, adv.

MED’ICINE, n. s. & v. a. or any thing of a medicinal nature. Medicinable and medicinal, having the power of healing, or of physic ; appertaining to physic. Medicine is physic ; any remedy prescribed by the faculty : the verb is obsolete, but used by Shakspeare as signifying to operate upon as physic.

A merry heart doeth good like a medicine ; but a broken spirit drieth the bones. Prov. xvii. 22. O, my dear father ! restauration, hang

Thy medicine on my lips ; and let this kiss

Repair those violent harms.

Shakspeare. King Lear. Not all the drowsy syrups of the world

Shall ever medicine thee to that sweet sleep

Which thou owedst yesterday. Shakspeare.

Come with swords as medicinal as true,

Honest as either ; to purge him of that humour

That presses him from sleep. Id. Winter’s Tale.

Every .medicine is an innovation, and he that will not apply new remedies must expect new evils ; for time is the greatest innovator ; and if time of course alter things to the worse, and wisdom and counsel shall not alter them to the better, what shall be the end? Lord Bacon.

The watering of the plant with an infusion of the medicine may have more force than the rest, because the medication is oft renewed. Id.

Accept a bottle made of a serpentine stone, which gives any wine infused therein for four and twenty hours the taste and operation of the spa water, and is very medicinable for the cure of the spleen.

Wotton.

Admonitions, fraternal or paternal, then public reprehensions ; and, upon the unsuccessfulness of these milder medicaments, the use of stronger physick, the censures. Hammond.

Thoughts my tormentors, armed with deadly stings, Mangle my apprehensive tenderest parts ; Exasperate, exulcerate, and raise Dire inflammation, which no cooling herb Nor medicinal liquor can assuage. Milton.

The fumes, steams, and stenches of London, do so medicate and impregnate the air about it, that it becomes capable of little more. Gratint.

Innumerable persons blind, deaf, dumb, lame, and maimed, he restored to the use of their faculties, and members respectively, without any medicinal ap- plications, or any natural means conducible to those purposes. Barrow.

VOL. XIV.— PART 1.

Learned he was in medicinal lore, For by his side a pouch he wore, Replete with strange hermetick powder That wounds nine miles point-blank with solder.

Butler.

In this work attempts will exceed performances, it being composed by snatches of time, as medical vaca- tion would permit. Browne'i Vulgar Errourt.

That which promoted this consideration, and mt- dically advanced the same, was the doctrine of Hip- pocrates. Id. He advises to observe the equinoxes and solstices, and to decline medication ten days before and after.

Id.

The substance of gold is invincible by the power- fullest action of natural heat ; and that not only ali- mentally in a substantial mutation, but also medica- mentally in any corporeal conversion. • Id. The hearts and galls of pikes are medicina'tle.

Walton.

A cruel wound was cured by scalding medicaments, after it was putrified ; and the violent swelling and bruise of another was taken away by scalding it with milk. Temple's Miscellany.

I wish to die, yet dare not death endure ; Detest the medicine, yet desire the cure. Dry den. The second causes took the swift command

The medicinal head, the ready hand ; All but eternal doom was conquered by their art.

Id.

Such are called medicinal-days by some writers wherein no crisis or change is expected, so as to for- bid the use of medicines ; but it is most properly used for those days wherein purging, or any other evacuation, is more conveniently complied with.

Quincy.

To this may be ascribed the great effects of medi- cated waters. Arbuthnot. No present health can health ensure

For yet an hour to come ; No medicine, though it oft can cure,

Can always balk the tomb. Cowper.

1. MEDICINE, from Lat. medico, to heal, in its verbal signification, means, as we have seen, the art of curing, mitigating, and preventing disease; as a substantive it signifies the material employed to effect these purposes.

2. In treating of this subject, as a science and an art, we shall first present our readers with an historical account' of the successive revolutions which medicine has undergone from the earliest periods ; we shall then give a short estimate of its present condition ; engage in the consideration of classifying or arranging disease ; and finally treat of ailments as they occur in practice, en- quiring into their sources remote and immediate, and the methods best adapted to remedy and re- move them.

P

MEDICINE.

PART I.

HISTORY OF MEDICINE. 3. To reason from the general course of na- ture, says an author of whose labors we shall avail ourselves in the present article, it is evident that man, subjected as he is to the influence of a variety of causes which may disorder the action of his organs, must very soon have been obliged to seek for the means of alleviating the pains and of curing the diseases with which he was af- fected. As he cannot seclude himself entirely from the constant agency

of many of those ex- ternal causes ; and as he carries within him several others which are destined to act at particular periods of life, or which may at any time exert their influence ; we may with safety affirm that the first trials of particular remedies bear almost as ancient a date as the existence of man himself. Among the most rude and uncultivated tribes, as those of New Holland, and New Zealand, of Lapland, and Greenland, of North America and the interior of Africa, we find traces of the practice of medicine and surgery. The savages in these countries know how to distinguish dif- ferent diseases, and to apply a more or less suit- able method of treatment ; and they are ac- quainted with the use of several remedies which form no part of their daily food. These un- civilised communities present to us the picture of mankind in their infancy, and give us a lively idea of the original state of all nations.

4. From their first existence, men must have had diseases which they naturally sought to cure or alleviate. To attain these objects they tried a variety of methods. But we may presume that their discoveries were in general very slow, and more frequently the offspring of fortunate acci- dents than the result of rational investigation. Men receiving by tradition a knowledge of the discoveries which had been already made, would soon find themselves obliged to make new ob- servations for themselves, and in this manner their acquisitions would gradually increase. In these early ages all the knowledge of the tribe formed a common stock; and their imperfect arts might be exercised by all those who were endowed with a certain portion of intelligence. Medicine therefore existed before there were any regular physicians. (Cabanis).

5. Whether instinct or actual observation had most to do with the origin of medicinal attempts has been the subject of dispute, but it is most probable that each had a share in the matter ; and, although we must receive as fabulous and un- worthy of full credence several accounts which have been transmitted to us on the subject of men being taught the virtues of herbs by witnessing the instinct of brutes, it is more than probable that some of these narrations have their founda- tion in truth.

6. The necessity of medicine from the ear- liest periods being admitted, says Le Clerc, it may naturally enough be inferred, that both reason and chance might place several remedies in the hands of man; and the most ancient accounts we find extant, respecting the manner in which medicinal virtues were ascertained to exist in certain plants, attribute the discovery of such

virtues to accidental observation. We learn from fabulous history that Glaucus, son of Minos king of Crete, having fallen into a cask of honey, was sought for some time unsuccessfully, until Polydius, a soothsayer, who came from Argos, dis- covered where he was immured. Minos finding this Polydius to be so cunning a personage, be- lieved that it was in his power, if he were put upon his mettle, to restore the young Glaucus to life, and accordingly ordered him to be shut up in the same cask with the dead body for the pur- pose of inducing him to make the experiment of re-animation. While thus confined with the corpse, and finding himself without resource, he per- ceived a serpent approaching him which he im- mediately killed ; soon after another serpent came ; and, regarding the dead body of the first, immediately went out, and returned forthwith bearing a certain herb with which he covered the dead body of his fellow, and thereby restored the animal to life. Polydius directly tried the same experiment on the dead body of Glaucus, and with the same effect.

7. This well known story, taken from Hyginus and Apollodorus, Le Clerc follows up by another, which, as having in it a little less of the marvellous, is of course entitled to a little more credit. Melam- pus while performing the duties of a shepherd, hav- ing observed that his goats were purged while they fed on hellebore, ordered the milk of these goats to be administered to the daughters of Prcetus, who imagined themselves transformed into cows ; the milk .proved purgative to them, and they were cured by it of their hallucination ; and hence has been traced the origin of an opinion which came to be general, that hellebore was not merely a cathartic but that it possessed some specific in- fluence upon disorders of the mind.

8. In another part of his history Le Clerc alludes to the story told by Pliny respecting the hippopotamus, or sea-horse, drawing blood from his body by means of a reed, thus relieving him- self from a plethora, and thus teaching man the art and benefit of artificial blood-letting; and to the account further of the bird ibis administering enemas to itself with its own bill ; and having recorded these with other narratives and intima- tions, he concludes with the following judicious remarks. Besides that fable is more or less founded on fact, every one knows by his own ob- servation on others that the condition of health is greatly referrible to matters whether of diet or luxury taken out of the ordinary course of things; and, if accidental observation be thus capable of teaching the deleterious qualities of certain substances, the same observation would be likely to lead to the discovery of salubrious substances. Thus mankind would come succes- sively to observe, to reason, and to generalise, and thus would experience and experiment in the art of healing be gradually systematised into a

science.

9. We may here incidentally remark, before we proceed with our history, that the simplicity of primeval medicine, and its present condition among savage tribes, have been preferred as ar- guments against the necessity of its complica- tion ; in other words it has been urged that the ancients with their herbs and simples did quite

as well as the moderns who have brought into subserviency the other kingdoms of nature, and have converted medicine from a matter of mere observation and simple inference, into one of ex- tensive reasoning and complicated induction ; but objectors of this kind, even if we allow their correctness as to fact, overlook the circumstance of artificial states engendering artificial wants, and that as law, from a simple consideration of right and wrong, branches, eventually out into code, and precepts, and acts, so does the neces- sity of medicine's complication increase with in- creasing luxury, and become complicated to meet the complicated demands of artificial existence.

10. As, however, medicine was first ' culti- vated by the patients themselves, or by their friends and relations, it becomes a matter of in- teresting investigation to trace the successive steps by which it proceeded from general to par- ticular cultivation ; and to develope the causes and circumstances which have in the course of ages advanced the science and profession to the rank and importance which they now assume and maintain.

11. It must be recollected, as a matter of im- portance connected with this enquiry, that in the very earliest ages, and before the physical sciences had made much progress, events were often considered as having received a satisfactory solution, in respect to their rationale, by referring them to divine interpositions ; no one, indeed, even in the present day, ought for a moment to question that an interposing providence regulates the affairs of the world, but we do not now talk of ' the darts of Apollo' when we contemplate the consequences of a heated atmosphere on the Trojan marshes. But, when such was the mode of settling the matter, it is easy enough to con- ceive that the first men, who came as a distinct order of men to take cognizance of disease and its management, would be those who were the professed media of communication between heaven and earth.

1 2. ' The priests,' says Cabanis, ' soon seized upon the province of medicine, and found it no difficult matter to combine it with their

other in- struments of power. Indeed, the medical and the sacerdotal professions have in reality many features of resemblance. Both bring into action the same principles, hope and fear; and, although vhe objects of these two passions are not the same in the hands of the priest as in the hands of the physician, their effects had, at that time, nearly the same degree of influence in promoting the views of both. Certain it is that medicine, like superstition, exerts on the minds of men an influence proportional to their weakness; and, as the former acts upon more real and palpa- ble objects than the latter, it is found that the most rational and enlightened men can never entirely resist its power. In short, no art pene- trates further into the human heart ; no profes- sion enables its votaries more easily to obtain possession of the most important family secrets ; no species of doctrine (except that, indeed, which relates to the agency of invisible powers) affects so nearly all those fanciful ideas in which the human mind, when it throws off the restraint of reality, is so apt to indulge ; and certainly none

furnishes means more independent of all political revolution, to those who impose upon the credu- lity of the public, and cultivate it, like a fruitful soil, with the utmost care and attention. It was, therefore, natural that the priests should become physicians, as they in fact became ; and in most savage tribes the art is still practised by the priests or by mountebanks.

13. Egypt was the cradle of medicine as it ap- pears to hare been of every other science ; and we hear of Thoth, or Thouth, whom the Greeks have called Hermes, and the Latins Mercury, but about whose actual existence there seems to be some doubt : and the same may be said of Isis and Osiris, which were perhaps rather regal titles and allegorical representations than real existences. At any rate, their history is so mixed up with fable, and one is in such a man- ner confounded with the other, that very little of satisfaction can be obtained with respect to them as cultivators and promoters of the healing art. Some have attributed the invention of medicine to Horus, son of Isis, who was the Apollo of the Greeks, and about whom the early historians speak as a real person. It is to this Apollo that Ovid alludes in his Metamorphoses, making him call himself the inventor of medicine and the subjector of plants to his power in the following well-known lines : —

Inventum medicina meum est, opiferque per orbem Dicor, et herbarum subjecta potentia nobis, i. 521.

14. .ZEsculapius’was called by the Greeks the son of Apollo, and we

find a great deal, both in the historians and poets of the early periods, ot allegorical and metaphorical matter mixed up with the accounts respecting the circumstances of ˆ.sculapius's birth and elevation. Certain it is, that, for a long time, he acquired the ascen- dancy over medicine and medical rites ; and the priests, who were still the physicians of the time, acted in the assumed capacity of priests of TEscu- lapius, and invented charms and effected cures avowedly under this assumption.

15. Temples were erected in different parts of Greece, dedicated to TEsculapius, now deified, and from these temples oracles were issued by the officiating priest, as if emanating from the resident and presiding divinity; these oracular emanations were usually conceived and issued in such sort as to establish their prophetic and ope- rative power in the event of success, and to be susceptible of a double signification, so as to elude exposure, or conceal the imposition, in the event of the prediction not being fulfilled. And in spite of the doubts of the philosophers, and the occasional ridicule of the satirical writers of the times, the mass of the people resorted to the ./Esculapian temples under the full feeling of belief and expectation ; and often returned, satis- fied and cured, from the very circumstance of their faith keeping pace with their wishes.

16. We are told, moreover, that the air res- pired in the country, and surrounding the jEscu- lapian temples, was naturally pure, from the elevation of the soil, and was rendered still more salubrious by the woods which encompassed them. These woods themselves became also the objects of religious veneration ; they were pre- served with great care ; and their sombre shade

contributed much to the awe with which the people naturally beheld the abode of their deities. The temples of yEsculapius, in particular, en- joyed all these advantages, which seemed to be more peculiarly appropriated to them; for an unhealthy abode would have been very unsuit- able to the god of physic. If his advice did not always restore health, it was at least becoming that the patients should contract no new dis- orders at the foot of his altars. In consequence of some prudent precautions in this respect many cures must have been accomplished by the diversions which the patients experienced in the course of their journey to the temples ; by an exercise to which, perhaps, they had been but little accustomed ; by the beneficial

consequences of a change of air ; by the invigorating effects which an elevated situation produces upon man, and indeed upon the generality of animals ; and, lastly, by the still more invigorating effects of hope. / Esculapius acted like a certain descrip- tion of physicians, who possess more cunning than real talent; he established himself in si- tuations the salubrious influence of which left him little or nothing to do ; and he maintained his reputation the better, that he had less occa- sion to labor in order to acquire it.

17. The temples of ˆEsculapius, continues the author from whom we are now extracting, were very spacious ; and within their walls were convenient lodgings for the priests ; but, as the deity did not permit any person to die within them, which certainly would have been very in- decorous, those persons who were afflicted with severe disorders, and women in the last stages of pregnancy, were obliged to remove to the neigh- bourhood ; and they often remained in the open fields exposed to all the injuries of the weather. The deity, too, forbade any part of the offerings and victims to be consumed out of the temples. From this prohibition, which was no doubt, very politic, we see that he was both wise and provi- dent; and had the welfare of his ministers no less at heart than his own fame and character.

18. Of the great number of temples dedicated to TEsculapius the most celebrated were those of Epidaurus, of Pergamus, of Cos, and of Cnidos. The temple of Cos was burnt in Hippocrates' time. The walls and pillars of it were covered with inscriptions, briefly describing the history of diseases, and giving an account of the re- medies which had been successfully employed for their cure according to the advice of the deity. People of affluence had these inscriptions engraved on marble, on metal, or on stone ; the poorer sort had them carved on mere tables of wood. However imperfect these descriptions of diseases, and of the methods of cure, may have been, their collection was nevertheless very va- luable. They formed, as it were, the first rudi- ments of the art; and discovered some faint traces of the method of observation and experiment which alone is capable of placing it on a solid basis.

19. In contemplating the circumstances and particulars connected with and characterising ancient medicine, we are disposed to think that the whole was imposition on the part of the agents, and credulity on the part of the people; but it may be questionrd whether the ./ Escula-

pian prophets and priests did not act as much under the principle of self-deception as that of deceiving the multitude; and, indeed, when

they found crowds of votaries returning from their visits to the temples, with their faith con- firmed and their maladies healed, it was natural enough, in these early times of fanaticism and unfounded belief, that they should come to be- lieve themselves what the people supposed them to be, immediate interposers between them and deity. Knavery is often supposed and charged, even in modern times, when the fact has been that the individuals thus impugned have been acting under the influence of somewhat better motives than those supposed to be in operation. The facts connected with the history of our late prophetess, Joanna Southcott, were sufficiently humiliating and extraordinary ; but it is far from impossible that even this woman was quite as much a fanatic as an impostor, and that she was worked upon by the faith of her followers, so as to actually suppose herself what her disciples gave her credit for being. In any other point of view than that of fanaticism and delusion, it is difficult to realize the systematic procedure of the priests in ancient times with regard to their profession of miraculous powers.

20. In Egypt then, in the first instance, and sub- sequently in Greece, medicine was practised alone by the sacerdotal orders ; and this was in fact the case among the Israelites ; we find in sacred history that the Levites were the persons consulted respecting the management of leprosy and other disorders incident to the age and peo- ple, and ‘ in the porch of the temple of Jeru- salem, a complete formulary of remedies was exhibited, of which Solomon was said to be the author.’ The Essenes, a sect celebrated for the pure and mild system of morality which they endeavoured to propagate among a wicked and hypocritical people, cultivated the science of medicine, not only in order to render themselves more respected, but also in order to discover means to improve the minds of their adherents by rendering their bodies more healthy. Zealous apostles of their doctrine they endeavoured to confirm it by the performance of cures ; and by these means they were often enabled to brave the jealous furies of the Pharisees, those hypocritical and domineering priests. They went sometimes by the name of Essenes and sometimes by the appellation of Sfpairevrat, which signifies healers or physicians.’

2 1 . Chinese pretensions to antiquity always defy any attempts to follow them ; but there were some practices among these people of exceeding- ly ancient date which have been resumed in mo- dern times such as acu-punctuation ; and among the Babylonians and Chaldeans a great deal of their medicine was connected with astronomical investigations that characterised these people. Herodotus, however, speaks of the sick at Babylon as being exposed in public places to the inspection of passers by, who were solicited to

give them advice and furnish them with means of cure ; so that part of the medicine of these an- cient people consisted in something more palpa- ble than astrological influence, or mere calcula- tions from planetary positions.

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22. From the hands of the priests, medicine fell into those of the philosophers. Certain men, of a noble character and more sound under- standing, soon began to direct their attention to the study of the rising arts. At first they em- ployed themselves with those which related to their immediate wants. The science of public and private morals was doubtless regarded by them as belonging to this class ; and accordingly we see them employing their utmost sagacity in the research of its rules, exerting the strength of their judgment in their delineation, and inculca- ting with all the commanding powers of their eloquence the advantages which accrue, both to individuals and society in general, from a ra- tional but entire obedience to those immutable laws. Natural philosophy, astronomy, and geo- metry, which sciences were all in their infancy, became at the same time the objects of their con- templation. From this investigation, superficial as it no doubt was, of the different classes of na- tural phenomena, they acquired the habit of a certain method in their proceedings, which soon became a sort of necessary want to them.

23. When these sages afterwards came to turn their attention to medicine they were able to throw a new light upon the science. Accus- tomed as they had been to arrange in a certain order the different branches of their knowledge, to trace relations between them, and to connect them together, they perceived how requisite it was to class the indigested mass of medical ob- servations, before they could be subjected with advantage to the test of reasoning. And if, on the one hand, in order to discover some connect- ing principle among so great a number of facts, it was absolutely necessary to resort to classifica- tion ; on the other hand it was no less requisite to impress the conclusions which were obtained firmly on the memory, to arrange them, and to express them in the form of general rules.

24. The revolution which these early philoso- phers effected in the medical art was evidently a work of necessity. The time was come for drawing it forth from the recesses of the temples, and for dissipating at least in part the obscurity in which ignorance and quackery had involved it. If these attempts had done nothing more than bring it fairly to light, they would still have the merit of greatly contributing to its progress. From that time forward, a rational system was

substituted in the place of undigested collections of rules ; enterprising geniuses began to connect the principles of the science with those of the other branches of human knowledge ; and its in- timate relation to the different parts of natural and moral philosophy became every day more apparent to minds, whom books could not yet mislead from the path of pure observation.

25. These philosophers then freed medicine from its superstitious and hypocritical character. They transformed an occult and sacerdotal doctrine into a popular science and a common art. This reform was of infinite service both to medicine and philosophy ; but it must be confessed that its happy effects were in some degree combined with serious disadvantages. For, in remedying errors, the reformers often fell into a daneerous extreme; not satisfied with applying to medicine

that general and sublime species of philosophy which presides over all the sciences, and which alone is capable of illustrating their principles and operations, they vainly attempted to transfer to it the imaginary laws of their systems of na- tural philosophy, and various other conjectures which were the most fertile sources of error when thus applied, that the particular objects to which they related had absolutely no connexion with the living system.

26. Thus Pythagoras endeavoured to explain the laws of the animal economy, the formation of diseases, the order of their symptoms, and the action of medicine by the power of numbers. Democritus again referred them to the motions and different relations of figure and position of the primary atoms of matter, while Heraclitus at- tempted to account for them by the various mo- difications of which the ovative and preservative fire of the universe is susceptible. It was but natural that the hypothesis which each of them employed for illustrating the production of ani- mated bodies should be also applied by him to explain the series of phenomena brought to view by their spontaneous evolutions, by the agency of external substances, by the changes of which they are susceptible, and by their final destruc- tion, or that alteration of form which we call their death. Hence arose so many futile theo- ries of which we may find examples in the works of Plato, Aristotle, and Plutarch, and from which the writings of Hippocrates himself are not wholly exempt. Empedocles, for example, the disciple of Pythagoras, affirmed that the muscu- lar flesh was composed of the four elements combined in equal proportions ; he supposed the nerves when cooled by the external air to form the nails ; he thought the perspirable matter and tears resulted from the fusion of the blood, and imagined the osseous matter of the system to proceed from the union of earth and water. Timffius of Locris framed

a new system of cos- mogony, from which he deduced his physiological views and methods of cure. Eudoxus, Epi- charmus, Democedes, &c., adopted the opinions of the Italian school founded by Pythagoras, and their system of physic was supported and guided by that philosopher so celebrated, and yet so little understood, even by the ancients ; but for which, when we consider its beneficial effects in a moral and political point of view, it is im- possible not to be inspired with sentiments of veneration.

27. To conclude : all men of letters, whom a sedentary life and the nature of their labors dis- posed to melancholy habits, cultivated medicine as a subject of meditation upon themselves. Their habitual valetudinary state obliging them often to invoke its assistance, they had the ad- ditional motive of the proper care and preserva- tion of their own health to invite them to the study. Their first acquirements, superficial as they often were, could not fail to prove in active minds the germs of numerous errors. Those among them who did not combine the observa- tion of diseases with their theoretical opinions, such as they had been delivered in the schools by oral communication, or detailed in the small number of written works which existed in those

early times, allowed themselves to he easily de- luded by romantic notions ; and the custom of ranging and systematising all their ideas rendered their errors more serious and dangerous.

28. Of all the philosophers, who at that time devoted themselves to the study of medicine, no one preserved himself more free from the spirit of hypothesis than Acron of Agrigentum in Sicily. This bold and original genius, whom the empirics of later times have regarded as their chief, was desirous to refer the art of medicine to experience alone. Accordingly, he reduced all the reasonings about disease to the appreciation of the different symptoms which admitted of comparison, and to the discovery of analogies from which he observed that we may often draw the indications of cure. But, although he en- joyed a high reputation in his life time, his opinions could not overcome the ascendancy of more po- sitive and dogmatical theories ; and it was not till long after that they became the rallying point of a sect of respectable physicians. Although, too, these opinions were less dangerous when applied to practice than those of his opponents, it is but too certain that a spirit of rivalship car- ried the adherents of both almost equally far beyond the bounds of .reason, which indeed would have easily reconciled them, for the dis- pute turned, properly

speaking, upon mere words.

29. The philosophers of antiquity then both improved and injured the science of medicine. They rescued it from undiscerning ignorance, but they precipitated it into a variety of hazar- dous conjectures ; they delivered it over from the blindness of empiricism to all the rashness of dogmatism. In short, its lot was the same as that of moral philosophy. Medicine at first, as placed in the hands of the poets, exhibited only an assemblage of beautiful images or refined sentiments ; while, in the hands of the priests, it adopted the vague language and mysterious tone of superstition ; and, in the hands of those pri- mitive philosophers whose exertions in other respects claim our warmest acknowledgments, its scattered, confused, and undigested materials were combined and formed into more or less re- gular, and more or less perfect systems ; but it usurped the principles of many other sciences which were themselves but in a crude state ; it shared in their errors, which proved the more injurious to it, as these sciences had for the most part little connexion with it. We may even venture to assert, that it made in some measure the complete round of the false systems which prevailed in the different branches of human knowledge, and which succeeded each other by turns (Cabanis).-

30. We have made this long extract from a modern author, because we think that he has in a happy manner, traced the circumstances of directing the succession of medicine from that of being a symbolical and poetical matter in the first instance, and afterwards a sacerdotal con- cern, into the hands of those men who were named philosophers in consequence of their socking to divine the causes of things, and looking dopper th™ the vulgar into the principles of material phenomena.

31. But philosophers full of desire to penetrate into the .secrets of nature, and engaged in in- vestigations on the subject of abstract truth, were likely enough to prove bad physicians on two grounds. In the first place they could not be supposed to have time or disposition to attend minutely to those details which practical medi- cine demands ; and in the next it is in the very nature of philosophical speculation to force analogies into the mind that are of the most fallacious nature. Medicine, then, first in the hands of poets and priests, and subsequently cultivated by men of general science, awaited the birth of a superior .nind who should as it were stamp a peculiarity on its pretensions, and learn, and teach, and practise it as a distinct and separate branch of pursuit. ‘4

32. It was this which the far famed Hippo- crates did for the science

and art of healing, and on this account he has been styled the father and founder of medicine. Hippocrates was a phi- losopher before he was a physician ; but finding, says Le Clerc, that the speculations of natural science were not so likely to benefit society as the practice of medicine, he only retained enough of his first pursuits to enable him to reason justly on the subject of medicine, which he at length made his principal or rather his only study. The original of our quotation runs thus : ‘ Mais ne jugeant pasque les speculations de cette derniere science (philosophic) fussent aussi utilej a la societ6 que la pratique de la premiere, il ne retint de la philosophic qu’autant qu’il en fallait pour raisonner justement dans la medicine, dout il fit sa principale, ou plutot son unique etude.’

33. Cabanis expresses the same fact in a more diffuse but in a pleasing and instructive manner. We employ in this instance the trans- lated copy of the French author by Dr. Hen- derson. Surrounded from his infancy with all the objects of his studies ; instructed in elo- quence and philosophy by the most celebrated masters ; having his mind enriched with the largest collection of observations which could at that time have existed ; and endowed in fine by nature with a genius which was at once penetrating and comprehensive, bold, and pru- dent; he commenced his career under the most favorable auspices, and pursued it during a period of more than eighty years, with that degree of renown which was equally due to his talents and to the greatness of his virtuous character.

34. Euryphion had just published the Cnidian Sentences. Herodicus too by the revival of gymnastic medicine, the original invention of which was ascribed to JEsculapius, had given to the art a more regular and scientific form. They knew how to observe disease1*, and were ac- quainted with the most general remedies, such as venaesections, emetics, cathartics, and bathing, the use of incisory instruments, and of the actual cautery or fire ; and although a certain routine, numerous false theories, and the influ- ence of superstition, continued to deform the prevailing methods of treatment, yet the glimpses of a happier dawn were perceived at intervals in almost all the branches of medicine.

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35. It was in these fortunate circumstances that Hippocrates appeared as it were on a sud- den, and procured to the Coan school a lasting pre-eminence to which it was doubtless well entitled, since it had been able to produce such rare talents. Amid the sports of childhood he received from the mouth of his parents the elementary notions of

medical science; by viewing diseases he learned to distinguish them; .by witnessing the preparations and employment of medicines, their use and their virtues became equally familiar to him. The first objects which strike the young and curious senses, the first comparisons which they suggest to the infant mind, the first judgments of growing reason, have a greater influence on the remaining part of life, as the traces which they leave, and the habits which they form, are for the most part indelible. It is then that the bent of the charac- ter, and the particular cast or direction of the operations of the mind, are determined. To the fatal disposition to satisfy ourselves with words, and to aflix to those we employ erroneous or vague ideas of the things they were meant to express, may perhaps in a great measure be ascribed the custom of constantly figuring to ourselves objects which we have never seen, and of substituting the fictions of the imagination for the works of reality. A sound habit of judgment depends upon the justness and accu- racy of the sensations; and the organs which are designed for the reception of the latter require culture, that is, a well directed employ- ment. Now as nature or the objects surround- ing us are our proper teachers, and as their instructions differ from those of men or books in this respect that they are always adapted to our faculties, they are consequently the only ones which are seldom or never fruitless, and the only ones which never mislead us. We must therefore in general early familiarise ourselves with the images which are destined afterwards to furnish the materials of all our judgments ; and, with regard to each in particular, the man who devotes himself to it cannot place himself too soon among the objects of his studies, or in that situation which is the most suitable to the nature and design of his observations.

36. Hippocrates was not less favored by cir- cumstances than by nature. The latter had endowed him with the most happy frame of body; the former furnished him from his earliest infancy with every thing which could most successfully contribute to his education.

37. Good sense, joined to the faculty of inven- tion, is the distinguishing characteristic of a small number of privileged men. Hippocrates was of this number. He saw that too much and yet not enough had been done for medicine, and he accordingly separated it from philosophy, to which they had not been able to unite it by their true and reciprocal relations. He brought the science back into its natural channel, that of rational experience. However, as he himself observes, he introduced both these sciences into each other, for he regarded them as inseparable, but he assigned to them relations which were altogether new. In a word, he freed medicine from false theories, and formed for it sure and

solid systems ; this, he with justice said, was to render medicine philosophical. On the other hand he elucidated moral and natural philosophy by the light of medical science. This we may with propriety call with him the introduction of one into the other. Such then was the general outline of his plan.

38. The fame of the existing schools (says Dr. Parr in his Medical Dictionary) was soon eclipsed by Hippocrates, who seemed to have been the first to whom the appellation of physi- cian in its modern acceptation is due. He first separated it from philosophy, gave it the form of a distinct science, and personally observed the progress of disease as well as the effects of re- medies ; on this account he is esteemed the in- ventor of the medicina clinica, Yet perhaps the philosophers who preceded him must not be wholly omitted. We are reminded of Pytha- goras, by the Climacterics, by the critical days, and his recommendation of vinegar of squills in deafness; of his scholar Alcmajon, who first described the eye ; of Empedocles, who, before any other anatomist, dissected with accuracy the ear ; and of Timaus Locrus, who taught that the nervous system was the basis of the whole body on which the nutritious system was gradually extended. Democritus was rather a philosopher and a chemist than a physician, and might have ranked with credit in each class, were the various hints of his labors collected.

39. Of Hippocrates, continues Dr. Parr, it is difficult to speak impartially in a manner that will satisfy his warm admirers, or those who reject every thing that is not of a modern era : and if we look at him as a physician when medicine had scarcely escaped from the trammels of super- stition, the refinements of philosophy, or the dictates of antiquated tradition, our admiration will rise almost to enthusiasm ; for we shall per- ceive sound judgment, accuracy of reasoning, and acuteness of observation, superior to his era or the state of science at that period. But to study and admire Hippocrates at this time is very different. Science has opened newer and more extensive views, diseases are distinguished with greater accuracy, and the remedies as they are more numerous may be more appropriately adapted to the circumstances. If we find a striking description in Hippocrates we admire it as a mark of superior genius, and wonder how the same event could have happened both in Greece and England. Yet strip the fact of the disguise of system and it will be found that pa- tient observation would alone have taught it. He fills however so vast a space in the medical scene that some further notice of him and his doctrines will be necessary.

40. Hippocrates was born in the first year of the eightieth Olympiad,

460 years before the birth of Christ, and was descended from a line of phy- sicians, inheriting the instructions of his father and grandfather, themselves descendants from the Asclepiadae, while his mother traced her ori- gin from the Heraclidae : he died at Larissa it is said at the age of ninety. He first practised physic at Thasus, afterwards at Abdera, and at last in Thessaly ; but his chief residence was at Cos, where the Coan school became for a long

time the successful rival of the Cnidian. All that has been added to these few events is doubt- ful. That his instructors were Ilerodicus or Prodicus, and Democritus, rests only on the at- tention which he has paid to the gymnastic art as well as to anatomy ; and the philosophy of Hippocrates is more nearly allied to the tenets of Heraclitus than of the Abderite. As Hippo- crates was a great traveller, he might have at- tended the lessons of Prodicus in Athens, where he chiefly taught ; and might there have been ac- quainted with his brother Gorgias whom he after- wards attended in his medical capacity in Thes- saly when worn down with oldage ; but we have no records of his having ever practised at Athens.

41. It is not very easy to form a true estimate of the anatomical knowledge and physiological science of Hippocrates. Some of these subjects are treated of in works which are attributed by some to him, and by others aie deemed spurious. Le Clerc, however, has taken pains to distinguish -*ese; and the following outline will be very little else than an abridged translation of the work of that learned and laborious author.

42. The doctrine of the four primary qualities of beat, cold, moisture, and dryness, seems to have %een held by Hippocrates, and of the ‘primary elements air, water, fire, and earth : he also sup- poses, and reasons upon the supposition of a leading principle to which he gives the name of mature, about the operations of which he occa- sionally speaks somewhat vaguely, but in con- sistency with the spirit and temper of the times, which too much confounded the ideas of final with physical or efficient cause ; and which sup- posed the invention of a term the development of a principle. Indeed if we are to believe the treatises de Flatihus, de Carnibus, de natur& Hominis, de natura Pueri, and de Dietzl to be the productions of Hippocrates we must believe that some of his positions respecting the forma- tion of the hard and the soft parts of the body, from the different elements and

qualities and principles in nature, to be of the most whimsical and futile kind.

43. With respect to the anatomical researches and science of Hippocrates it appears, to say the best, very doubtful whether he ever actually wit- nessed the dissection of the human subject. In the book de Alimento we find it stated that the veins originate in the liver, as the arteries do from the heart. In another pact he talks of two orders of vessels proceeding from the heart, namely, the veins and the arteries or rather the roots of these as single vessels. At this time, indeed, the word vein was generally applied to vessels containing blood, and artery to those which were supposed to contain air, Apnjptg, •ITTO row lov atpa rijp«v. In the description of the heart ascribed to Hippocrates we find it stated that the organ is of a pyramid ical figure, of a red color, that it is every where enveloped by a tunic, between which and the heart's sub- stance a small quantity of water is found similar to the urine, that it is a strong muscle, that it has two ventricles, and that it has internal membranes of an admirable structure. And, when he passes from description into the physiology of the heart and connecting vessels, we find some faint inti-

mations of a circulatory movement : all the veins, he says, have a general communication, by which communication nourishment is conveyed through the whole body; and he further supposes or speaks of a rest of vessels — which, say his com- mentators, necessarily imply the notion of move- ment or circulation. It is curious that, when adverting to the return or reflux of the humors from the surface to the centre of the body, he makes use of a word which was employed to express the motion of the tides, ap.iru»Tte ', from which it has been fairly inferred that Hippo- crates although not fully acquainted with the transmission of the 'blood from, and its return to, the heart, had some faint impression or vague notion that such exit and reflux was effected ; indeed the more enthusiastic admirers of the great man concerning whom we are now speak- ing have not hesitated to say that the modern doctrine of the circulation was known to him ; but it is evident, and Le Clerc very properly insists upon this fact when discussing the ques- tion, it is evident that this flux and reflux was considered by Hippocrates as effected by the same order of vessels; and the way altogether in which the subject of the motion of the blood and humors is spoken of has a confused- ness and vagueness of manner, which is very different from the precision and clearness of the present day doctrine.

44. Neurology, or the doctrine of the nerves, as taught by Hippocrates, was perhaps still more vague and indistinct in reference to its compa-

rison with the physiology of modern times. Nerves, tendons, and ligaments, are evidently confounded together in his writings ; and with respect to the brain, and its connexions with other parts of the body, we do not find any thing upon which the modern anatomist can rest with much pleasure, or which modern physiology can recognise as clear and distinct. Hippocrates places the brain among the glands, inasmuch as it appears of the same nature with other glan- dular substances, being like the glands generally white, and friable, and spongy ; and he supposes that the brain charges itself with the superfluous humors of the body as do the other glands, be- ing as they are spongy, and therefore capable of easily absorbing. He moreover imagines its power of absorption from its form and situation, and considers it to be attractive of the body's moisture, which rises into it as vapor, until such time as it becomes surcharged, when this mois- ture is again transmitted to different parts of the body, more especially to the glands, whence come fluxions and catarrhs.

45. With respect to the other uses of the brain, Hippocrates speaks of it in some of his writings, in his book de Morbo Sacro, for instance, as the seat of understanding and wisdom ; although in other places, as in his book de Corde, we find the seat of understanding (yvuftrj) lodged in the left ventricle of the heart. It should be observed that our author speaks of two membranous cover- ings to the brain, the one thick and the other fine in its structure.

46. The organs of sense are described by Hippocrates in the following manner: — The ears have a hole which penetrates as far as a dry and

hard bone, to which is united a fistulous cavity, or an oblique kind of canal, at the entrance of which a very fine and dry cuticle is found, the dryness of which as well as that of the bone pro- duces sound ; the air being beaten back as well by the bone as the membrane. On the organ of smell he thus expresses himself: — The brain being moist possesses the faculty of sending out an odor, or of smelling, by drawing the odor of hard materials in with the air which traverses certain dry bodies ; the brain itself extending into the nasal cavities. In this organ we find no bone as in the ear, but merely a cartilage similar to a sponge, which cannot well be considered either bone or flesh. When treating of the eye, he speaks of small and very delicate veins which are conveyed into the organ by means of a mem- brane which envelopes the brain. These veins carry to the eye a very pure humor which comes from the brain. There are, he adds, three mem- branes enveloping the eye itself ; the outer one the thickest, the middle one

the most tenuous, and the third which preserves the humidity or the humor of the eye is very loose. If the first be injured the eye is affected, if the second is torn or broken it places the organ in great danger, and it projects like a bladder ; but the third is the membrane an injury to which is the most mis- chievous, on account of its office being that of preserving the humor. The rationale of vision is accounted for very obscurely, and a vein is talked of as being sent from the membrane of the brain and conveying a humor which forms diaphonous, and reflecting membranes. It is very obvious, from the mode in which our author expresses himself in reference to these points, that he had no ‘proper conception of the transmission of the optic nerve; and that he confounds the notions of nerve, and vein, and membranes, and humors, in a way that js any thing out precise and clear anatomy or physiology.

47. The muscular fibre and flesh are likewise described with considerable vagueness; he de- scribes the oesophagus as a tube which extends from the tongue to the stomach ; the stomach itself is spoken of as a paunch in which the septic process goes on (KoiXuj aiirrt\ri\ or where coc tion (iritis) takes place ; this coction or digestion being effected, according to him, by the heat of the stomach, which he describes as connected with the liver from which proceeds the necessary heat. It appears that Hippocrates only talks particularly of two intestines, the first attached to the stomach twelve cubits long, always folded and suspended by the mesocolon, which is itself attached to the nerves, which come from the spine of the back, and which pass under the abdomen ; the second intestine is covered with a good deal of flesh, is porous, and terminates at the anus.

48. The liver is described as more abounding in blood than the other viscera, and as having two avenues or gates ; he talks of its division into five lobes, and as being the origin of the venous sys- tem. He speaks of bronchia: as passing from the heart to the liver, together with the great vein of the organ. He assigns to this orˆan, the liver, the office of separating the bile, and, as we before remarked, supplying the stomach with heat.

49. The spleen is spoken of as similar in its form to the impression of a man’s foot, and as receiving a vein which ramifies into its substance. The organ is, he says, suspended by the omentum which it supplies with blood. He says that it is fibrous, soft, and spongy, and that it draws from the stomach by its spongy consistence part of the fluid from the stomach, to which it is attached ; the rest of the fluid being attracted by the urinary bladder.

50. The lungs, according to Hippocrates, have like the liver five lobes ; they are spongy, and at- tract moisture from neighbouring parts. The diaphragm is named by him 0pev«c, under the notion that it was the scat of intelligence, dividing as it were this locality with the heart ; but this office was not universally ascribed to the organ in question, even during the life-time of our au- thor, and it is even contested in a work which has been attributed to Hippocrates himself.

5 1 . The kidneys are placed, by Hippocrates, among the glands ; he speaks, as we have above intimated, of their attracting part of the fluids of the stomach. The vesicula? seminales are men- tioned as bodies lying on each side of the urinary bladder, and containing the semen. The organs of generation are rudely delineated in either sex ; and the mode in which conception and gestation are effected is traced in a very fanciful and hy- pothetical manner. We may probably have to allude to our author's notions on these particulars in the article PHYSIOLOGY.

52. When considering the general principles of health and disorder, Hippocrates refers to the four supposed humors, viz. the blood, the phlegm, the yellow bile, and the black bile ; the impulse or moving power of these several humors being a spirit, which pattakes of the nature of air. The above four humors existing in due proportions, constitute health ; disease resulting from a dis- proportion in either one or more, or an undue impetus in the motion of one or the other, oc- casions disease without reference to change of quantity. The excitants of disease are air, food, and drink, sleep and watching, exercise and re- pose, things whichare expelled from the body, those which are retained, and the passions of the mind. He also speaks of the reception of exterior sub- stances, as of poisons and venomous animals ; but the principal source of disease, according to our author, are aliments and air. Both on the sub- ject of dietetics and of air, Hippocrates there- fore treats largely ; and, in conformity with the spirit of the times, he supposes heavenly influ- ence to have a share in the immediate production of certain maladies, but it must be admitted that he gave as little as possible into the superstitious notion of celestial workings ; and indeed in the book De Morbo Sacro it is expressly stated that we ought not to attach the idea of divine origin to one disorder more than another, for all mala- dies are in one sense divine, and in another hu- man. Respecting, however, the authenticity of thisbook, there are, as before stated, some doubts.

53. The modern distinction of diseases into chronic and acute was observed by Hippo- crates, and he distinguished them moreover into endemic, or those which are peculiar to a peo- ple ; epidemic, or those

which visit masses of

people in a district at certain times; sporadic, or maladies of different characters affecting a people at the same time ; and hereditary, or those disorders which are born with us, and have been transmitted by parents.

54. Crisis and critical days are largely dwelt upon by Hippocrates. He talks of the termina- tions of diseases as being regulated by the con- coction of humors, and of the modes which nature employs to expel these humors from the body after due preparation.

55. The critical periods of our author are formed considerably upon the Pythagorean notion of numbers, and he speaks of every fourth day as having something in it of destinating or regu- lating power. In disorders which he would call exceedingly acute, the coction of the humors becomes completed and the crisis perfect on the fourth day ; the ordinarily acute disease may pass on to the seventh, and sometimes to the eleventh, or even to the fourteenth ; occasionally he talks of acute diseases being protracted to the twentieth, or one-and-twentieth day, and at times even to the fortieth and sixtieth : after this last period the disorder is considered as justly enti- tled to be ranked among chronic affections.

56. After the time of critical tendency is over, in reference to days, Hippocrates supposes the seasons and other circumstances to influence the termination or protraction of disorders ; some, for example, terminate about the equinoctial, others about the solsticial periods ; others are regulated by the stars and constellations ; and there are affections which are influenced by en- tire months and years ; thus certain disorders, incidental to infancy, have reference to the seventh month from birth, and others to the seventh or fourteenth year.

57. Hippocrates does not argue for the abso- lute necessity of crisis in disorders, but he con- tends that the termination of acute maladies without them is not so safe and satisfactory as when they have place. He further recognises and speaks of the mutation of diseases, as when inflammation of one part or organ leaves the plaˆe originally affected, and falls upon another; or as when cancer of the breast is changed for can- cer of the womb.

58. On prognosis and diagnosis the writings of Hippocrates are

exceedingly full and particu- lar. He especially speaks of the physiognomy as indicative of danger or otherwise ; and his statement respecting the appearances of the countenance, in an individual who is about to sink under the violence of a disorder, has become proverbial. The Hippocratic visage is talked of even in the present day. When, he says, the nose is sharp, the eyes are sunk, the temples hollow, the ears cold and drawn back, the skin hard, ex- tended, and dry, and the color of the face approaching to a leaden appearance, death is certainly approaching ; to these sisjns he adds hanging, relaxed, and cold lips. He takes spe- cial notice of the appearance in the eyes. When a sick person is incapable of supporting the light, when he sheds tears involuntarily, when, during sleep, he shows part of the white of the eye, should that not be his habit, or he has no diarrhata upon him, things are for the most part :u a bad state, the last being a particularly unfa-

vorable symptom. A want of the usual bright- ness of the eye is either a sign of approaching death, or indicates extreme feebleness. A sharp, fixed, and at the same time wild look in the eyes, denotes present or approaching phrenzy. When the individual sees red sparkling or clear bodies floating before his eyes, a nasal hemorrhage may be anticipated, or some critical loss of blood.

59. The manner in which the sick lie in bed is especially marked by Hippocrates as demand- ing and deserving observation. If the patient lies on one of his sides with a slight curvature, as in health, we may judge favorably of his state ; on the contrary, if the individual lie on his back, with the arms and the limbs generally extended, and particularly if he is found gradu- ally to slip down towards the bottom of the bed, a motion which proves that the body is as it were acting by its own weight without any muscular resistance, approaching death may be calculated on. Lying on the abdomen, should this position not be the common one, indicates either delirium or pain in the belly.

60. When an individual who has a fever upon him is continually picking with his hands and fingers, and often putting his hands about his face and eyes, as if to remove something that is irritating him, or pulling about the sheets and coverlet of the bed, as if to take things away that are offensive to him, delirium and death may be predicted ; the approach of delirium is also menaced by the circumstance of a person, natu- rally taciturn, becoming talkative; or, on the contrary, when a great talker becomes all at once silent and reserved.

61. Starting of the tendons (subsultus) is marked as an especially unfavorable omen.

62. Frequent or oppressed respiration is a bad sign, as are continued watch ings or want of sleep.

63. The color, the odor, and the consistence of the excrements, are matters of importance to at- tend to : if the faeces are soft, of a reddish brown, and of due consistence, answering in quantity to the ingesta, and evacuating at accus- tomed times, and not of an uncommon odor; the symptoms in reference to this particular are favorable ; the fasces ought also to increase in consistence as the disorder approaches a crisis. Liquid motions may indeed be considered as importing well, providing they are not discharged with much noise, and not rendered in very small quantities, and very frequently. All watery evacuations from the bowels, whether of a white, or very high color, or of a greenish cast, or frothy, or nauseous, are bad. But the worst sort of faecal discharges are those which are black and greasy, and those which are of a verdigris color. That discharge which is actually black, and which Hippocrates considers to be black bile, invariably denotes a very high degree of danger. Indeed, bile discharged in any form unmixed with faecal matter is always a bad symptom.

64. In respect to the urine, that is to be con- sidered the best which readily throws down a sediment of a whitish and equable kind ; the notion of Hippocrates in regard to such urine is that this regular sediment denotes a disposition to what he calls, as above intimated, the coction of the humors. When, he says, thejturine is

cloudy, and does not show a tendency to be- come clear by throwing down a sediment, the humors are in a crude unsettled state. When it is unusually white and clear, a very considerable crudity is denoted, and sometimes a transfer of the bile to the brain. Urine which is particu- larly yellow or red marks a superabundance of bile. Black urine is an exceedingly unfavorable omen, especially if its odor be particularly un- pleasant, or if it be either preternaturally thick, or more than commonly clear. Those urinary discharges which appear to have in them a thick meal, or bran, or small bodies like scales or shells, are unfavorable, and denote a disorder in the bladder or the kidneys. Urine, upon the surface of which oily matter is found swimming, marks a disposition to consumptive wasting of the flesh. The sudden discharge of a copious quantity of urine is for the most part critical. The correspondence of the appearances on the tongue with the urinary discharge is pointed out by Hippocrates as capable of

recognition, and important to recognize ; if for example the tongue is yellow and charged with bile, the urine should be of the same color and condi- tion; on the other hand, if the tongue is red and moist, the urine will be found natural' in its ap- pearance.

65. Matters discharged by vomiting ought to be mixed with bile and phlegm ; those iu which only one of these matters is present are not so favorable. Black, livid, and green discharges from the stomach are bad ; and if they have a particularly strong odor, they denote approaching death. Vomiting of blood is often fatal.

66. Expectorated matter, or that discharged from the chest, is favorable in proportion to the facility with which it is thrown out ; and, during the early periods of pulmonary disorder, it is not amiss to see that discharge of a yellowish tinge ; but if this discoloration continues, or if the matter be acrid, and occasion violent cough, iUis a bad sign. If the expectoration be quite yellow, it cannot be considered good ; and dis- charges of a white, glairy, or frothy kind do not relieve the patient. White expectoration de- notes a due coction, but then this whiteness must not be accompanied by viscosity, nor should the expectorated matter be either very thick, or very transparent. The same observa- tions apply to discharges from the nose. Ex- pectorated matter that is either black, or green, or red, is bad. But the worst sign in pul- monary affection is when the matter which ought lo be thrown off from the chest is retained. Spitting of blood is followed by a discharge of pus, upon which follow consumption and death.

67. Perspiration is favorable when it happens on a critical day, when it is abundant and uni- versal ; but cold sweats are always unfavorable. If sweats are confined to the head and neck we may expect that the malady will be protracted and dangerous. Light partial perspirations either point out the seat of the disease, or denote topical weakness.

68. A soft equable condition of the hypo- chondria and the abdomen always imports well ; if upon feeling over the abdomen any irregu-

larities are found, or if one part is more hot than another, or painful to the touch, we may conclude that there is either external or internal inflammation.

69. With respect to the pulse, it is generally admitted that the remarks of Hippocrates do not correspond in precision on this head with those which are made in reference to other particulars. Some indeed have denied that our author recog- nised the pulse at all in the sense which

we give to the term, that is the ordinary and natural beat of the arteries ; and, with his confused ideas of the blood's flux and reflux, k is conceivable enough that the circumstance of pulsation would not by him be appreciated as it is in modern times ; certain, however, it is, that in the books on Epidemics we read of frequent and strong pulses in acute fevers, and of the trembling, weak, and languishing pulse as indicative of ap- proaching death ; but it must still be allowed that on the subject even of fevers Hippocrates dwells much more upon all other symptoms, especially on the variation and degrees of heat, and on the kind of respiration (both highly im- portant points of recognition) than he does upon the character and circumstances of pulsation.

70. We shall now consider the practice of Hippocrates, or the principles upon which he professed to treat diseases, as well as the reme- dies he was in the custom of employing ; on these heads, however, we shall be proportionately less full than on the subjects of signs and prog- nosis, inasmuch as the maxims and remarks on these last are applicable to all times and all cir- cumstances; while practical or therapeutical medicine varies with varied states of the art, and with the modifications made in disease by time and place.

71. Hippocrates gives the following general principles for regulating medical practice. We must proceed to oppose contrary to contrary ; we must evacuate in cases of repletion, and sup- ply materials where there has been too much loss. We must have recourse to heat in cases of cold ; and meet superfluous heat by refriger- ating measures.

72. We must recollect that there are certain juices or humors which require to be discharged or dried ; others which are to be restored. We must be careful not to be very precipitate in our measures, either of depletion or repletion, either of discharge or restoration. We must not fear- lessly and abruptly meet heat with cold, or cold with heat, nature being an enemy to every thing that is violent or in excess. We must sometimes contract and sometimes dilate, so as to give facility and freedom to the passage of the hu- mors by the first operation, and restrain their too copious discharge by the second. There are occasions too in which we are called upon to sweeten, to harden, to soften, and to render parts finer or more subtle ; sometimes we must give them increased thickness, at other times ex- cite or stir them up, and occasionally it is neces- sary to blunt the sensibility of the body. It is expedient moreover to take good note of the natural tendency of the humors, and to follow nature as much as may be in her course, not to direct upwards what nature disposes downwards,

or lo force in one direction where the natural disposition is to the opposite. We should be solicitous to choose convenient passages for dis- charges, and not permit matter which has been thrown out from vessels to return. Should we have attempted a course of proceeding without success, we must not be too quick in changing our plans of operation. We ought, however, to be ever watchful as to what obviously agrees or disagrees, or what the patient can and cannot support. Nothing ought to be undertaken rashly ; and it is often the part of a prudent physician to stand still and merely watch, without any inter- ference, since nature sometimes cures without the assistance of art, and, when we are doing nothing, we of course are avoiding positive mis- chief. In extreme disorders, Hippocrates pro- poses extreme remedies. What medicaments will not effect, may occasionally be effected by iron (cautery), and what this latter fails of performing may sometimes be accomplished by fire. At the same time, we must not think of uselessly inter- fering when the case is desperate, and beyond the powers of medicine.

7*. In the detail of his practical directions, Hippocrates considers largely the subject of purgation, and he has a notion that the several articles winch are employed as cathartics have the power of attracting as it were the particular something that requires to be thrown off, and thus effecting its expulsion ; that having effected this main operation, of attracting the matter to be expelled, it subsequently takes hold of others ; thus, if a medicine which is given for the purpose of purging off the bile is too strong, it takes hold first of the bile, then of the phlegm, then of black bile, and finally of blood. The purgatives employed by him were many of them of the active or drastic kind, such as hellebore, elateri- um, scammony, colocynth, buckthorn, &c. The doctrine of concoction of humors, Hippocrates applies to purgative operations; and in some cases this preconception must have led him to erroneous timidity in respect to purgative medicinals, and, indeed we find some inconsis- tencies on this point; for in one place he talks of the propriety of purging at the commencement of acute diseases, while in others he speaks of its impropriety, till the humors are sufficiently pre- pared by concoction. Suppositories and clysters were employed by Hippocrates.

74. Bleeding, according to our author, should be instituted under several indications ; in the first place, that of evacuation, or taking off a superfluous quantity of blood; in the next place, that of recalling the

impetus of the fluid from parts where it is going in too large quantities ; thirdly, to procure a more free motion of the blood and spirits generally ; and fourthly, to cool the system. In those maladies which ap- peared to have their seat above the liver, he directed that blood should be taken from the arms, or from some veins in the upper parts of the body ; while, in those disorders the locality of which was lower than the liver, he ordered the discharge to be procured from a vessel in the foot, or ankle, or ham.

7,r>. The practice of taking blood by oupping is also spoken of, and directed by Hippocrates,

both in the dry way, or without previous scaii- fication, and also after scarifying.

76. When purging and blood-letting did not appear to avail sufficiently in diminishing the quantity of superfluous humors, our author had recourse to diuretics and sudorifics ; sometimes simply ordering the bath or wine, to produce an increased flow of urine ; at others, employing one or more of the diuretic species-of vegetables, as garlic, onion, leek, fennel, &c. ;. but, when he wished for a more powerful diuretic operation, he administered cantharides, powdered and mixed with wine and honey. He scarcely mentions any particular sudorifics to be taken into the stomach, and in only one or two places alludes to the practice of provoking sweat, by pouring hot water upon the head. Ytfarof TroXXs icat 0£p/t» Kara rijc KtQaXtje Karaxeoptva.

77. In harmony with his doctrine of humors, Hippocrates talks of medicaments which in- crease or diminish dryness, or which resolve or dissipate humors, without actually purging ; thereby indicating that class of remedies which would in the present day be called alteratives ; and he speaks of drugs which procure sleep; of the mecon (/ JTJKWJ/) he speaks in several places, which was the poppy of the Greeks; but it is curious that he ascribes to this plant generally a purgative quality. There seems in this, as in the instance of hellebore and several other drugs employed by the ancients, reason to believe tnat the names have not been handed down to posterity correctly. Galen informs us that some considered the peplis and spatling poppy for the same plant; and he mentions, in his commen- taries on Hippocrates, that mecon ium and pep- lis were often spoken of as the same thing. In addition to medicines acting thus sensibly, or upon certain principles, Hippocrates alludes to the specific virtues of drugs, or those which pro- duce a particular effect without their modus operandi being at all known.

78. External as well as internal medicaments were employed by our author. Fomentations were employed in various ways; the first was that in which the patient sat in a decoction of herbs, so that the part affected should be as it were soaked by them ; indeed this was a kind of medicinal bath. A second form of fomentation was that of enclosing hot water in a skin or bladder, or in a copper or earthen vessel, and applying-the vessel to the part.affected. Sponges too were employed for fomentation ; and bran or vetches applied in linen bags. These applica- tions were further made occasionally in the dry way, as by heated salt or millet in bags. Va- porous fomentations were also employed by Hip- pocrates, of which we find an example in the first book on Female Maladies. He threw bits of red hot iron into urine, and caused the patient to receive the steam from below. His intention in applying these fomentations was to warm, resolve, and dissipate; to draw out peccant humors, to assuage pain, and open or close pores, according as the materials employed were relaxant or astringent. Fumigations also were much em- ployed by Hippocrates; and we find pitch, and sulphur, and other things, employed in this way for the purpose of bringing away phlegm from

the fauces, &c., in quinsies and other affections about the mouth and throat. Gargles too were used by him. And oils were recommended, in the way of friction, to mollify and ease pain, and resolve tumors. We find him farther speak- ing of ointments and cataplasms, both of the cooling and resolving kind. Powders were also employed externally, such as those used for re- solving fungous excrescences, 8cc.

79. Pharmacy, or the art of compounding or preparing medicines, was evidently cultivated by Hippocrates; and it appears that he prepared medicines himself, or at least ordered their pre- paration in his own house by his servants ; this indeed was common to the physicians of his time, pharmacy then not being, as it is now, a distinct branch of practice, but the physician being at once a practitioner in pharmacy as well as in surgery.

80. Before quitting our account of the medical practice of Hippocrates, we shall add that he gave particular attention to diseases of females, under the notion that the womb, according to one of his axioms, is the cause, or at least the regulator, of almost all disorders to which the female frame is obnoxious. Hippocrates, indeed, imagined that the womb was not only susceptible of re- laxation and descent, but he

thought it capable of being extended in several divisions up as far as the liver or the heart, and even the head. We find a great number of remedies specified, in his book on female diseases, for these supposed affections of the womb ; and he made much use of pessaries, which were occasionally smeared with oily, or stimulating or aromatic substances, according to the indications of treatment. He also recommends injections into the womb in ‘he case of ulcers of that organ, as well as in some other disorders of the part.

81. Hippocrates, as above intimated, was a surgeon as well as physician ; indeed the latter included the former in these times, the arts not having, as we have also above stated, yet been divided. We shall, however, defer a history of the surgical precepts and practices of our author till we treat of SURGERY in particular; and shall terminate our account of the ‘ father and founder of medicine,’ by extracting his maxims concerning medicine and physicians in general.

82. Medicine has long since been established, and, as many things have already been discovered, so are we put in the way of discovering several others, if we are fitted for the investigation, and follow the old track of observation. He who rejects every thing that has been already done, and branches out into a new road, boasts of having discovered novelties, but deceives both himself and others.

83. Medicine is the noblest of all arts ; but it is one of the least respected on account of the ignorance of those who practise it, and of those who judge rashly concerning it. And what fur- ther injures the art is this, that it is the only one in which there is no other punishment beyond shame for those who abuse it, and those who thus dishonor it are insensible of shame. These in- dividuals are a species of actors, representing themselves to be what they are not in reality : they are very numerous.

84. In this, as in other arts, there ace good and bad artificers. The art is of great extent; life is short, opportunity easily escapes (O|DC), experience is deceitful, and judgment difficult. Not only must the physician do his duty, but it is requisite that the patient and those about him do theirs; and every thing, to insure success, must be disposed in the best order.

85. To arrive at a high degree of acquirement in medicine the following conditions are neces- sary : — A natural aptitude, opportunities of in- struction, study and application from early life, a docile and well regulated mind, diligence, and time.

86. A physician ought not to be above learn- ing from the meanest persons the results of ex- perience ; for it is by multiplied observations collected together that the art is constituted.

87. Some are in the constant practice of find- ing fault with others, without reaping any other advantages than that of making a vain parade of their knowledge. It appears to me that more wisdom is manifested in finding out useful things, and in perfecting previous observations, than by trying to bring into disrepute, among the vulgar, what ability has produced, and experience con- firmed.

88. Those who impugn medicine on the ground that many die under the hands of phy- sicians, in general have as much reason to blame the patient as the physician ; but why not impute incurableness to the distemper, rather than want of skill to the physician ?

89. Physicians certainly are often in fault; but those that are the least so ought certainly to be the most esteemed.

90. The most skilful and best informed among physicians are sometimes deceived by false analogies.

91. Distempers that are obscure and doubtful are judged of rather conjecturally than by art; but even in these cases the experienced physician has an advantage over one that is not.

92. One physician approves the thing of which another disapproves : it is this which exposes the art to the calumny of the vulgar, who are dis- posed to consider it altogether vain, and to com- pare it with the augurs, of whom one says of the same bird, that if it appear on the left it is a good sign, and its appearance on the right is ominous; while another says directly the reverse.

93. In no one instance ought we to speak po- sitively of the success of a medicine, for the mi- nutest circumstance may give rise to variation, and cause a distemper to be protracted and dan- gerous beyond expectation.

94. The intention of medicine is either to cure disease, or at least to mitigate its virulence ; but maladies which are incurable ought not to be un- dertaken, whether their being incurable depend upon the nature of the sickness, or arise from the destruction of the organ the malady has fallen upon ; for it is not in the power of the medica- ment to reorganise.

95. A physician ought to be frequent in his visits, and exceedingly

attentive to every mi- nutia.

96. It is expedient for a physician to have the appearance of health in his countenance ; for

the inference is apt to be made, that if he have not health himself he cannot give it to others.

97. A physician ought to be attentive to pro- priety in his habits, to possess a gravity of demea- nor, to be moderate in his actions, and chaste and modest in his conversation with females ; he ought not to be envious, unjust, nor a lover of dishonor- able gain : he should not be a great talker, but nevertheless ready to give a prompt answer with suavity to every proper question. He should be sober, patient, and ever ready to do his duty ; he should be pious without being superstitious, and always conduct himself honorably both in his especial calling and in the general conduct of life.

98. It is not discreditable to a physician, when he feels a doubt about the method of treating a oase, to call in the aid of another opinion.

99. As it regards remuneration, a physician ought always to act according to the ability of the patient. On some occasions pecuniary re- ward ought neither to be asked nor expected ; on the other hand the fee may occasionally be given and received in advance, that the patient may with more confidence commit himself to the care of the physician.

100. Those who have considered medicine as having God for its author, have in my mind considered justly. Physicians and philosophers have this in common, that they have the know- ledge of the Divinity forcibly impressed on their minds.

101. Such, says Le Clerc, are the principal maxims given by Hippocrates respecting medi- cine in general, and the duty of its professors. The reader is left to judge for himself on their merits, and physicians may make what use they please of them. It appears from these maxims that there were many physicians in existence at the time when Hippocrates wrote, and but few good ones. It is also evident that consultations were used in his time.

102. Before we quit altogether the part of our history which refers to

the ‘ Coan sage,’ it may be right to say a few words on the subject of his writings, and on the question respecting the ge- nuineness or spuriousness of those productions which have been attributed to our author.

103. Under the name of Hippocrates, says Dr. Parr, we have received works of very dif- ferent value. Those of his predecessors and suc- cessors are confounded with his, partly from his having appropriated some of their remarks, in part from the high character he acquired, and from several of his descendants having retained his name. The chief cause, however, of the many spu- rious works attributed to him, is the avarice of the collectors of Ptolemy, who, when he founded the library of Alexandria, endeavoured to obtain at the most extravagant rates the works of every author of reputation. Every thing under the name of Hippocrates was eagerly received, and it was thought of little importance whether they proceeded from the first, second, or third of that name, so that the reports were not sifted with mi- nute discrimination. To distinguish the real works of Hippocrates has been consequently a problem of no little difficulty. At the expiration of 500 years this task was attempted by Galen, who, with an intimate knowledge of what the succes-

sors of Hippocrates had written, possessed a dis- criminating genius and a critical discernment of the style and manner of the Coan sage, which pe- culiarly fitted him for the task. Mercurialis, a man of the most extensive erudition ; Haller, a physician of vast information, capable of the most incredible labor ; and Grumer, possessed of all the indefatigable diligence of his native place, labored in the same field. They have assumed as a principle that Hippocrates was a man of singular abilities, extensive information, consummate candor and modesty. By these tests they have tried every imputed work. Though perhaps the principles might not be readily con- ceded, yet, as they will certainly point out to our attention the most valuable works, we shall give the result of their labors.

104. The undisputed works of Hippocrates are said to be the first and third books of the Epidemics, two books of the Praenotiones (a dif- ferent work from the Praenotiones Coacae, pub- lished by Elzevir, in 1660, by Duretus at Paris, and with commentaries by Hollerius at Leyden, which is very certainly spurious), containing the • Prognostics and the second book of the Prorr- hetica ; De Dieta in Acutis, in opposition to the Cnidian sentences ; the Aphorisms ; De Aere, Aquis, et Locis ; De Naturfe. Hominis ; De Hu- moribus purgandis; De Alimento; De Arti- culis ; De Fracturis ; De Capitis Vulneribus ; De Officina Medici ; De Locis in Homine. This is nearly the enumeration

of Haller ; but Galen and Haller seem to have admitted tracts among the Hippocratic works with too great facility. Grumer, who like Haller considered brevity, gravity, and the absence of theoretical reasonings, to be the true test of the genuine writings of Hippocrates, differs in the applica- tion. He admits the Oath, but rejects the trea- tise De Natura Hominis, De Locis in Homine, De Humoribus, De Alimento, and De Articulis. Whether the Oath be rejected or admitted is of little importance, since it must be considered rather as an object of curiosity than utility. The first of these rejected works was admitted with hesitation by Galen and Mercurialis, as contain- ing many passages very distant from the manne- and doctrines of Hippocrates ; but it was re- tained as containing some facts of importance. The second, though admitted by Galen and Cae- lius, and though it agrees in general with the practice of Hippocrates, has been suspected on account of some passages of a very different de- scription. Haller only asserts that it may be his work ; and Mercurialis, who ascribes it to Hip- pocrates, thinks that he did not live to com- plete it.

105. Grumer and Mercurialis reject the tract De Humoribus, but add that it merits attention. It has indeed been commended in every age, and illustrated with commentaries by Galen, Du- retus, and Gunzius. The tract on Aliment on the contrary imitates only the terseness of Hip- pocrates, but betrays the author to be of a later era by the doctrine respecting the arteries and veins. The book on the joints is evidently the work of Hippocrates, or at least of the author of the tract De Fracturis, and universally admitted. It contains also an account of the luxation of the

thigh, which the history of medicine uniformly attributes to Hippocrates, by recording a contro- versy between him and Ctesias on tins subject.

106. Yet even the undisputed works of Hip- pocrates must be received with some hesitation. The criteria by which they are decided are, we have said, not infallible ; for they assume a de- gree of uniform excellence which perhaps few have possessed. The tract De Aere, Aquis, et Locis, shows the author to have been a Euro- pean ; and various passages, even in the most genuine works, may be adduced to prove that interpolations have crept in. Where then can we draw the line ?

107. The style of Hippocrates, says Le Clerc, is very concise, which makes it frequently diffi- cult to comprehend his meaning ; to this may be added, that it is grave, and Erotian remarks that there is a similarity between his phrases and those of Homer.

108. His language seems mainly Ionic. Ga- len observes that the style of Hippocrates in- clines somewhat towards the Attic; and he adds that some have considered him as writing in the old Attic.

109. There were several physicians contem- porary with him of considerable note in their time, but of such inferior importance in history as scarcely to require notice in the present place. We may mention merely the names of Phaeon, Euryphon, Philistion, Ariston, Pythocles, Phile- tas, Acumenus, and ˆ.geineus. The sons of Hippocrates were Thessalus and Draco; Polybus was his son-in-law; the first enjoyed the greatest reputation. Ctesian was also a relation of Hip- pocrates, and contemporary with Xenophon.

110. Diocles was the first in medicine, subse- quently to Hippocrates, to make much noise in the world ; and on this account he was called by the Athenians the second Hippocrates. A frag- ment of his is quoted by Galen, which contains a close description of dyspeptic and hypochon- driac disorders ; his theory of that affection is, that those who are the subjects of it have a super- fluous quantity of heat in the veins, which re- ceive the nourishment from the stomach, and that the blood in these veins is consequently thickened, and that thus nourishment is pre- vented from being distributed through the body, remaining crude upon the stomach and passing the greatest part of it into the lower belly. It is curious to observe in Diocles, an allusion to stomach disorders similar to what is at this very period (1827) the subject of controversy. He states that some conceive that in these affections there is an inflammation at that orifice of the stomach ‘which is connected with the bowels, and that this inflammation occasions a hindrance to the passage of the aliment, and causes the in- flation, heat, and other symptoms characteris- ing the disorder. Now, whether in dyspepsia, after it has some time existed, inflammation of the stomach be or be not present is, as we have said, a controverted point among several physi- cians of the present day. See the several au- thors who have lately written on dyspepsia, Wilson Philip, Paris, Johnson, and Uwins.

111. Diocles made considerable progress in anatomy considering the impediments of the

times in which he lived ; but the first great pro- moters and improvers

of this important part 01 medical and physiological science were Erasis- tratus and Herophilus.

112. There seems some uncertainty respecting the precise period in which Erasistratus lived. Eusebius places it about the 131st Olympiad, which commenced at the year of the world 3714 ; but several parts of his history present discre- pancies with respect to this alleged time of his birth ; for instance, he is stated to have been in great reputation during the time of Seleucus Nicator, who died in the 124th Olympiad. Re- specting the part of Greece which gave him birth there seems also to be considerable uncer- tainty ; some have stated it to be Cos, the island in which Hippocrates was born ; but it would seem more probable that this supposition has been grounded upon the similarity of the name Cos, and Coa ; which last, according to Suidas, was the real birth place of this celebrated man.

113. It seems to be pretty certain that, before the time of Erasistratus and Herophilus, human bodies had not been anatomically examined ; and it follows of course that these individuals had opportunities presented them by the permission to investigate human anatomy of a far superior kind to any enjoyed by their predecessors.

114. It is to Erasistratus that we owe the just intimation of a distinct order of vessels in the mesentery as conveyors of chyle ; and he with Herophilus were the first to give any thing like a correct account of the brain and nervous sys- tem. It has indeed been asserted that Erasistra- tus recognised two orders of nerves, the one for sensation, the other for motion ; and that he de- scribed the first as hollow, and taking their origin from the membranes of the brain, while the others originated in the brain itself; but he after- wards spoke of all the nerves originating from the brain itself. He was the first also, according to Galen, to describe, with any thing like accu- racy, the membranes which are found about the orifices of the heart, and he speaks of the veins and the arteries as deriving their origin from the heart ; but he considers the latter as channels of air, and he supposes respiration to be the pro- cess through which air is supplied to the arteries. Some have attributed to him the knowledge of the circulation, but he does not appear to have even been aware of the reason of a double heart. His notion of digestion was that of attrition, as opposed to the concoction and humoral doctrine of Hippocrates ; and he differs from Hippocrates in his explanation of the mode in which the kid- neys perform the office of separating urine from the blood. He talks moreover of the division of the veins in the liver for the formation of the bile.

115. In his practise Erasistratus was more partial to fasting and abstinence than to blood- letting and purging; and his opinion of disease generally (or rather of febrile disorders) was, that it was occasioned by such a plenitude of the veins as to cause the blood in them to flow into the arteries, and thus to give rise to inflam- matory commotion.

116. Respecting the time at which Herophilus lived there seems to be the same uncertainty as

in reference to Erasistratus, some considering him as the contemporary of this last, some mak- ing him his predecessor, and some his successor.

117. It was at Alexandria, the capital of Egypt, and under the sanction of the Ptolemies, that both Erasistratus and Herophilus conducted their dissections.

118. Herophilus was the first to point out the optic foramina and nerves, and he speaks still more satisfactorily than Erasistratus respecting the vessels on the mesentery, as being distinct in their (Economy and office from the general ven- ous system. He pointed out also the retina of the eye, and compafed that cavity in the brain which goes at present by the name of the fourth ventricle, to the extremity of a writing pen ; and described the union of the sinuses, formed by the dura mater; to this day this junction is called the torcular of Herophilus.

119. This author is said to have been the first who described, with any degree of precision, the pulse ; and he was so particular in reference to this point, says Pliny, that he contended for the necessity of a knowledge both of geometry and music, in order properly to appreciate the dif- ferena of pulsation produced by age and by dis- order. Le Clerc, however, contends that this remark of Pliny was founded upon a vulgar error, which attributed this position to Herophi- lus, because he was the first to make use of the word pvOpof in application to the pulse. Indeed the precision and science here spoken of seems, as Le Clerc justly remarks, to be inconsistent with the account that has been given, by Galen, of Herophilus, viz. that, in respect to practice, he was half an empiric. Galen actually ranks him among the empirics.

120. Herophilus objected to the prognostics of Hippocrates, and it is surmised that he did so on account of very little attention having been comparatively given by Hippocrates to the pulse. He did not expatiate much upon the curative part of medicine; but it is remarkable that he pointed out particularly palsy of the heart as being a malady which often produced sudden death.

121. It was very shortly after the time of Erasistratus and Herophilus that medicine came to be divided into three parts, the dietetic, the pharmaceutic, and the chirurgical ; yet it is ob- servable that, even after the division was acknow- ledged, the same authors treated /of each, the proportion of their attention to one or the other branch being regulated by fancy or by incidental circumstance. The Pharmacopolists of the an- cients seem to have been a class of men distin- guished from the professors of any of the other branches, and the herbalists were a still different and lower branch.

122. Now also arose the sect of physicians called empirics, who particularly opposed them- selves to the anatomical schools introduced by Erasistratus, Herophilus, and their followers. Se- rapion of Alexandria was the first openly to con- tend that the science of medicine is and ought to be a mere matter of observation, and that anatomi- cal and physiological knowledge is incapable of affording any real aid in the treatment of disease, i'hiliaus indeed, who was from the island of

Cos, is said to be the primary instigator of the empirical creed, and it lias even been said that Herophilus was the first to intimate to Philinus the doctrine of experimental observation as op- posed to theoretical reasoning.

123. Of Serapion's followers the most famous was Heraclides of Tarentum, who somewhat de- viated, it is said, from his predecessors, since he commented on the works of Galen, and dealt in those compositions which seemed to indicate some kind of a priori reasoning as to their sepa- rate and combined effects. This inconsistency is charged upon Heraclides by Caelius Aureli- anus, who asks how nature or mere accidental observation could instruct men in the compo- sition of medicaments, which seem in the ab- stract to have so little of correspondence.

124. The question of empiricism and dog- matism is very well discussed by Celsus in his Preliminary Discourse to his Treatise on Medi- cine, and we recommend its perusal to our young readers, both on account of the fairness and ability with which the investigation is

pur- sued, and the elegant and classical language in which the discussion is clothed.

125. We are now to speak of the introduction of medicine into Rome, or of its transference from Greece to Rome ; which, in the infancy of its establishment, was not only indifferent to the reception of the sciences and the fine arts, but was actually jealous of copying the refinements of the Greeks under the apprehension of their eventually leading to effeminacy and weakness. The Romans were said to be nearly 600 years without any medical aid beyond what rude empi- ricism or blind fanaticism bestowed ; and, keep- ing free from the refinements of their neighbours, they of course did not stand so much in need of the physician's assistance as in after times, when the luxuries of peace took place of the rugged- ness of war, and the love of arms ceded to the love of science and art.

126. Rome, says a modern author, formed by the rude tribes of ferocious banditti, wanted for many ages little more than those chirurgical aids which their mode of life rendered. indispensable. Epidemic fevers were, however, at times violent and fatal, from the Pontine marshes which were at no great distance from this capital of the world. Yet, for nearly 600 years, they were said to be without medical aid, and their only re- sources to have apparently been blind empiri- cism, superstitious charms, or religious cere- monies. Temples seem to have been erected to Febris ; and their most destructive enemy, thus raised to the rank of a goddess, was wor- shipped. In various parts of the city subordi- nate deities of the same kind were introduced ; and no less than three goddesses, Intercidona, Pilumna, and Devirra, were propitiated, by offerings, to confine Sylvanus, who was supposed to be inimical to women in child-bed. In the year 321, ab urbe condita, a temple was erected to Apollo for the health and safety of the Roman people; and in 470 TEsculapius, or rather his emblem, a snake, was brought to Rome by a solemn embassy, sent for the purpose to Epidau- rus. The snake took refuge in an island in the Tyber, and there the temple of the god was

erected. This fact is of considerable importance in the history of medicine, since it proves that the worship of TEsculapius was continued in Greece at that era ; and consequently that traces of record from which as a fountain Hippocrates drew a great part of his observations were still preserved. Some of the votive tablets, hung up

in the new temple, are preserved by Gruter, and of a date so late as the age of the Anto- nines ; but these are in Greek, and seem to have owed their origin to the gratitude or superstition of some Greeks who, at that time, resided in the city.

127. It indeed appears singular that while Rome was so little distant from Naples, a Greek city which traced its origin to the Rhodians, among whom ./Esculapius was worshipped, should have had no traces of medicine, especially as the Pythagorean philosophy was brought from thence, or from the further provinces styled Magna Graecia, to the Roman kings. The testimony of Pliny, however, is positive ; nor is it repelled by Dionysius of Halicarnassus, who remarks in two distinct epidemics, viz. of the years 282 and 400 ab urbe condita, that the disease was so vio- lent as to baffle the skill of the physicians; for such would be the language, whatever the medical aid might have been. The stern patriotism of Marcus Cato seems to have prevented the in- creasing influence of the Grecian physic, and from authority or complaisance Pliny fixed the period of 600 (strictly 535) years during which no physicians were to be found in Rome. It must be obvious that this could not be strictly tnie; but some resources, either ridiculous or su- perstitious, must have been sought for when disease o«mrred. The dietetic system, the vir- tues of cabbage, adopted from the school of Py- thagoras, and the superstitious attachment to the Asclepiadae, could not have sufficed ; but we find little to substitute in their place. The Roman records fail us, and the authority of Cato is su- preme. We mean not, in this account, to allude to a law, said to be introduced by Cato, prohi- biting the Grecian practice, (for, at the time of the arrival of Archagathus from Greece, he was but fifteen years old) ; but, to his influence in preventing the increase of the prevailing fashion. The fame of Archagathus quickly faded ; for although at first styled Vulnerarius (healer of wounds), he was soon stigmatised by the appel- lation of Carnifex (executioner). Of the prac- tice of Cato, who wished to supersede the Grecian system, we have hints from Pliny, Plutarch, and his own remaining works. He did not enjoin abstinence, but allowed his patients to eat vege- tables. Pliny says cabbage, exclusively, ducks, pigeons, or hares. In fractures and dislocations his remedy was a charm, consisting of hard words without a meaning. The English reader may find some amusement on this subject in the memoirs of Martinus Scriblerus.

128. The bad success of the severer practice of Archagathus soon rendered his successors more gentle in their operations; but some re- mains of the active Greek surgery continued to prevail, we learn from Plutarch, who informs us that when C. Marius suffered the extirpation of the varices of one leg without a groan, he de-

clined the attempt on the other, saying that the advantages did not compensate for the sufferings.

129. Numerous works have been written to prove that physicians at Rome were slaves, li- berti, or foreigners. The opponents of this opinion have been equally voluminous. We must, as usual, give the result of our enquiry without engaging in the controversy. It seems clear that the greater number of practitioners were of the description mentioned, but it is equally certain that many were of a superior character. Archagathus himself was received at first with great ardor, and a house purchased for him ; nor on the decline of his credit was he ap- parently deprived of it. He was also raised to the rank of a Roman citizen, and the Aquilan law declares, that if any physician neglects a slave after any operation he shall be pronounced guilty of a crime. By the same law an action will lie against a physician, who, by the unskilful use of the knife, or of medicine, shall kill a slave, and Ulpian decides that a midwife in the same circumstances shall be pronounced equally guilty. These regulations must relate to free men, and the Aquilan law is confessedly anterior to the age of the Caesars ; for all physicians were by Julius Caesar raised to the rank of Roman citizens. Varro is also explicit on this subject, when he discusses the question, for what farms it is preferable to have artificers, among whom he reckons ‘medical assistants, occasionally hired, and to what kinds it is better to have slaves at- tached. In the time of Cato also the Phoenicians had been driven from Sicily by the Romans, and the Macedonians from Greece. The Grecians had therefore recovered a great share of their former liberty. As their language was fashion- able, their manners pleasing, their demeanor obliging, perhaps approaching to servility (Ju- venal), it is not surprising that they should flock to Rome, nor that they should be favorably re- ceived.

130. We are now called upon in the order of time to mention Asclepiades, who was the founder of a new sect of medicine called the Methodic, and who explained all the laws of life and the phenomena of disease upon the principle of the Epicurean philosophy, or rather of the philosophy of Democritus extended and improved by Epicurus. By means of corpuscles and pores, Asclepiades explained every thing. H astonished the people, and was sometimes suc- cessful in effecting a cure. He laughed at the ideas of Hippocrates on critical days; he ridi- culed his patience in observing nature in order to aid her, or supply her wants ; and termed his system a Meditation upon Death.

131. In some consistency with the philosophy of Asclepiades do we

find his medical practice. Gestation, friction, and the employment of wine, constituted the three main items of his curative plans, which were all so many means of opening the external and internal pores of the body, and causing the juices and corpuscles to pass from one part to the other freely, and to make their exit liberally.

132. It should seem that the anatomy of As clepiades was not very correct or extensive, nor was his physiological reasoning entitled to much

commendation. We have spoken of him as the founder of the Methodic sect, but this honor is more strictly due to Themison who succeeded him ; and whose system though in some measure harmonizing with the corpuscular philosophy, and re- gulated by the principles of Asclepiades, was rather, if we may so say, fibrous, than porous ; for he divided diseases into those of contracted fibres, those of relaxed fibres, and those of a mixed condition of fibre ; in the first he directed evacuants, in the second astringents, and in the third a mixture of both, or rather to meet by the one or the other class of medicaments the most dangerous symptoms.

133. Thessalus, who lived under Nero, about fifty years after Themison, further modified the methodic system especially in its practical bear- ings; to him has been ascribed the introduction of the metasyncrisial method of treatment, and of causing his patients to abstain from aliment during three whole days, in order to effect a thorough change in constitutional conditions. But it seems that Soranus was most esteemed among the methodical physicians, as having brought the principles of the sect into the greatest degree of practical perfection. This Soranus lived under the emperors Trajan and Adrian. His writings are lost, but their substance is retained by Caelius Aurelianus, who avows that his own works are very little more than a translation of those of So- ranus— a translation, for Caelius Aurelianus wrote in Latin. He was indeed an African by birth, ac- cording to the most common opinion, but the precise time at which he lived is uncertain.

134. Our limits will not allow us to engage in a lengthened description of the methodic system as it appears in the writings of Caelius Aurelia-

nus : indeed there is in it altogether so much of fanciful and wild, that we should be occupying our time and pages to very little purpose, by tran- scribing its principles in detail, and we shall con- tent ourselves with the following quotation from Dr. Parr, in reference to the leading doctrine of the methodic school, as, says this author, the cycles of the methodists are often mentioned in medical works, we shall give a short description of the meaning.

135. The cycles were periods supposed to con- sist of three days each, or combinations of three, and during these the same plans were continued ; but at the end of each cycle the exertions were increased, so as at last to arrive at the most ac- tive measures. The resumptive cycle consisted of common foods ; the metasyncritic of a more acrid and stimulating diet, with frictions, baths, rubefacients, sternutatories, &c. Themison we have said was the principal inventor of this part of the methodic system of medicine. ‘ The cyclus vomitorius was distinguished into two, as the vomits accompanied the sparer diet of the first, or the more stimulating diet of the second. Each cycle consisted of four diatriti, though sometimes prolonged to sixteen days; the ad- ditional diatriton containing four days.’

136. The reader will perceive, in the Asclepia- dxan or methodic theory, traces of what we shall afterwards speak of as the humoral doctrine pro- pounded by Boerhaave ; and of the system of sol id ism or fibrous pathology advocated at

length and with much ingenuity by Hoffman, and taught with some modification by the cele- brated Cullen .

137. The episynthetic, eclectic, and pneu- matic sects of physicians, followed those of the methodic, but their respective peculiarities, as consisting merely in some niceties of bad meta- physics, need not be here dwelt upon ; it may suffice to say that the episynthetics affected to reconcile the various discordant opinions of dif- ferent authors, the eclectics proposed to select from each system the good and practical, and the pneumatics added a governing or spiritual prin- ciple to the corporeal or material qualities already recognised; which principle regulated every thing, and occasionally induced disease.

138. Arctaeus was ˆthe most noted writer among the pneumatic sect of physicians ; indeed he is the only author of this sect whose works have descended to modern times complete. It seems uncertain at what precise period Arctaeus lived, some have supposed him contemporary with Galen from the circumstance of his never men- tioning that author, nor that author him. The principal clue that we have to the

discovery of the time in which Arctaeus flourished is the dia- lect of his writing, which is the Ionic, and the circumstance of his being quoted by Paul Egi- netus and Ae'tius, which proves that he was prior to them. If indeed Arctaeus could be proved a contemporary of Galen that would settle the point ; for the time in which this last writer lived is as we shall immediately see well known. The writings of Arctaeus appear to us to be among the most valuable of ancient records. We may here remark that there is some uncertainty also witli respect to the time at which the celebrated Latin writer Celsus lived, some considering him as having been born under the reign of Augustus, others under that of Tiberius, while others again suppose him to have lived so late as the reign of Nero, or even of Trajan. The purity of his style would be almost sufficient to prove him of the Augustan period, and there are other circum- stances which favor this presumption. It is curious that Celsus, although one of the best writers on medicine that either ancient or modern times have produced, does not appear to have been himself a medical practitioner. He talks indeed of his observations, but it is supposed that he was merely an observer. Some indeed have gone so far as to imagine that the volumes of Celsus, to which the reader will recollect we have already made allusion, are translations of some Greek author whose name has been lost ; for this opinion, however, there does not seem any thing like a foundation ; indeed the purity of the style, and the general aspect of the writings of Celsus, would be sufficient guarantees for their originality. We must here repeat our recom- mendation to the medical student to familiarise himself with the works of this classical author, both on account of the information with which they are pregnant, and the pure Latinity in which they are penned.

139. We come now to speak of the famed Galen, who was born in the second century of the Christian era, under the reign of Severus, and who, for the space of 1500 years, was re-

garded as the oracle rof medical science and practice. The birth-place of this celebrated in- dividual was Pergarnus a town of Asia Minor ; he received the best education of the time under the auspices of a parent, who was himself devoted to philosophy and the belles lettres, and began the study of medicine so early as his seventeenth year, having been it is said directed thereto by a dream of his father.

140. At the time when Galen was born the several sects of physicians,

the most conspicuous of which we have just named, were contending for pre-eminence, some practitioners declaring themselves partial to one, some to another, while the eclectics as we have intimated, as indeed their name implies, without attaching themselves to any one code of doctrines, professed to be guided in their philosophy and practice by what of good they found in any of them. To this sect, or rather to these excluders of sects, Galen pro- fessed himself attached ; but he did not exclude all authority ; on the contrary, he avowed his de- sign of restoring the Hippocratic method of con- sidering the objects of medicine, and went so far as to declare himself a disciple and ex- pounder of Hippocrates, who he conceived had been misunderstood or misrepresented, even by those who professed themselves his followers. In commenting however on the works and doctrines of Hippocrates, Galen himself seems to have occasionally given way to the exuberance of a lively imagination, and he seems to have bor- rowed some of his notions, in respect to ani- mating principles, and regulating essences from the pneumatics.

141. Galen, says Dr. Parr, wrote very dif- fusely on every part of medicine, hut he added only dress and ornament to the system of Hip- pocrates. In fact minute distinctions, refined speculations, and abstract reasoning, is the whole for which the medical world is indebted to him. They did not lead Galen himself from the path of truth, but they had the most fatal influence on his successors, who speculated when they should have observed, and reasoned when they should have acted. The doctrine of concoction, the most fatal idea which ever occurred, was com- pletely established in the school of Galen.

142. This systematist followed Hippocrates in recognizing three principles in an animal body, viz. the solid parts, the humors, and the spirits ; he talked also of four humors, viz. the blood, the phlegm, the bile, and the black bile ; the spirits he divided into the natural, the vital, and the animal ; the first being nothing else than a subtle vapor rising from the blood, and drawing origin from the liver; these carried to the heart meet with the air we take in by breathing, and become the vital, which themselves are con- verted into the animal by the action of the brain; these several spirits answer to, and become the instrument of three sorts of faculties — the first or natural having its residence in the liver, and serving for nutrition, growth, and generation ; the second, the vital, being situated in the heart, and communicating heat and life to all parts of the body ; while the animal faculty is lodged in the brain, which, joined with the rational, dis- tributes feeling and motion through the instru-

mentality of the nerves, and presides over all the inferior faculties. lie

supposes three species of actions effected by these three faculties ; viz. the natural, the vital, and the animal. He di- vides the actions of the system moreover into internal and external. The internal actions of the animal faculty being imagination, reasoning, and memory ; and the external, the five senses of seeing, hearing, tasting, smelling, feeling, with sentiment, and notion generally. The internal actions of the vital faculty are the violent pas- sions, such as anger, while the external ones are the pulsation of the arteries, and the distribution of blood, and communication of heat and life throughout the frame. The internal actions of the natural faculty are sanguification, digestion and its consequences, and even desire ; the ex- ternal ones are the distribution of the venous blood for nourishment, augmenting, preserving and propagating the species. Besides these general faculties, Galen speaks of other more particular ones which reside in different parts of the body, and which apply to the several de- mands of these several parts. The stomach, for example, digests by means of its concocting faculty, it attracts nutrition by its attractive fa- culty, it retains the aliment by its retaining, and discharges it by its expulsive faculty. If we ask what is the primum mobile of all these faculties and functions, Galen, with Hippocrates, replies, it is nature.

143. Health, our author maintains, depends upon the due adjustment of all these faculties, upon the regular distribution of the humors, the proper symmetry of the organic parts, and the harmonious union of the whole ; which the reader will be ready to exclaim, is, after all, only to say that health is health ; and indeed very little more is predicated by these circuitous modes of expressing absolute circumstance than would be made out by the use of the most common ter- minology ; nor should we have detained the reader with the above sketch, principally bor- rowed from Le Clerc, of Galenian philosophy, were it not that it is incumbent on us, while pro- fessing to give the history of the science, to dwell on the prominent features by which such history is characterised ; and did we not feel that the curious, in tracing things to causes, are likely to find an interest in ancient metaphysico-patho- logy, if we may be allowed the term, from the cir- cumstance that much of ordinary language, in re- ference to common as well as medical matters, is deducible from the pseudo-philosophy of ancient times. The great error, it will be seen, that per- vades the whole of these assumptions, and terms, and inferences, is the localising of presiding powers, the substitution of terms for the exposi- tion of fact, and the confounding of final with efficient cause.

144. When Galen, however, descends from his metaphysics, and discourses on the essence of disease as consisting of plethora and cacochymy his doctrines become more tangible in the way of

discussion; and we may shortly state that he imagines these two circumstances, fulness of vessel and depravation of the humors, to be the two great origins of diseased states. In con- sistency with the Hippocratic doctrine, to which

we have already referred, of the four assumed humors, Galen considers that, beside general plenitude beyond the grade of health, as it re- gards the blood- vessels, there may exist a bilious, a phlegmatic or pituitous, and a melancholic plethora ; but he makes this distinction between the sanguineous and the three other species of plethora : viz. that when either of the latter ex- ists, either separately or conjointly, it mixes with the blood and causes a cachomytous condition of the humors, the morbid condition of the system which thence results being marked by excess of heat, or cold, or dryness, or humidity, or acri- mony, or sharpness, or saltness, or sweetness, or any other quality. Even of general plethora he admits of two kinds — the one relative to the vessels, the other to the powers of the system — the former being present when the blood is ab- solutely superabundant, the other existing when the forces of the body are only equal to the pro- pulsion or management of a certain quantity of blood, and the quantity then becoming, relatively to the powers circulating it, superabundant.

145. On symptoms, diagnosis, and prognosis, Galen treats pretty largely : but we do not find matter under these heads sufficient to detain our readers. Indeed, both as it respects causes and signs and distinctions, there appears to us a good deal of mere verbiage, and certainly no improve- ment upon his master Hippocrates. On the va- ieties of pulse he is rather more interesting; but even in this particular we find fancy and conceit occasionally to take the place of observation and truth. We may understand the minuteness, nowever, with which Galen attended to the cir cumstance of pulsation, from his having pointed out among others the mouse-tail kind of beat, by which he meant to designate that sort of pulsa- tion which seems as it were to slide through the fingers in the manner of a rat or mouse’s tail, and which strikes the different fingers with varied degrees of power.

146. In respect to the practice of Galen we may remark, in the first place, that blood-letting was employed more generally by him than by

Hippocrates. He was the first to talk of the precise quantity of blood to be taken in this and that disorder. The principles upon which he directed blood-letting were similar to those of Hippocrates : viz. to lessen fulness, to drive it from parts affected, and to cause revulsion. When the patient was in circumstances to de- mand bleeding and purging, at the same time, he commenced by the former — which, by the way, may be generally stated not only a good practice, but as an important principle of practice.

147. Anodynes and soporifics were in greater use by Galen than Hippocrates ; internal sudo- rifics were not much employed by him ; he oc- casionally gave specific medicines, or those the modus operandi of which he professed not to un- derstand ; but, for the most part, he professed to administer medicaments rather from a principle of philosophical inference than from mere observa- tion, and in this particular, as pointed out by Le Clerc, there was a considerable difference between mm and Hippocrates.

148. Galen's anatomical knowledge was of course more extensive and accurate than that of

Hippocrates, inasmuch as the actual inspection of human bodies, though still effected with diffi- culties and obstructions, was certainly occasion – ally had recourse to, and we have already stated it to be a doubtful point whether Hippocrates had, even in a single instance, enjoyed the op- portunity of human dissection. Galen divides the body into four parts — the abdomen, the tho- rax, the head, and the extremities. The contain- ing parts of the abdomen he describes as the skin covered by the epidermis, or outer skin, the membrane under the skin, and the fat : these are the parts common to this cavity and to other portions of the body, while the parts peculiar or proper to the abdomen are the abdominal mus- cles, the peritonaeum, the epiploon, the stomach, the intestines, the mesentery, the liver, the spleen, the kidneys, the ureters, the urinary blad- der, and the generative organs. This division of the intestines is that which obtains even to this day, namely, into duodenum, jejunum, and ilium; caecum, colon, and rectum. His physio- logy of assimilation is expressed in the following manner : — The mass of aliment, having arrived in the intestines, is met and received gradually by the meseraic veins, which have the power of attracting the chyle mixed with this mass, in the same manner that the roots of trees draw their nourishment from the earth; they also com- mence the conversion of this chyle into blood, and carry it to the liver. After the chyle has thus been separated from the alimentary mass the rest of the mass becomes excrement, and is voided by the anus. The liver Galen recognises as the organ

principally destined to the formation of blood, and as the origin of all the veins of the body. The spleen is considered as a tissue of vessels like the liver, but being different in the kind of vessels of which it is composed — the latter being principally made up of arteries, while the liver is formed merely of veins : he speaks of the spleen as attracting the black blood from the veins of the liver, thence drawing its nourishment, and transmitting the superfluous portion to the stomach by means of a short vein.

149. We have a description given of the kid- neys, and of their blood-vessels coming from the aorta and the vena cava ; the ureters are also described as transmitted from the kidneys and terminating in the urinary bladder, which has its sphincter for preventing involuntary discharges. He speaks of the organs of generation in the male and female as being the same, with the ex- ception of difference in size and position ; and his theory of generation supposes a mixture and combination of the semen of the female with the semen of the male.

1 50. In describing the anatomy of the thorax, Galen speaks of the diaphragm, and of a mem- brane which comes from the parieties of the chest and furnishes the same covering to the lungs and heart that the peritonaeum does to the abdominal viscera : he speaks also of a separat- ing membrane between the two cavities of the chest. When describing the heart he speaks of its straight, transverse, and oblique fibres ; he de- scribes the pericardium or enveloping membrane of the organ, speaks of the auricles and ventri- cles of the heart, of its valves, and point* out

the difference between the foetal and adult heart in reference to the distribution of its vessels. He speaks of the lungs as formed of a parenchyma- tous substance, similar to the liver and the spleen : he mentions the trachea as of cartila- ginous formation, points out the laryngeal car- tilages, speaks of the situation and office of the epiglottis, describes the thymus gland, but is ob- scure both in his account of the mode in which respiration is performed and of the vascular connexion of the heart with the lungs.

151. When on the subject of the brain, Galen speaks of the pericranium, of the five sutures, of the dura mater and its sinuses, of a fine or choroid membrane under the dura mater, of the larger and smaller brain, of the ventricles, plex- us choroides, pituitary and

pineal glands, &c. ; and here we have a good deal of wild speculation concerning the use of these several parts of the brain, such as the ventricles receiving and con- veying away superfluous moisture, and receiving air from without and preserving the animal spirits in a proper condition. As to the general office of the brain, our author considers it the seat of the understanding, and as giving origin to the nerves. He speaks of the nerves from the cerebellum as principally appropriated to motion, while those from the larger brain are for the sentiments. He speaks of seven pairs of nerves — the optic, the motores oculorum, the lin- gual, the gustatory, the auditory, the sixth pair immediately following these and giving origin to the recurrents, and the seventh going mainly to the muscles of the tongue. From the spinal marrow he recognises sixty pairs of nerves ; the organs of sense are described with some degree of minuteness, more especially the eye; for it is remarkable that in Galen's account of the interior of the ear he is extremely defective : he does not even describe the Eustachian tube, which was discovered and described many years previously to the time in which he lived.

152. Galen speaks of arteries, veins, and nerves as three distinct kinds of vessels ; he says the nerves convey sensation and the faculty of mo- tion through all the parts of the body ; that the veins and the arteries both convey blood from the centre of the body to its circumference ; but that the blood of the veins, which is the grossest, serves to nourish parts, while that of the arteries, being more subtle, is for the purpose of vivifying them.

153. Lastly, we may state in reference to the anatomy of our author, that his description of the bones and muscles is occasionally correct as well as minute ; but at times there appears to be reason to suppose that he takes his account from apes and other animals whose external form comes nearest to man, for want of opportunities whence to describe the actual anatomy of the hu- man subject.

154. The epoch of Arabian medicine is so well though briefly given by Cabanis, in his Sketch of the Revolutions of Medical Science, that we shall use the freedom of transcribing the section of that work which refers to this parti- cular.

155. From Galen to the time of the Arabians, says the author just named, medicine appears to

Lave revolved in the circle of the opinions which we have seen successively prevail among the Greeks. Its condition during the continuance of the eastern empire is little worthy of attention. We might perhaps in this interval find some ob- servations worth collecting with respect to the hospitals which were at that time established at Constantinople, and in several other cities of Greece, in Europe and Asia; but this subject has but a remote connexion with that now under consideration.

156. The Alexandrian library, which had been formed by the unremitted care of a long succes- sion of princes friendly to the cause of learning, was burnt during the war between Caesar and Pompey. A violent insurrection having taken place in the city, Caesar ordered the ships thai were in the harbour to be set on fire. The fire communicated on a sudden to the buildings of the library, and not fewer than 400,000 volumes were consumed by the flames.

157. However this loss was in a short time replaced, at least as far as it could well be. An- tony made a present to Cleopatra of the library of Pergamus, which contained 200,000 volumes. This stock was by degrees augmented ; the books attracting men of letters, and the men of letters, on the other hand, created an influx of more books. In this manner Alexandria became again the emporium of the sciences and arts.

158. Medicine, in particular, was taught there with much success. Students from all quarters of the globe resorted to it to receive the instruc- tions of the most celebrated masters in the world ; and this school, which had been founded in the happiest age of Greece, was

still enjoying an undiminished degree of credit when the con- quest of Egypt by the Saracens took place.

159. Amron, who commanded the expedition, was desirous to save the library ; the answer of Omar is well known. Thus a treasure of incal- culable value to the whole human race perished through the barbarous fury of Mussulmans.

160. Yet the proscription was less general with respect to books of medicine, of natural history, and of natural philosophy. Some few escaped destruction either on account of the in- terest which the most stupid men take in the science which promises them health or an allevi- ation of their complaints; or, as some writers are of opinion, on account of the idea which generally prevailed in the east, that they would learn from them the art of making gold.

161. The first versions of these books whic'> appeared were in the Syriac language ; for the Arabian translations are of a later date. The works of Aristotle and Galen were those fo*. which the Arabians evinced the most enthusiastic admiration. They translated them with the greatest care, and commented on them in differ- ent ways and with different views. Their subtle minds were admirably adapted for the Peripate- tic system of metaphysics, and for that farrago of abstract propositions which bears down the small number of just and ingenious views it contains. Their literati, who were as fond of pillage as their warriors, appropriated to them- selves the ideas that were to be found in works

of little note ; and sometimes did not scruple to lay claim to whole books, only taking care to suppress the name of the author. Even their most celebrated writers are not altogether free from this reproach.

162. To the Arabians we are indebted for some important improvements in the art of pre- paring medicines. They introduced into prac- tice the use of mild cathartics or lenitives : and Rhazes, an Arabian physician, is the first who describes the small-pox. The moderns, no doubt, have far surpassed him in the observa- tion of the different characters it assumes, and of the appearance it exhibits according to the age, the temperament, the state of the body, and the epidemical constitution prevalent at the time when the disease occurs ; but it is delineated with much accuracy in his writings ; and till the time shall come when the practice of inoculation (simplified as it has been by the beautiful disco- very of Jenner) shall have completely

effaced it from the catalogue of diseases, Rhazes and some other Arabians who have treated of this disorder (by the way we may remark that Cabauis is not correct in saying that Rhazes was the first to de- scribe the small-pox), will corttinue to be read with much profit.

163. The works of Hippocrates were translat- ed into Arabic at the same time with those of Aristotle and of Galen. But his simplicity, his precision, his doctrines founded upon experience, that prudent philosophy and rigid method which observes with care the footsteps of nature, were far from exciting the same degree of enthusiasm as the scientific pomp and imposing luxuriancy of the two others; and indeed the Arabian sys- tems of physic have always retained this cast, for in them we look in vain for that genius and that delicacy of discernment which are to the science of medicine what taste is to the polite arts.

164. If we regard merely the absurdity of the enterprise, and the stupid ferocity which gave birth to it, the crusades were nothing more than a cruel and superstitious disorder of barbarous times. But we must at the same time admit that they became very powerful means of weak- ening and diverting the force of feudal tyranny ; and, above all, that they tended to enlarge the intercourse between the ignorant Europeans and the Saracens, who at that time were more enlight- ened. It also appears that we are indebted to them for the first notion of the municipal system ‘ of law. It was at Jerusalem that a class of ci- tizens suddenly emerged from amid the Christian armies, and that their chiefs, by conferring upon them different functions of the magistracy, were enabled by their aid to keep in subjection those bands of turbulent nobles who till then had known no authority.

165. Besides, the better informed part of these nobles, who returned to Europe, brought with them a number of new ideas. The flourishing aspect of the towns and palaces, inhabited and embellished by the Arabian chiefs, and the lux- ury and conveniency which they exhibited, had naturally inspired them with new desires ; and either from this circumstance, or from their con- nexion with the Genoese and Venetian mer- chants, the crusaders began first to perceive the

value of the arts, and afterwards that of the sciences which elucidate them, or of the litera- ture which enlivens them, which serves them for a guide, and forms, as it were, their necessary ac- companiment ; and soon diffused a taste for them through the western world.

166. The unfortunate remains of the Alexan- drian school, which had escaped the fury or rapacity of the Saracens, were collected by the

emperors of the east. While the Arabians en- deavoured to promote the advancement of sci- ence in Asia and Spain, Greece retained some faint traces of her former splendor. The scenes of so many glorious exploits, of so many feats of genius, and of the industry of its ancient in- habitants, were still before their eyes. The first productions in the most beautiful language that ever was spoken were in the hands of everyone; the monuments of which the avarice of the Ro- mans had not been able to deprive them, and those w-hich the luxury of the emperors of Con- stantinople had raised, at a vast expense, sup- plied their livery imaginations with ideas that favored the development of ill the mental facul- ties ; and, if it had not been for the theological disputes which the folly of princes had kindled, their genius might have shone with a lustre at least as strong as can be expected to emanate among a people that had lost its liberty.

167. It will have been observed that in the above account, taken from Cabanis, the author scarcely alludes to any other physician than Rhazes, who was indeed the great luminary of the Arabians ; but, before his time, Isac, Sera pion, and Avenzoar flourished ; then afterwards Avicenna wrote very voluminously, and Averr- hoes, Alsaravius, and many others, become con- spicuous by their works. What the Arabians principally did for medicine was the introduction of several new drugs which the east supplied ; but even on this point, as well as in reference to the literature of the art, a great deal was often assumed as novelty which, as above intimated, only consisted in change of nomenclature, or in unacknowledged copies from the Greeks and Romans; nor was the plagiary detected until the time when the Europeans received back, partly by the crusaders and partly by the Sara- cenic invasion of Spain, that learning which had emigrated and so long been confined to the eastern part of the world. It is a curious fact that the Europeans, at the time to which we are now alluding, actually first became acquainted with the works of Hippocrates and Galen through the medium of Arabic translations.

168. Historians usually at this epoch have in- troduced to the notice of their readers the par- ticulars of Jewish medicine. The Jews migrating to Spain with the Moors, and still constituting a separate and distinct people, opened schools at Toledo, Grenada, and other parts, and became celebrated as physicians. They became the sub- jects of persecution; but, in spite of objections raised against them, continued, for a long time, to maintain their ascendancy in public repute, especially in the northern parts of Europe. Scarcely any of their works, however, remain as memorials of the ground of distinction which they so long retained ; and they at length became

lost and amalgamated (we now speak of them merely as physicians) with the people among whom they sojourned and associated ; and there are no particulars upon which we need at all rest, until the time when chemical medicine came into vogue. What is called alchemy was of Arabian origin. It was in the east that those dreamers first began to speculate and to operate who believed in the transmutation of different metals into gold, and in the existence of a some- thing, could it but be found, which had the power of prolonging the duration of life to an unlimited period. In the researches set on foot to obtain these secrets, and accomplish these ob- jects, many useful facts and principles inciden- tally unfolded themselves ; and as the fanaticism of the crusades was followed by collateral and unlooked for good, so did the folly of the alche- mists work out many of nature's secrets, which but for the extraordinary impulse now alluded to might have still remained unknown. But not only did the general fanaticism of the times, but the fanaticism and folly and rudeness of one in- dividual, and that an unlearned man, operate a considerable change upon the character and complexion of medical speculation ; and, like Brown in a later period, did Paracelsus at the beginning of the sixteenth century effect a very material revolution in the science and art of healing. This extraordinary man, says Cabanis, whom the solitary practitioner cited by Bordeau calls the greatest fool of physicians and the great- est physician of fools, was unquestionably the prototype of mountebanks — a perfect pattern of pride, madness, and impudence. From the ob- scurity of the alehouses of Basle he practised upon the credulity of princes, and even of some men who were in other respects very enlightened for their age. Leaving these disgraceful haunts, and at- tended by a multitude of infatuated adherents, he poured forth a volley of lies, absurdity, and abuse, against his rivals. He proscribed every thing that was not his — he cried, with a frantic voice, * Away with Greek, Latin, and Arabic !' and he publicly burnt the works the fame of which he was desirous to destroy.

169. Such was Paracelsus, who fancied him- self a great man because his name was oftener mentioned in all parts of Europe than that of his contemporaries. Since that time the severest justice has succeeded this infatuation, and there is not a single physician whose opinion is allowed to have any weight who has not perceived the in- consistency of his ideas, and the extravagance of his pretensions. How often have all the odious and ridiculous features in his conduct been ex- posed and detailed ! and yet justice compels us to acknowledge the real

services which he ren- dered to science ; the utility of the remedies he first introduced into practice, or which he em- ployed with more boldness and success than his predecessors ; and that peculiar sort of sagacity he possessed, which, without meriting the name of real genius, prepares the mind for certain dis- coveries to which a more cautious mode of pro- cedure never could have led.

170. Paracelsus had perceived the principal errors of the ‘prevailing systems of physic, and had some distant idea of the reforms which they

required; and, if his natural disposition had allowed him to do justice to those whom he im- pudently copied, while he was abusing and re- viling them; if he had not been constantly obliged to work upon the passions of the multi- tude which surrounded him, he no doubt would have been able to promote to a great degree that revolution which was sooner or later to effect the revival of the true science of medicine in Eu- rope.

171. It cannot be questioned that the specu- lations and dogmata of Paracelsus very consider- ably influenced the medical doctrines and practice of the times in which he lived ; and, although perhaps the most respectable portion of his con- temporaries and immediate successors preserved their faith in Hippocratic and Galenic medicine; the chemical mode of reasoning on pathology, and the application of chemistry to medicinal composition, came to be very generally admitted soon after the period at which Paracelsus first announced chimerical novelties,’.and broached his strange compound of alchemic, astrological, and magical pretensions.

172. Van Helmont is the next of the chemi- cal physicians who demands notice Jn this place. This celebrated individual had consumed a great part of his youth in studying the works of the alchemists. To him has been ascribed by some the first discovery of factitious airs, and, al- though there is some error in this unqualified ascription, there cannot be a doubt that much credit is due to him for the mode in which he considered the doctrines of aeriform existence. He was undoubtedly an independent observer, and an original thinker, and we shall here tal.e occasion to make an extract frum his writings, which indeed we have already presented to our readers in the article CHEMISTRY ; but which, as remarkably illustrative of the workings of an ingenuous and ingenious mind, and as by no means inapplicable to our present purposes, we may here not improperly again introduce.

173. ‘ In 1594,’ says Van Helmont, ‘ I finished my courses of

philosophy, but upon seeing none admitted to examination at Louvain who were not in gown and hood, as though the gar- ment made the man, I was struck with the mockery of taking degrees in arts. I, therefore, thought it more profitable seriously and con- scientiously to examine myself, and then I per- ceived that I really knew nothing, or at least nothing that was worth knowing. I had, in fact, merely learned to talk and to wrangle, and there- fore refused the title of M. A., finding that nothing was sacred, nothing true; and I was unwilling to be declared master of the seven arts, when my conscience told me that I knew not one. The Jesuits, who then taught philosophy at Louvain, expounded to me the disquisitions and secrets of magic, but these were empty and unprofitable conceits; and instead of grain, I reaped stubble. In moral philosophy, when I expected to grasp the quintessence of truth, the empty and swollen bubble burst in my hands. I then turned my thoughts to medicine ; and, having seriously read Galen and Hippocrates, noted all that seemed certain and incontroverti- ble ; but was dismayed, upon revising my notes,

when I found that the pains I had bestowed, and the years I had spent, were altogether fruitless ; but I learned at least the emptiness of books and formal discourses and promises of the schools. I went abroad, and there I found the same sluggishness in study, the same blind obe- dience to" the doctrines of their forefathers, the same deep-rooted ignorance.'

174. It may easily be imagined that an indi- vidual, who would think and express his thoughts in this free manner, would not be likely to sub- scribe to the dicta of established systems ; and we find him accordingly breaking through the trammels of the schools, both Hippocratic and even chemical, and proposing dogmata, inde- pendent of either. It may be here remarked as a fact worthy observation, that Van Helmont was the first systematically to propound the principle of stomach agency in exciting sympathetic affec- tion to an almost unlimited extent. This sym- pathetic doctrine has lately been propagated and talked of as something entirely novel ; but the merits of the modern pathologists in refer- ence to stomachic influence consist rather in simplification, if we may so say, than in origin- ality ; for Van Helmont threw out the idea, but he was not contented to confine himself to the simple fact, but in consistency with the tendency of the times; viz. that of imagining occult and intelligent agencies in the regulation of vital phenomena and morbid incident; he

exalted the stomach influence, or rather the influence of the central nerves, into an esssential and govern- ing principle, to which he gave the name of archaeus. But we are here tempted again to ex- tract from a modern author in reference to Hel- mont's views, as the mode in which the doctrine is delineated appears to us so exceedingly just, and to the English reader of the present day so particularly interesting.

175. Van Helmont, says Cabanis, had spent his youth in studying the works of the adepts. Endowed by nature with a glowing imagination, he increased its ardor by his acquaintance with them ; and the fire of their furnaces had the ef- fect of completely inflaming his mind. Yet, amid the tarnish of alchemy and superstition by which his ideas are too often obscured, vivid gleams of light are at times observed to appear. It was in pursuing the path of error that he made several fortunate discoveries, and it was in the language of quackery that he announced the sublimest truths.

175*. Van Helmont was one of the most in- veterate opponents of the Galenian system, and of the schools which were most in vogue in his time. He indeed allows no opportunity of at- tacking the latter to escape him ; and frequently combats them with great justice and discern- ment. Nothing could be more unlike his sys- tem of physic than that which was then generally taught; but the circumstance of thinking dif- ferently from the rest of mankind is not always a sure criterion of thinking rightly.

176. Van Helmont had the merit of being the first who demonstrated the influence which the epigastric organs exert upon the rest of the system. Some obscure hints of this influence were no doubt to be found in the writings of

Hippocrates; but the latter appears to hnve noticed it merely for the purpose of observing . the narrow limits within which he supposed it to be confined. No one, after this time, seems to have paid particular attention to the subject, till Van Helmont perceived the potent action of the stomach upon other organs of the body, and that of the digestive power upon their respective functions. He remarked, too, that the diaphragm, which is placed both as a partition and means of communication between the thorax and ab- domen, becomes in consequence of its connex- ion with other parts, and the vicinity of some of the most important viscera, a principal centre of action in the economy of the living system.

177. Numberless facts may be added in sup- port of this opinion. The physicians of the Montpelier school have collected those that are most

striking, and have illustrated them in dif- ferent works with much more method and per- spicuity than Van Helmont could have done.

178. Each organ has a sensibility peculiar to itself, although closely connected with, and sub- ordinate to, that of the whole system ; particular properties serve to distinguish it from all the other organs ; and certain functions are exclu- sively ascribed to it. Van Helmont supposed that the characteristic distinctions of the dif- ferent parts of the body depend upon the causes that animate them ; and believed that in each organ there resided a principle charged with its government; that a superior principle, to which the author gave the name of archseus, had the superintendence of all the rest; and that from their concurrence and systematic combin- ation the general principle ,of life results, in the same way as the body itself is formed by the union of all the members. The great archseus is supposed to arise at the superior orifice of the stomach ; whence, as it were from his throne, he issues orders to the inferior archaei, according to their different jurisdictions. The latter, though obliged to obey, even the caprices of the former, take care always to add something of their own, either good or bad ; and it is in all these operations combined, that the regular ac- tions of the healthy state, and the anomalous appearance of disease consist.

179. The art of medicine then, according to the above theory, consists in the faithful study of the character of the common central principle, and of the nature of the other inferior principles; in knowing when to rouse their industry or sup- press their rage ; and what are the proper means of governing their passions, or correcting their mistakes. All this, translated into common language, implies, that in animated bodies there exists a general cause of the operations of life ; that the different organs, though constantly de- pendent upon this cause, have, nevertheless, certain modes of being affected and of acting peculiar to themselves, which are the necessary consequence of their peculiar structure ; that the object of medicine is to trace the laws by which this cause is governed ; to determine the modifications it undergoes in different parts of the system, and in different circumstances, and to ascertain the means of operating, both upon the whole system in general, and upon any organ

r.* particular, in order to preserve or re-establish the regularity of its functions.

180. This doctrine is confirmed by the obser- vation of nature. It was

upon it too that Van lleluiont grounded his practical views. Unfortunately he fancied that genius could supply the place of observation ; and, rejecting with disdain the facts which had been collected by his pre- decessors, he boldly adopted plans of treatment that were entirely novel. After the example of Paracelsus, he aimed at the prolongation of hu- man life ; he flattered himself that he had dis- covered the secret, and proclaimed it with the greatest assurance ; and, like his predecessor, he shortened his days by those brilliant discoveries which ought to render their authors immortal.

181. We have now arrived at the commence- ment of the seventeenth century, at which time Dr. William Harvey of London first announced the very important discovery of the blood's cir- culation ; a discovery which furnished a new ground for the whole body of physiological and pathological speculation. Most of Harvey's contemporaries refused to subscribe to the fact, while some endeavoured to deprive the author of the merit of the discovery. We have already had occasion to see how confused and imperfect even Galen's views were with respect to the mode in which the blood makes its passage from the centre to the circumference ; he had indeed no idea of a regular circuit. Servetus, the noted object of Calvin's persecution, was a Spanish physician, and in a medico-theological work he mentioned that the blood finds its way from the pulmonary artery into the veins; but, even allow- ing that such intimation laid claim to a dis- covery, it is at best but a discovery of the pul- monary circulation, and cannot possibly be considered as any thing like an anticipation of the great Harveyan doctrine. Servetus indeed with Galen limits the blood to the liver and veins generally, and, confusedly and inconsist- ently with his other assumptions, imagines the heart and arteries to be the instruments of aerial or spiritual transmission. Columbus also, to whom the discovery of the circulation has been attributed by some, although he seemed to have an idea of the pulmonary circulation, and although he described the structure and office of the valves of the heart, fell in with the Galenic notion of venous origin ; and Caesalpinus, who very shortly followed him, still manifests confu- sion when he mentions the mode in which the system is supplied with alimentary blood; in a word, the actual transmission from, and return to, the heart of the mass of circulating blood, was first unequivocally detailed and explained by Dr. Harvey ; and it might have been anticipated that from this time forward medical doctrine and medical practice, commencing as it were from a new starting point, would have regularly, if not rapidly, proceeded on to a state of comparative perfection. But no ; this new instrument of truth was destined to become, in the hands of men prone to error, a new excitation of fanciful and futile hypotheses and

systems. As the Paracelsian chemists, and the disciples of Hel- mont, had derided the Galenic faith, so the chemical aera now in its turn gave way before

the fury and fanaticism of a mathematical mania, which by axioms, postulata, and corollaries attempted to explain the functions of life and the features of disease. Nothing now was thought of but hydraulic motion, and mathematical cal- culation of forces ; the circulation of the blood, and the laws regulating it, constituted the whole compass of physiological and pathological prin- cipia ; and medicine was from first to last cor- recting circulatory impulse, or changing the circumstances and condition of the blood. How futile and far from truth some of the positions and inferences of the mathematical physicians were, may be inferred from the vast difference of premises and deduction which different theorists broached in reference to the same particulars : while, for example, one estimated the force of the heart at a few ounces, another calculated it to be many pounds. And, with regard to the practical inferences which resulted from these mathematical dogmata, an author, from whom we have already largely borrowed, expresses himself in the following terms : — The new light which was thrown upon the animal economy, by this important discovery (the circulation), served only we may affirm to redouble the rage of systems. Nothing else was thought of but to cause the blood to circulate more freely, to de- stroy its viscosity, to draw off from the body that which was supposed to be corrupted, to purify it, correct it, and renew it, and to preserve the blood vessels in a relaxed and pervious state. Hence those torrents of aqueous and diluent drinks, with which Bontikoe and his adherents inundated their patients. Hence that sanguinary fury which the partisans of Botalli thought them- selves entitled to exercise in their treatment of all sorts of diseases; a fury which, though so often damped in some measure by systematic murders, has ceased only for intervals, and still, from time to time, re-appears in the schools.

182. Thus one of the most beautiful dis- coveries of modern medicine, far from elucidating the practice of the art, as there was every reason to expect, only had the effect of misleading weak imaginations, dazzled by its splendor ; and it may still be doubted whether its application to the knowledge and cure of internal diseases has been of any real use. In surgical cases, even where its assistance is generally regarded as indispensable, might not observation almost always supply its place ? and must we not limit its importance to the elucidation of a point in anatomy and physiology, very curious no doubt in itself, but which, if it did not indirectly affect many other interesting questions relative to the animal economy, would perhaps

have contributed very little to our knowledge of its true laws?

183. However, under this point of view alone, the discovery of the circulation has been produc- tive of advantages by which the practice of medi- cine has eventually profited ; and the glory of its authors can be contested only by the most ridicu- lous envy, or the roost inconsiderate attachment to paradox.

184. The chemical theories of acids and alka- lies, which were applied to the fluids of the living body ; the pure mathematical theories, by means of which men, who were in general of in-

ferior talents, both as physicians and geometers, pretended to explain the functions of the dif- ferent organs of the body ; the hydraulic theories that succeeded, and which served as the founda- tion of so many erroneous calculations with re- gard to the circulation of the blood and other fluids; and, lastly, the mechanical views that were broached respecting the laws of motion, and their influence on the phenomena of life, or respecting the advantages which may be derived from an acquaintance with them in the illustra- tion of these phenomena; all began to attract very general attention, when there appeared a new professor, who was destined to effect a real revolution in the science of medicine.

The professor here alluded to is the celebrated Boerhaave; but before we engage in a slight disquisition respecting the merits of this indi- vidual, and the peculiarities of his theory, we are called upon to introduce to our readers' notice an English physician, who, by one leading prac- tical institute, and by the general substitution of good sense, and untrammelled observation, for systematic conceit, and hypothetic inference, did more for the science of medicine than had been effected by scholastic and theoretic principles for ages. It will have been seen that even Hippo- crates himself (who has justly been called the physician of nature, in contrast with others who seemed to demand that nature should accommo- date herself to their postulata, and not them to nature), it will have been observed, we say, that even in the writings of Hippocrates the notion of a concoction of humors, previous to their ex- pulsion, is defended as a principle of practical regulation. By others this principle was car- ried still further into practice ; and, at the time M'hen Sydenham made his appearance in the world of medicine, heating alexiphatmic ma- terials were forced

down the throats of the sick, under the assumption now referred to, without measure, and without mercy — without mercy, we say ; for the sufferings, and manifestations of sufferings, of the sick, were disregarded among the clamorous calls of a prevailing system thus founded in misconception, and acted upon in cruelty.

185. Sydenham atoncesawtheerrorof this plan of treatment, and boldly proposed and carried into effect a reformation, which, as we have above intimated, was attended with practical good of the most unequivocal and extensive kind. But we are here again tempted to make a long extract from an author upon whom we have already made large demands, and whom we always find much satisfaction in quoting ; in the present instance the testimony of an enlight- ened foreigner, given with so much propriety of feeling and freedom from all sort of prejudice, upon the merits of our own countrymen, will be received with the approbation due to its value.

186. When Sydenham (says Cabanis), ap- peared in England, the science of physic still retained its scholastic form. The progre'ss of the other branches of knowledge had hitherto exerted only a prejudicial influence upon it; and the peneral spirit of observation was almost entirely unknown. Sydenham, after a short course of Miuly, assisted by a little reading but guided

chiefly by the impulse of a happy genius, under- took to bring back the practice of the art to the path of experience. With the prevailing theories of the time he was but imperfectly acquainted ; but this circumstance was perhaps more favorable to his labors, as it could never be embarrassing to his self-love, and as he would find less difficulty in following the footsteps of nature. Among the number of his friends was the illustrious I,ocke, to whom we are indebted, if not for the first principles of a philosophical method of enquiry, at least for the first demonstration of the funda- mental truths on which they are founded. The friendship of such a man sufficiently indicates the disposition of mind of the person who cul- tivates it, and serves, as it were, for its standard comparison. We can therefore scarcely doubt that the counsels of the philosopher must have greatly contributed to the success of the phy- sician, who indeed acknowledges it himself with candor.

187. Sydenham attacked with the irresistible arms of experience several destructive prejudices which at that time prevailed. The chemists, for instance, had introduced into medicine the in- discriminate use of cordials and of ardent or volatile spirits. In acute diseases, in particular, the abuse of these'remedies was very great. Sy-

denham proved that, in such cases, they were almost always injurious, but especially at the commencement of the disorder. The small pox and other acute cutaneous eruptions were treated by sudorifics alone. Sydenham demonstrated that this mode of practice had been more fatal to mankind than a long succession of destructive wars. His Treatise on the Gout has been gene- rally regarded as a master-piece of description ; it is indeed the most perfect account of this dis- ease which we possess; not that this malady always presents itself in the manner in which it is described, but because we can conceive nothing more accurate or ingenious than the plan of ob- servation which he there lays down.

188. Hippocrates, in his Epidemics, had sketched the outlines of a system of physic as extensive as it was original. During several ages his ideas had remained in a manner dormant. Baillou, a Parisian professor, in the sixteenth century, appropriated them to himself, and ex- tended them : not indeed as a man of genius, for he was not such, but at least as an attentive ob- server, and skilful practitioner. He was even led to consider them in several new points of view.

189. Sydenham, without having any know- ledge of Baillou, perhaps even without having read Hippocrates, was led into the same path by observation alone. He pursued it with still greater success ; and in this his chief glory con- sists. It is only since his time that we have be- come thoroughly acquainted with those general variations to which the character of epidemic diseases are liable; with the relations they bear to each other; and their connexion with the dif- ferent apparent changes of the atmosphere, or their independence of these changes, which is often very apparent; with the influence they exert on sporadic or local disorders ; and, lastly, with the manner in which their succession is

regulated, although the order of it, we must con- fess, has not yet been subjected to any determi- nate rules, upon which we can entirely rely.

190. The practice of Sydenham effected a real revolution in physic. It was the triumph, not of a transcendant genius, who reforms every thing by bold and general views, but that of an ob- server, who investigates with sagacity, who con- ducts his researches with skill, and who is always guided by a sure method. The theories of Sy- denham were, it must be acknowledged, con- tracted, or even

erroneous ; and beyond the sphere of his experience, in which his natural penetration supplied the place of all other ta- lents, his ideas were in general very limited ; but no physician ever exerted so beneficial an influence on that branch of the art to which all the others are subservient — on its practical ap- plication ; and, in this respect, no one was ever more deserving the title of the restorer of true medical science.

191. Boerhaave, whose name we introduced immediately preceding the above extract from Cabanis, was in one sense the opposite to Sy- denham. He, like some others, was a philoso- pher before he was a physician ; and the medi- cal system which he broached and acted upon, so far from being merely the result of simple observation and strong sense, as in the case of Sydenham, was drawn from the principles of chemical and physical science into which he had been early initiated.

192. This celebrated individual, and amiable man, was in one particular hue the eclectics of old : he aimed at incorporating with his own particular views, the best portions of the medical philosophy which had preceded him. We have no reason, says a modern writer, to think that he expected to be the founder of a sect ; yet he proceeded with the caution of a veteran, and culled from each the flower which was to adorn his own parterre. Though Paracelsus had burnt the writings of Hippocrates and Galen in solemn state, yet they were not forgotten ; and the wise observations of the Grecian sages formed the ground-work of his system. The Galenic doc- trine of humors he assimilated with wonderful address to his chemical doctrines, and gave them a specific character, founded on their chemical relations. The mechanical philoso- phy, then attracting universal attention, added to the fabric ; the vessels were cones or cylin- ders ; the fluids, consisting of various particles adapted only to given apertures, were at times forcibly impelled and impacted in vessels to which they were not fitted, and consequently produced numerous complaints.

193. The above extract from Dr. Parr may be taken as an outline of the Boerhaavian system of medicine, which turned upon the lentor and acrimony of the fluids, and upon the impelling and correcting power of therapeutic agents ; supposing too that the solid portions of the living system were so susceptible of chemical and mechanical changes, that the laws of life and the phenomena of disease were referable to alterations of form, or variety of constitution, in all his positions and inferences, forgetting or overlooking, as his predecessors had also done,

that the reasoning, even when correct, that ap- plies to formative change or impelling powers has qualifications and limits which demand careful recognition when it comes to be applied to organised being.

194. In a manner to remedy this defect of the Boerhaavian doctrine, the doctrine of Stahl, mo- dified by Hoffman, came to be promulgated. In the opinion of Hoffman the actions of the living solid were to be looked upon as the main springs of disordered being ; that to the affection of the solidum vivens the deranged conditions of the fluids are subordinate ; and that to ‘ the exertions of the vital power in changing the direction and balance of the circulation,’ are we to look for an explanation of all the varieties which disease as- sumes. Stahl adopted the same principle, but he carried his notion of living agency to the pitch of a presiding intelligence guarding against the invasion of disease. ‘ He acknowledged, with Van Helmont, a ruling power, guarding the constitution and repairing every defect that might occur; but with this superintendence he con- sidered the human system as a living and an irritable machine, susceptible of various and irre- gular motions, and consequently of topical con- gestions.’ To these irregular motions, originating as it was supposed, in the living fibre, the term spasm came to be applied ; and it is to the solidists, as they have been termed, in opposition to the Boerhaavian tenets, that we are to trace the intioduction of the word spasm, as illustra- tive of disordered condition of the animate fibre, while the phraseology which talks of humor and acrimony is the phraseology borrowed from the doctrines of Boerhaave.

195. Dr. Cullen tells us, in the preface to his first lines of physic, that, when he was appointed professor in the Edinburgh University, he found the humoral pathology in full force ; in the de- velopment of his own opinion he, however, ex- pressed himself more partial to the views taken by the solidists ; and we find in Cullen the term and notion of spasm to form a conspicuous fea- ture in his pathological code ; the reaction to overcome this spasm constituting the perturba- tion of disease, and yet, being regulated by a vis medicatrix, which is the tvopuw of Hippo- crates, the archseus of Helmont, and the ruling power or rational principle of Stahl.

196. The theory of Cullen, which is in fact a modification of the Stahlian and Hoffmanic doctrines of medicine, came to be received and taught in the Edinburgh school ; and the termi- nology of the times was spasm and reaction in place of lentor and acrimony ; in other language we might say the principles of the solidists su- perseded in a very considerable measure the assumptions and

inferences of the Boerhaavian pathology. The works of Gaubius, of Haller, and of Whytt; the first, a celebrated pupil of Boerhaave, who considerably modified the doc- trines of his master; the second an author of notoriety, who published on the irritability of the fibre, and of whom we shall have more to say under the head of PHYSIOLOGY ; and the last a writer on nervous sympathies ; all contributed towards a modification of the Boerhaavian and Stahlian theories: and thimrs were in this state

when Brown, in some measure like a second Paracelsus, started into notice — we say like a •econd Paracelsus, because he boldly and at once avowed his unqualified dissent from all that had gone before him, and not only opposed but ri- diculed and contemned all the attempts which hitherto had been made to combine into one systematic whole the principles of life and the causes of disease.

197. Deviation from the state of health, in which the morbid state consists, is not, says Brown, either repletion or inanition, or changes in the quantities of the fluids, whether of an alkaline or of an acid nature; or the introduc- tion of foreign matters into the system; or a change of figure in the extreme particles; or a disproportion in the distribution of the blood ; or an increase or decrease of the powers of the heart and vessels as regulating the circulation ; or a rational principle governing the actions of the body ; or an alteration in the extreme parti- cles as being of too large or too small a size ; or an alteration of the pores as being too narrow or too capacious ; or a constriction of the superficial vessels from cold ; or a spasm of these vessels producing a reaction, as it is called, of the heart and interior vessels ; or any thing that any per- son has yet thought of respecting the cause and nature of the morbid state. On the contrary, health and disease are the same state, depending on the same cause, that is excitement, varying only in degree ; and the powers producing both are the same, sometimes acting with a proper degree of force, at other times either with too much or too little : the whole and sole province of a physician is not to look for morbid states and remedies which have no existence, but to consider the deviation of excitement from the healthy standard, in order to remove it by proper means.

198. It will be readily seen, says a modern writer, that this subordination of every thing in the living economy to the leading and master- principle of excitement, constitutes the essence of Brunonian

pathology and practice. A sub- ordination that may be illustrated by adducing one or two examples. Suppose an individual to be affected with the disorder called diabetes, which disorder is constituted mainly of an altered quantity and condition of the urinary secre- tion ; at least, that is one of its most prominent characteristics. The philosophy of Brown would teach us that the general systematic derangement, by which the malady is constituted, is the only matter of consequence to attend to ; and could we but bring the excitement, that is the healthy actions of the system, to a proper balance and bearing, every thing else would fall by conse- quence into regularity and order ; the functions of the kidneys would be restored to their wonted integrity, and health would take place of disease.

199. Again, suppose that a man falls down in an apoplectic fit, he dies, and you examine the condition of the brain ; whether it is or is not laden with an undue quantity of blood and scrum ; whether some of the blood-vessels of the on;an have or have not given way ; the main circumstance to be regarded, in appreciating the nature of the affection, is the extent to which the

excitement has been implicated ; and the only effectual way of warding off attacks of apoplexy or even of remedying them when they are reme- diable, is not to set about emptying the blood- vessels, which is a debilitating process, and cal- culated to be destructive of its own design ; but to aid the sinking and restore the lost excite- ment. To cure disorder, upon the Boerhaavian hypothesis, is to correct the acrimony of the fluids, or diminish their lentor, or to open the pores of the body for their exit. The Cullenian would say, Take off spasm from extreme vessels and excite, repress, or regulate reaction ; while Brown's disciples would say, Adjust and adapt the excitability to the powers which excite, and you need not trouble yourself about any thing further.

200. This Brunonian doctrine of excitability was modified and complicated by Dr. Darwin into four distinct divisions. All diseases, says this last systematist, originate in the exuberance, deficiency, or retrograde action of the faculties of the sensorium as their proximate cause, and consist in the disordered motions of the fibres of the body, as the proximate effect of the exertions of those disordered faculties.

201. The sensorium possesses four distinct powers or faculties, which are occasionally ex- erted, and produce all the motions of the fibrous part of the body. These are the faculties of pro- ducing fibrous motions in consequence of irri- tation, which is excited by external bodies ; in consequence of sensation which is excited by pleasure or pain ; in

consequence of volition, which is excited by desire or exertion ; and in consequence of association, which is excited by other fibrous motions. We are hence supplied with four natural classes of diseases, derived from their proximate causes, which we shall term those of irritation, those of sensation, those of volition, and those of association.

202. Darwin's propositions and principiamay be considered the last to have been organised into a body of systematic doctrine. Since his time attempts to generalize have been of rather a different cast: thus, instead of uniting physic with metaphysic and aiming to reduce vital cau- sation, and deranged action to one leading and generally applicable law, in the same manner that gravitation is applied to the phenomena ex- hibited by inanimate matter; and which attempts, by the way, have all proved nugatory ; the en- deavours of recent systematists have rather been those of localising disease, or of aiming to prove that affections of this or that part, or primary derangement of one or another organ, are the main springs of general perturbation. Some of these theorists, evincing a disposition to place this fons et origo malorum in the liver, some in the brain, some in the stomach, and some in the fine membrane which secretes mucus and lines internal cavities. And it is a curious fact that the organic theories, if so they may be termed, have seemed to originate in the downfal of the Brunonian assumption of mere general excite- ment ; or rather when it was perceived, as it soon must have been perceived, that these prin- ciples were too comprehensive and sweeping to be applied to the complicated organisation of the

living body, the contrary principles, from the tendency there is in the human mind to reacting extremes, came into play ; and, as it has been expressed, from no organ it came to be all organ. And there has been another manifestation of op- posing principle in the more recent fashion of placing every thing connected with morbid being to the account of the blood-vessels, which is in contradistinction to the nervous theories of the solidists and animists who have just passed by ; so it will be seen that the spirit of system, though curbed and crippled by the good sense of modern times, has not yet totally disappeared. Indeed, theory, after all, must more or less in- fluence practice, even among the least disposed to abstract reasoning. ' With some,' says a writer whom we have already quoted, 'the notion of theory, as applied to the art of healing diseases, is considered to be altogether nugatory ; and it must be admitted that much of medical

doctrine and dicta has prevailed at different times without proving materially influential upon prac- tical indications. I am ready, moreover, to admit, that a large proportion of therapeutic endeavour is conducted, more especially in the present day, under the guidance of an empirical good sense, without reference to the institutes of determined systematists ; but still it will be found that the most decided oppositionist to partial views, and particular creeds, is in a greater cr less degree influenced in his feelings, and directed in his habits, by the prevailing theories of the times. No one surely will deny that up to the present moment many sensible and unsys- tematic practitioners are pushing at the liver, and prescribing blue pill, or correcting the chylopoie- tics, or emptying the blood vessels, or battling at congestion, or thinking about morbid condi- tion of mucous membranes; who, had they been living in the days of Boerhaave, of Hoff- man, or of Cullen, would have been acting un- der the notion of deobstruent agency ; have been busily employed in attempts to restore the ba- lance of nervous and fibrous excitation, or in finding out the best methods of resolving spasm, and regulating reaction.' The writer might have added that, had his supposed practitioner been tho practitioner of times preceding Sydenham, he might have been waiting for the coction of hu- mors, and permitting the disorder to proceed with- out interruption till this imaginary process was complete ; or he would have been adding irritation to too mucn already present, under the idea of forci- bly expelling humors. Another difference in these cases would not, as it is remarked, be merely in terminology ; the medicaments and actual modes of management would also differ ; so that it is of some consequence, to say the least, for us to look well to the correctness of propounded prin- cipia before we permit them to become either in whole or part ' parcel of the mind.' And it further behoves us to look well towards the correction of another, but opposite tendency, viz. that which re- fuses to receive any of the good of system, inas- much as it is mixed with evil. To think is to sys- tematise, and a process of thought must ever pre- cede all acts that are not instinctive or involuntary. ' It is impossible to observe the various appearances in nature'without remarking certain circumstances

in which they agree; to remain these circum- stances is to arrange the similar appearances. It is thus impossible not to systematise ; and hence the question should be, not whether systems be useful, but to what extent, and in what mode they can be most usefully formed.'

203. There ought of course to be as little as pos- sible assumed ; or rather, the assumption having been once made, its legitimacy ought not to be blindly and obstinately maintained ; but, on the contrary, it

should be tried by the severest tests of affiliation. Thus, if we find post mortem appearances subsequent to a certain series of symptoms, we may register or arrange the two circumstances under one head of cause and effect ; and pleasure may arise from having de- tected a connexion which has escaped the saga- city of others ; but to this supposed discovery such a partiality must not be conceived, as that its cause must be defended against subsequent development of truth. And it is precisely from this point whence all the errors of systematists commence and proceed. When we talk of con- gested veins, inflamed arteries, disordered tissues, chylopoietic disturbances, and hepatic derange ments, as influencing the whole series of organic movements ; is not one link only in the chain of causation open to our perception, while the remainder are among the invisible or dimly seen ? Are we not apt to overlook the impelling, in our eagerness to grasp at the impelled ? In other words, do not we seize hold of one or two striking facts in morbid manifestation, and, hur- rying away with them to our closets, mould them into a mass, and eventually throw them out upon the world as presents from nature, whereas they are in reality half the products of our own manu- facturing ingenuity ? Thus, for a time, the most daring and novel become the most accredited propositions; but as soon as their charm of novelty h gone by, and their propounders are laid in the silent grave, the adventitious separates itself from the real, and the dross is discovered to bear an immeasurably large proportion to the intrinsic of the doctrine.

204. Brown would have effected an abundance ot good had he been content to have ridiculed the metaphysical abstractions, or physical absurdities, of preceding systematists; but his failure con- sisted in attempting another abstraction, in lieu of those he had hurled to the dust ; and an ab- straction which was still more mischievous in its bearings than those that had gone before ; inas- much as that part of it which was illegitimate and bad was more positively and practically so than its predecessors It is indeed frightful to contemplate the evil that must have resulted from the determined application of his sweeping dogma, which it is surprising was not sooner brought to the ad absurdum test of trial as to its rectitude. But even in this system, degraded as it at present is, a great deal of actual good may be discerned ; and a great deal, moreover, of the indirect and direct occasion of those theories that are at present the order of the day.

205. To this circumstance we have already adverted ; and we have in some measure antici- pated, in the latter clauses of this historical sketch, the second head proposed for disquisition,

namely the present condition of medicine, which is, as indeed it ought to be in the present ad- vanced state of general science, much improved from former times. Its very nature prevents it from proceeding in that uninterrupted progress of improvement which some other departments of knowledge might be expected to do, as it is after all a matter rather of individual observation, than consisting of facts, or codes and precepts, which may be handed down from father to son, like the facts of natural science, or the principles resulting from moral and political investigations; but medicine is in a better state than it was for- merly, were it only that its professors have come to recognise duly its peculiar nature, and the mode which each individual is to pursue if he wishes to learn the science as it ought to be learned, or practise it as it ought to be practised.

206. The medical art, says an able writer of the present day, is one of judgment, not of rules. Unless the judgment have been exercised and matured, rules are of very little use. This pe- culiarity belongs almost exclusively to medicine. The divine has the authority of Scripture for his guide ; the lawyer the decisions and precedents of former times. What was yesterday true and binding in doctrine, or in authority, is equally so to-day. But the physician has no standard to direct him in the hour of doubt and danger. The father and founders of his art may assert, but cannot determine for him. Upon his own clearness of perception, and soundness of judg- ment, must his reputation, and the life of his patient, stand or fall. The young practitioner, who, with a name for curing disease, thinks he has also an infallible rule to guide him in his treatment, often finds himself involved in per- plexities which no rule of art will assist him to unravel.

207. We shall merely add that the medicine of the present day has been much improved by the successful labors of the anatomical physiolo- gists, especially of fiichat, in pointing out the peculiar susceptibilities of the respective mem- branes which enter into the composition of the human frame. It must be’allowed that the patho- logical and therapeutic principles which have resulted from these membranous views, if so they may be termed, have been taken up and acted upon in too extended and exclusive a spirit; but it must at the same time be admitted that much of practical good, as well as of theoretical preci- sion, has resulted from a temperate and moderate application of the doctrines to which they have conducted. One of our latest and best authors on medicine has dwelt particularly on these points, as giving a new complexion to the theory of the science; and we cannot perhaps better conclude this preliminary discourse, than by

presenting our readers with the following extract from the writer to whom we refer — Dr. James Gregory. ‘It has appeared to the author,’ says Dr. G. in the preface to his Elements, ‘ that in the course of the last twenty years the science of medicine has undergone so considerable a change, as to render an attempt to give a new view of the elements of pathology, and the practice of physic, not altogether presumptuous. Without desiring to enquire to what particular causes this change

is to be ascribed, or how far the science has profited by it, it will be sufficient for his purpose to allude very generally to the influence which the works of Baillie and Bichat have had in bring- ing it about. To the former much praise is due for directing the attention of the profession to the investigation of morbid anatomy, more ef- fectually than had been done by Morgagni, his laborious, but diffuse, predecessor, in the same branch of study. The effects of disease in the alteration of structure have been by his means more clearly developed, and in many cases the seats of disease more accurately ascertained.

208. ‘ But it is to the labors of Bichat that me- dicine is more particularly indebted for those changes in its aspect to which allusion has just been made, and which must be obvious to all in the general tone and character of the medical writings of the present time. His Anatomie Ge’ne’rale, and Traite des Membranes, present new and beautiful views of the animal economy, which are obviously fitted to become the basis of all pathology, by illustrating the origin of dis- ease in the different structures of the body. The influence of these views on medical reasonings is daily becoming more apparent, and is now felt, if not acknowledged, by many who are yet strangers to Bichat’s works.

209. ‘ It is a supposition borne out by the evidence of history, that the progress of me- dicine is upon the whole in the great road of improvement. It is unfair to argue that the science is retrograde because we occasionally recur to an ancient opinion or practice. Consi- dering the mass of books which have been written on medical subjects, it would appear scarcely possible to invent a practice, or to offer an opinion, which may not be traced in the writings of former authors ; but it is not in this way that the value of any new suggestion can be ascertained, or the state of medical practice at any one period justly appreciated. To form an estimate of either, it is necessary to look to the great body of pathology, and it is here thatwe shall find those improvements which modern medicine may boast. Nor must it be supposed that im- provements in pathology are necessarily

followed by corresponding changes in the methods of treating diseases. These, it has long been ob- served, have continued nearly the same through every variety of pathological doctrine. It is enough to say, that the powers ‘of medicines do not necessarily keep pace with the powers of the human mind, in investigating the causes, and tracing the relation?, of disease.’

PART II. NOSOLOGY AND NOMENCLATURE.

210. Since the human mind is so constructed as that order and arrangement prove vast assist- ants to observation and memory, the cultivators of all sciences, the objects of which embrace many particulars, have ever been industriously engaged in forming schemes, by which, princi- pally upon the ground of analogy and resem- blance, the memory is materially assisted. It is upon this approach as it were to accord- ance, that those classifications have been made

in the science of natural history, which have essen- tially abridged the labors of the student, and thus served greatly to invite and assist in the acqui- sition of knowledge. In that branch, for ex- ample, of natural science, which is termed bo- tany, the projectors of the schemes now referred to have assumed, that if out of three plants two of them are analogous in more particulars than the third, they sha’l as it were be made to have a nearer relationship to each other in the way of designation — or shall, in the distribution of par- ticulars, be referred to one class; and whatever scheme of classification be pursued, whether from more obvious and natural, or more as- sumed, or, as it may be considered, artificial alliance, the fundamental principle of all arrange- ment is the same, viz. a point or points of resem- blance. Hence the origin of class, order, genus, species, and varieties. Now it was natural enough for those individuals who gave themselves to the study of disease, and to facilitating the acquisi- tion of medical knowledge, to conceive that the multiform aspects of disordered manifestations might be brought within the compass of a gene- ralising scheme upon the same principles as those which had regulated other branches of science.

211. But, in the application of these principles to the medical art, difficulties oppose themselves which are not found to interfere with truth and precision, to any thing like the same extent, in other cases. If we are not allowed to call me- dicine occult and conjectural, it is at

least, so to say, circumstantial; and to suppose that two dis- eases may be identified, by certain parts and properties, as you name and classify a plant by the number of its petals and the form of its corolla, is to assume a matter upon a somewhat erroneous ground. We allow, indeed, that exter-r nal circumstance, as in the case of more or less, of artificial cultivation evenin the vegetable tribes, will come eventually to transform external ap- pearance, and thus to interfere with the order of arrangement which has been instituted upon out- ward resemblance; but this does not take place with any thing like the same rapidity and facility as occurs in the instance of disorder, in which, unless the cause which excites it operate with so much force as to overcome constitutional states, and thus to authorise designation from the exciting cause, as we find in the specific dis- tempers of small pox and measles, and some other malignant contagions ; unless, we say, this be the case, the excitation of disease shall be so modified by the varied circumstances or constitutional susceptibilities of the recipient, that a certain number and aggregate of external symbols can never be predicted as absolutely necessary for the presence of this or of that ma- lady.

212. When, therefore, systematic authors even name a disease, we must for the most part take such enunciation as having something in it pre- sumptive and uncertain; unless indeed, by a kind of metonymical management, we substitute the cause of the ailment for the actual ailment itself, as is sometimes done in medical nomenclature ; when, for example, we say of an individual that he has got a cold. But even in this case, and supposing this principle of designation to obtain universally, how great would be the consequent

confusion and indecision ; for when a person speaks of having a cold in his head, his limbs, or his chest, he often applies the same term to affections widely differing in their essential nature and external showings, since cold may produce spasm, excite inflammation, or derange in a variety of ways and degrees ; and classifi- cation at once from cause and symptoms would be wanting in every thing that should approach to precision.

213. But, besides this source of indistinctness and error, there is yet a further objection, and that of a formidable and insuperable nature, against precision in nomenclature, when the cause is thus taken for the effect ; inasmuch as a diversity of opinion exists as to the actual essence and mode of operation of the cause itself. The term typhus, in its application to a form of fever excites iu the minds of many physicians the idea of contagion, of a specific or peculiar kind, as the source of the distemper ; others again conceive that atmospheric

change, or change of temperature, or famine, or filth, may produce typhus without the aid of contagion ; while a third set of theorists altogether contemn and deride the notion of contagious influence as excitative of the malady in question ; and con- tend that there is not only no necessity for a miasm or poison to engender the malady, but that it never is so produced; and this point, which a. priori one should imagine would soon and easily be brought to the test of ascertain- ment, is still one of dispute and uncertainty.

214. If then the mere naming or designation of a disease with any thing like precision be attended with so many impediments, how much must the difficulty be increased when we attempt to arrange and to classify morbid states accord- ing to analogical resemblances ! Let us turn to that scheme which has obtained the greatest credit in this country of any that has yet been offered, and which we ourselves, for reasons afterwards to be given, shall adopt in the present article, viz. that framed by the celebrated Cullen. Now this author, and we take the example at random, places haemorrhage from the lungs, and intermittent fever, in the same class — and why ? Is it because the two maladies have any charac- ter in common like the number and shape of petals in two plants? No; it is simply because both diseases, widely different as they are both in cause and symptoms and every thing in fact, have to do in an especial manner with the blood- vessels ; and even in this particular an hypothe- sis is involved, which is inconsistent with accu- racy of arrangement, since it may be disputed whether this same intermittent fever has not more to do with the nerves than with the blood- vessels, and, therefore, whether it might not with more propriety have been classed among de- rangements of the nervous system.

215. A recent attempt has been made, of a learned and laborious cast, to arrange and de- signate diseases as the separate functions con- sidered physiologically are affected. This system of nosology comprises seven classes, viz. diseases of the digestive function ; the respiratory func- tion ; the sanguineous function ; the nervous function ; the sexual function ; and the excern- ent function : the seventh division or clas* «om

prehending fortuitous laesions or deformities. But this system is, in common with all others that have preceded it, obnoxious in the first place to similar objections, viz. the frequent dif- ficulty, nay

occasional impossibility, of predi- cating by any certain signs the particular function which was first the subject of disorder ; and more especially since one function cannot well take on a deranged action, without at the same time, or in short succession, deranging several others. Allowing, for example, that the word asthma stands as a proper cognomen for the internal condition it professes to point out, how shall we with any propriety class it as an affection either of the respiratory or digestive function, till we are agreed as to the manner in which the malady is engendered, or till we have settled the disputed point whether it be 6ne of sympathy with the first passages, or whether it be inherently, absolutely, and invariably a pulmonary, or, in other words, a respiratory de rangement.

216. But, further, these physiological systems or schemes of arrangement have another very material inconvenience to contend with, since, for the sake of following functions, they neces- sarily separate by very wide gaps disorders of the same organs and parts ; ‘ for while,’ as the learned author whose system we now more par- ticularly advert to, himself admits, ‘ inflammation of the stomach and bowels belong as inflamma- tory affections to one class, indigestion and cho- lera, though disorders of the same organs, must necessarily from their nature be ranged under another.’

217. These objections apply mainly to classi- fication ; the nomenclature from symptoms, or supposed causes, must necessarily be open to the same sources of error in this as in every other invention of the nosologist to comprise morbid states under a few leading divisions, according to their points of resemblance.

218. By some individuals, who have seen the difficulties connected with the formation of schemes and classifications in the abstract way above referred to, an anatomical plan of proce- dure has been proposed, such as taking the human body and commencing with any given portion of it, proceeding upwards or downward* as we shall have fixed upon any starting point. But unfortunately, as it has elsewhere been re- marked, medical and anotomical science do not go hand in hand through all the mazes of morbid being ; or at any rate sometimes one and some- times the other will be lost in shade as the eye of the observer aims at pursuing them through all their intricate walks and meanderings. Epi- lepsy, for instance, in an anatomical scheme of classification would be put down as a disorder of the head ; but who that has not a disorder in his own head does not know, that this manifes- tation of morbid state at tianes arises from de- ran gred conditions of parts very different from the head ? And whether, when we take anato- mical topography for our guide, should we be right in

classing gout, when we had got to the head, or the stomach, or the liver, or defer it till we had traced our course of descriptive affection down as far as the great toe?

219. Although then, as will immediately be

seen, we shall select a plan of arrangement of an artificial or abstract kind, when we come to trace the several items of diso-dered being ; we wish to impress on our readers, and on students of medicine generally, that the classifier and namer of diseases is very differently circum- stanced from the individual who undertakes to invent classes and orders for the designation and distribution of the particulars belonging to the science of natural history.

220. Plater, in his Praxis Medica, published in 1602, was the first distinctly to indicate the possibility of thus arranging diseases, and the celebrated Sydenham almost simultaneously conceived the same design ; but to Sauvages are we indebted for the primary elaboration of a sys- tematic arrangement, founded up»n the intima- tions of the above-named individuals. The celebrated Linnaeus followed in the same track, and Vogel followed Linnaeus. Sagar again en- larged and modified the system of Sauvages into one of his own. Cullen's, which is the system we shall adopt, for reasons immediately to be given, succeeded to that of Vogel. M'Bride and Crichton proposed improvements upon the Cullenian synopses, and Dr. Darwin's system of nosology is entirely novel. Dr. Parr subse- quently made an attempt, under the feeling that the natural order of the diseases had been too much disregarded by his predecessors ; and Dr. Mason Good, as we have above intimated, has presented a labored and most ingenious classi- fication, founded on physiological principles.

221. We shall only be able to find room for the heads or leading divisions of these several schemes, with the exception of that invented by Dr. Cullen, whose classification we shall tran- scribe through all its details, as it is the system we shall adopt in the present article ; and we shall do this first, because we think the definitions of Dr. Culleii are the most faithful that have been given ; secondly, because its terminology, however open to objection in many of its particulars, har- monises more than any other with the language which is still generally employed in most schools of medicine in this country; and lastly, because by recognising the three leading principles of the animal economy — circulation, sensation, and ab- sorption, his system is perhaps as physiologically accurate as it is possible for one to be constructed. The great defect of Dr. Cullen (we speak now upon the assumption of schemes being admissi- ble) is the introduction of the

class locales; for, besides that objections might be urged against the propriety of thus separating general from topical disorders, many of the affections which are comprised among the local are unequivocally of general or systematic origin; but on this head we shall have to offer another intimation or two in our running commentary on the nosology, to which we shall proceed after first, as it has been proposed, presenting the general heads of the systems above referred to. Of these sys- tems, Dr. Good will fall the last in order, and to its transcription we shall take the liberty of adding a long extract from his System of Noso- logy, bearing upon a most important part of the medical science, we mean the nomenclature. It cannot be expected that reformations, such as Dr. Good contemplates, will be all at once

effected ; indeed we do not know whether he has not been more happy in pointing out the errors of others than avoiding error himself; but it may at any rate serve a useful purpose for the medical student to be made aware of the looseness often of that terminology which he has been, almost ne- cessarily, in the practice of following and adopting from his first having had any thing to do with the words and designations of his adopted profession.

The classes of Sauvages are,

1. Vitia. 6. Debilitates.

2. Febres. 7. Dolores.

3. Phlegmasiae. 8. Vesaniae.

4. Spasmi. 9. Fluxus.

5. Anhelationes. 10. Cachexiae.

The classes of Linnaeus are,

1. Exanthematici. 7. Motorii.

2. Critici. 8. Suppressorii.

3. Phlogistici. 9. Evacuatorii.

4. Dolorosi. 10. Deformes.

5. Mentales. 11. Vitia.

6. Quietales.

The classes of Vogel are,

1. Febres. 7. Hyperaestheses.

2. Profluvia. 8. Cachexise.

3. Epischeses. 9. Paranoiae.

4. Dolores. 10. Vitia.

5. Spasmi. 11. Deformitates.

6. Adynamia:.

The classes of Sagar are,

1. Vitia. 8. Anhelationes.

2. Palgae. 9. Debilitates.

3. Cachexiae. 10. Exanthemata.

4. Dolores. 11. Phlegmasiae.

5. Fluxus. 12. Febres.

6. Suppressiones. 13. Vesanise.

7. Spasmi.

The classes and orders of M'Bride. Class I. Univertal diseases. Order 1. Fevers.

2. Inflammations.

3. Fluxes.

4. Painful diseases.

5. Spasmodic diseases.

6. Weaknesses or privation.

7. Asthmatic disorders.

8. Mental disorders. Class II. Local diseases.

Order 1. Of the internal senses.

2. Of the external senses.

3. Of the appetites.

4. Of the secretions and excretions.

5. Impeding different actions.

6. Of the external habit.

7. Dislocations.

8. Solutions of continuity. Class III. Sexual diseases.

Order 1. General proper to men.

2. Local proper to men.

3. General proper to women.

4. Local proper to women. Class IV. Infantile diseases.

DvAt*~ t /•* i

The classes and orders of Darwin. Class I. Diseases of irritation. Order 1. Increased irritation.

2. Decreased irritation.

3. Retrograde irritative motions. Class II. Diseases of sensation.

Order 1. Increased sensation.

2. Decreased sensation.

3. Retrograde sensative motions. Class III. Diseases of volition.

Order 1. Increased volition. 2. Decreased volition. Class IV. Diseases of association. Order 1. Increased associated motions.

2. Decreased associated motions.

3. Retrograde associated motions.

The classes of Crichton are the four of Dr. Cullen, with the addition of Haemorrhagiae. Fluxus.

Intumescentiae. Epischeses.

Dr. Parr's classes are

Order

1. General.

2. Local. VOL. XIV.

1. Pyrexiae. 7. Adynamia;.

2. Phlegmasiae. 8. Paranoiae.

3. Eruptiones. 9. Cachexiae.

4. Profluviae. 10. Intumescentiat-

5. Suppressorii. 11. Ectopiae.

6. Spasmi. 12. Plagse.

Dr. Good's classes are,

1. Caeliaca. 6. Eccritica.

2. Pneumatica. 7. Tychica, which in-

3. Haematica. eludes fortuitous

4. Neurotica. laesions, and de-

5. Genetica. formities.

222. We now present our readers with the follow- ing promised extract from the ingenious framerof the last of the above schemes, and we recommend the book itself from which we extract it to the attention of the medical student as full both of literary and practical information. We recom- mend at the same time, to the literary student of medicine, Dr. Young's Introduction to Medical Literature, which beside being a digest of ana- tomical, physiological, and therapeutical know- ledge, contains also another indication of a noso- logical scheme founded on the principles of physiology, or natural function.

223. In the hope, says Dr. Good, of giving some degree of improvement to the medical vocabulary, as far as he may have occasion to employ it, the author has endeavoured to guide himself by

the following general rules : — First, a strict adhe- rence to Greek and Latin terms alone. Secondly, a use of as few technical terms as possible, and consequently a forbearance from all synonyms. Thirdly, a simplification of terms, as far as it can be done without violence or affectation, both in their radical structure and composition. Fourthly, an individuality and precision of sense in their respective use.

224 (1). As the science of medicine is open to all ages and nations, it would be highly bene- ficial, if it could be accomplished, that its tech- nology should be confined to one alone of the many tougues from which it is at present de- rived. No modern tongue, however, would be

allowed such a precedency; and, were it to be granted, there is no none so richly endowed with distinct names for diseases as to enable it to spe- cificate every complaint of which a system of nosology is expected to treat. Dr. Macbride has made a trial of our own tongue, and has completely failed ; for the generic terms, under several of his orders, are entirely exotic, and under most of them very considerably so, being partly Greek, partly Latin, and partly English, uncouthly mixed together for the sake of con- venience, like foreigners from all countries at a Hamburg hotel.

225. Our choice, therefore, is limited to the Greek and Latin, which have for ages maintained so equal a sway in the province of medicine, that they must still be allowed to exercise a joint control. It is a singular fact, that the Greek has furnished us with by far the greater •lumber of terms that distinguish the higher di- visions of systematic nosology, the classes, orders, and genera ; and the Latin those employed to indicate the species and varieties. The systems of Linnaeus and Darwin offer, perhaps, the only exception to this remark; for here we meet with attempts to use the Latin tongue alone, or at least to give it a considerable preponderancy. These examples, however, have not been fol- lowed, and are not likely to be so. The greater flexibility, indeed, and facility of combination belonging to the Greek has, on the contrary, induced almost all other nosologists, as well as almost all other men of science, to turn to it for assistance far more frequently than to the Latin. The author has availed himself of this general taste ; and, by an occasional revival of terms which ought never to have been dropped, has been able so far to simplify the nomenclature of his classes, orders, and genera, as to render them exclusively Greek ; and consequently to take his leave, thus far, of all

other languages whatever. The changes introduced for this purpose are by no means nu- merous, and will in no instance, as he trusts, betray affectation or coercion. His authorities will usually be found in Celsus or Galen, who have carefully handed down to us the dis- tinctive terms both of the earlier and the later schools of Greece ; and, if at any time he has had occasion to wander farther, he has usually supplied himself from Aetius, Caelius Aurelia- nus, Dioscorides, or Aristotle. The sources, however, from which he has drawn, are in every case indicated, and, he ventures to hope, will be generally approved. Concerning the specific names he has been less scrupulous ; and has al- lowed those to stand, whether Greek or Latin, that are already in most common use ; or has drawn from either language such as may most fitly express the essential character, wherever such character can be traced out. Yet even here he has never wandered from the Greek farther than into the Latin.

226. (2). The machinery of every art or sci- ence becomes simpler, and its auxiliary powers fewer and less needed, as it advances towards perfection. It is the same with their technology. \Vhile we are but loosely acquainted with the principles of an art we speak of them with cir- cumlocution, and employ more words than are

necessary, because we have none that will come immediately to the point. As we grow more expert we learn to make a selection ; we give to many of them a greater degree of fov:e and pre cision ; and separate those that are thus rendered of real value from the ‘ leather and prunello/ the heavy outside show of useless and unmean- ing terms with which they are associated ; and thus gain in time as well as in power. In unison with these ideas the author, as soon as he has pitched upon a word that will best answer his purpose, will be found, as he hopes, to ad- here to it wherever he has had occasion to advert to the same idea, without indulging in any play of synonyms, or different terms possessing the same or nearly the same meaning. Marisca and hae- morrhois have, been equally employed by medical writers to distinguish the disease which we call vernacularly piles. The first is a Latin term, and refers to the tubercles of the disease, and the second a Greek, and refers to a discharge of blood which occasionally issues from them. As commonly used they are direct synonyms not- withstanding this difference of radical meaning, and either might answer the purpose ; the diver- sity of the disease being pointed out by distinc- tive adjuncts, as caeca, mucosa, or cruenta. Sau- vages and Sagar, however, have employed both ; but have labored to establish a difference, without having succeeded even in their own j udgment. So that, in these writers, we have one and the same disease described under two dis- tinct genera in distinct classes ; the first occurring in

Sauvages under class i. ord. v. entitled, vitia, cystides : the other under class iv. ord. ii. en- titled fluxus, alvifluvus, and introduced with this remark, ‘ haemorrhoides vero nihil aliud sunt quam mariscae, gazae apud Aristotelem.’ In the present system marisca is alone retained ; and the author has preferred it to haamorrhois, first, because hemorrhage is only a symptom that characterises a peculiar species, or rather, per- haps, a variety of the disease ; and next, because haemorrhois, or rather haemorrhoidse (ai/ioppoitfai), was employed among the Greeks, as well vul- garly as professionally, in a much wider sense than that of modern times, and imported flux of blood from the vagina, as well as from the anus; and, in fact, from any part of the body, when produced by congestion and consequent dila- tation of the mouths of the bleeding vessels, which were supposed in every instance to be veins. So Celsus, ‘ Tertium vitium est, ora venarum tanquam capitulis quibuscum surgentia quae saepe sanguinem fundunt: aipopooiSaf, Graeci vocant. Idque etiam in ore vulvas faemi- narum incidere consuevit: To the same effect Hippocrates, Lib. de Morb. Mulier. Galen uses it in a still wider extent, De Morbis Vulgaribus : and hence the woman with an issue of blood in St. Matthew, ch. ix. 20, is termed in the Greek text yvvij ai/iopo«ffa. Gaza (ya£a), the term used by Aristotle, would have answered as well as marisca, but that it is less common in the present day, and an exotic term even in the Greek. Hesychius calls it a Persian word, and Scaliger coincides with him ; translating it, ‘ thesaurus, reditus, tributus,’ ‘ a treasury,’ or place of deposit or accumulation, chiefly of tri-

bute or taxes. It is rather an Arabic than a Persian term, though both countries use it under different inflexions. The Arabic root is khazi, ‘a blush or ruddy flush,’ whether from fulness, shame, or modesty ; whence the verb khaza, to produce bluslies, erubescence, or suffusion ;’ and hence khazan in Persian signifies ‘autumn, or the season of fulness and erubescence ;’ while khazain in Arabic is ‘ a garner, treasury, or repository for the fulness of the autumnal months ;’ literally cella, cellula, gaza, or gazo- phylacia, as explained by Hesychius.

227. Vogel and Plenck are overloaded with synonymous terms, or what may, for common purposes, be so regarded ; and perpetually aiming, like Sauvages, in the preceding instance, to discover a distinction where none exists, they have multiplied their list of diseases, as we have already seen, almost without number. The dis-

crimination of Cullen has here been employed to the highest advantage, and is entitled to the thanks of every one. Celsus is in this respect peculiarly correct ; he adheres to the best tech- nical term supplied by his own tongue ; and, though he carefully gives us its Greek synonym, he never changes it for any other term, whether Greek or Latin.

228. (3). In improving the technology of an art or science it seems of great importance not only that all unnecessary terms should be banished, but that those retained should be simplified and abbreviated as much as may be without injuring their force or precision. Nothing can be more repulsive to the eye of a learner, or more incon- venient to the memory of an adept, than the long cacophonous compounds with which the science of nosology has been loaded by several German writers ; such as the pothopatridalgia of Zwinger, for which, to the consolation of every one's lips and ears, Nenter auspiciously invented nostalgia ; the ancyloblepharon, hydrenterocele, and others already noticed of Vogel, for which it is scarcely worth while to look for better to supply their place, as they import mere shadows of real diseases; and such specific epithets as spondylexarthreticus and hydrocatarrhophicus, employed in the nosology of Plouquet, but far more likely to produce than to remove confusion. To this point the author has endeavoured to keep his eye steadily directed ; he has avoided compound terms as much as possible ; and, when compelled to have recourse to them, has aimed at restraining them within compass.

229. Much of the character of words in res- pect to dimensions and euphony, as well as to precision, depends upon the common prefixes and suffixes which it is occasionally found ne- cessary to employ ; and which in so.ne branches of science, and especially in that of chemistry, create and regulate considerably more than half their nomenclature.

230. This subject opens a wide field, though the consideration of it, for the present, must be confined to a very narrow compass. It is alto- gether new, not only to medicine, but, as far as the author is acquainted, to Greek philology ; at

east, after an extensive enquiry, he has not been able to obtain any assistance from books pro- fesswlly devoted to it. There seems much

reason to believe that the auxiliary parts of every oompound term, not only in medical technology, but through the whole range of the Greek tongue, had, when first employed, distinct and definite meanings, and

limited the radicals, with which they were associated, to peculiar modifi- cations of a common idea. To these meanings we can still trace many of them, though the greater number, like most of the elements in the Chinese characters, have passed through so many changes, that it is difficult, and in some instances perhaps impossible, to follow up the analysis to their original sources. From the novelty of the subject the author has, perhaps, a fair claim upon the reader's indulgence; the enquiry, however, is worthy of being carried much farther than he has time or limits to pursue it ; and he hopes, and has reason to believe, that it will be thus extended, before long, by a friend, who has far more competency for the purpose than he can pretend to.

231. The suffixes employed in medical tech- nology are more numerous than the prefixes, and the following is a list of those in most com- mon use : —

'Agra algia asma

esmus ismus osma

cele Greek -\ copus

esis

iasis

itis

odes

odynia

osis

rhagia

rhoea

Latin

ajoa

aXyia

aapa

ttrtc

oSvna

ula

ilia \ ularis

illaris lˆosus.

232. The common prefixes are unifoirr.ly Greek, and are as follow : —

A a

apo, ap’ OTTO, air’

aph’ o0′

caco, cac’ KUKO, xac’

cata, cat’ Kara, tear’

dia Sia

dys Svc

ec, ex tie, t£

en iv

epi, ep’ t?rt, lie”

U» j*

eph tˆ

hyper wn-tp

hypo viro

para, par’ irapa, ?rap’

peri irtpt

syn, sym, sy’ trvv, ovp, av .

233. These auxiliaries are far too numerous, and, in the course of the vocabulary, recur far

too frequently. Some of them however may be suppressed, as synonyms or duplicates of others; while it should be a rule never to employ any one of the remainder but when absolutely neces- sary to distinguish the compound into which it enters from the roˆt itself, or from another com- pound derived from the same root, by the ad- dition of an idea to which it is uniformly re- stricted.

234. Algia, copus, and odyne, are direct synonyms ; to which may also be added agra, for, though of a somewhat different radical mean- ing, it is commonly superadded, like all the three former, to express the general idea of pain or ache. And hence, very much to the per- plexity of the learner and the incumbrance of the technical vocabulary, we have cephal-algia for head-ache, gastr-odyne for belly-ache, chir- agra and pod-agra for gout-ache in the hand or foot. And, worse than this, we have ost-algia, ost-odynia, ost-agra, and osto-copus, to signify one and the same affection of the bones. Now it may be necessary to retain algia, which is perhaps th« most popular of the whole, but we should as far as possible banish all the rest ; and wivh the exception of agra in the single instance of pod-agra, which cannot readily be dismissed, none of the others will be met with in the course of the ensuing arrangement. Parodynia will in- deed be found, but in this case odynia is the root itself.

235. Esis, osis, itis, oma, and iasis, have been employed perhaps for ages, and several of them very generally throughout the Greek tongue, as mere terminations, without any direct reference to their origins : and probably without a recol- lection or belief that they have any significant origins, or that those origins can be traced : in which case they would become simple terminating synonyms, and, in the abbreviating aim of a technical nomenclature, ought to follow the fate of the generality of the preceding list. Some of them, indeed, can well be spared ; but acci- dent, or a cause not easy to be explained, has given a peculiar and useful meaning to others, though very different from their radical sense, and these may be advantageously retained. The first three are probably derived from tta or its different compounds, and together with the Latin term igo, which is perhaps a corruption of ago, imply the common idea of ‘ ago, mitto,’ ‘ motion, action, or putting forth,’ and consequently, in medical combination, of ‘morbid motion or action.’ Esis (totf) is a direct derivative from tw, as is obvious in paresis, literally ‘submissio,1 ‘remissio,’ ‘ laxatio,’ ‘restraint or inability’ of ‘ moving or putting forth ;’ whence by

Aretaeus, and various other Greek writers, it is used sy- nonymously with paralysis. We meet with the same word and the same radical idea in proesis, synesis, and other compounds of the same root. Osis (oifftf or « ; whence osh or ousia (oxruz or »aia) is literally * ens, essentia, substantia,' the thing put forth 'in being, action, or motion.' Itis (irt/c) is as clearly an immediate derivation from upai; itself, like the preceding, a ramification from «o>, and imports, not merely action, but, when strictly true to itself,

• impetuous or violent action ' The literal ren- dering of u fiat is ' feror impetu,' and that of trj> is, ' temerarius, audax, praeceps periculorum. While the direct origin of igo betrays itself in all its compounds, for vertigo (deriving igo from ago) is literally ' rotatory motion or dizziness ;' serpigo, ' serpentine motion or course,' peculi- arly describing a particular modification of her- petic eruption to which the term serpigo is ap- plied.

236. Iasis, and oma, convey different ideas as issuing from different radicals. Iasis ('tao-if) is literally sanatio, from 'laopai, ' sano, medeor,' and hence necessarily imports, in composition, ' medendus,' or ' ad sanationem spectans.' Oma ('w/ia) is as obviously an inflection of 'upoc, ' crudus, ferus, imperfectus,' as is its real mean- ing in sarc-oma, distinctly 'crude, wild, imperfect flesh :' ather-oma, ' crude, incocted pulp or pap.' But if oma be preceded by the letters pt, as in ptoma (Trrw/ia) it is then derived from ITIITTU, ' procido,' and constantly imports procidence or prolapse ; as m pro-ptoma, ' a prolapse of any part ;' archo-ptoma, ' a prolapse of the anus.* This is sometimes written ptosis, as in colpo- ptosis, ' a prolapse of the vagina ;' hystero- ptosis, ' a prolapse of the uterus :' but for the sake of perspicuity, and especially to the learner, one mode only ought to be adhered to, and per- haps the first is the best.

237. Asma (aopa) is strictly 'incantamen- tum,' enchantment, incantation ; and, in a looser sense, possession, seizure. Osma, asmus, esmus, and ismus, are mere varieties of asma ; and that they were at first intended to denote this idea we may judge from the terms phantasma, enthusiasmus, phricasmus, marasmus, phrenis- mus, priapismus. It became long afterwards a terminal member of tenesmus, rheumatism us, ptyalismus, when the original sense was nearly or altogether lost sight of. And since this period the entire group have been employed not only so generally, but in such a multiplicity of senses, that we can neither banish them nor de- fine them ; whence, like esis and osis, they must remain to be had recourse to as mere final adjuncts whenever necessary, though the less frequently employed the better.

238. It is clear, then, as well from actual analysis as from the genius of the Greek tongue itself, that each of these terminations had a dis- tinct signification when first introduced ; although it is equally clear that most of them have for some centuries been employed loosely and indis- criminately as mere final syllables. In many in- stances none of them are wanted ; and in all such cases they ought, xmquestionably, to be dropped as redundant ; and, occasionally, they have been so. Thus the myopiasis of Vogel is advantageously shortened by Plenck to myopia, as at first written by Linnaeus; and, for the same reason, mydriasis ought to have been written mydria. So chlorosis, if it were to be formed in the present day, would be chloria, and exoneirosis, exoneiria. Many of the terms in- troduced by Dr. Young seem to be formed directly upon this basis, and are highly entitled to attention ; as phlysis, palmus, pneusis.

239. In various instances, again, we find, as

already hinted at, several of the terminations, apparently from some accidental cause, taking a peculiar bearing which it would be right to en- courage, as long as they are retained, so as to give them a direct and definite sense. Such especially is the case with itis, which, from the time of Boerhaave, has been progressively em- ployed to express organic inflammation, as in cephalitis, carditis, gastritis, and most similar affections. In this sense, therefore, when em- ployed at all, it ought to be employed exclu- sively. And here the etymological idea is directly consonant with the practical : for, as observed already, it imports increased and impetuous action. A few terms only stand in our way, upon this point, even at present, as rachitis, hy- drorachitis, ascites, and tympanites ; all which, however, are of little consequence, as they have good synonyms, or may be easily varied, as the reader will perceive in the ensuing arrangement.

240. Oma has, in like manner, from some cause or other, a general idea attached to its use, not easy to be explained from its primary signi- fication : it is that of external protuberance, and to this, therefore, it should be confined. We meet with this idea in ecchymoma, staphyloma, atheroma, steatoma, sarcoma, and carcinoma. It does not easily apply to glaucoma; hut as this was as frequently called by the Greeks glaucosis, and by the Romans glaucedo, we need not be troubled even with this slight exception. The therioma of Celsus, though continued by Vogel, is banished from general use ; and, if it were not, this would also admit of a ready change to theriosis.

241. lasis is almost as generally appropriated in the present day to denote diseases of the skin, unconnected with fever ; the cause of which it seems, also, as difficult to discover as in either of the preceding instances: but, this being the fact, the hint should be taken and the necessary limit applied. We have sufficient exemplifica- tion of this remark in elephantiasis, leontiasis, psoriasis, pityriasis, phthiriasis, helminthiasis (applied by Plenck to cutaneous worms and larves of all kinds, except those of the pedi- culus, but to which malis is preferable) and tyriasis, importing in the same author a peculiar variety of lepra. To these we may add ichthy- iasis, as in this case it ought to be written, instead of ichthyosis. Many of these terms are unne- cessary, and may be well spared, but they serve as examples of the general turn the" final iasis has been lately taking, and to which, whenever it is made use of, it would be right to attend. Satyriasis, sardiasis, and one or two other terms, form exceptions to the general tendency ; but they are not wanted, as will be readily perceived in the ensuing pages ; while all but the first have been long obsolete, and are almost forgotten. Hypochondriasis is not, strictly speaking, a Greek term. It is comparatively of modern origin, and may be conveniently exchanged for hypochondrias.

242. Cele (e»j\q) retains generally, to the pre- sent hour, its original sense, which is that of ' a yielding tumor,' especially a yielding tumor pro- duced by the protrusion of a soft part; as in bronchocelc, sarcocele, glossocele, bubonocele.

Ithagia (payta) is, properly speaking, an elision of haemorr-rhagia, from 'pjjcro-w, ' rumpo,' to burst or break ; and hence uniformly denotes a preternatural flux of blood by the bursting of one or more blood-vessels, as in menorrhagia, rhinorrhagia, and enterrhagia. While rhoea Cpoia), from 'ptw ' fluo,' to flow, imports, with almost equal uniformity, a preternatural flux of any other fluid, as in diarrhea, gonorrhrea, leu- corrhcea, ottotrhoea. In perirrhcea, as employed by Hippocrates in the sense of enuresis, we have an exception, as we have also in the modern compound menorrhoea, which denotes a natural flux, and in a healthy proportion. But the first has long grown obsolete and yielded to enuresis ; and for the second we may employ catamenia, or menia without the preposition, which is totally superfluous, and omitted in all the compounds of ptiv, as also in the Latin homonyms menses and menstruatio. All these therefore may remain untouched, and are sufficiently correct in their present use.

243. Odes (wflqc) uniformly imparts ' par, similis,' like or akin, to the subject with which it is connected, as in typhodes, icterodes, phleg- monodes : and is probably derived from wdt, ' hoc modo.'

244. Ilia, ula, illaris, ularis, well known as Latin diminutive terminations, are perhaps de- rived, as will be more particularly shown here- after, from the Greek w\jj(yle or ule), ‘ materies,’ and import, therefore, ‘ of the matter, make, or nature of,’ as in pupilla or pupula, pustula, fibula. These are opposed by the suffix osus, uniformly a Latin augment, derived perhaps, like osis above, from w

245. The prefixes or initial particles or propo- sitions have far less generally departed from their original sense, though many of them ex- hibit great looseness, and very different signifi- cations. In grouping them we shall find that a, caco, dys, and para, though separated from each other by shades of difference, are all privative or debasing ; and that ec, ex, epi, hyper, though separated in like manner, are all augmentative or elevating. It would be better perhaps that a should be limited to the idea of total privation, as in agenesia, or aphoria : but the laxity of its use, not only through the whole nomenclature of medicine, but the whole of the Greek tongue, is an effectual bar to such an attempt, as we may readily perceive in atonia, apnoea, adipsia, asthenia, in which it is merely debasing or de- fective : and.it is in this sense that it often becomes synonymous with dys, para, and caco, as in dyspnoea, paralysis, and cacodia (defective power of smelling). Dys, indeed, in its strictest sense, should convey the double idea of defect with difficulty or distress, as in dysenteria, and dys- menorrhoea ; and caco the double idea of defect with corruption or depravity, a» in cachexia, cacophonia : but this distinction has been little

attended to. Para occasionally embraces a wider range than any of the rest, and runs precisely parallel with the Latin male, or the Teutonic mes, or mis, so frequent in compound words of our own and the French tongue. In anatomy, however, para is often employed in the sense of apud or juxta, ‘ bordering on, or hard by* — and in words derived from anatomy it retains this sense in the vocabulary of diseases, as in parotis, paronychia, with no small ‘confusion to the learner : and consequently gives a sense that should be otherwise provided for.

246. It would be better still to avoid the use of all these prefixes as much as possible, with the exception of a, which cannot be spared ; for, where they convey the direct sense of a they are not wanted, and, where they convey no other than that of general morbid action, they

are commonly, though not always, superfluous ex- pletives; since the science, in whose service they are thus employed, necessarily implies such an idea, as well without them as with them.

247. The opposite initials ec, or ex,epi, oreph', and hyper, denote alike the general idea of out of, outwards, over, above, in their primary sense, or when applied to place, as in ectropium, epi- demicus, hyperostosis ; but that of augmentation or excess in their ˆecondary sense, or when ap- plied to quantity or quality, as in ecstasis, epi- phora, hyperuresis.

248. En is an initial of very extensive range as well as signification ; and it has this peculiar property, that, in different senses, it becomes an antagonist to both the preceding groups in the one or other of their general meanings. In its primary sense, or as applied to place, it imports within, below ; as in encephalon, emphysema ; and consequently opposes the primary sense of ec, epi, hyper : while in its secondary sense, or as applied to quantity or quality, it exactly ac- cords with these prepositions, and imports supe- riority or excess, and in like manner opposes the general idea conveyed by a, caco, and dys ; of which we have examples in entliusiasma and enuresis. En appears therefore to be as necessary an initial particle in the medical vocabulary as a ; and with these two we should seldom feel at a loss for any other; for as a is capable of sup- plying the place of all the rest in the first set, so en is capable of performing the same office for f hose of the second. Hypo (UTTW), in its signifi- cation of below or downwards, is sometimes called upon to act the part of an ally, as in hypogas- trium, and hypocondrium, and their derivatives hypogastrocele, and hypocondrias or hypocon- driasis ; but this is seldom the case, and at all times obtrudes an assistance of which en is not in want : whence hypo might easily share in the preceding proscription. In this general view of the subject, en seems at first sight to be untrue to itself: but it is not difficult to explain the ap- parent contradiction. En runs precisely parallel with the Latin alte. The leading idea of both is ' power or precedency ;' and this, whether the order of advance be from below upwards, or from above downwards. In measuring rank and station, we take the former scale, and speak of high posts and dignities ; in measuring intellectual qualities we take the latter, and speak of pro-

found judgment and wisdom. The Greek en and the Latin alte are equally applicable to both ; and hence it is that in our own tongue, and indeed in most of the dialects of Europe, high and deep occasionally becoming synonyms, and the same general meaning may be expresse i by either. In one respect, indeed, the Greek and Latin

terms differ; the former importing depth in its primary, and height in its secondary sense; and the latter importing height in its primary, and depth in its secondary sense. In all these cases, however, the difference of the two meanings is easily understood by the con- text, and it would be hardly worth while to at- tempt to limit the Greek en to either sense if we were able. En is a short and tractable intitial, and must remain equally to form a contrast with a, and with ex or epi; in the former case to import ascendancy or superiority, as being applied to quantity or quality ; and in the latter case to import descendancy or inferiorfty, as being applied to place; with which distinc- tion before us its meaning can never be mistaken.

249. A word or two will suffice for the re- maining prefixes. Cata (rara) and apo (OTTO) are two of the most frequent. They have been very little introduced into nosological terms of late ; but in those of early writers are far more frequent, and exhibit a great variety of senses ; most of which, however, in respect to either prefix, are capable of being resolved into the general idea of iteration or duplicate action, or ideas that obviously ramify from this fountain, and which are usually expressed by the Latin and English particle re ; as in catapsyxis, re-frigera- tion ; cataspasma, re-traction ; catamenia, re- menstruation (importing its regular return); apostema, re-cession, abscession or abscess ; apothesis, re-placement or reduction of a dislo- cated bone. Whence again apo is generally used in the sense of back or from, as in apogeu- sia, apositia, backward, tardy, defective taste or appetite; while both are far more frequently used emphatically or in a superlative sense, as im- porting reduplicate action or double force ; of which we have examples in catacauma, a burn ; catagma, a fracture ; catalysis for paralysis, ca- tarrhus, apoplexia, apocyesis (parturition). In this signification both are evidently redundant ; nor are they much marked in any other.

250. Peri (irtpi) continues uniformly true to the sense of circum, and is limited to terms derived from anatomy, as peripneumonia and peritonitis. Dia (Sia) is nearly as single in its meaning; or rather the different significations in which it is used are capable of being arranged under one leading idea, that of separation, which is the only idea it should be allowed to convey, if ever employed in the coinage of new terms. We trace this general sense in diabetes and diarrhoea, ‘a passing off, or flowing through;’ diacrisis and diagnosis, ‘ a judgment or distinction, by the separation of one symptom from another ;’ diastole and diastasis, a dilatation or separation of part from part.’ Syn (avv\ and its deriva- tives sym and sy, are uniformly expressive of conjunction or association.

251. Such are the significations assigned to these auxiliaries whenever employed in the en-

suing system ; the author” has nevertheless en- deavoured to employ them as seldom as possible, and always in a definite sense. The classific names are given entirely without them, and the ordinal nearly so. In this respect he has dif- fered from Dr. Young, who has prefixed the pre- position para, importing diseased action, to the name of every class but the last, in which it is exchanged for ec. But this seems a pleonasm ; for, in a system directly nosological, para is ne- cessarily implied in every instance. Neuroses or neurismi is just as expressive as paraneurismi ; and haemorrhagiae or hxtnasiae, as parhaemasiae. Linnaeus has been very particular upon this point, and has never introduced compound terms but when he has thought them strictly called for. In consequence of which we have mentales, quietales, motorii, without any affix whatever.

252. But though the author has felt no oc- casion for these auxiliaries in denominating his classes, and but little occasion for them in the names of his orders, in his generic terms he has often found it necessary to have recourse to such assistance ; in some instances because, though evidently redundant, the affix could not be de- tached without the appearance of affectation ; but more frequently for the purpose of distin- guishing the names of different diseases, com- pounded of the same radical term; as in phyma, ecphyma, and emphyma; phlysis, ecphlysis, and emphlysis ; ecpyesis and empye”sis with various others; which, thus compounded, pre- sent, at the same time, their relative points of accordancy and ,of discrepancy, and are conse- quently more easily, instead of less easily, dis- tinguishable.

253. (4.) As the component parts of a term ought to be restricted to a precise and individual meaning, so ought the entire term, whether com- pound or single. The common signification of asphyxia is ‘ apparent death,’ whether from suf- focation, electricity, or any other cause. Plou- quet, in his Initia, has applied this term to a ‘ temporary suspension of the pulse, while all the other functions of the system, whether cor- poreal or mental, continue with little or no in- terruption.’ The term, in its original sense (afftyvZia), pulselessness, will bear Plouquet’s meaning ; but it is at the expense of its general Interpretation: and hence, as the disease alluded to by Plouquet has not yet fairly found a place in nosology, and no other term has been

devised for it, it will be found distinguished from as- phyxia in the present system by the term acrotis- mus, of meaning precisely parallel.

254. There is a strange confusion in the gene- ral use of the terms hemeralopia and nyctalopia. Most modern writers mean by the first, ‘ vision, irksome or painful, in the light of noon, but clear and pleasant in the dusk of the evening ; ‘ and, by the second, ‘ vision dull and confused in the dusk, but clear and powerful at noon-day.’ But this is directly to reverse the signification of both terms, as employed by Hippocrates and the Greek schools ; and, as the Greek sense is still occasionally continued, there is sometimes no small difficulty, and especially to a learner, in understanding what diseases are referred to. In the ensuing system most disorders of the sig’it,

unconnected with inflammatory actioiv, are ar- ranged under a common genus, entitled paropsia, of which hemeralopia and nyctalopia become species ; and as they are here distinguished by the names of p. lucifuga, and p. noctifuga, it is hoped that the usual perplexity will be found sufficiently avoided.

255. ./Esthesia, among almost all the nosolo- gists, imports sensation generally : and hence dy- saesthesiae is employed by Sauvages, Vogel, Sagar, and Cullen, as the name of an order comprising diseases of sight, smell, taste, touch, and hear- ing; running parallel with the order oesthetica, in the class neurotica of the present system. But Cullen, after having used the term as an or- dinal name in this general signification, next employs it as the name of a distinct genus, in the very limited signification of touch alone, and in contrast with all the other senses ; anaesthesia, the genus referred to, being defined ‘ tactus im- minutus vel abolitus.’ Linnaeus, indeed, had already used it with an equal restriction, which he ought not to have done, as the term had been already adopted by Sauvages in its wider and correcter sense. But Linnaeus has not fallen into the self-confusion of Cullen, for he has not employed oesthesia or any of its compounds in any other import. To avoid this irregularity, the anaesthesia of Linnaeus and Cullen is, in the pre- sent system, exchanged for parapsis.

256. Exanthema, among the Greeks, imported ‘ cutaneous eruptions generally.’ Sauvages, and all the nosologists down to Cullen inclusively, together with most other medical writers, have limited it to express ‘ cutaneous eruptions ac- companied with fever.’ Attempts have more lately been made to fetter it within a still nar- rower circle ; sometimes by confining it to erup- tive fevers produced by specific contagion, whatever be the character of the efflorescence : and sometimes by restraining it to the character of the eftlorescence alone,

with little attention to its being connected or unconnected with fever. It is in this last view that the term has been employed by Dr. Willan, who limits it to the import of the English term rash, and in his list of definitions explains the one term by the other. In this con- fined use of the word, however, he does not always maintain his accustomed precision ; for after having, in his table of definitions, charac- terised rash or exanthem as distinct from papula and wheal, he employs exanthemata as the name of an order, embracing diseases by both these symptoms. In Dr. Willan's very restricted use of the term there is great inconvenience, and but little or no authority in his favor ; and hence in the ensuing system it is restored to its com- mon nosological acceptation.

257. The limits of the present sketch will not allow the author to pursue this subject much further ; but it is necessary to observe, before he entirely drops it, that there are various terms, in common use in nosological descriptions, whose meaning in like manner remains in a very un- settled state to the present hour ; and which it will be the object of the ensuing attempt tc simplify anil define. As examples, it may be sufficient to glance at the words pyrexy, apyrexy paroxysm, accession, exacerbation, crisis.

258. Fevers were called by the Greek physi- cians pyreti, pyrectici morbi, or simply pyrectica. Pyrexia (febricitatio, rather than febris), was in a looser sense applied to fever generally, but limited, when more strictly employed, to febrile heat and increased pulsation. The duration 01 the cold and hot stages was called its paroxysm, and the interval between one paroxysm and ano- ther was distinguished by the term apyrexy (aTruptJta). What the Greeks called paroxysm, the Latins named accession (accessus, or ac- cessio); for the apyrexy of the former, the latter employed the term intermission (inter- missio), and if the interval were only a remis- sion, instead of a perfect intermission, the return of the hot fit was denominated exacerbation (exacerbatio) ; which in fact is a direct transla- tion of paroxysm ; so that an exacerbation was the same correlative to a remitting as an acces- sion was to an intermitting fever. The duration of a single exacerbation and its remission, or of a single accession and its intermission, was deno- minated a febrile period.

259. Sauvages employs the whole of these terms with a p> itty strict adherence to their original meaning ; but by Cullen and still later

writers they have been used with much greater laxity, and occasionally in very different senses. Like many of the Greek physicians, Dr. Cullen has proposed a difference between pyrexy and pyretus or febris ; the former of which terms he is well known to have taken as the name for his first class of diseases. While, however, he pro- poses a difference between these terms, it is not that of the Greek schools, but altogether of his own invention ; for instead of limiting pyrexy, as was done by the Greeks when they allowed a distinction, to the mere symptoms of increased heat and increased pulsation, corresponding in a considerable degree with what is now usually called the second stage of a febrile paroxysm, he has connected shivering, or the chief symptom of the first stage, with it, together with the symp- toms of ‘ various injured functions, and dimi- nished strength in the limbs.’ By this addition, however, he has considerably overshot his own mark ; for he has not only given a new sense to the term, but has frustrated the distinction he in- tended to establish; insomuch that, when he proceeds to define fever by its ordinal character he has nothing of any real importance to add ; for fever in his ordinal definition of the term is still pyrexy, though pyrexy with the compara- tively trivial appendage of ‘ previous languor, lassitude, and other signs of debility, without primary local disease ;’ and hence, moreover, the term pyrexiae, upon his own interpretation, applies but very indifferently, as a classific name, to any of Dr. Cullen’s remaining orders, except exanthemata ; for it is rarely that inflammations or haimorrhages, his other orders, are preceded by shivering, or accompanied with lesion of va- rious other functions than that belonging to the orˆan affected, although they usually are accom- panied with ‘ increased heat and pulse,’ or py- rexy, in the Greek restricted sense of the term. It is not to be wondered at, therefore, that this distinction of Dr. Cullen, between pyrexy and fever, should have appeared to later writers as

perplexed or nugatory ; and it was probably under some such feeling that Dr. Parr, and stilf. more recently Dr. Young, in laying down their respective systems, determined upon abandoning all distinction whatever, and upon employing pyrexiae and fevers as synonymous, or rather univocal terms. It is necessary, therefore, to point out the. discrepancy that is at present pre- vailing in medical technology upon this subject; In the restricted sense in which the term was employed by the Greeks it seems useful and necessary; for we have no other by which we can so well or so shortly indicate those peculiar febrile symptoms which connect the family of phlogoses or phlegmasiae with that of simple fevers ; and it is in this sense, therefore, as im- porting the joint idea of febrile heat and aug- mented pulse, detached from the

ideas of shivering, languor, and various injured functions, that the term pyrexy will be employed whenever had recourse to in the ensuing pages.

260. The term accession has of late years under- gone a still greater change in its meaning than pyrexy. It has been just observed that accessio or accessus was employed by the Latin writers in a sense precisely parallel with the Greek word paroxysm ; and that either embraced the cold and hot stages of a febrile seizure, the only stages into which such seizure was divided. And hence paroxysm is a term not to be found in Celsus, who uniformly employs accessio in its stead.

261. Among recent writers, however, and per- haps generally in the present day, while the term paroxysm is applied not merely to fever-fits, but to fits of every violent and intermitting disorder whatever, the term accession is limited to the commencement or onset of a fit, its in-sultus, as denominated by the Latin writers ; and hence Dr. Cullen speaks of the ‘ accession of paroxysms,’ a phraseology which would be nonsense upon the original meaning of the terms; while Dr. Turton, with evident indecision upon the subject, defines accessio, in his Glossary, ‘ the beginning or paroxysm of an intermitting fever’ (allowing the reader to take which sense he will) ; and paroxysmus ‘ an access, fit, or ex- acerbation of a disease ;’ giving a still greater latitude, as well in respect to the genus, as the stage of the morbid affection. The Latin transla- tors of Galen adhere to the original significa- tion ; and hence what Cullen calls the ‘ accession of paroxysms,’ is in their language ‘ ‘incrementa accessionum :’ and the same import is given to the term access or accession by Sauvages, who, in describing the simple quotidian fever, says, ‘ duratio accessus octodecim horas non excedit;’ and observes of the quotidiana subin trans ‘ ac- cessus ad viginti quatuor horas ferme exten- duntur.’ Even in Cullen the term seems some- times to be employed as a synonym for paroxysm, as in his definition of hectic fever, in which ac- cession is opposed to remission or apyrexy; while in his definitions of the tertian and quartan, in which the words paroxysm and accession are both introduced, the latter is designed evidently to import the commencement or first stage of the former, or ‘ the accession of the paroxysm,’ as in the passage just referred to ; that which by

Hoffman was elegantly and correctly denomi- iated the spasmus penphericus, or general spasm of the small vessels diffused over the

entire sur- t'ace; in popular language, the shivering fit.

262. It is not difficult to account for this con- fusion of sense : for notwithstanding the ge- neral appropriation of the word accession among the Latin writers to the whole duration of a fe»er-fit, or what is now called a paroxysm, its radical idea imports simply 'advance, approach, entrance, avenue ;' and in this meaning Celsus himself is perpetually using the term in its verbal form, and occasionally, indeed, in connexion with accessio in its technical signification, as ' donee altera accessio accedat,' ' till another ac- cession accedes or comes on.'

263. Fordyce, probably from its complicate meaning, has banished the term accession alto- gether, and introduced the phrase cold fit in its stead, retaining, however, paroxysm in its modern and popular sense : so that, according to him, an ephemera is a fever consisting of one pa- roxysm, which paroxysm comprises three stages, ‘ a cold fit, hot fit, and crisis.’ And here we have a new sense assigned to the term crisis. Among the Greeks it is very well known to have imported a decision or determination of the disease; and hence critical days were, amongst them, days which produced such decision or de- termination. With Dr. Fordyce, however, crisis imports nothing more than the decision or de- termination of a single paroxysm of a disease, its decline or sweating stage. Whilst, by many of the humoral pathologists, the term was used in a different sense from both these, and signified, synonymously with the despumatio of Syden- ham, the separation and discharge of the crude and morbid material which was the supposed cause of fevers, without any reference to parti- cular days, or particular stages of a paroxysm.

264. It is high time, then, that an exact sense should be fixed for the whole of this group of terms ; and with a view of accomplishing this object, as far as he is able, the author will be found in the ensuing pages uniformly to employ, I. Paroxysm, as importing the entire duration of a fit of acute disease of any kind, whether the interval be perfectly or imperfectly free : 2. Ex- acerbation, as signifying the paroxysm of a disease, whose intervals are merely imperfect or remissive ; which is the strict meaning of pa- roxysm when literally rendered : and, 3. Acces • sion, as indicating the commencement or onset of an exacerbation or paroxysm of any kind; which restores the term to its radical idea ; whilst he has omitted the use of the term crisis, as nei- ther wanted nor conveying in the present day any determinate sense.

CULLEN’S ARRANGEMENT.

Class I. PYREXI5L. A frequent pulse com- ing on after a horror ; considerable heat ; many of the functions injured ; the strength of the limbs especially diminished.

Order I. FEBRES. Pyrexia without any pri- mary local affect ion, following languor, lassitude, and other symptoms of debility.

Sect. I. Intermittentes. Fevers arising from the miasma of marshes ; with an apyrexia, or at

least a very evident remission; but the disease returns regularly, and for the most part with a horror or trembling.

Genus I. Tertiana. Similar paroxysms afte: an interval of about forty-eight hours, coming on most commonly at mid-day. A tertian has either ;

I. An apyrexia interposed.

1. Varying the duration of the paroxysms.

A, The tertian whose paroxysms are not ex- tended beyond twelve hours.

B, The tertian with paroxysms extended be- yond twelve hours.

2. Varying in the return of paroxysms.

C, The tertian returning every day with un- equal paroxysms alternately similar to one another.

D, The tertian returning every third day witli two paroxysms on the same day.

E, The tertian returning every day, with two paroxysms on every third day, and only one on the intermediate ones.

F, The tertian returning every day, with an evident remission interposed between the odd and even days, but a less remarkable one between the even and the odd days.

3. Varying in its symptoms.

G, The tertian accompanied with a disposition to sleep.

H, Accompanied with spasms and convulsive motions.

I, Accompanied with an efflorescence on the skin.

K, With phlegmasia.

4. Varying in being complicated with other diseases.

5. Varying as to its origin.

II. With the interposition only of a remission between the paroxysms.

Genus II. Quartana. Similar paroxysms, with an interval of about seventy-two hours, coming on in the afternoon.

I. With the interposition of an apyrexia.

1 . Varying in the type.

A, The quartan with single paroxysms, re- turning every fourth day, none on the other days.

B, With two paroxysms every fourth day, and none on the other days.

C, With three paroxysms every fourth day, and none on the intermediate days.

D, Of the four days having only the third free from fever, with similar paroxysms every fourth day.

E, The quartan coming on every day, with similar paroxysms every fourth day.

2. Varying in its symptoms.

3. Varying in being complicated with othet diseases.

II. With a remission only between the pa- roxysms.

Genus III. Quotidiana. Similar paroxysms with an interval of about twenty-four hours, com~ ing on commonly in the morning.

I. With the interposition of an apyrexia.

1. Varies in being sol-tary.

A, Universal.

B, Partial.

2. Complicated with other diseases.

II. With a remission only between the pa- roxysms.

Sect. II. Continua. Fevers without evident intermission, and not occasioned by marsh mias- mata ; but attended with exacerbations

and re- missions, though not always very remarkable.

Genus IV. Synocha. Great heat ; a frequent, strdng, and hard pulse; high-colored urine; the functions of the sensorium a little disturbed.

Genus V. Typhus. A contagious disease : the heat not much above the natural ; the pulse small, weak, and for the most part frequent ; the urine little changed ; the functions of the senso- rium very much disturbed, and the strength greatly diminished.

The species are,

I. Typhus petechialis. Typhus for the most part with petechiae.

Varying in degree. 1. Mild typhus. 2. Ma- lignant typhus.

II. Typhus kterodes. Typhus with a yellow- ness of the skin.

Genus VI. Synochus. A contagious disease. A fever compounded of synocha and typhus ; in the beginning a synocha, but towards the end a typhus.

Order II. PHLEGMASI.E. A synocha fever, with inflammation or topical pain, the internal function of the parts being at the same time in- jured ; the blood drawn and concreted exhibiting a white coriaceous surface.

Genus VII. Phlogosis. Pyrexia; redness, heat, and painful tension, of some external part.

The species are,

I. Phlogosis (phlegmone) of a vivid red co- lor ; a swelling well defined, for the most part elevated to a point, and frequently degenerating into an abscess, with a beating or throbbing pain.

The variations are, 1. In the form. 2 In the situation.

II. Phlogosis (erythema) of a reddish color, vanishing by pressure; of an unequal and creep- ing circumference, with scarcely any swelling ; ending in the scaling off of the cuticle, in pus- tules, or blisters.

The variations are, 1. In the degree of violence. 2. In the remote cause. 3. In being complicated with other diseases.

The consequences of a phlogosis are, an im- posthume, gangrene, sphacelus.

Genus VIII. Ophthalmia. A redness and pain of the eye, with an inability to bear the light ; for the most part with an effusion of tears.

The species and varieties of the ophthalmia are,

I. Idiopathic.

1. Ophthalmia (membranarum), in the tunica aclnate, and the membranes lying under it, or the coats of the eye.

A, Varying in the degree of the external in- flammation.

B, In the internal coats affected.

2. Ophthalmia (tarsi), of the eye-lids, with swelling, erosion, and glutinous exudation.

II. Symptomatic.

1 – From a disease of the eye itself.

2. From diseases of other parts, or of the whole body.

Genus IX. Phrenitis. Violent pyrexia; pain of the head; redness of the face and eyes ; in-

ability to endure the light or any noise ; watch- fulness ; a furious delirium, or typhomania.

I. Idiopathic.

II. Symptomatic.

Genus X. Cynanche. Pyrexia sometimes in- clining to a typhus ; difficulty of swallowing and breathing; with a sensation of narrowness in the fauces.

The species are,

I. Cynanche (tonsillaris) affecting the mucous membrane of the fauces, but especially the ton- sils, with redness and swelling, accompanied with a synocha.

II. Cynanche (maligna) affecting the tonsils and mucous membrane of the fauces with swel- ling, redness, and mucous crusts of a whitish or ash-color, creeping, and covering ulcers ; with a typhous fever and exanthemata.

III. Cynanche (trachealis) attended with dif- ficult respiration, noisy and hoarse inspiration, loud cough, without any apparent tumor in the fauces, somewhat difficult deglutition, and a synocha.

IV. Cynanche (pharyngeea) attended with red- ness in the bottom of the fauces, very difficult and painful deglutition, respiration sufficiently free, and a synocha.

V. Cynanche (parotidaea) with great swelling in the parotids and maxillary glands appearing on the outside : the respiration and deglutition but little injured; a synocha, for the most part mild.

Diseases of this genus are symptomatic, eithei from external or internal causes.

Genus XI. Pneumonia. Pyrexia, with a pain in some part of the thorax, difficult respiration, and cough. The species are.

L Peripneumony, with a pulse not always hard, but sometimes soft; an obtuse pain of the breast; the respiration always difficult; some- times the patient cannot breathe unless in an up- right posture ; the face swelled, and of a livid color; the cough for the most part moist, fre- quently bloody.

1. Simple idiopathic peripneumonies. Varying in degree.

2. Idiopathic peripneumonies complicated \vith fever.

3. Symptomatic peripneumonies

II. Pleurisy, with a hard pulse ; for the most part attended with a pungent pain of one sidp augmented chiefly during the time of inspiration an uneasiness when lying on the side ; a most painful cough, dry in the beginning of the disease, afterwards moist, and frequently bloody

1. Simple idiopathic pleurisies.

2. Pleurisies, complicated, 1. With fever. 2. With catarrh.

3. Symptomatic pleurisies.

4. False pleurisies.

The consequences of pleurisy are a vomica or empyema.

Genus XII. Carditis. Pyrexia ; pain about the heart; anxiety; difficulty

of breathing; cough ; unequal pulse : palpitation of the heart, and fainting.

I. Idiopathic.

II. Symptomatic

Genus XIII. Peritonitis. Pyrexia ; pain of the belly, exasperated by an upright posture,

without the proper signs of other abdominal phlegmasiae.

I. Peritonitis (propria), situated in the peri- tonaeum, properly so called, surrounding the in- side of the abdomen.

II. Peritonitis (omentalis), in the peritonaeum extended through the omentum.

III. Peritonitis (mesenterica), in the perito- naeum spread through the mesentery.

Genus XIV. Gastritis. Pyrexia inclining to a typhus ; anxiety ; pain and heat of the epi- gastrium, augmented when any thing is taken into the stomach ; an inclination to vomit, and an immediate rejection of every thing swal- lowed ; an hiccough.

I. Idiopathic.

1. From internal causes.

A, Gastritis (phlegmonodoea), attended with acute pain and violent pyrexia.

2. From external causes.

B, Gastritis (erysipelatosa), with a less violent fever and pain : an erysipelatous redness ap- pearing on the fauces.

II. Symptomatic.

Genus XV. Enteritis. Pyrexia of a typhous nature ; pungent pain of the belly, stretching and twisting about the navel ; vomiting ; the belly obstinately bound.

1. Idiopathic.

1. Enteritis (phlegmonodaea), with acute pain, violent fever, vomiting, and constipation of the belly.

2. Enteritis (erysipelatosa), with less acute fever and pain, without vomiting; but accompa- nied witli a diarrhoea.

II. Symptomatic.

Genus XVI. Hepatitis. Pyrexia ; tension and pain of the right hypochondrium; some- times pungent like that of a pleurisy, but more frequently obtuse; a pain reaching to the clavi- cle and top of the right shoulder ; a difficulty of lying on the left side; dyspno?a; dry cough, vomiting, and hiccough.

Genus XVII. Splenitis. Pyrexia; tension, heat, and swelling of the left hypochondrium, the pain increasing by pressure; without the signs of nephritis.

Genus XVIII. Nephritis. Pyrexia ; pain in the region of the kidney, often following the course of the ureter : frequent discharge of urine, either thin and colorless, or very red; vomiting; stupor of the thigh ; with a retraction or pain of the tes- ticle of the same side. The species are,

I. Idiopathic. Spontaneous,

II. Symptomatic.

Genus XIX. Cystitis. Pyrexia; pain and swelling of the hypogastrium : frequent and painful discharge of urine, or ischuria; and tenesmus. The species are,

I. Those arising from internal causes.

II. Those from external causes.

Genus XX. Hysteritis. Pyrexia ; heat, ten- sion, swelling, and pain of the hypogastrium ; the os “teri painful when touched ; vomiting.

Genus XXI. Rheumatismus. A disease arising from an external and frequently very evident cause ; pyrexia ; pain about the joints, frequently following the course of the muscles , infesting the knees and other large joints rather than those of the feet or hands ; increased by external heat.

The species are either idiopathic or sympto- matic. The former varies in situation.

A, In the muscles of the loins.

B, In the muscles of the coxendix.

C, In the muscles of the breast.

Genus XXII. Odontalgia ; a rheumatism of the jaws from a caries of the teeth.

Genus XXIII. Podagra. An hereditary disease, arising without any evident external cause, but for the most part preceded by an unusual af- fection of the stomach ; pyrexia : pain of a joint, for the most part of the great toe of the foot, at last infesting chiefly the wrists and ancles ; re- turning at intervals ; and often alternated with affections of the stomach and other internal parts.

I. Podagra (regularis), with a pretty violent inflammation of the joints remaining for some days, and by degrees going off with swelling, itching, and desquamation of the affected part.

II. Podagra (atonica), with an atony of the stomach, or some other internal part ; and either without the usual inflammation of the joints, or only with slight and wandering pains ; and fre- quently alternated with dyspepsia, or other symp- toms of atony.

III. Podagra (retrograda), with the inflam- mation of the joints suddenly disappearing, and an atony of the stomach and other parts imme- diately following.

IV. Podagra (aberrans), with the inflamma- tion of an internal part either preceding or not, and suddenly disappearing.

Genus XXIV. Arthropuosis. Deep, obtuse, and long-continued pains of the joints or mus- cular parts, frequently following contusions ; with either no swelling, or a moderate and dif- fused one ; no phlogosis ; pyrexia, at first gentle, afterwards hectic, and at length an im- posthume.

Order III. EXANTHEMATA. Contagious diseases; affecting a person only once in his life ; beginning with fever ; after a certain time appear phlogoses, for the most part small and in considerable number, and dispersed over the skin.

Genus XXV. Erysipelas. A synocha of two or three days, for the most part attended with drowsiness, often with a delirium. In some parts of the skin, most frequently the face, ap- pears a phlogosis. The species are,

I. Erysipelas (vesiculosum), with erythema, redness creeping, occupying a large space, and in some parts ending in large blisters.

II. Erysipelas (phlyctoenodes), with an ery- thema formed of a number of papulae, chiefly occupying the trunk of the body, ending in phlyctence or small blisters.

The disease is also symptomatic.

Genus XXVI. Pestis. An exceedingly con- tagious typhus, with the highest debility. Oo an uncertain day of the disease buboes and car- buncles break forth. It is various in degree, but the species are uncertain.

Genus XXVII. Variola ; a contagious syno- cha, with vomiting, and pain on pressing the epigastrium. On the third day begins, and on the fifth is finished, the eruption of inflammatory pustules, which suppurate in the space of eight days) and at last go off in crusts ; frequently leaving depressed cicatrices or pockpits in the skin. The species are,

I. Variola (discreta), with few, distinct, turgid pustules, having circular bases ; the fever ceasing immediately after the eruption.

II. Variola (confluens), with numerous, con- fluent irregularly-shaped pustules, flaccid, and little elevated ; the fever remaining after the eruption.

Genus XXVIII. Varicella. Synocha ; papulae breaking out after a short fever, similar to those of the small-pox, but hardly ever coming to sup- puration ; after a few days going off in small scales, without leaving any mark.

Genus XXIX. Rubeola. A contagious syno- cha, with sneezing, epiphora, and dry hoarse cough. On the fourth day, or a little later, break forth small, clustered, and scarcely elevated papulae ; after three days going off in very small branny scales.

I. Rubeola (vulgaris), with very small con- fluent corymbose papulae, scarcely rising above the skin.

Varying,

1. In the symptoms being more severe, and the course of the disease less regular.

2. In being accompanied with a cynanche.

3. With a putrid diathesis.

II. Rubeola (variolodes), with distinct papulae raise.d above the skin.

Genus XXX. Miliaria. Synochus with anxiety, frequent sighing, unctuous sweat, and a sense of pricking as of pin points in the skin. On an uncertain day of the disease break out red, small, distinct papulae, spread over the whole body as well as the face ; the apices of which, after one or two days, become very small white pustules, remaining for a short time.

Genus XXXI. Scarlatina. A contagious synocha. On the fourth day of the disease the face swells a little ; at the same time a universal redness occupies the skin in large spots, at length running together ; after three days go'ng off in branny scales ; frequently succeeded by an ana- sarca. The species are,

I. Scarlatina (simplex), not accompanied with cynanche.

II. Scarlatina (cynanchica), with an ulcerous cynanche.

Genus XXXII. Urticaria. A quotidian fever. On the second day of the disease red spots re- sembling the stinging of nettles, almost vanish- ing during the day, but returning in the evening with the fever, and after a few days going off altogether in very small scales.

Genus XXXIII. Pemphigus. A contagious typhus. On the first, second, or third day of the disease, blisters break out in several parts of the body, of the bigness of a bean, "remaining for many days, "> nd at last pouring out a thin ichor.

Genus XXXIV. Aphtha. Synochus ; the tongue somewhat swelled and of a livid color, as well as the fauces ; eschars first appearing in the fauces, but at length occupying the whole inter- nal parts of the mouth, of a white color, some- times distinct, often running together ; quickly growing again when taken off, and remaining for an uncertain

time.

The species are, 1. Idiopathic. 2. Sympto- matic.

Order IV. H.EMORRHAGI*. Pyrexia, with a discharge of blood, without any external vio- lence : the blood drawn from a vein hath the same appearance as in phlegmasiae.

Genus XXXV. Epistaxis. Pain or weight of the head, redness of the face ; a discharge of blood from the nose.

I. Idiopathic.

Varying according to the time of life.

1. Epistaxis of young people, with symptoms of an arterial plethora.

2. Epistaxis of old people, with symptoms of a venous plethora.

II. Symptomatic.

1. From internal causes.

2. From external causes.

Genus XXXVI. Haemoptysis. Redness 01 the cheeks ; a sensation of uneasiness, or pain, and sometimes of heat in the breast : difficulty of breathing ; tickling of the fauces ; either a severe or less violent cough, bringing up florid and frequently frothy blood.

The idiopathic species are,

1. Haemoptysis (plethorica), without any ex ternal violence, and without being preceded by any cough or suppression of any customary eva- cuation.

2. Haemoptysis (violenta), from external vio- lence applied.

3. Haemoptysis (phthisica), after a long con- tinued cough, with a leanness and debility.

4. Haemoptysis (calculosa), in which some calculous molecules, for the most part of a cal- careous nature, are thrown up.

6. Haemoptysis (vicaria), after the suppression of a customary evacuation.

Besides these, there are a number of sympto- matic species mentioned by different authors. The consequence of an haemoptysis is, a

Phthisis. A wasting and debility of the body, with a cough, hectic fever, and for the most part a purulent expectoration. The species are,

I. An incipient phthisis, without any expecto- ration of pus.

II. A confirmed phthisis, with an expectora- tion of pus.

Both species vary, 1 . As to their remote cause. 2. As to the origin of the purulent matter.

Genus XXXVII. Hacmorrhois. Weight and pain of the head ; vertigo ; pain of the loins ; pain of the anus ; livid painful tubercles, from which for the most part blood flows out; which sometimes also drops out of the anus, without any apparent tumor. The species are,

1. Haemorrhois (tuinens), external from ma- riscae.

Varying,

A, Bloody.

B, Mucous.

2. Haemorrhois (procidens), external from a procidentia ani.

3. Haemorrhois (fluens), internal, without any swelling, or procidentia ani.

4. Haemorrhois (caeca), with pain and swelling of the anus, without any profusion of blood.

Genus XXXVIII. Menorrhagia. Pains of the back, belly, and loins, like those of child- birth ; an unusually copious flux of the menses or blood from the vagina. The species are,,

f.

MEDICINE.

1. Menorrhagia (rubra), bloody in women neither with child nor in child-birth.

2. Menorrhagia (abortus), bloody in women with child.

3. Menorrhagia (lochialis), bloody in women after delivery.

4. Menorrhagia (vitiorum), bloody from some local disease.

5. Menorrhagia (alba), serous, without any local disease, in women not pregnant.

6. Menorrhagia (nabothi), serous in women with child.

Order V. PROFLUVIA. Pyrexia, with an in- creased excretion, naturally not bloody.

Genus XXXIX. Catarrhus. Pyrexia fre- quently contagious; an increased excretion of mucus, at least efforts to excrete it.

The species are,

1. From cold.

2. From contagion.

Genus XL. Dysenteria. Contagious pyrexia ; frequent mucous or bloody stools, while the al- vine faeces are for the most part retained; gripes; tenesmus.

Varying,

1 . Accompanied with worms.

•2. With the excretion of small fleshy or seb- aceous bodies.

3. With an intermittent fever.

4. Without blood.

5. With a miliary fever.

Class II. NEUROSES. A preternatural af- fection of sense and motion, without an idiopa- thic pyrexia, or any local affection.

Order I. COMATA. A diminution of volun- tary motion, with sleep, or a deprivation of the senses.

Genus XLI. Apoplexia. Almost all volun- tary motion abolished, with sleep more or less profound ; the motion of the heart and arteries remaining.

The idiopathic species are,

1. Apoplexia (sanguinea), with symptoms of universal plethora, especially of the head.

2. Apoplexia (serosa), with a leucophlegmatia' over the whole bi)dy, especially in old people.

3. Apoplexia (hydrocephalica), coming on by degrees ; affecting infants, or those below the age of puberty, first with lassitude, a slight fever, and pain of the head, then slowness of the pulse, dilatation of the pupil of the eye, and drowsiness.

4. Apoplexia (atrabiliaria), taking place in those of a melancholic constitution.

5. Apoplexia (traumatica), from some external injury mechanically applied to the head.

6. Apoplexia (venenata), from powerful seda- tives taken internally, or applied externally.

7. Apoplexia (mentalis), from an affection or emotion of the mind.

8. Apoplexia (cataleptica), the muscles remain- ing contractile, by external motion of the limbs.

2. Apoplexia (suffocata), from some external suffocating power.

The apoplexy is frequently symptomatic.

1. Of an intermittent fever. 2. Continued fever. 3. Phlegmasia. 4. Exanthema. 5. Hys- teria. 6. Epilepsia. 7. Podagra. 8. Worms. 9. Ischuria. 10. Scurvy.

Genus XLII. Paralysis. Only some of the voluntary motions impaired, frequently with sleep.

The idiopathic species are,

1. Paralysis (partialis), of some particular muscles only.

2. Paralysis (hemiplegica), of one side of the body.

Varying according to the constitution of the body.

a, Hemiplegia in a plethoric habit.

b, In a leucophlegmatic habit.

3. Paralysis (paraplegica), of one-half of the body taken transversely.

4. Paralysis (venenata), from sedative powers applied either internally or externally.

A symptom either of an asthenia or palsy is,

Tremor; an alternate motion of a limb by frequent strokes and intervals.

The species are, 1. Asthenic. 2. Paralytic. 3. Convulsive.

Order II. ADYNAMIA. A diminution of the involuntary motions, whether vital or natural.

Genus XLI LI. Syncope; a diminution or even a total stoppage, of the motion of the heart for a short time.

I. Idiopathic.

1. Syncope (cardiaca), returning frequently without any manifest cause, with violent palpi- tations of the heart during the intervals. From a fault of the heart or neighbouring vessels.

2. Syncope (occasionalis), arising from some evident cause. From an affection of the whole system.

II. Symptomatic ; of diseases either of the whole system, or of other parts besides the heart.

Genus XLIV. Dyspepsia. Anorexia, nausea, vomiting, inflation, eructation, rumination, cardi- algia, gastrodynia, more or fewer of those symp- toms at least concurring ; for the most part with a constipation of the belly, and without any other disease either of the stomach itself or of other parts.

I. Idiopathic.

II. Symptomatic.

1. From a disease of the stomach itself.

2. From a disease of other parts, or of the whole body.

Genus XLV. Hypochondriasis. Dyspepsia, with languor, sadness, and

fear, without any ade- quate causes, in a melancholy temperament.

Genus XLVI. Chlorosis. Dyspepsia, or a desire of something not used as food ; a pale or discolored complexion ; the veins not well filled : a soft tumor of the whole body ; asthenia ; pal- pitation ; suppression of the menses.

Order III. SPASMI. Irregular motions of the muscles or muscular fibres.

Sect. I. In the animal functions.

Genus XLVII. Tetanus. A spastic rigidity of almost the whole body.

Varying according to the remote cause, as it rises either from something internal, from cold, or from a wound. It varies likewise, from what- ever cause it may arise, according to the part of the body affected.

Genus XLVIII. Trismus. A spastic rigidity of the lower jaw. The species are,

1. Trismus (nascentium), attacking infant* under two months old.

2. Trismus (traumaticus), attacking people of all ages, either from a wound or cold.

Genus XLIX. Convulsio. An irregular clonic contraction of the muscles without sleep.

I. Idiopathic.

II. Symptomatic.

Genus L. Chorea, attacking those who have not yet arrived at puberty, most commonly within the tenm or fourteenth year, with convul- sive motions for the most part of one side in at- tempting the voluntary motion of the hands and arms, resembling the gesticulations of mounte- banks ; in walking, rather dragging one of their feet than lifting it.

Genus LI. Raphania. A spastic contraction of the joints, with a convulsive agitation, and most violent periodical pain.

Genus LII. Epilepsia. A convulsion of the muscles, with sleep.

The idiopathic species are,

1. Epilepsia (cerebralis), suddenly attacking without any manifest cause, without any sense of uneasiness preceding, excepting perhaps a slight vertigo or dimness of sight.

2. Epilepsia (sympathica), without any mani- fest cause, but preceded by the sensation of a kind of air rising from a certain part of the body towards the head.

3. Epilepsia (occasionalis), arising from a ma- nifest irritation, and ceasing on the removal of that irritation.

Varying according to the difference of the irri- tating matter. And thus it may arise,

From injuries of the head, pain, worms, poi- sori; from the repulsion of the itch, or an effu- sion of any other acrid humor ; from crudities in the stomach ; from passions of the mind ; from an immoderate haemorrhagy, or from debility.

Sect. II. In the vital/unctions.

In the action of the heart.

Genus LIII. Palpitatio. A violent and irre- gular motion of the heart

In the action of the lungs.

Genus LIV. Asthma. A difficulty of breathing returning by intervals, with a sense of straitness in the breast, and a noisy respiration with hissing. In the beginning of the paroxysm there is either no cough at all, or coughing is difficult ; but, towards the end, the coughing becomes free, fre- quently with a copious spitting of mucus. The idiopathic species are,

1. Asthma (spontaneum), without any mani- fest cause or other concomitant disease.

2. Asthma (exanthematicum), from the repul- sion of the itch or other acrid effusion.

3. Asthma (plethoricum), from the suppression of some customary sanguineous evacuation, or from a spontaneous plethora.

Genus LV. Dyspncea. A continual difficulty of breathing, without any sense of straitness, but rather of fullness and infarction in the breast ;

a frequent cough throughout the whole course of the disease.

The idiopathic species are,

!• Dyspncea (catarrhalis), with a frequent cough, bringing up plenty of viscid mucus.

2. Dyspnoea (sicca), with a cough for the most part dry.

. 3. Dyspncea (aerea), increased by the least change of weather.

4 Dyspnoea (terrea), bringing up \vi:h the cough an earthy or calcnlous matter.

5. Dyspnoea (aquosaX with scanty urine and cedematous feet ; without any fluctuation in tlie breast, or other signs of an hydrothorax.

6. Dyspncea (pinguedinosa), in very fat peo- ple.

7. Dyspncea (thoracica), from an injury done to the parts surrounding the thorax, or from some malconformation of them.

8. Dyspncea (extrinseca), from evident exter- nal causes.

The symptomatic species of dyspnoea are con- sequences,

1. Of diseases of the heart or large vessels.

2. Of a swelling in the abdomen.

3. Of various other diseases.

Genus LVI. Pertussis. A contagious disease ; convulsive strangulating cough reiterated with noisy inspiration ; frequent vomiting.

Sect. I IE. In the natural functions.

Genus LVII. Pyrosis. A burning pain in the epigastrium, with plenty of aqueous humor, for the most part insipid, but sometimes acrid, belched up.

Genus LVIII. ColicB. Pain of the belly, especially twisting round the navel; vomiting; and a constipation.

The idiopathic species are,

1. Colica (spasmod ica), with retraction of the navel, and spasms of the abdominal muscles.

Varying, by reason of some symptoms super- added. Hence,

a, Colica, with vomiting of excrements, or of matters injected by the anus.

b, Colica, with inflammation supervening.

2. Colica (pictonum), preceded by a sense of weight or uneasiness in the belly, especially about the navel ; then comes on the colic pain, at first slight and interrupted, chiefly augmented after meals ; at length .nore severe and almost continual, with pains of the arms and back ; at last ending in a palsy.

Varying according to the nature of the remote cause ; and hence,

a, From metallic poison.

bt From acids taken inwardty,

c, From cold.

d, From a contusion of the back.

3. Colica (stercorea), in people subject to costiveness.

4. Colica (accidentalis), from acrid matter taken inwardly.

5. Colica (meconialis), in new-born children from a retention of the meconium.

6. Colica (callosa), with a sensation of stric- ture in some part of the intestines, and fre- quently of a collection of flatus with some pain ; which flatus also passing through the part where the stricture is felt, gradually vanishes ; the belly slow, and at last passing only a few liquid faeces.

7. Colica (calculosa), with a fixed hardness in some part of the abdomen, and calculi sometimes passed by the anus.

Genus LIX. Cholera. A vomiting of bilious matter, and likewise a frequent excretion of the same by stool ; anxiety ; gripes ; spasms in the calves of the legs.

I. Idiopathic.

1. Ctiolera (spontanea), arising in a warm sea- son, without any manifest cause.

2. Cholera (accidentalis), from acrid matters taken inwardly.

II. Symptomatic.

Genus LX. Diarrhoea. Frequent stools ; the disease not infectious ; no primary pyrexia. I. Idiopathic.

1. Diarrhoea (crapulosa), in which the excre- ments are voided in greater quantity than natu- rally.

2. Diarrhoea (biliosa), in which yellow faeces are voided in great quantity.

3. Diarrhoea (mucosa) in which either from acrid substances taken inwardly, 01 from cold, especially applied to the feet, a great quantity of mucus is voided.

4. Diarrhoea (coeliaca), in which a milky humor of the nature of chyle is discharged by stool.

5. Diarrhoea (lienteria), in which the aliments are discharged with little alteration soon after eating.

6. Diarrhoea (hjspatirrhcea), in which a bloody serous matter is discharged without pain.

II. Symptomatic.

Genus LXI. Diabetes. A chronical profusion of urine, for the most part preternatural, and in immoderate quantity.

I. Idiopathic.

1. Diabetes (mellitus), with urine of the smell, color, and taste of honey.

2. Diabetes (insipidus), with limpid, but not sweet, urine.

II. Symptomatic.

Genus LXII. Hysteria. Rumbling of the bowels ; a sensation as of a globe turning itself in the belly, ascending to the stomach and fauces, and there threatening suffocation ; sleep ; convulsions ; a great quantity of limpid urine ; the mind involuntarily fickle and mutable.

The following are by Sauvages reckoned dis- tinct idiopathic species ; but by Dr. Cullen only varieties of the same species.

A, From a retention of the menses.

B, From a menorrhagia cruenta.

C, From a menorrhagia serosa, or fluor albus.

D, From an obstruction of the viscera.

E, From a fault of the stomach.

F, From too great salacity.

Genus LXIII. Hydrophobia. A dislike and horror at any kind of drink, as occasioning a convulsion of the pharynx ; induced for the most part by the bite of a mad animal. The species are,

I. Hydrophobia (rabiosa), with a desire of biting the bystanders, occasioned by the bite of a rabid animal.

II. Hydrophobia (simplex), without madness, or any desire of biting

Order IV. VESANIJE. Disorders of the judg- ment, without any pyrexia or coma.

Genus LXIV. Amentia; an imbecility of judgment, by which people either do not per- ceive, or do not remember, the relations of things. The species are,

I. Amentia (congenita), continuing from birth.

II. Amentia (senflis), from the diminution of the perceptions and memory through extreme old age.

III. Amentia (acquisita), occurring in people formerly of a sound mind, from evident external causes.

Genus LXV. Melancholia; a partial mad ness, without dyspepsia.

Varying according to the different subjects concerning which the

person raves ; and thus- it is,

1. With an imagination in the patient con- cerning his body being in a dai.gerous condition, from slight causes; or his affairs in a desperate state.

2. With an imagination concerning a pros- perous state of affairs.

3. With violent love, without satyriasis or nymphomania.

4. With a superstitious fear of a future state.

5. With an aversion from motion and all the offices of life.

6. With restlessness, and an impatience of any situation whatever.

7. With a weariness of life.

1. With a deception concerning the nature of the patient's species,

Dr. Cullen thinks that there is no such dis- ease as that called daemonomania, and that the diseases mentioned by Saavages under that title are either,

1. Species of melancholy or mania; or

2. Of some disease by the spectators falsely ascribed to the influence of an evil spirit ; or

3. Of a disease entirely feigned ; or

4. Of a disease partly true and partly feigned . Genus LXVI. Mania; universal madness.

1. Mania (mentalis), arising entirely from passions of the mind.

2. Mania (corporea), from an evident disease of the body.

Varying according to the different disease of the body.

3. Mania (obscura), without any passifin of mind or evident disease of the body preceding.

The symptomatic species of mania are,

1. Paraphrosyne from poisons.

2. Paraphrosyne from passion.

3. Paraphrosyne febrilis.

Genus LXVII. Oneirodynia. A violent and troublesome Imagination in time of sleep.

1. Oneirodynia (activa), ˆexciting to walking and various motions.

2. Oneirodynia (gravans), from a sense of some weight incumbent, and pressing on the breast es- pecially.

Class III. CACHEXIˆ; a depraved habit of the whole or greatest part of the body, without primary pyrexia or neurosis.

Order I. MARCORES ; emaciation of the whole body.

Genus LXVIII. Tabes. • Leanness, asthenia, hectic fever. The species are,

1. Tabes (purulenta), from an external or in- ternal ulcer, or from a vomica.

Varying in its situation ; hence,

2. Tabes (scrofulosa), in scrofulous consti- tutions.

3. Tabes (venenata), from poison taken in- wardly.

Genus LXIX. Atrophia. Leanness and asthenia, without hectic fever The species are,

1. Atrophia (inanitorum), from too great evacuation.

2. Atrophia (famelicorum), from a want of nourishment.

3. Atrophia (cacochymica), from corrupted nourishment.

4. Atrophia (debilium), from the function of nutrition being depraved, without any extra- ordinary evacuation or cacochymia having pre- ceded.

Order II. INTUMESCENTIJE. An external swelling of the whole or greatest part of the body.

Sect. I. Adipo$

Genus LXX. Polysarcia; a troublesome swelling of the body from fat.

Sect. II. Flatuoste.

Genus LXXI. Pneumatosis ; a tense elastic swelling of the body, crackling under the hand The species are,

1. Pneumatosis (spontanea), without any ma- nifest cause.

2. Pneumatosis (traumatica), from a wound in the breast.

3. Pneumatosis (veneneta), from poison in- jected or applied.

4. Pneumatosis (hysterica), with hysteria. Genus LXXII. Tympanites; a tense, elastic,

sonorous swelling of the abdomen ; costiveness ; a decay of the other parts. The species are,

1. Tympanites (intestinalis), with a tumor of the abdomen frequently unequal, and with a fre- quent evacuation of air relieving the tension and pain.

2. Tympanites (abdominalis) with a more evident noise, a more equable tumor, and a less frequent emission of flatus, which also gives less relief.

Genus LXXIII. Physometra; a slight elastic swelling in the epigastrium, having the figure and situation of the uterus.

Sect. III. Aquosa or Dropsies.

Genus LXXIV. Anasarca. A soft, inelastic swelling of the whole body, or some part of it. The species are,

1 . Anasarca (serosa), from a retention of serum on account of the suppression of the usual evacu- ations, or from an increase of the serum on ac- count of too great a quantity of water taken inwardly.

2. Anasarca (oppilata), from a compression of the veins.

3. Anasarca (exanthematica), arising after ex- anthemata, especially succeeding erysipelas.

4. Anasarca (anaemia), from the thinness of the blood produced by haemorrhagy.

5. Anasarca (debilium), in weak people after long diseases, or from other causes.

Genus LXXV. Hydrocephalus. A soft in- elastic swelling of the head, with the sutures of the cranium opened.

Genus LXXVI. Hydrorachitis. A soft, slender tumor above the vertebrae of the loins; the ver- tebra gaping from each other.

Genus LXXVII. Hydrothorax. Dyspnoea; paleness of the face ; O3dematous swellings of the feet; scanty urine; difficult lying in a recumbent posture; a sudden and spontaneous starting out of sleep, with palpitation ; water fluctuating in the breast.

Genus LXXVI1I. Ascites. A tori se, scare* elastic, but fluctuating swelling of the abilomen. The species are,

1. Ascites (abdominalis), with an equal swel- ling of the whole abdomen, and with a fluctua- tion sufficiently evident.

Varying according to the cause.

A, From an obstruction of the viscera.

B, From debility.

C, From a thinness of the blood.

2. Ascites (saccatus), with a swelling of the abdomen, in the beginning at least, partial, and with a less evident fluctuation.

Genus LXXIX. Hydrometra. A swelling of the hypogastrium in women, gradually increasing, keeping the shape of the uterus, yielding to pressure, and fluctuating ; without ischuria or pregnancy.

Genus LXXX. Hydrocele. A swelling of the scrotum, not painful ; increasing by degrees, soft, fluctuating, and pellucid.

Sect. IV. Solid*.

Genus LXXXI. Physcnnia. A swelling chiefly occupying a certain part of the abdomen, gra- dually increasing, and neither sonorous nor fluc- tuating. The species are

Physconia hepatica.

Physconia splenica.

Physconia renalis.

Physconia uterina.

Physconia ab ovario.

Physconia mesenterica.

Physconia intestinalis.

Physconia omentalis.

Physconia polysplachna. i

Physconia visceralis.

Physconia externa lupialis.

Physconia externa schirrhodea.

Physconia externa hydatidosa.

Physconia ab adipe subcutaneo.

Physconia ab excrescentia.

Genus LXXXII. Rachitis. A large head swelling most in the fore part, the ribs depressed , abdomen swelled, with a decay of the other parts.

Varying,

1. Simple, without any other disease.

2. Joined with other diseases.

Order III. IMPETIGINES. Cachexies chiefly deforming the skin and external parts of the body.

Genus LXXXIII. Scrofula. Swellings of the conglobate glands, especially in the neck ; swelling of the upper lip and of the nose ; the face florid, skin thin, abdomen swelled. The species are,

1. Scrofula (vulgaris), simple, external, and permanent.

2. Scrofula (mesenterica), simple, internal, with paleness of the face, want of appetite, swel- ling of the abdomen, and unusual fetor of the excrements.

3. Scrofula (fugax), most simple, appearing only about the neck ; for the most part proceed- ing from the resorption of the matter of ulcers in the head.

4. Scrofula (Americana), joined with the yaws.

Genus LXXXIV. Syphilis. A contagious disease ; ulcers of the tonsils, after impure ve nerv, and a disorder of the genitals ; clustered

pimples of the okin, especially about the margin of the hair, ending in crusts and crusty ulcers ; pains of the bones; exostoses.

Genus LXXXV. Scorbutus ; in cold countries attacking after putrescent diet, especially such as is salt and of the animal kind, where no supply of fresh vegetables is to be had ; asthenia ; sto- macace ; spots of different colors on the skin, for the most part livid, and appearing chiefly among the roots of the hair. Varying in degree.

a, Scorbutus incipiens.

6, Scorbutus crescens.

c, Scorbutus inveteratus. Varying also in symptoms.

d, Scorbutus lividus.

e, Scorbutus petechialis.

f, Scorbutus pallidus.

g, Scorbutus ruber. h, Scorbutus calidus.

Genus LXXXVI. Elephantiasis; a contagious, disease : thick, wrinkled, rough, unctuous skin, destitute of hairs, anaesthesia in the extremities, the face deformed with pimples, the voice hoarse and nasal.

Genus LXXXVII. Lepra; the skin rough, with white, branny, and chopped eschars, some- times moist beneath, with itching.

Genus LXXXVIII. Frambcesia ; swellings resembling fungi, or the fruit of the mulberry or raspberry, growing on various parts of the skin.

Genus LXXXIX. Trichoma; a contagious disease ; the hairs thicker than

usual, and twisted into inextricable knots and cords.

Genus XC! Icterus; yellowness of the skin and eyes; white faeces; urine of a dark red, tinging what is put into it of a yellow color.

The idiopathic species are,

1 . Icterus (calculosus), with acute pain in the epigastric region, increasing after meals ; biliary concretions voided by stool.

2. Icterus (spasmodicus), without pain after spasmodic diseases and passions of the mind.

3. Icterus (hepaticus), without pain, after dis- eases of the liver.

4. Icterus (gravidarum), arising during the time of pregnancy, and going off after delivery.

5. Icterus (infantum), coming on in infants a few days after birth.

Class IV. LOCALES. An affection of some part, but not of the whole body.

Order I. DYS«STHESI*. The senses de- praved or destroyed, from a disease of the exter- nal organs.

Genus XCI. Caligo. The sight impaired or totally destroyed, on account of some opaque substance interposed between the objects and the retina, inherent in the eye itself or the eyelids. The species are,

1. Caligo (lentis), occasioned by an opaque spot behind the pupil.

2. Caligo (corneas), from an opacity of the cor- nea.

3. Caligo (pupillse), from an obstruction of the pupil.

Varying according to the different causes from which it proceeds.
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4. Caligo (humorum), from a disease or defect of the aqueous humor.

Varying according to the different state of the humor.

5. Caligo (paipebrarum) from a disease in- herent in the eyelids.

Varying according to the nature of the disease in the eyelids.

Genus XCII. Amaurosis. The sight di- minished, or totally abolished, without any evi- dent disease of the eye ; the pupil for the most part remaining dilated and immoveable. The species are,

1. Amaurosis (compressionis), after the causes and attended with the symptoms of congestion in the brain.

Varying according to the nature of the remote cause.

2. Amaurosis (atonica), after the causes and accompanied with symptoms of debility.

3. Amaurosis (spasmodica), after the causes and with the signs of spasm.

4. Amaurosis (venenata), from poison taken into the body or applied outwardly to it.

Genus XCIII. Dysopia. A depravation of the sight, so that objects cannot be distinctly per- ceived, except at a certain distance, and in a cer- tain situation.

The species are,

1. Dysopia (tenebrarum), in which objects are not seen unles- they be placed in a strong light

2. Dysopia (Itrminis), in which objects are not distinctly seen unless by a weak light.

3. Dysopia (dissitorum), in which distinct ob- jects are not perceived.

4. Dysopia (proximorum), in which the nearest objects are not perceived.

5. Dysopia (lateralis), in which objects are not perceived unless placed in an oblique pos- ture.

Genus XCFV. Pseudoblepsis ; when the sight is diseased in such a manner that the per- son imagines he sees things which really do not exist, or sees things which do exist after some other manner than they really are. The species are,

1. Pseudoblepsis (imaginaria), in which the person imagines he sees tilings which really do not exist.

Varying according to the nature of the imagi- nation.

2. Pseudoblepsis (mutans), in which objects really existing appear somehow changed.

Varying according to the change -perceived in the objects, and according to the remote cause.

Genus XCV. Dysecoea. A diminution or total abolition of the sense of hearing. The spe- cies are,

1. Dysecoea (organica), from a disease in the organs transmitting sounds to the internal ear.

Varying according to the nature of the disease and of the part affected.

2. Dysecoea (atonica), without any evident disease of the organs transmitting the sounds.

Varying according to the nature of the cause. Genus XCVI. Paracusis : a depravation of the hearing. The species are,

1. Paracusis (imperfecta), in which, though sounds coming from external objects are heard, yet it is neither distinctly nor in the usual man- ner.

Varying,

a, With a dulness of hearing.

b, With a hearing too acute and sensible.

c, When a single external sound is doubted by some internal causes.

d, When the sounds which a person desires to hear are not perceived, unless some other violent sound is raised at the same time.

2. Paracusis (imaginaria), in which sounds not existing externally are excited from internal causes.

Varying according to the nature of the sound perceived, and according to the nature of the re- mote cause.

Genus XCVII. Anosmia; a diminution or abolition of the sense of smell. The species are,

1. Anosmia (organica), from a disease in the membrane lining the internal parts of the nos- trils.

Varying according to the nature of the disease.

2. Anosmia (atonica), without any evident dis- ease of the membrane of the nose.

Genus XCVIII. Agheustia ; a diminution or abolition of the sense of taste.

1. Agheustia (organica), from a disease in the membrane of the tongue, keeping off from the nerves those substances which ought to pro- duce taste.

2. Agheustia (atonica), without any evident disease of the tongue.

Genus XCIX. Anaesthesia ; a diminution or abolition of the sense of feeling. The species from Sauvages, adopted by Dr. Cullen, are,

1. Anaesthesia a spina bifida.

2. Anaesthesia plethorica.

3. Anaesthesia nascentium.

4. Anaesthesia melancholica.

Order II. DYSOREXI.E; error or defect of appetite.

Sect. I. Appetitus erronei.

Genus C. Bulimia; a desire for food in greater quantities than can be digested.

The idiopathic species are,

1. Bulimia (helluonum), an unusual appetite for food, without any disease of the stomach.

2. Bulimia (syncopalis), a frequent desire of meat, on account of a sensation of hunger threat- ening syncope.

3. Bulimia (emetica), an appetite for a great quantity of meat, which is

thrown up immedi- ately after it is taken.

Genus CI. Polydipsia; an appetite for an unusual quantity of drink.

The polydipsia is almost always symptomatic, and varies only according to the nature of the disease which accompanies it.

Genus GIL Pica; a desire of swallowing substances not used as food.

Genus GUI. Satyriasis; an unbounded de- sire of venery in men. The species are,

1. Satyriasis (juvenilis), an unbounded desire of venery, the body at the same time being little disordered.

2. Satyriasis (furens), a vehement desire of

venery with a great disorder of the body at the same time.

Genus CIV. Nymphomania; an unbounded desire of venery in women.

Varying in degree.

Genus CV. Nostalgia ; a violent desire of those who are absent from their country of re- visiting it.

1. Nostalgia (simplex), without any other dis- ease.

2. Nostalgia (complicata), accompanied with other diseases.

Sect. II. Appetitus deficientes. Genus CVI. Anorexia. Want of appetite for food. Always symptomatic.

1. Anorexia (humoralis), from some humor loading the stomach.

2. Anorexia (atonica), from the tone of the fibres of the stomach being lost.

Genus CVII. Adipsia;- a want of desire for drink. Always a symptom of some disease af- fecting the sensorium commune.

Genus CVIII. Anaphrodisia ; want of desire for, or impotence to, venery.

The true species are,

1 . Anaphrodisia paralytica.

2. Anaphrodisia gonorrhoica. The false ones are,

1. Anaphrodisia a mariscis.

2. Anaphrodisia ab urethrse vitio.

Order III. DYSCINESI.JE. An impediment, or depravation of motion from a disorder of the organs.

Genus CIX. Aphonia; a total suppression of voice without coma or syncope. The species are,

1. Aphonia (gutturalis), from the fauces or glottis being swelled.

2. Aphonia (trachealis), from a compression of the trachea.

3. Aphonia (atonica), from the nerves of the larynx being cut.

Genus CX. Mutitas ; a want of power to pro- nounce words. The species are,

1. Mutitas (organica), from the tongue being cut out or destroyed.

2. Mutitas (atonica), from injuries done to the nerves of the tongue.

3. Mutitas (surdorum), from people being born deaf, or the hearing being destroyed during child- hood.

Genus CXI. Paraphonia ; a depraved sound of the voice. The species are,

1. Paraphonia (puberum), in which, about the time of puberty, the voice from being acute and sweet, becomes more grave and harsh.

2. Paraphonia (rauca), in which, by reason of the dryness or flaccid tumor of the fauces, the voice becomes rough and hoarse.

3. Paraphonia (resonans), in which, by rea- son of an obstruction of the nostrils, the voice becomes hoarse, with a sound hissing through the nostrils.

4. Paraphonia (palatina), in which, on account of a defect or division of the uvula, for the most part with a hare-lip, the voice becomes obscure, hoarse, and unpleasant.

5. Paraphonia (clangens), in which the voice is changed to one acute, shrill, and small.

6. Paraphonia (comatosa), in which, from a relaxation of the velum palati and glottis, a sound is produced during inspiration.

Genus CXII. Psellismus; a defect in the articulation of words. The species are,

1. Psellismus (hsesitans), in which the words, especially the first ones of a discourse, are not easily pronounced, and not without a frequent repetition of the first syllable.

2. Psellismus (ringens), in which the sound of the letter R is always aspirated, and, as it were, doubled.

3. Psellismus (lallans), in which the sound of the letter L becomes more liquid, or is pro- nounced instead of R.

4. Psellismus (emolliens), in which the hard letters are changed into the softer ones, and thus the letter S is much used.

5. Psellismus (balbutiens), in which, by rea- son of the tongue being large, or swelled, the labial letters are better heard, and often pro- nounced instead of others.

6. Psellismus (acheilos), in which the labial let- ters cannot be pronounced at all, or with difficulty.

7. Psellismus (lagostomatum), in which, on account of the division of the palate, the guttural letters are less perfectly pronounced.

Genus CXIII. Strabismus ; the optic axes of the eyes not converging. The species are,

1. Strabismus (habitualis), from a bad custom of using only one eye.

2. Strabismus (commodus), from the greater debility or mobility of one eye above the other ; so that both eyes cannot be conveniently used.

3. Strabismus (necessarius), from a change in the situation or shape of the parts of the eye.

Genus CXIV. Dysphagia ; impeded degluti- tion, without phlegmasia, or the respiration being affected.

Genus CXV. Contractura; a long-continued and rigid contraction of

one or more limbs. The species are,

1. Contractura (primaria), from the muscles becoming contracted and rigid.

a, From the muscles becoming rigid by inflam- mation.

b, From muscles becoming rigid by spasm.

c, Fr6m muscles contracted by reason of their antagonists having become paralytic.

d, From muscles contracted by an irritating acrimony.

2. Contractura (articularis), from stiff joints. Order IV. APOCENOSIS. A flux either of

blood or some other humor flowing more plenti- fully than usual, without pyrexia, or an increased impulse of fluids.

Genus CXVI. Profusio ; a flux of blood.

Genus CXVII. Ephidrosis; a preternatural evacuation of sweat.

Symptomatic ephidroses vary according to the nature of the diseases which they accompany, the different nature of the sweat itself, and some- times the different parts of the body which sweat most.

Genus CXVIII. Epiphora; a flux of the lachrymal humor.

Genus CXIX. Ptyalismus ; a flux of saliva.

Genus CXX; Enuresis; an involuntary flux of urine without pain. The species are,

1. Enuresis (atonica), after diseases injuring the sphincter of the bladder.

2. Enuresis (irritata), from a compression or irritation of the bladder.

Genus CXXI. Gonorrhoea; a preternatural flux of humor from the urethra in men, with or without a desire of venery. The species are,

1. Gonorrhoea (pura), in which, without any impure veuery having preceded, a fluid resem- bling pus, without dysuria or propensity to venery, flows from the urethra.

2. Gonorrhoea (impura), in which, after im- pure vereny, a fluid like pus flows from the ure- thra with dysuria. The consequence of this is,

Gonorrhoea (mucosa), in which, after an impure gonorrhoea, a mucous humor flows from the urethra with little or no dysuria.

3. Gonorrhoea (laxorum), in which a humor for the most part pellucid, without any erection of the penis, but with a propensity to venery, flows from the urethra while the person is awake.

4. Gonorrhoea (dormientium), in which the seminal liquor is thrown out, with erection and desire of venery, in those who are asleep and have lascivious dreams.

Order V. EPISCHESES ; suppressions of evacu- ations.

Genus CXXII. Obstipatio; the stools either suppressed, or slower than usual. The species are,

1. Obstipatio (debilium), in lax, weak, and for the most part dyspeptic persons.

2. Obstipatio (rigidorum), in people whose fibres are rigid, and frequently of an hypochon- driac disposition.

3. Obstipatio (obstructorum), with symptoms of the colica 1st, 2d, 4th, and 7th above-men- tioned.

Genus CXXIII. Ischuria; an absolute sup- pression of urine. The species are,

1. Ischuria (renalis), coming after a disease of the kidneys, with pain, or troublesome sense of weight in the region of the kidneys, and with- out any swelling of the hypogastrium, or desire of making water.

2. Ischuria (ureterica), coming after a disease of the kidneys, with a sense of pain or uneasi- ness in some part of the ureter, and without any tumor of the hypogastrium, or desire of making water.

3. Ischuria (vesicalis), with a swelling of the hypogastrium, pain at the neck of the bladder, and a frequent stimulus to make water.

4. Ischuria (urethralis), with a swelling of the hypogastrium, frequent stimulus to make water, and pain in some part of the urethra.

All these species are subdivided into many varieties, according to their different causes.

Genus CXXIV. Dysuria ; a painful and some- how impeded emission of urine. The species are,

1. Dysuria (ardens), with heat of urine, with- out any manifest disorder of the bladder.

2. Dysuria (spasmodica), from a spasm com- municated from the other parts to the bladder.

3. Dysuria (compressionis), from the neigh- bouring parts pressing upon the bladder.

4. Dysuria (phlogistica), from an inflammation of the neighbouring parts.

5. Dysuria ‘irritata), with signs of a stone in the bladder.

6. Dysuria (mucosa), with a copious excretion of mucus.

Genus CXXV. Dyspermatismus ; a slow, im- peded, and insufficient emission of semen in the venereal act. The species are,

1 . Dyspermatismus (urethralis), from diseases of the urethra.

2. Dyspermatismus (nodosus), from knots on the corpora cavernosa penis.

3. Dyspermatismus (praeputialis), from too narrow an orifice of the

prepuce.

4. Dyspermatismus (mucosus), from mucus infarcting the urethra.

5. Dyspermatismus (hypertonicus), from too strong an erection of the penis.

6. Dyspermatismus (epilepticus), from a spas- modic epilepsy happening during the time of coition.

7. Dyspermatismus (apractodes), from an im- becility of the parts of generation.

8. Dyspermatismus (refluus), in which there is no emission of semen, because it returns from the urethra into the bladder.

Genus CXXVI. Amenorrhcea. The menses either flowing more sparingly than usual, or not at all, at their usual time, without pregnancy. The species are,

1 . Amenorrhcea (emansionis), in those arrived at puberty, in whom, after the usual time, the menses have not yet made their appearance, and many different morbid affections have taken place.

2. Amenorrhcea (suppressionis), in adults, in whom the menses which had already begun to flow are suppressed.

3. Amenorrhcea (difficilis), in which the menses flow sparingly, and with difficulty.

Order VI. TUMORES ; an increased magnitude of any part without phlogosis.

Genus CXXVII. Aneurisma ; a soft tumor, with pulsation, above an artery .A

Genus CXXVIII. Varix ; a soft tumor, with- out pulsation, above a vein.

Genus CXXIX. Ecchymoma; a diffused, little eminent, and livid tumor.

Genus CXXX. Schirrus ; a hard tumor of some part, generally of a gland, without pain, and difficultly brought to suppuration.

Genus CXXXI. Cancer; a painful tumor of a schirrous nature, and degenerating into an ill- conditioned ulcer.

Genus CXXXII. Bubo ; a suppurating tumor of a conglobate gland.

Genus CXXXIII. Sarcoma ; a soft swelling, without pain.

Genus CXXXIV. Verruca; a harder scabrous swelling.

Genus CXXXV. Clavus ; a hard, lamellated thickness of the skin.

Genus CXXXVI. Lupia ; a moveable, soft tumor below the skin, without pain.

Genus CXXX VII Ganglion ; a hard move- able swelling, adhering to a tendon.

Genus CXXXVIII. Hydatis; a cuticular vesicle filled with aqueous humor.

Genus CXXXIX. Hydarthms; a most painful swelling of the joints, chiefly of the knee, at first scarcely elevated, of the same color with the skin, diminishing the mobility.

Genus CXL. Exostosis ; a hard tumoi ad- hering to a bone.

Order VII. ECTOPI* ; tumors occasioned by the removal of some part out of its proper situation.

Genus CXLI. Hernia; an ectopia of a soft part as yet covered with skin and integuments.

Genus CXLII. Prolapsus ; a bare ectopia of some soft part.

Genus CXLIII, Luxatio ; the removal of a bone from its place in the joints.

Order VIII. DIA.LYSES. A solution of con- tinuity ; manifest to the sight or touch.

Genus CXLIV. Vulnus ; a recent and bloody solution of the unity of some soft part by the mo- tion of some hard body.

Genus CXLV. Ulcus. A purulent or ichorous solution of a soft part.

Genus CXLVI. Herpes; a great number of phlyctenae or small ulcers, gathering in clusters, creeping, and obstinate.

Genus CXLVI I. Tinea; small ulcers among the roots of the hair of the head, pouring out a fluid which changes to a white friable scurf.

Genus CXL VIII. Psora. Itchy pustules and little ulcers of an infectious

nature, chiefly in- fecting the hands.

Genus CXLIX. Fractura ; bones broken into large fragments.

Genus CL. Caries ; an ulceration of a bone.

PART III. THEORY OF MEDICINE.

Having thus laid before the reader the scheme of arrangement which, for the reasons above named, we adopt for our guide on the present occasion, we shall now proceed to a slight dis- quisition on the theoretical part of medicine, prior to engaging in the consideration of morbid affections, separately and particularly. It is usual for authors on medicine to engage in topics of physiological bearing when treating on theory — indeed physiology constitutes a great part of medical theory — and we take the opportunity of saying that Dr. Mason Good has much enriched his volumes, published under the title of The Study of Medicine, in preliminary chapters to his pathological and therapeutic disquisitions, with a most interesting sketch of the physiology of all the functions.

In the present case, however, we shall not in- clude physiology, as that science will fall to be treated of in a separate article, but shall limit our- selves to pathological principles; and, in so doing, we propose to avail ourselves of the proem pre- fixed by Dr. Uwins to his Compendium of Theo- retical and Practical Medicine, this author having given a running commentary, which we are about to follow, on the classes and orders of Cullen's Nosology. Dr. U. has likewise en- gaged in physiological considerations ; but, for the reasons just stated, we shall at present pass over these points.

265. In the first class of Cullen's arrangement, which the reader will recollect is entitled Pyrexise, are comprehended the five following orders — fevers, inflammations, eruptive disorders of an acute kind, haemorrhages, and fluxes ; and, as we slightly go over the pathology of the circu- lating organs, or, in other words, the theory of their derangement, each of the above kinds of morbid being will fall under our notice.

206. Pyrexia implies an increase of the body's heat, and it behoves us to enquire in what way tliis is brought about; but the enquiry is at- tended with many difficulties, inasmuch as the mode in which the

natural heat of the frame is maintained is still a matter of some obscurity. • When the chemical changes that take place during respiration had been enquired into, and when it was found that the capacity of carbonic acid for heat was less than that of oxygen, it was supposed that the conversion of oxygen into car- bonic acid gas was the cause of the rise of tem- perature; and, as the heat of the lungs does not exceed that of other parts, it was asserted that the air was absorbed by the blood, and that the production of carbonic acid, and consequent evolution of heat, took place gradually during the circulation.' To these opinions many strong objections have, from time to time, been urged by different physiologists, but their complete subversion followed the researches of Mr. Brodie (Phil. Trans. 1812), who found that the heart was capable of retaining its functions for some hours, and of carrying on circulation in a decapi- tated animal, and consequently independent of the influence of the brain, when respiration was artificially carried on. Under these circum- stances it was observed, that, although the change of blood from the venous to the arterial state was perfect, no heat was generated, and that the animal cooled regularly and gradually down to the atmospheric standard. In more than one instance the expired air was examined, and found to contain as much carbonic acid as was produced by the healthy animal; so that here circulation went on, there was the change of oxygen into carbonic acid, and the alteration of color in the blood, and yet no heat whatever ap- peared to be generated.

267. Since then, even on the subject of vital temperature, without reference to disease, much remains to be explained, and some positions have been assumed which experiment proves to be untenable, it follows, that to account for the in- crease of heat as health recedes must be a task of much difficulty ; and perhaps very little more at present is known on this point than that an increase of exterior and internal heat accompanies the excitation of certain superficial or interior movements. Indeed, heat from motion, and cold from quiescence, are, with some modifica- tion, laws of inorganic matter; so much so, that some philosophers have considered the introduc- tion of a subtile material, as the essence of heat, to be not only gratuitous but unnecessary, and have maintained that heat, like every other inci- dent of bodies, is but a manifestation of altered form or circumstance of the body ; and, although inorganic and organised being are regulated by different laws, we see and know enough of the latter to be convinced that action and heat are in some measure connected even in it, in the way of cause and effect. But let us, dismissing the intricate topic of natural and morbid heat, as excited and maintained in an organised body, say a few words in succession

on the several disordered conditions above enumerated, viz. fever, inflammation, eruptive affection, hcemorr- hage, and flux. The order, however, of the two

first, for reasons which will soon be obvious, we shall reverse, and treat, in the first place, on in- flammation.

268. When ‘treating on the circulation, in the article PHYSIOLOGY, we shall have to state that one of the arguments adduced in favor of an in- dependent power in the arterial system — that is of a power independent of the motive power of the heart — is taken from the circumstance that partial distribution of blood may have place without, in the first instance at least, the heart itself being changed from its steady course of regular procedure. Thus, in a given spot, an increased quantum and momentum of blood shall be discoverable ; this augmented momentum and excitement shall bring with them an increase of heat, and eventually all the phenomena shall manifest themselves to which the term inflamma- tion would be applied, merely from topical or local causes, the heart and other parts of the vas- cular organisation only then coming to be affected when the commotion shall have excited what are called sympathetic or secondary considerations. But inordinate action, and consequent heat, do not of themselves constitute inflammation. Of what then is inflammation actually formed? We may suppose the eye to be suddenly and unex- pectedly subjected to an undue quantity of light; inordinate excitation is the immediate conse- quence, in other words the fibres of which the organ is composed are for a time irritated into more vigorous movement than is ordinarily the case ; the volume and force of its circulation are rendered more abundant, and visual perception is in the same ratio increased. All this however may exist without the presence of positive in- flammation ; we have here augmented, but not otherwise deranged action — the error loci of the schools has not taken place; the component parts of the blood preserve their proportionate rela- tions, and the ordinary standard of circulating power is shortly restored without the intervention of organic derangement.

269. But let the stimulus be applied with more force, or let it be brought to act under greater than usual irritability of the organ, a dif- ferent state of things will soon commence ; the blood vessels, which are usually colorless, will now be seen to convey red blood, new secretions will take place, and in the course of a short time new parts or vessels will be actually formed. If, then, we are asked for a definition of the in- flamed state, as opposed to mere excitation or fulness of vessel, we reply that it is such excita- tion or such plenitude

carried up to the extent of actual derangement ; the capillaries do not merely momentarily receive, but positively and permanently circulate an unhealthy quantity of blood ; while this break-in upon her orderly course nature will not permit, without setting about the work of regeneration in order to be ready, as it were, for the breach that is about to be made.

270. Actual inflammation, then, seems to a certain extent to be disorganisation, and this dis- organisation implies a weakened state of the capillary or smaller vessels, either forcibly, in- duced by the rush of blood into them when the inflammation has been more active, or sthenic,

as some pathologists would call it, or more pas- sively brought about when the impetus has not been much abore its common grade, but when from some circumstances of obstraction, or other accidental conditions, the capillaries are made to receive and transmit such a quantity of blood as to distend them and excite them into perturbed motions ; for in either case undue action and ir- ritation seem necessary to the formation of the inflammatory state, otherwise the state would be that of mere fulness or congestion.

271. Why in case either of more active or pas sive inflammation, says the author whom we are now following, there should be the resisting and repairing actions set up which have been above adverted to, there is no possibility of explaining beyond an appeal to final cause, and this Deus intersit language ought never to be introduced when the subject is not morals nor religion but physiology and physics. What, it has been justly remarked, does John Hunter's ' stimulus of necessity' amount to, as applied to the blood's coagulation, more than that the blood coagu- lates because it must coagulate ?

272. ' If there be any correctness', he con- tinues, « in what has been above advanced in reference to the essentials of inflammation, it would seem, moreover, to follow, that the dis- pute is somewhat idle and unmeaning, whether inflammation be weakness or strength, action or torpor, obstruction or other impediment ; it is all and every thing as the general frame and local incidents shall vary; and both as to patho- logical essence and practical indications abstract views ought to be kept as much as possible from influencing judgment.

273. In reference to the modes in which in- flammation terminates, it may be said, that the term resolution is generally meant to express that recovery from the morbid state which is effected without the intervention of any disorganising pro- cess. But this event, strictly speaking, is not perhaps possible, since the existence of the de- rangement supposes, as above intimated, some degree of disorganisation. Even the most sim- ple case then of resolution seems to imply some degree of absorption, and it is probable that the remedial agents that are had recourse to, under the notion of subduing vascular action, effect their purpose in part by giving an impulse to the absorbing faculty. The readiness with which adhesion takes places under inflammation, be- tween membranes that are in apposition, is a proof of the rapidity with which inflamed vessels pour out lymph ; and this lymph, if not again taken up into the circulating mass, often becomes organised in a very few hours; a process this which is one of the most remarkable in the whole circle of animal movements, and which, on ac- count of its important bearing upon pathology generally, we shall illustrate by the recital of a case in proof. A man was operated on for stran- gulated hernia at seven o'clock in the morning. The hernial sac was laid open, and the gut, which proved to be a portion of the ileum about six inches in length, was attentively examined previously to its being returned into the cavity of the belly. .It had the natural polished surface peculiar to intestine, and although its vessels

were tinged with blood it did not appear that they were uncommonly numerous. After the operation the symptoms did not abate so much as might have been expected, and during the afternoon a pain was complained of in the lower part of the belly. There was no passage by stool, and next morning, about seven o'clock, the pulse was scarcely perceptible ; the skin was- cold and clammy, and at about twelve o'clock at noon the patftnt died ; having lived twenty- nine hours after the operation.

274. The body was opened, and the portion of gut which had been strangulated was found con- siderably inflamed, the external surface having lost its natural polish, and having several small portions of exudated coagulable lymph adhering to it. The vessels of the gut were minutely in- jected ; the arteries with a red colored injection, the veins with a yellow one. Upon examination afterwards all these adhering portions of coagu- lating lymph were found to be injected, having a considerable artery going to each of them, and a retuniing vein which was larger than the artery. It is evident, therefore, that the coagu- lating lymph was laid upon the surface of the gut after the operation; and we cannot suppose, says the narrator, that any such process as

form- ing new vessels could have been going on during the last five hours of life, when the pulse at the wrist was scarcely to be felt, and the powers of life were so much weakened in every respect. We must therefore conclude that the whole operation of throwing out coagulable lymph, and supply- ing it with blood vessels after it had become solid, was effected in less than twenty-four hours !

275. If inflammation be not resolved, or it may not have terminated by effusion, or this new and adhesive action, suppuration, or the formation of pus, is the next step in the pro- cess. On the manner in which pus is formed, opinion was exceedingly vague to the time of Dr. Morgan and the justly celebrated Mr. John Hunter. Even Pott, in his estimable works, al- ludes to the formation of pus as if it were some how or other the consequence of the solid parts being melted down ; and in the first lines of Dr. Cullen this same theory is broached. The gene- ral sentiment among pathologists of the present clay is, that pus is a peculiar secretion from ves- sels in a certain condition, but what the precise state is which originates pus seems still an un- settled matter. Pus, indeed, is evidently en- gendered under different circumstances of the vessels, and, although it is usually the result of inflammation, it sometimes seems to be the con- sequence of an irritative action which is under the grade of positive inflammation ; as when it is secreted from mucous surfaces after a long con- tinuance of chronic, but not perhaps truly of in- flammatory ailment.

276. Gangrene is in fact the death of the part which the disorder implicates; the rush of the disease has proved too violent for the organs t«- bear; the living reaction has failed of accom- plishing its purpose ‘ and the laws of animal che- mistry, thus far held in subjection by the superior sway of the living power, acquire an ascendancy ; a play of chemical affinities takes place, and pu- trefaction or a decomposition of the organised

substance, and a restoration of its constituent parts to their elementary forms, necessarily ensues.

277. We shall not proceed further in the con- sideration of the inflammatory state, as the sub- ject, in a more enlarged and detailed manner, will fall more properly to be noticed under the head of SURGERY; and it is now in order that we pass on to the topic of fever generally. This word fever, in its extended application, consti- tutes,

says Dr. Uwins, a curious example of the principles upon which nomenclature is founded in medical science. Observers of morbid pheno- mena could not have been long in ascertaining that in some deviations from health the heat of the body is preternaturally increased ; and, con- necting this leading and characteristic effect with a vague idea of causation, they thus made a single symptom in a manner expressive of a whole cause. But as animal heat, or the tempera- ture of the body, is equally augmented under very different circumstances of the frame, it became necessary to seek for epithets further expressive of these varieties; and hence the adjectives nervous, bilious, inflammatory, putrid, were at- tached to the generic term fever.

278. Now that local condition of vessels to which we have above adverted, under the term inflammation, never takes place to any great ex- tent, or lasts for any length of time, without giving rise to those irritative actions throughout the whole frame, by which, or in conjunction with which (to avoid language expressive of cause), the heat of the whole body is increased. In this case a sympathetic or symptomatic fever is said to have taken place. But it is not always that fever, or an increase of heat, is traceable to these local circumstances; and, when it is not so traceable, the disease has been named in the schools idiopathic, as contradistinguished from sequential or symptomatic fever.

279. We know not the reason, even when there is local inflammation, why such topical disturbance should produce systematic derange- ment ; but when the general derangement occurs without such commencing point, or starting post, we seem to he placed in still more difficulty on the score of pathological explication. This last difficulty, indeed, some pathologists have en- deavoured to prove dispensable; they maintain that fever is in reality always a symptomatic ex- pression of partial disturbance, although the local derangement shall not in all cases be the actual subject of perception. But there is a dif- ference of opinion among these theorists, as to the first link in the chain of morbid process. Some maintaining that it is the brain, others that it is in the membrane which lines the alimen- tary and intestinal canal, and some considering that the chylopoietic or assisting chylopoietic viscera are the parts upon which that morbid irritation first falls, which comes thus to extend itself through the frame generally, and each ap- peals to post mortem appearances in support of his particular theory; that is, the speculatist who asserts that fever is inflammation of the brain, virtually from first to last, calls your at- tention in the first place to the derangement of the animal functions by which fever is consti- tuted, and which, as he assert?, implies brain

af-

fection ; and in the next place he tells you, that you will generally find, upon inspecting the head of an individual that has died of fever, the presence of marks which indicate that an inflammatory process of disorganisation has been proceeding in this part during the existence of the malady ; that this disorder of the animal and intellectual functions is very characteristic of fever, and in a degree almost essential to its existence; and that vestiges of inflamed brain are frequently seen ; while others, admitting these facts, refuse their assent to the position that fever is inflamma- tion of the brain, and inflammation of the brain fever, alleging, that a great degree of disturbance in cerebral functions may exist without the ne- cessity of inflammatory action, and that the post mortem showings are rather consequential and incidental than primary and of necessity. It is well known, they further say, that inflammatory and other disorganising processes occasionally take place in the bowels and viscera under the presence of fever, and that the disorder in ques- tion has therefore as much title to be considered inflammation of these parts, as of the brain itself. Some, indeed, do consider that the essence of febrile action consists in an inflamed or irritated state of mucous surfaces, while others argue, that the malady consists mainly in general per- turbation, and that inflammation, although of common occurrence, during its progress, is not essential to its existence.

280. A febrile paroxysm consists, more or less distinctly marked, of rigor, then of heat, and, lastly, of perspiration ; but, in tracing the ratio- nale of these several steps, we find ourselves in- volved in much that is obscure and perplexing ; and that partly in consequence of the ignorance to which we have before adverted, in regard to the laws by which both actual heat and the sensation of heat are instituted and exercised in animal existence. The disturbance, how- ever, of the corporeal movements by which the first link of fever is constituted, whatever be its actual and precise nature, seems a something, which in one moment, in uno ictu, as Fordyce expresses it, runs through the whole fibres, and texture, and functions of the sentient organisa- tion ; it is a shock to which succeeds the rigor, which rigor, though expressed in English shiver- ing, is not exactly the same sensation as cold, although it is more like it than any other sensa- tion ; and to account for the sudden generation of cold would be, in some measure, to account for the feeling in question. There is in the shock and rigor of fever, a sudden induction as it were of quiescence, a temporary suspension of the or- dinary movements ; and hence, in part at least, seems to arise the perception. It is a curious particular, as remarked by Dr. Fordyce, that the power of diminishing heat, without such heat

being given out to surrounding media, is common to the first stage, or preliminary quiescence, of fever. The body seems in a manner to lock up its own heat ; or, perhaps more properly speak- ing, by ceasing for a time its action, ceases in the same ratio to engender or manufacture heat. We probably then are permitted to go thus far in the explanation, viz. that an abrupt suspension of vita forces occasions the generation of cold, and

causes a shrinking and contraction of the ex- treme vessels, and that, after this suspension and contraction existing for some time, excitability is as it were accumulated ; so that, when the sys- tem recovers from it, the ordinary reacting move- ments or external impulses cause undue impetus, and hence the commotion constituting the irrita- tive portion of the series of actions by which consecutively fever is made up. This is, in fact, the mode in which the disciples of Stahl and of Cullen would explain the phenomena of fever ; only that in the schools of these celebrated teach- ers, especially in that of the former, a sort of in- telligence was supposed to be connected with these reacting impulses, to the directions of which it behoved the pathologist and practitioner to listen. Thus, to that primary shrinking the term spasm was applied by Cullen, with some looseness perhaps of phraseology, and a phraseo- logy to which many objections have been ad- vanced ; but it does not appear that the succes- sors of Cullen, who have loudly called out on the absurdity of his terminology and doctrines, have substituted others much more precise or satisfactory ; and from the whole it would appear that the perturbation of fever may be present with- out the actual presence of inflammation, but that it seldom lasts long without being productive of the inflamed state, as it is natural to expect would be the case when circulating impulse is ex- ercised with such irregularity ; the nervous power directing the arterial action in such sort as to cause the facile production of topical inflamma- tion and all its consequences.

281. When fever, instead of suddenly rushing as it were upon the subject it attacks, occurs more slowly and insidiously, as in the instance of its proving consequent upon mental uneasi- ness, then, we believe that the brain for the most part partakes essentially, if it may be so said, of the disorder’s essence, and that the disorder of the whole system is the result of an inflamed state of brain.

282. But how, it may be asked, is the in- creased heat under fever explained ? and what is the pathology of the perspiration which suc- ceeds ?

In the hot stage of fever, says the author whom we are now following, it has always appeared to me that phenomena present them- selves inconsistent with the chemical theory of animal temperature, even had we not been fur- nished with the refuting experiments of Mr. Brodie, before alluded to. During the heat of fever there is often much less change effected in the pulmonary organs, than while the body is free from disorder. Nay, the breathing an oxy- genous and vivifying atmosphere will often serve to cool, while azotic or carbonaceous air will heat the body ; this is so conspicuously the case, that some have proposed, as, in part at least, an explanation of fever's essence, the circumstance of carbonaceous rather than vivifying blood circulating through the brain, and producing the sensorial and other disturbance. Be this as it may, we certainly are compelled to ascribe the morbid heat, under the affections supposed, to a derangement in the sentient faculty, and to the commotion which the disorder induces, rather

than to aay decomposition of the air which the individual respires. In this announcement, how- ever, we rather cut through than untie the knot, and both the primary cold and subsequent heat of a febrile paroxysm are in respect to their rationale still involved in some obscurity, and connected in some hitherto unexplained way with vital peculiarities.

283. Perspiration is the final stage of a fever fit; and it becomes a question how this is brought about? and upon what principle it is that synchronously with the production of sweat, the body's temperature is reduced. At the time when the pulmonary theory of animal heat was generally admitted, it was ingeniously conjec- tured whether perspiration is not in all instances the converse of respiration in regard to its agency in the system; or that, as the lungs are the inlets of the calorific principle, so is the surface of the medium through which the heat is prevented from rising too high. 'That an animal/ says Dr. Currie, ' possesses to a certain extent the faculty of rendering sensible heat latent, or to speak more philosophically of reducing caloric from a free to a combined state, in cases in which the stimulus of heat might otherwise overpower the living energy, there is reason to believe from a variety of experiments and obser- vations; and that this in part is performed by perspiration from the surface, can scarcely admit of a doubt. The process of perspiration, which is continually going on from the surface of the body, is in this point of view the converse of respiration. As in respiration a gas is constantly converted into a solid or fluid, and thus heat is evolved, so in perspiration a fluid is constantly converted into a vapor, and thus heat is absorbed. A vessel filled with water, and exposed to the atmosphere, cannot be raised above 212° of Fahrenheit by any quantity of fuel, because, as

heat is supplied from below, evaporation carries it off from the surface ; in like manner we may suppose the heat of the human body to be kept uniform by the evaporation from the surface in- creasing or diminishing, according to the quan- tity of heat extricated from the system, or received from the surrounding media.'

284. To a certain extent this doctrine, of per- spiration being a regulator of heat, may be ad- mitted. But it ought to be recollected that we have agents that are capable of reducing the heat of the body, without producing sweat ; and Dr. Currie himself admits that, from some experi- ments in the hot bath, it appears that the tempe- rature of the body is with difficulty increased after the sweat begins to flow, although there is, of course, no evaporation from the surface while the body is immersed in hot water. Our theorist meets the objection, which starts up from this source, by supposing that perspiration is a cool- ing process even in its being engendered inter- nally, and before it breaks out upon the surface, from the fact of this fluid having a greater capa- city for heat than the blood, and thus absorbing or reducing temperature in the moment of its formation.

285. But it has been said that the matter of sweat is actually secreted in as great abundance during the heat of fever as after the paroxysm

has declined ; and we know also that many agents prove cooling without proving sudorific ; and, upon the whole, we must conclude that, as in the instance of natural and morbid heat, so in the case of its modification and reduction, there is still much that does not admit of explanation by the assumptions and inferences of chemistry; and that vital actions and sentient impulses must be taken into account before we can take one secure step in the way of tracing the rationale of function.

286. Why, it is natural to enquire, does not sweat immediately result upon the reaction and heat of fever? Why does the surface for a time pertinaciously retain its dryness and heat, and then all at once give way and become bathed in perspiration ? For suppose we allow the correct- ness of the statement made above, that sweat is produced as freely during heat as after the declension of heat, even then we must admit that the vessels on the surface are in a different condition, under the actual appearance of sweat, from that of dry heat. Dr. Cullen and his dis- ciples would reply to this query, that the rush of

blood and newly excited action eventually succeed in dissolving the spasm of the small ves- sels, and thence the resulting phenomena ; but, besides that this is saying it takes place because it does take place, we must suppose the subsi- dence of the spasm, or the giving way of con- traction in the extreme vessels, prior to the full establishment of reaction. Dr. Park has en- deavoured to refer these circumstances to a similar law with that which takes place in some of the hollow muscles, as of the bladder and rectum, in which the sphincters or outlets always act in opposition as it were to the organ itself; when one is in a state of contraction, the other is in that of relaxation, and vice versa. In consis- tency with this principle, he says, that the exhalants may be received or furnished at their extreme points with a species of sphincter agency ; and that, when the vessels on the surface give way before an inordinate rush of blood, the extremities contract to retain it, and that this con- traction only ceases when the retaining power of the vessel is stretched to a certain pitch ; as we micturate of necessity when the urinary bladder is full. Is not this hypothesis open to the following objection, even if otherwise tena- ble ? that it supposes the capillaries to be organs of mere retention and transmission, not, as they in reality are, actual secretory vessels. Were it the mere rush of blood that the shut mouths of the extreme vessels retain, the discharge when constriction is overcome ought to be blood, or at least the thinner part of that fluid, and not, as it proves, a new secretion.

287. With respect to the exciting causes of lever, opinion is still as various as in reference to the rationale, or proximate cause, as some ex- press it, of the febrile state. This question of the excitants of fever in part involves another, viz. what are the kinds and species of fever ? Some assert that fever, whatever type or external cha- racter it may display, is always one and the same thing, and that there is no difference except in the imagination of the nosologist, between the malignant plague of the Levant, and

the low, or as some call it the typhoid, fever of a London alley. Others again divide and subdi- vide to an enormous amount, under the feeling that every new modification of the ailment, in acknowledging a distinct source, demands a dis- tinct appellation. While some steer a middle course, and imagine that fevers, though in one sense they are identical, are susceptible, in point of fact, of greater divisions than the identifiers of disease acknowledge. Genuine fever, say one class of pathologists, never can originate without the agency of contagion; others, on the contrary, go so far as to deny the contagious quality of any fever except in the instance of certain specific disorders as the small pox; while a third party are ready to admit that contagion is an

agent in the production of fevers, but at the same time contend that the disorder may be elicited from other powers, such as the undue influence of temperature, famine, repletion, filth, confined air, and even mental agitation.

288. The words contagion and infection have sometimes been used synonimously, and this has occasioned some want of precision in the reason- ing, and uncertainty in the inferences, of specu- latists. Contagion, says the writer whom we are now principally following, is, by the general acceptation of the term, a something which, coming in contact either immediately or inter- mediately with the body of an individual previ- ously in health, engenders a disease in that individual of a nature precisely similar to its own ; it implies, in a word, specific poison. What is infection, as opposed to contagion? — If we take a journey to Constantinople while the plague is raging in that city, and if by conse- quence of our residence there we fall sick of the plague without having come into contact with the matter that shall have emanated from the body of another person who is the subject of plague, we receive an infectious malady. Here then is stated to be the difference between an in- fection and a contagion ; that the one is atmos- pherical, or only through the medium of the unhealthy air communicated, while the other implies communication, either direct or indirect, with a something issuing from the body of the sick. In either case, indeed, the contact with a poison is, strictly speaking, supposed ; and hence there is some impropriety in basing the notion of difference upon the assumption of dif- ferent operation. ‘ I am disposed to think,’ says our author, ‘ that much of the intricacy that attaches itself to the question of contagion and infection originates in this very source ; that is, a variety in modus operandi is presumed which is really non-existent. Let us imagine that a patient dies in the Levant of the disease called plague, and that the clothes in which he died are conveyed to this country imbued with the poison of plague. An inhabitant of our metropolis pro- curing and putting on these clothes might be affected with a certain dose, so to say, of disease ; but still, though the virus may be as active in se as had the same appropriation of the habiliments been made at another quarter of the globe, yet the resulting distemper1 might nevertheless be various ; and in that case you would say of the individual that he had taken an infectious as well

as contagious distemper. In this way then the question may be viewed

as standing out in a tangible form. Is there any reason to believe that some disorders are entirely of an abstract nature, dependent solely upon their several ex- citing sources, without reference to time, place, or circumstance ? Or does the modify ing power of place always, to some extent, operate upon the nature and aspect of a distemper ? ‘ ‘ For my own part,’ continues the writer we are quoting, ‘ I am disposed to think it does, so that though in some cases I incline towards the sentiments of the anti-contagionist, I in another recede from his inferences, even much further than does the contagionist himself; for I believe that, from the most decided case of small pox, down to a nur- sery cold, there is something communicable in the maladies, and something operative in the atmosphere.’

289. The author goes on to other illustrations, which we have not space to quote, of the same principle — that is, he endeavours further to de- monstrate, that even those distempers which seem, so to say, the most abstractedly dependent upon their own peculiar sources, are in some measure modified by atmospheric influences, and that thus specific contagion falls by insensible degrees into malignant, and that again into mild or general disorder, as the succession of time or the variation of circumstance directs. Having, however, admitted that on these points there is much to learn, much to unlearn, and much pro- bably that will be for ever hidden, he concludes the section of his book which refers to the exci- tants of fever, by the following announcement of facts and opinions : —

290. There is in all fevers a tendency to pe- riodical accession and decline, but in some cases this is so complete and so marked that the pa- tient is left during the intervals in total exemption from the disorder; hence the term intermittent. In other instances, though the malady gives way in part, it does not wholly. Now, the intermit- tent shapes of fever have been observed much more frequently in marshy situations, or where shallow stagnant waters abound ; and they have on this account been usually attributed to a poi- sonous exhalation of miasm arising from the decomposed materials of a soil thus circum- stanced. Others have argued that there is no necessity of interposing the notion even here of a specific poison, since the coldness and dampness of the country are quite sufficient to account for the effect. When, however, we find that in some situations not marshy, but otherwise unhealthy, intermittent* do not, or but seldom appear ; when we see that the draining of lands from shallow stagnant waters has considerably lessened the frequency of these fevers ; and when we re- collect that the neighbourhood of deep waters, though equally cold, is not so insalubrious as that of a marshy vicinity, it appears to be carry- ing a disposition to generalise too far to question the specific

agency of marsh miasmata. But the influence of this may be much modified by other agents ; and, in cases where we have very high variations and sudden vicissitudes of temperature from the sultry day to the damp foggy night, and where at the same time the land is” low and

marshy, there we meet with modifications of yellow and intermittent fever under the shapes and denominations of bilious remittent. Again, let these circumstances of soil and temperature operate in conjunction with animal decomposi- tion, and the resulting disorder assumes more of what has been called a putrid type, still re- taining some of the features either of remis- sion, intermission, or yellow hue, that have been imparted to it by its other excitants besides that of the main and master one. Whether, then, we shall name all these fevers differently as they thus assume various shades and modifi- cations, becomes in some measure a dispute about words, only that it is important to recollect that these varieties are rather local, endemic, and incidental, than inherent, abstract, and essential.

291. The remaining orders in Cullen’s first class or pyrexia are exanthemata, hoemorrhagia, and profluvia. Exanthamata is a term applied to diseases which break out on the surface of the body in the form of rashes or otherwise. The theory of these diseases is often very difficult and intricate. The ancients, who were for the most part contented with generalising inference? of not a very precise nature, supposed a sort ot internal commotion of humors, which, after battling about for some time, settled on the surface, something after the manner of ferment- ing materials, which eventually come to subside into their respective localities ; indeed the humoral pathology, as it has been termed, of more modern times, reasoned in some measure after this sort; and averse as we may be from falling into these notions, now that the laws of secretion and excretion are more scientifically traced, we must still, nevertheless, admit that there is in the phenomenon which some of the rashes exhibit not a little that justifies the crude analogies alluded to.

292. It is right to remark here that Dr. Cullen confines his views of the exanthemata to those affections of the skin which are not only attend- ed with, but which are actually ushered in by, fever ; and it is through the means of this fever that the disorder is thought to work its own cure ; for it is hereby that a general determina- tion is made to the surface, and the morbid poison is thrown off from the system.

293. ‘ When a febrile poison producing a cutaneous eruption is generated, or has been conveyed into the b’lood, a small degree of

fever is sufficient to throw it upon the skin ; and, if it exceed the proper extent, the specific virus will be multiplied, and the fever itself may become a source of real danger. It was formerly the practice to encourage the fever by cardiacs, a heated atmosphere, and a load of bed clothes, from an idea that we hereby solicit a larger flow of morbific matter from the interior to the sur- face. The fact is unquestionable; for, be the exanthema what it may, the skin will hence in almost every instance be covered with eruption. But it did not occur to the pathologists of those times that the morbid virus was an animal fer- ment, capable of multiplying itself by acces- sories ; and that heat and febrile action, beyond a very low medium, are among the most power- ful accessories we can communicate. And hence

the advantage of applying cold water in scarlet fevers, and cold air in small pox, with a view of mitigating the fever that often accompanies these diseases ; for, by diminishing the febrile violence, we do not as was formerly imagined lock up the contagion in the interior of the system, but prevent it from forming afresh and augmenting there.'

294. To this law, however, of moderating rather than abetting excitement, some limits must be made in theory and practice ; and here it is of importance to remark, that of late years a connexion has been traced between the action of the outer skin, and internal membraneous surfaces, and that in especial reference to febrile disorders that are expressed by rashes. The connexion seems to be of that nature which is denominated by Dar- win reverse sympathy, which had long ago been recognised in the case of catarrhal irritation, but which has recently been more particularly traced and applied to the affection now under notice. Suppose the whole surface of the body to be covered with a thick crop of eruptions, it you too precipitately arrest the morbid processes which these eruptions imply, you thereby cause the surfaces which line the interior, both of the alimentary and aerial passages, to take on an action, at least somewhat similar if not precisely the same, as that which you have interfered with on the exterior. In some instances this vicari- ous sort of connexion is more marked than in others ; but in all cases of skin activity it is in a greater or less measure conspicuous. In all it requires to be attended to in practice, and, in- deed, in modern medicine is attended to, much to the credit of the science, and to the benefit of the patient. It may be right just to remark here that the connexion appears to have some relation, at least, to kind as well as degree ; for in the eruption of

scarlet fever, and especially measles, thoiigh the cutaneous disturbance may not be nearly so great as in the instance of small pox, the internal tendency, upon either natural or artificial repression, appears greater. It will be found necessary in practice to proceed under a recol- lection of this fact, and to be wary of bringing down the irritation on the surface with too much freedom, where the internal tendency to the vicarious irritation now referred to is thus con- spicuous.

295. The next order is haemorrhages, in which there is some degree of analogy with inflammations ; that is an inordinate impulse given to the blood may produce the discharge in a direct way, as in the case of active inflam- mation ; or the discharge may be brought about by want of resisting or retaining power in the vessels themselves, the impulse not being much more than ordinary. It is proper, however, to take into account, when we are considering the pathology of haemorrhages, that a discharge of blood does not necessarily imply an actual rupture of vessels, since the impetus may be so great as to force blood through the terminal capillaries, or those small vessels which terminate by open mouths upon surfaces, and thus may a very considerable profusion be produced, while the coats of the vessels remain unbroken. In this case inflammation and haemorrhages are

exceedingly analogous : but, in the case of dis- charge of blood, the discharge in some degree operates its own remedy, that is, as far as the inflammatory process is concerned, although a new disorder is sometimes engendered by ex- travasation into parts which, having no outlet, are incapable of immediately ejecting this foreign matter.

296. Haemorrhages were formerly conceived to have great dependence upon external circum- stance, that is, to be influenced by variations in temperature and aerial density ; heat expand- ing the circulating blood beyond its ordinary tenacity, and the varied states of rarefaction in the air causing a varied condition in the rarefaction or condensation of the fluid while flowing in its vessels ; and, although the laws of physics and chemistry are ever held in subordi- nation and check by the commanding energies of vital forces, it is perhaps questionable whether the pathology of the present day is not too regardless of external agents in the rationale of internal processes. Haemorrhage from the nose and from the lungs is not seldom induced by breathing an air more than commonly rarefied ; and without going to the full length of Hoff- man, when he talks of orgasm, ebullition, and turgescence of blood destroying the systaltic and elastic power of the vessel, and thereby inducing congestion, distension, and rupture, we may at least subscribe to the doctrine of some immedi- ate change

in the blood's condition, as caused by external agents, beyond the influence of these agents as mere vital excitants.

297. Persons ascending elevated regions, when the atmosphere is less dense or more rarefied than that immediately surrounding us, have been seized with haemorrhagic attacks, which could not be ascribed solely to exertion, but must be in part referred to atmospheric change • a proof this that even in circulating blood some direct alteration may be effected on its volume by the varied circumstances of external exposure ; even here, however, we are to take into account the probable influence of the supposed change upon the living fibre as well as upon the circu- lating fluids ; and upon the whole it seems right to recognise, as above intimated, the supe- rior power of vital causation, while we admit, in a qualified and subordinate way, physical and chemical agency.

298. When haemorrhage takes place from ob- viously exciting causes, such as a flow of blood from the nose in consequence of a blow, or when spitting of blood is induced by violent exercise of the lungs, it does not seem very difficult to follow the steps of the morbid process ; but the occurrence of spontaneous haemorrhage, as of spontaneous inflammation, brings with it a little more of difficulty in respect of explanation ; and here we must have recourse to the idea of ple- thora, and to an irregularity in the blood's distribution arising out of that state of the system to which the predicate of plethora is applied. On the nature and essence of plethora much controversy has arisen ; and, indeed, by some the possibility is denied of more blood being at any given time in the body than th» vessels can conveniently contain and carry. If,

is averred that the secretory and excretory organs would take care that this should not be the case, and that the demand upon them is ever in pro- portion to the ingesta or matter received from without. But, were these functions always thus true to their charge, very little of disordered action would ever be manifested ; and the fact is, that the very tone of the system which pro- duces appetite, free digestion, and, in conse- quence, occasions more blood and chyle to be formed, is that condition which contracts the blood-vessels and the secernents at the same moment, srhd thus occasions a more than due quantity of blood to be contained through the whole of the circulatory organisation. We know also that, for the secernents and excretories to

be kept in a due condition of activity, a certain quantity of exercise is required on the part of the individual. In default therefore of the exercise a plethoric state may be induced, since rest in some conditions of vigorous stamina may not be equal to causing a failure of appetite and ingesta. This species of plethora, if it be ad- mitted, implies a stenich diathesis, to use the phraseology of some pathologists ; and, although in itself not disease, certainly predisposes to it, by rendering the system more obnoxious to the effect of the slightest and otherwise scarcely operative irregularities.

299. But it is further conceivab.e that the vessels may be overladen and over distended while the actions of the system are in respect of tonicity or sthenic condition rather below than above the ordinary standard. In this case, how- ever, the blood would be more tenuous as well as in larger quantity, and the morbid inclination would be more towards the next order of disease, the profluvia; or rather it would be towards serous effusion and dropsical accumulation, on the rationale of which a few words will be said under cachexia.

300. The schools have admitted a plethora ad molem, which implies an actual expansion of blood in the vessels ; and this in some degree may have place if what has been advanced on the subject of aerial density or tenuity and their effects has any foundation in fact.

301. Profluvia. A certain kind and quantum of excitation in the excretory organs increases their natural discharge ; but a diminution as well as increase in this excitation may also be pro- ductive of inordinate discharge. Thus coryza from the nose, and tears from the lachrymal glands, may appear in superabundance from mere exposure to cold, which being a depriva- tion of heat is in fact a deprivation of stimulus. There would seem at first some difficulty in re- conciling these ‘ hot and cold blowing’ pheno- mena, but the following explanation may be deemed sufficiently satisfactory. ‘ The absorb- ent vessels become torpid by the diminution of the external heat sooner than the secerning ones, which are longer kept warm by the circulating blood, from which they select the fluid they se- crete ; whereas the absorbent vessels of the nos- trils drink up their fluids, viz. the thin and saline part of the mucus, after it has been cooled by the atmosphere. Hence the absorbents ceasing *o act, and the secerning vessels continuing some

time longer to pour out the mucus, a copious thin discharge is produced, which trickles down the nostrils in cold weather. This discharge is so acrid as to inflame the upper lip, which is owing to the neutral salts with which it abounds not being re-absorbed; so the tears

in fistula lachrymalis inflame the cheek.

302. But there are circumstances connected with morbid activity in the secernent vessels which are exceptions in appearance to the more general one of increased secretion being equiva- lent to increased excitation. In the first case a given quantity of excitement, or that quantity applied under a given state of the secerning or- ganisation, shall arrest secretion or flow alto- gether. Shall we say here that both the exhalants and absorbents are in a state of increased action, but the absorbents have obtained the mastery in the contest; or shall we suppose, with Dr. Parr, a sort of opposition between the small vessels and their sphincter extremities ; or shall we confess at once that we have much of difficulty to grapple with when we trace functional rela- tion to exterior agents ? Again the flux shall be continued by habit after all extraordinary exci- tation is gone by. By habit ! What do we mean by this term ? Merely a statement of fact ; and it is really not easy to say why a thick ropy secretion should be continued to be poured out from the mucous surfaces, after the cessation of that cause from which the flux had primarily proceeded. The absorbents here would seem to do something more for the poured out matter than merely drink up its watery and saline parts ; for the secretion often gradually changes in kind as well as consistence; and at length, under particular conditions of the part and of the frame, slides, as we have before intimated, into purulent condition.

303. With these remarks we conclude our preliminary comment on the first class of Cul- len's system, and we now proceed to observe in the same cursory and prefatory manner on the second division of the system, viz. neuroses, which comprises the four orders comata, ady namiae, spasmi, and vesaniae.

304. Comata. Diminished voluntary motion with torpor or a suspension of sense. Here, we are told, an obvious and large objection imme- diately rises up against classifying attempts. Let a few branches of blood be ruptured and a little blood be poured out upon the brain, by which 'primarily and properly a mere haemorrhagic dis- order is constituted, and you have instantaneously all the symptoms presented to you of Dr. Cul- len's first and most important order of nervous ailment. Again, the two genera of this order are apoplexy and palsy; the latter of which often occurs without coma, and is, in truth, a mere adynamic affection ; so that the class neu- roses in its leading definition, and in both the genera of the very first order, is far from correct- ness either in admission or omission.

305. Coma is usually produced by pressure upon some part of the

encephalic mass, and this pressure for the most part occurs from fulness of vessel, or from extravasation ; but that this is not always the case may be analogically inferred from the phenomena of a drowsiness that is below the

grade of actual disease. Let an individual, for instance, feel himself almost irresistibly impelled to sleep, under the ordinary excitants by which he is surrounded ; but add a larger quantity, or subject him to a different kind of excitement, and his soporose tendency immediately changes into wakefulness and vigor. Now in this case we cannot suppose that pressure on the brain was the cause of the drowsiness, or the removal of that pressure the occasion of the wakeful- ness; the altered circumstances and feelings must surely have reference rather to some un- known change in the sentient energy than to the mechanical condition, if we may so express it, of brain and nerve ; and an inference has been adduced from these occurrences against the theory altogether, which ascribes the sopor of apoplexy to either fulness or pressure. Even in those in- stances of sentient abolition that are unquestion- ably connected with haemorrhage upon the brain, some theorists will pertinaciously contend that the haemorrhage is rather a consequence than a cause of the suspended functions, and that it is in the derangement of nervous energy that you are to look for a satisfactory exposition of coma- tose circumstance.

306. But we believe the moderate and unsys- tematic or independent observer will only permit the fact referred to, of volition and sense being interfered with, where no pressure can be sup- posed to influence his mind against the common theory of apoplexy to a certain extent. He will be led by reflection on it to qualify, not to reject, the principle. He will in some sort accord with this theorist who talks of broken down nervous power, and with that who refers the whole busi- ness rather to altered circulation than to actual pressure ; but he will also recollect that the Pa- risian beggar could at any time bring an apoplexy upon himself, by merely pressing upon a denuded portion of the brain; and he will duly recognise the fact, that a man who was but a few short moments since in health and spirits may be now lying before him snorting under the succum- bence of hremorrahagia cerebri.

307. The fault in this, as in other parts of pa- thology, consists in assuming that trfere must be one spring and source of ailment to the

exclu- sion of all others ; and the error here has not been limited merely to theoretical speculation. It is to be feared, on the one hand, that the lancet has been systematically withheld at the expense of life ; and that, on the other, large depletions have acted in aid of disordered forces to determine the patients' untimely fate. An intermediate but not a neutral course seems to be the safest plan of procedure, and • a great deal must be left to the practitioner's judgmentand to the par- ticular circumstances of the individual case. But it is theory rather than practice to which we are now attending.

308. Of the adynamia;, the second order in this se- cond class, we may observe, the existence seems sufficiently well established. It is easy to con- ceive of defective power in the involuntary functions from defective nervous supply, without resorting to the condition of blood-vessels for an explanation of the circumstance. That these functions may thus be interfered with, by some

unknown condition of that part of the nervous organisation under the influence of which they are exercised, all experiments and observations bearing upon the point tend to prove, and none more so than the recent ones of Dr. Wilson Philip; who not only, by dividing the nerve which supplies the digestive organs, puts a stop to the process of digestion, but who also causes digestion to be continued or resumed, by so placing the animal experimented on under the in- fluence of voltaic electricity that this latter is made a substitute for the nervous energy.

309. Adynamic disorders, or, in other words, disorders of defective power, have often been supposed when inflammatory conditions had been really present ; and to say of disease it is a defective power, without minutely investigating all its phenomena, is to let loose upon our minds a speculative principle which may be highly injurious to our patients when carried into practical application. But at the present day the tendency of theory and practice may be rather to the opposite extreme ; and, in our en- deavours to trace every thing up to tangible sources, it may be questioned whether the ideas of congestion and inflammation have not too much superseded the recognition of nervous agency.

310. Spasmodic affections, which are made to constitute the third order in the present class, are quite as difficult of explication as are the adyna- mia ailments. We have assumed the deprivation of power, causing the latter to be an unknown condition of nerve, and of the spasm we may predicate the same thing; for if we admit of ir- regular flows of nervous fluid, as the source of those irregular actions in the

fibrous part of the frame to which the term spasm is applied, we set out without any other guide than that of a petitio principii, and wander we know not whi- ther.

311. Even the axiom that has been admitted by some to an unlimited extent ‘ debilitas gignit spasmum,’ spasm originates in debility, cannot be received into pathology without much qualifica- tion ; for when an individual is thrown down in violent convulsions from merely a few thread worms being lodged hi the rectum, and becomes immediately himself again upon the expulsion of these ‘ minute instruments of mighty mischief,’ you can scarcely say that it was weakness which caused, and it is returning strength which has subdued the disorder ; though, as far as the con- vulsion itself is concerned, there may be some propriety in placing it to the account of debility, since convulsion consists in fibrous contraction not being brought up to the due pitch which is demanded for ftrderly display.

312. Among the spasmi Dr. Cullen has in- troduced some of his genera, in violation of his own principles. Asthma, dyspnoea, and hooping- cough, might still perhaps retain their situation without very strict investigation of right or claim ; but who can see pyrosis and diabetes introduced as spasmodic disorders, without thinking that either the scheme which admits them into the class is defective, or that insuperable difficulties connect themselves with all schemes.

313. The vesania* are those derangements

which are commonly considered as distinctly mental. It lias, however, been asserted that ‘ every nervous disorder is a degree of insanity ;’ and there is some rectitude in the notion which this sweeping assertion is meant to convey. When feeling is no more than commensurate to obvious circumstance, the individual thus feeling, or thus perceiving, is considered to be under a degree of delusion corresponding with the inten- sity of the affection ; and in delusion consists insanity. But here lies the difficulty in determin- ing upon the existence of insanity, that a standard of sanity is assumed which it is difficult to substan- tiate. What, says the author now under contri- bution, is motive to me is not to another ; and, while I call the miser mad for loving money merelyfoi money’s sake, I in a measure forget that his feelings with regard to the value of money are absolutely different from mine ; and so in respect of what are called and

considered imaginary ailments. Who shall say that the despairing hypochondriac, contemplating and ef- fecting the horrid purpose of suicide, feels or acts in less consistency with his state of sentient being than does the happy individual who grate- fully participates in the blessings of providence, and does all in his power to preserve his life both from a sense of duty and a feeling of delight ?

314. With respect to the altered condition of brain and nerve, upon which insanity depends, we know nothing more than we do respecting the cause of convulsive agitation, or adynamic torpor. We are fully conscious that there must be some bodily change, and that of a serious nature ; for the idea of merely mental disorder, abstracted from corporeal engagement, cannot be admitted into pathology ; but, of the essence of the change produced, we are often from first to last pro- foundly ignorant, and the suddenness with which both its visits and departures are sometimes made is inconsistent with our notions and know- ledge of organic disorder. When, indeed, we meet with opportunities of examination after death, there is scarcely any condition of brain not found at one time or other ; but there is a great want of uniformity in these appearances. They arc most of them occasionally found when the disorder had not been insanity; and it is further impossible to say how much of the change has been cause and how much consequence. When, says our author, the vascular theorists refer all the aberrations of nerve and mind to congestive and inflammatory states, they make the same mistake here as they do in reference to pyrexial pathology, by putting the acted upon in place of the agent, and by assuming the existence of states that are incidental as if they were neces- sary and invariable; so again do your chylo- poietic speculatists, who will have it that the stomach must be mad before the man, in the same sweeping way that they will not admit of an accidental blotch on the body's surface, with- out considering it an index of digestive derange- ment.

315. The distinction between hypochondriasis and melancholia, it must be conceded, has been too nicely drawn out upon the ground that the one is

an adynamic, and the other a vesanic ailment ;

but that absolute madness of the melancholic cast

often takes firm hold of an individual, without at all interfering with digestive integrity, must be allowed by every one who may not have com- mitted himself beyond recall to the Catholicism of the chylopoietic creed. Cullen on the other hand seems to be in an error,

when he states melancholia to be partial insanity without dys- pepsia, and mania to be universal madness ; for the one is often as complete and universal as the other, and the difference, like that in febrile mani- festation, is rather to be taken from the person affected than from the thing affecting : ‘ such a system of division is contrary to what manifest propriety suggests. It is making the plant, from an acorn dropped upon a rocky soil, not an oak because it does not rise to the height or spread to the extent usual to the king of the forest.’

316. The remarks of Dr. Ilaslam on this head are well worth the attention of the nosological subdivider. As the terms mania and melancholia are in general use, says this writer, and serve to distinguish the forms under which insanity is exhibited, there can be no objection to retain them ; but I would strongly oppose their being considered as opposite diseases. In both the association of ideas is equally incorrect, and they appear to differ only in form from the different passions which accompany them. On dissection, the state of the brain does not show any appear- ances peculiar to melancholy, nor is the treat- ment which I have observed most successful different from that which is employed in mania. We every day see the most furious maniacs sud- denly sink into a profound melancholy ; and the most depressed and miserable objects become violent and raving.

317. The third class of Cullen is established on the assumption that a depraved condition may be present, of the assimilating or eliminating or- gans, without either the nervous system or the blood-vessels being primarily implicated. Such disorders, under the prevalence of the humoral pathology, were ascribed to bad humors pervading the body ; a notion which Dr. Cullen has in some measure himself given into by retaining the term cachexy; bjit to disordered action, in the ab- sorbent or secerning organisation, are the occur- rences rather referred in the present day ; and the pre-disposition to them is thought to consist in a particular susceptibility to be acted on in this portion of the frame.

318. The orders of cachexia are, marcores or emaciation ; intumescentiae or swellings ; and im- petigines, or those cachectic disorders which principally manifest themselves in the skin and superficies of the body.

319. Of the marcores, or emaciation, Dr. Culien makes two kinds, the tabid and the atrophic ; the one being attended with hectic fever, as a prime and peculiar accompaniment, the other being without this index of diseased state. Atrophia ought, however, in strict pro- priety to have been transferred to the neuroses, since the assimilating functions

are supposed to be secondarily at fault in these cases of atrophic as opposed to tabid wasting, or to be depende”* upon a disordered condition of the nervous sys- tem ; while the tabid affections originate in some inherent or essential error in the assimilating or

secernent organs ; and in these last, it is said, some indications at least of hectic disposition may for the most part be traced, as well as some intimations that a scrofulous diathesis is present. \Vhat, asks our author, is hectic? What is scro- fula ? and he replies to these questions in the following manner. Some individuals are so con- structed, principally in reference to lymphatic organisation and susceptibility, that any cause which produces derangement, or deviation from healthy action, fastens with more facility upon this part of the frame (the lymphatic) than upon any other ; and these are they, who, by common consent, are considered scrofulous — these are they moreover in whom hectic fever is soonest established, so much so, that any attentive ob- server may be guided in his recognition of scro- fulous tendency, by the readiness which hectic manifests to start up and accompany a disorder’s progress.

320. Fully marked hectic is indeed for the most part a signal that local disorganisation of a serious nature has established itself in some part of the body; and it is so general an attendant upon the suppurative process as to have led some theorists to trace its essence into reabsorption of pus, which had been poured out from the blood-vessels ; but it does certainly show itself at times without any topical accompaniment, and does appear in some way or other to be especially connected with the lymphatic and secernent sys- tems. If two children be affected simultaneously with inflammation of the brain, from the same acting cause, and one of them has more of the scrofulous diathesis about him than the other, you will in this one find a readier disposition to hydrocephalic effusion, you will find his little cheeks sooner painted by the hectic blush, and all things more rapidly tending towards a certain sort, as well as grade of disorder.

321. Fill the stomachs of two other children, with food, which, both in kind and quality, shall make too large a demand upon the digestive and assimilating powers; in the one case you will have common pyrexial disturbance produced, or the infantile remittent fever of authors will be engendered ; in the other you will have a knotted protuberant abdomen, a hectic circle of red on the face, emaciated

limbs, and, in fact, tabes me- senterica; and why? Because in this last case the mesenteric glands, as parts of the lymphatic or lacteal system, are constitutionally obnoxious to ready derangement, and, probably, because there is not the proper absorbent process going on in the several secernents that are connected with the assimilating process ; there may not merely be a deficient quantity of the biliary and pancreatic secretions, but such diminution nay be accompanied by a deficient stimulant 'pro- perty in these secretions ; besides, from the inac- tivity of the absorbents, the watery parts of the secretions referred to are not readily re-absorbed, and thus the duodenum receives them in too dilute a state for functional demands. The emaciation then of this child and its weakness are not induced in the same way as the weakness and want of flesh in the other. In the subjects of remittent fever, the blood vessels and nerves appear to have been more engaged with the dis-

ease, and the altogether of the morbid process has been of a different nature.

322. Of the intumescentiae, the next order of the class, the rationale is often exceedingly ob- scure. When a permanent enlargement takes place of the abdomen, and we find such en- largement to be constituted by a deposit of fluid in the peritoneal cavity, we may seem to have some precise notion of the modus generandi ; at any rate we are convinced that the tumefaction is oc- casioned by exhalation being greater than the due quantity, or the absorption less ; but a tense protuberant abdomen shall often present itself, which can no otherwise be accounted for than by a secretion of air, and which protuberance shall appear and disappear in a manner as difficult to trace as in any morbid process to which the body is obnoxious. That the emphysematose, and tympanitic, and adipose, and physconic enlarge- ments, are, however, in some sort or other depen- dent upon a depraved or rather deranged action in the secernent and absorbent functions, may be considered as pretty certain, and hence the pro- priety of their admission into this class of dis- eases.

323. In respect of actual dropsy, it has been just intimated that the pathology is rather more satisfactory ; even here, however, opinion varies, as to the precise principle upon which the interstitial deposit is effected. Systematists have been accustomed, until very lately, to settle the account by assuming a want of due adjustment in the proportion of exhalation and absorption ; and in this way connecting necessarily the idea of debility with the development of the disor- dered state. More «ecently, however, an undue accumulation of fluid, either in the cellular mem- brane or in any of the cavities of the body

has been looked upon rather as the result of morbidly increased action — of inflammation, in fact, than of torpor, or want of excitement. In some dis- eases, that go under the denomination of dropsy, this assumed action has been most manifestly pre- sent, as in acute hydrocephalus, in hydrothorax succeeding to pneumonia, and in ascites to peri- tonaeal inflammation ; but it may be questioned whether we have not too precipitately changed sides with regard to hydropic pathology, and now think of action too much as before we thought too much of torpor.

324. Dropsy, says our author, appears fairly traceable to at least three sources. When you have sluggish circulation connected with, and in- deed caused by, venous plethora, the overladen vessels empty themselves by means of their con- tiguous exhalants in a sort of percolating way ; or at least without the induction of any disor- dered process that can justly be considered ana- logous to inflammation. It is this kind of dropsy that gradually supervenes upon obstructed vis- cera, such an obstruction causing an impediment to a free flow of blood and occasioning a re- mora among contiguous vessels. In this case neither are the exhalants nor the absorbents pro- perly at fault, nor is there any inflammator) irri- tation causing the exudation.

325. Serous or watery accumulations at other times take place, where every thing about the pa- tient indicates torpor, and torpor of a particular

kind, where, as it has been happily expressed by Dr. Bree, ‘ the last guardians of the safety of the animal economy give way and refuse to do the work of absorption.’ In this case it would appear, that we have dropsy from direct debility. 326. Lastly, some kinds of inflammation more open or more masked (for inflammation has often exiitedwhen it has not been suspected), so impli- cates the arteries, which terminate by open mouths or surfaces, that they are obliged in their own de- fence, as it were, to throw out an extraordinary quantity of serous effusion, and occasionally something more than the mere watery portions of the vital fluid are sent through them during the hurry and commotion of the process. Even here, however, the tendency to lymphatic exuda

scrofula more especially appertains: you may even here, it is said, trace a tendency to hectic irritation, and the altogether of the case will

tell you that the evil is of a peculiar, not of a com- mon nature. It ought, however, to be noticed, that the scrofulous diathesis is marked by consi- derable variety in respect of degree. There are scarcely any individuals in Britain without exhi- biting some slight tokens of its making up part of their constitutional stamina, while it is in some so conspicuously manifested as to be ob- yioui to the most superficial observer.

330. Of syphilis, the second genus of the or- der impetigines, we shall not say any thing in this place, as its history, peculiarities, and treat- ment, will be considered in the article SURGERY.

tion is partly constitutional ; and it will be found Scurvy is principally confined to marine situa-

that, from first to last, there is more disposition to hectic production than is common to ordinary in- flammation.

327. Whether a fourth cause of dropsy may be put down, viz. actual tenuity of blood brought on by haemorrhage, as expressed by Dr. Cullen, seems, to say the least, problematical. The blood certainly may be, and often is, deficient in its due proportion of solid to serous part ; but whe- ther this constitution in itself would tend to se- rous effusion seems doubtful. In this, as in all parts of medical theory, we should be careful to avoid the error of looking for one principle and source of affections that may be dependent upon a multiplicity and variety of causes; and we should likewise be careful, when we reject old theories, not to suppose that the one diametrically opposed to the rejected one must be true.

328. Rickety deformity, one of the genera of the present order, it would not seem very difficult to account for. During infancy one of the main duties of the exhaling or secerning vessels is to throw down calcareous matter into the cartilages and osseous membranes, so as to form bone. See PHYSIOLOGY and BONE. But, when the blood from which the bony matter is manufactured is not duly fed with repeated supplies of well- formed chyle, the consequence is a failure in quantity and kind of deposit ; or it may be that, from some vice in the re- absorbing energy, the same effect is more indirectly brought about;

tions and circumstances. It seems to consist of a broken down, or in some way vitiated, condi- tion of the blood, connected for the most part both with a primary and consequential derange- ment in the nervous power, and is thus very dif- ferent from scrofula — the one being, so to say, more sanguineous, the other more glandular or

lymphatic.

331. Elephantiasis, lepra, frambcesia, and tri- choma, are the four succeeding genera of this or- der; but as these are cutaneous complaints, and as Dr. Cullen may be considered particularly de- fective in his notions and arrangements of skin disorders, we shall defer any remarks on them till we come to treat especially of the ailments which affect the surface of the body. Icterus (jaundice) is also placed here, but most evidently misplaced : for that an accidental obstruction of the bile passages, causing the fluid destined for one part of the system to be thrown upon an- other, should be put down to the score of bad habit would seem, in every point of view, to be highly inconsistent with the principle of the clas- sification ; but it becomes more obviously and especially so when the term cachexy is meant to predicate a morbid susceptibility, or disordered excitation of the secernent, assimilating, or glan- dular organs.

332. Cullen's fourth class, as the reader will see by turning to the nosology, comprises local affections ; there is, however, a good deal of ob-

and, in this last case, we may have undue or ir- jection to the very notion of topical as opposed

regular ossification, even when the blood ab- stractedly ma£ not be in fault.

to universal ailment, and it has been made a question whether the idea of locality, independ-

329. Of the third order in the class impeti- ent of external irritation, may not be based

gines, scrofula is the first genus, on which some remarks have already been made. To say that scrofula consists of a peculiar condition of the lymphatic vessels and glands is not to say much in the way of exposition as to its absolute essence, but much more we cannot perhaps say without treading on hypothetical ground ; to the immediate circumstances, however, connected with lymphatic and glandular derangement scro- fula does not seem to confine its workings. Madness '.tself is often of scrofulous origin ; and in this case, of course, the nervous system is unequivocally implicated in the disorder; but still, even here, there is something by which you seem convinced of the more than common con- nexion between the production of the malady ami the derangement of those organs to

which

upon a wrong foundation, there being such an intimate and pervading connexion among the se- veral constituents of an organised body, that the isolation thus assumed cannot be fully substanti- ated. In the first order of the locales, viz. the dysaesthesiae, comprising affections of the senses from vitiated organs, as caligo, amaurosis, dys- pepsia, fcc., we often positively know, and may for the most part positively infer, tha* the local is but an accidental expression of systematic ot general evil. Then, again, among the dysortxiae or depraved appetites, with what propriety, it is asked, Can anorexia and bulimia be regarded as partial derangements, while dyspepsia is consi- dered a universal affection, even although this last, by the admission of Cullen himself, is some- times consequent upon a disease ipsius ventri-

culi ? Our author concludes these preliminary remarks by saying that, between nymphomania and nostalgia, which are placed by Dr. Cullen in his class locales, and in immediate succession as to order, no further connexion can be traced than in their commencing letter ; and upon this prin- ciple nosology and nonsense are as nearly allied. To call ‘ a vehement desire of revisiting our na- tive home,’ which is the definition of nostalgia, a local affection, would seem indeed totally incon- sistent with any other notion than that of an ob- scure anticipation of organological or phrenolo- gical doctri ne =

PART IV.

PRACTICE.

CLASS I. — PYREXIAL AFFECTIONS.

333. Order 1 . FEVERS. The general divisions, it will be observed, of the febrile order of diseases, are in the first place into intermittent and conti- nued ; the subdivisions being, of the intermittent, the tertian, quartan, and quotidian, with their several varieties and admixtures ; and, of the con- tinued, the inflammatory or synocha, the typhoid or low fever, and the synochus or mixed; to which is added in the nosology hectic fever. We shall not of course repeat the definitions which are given in the nosology, but proceed to remark generally and individually on symptoms, pecu- liarities, causes, diagnosis, prognosis, and modes of treatment.

334. Symptoms ofintcrmitlents. — Intermittent fevers are characterised by a decidedly marked cold stage, in which we find rigors, paleness, collapse, short and obstructed respiration, chat- tering of the teeth, trembling of the limbs, and rough or contracted skin called goose skin, with a general shrinking of the features, and a small and frequent pulse. These symptoms continue for a longer or shorter period, and are then suc- ceeded by those of the hot stage, which however is at first of partial and irregular occurrence ; and at length the heat becomes universally diffused, and is much above the standard heat of health. Fulness likewise takes the place of the previous collapse and shrinking ; the pulse from being small becomes fullerand harder ; pains are felt in different parts of the body and limbs ; nausea and vomit-* ing are not unfrequent ; the urine is high colored, but small in quantity ; the breathing is hurried ; there is considerable headache and throbbing of the temples ; confused perception and thought, and oftentimes delirium ; the tongue now be- comes covered with a white crust, and thirst prevails. After these symptoms have continued for some time a moisture breaks out on the fore- head, face, and neck, which soon extends universally ; and now the heat and thirst abate,

v the urine from being high colored and scanty comes to be more copiously discharged and to throw down a sediment, the pulse becomes more free and natural, the throbbing of the head sub- sides, the respiration becomes less labored, and in a word, all the functions are restored to their wonted condition. The whole of this process usually takes up from six to eight hours.

We have above remarked that tne tertian, the quartan, and the quotidian, are the most frequent Vor.. XIV.

types, as it is expressed, of intermittent ferer By this is meant, that, in the case of the tertian . forty-eight hours elapse from the commencemen of one fit of fever to the commencement of an” other ; that the period of the quartan is seventy” two hours, and of the quotidian twenty-four’ The most common type is the tertian, which is the occasion of its being marked first in the no- sology : this principally occurs in the spring. The quartan, which is the most severe form of ague, usually occurs in the autumn : this has ge- nerally the cold stage the longest, while the ter- tian has for the most part the longest hot stage.

The subdivisions and intermixtures of types we need not, as above intimated, follow ; but it is necessary to remark that, while the true inter- mittent or ague leaves the patient in the intervals of the fits

quite free from febrile disorder, there is a form of fever which is neither properly in- termittent, because it does not thus go off completely; nor properly continued, because the intervals are marked, but not with distinctness : this kind of fever authors have therefore agreed to designate remittent. It is further necessary to notice that these types of fever change, tertians and quartans become quotidians, and the quoti- dian falls into the remittent ; and this change in the general way is rather favorable than not, inas- much as it is for the most part from a severer to a milder form. Climate very much modifies the types and circumstances of intermittent and re- mittent fever, and the different seasons have likewise a considerable influence upon the types of the disorder. It is in countries where heat and moisture prevail conjunctively that the re- mittent form of fever is the most common.

Agues often last, if not arrested by medical treatment, for some length of time, and often terminate without producing much organic mischief; but they occasionally give rise to chronic obstructions of the viscera by their continuance, more especially of the liver and spleen, enlarge- ments of which last organ used formerly to be well known under the denomination of ague- cakes ; dropsy also is an occasional sequela ot intermittent fevers ; but these seem rather to be produced in an indirect way, and to follow upon primary derangement and chronic obstruction of the viscera.

335. Causes. — The predisposition to be affect- ed by the exciting causes of ague are, weakness of body, whether constitutional or induced by large evacuations ; unwholesome diet ; long watching; exposure to the cold and damp of a night air ; mental depression ; and, in fine, what- ever tends to debilitate or derange the frame. And it is to be observed, that this predisposition is increased by habit, that is, a person having once had the disorder is more likely afterwards to have it excited by its particular and specific source, or perhaps to fall into it in consequence of exposure to cold and damp, or subjection to circumstances which are generally regarded as merely circumstances of predisposition, but which some consider actual excitants of the disorder. We may further remark that this law of habit is dif- ferent from that which applies to the continued forms of lever, especially those which mani- festly acknowledge a specific poison as their

source ; for the effect of these is rather to lessen than increase predisposition, an individual being much less obnoxious to their influence after having once been the subject of them. This in some cases is carried almost to the extent of com- plete insusceptibility to a second attack.

lleypecting the actually exciting causes of in- termittent fevers, or agues, we may refer to what has been advanced in our introductory remarks (see par. 290) ; in which it will be seen that a dif- ference of opinion prevails on this head, some supposing that a particular poison engendered from the decomposition of marshy lands is abso- utely necessary for the production of ague, or even remittent fever; while others contend that, so far from marsh miasm being necessary to the excitation of intermittent, we have no evi- dence that such poison ever operates, or even exists. In addition to what has been advanced on this head, we shall here beg leave to intro- duce the remarks of a modern and luminous writer, Dr. George Gregory, to whom we shall become more indebted for quotations and extracts as we proceed in our disquisition.

The great and important occasional cause of in term it tents, says Dr. G., are the effluvia arising from marshy grounds, and called by physi- cians marsh miasmata. It is certainly a curious fact that this pathological principle, so obvious and so important in its practical tendency, should have been unknown, or at least unnoticed by the older medical authors. Sydenham seems to have had a glimpse of it, but he could not have seen it in its true light, for in his fifth chapter he attributes agues to the ebullition of spirits and viscid juices. Lancisci is the ori- ginal writer on marsh miasmata. His treatise is entitled De Noxiis Paludum Effluviis. We are not, however, yet acquainted with all the circum- stances upon which the production of ague de- pends. It is presumed, however, that the mias- mata arise from the combination of earth and moisture with putrescent vegetable matter. Moist-ire alone, though ever so abundant, will not produce ague; for it is a rare disease at sea, even upon the foggy banks of Newfoundland. When the marsh is covered by water, agues are less frequent. Of the exact nature of these miasmata we are ignorant, but some points have been noticed with regard to them to which it will be proper to advert.

The most elevated parts of a marsh being al- ways the healthiest, it is imagined that the mias- mata are comparatively heavier than the atmo- spheric air. There is reason too to believe that they cannot be wafted by currents of air to any great distance from the spot where they were ge- nerated, but on this point some differences of opinion

have lately prevailed. The calm months of the year being the most productive of agues, it is reasonable to suppose that the miasmata are most powerful when concentrated, and that diffusion by a brisk wind renders them compara- tively inert. Culture and proper draining pre- vent their formation, and hence it is that inter- mittent fevers are so much less frequent in England at present than they formerly were. A very short exposure to the exhalation of a marsh .* sufficient to affect the system. Travelling through the Ponline marshes has often been fol-

lowed by an attack of ague. There is consider- able diversity in the period which elapses between exposure to marsh miasmata, and the invasion of the disease. It sometimes does not exceed a few days, but there is reason to believe that the latent period has occasionally extended to several weeks or even months.

But, though it cannot be disputed that marsh miasmata are the most frequent and important existing causes of intermittent fevers, still it would |be impossible to deny that it has others. Febrific miasmata may unquestionably arise, under particular circumstances, from almost any soil. Persons residing in very healthy parts of London are occasionally attacked by intermittent fever. In the time of Sydenham, agues were common in every part of the metropolis. To the great attention which is now paid to the sewers we are probably in a great measure in- debted for the present healthiness of the town, and particularly for our exemption from ague. The occasional occurrence of the disease, there- fore, at a distance from marshes, is not to be a matter of surprise. Agues prevail extensively in certain districts where there are no marshes; but then it will always be found that there is some- thing equivalent to a marsh. There is either a subsoil of such a nature as does not allow water to penetrate easily through it ; or there is a great extent of wood impeding thorough ventilation and the action of the sun's rays; or there is total inattention to drainage and culture. In one or other of these ways we may be able to explain the prevalence of ague in the uncultivated parts of America, and in many parts of Italy, parti- cularly the neighbourhood of Rome, Naples, and Syracuse.

These peculiarities of soil are not merely the occasion of agues, but they serve to modify the characters of continued fever, and of any other febrile disease which may happen to occur in the district. They give a tendency to exacerbation and remission in the symptoms of the fever; and it is not improbable that many cases of what might be considered genuine remittent fever from marsh exhalations, are in fact cases, of com- mon continued fever from cold modified by peculiarities of soil.

We may add that there is still much that is obscure with respect to £he actually producing causes of intermittents ; these forms of fevers, after having been almost unknown in the metro- polis for many years, have within these few past months been comparatively frequent here ; a fact which should seem inconsistent with the notion of marsh miasmata, which generally obtains ; indeed there is every reason for the inference that much of disease-creating and disease-modi- fying circumstance has reference to atmosphe. rical variations which have hitherto been alto- gether undetected excepting in their effects.

336. Prognosis. — In Britain, and in other countries in the north of Europe, agues are for the most part unattended with any immediate danger; but the disorder is apt, as above inti- mated, under unfavorable circumstances, or in- judicious treatment, to give rise to visceral obstructions, and their consequences. In some parts of Africa a«rues ar6 diseases themselves of great danger, without reference to their interme-

•Jiatc consequences ; and in all cases we may say .if the disorder, that its prognosis will be greatly regulated by climate, soil, and season. When the fits are of short duration, and regular recur rence, a speedy or an interrupted solution of the malady may be looked for; but when they are of long continuance, and accompanied with structural derangement, or even of very violent affection of function, the disorder is likely to continue for some time, and its termination in health will be doubtful.

337. Treatment. — The obvious indications are to abate the violence of the fit; and, when the fit has subsided, to endeavour at preventing its recurrence.

During the cold stage, warm diluent drinks may be given; warm fomentations applied to the legs and feet ; or the patient may be im- mersed in the warm bath should the symptoms be very violent; and cordial diaphoretics may be administered.

R Ammonia; subcarbonatis grs. viii. Liquoris ammonite acetatis f. 3iij. Syrupi aurantiorum f. 3ij. Aquae purse f. Q.] iat haustus.

That is, Take of subcarbonate of ammonia «ight grains, liquor of acetate of ammonia three fluid drachms, syrup of orange peel two •fluid drachms, water one fluid ounce for a draught.

When the hot stage is fully set in, saline and cooling medicines are

called for, with acidulated drinks ; and now it will be proper likewise to give diaphoretics, of which one of the best, when the irritation runs very high, is a small dose of turturised antimony, as in the following formula: R Antimonii tartarizati gr. j.

Aquae purae f. Jift. Fiat haustus.

That is, Take of tartarised antimony one-sixth of a grain, and water a fluid ounce and a half, for a draught ; or a solution of half a scruple of nitre (potassae nitras) may be administered in a draught of water ; or the common saline draught, either in a state of effervescence, or when the effervescence is over. The effervescent saline draught is made by mixing a scruple of car- bonate of potass (salt of tartar) dissolved in a fluid ounce of water, and sweetened by sugar, with half an ounce of lemon juice, or, what is quite as good, fifteen grains of the concrete citric acid. Some practitioners give opium in the hot stage, to the extent of from thirty to sixty drops of the tincture, about half an hour after its accession; others recommend a fluid drachm of sulphuric ether for the same purpose of shortening the fit, abating its violence, and hastening perspiration. Bleeding too has been recommended, especially where the irritation of the hot fit runs high, or the inflammatory dia- thesis is conspicuous. Saline purgatives may at this time also be exhibited should constipation accompany heat ; and there is no better aperient on these occasions than from half an ounce to an ounce- of Epsom salts (magnesiae sulphas) dissolved in camphorated mixture. In short, the treatment of the hot stase of intermittent

fevers is pretty nearly the same as the treatment of continued fever, marked by irritative or in- flammatory excitement ; and to heat in the cold stage, and cool in the hot stage, are the plain in- dications of nature. Some practitioners admi- nister, immediately before the accession of the cold stage, an emetic, with a view of producing such an impression upon the system as to inter- fere with the full development of the febrile action, and some give tincture of opium at this time, with the same intention; so that it will be recollected that opium is given by different in- dividvals, both in the cold and hot stages.

For the purpose of accomplishing the second indication, viz. preventing the disorder’s recur- rence, remedies are had recourse to in the inter- mission, and of these emetics, purgatives, Peruvian bark, arsenic, and forcible impressions made upon the nervous system, are the principal. For an emetic, a scruple of the sulphate of zinc may be given, dissolved in water ; and the purgatives at this time of the apyrexia should be rather of the resinous than saline kind. A fluid

ounce of the compound decoction of aloes, with the same quantity of infusion of senna, will make a good aperient draught, and when decided marks are present of obstructed viscera, or dis- ordered condition of the alimentary and intestinal canal, mercurials may be joined with the purga- tives that are administered, and by the exhibition of them the system will be better prepared for bark or arsenic. Five grains of blue pill at night, succeeded in the morning by the above- named purgative draught, and these repeated two or three times in the course of the week, will constitute a good preparative or accompaniment of bark, which given without these deobstru- ents, as they would be called by the Boerhaa- vians, might, while it cures the complaint, tend to facilitate the visceral infarctions above referred to.

Bark should for the most part be given when the system is entirely free from pyrexia; it may be administered in drachm doses every third or fourth hour, or even oftener if the stomach will bear it ; so that several doses may be exhibited during the intermission; the following draught may be substituted.

R Extracti cinchonas resinosi grs. xv. Tinctura cinchonas composite? f. 3ij. Syrupi aurantiorum f. 5i. Decocti cinchonre f. Jift.

That is, Take of extract of bark fifteen grains, compound tincture of bark two fluid drachms, syrup of orange peel one fluid drachm, decoc- tion of bark a fluid ounce and a half; for a draught.

As an excellent substitute for bark in those large quantities, the modern concentration of it, beginning now to be well known under the name of the sulphate of quineric, may be administered with much advantage. Of this two grains may be given instead of the bark powder or draught, made into a pill with a small quantity of crumb of bread, or thick mucilage ; or it may be made into a draught with water and two or three drops of the diluted sulphuric acid. The medical practitioner, who has not hitherto

been in the practice of employing this medicinal, will often be surprised at its prompt efficacy, both in intermittent fevers, and in other cases where considerable quantities of bark are indi- cated, but where the stomach is scarcely able to receive the necessary quantity in the form of powder, decoction, or extract. It should be ob- served that, when the extract of bark is em- ployed with a view of giving the medicine in large doses, the resinous extract, or that made with spirit, is much superior to the aqueous, as by the action of the spirit a part of

the bark is taken up which is not soluble in water.

When arsenic is administered to cure inter- mittent (which for the most part is more effica- cious, at any rate, than the old forms of bark), the liquor arsenicalis of the London Pharmaco- poeia should be employed. This is an arseniate of potass, and often proves promptly and de- cidedly efficacious in preventing the recurrence of the febrile paroxysms. It may occasionally be employed with tincture of opium in the dose of five minims of the former to three or four of the latter. Under proper management, says a modern author, arsenic will be found to be the most generally useful of all the medicines which have been recommended in the treatment of agues. The best mineral substitute for it is the sulphate of zinc, which is largely employed in the fenny counties of England. It is given in doses of one or two grains three times a day, and is very highly spoken of.

A strong impression made upon the imagina- tion of the patient will sometimes break in upon the habit of the disorder, and at once dislodge the malady, which shall have seemed reluctant to give way to the common remedies. Charms have often proved efficacious ; and it is not ne- cessary to say that their operation is upon the principle now adverted to.

While the secretions are kept in good order by the administration of purgatives and mercu- rials, to which, by the way, the taraxacum (dan- delion) may be occasionally added with advan- tage ; a generous diet, and the moderate use of wine, will be found requisite during the absence of the paroxysms. These too are good preven- tives of the malady, especially after a patient has been the subject of an attack.

Remittent fevers are to be treated upon the same general principles with intermittent and continued. These are types of fever which, as above intimated, are very common in counties where there is a combination of heat and marshy exhalations, or humid atmosphere. Their va- rieties, from endemial causes, and local cir- cumstances, and constitutional peculiarities, are almost endless. They are, however, for the most part characterised by an excited or disturbed state of the biliary functions, and on this account especially call for medicines which act as an emulgent to the liver ; but we shall have further to speak on this head, when considering that form of disease which has been termed yellow fever.

338. Continued f evert.— The student, by turning to the nosology, will perceive that Dr. Cullen's system recognises three forms of continued fever- out it will be right to take these, as all other di-

visions in medicine, merely as arbitrary or con- ventional, and to recollect that, although the de>- finitions are as accurate as definitions can be, the practioner must expect to find endless varieties and modifications. We shall in this section, as we have done in that devoted to iritermittents, first treat of the general symptoms of fever, then of their causes, prognoses, diagnoses, and ma nagement.

Symptoms of continued fever. — Lassitude, lan- guor, and anxiety, followed by rigors, which are again succeeded by partial, and at length uni- versal, heat ; indeed, the history of a paroxysm of intermittent fever is, in some sort, a descrip- tion of continued fever ; but, for the most part, there is in these last more of animal depression and sensorial disturbance than is the case in intermittent fever. A very great prostration of strength also, in the general way, marks the commencement of continued fever, though in respect to the degree of this symptom there is found very great variety, and in some cases the powers seem rather obstructed or oppressed than actually exhausted ; indeed, this particular may be received as one of the differences between positive debility and the peculiar debility of fever — that in the latter there is an indisposition to exert power — while in the former there is the inclination without the ability. The pulse in fever becomes more frequent than in health, and it wants also the freedom of health ; it is op- pressed, and if the fever be what is called in- flammatory, or marked from the onset by very high excitement of the vascular system, there can be recognised a hardness as well as obstruc- tion about its beats ; this hardness, however, is more conspicuous when the fever is what i* called symptomatic, that is dependent upon ac- tual inflammation of some one organ. It should be observed that the symptoms of continued fever, especially of the fevers that are met with in this country, are often of gradual and almost imperceptible invasion. You cannot always draw the line of demarcation between health and disease ; the patient is often unwell rather than positively ill for some days ; and the young and inexperienced practitioner must not condemn himself for being less skilful and observant than others, should he fail to anticipate the full for- mation of unequivocal fever, from having seen the patient during the time and circumstances now referred to. When, however, there is con- tinued languor and depression, especially if it be attended with confusion of thought and gene- ral difference of perception from what is the case in health— when these symptoms are accompa- nied by an altered state of pulse, by pains of an obscure and wandering kind about the limbs, by sighing, or hurried or obstructed breathing, by a peculiarity in the expression of the counte- nance, especially of the eye, this last organ being sometimes dull and dim, at other times morbidly sensible to the

light ; and the vessels of the tu- nica conjunctiva injected with red blood — when in addition to these symptoms the tongue be- comes furred, the skin hot, shrivelly, and dry, the urine scanty and high colored, and the bowels torpid or irregular, we may be pretty certain that fever is about to establish itself; and

the particular nature of the fever will be usually designatedjby the prominence of one or two cha- racteristic marks ; thus in the p.ague, whicn according to Dr. Cullen's classification would be a typhus gravior, the most marked of all the early symptoms is the extreme prostration of the strength, and the staggering of the individual attacked, and in the course of the malady bu- boes become its characteristic ; while, in the yellow fever of the West Indies, typhus icterodes, the yellow color of the skin, the buboes, derange- ment, and tha black vomit, are the prominent features of the distemper.

339. Causes of continued fever. — On this head we must refer to our proem, as we did in the case of intermittent fever, where it will be seen that a difference of opinion still prevails on the excitants of the febrile state, one party supposing that no case of genuine fever of any continuance can have place without the operation and in- fluence of a certain morbific poison which is peculiar to itself; another going to the opposite extreme of supposing tha* contagion is a mere imaginary power, and, while it is supposed to operate so as to communicate the malady, that the communication has, in point of fact, been from the air and circumstances of the place; while a third, and moderate party, think that we nave sufficient evidence for the existence and operation of a poison in fever, but that the action of this poison is not, so to say, abstract and ex- clusive, that is, does not display its effects inde- pendently of the soil and atmosphere, and other circumstances of place, and that the disorders themselves, in which this poison is engendered, and by which they are propagated, may originate at times spontaneously. All parties, indeed, acknowledge that some distempers are directly and absolutely dependent upon a specifically exciting cause, and the disputes in some mea- sure resolve themselves into the extent or limi- tation of this specific causation; whether, for instance, the plague of the Levant, and the yellow fever of the West Indies, originate and are communicable in the same manner as are small pox and measles.

As considerable importance is attached to this enquiry, we shall in the

present place add to the remarks made in the preliminary portion of the present article, the following quotation from Dr. Gregory, which, in our judgment, contains as clear and distinct an account of the subject in dispute as any we have met with. After speak- ing of cold and atmospheric alternations of tem- perature as causes of the febrile state, Dr. Gregory, the author to whom we now refer, goes on to say — 'Continued fever, however, has another and a very important exciting cause, which fre- quently operates where neither |cold nor alter- nations of atmospheric temperature can be suspected, as where fever attacks persons shut up in close rooms with others laboring under the disease. When fever appears under such circumstances, it is said to have its origin in con- tagion.' A number of the most important doc- trines in the science of pathology are closely associated with the subject of contagion. From the earliest periods at which it became an object of enquiry this has been acknowledged, but the

investigation is obscure and difficult, and has proved a source of endless controversy. Many 01 the disputed points in medicine are interesting only to the man of science, but the doctrines of contagion are of general interest, because in- volving practical considerations of the highest importance. Without attempting to clear up all the difficulties in the way of the enquiry, I shall be satisfied with a brief enumeration of its lead- ing positions, and of the principal points in dispute.

1. Attempts have been made to throw discre- dit on the doctrine of contagion as the cause of fever, by showing that it was for a long time either unknown to or discredited by physicians. It is certainly a curious fact that, for the first dawnings of information concerning it, we are indebted, not to Hippocrates or Galen, but to ancient poets and historians. Thucydides, in his account of the epidemic fever or plague that raged in Athens during the Peloponnesian war, shows that he understood contagion in the sense in which we now use the term ; noxious matter from one body producing a similar disease in another. In Plutarch's life of Pericles, we read that, whilst that commander was laying siege to the city of Epidaurus, a distemper prevailed in his army, which not only carried off his own men, but all that had intercourse with them. Livy, in the account of a camp fever which affected the armies of the Romans and Carthaginians at the siege of Syracuse, distinctly states that it was propagated by contagion : — ' Postea curatio ipsa et contactus aegrorum vulgabat morbos.'

Virgil and Lucretius employ the term conta- gion to express the manner in which a disease of sheep spread among the flock. Medical writers were for the most part very inattentive to conta- gion, until the

time of Sydenham, in whose work (sect. ii. cap. 2), a distinct reference to contagion may be met with. Boerhaave and the followers of his school were very incredulous on the sub- ject of contagion. Their ideas about it too were very imperfect and confused, from the circum- stance of blending the notion of contagion with that of marsh miasmata. Dr. Huxham, Dr. Lind, and Sir John Pringle, are the great origi- nal writers on contagion, particularly on that of continued fever. Since their time the subject has undergone the most rigid examination, and, as we have said, has given rise to the most dis- cordant opinions.

2. Much confusion has been introduced into the subject of contagion by the employment of the term infection, and by the different acceptations in which contagion and infection have been taken. This has been increased from the want of proper attention to the distinction between common contagion and specific contagion. Of this last kind are small- pox, measles, the plague, and syphilis. Diseases which, occasionally pro- duced by contagion, are yet sometimes owing to the operation of other causes, are said to arise from common contagion ; of this kind are ca- tarrh, erysipelas, ophthalmia, and typhus. The laws of common and specific contagion are in many respects similar, but they have also their points of difference.

3. In the last paragraph, that has been at-

sumed as an established principle, which has oeen and still is made the subject of keen dis- pute, viz. that typhus fever does originate from contagion, and that it is of the kind which we have called common in opposition to specific contagion. Both those points have been called in question. By a few, and happily a very few, if has been contended that the notion of a con- tagious origin of typhus fever is altogether unwarranted ; but the views of these anti-conta- gionists are so completely at variance with the generally received opinions of medical men, and so irreconcileahle with facts obvious to all mankind, that any forma! refutation of them is unnecessary. On the other har.d there have been, and there continue to be, physicians who believe in the exclusive origin of typhus from contagion, who maintain that no disease can propagate itself by contagion, which had not its own origin in contagion ; in other words, who deny that com- mon continued fever under any the most adverse circumstances can ever spread by contagion. This opinion involves the difficult, but for the

most part idle question, how contagious fevers ara originated ; but, setting this aside, it may fairly be argued, that it is neither borne out by observation nor by reasoning. There is nothing improbable in the supposition that what originated in cold maybe afterwards propagated by contagion. It violates no established law of the animal economy. Experience, on the other hand, appears to favor it; and it may therefore be laid down as an im- portant practical principle, that fever which ori- ginates in the first instance from common causes, may, under certain circumstances either of local situation or constitution of body, spread by con- tagion. What these particular circumstances are may be imagined from what has already been said. The principal of them are crowded and ill-ventilated apartments, want of cleanliness and comfort, a close and sultry state of the atmo- sphere, and previous weakness of the affected in- dividual, whether owing to excessive fatigue, or an improper or scanty diet.

4. Many of the controverted points in the doctrine of contagion hinge upon this question, but there is another of almost equal importance involved in their decision. Sydenham long ago argued it with much force of argument, and a due attention to his observations might have prevented much of the controversy which has lately taken place on the subject of the plague and yellow fever; I mean that particular consti- tution of the atmosphere which disposes to, or which checks the diffusion of febrile contagion. A malignant contagious disease, when once it has got footing in a populous city or district, does not go on to the destruction of all the inha- sitants. Several circumstances contribute to this : first, peculiarities of constitution, which occasionally secure an individual completely from the influence of contagion , secondly, the immunity from future attacks, vhich, in several instances of febrile contagious diseases, is af- forded by its having been once undergone.

1 nese two circumstance? certainly contribute

explain the fact just mentioned, but they are

>t fully adequate to the effect. A certain con-

uuon of the air, therefore, sometimes favor-

ing, but sometimes checking, the diffusion of contagion, must be admitted as a third general principle upon which it depends. Some physi- cians have pretended to find fault with this multiplication of causes for explaining a single phenomenon, and have argued that a peculiar, or, as Sydenham says, an epidenic constitution of the air, is

alone capable of explaining what others refer to the combined operation of it, and of the principle of contagion. As well might they argue that the tree could be reared without the seed, because a peculiar condition of soil is required for its reception and growth. Several of the most important facts in the histories of great epidemics, particularly the plague, will hereafter be illustrated by a reference to these fundamental doctrines in the laws of contagion.

5. Much speculation has taken place among medical authors, regarding the mode in which contagion produces its effects in the animal economy. It has been observed, of a number of diseases notoriously arising from contagion, that they exhibit even from an early period symptoms of great depression of nervous energy, or of col- lapse. This is exemplified in the cases of plague- typhus, cynanche maligna, influenza, erysipe- 1 .s ; and it has been imagined that there is in the nature of contagion something which is directly sedative or depressing of the nervous energy. A more extended view of disease would show the fallacy of this as a general principle. Measles and ophthalmy, which yet exhibit all the marks of genuine inflammatory excitement, are diseases as obviously arising from contagion as plague or typhus. The operation of contagion may possi- bly be upon the brain and nerves, but its precise effect upon them is altogether inscrutable. Still, while a caution is offered against assuming as a principle of pathology any thing sedative in the nature of contagion, we must be insensible to the importance of the fact, that cases of disease arising from common contagion, above all conti- nued fevers, are more likely to be of the low ty- phoid kind, than such as are attributable to cold, or other causes independent of contagion.

6. Of the intimate nature of the contagious particles which arise from morbid bodies, and which produce a like disease in others, we know nothing ; but there are a few particulars concerning them which are known, or conjectured, which it will be proper to notice.

Great attention has been paid by Dr. Hay- garth and others to determine the distance to which the noxious effluvia extend, and at which they operate in exciting disease. There is reason to believe that this varies in different cases, and that the plague, typhus, and small- pox, have in this respect each their respective laws. The subject, however, does not appear to have been yet investigated with sufficient accuracy to enable us to lay down any established points of doctrine with regard to it. It is not, for instance, known how far the sphere of contagious influence is affected by ventilation. In the case of continued fever, we are warranted in saying that a free cir- culation of a pure and cool air renders the con- tagious particles comparatively

inert, even if it does not altogether prevent their formation. Some physicians have extended their views fur-

ther, and have maintained that tnere are certain chemical substances that have the power of de- composing contagious effluvia, or at least of rendering them in some way or other innoxious ; of these the principal are acid vapors, particu- larly those of the nitric and acetic acid, and chlorine. Fumigation has therefore been recom- mended as a powerful means of counteracting contagion. The theory upon which it has been introduced is exceedingly doubtful, and the prac- tice, far from being generally applicable ; acid vapors of all kinds being more or less injurious to breathing. If fumigation is adopted as a sub- stitute for thorough ventilation it may prove injurious : if only superadded, it is perhaps su- perfluous ; but, on a point of such practical im- portance, it is right to speak with much caution.

The next subject of enquiry which the general doctrine of contagion offers is the attachment of contagious particles to certain bodies, thence called fomites, where they may lurk for a very long period of time and subsequently renew the disease with all its former and even increased virulence. It is the most curious fact in the history of contagion, and one established upon the most unquestionable evidence. The princi- ple appears to be of more general application than any other which the doctrine of contagion involves. The plague and typhus, small-pox and scarlet fever, ophthalmia and porrigo, afford the most familiar illustrations of it; but it is doubtful if there is any species of contagious disease which may not be communicated through the medium of fomites. They may either be hard or soft bodies. The walls and wainscoting of the room, the bed and bed-furniture, the furniture of tiie rooms, and the clothes of the patient, are those against which we are to be chiefly on our guard.

It is well ascertained that the clothes of an in- dividual, who is himself unsusceptible of the dis- ease, may become the fomites of its contagion. In this manner typhus, small-pox, and plague, are not unfrequently disseminated.

Attempts have been made to ascertain the period of different diseases at which their conta- gion is most active, and that at which the body ceases to afford contagious matter. This po:nt it would be of much importance to determine, as it would indicate when a patient might

safely be permitted to mix in society; but unfortunately there do not appear to be sufficient data to enable us to decide the question with any degree of accuracy.

340. Prognosis in continued fevers. — The favor- able symptoms in fever are in the first place the pu'se not mounting very high above the ordinary standard in respect of numbers. Dr. Heberden, whose opinion of the pulse was different from many others, and who thought that very little notice need be taken of it beyond that of its greater or less frequency, considered that there was always something to be apprehended if the pulse continued regularly at more than 100 beats in the minute ; and although many patients recover whose pulse, from first almost to last, is much higher than this ; and, although the mode as well as the number of pulsations seems to de- mand somewhat more of recognition than Dr. Ileberden was disposed to admit, we should say that it certainly is an unpleasant and an unfavor-

able circumstance in fever to find the arterial beats steadily above 100. It must always, how- ever, be taken into account that much depends upon the constitutional proportion of healthy pulse in the individual affected ; scarcely is it necessary to say that if the subject of fever has had, while in health, an average pulse of from eighty to ninety in a minute, the increase to 100 in him is not of such unfavorable import as had the natural pulse been only seventy. Another favorable circumstance is the absence of hard- ness, or wiryness, or obstruction, in the pulse ; for, when these conditions of the arterial beats are present and prominent, they denote both an indisposition in the febrile state to give way, and are often likewise marks that some internal organs are more especially engaged with the dis- ordered condition; hardness of pulse generally indicating local inflammation, while obstruction, and want of freedom in the beats, points out, perhaps, an unequal circulation, and a gorged or congested state of some parts of the system. We make use of the word, perhaps, because tnere is some degree of hypothetical inference in the idea of congestion, as opposed to inflammation, and because some pathologists will not allow the pre- sence of fever without the presence at the same time of inflammation. At any rate a soft and free pulse, as well as one of less morbid frequency, is a good symptom. Respiration, from having been oppressed and hurried, and obstructed, becoming free, is likewise a favorable sign. The urine de- positing a large sediment looks well; the tongue becoming moist at its edges is a favorable indi- cation. Warm and general perspiration, as op- posed to partial and irregular sweats, are good. Local tendencies in the fever, such as breakings out about the mouth, are often favorable symp- toms; the countenance remaining unchanged argues well, as also does,

more especially, the absence of delirium; the position of the body is also of importance to attend to; for, if it does not much change from that of health generally, there is room, as far as this particular is concerned, for hoping a favorable termination. Deafness has been considered a favorable sign, especially in fevers of a low or typhoid character ; and, though it may be difficult to say why it should be, there does seem to be some founda tion for the belief.

The unfavorable symptoms, it is scarcely Necessary to say, are positive and negative, the absence of good being the presence of bad ; hut there are some degrees which are of unequivocal and positive kind, and which in proportion to their extent and degree denote danger. Much delirium, whether of the high phrenetic kind, or of the low muttering cast, is an exceedingly bad sign in fever, as it denotes a great deal of general derangement, and often points out a considerable extent of cerebral affection ; hurried and laborious respiration is. also bad, whether the derangement be merely functional, or whether it be attended with marks of pulmonary inflammation, or ob- struction; on one account, indeed, the former species of respiratory disorder is the worst, inas- much as it implies a great extent of general dis- order. What authors call subsultus tendinum is always considered a bad omen ; it is that invo-

Unitary twitching and motion among the tendons and muscles, particularly about the wrist, which you often witness, and which manifests a great de/4iency of muscular, and therefore of nervous, power. A picking about the bed-clothes, as if to remove something that offends the eye, is a bad omen ; it shows the brain and the percep- tion to be in a state of considerable derange- ment, and the degree of danger is often depen- dent upon the measure of cerebral disturbance. A very great prostration of power marked by lying on the back, rather than on the side as in health, and by sliding gradually down to the foot of the bed is one of the bad omens in fever. A collapse and sharpness of feature is prover- bially so. An indisposition or incapacity of putting out the tongue when the patient is re- quested to do so is always unfavorable, as it de- notes either want of power, or want of con- sciousness, or a mixture of both ; the tongue being covered with a thick black border may be also taken as an unfavorable symptom ; a tense, drummy, or unequal, feel of the abdomen, in place of a soft and yielding condition of it, looks ill ; this mark, with several others here noticed, will be found in the historical part of the pre- sent

article as generally a bad indication of dis- order, noticed by Hippocrates, and it is always highly worthy of observation ; foetid excretions and intestinal evacuations of a very offensive odor prove a considerable derangement in the as- similating and chylopoietic functions ; and when the urine and faeces pass involuntarily the danger mujt be considered as extreme ; a cadaverous smell of the body argues very ill; as well as other indications of what has been called a pu- trescent tendency, ‘ a state of body,’ says Dr. Gregory, ‘ the notion of which has in later times been the frequent subject of dispute.’ ‘ That the powers of the living body, in checking the putre- scent tendency of all animal matter, should be di- minished in certain states of disease does not,’ our author very properly remarks, ‘ appear to be an unreasonable supposition/ Thp following may be enumerated as the chief symptoms which mark the putrescent diathesis. A loose or very imperfect coagulation of blood ; foetor of the eva- cuations ; a squalid appearance of the skin, and a cadaverous odor of the body; haemorrhages from the mouth, nose, stomach, rectum, or ure- thra; the blood being of a very loose texture and quickly putrefying ; petechiie and vibices ; a disposition to gangrene in the skin wherever it has been accidentally wounded, or abraded, or ex- posed to long pressure ; the speedy putrefaction of the body after death. ‘ It would,’ Dr. G. con- tinues, ‘ be necessary to clear up many of the difficulties in which the doctrine of the coagula- tion of blood is involved before we could arrive at a satisfactory explanation of these phenomena ; but, in the mean time, there are sufficient grounds for believing that they depend in a great mea- sure on the deranged functions of the brain. PetechUe, or tumid spots, appearing on the skin arc a very bad omen, inasmuch as with extreme debility they indicate a loose crasis of the blood ; this circumstance of petechial eruptions Dr. Cullen makes of sufficient importance to found a species of disease upon ; for under the genus

typhus the student will see one of the species petechialis spotted fever; the other, icterodes, yellow fever. Petechiae would seem, for th« most part, to be mere accidental indices of ex- treme weakness connected with morbid activity, and, as above intimated, a loose texture of the blood.

We may add to the above enumeration of un- favorable symptoms a coldness in the breath, which shall be perceived by the hand being placed before the mouth of the individual laboring under fever. Aphthae, too, about the mouth and fauces, are bad symptoms; they in general mark both ex- treme weakness and the simultaneous presence of a low inflammatory action about the mucous linings of the first passages.

‘ The general prognosis in continued fever is certainly favorable. Under proper management a large proportion of cases recover. This is a point which has been made an object of enquiry by different writers, and a very curious coinci- dence has been traced in the extent of mortality occasioned by continued fever, under circum- stances considerably different. The average of deaths in the hospitals of this country appears to be in the ratio of about one to twelve, which is believed to be considerably below the ordinary scale of the mortality of fever, when it occurs in private habitations, even with access to medical assistance. It varies, of course, with the general character of the epidemic, the period of the dis- ease at which it is first submitted to medical treatment, and many other circumstances of nearly equal importance.’ A pamphlet was some time since published by a Dr. Brown of Edinburgh (not the celebrated author of the Elementa, to whom reference will be found in another part of the present article), in which it was endeavoured to be proved, that the rate of mortality from fever is the same generally, whatever plan of treatment may be pursued. The object of the writer was to show that no system of remedial management is available in, lessening the mortality of the disorder, and that treatment or no treatment amounts in the end, or in the long run, to the same thing. We must refer to the preface of Dr. Young’s work on medical literature for a refutation of this position, in which Dr. Y. makes out that the author to whom we have alluded, although ingenious in his arguments, and specious in his inferences, has completely failed in substantiating his as- sumptions.

341. Critical days? — We mark these, says Dr. Uwins, in his Compendium of Medicine, interro- gatively, because they are doubtful. One fact, however, appears to be pretty generally admit- ted, viz. that all fevers are disposed to assume progressively the quotidian, tertian, and quartan type, so that, after the disorder shall have lasted some time, two whole days shall intervene between the terminating tendency, as the 14th, 17th, and 20th. Even here, however, there arises a difficulty, some considering the 21st, others the 20th, the critical day. It is probable that fevers with us are different in respect of crisis from what they were with the ancients. Dr. Gregory says the doctrine of critical days in fever, that is to say the supposition that tebrile

diseases are disposed to terminate favorably or unfavorably at certain periods of the disease, more than at others, has found many advocates

and some opposers, even from the earliest times. The very general reception which it has met with among mankind makes us unwilling to distrust it altogether; and, if we bear in mind how many circumstances may contribute to disturb the regular course of the disease, we may admit the doctrine of critical days in fever, without much risk of error. There has been some dis- pute about the precise days, but they are gene- rally set down as the 7th, 9th, llth, 14th, 17th, and 21st, counting from the invasion of the cold fit. It is seldom that these observations can be verified in the fevers of this country, which run their course with much less regularity than those of warmer climates.

As this doctrine of critical days is thus still a somewhat uncertain, and, at any rate, a disputed point, we shall further extract the remarks on the subject that are found in Dr. Good's Study of Medicine. Dr. G. discusses the question with much ability and candor.

‘ A sudden and considerable variation of any kind, whether favorable or unfavorable, occurring in the course of the general disease, and produ- cing an influence on its character, is still loosely expressed by the name of crisis. The term is Greek, and pathologically imports a separation, secretion, or excretion of something from the body ; which was in truth the meaning ascribed to it when first employed, agreeably to the hypo- thesis of concoction which has been considered. The original hypothesis is abandoned, but the term is still continued in the sense now offered.

That changes of this kind are perpetually occurring, in the progress of continued fevers, must I think be admitted by every considerate and experienced practitioner. Nothing is more common than to behold a patient suddenly and unexpectedly grow decidedly better or worse in the progress of a fever of almost any kind, and pass on rapidly towards a successful or an unsuccessful termination.

But the important question is, whether there be any particular periods in the progress of a fever in which such changes may be expected? Hip- pocrates conceived there were ; he endeavoured to point out and distinguish them by the name of critical days. Asclepiades and Celsus denied the existence of such periods, and the same diversity of opinion has prevailed in modern times.

It is not very easy to determine upon the sub- ject in the present day, and especially in our own country. For, first, fever like many other complaints may bave undergone some change in Us progress from a like change in the nature of its remote causes, or in the constitution of

man. And next it seems to be generally allowed that sudden transitions, whether regu- lar or irregular, are more apt to take place, in almost a.11 diseases, in warm than in cold cli- mates. On these grounds it is probably a sub- ject that will never become of great practical importance at home. Yet it is well worthy attention as a question of history, and which may yet be of great importance to many -larts of the •worlc'

If we examine the phenomena of the animal economy, as they occur in a natural series, we shall find that they are almost in every instance governed by a periodical revolution. A man in a state of health and regular habits generally be- comes exhausted of sensorial power within a given period of time, and requires a periodical succession of rest ; his appetite requires a period- ical supply, and his intestines a periodical evacu- ation. This tendency equally accompanies, and even haunts him in disease; he cannot disen- gage himself. Gout, rheumatism, mania, rapidly and pertinaciously establish to themselves periods of return. The haemorrhoidal discharge often does this, and the catamenia constantly. The same occurs in fevers, but especially in intermit- tents; for the quotidian, the tertian, and the quartan, have upon the whole very exact revo- lutions. And though accidental circumstances may occasionally produce a considerable influ- ence on every one of these facts, whether morbid or natural, the tendency to a revolutionary course is clear and unquestionable.

Now, although Hippocrates has not appealed to this reasoning, it forms a foundation for his observations ; and when stript of the perplex- ities that encumber his writings on this subject, partly produced by erroneous transcripts, and in a few instances, perhaps, by his own irresistible attachment to the Pythagorean hypothesis of numbers, he may be regarded as laying down the following as critical days of continued ferer: the 3d, 5th, 7th, 9th, llth, 14th, 17th, 20th, be- yond which it is not worth while to follow the series, for it is not often that they extend further.

In other parts of his works he regards also the 4th and 6th, and even the 21st, as critical days, so that, in the first week, every day after the dis- ease has fully established itself evinces a dispo- sition to a serious change, in the second week every other day, and in the third week every third day. It is not easy to determine why the 21st day should be a critical day as well as the 20th. Various conjectures have been offered upon the subject ; by some it has been regarded as a mistake in the Greek copy, and by others as a piece of favoritism in Hippocrates for this number, in consequence of its being an imper- fect one in the Pythagorean philosophy, as the commencement of a

septenary.

De Haen, with rigid and patient assiduity, has

Eut Hippocrates to the test upon these data : for e has accurately analysed Hippocrates' own journal of the numerous cases of fever he has most industriously collected and recorded, and finds the positions in most instances to be strictly justified ; and that, out of 168 terminations of fever, not less than 1 07, or more than two-thirds, happened on the days denominated critical, not reckoning the 4th, 6th, or 21st, and that the 4th and 6th were very frequently criti- cal. There are a few anomalies, but it is not necessary to notice them, because they are easily referrible to accidental causes, similar to those that retard or accelerate the paroxysm of intermittent fevers.

Now, admitting the Hippocratic table to be true, the continued fever, in its progress, is mea-

vired by the various typei exhibited by intermit- tent ferera. Thus the quotidian prevails through the first seven days ; there is on each day a slight exacerbation, and no one day is more critical than any other. After this period the tertian typ« commences, and runs through the ensuing week ; the principal changes occur on the ninth and eleventh days, and would occur on the thirteenth but that the quartan type now assumes its prerogative ; and the principal transitions, after rl»e eleventh, take place outhe fourteenth, instead < >f the thirteenth, the seventeenth, and the twentieth. Dr. Cullen, who has examined this subject with great attention, and simplified it from many of its difficulties, directly asserts that his own experience coincides with the critical days of Hippocrates; and Dr. Fordyce, who scarcely does justice to Cullen in other points, unites with him upon the present, and justly compliments him upon his ingenious examina- tion and explanation of the Greek distribution of critical days. It is nevertheless admitted on all hands, that the order of succession is far less dis- tinct, as well as less regular, in cold than in warm climates ; and that it requires a thoroughly attentive and practised eye to notice these changes in our own country, or indeed in any part of northern Europe. And hence Craanen says it is lost time to look for them ; StoU that they are only to be found in inflammatory fevers ; and Le Roy that the supposed critical days have no influence, and can lead to no prognosis or peculiarity of practice. Why the first week of a fever should incline

to a quotidian type rather than a tertian, or the second to a tertian rather than to a quartan, we know no more than we do why fevers should ever intermit, or at any time observe the distinctions of different types. We are in total ignorance upon all these subjects. We see, moreover, that intermittent fevers, whether quotidian, tertian, or quartan, have their paroxysms recur regularly in the day time ; the quotidian in the morning, the tertian at noon, and the quartan in the afternoon ; and that in no instance do the paroxysms take place at night ; and we see also that in continued fevers the exacerbations uniformly take place later in die day than the paroxysms of the latest inter- mittent ; for these rarely occur earlier than be- tween five and six o'clock in the evening, while the paroxysms in the quartan return commonly before five. Of these interesting and curious scenes we are spectators; but we are nothing more ; for we are not admitted to the machinery behind the curtains.

Hy some pathologists the source of these phe- nomena is sought for in the influence of the heavenly bodies, and especially in those of the sun and moon. In ancient times these luminaries were supposed to produce an effect on all dise-ises, and especially on mania, epilepsy, catamenia, and pregnancy. And when the New- tonian philosophy first illuminated mankind with the brilliant doctrine of universal attrac- tion, Dr. Mead stepped forth into the arena and revived and supported the ancient doctrine with i.ivat learning and ingenuity. And, as an in- genious conjecture and possible fact, of which no practical use could be made, it was contem-

plated till towards the close of the last century ; about which time Dr. Darwin, by interweaving it with his new hypothesis, once more endeavoured to raise it into popular notice, and give it an air of serious importance. Dr. Balfour of British India, however, has still more lately brought it forward as a doctrine capable of di- rect proof, and as peculiarly affecting the pro- gress of fevers. His opinion, which he endeavour j to support by weighty facts and arguments, is, that the influence of the sun and the moon, when in a state of conjunction which is named sol-lunar influence, produces paroxysms or exacerbations in continued fever, in all cases in which a paroxysmal diathesis (for such is his expression) exists ; and as this influence declines, in conse- quence of the gradual separation of these luminaries from each other, and their getting into a state of opposition, a way is left open to the system for a ˆitical and beneficial change, which is sure to take place, provided the critical dispo- sition is at this time Featured. In other words, paroxysms and exacerbations in fever may be expected to take place (and do in fact take place) at spring tides, and crises at neap tides.

This is a new view of the influence of the heavenly bodies upon the human frame, and a view which, though feebly supported by facts, is advanced with all the dogmatism of an estab- lished science. There is nevertheless more in medical astrology than is perhaps generally supposed ; it is an important branch of meteorology, and, as such, is well worth studying. Nor can there, I think, be a question in any impartial mind, that, under certain circumstances, and especially in tropical climates, many diseases are influenced by lunation, as we are sure they are in all climates by insolation. The concur- rent observation of a host of candid and attentive pathologists, who have been witnesses of what they relate, are sufficient to impress us with this belief; but, till we know more fully what these circumstances are, we cannot avail ourselves of their remarks, and can only treasure them up as so many isolated facts. And hence it is that in no age or country whatever has the study been turned to any practical advantage, expedited the cure of a disease, or enabled us to transform the type or interval of one kind of fever into that of another. Nor is it any exclusive reproach to the art of medicine that it should be so ; for, of all the subdivisions of general philosophy, there is none so little entitled to the name of a science as meteorology itself. And, till the naturalist has explained the variations of the barometer, the physician need not blush at being incapable of turning to account the supposed influence of the planets, or of unfolding the origin, or tracing the capricious courses, of epidemics and pesti- lences.’

342. Treatment of continued fevers. — In con- sidering the treatment of fever we may state that three indications present themselves.

Indication 1st. To excite such an action in the system as that the febrile concatenations shall be broken in upon before they may have had time to become confirmed into a habit ; in other words, and according to the expression of some authors, to cut short the disease. Whether we

are able to effect this purpose at any time, and in iny way, has been considered by some more than doubtful ; but there should seem sufficient evidence for the great probability, at least, in some instances, of the interference of art in a forcible way, and by modes immediately to be mentioned, being available to the fulfilment of the indication proposed, provided the attempt be made sufficiently early ; it would appear however as certain that fever is not properly cured in any other way, and that, should we fail of thus early crushing the nascent malady, we must be con- tented afterwards to follow the second and the third indication.

Indication the 2nd, being to moderate excite- ment, and diminish heat ; to subdue inflammatory incidents, equalize the circulation, and open the secretions.

Indication the 3d. — To keep watch, as it were, over tlie powers of the system, and, in cases of more than ordinary sinking, to sustain the falling powers. Dr. Cullen has been ridiculed for talking of obviating the tendency of death, inas- much it is said as all remedial agency, at all times, and under all circumstances, resolves itself into this principle; but in a disorder open to such constant changes, and incidental occur- rences, as fever, there is an especial propriety in recognising the necessity of constant vigilance upon tiie ground now alluded to.

The first indication, viz. that of cutting short fever, has been proposed to be accomplished by large blood lettings ; by dashing cold water over the naked body of the patient ; by administering emetics ; by drastic purgatives ; or by mental im- pulse or agitation. When the fever is of an in- flammatory type, with what in Brown’s language would be called a sthenic diathesis, considerable detractions of blood at the commencement of fever, that is during the fulness of heat and

ex- citement, will often be found of very essential service in moderating its violence, if not of strangling its birth. This practice cannot how- ever be adopted with safety in all kinds of fevers, and even in some where the measure of excite- ment or irritation would seem to warrant the practice, the constitution of the air, or some ex- terior or interior circumstance, may render the expedient dangerous; and we should recollect, that if we go beyond the right point of reduction, without succeeding in crushing the malady, we may induce a weakness which will tend to make the patient less capable of grappling with the subsequent disorder. We may be told, perhaps, that the weak often get through fever under which the strong and robust give way ; but, even allowing there may be some truth in this posi- tion, and some rectitude in the inference which may be drawn from it favorable to depleting and debilitating measures, we ought ever to recollect that natural feebleness, and that brought on by artificial means, are very different, and that it always behoves the physician to be careful, while he is destroying the complaint, not at the same t:me to destroy the subject of the complaint.

In the fevers of tropical climates the vi et armis plan of treatment is often imperiously, and at all hazards demanded, but for the most part disorders with us do not take on ab origine

such a formidable aspect, neither do they de- mand or adroit of such forcibly opposing mea- sures ; for ourselves then we should hesitate in the general way about joining in the recommen- dation of very large detractions of blood in the onset of fever, by way of laying the patient prostrate, and crushing the nascent malady ; at the same time it has seemed to us that small- blood-letting, say to the amount of ten or twelve ounces, in the onset of a fever which is marked by much arterial excitement and tendency to to- pical disorder, does considerable good by check- ing this tendency, and by keeping the malady from mounting up to a malignant height.

With respect to the second measure above mentioned, of cutting short the progress of con- tinued ferer, viz. that of dashing cold water on the surface of the body, we are also somewhat doubtful as to its efficacy in this point of view ; but we are convinced that it may be made very serviceable in mitigating the force of the dis- order, and assisting to conduct the patient through its course. We shall immediately speak of this practice more in detail when upon the subject of the second indication of remedial treatment.

The exciting cause of some fevers, when the predisposition is considerable, may have been taking into the stomach some material

which either by its quantity or quality has thus proved deleterious. In this case, especially, emetics would appear to be indicated as arresting reme- dies, and the course of fever may occasionally be stopped both by the administration of them and of the more drastic kind of purgatives ; such particularly as elaterium, which, besides procuring intestinal evacuations, so influences the whole frame as to counteract the febrile tendency. When emetics are employed with this view, viz. that of cutting short fever, they should consist in the general way of ipecacuan and anatomy combined, since this combination has a tendency to promote the secretions of the surface and thus to equalise the circulation.

R Pulveris ipecacuanha 9j. Antimonii tartarizati gr. i.

Fiat pulv. emeticus.

Take a scruple of ipecacuan powder and a grain of tartarised antimony (tartar emetic); mix them for an emetic powder.

R Vini ipecacuanhas f. 3ij. Antimonii tartarizati gr. i. Aquse purse 3x.

Fiat haustus emeticus.

Take two fluid drachms of ipecacuan wine, one grain of tartarised antimony, and ten fluid drachms of water; mix them for an emetic draught.

The elaterium may be given in the dose of one grain, and in the form of pill, either made up with a little aromatic confection or crumb of bread : or five grains of calomel, with fifteen of compound scammony powder, may be adminis- tered as a drastic purgative, or any other of the resinous and active cathartics ; for from this the resinous class of medicines should the purgatives be now chosen, while when the fever has estab- lished itself, and you are desirous of combining

the agency of refrigerating medicinal with that of aperients, the saline purgatives are for the most part to be preferred.

Indication 2nd. Blood-letting, cold effu- sion ; or ablution, purgatives, diaphoretics, diu- retics, and refrigerants, are (says an author whom we profess a good deal to follow in the present disquisition), now resorted to upon different principles, and are to be employed with

more or less freedom and frequency, as the excitement and heat are high, the powers vigorous, and the tendency to local inflammation or congestion great. When topical affections are urgent, at the same time mat the vital powers are low, leeches and cupping near the affected part are to be preferred to general bleeding. It ought, how- ever, always to be recollected, that it is rather smothered or obstructed strength that we have to deal with in fever, than actual or positive debility; and that the moderate use of the lancet, in cases calling for its employment, may for the most part be resorted to in the early stages of the disease without fear of conse- quences ; some fevers, however, will be found not to bear bleeding, even though excitement and power seem considerable; and authors in their directions respecting vensesections are too apt to overlook very frequent exceptions to general rules. Endemic and epidemic pecu- liarities ought always to be carefully appreciated by the physician. For months together at times, and without any external circumstances to ex- plain the reason, fevers demand a different treat- ment from what may be ordinarily pursued, or the patient will fall a victim to the practitioner's systematic obstinacy.

Cold affusion, or ablution also of the skin, will be found as above intimated to favor the fulfilment of the second indication, of moderating excitement and heat, and conducing to a healthy and equable discharge from the surface of the body. The following regulations and re strictions respecting this practice we copy from the elegant volumes of the late Dr. Currie.

Whoever, says this author, has watched the progress of fever must have observed the just- ness of the observation made by Cullen, Vogel, De Ilaen and others, that even those genera which are denominated continued are not strictly such, but have pretty regular and distinct exacer- bations and remissions in each diurnal period. In this space of time Dr. Cullen contends that an attentive observer may commonly distinguish two separate paroxysms. My observations do not enable me to confirm his position in its full extent, but one exacerbation and one remission in the twenty-four hours seem generally ob- servable. The exacerbation usually occurs in the afternoon or evening, the remission towards morning. These exacerbations are marked by increased flushing, thirst, and restlessness. If the heat of the patient be at such times taken by the thermometer, it will be found to have risen otie or two degrees in the central parts of the body above the average heat of fever, and still more in the extremities. The safest and nost advantageous time f;r using the aspersior. or affusion of cold water is when the exaccrba ion is at its height, or immediately after its declina-

tion is begun ; and this has led me almost always to direct it to be employed from six to nine in the evening ; but it may be safely used at any time of the day, when there is no sense of chilness" present, when the heat of the surface is steadily above what is natural, and when there is no general or profuse sensible perspiration. These particulars are of the utmost importance.

1. If the affusion of cold water on the surface of the body be used during the cold stage of the paroxysm of fever, the respiration is nearly suspended ; the pulse becomes fluttering, feeble, and of incalculable frequency ; the surface and extremities become doubly cold and shrivelled ; and the patient seems to struggle with the pangs of instant dissolution.

2. Neither ought it to be used when the heat measured by the thermometer is less than, or even only equal to, the natural heat, though the patient should feel no degree of chilness. This is sometimes the case towards the last stages of fever, when the .powers of life are too weak to sustain so powerful a stimulus.

3. It is necessary to abstain from the use of this remedy when the body is under profuse sensible perspiration ; and this caution is more important in proportion to the continuance of this perspiration. In the commencement of sweating, especially if it has been brought on by violent exercise, the affusion of cold water on the naked body, or even immersion in the cold bath, may be hazarded with little risk, and some- times may be resorted to with great benefit. After sweating has continued some time and flowed freely, especially if the body has remained at rest, either the affusion or immersion is attend- ed with danger, even though the heat of the body at the moment of using it be greater than natural. Sweating is always a cooling process in itself, but in bed it is often prolonged by artificial means, and the body is prevented from cooling under it to the natural degree, by the load of bed clothes. When the heat has been thus artificially kept up, a practitioner, judging by the information of his thermometer only, may be led into error. In this situation, how- ever, the heat sinks rapidly on the exposure of the surface of the body even to the external air, and the application of cold water either by affusion or immersion is accompanied by a loss of heat and a deficiency of re-action, which are altogether inconsistent with safety.

Under these restrictions, says Dr. C., the cold affusion may be used at any period of fever; but its effects will be more salutary in propor- tion as it is used more early. When employed in the advanced stages of fever, where the heat is reduced and debility great, some cordial

should be given immediately after it, and the best is warm wine. The general effect of the cold affusion, says Dr. Curne, in continuance will be more clearly illustrated by the following cases. They are a selection from a great num- ber, the records of which have been preserved, and which lead to the same results. They are so arranged as to exhibit the salutary effects of this remedy in the different stages of fever, and illustrate the precautions laid down against using it improperly.

The first cases which Dr. Currie selects are those in which the affusion produced, according to his account, a complete solution of the fever; but in these cases the remedy was had recourse to before the fourth day ; after that day, indeed for the most part after the third, the affusion does not, according to our author, usually produce an immediate solution of the disease, but it instantly abates it, and by a few repetitions brings it to a happy termination in two or three days.

As these cases of the late trial of the affusion are more appropriate to the present division of our subject we shall select one or two of the most striking of them, and leave the reader to make his own application.

A young lady of nineteen, in the seventh or eighth day of a typhus became my patient, Sep- tember 26th, 1794. Her pulse was 112 and feeble, heat 101°. She had great pain in the head and much prostration of strength ; her eyes were suffused and dull ; her tongue furred ; her spirits greatly depressed. Saline medicines were used for this patient, with lemonade for her usual drink, and moderate quantities of wine were given mixed with water. The burning sensation, in the palms of her hands and temples, was as- suaged by frequent sponging with vinegar, and every evening at six P. M. three or four gallons of cold brine were thrown over her. The happy effects so frequently described were in this case particularly striking. The pulse fell almost im- mediately to 90, the heat to its natural standard, and the head ache vanished; a gentle diaphoresis followed with easy sleep ; in a few hours, how- ever, the feverish symptoms returned, and tow- ards the hour of six in the evening the fever was in its highest state of exacerbation. At this hour, therefore, the affusion was repeated with the sane happy effects ; though the fever returned as before it was in a milder form ; the same prac- tice was continued, and on the 2nd of October she was entirely free from the disease.

The following is a case in which the cold affusion was employed in the more advanced periods of fever. It is related, we are told, circum- stantially, because it contains the particulars of the narrator's practice in the epidemic, in which it occurred. In such instances, says our author, as might be expected, it does not procure the same advantages as in the earlier stages, when the strength is less impaired, and the morbid ac- tions less firmly associated ; nevertheless it is evidently advantageous, while the heat of the patient exceeds the natural standard, though it ought to be employed with caution in the more advanced stages of the disease, and in such cases, according to my later experience, of a tempera- ture from 15° to 20° degrees only, below the hu- man heat. In the greater part of the cases which Dr. C. recites the water employed was the pump water of the hospital, saturated with sea salt, and of a temperature from 40° to 50° of Fahren- heit.

F. G. a soldier of the thirtieth regiment, aged 'hirty-three, fell under my care on the 9th of June, 1792, during the prevalence of the epi- demic in the regiment. He was in the ninth day of the disease. His pulse 100 and feeble; his heat 104°: his thirst wa» very great; his tongue

foul and black ; frequent cough occurred, with streaks of blood in the expectoration ; and pe- tichiae appeared all over his body. His mind was at all times confused, and at times he was completely delirious. I directed that his strength should be supported by administering a bottle of wine every day with an equal quantity of gruel ; that every night he should take an opiate draught; and that a complete operation of his bowels should be procured by a clyster administered daily, and, if this did not succeed, by a few grains of calomel. I also directed that a bucket full of salt water should be thrown over him immediately and repeated according to circumstances. In a few minutes after the affusion, the heat was 98°, the pulse 98, and his mind more calm and collected ; two hours afterwards he had relapsed into nearly his former state, but the night was passed more tranquilly. The whole of this practice was con- tinued with nearly the same result till the twelfth day of the disease, the affusion having always been performed in the evening, and some- times at noon also. The fever continued its usual period ; but on the twelfth day, the heat having sunk to its natural standard, the cold affusion was thenceforth omitted : we, however, sponged the whole body once or twice a day with vinegar. The patient was in a state of con- valescence on the eighteenth day from the first attack.

Partly upon the same principles which regu- lated the above practice

of employing cold water to the surface with a view to the abating of irri- tation, it is the practice of many, especially at the time in which we are now writing, to institute small and repeated bleedings, and in some cases this practice will be found very beneficial ; it has lately obtained, partly on account of the pre- valent notion of fever being necessarily con- nected with local inflammation; and although the doctrine may not be altogether stable, for fever seems capable of a full development and establishment without the presence of topical dis- order, there is, it must be admitted, a tendency to such local manifestation in most distempers of the febrile class; and the plan of depleting in a moderate way, keeps as it were this tendency under, and may be considered as rather adding to, than subtracting from, the general energies of the system by equalising the circulating im- petus. From four to six ounces may be taken according to circumstances, and at any time almost during the course of the fever, excepting when the tendency to sinking is marked and ex- treme.

Purgatives are almost invariably called for in all kinds and in most stages of fever. To keep the alimentary and intestinal canal free is one of the most important principles in conducting fevers to a favorable termination. When visceral obstructions are present, mercurial preparations may precede and alternate with saline and other purgatives ; but the continued fevers which are met'with in this country do not for the most part require very large and repeated doses of calomel.

Diaphoretics, especially those of the saline and cooling kind, are valuable medicines in fever ; and it may be questioned whether anti-

mony which was at one time in more than due estimation is not n«w too little appreciated ; like the cold affusion and ablution, and like small and judicious bleedings, antimony properly ma- naged may be made to keep up a constant and regular action upon the excretories of the sur- face, and thus moderate re-acting violence, and assist in equalising the circulation.

Diuretics, likewise, of the saline and cooling order are occasionally administered in fever with much advantage. We do not now talk of con- coction in the urine, nor do we direct our re- medial measures towards effecting changes in the quality of this excretion ; but it is of practical im- portance to recollect that conspicuous changes in the

urine invariably attend changes in the disor- der's aspect and character.

Refrigerants are obviously called for when heat is above the natural standard; indeed cold affu- sion and diaphoretics may by other terms be named refrigerants; however, the modus agendi of internal refrigerants is often attended with some difficulty in the explanation. That a little nitre dissolved in water should speedily biing down the heat of the whole body, some degrees, is not very easy to account for : the fact however would of itself be sufficient to show, that, as intimated in the preliminary discourse, much remains to be learned on the subject both of natural and morbid temperature, before pa- thology can congratulate itself on much accuracy of knowledge or precision of notion in reference to these particulars.

Formula for purgatives, diaphoretics, diur«>- tics, and refrigerants, taken from Dr. Gregory and Dr. Uwins.

PURGATIVES.

R Pulveris jalapa grana viginti. Hydrarg. submuriatis grana quatuor. Misce : fiat pulvis.

Take of powdered jalap a scruple, of calomel four grains. Make them into a powder. R Magnesia sulphatis 3vj.

Liquoris ammonias acetatis f. ˆft. Syrupi simplicis f. 3ij. Aquas purse f. 3x. Fiat haustus.

Take of Epsom salts six drachms, liquor of acetate of ammonia a fluid half ounce, simple syrup two fluid drachms, water ten fluid drachms. Make them into a draught. R Potassae tartratis Sift. Syrupi aurantiorum f. 3ij. Infuii sfnnic f. lift. Fiat haustus.

Take of tartrate of potass one drachm and a half, syrup of orange peel two fluid drachms, in- fusion of senna a fluid ounce and a half. Make them into a draught.

R Pulveris jalaps grs. xv. Soda sulphatis liij. Fiat pulvis.

Take of powder of jalap fifteen grains, sul- phur of soda three drachms. Make them into a

powder.

Di.u-noRF.ncs.

R Antimonii tartarizati er. j.

Syrupi papaveris f. 3’ft-

Aquae purae f. ˆiils- Fiat mixtura. Dosis pars quarta.

Take of tartarised antimony one gram, syrup of white poppy a fluid ounce and a half, water two fluid ounces and a half. Make them into a mixture. Dose a fourth part.

R Liquoris ammonias acetatis f. 3iij. Vini antimonii tartarizati f. 5j. Syrupi papaveris f. 3ij. Aquae purae f. 3x. Fiat haustus.

Take of liquor of acetated ammonia three fluid drachms, wine of tartarised antimony one fluid drachm, syrup of white poppies two fluid drachms, water ten fluid drachms. Make them into a draught.

DIURETICS. R Potassae nitratis grana quinque.

Aquae mentha pulegii drachmas quatuor. Liquor, antim. tartariz. guttas quinque. Tincti. digitalis guttas quinque. Syrupi drachmam. Misce : fiat haustus.

Take of nitre five grains, four fluid drachms of pennyroyal water, liquor of tartarised anti- mony five drops, tincture of digitalis five drops, syrup a fluid drachm. Mix into a draught.

R Potasses nitratis 9ft.

Spiritus aethe”

Misturae camphorae f. 3’ft- „ Syrupi simplicis f. 5j.

Fiat haustus.

Take of nitre half a scruple, spirit of nitric ether a fluid drachm, camphor mixture a fluid ounce and a half, simple syrup a fluid drachm. Mix for a draught.

R Potassse acetatis 3j. Syrupi simplicis f. 3ij. Aqua purae f. Jift. Fiat haustus.

Take of acetate of potass a drachm, simple syrup two fluid drachms, water a fluid ounce and a half. Make them into a draught.

REFRIGERANTS.

ft Potassa nitratis 3ft. Syrupi simplicis f. 3ij. Aqua pura.- f. ˆift- Fiat haustus.

Take of nitre half a scruple, simple syrup two fluid drachms, water ten fluid drachms. Make them into a draught.

R Potassa supertartratis 3vj. Sacchah purificati Jiv. Corticis aurantiorum Jfl. Aqua ferventis o.iij. Misceantur pro potu.

Take of cream ot tartar six drachms, purified sugar four ounces, orange peel half an ounce, hot water three pints (imperial). Mix for a drink. For the mode of making the saline

draught to bfe drunk in a state of effervescence, see under the head of intermittent fever.

Indication 3. When obviously marked debi- lity prevails, stimulants and cordials appear to be called for. It will be found, however, that these artificial excitants are much less admissible in febrile weakness and sinking than would, & priori, be imagined. Some systematists have gone so far as to forbid altogether the employ- ment of stimuli in fever, while others have pushed them through thick and thin without regard to any other considerations than the pre- vailing lowness of the vital energies. Both ex- tremes are wrong.

The propriety of stimuli seems questionable, while any of the secretions or excretions are in a manner locked up; especially when the bowels are constipated, the stomacn laden, and the surface of the body in a dry unperspirable state ; when the pulse too is sharp, as it is ex- pressed, that is wanting in softness and fulness, then we must be careful how we meet the weak- ness with exciting agents. But when the patient lies prostrate under the pressure of typhoid lowness, the bowels being loose, the skin open, and the tongue disposed to moisture, we should be losing ground by withholding supporting powers. Under these circumstances, too, opium will meet and subdue the restlessness of fever, without being attended by any injurious conse- quences. Dr. Currie's rule, in respect to the time and circumstances of opium's admission, will be found of importance to recollect ; it may be given, he says, when the stomach is «rr.pty of food, the bowels loose, and the skin moist; and, as above intimated, these are con- ditions generally for the admission of the exci- tantia in fever ; one of the most beneficial and least objectionable of which is

the subcarbonate of ammonia.

R Ammonia subcarbonatis 9ft. Confectionis aromaticae 9j. Aquae purse f. Jift.

Fiat haustus.

Take of sub-carbonate of ammonia half a scrnple, aromatic confection one scruple, water a fluid ounce and a half. Make them into a draught.

R Liquoris ammoniae acetatis f. 3iij. Ammoniac subcarbonatis gr. vL Misturae camphorae f. ˆift- Fiat haustus.

Take of liquor of acetate of ammonia three fluid drachms, sub-carbonate of ammonia six grains, camphorated mixture a fluid ounce and a half. Make them into a draught.

R Tincture opii TCI. XT. Succi leroonum f. Jft. Aquae purae f. Jifl. Fiat haustus.

Take of tincture of opium fifteen minims, lemon juice half a fluid ounce, water a fluid ounce and a half/ Make a draught.

The black drop may often be employed with advantage where opium is required, but seems of doubtful admissibility. One drop of this last is equal to four or five of the tinctura opii.

The liquor opii sedativus of Baltley is also useful in being without some of the deleterious qualities of the common tincture. The dose of Battley's liquor is from fifteen to thirty drops.

When what are called putrescent symptoms make their appearance, the mineral acids will be found occasionally of abundant service ; some practitioners trust almost entirely to the use of these in those kinds of fevers which tend to- wards the typhus gravior of authors. R Acidi muriatici, Acidi nitrici a a. m.ij. Syrupi simplicis f. §ft. Aquae purae Jift. Fiat haustus.

Take of muriatic acid and nitric acid of each two minims, simple syrup half a fluid ounce, water a fluid ounce and a half. Make them into a draught.

R Acidi nitrici diluti f. 3ij. Syrupi aurantiorum f. Jij. Aquae purae f. Jx. Misce pro potu communi. Take of diluted nitric acid two fluid drachm.*, syrup of orange peel two fluid ounces, water ten fluid ounces. Mix them for a common drink. R Acidi sulphurici diluti m.xij.

Decocti cinchona; f. Jift. Syrupi papaveris, f. 3ij. Fiat haustus.

Take of dilated sulphuric acid twelve minims, decoction of bark a fluid ounce and a half, syrup of white poppy two fluid drachms. Make a draught.

Cascarilla, valerian, serpentana, camphora, and the aethers are in use, when the fever exhibits the typhus mitior or nervous, rather than the typhus gravior, or, as it would be said by some, putrid aspect. It is necessary to observe that, when camphor is administered with any other inten- tion than that of a mere adjunct to other medi- cines, the dose ought to be much larger than can be given in the mixtura camphorae of the pharmacopoeia. It should be exhibited in doses from six to ten grains, either rubbed down with mucilage of acacia, or in the form of bolus. Hyoscyamus is a useful medicine in nervous fever, when sleep is required, and opium is forbidden.

R Tincturae hyoscyami, f. 3ft.

Camphorae, gr. vi. Mucilag. acacias, f. 3i. Spiritus aetheris nitrici, t. 3i. Syrupi simplicis 3U Aquae pure, f. Ji. Fiat haustus.

Take of tincture of henbane half a fluid drachm, camphor six grains, acacia mucilage a fluid drachm, spirit of nitric ether a fluid drachm, simple syrup a fluid drachm, water a fluid ounce. Make them into a draught.

In colliquative diarrhsa, the opiate confection will be found an efficacious medicine. R Confectionis opii grs. xv. Aquae cinnamomi f. Jift. Fiat haustus. Take of opiate confection ffteen grains, crnna-

roon water a fluid ounce and a half. Make a draught.

But the young practitioner must always be careful not to interfere too much with nature's operations by precipitately checking an evacua- tion, which, if it takes place while the powers of the system are yet vigorous, and is not ex- haustingly profuse, may be looked upon as salu- tary rather than injurious, and ought to be assisted by slight and mild mercurials; as with five grains of the pilula hydrargyri, or one grain of calomel, rather than immediately suppressed by opium and astringents.

Should haemorrhage take place from the bowels, a considerable dose of tincture of opium, from thirty to forty minims, may be resorted to with much promise of advantage, and the Peruvian bark with sulphuric acid, and syrup of white poppy be afterwards employed according to the extent of sinking manifestation ; but, even in these cases, we must be on our guard against too much of astringent agency.

Of the external applications that are made use of occasionally in the management of fever very little need be said. In cases of much cerebral disturbance, leeches are often demanded for the temples; and it occasionally becomes expedient to have the head shaved, and to keep the naked scalp constantly wetted with an eva- porating lotion.

R Liquoris ammonias acetatisff. Jvij.

Spiritus aetheris sulphurici f. Jj. Fiat lotio.

Take of liquor of acetated ammonia seven fluid ounces, spirit of sulphuric ether one fluid ounce. Make a lotion.

R Ammonia muriatis 3ift. Aquae purse f. Jvift. Spiritus rectificati f. ˆift. Fiat lotio.

Take of muriate of ammonia (sal ammoniac) a drachm and a half, water six fluid ounces and a half, rectified spirit a fluid ounce and a half. Mix them for a lotion.

Some practitioners are accustomed to apply blisters to the scalp in the event of cerebral af- fection proving urgent. This appears to be a questionable practice. Blisters ought rather to be applied to the nucha, or legs, and not to the head ; and where the vascular irritation is so high as to call for either topical or general blood letting, this ought always to be premised, and the blisters not had recourse to till after the ves- sels have been emptied.

Whether convalescence from fever should be treated by tonics, especially by Peruvian bark, has been made a question in modern times; indeed, it is the more common custom in the present day to leave the confirmation of health and strength entirely to time and nature. We find, however, that relapses from fever are by no means infrequent ; and it may be that the de- parture from the ‘throwing in bark’ practice has been too freely and fearlessly carried to the extent of throwing it entirely aside. It is probable, at least, that a little tonic opera- tion upon the nervous and vascular organisa- tion of an individual recovering from a pro-

tracted disorder may obviate the tendency to the recurrence of those actions by which the disorder was constituted. The sulphate of quinine seems well adapted to the circumstance of conva'es- cence, as it is powerful without being bulky and nauseating/

Recapitulation of the treatment in continued fever.

1. To endeavour to cut it short, either by the administration of an emetic, of a violent or drastic purgative, or by blood-letting to a pretty considerable amount, or by dashing cold water over the naked body.

2. To endeavour at conductiug it to a safe termination, or assist in expediting such termina- tion by moderate blood-lettings at any time of the fever's course that heat and irritation seem to de- mand it, to wash or sponge the body with cold water during the existence of dry heat, or to dash cold water over the body in the way of affusion, to administer saline purgatives, or diaphoretics, or diuretics, or refrigerants; and in cases of de- cidedly marked topical affection to apply leeches or cold evaporating lotions over the parts affected ; and when there are indications of visceral disorder, especially of the liver, to give calomel or blue pill in combination with the purga'.ive medicines.

3. To support the powers of life when they appear sinking under the violence of the commo- tion, by ammonia, wine and cordials, always re- collecting that these kinds of stimuli are then most admissible when the skin is in an open state, and the pulse free from constricted sharpness; to administer opium and wine when diarrhaea or haemorrhage from the bowels are urgent, still acting under the impression that care must be taken not to check precipitately those discharges which seem manifestations of nature's efforts to procure a solution of the disease ; to administer those vegetable tonics which are more especially adapted to nervous weakness, when the malady seems as it were to fix upon the nerves, rather than tend to typhus gravior ; these tonics are va- lerian, serpentaria, &c.; to allay irritation by vege- table narcotics, such as henbane, when opium is inadmissible ; and lastly to assist convalescence by the moderate use of bark in one or other of its forms.

343. Means of prevention? — Before conduc- ing the subject of general fevers, it will i e expect- ed that we introduce a few remarks on he means of prevention : of which, by the way, rr uch more has been said than the facts of the case have war- ranted ; separation and free ventilation being after all the most efficacious means of obviating the communication of the malady. It should seem that the poison of

whatever nature and kind it may be, is received into the system through the medium of the lungs; for while the skin is whole or unabraded, that is while the cuticle or scarf skin properly covers the cutis vera or true skin, the poison of contagion cannot make its way into the system. Merely lay the most virulent miasm upon the outer skin of an indivi- dual, say the small pox virus, or even the virus which produces hydrophobia, and no harm will be done. For the body to be infected, it is neces- sary that a puncture or abrasion be made of this outer surface, so as that the matter infecting shall

get to the blood vessels, or nerves, or absorbents. Experiments, moreover, have been made, which are at variance with the notion that might be en- tertained of the stomach being an inlet to these infecting materials, or that the individual swal- lows the poisons which produce their specific «ffects. Dr. Rush, of Philadelphia, caused a negro girl to swallow some small-pox matter, and it was done without producing the disease; so that in point of fact all that is to be feared, or at any rate the most that is to be apprehended, is taking into the lungs by inspiration the matter immediately emitted from the lungs of another; or the matter exuded by the sick, whether imme- diately exhaling from his body or having been col- lected and concentrated in some material witk which his body has been in contact. These simple facts being admitted, it necessarily fol- lows that, as above stated, plenty of washing so as to prevent the collection and concentration of the materies morbi, and a plentiful supply of fresh air, so as to prevent as much as possible a poisonous atmosphere, are the main particulars of preventive measures. It is questionable whe- ther the aromatics and perfumes that have been had recourse to under the notion of disinfection or preservation may not be sometimes worse than useless, excepting as they may bring with them a confidence of their efficacy; for a careless and confident state of mind with regard to infec- tion would seem occasionally some sort of gua- rantee against its influence.

We may not, perhaps, assume that this is the explanation of the comparative immunity of me- dical attendants and nurses, more especially of the latter ; for these seem to be guarded in some measure by a law which obtains in reference to a contagious atmosphere, viz. that those who are constantly inhaling it are much less obnoxious to its poisonous influence than those who are only partially and occasionally exposed.

‘ As a matter of prevention,’ says Dr. Thomas, in his very cc:r>prehensive and useful work en- titled The Modern Practice of Physic, ‘ strict non-intercourse with the sick should be enforced, and those whose duty or kindness leads them to visit the patient, should be very careful not to inhale his breath, or expose themselves to that steam of perspirable matter which emanates from his body when the bed clothes are turned down for the purpose of rendering him any offices of assistance. While engaged in such duties they should retain their breath for a time; and, if un- der the unavoidable necessity of inhaling the tainted atmosphere, they should, as soon after- wards as possible, blow from the nose, spit, or wash their mouth, with a view of detaching any infectious particles that may have adhered to these passages. All the discharges of the patient should be thrown away to some distance as soon as they are rendered, and the vessel washed with boiling water. But the most important precau- tion of all is to maintain a perpetual circulation of air in the patient’s chamber throughout the whole course of the disease ; and for this purpose a part of the window should be left open both at top and bottom, and the opposite window where there is one, or else the door of the room, should aUo be a little opened. For the better success ““OT.. XIV.

of ventilation the bed curtains should never be drawn close round the patient but merely one of them let down to screen him from the irritation of light. When open windows cannot be had recourse to on account of high winds, or other inclemency of the weather, a small fire must be kindled in the grate, so as to cause a current and frequent removal of air in the chamber without considerably raising the temperature. Another essential precaution consists in frequently chang- ing the body and bed linen of the patient, which, as soon as removed and carried away, may be put into a tub and covered over with water, into which a handful of lime or potash maybe thrown, for the purpose of detaching the animal matters with which they may be impregnated. In few words,’ he adds, ‘ unremitting regard to ventila- lation, and the strictest attention to cleanliness in all its parts, constitute the whole secret of evad- ing contagion. Fumigations with nitric or mu- riatic acid in a state of vapor may however be employed as auxiliaries.’

We shall extract the brief history and account that this minute and practical author, Dr. Tho- mas, gives of the practice of fumigation as a pre- ventive and counteractive of febrile contagion.

Nitric acid has been used by Dr. Carmichael Smyth as a fumigation, with the greatest success, in malignant fever. In the year 1780 the disease broke out among the Spanish prisoners confined in Winchester

Castle : he embraced the oppor- tunity of giving the remedy a fair trial, and ob- tained the most decisive evidence of its happy power in preventing the spreading or farther communication of the infection. He found he could use it without risk or inconvenience to respiration, and therefore thought it the most proper antidote to be applied where persons are unavoidably obliged to be present.

The doctor's mode of obtaining nitric acid is by decomposing nitre by means of heated sul- phuric acid, which may be done as follows : Put half an ounce of this acid into a crucible, glass, china cup, or saucer, and warm this over a lamp, or in heated sand, adding to it from time to time some nitre ; these vessels he directs to be placed at twenty or thirty feet distance from each other, according to the height of the ceiling, and virulence of the contagion. In hospitals and prisons he advises the lamps, or vessels contain- ing heated sand, to be placed on the floor; but on board of ships he recommends to hang them to the beams by waxed silk cords.

From the well known efficacy of the sulphuric acid, in destroying contagion, he advises it to he employed as a fumigation for clothes and furni- ture, &c. : but for purifying empty prisons, hos- pitals, wards, and ships, he gives the preference to the nitric, its vapors being more volatile and penetrating, and not having the disagreeable smell which the sulphuric has, and thinking it at the same time equally efficacious.

Monsieur Guyton Morveau, in his treatise on The Means of Purifying Infected Air, claims tht- merit of being the discoverer of the power of the mineral acids to destroy contagion, and endea- vours to establish the superiority of the muriatic acid over all others. Upon a full investigation of the matter it appears, however, that the power

of the mineral acids to destroy contagion was know to Sir John Pringle as early as the year 1750; and their utility for that purpose was mentioned by Dr. Johnson in his pampnlet pub- lished in 1758, in which we are told that the Taper of muriatic acid was successfully employed by him in correcting the contagion of a very malignant fever, which had raged at Kiddermin- ster two years before that period.

Dr. Smyth has also claimed the having been the first who used the mineral acid gas in the apart- ments of the sick, and has alleged that they never had been employed by Dr. Johnson but in places where no one was present, or where the sick were removed. This opinion has been re- futed by Dr. Johnson's son, and the invention of his father most incontestably established. What Dr. Smyth seems therefore entitled to is the merit of having brought the discovery into pub- lic notice, and of having applied and extended it to general use.

It seems of little consequence whether we em- ploy the nitric acid or the muriatic, in the form of gas for the purpose of destroying con- tagion, and purifying infected air, as the powers of both are extensive and certain. The muri- atic is, however, thought to be more diffusible than the other. When we give it the preference it may be used in the following manner : — Put one pound of common salt into an earthen ves- sel, and pour over it from time to time a small quantity of sulphuric acid, till the whole salt is moistened. If the air is foul, and peculiarly offensive, apply a gentle heat under the vessel to extract a large quantity of vapor : but in general the simple addition of the acid to the salt will be found sufficient, unless the apartment is very large.

The most effectual, however, of all fumigations is perhaps the following ; but it requires some nicety : — Take of manganese, in powder, two parts, the same of common salt, of sulphuric acid three parts, and of water one part. Put an ounce of the mixed manganese and salt into a basin ; add of water a large tea spoonful, then drop in half a tea spoonful of sulphuric acid, and repeat this till you have used a tea spoonful and a half of the acid. In this manner keep up a sensible extrication of the fumes.

On the appearance of typhus, or any infec- tious disorder, in a gaol, hospital, workhouse, garrison, transport ship, or any othrt place where many persons are crowded together, we should not fail to advise one of these gaseous fumigations in every room, in addition to a free ventilation and the greatest cleanliness. The same steps should be adopted in academies, boarding-schools, and even our dwelling-houses.

The principal objections against these acid fumigations are, that they occasionally oppress the breathing of individuals whose respiratory functions are already perhaps morbidly affected, and that they tarnish tire furniture of the rooms, at least the metallic part of such furniture. More recently still the chloruretof oxide of sodi- um, and the chloruret of the oxide of calcium, have been substituted for the fumigation above alluded to. Waters, impregnated with these chlorurets, are

aspersed about the apartments, and are al-

leged to possess to the full the disinfecting ten- dency of the acid fumigations, without any •• their inconveniencies. M. Labarraque of Pari. was the first to propose the employment of these substances as disinfecting materials; and Mr. Alocock has lately published an interesting pamphlet on their application, not only to the purposes now particularly referred to, but under several other circumstances of disease. To the article PHARMACY the reader is referred for an account of the preparation of these substances, and they are now prepared by Mr. Beaufort, for disinfecting animal food as well as for preventing the spread of contagious disease.

Typhus icterodes, yellow fever. The student, by referring to the nosology, will find that Cullen places this as a species under the genus typhus; and on this account it falls hereto be considered. The remarks which we have already introduced under the general head of fever, and the disqui- sition in which we have already engaged, both in the preliminary part of the present article and when considering the existing causes of fever generally, might seem to supersede the necessity of any lengthened account of the symptoms, sources, and treatment, of the malady now to be noticed ; but it demands somewhat of particular consideration, inasmuch as it has occupied the pens of controversial writers for years, and its precise nature and habits are still the subject of dispute.

It is still, we say, a disputed point, whether there is any disease, of a specific and peculiar kind, to which the term yellow fever may legiti- mately apply, or whether all its forms are not merely modifications of endemic fever, or of a fever which owes its peculiarities not to the spe- cific and abstract nature of its exciting causes, but to the local circumstances of soil, tempera- ture, air, &c., of the places in which it breaks out and spreads. It would seem to us probable that this discussion has been agitated too much in the abstract, or under the supposition that the disorder must be absolutely one or the other: — either common, that is, excited by the ordinary excitants of fever ; or specific, that is, equally independent of time, place, and circumstance, as is small pox, or measles. To our conception, we repeat, both yellow fever, and a form of disease afterwards to be commented on, the plague, seem to hold a sort of midway condition in respect of peculiarity or specific character ; and that while both are communicable by means of a particular poison, and both susceptible of transportation from one country to another, the clime in either case, to which the virus is trans- ported, must be naturally or artificially such as to assist in the consequent development and spread

of the disease. Who, it has been asked, ever heard of the yellow fever in the north of Europe? but small pox we all know is a dis- temper which has appeared in the south and in the north, in the east and in the weet.

In the present case, however, it behoves us to recollect that we are encyclopasdiasts rather than essayists, and that it is our duty rather to con- centrate the opinions of others than to prefer our own. Under this impression we deem it proper to present a general account and estimate of the

yellow fever from the writings of others, and, in this instance, we shall bring into requisition the very able author of the Study of Medicine, who, after treating of remittent fever generally in its various shapes and modifications, goes on to say, ‘ One of the severest and most fatal forms under which the malignant remittent shows it- self is that of the yellow fever, so denominated from the lemon or orange hue which is thrown over the entire surface of the body almost from the first attack of the disease, and which gives it a distinctive feature. The heat is here also in- tense, the thirst extreme, and the vomiting strikingly obstinate; but not consisting of a colorless material, or the food which has been swallowed, but of a yellowish matter at the be- ginning and through the height of the fever, and of a chocolate colored colluvies towards its close.

‘ The common remote cause of this fever is unquestionably marsh miasm; and hence it holds a stationary abode in the swampy soils and morasses of the inter-tropical regions, exposed to a high solar heat, and perpetually exhaling a decomposition of animal and vegetable mate- rials ; and is found occasionally in all climates that make an approach to the same characteristic ; where, in the language of the poet,

The rivers die into offensive pools, And, charged with putrid verdure, breathe a gross And mortal nuisance into all the air.

And, as almost every territory in which it has committed its ravages has given it a new name, it is as gorgeously arrayed with titles as the mightiest monarch of the east. From the depre- dations it has committed in the West Indies and on the American coast it has been- called the St. Domingo, Barbadoes, Jamaica, and American fever: and from its fatal visitation on the Guinea coast, and its adjoining islands, the Bulam fever. In British India it is distinguished by the name of the

jungle fever, and still further to the east by that of Mai de Siam. Nearer home, in the lowlands of Hungary and along the south of Spain, it is called the Hungarian or the Andalu- sian pestilence. From its rapid attacks on ships' crews that are fresh to its influence the French denominate it fievre matillote, as the Spanish and Portuguese calf it vomito prieto, or black vomit, from the slaty or purplish and granular saburra thrown up from the stomach in the last stage of the disease, while, as its ordinary source is marsh lands, it has frequently been named paludal fever. Its more common name, however, in the present day, and for the reason already assigned, is ydlow fever; and, when the attack upon new comers is slight, seasoning.

From its showing itself in so many parts of the world, and under circumstances so widely dif- ferent, it is not to be wondered at that it should often be accompanied with a considerable diver- sity of symptoms, and consequently that the pa- ludal fever of one quarter should be regarded by many writers of considerable authority as essen- tially different from that of another. But an attentive perusal of the origin and laws of febrile miasm, as I have endeavoured to explain them when treating of the remote causes of fever, will, I

trust, be sufficient to account for all such local dis- tinctions, and if not to prove, at least to render i: highly probable, that they depend partly upon the state of the body at the time of the attack, but chiefly upon some modification in the powers or qualities of the febrile miasm itself, by the varying proportions of the co-operative agents of moisture, heat, stagnant air, and other aux- iliaries which have not yet been detected, in their relation to each other in different places and sea- sons.

How far the yellow fever is capable of origi- nation from any other cause than febrile miasm from marshy lands, we cannot at present deter- mine. When, however, it has once firmly esta- blished itself and raged with severity, it is now very generally admitted that the effluvium from the body of the affected is loaded with miasm of the same kind, completely elaborated as it passes off; and that the disorder is from this time ca- pable of communicating itself by contagion. And.it appears far more probable that the fever at Cadiz in 1800, and that at Malaga in 1803, had their origin in contagion, or, in other words, in febrile miasm, produced by a decomposition of the effluvium from the human body, than from the same miasm issuing from a decomposition of marsh lands. And on this account I have rather preferred" the trivial name of yellow to that of paludal fever, which is too limited to express its source in every instance.

From the different impressions produced on febrile miasm, under these diversities of origin and adjuncts, we find, independently of other dis- crepancies, that the fever it excites sometimes assumes a caumatic or inflammatory cast, some- times a typhus, and sometimes a synochus, or, in other words, begins with the first and rnns ra- pidly into the second or third. Generally speak- ing, the variety before us evinces the last of these characters, as does also the variety we have just treated of : the two varieties that yet remain will afford examples of a typhous and inflammatory bearing.

Its ordinary progress amongst those who am fresh to the tainted atmosphere is thus accurately described by Dr. Moseley, who, from its resem- blance to the causus of Hippocrates, denominates it endemial causus. ‘ When a new comer is seized with a sudden loss of strength, and a de- sire of changing for rest, into every position with- out finding it in any, those symptoms which con- stitute the endemial causus may be expected. The following day, but sometimes within twelve hours from the first indisposition, the violence of the disease will commence thus : there will be a faintness and generally a giddiness of the head, with a small degree of chilness and horror, but never a rigor. Then immediately will succeed a high degree of fever, with great heat and strong beating in all the arteries of the body, par- ticularly observable in the carotid and temporal arteries ; flushings in the face; gaspings for cool air ; white tongue, but tinged with yellow, after the retchings have commenced ; excessive thirst, red ness, heaviness and burning in the eyes; hea- viness and darting pains in the head and small of the back, and often down the thighs; pulse quick, generally full and strong ; in some cases

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quick, low, and vacillating; skin hot and dry; sometimes with a partial and momentary mois- ture ; sickness of the stomach from the first, which increases with the disease ; and, immedi- ately after any thing is taken to quench the thirst ; retchings succeed in which bilious matter is brought up ; anxiety with stricture, soreness and intense heat about the praecordia ; great restless- ness; heavy respiration; sighing; urine deep colored and but little in quantity. This is the first stage of the fever, and may continue twenty- four, thirty-six, forty-eight, or sixty hours, and this constitutes its inflammatory period.

The second stage begins with an abatement of many of the preceding symptoms, and the rise of others, sometimes with a deceiving tranquillity, but with perturbation if the patient should fall into a sleep ; then a yellow tinge is observed in the eyes, neck, and breast; the heat subsides and sometimes with a chilness, but not with that sort of strong rigor which, when it happens, ter- minates the disease by sweat, or by copious bilious evacuations upwards or downwards. The retchings are violent, and turn porraceous ; the pulse flags, but is sometimes high, and some- times soft ; the skin soft and clammy ; the urine in small quantity, and of a dark croceous color ; the tongue in some cases is dry, harsh, and dis- colored ; in others furred and moist ; there is confusion in the head and, sometimes delirium ; with the eyes glassy. This stage of the disease sometimes continues only for a few hours, some- times for twelve, twenty-four, thirty-six, or forty- eight hours, but never longer.

In the third and last stage of the fever the pulse sinks and becomes unequal and intermit- tent, sometimes very quick; frequent .vomiting with great straining, and noise in vomiting, and what is brought up now is more in quantity, and has the appearance of the grounds of coffee, or is of a slate color. Nothing can be retained in the stomach; difficult breathing; tongue black; cold clammy sweats ; eyes hollow and sunk ; yel- lowness round the mouth and temples, and soon after over the whole hody.

These symptoms become gradually more ag- gravated, accompanied with subsultus tendinum, black urine, deadly coldness of the limbs, deli- rium, faltering speech, haemorrhage, or oozing of blood from the mouth and nostrils, corners of the eyes, and ears ; black bloody vomiting and stools ; vibices, hiccough, muttering, coma, death.

After the first prostration of strength the dis- ease runs on violently till the sensorial power is exhausted. Through its entire course, till the patient is sinking, the intellect is not particularly disturbed, and the organs chiefly affected are the abdominal ; those which principally suffer in the malignant autumnal remittent of our own coun- try, more especially the stomach and the liver. Hence the intense heat and anxiety about the praecordia, the saffron dye of the urine, the yel- low tint of the skin, and the vomitings, first of a bilious and afterwards of a chocolate or sangui- neous colluvies.

In some cases the disease opens with great vehe- mence and rushes forward at once to its acme1, con- ntutmg the second stage of Dr. Moseley. The patient is sometimes cut off in four-and-lwenty

hours; and, from the violence so suddenly com- mitted on the liver, its proper function is instan- taneously suspended, and, instead of an exces- sive emulgence of high-tinted bile, a chlorotic secretion takes place, which, forced into the san- guineous system, gives a ghastly lividity to the entire surface. Shortly after which, if the patient live long enough, the gorged blood-vessels of the inflamed and gangrenous liver itself, and some- times also of the spleen or stomach, give way, and repeated tides of dark granulated grume, like the grounds of chocolate, are ejected by the mouth. ‘ .

Mr. Pym has very forcibly described this overwhelming onset of the disease ia the follow- ing terms : ‘ There is at the first attack a’ peculiar, heavy, or drunken appearance in the eyes ; the head-ache is excruciating, and, confined to the orbits and forehead, has no remission ; when it terminates favorably it is rarely attended with yel- lowness of the skin, which, if it do take place, is of a very pale lemon color. It runs its course from one to five days; is attended with a peculiar inflammation of the stomach, which, in most cases that prove fatal, terminates in gangrene, or in a diseased state of the internal or villous coat of that organ, accompanied with a vomiting of matter resembling coffee grounds, and a livid or putrid appearance of the countenance which it is impossible to describe ; but those wishing to form an idea of it may see its fac simile in the coun- tenance of any person with a florid complexion, during the burning of spirits of wine and salt in a dark room, as is practised in the game of snap- dragon during the Christmas gambols.’

In this state the disease is unquestionably con- tagious; and as Dr. Cullen has laid down con- tagion as a distinctive character of fevers origi- nating from human effluvium, in contrast with those originating from the effluvium of marshes, Mr. Pym has endeavoured to draw a line of dis- tinction between yellow fever in this state of in- tensity and in its ordinary career; contending that tne former (to which he limits the name of Bulam fever) is in every instance derived from human effluvium, and consequently that the two must of necessity be distinct diseases. And, to make the distinction still clearer, he has ventured to assert that the symptoms of a more pallid or bloated countenance, together with that of black vomit, or the discharge of coffee-like grounds from the stomach, is peculiar to the contagious fever, and is rarely, if ever, attendant on that produced by marsh miasin even in its most im- petuous and fatal course.

This distinction, however, is in both instances at variance with the history of the disease as it has occurred in most other parts of the world, and more especially with respect to the symptom of black

vomit, which in its last stage, or severet incursions, is common to it, from whatever source derived. It occurred more especially in the fatal epidemic of Antigua in 18-16, whicl- was decidedly an offspring of marsh effluvium. The island had for some years, observes Dr. Musgrave, at whose description we have already glanced slightly, been peculiarly healthy; and the disease first showed itself in a swampy part of it, and amidst new comers, who were sailors,

but from a healthy ship, and themselves in good health on first landing. It soon spread widely, and at length indiscriminately, among all ranks, and conditions, and situations ; among blacks and whites, the newly arrived, and the oldest settlers in town and country.

Nothing was better calculated than this fever to show that almost all the different kinds of fever that occur to us are capable of issuing from a common source or miasm, merely modi- fied by contingencies; for, in Antigua, they all occurred in different individuals. The disease sometimes commenced as an intermittent or re- mittent, and sometimes in a continued type ; it sometimes ceased in four or five days, which was its usual course, and sometimes terminated in an intermittent. The head was in some cases chiefly affected ; in others the stomach, liver, or some other organ. Sometimes the patient died without hiccough, or black vomit, though he rarely recovered where these symptoms appeared : Dr. Musgrave recollects but one instance. Re- covery was no exemption against a second attack. In new comers the tint was of a lemon hue; in natives, or assimilated constitutions, of a deep orange. The state of the atmosphere, at the commencement of the disease, presented nothing peculiar.

In the midst of the discrepancy between these two accounts there is still much that is concur- rent ; and quite enough to establish the identity of the two diseases, if an abundance of other evidence to the same purpose were not at hand. The fever of Mr. Pym, specifically characterised by black vomit, is represented as being peculiarly dangerous and fatal; in that of Dr. Musgrave, this symptom only occurred in the most dangerous cases of the malady. According to the latter, the severest and most deadly attacks were amongst the new comers; the mildest amongst the natives, or those whose constitutions were assimilated to the climate. The yellow hue of the former was of a deep orange; that of the latter a lemon color. Mr. Pym describes three species of fever as common to warm climates, but which differ from

each other in their mode of origin, and diagnostic character. In that of least danger the color of the surface, he tells us, is of very deep yellow ; in that of higher danger it is of a deep yellow; and in the disease before us, which is by far the most fatal, where there is any yellow at all, it is of a very pale lemon color ; which is, in effect, the very hue ascribed to the severest cases of the Antigua fever by Dr. Mus- grave, as the very deep yellow or orange is to the mildest. So that, examined by their external livery, as well as their internal disorganisation, there can be no doubt that the two diseases are the same. Mr. Pym appeals peculiarly, as a distinctive character of the Bulam fever, to the deadly and chlorotic paleness exhibited by the countenance in its latest stage, or most fatal in- cursion. But even this only shows that, in such case, the disease makes a mortal attack upon the larger viscera, and especially the liver, from the first; and demonstrates the proposition I have •ventured to lay down, that, in proportion as this organ is severely affected, is its inability to se- crete proper bile, or indeed bile of any kind;

and, consequently, that if the irritation only reach a certain point, the secernents will be stimulated to emulge a larger quantity, and of a deeper hue; a considerable portion of which, in consequence of such irritation extending to the neighbouring absorbents, will be sent back into the sanguiferous system, and produce the orange tinge, which, in the description of both these writers, peculiarly marks the disease before us in its less fatal attacks. While, if the febrile in- cursion be so violent as totally to derange the function, and still more the structure of the liver, no bile will be secreted at all, or, if secreted, less in quantity, and consequently less diffusive in color ; and hence only conveying a chlorotic or livid tinge to the face, which, at the same time, exhibits a bloated fulness from effusion or de- bility of vascular action.

Yet, after all, it is not denied by Mr. Pym, nor, so far as I know, by any of the writers on the American or Andalusian fever, that the yellow fever from marsh miasm ever evinces either of the symptoms that are so essentially ascribed to the bilious remittent produced by contagion ; but only that it is rarely, if ever, to adopt Mr. Pym's own words, attended with the fatal symptoms peculiar to the Bulam fever, .viz. the black vomiting, and a peculiar bloated appearance of countenance.

There would, however, be an almost insur- mountable difficulty in reconciling these different descriptions of the same disease, in consequence of Dr. Musgrave's telling us very decidedly that not a single instance occurred in the Antigua fever of its being received by contagion, were there not strong reason for believing that this explicit

writer suffered himself to be deceived on this point; most probably, like Mr. Pym, from too close an attachment to the doctrine laid down by Dr. Cullen, that the fever from marsh miasm does not produce contagion, which is spe- cifically a result of a fever frofn human effluvium.

It is impossible to peruse the history of bilious remittent in warm climates, offered from all quarters, without seeing that it may and does originate from both sources; each sometimes operating alone, and sometimes in conjunction with the other, as was probably the case at An- tigua, and certainly the case in the yellow fever that raged at Philadelphia in 1793 ; in which, says Dr. Rush, there were for several weeks two sources of infection, namely, exhalation and con- tagion. The exhalation infected at the distance of 300 and 400 yards; while the contagion in- fected only across the streets. The more narrow the streets, the more certainly the contagion in- fected. Few escaped it in alleys. After the 12th of September, the atmosphere of every street in the city was loaded with contagion ; and there were few citizens in apparent good health who did not exhibit some mark or other of it in their bodies, particularly a preternatural quickness in the pulse, which occurred in negroes as well as in whites ; and in a few who had had the disease before.

That febrile miasm, produced from human effluvium is less volatile than that from marsh miasm, and consequently more limited in its range of infection, is consistent with common

observation. It is sufficient to observe, on the present occasion, that the disease thus issuing from two distinct sources, was one and the same in its general symptoms, and yielded to a lite treatment, thus establishing satisfactorily what, indeed, Dr. Rush himself does not seem to have apprehended, that, though remotely issuing from two distinct sources, it was immediately excited by a common miasm thus doubly generated, and which was only modified in its action by the nature of its origin, or by contingent powers.

Unfortunately the practitioners in warm cli- mates have differed as much in their therapeia as in their aetiology; and apparently the cause that has produced the one has produced or greatly influenced the other. Mr. Halliday, alarmed at the debility which the system will have to encounter in the second stage of the disease, or as soon as it

has run through its in- flammatory career, shuddered at the thought of the lancet, commenced with slight purgatives of sulphate of magnesia and manna, and immediately afterwards had recourse to the bark. The prac- tice of Dr. Hillary was something less timid ; for he allowed an abstraction of from twelve to twenty ounces of blood on the first, and even in a few cases again on the second day, according to the patient's strength and constitution. While Dr. Rush, on the other hand, regarding the in- flammatory impetus as the sole cause of danger, boldly resolved to lay prostrate if possible the morbid Hercules at its birth, by bleeding accord- ing to the state of the pulse, two or three times a day during the first two days, and by following up the same plan as long as a single germ of in- flammatory diathesis should continue manifest. ' I paid no regard,' says he, 'to the dissolved state of the blood, when it appeared on the first or second day of the disorder ; but repeated the bleedings afterwards in every case when the pulse continued to indicate it. It was common to see sizy blood succeed that which was dis- solved. The disordered appearance of the blood I supposed to be an effect of a certain action of the blood-vessels upon it. The presence of petechiae did not deter me from repeating blood- letting where the pulse retained its fulness or tension.' And he affirms that both petechiae and vibices disappeared in various cases after bleeding. This plan he often pursued through the fifth and even the seventh day, in the course of which period from 100 to 120 ounces of blood were frequently taken away by six or eight applications of the lancet.

His purgative plan was not less alert. Ten grains of calomel and fifteen of jalap were the force with which he opened his remedial attack, and which he repeated every six hours till the alvine canal was sufficiently evacuated. This mode of treatment, he tells us, he was led to by accident ; and with it he became as successful as he had been unsuccessful under the tame and more established method.

Yet it is the boast of those who have pursued this tamer, and formerly more established me- thod, that though less striking it has in the gene- ral balance of the account proved more salutary than the formidable plan of their antagonists. There is not, however, necessarily any oppro-

brium medicorum in this discrepancy ; for it is probable that in different situations, or under different circumstances, both plans have been equally judicious and equally successful; for we have seen that the disease, under different inci- dents and coadjutants, has exhibited every variety of violence, and inclined to almost every variety of febrile type. Where there is not much impetuosity in the onset, no

great derangement or prognostic of inflammatory congestion in the larger viscera ; where the remissions are regular and the epidemy is pretty uniform in its charac- ter ; large and repeated bleedings, as a general rule, must prove mischievous. They will not shorten the period of the disease, but they will convert the remittent into a continued fever ; and we shall in the latter stage of its course stand woefully in need of that strength which we shall have squandered away at first, if we have com- menced with profuse vensesection .

On the contrary, if the disease make its incur- sion _with great impetuosity; if the pulse be- full and strong ; or even if ft be only hard, and there be great tendency to inflammatory congestion in any of the larger organs, as the head, the chest, or, as is far more common, the stomach, the spleen, and the liver; we cannot well be too bold both in bleeding and purging ; and the plan laid down by Dr. Rush is by no means an exaggera- tion of what ought to be pursued. It may be that eight-and-forty hours, or even twenty-four are the whole we have to work in ; and unless we, so to speak, can stifle or lay prostrate the sensorial power, and thus completely break down the inflammatory diathesis by debilitating and relaxing the living fibre orsolidum vivum, rather than by diminishing the moles movenda, the organs mostly affected will, in all probability, become gangrenous, in a day or two the oppressed blood- vessels will give way, and we shall have a chlo- rotic or livid skin, cold extremities, black vomit, and all the other apparitors of death, before the tamer plan of aperients and diaphoretics could have time to produce the slightest impression on the system. Generally speaking, it will be best to bleed in an erect position ; for the sensorial excitement, which is what we are principally to aim at, is cut down by syncope which an erect position will soonest induce, and we may hence save the expense of several subsequent bleedings. There is no doubt that, by a practice thus ac- tive and resolute, very vehement attacks of the yellow fever have sometimes been subdued in a few days. But let not those who have thus triumphed conceive that by the same process they would as soon put to flight less violent incursions of the same disease that have been healed in a different manner ; for the more acute the disease the shorter its duration in most instances ; and hence, had no medical treatment whatever been resorted to, the fever might have run through its course whether fatally or happily in a less period than if it had commenced more leisurely and in- sidiously. Yet it is very far from being always true that an early return to health is the consequence of this daring practice, however judiciously it may be had recourse to, and though it may have been the only means of rescuing the patient from death ; for the double debility induced by

the disease and its remedy have often laid a foundation for dropsies and other cachexies which have required years to master, and which have sometimes never been mastered at all.

Dr. Pinkard, in his Notes on the West Indies, has given a very interesting description of his own sufferings under this disease, and of the re- medial process to which he had recourse. His attack commenced in the more common manner, slowly and insidiously, and demanded eight or nine days to reach its acme\ His head, sto- mach, and at last his bowels, were severely affected, especially the first; but his intellect continued sound, and, though the symptoms were vehement, there seems to have been little tendency to that violent visceral inflammation which in the stage of debility is so apt to produce gangrene ; and consequently he had no black vomit. He lost twelve or fourteen ounces of blood at the commencement of the disease, and took a strong dose of calomel, which considerably relieved the pain in his head and eyes, and di- minished the restlessness; but the thirst, heat, and dryness of the skin, were still intense; and his weakness became extreme. Affusions of cold water, old hock, opium, and bark, were made use of in profusion, and each seemed to afford great relief. Yet on the subsidence of the fever he represents his feebleness as most deplo- rable, and such as it appeared impossible to re- cover from. Here a mere use of the lancet could have been of no avail, and, had not the author most judiciously forbade its further employment, in all probability he would not have been the his- torian of his own case.

Mr. Pym speaks with a very just discrimi- nation on this subject, in observing that while the Bulam fever, or the disease in its most vio- lent attack, is relieved by free venaesection, the yellow fever, more properly so called, from the brighter hue on the surface, or, in other words, that which is slighter in its incursion, will not often endure the lancet. Dr. Musgrave's state- ment seems to oppose this assertion ; for he dis- tinctly tells us, that blood-letting in both forms is our sheet anchor ; the only pillar on which we can securely rest any hope of extensive success. The Antigua fever seems to have exhibited great severity in most instances, and hence called for a courageous course of practice, with perhaps few exceptions. Yet the following paragraph proves that it did admit of except-ons, and softens down almost to unanimity a clash of opinions and mode of cure, which after all is more ostensible than real. ' We have repeatedly,' says he, ' with

success taken upwards of forty ounces of blood at one bleeding. With equal success we have in several cases renewed the bleeding up to the third, and even fourth time ; but, generally speaking, those that require such reiterated evacuation, evince an obstinacy not likely to admit of a favorable result, under any mode of treatment. It must also be remembered that every one who applies for assistance is not alike able to bear this liberal depletion.'

The reader will have observed that Dr. Good, throughout the whole of the extract that we have given, assumes an essential identity in different fevers, or in fevers that go under different de-

nominations, and imagines their varieties to be rather incidental or circumstantial than depend- ent upon varieties of general excitant. It will fur- ther have been observed that his opinion on the subject of fever's requisites, in the way of treat- ment, is that endemic characters and epidemic peculiarities, and other particulars which regu late the degree of force or vehemence with which the disorder makes its attacks, are to be taken into account in the regulation of practice, rather than the name or abstract peculiarities of the distemper itself. In these assumptions and in ferences we entirely accord, and are disposed to think that, had they been more generally admitted and acted upon, much of mere verbal contro- versy might have been saved ; as, however, the subject of yellow fever, and the question of its specific character and contagious quality, are still interesting and unsettled, we shall, previously to the conclusion of the present section, extract Dr. Gregory's succinct and able account of the mat- ter, in order that the reader may be furnished with two of our best authorities, that have taken the pains to concentrate the scattered accounts, and reconcile the discordant opinions of those who have investigated the subject. We may first take occasion to say that the reader will find the topic handled in a very able manner by Sir Gil- bert Blane, in his Elements of Medical Logic. Dr. Gregory himself speaks of the essay to which we now refer as containing a very luminous view of the yellow fever question, and one which almost precludes the possibility of future ambi- guity. The section of Dr. G.'s remarks on the yellow fever is as follows :—

Most of the gen jine febrile diseases of hot climates appear to have a bilious tendency. Both the inflammatory and the intermittent and the remittent endemics of those countries are frequently accompanied with a yellow color of the skin, and other symptoms, supposed to denote that the functions of the liver are mate- rially disturbed. This is particularly the case in the West Indies, and the common fever of the country is, on that account, known under the familiar appellation of

yellow fever. Into the symptoms and treatmentof these forms of disease, however, it is not my intention to enter. They are noticed only in order to contrast them with the epidemic yellow fever, such as that which raged in the West India Islands and at Philadel- phia in 1793; at Cadiz in 1800 ; at Malaga in 1803; at Gibraltar in 1804 and 1813; and again at Cadiz in 1819. As this particular form of fever has been observed in all these situations to exhibit very much of the same defined charac- ters, and as it presents some peculiarities which may distinguish it from other epidemic fevers, I shall give a short account of its symptoms and progress, of the appearances found on dissection, and of the most approved systems of treatment.

The attack of the epidemic yellow fever is ushered in, in the usual way, by languor and rigors. There is sometimes a peculiar dejection of countenance observed, with a remarkable aversion to the least motion; at other times there is an appearance of inebriation. The face is flushed ; but the most prominent of the earliest symptoms is head-ache, of a very peculiar kind,

It is exceedingly serere, and referred to the fore- head and bottom of the orbits. The eyes appear dull, glassy, suffused, and protruded. The tongue is at first furred and moist, and trem- bling, but by degrees it becomes dry and black, or sometimes of a fiery-red color. The heat of the skin is but little increased. The patient sometimes lies in an almost insensible state, but extreme restlessness has also been noticed.

To this succeeds the second striking feature in (the symptoms of the disease, great irritability of the stomach. The matter ejected is very seldom bilious, or, if it is so at first, it speedily loses that character. For the most part it is slimy and tasteless, and adheres in small flakes to the sides of the containing vessel. As the disease advances, it assumes a dark color, and comes to have the appearance of coffee-grounds. This is the vomito prieto, the black vomit, which may be considered the characteristic feature of this disease, as much as buboes and carbuncles are of the plague. The dejections have a tarry ap- pearance. There is often noticed a total sup- pression of urine, which, like the black vomit, is a fatal symptom. Hiccough, haemorrhages, and petechise, have been observed in some cases, even from an early period.

I have retained to the last the mention of that symptom which gives name to the disease — yel- lowness of the skin, but it is not of that impor- tance that might have been anticipated. Many cases indeed run

through their whole course without exhibiting it; but when it appears early, or when it assumes a leaden or livid cast, it is to be considered an unfavorable symptom. A few other peculiarities in the disease are all that remain to be noticed. The yellow fever is occasionally attended with an ulcerated state of the throat. A fatal termination has often hap- pened in the most unexpected manner, a very singular remission of all the symptoms taking place about sixty hours from the first attack, and raising hopes which are soon to be disappointed. Death is sometimes observed to be preceded by a low muttering delirium ; at other times the patient has sunk exhausted, but with the intellect quite unimpaired.

The usual duration of the yellow fever is from five to seven days. If the patient passes the sixth day without the recurrence of black vomit, or suppression of urine, his chance of recovering is much increased ; but typhoid symptoms occa- sionally supervene and prove fatal. Relapses in this disease are very rare.

Upon dissection very few appearances present themselves which can be considered as throwing lis;ht on the pathology of the disease. The body has been observed speedily to become livid. ˆ pllowness of the skin has sometimes been first noticed to occur after death. A state of turges- cence of the cerebral veins has been described, and occasionally there has been observed a pe- niliar redness of the inner coat of the stomach. The pall bladder is generally found distended with dark and viscid bile. The structure of the liver is not found to be altered. It sometimes assumes an ash color.

Such are the most usual symptoms of the yellow fever. They will be seen to bear some

resemblance to those of the plague, and the ana- logy between these diseases has been urged with much force by John M'Grigor. A more im- portant analogy may be traced between the epi- demic yellow fever and the genuine typhus fever of this country ; and there can be no doubt that the former bears the same relation to the endemic fever of the West Indies, that typhus does to the common synochus of Europe. It is pro- bably called therefore the typhus icterodes. The cause of the yellow color of the skin in this fever has been made a subject of enquiry. By some it has been attributed to disordered func- tion of the liver, by others to bile absorbed from the intestinal canal, without hepatic derange- ment. Sir Gilbert Blane has thrown out the idea that it may be owing rather to a depraved state of the red globules of the blood. In- whatever way this question may be decided, it is perfectly clear that the state of the biliary organs has very little to

do with giving a cha- racter to this formidable disease, which is to be viewed as one of the most aggravated forms of continued fevers. In respect to mortality, the yellow fever may even take precedence of the plague. At Gibraltar, in 1804, the disease raged among the inhabitants uninfluenced by any distinctions of age, sex, or condition. The deaths amounted to somewhat more than one in three, a proportion, according to Sir Gilbert Blane, considerably above the devastation of the pestilence of the Levant.

The treatment of the epidemic yellow fever is a point which has attracted great attention from all classes of enquirers ; but their observations tend only to show that it is a disease of so sin- gularly malignant a nature, as, in a large pro- portion of cases, to bid defiance to all the efforts of art. This is particularly the case when the disease first makes its appearance in any town or district. The peculiar combination of cir- cumstances, whether in respect to local situation, or of the state of the atmosphere, or of the constitution of the inhabitants which gives the peculiar feature of malignity to the symptoms of the disease, operates also against the prac- titioner, and deprives him of all his most powerful means of combating fever. The severe head ache, which characterises the early stages of the disease, naturally suggested blood-letting as a probable means of relief, but experience has proved that, though occasionally, it is not gene- rally beneficial. The blood, when drawn, sepa- rates very imperfectly ; upon exposure to air it does not acquire its usual florid color, and scarcely ever exhibits a buffy appearance. The great object which it is found necessary to keep in view, in the treatment of the disease, is the allaying that excessive irritability of the stomach which leads to the black vomit. Calomel given at first in a smart dose so as to operate freely as a purgative, and repeated in smaller doses at intervals of three or four hours, so as to keep up this effect, was the most approved practice among the English practitioners at Gibraltar in 1813. Along with calomel were occasionally united aloes and gamboge. In the exibition of these medicines no time was to be lost, for it was only by their speedy and full effect that the

prevention or relief of the vomiting could be insured. Pediluvia and tepid sponging were found to be beneficial. Under certain circum- stances the warm bath even was administered with good effect. Cold applications to the fore- head and hands occasionally served to relieve the urgent head-ache. When the powers of life appeared to fail, it is unnecessary to say that stimulants and cordials were had recourse to ; subacid drinks were given, and a strict antiphlo- gistic regimen

pursued throughout the whole dis- ease. The same rigid attention to diet and regimen were required during the period of convalescence.

I have stated that among the points in dispute regarding the yellow fever, is the question of the identity of the epidemic yellow, or Bulam fever, with the endemic fever of the West Indies. Upon this question an opinion has already been given. The other topics of controversy are, first, whether the disease be always imported, or whe- ther it can ever be generated by a combination of common or endemic causes ; secondly, whe- ther, being once received into a town, it propa- gates itself by contagion ; and, thirdly, whether those who have passed through the disease are susceptible of it a second time. These are all important questions, the replies to which are not so obvious as to that which has already been under discussion, and they involve the most dif- ficult part of the controversy.

The first question is undoubtedly one which should be answered with some caution. Many circumstances connected with the early appear- ance of the epidemic yellow fever at Phila- delphia in 1793, and at Gibraltar in 1804, strongly favor the idea of its having been in those situations an imported disease. Several other facts, however, might be adduced which militate against the universality of this doctrine; and there appears nothing inconsistent in allowing that, under peculiar circumstances, the genuine malignant yellow fever may be engendered by a combination of endemic causes. With regard to the second question, no reasonable doubt can surely be entertained by any candid, intelligent, unbiassed man, that this disease, being once re- ceived into a town, is contagious. The evidence in favor of this opinion is certainly as strong as for that of the contagion of typhus or of plague. Whether the yellow fever bears the greater ana- logy to the former or the latter of these diseases may indeed be disputed. We may hesitate, that is to say, whether the contagion of yellow fever be common or specific ; but that the disease is pro- pagated by contagion of some kind cannot be questioned, after the ample experience which has been had, both in America and Europe. If any doubts could have been entertained while the disease occured only in the West Indies, in con- sequence of the resemblance of the epidemic to the endemic fever of those islands, they must have yielded to the obvious arguments suggested by its appearance in Cadiz and Gibraltar. The contagious nature of the disease, it may be re- marked, is a perfectly distinct question from that of its foreign or endemic origin.

Some of the laws of contagion of yellow fever appear to be ascertained with tolerable accuracy. Its latent period varies from two to eight days.

Ten days are, I believe, the longest period re- corded of yellow fever appearing after the ex- posure to the contagion, and removal to a freely ventilated atmosphere. The contagion of yellow fever has a peculiar range of atmospheric tem- perature, but on a higher scale than that of the plague. It has never been known but in those countries and at those seasons, when tropical heats, that is, of eighty degrees of Fahrenheit, or upwards, prevail. It never fails to disappear as the winter approaches. It is certainly a singu- lar circumstance in the history of the yellow fever that it has never been seen, except in one instance, but on the shores of the Atlantic Ocean.

The last circumstance which it is of impor- tance to notice, in the history of the yellow fever and the laws of its contagion, is the question whether it can be taken a second time. The answer is a very short one. Although a few well-attested instances to the contrary have been recorded, still a most extensive experience has satisfactorily proved that the immunity from second attacks is nearly complete, and that it forms one of the most striking characteristics of this remarkable disease;

Hectic fever. — This is the last species in Cul- len's order of febres ; but it is introduced impro- perly, as it varies much from all other kinds of idiopathic fever in being without that symptom which is so remarkably characteristic of the febrile condition, depression of animal power ; for it is observable that from the first the subject of hectic fever has for the most part an alertness and springiness of feeling which is often, indeed, mournfully in contrast with the wearing and wasting character of the disease. Hectic also is for the most part decisively the product of topi- cal affection, which presents another inconsis- tency in the classification, inasmuch as Cullen's theory supposes genuine fever to be a general, not a local, disorder.

Symptoms of hectic fever. — This is essentially a remitting fever, having its remissions and exa- cerbations fairly marked; these occur twice in the day for the most part, the first about noon the other about six o'clock in the afternoon; and which last exacerbation is certainly the most considerable. Hectic fever is prominently marked by a circumscribed red spot on the cheek alternat- ing with paleness. The tongue is clear and red, and, as we have above observed, the animal powers are, comparatively with other febrile states, free from oppression. The brain does not appear to be affected in hectic. The appe- tate is not necessarily impaired as in other kinds of fever. Thirst is not so urgent. Emaciation is for the most part extreme, and towards the last a diarrhoea almost invariably takes place. But the great characteristic symptom of this malady, or rather of this index of other

malady, is the colliquative sweating which takes place in the night and continues till the morning ; so that the patient, when he is about to rise, finds him- self bathed in perspiration, which perspiration for the most part is principally conspicuous about the head and neck, and breast and shoulders, or at any rate it is not diffused over the whole body so geneialiy as the sweat which terminates the paroxysms of other fevers.

MEDICINE,

Such are the characters of hectic when fully marked, and when attendant upon some wasting process of disorganisation that is going on in the system, especially an ulceration of the lungs. When, however, in the course of mentioning other maladies, we state that hectic is an accom- paniment, it must not be supposed always that we speak of the symptom in this unequivocal and extreme manner. In the preliminary remarks on the nosology it will be seen that we consider hectic to be a mode of disordered manifestation very common to scrofulous or lymphatic ail- ments, and occasionally, when the constitutional tendency has this verging, if we may so say, more or less of hectic irritation will easily be in- duced by any circumstance which excites morbid irritation in the frame.

With respect to the treatment of hectic nothing requires to be said in this place, since its management is the management of the disease upon which it depends. Indeed, as decidedly a symptomatic disorder, and as widely different from all other disorders to which the term fever has been appropriated, we only introduce it here in conformity with the nosological arrangement we have adopted. We shall have again to al- lude to it especially under the head of pulmonary consumption.

344. Order 2. INFLAMMATION. For some re- marks on the general pathology of the inflam- matory state we refer to our introductory proem, and the farther consideration of this state will be found in the article SURGERY. It is only for us, in the present instance, to delineate the ge- neral symptoms of inflammation, mark its diag- nosis from other diseases, and give an outline of the principles which should regulate its treat- ment. We shall then be prepared to go through the several maladies contained in the order.

Symptoms of inflammation. — It will be seen, by turning to the nosology, that topical pain with synochal fever, lesion of function, and the blood exhibiting upon being drawn the inflammatory crust, are considered by Cullen as the main characteristics of the state now to be

commented on. But there is an incorrectness in these assumptions ; for the local disorder shall some- times, as in the instance of what is called passive inflammation, be accompanied with a sympathe- tic fever, which has not a synochal aspect ; and the buffed blood is sometimes present when no in- flammation exists, while it is occasionally absent under the presence of inflammation. We may remark by the way, and before we proceed in the delineation of symptoms, that buffy crusts on the surface of blood should be always recognised with some reserve as an index of the inflamed state ; for, as Mr. Thachrah very properly re- marks, in his excellent treatise, it is sometimes rather the indication of very different circum- stances from those of excitement. There is a good deal of difficulty connected with the theory of buff on blood, but one particular connected with its rationale is pretty clearly made out, and that is, that the slowness with which the separa- tion takes place of the constituents of blood in some measure regulates the quantity of buff. Now this separation is effected more or less tar- dily as the components of the mass are more or

less intimately combined ; and when the blood is in a condition of more than common thinness, as is the case under several circumstances of extreme debility and lowness of vital power, the tardi- ness of the coagulation will cause the appear- ance on the surface of buff, which is then any thing but a token of inflammation. We merely mention this particular by way of caution against hasty and unqualified inference, and not at all with a view to invalidate the criterion now under remark ; for certain it is that, cseteris paribus, buff on blood must be considered as proof of the presence of inflammatory excitement.

Pain, heat, hardness and quickness of pulse, with external redness and swelling, if the parts implicated are so superficial as to be obvious to the senses, are noted down by authors as> indices of inflammation. The first symptom, pain, would not seem of difficult explanation, when we recollect the distension of the parts engaged with inflammation : but, besides the mechanical source of pain, if it may be so expressed, there is an increased sensibility referrible to the aug- mented excitement, and connected with the laws of vital influence. Pain, moreover, often exists without inflammation, so that its kind rather than measure is to be taken as the characteristic symptom — it is what is called lancinating and acute in the first stages, and afterwards throbbing or pulsatory. It is also increased by pressure, should the organ affected be so situated as to be within the reach of pressure ; whereas pains arising from other sources are oftentimes mitigated by pressure.

Heat is a symptom of inflammation, but not per- haps necessarily or characteristically so ; when it takes place it is in superficial parts, or in parts at a distance from the centre and source of circulation, and it is, tike the pain itself, partly referrible to increased nervous excitement, and partly to be attributed to the more than ordinary quantity of blood rushing through the vessels that are impli- cated in the disorder.

Increased redness is the necessary consequence of inflammatory condition; for where more blood is flowing through vessels than they ordi- narily convey, and when moreover new vessels shoot out which are immediately supplied with their appropriate fluid, more than common red- ness must be the result.

Swelling too, or increased bulk, naturally and necessarily grows out of the inflammation, since the distended and newly formed vessels must by occupying space increase bulk ; unless where the structure of the part is resisting and not loose, in which case no swelling will be perceptible.

In respect to quickness of pulse, this almost of course ensues from the systematic excitement which the local irritation causes ; and with quick- ness there is for the most part a hardness or wiry feel in the pulse, as if there was a resistance to the velocity and perturbation excited through the mass of circulating blood.

The above are the symptoms of the first stage of inflammation. When the second or suppurative stage is about to commence the lancinating and tight kind of pain becorn'es changed to a sensation as if of throbbing or beating; a feeling also of fulness takes the place of tightness; the pulse

from being hard and wiry becomes softer and fuller, and when pus is formed to any extent we •ave almost always the occurrence of rigors.

The third or gangrenous stage is denoted by the sudden cessation rather than change of pain, while the pulse instead of becoming full as in suppuration acquires a very great rapidity, and occasionally becomes irregular ; the patient although he may express himself relieved, and fancy that all is going on well, soon loses the na- tural fulness of feature and ordinary expression of countenance, and also feels incapable of muscu- lar exertion ; in a short time becomes wandering and delirious, hiccough supervenes, cold sweats break out,

and death soon closes the scene. Many are the instances in which from an individual expressing himself relieved and improved, he has become a corpse in less than forty-eight hours ; and the medical practitioner ought always to be aware of pronouncing his patient better merely from the subsidence of the pain, while the pulse, instead of coming down to the standard of health, increases in celerity. Rigors then, let it be repeated, are the leading features of suppuration ; subsidence of pain with rapidity of pulse marks the commencement of gangrene.

It may be remarked, before we terminate this outline of inflammatory symptoms, that the dis- order sometimes instead of tending to suppuration terminates by effusion, as indeed we before slightly intimated when speaking of inflammation in our introductory section ; when that is the case rigors do not follow the subsidence of the irritative state, but an approach to hectic manifestation takes place of the primary excitement; when the effusion is of serum one species of dropsy is formed, as we likewise have already noticed, and when it is coagulable lymph that is thrown out adhesions are effected often between parts that were originally in a state merely of .contiguity, and a new kind of impediment to function is produced. Thus in the first stages of inflamma- tion of the pleura we have tightness of breathing occasioned by the inflamed state of the mem- brane, and afterwards we have difficulty in the respiratory process from the two layers of the pleura being glued as it were together, or being attached to the parietes of the chest on the one side, or the surface of the lungs on the other, in the same adhesive or organic manner.

Of the kinds of inflammation. — Phlegmon and erythema, are, it will be seen, the two species marked in the nosology. A phlegmon may be described as an inflammation of a bright red co- lor, of a regularly circumscribed extent, and marked by a general disposition to the suppura- tive process. An erythema is characterised by a less deep color, by being more superficial and spreading than circumscribed and deep, and by manifesting a tendency first to serous effusion and next to gangrene, rather than showing a dis- position to suppurate. Boils are phlegmons, as are the pustules in what are called distinct small-pox. Scarlet fever, measles, and the confluent small-pox, more especially the first of these ma- ladies, are rather instances of erythematic than phletˆmonous inflammation. Phlegmons are not confined to membranous expansions, but are, as above intimated, found to penetrate muscular or

fleshy substance, while erythema is rather a dis- order of membranes.

Inflammation, however, it should be remarked, is not only modified by the constitutional tnergy of the individual, and the texture which it im- plicates, but it has a dependence further upon the nature of its exciting source. Thus the in- flammation of rheumatism is different from or- dinary inflammation, though the habit of the suf- ferer be the same in either case, and even though the texture implicated be the same; thus the erythema of scarlet fever and that of erysipelas are in one respect alike, in another dissimilar; again scrofulous and venereal inflammation dif- fer from common inflammation in several parti- culars as in other places will be duly noticed, so that, in considering both the symptomatology and the rationale of the inflamed state, varieties from exciting sources and constitutional predisposi- tion must always be taken into the account.

On these sources of inflammation, we may extract the following statements from Dr. Gre- gory.

1. Mechanical and chemical irritants. The phrenitis of infants has been traced to the irrita- tion of teething, gastritis to poison, interitis to the presence of hardened faces ; nephritis to cal- culus in the bladder ; ophthalmia to dust and sand ; erysipelas to leech bites, or the distension of the skin from dropsy.

2. Cold is the most important of all the excit- ing causes of internal inflammation. There is scarcely a form of it that does not occasionally owe its origin to cold, and many inflammatory affections, as rheumatism and pleurisy, have no other cause of the smallest practical importance. The period of time that elapses between the ap- plication of cold and the occurrence of inflam- matory symptoms is subject to great variety. In the case of sore throat, it often follows in the course of a few hours. In that of acute rheuma- tism a week or even a fortnight has been known to elapse. In what manner cold operates as the cause of internal inflammation has been a constant subject of enquiry with all pathological writers, but it is still involved in great obscurity.

” 3. Some forms of inflammation, which to a superficial observer might appear to arise with- out any assignable cause, have their origin in a peculiar state of body, the nature of which is not always understood, but which the older physici ans supposed to consist in some morbid state of the fluids of the body. This piece of pathology is exemplified in the phenomena of gout ; to the inflammation of absorbent glands occurring in scrofulous children, on the approach of win- ter ; and in the pustular eruptions to which young persons are subject about the age of pu- berty. The presence of fever

unquestionably leads to local inflammation, and hence it is that, in the progress of typhus, thoracic or abdominal inflammations so frequently supervene.

4. The presence of a morbid poison in the system is a frequent occasion of internal inflam- mation. This principle is amply illustrated in the phenomena of the plague, small-pox, measles, and other exanthemata. It is equally exempli- fied in those of secondary syphilis, where the in- flammation of the fauces, or of the iris, or of the

joints, is obviously attributable to the presence of a morbid poison. Closely allied to this, in a pathological view, is the important, but well ascertained fact of the origin of many inflamma- tory affections from contagion. There is a spe- cies of contagious catarrh. Two species of cynanche are contagious. There is a contagious form of ophthalmia. Erysipelas is contagious un- der certain circumstances ; so in all probability is dysentery. There is reason to suspect that one of the forms of peritoneal inflammation is occa- sionally propagated in the same way.

5. The last cause of internal inflammation which it will be necessary to notice in this gene- ral view of the subject is metastasis, or the trans- lation of inflammation from one organ or structure to another. This is a very curious point in pa- thology, sufficiently established indeed, as a mat- of fact, but the reasonings concerning which are hitherto very obscure and imperfect. It is ex- emplified in the ophthalmia which succeeds go- norrhea ; in the inflammation of the testicle which succeeds the mumps, in the inflammation of the pericardium which succeeds rheumatism. In what manner the metastasis is effected has never yet been developed. It appears, however, that to sympathy from similarity of structure, something may be referred ; for in almost all cases of metastasis it will be found that the structures primarily and secondarily affected have an affinity to each other.

In the treatment of inflammation it will be of course right to consider the exciting cause, the period of the disease at which we are called upon to attempt our remedial measures, the de- gree of force by which the inflammation is cha- racterised, and the structure and habits of the part inflamed.

In acute, or active, or as it has been called sthenic inflammation, the immediate indication is of course to lessen the action of the vessels, and diminish the quantity of blood flowing through them ; and to effect this purpose veneesection, purging, refrigerants, sudorifics, emetics, and counter-irritants are had recourse to. Some have said that fhe three indications, which the treat- ment of the most sthenic inflammation involves, are to reduce action, to promote absorption, and to restore tone. In a MS. course of lectures which is now lying before us we find the follow- ing statements of opinion in reference to these indications. ‘ I would again call to your attention the principle previously inculcated, that while the most passive or atonic kind of inflammation supposes commotion and inordinate irritation, which we are called upon to subdue, on the other hand the most sthenic or tonic, if it may be so called, implies vascular debility. How, I would ask, is it possible for more blood to be forced through vessels than nature ordained them to con- vey, without such admission and transmission, bfinˆ occasioned by a deprivation of tonic or resist- in;; power to vis a tergo impulse ; it may have been induced by that impulse, I grant, and have already indeed stated that it is so, but still the weakness is present, and part of the curative means should have regard to its presence. ˆ hen then I place blood-letting, as it ought to be placed, at the front of remedial measures for

the subduction of the inflammatory state, I would say that in thus necessarily withdrawing the vis a tergo impulse, we must be careful that we do not too much add to the weakness of the capillary vessels, which constitutes one of the links in the chain of the inflammatory state.’ ‘ Again,’ the lecturer goes on to say, ‘ it will be had in recollection, that I have intimated the impossi- bility of simple reduction of an inflamed condition of parts. The change which inflammation creates implies a degree of disorganisation ; there is the production of new fibre and new vessel, and there is effusion either of lymph or of serum, so that the process of cure when in the most imme- diate and simple way implies some degree of ab- sorption ; and if we carry our weakening measures too far we may be likely rather to facilitate and encourage the tendency in some species of inflam- mation to effusion. Carrying these principles out to too great a length, some practitioners have pro- scribed blood-letting altogether, and Dr. Maclean has published a volume full of cases, in which inflammation was successfully treated by calomel and opium, omitting altogether the use of the lancet ; but this appears a dangerous extreme on the other side, and there are many cases in which it would seem next to madness to attempt the cure of the disorder without even very consider- able venaesection.’ Thus far the lecturer, who, it will be

seen, argues on the assumption of inflam- mation being constituted of weakness of vessel as well as of inordinate excitement ; and, although we may not subscribe to his theory, or comply altogether with his practical principia, we may at any rate take from him the hint that the powers of the system, as well as the force of the disorder, ought to be taken into our calculation, when we are using the lancet to subdue inflammation.

It is a most important observation of Dr. Gre- gory that to a certain degree the part inflamed affects the treatment. ‘ Inflammation of a serous membrane,’ says this very able writer, ‘ demands the copious and rapid abstraction of blood. That of mucous membranes does not bear the same extent of evacuation, nor does it so often require it. Erysipelatous inflammation is often succes- fully treated by bark and acids. Rheumatic in- flammation is often under the control of certain drugs which have no effect upon, or which prove absolutely prejudicial in, common inflammation, I mean colchicum and opium.’ In the latter clauses of this paragraph Dr. G. alludes, how- ever, rather to the kind of disorder than to its locality ; and besides the remarks go beyond the question of blood-letting, but they are altogether so important, and so deserving of practical re- cognition, that we could not resist the temptation of transcribing the whole.

Immediately upon an impression being made upon the system by large blood-lettings, in some cases of internal inflammation, Dr. Armstrong and others have recently recommended the prac- tice of administering pretty considerable quantities of opium, such as three grains of the powder; and Dr. Uwins, in his recent treatise on affections con- nected with indigestion, proposes to explain tne good resulting from this practice in the following way. It would seem that opium exerts a parti- cular effect upon the small capillary system of

vessels which is proved by the tendency it has to lock up secretions. This effect is contractile, and we may then suppose that the medicine by con- tracting or lessening the diameter of the capilla- ries may prove preventive of that rush of blood again into them which is so apt to succeed to de- pletion of vessels. Whetherthis or any other prin- ciple be that upon which the good of opium after blood-letting actually depends, may.be a subject of dispute ; but, if more extended observation con- firms the rectitude of the practice, it will not be right to wait for settling the rationale, before we adopt the measure ; and,

so far as our observa- tion has gone; we are inclined to think very highly of it.

Purging is another important principle in the treatment of inflammation. By producing ca- tharsis, we certainly accomplish a two-fold object, we call the action of the vessels away from the part affected, and diminish the irritative fever which has been set up by the local disorder. Some kinds of purgatives indeed as in the in- stance of elaterium by occasioning a general nausea, effect a sort of collapse over the whole frame, or to make use of a terminology that does not imply hypothesis, cause such a general impres- sion upon the system as to abate the force of the disorder. In some cases it is desirable to accom- plish this effect without expenditure of blood ; and, when these cases occur, the medicine just named may be occasionally employed with happy effects. How far purging is requisite and admissible in inflammation of the bowels will afterwards be matter of enquiry.

Sudorifics are employed as anti-inflammatory measures with occasional good effect, by throw- ing the actions and the fluids of the system out upon the surface : these medicines, as mentioned under the head of fever, abate inordinate heat, divert the current of blood from the affected organs, and tend generally to equalise the circu- lation. Some medicines in the class of sudorifics, when employed in rather large doses, excite an •emetic or a nauseating effect, and when they do so their modus agendi may be partly similar to the sort of purgation to which we have above re- ferred.

Another mode of abating inflammatory action consists in the administration of those medicinals which, under the supposition of their possessing the faculty of reducing inordinate irritation, in an immediate or direct manner, have been termed sedatives ; the term is however vague, or at any rate it is only expressive of an effect, and does not convey any precise notion of agency. Foxglove and the hydrocyanic acid may be instanced as two of the most conspicuous medicinals of this class.

Counter-irritation is the last means here to be noticed of remedying inflammation. It is a law of the system, that one irritation tends to modify and often to mitigate another, and it is partly in conformity with this law that epispastics and ru- befacients are made use of as anti-inflammatory measures. Blisters to the back of the neck will often relieve an inflammation of the tonsil glands, and so forth. It is in the general way expedient that the high excitement conrrecting itself with the first stage of active inflammation be in some

measure subdued before these counter-irritants are resorted to ; otherwise by introducing a new excitant to the already morbidly excited frame, we may increase the evil that we wish to subdue. It is for example but seldom, unless in cases of long continued or chronic inflammation as it is termed, that blisters are applied with propriety before the use of the lancet.

On the subject of chronic inflammation we shall take the liberty of extracting the following remarks from Dr. Gregory, premising that the condition of vascular disorder, which this term is meant to denote, is somewhat obscure; indeed, when it is considered how very shortly inflam- matory action produces disorganisation — occca- sions the formation of new vessels — the effusion of coagulable lymph, and the consequent change of structural circumstance in the parts implicated, we cannot well imagine the presence of the disordered state, during any length of time, without the consequences now referred to ; still there is, at times, a species of vascular irritation of a passive and chronic nature, which demands to be recognised, whatever terminology we may apply to the state. Dr. Baron, in a recent work of much ingenuity, has objected to the generally received principles of chronic inflammation, and has suggested whether the lymphatic system may not have much more to do than the blood-vessels in effecting those structural alterations which are usually referred to inflammatory action of a con- tinued kind, whether of a common or specific character. Some of the continental pathologists have in part conjectured, and endeavoured to establish, the same principle of action ; and have pointed out the lymphatic, and the sanguiferous capillaries, as the chief seats of those irritative actions which are usually designated chronic in- flammation : the subject, however, is altogether somewhat obscure, and still open to farther re- search. In the article SURGERY we shall have more particularly to refer to this subject, and shall here limit our disquisition to the above mentioned extracts.

Chronic inflammation, says our author, occurs frequently, and in almost every variety of struc- ture ; in the lungs, where it lays the foundation of consumption ; in the brain, liver, spleen, and kidneys. All the serous and mucous membranes of the body are subject to it ; and, in many cases, it proves a most formidable affection, as in chronic dysentery, and catarrhus sinilis. The substance of muscle appears to be the seat of in- flammation in some forms of chronic rheumatism, the frequency of which disease shows that the fibrous membranes are in like manner affected. The skin is, of all textures, the least liable to chronic inflammations. This state of disease falls also within the observation of the surgeon. Gleet, inflammation of the

prostate gland, scro- fulous enlargements of absorbent glands, chronic ophthalmia and ozxna, or the chronic inflamma- tion and ulceration of the schneiderian mem- brane, may be taken as instances.

One of the circumstances most deserving o attention in the pathology of chronic inflamma- tions is, that it is sometimes a primary, and at other times a secondary, affection. By this lat- ter term it is intended to denote that it succeeds

acute inflammation ; and this is the most common form in which it appears. It is thus that it oc- curs in gleet and dysentery. But at other times it is not preceded by any symptoms of active in- flammation. It begins almost imperceptibly; and its advances are slow, often exceedingly in- sidious, being unaccompauied by any symptoms which could betray, even to the experienced practitioner, the existence of such a disease. No where is this better exemplified than in the case of some forms of peritonaeal inflammation ; but the same thing has been observed also in cases of chronic inflammation of the membranes of the brain, and even of the heart itself. In these instances not only are there wanting all local symptoms of inflammatory action, but there are not even any constitutional symptoms ; at least none of sufficient importance to attract attention. This, however, it must be confessed, is com- paratively a rare occurrence; and it is much more usual for chronic inflammation, both pri- mary and secondary, to exhibit local and consti- tutional symptoms ; less in degree, but the same in kind, with those which accompany acute in- flammation.

The local symptoms produced by chronic in- flammation vary of course with the part affected. Sometimes, as in chronic laryngitis, there are local symptoms, but no affection of the constitution. When the general system is implicated, the symp- toms are usually those of fever. The pulse is quickened ; there is a white tongue, thirst, and some degree of restlessness. Occasionally, how- ever, in a state of chronic inflammation, the tongue is clean, there is no thirst, but the pulse is feeble and languid, the extremities are cold, and the slightest exertion occasions fatigue, gene- rally uneasiness and pain across the loins. All these symptoms mark a state, not of fever, but of atony and debility. The term asthenia has been applied with much propriety, by some patholo- gists, to express this state of the general system. Many of the protracted cases of bronchial inflam- mation, particularly those which occur in old people, exhibit, in the greatest perfection, the

characters of asthenic inflammation.

The causes of primary chronic inflammation are involved in much obscurity. There is reason to suspect that cold has sometimes induced it ; or mechanical irritation, as in the case of chronic inflammation of the brain, from spiculae of bone ; but it is seldom that we can attribute the disease to so obvious a cause. A scrofulous habit of body appears to favor the disposition to chronic inflammation ; but it often occurs where it would be mere hypothesis to attribute it even to that obscure source. What the particular state of body may be which leads to the affection, in such cases, is in all probability inexplicable.

The nature of that action or vessels in which chronic inflammation consists has been lonw an object of research. By some it has been defined to be that state of increased action of vessels, which is neither so far subdued as to tend to resolution, nor so violent as to form abscess; mil this goes only a little way in explaining the difficulty. From the appearance of the eye in some cases of chronic ophthalmia, and from the eiiects of the juvantia and ledantia in this and

many other instances of chronic inflammation, it would seem probable that a relaxation of vessels prevails, rather than any increase of their action. It must be confessed, however, that this object of enquiry is obscure; and perhaps the truth, if it could be ascertained, would be found of no prac- tical application. (Dr. G. here refers to the pa- thology of the French, and its similarity with the speculations of Dr. Baron.)

The effects, he continues, of chronic inflamma- tion, or more correctly the local appearances presented during the state of chronic inflamma- tion, vary with the texture of the part affected. A simple thickening of structure is a common appearance, both in serous and mucous mem- branes. Sometimes the thickening assumes the form which has been called tuberculated accre- tion. In serous membranes it leads to the ex- tensive union of surfaces. Schirrus is generally accounted the effect of chronic inflammation in a glandular organ.

The origin of tumors in different structures is a subject that has excited much attention among pathologists. In many cases it is pre- sumed that their growth is referrible to the same action of vessels by which all parts of the body are formed ; but in other cases there is reason to believe that they may have had their origin in a state of chronic inflammation of vessels. Closely allied to tumors are tubercles; but the views which are entertained by pathologists of the ori- gin and progress of tubercle will come better under discussion hereafter, when

treating of pul- monary consumption.

The last effect of chronic inflammation which I shall notice is suppuration ; and it is one of those which we have most frequent occasion to witness in practice. The fact of the formation of purulent matter in cysts and other structures, without any evidence of previous inflammation, was well known to John Hunter, who had par- ticular views of his own regarding it. But they are unsatisfactory, and, until further light is thrown upon the subject, it may not be improper to consider these collections of matter as the re- sult of chronic inflammation.

To some, the subjects which have now been discussed may appear too indefinite and obscure to be legitimate objects of investigation, par- ticularly in an elementary work. To this I would reply in the energetic language of Bichat ‘ that, in explaining the animal economy, it is doing much to indicate analogies ; to show the uni- formity of an unknown phenomenon with another about which all the world are agreed. In every branch of science,’ adds this author, ‘ it would be well if the principle were thoroughly appre- ciated, that nature, greedy of her means, is pro- digal of results ; that a small number of causes every where preside over a multitude of effects, and the greater part of those about which we are doubtful are referrible to the same principle with others which appear to us evident.’

The treatment of chronic inflammation is very little understood. It is often said that parts which have been much weakened, especially by large bleedings during the acute stage, are liable to fall afterwards into the state of chronic inflam- mation. We believe, however, that the remark is

not of general application; and that this form of the disease is oftener attributable to a neglect of those vigorous measures which would have cut short the acute state of inflammation at its commencement. Chronic inflammation is almost as much out of the control of medicine as acute inflammation is under it. Nature sometimes works a cure ; but in many cases, more particularly of primary chronic inflammation, the prognosis is very unfavorable.

The general system of treatment must depend upon the state of the constitution. Four plans of treatment have been advised, and each has

been found serviceable under different circum- stances.

1. Where fever is present, blood-letting, purg- ing, and saline medicines, with a low diet, are to be recommended.

2. Where the pulse is feeble, and there is a decided loss of tone in the system, myrrh, ben- zoin, the balsam of copaiba, steel, and bark, are unquestionably useful.

3. Where the disease is purely local it is best treated by leeches, blisters, and issues, upon the principle of counter irritation.

4. Where these means fail an alterative plan of treatment may be resorted to. This is done under the idea of giving a new action to the ves- sels. Upon this principle mercury is employed in the treatment of chronic hepatitis, alkalies in the scrofulous inflammation of absorbent glands, and sarsaparilla and guaiacum in chronic rheu- matism.

We are now called upon to follow the nosolo- gical order of inflammatory affections, and the first which falls before us for notice is,

345. Ophthalmia, or inflammation of the eye. The species of the genus are, it will be seen, ophthalmia membranosa, inflammation of the membranes of the organ ; and ophthalmia tarsi, inflammation of the eye-lids.

The eye is a complicated organ, and therefore subject to a variety and complication of ail- ment, and Dr. Cullen's divisions are by far too general and superficial; most, however, of the minute circumstances and incidents attendant upon ophthalmic irritation will come to be con- sidered under the head of SURGERY, and we shall here limit ourselves to a very cursory notice of the inflammatory disorders which occasionally attack the organ of vision.

The principal points of attack are the tunica conjunctiva, the sclerotica, the iris, and the tar- sal glands. Pain, inordinate sensibility to the light, a feeling as if something gritty had made its lodgment in the eye, redness in the parts which are usually colorless, »nd an increased flow of tears, are the prominent symptoms of conjunctival inflammation. When the disorder is very severe, head-ache, and often of an excru- tiating kind, accompanies the inflammation ; the intolerance of light is extreme, and the inflamed conjunctiva extends to the lids, occasions them to swell, and to pour out a purulent secretion which glues the edges of the lids together; and then the purulent ophthalmia of authors comes to be formed, which, if suffered

to run on without interruption, tends to a disorganisation of one or

other of the structures of the organ, one of the most common and direct of which is the inflam- mation extending over the cornea, and, by thicken- ing its coats, destroying its transparency, and of course in the degree of the opacity produced does vision become defective; sometimes, in place of chronic thickening and opacity, actual and open ulceration is formed in the cornea. The iris sometimes partakes of the disordered action, arid adhesions are hence formed with the capsule of the lens, or with the posterior layer of the cornea, and more or less of blindness is thus induced. In weak and scrofulous habits ‘ the acute state of ophthalmia, instead either of completely yielding or terminating by one or other of these disorganising processes, passes into an indolent or chronic state of conjunctival inflammation, and continues for some time in a very obstinate way, refusing to yield to ordinary treatment.

The causes of ophthalmia are those which either operate upon the organ itself immediately or from without, or those which act sympathetically or intermediately; these are frequently combined in their operation, that is, the external irritants which produce the disease would not sometimes prove of sufficient force, were they not assisted in their influence by the condition of the general system. A pecular poison sometimes seems to engender ophthalmia, as was the case with the Egyptian army ; a poison which seems to affect both endemically and epidemically; thus it ap- pears to result from the combined influence of heat and moisture and floating particles of sand in the atmosphere acting in combination with the predisposing circumstances of fatigue and bad living, and having once affected becomes communicable from one individual to another ; there does not appear to beany room for doubting that disordered states of the eyes were commu- nicated from our soldiers who returned from Egypt ophthalmically affected, to many of the in- habitants even of this country; in which, of course, the endemic circumstances which had to do in the formation of the disease originally could not have operated.

The ordinary external irritants are changes of temperature, exposure to a brisk and keen wind ; blows, and other mechanical or chemical irritants. The internal sources of the disorder are generally deranged states of the digestive organs, produced by intemperance, or occurring more spontaneously, and the presence of some morbid poison as of small pox ; translated poison, also, or metastatic action, is to be put down as one of the sources of ophthalmia, manifested in the curious instance of the gonorrhaeal discharge ceasing or becoming repelled from its common locality, the urethra, and affecting the eye; in this

case the purulent ophthalmia becomes formed, and, although it is not the same matter which is engendered by the new disease with that which has ceased to flow from the urethra, the subsi- dence of one disorder and the immediate com- mencement of the other are curious facts in pathology. It has been found that the matter of gonorrhoea, when the disorder is very active and the discharge acrimonious, if applied to the eye will sometimes excite ‘•«flammation : and i« has

heen supposed that in the instances of ophthal- mia after gonorrhoea some accidental application of this kind had taken place ; but there does not seem evidence sufficient to establish this pre- sumption, and the vicarious manner in which the eye affection occurs is inconsistent with the hypothesis.

The kind of disease to which Dr. Cullen applied the term tarsal is of scrofulous origin, and is very commonly seen in children of a strumous habit. With tarsal inflammation, which extends to the glands and occasions a copious secretion of matter, which glues the lids together, you often see marks of membranous irritation, which in some cases indeed is very severe, ac- companied with an increased flow of tears and all the other symptoms and tendencies of mem- branous ophthalmia; so that the distinction is often an untenable one. Occasionally, however, a chronic, and indolent, and evidently a scrofu- lous, affection of the tarsi will be present for a length of time without being extended to the actual structure of the eye. There is scarcely a stronger indication of scrofulous diathesis than the condition of eye-lid to which we are now al- luding.

The venereal poison, when it affects the eye in a secondary way, most frequently attacks the iris. Iritis, however, will be most properly con- sidered in the article SURGERY, and so will that species of inflammatory irritation which has but of late years been duly recognised as one of the producing causes of amaurosis, which occurs frequently, as a consequence of the intemperate use of the eyes, and in which there is often im- patience of light and even an increased secretion of tears without any exterior redness of the organ.

In the treatment of ophthalmia depleting mea- sures will be called for, according to the degree of the disorder, and the condition of the constitu- tion. In violent cases general bleeding, and that copiously, is often demanded. In the milder cases local abstractions of blood, as by

leeches and cupping glasses, will be all that are re- quired. In all cases the state of the stomach and bowels must be carefully attended to ; for, as we have above intimated, the source of the disorder, or, to say the very least, the predispo- sition to it, is to be found in a deranged condi- tion of the whole system. Where we are fearful of large detractions of blood, nauseating doses of tartar emetic will be found serviceable in getting under the inflammatory diathesis and the local disorder ; and, after the bowels have been eva- cuated, the combination of calomel and opium, in the small doses of half a grain of each, re- peated three or four times in the day, will often prove exceedingly beneficial. The counter irri- tation of blisters is almost always desirable after the force of the inflammation may be a little subdued by blood-letting, or where the disorder has not assumed a very formidable aspect from the first ; and cold lotions, such as a scruple of the sugar of lead to half a pint of distilled water, will assist in the cure.

\Vhen inflammation of the eye has become chronic and indolent, tonics are often required together with topical applications of a more

astringent kind, such as the white vitriol (the sulphate of zinc), a scruple or half a drachm of which may be dissolved, for a lotion, in half a pint of water, or alum solutions, or aqueous or vinous solutions of opium, may be dropped into the eye. In these cases attention to visceral states is also absolutely necessary, as it is also in the strumous or tarsal affection to which we have above alluded, and for which the best local ap- plication is unquestionably the citrine ointment, the unguentum hydrargyri nitratis, with which the lid should be penciled every night, after the subject of the disorder has gone to rest, and closed the eyes; for, if used while the eye is open, it may stimulate the membranous part of the eye too much, and cause a painful irritation.

346, Phrenitis. — Inflammation of the brain. The acute or violent kind of phrenitis in an un- mixed form is not of very frequent occurrence, although inflammatory affections of the brain of a less decided character, and less formidable as- pect, are not by any means infrequent. Indeed disorders which go under other names, such as apoplexy, epilepsy, paralysis, and hydrocephalus, are often but certain modifications of brain in- flammation, and this inflammation is, as we have already seen, a very usual accompaniment of fever.

The following are the characterising symptoms of acute or idiopathic phrenitis. Acute pain, which often begins at the back or hinder part of the head, and at length extends over the whole of the head, flushed face, eyes red and promi- nent, intolerance of light and sound, the

carotid arteries appearing to beat with unnatural energy, furious delirium, the pulse for the most partvery quick and hard, and the tongue furred. When the symptoms are more insidious, and the disease is more symptomatic of other derange- ments, the symptoms for the most part are such as characterise a typhoid disposition.

Causes of phrenitis. — Exposure to the rays of a vertical sun, especially in the tropical cli- mates, will produce inflammation of the brain, at times in an immediate manner. This con- stitutes the insolation, or coup de soleil, of au- thors; violent passions of the mind, immoderate application to business or study, external vio- lence, as from blows or falls, repelled eruptions, extension or translations of external erysipelas upon the brain, inebriation, and a disordered state of the first passages or viscera ; which last sometimes merely predisposes to, at others actu- ally excites the complaint.

Distinctions. — Some persons have confounded phrenitis with mania, or at least have supposed that, where maniacal excitement manifests itself to a very considerable degree, there must neces- sarily be inflammation of the brain ; there ap- pears, however, to be considerable error in this opinion, and it is an error which may lead to false inference with respect to practice. Phre- nitis, we are told, may be distinguished from in- sanity by the former being necessarily attended with pyrexia, and by its being externally im- printed on the countenance in a way more indi- cative of vascular fulness. The pulse too is harder and more frequent than is ordinarily the case in mania. From the inflammation of fever

it is to be distinguished by its early manifesta- tion, or by its being synchronous with the general derangement, while the phrenitic symp- toms of fever present themselves after the dis- order has existed for some time. The powers too in phrenitis are not in that oppressed state that they are in fever.

There is a singular condition of brain, for the most part induced by along course of inebriation, which, although manifested by a certain kind of high excitation, is still different from phrenitis : the condition of the brain to which we now allude is named in the schools delirium tremens, from the circumstance that, while encephalic ex- citement is at a very high pitch, there is a trem- bling and powerless condition of the general system, differing on the one hand from the op- pression of fever, and on the other from the excitement of real or high inflammation. It ought always to be the aim of the medical prac- titioner to recognise these distinct conditions, both of the brain and general system, and not to confound all manifestations of cerebral irritation under the general notion of inflammation.

The student, it has been further remarked, must not expect to find every case of phrenitic disorder marked with unequivocal signs, nor is it very easy sometimes to distinguish the idiopa- thic from the sympathetic phrenitis ; the com- plaint, moreover, occasionally occurs in the most insidious manner, and if the difficulty of distin- guishing abstract or idiopathic phrenitis, from the phrenitis consequent upon fever, should em- bajrass the young practitioner, let him recollect that this difficulty is not peculiar to the inexpe- rienced ; indeed some, as we have already had occasion to intimate, maintain, that no such dis- tinction actually exists. There appears, however, to be one state of brain in fever, another in phrenitis, another in mania, and another in deli- rium tremens, although the lines of demarcation are not always to be traced : disordered condi- tions being often mixed and modified to an extent which defies systematic recognition.

Some practitioners have dwelt much on the variations of external symptoms, from the cir- cumstance of the membranes, or the substance of the brain, being in one case or another especi- ally implicated ; the membranous inflammation giving you marks of very high excitement, while the affection, falling upon the actual body or substance of the brain, presents features rather of a typhoid kind ; and there appears some foun- dation for this alleged^distinction, although, even in reference to this particular, we must not pre- sume too largely upon our power of determining interior conditions by external signs.

Prognosis. — We may expect phrenitis to termi- nate favorably if the symptoms are soon mitigated by the treatment. The occurrence of any sponta- neous discharge is a good indication ; such as warm and free perspiration ; natural and pretty copious diarrhoea; a considerable flow of urine, which shall soon throw down a considerable sediment ; bleeding at the nose is also a good aign, when the powers are not

much exhausted ; a return of consciousness and tranquillity is of course a favorable symptom.

If the pulse continue hard and rapid, and the VOL. XIV.

watchfulness and delirium do not subside, or if stupor succeed with dilated pupils, and subsul- tus tendinum occur, the prognosis will be unfa- vorable. Should the secretions and excretions continue to be small in quantity, or irregularly produced, and the faces wanting in their proper color and consistence, we shall have to judge unfavorably. A total suppression of urine is a mark of much danger, and in this, as in some other disorders, is often a prelude to death.

Treatment. — In the management of very high and unequivocal affections of the brain of an in- flamm atory k ind, it is often proper and necessary to draw blood very profusely ; and the disorder will refuse to yield till you are successful in making a very considerable impression upon the system. In other cases, of a less marked and idiopathic character, the taking of ten or twelve ounces of blood will prove a better practice than that of ad deliquium depletion. If the practitioner be dexterous at these operations, the opening of the temporal artery, or the jugular vein, will often prove more advantageous than the common mode of taking blood from the arm ; should this last be preferred, a large orifice ought to be made, and the quantity abstracted in a short space of time, especially in cases where we are desirous of producing faintness.

Elaterium, as a purgative, is often very useful in cerebral disorders, as it makes an impression on the system somewhat similar to large blood- lettings. In the course of the disease the saline purgatives, combined with diuretics, may be em- ployed. See under Fever.

The foxglove is a favorite remedy with some practitioners in doses of from fifteen to twenty minims, several times in the course of the day. ‘ I have given,’ says the late Dr. Currie, ‘ digi- talis in inflammation of the heart, and the lungs, and the brain, and have succeeded with it in cases where I should otherwise have despaired.’

After the vessels have been freely depleted, and the inflammatory symptoms somewhat sub- dued, let the diaphoretics that are given partake a little more of the stimulant character.

R Liquoris ammonia; acetatis f. 3iij- Ammonia; subcarbonatis gr. vj. Syrupi croci f. 3ij. Aquae purse f. 3>fl-

Fiat haustus.

Take of liquor of acetated ammonia tnree fluid drachms, subcarbonate of ammonia six grains, syrup of saffron two fluid drachms, water a fluid ounce and a half. Mix into a draught.

Let ten or twelve leeches be applied to the head, and after venaesection let a large blister be put upon the nape of the neck, or to the legs. Let the head be kept rather high ; if it can be done without producing much irritation, let the hair be all taken off with a razor, and to the na- ked scalp apply either cold iced water in bladders, or spirits and water, or an evaporating lotion composed of seven ounces of liquor of acetated ammonia and one ounce of sulphuric ether, or a drachm or two of muriate of ammonia with on ounce and a half of rectified spirit of wine ana six ounces and a half of water. Throughout the whole course of the complaint it will be found

of the utmost importance to keep the apartment in which the patient lies dark and cool, to forbid the intrusion of visitors, and to countermand all animal food excepting some broth, which may be sometimes serviceable, given under the col- lapse that has been produced by the necessary severity of the remedial processes.

In conclusion, says the author from whom we have extracted the last paragraph, I wish again to remark that phrenitis, or at least inflammatory disorder of the brain, will oftentimes present it- self under less characters of decision; will be mixed up with other complaints; and will prove the gradual result of erroneous or obstructed ac- tion in other and distant parts. In these cases the treatment will require to be assiduously di- rected to these primary and constitutional con- ditions. On the other hand it is to be recollected that these supposed primary are not seldom ac- tually secondary states, and that a bad condition of the encephalon will produce disordered vis- cera with as much or more readiness than disor- dered viscera will bring on brain affection.

In the treatment of delirium tremens opium is our sheet anchor; it is impossible to lay down any directions for its dose of undeviating appli- cation ; but two or three grains of the powder of opium, combined with some liquor of acetated ammonia, are often necessary. The bowels must at the same time be attended to, and some- times,

previously to the administration of a full dose of opium, it may be proper to abstract some blood notwithstanding the prevailing debility. The compound powder of ipecacuan is a good form of administering opium in many brain af- fections where we are desirous of allaying irrita- tion, but are fearful of opium by itself in sub- stance or tincture. The vegetable acids too are useful adjuncts of opium, when we have to ad- minister it in cerebral disorder. From six to ten grains of the citric acid dissolved in an ounce and a half of water, will form a good vehicle for small and repeated doses of tincture of opium, when these are required in phrenitic irritations.

347. Cynanchial disorders. — In the genus cy- nanche Dr. Cullen includes the cynanche tonsil- laris, or inflammatory sore throat ; the cynanche maligna, or malignant sore throat ; the cynanche trachealis, or croup ; cynanche pharyngea, or in- flammation of the pharynx ; and cynauche paro- tidea, or mumps ; each of which demands sepa- rate consideration.

348. Inflammatory sore throat is an affection of the mucous membrane lining the fauces, and especially of the tonsil glands, sometimes extend- ing down the pharynx, at others spreading about the lining membrane of the nose, and producing a suffocating sensation and difficult breathing ; but the inflammation and swelling of the tonsils are the main characteristics of the disorder now under notice, and this inflammation is sometimes so high, and the consequent tumefaction so great, as to impede deglutition, and even mate- rially to interfere with the respiratory process. NV hen the inflammation takes its course towards the orifice of the eustacliian tube a temporary deafness will be attendant upon quinsey. The fever which accompanies the local affection is either synochal or synochous, according to the

constitutional condition of the patient and the extent of topical disorder. There is generally a teazing and irritating increase of saliva in these affections, which is more observable and trouble- some on account of the difficulty of swallowing; the clieeks are often swollen, the eyes red, and the patient very irritable and distressed.

Causes. — Tliose of inflammation generally; and especially an exposure to sudden changes from heat to cold and from cold to heat. Its oc- currence is principally late in the winter, or early in the spring; it is exceedingly liable to recur from a slight exciting cause, the system having once been affected by it.

Distinctions. — The inflammatory quinsey is distinguishable from the

malignant sore throat by its being more of a phlegmonic than an erythe- matic inflammation, and by its tendency to full and complete suppuration rather than to the formation of small separate ulcers. The fever too is for the most part without those typhoid characters which denote the malignant species.

Prognosis. — The termination is usually fa- vorable, and within a few days of its occurrence. There have been instances of suffocation being produced by the enlargement of the glands dur- ing the suppurative process ; but this is an ex- ceedingly rare event, nature for the most part effecting the discharge, or if not the lancet may be plunged into the suppurating tumor, and thus the threatened occurrence averted. When the prognosis is to be unfavorable the disorder passes into the erysipetalous and malignant kind.

Treatment. — If the patient be of a full pletho- ric habit, and the inflammatory excitement con- siderable, venaesection should be had recourse to; but for the most part we should say it is not requisite. A scarification of the tonsils often gives considerable relief. Emetics may be admi- nistered at the onset, composed of half a grain of tartrate of antimony, and two or three drachms of wine of ipecacuan. When leeches are em- ployed, they are best placed two or three under the lobe of each ear. Saline diaphoretics and purgatives may be employed according to cir- cumstances (see under Fever) ; blisters put to the back of the neck, not to the throat; and, the in- flammation having been got a little under, the following gargle may be frequently used : —

R Acidi muriatici f. 3ft. Syrupi papaveris f. jij. Infusi rosae f. 3?j- Fiat gargarisma.

Take of muriatic acid half a fluid drachm, sy rup of white poppy two fluid ounces, infusion of roses six fluid ounces. Mix for a gargle.

Emollient poultices, made of bread and milk or linseed meal, may be applied to the sides of the neck for the purpose of assisting the suppu- rative process ; and the inhalation of warm water from Mudge's instrument (into which some tincture of opium is put — about an ounce of the tincture to half a pint of the water), may prove serviceable in allaying irritation.

Small doses of sulphate of quinin, or a draught or two in the day of decoction of bark, with ten or fifteen minims of the diluted sulphuric acid, may assist convalescence, especially when the

tonsil affection, instead of entirely subsiding, falls into a sort of indolent state.

The second species of the cynanche, the cy- nanche maligna of Cullen, will fall to be consi- dered under the head of scarlatina among the exanthemata.

349. Croup. — This disorder is characterised by a sonorous inspiration of a very peculiar kind ; it comes on sometimes suddenly, and at other times is preceded by common catarrhal irritation, which lasts for days ; when it is esta- blished the difficulty of breathing is very dis- tressing. The attendant cough is usually hard and dry at first, but afterwards a viscid matter is secreted, and the efforts to expectorate it threaten suffocation. The disorder sometimes terminates life in less than eight-and-forty hours from the attack ; at other times it runs on to the fourth or fifth day, and. may then terminate fatally. Croup is a disorder of childhood, generally oc- curring before the third year, but sometimes it takes place when the child is nine or ten years old. It is apt to recur.

There seems some difficulty in accounting for the disorder being confined to childhood ; but this is the fact; and it has been explained by some on the supposition of the mucous lining of the wind-pipe, which is the seat of the disorder, undergoing some change 6f susceptibility.

Death from croup is usually produced by the rapid formation of an adventitious membrane or tube of coagulable lymph, which in many cases extends down into the ramifications of the bron- chiae ; there is at the same time often a muco- purulent secretion which assists to plug up the passage and impede the breathing, and the spasm which the violence of the inflammation brings upon the muscles about the glottis often contributes to the fatal termination.

Causes. — Croup is produced by the common excitants of inflammation in children predis- posed to the disease, the predisposition consisting in a full habit with robust stamina, or in a parti- cular susceptibility about the respiratory organs. Teething seems often to excite croup. A disor- dered state of the stomach and bowels may excite the disorder, and very generally predisposes to it. Some peculiarity in the atmosphere at times tends to induce it, for it

occasionally proves en- demic and epidemic. It has, as we have intimated above, a tendency to return by habit. In some cases it would seem to be contagious.

Distinctions. — Croup is distinguished from other disorders of the wind-pipe and lungs by the peculiar stridulous breathing; it has intermis- sions and exacerbations like spasmodic asthma, but the intervals are not so free from disorder as in the latter case, and the attendant irritation is more decidedly febrile.

Prognosis. — Croup is proverbially a dange- rous disease. We may, however, expect a fa- vorable termination when the expectoration shortly becomes free and relieves the little suf- ferer. When no expectoration takes place, and the voice increases in acuteness, without the irritative fever declining, we must expect an un- fortunate termination.

Treatment. — Promptitude and decision are here necessary. If the practitioner be called in

before the disease has fully established itself, an emetic of ipecacuan may be administered with the addition of some emetic tartar. R Vini ipecacuanha; 3ft. Antimonii tartariz. gr. i. Aquae purae Jft.

Fiat mistura, suinat cocli. min. subinde donee excitetur vomitio.

Take of ipecacuan wine half a fluid ounce, tartarized antimony a grain, water half a fluid ounce. Make them into a mixture, of which let the child take a tea-spoonful from time to time till vomiting is excited.

When the disease is fully established, the ca- lomel treatment will be found the most efficacious, as this medicine possesses the power of breaking down the crasis of the blood, and thus prevent- ing the formation of the adventitious membrane which, as we have above said, is formed of coa- gulable lymph.

R Hydrargyri submuriatis gr. ij.

Pulv. sacchari albi gr. iij. . Fiat pulvis, secundis horis sumendus.

Take of calomel two grains, white sugar pow- dered three grains. Make it into a powder, and administer it every two hours.

In cases of very high irritation, and much fulness, bleeding by leeches or opening the ju- gular vein may precede or accompany the calo- mel plan ; but we must be careful not to carry the bleeding too far, lest we

induce that spasmo- dic action which, as above intimated, tends to hasten suffocation.

Some practitioners are stated to be exceedingly successful in the employment of tartar emetic, so as to induce and keep up a constant nausea, till the force of the disease is broken.

An external application to the chest of the fol- lowing ointment may be of much use by exciting vicarious irritation of the skin.

R Antimonii tartarizati 9j. Opii pp. pulv. 3j.' Cerati cetacei 3ij.

Fiat ung. cuj us ipplicetur thoraci pars sexta, vifl fricationis, sexta qu&que bora.

Take of tartar emetic and opium of each a scruple, cetaceous ointment two drachms. Make an ointment, of which the sixth part is to be applied to the chest by friction every sixth hour.

Warm bathing may be used with advantage when the plethoric fulness and high action have been in some measure subdued by the bleeding, or calomel, or antimony.

Bronchotomy or laryngotomy has been pro- posed, and we have seen it had recourse to, but not with eventual success. The fact is, that the membrane of which we have spoken, for the most part, in fatal cases of croup extends down into the bronchiae, and there is moreover such a loss of power locally and generally before the operation would be at all justifiable, that we cannot expect much from the expedient in ques- tion.

In all cases of croup, the probability of inflammation recurring ought to be guarded against, and preventive measures had recourse to, such as an attention to the condition of the sto- mach and bowels, and care against repletion.

350. Pharyngral and laryngeat infammat'um. — There is a species of ery thematic inflammation which occasionally affects the pharynx, which is attended with difficult deglutition, but not of impeded respiration, unless from the pharynx the inflammation extend itself

into the larynx, and then the laryngitis of some authors comes to be formed, which is a disorder of much danger, and often proceeds with rapidity to a fatal termina- tion.

This cynanche laryngea, or laryngitis, is at- tended with difficult respiration, with a sense of suffocation, and often a simultaneous difficulty of deglutition.

Distinctions. — Croup is different from an in- flammation merely of the larynx in the circum- stance of that stridulous or sonorous respiration, which we have above stated characterises the croupal inflammation ; it occurs moreover in adult or advanced life, which is not the case with croup. From an actual affection of the lungs the laryngeal disorder is distinguished by a cer- tain kind of hoarseness and impediment of re- spiration referred to the wind-pipe at its upper part. From asthma laryngitis is distinguished by its attendant fever, and by its being wanting in that complete intermission which characterises the latter ailment.

Causes. — Sudden alternations of heat and cold. Violent exercise of the voice. Irritations in the alimentary and intestinal canal, producing the disorder in a sympathetic way.

Prognosis. — Laryngeal inflammation is a dis- order of much danger. It often appears very active and spreading, and unless checked shortly terminates existence. Sometimes suppuration is formed, a collection of matter is found in the sac- culi laryngis, or an effusion of coagulable lymph terminates the disorder more in the way of croup. Often a chronic inflammation establishes itself in the larynx, which is attended with a slow fever, that eventually takes on the hectic charac- ter, when the disorder from the state of mere inflammation shall have passed on to its ulcera- tive stage. Chronic laryngitis is also a disease of danger. This disorder, when it terminates fatally, is often confounded with phthisis, and in some cases a species of actual consumption is occasioned by the extension of the irritative action down into the lungs; but very often life is terminated by ulceration in the larynx without any accompanying disorder of the lungs.

Treatment. — When the larynx is affected with active inflammation, large bleedings are called for ; after which, and it may be right to push the bleeding to the extent of producing fainting, blisters may be had recourse to; these, however, should not be applied immediately over the part affected, but upon the breast or neck. The ointment recommended under the head of croup, may likewise prove serviceable. Warm water from Mudge’s inhaler may be employed with

tincture of opium and ether: the latter is more especially proper when the disorder takes on somewhat of a spasmodic as well as inflammatory character. In the chronic laryngitis, calomel and opium in the quantities of half a gram of each, repeated three or four times a day, may be of service. Sarsaparilla decoction with

Plummer's pill, the dose of the former being a quarter of a pint three times a day, of the latter five grains every night, may likewise be tried.

These laryngeal affections are often the conse- quences of syphilitic poison upon a scrofulous constitution.

351. Mumpi. — Cynanche parotidea. After a slight febrile irritation a swelling occurs under the angle of the lower jaw, and extends upwards behind the ear, or forwards upon the submaxillary gland ; the swelling increases gradually for three or four days, and then subsides. For the most part no treatment is demanded beyond a dose or two of some common aperient. Occasionally, however, the inflammation takes on a more de- cided and severe form, and terminates in suppu- ration. At other times delirium follows the retrocession of the swelling by a sort of metas- tasis to the brain ; and now and then when the neck swelling disappears, the testes in the male and the breasts in the female become affected in the way of transference.

Causes. — Vicissitudes of temperature, or teeth- ing, or affections of the stomach and bowels, may be productive of mumps ; but it seems for the most part either to be occasioned by a parti- cular condition of the atmosphere, or communi- cated from one child to another in the way of a contagious disorder.

Treatment. — We have said above that it is for the most part scarcely necessary to interpose medicine, but, when the secondary or metastatic disorders of which we have spoken take place, these must be treated by antiphlogistic remedies, and local refrigerants or repellents, according to the measure of the new irritation. When there is much of swelling, without any very active in- flammation, warm fomentations or emollient poultices will be required, together with the ad- ministration of purgatives.

Before we conclude the subject of mumps, it is right to say that the young practitioner must not expect to find every affection of the parotid and submaxillary glands marked by this regu- larity in respect of time, nor attended by these sequelae. We frequently find disorders

that may be entitled to the appellation of mumps, to assume very different appearances from those mentioned by systematic writers on these dis- orders.

352. Pneumonic inflammation. — Dr. Cullen divides this into peripneumony and pleurisy, the one a disorder of the substance and body of the lungs, the other of the investing membrane, the pleura.

The general symptoms of peripneumony, or inflammation of the lungs, are pain in some part of the thorax, or over the whole breast ; this pain being rather obtuse ; the pulse is quick and sometimes rather hard and wiry ; a cough is present which increases the pain, and throughout the disorder the breathing is difficult. Expec- toration' is at first difficult and painful, but in the course of four or five days it becomes free and the breathing is much relieved ; the pulse ' also becomes softer and less quick, and the symptoms of the disorder decline.

When the inflammation, instead of thus giving way, goes on to suppurate, rigo-s are felt, th«

puise becomes more bounding and does not decrease in frequency, the respiration also becomes more oppressed but not so painful, and the patient often cannot lie down excepting on one side, this side being that which is affected.

When pleurisy rathei than peripneumony is the disorder, or when the pleura rather than the substance of the lungs is inflamed, the breathing is more tight and straitened as it were ; if you ask the patient to breathe, he tells you he cannot without the effort giving him much pain ; the pulse is harder, the attendant fever often higher, and from the first the pain is increased by turn- ing from one side to the other.

In addition to pleuritic or peripneumonic in- flammation, Dr. Cullen speaks of a bastard peripneumony, but which he scarcely admits as a distinct species. This affection, which is distin- guished from the pleuritic inflammation and the inflammation of the substance of the lungs, is considered as implicating rather the mucous linings of the bronchiae, and has been therefore described more recently under the title of Bron- chitis ; the symptoms of which are difficulty of breathing, with hoarseness and obstruction rather than painful or

strictured feeling, the pyrexia not being so high as in the other kinds of pul- monic disorder; and the pulse, though quicken- ed, being without the hardness or vibratory character of the pleuritic inflammation. Mucous expectoration is here also from the first consider- able ; indeed the condition is nothing more than catarrh, assuming a more than ordinary severity, and extending itself down more upon the mucous linings of the bronchial cells.

Another species of bastard peripneumony is constituted rather of a gorged or congested than positively inflammatory state of the pulmonary vessels, and is marked by suffocative rather than by painful breathing; the countenance too looks flushed, the lips are often bluish, and every thing denotes rather obstructed respiration than in- flammatory excitement. Let the student, how- ever, always be aware that these different degrees and localities and kinds of pulmonary affection run constantly into one another, so as to defy the precision of nosology, and let it be recollected that here, as in other cases, systematists are too apt to define and divide, and describe with a freedom beyond the warranty of truth.

There is, however, another particular which the student ought also to recollect, and which on the other hand is more in accordance with the principle of systematic division ; it is that the pleura being a serous membrane, an inflamma- tion of it shows different characteristics from an inflammation of the bronchial membrane which is a mucous tissue ; a disordered state of the latter does not excite so much inflammatory commo- tion as one of the former, but it is for the most part of a more insidious cast, and proceeds to the suppurative termination more gradually and insensibly.

Causes of pneumonic inflammation. — Changes of temperature ; violent exercise of the lungs, or of the body generally ; suppressed or obstructed perspiration; a constipated state of bowel, which last is a very general circumstance of pre- disposition, and often an exciting cause of the complaint.

Distinction*. — There is sometimes a difficulty in distinguishing between inflammation of the lungs and the liver; occasionally, indeed, both organs are engaged with the disease at the same time. The distinction, however, is to be taken from pressure upon the region of the liver not so manifestly increasing pain when the disease is pulmonary rather than hepatic; in pulmonary inflammation also there is the absence of that sallowness of countenance and oppression of spirits, which is so characteristic of disorder in the liver. In inflammation of the lungs, we have above observed, that

expectoration after a few days becomes free, when the disorder is about to terminate favorably ; this is not the case when the liver is the seat of the disorder. There is an absence too in pneumonia of the shoulder pain, which characterises, or at least often attends, inflammation of the liver. In pneumonia there is more or less cough from the first ; but an inflam- mation of the liver may exist for some time without occasioning any cough, which is of course more sympathetic and incidental than direct and essential. One author has told us, and occasionally we have observed the same thing, that the blood which is drawn when the liver is inflamed has its buffed surface tinged with yellow, and that the serous part of the blood is also more of this color than in pulmo- nary inflammation ; it must however be allowed that this condition of blood is not invariably characteristic of inflamed liver, and therefore it cannot be received as an absolutely pathognomic or diagnostic sign.

Pneumonia is distinguishable from muscular or spasmodic pain of the chest by the attendant pyrexia, by its being more decided and continued, and by the attendant cough and expec- toration.

Prognosis. — Pulmonary inflammation may be expected to terminate favorably when mucous expectoration occurs freely within two or three days from the attack ; and, if this expectorated matter is tinged with blood, no unfavorable in- ference should thence be drawn. Warm and general perspiration, a deposit of sediment in the urine, spontaneous discharges, as of blood, from the nostrils, or diarrhoea, are favorable cir- cumstances.

The unfavorable indications are rigors, deli- rium, cold, and partial perspirations; a purple appearance of the countenance, or a collapse of feature with an increase in the difficulty of breath- ing, while the expectoration either ceases alto- gether, or instead of being thick mucus becomes purulent and vanishes.

Treatment. — Venasection, and that, in indivi- duals of a firm fibre and when the inflammation runs very high, to a considerable amount ; from sixteen to twenty ounces may be taken, and re- peated the following day or two in succession. But, if the inflammation is not so considerable, and the powers of the system not so great, smaller quantities of blood may be withdrawn, as from ten to twelve ounces, and after the irri- tation is in some measure quelled let a blister be applied over the chest. The bowels must be evacuated by saline purgatives, which may be preceded by a five grain pill of caiomel, a medi-

cine especially called for, if there be reason to suspect hepatic as well as pulmonary affection, or if the bowels had been much constipated pre- viously to the attack of the chest disorder. When the blood-vessels and the bowels have been thus evacuated let one grain of calomel and one of opium be given every sixth hour; or, in place of this, administer nauseating doses of tartarised antimony with opium or poppy, as in the following formula.

II Antimon. tartariz. gr. i. Syrupi papav. f. ˆj. Aquae purae f. Jv.

Fiat mist ura: sumat partem quartam quartis horis.

Take of tartarised antimony one grain, syrup of white poppy one fluid ounce, water five fluid ounces. Make them into a mixture, of which let a fourth part be taken every four hours.

Some practitioners are very fond of digitalis. We have already made a quotation from Dr. Currie, who says he has succeeded in some cases with digitalis in inflammation of the brain, the heart, and the lungs, in cases where he should otherwise have despaired.

R Tincturae digitalis n_ x. Tincturae hyoscyami n. xxv. Liquoris ammonias acetatis f. 3iij. Syrupi simplicis f. 3ij. Aquae purae f. ˆift.

Fiat haustus : quartis horis sumendus. Take of tincture of foxglove ten minims, of henbane twenty-five minims, of liquor of acetate of ammonia three fluid drachms, of simple syrup two fluid drachms, of water a fluid ounce and a half. Make into a draught, to be taken every four hours.

When the inflammatory action ‘s evidently lessened, and a tendency is manifested towards expectoration, let expectorant medicines be conr- hined with refrigerants, diaphoretics, and ano- dynes.

R Vini ipecacuanhas nˆ xxv. Syrupi papaveris f. 3i. Pulv. potassae nitrat. 9ft. Syrupi tolutani f. 3ij. Aquas purse f. 5ift. I i.it haustus.

Take of ipecacuan wine twenty-five minims* syrup of white poppy a fluid drachm, powdered nitre half a scruple, syrup of tolu two fluid drachms, water a fluid ounce and a half. Mix into a draught.

The class of medicines called expectorants are chiefly applicable when

the affection has been principally on the bronchial membrane; and in equivocal or bastard peripneumony, v.hen tlu;re is considerable tendency to sinking in the vital powers, the subcarbonate of ammonia may be administered in combination with expectorants.

IX Ammoniac subcarbonatis gr. vij. Mucilag. acaciae f. 3iij. Vini ipecacuanha?, til xv. Tincture scillae nˆ xij. Syrupi papaveris t. 3i. Aquae purae f. ˆift. !• KU linustus.

Take of subcarbonate of ammonia seven grains, acacia mucilage three fluid drachms, ipecacuan wine fifteen minims, tincture of squills twelve minims, syrup of white poppy a fluid drachm, water a fluid ounce and a half. Make them into a draught.

Small doses of cascarilla may be usefully em- ployed in convalescence, combined with expec- torants. The cascarilla, indeed, possesses an expectorant as well as tonic quality.

R Oxymellis scillae f. 3j. Syrupi papaveris f. 3j. lufusi cascarillae f. 31! $. Fiat baustus.

Take of oxymel of squill and syrup of white poppy of each a fluid drachm, infusion of casca- rilla a fluid ounce and a half. Make them into a draught.

The terminations of pulmonic inflammation are, into effusion, constituting one species of hy- drothorax ; into, general suppuration, forming the empyema of authors ; into partial and con- fined suppurations, especially where there have been tubercles ; in this case what are called vo- micae are formed ; or there may be a pouring out of a muco-purulent fluid, either into the cavities of the pleura, or into the cellular substance of the lungs ; or the termination may be in a con- gested state of the pulmonary capillaries with an effusion of blood from them ; or the layers of the pleura may either be made to adhere together, or the adhesion may be between the substance of the lungs on one side, or the sides of the chest on the other. Indeed pleuritic inflammation cannot exist for any length of time unsubdued without throwing out the coagulable lymph which occa- sions these adhesions, whence results that impe- diment to respiration and want of free play in the lungs which so commonly follow upon pleu- ritis, even when the disease has been considered to terminate favorably.

The symptoms of vomica and empyema are marked in the nosology. When matter is dis- tinctly perceptible in the chest, tapping has been occasionally had recourse to ; but, in the general way, both local and

general disorders are too confirmed to admit of permanent or radical re- lief by this measure.

353. Inflammation of the heart. Carditis. — The peculiar symptoms of inflammation of the heart, or rather of the pericardium (for it is for the most part in this membrane that the affection is resident), are sharp pungent pains referred to the region of the heart, attended with a sinking suffocating sensation, and catches in the breath ing which are very much increased by motion or ex- ercise of any kind ; there is also a particular jar in the pulse, with a violent beating often of the carotids, and the whole of the patient's feelings are much more distressing and oppressive than in merely pleuritic disorder : the countenance as well as symptoms bearing marks of a vital organ being affected.

If the violence of the disorder somewhat sub- sides, but the inflammation does not entirely give way, a chronic affection of the pericardium is induced, and palpitations, continued dyspnoea, disturbed dreams, vibrating pulse, difficulty in

making any exertion, particularly in ascending a hill, oedema of the extremities, and eventually • sy, occur.

Very little need be added, in regard to the treatment, to what has been advanced under the general head of pneumonia, only that the mea- sures must be prompt and decisive, and we must not be deterred from the use of the lancet by the sinking sensations of the patient, if we feel pretty well convinced by other symptoms that the heart is in a state of active inflammation.

When the disorder has either fallen into a chronic from an acute state, or has been from the first of a chronic kind, the treatment is of course equired to be different. Very small doses of digitalis may be employed in conjunction with calomel and opium as in the following formula, and great care must be taken to keep down irri tation by avoiding all inordinate excitement either of mind or body, by avoiding full or sti- mulating diet, and preserving the intestinal eva- cuations free.

R Opii pp pulv. gr. ft. Pulv. digitalis gr. i. Hydrarg. submuriat. gr. . Mucilag. acaciae, q. s.

Fiat pil. nocte maneque vel ter in die su- menda.

Take of opium in powder half a grain, powder of foxglove one grain, calomel a quarter of a grain, mucilage enough to make into a pill — take one night and morning, or three times a day.

Ointment externally applied to the chest, as in the following formula, may be useful in these chronic affections of the heart. R Antimonii tart.

Opii pp pulv. a5 3ft. Cerat. cetacei 3ij.

Fiat Ung., pars sexta app. om. nocte thoraci.

Take of tartarised antimony, and powdered opium, of each half a drachm, cetaceous ointment two drachms. Make them into an ointment, of which apply a sixth part over the chest in the way of friction every night.

When treating on the subject of rheumatism we shall have to revert to inflammatory affections of the heart.

354. Peritoneal inflammation. — Under the head of visceral affection we shall have immediately to treat of peritonaeal inflammation, for when a disorder is called inflammation of the bowels or of the liver, it is very often only the peritonaeal investment of the viscus that is much affected ; sometimes, however, a great portion of the peri- tonaea! membrane becomes the subject of inflam- mation, bringing with it a corresponding pain and fever without the immediate indication of any other visceral disease. Than pure peritonitis there is indeed scarcely any affection more com- mon or more important for the physician to re- cognise. Its treatment when it is of the active kind is the same as that of active inflammation generally ; and when of a more passive, insidious, or chronic nature, small doses of calomel, opium, and foxglove, as in the formula above for chronic inflammations of the heart, may be administered. The great object of the practitioner, in peritonceal inflammation, will be to prevent effusion into the

abdominal cavity, dropsy of the abdomen when the inflammation is of a more spreading or ery- thematic kind, and adhesive union of a preter- natural kind when the inflammation is rather phlegmonic than erythematic.

355. Inflammation of the stomach. Gastritis — This disorder is not of very frequent occurrence ; when it does take place it is for the most part in the mucous coat of the organ, and has been in- duced by the habit of intoxication, or by taking some poisonous material into the

stomach, or oc- casioned by a specific disorder, as of schirrus affecting this part.

The symptoms of gastric inflammation when it does occur in an active form are an acute pain and sense of heat in the region of the storna',-1 the organ not bearing the mildest ingesta ; thetfe is a remarkable depression of strength, extreme anxiety depicted in the features, and sometime* delirium.

Causes. — Acrid cr indigestible substances re- ceived into the stomach, alternations of tempera- ture, a large draught of cold water while the body is hot, suddenly repelled eruptions of the surface, and metastasis, especially of gout.

Distinctions. — The burning heat of the sto- mach and attendant fever distinguish the pain of gastritis from that of mere spasm; from ente- ritis the stomach inflammation is distinguished by the seat of the pain, and intolerance of any thing that is attempted to be ad ministered by the stomach. Hiccough too occurs in gastritis more speedily than in enteritis.

Prognosis. — If, in the course of two or three days, the pain and sickness' cease, while the pulse becomes more free and full, and diminishes in frequency, the urine depositing a sediment, and the bowels becoming spontaneously loose, a favorable termination may be looked for. The unfavorable symptoms are a continuance of dis- ease for some days, the pulse not decreasing in frequency, and hiccough remaining in spite of the medicinal processes.

Treatment. — General blood-lettings, and the free application of leeches to the epigastric re- gion ; afterwards warm fomentation and a blister, the copious employment of mucilaginous di- luents, such as linseed tea, good barley water, with acacia gum dissolved in it. Emollient ano- dyne clysters are likewise to be injected. R Tincturae opii f. 3ft Mucilag. amyli. Aquae purae a a f. Jvj. Fiat enema.

Take of tincture of opium half a fluid drachm, mucilage of starch and water of each six fluid ounces. Make them into an enema. R Olei ricini f. jiij.

Decocti hordei f. Jv. Fiat enema.

Take of castor oil three fluid ounces, barley- water five fluid ounces. Mix for an enema.

A common saline draught may be administered with five or six drops

of tincture of opium, or pills with a grain of calomel and a grain of opium That erythematic, and at the same time chronic inflammation, which is often produced by a lon£ habit of intemperance, especially by the habitual

and inordinate employment of spirituous liquors, is for the most part best treated by very small doses of mercurials joined with vegetable narco- tics ; the pain and irritation of real schirrhus is also occasionally mitigated by these medicines.

R Pilulae hydrarg. Extract, hyoscyami Extract, conii §§ gr. ij. Fiant pilulae duae, nocte maneque sumendae.

Take of blue pill, extract of henbane, and ex- tract of hemlock, of each two grains. Make them into two pills, to be taken night and morn- ing, two at each dose.

Schirrosities of the stomach generally, it may be remarked, take place about the cardiac or the pyloric orifice ; and when the former is the case the stomach pain is immediately excited by Bating ; when the latter, the pain is more felt an hour or two after the meal, or when the digested material is making its way through the pylorus into the duodenum.

356. Inflammation of the bowels. Enteritis.— This is as common a disease as the stomach inflammation is rare; it is marked by pain in the part affected, increased by pressure; by great prostration of power; by much restlessness; great anxiety of countenance ; spontaneous nausea and vomiting; small, contracted, and frequent pulse; with obstinate costiveness. For the most part the pain is referred to the point where the large intestines commence, it being here where the lodgment is, as it were, made in the caecum, that the inflammation of enteritis usually commences.

Causes. — Costiveness, or neglected bowel, often proves the actually exciting cause of enteritis ; at other times it merely predisposes the individual to be affected by other causes — such as atmos- pherical vicissitudes, exposure of the body to cold, getting wet in the feet, spasms and con- tractions in the bowels and hernia becoming strangulated.

Distinctions. — Enteritis is distinguishable from colic by the presence

of pyrexia, and by the pain being increased upon pressure ; from the pain of gall-stones passing, it is to be distinguish- ed by the quickness of pulse (for very violent pain occasioned by the passage of biliary con- cretions will exist while the pulse shall be under 100 in the minute) ; from nephritis or inflamma- tion of the kidney, or from a fit of gravel as it is called, enteritis is distinguished by its being generally higher up in the abdomen, by its being without any retraction of the testicle, by tlie obstinate costiveness, and great sensibility to pressure.

Prognosis. — If the costiveness soon yields, if the pain from being fixed and intense changes its seat and becomes more moderate; if the pulse changes from the small contracted feel that i had at first to more fullness and less frequency ; it the restleness and anxiety abate ; and if an equal' warm, and free perspiration, occur, we may hope for a favorable termination.

The unfavorable signs are sudden cessation of (•am, with the prostration continuing, and the pulse increasing rather than diminishing in fre- quency ; hiccups, cold extremities, clammy and partial perspirations, and a drummy tense condi- tion of the abdomen.

Remarks. — Inflammation of the bowels varies greatly, both as to degree, kind, and locality. Sometimes the villous coat of the bowel will be affected with erythema, and a diarrhoea will be the consequence rather than costiveness (indeed, diarrhoea in a very great many cases acknow- ledges this condition of the bowels for its cause); at other times the inflammation will be confined to the peritonaeal investment of the bowel, and then the external tenderness and pain upon pres- sure are greater, and the pyrexia is for the most part more considerable ; the peritonaeum being a serous membrane, and serous membrane inflam- mation, as stated under the head Pulmonary Dis- order, being usually attended with higher sympto- matic irritation than inflammations of mucous tissues. Sometimes the fine membranes inter- spersed among the muscular fibres will be rather the seat of the disease, and in this case there will be the tormina and twistings noticed in the defi- nition.

Then, further, in respect of degree, there is the greatest variety ; sometimes the practitioner will hardly be certain of absolute inflammation, while at other times the symptoms are so marked and unequivocal that he who runs may read.

The mode of termination will be found much regulated by the seat and sort of inflammation. Decidedly marked enteritis, unless checked, tends with frightful rapidity towards a fatal issue ; while the more

fixed but less violent disorder, eventually comes to produce small points of ulceration, and tabid wasting. In this as in all other cases, and as we have all along endeavour- ed to enforce, the student is rather to be directed in his pathology and practice by attentive ob- servation and reflection for himself, than by the distinctions and divisions and niceties of nosology. Treatment. — When we are sure that active in- flammation is going on in the bowels, we can only expect to arrest it by prompt and large blood-letting ; it is the practice of some, and in our opinion it is a very good practice, to give a considerable dose of opium (say three grains of the powder in the form of a pill), immediately upon blood having been withdrawn, — the objec- tion that would occur against this practice is, that as costiveuess is a prominent and formidable circumstance in enteritis, so it should seem fear- ful to administer a medicine, the general tendency of which is to occasion costiveness ; but it must be recollected that the inflammation and conse- quent irritation are the most fearful features of the malady, and that while that inflammation is proceeding it will be but of small avail to pro- cure evacuations ; then again the very constipa- tion is sometimes produced by those states which opium is calculated to relieve ; viz. a constricted state of the intestinal fibres. An actual objection indeed lies against the administration of violent purgatives in the minds of some when the constipa- tion is occasioned by an inflammatory condition of the parts, inasmuch as the action of catharsis is they say likely to increase the evil we are desir- ous to subdue. This last objection may, how- ever, be felt with too much weight, and it is for the most part desirable to procure a free passage through the bowels, more especially when we suspect that the malady has been induced by r& •jined fasces.

At any rate purgative enemata should be in- jected.

R Magnesias sulphat. 51 ft. Ol. ricini f. §j. Aquae bullientis f. §x.

Fiat enema.

Take of Epsom salts one ounce and a half, castor oil one fluid ounce, boiling water ten fluid ounces. Make them into an enema.

The following form of purgative by the mouth is most likely to be retained.

R Hydrargyri submuriatis 9j. Extract! colocynth. comp. 3j.

Fiant pilulae xvj, quarum sumat aeger duas secund£ quaque hora donee soluta sit alvus.

Take of calomel a scruple, compound colocynth extract a drachm. Make them into sixteen pills, and let two be taken every second hour till the bowels are opened.

Apply leeches and warm fomentations to the bowels ; rub the abdomen all over with castor oil ; give pills after evacuations have been pro- duced containing a grain of calomel and a grain of opium. Warm bath. The application to the rectum of three or four drops of croton oil made into a suppository with crumbs of bread will sometimes excite to a discharge of the bowels when enemata fail. In case of invincible sick- ness, with every mark of introsusception, from four to six ounces of running quicksilver may be poured into the stomach.

The above directions of course apply to the more formidable and virulent shapes of the dis- ease. The less decided, more insidious, more chronic, more equivocal, or more specific inflam- mations demand a discriminating adaptation to varying circumstances ; and here we again re- peat that the young practitioner must not be dis- appointed if he finds in practice different features and circumstances from those delineated by the nosologist.

357. Inflammation of the liver. Hepatitis. — For the definition of this, as of other diseases,1 let the student turn to the nosology. In the case, indeed, of hepatitis, Cullen has almost stretched out his definition, particularly of the chronic kind, into a history.

The pain, it must be recollected, in liver affec- tions, varies very much both in itself and in its sympathetic consequences, as one or other part of the liver may be affected ; the state of the bowels is irregular ; sometimes a diarrhoea will be produced by the increased secretion and undue acrimony of the bile ; at other times the inflammation will arrest, or very nearly so, the secretion altogether; and then of course there are clay-colored fsces and sluggish bowels ; a yellowish tinge in the eye is not at all uncommon in hepatitis ; the urine is high colored, and the spirits are for the most part dull and oppressed ; the pulse is sometimes in- termittent in chronic hepatitis, stomach derange- ments become conspicuous, and there is often a tendency to oedematous swellings about the ancles.

Causes. — Those of inflammation generally, im- moderate use of spirituous liquors, mental affec- tions ; which last are sometimes

causes, and sometimes consequences, of liver disorder. Au-

tumnal heats and colds give an acrimony to the bile ; this cause is more especially conspicuous in some of the tropical situations where heat and moisture act in combination, or speedy alterna tion ; indeed, heat seems to possess some specific influence upon the liver; and it has been re- marked by Dr. Thomas, and quoted by Dr. Gregory, that the liver, in warm climates, seems to be the seat of disease nearly in the same pro- portion a.* the lungs are in Great Britain : liver affections are occasionally induced by the cessa- tion of the menstrual flux, which, like mental affection, is sometimes source, and sometimes se- quence; protracted, or ill treated intermittents, are the cause at times of hepatitis ; sitting day after day in one position, so as to impede the free circulation through the liver, may come to produce an inflammatory or congestive affection of the organ ; tight lacing of stays ; sudden re- pulsion of cutaneous disorder, or of perspiration ; constipated bowel ; in a word, whatever disturbs or impedes the circulation through this important and complicated organ may produce a measure of hepatic inflammation.

Distinctions. — From pneumonic inflammation (see PNEUMONIA), from gastritis by the absence of that burning sensation which is occasioned in gastritis by any thing taken into the stomach; and by the strength not being so suddenly pros- trated as in gastritis, and by the pulse not being so small or oppressed as in gastric and enteric inflammation. Gall-stones passing give rise to suspicion sometimes that the liver is inflamed ; but the intensity of the pain does not produce that irritation of the pulse which is always the product of inflammatoty derangement. On this distinction, it will be recollected, we have before remarked; and it is an important one for the young practitioner to keep in his recollection.

Prognosis. — Favorable when the pain and fe- brile symptoms subside; the complexion loses its sallowness, and spontaneous evacuations oc- cur; when perspiration breaks out general and warm, when the urine throws down a sediment, or when local inflammation breaks out in any part of the body’s surface.

Unfavorable when the pulse continues full and frequent, and rigors take place ; the pain having somewhat remitted, and being followed by a feeling of fulness and throbbing ; or in the more chronic, and in this country more common form, the organ becoming hard to the feel ; the yellow tinge of the countenance continuing; and, at length, abdominal swelling and fluctuation pre- senting themselves.

Terminations.— Inflammation of the liver may end in suppuration, the pus pointing outwards, and being discharged externally ; or it may make its way through the lungs ; or may penetrate into the abdominal cavity ; or may get into the ductus communis, and through this channel be dis- charged ; or it may get into the intestinal canal, in consequence of adhesion taking place between the inflamed liver and contiguous bowel, and a communication being made in this direct manner. Schirrous hardness, with enlargement, is a very frequent consequence of inflammation in the liver; tubercles and tubera, of all forms and sizes are found in its substance ; extensive adhesions

take place with neighbouring viscera and parts ; vesicular cysts and hydatids become developed ; unnatural softness, with enlargement, sometimes takes place ; calculous or ossified matter becomes impacted in its body; in fine, there is scarcely any modification of morbid structure that the liver does not occasionally display upon dissection; and that with such a capricious irregularity as often to defy any precision of inference from symptoms during life.

Treatment. — General and local blood-lettings are demanded according to the urgency of the symptoms. After evacuations of blood, blisters and cathartics, as in other inflammations, are called for. Mercurial cathartics are in general preferred in inflammation of the liver, even of the most active kind ; there may be some reason, however, to suspect that this free and indiscrimi- nate action of mercury may be grounded too much on the notion of specific action. We in general prefer the saline cathartics, and those which, acting more upon the bowels than the liver, divert the current of blood away from the vena portae. After purging and bleeding, calo- mel and opium may be given, as in pleuritic and enteric inflammation. When suppuration manifests itself, and the matter appears to point externally, it should be encouraged by warm poultices and fomentations. Suppuration being fully established, bark, and a somewhat more generous diet, may take the place of the anti- phlogistic and lowering measures.

When the disorder is of a more chronic and less active kind, which is for the most part the kind or form we meet with in this country, the treatment is to be of a more deobstruent charac- ter, such plans being instituted as in some mea- sure emulge the biliary organ of its load, or excite it into new actions. Topical bleedings by leeches or cupping glasses, and even small gene- ral bleedings, will be found requisite even in these cases ; and here we may administer, with much

advantage, small doses of mercury, in con- junction with the vegetable narcotics; the former with a view to excite and absorb, the latter to abate irritation.

R Hydrargyri submuriatis gr. i. Extract, conii. Extract, hyoscyami S3 grs. ij.

Fiat pii. nocte maneque sumenda.

Take of calomel one grain, extract of hen- bane and hemlock of each two grains. Make them into a pill to he taken night and morning.

Mercurial inunctions are occasionally of ser- vice, as in the following formula: —

R Unguenti hydvargyri fortioris 9j. Camphors grs. v.

Fiat ungucntnm ; applicetur omni nocte vel alternis noctibus in regionera hepatis. •

Take of the strong mercurial ointment a scru- ple, camphor five grains. Make them into an ointment, which may be rubbed upon the region of the liver every night or every other night.

Or the tartarised antimony ointment, a formula for which will be found under Inflammation of tfie heart, may be used every night.

The taraxacum will often be found a useful medicine in chronic affections of the liver; it

may be given in combination with some salina aperient.

R Potassx tart. 3ij. Extract, taraxaci 9j. Tinct. rhei f.3j. Aquae menthae s. f.ˆift- Fiat haustus.

Take of soluble tartar two drachms, extract of dandelion one scruple, tincture of rhubarb one fluid drachm, mint-water a fluid ounce and a half. Mix for a draught.

It is often advantageous to administer those medicines which act upon the kidneys in a sort of vicarious manner.

R Juniperi baccarum ˆiv.

Aquas bullientis Oj. Fiat infusum.

R Liquoris hujus colatae f.ˆift- Extract taraxaci 9j. Spiritus setheris

nitrici f.3j Fiat haustus, ter in die sumendus. Take of juniper berries four ounces, boiling water a pint. Make an infusion ; of which, when cold and strained, take a fluid ounce and a half, and mix it with a scruple of dandelion extract and a fluid drachm of nitric ether. Make them into a draught, which may be taken three times a day.

R Sodae subcarbonatis exsic. Saponis duri, a a 3j. Pulv. rhei 9j. Ol. juniperi ttj, xxv.

Mucilag. acaciae q. s. Fiat massa, in pi- lulas xxx. dividenda ; sumat tres nocte maneque.

Take dried subcarbonate of soda, and hard soap of each a drachm, powder of rhubarb a scruple, oil of juniper twenty-five minims, make them into a mass, which divide into thirty pills, three to be taken night and morning.

The dandelion may be administered in decoc- tion ad libitum; as may also the infusion of juniper berries.

In chronic affections of the liver some practi- tioners are partial to nitric acid, which may be given according to the following formula : R Acidi nitrici diluti n\ x. Syrupi simplicis f. 3iij. Aqua; purse f. Jift- Fiat haustus, ter in die sumendus Take of diluted nitric acid ten minims, sim- ple syrup three fluid drachms, water a fluid ounce and a half. Make them into a draught, which may be taken three times a day.

The internal and external employment of chlorine has been recommended in hepatic and bilious affections. In its external use the aqua regia bath is formed ; the following account of which is extracted from Dr. Mason Good's Study of Medicine.

'The aqua regia should be compounded of three parts in measure of muriatic acid, and two of nitric acid ; and, in preparing them for use, a pint of the combined acid is to be mixed with the same measure of water. This constitutes the diluted acid or diluted aqua regia. The acid bath is to consist of three ounces of tint

diluted acid to every gallon of water. It should, however, be observed by those who are inclined to form this mixture extemporaneously at their own houses, that if either of the acids be poured immediately upon the other, a large volume of very offensive gas will be

disengaged, on which account it will be better to pour them separately and slowly on their proper measure of water.

‘ If the acids be of adequate strength, the mix- ture subdiluted for bathing, will, to the taste, have the sourness of vinegar, and perhaps prick the skin slightly if very delicate, but not other- wise after it has been applied to the skin half an hour. But since these acids vary much in their degree of concentration, as distilled by different chemists, there will be some variation in their power. The strength of the bath, however, should not be much greater at any time than the proportion here laid down ; for otherwise it may excite a troublesome rash, and give a yellow hue to the nails and skin on the feet, or whatever other part is exposed to its action. A narrow tub for a knee bath, just wide enough to hold the feet, and reach the knees, should contain three gallons of the prepared bath liquor, and consequently about nine ounces in measure of the diluted aqua regia. For a foot bath, half a gallon may be sufficient, and a common wash- hand basin may be employed as a vessel for the purpose. The feet should remain in the bath for twenty minutes or half an hour; and the legs, thighs, and abdomen be in the mean time frequently sponged with the same. In the win- ter the water may be used warm ; but this is not necessary in the summer. The bath may be employed at first daily for a fortnight or three weeks, and afterwards every other day, or only twice a week.’

358. Inflammation of the spleen. Splenitis. — We have already said that visceral inflamma- tion may be mere peritonitis, when the peri- tonaeal covering of the viscus is the part implicated with the disorder. It has likewise been inti- mated that a sort of gorged condition of the blood-vessels exists in some cases of visceral disorder that may approach to, but yet be under the grade of actual inflammation. Of splenitis as a peritonaeal affection, we need add nothing more in the present place ; but a measure and kind of splenitic affection often exists when it is not perhaps immediately suspected. When we have stomach irritations and derangements with vomiting of blood, with pains about the left shoulder, and general uneasiness, we ought to be upon our guard against disordered conditions of the spleen passing unnoticed.

Causes. — Those of visceral derangements ge- nerally. Protracted intermittents were formerly considered proverbially prolific of splenic en- largements ; these are not now so common as formerly, partly perhaps on account of the com- parative infrequency of the intermittents, and partly because in the treatment of them we are more careful to act upon ‘ the secretions and excretions than was formerly the case ; for although the spleen does not appear to be an

organ of secretion (see PHYSIOLOGY), yet its condition is much regulated bvthe state of other viscera that are secretory.

Distinctions.— Splenitis is perhaps most usually confounded with hepatitis when the disorder is chronic, and not unequivocally marked. The distinction is to be taken from the seat of the pain and enlargement, and from the presence or absence of bilious derangement, though there may be some deception in this last particular, since these viscera are connected together, partly in function, and partly in structure, as far as a connexion of nerves and blood-vessels may be said to unite them. From kidney affection, disorders of the spleen are more easily distin- guished, inasmuch as the latter do not interfere so much with the urinary secretion, are confined to the left side, and are higher in their position than the kidney, and do not produce any retrac- tion of the testicle.

Prognosis. — Mere chronic derangement of the spleen may last for years, and eventually be got under by judicious management. Even active inflammation of the organ does not tend so rapidly to disastrous consequences as the same measure of inflammation in some of the other viscera, partly perhaps because it is not subser- vient to chylopoietic functions as a secretory organ, and partly probably from the power the spleen may possess of working its own cure by spontaneous evacuations from its large and nu- merous blood-vessels.

Treatment. — Active and membranous inflam- mation must be treated upon the same principles as inflammation of other viscera affected in the same way ; the chronic affections, to which it is subject, are best counteracted by an attention to the state of the bowels, by a mild and unirrita- ting diet, and by the administration of deobstru- ents. See for a formula of mercury and anodynes under Gastritis.

359. Inflammation of the kidney. Nephritis. — We scarcely need add any thing to the defini- tion given of this disorder in the nosology; we may say that although costiveness is not a pathognomic or necessary symptom, the bowels are often constipated, and that then the violence of the complaint is increased. Vomit- ing is not invariably an accompaniment of kid- ney affection, but there is almost always nausea ; and when this condition of the stomach is pre- sent, without any obvious cause, we ought al- ways to ascertain whether the kidneys, or in the female the womb, may not be disordered.

Causes. — Calculary concretions, violent exer- tions, as of riding, with strains or blows upon the loins, exposure to colds and heats, faecal collec- tions in the large intestines, acrid diuretics, as turpentine and

cantharides, and metastasis, par- ticularly of gout.

Distinctions.— Nephritis is to be distinguished from lumbago by the more fixed and less extended character of the pain ; by its being increased on pressure upon the kidney; by retraction of the testicle; by the alteration in the quantity and quality of the urine; by the direction of the pain towards the groin, and down the thigh ; and by the sickness of stomach. From enteritis by the pain being more behind than in front ; by its not being accompanied by the obstinate con stipation characteristic of enteritis ; and by the pulse not being so rapid, oppressed, and small

From gastritis by the sickness not being accom- panied with the burning sensation at the stomach, especially when any thing is received into it. From gall-stones, or spasms upon the gall-ducts, by the seat of the pain, the absence of yellow- n*ss of the skin; by the urinary changes; and by the quickness of the pulse.

Prognoti$. — For the most part favorable ; the signs of approaching resolution, or on the other hand, the tendency to suppuration are marked, as in other inflammations. It may here be re- marked, that purulent formation and discharge of pus with the urine may be the consequence of nephritis, and that this may continue for years without producing any great emaciation, any hectic fever, and without indeed much derange- ment of the patient's health. This fact, which is in opposition to the consequence of abscess in the liver, or some of the other viscera, has been accounted for by the kidney being an organ, as it is called, of waste, rather than of supply ; that is, that its secretion is immediately discharged, and does not, as the secretion from the liver, &c., go to the assistance of alimentation. Nephritis some- times ends in a destruction of the kidney's sub- stance, but seldom is what would be properly called gangrene a consequence of kidney affec- tion.

Treatment. — The inflammation must be met by the ordinary means of bleeding and pu-ging. The purgatives should, however, be of the bland and unirritating kind ; and, when saline cathar- tics are used, it is better perhaps to join them with manna. Castor oil is a good purgative in nephritic affections, especially when there is reason to suspect a lodgment of faeces in the colon, for the castor oil acts especially upon the larger intestines, and, as an oleaginous material, is more suited also to kidney irritation. Emol- lient and anodyne clysters,

as ordered in ente- ritis, may be employed, and, when the pain is considerable, a drachm of tincture of opium may be added to them. Warm fomentations are always desirable ; and the abdomen and region of the kidney may be rubbed over with castor oil. Drinks of linseed tea, or acacia mucilage, or barley water, or decoction of mallows, seem to have the power of blunting the irritation of the kidney; and, when nephritic irritation is caused by the presence of the lithic acid gravel, magnesia should be given pretty freely, either mixed with the drinks just mentioned, or ad- ministered alone with common water.

360. Inflammation of the bladder. Cystitis. — This is frequently marked by the same general symptoms as the kidney inflammation, only that the pain is lower down and in front upon the pubic region, and when the mucous or internal lining; of the bladder is the seat of the affection mucous and muco-purulent, and sanious dis- charges are mixed with the urine : very often indeed affections of the prostate gland or mem- brane lining the internal surface of the urethra accompany the bladder affection, when this last is more of the chronic kind, and is seated rather in the mucous tissue than in the external sur- <;ice of the orpan.

Causes. — Local irritation as from calculus,

\ti-nsion of prostatic and urethral disease, blows

upon the pubic region, and other common causes of inflammation.

Distinction. — The locality and consequence of the irritation, in general, will mark an irritation or inflammation of the bladder. The sympa- thetic irritations being those, a good deal of nephritis denotes that some portion of the urinary organs is affected.

Prognosis. — Active or external inflammation generally terminates favorably, if the proper remedies are timely had recourse to; but the mucous membrane affections are often tedious and obstinate, complicating themselves with af- fection of neighbouring parts, and sometimes giving rise to formidable, protracted, and structu- ral disorder.

Treatment. — Acute inflammation of the blad- der calls for the same treatment as nephritis, with the application of leeches to the pubic region, and warm anodyne fomentations over the lower part of the abdomen.

In the chronic affection the treatment demands variation from varying

circumstances ; when the irritation is present small doses of calomel and opium, as half a grain of each, two or three times a day, may accompany the castor oil and other bland purgatives which it may be necessary to administer ; and when mere passive and hab- itual discharges have established themselves, a combination of copaiba balsam with one or other, or a mixture of two or three of the vege- table narcotics, may be employed with advan- tage.

R Extract, hyoscyami, Extract, conii a a 9j. Copaibse Siij. Mucilag. acaciae f. 3vj. Gradatim misceantur in mortario sensira

affundens Aquae purae f. Jv.

Fiat mistura. Dosis cochlearia duo bis terve in die.

Take of extract of henbane and of hemlock of each a scruple, copaiba three fluid drachms, mucilage of acacia six fluid drachms. Mix them gradually in a mortar, gradually pouring on them five fluid ounces of water. Make them in*o a mixture, the dose of which is two table- spoonsful ttoo or three times a day. Soap and soda may be given in combination with the narcotics. Emollient and anodyne injections, as of starch and opium, may often be injected into the blad- der with much benefit.

361. Inflammation of the womb. Hysteritis — In this disorder the spirits are for the most part depressed, and the pulse while it is small, is not perhaps, in the general way, quite so frequent nor so contracted as in the same measure of in- flammation attacking other parts.

Caiaes. — Besides those of inflammation in general, as alternations of temperature, &c., the womb is liable to become inflamed by an inter- ruption in the menstrual discharge, or in the lochia after parturition; a constipation of the lower bowel is also, by contiguity and sympathy, apt to affect the womb, and become an excitant of inflammation when the predisposition is strong.

Distinction. — From cystytis by the pain being deeper seated, and by the absence of the urinary changes.

Prognosis. — Peritoneal inflammation affecting the womb is often a highly dangerous disease, especially after parturition, when the powers have been exhausted by the process of delivery, and so much

weakness and irritation are combined as to embarrass the practitioner with regard to the demands and admiss-ibility of the case. When the inflammation is in the substance or body of the uterus, a gangrenous termination sometimes takes place, indicated by remission of the pain, prostration of power, hiccough, &c. If the peri- ton seal investment of the uterus is the seat of the affection, the unfavorable symptoms will be rather those of abdominal fulness and tension, with the pulse increasing instead of diminishing in fre- quency, and the supervention of rigors.

Treatment. — Blood-letting with more or less freedom and frequency according to the urgency of the symptoms and strength or weakness of the patient. In puerperal inflammation some practitioners abandon altogether the use of the lancet, and give calomel and opium ; or even turpentine ; but this form of the disease will be best discussed in the article MIDWIFERY. The treatment generally, both for the more acute. and the more chronic kind, may be considered as pro- perly analogous with that of cystitis.

362. Rheumatism. Rheumatismus. — Symp- toms.— After exposure to cold or damp, lassitude and shivering occur, which sensations are follow- ed by heat and pain of one or other of the large joints extending itself along the muscles; this pain is often as fugacious as it is violent. It remits in one part, and seizes suddenly and with equal force another ; sometimes the surface as- sumes a redness, and there is for the most part swelling and a sense of tension in the joint or joints affected. The sympathetic fever that is excited often runs exceedingly high, but there is an absence of that hardness, and sometimes even celerity of pulsation, which characterises other inflammatory disorders ; the tongue is white, the urine is high-colored, and there is often profuse perspiration. It is not only from joint to joint that rheumatism shifts ; there is often a metas- tasis to the heart constituting one of the most formidable and dangerous species of carditis, to the muscles of the breast, and even to the pleura, diaphragm, and stomach. The bowels are often costive.

The chronic form of the disease is not attended by so much perturbation, but pains are experi- enced in the head, shoulders, knees, loins, and other parts, sometimes more fixed and sometimes more fugacious, leaving a paralytic debility in the parts affected, or tending to the induction of contracted limbs and stiffened joints. In either case, whether the disorder be acute or chronic, there is a disposition to be suddenly translated from one part to another ; and another leading character of the malady is, that it does not in- cline to suppuration. The chronic is sometimes a sequela of acute rheumatism,

at other times it takes place without having been preceded by the acute form of the disorder. In many cases after the complaint shall have fastened upon some

one part particularly, and there lasted for a length of time, there will be a wasting of the muscular substance, and a consequent lessening in the bulk of the part.

Causes and peculiarities. — Cold, causing ob- structed perspiration, damp air, wearing damp linen, or lying in damp beds ; in fine every mo- dification of cold, or transition of temperature, more especially when humidity accompanies this transition, will produce rheumatism.

There is some difficulty in respect of what sys- tematic writers call the proximate cause of rheu- matism, inasmuch as it is inflammation not only of a particular locality (this locality seeming, for the most part, to be the fine membraneous ex- pansion which lines the muscles, or the ten- dinous aponeurosis), but the kind as well as seat is different from common inflammation ; and it is moreover difficult to form an idea of that disorder being properly inflammation which shall in a moment's time leave the spot where it was raging violently, and be transferred with all its force, and at once, to another seat. There is one pe- culiarity of rheumatic inflammation, viz. that it does not tend to suppuration : this, indeed, we have already intimated, nor does it produce exu- dation quite in the way of erythematic, or rather erysipelatous, inflammation ; in a word, it is a dis- order (though often, mixed up with others and thus greatly modified) in its nature, and essence, and characteristics, peculiar. The general di- vision of this disorder is into acute and chronic as we have stated above. Some pathologists however, have proposed a third division into that of paralytic rheumatism ; and there does seem some foundation for this adjective designation ; for without any kind of affection that would imply inflammatory excitement, even of a specific or peculiar kind, the limbs are affected occasion- ally with a sense of coldness, and of a powerless condition, from causes which in other persons pro- duce rheumatism, and which in several of their symptoms manifest an alliance with the more po- sitive or legitimate shape of the malady.

Distinctions. — From gout rheumatism is dis- tinguished by its affecting principally the larger joints, while gout is more common among the smaller; by its being for the most part more traceable to external excitants ; and by its not being preceded by stomach ailments. Some in- deed have endeavoured to prove that rheuma- tism is essentially a sympathetic affection, depen- dent upon gastric conditions. Yet, although no one will deny, who has been atttentive to

the phenomena of disease, that pains of nearly a similar character to rheumatism are often conse- quent upon internal conditions, and gastric irregularities, he must be indeed wedded to sys- tem who maintains that rheumatism never esta- blishes itself in the body, but through the medium of stomach irritation. Rheumatism further differs from gout in its attacking earlier in life, in its being attended when acute with more of sympa- thetic fever ; while from common phlegmonous inflammation it is different in showing no dispo- sition to suppurate, in changing from one part to another, and often by the redness and swelling being in no measure proportionate to the pain and irritation.

Prognotis. — Acute rheumatism requires often to oe met by vigorous measures in the onset ; and occasionally considerable blood-lettings would seem imperiously demanded ; it is a fact, how- ever, that blood-letting does not get hold of rheumatism quite in the same satisfactory manner that it does of common inflammation ; and it is for the most part better to make a strong impres- sion on the system by other means than detrac- tions of blood. A pretty considerable dose of elaterium will sometimes serve to strangle a rheumatism in its birth.

K Extract! elaterii gr. i. Confectionis aromat. q. s.

Fiat pilula.

Take of elaterium extract one grain ; make it into a pill with a sufficient quantity of aromatic confection.

Colchicum too is exceedingly efficacious in the early stages of rheumatism ; it may be given in the form of wine or the ammoniated spirit, ac- cording to the formula of Dr. Williams intro- duced into the last edition of the pharmacopoeia, or in powder to the extent of five or six grains.

Sudorifics with digitalis may be employed when there is much of pyrexial irritation.

R Tincturae digitalis purp. ity x. Syrup papav. f. 3ij. Liquoris ammon. acet. f. 3ft. Aquae purae f. 5J.

Take of tincture 6f foxglove ten minims, syrup of white poppy two fluid drachms, liquor of acetate of ammonia half a fluid ounce, water

one fluid ounce. Mix into a draught.

Saline purgatives also may be administered. Compound powder of ipecacuan, with very small .doses of calomel, will often prove beneficial given at night.

R Pulv. ipecac, corap. grs. xij. Hydrarg. submur. gr. J.

Fiat pulvis, hora somni sumendus.

Take of compound ipecacuan powder twelve grains, calomel a quarter of a grain. Make them into a powder to be given at bed-time.

Or smaller doses of this very useful powder may be administered three or four times in the course of the day in conjunction with the liq. amm. acet.

R Pulv. ipecacuan. comp. grs. vi. Liq. ammon. acet. Jft. Aquae purse Jift.

Fiat haustus.

Take of compound powder of ipecacuan sit grains, liquor of acetate of ammonia half a fluid ounce, water a fluid ounce and a half. Mix for a draught.

Calomel and opium, a grain of each made into a pill, will often prove beneficial in cases of ob- stinate rheumatic affection, after the hi%h or py- rexial inflammation shall have in some degree subsided.

When rheumatism requires external applica- tion, we must be careful not to be too free with repellent, or cold, or saturnine lotions, lest we produce metastasis to internal parts. When these do take place, especially when the new residence is the pleura or the pericardium, or the heart, we must freely and fearlessly have recourse to blood-

letting, and then follow it up by calomel and opium, to the extent of inducing a degree of sali- vation. Many lives, especially in the instance of heart metastasis, might be saved by this practice, sufficiently early had recourse to, and the prac- titioner ought always to be upon the alert against their occurrence.

Many years since the practice of giving the Peruvian bark very early and freely in acute rheumatism pretty generally obtained ; it was ad- ministered even in the most inflammatory kinds and stages and with much reputed success. This practice, however, is at present almost

entirely discontinued, and the bark is confined either to rheumatic disorders which ab origine manifest an intermittent or chronic disposition, or adminis- tered during convalescence, from the acute and more continued form of the malady. In inter- mittent rheumatism, if so any disorder may be characterised, the sulphate of quinin made into pills with crumb of bread, and given in doses of two grains two or three times a day, will occa- sionally prove of considerable service.

When, notwithstanding the continuance of the pyrexial irritation, there shall seem a tendency to sinking in the vital powers, ammonia will be found of much advantage ; which, indeed, will sometimes check the disposition to metastasis. It may be given by supersaturating the common liq. am. acet. as in the following draught.

R Liq. ammon. acet. f. 3iij. Ammonia; subcarb. grs. vij. Syrup, papav. f. 3ij. Mist, camphorae f. |j. Fiat haustus.

Take of the liquor of acetated ammonia three fluid drachms, subcarbonate of ‘ammonia seven grains, syrup of white poppy two fluid drachms, camphor mixture one fluid ounce. Mix for a draught.

Treatment of chronic rheumatism. — The stimu- lant, warm, and tonic medicinals, are in this stage and state of the disease more unequivocally ad- missible; they may be combined or alternated with medicines that are usually called alteratives ; and now it is that small and often repeated doses of the same medicinals may be had recourse to. which had in acute rheumatism been adminis- tered more largely, and for a shorter period.

R Guaiac. resinae 3y. Pilulae hydrarg. 3j. Pulv. digitalis 9j. Opii pp. pulv. 9ft. Mucilag. acaciae. q. s.

Fiat massa, in pilulas quadraginta et duas dividatur : dosis pilulae tres nocte maneque.

Take of gum Guaiac two drachms, blue pill one drachm, powder of foxglove one scruple, opium in powder ten grains, acacia mucilage as much as will suffice to form a mass. Divide it into forty-two pills, of which three are to be taken night and morning.

R Terebinthinae Chiae 3j. Pulv. antimonialis 3j. Guaiac. resin. 3ft.

Misceantur in massam, cujus formentur pilulse vipinti et duae. Sumat tres nocte maneque. Take of Chio turpentine one drachm, antimo-

nial powder one scruple, Guaiacum half a drachm. Mix them into a mass, of which form two and twenty pills. Take three night and morning.

R. Pilule hydrarg. submur. comp. grs. ivfi.

Opiipppulv. gr. ft.

Fiat pilula. Bis in die sumenda, et sumat asger eodem tempore.

Decoct, sarsae comp. f. Jiv.

Take of Plummer's pill four grains and a half, opium in powder half a grain. Make them into a pill, and let one be taken twice a day, the patient drinking at the same time four fluid ounces of compound decoction of sarsaparilla.

Compositions of the above kind may be varied almost ad infinitum according to circumstances ; and it may be proper, after a trial for some time of one formula, to have recourse to another. In but too many cases the disease will be found to baffle our varied endeavours. \Varm clothing will prove one of the best alteratives. The sub- ject of chronic rheumatism should not be con- tented with wearing flannel next the skin, but he should likewise wear the wash or chamois leather, which will sometimes prove more efficacous than all the drugs in the materia medica. Ban- daging rheumatic limbs with very tight rollers has, in the practice of some, proved greatly avail- able ; and beating or rubbing them daily (the former is the most efficacious), will occasionally prove signally beneficial. Acupuncture and shampooing, the first consisting of running into the skin the fine points of several very small needles together, the second pinching and kneading it, are recently revived practices in this country, and sometimes are attended with very considerably efficacy. Warm bathing is usually employed, and lately the vaporous sulphur baths have been much in vogue ; but it is questionable whether these last do not owe their efficacy to the penetrating quality of the vapor rather than to the specific operation of the sulphur. Elec- tricity, more especially the voltaic electricity, or galvanism, is occasionally employed with de- cided and extensive advantage in cases of para- lysis, consequent upon chronic rheumatism.

363. Gout. Podagra.— What is called a fit of the gout seldom makes its visit till after the age ot puberty, though to this rule there are occasional exceptions. It seizes the first joint or ball of the, great toe, which, with violent and peculiar pain, becomes also red, and in some

degreee swollen. This attack is for the most part in the night after the first sleep ; it lasts sometimes, with little abatement, for twenty-four hours, and then becomes mitigated ; it again, however, re- curs after the intermission of a day or two, and thus continues to harrass the sufferer from ten to twenty or thirty days, more or less ; for even in what is called regular gout there is much irregu- larity in point of time. The gouty individual, having thus had his first fit, sometimes enjoys a respite for a few years, and in the first attack the locality is for the most part that just mentioned ; but after three or four regular fits the feet, the hands, wrists, and other joints are affected, and the paroxysms come to visit more frequently, viz. annually, or twice or thrice in the ye-vr. Of the

varying modes and aspects of gout the readet will find a good account in the appendage to the definition ; but he must expect to find, in prac- tice, even still more irregularity than is there set down. The atonic or misplaced form of the disorder especially falls upon the stomach, pro- ducing dyspeptic symptoms; upon the lungs, giving rise to asthmatic conditions ; upon the heart, occasioning syncope; and upon the head, leading to vertiginous disorder; and upon the hcemorrhoidal vessels, giving occasion to piles The kidneys also are very commonly affected in this vicarious way in gouty subjects, to such an extent, indeed, that some have thought gravel and gout to be merely different expressions of the same malady.

Causes. — Gouty predisposition is constituted by a peculiarity of temperament ; there is often fulness of vessels and an apoplectic make. It is hereditary; the natural tendency being in- creased by very high living, and by all those habits of indulgence to which the gouty are often constitutionally inclined. These indulgencies sometimes prove actual excitants of the disorder; and at other times the paroxysms are brought on by precipitately changing from voluptuous to abstemious modes of life ; by exposure to cold at the time the predisposition is high ; by the cessation of accustomed employment It is always a fearful thing for a gouty merchant or tradesman to retire from the bustling anxiety of a city existence to the solitude and good living of country retirement ; by inordinate evacuations ; by mental anxiety, as well as mental ennui ; in a word whatever tends to general derangement will be likely, in the disposed to gout, to bring on the fit. There seems in gout to be a predis- position to the secretion of lithic acid, with an accompanying alkali in small quantities; but whether the constitution which produces gout merely gives power to withdraw this secretion from the blood with more than ordinary readi- ness, or

whether there is actually more of the material existing in the blood, does not seem to be satisfactorily ascertained. Certain it is that the same degree of digestive and general de- rangement happening in subjects not goutily disposed will not occasion gout, so that it is in one sense improper to look upon the affection as a mere stomach complaint.

Distinct ions.— From rheumatism gout is dis- tinguishable by the latter being as it were more constitutional, and having more obviously to do with deranged viscera ; by the frequent presence of calculous disorder, and chalk stones as they are called, in the small joints, and by the metas- tatic or translated affection being often of a spasmodic or tonic kind, while in rheumatism it is more inflammatory. The perspirations in gout have also for the most part more acidity than in rheumatism, and gouty subjects are for the most part salacious, a constitutional bias which doer not seem to have any thing to do in the way of connexion with rheumatism. For other marks of distinction see under the head of Rheumatism. Prognosis. — Gout is not in general a disease in itself of danger, indeed the general feeling among pathologists and practitioners is that it rather preserves the constitution from formidable

advents of other maladies. This principle has, however, been combated by Heberden, Beddoes, and others Certain it is that, when a person dies of gout, it is rather of the consequences of the malady than of the malady itself; and the fatal termination seems in some measure con- nected with a want of power to produce a full paroxysm of inflammation ; the humoral patho- fogists would say, a want of power to throw off the gouty matter which thus falls ou the interior and occasions death. Apoplexy is exceedingly frequent in gouty habits; and formidable and even fatal affections of the stomach and heart, so as to cause death, do not seldom occur as a con- sequence of the gouty diathesis being very strong. The presence of chalk stones proves an inveterate diathesis, and often argues a fatal tendency.

Treatment. — When the local disorder is very considerable, it may be moderated by topical blood-letting, that is by the application of leeches, and refrigerant lotions ; but the repres- sion of the topical inflammation ought not to be effected precipitately, especially when the sub- ject is advanced in age and his constitution has been debilitated by protracted disease. When the inflammation is not

particularly high, but the pain still considerable, relief is some- times obtained by the application of a camphor poultice, about a drachm or two of camphor being mixed with crumb of bread, and made into the consistence of a poultice with warm water. Warm and anodyne fomentations may also be employed. Some suppose, and with probably good reason, that beyond keeping the bowels attended to, and obviating as much as possible derangements in the digestive organs, the art of medicine is not capable of rendering any effectual or safe assistance ; since shortening a paroxysm by the interposition of drugs or other remedial measures is calculated to hasten its return and eventually to increase and protract the disorder. It is certain that some medicines possess the power of lessening for a time the violence of gouty action. Elaterium as in rheu- matism will do this. See Rheumatism. The colchicum too seems still more adapted to gout than it is to rheumatism, and the celebrated specifics seem principally to be made up of this last medicinal. Opiates combined with antimo- nials or calomel may be occasionally used ; and the formula which will be found under the head of Chronic rheumatism, consisting of compound powder of ipecacuan and calomel, may occasion- ally be taken with considerable benefit. In all cases the bowels should be kept in action, and the warm resinous cathartics are rather indicated in old cases than the saline refrigerants. A combination also of the alkaline principle with the purgative is often requisite.

\k Sodoe subcarb. exsic. 3ft.

Extracti colocynth. comp. 3ift. Mucilag. acaciae q. s.

Fiat raassa in pilulas xxiv. distribuenda. Su- mat tres pro dose.

Take of subcarbonate of soda dried half a drachm, compound extract of bitter apple a drachm and a half, and of acacia mucilage a suf- ficient quantity. Make into a mass, and divide A into twenty-four pills. Three for a dose.

R Tinct. rhei f. 3ft.

Liquoris potassae subcarb. f. 3ft. Infusi rhei f. Ji. Fiat haustus.

Take of tincture of rhubarb a fluid half ounce, liquor of subcarbonate of potass a fluid half drachm, infusion of rhubarb a fluid ounce. Make a draught.

Sudorifics may be occasionally employed ; but we must not be very free in the employment of antimony when the powers of the system are rather low.

Fits of atonic or retrocident gout are best treated by volatile alkali, which medicine serves the combined purposes of an antacid and ex- citant, and sudorific.

R Ammoniae subcarbonatis 9ft. Confect. aromat. 9i. Aquae purse f. Jift.

Fiat haustus.

Take of subcarbonate ot ammonia ten grains, aromatic confection a scruple, water a fluid ounce and a half. Make them into a draught.

Or if there be much inflammatory condition, while atony is at the same time conspicuous, the liquor ammon. acet. may be supersaturated with five or six grains of the subcarbonate of ammonia, and in order to increase the secietion of urine a fluid drachm of the nitric ether may be added to the draught. When the stomach is attacked with gout, large quantities of stimuli are required, and ammonia with aromatic con- fection is the best form of administering them, but brandy or warm wine may be employed in the absence of more positive medicinals. Sul- phuric ether, and ginger, are also useful in ato- nic and retrocedent gout.

The returns of gouty paroxysms are best pre- vented by an abstemious mode of diet, or rather by regular habits of living; by keeping the bowels acted upon, and preserving the urinary and cutaneous discharges free , regular exercise must also be taken. The aperients that are used should have reference to the prevailing acidity and the tendency towards obstruction or wrong action in the kidneys.

R Pulv. rhei 3i.

Liq. potassae subcarb. q. s. Fiatmassa in pilulas xvi. distribuenda. Sumat tres nocte maneque.

Take of powdei of rhubarb a drachm, liquor of subcarbonate of potass as much as is sufficieH* to form a mass, which divide into sixteen pills, and administer three night and morning.

R Soda; subcarbonatis exsic. 5i. Saponis duri 3i. Pulv. rhei rad. 3ft. Aqua q. s.

Fiat massa in pilulas xxxv. divide ; et suman- tur tres vel quatuor omni nocte.

Take of dried subcarbonate of soda and Venetian soap of each a

drachm, powder of rhubarb half a drachm, water as much as is sufficient to form a mass ; let it be divided into thirty-five pills, and give three or four every night.

Magnesia is a good aperient in gouty habits,

on account of its antacid and lithonthriptic qua- lities.

R Magnesiae subcarb. 9ij.

Spiritus ammoniae aromat. f. 3j. Tinct. rhei f. 3ij. Aqua; purae f. Jift. Fiat haustus.

Take of common magnesia two scruples, aro- matic spirit of ammonia a fluid drachm, tincture of rhubarb two fluid drachms, water .a fluid ounce and a half. Make them into a draught.

The continued use of bitters in gouty atony is a practice of questionable propriety ; they have been supposed to give a tendency to apo- plexy and paralysis, by curing or keeping under the gout, and thus fostering the tendency to these vicarious disorders. This may or may not be a correct notion ; but, at any rate, the habi- tual employment of medicinals is an evil ; and those medicines are more objectionable that do not act upon the secretions, as upon the skin, the kidneys, the liver, or the intestinal canal. We would not advocate the practice of giving for a constancy even purgatives, and diuretics, and diaphoretics, but they are, perhaps, less objectionable than the permanent employment of tonics and stomachics. Were it only that these last medicines excite to larger meals than the stomach is in a fit state to digest; this, in itself, would form an objection to them, and perhaps a-fter all this is the principle upon which their protracted administration is objectionable as medicines against gout.

The Portland powder, which was formerly a fashionable anti-arthritic, is composed of equal parts of the roots of gentian and round birth- wort, of the leaves of germander and ground pine, and of the tops of the lesser centaury, all dried.

Bath waters are useful in old gouty cases, but they have no specific agency. Indeed Heber- den, who may be considered as high authority in gout on account of his practice being princi- pally among the higher classes of the commu- nity, is altogether sceptical as to any good

effected by them.

The student will observe in the nosology odontalgia (tooth-ache) and arthropuosis (joint disease) marked as genera of the order phlegmasia ; but the consideration of these, beyond their being merely rheumatic affections, we refer to the article SURGERY. The remedies, however, no- ticed under the head of chronic rheumatism, will often beneficially apply to those affections of the joints which Dr. Cullen would designate by the term arthropuosis.

364. Order 3. RASHES ATTENDED WITH IN- FLAMMATION OR FEVER. Exanthemata. — Under this head we are to include, according to the nosological arrangement we follow, small pox, chicken pox, measles, scarlet fever, plague, St. Anthony's fire, the miliary eruption, vesicular eruption f pemphigus), and thrush.

For general remarks, on the principles of febrile eruption, we refer to the preliminary discourse attached to the present article.

365. Small po.r. Variola. — The fever which precedes the eruption of the small pox is at-

tended by pains in the loins and back, as well as pain in the epigastrium, noticed in the definition ; there is often considerable drowsiness ; and it is by no means uncommon for epileptic fits to make their appearance before the breaking out of the eruption. The first appearance of vario- lous eruption is like the bites of fleas; they usually come out first on the face, neck, and breast, and successively extend over the whole body. About the fifth or sixth day a small vesicle with a depression in the centre, and con- taining a fluid nearly colorless,- is observable on the top of each pimple. Now some degree of swelling in the throat, and difficult deglutition come on, which, on the eighth day, has extended to the face and eye-lids, and at this period the pustules are fully formed. On the eleventh day the swelling of the face subsides, the matter in the pustule has changed to an opaque yellow, and the hands and feet begin to swell. There is now, too, an appearance of what is called secon- dary fever, which gradually subsides, and disap- pears on or before the seventh day.

When the small pox is what is called in the nosology confluent, a more violent fever precedes the eruption, while the rash itself breaks out in a more hurried and irregular manner. The eruptions assume an ery thematic character, run- ning into each other, and do not suppurate

kindly, but contain an ichorous brownish matter; the swelling of the face, and the salivary dis- charge commence earlier, typhoid symptoms make their appearance, and often petechiae are observed on the skin ; blood is also dis- charged, by stool, and sometimes even by the urine ; the bronchial cavities seem to he laden with irritation, and the little patient often dies suffocated.

Causes. — Specific contagion. This may be re- ceived either by the lungs or the skin ; but in the latter case it is necessary that puncture or abra- sion be used. Although the virus of small pox is exceedingly subtile, it does not appear to have the power of penetrating the scarf-skin, and thus making its way into the blood-vessels or ab- sorbents.

Prognosis. — Now that the proper principles of treatment in small pox have come to be under- stood and acted upon, the prognosis may in ge- neral be considered favorable. In the confluent kind, however, there is always much to fear, on account of the typhoid tendency of the ac- companying fever. The unfavorable indications are the flattening of the pustules, or disappear- ance of the eruptions, with a subsidence of the swelling of the face ; th« breathing becoming much oppressed or obstructed, and marks of in- flammatory and congestive conditions about the head or the liver.

Distinctions. — A common attack of febrile disease is usually distinguishable from the fevet preceding small pox, by the latter being attended by pain in the loins and tenderness in the epi- gastrium ; and there is in general more of drow- siness in the fever preceding small pox eruption. When the eruptions break out they are distin- guished from measles by being larger, fewer, more distinct, and more papular; from the chicken pox, by their being more distinct and

circurasciibed, as well as more uniform in size ; ard,by a more regular and gradual progress of preliminary fever, and eventual suppuration. The pustule too is cellular and depressed in the centre, if it be genuine small pox.

Treatment. — It is merely necessary, in common small po* of the distinct kind, to enjoin a cool regimen; and if the fever runs high to administer saline and aperient medicines, as in common fever. If there is much restlessness, the addition of a little syrup of poppy, as in the following draught, will be found useful : —

K Laquoris ammon. acet. f. 3(5. Syrup, papav. f. 3ij Sp. aetheris nitric, f. 3j. Aquae purse f. Ji.

Fiat haustus.

Take of liquor of acetate of ammonia half a fluid ounce, syrup of white poppy two fluid drachms, spirit of nitric ether one fluid drachm, water a fluid ounce. Make them into a draught.

In the confluent small pox, the treatment is rather that demanded in typhoid fever. A com- bination of nitre and cinchona bark will often be found useful ; and it will be expedient to pre- serve the bowels free. In tendencies to sinking, especially if the eruption appears to recede, or manifest an inward direction upon the mucous lining of the bronchiae, the subcarbonate of am- monia must be given, and blisters applied to the chest. If diarrhoea be urgent, administer opium with ammonia ; and in some cases a combination of calomel and opium in equal doses, say from a quarter of a grain to a grain of each, according to the age and circumstances of the patient, will be desirable. Here it is allowed that the mucous surfaces are in a state of erythematic irritation, but it is that kind and degree of inflammation which will often best yield to bark, wine, opium, :i:nl cordials; or, at least, those must at all events be given when the system is sinking. Even in more distinct small pox, when the pock becomes flattened, and manifests an indisposition to come freely out, ammonia may be administered with signal advantage ; should there be much febrile action at the same time, it will be right to super- saturate the saline draught with the subcarbonate of ammonia.

\ iWe — In the above account we have treated of the distinct and confluent small pox, as if they were different kinds of disease ; it should, how- ever, be remarked, that the kind rather refers to the state of the individual and to epidemic constitutions in the air, than to any abstract or essential difference in the virus itself; the most confluent will produce in another the most dis- tinct, and vice versa.]

It might be expected that we should in this place enter upon a disquisition upon the substi- tute for small pox — the vaccine matter, but we pur- pose to devote a separate article to this important topic; and, under the word VACCINATION, the reader will find a full estimate of the comparative merits of the small pox and vaccine inoculation.

366. Chicken po.r, varicella.— The definition is a sufficient history.

Distinction. — We have already stated the prin- cipal points of distinction between this eruption

ana that of small pox. It is generally about the fifth day at furthest that the eruption disappears ; and, unlike the small pox, it often commences about the hip and back.

The prognosis is always favorable; and the

treatment necessarily simple. Indeed medicine

•is scarcely at all required; or, at furthest, some

gentle aperient to keep down the little irritation

that may be induced.

It has been contended by some, more especially by Dr. Thomson of Edinburgh, that small pox, the vaccine virus, and the varicella, or chicken pox, are mere degrees and modifications of the same poison. Others have advocated their essential distinction. On this head we shall have further to remark when treating of cow-pox un- der the word VACCINATION.

367. Measles. Rubeola. Morbilli. — The pro- minent symptoms of this disease are exceedingly well pointed out in the nosological definition. The eruption usually appears first about the face and neck, and successively spreads to other parts of the body. The fever does not, as in small pox, abate upon the appearance of the eruption, but rather increases as do the catarrhal symptoms. Sometimes the eruption at first ap- pears to come out full and free, but very soon disappears, and oppression of the praecordia, difficulty of breathing, and other internal symp- toms present themselves. At other times, during the whole course of the disease, the skin shall be but just sufficiently marked to prove the exist- ence of the complaint, and scarcely that. On the very day that we are writing these remarks, we have seen a child who is evidently laboring under the influence of measles' virus, but whose disorder would scarcely even be suspected measly, were it not that other children of the same family are simultaneously, and these ob- viously affected.

Causes. — Contagion as in small-pox. It is curious that small-pox and measles were treated of in the first instance as one and the same dis- order ; and, as the identity of vaccine virus with ' varicella and variola has been imagined, so has it been further supposed by some that measles and small-pox poison have only become essentially dif- ferent

by the operation of time and circumstance. Distinction. — From small-pox in the first breaking out by the presence of catarrhal symp- toms, and by the more clustered and less papu- lar appearance of the eruption. Measles consti- tute a sort of midway eruption between the more distinct papula of the small-pox, and the more erythematic and rashy character of scarlatina; from this last measles are also distinguishable by the coryza and sneezing as opposed to the cynan- chial irriration of scarlet fever.

Prognosis. — It is rather fearful to give a favor- able prognosis of measles from their first appear- ance, and for the first few days we should always leave it open to contingencies ; for sometimes the skin affection will appear to come out free and favorably, and then will suddenly, and without apparent cause recede, and internal damagement will take its place. If the fever run high ; if the difficulty of breathing be considerable; if deli- rium take place, if the eruption display an inte – nal tendency, if it assume a pallid appearanc “,

especially if it become livid ; and petechial spots are intermixed with it; considerable danger is to be apprehended. Much diarrhoea and vomiting are bad symptoms ; but slight diarrhuea with a free skin and easy expectoration are favorable signs. It is always well to see a good and re- gular crop of eruptions.

Treatment. The indications are to keep down excitement ; to guard against or combat local in- flammation, especially inflammation of the lungs; and to excite and stimulate when the powers of the system seem to be sinking.

Excitement is to be moderated by an equal temperature, carefully preventing sudden or par- tial applications either of heat or cold ; for, although it is not expedient to pursue the heat- ing and alexipharmic plans of former times, we cannot on the other hand adopt the cooling prac- tice quite so freely and fearlessly as in the small- pox, on account of the tendency of the eruption to recede upon the internal membranes, and on account of the catarrhal irritation that is always in a greater or less degree present. Saline pur- gatives are to be given as in common fever, ac- cording to the measure of the pyrexial irritation ; general blood-letting may be had recourse to if the patient be an adult, and the phlogistic dia- thesis runs high, but for the most part this is not necessary. Leeches must be applied to the chest if the

pulmonary symptoms become urgent, or to the head should delirious and phrenetic irrita- tion manifest themselves. Digitalis is for the most part a useful medicine in measles, and it may be joined with nitre and poppy syrup, as in the following formula.

R Tincturae digitalis purp. nˆ x. Syrup, papaveris f. 3ift. Pulv. potassae nitrat. 9ft. Misturae amygdalae f. Jift. Fiat haustus.

Take of tincture of digitalis ten minims, syrup of white poppy a fluid drachm and a half, nitre ten grains, almond emulsion a fluid ounce and a half. Make them into a draught.

When the internal tendency of the eruption, as above alluded to, becomes combined with much debility and sinking, the subcarbonate of ammo- nia will prove one of the best medicinals, since it has a sudorific as well as a stimulant quality (see under Confluent small-pox ; the same indica- tions being present, and the same rules applica- ble).

The cough which follows measles ought to be carefully attended to, and moderated by at- tention to diet — by the administration of digita- lis, or hyoscyamus, or conium, or poppy, or a combination of some or all of them ; and the child be removed to a mild air. If the pulmonary irritation become considerable and protracted, a blister may be laid on the chest, or the tartrate of antimony ointment applied ; for if these indi- cations of remaining disorder be not got under, they are apt, in their continuance to lay the foun- dation for future phthisis.

368. Scarlet fever. Scarlatina. — There is some uncertainty in respect to the time at which scar- let fever first made its appearance. It has been supposed by some to be a modification of some

of the other eruptive diseases, but there seems a good deal of difficulty attending the investiga- tion respecting the precise point of time, and the particular part of the world, in which this and some of the other acute affections of the exanthe- matous kind first appeared in a distinct and de cided form. ‘ It has been suspected that the contagion came originally from Africa. Be this as it may, it first broke out in a severe form in Spain in 1610, from whence it spread to Naples where it raged epidemically in 1618. In 1689 the same disease made its appearance in London, and was described by Dr. Morton, though not with the accuracy of the first Spanish and Italian authors. In 1735 it broke out in North America and spread gradually but slowly over that con- tinent. One of the most curious circumstances in the history of the disease is the slowness of its diffusion.’

Symptoms. — The definition comprehends almost all the common symptoms of the complaint. The inflammation of the skin appears as an erythema, and is not phlegmonous, nor papular ; the accompanying fever showing often a typhoid tendency, especially when the tonsils are much ulcera'ed. The face is often sensibly swelled about the third day. Scarlet fever, like the measles, is various in respect to the freedom with which the cuta- neous affection appears ; sometimes we have ,a promise of a large crop, or rather of a universal redness, which in a few hours recedes, and be- comes pale; sometimes the throat is malignantly affected; at other times there is scarcely any tonsil disorder. The sequelae, too, of the fever are very irregular, health and strength gradually, at times, following upon the cessation of the complaint in its active form ; while at other times, after a day or two of good promise, languor and weakness are felt, the urine becomes scanty, and dropsical tumefactions make their appearance. For the most part, these are confined to the skin; but now and then, especially if there have been much pulmonary or abdominal affection during the fever, symptoms become manifest of hydro- thorax or ascites.

Causes. — Contagion of a specific nature, com- municated it should seem as other contagions by the respiratory organs, the outer skin forming a complete barrier to its entrance into the system ; the power of infecting is said to continue cer- tainly a fortnight from the time of the eruption.

Distinction. — From measles (see Measles). From small-pox (see Small-pox). The distinc- tion proposed between malignant sore throat and scarlatina cynanchica does not perhaps exist ; for, although a malignant ulcer in the throat may be occasioned without the specific poison of scarlet fever being applied, we often see several children of a family affected simultaneously, one having the sore throat without having the skin disorder, another having the eruptive without the cynanchial complaint. Indeed, it is now pretty generally supposed that scarlatina and cynanche maligna are produced by the same specific con tagion.

Prognosis.— For the most part, upon the whole, more favorable than measles, since the internal tendency upon vitaLorgans is not so great. The later and less hurried the eruption, after the first

Appearance of fever, the better ; and the fever assuming less of the typhoid type is favorable. The unfavorable symptoms are delirium; coma; praecordial anxiety; hurried respiration, with a .hick voice and difficult deglutition; partial patchy eruption, instead of a full and universal floridness of skin ; pains about the angle of the aws, and ears, with acrid running from the nasal membrane or meatus auditorius ; saliva tinged with blood ; and dry contracted skin.

Treatment.— That of fever generally. Moderate Ihe excitement when high, as in fever. When the eruption is full out upon the skin, and there is no perspiration, cold water may be used freely to the surface. When the eruption is disinclined to come out, and torpor without signal typhoid tendency prevails, the subcarbonate of ammonia may be used with much prospect of benefit. Nitre and cinchona bark in combination, as mentioned in malignant small-pox, will be found applicable in the typhoid form of the disorder ; the mineral acids too may be ordered; and the frequent use of acidulated gargles is called for. It is often necessary to syringe the throat of children, or to apply more stimulant solutions in case of a sloughing appearance of the tonsils.

R Hydrargyri oxymuriatis gr. vj. Mellis rosae f. Jij- Aquae purae f. jvi.

Fiat solutio ; tonsillis ulceratis saepe applicetur parvis quantitatibus ope penicilli.

Take of oxymuriate of mercury six grains, honey of roses two fluid ounces, water six fluid ounces. Make a solution, of which apply a •

Blisters are sometimes called for in these and other eruptive complaints ; but they ought to be used with some reserve, when there is a gangre- nous or highly typhoid tendency in the habit, as in this case they are apt to produce sloughing and exhausting sores.

As a consequence of scarlatina we frequently find dropsical swellings of the skin in different parts of the body ; and sometimes dropsical accumulations in the cavities. These would seem to result from the exhausted state of the exhalant vessels on the surface, they having been stimu- lated too much in the inflammatory period of the disease. A difference of opinion has prevailed with respect to the method of treating this kind of dropsy following scarlatina, some recommending bleeding, while others prescribe tonics. Per- haps we should be guided in this, as in other cases, more by the attendant circumstances than by abstract considerations. Where there is much of arterial action in connexion with the oedema, we ought to be careful of introducing

tonics with much freedom ; at Ihe same time the debilitated condition of the system and of the exhalants worn down by protracted disorder ought to be taken into the account. It is wor- thy of remark that Dr. Gregory, who spoke highly of the bleed ins; and depletory plan of treatment (under these circumstances), in his lecture on dropsy states, in his Practice of Physic, that he has met with several cases which appeared to in- dicate the propriety of bleeding and purging, but

which resisted both, and ultimately yielded to bark and aromatic confection. Dr. Uwins speaks of the very gradual introduction of foxglove into the system under these circumstances as calcu- lated to meet both demands of reducing arterial irritation and obviating lymphatic debility. When foxglove is used with these intentions it should be commenced in doses (for a child four or five yeare old) of two or three minims, and in- creased to eight or ten by an additional minim at each dose. See Dropsy.

369. Plague. Pestis. — We have been so pleased with the succinct account which Dr. Gregory gives of the peculiarities, and habits, and circumstances of the plague, that we shall take the liberty of extracting the whole section of his book which refers to this sub- ject ; referring the reader to its more enlarg- ed consideration under the words PLAGUE or QUARANTINE in this Encyclopaedia.

The plague, classed by Dr. Cullen among the exanthemata, is yet, in strict nosological lan- guage, a continued fever closely applied to ty- phus, and therefore demanding notice more particularly in this place. It may be viewed indeed, without over-refinement, as the link which connects these two great classes of idiopatliic fevers. In its mode of propagation it resembles the exanthemata. In its symptoms and progress we shall trace an obvious resemblance to those of typhus.

The historical details connected with this very singular disease are highly interesting. The an- cients do not appear to have been acquainted with it ; but it must be confessed that its origin and early history are involved in much obscurity. For many centuries past it has been endemic on the shores of the Mediterranean ; and though it has occasionally shown itself in other latitudes, as at Moscow in 1771, and in this country in 1665, yet in that situation only is it at all times to be met with. Grand Cairo may be considered as the great nidus of the contagion of plague ; and from this point, at particular seasons, it spreads with a malignity scarcely to be esti- mated. The interest with which such a disease must at all times be viewed has been much heightened of late years from the circumstance of its having appeared in our own settlements (in 1813 at Malta, and in 1816 in the Ionian

Islands), and been subjected there and in Egypt to the observations of our own countrymen. The symptoms of this disease, the peculiarities in the laws of the contagion of the plague, and the cir- cumstances which appear to favor its diffusion, and the consequent appearance of the disease as an epidemic, are the points to which our atten- tion will, in this chapter, be principally directed. A feeling of great languor and lassitude usher in the attack of plague, which for the most part happens towards evening. There is always a cold stage, though it is seldom of long dura- tion. Heat of skin, head-ache, and giddiness succeed. The pain of the head is referred to the temples and eye-brows. The eyes appear heavy, dull, and muddy. The expression of the coun- tenance changes in a remarkable manner. Some- times there is a wild and furious look ; sometimes a look claiming commiseration, with a sunk eye

and contracted feature. The most striking of all the early symptoms of plague is the staggering, and the sudden extreme prostration of strength. A strong tendency to void the urine is generally noticed. The stomach is very irritable, and re- jects almost every thing presented to it. The tongue is white and moist. The bowels are sometimes torpid, and at other times loose, the evacuations being always highly offensive. The speech faulters. The pulse is at first small, hard, and quick ; but, after the appearance of buboes, it often becomes fuller and softer. It is sometimes intermittent. In point of frequency its average may be stated at 100. The heat of skin is sel- dom very intense. The head is occasionally per- fectly clear and collected. At other times stupor occurs immediately .after the formation of the hot fit. Some cases of the disease are ushered in by a violent fit of mania. The greatest indif- ference with regard to recovery prevails, and is always reckoned a most unfavorable symptom.

After one, two, or at furthest three days, pains in the groins and axillae announce the formation of buboes. These pains are often highly acute, and, unless speedily followed by the swelling of the gland, the patient dies delirious. In women the axillae, in men the groins, are chiefly affected. Carbuncles appear at the same time, but indif- ferently on all parts of the body. Petechiae and vibices are much more frequent than carbuncles, which it appears do not occur above once in twenty cases. The fatal termination is sometimes preceded by violent haemorrhages from the mouth, nose, or intestines.

The duration of the disease is very various. A few cases are on record where the patient died within a few hours from the invasion. To many it proves fatal during the first paroxysm or pe- riod, which includes the time from the evening of the attack to the close of the following night. The third and fifth days are however, upon the whole, those of the greatest danger. The former is the usual period of the appearance of bubo ; the latter of the abatement of the febrile symp- toms. If the patient survives the fifth day, and the bubo is fully formed, he may be considered as nearly out of danger. The convalescence in- deed is always very tedious, from the extreme debility which the disease leaves ; and the patient's life u not unfrequently asrain put into imminent hazard from the occurrence of gan- grene in the extremities.

Such is the train of symptoms which charac- terises this disease. To form some idea of the extent of the mortality which it occasions, I may mention that out of 700 persons attacked by it in the district of Leftimo in Corfu, in 1815, seventy were saved, and 630 died. It is curious however to observe that, occasionally, this very formidable disease assumes a totally different character. The mild form of plague is not pecu- liar to any families, or classes of persons, or dis- tricts, or periods of the epidemic. It is more commonly met with towards its decline, but it is observed occasionally even from the very first. Buboes form in this variety of the disease about the usual period, generally with a good deal of inflammation, and s,o on to suppuration. Car- buncles and petechiae, however, are never ob-

served to attend it. It is marked by the same set of febrile symptoms as characterise the malig- nant form of the disease, but they are all milder in degree. It terminates occasionally by a cri- tical discharge, but does not appear to require, or to be at all affected by, any kind of medical treatment. A few cases have been recorded of plague appearing in the form of buboes, without any constitutional affection.

A circumstance of some importance, as tend- ing to point out the analogy between the plague and other forms of continued fever, has been taken notice of by Sir James M'Grigor, in his Medical Sketches of the Expedition from India to Egypt : — I mean the effect of season, ventila- tion, and peculiarities of soil, in modifying the character of the symptoms. The cases of plague which occurred in the cold months of the year were marked by an inflammatory diathesis. Those which were sent in from crowded hospi- tals were attended from the very first with low or malignant symptoms. Those which occurred when the army was encamped near the marshes of El-Hammed showed a kind of remittent or iu- termittent type.

Some dissections have been made of the bodies of persons who have died of the plague, but they afford little or no instruction. The few morbid appearances noticed were met with in the cavity of the abdomen.

In the malignant form of plague every variety of treatment has been tried, but with so little effect that it may be considered as a disease nearly beyond the reach of medicine. The vio- lent head-ache which occurs during the first twenty-four hours seems to point out the pro- priety of blood-letting, and is recommended by the general custom of the Turkish practitioners ; but in the hands of English surgeons it proved of no avail. In the cases in which it was tried it did not appear, however, to make matters worse. The blood first drawn was generally sizy, but never afterwards.

Where mercury can b« brought to affect the mouth it appears to be of some service, but it is seldom that sufficient time is afforded for this specific effect of the remedy. Ether and lauda- num are valuable medicines in allaying the irri- tability of the ‘stomach. Wine and opium are of no use during the violence of the disease, and bark can seldom be retained. This is much to be regretted ; for wherever it can be made to stay on the stomach, even in those severe cases where carbuncles and vibices appear, its good effects are conspicuous. Camphor, bark, and wine are given with much advantage during the period of convalescence. Emetics, purgatives, and the cold affusion have been tried, but it does not appear that they are of any particular service. Diaphoresis can seldom be produced, owing to the disposition to vomit; but wherever it can be procured the symptoms seem to be mitigated by it.

Great attention is always paid to the local treatment of the buboes. They seldom go back, and it is usual, therefore, to employ means with the view of accelerating their suppuration. For this purpose the Turks are in the habit of apply- ing the actual cautery, but it did not answer in

the practice of our army surgeons. The irritation occasioned by it was excessive, so as sometimes to hasten the patient’s death. Blisters and poul- tices are certainly preferable ; but, upon the whole, it is quite obvious, that as little can be done in the way of surgical treatment in the plague as by internal medicines.

The general resemblance which plague bears to those malignant forms of typhus fever, which are occasionally witnessed in cold countries, must be abundantly obvious. The great distinc- tion between them lies in the occurrence of bu- boes; in other words, in the tendency which plague has to affect the lymphatic system. This line of distinction, however, is so broad, that plague is to be viewed as a continued fever, allied indeed to typhus, but differing from it in the important circumstance of having its origin in specific contagion. That the plague is a highly contagious disease cannot for a moment be made a matter of dispute ; but some physi- cians have maintained that it is not a fever sui generis, generated by a specific contagion, but only an aggravated form of typhus, in support of which opinion it has been argued, that cases of* typhus complicated with buboes have sometimes been observed in this country. This idea, how- ever, is entertained only by a few, and Vhe doc- trine of a specific contagion in plague is that which is now generally received. Its laws have been investigated with some accuracy, and the following seem to be the most important of those which have hitherto been ascertained : —

1 . The latent period of the contagion of plague, or that between communication with an affected individual and the appearance of symptoms, varies in different cases. It is scarcely ever less than three days, and it seldom exceeds six. In- stances are recorded of the disease not appearing until the tenth day, but these cases are rare.

2. The contagion spreads to a very small dis- tance only from the body of the patient. The consequence of which is, that the disease is seldom if ever communicated, except by actual contact.

3. The dead body does not communicate the disease so readily as the living. This, I under- stand, is well known in Turkey, but that the con- tagion is sometimes received from the dead body cannot, I apprehend, be doubted.

4. The contagion of plague is readily im- parted to fomites, in which it may lurk for a very long time, more particularly if secluded from the air.

5. Re-infection is occasionally observed, but, upon the whole, it is not common. The indivi- duals throughout Turkey, who are employed about the persons of plague patients, have, with very few exceptions, undergone the disease. Sufficient instances, however, are met with of persons taking the disease a second time, and even dying of the second attack, to make all who have previously had it cautious in their intercourse with the affected.

6. Plague, like the small pox, may be taken by inoculation. The experiment has been tried in several instances, but in none has it succeeded in mitigating the disease. Dr. Whyte in 1801, and Mr. Van Ilosenfeldt in 1817, paid the for-

feit of their temerity with their lives. The for- mer died on the fourth, the latter on the second day of the disease.

Plague I have stated to be endemic in Egypt; and both at Cairo and Constantinople cases of the disease are almost always to be met with. In other words they occur sporadically in those places. While the English army was in Egypt, in 1801, cases of plague were continually occur- ring ; but the judicious regulations which were adopted prevented the disease from spreading, and the troops suffered but little from it. At Malta however in 1813, and in the Ionian Islands during the years 1815-16, the plague raged epidemically ; and from very early times it has been observed that, at particular seasons, the plague disseminates itself with extraordinary malignity. To this nothing can give any effec- tual check but the enforcement of severe mea- sures by the strong arm of military power. At Marseilles in 1720, at Messina in 1743, at Grand Cairo in 1759, and on various other occasions, when the plague was suffered to advance without any such control, the ravages which it committed were of incalculable magnitude. The rigid seclusion of families, the immediate removal of all suspected cases to quarantine, and of all de- cided cases to the lazaret, are the preventive measures of most obvious importance.

Many enquiries have been instituted with the view of determining, if possible, what the circum- stances are which render the plague epidemic at certain seasons. Some particular constitution of the air is generally supposed to occasion it, but what that is never has been, and probably never will be ascertained. The extremes both of heat and cold are said to be unfavorable to the propagation of plague; but this opinion must be taken with some limitations. The plague raged in summer at Malta, in the winter months at Corfu. Nor is it clear that it is upon any peculiar state of dryness or moisture in the at- mosphere that the phenomenon depends, though indeed there is a popular belief all over the Le- vant that the heavy dews which begin to fall about St. John's day check the advance of the plague. To this circumstance is attributed the curious but well ascertained fact that, though the disease had been previously raging in the town, the inhabitants may, after that day, leave their homes, and mix in society with compara- tive security.

It is a common remark in the Levant that the advances of the plague

are always from south to north. When the plague is at Smyrna, the inhabitants of Aleppo handle goods without pre- caution, and have no fears of contagion. When the disease, on the other hand, is at Damascus, great precautions are observed, and all the Frank families hold themselves in readiness to shut up, or to leave the town. An epidemic plague, therefore, nearly always begins at Grand Cairo, spreads to Alexandria, and from thence through Syria to Smyrna and Constantinople.

The seeds of the plague being always present in Turkey, if it were not for these peculiarities in the laws of its contagion, that country must have been long since depopulated. Whether the genuine Levant plague could spread in this cli-

mate is a point upon which physicians are not agreed. The general opinion is, that it might so spread under particular circumstances, and, therefore, that the quarantine regulations estab- lished by the legislature are absolutely necessary for the protection of these countries.

370. St. Anthony's jire. Erysipelas.

Symptoms. — This cutaneous affection is often ushered in with sickness, and much depression of animal power; the pulse is quick and some- times hard; and, after a day or two, redness and tumefaction appear about the face and neck, which extends to the eye-lids, and closes the eyes ; this continues to increase for some days, often accompanied by great pain in the head, and delirium, and at length it terminates in de- squamation. Metastasis is very liable to take place in erysipelas to the brain, and sometimes to the lungs, producing in the first case delirium, and in the pulmonary translation difficulty of breathing and general pulmonary symptoms. The brain, however, is by far the most frequent seat of translated erysipelas. The head and face are not the only parts obnoxious to erysipelas ; the legs sometimes are the seats of the disorder, and at other times different portions of the body's surface. For an account of that species of erysipelas which Dr. Cullen calls the phlyctae- nodes, see the Appendix.

Causes. — Irritations in the stomach and bowels ; vicissitudes of temperature; over eating or drinking; suppressed evacuations, as of

the menstrual discharge. In some there appears a more than common disposition to plethoric ful- ness and erythematic inflammation; and these are the subjects that are predisposed to erysi- pelas. Erysipelas seems sometimes contagious, and often endemic, as if from some peculiarities in the air.

Distinction. — Gout and scarlet fever are the complaints with which idiopathic erysipelas is most nearly allied in appearance ; but these are easily distinguished from it by their accompany- ing tokens.

Prognosis. — In general favorable, but, not sel- dom, far otherwise ; the kindly symptoms are, the comatose and delirious states leaving the patient as the efflorescence of the skin proceeds ; this last shortly ending in a yellowish appear- ance, and not producing much vesication. If the fever continue urgent after the appearance of the efflorescence, assuming a typhoid type, and being protracted beyond the seventh day ; if then the skin redness suddenly recede, and internal tendencies become marked with prostration of strength, and weak or intermittent pulse, the patient must be considered in a highly dangerous condition.

Treatment. — For the most part it is best to begin the treatment by an emetic ; this being directly serviceable when the disorder is occa- sioned by stomach and bowel irritation ; and in- directly, when it shall have had another origin, by reducing action. When the subject of the disorder is in a high condition of sthenic excite- ment, robust in his constitution, and breathing the pure air of the country, we may have recourse to pretty large blood-lettings ; but these oucht to be instituted with much reserve in crowded hos-

pitals or cities, and when the patient is not con- stitutionally strong. In this case we must be content with saline purgatives or diaphoretics. Local blood-letting is seldom advisable in erysi- pelas : indeed, leeches often bring the disorder on when there is a constitutional bias towards its formation. When the frame seems sinking, and the disorder tends internally, give subcar- bonate of ammonia ; and, when typhoid symp- toms are urgent, bark and the mineral acids are called for. In respect to topical applications, the repellent kinds tor obvious reasons must be used with much reserve, and only then resorted to when the subject is young and vigorous, and the skin affection is at a distance from the head ; sprinkling the surface with flour, or starch, or oatmeal, will sometimes take off the distressing burning of the skin by gradually absorbing the acrimonious moisture that oozes out from the inflamed vessels. In cases of internal disposi- tion, warm fomentations or spirituous applications may be resorted to in order to restore the cuta-

neous action.

371. Miliary fever. Miliaria. — The defini- tion gives the symptoms with sufficient correct- ness. The great characteristics of the disorder are the odor of the perspiration, and the praecor- dial anxiety. The eruptions are like millet seeds, sometimes red, and sometimes more white or pale-colored. They are occasionally pro- duced by stomach disorder, but most commonly brought on by a heating, irritating regimen ; by an overload of bed-clothes; and by confined heated apartments : and are, therefore, of com- paratively unfrequent occurrence, in this day of antiphlogistic good sense. Their prevention and treatment are sufficiently obvious. In case of retrocession, succeeded by internal symptoms of an alarming kind, ammonia and cordials must be resorted to. In all cases it will be necessary to keep the bowels free, while attention is at the same time given to support the strength by bark and acids.

‘ To prevent the disease arising in pregnant women, costiveness,’ says Dr. Thomas, ‘ ought to be carefully guarded against, and when in child- bed they should strictly observe a cool regimen.’

372. Settle-rash. Urticaria.

Symptoms. — In addition to the definition it may be stated, that large wheals are occasionally observed on the skin as well as the small spots ; and that the disorder sometimes lasts, or dis- appears, and appears again for some months.

Causes. — Exposure to colds and heats will sometimes bring on urticaria ; at other times it is occasioned by substances taken into the stomach. Shell-fish will, in some individuals, invariably produce a nettle-rash ; and these fre- quently occurring idiosyncracies have induced patbologists to conclude that in all cases, even or the more common and decided nettle-rash, tli< > digestive organs are in some measure concerned in its production.

Treatment.— An emetic may generally be ad- ministered with propriety ; and afterwards cool- ing aperients. In the chronic disease we are informed, that an infusion of serpentaria may be employed with advantage in the proportion of two drachms to a pint of water.

373. Fericu/or eruption. Pemphigus.— This vesicular eruption is of

rare occurrence, of un- certain origin, and does not seem to be influenced by medicine on any other principle than of keeping the stomach and bowels clear, and meeting the incidental excitement that may be present by a cooling regimen. Should the atten- dant fever assume a typhoid character, bark, mineral acids, and syrup of poppy, may be given. Pemphigus does not appear to be contagious.

374. Thrush. Aphtha. — The aphthous erup- tions, that appear in the mouth and fauces, are generally accompanied by the same condition of parts, through the whole length of the intestinal canal, or at least through a considerable portion of it. They are merely indices of irritation growing out of debility, and are not under the control of any specific agents. When they take place iu the diseases of old people, that have been of long standing, they are, for the most part, signs of approaching dissolution. The aph- thae of children generally denote a disordered state of the mucous tissues of the stomach and bowels. Dr. Thomas speaks of a chronic thrush as very common in the West Indies, and accom- panied by a cachectic state of the general sys- tem. Aperients and detergent gargles are the remedies for aphthae generally, and the mineral acids taken internally, according to the extent of excitement or degree of debility : but to attempt their removal, without removing their cause, is like an attempt to whiten an Ethiopian's skin.

375. Order IV. HEMORRHAGES. Some re- marks will be found on the general doctrine of haemorrhage in the introductory disquisition, and we shall have to recur to the consideration in the article PHYSIOLOGY,, when the forces which circulate the blood are under discussion. It is only for us now to go through the several genera contained in the order; merely reminding the reader that haemorrhage takes place under oppo- site states of the system as to power, and that discharges of blood do not always imply actual rupture of the vessels containing it.

376. Bleeding from the nose. Epistaxis. — Hae- morrhage from the nose is generally an effort of nature, to relieve a congested or plethoric state of the blood-vessels about the head ; and, unless immoderate, it is for the most part inexpedient to interfere with the discharge. When much general excitement prevails, the antiphlogistic regimen is to be adopted; if obstructed viscera, as of the liver or spleen, have caused it, emul- gent purgatives are to be employed; and, in cases of old age and great debility, tonics and astringents may be required internally. The best local application are dossils of lint, or the scrapings from a beaver hat, put up the nostrils so as to plug them and permit a coagulum to be formed ; the lint may be dipped in strong

solu- tion of common alum or sulphate of zinc. The Midden application of cold to any part of the body will sometimes stop epistaxis; hence the

jl?ar remedy of a key put down the back. I'luriging the head in a pail of cold water, im- pregnated with salt, has been had recourse to with success when other plans have failed. It is a general observation, and one as old as Hip- pocrates, that persons who have bleeding at the

nose when young are liable in after life to hae- moptysis and consumption.

377. Spitting of Mood. Haemoptysis.

Symptoms. — The definition is very accurate; there is sometimes a hard full pulse at the time of the discharge ; the irritation is usually just at the top of the larynx, and there is often a saltish taste perceived.

Causes. — Scrofulous laxity, with plethoric ful- ness of vessel, predisposes to haemoptysis ; and the predisposing age is from sixteen to thirty- five. A narrow chest gives too a predisposition to the disorder, as does an obstructed state of one or more of the viscera ; or a suppression of an accustomed evacuation ; or obstructed perspira- tion.

The exciting causes are, violent exercise of the body or the lungs ; excessive heat ; the impure air of crowds ; and mental agitation. The air, also, not otherwise impure, may be too much rari fied.

Distinction. — From haematemesis, by the blood being frothy and florid instead of dark and gru- mous ; by its coming up in the act of coughing rather than vomiting; on this point there is, however, occasionally some difficulty, from the circumstance of vomiting being a frequent atten- dant upon haemoptysis; and by its being in smaller quantities than when it comes from the stomach.

Prognosis. — Unfavorable when the discharge indicates a phthisical state or tendency in the lungs, where it is not followed or preceded by much constitutional irritation. When it leaves behind it no difficulty of breathing, cough, nor pricking pain in the chest; and where there is no scrofulous habit, nor malconformation of the pulmonary organs, nor hepatic derangement, the prospect is favorable as to thorough and perma- nent recovery. It should be remarked, that the danger is in most cases rather remote than imme- diate, since death very seldom follows upon the mere quantity of blood discharged. Dr. Heber- den

tells us that he never witnessed but one case of a fatal termination of haemoptysis from the actual loss of blood.

Treatment. — With a hard and jerky pulse, as it is called, and when the haemorrhage is very considerable, repeated bleedings are called for, as in pneumonia ; but it is by no means necessary to bleed in all cases of haemoptysis. The anti- phlogistic plan of treatment is invariably required when the haemorrhage is of an active kind; heat in all forms and shapes must be avoided, and quiet enjoined. Saline purgatives are requisite, to which may be added tincture of digitalis; or this last may be given alone in doses of ten, gra- dually increased to thirty minims. The nitrate of potass is a good medicine in active haemoptysis. The sulphuric acid is an excellent medicinal.

R Acidi sulphurici diluti ni xv. Syrupi papaveris f. 3j. Infusi rosse f. 3ift. Fiat haustus.

Take of diluted sulphuric acid fifteen minims, syrup of white poppy a fluid drachm, infusion of roses a fluid cunce and a half. Make them into a draught.

Should the bleeding continue in defiance of the above treatment, more active astringents will be called for, and one of the most efficacious is the acetate of lead.

R Plumbi acetatis gr. j. Opii pulveris gr. ft. Micae panis q. s. Fiat pilula parva ; ter quaterve in die sumunda.

Take of sugar of lead one grain, powder of opium half a grain, crumb of bread enough to make a small pill, to be taken three or four times a day.

When this medicine is had recourse to, acids ought to be laid aside, otherwise bowel affections are likely to follow its use.

Blisters to the chest and back will occasionally be found useful in exciting a vicarious irritation. But for the most part it is improper to apply them till the vascular irritation has been got under by other means.

378. Pulmonary consumption. — Dr. Cullen marks this as a mere sequela of haemoptysis, but it often commences, proceeds, and

becomes in- curably confirmed, without any spitting of blood ; and often this last is rather an accompanying symptom than a preliminary condition of phthisis.

Symptoms — The first indication of this disorder is usually a short, dry cough, with impeded and hurried breathing, especially upon exercise either of the body or the lungs ; an indolence and lan- gour insensibly creep upon the patient's habits and feelings, and he is observed to lose flesh ; he is more than commonly also sensible to alternations of temperature, and in this state, between posi- tive health and actual disease, the patient will often continue for some length of time. But the breathing afterwards becomes more and more difficult ; and the cough more decided ; now too, pains are felt in the chest; a difficulty in lying on one side is experienced ; the emaciation be- comes more conspicuous, and hectic irritation is decidedly established ; burning heats are felt in the palms of the hands and soles of the feet ; the pulse becomes not only quick, but hard ; the urine high colored, and throws down a branny sediment ; and the tongue, from being at first covered with a whitish crust, now appears clear and red. The two daily exacerbations of the hectic fever occur ; the face comes to be marked at the time with a circumscribed spot of red. Morning perspiration too, principally about the neck, head, and shoulders, comes to harrass the consumptive subject ; and, at this stage of the complaint, the white of the eye assumes a pearly appearance, which is remarkably and mournfully opposed to the swimming brilliancy of its trans- parent part. Now too, the sputum has become unequivocally purulent ; the stomach fails of its retaining power, even though the appetite may not be deficient ; the emaciation becomes ex- treme; the cheek-bones frightfully prominent; the eyes hollow and languid ; the nails incur- vated; the hair falls off; cedematous swellings of the ancles take place, and at length, a diarr- hoea occurs, which last is usually a prelude to speedy dissolution: and the patient often dies, while he is still full of hope with respect to his state, and planning schemes for his enjoyment in

life. This last feature, however, is not an inva- riable one of the disease; in some cases, the patient is conscious of his approaching end, and resigned to his fate; at other times he wars against the disorder, and is worried by present irritation and gloomy prospects.

The above account of the progress of the dis- ease we have taken, as we nave many others, from Dr. Uwins's Compendium ; but in the pre- sent instance we shall add the symptoms of pul- monary consumption from two other modern authors ; for it is often useful to contrast and compare the accounts of different writers, and the student cannot take

too much pains in familiaris- ing himself with the physiognomy of this fre- quently occurring malady. The two other phy- sicians from whom we now extract are Dr. Gregory and Dr. Thomas.

A slight tickling cough is one of the first symp- toms that mark the formation of tubercles in the lungs. The patient is languid, and has the feel- ing of slight pains in some part of the chest, when he ascends a flight of stairs, or takes any considerable exercise. The pulse will commonly be found, even in this early period of the disease, somewhat accelerated. These symptoms, how- ever, being very slight, are often overlooked, both by the patient and his friends, until the occurrence of haemoptysis, which may be said to characterise the first stage of phthisis puhno- nalis, with as much certainty as purulent expec- toration does the second.

By degrees the cough becomes more and more troublesome. A fixed pain in some part of the thorax, or about the pit of the stomach, will now be complained of. Respiration is hurried, and the patient is unable to expand the chest, even in the slightest degree. There is difficulty in lying on one or other side, or sometimes on the back, and, at length, the nature of the disease is put beyond doubt by the occurrence of purulent expectoration, and hectic fever.

The expectoration of a thick pus, generally in the form of globular lumps, of a straw color, occasionally tinged with blood, and always more or less mixed with mucus, is indeed the peculiar feature of this disease; but perhaps too much stress has been laid upon the necessity of dis- tinguishing in pulmonic diseases between the different kinds of expectorated matter. An ex- tensive observation of disease will show that its appearance varies extremely, not only in dif- ferent individuals, but even in the same indivi- dual on different days, and that its qualities may alter, without materially altering the danger, still less the nature of the disease.

Dr. Gregory goes on to describe the pecu- liarities of hectic fever, and then continues his history in the following manner : —

Such are the characters of hectic lever ; and, as they are always most strikingly displayed in the progress of tubercular consumption, they will seldom fail, in conjunction with the local symp- toms already enumerated, to afford evidence which will be sufficiently decisive of the nature of the disease. There are some symptoms, how- ever, which occasionally occur in the progress of consumption, which require a separate notice. I may first mention that it is not uncommon tc

have in this disease an accession of acute pleu- risy, or of inflammation of the peritonaeal surface of the liver. Further, as phthisis frequently su- pervenes on other diseases, its symptoms are sometimes so complicated with those of the pri- mary disorder, that much discrimination is re- quired in forming a judgment as to the true nature of the case. In many instances the symp- toms of such diseases correspond very closely with those of phthisis, and this applies more especially to certain morbid states of the larynx and trachea, and to some obscure affections of the heart and great vessels. — I have already alluded to the hoarseness which attends consumption, and to that sympathetic affection of the larynx which is so frequent in its latter stages.

Dropsy, particularly of the cellular membrane, is by no means uncommon in this disease. A degree of oedema of the feet and ancles is suffi- ciently decisive of it, but it frequently extends also to the legs and thighs. This has commonly been attributed to debility, to that same relaxa- tion of the capillaries to which we are in fhe habit of ascribing colliquative perspirations. But this theory is doubtful, because in many cases, where an equal or even a greater degree of muscular weakness prevails, there is no ap- pearance of dropsical effusion. Dr. Hastings is inclined to attribute it to the mucous membrane of the bronchia becoming implicated in the dis- ease.

Dr. Thomas says the incipient symptoms of phthisis will vary with the cause of the disease ; but when it arises in persons of a strumous tem- perament, or from tubercles, it is mostly thus marked ; it begins with a short dry cough that at length becomes habitual, but from which nothing is spit up for some time, except a frothy mucus that seems to proceed from the fauces. The breathing is at the same time somewhat impeded, and upon the least bodily motion is much hurried ; a sense of straitness with oppression at the chest is experienced ; the body becomes gradually leaner, and great languor with indolence, dejec- tion of spirits, and loss of appetite prevail.

In this state the patient frequently continues a considerable length of time, during which he is, however, more readily affected than usual by slight colds ; and, upon one or other of these oc- casions, the cough becomes more troublesome and severe, particularly by night, and is at length attended by an expectoration, which towards morning is more free and copious. By degrees the matter which is expectorated

becomes more viscid and opaque, and now assumes a greenish color, and purulent appearance, being on many occasions streaked with blood. In some cases a more severe degree of hemoptysis attends, and the patient spits up a considerable quantity of florid frothy blood.

The breathing at length becomes more difficult, and the emaciation and weakness go on increas- ing. With these the person begins to be sensible of pain in some part of the thorax, which, how- tver, is usually felt at first under the sternum, particularly on coughing.

At a more advanced period of the disease a pain is sometimes perceived on one side, and at times prevails in so high a degree, as to prevent

the person from lying easily on that side ; but it more frequently happens that it is felt only upon making a full inspiration or coughing. Even where no pain is felt it often happens that those who labor under phthisis, cannot lie easily on one or other of their sides without a fit of coughing being excited, or the difficulty of breathing being much increased.

Dr. T. then goes on to notice the coming on of hectic, and proceeds to say, that, from the first appearance of hectic symptoms, the urine is high colored and deposits a copious branny red sedi- ment. The appetite, however, is not greatly im- paired; the tongue appears clean; the mouth is usually moist, and the thirst is inconsiderable. As the disease advances the fauces put on rather an inflamed appearance, and towards the termina- tion are often beset with aphthae, and the red ves- sels of the tunica adnata become of a pearly white (this last sympton and appearance is re- markably characteristic of phthisis). During the exacerbations a florid circumscribed redness ap- pears on each cheek ; but at other times the face is pale and the countenance somewhat dejected.

At the commencement of hectic fever, the belly is usually costive; but in the more ad- vanced stages of it a diarrhosa often comes on, and this continues to recur frequently during the re- mainder of the disease ; colliquative sweats like- wise break out, and these alternate with each other and induce vast debility. The degree of heat in which the patient is kept has often a great effect upon the diarrhoea ; for by exposing him to cool air in the morning the sweat may be much diminished, but the diarrhoea will be increased ; and on the other hand, if the diarrhoea be relieved by opiates and astringents, the sweating will be aggravated ; thus they frequently alternate for a long time, but in a few instances they are both severe at once.

In the last stage of phthisis the emaciation is so great that the patient has the appearance of a walking skeleton ; his countenance is altered, his cheek bones are prominent, his eyes look hollow and languid, his hair falls off, his nails are of a livid color and much incarcerated, and his feet and ancles are affected with oedematous swel- lings. To the end of the disease the senses re- main entire, and the mind is confident and full of hope. It is indeed a happy circumstance at- tendant on phthisis, that those who labor under it are seldom apprehensive or aware of any danger ; and it is no uncommon occurrence to meet with persons, laboring under its most ad- vanced stages, flattering themselves with a speedy recovery, and forming distant projects under that vain hope.

Shortly before death the extremities become cold. In some cases a delirium precedes that event, and continues until life is extinguished.

Causes. — Scrofula constitutes the predisposition to true or tubercular phthisis ; a particular forma- tion of the body likewise predisposes to it, as long neck, high shoulders, and narrow chest ; which, when they occur with a scrofulous dia- thesis, give a manifest tendency to the production of phthisis. The exciting causes are cold, and every thing which may mechanically, as it were, injure the lungs, such as the occupations rf

needle-pointing, flax-dressing, hair-powdering, &c. We are told by Dr. Willan that hair-dressers, bakers, masons, bricklayers' laborers, laboratory men, coal-heavers, and chimney-sweepers, as well as dressers in flax and feathers, and workmen in the warehouses of leather-sellers, are liable espe- cially to pulmonary disease. It seems to a cer- tain extent contagious. On the continent it is generally supposed very contagious, but in this country the opinion is generally scouted. Various diseases will excite the pulmonary tendency into action, as the catarrhal irritation of the exanthe- mata, especially measles; asthma, whooping- cough, bronchitis, pneumonia, haemoptysis, will all and each of them occasionally come to be productive of suppurative lungs in the common way of inflammatory disorganisation, or will ex- cite the tubercular predisposition into the specific disorder in question ; for genuine phthisis, we may repeat, is invariably tubercular. Tubercles are small tumors, which have been supposed by some to be indurated lymphatic glands ; but, although this is not the case, their formation and progress seem to have some intimate con- nexion with

the workings of the lymphatic sys- tem ; they are at first indolent and harmless, but, becoming inflamed, they suppurate and form little abscesses, which communicating with the air-cells of the lungs, are discharged by expecto- ration. These bodies vary from the size of a pin's head to that of a garden pea; they are fre- quently formed through the whole substance of the lungs, but are most usually met with in its upper and posterior parts. In their earliest state they are solid and of cartilaginous hardness. No blood vessels can be traced in them even by a micros- cope, and the finest injection does not penetrate them. They are situate, not in the air-cells, but in the proper cellular texture of the lungs.

Distinctions. — In the latter stages of pulmo- nary consumption, the disorder is too unequi- vocally marked to be mistaken for any other. Chlorosis and amenorrhoea, however, simulate the disorder in its early stages, and often termi- nate in its actual production. In respect to the distinction between pus and mucus, the eye will soon, by use, learn to make it with quite as much accuracy as by any chemical tests; pus, it is merely necessary to say, is more compact in its substance, more opaque in its appearance, sinks sooner in water, and is of a more foetid odor than mucus. When pus comes to be gradually formed from mucous surfaces, the discharge is often a something between mere mucus and positive purulent matter. This kind of interme- diate substance is, however, more common to bronchitis than to tubercular consumption, and its presence may in some measure be taken as a diagnostic mark between the one and the other disease. Between specific or true consumption, and the disorders which commence in common inflammation, and in common suppuration, the distinction must betaken from the slow insidious progress of the former, and from its being ac- companied by scrofulous marks. It may in conclusion be noticed that there is often a pecu- liar and semi sort of voice in the individuals destined to be consumptive, and not unfrequently actual aphonia occurs. The stethoscope has

lately been employed by Dr. Davis for ascertain- ing the various stages of this disease. It was originally introduced by Laennec, and owes it power to the conducting power of a piece of wood which is brought in contact with the chest. By the sound emitted, the practitioner is enabled to determine the amount of the patient's danger.

Prognosis. — Always unfavorable in confirmed tubercular phthisis. We hear talk of ulcers being healed, and consumptive cysts left, as cysts are formed in the brain after haemorrhagia cerebri, and the disorder thereby for a time stopped ; but it is, to say the least, extremely doubtful whether strurnous tubercular ulceration that has taken place

to any extent can ever be cured either by nature or art. That pus may be expectorated, and the patient recover, we all know ; but then tin's is the pus of common, not of specific inflammation, and takes place after bronchitis, or after pneumonia, not from tubercle. Dr. Gregory, in remarking on the prognosis in consumption, expresses himself in the following manner : — It is unnecessary to treat formally of the prognosis in this disease. The common observation of the world has sufficiently stamped its character as the most destructive disease in this island (the annual deaths in England by consumptions are calculated at one in five of the whole mortality, and amount therefore annually to about 55,000), and in its confirmed stage almost hopeless. The duration of the com- plaint, however, it is scarcely possible to define with any degree of accuracy; for a galloping and lingering consumption are almost equally fre- quent. A French author, speaking of the usual duration of pthisis, informs us that, out of 200 cases, 104 died, within nine months. In many cases there are threatenings of the disease for several winters before the symptoms assume any degree of urgency. They are often checked by the return of mild weather ; but perhaps, even in a still more remarkable manner, by pregnancy. The months of January and December are ob- served to be particularly fatal to phthisical patients. Sometimes they die from extreme weakness, exhausted by the discharge of pus, and the colliquative perspiration and purging; at other times more suddenly suffocated by accu- mulation of pus in the bronchi, which they are unable to expectorate ; and in some rare cases by the rupture of a large blood-vessel in the lungs in consequence of ukeration.

Treatment. — Keeping down irritation consti- tutes the main principle in the management of phthisis, since it is irritation, superinduced upon predisposition, by which the disorder becomes developed ; but then, in attempting to do this, we must recollect that there is often a formidably asthenic condition of frame, under the cover of high action, and that we may come to defeat our own purpose by pulling down too fearlessly. In the catarrhal irritation 6f incipient phthisis, small bleedings are, however, often imperatively demanded. Counter irritants are also called for, such as blisters, or »he antimonial ointment to the chest. It is in this condition of parts and of the whole that the vegetable narcotics, viz. the digitalis, prussic acid, hyoscyamus, conium, ard poppy separately, or some of them combined,

will be found applicable; and if the pulmonary excitement partake, notwithstanding its consti- tutional and specific nature, of a sympathetic character, or is magnified, if not made, by stomach and bowel, or hepatic disorder, then small doses of the blue pill,‘in conjunction with the narcotics, may be admissible. Gentle laxa- tives are always to be thought of as part of the curative measures; and some have much faith in the occasional, or even periodical, exhibition of emetics; these last have, however, for the most part been used in the latter or ulcerative stages of the disorder. Regulation of the diet, but more especially of external temperature, is, in the early periods of phthisis, of most import- ant consideration. Warm clothing should be enjoined, especially warmth to the feet; and, when the menaces of the complaint are too un- equivocal to be mistaken, we must give up all thoughts of braving it out, or hardening the frames of our patients, lest we add to the already existing irritation. Some, indeed, still pursue the plan, even in the most formidable state of con- sumptive manifestation, of cold applications to the chest, and other rough processes ; and success may, occasionally, have followed their experiments : it must likewise be admitted, that the other plan of confinement and regulating temperature is but too often unavailing. While we keep the apartments of our consumptive invalid in a state of equable warmth, we must, at the same time, guard against those impurities in the air that are likely to be engendered by confining it ; and we must at no time raise the heat beyond pleasant endurance. Early removal to more temperate climates, such as the south of France, or Devonshire, in our own country, may be thought of, when the patient’s circumstances permit ; but the idea of any specific good to be got by these changes, beyond a greater equality of temperature, must be given up. In some cases the journey or voyage may prove useful, by altering the actions of the system, and indu- cing a new series of movements. Inhaling tar vapor has been highly recommended, but it is for the most part too irritating, and rather appli- cable to bronchitis than to true consumption ; a farinaceous diet should be enjoined, such as arrow-root and light puddings ; milk, too, as being nutritious, without being irritating, oueht to constitute a large portion of the phthisical patient’s support ; ass’s milk, being more easily assimilated than that of the cow, is, in cases of weak digestion, more beneficial ; but in no other way preferable. Shell-fish, especially oysters, seem sometimes abundantly to suit the con- sumptive. But these are matters that must be rather regulated by individual experience than abstract rule. All inhalations of factitious airs, whether to moderate the excitement of the first stapes, or to stimulate and heal ulcers in the latter, are pretty generally now abandoned as unavailable. In that condition of phthisis which is

between the hope of the first stage “and the absolute hopelessness of the second, chalybeates have been employed with alleged benefit; especially the combination of myrrh, sulphate of iron and alkali, constituting: the celebrated mix- Viir-3 of Griffith, and now introduced into the

pharmacopoeia, under the name of mistura ferri composita. This is especially applicable to the consumptive disorder of chlorotic females, and may, with address and management, be applica- ble to the states supposed. We do not, however, in the present day, find medicines of this class so available, or even so admissible, as the reports of our immediate predecessors would lead us to believe might be the case. Moderate exercise, so as to keep up a constant tendency towards gentle perspiration, should be enjoined on the con- sumptive invalid, when it can be used without too much exposure ; horse-back exercise was formerly thought to be almost a specific in hectic irritation; swinging is recommended by some, upon the same principle of agitating and exer- cising without fatiguing. We come to be more and more sceptical with respect to the specific qualities of waters, as well as places, for con- sumptions. The Bristol waters, for instance, have been extolled and held in reputation as highly antiphthisical : but a practitioner of high name, and not certainly destitute of a disposition to credit remedial processes, and who resided at the hot wells, ridiculed their pretensions to sanative virtue; and another physician tells us, that during a residence of some time, at and near the Bristol hot wells, he cannot charge his memory with a single instance where any per- son, laboring under a confirmed phthisis, experi- enced much relief from their use alone.

In the confirmed, or completely suppurative, stage of the disease, it follows from what has been intimated above, that we are not to expect much from art ; opening setons or issues in the fleshy parts of the chest may prove of temporary advantage in prolonging life; and should the purulent sputum not come from almost the whole mass of the lungs, or not result from turber cular irritation, this measure might, in some cases, prove radically and permanently sanative. British physicians of the present day look pos- sibly with too little regard upon the power of these counter-irritants. When there is not such a degree of inflammatory irritation as to forbid their use, tonics of different kinds, especially the mistura ferri composita, may be given under these circumstances, and the copaiba may be tried, should we suspect that the purulent dis- charge was partly, at least, from the bronchial membrane ; but it may be repeated, that, in true phthisis of a confirmed kind, it is idle to encou- rage the expectation of any radical or essential good being accomplished by our present know-

ledge of the powers of art. — Dr. Uwins.

Dr. Gregory's remarks on the treatment of consumption are as follows : —

It is melancholy to reflect how very little this disease is under the control of medicine ; and, before I can enter upon the consideration of the principles which are to guide us in its treat- ment, I must record the failure of every plan for its effectual cure, which human ingenuity has yet devised.

The first principle which it appears to me of importance to inculcate is, that in phthisis active measures cannot be pursued, and that this must be compensated by a strict attention to a num- ber of less circumstances, which in many othei

diseases may be neglected without detriment to the patient. We are to bear in mind that con- sumption, though an inflammatory affection, is principally characterised by its occurring in a scrofulous, which is commonly a weak habit of body, and in an organ loaded with tubercles, the inflammation of which runs rapidly to sup- puration. The chief objects of consideration, therefore, are how these tubercles may be either absorbed, or kept in a quiescent state; in what respect their treatment, when inflamed, differs from that of common pneumonia ; and how the constitution may be best supported in the pro- tracted suppuration to which their inflammation leads.

The question has been frequently agitated, whether tubercles can be absorbed, and by what medicines that desirable object can be effected. Emetics have been recommended by some, the muriate of baryta by others ; but, though there is every reason to believe that tubercles have in some cases dispersed, yet this effect appears to be as completely out of our control, as the manner of their formation is beyond our know- ledge. All that can reasonably be expected from medicine is to keep them in a quiescent state, and this is to be done by a strict attention to diet, air, exercise, and by avoiding all those causes which we noticed, in the last chapter, as likely to bring on haemorrhagy of the lungs.

The diet of a person who has shown a dispo- sition to phthisis, should be nourishing, and cal- culated to afford strength to the system, without creating a disposition to febrile excitement. For this purpose,

farinaceous preparations of all kinds, with milk, should be recommended. Ani- mal broths with fish and a proportion of plainly dressed meat may also be allowed ; but all highly seasoned dishes, and food which is difficult of digestion, and fermented and spirituous liquors are to be strictly prohibited. Nothing appears more likely to correspond in every respect with this indication of cure, than the breathing a free and pure air, and its advantages in consumptive cases are generally acknowledged. The patient should be sent therefore to the country, and if possible a situation selected, which is sheltered from cold bleak winds, and where the soil is gravelly.

To those whose circumstances will admit of it, we should advise the removal to a warm cli- mate. Consumption, though far from being uncommon in the southern countries of Eu- rope, is, upon the whole, less frequent there than in cold climates; but between the tropics it is a disease nearly unknown. This considera- tion, were it not for the danger of the endemics of those countries, would induce us to prefer the Bermudas, or even the West India Islands, as a residence for consumptive patients. But even the south of Europe, particularly the climate of Naples, holds out many advantages, and a timely removal thither, with regularity of living, mny be recommended to those who are threatened with consumption, with a fair prospect of overcoming the tendency to the disease.

With the enjoyment of a free and pure air, moderate exercise should also be advised. A sedentary mode of life, and close application to

study, or business, have frequently proved the exciting cause of the disease ; partly, perhaps, by the bent position in which the thorax is so long kept, but principally from the want of that due exercise which is essential to the preserva- tion of the health and strength of the body. With the view of affording at the same time, both exercise to the body and relaxation to the mind, a journey during the summer months is particu- larly useful.

When haemoptysis has occurred, and when the symptoms warrant the belief that inflammatory action is going on in the lungs, measures of more activity must be pursued. Bleeding from the arm has been recommended as a means of put- ting an immediate check to the progress of the' disease ; but this is a vain hope, and blood-letting must therefore, at all times, be resorted to with caution, and a due consideration of the habit of body in which consumption occurs. Where the pulse is hard and contracted, and the pain and cough urgent, blood must be drawn from the arm as in pneumonia, and repeated according to the strength of the habit, and severity of the

symp- toms. At any period of the disease, if pleuritic symptoms supervene with a loaded state of the tongue, blood may be taken away ; and com- monly a few ounces taken from the arm will be preferable to the application of leeches.

Blisters afford great relief to the cough and tightness across the chest, and they may be re- peatedly applied with great advantage through the whole course of the disease. I have never seen sufficient benefit derived from issues and setons to warrant me in recommending them. Active purging is inadmissible, but an occasional dose of castor oil, or of rhubarb, will be found very useful. The mild diaphoretic and expec- torant medicines may be exhibited frequently through the day. Attention to the state of the skin, indeed, is very necessary in this disease, as in every other in which the lungs are implicated. A uniform temperature of the body should be promoted by warm clothing. In some cases it may be necessary, during the whole winter, to confine the patient to apartments which are of a regulated temperature.

In this state of disease digitalis is universally employed. That its powers have been extrava- gantly over-rated, I cannot doubt, but it appears in some cases to quiet the cough, and to be a useful narcotic. In this view, I am inclined to think it preferable to conium, and even some- times to opium. I have never observed any good effect to follow from pushing the dose of this medicine to such an extent as materially to affect the pulse.

In the confirmed stages of consumption, it will be advisable to support the strength of the sys- tem by mild tonics ; and the mistura ferri com- posita, in doses proportioned to the state of the system, is perhaps, under all circumstances, the best form of tonic which can be recommended. In many cases, however, it seems to increase the febrile excitement, and to aggravate the cough and dyspnoea.

Attention must chiefly be paid in this state 01 the disease to palliate the urgent symptoms. Cough may be alleviated by demulcents ; diar-

rhuea muy be diminished by chalk, catechu, and aromaiics. Both these objects will be promoted, and the further advantage gained of procuring sleep, by the last resource which the art of me- dicine affords — opium.

In addition to the statements of the above mentioned physicians

respecting the curative plans indicated in consumption, and the prospect of good from them, we shall here extract that part of Dr. Thomas's chapter on this sub- ject which relates to change of air and climate.

In our climate, tubercles are evidently in- duced arid accelerated in winter, and retarded in summer. A person gets a dry cough in winter or spring, which goes off as the summer ad- vances, and was regarded as a catarrh, but tu- bercles were forming : if therefore such a person could be removed to a warm climate, before the winter comes on, he might escape an attack at this period ; and, by continuing there for a few years, may be perfectly recovered. Going to a warm climate is not merely avoiding what might be hurtful, it is applying a remedy which has the best chance to prove beneficial.

It may justly be admitted, that the cold and variable temperature of the winters in England is the great source of phthisis in this country, and, when the disorder is once formed, greatly contributes to its fatal termination ; and that a warm and equable temperature in some measure prevents the formation of the disease, and, when it has taken place in only a slight degree, pos- sesses some power in retarding its progress.

In the early stage of consumption, that is to say, when suppuration and ulceration have not yet taken place, it appears from the report of Sir James M'Gregor, that the disease was checked by the climate of the Peninsula among those of the army affected with phthisis ; but that when suppuration and ulceratioa had taken place, it ran even a more rapid progress than in England, and the same remark has been made in regard to the East and West Indies.

It is indeed a well-established fact, that a warm climate is only advantageous in cases of incipient phthisis. Persons who have passed the first stage of pulmonary consumption will derive no benefit from a journey to the South of Eu- rope, or elsewhere. Those who labor under confirmed phthisis should never quit their own country. By leaving it, they will lose many comforts ; they most probably will be deprived of the attendance of their nearest and dearest friends, as well as that of the medical men in whom they can place confidence, as the English are apt to be prejudiced against foreign physi- cians : they will, moreover, expose themselves to much anxiety and fatigue, and all this for a vague hope of recovering or prolonging life, an expectation very seldom, if ever, realised. If they remain at home, which they had best do, in all cases of confirmed phthisis, they may live throughout the winter in a regulated temperature, f the patient's case is one of

incipient phthisis only, and his circumstances will admit jf removing in due time, that is to say, on the first thveatenings of the disorder, from this cli- mate to one in which the temperature is warm

during winter, he may comply therewith. Tht islands of Madeira and Malta, Lisbon, Italy, or the south of France, have been recommended as proper places.

To persons liable to catarrhal or consumptive complaints, the most important properties of the climates of other countries are, warmth and equability of temperature, especially in the win- ter months. The islands of Madeira and Malta present, numerically, a mean temperature for the winter months, but Pisa, Nice, Villa Franca (very near the latter), and Hieres, are certainly the most desirable places for an invalid.

A female writer of some celebrity informs us, she is convinced by experience, that the lives of many consumptive patients might be saved were they sent by sea to Leghorn, advised to winter at Pisa, cautioned against travelling much by land, and, above all things, interdicted from crossing the Appennines and Alps, which people very frequently do, in order to spend the sum- mer months in Switzerland, one of the most un- equal climates in Europe. She thinks that, in pulmonary complaints, Pisa is entitled to a de- cided preference over Nice, Massa, Florence, Rome, or Naples, or indeed to any other place in Europe, from the beginning of October till the end of April. She was advised to travel over land to Italy, and, therefore, she passed over to France. Nice was recommended to her as the best winter climate, and she therefore spent many months in that city : but experience soon convinced her that she might have adopted a more eligible plan ; for long journeys over land on the continent are to consumptive persons dange- rous experiments, owing to the accommodations being so very indifferent that it is scarcely pos- sible for an invalid to sleep at an inn out of a great town without suffering. To consumptive persons, and invalids in general, she therefore recommends the going to Italy by sea in a vessel bound to Leghorn, and so wintering at Pisa.

When the patient’s circumstances or business will not admit of his removing to a more tem- perate climate, he must endeavour to pass his winter in some place which is dry and well shel- tered from cold bleak winds, where the air is free and pure, and the soil of a gravelly nature. The mild and sheltered vales of Devonshire, but more particularly Sidmouth, Torquay, and Pen- zance in Cornwall, offer desirable situations of this nature ; but the latter may be considered as entitled to a decided preference.

It has indeed been thought by some as equal to any situation abroad ; and, therefore, the vic- tim to consumption will not find it necessary to fly an exile from his home and friends to seek a doubtful advantage in a foreign clime.

From a register of the weather at Penzance, by Dr. Forbes, the mildness and equaoi/ity of the temperature of that country are evident. He observed the maximum temperature of July was only 78° of Fahrenheit, the minimum of Decem- ber only 33°, and the mean range of the baro- meter 1-48 inches.

With the enjoyment of a free and pure aii. the patient should take daily moderate exercise either in a carriage or on horseback, but more

particularly the latter. By taking it in progres- sive journeys through different parts of the country, in fair and settled weather, the efficacy of the remedy, great as it may be at other times, would be much increased ; for in such a tour the mind would find an ample store of amuse- ment, and be diverted from any train of unplea- sant thought. The pursuit of some object at the same time might probably add to the effect. All violent exertions, such as dancing, &c., li- berties in diet, and going to crowded public places, are most cautiously to be avoided.

If the disease has made considerable progress, and the patient is thereby prevented from ex- posing himself out of doors during the winter and spring, he must be contented to live in chambers subject to very little change from the atmosphere, asid heated from 62° to 650, which temperature will be most suitable. A stove may be employed for the purpose, and a preference should be given to one of porcelain (like the German and Russian stove), over one of iron, as a very unpleasant smell is occasioned by the latter. Dr. Buxton is of opinion that in the com- mon shop stove, or ironing stove used in laundries, we possess all that is necessary for the purpose of the proposed remedy.

Under the principle of amusing the mind, and at the same time of having a desirable end to be obtained, many phthisical patients are yearly sent to the hot-wells at Bristol. The waters of these wells have long been extolled for their supposed good effect in consumptive cases ; but in my humble opinion they are by no means deserving of the credit ascribed to them, as, during a residence of some time at and

near these wells, I cannot charge my memory with a single instance where any person labor- ing under a confirmed phthisis experienced much relief from their use alone.

That many persons who have been of a phthisical habit have derived benefit from re- sorting to the Bristol hot-wells, I am ready to admit ; but this should not be attributed wholly to the waters. The horse exercise, which is taken daily by such patients, on a fine airy down, where most beautiful views and rich landscapes are presented to the eye on every side ; the sa- lubrity of the air ; the heathfulness of the situa- tion, and the frequent attendance on the different amusements which are furnished at these wells, and those of Clifton, prove beyond all doubt most powerful auxiliaries. Places of public resort are food to the mind of convalescents, and serve to keep it in the same active state that exercise does the body, preventing thereby that indulgence in gloomy reflection, to which the want of cheerful scenes and agreeable com- pany is apt to give rise in those who are in an in- different state of health.

The opinion which I have here offered, on the efficacy of the Bristol hot-wells waters, seems however by no means to accord with that enter- tained of them by a gentleman who some time ago published a dissertation on their chemical and medical properties. On the subject of pulmonary consumption, he observes, that the utility of a journey to Bristol, undertaken while a cure is yet practicable, is demonstrated by

hundreds of examples annually, where the disease is prevented in many, and suspended or mitigated in others. I agree, however, with I)r Beddoes, that the fine things which medical mei put into their pamphlets about the water of the places where they constantly or occasionally re- side, are to be received with a large share or weight of allowance. Nay, I am decidedly of opinion, that at least three-fourths of the cures attributed to all mineral waters, ought rather to be placed to the account of a difference in air, exercise, diet, amusement of the mind, and the regulations productive of greater temperance, than to any salutary or efficacious properties in the waters themselves.

Short voyages on sea have been much recom- mended to consumptive persons, under the idea that sailing is of all modes of exercise or con- veyance the smoothest and most constant. The good effects produced by sea voyages seem to depend, however, chiefly on the purity of the air, assisted somewhat probably by the occa- sional vomiting, which persons unaccustomed to be on board of a ship usually experience.

379. Hemorrhoids. — Hemorrhoids are either formed of varicose haemorrhoidal veins, or of parts of the internal membrane of the rectum strangulated by the contraction of the sphincter ani, or of interstitial deposits of blood in the cellular membrane of the part under the mucous coat of the intestine. They are divided into external and internal, blind and bleeding, and the differences may be easily understood from their names. They are frequently accompanied by much heat and pain about the loins and in the rectum, which is increased often by the passage of the faeces ; when the pile becomes inflamed, and is in this condition strangulated by the sphincter, and the pain which they occasion is often of the most acute kind. When the piles bleed, they frequently do so most profusely, so that the quantity of blood lost in this way will be very considerable.

Causes. — A predisposition to piles is often in- creased by too free an indulgence in food and wine, by sedentary habits, by suffering the bowels to remain long in a costive state, by the too fre- quent use of the resinous purgatives, particu- larly aloes, which seem to have their influence principally directed upon and confined to the lower bowels, by any long continued posture, particularly of sitting too much ; and they have occasionally been engendered by riding on horse- back. All circumstances which interrupt the free return of blood from the large veins of the abdomen, conduce to haemorrhoids ; hence they are of common occurrence in pregnancy. Per- sons too with diseased liver are very obnoxious to piles.

Prognosis. — Piles in themselves are seldom attended with much danger, in fact they have been considered as rather salutary occurrences than not, and in some cases they may actually prove so ; thus apoplectic tendencies may be suspended by the appearance of the haemorrhoi- dal discharge, and other affections may also be diverted or arrested by the vicarious action of haemorrhoids. Their dangerous tendency con- sists in the establishment of a permanent thick-

enine of the intestinal membranes, or in their is sometimes found to produce the disorder. In

‘— «anH,n

exciting inflammation which shall extend through the cellular membrane, terminate in abscess, and be productive of sinuous or

fistulous sores. Treatment.— The doctrine of active and pas- sive hemorrhage is especially requisite to attend to in reference to the hemorrhoulal affection, which, according to the presence or absence of * opposite modes of treat-

long standing haemorrhoids, when ulcerative in- flammation and fistula are threatened, the paste of Ward is occasionally of unequivocal service ; so much so, that he who should refrain from prescribing it, because its operation seems to be inconsistent with the demands of the case, would be sacrificing his patient's good to theoretical niceties. This celebrated paste is composed of

!ent""when' tnTpaS an5 "swelling is conside- black pepper, and elecampane root, of each half rable' in case of blind piles, it is often necessary a pound ; fennel seeds and honey, of each one abstract blood, sometimes from the system pound. The dose being the quantity of a nut- eenerallv or rather by the arm ; but oftener it meg two or three times a day. Small doses will be proper to apply half a dozen leeches also of copaiba balsam prove availing under the locally about the verge of the anus, and to ad- same circumstances. The dose may be about minister saline or refrigerant purgatives. But, twenty drops or fifteen minims rubbed down

with yolk of egg or mucilage of gum arable. 380. Immoderate flow of the menses. Menorr-

for the most part, the best purgatives are sul- phur, senna in the form of the confection, castor and linseed oils.

R Confect. sennae,

Sulphuris loti aa. f. Jt. Syrup, q. s.

Fiat elect.: sumat coch. ij. parv. nocte ma- neque.

Take of lenitive electuary and washed sul- phur of each an ounce, simple syrup as much as will make an electuary. Let two tea spoons- ful be taken night and morning. R Olei lini,

Tincturae rhei aa Jij- Aquae menthae pip. f. %vr. Fiat mistura. Sumat coch ij. magna bis in die.

Take of cold-drawn linseed oil and tincture of rhubarb of each two fluid ounces, pepper- mint water four fluid ounces. Make a mixture, of which two table spoonsfuls may be given twice a day.

R Pulv. potassae nitrat. 9ft.

Sulphuris loti Bftij. Fiat pulv. ter in die sumendus.

Take of powdered nitre ten grains, and washed sulphur two scruples and a half. Make them into a powder to be taken two or three times a day.

Cooling lotions are sometimes required, such as half a drachm of white vitriol to half a pint of water ; and when the piles are blind or no blood is discharged, but the pain and tension are considerable, the patient will often find much re- lief by sitting over the steam of hot water. But for the most part a horizontal position is desira- ble, and lying on the stomach will sometimes afford relief, probably by facilitating in some measure the return of the blood through the ab- dominal veins.

When the haemorrhoidal flux is vicarious of constitutional or other irritation, especially when it occurs in a habit the tendency of which is unequivocally gouty, we must be careful of too precipitately stopping the discharge by astrin- gent applications; and, where much debility prevails, the very same kind of medicines will cure which would at times create the disorder. The tincture of muriated iron, in doses of fifteen or twenty drops, will sometimes do much good in mere asthenic or passive hemorrhoids, and steel

hagia.

Symptoms. — Profuse menstruation, and immo- derate discharges of blood from the uterus, are in some measure different disorders, since the menstrual secretion and discharge is not blood, being wanting in some of the characteristics of that fluid (See PHYSIOLOGY). Profuse men- struation is also rather relatively than positively a disordered state, since the natural quantity in different women, and even in the same woman at different times, varies very considerably. This discharge may further occur, like all other haeraorrhagic affections, in precisely opposite states, both generally and locally ; and all these particulars, of course, require recognition by the medical practitioner. Unless, then, exhaustion takes place from the profuseness of the discharge, or from its occurrence when the female is very low and weak — or, on the other, high irritation, pain, and sympathetic fever, be excited, the case scarcely demands the interference of art.

Causes. — Predisposition to menorrhagia may be constituted by a full plethoric habit, and early sexual propensities — or the disposition to

the passive form of the complaint may consist in a habit entirely the reverse, with a lax state of the uterine vessels. The exciting causes are, violent exercise, especially of dancing or walk- ing much ; much costiveness, producing exertion in the expulsion of the faeces ; exposure to ex- cessive heat ; inordinate indulgence in venery, especially at the period of the menstrual flux ; violent agitations of mind ; repeated miscarriages ; and, lastly, organic disorders of the womb, which by absorbing, as it were, the terminal arteries, which open out into the womb, occasion rushes of blood of an alarming nature ; and in these cases the menorrhagia is accompanied often by very violent pain. Indeed, structural disorders of the womb, connected with discharges, are among the most formidable and distressing dis- orders to which the human frame is liable.

Prognosis. — It is not often that the mere dis- charge occasions a fatal termination, and, when the patient is without structural disorder to oc- casion the flux, the prognosis is for the most part favorable. Its frequent recurrence, indeed, exhausts the powers and gives accession to drop- sical and other diseases, but otherwise menor rhagia is not to be considered as an affection of a formidable nature.

Treatment.— When the action is considerable, their management; and the complaint bein? ! the sympathetic fever runs hieh. blood-letti™ moreover for the most part quite as much of a

and the sympathetic fever runs high, blood-letting may be called for ; but it is not often that deple- tion to any great extent is either required or ad- missible. When much pain accompanies the discharge, cupping on the loins may be produc- tive of considerable advantage. A light diet must be enjoined, and purgatives administered.

R Infusi rosae f. ˆift. Magnesiae sulphat. 3ift. Acid sulphur, dil. t»t *v. Syrupi papav. f. 3fti. Fiat haustus.

Take of infusion of roses a fluid ounce and a half, Epsom salts a drachm and a half, diluted sulphuric acid fifteen minims, syrup of white poppy a fluid drachm and a half. Make them into a draught.

The above formula will abate irritation, prove refrigerant, and act gently as an astringent. When the discharge is more passive or asthenic, the tincture of muriated iron, in doses of fifteen drops in a glass of water, may be given; or the tincture of catechu may be combined with the

general as of a topical nature, the internal medi- cines are those from which most benefit is to be expected.

Prctcriptiont.

R Tincturae cantharid. m xv. Sp. xtheris nitric, f. 3j. Aquae purae f. Jift. Fiat haustus.

Take of tincture of cantharides fifteen minims, spirit of nitric ether a fluid drachm, water a fluid ounce and a half. Make them into a draught. R Copaibse m xxv. Mucilag. acaciae f. 3iij. Terantur simul in mortario sensim afiundons

aquas purae f. ˆift Dein add. sp. etheris nitric, f. 3j. Fiat haustus.

Take of copaiba balsam twenty-five minim* mucilage of gum arabic three fluid drachms, let them be rubbed together in a mortar by degrees, pouring on them a fluid ounce and a half of

water; then add a fluid drachm of spirit of nitric sulphuric acid, the dose being a fluid drachm of ether, and make them into a draught

the former to fifteen or twenty drops c-f the latter. The acetate of lead may be administered in doses of a grain, with half a grain of opium made into pills with crumb of bread ; in cases where the discharge is protracted and obstinate, and much enfeebles the patient,' applications to the perinaeum and hypogastrium of linen rags that have been dipped in vinegar may be had recourse to. Some recommend the throwing up into the rectum cold water, in which some com- mon salt has been dissolved : and cold injections of alum or white vitriol dissolved in water, into the rectum, are in use. In all cases of active menorrhagia the patient should be as much as possible in a lying position, with the thighs rather raised above the horizontal line. Sponges dipped in cold and astringent lotions, and ap- plied externally, will often supersede the neces- sity of injections. Whey, made by throwing a piece of alum into boiling milk, so as to coagu- late it, will often prove a useful drink in menor- rhagic disorder.

381. The menorrhagia alba, or fluar albus, or whites, is a very common and sometimes a rery troublesome affection. It is sometimes an at- tendant upon menorrhagia and sometimes occurs exclusively of this last, occasionally attended by febrile excitement, but more commonly connect- ed with general and local weakness. When this last is the case, tonics and stimulants are demand- ed ; and, among the most efficacious of these, the warm balsams, particularly the copaiba and the tincture of cantharides may be reckoned ; both these

medicinals will ocasionally in the first in- stance increase the discharge by giving a stimulus to the uterine vessels and general system, but eventually they will prove astringent. The mu- riated tincture of iron also often proves highly beneficial in asthenic fluor albus, and the uva ursi may occasionally be employed with advan- tage. Astringent injections in obstinate cases may be thrown up the vagina ; but these are for the most part unpleasant to use, and difficult in VOL. XIV

R Uvae ursi, fol. 3iij. Aquae bullientis Oj. Fiat Infus.

R Infusi istius frigefact. et colat. Jift.

Pulv. potassze nitrat gr. viij. Fiat haustus.

Take of the leaves of bear berry three drachms, boiling water a pint; let them stand to infuse. Of this infusion cooled and strained take a fluid ounce and half, and mix with it eight grains of powdered nitre, so as to make a draught.

When much pain or irritation connects itself with the discharge, the addition of twenty or thirty minims of the tincture of henbane may be attended with benefit.

It is always necessary, while these astringents and stimulants are employed, to preserve the bowels free by aperient medicines, for the dis- charge will sometimes be kept up by a consti- pated state of the intestines.

When this discharge is accompanied by irrita- tion and excoriation it often excites alarm, espe- cially in newly married women, on the score of suspected infection ; and it is not seldom that the acrimony accompanying this irritative kind of leucorrhaea is such, that a degree of infection is imparted to the husband, and suspicion, or at the least very uncomfortable feeling, will on this side attach. The physician and surgeon will often be consulted on account of these distressing and delicate occurrences, and he ought to be careful of drawing a hasty inference merely from the circumstance of communication of disorder. The respectability of the consulting parties con- stitutes for the most part a sufficient guarantee against any thing improper, and, if there be any doubt as to the nature of the discharge, it is often ascertainable whether the disorder be merely fluor albus or venereal conorrhaa by the absence in the former case of that ardor urinae which al- mcst invariably attends the latter.

Vomiting of blood (haematemesis). Discharges

of blood from the kidney (haematuria), and dis- charge of blood from the bladder (cystirrhagia), are not reckoned among the genera, in the noso- logy, because they are considered by Cullen as for the most part, if not always, symptomatic. 382. Vomiting of blood. Symptoms.— The connecting symptoms are a sense of weight and uneasiness about the prae- cordia, which indeed is for the most part some time existent prior to the discharge, and is reliev- ed by the discharge.

Causes. — The discharge is for the most part occasioned by obstructions in the liver, or the spleen, and sometimes is the consequence of suppressed haemorrhoidal or menstrual flux. Merely constipated bowel will at times produce hemorrhage from the stomach where there is a constitutional disposition to its occurrence. It is often brought on by blows on the stomach, and sometimes occurs as a consequence of vascular de- bility engendered by the habits of spirit drinking. Distinctions. — The blood discharged from the stomach is for the most part much more dark, grumous, and clotted, than that which comes from the pulmonary vessels; it is also usually thrown up iu much larger quantities — part of the stomach's contents are not seldom mixed with it, and it produces much more exhaustion at the time than haemoptysis. It also for the most part takes place in constitutions that have been in- jured by other disorders, and is preceded as above remarked by praecordial oppression more signally than in the instance of haemoptysis. (See Hemoptysis).

Prognosis. — It is of a more dangerous nature as to its immediate effect, than haemorrhage from the lungs ; but even here it is rather from the discharge being a manifestation and effect of dis- ordered viscera and broken down stamina, than from the mere quantity of blood thrown up, that a fatal event is to be apprehended.

Treatment. — Whether depletion is to be em- ployed in this disorder depends upon the age and constitution of the patient ; and the same remarks apply as in other cases of haemorrhage. For the most part, however, the habit is too feeble, and the constitution too much shattered to admit of much blood-letting. Purging is almost invaria- bly necessary, and castor oil or Epsom salts should be employed for this purpose. After the bowels have been freely evacuated, astringents may be administered as in haemorrhages ; and in obstinate cases the acetate of lead may be em- ployed. See Httmoptysis and \fenorrAagta. 383. Homorrhoge from the kidneys or bladder. Symptoms. — Pain in

the loins or above the pubis, and occasionally a difficulty, especially in the first efforts, to discharge the urine.

Causes. — Calculous and other foreign bodies, in the kidneys or bladder, will give rise to the disease ; but sometimes the discharge seems to be a sort of plethoric manifestation, the urinary organs being made use of, as it were, by nature, to convey away redundant blood. It sometimes follows violent blows or strains, and is occasion- ally the result of common inflammation in these very vascular parts.

Distinctions. — The very high-colored urine, occasioned by an admixture of bile, or other dis-

ordered states of the kidney or general system, does not stain linen of a red coldr, as is the case in haematuria ; nor, in the former instances, is a red coagulum thrown down to the bottom of the vessel.

Prognosis. — When the affection is unaccom- panied by any indication of organic disorder, in *he parts from which the discharge proceeds, the prognosis may be considered favorable. But these discharges are seldom thus idiopathic, and the degree of danger must be inferred from the degree of the producing derangement.

Treatment. — Saline purgatives, with syrup of poppies, as in the haemoptysis. If calculus is present, mucilaginous drinks and medicinals will be demanded, such as large draughts of barley water, with tragacanth or acacia gum, mixed in it. Decoction of marsh mallows. The tinctura ferri muriatis, in cases of much weakness, will be found useful. Uva ursi has long had a repu- tation in urinary discharges.

R Uvae ursi foliorum Jft- Aquae ferventis Oj.

Fiat infusum.

R Hujus infusi frigefacti et colati f. Jvii Pulveris potassae nitratis 3j. Syrupi papaveris f. Jj.

Fiat mistura. Dosis pars sexta.

Take of bear berry leaves half an ounce, boi’ ing water a pint. Make an infusion ; of this in- fusion take seven fluid ounces, powdered nitre a drachm, syrup of poppy a fluid ounce. Make them into a mixture : the dose is the sixth part.

The peach leaf has been employed with ˆalleg- ed success in obstinate

haematuria.

R Persicariae foliorum exsiccatorum Jj. Aquae purae Oij.

Decoque ad Gift ; liquore frigefacto, coletur ; bibat aeger Oj. in die.

Take of dried peach leaves an ounce, water a quart ; boil down to a pint and a half; when the liquor is cold strain it, and let a pint be taken in the course of the day.

Oil of turpentine, in small doses, is occasionally employed in haematuria of long stauding. R Olei terebinthinae m xxv. Mucilaginis acaciae f. 3ij. Syrupi papaveris f. 3j. Aquae purae f. Jift.

Fiat haustus : nocte maneque sumendus.

Take of oil of turpentine twenty-five minims, mucilage of gum arable two fluid drachms, syrup of white poppy one fluid drachm, water a fluid ounce and a half. Make a draught, to be taken night and morning.

384. Order V. FLUXES. Profluvia. CA- TARRH.— The symptoms of catarrh, or as it is vulgarly called cold, need scarcely be mentioned beyond what are comprised in the definition. The causes are said to be cold and contagion ; it is probable, that a degree of contagion con- nects itself with all catarrhal affection, for you never see one child in a nursery affected by a cold, without the affection reaching the other children of the same family ; the difference be- tween the influenza or contagious catarrh of Cullen, and common cold, is probably referrible to the state of the air; and the division should

be into infectious and common, not into conta- “ious and ordinary catarrh.

Prognosis. — Catarrh only, then, becomes dan- gerous, when it happens to meet with disordered predisposition ; thus, that inflammation of the mucous membrane of the nostrils, &c., by which it is constituted, may become protracted and ex- tended down into the bronchial cells, and thus form bronchitis ; or it may excite the tubercular latency into action from contiguity and sympa- thy, and thus come to be productive of true consumption; or it may prove an excitant of asthmatic disposition, or fall into common pul monary

inflammation : but in all these cases the disorder, before it is dangerous, becomes, nosolo- gically, a new affection.

Treatment. — Catarrhal irritation is to be al- layed by aperients, diaphoretics, and demul- cents, according to the degree of excitement, and accompanying hoarseness or cough. R Potassae nitratis 9fs.

Misturae amygdalae f. Jifi. Syrupi tolutani f. 3ij. Fiat haustus

Take of nitrate of potass (nitre) half a scru- ple ; almond emulsion a fluid ounce and a half; syrup of tolu two fluid drachms. Make a draught R Syrupi papaveris f. 3ij. Spiritus aetheris nitrici f. 3j. Mucilaginis acaciae f. 3iij. Aquae purae f. 51 ft. Fiat haustus.

Take of syrup of white poppy two fluid drachms, spirit of nitric ether one fluid drachm, mucilage of acacia three fluid drachms, water a fluid ounce and a half. Make them into a draught.

R Pulveris inulae, Sulphuris loti,

Pulveris radicis glycyrrhizi, aa 3ft« Mellis despumati q. s.

Fiat electuarium : cujus sumat aeger cochlea- rmm unum parvum subinde.

Take of powder of elacampane, of washed sul- phur, and of liquorice root, of each half an ounce ; honey enough to make an electuary. A t#)a-spoonful to be taken frequently. R Oxymellis scillae f. 3j. Syrupi papaveris f. 3ift. Spiritus aetheris nitrici f. 3j. Misturae ammoniaci, Aquae pure, aa f. 3vi. Fiat haustus.

Take of oxymel of squill a fluid drachm, sy- rup of white poppy a fluid ounce and a half, nitric spirit of ether a fluid drachm, ammoniacal mixture and water of each six fluid drachms. Make a draught.

The last as an expectorant after the inflam- matory symptoms have subsided. 385. Dtfsentery. Dysenteria, Symptoms. — Dysentery sometimes appears, in the first instance, in the form of a purely local disease ; and, in that case, the pyrexial symptoms are not manifested till after the griping and te- nesmus, and mucous and sanious discharges shall have occurred; sometimes the disease is ushered in by pyrexial irritation, loss of appe- tite, nausea, flatulency, and frequency of pulse.

With the mucous and muco-sanguineous dis- charges are sometimes passed indurated knotted masses of faecal matter, called scybala ; and the disorder sometimes rises to such a height, or continues for such a length of time, as to pro- duce bearing down of the intestinal membrane ; great prostration of strength; falling away of flesh ; hiccough ; and a fatal termination. At other times the disease will produce chronic affections of the parts implicated, which will last for months, and the patient eventually recover.

Causes. — Every thing which tends to derange the regular functions of the intestinal canal may tend to induce dysentery. Ithas at times been com- pletely formed from the cretaceous mixture given injudiciously for diarrhoea. Obstructed perspira- tion, damp air, unwholesome diet, may occa- sion it; and, like most other disorders, it will prove communicable or contagious, under cir- cumstances fostering such tendency

Its proximate cause, as pathologists express themselves, is constituted of a mixture of inflam- matory action in the villous coat of the large

in- testine, giving rise to irregular contractions of the gut; locked-up or morbid secretions; and all the consequent disturbance.

Prognosis. — The favorable signs are, a ten- dency to general diaphoresis ; while the urine throws down a sediment, and the stools gra- dually acquire their natural color and consis- tence : the unfavorable symptoms are, dryness and contraction, alternated with clamminess of the skin, the pyrexial irritation continuing ; the abdomen becoming tense ; the tenesmus becom- ing more urgent; the pulse weak and irregular; the extremities cold, and hiccough and aphthae making their appearance; while the disease shall become complicated with others, such as ague or hepatic disorders.

Treatment. — The dysentery that is met with iu this country does not commonly require the use of the lancet ; if, however, the irritation runs up very high, blood-letting, both general and topi- cal, may be occasionally and under due restric- tion employed; the great objects of treatment are, to get completely rid of the scybala, and to keep under the inflammatory irritation and spas- modic contraction of the colon. An emetic, composed of ipecacuanha and antimony may be premised. Of cathartics, which are indispensa- ble in dysenteric affections, the castor oil is the best; it seems, as it were, made for the com- plaint; and should be given in half-ounce or ounce doses every day, or twice a day, till the whole scybalous matter is brought away. The oleum lini and tinctura rhei, as recommended for haemorrhoids, will often be found of service. When refrigerant or saline cathartics are em- ployed (and these seem called for when the marks of inflammatory irritation run high), they should be combined with manna. R Magnesias sulphatis Jift. Mannas 3iij. Aquae menthae pipentse jft.

Fiat haustus.

Take of Epsom salts half an ounce, manna three drachms, peppermint-water a fluid ounce and a half. Make them into a draught.

Emollient clysters are occasionally called for, with or without opiiun, according to circum- stances.

R Decocti amyli Oj.

Tincturae opii f. 3j. Fiat enema.

Take of decoction of starch a pint, tincture of opium a fluid drachm. Make them into an

enema. . .

To allay irritation, a combination of ipeca- cuan and opium, as in the pulvis ipecacuanha; compositus, constitutes one of the best of medi- cines.

R Pulveris ipecacuanhze compositi gr. vj. Confectionis aromaticae q. s.

Fiant pilulae duae : ter quaterve in die sumen- das.

Take of compound ipecacuan powder six grains, aromatic confection enough to form two pills : to be taken three or four times a day.

Warm fomentations and stimulant embro- cations to the abdomen will sometimes be found serviceable; and it will be expedient occasion- ally to rub the abdomen all over with castor-oil, as recommended in enteritis, by which, it ap- pears that the expulsion of the scybala will be considerably expedited.

When the hardened faeces are all expelled, and the inflammatory and spasmodic irritation are got under, tonics are called for ; and one of the best of these is the calumba, which may be given united to rhubarb.

R Infusi calumbi, Infusi rhei, aa f. 3vj. Tincturae cardamomi compositae f. 3j. Fiat haustus.

Take of infusion of calumba and rhubarb of each six fluid drachms, compound tincture ot cardamons a fluid drachm. Make them into a draught.

When opiates are still required, the confectio opii of the Pharmacopoeia is one of the best forms in which to administer it.

R Confectionis opii gr. xv. Vini ipecacuanhas n\ xv. Aquae menthae piperitae f. ˆift- Fiat haustus.

Take of opiate confection fifteen grains, ipe- cacuan wine fifteen minims, peppermint water a fluid ounce and a half. Make a draught.

The infusion of cusparia, or simarouba, or cascarilla, may be used in conjunction or alter- nation with calumba ; but, upon the whole, the

last mentioned bitter seems the best adapted for that intestinal weakness that has been brought on by protracted bowel disorder. When small points of ulceration have established themselves on the membrane of the intestine, giving rise to purulent discharge, chronic irritation, and hectic wasting, the vegetable narcotics are to be had recourse to, with small quantities of the blue pill. When the liver has had to do with the origin of the disorder, or takes on a decidedly disordered :\clion during its course, mercurials in a large dose will be required ; and in all cases we must Lc careful not to push our tonics, under the

notion of debility, while the secretions coni'.m.e obstinately out of order. The copaiba balsan., combined with one or other, or more than one, of the vegetable narcotics, will occasional y prove advantageous in old dysenteries, connected with a chronically diseased and ulcerated state of the villous coat of the intestine i

R Extracti hyoscyami,

Extracti conii,

Extracti papaveris, 5<1 gr. •> ij

Copaiba? f. 3ift.

Mucilaginis acaciae f. 3j-

Aquas purae f. Jv.

Fiat mistura : cujus sumat aeger partem sextam bis terve in die.

Take of extract of henbane, of hemlock, and of poppy, of each twelve grains, copaiba balsam a fluid drachm and a half, mucilage of gum arabic a fluid ounce, water five fluid ounces. Make a mixture, of which a sixth part is to be taken two or three times a day.

Rice, barley, Indian arrow root, oatmeal, sago, and animal broths, are the proper articles of diet. [Note. — We have taken the whole of the three last sections from Dr. Uwins's Compendium of Medicine, merely translating the prescriptions.]

CLASS II. — NERVOUS DISEASES. Neuroses.

386. Both in the general introduction to the present article, and as an immediate preliminary to our disquisition on pyrexial, inflammatory, and vascular disorders, we had occasion to make some prefatory

remarks, which were applicable to the whole class of diseased affections com- prehended under the term pyrexia. Upon the same principle, and with the same view, we now propose to engage in some considerations on the habits and peculiarities of the sentient part of the organisation, in its reference to disordered susceptibilities and deranged conditions.

On this head there is some diversity of opinion, many conceiving that there is a laxity of signification attached to the term nervous, which is inconsistent with the correctness of just pathological principles; while others, on the contrary, imagine that the speculations and in- ferences of those pathologists, who are always ooking for something visible and tangible as explicatory of disease, do not sufficiently recog- nise the fact, that both ordinary and morbid sensation are directed often by mere functional peculiarities, which must ever elude a further perception than that of the phenomena which they manifest.

It i?, we think, pretty evident that a dispo- sition to extremes has shown itself on both sides of the question ; and that the functional patholo- gists, if so we may term them, have often reasoned and deduced with too little recollec- tion, that sentient impulses are intimately con- nected with vascular states. Indeed Cullen's class neuroses proceeds too much upon inatten- tion to this principle, while, on the other hand, those individuals who will have demonstrative evidence of every pathological occurrence are frequently led by this very laudable feeling — • laudable when retained within certain bounds — to infer that there is nothing in medicine worth

attending to, but what the knife of the dissector can open up, or morbid anatomy confirm.

But it is for us, as encyclopaedists, rather to select and collate the sentiments of others, than to obtrude our own opinions; and, in consistency with this duty, we think we cannot be better em- ployed than in presenting to our readers, on the present occasion, some pretty long extracts from authors bearing upon the subject now particularly adverted to.

In every part of the study of nature it is com- mon, says Dr. Beddoes, for ancient distinctions to vanish as a greater number of objects become known ; and as every object is more completely investigated,

the intervals are gradually filled up ; and productions, once held the most dissimi- lar, are seen to gain a degree of affinity by the successive modifications of the particular features of the extremes in the members that fall in to complete the series.

Proofs of this observation may be found in the attempts which have been made to distribute diseases into classes. In these later ages an in- finite number of experiments have raised the brain, the spinal marrow, and the nerves con- nected with these, into a degree of importance which they did not possess in the estimation of ancient physiologists. It has been found that where the nerve going to a limb is cut, tied, or injured, the empire of the will over the limb is destroyed, and applications to it produce no sen- sation. What more natural, therefore, than to impute loss of motion and sense to an altered state of that portion of the animal structure of which intentional alterations are followed by the same disability to feel and move ? Again, pinch, prick, or otherwise irritate a particular nerve, and the muscle into which that nerve passes shall be thrown into irregular action. When the same irregular actions manifest themselves, with- out the interposition of any experimenter, it is simple and reasonable to infer that the nerve suf- fers as when irritated on purpose, and that the cause of the diseased or irregular action lies in the nerve. Here, therefore, we have a foundation for a distinct class of diseases. This class gains extension from other phenomena. That compres- sion of the brain which accidents perpetually produce, and which sometimes the want of the skull or bony cover in the human subject has enabled others to effect at pleasure, have demon- strated that a certain condition of this principal member of the nervous system is an indispensable requisite to perception, locomotion, and to the other exertions characteristic of the healthy waking state. The anatomy of the organs of sense, in different states, has proved how es- sential their nerves are to the proper performance of cheir offices. If the optic nerve be entire, other parts of the eye may be removed, and vision remain. The apparatus provided for con- ducting the sonorous vibrations of the air to the auditory nerve may be totally destroyed, and yet sounds may be conveyed through the teeth. But hearing ceases, or is impaired, by any disor- ganisation of the nerve of hearing. It is in vain that the other parts continue perfect. To these direct proofs it may be added that a vast quantity of nervous substance is appropriated to each

sense, and that it is distributed in a manner which always raises admiration when exhibited. The nicety of the organ also corresponds to the apparent care bestowed in the distribution, as M particularly manifest in comparing the interior of the nostrils in animals which

differ in acute- ness of smell.

These observations give us two additional kinds of complaints, properly to be denominated nervous. W hen the hearing is impaired, and the auditory nerve altered in its structure, we have nervous deafness ; and nervous dimness of sight, or blindness, under similar circumstances of vision and the optic nerve.

From slight numbness up to utter insensibi- lity, and from premature loss of power to total immobility of a part, there are many gradations ; but the whole appear to be steps in the same progress. Hence the first comes to be referred to the same head as the last; and in fact corresponding causes, capable of acting on the nerves, are often discovered in the slighter affec- tions. Mineral poisons make the limbs tremu- lous first, and afterwards motionless. Fear and anger are every day observed to make persons quake all over. They are occasionally observed to bring on perfect palsy. Indeed common language marks the analogy of these affections. One has often been called the shaking, tho other the dead palsy.

So far the deduction appears to proceed satis- factorily. We may follow it yet another step without danger of being puzzled. Supposing a complaint in which a considerable part of the symptoms shall be from the first exactly such as some of those above enumerated, and another part of a different nature, and not by any certain experiment or observation referrible to that par- ticular part of the organisation, yet we may ven- ture to term the whole disorder nervous. We do this with more confidence if the symptoms of each description occur together or alternate. Hysterics may be taken as an example. The same hysterical person shall tremble at one moment, and become blind or deaf, or lose the use of a limb, at another. Then a sneezing or retching of the most excessive violence shall supervene. Not only so, but the paralytic limb shall be restored, in the twinkling of an eye, to its full powers upon the commencement of sneezing or retching, upon a fit of laughing or crying, or the rising of a ball in the throat, or upon the occurrence of any other of the symptoms which show them- selves in this infinitely diversified complaint. Now, having referred the universal trembling and partial deadness to a certain change in the state of the nerves, we refer to the same consti- tuent parts of the body, the suffocating ball in the throat, the retching, the sneezing, and the other symptoms, though I may not be able to excite them by any operation upon a dissected nerve. But they appear to be intimately con- nected and interwoven with the others; and indeed seem to make up one disorder, as differ- ent strands are twisted into one rope.

But from this point our track becomes ir.ore uncertain. By extending the term nervous, upon the strength of one or two circumstances of resemblance, we are in danger of losing all

meaning, and reducing the most heterogeneous affections to one head. It will therefore, if we would keep clear of embarrassment in language, be necessary to have a word entirely new, or some, addition to that which we have hitherto retained, in some cases where nervous symptoms occur. For there occur also symptoms of a different character; and as these predominate they require to be marked. In the beginning of small pox for example, and also of some feverish complaints without eruption, there shall be irregular action of the muscles, or convulsions. Along with the convulsions too there shall be other appearances exactly the same as in diseases strictly called nervous. Yet the smalUpox passes not either with nosologists, or with those that follow popular language, for a nervous com- plaint. The reason is obvious : the nervous symptoms do not generally appear; and in hysteria, if there had only been the retching and the ball in the throat, probably it would never have been considered as a proper nervous dis- ease. The strong pulse, heat, and violent affections of the breathing, in bad cases of small-pox are more common, permanent, and dangerous. They would therefore probably give the disease its denomination, and occasion it to be referred to the inflammatory class, did not the pustules offer so striking an appearance and furnish the matter by which it may be propagated.

There are certainly no diseases of whatever name in which the nerves are not affected ; and there are probably no nervous diseases in which the other parts (if they can be considered as destitute of nerves) are not affected. But to call only certain complaints nervous may enable the writer to be more concise without being less perspicuous, which is the proper use of general terms. Nervous disorders then may be consi- dered as those in which the limbs move irregu- larly or without the direction of the will, in wh'ich the organs of perception suffer, and the intellec- tual functions are disturbed; and this in most instances without any preceding or concomitant symptoms of a different nature, either general or partial.

It is not easy, and perhaps not possible, to invent a term which shall point out any one set of disorders to the exclusion of others. But in common life there would be much less confusion, and somewhat

fewer mistakes, if the term ner- vous were not indiscriminately employed, both where there exist, or have existed, symptoms of a different and peculiar nature, and where they do not. A young person in consumption feels her- self low, and is hysterical in various ways ; she is therefore persuaded that the cough is nervous ; that is, she and her friends persuade themselves there is no danger, or that a treatment very different from that likely to answer is requisite. A £>outy veteran becomes tremulous throughout his whole frame. Hence he concludes that he labors under opposite or antagonist maladies; and that if the gout should gain the ascendancy it would deliver him from his other enemy. But in the generality of cases, though it be true that thi! patient is nervous, it would be more exact to consider him as nervous because he has been gouty. He is only secondarily nervous.

According to a vulgar phrase, when such a one is said, and truly said, to have a complaint of the bile, the physician can frequently ascer- tain to which of the two opposite states the given case belongs. For in some the liver se- cretes too much bile, in others too little. Per- haps some such opposition may hereafter be discovered in the variety of nervous complaints. The convulsions to which children are so prone, and the loss of power in old age, would appear to arise from contrary states ; the one from excess, the other from defect, of nervous energy ? But nothing of this kind can be generally established. Our present acquaintance with the subject does not entitle us to divide the family of nervous ail- ment into two branches, the one positive, and the other negative. In the same day an hysteri- cal person shall be troubled with painful acute- ness of hearing, and with deafness, and be in the intermediate or natural state. The limbs shall be palsied one hour, and the next a strong pro- pensity to motion shall impel the invalid to place all the chairs and tables in a circle, and to skip from one to the other till quite out of breath. Poetical effusions shall follow a fit of stupidity, in a person who is neither dull nor brilliant in her ordinary mood.

In all departments of knowledge, the nomen- clature must be as the information. Where one is deficient the other will be vague. In medi- cine it may be for a long time equally easy to ob- ject to a general term, and difficult to replace it by another free from just objections.

All diseases, nay every sort of injury, will, on strict consideration, be found to affect the mind. Some difference in the inward state will be cor- respondent to the slightest external difference. But in many instances the bodily change is so much more permanent and considerable, that this is overlooked. In a pleurisy, the history of the

disease, and of its treatment, is thought to be fully comprehended in an account of the pain, of the pulse, of the breathing, of the number of bleedings, and so forth. In this, and other fe- brile affections, it is deemed sufficient just to note whether delirium occurs, or at most to mark whether it be a delirium of the low or the frantic kind. Again, the parts concerned in many diseases have been so often examined by dissec- tion, that the physician can read the state of the interior as plainly as if the body were a book, the alteration in organs accessible to sense, and the patient's account of his feelings serving him for letters.

In nervous complaints every thing is different. Cnanges of the organisation, it is true, have been sometimes detected in nervous complaints, but then the same symptoms equally appear when no such changes exist ; so that here morbid anatomy is at present of little or no use in pointing out the correspondence between the obvious and hidden workings of the machine. The intellectual faculties bear a considerable part in these mys- terious, and often terrific, scenes. The members,, long since reduced under perfect obedience to the will, throw off all control. In ruder ages it was a general persuasion that the furious agita- tions which sometimes take place were still voluntary, but proceeding from the will of a ma-

lignant spirit who had possession of the patient, and managed his members as the master of a puppet-show does those of his diminutive repre- sentatives of man. Among the lower ranks of society, some are still haunted by the same per- nicious belief. For these irregularities of thought, feeling, and action, which constitute the essen- tial character, if it be possible to assign the es- sential character of this class of disorders, we cannot hope to account without some insight into the laws of the human mind. What terrors there are inherent in this subject, different people will probably disagree in attempting to determine. But one thing is clear. It is a subject of en- quiry equally shunned by the faculty, and by those who are not of the faculty. Yet it is ob- vious that the investigation of these laws bears exactly the same relation to the diseases in question, as the comparative anatomy of sound and morbid bodies does to many other diseases/

We shall follow up this extract from Dr. Bed- floes, by a long quotation from Dr. George Gregory, which we consider especially valuable, as corroborating and illustrative of the principle with which

we started ; namely, that it is of im- portance, in our investigation of those maladies which are distinctly termed nervous, to appreciate duly, but with proper limits, the information which may be obtained from structural investiga- tion. Indeed, we cannot well conceive of a better introduction to particular disquisitions on nervous affections, than that to which we now beg the best attention of our readers.

‘ There are not perhaps,’ says Dr. Gregory, * in the whole circle of medical science, any diseases offering so many interesting points of research to the speculative physician, as those which de- rive their character from disturbance of function in the brain and nervous system, independent of the presence of fever. They may be associated together as the diseases of primary neurosis, and they constitute a series which it cannot but be useful to examine, in the first instance, in a general manner. It will be found that they have a common character, and many points of mutual connexion. To explain these will not only be the means of preventing hereafter much needless repetition, but it will serve to impress upon the student the importance of those pathological re- lations among diseases, which serve equally to improve and to facilitate practice.

The diseases comprised in this series are apo- plexy, palsy, epilepsy, mania, chorea, tetanus, hydrophobia, neuralgia; to which may be added syncope, asphyxia, hysteria, and hypochondria- sis. Though deriving their character principally from a morbid condition of the nervous system, they are all more or less connected with disturbed function in other parts. The four last mentioned, however, are so intimately connected with dis- order in other organs that, in the present divi- sion of the work, I shall merely keep them before me with a view to some points in their general pathology, reserving their separate consideration to future parts of the volume.

Physiology teaches that among the several functions of the brain and nerves, of which some are well, and others only imperfectly ascertained, the principal are sensation, voluntary motion,

and the manifestation of the mind. It is natural to expect that, from disturbance in them, the chief characters of the neuroses should be de- rived ; and, accordingly, we find that coma, con- vulsion, and mental aberration, are the three great classes to which we may refer the symp- toms of these diseases.

1. Coma consists in the loss of sensation, thought, and voluntary motion. In this state of disease, however, the organs of involuntary mo- tion preserve their functions ; and consequently it is by the

continuance of the pulse and of the breathing that we distinguish between coma and the states of syncope and asphyxia. But, though in this manner we are enabled to mark the diag- nosis between coma and the disordered condi- tions of body with which it is liable to be con- founded, there are two states, consistent with health, from which it cannot be distinguished by such a criterion; I mean the states of sleep and of intoxication. In all cases of suspected coma it is necessary, for the safety of the patient and the credit of the practitioner, that this point should receive attention. If duly kept in view there is no great probability of any error occur- ring ; for it is inattention to the circumstance, and not any difficulty in deciding upon it when once suggested, from which mistakes have origi- nated. Coma is distinguished from sleep by the impossibility of rousing the patient by shaking, noise, or otherwise. The smell of the breath will, for the most part, be sufficient to characterise the state of intoxication ; but in ex- treme cases there will always be difficulty, for actual coma may possibly have supervened. At all times attention should be paid to the circum- stances which preceded the attack ; for by this means not only will ambiguity be prevented, but the physician will obtain such an insight into the causes of the disease, and the habits of the patient, as will assist materially in directing his practice.

The abolition of sense and voluntary motion then constitutes perfect coma, and it is the dis- tinguishing feature of apoplexy, the first disease which will be noticed in the present series. It remains to state that the loss of these functions is not always complete. Partial deprivations, both of sensation, thought, and voluntary motion, occur in the chronic diseases of the brain, and they afford many of the most prominent symp- toms of such disorders. Of this kind are preter- natural drowsiness, or lethargy, paralysis of particular muscles, indistinctness of vision, amaurosis. They are all referrible, however, to the general head of coma.

2. The second set of symptoms occurring in the chronic diseases of the encephalon may be classed together under the head of convulsion or spasm. The state of convulsion is commonly defined to be that wherein the voluntary muscles of the body are excited into action by powers independent of the will. It is not, however, peculiar to those muscles. Not unfrequently those of involuntary motion are similarly affected, the diaphragm for instance, and smaller muscles of inspiration, as in asthma, or the mus- cular coat of the stomach or intestines, as observed in colic. It would appear indeed as if no mus-

cular fibres were exempt from spasmodic con- traction, excepting those of the heart.

Of the voluntary muscles of the body it has been remarked that those which are most imme- diately under the influence of the will, and most frequently employed, are those principally

may be either temporary or permanent ; that u to say, it may assume the form of delirium or mania. It may be either general or partial ; that is to say, the powers of thought may be completely lost, as in the case of idiotcy ; or some one faculty of the mind may be disturbed, while others re-

affected in convulsive disorders, and the same main perfect, or only partially impaired. Some- observation will be found applicable to paralytic times, for instance, the imagination labors under affections. Of this kind are the muscles of the a strong and unconquerable delusion, while the eyes, eyelids, face, arms, and legs. Spasms of memory is perhaps still enjoyed in full perfec- these muscles are observed in chorea, hysteria, tion. This constitutes the highest grade of mental

aberration, and is the characteristic feature of

and all the lighter forms of nervous affection ; while spasms of the muscles of the neck, back, and belly, occur in tetanus, hydrophobia, epilepsy, and indicate a severer kind, or more aggravated degree of disease.

Convulsions have been divided into two Kinds — the permanent, and that which alternates with relaxation ; in other words, the tonic and clonic. Tetanus affords an instance of the one ; Hysteria of the other. The distinction is of little consequence unless coupled with the pathologi- cal principle that the tonic or tetanic spasm is a disease of infinitely more importance than the common or clonic spasm. The former arises from causes over which we have little or no control, and is, at all times, a state of the utmost danger ; while the latter is very frequently little more than the evidence of a peculiarly irritable dis- position in the nervous system, and may exist, even to a great extent and for a long time, with- out exciting any uneasiness for the ultimate safety of the patient. In all reasonings, indeed, concerning a disease accompanied with clonic or common spasm, it is necessary to look to the

mania. At other times the memory fails, while the powers of perception are still uninjured. This is a frequent consequence of severe injuries of the head, and of paralytic seizures. It is a very common attendant also on that morbid change in the structure of the brain, which fre- quently occurs in the later periods of advanced life.

Aberrations of mind, lastly, vary in their cha- racter and intensity. Sometimes they are at- tended with fierce excitement, violent aversion, and a disposition to commit acts of violence on themselves or those around them. At other times the delusion of mind is accompanied with a sense, hardly less formidable, of melancholy and settled despondency. To the lighter shades of this disordered condition of the mind physi- cians have commonly applied the term hypo- chondriacism. Occasionally we find maniacal aberration coupled with a perfect tranquillity and self-content.

After noticing the general character of the diseases usually called nervous, I proceed to en-

original constitution and temperament of the quire into the opinions commonly entertained

individual. There exists in some persons an irritable habit of body, a disposition in the sys- tem to be excited on slight occasions, and con- sequently a more than ordinary tendency to spasm. This manifests itself even when any function of the body becomes, from accidental circumstances, disturbed. Such a habit of body has been denominated by some physiologists the

regarding their pathology and proximate cause. And here it is to be remarked, in the first place, how manifestly a large proportion of such cases are connected with, and therefore probably de- pendant upon, certain disordered states of the circulating system. That this principle is not of universal application I shall presently have oc- casion to show ; but in the mean time it will be

nervous temperament. It is characteristic of the right to point out what those derangements of infantile period of life, and of the female sex. the circulating system are, which are so closely The distinction between this irritable habit of interwoven in the pathology of nervous dis- body and the morbid state of convulsion, though eases, sufficiently apparent in common cases, is yet, on many occasions, a matter of considerable dif- ficulty. In point of fact they will be found to run into each other by insensible degiees, con-

stituting, as we shall afterwards show, one of the many interesting features in the pathology of epi- lepsy.

Independent of those convulsive actions of the

1. The first ot these is chronic inflammation of the substance of the brain, or of its meninges. That this is the true proximate cause of many cases of chronic disease within the encephalon is abundantly proved by the appearances found on dissection; which are depositions of coagu- lable lymph upon the surface of the brain, thick- ening of One or more of the membranes, and

whole body to which the term fits is popularly suppuration. These unquestionable marks of ir-

applied, there are a variety of partial convulsions referrible to this general head, which occur as evidences of chronic disease within the brain. Of this kind aif. permanent contraction of the iris, irregular contractions of the muscles of the eye, constituting squinting, and the convulsions of the pterygoid muscles, commonly called grind- inc of the teeth.

flammatory action are, however, but rarely met with, in comparison with two others, frequently adduced as evidences of the same state of disease : I mean increased vascularity within the cranium, and serous effusion be*ween the membranes or within the ventricles. These ap- pearances are very common in different diseases, but in none are they so generally met with as in The symptoms by which chronic disease chronic affections of the nervous system. There the hram manifests itself may he referred, in are few instances, indeed, of any morbid change th< > third place, to the head ofvesania,or mental of structure in the brain existing without them. aberration. Of this disordered condition of the Palhol exists have differed, however, in their esti- brain physicians have noticed many varieties. It male of the importance to be attached to them

especially to that of serous effusion. The gene- ral opinion appears to be that, though it cannot he assumed as a proof of the existence of actual inflammation within the brain, it must yet be al- lowed to denote a degree of morbid excitement of the vessels of the brain, not far removed from inflammatory action.

2. The second of the morbid conditions of the circulating system, connected with nervous dis- ease, is simple congestion of blood in the blood- vessels. This may arise either from an extraor- dinary flow of blood into the arteries of the brain, or from the difficulty experienced in the return of blood to the heart. The peculiar struc- ture of the large venous trunks of the brain is calculated to lead, under certain circumstances, to stagnation, or, as it is now more commonly called, venous congestion in the head. That such a state of the circulating system in the en- cephalon does occasionally exist there cannot, I presume, be a doubt; but it may be fairly ques- tioned how far we are able to judge of its exist- ence, with any degree of accuracy, by examination made after death. It is at least sufficiently ascertained, that that fulness in the vessels of the brain, so often found upon dissection, and sup- posed to denote congestion, depends in a great degree on the position in which the body had lain previous to examination.

3. The third of those states of disease to which our attention must be paid in this enquiry, is haemorrhagy. THe rupture of a blood-vessel within the brain acknowledges many of the laws which affect other haemorrhagies ; but the want of outlet for the effused fluid, the peculiar deli- cacy of the structure of the brain, the import- ance of its functions, and, above all, the re- markable effects of pressure upon its substance ; give to the haemorrhagia cerebi an interest far superior to what belongs to any other form of haemorrhagic disease. The symptoms produced by effusion of blood within the brain, are, with few exceptions, those of apoplexy ; and the na- ture and varieties of cerebral haemorrhagy will accordingly constitute the most important fea- ture in the pathology of that disease.

4. The fourth morbid condition of the circu- lating system, observed in certain diseases of the nervous kind, is an imperfect supply of blood. The brain, like every other organ of the body, is dependent for the due exercise of its functions on the circulation. It can neither perform them properly when the supply of blood is too great, nor when it is defective. Syncope is the usual result of a want of due supply of blood to the brain ; but convulsions occasionally arise from the same cause, as is well exemplified in the in- stance of puerperal haemorrhage. It is not often that we have to apply this principle in the pa- thology of nervous diseases, but in a general view of the subject, such as we are now taking, it would have been improper to omit it.

5. In like manner it becomes necessary to notice a fifth state of the circulating system which is occasionally present in nervous dis- eases ; — I mean the supply of blood imperfectly “xveenated, and therefore

unfit for supporting the functions of the nervous system. This principle, it i. i.ue, like the last, is very limited in

its application, but it enters into the pathology of apoplexy, and is the foundation of many of our reasonings concerning asphyxia.

I have already stated that there are states of disease of the brain independent, as far as we can judge, of the circulating system.

1. The first of these is simple compression. This may arise either from a coagulum of blood, a soft tumor, a bony excrescence, a depressed portion of the skull, or the presence of some foreign body. The effects of pressure vary ex- tremely, according as it takes place suddenly or gradually. In most instances, as already ob- served, the symptoms occasioned by pressure on the brain partake of the comatose, or apoplectic character; but instances are upon record, par- ticularly in the case of gradual pressure, where such a state has been followed by symptoms, not of insensibility, but of high nervous excitement, by mania and convulsions.

2. There still remains to be stated one prin- ciple of very general application in the pathology of nervous disorders. Hitherto we have had some cognisable cause for the symptoms — the effusion of blood, inflammation, or the pressure of a tumor. But it is to be remembered, that there exists an affection of the brain and nerves equally independent of pressure, and of all dis- turbance in the circulation within the encepha- lon. The best illustration of this principle is afforded by the phenomena of the narcotic poisons, where coma and convulsion are pro- duced by means which obviously act on the sentient extremities of the nerves, and which, we may fairly presume, deprive the nervous substance of its mobility, or of its power of re- ceiving or communicating impressions. Such a pathological principle is necessarily obscure, from the very nature of the functions concerned, but it will be found an indispensable one on many occasions, as, for instance, in any attempt at explaining the pathology of tetanus and hy- drophobia, or in elucidating those varieties of epilepsy and chorea which depend upon the sympathy of the brain with some distant organ. The principle being once established, there re- mains no longer any difficulty in understanding why, in a great variety of cases of chronic disease of the brain, no morbid appearances of any kind are found upon dissection. This inter- esting fact, indeed, has been denied by some, and explained away by others ; but it is too fre- quent and too obvious to be thus got rid of. The student in medicine may here receive an important lesson. He may learn from this, that the causes of death are often as obscure as the sources of life

and health ; and that morbid ana- tomy, with all its acknowledged advantage* may, if pursued too exclusively, injure rather than forward the conclusion of the pathologist.

The observations now offered on die character and general pathology of nervous diseases will tend to point out the very intimate connexion subsisting among them. The same thing will be further illustrated by a view of their predisposing and exciting causes, by a consideration of their mutual conversion, and, lastly, by a surrey of the principles of treatment applicable to the greater number of them. But, before adverting

to these topics, I would wish (without, however, purging, leeches, cupping, local cold, blisters,

going into any detail on the subject) to notice issues, and setons ; or content ourselves with re-

the attempts which have been made to connect medial means of a less formal though not less

particular symptoms observed during life with useful character, such as a cooling spare diet,

certain appearances found after death ;— in other regular exercise, or a course of aperient mineral

words, to establish minute diagnosis among the waters. By these means, early, steadily, and

morbid affections of the several structures con- judicio-isly applied, we may often do a great

tained in the encephalon. Pathologists, more deal towards the relief, or permanent cure, of

especially those of recent times, have been at the chronic diseases of the brain ; while without

pains to distinguish inflammation of the arach- them, and depending upon stimulants, and an-

noid, from a similar affection of the other mem- tispasmodics, our

expectations will be but too

branes; — extravasation into the ventricles from often baffled.'

extravasation with laceration of the substance of The reader who shall have attended to the general

the brain ;— disease of the anterior from disease bearing of the preceding extracts, will learn the

of the posterior lobes of the brain ;— injury of importance of endeavouring to distinguish be-

the brain from injury of the medulla oblongata. tween structural and mere functional change in

all inquisitions as to the nature and peculiarities

It would be presumptuous to say that attempts of this kind are altogether nugatory ; but it cannot be denied that hitherto very little success has attended them ; that the rules laid down by authors are subject to such numerous exceptions as to interfere greatly with their application in practice; and, lastly, that no reasonable hope exists of deriving from them, even if consider- ably improved, any portion of practical advan- tage.

It is of more importance to trace the analogies among the chronic diseases of the encephalon than their minute shades of difference; and we shall be assisted in this, in the first place, by considering the similarity, and even, in many cases, the identity of their predisposing and ex- citing causes. Mania for instance, and epilepsy, are hereditary. The exciting causes of epilepsy are for the most part those also of apoplexy and palsy. Chorea, hysteria, and many varieties of epilepsy, have a common origin in a disordered state of the stomach and bowels. But in no way is the connexion among these diseases so strikingly displayed as in the circumstance of their mutual conversion, and in their manner of running into each other by insensible degrees. 1 have already alluded to this in the case of hys- teria and epilepsy, but it is equally well marked with regard to palsy and apoplexy, syncope and convulsion, convulsion and mania, mania and apoplexy. One individual of a family has had epilepsy, while others have been deranged. Epi- leptics commonly die with comatose symptoms. Neuralgic affections are not unfrequently suc- ceeded by amaurosis, or by apoplexy. Instances of this important principle in pathology need not be multiplied, as they must be familiar to all who have enjoyed any share of general practice. It remains only that I notice the

principles of treatment applicable to the greater number of the diseases which are now under consideration, and it will be found that the pathological analo- gies subsisting among them are strikingly con- firmed by the effects of the juvantia and laeden- tia. The depleting and lowering system adapted to the particular circumstances of each patient, and the peculiarities of each disease, are that upon which the physician places his chief re-

of diseases which seem, in an especial manner, to have to do with those organs which are destined by nature to be the media of perception, sensa- tion, and even intellect. We are now about to present, we were going to say in contrast, an ex- ceedingly instructive outline of the diseases of nerves, from the pen of an individual to whom morbid anatomy and pathology are under the highest obligations. This quotation we shall follow up by some remarks on the peculiarities of nervous disorders, from a MS. course of lectures which now lies by us ; introduce some observa- tions on the principal points of distinction between nervous disorders, as they are termed, and other maladies ; and then close the whole by a corollary or two of general combination and application. By this plan we shall lessen the necessity of more lengthened detail that we should otherwise enter into on the individual affections of the class.

‘ The pathology of the nerves,’ says Dr. Aber- crombie, ‘ is entirely in its infancy, but the inves- tigation seems to promise very interesting results. From what we already know, there is every rea- son to believe, that nerves are liable to diseases analogous to the diseases of the brain and of the spinal cord, which may affect them either in their substance or in their membranes, and are proba- bly the source of several diseases which are at present involved in much obscurity.

In as far as this subject has hitherto been in- vestigated, the following may be considered as the principal idiopathic diseases of nerves which have been observed.

1. A uniform dark red color of the nervous substance, occupying a defined space, perhaps an inch or two in extent. This was observed by Martinet (Revue Medicale, Juin, 1814), in the median nerve, in a. case in which there had been violent pain of the fore-arm, followed by palsy. Repeated blisters removed the paralytic affection; but, as soon as the blisters healed, pain returned followed by palsy. In a similar affection of the right sciatic nerve, accompanied by palsy of the limb, he found a diseased portion of nerve en- veloped in a quantity of gangrenous cellular tissue. In another case he found a diseased por- tion of the crural nerve, which was an inch and

liance ; and it is, with some few exceptions, of a half in extent, enlarged to about double its na-

powerful efficacy in all of them, whether exhib- iting the character of coma, of convulsion, or of mental aberration. This is the great principle kept in view, whether we employ bleeding,

tural size. This portion was of a violet red color, and strewed throughout with small ecchy- moses each about the size of a pin's head.

2. Serous or bloody effusion within the sheath

of the nerve, penetrating the substance of the nerve, and separating its fibres from each other. This appearance was found by Martinet in the sciatic nerve of a man who died of pneumonia ; he had been affected with violent pain in the pos- terior part of his thigh, aggravated by the least motion so as to make him cry out.

3. Pus effused in the same manner among the fibrils of the nerve. This was found in the sciatic nerve by Martinet, in a man who died of disease, both in the head and the abdomen, and who had been affected during the latter part of his illness with violent pain in the course of the sciatic nerve. The cellular texture surrounding the diseased portion of the nerve was also penetrated by pus. lie found the same appearance in a young man who died of consumption, and who had been affected for two months with lancinating pain, and a painful feeling of numbness extending from the ham to the top of the thigh.

4. Kamollissement of the nervbus substance. A man mentioned by Descot (Descot sur les Affections Locales des Nerfs), died in the Hotel Dieu, after he had been for six months blind of one eye. The optic nerve was found reduced through half its extent to a liquid matter of a white color.

5. Ulceration of the substance of the nerve was observed by Mr. Swan in connexion with a fungous ulcer in the leg. There had been such violent pain of the whole leg and thigh, as to ren- der amputation necessary, and, in many parts of the limb, the nerves were found very much en- larged. Swan on the Local Affections of the Nerves.

6. Small tumors attached to nerves, and produc- tive of violent

symptoms, have been described by various writers. In a remarkable case, by Portal, a woman was cured of epilepsy by the removal of one of these tumors from the thumb. The slightest pres- sure upon it gave great pain, and frequently brought on an epileptic attack. The removal of such a tumor however from one of the auxiliary nerves by Sir Everard Home, terminated fatally; and the safer mode of treating such affections appears to be to remove the portion of nerve entirely to which the tumor is attached, when the nerve is so situated as to render such an operation ad- visable. Small tumors or tubercles have also been found on internal nerves. Sedillot found one in the optic nerve, in a case of araaurosis ; and Berard has described a black tumor as hard as scirrhus developed in the substance of the diaphragmatic nerve. The man had been asth- matic, but he had also slight emphysema of the lungs.

These tumors are generally very small; but there is another species of tumor which grows to a considerable size. One mentioned by Mr. Pring (Pring on the Nervous System), the size of a pigeon's egg, was cut out from the arm, by di- viding the nerve above and below. On cutting into it an expansion of the substance of the nerve seemed to form an imperfect cyst, which contained a medullary and fatty matter, and the filaments of the nerve were continued over it. There had been great numbness and loss of power of the arm, but it gradually improved after the operation.

7. Nerves have been found both very much

enlarged and very much diminished in size ; and they have been in a few instances found with the nervous substance destroyed, the membrane at the part forming an empty canal. But these points have not yet been sufficiently investigated.

Few opportunities have as yet occurred of as- certaining the condition of the nerve in those interesting cases of local paralysis, which have been so beautifully illustrated by Mr. Charles Bell, and his lamented friend the late Mr. Shaw. It is probable that there is either an inflamma- tory action in the nerve itself, or its coverings ; or that the nerve is affected by disease of some of the parts through which it passes. The only case in which I have had an opportunity of examining the parts, since I was acquainted with the discoveries of Mr. Bell, was lately, in a woman about forty years of age, who died of organic disease of the stomach. About a fortnight before her death, she was seized with twisting of the mouth and para- lysis of the orbicularis of the left eye. She had afterwards considerable indistinctness of speech, and, before her death, there was

inflammation of the left eye, with an evident tendency to slough- ing of the cornea. A small hard tumor was felt under the ear, deeply seated betwixt the angle of the jaw and the mastoid process. On dissection no disease could be discovered in the brain. The tumor under the ear was found to be the size of a small bean, very firm, of an ash color; and, when cut across, it discharged thin puriform sanious fluid from minute cells in its substance ; it lay directly above the facial branch of the por- tio dura; and there was considerable appearance of inflammation in the cellular structure sur- rounding the nerve ; but I could not discover any deviation from the healthy structure in the nerve itself. I thought it was diminished in size at the place where the tumor lay over it, but in this I might be mistaken. In a case by Descot, connected with extensive suppuration and caries of the auditory portion of the temporal bone, a part of the portio dura was entirely destroyed ; and in a case by Billard, connected with an un- healthy abscess of the parotid gland, the course of several of the nervous branches was inter- rupted by destruction of part of their substance. An epileptic patient, mentioned by Serres, had inflammation followed by opacity of the right eye, loss of feeling of the conjunctiva, and insensibility of the right nostril, and right side of the tongue. He died of an affection of the brain ; and, on inspection, the fifth pair of nerves, at its origin, was found yellow, softened, and reduced to a state almost gelatinous.

To this source, diseases of the nerves, also, are referred certain severe and obscure affec- tions of the nervous kind, some of which have supervened upon slight injuries, and others come on without any obvious cause. A young lady, mentioned by M. Verpinet, received a slight wound with the point of a sword on the inferior and outer part of the fore-arm It very soon healed, but most violent pain continued in the fore-arm, wrist, and hand, accompanied by con- vulsive motions of the arm, and loss of the vo- luntary power of the wrist and fingers. The affection resisted every mode of treatment for two vcars, and then got speedily well after the

application of the actual cautery to the cicairix of the original wound. In a lady, mentioned by Mr. Swan (Jour, de Med. vol. x), a slight wound on the thumb was followed by numbness, pain, convulsive motions of the arm, and spasms, which occasionally affected the opposite arm, and sometimes the whole body. In this case the affection seemed gradually to wear itself out, though she was not

entirely free from uneasiness at the end of seven years. A very violent case of the same kind, described by Mr. Wardrop, (Med. Chir. Trans, vol. viii.), was cured after twelve months by amputation of the finger. In a similar case by Larry, which followed a wound, a portion of the nerve was removed, without complete success, though the disease was very much alleviated. In a singular case by Sir Everard Home (Phil. Trans. 1801), a gentleman received a violent sprain of his thumb, by the weight of his body being thrown upon it, in saving himself when nearly thrown off, by a sudden motion of his horse. He was afterwards liable to paroxysms, in which his thumb was first bent in towards the palm of his hand ; a spasm then took place in the muscles of the arm, after which he became insensible, and continued so for about a quartet of an hour. The attacks re- turned frequently in the arm, but it was found that the pressure of a tourniquet prevented the insensibility. A nerve in this case was divided without success. The tourniquet lost its effect in arresting the spasms, and he died suddenly after three months, but there was no examination of the body.

In the Medical and Physical Journal, Mr. Jeffries has described a remarkable case of a violent neuralgia of the face, which was cured by the extraction of a small fragment of china, which had been lodging there for fourteen years; and M. Descot mentions a case in which a very severe affection of ten years standing was re- moved by the extraction of a carious tooth. A young lady, mentioned by Mr. Pearson, was seized, without any obvious cause, with pain in the thumb, accompanied by a morbid sensibility of the part ; the affection gradually spread over the arm, and was accompanied by loss of nearly the whole muscular power of the extremity, with morbid sensibility of the integuments, and a strong contraction of the fingers, so that the points of the nails were forcibly pressed against the palm of the hand. The fingers were not under the control of the will, and every attempt made to extend them was accompanied by in- supportable pain. The joint of the elbow also was contracted, and voluntary motion was nearly lost over the whole extremity. It was also very much diminished in size, while the morbid sen- sibility of it was inexpressibly distressing. After some time the other arm was slightly affected in tlie same manner, and she had likewise pain and creat debility of both the lower extremities. After this affection had continued about a year, it got well under the use of a liniment com- posed of olive oil, turpentine, and sulphuric acid. This produced most severe eiysipelatous inflammation, which, beginning upon the af- fected arm, extended afterwards over the whole oody. (Med. Chirurg. Trans, vol. viii.)

Little has hitherto been done on this curious and interesting subject,

but it certainly promises most important results, when it shall be more extensively cultivated. For we have every rea- son to believe that both the nerves themselves, and the investing membrane, are liable to affec- tions which may be the source of many obscure diseases. It is now upwards of fifteen years since I first saw a girl, aged at that time about eighteen months, and previously enjoying ex- cellent health. She had been left for some time sitting upon damp grass, and was immediately seized with fever, accompanied by such a degree of oppression as led to an apprehension of an affection of the brain. These symptoms, how- ever, passed off in a few days, and, upon her recovery from them, it was found that she was entirely paralytic in the right lower extremity. She has from that time enjoyed uninterrupted health, and is now a big and strong young woman, but the right lower extremity has con- tinued entirely paralytic. It is also a great deal smaller than the opposite extremity, and several inches shorter. All the joints are remarkably relaxed, and the muscles flaccid ; but there is no other appearance of disease in any part of it, or in the spine. Very lately I was consulted about a young man, aged fourteen, who had nearly lost the muscular power of the upper part of both his arms, accompanied by a most remarkable dimi- nution of substance of the principal muscles. The deltoid and biceps are reduced to the ap- pearance of mere membranes, and the same af- fection extends in rather a less degree to the muscles upon the scapula ; the muscles upon the fore-arm, however, are full and vigorous. No disease can be discovered about the spine, and in other respects he is in perfect health. The affection has come on gradually, and cannot be traced to any cause.

It is impossible, I think, to explain such cases as these, except upon the principle of local af- fections of nerves, which are at present involved in much obscurity. There are various other af- fections which can only be referred to the same subject, and which present some very singular phenomena, though the facts relating to them have not yet been brought together in any con- nected form. Some time ago I was consulted about a singular disease of this nature, which oc- curs in paroxysms, and affects in the same man- ner two individuals of one family, a young lady of twenty-five, and a young man of twenty- two. The lady describes the attack in the following manner. She is first affected with blindness of the right eye, wnich comes on gra- dually as if a cloud passed slowly over the eye ; about a quarter of an hour after this she feels a numbness of the little fineer of the right hand, beginning at the point of it, and extending very gradually over the whole hand and arm, pro- ducing a complete loss of sensibility of the parts,, but without any loss of the power of motion. The feeling of

numbness then extends to the right side of the head, and from this it seems to spread downwards towards the stomach. When it reaches the side of the head she becomes op- pressed and partially confused, answers questions slowly and confusedly, and her speech is con-

siderably affected ; when it reaches the stomach she sometimes vomits. The feeling of numbness then begins to subside, and, as it goes off, she is seized with violent headach, which continues for several hours, and leaves her for a day or two feeble and languid. The progress of the feeling of numbness, from the little finger to the stomach, sometimes occupies several hours, and the com- mon duration of the whole paroxysm is about twenty-four hours. The frequency of its occur- rence varies from a few days to several months ; she has been liable to it for several years, but in, the intervals betwixt the attacks, she enjoys per- fect health. Her brother, who is twenty-two years of age, is affected almost exactly in the same manner, and he has been liable to the pa- roxysms for many years. He is a banker's clerk, and in the intervals between the attacks enjoys perfect health. When he feels the commence- ment of the attack, he hastily brings to a con- clusion any business in which he happens to be engaged, — gives distinct instructions to another of the clerks in regard to the state in which he leaves the affairs of his department; then walks home, goes to bed, and soon after becomes in- sensible. Next day he is in his usual health, ex- cept a considerable degree of languor.

These singular cases are under the care of Dr. Gibson of Montrose, and in a letter, received from him as these sheets were going to press, he informs me that they are considerably improved. He thinks they have both derived benefit from a course of purgatives, followed by a course of sulphate of quinine, combined with small quan tities of rhubarb. Dr. Gibson adds, that another of the family, a stout young man of twenty, has lately had several attacks of a similar affection, though in a slighter degree.

The affections of internal nerves present a sub- ject of still greater difficulty, and the observations that have been rrade in regard to them are at present far from being satisfactory. Lobstein (De Nervi Sympathetic! Fabrica, usu, et Morbis) thinks he has ascertained the existence of in- flammation of the great sympathetic nerve ; and to this source he refers many obscure diseases, such as violent hysterical

affections, sympathetic affections of the heart, spasmodic cough, colica pictonum, ang'na pectoris, and many obscure affections of the stomach and bowels. In the same manner he explains the fatal effects which are produced by blows upon the stomach, and the severe symptoms, both in the head and in the general system, which often arise from worms, and from other disorders of the bowels. In a lady who died of urgent vomiting, with burning pain in the spine and on the right hypochondrium, he found the semilunar ganglion in a state of in- tense inflammation, and the lower part of it livid. In a boy who died with great oppression of the chest, and distension of the epigastrium, super- vening upon the retrogression of a miliary eruption, he found deep inflammation of a part of the trunk of the left intercostal nerve, and of the ninth and tenth thoracic ganglia.

These speculations must be received with much caution, especially as nothing is more pre- carious than morbid appearances, consisting of mere change of color of parts, without any of

the actual results or terminations of inflamma- tion. We must forbear to speculate where we have not facts before us, but it appears extremely probable that there are diseases of internal nerves which may be the source of important morbid phenomena. Descot exposed the par vagum upon the neck of a dog, and bruised it on both sides slightly with a pair of pincers ; the wound healed favorably, but the animal was af- fected with general tremors, difficult and labori- ous breathing, vomiting, great debility and wasting. The vomiting subsided, and the other symptoms were diminished, but he had not re- covered a natural state of his breathing, when he was killed at the end of three weeks. The internal organs were all healthy. The nerve on the left side, where the injury had been inflicted, appeared slightly increased in size, and was of a yellowish color ; and that on the right side ap- peared more decidedly enlarged, highly injected, and adhering to the neighbouring parts.'

The following is the extract from the MS. lecture, to which we have above referred : —

It has been said that the rationale of nervous agency is in some sort a matter more out of the reach of our perceptive powers than that of the blood's circulation ; or of the assimilation of dead to living, or organic particles. In dis- turbed or deranged functions, implicating this portion of the frame, there will of course be found a corresponding ˆdifficulty attendant upon their divination. We see an inflamed part of it is on the surface of the body, and we know that it consists of a disordered action of the circu- latory powers — at least we know that such dis-

ordered action is present. In like manner, we can perceive the tumefaction of a diseased lymphatic gland ; but a limb or an organ will oftentimes be deprived of its loco-motive, or perceptive susceptibility, without the eye of the observer, or even the knife of the dissector, being able to detect any difference in the organisation from that of health. When, then, we say a malady is nervous, we imply that the faculty of perception is especially implicated, and, know- ing that the nerves are the media of that faculty, we infer that these are its seat and source.

But we are naturally discontented with mere inference, and are anxious for demonstration : and this anxiety has seemed to me occasionally to have introduced into pathology, especially into the pathology of the present day, a somewhat erroneous notion in respect to the origin of some disordered states. Many of us seem hardly dis- posed to allow that any purely nervous derange- ment can have place, and are ready to accuse either the vascular organs, or the first passages, with being the occasion of the present mischief, when neither the one nor the other has had to do with producing the state in question : for, how- ever difficult the explanation of the fact, fact it seems to be, that independently of the bldod- vessels — that independently of the assimilating organs — that independently of the digestive pro- cesses, the nerves may be brought into a con dition of morbid being, occasioning an irregu- larity in feeling and function, which may be named, in strict propriety, a nervous ailment.

True it is that, in consequence of the intimate

connexion in structure and office which one part of the body has with another, an affection of the sentient organisation is very often soon followed by vascular and other disturbance; but, even in that case, the blood-vessels are not the only part to be regarded, either in our estimate of the nature of the disorder, or in the insti- tution of our curative means ; it is ever indeed of prime importance to ascertain, as nearly as possible, what share a disordered state of the nerves has had in the production of a disordered state of the circulation. But I am now to speak generally of more strictly nervous derangements. We may first notice a very curious fact — viz. the loss or suspension of the ordinary percep- tive faculty, while every voluntary muscle remains obedient to the mandates of the will. Dr. Ilaslam has given us an account of a patient, a female, having dreadfully mangled her jaw, by

a piece of glass, in an ineffectual attempt to commit suicide, and being without any sensation of pain during the whole process. Dr. Heberden, too, speaks ot an individual, who, under the influence of some temporary impression, cut away the whole of his testicle and penis, and who afterwards stated that he had not the smallest recollection of feel- ing any pain from the process ; and how often do we see instances of religious or political enthusiasm absorbing the faculty to such a de- gree, that inflictions of the most violent kind are borne almost without perception.

‘ Perhaps,’ says an eloquent writer, ‘ no combi- nation of affections could be feigned, which can- not be matched in faithful medical reports, and the reality exceeds whatever the most fertile fancy could invent in readiness to be affected,, in violence, in the whimsical manner in which the symptoms are grouped, and in the rapid changes from one state to another. In this last respect, what is fabled in romances and masks, concern- ing the power of the enchanter’s rods, to induce in a moment the stiffness of a statue, or to restore the spell-bound person to motion, is much ex- ceeded in nature ; and it is possible that fiction took the hint from this species of reality, since it always must borrow from one species of reality or another. That the dropping of a hair-pin on the floor should make a person start from her seat, and fix her in a preternatural posture, by occasioning preternatural fixed contractions and relaxations equally preternatural, till she sink into insensibility, from which she awakes into vehement delirium, is hardly credible to those who are conversant only with the healthy, and the sorts of sickness to which the robust are subject.

‘ On comparing an individual, liable to these sad varieties of being, to the engineer who stands unmoved amid the thunder of a battery, to the seaman who maintains his footing upon the :leck or ropes of his vessel, reeling under the shock of the elements, or to the Indian who exhibits the signs, and probably feels the throb of intense delight while the flames are preying upon his flesh, how astonishing do we find the ranue of human susceptibility to the effects of the powers by which we are surrounded !’ Indeed, almost numberless instances might be

adduced, both from modern and ancient authors> bearing upon this point ; but it is the fact alone about which we are interested. Now this pecu- liarity is in a greater or minor degree character- istic of a great many nervous complaints, vari- ously delineated in nosological systems; and there are no persons who at all times have exactly the same measure of local insensibility j the shades varying in degree ad infmitum, with- out the anatomist being able to state any variety in

structure or organisation, upon which the variation had depended, and without there being apparently a particle more or less of blood in the vessels of the part than under circumstances of health.

On the other hand we find in some cases an acuteness of feeling in one part or organ, which is totally inexplicable by any a priori reasoning, or anatomical peculiarities. Haslam (to give one example) speaks of a man in Bedlam who was so sane and rational in all his deportment that he was on the point of being dismissed; but he was detained in consequence of having com- municated to Dr. Haslam a secret of importance. ‘ Never,’ says the man, ‘ venture to walk in acertain apartment, for there is a subterraneous fire under that room which communicates such a heat to the floor that I never walk there without having my feet burnt.’ Now in this case there must have been an actual perception of pain in the feet from some unknown condition of the brain and nerves ; a condition upon which no light is thrown by any reference to the state, at the time, of the vascular actions ; and if we talk of mental peculiarities we are equally gratuitous in our explanatory phraseology — since we know nothing of the manifestations of mind but through the medium of the physical frame.

Another very remarkaole affection, to which the sentient organs are obnoxious, consists in the existence of perception to a very acute degree without the power of expressing to by-standers that such perception is present. This constitutes that state which is vulgarly named a trance, and may be looked upon as merely a more than com- mon measure of that affection to which we are all liable, as when we are susceptible of a greater than ordinary difficulty in conveying to others or embodying in language the thoughts and feelings which pass in our own minds, nay our own case. Again, one whole order of perceptions shall be abolished, or for a time suspended, while other functions shall be exercised with even more than accustomed facility ; an extreme extent of which state is exemplified in the phenomena of som- nambulism or sleep-walking, while in all these varieties of being the arterial pulsations shall not undergo any appreciable change, proving to a demonstration that it is the nervous and not the vascular organisation that has been the especial residence of those peculiarities, whence the alterations have originated.

These facts, with volumes of others that might be adduced, of a similar kind, ought, in my mind, to teach us two lessons. They ought to instruct us in the inefficiency of that pathology and prac- tice, which should be regulated upon .no other principles than that of vascular irritation or con-

gestion in blood-vessels ; and they ought more- over to keep us constantly alive to the remark- able subordination of the physical to the mental part of the frame. A fact and principle in medi- cal experience and theory which it seems to me \ve are occasionally at least too much inclined insufficiently to appreciate. If it were nothing but the importance which the knowledge and at- tention now adverted to would teach of manner in the practice of medicine, that itself in its appli- cation would be found of no mean moment. I should, I hope, be one of the last to recommend hypocritical charlatanism, and assumption of superior powers ; but when we find that the as- sumption itself has an effective influence, it ceases to be a dishonorable or immoral act. If then we wish for success, in the administration of medicine, let us in prescribing it be careful to join a mildness of manner, with a confident de- portment. This is not as I have said to assume a virtue which we have not, but lawfully to act upon the susceptibility of our patients towards assisting by every means in our power their re- storation to health.

While I am upon this head it may not be im- proper to state a single example of the influence of imagination upon the actual physical condi- tion, which is furnished us by Dr. Haygarth in the pamphlet which he published on the subject of the Pretensions of the Metallic Tractors ; in order to show that we might even admit all that these pieces of metal laid claim to in respect of actual effect, and yet notwithstanding maintain the fallacy of their claims to any actual virtue in and of themselves.

It is necessary to premise that, in the trials which Dr. Haygarth records, pieces of stick and iron were employed while the patients invariably supposed themselves to be under the influence of the genuine metallic tractors. The case which I have selected was transmitted to Dr. Haygarth by Mr. Smith of the Bristol infirmary, a man of unquestionable credit and veracity. ‘ Edmund Williams,’ says Mr. S., ‘applied to me with an obstinate affection of the urinary organs (stillici- dium urinae). The man was a poor feeble sub- ‘ect, and appeared to be impressed with the idea that he should never recover, that nothing would be of service to him, but he was willing to try every thing. In one minute after the points of the wooden tractors had been drawn ii various directions about the pelvis, he said I begin to feel something jumping in my inside, and in three minutes and a half the determination of blood to the capillary vessels of the skin was

evident, giving him the sensation of warmth to which he had been long a stranger. On the 27th he reported that his hips had been unusually comfortable and warm : this induced me to per- severe, especially as the patient himself had be- come less sceptical as to the powers of the tractors. The gentleman who assisted me having borrowed the pieces of stick I was obliged to make use of two-penny nails, which had before been used on a similar occasion : these were disguised with red sealing wax, and on this account had the dig- nified appellation of rouge et noir. In fact it was often necessary to play the part of a necromancer, to describe circles, squares, triangles, and half the

figures of geometry upon the part affected, with the small ends of our feigned tractors. During all this time we conversed in the patient's hearing upon the wonderful discoveries of Franklin and Galvani, laying much stress upon the power of metallic points attracting even lightning, and conveying it to the earth harmless. To a more curious farce I never was witness ; we were al- most afraid to look each other in the face, lest an involuntary laugh should remove the mask from our countenance and dispel the charm. But to return to my patient. In one minute he felt ' a smarting in his loins and warmth of the skin ;' in two ' heat increased ;' in four the operation ceased when he said the ' skin was very warm :' a by- stander asked him if he thought himself mended ? he replied, « He would soon answer his question,' and upon sitting down suddenly exclaimed 'yes, I am better.' It was demanded ' how he knew it?' ' When I used to sit down,' he replied, there was always a spirt of water thrown from me, but now I can prevent it.' The experiment was two or three times repeated, and with the same result : in fact the patient absolutely regained the power of retention in a great measure afterwards.'

On this case the reporter of it makes the fol- lowing reflections.

It may be asked what physical alteration could so suddenly have taken place in the muscular fibres of the sphincter of the bladder, that, from a state of pallid relaxation, they should again be endowed with the power of performing their office. Permit me in my turn to ask the enquirer what is the primary cause of the purple blush which instantly overspreads the cheek of the guilty when accused? Would it be answered because the vessels are distended suddenly with blood ; that will be readily granted as the remote cause, but it is the power which directed that ope- ration which I wish to be demonstrated. We shall be equally involved in the same dilemma, but, the facts being admitted, our inability to account for them signifies nothing.

Such cases as this lead to more important in- ferences when properly appreciated than that for which the experiments were principally insti- tuted, namely, the detection and derision of a gross system of quackery; they are mainly to be valued in the use that may be made of them in regular aud legitimate and conscientious en- deavours to restore health ; they serve to evi- dence that very important principle in the theory of living actions — that mental stimuli are by no means limited in their operation to the sentient organisation and faculties ; but that they display an agency decided and demonstrative, upon even the minutest fibre entering into the composition of an animal body.

‘ It is worthy of observation,’ says Dr. Cogan, who has written on the Passions, ‘ that, in every powerful exertion of the imagination, some change takes place in the body corresponding with its nature. In a keen appetite, upon the thoughts of some favorite viand, the salivary glands are stimulated to a secretion of saliva as pre- paratory to deglutition. We feel ourselves firm, collected, elevated, upon the timely representa- tion of the firm heroic conduct of others. The blood thrills in our veins, and the skin corrugates

at the description of any thing peculiarly horri- ble; and, under the strong impression of fictitious danger, the attitude of our bodies attempts to evade it. Full confidence in the mystic power of another places the whole system in a situation most favorable to the effects, which the object of his confidence undertakes to produce. This will explain much of what is real in the pretensions of magnetisers, and the exaggerating disposition of both operator and patient will serve to ex- plain the rest.

I have thus, continues the lecturer, guided by the order of my subject, called your attention to the influence of mental impression in aiding and regulating the agency of physical powers, not with a view to make you contemn, but, on the contrary, for the purpose of inducing you duly to appreciate and properly to apply the virtues of medicine iu the cure of diseases.

This fact of mental agency upon physical con- ditions and powers, while it gives us a clue, as we have seen, to the success of unprincipled pre- tenders to nostrums, directs us as far as we are permitted by a sense of rectitude of conduct and manliness of character to make the best use of that faith which the subjects of our

care are ready to repose in our skill; and confers a dignity and importance on the medical profession beyond that which could be claimed from a mere routine ac- quaintance with drugs and antidotes.'

It will be hardly necessary to say in addition to the above extracts, and the intimations we have already dispersed among them, for what purpose we have thus collated and compared the sentiments and statements of different authors in respect to the pathology of the nervous organi- sation. We wish to impress upon the mind of the medical student, while it is his duty to seek every opportunity of investigating morbid structure in connexion with morbid action, that such is the nature of the organised body, and such its connexion with external circumstances, that a great deal goes on in the interior of the frame, of which no possible explanation will ever be given if we wait until the knife of the morbid anatomist unfolds the secret. We wish it further to be understood, that the alteration of structure, which post mortem examination un- folds, is often rather the effect than the cause of the malady which has terminated life ; or that, even if such alteration or structural disorder has been the means of severing the thread by which existence is sustained, previously disordered workings of a general kind, and not merely the topical malady, have been in point of fact the main and radical source of the incidental derangement of structure. But on the other hand let us al- ways be alive to the probability of mere topical lesion being equal to the production of an im- mensity of constitutional derangement ; and let us feel grateful to such pathological patience and discernment as that evinced by Dr. Aber- crombie, in his endeavours to place medicine as much as possible upon the footing of a demon- strative science.

VN e now proceed to consider the several ge- nera included by Cullen in his class neuroses.

3R7. Order 1. COMATOSE AFFECTIONS. Co- mata. — On this order we need add nothing to

the remarks which have been submitted on the pathology of nervous affection, of its occasional, and indeed most frequent, connexion with the brain, and on the question of pressure upon or other disordered condition of the encephalon inducing the comatose state. See the remarks just made on the class, and those on the nosolo- gy in the third division of the present article.

388. Apoplexy.

Symptoms. — The patient in the most common form of apoplexy falls

down as with a sudden stroke, which the name imports ; he is deprived of sense and motion, unconscious of every thing that passes around him, and as if in a deep sleep, for the most part making a stertorous noise. While sense and motion are thus suspended, the heart and arteries, as noticed in the definition, continue to carry on the circulation. It is not, however, invariably that this apoplectic seizure is thus so sudden or so complete. Sometimes it is preceded by violent pains in the head, sick- ness of stomach, dimness of sight, paleness of face, vertigo and loss of recollection ; this state lasting for some time, at length complete coma supervenes, and the patient becomes equally unconscious as when the attack is more sudden. Sometimes a palsy of one side precedes the coma, and the apoplexy seems to proceed from the palsy, as the palsy in other cases follows the apoplexy.

In which ever way the apoplectic fit commences, there are certain appearances presented during its continuance which merit attention. The pulse at first is commonly small and irregular; but, as the system recovers from the shock, the pulse becomes full and strong, and is generally slower than natural. Respiration is much em- barrassed, being always slow and occasionally irregular. In all the severer degrees of the dis- ease, this laborious breathing is accompanied by stupor ; and a frequent appearance is that of foam or frothy saliva excreted from the mouth and blown away from the lips with considerable force.

The skin is commonly warm and bathed in a copious perspiration. In the worst cases of the disease a cold clammy sweat has been observed. The face is generally pale, the cornea dull and glassy, and the pupils permanently dilated. The teeth are closely clenched, and the power of swallowing, though seldom wholly lost, is for the most part so much impeded as to oppose the most serious obstacles to the administration of lemedies. The bowels are torpid, as is usual in all cases of cerebral oppression, and they resist the action even of powerful cathartics. If blood is drawn from the arm the coagulum is com- monly firm, and Sir Gilbert Blane has noticed that it is in most instances covered with the in- flammatory crust.

The duration of the apoplectic fit varies from two or three hours to as many days. Thirty hours Dr. Gregory (from whom we principally extract this very correct history) states to be the average duration of those which have fallen under his own observation. Instances indeed are on record of sudden death from apoplexy ; but in many of these cases there is reason to suspect that the immediate cause of death was

rather to be found in some affection of the heart, or large blood-vessels in its neighbourhood, than in injury to the brain.

It should be observed that the full paroxysm is occasionally ushered in by premonitory symp- toms of more gradual occurrence and permanent character than those above mentioned. There will be vertiginous sensation, loss of memory, the perception of black spots floating before the eyes, faltering in speech, more than usual drow-siness, and indisposition to take an interesi in the common affairs of life, and in fine all the indi- cations of cerebral disturbance for some length of time. The most usual times of apoplexy's occur- rence is between the age of forty and sixty ; the most common times of the year are in the spring or fall, when atmospheric temperature is subject to sudden variations.

Causes. — Certain conformations of the body are considered as predisposing to apoplexy. The apoplectic make, consisting of a short neck, large head, and florid complexion, is proverbial ; though some have questioned whether individuals thus constructed and circumstanced are more obnoxious to the complaint than others. Habits of life may increase the tendency to apoplexy without always proving the actual excitants of the malady. These are, full living, the indul- gence cf wine, sleeping after dinner, and lying in bed in the morning longer than is proper ; men- tal anxiety, intense thought, carelessness as to the alvine evacuations, neglect of exercise, and indulgence in venery.

The principal exciting causes of apoplexy are, the immoderate use of wine and spirits ; exposure to cold, so as to check the perspiration ; violent exertion of body or mind; very long or loud speaking, especially if much mental exercise ac- company it ; gout, rheumatism, and cutaneous disorders, translated from the extremities or sur- face ; severe fits of coughing ; stooping the body ; exposure to hot suns, producing apoplexy in the way of coup de soleil; warm bathing injudi-ciously used ; and the inhalation of poisonous vapors. In respect, however, to the first men- tioned sources, there is reason to doubt whether, when they affect the frame violently, and even to the production of death, the effect is not for the most part of a different character from that of the apoplectic seizure.

In respect to the proximate cause of apoplexy, as pathologists

sometimes express themselves, or that state of brain which is necessary to the actual induction of the fit, we shall find in this, as in most other affections, that it is various. Inti- mations on this head have already been thrown out : and we may here repeat, that, although some contend for the necessity of absolute haemorrhage upon the brain, or at the least for effusion, to produce genuine apoplexy, it should appear that there are several conditions of the cerebral sys- tem which at different times constitute the im- mediate cause, or the actual circumstance of the disorder. Slow inflammation of the membranes ; mere temporary fulness of vessel; gradual loss of power in the nervous system, and in the brain, especially as the main portion of the nervous mass ; ossification, or other obstructions to some of the vessels, causing too little blood VOL. XIV

on one part of the brain and too much on another ; these, and probably other circumstances and conditions, may occasionally prove quite equal to the production of the apoplectic state. The old division of apoplexy was into sangui- neous and serous ; the one being constituted of actual blood poured out from vessels, the other of the extravasation of serum. Another divisiot has been suggested of cerebral and meningeal, the one consisting in haemorrhagia cerebri, and always attended or followed by palsy ; the other existing in the membranes, not in the substance of the encephalon, and not being accompanied by paralysis. It may DC observed of all these distinctions that there does seem some foundation for them, but that none of them are tenable in the abstract way which systematists have assumed them to be. Of one thing we may generally feel pretty certain, that if with a decided attack of apoplexy there is a decided loss in the power of one Umb, or one side, a rupture of blood- vessels, or at least a pouring out of either actual blood or serum upon the brain, has been the oc- casion of the symptoms. And here we may re- mark, in connexion with the proximate cause of apoplexy, that the circumstances are generally illustrative of the decussation of the nervous system : at what particular part this crossing or interchange of nervous fibres takes place does not seem to be quite a settled point among patho- logists ; but that it does obtain is rendered evi- dent even by the phenomena of an apoplectic seizure, or a blow upon the head ; the resulting paralysis being on the side opposite to the part of the brain in which the lesion is made. It is, however, a curious fact, that this, though a ge- neral, is not an invariable occurrence : now and then the injury, or haemorrhage, or lesion, of whatever kind, and the consequent palsy, are on the same side ; which increases the difficulty and perplexity that still accompany all investigations on the subject of encephalic lesion for the pur- pose of throwing light on the function of the brain

as connected with its structure. On a sub- ject which is so exceedingly obscure we ought to receive with great commendation the exertions of industry directed to this point of pathology; which, if they do no other good, are at least cal- culated to prevent that hasty and erroneous ge- neralisation, with respect to structural function, to which some physiologists have on the other hand proved themselves too prone.

Distinctions. — Was the complaint of which the patient died apoplexy, or epilepsy, or intoxi- cation, or other disorder of the brain ? is often a question proposed by curiosity, and sometimes in the course of judicial inquisition. These dis- tinctions are sometimes not very easily traced ; indeed one state of the brain often falls into an- other, and systematic nomenclature, we wish again and again to urge, often assumes a preci- sion which does not obtain in fact. From epi- lepsy, however, we may generally say, apoplexy is distinguishable by the absence in the latter complaint of that foaming at the mouth and convulsions which characterise the epileptic pa- roxysm ; a secretion of saliva does indeed, as we have above remarked, occasionally attend upon the apoplectic fit, but it is puffed out with tho

respiration in a different way from that which is seen in epilepsy ; and the more that there is a tendency to convulsive distortion of countenance and limb, and the more that saliva is excreted from the salivary glands, in that proportion does the disorder recede from true apoplexy and ally itself with epilepsy. From hysteria apoplexy differs by the absence in the latter of that sense of constriction about the throat, called globus hystericus ; which, in some forms or grades of the hysteric disorder, is so exceedingly urgent. From intoxication the distinction is to be taken by the absence, in apoplexy, of any vinous or spirituous smell in the breath ; by the respira- tion being more stertorous, and by the patient being for the most part more insensible to tem- porary rousing by shaking or loud talking.

Prognosis. — A person having once been apoplectic is scarcely ever the same person again that he had been prior to the attack, so that in one sense we may say the prognosis is almost without exception unfavorable. Apoplexy in- deed, occuring in early life, in a full, plethoric, vigorous individual, and induced by some evi- dent excitation, may be taken as an exception to the rule now laid down ;

but the exceptions are rare, and apoplexy of old age always leaves either an enfeebled understanding, an impaired muscular energy, or at the least a more than original tendency to its occurrence again.

The favorable signs, in respect to the prospect of recovering from the present attack, are the senses being but little impaired, the breathing becoming more free and easy, the pulse more natural or less jirky and obstructed, warm sweats breaking out, the occurrence of spontaneous haemorrhage, and haemorrhage taking place either from the haemorrhoidal vessels or from the nose.

The unfavorable signs are the protraction of the insensibility beyond the third day, the pulse becoming still more oppressed and hard, fever supervening, though in some cases the re-action of recovery is accompanied by fever, so that Hippocrates puts this down as one of the favor- able signs ; when, however, fever occurs while the patient remains heavy and oppressed, we should say, the degree of fever is almost the degree of danger. Cold, clammy, and partial sweats are also dangerous prognostics, a drib- bling of saliva from the mouth, red heavy ap- pearance about the eyes, and cold extremities, all forebode ill. A dilated pupil is universally allowed to be a bad sign ; but we are told, by Dr. Cooke and others, that some of the worst cases of apoplexy are accompanied by a remark- ably contracted pupil.

Treatment. — During the paroxysm,the patient, if possible, should be laid in a spacious and airy apartment, and all causes removed that impede respiration ; the head, and this direction is not perhaps always sufficiently attended to, should be placed high on the pillow; pillows too, or other supports, should be put under the shoul- ders, so that there should be as little bend as possible in the neck. All ligatures or tight dress should be as speedily as possible loosened, and some have directed the feet and legs to be put into hot water. Blood is to be withdrawn :n greater or less quantity, according to the de-

gree of arterial action that may be indicated by the state of the pulse ; if this be not high, and there should seem a collapse of the system, and a state somewhat similar to what surgeons call concussion of the brain, it will be better to defer the bleedings till signs of reaction present them- selves ; but bleeding should never be deferred in the full sanguineous attack, and where there is every mark of plethora and high action. One or two pounds may be taken at once, and re- peated in five or six hours afterwards should the stertor and high action continue. The fol- lowing day the bleeding may be again repeated if we appear to be gaining a little ground with- out having gone far; but we must now be fearful of carrying the evacuation too far, lest we in-

duce a collapse, which, under the present cir- cumstances of the brain, would not be likely to be recovered from. It is not here as it is in some forms of active and sthenic inflammation, where faiutness is a state of things rather de- sirable than otherwise ; or, at any rate, if we stop the internal flow of blood by the production of faintness, we at the same time may do still more injury to the brain's energy than we have done good. Indeed, than bleeding in apoplexy, no- thing can be conceived a nicer point, and more requiring a tact and judgment which can scarcely ever be assisted by abstract precept, but must be guided by circumstance. We have seen pa- tients bled out of insensibility, and again bled into it, by a too free repetition of what in the first or perhaps second instance was good prac- tice. When a large quantity of blood is de- manded, it is for the most part best to take it from the arm, especially if there be any want of dexterity in the operator in respect of the jugu- lar vein or temporal artery, for it is not perhaps of so much consequence from what part the blood is taken, as whether you take the proper quantity. Some, indeed, have said that, in point of fact or effect, there is no such thing as local blood-letting. This position does not appear to be correct, but we are often apt to infer errone- ously in respect to the immediate depletion of vessels, and causing blood to be diverted away from the channels into which it is flowing.

Purging next to bleeding seems one of the most important items in the treatment of apo- plexy ; but we are often prevented from getting down any thing of much bulk or substance, bj the closed state of the mouth, and the interrupted deglutition. In this case some calomel may be introduced forcibly upon the tongue, or, what gives us a better chance of speedy operation, two or three drops of the croton oil may be in- troduced in the same manner.

In respect of emetics opinion varies: it has been supposed that the collapsed oppressed state of the system, which they occasion, is likely to prove an impediment to restoring the brain's energy. In most instances however the stomach pump might be employed ; and, should the apo- plexy have been induced by any poisonous sub- stance taken into the stomach, or should the disorder be one simulating apoplexy from poison or spirituous liquors, we may do a great deal ot good ; and if that is not the case we cannot have done much harm.

Stimulant enemas, as the following, may be thrown up the rectum.

R Vini aloes f. Jiij. Aquae purae f. %*..

Fiat enema.

Take of wine of aloes three fluid ounces, wa- ter ten fluid ounces. Mix them and make au enema.

Or the turpentine enemata may be employed. R Ol. terebinth, f^iij. Aquae menthae pip. f. 3X-

Fiat enema.

Take of oil of turpentine three fluid ounces, peppermint water ten fluid ounces. Mix for an enema.

Or a few drops of the Ooton oil may be mixed with a small quantity of crumb of bread, and be introduced into the rectum as a supposi- tory.

After bleeding and purging, blisters may be applied to the nape of the neck, or to the calves of the legs ; and, should the insensibility conti- nue, it is usual to apply sinapisms of mustard and crumb of bread, made into a poultice with vinegar, to the feet and ancles. It is doubtful, however, whether much good is ever effected in the powerful kinds of apoplexies by these stimu- lants and counter-irritants, and the practitioner rather has recourse to them with a view of satis- fying anxious and distressed friends and relations than with much hope of their proving effica- cious.

The head should be kept cool by the applica- tion of a spirituous lotion should morbid heat be generated, and nothing is perhaps better for this purpose than a mixture of spirits of wine and water, or, in the absence of it, common gin and water. If we have recourse to a pharmaceutical composition for this purpose, the proportion of seven ounces of the liquor, ammon. acet. with one ounce of the nitric ether,/ or half an ounce of sulphuric ether, will answer our purpose (see Phrenitis).

We scarcely need go into the requisites of treatment during the progress of recovery from the paroxysm. Should febrile heat prevail, sa- line aperients and refrigerants are to be adminis- tered, as in the case of other febrile complaints; the bowels preserved gently open ; and, in the instances of threatened collapse or sinking, the subcarbonate of ammonia should be administer- ed, as directed under the head of fever.

‘ Apoplexy being so very fatal a disease, it is incumbent on the

physician, in all cases where he has reason to suspect a predisposition to it, to employ steadily such prophylactic measures as are calculated to avert the danger. A cool spare diet, abstinence from all fermented or spirituous liquors, regular exercise, abridging the usual number of hours allotted to sleep, keeping an open body, and in some instances establishing a drain by means of an issue or seton, are those on which his chief reliance is to be placed.' — Gregory.

It will be necessary, says another author, to en- quire into the state of the viscera during the after treatment ; if these have obviously been deranged, before the occurrence of the paroxysm,

they must be especially attended to; and the stimulants, which it may be thought necessary to administer, require, for the most part to be modi . fied and corrected by that class of medicinals that are termed deobstruent or alterative; which are, in fact, those that by acting gently and ge- nerally upon the secretions obviate as much as may be the disposition to these irregular impe- tuses of the circulation.

389. Palty. Paralysis. — In reference to palsy the reader is requested especially to advert to and recognise the habits of the nervous system, as pointed out in the preliminary extracts from authors on the several kinds, and species, and grades, and complexions, of nervous disorder.

Symptoms. — Palsy is characterised by an abo- lition or suspension of voluntary power, or of sensation, sometimes of both, preceded some- times by a numbness and sense of weight in the head, or vertiginous affection; sometimes a sense of creeping, or numbness, precedes the full at- tack ; and occasionally there is a twitching or catching of the member affected. It has been supposed that when paralysis is thus ushered in by nervous feelings, such as those just mentioned, the disease is then in some portion of the nervous system unconnected with the brain ; but when it occurs suddenly, or without these pre- cursors, that then the effect has been brought about by some prior condition of the cerebral system.

Causes. — The predisposition and excitants of palsy are for the most part minor degrees of those which dispose to and excite apoplexy. Some- times, however, as may have been inferred from what has been previously remarked, the paraly- tic disorder is purely local and independent of the cerebral system, as when it is induced by a diseased condition of the nerve supplying the muscles which become paralysed ; at other times a particular poison, as of lead, will bring on palsy without any obvious effect upon the brain ; occasionally the disorder is purely sympathetic, as in the instance of paralysis from

worms ; at times a certain kind of rheumatism will engender paralysis; and it has been already remarked that some pathologists, from the alliance of rheu- matism and palsy, have proposed to designate some kinds of rheumatism, paralytic. The di- rect application too of cold will, under certain circumstances, create a'disordered condition of the sentient and moving organs, which would be justly entitled to the appellation of paralysis, and that without occasioning any obvious de- rangement in the encephalon ; so that palsy is at times a sort of minor apoplexy, or a degree of the same disorder, and at other times apparently independent of the brain.

Distinctions. — Palsy is distinguishable from apoplexy by the absence of stertorous breathing, and by the loss or suspension of sense and motion being only partial. The distinction be- tween cerebral and merely sympathetic palsy must be taken from a careful attention to the circumstances of the attack, by enquiring into the condition of the chylopoietic organs, by ascertaining whether there be any reason to sus- pect the existence of worms, and by learning whether there are anv other particulars con-

nected with the attack beside cerebral disturb- ance.

Prognosii.— That palsy which results from fully formed apoplexy is seldom thoroughly cured ; or, if the muscular energies and volition be restored, it is often at the expense of lesion of the intellectual faculties. It has been re- marked that when cerebral or apoplectic palsy, if we may so express ourselves, occurs on the left side, the chance of restoration is less than when the right side is affected. When the paralysis is from causes acting upon the nerves only, the parts have been restored occasionally to their wonted sensation and motion by the occurrence of a fever — which by the way has been known to pro- duce a temporary cure, even of idiotcy, or rather total loss of memory ; but the condition that had been removed has been found to recur when the fever subsided. A remarkable case of this kind is related in the Edinburgh Review, if we recollect right, quoted from Mr. Tuke, the proprietor of a lunatic asylum. These mutations and suspen- sions of disordered states, by the intervention of others, are among the most extraordinary and in- teresting phenomena that are manifested in con- nection with morbid processes. The unfavorable

circumstances and prognosis in palsy are the simultaneous deprivation of both feeling and motion, with a gradual wasting of the affected limb. The palsy we may say that results from an affection of the brain is always likely to be more permanent, and less under the influence of remedial measures, than that occurring as a mere nervous affection.

Treatment. — Should there be much plethoric condition, or seeming congestion of vessels, bleeding and active purgatives will be required, as in apoplexy. On the other hand, if the de- privation of power be rather nervous than cere- bral, rather adynamic than apoplectic, stimuli will be called for, such as blisters, electricity, or galvanism, friction, and the several medicinal ex- citants that are employed to rouse nervous ener- gy, such as mustard seed, horse radish, ammo- niated tincture of guaiacum, carbonate of am- monia, valerian, assafcetida, &c.

Prescriptions from Dr. Gregory, Dr. Hooper, and Dr. Uwins.

R Infusi cascarillae f. 3viij. Ammonias subcarb. gr. v. Confect. aromat. 9ft. Sp. armoracix comp. f. 3ij. Fiat haustus : ter de die sumendus.

Take of infusion of cascarilla eight fluid drachms, subcarbonate of ammonia five grains, aromatic confection ten grains, compound spirit of horse-radish two fluid drachms. Mix into a draught.

R Confectionis aromat. 9j. Ammoniae subcarb. 9ft. Aquae pure f. Jift. Fiat haustus.

Take of aromatic confection a scruple, sub- carbonate of ammonia ten grains, water a fluid ounce and a half. Mix into a draught. R Guaiaci pulv. 9ft.

Tinct. guaiaic ammon. f. 3i.

Pulv. acaciac 9ij Syrupi croci f. Sift. Aquae pimento f. 3xiij

Fiat haustus.

Take of guaiacura in powder ten grains* ammoniated tincture of guaiacum a fluid drachm* powder of gum arabic two scruples, syrup oˆ saffron a fluid drachm and a half, pimento water thirteen fluid drachms. Make into a draught.

Valerian, in the form of ammoniated tincture, is an excellent medicine ; or valerian root may be infused in the proportion of a quarter of an ounce to half a pint of water, and half this quantity taken twice a day.

It is questionable whether the virtues of valerian may not be too little regarded in the present day ; but, upon the whole, we are not to expect a great deal from stimulants of this kind as permanent medicinals. In old cases, where the secretions as well as the nervous energy may be out of sorts, a combina- tion of guaiacum with deobstruents, as in the following formula, may be tried.

R Guaiac. resin. 3ij. Pil. hydrarg. 3j. Pulv. digitalis 9j. Opii pulv. 9ft. Muctlag. acaciaa q. s.

Fiat massa in pilulas xlij dividenda. Suma ij vel iij nocte maneque.

Take of guaiacum two drachms, blue pill one drachm, powder of foxglove one scruple, powder of opium half a scruple. Mucilage of gum arabic as much as will be sufficient to make into a mass, which is to be divided into forty-two pills, two or three to be taken at night and morning.

The nux vomica, the arnica montana, and the rhus toxicodendron, have all been tried in palsy, especially the former, and they unquestionably possess an influence over the nervous system ; it may, however, be considered doubtful, whe- ther any of them are gifted with influence of a permanent kind in old standing palsies, and whe- ther the temporary excitation which they occa- sionally produce may not in some instances prove worse than useless. Certain it is that, when the palsy has connexion with chronic irri- tation in the brain, there is some danger of sti- mulating the vascular as well as the nervous system by means of these medicinals, to an ex- tent destructive of our own design in their admi- nistration. This objection lies against the voltaic electricity, if unseasonably, or without due care applied ; but upon the whole we should say that galvanism under proper regulations promises to be of more service in some cases of old standing palsy than any remedy which has hitherto been proposed. Bath waters, warm seabathing, vapor baths, with or without medicinal impregnations (and these impregnations are of questionable effi- cacy) shampooing, and a determined course of friction, seem principally useful when the para- lysis partakes of an arthritic, that is, of a gouty or rheumatic character ; for in stiffness and want of power over the limbs, connected with these dispositions and states, much good may be effected by a judicious employment of one or more of these several remedial processes ; they combine the advantages of exciting hope and v.-

spiring confidence, with their more positively physical operation ; and the reader will recollect the curious fact, stated in the introduction to the present class of diseases, that supposed metallic tractors, while they were employed under the conception on the part of the patient of their being the real thing, operated a decided and pow- erful effect upon muscles which refused to be called into action by the common excitants of muscular energy.

In all cases of remedial attempts to overcome palsy we must be careful to keep the secretions active, and not to stimulate the brain to an excess.

The following composition may be employed with much benefit in some cases of chronic palsy, particularly where there is still a disposition ma- nifested to cerebral irritation.

R Decoct, aloes comp. f. 3vj. Ammonise subcarb. gr. v. Aquae purae 3vj. Fiat haustus.

Take of compound decoction of aloes six fluid drachms, water six fluid drachms, subcar- bonate of ammonia five grains. Mix them into a draught.

The student will perceive, by turning to the no- sology, that paraplegia is one of the varieties of palsy pointed out by Dr. Cullen. This name is given to a loss of power over the lower extremi- ties, or, as it is expressed, half the body divided, not as in hemiphlegia, but transversely. Much discussion has taken place in respect of the condition of parts necessary to the production of this species of palsy, when it occurs without an obvious affection of any portion of the spinal chord. Dr. Baillie has brought forward argu- ments in support of the principle that this is a cerebral palsy as well ashemiplegia ; and he has adduced the facts that giddiness, drowsiness, ver- tiginous affections, &c., accompany it. The probability, however, is, that it may at different times be both cerebral and spinal ; that is, that some altered condition of the spinal chord, with- out being obvious to the senses may prove, occa- sionally equal to the production of this kind of paralysis without any primary affection of the brain, and that at other times the original cause of the paralysis may be in the brain, and the di- rection of it to the lower extremities regulated by the particular parts of the brain which may be implicated. Affections of the spinal chord, and its investing membranes, we may here take occasion to say, have been recently investigated with considerable minuteness,

and no examina- tion as to structural change is at present consi- dered satisfactory; we mean more especially in reference to nervous changes, that do not take the spinal appendage to the brain, as well as the brain itself, or as it is called by some the cerebral brain into recognition.

The following is an outline lately given by Dr. Abercrombie of the general pathological changes of which the spinal chord is susceptible. For the record of cases illustrating the principles we roust refer to the work itself of Dr. A., which is entitled Practical Researches on Diseases of the Brain and Spinal Chord ; a work from which we have already made a considerable extract in

the introduction to the present class of morbid affections.

1. Acute inflammation of the membranes, or what we call meningitis, of the chord.

2. Inflammation of the body of the chord terminating by ramollissement or suppuration.

3. Serous effusion in the spinal canal.

4. Extravasation of blood in the spinal canal, or spinal apoplexy.

6. Fungoid disease and thickening of the mem- branes.

6. Induration of the chord.

7. Compression of the chord by new formations within the canal, as tubercles, albuminous depo- sitions, hydatids, and ossifications of the mem- branes.

8. Destruction of a portion of the chord.

9. Concussion of the spinal chord.

10. Certain affections of the bones of the spine.

We do not mean to say that the above affect- ions of the spinal chord are causes producing, or circumstances in connexion with paraplegia ; we merely embrace the opportunity, which no part of the nosology better affords us, of reminding the reader of the connexion between spinal and cere- bra\ ailments, and of the necessity of preserving in the recollection a view of this connexion when the different shapes of palsy are made the sub- ject of pathological enquiry as to their nature and seat and rationale. At the same time let us again remind the

student that paralysis of all kinds, and in all localities, oftentimes presents itself without any morbid manifestation of a structural or local kind whatever, and when we take into account that a complete paraplegia of a temporary kind will be consequent upon a few ascarides in the rectum, which will yield with the destruction or expulsion of these animalcule, we must acknow- ledge that many changes take place in the ner- vous system which morbid anatomy cannot dis- cover, but which pathology must carefully collect and appreciate.

The difficulties (says an author whom we hare already so rrany times quoted in the present ar- ticle) which we have to encounter, in any enquiry into the pathology of paralysis, are greatly. in- creased when the investigation is extended to those cases of general and partial palsy which are to all appearance totally unconnected with any derangement of structure, or function, in the en- cephalon. That such cases do occur is unques- tionable ; and it must be left to future enquiries to determine in what manner these apparent in- consistencies are to be reconciled.

In the year 1820 I had an opportunity of see- ing an instance of general palsy, of the kind now alluded to, the history of which is fully detailed in the London Medical Repository. The disease ran a very singular course, terminating after the lapse of about eight months in the complete re- covery of health. During the whole of this long period, there did not occur one symptom which could warrant me in looking to the brain as the source of the disorder. The vital and natural functions were also undisturbed, nor was there any evidence of disease within the theca vertebra- lis. It is obvious, therefore, that this disease was in its pathology totally distinct from the cr-

diiury forms of palsy. A case very similar in its leading symptoms, but different in its termina- tion, is recorded by Dr. Powell in a paper con- taining manyimportant pathological views of palsy. We bring forward this case among others in sup- port of the opinion that paralytic affections, both partial and general, often originate in a peculiar , condition of the nerves alone ; that they are inde- pendent of any morbid affection of the blood- vessels of the head : and that they are produced in many instances by cold, and in some by sym- pathy with particular states of the stomach, or other distant local irritations.

The palsy from lead is the one to which Dr. (‘alien particularly alludes in his variety entitled Paralysis V’enenata ; but, as we shall

have occa- sion to speak of the effects of lead under Colica Pictonum, we need not in this place enlarge on this variety.

390. Order 2. ADYNAMIC DISORDER. Ady- namise. — Adynamia is a vague term to apply to an order of diseases, since there are very few af- fections which the term would not characterise, the strict meaning of it being deficient power. The genera of the order are fainting (syncope), dyspepsia, hypochondriasis, and chlorosis (green sickness).

391. Fainting. Syncope. — Fainting is some- times nervous, strictly so speaking ; at other times it is organic, or dependent upon some affection of the heart. ‘ To maintain the faculty of percep- tion clear and true to the impressions that are made on the external senses, the motion of the nervous power which connects it with those senses must be equable and uniform ; and, to maintain the action of the heart in a firm and re- gular order, it is necessary that the blood should flow into it in an equal and uniform stream ; for if its volume be altered from any cause, whether of obstruction, surcharge, or deficiency, its mo- tion will be checked and enfeebled; the brain and respiratory organ .will participate in the de- bility, and syncope be a frequent result. And hence we may account for the fainting which fre- quently takes place on the commencement and sometimes on the close of venaesection. On tying (he arm for this purpose a considerable stream of supply is cut off, and ten ounces of blood flow, in perhaps five minutes, into a basin, which would otherwise have flowed into the heart in the same period of time. The volume of blood is hence diminished, and the heart must collapse or con- tract itself in proportion. In many habits this is done with great facility, but in others, and es- pecially whese there is a feeble supply of motific or irritative power, the contraction takes place slowly and irregularly, and with a considerable degree of flutter, or clonic spasm ; and fainting or a temporary failure of sensation is the necessary consequence ; during which the alternating sys- tole is very feeble, and the blood ceases to flow at the puncture. This effect is ordinarily ascribed to a loss of the stimulus of distension, and there may be 8onQC <]egree of trulh jn sucn an expia_ nation. But that there is something beyond this is certain ;. because, on removing the ligature

mm the arm. this stimulus is once more obtain- ed ; for the blood, instead of flowing away at the ft nous orifice, now takes its proper course and

flows back to the heart. Yet we see almost as often a syncope produced at this moment, and consequently by a revival of the distension, as well as by an interruption of it. The fact is, that the

heart, which by this time has accommodated itself to the diminished volume of the returning current, has now once more to change its diame- ter, and to expand itself in proportion to the in- creased measure and momentum of the in-flow- ing tide ; and as a change in its diameter pro- duced a syncope in the former case, a change in its diameter ua like manner produces it in the latter.

For the same reason we see swooning takes place when any extensive range of blood-vessels that have been pressed upon by every other means suddenly acquire a power of dilatation ; as when a large cavity is formed in the abdomen by the process of tapping for an ascites, or on opening an extensive abscess in any other quar- ter.

But the flow of sensorial power from the brain may also be suddenly exhausted or checked, or perhaps its secretion impaired ; and syncope may ensue from this source, the action of the heart being diminished not primarily but secondarily, or by sympathy with the state of the sensorium. In fainting from entonic passions or emotions, as a sudden shock of vehement joy, the sensorial power is perhaps abruptly expended as also in se- vere pain. In fainting, under the influence of atonic passions, as fear, or heart-sick grief, this power is unquestionably checked in its regular flow, and probably checked also in its secretion ; (it will be observed that the author, whom we are now quoting, speaks of the nervous power as effected through the agency of a secreted fluid, as being indeed a nervous fluid,) as we have reason to be- lieve it is where fainting occurs from a repulsion or retrocession of gout, exanthems, or various other diseases. And to the same cause may be referred those cases of swooning which in some idiosyncracies, or indispositions of body, are well known to take place on exposure to particular odors, as those of cheese apples, of roses, lilies, and other fragrant plants. Where it has followed instantly upon acrid poisons, there can be no doubt that these have induced a rigid or entastic spasm upon the muscular fibres of the heart ; and, where the poisons are purely narcotic, the living or instinctive stimulus is suddenly extin- guished or carried off, and the nervous system becomes an exhausted receiver.

Syncope then in its simple state, as uncon- nected with any structural disease of the heart or its adjoining vessels, seems to appear under the following modified forms or varieties : — a. Inanitionis (from inanition). The swooning pro- duced by fatigue, long fasting, or a sudden and excessive discharge of any fluid whether natural or morbid, accompanied with a sense of inani- tion and great prostration of strength. /3. Do- loris (from pain), preceded by severe pain or irritation of body ; internal, as from poisons, flatulency, or worms ; or

external, as from wounds, or other injuries. y. Pathematica (from mental emotion), preceded by an exercise of some sudden and overwhelming passion or emotion. S. Metastutica, accompanied with a

retrocession or repulsion of gout, exanthems, or other diseases.

The degree and duration of tne paroxysms depend upon the peculiarity or violence of the cause, the extent of the sensorial exhaustion, or the nature of the constitution, and hence must greatly differ in different individuals. In some cases it ceases in a few minutes, and the patient, though incapable of speaking, retains enough of perception and sensation to be conscious of his own disorder, and to understand what is passing around him. The pressure and irritation of flatulency, in dyspeptic and hypochondriacal nubits, are often sufficient of themselves to pro- duce a fainting of this kind. In other cases the general feeling and understanding fail totally, and the pulse is scarcely perceptible. Occasion- ally the sensorial power has been totally, as well as suddenly exhausted, and the syncope has run into asphyxy, and even proved fatal

When not assisted by medicine the system re- covers itself by the gradual accumulation of sensorial energy that must necessarily take place so long as the living principle continues during such a state of quietism ; aided unquestionably by the continued action of the instinctive ‘or remedial power of nature, which is always aiming to repair what is amiss. The process of recovering, however, varies almost as much as that of sinking. Some revive almost immediately without any inconvenience or sense of weakness whatever ; while others improve slowly and al- most imperceptibly, and require many hours Defore they fully regain their self-possession. In various cases the head becomes clear as soon as the pulse becomes regular ; while, not unfre- quently, the recovery is accompanied with a confusion of ideas, vertigo, and head-ache.

As this disease is always attended with an irregularity in the flow of nervous power, and some degree of spasmodic action, entastic or clonic about the heart, the best remedies we have recourse to, during the paroxysm, are an- tispasmodics and stimulants ; and those that are the most volatile are the most useful. Hence the advantage of admitting a free current of cold air, sprinkling cold water over the face, and pouring a little of it if possible down the throat. And hence also the advantage of holding ammo- nia, the strongest vinegar, or any other pungent odor, to the nostrils. A recumbent position is always

advisable as most favorable to an equa- ble circulation of blood ; and irritating and warming the extremities by the friction of the hand, or the application of rubefacients, will com- – monly be found to expedite the recovery, upon the principle that, in a chain of organs united by sympathy or continuity, an impression produced on the one extremity is sure to operate on the other. As soon as the patient is capable of swallowing some spirituous cordial, as a glass of wine or brandy and water; fetid tincture, or the aromatic spirit of ammonia, or of ether, should be administered, and the occasional cause should be sedulously avoided in future. — Good.

392. Dyspepsia. Indigestion. — To describe the symptoms of dyspepsia would be to run over the whole ground of nervous feelings. The dyspep- tic is hypochondriac, has wandering pains over

his body, and uneasy sensations about his limbs, as well as immediately in the stomach and con- nected viscera ; his countenance looks dejected ; the surface of the body loses its healthy com- plexion; the secretions and excretions are irre- gular; the tongue is foul and clammy; and, in a word, the whole system in a state of derange- ment.

Causes. — The existing causes of indigestion are generally sufficiently obvious. Alternations of temperature, affections of the mind, spirituous liquors unduly taken, the immoderate use of tea, a sedentary life, intemperate study, and in fact all excesses which tend to deprive the system of power will have the effect, in the dyspeptically disposed, of interfering with the digestive pro- cess, as well as the more obvious and necessary sources, those of eating too much, or taking food of an improper quality.

With respect to the proximate cause of indi- gestion, or the circumstances by which it is con- stituted, it evidently consists, in the first instance, of a disordered condition of the muscular fibres of the stomach, and a disordered secretion from the villous coat of the organ ; hence the ingesta, instead of being duly acted upon mechanically, chemically, and, if we may so say, vitally, run into those changes which unorganised matter is obnoxious to; fermentations take place, eruc- tations of gas are the consequence ; pains of the stomach are brought on, partly by the irregularity in the fibrous action of the stomach, and partly by the acrimony of its secretion, and of the un- digested mass : a general morbid susceptibility is induced, connected with want of muscular energy ; this torpor is extended to the duodenum, and to the liver, and to the pancreas, — the func- tions of these organs are in consequence per- formed lamely; in this manner the original dis- order of the stomach is both extended to other parts, and increased in the organ itself first affected ; the cerebral system of sympathetic nerves partakes of the deranged condition, and thus sympathetic grows out of local disturbance, and the whole frame, as we have said, comes to participate in the induced affection.

Dr. Wilson Philip, who has written expressly on indigestion, divides it into three stages ; the first, in which the stomach itself is alone or principally injured in the way just pointed out, of mere functional or nervous, and muscular and secretory derangement; in the second stage he supposes an inflammatory condition to have been induced, marked by epigastric tenderness and hard pulse ; and in the third consecutive disorders are occasioned, and the dyspeptic becomes phthisical, or otherwise disordered, ac- cording to constitutional tendencies or accidental circumstances.

Dr. Paris, Dr. James Johnson, and Dr. Uwins, who have all recently written on dis- ordered digestion, contend that the inflamma- tion assumed by Dr. Philip is for the roost part mere tenderness, and they deny that any thing like this regularity of division into stages does in point of fact obtain. At the same time they allow that inflammatory threatening, and phthisical, as well as other tendencies, should be watched over and counteracted, and he tha:

should confine his observations to the mere con- dition of the stomach itself, under circumstances of dyspepsia, would take by far too limited a view of its nature and remedial requisites.

Dr. Mason Good, too, dwells particularly on the necessity of extending our views out from the mere stomach derangement, and taking into account the condition of the intestines, the liver, the pancreas, and the spleen. The debility, and indeed torpitude, of the intestinal canal, is evi- dent, he says, from the habitual costiveness which so peculiarly characterises this affection. Whe- ther this be direct or indirect, intrinsic or sym- pathetic, as harmonising with the weakness of the stomach, it is not easy to determine; but nothing can be a stronger proof of the great in- activity of the intestinal tube, from whatever cause produced, than the feebleness of its peris- taltic motion, notwithstanding the pungency of the acid, and other acrimonious matters, that are so frequently formed in the stomach, and hence so frequently diffusing their asperity over its inner surface.

The imbecility of the liver is equally obvious in most cases from the small quantity of bile that seems to be secreted, or its altered and morbid hue as evinced by the color of the faeces, which in some instances are of an unduly dark, and in others of an unduly light tint, and possibly from the inactivity of the intestines themselves, whose peristaltic motion is in a great measure kept up by its stimulus.

it is highly probable that the pancreas and spleen are bo»h also affected in many cases of dyspepsia. We know that the pancreas pours forth a considerable portion of the fluid which holds the solid part of our aliment in solution ; while in most cases of dyspepsia, brought on by a habit of drinking spirituous liquors, the spleen is evidently affected as well as the liver.

Distinctions. — Hypochondriasis and dyspep- sia are said by the

dividers of disease to be different, inasmuch as the former is a disorder of the nervous system, which only brings the digestive organs into consecutive sympathy, while the latter is a complaint of the stomach originally, and the nervous system is the part secondarily affected. It is also predicated 01 hypochondria- sis that it affects principally individuals of a melancholic temperament, while dyspepsia is common to all constitutions. The student will, with a recollection of these intimations, which have in the course of the present article been more than once given, respecting the nature of medical nomenclature, know how far to care about these niceties of nominal distinction. It is, however, always right both in reference to pathology and practice to endeavour at tracing the first link in the chain of morbid association, or to ascertain the primary locality of affections that are thus located both in a primary and secondary way.

Prognosis. — From mere derangement in the digestive process much is not to be dreaded, unless it continue, and in its protraction come to elicit latent disorders of the frame that only awaited an excitant to develope themselves. Dr. Wilson Philip has argued at length in sup- port of a dyspeptic phthisis, and has̑replied to

others who are a little inclined to speak con- temptuously of this designating precision; and it must be allowed that an individual with a phthisical tendency, ready to break out upon any exciting cause, may have consumption establish itself as the result of a stomachic derangement ; this last having been formidable and protracted. Organic affections of the stomach, as schirrous pylorus, may also be engendered by the long continuance of dyspepsia; but it must be allow- ed that these specific diseases often occur during the time when the digestive process is no other- wise interrupted than as a consequence of the disorganisation referred to.

Treatment.— It is especially requisite for the dyspeptic to relinquish with determination and perseverance those practices which have induced the disorder; intemperance of all kinds must be given up, even immoderate studies : indeed than these, connected with the anxiety of mind which frequently accompanies them, there is not proba- bly a more fruitful source of the malady now under notice. It is the position of the body also that partly operates unfavorably under these circumstances. Severe and long continued study, says Dr. Good, who himself was a har<\ student, protracted as I have known it through ten hours a day for many months, without any relaxation or change of pursuit, must give way to the exercise of walking or riding, and this not occasionally but daily, and to the still better cordial of cheerful conversation. The last is of very great importance, and

without it even exer- cise itself will be of little avail; for the mind, accustomed to a certain track of intellectual labor will otherwise relapse, even while riding or walk- ing, into the same habitual course, be dead to the most fascinating prospects around it, and become exhausted by its own abstractions. And it is to characters of this kind perhaps, more than to any other, that the amusements of a watering place promise ample success; where the general bustle and hilarity, and the voluntary forgetfulness of care, the novelty of new scenes and new faces, and new family anecdotes, and the perpetual routine of engagements that fill up the time with what would be otherwise trifles and frivolities, reverse the mischievous order and monotony of the past, break the sturdy chain of habit and association, and give occasion to the worn out sensory to refresh itself.

Mere change of air, as well as of scene and amusements, is often wonderfully forcible in breaking into the morbid links of the chain of diseased actions, which constitute the worst forms of dyspepsia, and a very short removal, even from one part or outlet of the town to another, will often effect a considerable share of good. I have known, says Dr. Uwins, indivi- duals who have felt themselves vaporish and dull, and dyspeptic, when residing in Westmin- ster, to become, comparatively indeed, conspi- cuously free from their complaints as soon as they shall have removed to the north-west sub- urbs ; but there is something inexplicatively ope- rative at times in mere change of air, when the new atmosphere may not abstractedly be so salubrious as the one left.

With respect to the medicinal indications, in

dyspepsia, they are obviously to rid the stomach of the offending material, and to get the muscu- lar and secretory tone of the organ into that state of vigor which shall insure against future loads of unhealthy secretions. Emetics are occasion- ally required, either of ipecacuan or sulphate of zinc, a scruple or half a drachm of this latter often doing the good that the ipecacuan or anti- monial emetic refuses to accomplish. Gentle purgatives are also of course requisite ; and, when ‘.he liver is obviously engaged with the disordered condition, it is right to combine with the purgative material some blue pill, or small doses of calomel. It is right also, when think- ing of purgative medicinals, to take into account the morbid susceptibility of the nerves and or- gans implicated, otherwise, by employing indis-

criminately drastic materials to dislodge offend- ing colluvies, we may defeat the object for which we instituted the cathartic process, and add to rather than abate irritation. For the sake of accomplishing this combined intention of allaying irritation, while we produce evacua- tion, some one of the vegetable narcotics may be advantageously combined with the purgatives, of which few formulae will be found more effi- cacious and applicable in most dyspeptic states than the following.

R Extract, hyoscyami 3ft. Extract, colocynth. comp. 3j. Hydrarg. submuriat. gr. ij. Fiat massa in pilulas xxiv. dividenda ; quarum sumat aeger ij vel iij semel, bisve in die, ut opus erit.

Take of extract of henbane half a drachm, compound extract of bitter apple a drachm, ca- lomel two grainsˆ Mix them into a mass, which divide into twenty-four pill?, and let two or three be taken once or twice a day according to circumstances.

Exceedingly small doses of calomel, such as will be found in the above formula, or the addi- tion of only one grain of blue pill to other pur- gatives, will not seldom prove highly useful to the dyspeptic, whose morbid irritability of sto- mach would reject, or at least be injured by, larger quantities of mercurials ; and some per- sons, dyspeptics particularly, have an extreme sensibility to mercury, when given in any be- yond very minute doses.

Acidities must of course be corrected by one of the alkalies, or magnesia ; the last is often ex- ceedingly applicable to dyspepsia, for while it corrects the stomach acidities, it forms a salt with such acidity that is purgative, and when the dyspeptic condition is connected with the tendency to gravel, which is not seldom the case, a tea spoonful of the rommon or subcar- bonate of magnesia, taken about twice a day in a glass of cold water, will do much good.

The more positive alkalies, as of soda and potass, will also prove beneficial in correcting the acidities of the stomach ; and for the most pavt it is best to employ the mild or aerated alkalies, than the caustic or pure.

Acids also will occasionally be found good correctives of stomach disorders, even although the condition which they are given to counter-

act is one of acidity. But, as remarked by Dr. Good, it is not always from acid formation that the dyspeptic suffers. The eructations, says

this author, are often of a compound and very offensive taste, and give to the breath the smell of carbureted hydrogen gas, or rotten eggs ; as though the gastric juice were incapable of per- forming its proper office, and the food were re- tarded rn the stomach till the process of putre- faction had commenced. In this case, instead of avoiding acids, we should recommend a free use of them, from whatever quarter they icay be obtained, as they not only tend to correct the factor, but to strengthen the stomach. The mi- neral are the most powerful ; and of these the sulphuric is by far the pleasantest ; but, in com- mon with the rest, it labors under this disad- vantage, that only a small quantity of it can be taken at a time, because of its corrosive quality. It may be advantageously employed as a medi- cine, but for acidulated diet-drinks it must yield to the vegetable acids. These are of three kinds, native, distilled, and such as are obtained by fer- mentation. The first are commonly the most grateful, and especially when they exist in the form of fruits ; but, as in most of these they are combined with a fermenting power, they are apt in weak stomachs to set free a very large quan- tity of air, and consequently to produce a very troublesome flatulency, and even promote the ascescent disposition of the organ. The citric and oxalic may be exceptions; and there may also be a few others, but they are not numerous, and where these cannot be procured we must have recourse to the acids elaborated by distil- lation, or a fermenting process. The last are called vinegars, whether obtained from malt, weak wines, or sugar ; and being themselves, when properly refined, very pure and dilute, they are capable, with a little care, of being ren- dered highly grateful.

The distilled acids of vegetables have not yet been sufficiently tried, to determine whether any of them possess any specific virtue. They were at one time very generally made use of under the guise of tar water, the whole of whose benefits Dr. Cullen ascribes to the acid of the fir with which the tar was impregnated ; but I cannot avoid conceiving that some and not a small part of its good effects resulted from the camphorate t>r terebinthinate principle which was communicated at the same time. Glauber and Boerhaave seem to have been of the same senti- ment ; and, as the Norway tar is richer in this principle than the American, we are at no loss in determining why Dr. Berkely preferred the former to the latter. This medicine has experienced the fate of every human discovery, whose praise is carried to extravagance ; and, from being esteemed good for every thing, it is now esteemed by many practitioners good for nothing, and has sunk into total disuse. But this is to sink it very consi- derably below its level. There are many com- plaints for which it has very fair pretensions: and where the taste is not disliked it will be found a useful remedy in

indigestions attended with offensive and putrid eructations.

Having thus expressed himself on the subject of tar water, Dr. Good goes on to the mention of

another remedy which is but little employed as an anti-dyspeptic, but of which some have spoken highly. We may observe by the way that this remedy (charcoal) has likewise obtained the re- putation of being the best material for obviating some kinds of costiveness ; the dose may be from half a scruple to a scruple, repeated three or four times a day.

By way of restoring tone to a dyspeptic sto- mach, bitters and other tonics are had recourse to, and occasionally with considerable advantage : in their administration however, we must be careful not to induce the habit of dependence upon these kinds of fillips, and we must likewise withhold them when there is much febrile irrita- tion, with hardness and quickness of pulse. In all cases it may be as well to combine them with slight aperients, so as that their too stimulating action may be obviated ; and when we have rea- son to suppose the sluggishness or irregular action of the stomach has extended itself to the liver, the addition of what in the humoral school of medicine are called alteratives may be still further called for. We shall here put down a few formulae for answering these different indica- tions.

Antacid, and aperient, and coidial, from Dr.

Hooper.

R Potassae subcarb. 3ift. Myrrhae contus. 3j. Aloes soc. Sift. Croci 3ft. Aquae distill. Oj .

Coqne ad ˆxij et liquori colato adde Tincturae Cardam. comp. Jiv. Syrupi zingiberis 3’ft- Sit dosis cochlearia duo magna bis die.

Take of subcarbonate of potassa a drachm and a half, bruised myrrh a drachm, Soccotrine aloes a drachm and a half, saffron half a drachm, dis- tilled water a pint. Boil them down to twelve fluid ounces, and to the strained liquor add compound tincture of Cardamum four fluid ounces, syrup of ginger a fluid ounce and a half. Let the dose be two table spoonsful twice a day.

Very similar to this is the decoctum aloes compositum of the Pharmacopeia two table spoonsful of which may he taken twice a day. It is for the most part better to add three or four grains additional of soda to that proportion of alkali which the Pharmacopeia orders, more especially if the acidity of the stomach is consi- derable.

Soap pills with rhubarb, as antacid and aperient- R Saponis duri,

Sodae subcarbonatis exsic., a§ 3j. Pulv. Rhei 3ft. Aquae q. s.

Fiat massa in pilulas xxxvj dividenda. Sumat iij nocte maneque, vel omni nocte.

Take of Castile soap and dried subcarbonate of soda of each one drachm, powder of rhubarb half a drachm, water as much as is sufficient to form a mass, which make into thirty-six pills, th-ce to be taken every night, or night ‘and morn- ing:.

This last prescription will be found exceed-

ingly applicable when affections of the kidu«-}s accompany disordered states of the stomach.

Stomach tonics with gentle aperients. R Infus. quassias f. ˆift. Magnesias sulphat. 3j. Tinct. rhei f. Sift. Fiat haustus : bis die sumendus.

Take of infusion of quassiae a fluid ounce and a half, Epsom salts a drachm, tincture of rhubarb a fluid drachm and a half. Mix into a draught, to be taken twice a day.

R Ferri ammoniat, Pulv. rhei, aa 3j. Aquae purae q. s.

Fiat massa in pilulas xxxvj divid. Sumat iij bis in die ante et post merid.

Take of ammoniated iron and powder of rhubarb of each a drachm, water enough to form a mass, to be divided into thirty-six pills ; three to be taken forenoon and afternoon.

Deobstruent and stomachic.

R Extract! taraxaci 3ft. Sp. aetheris nitric f. 3j. Infus. gentianae comp f. Jift. Fiat haustus : bis die sumend. Take of extract of dandelion half a drachm* spirit of nitric ether a fluid drachm, compound infusion of gentian a fluid ounce and a half. Make them into a draught to be

taken twice a day.

The above are more particularly called for when there is reason to suppose the liver requires to be stimulated or emulged.

Antacid and aperient and stimulant.

R Magnesiae subcarb. 3ft. Sp. ammoniac aromat. f. 3i. Aquae purae f. Jift- Fiat haustus.

Take of common magnesia half a drachm, compound spirit of ammonia a fluid drachm, water a fluid ounce and a half. Make them into a draught.

A good stomachic under circumstances of a tendency to gouty affection.

When violent pains accompany stomach af- fection, so as to constitute what in the schools would be called gastrodynia, the oxide, or what is now more properly termed the subnitrate, of bismuth will be found a useful medicament; i* may be given in conjunction with rhubarb.

R Bismuth subnitrat. gr. vij. Mucilag. acacias f. 3iij. Tincturae rhei f. 3ift. Aquae menthae pip. f. 3'ft- Fiat haustus.

Take of white oxide of bismuth seven grains, mucilage of gum arabic three fluid drachms, tincture of rhubarb a fluid drachm and a half, peppermint water a fluid ounce and a half. Mix into a draught.

Than tincture of rhubarb, in small quantities, very few medicinals are more suitable to a dys- peptic invalid. The Chlorine bath, mentioned under the head of chronic hepatitis, may be

employed in obstinate cases with a prospect of good.

When diarrhoea occurs in dyspepsia, five grains of the blue pill may be given at night, and about a fluid ounce of the cretaceous mixture (the mistura cretae of the pharmacopoeia) two or three times a day. A little tincture of rhubarb may be added to the cretaceous mixture, in order to prevent undue constipation following the diarr- haea.

Blisters to the back will sometimes correct a chronically disordered state of the stomach ; or with the same view, of procuring a vicarious

or metastatic irritation, the antimonial ointment may be rubbed into the hypogastrum every night.

Friction of the surface, warm clothing, cold, warm, or shower bath, according to circum- stances are all of occasional use in correcting dyspeptic conditions of stomach. The dyspep- tic must be especially enjoined to keep his extre- mities warm; and he must be urged even against his inclination to walk and ride in the open air. Galvanism under judicious management may be made very useful in some old standing cases of dyspepsia.

I Note. — Although we object to the division of Wilson Philip before alluded to, into the first and second stages, or into that which is inflamma- tory, and into that which is not ; yet when much epigastric tenderness manifests itself in connexion with febrile symptoms, it will then especially be requisite to use caution as to the administra- tion of bitters and stimulants, and in their place very small doses of the vinum colchici, of nitre, or even of antimony will be found expedient ; the dose of the last requires, when administered as an antidyspeptic medicinal, to be very small, the eighth or tenth of a grain of tartar emetic being often sufficient. The colchicum wine may be given in doses of from twenty minims to half a drachm, and the dose of nitre is from about six to ten grains.]

Respecting diet no very precise rules can be laid down with propriety, inasmuch as the meat of one is the poison of another; but as it might not be expedient to bring this disquisition to a close without some specific regulations on this head, we shall beg leave to extract from Dr. Good his observations in reference to these particulars.

One substantial meal of solid animal food daily is sufficient fora man in full health in a life of ordinary labor. Yet there are many who, without any labor, are from a long habit obliged to take two or even three. But the habit is bad, and cannot too soon be broken through. It fol- lows therefore, of necessity, that, where the sto- mach is weak, the toil of digesting one full meal of animal food is the most that should be put upon it. This should take place as nearly as may be to the hour of noon, certainly not later than one or two o'clock, so as to occupy the middle of the wakeful period. The animal food should consist of one dish only; and be confined to such as is lightest of digestion, or as the pe- culiar state of the stomach may call for ; foi in both these respects there is a considerable differ- ence. Thus shell-fishes do not always agree with weak stomachs, and will sometimes excite great

uneasiness, with pyrectic heat, and even throw out a nettle rash, or

some other cutaenous erup- tion. Yet, where they sit easy and are relished, several of them, as the crab and lobster, are found to neutralise acidity in the stomach more readily and effectually than any other kind of animal food : an effect we should little predict, considering that they give out, on a chemical analysis, a smaller proportion of ammonia than the flesh of quadrupeds, birds, or even amphi- bials. The food of young animals is less nutri- tive than that of old, but it is, in general, digested with less irritation. Many writers have arrang- ed the different animals that furnish food in tables founded upon their supposed degree of nutri- ment. But they have drawn them up with con- siderable variations, in some instances apparently according to their own fancy. I have not space to enter into a comparison of these, nor is it necessary. Those who have leisure for such a study may turn to Dr. Darwin's, which is per- haps one of the best, and which they will find in his Zoonoinia. Generally speaking, the tenderest food is that of the gallinaceous birds : then that of the ungulated quadrupeds; among which the stag, or cervus kind, claims the pre-eminence ; and to this succeed the ox, sheep, and hare, in the order in which they are here placed. Yet it should be observed that the last, though less nu- tritive than the preceding, is more easily digest- ed than several of them ; as it should also, that the flesh of animals in their wild or native state, though less coveted by a pampered palate, offers a more wholesome and digestible aliment, and is more perfectly animalised than that of animals cooped up and fattened for the table. Below the hare we may place the web-footed birds that are ordinarily brought to market; and below these the oyster and lobster tribes, and lastly the numerous genera of fishes.

The vegetable nutriment should be such as is least disposed to ferment in the stomach, and hence all kinds of new bread, sweet preserves, confectionary, and pastry, must be sedulously avoided ; and the crust of bread, toasted bread, and unleavened biscuits take their place. The farinacea, whether seeds or roots, as rice, wheat flour, in the form of light and simple pudding, and potatoes, may be allowed in moderation. Water too is the best beverage ; but, where there is great flatulency, a small portion of brandy may occasionally be added. The only condiment- that can be conceded are salt and spices : pickle? might be admitted where acids constitute a par- of the medical treatment ; but they are disposec to provoke a false appetite, and hence to weaken the stomach by overloading it.

From fixing the principal meal so near the hour of noon, it is clear that we suppose the day to commence at a very different period from the ordinary regulations of fashionable life ; in which the bed is rarely quitted before nine or perhaps ten o'clock, after a night of imperfect

and fever- ish sleep, when the languid idler immediately proceeds to a breakfast of tongue, ham, and eggs in addition to the ordinary materials of this meal, as though he had been already laboring in the field for two hours ; and by means of their com- bined stimulus fills hi? stomach with a load,

which might indeed do good to the husbandman, but to himself proves nothing more than a mis- chievous oppression. Yet to this morning toil of the stomach succeeds, at about two o'clock, the ordinary luncheon in a still more solid shape ; followed in the evening by a dinner of numerous courses, with high seasoned condiments and a stimulating change of wines ; the real business of this vain and frivolous life perhaps not com- mencing till the better disciplined peasant has begun his quiet sleep : when, roused by a flow of factitious spirits, and primed for gaiety and gallantry, the votary of pleasure, as it is called, sallies forth to join his comrades at the allotted place of rendezvous, and to pass the midnight in hot and crowded ball-rooms, or in orgies of a still more exhausting nature. Of the whole of this career, the only rational part of it is the luncheon a little after mid-day ; this may be copied by the invalid before us, as his dinner, but from all the rest we must carefully shut him out. He should quit his bed by six or seven o'clock in the morn- ing in the summer, and by seven or eight in the winter; and after having risen for an hour he may partake of a light breakfast of milk, cocoa, sassafras, or any other aromatic or warm-flavored tea, with toasted bread, the crust of bread, or sea-biscuits, as observed already. The morning may be devoted to such exercises or recreations as may be most agreeable without producing fa- tigue. To this will succeed the chief meal of the day, upon the plan already laid down ; and a light refreshment of the same nature as the break- fast should conclude the daily diet, a few hours oefore retiring to rest, which should never be later than eleven o'clock. Sea-bathing or the shower-bath, before breakfast, will considerably add to the means of improvement wherever these advantages can be enjoyed, and particularly when the warmth of the season may give them the character of luxuries.

393. Hypochondriasis. Low spirits. — This is the next genus to dyspepsia in the nosology, but nothing further can be said of it in connexion with dyspepsia than what has already been ad- vanced. See Dyspepsia (distinctions). As far as it is a vesanic, or more strictly mental ma- lady, a remark or two will fall to be made on it in the

order of vesaniae.

395. Chlorosis. Green sickness.

Symptomt. — Indisposition to exertion; stomach derangements to such an extent as to excite a de- sire for some of the absorbent earths ; wandering pains; palpitation; and, at length, from a pallid to a green change of countenance and com- plexion, are the characteristics of chlorosis Sometimes, indeed pretty frequently, while there is an irregularity with respect to the men- strual discharge, an obstruction indeed of it, the chlorotic female is worried with fluor albus ; and this, with other circumstances, adds to her dejec- tion of mind.

Causes. — It usually happens to girls who are of a scrofulous habit ; its exciting causes are all such as tend to debilitate and derange. Dis- appointed love will sometimes engender it.

Distinction. — The obstructed menstruation of chlorosis may be distinguished from that of pregnancy by the absence of that fulness of the

whole frame, especially of the breasts, and the want of the dark areola about the nipples which mark the pregnant state. Although, too, there is often sickness, it is not of that regular morn- ing recurrence that is so often the case in preg- nancy. Chlorosis sometimes simulates phthisis and often falls into it ; but the cough and the regular hectic are wanting where the malady is merely chlorotic.

Prognosis. — Should there be not much verg- ing towards actual consumption, we may gene- rally pronounce of chlorosis that it is remediable, provided the medicinal plans are judiciously in- stituted and pursued.

Treatment. — ‘ Give steel,’ say the older prac- titioners. ‘ Give purgatives,’ says Dr. Hamilton. Both are highly useful ; but, for the most part, this combination is demanded. The stomach is sometimes too irritable for steel without a good deal of address in the management of it. An emetic may in these cases be premised ; indeed, emetic operation is not seldom salutary beyond the mere circumstance of discharging the stomach contents. From the sympathy which this organ maintains with the uterus, it will often be found that the excitation of vomiting is desi- rable in some inactive conditions of the uterine system, as in the case now before us. For a useful combination of iron, with a purgative, see under Dyspepsia (the ferr. aram. with rhubarb). The mistura ferri comp. of the pharmacopoeia will be found

a good formula in most cases of chlorosis, when the stomach can bear it. The tincture of muriated iron is also useful in doses of fifteen or twenty minims. When fluor albus is an accompaniment, the same dose of the tinc- ture of cantharides may be exhibited. Change of air, exercise, especially on horseback, and mental excitation, ought all, when it can be so managed, to constitute ingredients in the cu- rative process of chlorosis. Marriage is one of Dr. Darwin's prescriptions ; and this would be more likely, provided affection was insured and circumstances favorable, than any simple article, or any combination of articles, in the whole ma- teria medica.

Order 3. SPASMODIC AFFECTIONS. Spasmi.

395. Tetanus. Symptoms. — It is not often, in this country, that tetanus is met with to that malig- nant and frightful degree that it manifests in tropical climates. The first symptoms, we are told by authors who describe the malady from having been eye-witnesses to it, are a stiffness in the back of the neck, and a difficulty of swallow- ing ; then a pain attacks the breast, which shoots through to the back and shoulders, — the jaws become locked, and the head is forced violently either forward or backward. Much convulsive movement also takes place in the abdominal muscles; the countenance becomes distorted; the tongue is thrust out of the mouth, and these symptoms, with others marking general pertur- bation, remit and recur for a longer or shorter time, till ' at length one universal spasm rushes upon the patient, and carries him off in its frightful embrace.'

Causes. — Mere heat, or sudden changes from the extremes of heat to cold, and vice versa, will sometimes of themselves be equal to the

production of tetanus ; but for the most part these are mere circumstances of predisposition, and the excitant is some local injury, — more especially that of wounds in tendinous structure. The proximate cause has been recently consi- dered a high state of inflammation in some portion, more particularly the upper portion, of the spinal cord. Others have considered the spinal affections, which are discoverable upon dissection at times, to be rather the effect of that violent impulse which is made upon these parts, and which thus brings the vessels of the theca into an inflammatory condition, than that the inflammation itself is primary and essential (see the introductory remarks to the present order).

Prognosis. — Highly unfavorable for the most part. If it occur merely from the heat of the climate, or general derangement, it may terminate favorably ; but, when it is the consequence of lacerated tendinous wounds, it is seldom that life does not succumb under the virulence of the malady.

Treatment. — Opium, in exceedingly large quantities, seems to have been the only remedy hitherto discovered at all efficacious in meeting and conquering the terrific force of this frightful advent. A whole ounce of laudanum has been given in twenty-four hours, and indeed there need scarcely be any limit to its administration, as the convulsive affection seems in a manner to swallow it up, and prevent any of the common effects of the drug upon the frame. When lacerated wounds have produced the tetanus, these should be freely divided and laid open ; and the wounds may be dressed with matters with which tincture of opium should be mixed ; it has been said that dossils of lint, well imbued with lau- danum, and put into wounds, will prove preven- tive of tetanus. Should worms or stomach derangements have ingendered the disorder, pretty considerable doses of the ol. terebinthinae might be administered with advantage, and it will of course be at all times requisite to take cogni- sance of the condition of the stomach and bowels ; but after all the round of all the known medici- nals that, from analogy, might promise to be of some avail, we believe that no reliance is to be placed on any excepting very large doses of opium, continued till the abatement of the spasms.

396. St. Vitus's dance. Chorea.— Dr. Cullen's definition is so accurate that nothing need be added in the way of history.

Causes. — The predisposition to chorea seems to be constituted by a mobility of nerve. The exciting causes are irritations in the stomach and bowels, teething, mental affections, and imi- tation of others.

Distinction*. — Chorea has been said to bear about the same relation to genuine epilepsy that palsy of one side does to complete apoplexy, — and there is something in the analogy. There is, however, this essential and important differ- ence between the two maladies of epilepsy and St. Vitus's dance, that the latter, however vio- lent, is for the most part but temporary, and comparatively with epilepsy very seldom indeed fatal. Chorea, too, seems more influenced by physical remedies than epilepsy ; and we have

been as satisfied with the actual efficacy of me- dical management in this complaint as in almost any that could be named, which are in some measure of a chronic character.

Prognosis. — Seldom dangerous, unless the violent agitation fastens upon some vital part, and produces organic disease, such as hydrocephalus. We have never seen but one death from chorea, and then the disorder became hydroce- phalic.

Treatment. — Purgatives and tonics are to be administered, one of the best of which is the nitrate of silver ; but it is often found necessary to alternate this with the sulphate or oxide of zinc : cold bathing ; sudden impression on the mind ; this has occasionally both caused and cured chorea.

Epilepty. Epilepsia.

Symptoms. — Epilepsy is derived from a Greek verb, c7T(\a/i/3av, *which signifies to seize upon, and the suddenness with which its attacks are for the most part made is the particular fea- ture of the disorder from which its name is taken. In stating the more prominent symp- toms of epilepsy it is perhaps scarcely necessary to observe, that the same variation of circum- stances takes place in this as in every other ma- lady that has a distinctive denomination, and that no one account will apply accurately to dif- ferent epileptics, or can be considered in any other light than as a collective aggregate of the most ordinary occurrences.*

The sudden fall of the patient to the ground is considered as the most essential characteristic of an epileptic fit, so much so indeed that the paroxysms of epilepsy have received the vulgar appellation of falling fits; frequently at the mo- ment of the attack a shrill cry is uttered, and the limbs are soon agitated with violent convulsions ; sometimes, in connexion with these general agi- tations, a fixed permanent spasm takes place in one or more of the muscles, and an epileptic is often observed to retain a firm grasp of any thing that he may have had in his hand immediately before the accession of the fit. The countenance exhibits for the most part a terrifying spectacle, from the violent contortions of the muscles of the face ; the eyes become prominent and are fixed ; sometimes, however, they are so distorted that scarcely any of the colored part of these organs is discernible ; the hair often stands on end as in fright ; in the great majority of instances sa- liva issues froir the mouth as foam ; and this is not seldom mixed with blood in consequence of the vessels of the tongue being wounded by the convulsive action of the jaws: the saliva that issues is at times extremely fetid, as is likewise the case with other excretions. In some instances the urine and semen are discharged involuntarily, and the former is thrown out, as with a jet, to a considerable distance. The content! of the bladder have been observed, it is said, in children, to form a jet of three feet.

Epileptic attacks are very often made without the intervention of any preparatory signs, or warnings of its approach ; at other times the disorder is ushered in by antecedent symptoms, similar frequently to those which precede a paroxysm of apoplexy, such as pain in the head,

vertigo, obscure perception of surrounding ob- jects, stammering in the speech, coldness of 'the extremities, nausea, and other signs of nervous derangement. One particular phenomenon some- times precedes a confirmed fit of epilepsy, but of which we perhaps read more in authors than observe in practice, notwithstanding that by some it has been regarded as a sine qu& npn in epilepsy, it is a sensation of a peculiar irrita- tion commencing in some distant part of one of the extremities, and perceptibly directing its course towards the brain, before the general shock is effected. This feeling has been named the epileptic aura.

The length of thne which a paroxysm of epilepsy lasts varies exceedingly; the average period has been stated to be from fifteen to twenty minutes ; the return to the natural state is also made at very different times in different indivi- duals, and is likewise very different in the fits of the same individual. Scarcely a vestige is often left of disorder when the patient shall have recovered from the violence of the fit, while in other cases a languor and general indisposition will remain for hours and even for days. The in- tervals likewise between the accessions is exceed- ingly various. Epileptic fits fully marked have been known to recur several times in the course of the same day ; at other times weeks, months, or even years, shall elapse previously to the repetition of the disorder.

The lunar periods have been thought by some authors, ard are generally conceived by the vulgar, to regulate the return of paroxysms; others state that they have never been able to trace with any certainty this supposed connexion, although they have watched the disorder with particular reference to this point.

By the protraction of the complaint, or very frequent recurrence of the paroxysms, the me- mory and intellectual faculties in general be- come much weakened in the majority of cases ; and, when actual insanity supervenes upon a long continued epilepsy, the distemper is con- sidered of so malignant and confirmed a nature that the public receptacles for the cure of the insane, close their doors against the admission of this kind of lunatics.

The disease in the severe form above described most commonly happens at the season of youth. The epilepsy of infants is for the most part of a much milder nature and remediable character ; indeed the fits of childhood which by common consent are denominated epileptic, have often no determinate form or origin.

Cautet. — Let the student remark the several causes cited in the nosology. Predisposition to epilepsy is often hereditary ; .the exciting causes are all those which derange the mobi- lity of the nervous system ; such as vehement emotions, affections, or passions. Terror is a common cause of epilepsy. The physical causes are those that exist in the brain, such as slow inflammation, or congestion ; tumors, po- lypi; spiculae of bone : abscess; hydrocephalus ; or those that primarily affect other portions of the frame, such as irritations in the alimentary or intestinal canal, mor.e especially worms ; sup- pressed evacuations, as of the menstrual dis-

charge ; repelled eruptions of the surface ; dif- ficult and painful dentition. But to the question what is the proximate cause of epilepsy ? it is difficult 4o give a satisfactory answer. If it be said that it is an overladen or overactive condi- tion of the blood-vessels of the organ, it might be objected, why does not such pletHora or irri- tation always occasion this particular form of the disease ? Again, the phenomena connected with the sympathetic production of the complaint, as above alluded to, and the habitual occurrence of it when it is permanently fixed as a constitu- tional disorder, are against the notion of either plethora or vascular irritation being absolutely necessary to the production of epilepsy — though these conditions of the brain do unquestionably occur at times simultaneously with the occur- rence of the fit.

Distinction. — The distinguishing features of epilepsy are convulsion of the limbs, in connex- ion with sopor, and the foaming at the mouth. See Apoplexy.

. Prognosis. — When the malady depends upon cerebral conformation, or permanent disorder in the brain, it is incurable. It will sometimes leave the person that has been attacked before the age of puberty, at the time when the sexual characteristics appear. When the disorder is sympathetic, it for the most part yields with the yielding of the primary complaint. It often terminates in apoplexy, or madness, or idiotism. An intermittent fever or chronic eruption on the skin has been known to cure an epilepsy.

Treatment. — If it be symptomatic of worms, vermifuges are of course its remedies. If the fits are connected with manifestations of cerebral fulness of blood, bleeding must be enjoined ; if, on the contrary, an asthenic condition of the system, and want of cerebral excitement, are the concomitants,

stimulants, especially the carbo- nate of ammonia, are loudly called for ; and the practitioner should ever bear in mind the active and passive states in which these convulsive disorders show themselves. The following ene- ma has been recommended :

R Tinct. assafcetid. f. Jfl. Tinct. opii f. 3i. Aquae f. ˆviij. Fiat enema.

Take of tincture of assafcetida a fluid half ounce, tincture of opium a fluid drachm, water eight fluid ounces. Make an enema.

During the fit care must be taken to loosen every thing about the patient, especially his neck- cloth, and buttons of his collar; thrusting a something, as a piece of wood, between the teeth, will prevent the tongue from being wounded, and is said to shorten the time of the fit. Dashing cold water over the face is some- times proper and useful. It is always right, as in apoplexy, to let the head be rather high. In the permanent treatment, we must endeavour to strengthen the nervous system, when the disorder is the result of mobility, founded on weakness ; the most powerful of the tonics, for effecting this purpose, are the oxide and sulphate of zinc, the medicinal preparations of copper, the nitrate of silver, and the vegetable bitters, or the Peruvian

bark. It will be found expedient often to vary and alternate these medicines, and sometimes advantage will be obtained by their combination. R Argenti nitratis gr. i.

Conf. rosae gr. v.

Fiat pilula : ter in die deglutienda. Take of nitrate of silver one grain, confection of roses five grains. Make a pill, to be given three times a day.

R Zinci sulphatis gr. j.

Pilulae galbani composite gr. ix. Fiant pilulae duae : ter in die sumeudae.

Take of sulphate of zinc (white vitriol) one grain, compound galbanum pill nine grains. Make them into two pills; to be taken three times a day.

R Zinci oxydi gr. iv.

Extract! gentianae 9ft. Fiant pilulae tres : ter in die capiendae. Take of oxide of zinc four grains, extract of gentian ten grains. Make three pills; to be taken three times a day.

R Cupri ammoniati gr. ij. Confectionis rosae gr. v Fiat pilula: ter in die exhibenda.

Take of ammoniated copper two grains, con- serve of roses five grains. Make a pill; to be taken three times a day.

The sulphate of quinine will not be so likely to nauseate the stomach as the requisite quan- tities of bark in substance.

While administering these medicines, it will be necessary to attend to the alvine and other secretions, and, if any marks of plethora present themselves, these must be met by local, if not by general blood-letting, even at the time that we are persisting in our generally tonic plan of treatment.

It may be doubted whether much good is

disease depending in females, as it sometimes does, upon uterine irregularities, the decoctum aloes compositum will be found especially ser- viceable. The dose is from a fluid half ounce to an ounce and a half.

Sea and cold bathing are sometimes beneficial. An emetic, or a large dose of opium, as in inter- mittent fever, just before the recurrence of the fit, is said to prevent or mitigate it ; the attack, however, is, for the most part, too sudden to ad- mit of these expedients.

Manyarethe reputed specifics inepilepsy, such as the viscus quercinus, or misletoe; the gratiola officinalis ; the rhus radicans ; the cicutaria, &c. But in the present day scepticism, respecting the virtues of these reputed remedies, increases upon us, and we are disposed to think nothing opera- tive but what has either a manifest agency upon the secretions, or a decided influence in giving tone and energy to the nervous system.

The oleum terebinthinae, as an antiepileptic, perhaps, came to be lauded on account of its virtue as an anthelmintic ; and its continued employment, in doses of about thirty minims, twice a day, in peppermint-water, may prove positively beneficial, when the epileptic disorder is connected, in the way of cause, with intesti- nal irregularities. But of confirmed epilepsy, arising from hereditary conformation, permanent brain disease, or any other inherent and un tan- gible source, if time may be looked to as a cure, medicine certainly cannot.

Change of climate, and habits of life, may oc- casionally have operated with radical and per- manent benefit.

398. Palpitation. Palpitatio. — This arises from the same circumstances and causes as syn- cope, when it is not an organic affection. See Syncope- Asthma. Symptoms. — An attack of asthma is often pre-

effected, in epileptic affections, by the class of ceded by drowsiness, pain in the head, and a

medicinals that are called antispasmodic, such as castor, assafoetida, musk, ether, and others. The valerian, however, seems not only antispas- modic, but permanently tonic, to the nervous organisation ; and, as such, especially applicable

feeling of flatulent fulness about the stomach, with a depression of spirits, and sluggish bowel. — At other times, the disorder, attended by the symptoms marked in the definition, seizes upon the patient at once: this is often in the

to convulsive and other affections, the origin of night, after the first sleep ; and it recurs nightly which is in pure debility of the sentient and mo- ‘ ~ tive powers.

R Had. valerians incisae 3J. Canellae alb. cort. contus. 3ij. Aquas ferventis Oi. Macera per horas duas, dein cola.

R Hujus colaturae f. 3xij.

Tinct. valerian ammon. f. 3j. Fiat haustus : ter in die sumendus.

Take of cut valerian root one ounce, canella alba bark bruised two drachms, boiling water one pint.

Digest for two hours, then strain.

Take of the strained liquor twelve fluid

for some length of time. The patient has, for a time, a distressing sense of suffocation, occa« sioning him to rise from a horizontal to an up- right posture, which, with the wheezing, and sub- sequent expectoration, are trnly characteristic of this dreadful disorder. The expectoration generally comes on towards the approach of morning.

Causes. — In the hereditarily disposed, asthma will occur from almost any cause which in others create common derangement ; exposure to cold or moisture ; violent exercise ; mental agitation ; suppressed evacuation ; receding exanthemata, or retrocedent gout ; stomach, or hepatic, or bowel, or uterine, or renal irritation, will all,

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drachms, ammoniated tincture of valerian one under predisposition, prove excitants of the dis-

fluid drachm. Make into a draught; to be taken order.

three times a day. Distinctions. — It is distinguished frompulmo-

The purgatives that are employed in epilepsy nary inflammation, either of an ordinary or spe-

ought, for the most part, to consist of those which cific kind, by the periodical character of its

are warm and stimulating ; and in case of the attacks, the patient in the intervals being froe

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from disease, by the wheezing, and by the pe- culiar sense of suffocation. It is seldom too that asthma is attended by those pyrexial or febrile accompaniments that are found in truly inflammatory affections of the chest.

Prognotit. — Generally unfavorable, when confirmed ; when it takes place in young per- sons, and is traceable to obvious causes, a reco- very may be expected. Its fatal termination is, for the most part, by the induction of other dis- eases, such as organic affections of the heart, and hydrothorax. Sometimes, indeed, positive in- flammation of the lungs will be the consequence of asthma.

Treatment. — In habits of much plethora and high action, blood-letting is required in the pa- roxysm ; in taking away blood, however, we must recollect the spasmodic nature of the dis- order, and its tendency to terminate in hydro- thorax. Antispasmodics are often freely admis- sible, and combinations of these with anodynes prove useful. Assaftatida glysters may be thrown up the rectum.

R Spiritus aetheris sulphurici compositi f. 3j.

Tincturae opii tn.vj.

Misturae camphorae f. Jift. Fiat haustus.

Take of compound spirit of sulphuric ether a fluid drachm, tincture of opium six minims, camphorated mixture a fluid ounce and a half. Make them into a draught.

One of the most powerful agents, as adapted to the circumstance of asthma, is the stramo- nium.

R Extracti stramonii gr. ft.

Confectionis aromaticae q. s. Fiat pilula : ter in die sumenda.

Take of extract of stramonium half a grain, aromatic confection enough to form a pill. To be taken three times a day.

The belladonna, and aconitum, and digitalis, and conium, have been administered with the same intention.

Towards the close of the paroxysm, when ex- pectoration is not free, let expectorant remedies be administered.

R Misturae ammoniaci, Aquas purse aa f. 3vj. Tinct. scillae n\x. Syrupi tolutani f. 3j. Fiat haustus.

Take of ammoniacal mixture and water of each six fluid drachms, tincture of squill ten minims, syrup of tolu one fluid drachm. Make them into a draught.

The application of a blister to the chest is often highly useful. The bowels must be briskly acted on with the warm and aromatic purgatives ; and both in the treatment and the prevention of asthma, but more especially in the latter, the state of the stomach, and first passage, must be sedulously attended to. Dr. Bree treats asthma as a stomach disorder; he cautiously confines the diet to easily digested materials, and gives carbonate of steel, soda, &c., to strengthen the nores of the stomach, correct the acid fermenta-

tion, and alter the internal secretions. In tins view, also, he recommends small doses of the mineral acids. Warm clothing is always neces- sary in asthma. Coffee is sometimes found to abate the violence of the disorder. Regular ex- ercise, both of walking and horseback, should be enjoined : an assiduous care should be taken not to check perspiration. Change of air is often desirable; but there is great irregularity, and often inexplicably so, with regard to the appro- priate kind of air for asthmatics; some being benefited by a warm, others by a cold atmc- sphere ; some breathing best in a humid, some in a dry situation ; some courting the vivifying air of an open country, others loving rather the smoky atmosphere of a large city.

Issues are occasionally of service to old asthmas ; and some are in the practice of giving an emetic just before the expected accession of the fit.

399. Difficulty of Breathing. Dyspnoea. — Dyspnoea is rather a symptom of other diseases than in itself a malady of a specific kind. Asth- matic and other impediments to free respiration are often obscure in their rationale ; sometimes there seems to be a sort of spasmodic stricture in the bronchial cells, without inflammatory action on the one hand, or effusion of lymph, or mu- cus, or matter, on the other hand ; and then the true spasmodic asthma is present; at other times the secretion or effusion is temporary, and the pituitous asthma is formed ; then again it is per- manent, and permanent difficulty of breathing, or dyspnoea, is produced. This dyspnoea may, indeed, be occasioned by other causes of a more extensive nature, such as adeps pressing upon the bronchia, or mal-conformation of the thoracic cavity ; in the one case the remedy is obvious, in the other it must be obvious there is no re- medy.

400. Whooping cough. Pertussis. Symptonis. — \Vhooping-coughoften exists with

very little more than ordinary catarrhal symp- toms for two or three weeks ; the breathing, how- ever, will generally be found to be more difficult and obstructed than in common cough ; at length the whooping sound is heard, which is occa- sioned by the air rushing through the glottis with unusual force and rapidity, to make up, as it were, for the convulsive and frequently recurring expirations. After the fit or fits are over, a con- siderable quantity of mucus is brought up, by which the little patient is relieved from his dis- tressing and suffocative sensations, and he re- turns to his play as if nothing had happened or was again to happen. Vomiting frequently ter- minates a violent paroxysm, and then, for the most part, the subject of the disorder expresses a great desire for food. But the peculiarity of the complaint is certainly this, that in the inter- vals of the fits there are no relics of the disorder, until, by the protraction of the malady, the in- dividual becomes worn down, or bronchial in- flammation, of a permanent kind, has taken place of the mere spasm by which, in the first instance, the distemper seems to be constituted. Causes — Specific contagion. Whether it may arise spontaneously, or whether, under epidemic peculiarities of the atmosphere, it may be made to supervene upon common catarrh, is a doubtful

and disputed point. Its proximate cause seems, as just intimated, to consist

of spasm in the first instance, and congestion and inflammation in the course of time.

Distinctions. — The distinguishing peculiarities of the affection are the whooping noise, the com- plete cessation of the distressing feelings in the intervals of the fits, and the paroxysms ending in vomiting.

Prognosis. — When the disorder occurs after the child has got through dentition, when the strength seems but little impaired, and the tendency to pulmonary inflammation does not manifest itself, expectations of thorough recovery are well founded. The unfavorable concomitants are, early infancy, much appearance of pulmonary congestion; and the occurrence of convulsions; indeed, the bias of the disorder is often towards head affection in young children.

Treatment. — If inflammatory or congestive ap- pearances manifest themselves, put leeches upon the chest or head. Give emetics of ipecacuan and antimony combined ; let the bowels be kept free ; meet the pyrexial irritation by saline dia- phoretics, and the supersaturated liquor am- moniac acetatis (that is, supersaturated with ammonia), should there be much appearance of sinking. Give hyoscyamus, and conium, and digitalis, and prussic acid, in conjunction or se- parately, when the cough seems purely spasmo- dic ; occasionally change these from one to the other. When there is much difficulty of expec- toration, add a little of the wine of ipecacuan, and the oxymel of squills, to the above antispas- modics. Correct the stomach acidities by car- bonated soda or potass. A popular remedy for whooping-cough consists of salt of tartar and cochineal, and it is said to be very efficacious. Apply blisters to the chest, or the tartarite of an- timony ointment, with opium. Rub the chest and neck with diluted tincture of cantharides; give small doses of this internally ; and when the violence of the disorder is abated, debility only remaining, give tonics, such as Peruvian or Cascarilla bark, or small doses of the liquor arse- nicalis. Above all, change of air, which is ma- gically operative in whooping cough, in cases of protracted convalescence, and indeed, it some- times will prove abundantly beneficial, even during the height and violence of the complaint.

401. Water-brash. Pyrosis.

Symptoms. — The fits of water-brash generally recur in the morning : there is sometimes an ac- companying sensation, as if the stomach were drawn down towards the back. For the most part, as stated in the definition, the discharge is watery and thin, but it is sometimes glutinous and ropy. The pain is generally increased by an erect position of the body, which occasions the subject of the disorder to stoop forward.

Causes. — It appears to be a peculiar spasm of the stomach, affecting the secretions of the organ ; it is sometimes brought on by poverty of diet, and mental anxiety. The lower classes of people, who live much upon food of a farinaceous kind, are very obnoxious to it. It often continues by habit for a long time.

Treatment. — Antispasmodics and absorbents ; a plaster composed of equal parts of the em- VOL. XIV.

plastrum opii and emplastrum cumini to the tui- gastrium; the subnitrate of bismuth. R Bismuthi subnitratis gr. vj. Pulveris rhei, gr. iij. Tragacanthae, 9ft.

Fiat pulvis ; bis terve in die sumendus.

Take of the white oxide of bismuth six grains, of powdered rhubarb three grains, of gum traga- canth ten grains. Make them into a powder, to be taken three times a day.

The nux vomica may be tried in doses of five or six grains. Eggs boiled hard, and eaten pretty freely, have put a stop to obstinate pyrosis. The smoking or chewing of tobacco will likewise occasionally subdue it.

402. Colic. Colica. — Abdominal pain with a sense of twisting, especially about the navel ; vomiting ; constipated bowel. It is produced, first by spasm, second by the poison of lead, in which case we have what is called the painter's colic, marked by a gradual accession of the se- verer symptoms, with pains in the arms and back, the arms eventually become paralysed ; third, by protracted costiveness ; fourth, by acrid ingesta ; fifth, by retention of the meconium in infants; sixth, by stricture in some part of the intestinal canal, occasioning windy collections and eructa- tions; and seventh, by calculous concretions in the bowels.

Distinctions. — From enteritis, by the absence of pyrexia, by pressure in inflammation increasing, while in colicky spasm it sometimes diminishes pain, and by the irregular contraction in the ab- dominal muscles which has place in colic.

Prognosis. — Favorable when the pain remits or changes its situation ; when there is a discharge of wind and faeces, followed by an abatement c symptoms. Unfavorable symptoms are violen- fixed pain; obstinate costiveness; sudden cessa- – tion of the pain followed by more frequent hic- cough, great watchfulness, delirium, syncope, cold sweats, weak tremulous pulse, the pulse becoming hard, and the pain, before relieved, now becoming increased by pressure ; in fact, all the symptoms indicating the supervention of inflammation.*

Treatment. — To be directed, of course, to its exciting cause. Sometimes it is necessary to have immediate recourse to powerful antispas- modics, whatever shall have been the source of- the disorder. Warm fomentations are always ad- missible, and for the most part conspicuously serviceable ; the warm bath ; and when we wish for evacuations, and fail in producing them, dashing cold water upon the legs and abdomen, or causing the patient to stand with his naked feet on cold marble, will sometimes relax the spasm which thus obstinately retains the faeces. Give the croton oil, in doses of two or three drops, when common purgatives fail; -rub the abdomen all over with castor oil ; give large doses of castor oil internally, when the stomach will bear it. This last is especially applicable in the colica pictonum, which requires also small doses of calomel and opium combined, given for some time.

Warm bathing is exceedingly useful in colica pictonum ; and in its chronic state, when little besides the paralysis of the arms remains, the use of the Bath waters proves of unequivocal efficacy.

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In all cases of colic we should carefully iVatch the coming on of inflammatory symptoms ; and it is partly because inflammation is so easily in- duced that we must, while using our antispas- modics freely, take especial care that WP do not lock up faecal, or calculous, or any other matter in the internal passages. The opiate confection is one of the hest forms of administering opium in colicky pains; itisnotso conslringing as other preparations of this medicine, and its consti- pating tendency may be guarded against by tincture of rhubarb. Its dose may be a scruple.

The opiate confection deserves to be in more frequent use than it is in the general practice of medicine.

We have been principally indebted to Dr. Uwins and Dr. Hooper for the three or four last sections, having done very little more than add a few remarks on their histories and descriptions, and given a translation of their recipes. The two following sections on colica pictonum and worms we extract unaltered from Dr. Hooper's Vade Mecum.

403. Of the colica pictonum. — The colic in- duced by lead, is more obstinate, and longer protracted, than the same disease brought on from common causes ; and frequently terminates in paralysis of the wrists and upper extremities.

Freatment. — Oleum ricini, often repeated, is most effectual in procuring stools, and, with fo- mentations and warm bath, generally removes the disorder in a few days ; afterwards mercury united with opium, to excite slight salivation ; alum; electricity; chalybeate and sulphureous waters; sinapis.

R Hydrargyri submuriatis gr. . Extracti opii gr. ft. Confectionis rosae q. s. Fiat pilula ; ter in die sumenda.

Take of calomel a quarter of a grain, opium half a grain, conserve of roses enough to form a pill, to be taken three times a day.

R Hydrargyri submuriatis gr. $. Sulphureti antimonii praecipitati gr. |. Confectionis opii gr. v. Fiat pilula; ter in die capienda.

Take of calomel a quarter of a grain, preci- pitate sulphuret of antimony half a grain, opiate confection five grains. Make them into a pill, to be taken three times a day. R Aluminis purificati 9ft. Infusi rose f. 5 xij. Syrupi ejusdem f. 3j. Fiat haustus; ter in die sumendus.

Take of purified alum ten grains, infusion of roses twelve fluid drachms, syrup of the same one fluid drachm. Make them into a draught, to be taken three times a day.

Colica pictonum is often productive of inflam- mation of the bowels and peritonaeum, when the warm bath, general and local blood-letting, must be had recourse to.

WORMS. — The human primae viae are infested by five kinds of worms.

1. Ascaris vermicularis : the small white thread or maw-woiiu.

2. Ascaris lumbricoides : the lumbricus teres, or long round worm.

3. Trichuris.: the long hair-tailed thread-worm.

4. Taenia osculis marginalibus : the solium, or tape-worm .

5. Txnia osculis superficialibus : the broad tape-worm.

The ascarides have usually their seat in the rectum ; the lumbrici occupy the small intestines, and sometimes the stomach ; the trichurides the caecum ; the taeniae the whole tract of the intes- tines, more especially the ileum.

Worms mostly produce symptoms of colic, and very frequently other symptoms, as variable appetite ; foetid breath ; picking of the nose ;

hardness and fulness of the belly ; sensation of heat and itching in the anus; preternaturally red tongue, or alternately clean and covered with a white slimy mucus ; grinding of the teeth during sleep ; short dry cough ; frequent slimy stools ; emaciation ; slow fever, with an evening exacerbation ; irregular pulse ; some- times convulsion-fits.

Worms appear more frequently in those of a relaxed habit; those whose bowels contain a preternatural quantity of mucus or slimy mat- ter; in those who live on vegetable food ; in the dyspeptic ; the eating of unripe fruit is a fre- quent cause of their production.

They are evolved from ovula that exist in the human body, and in no other situation. For further information on this subject, consult An Attempt to an Arrangement of human intestinal Worms, published by the author in the fifth volume of the Memoirs of the London Medical Society.

Of colica verminosa. — 1. The most esteemed remedies against ascarides and trichurides are purgatives of the submuriate of mercury, scam- mony, aloes, rhubarb, spigelia, cowage, tin ; also assafoetida, lime-water, tobacco.

R Hydrargyri submuriatis gr. ij— vj. Pulveris rhabarbari 9j.

Fiat pulvis ex melle sumendus.

Take of calomel from two to six grains, pow- der of rhubarb twenty grains. Make into a powder to be taken with honey. R Scammoniae gr. iij.

Hydrargyri submuriatis gr. ij. Sacchari purificati gr. vj. Fiat pulvis ex quovis vehiculo crasso su- mendus.

Take of scammony three grains, calomel two grains, purified sugar six grains. Make them into a powder to be taken in any thick vehicle.

R Extracti aloes spicatae, Extracti tanacaeti, aa 3ft. Olei rutae m xij.

Fiant prlulae xij. quarum sumat seger duas nocte maneque.

Take of extract of aloes and of tansey of each half a drachm, oil of rue twelve minims. Make the mass into twelve pills, of which two are to be taken night and morning. R Radicis spigeliae 5vj.

Aquae ferventis O j. Macera per horas duas.

R IIujus infusionis f. 3xij. Tincturae cardamomi f. Jj. Syrupi zingiberis f. 3j. Fiat liaustus nocte maneque capiendus. Take of Indian pink six drachms, boiling water a pint. Let them stand to infuse for two hours. Then take of this infusion twelve fluid drachms, of tincture of cardamoms and syrup of ginger of each one fluid drachm. Make them into a draught to be taken night and morning.

The dolichos pruriens, or cowage, is best pre- pared at the late Mr. Chamberlaine's, of Ayles- bury Street, Clerkenwell, and sold with proper directions.

R Liquor calcis O j. Fiat enema omni nocte injiciendum. Take of lime water a pint. Make an enema to be administered every night. R Misturae assafoetidae f. ˆiij.*

Lactis vaccini f. %v.

Fiat enema tertia quaque vesperi adhibendum. Take of assafoetida mixture three fluid ounces, cow's milk five fluid ounces. Make an enema to be administered every third evening.

R Foliorum tabaci 3ft. Aquae ferventis f. Jx.

Macera, et liquorem frigefactum cola pro ene- mate.

Take of tobacco leaves half a drachm, boiling water ten fluid drachms. Digest, and when the liqnor is cold let it be injected into the rectum. R Limaturae stanni f. Jj. Electuarii e senna f. Jij. Syrupi zingiberis q. s.

Fiat electuarium molle, de quo sumatur coch- leare unuin minimum quovis mane.

Take of tilings of tin an ounce, lenitive elec- tuary three ounces, syrup of ginger as much as necessary to make a soft electuary, of which a tea spoonful may be taken every morning. R Camphorce 3j.

Olei olivae f. Jij.

Solve pro enemate urgente ani prurigine adhi- bendum.

Take of camphor a drachm, olive oil two fluid ounces. Rub them together so as to dis- solve the camphor, and let the solution be em- ployed as an enema in case of violent itching at the anus.

A decoction of the geoffraea inermis, or cab- bage-bark, is a remedy much used, according to Dr. Wright, in the West Indies.

2. Against the taenize most of the drastic purges before prescribed have been resorted to. Madame Noufer's remedy is occasionally used with success. She directs as follows : —

The day before the patient is to take the re- medy he is to avoid all aliment after dinner, till about seven or eight o'clock at night, when he is to take a soup made thus : —

Take a pint and a half of water, two or three ounces of good fresh butter, and two ounces of bread cut in slices ; add to this salt enough to season it, and then boil it over the fire to the consistence of panada.

About a quarter of an hour after this, she gives

him a biscuit and a glass of white wine, either pure or mixed with water ; she even gives water alone to those who have not been accustomed to wine. If the patient has not been to stool that day, or is naturally costive (which is not usual, however, with patients iu this way), Madame Noufer directs the use of a clyster.

Take a handful of the leaves of mallows, and boil them in a sufficient quantity of water, mix- ing with it a little salt, and, when strained off, add two ounces of oil.

Early the next morning, about eight or nine hours after the supper, the patient takes the fol- lowing specific : —

Take two or three drachms of the male fern, gathered in autumn, and reduced to a very fine powder, in four or six ounces of water distilled from fern, or the flowers of the lime-tree.

It will be right for the patient to drink two or three times of the same water, rinsing his glass with it, so that none of the powder may remain either in the glass or his mouth in bed ; and, to avoid the nausea which this medicine sometimes occasions, he should chew lemon, or something else that is agreeable to him, or he may wash his mouth with whatever he likes, but he must be care- ful not to swallow any thing. He may likewise smell to vinegar, to check the sickness ; but if, notwithstanding all his efforts, the nausea con- tinues, and he is obliged to throw up the specific, it will be right for him to take a fresh dose of it as soon as the sickness is gone off, and then he should try to go to sleep. About two hours after this he must get up, and take the following : —

Take of the panacea of mercury fourteen times sublimed, and select resin of scammony, each ten grains, of fresh and good gamboge six or seven grains. Reduce each of these substances separately into a powder, and mix

them with some conserve into a bolus.

This is to be taken at one or two different times, washing it down with one or two dishes of weak green tea, the patient walking afterwards about his chamber.

When the bolus begins to operate, the patient is desired to take a dish of the same tea occa- sionally, until the worm is expelled ; then, and not before, Madame Noufer gives him broth or soup, and he is directed to dine as is usual after taking physic. After dinner he may either lie down or walk out, taking care to conduct him- self discreetly, to eat little supper, and to avoid every thing that is not of easy digestion.

The panacea of mercury is the submuriate; and the male fern is the polypodium filix mas of Linnaeus, and aspidium filix mas of Smith.

4. Turpentine has been given in some cases with success. In the year 1795 a letter was put into the hands of the author, from a medical gentleman in the East Indies, which contained an account of a large dose of the oil of turpen- tine having been swallowed by mistake, and which brought away several worms. In conse- quence of this, the oleum terebinthinae was ad- ministered as an anthelmintic in the dose of from one drachm to an ounce to several patients with taeniae; the result was equally uncertain with other purgatives. Of late its use has be- come more general. The best way to pive it is

mingled with syrup, and to direct the patient to take some gruel, arrow-root, or sago, after it. It produces a slight vertigo, and a sense of warmth and heat in the oesophagus and stomach, like to that produced by a glass of brandy ; but these are very transient. Three or four evacuations are mostly produced by half an ounce.

405. Cftolera. Vomiting and purging.

Symptoms.— The characteristic symptom of this sometimes very severe malady is the combina- tion of vomiting and purging of bilious matter, and when the disorder is violent there is extreme sinking and painful feeling about the epigas- trium, with spasms of the legs as mentioned in the definition ; very great exhaustion of powers ; hurried fluttering pulse, heat, thirst, and op- pressed respiration. When the attacks are made with

malignant violence, a fatal termination is sometimes the consequence, and that within twenty-four hours from the first occurrence of the sickness. In this case death is preceded by cold clammy sweats, very great irregularity in the pulse, and very violent cramps in the legs ; hiccough, too, for the most part, precedes death.

Causes. — This is a disorder of the autumnal season, and seems to be occasioned by an acri- mony of the bile produced by the combination of heat and moisture, connected in its manifes- tation with the cold, which, in the autumnal sea- son, often quickly succeeds to heat, and tends to increase the disposition to the internal direc- tion of the secretions, by obstructing the vessels on the surface of the body, or interrupting the irregularity of cutaneous discharge. The autum- nal fruits have been supposed to be one main cause of the disorder appearing in the autumnal season ; and, as far as these are difficult of diges- tion (plumbs and cherries in particular), there may be some justice in the allegation; but we very often find persons who never taste fruit the subjects of these violent bilious attacks ; and it should seem, as above intimated, that the malady is rather referrible to sudden changes in atmos- pheric temperature, to cold and damp nights succeeding to hot days, and probably to some sort of specific influence that this combination of heat, and cold, and moisture, may have upon the biliary secretion, in increasing its quantity and imparting to it acrimony. In the tropical climates cholera shows itself with a force and malignity of which we in this latitude know no- thing but by history; and this circumstance is in favor of the principle we now intimate as the most probable one to which its source may be attributed.

Distinctions. — Diarrhoea often occurs with some violence from the mere acrimony and over- flow of the bile, but if the discharges are not ac- companied by vomiting the disorder is without the essential of cholera, morbus. In colic, too, and other enteric affections, there is often on the other hand considerable vomiting, but then the bowels are costive, and the disease therefore is different from cholera.

Prognos/s. — When the oppression and exhaus- tion are extreme we may anticipate an unfavor- able termination. In this country, however, the disorder does not, as above stated, in the general way put on so much malignity of character and

aspect, and if the interference of art be prompt and judicious, the malady usually terminates speedily and favorably.

Treatment. — We are for the most part told by authors that a great deal of diluent drink should be thrown into the stomach, such as barley water, thin water gruel, and linseed tea, in order to lessen the acrimony of the bile, or

sheath the coats of the stomach against its morbid influence. We are a little doubtful, however, with regard to the theory upon which the stomach is thus ordered to be drenched, and in the general way should avoid the practice. Opium should be speedily given, and, if the stomach is too irritable to bear it, enemas may be administered of starch in which there is a considerable dose of tincture of opium. The cholera which we meet with in this country will be usually controlled by a grain of opium and a grain of calomel given in the form of a pill ; and, whether it is on ac- count of the specific influence which the calomel as mercury has upon the liver, or from any other cause, certain it rs that its combination with opium will often occasion the latter to stay on the stomach and assist in subduing the violence of the vomiting. Five grains of blue pill, with a grain, or half a grain, of opium, may be em- ployed with the same intention and effect. A small draught, in which from ten grains to a scruple of opiate confection is rubbed down with some mint water, will sometimes be re- ceived by the stomach in spite of its irritability. Warmth applied externally, in the way of fomen- tation, to the epigastrium and abdomen generally, will often prove very serviceable, and some- times the discharge of bile will be checked by the application of a blister either to the epigas- trium or the back. The external application of a liniment, in which tincture of opium is mixed, as in the following formula, may also be ad- visable in these and some other cases of irritable stomach; indeed, external applications are not

Serhaps used and appreciated to the extent they eserve.

R Linim. camphorae comp. f. 3ifl.

Tine, opii f. 3ij.

Fiat linini. in ventriculi regionem fricatione saepe applicandum parva quantitate.

Take of compound camphor liniment a fluid ounce and a half, tincture of opium two fluid drachms. Make them into a liniment ; a small quantity of which is to be rubbed on the stomach frequently.

When the extreme irritability of the stomach has somewhat abated, alid from the first in ordi- nary cases, tincture of rhubarb may be admi- nistered in small quantities. The following for- mula will be found, in many cases of sickness which should hardly amount to the violence of cholera, to be exceedingly beneficial; indeed, we have passed season after season, and have had public establishments to take care of, with- out the necessity of much more in the way of an immediate medicinal for ventricular complaint of the kind now referred to. R Tinct. rhei f. 3iij. Confect. opii gr. xv. Aquae menthx- sat. f. 3'ft- Fiat haustus-*

Take of .mcture of rhubarb three fluid drachms, opiate confection fifteen grains, simple mint water a fluid ounce and a half. Make them nto a draught.

In the extreme exhaustion of the violent cases if cholera fifteen grains of opiate confection /nixed with the same quantity of aromatic con- fection, and eight or ten grains of subcarbonate of ammonia, rubbed down into a draught with water, will often prove signally beneficial.

We have just said that the cholera of Britain is a mild disease, in [the majority of cases, com- pared with that which is met with in the Indies. Of the frightful force with which attacks of bili- ous disorder are made in the east, and of the vigorous measures required to meet and subdue them, an opinion may be formed by the follow- ing masterly account taken from the Study of Medicine by Dr. Mason Good.

*The rapid or sudden fatality of the disease (the Indian cholera), in its severest onsets, is very singular. Even Sonnerat affirms, ‘ that the patient was frequently carried off in twenty-four hours.’ But, in the later epidemy of 1817 and 1818, this term was wonderfully abridged. * In the second, and very fatal visitation,’ says Mr. Orton, ‘ of the epidemic experienced by Briga- dier-general Pritzler’s force, I am informed that vomiting, purging, and spasms were very fre- quently, in a great measure if not entirely ab- sent : all the powers of the system failing at once, and death commonly ensuing in three or four hours from the attack.’ Several instances were heard of at Hoogly, and other places, of natives being struck with the disease whilst walking in the open air ; and who, having fallen clown, retched a little, complained of vertigo, deafness, and blindness, and expired in a few minutes. Mr. Gordon gives a history of many cases of this kind. At Bellary, a tailor was at- tacked with what was supposed to be cholera, and instantly expired, with his work in his hands, and in the very attitude in which he was sitting.*

The dissections in this presidency seem to have shown even a more extensive range of vis- ceral effusion, congestion, and extravasation than those in Bengal. Not a single thoracic or abdo- minal organ was to be traced unmarked by vas- cular rupture, or turgescence of black-blood, or unstampt with some other morbid appearance ; the stomach and liver, however, were chiefly af- fected, and the urinary bladder was always shrivelled. The blood, when drawn from the arm, was found to coagulate very loosely, and sometimes not at all : and the arterial and venous blood

were of a like purple hue.

Of the dreadful spread and havoc of this cruel Asiatic scourge, we may form some idea, from the report to the Medical Board at Bombay, by George Ogilvy, esq., secretary. The population in this district alone is calculated at from 200,000 to 220,000 ; the total number of ascertained cases amounted to 15,945 ; giving a proportion of seven and a half per cent. Of these cases 1294 sick had been without receiving medicine, or medical aid ; and there is reason to believe that of these every individual perished. Mr. Ogilvy, indeed, expressly asserts that it was tiot ascertained that any case had recovered in which

medicine had not been administered : while it u gratifying to learn, on the other hand, that, among those who had received the advantages of the judicious and active plan concurrently pur- sued, the proportion of deaths was reduced to fi-6 per cent., an alarming mortality still, but a marvellous improvement upon the natural course of the disease. In other parts of India, indeed, the deaths, under the same plan of treatment, seem to have been still fewer : for Dr. Burrell, surgeon to the sixty-fifth regiment at Seroor, out of sixty cases, makes a return of only four deaths ; and Mr. Craw, on the same station, asserts, that, on an early application for relief, the disease in his opinion ‘ is not fatal in more than one in 100 cases.’

The curative plan, pursued with so much suc- cess, consisted in bleeding, according to the strength of the patient ; calomel in free doses of from fifteen to-twenty grains in a dose ; with one or two grains of opium, repeated, if necessary, every four, three, and in some cases every two hours, till the urgency of the symptoms abated : to these were added a liberal use of the most diffusible stimuli, as the spirit of nitric ether, ammonia, camphor, hot arrack-and-water, mixed with spices and sugar, camphor-mixture, essen- tial oil of peppermint, the hot-bath, stimulant embrocations; and sometimes the antimonial powder in doses of five grains given in conjunc- tion with the calomel.

We are informed of a fortunate blunder in one instance, capable of being laid hold of and ap- plied with great practical advantage. ‘ By mis- take, twenty grains of calomel and sixty minims of laudanum were given at an interval of less than half an hour. The patient was inclined to sleep; nothing more was done; and in two hours and a half he was as well as erer he was in his life.’

Many of the cases proved successful without the use of the lancet : but, from a return of Dr. Burrell, the hazard of omitting it, whenever blood could be made to flow, seems rather unjustifiable : for according to this return out of 100 patients eighty-eight were bled, and twelve not ; of the

former, two died, being one to forty-four ; of the latter, eight, being two-thirds or nearly thirty to forty-four. It is altogether idle therefore to de- pend upon stimulants alone, and to boast of their power to subdue the disease without active evacuants in the beginning of the curative pro- cess, as Hufeland and other writers on the con- tinent appear to have done, without a sufficient knowledge of the real nature of the disease; if, indeed, it be this species which they have under- taken to describe, of which there is great reason to doubt.

Of the remote cause of this extraordinary ma- lady we know nothing. That it is an epidemy, and of a most maligaant character, is unquestionable ; but whether dependent upon an intemperament of the atmosphere, or upon specific contagion, ii by no means ascertained. The first was the most obvious mode of accounting for it, and that which was earliest adopted ; but by many prac- titioners it has been rejected, for the following reasons. The disease, instead of spreading from a centre to a ci preference, or following the

course of the wind, or of the sun, or obeying any other meteorological power, marched by a chain of posts, often in direct opposition to all kinds of atmospherical influence, and in the immediate track of human intercourse. ‘ It prevailed,’ ob- serves Sir Gilbert Blane, in his remarks upon Mr. Corbyn’s letter, ‘ to a degree equally violent at all seasons of the year : in regard to tempera- ture, from 40° or 50° of Fahrenheit to 90° or 100°; in regard to moisture, during the conti- nuance of almost incessant rain for months, to that dry state of the atmosphere which scarcely leaves a vestige of vegetation on the surface of the earth.’ To which I may add, that it often fought its way in the very teeth of the most pow- erful monsoons, and left untouched various dis- tricts that bordered on its career, and whose less salubrious features seemed to invite an acquaint- ance with it. It appeared also and vanished in all the changes of the moon, and in all states of atmospheric electricity : and at sea as well as at land. Mr. Corbyn, indeed, gives an account of its having made an attack upon the Lascars of an Indiaman, in its passage from England to the Cape of Good Hope, in 1814 ; and that too in the month of January, when the weather was in- tensely cold.

It has, hence, by many pathologists been sup- posed to have been propagated by a specific contagion : and in support of such opinion they have endeavoured to show, that it appeared in no town or district where a direct communication had not been maintained with some place in which it

was prevalent. In this endeavour, however, they do not seem to have been success- ful. Nor is it easy to reconcile the suddenness of its appearance and disappearance with the laws of contagion, so far as we are acquainted with them ; a subject we shall have occasion to examine at large, when treating of fevers. Mr. Allardyce, surgeon to his majesty's thirty-fourth, informs us, that in this regiment the disease ap- peared on the 21st of September, and committed dreadful ravages before night. On the 25th it abated remarkably, and in three days more en- tirely vanished. In like manner, the severe at- tack which was experienced by the Bengal and Madras troops at Nagpore, occurred at the end of May 1818. On the 10th of June, the rains appeared with great violence, when the epidemy abated, and immediately afterwards ceased. Neither if the idea of a contagious propagation reconcileable with the escape of the great body of persons exposed to the influence of the dis- ease, considering that, from its not being appre- hended to be contagious, no means, as is usual in other cases, were employed to avoid the infec- tion.

The state of the atmosphere, as described by Mr. Allardyce, did not differ materially from that in Nagpore. The disease made its attack in close and sultry weather, and vanished after thunder storms and heavy rains. But we can draw no conclusion from these phenomena; since it seems to have shown itself quite as frequently and fa- tally after a long succession of rain ; and, as al- ready observed, sometimes in very cold and dry weather. The remote cause, therefore, of this mysterious scourge remains yet to be ascertained,

and affords further proof, if indeed proof were wanting, of our general inacquaintance with the nature and economy of epidemics.

With the exception of the plague, there is no- epidemy on record that seems to have been so strikingly marked by violence and irregularity of action, and especially by a rapid exhaustion of living power ; the patient, as we have seen, often expiring within twelve hours from the attack, and sometimes sooner.

The first characteristic feature that occurs to us, on a review of the disease, is the total ab- sence of the bile from the whole range of the alimentary canal in every ca§e, while this fluid was as generally found in abundance in the gall- bladder; and, perhaps, the next is, the turgid, and, in some instances, the ruptured state of the liver from the quantity of blood with which it was distended. The general battery of symp- toms appears, therefore, to have been opened by a spasmodic constriction of the bile- ducts; for, without such an obstruction, we cannot ac- count for an exclusion of all bile from the in- testines. From this point, as from a centre, the spasmodic action seems to have spread in every direction, and under a

clonic or entastic form to have seized upon almost every organ ; preying with greater violence according to the greater degree of debility, and hence, perhaps, of irri- tability of the system ; into which law, we are to resolve it, that the natives, supported by a less rich and nutritive diet than Europeans, suffered more severely, and died more frequently. The stomach and intestines, generally speaking, first participated in the spasm of the bile canals, and hence the griping pains, the nausea, and violent commotions, which spread from the one to the other.

In all cases of nausea, from whatever cause, we see the brain and the surface of the body peculiarly diminished in their energy ; whence the skin, to the remotest extremities, collapses beneath a deadly chill, and the heart sinks with insupportable languor. In the ordinary course of sickness the nausea subsides, and the general organisation recovers its balance, or it terminates in full vomiting, which excites a universal re- action. And where any such re-action occurred, in the disease before us, it was hailed as a fa- vorable change ; agd hence the wisdom of the stimulant plan so frequently had recourse to by the medical staff for the purpose of producing a revulsion. But, where this was not accompished, the living power, feebly recruited from its foun- tain from the first, or not recruited at all, became exhausted in every organ apace, the strength failed, and hope gave way to despair. While the ge icral mass of blood, thrown back by the contra :tion of the vessels of the surface upon the deeper and larger organs, produced effusionˆ congestion, and extravasation, wherever they yield :d most readily ; and hence chiefly in the liver, which in hot countries is almost always in a debilitated state. In the midst of these accumu- lated evils, the spastic diathesis, instead of being su'jdued or even checked, became, by the very resistence it met with, more forcible and aggra- vated. Every organ successively or simultane- ously submitted to its torturing cramp ; the heart

was fixed and incapable of propelling the blood through the arteries ; the muscles of respiration were incapable of expansion, the lungs were collapsed, and suffocation was threatened every moment.

None of the natural secretions took place ; the bladder was shrivelled and empty ; the bile, while in the gall-bladder, became discolored and dark ; there was no fluid, or only a morbid fluid, in the pericardium, and the intestines were no longer lubricated with the refreshing mois'ure of health. But, while these secretions were put a stop to, others took place in different org ins from the mortal struggle of those organs them- selves, and chiefly where the struggle was severest. And hence those morbid fluids, and other ma- terials, exhibiting almost every degree of con- sistence, which were found in the intestinal canal, and often ejected by the mouth and anus; varying from the nature of chyle, thrown back perhaps, by a retrograde spasmodic action of the thoracic duct, to the nature of that mucous and unctuous matter which the intestines are some- times capable of forming even under other cir- cumstances.

I have said that the living power, during the whole of the melancholy contest, seems to have been recruited very feebly from its fountain, or not recruited at all. The latter appears to have been the case in the island of Ceylon, where the disease raged with even more violence than on the Indian continent, and the patient very frequently expired in twelve or fifteen hours from its attack. A dissection of those who perished thus early in this quarter has p t u into possession of some interesting facts, varying in a few particulars from those that occurred on post-obit examina- tions in the island of Bombay, and which will, I trust, uphold me in making this remark. The brain was in these cases chiefly the congested organ, the liver sometimes appearing to have no congestion whatever; and hence the inactivity produced in the brain by the nauseating state of he stomach must have been greatly augmented by oppression. Consentaneous herewith, we are told by Dr. Davy, that, in some of the cases which he dissected in this region, there was a flaccidity of all the muscular parts, as in ani- mals killed by electricity or hunted to death. There was also a tenderness of the muscular fibres; while antecedently to death, as in many of the Bombay cases, there was no difference in the color of the arterial and venous blood, and no instance of a buffy coat on the blood that was drawn ; which in reality was so loose and uncoagulable that, when venaesection was neces- sary, the vessels were opened with the greatest caution from the difficulty of restraining the blood afterwards.

In all these cases there can be little doubt that the supply of the living power from the brain was spent profusely, and soon altogether ex- hausted : in some instances, indeed, nearly mo- mentaneouslv; like the effects produced upon the animal frame by a stroke of lightning, a vio- lent blow on the stomach, or any other accident that occasions instant death by a total and im- mediate discharge of the vital energy.

In other cases, the oppression on the brain,

produced by congestion, seems to have put an end to the conflict before the living power had completely failed, and while it was still acting with irregular accumulation in various organs: for, in these, the muscles of the extremities, and even of the face and lower jaw, were ob- served to move in a convulsive manner, and sometimes to be drawn into tremulous knots, fifteen or even twenty minutes after death had closed the scene. So the heart of the traitor, when extirpated after he has been beheaded, from a like accumulation of sensorial power, has been seen to palpitate, and even to leap up for several times in succession after its removal from the pericardium.

Commonly, however, the living 'principle seems to have been exhausted more generally and progressively ; and the muscles, and indeed most of the organs, freed from the tetanic power that at first constringed them, to have been gra- dually relaxed and flaccid : and hence that com- parative absence of pain that occurred so fre- quently a short time before death, with the flow of a cold sweat over the surface of the body, and of bile into the smaller intestines.

I have thus endeavoured to follow up and ex- plain the different symptoms of this complicated disease, many of which appear at first sight to be incongruous with each other and of difficult reconciliation. And we may hence see how well calculated the plan of treatment pursued by the different medical boards was to meet them, and may trace the ground of its success. The grand objects before them were : to equalize the flow of the living power ; to counteract the spastic action so common to the irritable diathesis of hot countries ; to guard against the danger of congestion in the vital organs ; and to restore the natural secretions of the system. The great danger of congestion was guarded against by bleeding ; spasm and irritability were opposed by powerful narcotics ; and the full and repeated doses of calomel were admirably calculated to act upon the secernents and restore them to their proper functions, and especially when united, as was occasionally the case, and perhaps al- ways ought to have been, with antimonials. All this was sometimes accomplished rapidly, and the disease ceased in a few hours. But if from the violence of the attack, or from any other cause, it could not be accomplished at all, such violence could not

long be resisted ; and the pa- tient in a few hours, or at the utmost in two or three days, fell a prey to its fury.

We may also be enabled to see, from the ge- neral history before us, why the present species of cholera, or that accompanied with general spasmodic contractions, should occur more severely in the hotter climates of India, or indeed of any other torrid region, than in the more temperate ones of Europe. Cholera is pecu- liarly characterised by a tendency to spastic action : but hot climates have a peculiar ten- dency to excite a general spastic diathesis, and to develope this diathesis in some degree or other in all diseases ; whence, more especially, the frequency of tetanus upon slight wounds of the extremities, or an exposure of them to sud- den chills : and hence, from the co-operation of

these two causes, the graft of a spastic disease tedious, intractable, and dangerous. upon a spastic temperament, the effect must be sentery

See Dn-

of a highly multiplied aggravation. It is well known, however, that this spastic temperament, though common to such climates, is by no means equally common to every inhabitant : and aence again we see a predisposing cause exist-

Treatment. — The management of diarrhoea demands considerable attention as to its exciting and proximate cause. A gentle emetic will sometimes prove its best remedy when it shall have been excited by any thing of an irritating

*•VUW *•£«••" K O ,'..i: LJ*

ne in some cases, which does not exist in others, nature taken into the stomach ; and even some nd are able to trace out something of the rea- old diarrhoeas, which continue from habit, will be on why the epidemy should not have been able best : counteracted by the administration of ai> to fasten upon every individual with equal ipecacuan emetic, which breaks into the series o.

morbid action constituting the complaint. Wher obstructed perspiration has produced the com plaint, small doses of antimony and opium or

ease.

It still remains, however, to be ascertained, besides inquiring into the nature

of the remote

cause, why this disease should have been so ipecacuan and opium, will be its best remedies

much more severe as well as so much more fre- to this last medicine the blue pill or very small

quent within the last six or seven years, than in doses of calomel may be added.

former periods ; as also, why an affection of the

liver, or of the bile-ducts, should be capable of

exciting so extensive a chain of influence on the

nervous, rather than on any other system.

Whilst revising this sheet for the press, Sir James M'Grigor has informed me, that the disease in the Mauritius did not appear till after the arrival of a ship on its coast from Ceylon, where the epidemy was raging; some of the

R Pulv. ipecac, comp. gr. v. Hydrarg. submur. gr. ft. Syrupi aut. mucilag. acaciae q. s. Fiat pil. : bis terve in die sumenda. Take of compound powder of ipecacuan or Dover's powder five grains, calomel half a grain. Make them into a pill with mucilage or syrup ; one to be taken two or three times a day.

When the diarrhoea seems merely to proceed

crew of which were seized with it on their pas- from a kxity of the intestines> or their exhalant

sage, though all were well at the time of sailing. As a single fact, this is not sufficient to prove contagion ; but, in the present uncertainty of the subject, it is a fact worth treasuring in mind.'

406. Dicurhtfa. Looseness.

Sympinms— -This in some causes a sort of minor cliolera, and according to its sources is or is not accompanied with much pain and irritation.*

Causes. — These act either on the body gener- ally, or upon the part or parts affected. Cold checking perspiration is a very common source of diarrhoea; mental agitation occasionally pro-

vessels, astringents will be called for, such as kino catechu, alum, or logwood. R Tinct. catechu f. 3i. Aquae cinnam. f. Jift1

Fiat haustus.

Take of tincture of catechu one fluid drachm, cinnamon water a fluid ounce and a half. Make them into a draught ; or a fluid drachm of tincture of kino may be used in place of the catechu.

The chalk mixture, (mist cretse of the phar- macopoeia,) is an excellent medicine for a diar-

duces it. Dentition is a most frequent cause of rhcea connected with acidity ; and it is there-

looseness in the bowels, and sometimes metasta- sis of other complaints upon the internal mem- brane of the intestines, or upon the liver, will

fore a very useful formula for children's com- plaints ; in these, however, we must be careful to give either small doses of calomel or hydrarg.

excite the disorder. Indigestion is a frequent cum creta ; or, where much intestinal irritation

source both of costiveness and looseness ; indeed the former disease never exists to any extent, or lasts for any time, without thus in one way or other disordering the bowels. Sometimes, and

is present, castor oil, in order to prevent the cre- taceous medicine from proving too precipitately astringent or absorbent; for, although it may be often necessary to check the diarrhoea of in-

indeed very frequently, and often when it has fants, we must be cautious against doing it too

not been suspected, an erythematic inflammation hastily or completely, since it is often the conse-

of the mucous membrane of the bowels will be quence of nature's efforts to lessen the general

the occasion of diarrhoea: indeed a degree of the or local irritation, which without this induced

same affection which when more violent or con- looseness might prove considerable and fearful.

firmed will arrest secretion, causes constipation and becomes positive enteritis. In many cases a mere superabundance of bile will be productive

Where much pain is attendant upon diarrhoea, the opiate confection, as just advised under the head of cholera, will often effect a good deal of bene-

of the malady, and occasionally a deficiency of fit ; and it may be combined with still smaller

that secretion will be followed by looseness.

Distinctions. — When the complaint is merely looseness, and is not attended with the discharge of hard scybalous faeces mixed with blood and mucus, and exciting tenesmus, it is positively and

doses of tincture of rhubarb, than there men- tioned. The aqua calcis, taken in the dose of a few ounces with an equal part of milk, is recom- mended occasionally in protracted disorders of the bowels. When there is a tendency to

properly diarrhoea from whatever cause origi- dysenteric irritation, the simauroba bark in

nating. To the disease, in the form just men- tioned, we should apply the term dysentery.

Prognosis. — Diarrhoea if judiciously managed usually terminaUs well ; if imprudently interfered with, dysenteric and inflammatory ailment may

infusion with a small quantity of tincture of rhubarb may be administered. In the treat- ment of all kinds and forms and degrees of diarrhoea, warmth to the exlernal surface, and to the feet especially, is demanded. Opiate lini-

- *the result, and the malady may then become ments as advised under the head of cholera, or*

in long standing cases opium and antimony to the surface in the form of ointment, may be adopted. When there is reason to suspect that the villous coat of the intestines has become the seat of small ulcerations, very small doses of calomel and opium, say a quarter of a grain of each, will be useful; and with this plan may be conjoined the administration of small

doses, likewise of the copaiba balsam. Ten minims or fifteen taken two or three times a day, rubbed down with mucilage of acacia or yolk of egg.

407. Diabetes.

Symptoms. — Dryness and harshness of the skin, emaciation, weariness and indisposition to exer- tion, constipated bowel, urgent thirst,, frequently a voracious appetite, with cedematous swellings of the ancles, and febrile irritation of a hectic character, aie the usual symptoms of diabetes, beside its main characteristic, that of a large flow of urine, which is sweet to the taste, and has the odor of hay. There is also, for the most part, when the disease has been of long standing, an excoriation at the extremity of the penis. Of true diabetes (or diabetes mellitus, as it has been called to distinguish it from the complaints in which, as in the hysteric disease, there is a large flow of limpid urine), it is necessary to remark this hay-like smell in the urine, which is some- times so marked as to be discoverable in the odor of the patient's body. Dr. Latham, who has written on diabetes, mentions this particular, and in a very candid way. He tells us that a patient called upon him, for whom, after having made some enquiries, he prescribed some medi- cine, under the notion of the patient being a mere dyspeptic ; but, as he turned from him to go out of the room, this peculiar odor struck him as proceeding from the man's body ; he re- called him in consequence, renewed his investi- gations with this clue to guide him, and found the individual laboring under a confirmed dia- betes.

Causes. — A long course of diuretic medicine has been said to produce diabetes; it is for the most part, however, brought on by poor living, accompanied by spirituous liquors. It is more common in Scotland, and in the north of Ireland, where the poorer class of people live principally upon oats or potatoes, than it is with us. The water brash is likewise, as we have said, more common under these circumstances and localities, and an analogy has indeed been supposed be- tween these two diseases. Occasionally the disorder is produced by exposure to cold, or brought on by mental anxiety ; and sometimes its occurrence does not seem at all traceable to any circumstance of obvious excitation.

In respect to the proximate cause of the malady, or the actual condition of organs as its procuring cause, opinion differs. Some have supposed it to have particular reference to the lymphatic sys- tem ; others have traced it to some morbid state or action of the liver. The stomach theorists have referred it to defective digestion and as- similation : while others have looked upon it as a depraved condition in the secretory power of the kidney. There are difficulties attendant upon all these hypotheses. Certain it is that dissections of those who have died of diabetes have usually

shown the kidneys to be considerably affected ; but whether this altered structure, and probably, by consequence, altered action, is the result of the malady, or its primary circumstance and ab- solute essence, does not seem very easy to settle. Then, again, the digestive and assimilating or gans would seem to be implicated, on account oi the extreme emaciation ; but those pathologist; who maintain that the disorder is one of the kid- neys, and of the kidneys alone, remark that thr emaciation is to be accounted for by the dis charge of so much saccharine matter daily; and they urge that the stomach, the liver, the pan- creas, and the spleen, are found for the most part in a healthy state, as far as structure is concerned, while, on the other hand, the kidneys are highly disorganised, sometimes exhibiting a high measure of vascularity, at other times much enlarged, and of a paler color than natural. It should be observed that the urine of a diabetic patient is not merely different from that of a healthy individual in thus being laden with sugar, but that it is at the same time destitute of the urea and ammoniacal and earthy phosphates that are found as ingredients in healthy urine.

Prognosis. — Very unfavorable. It may indeed be doubted whether a confirmed case of diabetes, that is, one which had existed for any considerable length of time, was ever radically and perma- nently cured. We remember some remarkable cases in the Edinburgh Infirmary, which were under the care of Dr. Hope, at that time clinical professor, and two of which were dismissed as cured, and their cure deemed manifestations of the good resulting from Dr. Hollo's plan of treatment, which we are immediately to mention. These two individuals returned soon to the infirmary, there died of diabetes, and dissection proved the kidneys in a high state of disorganisation. And we are told by Dr. Uwins, in his recently pub- lished work on disorders connected with indi- gestion, that he was favored with a communica- tion some time since, from Dr. Buxton, to the following effect :— that he, Dr. B., had used the meat diet in five instances of confirmed diabetes; that he had found a rapid, a decided, and a beneficial effect in all. But that he had not known it cure in one example. ' All the patients,' he says, ' who employed this meat diet, soon be- came fatter and stronger, and made less water materially, and that of a less diabetic quality than before, and the amendment appeared most conspicuous in the worst cases ; but the disorder ultimately proved fatal in all.'

Treatment. — Diabetes, like hydrophobia, has been endeavoured to be subdued by almost all the remedial plans which ingenuity could devise, or mere empirical feeling suggest. Diaphoretics have been employed with the very natural ex- pectation of possible good, by diverting from the kidney to the surface of the body. Astrin- gents have been tried, and tonics, and chalybeates, under the notion of restoring tone to the kidneys and the

organs of assimilation. Large doses of opium have been thought of, and experimented upon, and this in some instances with decided effect of a temporary kind. The tincture of can- tharides, from the specific influence which this medicine has upon the kidnevs, has been un-

availin-ly used. Horse-exercise, daily friction of the surface, and rubbing the whole exterior of the body over with oil, under the impression that this might prevent the cutaneous absorbent from taking in moisture from the atmosphere. Large blood-lettings, in order to abate the conjectured inflammation of a chronic kind going on in the kidneys ; the warm balsams, more especially the copaiba, from the known effect that these sub- stances have upon the urinary organs; and, lastly, a complete abstinence from all vegetable diet and spirituous liquor, and putting the pa- tient entirely and exclusively upon meat as food, and at the same time giving hepatised ammonia, or carbonate of ammonia as medicine, have all been tried, and almost all of them with immediate and temporary, but not, we fear, with radical and permanent, benefit.

'We are informed, however, by Dr. Ferrier, that he has actually cured three confirmed cases of diabetes by a combination of cinchona, uva ursi and opium, taken three times a day, in the pro- portion of a scruple of each of the former to half a grain of the latter ; and that, from the great suc- cess he had met with from this medicine, he found it unnecessary to try Dr. Hollo's plan. The doses were taken with lime water, which was also directed for the patient's common drink ;' and which probably might have had a very considerable share in effecting the re- covery.

Dr. Hollo's plan, beside enjoining a thorough abstinence from vegetables, was that of adminis- tering hepatised ammonia in doses of three or four drops, gradually increased to the production of giddiness, or pills containing about four grains of the subcarbonate of ammonia, to be given about twelve in the day ; the skin is to be at the same time anointed with prepared lard ; at night antimonial wine, with opium, is to be given ; an ulceration of about the size of half-a-crown to be formed over the region of each kidney, and the bowels to be kept free by aloes and soap.

[Note. — We might here mention several other changes which the urine undergoes in its chemi- cal composition and essential characters, particu- larly in reference to its proportionate quantity of urea: but as this subject is at present undergo- ing minute investigation by the labors of animal chemists, more especially by Dr. Prout, we have thought it better to defer

the more particular no- tice and discussion of these points, till we come to speak more specifically and particularly of the composition of urine, in the article PHYSIOLOGY. Its chemical analysis is also examined under the head of Urine, in the article CHEMISTRY. 408. Hysteria. Hysteric disease. Symptoms. — The definition is very accurate in respect of the main symptoms, but hysteria brings in its train such a numerous assemblage of symptoms, that to describe them would be to KO almost the whole round of sympathetic, or, as they have been termed, simulative or mimositic maladies. The suffocative feel noticed in the description is often accompanied by a hurried or oppressed respiration, by distressing flatulence, and sometimes a feeling as if, could the pent-up wind be removed or expelled, every thing would go on well— the fear of death is remarkablv cha-

racteristic of the hysteric disorder in its height of manifestation, and the patient does often for a time lose consciousness, and to bystanders the appearance of life. On the day previous to penning this account, we have seen an hysteric patient, who had just recovered from one of these fits of syncope, and who described his sen- sations (for in this case the patient is a male) as highly distressing, and scarcely bearable during the progress of recovery. Shedding tears is remarkably characteristic of hysteria, and often gives much temporary relief to the sufferer.

Causet. — Nervous mobility is the predisposing cause of hysteria ; and it is excited by all causes of irregularity, such as irritation from undigested food or from worms; alternations of tempera- ture ; crowded heated rooms ; late hours ; men- tal agitation ; a diet either immoderately full, or too abstemious : some indeed talk of it as they do of every thing else as the result of irritation in the digestive organs exclusively; but we often see persons the subjects of the affection who are exceedingly regular in respect of diet, never ex- perience any inconvenience from their meals, and are altogether without any manifestation of digestive disturbance. That the cerebral and sympathetic nerves are affected is obvious enough, but then it is not the stomach or its ap- pendages that in these cases are implicated, except in a secondary and incidental manner. The ancients used to imagine the seat of the dis- order to be the womb, and the globus hystericus, or suffocating ball, or sensation as if of a ball rising up in the throat, or more properly speak- ing the wind-pipe, was supposed to be an actual something rising from the womb — hence the name hysteria; but this idea is of course in the present day abandoned, although the disor- der itself has very often a most manifest con- nexion, sometimes primary and sometimes in a secondary incidental way, with uterine con ditions.

Prognosis. — For the most part favorable, un less when it depends upon some organic affec- tion, as an inflamed or otherwise disordered brain ;

and, even then, it is not from the hyste- ria, however violent, that danger is to be appre- hended, but from those affections which may have produced it.

Distinctions. — Epilepsy and hysteria are nearly allied ; but the latter, even in its most violent forms, is without the foaming at the mouth and horrible-convulsions characteristic of the former, while an epileptic has not that feeling of suffo- cation, or globus hystericus, which the hysteric subject has. Hysteria too is usually a disorder of females, though not as we have just said invariably.

Treatment. — Ascertain whether the disorder is sympathetic upon stomach or bowel, or uterine irritation, and if so, give purgatives and anthel-mentics. If there be much plethoric fulness, and especially if the mobility of the system seem to have connexion, with fulness about the blood-vessels of the head, bleed from the arm, or apply leeches to the temples, or behind the ears. If a foul stomach is suspected, an emetic may be administered. In cases of costiveness, Dr. Thomas tells us that he has seen very speedy

and effectual relief obtained by administering the i'jllowing enema : —

R Ol. terebinth, f. 3iij. Mucilag. acac. f. 3fi-

Misceantur bene simul in mortario et adde decocti avense, f. Jxi. Fiat enema.

Take of oil of turpentine three fluid drachms, mucilage of acacia half an ounce. Mix them well together in a mortar, and add thin gruel eleven ounces, for a clyster.

Antispasmodics may be sjiven by the mouth, as soon as the patient is found capable of swallow- ing, but perhaps there is not so much to be expect- ed from this class of medicinalsas some imagine. One of the most useful medicinals of the nervous class appears to us to be valerian, which may be administered in the form of the ammoniated tincture, a tea-spoonful two or three times a day, or given as an infusion, in the proportion of half an ounce of the root to a pint of boiling water, and a wine glassful of this infusion taken two or three times a day.

When dyspeptic symptoms are present, espe- cially should there be an accompanying acidity, the combination of magnesia and ammonia, as mentioned under gout, may prove of great service.

When it has been ascertained that merely morbid sensibility, and consequent mobility of the nervous system, is in fault, the metallic tonics may be administered ; and one of the best is the nitras argenti, which may be commenced iu doses of half a grain two or three times a day, and carried up to the extent of two or three grains. The oxides and sulphate of zinc, and the ammoniated copper, or ammoniated iron, may also be administered with the same view of lessening the sensibility and mobility of the nerves.

We have all along spoken of those symptoms that are common to the hysteric form of disease as simulative of formidable affection, rather than in themselves formidable ; they are in common language nervous ; and, although as real to the sufferer as those attendant upon organic disorder, are nevertheless essentially different, and require to be recognised as such by the practitioner. In a work recently published on nervous and di- gestive derangements, one section is devoted to the prominent marks of distinction between those affections which have most to do with the nerves, and those which rather implicate other parts of the frame, and we cannot have a better opportu- nity than the one now afforded us, of incorpor- ating the section of the work alluded to in this article.

The maladies, says the author from whom we extract, which have been the subject of disquisi- tion in the preceding pages are those, for the most part, of the sympathetic kind, as opposed to actual or structural disorders ; and it may not be improper to add a cursory remark or two to thoae which have already been made respecting the particular features of distinction traceable between affections which are thus rather nervous than organic, or which are disorders of action rather than disorders of structure.

One of the most prominent circumstances of

distinction between the one and the other may be taken from the pulse; for, in the fugacious and simulative affection, you will not find the arterial beats of that uniform and steady quickness which is characteristic of topical disturbance influencing the general frame. It is curious, indeed, to ob- serve how the pulse of a nervous patient shall vary with varying circumstances. I have just seen a lady in the Kent Road, about whom there was some little reason for hesitation as to the extent to which the liver might have become implicated in the general derangement that was pervading the system: 1 felt her pulse, and found it, at my first coming into the room, quick and irritable; but, as it wanted that peculiar hardness or wiriness of character that marks topical' in- flammation, I hoped that, when the patient should become a little familiarised to the formidable appearance of two medical men standing by her bed-side, the temporary ruffle of the circulation would subside ; and the event proved me to be right

in my anticipations. I left the person in question with a pulse beating fifteen strokes in a minute less than when I first felt them ; and I left her with a feeling, in a great measure founded upon the particular referred to, that although there was some measure of liver disease, it was not so formidable and extensive as I should have inferred it to be had the pulsations continued, from the first to the last, of a uniform celerity.

It is a curious fact that, when an actual affection of an organ takes place, the individual who is the subject of it often becomes les» ner- vous, as it is called, or timid and apprehensive, than he was before ; and the quickness of the pulse, which forms one of the characteristics of the new disorder, is not by any means regulated, as it was before, by the feelings and fears of the affected ; and in this case there will be none of that momentary hurry and eventual calmness that, in the way just intimated, marks the mimo- sitic as opposed to the real disorder. The term, by the way, real disorder, it is hardly proper to employ; for the malady is as actually existent in one case as it is in the other ; and that physi- cian knows very little of the laws which regulate the sentient organisation, who shall consider an ailment a matter of fancy, because it has no tan- gible essence or structural character.

With celerity there is, for the most part, a hardness of pulse when the blood-vessels are more engaged than the nerves, or when the general irritation is an index of some local dis- turbance of an inflammatory or irritative nature. This change in the pulsations, from a healthy condition, is indeed scarcely recognised by some physicians ; and the late Dr. Heberden used to avow his carelessness about pulse beyond the mere number of its beats. ‘ If your patient,’ says the author just named, ‘ has a pulse which regularly beats more than 100 in a minute, I should infer, that the affection of which he is the subject is somewhat dangerous ; but I cannot go along with some individuals who talk of this and of that kind of pulsation as indicating the kind and measure of disorder.’

*Others, again, profess an almost total disre- < *ard of number, and confine their observations*

and deduce their inferences, from mode almost alone. My own opinion on this head is inter- mediate ; and although I consider the kind of pulsation an important point of recognition, and although I can find topical and inflammatory affection attended with hardness as well as cele- rity, and the more symptomatic and fugacious disorder without this same wiry character

; yet 1 must confess that I cannot follow some of my professional brethren in all their apparent nicety of observation. In this respect, however, there is confessedly a good deal of difference as to tact. The late Dr. Gregory, of Edinburgh, used, I recollect, to say in his lectures, that he could sel- dom detect the fluctuation of dropsy which was so evident to others who might be in attendance with him ; and we must, therefore, ascribe the difference of sentiment with regard to pulse, in a great measure, to the varied power of the indi- vidual of perceiving the varieties. At the same time, some may probably affect to have, or cheat themselves into the supposition of having, more delicacy of perception than is positively the case, — just as some would profess to feel, or fancy they felt, more pleasure in musical sounds than they actually do, merely because the want of the pleasure might be thought to imply a general deficiency of sentiment or taste.

The state of the spirits is another circum- stance which will materially assist the decision, when assistance is wanted to judge between functional and organic disturbance. Those who have much fear about them have, for the most part, less cause for fear ; and, when individuals tell you that they feel a presentiment that they shall die of disease in the lungs or the heart, you may generally conclude that their gastrony- mic system of nerves requires more correction than the condition of the organ about which their apprehensions are so much upon the alert. I have already, indeed, intimated, that, with the coming on of organic malady, a firmness and fearlessness of mind very frequently accompanies it. The late Dr. Reid, in his essays on nervous affections, tells of ‘ a lady who had, for a long time, been a miserable victim to the vapors, but who was completely cured of this complaint by the supervening of another which was more im- mediately alarming, and which precluded, in- deed, the possibility of much longer life. No sooner,’ continues the narrator, ‘ was the new disease ascertained to be an aneurism of the aorta, and the necessary result of that complaint was explained to her, than all her nervous feelings vanished, and she even bore the an- nouncement of her inevitable fate with calmness. Ilypochondriasis,’ he adds, « may often thank calamity for its cure.’

The countenance, in general, of a person laboring under organic disorder, is very different from one whose complaint is merely simulative or sympathetic; and the difference, like that of the pulse and the spirits, principally consists of the greater permanency and steadiness, as it were, of alteration from the physiognomy of health in the one case than in the other. There is, in the subject of organic disease, a continued sharpness and fixedness of feature which is very observable, and which the merely nervous patient

is without ; and when the stomach, but more especially the liver, happens to be the residence of the organic disorder, this fixed cast of counte- nance

is accompanied by a peculiar anxiety of expression, or rather perhaps, I should say, of despondent indication. The term anxiety should rather apply to the physiognomy of a person with merely sympathetic malady ; but then it is changed with the changing feelings that pass through his mind. I think it likely enough thaf an observant spectator would have perceived i marked change in the marked countenance of th late ruler of France, from the time that the gene- ral perturbation, of which he was the subject, resolved itself into a fixed point, and he became the subject of a topical and organic complaint.*

It should be remarked that, when dyspeptic conditions are the occasion of the disorder, the precise nature of which we are desirous to learn, there is often a muddiness or dirtiness, as it were, of the skin, owing to the secretions of the surface being in sympathetic connexion with what is going on in the interior. Dr. Saunders, I think, in his treatise on liver complaints, speaks of this condition of the surface as peculiar to the dyspeptic or hypochondriac, who feels as if his skin constantly required washing ; but this is a very different condition of the surface from that which is the indication of organic malady, accompanied by the sharpness and fixedness of feature just alluded to.

Emaciation, for the most part, accompanies organic malady, more especially if the organ affected be connected at all with the assimilating process ; but, even in pulmonary affection, you find the patient sensibly losing his flesh and strength, while he himself is less sensible of the change than the hypochondriac sufferer, who feels himself rapidly wearing away, and is sur- prised that the change is not so observable to by-standers as he should suppose it would be.

When perspirations accompany fixed and organic disorder, they are more regular in their recurrence ; they assume more of the hectic shape ; they break out in the morning, and are, for the most part, rather confined to the upper part of the body ; they are of a colliquative cast, as it is called ; that is, they seem as if the frame were melting away under them, while the per- spirations of the sympathetic complainant, al- though often profuse, are not so steady with respect to time, not so certain as to the part of the body upon which they break out, nor of so melting or dissolving a character. This distinc- tion, indeed, more strictly applies to pulmonary affection ; but it may be extended, with some qualification, to many others.

The pains of organic and sympathetic disease are remarkably different ; and the difference relates partly to the locality of the affection, and partly to the state of nervous susceptibility of the patient. When the substance of an organ is implicated, and is wearing away under the malign influence of structural malady, the indi- vidual shall, at times, be scarcely conscious of

pain at all, while the pain produced by nervous susceptibility, being called into actual conscious- ness, will prove, though perhaps transient, while it does last, comparatively severe.

MEDICINE.

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The shivers, or rather rigors, which accom- pany disease, are very different in their aspect and character, as they shall be the indices of nervous or inflammatory affection. In the former case they will be fugacious and uncertain ; in the latter fixed and regular.

Flatulent feelings and expulsions of wind are remarkably characteristic of nervous or sympa- thetic disorder; of the inflammatory or organic they are much less so. We may not, perhaps, subscribe to the medical axiom, ubi flatus nulla inflammatio ; but, for the most part, where there is much of flatus, there is little of formidable disease.

When the seat of the disorder may be such as that you can make pressure on it with your hand, you will often find merely spasmodic or nervous ailment mitigated by the pressure ; while if inflammation be going on, however slow and insidious, the patient's countenance, though he may not wish to acknowledge it, indicates that you occasion pain by the pressure. This is espe cially observable when our investigations are directed to the existence or not of liver affection, for here we press upon substance uninterfered with by bony parietes. In the case of chest affection, we must be guided by general distinc- tions, occasionally assisted by the ear, the ear itself being assisted by the stethoscopical instru- ment lately invented by our ingenious neigh- bours, the French, and brought into considerable use in this country. Although a little over forty I hope I am still young enough to listen to any suggestions by which a promise is made of for- warding the progress of medical science; and I do not feel inclined to deny, that the naked ear may be thus occasionally assisted by this artificial method of concentrating and conveying sound : but after all the ear is of much less use to us in medical investigation than the eye and the touch ; and I am inclined to think that some of the boasted stethoscopical discoveries are like the salt on the bird's tail, — not made, till you have pretty well made them out by other means.

In a word, the sympathetic, or nervous, or mimositic patient, is always ready with his com- plaints : he will tell you of feelings about his eyes, of ringing in his ears, of pain in all parts of the head ; and from the head he will traverse, with his bewailings, the whole topography of his body down, literarily ad calcem ; he will call his physician back, after having detained

him some half hour or longer, to add to his catalogue of miserable items, or to ask ‘ what he shall eat, or what he shall drink, or wherewithal he shall be clothed ;’ while, on the contrary, you are often obliged to force from the other individual what you do get in the way of information, and he is quite as glad as is the medical attendant when the time of the visit is over.

Hydrophobia. Canine madness; dread of water.

Symptoms. — A dread of water is perhaps rather erroneously considered as a characteristic of this dreadful malady ; for there is no other fear of it than that which arises from the patient’s finding himself incapable of swallowing it, without producing most distressing convul- sions about the pharynx ; the mere sight indeed, or even the hearing of water dropped, will

occasionally bring on this horror and dread ; but then it is produced almost involuntarily and ne- cessarily from the recollection of previous suf- fering. The commencement of the disease is attended with extreme anxiety and general timidity, accompanied by a sense of suffocation, by intolerance of light and sound, by a secretion sometimes of saliva from the mouth, and by a remarkable susceptibility to the slightest motion or agitation of the surrounding air. Epilepsy and very violent hysteria are the diseases which more resemble hydrophobia than any thing else; it is not long since that we witnessed an extreme case of the latter disease which so much simu- lated hydrophobia, as to lead to the suspicion that the subject had been bitten by a rabid animal. It was in the last mentioned particular that the. resemblance was so near, that, namely, of extraordinary agitation produced by the slightest agitation of the air about the patient. Towards the close of hydrophobia more frightful manifes- tations are presented, and the subject of it often dies within twenty-four or forty-eight hours from the attack.

Causes. — It should appear that the disease may arise spontaneously in the animal that imparts the disease, and it is mostly confined to the dog and the cat ; but that, for its production in the human species, the matter must be re- ceived by the rabid animal, and must enter the blood-vessels ; so that if some of the saliva should accidentally get on the skin, without pe- netrating it, there is nothing to oe feared. It may be remarked that a degree of the disorder may be produced by a highly irritated dog or cat which is still not irritated into actual mad- ness ; and the apprehensions of the bitten would be calculated to establish the simulated malady; but although the symptoms in these cases might for a time resemble real hydrophobia, (and the imagination itself will work up this condition,) yet the termination in the one and the other case would soon prove the difference. With respect to the time which the virus may be latent in the system without coming into actual operation nothing certain has been ascertained. Thus much is certain

that weeks and months have elapsed between the infliction of the injury and the production of the disorder.

In regard to the proximate cause of the ma- lady, it has in this case, as well as in tetanus and other violent affections of the nervous frame, been endeavoured to be proved that some spinal, or tracheal, or cerebral inflammation, has been the immediate result of the poison's influence, and that the external showings of the distemper have depended upon these local inflammations ; but the extreme irregularity in morbid appear- ances after death are seemingly inconsistent with these theories; and it is perhaps more correct to infer that the primary action of the virus is rather upon the nervous organisation, and that these congested and inflammatory con ditions are consequences rather than causes of'the general perturbation.

Prognosis.— In the highest degree unfavorable : indeed it is doubtful whether any real case of hy- drophobia has ever yielded to any medicinal trials. We have conversed with a medical prac-

titioner of respectability in Hertfordshire, who affirms that he once saw the actual symptoms of hydrophobia arrested by the employment of a auack medicine which has gained celebrity m that part of the country, and which is supposed to be constituted of very large doses of meadow saffron ; but even in the face of such evidence we cannot help being sceptical when we hear all around us of the constant failure of all trials.

Treatment. — Of this then of course nothing need be said, excepting that excision of the bitten part ought to be had recourse to as soon as pos- sible, and during the absence of a person who should be equal to this incision, a tight ligature ought immediately to be made round the limb be- tween the bitten part and the brain ; for it seems that this may for a time be preventive of1 the re- ception of the poison into the system.

On the subject of incision and prevention, we may be permitted to extract the following remarks from Dr. Thomas.

As in rabies, when once manifested" in the system, the power of medicine and all human skill have failed in most instances, our views should be early directed to prevent the accession of the disease ; and for this purpose the most effectual is excision of the wounded part, with free ablutions and scarifications. Immediately, therefore, on the infliction of the bite, or as soon afterwards as possible, ablution with water and soap should be had recourse to, and be continued until professional aid is procured. On the

arrival of the surgeon, a free and complete excision of the bitten part is to be made, taking care to carry the knife to a sufficient depth, so as to ensure its complete removal. The excised parti being re- moved, ought carefully to be examinea to see if there is any place in the piece through which the dog's teeth appear to have passed ; and^ in case there is, the excision ought to be carried still deeper than before. Should the knife, on a close examination, appear to have entered the wound made by the dog's teeth, it may be adviseable to recommence the operation with a clean knife, lest the other should be contaminated by its having entered the wounded parts, and by which the sound ones might become inoculated with the canine virus.

The sooner that the wounded part is extirpated after the accident the better ; but it will be right to do it even at the distance of several days, rather than that the person should be debarred of the chance which excision affords, as there is great reason to presume that the canine poison does not enter the system so quickly as a variety of others are perceived to do. This conclusion we are somewhat authorised to draw, as in several well-attested cases, many weeks, nay months, have intervened between the accident of being bitten, and the appearance of the disease. If the bite be of long standing, and the wound con- sequently cicatrised, and there be a certainty that the animal by which it was inflicted was really rabid, it should immediately be laid open, cauterised, and caused to suppurate.

Dr. Darwin observes, thnt if the patient is bitten in a purt which could be totally cut away, ns a finger, even after the hydrophobia appears, it is probable it might cure it, as he suspects the

cause still remains in the wounded tendon, and not in a diffused infection tainting the blcod. Hence there are generally uneasy sensations in the old crcatrix before the hydrophobic symptoms commence.

Even in cases where assistance has not betn requested until the consequent disease has already appeared, I am of opinion that the wounded parts should be excised : for if the excision of the part, in which the virus of small-pox, syphi- lis, or any similar disease is deposited, after the local action has evidently commenced, prevents absorption, and consequently the complete for- mation of the general disease; what reason is there for supposing that the same effect would not result from this operation, at the same period, in the case of the bite of a rabid animal, if the poison enters the system by the absorbents.

After excision, ablution isagain to be performed with a solution of volatile alkali in water, and, when the flow of blood begins to cease, suction with the cupping-glass may be resorted to. The alternate employment of ablution and the ex- hausted receiver may be continued for some hours. Having

proceeded thus far, caustic, such as the argenti nitras, or potassa fusa, may be ap- plied to the wound, so as to produce a slough in the first instance, and afterwards a purulent dis- charge for some weeks. By this mode of treat- ment many persons have been known to escape the disease; while others who have been bitten by the same animal, and who neglected these means, have become affected.

It sometimes happens that the wounded or bitten part is so situated as not to admit of ex- cision, or from the timidity of the patient he cannot be persuaded to submit to the operation. Under this dilemma we must be content to have recourse to a careful and persevering ablution, and afterwards to scarification and cupping, bathing the parts with warm water to promote a free flow of blood, in order to assist in washing away any remaining particle of the poison. With respect to the fluid to be employed at first in the ablution, a weak solution of volatile alkali, in the proportion of one part of the alkali to four of water, may be as proper as any we can use. With this solution, which is fully capable of dissolving the saliva, the wounded part should be freely washed, and injections with a syringe forcibly be made into the wound. After this, water may be substituted to assist'in washing away any remain- ing particles of the canine poison. Having washed the wound for a considerable time, it may be touched with caustic, the argenti nitras, or the potassa fusa. Ligatures above and below the wounded part have been recommended during the ablutions by Dr. Percival, when they can be put on.

The bitten part must be destroyed to the bot- tom, by repeated applications of the caustic. To assuage the inflammation caused thereby, the wound is to be dressed for some time with poul- tices, and afterwards with acrid dressings and hot digestives, to remove the eschar, create a dis- charge, and drain the injured parts. Where there has been any delay after the accident, the wound should thus be kept open for two or three weeks, or even longer.

From some experiments made by Dr. Linke of Jena, with the saliva taken from a mad dog after it was dead, and that had bitten other animals with a fatal effect, the external application of a strong solution of white arsenic in water, to wounds besmeared with the poison, appears to have been attended with the happy effect of destroying the vims, and of preventing the disease from taking place. The remedy seems therefore worthy of further trials in wounds made by rabid animals.

Under the head of animal poisons it is men- tioned that the external

application, as well as the internal exhibition of the liquor ammonia-, was found on many trials entirely to do away the in- jurious consequences arising from the bite of the cohra de capello, a snake of the most venomous kind, and productive of symptoms pretty similar to those arising from a rabid animal. The same remedy would, therefore, seem worthy of a trial in cases of hydrophobia; but as there would be great difficulty in administering caustic volatile alkali in a state necessarily diluted with some mild bland liquor, where the increased sensibility of the fauces and the dread of liquids are so strongly felt, we might convey it into the sto- mach in the manner practised by Mr. John Hun- ter, and hereinafter mentioned, or we might mix the volatile alkali with crumbs of bread, and form the mass into pills, or a bolus. (Stomach pump.)

*In addition to these modes of prevention, it has strongly been recommended to commence, very speedily, a course of mercurial unction, which is to be continued regularly, and to be ap- plied in a considerable quantity at once, so as to occasion some degree of salivation ; *o expedite which the submuriate of mercury may be given internally night and morning, and warm-bathing be used occasionally. Mercurial fumigations may also assist.*

With the design of exciting a rapid salivation, in hydrophobia, Dr. Darwin has suggested that one grain and a half of the hydrargyri oxymurias dissolved in half an ounce of rectified spirit may be given frequently to the patient with a prospect of advantage. From a paper by Mr. Aldington of West Bromwich, inserted in the Contributions of Medical Knowledge published by Dr. Bed<- does, it appears that a similar mode is adopted by him for the cure of gonorrhoea virulenta, and that he has cured hundreds in a very short time in this manner, without the least disagreeable consequence. He directs us to proceed as follows : three grains of hydrargyri oxymurias are to be dissolved in one ounce of rectified spirit. Half of this mixture is to be taken undiluted at going to bed ; it produces a copious salivation for an hour and a half, or longer, during which the patient spits about a quart. Some aperient salts are to be taken on the second day after this operation, and on the evening of that day he is to repeat the draught, and the salts on the day but one following.

Dr. Thomas Reid, in a pamphlet which bears the title of Observations on the Application of warm and cold Sea-bathing, recites a case which strongly attests the preventive effects of mercury. He makes mention that a man, a woman, and several dogs, were bitten by a supposed mad dog, who was soon after destroyed. A fortnight after

the accident, he saw them; the woman was slightly wounded in the little finger, a black scab remained on the puncture : she had great pain in the arm, shooting up to her head, particularly in the night, with disturbed and

frightful dreams, and great depression of spirits. The man had been bitten in the hand also, but had not so much pain. He directed mercury for them in the manner published by Dr. James. In a few days the symptoms abated ; and, as the woman's mouth was sore, she desisted from using it. The pain, however, returned very soon, greatly aug- mented and affected her head ; she resumed the medicine, and every symptom vanished ; they both remained perfectly well. Had any return of the disease taken place, he is certain he should have been informed of it.

Dr. Reid further mentions, that the same me- dicine was given to dogs ; but by some accident one of them was forgotten, and took none ; he became raving mad the thirtieth day, and in thai state he had him shot; all the other dogs re- mained well, except a small lap-dog, which died of the salivation. Neither the man nor woman supposed the dog to have been mad, until they began to take the medicine; the mind had there- fore no influence in producing the symptoms that ensued.

These facts seem well authenticated, and strongly attest the good effects of mercury, when used at an early period. During the actual pre- sence of the disease, its inutility has been proved in numberless instances. Dr. Mosely has, in- deed, recorded a case of recent hydrophobia, and timely discovered, which was successfully treated by exciting a rapid and plentiful salivation by means of an ounce of strong mercurial ointment rubbed into different parts of the body at four frictions within forty-eight hours.

Dr. Richard Pearson, of Birmingham, in his Treatise on Hydrophobia, offers it as his opinion, that if the disease has ever been cured by mer- cury, it has been in consequence of a counter- impression communicated to the whole system, and not in consequence of the salivation ; for a salivation is a constant symptom of the disease, so that if it were curable by a flow of spittle, it would cure itself. This seems, however, a yague mode of reasoning.

410. Insanity. — We now proceed to treat of that order of maladies which Dr. Cullen consi- ders mental or vesanic, in contradistinction to those which are ˆmerely nervous. The qualifi- cation with which this peculiarity of disorder is to be admitted will be commented on as we proceed ; meantime we announce our intention of treating madness in a manner somewhat dif- ferent from that which we have adopted in refer- ence to other affections ; and we shall conclude the genera amentia, melancholia, and mania, un- der one division. Oneriodynia will afterwards fall to be noticed separately.

In endeavouring to define insanity, we meet with difficulties which are peculiar to itself, since there is a want of an entire coincidence in sentiment

respecting Hie precise standard of men- tal health ; and, until such standard be agreed on- by universal consent, the deviations from it cannot of course be easily pointed out with that

decision and accuracy whicn correct definitions demand.

By one writer, ‘ an erroneous judgment and irrational conduct,’ have been described as the essentials of insanity. In this definition, how- ever, it is immediately seen that a fixed point of rationality and rectitude is assumed, which we hare just stated does not exist in the common consent of mankind.

The same objection lies against that announce- ment of mental alienation which makes it con- sist in the want of correspondence between the estimate and real value of things.’ « If every one,’ says Dr. Darwin, ‘ who possesses mistaken ideas or puts false estimates on things, were liable to confinement, I know not who of my readers might not tremble at the sight of a mad- house.’ Even the objector, however, to the above definition admits too much. As there is no standard of rationality in the sense the above definition assumes ; so, in strictness of language, tbere is no admissible difference between false and true with respect to our ‘ estimate of the value of things.’

The miser locked in his solitary closet, and lost in the contemplation of his golden stores, is regarded as insane by the youthful voluptuary, who has no other notion of the value either of specie or paper but as they furnish him with the means of sensual gratification ; with the latter, however, the former is equally in his senses, pro- vided he act, as indeed he necessarily does, in conformity with his inclinations, or, in the words of the definition upon which we are comment- ing, ‘ his estimate of the value of things.’

Neither will Darwin’s own definition bear the test of rigid scrutiny. ‘ Madness,’ says this au- thor, ‘ is an excess of action in the sensorial power of volition.’ In this account we must necessa- rily include the late emperor of France. Where is the man whose volitions were more in excess, during the zenith of his power and splendor, than Napoleon Buonaparte ? Yet, however de- sirable to Englishmen it might always have ap- peared that this extraordinary individual should as soon as possible be put out of harm’s way, we suiely never could have desired his confine- ment on the score of his being a maniac.

Again, it is not the volition, but the influences operating upon the mind to

engender the voli- tion, which form the criterion of the healthy or deranged condition of the understanding. 'Mad- ness/ says a modern author, with equal force and propriety, ' is not a disease of action, but a disease of motives to action.'

In that very entertaining section of the Zoono- mia which is devoted to the subject of mental hallucination, we find it stated that a gentleman ordered his servants to be all stripped before him in order to examine them. In consequence of this procedure he was confined as a maniac ; and, after much persuasion, he was prevailed upon to tell the medical attendant that he had got the itch, and that he had determined to examine all his domestics separately and minutely in order to ascertain from which of them lie had con- tracted it. At the time, however, of this trans- action, there was not a spot to be seen on the individual's hands, or on other parts.

Now in this case the hallucination consisted not in the volition to satisfy the particular con- ceit, but in the conceit itself ; it was a derange- ment rather of sensation than volition, or, more strictly speaking, the complaint was constituted by strength of passion, rendering the ideas of conception more prominent than those of per- ception ; and, by consequence, producing a vo- lition which, although wild and incongruous in reference to former feelings ar.d associations, was in conformity and consistency with such as at the time prevailed. In like manner, if con- ceiving, or in other words believing, myself to be too bulky to pass through a door-way, like the late Dr. Watts, I will, or order, its dimensions to be increased, neither are my volitions inordinate nor my reasonings incorrect ; nor are they so, if, like the mad philosopher inRasselas, actuated by the consciousness of possessing power over the elements, I will and command the thunder to roll, the lightning to flash, and the rain to fall. ' He does not,' says a modern author, ' reason falsely, but more properly furiously deceives himself ; who, fancying himself to be Jove, hurls Jove's thunderbolts, — Non male ratiocinatur, sed potius furens decipitur, qui Jovem se credens Jovis fulmina jaceret.

Dr. Mead makes madness to consist in ' in- creased strength of imagination.' But by this enunciation the poet, or the man of inventive genius, is classed with the insane, and Shakspeare and Milton are made to stand highest in the list of maniacs. ' The strength or increase of any power of the mind,' says Haslam, ' cannot con- stitute a disease of it. Strength of memory has never been suspected to produce derangement of intellect, neither is it conceived that great vigor of judgment can operate in any such manner. On the contrary, it will readily be granted, that imbecility of memory must create confusion, by obstructing the action of other powers of the mind ; and that, if the judgment be impaired, a man must necessarily speak and generally act in a very incorrect and ridiculous manner.'

Dr. Arnold, who has written very largely on the topic now under discussion, divides insanity into ideal and notional : the first he defines that state of mind in which a person imagines he sees, hears, or otherwise converses with, or per- ceives persons or things, which either have no external existence to his senses at the time, or have no such external existence as they are then conceived to have, or, if he perceives external objeqts as they really exist, has yet absurd and erroneous ideas of his own form, and other sen- sible qualities.

Notional insanity, he says, is that state of mind in which a person, hears, sees, or otherwise per- ceives, external objects as they really exist, as objects of sense, yet conceives such notions of the powers, properties, designs, state, destina- tion, importance, manner of existence, and the like, of things and persons, of himself and others, as appear obviously and grossly erroneous cr un- reasonable to the common sense of the sober and judicious part of mankind.

With respect to the first of these distinctive delineations of the constituents of insanity, it may be observed that the definer, although nearer

correctness, perhaps, than some others, seems to suppose that false perception implies an absolute and abstract difference in the object perceived ; and as to the second division it is obviously in some sort objectionable, upon the same principle upon which we have ventured to object to some other definitions, namely, that it assumes a test of notional rectitude, which neither does nor can exist. How absurd do the notions which the

whelm, the usual order of perceptive ideas ; the spectator would now be carried above the reach of reason or of truth, he would actually, as a modern writer expresses it, see Alexander and Caesar before him in the persons of his old fa- miliars, a room illuminated with candles now comes to him to be the plains of Pharsalia, or he believes that his walk to the theatre has been a voyage to Egypt, and that he lives in the days of

miser entertains of the nature and value of Antony and Cleopatra.

money, appear to the majority of mankind ! and

Allowing then the correctness of this assump- tion, respecting the essentials of insanity, we might say in other words that it is delusion more transient, or more permanent, more partial, or more general ; the imagination having

over- whelmed the perceptions, and the understanding having fallen prostrate under the violence of the conflict.

Vividness of imagination, then, although in itself a condition of mind very far different from madness, may come at length to be productive of positive insanity, and hence we find that the principal sources of mental derangement are those influences which, so to say, seize upon and hurry away the conception, leaving at a distance, and in a debilitated, confused state, the remaining fa- culties and functions of the mind.

But it may be said that there are many in- stances of mad actions, which seem to be the result rather of ungovernable impulse, than of false conception. There is a sort of insanity, it will be urged, in which the subject of it commits actions, and expresses feelings, which he at the time knows to be immoral and irrational. Now here appears to be the stand which it behoves both the moral island the metaphysician to make against the admission of that laxity of sentiment which goes to the destruction, not only of the land-marks of distinction between sanity and madness, but of every principle of right and wrong. ‘ I am aware that such an action is not consistent with the dictates of virtue, but still I am goaded on to its commission, by an absolute necessity or irresistible impulse,’ is a plea that might be instituted for every sin against con- science or better feeling, and might stand as a le- gitimate apology for the most flagitious crimes whether public or private, selfish or social, po- litical or moral. And, indeed, something like this defence has been set up in favor of actions which in one view of the case are acts of crimi- nality, in another deeds of madness. Dr. Dar- win gives us the following recital as an instance

of insanity. Mr. a gentleman of polished

manners, who in a few months after destroyed himself, said to me one day, ‘ a ride out in the morning, and a warm parlour, and a pack of cards in the afternoon, are all that life affords,’ and, as he was weary even of these enjoyments, he had determined to put an end to his exist- ence. He was persuaded, says Dr. D., to have an issue on the top of the head, as he complained of a dull head-ache, which, being unskilfully ma- naged, destroyed the pericranium to the size of an inch in diameter ; during the time this took in

Suppose, however, that the vivid- healing, he was indignant about it and endured should hurry the life, but soon afterwards shot himself. Now if

yet we cannot with any propriety attach the im- plication of madness to either the notions them- selves or the resulting conduct. Indeed the ad absurdum extreme of Dr. Arnold’s position, respecting difference of opinion

as constituting insanity, would make the much talked of remark of the Bedlamite to be as sensible an assumption, as ever was put into language ; who, upon being questioned as to the why and wherefore of his confinement, replied, ‘ The reason, Sir, is this ; I conceive the whole world to be mad — the world, returning the compliment, supposes me to be in the same predicament, and, the many being more powerful than one, here they have locked me up.’

In what then, to return to our query respecting definition, in what does insanity consist ? In our remarks on one of Dr. Darwin’s examples of mental hallucination we have stated that strength of sensation or passion, rendering the ideas of conception more forcible than those of percep- tion, gives birth to incongruity of association, and consequent incoherence of gesture, speech, or action. Of this disordered association, then, is insanity formed ; by incoherence of conduct is it displayed ; and by the intensity of the pre- vailing sentiment or passion has it been pro- duced.

We would therefore define madness, intensity of idea causing imagination to be converted into actual belief; and it will now be our endeavour to illustrate and defend this position, as well as to point out what we conceive to be the practical importance of thus considering the line of demar- cation between mental health and disease, to be mainly, if not absolutely and entirely, made up of difference of belief or persuasion.

Suppose an individual to be present at a the- atrical representation. Let his imagination be warmed, and his passions excited by the scenes which are presented to his senses. Let him follow with ardor the fortunes, and engage with interest in the events, connected with the princi- pal personage of the drama. Still he has no be- lief in the actual existence of the fictitious character — or at least his belief, if it does exist, is merely momentary. Otherwise he would not applaud the faithfulness of representation in the

actor, but the passion which the actor feigns. Again, our individual admires the beauty and fi- delity to nature of the scenery, but he does not therefore suppose himself transported to the actual place which the scene represents. In other words his heightened conception or imagination still stops short of the pitch of overpowering his perceptions, ness of the representation

feelings and exalt the fancy to such a degree of we admit such cases as these to be cases of mad

intensity, as to break into, and in a manner over- VOL. XIV.

ness, at what point shall we cease to deplore, and

begin to condemn. Is not the distinction be- tween virtue and vice of the most unfounded and risionary nature ? and is not the implication and punishment of guilt in all instances not only cruel but absurd? Inferences like these have indeed been adduced in some recent publications of a very acute and logical cast, and they are conclusions which cannot fail of being drawn from those premises that predicate organisation as the ultimatum of every thing intellectual and moral.

But still it will be urged that many cases do often occur, and those of the most melancholy character, which both feeling and philosophy would command us to put down to the score of actual and positive irresistibility, rather than refer to a vicious and voluntary compliance with the dictates of passion. We hear often, it may be said, of most affectionate parents conceiving and actually perpetrating the murder of their offspring. The hand of the loving husband has been known to be lifted up against the wife of his bosom. The wife has sought to extinguish the life of her husband. The man marked for morality, and even distinguished for religious sentiment, sometimes plunges the dagger of de- struction into his own breast. The individual noted for delicacy of conversation and correct- ness of conduct will, under some circumstances of disease, even revel in the dreadful luxury of loose and licentious language and demeanor.

It must indeed be allowed, that the distinction between criminality and madness in these cases of impulse, apparently beyond control, is one of especial difficulty and nicety, and requires much and very minute attention to every peculiarity and bearing of the individual case; it must, moreover, be admitted, that as it relates to the individual a correct opinion is sometimes almost impossible; and feeling of course would always point to the merciful side in dubious instances ; especially as so little is in our power with respect to an accurate estimate of other interior states from external indications visible tons. In all the exam- ples of the kind of insanity now under notice, the subject of it, during the actual commission of the act, upon the degree of criminality of which we may be called upon to decide, has verily con- ceived or believed himself, for the time being, to be acting according to the necessity of things; it being in his lucid intervals only that the ma- niac feels a consciousness of the deed that he had contemplated or executed. While the hallucina- tion is actually upon him he believes that he is obeying imposed laws, or acting under the in- fluence of superior mandates. But let it be re- collected that nothing of this kind can be brought forward in favor of mere gusts of pas- sion, or even of many cases of self-destruction, which last, as in the instance just cited from Darwin, are sometimes inflicted with a delibe- rate calculation, and dreadful venture, as to pre- sent circumstances and future states ; and have, therefore, no more

legitimate title to the excuse of insanity, than has the act of the gamester, who, with a dread resolve growing out of inci- pient despair, offers his last stake, and thus vo- luntarily reduces himself to wretchedness and beggary.

We repeat, however, that it is actually neces- sary to take into account that changes take- place in the sentient part of our organisation which often are only visible in their effects, while the changes themselves are as truly physi- cal as had they been fully demonstrated ; and while we think it right, both upon moral and physical grounds, to check the extension of in- sanity into an unjustifiable lax degree, we should be erring still more on the other side in looking upon self-destruction indiscriminately as an im- moral act. On the very day that we are penning these remarks, we have seen in the daily papers a melancholy account of suicide in one of our first poets and a most virtuous man — we speak from personal knowledge — and who does not recollect with sympathy and melancholy regard, the names of Romilly, Whitbread, and Castle- reagh ?

In these cases, we say, there is evidence of bodily disorganisation, or some effect beyond the mere motive of avoidable passion ; and, we repeat, that in all cases of mental aberration, whether indicated by act or feeling, some change in the corporeal structure is properly presum- able.

The bodily disorganisation, that we presume thus to be invariably connected with mental disease, may be primary or secondary ; that is, the condition of the corporeal frame may be either such as that the common excitants shall be sufficient to occasion the derangement, or the exciting power or powers may be applied with such intensity as more positively to operate the change in question : although in this last case it may be supposed that there is, in the majority of instances, at least a preuisposition thus to be affected by extraordinary excitations.

There is one fact which would go to prove, if proofs were wanting, the bodily affection in mental disease which we now contend for : and that is the remarkable and almost instantaneous mutation which is sometimes made of more ofe- viously corporeal, for more strictly mental dis- order. Take the following affecting recital from the works of Dr. Mead, in illustration of this particular: — ‘ A young lady, about eighteen years of age, was attacked with a spitting of blood and cough, which, although active treat- ment was pursued, was soon succeeded by hectic fever, night perspirations, and every symptom indicative of a rapid, and menacing a confirmed, consumption. Death indeed stared her fright- fully in the face. The anticipation of the event struck the patient with horror in respect of fu- turity, and the consequence was a state of furious mania. In the mean time her bodily condition began to amend, the fever and sweats subsided, the spitting was arrested, and every thing pro- mised a complete recovery. From

a condition of high mental agitation she now fell into melan- choly ; and this was in the course of three months succeeded by calmness and composure of mind ; but, alas ! with the return of her rea- son, her bodily complaints likewise returned, and this fine young creature very shortly died of actual consumption of the lungs.'

Still more remarkable however is the fact, tha disorders of the body will sometimes have trv,

effect of locking up as it were, and concealing from view the mental energies for a long series of years ; and when it is asked respecting a paralysed individual where is the immortal mind which was wont to animate the features, and guide the conduct of this man, now reduced to a state of mere animal vitality, we might appeal to in- stances, and they are not a few, in which, just prior to the period of the total extinction of the living principle, the soul seems to come out from its hiding place, and to cast a parting glance at the surrounding scene. Who has not dwelt with agonising delight upon the transcendantly beau- tiful representation by Mrs. Opie, in her inimi- table work entitled the Father and Daughter, where she makes the return of reason in the dis- tracted parent to be the signal that all is about to close with him, as far as this world is con- cerned ? and the delineation is no less true to nature than it is impressive and affecting. Not long since we heard from a respectable physician, of the Society of Friends, of an intel- ligent and most respected individual of that society, who had been deprived of his faculties for years by a stroke of palsy, nay, to use our friend's words, ' who had been for this long time in a state of drivelling idiotcy, but who, for some days previous to his death, was restored to the full possession of his rational powers ; he summoned his astonished family around him, delivered to each of them his parting advice and benediction, and then calmly resigned himself to a peaceful death.'

In a pamphlet published some time since, by Mr. Tuke, we meet with the recital of a most singular case, bearing upon the point of that vicarious and alternate visitation of disease of the body and mind, to which we have just alluded.

' A young woman,' says Mr. T. (we extract from the Edinburgh Review), ' who was em- ployed as a domestic servant by the father of the relater, when he was a boy, became insane, and at length sunk into a state of perfect idiotcy. In this condition she remained for many years, when she was attacked by typhus fever ; and my friend, having then practised

medicine for some time, attended her. He was surprised to observe, as the fever advanced, a development of the mental powers. During that period of the fever, when others were delirious, this patient was en- tirely rational. She recognised in the face of her medical attendant the son of her old master, whom she had known so many years before; and she related many circumstances respecting his family, and others which had happened to herself in her earlier days. But alas ! it was only the gleam of reason ; as the fever abated, clouds as;ain enveloped her mind. She sunk into her former deplorable state, and remained in it till her death, which happened a few years afterwards.'

But it has been above remarked, that the accompanying bodily affection in cases of mental derangement may be secondary ; that is, it may be induced by the violent action of the cause which may have induced the insanity itself. In this last case, we have moreover said that, although the excitation is from without, it is fair to presume upon some interior condition of the

physical frame, different from its ordinary tone aud tenor. Dr. Ferrier, it is well known, has aimed at tracing the belief in ghosts to acciden- tal impressions, made upon the mind of the believer, under certain states of the body, which have thus proved of sufficient force to cause the belief and supposed sight of spectral images; but which, happening to impinge as it were upon this same body, under different circumstances, would have passed unheeded, or, at furthest, would have been regarded merely as the freaks and flittitigs of fancy. Whether this ingenious speculatist has substantiated his data to the extent contended for, we may leave to others to determine. In the mean time we will relate a case, which, although of foreign occurrence, stands already recorded in two accredited pub- lications of our own country ; and for the authenticity indeed of which, the respectability of the original narrator may be taken as a suffi- cient pledge.

' A student of Jena, about sixteen years of age, having a weak and irritable nervous frame, but in other respects healthy, left his apartment during twilight, and suddenly returned with a pale dismal countenance, assuring his com- panion that he was doomed to die in thirty-six hours, or at nine o'clock in the morning of the second day. This sudden change of a cheerful young mind naturally alarmed his friend ; but no explanation was given of its cause. Every attempt at ridiculing this whimsical notion was fruitless; and he persisted in asserting that his death was certain and inevitable. A numerous circle of his fellow students soon assembled, with a view to dispel these gloomy ideas, and to con- vince him of his folly by arguments, satire, and mirth. He remained however unshaken in his strange conviction, being apparently inanimate in their company, and expressing his indignation at the frolics and witticisms applied to his pecu- liar situation. Nevertheless, it was conjectured that a calm repose during the night would pro- duce a

more favorable change in his fancy ; but sleep was banished, and the approaching disso- lution engrossed his attention during the noctur- nal hours. Early next morning he sent for pro- fessor Hufeland, who found him engaged in making arrangements for his burial ; taking an affectionate leave of his friends, and on the point of concluding a letter to his father, in which he announced the fatal catastrophe that was speed- ily to happen. After examining his condition of mind and body, the professor could discover no remarkable deviation from his usual state of health, except a small contracted pulse, a pale countenance, dull or drowsy eyes, and cold extremities ; these symptoms, however, suffi- ciently indicated a general spasmodic action of the nervous system, which also exerted its influ- ence over the mental faculties. The most serious reasoning on the subject, and all the philosophi- cal and medical eloquence of Dr. Hufeland, had not the desired effect ; and though the student admitted there might not be any ostensible cause of death discoverable, yet this very cir- cumstance was peculiar to his case; and such was his inexorable destiny that he must die next morninc, without any visible morbid symptoms,

In this dilemma, Dr. Hufeland proposed to treat him as a patient. Politeness induced the latter to accept of such offer, but he assured the phy- sician that medicines would not operate. As no time was to be lost, there being only twenty-four hours left for his life, Dr. Hufeland deemed proper to direct such remedies as prove power- ful excitants, in order to rouse the vital energy of his patient, and to relieve him from his captivated fancy. Hence he prescribed strong emetics and other medicines, and ordered blisters to be applied to both calves of his legs. Quietly sub- mitting to the doctor's treatment, he observed that his body being already half a corpse all means of recovering it would be in vain. In- deed, Dr. Hufeland, on repeating his visit in the evening, was not a little surprised to learn that the emetic had but very little operated, and that the blisters had not even reddened the skin. The case became more serious, and the supposed victim of death began to triumph over the incre- dulity of the professor and his friends. Thus circumstanced, Dr. Hufeland perceived how deeply and destructively that mental spasm must have operated on the body, to produce a degree of insensibility, from which the worst conse- quences might be apprehended. All enquiries into the origin of this singular belief had hitherto been unsuccessful. Now only, he disclosed the secret to one of his intimate friends, namely, that on the preceding evening he had met with a white figure in the passage, which nodded to him, and in the same

moment he heard a voice exclaiming, ‘ The day after to-morrow, at nine o’clock in the morning, thou shalt die.’ He continued to settle his domestic affairs; made his will ; minutely appointed his funeral ; and even desired his friends to send for a clergyman, which request, however, was counteracted. Night appeared — and he began to compute the hours he had to live, till the ominous next morning. His anxiety evidently increased with the striking of every clock within hearing. Dr. Hufeland was not without apprehension, when he recol- lected instances in which mere imagination had produced melancholy effects ; but, as every thing depended upon procrastinating or retarding that hour in which the event was predicted, and on appeasing the tempest of a perturbed imagi- nation till reason had again obtained the ascen- dancy, he resolved upon the following expedient: having a complaisant patient, who refused not to take the remedies prescribed for him (because he seemed conscious of the superior agency of his mind over that of the body) Dr. Hufeland had recourse to laudanum combined with the extract of henbane; twenty drops of the former and two grains of the latter were given to the youth, with such effect, that he fell into a profound sleep, from which he did not awake till eleven o’clock on the next morning. Thus the prog- nosticated fatal hour elapsed ; and his friends waiting to welcome the bashful patient, who had agreeably disappointed them, turned the whole affair into ridicule. The first question, however, after recovering from his artificial sleep, was ‘ What is the hour of the morning ?’ On being informed that his presages had not been verified by experience, he assured the

company that all these transactions appeared to him as a dream. After that time he long enjoyed a good state of health, and was com- pletely cured of a morbid imagination.’

This very curious example of the influence of the imagination upon both the mental and bodily condition of being, may be considered as in- structively interesting in several points of view. In the first place the possibility is established of a bodily affection originating in a mental cause ; and it forms, therefore, an insuperable obstacle to the admission of that postulatum which de- mands that every thing which we are accustomed to consider and to call mind be placed to the account of organic operation as its source. Without the addition or subtraction of a particle of matter to the frame, actual disease, we see, may both be induced and suspended; and, if the presumed predisposition to fall into such disease be admitted as evidence of organisation having to do with the effect, this kind of argument ceases to be applicable to the point of the disor- der’s cessation, which it will have been remarked took place with the rapidity of a charm, when the prevailing fancy upon which it depended was proved to the patient to have no foundation in fact.

In the second place, the example just adduced may serve to show the impropriety of opposing with the weapons of reason or ridicule those fantasies, and feelings, and convictions, which however ungrounded in the abstract, and in fact, have nevertheless a certain sort of truth in them as it refers to the individual influenced. Prove, if you can, and as professor Hufeland by a dex- terous ruse in the present instance did, that ma- niacal illusions are illusions ; but never attempt to convince a madman, or even a nervous invalid, against the evidence of his own senses and feelings.

Lastly, it may be observed that the fulfilment of alleged predictions in respect to events sup- posed to be communicated in a supernatural way, by no means proves the verity of these preten- sions, since the conceptions themselves may come to operate the circumstance predicted, and thus a mere physical incident would be apt, by the generality of judges respecting events of this nature, to be set down as a visitation from the world of shadows. The much-talked of death of the late lord Lyttleton, for example, is suffi- ciently accounted for by mental and physical causes, without looking for its explanation to an especial interference of divine providence. The Horatian maxim in respect of poetry, not to introduce superior agency unless the occasion obviously demands it, is especially applicable when philosophy is concerned ; and, while we reject the sceptical tenets of necessity as conduct- ing to error in principle and mischief in effect, let us as carefully close our ears against the call of superstitious credulity to enlist ourselves un der her blood-stained banners.*

We may be permitted to add a few word; more on the sources and preventives of nervouj affections : of nervous affections, we say ; for, in consistent as at first sight it may seem with the limitations proposed respecting the essentials ot insanity, wi« would express i as our conviction*

that there is a certain kind of truth in the strongly expressed axiom of a modern author, that ‘ every nervous disease is a degree of insa- nity ; ‘ in other words, when fancies are substi- tuted for realities, absolute sanity can never be predicated : there is a certain degree of delu- sion present, or a belief in the existence of things that have no other entity than in the mind of the recipient and sufferer.

Let us again be indulged while briefly illus- trating our meaning by examples. Two indivi- duals shall be on the bed of sickness, both of whom shall complain of an equal degree, although of a different kind of disorder, and the complaint shall virtually for the time be of the same mea- sure in

either ; but in this consists the difference that the illness of the one is positive — of the other, so to say, negative ; or, in other words, the loss of power will be only susceptible of very gradual restoration by the due employment of physical- agents in the first ; while the latter, though apparently equally feeble and helpless, only requires the proper kind of stimulus to be applied, and the complaint will immediately dis- appear as if charmed away by the power of ma- gic. After what has been stated, in a preceding part of the present paper, it will not surely be suspected that we mean to insinuate there is not actually a bodily disorder in the one case as well as in the other ; all that we wish to infer is the difference of the two states supposed ; the one being frequently vincible by mere mental ex- citants, the other necessarily under the control only of physical agents.

Dr. Reid, in his treatise on Nervous Ailments, has given the history of a very instructive case, under the title of Real Evils a Remedy for those of the Imagination. This, with a very curious but well-authenticated case from Dr. Mead, we shall in the first place take the liberty of laying before our readers, and then add a few observa- tions on the practical advantages which might be made of such occurrences.

' Some years ago,' says Dr. R., ' I knew a lady who had been for a longtime a miserable victim to the vapors, but who was completely cured of this complaint by the supervening of another, which was more immediately alarming, and which pre- cluded indeed the possibility of much longer life. No sooner was her new disease ascertained to be an aneurism of the aorta, and the necessary result of that complaint was explained to her, than all her nervous feelings vanished ; and she even bore the announcement of her inevitable fate with a calmness which is seldom exhibited under such trying circumstances. The near prospect of death, instead of overpowering, seemed to brace anew the relaxed energies of her frame; and, what is worthy of remark, so far from being during her subsequent days, selfishly absorbed by her real, as she had before been by her imaginary ailments, she interested herself almost continually and exclusively about the happiness of others ; and in proportion as she became more amiable she became less wretched.'

The case of Dr. Mead is as follows : — ' An academic became so deeply imbued with imagi- nary fears respecting his health, that, after having taken to his bed for some time, he at length in-

sisted that he was actually dying, and ordered the passing bell of the church which was conti- guous to his house, to be tolled for his departure. It was in a catholic country. He had been him- self accustomed when a young man, for the sake of exercise, to ring this same bell, and by this practice having acquired a connoisseurship in the art of tolling, he found

himself displeased with the manner in which the present performer executed his task ; and, thus irritated with the man's bungling, he sprang out of bed, and with his own hands showed him the manner in which he would have it done. He then returned to his bed bathed in perspiration, and was ever after- wards free from complaint. Vitam autem reddi- dit iste labor et convaluit.'

Now, although it is not very often that the actual distinction between nervous and other complaints shows itself in so marked a matiner as in the above recitals, yet common and every day occurrences are degrees of the same evidence ; and these more conspicuous instances of actual capacity, combined with imaginary inability, might be made to serve, if properly applied, a very useful purpose.

A combination, it will be allowed, of mental and physical impulses, is for the most part ope- rative in the production of every grade of mental and nervous derangement; and thus we have it sufficiently explained why these derangements become more numerous in proportion as we re- cede from simple and rustic, and advance to social and refined habits. Every augmentation of our enjoyment supposes, by a law of nature, an increased susceptibility to suffering; and when the surface of impression is thus constantly, as it were, beaten out into increased expansion, by the multiplication and successively new con- junction of existing agents, it is not surpris- ing that life thus rendered more artificial and more complicated, becomes in the same ratio more obnoxious to disgusts and derangements. It is a remarkable fact, that in savage life even intense passions, such as love and religious fer- vor, do not operate as they do with us, a deterio- ration of the understanding beyond mere fallacy of judgment, and consequently irrational conduct in immediate reference to the subject of the pre- vailing sentiment. And why is this ? Palpably because the movements of the mental and bodily frames of the savage are, so to say, regu- lated by less complicated machinery, and there- fore less likely to be irregularly excited. '.In proportion,' says an eloquent writer, ' as man emerges from his primeval state do the furies ad- vance upon him, and would seem to scourge him back into the paths of nature and simplicity.'

Having thus briefly discussed the question respecting the essentials and sources of insanity, we now proceed to treat the subject somewhat more medicinally, and shall consider the history, prognosis, and treatment of madness, upon the plan which we have generally pursued in the pre- sent article.

*Symptoms. — ' The coming on of madness is marked,' says Haslam, * by restlessness. Insane patients first become uneasy and incapable of confining their attention ; they neglect their ac- customed employment ; they get hut*

little sleep ;

tacy are loquacious and positive on any subject that may be started ; soon after they are divested of all restraint in their declaration of their opi- nion of those with whom they are acquainted ; iheir friendships are expressed with fervency and extravagance; their enmities with intolerance and disgust. They now become impatient of contradiction, and scorn reproof. For supposed injuries they are inclined to quarrel and fight with all about them. They, have all the appear- ance of persons inebriated, and people unac- quainted with the symptoms of approaching mania, generally suppose them to be in a state of intoxication. At length suspicion creeps into the mind, they are aware of plots which had ne- ver been contrived, and detect motives which were never entertained. All this may exist without the perceptions and associations being sufficiently disturbed to constitute actual madness; at last, however, the succession of ideas becomes too ra- pid to be examined ; the mind becomes crowded with thoughts, and indiscriminately jumbles them together: insanity is established. Patients under the influence of the depressing passions will exhibit a different train of symptoms. The countenance wears an anxious and gloomy as- pect ; they retire from the company of those with whom they had formerly associated, seclude themselves in obscure places, or lie in bed the greatest part of their time. They next become fearful ; and, when irregular combinations of ideas have taken place, conceive a thousand fancies, often recur to some former immoral act which they have committed, or imagine themselves guilty of crimes theynever perpetrated ; believe that God has abandoned them, and with trem- bling await his punishment. Frequently they be- come desperate, and endeavour with their own hands to terminate an existence which appears to be an afflicting and hateful incumbrance.'

Causes. — The causes of insanity are numerous, and the predisposition to run into the insane state is very often indeed connate ; although this fact has been attempted to be denied or ex- plained away by several modern authors — as by Brown, Adams, Hill. The hereditary nature of the complaint is not however so absolute and un- necessary as has been, on the contrary, conceived by others ; and much family apprehension is often established upon a false foundation in re- ference to this particular. The exciting causes of madness are physical, mental, and moral ; such as inebriety, pride, and the feelings and emo- tions of whatever nature and kind are calculated in their indulgence to derange the intellect; but the very passions and emotions themselves prove that the business is half accomplished before the specific excitation has been applied. Madness

sometimes makes its way into the system through the medium of other more decidedly corporeal complaints ; and sometimes, as we have seen, it in a manner dislodges and supersedes these ; and it often comes upon a person without any obvious reason either of predisposition or excitement.

The mental causes adduced by Arnold are in- tense application to business, or study ; passions of various kinds ; too great activity of imagina- tion, and imbecility. His enumeration of bodily rauses is— internal, seated in the brain ; external,

acting mechanically on the brain. Causes act ing on the body generally, and through it upon the brain, either directly, sympathetically, or by translation.

Distinctions. — A great deal has been said of the necessity of distinguishing between melan- cholia and mania; but these distinctions are scarcely traceable, inasmuch as the fury of mania- cal excitement very often passes into the abstrac- tion of melancholy ; and in this case, as in other disordered manifestations, we must be careful of not giving rise to the idea of any essential or abstract difference in the essence of disease, merely by inventing terras. Hypochondriacism. or that state which is as it were between sanity and insanity, the completely absorbed state of the melancholic, and the high ravings of the maniac, will be manifested by the same indi- vidual. And, as far as bodily and mental dis- order must be considered as establishing a dis- tinction, we have already more than once said that the most purely mental affection must in one sense be corporeal, that is, it must be at- tended with some change in the bodily condition, whether that change be visibly structural, or only cognizable in its effects. When indeed the func- tions of the stomach are obviously deranged, and such derangement obviously regulates the mental aberrations, the word hypochondriasis may, if you please, apply in the way of distinc- tion from melancholia, which often commences, pursues its course, and becomes confirmed into complete insanity, without appearing to have any thing to do with chylopoietic conditions.

Prognosis. — With regard to prognosis, Dr. Cox, who enjoys ample opportunities for minute observation, tells us that the chances of recovery are against those madmen in whom the dispo- sition can be traced to lunatic ancestry. ‘ When the causes are manifestly corporeal, a favorable termination may be expected. When the sub- jects of hallucination vary, and the mind is not obstinately fixed on one topic, hopes may be in- dulged. The insanity subsequent to parturition is generally curable, if the curative attempts be rational, which is not always the case.’ It de- serves, however, to be noticed, that the intellect in this case is subject to a second derangement from the same exciting sources, just as abortion has a

tendency to recur after it has once hap- pened. ‘ Palsy, hemiplegia, and diseases of this class supervening, may be reckoned among the unfavorable occurrences.’ In these cases the unhappy patient often becomes decidedly, and beyond recovery, fatuitous. ‘ Patient-.,’ says Haslam, ‘ who are in a furious state, recover in a larger proportion than those who are depressed and melancholy.’ When the furious state is suc- ceeded by depression, and after this shall have continued a short time the violent paroxysm re- turns, the hope of recovery is very slight. Indeed, whenever these states of the disease frequently change, such alternations may be considered un- favorable.’

Dr. Darwin well observes that, ‘ when an indi- vidual becomes insane who has a small family of children to solicit his attention, the prognosis is very unfavorable, as it shows the maniacal hal- lucination to be more powerful than those ideas

•which usually interest us most.’ And Haslam further states, ‘that in those instances where in- sanity has been produced by a train of unavoid- able misfortunes, as when a father of a large family, with the most laborious exertions inef- fectually struggles to maintain it, the number who recover is very small.’ It may be added that, in proportion to the length of time the malady may have lasted, is the hope enfeebled of ultimate recovery. After the disorder has lasted for more than a year, the chances against restoration are great.

The statements of proportionate recoveries from in > anity show much discrepancy. The most fa- vorable we have seen is that of Dr. Burrows, who remarks that, if curative attempts are pursued with judgment, eighty-one cases out of 100 may be expected to recover. Of quite recent ones ninety-one in 100; and of oM cases thirty-five in 100.

In respect to appearances of the brain, of the liver, and other viscera, when examined after death, there are scarcely any kind of morbid changes which have not at different times been seer: ; but no certainty of inference has yet been deducible from these appearances, inasmuch as they are by no means regularly conformable with what might, a priori, be expected from analogy, and from the witnessing of other cases. The very same appearances, it has been remarked, have exhibited themselves after the most oppo- site disorders; and Haslam expressly states, that even the general texture of the brain of maniacs, independently of partial lesions, shows an un- natural firmness, or morbid flaccidity, without any apparent reason why it should

be so. Dr. Arnold has been at the pains of collecting from Bonetus, Morgagni, and Haller, their several statements of organic lesion, as of hardened and thickened membranes, turgidity of blood-vessels, water in the ventricles, different conditions of the pineal gland, bloody spots in different parts of the brain itself, purulent matter in its sub- stance or ventricles, enlarged plexus choroides, dilated carotids and jugulars, dryness and hard- ness, or softness of its texture, adhesions of the dura mater to the frontal bone, and many other conditions of the brain itself, and accompanying disorganisation of the abdominal, and even tho- racic, viscera ; and although it is inferred, from a collation of all this evidence, that in disorders of the mind the brain and its connexions are usually affected, yet it is at the same time al- lowed that nothing of regularity obtains ; and it is further uncertain how much that is seen has been cause, and how much consequence. It be- hoves us farther to say, in reference to morbid appearances, that the phrenological pathologists are pursuing the investigation, under the as- sumption that the multifarious kinds and charac- ters of mental derangement are explicable upon the particular portion of the brain that shall have been affected. Thus excitation and delusion on one particular point, may be supposed especially to implicate that part of the encephalon which is occupied in the development of the particular passion or sentiment affected. Should future investigations confirm this principle, a great deal of what has been hitherto considered anoma- JDUS and inexplicable maybe expected to be un-

folded. And we think it right here to state, that one of the medical officers of a public institution for the insane has told us, that his observations harmonise with the tenets of those physiologists to whom we now allude.

Treatment. — In regard to the treatment of the insane, it should ever be preserved in recollection that an important distinction obtains between high excitement of the mind and augmented vas- cular action. Natural enough it is to conclude, thai, in cases where we are called upon to witness the ravings of maniacal fury, a large detraction of blood from the vessels of the head is the solum remedium, the obvious and only resource. It is possible, however, for a state of the most dreadful irritation and excitement of a maniacal kind to exist and be expressed, without the blood- vessels being at all brought into that kind of state which would seem to demand bleeding, and where bleeding, indeed, will be likely to rivet and protract, rather than to mitigate and shorten, the course of the malady. It is a re- markable fact that the blood of a furious maniac tor the most part exhibits, when drawn from its vessels, a state very different from that of inflam- mation ; there is often not the smallest vestige of inflammatory buff; and it is in these cases that bleeding often does much more harm than good. We would by no means wish to assert that we consider that proposition as of universal applica- tion which objects to venaesection in mania, but we do at the very

best think, it problematical whether had the practice never been had recourse to, even in any one single instance, there would not have been less mischief occasioned than has been produced by its injudicious and erroneous employment. Blood-letting is principally indi- cated when the malady has been evidently in- duced through the medium of some bodily disorder; as when the catamenia have suddenly ceased after parturition, and mania has im- mediately succeeded ; when there is much hard- ness, and evident velocity, about the pulsations, it is sometimes necessary to take blood, either from the head by leeches, from the neck by cup- ping, or from the arm by venaesection : and this demand is more especially imperious when the vascular irritation has obviously existed prior to the mental excitement.

Purging may be considered a practice of much more unequivocal and general admission than that of sanguineous depletion. With that fashion- able theory we do not accord which attributes all maniacal derangement to visceral torpor and ob- struction ; but these obstructed states must un- doubtedly have an occasional and very material influence upon the state of the mind ; and such is the connexion and sympathy between the brain and stomach, that this organ and its con- nected viscera very often, indeed, come to b affected, in consequence of the encephalic de- rangement, in such a way as to render obvious the necessity of intestinal evacuations. It is im possible to lay down any rules with regard to the mode of administering purgative which shall apply to all cases. Suffice it to say, that the saline and antiphlogistic remedies of this class seem especially indicated when much vasculai irritation accompanies the maniacal derange-*

meat • ana tnat, when the hallucination is rather connected with torpor in the stomach, the vessels, and the general system, drastic cathartics are more particularly called for. Calomel is some- times given in connexion or alternation with aloetic medicines with much benefit. But it is not possible to lay down any more than very ge- neral rules to be acted upon by the experience

Partly upon the same principles with digital is, Dr. Darwin has recommended, and Dr. Cox ex- tensively employed, rotatory motion to the extent of inducing vertigo and nausea. Haslam ridi- cules this practice. We repeat that all these expe- dients are at the best but of questionable utility. Mr. Hill, in his treatise on insanity, speaks in very high terms of emetics, especially of those

and eood sense of the prescriber. Suffice it then to composed of equal parts of tartarised antimony say it is not merely a recognition of the principle and sulphate of copper, according to the formula that purgatives are useful, which ought to regu- of Marryatt; and he orders these to be given late the practice in these cases ; but the practitioner every third morning for weeks together. 1 here ouetit to be aware of the necessity of combining, is so much appearance of practical good sense

about Mr. Hill’s book that we should be disposed to listen with some attention to any of his sug- gestions ; but we should incline rather to the purgative than the emetic practice ; always, how- ever, recollecting the propriety of the tonic plan of treatment in connexion with purging, when a decidedly asthenic state of the system is present. A few words remain to be said on the moral management of madness. To reason with a madman is said to prove ourselves in the same predicament with our patient. By a judicious and skilful management, reason, however, has sometimes been recalled from its wanderings,

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alternating, suspending, increasing, ana nishing the kinds and doses of these medicinals with an attention very different from that of mere empirical routine.

Warm bathing is another remedial process sometimes abundantly applicable and of signal utility. Attention to the cutaneous discharge is an important principle in the treatment of mental disorders ; and it is in a great measure by increasing and regulating this discharge, that the practice of warm bathing proves beneficially operative.

A practice at least as old as Celsus has recent-

ly been revived under the assumption of novelty, and replaced in its appropriate seat. M. Pinel,

and has been lauded as highly efficacious ; it is that of causing the insane person to sit in a hot- bath with the water up to his neck and pouring cold water from a height on his naked head while in the bath.

Of the various medicinals of the nervous class we confess a considerable degree of scepticism. Camphor, opium, henbane, foxglove, night- shade, have all been lauded and derided in their turns, as they have been employed by different physicians and under different circumstances. In those cases of temporary insanity, as connected with bodily disease, in

which we have found it necessary to empty the blood vessels, the immediate administration of pretty considerable doses of opium has appeared to us to be of vast ad- vantage ; but we must confess the experience we have had of any other medicinals, of the above stated kind, has not been satisfactory as to their respective virtues. In the supplementary report of the state of receptacles for the insane, there is a remarkable and well attested account of the very great powers of digitalis in calming the fury of a maniac; and an author of practical eminence delivers his opinion of this medicine in the following terms : — ‘ Where the derangement is accompanied, and in a degree regulated, by an accelerated circulation without any other symp- tom of pyrexia, I have found foxglove extremely applicable. Indeed, says Dr. Cox (the author to whom we allude), I am of opinion that no case ought to be abandoned as incurable, till it has been submitted to a trial of this powerful medi- cine. I had a patient (he says) whose system was kept saturated as it were by digitalis for weeks in succession, whose mental wandermgs seemed regulated by the state of his pulse ; when the pulse was at ninety he was constantly furious, at seventy perfectly rational, at fifty melancholy, and at forty half dead. This man was at length

in his late work on Mental Derangement, records a curious instance of the cure of insanity, which is by no means destitute of instruction. In the Bicetre of Paris one of the lunatics supposed that his head had been taken off by the guillo- tine and that a new one had been fixed on his shoulders ; a convalescent from lunacy convers- ing with this individual artfully turned the con- versation upon the miracle of St. Dennis, who was said to carry his head under his shoulders and kiss it as he walked along. The insane individual appealed to his own case in order to prove the possibility of the fact, when the narra- tor of the story with a burst of laughter suddenly exclaimed, why how you fool could St. Dennis kiss his own head ? was it with his heel you block- bead ? Pinel states that this difficulty starting upon the mind of the deranged man actually operated his recovery.

Another mode in which maniacal hallucina- tion has been dispelled, is that of indulging the sufferer in his erroneous conceptions, as in the following case related by Boerhaave. — ‘A coun- sellor at Paris retained his urine lest he should deluge the city, till his friends raised aery of fire, and prevailed on him to lend them his assistance towards extinguishing the flames.’ Vanswieten mentions the case of a man who conceived that his legs were made of glass, till the maid servant threw a block of wood upon his shins, which ex- cited pain, and with it such indignation, that, forgetting the transmutation of his limbs, he pur- sued her to take revenge. Thus convinced the conceit left him, and, by proper exercise, he per- fectly recovered.

The following case is from Dr. Cox, and si- milar cases in kind, if not in degree, are falling daily into the hands of the medical practitioner The use which may be made of them a this ; that by a justifiable acquiescence in the reality

perfectly cured by such a dose of this remedy as of alleged feelings, the physician may oftentimes kept the pulse pretty uniformly about seventy. be more successful in dispelling such hallucica-

tions, than by endeavouring the hopeless task of convincing his patient of the mere imaginary

nature of his sufferings. ‘ Mr. , aged

twenty-five, of a fair complexion, though dark hair and eyes, of exemplary morals and most amiable manners, was fond of anatomy, and had dissected some few animals ; very desultory in his studies, but had read some medical authors with much attention, and was in the constant practice of quacking himself. Though no apparent altera- tion took place in his countenance, yet he con- stantly complained ; and all his attention was confined to his health, which at length actually rendered him incapable of any exertion, either bodily or mental. After the repeated and anxious enquiries of his friends, it was discovered he believed himself affected with syphilis, con- tracted not by any unfortunate connexion, but from sitting on the same seat with an infected person. Deaf to all reasoning and attempts to prove the impossibility of the disease being pro- pagated in such a way, his case was referred to some medical man of whom he had read or heard ; and he, being previously instructed, pro- nounced it venereal, sent a prescription which very soon dissipated the absurd idea, and re- stored him to himself, his friends, and his family.’

*To revive former impressions, and thus to break the chain of diseased association, will sometimes be an advisable attempt. On this account, and with this view, it will of course be important to ascertain the previous habits, tastes, feelings, propensities, and occupations of your insane patient. ‘ In a military ma- niac,’ says a modern author of much acumen, * I once witnessed the notes of a shrill pipe ma- naged with some address first awaken the atten- tion, then occasion interest, as was obvious by his animated looks, and beating time ; at length, by varying the air according to the observed effects, produce the most pleasing sensations. It at length brought back some very impressive recol- lections, created enti rely new*

trains of thought, and seemed to correct the errors of intellect. Though he had not left his bed for weeks, nor spoken a single word during that time, and had been sup- ported entirely by force, he now arose, dressed himself, and without any other remedy- but gentle tonics, returned to his~ former habits of neatness and rationality; advancing gradually to perfect recovery.'

But we might occupy a great number of pages were we to go over the records of indivi- dual cases, in which either by design, or by acci- dent, a forcible impression upon the imagination or feelings of maniacs, had succeeded in dispel- ling the deranged idea, either for a time or for a continuance. The reader is not to suppose that •we mean to assert that this task of curing insanity, by these means, is of easy accomplishment ; but it is always right of course to be armed at all points, and to make accidental occurrences sub- servient to practical instruction.

With regard to the question of confinement, and personal restraint, it is. difficult to say any thing which shall apply universally. Certain it is, as a modern author has stated, that nothing is more calculated to make a man mad, than the idea that he is thought so by others; on the

other hand, however, we feel convinced that in- cipient insanity has often been prevented from breaking out into overt acts, and from becoming confirmed and irremediable, by an early and ju- dicious personal restraint. We recollect hear- ing Dr. Aikin say, that some of the most valua- ble articles in his biography were penned in a mad house, and that the gentleman who wrote them was so convinced himself of the necessity of his own confinement, that when he found himself conscious of approaching insanity he voluntarily submitted himself to the custody of keepers, and the regime of a mad-house, before the malady had come to such a height as to de- prive him of the power thus to exercise his will. We must confess, for ourselves, that in the ge- nerality of cases in which we found the marks of insanity pretty fairly made out, even before the malady should have become thoroughly esta- blished, we should rather incline to give our probatum for placing the individual under those circumstances which would prevent the possibi- lity of his inflicting injury either upon himself or others ; and which, we are convinced, although it may bear the appearance of cruelty, is often, on the contrary, the height of mercy. We do not say that we would consign every nervous or melancholic man to the stigma of madness and the confines of a mad-house ; nor, we hope, is it at all necessary for us to say, that every thing in the shape of restraint or control, beyond what is necessary to the well-being both of the patient and those about him, is to be deprecated as equally absurd and inhuman. ' It has been re- commended,' says an author to whom we have more than once referred in the present paper, 4 by very high authority, to inflict corporal pu- nishment upon maniacs with a view of rendering them rational by the

impression of terror ; what success may have followed such disgraceful and inhuman treatment, I have not yet learned, nor should I be desirous of meeting with any one who could give me the information. If the patient be so far deprived of understanding as to be insensible why is he punished ? such coercion, setting aside its cruelty, is manifestly absurd; and, if his state be such as to be conscious of the impropriety of his conduct, there are other me- thods more mild and effectual.'

411. Night Mare. Oneirodynia. — It is rather curious that Dr. Cullen should have classed this affection under the head of vesanic disorders, which is only thus entitled to a situation among these ailments from the circumstance of the ima- gination being morbidly excited in them. The oneirodynia of nosologists is divided into active and passive ; in the first the irritative and imagi- native ideas excite the patient to walk in his sleep ; the second is characterised by a sense of oppression upon the breast, as if a heavy load were lying upon and threatening the individual with suffocation.

Dr. Darwin in his Zoonomia introduces the following ingenious observations on the sub- ject of sleep, which were transmitted to him in a letter from Dr. Currie ; and we shall here transcribe them with the comments of Dr. Dar- win, and the further remarks of the latter on thr subject of night mare.

« Though rest in general perhaps render the healthy pulse slower, yet, under certain circum- stances, the contrary is th« truth. A full meal withtmt wine, or other strong liquors, does not increase the frequency of my pulse, while I sit upright, and have my attention engaged. But if I take a recumbent posture after eating, my pulse becomes more frequent, especially if my mind be vacant, and I become drowsy ; and, if I slumber, this increased frequency is more con- siderable with heat and flushing.*

This I apprehend to be a general truth. The observation may be frequently made upon child- ren ; and the restless and feverish nights expe- rienced by many people after a full supper are, I believe, owing to this cause. The supper oc- casions no inconvenience whilst the person is upright and awake ; but when he lies down and begins to sleep, especially if he does not per- spire, the symptoms above mentioned occur. Which may be thus explained in part from your principles. When the power of volition is abolished the other sensorial actions are in- creased. In ordinary sleep this does not occa- sion increased frequency of the pulse; but, where sleep takes place during

the process of digestion, the digestion itself goes on with in- creased rapidity. Heat is excited in the system faster than it is expended ; and, operating on the sensitive actions, it carries them beyond the limi- tation of pleasure, producing, as is common in such cases, increased frequency of pulse.

It is to be observed that, in speaking of the heat generated under these circumstances, I do not allude to any chemical evolution of heat from the food in the process of digestion. I doubt if this takes place to any considerable de- gree ; for I do not observe that the parts incum- bent on the stomach are increased in heat dur- ing the most hurried digestion. It is on some parts of the surface, but more particularly on the extremities of the body, that the increased heat excited by digestion appears, and the heat thus produced arises, as it should seem, from the sympathy between the stomach and the vessels of the skin. The parts most affected are the palms of the hands and the soles of the feet. Even there the thermometer seldom rise above 97° or 98°, a temperature not higher than that of the trunk of the body ; but three or four degrees higher than the common temperature of these parts, and therefore producing an uneasy sensa- tion of heat, a sensation increased by the great sensibility of the parts affected.*

'Iliat the increased heat excited by digestion in sleep is the cause of the accompanying fever, seems to be confirmed by observing that, if an increased expenditure of heat accompanies the increased generation of it (as when perspiration on the extremities or surface attends this kind of sleep), the frequent pulse and flushed countenance do not occur, as I know by experiment. If, during the feverish sleep already mentioned, I am awakened, and my attention engaged power- fully, my jmlse becomes almost immediately slower, ami the fever gradually subsides.'

From these observations of Dr.Currie it appears, that, while in common sleep the actions of the

heart, arteries, and capillaries, are strengthened by the accumulation of sensorial power during the suspension of voluntary action, and the pulse in consequence becomes fuller and slower; in the feverish sleep above described the actions of the heart, arteries, and capillaries, are quickened, as well as strengthened, by their consent with the increased actions of the stomach, as well as by the stimulus of the new chyle introduced into the circulation. For the stomach, and all other parts of the system, being more sensible and more irritable during sleep, and probably more ready to act from association, are now exerted witn greater velocity, as well as strength, con- stituting a temporary fever of the sensitive irri- tated kind, resembling the fever excited by wine in the beginning of intoxication ; or in some people by a full meal in their waking hours.

On waking, this increased sensibility and irri- tability of the system ceases by the renewed ex- ertions of volition; in the same manner as more violent exertions of volition destroy greater pains; and the pulse in consequence subsides along with the increase of heat. If more violent efforts of volition are exerted, the system becomes still less affected by sensation or irritation. Hence the fever and vertigo of intoxication are lessened by intense thinking ; and insane people are known to bear the pain of cold and hunger better than others ; and, lastly, if greater volun- tary efforts exist, as in violent anger or violent exercise, the whole system is thrown into more energetic action, and a voluntary fever is in- duced, as appears by the red skin, quickened pulse, and increase of heat ; whence dropsies and fevers with debility are not unfrequently re- moved by insanity.

Hence the exertion of the voluntary power in its natural degree diminishes the increased sen- sibility, and irritability, and probably the in- creased associ ability, which occur during sleep ; and thus reduces the frequency of the pulse in the feverish sleep after a full meal. In its more powerful state of exertion it diminishes or de- stroys sensations and irritations, which are stronger than natural, as in intoxication, or which precede convulsions, or insanity. In its still more powerful degree the superabundance of this sensorial power actuates and invigorates the whole moving system, giving strength and fre- quency to the pulse, and a universal glow both of color and of heat, as in violent anger, or out- rageous insanities.

If, in the feverish sleep above described, the skin becomes cooled by the evaporation of much perspirable matter, or by the application of cooler air or thinner clothes, the actions of the cutaneous capillaries are lessened by defect of the stimulus of heat, which counteracts the in- crease of sensibility during sleep, and the pulsa- tions of the heart and arteries become slower from the lessened stimulus of the particles of blood thus cooled in the cutaneous and pulmo- nary vessels. Hence the admission of cold air, or ablution with subtepid or with cold water, in fevers with hot skin, whether they be attended with arterial strength or arterial debility, ren- ders the pulse slower; in the former case by

diminishing the stimulus of the blood, and in the latter by lessening the expenditure of senso- rial power.

The night-mare is an imperfect sleep, where the desire of locomotion is vehement, but the muscles do not obey the will; it is attended with great uneasiness, a sense of suffocation, and fre- quently with fear. It is caused

by violent fa- tigue, or drunkenness, or indigestible food, or lying on the back, or perhaps from many other kinds of uneasiness in our sleep, which may originate either from the body or mind.

Now, as the action of respiration is partly vo- luntary, this complaint may be owing to the ir- ritability of the syst«vn being too small to carry on the circulation of the blood through the lungs during sleep, when the voluntary power is sus- pended. Whence the blood may accumulate in them, and a painful oppression supervene ; as in some haemorrhages of the lungs, which occur during sleep ; and in patients much debilitated by fevers.

Great fatigue with a full supper and much wine, I have been well informed by one patient, always produced this disease in himself to a great degree. Now the general irritability of the system is much decreased by fatigue, as it ex- hausts the sensorial power; and, secondly, too much wine and stimulating food will again dimi- nish the irritability of some parts of the system, by employing a part of the sensorial power, which is already too small, in digesting a great quantity of aliment ; and in increasing the motions of the organs of sense in consequence of some degree of intoxication, whence difficulty of breathing may occur from the inirritability of the lungs.

This explains an apparent paradox, why peo- ple who are feeble digest their dinners best il they lie down and sleep, as most animals do, when their stomacns are full. Yet many weak people sleep very uneasily after a large supper. If the debility of the patient be not very great, and the dinner he has taken be moderate, the suspension of voluntary action during sleep pre- vents the expenditure of so much sensorial power, which may be employed on the actions of the stomach, and thus facilitate the digestive process. If the patient be further exhausted as in the evening, or his debility greater, and sleep ensues after a copious or stimulating supper, so much sensorial power will be exerted on the actions of the stomach for digestion, that the cir- culation of the blood through the lungs will be impeded from the diminished irritability to ex- ternal stimuli, and the absence of volition, as in the incubus, and somnus interruptus.

M. M. To sleep on a hard bed with the head raised. Moderate supper. The bark. By sleep- ing on a harder bed the patient will turn himself more frequently, and not be liable to sleep too profoundly, or lie too long in one posture. To be awakened frequently by an alarm clock.'

The cause of sleep walking or active oneiro- dynia, is exceedingly obscure. An ingenious essay published some time since (if we recollect right, in one of the volumes of Transactions from the Dublin College of Physicians) endea- voured to establish the phrenological datum of separate faculties

and localities of the brain from

the phenomena presented by the sleep walker; the doctrine advocated in the paper was this, that the waking condition of one part of the cerebral mass in connexion with the torpid state of the others impels to sleep walking from the cir- cumstance of those faculties being still locked in sleep which if awake would correct the im- pulse of the one awake and put it under the ordinary control of regular condition.

One very remarkable feature in sleep walking is the accuracy with which things are accom- plished, demonstrably without the exercise of those perceptions which we are accustomed to think absolutely necessary to be in exercise for the accomplishment of the purposes effected ; it would seem as if the whole sentient power were for a time accumulated in one organ, and that thus a person, by becoming all ear or all touch, made up as it were for the want of other senses. We know, indeed, that this law in some measure obtains under circumstances of permanent sus- pension or abolition of one of the senses ; the nervous power which would have been expended in the exercise of this or of that sense is di- rected into one which still remains unimpaired, and the latter becomes in the same ratio acute ; thus magnitude and form are judged of by a blind man, through the organ of hearing, and an individual being without, or having lost, his sight is often able to determine the number of persons present in a room, merely by the acuteness of smell. Habit and exercise we are aware ex- olain a good deal of this law, but they do not wholly ; and the sleep walker, as we above inti- mated, appears to illustrate it in a remarkable manner. As a matter of curiosity, and with a view to exemplify the above positions, we shall extract the following interesting accounts which Dr. Beddoes has copied in his Hygeia from foreign publications; and remarkable, or inex- plicable as they appear, they are too well au- thenticated to allow us to doubt of their truth.

‘ In the Encyclopedic, under the article SOH- NAMBULE, there is an observation which shows a remarkable suspension of one series of affec- tions, while others, the most intimately connected with them, were going on. The archbishop of Bourdeaux was at college with a student subject to walking in his sleep. On planting himself from curiosity in the student’s chamber, so as to as- certain his motions, he observed the young man sit down to compose sermons, which he read page by page as he committed them to paper, if it can be called reading’ when no use was made of the eyes. On being dissatisfied with any passage, during the recitation, he crossed it out and wrote the correction with much accuracy over it. The writer of the article saw the be- ginning of a sermon in which was the following amendment. It stood at first ce divin enfant. On revisal it struck the student to substitute adorable for divin. So he struck out the former word, and set the latter exactly above it. But, remarking that the article ce

could not stand be- fore adorable, he very nicely set a t after ce, and it then stood, cet adorable enfant.

To satisfy himself that the somnambulist, in all these operations, made no use of his eyes, the arjhbishop held something under his chin, suffi-

cient to intercept the view of the paper on which he wrote. But he wrote on without being interrupted by this obstacle in the way of his sight. To dis- cover how the night-walker knew the presence of objects, the archbishop took away the paper on which he wrote and pushed other papers un- der his hand. Whenever they were of unequal size the student was aware of the change ; but, when they were equal, he wrote on, and made corrections on the spots corresponding with his own paper. And it was in this way that posses- sion was gained of some of his nocturnal lucubra- tions. Amongother manuscripts, which the arch- bishop put into the hand of the encyclopaedist, »re musical pieces written with tolerable exactness.

One night, having dreamed that he was beside a river into which a child had fallen, he went through all the actions tending to its rescue, and with teeth chattering, as from cold, asked for brandy. None being at hand, a glass of water was given him instead. But he immediately re- marked the difference, and with greater impa- tience demanded brandy, saying he should die if none were given hirr. Brandy was therefore now brought. He took it with pleasure, and said, as he smelled to it, that he found himself already better. All this time he did not awake, but, as soon as the paroxysm was over, lay down on his bed and slept very composedly.

In some cases the susceptibility of visual im- pressions has undoubtedly remained, because the somnambulist has been sensible to some present objects of sight, though not to others. This par- tial attention seems clearly to have existed in the case described in Darwin's Zoonomia, since the patient drank tea, when it was set before her, and smelt to a tuberose, which last action might however have arisen from accurate recollection of the place where it stood. In the remarkable instance, frequently observed and described at large by Porati, the same circumstance occurred. A young man in his employ, of the name of Cas- teili, who had often before suffered from nervous affections, took a candle and lighted it. Instead of going to bed, as was supposed to be his inten- tion, he went down stairs, reached a book from a shelf in his master's study, and began to read. I'orati several times desired him to go to bed, but received no answer, upon which he took away the light. Castelli upon this got up, and opened the window, observing

— it is cloudy, we shall have rain to day. The master now replaced tlie light, and Castelli immediately walked up to it, and began to read aloud. The people of tlie house collected round him, but he observed no one. They called to him, but he did not hear. The light being again removed, he got up, rubbed his eyes, and said ‘ I am not well ; I must go out into the air.’ He accordingly went into the apothecary’s shop belonging to his master. Here, other methods having been fruitlessly tried to rouse him, some spirit of hartshorn was held to his nostrils, when he im- mediately sank to the floor and fell into convul- sions. After some minutes he had a tetanus, or universal spasm of his muscles, which by

egrees relaxed, and he slept. Presently he

iwaked, as out of a sound sleep, but knew no- thing of what had passed.

Another time he fell asleep in the shop, but had continued only a short time in that state, when he opened his eyes, muttered a few words lighted a candle, went into the study and began to read. He was at this time studying French, and had to translate a passage out of the Italian. He ceased reading, took up the dictionary, and made his exercise, as well as if he had been awake.

They snuffed out his candle, when, without noticing other candles that were burning in the room, he went into the kitchen and struck a light, by which he rekindled his own candle and set to his task again. It was snuffed out again. He shut the window, as supposing the wind had blown out his caudle, which he lighted anew ; when Porati blew it out. He now grew impa- tient. He stirred the embers, took some matches in his hand, and said — ‘ Is that fire, or is it not ?’ He lighted the candle and went into the study, where he took a dispensatory, examined by it some plants that stood ready for distillation, ami found one right after the other. Porati now spoke to him about the plants. He immediately heard and answered as rationally as if he had been awake. He then fell asleep, soon awoke, and was sent to bed

On another occasion a remark he made, on a book which he was reading, excited in one of his comrades a suspicion that he was feigning. To ascertain this, the comrade held the flame of a candle to his hand, but he did not withdraw it. Next morning he complained of a pain in the place, but did not know how it came

He was repeatedly observed not to know any person or thing but what coincided with his passing train of ideas. When he went into the shop, if faulty recipes were brought to him, he would soon detect the error, hut did not know the persons who brought them, though they were his own

comrades, but took them for servants who came for medicines. He often tried to light a candle at a lamp standing under a glass bell, of which he was not aware; and it was observed that he could not distinguish two powders of which one had a strong smell and the other was without any. It was accidentally discovered that the waving of a fan threw him into a quiet sleep,, and this expedient was frequently employed to stop him when he attempted to do what his mas- ter did not wish. The effect of the moving air was to arrest him suddenly, upon which he would sink down and sleep a short time, but his paroxysm went on afresh afterwards.'

We must be better acquainted with the ra- tionale of function, and know more of pathology than we now do, before we can explain these and other curious and remarkable susceptibilities and peculiarities of the sentient and percipient organisation . They must, however, be considered as objects of considerable interest ; and perhaps future pathologists may come nearer to a free ex- position of their theory than at present is gene- rally conceived to be possible.

412. Class 3. Cachexia.— The disorders which should be properly included under this head, would be those which according to the doctrines of the humoral patholosy, and according, indeed, to vulgar phraseology and opinion, are considered

indications of a bad habit, as it is expressed, which means, if it means any thing, that the humors of the body, instead of being what they ought naturally to be, have undergone some change either ir> their physical or chemical con- dition, which is inconsistent with a state of absolute health. Thus should a wound, instead of healing kindly and regularly, show an indis- position to come to this favorable termination, without any thing in the character of the wound itself, or in exterior circumstances, to account for the tardiness ; or should a chronic eruption ‘ break out on the surface of the body without being excited by imparted virus, or indepen- dently of any pyrexial irritation, the individual subject to such complaints and conditions would be considered in a bad habit of body.

But these vague sort of explanations do not satisfy the pathological precision of present times, and we look for something more satisfac- torily explicative than this terminology supplies. It must, however, be confessed, and we have already intimated the same thing in the proem to the present article, that the physiognomy and character of some chronic disorders is not easily explained upon any other hypothesis than those which the humoral doctrines present to us. As, however, these cachectic disorders are for the most part disorders of the assimilating and absorbing functions, it will be consistent with what we have already done in reference to the pyrexial and nervous classes of ailments, to engage in a preliminary sketch of the more pro- minent and primary disorders to which the ab- sorbents, as a distinct system are obnoxious; a distinct system, however, we should hardly say; for, as it has been expressed by a modern author, ‘ whilst we thus survey detached portions of the animal economy, and examine the disorders to which each part is principally subject, it must be confessed that nature has not left them inde- pendent of each other. Nay, so far is she from laving established an empire within an empire, that, with astonishing contrivance and unity of design, she has made each part subordinate to the rest ; and hence it is that, if one is princi- pally affected, the other sympathise and are drawn into action by consent.’

This idea is beautifully expressed by Hippo- crates, when he compares the body to a circle in which we can find neither the beginning nor the end,

and then remarks that the same observation will hold good respecting its diseases.

Yet, adds our author, notwithstanding the efforts of nature to relieve herself are thus com- bined, they require for the sake of distinctness to be separately viewed, and, to cure diseases, attention must be turned towards the system chiefly affected, whether the arterial, the nervous, or the absorbent. And it is under this feeling that we now engage in considering generally the pathology of the absorbents.

It is well known that the celebrated Brown, as we have indeed before observed, attempted so great a simplification of vital powers and diseased habits, as to place every thing to the account of one principle pervading the frame, which he named excitability ; but, were there no other error in his system, this single fact would be

sufficient to subvert it from its foundation, viz. that different parts of the frame are under the distinct influence of different impulses. Thus those agents which excite one series of actions in the body will at the same time suppress others; for instance, nausea, or inaction of the stomach, occasions a temporary augmentation of the powers of absorption. The known varieties, too, of constitutional susceptibilities are all at variance with the above principles. While then we avoid falling into the vulgar errors connected with and derived from the humoral pathology, we must at the same time recollect that in different indi- viduals, and at different periods of life, there is immense variety of kinds as well as degrees of susceptibilities and excitants.

Dr. Heberden observes, and it is a curious as well as important fact in the animal economy, that the lymphatic glands of the neck, groin, axilla, and mesentery, are more especially sub- ject previous to the period of puberty to disor- dered action. At the time of puberty the pul- monary organs are principally obnoxious to disease, and in more advanced life the uterus and breast in females, and the prostate and other ex- cretory glands in males, are the seats of morbid affection. Now these facts are susceptible of something like the following explanation. We have already stated that the evolution of organs is different at different stages of life. In infancy, and previously to the development of sexual pe- culiarities, those lymphatics and absorbents art chiefly called into action which are concerned more properly and especially in the growth of parts. To the head, the mesentery, and the extremities, is the blood now directed in a greater proportion ; the deposition of calcareous matter forming bone is at this period proceeding with rapidity. Ab- sorption is necessarily required and effected in the same ratio; and, in those constitutions which are characterised by constitutional laxity in the fibres of the exhalant and absorbing vessels, disease will most

readily appear in these parts, which are now subject to the greatest degree of irritation.

The lungs at the age of puberty, as is indicated by the alteration of the voice and other circum- stances, undergo a very material change. The osseous portions of the extremities and of the head being now rendered nearly complete, the growth and changes of these parts proceed more leisurely and tardily; the principal impetus of the blood is directed into other channels, new determina- tions (as it is technically expressed) arise, and constitutional excitement is directed from the parts above mentioned to the lungs. Hence the very frequent occurrence of pulmonary disorgan- isation at the time when the constitution is about to assume fully its sexual character ; and hence the more usual appearance of a tendency to such disorganisation in those habits which are called scrofulous.

Individuals of such temperament are in after life subject to diseases of the organs above men- tioned, in consequence of all weak parts being made more than ordinarily obnoxious to organic derangements by the abstraction of their accus- tomed stimuli. The breasts are no longer excited to the secretion of milk, the offices of the prostate

ghnd and seminal vessels cease, the uterus does not now acknowledge its former stimulus ; and those organs, always more or less liable to dis- ordered action, with difficulty resume their ori- ginal state of inactivity without falling into actual and positive disease.

That condition of absorbent disturbance and derangement which constitutes the disease named by authors tabes mesenterica, as the source and origin of so many others, demands to be primarily considered.

Tabes mesenterica, or mesenterica atrophy, is characterised by the following symptoms. A prominence and hardness of the abdomen, with sometimes irregular and knotty protuberances, with an emaciation of the limbs, and a paleness of the countenance, unless when it is lighted up with a hectic flush. The bowels are extremely irregular, now constipated, and now in a state of more than healthy looseness : the stools, however, are never of a good appearance and consistence, they consist of slimy and mucous matter in place of proper feculent discharges; the temper of the little invalid (for this is a disorder of infancy) is made peevish and fretful; when the malady arises to any height the child moans piteously, and cannot be brought to notice surrounding ob- jects. It seems to be wrapped

up in itself and in its complaints. After the state has continued some time, the limbs will not only be flabby and feeble, but they will become of a rickety defor- mity, and the patient is invariably taken off its legs, as the persons about children are in the custom of expressing themselves.

Now with a recollection of the functions and office of the lacteal absorbents and glands, and witli a small knowledge of the physiology 01 adjacent organs, the rationale of the above men- tioned appearances does not appear very diffic.ult to trace. The tumefaction of the abdomen has some connexion with retained matter in the intestines, but is more especially connected with a disordered condition of the mesenteric glands. It will be proper here to observe, that this glan- dular enlargement is not, as might be supposed, occasioned by a mechanical obstruction to the passage of chyle, but is dependent upon a dis- ordered action of the glands themselves. There is in fact less than the ordinary quantity of di- gested aliment in the mesenteric passages during this derangement of parts. Chyle is not duly secreted or manufactured, and on this account, not from a mechanical impediment to its pro- gress through the lacteals, it is that a due quantity of aliment is not given to the blood ; and hence the paleness and weakness of the subject of the complaint.

The torpid state or irregular action of the bowels, and the discharge of slimy, in place of proper faeculent evacuations, appear to have somewhat of a complicated origin.

For the due digestion, separation, and assimi- lation of the aliment, it is not merely necessary that a due action be preserved in the muscular fibres of the stomach, intestines, and lacteals, but it is at the same time requisite that the offices of what are called the assistant chylopo- ittic viscera be performed without interruption. For due and complete digestion and chylinca-

tion the liver must pour out its bile, and the pancreas its peculiar secretion. It is further necessary that not only the quantity, but also the quality of these fluids be duly maintained. Now in that torpid state of the lymphatic or absorbent system which occasions tabes mesen- terica, there is not merely a diminished quantity of biliary and pancreatic secretions, but such diminution is accompanied by a deficient stimu- lant property in these secretions, since from the inactivity of the absorbents their aqueous por- tions are not reabsorbed. Thus the duodenum receives them in a dilute weak state ; a state in which they are incapable of either properly as- sisting in the requisite solution or preparation of the nutritious from the faeculent portions of the aliment, or of stimulating the irritable fibre of the intestine in order to eliminate the latter. Hence the discolored, slimy, and viscous ap- pearance of the stools in children laboring under tabes

mesenterica ; and hence the irregu- larity as to time in which the alvine excretions are discharged.

With regard to the impeded growth, flabbiness of the flesh, paleness of the face, and ricketty deformities that in a greater or less degree arise out of this state of things, we have only to ad- vert to the general laws of the absorbent sys- tem for an immediate explanation of them. During infancy, the principal office of the ex- halant termination of arteries is the deposition of calcareous matter forming bone. Now, when the blood from which this secretion of osseous substance is obtained becomes deprived of its source of supply; when the chyle is, from the state of the mesenteric vessels, prevented from being conveyed to the blood-vessels, the lym- phatic arteries are by consequence bereaved of their wonted stimulus to action; the earth of bone (principally phosphate of lime) fails of being duly deposited ; the limbs, instead of gra- dually acquiring firmness and strength, remain soft and yielding ; rickety deformity presents itself, the want of a proper quantity and con- sistency of blood occasions paleness, and every function is either torpid or irregular in its dis- play.

Such then is shortly the history and rationale of mesenteric atrophy; and scrofula, which has been treated as a distinct disorder, may perhaps be represented rather as the cause for the most part of other diseases, than a disease itself. Thus it is a scrofulous weakness in the lacteal and lymphatic vessels that causes tabes mesenterica ; and this last may be looked on as the root of al- most all other diseases of lymphatic debility. In some cases, however, scrofula appears as a decided tendency in the habit, without occasion- ing other diseases, and sometimes there are inflammations and ulcerations in different parts of the body to which we can give no other name than the general one of scrofula. The marks of a scrofulous tendency, and the general cha- racters of these scrofulous irritations, it there- fore behoves me more briefly to point out. A fine transparent skin, a full blue eye, and an ex- traordinary whiteness of the teeth, are the signs of the scrofulous diathesis which are most usually pointed out by authors; but it has been with

propriety remarked, by other writers, that a dark eye and dark hair are frequently connected with the scrofulous tendency ; and when that is the case an apprehension of its consequences upon the system would seem even to be better founded than in the former case, since the lymphatic and glandular irregularities to which it disposes are of a more torpid, more fixed, and more deep-seated kind. Consumption of the lungs creeps on

insidi- ously upon these subjects : insidiously since there is not that external disposition to lymphatic irri- tation in so great a degree as in the more obvi- ously scrofulous. In these the lymphatic glands in the neck, in the axilla, and indeed in all parts where they are found in abundance, are very apt to take on a diseased state, and when from mere inflammatory irritation they form into open ulcers or abscess, these ulcerations are called scrofulous. Now one very remark- able characteristic of these tumors, when they come to ulcerate, is, that they do not pour out pus, properly so called, as humors of other kinds and other parts do, but a sort of curdy chalky-like matter issues from the wound, which John Hunter has described as the coagulating lymph, deprived of its serum ; it would seem however to he a peculiar secretion, occasioned by the condition of the lymphatic vessels when thus the subject of scrofulous irritation. Scro- fulous ulccrations are exceedingly difficult to heal, and will often continue for months in an indolent kind of state with irregular edges, indeed when they tend inwardly upon the bones they last sometimes in this state for years, and come to produce erosions, and exfoliations, and caries, the history and progress of which will fall to be detailed in the article SURGERY.

The cure of scrofula is generally directed to the treatment of its particular manifestations ; but we shall have occasion to offer a few remarks on this head in another place.

Dropsy is another affection which has to do in an especial manner with the absorbents. This disease is constituted by a collection of lymph into cavities, which, not being taken up and re- turned into the blood vessels, remains as extra- neous mailer, and causes the swellings by which the complaint is characterised. The different kinds and species of dropsy, when they arise principally from inflammatory irritation, and when they are rather the result of pure and direct debility in the exhalant and absorbent vessels, will be canvassed forthwith under the head of Dropsy. It may be here sufficient to remark that in no case, either of general or local dropsy, can the malady be established without an absorption disproportionate to the exhalation, and that consequently dropsies have a singular right to be classed as lymphatic diseases.

(if rickets scarcely any thing further need be eaid than that it is almost the same affection with mesenteric atrophy ; and how the ncketty growth of bones becomes established in that affection namely, from the blood-vessels not receiving their due supply of «ood chyle, we have al- ready endeavoured to explain."

Mollifies ossium, or softness of the bones; ir. which indeed they become so deprived of thtir osseous matter as to lose all the character

of bones, is a disease not of very ordinary oc- currence. When, however, it does take place- it must necessarily be m the way of either defi- cient action in the exhalants, or excessive, or rather disordered, action in the absorbents, by which either a disproportionate quantity of osseous matter is taken up from the bones and reconveyed into the circulation, or there is an insufficient secernment of this substance from the blood-vessels.

But perhaps we cannot better continue this preliminary view of absorbent susceptibility and peculiarity than by an extract from the elements of Therapeutics by Townsend, a work, which although faulty in many particulars, and in the one of a too hasty reception of the pneumatic doctrines which were prevalent at the time the author wrote, yet contains much of what is cor- rect in pathology, and useful in practice.

Nothing in nature, says Mr. Townsend, can be more worthy of admiration than the vital action of the absorbents ; and it is curious to observe that their activity continues unimpaired whilst sensation and the animal functions are perfectly suspended. This will be evident if we consider that, during sleep, the bronchial mucus is much thickened, and that both the urine and the faces show the continued progress of absorption.

In our wonderful machine, to prevent friction and adhesions, it is required that vapor should be interposed between contiguous parts, more especially if either of them is designed for mo- tion. This the excretories provide ; but, as it must be frequently renewed, absorbents are in- cessantly at work, to convey it back into the mass of circulating fluids. Dr. Musgrave injected twenty-four ounces of water into the thorax of a dog, and in five days the whole was taken up by the absorbents, for the breathing became as free as it had been before this water was introduced into the chest.

In case of dropsy, nature, by means of the ab- sorbent system, makes wonderful efforts to re- lieve herself.

John Hunter relates tlje case of a lady, with swelled legs, who made little or no urine, and was so weak that she could scarcely articulate. She dozed incessantly, and had no desire for food. Her pulse was hardly to be felt, her feet and all her extremities were cold, yet, within thirty- six hours of her death, the whole water in her legs and thighs was absorbed, her urine was increased, and, about ten hours before she died, her legs and thighs were as small as ever. Hoffmann, in confirmation of what is said by Aretseus, assures us, that he has seen many perfectly cured by a spontaneous and long continued diarrhoea. But what is most surprising is, a case recorded by Fernelius, Pathol. lib. 6, in which ascites was re- lieved by the approach of the menstrual period by a profuse discharge of water, which continued for two days ; and when, in the interval of menstru- ation, the serous fluid

had been collected, it was the next month entirely discharged by the uterus.

Some kind of vessels, as I have stated, arc employed to take up the roscid lymph from the ventricles of the brain ; but the office assigned to the common cellular absorbents is twofold ; for they not only imbibe the aqueous fluid from the

ˆeticular part of the cellular membrane, but, when it is needful, they absorb the animal oil from the little bags in which it is deposited, and convey it wherever it is wanted for the purposes of life.

When there is any extravasation either of lymph, of serum, or of blood, they remove it ; and when extraneous matter gets into the sys- tem, if this proves injurious, they quickly go to work ; or, if any part is either dead or useless, it proves a sufficient stimulus to excite their ac- tion.

In cases of gangrene, both sloughing and exfoliation are produced by the absorbents, and thus a separation is made between the living and the dead.

When whole parts are to be removed, as useless, without producing solution of continuity in the surrounding parts, this can he accom- plished only by the action of the absorbents. It is thus the thymus gland, the ductus arteriosus, the membrana pupillaris, are obliterated, and thus also the fangs of diseased teeth, with their sockets, are quietly destroyed. It is by this pro- cess that aged women lose their breasts, when these are no longer needful. When the cataract has been extracted, the absorbents take up the capsule, and frequently, more especially after couching, they carry off the cataract itself. The diseased testicle is removed by them, and some- times in cases of necrosis they devour the bone itself. It is by this process that schirrous tumors are removed.

Du Hamel has demonstrated, by his experi- ments, that the earthy parts of bones, on which they depend for solidity and strength, are unre- mittingly renewed, whilst the absorbents carry off, and exhalant arteries as constantly deposit calcareous matter. This discovery he made by feeding animals alternately with common food, and with this strongly tinged by rubia tinctorum ; in consequence of which their bones were varie- gated red and white. But when he had ceased to give the madder for six weeks this redness vanished.

When either extraneous bodies or dead parts, which cannot be absorbed, cause irritation in the system, the absorbents destroy the intermediate living

parts between the offending matter and the nearest external surface of the body. It is by this process that nature frequently relieves her- self in cases of necrosis and of extra-uterine con- ception. And it is thus that pus, when pro- duced internally, exfoliated bones, and all extra- neous matters, are discharged. But sometimes it happens that, whilst the ulcerative process is destroying the inside of a bone, the ossifying process makes addition to its outside, and the bone increases to a prodigious size ; but in the end the ulceration on the inside gets the better, and the matter makes its escape. Whenever incysted tumors are formed in the cellular mem- brane, the whole substance between them and the skin is in process of time taken up by the absorbents, and then inflammation commences to produce a quicker absorption, which borders often upon ulceration. It is thus that the tumor is exposed. John Hunter mentions a case which Cirnc under bis inspection, in which a tumor, icrir.od upon the brain, excited to such a degree

the action of the absorbents, that without ulcer- ation they carried off the opposing portions of the dura mater, of the scull, and of the scalp.

When there is offending matter in the system, which cannot be expelled by the usual outlets, the absorbents convey it back into the mass of circulating fluids to be thrown out by the emunctories. Thus it is evidently in jaundice ; for the bile, being prevented from passing by thf common duct into the intestines, is taken up bv the absorbents and secreted by the kidneys. Andj when mania and melancholia are relieved by cuticular eruptions, we are probably indebted to the absorbents ; for upon all occasions they are ready to assist nature in her efforts to relieve herself. John Hunter mentions a young man who had a large bubo in the bottom of his belly which, having suppurated and being on the point of breaking, was suddenly absorbed. While this process was going on he observed his urine wheyish and thick, as it was coming from him; but this went off entirely when the bubo- had subsided.

Since the absorbents act, not by capillary at- traction, but with vital energy, which is liable to increase and diminution, it is evident that their activity may be either deficient or exces- sive. But whatever produces either direct or in- direct debility lessens the action of the absorb- ents, because the vital energy is injured equally by both.

I. Direct debility is induced, a. By deficiency of wholesome nutriment, when it fails either in quantity or quality. This we observe among people who live chiefly on the legumina, peas and beans, or on other unfermented vegetables, with dried, smoked, and salted fish, as in Hol- land ; on cucumbers, melons, pompions, and other vapid fruits, as in the watered provinces of Spain; or on bread, water, tea, as in some parts of England. /3. By deficiency of exercise, more especially when the indolent and

inactive spend most of their time in sleep, y. By sudden and profuse evacuations. 8. By im- pure air with excess of humidity, t. By such poisons as are directly sedative, among which I am inclined to reckon bile and the menstrual secretion retained.

II. Indirect debility is induced by excitement either violent or long continued, and therefore by such poisons as are indirectly sedative, that is/ whose first operation is stimulant. We have seen, by the experiments of the Rev. Dr. Hales on vegetables, that their vital energy constantly accumulates during the night, and is to a certain degree exhausted by the stimulus of light and heat before the middle of the day. And we observe, not here particularly to mention heat, that wine,, spices, spirits, have precisely the same effect on the absorbents, as may be seen in gluttons, and in drunkards whose spleen, pancreas, and liver are frequently discovered to be schirrous.

The consequence of defective action in the ab- sorbents must be disease, such as obesity, indo- lent tumors, aqueous accumulation, and herpetic eruptions.

Excessive action of the absorbents produces atrophy, and may arise from either general ex- citement, as in acute fevers, or partial stimulants. The stimuli may be irritating substances, such as

tears passing constantly over the cheeks ; or pressure, whether by external objects, by indo- lent tumors, by pus, or by aneurisms, all which cause the lymphatics to absorb, not only mem- branes and muscular fibres, but the bones. Thus, in case of a large aneurism of the aorta pressing against the back-bone, the artery is first absorbed where it comes in contact with the bone, and continues to waˆte till the whole is taken up, after which the bone itself is soon consumed; but, as the surrounding parts unite by adhesive inflammation, a cavity of some strength for the circulating blood is always kept entire, and no extravasation can take place, nor can the parts readily give way. Thus also, when in palpita- tions of the hoart repeated pressure is made upon the ribs, they likewise are absorbed. We must suppose not only excessive but mistaken action of the absorbents, when, from external inflam- mation in the eye, they take up both the crystal- line and the vitreous humors, leaving only a bag of water. When this happens to cataracts pro- duced by contusion, and therefore by inflamma- tion, we must attribute it, not to morbid action, but to the well directed efforts of nature to re- lieve herself.

One species of morbid action in the absorbents is not easily reconciled with the general laws of the animal economy, but the effect is too readily discovered, which is when they convey poisons into the system, such as the variolous, syphilitic, cancerous, canine, and others. Nor can we understand for what reason they translate matter from cancers and scrophulous tumors to distant, and sometimes to more noble parts, than those which suffer. This however, like many spas- modic affections, seems to be merely an effort of impatience, whilst the ordinary efforts appear to follow the most calm deliberation, and to be di- rected always by the best intention.

With regard to the general indications of cure in morbid action of the absorbents. — These must be derived from a consideration of the causes which produce morbid action, whether it be de- ficient or excessive.

In cases of defective action of the absorbents, the first attention must be paid to diet, which should be mild, yet generous, consisting of such articles as are most easy of digestion, with a moderate quantity of spice and wine. Further to assist the digestive powers of the stomach, and the general action of the absorbent system, re- course must be had to air and exercise. It is Boerhaave who has left us this direction : — Turn ut optime digeri queant, condimentis, potu vino- so, exercitio, ae're, procurandum, § 1 176.

By experience, all medical practitioners have been convinced that health and vigor depend upon the air we breathe : but no one, till Dr. Beddoes wrote upon the subject, was ever able to explain what the air contributed towards heat and life. They had observed that the blood ac- quires a florid color by passing through the lungs, precisely as when venal blood is exposed to the open air. They had remarked that the blood of those people was most florid who used most ex- ercise ; and that even the blood of horses after a long journey was more florid than when they had oeen confined without exercise in stables. They VOL. XIV.

saw clearly that the blood of a cachectic woman is watery and of an obscure red ; but that by in- creasing the blood's motian with friction, eier- cise, and medicine, it recovers its bright color This change they attributed to its passage through the lungs, where, according to Galen and the ancients, it received some spirit from the air im- parting vital energy to the arterial blood. Boer- haave, from whose Institutes these quotations are taken, also asserts that the lungs receive some- thing from the air, the nature of which he con- fesses himself unable to discover; but, in order to account for the red blood of fish, and the red- ness of the punctum saliens in an egg, he observes, that the gills of fish supply the office of lungs, and that air penetrates the egg to support the life and growth of the included chick, (

202.

Baron Van Ssvieten, in his Comment on the Aphorism of his master, Boerhaave, wherein air is recommended, has remarked, that prisoners ex- cluded from the air, and patients long confined to hospitals, become cachectic ; that in such situa- tions it is very d ifficult to cure them ; and that hence we may understand, why atrophy attends affec- tions of the lungs, even when little is discharged by spitting, or lost by sensible evacuations. S

1174, 1176.

Exercise increases respiration and promotes the oxygenation of the blood ; and by this it gives vigor to the system, and excites the action of the absorbents. It is the circulation of the blood which distributes vital energy to every part; for in syncope, and even in death, when it is a consequence of suffocation, all the vital or- gans remain perfect and entire ; but for want of distribution of vital energy, by the circulation of blood, neither the heart, the lungs, the stomach, nor the brain, can perform their office ; there is neither secretion nor excretion, and all action, both vital and voluntary ceases.

In those cachectic diseases, in which the cir- culation of the blood is languid, in vain will you pour in nutriment, unless at the same time by air, by exercise, and proper medicines, you promote the circulation, and consequently the secretion with the vital energy of the absorbents. Muscu- lar motion, by compressing the veins, sends the blood with increasing vigor to the heatt, which strongly stimulates that organ ; the respiration is much quickened, the blood becomes highly oxy- genated in its passage through the lungs, and in its return excites the heart to more powerful exer- tion, by which the whole arterial system is dis- tended. This stimulates the vessels to contract with vital energy ; the action and eaction are great ; the contractions strong ; all is activity, all is vigor. Hence it is that if, of two brothers, one takes to a sedentary life, and the other is constantly engaged in hunting, shooting, fishing, or in the cultivation of the earth : this, with a ruddy countenance and rigid fibre, will enjoy high health ; whilst the other pale, bloated, and relaxed, will be incessantly consulting his phy- sician.

Of the different kinds of exercise none is to be preferred to riding, because it agitates every part of the machine, and most powerfully pro- motes the action both of the exhalants and absorb-

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ents. Sydenham relates the case of a friend, who, by neglect of exercise, had brought himself into so deplorable a condition, that he was dying of a colliquative diarrhoea, which no medicines could relieve. This man, by the advice of his sagacious physician, mounted his horse, defied all weather, paid no attention to his diet, but rode at first short distances in proportion to his strength, and continuing this practice without in- terruption for many months, came at last to ride his twenty or thirty miles a day without fatigue, and was restored to perfect health and strength.

Dr. Stack was consulted by the relations of a young nobleman then dying of atrophy, as it was thought, in Paris, to whom he recommended the Bath waters. The young nobleman was driven to despair by this advice, because he could not walk across his room, and was confined chiefly to his bed. But the marchioness his mother, a lady distinguishexl for spirit and resolution, prevailed on him to rise, supported him in his carriage, re- vived him with cordials when he fainted, and, by short stages at first, in less than six weeks brought him to my friend at Bath in perfect health.

In a very ancient history of Cornwall mention is made of M. Atwel, a clerical physician, who infallibly cured all diseases ; and so great was his celebrity, that patients travelled to him from every part of the island west of London, to know what quantity of apples and milk, (for, excepting manus Christi, and such like cordials, that was the only medicine he prescribed,) would be good for them. Few of these, if they came from a great distance, consulted him in vain ; before they got home they were restored to health. Carew's Survey of Cornwall, p. 60.

Sydenham assures us, that he has frequently cured both tabes and phthisis by horse exercise and long journeys, when all medicines had been given in vain, and this not merely in the incipient stages, but when night sweats and diarrhoea, usually the concluding symptoms, had appeared. Morton expresses in most energetic language some sentiments respecting the benefits to be de- rived from air and exercise, and we may venture to affirm, that most kinds of cachexy may be cured by these alone, even without the aid of a physician.

Frictions, in some degree, answer the end of exercise, by diffusing vital heat and promoting the circulation of the blood. The benefit to be derived from hence is evident in horses, who never enjoy high health when confined to stables, unless they are well combed and brushed.

Bandages, by pressure, assist weak vessels and promote absorption. It is for this reason that Boerhaave recommends compression in diseases of the

weak relaxed fibre, because when either fibres or vessels are distended beyond their tones, their vital action will be weakened till it is wholly lost. And John Hunter has admirably stated that the best exciting power is pressure, which, if urged beyond the point of ease, sets the ab- sorbents of the part to work, for the purpose of removing either the substance pressing or the part which is pressed. These therefore, in some casrs, m.iy be usefully applied-

1 n cachectic patients, attention must be paid

to the organs of digestion, which are usually de- ranged, and loaded either with indigested sordes, corrupted bile, or phlegm. If the stomach is af- fected, an emetic must be given ; or, if the smaller intestines require to be cleansed, gentle cathartics will be required, which in most cases may be followed by tonics and astringents. This Boer- haave has enjoined.

Ut vero organa primarum coctionum itidem bene disponantur, leni digestive, vomitive, pur- gante roborante, prospiciendum, § 1177.

But, whilst emetics prepare the digestive or- gans for tonics and astringents, they in many cases serve another useful purpose, by promoting absorption in every part of the system. Cathar- tics have the same effect, and among these none is more powerful than mercury, whether exter- nally or internally applied. Indeed every in- creased evacuation excites absorption from dis- tant parts, but, independent of this effect, mercury stimulates the absorbents, and thereby excites their action. Diaphoretics and diuretics unequi- vocally act upon the absorbents.

But the most effectual stimulant in all cachec- tic cases, attended by diminished excitement, is steel. This was the favorite remedy of Syden- ham, and Boerhaave, and it has continued to maintain its credit, in the hands of all the most successful practitioners, to the present day. To this Dr. Smith owed his celebrity ; and, from the experience of thirty years, I can venture to as- sure the student, that in few cachectic cases will it ever fail to cure. Professor Van Swieten says, ‘ In practice I have met with innumerable cases in which cachexy has been cured by this remedy alone, joined with grateful aromatics, after mild evacuants had cleared the first passages from mucus, filth, and indigested food ; and he par- ticularly assures us, that by steel filings he never failed perfectly to cure cachectic virgins, provided they consented to take air and exercise, and to avoid warm liquids.’

Chalybeates have certainly a two-fold effect ; for as the natural vehicle of oxygen, and the constituent principle of red blood, they strengthen the digestive organs, and they excite the absorb- ents. Indeed all the metallic

oxides, excepting the mercurial, act in the same manner, only in a superlative, and, therefore, in a less manage- able degree. For this reason iron has maintained its empire; and whilst we have one oxide, which, when conjoined with the inhalation of vital air, in these cases may he regarded as in- fallible, we need be less solicitous about the rest.

I cannot conclude this article without making mention of electricity, which, as a powerful sti- mulant, has not only reduced swellings from sprains, and promoted the speedy absorption of considerable glandular and scrofulous tumors, but is known to attenuate fluids, and to excite strong action in the animated fibre, by which, among other remarkable effects, it quickens vegetation, increases perspiration, and restores the menstrual flux.'

Had our author been writing at the present moment he would have added, to this recommen- dation of electricity, the Voltaic modification of it ; for it will be seen throughout the whole of

the long extract which we have made, that there is a readiness evinced on the part of the author to receive every modern suggestion as an im- provement.

Had he lived too to hear of the late experi- ments of Magendie, he would gladly nave availed himself of them in adding moderate and judicious depletion as one of the most powerful means we possess of exciting the absorbent action. The experiments of the physiologist we have just named have always appeared to us exceedingly important in reference to this parti- cular, and we should be disposed to place the practice referred to at the head of stimuli to the absorbent faculty. The principle upon which it proves to be so, seems that of removing a load from the vessels, and thereby enabling them to act with more freedom. We may here then advert to some important experiments of Ma- gendie in referencejto this point. ' I endeavoured,' he tells us, ' to ascertain by experiment the influence upon absorption which should be excited by a state of fulness in the sanguiferous vessels. Having injected into the veins of a dog a certain quantity of water at the tempera- ture of 40° (105° of Fahrenheit), I introduced into the pleura a solution in alcohol of nux vomica, the absorption of which was proved by its speedy and powerful effects. The effects, however, were not so immediate as had been the case when the veins were not thus previously injected ; and in repeating the experiment, with a still greater quantity of water in the veins, I found tnat the effects of the poison were in the same measure more tardy in showing themselves; at length having thrown in as

much water as it was possible for the animal to receive while he continued alive, the poison which in ordinary circumstances would have operated in less than two minutes, had not affected at the end of half an hour.'

' The condition,' Magendie continues, ' of the blood-vessels in reference to their plenitude was shown by these experiments to possess a con- siderable influence upon their absorbing power. What then, it became interesting to ascertain, would be the effects of an opposite state of these vessels? This was likewise put to the test of experiment in the following manner: a dog having been largely bled, the same quantity of nux vomica solution was thrown in, as in the former experiments, and the poison manifested itself in little more than half a minute, while, under ordinary circumstances, it would have required two minutes to produce the effect.

The veins of another dog were opened, and a given quantity of blood having been withdrawn, it was replaced by an equal quantity of water ; in this case the absorption of the poison took place about the ordinary time.'

By these experiments then it is clearly mani- fested that plenitude of vessels, beyond a due proportion, interferes with the absorbing agency, and hence blood-letting, properly regulated, proves itself to be a stimulus to the absorbents, and is thus applicable to several diseased states that demand – ultimately stimulating and sup- porting remedies.

There are some other medicinals beside those

mentioned by Townsend, which likewise seem especially to operate upon the absorbent faculty. Digitalis may.be instanced as one of these ; hence its utility in dropsical swellings; and hence it has been used in those mesenteric affections to which we have above alluded, as the radix and source of many disorders incident to children. See the two first genera in the present class Iodine too, which has lately been employed for the discussion or dispersion of glandular en- largements, particularly that enlargement of the thyroid gland called bronchocele, seems as far as its influence can be traced to expend its virtues mainly upon the absorbents. We must not, however, expect to be able to trace this exclu- sive agency upon one part of the frame through the action of any one power or any one medi- cinal, but at the same time it much assists the therapeia of medicine thus to observe the par- ticular influence of some drugs, or some exci- tants upon one more than another portion of the system ; and, while we should be careful not too hastily to generalise, we should avoid being merely empirically observant. The exciting passions, as well as those that are sedative and depressing, may be made to stimulate the absorbents as well as other parts of the frame. In this case the influence is probably an exten- sion of that which is primarily communicated to the sentient part of the organisation ;

and it is more than probable that hope and confidence, as well as exercise, had to do with these cures to which Mr. Townsend alludes as resulting from the invigorating and exciting power of exercise ; indeed, the medical practitioner should never act without the recollection of the astonishing influence which the mental faculties possess over the physical functions of the frame, and, in those instances where the manifestation of good has principally been made through the medium of the nervous system, it may be that a considerable portion of the therapeutic effect has actually been produced through the blood-vessels and absorb- ents.

We now, then, proceed to consider the order and genera which Dr. Cullen has introduced, in some cases with obvious impropriety, into the class cachexia.

413. Order 1. WASTING. Emaciation.

Tabes. Atrophy. — The former with hectic fever, as having more to do with the absorbent system ; the latter being without hectic, and there- fore, although the falling away in flesh and strength must necessarily in its course be con- siderable, connected with the absorbent power, yet the nervous or sentient system seems to be the part primarily and principally affected.

‘ When,’ says a modern author, ‘ the falling away in flesh and strength is connected with a disordered condition of the nervous and muscu- lar energy, those plans of treatment are required which give tone and vigor to these parts of the frame; such as the vegetable bitters, the vari- ous barks, and the metallic tonics. When the complaint is rather tabid than atrophic, and the lacteal system is especially implicated, medi- cinals are called for, which stimulate this portion of the system. For the tabes mesenterica of infants I have found nothing better, in the gene-

nil way, than the hydrargyrus cum cretA of the Pharmacopoeia, with very small doses of digitalis.

R Hydrarg. cum creta gr. ij. Fiat pulvis omni nocte sumendus ex vehiculo

Take of quicksilver with chalk two grains. Make it into a powder. To be taken every night in something thick.

Tinct. digitalis n. ij. ter in die sumendse gra- datim augens quantitat. usque ad n. vj.

Let two minims of digitalis be given three times a day, gradually increasing the dose to six. This combination of medicinals seems to be de- obstruent, and excitative of the lymphatic and lacteal vessels ; and in more advanced life, when nutrition seems impeded in consequence of de- fective action in the mesenteric absorbents, stell will, in general, prove one of the best stimulants. It will, for the most part, I think, be found, that steel is rather applicable to the tabid state, and other tonics to atrophia.

414. Order 2. SWELLINGS. — Corpulency ; pneu- matic swelling ; tympanitic, or drummy swelling; uterine inflation. Physometra. — The same au- thor from whom we have extracted the above, places these four genera together and upon them makes the following remarks : — Corpulency needs no description ; its obvious remedy is to lessen the ingesta, and increase the absorbent energy, which is best done by exercise. Emphy- sematic, or windy, swelling, is occasioned by a collection of air in the cellular membrane : it is attended, as the definition states, with a crepitat- ing or creaking noise, and occasionally spreads over the greater part of the body. It is some- times produced by wounds in the lungs, some- times arises spontaneously, or without any manifest cause, and occasionally occurs in an inexplicable manner, from certain kinds of food that prove poisonous. When the collection of air is excessive, so as to prove troublesome, and happens in the thorax so as to impede breathing, scarifications of the cellular membrane will be found necessary. In all cases the occasional cause is of course to be sought for, and if possi- ble subdued.

Of the drum-belly, as it is called, there are two species ; the one abdominal, occasioned by a collection of air in the peritonaeal cavity; the other intestinal, formed by air in the cavity of the intestines. In the former the swelling is more diffused and equal than in the latter, and there is not that emission of flatus which attends the tympanites. The continuance of either tends to dropsical effusion ; indeed tympanites and ascites are not unfrequently combined ; and they seem occasionally to alternate with each other. At this time I am attending a patient whose ab- domen on one day or week seems distended with flutus, on another there are complete indications if watery collection.

Causes. — Debility in the absorbent or exhalant Sstems ; intemperance, or low living; distend- r>g the stomach with tea, in place of taking jiore wholesome and substantial nutriment. Sometimes the suppression of ordinary evacua- f.ons will occasion tympanitic enlargement. Men- tal anxiety will produce it.

Diagnosis. — From dropsy, tympanites is dis- tinguished by there being in the latter no fluctu- ation, while the former is without crepitus. There is not, necessarily, in mere tympanites codematous swellings of the ancles, nor paucity of urine.

Prognosis. — Obstinate cases of abdominal tympanites often prove fatal. The intestinal is of a more fugacious and symptomatic kind, and is remediable by the removal of the causes upon which it has depended.

Treatment. — Expulsion of the wind in the first instance, and restoration of tone in the second, are the indications of treatment. Carminatives are required to fulfil the former, tonics are de- manded to effect the latter.

R Spiritus aetheris nitrici, Spiritus sulphurici,

Spiritus ammoniae aromaticae, aa f. 3fl. Aquae menthse piperitae f. Jift. Fiat haustus.

Take of spirit of nitric aether of sulphuric ether and of aromatic ammonia of each half a fluid drachm, peppermint water a fluid ounce and a half. Make them into a draught R Decocti aloes compositi,

Infusi cascarillae, a a f. 3vj. Fiat haustus.

Take of compound decoction of aloes and infusion of cascarilla of each six fluid drachms. Make them into a draught. R Pulveris aloes compositi,

Pulveris cinnamomi compositi, aa gr. viij. Olei carui n_ ij. Mucilaginis acaciae q. s. Fiant pilulae iv. ; bis terve in die sumendse.

Take of compound powder of aloes and con; • pound cinnamon powder of each eight grains, oil of caraway two minims, mucilage of acacia enough to make four pills. To be taken two or three times a day.

Warm plasters, as the cumin and compound galbanum plaster, may be laid on the abdomen with advantage ; the abdomen, too, may be ban- daged : if the species be abdominal, and not intestinal, puncturing may be had recourse to.

In order to restore tone, the barks, especially cascarilla, are indicated, or other tonics ; while during their use, as well as during the employ- ment of warm purgatives, all flatulent articles of diet must be carefully abstained from, more es- pecially the legumina — beans and peas.

Uterine inflation we cannot suppose to take place to any extent, unless there be some vaginal obstruction to the passage of the air. It seems,

however, to be an admitted fact, that air does occasionally collect in the womb, and discharge itself from the vagina in considerable quantities, and considerably to the annoyance of the pa- tient.

413. Dropsies. — In the proem to the present article will be found some intimations principally extracted from a modern writer on the general pathology of dropsical affection ; it will be ob served that the principle of referring watery accumulation to any one cause was combated ; and it was moreover intimated that pathologists

of the modem school, in their eagerness to oppose the old assumption of dropsy being attributable to debility, had in some instances too largely and gratuitously inferred the necessity of inflamma- tory action previous to the throwing out of the serous collection const, tutmg the disorder.

It was at the same time admitted that these inflammatory conditions are necessary to be recog- nised under several circumstances of dropsy ; and upon the whole it was concluded that a mixture of the old and new admission of hydropic pro- duction is that which is likely to lead to a cor- rect view of the subject

We now proceed to illustrate these principles by considering the several affections which are comprised in the class ; but we shall not pursue the same order which Dr. Cullen has adopted in the arrangement of the genera, for we consider the more natural arrangement to be that of dropsy of the abdomen (ascites), of the chest (bydrothorax), of the womb (hydrometra), and of the head (hydrocephalus). Hydrorachites or spinal dropsy, and hydrocele or dropsy of the scrotum, will be treated of in the article SUR- GERY.

414. Dropsy of the abdomen. Ascites. — It will be recollected that, when treating of inflam- mation generally, we adverted to two distinct kinds of this disordered action, viz, the phleg- monous and the erysipelatous, the one being cir- cumscribed and deep seated, and more espe- cially tending to suppuration ; the other being spreading, and membranous, and disposed more particularly to effusion. Now there is one spe- cies of dropsy which has its origin in this ery the- matic kind of inflammation ; and it is absolutely necessary in every case of dropsical effusion to aim at investigating the prior circumstances both local and general, in order to ascertain how far the effusion has or has not been occasioned by inflammatory action. Let us further notice the especial characteristics of that which we may term inflammatory dropsy of the abdomen, a very frequent concomitant of diseased or ob- structed liver. What are the

vascular conditions of the abdomen occasioned by such obstructions to the free circulation of blood through the liver ? It is sufficiently easy to conceive that the blood- vessels which terminate in the vena portze must necessarily, in consequence of this vessel be- coming obstructed either in its trunk or its branches, be more disposed to plenitude than is consistent with their natural condition ; that such plenitude will extend itself to contiguous vessels; that thereby congestions will be induced ; and, should the body at the time be exposed even to slight causes of inflammation, such inflammation will come to be readily established ; that this will assume a chronic, and perhaps indolent kind of character; that where cellular kind of substance exists it will take on an erythematic aspect; and, where other kind of membranous texture is the seat of the inflammation, the disposition will rather be to the effusion of coagulating lymph ; that thus effusions and adhesions will either separately or conjunctively be established, and dropsy will be formed either with or without adhesive unions of membranous structure. But even this kind of inflammatory dropsy m ly at times take place in

the abdomen without the preliminary condition of diseased or obstructed liver. Let it, however, be recollected, that obstruction to free circulation through other viscera may be attended with the same effect. That any circumstance which in- terferes with the due transmission of blood through the substance of the spleen may be the occasion of haemorrhage has already been remarked ; and it may now further be stated, that the same circum- stances of this viscus, which in one subject or at one particular time of life predisposes to hae- morrhage, may, under different circumstances, and at different ages, have a tendency to induce congestion, inflammation, effusion ; and thus to form dropsy. But further, even obstructions to the free circulation through the heart may, under certain tendencies in the body, conduce to the same event. Hence we see affections of the heart and of the lungs, not only terminating at times in dropsy of the chest, but in general dropsy, and dropsy of the abdomen, in which case, as indeed in all others of congestion, in- flammation, and effusion, we have two causes operating : there is the vascular fulness conse- quent upon the blood being as it were thrown back upon the vessels by not having a free trans- mission through the chambers of the heart, and there is the tendency to effusion arising out of the very debility that was the first cause of the obstruction supposed. W'hen then there is in the age, or the constitution, or both, a bias towards dropsical accumulations, we see how readily this is converted into the actual state by any obstruc- tion occurring in the more important viscera, and the most common media through which this kind of dropsy is engendered are the liver, the spleen, the heart, and the lungs. Let then the practitioner, when he is called to judge of the nature and to determine on the treatment of dropsy, always pay great attention to the

con- dition of these respective viscera, and to the pre- sence or absence of general inflammatory irrita- tions. But what is the essence of that species of dropsy which may be designated by the title of serous ? Dropsy, let us recollect, is a pre- ternatural increase of serous exhalation. The immediate cause of it then musl in all instances be a loss of balance between the exhalanls and absorbents; now this want of healthy corres- pondence, so to express ourselves, between these two orders of vessels, may be either positive or relative, that is, the absorbents may continue their due activity, and take up their usual mea- sure of effused fluid ; they may even do more than common ; and yet, from the excessive exha- lations, that more may not be equal to existing circumstances, and dropsical accumulations will take place by virtue of increased activity in the exhalants, which is the case in the inflammatory dropsy that we have just been conceiving. On the other hand, this effusion may not be more than natural or healthy, and yet, inasmuch as the absorbents have lost somewhat of their wonted tone and action, the same accumulation will take place, although in a different manner, as in the former instance. But here, of course, both the systematic and local disturbance will assume a different aspect ; there will in this last case b« more of torpor, and less of irritation, more of

paleness and weakness, and cachexy as it is termed, and less of tendency to partial accumu- lations, to irregularities in the circulation, and to high colored excretions. A late most ii/genious author on the subject of dropsy has made the division into two kinds to hinge principally upon the circumstance whether the urine is loaded or not with serum ; and, consequently, whether it does or does not evince a tendency to coagulate. We believe, however, that the distinction will generally be traceable with more accuracy by recognising other symptoms in combination with that of the urine, as marking the prevalence either of inflammatory action or lymphatic tor- por ; and establishing our principles of treat- ment upon this recognition. Besides the ques- tion, Is dropsy inflammatory or lymphatic? there is another point of moment to ascer- tain in regard to the rationale and management of all dropsical affections, viz. Is it organic, or is it general? In other words, does the ef- fusion which forms the dropsical enlargement depend upon some local condition merely, of the part or viscus in which it is found, or is the local swelling an accidental and particular expression of general affection ? On the diagnostic marks between encysted and other dropsies we shall soon say something further ; it may here, how- ever, be generally stated, that when the dropsical effusion is merely local, it most usually depends upon some accidental source of disturbance in the vessels of the affected viscus which may take place without any

constitutional disposition to serous debility ; but that when the swelling is of a more diffused and general kind we shall usually find, whatever may have been the ex- citing causes, that the actual disorder has been induced through the medium of that kind of habit which we may designate lymphatic, which if not actually the scrofulous temperament is at least nearly allied to it. Having made these pre- liminary remarks, on the rationale of dropsical production, we shall now proceed to treat more especially of ascites or dropsy of the abdomen.

Symptoms^ — The existence of this complaint is for the most part unequivocally marked by pro- tuberance on the belly, attended with fluctuation, perceived by placing the hand on one side of the abdomen, and gently striking on the opposite side. Dropsy of the abdomen may, however, exist, without any perceptible fluctuation.

Ascites is attended for the most part with scarcity of urine, with thirst, and some degree of fever, which usually, especially when it is of the lymphatic kind, partakes more or less of a hectic cast. Now it will readily be understood of what consequence it must be to ascertain the precise nature, both systematic and local, of the com- plaint, before we can set about forming any ra- tional indications with regard to its treatment, or any correct opinions on the probability of its duration and event. Whether is it inflammatory ? and if so, is the liver (the most usual source) or any other part or viscus the seat of the inflam- mation upon which it has depended? or is it lymphatic ? In other words, does it originate in an undue torpor of the abdominal absorbents? Is it organic, merely? that is, does it arise out of the siatc of the organs concerned with primary

reference to the condition of the whole body? or is it rather a mere local expression of general lymphatic weakness ? If the first be the case, that is, if the complaint be inflammatory, we shall find more or less of tenderness upon placing our hands either upon the region of the liver, or upon the surface of the abdomen. We shall find the urinary excretion high colored rather than serous, and the fever will at first be rather of the usual pyrexial type, and only in the course of the malady will it come to put on a more decidedly hectic charater. If too, as is for the most part the case, the liver be the principal organ in fault, there will be present, more or less exquisitely marked, those characteristics which we have previously pointed out as belonging to liver affection, whether the disorder be inflamma- tion, or schirrus, or mere congestion. If the dropsy be merely lymphatic, without any present or prior inflammation, it will for the most part be accompanied with cedematous swellings of an anasarcous kind in the legs and other parts, it will be without local pain or tenderness, and it will from the first have been signalised by a fever rather of the hectic than the common type. If the disorder be the result of some merely local inflammation, the

inflammation of the part will have been of a decided kind, and often it will have depended upon some exterior or local cause. In each case the required treatment will vary, and saline, stimulant, or absorbent diuretics, will, according to circumstances, come to be em- ployed with greater or less propriety and effect.

Prognosis. — The prognosis in dropsy of the ab- 'omen will be always unfavorable if the disorder s accompanied by much indication of liver dis- order, by marks of broken down stamina, and attended at the same time by the symptoms of slow inflammation going on in the peritoneal membrane.

Treatment. — What medicines, let us enquire, will it be proper to employ in case of inflamma- tory or congestive dropsy? Bleeding is recom- mended by some practitioners to a considerable extent, seeing that the effusion is brought about by the local plethora, and to lessen such plethora is thus to strike at the root of the disease. For the most part, however, we should be disposed to institute bleeding upon different premises, and consider it indirectly stimulant to the absor- bent energies, upon the principle we have re- cently referred to as established by the experi- ments of Majendie.

Although we would by no means say that there may not be instances of inflammatory dropsy, in which a large use of the lancet may provo bene- ficial, we think it of moment to caution the un- wary, in reference to bleeding, of the high pro- bability of doing irreparable mischief by making too free with the loss of blood. It is in this kind of dropsy especially that the saline purgatives are of so much efficacy; and the supertartrite of potass, or crystals of tartar, hold justly a high consideration in dropsy of the belly accompanied by marks of lurking inflammation. In doses of a drachm, three or four timed a day, this medicine will often act kindly upon the kidneys, and prove at once aperient, anti-inflammatory, and diuretic. The acetate of potass too, in doses of about a

scruple or half a drachm, is a saline deobstruent in these cases of considerable efficacy ; and even the subcarbonate of potass alone, especially when aided by much dilution, is a medicine of no mean virtue when employed with a view to its diuretic and antihydropic qualities. Its dose is about fifteen grains.

With respect to purgatives of a more drastic nature, which are recommended and used in ascitic cases, there ought to be some caution used lest we induce or rather increase the inflam- matory disposition.

PURGATIVES. R Pulv Jalapae 3ft. Zingiberis 9ft Ol. juniperi ny. Fiat pulvis: semel bisve in die sumend.

Take of powder of jalap half a drachm, of ginger half a scruple, oil of juniper one minim. Make them into a powder to be taken once or twice a day.

R Pil. hydrarg. 3j. Pulv. scillae 3ft. Extract, colocynth. 9iift. Ol. juniper tt).xij. Syrup q. s.

Fiat massa; in pilulas xxx divid., sumat ij ter jn die.

Take of blue pill one drachm, powder of squill half a drachm, compound colocynth extract two scruples and a half, oil of juniper twelve minims, syrup enough to make into a mass, which divide into thirty pills, two to be taken three times a day.

There is one medicine which seems to operate almost with specific virtue in abdominal dropsy, and that is the elaterium (wild cucumber). While, therefore, we should be cautious in the administration of gamboge, or of scammony, in dropsies accompanied with hepatic inflamma- tion, we should never hesitate in the employment of the elaterium, one grain of the extract of which, or in some cases only half a grain, acts often almost with the efficacy of a charm, and does not seem to be followed by so much debility as we might a priori be led to suspect. This medicine indeed seems to be applicable to either species of dropsical affection ; and proves salutary, whether the serous effusions have depended upon mere lymphatic torpor, or have been brought about by chronic inflammation. It is to the lymphatic species of dropsy that the digitalis seems more especially applicable ; and this fact, to which Dr. Blackball alludes, would seem to establish the principle to which we have formerly adverted, respecting the stimulating quality of this medi- cine, when used so as to gradually act upon the absorbent system of vessels. Upon the whole, however, we are inclined to think that, where we require active measures in the way of procuring large and sudden evacuations, the foxglove must be thought of with considerable reserve, and it is certainly much more objectionable in the general way than the elaterium.

Among the more stimulant diuretic?, applicable especially to the lymphatic species of dropsy, we may mention the lytta (cantharis). This sub- stance requires of course at»?ntion to its progres-

sive and peculiar effects; since improperly em- ployed, or in too large doses, it is apt to prove the very contrary to a diuretic, and has been known actually to excite an inflammation in the kidneys. We have generally, for

the purpose of preventing these probable consequences of the misuse of canthandes, been in the practice of combining with it another diuretic of a different class, but which can scarcely ever be objection able, viz. the spiritus setheris nitrici; about fifteen minims of the tincture of one, and thirty or forty of the other, with two or three drachms of muci- lage of acacia, form a good and beneficial com- position in many cases where we wish for the operation of a stimulant diuretic. Squill is another medicine of much reputed efficacy in dropsy ; but perhaps more applicable to dropsy of the chest than of the abdomen. On oil of turpentine much praise has been bestowed by some practitioners, and tobacco has been also ex- tolled. The meadow-saffron also, the colchicum autumnale, has been much praised both in drop- sical and some other affections. The copaiba too is possessed of diuretic qualities and may be applica- ble to dropsy. Mercury also is a powerful remedy for dropsy, but we think with Dr. Black hall it has been too often not only indiscriminately but mis- chievously used : such indeed is the power of this medicine upon the lymphatic and absorbent sys- tem, that it is not uncommon to see persons fall into a dropsical state after the liberal use of mer- cury, which may indeed partly depend upon the tendency this medicine has to excite internal ery- thematic inflammation, but is more especially attributable to the debility engendered in the lymphatic vessels by their being from mercury's protracted use kept in a condition of inordinate excitement.

Stimulant, saline, and absorbent diuretics, are the three divisions which may be made of these medicinals. And there certainly seems a foun- dation, in fact, for such division. Thus we have squill, we have lytta, we have turpentine, which appear to increase the flow of urine, either by a sort of direct or specific action upon the kidneys themselves, or by exciting such an action on th« stomach, and such influence being propagated by the nerves to the kidneys. Saline diuretics, such as crystals of tartar, acetate of potass, carbonate of potass or soda, nitrate of potass, or nitre, are on the other hand supposed to be received into the circulation, and, passing off with the urine, to stimulate the vessels of the kidneys, and in- crease the quantity secreted. This mode of operation does not appear, however, quite satis- factory to the mind ; and it certainly is not con- fined to the saline class of diuretics, since the copaiba and the turpentine, among the stimulant order of these medicinals, appear to be taken up into the circulation, and to pass off by the kid- neys in this somewhat inscrutable manner. 'There is still perhaps another mode,' says a writer on the materia medica, ' in which certain substances produce a diuretic effect, and that is, by pro- moting absorption. When a large quantity of watery fluid is introduced into the circulating mass, it stimulates the secretory vessels of the kidneys, and is carried off by the urine, therefore,' continues this writer, 'absorption be

promoted, and if a portion of serous fluid, per- haps previously effused, be taken up, the quan- tity of fluid secreted by the kidneys will be increased. In this way digitalis seems to act ; its diuretic effect is said to be greater when exhibited in dropsy than it is in health. — Murray. Now it will be found useful to fa- miliarise our minds with these various modes of operation in diuretic medicinals, since, as we have above seen, both their efficacy as diuretics, and their propriety of exhibition, are materially dependent upon the precise condition of the frame in which they are employed. We shall not again go over the ground of these dis- tinctions and respective requirements, but shall content ourselves with saying, that in the lytta we have an example of the stimulant ; in the ace- tate of potass of the saline ; and, in digitalis, of the absorbent order of diuretics.

Before we quit the subject of the treatment which is requisite to disperse dropsical accumu- lation, it may be right to mention that the prac- tice of tapping in abdominal dropsy is one which, both in reference to the time at which it is done, and the circumstances under which it is proper to do it, demands some discrimination : if per- formed very early, it may have proved an unneces- sary interference; and, if deferred very late, it .nay not only add to the prevailing irritation, but be likely to produce an inflammatory affec- tion of the peritonaeum, which the patient, in his weak condition, will not be able to encounter. Although often of considerable temporary ser- vice, tapping can never be looked upon as a radical remedy ; and, when we are convinced of much and extensive disorganisation of the liver, it is better for the most part to decline it. Puncturing or scarifying the thighs, when ana- sarca accompanies ascites, will often diminish even the abdominal tumor ; and this last practice need never be objected to ; but the application of blisters, to produce the effect of drain, may, in the weakened and irritable state of the body, give rise to sloughing sores.

Another important indication in dropsical af- fections remains to be spoken of, namely, how the re-accumulation is to be obviated. It is evi- dent enough that such kind of diet should be selected for the individual as would prove nou- r.shing without increasing irritation ; and, when there is not any objectionable decree of irritation present, tonics are certainly called for; indeed, we are inclined to think that our vascular and inflammatory notions in reference to this, as well as to other diseases, forbid, to rather too great an extent, the exhibition of supporting powers, lest we should augment the inflammatory dispo- sition. Let it be recollected how serviceable Peruvian bark often proves in erythematic in- flammation, as in St. Anthony's Fire, occurring in certain conditions of the system; and let the

;inalo<.ry be acted upon with caution in reference to dropsical inflammation. The following ob- servations on the bark and steel we extract from IV. Blackball. 'Perhaps practitioners,' says Dr. B., ' are too much in the habit of considering bark and steel as equivalent where tone is want- ing. In the present disorder it is far otherwise, bark being to be preferred after dropsy of young

persons, of acute disease, and of sound stamina ; steel being suited to a vitiated rather than to a feeble habit, and indicated more by a pale sallow complexion, and want of red color in the blood.'

415. Dropsy of the chest. Hydrothorax.

Symptoms. — Difficulty of breathing, especially in a horizontal position, or upon more than com- mon exercise; sudden starlings from sleep ; pale- ness of face, with occasional flushes of a hectic kind ; starting out of sleep, with palpitation and oppressed breathing; numbness of the arms, or occasional pains in them; diminished urine and thirst ; irregularities of pulse, and oedematous ancles.

The symptoms indeed vary according to the part of the chest implicated in the disorder ; the effusion constituting the dropsy is sometimes confined to the pericardium, and in that case the patient is not so much inconvenienced by a hori- zontal position. Sometimes the subject of hy- drothorax finds the impediment in breathing come upon him immediately upon lying down, at other times the dyspnoea is more gradual in its induction; and in this last case we may sup- pose the water to be rather in the substance of the lungs than in the cavity of the pleura, as the communication of the effused fluid is not so rea- dily made from one to another portion of the cellular structure. When palpitation of the heart is a prominent symptom, we are generally dis- posed to infer that the effusion is principally into the pericardium. These irregularities of the heart occur, however, in consequence of the general obstruction to respiration and circulation that ef- fusion into any portion of the chest supposes ; and it is not easy to fix upon any one pathognomic symptom as indicative of one or another portion of the thoracic system being disordered.

Causes. — Hydrothorax, like ascites, may be the result of obstruction, or lymphatic debility, or membranous inflammation. It is very often symptomatic of other disorders, and not uncom- monly connects itself with ascites. Its exciting causes are those which produce dropsy generally. Long continued asthma gives a tendency to, and often terminates in, hydrothoracic effusion.

Diagnosis. — The accompany ing dropsical indi- cationsx, such as oedema

of the ancles, and paucity of urine, and thirst, generally distinguish hydrothorax from mere dyspnoea ; than these last two hydrothorax is in the general way more perma- nent and less intermitting. The fluctuation externally, of which systematic authors speak, can very seldom be detected, even when the fluid is in the thoracic cavity. When fluctuation is perceptible it is generally matter or pus which causes it, and this the result of active inflammation on the chest.

Prognosis. — When much organic disease, or any change of structure, has induced the ail- ment, the prognosis is for the most part unfavor- able; and it is seldom that the malady is per- manently overcome when it may have resulted from chronic and insidious inflammation. We ought always to be guarded in our prognosis, even when we suspect fluid in any part of the thoracic cavity ; for it is very often that the patient under these circumstances dies suddenly : a mere turn of the body will occasionally extinguish Hf>*

MEDICINE.

Treatment. — Squill and foxglove seem more especially adapted for water in the chest, as ela- terium seems applicable to abdominal dropsy, and with these small quantities of mercury are to be added should there be any attendant symp- toms denoting hepatic affection.

R Pulv. digitalis purp. Pulv. scillae, aa gr. xv. Pil. hydrarg. 9j. Camphorae 9ij. Ol. juniperi W[viii. Syrupi q. s.

Fiat massa; in pilulas xxx. dividenda. Surnat ij ter in die.

Take of powder of foxglove and squill of each fifteen grains, blue pill a scruple, camphor two scruples, oil of juniper eight minims, simple yrup enough to form a mass, which divide into thirty pills. Two to be taken three times a day. R Tinct. cantharid. n^xij. Sp. aetheris nitrici 3j. Mucilag. acaciae 3iij. Mistura camphorae ^ift. Fiat haustus ; ter in die sumendus.

Take of tincture of cantharides twelve minims, nitric spirit of ether a fluid drachm, mucilage of acacia three fluid drachms, camphor mixture a fluid ounce and a half. Mix for a draught. To be taken three times a day.

R Myrrhae 9ft.

Ol. juniperi n^ ij. Pulv. rhei gr. vj. Syrup, simp, q s. Fiat bolus ; ter in die sumendus.

Take of myrrh ten grains, oil of juniper two minims, powder of rhubarb six grains, simple syrup enough to make into a bolus. To be taken three times a

day.

R Tinct. colchici f. 3ft

Syrupi aurantii f. ˆft.

Fiat syrupus cujus; sumat aeger cochleare minimm subinde, donee nauseam promoveat.

Take of tincture of meadow saffron a fluid half ounce, syrup of orange peel a fluid ounce and a half. Make them into a syrup ; of which let the patient take a tea spoonful frequently, until nausea be produced.

416. Water in the head. Hydrocephalus. — Dr. Cu. en is remarkably defective in his pathologi- cal account and systematic arrangements of en- cephalic affections. The water in the head, to which he alludes in this part of the nosology, is that congenital kind which some authors have described as the external, to distinguish it from that which is the result of a morbid action, which occurs after birth, and where the effusion by which the malady is constituted, or rather by which it is terminated (for the actual disease often exists long prior to the effusion) is princi- pally found in the ventricles of the brain.

The only notice which he takes of this last affection is under the head of apoplexy; where the student, by turning to the nosology, will find the hydrocephalic apoplexy marked as one of the genera, and defined, apoplexy com- ing on by degrees, attacking children, and indi-

viduals under the age of puberty, attended by febricula, and pain in t'.ie head, which is suc- ceeded by a pulse slower than natural, a dilated pupil of the eye, and drowsiness.

The fact is that there are several ways in which effusion is effected upon the substance or in the ventricles of the brain, one of which con- stitutes the hydrocephalus of the present genus ; which, as we have above remarked, is a conge- nital disorder; the process of ossification does not go on as in other children, but the head, large at birth, continues to increase ; the faculties, in- stead of gradually developing themselves as in other children, are irregular in their manifesta- tion; and, sometimes, with a generally idiotic condition of intellect, the patient will manifest some one particular faculty or sentiment, even in a more than ordinary measure. We recollect one remarkable instance of this kind of hydrocepha- lus, in which the ear for music was extraordina- rily nice and delicate. While the head enlarges the limbs continue small and powerless ; and should the child survive it is obliged to be car- ried about, often even at an advanced age, from want of power and growth of limb.

Sometimes this disorder becomes spontane- ously cured ; at other times the head continues of an enormous size ; but the bony process after a time becomes complete, and the patient lives for some years with a diminutive stature and de- fective intellect; for the most part, however, it terminates fatally. When it only exists to a certain extent it has seemed to us occasionally to yield to medicinal treatment given with a view to act upon the absorbent system. And, even on the day that we are writing these remarks, we have seen the parent of a child who was the sub- ject of this disorder, and whose life was not ex- pected by the parents, but who is now a strong and lively child. Dr. Good mentions the case of an hydrocephalic subject of this kind having a grain of calomel given to it for a length of time every day; and he states that the individual is now a student at one of the English universi- ties. Our own plan of treatment is that of ad- ministering very small doses, gradually repeated, of tincture of digitalis combined with the hydrarg. cum cret&, as mentioned under the head of Tabes. Lately the water has been discharged by a puncture at one of the sutures, in more de- cided cases of hydrocephalus externus, and a bandage applied so as to promote absorption and prevent re-accumulation. But in most instances, to say the least, the effusion has returned in spite of all precautions to obviate it.

There is a second kind of hydrocephalus which is only congenital in its tendency; that is, an infant is born with a decidedly strumous constitution ; it is perhaps injudiciously fed and nursed ; the mesenteric system of vessels become disordered; irregular chylification is the result. From this irregularity in the supply of nutritious matter, together with the inordinate stimulus to which the infant is subjected, the brain becomes inordinately excited, now being too much and now too little stimulated ; slow insidious altera- tions in consequence occur; the gradual and orderly process of development is interfered with, and hydrocephalus steals upon the child

insensibly. This kind of disorder too is remark- ably under the influence of deobstruent mercurials and small doses of foxglove, as alluded to just now under the head of external hydrocephalus.

There is what is called the water-stroke, in which the effusion is made as if by a sudden rush, and which seems to be the result of the ex- halanti all at once giving way, for want of power to perform their functions properly. In this case the marks of effusion, such as squinting and paralysis and convulsions, come upon the child at times almost instantaneously ; and this species of hydrocephalus very frequently is raetastatic, that is, some other

disorder has existed perhaps for some length of time, it sud- denly yields, and in its place this brain affection is thus induced.

For the most part this kind of hydrocephalus is out of the reach of remedy ; if any thing may be expected from medicine, it is from those sub- stances which should excite a large discharge from the emunctories, more especially from the kidneys, and thus cure the complaint by a sort of artificial metastasis ; but we repeat that very little is to be looked for under these circum- stances, of perhaps broken-down frame by a previous disease, and a large effusion into the ventricles of the brain. Occasionally we shall find, however, that symptoms of oppressed brain, as if from the source now supposed, will suddenly be induced, and examinations after death will not justify our previous conceptions of the disorder's precise nature. The last case we witnessed of this kind, of seeming water- stroke, was in the child of a physician, who appeared to be recovering from a violent attack of inflammation of the chest, connected with the virus of hooping-cough : this promised amend- ment was suddenly and unexpectedly succeeded by marks of compressed brain, as if from effu- sion, but upon post mortem inspection very little cerebral lesion of any kind was discover- able.

These different kinds of hydrocephalus are all for the most part indices of scrofulous habits; but there is a fourth species, which is not con- fined so much as in the other cases to one par- ticular kind of constitution. It is still however of more ready occurrence in such as have a ten- dency to lymphatic debility. Although most frequent in children under twelve years of age, it is sometimes observed in adults. It has been divided by Dr. Whytt, and others who have followed him, into three distinct stages ; the first of which is invariably characterised by a pulse of increased quickness and comparative strength ; in the second the pulsations become slower and more feeble; in the third and last stages the rapidity is increased beyond even that of the primary stage ; but this increased action is now attended with extreme debility. These different changes in the circulation are not however always to be traced even in the acute or phreni- tic species of hydrocephalus, in that order and undeviating regularity which the observations of Dr. Whytt would lead the young practitioner to imagine, although it is a disorder of much greater regularity than the other. Obscure affections of the stomach, and a reneral feeling of febrile las-

situde, are often the precursors of the first or inflammatory stage of acute hydrocephalus. At other times feverish heat, intolerance of light, violent pains in the head, and vomiting, are the earliest signs of the disorder, to which the atten- tion of friends is called. These symptoms, Dr. Rush tells us, are frequently attended with a remarkable impatience of sound ; and, although we have not much observed this, it is easy enough to conceive, when the seat of the inflam- mation is about that part of the brain more

particularly which is connected with the auditory nerves. The pain of the head is often confined to one side ; and, in proportion to its intensity, the nausea and vomiting become less urgent, while, with the remission of the pain, these symptoms are disposed to recur. Respiration is sometimes at this period of the complaint spas- modic and irregular, the bowels are often so costive as to require strong doses of purgatives, in order to procure evacuations ; at other times a diarrhoea is present. This stage sometimes lasts for several days ; it is then succeeded by the second, which commences by a sudden reduction of the pulse, and other symptoms of irritation. The pain of the head now be- comes less acute, and in some measure changes, not merely its degree, but its kind ; torpor and insensibility to light succeed to watchfulness and visual irritation ; the child now lifts his hands to his head (this symptom indeed is often present in the first stage, though not so observ- able) ; he now frequently utters piercing screams ; strabismus, or squinting, in a degree takes place ; an invincible inclination is shown to a horizontal posture, and to having the head particularly low ; and there is a motion of the head from side to side, and a desire to throw the head back when the child is lifted up, which are both remarkably characteristic of effusion upon the brain ; the bowels still continue torpid ; and after these symptoms have continued for some days, perhaps a week, more or less, the com- plaint very often seems to be on the decline ; deceitful semblances of returning health are noticed, so much so indeed, that parents, and even practitioners, are sometimes induced to think that either nature or medicine has begun to operate a beneficial change. There is less irritation, less fever, the beats of the pulse become more regular, and the child evinces a disposition to rouse himself, and notice sur- rounding objects. This semblance, however, of amendment is but a prelude to the final period of the disorder. It commonly lasts one or two days, and then the pulse, suddenly almost, be- comes again very rapid, so much so indeed, that it is often not to be counted. Dr. Whytt tells us that he has been able to number 210 pul- sations in the space of a minute ; this extraor- dinary rapidity does not however, as in the quickness of the first stage, last through the whole of the day : it comes on and declines with the accessions and remissions of the hectic flush in the cheek. The eyes at length become insen- sible to the strongest light; convulsions super- vene, and life is terminated. The duration of this last period like that of the others is irregu- lar. Sometimes the patient is carried off in

a few days from its commencement; at other times the child lingers in a hectic and convulsed state for some weeks; and Dr. Monro has informed us, that the last stage has been known to be protracted even to the fourth

month. In the general way, however, the whole period of the malady, from its commencement with in- flammatory irritation to its termination in hectic, convulsions, and death, is less than a month. The lymph which is thrown out upon the brain is found for the most part to be coagulable, proving the disorder to havo been in the first instance in- flammatory.

Distinctions. — As the hydrocephalus is very frequently present when not suspected, as it is often on the other hand suspected when not pre- sent, and as it is always of much moment to distinguish as early and as precisely as possible between this and other affections with which it has a deceitful resemblance, we shall here point out the leading features of difference between it and one or two other of childrens' disorders, but the possibility ought always to be recollected of one of these complaints running into the other, and that they exist often conjunctively. Worms, difficult dentition, tabes mesenterica, and that kind of irritation which has been denominated infantile remittent fever, are the particular affec- tions that have sometimes been suspected, and at other times commuted for true hydrocephalus internus.

When the state which we apprehend to be hydrocephalic, arises from worms, there has for the most part during the whole of the indisposi- tion been more of a dull heavy pain in the head than that acute sensation which often characterises the first stages of hydrocephalus. In worm cases there is never found that irritability to the light •which likewise in a great number of instances marks the first stage of hydrocephalic irritation. On the contrary, the pupil of the eye, from first to last, is large and inirritable when the disorder is occasioned by worms. It is not uncommon too for the pain in hydrocephalus to be distinctly seated on one or the other temple, while the pain occasioned by the presence of worms is indistinct and hardly referrible to one more than to another part of the head. As a characteristic of worms, we frequently find a tumid thickness in the upper lip, or the whole space between the nostrils and the margin of the lip ; there is too almost inva- riably an irritation in the membrane of the nostrils, which inclines the little patient to be constantly picking or rubbing the nose. This species of irritation is by no means common to the hydrocephalic state. When worms are pre- sent the appetite is for the most part extremely irregular ; now voracious and hardly to be satis- fied, and now more than commonly delicate ; but in the hydrocephalus, in the early stages, and «ven during the whole of the complaint, there is for the most part an indifference about taking food. In instances of worms there is often a tumefaction about the abdomen, as well as in the upper lip — this is not usual in hydrocephalus. Further, worms often occasion the stridor den- tium, as it is termed — grating of the teeth in steep, and even convulsive or epileptic fits, nei- ther of which affections is observed in dropsy of

the brain, excepting in its final stages. Lastly, in cases of worms, there never is any thing of that order and succession of symptoms, which we have pointed out above, as not (infrequently seen in hydrocephalus ; first, of irritation ; secondly of a sort of exhaustion, or apoplectic oppression ; and, thirdly, of a still greater irritation as preli- minary to death.

Difficult dentition not only often gives rise to symptoms very similar to hydrocephalus, but very frequently actually produces it — the inflam- matory irritation which it excites extending itself from the gums to the brain. When, however, the state is merely that of teething irritation, the gums and mouth are for the most part hot and inflamed ; the bowels, though irregular, are more easily acted on than when the brain is actually affected, and that symptom of extreme suscepti- bility to light in the first instance, and subse- quently of torpor, or of squinting, is not attendant merely upon teething. From tabes mesenterica, hydrocephalus is to be distinguished by the ab- sence in the latter of that tumefaction and knot- tiness in the abdomen which is, as we have before stated, the grand characteristic feature of the former. In tabes mesenterica, too, the attendant fever is from the first rather of the hectic than of the common kind, while the first stage of hydro- cephalus is very often marked more by ordinary febrile irritation. There is always too, and ne- cessarily, a wasting of the flesh to a great degree, consequent apon the deprivation of nutriment to the blood, in the mesenteric atrophy; but the hydrocephalic patient will often go through the whole course of the complaint with compa- ratively little reduction of flesh or strength ; since it is possible for the brain to be very extensively diseased, and the process of chylification never- theless to proceed without much interruption. Lastly, that disordered state which has received by authors the denomination of bilious remit- tent, or infantile fever, very frequently assumes an appearance which gives rise to suspicion that all is not going on well in the head ; and indeed this suspicion is not unlikely to be well-founded, for we would wish again and again to impress the possibility of one complaint falling by almost insensible gradations into the other. There are, however, certain diagnostic marks between the one and the other affection, and these have been so well detailed by Dr. Pemberton, in his work on the Diseases of the Abdominal Viscera, that we shall make use of his words in pointing them out :— ‘ In hydrocephalus internus,’ says Dr. P., ‘ there are occasional screamings in the sleep, witn a continual tossing of the hands above the head, and an intolerance of light, with more or less of squinting ; but I think I may say that, in the complaint before us (remittent fever), there is hardly ever what can be called screaming, and there is seldom intolerance of light, and never squinting ; and moreover, though the hands are often carried to the face, it seems more from an inclination to pick the skin from the lips, eyes, and nose, than occasioned by the painful rest- lessness which attends hydrocephalus.

In the delirium of hydrocephalus, the faculties are totally destroyed, and the muttering ravings of the pa- tient are without sense or reason, and from this

state he cannot be roused. But in the other species of delirium the child, during this state, can at any time be recalled to his senses, which he will retain for a few minutes, acting and talk- ing consistently. In remittent fever the appetite is destroyed ; in hydrocephalus, on the contrary, the patient will take, without reluctance, whatever is offered, apparently making no distinction be- tween what is palatable and what is nauseous. This difference of the appetite in the one and the other complaint is a most important feature of distinction between the two maladies.'

Dr. Pemberton would have done well to add, that the wasting of flesh is not so evident as in remittent fever. Upon this difference we have just observed in marking the diagnosis between tabes mesenterica and water in the head ; and we have often been struck with the remark of pa- rents and attendants about an hydrocephalic patient, ' that, considering he is so very ill, he has not lost much flesh;' a circumstance which, while it gives birth to hope on the part of friends, ought at least to excite suspicion in the medical attendant. The excretions of the bowels are sometimes perfectly black, and smelling like putrid mud ; they are sometimes curdled with shreds of coagulating lymph, floating in a dark greenish-colored fluid. These appearances of the faeces are not observed in hydrocephalus ititernus.

' The convulsions,' the author goes on to say, ' which attend hydrocephalus, very seldom super- vene, u ntil the patient has been laboring for several days under evident indisposition, whereas they often usher in the very first attack of remittent fever.'

Causes — Too much has been probably attri- buted in the present day to the state of the stomach, the bowels, and the hepatic viscera, as the media through which the affection now under remark is engendered ; for though hydrocepha- lus is confessedly often a sympathetic malady, occasioned by the visceral irregularities in question, it is full as often, to say the least, an originally cerebral disorder, and the intestinal irregularities by which it is attended stand more in the relation of effect than cause of the brain disease. Even indeed when hydrocephalus is induced indirectly, through the medium of other affections, it is mostly so engendered by the affections of the absorbent system which commence in the mesentery, and extend as it were to the brain, rather than by those mechani- cal kinds of obstructed

viscera which are chiefly supposed to be in fault.

In confirmation of this opinion, that hydroce- phalus frequently commences in the head and not in the viscera, we shall repeat here the few positions that we have elsewhere urged for the purpose of establishing this assumption. First : We find the disease to be one principally of early life. It occurs ordinarily at some period during the growth and gradual evolution of the brain, before the organ has arrived at maturity, which circumstance would seem to favor the supposition of some organic alteration taking place of an original and independent nature ; for impediments and interruptions must naturally be more incident to an organ during the process of development, than after the evolu-

tion is complete. Secondly: The malady is often connected with, and seemingly produced by, the process of teething, the irritation of which appears to extend itself to contiguous parts, and the brain comes to be affected by actual vicinity of position without reference to a distant organ. Thirdly: Were the complaint always, or more usually, brought about by ob- structed viscera, we should expect to meet with it oftener in advanced life, when such obstruc- tions are both more common, and more perma- nently operative, and then most obviously en- gender disorders in distant parts of the frame. Fourthly : We may observe that the subjects of hydrocephalus are, in the majority at least of cases, subjects in which a scrofulous tendency in the habit is more or less perceptible ; and they are moreover those children in whom, from a precocity of intellect, we might expect brain functions to be inordinately active and compli- cated, and consequently more susceptible of dis- ordered action.

But further ; the frequently obvious causes of hydrocephalus are proofs of a too certain nature, that the complaint may, and often does, originate directly in the head. It has been suggested, by Dr. Wall of Oxford, whether the increased frequency of hydrocephalus of late years may not be traced to ‘ the leaving off the circular defence round the heads of children,’ and their consequently more frequent exposure to injury from falls and blows. Whether this be the case or not, certain it is, and no practitioner of any experience will be inclined to dispute the truth of the statement, that external injuries, directly applied to the head, are often the immediately exciting sources of the disease; and this perhaps is the case much oftener thau is seen or suspected. When the derangement has been thus certainly induced, in an immediate and direct way, we always see the functions of the bowels to be disordered in consequence ; and may not this incidental and secondary affection be often in other cases taken for the cause, when it is rather the consequence ? the torpidity or irregu- larity of the bowels being occasioned by that altered state of the brain, which is prior to the actual production of confirmed hydrocephalus. ‘ Anatomical dissections,’

says Dr. Spurzheim, ‘ have convinced me, that in the greater number of cases the morbid appearances of the abdomen are secondary symptoms to those of the head.’

We, however, by no means wish to push our objections to the sympathetic theory too far. Derangements in the digestive organs, if per- mitted to go on without interruption, do often proceed to the length even of phrenitic hydroce phalus ; and attention to the bowels in children with a view to prevent this result is highly im- portant. In these instances, however, of second- ary or resulting affection, we hold for the ne- cessity of the scrofulous tendency being present to produce this specific effect; such tendency may not be very marked, but still it does exist : and upon the whole we would say, in reference to exciting cause, that dentition is the most com- mon source of the disease, but that in the pre- disposed it may be engendered by almost any thing which shall disturb the balance of healthy functions.

Prognosis. — Exceedingly unfavorable. It is indeed questionable whether recoveries ever take place after effusion has been thrown out into the ventricles in any considerable quantity. Many, indeed, are the cases on record in which after the full trial of the mercurial plan, hydrocephalus in i’s very last stages has been cured ; but there is always some reason to suppose that mistakes may have been made in reference to the actual condition of the brain supposed thus to be counteracted ; for marks indicative of effusion o a considerable extent are, as in the case above related, often present during life which are not manifested after death. We are disposed to think, when either art or nature does succeed in getting rid of the effused fluid, that a large flow of urine, or a very free diaphores, or a considerable diarrhoea, must be expected in the way of vicarious effect.

Treatment. — During the inflammatory stage bleeding and purging are to be had recourse to ; but we must ever recollect that, notwithstanding the measure of inflammatory irritation, there is present a scrofulous debility which should in some degree stay the hand of depletion. Elate- rium as a purgative appears applicable to the first stages of phrenitic hydrocephalus, since it produces a feeling of nausea, as well as occa- sions catharsis ; and in this way absorption may perhaps be assisted. We rather wish, however, that the recommendation of elaterium should be received as a matter of experience, than upon any hypothesis as to its modus operandi. It scarcely need be stated that very small doses will be sufficient for a child, such as the sixth part or a quarter of a grain. Dr. Hooper recommends the croton

oil, which has this advantage, that it can be put upon the child's tongue and thus brought to operate. We recollect seeing a child's life saved by merely smearing the tongue with the moistened cork from a croton oil bottle, and this after the power of deglutition, at least of swallowing any thing in much bulk, was gone. Digitalis and nitre may be administered to abate the febrile irrita- tion and get down the inflammatory excitement. R Pulv. potassae nitrat. gr. vj. Tinct. digitalis n. v — x. Liq. ammon. acet. f. 3ij. Syrup, croci. f. 3j. Aquae distillatae f. 3v.

Fiat haustus ; infanti aetat 4, adhibendus tertiS. quaque hora.

Take of powdered nitre six grains, tincture of foxglove from five to ten minims, liquor of ace- tated ammonia two fluid drachms, syrup of saf- fron one fluid drachm, distilled water five fluid drachms. Make them into a draught for a child of four years ; to be taken every third hour. — Hooper.

R Hydrarg. cum creta gr. ij. Pulv. digitalis gr. ft.

Fiat pulvis ; ter in die sumendus, ex quovis ve- hiculo crasso.

Take of quicksilver with chalk two grains, powder of foxglove half a grain. Make them into a powder to be taken three times a day in something thick.

When the inflammatory stage is a little over,

and even from the first showings of the disease, some practitioners commence immediately with mercury, under the notion that nothing else is to be depended upon. We wish we could con- ceive as favorably of the efficacy of this treatment as some practitioners seem to do. R Hydrarg. submur. gr. ij. Pulv. antimonialis gr. j. Fiat pulvis, omni bihorio adhibendus ex quovis vehiculo crasso.

Take of calomel two grains, antimonial pow- der one grain. Make them into a powder, of which let one be taken every second hour in any thick vehicle. Anoint with mercurial ointment under the arms and in the groins.

Some have reported favorably of the effect of tinct. canthari d., and have joined deobstruents with it.

R Extract, taraxaci 9ft.

Spiritus aetheris nitrici n[XT. Tinct. canthari d. m iv. Syrup, simp. f. 3j. Aquae pur f. 3iift.*

Fiat haustus.

Take of extract of dandelion ten grains, nitric spirit of ether fifteen minims, tincture of cantha- rides four minims, simple syrup a fluid drachm, water two fluid drachms and a half. Make them into a draught.

Blisters may be applied to the nucha, but much is not to be expected from them. When there is much exterior heat about the head lotions may be applied, formed of spirits and water, or a solution of the muriate of ammonia, or vinegar and water.

It is often necessary to give opium to abate the irritations, and the best form of administering it under these circumstances is that of the pulv. ipecac, comp., which may be combined with a small quantity of calomel. It is a fact worth attending to, that opium, in this form, will be borne by children when other preparations of it are inadmissible.

R Pulv. ipecac, comp. gr. ij. Hydrarg. submur. gr. J.

Fiat pulvis ; hora somni sumendus.

Take of compound powder of ipecacuan two grains, calomel a quarter of a grain. Make them into a powder to be taken every night at bed time.

418. Dropsy of the womb (hydrometraj should rather be stated dropsy of the appendages of the womb, the ovaria (hydrops ovaru); for tl collections in the womb itself, which give to the symptoms named in the definition, are not very common, unless as a consequence c false conception ; in this case we have occasion- ally hydatid and othw accumulations formed in the uterus, and retained by the production of an adventitious membrane or membranes.

Ovarian dropsy is of more frequent occurrence, and this it is sometimes difficult to distinguish from general dropsy in the abdomen. U affection Boerhaave, in one of his aphorisms, says,difficultercognoscitur,curaturveropunquarE

It attacks usually women at the time when the menstrual discharge is about to leave them, and

is most usually an affection of virginity or bar- renness. This however is by no means univer- sally the case ; for we sometimes observe it to occur in females at the prime and vigor of life, and at the very time in which they are regularly conceiving and becoming pregnant. Although, as we have just

said, a dropsy in one or other of the ovaria is not easily to be distinguished from a dropsical affection in the cavity of the abdomen, yet th«re are certain diagnostic characters be- tween the one and the other disease, which it behoves the medical practitioner constantly to bear in mind, since it is often of much moment with regard to practice, and always as it relates to prognostic inferences, to judge correctly respecting the position and actual nature of the dropsical swelling. In the first place, then, let it be remembered that, although in the event the whole surface of the abdomen becomes almost equally tumefied by ovarian dropsy, at the commencement of the enlargement this swelling is decidedly more on one side than the other, which is not the case in abdominal dropsy or ascites. The enlargement is, secondly, more slow in its progress than in cases of ascitic swel- ling. There is, thirdly, for the most part, no oedematous swelling about the ancles and legs, which is a frequent concomitant of ascites ; or, if this swelling do occur, it is more in one leg than in the other, and in this case the enlargement of the limb is more decided, extensive, and con- tinued, than in the case of general cedematous tumefactions. Fourthly, the general health is not by any means impaired in proportion to the extent of the local disorder, as is the case in as- cites. In the fifth place the urine is not, as in ascites, in particularly small quantities, until the bulk of the swelling becomes such as to impede the proper actions of the urinary bladder, and in this case it is rather a mechanical interruption to the discharge than any deficiency of secretion. Sixthly, thirst is by no means so urgent as it is in dropsy generally. Seventhly, there is an ab- sence of those liver affections, and of that peri- tonaeal tenderness, which we have before pointed out as very common concomitants of ascites, especially in advanced life ; and, lastly, the fluid cannot so distinctly be perceived to fluctuate as when it lies loose in the abdomen, and constitutes the true ascites. There is a further distinction to be observed even in regard to the ovarian dropsy itself, namely, Is the fluid which is contained in the organ extended throughout its whole cavity, thus constituting one uniform cyst? or is the ovarium, converted into a congeries of small, complete, and independent cysts ? This J distinction it will be of prac- tical consequence to aim at tracing, since an operation in one case to discharge the collected fluid might prove of considerable temporary ser- vice, whereas in the other case, that in which the cysts are numerous and independent of each other, a very small quantity of fluid might be evacuated only from the puncture, and the patient would scarcely receive even immediate and par- tial relief from the introduction of the instrument. The principal and almost only mean of a priori distinction in this case is, to pass the hand over the whole surface of the abdomen, and endeavour

to perceive whether the tumefaction is uniform, and without irregularities ; if not, and there are on the contrary protuberances and irregularities in the

swelling, it will be fair to presume that the water is contained in separate cysts or cavities, each of which must be punctured before the fluid can be evacuated. 'These cysts,' says Dr. Baillie, 'have been occasionally confounded with hydatids (another disease to which the uterus is more especially subject), to which they bear some resemblance. They are however really very different. They have much firmer, and less pulpy coats, than the hydatids; they contain a different kind of fluid, and they are differently connected among themselves. Hydatids either lie loose with regard to any connexion with each other, or they enclose each other in a series ; or small hydatids adhere to the coats of larger ones. Cysts of the ovarium adhere to each other la- terally by pretty broad surfaces ; do not envelope each other in a series ; and appear to have no power analogous to generation like hydatids, by which small cysts are formed, that are attached to those of a larger size. It appears not im- probable that these cysts are formed by a gradual enlargement of the small vesicles which make a part of the natural structure of the ovaria. On the treatment of ovarian dropsy we have literally nothing to say. It is probable that the state of the organs, previous to the collection of fluid, is of an irremediable nature ; certain it is, however, that we have no well authenticated cases of arty actual absorption of the fluid, and reduction of the ovary to its natural state, by means of me- dicinals of any kind. Tapping is a temporary remedy when the cyst is single, and it is perhaps more likely to be attended with unexceptionable benefit in some cases than even in general dropsy of the abdomen, since the tendency to peritonaeal inflammation is not so great, the ma- lady being of a more topical, and less compli- cated nature. Professor Morand asserts that he several times performed this operation on a lady of quality, who suffered so little from it, that she frequently went into the country the day after the operation, although generally eighteen pints of water were drawn out; nor did she die at last of dropsy, but of some other disease.

' It should be observed that although an ovarian enlargement is for the most part a dropsical af- fection, it is not so without exception. There is a species of schirrous increase in the bulk of one of the ovaria sometimes to be met with : this however, compared with ovarian dropsy, is most certainly a rare occurrence, and the complaint in such a case would be attended with more de- rangement of the general health than is found to be the case for the most part in dropsy of the ovaria. The swelling too would be less in bulk, and more gradual still in its progress. We may remark, indeed, that the ovaries are obnoxious to several disordered conditions of an anomalous nature, and all, we believe, withov\ remedy. Boerhaave and others talk of fomentations, and vapors, and the warm emmenagogue drugs, &c. ; but we are disposed to think that, when the pa- tient recovers, we are more indebted to nature than to art for the performance of the cure.

Although this is not exactly the place to speak

*of them, we may here take occasion just slightly to glance at those anomalous affections that are connected with the cessation of the menstrual discharge : we might go the whole round of dis- eases before we should exhaust this subject. The fact is that there are no constitutional affec- tions but what are likely to make their appearance at this proverbially critical time in the life of a female. Thus gout, apoplexy, mania, asthma, dropsy, stomach and intestinal complaints, ulcers in the legs, and many other distempers, seem as it were to await this time to make their attacks on the constitution, ‘ hanc nacta occasionem,’ as Dr. Heberden elegantly expresses it, * de valetu- dine jam infirma facile triumphant, et stabile im- perium constituunt.’ As it relates to the treat- ment of these maladies nothing requires further to be said, in reference to their appearance at this particular period, than that the management of them should always have an especial view to the stoppage or not of the menses ; and that local evacuations apportioned to the vicarious conges- tions induced are often demanded, not in order to lessen general plethora, but for the purpose of diminishing topical fulness or inflammation. Thus supposing a menace of apoplexy to occur, upon the sudden disappearance of the monthly discharge, we should be called upon more im periously to detract blood from the vessels of the head than in common cases of the same disorder at an advanced period of life ; and purgatives especially are almost without exception called for in instances of this nature. The drying up too of ulcers, or the precipitate stoppage of natu- ral evacuations, must in the state of things be very guarded and gradually done, and in fact the general principles of treating diseases at this juncture is that which the disciples of the Boer- haavian school of medicine would call deob- struent.*

419. Anasarca. Dropsy of the flesh. — Before quit- ting the subject entirely of dropsical affections we are called upon to say that a mere dropsy of the flesh sometimes occurs without being accompa- nied by any visceral disorder — for the most part, however, it is the result of or attendant upon these last, and constitutes merely one of the marks of an exhausted frame and interrupted cir- culation. On this head we shall again make use of Dr. Hooper’s instructions by extracting the section of his book which relates to it, and this we are induced to do from the opportunity it will afford us of presenting to the English reader the numerous prescriptions which are given by Dr. H., and which it may be observed are appli- cable in most cases to other kinds of dropsical accumulations as well as those for which they are more particularly inserted.

Symptoms. — The disease generally commences in the lower extremities, and first shows itself towards evening with a swelling of the feet and ancles, which by degrees ascends, and succes- sively occupies the thighs and trunk of the body. When it has become very general the viscera are affected in a similar way ; the cellular membrane of the lungs partakes the affection ; the breathing becomes difficult, and is accompanied by cough, and the expectoration of a watery fluid. The urine is small in quantity, high colored, and

deposits a reddish sediment; sometimes, how- ever, it is of a pale whey color, and more copi- ous. Costiveness; insatiable thirst; the skin is generally pale and arid ; though sometimes a slight yet general inflammation takes place, wnen it becomes tense and shining. The water often oozes through the pores of the cuticle, or raises it in the form of small blisters; the countenance becomes sallow; torpor; heaviness, trouble- some cough ; slow fever.

Causes. — Predisposing. An hydropic diathe- sis, which is known by a loose flabby fibre, pallid and bloated countenance, the phlegmatic tempera- ment, and scanty secretion of urine.

Exciting. Certain organic diseases, producing an obstruction to the free circulation of the blood; excessive discharges; suppression of customary evacuations ; exposure to a moist at- mosphere; the sudden striking in of eruptive complaints; crude and indigestible aliment; drinking large quantities of watery fluids ; abuse of spirituous liquors; certain preceding diseases, as inflammation, the exanthemata, especially scarlatina; jaundice, diarrhoea, dysentery, phthi- sis, gout, intermittents of longstanding.

Proximate. Increased effusion; diminished absorption ; or both united.

Distinctions. — From emphysema. By the swel- ling in anasarca being oedematous; in emphy- sema, elastic and accompanied with crepitus ; by the particular state of the urine ; and other symp- toms above mentioned.

Prognosis. — Favorable. The disease having been induced by causes which admit of easy re- moval ; the strength little diminished ; the con- stitution of the patient previously unimpaired ; the appetite remaining entire; the respiration free ; no great thirst ; a gentle moisture on the skin.

Unfavorable. Concomitant organic disease; great emaciation ; erysipelatous imflammation ; much drowsiness ; petechiae and ecchymoses ; haemorrhage ; feverish heat ; great thirst ; quick small pulse.

Treatment. — Indications. 1. To evacuate the collected fluid. 2. To prevent its again accu- mulating.

The collected fluid is evacuated by,

1. Scarifications and punctures.

2. Blisters.

3. Friction.

4. Emetics, and nauseating medicines ; espe- pecially antimonium tartarizatum and squills.

R Vim ipecacuanhas f. 3ft-

Tincturae scillae f. 3ij. Fiat haustus emeticus.

Take of Ipecacuan wine a fluid half ounce, and tincture of squill two fluid drachms. Make an emetic draught.

5. Cathartics ; of elaterium — gamboge— cro- ton oil— jalap — colocynth — submuriate of mer- cury— gratiola — crystals of tartar

R Extracti elaterii gr. ij. Sacchari purificati 3j.

Optime terantur simul, dein in pulveres octo aequales dividantur, quorum capiat aeger unnm omni horse quadrante donee adsit catharsis. Take of ela'crium two grains, purified sugai a

drachm. Let them be well rubbed together and divided into eight equal parts, and let one be taken every quarter of an hour till they operate by the bowels.

R Extracti colocynthidis compositi Extracti jalapae, aa 3j. Gambogiae 9ft. Olei juniperi rn.iv.

Fiant pilulae xij. quarum capiantur tres omni hora donee alvus ter quaterve respondeat.

Take of compound colocynth extract and ex- tract of jalap of each a drachm, gamboge ten grains, oil of juniper four minims. Make the mass into twelve pills, of which let three be ad- ministered every hour until three or four evacua- tions by the bowels are produced.

R Hydrargyri submuriatis gr. Y.

Confectionis rosae q. s.

Fiat pilula mane sumenda cum haustu cathar- tico salino.

Take of calomel five grains, conserve of roses sufficient to make a pill, to be taken in the morn- ing with a saline cathartic draught.

R Pulveris scammoniae compositi 9ft.

Hydrargyri submuriatis gr. v. Fiat pulvis catharticus.

Take of compound powder of scammony ten grains, calomel five grains. Make them into a cathartic powder.

R Extracti gratiolae gr. xv. Tincturae sennae f. 3ij. Infusi sennae f. 3xj. Sympi zingiberis f. 3ij. Potassae sulphatis 9j. Fiat naustus catharticus. Take of extract of hedge hyssop fifteen grains, tincture of senna two fluid drachms, infusion of senna eleven fluid drachms, syrup of ginger two fluid drachms, sulphate of potass a scruple. Make them into a draught, for a purgative dose. R Herbae gratiolse incisae ˆiij. Foliorum sennse ˆift- Extracti glycyrrhizae Jiij. Electuarii cassis ˆij. Aquae distillates Ojft.

Leniter coque per quadrantem horse addendo- sub finem coctionis,

Myrrhae optimae f. 3j. Potassae sulphatis Sift.

Cola pro usu : et sumat aeger cyathum parvum pro re nata.

Take of hedge-hyssop cut into slices three ounces, senna leaves one ounce and a half, ex- tract of liquorice three ounces, cassia electuary two ounces, distilled water a pint and a half. Gently boil them for a quarter of an hour, and towards the end of the coction add myrrh a drachm, sulphate of potass a drachm and a half. Strain for use, and let a small spoonful be taken occasionally.

R Potassae snpertartratis Jij- Pulveris zingiberis 3j Syrupi ejusdem q. s.

Fiat electuarium molle, de quo caj'iat aeger cochleare minimum ter quaterve in hora donee alvus copiose respondeat

Take of crystals of tartar two ounces, powder of ginger one drachm, syrup of ginger sufficient to form an electuary, of which a tea spoonful is to be taken three or four times in the hour, until copious evacuations from the bowels are pro- duced.

6. Diuretics ; of colchicura, scilla, acetas po- tassae, digitalis, supertartras potassae, spiritua oetheris nitrici, cantharis, juniperis, armoracia, sinapis,

genista, lactuca virosa, tabacum.

R Tincturae colchici f. ˆft. .

Syrupi aurantii f. Jjft.

Fiat syrupus, cujus sumat aeger cochleare mini- mum omni bihorio, vel subinde, donee nauseam promoveat.

Take of tincture of meadow saffron half a fluid ounce, syrup of orange peel a fluid ounce and a half. Make a syrup, of which a tea spoonful is to be taken frequently, tiil nausea is produced.

R Pilulae scillse gr. x. Fiant pilulae duae sexta quaque hora sumendae.

Take of squill pill ten grains. Make two pills to be taken every six hours. R Pilulse scillae gr. vj.

Pilulae hydrargyri gr. ijft. Fiat pilulae duae nocte maueque capiendae.

Take of squill pill six grains, blue pill two grains and a half. Make two pills to be taken night and morning.

R Pulveris digitalis gr. j— ij.

Hydrargyri submuriatis gr. j — ft. Pilulae scillae gr. vj. Fiat bolus ter in dies adhibendus.

Take of powder of foxglove from one to two grains, calomel from a quarter to half a grain, squill pill six grains. Make them into a bolus to be given three times a day.

R Pulveris scillae gr. j — iij. Pilulae hydrargyri gr. ijft. Extracti taraxaci gr. vj. Olei juniperi n|J.

Fiant pilulae duae ter in die sumendae. Take of powder of squills from one to three grains, blue pill two grains and a half, extract of dandelion six grains, oil of juniper a minim. Make two pills to be taken three times a day.

R Infusi armoraciae compositi f. 3xij.

Spiritus juniperi compositi f. 3ij. Fiat haustus ter in die sumendus post pilulas diureticas.

Take of compound infusion of horse-radish twelve fluid drachms, and compound spirit of juniper two fluid drachms. Make them into a draught, to be taken three times a day after the diuietic pills.

R Infusi armoraciae compositi f. 3xij. Spiritus aetheris nitrici f. 3j. Syrupi aurantii f. 5j. Fiat haustus ter in die sumendus.

Take of compound infusion of horse radish twelve fluid drachms, nitric spirit of ether one fluid drachm, syrup of orange peel one fluid drachm. Make them into a draught to be taken three times a day.

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A Tincturac scillae j^ xx.

Potassae subcarbonatis gr. vj. Misturae camphorae f. 3xij. Syrupi zingiberis f. 3j. Fiat haustus ter in die sumendus. Take of tincture of squills twenty minims, sub- carbonate of potass six grains, camphor mixture twelve fluid drachms, syrup of ginger one fluid drachm. Make them iuto a draught to be taken three times a day.

R Aceti scillae f. 3ft.

Spiritus aetheris nitrici f. Jift. Misce : capiat cochleare unum minimum ter in die ex quovis vehiculo idoneo.

Take of vinegar of squills a fluid half ounce, nitric spirit of ether a fluid ounce and a half. Mix them ; let a tea spoonful be taken three times a day in any convenient vehicle. R Potassae acetatis 9j. Infusi quassiae f. 3xij. Tincture digitalis nx x. Fiat haustus ter in die capiendus.

Take of acetate of potass twenty grains, in- fusion of quassia twelve fluid drachms, tincture of foxglove ten minims. Make a draught to be taken three times a day.

R Potassae subcarbonatis 9j.

Acidi acetici ferventis q. s. ad satura-

tionem alkali. Misturae camphorae f. 3x. Tincture digitalis n. x. Syrupi zingiberis f. 3j. Fiat haustus ter in die sumendus. Take of subcarbonate of potass a scruple, warm vinegar sufficient to saturate the potass, camphor mixture ten fluid drachms, tincture of foxglove ten minims, syrup of ginger a fluid drachm. Make them into a draught to be taken three times a day.

R Potassae supertartratis 3j. Potassae sulphatis gr. x. Pulveris rhei gr. v. Fiat pulvis ter in die sumendus.

Take of crystals of tartar a drachm, sulphate of potass ten grains, powder of rhubarb five grains. Make them into a powder to be taken three times a day.

R Tincture cantharidis n. xxx. Spiritus aetheris nitrici f. 3j. Misturae camphorae f. 3xij. Syrupi zingiberis f. 3j. Fiat haustus ter in die sumendus. Take of tincture of cantharides half a fluid drachm, spirit of nitric ether a fluid drachm, camphor mixture twelve fluid drachms, syrup of ginger one fluid drachm. Make a draught to be taken three times a day.

R Tincture nicotianae n_ x — xxx. Infusi gentianae compositi f. 3vj. Aquae pimentae f. 3x. Fiat haustus ter in die sumendus. Take of tincture of

tobacco from ten minims to half a fluid drachm, compound infusion of gentian six fluid drachms, pimento water ten fluid drachms. Make a draught to be taken three times a day. VOL. XIV.

R Extracti lactucae virosc gr. x Fiant pilulae duae ter in die capiendae Take of extract of strong scented lettuce tea

grains. Make it into two pills to be taken three

times a day.

R Extracti lactucae virosae 9ift. Infusi gentianae compositi f. 3x. Aquae menthae piperitae f. 3iv. Spiritus juniperi compositi f. 3j. Fiat haustus ter in die sumendus. Take of extract of strong scented lettuce halt a drachm, compound infusion of gentian ten fluid drachms, peppermint water four fluid drachms, compound spirit of juniper one fluid drachm. Make a draught to be taken three times a day.

R Radicis armoraciae excise .51). Seminis sinapis ˆift. Baccae juniperi contusac Jiij. Vini albi hispanici Oiij. Digere per dies octo, dein cola : capiat seger cyathum parvutn vinosum bis quotidie.

Take of sliced horse radish two ounces, mus- tard seed one ounce and a half, bruised juniper berries three ounces, white wine three pints. Di- gest them for eight days ; then strain, and let a small wine glassful be taken twice a day.

7. Diaphoretics ; compound powder of ipeca- cuanha ; camphor ; antimonials assisted by tepid diluents; the vapor bath; the copious use of aqueous diluents ; water impregnated with tinc- tura ferri muriatis.

8. Bandages.

9. Mercury; so exhibited as just to affect the gums.

The second indication demands,

1. Alight nourishing diet, with pungent aro- matic vegetables ; garlic, mustard, onions, cresses, Rhenish wine.

2. Tonics; cinchona, cascarilla, cusparia, quassia, preparations of steel, as recommended for dyspepsia.

3. The occasional use of diuretics and aro- matics.

4. Regular exercise.

5. Cold bathing.

423. Physcony. Physconia.— These hard swel- lings of the abdomen are often exceedingly obscure in their pathology, and generally irremediable, un- less attacked on their onset by mercurial medi- cines given to a considerable extent, so as to excite the action of the absorbents.

424. Rickets. Rachitis.— The irregular bony formation, the large head, flattened ribs, tumid abdomen, and general emaciation, which charac- terise this disorder, are not nearly so common as they were formerly ; and part of the immunity is, we believe, attributable to the improvement which has recently obtained in respect of the diet and management of infants ; to our having come to employ food less copiously, and fresh air more freely. This disease undoubtedly depends upon a faulty and irregular depo- sit of the matter which forms bone, and we should regard it but as a higher degree of mesen- teric atrophy. It is a curious circumstance, with respect to rickety children, that the earthy base of which the bones are formed, is occasionally

found in the urne and other parts of the body, so that the malady is partly in consequence of there not being sufficient energy in the system to convey the earthy phosphates to their appro- priate situation, and partly to the deficient for- mation of the matter constituting bone.

Causes. — Rickets is an hereditary disease in some families, though parents that have been affected with it have sometimes a healthy and ro- bust offspring. ‘ In some instances,’ says the author from whom we now extract, ‘ it may, I think, be traced to a venereal taint, which, though not the immediate cause, is very often an exciting one of it and scrofula. At least, it is certain that syphilis, transmitted from parents to their children, appears in the latter in a manner very different from that in which the former are affected. We find that the children of the indi- gent and the profligate are those most generally affected with rickets ; but at the same time it must be allowed that there are many circum- stances which conduce to this disease, such as damp and cold residence, impure air, inattention to cleanliness, bad nursing, want of due exercise, a deficiency of food, and debility. Difficult den- tition, and the pain and bowel complaint arising from it, may favor in a powerful measure the action of the exciting cause of rickets.’

Treatment. — ‘ The indication,’ says another author, ‘ is by bracing the system, especially the lymphatic part of it, to promote due assimilation of the ingesta, and the consequent osseous forma- tion.

‘ Purgatives of the deobstruent kind are called for, that is, those which rouse the secreting and assimilating energy. The hydrargyrus cum cret& of the pharmacopoeia is an excellent medicine ; this, in combination with very small doses of powder of digitalis, should be given every night for some length of time; and the practitioner will often be surprised at the beneficial effects of this combination. It will be necessary to inter- pose about twice a week a calomel purge in the morning.

R Hydrargyri cum creta gr. iij.

Pulveris digitalis gr. £. Fiat pulvis ; omni nocte administrandus. Take of quicksilver with chalk three grains, powder of fox-glove a quarter of a grain. Make them into a powder to be taken night and morn- ing.

R Hydrargyri submuriatis gr. ij. Pulveris jalaps gr. iij. Pulveris zingiberis gr. j.

Fiat pulvis ; bis in septimana exhibendus.

Take of calomel two grains, powder of jalap three grains, of ginger one gram. Make them into a powder to be taken twice a week in the morning.

‘ With wholesome food, such as biscuit, good milk, arrow-root, rusks, and rice, good nursing in the open dry air being at the same time en- joined, the above medicinals will sometimes prove every thing that is wanting. When, how- ever, by these means, the secretory and assimi- lating organs are got into a better state, chalybeate medieines may prove highly useful. Of these tlie vinum ferri, the carbonas ferri, and the

tinctura ferri muriatis, are the best. The dose of the first to a young child is half a drachm ; of the second two or three grains, with an equal quan- tity of powdered rhubarb ; and of the third four or five minims.

‘ It is often proper to correct the acidities of the first passages, by small doses of soda, or potass, or magnesia ; but the phosphates of soda and lime, which were introduced into practice some time since, are of little avail.

- *The sulphate of quinine, in half grain, or grain doses, might be tried with a promise of advantage.*

‘ Cold and sea-bathing are efficacious, should the system not be too debile

for their employment.

- *A small quantity (say half a glass) of good port wine will sometimes prove very serviceable to children that are rather more advanced, but who still show a rickety tendency, by the ancle and wrist bones continuing to be enlarged unduly.'*

Those deformities which are met witli in the Alpine valleys, deformities both of mind and body, have been considered as instances of rickets in an extreme degree. There has been, and still continues to be, a diversity of opinion respecting the actual source of cretinism, as it is called, some placing it in the water, and some in the air ; some attributing it to physical, some to mental causes ; and since the subject is at the same time full of interest, and as just hinted sub judice, we shall here add some remarks from two modern authors in reference to this particular modification of disorder, or this humiliating ex- hibition of debility and monstrosity.

' Cretinism (which is to be met with very gene- rally among the inhabitants of that part of Swit- zerland nearest to Italy, in the deepest valleys of the Alps, where the atmosphere is extremely hu- mid, in consequence of numerous waterfalls and rivulets that emit powerful exhalations through the influence of the sun's heat, while they are excluded from the access of every drying wind) is a dis- ease which has been supposed to be only as high a degree of rachitis as human nature can possibly sustain. This opinion is corroborated by an ob- servation that the different stages or degrees of the evil correspond with the variations in the at- mosphere. Those, for example, who inhabit the deepest and most recluse valleys are reduced to the lowest state of imbecility and idiotism ; in those who are somewhat more elevated the men- tal powers are not so completely obtunded ; atid others still more elevated, and of course less ex- posed to exhalations, will probably be deformed merely with wens or swellings about the joints, and other symptoms of rachitis. Those who are nearer to the summits are perfectly exempt from all these appearances.

Cretinism is, in many instances, connected with goitre or bronchocele (see this disease). An enlargement of the thyroid gland is indeed a striking feature in the unsightly aspect of the cretin, but it is not a constant attendant ; for cretinism is frequently observed without any af- fection of the thyroid gland, and this gland is often much enlarged without any affection of the intellectual faculties.

The production of cretinism by the bad qua- lity of the air and food, the neglect of moral edu-

cation, and other evils attendant upon poverty and indigence; and the deformity becoming so general in those regions by a seclusion from the rest of mankind, and by perpetual intermarriages, is supported by facts so strong and pointed, that the greater number of cases in mountainous districts may safely be ascribed to these causes, in- stead of the use of snow-water, as a few have supposed. That the use of snow-water produces either goitre or cretinism is an absurd idea ; for persons born and living in places contiguous to the Glaciers,who drink no other waterthan what flows from the melting of snow and ice, are not afflicted with these disorders, and they are observed fre- quently in places where snow is unknown.

The causes of cretinism begin to operate upon the system soon after, and perhaps even before, birth ; the want of energy in the parent is communicated to the offspring, the children become deformed and cachectic very early in life, the growth and development of the .body are im- peded, the abdomen becomes enlarged, and the glands swelled in various degrees j moreover, the powers of the mind remain dormant, and are at length obliterated, partly from the want of proper organisation, and partly from the total neglect of every thing like education.

The head of the cretin is deformed, his stature diminutive, his complexion sickly, his counte- nance vacant and destitute of meaning, his lips and eyelids coarse and prominent, his skin wrinkled and pendulous, his muscles loose and flabby, and frequently he is affected with an en- largement of the thyroid gland or goitre, which greatly adds to his unsightly aspect. The qualities of his mind correspond to the deranged state of his body, and the disease prevails in all the intermediate degrees from excessive stupidity to complete fatuity.

Cretinism was observed in Chinese Tartary by Sir George Staunton, in a part of that country much resembling Savoy and Switzerland in its Alpine appearance. Dr. Abercrombie mentions, that many cases of it are to be met with in the Pyrennees, and les Cevennes of France.

A race of cretins existing in the south of France has lately been presented to the notice of the profession, under the appellation of Cagotts. In this part of France this degraded race is widely extended ; the individuals of it, deformed with bronchocele, have an indistinct articulation, an air of stupidity, a sallow complexion, and an extreme apathy to all external objects. The Cagotts are pretty much the same as the Cretins of the Alps ; they both present the same degree of imbecility, the last remains of the intelligence of man, together with the last traces of the hu- man form.' — Thomas.

‘ Before taking leave of Switzerland, I may be permitted to make a few remarks,’ says Dr. Johnson, ‘ on those two blots on the physical and mental organisation of men in these interest- ing regions — bronchocele (goitre) and cretinism. However salutary and delightful it may be to travel among the Alps, a residence of any dura- tion there is attended with considerable danger, at least to young people, as will be presently seen.

In respect to the goitre, or swelled neck, a great variety of opinions have been broached as

to its cause. The snow-water, the air of the deep valleys, and the food of the inhabitants, have, each in turn, been accused of producing this singular deformity — a deformity, by the bye, which is far from being uncommon in some counties of England, especially in Derbyshire, Nottinghamshire, and Sussex. As to diet, it may be observed that goitre is found to be infi- nitely more prevalent in some parts of Switzer- land than in others, though the diet is the same, or nearly so, in all. For instance, in the valley of the Rhone we see hardly any thing else than cretins and goitres ; while in the valley of Cha- mouni, separated only by the Col de Balme from the other valley, we see very few of either dis- eases. This contrast must arise, therefore, from something in the air or water, or both — for the food and mode of living are the same. More- over, we trace bronchocele along the whole course of the Rhine, from Schaffhausen to Co- logne, its frequency gradually and progressively decreasing as we descend that magnificent stream. What can this be owing to? For my own part, after viewing, with no inattentive eye, the moral and physical conditions of those inha- bitants of the Alpine regions where cretinism and bronchocele abound, I have come to the conclusion, that one of the main causes of bron- chocele especially is to be found in the water, however much this cause may have been scouted by some medical and scientific travellers. I do not mean to say that it is the snow-water which has any thing to do with the complaint. But who can tell the thousand matters with which the Alpine waters are impregnated ? — Every stream, great and small, that takes its origin frorr the glaciers, and other elevated crusts of ice or snow, becomes in a short time perfectly white with the particles which it wears from off every rock and mineral substance, in its noisy and pre- cipitous route to the lakes below. Hence a bottle of water, taken from any of these streams, lets fall, on standing, a prodigious deposit of earthy and saline or mineral substances. When we consider the infinite variety of materials constituting the beds and banks of these Alpine streams, and see the quantity of detritus which they carry with them, and which is swallowed by the inhabitants, we can have very little doubt that such ingredients have no trifling influence on the physical organisation of man. This sup- position is strengthened by the fact which I have just mentioned, that bronchocele gradually and progressively decreases, as we descend the Rhine — a river that rises in the Alps, and is

chiefly supplied by Alpine waters. It is hardly necessary to observe that, as the river increases its distance from the Alps, it lets fall the matters with which it was impregnated, as well as be- comes mixed with auxiliary streams from countries not Alpine. This change U remark- able also in the Rhone. The Upper Rhone, where it falls into the lake of Genera, is turbid even to whiteness ; but its waters, while nearly quiescent in the lake, become clear, and pass through the city of Geneva like translucent streams of bluish crystal. Among those who in- habit the banks and drink the waters of the up- per or turbid Rhone (namely, in the Valais)

there are twenty cretins and goitres for one that can be seen on the lower or filtered Rhone, in its progress to the Mediterranean. Although I do not contend that all this difference is owing to the change in the waters, yet, taken in con- nexion with the Rhine, I think it forms a strong ground of presumption in favor of the goitrefac- tive (if I may use such expression), influence of Alpine waters. That the cause of bronchocele cannot be traced to sour bread, or indeed to any particular article of diet (the water excepted), at least in Switzerland, is proved by the fact, that English children (who live as well as people m England) cannot be kept long at Geneva, or in any other part of Switzerland, without having enlargements of the thyroid gland. This fact is well known to those English families who so- journ in that romantic country.

But, it may be asked, can the waters in Der- byshire, or other goitrous counties in England, be the cause of bronchocele ? I may answer that it is much more probable that the cause of the dis- ease should reside in the earth than in the air — and, if in the former, surely the water which we drink is the most likely vehicle for its convey- ance into the constitution. There is a mineral or saline substance in nature which is capable of removing this swelling of the thyroid gland— for instance, iodine ; — and why should there not be another saline or mineral substance which is capable of producing the said swelling ? — The same valley which issues forth the miasma that causes ague, gives birth to the tree that furnishes the quinine, which cures the disease.

When on this subject I may remark that, from an attentive survey of the Alpine valleys, it appeared to me that cretinism and bronchocele were only two prominent features of one great physical and intellectual deterioration which per- vades the inhabitants of scenes the most roman- tic, sublime, and beautiful, that human eye has ever yet beheld. It is not the swelled neck, the enormous head, and the vacuity of mind alone that arrest our

attention in traversing the Alpine regions. The whole corporeal fabric, with all its intellectual prerogatives, is stunted, deformed, — and, as it were, absorbed. Well might Gold- smith say —

Man is the only plant that dwindles here.

Every feature and phenomenon of nature around is wild, grand, and impressive — while he who is master of the whole, and the alleged image of his Creator, is an abomination to the sight.'

422. Order 3. IMPETIGINOUS DISORDERS. — On this head we shall be exceedingly brief, since the ailments which are included' under it are for the most part those which deform the skin, or appear as cutaneous affections, a subject which we shall consider, with one or two others, in the way of appendix to the nosology.

Scrofula, syphilis, scurvy, elephantiasis, le- prosy, yaws plaited hair, and jaundice, are the genera of this order, and it is only upon the first, third, and two last genera that we are now called upon to descant. Syphilis being referred to SURGERY, and the remaining generate the gene- ral head of cutaneous disorder.

423 Scrofula.— Of scrofula we have already

spoken in the introduction to the present class. Indeed it is the foundation as it were, and susceptibility to disordered action, rather than itself a disease — thus the varied modifications of disorder to which we have already alluded, as having in their manifestation considerable con- nexion with the states of the lymphatic system, are in truth so many indices of scrofulous tem- perament, and they have been made to come out into actual disease; by exciting causes happening to fall upon the scrofulous or lymphatic dia- thesis.

Causes. — The taint or the disposition, or that conformation of body which leads to lymphatic and glandular derangement, is evidently heredi- tary, as what disposition or tendencyis not ? The dispute indeed respecting hereditary disorders seems idle in the extreme — no one will or can deny that the son and daughter bring with them into the world physical and moral dispositions, inherited from their parents, and the disposition readily to break out into any particular form of disorder is all, we should suppose, that any one would contend for. The exciting causes of scrofulous diseases are the excitants of disease generally, but cold and variable and humid cli- mates are the hotbeds, if it is not a contradiction so to say, of scrofula. The disorder is excited both by pampering and starving, both by too rich and too poor a diet.

Treatment. — The treatment of suppurating lymphatic glands, which are the most common manifestations of scrofula, will be considered in the article SURGERY. In respect to the medi- cal counteractives of scrofula generally, they are all resolvable into the administration of those articles which impart tone and vigor to the system generally, and act peculiarly upon the. lymphatic part of the organisation. It is usual for parents to send their scrofulous children down to the sea-side, but there does not seem any specific virtue connected with a residence on the sea-coast ; and it can only be considered useful in scrofula, inasmuch as any thing is likely to be serviceable that braces and strength- ens the frame. Steel and bark are used with this intention ; the sulphate of quinine in small doses may occasionally prove very advantageous. For the remaining few remarks which we have to make, on the subject of remedies for scrofula, we shall again draw upon the Compendium of Medicine.

The ammoniated iron, or the carbonate of the same metal, three or four grains of the former, or four or five of the latter, may be given to a child four or five years old, with a grain or two of rhubarb added to each dose.

Respecting the specific virtues of muriate of barytes and lime, about which there was much talk some few years since, I am sceptical ; their efficacy, if they have any, is resolvable into tonic agency, and corrective operation upon the first passages.

When, in after life, scrofulous appearances are complicated with syphilitic taints, the decoc- tum sarsaparillse compositum may, perhaps, be administered with advantage ; administering a» the same time five grains of the pilula hydrargyn submuriatis composite, every night.

Soda may be employed, together with the

coniura and hyoscyamus, in the management of scrofulous disorders, that consist at once of derangements in the stomach and bowels, and local affections.

R Sodae subcarbonatis exsiccatae 3j. Extracti hyoscyami, Extracti conii, aa 3ft. Pulveris rhe”i gr. xv. Mucilaginis acaciae q. s. Fiant pilulae xxx. ; sumat ij. ter in die.

Take of dried subcarbonate of soda one drachm, extract of henbane and hemlock of each half a drachm, powder of rhubarb fifteen grains, mucilage enough to make thirty pills; two to be taken three times a day.

From ten grains to a scruple of the spongia usta are given in cases of glandular affections, made into a powder with sugar; and iodine in different forms has recently been much lauded, especially in that enlargement of the thyroid gland which constitutes bronchocele; and which, perhaps, principally depends upon the same cause as the disorder of the lymphatic glands. See Dr. Gairdner's pamphlet on Iodine in B'on- chocele, Scrofula, &c.

424. Scurvy. Scorbutus. — This is one of those diseases which demonstrate in a marked manner the influence which the depressing pas- sions possess, not only upon the nervous organ- isation, but upon the blood-vessels and general frame; for its great remedies, as it has been ex- pressed by a writer whom we have often quoted in the present article, are 'change from despon- dency to hope, from filth to cleanliness, and from cold and damp to a temperate and dry climate.'

The disease, however, in its true and legitimate character, seldom appears but at sea, and is mani- festly dependent in a great measure upon a long course of salted, dry, and putrid provisions ; its symptoms, when occurring in this full extent, are, besides those put down in the definition, spongy bleeding gums, great depression of the animal powers, foetid excretions, and occasionally spon- taneous haemorrhages from the bowels, the nose, and even from the ears and finger extremities.

Causes. — To these we have just referred ; in respect to its proximate cause we should say, that, it mainly consists in a disordered state of the blood, which breaks down its crasis and ren- ders it unfit for the supply of the several secre- tory and excretory organs ; hence the emacia- tion and debility, hence the haemorrhagic dis- position, the foetid breath, the offensive evacua- tions, and all the general symptoms which connect themselves with this disease. At the time when the chemical changes which take place in the blood, in the process of respiration, were the topics of particular interest, there was much crude theory proposed in the way of explaining disorders upon degrees of oxygena- tion and deoxygenation ; and although, as we have said, some of these theories were vague and much wanting in the precision and completeness which should always attend the admission of premises and the deduction of inference, yet the speculations themselves were of service had they done nothing else but call attention to the chemical habits and conditions of the blood in Deference to the atmosphere.

« Various theories have indeed been advanced with respect to scurvy. By Sir John Pringle it has been supposed to be owing to a putrescency of the blood. By Dr. Lind, Dr. Blane, and Dr. Millman, it has been looked upon as a disease of debility, having its origin in the weak- ness of the organs of

digestion, or in the gra- dual diminution of the vital power by the remote causes ; or that it is owing rather to a defect of nourishment than to a vitiated state of it. Dr. Trotter, reasoning from the experiments of Dr. Goodwin concerning the action of de- phlogisticated air on the blood, infers that the black color of this in scurvy is owing to the abstraction of this principle (dephlogisticated air), and that fresh vegetables cure the disease by restoring to the blood this lost principle. Dr. Beddoes supposes scurvy to be owing to a gradual abstraction of oxygen from the whole system, just as death is produced in drowning, by withholding all at once the same substance from that blood which is to pass the posterior cavities of the heart. Of the two causes of scurvy, want of fresh vegetables, or want of air sufficiently fur- nished with oxygen, Dr. Beddoes thinks the latter is by far the most powerful. Captain Cook's unexampled success in preserving his crews from the scurvy, during his last two voyages, seems to have been owing in a great measure to his extreme care in keeping every part of the ship well ventilated. The crew on many occasions were reduced to salt provisions, and much longer out of sight of the land than many other ships which have been dreadfully afflicted with the scurvy. In his last voyage there did not appear among the men any symp- toms of this disorder; and, in his second, only one man had it in any considerable degree.'

Diagnosis. — The foetid exhalations, spongy gums, and depressed spirits of the patient labor ing under scurvy distinguish it from other dis- eases; the purpura haemorrhagica or petechix sine febre is perhaps more allied to scorbutus than any other affection, but it is without the above manifestation. When petechiae occur in malignant fever, the prior pyrexia sufficiently marks the distinction.

Prognosis. — Should the exciting causes con- tinue to act with much force, the prognosis is unfavorable; but it is remarkable how speedily the disorder, even at its height, will yield to change of circumstances, of air, and of diet.

Treatment. — Vegetable food and vegetable acids are the principal antiscorbutics ; nitre is also a good medicine in scurvy ; this, given in conjunction with Peruvian bark, will often be found very useful. Our author has proposed that ships should be provided with the concen- trated preparation of bark, the sulphate of quinine. The mineral acids also as well as the vegetable are good antiscorbutics ; but the great principle of preventive treatment is that of pro- curing a good supply of fresh animal and ve- getable food ; and preserving ships' crews frorr the habits which under all circumstances tend to engender disease, but under circumstances of deprivation greatly increase such tendency. On this head we shall take the liberty of again extracting some paragraphs from the compre- hensive and useful work of Dr. Thomas.

In all Ion.; voyages it ought to be our object not only to find out and employ the most effec- tual means to cure the scurvy when it shows it- self, but likewise to prevent its arising at all, as the taint never fails to give a fatal or malignant tendency to the other disorders incident to sea- men, such as ulcers, dysentery, &c.; and, with this view, our preventive plan ought to com- mence from the first day on which the sailing stock of fresh vegetables and ship's beer is ex- pended ; since from many experiments it appears that much greater success is likely to attend our endeavours in this way, than by reserving them for the period in which the marks of a scorbutic diathesis begin to manifest themselves.

When, from a want of the proper precautions before pointed out, the scurvy makes its appear- ance among a number of men, be it on board of a ship or in a close garrison, we are then to counteract its effects, first by obviating the putrid state of the system, and secondly by restoring it to its former vigor.

The first of these is to be accomplished by a diet of fresh animal and vegetable food, but more particularly the latter, consisting of garden and water cress, mustard, horse-radish, common radish, scurvy-grass, celery, endive, and lettuces, all of which may be eaten in their crude state, together with spinach, beet, carrots, turnips, cabbages, cauliflowers, brocoli, asparagus, the young shoots of hops, &c., which may be pre- pared by any common process of cookery. To these may be added a free use of ripe fruits, es- pecially those of a subacid kind, such as oranges, shadocks, and others of this class. For ordinary drink the patient may use milk, or its produc- tions, as whey, butter-milk, &c., or else an infu- sion of malt or spruce.

Such things are, however, only to be pro- cured on shore, and therefore cannot be obtained for a ship's crew, unless they remain in port. When at sea, other substitutes must be resorted to.

One of the most effectual of this kind has been found to be lemon-juice, with which most ships belonging to government, and bound on a long voyage, are, I understand, now supplied ; and I am informed that the daily regulated al- lowance is now one fluid ounce, mixed with one ounce and a half of sugar. Where fresh vege- tables are not to be obtained, we ought to have recourse to this. To render its effects more cer- tain, and prevent it from irritating the bowels, we should mix it with a sufficient quantity of water and sugar, which will make a pleasant drink, usually known under

the name of sherbet. If a due proportion of wine is added, it will render it still more antiseptic. The quantity of juice used, during the first three or four days, ought not to exceed two ounces daily, but it may afterwards be increased to three or four per diem.

In Dr. Trotter's MedicinaNautica is inserted a letter from Mr. A. Baird, surgeon to the Hector ship of war, communicating to him the wonder- ful benefit derived from the use of lemon-juice in a voyage to and from the East Indies, during which, although the scurvy became very preva- il, he did not lose a single man. His words are, ' When I consider the alarming progress

which the scurvy was making among the Hector ship's company previous to the administration of lemon-juice as a preventive, the sudden check that disease met with afterwards, and the power- ful effect of the acid in very bad cases, I think I shall not be accused of presumption when I pronounce it, if properly administered, a most infallible remedy both in the cure and preren- tion of scurvy.'

Where the fresh juice cannot be procured we may substitute, with the greatest advantage, the citric acid in a concrete form, as first prepared by Mr. Coxwell. We are informed by Dr. Trotter that he has experienced its powers against scurvy to be equal to any effect he has ever observed from the recent fruit in its most perfect state. Other practitioners have reported alike favorably of it. It takes from sixteen to eighteen parts of water to bring the concrete acid to the standard of lemon-juce. It is obtained after the manner of Scheele, by combining the fresh vegetable acid with lime, and then precipitating by means of the sulphuric acid. See PHARMACY.

Dr. Trotter observes, that government mis- take in making their contract for lemon-juice for the use of the navy, as what is furnished is often adulterated with the acetous acid, and sometimes contains the pulp, which render it liable to ferment. Lemon, and lime-juice/ he says, ' should be procured in Portugal and the West Indies, and in each place be combined with cal- careous earth. It may be imported in barrels, and in that state be sent to sea, when the sepa- ration of the liquid acid is so easy a process as to require no trouble, and the medicine will be always in the best state. Combined with calca- reous earth, the acid will remain unchanged for a great length of time.

It has been common to employ the fossil acids in this disease ; but there is some reason to doubt if they are of any service, and it is certain they are not effectual remedies. Moreover, they can hardly be thrown in in such a quantity as to be useful antiseptics.

In a Treatise on Scurvy, by Mr. D. Patterson, surgeon in the navy, we are informed, that, from certain reasons, he was induced to try a solution of the nitrate of potass in common vinegar in se- veral cases of this disease, which, with inexpres- sible pleasure, he saw to succeed in every one of them ; and from frequent trials of it h« is con- vinced that the scurvy may be cured at sea with- out the assistance of recent vegetable matter. If this turns out as stated, the discovery will in- deed prove of great national advantage.

Mr. Patterson supposes that the good effects of the nitrate of potass, in mitigating or removing the disease, are to be accounted for solely from the dephlogisticated or vital air it contains, and that it may be rendered more active by being combined with an acid. He allows common vinegar to be of little or no utility when given by itself; yet supposes, that, if it were charged with dephlogisticated or oxygen air, it might prove highly beneficial ; and this he presumes to be effected by the addition of nitre. The following is his method of preparing this new remedy, and making use of it.

At first he dissolved two ounces of nitre in one

quart of the ship's vinegar, and gave half an ounce of the solution (which he named acidum nitrosum, or nitric vinegar) to some twice, to others thrice, in the day, and as frequently bathed their blotched and ulcerated limbs with the same. From the good effect it had, and from its not producing the smallest degree of nausea, colic, or diarrhoea, he was induced to augument the dose to an ounce, and to repeat it as often as before.

Finding by far the greater number of scorbutics who were under his charge bore the increased dose of the medicine without expressing the least uneasiness, he now, instead of two, dis- solved four ounces of nitre in one quart of vine- gar, and gave from half an ounce to two ounces of this strong solution twice, thrice, or four times in the day, if they were either blotched, stiff, or ulcerated. In this manner, we are informed, he continues to use it.

He adds, ' Some patients cannot bear the nitric vinegar without the addition of water; while others, without the least inconveniency, bear it undiluted. The discharge by stool, or the presence of gripes and nausea, guide me with respect to increasing or diminishing the dose of the nitric vinegar ; but at the same time it is not a slight degree either of nausea, colica, or diarrhoea, that renders an alteration in the quantity of the

medicine necessary. To a great number of scorbutic patients eight ounces of this strong solution, containing one ounce of nitre, have in the course of the day, as long as such a quantity was necessary, been administered to each with the greatest success. Also, a cir- cumstance no less curious than pleasing, large and frequently-repeated doses of this medicine have been given in cases of dysenteria scorbu- tica; and instead of increasing I have always found it remove the disease. Sometimes, not- withstanding the free use of the nitric vinegar, I have known constipation take place to a consi- derable degree; in which case I have found in- termediate doses of the potassae supertartras necessary and highly advantageous. This very constipated state generally occurred where the disease was far advanced ; but in a few particular cases in delicate habits, and where the disease was not far advanced, I perceived even small doses of the nitric vinegar ruffle the stomach and intestines ; to prevent or remove which I have found two, three, or four grains of camphor, with each dose of the medicine, very effectual.'

The effects of this medicine are as follow : — ' During a course of the nitric vinegar the belly in gene»nl is kept gently lax ; the discharge of urine is increased, and changes from an alkaline to a healthy nature ; the skin becomes open and more agreeable to the touch ; the chilness is changed to a pleasing warmth ; and the pulse acquires steadiness and healthy strength. Sleep comes to be more and more natural. The sallow and the gloomy is gradually changed into a clear and cheerful countenance. By degrees the in- flammation of the mouth and nose subsides; the gums heal and get tirm. The lower extremities lose, faster than could have been supposed, their livid hue ; they gradually become softer, less painful, and moie flexible, and ulcers put on a

healthy appearance and skin over. The great oppression about the breast and stomach gives way, and the cough and the breathing become less laborious. The appetite and the sense of taste are restored ; the depression of spirits and the lassitude are not remembered ; the strength increases, and at last health returns.'

Mr. Patterson, in comparing the effect of vege- table acid with that of the nitric vinegar, writes as follows: — ' In the month of July, 1794, at sea, a small quantity of limes were purchased by order of admiral Murray, for the use of the scor- butics at that time on board ; but, instead of de- pending altogether on their power, 1 gave them only to a certain number, on purpose to compare their effect with that of the nitric vinegar, which was more generally administered; and from what I have seen of both, and after having weighed all circumstances, I am at present inclined to decide in favor of the latter.'

Such is the report made by Mr. Patterson on the effect of these two acids ; and as he seems to attribute the good effect of the remedy which he most approves of to the nitre it contains, and not to the vinegar, I beg leave, continues Dr. Thomas, to propose the following query : — Might not a solution of the nitrate of potass in lemon or lime- juice, which of themselves are powerful remedies in scurvy, be preferable to a solution of it in vinegar, or even to these acids given by themselves ?

By the means which have been pointed out, together with some other auxiliaries, such as spruce-beer, fresh infusions of malt or wort, sugar, and the succus cochleariae compositus, we are induced to suppose that we shall in most cases, even in those of a desperate nature, be able to obviate the putrid tendency of the system, and effect a cure. Introducing oxygen into the system by any kind of means may likewise prove a good auxiliary.

It appears that the gases were used by the cele- brated navigator La Pe"rouse in his voyage round the world; but he very wisely observes, that bottles-full of them might be swallowed without doing seamen a thousandth part of the good they receive from good slices of roast beef, turtle, fish, fruit, herbs, &c.

425. Plaited hair. — Plica polonica or trichoraa — In some parts of the north of Europe, especially in Poland, this disease is endemic; it is a disease in whicn a matter issuing from the head is deposited upon the hair, and so binds or plaits it together, that it is impossible to unravel it. It would appear to be a malig- nant degree of the porrigo of authors.

Causes. — There is said to be some obscurity respecting the exciting cause of this affection, inasmuch as cleanliness and regular combing of the hair do not afford securities against its visits. It should however be observed, that, in the coun- tries where this disorder is endemic, it spreads only among the lower classes of people, whose diet is poor and irregular, and whose habits arc such as to encourage the spread of a contagious affection. It is said to be hereditary; or that a disposition to it is transmitted from parent to offspring ; and what disposition, as we have just before enquired, is not so transmitted? It ts, however, a curious fact, that strangers are not sc

liable to the disease as the natives, although they may fall into the same habits of uncleanli- ness or neglect; thus it should seem that the endemial disposition requires some length of re- sidence to become established. It is

further stated, that, in the countries obnoxious to the malady, some of the lower animals become sub- iect to a distemper of a similar nature ; so that upon the whole it should seem that the pre- disposition to be affected by the common ex- citants of the complaint has some connexion with the peculiarities of soil or air of the place.

Cure. — 'Cleanliness is its great preventive and cure; the hair should be taken off; the head kept well washed with soap and water, and very small doses of mercury may be occasionally necessary to correct the disordered habit. In- deed, one general principle pervades the requi- sites in these cutaneous ailments ; and, with little exception, what is serviceable to one is service- able to all. Drugs without cleanliness would make a sorry figure in all cases.'

It seems that an opinion is generally enter- tained among the Polanders, that there is danger in cutting off the hair, and that promoting the cure by external remedies is totally erroneous. The following fact which is quoted by Dr. Thomas proves the error and absurdity of this notion.

Some years ago, one-third of the recruits of the regiments of artillery brought from South Prussia were attacked with plica polonica. An order was received from Berlin to send to that city all those that were infected, and to take care that the dis- ease was not communicated to others. This order, it appears, was not agreeable to the com- manders of companies, as it would have occa- sioned the loss of at least 200 young soldiers. M. Hcenel, sugeon-major to the artillery regi- ment, became mediator in the cause; he made the recruits be brought on the ramparts, and ordered that a general shaving should be made. In a little time, a pilp of plica was accumu- lated ; these trophies were then cast into a ditch, and the heads of the men carefully washed with soap and water daily for some weeks ; by this simple method those dirty Polanders were spee- dily transformed into good soldiers, without having in the least suffered by the loss of this precious ornament of their heads.

426. Jaundice. Icterus. — Jaundice is charac- terised by a yellowness of the skin, and of the whites of the eyes; by faeces of a whitish color and clayey consistence ; by urine of a yellowish or rather obscure red color, tinging with a yellow hue linen that is dipped in it ; by lassitude and indisposition to exertion; and by a lowness of spirits. All these symptoms being easily referri- ble to that quantity of bile being in the livei and general system which ought naturally to flow through the intestines, but which is prevented from thus supplying the intestines by several sorts of impediments.

Hepatic inflammation continuing for a time unsubdued, the coats of the

bile-ducts will thereby become thickened, their diameter in con- sequence materially diminished, and thus a spe- cies of jaundice produced of a permanent and incurable nature. That yellowness of the skin and general depression of the spirits which we

sometimes observe as the resu.t of u long con. tinued course of indulgence in the free use of spirituous liquors may often be brought about at least partly upon this principle ; but partly perhaps by the schirrous enlargement of a liver which has been subjected to repeated inflammations pressing upon and thus lessening the diameter of the bile- ducts, which state of the liver, besides producing a tardy secretion, thus occasions a tardy flow of the bile that is secreted, and it has hence time by congestion in the liver to get into the blood vessels by re-absorption or by reflux. When then we are called upon to treat jaundice, it is scarcely necessary to say how highly important it must be to learn with as much exactitude as may be the actual state, not merely of the passages through which the bile flows, but the condition itself of the organ by which the bile is secreted ; that our indications of cure may be built upon some ra- tional grounds, and that we may be able to foretel, with any thing like certainty, the continuance and event of the malady upon which we have to exercise our discernment.

The above kinds of jaundice are more or less of an incurable nature: of this disorder there are, however, some species in which the inter- ference of art is signally and abundantly bene- ficial. Gall-stones or inspissations of the bile plugging up the duct, and thus preventing the passages of the fluid, and spasms on these ducts, are the sources of jaundice which are principally treated of as those which the practitioner of me- dicine will be called upon occasionally to detect and to obviate ; but there is another species of the malady which has been properly enough called icterus mucosus, which is neither attended by pain as in gall-stones, nor by spasmodic affections, in which no gall-stones are observed in the faeces, but in which by cathartics a large quantity of viscid mucus will be discharged. Van Swieten talks of colluvies pituitosa in pri- mis viis as often the cause of jaundice, and it most certainly is so without either gall-stone ob- struction, or spasmodic attacks about the ducts. When with persons of sedentary habits and hy- pochondriacal temperament, the skin assumes a decidedly icteric hue, the urine becomes unusually high colored, the faeces lose their proper excre- mentitious character, and the mind is much de- pressed, we may refer the impeded flow of bile which is attendant upon this state of things, partly to a direct and immediate deficiency of action, and partly to an accumulation of viscidi- ties about the mouth of the bile-ducts, prevent- ing the due intestinal supply. This effect, says a modern writer, may be more readily conceived if we call to mind the very oblique direction in which the duct penetrates the coats of the intes- tine, and that it passes for a short space between two of them. When thus the mouth of the com- mon duct is closed,

we have commonly nof only obstruction to the passage of the bile into the in- testine, but of the pancreatic secretion, because most frequently the pancreatic duct enters the duodenum by the same orifice, and then, for want of these stimulant and detergent fluids, te- nacious slime accumulates, and the disease goes on still increasing.

The next species of curable jaundice which we

shall notice is that occasioned by those concretions which are called gall-stones; and, when these are the cause of the symptoms, the progress and es- tablishment of the disorder is very considerably different. In this case there is often violent and protracted pain in some part about the region of he liver, or rather in the upper part of the abdo- men, following the course of the ducts. This pain often comes on suddenly and continues for some time before any appearance of jaundice de- notes the true nature of the malady ; and it is highly proper for the young practitioner espe- cially to take due cognizance of this pain, inas- much as from its violence it may be supposed to be an inflammation of the bowels, and decided upon as such when subsequent appearances shall prove the fallacy of the prescriber's opinion. Let then the following marks of distinction be duly observed between the pain arising from the pas- sage of gall-stones, or from spasms about the gall- ducts, and that dependent upon an inflammation of the bowels. In the first place this gall-duct pain is for the most part rather higher in its situ- ation than enteritic pain ; it comes upon the patient suddenly without any preliminary marks of in- cipient inflammation, such as shiverings or rigors ; and lastly, as the principal point of difference, let it be recollected that the pulse is never acce- lerated as in the same degree of pain of an in- flammatory nature. It is very seldom indeed that the number of pulsations rises to more than 100 in a minute; they are for the most part much under, while, with the same measure of pain dependent upon actual inflammation,the pulse would invariably be running to 120 or 130. The pain too remits, especially if the obstruction be merely spasmodic, and even occasionally when there are gall-stones; but there is not this remis- sion in inflammatory pain ; and further the patient has an instinctive inclination to bend the body forward in order to obtain relief, which is also sometimes obtained by pressure upon the part contrary to what is observed in enteritis. But the difference with regard to the number of pulsations forms the surest criterion of distinc- tion : and it has been well observed, by a writer on this subject, that the more exquisite the pain is, provided the pulse is below 100 in a minute, with the more confidence may we rely upon this diagnostic symptom; inasmuch as such pain could only arise from the inflammation of

a membrane, in which case the pulse w«uld far ex- ceed the number above specified. Before we make any observations on the nature and composition of biliary calculi, we shall say a word or two further on the spasmodic jaundice of authors; this is sometimes unaccompanied by pain, and at other times attended by a pain almost as acute as in the instance of gall-stones passing through the ducts; it generally attacks individuals of a sanguine and irritable temperament, and is either produced by violent passions of the mind, or by sympathetic irritations, such as worms, or indigestible matter in the bowels : it is often exceed- ingly transient. Its existence has been confirmed by anatomical observations, since some dissec- tions that have been made of persons dying with t';is species of jaundice upon them, have proved the non-existence of either calculi or any cause

of mechanical obstruction. As, however, the ducts themselves are composed entirely of mem- brane, and are not muscular, they cannot well be conceived susceptible of spasmodic action; and when the obstruction is from this source the spasm must be supposed to take place at the part of the duodenum itself in which the duct enters in the oblique manner already described, and thus the spasmodic action of the intestine consti- tutes the obstructing cause.

Dr. Darwin attributes one species of jaundice to an inirritability as he calls it of the gall-blad- der. The jaundice of aged people, and which attends some fevers, is believed to be caused very frequently by a palsied state of the gall- bladder.

Darwin, indeed, mentions the case of a gentle- man between forty and fifty years of age, who had labored under the jaundice about six weeks, without pain, sickness, or fever, and had taken emetics, cathartics, mercurials, bitters, chaly- heates, ether, &c., without any apparent advant- age. On a supposition that the obstruction ot the bile might be owing to a paralysis or tor- pid action of the common bile-duct, and the stimulants taken into the stomach seeming to have no effect, he directed half a score of smart electric shocks, from a coated bottle which held about a quart, to be passed through the liver, and along the course of the common gall-duct as near as could be guessed, and on that very day the stools became yellow; the electric shock being continued a few days more the patient's skin became gradually clear. Such cases as these ought to be had in recollection, since the multiplication of our resources when the common ones fail is always desirable, and, when we successfully have recourse to expedi- ents that are a little out of the common way, the impression upon others is at once more favorable, and the satisfaction of our minds greater.

But, to revert to the subject of gall-stones, we may observe in the first place

upon the diffi- culty there is in conceiving the principle upon which these bodies are impelled through the duct, since there is no muscular power of pro- pulsion, and since, even if there were, the pro- pelling power would, as it has justly been ob- served, be as likely to push the body in one direction as in another ; and all those medicines which are given fop the purpose of irritating the duct into stronger contractions would be as likely to do good as harm. It would appear that the effect is produced by the pressure of the fluid bile from behind, and that thus the very size of the calculus serves at times to facilitate its own expulsion, since this si posteriori pressure is more likely to be effectual, provided the stony concretion so occupies the whole canal as not to permit the passage of any fluid bile between it and the inner sides of the intes- tine. Dr. Pemberton observes ' that this idea of the passage of a gall-stone may perhaps serve in some measure to explain the uncertainty in the power of emetics in forwarding a gall-stone. We all know that the effect of an emetic is not only to produce relaxation of the whole body, but also to increase the secretion of bile ; this increased secretion of bile, if its exit be prevented.

will mechanically increase the distension of the duct, and thus will a passage be opened for the calculus. If this position be true, it will follow that an emetic cannot assist the expulsion unless there is a total stoppage of the duct; for, without this, the bile would pass off, and no distension take place. The frequent failure of emetics, in making any impression upon the disease, suffici- ently argues a modification of the complaint over which they have no power. This state I take to be that in which the stone, iu consequence of its angles, does not completely close the duct.' It'is astonishing to what size gall-stones will sometimes pass through the dact without occasioning mechanical injury. ' I have in my possession,' says the author from whom we have made the above extract, ' the model of one, whose long diameter is two inches and a quarter, and whose short diameter is one inch and a quarter.' He conceives that in this case ulcera- tion had taken place between the duct and the duodenum, and that thus an aperture was made for the stone to pass into the intestines. Of this, however, there does not seem to be any positive proof. But although it does not seem by any means certain that the gall-stone just mention- ed made its way by exciting inflammation and ultimately ulceration, it is a fact that such events do sometimes follow upon the attempt at a pas- sage of very large concretions. ' An interesting case,' says a modern author, ' of inflammation of the gall-bladder proceeding from biliary calculi, and terminating in suppuration, which at length pointed externally, came under my observation some years hack. The patient was a woman of about forty

years of age, who for a considerable time had been severely afflicted with pain in the stomach, febrile heat, faintings, and a purging. After a month or so there arose a swelling near the navel, which upon being opened discharged a quantity of yellow matter for many days. The pain becoming very acute in the tumor, the surgeon was induced to introduce his probe into the orifice of the wound, when to his astonishment he found a hard gritty substance at the bottom of it, which upon being discharged a few days after- wards proved to be a gall-stone of the size of a common nut. This was shortly succeeded by another, and in due time the woman's health was perfectly restored.' — Thomas.

Biliary calculi are supposed to be principally formed in the gall-bladder, for here the bile is more stationary and viscid ; and, although the modus operandi of their production is obscure, it seems to be from irregularity in secretion and absorption. They consist, we are told by che- mists, principally of that peculiar substance which Fourcroy calls adipocire. ' They are di- visible,' says Dr. Thomson, ' into four classes. The first kind comprehends those which have a white color, and a crystallised, shining, lamellated structure. They consist of adipocire.. The second species are polygonal of a light grayish-brown color. Externally they have a covering composed of thin concentric layers, within, a matter either crystallised or having the appearance of coagulated honey. They are also composed chiefly of adipocire, but contain a small oortion of brown matter, consisting as it

appears of inspissated bile. The third are of a brown color, and are supposed to be more de- cidedly formed of inspissated bile. (This kind of gall-stones is principally found in the inferior animals.) The fourth species comprehends those gall-stones which do not flame but gradually waste away at a red heat. The two first kind, or those constituted principally of adipocire, are those which are oftenest found in the human subject.' ' There is,' says Dr. Monro, ' a fifth but very rare kind of biliary calculi, which, as far as I know, has not been described, which is of a jet black color, of a shining appearance, and seldom attains a large size, and is very irre- gular on the surface. I have never seen such calculi but in the ductus communis choledicus.'

With regard to the prognosis and treatment of jaundice every thing of course must depend upon the nature of the obstruction which produces the complaint. Should there be reason to suspect schirrosities, as the result of gradual chronic in- flammations of the liver, the malady is to be viewed as in a great measure hopeless, and the subject for the most part stands upon the brink of an abdominal dropsy by which he will sooner or later be carried off. That species, too, which depends upon the thickening of the villous coat of the gall-ducts, does not for the most part admit of much

remedy ; but in this case the jaundice is not always of so complete or so hopeless a nature ; since, though the thickness of the ducts may re- main, and thus impede the due supply of bile to the intestine, the obstruction is in 'no part of the ducts complete; and, with regularity of diet and habits, the liver may eventually come to accom- modate itself as to the quantity it secretes to the quantity that can pass off.

It is in the three remaining sources of jaundice that we have a prospect of accomplishing much by medicine, and which when uncomplicated with any other affection are for the most part diseases of no very long continuance. When we imagine the obstructing cause to consist in duodenal vis- cidities or mucous obstructions merely at the en- trance of the duct into the intestines, we must set about the administration of such medicinals as are calculated at once to purge off these vis- cidities, and restore the secretory power of the duct and intestines to their wonted tone. Eme- tics are often very useful in this species of jaun- dice, and they in some measure answer both the purposes of emulging and exciting new actions. The combination of purgatives with bitters, as mentioned under the head of Stomach Affections, will prove very useful in icterus mucosus. Should there be reason to suppose much hepatic torpor, the exhibition of calomel over night to be succeeded in the morning by a purgative will answer a very good purpose ; this plan may be pur- sued once or twice a week, and some tonic bitter, such as quassia or gentian, be taken twice or three times a day during the time. This kind of jaundice is most usually brought on by sedentary habits, and mental depressions ; regular exercise therefore, with the excitation as much as may be of pleasurable feeling, it is scarcely necessary to observe, are always desirable. This kind ot jaundice may be distinguished from liver affec- tion by the absence of those symptoms which

denote schirrous obstructions in this orˆan ; it may be distinguished from the jaundice of spasm and gall-stones by the slowness of its approach, and by the subject of it being exempt from pain, at least when there is pain it has nothing in it of that acute and violent kind which gall-stones and spasm produce.

When the obstruction of the ducts is from gall- stones, and when these occasion that extreme pain of which we have above spoken, warm fomentation, or the warm bath, and opium, are the principal resources of the practitioner. 'The quantity of opium (says a modern writer) ought to have no limit but the abatement of the pain, and, till thai object be effected, the patient should take a grain of solid opium, or twenty-five drops of tincture of opium every hour.' Enemas, too, composed of starch and about a drachm of tinc- ture of opium, will frequently assist much in mi- tigating

the sufferings of the patient; which it should seem is the principal thing that it is in our power to do, since, from what we have above observed, it is at least problematical whether an immediate and actual aid is given to the propul- sion of the obstructing body by any medicinals which we employ. An emetic may indeed, as above hinted, assist its passage mechanically by occasioning a large secretion of bile ; but we are for the most part disinclined to their employment, since the irritation excited by the pain is already so great as to induce a wariness in the use of any measures which are calculated to augment this systematic disturbance.

In the general way we should regard emetics as more precisely applicable to the icterus mu- cosus, than useful in facilitating the passage of gall-stones. There is a curious case related at length in Hoffman of an obstinate jaun- dice being cured entirely by emetics. This Hoffman treated as an instance of jaundice ari- sing, as he expresses it, ‘ kbile copiosori, viscida, et in ductibus biliosis non minus ac intestino duodeno stagnante.’ The subject of this attack took a scruple of ipecacuanha, and one of tartar emetic, which after the lapse of five days was re- peated, and thus the cure accomplished.

With regard to the specific solvent power of any materials, inferred from the same effect being produced out of the body, the exercise of such solvent property when they are received by the stomach is, to say the very least, abun- dantly doubtful. Ether for instance, and spirits of turpentine, as well as the pure alkalis, and nitric acid, are all capable of dissolving the most usually found biliary concretions, and these have, therefore, in various forms been sug- gested as internal medicines in cases of biliary obstructions. Ether with yolk of egg is recom- mended, says Darwin, as having a tendency to dissolve inspissated bile. And a decoction of madder is recommended for the same purpose, because the bile of animals, whose food was mixed with madder, was found always in a di- /ute state. The same author speaks with others of the beneficial effects of raw cabbage, and other acrid vegetables, as water cresses and mustard. Tt is said that horses are subject to inspissated lile witli yellow eyes, in the winter season, and to get well as soon as they feed on spring grass.

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The largest bile-stone, says Dr. Darwin, I have seen, was from a lady who had parted with it some years before, and who had abstained above ten years from all kinds of vegetable diet, to prevent, as she supposed, a colic of her stomach, which was probably a pain of the biliary dact On resuming the use of some vegetable diet, she recovered a better state of health, and formed no ne\v bilious concretions. M. Durande, a continen- tal practitioner, affirms that he has cured all whom he met with suffering from gall stones, by a mix- ture of ether and spirit of turpentine ; and Dr.

Beddoes talks in high terms of a composition of soda and soap in the form of pills, as a remedy for gall-stones. If these medicines are endowed with the faculty of dissolving the concretions, it must of course be by a slow process, and they must therefore be looked upon rather as preven- tives than remedies. It is possible that the benefit attending the continued use of nitric acid in some kind of stomach pain may have some connexion with this counteracting power, and that both the pure alkalies and the mineral acid may thus serve as conservatories against the calculary tendency in the habit. It must be recollected, that although we have described the cases of gall-stones, which in their passage are accompanied by very excruciating pain, these concretions may, and do often pass of such comparatively small dimensions, and probably often of such yielding consistence, that pains of a much less violent degree are induced by their transmission, and which appear in the shape of cramps and spasms about the stomach attended by a jaundiced color of a very slight and tran- sient nature. From the too hasty absorption, says Dr. Darwin, of the thinner part of the bile, the remainder is left too viscid and crystallised in lumps ; which, if too large, obstruct the ductus communis choledicus, producing pain at the pit of the stomach and jaundice. When the indu- rated bile is not harder than a boiled pea, it may pass through the bile-duct with difficulty, by changing its form ; and yet these viscid lumps of bile may afterwards dissolve, and not be visible among the faeces. The following obser- vations of Dr. Heberden on this subject are worth attention. ‘ Among the various maladies/ says this observant physician, ‘ to which the hu- man body is obnoxious, none are more frequent than pains about the stomach, which, if I am right in my judgment, do not seldom originate in a concretion of the bile (& bile concresente, vel coacta), although such concretions have not been equal to plugging up the bile-ducts, and producing jaundice. It is a long time, he says, that I have been induced to entertain this sus- picion, and the observation of each passing year has served to confirm and strengthen it. For several individuals, who for months or years had suffered from this pain, I have known eventually to become affected with actual jaundice. On this account, he goes on to say, when I have observed such pains accompanied by a sense of weight about the stomach, which I have not been able to trace to any other source, I have conceived a tendency in the bile to inspissation, and I have in consequence ordered emetics, and the use for some time either of saline purgatives*

or other aperient medicines.’ Now it is in such semi-kind of concretions as these, if we may use the expression, that the protracted adminis- tration of either soap and soap pills, or the nitric acid, may exercise a preventive effi-

cacy against the full formation of true biliary calculi ; and generally, in instances where we have suspected the states in question, we have e,m- ployed the soda pills especially with this intention ; but we certainly are short of actual demonstration that the objects we desire to accomplish are thus effected. 'Tanto tamen opus est, ne nimium fidamus his rationibus,' says the author whom we have just quoted, when treating on the head of biliary preventives or solvents; and we must confess a greater disposition to side with him than to join in the enthusiastic encomiums of M. Durande.

In long protracted cases of jaundice, espe- cially when the disorder is accompanied with much hepatic affection, and broken down ener- gies, it is not seldom that discharges take place from the bowels that appear to consist of vi- tiated biliary secretions mixed with blood poured out from the meseraic vessels. This state of things would constitute the melaena of authors, and is named by the vulgar the black jaun- dice ; considerable danger always accompanies this expression of disease, not so much from the loss of blood, or the extent of discharge of any kind from the bowels, as that it indicates a bad state of things internally, and is often indeed a mark of much visceral disorganisation. Its re- medies are such as have already been spoken of under Hcematemesis.

As this is the jaundice of old age, so is there one of infancy ; which is, however, for the most part, of a trivial nature, and short duration; it is often caused by a retention of the meconium, and relieved by those gentle purgatives which remove the meconium from the bowels.

We here subjoin a summary of the remedial indications of jaundice, taken from the Com- pendium of which we have in the course of the present article made so much use.

' The great object of practice will be, to cause the bile again to flow freely into the duodenum and through the intestines ; the cause of the ob- struction must, of course, be sought for; if much pain is present, opium is loudly and im- peratively demanded. From twenty to thirty drops of the tincture, or two grains of the solid opium, may be given every second or third hour, or oftener, till the pain subsides ; and, although inflammation be not present, a preliminary bleed- ing may be sometimes advisable, in order to make way, as it were, for the free and full action of the opiate. Warm fomentations to the abdo- men must be had recourse to ; and, after the pain may have somewhat subsided, cathartic pills may be administered. These are the remedies for the active and painful form of the disorder. The more gradual and less acute kind calls for emetics and purgatives, and biliary solvents, ac- cording to circumstances. In the icterus mu- cosus, emetics are often exceedingly useful, they are best formed of ipecacuan ; and in chronic cases of jaundice it will be sometimes found ex- pedient to

keep up nausea for some time. Blis-

ters on the region of the liver, and sparks of electricity drawn over the right hypochondrium, have been known to emulge the bile, and cure jaundice when other measures have failed ; when, as is often the case, a degree of chronic inflam- mation has been induced in the liver, from the interruption caused in its functions, the remedies directed under the head of Hepatitis are to be resorted to. Pills of soap and soda, equal parts, continued for some length of time, and combined with bitters and the taraxacum, have proved ad- vantageous in correcting chronic jaundice. Tur- pentine, also, with ether, has been thought by some specifically operative in resolving biliary concretions. When the icteric disorders con- tinue from mere debility, steel, with small doses of purgative salts, will be found of service. Thus Cheltenham waters prove beneficial to the semi-icteric state, that is connected with a chronic disorder of the liver, brought on by residence in tropical climates. Raw eggs are recommended by many, to be taken freely, when the purpose of the practitioner is that of procuring a deob- stfuent operation. The copaiba, too, which may be mixed with egg, is administered with the same intention.

R Copaibae t»l xxv. Vitelli ovi q. s. Spiritus aetheris nitrici, Spiritus sulphurici, aa f.3ft.

Syrupi simplicis f. 3j. Aquae purse f. §ift. Fiat haustus; bis terve in die sumendus.

Take of copaiba balsam twenty-five minims, yolk of egg a sufficient quantity, spirit of nitric ether and of sulphuric ether of each a fluid half drachm, simple syrup a drachm, water a fluid ounce and a half. Make a draught to be taken two or three times a day.

427. Class 4. LOCALES. Local diseases. — With jaundice Cullen's third class terminates, and with this also very nearly terminates our con- nexion with the nosology. It has already been remarked that the very notion of local disor- der, excepting in cases of accidental lesion of structure, is in some measure an erroneous one, and, at any rate, most of the orders and genera included in the class locales, are subjects rather to be treated of in the article SURGERY than re- quiring much discussion in this place. Thus the genera caligo, amaurosis, dysopia, pseudo- blepsis, all disordered conditions of the visual organ, are disorders which are principally re- ferred to the surgeon ; the same may be said of the three following genera, dysecoia, paracusis, and anosmia, — the first two having to do espe- cially with the ear and its appendages, the third with the nasal organ ; the genera agheustia de- praved taste, and anassthesia deranged feeling, as it regards touch, are obviously referrible either to some disordered condition of the

organs of taste and touch, over which the physician has not much control, or they are accidental expres- sions of other general or radical ailments, such as paralysis, which have already been dwelt upon.

428. On bulimia, or an inordinate appetite, we : hall use the freedom of extracting from Dr.,

Good, partly because the highly marked cases which occur of this disordered condition are ob- jects of some curiosity, and partly because the remarks of our author on the bulimia of habit and idleness are well worth the regard of those for whom they are intended.

There are many persons (says Dr. G.) who from birth, or a particular period of life, without any habit of indulgence, are capable of taking into the stomach an enormous quantity of food, and cannot be satisfied without it, from a con- stant sense of faintness and inanition ; and who by no means increase in bulk in proportion to the quantity swallowed ; being often, on the con- trary, slender and emaciated.

It is difficult to account for this effect in every case ; but there is great reason to believe that in general it depends upon some error in the struc- ture or position of the stomach, by which means the food passes out of this organ as soon as it is introduced into it. Thus Ruysch gives a case in which the diameter of the pylorus was consider- ably enlarged from relaxation ; and there are others in which it has been changed from its na- tural to a lower or dependent position, in con- sequence of the left side of the stomach being elevated by a dropsy of the ovarium, or an en- largement of the liver. The existence of a double stomach, or of an immediate insertion of the ductus communis choledochus into the stomach, though noticed as causes by Blasius and Bonet, are more doubtful. In the hunger of general exhaustion, forming our third variety, we know it to be pro- duced by the secretion of an extraordinary quan- tity of gastric juice, by which the food is digested almost as soon as it reaches the digestive organ. And it may sometimes, as supposed by Galen, be produced by some acrimony in the stomach, exciting that mimic feeling which is commonly known by the name of false appetite.

Whatever be the cause, the quantity of food devoured by persons laboring under this affec- tion is enormous, and in some instances almost incredible. Dr. Mortimer relates the case of a boy of only twelve years old, who, from a feeling of inanition, had so strong a craving that he would gnaw his own

flesh when not supplied with food ; when awake he was constantly eat- ing : the food given him consisted of bread, meat, beer, milk, water, butter, cheese, sugar, treacle, puddings, pies, fruits, broths, potatoes ; and of these he swallowed, in six successive days, 384 Ibs. 8 oz. avoirdupois; being sixty- four pounds a day on the average. The disease continued for a year : and in this case we have a clear proof that the feeling of hunger did not depend upon any extraordinary secretion of gastric juice producing a rapid digestion; for the food was usually rejected soon after it was swallowed, but whether without passing, or after having passed into the duodenum, it is impos- sible to say. And there are other cases related by Lommius of a similar kind.

In various instances, however, the food thus voraciously swallowed does appear to be di- gested, and that almost as soon as taken. The case of Tarare, as related to the National Insti- tute, by M. Percy, a surgeon in chief to the French army, is a striking illustration of this.

Before his enlistment he was hi the habit of de- vouring enormous quantities of the coarsest flesh, fruits, and roots : and, subsequently, he was found, after swallowing his own rations, to feed on the refuse of his comrades' messes, or offensive meat thrown on the dunghills ; and to devour cats, dogs, and serpents. He was strongly suspected of cannibalism; and was often re- strained with difficulty from the ward appropri- ated to the dead. He at length fled from ihe army before a rumor of having devoured a child of sixteen months old, which had suddenly dis- appeared. The alvine evacuations of this man were not immoderate : but, after gorging his sto- mach, he slept and sweated in torrents of perspi- ration, a symptom common to the disease. He fell at length into a hectic, and died of marasmus.

Voracity is often a symptom of some other affection : it will sometimes occur, in the most capricious manner, during pregnancy, often in the middle of the night, or at some other unex- pected period ; when the patient, with a sudden sense of faintness and inanition, will perhaps devour an inordinate quantity of almost any food that can be obtained at the moment, though in many cases there is a fanciful longing for a par- ticular kind, as for herrings ; of which Tarpius gives an instance of a lady, who in this state de- voured 1400 at a meal. In these instances it is probable that the urgent desire becomes a sti- mulus to the secernents of the stomach, and that a greater quantity of gastric juice is in conse- quence poured forth.

In like manner voracity and the sense of hun- ger occur also as a symptom in many cases of helmintha, or worms in the stomach or duode- num. But, from the emaciation which usually accompanies such persons, it is most probable that the inanition or emptiness of the stomach is here produced

not by a rapid or elaborate di- gestion, but by an irritable state of the muscles of the stomach, which contract too readily, and force the food into the intestines before chymi- faction has taken place. Dr. Burroughs relates the case of a patient in the Philosophical Trans- actions, who, from this cause alone, was rendered capable of devouring an ordinary leg of mutton at a meal for several days together, and fed greedily at the same time on sow-thistles and other coarse vegetables.

Among the Greeks idiopathic voracity appears to have been a frequent disease: they paid much attention to it, and distinguished it by a variety of names, but do not seem to have been very successful in determining on the nature of its cause, or the best means of treating it. The last, indeed, must be as variable as the efficients that produce it. When we have reason to ascribe it to a morbid state of the stomach, in respect to tone or secretion, purgatives, and especially those that are warm and bitter, as aloes, may be found successful. Stimulating stomachics have been found equally so; whence Galen very judici- ously recommends frequent and small doses c f brandy ; and Riverius, of ambergris. If these do not succeed, the stomach should be kept for some days in a state of constant nausea : and with this view, as well as with that of destroying the morbid irritation on which the voracity de-

pends, opium will often be found a highly salu- tary medicine. If the disease be produced by worms, or any other remote irritation, it is obvi- ous that it can only be conquered by conquering the primary affection. And if it depend on a preternatural enlargement of the right orifice of the stomach, so that the food slips away as soon as it is introduced into this organ, a perfect cure is beyond the reach of art ; though some benefit may be derived from a strong external pressure so as to detain the food in its proper place.

The second variety resulting from a gluttonous habit is far more common, and very rapidly pro- duced ; insomuch that there is not perhaps a corporate town in the kingdom that does not offer abundant examples of it. It is in fact one of the numerous evils to which idleness is per- petually giving birth : for let a man have nothing to do, and he will be almost sure, whenever he has an opportunity, to fill up his time by filling up his stomach : and hence the lazy train of servants that vegetate from day to day, almost without locomotion, in the vestibule, hall, and other ave- nues of a great man's house, eat three or four times as many meals as their masters, who may possibly be employed, from morning till evening, in the courts of law,

the committee-rooms of parliament, or in a fatiguing maze of commercial transactions.

In tracing the cause of this voluntary disease we have no difficulty whatever. When the sto- mach becomes accustomed to distension it is never easy without it ; and at length requires to be constantly full to be free from disquiet. It is also well known that every sense grows more acute the more it is employed : and hence the taste and longing of the glutton become more alive to what is relishing and savory : he enjoys such indulgencies more than other men, and turns with disgust from foods that are plain and simple : on this account the difference between the craving of a pampered appetite and that of real hunger is extreme. The former, whatever be its longing, can only satiate itself on delici- ous and high-seasoned dishes ; the latter is con- tent with a fare of any kind, and enjoys the plainest more than the richest.

It is not often that we are asked to attempt a cure of this complaint : it generally proceeds till the tone of the stomach is exhausted by its hard labor, and the cure is effected by the introduction of dropsy, or some other disorder worse than itself, which effectually extinguishes all appetite whatever. The man, nevertheless, who would honestly undertake to reclaim himself from this mischievous habit, and to acquire a better, should proceed in his career gradually ; for organs that have long been under the influence of perpetual excitement, would lapse into atony upon the sudden adoption of a severe counterplan. The food should gradually be plainer, less in quan- tity, and repeated at a greater distance of time; while the intervals should be filled up with some pleasant and active pursuit that may wholly en- gross the attention ; for the surest way for such a man to produce faintness, flatulency, and unea- siness in his stomach, is to think about it. The bowels will at first perhaps be costive : but this n. av easily be remedied by occasional doses of

the warmer and bitter purgati'es, as aloes, colo •cynth, and rhubarb; which will operate as use- fully by their tonic, as by their aperient qualities.

The voracity produced by an exhausted state of the system is rarely of difficult removal ; for, in general, it requires good plain food, and abundance of it. It is most usually consequent upon rapid growth of the body in the period of youth, fevers, excessive discharges, especially from the bowels or blood-vessels, long fasting, severe and uninterrupted exercise, and particu- larly the union of the last two, as often occurs in shipwreck, or the retreat of an enemy : it happens not unfrequently that in such cases the stomach occasionally overloads itself, and throws back some part of what has been swallowed. But this is of little importance, and often proves serviceable, by more effectually inculcating mode- ration than can be

accomplished by medical precepts.'

In respect to the several disorders which fol- low the stomach affections, in this order of dis- eases, we shall here content ourselves with transcribing the following remarks, to be found in the Compendium of Medicine, to which we shall add those introduced likewise under the second section of this order; and as to the re- maining items in this class, they will either be found, as we have above intimated, incidental manifestations of other maladies, and as such, to have already been treated of, or they will imme- diately be referred to in the appendix to the nosology ; or else they are such derangements as, in the present day, are placed in the hands of the surgeon.

The intimations to which we have above al- luded, are the following : —

429. Lasciviousness. Satyriasis. Nymphomania. — These ailments, connected with sexual peculia- rities, often require a good deal of delicacy and discernment from the practitioner ; many are the instances in which physical states have been considered moral derelictions; but, on the other hand, we must be careful of not running into the medical materialism of placing every thing to the charge of organic necessity. A proper regulation of the mind and moral sense will often do won- ders. Let the feelings of the practitioner, how- ever, always bear towards the material and merciful side of the question ; and let him be ready to comfort the patient, whose organic dis- order shall be kept up and increased by the erro- neous conception, that he or she in being the subject of such disorder is then and therefore criminal.

430. Anaphrodisia. — This is often an imaginary affection and creates great uneasiness to the party or parties concerned. Dr. Darwin records two cases of youths who committed suicide under the erroneous conceit of being impotent; and John Hunter relates a most instructive case in which temporary and merely imaginary want of power was overcome by a medical manoeuvre. It will be for the medical practitioner, when con- sulted on these distressing occurrences, either to do as Mr. Hunter did, cheat his patient into a proof of power, or give assurances that the feel- ing and fear are mere hallucinations resulting from morbid delicacy and apprehension.

Respecting nostalgia, or a vehement desire of revisiting the land of our nativity, we have al- ready remarked upon the strangeness of its locality in

the nosology. It is curious that the Swiss peasantry are more affected with this feeling than those of most other countries. Dr. Darwin, whose Zoonomia contains much of what is ex- ceedingly interesting, mixed with a great deal which is extravagant and false, makes the follow- ing brief remarks on the Maladie de Pais, or nostalgia, with which we shall conclude the pre- sent section of the present article.

An unconquerable desire of returning to one's native country, frequent in long voyages, in which the patients become so insane as to throw them- selves into the sea, mistaking it for green fields or meadows. The Swiss are said to be particularly liable to this disease, and when taken into fo- reign service frequently to desert from this cause, and especially after hearing or singing a particu- lar tune, which was used in their village dances, in their native country, ou which account the playing or singing this tune was forbid by the punishment of death. — Swingerus.

Dear is that shed to which his soul conforms, And dear that hill which lifts him to the storms.

PART V. APPENDIX TO THE NOSOLOGY.

431. ' On the subject of worms, acute hydro- cephalus, calculary disorders, and cutaneous affections, the nosology and first lines of Cullen will be found defective ; while vaccinia, angina pectoris, and tic douloureux, are affections in re- spect of name and especial investigation poste- rior to the time of our systematise'

Of worms, it will be seen, we have already treated, by extracting from Dr. Hooper's Vade Mecum the section which he devotes to their consideration ; in that extract will be found very many prescriptions for the best form of vermifuge ; but we might perhaps have added, from another author, that, after all, the counteraction of the con- dition -upon which worms depend is the great business to be aimed at ; and this is to be effected by change of air, change of scene, chang« of diet, and whatever breaks in upon those habits with which a wormy tendency has associated itself.'

Of hydrocephalus we have also taken an op- portunity of treating in the third class of dis- eases; although, upon any other principle than that of its being a scrofulous or lymphatic affec- tion, its consideration would have been there misplaced ; but the uosologist, we have again and again said, finds insuperable difficulties to contend with when he endeavours to make place, and name, and order, conform with his premises ; and 'even an anatomical arrangement of morbid affection, would, under the present circumstances of our pathological knowledge, leave some of the most important disorders untouched by its era- brace.'

On calculary, cardiac, and cutaneous ailments, we now proceed briefly to comment, leaving the more particular notice of them to the articles UREA, SKIN, functions, diseases, and management of, and PHYSIOLOGY, in the alphabetical course of the present publication. On VACCINIA too,

as demanding very particular consideration, we defer our remarks till the occurrence of the word in its alphabetical order.

432. Calculus. Stone and gravel. — Inflamma- tory affections of the kidneys and bladder have already been commented on ; and the diseases which we are now to notice very often produce these. Indeed there is not a more frequent source of inflammation in some portion of the urinary organs than calculary concretions; on the other hand, however, it ought to be recol- lected, that the passing of a considerable con- cretion through the ureters is often productive of excruciating pain without any inflammation being excited. But we are now to turn our attention to the nature and composition, and modes of af- fection, and counteractives, of these concretions themselves; and we proceed to offer a remark or two on the peculiar symptoms of the stone and gravel : —

We may observe, in the first place, that the existence of calculus in the bladder, is for the most part accompanied by less derangement of the general health than the same quantity of local irritation engenders when produced by other causes. This mark of distinction is espe- cially insisted on by Dr. Heberden, and with extreme propriety. Thus if we have bloody urine, if we have mucous discharges from the bladder, if we have difficulty and obstruction in the passage of the water, and pain about the back, testicles, and groin, as indications either of a diseased prostate, an irritation of the mucous membrane of the bladder, or from any other source than that of stone, we find always that the whole system sympathises much more than in stone with the local complaint. Thus we have wasting of the flesh and strength, hectic fever, disrelish for food, rigors, and such like attendants upon these states of disordered action; whereas in calculous pains and irritations the patients, during the intervals, are often as free from any signs and symptoms of disease, as if they were in the enjoyment of perfect health. A frequent mark of stone in the bladder is the discharge of urine tinged with blood, without any accompanying mucous or purulent admix- ture : this, again, is an unfrequent case in re- spect of other irritations, which, if they are sufficiently great to produce bloody urine, at the same time occasion also in a greater or minor degree muco-purulent discharges. The motion of a carriage or of horse-back exercise almost invariably excites or increases pain from stone in the bladder, which is by no means so com- mon in respect of other irritations. Tenesmus or a frequent desire to discharge the contents of the lower bowel, most usually attends enlarge- ments of the prostate gland in consequence of

the immediate connexion of this gland as far as situation is concerned with the rectum; this tenesmus is not an invariable, nor even a very frequent, accompaniment of stone. Pain and difficulty in discharging the urine is a very usual mark of calculus, and so it is of other affec- tions of the urinary organs, but in these last the pain is almost constantly perceived at the com- mencement ; whereas in stone it is almost in- variably during the discharge or just as the

raicturation is concluded, that the obstruction and pain are most troublesome. It is to be recollected that the prostate gland itself is some- times the seat of stone, as well as the subject of inflammation and schirrus, and in this case the diagnostic marks are somewhat more difficult still to trace. ' A decisive diagnostic,' says Dr. Marcet in his Treatise on Calculus, ' is still wanting of the presence of stones in the prostate. Some practitioners consider the circumstance of the uneasiness being much increased by riding in a carriage or on horse-back as the best discrimi- nating symptom of a diseased prostate ; but similar symptoms being often occasioned by stone in the bladder, they cannot alone lead to any positive conclusion. But I have heard of an instance, under the observation of Sir Astley Cooper, in which this pathological point was clearly decided by manual examination. A gentleman about twenty-one years of age became subject to a suppression of urine, for which Sir Astley was consulted. Upon passing a catheter, a grating sensation was felt at the neck of the bladder, and the finger being introduced into the rectum, some calculi could be felt moving in a cyst within the prostate, and a distinct clapping could be heard as their surfaces were pressed together. It was proposed that a small incision should be made through the rectum into the prostate, for the purpose of extracting the calculi, but the gentleman would not submit to the operation.' Into the further particulars of this case it would be carrying us beyond our province to enter ; and we shall conclude by urging the necessity of minute attention to all the bearings and circum- stances of the case, previously to the predication of an opinion on the existence or not of calcu- /ary concretions in the urinary bladder ; and of the several species and varieties of these concre- tions we are now briefly to treat. The following is the division of these concretions which was pro- posed some time ago by Dr. Wollaston, who paid a most minute and scientific attention to this subject : — 1. Scheelian uric, or lithic calculi, composed of uric oxide, or urate of ammonia. 2. Fusible calculi, which are formed principally of the phosphate of lime, and the triple phos- phate of magnesia and ammonia. 3. Bone earth calculi, which are made up entirely of phosphate of lime : and these three let it be observed, especially the first or the lithic calculus, are by far

the most common. The mulberry calculus is added in this arrangement, so named from its external appearance, which is principally com- posed of oxalate of lime. ‘ Urinary calculi,’ says Dr. Monro, junr, ‘ may be divided into five classes; the first includes those composed of >ric acid and urate of ammonia; the second such a » consist of phosphate of lime and the phosphate of ammonia and magnesia; the third class consisting of oxalate of lime and silica; ‘.he fourth contains a proportion of urate of am- monia; and the fifth includes those calculi which are composed of cistic oxide. Besides the above substances,’ Dr. Monro adds ‘ urea and animal matter enter into the composition of urinary calculi; the latter of which cements together the other ingredients. There are very few urinary calculi,’ he further adds, < which

consist of only one ingredient.’ Dr. Marcet observes in his Treatise, ‘ Upon the whole the different kinds of urinary calculi may be ar- ranged under the following heads : — 1 . The lithic calculus. 2. The bone-earth calculus, principally consisting of phosphate of lime.

3. The ammoniaco-magnesia phosphate or cal- culus, in which this triple salt obviously prevails.

4. The fusible calculus, consisting of a mixture of the two former (more frequent). 5. The mul- berry calculus, or oxalate of lime. 6. The cystic calculus, consisting of the substance called by Dr. Wollaston cystic oxide. 7. The alter- nating calculus or concretions, composed of two or more different species arranged in alternate layers. 8. The compound calculus, the ingre- dients of which are so intimately mixed as not to be separated without chemical analysis. 9. Calculus from the prostate gland.’ The lithic calculus, the earthy phosphates, and the mulberry calculus, being by far the most usually found, we may just observe that the first is brown and smooth, and uniform, and generally of a flattened oval figure : the earthy phosphates are generally of a grayish-white and are less compact ; the mulberry calculi are nearly black, and they are of a protuberant irregular shape.

Of the tests of each. — These we shall princi pally- extract from Dr. Marcet. ‘ Take a fragment of the stone which you suppose to be formed of lithic acid, expose it to the flame, of a blow-pipe, it will if thus constituted immediately blacken, emit a smoke of a strong characteristic odor, and he gradually consumed. Secondly pour upon the fragment in a glass vessel some caustic or pure alkali, and by the addition of heat it will be readily dissolved. Lastly, if to a small particle of lithic calculus, however impure, a drop of nitric acid be added, and heat applied, the lithic acid disappears.’ The phosphate of lime calcu- lus may be easily identified by first blacking before the flame of the blow-pipe, but soon afterwards be- coming perfectly

white, and not like the other exhibiting any appearance of fusion unless the most intense heat be applied. This calculus is readily soluble in muriatic acid. The ammo- niaco-magnesia phosphate will have its ammoni- acal portions disengaged by the heat of a blow- pipe, and the remaining phosphate of magnesia becomes opaque, and is capable of undergoing an imperfect fusion. This calculus is more readily soluble in dilute acids than even the phosphate of lime. The fusible calculus is easily distinguished when exposed to the flame of a blow-pipe, by melting, bubbling up, and running into globules of a pearly appearance. This likewise is readily dissolved by acids, and particularly by the dilute muriatic acid. The mulberry calculus is often abundantly distinguish- able by its external appearance.' Its most ob- vious chemical character is to swell out when exposed to heat, and to expand into a kind of white efflorescence, which when brought into contact with paper stained with the juice of violets and slightly moistened, turns it green. The cystic oxide may be distinguished by its peculiar waxy appearance, and by its peculiar smell when heated, and the great solubility of its substance both in acids and in alkalies. Not

then to go any farther into the minutiae of che- mical composition by which these concretions are characterised, it is proper again to call at tention to the leading distinctions of solution in an acid or an alkaline medium. Suppose it ad- mitted, that, by administering a certain quantity of alkali in any form by the stomach, we could insure the arrival, so to say, of a definite quantity of that alkali to the kidneys and bladder, it might be concluded that were we prescribing for a mulberry calculus we should be doing no good, inasmuch as this is'not acted upon by alkalies as just stated. But further, supposing that the offending matter which we wished to soften down or dissolve, to be made up principally of the alkaline phosphates, we should it has been said, in that case, not merely be throwing away our medicinals, and teazing our patients to no purpose, but we should be actually doing some- thing worse, and positively furnishing the calcu- lus already formed with a fresh pabulum for growth and increase : whereas, thirdly, if the concretion be (as it confessedly in the great majority of cases is), the lithic acid, alkaline solvents would then be proper and efficient.*

With respect to the constitutional disposition or exciting causes which combine to effect these several concretions, we still remain much in the dark. It seems, indeed, still to be a disputed point, as in the case of diabetes, whether the altered affinities which are brought into play, in order to evolve these depositions from the urine, commence primarily in the stomach, or are the result of some particular undefined action in the

urinary organs, or in the circulation; or whether the stomach affections which are so commonly attendant upon renal derangement be consequent upon, or the causes of such derangement. And, in regard to the exteric. cause immediately pro- ductive of them, nothing certain has been ascertained. The drinking of hard water has been accused of having an influence upon their forma- tion, but, beside that these concretions are widely different from any compositions of the several mineral or earthy springs, we find in fact that in- dividuals are quite as subject to them who live constantly upon soft, as those who all their lives drink what are termed hard waters. Calculous affections are hardly known in the tropical climates, where the skin is kept in much more acti- vity than in colder regions, and this has led to the preventive indication of attending to the external surface and keeping up cutaneous dis- charges. Of the prevention, however, of these concretions we know nothing more (nay, per- haps this is hardly ascertained) than that sub- stances taken into the stomach, which are cal- culated to derange its functions, and thus to engender acidities, are calculated in the same measure to encourage calculous deposits in those who are either by nature, or by some undetected causes, obnoxious to such maladies. And with respect to the remedies there is much doubt in the minds of several of the medical profession, whether %ve are possessed of any specific or radi- cal counteractives, even in the present state of our advanced knowledge in reference to their chemical composition and solvents. On this head, however, there may be some scepticism VOT . XIV.

arising out of indolence ; and it certainly does appear wrong to abandon calculous patients to their fate, merely because medicines have often proved inefficient or even worse than useless. The question of the efficacy of calculous solvents when taken into the stomach, would appear nearly to be resolvable by the determination of another problem, namely, whether it be possible for alkaline, acid, or any other substances to pass unchanged to the urinary organs ? Now, it is a remarkable fact in the animal economy that cer- tain substances shall be taken into the stomach, shall circulate with the blood in a kind of latent state, and shall afterwards by secretory action, especially by the secretory action of the kid- neys be made to develope themselves. This takes place certainly with regard to alkalies, which have been actually found in the urine by direct experiment, after a long course of alkaline medicines has been taken into the stomach, and the probability is that the same effect is operated upon the urine by the reception into the stomach of the mineral acids. The quantity is allowably very small that is capable of being conveyed in either case, and the solvent operation upon already formed, hard, compact, calculi, at the very least, extremely problematical ; still, however, nascent concretions may be prevented from ari- sing to any height by such medicinals, and their obvious diuretic effects, especially of the alkalies when it is proper to

administer them, may in some measure serve mechanically to force away small deposits of calculous matter, and likewise tend to change the secretory action of the kidney itself. A difficulty has been suggested respecting the agency of alkalies as solvents of lithic concretions, upon the ground that the carbonated or mild alkalies have been thought equally effi- cacious as medicinals with the pure or caustic alkalies, whereas these substances in this their mild state possess out of the body much less sol- vent property. This objection, however, has been answered by stating that the carbonic acid of the mild alkalies may be expelled in the first passages, and that thus the medicine is brought to the same condition of efficiency as had it been taken uncarbonated or pure. The aereated al- kalies may also be taken in much larger quanti- ties than the caustic. The principle then being admitted that both the alkalies and mineral acids may have a remedial operation upon calculous complaints, when judiciously and appropriately employed, it becomes a further question what is the best form for the administration of either. It would appear in general best to change the al- kaline carbonates for each other at times, and at other times to administer the soda or the potass in alternation, so as to obviate their possible de- leterious effects upon the stomach, and prevent the disposition to inefficacy, which habit occa- sionally engenders. Some little time since much talk was occasioned by a proposal fora substitution of magnesia in place of the medi cines more purely and properly alkaline, substitution was first proposed by Sir Everanl Home, and the grounds upon which its superio- rity was claimed are its being less offensive to the stomach than the alkalies, and its aperient tendency when meeting with acid in the stomach ;

and these advantages it certainly possesses, but it does not seem to be able to communicate to the urine alkaline properties quite in so great a degree as the alkalies ; and there have been cases in which a protracted use of magnesia has occa- sioned large concreted masses in the intestines, which have proved very troublesome, and even have been attended with fatal effects. It has been thought that magnesia when administered without any knowledge of the constituents of the calculus, for which it is given, may prove actu- ally deleterious, when administered in cases of the fusible concretions, by adding, as far as its substance and principle is capable of being con- veyed, to the actual mass of the body, to lessen which it had been exhibited ; but the purgative and alterative action of the medicinal upon the primae via? may serve to counteract this effect. It is in this last mentioned calculus, especially, that the muriatic acid has appeared to be attend- ed with so much benefit. In this species, says a modern author, which [am inclined to think is much more common than is usually

suspected, the benefit obtained from an acid solvent is much more rapid than could be expected from the usual effect of reputed solvents in other species of calculus. Six drops of the muriatic acid, in water, were given to five patients and repeated every two hours. Two of them received immediate relief not only from all the distress which accom- panies a common attack of gravel (as it is called) but also from a most painful restlessness, an ex- cessive thirst, and a continued tendency to faint- ing, which symptoms seem in a peculiar way to attend this species of calculus. Two others of them experienced a relief as complete, though not quite so expeditious : and the fifth passed considerable quantities of the sand, loosely ce- mented together during the whole time he was taking the acid, under my eye ; whether he was ultimately cured I am unable to say.' The above observations, it will readily be seen, apply to the uric and to the triple phosphate calculi. It will be recollected we stated that the mulberry, the next most usual form of calculus, is not acted on with facility either by acids or alkalies, and that consequently no principle of treatment hither- to detected can be brought to apply to it. Dr. Wollaiton has observed ' that as ihis mulberry calculus consists chiefly of the oxalate of lime, and as the acid of sugar is known to abound na- turally in a species of oxalis, it is probable it may be contained also in other vegetables and fruits ; and therefore it may be assumed that the secre- tion in question would be modified by avoiding such vegetable aliments as may be suspected of yielding that acid.' The alkalies, says Dr. Marcet, may be used with advantage in this, as in the other species of calculi, to allay irritation ; and they may also be possibly beneficial by com- bining with the oxalic acid in the primae viae, and preventing those displays of affinities that cause it to unite with the lime. Yet a still more bene- ficial effect is likely to be obtained from the usf of the mineral acids which have the power of dissolving the oxalate of lime in its nascent state, ami niav therefore, if it do not prevent its forma- tion, ;,> least serve to assist its passage and ulti- mate ex|iulsir>n from the system in a state of so-

lution.' Upon the .vhole, however, it must be admitted that the alkaline principle of lithontrip- tic agency is that alone upon which much de- pendence is to be placed ; and that as stomachic and diuretic, and in this way preventive, it is questionable whether the objections lie against their use to the extent that we might chemically conclude even in those cases where the concre- tion is not formed mainly of lithic acid ; then again it is to be taken into account that a very large majority indeed are so composed.

Reviewing all that has been laid before the reader, says Dr. Wilson Philip, in a paper he pub- lished on this subject, I cannot help thinking that we have reason to believe that gravel generally originates in a precipitation of lithic acid in the kidneys, in consequence of a greater than usual quantity of another acid, generated chiefly in the primae viae, passing by these

organs ; and that the best plan of prevention is to correct the tendency in the pnmae vias to form this acid ; to support by means which invigorate the powers of circu- lation the action of the skin by which in health any superabundance of acid is thrown off; and when we find that notwitVistanding such measures too much acid still passes off by the kidneys to correct it by antacids before it enters the circulating fluids. The conclusions too of Dr. Prout are pretty nearly the same.

433. Cardiac Disorders. — On affections of the heart we feel that we cannot give an account at once more succinct and satisfactory, than by ex- tracting the remarks of Dr. Gregory, which we therefore venture upon the liberty of doing, again reminding the reader that under the word STE- THOSCOPE in the Encyclopaedia we shall enter into an enquiry respecting the extent to which the different kinds of auscultation may be made to apply in the detection of structural and or- ganic diseases within the thorax.

'To a disease exhibiting many uniform and cha- racteristic symptoms, and usually considered as depending on some chronic derangement in the heart, either functional or structural, Dr. Heber- den in 1768 gave the name of angina pectoris. Dr. Parry of Bath has treated of it fully, under the title of syncope anginosa. In Dr. Cullen's nosology it has received no place, although it might readily have found one next to asthma, to which, in many of its characters, it bears a strong analogy. Modern writers have added but little to the observations of the distinguished author who first described this disease.

Angina pectoris consists of repeated paroxysms of violent pain or uneasiness about the chest, occurring principally when the patient is walking up hill, or scon after eating. The feeling of pain is so acute as to make him instantly stand still, and even to give the apprehension of immediate death; it it referred to the sternum, a little inclined to the left side ; from this point it shoot across the breast to the left arm, and appears to terminate at the elbow. In some cases it shoots to the right breast, and passes down the right arm in a similar manner. At first the paroxysms do not last more than a few minutes, and occur only at long intervals. Gradually they lengthen, and recur too with increased frequency ; being brought on, not only when the patient is walking,

hut when sitting or lying down, and by the slightest bodily exertions, or even anxiety of mind. The duration of the paroxysms has been, in some

very severe cases, protracted to half an ‘ hour or more, the face and extremities becoming pale and bathed in a cold sweat, and the patient, for a while perhaps, deprived of the power of sense and voluntary motion.

The character of the pulse during the fit is apparently subject to considerable variety. Dr. Ileberden found it sometimes, though far from uniformly, affected. Dr. Fothergill reports, that in his cases it was commonly intermitting or irre- gular. There is always some difficulty of breath- ing, or at least a distressing sense of suffocation, present at the same time, and in the advanced periods of the disease the stomach becomes un- usually irritable. Angina pectoris has been known to last for many years ; yet the prognosis is very unfavorable. In the larger proportion of cases it proves fatal suddenly, from causes which will soon come under consideration. The diag- nosis has often been looked upon as a matter of considerable difficulty, but I think without suffi- cient reason. Angina pectoris derives its cha- racter from symptoms present during life, and not from any appearances found after death ; and, if the former are observed, tne disease is at once entitled to such a denomination.

It has indeed been attempted by some patho- logists to attach the peculiar symptoms of angina pectoris to an ossified state of the coronary ves- sels of the heart, but this is taking too confined a view of the subject. More enlarged experience will show that this state of disease is connected with several kinds of structural derangement within the thorax, though certainly this is the most frequent of them all , but, to prove that the restricted notions of the disease entertained by Dr. Parry and others are not correct, it is suffi- cient to state, that in many cases (and very re- markably in that described by Mr. H. Watson) a most extensive ossification of the coronary ar- teries existed without giving rise to a. single symptom of thoracic disease. Dr. Latham, in an interesting communication to the London College)f Physicians, has described two cases of en- arged liver, in which all the genuine symptoms >f angina pectoris were observed. Both patients lied suddenly.

This disease, lastly, has proved fatal where the most accurate anatomists have failed in de- tecting any morbid alteration of structure ; and upon the whole, therefore, we must conclude, that angina pectoris is, in strict pathology, a chronic functional derangement of the thoracic organs, frequently associated with, but not ˆdi- rectly depending upon, disorganisation of the heart.

The objects of medical treatment in this affec- tion are limited to affording some degree of re- lief while the paroxysm is actually present, and to the avoiding as far as possible all those cir- cumstances which occasion its renewal. With a view to immediate relief we have recourse to a small

blood-letting, carminative draughts, and opiates. The more important object, of prevent- ing the gradual inroads of the disease upon the constitution, is to be attempted by strict attention

to diet and regimen, the regular use of aromatic laxatives, and the insertion of an issue or seton. All practitioners agree in the benefit which is derived from using the lightest and most diges- tible food, with perfect abstinence from fermented and sprituous liquors. Even in the latter periods of a protracted paroxysm, when the prostration of strength appears extreme, we are to hesitate in giving wine and cordials. The heart is here oppressed, not weakened.

Any thing that hurries the circulation is suffi- cient to bring on a paroxysm. The patient should therefore be cautioned to keep his mind quiet, and to refrain from all severe exercise. Flatus in the stomach and a torpid state of the bowels are so commonly found1 accompanying this disease, and either inducing or aggravating paroxysms of it, that the practitioner will do well to obviate, by the use of aromatics, bitters, and laxatives, any irregularity in the action of the chylopoietic viscera, which he may observe. Where sleep is interrupted, he may with pro- priety exhibit some narcotic — the extract of hy- oscyamus for instance, or opium. Dr. Ileberden says that he has known opiates given at night, in many instances, prevent the accession of a pa- roxysm.

The symptoms occasioned by the several kinds of structural disease of the heart and great vessels have been closely investigated by modern pathologists. Enquiries however have rather tended to show that they are obscure, than to establish their uniformity ; and, as the whole sub- ject is one of curiosity more than of practical interest, I shall be very brief in my notices con- cerning it.

1. The simplest, and one of the most frequent structural derangements of the heart, is dilatation, either general or partial, of its cavities. This sometimes takes place without any increase in the muscular parietes of that organ. At other times the heart is enlarged by an addition of solid substance, cellular and muscular; its cavi- ties remaining little, if at all, more capacious than usual. The symptoms vary according to the nature of the enlargement which the heart undergoes. Simple dilatation of its cavities is attended with a sense of oppression about the chest, a full, slow, soft, or sometimes even an imperceptible pulse. Persons have lived in this state for many years. The disease goes on, in almost all cases, to produce dropsy, and most remarkably dropsy of the pericardium, and con- sequently urgent dyspnoea. In some instances chronic inflammation of the pericardium super- venes a short time before death, when the cha- racter of the symptoms very essentially changes. Nothing is known regarding the causes

of simple dilatation of the heart. It has been observed in young persons, without any disease of the valves, or other mechanical impediment to the transmis- sion of blood.

2. Where the. heart, is enlarged by increase of its muscular parietes the symptoms are nearly the same with those formerly described as. attend- ing chronic inflammation of the pericardium. There is a constant sense of struggling in the thorax, with inexpressible anxiety referred to the heart The pulse is -mi" k. hard, and jarring, and,

when the hand is applied to the chest, the stroke of the heart seems restrained, and is succeeded by a kind of thrilling. Such cases are truly de- plorable, and much more formidable than those of simple dilatation. The bodily strength be- comes rapidly exhausted, the faculties of the mind are overpowered, and the patient is debarred from every source of enjoyment. Dropsy com- monly supervenes in this as in the former case. The solid enlargement of the heart is believed to be always dependent upon some mechanical im- pediment to the free transmission of the blood, and is therefore often found united to a diseased state of the valves. This suggests the patholo- gical principle (warranted certainly in many cases), that, in proportion to the resistance offered to the passage of the blood, the circulating powers have their strength augmented.

3. Much importance has always been attached by pathologists to the changes of structure which the valves of the heart and large arteries so fre- quently undergo, and to the symptoms thereby occasioned. That in many cases diseased valves are the direct cause of various marks of ob- structed circulation there can be no doubt, but it is not to be forgotten that they are often found where no symptoms had led to the suspicion of them. It is, I believe, quite impossible to ascer- tain with any degree of precision during life the existence of diseased valves, as separate from every other variety of disorganisation of the heart. Still more hopeless is any attempt to de- termine what valve or set of valves are affected. The general symptoms of obstructed circulation, by which we are led to form a plausible conjec- ture as to the existence of ossified valves, are, according to Dr. Baillie, frequent palpitations, a difficulty of breathing, a weak and often irregular pulse, and in some cases a disposition to fainting. To these symptoms other authors have added, and I believe justly, haemorrhage from the lungs and dropsy.

4. Aneurism of the thoracic aorta is a fre- quent and most distressing state of disease. It can never be distinguished with any degree of certainty until it

has attained to such a size that a tumor begins to be formed externally, accom- panied with a strong pulsation. Dr. Baillie cautions us against supposing that strong pulsa- tion in the chest indicates necessarily the forma- tion of aneurism. It is generally attended with more or less of pain in the aneurismal tumor, shooting to the arm of the same side ; and, in proportion to the advances of the disease, the breathing becomes disturbed. It sometimes proves fatal suddenly by the bursting of the sac, but in many cases the patient is destroyed more gradually by interruption to the respiration.

The unpleasant symptoms occasioned by aneu- rism of the aorta admit of very essential relief, and perhaps even the growth of the tumor is sometimes checked, by medicine. Repeated leeches to the chest have nroved serviceable in many cases, and tne application of cold to the tumor has been occasionally productive of ad- vantage. Digitalis unquestionably possesses a very considerable power in moderating the urgent symptoms, and, if to the occasional employment of this drug is added a strict attention to diet and

regimen, the patient may often pass the re- mainder of his days with tolerable ease.

5. Congenital malformations of the heart and large blood-vessels are of various kinds, and they have been ably described by Dr. Farre, to whose work I beg to refer for the anatomical peculiari- ties of the several cases. They all agree in one result — the intermixture of venous with arterial blood throughout the body. It is certainly a curious fact, that life should be compatible with such a state of the circulating system ; yet it is so; and persons have been known to live for many years with it, and even ultimately to die of a disease unconnected with such a deviation from ordinary structure. The great source of mis- chief and danger, as Dr. Farre has pointed out, is not the mere mingling of black and red blood, but the difficulty with which the circulation is generally carried on by a malformed heart. This is connected, in many cases, with the compara- tively small size of the pulmonary artery, the consequence of which is, that the full proportion of blood is not circulated through the lungs.

The principal symptom of malformed heart is a permanent blue color of the skin ; from which circumstance the term blue disease has commonly been applied to these cases. The other symp- toms to which it gives rise are general weakness of the whole frame, permanent or spasmodic dyspnoea, palpitation, an irregular, weak, or in- termittent pulse, and in some cases coldness oi the skin, and emaciation. Persons who have mal- formed hearts are liable to haemorrhages, drop- sical effusions, attacks of syncope or of epilepsy, and occasionally to the unequivocal symptoms of oppressed

brain.'

434. Cutaneous diseases. — The term cutaneous, as applicable to a distinct series of morbid affec- tions, wants something to make it very precise and definite. Certain it is, that, in the majority of those complaints which are regarded as dis- eases of the skin, this part of the body appears to be the principal seat of the deranged action, and the constitutional affections which are con- comitant upon these external irritations seen often to be excited merely by the violence of th< cutaneous derangement. When, however, thesi superficial marks of disease arise, as they oftei do, in consequence of the reception into the bod of a specific morbid poison, it must of course b< concluded that some sort of constitutional 01 general ailment precedes the local expression o the disease, upon which the cognomen is founded. This indeed is most obviously and decidedly the case in reference to the action of some of these poisons, as in syphilis for instance, in which, connected with the external signs of disease, we have internal pains and other marks denoting in ternal and systematic disturbance. Indeed th« vulgar creed is, with regard to all affections o the skin, that they are merely indices or displays of constitutional states, and hence the notion oi noxious humors and foul blood. Into this no- tion, we have already hinted, that some patholo- gists have too readily given, by the institution of an order of distempers under the denomination of cachexia, which, founded upon the Greek word Kafof, signifies a bad habit of body ; and, pre- viously to the laws of secretion and excretion*

having been properly recognised, it was con- ceived, both by the profession and by persons generally, that the marks on the skin were a sort of elimination, as it were, of this morbific matter, which, till it appeared upon the surface, was in some way or other floating about in the humors of the body. Now, that this notion is not only vague but actually incorrect, is shown by the fact that the most extensive affections shall at times exist in the exterior of the body, while the fluids of the body are free from any similar taint. It is therefore not distempered humors, but a certain species of deranged action, the actual essence of which is altogether inexplicable, which gives ori- gin to the derangements in question. To this principle there may seem to be some exception in scorbutic and some other morbid states, where the blood appears to partake of the distemper which at the time pervades the frame ; but even in these cases there is for the most part merely a want of proper constitution and crasis of the blood, rather than any chemical impregnation of a specific nature ; and there are several remedial in- fluences upon these disordered habits that, by curing the

malady, alter the constitution of. the fluids, which it is impossible for them to have effected by any immediate or direct operation of a chemical nature. Of mental influences as remedial in scurvy, we have already spoken. It is then, to say the least, extremely questionable whether those long processes of medicine, the fashion of which is indeed a good deal going by, that are instituted upon the notion of effecting an alteration in the mass of circulating fluids, have any more than an imaginary operation. Although, however, we must abandon the notion as untenable which hinges upon the supposition of these chemical changes in the fluids, we are compelled by observation to admit on the other hand, that there is in a great number of cutane- ous irritations such an intimate connexion with constitutional and internal charrges, that to repel precipitately the one is often to give rise to ano- ther morbid action. Thus let some species of skin eruption be suddenly dried up, by the em- ployment of external astringent or repellent medicinals, and, if there be tendency in the habit to asthmatic affection, a difficulty of breathing and other indications of pulmonary ailment will often immediately establish themselves, although if you draw blood from the patient under either cir- cumstance of affection of the skin or the chest, you will not find it impregnated with any mate- rial of a morbific kind. Cutaneous affections then are rather disordered actions than evidences of depraved fluids — this disordered action some- times pervading the internal organisation ab origine, at other times affecting the interior merely by the violence or repression of the local irritation, and occasionally being constituted solely by a depraved action in the surface itself, the internal organs not being affected either pri- marily or sympathetically. Whether are cuta- neous distempers susceptible of classification ? To this question we should be disposed to reply in the negative, notwithstanding the recent exertions to embody and arrange this varying ex- pression of disease. In the classes of Dr. Willan and Bateman, we find at the very outset an ob-

vious error, inasmuch as the epithet cutaneous is made to apply both to those affections the ex- clusive residence of which is the skin, and also to such as are preceded by internal irritations of an obvious and active nature, and of which, as in small pox, the state of the body's surface is but one link in the chain of disordered actions. Again, the evanescent and fugacious habits of these cutaneous irritations is extremely hostile to any definite arrangement of them. The disease, for example, to which we have just referred, is, in reference to its external characters, a different affection on one day from what it is on another. We are, thirdly, so little aware of the precise nature of the morbid poison which gives rise to most of the skin diseases, that it is impossible to trace and mark their effects, but by the most arbitrary assumptions of identity; and it may be questioned, whether the descriptions of the an- cients, either in cutaneous or any other disorders, are sufficiently distinct and explicit, to enable us to apply them

to modern maladies, such certainly is not the case with the order of diseases to which we are now adverting; their deficiency in intelligibly notifying by actual specification these diseases being a matter of notoriety . ‘ Disorders of the skin,’ says Heberden, ‘ have been variously recognised and named by the ancient writers on medicine ; the respective names which they attached to them are, however, not easily ascertained in the present day, nor does it appear of much consequence to aim at ascertaining them; and the division of these affections into kinds and species, which formerly obtained, is now pretty generally dis- carded or neglected. It is customary to name these anomalous and nameless affections scorbu- tic, but still without any sufficient reason.’ ‘ Of proper scurvy,’ he continues, ‘ I have nothing to say ; nor of the real leprosy, since the former being exceedingly rare in cities, and the latter hardly known in England. I have never had an opportunity of examining them ; and with the exception of these two, the itch, the herpes, and the tinea capitis, or scald-head, seem to be the only cutaneous affections about which medical opinion appears to be unanimous as it regards names and descriptions.’ Other authors make a division of the herpetic eruptions into two spe- cies, viz. the true herpes and the impetigo or ring-worm. ‘ In the herpetic eruption, says Dr. Monro, ‘ there is a small vesicle with a thin scale at the top, and the base is surrounded with erysipelatous inflammation. Sometimes herpes appears under the form of flat patches, which are covered by small scales. This form of the disease is very common on the scalp. When the scale falls off the skin below is generally nearly sound, though somewhat discolored. The herpes appears also in the form of very small vesicles, like millet-seeds ; which appear in clusters, and are filled by a viscid lymph, which exuding, forms rough yellow scabs, and when the scab falls off it is apt to be renewed. This kind of herpes sometimes attacks the throat. Another kind of herpes has been called the herpes exe- dens ; for it destroys the skin, sometimes it spreads along the whole surface, but in other cases penetrates deep.’ When speaking of the ring-worm, which Heberden includes under the

general name of herpes, Dr. Moiiro says, ‘ In this disease there are a number of small red pim- ples, filled oy a thin acrid fluid, which are dis- posed in a circular manner. This disease in some constitutions becomes of an inveterate na- ture, and is diffused over the whole body, like the lepra.’ The lepra is described by this author as a c’isease in which there are a number of cop- per-colored spots over the whole body ; these are in a great measure insensible. The skin, when the disease has made progress, becomes rough and scaly, or is covered by warts ; and foetid sores sometimes break out in different parts of the body.’ Tinea, herpes, psora, are Heber- den’s

three distinct diseases of the skin. Sibbens, syphilis, lepra, elephantiasis, frambaesia, acne, are talked of by others, and we shall proceed to offer a few observations under each of the above heads : — Tinea, or as Dr. Willan calls it, porrigo, or scald-head, is formed by a peculiar chronic inflammation of the skin of the head, which pre- vents the proper growth of the hair, and thereby occasions it to fall off. The matter which is se- creted in this complaint is capable of producing itself in the head of another individual by being applied to it, but the disease is not probably otherwise contagious. It appears, however, ca- pable of being engendered by uncleanliness and unwholesome food. It is not for the most part difficult to cure. The hair ought to be cutaway close from every part where the eruption makes its appearance, and the unguentum picis applied over the whole of the ulcerated surface. When the unguentum picis fails, the citrin ointment may be used, the ung. hydrarg. nitrat. of the pharmacopiEia ; this is for the most part too powerful of itself, and requires to be mixed with an equal quantity of the cetaceous ointment. The disorder usually lasts for a month or two or more. When the external applications seem to fail, or not to act with their usual power, the sulphuric acid taken internally will often prove exceedingly useful in promoting cutaneous ab- sorption. It is scarcely necessary to say that where poverty of diet has been either wholly or partially the cause of the complaint this must be changed for nutritive and wholesome food. The bowels must be kept regular, and even purging in some cases is advisable, especially when, with t-he retrocession of the eruption, the glands of the neck seem disposed to swell, or the gene- ral health affected.

Herpes breaks out in different parts of the body, and is sometimes exceedingly painful and obstinate. Its local remedies are the various preparations of mercury, with which the internal use of this medicine may be occasionally com- bined. Warm bathing is sometimes useful by promoting a regularity in the cutaneous excretion. The true herpetic eruption, according to Willan and Bateman, is a vesicular disease (see the heads of classification at the end of the present section). The shingles is in their scheme a true herpes (herpes zoster). This disorder usually occupies some part of the body rather than the extremi- ties, it consists of little vesicles or bladders on an inflamed base; and these extend often for some inches in length, appearing like little clus- tors of minute vesicles on a red pimple. It is

attended with a good deal of irritation at times, when the patch of eruptions is large, but does not require any medicinal beyond that of keep- ing the bowels gently open ; it lasts from a week to a fortnight. Respecting the vulgar notion of its fatality, shoul'd it complete the circle of the body, we need not say any thing.

The herpetic ring-worm of the head is distin- guished from the porrigo or scald head. Of the psora, or itch, there seem to be at least two or three varieties ; and hence the discordant ac- counts which we meet with in authors, on the question whether this disease is constituted of animalcula? ‘ The animalcula,’ says a modern author, ‘ which are seen in the pustules of itch are the effect, not the cause, of these pustules, as all other stagnating fluids abound with them.’ But Dr. Heberden tell us that he has never been able to discover these same insects in itch either as a cause or consequence of the distemper, and that other physicians have told him the same, although they have brought to- the investigation microscopes of large power. Dr. Bateman ima- gines that the breeding of these animalcula in a scabious skin is a rare and casual circumstance, and that the contagious property of itch consists in the fluid, and not in the transference of in- sects.’ Dr. Adams, however, proposes a different method of reconciling these discordances, and concludes, ‘ that an eruptive disease, independ- ent of the itch, is excited by an insect, called in Ireland the flesii-‘.vorm, in France the cyron, in Portugal the oucas ; once well known in Eng- land by the name of wheal worm, and still some- times occurring. That the disease which it excites from some resemblance, from situation, and from yielding to the same remedies, may be mistaken for itch ; but that the insect has never been dis- covered in true itch, when searched for in the most marked cases.’ Whether the itch is capable of being engendered by bad air, unwholesome diet, or deficient cleanliness, is another question about which there has been some diversity of opinion. There is, however, one kind of itch which has been named scabies cachectica, evi- dently the product of these sources, independent of contagion, and indeed, according to Dr. Adams, incapable of being propagated as a con- tagious distemper. Dr. Adams names this af- fection herpes pauperum. ‘ It occurs,’ he says, ‘ in confined nurseries, if cnange of air is not introduced, but without extending to other parts of the house.’ ‘I have seen it,’ he continues, ‘ in two or three misguided youths, who have returned to their parents after a temporary, absence in tin; lowest order of society ; in these instances it has never been communicated to the rest of the fa- mily. The more usual form, however, in which the itch makes it appearance is in the shape of small eruptions, which have for the most part little watery heads; and at other times, especially after a long continuance of the disease, these eminences become pustular, and run into one another. In this latter case the margins are slightly inflamed ns in small pox. The fingers, wrists, waist, and hams, are the principal seats of these eruptions, which, however, often come eventually to extend themselves over the whole of the body. The itch is one of those affections

of the skin which may be, for the most part, to say the least, repelled with impunity ; and most unquestionably the remedy of greatest efficacy in effecting this repulsion is sulphur. When this is objectionable, the several preparations of mercury may be tried, of which the white preci- pitate ointment is the most cleanly, and perhaps equally efficacious with any other. The internal use of sulphuric aci.d is often, in long-continued and inveterate cases, of conspicuous and abun- dant service. This has been said rather to ap- ply to the pustular itch, and the liquor arsenica- lis in doses of five or six drops, three times a day, to be more applicable to the herpetic pr diffused psora. The white helleboce was formerly much in use in cases of scabies, but it is at pre- sent not much employed. Dr. Heberden con- cludes his chapter on scabies with the following observations : — ' There are some contagious dis- eases, such as the small pox and measles, which only affect the system once in the course of life ; others, such as the scarlet fever and the hooping- cough sometimes, although rarely, recur a second time. Some depend for their production upon the combination of certain external and internal causes, as in the examples of dysentery, camp- fever, and the plague Psora, however, and the lues venerea may always be produced by the appli- cation of their peculiar exciting causes. It is there- fore to be regarded as a beneficent design in pro- vidence to have furnished mankind with specifics against both these poisons, viz. sulphur for the one, and mercury for the other ; for had not that been the case the extension of the two complaints might have proved unlimited and almost uni- versal.'

Respecting sibbens, opinion by no means appears to be unanimous; by some authors it is conceived to be a modification of the morbid poison which produces the frambaesia, or yaws-; by others it is imagined to be the form in which the venereal disease first made its appearance. In the chapter in Celsus de obscscnarum partium vitiis, there are several descriptions, which cor- respond more with the symptoms of disease called by the moderns sibbens, than they do with the true lues venerea. The following ex- tract respecting this affection is from a work of professor Frank of Vienna : — ' In 1800 a disease appeared in Dalmatia, which had the character of syphilis, but was rather considered a kind of lepra, as it was communicated not only by sexual intercourse, but also by every kind of intimate connexion. Several thousand persons were already affected, when Dr. Cambieri, district physician at Fiume, pronounced the disease, which was called by the natives scherlievo, a venereal affection, and the same with the sibbens in Scotland. In consequence of which the malady in question was not only treated with corrosive sublimate, but also its further propa- gation completely checked, by the erection of hospitals, and the adoption of other regulations, that in the course of three years it was almost exterminated. On this occasion Dr. Cambieri suggested the opinion that the sibbens, or the scherlievo, was the original form of the venereal disease, as it first

appeared in Europe. For it is well known that it existed long before it was

supposed that it communicated itself by sexual intercourse. Even the rapidity of its diffusion over all Europe, renders it probable that this was not the only way in which syphilis was then propagated.' Dr. Adams supposes that sibbens and syphilis are different diseases, although the former resembles the latter more than any other with which we are acquainted. 'The venereal ulcer,' says Dr. A., 'is attended with callous edge and base, and sibbens consists only of the clear phagadenic ulcer. The secondary local symp- toms differ also; the venereal retaining longer its copper appearance, and afterwards becoming more elevated, retaining more of the color of the skin; and the scab when formed being more scaly. In sibbens the appearance is very rarely pustular, and I should conceive the pus still less in quantity than in syphilis. There is nearly the same difference between this and the vene- real scab, as between the cow-pock and small-pox scabs. Lastly, it is now universally admit- ted, that sibbens never attacks the bones, but by spreading from the soft parts, and that it yields earlier to mercury than syphilis. This disease vms a few years since exceedingly prevalent in the western parts of Scotland; but it appears to be at present on the decline, both with regard to severity and frequency of occurrence. Fram- boesia, or the yaws, is a disease very common in the West India islands, and supposed generally to have been imported from Africa. Dr. Adams supposes that the leprosy of the Jews, described in Leviticus, was rather this disease (the yaws) than either the Arabian leprosy or the lepra Grae- corum, and there appear some grounds for the supposition. The following is the description of this disease which is given by Dr. Thomas, who informs us that he has several times witnessed it : 'For the most part the patient complains of head-ache, loss of appetite, and pains in the back and loins, which are rather exasperated towards the evening. When these symptoms have con- tinued for some days, they are followed by an eruption of pustules, more or less numerous, which appear in various parts of the body, but especially upon the forehead, face, neck, arm- pits, groins, pudenda, and round1 the anus. The eruption of these pustules is not completed over the whole body at one time. At their first appearance they are not larger than a pin's head, but gradually increase until they attain the size of a sixpence, or even of a shilling. The pus- tules are filled with an opaque whitish fluid, and, when they burst, a thick viscid matter is dis- charged, which forms a foul dense crust or scab on the surface. From the larger kinds of pus- tules there frequently arise red fungous excres- cences of various magnitudes, from the size of a pea to that of a large mulberry. These fungi have but a small degree of sensibility : they never suppurate kindly, but discharge a sordid gelatinous fluid, which forms an ugly scab round the edges of the excrescence. When these erup- tions appear upon any part of the body covered with hair, the color of this

is gradually changed from black to white.'

The few words which we have to say on syphilis are merely in reference to the disorder as a cutaneous affection. The copper appear-

ance of the cutaneous eruptions in the lues vene- rea is their principal characteristic ; they are not so phagadenic as some other ulcerations of the skin, but they appear more stationary, and are rather disposed to rise from the surface than to spread. The scurf or scab which forms over the true venereal ulcer is remarkable ; and it is a very frequent occurrence to find the throat affected in conjunction with the cutaneous erup- tions. When indeed this is the case, there is for the most part but little room to doubt respecting the actual nature of the disease ; and, with regard to the appearance which a venereal throat as- sumes, it may be observed that there is a dead foul coppery kind of character in it, which, to a person who has once seen it, can seldom be mistaken a second time. One author has said that a venereal ulcer in the throat gives the appearance as if a portion of its substance was dug out, and this is not an unapt description of the appearance which it takes on. If not arrested, too, the palate and uvula come in time to be affected, so as to occasion a hoarseness in the voice. But, as we have just said, it is not within our intention to trace the progress of the venereal disease through its various stages and degrees ; we shall content ourselves with merely intro- ducing a caution against that tendency, which has become perhaps rather too determinate, to doubt the syphilitic character of actual syphilitic erup- tions, and thus to forego too long the use of the only decided antidote hitherto discovered to the poison.

On the subject of lepra and elephantiasis the greatest diversity of sentiment has prevailed ; and the discordant opinions in reference to these particulars do not seem as yet to be entirely . econciled. In the writings of Aretaeus we have • very eloquent description of the disease, termed by this author elephantiasis, which commences with a description of the elephant, to which he compares the affection, or rather the subject of it. In the course of this description Aretaeus acquaints us that the skin of the individual who is the subject of the affection becomes thickened and scaly, tumors and spots of various kinds break out in the upper parts of the body, the body itself becomes emaciated, notwith- standing which the face and the lower limbs swell, and, when the disease is inveterate, both the toes and the fingers become buried in tume- factions. Such is the elephantiasis of Aretaeus, with which a more modern disease has lately been confounded, named by some the Barba- does distemper. In this last disease one or both of the lower

limbs is swelled to an enormous size, and the patient is sometimes free from any cuticular affection independent of this. That • these two affections are distinct does not seem to admit of any doubt, but much controversy has arisen respecting the identity of the ancient ele- phantiasis and the lepra, described by the Arabian writers, of which Avicenna in particular speaks, 'quasi cancrum communem corpori.' Dr. Adams contends for the sameness of these two distempers, and he makes a division of the istemptrs in question into the Arabian or Syrian leprosy, or elephantiasis of the Greeks, the true lepra (Jrcecorum and the Barbidoes leg.

The leprosy of the Jews, we hare already said, this author imagines may have been what is now called the yaws, and there is certainly a con- siderable correspondence in the delineated fea- tures of these two last diseases. The leprosy, of which we hear so much in the New Testament, is conceived to be the elephantiasis of the ancients, which, says Dr. A., is a chronic dis- ease unattended with fever, and appears on most parts of the body in distinct tubercles. The scales which characterise this affection never ap- pear but in the advanced stage of the disease, and are then only partial, while the lepra Graco- rum is distinguishable by the scales being coeval with, and as general as the disease. In the one affection the elephantiasis, or Syrian leprosy, the disorder prevents the evolution of the genitals ; in the lepra Graecorum, on the contrary, physical and sensual desires are extremely ardent and ungovernable. M. Sonini, in his travels through Egypt, informs us, that the subjects of leprosj are remarkable in this particular ; and he men- tions an instance of a leper, on the very night of his death, being hurried away even several times by the warmth of his passions. ' He further tells us, he has noticed in Canea, in the island of Candia, great numbers of lepers, both men and women, banished without the gates of the city in miserable hovels, where they abandoned them- selves to the greatest excesses of voluptuous irritation. They were sometimes to be seen satisfying their disgusting and impetuous lusts in open day, by the side of the roads leading to the towns near which they lived.' Aretaeus mentions this peculiarity in the elephantiasis, but Dr. Adams conceives that this feature is described by the Greek writer merely upon hearsay authority ; and indeed, by his own con- fession, his description is taken in part from the relations of others. The true elephantiasis we are told by Adams is not contagious, but it is constitutional and incurable ; and, from this last particularity in the distemper, he infers the difference between the lepra Graecorum and the lepers of the New Testament, upholding his opinion that these last were instances of the elephantiasis, and not lepra. ' That this disease,' says our author, ' was different too from the leprosy mentioned in Leviticus, and for which a temporary exclusion only was required, is evi- dent, inasmuch as it was incurable. Am I a god, says the king of Israel, that this man expects me to heal a leper ? and the cleansing of lepers was

admitted among the most extraor- dinary of our Saviour's miracles. On the treat- ment of these diseases it will not be necessary to enlarge further here, than by saying, the various alteratives, mercurial, antimonial, and vegetable, have been employed, and with various reputed success. 'Although,' says Dr. Thomas, 'by paying a proper attention to regimen, and ad- ministering alteratives, we may be able some- what to retard the progress of the disease, and thereby prolong the life of the patient ; still, when the habit becomes generally tainted, all means will be likely to prove inefficacious.' In respect to the Greek elephantiasis, or Syrian leprosy, if we are to regard the affections as synonymous, it is agreed to be incurable. •' How

cun we expect,' says Dr. Adams, ' to cure a dis- ease which originates in the constitution, and which the constitution is unable to cure.' A generous diet, however, he adds, certainly pro- tracts life, and renders it more tolerable. The treatment of the Barbadoes elephantiasis is directed principally in the first instance to the abatement of lymphatic irritation, and after- wards to support the tone of these vessels.

Of acne or spotted face there is an abundant variety. Eruptions on the face, especially on the forehead, chin, and temples, which do not extend to the body, are very common at all periods of life, but whether these distinct, hard, inflamed tubercles which are sometimes permanent for a considerable length of time, and sometimes sup- purate very slowly and partially, are capable of being arranged accurately, as Dr. Willan pro- poses, under the varieties of acne simplex, punc- tata, indurata, and rosacea, admits of a doubt to say the least. The acne, or spotted face, is to be treated by internal remedies or by local astrin- gents, according as the constitution appears to be affected, or the complaint is merely cutaneous, the symptoms characterising the one or the other state being for the most part rendered sufficiently obvious by the present state or previous history of the patient. Indeed the whole of cuticular medicine is resolvable into this principle. First ascertain how far the root of the evil exists in the interior of the frame, and how far the derange- ment is merely on the surface, and then proceed either to internal medicinals or to external appli- cations.

Cutaneous absorption, or the promotion of this, is what we must always aim at in our endeavours to remedy chronic eruptions of the skin : and, when the disorders are attended with much local or systematic excitement, these absorbent powers must be such as act without much irritation, such as the mineral acids, either the sulphuric, the muriatic, or the nitric, which

at the same time sufficiently stimulate the absorbent vessels of the surface, and serve to abate the prevailing irrita- tion. Arsenic and mercurials appear to be more especially applicable to those states of the skin which are unconnected with much irritative dis- turbance, and in which more direct excitement is called for. We probably often increase and pro- tract cutaneous complaints by the too indiscri- minate and free use of these, especially of mer- curials, from a vague notion of the alterative efficacy of these medicinals. In all affections of the surface cleanliness is one of the cardinal points upon which the treatment must turn, and we are disposed to think that independently of the one or two specific distempers and specific remedies, as mercury in syphilis, and sulphur in itch, we have not arrived hitherto at any satis- factory acquaintance with the principles of me- dicinal management, beyond that of exciting the excretory and absorbent power of the surface, abating local and constitutional irritation when they exist, preserving the bowels in a state of freedom or regularity, and correcting poverty of diet on one hand, and exciting, heating materials of food on the other.

It must be allowed, however, that sevpral chronic affections of a cutaneous kind ˆeeln

very much benefited by the decoction of the woods as it is called, decoct, sarsap. comp., which in connexion with Plummer's pill., the pil. hy- drarg. submur., may be administered for some length of time when we find the cutaneous dis- order of an obstinate nature, and when it assumes an anomalous character. Of the eruptions and derangements which are termed pseudo-syphilitic we shall have to treat in the article SuaGERY.

In the course of the above remarks it will be seen that we doubt the correctness of those clas- sifications which have been made by some modern authors, especially Willan and Bateman. It may be right, however, just to state the principles upon which these arrangements have been pro- posed and the classes into which the various affections of the skin are divided. The elemen- tary terms then of Dr. Bateman, which he prin- cipally takes from Dr. Willan, are,

1. Papula. Pimple. — Little eminences on the skin not commonly containing a fluid, and in which he ranks strophulus or the eruptions which are common to very young children under the name of the red gum, or red gown, and tooth rash ; these often appear in the healthiest children, and being attended by no constitutional derange- ment no medical treatment is demanded, unless indeed, under the feeling that it is right to attend to the stomach and first passages, we should be disposed to give the child a few grains of magnesia, or a few minims of sp. ammon. aromat.

2. Squama. A scale. — Disorders in which the cuticle comes off in the form of lamina. The lepra is one of the illustrations of a squamous as op- posed to a porriginous disease.

3. Exanthemata. Rashes. — The febrile erup- tions, such as measles and scarlatina, are exanthe- matous diseases.

4. Bulla. Bleb. — These are swellings contain- ing a watery fluid. The nettle rash, and the vesicular disease called pemphigus, are included in this class. The neitle rash, when it is ob- viously caused by irritating matter taken into the stomach, requires emetics and purgatives. Beyond this, these vesicular affections a.e very little under the control of medicine.

5. Pustula. Pustule. — Common boils and distinct small pox are examples of pustular dis- eases. The porriginous affections are pustular as opposed to the leprous or scaly on one hand, and the herpetic or vesicular on the other.

6. Veskula. Vesicle. — Some eruptions, instead of proceeding to pustular suppuration, continue vesicular ; the vaccine disorder is more vesicular than pustular. Shingles are vesicular.

7. Tuberculum. tubercle.— This, like the papula or pimple, is a flesh eruption as opposed to the pustular or vesicular, but the swelling is much larger. Acne, or spotted face, is an instance of a tubercular eruption.

8. Macula. Spot.— This designation merely points out discolored skin, as in the noevi materni.

9. Wfttal.— This has somewhat the character of the bulla or bleb, but it is not so permanent, nor do«s it contain a fluid.

10. Furfur. Scab. — Scurfy exfoliation, as in the disease called pityriasis, which consists of a yellowish color of skin extending over the prin-

cipal part of the body, the cuticle coming off in bran-like exfoliation." It lasts often for months or years, and does not seem to be much under the influence of medicine.

11 . Scab.— Hard cuticle forming itself over su- perficial ulcerations.

12. Stigma. Specks.— Several together form- ing petechiae.

435. Tic Douleureux. — Respecting the patho- logy and precise nature of nearulgia facialis or tic douleureux very little can be advanced that is satisfactory. Its seat is usually oa the cheek bone, and it affects in a manner quite peculiar ; for, beside that the pain is extreme and intolerant, it is accompanied by twitchings and convulsive darts, from which the name tic has been derived ; and it is usually as protracted and obstinate as it is painful and peculiar.

Some have endeavoured to account for this affection by supposing it to be an inflammation of the neurilima, investing the particular nerve that is its seat; but its mode and manifestation seem inconsistent with the notion of inflamma- tory disorder even of the most chronic kind ; and to attribute it to a particular condition of the brain is quite vague and nugatory, for it often lasts for years without the cerebral system seeming to be at all affected, and, even when comatose affection supervene upon it, one should rather incline to the inference that these last depended upon some altered condition of the nervous organisation and functions consequent upon the intensity and protraction of the dis- order, than that the disorder resulted from the condition of the brain.

The remedies too seem inconsistent with the cerebral pathology of the malady; for nothing cer- tainly has come so near to a specific operation in this complaint as very large quantities of those medicinals which go under the denomina- tion of tonics ; arsenic bark, and more especially carbonate of iron. We have seen cases, which, to say the least, came nearly up to the full ma- lignancy of the disorder that have yielded to the carbonate of iron in drachm doses, repeated tr.ree times a day ; and it would, we think, be right in all nascent affections menacing the actual establishment of neuralgia facialis to make trial of this last mentioned drug. All the narcotics, such as opium and henbane and hemlock have been tried without affording any thing beyond a temporary relief; even the divi- sion of the affected nerve has proved unavailing, and a most rigid attention to dietetic rules has been enjoined and practised under the notion of 'digestive organ' derangement, without at all fulfilling the expectation of prescriber or patient.

In concluding the present article it will scarcely be necessary to point out the books which the student of medicine will find his ac- count in consulting. The use which we have made of most of the modern authors, who have written systems of medicine, is a proof of the value we set upon their labors. Indeed we have been fearful sometimes of transgressing even encyclopsedian license by transferring sections of books into our pages. If, however, we have

largely borrowed, it will be admitted that we have liberally acknowledged,

and we should hope rather to have promoted the circulation, than interfered with the value, of the several works that have contributed towards the composition and compilation of the present article.

It will all along have been seen that we have been anxious to impress the peculiar nature of medical researches, and the different circum- stances in which a student of medicine is placed from that of an enquirer into any other branch of science. It will have been perceived also, that, without regard to the restriction of uni- formity, we have dwelt upon some parts of our subject more fully than others ; thus on the head of nervous and mental ailments we may be con- sidered as having entered into more detail than consisted with the limited and practical manner in which other affections had been discussed ; to this we have perhaps been partly led by the feeling that our readers are not expected to be exclusively professional, and we have therefore been desirous of branching occasionally out from the dryness of mere detail, into something rather speculative, and of general interest.

But we will not conceal that our intention has further been to assist in freeing the science from the fetters of mere technicality, and to enforce the conviction that neither a combination of anato- mical and physiological knowledge, nor a full acquaintance with disease and antidotes in a routine way, will suffice to form the philosophic and efficient practitioner of medicine.

We have already, in the introductory portion of the present treatise, introduced some few re- marks from a sensible writer, Mr. Mansford, bearing upon this point, and we have the highest satisfaction in concluding the paper by present- ing an extract from a little work which has been sent to us from our friend Dr. Stewart, the au- thor, while these pages have been passing through the press. This little book, entitled On Tendency to Disease of Body and Mind, &c. strikes us as containing in a small compass much that is ad- mirable in matter, joined with a singular felicity and impressiveness of mariner; but the reader shall judge for himself.

• It must be always borne in mind, when we consider the different manifestations of mental or corporeal power, that it is not in the object or subject of any action, that the great virtue lies, but rather in the passion or function that grapples with it. Food and drugs have, in them- selves alone, no more strength or operation, when applied to the lethargic or unwilling stomach, than a book or engraving has, when laid before the gaze of an untutored savage. Their admi- ration is merely the opportunity or occasion, upon which the vital energy is called into play ; and it is the functional power, not the passive capacity, of any organ which is to be considered. Whether the application be jnade to the internal surface of the alimentary

canal, or to an ulcer- ated extremity, it is still the living fibre which is excited and interested. For, though necessary to the transactions in which they bear a part, any articles of diet or medicine are subservient to various controlling powers, and can of themselves do nothing ; neither are they in any sort of ac-

cordance with the phenomena to which they ad- minister. Vitality bids defiance, to a certain extent, to chemical and mechanical laws, or at least regulates and overrules their sway ; and its deficiency is always best estimated by the resis- tance which these last maintain, on some occa- sions, in opposition to it. This peculiar power is nevertheless bounded. Certain general laws hedge in the widest irregularities, and establish something like constancy in the occurrences be- longing to natural functions. For instance, in digestion, the instrumentality of various organs is required, and these are more or less affected and disciplined by circumstance and habit; and then the subject matter must contain certain ele- ments of nutrition, and be free from an exces- sive proportion of crude or poisonous alloy ; but, after all, whatever be the diet, and whatever the precautions used as to time and preparation, it is still this unseen power of vital energy which acts and governs, and in fact, ‘ makes the food it feeds on.’ If we look merely to secondary phenomena, without tracing them to their pri- mary source, we shall not account for the con- dition of any one of the living functions. An explanation of the ultimate stages of digestion and assimilation will in vain be sought in the most scrupulous analysis of the quality, and in the most exact admeasurement of the quantity, of esculent substances, if at the same time the disorder or well-being of the complicated appa- ratus which is brought to bear upon them, be not estimated. How else shall we explain the impunity with which people in vigorous health feed upon the most indigestible fare, the dura ilia messorum, compared with the irritation which the simplest and properest food occasions, when the stomach is debilitated or diseased ?

We draw from the foregoing considerations, that all the agents or circumstances which modify the living powers have not a direct or positive, but only an indirect or relative operation. It is their fitness and expediency, their practical ef- fect, not theii1 inherent virtue, and abstract defi- nite qualities, which recommend them to our notice. For instance, when in the treatment of an injured joint, rest is enjoined at one period, on account of inflammation, and then motion is ordered, at another, to keep up the proper uses of the part, neither plan is of itself good or bad ; but we have an example of the legitimate agency of the healing art, which alternately

inter- feres or looks on, as it is judged proper to check the tendency of vital actions, or to trust entirely to them. In this way alone can we account for the remarkable similarity of effects brought about by causes very different in their nature and mode of operation. We know that, in the treat- ment of many diseases, it is now a minute dose of a poison, now a total change in the habit of life, which sets up a new action in the system. At one time the most active unremitting supply of corroborants is demanded, as in purulent dis- charges ; at another, a total suspension of human agency, as in encouraging union by the first in- tention.

It is not possible to deny the truth of this statement without refusing credence to the ma- jority of writers and speakers on all occasions of professional conference and consultation ; and

without taxing a very partial and limited view of the laws of physiology, pathology, and the- rapeutics. But if we duly consider under what different circumstances the same series of exter- nal phenomena may exist, how different may be the conditions of the vital energy, and how va- rious the aptitude of the inherent powers of the system, to profit by any opportunity of re-estab- lishment; we shall be much less puzzled to ex- plain these apparently discordant facts. By considerations such as these we can easily subdue all tendency to pyrrhonism, reconcile discre- pences which would else appear startling, and account for various revolutions in theory and practice totally inexplicable in any other way. Hence, too, we learn to study, rather the varied applicability of remedial agents, than to confide in their specific power. We must, it is true, from our limited powers of penetration and com- prehension, and from the influence of habit, look with more favorable eyes upon those instruments which we have proved, and be inclined to ac- count for their efficacy upon principles which we have deduced from actual trial, or from the com- mon rund of experience and observation. But, withovt denying the utility of a system of pro- fessional orthodoxy, we should be cautious ot attaching ourselves with so much bigotry to any favorite class of remedies, as to exclude all others from their rank as auxiliaries. Our art should be, like the system which it aims to preserve, living and progressive ; and we should learn not only what, but how to think.

We are then all prepared to admit that there must be causes operating which we cannot ap- preciate, and to acknowledge the assistance which we must always derive from the general laws which control life and health, and recovery from disease ; but it is also certain that so long as we have the power of stepping in to alter the direc- tion of the vital processes, and to originate new actions in the system, we are untouched by the suspicion of the vulgar, who, ignorant of these principles, frequently consider the medical prac- titioner inefficient when he is really exercising the greatest

skill, and promoting the most bene- ficial results. In these matters, as in most others where we are vitally concerned, we can obtain only moral evidence, and must not expect de- monstration. There is a balance of probabilities to be decided only by a majority of proof. In new and isolated cases, therefore, we have ana- logy only as tour guide ; and proceed with less satisfaction and confidence than in those which are more familiar. Where there is conflicting testimony, in favor of opposite methods, we must always suppose a variation in the circumstances of the disease and of the treatment. Where the most frequently repeated experiments establish the character of a remedy, we find still a call for attention to its application and management ; as in the employment of mercury and vensesection. Even the inestimable value of the vaccine mat- ter, as a preventive of small-pox, though estab- lished beyond doubt in a general view, is yet subject to fluctuation, from circumstances which modify its action and defeat its operation, and which prevent our regarding it as a sure specific. Our profession, in its practical capacity, being then not a science, but simply anpivnn' the me-

dical sciences (see the author's pamphlet on the Division of Labor in Medical Practice. — Hatch- ard and Son), we must go on reasoning and in- ferring, and nicely weighing contingencies, and acting upon general deductions from our multi- plied observations, still prepared to find the fading system of to-day give place to the more enlarged and more refined theory of to-morrow ; and we may leave to mathematicians the task of determining how far the power of human agency can be made to square exactly with the causes upon which depraved action depend, when dis- eases and their cures shall be reduced to defi- nite proportions, medicine as an art abolished, and all such matters, not managed by physi- cians, surgeons, and accoucheurs, but settled by Cocker's Arithmetic !'

After some further reflections on the re-agency of moral causes, Dr. S. goes on to say — ' The intellectual faculties and the affections are beings not to be talked of only, but re-agents, which may be made subservient to our purpose, and auxiliaries in our mode of cure. It is with a view to this important and practical end, that we enquire, whether it be ever allowed us to assem- ble these spirits of the deep, byr throwing out the food upon which they feed, and to summon them by pronouncing the spell which they obey ? In matters which we know to be under the control of habit, and so much modified by circumstance, shall we not endeavour to discipline and educate the unruly, and to elicit and develope those which are deficient ? We cannot, it is true, create a passion ; but we can perhaps lay a train for

its appearance; we cannot either form a seed, or construct a plant ; but we can cultivate the soil from which they spring, and provoke them by arrangements and contrivances of our own. Shall then the physician, who is, par excellence, the creature of real life, who is all things unto all men, the connecting link of all stages of society, the witness of every act, and the repository of every secret— shall he content himself with ad- vising the frantic man to 'be calm,' and directing the hypochondriac to ' keep up his spirits ? ' Shall he not rather in critical circumstances ex- ercise a temporary power of dictating, and pro- vide ' ne quid damni capiat respublica? ' < De 1'ascendant que les ames fortes ont sur les esprits foibles." .

To those who have engaged in the actual prac- tice of the art, the above intimations respecting the peculiar nature of medical researches, and the necessity of something being appended to mere medical science, will be appreciated as in- dicative of a proper tone of thinking and feeling. With this extract we had intended toclose the arti- cle ; but, as we are called upon to fill up our page, we shall do it by transcribing the concluding sen- tences of an address, delivered some time since, preliminary to a course of chemical instruction.

' Let the student of medicine,' says the lec- turer, • be given to understand that science will prove nugatory, and learning a vain thing in the practice of physic, if they shall be calculated on as answerable to all the exigencies of morbid cir- cumstance in the way that philosophy teaches planetary motions, or calculates upon phases in the celestial bodies.

' Good sense and independent judgment, and a

ready discernment are, in medicine, what taste and correct feeling are to the fine arts — they are the links which bind the several parts of scienc" into one comprehensive and consistent totality — they are that which may keep from the extrava- gance and mannerism, as artists would say, of a school — they infuse life^and soul, and order, into what, without them, would be a lifeless and con- fused mass of materials Let then no opportu- nity be lost of getting knowledge, but with all your gettings get wisdom ; or, in other words, cultivate that disposition of mind which shall at once enable you to learn from others, and judge for yourself, and which shall often direct you what to do, and what to leave undone, where testimony is unavailing and science impotent.

' With respect to your general conduct in so- ciety as members of a liberal calling, and as partaking in an especial manner of that respon- sibility which attaches to every individual in social life, I feel that it is not necessary for me to expatiate at large; but I shall just use the freedom of

urging consistency of conduct amidst all the chances and changes of this precarious and oftentimes painful existence. Be on your constant guard against the usurping influence of those ma- lignant passions which belong to our nature. Let the superior success of a rival practitioner, should such happen to be the case, in the district where you reside, be suffered to excite as little as may be the feelings or the manifestations of envy. Conscious of having done your best to deserve success, persevere, in spite of apparent or tem- porary obstacles, in the manly endeavour to gain success ; and calmly leave the event to the dis- posal of a superior power.

‘ Let no temptation of temporary advantage im- pel you to the adoption of a measure, either of a public or private kind, of which, when you ask counsel of your conscience respecting its ex- pediency, the reply of ‘ the man within the breast’ is, Desist ; for, when once you lose that self-respect which is only to be retained by a firm resistance to every thing of an equivocal nature, you not only lose with it peace of mind, but the very act of compliance unlocks the door to the more easy access of future errings.

‘ In the event of large success in your profes- sipn, and in the world, let your honors and emo- luments be borne meekly. Recollect that your less fortunate rival has the same feelings, and per- haps equal merit with yourself; and that, see- ing the most stable reputation in medicine may receive a shock as serious in its nature as it had been unlocked for and unmerited in its occurrence.

‘You have much before you of endurance, of forbearance, of enjoyment. You have embraced a profession which is full of uncertainties and anxieties ; but, at the same time, rich in high and important truths ; pregnant with sources of satisfaction ; and abounding with circumstances of delight. And I here reiterate the convic- tion which I have expressed on former occasions, that in spite of all the uncertainties of the art, and all the vexations its practice involves, it will be found that the qualified, and conscien- tious, and consistent, practitioners will meet with full cause of self-congratulation, on the score of conscious utility, and full reason for being contented and happy in his course and calling.’

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MED

- *MEDl'ETY n.t.*

MEDIOC'HITY,

Middle state ; between two extremes ; moderate degree : moderation ; temperance.

When they urge us to extreme opposition against the church of Home, do they mean we should be drawn unto it only for a time, and afterwards return to a mediocrity 1 Hooker.

Men of age seldom drive business home to the full period, but content themselves with a mediocrity of success. Bacon.

There appeared a sudden and marvellous conver-

Fr. medietc, mediocriti ; and is performed by few. Medina does not con-
Lat. medietns, mediocritas. sist of more than 500 ill-built houses; and the sacred tomb itself is not superior to those which the founders of mosques usually erect. It is placed between those of the caliphs Abubeker and Omar : the building being hung with silk, which is renewed every seven years. The guard of forty eunuchs, according to Niebuhr, is chiefly designed to keep off the populace, who seek to carry off relics. Here is a very magnificent mosque, founded by the prophet, being sup-

sion in the Huke's case, from the most exalted to the forted by 4. °° c °luran?» and. containing 300 most depressed, as if his expedition had been capable lamPs> which are kePt always burning. Jambo, of no mediocrities. Wotton. on the Red Sea» ˆ the Port of Medina.

Great wits have great errors, and great estates MEDINA DEL CAMPO, the ancient Methymna have great cares ; whereas mediocrity of gifts or of Campestris, an inland town of the province of estate hath usually but easy inconveniencies. Leon, Spain, has been the birth-place and resi-

Bp. Hall, dence of several of her kings. It is of good size,

They contained no fishy composure, but were made an(j has a neat square, with a noble fountain, up of man and bird ; the human mediety variously " placed not only above but below.

Browne's Vulgar Errours.

'He likens the mediocrity of wit to one of a mean fortune, who manages his store with great parsi- mony; but who, with fear of running into profuse-ness, never arrives to the magnificence of living.

Dryden't State of Innocence. Getting and improving our knowledge in substances only by experience and history, is all that the weakness of our faculties in this state of medio-

crity, while we are in this world, can attain to.

Locke.

The town is separated by the little river Zapardiel, into two parts. Here is a Jesuits' college, a respectable structure ; and a wellendowed hospi- tal. This town has three annual fairs. Popula- tion between 5000 and 6000. The country around is rich in wine. Thirty-seven miles north-west of Segovia.

MEDINA DEL Rio SECO, an old town of Leon, is situated in a plain, watered by the Sequillo. It contains three parish churches, four convents, three hospitals, and about 8000 inhabitants. Noted in former times for its population, manu- MEDINA (Sir John Baptist), an eminent factures, and fairs, it received the name of India painter, was son of Medina de L'Asturias, a Chica, or the Little Indies. The castle is now Spanish captain, who had settled at Brussels, entirely in ruins, and the whole place in a de- •where the son was born in 1660. He was in- cayed state. Twenty-five miles north-west of structed by Du Chatel ; and afterwards made Valladolid.

Rubens his principal model. He was both an MEDINA SiDONiAisan ancient town of Spain, historical and portrait painter ; and was held in in Andalusia, having two churches, six monas- •extraordinary esteem by most of the princes of teries, and about 5000 inhabitants. It has long Germany, who distinguished him by several given the title to a duchy ; and the families of marks of honor. He married young, and came Medina Celi and Medina Sidonia are now united, into England in 1686, where he drew portraits Twenty-two miles south-east of Cadiz, for several years with great reputation, as he MEDIOLANUM, in ancient geography, a painted strong resemblances with remarkable city of Italy, the capital of the Insubres, built by freedom of touch, and a delicate management of the Gauls, now called Milan. It was a muni- tint. The earl of Leven encouraged him to go to cipium ; a place of great strength ; and the seat

Scotland, and procured him many engagements. v"

He returned to England for a short time ; but went back to Scotland, where he died, and was 'buried in the Greyfriars church-yard at Edin- burgh in J711, aged fifty-two. He painted most •of the Scotch nobility, and the professors of Edinburgh ; but was not rich, having twenty

6f the liberal arts ; whence it had the name of Novae Athenae. See MILAN.

MEDIOLANUM AULERCORUM, an ancient town of Gallia Celtica, afterwards named Eburovicum Civitas (Antonine), corrupted to Civitas Ebroi- corum, and this last to Ebroica; whence tht modern name Evreux.

MED'ITATE, r. a. & v.n.^% Fr. mediter

MEDITA'TION, n. x. > Italian meditare;

MED'ITATIVE, adj. j Span, mediter ;

children. He was knighted by the duke of •Queensberry, being the last knight made in Scot- land before the Union.

MEDINA, the capital of Woolly, a kingdom of Lat. meditor. To "plan or contrive; to think Western Africa, contains from 800 to 1000 upon: as a neuter verb, to contemplate; muse; houses, and is defended by a high wall, sur- dwell upon with deep thought : the substantive rounded by a thick hedge. It stands in long. arMj adjective correspond. 12° 50′ W., and lat. 13°38'N.

MEDINA, a city of Arabia, next in honor to Mecca for its sacred connexion with the founder of the Mahometan faith. It contains the tomb of the prophet, though the orthodox do not be- lieve the body to be enclosed in it, but to have

His delight is in the law of the Lord, and in his law doth he meditate day and night. Ptalm i. 2.

Blessed is the man that doth meditate good things in wisdom, and that reasoneth of holy things.

Ecclm. xiv. 20

been transported to heaven. Still this tomb is held in great veneration ; but a visit to it is not considered in any very high drprrce meritorious, VOL. XIV.

Them among Theer set a man of ripe and perfect age, Who did them meditate all his life long.

Faerie Queene

R

Some affirmed that I meditated a war ; God knows I did not then think of war. A'i/i£ Charles.

In meditation, those which begin heavenly thoughts, and prosecute them not, are like those which kindle a fire under green wood, and leave it so soon as it but begins to flame ; losing the hope of a good be- ginning, for want of seconding it with a suitable proceeding. BP- Hall.

Meditate till you make some act of piety upon the occasion of what you meditate ; either get some new arguments against a sin, or some new encourage- ments to virtue. Taylor.

Tis most true,

That musing meditation most affects The pensive secresy of desert cell. Milton. To worship God, to study his will, to meditate upon him, and to love him ; all these bring pleasure and peace. Tittotson.

Like a lion that unheeded lay, J

Dissembling sleep, and watchful to betray, With inward rage he meditates his prey. Dryden. J

Thy thoughts to nobler meditations give. And study how to die, not how to live.

Granville.

Some thought and meditation are necessary ; and a man may possibly be so stupid as not to have God in all his thoughts, or to say in his heart, there is none.

Bentley.

Before the memory of the flood was lost, men meditated the setting up a false religion at Babel.

Forbes.

MEDITERRANE', adj.ˆi Tr.mediterranee, MEDITERRANEAN, or >of Lat. medius and MEDITERRA'NEOUS. j terra. Encircled with land ; inland ; remote from the sea.

In all that part that lieth on the north side of the mediterrane sea, it is thought not to be the vulgar tongue. Brerewood.

It is found in mountains and mediterraneou.i-pa.Tts ; and so it is a fat and

unctuous sublimation of the earth. Browne.

We have taken a less height of the mountains than is requisite, if we respect the mediterraneout moun- tains, or those that are at a great distance from the sea. Burnet.

The MEDITERRANEAN SEA, the Mare In- ternum of the ancients, extends in length from the strait of Gibraltar to the coast of Syria, nearly 2300 miles ; but is of a breadth varying from 300 to 900 miles : the limits of its latitudes are 45° 54′ and 30° 5'. It is united to the Atlantic by the strait of Gibraltar, the Fretum Herculeum,Colum- narium, and Gaditanum, of ancient geography, receiving the first two names from the promonto- ries of Abyla and Calpe, the ancient pillars of Hercules; and the latter from Gades (Cadiz). The Arabs gave to the strait the name of Babuz Zukak, the gate of the way. Its length is four- teen leagues, and the breadth where narrowest six leagues.

The Mediterranean has been thought to hare been originally a vast lake, the waters of which being suddenly increased by an irruption of the Black Sea, at the time of the formation of the latter, forced themselves a passage through the present strait of Gibraltar, and produced the in- undation that submerged the great Atlantic island of Plato : BufFon, however, objects to this hypothesis on the ground that it is the ocean which runs into the Mediterranean, and not the Utter into the ocean : he believes that the Medi- terranean \vas in reality a lake, and that the strait

was formed by a sudden convulsion produced by some earthquake, or violent effort of the ocean against this spot. This opinion, which was also that of several of the ancients, is supported by the similarity of the strata observed at equal elevations on the opposite sides of the strait.

The Mediterranean forms various gulfs, the three most considerable of which are the Gulf of Venice or Adriatic Sea (a name derived from the now small town of Adria, on the Tartaru, nine leagues south of Venice, anciently washed by the sea) ; the Archipelago (jEgean Sea) ; and the Gulf of Tripoli on the coast of Africa.

Portions of this, the largest expanse of water in the world not denominated an ocean, have also other distinctive names. The space between the Balearic Islands and Spain is by the Spani- iards called the Sea of Valencia (Mare Baleari- cum). That between Sardinia, Corsica, Italy, and Sicily, the ancient Tyrrhenian Sea, is named sometimes the Sea of Tuscany and of Sicily. The great gulf by which the Adriatic is entered is called the Ionian Sea, and the eastern extre- mity of the Mediterranean from the isle of Can- dia is denominated the Levant.

Gulfs of this sea, of a secondary description, are those of Lyon (Sinus Gallicus, Sinus Leonis), Genoa (Sinus Ligusticus), and Tarente (Tarentinus). The first extends from Cape St. Sebastian, in Catalonia, to the Isles of Hieres; the Gulf of Genoa, in its most extensive sense, from these islands to the promontory of Piombino ; and the Gulf of Tarente is a branch of the Ionian Sea.

The current that flows into the Mediterranean from the ocean has been supposed to prove its level to be lower than that of the Atlantic, an effect which can only be produced by the loss of more of its water by evaporation than is restored to it by rivers, rains, &c. : its level is certainly also lower than that of the Red Sea. We are ac- quainted with but few authentic notices .of the depth of the Mediterranean. In the channel between Sicily and Malta the greatest depth is 100 fathon.s, while between Malta and Cape Bon there is not more than thirty fathoms wa- ter. The inward current is much stronger on the African shore of the strait of Gibraltar, and even at times an outward current is experienced on the opposite coast. From the strait the current sets strongly to the east along the coast of Africa, following its direction to the coast of Syria, where it sets to the north and to the west along the coast of Caramania, at the rate of one mile per hour. The current from the Black Sea passes to the south through all the channels of the Archipelago. A current sets into the Adria- tic along the east coast quite to its head, and out on the opposite coast. The general current sets out along the coasts of France and Spain ; but with the wind from north-west it is the reverse, the currents then setting in along the coasts of Spain and France; and indeed, throughout the sea, the currents are considerably affected by the winds.

The idea of a submarine current in the strait of Gibraltar rests on the following curious and almost decisive facts : — Dr. Hudson, in a paper communicated to the Philosophical Transactions, above a century ago, says, 'In 1712 M. de L'

Aigle of the Phoenix, off Marseilles, giving chace near Ceuta Point to a Dutch ship, came up with her in the middle of the gut between Tariffa and Tangier, and there gave her one broadside which sunk her. A few days after, the sunk ship, with her cargo of brandy and oil, arose on the shore near Tangier, at least four leagues to the west of the place where she sunk, and directly against the strength of the current; which has persuaded many men that there is a recurrency in the deep water in the middle of the gut that sets out- ward to the grand ocean, which this accident very much

demonstrates.' Philosophical Trans- actions, vol. xxxiii. p. 192.

Lieutenant (afterwards admiral) Patton, when lieutenant of the Emerald, being overtaken with a very heavy gale of easterly wind, in approach- ing the rock of Gibraltar, when night came on it became necessary to lay the ship to, under a close-reefed main-topsail, to wait for day-light and better weather ; and this was done as nearly as possible in the mid channel. About one o'clock in the morning lieutenant Patton ob- served an unusual darkness on the lee beam, and supposing it to be land, and the vessel to be in imminent danger, he instantly wore the ship, without waiting even to acquaint the captain. Finding it impossible to clear the land by setting sails, he saw that there was no chance of saving the ship but by trusting to the anchors. One of them was accordingly let go, but before it took effect the vessel struck the ground three times ; but the ship, notwithstanding the very high swell, and the breakers within half a cable's length of the stern, rode fast till day-break, when the wea- ther became more moderate, and the vessel was found to have drove in at the back of the rock of Gibraltar, by a counter current. In consequence of this narrow escape, lieutenant Patton was led to study the subject of the currents of the strait of Gibraltar.

'He had ascertained by experience,' says his brother, captain Patton, ' that when two fluids meet in a narrow channel, the one being lighter than the other, that which is heaviest will run out below, at the same rate exactly that the fluid which is lightest runs in above. Of the truth of this any person may satisfy himself by filling two long phials, one with salt water and the other with fresh ; color one of them with ink, or any other substance to distinguish it, and place the mouths of the phials close together, holding them horizontally : the salt water, which is hea- viest, will be seen to run out below, exactly at the same rate that the fresh water, which is light- est, runs in above. The same law of nature holds with respect to air, which is also a fluid ; if, for example, the air in a room is more heated than the air in the outside, or next apartment, it will of consequence become rarified and lighter ; if the doors be opened between them, and a lighted candle be placed on the floor of the pas- sage of the door, the flame will blow inward with the cold air running in below; but if the candle is held up, near the upper part of the door, the flame will go outward with the warm and light air, blowing out as fast above as the heavy air comes in below.

'Lieutenant Patton, therefore, very naturally

conceived that, if the water within the Mediter- ranean be heavier than the water in the Atlantic, the water of the latter, according to the laws of gravity and fluids, must of course run in above, and at the some rate the water of the Mediterra- nean, being heaviest, run out below ; and in this particular case, as the cause must be perpetual, the effect must follow ; and

the upper or surface current never cease to run in from the Atlantic to the Mediterranean. In order to ascertain the fact, whether the water in the Mediterranean ia actually heavier than the water in the Atlantic, Lieutenant Patton filled some bottles of sea- water, at a distance from all land, in the Atlantic, and also some bottles near the middle of the Me- diterranean, which were afterwards carefully and accurately weighed ; when a flask, containing one pound six ounces and five drachms of the Atlan- tic water, was found to be thirteen grains lighter than the same flask most exactly filled with an equal quantity of the Mediterranean water. The difference of weight seems small in the contents of a flask, but, on so large a body of water as the gut of Gibraltar must contain, is quite suffi- cient to account for the constant current which, from this cause, as lieutenant Patton has fully ascertained, runs from the Atlantic into the Me- diterranean.'

To this testimony may be added the fact lately communicated to Dr. Marcet by Dr. Macmi- chael, on the authority of the British consul at Valencia, that some years ago a vessel was lost at Ceuta, on the African coast, and its wreck afterwards thrown up at Tariffa on the European shore, full two miles west of Ceuta.

The tides of the Mediterranean are all, on the whole, inconsiderable ; but they have, in some places, a perceptible rise and fall. The greatest seems to be at Venice, where the extreme differ- ence is three feet. At Marsala, in Sicily, the flood comes from the north-east, and the rise is two and a half to three feet ; at Naples one foot, at Toulon one to two feet, on the coast of Syria only six inches. The winds also produce partial and irregular elevations of water, which in many instances have probably been mistaken for tides : when strong westerly winds blow, for any conti- nuance, they force an accumulated body of waters through the strait, which raises the general level of the sea, while strong Levant winds have a con- trary effect; nevertheless it is observed that, in the sea of Tuscany, south-east winds cause a greater elevation of the tide; on the north coast of Sicily, particularly at Marsala, where, as we have observed, the common rise is but three feet, with a strong south-east wind it is as much as ten or eleven. In the strait of Euripus, which separates Negropont from the continent, a sin- gular phenomenon occurs : during the first eight days of the moon, as well as from the fourteenth to the twentieth day, and for the last three days, the tide ebbs and flows regularly four times in the twenty-four hours ; while, during each of the other days it ebbs and flows with great force from eleven to fourteen times, though the differ- ence of elevation never exceeds two feet. Aris- totle is said to have drowned himself here from a feeling of humiliation at being unable to account for this.

In the strait of Messina is found the celebrated Charybdis, which at present is not considered a »e—y dangerous agitation of the waters. It occu- pies a space of about 100 feet in circumference opposite a little cove east of Faro light-house called Calo Faro, and about 250 yards from- the shore. The agitation only takes place when the current is ebbing, or setting through the strait from the north, when its stream makes with the shore a number of angles of incidence which retard its progress, so that it takes two hours to reach Charybdis from the entrance of the strait. Here it produces a considerable rippling, but no vortex ; for the light substances thrown into it, instead of being carried down, are tossed about on the surface. The depth of water here is about eighty fathoms. Between the tides there is a period of repose, of never more than an hour nor less than a quarter of an hour. When the wind blows strongly from the south against the current, the waves rise to a dangerous height for open boats; but the only danger to a large vessel is of being driven on shore by the stream, her sails and rudder being in this spot useless. In order to prevent such accidents, expert sea-men, with proper boats, are kept constantly ready on the beach, at Messina, to put off to the assistance of any vessel. On the Calabrian shore, opposite Charybdis, is the equally cele- brated rock of Scylla, a little promontory the ex- tremity of which is 200 feet in perpendicular height. At low water many rocks show them- selves at its base ; and these, with the currents and waves rushing with great fury and noise into the neighbouring caverns, doubtless gave rise to the poetical fiction of ' the dogs howling round the monster Scylla.' However this rock is not without a certain degree of danger, which in some measure authorises the proverb of ' falling upon Scylla in trying to avoid Charybdis ;' for the tide setting directly on it, and the depth be- ing too great for anchorage, a ship is liable to be driven on it in either a calm or a contrary wind. On the summit of the promontory is a castle, and on the south side a little village.

The Fata Morgana of the strait of Messina is to the ignorant as wonderful a phenomenon as was Scylla or Charybdis to the ancients. ' In fine summer days,' says a late French traveller, ' when the weather is calm, there rises a vapor from the sea which, when it has acquired a cer- tain density, forms, in the atmosphere horizontal prisms, whose sides are so disposed that they re- flect for some time like mirrors the objects on the coast, exhibiting by turns the city of Messina, trees, animals, men, mountains, &c. This repre- sentation continues for eight or ten minutes, when shining irregularities are observed on the surface of the prisms, that first render confused the objects they reflect and the picture dies away gradually.'

The Mediterranean being the receptacle of but four rivers of magnitude, while a stream from the Atlantic continually runs into it, its waters are as saline as those of the latter. According, indeed, to the late experiments of Dr. Manet they are even more so. The singularity of this has been explained upon the supposition that the Medi- t rrar.ean is not supplied, by the rivers which

flow into it, with a quantity of fresh water suffi- cient to replace what it loses by evaporation un- der a burning sun, aided by a powerful radiation from the African shores and the parching winds blowing from the adjacent deserts : and philoso- phers suppose that the only reason why this sea does not gradually increase in saltness, and be- come converted into saturated brine, is the under current of water already mentioned, salter than the ocean, which runs out at the strait of Gib- raltar, and unloads its waters of their excess of salt.

This sea has several springs of fresh water rushing up from amidst the salt, the most cele- brated of which is in the grand port of Tarento, called the Little Sea, and at some distance from the mouth of the Galesus : it is in such force and abundance that it may be taken up without the least mixture of salt water.

The winds most prevalent in the Mediterra- nean blow between north-west and north-east, with few intermissions, for nine months of the year, and almost constantly during summer. In the other three months (February, March, and April) south-east and south-west winds prevail. The nature and effects of the winds in the Me- diterranean, however, differ greatly according to locality. On the south of Spain the Solano wind (Called in Italy the Sirocco) is from the south- east. These, blowing from the sandy deserts of Africa, bring with them, particularly to Sicily and Naples, a degree of insupportable heat. During their continuance the elasticity of the air seems to be lost, and both the body and mind are reduced to debility. At Palermo, where the intensity of the Sirocco is greatest, it never lasts more than forty-eight hours, but at Naples it sometimes continues for weeks. The Mistral is. a north-west wind which blows with great vio- lence down the Gulf of Lyon. The Kamsin a S. S. W. wind, which blows in Egypt in March and April, generally not more than three suc- cessive days at a time. While it continues, the atmosphere seems to be on fire, and acquires a purple tinge; and the transient blasts which succeed from time to time, resemble the breath from a furnace. This is the period in Egypt when the plague, which seems to be indigenous in this country, bursts forth in all its violence. The Kamsin signifies the wind of fifty days, thus named because it only happens, it is said, during fifty days of March and April. The Samiel, or poisonous wind of the Arabs, which at Bassora blows from north-west, at Bagdad from west, at Mecca from the east, and in Syria from the south-

cast, and which is also the Simoom of the desert, is similar in its nature and effects. It contains a great portion of azote.

Towards the east of the Mediterranean the temperature of the atmosphere varies more with the wind than in any other part of the world. In the Archipelago the northern winds, Tramontana, the Etesian winds of the ancients (though this denomination was also extended to all periodi- cal winds), which blow at times with great vio- lence during summer, bring a considerable degree of, cold, and obscure the horizon in a re- markable manner. They are very injurious to vegttation, and cause violent head - aches. A few

hours of these winds cover the mountains of Epirus with snow, which as speedily disappears with a few hours of the Sirocco. On the coasts of the Levant there are land and sea breezes ; the latter, on the coasts of Turkey, is called the Imbat. In some places the former are exceed- ingly baneful, particularly in the island of Can- dia, where they are said frequently to suffocate those exposed to them.

The Marobia is a northern phenomenon of this sort, most probably deriving its name from Mare Ubbriaco, or drunken sea, as its movement is apparently very inconsistent. It occurs prin- cipally on the southern coast of Sicily, and is generally found to happen in calm weather, but is considered as the certain precursor of a gale. The Marobia is felt with the greatest violence at Mazzara, perhaps from the contour of the coast. Its approach is announced by a stillness in the atmosphere and a lurid sky ; when suddenly the water rises nearly two feet above its usual level, and rushes into the creeks with amazing rapidity; but in a few minutes recedes again with equal velocity, disturbing the mud, tearing up the sea- weed, and occasioning noisome effluvia : during its continuance the fish float quite helpless on the turbid surface, and are easily taken. These rapid changes (as capricious in their nature as those of the Euripus) generally continue from thirty minutes to upwards of two hours; and are succeeded by a breeze from the southward, which quickly increases to heavy gusts. — Smyth's Memoir of Sicily.

The temperature of the Mediterranean varies greatly, according to peculiar circumstances. Towards the south the climate approaches to that of the tropics, while on the north the varia- tions of the seasons are more considerable. The greatest severity of winter, however, does not ex- ceed some days of light frost, and the snow never lies more than a few hours in

the valleys of the coasts. The Adriatic being frozen, in the years 860 and 1234, is recorded as a singular phenomenon. In the eastern part of the sea, and particularly amongst the islands of the Archipe- lago, the winters are disagreeable, from the pre- valence of the Sirocco, accompanied by heavy storms of rain, thunder, and lightning. The cli- mate of Attica, on the contrary, is constantly dry and serene. The medium heat of the sea around Sicily, at a depth of from ten to twenty fathoms, by Six's thermometers, is from 73° to 76°, which, being 10° or 12° warmer than the water outside Gibraltar, accounts for the greater eva- poration and consequent currents. — Smyth's Me- moir, p. 184.

Coral is the most important af the marine pro- ductions of the Mediterranean. It is found in great abundance round the Lipari Islands, in the strait of Messina, and on the coast of Barbary ; but the French and Sicilians are the only nations who make its fishery an object of industry. The former, on the coast of Barbary, is said to pro- duce a profit of 360,000 francs per annum. That of the Sicilians, round Lipari and Volcano, em- ploys about sixteen boats ; and that in the strait of Messina eighteen to twenty, with eight men in each. The produce is about 3000 Ibs. weight per annum. The spots on which this substance

is found, in the strait, are nearly in the middle, from the Faro to opposite the church of the Grotto, on the Sicilian shore, an extent of six miles ; and on two small rocky spots opposite the canal of St. Stephen, eight miles south of Messina. The depth here is from sixty to ninety fathoms. This space is divided into ten portions, one of which only is fished every year, so that each has ten years rest, the time found necessary to allow the coral to grow. To the extremities of a wooden cross pieces of net are fastened ; the machine is sunk by heavy weights, and dragged over the bottom, breaking off the branches of coral which thus get entangled. A trifling quantity of this substance is also fished in the gulf of Ajaccio (Corsica), and in some spots near Sardinia and Minorca. Eleven other spe- cies of the gorgona, or sea fan, are found in this sea.

It also possesses a great variety of naked mol- lusca, amongst which the medusa pulmo is the most common in the seas of Italy. The holu- thuria phasalis (Portuguese man of war of our seamen) is also common in this sea, and is named by the French la vellette and la galere, the sail and the galley. The species of testaceous mollusca are also very numerous : the murex af- forded the celebrated purple dye of the ancients . Oysters, limpits, scollops, and muscles, are abundant ; and of the latter is a singular species, found in the gulf of Nice and the Adriatic, en- closed in masses of limestone at the bottom of the sea. It is called, from its resemblance to that fruit, the sea date (pholas dactylus) and much es- teemed by the epicures of Rome and Naples. The lanna pinna, or sea pine, is a bivalve, which

affords a kind of tow, or silk, that is manufac- tured into gloves, stockings, &c. These fish are taken principally round Cape St. Vito, the south point of the Gulf of Taranto. The paper nau- tilus is also met with, but rarely.

The common lobster and crab abound on the coast of Tuscany ; and the squilla arenaria is a very delicate prawn, of the Adriatic. Ichthyolo- gists reckon thirty-eight genera of fish, divided into upwards of 100 species, in the Mediterra- nean and its tributary rivers.

But the indolence of most of the modern races who inhabit its coasts prevents the fisheries of this sea from being carried to any extent as an object of commerce ; and with the exception of the tunny fish, anchovies, and sprats, the whole produce is consumed. The tunny enters the Mediterranean in shoals from the ocean in spring, and passes through into the Black Sea and Sea of Azoph, in whose shoal waters it is supposed to spawn : they return to the ocean in autumn. 'It is said,' observes Mr. Tuckey, ' that these fish enter the Black Sea along the coast of Asia and return along that of Europe ; Aris- totle and Pliny, who noticed this fact, account for it by supposing the fish to see better with the right eye than with the left. It is however more natural to suppose that the prevailing winds are the cause; for when the fish enter the channel they are chiefly from the south, and, when they return, from the north ; the fish therefore prefer the smooth water under the weather shore. These fish are also said to spawn in the Italian seas.

The French carry the tunny fishery to the great- est extent. These fish arrive on the coast of Provence from June to September inclusive, and are taken both with hook and line and with nets.'

'The thonaire, used here, is a number of nets loined together and hauled on shore like the seine, when the shoals of fish appear, for whose arrival a strict watch is kept by persons placed on the hills. The madrague is an enclosure of nets, consisting of several apartments, like a suc- cession of rooms opening one into the other, the nets which compose them being kept in a per- pendicular position by floats and weights. The outer apartment, called the hall, has an opening through which the fish enter, and when it is full the opening is closed by another piece of net, let down by the fishermen who attend in the boat. The fish are then frightened by the noise of the men into the second apartment, and so on to the others, there being from four to eight, until they get into the last, which is called the chamber of death, and when this is full the nets that form it are raised to bring the fish to the

surface, when they are killed with spears and harpoons.'

This fishery is also carried on on the coast of Valencia, from April to September, with nets in the same manner, called almadrabas, and on the coast of Sardinia, the fisheries of which produce upwards of £70,000 a year. The Sicilians carry on this fishery near the isles of Maretimo, &c. ; and the Neapolitans in the gulf of Taranto. The female fish are much the largest, weighing from 800 Ib. to 1200 Ib. The method of curing is by cutting off the head and dividing the fish into six or eight pieces : it is then either simply salted, or is boiled and preserved in oil. The belly pieces are preferred for this last purpose, and the fish thus prepared is called by the French thon marine, and by the Italians tarantilla, from its being prepared chiefly at Taranto : the livers and roes are also salted.

The anchovy enters this sea in shoals in May, June, and July, and is an important object of the French fishery. The preparation consists in cutting off the head, which is said to be bitter, emptying the inside, and salting and packing in little barrels. The most esteemed are those taken near Gorgona; but the people of Frejus are considered the most expert in curing them. The French, Valencians, and Italians, also take great quantities of sprats on their coasts, which they both smoke and salt. The season of this last fishery is from December to March.

The sword-fish is taken in the gulfs of Genoa and Messina. The fishery commences on the Calabrian shore in April, and lasts till July, when it begins on the opposite coast of Sicily and lasts till August. The fish enter the gulf from the north close along the Calabrian shore, and in their return from the south keep close to the Sicilian shore. Twenty to thirty feluccas, and a number of smaller boats are employed in tliis fishery with harpoons, or it is carried on with nets called palmidores.

The fish chiefly taken in the gulf of Lepanto are mullet, which are dried in the sun for the consumption of the Greeks during their fasts, and the roes made into boutaraga, a kind of in- terior caviar, which is exported to France and

Italy. The preparation of this object consists in " highly salting the roes, pressing them between boards, and then washing and drying them in the sun, or smoking. The mackarel is a visitor of the Mediterranean ; and some writers have given the herring to this sea, but the fish called harengade and celerin, on the coast of France, is now ascertained to be only a large sprat. The red turmulet abounds on the coast of Egypt, particularly in winter; the raia aquila is also chiefly met on this coast: the barbel is likewise to be found on the lakes of Naples.

The hippocampus, or cavallo marino of the Italians, abounds in the gulf of Naples and the Adriatic, where it is washed up dead on the shores, and vrhen dried is preserved as a curiosity, the head having a resemblance to that of the horse, and the tail to that of the shrimp. The Italian women take it to increase their milk, and use it externally as an anodyne to the breast: it has also been used with honey and vinegar in hydro- phobia. The gadus minutus arrives periodically, and is followed by numbers of large fish, to the great joy of the fishermen, who make them their food.

Instances have occurred of great cetaceous animals being taken in the Mediterranean, but they are considered only as individuals which have strayed thither. A pike-headed whale, 10O feet long, was taken in 1620 near the island of Corsica; and in 1790 a round-nosed whale was killed on the coast of Provence. The whale which Pliny mentions as having entered the port of Ostia, in Claudius's reign, clearly excited the attention of the Roman populace by its being considered a wonder. But this sea habitually yields the grampus (delphinus orca), the delphi- nus feres, the common porpoise (delphinus pho- caena), and the bottle-nosed porpoise (delphinus delphis) the dolphin of naturalists. The modern Greeks are said to have a great veneration for this latter.

Here are of amphibious animals, of the genus phoca, three species — the common seal (phoca vitulina),the hooded seal (phoca monachus), and the little seal (phoca pusilla). They frequent the desert isles, particularly of the Ionian Sea and the Archipelago : the Zantiots are the only peo- ple that take them for their skins and fat. Two species of sea turtle are also met with in the Mediterranean — the loggerhead and hawksbill : the sea birds are, various species of the gull and diver, the storm-petrel, tern, sea swallow, and wild duck.

We have room but to add an extract from an ingenious paper of Dr. Robertson's adddressed to Dr. Brewster, in the Edinburgh Philosophical Journal, 1819, on the luminous appearance of the waters of this sea : a specimen of which is seen in the Fata Morgana, already alluded to.

'In addition to these observations,' says this . writer, ' I beg leave to offer what I have remark- ed respecting the very luminous appearance of its waters on the slightest agitation, so frequently perceived after sunset, especially during the warm season. By many people this has been supposed to be caused by certain minute lumin- ous insects existing in the water, to the disen- gagement of phosphorus from the excrements;, or

remains of fishes that have died, and other pu- trid matters. By seamen this luminous appear- ance, from the slightest agitation, has been considered as generally the precursor of blowing weather, and I am persuaded, from repeated ob- servation, that the remark is as correct as it is general.

‘ This luminous appearance is but rarely met with during the winter season, compared to the f-equency with which it occurs in the summer and autumn. I have never seen it when the wind blows fresh from a northerly point,, or when the temperature of the air is low ; nor have I remarked it in any great degree but in calm weather, when the temperature of the air was high, and especially as the wind was chang- ing towards a southerly point, and I have always observed that this luminous matter was emitted most strongly immediately preceding the fall of rain or an overcasting of the sky, showing a dis- position to the formation of that meteor. Upon the whole I am of opinion that this appearance of light, on the agitation of the waters of the Medi- terranean, is somehow or other connected with evaporation, and that it is occasioned by the ra- pid evolution of the electric fluid in that process ; that probably it rarely depends on phosphoric matters existing in the waters; and, after re- peated and careful observations by myself and others, I have never been able to trace its ap- pearance as depending on the existence of in- sects, nor could I ever perceive any thing pecu- liar in the sensible qualities of water taken up in such circumstances, or that was different from the water of the sea when it did not give out this luminous appearance.’

ME’DIUM, n. s. Lat. medium. A mean; any thing interposing or intervening; hence the middle term, or step, of an argument; middle olace or degree.

Whether any other liquors, being made mediums, cause a diversity of sound from water, it may be tried.ˆ Bacon.

Alt the old philosophy consented that virtue and vice had no medium between them, but whatsoever was not evil was good. Bp. Taylor.

He who looks upon the soul through its outward actions often sees it through a deceitful medium, which is apt to discolour the object. Addison.

‘I he parts of bodies on which their colours depend are denser than the medium which pervades their in- terstices. Newtm. To find the medium asks some share of wit,

And therefore ‘tis a mark fools never hit.

Cropper.

MEDIUM, in philosophy, that space or region through which a body in motion passess to any point : thus ether is supposed to be the medium through which the heavenly bodies move (see ETHER); air the medium wherein bodies move near our earth ; water the medium wherein fishes live and move ; and glass is also a medium of light, as it affords it a free passage.

MEDIUM, ARITHMETICAL, or arithmetical •nean, or medium rei ; that which is pqually dis- tant from each extreme, or which exceeds the less extreme as much as it is exceeded by the greater, in respect of quantity, not of proportion; thus nine is a medium betwixt six and twelve.

MEDIUM, CIRCULATING. Upon this prolific topic we expected (see our article BANK) to see the public mind and the procedures of the mo- nied interest in a far different state to that in which we find them, at the date of drawing up this article. While of the issues of the Bank of England an account is periodically afforded, of the banking system (if such there be), in this the highest and most influential quarter, no intelli- gible account is allowed to circulate beyond the court of directors ; and even to the proprietors no statement of profits is afforded. We have only therefore to add to that article that the bank of England has returned to cash payments, and, having been allowed to plant branch banks at the distance of not less than sixty miles from London, has made the experiment with conside- rable success in several large towns ; that this year (1829) the country banks have withdrawn all their small notes from circulation, with little or no apparent difficulty to themselves; but that the result on the manufactures and mercantile interests is far from being fully ascertained. For the manner in which the various mercantile towns abroad conduct their banking measures we must refer to what we have been able to collect respecting them in the several separate articles. Some hints on the connexion of 'the doctrine of CURRENCY with that of our Corn Laws may be found in the article CORN LAWS. From a writer there quoted we may add the fol- lowing extract as worthy the consideration of all classes : —

- *Equity demands, in favor of the landed pro- prietor, an equivalent for the exclusive charges fixed by law on his estate : that equivalent must be a protecting duty on foreign corn imported ; the amount of the duty is a fit subject for dis- cussion : but here we are arrested by the past vari- ations in the value of our currency, and the pric» which we have first to settle is the price of money ; for it is impossible to establish a fixed pro- tecting duty with fairness, when the standard of value is itself unfair. This appears to me the very core of the whole subject, the point on which you have committed the most fatal errors. You have fought for high prices, and concurred in measures which render them impossible. You have retained your*

monopoly, but consented to a change in the value of money which must destroy its efficacy. The ground which you still endeavour to defend is no longer tenable ; and the points which you have surrendered ensure your defeat. If I might venture to allude to the conduct of the landed interest in the last session of parliament (1825-1826), I should say, that it affords conclusive evidence of the blindest adherence to the single object of high prices, coupled with an entire misapprehension of the means by which this object might he attained, and of the general principles on which the prices must depend ; the price of commodities, and of corn among the rest, is compounded of two ingredients — of the supply in the market compared with the demand, and also of the value of money ; itself the measure of value, liable, however, to great variation, in proportion to its quantity.

‘ The value of money is the inverse ration o»

its quantity ; the supply of commodities remain- ing the same. Increase the quantity of money, prices rise: decrease the quantity of money, prices fall. On the other hand, the quantity of money remaining the same, increase the quan- tity of commodities, prices fall : decrease the quantity of commodities, prices rise. Thus a decrease of the quantity of money produces the same effect on the price of a commodity as an increase of the quantity of the commodity itself; if corn be that commodity, an addition to the value of money, such as the diminution of its quantity occasions, ensures as effectually a fall in the price of corn as the opening of the ports and free importation : in which of the two cases prices would fall lowest is a simple question of proportion between the increased supply of corn and the decreased quantity of money. These truths are elementary, and admitted as axioms ; yet the conduct of the landed interest proceeds on a virtual denial of their validity. The high price of corn being their declared object, they direct their whole strength to the preservation of their monopoly of the supply, and at the same time contribute their support to measures de- signed to diminish the quantity of money and to increase its value. Their whole attention is absorbed by one half of the object of price — they look only to the supply, they disregard the measure of value ‘

MEDIUM, GEOMETRICAL, or medium personae, is that where the same ratio is preserved between the first and second as between the second and

third terms ; or that which exceeds in the same ratio or quota of itself, as it is exceeded : thus six is a geometrical medium between four and nine.

MED'LAR, n. s. Sax. mae'D, from its being used in mead. The MESPILUS of Linne, which see.

You'll be rotten ere you be half ripe And that's the light virtue of the medlar.

Shaktpeare.

October is drawn in a garment of yellow and car- nation ; with a basket of services, medlars, and chesnuts. Peacham.

Men have gathered from the hawthorn's branch Large medlars, imitating regal crowns. Philips.

The leaves of the medlar are either whole, and shaped like those of the laurel, as in the manured sorts ; or laciniated as in the wild sorts. Miller.

MED'LE, } Goth, medal ; Swed.

MED'LY, v. a. & n. x. £ medel, mingled. To

MED'LEY, n. s. Scad;'. J mingle or mix (obso- lete as a verb) : a mixture ; miscellany ; confused mass or congeries : medley is used by Dryden for mingled ; confused.

Ther is nothing that savoureth so sole to a child as the milke of his uorice, ne nothing is to him more abominable than that milke whan it is medled with other mete. Chaucer. Personnes Tale.

Some imagined that the powder in the armory had taken tire ; others, that troops of horsemen ap- proached : in which medly of conceits they bare down one upon another, and jostled many into the tower iitch. Hazard.

I'm strangely discomposed ; (rjualms at my heart, convulsions in my nerves, Within my little world make medley war.

Dryden.

Mahomet began to knock down his fellow-citizens, and to fill all Arabia with an unnatural medley of religion and bloodshed. Additon.

They count their toilsome marches, long fatigues, Unusual fastings, and will bear no more This medley of philosophy and war. Id. Cato.

MEDMANN, or METTMANN, a town in the Prussian states of the Rhine, in the duchy of Berg, having manufactures of cotton, woollen, and hardware. Po ulation 4000. Six miles E.N. E. of Dusseldorf. ,

MEDUL'LAR, adj. { Fr. medulla ire ; from

MEDUL'LARY. J Lat. medulla, pith. Per-

taining to the marrow.

The back, for the security of that medullary sub- stance that runs down its cavity, is bent after the manner of the catenarian curve. Cheyne.

These little emissaries, united together at the cortical part of the brain, make the medullar part, being a bundle of very small, thread-like channels or fibres. Id.

MEDUSA, in mythology, one of the three Gorgons, and the only one subject to mortality. She was celebrated for her personal charms, and the beauty of her locks. Neptune became enamoured of her, and obtained her favors in the temple of Minerva. This profanation provoked Minerva, who changed the beautiful locks of Medusa into serpents, the sight of which turned the beholders into stones : but Perseus, armed with Mercury's axe, cut off Medusa's head, from whose blood sprang Pegasus and Chrysaor,. together with the innumerable serpents that in- fest Africa. He placed Medusa's head on the aegis of Minerva, which he had used in his ex- pedition ; and the head still retained its petrify- ing powers.

MEDUSA, in zoology, a genus of vermes, be- longing to the order of mollusca. The body is- gelatinous, roundish, and depressed; and the mouth is in the centre of the under part of the body. Many species, on being handled, affect with a nettle-like burning, and excite a redness. They were named by the Greeks Trvtw/ia 0aXa

MEDUSA CA.HLATA, the capillated medusa. is a very singular animal ; it is easily broken and destroyed by a touch ; its shape is rounded, ris ng into a convexity in the middle, where it is 1 1 refore thickest ; on the under side it is plain, HI d on this there is visible a rough, or, as it were, an echmated circle, within which there run eight pairs of rays from the centre toward the circum- ference ; from the centre there arise also a number of curled appendages. This species is met with in vast abundance, floating on the surface of the water about Sheppey Island in Kent and else- where on that coast. This species is called hy many authors pulmo marinus, or the sea lungs

MEE

MEDUSA LUMINOSA, a species discovered by Sir Joseph Banks, to which he has given the name of luminosa, as, when brought aboard by the casting net, it had the appearance of metal violently heated, and emitted a white light. These luminous animals are one of the causes of that appearance of the sea which has been men- tioned by many navigators, and for which various reasons have been assigned. They seemed to emit flashes of light exactly resembling those of lightning, only not so considerable ; but so fre- quent, that sometimes eight or ten were visible at the same moment.

MEDUSA UMDULATA, the waved medusa, has the edges waved, with fangs on the projecting parts ; four orifices beneath, between which rises a stem divided into eight large ragged tentacula. These animals swim in large companies in search of food, with their tentacula in continual motion, with which they seize their prey, and convey it to their mouths; they vary in size, the largest being generally about eight inches in diameter. They vary likewise in the number of their tenta- cula ; some have only two ; others four, six, and some eight, but they rarely exceed that number. So powerful is their embrace, that whatever prey comes withi-n their reach never escapes. They subsist on insects, small fish, &c.

MEDVVAY, a river of England, which rises in the Weald of Sussex, and, entering Kent near Ashurst, runs by Tunbridge, and thence con- tinues its course towards Maidstone. It is navigable for large ships to Rochester Bridge, and thence for vessels and barges to Maidstone, the tide flowing up to that town. The distance between its mouth, where the fort at Sheerness is erected, and Rochester Bridge, is between six- teen and eighteen miles. In this part of the river, the channel is so deep, the banks so soft, and the reaches so short, that it is one of the best and safest harbours in the world ; and ships of eighty guns ride a-float at low water, within musket-shot of Rochester Bridge. Nor is there an instance upon record, that any of the royal navy ever suffered here by storms, except in the dreadful tempest in November 1703, when the Royal Catharine was driven on shore, sunk, and lost. On the banks are two castles, one at Up- nor, to defend the ships between that and the bridge ; the other is Gillingham Castle, well fur- nished with cannon, which commands the river. There is also a platform of guns at a place called the Swam, and another at Cockham Wood. But the principal fort is at Sheerness.

MEED, n. s. Sax. mevt> ; Teut. meeten, myde ; Goth. met. Reward; hence present ; gift; recom- pense, good or evil.

But if I do this thing wilfulli I haue meide 1 but if tghens ray wille dispendyng is bitaken to me.

Widif. 1 Cor. ix.

Ne for prayer, ne for mede he wil not be corrupt. Chaucer. Personnes Tale. He knows his meed, if he be spide,

To be a thousand deaths, and shame beside.

Spenser.

Whether in beauties glory did exceed, A rosy garland was the victor's meede.

Faerie Queeae. Thanks to men

Qf noble minds is honourable meed. Shakipeare.

Plutus, the god of gold, Is but his steward ; no meed but he repays Seven-fold above itself. Id. Timcm of Athem He must not float upon his watery bier Unwept, and welter to the parching wind, Without the meed of some melodious tear.

Milton.

A long and prosperous enjoyment in the land of Canaan was the meed set before them, if they should obey and make good their part of the covenant.

Barrow.

If so, a cloak and vesture be my meed, Till his return no title shall I plead.

Pope' i Odystey.

MEEK, ad;. -\ Goth, and Swed. mink;

MEEK'EN, v. a. / Danish, mygr; Hebrew, "|p.

MEEK'LY, adv. £ Mild or pliable of temper ;

MEEK'NESS, n.t.J' not easily provoked :' to

meeken is to soften : meekness, gentleness ;

mildness; suavity.

Moses was very meek above all men.

Numb. xii. 3.

Hir meke praiere and hir pitous eliere Made the markis for to han pitee.

Chaucer. Cant. Tabs. Be therefore, O my dear lords, pacifyed, And this mis-seeming discord meekly lay aside.

Faerie Queene.

That pride and meekness mixt by equal part, Do both appear to adorn her beauty's grace.

Spenser.

You sign your place and calling, in full seeming, With meekness ana humility ; but your heart Is crammed with arrogancy, spleen, and pride.

Sliakspeare. Both confessed

Humbly their faults, and pardon begged, with tears Watering the ground, and with their sighs the air Frequenting, sent from hearts contrite, in sign Of sorrow unfeigned, and humiliation meek.

Milton.

No pride does with your rising honours grow You meekly look on suppliant crowds below.

Stepney.

We ought to be very cautious and nwefc-spirited, till we are assured of the honesty of our ancestors.

Collier.

*When his distemper attacked him, he submitted to it with great meeknest and resignation, as became a Christian. Atterbury**

The glaring lion saw, his horrid heart Was meekened, and he joined his sullen joy.

Thomson.

If thou art rich, then shew the greatness of th> fortune, or, what is better, the greatness of thy soul, in the meekness of thy conversation ; condescend to men of low estate, support the distressed, and pa- tronize the neglected. Steme.

MEER, or ˆ Sax. merie; Belg. nicer. A MERE, n. s. J lake or river : hence a boun- MEERED, adj. J dary : meered is bounded, or relating to a boundary.

What, although you fled ! why should he follow

you 1

The itch of his affection should not then Have nickt his captainship ; at such a point. When half to half the world opposed, he being The meered question.

Hhakrfware. Antony and Cleopatra.

MEEREN, or MEER (John Vander), an es- teemed painter, born in 1627. He chose for his subjects sea-pieces, landscapes, and views of tlie

•ea and its shores; which he painted with great truth, as he had accustomed himself to sketch every scene after nature. He also painted battles with approbation. He died in 1690.

MEEREN, or MEER (John Vander) the Young, an eminent landscape-painter, supposed to have been the son of the preceding, of whom he learned the rudiments of the art ; but, being deprived of his instructor before he had made great progress, he became a disciple of Nicholas Bergham, and was accounted the best of those who were edu- cated by that admired master. In the style of his master he painted landscapes and cottages, with peasants at their rural occupations and diver- sions ; but he very rarely introduced cows, horses, or any other animals, except goats and sheep, which last are highly finished. His touch is scarcely perceptible, and yet the colors are ad- mirably united. He died in 1688. His genuine works bear a very high price, and are esteemed even in Italy.

MEERJAOW, a town of the province of Canara, Hindostan, on an inlet of the sea. It is supposed to have been the Musiris of the ancients; and was nearly destroyed by Hyder Aly when he invaded the province in 1773. The neigh- bouring forests abound with teak and black pep- per. Long. 74° 36′ E., lat. 14° 27′ N.

MEERMAN (Gerard), a Belgic writer on jurisprudence, was born at Leyden

in 1722; and was an author at the age of seventeen. Between 1744 and 1748 he was abroad in several voyages; and, on his return, was appointed pensionary counsellor of Rotterdam. In 1766 he was made counsellor of the high tribunal of the chace of Holland and West Friseland ; and died at Aix- la-Chapelle, December 15th, 1771. The em- peror created him a baron of the German empire; and Louis XV. invested him with the order of St. Michael. He possessed an immense collection of books and MSS. ; and presented several of the latter to the French king s library. Among his works may be specified Novus Thesaurus Juris civilis et canonici, 1751 — 54, 7 vols. folio; and Origines Typographies, 1765, 4to.

MEERMAN (John), son of the preceding, was born in 1753, and early distinguished for learn- ing. He studied at Leipsic under Ernesti ; and completed his education at Leyden, where, in 1774, he took the degree of LL.D. He now visited France, Italy, Germany, Great Britain, and Ireland; and, on his return home, he was elected burgomaster of Leyden, a situation which he soon resigned. Under Louis Buonaparte he was director of the fine arts and of public in- struction in Holland; and, on the union of that country to France, he was made a count of the empire. He died August 19th, 1815, leaving to the city of the Hague the rich library of his father, which he had largely increased. His best known published works, including a supplemen- tary volume to his father's Thesaurus, are the History of William, earl of Holland, and king of the Romans, 5 vols. 8vo. ; The Relations of Great Britain and Ireland, of Austria, of Prussia, and of Sicily, 1787 — 94, 5 vols. 8vo.; The Re- lations of the North and North- West of Europe, ? 905-6, 6 vols. 8vo. ; containing observations made by the author in his travels.

MEERSCHAUM, in mineralogy, a kind of clayey earth, the keffekil of Kirwan. Color yeC- lowish and grayish-white. Massive. Dull. Frac- ture fine earthy. Fragments angular. Opaque. Streak slightly shining. Very soft, sectile, but rather difficultly frangible. Adheres strongly to the tongue. Feels rather greasy. Specific gravity 1-2 to 1'6. Before the blowpipe it melts on the edges into a white enamel. Its constituents are, according to the analysis of Klaproth, silica 41'5, magnesia 18'25, lime 0-50, water and carbonic acid 39. It occurs in the veins in the serpentine of Cornwall. When first dug, it is soft, greasy, and lathers like soap. Hence the Tartars use it for washing clothes. In Turkey it is made into tobacco-pipes, from meerschaum dug in Natolia, and near Thebes. See Jameson's Mineralogy for an entertaining account of the manufacture. MEET, adj. t Sax. maete ; Goth, masti, in MEET'LY, adv. J measure. See METE. Fit ; proper; adapted; suitable. ' Meet with ' is a low phrase for ' even with ' you.

Arcitc is ridden anon unto the toun, And on the morwe, or it were day light, Ful prively two harneis hath he dight, Both suffisant and mete to

darreine The battaille. Chaucer. Cant. Talet.

Ah ! my dear love, why do you sleep thus long, When meeter were that you should now awake ?

Spenter.

If the election of the minister should be committed to every parish, would they choose the meetest 1

Whitgift.

I am a tainted wether of the flock, Meetest for death.

Shakspeare. Merchant of Venice.

To be known shortens my laid intent, My boon I make it, that you know me not, Till time and I think meet. Id. King Lear. Niece, you tax Signior Benedick too much ; but he'll be meet with you. Shakspeare.

As for the comfort of conjugal society, what other did our good God intend in the making of that meet helper? Bp. Hall.

The eye is very proper and meet for seeing.

Bentley.

MEET, v. a. & n. s. ~\ Sax. metan; Belg.

MEET'EH, n. $. f moetan ; Teut. moten ;

MEET'ING, {Goth. & Swed. mota.

MEETING-HOUSE, n. s. J To encounter ; come face to face : hence to oppose in conflict or hos- tility ; close with ; join ; to find ; light upon ; accost: as a neuter verb, to assemble; congre- gate : it frequently takes the preposition with after it. A meeting is in encounter; assembly interview, or place of assembly or meeting Meeting-house, an old but well-fashioned word . signifying a dissenting place of worship.

His daughter came out to meet him with timbrels and dances. Judges xi. 34.

Thev appointed a day to meet in together.

2 Maccabee.*

When ae cometh to experience of service abroad, he maketh as worthy a soldier as any nation he meeteth with. Spenser.

When shall we three meet again, In thunder, lightning, or in rain 1

Shakspeare. Macbeth.

Falstaff at that oak shall meet with us.

MEG

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MEG

There are beside

Lascivious meeters, to whose venomed sound The open ear of youth doth always listen. Id. Let's be revenged on him ; let's appoint him a meeting, and lead him on with a tine baited delay.

Id.

Met'st thou my posts 1 Id.

We met with many things worthy of observation.

Bacon.

Before I proceed farther, it is good to meet with an objection, which if not removed, the conclusion of experience from the time past to the present will not be found. Id.

A little sum you mourn, while most have met With twice the loss, and by as vile a cheat.

Creech.

Mean while our primitive great sire, to meet His godlike guest, walks forth. Milton.

Te meet the noise

Of his almighty engine, he shall hear Infernal thunder. Id.

Their choice nobility and flower Met from all parts to solemnize this feast. Id. The materials of that building happily met toge- ther, and very

fortunately ranged themselves into that delicate order, that it must be a very great chance that parts them. Tillotson.

I knew not till I met My friends, at Ceres' now deserted seat.

Dryden.

Not look back to see, When what we love we ne'er must meet again.

Id.

Had I a hundred mouths, a hundred tongues, I could not half those horrid crimes repeat, Nor half the punishments those crimes have met.

Id.

If the fathers and husbands of those, whose relief this your meeting intends, were of the household of faith, then their relicks and children ought not to be strangers to the good that is done in it, if they want it.

Sprat's Sermons.

He yields himself to the man of business with re- luctancy, but offers himself to the visits of a friend with facility, and all the meeting readiness of desire.

South.

Royal mistress,

Prepare to meet with more than brutal fury From the fierce prince.

Rowe's Ambitious Stepmother. Our meeting hearts Consented soon, and marriage made us one. Rowe.

The nearer you come to the end of the lake, the mountains on each side grow higher, till at last they meet. Addison.

What a majesty and force does one meet with in these short inscnptions : are not you amazed to see so much history gathered into so small a compass?

Id. on ancient Medals.

Hercules' meeting with pleasure and virtue, was invented by Prodicus, who lived before Socrates.

Addison.

His heart misgave him that the churches were so many meetinghouses ; but I soon made him easy. Id.

To me no greater joy, Than that your labours meet a prosperous end.

Grant) ilk.

Of vice or virtue whether blest or curst, Which meets contempt, or which compassion first.

Pope.

Since the ladies ha\e been left out of all meetings, except parties at play, our conversation hath dege- nerated. Swift.

Meg fain wad to the barn gane To win three wechts o' naething ; But for to meet the deil her lane, She pat but little faith in. Burns.

MEGALE POLIS, written dividedly by Ptole- my and Pausanias; or conjunctly Megalopolis, according toStrabo; an ancient town of Arcadia, built under the auspices of Epaminondas, after the battle of Leuctra ; many inconsiderable towns being joined together in one great city (whence the name), the better to withstand the Spartans. Strabo says it was the greatest city of Arcadia. It was destroyed by Cleomenes III., king of Sparta.

MEGALESIA, AND MEGALENSES LUDI, feasts and games in honor of Cybele or Rhea, the mother of the gods, held on the 12th of April by the Romans, and famous for great rejoicings and diversions of various sorts. The Galli carried the image of the goddess along the city, with drums and other music, in imitation of the noise made to prevent Saturn from hearing the cries of his infant son Jupiter, when he was disposed to devour him.

MEGANTICK, a lake of Lower Canada, on the borders of New England, from which the river Chaudiere in part arises. It is nine miles in length, and two in average breadth, running deeply into the land. It is surrounded by some excellent meadows, and altogether the scenery is beautifully picturesque here : large groups of stately trees ranging above each other until they crest the summit of the rising lands. The waters abound with fish ; and the country is the resort of almost every species of game.

MEGARA, in ancient geography, a noble city, capital of Megaris, which for many years carried on war with the Corinthians and Athen- ians. It had for some time a school of philoso- phers, called the Megarici, successors of Euclid the Socratic, a native of Megara. Their dialect was the Doric ;

changed from the Attic, which it formerly had been, because of the Peleponnesian colonists who settled there. Megara was situ- ated at a distance from the sea. Its port was called Nisaea, from Nisus, son of Pandion II., who obtained Megaris for his portion, when the kingdom of Athens was divided into four lots by his father. He founded the town, which was eighteen stadia, or two miles and a quarter from the city, but united with it, as the Piraeus with Athens, by long walls. It had a temple of Ceres. The site is now covered with rubbish, among which are standing some ruinous churches. The place has been named from them Dode Ecclesiais, the Twelve Churches ; but the num- ber is reduced to seven. The acropolis or cita- del, called also Nisaea, was on a rock by the sea- side. Some pieces of the wall remain, and a modern fortress has been erected on it, and on a less rock near it. Megara consists now only of a few cottages on the slope of an eminence, divided in the middle.

A few inscriptions are found, with pedestals fixed in the walls and inverted ; and also some mutilated statues. One of the former relates to Atticus Herodes, and is on a pedestal which supported a statue erected to him when consul, A. D. 143, by the council and people of Me-

gara, in return for his benefactions to the city. In the plain behind the summits is a large basin of water, with scattered fragments of marble, the remains of a bath or fountain, which is recorded as in the city, and remarkable for its size and ornaments, and for the numbei of its columns. The spring was named from the local nymphs called Sithnides. The stone of Megara was of a kind not found any where else m Hellas; very white, uncommonly soft, and consisting of cockle shells. This was chiefly used, and, not being durable, may be reckoned among the causes of the desolation at Megara, which is so complete that one searches in vain for vestiges of the many public edifices, temples, and sepulchres, which once adorned the city. Megara was engaged in various wars with Athens and Corinth, and experienced many vicissitudes of fortune. It was the only one of the Greek cities which did not flourish under their common benefactor Adrian. Another benefactor was Di- ogenes, son of Archelaus, who bestowed on the Megarensians 100 pieces of gold towards build- ing theii towers, and also 150 more, with 2200 feet of marble, towards re-edifying the bath. This Diogenes was one of the generals employed by the emperor Anastasius on a rebellion in Isauria, and took the capital Claudiopolis, A. D. 494.

MEGARIS, in ancient geography, the country of the Megareans, is described as a rough region, like Attica ; the mountain called Oneian, or the Asinine, now Macriplayi, or the Long Moun- tain, extending through it towards Bceotia and Mount Cithaeron. It belonged to lonica or Attica, until it was taken by the Peloponnesians in the reign of Codrus, when a colony of Do- rians settled in it. This territory had Attica on the east, Boeotia on the north and west, and the Isthmus of Corinth on the south.

MEGASTHENES, a Greek historian in the age of Seleucus Nicator, about A. A. C. 300. He wrote concerning the oriental nations, and particularly the Indians. His history is often quoted by the ancients. What now passes as his composition is spurious.

MEGIDDO, in ancient geography, a town of Galilee, mentioned (Josh. xvii. 11) among the cities of Manasseh, in the tribe of Issachar or Asser, on the west side of the Jordan, near an open plain, fit for drawing up an army in battle array. It was situated on the north, contrary to its position in the common maps. The Canaanites, being tributary to the Israelites, dwelt in it, Josh. xvii. It was rebuilt by Solo- mon, 1 Kings ix; and is remarkable for the deaths of Ahaziah king of Israel, and Josiah king of Judah, 2 Kings ix. 27; xxiii. 29.

MEGNA, THE, a river of Hindostan, formed by the junction of numerous streams, which issue from the mountains on the northern boundary of Bengal. The principal of these is the Brahma- pootra. Below Dacca it is joined by the Issa- mutty, Dullasary, Luckia, and Ganges, after which it pours its immense waters into the bay of Bengal, forming several large islands at its mouth. Between these the tide enters with great rapidity, forming in the spring tides what is railed the Bore, and which in a few minutes rises twelve feet high. The sand-banks run

nearly thirty miles into the sea. This appears to be the proper entrance of the Ganges.

ME'GRIM, n. J. Fr. migraine ; Gr. tytucpavta. Disorder of the head.

In every megrim or vertigo there is an obtenebra- tion joined with a semblance of turning round.

Bacon's Natural History.

There, screened in shades from day's detested glare, Spleen sighs for ever on her pensive bed, Pain at her side, and Megrim at her head. Pope.

MEHALLET KEBEEB,acity of Lower Egypt, the capital of the district of El Garbie, in the Delta, and standing on a canal between the eastern and

western branches of the Nile. It is of considerable magnitude and commercial im- portance, so as to be called Kebeer ‘ the great,’ and possesses manufactures of cloth and sal ammoniac. Long. 31° 24′ E., lat. 30° 50′ N.

MEHKOOR, a populous district of Hindos- tan, in the province of Berar ; situated between two ranges of mountains, and subject to the Nag- pore rajah.

MEHWAS, a district of the province of Gu- jerat, Hindostan, situated on the south-east bank of the Puddar. The inhabitants, formerly Hin- doos, have been converted in considerable numbers to the Mahometan religion, and are marauders, who live by plunder. Any one who can head twenty horsemen considers himself an independent chief. They breed horses and cat- tle, but cultivate little of the soil.

MEIBOMIUS (John Henry), a learned Ger- man, who was professor of physic at Helmstadt, where he was born, and at Lubec. He wrote the Life of Maecenas, published at Leyden, in 4to. 1653, with several other learned works.

MEIBOMIUS (Henry), son of the preceding, was born at Lubec in 1638; he became profes- sor of physic at Helmstadt; and, besides medical works, published Scriptores rerum Germani- corum, Svols. folio, 1688 ; a very useful collec- tion, first begun by his father.

MEIBOMIUS (Marcus), another writer of the same family, who published a collection of seven Greek authors, who had written upon ancient music, with a Latin version by himself, dedicated to queen Christina of Sweden, who invited him to her court. But his enthusiasm in favor of ancient music subjected him to a degree of raillery, that made him leave the court of Sweden. His edition of the Greek mythologists, and notes upon Diogenes Laertius in Menage’s edition, show him to have been a man of learning.

MEJERDAH, a river of Tunis, the Bagrada of the ancients, in the western part of that terri- tory, and running along the borders of Algiers, till it falls into the Mediterranean at Porto Farina. The country beside its banks is level, apd very rich, in consequence of which it is deeply impregnated with soil, and often presents the same discolored aspect as the Nile. It is one of the most considerable streams in Bar- bary.

MEINUNGEN, a principality of Saxony, forming part of the duchy of Saxe-Meinungen, and divided into the Oberland and the Unter- land, two districts situated at some distance from each other. The extent of the whole is

about 448 square miles. The Unterland is the larger of the two, containing nearly 350 square inifes, and a population of 40,000. It is traver- sed by the Werra, and has extensive forests, several iron mines, and mines of coal and cobalt. The manufactures, which are not considerable, are of woollen, linen, and hardware. The chief export is salt from the mines of Salzungen. The Oberland has 16,000 inhabitants, and is a hilly district of the great forest of Thuringia.

MEINUNGEN, a town of the above principality, situated amongst mountains, on the Werra. Since 1681 it has been the residence of the dukes of Saxe-Meinungen, who have an elegant palace here, with a library and a depot of archives. Here is also a lyceum, council-house, and state-house. The chief manufacture is black crape. Population 4200. Twenty-one miles north of Schweinfurt.

MEINY,n. s. Sax. meniju; old Fr. mesnie, nteme ; Lat. mansio. A house or family ; a reti- nue or train.

They summoned up their meiny ; strait took

hone ; Commanding me to follow, and attend. Shakspeare.

MEISSEN, or MISNIA, a circle of Saxony, on both sides of the Elbe, and extending from Bo- hemia on the south, to Prussian jSaxony on the north. Part of it was ceded to Prussia at the congress of Vienna in 1815, but it has still an area of 1600 square miles. It is one of the best cultivated parts of Saxony, and yields corn, fruit, flax, hops, and pasturage, in abundance, and, in a few districts, wine. It contains also the principal manufactures of the kingdom in woollen, linen, and cotton. Dresden itself lies within its limits. Inhabitants 298,000.

MEISSEN, a town of Saxony, the capital of the former margraviate and circle of this name, is situated on the left bank of the Elbe, at its junc- tion with the Meissa, in one of the most beauti- ful valleys of Saxony. It is divided into three parts : the upper and middle towns, and the suburbs. On a rock, eighty feet in height, stand the remains of an ancient castle, built by the emperor Henry I. ; and on a neighbouring eminence the rock of Afra, the ancient monas- tery of that name. The objects worth notice in this town are the fine Gothic cathedral, the chapter-house, and a covered bridge over the Elbe. This place is also distinguished for its porcelain manufacture, the

clay of which is yielded in the neighbourhood. Population 4000. Fifteen miles W. N. W. of Dresden.

MEISSNER (Augustus Theophilus), an au- thor of German romances, was the son of a Saxon quarter-master, and born in 1753 at Baut- zen in tusatia. He studied law and the belles lettres at Leipsic and Wittemberg, and became keeper of the archives at Dresden. His literary career commenced in his translating comic ope- ras from the French. In 1785 he obtained at Prague the chair of belles lettres, and twenty years after was invited to Fulda, to direct the superior schools. He died in 1807. Meissner translated Hume's England into German, 1777- 1780, and wrote a number of historical romances and other works. His Sketches have been trans- lated into French, Danish, and Dutch.

MEKRAN, a large maritime province of Pei sia, extending along the shore of the Indian Ocean to Scinde, and on the west and north to Kerman and Seistan. It has been little traversed by travellers. Alexander the Great, in returning from his Indian expedition, passed through this province, and the sufferings and hardships en- dured by his army gave the most unfavorable impression of the nature of the country. The northern and inland part is the Baloochistan of modern geography, and separated from the maritime part by a range of mountains. See BALOOCHISTAN. The entire province is occu- pied by a great number of independent chiefs, whose power and territory is always fluctuating. The whole military force of the country may amount to about 25,000 men. Around Bun- pore the people are migratory, and live in tents of black hair. The women of Mekran are not confined as in other Mussulman countries. The chief place at present is Rei.

MEL, honey. See HONEY.

MELA (Pomponius), an ancient Latin writer, who was born in Hispania Baetica, and flourished under Claudius. His three books of Cosmogra- phy, or De Situ Orbis, are written in a concise, perspicuous, and elegant manner. Isaac Vos- sius gave an edition of them in 1658, 4to., with copious notes.

MELADA, MELEDA, or MELIT, an island of the Austrian empire, on the coast of Dalmatia. It formerly belonged to the republic of Ragusa, and has a town of the same name ; a good har- bour, and a large monastery. Population 2000. Long, of the eastern point 17° 5b' E., lat. 43° 5'N.

MELADA, a small barren island of Dalmatia, at the entrance of the canal of Zara, to the north of Isola Grossa. It is inhabited chiefly by fish- ermen.

MELALEUCA, in botany, the cayputi, or cajeput-tree, a genus of the polyandria order, and polydelphia class of plants : CAL. quinque- partite,

superior : COR. pentapetalous ; the fila- ments are very numerous, and collected in such a manner as to form five pencils ; there is one style : CAPS, half-covered with the calyx, formed like a berry, trivalved and trilocular. The spe- cies are all natives of India and the South Sea Islands. The most remarkable is,

M. leucodendron, from a variety of which (the latifolia, or broad-leaved leucodendron) Ihe cajeput oil is obtained : a medicine in very high esteem among the eastern nations, particularly in India. It is said to be obtained by distillation from the fruit. When brought into this country it is a liquid of a greenish color, of a fragrant but very peculiar odor, and of a warm pungent taste. Hitherto the oleum cajeput has been little employed either in Britain or on the continent but in India it is used both internally and exter- nally, and is highly extolled for its medical properties. It is applied externally where a warm and peculiar stimulus is requisite ; it is employed for restoring vigor after luxations and sprains.

MELAMPODIUM, in botany, a genus of the polygamia necessaria order, and syngenesia class of plants ; natural order forty-ninth, com-

positse ; receptacle paloaceous and conical ; pappus monophyllous and Talve-like ; CAL. pen- taphyllous.

MELAMPUS, in fabulous history, a cele- brated soothsayer and physician of Argos, son of Amythaon and Idomenea or Dorippe. He lived at Pylos in Peloponnesus. His servants once killed two large serpents who had made their nests at the bottom of a large oak ; and Melam- pus paid so much regard to their remains, that he raised a funeral pile and burned them upon it. He also took their young ones, and fed them with milk. Some time after this, the young serpents crept to Melampus, as he slept on the grass near the oak ; and, as if sensible of the favors of their benefactor, they wantonly played around him, and softly licked his ears. This awoke Melampus, who was astonished at the sudden change which his senses had undergone. He found himself acquainted with the chirping of the birds, and all their rude notes, as they flew around him. He took ad- vantage of this supernatural gift ; made himself perfect in the knowledge of futurity, and Apollo instructed him in the art of medicine. He soon after cured the daughters of Proetus, by giving them hellebore, which from that circumstance has been called melampodium ; and, as a reward, he received the eldest princess in marriage. The tyranny of his uncle Neleus, king of Pylos, obliged him to leave his native country ; and Proetus gave him part of his kingdom. About

this time the personal charms of Pero, the daughter of Neleus, had gained many admirers ; but the father promised his daughter to him only who should bring him the oxen of Iphiclus. Bias, who was one of her admirers, engaged his brother Melampus to steal the oxen. Melampus was caught in the attempt and imprisoned ; and nothing but his services as a soothsayer and physician could have saved him from death. But when he had taught the childless Iphiclus how to become a father, he not only obtained his liberty, but also the oxen ; and with them he compelled Neleus to give Pero in marriage to Bias. A severe distemper, which had ren- dered the women of Argos insane, was totally removed by Melampus ; and Anaxagoras, the king, rewarded his merit by giving him part of his kingdom, where he established himself, and where his posterity reigned during six genera- tions. He received divine honors after death.

MELAMPYRUM, cow-wheat, a genus of the angiospermia order, and didynamia class of plants ; natural order fortieth, personate : CAL. quadrifid : COR. upper lip compressed, with the edges folded back : CAPS, bilocular and ob- lique, opening at one side ; there are two gib- bous seeds. There are four species, all natives of Britain, and growing spontaneously in corn fields. They are excellent food for cattle ; and Linnaeus tells us that, where they abound, the yellowest and best butter is made. Their seeds, when mixed with bread, give it a dusky color, and produce vertigo.

MELANCHOL'Y, n. s. & adj.) Fr. melan-

MF.LANCHOL'IC. x \ colic ; Latin

melancholia, of Gr. fif\av black, and ˆ0X17 bile.

A disease formerly supposed to proceed from an

abundance of black bi.fc , a species of madness ; gloomy; pensive; hypochondriac temper.

He protested that he had only been to seek solitary

E laces by an extreme melancholy that had possessed im. Sidney.

I have neither the scholar's melancholy, which is emulation ; nor the musician's, which is fantastical ; nor the courtier's, which is proud ; nor the soldier's, which is ambitious ; nor the lawyer's, which is poli- tick ; nor the lady's which is nice ; nor the lover's, which is all these ; but it is a melancholy of mine own, compounded of many simples, extracted from many objects, and indeed the sundry contemplation of my travels, in which my often rumination wraps me in a most humorous sadness. Shaktpeare.

How now, sweet Frank ; art thou melancholy 1

Id.

It is a false slander raised" on Christianity, that it maketh men dumpish and melancholic. Bp. Hall.

All these gifts come from him; and, if we murmur here, we may at the next melancholy be troubled that God did not make us angels. Taylor's Holy Living.

Think of all our miseries

But as some melancholy dream which has awaked us To the renewing of our joys. Denham.

The king found himself at the head of his army, after so many accidents and melancholick perplexities.

Clarendon Moonstruck madness, moping melanchrly.

Milton.

This melancholy flatters, but unmans you ; What is it else but penury of soul, A lazy frost, a numbness of the mind 1 Dryden. If he be mad, or angry, or melancholick, or sprightly, he will paint whatsoever is proportionable to any one. Id.

He observes Lamech more melancholy than usual, and imagines it to be from a suspicion he has of his wife Adah, whom he loved. Locke.

The commentators on old Ari- Stotle, 'tis urged, in judgment vary : They to their own conceits have brought The image of his general thought : Just xs the melancholick eye Sees fleets and armies in the sky. Prior.

In those deep solitudes and awful cells, Where heavenly pensive contemplation dwells, And ever musing melancholy reigns. Pope.

This sudden view of my danger strikes me with melancholy ; and, as 'tis usual for that passion above all others to indulge itself,- I cannot forbear feeding my despair with all those desponding reflections which the present subject furnishes me with in sudi abundance. Hume on the Human Understanding.

MELANCTHON (Philip), the celebrated con- temporary and fellow-laborer of Martin Luther, was born at Bretten, in the Lower Palatinate of the Rhine, in Saxony, on the 1 6th of February, 1497. His mother was the

daughter of John Reuter, for many years mayor of that town, and his father, George Schwartzerd, a native of Hei- delburg, who had settled at Bretten in conse- quence of his marriage, and filled the office of engineer, or commissary of artillery under the palatinate princes Philip and Rupert. In com- pliance with a custom very prevalent at that time among the learned, our reformer's name was afterwards changed, by his friend Reuchlin or Capnio, from Schwartzerd, signifying black earth, to Melancthon, a Greek appellation of similar import. The conduct of his early stu- dies devolved chiefly on his maternal grandfather

Reuter, who was well qualified for the task, and affectionately solicitous for his improvement. He was first placed at a public school in his na- tive town ; but, a contagious disorder having found its way into this seminary, he was with- drawn, and pursued his studies under private tuition. In the Latin language he had for his preceptor John Hungarus of Pforzheim, a scholar of considerable merit, who was delighted with the proficiency of his pupil. At Pforzheim he likewise entered on the study of Greek, which he diligently and successfully cultivated. Hap- pening to lodge at the house of a relation who was sister to John Reuchlin, that elegant scholar was struck with the early proofs of his genius, and presented him with a Greek grammar and a Greek and Latin lexicon. At the age of thirteen he had made so great a proficiency as to write several poetical pieces, and, among others, a comedy, which he dedicated to his friend Capnio, who, on that occasion, gave him the name that he ever afterwards bore.

From Pforzheim, where he resided nearly two years, Melancthon proceeded to the university of Heidelburg, then celebrated for its eminent professors in the different branches of learning; and here he soon so much distinguished himself as to be selected to write many of the public discourses of the professors and others : his cre- dit for learning indeed was so great, that count Leonstein committed to his care the education of his two sons. At this early age he composed his Rudiments of the Greek Language. At Heidelburg he formed an acquaintance with va- rious learned men, particularly the celebrated Pallas, who was for many years the brightest ornament of the academy : but he continued here not more than three years ; the place not being thought favorable to his constitution, which was naturally feeble. This circumstance, toge- ther with the mortification of being refused a higher degree in the university merely on ac- count of his youth, induced him to remove to Tubingen, a town in the duchy of Wurtemberg. He now attended particularly to the mathematics, jurisprudence, logic, medicine, and theology.

Melancthon was not yet seventeen when, in the year 1513, he took his

degree of M. A., and commenced a course of private teaching. Not long after he became a public lecturer in the university on the learned languages, logic, ethics, mathematics, and divinity. His elegant classical taste was the theme of universal admiration, and it was at this period he commenced the restora- tion of Terence, whose works he arranged in their present poetical form out of the confused prose into which they had been reduced through the ignorance of transcribers. The attention of the learned was now universally attracted to him ; and Erasmus declared that he was destined to eclipse himself. The venerable Latimer, too, we find speaking of him in the highest terms, and recommending him strongly to the patron- age of king Edward VI.

After residing six years at Tubingen our young reformer removed (25th August 1518), on the invitation of the elector of Saxony, to the uni- versity of Wittemberg. So great was the esteem in which he was held at Tubingen, that Simler

says, ‘ The whole city lamented his departure. No one can conceive or estimate how much the academy lost of distinction and emolument when he left.’ At Wittemberg his station as Greek professor first brought him into contact with Luther, whom he had the honor of instructing in that language, and who ever readily acknow- ledged his literary superiority. His public lec- tures are said sometimes to have been attended by 1500 persons. On his first arrival he found the university iu a wretched condition, both as to literature and philosophy ; a single copy of the most celebrated Greek classics could not be found in print ; and the students were obliged to write out passages as they were explained to them. Melancthon set himself diligently to diffuse the knowledge of this important language In his first year he delivered lectures on Homer, and on the Greek of the epistle to Titus ; all the principal theologians attended him, and all classes were inspired with the love of Greek. His ardor and diligence were indeed too great for his health, and we find the elector Frederick urging him to take wine for the support of his weak frame, and offering him the best in his own cellars. He announced, in an oration delivered in the month of October, a plan for reforming the studies of youth. In this address he parti- cularly urges the study of the Greek philosophy, and the sacred scriptures, promising his pupils every aid that his own industry or erudition could afford. Melancthon was fully aware of the erroneous subtleties of the Aristotelian phi- losophy, and of the mischievous support which it had so long afforded to false and unscriptural tenets, by involving every subject in metaphysi- cal obscurity; but he possessed a mind which could discriminate accurately, and he therefore carefully availed himself of the general preju- dice in its favor, for the illustration and sup- port of real phjlosophy and religion. With this view he composed a number of elementary trea- tises, which were, for a long time,*

in general use in the Lutheran schools, among which may be particularly noticed his Logic ; Physics ; Ethics ; and a Treatise on the Soul : which were ap- plauded by the most competent judges of the age as much calculated to aid the labors of the young student.

*Melancthon was present at the celebrated dis- pute between Carlostadt and Eckius at Leipsic, in the summer of 1519 ; and, though he represents himself as a mere hearer on this occasion, he be- came so much interested in the procedings, and so often offered suggestions to Carlostadt, that Eckius was induced to exclaim, with some warmth, * Tace tu Philippe, ac tua studia cura, nee me perturba.' He afterwards wrote an ac- count of this conference in a letter to a friend, which, falling into the hands of Eckius, pro- duced from him a bitter rejoinder, which Me- lancthon answered in a small tract, written with so much acoteness, elegance, and candor, that it greatly promoted the cause of the reformers.*

In the year 1520 he married Catharine Crap- pin, the daughter of a burgomaster of Wittem- berg, with whom he lived in the most perfect harmony for thirty-seven years, and by whom he had two sons and two daughters. Both the for-

mer died young ; the latter were married, the elder to George Sabinus, the younger to Caspar Peucer, an excellent man, who suffered much for maintaining the doctrines of the Reformation. — Melancthon's wife is said to have been a pattern to her sex for the simplicity and purity of her manners, and diligent domestic economy. Yet so great was their hospitality that their house was scarcely ever free from guests, and it seems to have been a maxim with them never to refuse a needy applicant. In addition to these serious deductions, as they may be justly accounted, from his very moderate income, the time of this great man was often severely taxed by the calls of persons soliciting his advice in their difficul- ties, his correction of literary productions, or his recommendations to others. For a considerable time he delivered his lectures on the Holy Scrip- tures without any salary ; and, when the elector offered to settle on him a pension of 200 florins, he refused it, on the ground that he was unable to devote sufficient time and attention to the duty which he judged was incumbent upon him. When the elector Maurice urged him on this subject, and entreated him at least to ask some favor, he requested his dismission. He is said to have been materially assisted in his pro- jects of benevolence by the faithful care of an affectionate domestic, to whom all the duties of provisioning his family were intrusted, and who, after faithfully discharging those duties and con-

tributing to feed the streams of his charity for more than thirty years, died in the bosom of the family, regretted as a friend. The benevolence of Melancthon, however, was retired, and en- tirely devoid of ostentation ; and, although men- tioned by few writers, yet it is an undoubted fact that, when his purse was insufficient to an- swer the calls that were thus made on it, he would sometimes supply the deficiency by pri- vately disposing of articles of domestic furni- ture.

Whatever he read or heard he quickly made his own ; it is even asserted that he could retain, for the most part, the very words of the writer or speaker. In the midst of all these excellen- cies be was so modest that he never uttered his opinion without the most serious deliberation, and was ready to acknowledge any mistakes, into which he might have fallen, with the greatest simplicity. His good qualities, indeed, were so conspicuous, that the very enemies of that Reformation, of which he was so ardent a sup- porter, most readily acknowledged and extolled them.

The importance of so able a coadjutor in the good cause was very apparent, and none valued his assistance more than Luther. During his temporary confinement in the castle of Warten- burg, we find him thus expressing himself: ‘ The accounts which I receive of your abundant suc- cess in religion and learning during my absence rejoice my heart exceedingly, and very much di- minish the miseries of separation. The circum- stance of your going on so prosperously is pecu- liarly delightful to me, because it may serve to convince the wicked one,that, however he may rage ;md foam, his desires shall perish, and Christ will finish the work which he has begun.’ While, how-

ever, Melancthon was so important an auxiliary to Luther in the great cause in which they were embarked, such was his constitutional timidity, that all the firmness of Luther was necessary to console and support him. Yet we never find him for a moment abandoning the post of duty. In the year 1521 the doctors of the Sorbonne at- tacked the Lutheran doctrines, in a violent pam- phlet ; to which Melancthon replied in a piece entitled Ad versus Furiosum Parisiensium Theo- logastrorum Decretum pro Luthero Apologia. In this publication, he, with the keenest satire, ex- poses the folly of these monkish divines, showing that those very men who contended against Luther for opposing the fathers, were themselves the most diametrically opposed to them. He published another piece this same year against Thomas Placentinus, or Emset, who had attacked Luther on the ground of his secession from the church. A piece which excited the greatest at- tention, however, at this time, was that which he published under the title of Loci Communes Theologici. It was translated and extensively read in France and Italy, particularly in Venice, till a monk, who had seen it in its German dress denounced it to the inquisitors, and had it sup- pressed.

The author in this publication gives a summary of Christian doctrine, which is at once both lucid and Scriptural, and calculated to make any one, according to Luther, who has become master of it, in conjunction with a thorough knowledge of the Scriptures, a divine against whom neither the devil nor any heretic can be able to stand. In this eventful year also Melancthon was called to take a conspicuous part in the abolition of private masses. The Augus- tinian Friars at Wittemburg had attempted this in Luther's absence, and the elector, alarmed at the measure, had sent one of his counsellors to remonstrate with them. Our reformer was chosen, in conjunction with five others, to enquire into this matter, and so thoroughly were they convinced of the propriety of the step, that they urged the prince to enforce it throughout his dominions. Me- lancthon gave full proof in this discussion of his deep acquaintance with the Scriptures and the history of the purer ages of the church, as well as of the firmness with which he could resist cor- ruption ; until the elector was finally induced to wink at these innovations, though he did not publicly countenance them.

In the early part of the year 1522 the subject of this memoir was engaged in a conference with Stubner and others of the ANABAPTISTS, see that article. The piety of some of these sectaries, and the sufferings they had endured on account of their opinions, made a considerable impres- sion upon his mind, and led him to treat them with more kindness than was shown to them by Luther. The latter indeed readily perceived the dangerous issue of their more prominent opinions.

It has been already mentioned that Melancthon was one of his coadjutors in the translation of the Holy Scriptures (see article LUTHER), and not a little of the correctness and fidelity with which this work was executed is to be attributed to his labors. His extensive acquaintance with the original languages eminently fitted him for

this work, and no one could feel more than he did its importance to the cause of the reforma- tion. \Ve rind him also employed about this time in writing a valuable Commentary on the Epistle of Paul to. the Romans, which was not, however, published till the year 1540. In the dedication to Philip of Hesse will be found a clear statement of the author's sentiments on the most important articles of Christian doctrine, as well as a consistent view of the whole train of the apostle's reasoning, while his criticisms are most valuable. In the month of May 1525 he assisted at the funeral of the lamented Frederick, elector of Saxony, and delivered an oration, which affords a high but not unmerited encomium on that prince, the greatest of

all the human sup porters of the reformed religion of this period.

So highly was Melancthon esteemed at this time, even by the enemies of the Reformation, that not a few attempts were made by the catholic party to draw him over to themselves. That of the celebrated Erasmus is the most remarkable, both because it equally illustrates the dishonest adherence of that eminently learned man to a cause, the weakness and wickedness of which he often exposed in his works, and the steady ad- herence of our reformer to those opinions which upon the full conviction of his conscience he had adopted. Erasmus used every effort to shake him, by hinting to him the wishes of some of the highest dignitaries in the church that Melancthon would come over to them, and his regret that he had not devoted his great powers to literature alone. The language of Melancthon in reply to these insinuations is decided and noble : ‘ For my own part,’ says he, ‘ I cannot with a safe conscience condemn the sentiments of Luther, however I may be- charged with folly or superstition, that does not weigh with me. But I would op- pose them strenuously, if the Scriptures were on the other side ; most certainly I shall never change my sentiments from a regard to human authority, or from the dread of disgrace.’ We are also told that cardinal Campeggio used his most strenuous endeavours to bring over Me- lancthon to the orthodox party ; but he met with no better success.

It was in consequence of an accidental meet- ing between pur reformer, while on a journey, and Philip the landgrave of Hesse, that the latter first made those enquiries into the nature of the Reformed doctrine which resulted in his adopt- ing it. In the mean time the cause of religion and learning continued to advance in Saxony, and in the latter part of the year 1525, by the permission of the elector, Melancthon repaired to Nuremberg to arrange for the senate the plan of an academical institution there. On the occasion of its opening we find him delivering an oration, in which he complains in very se- vere terms of the neglect of learning, which marked the priesthood of the day, and animates the senate to proceed in the good work in which they had engaged, as the most seasonable remedy for that evil. So great was the admiration of him excited at Nuremberg, that he was invited to fill a professor’s chair in the new university ; this, however, he was too warmly attached to Wittemburg to accept : but he continued to

correspond with those who had the manage- ment of its affairs ; and that even at a time when his numerous engagements were seriously injuri- ous to his health.

In the year 1526, when it was judged advisable by the elector of Saxony to present a memorial at the diet of Spires, Melancthon was required by that prince to draw it up, which he accom- plished in a very satisfactory manner

; refuting the chief objections of the papists to the re- formed doctrine ; and citing in particular the commandments of Christ and the examples contained in the Scriptures to demonstrate that jus- tification by faith is the great truth of the word of God, which must be maintained at the risk of the severest persecution. He enters upon se- veral other topics with equal faithfulness and power, insisting that the reformers had separated from the Romish church not from the love of schism, but because they were impelled to that separation by the obedience due to the Scriptures and to God. The result of this appeal was highly advantageous, as will be seen in the article REFORMATION. In the mean time our re- former was called upon to advise the landgrave of Hesse as to the promotion of the Reformation in his states, and in preparing for publication a directory of doctrine and practice. In this work the papists alledged that Melancthon advocated different sentiments to those of Lather, and loudly exulted in the circumstance ; nothing, however, was more unfounded, and Luther him- self treated the charge with the utmost contempt. A more serious vexation occurred to the author in the conduct of one of his fellow-laborers. In speaking of the law Melancthon had urged the inculcating a spirit of contrition in order to obtain the remission of sins; at this- John Agricola was so offended, that a breach took place be- tween him and Melancthon, which was with difficulty made up by the interference of the elector. Agricola afterwards became the founder of a sect called the Antinomians ; see >AcRicoLA and AN- TINOMIANS.

Melancthon attended at the second diet of Spires in the year 1529, and was during the meeting the means of preserving the liberty, if not the life, of Simon Grynaeus, professor of Greek in the university of Heidelburg. The latter had engaged in an argument with Faber, bishop of Vienna, which induced that crafty prelate to adopt means for removing him by force from the diet. While Grynaeus was at supper with his friends, Melancthon, who was of the party, was called out to speak with an old man of singular appearance, who advised that Grynaeus should be sent to a place of safety, as some messengers from the king, at the instigation of Faber, were coming to seize him. Grynaeus was accordingly sent away, and almost immediately after the messenger arrived : the old man being never afterwards seen or heard of, the warning given was regarded as nothing less than a divine inter- position. Melancthon was, during the sitting of this diet, harassed with great anxiety; the inter- diction of every innovation in religion, and the solemn protest of the reformed princes, which then took place, made it a scene of great interest; and he and Luther were constantly looked up to

is advisers in these trying circumstances. At the same time the agitation of the sacramental con- troversy caused them BO small grief, especially as it tended to separate them from those whom they could not but regard as brethren. In this year Melancthon published a Commentary on the Epistle to the Colossians, to which Luther wrote a preface, speaking highly of it and preferring it to his own works.

*In 1530 we find Melancthon employed to draw up the celebrated confession of Augsburg ; and such was the effect produced, that several of the Catholics acknowledged it could not be answered from the Scriptures ; when an an- swer was at length prepared, the emperor, as if aware of its weakness on other grounds, declared authoritatively, that those were his sentiments, and he would no longer tolerate any who did not adopt them. The Apology for the Augsburg Confession was also written by our reformer, and with the same mixture of firmness and suavity : these qualities indeed were so con- spicuous, as well as his great talents, at the conferences wmch were now frequently held with the Romish party, that they made several efforts to gain him over, but, as before, he stood firm in his attachment to the truth. It was at this momentous crisis, when the decree of the diet had been published, asserting the doctrines of popery, and condemning the Protestants, that the courage of Melancthon and his confidence in Divine assistance displayed themselves in a striking manner. While he and his friends were anxiously deliberating upon the best measures to be pursued, he was suddenly called out of the room. Some of the elders of the reformed churches had brought their friends and families to pray for and encourage the minds of their leaders, and even the children were seen en- gaged in prayer on their behalf. Encouraged by this scene he returned to his friends with so cheerful a countenance, that Luther rallied him upon it, and asked what had produced so sudden a change. ' O,' said Melancthon, ' I have seen our noble protectors, and such as, I will venture to say, will prove invincible against every foe.' * And, pray,' said Luther, ' who are they ?' 'They are the wives of our parishioners and their little children,' rejoined his colleague, ' whose prayers I have just witnessed — prayers which, I am satisfied, our God will hear.'*

In the month of August, 1532, Melancthon was called to the office of delivering an oration at the funeral of the elector John, whom he deservedly styles a pious, firm, and peaceful prince, the father of his people. We afterwards find him delivering his decided opinion on the attempt of the pope and his nuncio to fix the meeting of a general council in Italy. In con- sequence of this advice the nuncio was informed, that, the controversy having been principally carried on in Germany, it was proper that the council should be assembled there. Two years after Melancthon was requested to undertake a journey, in order to confer with Bucer on the sacramental controversy ; and in the same year his accustomed candor and

meekness were displayed in a conference with certain of the Roman Catholic party, appointed by the arch- duke Ferdinand and duke George.

So universal was the fame ot cur reformer that in the month of June, 1535, he received a pressing invitation from Francis I. of France, to visit his dominions, in order to discuss the sub- jects of difference between the Protestants and the papal see. Some of his friends (among whom was Luther) urged his compliance; but it was well perhaps for the Protestant cause that some impediments were interposed, as there is more than a doubt of the sincerity of the French court : — about this time, in consequence of some indiscreet reflections of the Protestants on the Romish clergy, six Lutherans were con- demned to death by the parliament of that country, and actually, suffered. The elector ex- cused himself to the king for not sending him, on the plea that his services were more than ever necessary at home, as the academy at Wit- temburg had been scattered by a pestilential disorder. Melancthon, however, wrote a small work on the best means of settling religious controversies, and sent it to the king. About the same time also Henry VIII. of England, having sent Dr. Barnes to consult the Saxon divines respecting his divorce from Catherine of Arra- gon, urged Melancthon to visit this country. Henry, it appears, was not a little jealous of his proposed visit to France, and made use of every means to draw him over to England. But our reformer, notwithstanding his own wish and that of Luther, that he should comply with this request, was obliged by the elector to refuse ; and could only send to his royal correspondent letters of advice, and a copy of his Commentary on the Romans. In return, the latter wrote him a letter, expressing his approbation of his zeal in defence of religion, and presented him with 200 crowns, a large sum in those days. Henry's chief object in these negociations being to procure the sanction of his divorce from the Saxon divines, and neither Luther nor Melanc- thon being able to concur in it, the correspond- ence soon dropped. Our reformer, however, by this means became acquainted with some of the most celebrated leaders of the Reformation in England, particularly archbishop Cranmer.

In a journey undertaken for the benefit of his health, in 1536, Melancthon rendered essential service to the university of Tubingen by his ad- vice relative to its religious and literary manage- ment. He also wrote at this time a treatise against the fanatical Anabaptists, who had pro- duced great disturbances among the lower orders. Soon after his return home another conference was held between the Saxon and Swiss divines, upon the sacramentarian controversy, and he was appointed to draw up a formula on the sub- ject ; which all parties agreed in signing.

Melancthon was now (February, 1537) called upon to take a leading part at the meeting of Smalcald, held by the confederate Protestant princes, to

deliberate on the propriety of attend- ing the council, appointed by pope Paul III. for the 27th of May following; and incurred no little odium on account of his willingness to make concessions to the Catholics, for the sake of peace. But his work composed for this occasion, on the supremacy of the pope and the authority of bishops, manifested his firmness on essential points. He also wrote tne letters that

passed between the princes and the king of France on the subject of this council. It was his pen, indeed, that was at this time used in drawing up almost all the authorised docu- ments of the Protestant princes. A further attempt was made this year by the pope, through the means of cardinal Sadolet, to conciliate Melanc- thon ; and Henry VIII. applied again for a deputation of the Saxon divines, and especially for a visit from our reformer ; he was, however, too much occupied with otherconcerns; year after year passed away, and the journey was never accomplished. One of his letters to the king at this time boldly exposes those errors of popery which he still retained in his system, and which the English bishops greatly contributed to up- hold. In 1540 he drew up a new and excellent defence of the Reformers, and soon after, while on his way to the diet at Spires, was taken so ill, that he appeared to Luther to be on the point of death. Alarmed at this, the latter broke out into the most ardent supplications, and then, turning to the patient, confidently assured him that he should not die ; that God would raise him up. Strange as it may appear, while he was speaking, Melancthon evidently revived, and was soon after restored to health : he himself even says, ‘ I must have died, if Luther had not recalled me from the gates of death.’

At the conference which opened in the month of January 1541, at Worms, Melancthon was engaged in a dispute with Eckius ; but, at the end of the third day, the emperor ordered his agent Granville to break up the meeting, ap- pointing another at Ratisbon early in the spring. On his journey thither Melancthon, being over- turned, dislocated the wrist of his right hand, and he never afterwards recovered the full use of it. In this meeting he again had a long debate with Eckius, during which his opponent, having brought forward some perplexing sophism, Me- lancthon paused to consider, and then said, ‘ I will give you an answer to morrow.’ Eckius re- plied, ‘ But there is no honor in that : why can- not you answer me immediately.’ ‘ My good doctor,’ said Melancthon, ‘ I am not seeking my own glory in this business, but truth : I say, God willing, you shall have an answer to-mor- row.’ In the year 1542 we find him assisting at the ordination of a Protestant bishop, at Naumburg; and, early in the next year, he was

engaged in a correspondence with the prince archbishop of Cologne, about the introduction of the reformed religion into his dominions. He visited Cologne, and, though the object proposed was not fully accomplished, much good was done, and the city of Hildesheim, in particular, embraced the Protestant doctrine. At this period many private and public trials oppressed his mind : the improper behaviour of one of his sons-in-law, and the death of his friend Valerius Cordus, the renewal of the sacramental contro- versy, in \vhich Luther manifested unjustifiable violence of language, and the miserable state of the Protestants in France, all conspired to embitter his declining life. In 1545 he drew up a plan of proceeding for the elector palatine, who wished to introduce the Protestant doctrine into his

country ; and soon after assisted at the episcopal ordination of George, prince of Anhalt, who had devoted himself to the ministry of the gospel.

Melancthon, however, seems justly to have regarded the death of Luther, in 1546, as the most afflictive event that ever befel him. He expressed his feelings most powerfully in the affectionate and able oration delivered at the funeral of this great man : for not less than twenty-eight years had they lived and labored together in the same cause, and though they dif- ferred in some few of their sentiments, and were in many respects of very opposite dispositions, their harmony seems never to have been inter- rupted. In the month of November the univer- sity of Wittemburg being dissolved for a short time, in consequence of the war between the emperor and the Protestant princes, Melancthon retired, with his wife and family, to Yerbst, in Anhalt. Here he received repeated offers of a professor's chair in the university of Jena, but he could not bring his mind to forsake Wittemburg, and, in less than a twelvemonth, recommenced his lectures. In this year, also, the famous tem- porary rule of faith and worship, called the In- terim, was published at Augsburg by order of the emperor Charles V., and afterwards enforced by the sword. To this document Melancthon replied, exposing its errors, and setting forth its miserable defects : his work was immediately translated into English. In the month of Janu- ary 1552 he set out on his journey to the council of Trent, but soon was obliged to return in con- sequence of a war breaking out between the elector of Saxony and the emperor.

Melancthon now continued in his usual occu- pation at Wittemburg, occasionally attending different conferences, and composing most of the official documents that the Protestants promul- gated. Truth compels us to add, that he was found approving the conduct of Calvin in the persecution of the miserable Servetus, the only apology for which is, that the principles of reli- gious liberty were ill-understood by all parties ; and that the reformers themselves were scarcely delivered, at this time, from the

thraldom of a church in which persecution was professed and vindicated. The care of all the Protestant churches may be said now to have devolved on Melancthon, and he had frequently to meet his popish adversaries on 'the most important sub- jects. The last conference he attended was in 1557, at Worms ; when the right of private judg- ment in matters of religion was discussed, and he manfully maintained the great principle of the Reformation, that the only authority to which human reason ought implicitly to submit, in religious concerns, is the infallible word of God. He then visited Heidelburg at the request of the elector palatine ; and while there, surrounded by his friends, received the painful tidings of the death of his wife. He was now, in a great mea- sure, weaned from the world, and, after a life of useful and even splendid public labors, closed his mortal career on the 19th of April 1560, in the sixty-fourth year of his age. He was interred at Wittemburg near his friend and associate Martin Luther. ' Nature,' says one of his bio- graphers, ' had given him a peaceable temper, —

which was not altogether in accordance with the limes :n which he lived : his moderation often only served as his cross. He was like a lamb in the midst of wolves ; nobody liked his mild- ness ; it looked as if he were lukewarm.' The following is an epitaph he composed on him- self:—

Iste brevis tumulus miseri tenet ossa Philippi, Quis, qualis fuerit nescio, talis erat.

METANIPPIDES, a Greek poet, who flou- rished about A. A. C. 520 His grandson, of the same name, flourished about sixty years after, at the court of Perdiccas II. of Macedonia. Some fragments of their poetry are extant.

MELAS (M. de), a modern Austrian general, who served with distinction against the French republic. In 1793 and 1794 he was a major- general, and then a lieutenant field-marshal on the Sambre. He was removed in 1795 to the army of the Rhine; and, in March 1796, to that of Italy. In 1799 he was at the head of the Austrian army, acting in concert with Suwarrow. He distinguished himself at Cassano, and was present at the battles of Trebia and Novi ; he beat Championnet at Genola, November 3d, and took Coni. In 1809, however, he lost the bat- tle of Marengo ; but, though his conduct was censured, he was afterwards appointed com-

mander in Bohemia. In 1806 he presided at the court of enquiry into the behaviour of general Mack at Ulm. Melas died at Prague in 1807.

MELASSO, a large town of Anatolia, the ancient Mylasa, and formerly so adorned with public buildings as to originate the story of the crier, who, on entering the market-place, instead of saying Hear, ye people, called out, Hear, ye temples. It is situated in a fertile plain ; but the modern houses are mean. It is eighty miles south of Smyrna.

MELASTOMA, in botany, the American gooseberry tree, a genus of the monogynia order, and decandria class of plants; natural srder seventeenth, calycanthemae : CAL. quin- quefid and campanulated ; petals five, inserted into the calyx : BERRY quinquelocular, and wrapped in the calyx. There are many species, all natives of the warm parts of America, and very beautiful, from the variegation of their leaves. Most of them are of two different colors on their surfaces ; the under side being either white, gold-colored, or russet, and their pper parts of different shades of green ; so that i.»ey make a fine appearance in the hot-house all 4he year round. There are few of these plants in the European gardens, from the difficulty of bringing over growing plants from the West Indies ; and the seeds being small, when taken out from the pulp of their fruits, rarely succeed. The best way is to have the entire fruits put up in dry sand as soon as they are ripe, and for- warded by the quickest conveyance to Britain. They should be taken out as soon as they arrive, and the seeds sown in pots of light earth, and plunged into a moderate hot-bed of tanner's hark. When the plants come up, and are fit to be removed, they must each be planted in a small pot, and plunged into the tan-bed; and Afterwards treated as other ex6tic plants.

MELAZZO, or MILAZZO (the ancient Mylae\ a sea-port town of the north coast of Sicily, in the Val di Demona. It is built on a promou- tory, which has a good road on each side, and a well-sheltered capacious bay. The town, which is ill-built, is divided into two parts : the one on the promontory being strongly fortified, and the other at the harbour, near the bottom of the bay Neither contains any buildings of note. The trade chiefly consists in the export of wine, olives, and olive oil, to Marseilles, Leghorn, and Genoa. The tunny fishery is also considerable. The neighbourhood, covered with villages and groves of olives and orange trees, bounded by the mountains of Pelorus, exhibits a most pic- turesque scene. Population 6000. Twenty miles west of Messina, and 100 east of Palermo.

MELCHIOR (Adam), a German biographer, born at Grotkaw, in Silesia, and educated at the college of Brieg. He was a Calvinist ; was made rector of a college at Heidelberg, and wrote several works, particularly five volumes of • the Lives of Illustrious Men, 1615 — 162G. He died in 1622.

*MELCHISEDEC, or MELCHIZEDEC, king of Salem, and priest of the Most High. The scripture tells us nothing either of his father, mother, genealogy, birth, or death. And in this sense St. Paul says, he was a figure of Jesus Christ, ‘ who is a priest for ever, after the order of Melchisedec,’ and not after the order of Aaron, whose origin, life, and death, are known. When Abraham returned from his victory over the four confederate kings, Gen. xiv. 17 — 19, &c., Melchisedec came to meet him, at the val ley of Saveh ; presented him with a refreshment of bread and wine, and blessed him, and Abra- ham offered him the tythes of all the spoils. After this no mention is made of Melchisedec ; only the Psalmist («cx. 4), speaking of the Mes- siah, says, * Thou art a priest for ever after the order .of Melchisedec.’ St. Paul, in his epistle to the Hebrews (vii. 6 — 10), unfolds the mystery. A great number of difficulties, however, have been started respecting the person of Melchise- dec. St. Jerome thought that Salem, of which Melchisedec was king, was not Jerusalem, but the city of Salem, near Scythopolis, where they still pretended to show the ruins of his palace. The greatness and extent of these ruins are, he says, a proof of the magnificence of this ancient building. He thinks it was at this Salem, or Shelem, that Jacob arrived after his passage over Jordan, on his return from Mesopotamia. (Gen. xxxiii. 18). Some believe that Salem, where Melchisedec reigned, is the same as Salem men- tioned by John, chap. iii. 23. Various names have been invented for the parents of Melchise- dec. But it is generally agreed by the learned, that when the apostle says (Heb. vii. 3), he was ‘ without father and without mother,’ &c., no more is meant than that he derived his priest- hood from no ancestral right, and handed it down to no posterity, or order of men. Never- theless, some have taken St. Paul’s words lite- rally, and contend that he was not of human ori- gin. Origen and Didymus took him to be an angel. The Arabic Catena, upon the ninth chapter of Genesis, makes Melchisedec to be*

descended from Shem by his father, and from Japheth by his mother. Cedrenus and others derive Melchisedec from an Egyptian stock. They say his father was called Sidon, and was the founder of Sidon, the capital of Phoenicia. The Jews and Samaritans believed Melchisedec to be the same with the patriarch Shem ; which opi- nion has been followed by many modern writers. M. Jurieu endeavoured to prove that he is the same as Ham. Peter Cunaeus and du Moulin asserted that Melchisedec, who appeared to Abraham, was the sou of God, and the patriarch worshipped him, and acknowledged him for the Messiah. We shall only add one

opinion more concerning Melchisedec. The learned Heidegger supposes a two-fold Melchisedec ; the one his- torical, of whom Moses gives an account in Gen. xiv. that he was king as well as high-priest of Jerusalem; the other allegorical, whom St. Paul describes, and this is Jesus Christ. Num- berless other fables have been invented of Mel- chisedec, which are totally unworthy of notice.

MELCHISEDECIANS, a sect of heretics, who rose in the beginning of the third century, and affirmed that Melchisedec was not a man, but a heavenly power, superior to Jesus Christ : for Melchisedec, they said, was the intercessor and mediator of the angels, but Jesus Christ was so only for men, and his priesthood only a copy uf "that of Melchisedec, who was the Holy Ghost.

MELCHITES, in church history, the name given to the Syriac and Egyptian Christians. The Melchites, excepting some few points of little or no importance, which relate only to ceremonies and ecclesiastical discipline, are in every respect professed Greeks; but they are governed by a particular patriarch, who resides at Damas, and assumes the title of patriarch of Antioch. They celebrate mass in the Arabian language. The religious among the Melchites follow the rule of St. Basil, the common rule of all the Greek monks. They have four fine con- vents, about a day's journey from Damas, and never go out of the cloister.

MELCOMBE REGIS, a town of Dorsetshire, 127 miles from London, at the mouth of the Wey, by which it is separated from Weymouth. It appears from the name to have been anciently the king's demesne, and from the records to have paid quit-rent to the crown, after the time of king Edward I. till it was bought off by the inhabi- tants before they were united to Weymouth. It lies on the north side of the haven, on a penin- sula, surrounded by the sea on all sides except the north. The streets are broad and well paved, and many of the houses large and high. It sent members to parliament in the reign of Edward I. before Weymouth had that privilege. It was appointed a staple in the reign of Edward III. In the next reign the French burnt it ; and it was thereby rendered so desolate, that the inha- bitants obtained a discharge from customs. In the reign of Henry VI. its privileges, as a port, were removed to Pool ; but in that of queen Elizabeth they were restored by act of parlia- ment, which was confirmed by king James's reign, on condition that Melcombe and Wey- mouth should make but one corporation and

borough, and enjoy their privileges in common • and to this was owing the flourishing state of both. In the two reigns last mentioned a wooden bridge with seventeen arches was built from hence to Weymouth ; to which, as well as its church, the chief contributors were citizens of London. Upon its

decay it was rebuilt in 1770. It has a good market place and town hall, to which the members of the corporation of Wey- mouth come to attend public business. For several years past the sea has retired from it on the east, the priory formerly being bounded by the sea; but there is now a street beyond it, from which it is several paces to the high water mark. The priory was situated in the east part of the town, in Maiden Street, whose site occu- pied about an acre, now covered with tenements. Near it are the remains of an ancient nunnery. It has three meeting-houses, and a work-house for the poor. The church, which is in the mid- dle of the town, has a wooden turret for a bell. It was rebuilt in 1605, and made parochial ; and is a handsome fabric, with a beautiful altar piece, painted and given by Sir James Thornhill. The port, which generally goes by the name of Wey- mouth, is the best frequented in the county, and is defended by Sandford and Portland cas- tles. The markets for both towns are on Tues- day and Friday. Melcombe Regis is bigger, more thriving, and populous than Weymouth. The united corporation consists of a mayor, recorder, two bailiffs, an uncertain number of aldermen, and twenty-four capital burgesses. Whoever has been a mayor is ever after an alderman. They seno. two burgesses to parliament, who are elected by freeholders, whether they reside or not ; and the number of inhabitants is 8200. Every elector has the privilege of voting for two persons, who, when chosen, are returned, in conjoint indentures, as the burgesses of Weymouth and the burgesses of Melcombe Regis. Melcombe lies eight miles south of Dorchester, and 127 W.S.W. of Lon- don. See WEYMOUTH.

MELEAGER, in fabulous history, a cele- brated hero, son of CEneus, king of .flLtoHa, by Althaea, daughter of Thestius. The Parcae were present at his birth, and predicted his fu- ture greatness. Clotho predicted that he would be brave and courageous ; Lachesis foretold his uncommon strength and valor; and Atropos said that he should live as long as that fire-brand which was on the fire remained entire and un- consumed. Althaea no sooner heard this, than she snatched the stick from the fire, and kept it with the most jealous care, to preserve the life of her son. The fame of Meleager increased with his years ; he signalised himself in the Argonautic expedition, and afterwards delivered his country from the neighbouring inhabitants, who made war against his father at the instigation of Diana, whose altars (Eneus had neglected. But Diana punished the negligence of CEneus by a greater calamity. She sent a huge wild boar, which laid waste all the country, and seemed invinci- ble, on account of its immense size. All the neighbouring princes assembled to destroy this terrible animal. Among these, besides Melea- ger, were Idas nncl Lynceus, sons of Aphareus, Dryas son of Mars, Castor and Pollux, Piri-

thous son of Ixion,Theseus, Anceus, and Cepheus, sons of Lycurgus, Adraetus son of Pheres, Ja- son, Peleus and Te'.amon sons of JEacus, Iphicles son of Amphitryon, Eurytryon son of Actor, Atalanta daughter of Scheeneus, lolaus the friend of Hercules, the sons of Thestius, Amphi- arus son of Oileus, Protheus, Cometes, the bro- thers of Althaea, Hippothous son of Cercyon, Leucippus, Adrastus, Ceneus, Phileus, Echion, Lelex, Phoenix son of Amyntor, Panopeus, Hy- leus, Hippasus, Nestor, Menoetius the father of Patroclus, Amphicides, Laertes the father of Ulysses, and the four sons of Hippocoon. This troop of heroes attacked the bear, and it was at last killed by Meleager. The conqueror gave the skin and ;the head to Atalanta, who had first wounded the animal. This irritated the rest, and particularly Toxeus and Plexippus the brothers of Althaea, and they endeavoured to rob Ata- lanta of the honorable present. Meleager defended her, and killed his uncles. Meantime the news of this celebrated conquest had already reached Calydon, and Althaea went to the tem- ple to return thanks for the victory which her son had gained ; but, being informed that her brothers had been killed by Meleager, she, in the moment of resentment, threw into the fire the fatal stick on which her son's life depended, and Meleager died as soon as it was consumed.

MELEAGER, a Greek poet, the son of Eucrates, •was born at Seleucia in Syria, and flourished un- der Seleucus VI., the last king of Syria. He was educated at Tyre; and he died in the island of Coos, anciently called Merope. He there composed the Greek epigrams called Antho- logia, which Planudts arranged in 1380.

MELEAGRIS, in ornithology, the turkey ; a genus of birds belonging to the order of gal- linae. The head is covered with spongy carun- cles , and there is likewise a membranaceous longitudinal caruncle on the throat.

M. gallopavo, the turkey of Ray, has a carun- cle both on the head and throat ; and the breast of the male is bearded or tufted. He lives upon grain and insects ; when angry blows up his breast, spreads and erects his feathers, relaxes the caruncle on the forehead, and the naked parts of the face and neck become intensely red. Barbot informs us that very few turkeys are to be met with in Guinea, and those only in the hands of the chiefs of the European forts ; the negroes declin- ing to breed any, on account of their tenderness, which proves them not to be natives of that climate. Neither is that bird a native of Asia; the first that were seen in Persia were brought from Venice by some Armenian merchants. They are bred in Ceylon, but not found wild. It is the commonest wild fowl in North

America, where they are often met with by hundreds in a flock. In the day time they frequent the woods, where they feed on acorns ; and return at night to the swamps to roost on the trees. They are often taken by dogs, though they run fast for a time ; but, the dogs persisting, the birds grow fatigued, and take to the highest trees, where they are shot one after another, if within gun- shot. Turkeys were first seen in France in the rciu-n of Francis I., and in Enpland in that of Henry VIII. By the date of these reijms, the first turkeys must have been brought from

Mexico, about A. D. 1521. .ˆElian mentions a bird found in India, which some writers have suspected to be the turkey; but Pennant con- cludes with Gesner, that it was either the pea- cock, or some bird of that genus. The hen be- gins to lay early in spring, and often produces a great number of eggs, which are white, marked with reddish or yellow spots, or rather freckles. She sits well, and is careful of her young; of. which in this climate she often has from fourteen to seventeen for one brood ; but she scarcely ever sits more than once in a season, except allured by putting fresh eggs under her as soon as the first set are hatched ; for, as she is a close sitter, she will willingly remain two months on the nest, though this greatly injures her. Turkeys are bred in quantities in some northern counties of England, and are driven up to London in autumn for sale, in flocks of several hundreds, collected from the cottages about Norfolk, Suf- folk, &c., the inhabitants of which attend care- fully to them, by making them part of their family during the breeding season. It is curious to see with what facility the drivers manage them, by a bit of red rag fastened to a stick, which, from their antipathy to the color, has the same effect as a scourge to a quadruped. There are several varieties. The most common is dark gray, inclining to black, or barred dusky white and black. There is also a beautiful va- riety, of a fine deep copper color, with the greater quills pure white, and the tail of a dirty white. A variety with a pure-white plumage is also now frequent, and appears very beautiful. It was once esteemed a great rarity, and supposed originally to have arisen in Holland. In the Le- verian museum is also a common turkey, with a large tuft of feathers on its head, much resembling one figured by Albin.

MELETIANS, in church history, a consider- able party who adhered to the cause of Meletius, bishop of Lycopolis, in Upper Egypt, after he was deposed, about A. D. 366, by Peter, bishop of Alexandria, under the charge of having sacri- ficed to the gods, and been guilty of other hein- ous crimes ; though Epiphanius makes his only failing to have been an excessive severity against the lapsed. This dispute, which was at first a personal difference between Meletius and Peter, became a religious controversy ; and the Mele- tian party subsisted in the fifth century, but was condemned by the first council of Nice.

MELIA, AZADERACH, or the bead-tree, in botany, a genus of the monogynia order and de- candria class of plants; natural order twenty-third trihilaUe : CAL. quinquedentated ; the petals five : the nectarium cylindrical, as long as the corolla, with its mouth ten-toothed ; the fruit is a plum with a quinquelocular kernel. There are three species, all exotic trees of the Indies, rising nearly twenty feet high, adorned with large pin- nated leaves, and clusters of pentapetalous flowers. They are all propagated by seeds sown on hot-beds.

MELIANTHUS, honey-flower, in botany, a genus of the angiospermia order, and didyna- raia class of plants : CAL. pentaphyllous, with the lowermost leaf gibbous : there are four pe- tals, with the nectarium under the lowest: CAPS, quad r Jocular.

t . M. major has a thick, ligneous, spreading root ; many upright, ligneous, durable stalks, ris>ng six or eight feet high ; garnished with 'arge pinnated leaves of four or five pair of serrated lobes, terminated by an odd one; and, from the sides and tops of the stalks, long spikes of chocolate-colored flowers.

2. M. minor has a root like the former; up- right, ligneous, soft, durable stalks, rising four or five feet high ; garnished with smaller pinnated leaves ; and, from the sides and ends of the branches, long, loose, pendulous bunches of flowers tinged with green, saffron color, and red. Both species flower about June, but rarely pro- duce seeds in this country. They are very or- namental, both in foliage and flower, and merit admittance in every collection. They are easily propagated by suckers and cuttings. They thrive best in a dry soil, and a sheltered warm exposure.

MELIBOEA, in ancient geography, an island of Syria, at the mouth of the Orontes ; which forms a spreading lake round it. It was famous for its purple dye; and is supposed to have been originally a Thessalian colony. Hence Lucre- tius's epithet, Thessalicus.

MELICA, rope-grass, a genus of the digynia order, and triandria class of plants: CAL. bi- valved, biflorous, with an embryo of a flovyer betwixt the two florets. There are many species, of which the most remarkable are,

M. altissima, and ciliaca, which thrive on the most barren hills, and are much relished by cattle. M. cerulea affords an excellent substi- tute for hair

in the manufacture of brooms. M. nutans is a native of several parts of Britain and the adjacent islands ; and the inhabitants of some of the western islands make ropes of it for fishing-nets, as it will bear the water long with- out rotting.

M ELIC E'RIS, n. «. Gr. peAuˆpic .

ileitceris is a tumour inclosed in a cystis, and con- sisting of matter like honey. If the matter resem- bles milk curds, the tumour is called atheroma ; if like honey, meliceris : and if composed of fat, or a suety substance, steatoma. Sharp.

MELICERTA, MEi.icERTES,or MELICERTUS, in mythology, a son of Athamas and Ino. His mother saved him from his father's fury, who pre- pared to dash him against a wall, as he had done his brother Learchus. The mother was so terrified hat she threw herself into the sea with Melicerta in her arms. Neptune had compassion on the misfortunes of Ino and her son. He changed them both into sea deities. Ino was called Leu- cothoe or Matuta ; and Melicerta was called by the Greeks Palemon, and by the Latins Por- tumnus. Some suppose that the Isthmian games were instituted in honor of Melicerta.

MELINDA, a kingdom on the east coast of Africa, situated between lat. 3° and 4° S., though there is great disagreement among geo- graphers as to its extent, and it is altogether but little known. The coasts here are very danger- ous ; being .full of rocks and shelves, and the sea at various seasons very liable to tempests. The interior is said to be for the most part rich and fertile ; producing almost all the necessaries of life except wheat and rice, both of which are

brought thither from Cambayi and other parts potatoes are here fine, large, and in great plenty It also abounds with great variety of fruit-trees, roots, plants, and other esculents, and witn melons of fine taste. There is also great plenty of venison, game, oxen, sheep, hens, geese, ana other poultry, &c., and one breed of sheep, whose tails weigh between thirty and forty pounds. Here Vasco de Gama, having doubled the Cape, met with a hospitable reception, and was supplied with pilots to conduct him to Malabar. Cabral and several of his successors also met with friendly treatment on this coast. The Por- tuguese, however, as their power extended, be- came too haughty to be tolerated even by friendly powers. A quarrel arose : Melinda was taken and destroyed by them, and, when it was rebuilt, became one of their tributaries ; till about 1698, when it was wrested from them by the Arabs.

Melinda, the capital, is a large handsome town, having houses built of

stone, and many of them richly furnished. The numerous mosques give it a splendid appearance from the sea; but most of the churches and buildings erected by the Portuguese are in ruins. At the mouth of the Quillimany it has a good port, but it is dif- ficult of access from shoals. Still it is the seat of a very considerable trade with the Red Sea, Persia, and the northern parts of India. The exports are gold, ivory, copper, wax, and drugs; in exchange for which they receive silks, cottons, linen cloths, and European goods.

MELINUM, in natural history, the name of an earth famous in the earliest ages of painting, being the only white of the great painters of an- tiquity ; and, according to Pliny's account, one of the three colors with which alone they per- formed all their works. It is a fine, white, marly earth, of a very compact texture, yet remarkably light ; a sort of texture which must render any earth fit for the painter's use that is of a proper color. It is often found forming a stratum in the earth, lying immediately under the vegetable mould. It is of a very smooth, but not glossy surface ; is very soft to the touch ; adheres firmly to the tongue ; is easily broken between the fin- gers ; and stains the skin in handling. It melts readily in the mouth, and is perfectly fine ; leaving not the least grittiness between the teeth ; thrown into water, it makes a loud bubbling and hissing noise, and moulders away into a fine powder. It does not ferment with acids ; and suffers no change in the fire. These are the characters by which the melinum of the ancients is distinguished from all other white earths. It is still found in the same place from which the painters of old had it, viz. the isle of Milo or Melos, whence it had its name ; and is common in most of the adjacent islands.

*ME'LIORATE, v. a. j Fr. ameliorer ; Latin MELIORA'TION, n. *. ymelior, better. To MELIOK'ITY. j make better, or hap-*

pier; improve. Melioration is the act or habit of improving. Meliority, state of being better.

Grafting meliorates the fruit ; so that the nourish- ment is better prepared in the stock than in the crude earth. Bacon.

For the melioration of mnsick there is yet much left to trv- "•

Men incline unto them which are softest, and least in their way, in despight of them that hold them hardest to it ; so that this colour of meliority and

pre-eminence is a sign of weakness. Bacon.

But when we graft our buds inoculate, Nature by art we nobly meliorate. Denham.

Castration serves to meliorate the flesh of those beasts that suffer it. Graunt.

Much labour is required in trees ; Well must the ground be digged, and better dressed, New soil to make, and meliorate the rest. Dryden.

A man ought by no means to think that he should be able so much as to alter or meliorate the humour of an ungrateful person by any acts of kindness.

South.

The order and beauty of the inanimate parts of the world, the discernible ends of them, the meliority above what was necessary to be, do evince, by a reflex argument, that it is the workmanship, not of blind mechanism, but of an intelligent and benign agent.

Bentley.

Past indiscretion is a venial crime, And if the youth, unmellowed yet by time, Bore on his branch luxuriant then and rude Fruits of a blighted size, austere and crude, Maturer years shall happier stores produce, And meliorate the well-concocted juice. Cowper.

MELIPILLA, a town and province of Chili bounded on the north by Quillota, on the east by Santiago, on the south by the river Maypo, which divides it from Kancagua, and on the west by the sea. The province, abounding with wine and grain, is of small extent upon the sea, but is about twenty-five leagues from east to west. Its rivers are the Mapochoand Poangue. The town is near the Mapocho, and has a church and several monasteries ; but is thinly peopled. The Jesuits had a college here.*

MELISSA, in mythology, a daughter of Melissus, king of Crete, who, with her sister Amalthsea, fed Jupiter with the milk of goats. She first found out the means of collecting honey ; whence it has been fabled that she was changed into a bee, as her name, M«X«r

MELISSA, BAUM, a genus of the gymnosper- mia order, and didynamia class of plants : CAL) arid, a little plane above, with the upper lip having its dents nearly of equal height: COR. upper lip, arched and bifid; the under one, with the middle lobe, cordated : the most remarkable species

are,

1. M. calamintha, or common calamint of the shops, with fibrous perennial roots; upright, square, branchy, hairy stalks, rising a foot high ; roundish, indented, opposite leaves; and verti- cillate clusters of small bluish flowers, on forked foot-stalks, as long as the flowers.

2. M. grandiflora, or Hetrurian calamint, with fibrous perennial roots and annual stalks, rising about a foot high, garnished with oblong, oval, indented, hairy, opposite leaves ; and from the upper axillae verticillate clusters of large purple flowers on forked foot-stalks.

3. M. officinalis, or common baum, with fibrous perennial roots ; many upright, square, branchy, annual stalks, rising two or three feet high ; garnished with oblong, indented, opposite leaves, by pairs, two or three inches long, and halt as broad ; ni:d from the upper axilla- verti-

cillate clusters of small white flowers upon sin- gle foot-stalks. There is also a variety witn variegated leaves. All these species are easily propagated by off-sets. This last, when in per- fection, has a pleasant smell, somewhat of the lemon kind; and a weak, roughish, aromatic taste. The young shoots have the strongest fla- vor ; the flowers, and the herb itself, when old or produced in very rich moist soils or rainy seasons, are much weaker both in smell and taste. Baum is appropriated, by the writers on the materia medica, to the head, stomach, and uterus ; and, in all disorders of these parts, is said to be very serviceable.

MELISSUS OF SAMOS, a Greek philosopher, was the son of Ragines and the disciple of Par- menides; and lived about 440 B.C. He as- serted that the universe is infinite, immoveable, and without a vacuum. Themistocles was among his pupils.

MELITA, or MELITE, in ancient geography, an island referred to Africa by Scylax and Pto- lemy ; but nearer Sicily, and allotted to it by the Romans ; commended for its commodious har- bours, for a city well built, and for weavers of fine linen. The Phoenicians were the first co- lonists. It is now called Malta.

MELITENSIS TERRA, the earth of Malta, an earth of which there are two very different kinds ; the one of the genus of boles, the other of marls. The.latter is that known by medicinal authors under this name ; the former is the Malta earth now in use ; but both, being brought from the same place, are confusedly called by the same name. The Maltese marl, which \s the terra Melitensis of medicinal authors, is a loose, crumbly, and very light earth, of an unequal and irregular texture, and when exposed to the wea-

ther, soon falls into fine soft powder; but, when preserved and dried, it becomes a loose, light mass, of a dirty white color, with a grayish cast : it is rough to the touch, adheres firmly to the tongue, is very easily crumbled to powder be- tween the fingers, and stains the hands. Thrown into the water, it smells, and afterwards moul- ders away into a fine powder. It ferments very violently with acid menstruuuis. Both kinds are found in great abundance in the island, and the latter has been much esteemed as a re- medy against the bites of venomous animals. The other has supplied its place in the German shops ; and is used there as a cordial, sudorific, and astringent.

MELITO, bishop of Sardis in Lydia, in the second century, was remarkable for the apology he presented to the ernperor Aurelius, in favor of the Christians; on which Eusebius and other ancient ecclesiastical writers bestow great praises ; but that and all Melito's other works are lost.

MELITTIS, in botany, baum-leaved arch- angel, or bastard baum, a genus of the gymno- spermia order, and didynamia class of plants; natural order forty-second, verticillatae.

MELITUS, a Greek orator and poet, the accuser of Socrates. The Athenians, after the death of Socrates, discovering the iniquity of the sentence they had passed against that grea' philosopher, put Melitus to death, 400 B.C.

MELL,r. n. Fr. meler. To mix; meddle. Obsohte.

In no wise dare I more mell Of thing wherein such peril is As like is now, to fall of this.

Chaucer's Dreume. It fathers fits not with such things to mell.

Spenser.

Here is a great deal of good matter Lost for lack of telling :

Now I see thou dost but clatter, Harm may come of melting. Id. Pastorals.

MELLAN (Claude), an engraver of consider- able note, born at Abbeville in Picarcy in 1601. His father was the receiver of the customs in that tovn,

and took great care of his education. His genius for drawing appearing very early, he was sent to Paris, and placed under the direction of Simon Vouet, to perfect him in that art, and his studies promised success ; but he was diverted from his application to them by the desire he had of learning the management of the graver, which he acquired with much facility. From Paris, at the age of sixteen, he went to Rome, where he engraved a considerable number of plates, many of which are held in great estimation ; particu- larly those for the Justinian Gallery, the portrait of the marquis Justinian, and that of pope Urban VIII. Returning to France, he married and settled at Paris, in 1654. Louis XI V., being made acquainted with his merit, assigned him apartments in the Louvre, in the double quality of a painter and an engraver. He acquired a competent fortune, and was greatly esteemed. He died in 1688, aged eighty-seven.

MELLIF'EROUS, adj.ˆ Lat. mellifico, or

MELLIFICA'TION, n.s. i mel (Gr. jwXi) and MELLIF'LUENCE, \fiuo- Flowing with

MELLIF'LUENT, adj. i honey. Production MELLIF'LUOUS. J of honey; flowing

with honey or sweetness : this is the sense of all the adjectives. Mellification is the art of mak- ing, or the production of honey. Mellifluence, a honied or sweet flow.

MELLITE, or HONEY-STONE, in mine- ralogy, takes its name from its yellow color, like that of honey. Its primitive figure is an octahedron. The crystals are small ; their sur- face is commonly smooth and shining. Inter- nally, it is splendent. It is transparent, passing into the opaque, and possesses double refraction. It is softer than amber, and brittle. Specific gravity 1.5. to 1.7. It becomes electric by fric- tion. It occurs on bituminous wood and earthy coal, at a single locality in Thuringia. It con- sists of 46 mellitic acid, 16 alumine, and 38 water.

MELLITIC ACID; discovered by Klap- roth in the mellite, or honey-stone. It is pro- cured by reducing the mellite to powder, and boiling it with about 72 times its weight of water ; the alumine is precipitated in the form of flakes, and the acid combines with the water. By fil- tration and evaporation, crystals are deposited, in the form of fine needles, or in small, short prisms. It is composed of carbon, hydrogen, and oxygen. In combination with the earthy alkalies and metallic oxides, it forms compounds called •••-"-*

MELTOW, adj., v.a. & v.n. \ French tnoi, MEL'LOWNESS. { moelleux ;

Itaf.

and Span, motte ; Port, mole ; all perhaps of Lat. mollis, soft. Ripe to softness ; mature ; soft in sound; unctuous; subdued or melted down by drink; intoxicated. To mellow is to ripen; mature; bring to or towards perfection : hence to ameliorate ; make better in any way ; be matured ; ripen. Mellowness follows these senses.

An apple in my hand works different effects upon my senses : my eye tells me it is green ; my nose, that it hath a mellow scent ; and my taste, that it is

.

The spring, like youth, fresh blossoms doth pro- duce, -•

But Autumn makes them ripe, and fit for use : So age a mature mellowness doth set On the green promises of youthful heat. DenJium.

Greedy of physicians frequent fees, From female mellow praise he takes degrees.

Roscommon. A little longer,

And Nature 'drops him down without your sin, Like mellow fruit, without a winter stoim.

Dryden.

Of seven smooth joints a mellow pipe I' have, Which with his dying breath Damsetas gave. Id.

They plow in the wheat stubble in December; and, if the weather prove frosty to mellow it, they do not plow it again till April. Mortimer's Husbandry.

On foreign mountains may the sun refine The grape's soft juice, and mellow it to wine.

Addison.

In all thy humours, whether grave or mellow, Thou'rt such a testy, touchy, pleasant fellow : Hast so much wit, and mirth, and spleen about thee, There is no living with thee, nor without thee. Id.

When thou wast corn't, an' I was mellow, We took the road aye like a swallow : At Brooses thou had ne'er a fellow. Burns.

As time improves.the grape's authentic juice, Mellows and makes the speech more fit for use, And claims a reverence in its shortening day, That 'tis an honour and a joy to pay. Cowpe'.

The rose was yet upon her cheek, But mellowed with a tenderer streak : Where was the play of her soft lips fled ? Gone was the smile that enlivened the red.

Byron.

MELMOTH (William), esq., a learned bencher of Lincoln's Inn, was born in 1666. In conjunction with Mr. Peere Williams, he published Vernon's Reports, under an order of the court of chancery. But the performance for which he most deserves to be held in remem- brance is, The Great Importance of a Religious Life; of which, after many large editions had been circulated, 42,000 copies were sold within eighteen years, before the real author was known. Few men, it has been truly said, have ever passed a more useful, not one a more blameless life. He died on tbe 6th of April,

1743.

MELMOTH (William), esq., son of the preced- ing, the celebrated

translator of Pliny and of Cicero's Letters ; and author of those which pass under the name of Sir Thomas Fitzosborne. MELOCHIA, Jews' mallow, in botany, a genus of the pentandria order, and mouodelphia class of plants : CAPS, quinquelocular and mono- sperm ous. There are several species ; but the only remarkable one is,

M. olitorius, the common Jew's mallow, a native of the warm parts of Asia and America. It is an annual plant, which rises about two feet high, dividing into several branches, garnished with leaves of different sizes and forms : some spear-shaped, others oval, and some almost heart- snaped : they are of a deep green, and slightly indented on their edges, having near their base two bristly reflexed segments. They have very long slender foot-stalks, especially those which grow on the lower part of the branches. The flowers sit close on the opposite side of the branches to the leaves, coming out singly ; they are compc/sed of five small yellow petals, and a great number of stamina surrounding the oblong germen, which is situated in the centre of the flower, and afterwards turns to a rough swelling capsule two inches long, ending in a point, and having four cells filled with angular greenish seeds. This species is cultivated about the city of Aleppo in Syria, and in the East Indies, as a pot-herb ; the Jews boiling the leaves, and eating them with their meat. It is supposed by Rauwolf to be the olus Judaicum of Avicenna, and the corchorum of Pliny.

MELOCO'TON, n. s. Spanish melocotone ; Lat. malum cotoneum. A quince. Obsolete.

In apricots, peaches, or melocotones upon a wall, the greatest fruits are towards the bottom. Bacon.

MEL'ODY, n.s. -\ Fr. melodic : Latin

MELO'DIOUS, adj. tmelodia; Gr. /teXwfia.

MELO'DIOUSLY, adv. £ Music; harmony or

MELO'OIOUSNESS, n.s.) sweetness of sound: the other derivatives correspond.

Singing and making melody in your hearts to the Lord. Ephesians.

The prophet David having singular knowledge not in poetry alone but in musick also, judging them both to be things mostnecessary for the house of God, Jeft behind him a number of divinely indited poems, and was farther the author of adding unto poetry melo lii in public prayer, melody both vocal and in- strumental, for the raising up of men's hearts, and the sweetening of their affections towards God.

Hooker.

W hy rather, sleep, liest thou in smoky cribs, And husht with buzzing night flies to thy slumber ; Than in the perfumed chambers of the great, And lulled with sounds of sweetest melody 1

Shahspeare. Fountains ! and ye that warble, as ye flow,

Melodious murmurs ; warbling tune his praise.

Milton.

And oft with holy hymns he charmed their ears ; A musick more melodious than the spheres.

Dryden.

Lend me your songs, ye nightingale : Oh pour The mazy-running soul of melody Into my varied verse ! Thomson's Spring.*

The lover, in melodioui verses, His singular distress rehearses. Still closing with a rueful cry, Was ever such a wretch as I ! Cowper.

MELOE, in zoology, a genus of insects of the order of coleoptera. The antennae are jointed, the last joint being oval ; the breast is roundish ; the elytra are soft and flexible ; and the head is inflected and gibbous. This genus is divided into two families; one without wines, and having the elytra shorter than the abdo- men ; the other winged, with elytra shorter than

the body, and wholly covering the wings. Sc. ENTOMOLOGY.

M. proscarab»us, the color is black, but without brightness, though intermixed with a small degree of purple, especially towards the under part of the body. Its head, which is large is dotted ; as is the thorax, which is narrower, round, and has no margin. The elytra are as soft as leather, shagreened, and cover but one part of the abdomen. They seem cut off ob- liquely from the inner to the outer part, being shorter towards the suture, longer on the sides. There are no wings under the elytra. The ab- domen is large, especially that of the female, in which it far exceeds the elytra. This

insect makes its abode on the side of wet roads and in woods. Its food is insects, violet leaves, and delicate herbs. A fat unctuous matter of an agreeable smell oozes from its body. The males are less than the females. Oil, in which insects of this species have been infused, is said to be an excellent remedy for wounds and the scor- pion's sting. It enters also into the composition of salve for plague sores. The insects bruised and mixed with oil or honey, Linnaeus says, are recommended as a remedy in the rabies canina. See ENTOMOLOGY.

ME'LON, n. s. Fr. melon ; Lat. melo. A species of cucumis. See below.

We remember the fish which we did eat in Egypt freely ; the cucumbers and the melons. Num. xi. 5.

The southern wits are like cucumbers, which are commonly all good in their kind ; but at the best are an insipid fruit ; while northern geniuses are like melons, of which not one in fifty is good ; but when- it is, it is an exquisite relish. Berkeley.

The flower of the melon consists of one leaf, which- is of the expanded bell shape, cut into several seg- ments, and exactly like those of the cucumber, &c.

Miller.

MELON, in botany. See CUCUMIS. The fe- male flowers have no stamina or summits, but have a very large oval germen, situated below the flower, which turns to an oval fruit with se- veral cells, filled with oval, acute pointed, com- pressed seeds, enclosed in a soft pulp. Great varieties of this fruit are cultivated in different parts of the world, many of them of no value, size being regarded too much in the markets. The cantaleupe melon, so called from a place near Rome, where this fruit has been long culti- vated, and whither it was brought from Arme- nia, is in the greatest esteem among the curious. There are also the romana, the succadoe, the Zatte, the small Portugal or dormer, and the black Galloway melons, most of which are culti- vated for an early crop. The proper manage- ment and culture of melons are as follow : — The seed from which they are to be propagated should be from three to six years old, sown at two different periods, to obtain a succession of crops. For those of the first season the seed may be set about the middle of February, jn a cucumber bed, two inches from each other, and covered with a little earth. When a fortnight old they should be transplanted, and, in three weeks after, finally removed to the bed on which they are intended to remain, which ought io be in a warm situation, so as to be defended

from cold and violent winds. The second crop should be sown about the middle of March, and treated in a similar manner. But the hot-bed, formed with the view of rearing these tender ex- otics, ought to evaporate two or three days be- fore it be ready for the reception of the plants ; which should be carefully removed without in- juring their fibres. After they are placed on the tops of the hills, raised of garden-mould above the dung, water them once or twice till they have taken root, when their management will vary but little from that of cucumbers, ex- cepting that melons require more air and a small quantity of water. As soon as the plant spreads into branches it must be properly clipped : so that only two of the principal shoots may re- main ; and, to produce perfect and ripe fruit, one only should be left on each% stem, and all superfluous young melons removed as soon as they appear. Besides, the diseased leaves and branches, together with the forked extremities, ought to be continually cut off; and when the fruit is set, or formed, it will be necessary to place thin boards or stones under each, and to turn it gently twice a-week, that the whole may be equally benefited by the sun and air. When fully grown, it must be plucked at a proper time, as it will otherwise lose a considerable part of its flavor. Thus, if melons be intended for the table they should be cut early in the morning, immersed in ice or cold spring water, and kept in the coolest place till they are used. The most certain criterion, to ascertain the maturity of this fruit, is its cracking near the foot-stalk, and be- ginning to smell.

MELOS, in ancient geography, an island be- tween Crete and Peloponnesus, about twenty- four miles from Scyllaum. It is about sixty miles in circumference, and of an oblong figure. It enjoyed independence for above 7.00 years befor the Peloponnesian war. It was originally peopled by a Lacedemonian colony, about A. A. C. 1116. For this reason the inhabitants refused to join the rest of the islands and the Athenians against the Peloponnesians. This refusal was severely punished. The Athenians took Melos, and put to the sword all who were able to bear arms. The women and children were made slaves, and the island desolated. An Athenian colony repeopled it, till Lysander re- conquered it, and restored the inhabitants to their possessions. It is now called Milo, as well as its capital. See MILO.

MELOTHRIA, in botany, small creeping cucumber, a genus of the monogynia order and triandria class of plants; natural order thirty- fourth, cucurbitaceae : CAL. quinquefid : COR. campanulated and monopetalous ;

berry tri- locular and monospermous. There is only one species, viz.

M. pendula, a native of Carolina, Virginia, and many of the American islands. The plants strike out roots. at every joint, which fasten their stalks in the ground, by which means they extend far every vay. The flowers are very small, shaped like those of the melon, of a pale sulphur color. The fruit in the West Indies grows to the size of a pea, is of an oval figure, and changes to black when ripe : these are by the inhabitants

sometimes pickled when green. In Britain the fruit are much smaller, and are so hidden by the leaves that it is difficult to find them. The plants in this country require artificial heat

MELPOMENE, in mythology, one of the nine muses, daughter of Jupiter and Mnemo- syne. She presided over tragedy. Horace has addressed one of the finest of his odes to her, as to the patroness of lyric poetry. She was generally represented as a young woman with a serious countenance. Her garments were splendid ; she wore a buskin, and held a dagger in one hand, and in the other a sceptre and crown.

MELROSE, a town of Roxburgh, on the con- fines of Tweeddale ; seated on the south side of the Tweed ; with an ancient abbey, now in ruins, founded by king David I. in 1136. He peopled it with Cistertians from Rivale abbey in York- shire, and dedicated it to the Virgin Mary. At the Reformation James Douglas was made com- mendator, who took down much of the building, to furnish materials for a large house for himself, which still remains. Nothing is left of the abbey excepting a part of the cloister walls elegantly carved ; but the ruins of the church are most strikingly beautiful. Part is at present used for divine service, the rest uncovered ; but every part does great honor to the architect. Alexander II. was buried beneath the great altar. This ancient monastery is mentioned by Bede, as having been founded in the end of the sixth century; and Sir Walter Scott's description of it, in the Lay of the Last Minstrel, has attracted numbers of travellers to the spot. Sir Walter's seat of Abbotsford is in the immediate vicinity. Melrose has fairs in March, June, August, and November.

MELT, v. a. & v. n.~\ Sax. meltan; Goth.

MELT'ER, n. s. { and Swed. melta ; Belg.

MELT'INU, adj. f smelten ; Gi. /icXdw. To

MELT'INGLY, adv. J dissolve; make or re- duce into liquid : hence to break into small particles ; waste ; and metaphorically to soften to regard or tenderness ; waste away : as a neu- ter verb, to become liquid ; be dissolved or lose substance; be softened into compassion, tender- ness, or gentleness.

Amelteris particularly ap- plied to one that smelts metals. Melting and meltingly follow the senses of the verb.

My soul melteth for heaviness : strengthen thou me. Psalm.

When the melting fire burneth, the fire causeth the waters to boil. Isa. Ixiv. 2.

Miso and Mopsa, like a couple of foreswat melters, were getting the pure silver of their bodies out of the ore of their garments. Sidney.

Zelmane lay upon a bank, that her tears falling into the water, one might have thought she began meltingly to be metamorphosed to the running river.

Id.

How they would melt me out of my fat drop by drop, and liquor fishermen's boots with me.

Shakspeare.

Thou would'st have plunged thyself In general riot, melted down thy youth In different beds of lust. Id. Timon of Atheru.

Dighton and Forrest, Albeit they were flesht villains, bloody dogs,

Melting with tenderness and mild compassion, Wept like two children in their death's sad story.

Shakspeare.

Whither are they vanished 1 —Into the air : and what seemed corporal Melted as breath into the wind. Id. Macbeth. The rose is fragrant, but it fades in time ; The violet sweet, but quickly past the prime ; While lillies hang their heads and soon decay, And whiter snow in minutes melts away.

Dry den.

The mighty master smiled to see That love was in the next degree : 'Twas but a kindred sound to move, For pity melts the mind to love. Id.

Melting into tears, the pious man Deplored so sad a sight. Id.

This price, which is given- above the value of the silver in our coin, is given only to preserve our coin from being melted down. Locke.

To take in pieces this frame of nature, and melt it down into its first principles ; and then to observe how the divine wisdom wrought all these things into that beautiful composition ; is a kind of joy which pierceth the mind. Burnet.

Alas ! the story melts away my soul, Addison, This the author attributes to the remissness of the former melters, in not exhausting the ore.

Derham's Physico- Theology. The rock's high summit in the temple's shade, Nor heat could melt, nor beating storm invade.

Pope.

If your butter wnen melted tastes of brass, it is your master's fault, who will not allow you a silver sauce- pan. Swift.

What with afflicted beauty can compare. And drops of love distilling from the fair ? It melts us down ; our pains delight bestow, And we with fondness languish o'er our woe.

Young.

MELVILLE ISLAND in the North Polar Sea ; one of the North Georgian group, between 74° and 76° 50′ N., lat., and 105° 40', and 1 13° 40′ W., long. It is surrounded with enormous masses of ice, and the only vegetation is moss. Cap- tain Parry discovered it in 1819, and passed the winter of 1819—20 there.

MELTING CONE, in assaying, a hollow cone of brass or cast iron, into which melted metalline substances are thrown, in order to free them from their scorise. When a small quantity of matter is melted it will be sufficient to rub the inside of the cone with grease; but when the quantity is very large, especially if it contain any thing sulphureous, this caution of tallowing the moulds is not sufficient. In this case the assayer has recourse to a lute reduced to thin pap with water, which effectually prevents any injury to the cone.

MELVIL (Sir James), descended from an honorable Scots family, being the third son of the laird of Kaeth, was born in 1530. He went to France very young, as page to queen Mary, then married to the dauphin ; and on the death of her husband followed her to Scotland, where he was made

gentleman of her chamber, and ad- mitted a privy counsellor. She employed him in her most important concerns, till her confine- ment in Lochleven, all which he discharged with the utmost fidelity ; and, had she taken his ad- vice, she might have avoided many of her mis- fortunes. \Vbpn ,«he was prisoner in EnglajoJ,

she recommended him strongly to her son James with whom he continued in favor and employ- ment until the death of queen Elizabeth : James would then have taken him to England; but Melvil, now grown old, was desirous of retiring from business, and in his retirement he drew up the memoirs of his past life for the use of his son. These Memoirs were accidentally found in Edinburgh castle in 1660, and published in folio in 1683.

MELVILLE BAY, a harbour on the north coast of New Holland, in the west entrance of the gulf of Carpentaria, said by captain Flinders to be the best harbour in the gulf. The entrance from the N. N. W. is four miles wide ; and the bay every where affords good anchorage. On the south and eastern sides the country was found covered with pasturage and trees. Among the latter kangaroos appeared to be numerous. Long, of Point Dundas, at the entrance of the bay, 136° 41′ 40″ E., lat. 12° 13′ 0″ S.

MELVILLE, CAPE, the north-west point of Hispaniola. Long. 60° 30′ W., lat. 15° 44′ N.

MELVILLE ISLES are formed of an island, with several smaller rocky islets adjoining, on the north shore of New Holland, at the entrance into the gulf of Carpentaria. The island is low, about five miles long, and between one and two in breadth. It is barren, and the shores in general are sandy. The south end lies in long. 136° 52′ E., lat. 12° 8′ 30″ S.

MELUN, an ancient and handsome town, the principal place of the department of the Seme et Marne, in France, having a minor court of justice, subject to the royal court of Paris, a communal college, a free drawing school, an agricultural society, a public library of 8000 “olumes, an assembly room, and several plea- sant public walks. It is a post town, situated at the foot of a hill, containing about 7000 inhab- itants : the river Seine running through it and dividing it into several parts. It has tolerably open streets : in the eastern part of the Isle of France, near it, are the ruins of a palace, once inhabited by the French monarchs, and where Blanche, the mother of St. Louis, for some time held her court. Melun was besieged and taken several times by the English and by the duke of Burgundy; the former reduced it by famine in 1419, but fourteen years after the inhabitants drove them out and admitted the troops of Charles VII.

Its manufactures consist of flint glass, cloth, drugget, serge, printed linens, calicoes, &c. &c. There are also some cotton spinning factories, tan-yards and bark-mills, lime-kilns, &c. The inhabitants carry on a trade in corn, flour, wines, cheese, wool, and cattle. There is a considerable corn-market here for the supply of Paris, and a central jail for five departments. Near this place was born James Amyot, the translator of Plu- tarch. It is situated twelve miles north of Fcn- tainbleau, thirty-nine south of Meux, and thirty-four S. S. E. of Paris.

MEM'BER, n. s. Fr. membre ; Ital. menibro ; Lat. membrum: [Ex. Gr. / xtpoc, quod membra sint partes corporis • qu. per redupl. /«/«poc? — Ainsworth.] Any part of a thing or person : an obvious or conspicuous part: hence a limb ; in-

tegral or principal part of a discourse or poem ; an architectural division of a column, capital, &c. ; one of a community.

It is profitable for thee that one of thy members should perish, and not that thy whole body should be cast into hell. Matthew,

My going to demand justice upon the five members, my enemies loaded with obloquies. King Charlet. "if shape it might be called, that shape had none. Distinguishable in member, joint, or limb. Milton. Mean as I am, yet have the Muses made

Me free, a member of the tuneful trade. Dryden.

In poetry, as in architecture, not only the whole but the principal members, should be great. Add-on.

Sienna is adorned with many towers of brick, which, in the time of the commonwealth, were erected to such of the members as had done service to their country. Addison.

The peace and happiness of a society depend on the justice and fidelity, the temperance and charity, of its members. Rogers.

Where the respondent limits or distinguishes any proposition, the opponent must prove his own pro- position according to that member of the distinction in which the respondent denied it. Watts.

MEM'BRANE, n. s. ~\ French membrane, MEMBRANA'CEOUS, adj. f membraneux; Latin MEMBRA'NEOUS, tmembrana, (that

MEM'BRANOUS. J which binds together

the members. — Priscian.) A fibrous integument

of the body. See the extract from Quincy. The .

adjectives mean consisting of, or pertaining to,

membranes.

They obstacle find none Of membrane, joint, or limb, exclusive bars : Easier than air with air, if spirits embrace, Total they mix. Milton.

The chorion, a thick membrane obscuring the for- mation, the dam doth after tear asunder.

Browne's Vulgar Errours.

Great conceits are raised of the involution or membranous covering called the silly-how. Broione.

The inner membrane that involved the several li- quors of the egg remained unbroken. Boyle.

Lute-strings, which are made of the membraneous parts of the guts strongly wreathed, swell so much as to break in wet weather. Id.

Such birds as are carnivorous have no gizzard, or musculous, but a membranous stomach ; that kind of food, being torn into small flakes by the beak, may be easily concocted by a membranous stomach.

Ray on the Creation.

A membrane is a web of several sorts of fibres, in- terwoven together for the covering and wrapping up some parts : the fibres of the membranes give them an elasticity, whereby they can contract, and closely grasp the parts they contain, and their nervous fibres give them an exquisite sense, which is the cause of their contraction ; they can, therefore, scarcely suf- fer the sharpness of medicines, and are difficultly united when wounded. Quincy.

Anodyne substances, which take off contractions of the membranous parts, are diuretick. Arbuthnot.

Birds of prey have membranaceous, not muscular stomachs. Id. on

Aliment.

MEMEL, a fortified town of Prussia, on the Dange, adjacent to the Curische Haff, which here joins the Baltic by a narrow strait, and re- ceives the great river Memel or Niemen, which is navigable through a great part of Lithuania. It has three suburbs, one of which lies beyond the Dange. The situation commands a good

regular trade in timber, particular deals, brought down in floats ; hemp, flax, corn ; hides and skins ; tallow, bristles, wax, feathers, and Lithu- anian yarn. The imports are chiefly coffee, sugar, pepper, dye-woods, tobacco, rum, and cot- ton goods. Lying only about thirteen miles from the Russian frontier, this town also carries on a good deal of smuggling with tha,t country. The average number of vessels, great and small, that visit the harbour, is from 600 to 700, of which two-thirds are British. The entrance of the harbour is obstructed by shoals and quicksands, so that it will not admit vessels drawing above eighteen feet of water. The exchange transac- tions are generally conducted at Konigsberg. The manufactures are trifling, with the exception of the saw-mills for cutting deals, logs, and boards. Population 6000. Seventy miles N.N.E. of Konigsberg, and 130 north-east of Dantzic.

MEMENTO, n.s. MEMOIR',

MEM'ORABLE, adj. & n. t. MEM'ORABLY, adv. MEM'ORATIVE, adj. MEMORAN'DUM, n. s. MEMO'RIAL, MEMO'RIALIST, MEM'ORIZE, v. a. MEM/ORY, n. s.

Lat. memento, memorabilis, me- morandum, memo- rialis, memoria ; Fr. memorie, me- morable, memo- rial. Notice, re- mark, or hint, to assist recollec- tion. A memoir

is a collection of such notices ; used particularly with regard to personal or family history. Me- morably, worthy of being recollected. Memoran- dum, a note to assist memory. Memorial, as an adjecti Ye, assisting memory; retained in memory; (memorative is used by bishop Hall in the for- mer sense) : as a substantive, a monument, or other formal record of a person's history, or of particular transactions. A memorialist is the writer, or he who presents a memorial. To me- morize is to record ; cause to be remembered. Memory, the power or faculty of recollection; fame ; time of knowledge.

A memorial unto Israel that no stranger offer in- cense before the Lord. Num. xvi. 43. Nothing I so much delight to recount, as the me- morable friendship that grew betwixt the two princes.

Sidney.

Churches have names, some as memorials of peace, some of wisdom, some in memory of the Trinitj it- self, some of Christ under sundry titles ; of the blessed Virgin not a few ; many of one apostle, saint, or martyr ; many of all. Hooker.

They neglect to memorize their conquest of the Indians, especially in those times in which the same was supposed. Spenser.

When Duncan is asleep, his two chamberlains Will I with wine and wassel so convince, That memory, the warder of the brain, Shall be a fume. Shakspeare. Macbeth.

That ever living man of memory, Henry the Fifth ! Id. Henry VI.

Be better suited ;

These weeds are memories of those worser hours : I pr'ythee put them off. Id. King Leai.

They meant To memorize another Golgotha.

Shakspeare.

Thy master now lies thinking in his bed Of thee and me, and sighs, and takes my glove, A..d gives memorial dainty kisses to :t. Id

Our master, for his learning and piety, is not only a precedent to his own subjects, but to foreign princes ; yet he is but a man, and seasonable me- mentot may be useful. Bacon.

From this desire, that main desire proceeds, Which all men have surviving fame to gain,

By tombs, by books, by memorable deeds, For she that this desires doth still remain. Davie».

Memorials written with kind Edward's hand shall be the ground of this history. Hayward.

Let their names that were bravely lost be rather memorized in the full table of time ; for my part, I love no ambitious pains in an eloquent description

of miseries. Walton.

Do but cast your eyes back upon the fresh memory jf those late flourishing times of this goodly kingdom, when pure religion was not more cheerfully professed than inviolably maintained. Bp. Hall.

The same thoughts do commonly meet us in the same places, as if we had left them there till our return ; for that the mind doth secretly frame to it-self memmative heads, whereby it recals easily the same conceits. Id.

Our memories are so frail that they need instru- ments of recollection, and laborious artifices to help them. Jer. Taylor.

In other parts like deeds deserved

Memorial, where the might of Gabriel fought.

Milton. Thy request think now fulfilled, that asked

How first this world, and face of things, beyan,

And what, before thy memory, was done. Id.

All the laws of this kingdom have some monu- ments or memorials thereof in writing, yet all of them have not their original in writing ; for some of those laws have obtained their force by immemorial usage. Hale.

Dares Ulysses for the prize contend, In sight of what he durst not once defend ; But basely fled that memorable day, When I from Hector's hands redeemed the flaming prey 1 Dryrlen.

Is not the frequent spectacle of other people's deaths a memento sufficient to make you think of your own 1 U Estrange.

Memory is the power to revive again in our minds those ideas which after imprinting have disappeared, or have been laid aside out of sight. Locke.

I resolved to new- pave every street, and entered a memorandum in my pocket-book accordingly.

Guardian.

I must not omit a memorial setting forth, that the memorialist had, with greai dispatch, carried a letter from a certain lord to a certain lord. Spectator,

As the memory relieves the mind in her vacant mo- ments, and fills up the

chasm of thought with ideas of what is past, we have other faculties that agitate and employ her upon what is to come. These are the passions of hope and fear. Id.

Medals are so many monuments consigned over to eternity, that may last when all othei memorials of the same age are worn out or l«st. Addison.

There is not so variable a thing in nature as a la- dy's head-dress. Within my own memory I have known it rise and fall within thirty degrees. Id.

Reflect upon a clear, unblotted, acquitting con- science, and feed upon the ineffable comforts of the memorial of a conquered temptation. South.

Be our great master's future charge To write his own memoirs, and leave his heirs

High schemes of government and plans of wars.

Prior.

I he tomb with manly arms and trophies raise ; There high in air memorial of my name Fix the smooth oar, and bid me live to fame. Pope.

There is not in any author a computation of the revenues of the Roman empire, and hardly any me- moirs from whence it might be collected.

Arbuthnot on Coins.

Nature's fair table-book, our tender souls, We scrawl all o'er with old and empty rules, Stale memorandums of the schools. Swift.

May I, at the conclusion of a work, which is a kind of monument of Pope's partiality to me, place the following lines as an inscription memorial of it.

Broome.

The case is with the memorial possessions of the greatest part of mankind : a few useful things mixed with many trifles fill up their memoirs. Watts.

He resolved U> disappoint the effects of their ne- gociations, by entering into a closer union with his nephew. In order to accomplish this, he transmitted to James an elaborate memorial, representing the nu- merous encroachments of the see of Rome upon the rights of sovereigns.

Robertson. History of Scotland. Excesses of all kinds do a great injury to the me- mory. Mason. They spake of him they loved, of him whose life, Though blameless, had incurred perpetual strife ; Whose deeds had left, in

spite of hostile arts, A deep memorial graven on their hearts. Cowptr. Theresa's form —

Methinks it glides before me now,

Between me and yon chesnut's bough,

The memory is so quick and warm ;

And yet I find no words to tell

The shape of her I loved so well. Byron. MEMMINGEN, a, -walled town of Bavaria, on the Iller, has a neat town-house, a merchant/ hall, arsenal, barracks, a public library, and a high school. Its manufactures are on a small scale, and consist of the weaving and printing cottons and linen, tanneries, tobacco, woollen, iron and copper works. In the environs hops are cultivated. Population 6500, chiefly Luthe- rans. Twenty-eight miles south by east of Ulm. MEMNON, in fabulous history, a king of Ethiopia, son of Tithonus and Aurora. He came with a body of 10,000 men to assist his uncle Priam during the Trojan war. He behaved with great courage, and killed Antilochus, Nestor's son. The aged father challenged the Ethiopian monarch ; but Memnon refused it on account of the venerable age of Nestor, and accepted that of Achilles. He was killed in the combat, in the sight of the Grecian and Trojan armies. Aurora prayed Jupiter to grant her son such honors as might distinguish him from other mortals. The god consented; and immediately a numerous flight of birds issued from the burning pile on which the body was laid, and dividing themselves into two separate bodies, fought with such fury, that above half of them fell in the fire as victims to appease the manes of Memnon. These birds were called Memnonides : and it has been said, by some of the credulous ancients, that they never failed to return every year to the tomb of Memnon in Troas, and repeat the same bloody engagement in honor of that hero. The Ethio- pians or Egyptians, over whom. Memnon reigned, erected a celebrated statue to his memory. This statue had the wonderful property of uttering a melodious sound every day at s-ui-rising, like that which was heard at the breaking of the string of a harp when it was wound up : effected, it is

said by the rays of the sun, when they fell upon it. At the setting of the sun, and in the night, the sound was lugubrious. Such is the testi- mony of the geographer Strabo, who confesses himself ignorant, however, whether the sound proceeded from the basis of the statue, or the people that were then around it. This celebrated statue was dismantled by order of Cambyses

when he conquered Egypt : but its ruins still astonish modern travellers by their grandeur and beauty.

MEMNON OF RHODES, one of the generals of Darius king of Persia. He advised that prince to lay waste the country, in order to deprive Alexander the Great's army of support, and af- terwards to attack Macedon ; but this counsel was disapproved by Darius's other generals. Memnon behaved, at the passage of the Grani- cus, like an experienced general. He afterwards defended the city of Miletum with great courage; seized the islands of Chio and Lesbos : spread terror throughout all Greece; but was stopped in his progress by the hand of death. Barsma, Memnon's widow, was taken prisoner with Da- rius's wife, and Alexander had a son by her named Hercules.

MEMORY is that faculty of the mind which presents to us ideas of what is past, accompanied with a persuasion, that the things themselves were formerly real and present. What we dis- tinctly remember to have perceived, we as firmly believe to have happened, as what is now present to our senses. The means by which the mind retains the ideas of past objects, and how these ideas carry with them evidence of their objects having been actually perceived, will be found noticed in our article METAPHYSICS. The inge- nious Dr. Beattie, in his Elements of Moral Science, divides memory into two species, active and passive.' ' When we remember,' says he, ' with little or no effort, it is called remembrance simply, or memory, and sometimes passive me- mory. When we endeavour to remember what does not immediately, and, as it were, of itself, occur, it is called active memory, or recollec- tion.' This is a talent of importance in every situation of life, and many rules have been laid down for its acquisition, direction, improvement, and preservation. Perhaps the most important practical observation on the subject is, that sen- sual excess of any kind is prejudicial to the brain, and gradually impairs this faculty. Such, indeed, is the precarious state of our mental powers, and particularly of our recollection, that it often happens, even with the most regular and temperate, that, notwithstanding every effort, those ideas, which appear to be the most interest- ing and desirable to be retained, vanish from the mind irrecoverably. To correct this inherent weakness various methods have been proposed, which constitute what is called the art of memory. Those of our readers who are inclined to avail themselves of such assistance, may consult Dr. Gray's treatise, entitled A New Method of Arti- ficial Memory, or our article MNEUMONICS. But let them remember that it is not extraneous aid, but constant attention and exercise, which form the true art of memory, ' It is the practice ot many readers,' says Dr. Beattie, ' to note in the

margin of their books the most important pas- sages, the strongest

arguments, or the brightest sentiments. Thus they load their minds with superfluous attention, repress the vehemence of curiosity by useless deliberations, and by fre- quent interruption break the current of narration or the chain of reason, and at last close the volume, and forget the passages and the marks together. Others are firmly persuaded, that nothing is certainly remembered but what is transcribed : and they, therefore, pass weeks and months in transferring large quotations to a corn- mo n-place-book. Yet, why any part of a book, which can be consulted at pleasure, should be copied, we are not able to discover. The hand has no closer correspondence with the memory than the eye. The act of writing itself distracts the thoughts ; and what is read twice is commonly better remembered than what is transcribed. This method, therefore, consumes time, without assist- ing the memory. But to write an abridgment of a good book may sometimes, be a very profitable exercise. In general, when we would preserve the doctrines, sentiments, or facts, that occur in read- ing, it will be prudent to lay the book aside and put them in writing in our own words. This practice will give accuracy to our knowledge, accustom .is to recollection, improve us in the use of language, and enable us so thoroughly to comprehend the thoughts of other men, as to make them in some measure our own.' ' Our thoughts,' says the author of the Idler, ' have, for the most part, a connexion; so that the thought which is just now in the mind, depends partly upon that which went before, and partly serves to introduce that which follows. Hence we re- member best those things of which the parts are methodically disposed and mutually connected. A regular discourse makes a more lasting im- pression upon the hearer than a parcel of de- tached sentences, and gives to his rational powers a more salutary exercise : and this may ,show us the propriety of conducting our studies, and all our affairs, according to a regular plan or method. When this is not done, our thoughts and our business, especially if in any degree com- plex, soon run into confusion.' It is hardly cre- dible to what a degree both active and passive memory may be improved by long practice. Scaliger reports, of himself, that in his youth he could repeat above 100 verses, having once read them ; and Berthicus declares that he wrote his Comment upon Claudian without consulting the text. The extraordinary memory of Magliabechi is- well known. See MAGLIABECHI. That of Jedidiah Buxton was of a peculiar kind, so long habituated to numbers, that it could fix on no- thing else. See BUXTON. To hope, however, for such degrees of memory as these, would be equally vain as to hope for the strength of Her- cules, or the swiftness of Achilles. ' But there are clergymen,' says Dr. Johnson, ' who can get a sermon by heart in two hours, though their memory, when they began to exercise it, was rather weak than strong. And pleaders, with other orators who speak in public and extempore, often discover, in calling instantly to rrind all the knowledge necessary on the present occa- sion, and every thing of importance that may

have been advanced i .1 the course ot a long de- bate, such powers of retention and recollection a?, to the man who has never been obliged to exert himself in the same manner, are altogether astonishing. As habits, in order to be strong, must be formed in early life, the memories of children should therefore be constantly exer- cised ; but to oblige them to commit to me- mory what they do not understand, perverts their faculties, and gives them a dislike to learn- ing.' In a word, those who have most occa- sion for memory, as orators and public speakers, should not suffer it to 'ie idle, but constantly employ it in treasuring up and frequently reviv- ing such things as may be of most importance to them; for, by these mear.£ it will be more at their command, and they may place greater con- fidence in it upon any emergency.'

MEMPHIS, an ancient city, and the royal re- sidence of the kings in Upper Egypt; fifteen miles from Delta to the south, according to Pliny : called also Moph and Noph, in Scrip- ture. Though this city is now so completely ruined that authors greatly disagree concerning its situation, yet Strabo says, that in his time it was the most magnificent in Egypt, next to Alex- andria. It was the capital of the country : and there was an entire temple of Osiris, where the Apis, or sacred ox, was kept and worshipped ; with an apartment for the mother of the ox ; a very magnificent temple of Vulcan; a large cir- cus for fighting bulls ; and a great colossus in the middle of the city, which was thrown down. There was likewise a temple of Venus, and a se- rapium in a very sandy place, where the wind heaps up hills of sand very dangerous to travel- lers; with a number of sphynxes, the heads of some of them only being visible, the others covered up to the middle with sand. He adds, that in the front of the city there were many lakes ; and that it contained a number of palaces, at that time in ruins. These buildings, he said, formerly stood upon an eminence ; they lay along the side of the hill, stretching down to the lakes and groves, forty stadia from the city. There was likewise a mountain in the neighbourhood, on which were a great number of pyramids, with the sepulchres of the kings, among which two were accounted wonders of the world, From this description, Mr. Bruce concludes, that the celebrated capital of Egypt stood in the place where the villages of Metrahenny are now situated ; in opposition to Dr. Shaw's opinion, who thinks it was situated at Geeza, Gisa, or Gyzeh. Savary has also shown, that Gisa was not the situation of the ancient Memphis. This stood, he says, on the west bank of the Nile, on the spot where the village of Memph now stands, which still preserves the name. Large heaps of rubbish are still to be seen there ; but the Arabs have transported to Cairo the columns and re- markable stones, which they ha/e disposed, without taste and without order, in their mosques and nublic buildings. This city extended as far as Saccara ; and was almost wholly encompassed by lakes, part of which are still subsisting. It was necessary to

cross them to convey the dead to the sepulchres. The tombs, hewn out of the

tionable size, And covered with sand. These bodies, embalmed with so much care, and pre- served with so much respect, are torn from the monuments they repose in> and sold without de- cency to strangers, by the inhabitants of Saccara. This place is called the plain of mummies. There too we find the well of the birds, into which one descends by a rope, into subterraneous galleries, filled with earthen vases, containing the sacred birds. They are rarely met with entire, because the Arabs break them in hopes of finding idols of gold. They do not conduct travellers into the places where they have found more precious articles. They even close them up carefully, reserving to themselves some secret passages by which they descend. In a journey into Egypt, made by the duke de Chauliies, he advanced very far into these winding labyrinths, sometimes crawling, and sometimets scramb- ling on his knes. Informed by Mr. Edward Wortley Montague, who had carefully visited Egypt, he arrived at one of those passages which had an opening shut up from without, by branches of the date tree interwoven, and covered with sand. He remarked there some hieroglyphics in relievo, executed in the highest perfection. But the Arabs resisted every offer he made them to permit him to take drawings or moulds of them. The duke is of opinion that these hieroglyphics, sculptured with so much art that the objects they represent may be discovered at the first sight, might furnish the key of the others, whose con- tours are simply expressed, and form a sort of alphabet of this unintelligible language. Several pyramids are distinguishable along the mountains which bound Saccara on the west, the greatest part of which appear as lofty as those of Gisa. See PYRAMIDS.

MEMPHREMAGOG, a lake of North Ame- rica, the greater part of which belongs to Ca- nada, and the rest to the state of Vermont. It is thirty-five miles long, and three broad ; in long. 72° 8′ W., lat. 45° N. It communicates with the St. Lawrence, by the river St. Francis, and re- ceives the waters of Black, Barton, and Clyde rivers, which rise in Vermont.

MEN'ACE, v. a. & n. s. > Fr. menacer, me- MEN'ACER. $ nace ; Lat minatio, a

mind, a weight. To threaten ; a threat : a me- nacer is one who threatens.

Who ever knew the heavens menace so 1

Shukspeare.

From this league ; ., Peeped harms that menaced him. Id.

How many of us, after a thousand hammerings of the menaces of God's law upon our guilty souls, continue yet insensible of our danger ! Bp. Hall.

Purely to seek God's honour, and in ali our ac- tions to regard it as our principal aim — promiseth the best rewards to humility, and menaccth, that whoever exalteth himself shall be abased. Barrow.

He that would not believe the menace of God at first, it may be doubted whether, before an ocular example, he believed the curse at last.

Browne's Vulgar Errours. What should he do ? 'Twas death to go away, And the god menaced if he dared to stay. Dryden

Hence, menacer ! nor tempt me into rage : This roof piotects thy rashness. But begone !

Philips.

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MENAGE', w. t. Fr. menage. A collection of animate.

The horse is a noble creature : which, as it is the strength and pride of France, so wins the hearts and heels of that nation. And whereas there is a double kind of menage, as I have heard, one for service, the other for pleasure. Bp. Hall.

I saw here the largest menage that I ever met with.

Addison.

MENAGE (Giles), a celebrated French writer, born at Angers in 1613. He finished his studies in that city, was made advocate, and pleaded, for some time, at Angers, Paris, and Poictiers ; but at length became an ecclesiastic, and studied polite literature. He entered into the family of cardinal de Retz, and afterwards went to live in the cloister of Notre Dame, where he held a weekly assembly of learned men. He read a great deal, and was incessantly quoting in his conversation verses in Greek, Latin, Italian, French, &c., on which account he was ridiculed as a pedant. The reputation of his works pro- cured him a place in the academy della Crusca, at Florence. His Requeste des Dictionaires, with the superior interest of his competitor Mr.

Bergent, prevented his admission into the French Academy. He died at Paris in 1692, aged seventy-nine. He published many books in prose and verse; the principle are, 1. Mis- cellaneous Works. 2. The Origin of the French Language. 3. The Origin of the Italian Tongue ; Geneva, 1685, folio. 4. Malherbe's Poems, with Notes. 5. Diogenes Laertius, with Obser- vations. 6. Remarks on the French Tongue. 7. Greek, Latin, Italian, and French Poems.

MENAI STRAIT, and BRIDGE. MENAI STRAIT is a strait about half a mile across, be- tween the island of Anglesey and the coast of Wales, which has become of considerable impor- tance in modern times as a point of communi- cation between Great Britain and Ireland. The mail from London to Dublin passes this strait regularly : a circumstance which, in the year 1810, induced the house of commons to appoint a select committee ' to enquire into the state of the roads from Holyhead to London ; into the regulations for the conveyance of his majesty's mail between London and Dublin ; and also into the laws and regulations relating to the con- veyance of passengers, goods, and merchandise, between Dublin and Holyhead.' This committee made several reports, in which it recommended various measures for improving the roads in this great line of communication, many of which are now in progress. But, in regard to expedi- tion, it would have been of little avail to have improved the roads, without remedying the delay, the inconvenience, and the danger, experienced in crossing the Menai Strait.

In this year and 181'1% therefore, several plans of BRIDGES were proposed for effecting a regu- lar and unobstructed passage in the place of the Bangor ferry. All the bridges proposed were to be of cast iron, and of sufficient width of span and height of elevation not to obstruct the navi- gation. Among those approved by the commit- tee of the house of commons, after due investi- gation, was one of a single arch, of cast iron, of 500 feet span, and 100 feet above the level of VOL. XIV.

high-water in the middle of the arch, projected by Mr. Telford. Although the least expensive of any cast iron bridge of those dimensions, the estimated cost of this bridge was upwards of £127,000. But the construction of such a bridge presented a difficulty in the fixing of proper cen- tering, which could not be accomplished by ordinary means from below, owing to the rocky bottom of the channel, and the depth and rapi- dity of the tide-way. Mr. Telford was, however, led to devise a new mode of suspending the cen- tering from above, and furnished a design of this kind.

The report of the commissioners being made to parliament, and the necessary funds being granted, in July 1818 directions were given for the

commencement of the work, at Ynysy-mochˆ on the Anglesey shore. It was to consist of one opening of 560 feet between the points of suspension, and 100 feet in height between the high-water line and the lower side of the road- way ; and, the road-way being horizontal, this height to be uninterrupted for the whole 560 feet, except where the natural rock, which forms the western abutment, interposes. In addition to these 560 feet, there were to be four arches on the western, and three on the eastern side of the main opening, each fifty feet in span, that is, making in all 850 feet of opening. The road way to consist of two carriage-ways, each twelve feet in breadth, with a foot-path of four feet be- tween them ; and the whole to be suspended from four lines of strong iron cables by perpen- dicular iron rods, placed five feet apart. The suspending power was calculated at 20-16 tons, and the weight to be suspended, exclusive of the cables, at 342 tons, leaving a disposable power of 1674 tons. The estimated expense was £70,000.

In will be seen, in our articles ANGLESEY and BE AUM ARIS, that this noble undertaking has been successfully accomplished ; we only reserve some remarks upon its scientific structure to the general article SUSPENSION BRIDGES.

MENANCABOW, an entire state or empire of the island of Sumatra, situated under the equator. It formerly extended over the whole island ; but has been on the decline ever since Sumatra was first visited by European naviga- tors. In more modern times its limits have been included between the river Palembang and that of Siak on the eastern side of the island ; and, on the western side, between those of Manjuta (near Indrapur) and Singkel, where it borders on the country of the Battas. The present seat, or more properly seats, of the divided govern- ment, lie at the back of the Tiga-blas koto disˆ trict. The country is chiefly one large plain, surrounded by hills producing gold, and com- paratively well cultivated. Its communication with the eastern side of the island is facilitated by means of a large lake, described by some traders as equal to a day's sailing, and by others as about the length of from twenty-five to thirty miles. From this lake a river flows east, and the banks are well peopled by Malay colonies. The arts are here carried to a greater degree of perfection than in any other part of Sumatra : these Malays being the sole fabricators of the

exquisite" gold. and silver filagree of this part of the world. In this country also they have, from the earliest times, manufactured arms for their own use, and that of the northern inhabitants of the island : they even harden their own steel. The use of cannon in this and other parts of India is mentioned by the oldest Portuguese his- torians. Their guns are match-locks, springs and flints not having been adopted by them. The barrels are of excellent materials, and of the justest bore. The inhabitants are said always to take aim by lowering, instead of raising, the muzzle of the piece. They have other weapons «f the sword and spear kind ; and a species of dagger, called a kris, is very generally worn. In the government the sultan or rajah is despo- tic ; fcut his power is modified by the influence of the aristocracy : and the people are feudal serfs.

MENANDER, an ancient Greek poet, born at Athens in the third year of the 109th Olym- piad. His introducing the new comedy, and refining an art which had been so gross and li- centious in former times, quickly spread his name over the world. Pliny says that the kings of Egypt and Macedon sent ambassadors and fleets to bring him to their courts, but without success. Of his works, which amounted to above 100 comedies, only nine are left besides the four which Terence borrowed from him. It is chiefly from Terence that most people form their judg- ment of Menander, the fragments that remain of him not being sufficient to enable them to do it. Quintilian, and other old masters of rhetoric, recommend his works as true patterns of every beauty and grace in public speaking. Caesar calls Terence only a semi Menander. Menan- der died in the third year of the"122d Olympiad. His tomb, in the times of Pausanias, was to be seen at Athens, in the way from the Piraeus to the city, close by the monument of Euripides.

MENANDER, the founder of a sect called Menandrians. Some say he was a disciple of Simon Magus. He taught that no person could be saved unless he were baptised in his name ; and he conferred a peculiar sort of baptism, which would render those who received it im- mortal in the next world ; exhibiting himself to the world, with the phrenzy of a lunatic, as a promised saviour. Irenaeus, Justin, and Tertul- lian say, that he pretended to be one of the aeons sent from the pleroma, or ecclesiastical regions, to succour the souls that lay groaning under bodily oppression ; and to maintain them against the violence and stratagems of the daemons that hold the reins of empire in this sublunary world.

MEN ASS EH BEN ISRAEL, a celebrated rabbi, born in Portugal about 1604. He was the son of Joseph Ben Israel, and followed his father into Holland ; where he was educated by rabbi Isaac Uzziel, under whom he made such progress in the Hebrew tongue, that, at eighteen years of age, he succeeded him in the synagogue of Am- sterdam. In this post he continued several years, and married Rachel of the Abarbanel family, whom the Jews

affirm to be descended from king David. He afterwards went to his brother Ephraim, a rich merchant at Basil ; by tthose advice he entered into trade. Some time

after he came into England, then under the pro- tectorship of Cromwell, who gave him a very favorable reception,and one day entertained him at his table with several other learned divines. However he soon after passed into Zealand; and died at Middleburg about 1659. The Jews at Amsterdam buried him at their own expense. He was a Pharisee, had a lively wit, a solid judgment, and great learning. He wrote many books in Hebrew, Latin, Spanish, and English. The principal of those published in Latin are, 1. His Conciliator; a learned and curious work, in which he reconciles those passages of Scrip- ture which seem to contradict each other. 2. De Resurrectione Mortuorum. 3. De Termino Vitae. 4. Dissertatio de Fragilitate Humana, e lapsu Adami, deque Divino in bono opere Aux- ilio. 3. Spes Israel. Dr. Thomas Pococke wrote his life in English.*

MENCKE, or MENCKENIUS (Lewis Otto), a learned professer of morality at Leipsic, born at Oldenburg in Westphalia in 1644. He studied in several universities of Germany ; and became an able philosopher, civilian, and divine. He was made professor of morality at Leipsic in 1668, and enjoyed that post till his death. He was five times rector of the university of that city, and seven times dean of the faculty of ph;- losophy. He published several works, but his most considerable, and which alone is sufficient to perpetuate his memory, is the Acta Erudito- rum, of Leipsic, of which he was the first au- thor, and in which he was engaged till his death. The first volume was published at Leipsic, in 4to., in 1682. He died in 1707, aged sixty- three.

MENCKE, or MENCKENIUS (John Burchard), son to the preceding. After his studies he tra- velled into England and Holland ; and, upon his return, was appointed professor of history at Leipsic, in 1688. He gained great reputation by his lectures, as well as his writings. He wrote many pieces, particularly De Charlatane- ria Eruditorum Declamationes dnse ; an excel- lent satire on false scholars. 2. Methode pour Etudier 1'Histoire, avec un Catalogue des Prin- cipaux Historiens, &c. 3. A Continuation of the Acta Eruditorum. He made many additions to Mr. Lenglet's book, especially with regard to the German historians. He died in 1732, aged fifty-eight.

MEND, v. a. & n. s.) Lat. emendo, from men- MEND'ER, n. s. S da, a fault. To repair a fault or breach ; correct ; meliorate ; help ; im- prove ; increase ; grow better.

They gave the money to the workmen to repair and mend the house. 2 Chron. xxxiv. 10.

What trade art thou ? A trade that I may use with a safe conscience ; a mender of bad soles.

Shakspeare. Juiiiu Ctuar.

Whatever is new is unlocked for ; and ever it mends some, and impairs others : and he that is holpen takes it for a fortune, and he that is hurt for a wrong.

Bacon.

Death comes not at call ; justice divine Mends not her slowest pace, for prayer, or cries.

Milton.

The best service they could do to the state, was to mend the lives of the persons who composed it.

Temple.

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When upon the sands the traveller Sees the high sea come rolling from afar, The land grow short, he mentis his weary pace, While death behind him covers all the place.

Dryden.

If, to avoid succession in eternal existence, they recur to the punctum stans of the schools, they will thereby very little mend the matter, or help us to a more positive idea of infinite duration. Locke.

Though in some lands the grass is but short, yet it mentis garden herbs and fruit. Mortimer's Husbandry.

Name a new play and he's the poet's friend ; Nay, showed his faults — but when would poets mend ?

Pope.

Their opinion of Wood, and his project, is not mended. Swift.

Happy the bard (if that fair name belong To him that blends no fable with his song) Whose lines uniting, by an honest art, The faithful monitor's and poet's part, Seek to delight, that they may mend mankind, And, while they captivate, inform the mind.

Cowper.

MENDACITY, n. s. Lat. mendax. False- hood.

. In this delivery there were additional mendacities; for the commandment forbid not to touch the fruit, and positively said, Ye shall surely die ; but she, ex- tenuating, replied, Lest ye die. Browne. MENDE, Auderitum, a very ancient town, and the principal place of the department of Lozere, in France. It has an inferior court of justice, under the jurisdiction of the royal court of Nimes ; a board of manufactures ; a society pf agriculture, and of arts and sciences ; and a 6ommunal college. It is a post town, containing about 5500 inhabitants. This town is situated In the bottom of a delightful valley on the left bank of the river Lot, surrounded by mountains, from which descend numerous streams that water a great number of gardens and country seats in the neighbourhood. It is surrounded with a little boulevard, and is pretty well built ; the streets, however, are narrow, but several public fountains contribute much to its cleanliness, and the freshness of its air. Among its manufactures may be particularly mentioned coarse cloth, serges, &c. A considerable trade is carried on in these articles, which are exported into Spain, Italy, Germany, and the interior of France. Here are a public library containing 6500 vo- lumes, and a gallery of pictures. The cathedral is remarkable for its loftiness, and the bold architecture of its towers. The public fountain of the Griffon is particularly beautiful, and at a little distance from the town is the hermitage of St. Privast. Mende is situated fifty-seven miles distant south-east from St. Flour; sixty S. S.W. from Puy; ninety-three north from Montpelier, and 414 south from Paris.

MENDELSHON (Moses), or Moses the son of Mendal, a Jew of Berlin, and one of the most celebrated writers in Germany, born in 1728. His first attempt as an author was in 1755, by a work entitled Jerusalem; in which, besides other unjustifiable opinions, he maintains, that the Jews have a revealed law, but not a revealed re- ligion ; that opinions are not subjects of revela- tion ; and that the only religion of the Jews is that of nature. He acquired great honor by his Phedon, or a Discourse on the Immateriality

and Immortality of the Soul, translated into French in 1773 ; and was styled the Jewish So- crates by some periodical writers. His modest and obliging disposition gained him the esteem equally of the superstitious and of the incredu- lous. At his death he received from his nation those honors which are paid to their first rabbis. He greatly recommended himself by his

integrity in business ; but philosophy and literature were his principal occupation. His weak constitu- tution being gradually impaired by intense ap- plication to study, he died in 1785, aged fifty- seven.

MENDEZ PINTO (Ferdinand), was born at Montemoro Velho, in Portugal. He embarked for India in 1537. His vessel being taken by the Turks, on his passage, 'he was carried to Mocra, and sold to a Greek renegade, and after- wards to a Jew ; in whose possession he conti- nued till he was redeemed by the governor of Ormus, a Portuguese fort ; who procured him an opportunity of going out to India. During a residence of twenty-one years- in that country, he was witness to very important transactions, and experienced many singular adventures. He re- turned to Portugal in 1558, where be enjoyed the reward of his labors, after having been thir- teen times a slave, and sixteen times sold. A very curious account of his travels was written by himself, and published at Lisbon, A.D. 1614, in folio. It was translated into French by Bern. Figuier, and printed at Paris, 1645, in 4to. It elucidates various particulars relating to the geo- graphy, history, and manners of the inhabitants of China, Japan, Pegu, Siam, Achem, Java, &c. MEN'DICANT, adj. & n. s. Fr. mendicant; Lat. mendicans, mendico. Begging; poor to beg- gary: a beggar ; one of the fraternity of beggars in the Romish church.

I am no whit afraid, O ye rich citizens, lest this paradox of our holy mendicants shall make you out of love with your wealth : I fear some of you would be rich though ye might not. Bp. Hall.

There is surely a physiognomy which master men – dicants observe; whereby they instantly discover a merciful aspect, and will single out a face wherein they spy the signatures and marks of mercy.

Browne.

Be not righteous over much, is applicable to those who, out of an excess of zeal, practise mortifications, whereby they macerate their bodies ; or to those who voluntarily reduce themselves to a poor and mendi- cant state. Fiddet.

What is station high ? Tis a. proud mendicant ; it boasts and begs ; It begs an alms of homage from the throng, And oft' the throng denies its charity. Young.

Digression is so much in modern use, Thought is so rare, and fancy so profuse, Some never seem so wide of their intent, As when returning to the theme they meant ; As mendicants, whose business is to roam, Make every parish but their own their home.

Cowper.

MENDICANTS, or begging friars, several orders of religious in Popish countries, who, having no settled revenues, are supported by the charitable contributions they receive from others. This class of society began in the thirteenth century, under Innocent III., who encouraged them as well as his successors. The members, by the T 9

tenor of their institution, were to remain entirely destitute of all fixed revenues and possessions. But they at last increased to such an enormous multitude, that they became a burden not only to the people, but to the church itself. In a gene- ral council, therefore, assembled by Gregory X. at Lyons, in 1272, the mendicants were reduced to a smaller number, and confined to the four following societies, viz. the DOMINICANS, the FRANCISCANS, the CARMELITES, and the Aoous- TINES. (See these articles.) As the pontiffs allowed these four mendicant orders the liberty of travelling wherever they thought proper, of conversing with persons of every rank, of in- structing the people wherever they went ; and as those monks exhibited, in their manner of life, more striking marks of gravity and holiness than the other monastic societies, they arose to the summit of fame, and were, regarded with the utmost veneration through all Europe. They were employed, not only in spiritual matters, but also in temporal and political affairs of the greatest consequence, in composing the differ- ences of princes, concluding treaties of peace, concerting alliances, presiding in cabinet coun- cils, governing courts, levying taxes, and other occupations, absolutely inconsistent with the monastic character and profession. However, the power of the Dominicans and Franciscans greatly surpassed that of the other two orders ; insomuch that they were, before the Reformation, what the Jesuits have been since, the very soul of the hierarchy. At last their pride and confi- dence arrived at such a pitch, that they had the presumption to declare, that they had a divine commission to illustrate and maintain the religion of Jesus ; that the true method of obtaining salvation was revealed to them alone ; proclaim- ing the superior efficacy of their indulgences, and boasting their interest with the Supreme Being, the Virgin Mary, and the saints. By Jiese impious wiles they so deluded the blinded multitude, that they would not entrust any but the mendicants with the care of their souls. Towards the close of the fourteenth century great numbers of both sexes requested admission into the order, as an infallible method of render- ng heaven propitious. Many made it an

essen- tial pan of their last wills, that their bodies after death should be wrapped in old ragged Domi- rrican or Franciscan habits, and interred among the mendicants, to insure the divine mercy. Cut about the commencement of the fifteenth century they became the objects of general odium. Being, however, protected against all opposition by the popes, who regarded them as their most effectual supports, they suffered little from their numerous adversaries. Besides their arrogance, which was excessive, a quarrelsome and litigious spirit prevailed among them, and drew upon them justly the indignation of many. By affording refuge to the Beguines in their order they offended the bishops, and were thereby involved in difficulties of various kinds. They lost their credit in the sixteenth century by their rustic impudence, their ridiculous supersti- tions, their ignorance, cruelty, and brutish man- ners. They discovered the most barbarous aversion to the sciences, and to learned men,

who endeavoured to open the paths of science to the pursuits of the studious youth, recom- mended the culture of the mind, and attacked the barbarism of the age in their writings and discourses. Their general character concurred with other circumstances to render a reformation desirable, and to accomplish this happy event. Among the number of Mendicants are also ranked the Capuchins, Recollects, Minims, and other branches from them. Buchanan tells us, the mendicants in Scotland, under an appearance of beggary, lived a very luxurious life ; whence one wittily called them, not Mendicant but Mandu- cant friars.

MENDOZA (Gonzales Peter de), a Spanish cardinal, born in 1428. He was an eminent statesman, and obtained the hat from Sixtus IV. He translated Homer and Virgil into Spanish, and died in 1495.

MENDOZA (John Gonzales de), an Augustine friar of Castile, who was ambassador from the king of Spain to the emperor of China. la 1593 he was made bishop of Lipari in Italy; in 1607 of Chiapa in New Spain; and in 1608 of Papaian in the West Indies. He wrote a history of China in Spanish, which has been translated into several languages.

MENDOZA, a city of Buenos Ayres, in the province of Cuyo, at the foot of the Andes. The neighbourhood is full of plantations watered by canals. It contains four convents, a Jesuits' college, and a church. A silver mine having been lately opened in its vicinity, the number of inhabitants is increasing, and at present amount to about 6000, employed in these works, or in carrying on a productive trade in fruits, wool, and wine. The river Mendoza flows by this town, which is fifty leagues from Santiago in Chili, and the district contains two silver, one copper, and one lead mine. Long. 69° 47 W., lat. 33° 25′ S.

MENDOZA, a large river of Buenos Ayres, in the province of Cuyo, which rises in the eastern slope of the Andes, and, running east, is formed into lakes in the plains ; whence it issues under the name of Desaguero, and finally enters the Atlantic under the name of Colorado.

MENDRAH, a district and town of Fezzan, in Africa, with a soil generally hard and barren ; but the quantity of trona, a species of fossil alkali, used in Morocco as an ingredient in the red dye of the leather, settles on the banks of numerous smoky lakes, and gives it a commer- cial importance. Great quantities of it are brought by the Fezzan merchants and shipped at Tripoli.

MENDS. For AMENDS, which see.

Let her be as she is : If she be fair, 'tis the better for her : and if she be not, she kas the mends in her own hands. Shakspeare.

MENECRATES, a physician of Syracuse, who flourished about A. A. C. 360, famous for his skill in his profession, but much more for his vanity. He affected the character and attributes of Jupiter ; made his patients follow him in those of the other gods, and travelled through different countries, escorted by these counterfeit deities. He once wrote to the king of Macedon, ' Menecrates Jupiter to Philip, greeting. Thou reignest iv

Macedonia, and I in medicine ; thou givest death to those who are in good health, I restore life to the sick ; thy guard is composed of Ma- cedonians ; the gods themselves constitute mine.' Philip answered that he wished him restored to reason. Hearing afterwards that he was in Macedon, Philip sent for him, and invited him to an entertainment. Menecrates and his com- panions were placed on rich and lofty couches ; before which was an altar, covered with the first fruits of the harvest : and, whilst an excellent repast was served up to the other guests, per- fumes and libations only were offered to these new gods, who, greatly affronted, hastily left the palace, and never returned.

MENEDEMUS, a Greek philosopher, born at Erythreum, was the son of Callisthenes, and one of Phedo's followers. He was in the greatest esteem, and enjoyed several important posts in his own country. He several times defended Erythreum with great bravery, and died of grief when Antigonus conquered it. He flourished about 300 B. C.

MENELAUS, the son of Atreus, and brother of Agamemnon, reigned at Sparta, when Paris deprived him -of his wife Helen. This rape occasioned the famous war of Troy. See HELEN, and PARIS.

MESELAUS, a mathematician in the reign of Trajan, who wrote three books on the Sphere, which have been published by Marsenne.

MENES, the founder of the Egyptian monar- chy, was born at This, a town of Thebias, in Upper Egypt. He had three sons, viz. Athotis, who ruled after him at This and Thebes ; Curudes, who in Lower Egypt founded the kingdom of Heliopolis, which was afterwards that of Diospolis ; and Necherophes, who reigned at Memphis. It is supposed that Menes reigned 1 17 years after the birth of Peleg, son of Heber, which was the year of the dispersion of mankind throughout the earth. In building Memphis he stopped the Nile near it, by a causeway 100 furlongs broad, and caused it to run through the mountains. Sir Isaac Newton makes Menes the same with Amenophis. See ETHIOPIA. Others make him the same with Mizraim.

MENESTRIER (John Baptist le), a native of Dijon, one of the most learned French an- tiquaries of his time. He wrote, 1. A Treatise on the medals, money, and ancient monuments of the Roman Empresses, in folio : 2. The most famous medals of the ancient Roman emperors and empresses in 4to. He died in 1634, aged seventy.

MENGS (Anthony Raphael), first painter to the king of Spain, was born at Auing in Bohe- mia, A. D. 1728. His father, painter to Augus- tus III. king of Poland, perceiving his superior talents, carried him from Dresden to Rome in 1741. Having copied the principal monuments of that capital, he returned in 1744 to Dresden, where he executed different works for Augustus •with great success. During his stay in Italy he became acquainted with Charles, king of Naples ; who, when he succeeded to the crown of Spain in 1761, engaged Mengs in his service, by granting him a pension of 2000 doubloons, with a house and equipage. He lived, however,

chiefly at Rome ; where, in 1779, he fell a sacri- fice to his confidence in a German quack, who pretended to cure him of a disease which he had contracted, partly by intense application, and partly by grief for the loss of his wife. His manners were simple ; he was a fond husband and a kind father ; but his faults were want of economy and unbounded generosity. Although he received during the last eighteen years of his life above 250,000 livres, he hardly left where- withal to defray his funeral charges. The king of Spain adopted his five daughters, and granted pensions to his two sons. His chief paintings are at Madrid and at Rome. A catalogue of them is to be found in the account of his life prefixed to his works, in 2 vols. 4to., published at Parma in 1780 by Chevalier d'Azara. These

contain, 1. Reflections on the Beautiful, and on Taste in Painting. 2. Reflections on Raphael, Correggio, Titian, &c. 3. . Ou the cultivation of the Fine Arts in Spain. 4. Two Letters on the Group of Niobe. 5. A Letter on the Origin, Progress, &c., of Drawing. 6. A Letter on the principal Paintings at Madrid. 7. Memoirs of Correggio. 8. Memoirs of the Academy of Fine Arts at Madrid. 9. Practical Lessons in Painting. He formed his style upon the different excellencies of Ra- phael, Correggio, and Titian.

ME'NIAL, adj. & n. s. From MEINY, which see. Belonging to a retinue or train of servants: a servant of low order.

Two menial dogs before their master pressed ; Thus clad, and guarded thus, he seeks his kingly

guest. Dryden'i JEneid.

Hard is the fate of the infirm and poor !

Here, as I craved a morsel of their bread,

A pampered menial drove me from the door,

To seek a shelter in a humble shed. Moss.

The woman attendants perform only the most menial offices. Gulliver's Travels.

MENIN, a handsome fortified town of Flan- ders, seated on the small river Lys. It has often changed masters ; having been taken by the French in 1667, and fortified very strongly by Vauban ; retaken by the allies in 1706, and ceded to the house of Austria by the treaty of Utrecht, but recovered- in 1744 by the French, who demolished its fortifications. It was restored to Austria by the treaty of Aix-la-Chapelle ; but was taken by the French republicans under Pichegru, April 30th, 1794, and annexed to France in 1795. It is well built, and its four principal streets, terminated by as many gates, meet in a square. Here are manufactures of lace, table linen, and silk stuffs ; oil, soap, and to- bacco. The bleaching fields are extensive, and it has two well attended annual fairs. Popula- tion 4600. It is eleven miles north of Lisle, and thirty south of Bruges.

MENIN'GES, n. t. Gr. /uviyyoc- The two membranes that envelop the brain, and which are otherwise called the pia mater and dura mater.

The brain, being exposed to the air, groweth fluid, and is thrust forth by the contraction of the meninget.

Witeman.

MENINSKI, or'MENiN (Francis), or Francis a Mesgnien, a learned orientalist, born in Lor- rain in 1623. He travelled to the east, and for

his skill in the oriental languages was made in- tural and persuasive eloquence, and such a dt~ tetpreter and counsellor of war to the emperor gree of learning as made him pass for an oracle of Germany. He wrote a dictionary, entitled with the multitude. He appears also to hare Thesaurus Linguarom Orientalium, printed at Vienna in 5 vols. folio, 1680 and 1687. He died

at Vienna in 1698.

MENIPPEAN SATIRE, MENIPPEA SATIRA,

been a man of probity, of a meek spirit, gentle in his manners, pliable and obsequious with per- sons °f aˆ ranks, and extremely zealous in pro- moting practical religion and virtue, which he

a kind of satire consisting of prose and verse in- recommended both by example and precepts.

termixed ; so called from Menippus. Varro The plan of discipline drawn up by Menno was

wrote satires under 'the title of Satirce Menippeae; much more mild and moderate than that of

whence this satire is also called Varronian satire, the furious and fanatical Anabaptists, but some-

Amoncr the moderns, a famous piece under this what more severe, though more clear and con-

title was published in 1594, against the chiefs of sistent, than that of those branches of the sect

the league, called also the Catholicon of Spain, who aimed at nothing more than the restoration

It is esteemed a master-piece

of the Christian church to its primitive purity.

MENIPPUS, a cynic philosopher of Phoenicia. Accordingly he condemned the plan of ecclesias-

He was originally a slave, but purchased his liberty, and became one of the greatest usurers at Thebes. He wrote thirteen books of satires, which have been lost ; and at last killed himself. MENISPERMUM, moonseed, a genus of the decandria order, dioecia class of plants ; natural or- der eleventh, sarmentacea : male has four exterior

tical discipline, that was founded on the pros- pect of a new kingdom, to be miraculously es- tablished by Jesus Christ on the ruins of civil government and the destruction of human rulers, and which had been the fatal source of dreadful commotions, execrable rebellions, and enormous ciimes. He expressed his abhorrence of the li-

and eight interior petals; there are sixteen sta- centious tenets, which several Anabaptists had

maintained, with respect to polygamy and di- vorce ; as well as some of their fanatical tenets about predictions, visions, &c. He retained in- deed the doctrines commonly received among

rnuia ; the corolla of the female is the same as in the male; there are eight barren stamina, and two mouospermous berries. There are three species, all, climbing plants, rising fourteen

feet high, and natives of warm climates, but not the Baptists of the present day, in relation to the

remarkable for beauty. Of these the

M. cocculus grows in the Levant. The seeds formed into a paste are regarded as specific against lice and cutaneous eruptions. The same paste is likewise used for intoxicating fishes.

baptism of infants, the connexion of the church with the state, and the abolition of war. These doc- trines the eloquence of Menno set off to such ad- vantage, that he acquired a high degree of credit among the Anabaptists ; in consequence of

MENNO (Simon), the founder of the sect of which ,the different sects agreed in excluding

the Mennonites, was born at Witmarsum, a vil- lage near Bolswert, in Friesland, in 1505, and died in 1561 in the duchy of Holstein, at the country seat of a certain nobleman near the city of Oldesloe, who moved with compassion by the

from their communion the fanatics that dishonor- ed them, and in renouncing all tenets detrimental to the authority of civil government.

MENNONITES, a sect in the United Pro- vinces, which had its rise in 1536, when Menno

perils to which Menno was exposed, and the Simon, who had been a Romish priest, and a

snares that were daily laid for his ruin, took him, notorious profligate, resigned his rank and office

with certain of his associates, into his protection, in the Romish church, and publicly embraced

and gave him an asylum. The writings of Menno, the communion of the Baptists. Though the

which are almost all written in the DutchJ Ian- Mennonites usually pass for a sect of Anabaptists,

guage, were published in folio at Amsterdam in yet M. Herman Sehyn, a Mennonite minister,

1651. About 1537 Menno was earnestly soli- who has published their history and apology,

cited by many of his sect to assume the rank and maintains, that they were not Anabaptists either

functions of a public teacher ; and, as he consi- dered those who made this proposal to be exempt from the fanatical phrenzy of their brethren at Munster, he yielded to their entreaties. From this period to the end of his life .he travelled from one country to another, with his wife and

in principle or by origin. However, nothing is more certain, than that the first Mennonite con- gregations were composed of different sects of Anabaptists, both of those who had been always inoffensive, and of those who, before their con- version by Menno, had been seditious fanatics.

children, exercising his ministry, under calami- The Mennonites are

subdivided into several sects;

tics of various kinds, that succeeded each other without interruption, and constantly exposed to

whereof the two principal are the Flanderians or Flemingians, ana the Waterlandians. The opi-

the danger of falling a victim to the severity of nions, says Mosheim, that are held in common by

the laws. East and West Friesland, with the the Mennonites, seem to be all derived from this

province of Groningen, were first visited by this fundamental principle, that the kingdom which

zealous apostle of the Anabaptists ; whence he Christ established upon earth is a visible church

directed his course into Holland, Guelderland, or community, into which the holy and just

Brabant, Westphalia, and the German provinces alone are to be admitted, and which is exempt

on the coasts of the Baltic, and penetrated as far from all those institutions and rules of discipline

as Livonia. In all these places his ministerial that hare been invented by human wisdom, for

labocs were att«nded with remarkable success, the correction and reformation of the wicked,

and added to his sect a prodigious number of They admit none to the sacrament of baptism,

followers. lie was a man of genius, directed but such as are come to the full use of their jea-

l>y a very sound judgment; he possessed ana- son; they neither admit civil rulers into their

communion, nor allow any of their members to perform the functions of magistracy ; they deny the lawfulness of repelling force by force, and consider war, in all its shapes, as unchristian and unjust; they entertain the utmost aversion to the execution of justice, and more especially to capi- tal punishsment ; and they refuse to confirm their testimony by an oath. The particular sentiments that divide the more considerable societies of the Mennonites are the following : The rigid Men- nonites, called Flemingians, maintain the opi- nions of their founder as to the human nature of Christ, alledging that it was produced in the womb of the Virgin by the creating power of the Holy Ghost ; the obligation to wash the feet of strangers; the necessity of excommunicating and avoiding, not only avowed sinners, but also all those who depart, even in light instances, as dress, &c., from the simplicity of their ancestors ; the contempt due to human learning, and other matters of less moment. However, this austere system declines, and the rigid Mennonites are gradually approaching towards the opinions and discipline of the more moderate or Waterlandians. The first settlement of the Mennonites, in the United provinces, was granted them by William I. prince of Orange, about the close of the six- teenth century ; but their liberty and tranquillity were not fixed upon solid foundations, till, by a confession of faith published in 1626, they cleared themselves from the imputation of those detes- table errors that had been laid to their charge. To appease their intestine discords a considerable part of the Anabaptists of Flanders, Germany, and Friesland, held a conference at Amsterdam in 1630, and entered into bonds of fraternal com- munion, each reserving to themselves a liberty of retaining certain opinions. This association was renewed and confirmed by new resolutions in 1649; in consequence of which- the rigorous laws of Menno were mitigated and corrected.

MENOCHIA, or MENOCHIUS (James), a cele- brated lawyer, born at Pavia, but who became so skilful in the law, that he was called the Baldus and Bartholus of his age ; all the princes of Italy soliciting him to their universities. He read at Padua twenty-three years, but from love of his country removed to Pavia, and succeeded Nicho- las Gratiani. He acquired fame by his works, De Recuperanda Possessione ; De Adipiscenda Possessione; De Praesumptionibus ; De Arbi- trariis Judicum Quaestionibus, et Causis Conci- licrum, torn. 13, &c. He died in 1607, aged seventy-five.

MENOL'OG Y, n. s. Fr. menologc ; Gr. pnvo\o- 7»ov, of fjujvr], the moon, and Xoyoc, a discourse. A register of months.

In the Roman martyrology we find, at one time, many thousand martyrs destroyed by Dioclesian : the menology saith they were twenty thousand.

Stillingfleet.

MENOU (James Francis, baron de), a mo- dern French general and politician, was original- ly a deputy from the nobility of Touraine to the states-general, and one of the first of his order who entered into the commons' chamber. At this time he united himself with the duke of Or- leans and the Jacobins, and was employed as mareschal-de-camp at Paris on the 10th of Au-

*gust, 1792. In 1793 he was sent against the in- surgents of La Vende*e, as general-in-chief, when he displayed great incapacity and was beaten by La Roche-Jacquelin. He was now superseded and returned to Paris. Having the command of a division, he defended the National Convention, in May 1795, against the Jacobins; but on a subsequent occasion his conduct exposed him to a degree of accusation as a traitor : he was however acquitted. He accompanied Buonaparte to Egypt, as general of a division, in which post he displayed considerable talents, but the same defi- ciency of principle as in earlier life. He turned Mahometan, for the sake of obtaining in mar- riage the daughter of the keeper of the baths of Rosetta, who was rich ; submitted to the peculiar rites of Islamism, and called himself Abdallah James Menou. On Kleber being assassinated, he assumed the chief command, and was opposed to the English under general Abercromby ; but he was at length obliged to capitulate, and re- turned to France in May 1802 ; Buonaparte im mediately appointed him governor of Piedmont he was afterwards sent in a similar character to Venice, where he died August 13th, 1810.*

MEN'SAL, adj. Lat. mensalis. Of or belong- ing to the table; transacted at table.

Conversation either mental or mensal. Clarissa.

MENSES, or CATAMENIA, in medicine, the monthly evacuations from the uterus of women not with child or not giving suck, so called from meosis, month, the period wherein they return. See MIDWIFERY. By the Jewish law a woman was unclean while the menstrual blood flowed. See Lev. xv. 11—29.

The discharge of the menses is interrupted naturally during pregnancy : but this is not always the case, because some have them three months, some six months, and some during the whole time of gestation, though in less quantity than at other times. The menses are also mostly interrupted during the time of giving suck ; though many women have a return about the third or fourth month after delivery, and almost all have them again in the ninth or tenth month. In cases of obstruction, the menstrual blood has discharged

itself by other outlets. This periodical discharge ceases between forty and fifty; and the season in which this takes place is critical to the sex. However, those who survive this period without contracting any chronical disease, become more healthy and vigorous than they were before. • When the menses are about to go off, they appear for the most part irregularly both in time and quantity ; once in a fortnight, three, five, or six weeks ; sometimes very sparingly, at other times in im- moderate quantities. See MEDICINE.

MENSORES, among the ancient Romans, harbingers, whose business it was to go before the emperor, and fix upon lodgings for him when he travelled into any of the provinces. They also marked out encampments, and as- signed every regiment its post.

MENSORES were also land-surveyors, architects, or appraisers of houses and public buildings. The distributors of provisions in the army were called mensores frumentarii. Mensores was also an name given to servants who waited at table.

MEN'STRUAL,o < #.) Fr. menstruel, men- MEN'STRUOCS, \strucs; Lai. menstruus,

MES'STRUUM, n. s. J mentis, of Gr. jtqvtj, the moon. Monthly ; occurring once a month ; per- taining to a menstruum: the several adjectives are particularly applied to the female habit: menstruum is defined below by Quincy and seems, as Dr. Johnson says, to be derived from some notion of the old chemists about the influ- ence of the moon in the preparation of dis- solvents. See PHYSIOLOGY AND MEDICINE.

O thou of Jate beloved, Now like a menttruou woman art removed.*

Sandys.

The dissents of the menstrual or strong waters hinder the incorporation, as well as those of the men- tal. Bacon.

Enquire what is the proper menstruum to dissolve metal, what will touch upon the one and not upon the other, and what several menstrua will dissolve any metal. Id.

She turns all her globe to the sun, by moving in her menstrual orb, and enjoys night and day alter- nately, one day of hers being equal to fourteen

days and nights of ours. Bentley.

All liquors are called menstruum which are used as dissolvents, or to extract the virtues of ingredients by infusion, or decoction. Quincy.*

White metalline bodies must be excepted, which, by reason of their excessive density, seem to reflect almost all the light incident on their first superficies, unless by solution in menstruum they be reduced into very small particles, and then they become trans- parent. Newton's Opticks.*

MENSURATION.

.v Lat.7ner«wra,amea MENSURABIL'ITY,H.S. /sure. Measurable:
MEN'SURAL, adj. s mensural is an un-

MEN'SURATE, v. a. i usual word for, relat- MENSURA'TION, n. s. J ing to measure : men- surate, a verb, also seldom used, for to take measure or the dimensions of any thing : mensu- ration, the act, art, or habit of measuring.

We measure our time by law and not by nature. The solar month is no periodical motion, and not easily mensurable, and the months unequal among themselves, and not to be measured by even weeks or days. Holder.

After giving the mensuration and argumentation of Dr. Cumberland, it would not have been fair to have suppressed those of another prelate. Arbuthnut.

MENSURATION is that branch of mathematics by which the relative extents of the spaces oc- cupied by bodies are compared with each other ; the comparison being always made with reference to some recognised unit of measure; as in length, a foot, a yard, &c. ; in surface, a square inch, a square foot, or any other unit of surface; in solids, a solid inch, foot, or any other under- stood unit of the same kind ; each kind of mag- nitude having its appropriate unit of measure.

This branch of mathematical science, from its extensive use in every department of life, must be considered as one of the most valuable and important of all the applications of abstract science. It rests for its principle in geometry and arithmetic, with the former of which it was indeed anciently considered as identical.

It has generally been considered that it took its rise as a separate branch of science in Egypt, where, the periodical overflowings of the Nile ob- literating every year the marks which indicated the boundaries of property, it was necessary to have some precise method of re-allotting to each

individual his share of land on the subsiding of tlie waters.

The elements of Euclid were probably com- piled at first with reference to mensuration alone; as it may be observed that the different trains of reasoning in that admirable compendium, point always, in the end, to the means of measuring ?ume body or figure, or of comparing them with

others of a like kind. Thus the firs.t book closes with the means of finding one square that shall be equal to two others ; the second with finding a square equal to any given rectilineal figure. His elements afford the means of determining the areas of all rectilineal figures, and of com- paring the areas of circles, and the solidities of spheres with each other ; but to determine the relation which a circle has to a square, or a sphere to a cube, is a problem which, simple as it may seem, has to the present moment been only approximately determined.

Archimedes contributed greatly to the advance- ment pf mensuration. He found that though the circle could not be squared, there were curvi- linear figures that could be squared ; and he ob- served that the parabola was exactly two-thirds of its circumscribing rectangle. He discovered many of the most curious properties of conic sections, and determined the ratio of spheres, spheroids, and conoids to their circumscribing: cylinders, and pointed out for the first time, that all that was necessary to complete the quadrature of the circle was to find the ratio of its diameter to its circumference. He also gave the first ap- proximation to this ratio, finding that the diame- ter to the circumference was nearly as 7 to 22 ; and consequently that the area of the circle was to that of its circumscribing square nearly as 11 to 14. Since the invention of fluxions these rough approximations have been superseded by others approaching so near the truth, that in a practical point of view nothing would be gained by carrying the approximation further.

The next great step in the improvement of mensuration was made by Cabalerius, who first introduced the idea that a circle might be con- sidered as a polygon of an infinite number of infinitely small sides; that solids were composed of an infinite number of infinitely thin sections. Viewing the figures about which mensuration is conversant in this way, many difficult problems admitted of nea' and simple solutions, though the metaphysics of" the method are not such as can fully satisfy a geometrician. But Huygens, Walter, and Gregory, made many of their discoveries by the application of this method ; which is now, in

the more difficult departments, quite superseded by the doctrine of fluxions. The discovery of fluxions revived among mathematicians the hope of effecting the quadrature of the circle ; but the fluent of the fluxion which represented its area in terms of its diameter was found to be one which could only be approximately found.

Mathematicians have since applied themselTes very sedulously and successfully to finding the most convenient series, for approximating to the lengths and area of different curves and curvi- linear figures. The most complete treatise on mensuration, in all its branches, is that by Dr. Hutton, entitled a Complete Treatise on Mensu- ration, originally published at Newcastle in a quarto volume, but since in the octavo size. Dr. Hutton also published a practical work on the subject, being an abridgment of his larger one; and Mr. Bonnycastle published a neat and valuable compendium of the practical rules and formulae, with their investigations and application. An exceedingly compact and com- plete little work on the subject has also been recently given to the public by Mr. Ingram.

OF THE MENSURATION OF SUPERFICIES.

PROBLEM I. To Jind the area of a parallelo- gram.

Rule 1. — Multiply the length by the perpen- dicular height, and the product will be the area.

*Example. — What is the area of a rhombus whose side is 12-24 feet, and height 9*16 feet? 12-24 x 9-16 = 112-1184 feet. Answer.*

Rule 2. — Multiply the product of two adja- cent sides by the natural sine of their included angle, for the area.

*Example. — What is the area of a parallelogram whose sides are 25-35 and 10*4 chains, and their included angle 30°?*

Acres.

25-35 x 10-4 x nat. sin. 30° = 13-1820 = A. R. P.

13 : 0 : 29.

PROB. II. To find the area of a triangle.

Rule 1. — Multiply the base oy the perpen- dicular let fall on it from the opposite angle, and half the product will be the area.

Example. — What is the area of a triangle whose base is twenty feet and

altitude 10‘25 ? 20 x 10-25

-r: 102-5. Answer.

2

Ride 2. — Multiply the product of two of the sides, by half the natural sine of their included angle.

Example. — What is the area of a triangle, of which two sides are 30 and 40, and their included angle 28° 57-3′ ? 30 x 40 X sin. 28° 57-3′

2

The above rules are immediate conse- quences of the elementary principles of geome- try and trigonometry.

PROB. III. To find the area of a trtangle, of which the sides only are given.

Rule. — From half the sum of the three sides, subtract each side separately, and multiply the half sum and the three remainders continually together; and the square root of the product will be the area.

Demonstration. — Let a, b, and c, represent respectively the sides B C, AC, and A B, of the triangle ABC, CD being the perpendicular. Then by ge-

; hence A D :r •—• +

•

ometry c : 6 + a;: b — : OAD — .D B = –

6»_a» c» + i»_a2 ~_ /.

2T = ~ 2ˆ ‘ ButCDsziAC + AD.AC — AD= V6 +

c + 6* — a*\ / c3 + b3 — a?\b + cV — a* «* — 1~— <12 _.*

*x ‘ *) • \— . .whenceCD*

2c / 2c

2c

D B

2c

« + 6 + c a + 6 — c o —

2 2 _ 2 2

Example. — What is the area of a triangle whose sides are twenty, thirty, and forty feet ?

20 + 30 + 40 20 + 30 — > 40 20 + 40 — 30 30 + 40 — 20

= 290-4737. Answer.

2222

This rule may be conveniently performed by logarithms. If S represent half the sura of a, 6, and r, the three sides of the triangle, then

log. S + log. S — a + log. S — b + log. S — c

— — 5 = log. area.

2

PROB. IV. To find the area of a trapezium.

Rule. — Divide it into two triangles by drawing a diagonal, and find the area of each triangle separately, and their sum will be the area of the trapezium ; or multiply the diagonal by half the sum of the perpendiculars falling upon it from the opposite angles, and half the product will be the area.

Example. — What is the area of a trapezium whose diagonal is 80-5, and perpendiculars 24-5, and 30-1 respectively ?

80-5 x 24‘5 + 30‘1. = 2197-65. Answe

PROB. V. To find the area of a trapezoid. Rule. — Divide it into two triangles by drawing

a diagonal to the two opposite angles, as in the trapezium, and the sum of their areas will be the area of the trapezoid. Or multiply the sum of the two parallel sides, by half the perpen- dicular distance for the area.

Example. — What is the area of a trapezoid whose parallel sides are 750

and 1225 feet, and perpendicular distance 1540 feet.

1540

750 + 1225 • y. Answer.

PROB. VI. To find the area of an irregular rectilineal figure of any number of sides.

Rule 1. — Divide the figure into triangles and trapeziums, and find the areas of each of them separately by the preceding rules, and the sum of these areas will be the area of the whole figure.

Example. — What is the area of the rectilineal figure A B C D E F, the dimensions being as follows : F B = 20-75, F C = 27-48, EC = 18-5, Bn = 14‘25, E m = 9-35, Dr = 12‘8, and Ai = 8-6.

FB ‘ ^ = 89-225 = area A ABF.

EC . Dr

= 118-400=

DEC.

Bn + ECT _ c _ 324.2640 = trapezium F B C E. 2 ‘ ~~ 531-889 — area of the whole figure.

Rule 2. The area of any irregular rectilineal figure may also be found by drawing perpen- diculars from all its angles, on one of its diago- nals, considered as a base ; and then adding the areas of all the triangles and trapezoid s together for the content.

Example. — What is the area of the figure A B C D E F, the following being its dimen- sions: En ‘4-54, Em 8-26, Er 20-01, Es 26-22, EB 30-15, Dm 10-56, Cr 12-24, Fn 8-56, and A s 9-26?

33

F m P1 tt ~

~=- = 19-4312 = area of AEFn

Dm’Em =43-6128 =

2

Cr .Dr

2

As . B»

. EDro . CBr

A];.

= 193-1688 = F»

= 62-0568 = = 18-1959 =

Sum 470-4155 Answer.

PROB. VII. To find the area of a regular po- lygon.

Rule. — Multiply the square of the side of the polygon by the number standing opposite to its name in the following table, and the product will be the area.

Note. — The areas in the table are those~of polygons whose sides are unity.

No. of sides.

Areas or Multipliers.

3

0-4330127

4

1 -0000000

5

1-7204774

6

2-5980762

7

3-6339126

8

4-8284272

9

6-1818240

10

7-6942088

11

9-3656411

12

11-1961524

Example. — What is the area of a decagon, or regular polygon of 10 sides, each sidebeing 16?

7-6942088 X 16J = 196-97174528. Answer.

Rule 2. — Multiply half the sxim of the three sides by the perpendicular falling from the centre upon one of the sides, and the product will be the area.

Example. — What is the area of a hexagon, one of whose equal sides is 14-6 feet, and the per- pendicular from its centre 12-64 feet ?

*«X 1*64X1*6 = 553-632 square feet.*

Answer.

PROB. VIII. To find the circumference of a circle, whose diameter is given, or the diameter when the circumference is given.

Rule. — Multiply the diameter by 3-1416, and the product will be the circumference nearly ; or divide the circumference by 3-1416, and the quotient will be the diameter nearly.

Demonstration. — It has been shown, in the article FLUXIONS, that z = the arc of a circle,

< t'

of which t is the tangent, the 2 = tl 1 —5

I4 t9 + -7— i r-g> &c-> in which if z be taken = 45°,

and r = 9, we have 2=1 T+T ~ +

— , &c. ; and by collecting a sufficient number of terms, and multiplying by 8, we obtain tne

MENSURATION.

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circumference of a circle to radius 1 = PROB. X. To find the area of a circle. 6-28318530 ; or the circumference to the di- Rl j ply the circumference by the

ameter 1, = 3-14159265, to which 3-1416, the ˆ d ˆ gjˆ of the product wul

number used in the ruie, is sufficiently near for v tu

ordinary purposes. Eraropfel-What is the area of a circle whose

Note. — The diameter is to the circumference nearly as 7 to 22.

Example 1. — What is the circumference of a circle whose diameter is 7 ?

3-1416 X 7 = 21-9912. Answer.

PROB. IX. To find the length of any arc of a

radius is 15-25 ?

By PROB. VIII. the circumference is 2 x id**d X •'1*110 j ncncG 2 X 15-25 X 3-1416 X 3Q-

4

Answer.

Rule 2. — Multiply the square of the diameter Rule.- -From eight times the chord of half by.7854; Or the square of the circumference by

• orr «iintrar> * thp r>hnrn of thf> whmp arr. anrt *. i .1 i . • -.1 -t« •>_

circle.

the area.

the arc subtract the chord of the whole arc, and one-third of the remainder will be the arc nearly.

Demonstration. — Let r = the radius, and s = diameter is 7f? the sine; then c, the chord of half the arc, will be

What is the area of a circle whose

(7|)a X '7856 = 46-164. Answer.

*7s**

4 ; and eight times the chord = 8s -f

s3 7s5 8c — 2$ s3

*r" 16r*J 3 Tr**

*7 s**

. But the length of an arc whose sine is s,

48 r

PROB. XI. To _/Znd M« area o/ f duded between two concentric circles.*

«pace tn-

Rule. — Multiply the sum of their diameters by their difference, and this product by -7854, and the result will be the required area.

Example. — Required the area of a ring, the diameters of whose boundary circles are 6 and 4?

6-f-4 . 6 — 4 x -7854 rz 15-708. Answer.

PROB. XII. " To find the area of a sector of a

s3 3 s5

*is known to be * — — — -. + — — ; whence twice . r,a'"*

6 r 40 ra circle.*

S3 jj Rule. — Let d = the diameter, c the chord of

that arc is 2 s -f — + 2— , differing from the arc > an(j „ j^ versed sine, thus the area =

ss dc c9

the former only by— — ^, which shows the rule

to be nearly true.

Example. — If the chord of the whole arc is 50-8, and that of half the arc 30-6, required the length of the arc?

30-6 X 8 — 50-8

^— = 66-6. Answer.

2 '2.3.d 4-5-d

—C', &c. ; whence A B and C represent the 6 " 7 d

terms immediately preceding those where they first occur.

Example. — What is 52?

area of a section whose height is 2, the diameter of the circle being

dv

*Here — *- — 26 J 10 4 = 265-149014 (A).*

v A— 2 2 . 3 d ~ 6-52 3s v _ 2-9

P ™~" . . •

A =

R ~ ~ f ••"*

D = E =

1-699673 (B). •029417 (C). •000673 (D). 000018 (E). 000001 (F>

4 . 5 . d 20-52 5at> c_ 2-25

*6 . 7 . d ~ 42-52 7*w D_ 2-49*

8 • 9 • d ~~ 72-52 9s v ^ 2-81

10.11-d ““110-62

266-878796. Answer.

PHOB. XIII. To find the area of the segment 3 . 7 t; _ _ 5 .9v

r — .-_»7r, •” c.rt-jˆ a 1-1 i

of a circle.

Rule. — The notation adopted in the preceding example being employed, the area of the seg-

4 v J~dv 3 v 5 v

ment is = ~— A – ---

Example.— What is the area of a segment of a circle whose versed sine is 3, the diameter of the circle being 60?

284

Here +

MENSURATION.

*12 */ dv*

A =

An 53-665632

— B = — -804984

— C = — -007187

— D:= — -000139

— E = — ‘000003

*— -812313 Answer. 52*853319*

PROB.’ XTV. To find the area of a figure formed of right lines and curves.

Practical Rule. — Take the perpendicular breadths of the figure in several places, at equal distances from each other, and divide their sum by the number of them for the mean breadth ; and this mean breadth multiplied by the length of the figure will give the area nearly.

Example. — The perpendicular breadths of the irregular figure A B C D, at five equidistant places, A, E, G, I, B, are 9-2, 10-5, 8-3, 9-4, and 10‘7j and its length A B is 20, what is its area?

A E

B

ference exact enough for most practical put poses.

*Example.— What is the circumference of an ellipse whose diameters are 24 and 20? 24s 4- 20**

By Rule 1. -J x 3-1416 = 69-3979.

Answer.

PROB. XVI. To find the area of an ellipse.

Rule. — Multiply the transverse diameter by the conjugate, and the product again by 7854, and the result will be the area.

Exvmple. — If the axes of an ellipse be 70 and 50, what is its area?

70 X 50 X -7854 — 2748‘9. Answer.

PROB. XVII. — To find the area of any seg- ment of an ellipse, the base of the segment being parallel to one of the diameters.

Rule. Divide the height of the segment by the axis, of which it is a part, and find by Prob. XIII. the area of a circular segment, whose dia- meter is unity, and height the quotient produced by so dividing. Multiply this circular area by the product of the two axes of the ellipse, and the result will be the area of the segment.

Demonstration. — Call the transverse t, the conjugate c, the abscissa x, and the ordinate y ;

c i

then (see CONICS) y ~ — (£— jr3) , whence the*

C X

*fluxion of the area is -— x * (t x — x2)*. But t*

‘ k (t x — x) is the fluxion of the corresponding*

circular segment, whose versed sign is x and diameter t. Denoting the fluent of this expres-

£

*sion by F, we have the fluent of — x * (t x —*

X 20 =

9-2 + 10-5 -f 8-3 + 9-4 + 10-7

5~~~

190-7500. Answer.

PROB. XV. To find the circumference of an ellipse.

Rule 1. — Multiply the square root of half the sum of the squares of the two diameters, and the product will be the circumference nearly.

Demonstration. — If t — the transverse, c the

c» conjugate, p rr 3-1416, and d=i 1 — -ˆ; then,

as may be shown by fluxions,/) t i 1 — – — 3

•2 . 2 . 44 2 . 2 . 4 . 4 . 66′ ference. Now the above rule is p —

1 c3 / i — d — ?- —

-+-1”’’ ~pt 2-3V*

t c

x) rr — . F; from which both this and the*

preceding rule are deduced.

Example.— What is the area of the elliptic segment whose height is 10, the axes being 35 and 25 respectively, the base of the segment being parallel to the minor axis ?

Here ˆ~ “2857 ~ versed sine of correspond- ing circular segment to radius unity ; whose area therefore is -185135. Here -185135 x 35 x 25 =: 161-993125, the required area.

PROB. XVIII. To find the length of an arc of a parabola cut off by a double

ordinate.

Rule. — To the square of the ordinate add four-thirds of the square of the abscissa 1, and twice the square root of the sum will be the length of the arc nearly.

Demonstration. — It may easily be shown, by the aid of fluxions, that z being the arc, y the

abscissa, and p the perimeter, z ~ 2-y i 1 +

*4 if 4 * y* 3 . 43 y5*

*2 .4 .5*0*2.4.6.7 * p" "*

and the above rule is z — 2 \/ y + — ar* —*

ti from the former only by — .*

I R"f.^-M^¥yhf thesumofthediameters ***_ £ to hich differg from the by 3-1416, and the oroduct will give the circum- 2.4.3*** *p4'*

MENSURATION.

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ceding by only four forty-fifths of a unit in the tnird term : and shows the rule therefore to be a close approximation.

Example. — The abscissa is 2, and its ordinate 6, what is the Jength of the parabolic arc ?

-r . 2l = 2 V 41-3333 =

O

2

Answer.

PROB. XIX. To find the area of a parabola.

Rule. — Multiply the base by two-thirds of the height, and the product will be the area.

Demonstration. — The abscissa being x, the ordinate y, and the perimeter p, we have the fluxion of the area — y x ~ x >/ p x, and its

2 x 2 x

fluents— x Jpx— y-y'

Example. — The abscissa being 12, and the double ordinate 38, what is the area?

38 x

— 304 Answer.

PROB. XX. To find the area of the' frustum of a parabola.

Rule. — Divide the difference of the cubes of the two ends of the frustum by the difference of the squares, and multiply the quotient by two- thirds of the breadth of the frustum for the area.

Demonstration. — Let D and d represent the length of the ends, and a the breadth; then by the

•

— the abscissa

nature of the curve

TV» _

reckoned from the vertex to the bottom of the

a

frustum, and ^ – -z •=. the abscissa from the JJ ^^ d i

aD8

^

Hence —D x o

D

j, the required

vertex to the top.

2 ad?

3 X D" — d? ' area.

PROB. XXI. To find the length of an arc of an hyperbola.

Rule. — To nineteen times the square of the transverse add twenty-one times the square of the conjugate ; and to nine times the square of the transverse add twenty-one times the square of the conjugate ; and multiply each sum by the abscissa. To each of the products add fifteen times the product of the transverse and the square of the conjugate. Then, as the less of these results is to the greater, so is the ordinate to the length of the arc nearly.

PROB. XXII. To find the area of an hyper- bola, the tranverse conjugate and abscissa being given.

Rule. — To the product of the transverse and abscissa add five-sevenths of the square of the abscissa, and multiply the square root of the sum by twenty-one. Add four times the square root of the product of the transverse and abscissa to the last product, and divide the sum by seventy- five. Then, if four times the product of the conjugate and abscissa be divided by the trans- verse, this last quotient multiplied by the former will give the area nearly.

. ON THE MENSURATION OF SOLIDS.

PROB. XXIII. To find the solidity of prism and cylinders.

Rule. — Multiply the area of the end by the perpendicular altitude, and the product will be the solidity.

Example. — What is the solidity of a prism whose base is a regular hexagon, each of the equal sides being one foot four inches, and the length fifteen feet ?

By Prob. VII.,~TJ a x 2-5980762 = the area of the end; hence (li)a x 2-5980762 x 15 = 69-282 feet Answer.

PROB. XXIV. To find the convex surface of an upright cylinder.

Rule. — Multiply the circumference of the base by the height of the cylinder, and the pro- duct will be the convex surface required.

Example. — Required the convex surface of a cylinder whose diameter is thirty inches, and length sixty inches?

By Prob. VIII. 3-1416 x 30 is the circum- ference; when 3-1416 x by 30 x

60 z = 5654- 862, the required surface.

PROB. XXV. To find the convex surface of a right cone or pyramid.

Rule. — Multiply half the circumference of the base by the slant height, and the product will be the convex surface.

Example. — The circumference of the base is 10-75, and the slant height 18-25, what is the convex surface ?

10‘75 x 18-25 = 98-09375 square feet.

2

Answer.

PROB. XXV. To find the convex surface of the frustum of a right cone or pyramid.*

Rule. — Multiply half the sum of the perime- ters of the two ends by the slant height of the frustum, and the product will be the area.

Example. — The circumferences of the ends of the frustum of a pyramid are thirty and ten feet, and its slant height twenty feet, required its convex surface.

30 + 10 x 20 = 400. Answer.

<£

Note. The demonstration of the three pre- ceding rules is too simple to need any formal statement.

PROB. XXVI. To find the solid content of a cone or pyramid.

Rule. — Multiply the area of the base by the perpendicular height, and one-third of the pro- duct will be the solidity.

This rule is demonstrated in the article GEO- METRY.

Example. — Required the solidity of a hexago- nal prism, each of its equal sides being forty, and its altitude sixty.

By Prob. VII. the area of its base is 40 x 40″ X 2-5980762 X 60 2-5980762; therefore – — 3 —*

— 83138.432. Answer.

PROB. XXVII. To find the solidity of the frustum of a cone or pyramid.

Hide V —For the frustum of a cone, the dia-

meters of the ends and the height being given, the base, and one-sixth of the last product will

Divide the difference of the cubes of the diame- be the solidity.

ters by the difference of the diameters, multiply Demonstration.— Let L zz length of the base,

the quotient by -7856, and again by one-third, b its breadth, / the length of the edge, and h the

of die height, and the result will be the solidity, height of the edge. Then by the preceding rule Rule 2. For the frustum of a pyramid when . bj_h + L ± I _ · ,

<..!._ l 1 »k~ knirrKt r.i-0 rr van We "<"= n Zi. " « A o — W rt A*

the sides of the base and the height are given To the areas of the ends add the square root of their product, and multiply the sum by one- third of the height for the solidity.

Demonstration.— Let D and d be the greater and less diameters of the conical frustum, h the

dh

2L + /

height, and p zz -7854, then,

D — d

6

Example. — How many solid feet are in a wedge whose base is sixty-four inches long and nine broad, the length of the edge being forty- = the two inches, and the perpendicular height twenty- eight inches ?

height of the part cut off from the top of the (2 x 64 + 42) x 28 x 9 _

dh

cone, and A + ˆ.

pD cone. Hence, 5-j- X*

zz whole height of the dh \ p

dh

zz the solidity of the frustum. This

— ; the rule for

3

D3 — d reduced, becomes _ – .

the cone. In a similar way is the rule for the pyramidal frustum demonstrated.

Example. — What is the solidity of the frustum of a cone, the diameter of the greater end being four feet, of the less end two feet, and altitude six feet?

4′ — 2 6 X “7854 _ „. Qrw. T— 2 ‘ – 3 – -659736.*

Answer

ZZ 7140 solid inches,

VI

or 4- 131 9 solid feet.

PROB. XXIX. To find the solidity of a pris- moid.

Rule. — To the sum of the areas of the two ends add four times the area of a section parallel to, and equally distant from, both ends, and mul- tiply the sum by one-tenth of the height for the solidity.

Demonstration. — Let B zz the breadth of the greater end, b zz that of the less ; L and I their lengths, and h their height; then, by the last problem, the solidity is (2 L + I . B + 2/ + L

i\ h L + /

•*)••?; watch, by taking M zz ! — and m

o ° 2

_B + I

PROB. XXVIII. To find the solidity of a wedge.

Rule. — Add twice the length of the base to

becomes (B L +; b I f 4 M m) – ;

which is the rule.

Example. — The dimensions of a waggon are at top 81-5 inches by 55; and at bottom 41

the length of the edge; multiply the sum by the inches by 29-5 ; and perpendicular depth 47-25 height of the wedge, and again by the breadth of required its capacity ?

81-5 x 55 + 41 x 29-5 + 81-5 f 41 X 55 + 29-5

zz 73-1133 cubic feet Answer.

To find the convex surface of a

PROB. XXX. sphere.

Rule. — Multiply the diameter of the sphere by its circumference, and the product will be the convex surface. g ‘

Demonstration.— Let p — 3-1416, x the ab- whose altitude is scissa, y the ordinate, and z the corresponding asc, and d zz the diameter. Then by fluxions 2 p y z is the fluxion of the surface, and z zz

(? +

Demonstration. — Adopting the notation in the preceding problem, we have p d x x — p x3 x for the fluxion of the solidity, whose fluent gives

— – — for the solidity of the segment and, when x zz d, the ex- X -5236.

, pd3

pression becomes —ˆ- zz a?

and by the property of the circle y1

(i-x ?*

= V 2 _ in substituting these values

*dx — x**

in the expression for the fluxion of the sur- face, reducing and taking the fluent we have

*> — \~y •ˆ,MW**UKJ u>iv*. van iuu vn c 11 uciii TTCllaVC . /• i*

*p d x for the surface of the segment whose height ˆment °-> a *Phere'*

Example. — What is the solidity of the earth, supposing it a perfect sphere of 7957} miles diameter.

(7957f)J x '5236 zz 263858149120 entire miles. Answer.

PROB. XXXII. To find the solidity of the

is r, which, when x zz d, becomes p d9, which vs the rule.

Rule. — To three times the square of the ra- dius of its base add the square of its height, Example. — WhatJ is the surface of a sphere multiply the sum by the height, and by -5236 whose diameter is 1$ feet, and circumference for the solidity.

4-1888 feet.

4-1888 x — zz 5-58506 square feet. Answer.

PROB. XXXI. To find the solidity of a sphere. R-Je.— Multiply the centre of the diameter C -5236, and the product will be the solidity.

Demonstration. — By the last problem we had (3 d T — r .r3) — zz the solidity of the segment ;*

and

i

zz d, r oeing the radius of the base

a.

of the segment ; whence, by substitution and re-

MENSURATION.

duction, we have the solidity = (3 r3 + As) £—•

which is the rule.

Example. — What is the solidity of a segment of a sphere, the diameter of whose base is twenty, and height nine ?

(3 .“id* + 98) X 9 X ‘5236 =: 1795-4246- Answer.

PROB. XXXIII. To find the solidity of a frustum or zone of a sphere.

To the sum of the squares of the radii of two ends add one-third of the square of their dis- tance ; and multiply the sum by the breadth, and by 1-5708 for the solidity.

Demonstration. — Let H and h be the heights of the two segments of which the zone is the difference, and R, r, the radii of their bases;

then by the last problem – (3 R» H + H3) —

(3 r* h — h9) | is the solidity of the zone whose

height is H — h. Hence, putting a for the alti- tude of the frustum, we hare by substituting eli-

minating and reducing (R*-r-r2+ r) ˆ, \ 3 ‘ 2

which is the rule.

Example. — What is the solidity of a zone whose greater diameter is twenty-four inches, less twenty inches, and breadth four inches?

(12s f 10′ + 1*) X 4 X 1-5708= 1566-6112

3 ‘

inches. Answer.

PROB. XXXIV. To find the solidity of a cir- cular spiiidle, whose length and middle diameter are givtn.

Rule. — From one-third of the cube of half the length of the spindle subtract the product of the central distance and half the area of the gene- rating segment, and multiply the remainder by 12-5664 for the solidity.

PROB. XXXV. To find the solidity of the middle frustum of a circular spindle, its length, middle diameter, and that of eithef of its ends, being given.

Rule. — From the square of half the length of the spindle subtract one-third of the square of half the length of the frustum, and multiply the remainder by the half length. From the product take that of the area, and the central distance, and multiply the remainder by 6-2832, for the solidity.

PROB. XXXVI. To find the solidity of a sphe- roid, its two axes being given.

Rule. — Multiply the square of the revolving axis by the fixed axis, and the product again by •5236 for the solidity.

PROB. XXXVII. To find the solidity of the middle frustum of a spheroid, the dimensions of the frustum being given.

Rule. — Case 1. When the ends are circular, or perpendicular to the fixed axis.— To twice the square of the middle diameter add the square of the diameter of either of the ends, and mul- tiply the same by the length of the frustum, and by -2618, and the result will be the solidity.

Case 2. When the ends are elliptical or per- pendicular to the revolving axis. — Multiply twice the transverse diameter of the middle sec- tion by its conjugate diameter, and to this pro- duct add the product of the transverse and con- jugate diameter of either of the ends. Multiply this sum by the length of the frustum, and by •2618, and the product will be the solidity.

PROB. XXXVIII. To find the solidity of the segment of a spheroid.

Rule. — Case 1 . When the base is perpendi- cular to the fixed axis. — Divide the square of the revolving axis by the square of the fixed axis, and multiply the quotient by the difference between three times the fixed axis and twice the height of the segment. Multiply this last pro- duct by the square of the height of the segment, and again by -5236, and the result will be the solidity.

Case 2. When the base is perpendicular to the revolving axis. — Divide the fixed axis by the revolving axis, and multiply the quotient by the difference between three times the revolving axis and the height of the segment. Multiply the product by the square of the height of the !seg- ment, and again by ‘5236, and it will give the solidity required.

PROB. XXXIX. To find the solidity of a pa- raboloid.

Rule. — Multiply the area of the base by the height, and half the product

will be the solidity.

PROB. XL. To find t/i£ solidity of the frustum of a paraboloid wlien its ends are perpendicular to the axis of the solid.

Rule. — Multiply the sum of the squares of the diameters of the ends by the height of the. frustum, and the product by -3927, and it will give the solidity.

PROB. XLI. To find the solidity of a parabo- lic spindle.

Rule. — Multiply the square of the middle diameter by the length of the spindle, and the product by -418879, and it will give the solidity.

PROB. XLII. To find the solidity of the mid- dle frustum of a parabolic spindle, whose dimen- sions are given.

Rule.— To eight times the square of the mid- dle diameter add three times the square of the less, and four times their product ; multiply this sum by the length, and the product again by •05236, and it will give the solidity.

PROB. XLIII. To find the solidity of a hy- perboloid.

Rule. — As the sum of the transverse axis of the generating hyperbola and the height of the solid, is to the sum of the transverse axis and two-thirds of the height, so is half the area of the base, multiplied by the altitude, to the soli- dity of the hyperboloid.

PROB. XL1V. To find the solidity of the frustum cf a hyperboloid.

Rule. — Add together the square of the greater and less semi-diameters, and square of the whole diameter in the middle; multiply the sum by the altitude, and by 5236, for the so lidity.

PROB. XLV.— To find the swrfates and soli- dities of regular bodies.

Ride 1.— Multiply the square of the lineai edge by the tabular area in the annexed table, aud the product will be the superficies.

Rule 2. — Multiply the centre of the linear edge by the tabular solidity in the annexed table, and the product will be the solidity.

SURFACES AND SOLIDITIES OF REGULAR BODIES WHEN THE LOWER

EDGE is 1.

No. of

Sides.

Surfaces.

Solidities.

4

1-73205

1-11785

6

6-00000

•00000

8

3-46410

0-47140

12

20-64578

7-66312

20

8-66025

2-18169

The demonstrations of such of the preceding problems as want of room has obliged us to omit, may be seen in Bonnycastle's Treatise on Mensuration, before mentioned ; with a copious collection of examples for exercises.

We shall close this article with an extract from Dr. Hutton's valuable work on Mensura- tion, on the relation between the areas of figures and the centres of gravity of their generating planes and lines, commonly called the centroba- ric method.

Proportion. — If any line, straight or curved, or any plain figure, whether tbounded by right liner or curves, revolve about an axis in tne

plane of the figure ; the surface or solid gene- rated will be equal to the surface or solid whose base is the given line or figure, ana neight the arc described by the centre of gravity of the said generating line or figure.

Demonstration. — Let AFHD be the figure generated by the given line or plane ACD; through C, the centre of gravity, of which araw D C A E perpendicular to the axis of revolution, and meeting H G F E in E, and let every point

of the base be reduced to AD by means of per- pendiculars to it. The figure AFHD gene- rated, is equal to all the AF's, CG's, &c., which are as all the EA's, FC's, &c., or as so many times EC, by the doctrine of mechanics. Hence the sum of all the AF's, CG's, &c., is equal to so many times CG, or equal to AD x CG; that is, the figure AFHD is equal to AB D x C G, or the base unto the line described by the centre of gravity.

By the application of this elegant principle, the areas and solidities of many surfaces and bodies, which may be conceived to be generated either by direct motion or revolution, may very readily be deduced.

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TABLE of Circular Segments to Radius J.

289

<-

<

A

n'

1

Area of

Z

Area of

I

Area of

is

Area of

a

Area of

P.

segment.

B

segment.

P-

segment.

•

segment.

O.

segment.

P

5'

a>

P

P

P'

•001

•000042

•051

- *015119*
- *101*
- *041476*
- *151*
- *074589*
- *201*
- *112624*
- *002*
- *000119*
- *052*
- *015561*
- *102*
- *042080*
- *152*
- *075306*
- *202*
- *113426*
- *003*
- *000219*
- *053*
- *016007*
- *103*
- *042687*
- *153*

•076026

•203

•114230

•004

•000337

•054

•016457

•104

•043296

•154

•076740

•204

•115035

•005

•000470

•055

•016911

•105

•043908

•155

•077469

•205

•115842

•006

•000618

•056

•017369

•106

•044522

•156

•078194

•206

•116650

•007

•000779

•057

•017831

•107

•045139

•157 '-8921

•207

•117460

•008

•000951

•058

•018296

•108

•045789

•158, JT9649

•208

•118271

•009

•001135

•059

•018766

•109

•046381

•159 ,‘080380

•209

•119083

•010

•001329

•060

•019239

•110

•047005

•160′ ‘

•081112

•210

•119897

•Oil

•001533

- *061*
- *019716*
- *111*
- *047632*
- *161*
- *081846*
- *211*
- *120712*
- *012*
- *001746*
- *062*
- *020196*
- *112*
- *048262*
- *162*
- *082582*
- *212*
- *121529*
- *013*
- *001968*
- *063*
- *020680*
- *113*
- *048894*

- *163*
- *083320*
- *213*
- *122347*
- *014*
- *002199*
- *064*
- *021168*
- *114*
- *049528*
- *164*
- *084059*
- *214*
- *123167*
- *015*
- *002438*
- *065*
- *021659*
- *115*
- *050165*
- *165*
- *084801*
- *215*
- *123988*

- *016*
- *002685*
- *066*
- *022154*
- *116*
- *050804*
- *166*
- *085544*
- *216*
- *124810*
- *017*
- *002940*
- *067*
- *022652*
- *117*
- *051046*
- *167*
- *086289*
- *217*
- *125634*
- *018*
- *003202*
- *068*
- *023154*

- *118*
- *052090*
- *168*
- *087036*
- *218*
- *126459*
- *019*
- *003471*
- *069*
- *023659*
- *119*
- *052736*
- *169*
- *087785*
- *219*
- *127285*
- *020*
- *003748*
- *070*
- *024168*
- *120*
- *053380*
- *170*
- *088535*

- *220*
- *128113*
- *021*
- *004031*
- *071*
- *024680*
- *121*
- *054036*
- *171*
- *089287*
- *221*
- *128942*
- *022*
- *004322*
- *072*
- *025195*
- *122*
- *054689*
- *172*
- *090041*
- *222*
- *129773*
- *023*
- *004618*

- *073*
- *025714*
- *123*
- *055345*
- *173*
- *090797*
- *223*
- *130605*
- *024*
- *004921*
- *074*
- *026236*
- *124*
- *056003*
- *174*
- *091554*
- *224*
- *131438*
- *025*
- *005230*
- *075*
- *026761*
- *125*
- *056663*

- *175*
- *092313*
- *225*
- *132272*
- *026*
- *005546*
- *076*
- *027289*
- *126*
- *057326*
- *176*
- *093074*
- *226*
- *133108*
- *027*
- *005867*
- *077*
- *027821*
- *127*
- *057991*
- *177*
- *093836*
- *227*
- *133945*

- *028*
- *006194*
- *078*
- *028356*
- *128*
- *058658*
- *178*
- *094601*
- *228*
- *134784*
- *029*
- *006527*
- *079*
- *028894*
- *129*
- *059327*
- *179*
- *095366*
- *229*
- *135624*
- *030*
- *006865*
- *080*
- *029435*

- *130*
- *059999*
- *180*
- *096134*
- *230*
- *136465*
- *031*
- *007209*
- *081*
- *029979*
- *131*
- *060672*
- *181*

•096903

•231

•137307

•032

•007558

•082

•030526

•132

•061348

•182

•096674

•232

•138150

•033

•007913

•083

031076

•133

•062026

•183

•098447

•233

•138995

•034

•008273

•084

•031629

•134

•062707

•184

•099221

•234

•139841

•035

•008638

•085

032186

•135

•063389

•185

•099997

•235

•140688

•036

•009008

•086

•032745

•136

- *064074*
- *186*
- *100774*
- *236*
- *141537*
- *037*
- *009383*
- *087*
- *033307*
- *137*
- *064760*
- *187*
- *101553*
- *237*
- *142387*
- *038*
- *009763*
- *088*
- *033872*
- *138*
- *065449*
- *188*
- *102334*
- *238*

- *143238*
- *039*
- *010148*
- *089*
- *034441*
- *139*
- *066149*
- *189*
- *103116*
- *239*
- *144091*
- *040*
- *010537*
- *090*
- *035011*
- *140*
- *066833*
- *190*
- *103900*
- *240*
- *144944*
- *041*
- *010931*
- *091*

- *035585*
- *141*
- *067528*
- *191*
- *104685*
- *241*
- *145799*
- *042*
- *011330*
- *092*
- *036162*
- *142*
- *068225*
- *192*
- *105472*
- *242*
- *146655*
- *043*
- *011734*
- *093*
- *036741*
- *143*
- *068924*
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TABLE of Circular Segments to Radius J. — Continued.

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MEN

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MEN

M F.NTAL, adj. > Fr. mentale; Lat. mem, MEN'TALLY,«

What a mental power

This eye shoots forth ! How big imagination Moves in this lip ! To the dumbness of the gesture One might interpret. Shakspeare. Timon of Athens.

This beholding, therefore, is with mental eyes : and not with every sudden glance, but with deep considerations. Bp. Hall.

So deep the power of these ingredients pierced, F.ven to the inmost seat of mental sight, That Adam, now enforced to close his eyes, Sunk down, and all his spirits became entranced.

Milton.

If the ideas be not innate, there was a time when the mind was without those principles ; for, where the ideas are not, there can be no knowledge, no assent, no mental or verbal propositions about them.

Locke.

The metaphor of taste would not have been so general, had there not been a conformity between the mental taste and that sensitive taste that affects the palate. Addison.

She kindly talked, at least three hours,

Of plastick forms, and mental powers. Prior.

If we consider the heart the first principle of life, and mentally divide it into its constituent parts, we find nothing but what is in any muscle of the body.

lientley.

Those inward representations of spirit, thought, love, and hatred, are pure and mental ideas, belong- ing to the mind, and carry nothing of shape or sense in them. Watts.

Unwise, who, tossing on the watery way,

All to the storm the unfettered sail devolve : Man, more unwise, resigns the menial sway,

Borne headlong on by passion's keen resolve.

Beat tie.

MENTHA, mint, in botany, a genus of the gymnospermia order, didynamia class of plants; natural order forty-second, verticillatae : COR. nearly equal, and quadrifid, with one segment broader than the rest, and emarginated; the stamina are erect, standing asunder. There are many species, but not above three are cultivated for use ; viz. 1 . M. piperita, peppermint ; 2. M. pulegium, pennyroyal ; and, 3. M. viridis, common spearmint: all these are so well known as to need no description ; and they are all very easily propagated by cuttings, parting the roots, or by off-sets. — For culinary purposes, the spearmint is preferable to the other two ; but, for medicine, the peppermint and pennyroyal have in some places almost entirely superseded it. A con- serve of the leaves is rery grateful, and the dis- tilled waters, both simple and spirituous, are universally thought pleasant. The leaves are used in spring salads; and the juice of them, boiled up with sugar, is farmed into tablets. The virtues of mint are those of a warm stomachic and carminative : in loss of appetite, and nausea, there are few simples of equal efficacy. In colics, Henteries, and other immoderate fluxes, this plant frequently does good service. It likewise proves beneficial in many hysteric cases, and affords a useful cordial in languors and other weaknesses consequent upon delivery. The best preparation in these cases is a strong infusion of the dried herb in water which is much superior to the green, or ratner a tincture or extract pre-

pared with rectified spirit. These possess the whole virtues of the mint ; the essential oil and distilled water contain only the aromatic partˆ the

expressed juice only the astringency and bit terishness, together with the mucilaginous sub- stance common to all vegetables. The pepper- mint is much more pungent than the others. Pennyroyal has the same general characters with mint, but is more acrid and less agreeable when taken intp the stomach. It has long been held in great esteem as an aperient and" deobstruent, particularly in hysteric complaints, and sup- pressions of the menses . For these purposes the distilled water is generally made use of, or, what is of equal efficacy, an infusion of the leaves.

MENTION, n. s. & v. a. Fr. mention, wen- tionner ; Lat. mentio, a speaking of. Expression, oral or written; recital; hint: to express in words or writing.

MENTOR; son of Alcimus, the confidential friend of Ulysses, who intrusted to him the care of his domestic affairs, during his absence at the siege of Tfoy. The education of young Tele- machus fell to his care, and when the prince set out in search of his father, Minerva accompanied him under the form of Mentor, as his counsel- lor and guide. From the development of this character in the Telemaque of Fenelon, the name Mentor is proverbially used to signify a wise and faithful monitor.

MENTZ, or M AYENCE, a strongly fortified city of the grand duchy of Hesse, and a bishop's see. is situated on the left bank of the Rhine, immedi- ately below the confluence of the Maine with thai river. It is built in the form of a semicircle, of which the Rhine is the base. Bastions with ravelins extend around the circumference ; at the southern extremity is a citadel ; at the northern two lunettes. On the south-west side are outworks of great strength, viz. six forts and a retrenched redoubt : most of them having casemates. On the north side, and beyond the glacis, are retrenchments thrown up in the latter half of the eighteenth century ; and on the side of the river there is a bridge of boats, nearly half a mile in length, which crosses the Rhine to the village of Cassel, and is defended by a tete du pont. A little above this is an island formed by the Maine, and strongly fortified. On that river, about a mile above its junction with the Rhine, is the village of Costheim; and a little farther up a bridge of boats, defended by a strong tete du pont. These works require a gar- rison of nearly 30,000 men ; but Mentz ranks, in consequence of them, as the strongest fortress .'n West Germany, if not in the whole empire.*

Most of the streets of this old town are nar- row, crooked, and gloomy, but some of the houses belonging to the great are spacious, and even stately. The buildings worth notice are, the electoral palace, now used as a military hos- pital, and greatly decayed; the house of the Teutonic knights, and the arsenal, all situated on the Rhine ; and the houses of the Bassenheim, Stadion, Ostein, and Elz families. The dom or cathedral was built in the twelfth century ; the church of St. Ignatius is a model of architecture; and

ornamented with good ceiling paintings •

the ancient church of St. Stephen commands a fine view from the steeple. The public library has a collection of 80,000 volumes; cabinets of coins, medals, and natural history ; a good collection of philosophical instruments ; a fine museum of Roman monuments, and a picture gallery. Here are also a seminary, lyceum, and schools, for medicine, midwifery, and the veterinary art.

The Eichelstein, a Roman monument, at a little distance from the town, is said to have been erected in honor of Drusus. It is now a mere ruin. Near Zahlbach, in this vicinity, is a Ro- man aqueduct; and a/ong the banks of the Rhine a beautiful parade, and a quay or harbour for landing goods. The chief attraction of Mentz and its environs are the beautiful prospects to the south and west. Its trade in wines (French and Rhenish), and in general commission busi- ness connected with the navigation, is consider- able, and largely conducted by Jews. Its manufacturing establishments are of small ex- tent. The chief are cotton and coffee of chicory. Population 25,000.

The ancient and modern history of this city are alike interesting. Here Marcus Agrippa esta- blished an entrenched camp to oppose the German nations who menaced Gaul ; and some time after Drusus Germanicus erected here a fort called Moguntiacum, and another on the opposite bank of the Rhine. Moguntiacum was extended, till the great struggles between the Romans and Germans checked its prosperity, but it traces its restoration to Charlemagne, who erected here a metropolitan church. Trade rirst beginning to thrive on the Rhine in the thirteenth century, the magistracy of Mentz and the neighbouring towns formed an association similar to that of the Hanse Towns. It took the name of the Rhenish confederation, and acted with vigor, so that the castles of the banditti of the neighbourhood were burned, and several of their ruins are still seen. In the fourteenth cen- tury Mentz was a place of some literary and scientific note. It was taken by the Swedes in the thirty years' war, and in 1688 by the French. In 1792 it surrendered to the French; next year the Austrians bombarded it, and in a siege of three months a great part of the houses were burned down. In 1797 it again came into pos- session of the French, and by the peace of Luneville (February 1801), was formally ceded to them. In 1802 the

archbishopric was sup- pressed ; but at the final settlement of Europe it was given to Hesse. It is thirty-seven miles south-east of Coblentz, and ninety-nine north by east of Strasburg.

MENTZEL (Christian), a native of Fursten- wald, in Brandenburg, celebrated for his skill in medicine and botany, in pursuit of which he travelled through many countries. He died, A.D. 1701, about the seventy-ninth year of his age. He was a member of the academy des Curieux do la Nature. His works are, 1 . Index Nominum Plantarum, printed at Berlin, in folio, 1696 ; and reprinted with additions in 1715, under the title of Lexicon Plantarum Polyglotton Universale. . A ('lironolosjy of China, in German ; Berlin, UiOiJ, in 4to. The following MSS. of his com-

position are preserved in the royal library at Berlin. 1. Sur 1′ Histoire Naturelle du Brasil, 4 vols. folio. 2. Sur les Fleurs et les Plantes du Japon, with colored drawings, 2 vols. folio.

MENUF, or MENOUF, a city of Lower \ Egypt, the capital of the district Menufyeh. It is situated on the side of a canal, which has ceased to be navigable; and at three leagues from the town a strong dyke has been made across it, for the purpose of preventing the too copious influx of water. Twenty- two miles N.N.W. of Cairo.

MENU, the name of a celebrated code of Hindoo laws, called after one of the fourteen mystical personages of that name. It is also called Manava Dherma Sastra, and is attributed to the first Menu, or Swayambhoura.

MENUTHIAS, or MENUTHIASDE, in ancient geography, an island adjoining to the north-east of the promontory Prasum of Ethiopia, beyond Egypt. Some take it to be Madagascar, or the island St. Laurence. Isaac Vossius will have it to be Zanzibar, Madagascar being at a greater distance from the continent than the an- cients ever sailed to, whereas Menuthias was nearer; yet, though Zanzibar be nearer the continent, it is nearer the equator than Ptolemy's Menuthias, placed in lat. 12° 30′ S.

MENYANTHES, marsh trefoil, or buckbean, a genus of the monogynia order, and pentandria class of plants ; natural order twenty-first, precise: COB. hairy; stigma bifid : CAPS, unilo- cular. This plant grows wild in moist marshy places in many parts of Britain. It has three oval leaves standing together upon one pedicle, which issues from the root ; their taste is very bitter, and somewhat nauseous. Mr. Lightfoot says, the flowers are so extremely beautiful, that nothing but the requisite marshy soil could exclude it from a place in every garden. They grow in an elegant spike; are white, dashed with pink, and fringed internally with hairs. The Highlanders esteem an infusion of the leaves a good stomachic. Dr. Withering prescribes

it in rheumatisms and dropsies ; a drachrn of them in powder destroys worms. In a scarcity of hops, this plant is used as a substitute in the north of Europe. The powdered roots are sometimes used in Lapland instead of bread, but they are unpalatable. From the Upsal Experiments it appears that, though goats eat it, sheep often will not. Cows, horses, and swine, refuse it. — Dr. Lewis recommends it, as an effi cacious aperient, deobstruent, and gentle laxa- tive. It has great reputation in scurvy and scrofula. Inveterate cutaneous diseases have been removed by an infusion of the leaves, drunk to the quantity of a pint a day, at proper inter- vals, and continued for some weeks. Boerhaave relates, that he was relieved of the gout by the juice mixed with whey.

MANZALEH, a large lake of Lower Egypt, extending eastward along the coast from the Damietta branch of the Nile. The French ge- neral Andreossy thinks it occupies the space formerly traversed by the Tanitic, Mendesian, and Pelusiac branches of the Nile, and has been formed out of them. It is about sixty miles in length, and twenty-five in extreme breadth, being

divided by a peninsula into two large gulfs, and the whole separated from the sea by a long and narrow tongue of land. The general depth is about five fathoms, but in some parts it is dou- ble, and even much greater. The water, which is phosphoric, is less salt than that of the sea ; and in some places, during the inundation, may even be drunk. The lake abounds in fish, and in the entrance porpoises are found. It com- municates with the sea only by two practicable mouths, those of Dybey and Omm Faredge, supposed to be the ancient Mendesian, and Ta- nitic mouth of the Nile. There is a consider- able number of uninhabited islands on it. Some of them are covered with ruins however. The fishermen on the lake, and the Bedouins who in- habit the surrounding villages, are remarkably barbarous and ignorant.

MENZIKOFF (Alexander), a Russian prince, originally an apprentice to a pastry-cook near the palace of Moscow. By a fortunate circum- stance he was, in early life, placed in the house- hold of Peter the Great. Having made himself master of several languages, he first rendered himself agreeable, and afterwards became neces- sary to his master. He assisted Peter in all his projects; and was rewarded with the government of Ingria, the rank of prince, and the title of major-general. He signalised himself in

Poland in 1708 and 1709; but in 1713 he was accused of embezzling the public money, and fined 300,000 crowns. The czar remitted the fine, and, having restored him to favor, gave him the command of an army in the Ukraine in 1719, and sent him as his ambassador into Poland in 1722. Constantly employed in endeavouring to preserve his influence after the death of his master, who was then evidently on the decline, Menzikoff discovered the person to whom the czar intended to leave the succession. The emperor was highly offended, and his penetration cost him the principality of Plescoff; and, on the death of the czar, in 1725, he was active in bringing different parties in Russia to agree to the succession of Catharine, under whom he enjoyed continued favor. This princess was not ungrateful. In appointing her son-in-law Peter II. to be her successor, she commanded him to marry the daughter of Menzikoff, and gave the czar's sister to his son. The parties were actually betrothed, and Menzikoff was made duke of Cozel and grand steward to the czar. But this summit of elevation was the prelude to his fall. The Dol- goroukis, favorites of the czar, had the influence to procure his banishment, together with that of his family, to one of his own estates, at the dis- tance of 250 leagues from Moscow. But, having the imprudence to leave the capital with great parade, a party of soldiers was sent after him, who reduced him to the rank and dress of a pea- sant, and carried him and his fainrly in waggons to Siberia; where, after losing his wife on the journey, and one of his daughters, he died November 2, 1729. His surviving son and daughter, after seeing their persecutor Dolgorouki degraded and banished to the same inhospitable climate, were recalled to Moscow by the empress Ann ; and left Dolgorouki in possession of theii cot- tage. Young Menzikoif was made captain of the

guards, and received the fifth part of his father's possessions.

MENZINI (Benedict), a celebrated Italian poet, born in Florence. He was professor of eloquence at the college of Sapienza at Rome, where he died in 1704. He wrote, 1. The Art of Poetry. 2. Satires, Elegies, Hymns, and the Lamentations of Jeremiah. 3. Academia Tus- culana, a work in verse and prose, which is his masterpiece.

MEPHITIC, orMEpHiTicAL, a word applied to any kind of noxious vapor ; but generally to that species of gas called carbonic acid gas. See CHEMISTRY.

MEPHIT'ICAL, adj. Lat. mephitis. Ill-savored ; stinking.

Mephitieal exhalations are poisonous or noxious steams issuing out of the earth, from what cause soever.

MEPHITIS, the name of the goddess who presided over the pestilential

vapors, and was worshipped in ancient Italy, particularly at Cremona, and by the llirpini. See AMP- SANCTI.

MEQUINEZ, a city of Morocco, the frequent residence of the emperors, is situated in a fine plain, watered by numerous rivulets, and sur- rounded with a wall six feet high. Muley Ismael resolved to make it the capital of his northern dominions, considerably enlarged the city, and erected a beautiful palace. The Brebers of the mountains often make incursions even to its gates. The seraglio occupies an immense quad- rangular space, being built only upon the ground floor ; the rooms are long and narrow, and the light is communicated only by folding doors. About 100 years ago a convent was founded here by the kings of Spain. Long. 5° 50′ W., lat. 33° 56′ N.

MER'CABLE, adj.~\ Lat. mercor, merx, MER'CANTANT, n. s. imercattis, mercatura. To MERCANTILE, adj. \beboughtorsold: mer- MER'CAT, n. s. icantant seems used in a MER'CATURE. Jcant way by Shakspeare,

after the Ital. mercatante, to signify a foreign merchant or trader : mercantile is commercial ; relating to trade or commerce : mercat, an obso- lete name for a market, or place of resort fo. trade: mercature, which we only find in D. Johnson, the practice of buying and selling.

MFRCANTILE SYSTEM, in political economy is one that prevails to a greater or less extent in every country of Europe. It was introduced in France by Colbert, (q. v.) As originally under- stood and acted upon, it embraces some fallaci- ous doctrines, and carries some just ones to excess. The notion, for example, that wealth is derived mostly from foreign commerce, and de- pends upon an annual importation of specie, called the balance of trade, is erroneous. This balance was understood to be the bullion o.- coin received by a country in exchange for a part of its exports, and the foreign trade was supposed to be advantageous and promotive of the national wealth in proportion as the returns of trade were made in the precious metals, in- stead of other merchandise, whereas an exchange for iron, tin, leather, or any other useful mer- chantable commodity, is quite as advantageous

as the importation of specie. It will depend upon the wants of the community whether the importation of one or another article will most promote the national wealth. It would be quite absurd, therefore, to attempt, by legislation, to force trade to yield a 'balance in specie. As far as

this was a direct object of the commercial sys- tem, it was accordingly mistaken. If a nation needs other things more than specie, such prices will be offered as will induce their importation. But this notion of the importance of the balance of exports and imports is not without its truth in a certain respect. It is undoubtedly an evil for one nation to be constantly indebted to another. It will be found true between individuals, dif- ferent districts of the same country, and also between different nations, that the indebted party is the one most liable to make sacrifices. If a people or district, or an individual, will keep in advance of their means, and anticipate the income of the coming year, the consequence will be a perpetually straitened and embarrassed state. This was always the case with the British Ame- rican colonies, and even of the states for many years after the establishment of the American independence. The liberal credits in England enabled them to anticipate their income, and they were accordingly always largely indebted to England, and thus constantly straitened and distressed, notwithstanding the country was, during the same time, rapidly growing in popu- lation and wealth. It is desirable that the com- merce of a country should be so conducted as not to keep the country constantly indebted. If we were, therefore, to consider the balance of trade to be a constant standing balance of debt due to, or from, a country, in this sense it would be a subject of great importance. The conse- quence of large foreign credits, and of the desire to consume more of foreign products than the people have present produce of their labor suf- ficient to pay for, is occasionally to drive specie from the country ; and the more extensive the credits, the more complete and exhausting will be this drain when it happens. The only way of preventing its recurrence is to produce at home so great a proportion of the commodities wanted for consumption, that the exportable produce will be amply sufficient to pay, in the foreign markets, for the foreign products needed. But, whether legislation shall be at all, and if at all, to what extent, directed to the advancement of commerce, or any other branch of industry, so as incidentally and consequentially to affect the kind and amount of exchanges with foreign nations, are much agitated questions. The praV tice of the whole civilized world is to legislate with a reference to national industry, and such it always has been. The real ground of doubt seems to relate to the proper objects and extent of this legislation.

MERCARA, a town and fortress of the My- sore, Ilindostan, and district of Coorg, of which ii_is the capital. It was built by Ilyder Aly in l~73, after he had conquered the country, and taken prisoner the rajah. It was again besieged l>y the Coorgs in 1785, but without avail. ˆBy the treaty with Tippoo, in 1792, he was, however, "Jin polled to relinquish Coorg ill favor of the

old family, which, since that period, has reside! here.*

MERCATOR (Geiard), one of tue most cele- brated geographers of his time, was born at Rure- monde in 1512. He applied himself with great industry to geography and mathematics. The emperor Charles V. had a particular esteem for him, and the duke of Juliers made him his eos- mographer. He composed a chronology, some geographical tables, an atlas, &c., engraving and coloring the maps himself. He died in .1594. His method of laying down charts is still used. See MAPS.

MERCATOR (Nicholas), F. R. S., an eminent mathematician in the seventeenth century, born at Holstein. He came to England about 1 660, where he lived many years. He endeavoured to reduce astrology to rational principles. He published several works, particularly Cosmogra- phia. He gave the quadrature of the hyperbole by an infinite series ; which was the first appear- ance in the learned world of a series of this sort drawn from the particular nature of the curve.

MERCATORUM FESTUM, a festival kept by the Roman merchants on the 15th of May in honor of Mercury, who presided over merchan- dise. A sow was sacrificed on the occasion, and the people present sprinkled themselves with water from the fountain called aqua Mercurii ; the whole concluding with prayers to the god for the prosperity of trade.

MER'CENARY,a$.&n.s.) fi.mercenaire;

MER'CENARINESS, n. s. J Lat. mercenarius. Hired or bribed ; corrupted by money ; venal : a hireling : mercenariness is venality ; undue respect to hire or pecuniary reward.

He a poor mercenary serves for bread j For all his travel, only clothed and fed.

Sandys.

MER'CER,«.s > Fr. mercier ; Ital. mer-

MER'CERY. \ ciaro; of Lat. merx, mercis,

merchandise. A dealer in silks (as a superior kind of merchandise) : mercery, the trade in silks.

The draper and mercer may measure religion as they please, and the weaver cast her upon what loom he please.

Howel.

The mercery is gone from out of Lombard-street and Cheapside into

Paternoster-row and Fleet-street

Graunt.

M ER'C HAN D, v. a. -\ Fr. man-hand

MERCHANDISE, n. s. & v. n. jmarchandise. It

*MER'CHANT, n. *. \mercunter, mer-*

MER'CHANTABLE, adj. Occident ia ; Span.

MER'CHAUTMAN, n. s. Jmercadina; Port.

mercadoria ; all of Lat. merx, mercator. To traffic ; transact in trade ; exercise commerce ; this is the sense of both the verbs, which are however seldom used : merchandise, as a sub- stantive, is traffic; commerce; wares bought or sold : a merchant, he who exercises that traffic ; and sometimes a wholesale as distinct from a retail dealer : merchantable, marketable ; in con- dition to be bought or sold : merchantman, a trading ship.

MERCH ET, or MERCHETUM. See MARCHET. Anciently no baron, or military tenant, could marry his sole daughter and heir, without such

leave purchased from the king, pro maritanda filia. And many servile tenants could neither send their sons to school, nor give their daughters in marriage, without express leave from the su- perior lord.

MERCIA, one of the seven kingdoms founded in England by the Saxons. Though the latest formed, it was the largest of them all, and grew by degrees to be the most powerful. On the north it was bounded by the Humber and the Mersey, which separated it from Northumber- land ; and on the east by the sea, and the terri- tories of the East Angles and Saxons ; on the south by the Thames ; and on the west by the Severn and Dee. It comprehended about se- venteen modern counties, being equal in size to the province of Languedoc, very little less than the kingdom of Arragon, and superior in size to that of Bohemia. Penda was its first monarch ; and the name is derived from the Saxon word mere, i. e. a march, bound, or limit, because the other kingdoms bordered upon it on every side ; arid not from the river Mersey, as some allege. Penda assumed the regal title A. D.626,

and was of the age of fifty at the time of his accession; after which he reigned nearly thirty years. He was of a most turbulent temper, differing occasionally with almost all his neighbours, calling in the Britons to his assistance, and shedding more Saxon blood than had been spilt in all their in- testine quarrels. He slew two kings of Northum- berland, three of the East Angles, and compelled Kenwall, king of the West Saxons, to quit his dominions. He was at length slain, with most of the princes of his family, and a multitude of his subjects, in a battle fought near Leeds by Osway king of Northumberland, A. D. 655. He had the year before killed Anna king of the East Angles in battle, whose brother Ethelred not- withstanding took part with Penda. On the other hand, Penda the eldest son of Penda, to whom his father had given the ancient kingdom of the Mid Angles, had two years before married the natural daughter of king Osway, and had been baptised at his court. But, after Penda had conquered the East Angles, he resolved to turn his arms against Northumberland. Osway, to prevent this rupture, offered large sums, and jewels of great value, to purchase peace ; these offers being rejected, he was reduced to the ne- cessity of deciding the quarrel by the sword. The river near which the battle was fought over- flowing, there were more drowned than killed. Amongst these, as the Saxon Chronicle informs us, there were thirty princes of the royal line, some of whom bore the title of kings ; and also Ethelred king of the East Angles, who fought on the side of Penda, against his family and country. His son Penda, who had married Os- way's daughter, became a Christian, and was not long after murdered by the malice of his mother. His brother Wolfher becoming king, embraced the Christian faith, and proved a very victorious and potent monarch ; and is commonly styled king of the Anglo-Saxons, as also are se- ven of his immediate successors, though none of them are known by that title in the Saxon Chronicle. The extent of the Mercian territories was so ample as to admit, and so situated as to

require, subordinate rulers in several provinces ; who, if they were of the royal line, had the title of king ; which occasions some confusion in their history. Besides establishing episcopal sees and convents, the Saxon monarchs improved and adorned their dominions otherwise, and Mercia was greatly improved. Coventry, being situated in the centre, was usually the royal re- sidence. Penda, who was almost continually in a state of war, lived, as his military operations directed, in some great town on the frontiers. Wolfher built a castle or fortified palace for his own residence, which bore his name. Offa kept his court at Sutton Walls, near Hereford. In each of the provinces there resided a chief ma- gistrate ; who, if of the royal blood, had the title of king. Penda, when he married Osway's daughter, had the title of king of Leicester. Ethelred made his brother Merowald king of Hereford ; who, dying without issue, bequeathed it to his younger brother Mercelm. The like honors were sometimes conferred upon

the prin- cesses ; and hence we occasionally read of vice- queens. By these means the laws were better executed, the obedience of the subjects more effectually secured, and the splendor of these re- sidences constantly kept up and augmented. At length, the crown devolving sometimes on minors, and sometimes on weak princes, intestine factions also prevailing, the strength of this hitherto mighty kingdom began to decline. Egbert, the most prudent and most potent monarch of th West Saxons, took advantage of these circum stances ; and, having encouraged the East Angles to attempt the recovery of their independence, he attacked the Mercians, and after a short war obliged them to submit. But this was not an absolute conquest, the kings of Mercia being al- lowed by him and his successors to retain their titles and dominions, till the invasion of the Danes put an end to their rule ; and, when the Danes were afterwards expelled by the West Saxons, it sunk into a province, or rather was divided into many.

MERCURIALIS (Jerom), an eminent Italian physician, born at Forli in 1530, where he first practised ; but was afterwards professor of me- dicine successively at Padua, Bologna, and Pisa. His writings on physic are very numerous ; be- sides giving an edition of Hippocrates in Greek and Latin, with notes. He died in 1606 ; and in 1644 some select pieces of his were published at Venice in one volume folio.

MERCURIALIS, mercury, in botany, a genus of the enneandria order, and dioecia class of plants . natural order thirty-eighth, tricocca. Male CAL. tripartite : COR. none ; but nine or twelve stamina ; the anthera globular and twin. Female CAL. tripartite: COR. none, but two styles: CAPS, bi- coccous, bilocular, and monospermous. There are several species :

*1. M. annua, or French mercury, with spiked flowers, male and female. This is an annual plant, with a branching stalk about a foot high, garnished with spear-shaped leaves of a pale or yellowish-green color. The male plants have spikes of herbaceous flowers growing on the top of the stalks : these fall off soon ; but the female plants, which have testiculated flower**

proceeding from the side of the stalks, are suc- ceeded by seeds, which, if permitted to scatter, will produce plenty of plants of both sexes.

2. M. perennts, mountain, or dog's mercury, with spiked or testiculated flowers, grows under hedges and in woods in many parts of Britain. It has a perennial root, which creeps in the ground ; the stalks are single, and without branches, rising ten or twelve inches high, gar- nished with rough

leaves, placed by pairs at each joint, of a dark green color, indented on their edges ; these have their male flowers growing in spikes, upon different plants from those which produce seeds. This species is of a soporific deleterious nature, noxious both to man and beast. Some have eaten it by mistake instead of Eng- lish mercury, and have thereby slept their last. In the isle of Skye it is called lusglen bracadale ; and an infusion of it is sometimes taken to bring on a salivation.

3. M. tomentosa, or shrubby hairy mercury, is a native of the South of France, Spain, and Italy. It has a shrubby branching stalk, grow- ing a foot and a half high, garnished with oval leaves placed by pairs, and covered with a white down on both sides. The male flowers grow in short spikes from the side of the stalks upon different plants from the first. All the species are easily propagated by seeds.

MER'CURY, n. s. Lat. mercurialis. A plant. Herb mercury is of an emollient nature, and is eaten in the manner of spinach, which, when cultivated in a garden, it greatly excels. Hill. MER'CURY, n. s. ~) Lat. Mercurius, mer- MERCURIFICA'TJON, \curialis ; from the nim- MERCO'RIAL, adj. j ble deity of this name. Quicksilver, see below : also, metaphorically, agility ; sprightly qualities : mercurification, the act of mixing any thing with mercury : mercu- rial, formed of mercury ; under the influence or operation of mercury; active; sprightly.

I know the shape of 's leg : this is his hand, His foot mercurial, his martial thigh, The brawns of Hercules. Shakspeare. Cymbeline. This youth was such a mercurial, as could make liis own part, if at any time he chanced to be out.

Bacon's Henry VII.

I add the ways of mercurification. Boyle. The gall of animals and mercury kill worms ; and the water in which mercury is boiled has this effect.

Arbuthnot.

Thus the mercury of man is fixed, Strong grows the virtue with his nature mined ; The dross cements what else were too refined, And in one interest body acts with mind. Pope. Tully considered the dispositions of a sincere, more ignorant, and less mercurial nation, by dwell- ing on the pathetick part. Swift.

MERCURY, or quicksilver, in chemistry, may be distinguished from all other metals by its extreme fusibility. It does not take the solid state until cooled to the thirty-ninth degree below zero of Fahrenheit, and is of course therefore always fluid in the temperate climates of the earth. Its color is

white and rather bluer than silver : its specific gravity 13-6. When solid it is malleable; but, at the common temperature of our earth, volatile and evaporating in a slight degree. At a heat of about C56° it boils rapidly, and rises

m dense copious fumes. The following is a list of its principal ores, as arranged by Jamieson. Species I. Native mercury.

1. Fluid mercury. It occurs principally in rocks of the coal formation, associated with cin- nabar, corneous mercury, &c. Small veins of it are rarely met with in primitive rocks, accompa- nied with native silver, &c. It is found at Idria in the Friaul ; Niderslana in Upper Hungary ; in the Palatinate ; Deux Fonts, 8cc.

2. Dodecahedral mercury, or native amalgam, divided into, a, fluid or semi-fluid amalgam. Color tin-white. In roundish portions ; and crystallised in a rhomboidal dodecahedron, rarely perfect. Splendent. When cut it emits a creaking sound. As hard as talc. Specific gravity 10‘5. Its constituents are, mercury 74, silver 25. I, is found at Deux Fonts; and /?, solid amalgam. Color silver-white. Massive and disseminated. Fracture flat conchoidal. As hard as gypsum. Brittle. Creaks strongly when cut. Specific gravity 10-5. The mercury flies off before the blow-pipe. Its constituents are, mercury 74, silver 25. — Heyer. Mercury 64, silver, 36. — Klaproth. It is found in Hungary, the Deux Fonts, Sac.*

Species II. Cinnabar, or prismato-rhomboidal ruby-blende.

1. Dark red cinnabar. Color cochineal-red. Massive, disseminated, imitative, and crystallised. Primitive form a rhomboid. Secondary forms, a regular six-sided prism, an acute rhomboid, and a six-sided table. Splendent, adamantine. Translucent. Streak scarlet-red, shining. Har- der than gypsum. Sectile and easily frangible. Specific gravity 6-7 to 8-2. It melts, and is volatilised with a blue flame and sulphureous odor. Its constituents are, mercury 85-5, sulphur 14-75. — Klaproth.

2. Bright red cinnabar. — Color bright scarlet red. Massive, and in delicate fibrous concre- tions. Glimmering and pearly. Fracture earthy. Opaque. Streak shining. Soils. Friable. It occurs in rocks of clay-slate, talc-slate, and chlorite-slate ; in veins at Horzowitz in Bohe- mia ; at Idria, &c.

3. Hepatic cinnabar, divided into, a, compact. Color between cochineal-red and dark lead-gray. Massive. Glimmering and semi-metallic. Streak shining. Opaque. Soft. Sectile. Specific gra- vity 7‘2. Its constituents are, mercury 81 -8,, sulphur 13-75, carbon 2-3, silica 0‘65, alumina 0-55, oxide of iron 0-2, copper 0-02, water 0-73 |8, slaty mercurial hepatic ore.

Color as above, but sometimes approaching to black. Massive, and in roundish concretions. Lustre shining, semi-metallic. Fracture curved slaty. Most easily frangible. Streak cochineal-red, inclining to brown. Rather lighter than the compact. It occurs in considerable masses in slate-clay and bituminous shale. It is most abundant in Idria.

Species III. Corneous mercury, or horn quick- silver.

Pyramidal corneous mercury. Color ash-gray. Vesicular, with interior crystallisations, which are, a rectangular four-sided prism, variously acuminated, and a double four-sided pyramid. Crystals very minute. Shining, adamantine. Cleavage single. Faintly translucent. Soft.

Sectile and easily frangible. It is totally volati- lised before the blow-pipe, with a garlic smell. It is soluble in water, and the solution mixed with lime water gives an orange-colored precipi- tate. Its constituents are, oxide of mercury 76, muriatic acid 16-4, sulphuric acid 7‘6. — Klap- roth. It occurs in Bohemia, &c.

Mercury is not perceptibly altered by mere exposure to the air ; though by long agitation, with access of air, it becomes converted into a black powder or oxide, which gives out oxygen by heat, the metal being at the same time revived.

When calomel or protochloride of mercury is acted on by potash-water, it yields the pure black protoxide ; and, when corrosive sublimate or the deutochloride is treated in the same way, it affords the red deutoxide. The former oxide, heated with access of air, slowly changes into the latter. The constituents of the first are 100 metal f 4 oxygen; of the second 100 + 8. Hence the prime equivalent of mercury is 25. At a red heat both oxides emit their oxygen, and pass to the metallic state. A moderate heat converts the black oxide partly into running mercury and partly into red oxide. The deutoxide, as usually prepared from the nitrate by gentle calcination, is in brilliant red scales, which become of an orange hue when finely comminuted. It frequently contains a little un decomposed subnitrate.

By triturating mercury with unctuous or viscid matters it is changed partly into protox-. ide, and partly into very minute globules. By exposing mercurial ointment to a moderate heat, the globules fall down, while a proportion of the oxide remains combined with the grease. This light gray chemical compound is supposed to possess all the virtues of the dark-colored ointment, and to be cheaper and more conveni- ent in the

application.

Red oxide of mercury is acrid and poisonous, and carries these qualities into its saline combi- nations. The protoxide is relatively bland, and is the basis of all the mild mercurial medicines. 1. When mercury is heated in chlorine it burns with a pale red flame, and the substance called corrosive sublimate is formed. This deutochloride may also be formed by mixing together equal parts of dry bideuto-sulphate of mercury and common salt, and subliming. The corrosive sublimate rises, and irrcrusts the top of the vessel, in the form of a beautiful white semi- transparent mass, composed of very small pris- matic needles. It may be obtained in cubes, and rhomboidal prisms, or quadrangular prisms, with their sides alternately narrower, and termi- nated by dihedral summits. Its specific gravity is 5-14. Its taste is acrid, stypto-metallic, and eminently disagreeable. It is a deadly poison. Twenty parts of cold water dissolve it, and less than one of boiling water : 100 parts of alcohol at the boiling temperature dissolve 88 of corro- sive sublimate; and at 70° they dissolve 37-5 parts. The constituents of this chloride are, — Mereury, 25 ... 73-53 Chlorine, 9 . . . 26-47 It may be recognised by the following charac- ter1; : — it volatilises in white fumes, which seem

to tarnish a bright copper-plate, but really com- municate a coating of metallic mercury, whicli appears glossy white on friction. When caustic potash is made to act on it, with heat, in a glass tube, a red color appears, which by gentle igni- tion vanishes, and metallic mercury is then found to line the upper part of the tube in minute globules. Solution of corrosive subli- mate reddens litmus paper, but changes syrup of violets to green. Bicarbonate of potash throws down from it a deep brick-red precipitate, from which metallic mercury may be procured by heating it in a tube. Caustic potash gives a yellow precipitate ; but, if the solution be very dilute, a white cloud only is occasioned, which becomes yellowish-red on subsidence. Lime water causes a deep yellow, verging on red. Water of ammonia forms a white precipitate, which becomes yellow on being heated. With sulphureted hydrogen and hydrosulphurets, a black, or blackish-brown, precipitate appears. Nitrate of silver throws down the curdy precipi- tate characteristic of muriatic acid; and the protomuriate of tin gives a white precipitate. The proper antidote to the poison of corrosive sublimate is the white of egg, or albumen, which converts it into calomel. Sulphureted hydrogen water may also be em ployed, along with emetics. From six to twelve grains were the mortal doses employed by Orfila in his experiments on dogs. They died in horrible convulsions, generally in two hours. But when, with the larger quantity, the whites of eight eggs were thrown into the stomach, the animals soon recovered, after vo- miting. Corrosive sublimate, digested with albumen for some time, was given in consider- able doses with impunity.

2. Protochloride of mercury, mercurius dul- cis, or calomel, is usually formed from the deutochloride, by triturating four parts of the latter with three of quicksilver, till the globules disappear, and subjecting the mixture to a subliming heat. By levigating and edulcorating with warm water the sublimed grayish-white cake, the portion of soluble corrosive sublimate which had escaped decomposition is removed. It may also be made by adding solution of pro- tonitrate of mercury to solution of common salt. The protochloride or calomel precipitates. The following is the process used at Apotheca- ries' Hall, London : — 50 Ibs. of mercury are boiled with 70 Ibs. of sulphuric acid, to dryness, in a cast iron vessel ; 62 Ibs. of the dry salt are triturated with 40J Ibs. of mercury, until the globules disappear, and 34 Ibs. of common salt are then added. This mixture is submitted to heat in earthen vessels, and from 95 to 100 Ibs. of calomel are the result. It is washed in large quantities of distilled water, after having been ground to a fine and impalpable powder.

When protochloride of mercury is very slowly sublimed, four-sided prisms, terminated by pyramids, are obtained. It is nearly tasteless and insoluble, and is purgative in doses of five or six grains. Its specific gravity is 7-176. Exposure to air darkens its surface. When two pieces are rubbed in the dark they phosphoresce. It is not so volatile as the deutochloride. Nitric acid dissolves calomel, converting it into cone-

sive sublimate. Protochloride of mercury is composed of

Mercury, 25- . . 84-746

Chlorine, 4-5 . . 15-254

We have also two sulphurets of mercury ; the black or ethiops mineral, and the red or cinnabar.

MERCURY, MERCURIUS, in the heathen my- thology. Most of the actions and inventions of the Egyptian Hermes have been ascribed to the Grecian Mercury, the son of Jupiter, and Maia the daughter of Atlas. No one of all the heathen divinities had so many functions allotted to him as this god : he had constant employment both day and night, having been the common minister and messenger of all Olympus ; particularly of his father Jupiter, whom he served with indefati- gable labor, and sometimes indeed in a capacity of no very honorable kind. Lucian is very plea- sant upon the

multitude of his avocations ; and, according to the emperor Julian, Mercury was no hero, but rather one who inspired mankind with wit, learning, and the ornamental arts of life, than with courage. He was also the patron of trade, and even of fraud and theft. Amphion is said, by Pausanias, to have been the first that erected an altar to this god ; who, in return, in- vested him with such extraordinary powers of music (and masonry), as to enable him to fortify the city of Thebes, by the mere sound of his lyre. See AMPHION. • Horace gives us the best account of his character, in his tenth Ode, lib. 1, which contains the substance of a long hymn to Mercury, attributed to Homer. His most magnificent temple was on mount Cylene, in Arcadia. He is described by the poets as a fair beardless youth, with flaxen hair, lively blue eyes, and a smiling countenance. He has wings fixed to his cap and sandals, and holds the caduceus in his hand (see CADUCEUS); and is frequently represented with a purse to show that he was the god of gain. The ani- mals sacred to him were the dog, the goat, and the cock. In all the sacrifices offered to him, the tongues of the victims were burnt ; and those who escaped imminent danger sacrificed to him a calf, with milk and honey.

MERCURY, $, in astronomy. See ASTRONOMY. This planet is brightest between his elongations and superior conjunction, very near to which •ast he can gerierally be seen. He becomes in- visible soon after he has found his elongation, go- ing towards his inferior conjunction ; and becomes visible again a few days before his next elongation. The brightness of this planet alters sometimes very considerably in twenty-four hours. It has been observed when less than three degrees distant from the sun. and may, perhaps, sometimes be seen even in conjunction with it. Mercury and Ve- nus appear brightest and most beautiful in the opposite parts of their orbits ; the first between his elongations and superior conjunction, and the other between her elongation and inferior con- junction. Therefore Venus is seen in great per- fection as a crescent, particularly in her inferior conjunction, whilst mercury is seldom seen in sroh perfect phases. Mercury should be always observed on or near the meridian. When far- thest trom the sur,, lie always appears with a

Fr. merci ; Ital. merce, misericordia; Span, and Port, misericordia, of Lat. misericordia. Com- passion ; tenderness ; clemency; unwilling- ness to punish; par- don; and, as mercy is

very faint light; and when he has a great south declination, or the atmosphere is not perfectly clear, he seldom can be seen in those parts of his orbit where he only begins to recover his brightness, or where it is much diminished. He has frequently been seen on the meridian, even with a small telescope and small power.

MERCURY, in heraldry, a term used in blazon ing by planets, for the purple color used in the arms of sovereign princes.

MERCURY BAY, a convenient bay on the north-east coast of the northernmost island of New Zealand, thus named by captain Cook, who observed here the transit of Mercury over the sun in 1769. It has abundance of wood and water; and in one of its rivers is an immense quantity of oysters. Long. 184° 4′ W., lat. 36° 48′ S.

MER'CY, n. ».

MER'CIABLE, adj.

MER'CIFUL, adj.

MER'CIFULLY, adv.

MER'ciFULNESS,tt. S.

MER'CILESS, adj. MER'CILESSLY, adv. MER'CY-SEAT, n. s. _

supposed to be free, discretion; power to act, or refrain from acting, at pleasure: merciable is used by Spenser for merciful, which signifies compassionate ; disposed to spare or pardon ; or to kind services ; the adverb and noun follow- ing, corresponding: merciless, without mercy; pitiless; severe; hard-hearted : mercilessly, in a ruthless or hard-hearted manner : mercy-seat, a peculiar part of the Jewish ark, and a name of our Lord Jesus Christ in the New Testament, See the following article.

Therforebe ye merciful as youre fadir is merciful. Wiclif. Luk. vi.

Make a mercy-seat of pure gold. Exod. xxv. 17. Be merciful, O Lord, unto thy people thou hast redeemed. Deut. xxi. 8.

He shall have judgment without mercy that hath shewed no mercy. St. James.

The hand that ought to knit all these excellencies together is a kind mercifulness to such a one, as is in his soul devoted to such perfections. Sidney.

His mother merciless, Most merciless of women Wyden bight,

Her other son fast sleeping did oppress, And \vith most cruel hand him murdered pitiless.

Spenser.

Nought but well mought him betight : He is so meek, wise, merciable, And with his word his work is convenable. Id.

'Twere a paper lost, As offered mercy is.

Shakspeare. Cymbeline. The foe is merciless, and will not pity.

Shakspeare.

Mercy is not strained ; It droppeth, as the gentle rain from heaven, Upon the place beneath. It is twice blessed ; It blesseth him that gives and him that takes. Id.

Condition !

What good condition can a treaty find I the part that is at mercy 1 Id. Cariolanus. Examples of justice must be made for terror to some ; examples of mercy for comfort to others : the one procures fear, and the other love. Bacon.*

Think not their rage so desperate to essay \n element more merciless than they. Denham-.

MEN

Miserable men commiserate not themselves ; bowel- .iass unto others, and merciless unto their own bowels.

Browne. Observe

His providence, and on him sole depend, Merciful over all his works ; with good Still overcoming evil. Milton.

Good heaven, whose darling attribute we find Is boundless grace, and mercy to mankind, Abhors the cruel. Dryden.

What god so mean,

So mercilesi a tyrant to obey ! Id. Juvenal. Make the true use of those afflictions which his •and, mercifully severe, hath been pleased to, lay .pon thee. Atterlmry.

We adore his undeserved mercy towards us, that he made us the chief of the visible creation.

JJentlei/ s Sermons.

Use the means ordinary and lawful, among which mercifulness and liberality is one, to which the pro- mise of secular wealth is most frequently made.

Hammond.

The most authentick record of so ancient a family should lie at the mercy of every infant who flings a stone. Pope.

Whatever ravages a merciless distemper may com- mit, she shall have one man as much her admirer as ever. Id.

A lover is ever complaining of cruelty while any thing is denied him ; and, when the lady ceases to be cruel, she is, from the next moment, at his mercy.

Swift.

The torrent merciless imbibes Commissions, perquisites, and bribes. Id. The mercy-seat was the covering of the ark of the covenant, in which the tables of the law were de- posited : it was of gold, and at its two ends were fixed the two cherubims, of the same metal, which, with their wings extended forwards, seemed to form a throne for the majesty of God, who in scripture is represented as sitting between the cherubims, and the ark was his footstool : it was from hence that God gave his oracles to Moses, or to the high-priest that consulted him. Calmet.

Seeds of merciless disease

Lurk in all that we enjoy ; Some that waste us by degrees,

Some that suddenly destroy. Cowper.

The MERCY-SEAT, or Propitiatory, in the Jewish tabernacle and temple, was strictly, not the covering of the ark, but the basis of the throne or standing-place of the cherubim. The latter are said to be made ‘ of,’ as well as ‘ in the ends of the mercy-seat.’ Whether the ark or chest beneath had or had not a distinct lid or cover seems doubtful.

The LXX., render the term mfl3, Exod. xxv. 17, by iXa

MERDIN, a city of Diarbekir, the ancient Murde, Asiatic Turkey, is situated near the sum- mit of a lofty mountain, on whiqh is a castle.

MER

The town is difficult of access, being ascended on the north side only by a

narrow winding path- way, and on the south by a road of a mile and a half in length very steep. Notwithstanding its situation it is well supplied with water, and the houses are built of very fine hewn stone, but have grated iron windows. The population, 1 1,000, are Arminians, Jews, Turks, Arabs, and Curds ; the first being the largest in number. The walls are kept in repair; and a few old pieces of cannon are mounted on the castle. It is forty-five miles south of Diarbekir.

MERE, adj. > Lat. merus ; Gr. papw.

MERE'LY, adv. $ Sole; pure; plain; very; that or this only : meraly, simply ; only ; thus and in no other manner.

Which thing we ourselves would grant, if the use thereof had been merely and only mystical.

Hooker.

Scotland hath foisons to fill up your will Of your mere own. Shakspeare. Macbeth.

These external manners of laments Are merely shadows to the unseen grief, That swells with silence in the tortured soul.

Shakspeare.

As for conflagrations and great droughts, they do not merely dispeople, but destroy. Bacon.

The mere Irish were not admitted to the benefit of the laws of England, until they had purchased char- ters of denization. Duviet on Ireland.

It is below reasonable creatures to be conversant in such diversions as are merely innocent, and have nothing else to recommend them. Additon.

From mere success nothing can be concluded in favour of any nation upon whom it is bestowed.

Atterbury.

What if the head, the eye, or ear repined, To serve mere engines to the ruling mind. Pope.

Prize not your life for other ends Than merely to oblige your friends. Swift. Let eastern tyrants from the light of heaven Seclude their bosom slaves, meanly possessed Of a mere, lifeless, violated form.

JTiomson's Spring.

MERE, n. s. Sax. merte. A pool, or lake or boundary. See MEER.

Meres stored both with fish and fowl.

Camden.

The mislayer of a mere stone is to blame : but -it is the unjust judge that is the capital remover of land-marks, who defineth amiss of lands. Bacon. MERE (George Brossin Chevalier de), a French writer of the seventeenth century. He published, 1. Discourses on Wit and Conversa- tion ; 2. The Elegancies of Discourse ; 3. Trea- tises on Politeness, Eloquence, and Speech ; 4. Letters, &c. He died at his seat, in Poitou, in

1690.

MERETRICIOUS, adj. \ Lat. meretricius, MERETRICIOUSLY, adv. S meretrix. Shewy; fallacious ; alluring by false show ; practised by prostitutes.

Our degenerate understandings have suffered a sad divorce from their dearest object, defile them- selves with every meretricious semblance, that the variety of opinion presents them with.

Glanville's Scepsis Not by affected, meretricious arts, But strict harmonious symmetry of parts.

Roxommon.

By happy alchemy of mind, They turn to pleasure all they find : They both disdain in outward mien The grave and solemn garb of spleen, And meretriciotu arts of dress To feign a joy and hide distress. Green. No meretricious graces to beguile, No clustering ornaments to clog the pile.

Covrper.

MERETRIX, among the Romans, differed from the prostibula. The prostibulae were com- mon courtezans, with bills over their doors signi- fying their profession, and were ready at all times to receive persons ; whereas the meretrices entertained none but at night. The meretrices

differed in their dress from the matrons; the former wore the toga and short tunics, like those of the men ; the latter wore the pulla and the stola of such a length as to reach, to their feet.

MERGUI, a sea-port town of Lower Siam, in the Birman empire, was taken from the Siamese by the Birmans in 1759, and has re- mained in their possession ever since. It is si- tuated favorably for commerce, about six - miles up the Tannaserim River ; middling sized vessels may go up to the town. The principal articles of export are ivory, tutenague, rice, and other provisions ; French privateers during the war, used to anchor at King's Island, off the mouth of the river, and were there supplied by the boats of the natives. A number of Mahometans are settled at Mergui, and the native Christians are permitted to have a Roman Catholic priest and church. It is governed by an officer sent from Ava. The French formerly had a settlement here. Long. 98° 23′ E., lat. 12° 12′ N.

The MERGUI ARCHIPELAGO consists of islands extending 135 miles from north to south, along the coast of Tannaserim, and the isthmus of the Malay peninsula, with a strait between them and the mainland, of fifteen to thirty miles broad, having regular soundings and good anchorage. The islands are well wooded and edged with rocks, encrusted with small oysters. They are not inhabited, although the soil appears fertile. The principal are King's Island, St. Matthew's, Clara, and Tannaserim. They belong to the Birmans.

MERGUS, in ornithology, a genus of birds of the order of anseres, distinguished by having the beak of a cylindrical figure, hooked at the ex- tremities, and its denticulations of a subulated form.

1. M. albellus, the smew, weighs about thirty-four ounces; the length eighteen inches, the breadth twenty-six ; the bill is nearly two inches long, and of a lead color; the head is adorned with a long crest, white above and black beneath ; the head, neck, and whole under part of the body, are of a pure white; the tail is of a deep ash-color ; the legs a bluish-gray. The fe- male, or lough diver, |is less than the male; the back, the scapulars, and the tail, are dusky; the belly is white. The smew is seen in England only in winter, when it is sometimes met with at 'he southern parts of it ; also in France, where it :s culled la pictte ; in Kent it is called the Mag- pic diver. On the continent it is found as far

south as Carniola; it frequents also Iceland, where, or in some other arctic region, it passes the summer ; and where it is supposed to breed, as it has been observed to migrate, in company with other mergansers, ducks, &c., in their course up the Worga, in February. It also in- habits America.

1. M. cucullatus, or crested diver of Catesby, has a globular crest, white on each side; and the body is brown above and white below. This elegant species inhabits North America. It ap- pears at Hudson's Bay about the end of May, and builds close to the lakes. The nest is com- posed of grass, lined with feathers from the breast; the number of eggs is from four to six. The young are yellow ; are fit to fly in July, and all depart thence in autumn. They appear at New York, and other parts as low as Virginia and Carolina, in November, where they frequent fresh waters. They return to the north in March ; and are called at Hudson's Bay Omiska sheep.

3. M. merganser, the goosander, weighs four pounds. Its length is two feet four inches; the breadth three feet four. The bill is three inches long, narrow, and finely toothed or serrated ; the color of that and of the irides is red. The dun diver, or female, is less than the male : the head and upper part of the neck are ferruginous ; the throat white; the feathers on the hind part are long, and form a pendant crest; the back, the coverts of the wings, and the tail, are of a deep ash color ; the greater quill-feathers are black, the less white ; the breast and middle of the belly are white, tinged with yellow. The goosander seems to prefer the more northern situations to those of the south, not being seen in the latter except in very severe seasons. It continues the whole year in the Orkneys ; and has been shot in the Hebrides in summer. It is common on the continent of Europe and Asia, but most so tow- ards the north. It is found also in Iceland and Greenland, and breeds there, retiring southward in winter, when it is found about the lake Baikel. It is common in America, inhabits New York in winter, and retires thence in April to Hudson's Bay.

4. M. minutus, the red-headed smew, weighs about fifteen ounces; the length one foot four inches, the breadth one foot eleven ; the bill is of a lead color ; the head slightly crested and of a rust color; the hind part of the neck is of a deep gray, the fore part clouded with a lighter color of the same kind ; the back and tail are of a dusky ash color, the legs of a pale ash color. It is a native of Europe. Birds of this genus (Mr. La- tham observes) are in general not so well flavor- ed as those of the duck kind ; yet we have often met with the last species in the London markets, and by some they are ;thought to be very little inferior to the wild duck ; which last now and then partakes of the fishy haut gout, a flavor not disagreeable to the palates of connoisseurs.

5. M. serrator, the red-breasted merganser, weighs about two pounds ; the length is one foot nine inches, the breadth two feet seven; the bill is three inches long; the lower mandible red ; the upper dusky ; the iri'des a purplish red; head and throat a fine changeable black anJ

M £ R I D A.

green; on the former a Icng pendant crest of the same color ; the tail short and brown ; the legs orange-colored. The head and upper part of the female are of a deep rush-color, and the tail ash- colored. These birds are most common in the northern parts of Great Britain. They breed on Loch Mari, in Ross-shire, and in the Isle of tslay. The species is common in most parts of the north of Europe, on the continent, and as high as Ice- land, where it is called vatus-ond ; also in the Russian dominions, about the great rivers of Si- beria, and the lake Baikal. They are numerous in Greenland in summer, where they breed on the shores. The eggs are like those of a wild duck, but smaller and whiter. They dive well, and are very active in the water; but the Green- landers often kill them with darts, especially in August, being the time of moulting. They are frequent in Newfoundland, and often appear in Hudson's Bay in large flocks, but of a larger size than in Europe. They generally come in pairs in the beginning of June, as soon as the ice breaks up ; make the nest soon after their ar- rival, chiefly on dry spots of ground in the islands, and lay from eight to thirteen white eggs, the size of those of a duck : the nests are made of withered grass, and lined with the down of the breast. The young are of a dirty brown, like young goslings. They all depart south in Oc- tober to the lakes, where they may have open water.

MERIAN (Maria Sibylla), a celebrated paintress, born at Frankfort in 1647. She was the daughter of Matthias Merian, a noted en- graver and geographer. As she showed a very early fondness for painting she was instructed by Abraham Mignon, from whom she learned great neatness and delicacy of color. Her genius par- ticularly led her to paint reptiles, flowers, and insects, which she designed from nature with ex- traordinary exactness and truth. She even un- dertook a voyage to Surinam, to paint the insects and reptiles peculiar to that climate ; and on her return published two volumes of engravings from her designs, which are well known to the curi- ous. She died in 1717. Her daughter Dorothea Henrietta Graff, who painted in the same style, and had accompanied her mother to Surinam, published a third volume from the designs of Sibylla.

MERIDA, a town of Estremadura, Spain, si- tuated on a rising ground, on the Guadiana, across which there is here a substantial bridge. This place was the Augusta Emerita of the Romans and Goths, having been peopled with soldiers of the fifth and tenth legions. It was one of the largest and most thriving towns of ancient Spain, but fell gradually to decay in the wars between the Goths and Moors, and has never recovered itself. Its antiquities, however, render it an ob- ject of interest, and comprise vestiges of superb temples, bridges, aqueducts, baths, a triumphal arch, circus, theatre, naumachia; together with the traces of two immense reservoirs at a

dis- tance from the town. Merida was the seat of a Gothic archbishop; and a council was held here in the middle of the seventh century. Be- sieged and taken by the Moors, in 713, it was for some time the capital of a small kingdom.

The Spaniards retook it in 1230; the French in January 1811 ; the British under general (now lord) Hill, in June 1812. Its environs abound in corn, wine, and fruits. Population 4500. Thirty miles east of Badajoz and 108 north-west of Cordova.

MERIDA, a province of Colombia, is bounded on the north by Maracaiho, on the east by Ve- nezuela, on the west by Santa Maria, and on the south by Santa Fe" and Juan de los Llanos. Its great geographical feature is the amazing eleva- tion of a branch from a chain of the Andes, which entirely pervades this province on its western side, rising beyond the lower period of perpetual snow, and to the height of 15,000 feet above the level of the sea.

The climate of this province is variable, on account of the vicinity of the snowy mountains, and the unequal heights of the land. The rainy season lasts from March to November, during which time the water descends in torrents ; and rains are also frequent, but not so heavy, in the other months. When westerly winds prevail fe- brile diseases are common.

The Rio Apure, and other rivers of consider- able size, rise or receive their tributary streams from the mountains of Merida, watering in their courses immense tracts of level and fertile laud, which extend from these mountains to the vici- nity of the Orinoco. Little is known concerning the interior of this country ; but it produces maize, beans, peas, potatoes, cassada, wheat of the finest quality, barley, rye, &c., as well as the tropical and European fruits, in great plenty. It also contains several plantations of sugar, ca- cao, and coffee. The cattle are in immense numbers.

MERIDA, the chief city of the above province, is situated in 8° 10′ N. lat., and 73° 45′ W long. ; twenty-five leagues south-east of Varinas, eighty leagues south of Maracaibo, and 140 leagues south-east of Caraccas. It stands in a valley surrounded by three rivers and lofty mountains, three leagues long and three-quarters of a league in breadth. The climate is so varia- ble that it often experiences every day the four seasons of the year.

The rains are heavy : they fall through the whole year, and with redoubled violence from the month of March to November ; but at all times they leave some interval of dry weather.

None of the three rivers is navigable, on ac- count of the rapidity of their currents, and the obstacles opposed to navigation by straits, some- times

formed by rocks and at others by moun tains : its bed is so contracted as to create falls which no boat can pass. The reason for the in- habitants not having sought to overcome these difficulties is the excessive insalubrity of that part of the lake of Maracaibo into which the river Chama disembogues.

At a short distance from the capital a college and seminary for priests is established : in this seminary also the inhabitants are educated. There are also here a handsome cathedral and three con- vents, with several chapels.

In the college and seminary are professors oi philosophy, theology, morality, the canon and the civil law. All the schools are under the im

mediate authority of a bishop, cud have a rector and vice-rector. An open disposition, a sound understanding, and a love of liteiature, are re- marked in the whites of Merida. No class dis- dains labor.

The inhabitants insist that neither the cold nor the heat is ever felt here to a degree that can in- convenience, and that throughout the year either silk or woollen clothes may be worn indiffer- ently. They peculiarly dread, however, the west wind, as it never blows without leaving traces of its malignity, and the weather is very changeable.

At some distance are plantations of sugar, ca- cao, and coffee, the quality of which is very su- perior. AH the environs of Merida are covered with fruits, pulse, such as maize, beans, peas of every sort, potatoes, cassada, wheat of the finest quality, barley, &c. These are consumed on the spot, and are so abundant that the poorest peo- ple have always more food than is necessary. The butcheries of Merida supply Varinas and Pedraza. Excellent meat is at a very moderate price.

They fabricate here different articles in cotton and wool, the cheapness of which makes them preferred to those of Europe. Among these fa- brics are carpets of the wool of the country, one ell long by rather more than half an ell wide, or- namented with flowers, and dyed on the spot with indigenous plants, whose red, green, blue, and yellow, are as bright and as lasting as those of our most famous manufactures.

The inhabitants, amounting to 11,500 persons, are of all colors and all classes. That of the negroes is perhaps the least numerous. That of the

whites has long been divided into two parties ; the Serradas and Guavirias, the names of the two principal founders of the city, who vowed a hatred against each other, which their descendants have preserved with much obstinacy, and cannot be said to be even yet perfectly ex- .inguished.

The city, at the period when the late dreadful earthquake overwhelmed the city of Caraccas, shared the same fate, and was nearly destroyed ; but has since been rebuilt and become more po- pulous.

MERID'IAN, n. s. Fr. meridien, meridional; Ital. Span, and Port, meridiano; Lat. meridies. Noon ; mid-day ; the line which the sun crosses at noon ; hence the highest point of power or attainment ; any particular place or state : as an adjective, at the point of noon, or highest point; extended from north to south : meridional, after the French, is used for southern or southerly : meridionally is, in the direction of the meridian.

I've touched the highest point of all my greatness, A nd from that full meridian of my glory 1 haste now to my setting.

Shakspeare. Henry VIII.

All offices that require heat, as kitchens, stilla- tories, and stoves, should be meridiend. Wotton.

Sometimes towards Eden, which now in his view I.;iy pleasant, his grieved look he fixes sad ; Sometimes towards heaven, and the full blazing sun, U liich now sat high in his meridian tower. Milton.

All other knowledge merely serves the concerns of

this life, and is fitted to the meridian thereof : they are such as will be of little use to a separate soul.

Hale.

The true meridian is a circle passing through the poles of the world, and the zenith or vertex of any place, exactly dividing the east from the west.

Browne's Vulgnr Emnirs.

In the southern coast of America and Africa, the southern point varieth toward the land, as being dis posed that way by the meridional or proper hemisphere.

Id.

The Jews, not willing to lie as their temple stood, do place their bed from

north to south, and delight to sleep meridionally. Id.

Your full majesty at once breaks forth In the meridian of your reign. Waller.

Compare the meridian line afforded by magnetical needles with one mathematically drawn, observe the variation of the needle, or its declination from the true meridian line. Boyle.

He promised in his East a glorious race, Now sunk from his meridian, sets apace.

Dry den.

The sun or moon,1 rising or sstting, our idea represents bigger than when on the meridian.

Watts's Logick.

Canst thou in whirlwinds mount aloft 1 canst thou In clouds and darkness wrap thy awful brow 1 And, when day triumphs in meridian light, Put forth thy hand, and shade the world with night ?

Young.

MERIDIAN, in astronomy, a great circle, sup- posed to be in the heavens exactly perpendicular to the terrestrial one. See ASTRONOMY.

MERIDIAN, in geography, is a great circle passing through the poles of the earth, and some given place on its surface. It therefore divides this surface into two hemispheres, the eastern and the western.. As the terrestrial meridian is the circle over which the sun is at noon, it is consequently in the plane of the celestial meridian with which the centre of the sun coincides at that time. Now as, by the earth's revolution about its axis from west to east once in twenty-four hours, every part of the equator is successively presented to the sun, all places that are situated eastward 01 westward of each other have their respective me- ridians. It is, therefore, always the same hour of the day at all places situated on the same me- ridian.

The first meridian of a country is that from which its geographers, navigators, and astrono- mers, commence their reckoning of longitude; and, the meridians having nothing in themselves to distinguish them from each other, the fixing upon any one for this purpose is quite arbitrary; hence different persons, nations, and ages, have com- menced their longitudes at different points, which has introduced no small confusion into geography.

But national and even scientific jealousies are too strongly prevalent for us to hope that the world will at any early period fix on a common first meridian.

Longitudes were formerly reckoned from the island of Ferro ; but, as each considerable country now usually adopts the meridian of its own capital as the first, the following longitudes reckoned from the Royal Observatory at Green wich, will facilitate the conversion of the reckon- ing from one country to that of another.

MERIONETHSHIRE.

303

Places. Amsterdam Berlin Bern . Constantinople Copenhagen Dresden Ferro . •. Florence Geneva Hanover Lisbon .

Madrid Munich Naples Paris

Petersburgh, St. . Rome Stockholm Stutgard Turin • . Venice Vienna Weimar

Longitudes. 4° 17′ 30'E

13 22 0 20 55

7 28 12

13 23

17 45 50 W 11 15 45 E

6

8 6

35 15 1

30 51

*i *2*

•y

3 11 14

2 30 12 18

9

7 40 15 12 20 57 16 22 45 11 52 0

8 25 W

33 8

35 15 E

15 45

20 15

18 45

25 15

3 45 18 0

MF.RIDIANI, in antiquity, a name given by the Romans to gladiators who entered the arena about noon, after the restiarii had finished ; so called from the time when they exhibited their prowess. They were a sort of artless combatants, who fought man with man, sword in hand. Hence Seneca observes, that the combats of the morning with beasts were full of humanity, com- pared with those which followed.

MERIDIONAL DISTANCE, in navigation, the same with departure, or easting and westing; being the difference of longitude between the meridian, tinder which the ship now is, and any other meridian which she was under before.

MERIDIONAL PARTS, MILES, or MINUTES, in navigation, are the parts by which the meridians, in a Mercator's chart, increase as the parallels of latitude decrease.

MERIONETHSHIRE, a county of the prin- cipality, is called by the Welsh Meironydd, and is the only one in Wales that, with the addition of shire, still retains its ancient appellation. It was so denominated from Meirion the son of Tibiawn, and grandson of Cunedda, a noble British chieftain, who came to North Wales in the fifth century, for the purpose of assisting in rescuing it from the grasp of a set of marauding Irish, who, for the sake of plunder, had nearly overrun the country. Having succeeded in his enterprise, he obtained a large portion of terri- tory as a boon, and gavelled out the possessions among his ten sons, and two grandsons Maelor and Meirion.

This district appears to have been known to the Romans, and was called by them Mervinia. It is a maritime county, lying on the Irish Sea, in which part of the large bay of Cardigan washes it on the west : and formerly beat against it with such violence, as to have made considerable en- croachments. According to British history, a whole cantred or hundred, called Contre'r- Gwaelod, stretching west and south-west for twelve miles in length, and about five in breadth, was swallowed up and lost. On the north this

county partly borders upon that of Caernarvon, it being separated from it by an immense ravine, through which the river Glass-lyn flows, and a bridge unites the two. A portion to the north also is divided by an alpine ridge, extending from beyond Rug on the east to Llyn Elidyr on the west. Montgomeryshire lies to the east, and the river Dovey severs it from Cardigan on the south. Its length from Beddgelert near Snowdon to Bwlch y Vedwin, • on the confines of Montgo- meryshire, is forty-three miles ; and, from Har- lech to the extreme boundary of Llangollen parish, thirty-eight.

Merionethshire is extremely mountainous, and, though the mountains are not so high as those of the adjacent county of Caernarvon, yet many are very lofty ; and others of a less towering height are, from their craggy nature, both picturesque and sublime. The principal mountains of this county areCader Idris, little inferior in elevation to Snowdon; the two Arans, Penllyn, and Fowddwy; the two Arenigs; Moelwyn, and many of less consideration. Of the comparative heights of the chief among these, an account from actual admeasurement was furnished Mr. Pennant by an ingenious gentleman of Bala, which confutes the vague notion of Cadar Idris being one of the highest mountains in Britain. It states that the highest peak, called Pen y Cadar, is 950 yards higher than the green adjacent to the town of Dolgelley ; Aran Fowddwy 740 yards above Llyn Tegid ; and the loftiest Arenig only twenty less than the Aran. The fall from the lake of Dolgelley Green is 180 yards, conse- quently the actual difference in height between the Cadar and the Aran amounts to thirty yards. The rivers of this county are, the Dee, formed by two small rivulets which rise from springs on . the side of Aran Pen-llyn, and, quickly uniting their streams, enter the lake called by the Welsh Llyn-tegid, and by the English Pimble Mere. After quitting Llyn-tegid, this river flows through the beautiful vale of Eidernion, and, passing the small town of Corwen, leaves this county and enters that of Denbigh. The Maw, or Mawddach, rises about the centre of the county, and running due south, to Dolgelly, receives the tributary Eden; and after becoming a tide estuary, and changing its course to the westward, falls into the Irish Sea at Abermaw, Anglicised into Bar- mouth. The Dovey, or Dyfi, has its origin at the foot of the mountainous ridge through which the celebrated pass Bwlch y Groes forms a com- munication with the adjacent parts of Montgo- meryshire; thence taking a southerly direction, by Dinas y

Mawddu, it waters part of that county as far as Machynlleth, when it re-enters Merionethshire, and, becoming a wide estuary, delivers its waters to the ocean below Aberdovey. The Glaslyn and Dwy'rid conjointly flow to the sea by the Traeth-mawr and Traeth-bychan. Nu- merous other rivulets and streams, chiefly sup- plied by mountain torrents, branch off and fer- tilise the numerous narrow valleys through which they flow. The principal lakes are Llyn-tegid, near Bala, ant! Llyn-talyllyn at the foot of Cader Idris Mountain. To these may be added Llyn Klider, Llyn Telwyn ccha and isa, Llyn y Cwmbv- chan, Llyn Arrenig, &c.

The soil of this county is various. The moun- tains consist principally of granite, porphyry, and other unstratified rocks ; while the secon- dary hills are composed of primitive or mixed srlilstus. The valleys contain schistose clay, and more level parts of the county abound with peat- earth, forming bogs and turbaries. From such a statement, this county may be expected to rank high in an agricultural point of view. The chief attention therefore of the inhabitants is confined to breeding and the dairy. The pastures in the valleys afford sustenance to numerous herds of horned cattle ; and the hills, though the grass is coarse, are nearly clothed to their summits, fur- nishing most extensive sheep walks ; and large flocks of sheep are seen to depasture their sides', while numerous goats browse among the adjacent crags. The peat-bogs produce turf of an excel- lent quality which is the principal fuel of the district. Several of the mountains are private property ; and the demarcation of the different demesnes is made by dry walls, carried in many instances up to the very tops. This appears to be the case ia some instances where, from the na- ture of the surface and the sharpness of the escarpment, they seem to set all cultivation at defiance. The average of the county has been rated at 430,000 acres; out of which 286,000 may be unenclosed, and of that number about 35,000 may be called improvable wastes. All the marshes on the sea coast, from Aberyvi on the confines of Cardiganshire to Pont Aberglas- lyn on that of Caernarvonshire, are of this description. Though Merioneth cannot vie with the adjacent counties, yet considerable improve- ments have been made by several landed pro- prietors within a few years past.

It has been remarked, that the original Welsh roads, generally ascending the brow of the hill, are strikingly descriptive of the national cha- racter. The method of surmounting difficulties, in this respect, appears to have been rather by a daring spirit, than the arts of circumvention. Almost every valley and dale had a road wind ing round its bottom, till at the extremity a moun- tain barrier presented itself, which was to be passed over a sudden

ascent by a path like a step-ladder. A striking instance of this still re- mains in the abrupt passes Bwlch y Groes near Llanynowdden, and Bwlch Verddrws near Dol- gelley; and the force of the remark to no dis- trict so strongly applies as to this. But it should be observed that this country is of gre^it extent, and the mountainous parts far exceed the plain or cultivated lands. This forms a strong obstacle in the first formation or the future improvement of the roads ; for the original expense must ne- cessarily be great, and the tolls collected at the different gates comparatively small, owing to the thinness of population and the low state of agri- culture. To the credit of the county, however, the magistrates have greatly exerted themselves ; and spirit with perseverance has performed much. About 200 miles of new or improved roads have been formed within the county within the space of the last thirty-seven years. Among these may be noticed the fine road from Dolgelly to Hurmouth, and more especially the one from Pont Aberglaslyn towards Tan y Bwlch, At the

former, near the celebrated salmon-lcarx, the groat road from Caernarvon to the south entered this county ; and the portion of 11 between the two places was extremely difficult to pass- The traveller was necessitated either to climb aJpine staircases, or, what was equally unpleasant and dangerous, to seek a guide to conduct him by the circuitous route over the Traethe- rnawr sands; and, as this could only be effected at ebb tides, lie was often detained for a day or night. This ob- struction has now been removed by forming a new read from the bridge to Tan y Bwlch. This, winding round the mountain upon various levels, and from the beauty and grandeur of the sur- rounding scenery, is now considered as one of the most pleasant and diversified rides in the princi- pality. This grand link connects a chain of roads through the whole extent of Wales, from the head of Holy Cibi in the north to that of the patron St. David in the south.

Leland observes, that several parts of the county in his time had ‘ meat by good plenty of wood ;’ so that this product of the county must have failed, as well as agriculture been neglected. But the failure in this respect is more easily ac- counted for than the retrograde state of hus- bandry, an art and practice so intimately con- nected with the necessaries of life. Respecting the former, avarice will easily solve the difficulty. Though this might at a subsequent period have been once as naked of woods is any in Wales, yet it is certainly at present better clad. A spirit of planting has for years pervaded the breasts of the great landholders, and still continues to in- crease the sylvan beauty of the county.

The manufactures of this county principally consist of woollen goods, such as strong cloths, druggets, kerseymeres, flannels, stockings, gloves, wigs, &c., made of the country wool furnished by the numerous and extensive sheep walks. This county is divided into five hundreds, con- taining thirty-

seven parishes, and five market towns. This county, as to its ecclesiastical government, is included within the diocese of Bangor, and returns one member to the imperial parliament for the shire.

MER'IT,n.s. &cv.a. "\ Tr.merite,meriterf

MERITO'RIOUS,^'. ' meritoire, of Lat.

MERITO'RIOUSLY, adv. (meritum. Desert;

MERITO'RIOUSNESS, n. s. J reward ; claim ; right; used generally of good, but sometimes of ill de- sert ; hence to deserve or earn : meritorious is de- serving ; high on the scale of worth or desert.

Instead of so great and meritorious a service, in bringing all the Irish to acknowledge the king for their liege, they did great hurt. Spenser on Ireland. You have the captives ; use them

As we shall find their merits and our safety

May equally determine. Shakspeare. King Lear.

Whatsoever jewels I have merited, I am sure I have received none, unless experience be a jewel ; that I have purchased at an infinite rate.

Id. Merry Wives of Windsor.

The war that hath such a foundation will not only be reputed just, but holy and meritorious.

Raleigh's Estays.

He carried himself meritoriously in foreign employ- ments in time of the interdict, which held up hi credit among the patriots. Wotton.*

\Ve can never fully enough comprehend in our thoughts the joys of heaven, the meritorious sufferings of Christ, the terrors of the second death ; therefore we must meditate of them often. Bp. Hall.

Sufficient means of redemption and salvation, by the satisfactory and meritorious death and obedience of the incarnate Son of God, Jesus Christ,

God blessed for ever. Sanderson.

Amply have merited of me, of all The" infernal empire.

Milton's Paradise Lost. She deemed I well deserved to die, And made a merit of her cruelty. Dryden.

A man at best is incapable of meriting any thing from God. South's Sermons.

There was a full persuasion of the high meritorious- ness of what they did ; but then there was no law of (;od to ground it upon, and consequently it was not conscience. South.

This is not only the most prudent, but the most meritorious charity, which we can practise.

Addison.

Those laurel groves, the merits of thy youth, Which thou from Mahomet didst greatly gain,

While bold assertor of resistless truth, Thy sword did godlike liberty maintain. Prior.

Roscommon, not more learned than good, With manners generous as his noble blood ; To him the wit of Greece and Rome was known, And every author's merit but his own. Id.

She valued nothing less Than titles, figure, shape, and dress. That merit should be chiefly placed In judgment, knowledge, wit, and taste.

Swift.

When a point hath been well examined, and our own judgment settled, after a large survey of the merit of the cause, it would be a weakness to con- tinue fluttering. Watts.*

What numbers live to the age of fifty or sixty years ! yet, if estimated by their merit, are not worth the price of a chick the moment it is hatched.

Shenstone.

Real friendship is a slow grower ; and never thrives, unless engrafted upon a stock of known and reciprocal merit. Chesterfield.

Then, conscious of her meritorious zeal, To justice she may make her bold

appeal.

Cowper.

MER'LIN,n.s. Barb. Lat. mer'Mus ; Belg. meerlin. A kind of hawk.

Not yielding over to old age his country delights, he was at that time following a merlin. Sidney.

MERLIN (Ambrose), a famous English poet and reputed prophet, who flourished about A. D. 480. Many surprising and ridiculous things are related of him. Several English authors have represented him as the son of an incubus, and as transporting from Ireland to England the great stones which form Stonehenge. Extravagant prophecies and other works are also attributed to him, on which some authors have written com- mentaries.

MER'MAID, n. s. Goth, mar, the sea, and maid. A sea woman; an animal, real or sup- posed, with a woman's head and fish's tail.

Thou remembrest,

Since once I sat upon a promontory, And heard a mermaid on a dolphin's back Uttering such dulcet and harmonious breath, That the rude sea grew civil at her sor»r

j-nakspeare.

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Did sense persuade Ulysses not to hear The mermaids' songs, which so his men did please,

That they were all persuaded, through the ear, To quit the ship and leap into the seas 1 Damei

Few eyes have escaped the picture of a mermaid Horace's monster, with woman's head above, and fishy extremity below, answers the shape of the ancient syrens that attempted upon Ulysses.

Browne' Vulgar Errours.*

MERODACH, an ancient king of Babylon, who was placed among the gods, and worshipped by the Babylonians. See Jerem. 1. 2. We find several kings of Babylon of whose names Me- rodach makes a part, as Evilmerodach and Merodach-Baladan. See EVILMERODACH and BALADAN.

MERODACH-BALADAN, son of Baladan king of Babylon, is called by Ptolemy Mardo- cempadus. He says that he began to reign a Babylon twenty-six years after the beginning of the era of Nabonassar, A. M. 2283.

MERGE, in ancient geography, an island of Ethiopia, beyond Egypt, in the Nile, with a cognominal town, the metropolis of the Ethio- pians.- The Jesuits have endeavoured to prove that the province of Gojam in Abyssinia is the Meroe of the ancients ; but Bruce has proved, almost beyond a doubt, that the peninsula of Athara formerly tore that name. Diodorus Si- culus says that Meroe had its name from a sister of Cambyses king of Persia, who died there in the expedition undertaken by that prince against the Ethiopians. His army perished with hunger and thirst in the deserts beyond Meroe ; which could not have happened if they had reached Gojam, the latter being one of the most plentiful countries in the world. A further proof that Gojam cannot be the ancient Meroe is, that the latter was enclosed between the Nile and Asta- boras, while Gojam is almost entirely surrounded by the Nile. If the ancients were acquainted with Gojam, they must also have been acquaint- ed with the fountains of the Nile, which we know they were not. Pliny says that Meroe, the most considerable of all the islands of the Nile, was called Astaboras, from the name of its left channel, which cannot be supposed any other than the junction of the Nile and Atbara. Again, the poet Lucan describes Meroe by two circum- stances which cannot apply to any other than the peninsula of Atbara. One is, that the inhabit- ants were black, which was the case with the Gymnosophists and first inhabitants, and which has been the case with all the rest down to the Saracen conquest ; but the inhabitants of Gojam, as well as the other Abyssinians, are fair, at least greatly different in complexion from the blacks; they are also long haired. The other is, that the ebony tree grew in the island of Meroe, which still grows plentifully in the peninsula of Atbara, but not in Gojam, where it could not subsist on account of the violent rains during six months of the year.

MEROM, or MEROME, in ancient geography, the waters of Merom, the place at which Jabin and the other confederate kings met to fight Jo- shua (xi. 5), generally supposed to be the lake Semechon, which lies between the head of the Jordan and the lake Gennesareth ; as it is gene-

rally agreed that Hazor, where Jabm reigned, was situated upon this lake. Others think, with considerable probability, that the waters of Me- rom

were somewhere about the brook Kishon, a place of that name being mentioned in Judges v. 21, where the account of the battle is re- corded.

MEROPE, in fabulous history, one of the Atlantides. She married Sisyphus the son of ./Eolus, and like her sisters was changed into a star, in the constellation Pleiades, after death. It is said that in this constellation the star of Me- rope appears more dim and obscure than the rest, because she married a mortal, while her sisters married some of the gods or their descen • dants.

MEROPS, in fabulous history, a king of the island of Cos, who married Clymene, one of the Oceanides. He was changed into an eagle, and placed among the constellations.

MEROPS, a celebrated soothsayer of Percosus in Troas, who foretold the death of his sons Adras- tus and Amphius, who were engaged in the Tro- jan war. They slighted their father's advice, and were killed by Diomedes.

MEROPS, in ornithology, a genus belonging to the order of picae. The bill is crooked, flat, and carinated ; the tongue is jagged at the point ; and the feet are of the walking kind. There are twenty or thirty species.

1. M. apiaster, the bee-eater, has an iron-co- lored back ; the belly and tail are of a bluish- green ; and the throat is yellow. This species inhabits various parts of Europe, on the conti- nent, though not in England ; yet has been seen in Sweden. They are now and then seen in Lorraine, though only in pairs ; and are frequent in other parts. Kramer talks of their building nests in the sandy crags of the Danube. They are met with in Italy and the south of France ; and in Candia and other islands of the Mediter- ranean they are numerous, as well as in Pales- tine and Arabia, being very common in the woods about Yemen, where they are called schaeghagha. It takes the name of bee-eater from its beiug very fond of those insects : it will also catch gnats, flies, cicadae, and other insects, on the wing, like the swallow. Willoughby tells us, from Belon. ' that its singular elegancy invites the Candian boys to hunt for it with cicadae, as they do for swifts, in this manner: — Bending a pin like a hook, and tying it by the head to the end of a thread, they thrust it through the cicada (as boys bait a hook with a fly), holding the other end of the thread in their hands: the cicada, so fastened, flies nevertheless in the air ; which the Merops spying, flies after it with all her force ; and, catching it, swallows pin and all, wherewith she is caught.' This species is said to be most plentiful in the isle of Candia ; and, in defect of insects, to eat seeds of many kinds ; and Ray supposes, from its similarity to the kingfisher, it may possibly feed on fish. Willoughby saw many of them exposed for sale in the markets of Rome. These birds make their nests in deep holes on the banks of rivers, like the kingfisher, at the

end of which the female lays from five to seven white eggs, rather smaller than those of a blackbird. The nest itself is composed of moss.

2. M. erythropterus, the red-winged bee-eater, is in length six inches ; the bill is one inch, and black ; the upper parts of the head, body, wings, and tail-coverts, are green brown, deepest on the head and back, lightest on the rump and tail- coverts ; behind the eye is a spot of the same, but of a very deep color ; the quills and tail are red, tipped with black ; the last two inches in length; the throat is yellow, the under parts of the body are a dirty white; and the legs black. This species inhabits Senegal, from which place a well preserved skin was brought by M. Adan- son.

3. M. Novae Hollandiae, the wattled bee- eater, is the size of a cuckoo, in length about fourteen inches and a half. The feathers on the upper part of the head, being longer than the rest, give the appearance of a crest ; those of the under part are smooth ; the plumage for the most part is brown ; the feathers are long and pointed, and each feather has a streak of white down the middle ; under the eye, on each side, is a kind of wattle, of an orange color ; the middle of the belly is yellow; the tail is wedge-shaped, simi- lar to that of the magpie, and the feathers are tipped with white ; the bill and legs are brown. This species is said to be peculiar to New Holland.

4. M. superciliosus is green, with a white line both above and below the eyes, and a yellow throat. It is found in Madagascar, where the natives call it patirich-tirich.

MEROVINGIAN CHARACTER, an ancient character much used under the Merovingian race of French kings. There are many MSS. in the French libraries, still extant in this cha- racter.

MEROVINGIAN RACE, the most ancient race of the French kings, so named from Meroveus, the third king of France of that race, which reigned 333 years, from Pharamond to Charles Martel. This race terminated in Childeric III. A.D. 751. See FRANCE.

MERRIMACK, a river of North America, which rises in New Hampshire. The most northern branch, the Pemigewasset, rises from the White Mountains and Moosehillock, and, after a southerly course of about seventy miles, isjoined by the Winnipiseogee at Sanborntown, and then takes the name of Merrimack. The course continues southerly about eighty miles, as the river runs, when it reaches Massachusetts line. It then turns to the east, and, after a course of about fifty miles, falls into the Atlantic below Newburyport. It is navigable for vessels of 200 tons to Haverhill. By means of this river, and the Middlesex Canal, an extensive boat naviga- tion is opened between Boston and the state of New HampshirCj as far as

Concord. The pr.n- cipal falls on the Merrimack, around which ca- nals are constructed, are Isle of Hookset, Arnos- keag, and Patucket.

MER'RY, adj. ˆ Probably Sax.

MER'RILY, adv. men.j-ian, gladness.

MER'RY-MAKE,»I.S. &v. n. Teut. mere, meyr, MER'RIMENT, n. s. ˆhas 3 similar signi-

MER'RINESS, fication. Gay;jo-

MER'RV-AXDREW, vial; loudly cheer-

MER'RY-THOUGHT, ful ; causing laugh-

MER

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MEIl

ter ; prosperous. To make merry' is to be jovial, or extremely cheerful : a merry-make is a festival; meeting for mirth; mirthful pranks: to merry-make, to feast; be jovial : merriness and merriment mean gaiety; laughing, or loud mirth; gay disposition : a merry-andrew is a buffoon, or harlequin : merry-thought, a forked bone on the body of fowls, so called because young people pull in play at the two sides, the longest part broken off betokening priority of marriage.

They drank and were merry with him.

Gen. xliii. 34.

They trod the grapes and made merry, and went into the house of their God. Judg. ix. 27.

Thenot now nis the time of merrymake, Nor Pac to herie, nor with love to play,

Sike mirth in May is meetest for to make, Or Summer shade, under the cocked hay.

Spenser.

The knight did not forbear, Her honest mirth and pleasure to partake ;

But when he saw her gibe, and toy, and geare, And pass the bounds of modest merrimahe, Her dalliance he despised. Faerie Queene.

Who, when they heard that piteous strained voice, In haste forsook their rural merryment. Id.

A number of merriments and jests, wherewith they have pleasantly moved much laughter at our manner of serving God.. Hooker.

You killed her husband, and for that vile fault Two of her brothers were condemned to death ; My hand cut off, and made a merry jest.

Stfiakspeare.

Merrily, merrily, shall we live now, Under the blossom that hangs on the bough. Id. The stile shall give us cause to climb in the mer- riness. Id.

Some, that are of an ill and melancholy nature, in- cline the company into which they come to be sad and ill-disposed ; and others, that are of a jovial na- ture, do dispose the company to be merry and cheerful.

Bacons Natural History. Methought it was the sound Of riot and ill-managed merryment. Milton. A paisan of France thinks of no more than his coarse bread and his onions, his canvass clothes and wooden shoes, labours contentedly on working days, and dances or plays merrily on holidays.

Temple's Miscellanies. In my small pinnace I can sail, Contemning all the blustering roar ; And, running with a merry gale, With friendly stars my safety seek Within some little winding creek,

And see the storm ashore. Dryden.

A fox 'spied a bevy of jolly, gossipping wenches, making merry, over a dish of pullets. L' Estrange.

He would be a statesman because he is a buffoon ; as if there went no more to the making of a counsellor than the faculties of a merry-andrew or tumbler.

Id.

The merry part of the world are very amiable, while they diffuse a cheerfulness through the conver- sation, at proper seasons, and on proper occasions.

Addison.

Man is the merriest species of the creation ; all above and below him are serious. Id.

With thee 'twas Marian's dear delight To moil all day, and merrimake at night. Gay. Let him not be breaking merrythoughts under the table with my cousin. Echard.

Merrily sing, and sport, and play, For 'tis Oriana's nuptial day. Granville.

MERRY (Robert), an English poet educated under the celebrated Dr. Barr at Harrow, and afterwards at Christ Church Oxford. He pur- chased a commission in the guards, and pub- lished several esteemed pieces, under the title of Delia Crusca ; and his tragedy of Lorenzo was acted at Covent Garden. He married Miss Brunton, an actress, with whom he went to Ame- rica, where he died in 1798.

MERRYMEETING BAY, a bay of Maine, United States, foTmed by the junction of the ri- vei» Androscoggin and Kennebeck, on the west side of Woolwich, and north of Bath, eighteen miles from the sea.

MERS EL KEBEER, or MAZALQUIVER, a sea- port of Algiers, anciently called, from its great extent, Portus Magnus, was taken by the Spani- ards in 1705, lost by them in 1708, but recover- ed in 1732. It is defended by a large but weak fort. Six miles west of Oran.

MERSA, a town of Barbary, pleasantly situ- ated about eleven miles from Tunis, and two from Melcha, the site of ancient Carthage. The bey has two country houses, one of them very costly work, built by Hassan Bey. From these are orange gardens reaching almost to the shore ; on the edge of which is a famous well of sweet water, esteemed the best in the kingdom. Close to this is a coffee-house, whither numbers of people from the neighbouring places resort to drink coffee, and a glass of this natural luxury so peculiarly enjoyed in the eastern countries. la the middle of the court is a large mulberry tree, under the shade of which they sit, smoke, and play at chess, inhaling the comfortable sea breeze that refreshes this delightful spot. The water is drawn up by a camel with the Persian wheel. Here are the remains of an ancient port (sup- posed to be artificial) built by the Carthaginians, after Scipio had blocked up the old port, no- thing but the turret, or light-house, being left.

MERSEBURG, one of the new governments of Prussia, containing that part of Saxony which lies to the south of Anhalt, and to the east of Erfurt ; and comprises the chief part of the old electoral circle of Saxony ; a small part of Thu- ringia ; the bishoprics and chapter lands of Merse- burg, Naumburg, and Zeitz; part of the duchy of Magdeburg: part of the districts

of Leipsic and Meissen ; with the counties of Mansfeld and Stolberg. The river Unstrut forms part of its western boundary. It consists almost entirely of cessions made by Saxony in 1815 ; the united territories composing a total of 4000 square miles, with 471,000 inhabitants, divided into seventeen districts or circles.

MERSENNE, or MERSENNUS (Mann), a learned French author, born at Oyse, in the pro- vince of Maine, in 1588. He studied at La Fleche with Des Cartes, with whom he contract- ed a friendship which lasted till death. He afterwards went to Paris, and studied at the Sorbonne ; and in 1611 entered among the Mi- nims. He became well skilled in Hebrew, philosophy, and mathematics. He was of a trap quil, sincere, and engaging temper; and wa. universally esteemed. He taught philosophy and divinity in the convent of Nevers, and at length became superior of it ; but, wishing tc

stud> with more freedom, he resigned all the posts in his order, and travelled into Germany, Italy, and the Netherlands. He wrote a great number of excellent works, the principal of which are, 1. Questiones Celeberrimae in Gene- sim. 2. Harmonicorum Libri. 3. De Sono- rum Natura, Causis, et Effectibus. 4. Cogitata Physico-mathematica. 5. La Verite des Sci- ences. 6. Les Questions Inouies. He died in Paris in 1648.*

MERSEY, a river of England, that runs through the counties of Lancaster, York, aˆid Chester, and falls into the Irish Sea at Liverpool. It receives numerous accessions in its course, of which the principal are the Irwell from Man- chester, and the Weaver from Cheshire, and spreads out into a wide but shallow channel. It is navigable up to the Irwell, and affords salmon, and shoals of smelts called sparlings, of remark- able size and flavor.

MERSEY ISLAND, an island of Essex, at the mouth of the Coin, south of Colchester. It was seized by the Danes in the reign of king Alfred, for their winter quarters. It had eight parishes, now reduced to two, viz. east and west Mersey. It had a block-house ; and during the Dutch war, the parliament put 1000 men in it.

MER'SION, n. s. Lat. mersio. The act of sinking, or thrusting over head. — Ainsworth,

MERTHYR TYDVILL, a market town of Glamorganshire, situated in the midst of an ex- tensive mining district, and at the distance of ibout 180 miles west from London, and twenty- bur N. N. W. from Cardiff. It was formerly jut a small village, and though now the prin- cipal trading town of Wales is meanly and irre- gularly built, having no connected streets. It owes its prosperity entirely to the mines in its vicinity, which consist principally of coal and iron. The agricultural improvements of the neighbourhood may be traced to the same origin, the vast quantities of manure produced by the horses, &c., employed in the mines, enabling the farmer to raise his land to the highest pitch of cultivation. It is supposed that there are forged weekly within ten miles of this town upwards of 1000 tons of iron. There are also several lead mines supposed to have been worked as far back as the times of the Romans. This town has a new church, a theatre, several dissenters' chapels, and two reading societies; and a fine canal has been cut from this place to Cardiff. On the top of a mountain, three miles distant, north, are the ruins of Merlais Castle, said to have been the residence of the kings of Brecknock. This town sends one member to parliament.

MERULA (George), an Italian of extraordi- nary parts and learning, born at Alexandria about 1420. He taught youths at Venice and Milan for forty years, and labored much in restoring and correcting ancient authors. He wrote, and addressed to Louis Sforza, Antiquitates Viceco- mitum, &c., or the Actions of the Dukes of Milan, in ten books, with some other pieces. He died in 1494, unlamented, as he had abused almost all his contemporary scholars.

MEKULA (Paul), born at Dort in Holland, a famous lawyer, historian, and linguist, was pro-

fessor of history in the university of Leyden after Lipsius. He wrote, 1. Commentaries on En- nius ; 2. The Life of Erasmus and Junius ; 3. A Cosmography ; 4. A Treatise of Law ; and died in 1607.

MERULA, in ornithology. See TURDUS.

MERUS, in ancient geography, a mountain of the Hither India, hanging over the city Nyssa, built by Bacchus, and situated between the rivers Cophen and Indus. The name, denoting the thigh, gave rise to the fable of Bacchus being sewed up into Jupiter's thigh, and being born twice ; because in this mountain he and his army are said to have been preserved, when dis- ease and pestilence raged in the plains below.

MERU SHAH JEHAN, the ancient Antiochia, a city of Korassan, in Persia, capital of Mar- gana, on the river Murghab. It was one of the four imperial cities of this country, and the capital of many of the Persian sultans of the

Seljukian dynasty. It was then sur- rounded by the beautiful gardens, the fruits of which were accounted most exquisite. Alp Arslan, the most powerful prince of his time, reigned here for a number of years. About twenty years ago this capital was taken and pil- laged by the Uzbecks, since which time it has gradually declined. The population is not at this time above 3000. It is 130 miles north east of Mesched.

MERSEBURG, an old town of Prussian Sax- ony, the capital of a government of the same, name, stands fifteen miles west of Leipsic, on the Saale, and has narrow crooked streets ; but they are clean and well paved. The cathedral, which has a fine organ, the gymnasium, and the palace of the bishops and dukes, are worth notice. Brewing is largely carried on here. Population

6800.

MESCHED, a city of Korassan, the capital of the Persian port of that province, is chiefly distinguished by a noble mausoleum, containing the remains of Imam Reza and the celebrated Caliph Haroun Al Raschid. It is called a ‘ holy city, and surrounded with a wall seven miles in circuit. There is also an inferior palace here called ‘the ark,’ and a bazaar three miles in length, which is well supplied with fruits and vegetables. The houses are in general mean, but the inhabitants are said to amount to 50,000. Beautiful velvet pelisses and fur are manufactured here, and a considerable trade is carried on with Bukhara, Kandahar, Herat, and Yeza. It is about five miles from the ancient Tous, in long. 57° E., and lat. 37° 35′ N.

MESCHED ALI, or NEJETT, a town of Irak Arabi, containing the burial place of the caliph Ali, a noble structure, encircled by a high wall, within which it is death for an infidel to be found. The dome is light and elegant, and, together with the tops of the minarets, was gilded at the ex- pense of Nadir Shah. The town is entirely sup- ported by the influx of Persian pilgrims and devotees. The environs are barren, and rendered gloomy by the number of graves which cover them ; persons of consequence being brough here for interment from the most remote parts of Persia. Ninety miles south of Bagdad.

MESCHIE, or MENSIIEEL, a town of Upper

Egypt. The ancient Ptolemais, immediately opposite to Achmim. It enjoys a considera- ble trade, as the vessels between Cairo and the cataracts usually stop here for provisions. There are very fine pigeon-houses in the neigh-

bourhood.

MESEEMS', impers. v. Me and seems, or it seems to me. For this word, says Dr. John- son, it is now too common to use methinks or methought, an ungrammatical word. I think; it appears to me; methinks.

Alas ! of ghosts I hear the ghastly cries ; Yet there, meseems, I hear her singing loud.

Sidney.

Meseemed by my side a royal maid, Her dainty limbs full softly down did lay.

Faerie Queene.

, To that general subjection of the land meseems that the custom or tenure can be no bar nor impeachment.

Spenser.

MESEMBRYANTHEMUM, fig marigold, in botany, a genus of the pentagynia order and icosandria class of plants ; natural order thir- teenth, succulentce : CAL. quinquefid; the petals are numerous and linear: CAPS, fleshy, inferior, and monospermous. There are between forty and fifty species, all African plants, from the Cape of Good Hope ; nearly forty of which are retained in gardens for variety. Of these only one, viz.

M. crystallinum, the diamond ficoides or ice plant, is annual, and the most remarkable of them all. It rises with a short, thick, succulent stalk, dividing low into many trailing, very spreading, succulent branches, bespangled all over with icy pimples ; very pellucid and glitter- ing ; oval, undulate, alternate, papulose or pimply, glittering leaves; and from the sides of the branches, numerous, almost close sitting, white flowers, tinged with red or crimson ; suc- ceeded by plenty of seed in autumn. This sin- gular and curious plant, being closely covered with large pellucid pimples, full of moisture, shining brilliantly, is in great esteem. It is a very tender plant while young; and is raised annually from seed in hot-beds. In June it will endure the open air till October, when it perishes ; but if placed in a hot-house in autumn, it will often live all winter. It is commonly planted in pots for the conveniency of removing; but if planted in full ground, it grows considerably stronger, even to luxuriance : however, when con- fined in pots, it flowers more abundantly. The other species are most durable in stem and foliage. Some are shrubby ; others pendulous, with loose straggling stems, and branches inclining to the ground ; while others have no stalks at all : their leaves are universally very thick, succulent, fleshy,

and of many various shapes, situations, and di- rections ; while some are curiously punctured, or dotted with transparent points, and some have pellucid pimples, as already mentioned : they afford a very agreeable variety at all times in the year, and merit a place in every collection. They are green-house plants, and are propagated by cuttings of their stalks and branches.

MESEN, a town of European Russia, on the Mesen, in the government of Archangel. It is the chief town of a circle, which includes the region of Nova Zembla. Its chief trade is in

fish, whale-oil, and sea-dogs. Population 2000. 138 miles E. N. E. of Archangel, and thirty from the mouth of the river.

MESEN, a large river of European Russia, rising in the government of Archangel : after nu- merous windings it takesaN.N.W. direction, and falls into the White Sea.

MESENGUY (Francis Philip), a French di- vine, born at Beuvais in 1677. He wrote, 1. Exposition de la Doctrine Chretienne, 6 vols. 12mo., which was condemned by Pope Clement XIII. 2. Abrege" de 1'Histoire et de la Morale de 1'Ancien Testament, 12mo. 3. Abrege" de 1'Histoire de 1'Ancien Testament, 10 vols. 12mo. 4. Some tracts on the bull Unigenitus. He died in 1769.

MESENTERY, MESENTERIUM, is so called from/«ANATOMY, Index. MES'ERAICK, n. s. } Fr. meseraique, me- MESEN'TERY, n. s. S sentere, mesenterique ; MESENTER'IC, adj. jGT.pioapaiov. Belong- ing to the mesentery ; this is also the meaning of mesenteric : the mesentery, a part of the PERI- TONEUM, which see.

Ittaketh leave of the permanent parts at the mouths of the meseraicks, and accompanieth the inconvertible portion into the siege. Brrvme.

The most subtile part of the chyle passeth imme- diately into the blood by the absorbent vessels of the guts, which discharge themselves into the meseraick veins. Arbuttmot.

When the chyle passeth through the mesentery, it is mixed with the lymph. Arbuthnot on A timents.

They are carried into the glands of the mesentery, receiving a fine lymph from the lymphatick ducts, which dilutes this chylous fluid, and scours its con- taining vessels, which, from the mesenterick glands, unite in large

channels, and pass directly into the common receptacle of the chyle. Cheyne.

MESERITZ, or MIENDZYRZECZ, a town of Prussian Poland, on the borders of Silesia, in a fruitful district, between the Obra and the Pack- litz. Population 3600. Fifty-five miles west of Posen.

MESH, n. s & v. a. 7 Old Fr. mache. See MESII'Y, adj. J MASH. The interstice

of a net : to ensnare or catch in a net : meshy is reticulated ; worked as a net.

Such a hare is madness the youth, to skip o'er the meshes of good counsel the cripple. Shnkspeare.

The flies by chance mesht in her hair, By the bright radiance thrown

From her clear eyes, rich jewels were,' They so like diamonds shone. Drayton.

The drovers hang square nets athwart the tide, thorough which the shoal of pilchard passing, leave many behind entangled in the meashes. Careta. Some build his house, but thence his issue barra Some make his meshy bed, but reave his rest. Id

He spreads his subtle nets from sight, With twinkling glasses to betray

The larks that in the meshes light. Dryden. With all their mouths the nerves the spirits drink, Which through the cells of the fine strainers sink : These all the channel'd fibres every way, For motion and sensation, still convey : The greatest portion of the' arterial blood, }

By the close structure of the parts withstood, Whose narrow meshes stop the grosser flood. 5

• Blackmore.

Caught in the meshy sm rp, in vain they beat Their idle wings, Thomson.

*MES'LIN, n. *. Fr. metier, to mix ; or cor- ruptly pronounced for*

mescellaiie. See MASLIN. Mixed corn.

If worke for the thresher ye mind for to have, Of wheat end of mestlin unthreshed go save.

T'tster.

What reason is there which should > >ut 'iiduce, and therefore much less enforce, us to thi.-':, that care of old dissimilitude between the people of God and the heathen nations about them, was any more the cause of forbidding them to put on garments of sundry stuff, than of charging them withal not to sow their fields with metlin 1 Hooker.

MESNARDIERE (Hippolytus Julius Pilet de la), a French poet, bora in 1610. He was partronised by cardinal Richelieu, and was a member of the French Academy. He published, 1. A Treatise on Melancholy. 2. Alinde; and 3. The Maid of Orleans, tragedies; 4. Poetique ; and 5. A Collection of Poems. He died in 1663.

MESNE, or MESN, a term in law, signifying him who is lord of a manor, and so hath tenants holding of him ; yet he himself holds of a su- perior lord. The word is derived from maisne, quasi minor natu ; because his tenure is derived from another, of whom he holds.

MESNE, a writ, which lieth where there is lord mesne and tenant ; and the tenant is distrained for setvices due from the mesne to the superior lord. This is in the nature of a writ of right; and in this case the tenant shall have judgment to be acquitted or indemnified by the mesne lord ; and if he make default therein, or do not appear originally to the tenant's writ, he shall be forejudged of his mesnalty, and the tenant shall hold immediately of the lord paramount himself.

MESOCHRI, musicians among the ancients, who presided in concerts, and, by beating a wooden desk regularly with their feet, directed the measure of the music. For the purpose of beating time, they wore wooden clogs, called by the ancients crupezia, which occasioned the sound to be better heard.

MESOCOLON, in anatomy, that part of the mesentery, which, having reached the extremity of the ilium, contracts, and changes its name. See ANATOMY.

MESO-LOGARITHMS, n. s. A term used by Kepler for the logarithms of cosines and tan- gents. See LOGARITHMS.

MESOPORPHYRON, a name given by the Greeks to the Roman laticlave; because that garment, being edged on each side, where it opened before, with purple, appeared when closed with two purple stripes down the middle. The same term was also applied to the angus- ticlave.

MESOPOTAMIA, the ancient name of the province of Diarbeck, in Asiatic Turkey. It is situated between the Euphrates and Tigris ; having Assyria on the east, Arabia Deserta with Babylonia on the south, Syria on the west, and Armenia on the north. The Hebrews called it Padan-aram (Gen. xxviii. 2, &c.), and Aram Naharaim (Psalm Ix.) or Aram of the two rivers, because it was first peopled by Aram the ancestor

of the Syrians, and is situated between the two rivers above mentioned. This country is much celebrated in Scripture, as being the first dwel- ling of

men both before and after the deluge ; and because it gave birth to Peleg, Heber, Terah, Abraham, Nahor, Sarah, Rebekah. Rachel, Leah, and the sons of Jacob. Babylon was in the ancient Mesopotamia, and, by vast labor and in- dustry, the two rivers of the Tigris and Euphrates were united into one channel. The plains of Shinar were in the same country. Often they gave it the name of Mesopotamia (Deut. xxiii. 4, &c.), and sometimes that of Syria (Hosea xii. 12). Balaam son of Beor was of Mesopotamia (Deut. xxiii. 4). Chushan-rishathaim king of Mesopotamia kept the Hebrews in subjection some time after the death of Joshua, Judg. iii. 8. MESPJLUS, the medlar, in botany, a genus of the pentajrynia order, and icosandria class of plants ; natural order thirty-sixth, pomaceae : CAL. quinquefid ; the petals are five ; the berry is inferior and pentaspermous.

1. M. amelanchier, the shrubby medlar, with black fruit, rises with several shrubby, slender, hairy stems, branching moderately about four feet high, having purplish branches ; oval serra- ted leaves, downy underneath ; and small whito flowers in clusters at the ends of the branches ; succeeded by small black fruit.

2. M. arbutifolia, arbutus-leaved mespilus, has a shrubby stem, branching five or six feet high; lanceolate, crenated, alternate leaves, downy underneath ; and from the sides and ends of the branches small white flowers in clusters ; succeeded by small, roundish, purple fruit, like haws.

3. M. Canadensis, Canada snowy mespilus, has a shrubby, smooth stem, branching four or five feet high, with smooth, purplish branches ; oval oblong, serrated, smooth leaves, on long foot-stalks ; and all the branches terminated by snowy white clusters of flowers, succeeded by small purplish fruit like haws.

4. M. chamavmespilus, the dwarf medlar, or bastard quince, has a shrubby, slender, smooth stem, branching weakly four or five feet high, having purplish branches ; oval, serrated, smooth leaves on long foot-stalks ; and from the axillas purple flowers, collected into round heads, with narrow, purplish, deciduous, bractea? ; succeeded by small red fruit.

5. M. cotoneaster, the dwarf quince, rises with a shrubby, smooth stem, branching four or five feet high ; the branches slender and reddish ; oval entire leaves, on short foot-stalks : and from the axillas, small close-sitting purple flowers, two or three together; succeeded by small, roundish, bright red fruit.

6. M. German'.ca, German mespilus, or com- mon medlar, rises with a deformed tree stem, branching irregularly fifteen or twenty feet high ; spear-shaped leaves, downy underneath : and large, close-sitting, white

flowers, singly from the sides of the branches ; succeeded by large roundish brown fruit, the size of middling apples, which ripen in October, but are not eatable till begin- ning to decay. The varieties are, common great German medlar, smaller Nottingham medlar, and spear-shaped Italian medlar. These all all cul

nvated in the English gardens for the fruit: the two former are the most common ; but the latter, though smaller, is preferable for richness of fla- vor. These kinds are never eatable, until they begin to rot ; for, when firm and sound, they are of a singularly austere disagreeable taste ; yet having lain some time after being gathered, till they begin to assume a state of decay and be- come soft, they acquire a delicious flavor, ex- tremely agreeable to many. They all ripen in the end of October, or beginning of November ; when, being gathered, some should be laid in moist bran, in several layers, to forward their decay ; others on straw in the fruitery ; those in the bran will be ready for use in about a fort- night, and those laid on straw will come forward in succession.

7. M. pyracantha, the evergreen thorn, rises with a shrubby spinous stem, branching dif- fusely twelve or fourteen feet high, the branches slender and flexible, with a dark greenish bark, armed with long sharp spines ; spear-shaped, oval, crenated, evergreen leaves; and all the shoots terminated by numerous clusters of whit- ish flowers ; succeeded by large bunches of beautiful red berries, remaining all winter, and exhibiting a very ornamental appearance. All these seven species are of the tree and shrub kind ; the first six are deciduous, the seventh an evergreen ; the leaves are universally simple ; those of the mespilus Germanica very large, the others mostly of moderate size, and which in most of the sorts grow upon short foot-stalks. They all flower abundantly every summer, the flowers universally hermaphrodite, and consisting each of fire large roundish petals, twenty sta- mina, and five styles. They are all very hardy, succeed in any soil and situation, and their pro- pagation and culture are very easy. The Ger- manica and its varieties are cultivated as fruit- trees, chiefly as standards, sometimes also as espaliers for variety. The other species are very proper furniture for any ornamental plantation, where they make an agreeable variety with their different foliage; and their flowers make a fine appearance, as also their fruit in autumn and winter, which, if not devoured by birds, remain long on the branches, and afford a fine variety in those seasons. The pyracantha, being rather of flexible growth, is most

commonly trained against walls or fronts of houses, for the support of its flexible branches. When it is designed to have any of the common medlars as fruit- trees, they may be trained either as dwarfs, for dwarf standards, or for espaliers, or as half or full standards, and managed nearly as other fruit trees, particularly the apple and pear. They are raised either by seed, by grafting, or by bud- ding ; but the two latter methods are the most certain for continuing the sorts without va- riation.

MESPRISE'. Of Fr. mesprise, mespris. Con- tempt; scorn. Obsolete.

Mammon was much displeased, yet not he chose But bear the rigour of his bold mespise, And thence him forward led, him further to entice.

Spenser.

MESS, n. s. & v.a.) Saxon mere 5 Goth. MESS'MATE, n. s. $ mesa ; Fr. mcsse; Ital.

messo. A dish ; quantity of food eaten at table ; the party or society meeting there : to mess is to eat or partake the food . messmate, a mate at mess or table.

The bounteous huswife Nature, on each bush Lays her full meu before you.

Shakspeare. Timon of Athetu. Now your traveller, He and his toothpick at my worship's meu.

Shakspeare.

Had either of the crimes been cooked to their palates they might have changed messes.

Decay of Piety.

Herbs and other country messes, Which the neat-handed Phillis dresses.

Milan.

From him he next receives it thick or thin, As pure a meu almost as it came in. Pope.

MES'SAGE, n. s.) Fr. message, messager ; MES'SENGER. $ of Lat. missus. An errand ; advice or intelligence sent : messenger one who carries a message or tidings.

She doth display The gate with pearls and rubies richly dight,

Through which her words so wise do make their

way, To bear the message of her gentle spright. Spenser.

Came running in, much like a man dismaid, A meuenger with letters, which his menage said.

Id.

May one, that is a herald, and a prince, Do a fair message to his kingly ears!

Shakspeare. '

She is fair, and fairer than that word, Of wondrous virtues ; sometimes from her eyes I did receive fair speechless messages. Id.

Yon grey lines, That fret the clouds, are messengers of day.

Id.

Evermore, when God's messengers are abandoned, destruction is near. Bp. Hall.

The earl dispatched mtssengen one after another to the king, with an account of what he heard and believed he saw, and yet thought not fit to stay for an answer. Clarendon.

Gently hast thou told

Thy message, which might else in telling wound, And in performing end us. Milton's Paradise Lest.

The welcome message made, was soon received ; 'Twas to be wished and hoped, but scarce believed.

Dryden.

Let the minister be low, his interest inconsider- able, the world will suffer for his sake ; the message will still find reception according to the dignity of the messenger. South.

Joy touched the messenger of heaven ; he stayed Entranced, and all the blissful haunt surveyed.

Pope.

MESSALINA (Valeria), a daughter of Mes- sala Barbatus. She married the emperor Clau- dius, and disgraced herself by her cruelties and incontinence. Her husband's palace was not the only seat of her lasciviousness, but she pros- tituted herself in the public streets, and few men there were at Rome who could not boast of hav- ing enjoyed the favors of the impure Messalina. Her extravagances at last irritated her husband, who commanded her to appear and answer all the accusations which were brought against her; upon which she attempted to destroy herself; and, when her courage failed, one of the tribunes

who liad been sent to her despatched her with las sword. Juvenal says of her,

Kt lassata viris necdum satiata, recessit.

MESSANA, in ancient geography, the first town of Sicily on crossing over from Italy, si- tuated on the strait now called the Faro (Itali- cus); anciently called Zancle, according to Dio- dorus Siculus, from king Zanclus; or, as others say, from the Sicilian word zanclon, a sickle, from the curvity of the coast : and hence zanclaei, the people. — Herodotus, Pausanias. Messana is de- rived from the Messenii of Peloponnesus. — Strabo. Thucydides ascribes its origin to Anaxilus, the Messenian, tyrant of Rhegium, who received all comers, calling the town after the name of his country. The Greeks always called it Messene ; the Romans Messena constantly, tp distinguish it from Messene of Peloponnesus. It is now called Messina.

MESSENA, or MESSENE, an inland town, and the capital of Messenia, a country of Pelo- ponnesus ; erroneously placed by Ptolemy on the coast. It was built by Epaminondas, who recalled all the Messenian exiles, and gave the town the name of Messene. It vied, in point of strength and situation, with Corinth, according to Strabo; and therefore Demetrius Phalereus ad- vised Philip II. that, if he wished to have Pelo- ponnesus in his power, he should make himself master of these two towns, as thus he would have the ox by both horns.

MESSENGERS are certain officers chiefly em- ployed under the direction of the secretaries of state, and always in readiness to be sent with all kinds of despatches, foreign and domestic. They also, by virtue of the secretary's warrant, take up persons for high treason, or other offences against the state. The prisoners they apprehend are usually kept at their own houses,

for each of which they are allowed 6s. 8d. a-day by govern- ment : aud, when they are sent abroad, they have a stated allowance for their journey, part of which money is advanced for the expense of their journey. They have also a standing salary.

MESSENIA, a country in the south of Pelo- ponnesus, mostly maritime, situated between Elea on the west, and Laconica to the east. An- ciently a part of Laconica under Menelaus, and called Messene by Homer; interpreted by the scholiast Messenaea Regia. This country is famous in history, on account of the resistance made by the Messenians to the Spartans, and the exploits of their hero, Aristomenes. The first hostilities commenced about A. A. C. 652. Though inferior in the knowledge of the art of war to the Spartans, yet, by keeping for some time on the defensive, they so much improved themselves, that in three years they were able to give battle to their enemies in the open field ; nor did they appear to be in any degree inferior either in courage or conduct; the war was there- fore continued, with various success on both sides. At last both consulted the oracle at Del- phi ; and received for answer, ‘ that whoever should first dedicate 100 tripods in the temple of Jupiter at Ithome, a strong hold of the Mes- penians, should be masters of the country.’ The inhabitants of Messenia, on hearing this, having

no money to make the tripods of brass, began to cut them in wood ; but before this could be ac- complished, a Spartan, having entered into the city by stratagem, dedicated 100 little tripods of clay : on which the Messenians submitted to the Spartans. But they were treated with so much barbarity by these tyrants, that a new war commenced under Aristomenes, a man of invin- cible valor, and enthusiastically fond of liberty. He perceived that the Argives and Arcadians, who acted as allies of the Lacedaemonians, ad- hered to them only through fear, and in reality hated them, and wished to revenge the injuries they had done them. To these Aristomenes ap- plied ; and, receiving an answer conformable to his wishes, he engaged his countrymen unani- mously to take up arms. About a year after, and before either party had received any auxilia- ries, the Spartans and Messenians met at the village Derae, where an obstinate engagement ensued. Aristomenes in this contest so distin- guished himself, that his countrymen unani- mously saluted him king ; which title he, how- ever, waived, alleging that he took up arms to set them free, and not to make himself great : he however accepted the title of general, with a power of doing whatsoever he thought requisite for the service of the public. As it now ap- peared that this war would be long and bloody, the Spartans again sent to enquire of the oracle concerning its event: the answer was, That it behoved the Spartans to seek a leader from Athens. The Athenians, naturally envious of the Spartans, granted their request, but in such a manner as manifested their hatred ; for they sent them for a general Tyrtseus, a schoolmaster and poet,

and lame of one foot. Meantime, Aristomenes had drawn together a large army ; the Eleans, Argives, Sicyonians, and Arcadians, having sent troops to his assistance ; the Spar- tans having no ally but Corinth. The Spartan kings, however, offered the enemy battle, which Aristomenes readily accepted. It was obstinate and bloody, but the Messenians were victorious, and the Spartans put to flight with great slaughter. Tyrtaeus now convinced them that he was capa- ble of fulfilling the promises made by the oracle ; he encouraged them by his poems, directed them by his counsels, and recruited their broken armies from among the Helotes. Aristomenes, on the other hand, acted with no less prudence and vigor. He led out the Messenians, to act offensively against their enemies; and, entering Laconia, took and plundered Pharae, putting all who resisted to the sword, and carrying off an immense booty. The Spartans sent immediately a body of forces to overtake the Messenians, but Aristomenes routed these pursuers, and conti- nued to slaughter them, till he was disabled by a wound in his side, which occasioned his being carried out of the battle. His cure being finished, he resolved to carry the war to the gates cl Sparta ; but, whether he found his design im practicable, or was influenced by some dream, he gave out that Castor, Pollux, and Helena, had appeared to him, and commanded him to desist. Soon after this, going with a small party to make an excursion, and attempting to seize some women who were celebrating religion?

rites near Egila, a village in Laconia, those zeal- ous matrons fell upon him and his soldiers with such fury, that they put them to flight, and took him prisoner; but he soon after escaped, and re- joined his forces. In the third year of the war, the Spartans with a great force entered Messenia, whither Aristocrates king of Arcadia was come, with a great body of troops, to their assistance ; but the Spartans bribed him to betray his con- federates. When the battle began, the deceitful Arcadian represented to the forces under his command the danger they were in, and the great difficulty there would be of retreating into their own country, in case the battle should be lost : he then pretended that the sacrifices were omi- nous ; and, having thus terrified the Arcadians, he not only drew them off from both wings, but in his flight forced through the Messenian ranks, and put them also in confusion. Aristomenes :tnd his troops defended themselves the best way they could ; but the Spartans surrounded them on all sides; so that most of their army and chief nobility were cut to pieces. Aristomenes, with the remains of his shattered forces, retired, and, perceiving that it was now impossible to maintain the war against the Lacedaemonians upon equal terms, he advised his countrymen to fortify mount Era, and to make the

best disposi- tions possible for a long defence. He likewise placed garrisons in Pylus and Methone on the coasts; and to these three places he gathered all the inhabitants, leaving the rest of Messenia to the mercy of the Spartans. They, considering the war as now finished, divided the lands among their citizens, and caused them to be carefully cultivated, while they besieged Era. But Aris- tomenes quickly convinced them that the war was far from being over : he chose out 300 men, with whom he ravaged all the adjacent country ; carried off a prodigious booty; and, when Mes- senia could no longer supply the wants of his garrison, penetrated into Laconia, and bore away corn, wine, cattle, &c., for the subsistence of his countrymen in Era ; so that at last the Spar- tans issued a proclamation, forbidding the culti- vation, not only of the Messenian territory, but also of Laconia in its vicinity; whereby they distressed themselves more than their enemies, inducing at last a famine in Sparta, with its usual attendant, sedition. Here the wisdom of Tyr- taeus again supported the Spartan courage ; and influenced them to continue the blockade of Era, and maintain a flying camp for the security of the country. Aristomenes, however, still com- mitted terrible depredations with his small corps of 300 men. Among other places which he plundered was the city of Amyclae; whence he carried on0 a great quantity of riches, and many carriages laden with provisions. The Spartan kings, as soon as they heard of this expedition, marched after Aristomenes, and, as the Messe- nians were encumbered with their booty, came up with them before they could reach Era. In this situation, Aristomenes, prompted rather by despair than prudence, made a long and vigorous resistance against the whole Lacedaemonian army. At length, however, numbers prevailed ; the greatest part of the Messenians were slain on the spot ; and Aristomenes, with about fifty of

his men who survived, were taken prisoners; that chief having received so many wounds that he was senseless when they carried him away. The Lacedaemonians expressed the utmost joy at the sight of this illustrious captive ; who, for so many years, by his single abilities, had enabled his exhausted country to defend itself against the whole force of Sparta. When he was recovered of his wounds, they barbarously decreed him and all his fellow-prisoners, to be thrown into a deep cavern, the common punishment of the lowest offenders. Three days he continued in this dismal place, lying upon, and covered with, dead bodies. The third day he was not only almost famished, but nearly suffocated with the stench of corrupted carcases, when he heard a fox gnawing a body near him. Upon this, per- ceiving the fox just by him, he, with one hand, seized one of its hind legs, and, with the other, defended his face, by .catching hold of its jaw when it attempted to bite him. Following as well as he could his struggling guide, the fox at last thrust his head into a small hole, and soon forced his way through,

and opened a passage to the welcome rays of light. Feeble as he was, Aristomenes wrought an outlet with his nails; and, travelling by night with all possible expedi- tion, at length arrived safe at Era, to the great joy and amazement of his countrymen. His escape was at first hardly credited ; but he soou put the truth of it beyond all doubt, by falling on the posts of the Corinthians, who had a con- siderable body of troops before Era. Most of their officers, with a multitude of private men, he slew, and pillaged their camp; and, in short, did so much mischief, that the Spartans, under the pretence of an approaching festival, agreed to a cessation of arms for forty days, that they might have time to bury their dead. On this occasion Aristomenes, for the second time, celebrated the hecatomphonia, or the sacrifice appointed for those who had killed 100 of the enemy with their own hands. He had performed the same before and after his second battle ; and he lived to do it a third time. But, notwithstanding this tiuce, certain Cretan archers, in the service of the Spar- tans, seized Aristomenes as he was walking with- out the walls, and carried him away a prisoner. There were nine of them in all ; two of them im- mediately flew with the news to Sparta, and seven remained to guard their prize, whom they bound, and conducted to a cottage inhabited only by a widow and her daughter. The young woman had dreamed the night before, that she saw a lion without claws, bound, and dragged along by wolves ; and that she having loosed his bonds, and given him claws, he immediately tore the wolves to pieces. As soon as Aristo menes came into the cottage, and her mother, who knew him, told her who he was, she in- stantly concluded that her dream was fulfilled ; and therefore plied the Cretans with drink ; and, when they were asleep, took a poniard from one of them, cut the thongs with which Aristomenes was bound, and then put it into his hands. He presently verified her vision, by putting all her guards to death ; and then carried her and his mother to Era, where, as a reward for her service, he married the young woman to his son Gorgus,

then about eighteen years of age. When Era had held out nearly eleven years, it fell into the hands of the Spartans by an accident ; the ser- vant of one Empiramus, a Spartan commander, driving his master's cattle to drink at the river Neda, met frequently with the wife of a Messe- nian, with whom he had an amour; and by means of whose husband he learned, that, Aris- tomenes being detained in his bed by a wound, the soldiers, knowing that he could not walk the rounds, had a grant to retire to their houses, to avoid the inclemency of the season. The Spar- tan no sooner heard this, than he hastened away to carry the news to his master. The kings were then absent from the camp, and Empiramus had the chief command of the

army. As soon as he received this information, he or- dered his army to begin its march, though it rained excessively, and there was no moon-light. They seized all the Messenian posts, and, as soon as it was light, the attack began; and Era had been quickly taken, if only the men had defend- ed it ; but the women fought with such fury, as made the event doubtful. Three days and two nights this desperate engagement lasted ; at last, all hopes of preserving the city being lost, Aris- tomenes drew off his wearied troops. Early the fourth morning, he disposed the women and chil- dren in the centre, the Messenian youth in the front and rear, the less able men in the main body ; himself commanded the van ; the rear-guard was brought up by Gorgus, and Manticlus, the son of Theocles, a Messenian of great merit, who fell with much glory in this attack. Aristomenes then caused tl.e last barrier to be thrown open, and began to march directly towards the Spartan troops, to force a passage. Empiramus, perceiv- ing his intent, ordered his men to open to the right and left, and give them a passage ; so that Aristomenes marched off in triumph to Arcadia. The Arcadians, when they heard that Era was taken, were very anxious to assist their old allies, and entreated their king Aristocrates to lead them into Messenia. But he, corrupted by the Spar- tans, persuaded them that it was too late ; that the Messenians were all cut off; and that such a step would only expose them to the fury of the conquerors. However, hearing that Aristomenes was on the frontiers of Arcadia, they went in crowds to carry him provisions, and to testify their readiness to afford him and his troops all possi- ble assistance. Aristomenes desired to be heard before a general assembly ; which being convoked, he proposed one of the boldest schemes recorded in history ; he said, that he had yet 500 undaunt- ed soldiers, who, at his command, would under- take any thing ; that it was probable most of the Spartans were employed in pillaging Era, and that therefore he determined to march and sur- prise Sparta ; which appeared so plausible, that all the assembly commended his unshaken courage. Aristocrates, however, by various pre- tences, retarded the execution of the project. The Arcadians, who began to suspect him, surprised the messengers as they came back, seized the letters, and read them openly in the assembly. The purport of them was, that the Spartans ac- knowledged his great kindness, and promised that they would bf. grateful. Upon this the Ar-

cadians stoned the king while Aristomenes stood with his eyes hxed on the ground, and shed tears to see him so deservedly put to death. The Ar- cadians afterwards erected a monument to per- petuate his infamy. The Messenians under Gor- gus and Manticlus passed over into Sicily ; where they founded the city of Messene. Aristomenes remained, however, in Greece, where he married all his daughters, except the youngest, to persons of rank. A prince of Rhodes, enquiring of the oracle at Delphi whom he should espouse, that his subjects might be happy under his posterity, was

directed to marry the daughter of the most worthy of the Greeks. He therefore demanded and received the virgin daughter of Aristomenes, Aristomenes himself accompanying him back to his dominions, where he formed a scheme of unit- ing the Lydians and Medes against the Spartans, resolving with this view to go into Media, and to the court of Sard is ; but meanwhile death sur- prised him, and thereby freed the Spartans from one of the most formidable enemies they ever had.

MESSI'AH, n.s. Heb. rVBNO, of npo, to anoint ; Gr. piamac. The Christ ; the anointed Saviour of the world.

And after the end of the said four hundred and thirty-four years, from the restitution of the temple, shall the Mestiah be slain, not for any cause that shall be found in him, but for the sins of men.

Bp. Hall.

Great and public opposition the magistrates made against Jesus, the man of Nazareth, when he ap- peared as the Messiah. Watti.

MESSIAH, Heb. rVB?B, signifies one anointed, or installed into an office by unction. It was usual among the Jews to anoint kings, high- priests, and sometimes prophets, at the designa- tion or instalment of them, to signify emblema- tically the mental qualifications necessary for discharging these offices. Saul, David, Solomon, and Joash, kings of Judah, received the royal unction ; Aaron and his sons received the sa- cerdotal ; and Elisha, the disciple of Elijah, re- ceived the prophetic unction. — The name Messiah was given to the kings and high-priests of the Jews. The patriarchs and prophets are also called Messiahs, or the Lord's anointed. See 1 Sam. xii. 3, 5 ; 1 Chron. xvi. 22 ; Psalm, cv. 15. Thus this name Messiah was principally, and by way of eminence, given by the Jews to their ex- pected great Deliverer; and is a name the Chris- tians apply to Jesus Christ (xp'^oc) i° whom the prophecies relating to the Messiah were accom- plished. The sum of these prophecies is, That there should be a glorious person named Mes- siah, descended from Abraham, Isaac, and Jacob, who should be born at Bethlehem, of a virgin of the family of David, then in its decline, before the Jews ceased to be a people, while the second temple was standing, and about 500 years after Ezra's time; who, though appearing in mean circumstances, should be introduced by a remark- able forerunner, whose business it should be to awaken the attention and expectation of the peo- ple. That this illustrious person should himself be eminent for the piety, wisdom, and benevo- lence of his character, and the miraculous works he should perform ; yet that, notwithstanding all this, he should be rejected, and put to death by

the Jews : but should afterwards be raised from the dead, and exalted to a glorious throne, on which he should through all generations continue to rule, at the same tune making intercession for sinners. That great calamities should be brought on the Jews for rejecting him ; whereas the king- dom of God should by his means be erected among the Gentiles, and extended unto the ends of the earth ; wherever it came destroying ido- latry, and establishing true religion and righte- ousness. In a word, that this glorious person should be regarded, by all who believed in him, as a divine teacher, an atoning sacrifice, and a royal governor ; by means of whom God would make a covenant with his people, very different from that made with Israel of old ; in consequence of which they should be restored to, and established in, the divine favor, and fixed in a state of per- petual happiness. The Jews still wait for the coming of the Messiah, being infatuated with the notion of a temporal prince, who is to be a mighty conqueror, and to subdue all the world ; a delusion in which we regret to see them encou- raged by some modern Christian interpreters of prophecy. Many modern rabbies, according to Buxtorf, believe that the Messiah is already come, but that he keeps himself concealed, and will not manifest himself because of the sins of the Jews. Some of the Jews, however, to reconcile those prophecies that seem to contradict each other as to the character and condition of the Messiah, have had recourse to the hypothesis of two Mes- siahs, who are yet to succeed each other; one in a state of humiliation and suffering; the other of glory, splendor, and power. The first, they say, is to proceed from the tribe of Ephraim, who is to fight against Gog, and to be slain by Annillus. Zech. xii. 10. The second is to be of the tribe of Judah, and lineage of David, who is to con- quer and kill Annillus, and restore the kingdom of Israel, reigning over it in the highest glory and felicity. Jesus Christ asserts himself to be the Messiah, in John iv. 25. Several impostors have endeavoured to pass for Messiahs, as Christ him- self predicted. J. Lent, a Dutchman, has written a history De Pseudo-Messiis, Of False Messiahs. The first he mentions was one Barcochab, who appeared under Adrian. The last was rabbi Mordecai, who began to be talked of in 1682. A little before him, viz. in 1666, appeared Sab- bathei Sebi, who was taken by the Turks, and became a Mahometan. The most valuable modern publication, on the subject of the Messiah whom the Old Testament teaches us to expect, is Dr. J. P. Smith's Scripture Testimony to the Messiah, 2 vols. 8vo.

MESSINA, a celebrated city in the north-east of Sicily, standing on a strait called the Faro di Messina. This separates Italy from Calabria, and is opposite to the city, only from two to three miles wide. The town runs

parallel with it, forming an oblong of more than two miles in length, and from a quarter to half a mile in breadth. The finest part is the Marina, a long line of buildings facing the harbour; for more than a mile it is connected with a broad quay. This noble range of buildings was begun by the government so long ago as 1622, and was inter- lected by nineteen openings, leading to the same

number of small streets, each entered by a gate. All the buildings suffered much by the earthquake of 1 783 ; but it has risen from its ruins, and is again a beautiful promenade. Several lofty and rugged mountains rise behind : the town forms a fine sweep along these eminences, and rises in gradation, so as to present almost every public edifice distinctly. The whiteness of the buildings forms a beautiful contrast to the dark green of the forests, while the lower grounds are strewed with cottages and villages. Nothing can exceed the coup d'oeil of the whole about a mile at sea. Since the great convulsion in 1783 the town has been rebuilt with great regu- larity, and several of the streets have been widen- ed. Next to the Marina, the principal streets are the Via Nuova and St. Ferdinand, decorated with fountains, statues, and other objects of interest. The inner part of the town, formerly dirty, is now much improved, and the pavement is of lava cut into flags. Two rapid streams from the moun- tains traverse the town, and are confined by stone walls to prevent their overflowing.

The public buildings consist of thirty fine convents for both sexes, a hospital, four semina- ries of education, six asylums for the poor, and two Monti di Pieta, or loan banks. The con- vents are richly ornamented, and possess consi- derable revenues. Here are also four libraries ; a noble public prison ; and fifty great and small churches, among which are several beautiful buildings, containing a number of admired paint- ings. The cathedral has a fine Gothic front, and a granite pillar which supports the roof, taken from the ruins of the temple of Neptune. The royal palace, the senate-house, and the episcopal palace, are also buildings of note.

The harbour of Messina is said to be the finest in the Mediterranean ; and consists of a bay, which has the city along its west shore ; on the east is a tongue of land, the point of which turns inward, so as to form an inlet (a quarter of a mile across) sufficiently wide for the ingress of fleets, and narrow enough to protect the enclosed waters from the storms of the sea. The circumference of this harbour is from four to five miles ; and its depth in general not less than forty fathoms. It is defended by a strong citadel. Of the Faro wine, not less than 10,000 pipes are said to be shipped here annually. Other exports are corn, oil, fruit, and the various productions of Sicily. Silk-worms have long been cultivated : and there are several extensive manufactures of silk in the city, which supply a large proportion of its ex- ports to the Levant. The imports consist chiefly of colonial

produce and British manufactures.

Messina is of great antiquity, having been known both to the Romans and Greeks, and is remarkable for its misfortunes. It has been at different times called Zancle, Mamertina, Mes- sana, &cc. Allured by the advantages of its si- tuation, the Cumaeans, a commercial and enter- prising people, invaded the island, and drove the Siculi from this settlement ; they were in their turn overpowered by a band of Samiau adventu- rers, who made way for a colony of citizens of Messene, and under these masters it changed its name to Messana. Their government was of short duration ; for, in A. A. C. 289, it was de-

stroyed by the Mamertines, a warlike unprinci- pled nation, inhabiting the south part of Brutium.

These soldiers being received into Messina on their return to Italy from Syracuse, where they had served as mercenaries in the army of Aga- thocles, massacred the inhabitants, and usurped their possessions. The city was now called Mamertina : and, to support themselves against the resentment of the Sicilian powers, the Ma- mertines implored the protection of the Romans, who, eager to extend their dominion beyond the limits of Italy, and jealous of the growing power of Carthage, assisted these assassins with a consular army. This step brought on the first Punic war. The Mamertines reaped no other fruit from the alliance, but a more honorable degree of slavery. Messina was, however, always distinguished by particular attention and favors from the senate ; and, excepting a short period during the wars of the triumvirate, appears to have tasted all the sweets of Roman pros- perity, with but little mixture of adversity. Its fate, in the ruin of the empire, was similar to that of the rest of Sicily. In 829 it fell into the hands of the Saracens, but obtained very honorable terms of capitulation ; for half the city was left to the Christians, where they were to be governed by their own laws, and profess their own religion undisturbed. In the other resided the bey of one of the five provinces, into which the Arabian conquerors had divided the island. Notwithstanding this indulgence, Mes- sina was the first to cast off the yoke in 1037, when George Maniaces landed an army of Greeks and Normans on the shore of the Faro. It afterwards held out against the whole Mussul- man force, till the feeble state of a distracted empire shut out all hopes of assistance from Constantinople. This unfortunate city then opened its gates to the army of the caliph, and felt very severely the weight of his resentment ; but it did not long groan under the yoke ; for, in less than twenty years, Roger the

Norman took it by surprise, and delivered it from Mahometan oppression.

During the crusades, Richard I. of England, and Philip Augustus of France, wintered here in their way to Palestine. The Messinese were particularly tardy in entering into the national conspiracy of 1282, but afterwards exceeded the rest of the insurgents in deeds of cruelty. This, and the importance of their situation, pointed them out as the first objects of Charles's ven- geance. He invested their city very closely, and declared so openly his determination to re- fuse all terms whatever to the besieged, that they saw no hopes of safety but in an obstinate defence. Their courage, perseverance, and suf- ferings, were excessive ; at length their strength and resources began to fail rapidly, and every circumstance seemed to denounce their speedy destruction, when Roger Lauria appeared off the harbour with the Arragonian fleet, forced the king to retire with precipitation across the straits, and in his sight defeated and destroyed his naval armament. Robert, grandson of Charles I., also made a fruitless attack; but in the disturbed rpiˆn of Frederick III. Messina was delivered rp 10 Lewis king of Naples and his consort

queen Joan, who entered it in triumph. In a few years it returned to its former possessors.

The year 1672 was remarkable for the revolt of the Messinese. They threw off the Spanish yoke, and swore allegiance to Louis XIV. of France. They were for some time vigorously assisted by the French ; but before the Spaniards had gained the least advantage, to excite any hopes of recovering so valuable a possession, Louis found himself necessitated to desert his new subjects, and leave them to the mercy of their old incensed masters. The horror of being thus abandoned, and the chastisement inflicted by Spain, now broke their fierce spirit, and they were stunned with the remembrance and effects of this blow, when the plague in 1743 was introduced from the Levant, and swept away more than half the inhabitants. From this chain of calamities, the opulence, trade, and population of Messina, have never recovered.

In 1780 this city continued, for more than six mon'ths, to suffer from an earthquake. And again on the 5th of February, 1783, the air was heavy and calm; the sky obscured with thick clouds, and the atmosphere seemingly all in a flame. About half after twelve at noon, the earth began to shake, with a dreadful noise. The shocks continually increased, and became at length so violent as to open the ground, and to overturn in two or three minutes a consider- able part of the buildings. A long white cloud appeared to the north-west, and soon after another, very dark, in the same quarter. The latter in a moment spread over the whole hori- zon, and deluged the city with rain and hail, accompanied with dreadful claps of

thunder. The inhabitants fled in the utmost terror to the fields and ships. From mid-day till five P. M., the earthquake continued almost without interruption. The shocks then became less fre- quent. The cries of the dying ; the shrieks of those half-buried under the ruins ; the wild terror with which others, who were still able, attempted to make their escape ; the despair of fathers, mothers, and husbands, bereft of those who were dearest to them ; formed altogether such a scene of horror as seldom occurs in the history of the calamities of the human race. Amidst that awful scene, instances of the most heroic courage, and the most generous affection, were displayed. Mothers, regardless of their own safety, rushed into every danger to snatch their children from death. Conjugal and filial affection prompted deeds not less desperate and heroic. But no sooner did the earthquake cease, than the poor wretches who had escaped began to feel the influence of very different passions. When they returned to visit the ruins, to seek out the situation of their fallen dwellings, to enquire into the fate o{ their families, to procure food, and collect some remains of their former fortunes — such as found their circumstances the most wretched became suddenly animated with rage and despair. Property was violated, and murder, rapine, and robbery, reigned among the ruins. About one A. M., another shock of the earthquake was felt, which overturned most of the remaining houses. Those whom want, or

avarice, or humanity, still detained among the ruins, now shared the same fate with those whom the former shocks had buried under them.

The succeeding day scarcely alleviated the distress of this dismal night : the few wretches who still survived found themselves destitute of every necessary. At length order was in some degree re-established ; and in two days after every person was supplied at least with some small portion of necessaries. None yet, how- ever, thought of returning to take up their abode among the ruins. The people fixed their resi- dence on the plains of Porta Salvo, near Salleo. The nobles, magistrates, and merchants, took up their abode on another plain, on the other side of the stream Porta de Legno ; the soldiers at Terra Nuova. Some violent shocks on the 7th of February and 28th of March completed the destruction of the city. The corn magazines, however, escaped without damage ; and the public ovens and the aqueducts were little injured. The neighbouring villages, having suf- fered but little, were the first to relieve the remaining inhabitants. Maltese galleys for some days brought provisions to the poor and the sick, with a generosity which merits the highest praise. They also brought surgeons with medi- cines, &c., for the cure of the wounded. The money needed for the

support of the people was taken from the treasury of Messina ; for what the king of Naples sent was seized and spent by the garrison.

About 900 persons perished by this earthquake. The sea during the convulsion was slightly agitated in the harbour. Farther out the sea was more violently agitated; but none of the ships in the harbour were dashed to pieces. The waters rose so high as to be injurious in a very considerable degree to Faro, as well as along the coast of Scylla and Bagnara. This earth- quake was not of a momentary duration, like that by which Lisbon was destroyed : for more than sixty days, from the 5th of February to the beginning of April, Messina continued to be shaken ; and in that time felt more than 200 shocks. Even after that period the alarm was again and again renewed. Of the church of Purgatory, only the walls were left standing. One half of the steeple of the cathedral was beaten to the ground. The magazines of Porto Franco were likewise very much shattered. The fort of St. Salvator, being built on an artificial foundation, the side next the sea fell down ; but on the other side, where it is founded on a rock, it stood unmoved by the shocks. On the 5th of February, when the earthquake was most vio- lent, a strong smell of sulphur was felt. The ealh was affected somewhat as if it had been borne upon a fluid, and seemed to reel like a ship tossed with the waves. This tremulous motion was felt all over Sicily. On the following days the sky was cloudy ; the mountains of Sicily and the shores of Calabria continued covered with a thick fog like smoke. North and north-east winds raged with the most violent impetuosity. This disastrous year was scarcely ended, when the elements again renewed their fury to ravage this miserable land. On Tuesday the 6th of Janu- ary, 1784, about sun-rise, the wind began to

blow softly from the north-east. The sea gradu- ally swelled, rose beyond its bed with rapid im- petuosity, overflowed the quay, and lashed the ruins of the Palazzata. It loosened and dis- placed many of the stones of the mole, spread over the whole street, and attacked the pedestals of the statues which had been spared by the earthquake, and still stood firm among the ruins. The same furious wind, which swelled the sea in so extraordinary a manner, ravaged the whole coast from Messina to Syracuse.

After this last calamity the inhabitants were exempted from the payment of taxes, for a period of twenty-five years, and their harbour was declared a free port; that is, a port for the deposit of all goods, free of duty, until taken out for consumption. Messina had the advantage of being the head-quarters of the British forces for several years prior to the peace of 1814. Popu- lation 36,000. Fifty miles N. N. E. of Catania, and 130 east of Palermo.

MES'SUAGE, n. s. Law Lat. messuagium, from mansio. The house and

grounds of an estate set apart for domestic use.

By the name of messuage may a garden, shop, mill, cottage, chamber, cellar, or the like, pass. In Scot, land, messuage denotes what we call the manor-house, viz. the principal dwelling-house within the barony.

Dr. A. Rees.

MESURADO, a river of Western Africa, which rises in the mountains of Kong, and falls into the Atlantic, at the western extremity of the Grain Coast. On its banks is situated a king- dom of this name, the boundaries of which are uncertain. It is populous, and well cultivated, and contains excellent wood for ship-building. The capital is situated about eight miles up the river.

META, in the Roman cucus, was a pile of stones of a pyramidical form, intended as a boundary of the stadium, or chariot-course. When the meta was passed the seventh time, the race was concluded. The greatest art and ma- nagement were required in avoiding the meta, and yet going as near it as possible. If they •went too near they were in the greatest danger of breaking the chariot to pieces ; and, if they took too large a circuit in the turn, they gave their rivals an opportunity of getting within them, besides losing a great deal of ground. The boundary of the Grecian stadium, or course, was cslled rtyoc, rtp/ia, jpappr], and aijpa ypa/J/tq to which last name Horace probably alludes it calling death, ultima linea rerum. The metae at Rome were first of wood, afterwards of stone but the emperor Claudius gilded them. In the Roman circus there were two metae, one at the entrance of the course, and the other at the end of it. An egg was placed on the top of the meta.

META, a large river in New Grenada, Colom- bia, which has its rise in the mountains opposite Santa Fe de Bogota, and flows through the pro- vince of San Juan de los Llanos, and the district of Casanare. It receives many other large rivers ; and, being swoln to an immense size, falli into the Orinoco, about 450 miles from its source, in long. 67° 45′ W., lat. 6° 10′ 30′ N. Before en- tering the Orinoco, it forms such a smooth body of water, that its current is scarcely perceptible.

Its banks are chiefly inhabited by very barbarous Indians. In the province of Juan de los Llanos, the missionary villages are numerous on its banks.

METAB'ASIS, n.s. In rhetoric, a figure by which the orator passes from one

thing to ano- ther.

METACAR'PUS, n. s. i Gr. jitraicopTrtov.

MF.TACAR'PAL, adj. $ In anatomy, a bone of the arm made up of four bones, joined to the fingers : belonging to the metacarpus.

It will facilitate the separation in the joints when you cut the finger from the metucarpal bone.

Sharp' Surgery.*

The conjunction is called synarthrosis ; as in the joining of the carpus to the metacarpus.

Wiseman's Suvjeny.

METAGITNION, the second month of the Athenian year, answering to the latter part of July and beginning of August ; so called from the metagitnia, which was kept in it. The Bce- otians called this month Panemus, and the Syracusans Carnius.

METAGRAM'MATISM, n. s. Gr. piTa, change, and ypaˆta, a letter. A transposition of the letters of a name.

Anagrammatism, or metagrammatism, is a dissolu- tion of its name into its letters, as its elements, and a new connexion of it by artificial transposition, without addition, subtraction, or change of any letter into different words, making some perfect sense applicable to the person named. Camden.

METAL', n.s. ˆ Fr. Span, and Port.

METAL'LIC, adj. metal; Ital. metetto ; Lat.

METAL'LIFEROUS, metallum; Gr. /wraXXov;

METAL'LINE, ˆ Heb. S'CO- A mineral

METAi/LisT,n.s. (substance; characterised

METAL' LOGRAPHY, in general by a peculiar

METALLURGIST, lustre. See CHEMISTRY,

METALLURGY. J part IV., and below ; also written for METTLE, which see : metallic and metalline mean partaking or consisting of metal or its

qualities : metalliferous, productive of me- tal : metallist and metallurgist, a worker, or a person skilled in metals; metallography, an ac- count or description of metals : metallurgy, the art of converting or working them.

A king that would not feel his crown too heavy for him must wear it every day ; but, if he think it too light, he knoweth not of what metal it is made.

Bacon.

Metalline waters have virtual cold in them ; put therefore wood or clay into smith's water, and try whether it will not harden. Id.

The ancients observing in that material a kind of metallical nature, or fusibility, seem to have resolved it to nobler use ; an art now utterly lost.

Wotton's Architecture.

The mind of man is of a strange metal : if it be not used, it rusteth ; if used hardly, it breaketh : briefly, it is sooner dulled than satisfied, with a continual meditation. Bp. Hall.

Being glad to find their companions had so much metal, after a long debate the major part carried it.

Clarendon.

Both kinds of metal he prepared, Either to give blows or to ward ; Courage and steel both of great force, Prepared for better or for worse. Hudibras. It is curious to observe how the nature of truth may be changed by the garb it wears ; softened to the admonition of friendship, or soured into the severity of reproof ; yet this severity may be useful to some tempers ; it somewhat resembles a file, disagreeable in its operation, but hard metal may be the brighter for it. . Mackenzie.

Though the quicksilver were brought to a very close and lovely metalline cylinder, not interrupted by interspersed bubbles, yet, having caused the air to be again drawn out of the receiver, several little bubbles disclosed themselves. Boyle.

Metallists use a kind of terrace in their vessels for fining metals, that the melted metal run not out.

Afar cm.

The lofty lines abound with endless store Of mineral treasure, and metallic ore.

Blackmore.

METAL, in heraldry. There are two metals used in heraldry, by way of colors, viz. gold and silver, in blazon called or and argent. In paint- ing of arms these metals are represented by white and yellow, their natural colors. It is a general rule in heraldry never to place metal upon metal, nor color upon color : so that if the field be of one of the metals, the bearing must be of some color ; and if the field be of any color, the bearing must be of one of the metals.

METALLURGY.

METALLURGY. This important branch of che- mical science has been diligently cultivated both in the north of Europe and America. The abun- dance of ore found in the mountainous districts of Great Britain has also induced commercial speculators to pay considerable attention to the subject; but still it must be admitted that, in a scientific point of view, we have done but little for this art.

The art of managing metallurgical processes, with skill and effect, is of the highest antiquity, though few of the metals offer themselves to our notice in a state calculated for domestic economy; and those, when they really occur, are found in small quantities and in few localities. It may be pioper to add, that many of the ores have no appearances by which their metallic contents could

be judged of. They differ, indeed, very materially in this respect : thus galena has much the ap- pearance of the metal it contains ; yellow copper has a metallic appearance, but not indicating the metal ; tin and iron stone are exceedingly pon- derous : whilst some ores and arseniates of cop- per have neither weight nor metallic lustre.

It has been ingeniously supposed by Mr. Muchet that iron might be accidentally produced in the operation of converting wood into char- coal. Tradition informs us that the discovery was owing to the accidental burning of a forest in Greece. Similar circumstances might, how- ever, lead to the knowledge of other metals, par- ticularly such as have ores easy of reduction, and which are often found near the surface of the earth, such as lead and tin.

In the fourth chapter of Genesis Tubalcain is mentioned as ‘ an instructor of every artificer in Drass and iron.’ Vallerius says that, as far as he knew,

Pliny was the first who enumerated the seven metals ; but they were certainly known long before his age, and were mentioned both by Homer and Moses. Indeed the former has several curious passages on the subject, while speaking of Vulcan, which describe his forges as urged by bellows, which must have been applied nearly in the same manner as we use them now.

Thus having said — the father of the fires To the black labour of his forge retires ; Soon as he bid them blow the bellows turned Their iron mouths, and where the furnace burned, Resounding breathed ; at once the blast expires, And twenty forges catch at once the fires ; Just as the god directs, now loud, now low, They raise a tempest, or they gently blow. In hissing flames huge silver bars are rolled And stubborn brass, and tin, and solid gold. Before, deep fixed, the eternal anvils stand, The ponderous hammer loads his better hand ; His left with tongs turns the vext metal round, And thick strong strokes the doubling vaults re- bound. Homer. Iliad, book xviii. line 537.

In the time of Abraham gold and silver were esteemed, as they are at present, precious metals (Gen. xxiii. 1C. Gen. xiii. 2) ; and hence it is reasonable to conclude that Noah was able to in- struct his descendants in the art of metallic ores. This art was afterwards lost among the various colonies which quitted the plains of Asiain search of settlements.

Virgil, in the eighth book of the ˆEneid, men- tions the melting of steel in large furnaces as contrasted with others in which bellows were used. And commentators on these passages men- tion that the Latin name for steel (chalybs) was derived from that of a people in Spain, who wererery expert in the working iron and its ores and mines.

We find some of the earliest specimens 'of weapons to be made of an alloy of copper with tin, which forms a metal almost as hard as steel, without, however, possessing the other valuable properties of the latter. There would be great probability in this being made before steel, and being applied to similar uses ; but we are not without evidence on this head, as Hesiod ex- pressly says, that in the early ages the arms and instruments of the primitive heroes were composed entirely of brass.

The Phoenicians, a people derived" from the Canaanites, and whose existence, as a separate nation, ceased 600 or 700 years before Christ, were famous for many arts, such as weaving fine linen, making glass, and particularly are recorded as having extraordinary skill in working the metals. Their fame was high for taste, design, and ingenious invention, and their commerce so extended by their industry and knowledge, that their ships even reached this country, and visited Cornwall for the tin which they

purchased there.

After the Phoenicians we find the arts which they possessed principally in the hands of the Egyptians, and that a considerable quantity of real chemical knowledge, which the possession of such arts would indicate, became mixed up, according to the custom of the country, with fable and hypothesis, and passed chiefly into the

hands of their priests. This seems to have been the case even in the time of Pliny ; it was, how- ever, communicated probably to the Alexandrian Greeks among the famous mysteries of the time; and as the complicated economy of the Egyptian hierarchy declined, by the consequences of the Roman conquest and other causes, the knowledge of some of their arts became diffused into Eu- rope, and with it the spirit that pervaded their philosophy. To this we may trace the study of alchemy, which has been called ' an art without art, the beginning of which is falsehood, the mid- dle hard labor, and the end beggary.'

Such a summary condemnation ought not, however, perhaps to be passed on a pursuit, which at any rate has procured for after times much knowledge, merely because we, with su- perior information, can see the absurdity of many of its pretensions, or can detect the imposture of many of its professions. The principal object of the alchemists was to make gold and silver : they imagined a certain mysterious sympathy between the metals and the heavenly bodies of our solar system. The great intrinsic value of the prin- cipal metals naturally engaged a great portion of the attention of those who acquired chemical knowledge ; and, finding in the pursuit of many experiments unlooked-for compounds and re- sults, two dominant passions in the human mind were flattered — the love of scientific discovery, and the desire of gain. The golden age of alchemy com- menced with the conquests of Arabian fanaticism in Asia and Africa, and the subjection of Europe to superstition and the most profound ignorance. From the tenth to the thirteenth century little is known concerning the state of alchemical stu- dies ; but about the latter period Albertus Mag- nus, Roger Bacon, and Raymond Lully, who were able men, raised the pursuit to a degree of credit which it little merited ; and it is spoken of as the Hermetic philosophy, and sometimes as the holy or divine art. The fifteenth century ex- hibited the same combination of chemistry with alchemy; but the language of the professors was less obscure, and the great authors were, during that period, Hollandus (Isaac and John), George Ripley, and Basil Valentine.

In 1550 appeared the celebrated treatise De Re Metallicˆ, by Georgius Agricola; who, though bewildered in his youth by the false philosophy of the times, made ample amends by this admi- rable work on metallurgy and

mineralogy. Al- chemy now gave way to the increase of know- ledge, and to the effect of the experimental mode of philosophising which was introduced by the great Bacon, though a certain number of impos- tors and some credulous and honest dupes con- tinued at intervals to pursue the glittering phantom. The labors of some alchemists were excessive, and their patience almost beyond be- lief: experiments were continued for months, and even years, and their repetitions of diges- tions, sublimations, and distillations, were almost without end. They supposed that there might be two methods to make gold, — by synthesis or composition, and by transmutation. For the first they labored to find out the elements of the metals, which they imagined would be some metallic earth, and some essence or spirit which they chose to call sulphur. They held a won-

derful opinion of what might be discovered in mercury, which seemed to them likely to possess hidden qualties analogous to what they hoped to find from its volatility, and as they thought its spiritual nature.

Another set directed their efforts to the attempt at changing the baser metals into gold, and made their experiments mostly for this purpose on lead and copper, attracted, probably, by the weight of the one and the color of the other. To effect this transmutation they imagined that it was only necessary to discover the true elixir, or medicine of metals, the tincture, the powder of projection, or philosopher's stone, — for by such names were their preparations called, — which they imagined would purge away the impurities which only caused the differences between the inferior metals and the perfect ones.

In all this there may, perhaps, be less absur- dity than has been urged; the discoveries of modern chemistry have been as wonderful, and might have seemed as improbable, in a former state of knowledge ; nor can we be surprised when they observed, for instance, that lead al- most always contains a certain portion of silver, and that all metals were capable of improvement by refining processes, that such expectations were excited. At any rate it is admitted that, from the labors of many of these men, great pro- gress was made in chemical research which was useful in many respects, and particularly enlarged the skill and experience of the metallurgists, as may be seen in the instance of Agricola.

Another class of alchemists directed their labors to find an elixir of life, by which all dis- ease was to be removed from the humar. frame, and existence prolonged to an indefinite period ; but this subject only merits

notice here as it is connected with the introduction of metallic preparations into medicine, which is another benefit we have derived from these absurd speculations. Paracelsus and Van Helmont were the great authors of this branch of the art.

The following are such of the metals as are usually seen in their metallic state in the popular sense of the word ; and those principally will be treated of which form the material of most of our metallurgic processes : —

1. Unalterable by fire, or not oxidable by heat; a property which formerly was supposed to characterise a perfect metal :

Gold, silver, platina, nickel } fusible and mal- palladium . . . Jleable.

Rhodium, iridium. {granular and

S brittle.

2. Oxidable by heat ; and, being thus converted into what was called a'calx, formerly considered as imperfect :

malleable'

Bismuth, antimony, cobalt, "} , ... , . . . manganese, tellurium, f £[mle but fusi' titanium, tantalium, . > e'

Uranium, osmium, . \ ˆibleandgra- S nular.

3. Metals which are acidifiable : Columbium, chrome, tung-) fi ,

sten, molybdena, . J Arsenic, . . volatile.

One of the most remarkable characters of metallic substances is the peculiar lustre which their polished surfaces exhibit; and which, from its being eminently characteristic of these sub- stances, has been called the metallic lustre. The next remarkable property of metals is their opacity, which, though very considerable, is by no means absolute as has been affirmed. Leaf gold will transmit a green light, and silver leaf a white light. Probably other metals would also be somewhat transparent if equally attenuated. In specific gravity the metals exceed all other known substances. Sulphate of barytes, the heaviest of earthy bodies, is less than four and a half times as heavy as water. The lightest metal (if we except sodium and potassium), is more than six times as heavy as water, and the heaviest (pla- tina) is nearly twenty-three times as heavy.

The principal metals, arranged according to their specific gravities, stand as

follows : —

1. Platinum . . 21-00

2. Gold . . . 19-30

3. Tungsten . . 17-50

4. Mercury . . 13-50

5. Palladium . . 11-50

6. Lead . . . 11-35

7. Silver 10-50

8. Bismuth . . 9-80

9. Uranium . . 9-00

10. Copper . . 8-90

11. Arsenic . . 8-35

12. Nickel . . 8-25

13. Cobalt . . 8-00

14. Iron . . . 7-78

15. Molybdenum . 7-40

16. Tin . . . 7-30

17. Zinc . . . 7-00

18. Manganese . . 6-85

19. Antimony . . 6‘70

20. Tellurium’ . . 6-10

21. Sodium . . 0-972

22. Potassium . . 0-865

The fusibility of metals is a property that emi- nently contributes to their usefulness ; for without this it would be impossible to separate them from

the earths and other impurities with which they are naturally mixed; not to mention the vast advantage of producing useful forms by the simple operation of casting into moulds of any required shape. The range of temperature at which various metals become fluid extends from the highest degree that our furnaces can produce, to a degree of cold, hardly ever occurring naturally. Thus, platina is scarcely fusible in the greatest furnace heat ; iron and some others require ah intense white heat; gold, silver, and copper, a bright red or low white heat ; anti- mony a low red heat; and tin, bismuth, lead, and zinc, melt from about 450° Fahrenheit, to a temperature just under a red heat; while mer- cury is fluid, unless it be in a state of cold equal to about 40° below zero.

At certain heats several of the metals may be volatilised, or driven off in the state of vapor, and it is not improbable that all may be so, if we could raise the temperature high enough. But a considerable difference exists in this respect; and advantage is taken of it in many processes of smelting and refining, of thereby

separating th° one metal from the other ; those which are called fixed metals remaining in the state of strong ignition without evaporation, and those which are called volatile rising in dense fumes. Mercury, arsenic, antimony, and zinc, are highly volatile. Lead, tin, and bismuth, are less so, but are evaporated in a strong fire ; while gold, silver, copper, and iron, are not sublimed by any heat which we usually employ. The next striking and valuable property is their extensibility. This by the ancients was reckoned one of the essential characters of metallic bodies, but has ceased to continue so in consequence of the discovery of a number of metals destitute of this quality. Its high im- portance, however, may he well judged of, by observing that, for almost all mechanical purposes, the intrinsic value of metals is intimately de- pendent on their extensibility. This property may be classed under two heads, — malleability and ductility : that is to say, metals may either be extended by hammering, when they are said to be malleable, or by lamellating when they are said to be ductile. The metal of the greatest malleability is gold, which may be beaten into leaves so thin that they will float in the air like a feather. Silver may be reduced to nearly the same state of tenuity. Gold leaf is estimated at a thickness of little more than sujfoggth of an inch. Silver leaf is about Tgˆth. After these may be ranked in the following order copper, tin, lead, iron, and zinc ; this last, however, to be made perfectly malleable, must be made somewhat hotter than boiling water. The other malleable metals are platina, palladium, nickel, and mer- cury.

It might at first sight appear that the ductility of metals would follow the same order as their malleability, both properties being merely a mode of extension ; but it is evident that the ductility of a substance is compounded of its malleability and tenacity. Hence iron, though by no means so malleable as tin or lead, greatly surpasses them in ductility. The tenacity of metal is estimated by the weight that will be required to break a wire of a given diameter. Thus it is stated that a wire of one-tenth of an inch diameter of

Iron will bear, before it breaks, 705 Ibs.

Copper . . . 387

Platina . . . 351

Silver .... 239 Gold 191

The tenacity of tin is greatly inferior to that of gold, and the tenacity of lead is the least of all.

Metals, besides the properties described, have of course others common to matter in general, or to bodies differently constituted in other respects ; and some on which depend both the uses we make of them, and the operations for making them useful. The most important are those of divisibility and penetrability, elasticity, affinity for each other, and affinity for other substances. By the first affinity they unite together, forming mixed metals, called alloys or amalgams. By the second they combine chemi- cally with various substances which alter their Trˆ XTV.

character, and form ores, salts, oxides, carbo- nates, hydrates, glasses, or enamels.

From the properties of the metals we are naturally led to consider their uses, and the means by which they are converted into the various forms that contribute so largely to the useful and ornamental arts of life. In any state of society, however rude, we can hardly conceive of substances more desirable than the metals; and thus we see that among savage nations nothing is more coveted, and that a few nails will be ex- changed for their most highly prized articles ; while, in the history of the civilised world, we may observe that metallurgic processes were greatly esteemed and eagerly pursued, and pro- ficients in the art by which the metals were worked were honored for their knowledge and enriched by their skill. The metals will appear, upon the slightest consideration of the subject, to form a principal ingredient in most opera- tions conducive to our comfort, amusement, or improvement. Without them we can conceive of no fit instrument of agriculture, art, or scien- tific research. Their uses may be said to be both

active and passive ; for, while they furnish us almost entirely with the tools by which sub- stances of every kind are moulded to their des- tined form, they are likewise in themselves a principal material to be worked upon. The copper plate which receives the most delicate forms that the engraver can portray, takes its impression from the hard and pointed steel. The various properties, then, which peculiarly render the metals applicable to so many pur- poses are (as before stated), peculiar lustre, opacity, specific gravity, fusibility, extensibility (including malleability and ductility), tenacity. Also those properties which they possess in common with other substances; such as divisi- bility and penetrability, elasticity, affinity for each other, and affinity for other substances.

1. From the first of these properties, the metallic lustre, and the susceptibility of polish, results not only all the brilliancy which delights the eye under so many varying forms and cir- cumstances, but also the perfection of mirrors and of the specula which have so much improved our telescopes.

2. The specific gravity of the metals is attendant upon that solidity and strength which forms a very prominent quality in fitting them for many important uses. The density which thus belongs to them enables us to employ them for vessels which are to retain or conduct the most subtile vapors, such as steam and the gases ; and, as it is combined with ductility, to confine and employ them in the full energy ot highly expansive force.

3. The third property of the metals, fusibility, gives rise to the art of founding, by which forms are produced in endless succession, similar to any given pattern, and similar to each other, and without the labor of working them into shape by long continued exertion. It is only necessary to mention the great use that is now made of cast iron and brass, as instances of the application of this property. As a part of the fusibility of metals, welding may be noticed, which is a quality that some of them have ot

uniting into a solid state by a partial fusion of the surfaces ; thus wrought iron is joined toge- ther, or iron is united to steel, which enables the workman to produce many most useful combi- nations.

4. Of all the properties, perhaps, extensibility is the most extraordinary ; and it adapts the metals most for uses for which substitutes could hardly be found. The following processes depend upon this property. — Forging; which is applied to iron, steel, and copper. Laminating or rolling ; by which

plates or sheets of many metals are produced, and by varying the process we obtain rods and bars. Wire-drawing is applied to metals which have considerable tenacity, and is accomplished by pulling rods successively through hotes, each smaller than the foregoing. Pipes are formed of soft metals, such as lead, tin, and copper, by a somewhat similar operation. Coining is an art also dependent on the ductility of metals, and seems to have been very anciently practised. A similar process ap- plied to thin plates of metal is called stamping, by which many beautiful forms in plated goods and brass ornaments are produced. Plating, particularly of silver, upon copper or brass, is principally performed by applying the two metals to each other, and laminating them together, so that a perfect contact is produced. And gilt wire is formed by drawing a rod of silver which has been coated with gold, and by which the latter metal is attenuated to an almost incredible degree. The tenacity of metals makes them most suitable for many important purposes ; such as chains, wires, steam-boilers, and other strong vessels, guns, &c.

5. By taking advantage of their penetrability, and their different degress of hardness, we avail ourselves of all the purposes which may be at- tained by the processes of turning, boring, filing, cutting or chipping, often called chasing, planing, engraving, polishing, and grinding.

6. The quality of elasticity, which many metals possess in a remarkable manner, gives us a great variety of our best springs for various important purposes ; and under the same head we may arrange the use of metal for musical strings, or wires and bells.

7. From the affinity of the metals for each other we derive the power of making many com- pounds called alloys, and which either possess qualities intermediate between their constituents, or often differing from both; thus rendering it possible for us, if we do not find a metai suited to our purpose, to compound one adapted to particular uses. In noticing the principal alloys, .t is to be observed, that gold and silver are hardened, so as to be more useful than they would be in their pure state, by the mixture of a little copper. Copper affords us many valuable alloys; as with zinc, brass; with tin, gun-metal, bell-metal, or bronze, and speculum metal; with tin and lead, pot-metal. Tin, alloyed with lead, forms the common solder used by plumbers; and also with a proportion of antimony and ,a small quantity of lead gives pewter. Lead and antimony form type metal, which has the re- quisite qualities of fusiblity and considerable hardness. Shot is made of lead mixed with a

small quantity of arsenic. Iron is seldom alloyed with other metals, but steel has lately been mixed with minute portions of silver, pla- tina, rhodium, &c., which are said to improve its quality. Bismuth (eight), lead

(five), and tin (three), form an alloy so fusible as to melt in boiling water; though no one of these metals separately will melt under a temperature of 450°.

Amalgams are combinations , of mercury with other metals, which in many instances readily take place even without the assistance of heat ; the mercury producing in this case a kind of solution of the other metals. Use is made of this circumstance to separate gold and silver from the other substances with which they are mixed in the earth. Amalgams are employed for many purposes. That of gold is used in gilding ; and silvering is performed in a similar manner in some instances. The amalgam of tin is used in silvering (as it is called) the backs of looking-glasses or mirrors. Another use made of the affinity of one metal for another is the coating applied to the surfaces by immersion. Thus the common tin-plates which are so much in use are made of sheet iron, dipped in melted tin, which, with proper treatment, combines with a portion of the iron and adheres to it. Copper for culinary vessels and many other purposes is tinned in nearly a similar manner.

Soldering is another instance of the use made of this affinity. It is performed by applying a metal, or an alloy, more fusible than the one the parts of which are to be united. The solder is easily melted without disturbing the form of the metal worked on ; and, combining in some degree with it, makes a perfect joint.

Tin alloyed with lead makes a solder for lead and tin. — Zinc and a little copper, called spelter, makes a solder for copper and brass. — Brass makes a solder for iron.

8. From the affinity of the metals for other substances, and the ease with which they com- bine chemically with them, we derive a great number of substances most important to the arts, to meckcine, and almost every purpose of life.

With oxygen the metals readily unite, and the metallic appearance and properties are lost, and a class of substances formed, which were at one time called calces, but are now more appropri- ately denominated oxides.

Iron with oxygen forms rust.

Lead with oxygen forms litharge, red-lead, and massicot. •

Copper with oxygen forms scales and red oxide.

Mercury with oxygen forms substances which are important in medicine ; such, as precipi- tate per se, red precipitate.

Tin with oxygen forms enamel or glaze. Putty powder used in polishing. Black oxide is the ore.

Antimony with oxygen gives oxides used in me- dicine.

Arsenic with oxygen forms the poisonous«state of this metal.

Manganese is principally useful from the large quantity of oxygen combined with it in its most common form. The metals very readily also unite with sulphur, and form many useful

compounds. Mercury gives a beautiful pigment called cinnabar or vermilion. Antimony gives some important medicines. Bismuth gives a cosmetic, pearl white, or blanc de fard. Carbon ‘ furms an important compound with iron in the article of steel ; and plumbago is also a small proportion of iron with a large proportion of carbon.

The beautiful art of enamel-painting, with the colors given to our porcelain and glass, are to be referred to the combinations which take place between the metallic oxides and siliceous earth in a state of vitrification. Some of the oxides act powerfully as a flux in promoting the fusion of siliceous earth when it is converted into glass ; and those of lead and arsenic (but particularly the former) are much employed in the manufac- ture of flint glass, and communicate no color to it. Other metallic oxides, however, combine this with silex, imparting to it a variety of delicate and transparent colors, which are used in the arts above mentioned.

Oxide of gold, Oxide of iron, Oxide of silver, lead,

and antimony, Oxide of copper,

chrome,

Oxide of cobalt. Oxide of manganese, Oxide of tin,

Fine purple. Common reds.

*Yellow. * * Green*

J

Fine blue.

Violet.

White.

The fabrication of imitative gems is dependent on the same circumstances, and the color of real gems may also be attributed to metallic mixtures.

Another numerous class of substances origi- nating from the affinity of metals with other sub- stances are the metallic salts, generally resulting from the combination of metals and acids. The list, if completely detailed, would extend to a great length. The following are some of those most commonly employed in the arts : —

Carbonates of lead, White lead.

Carbonates of copper, Verditer.

Sulphates of copper, Roman vitriol.

Sulphates of iron, Green vitriol, copperas.

Sulphates of zinc, White vitriol.

Nitrates of silver, Lunar caustic

,. . .. (Calomel and corrosive

Muriates of mercury, J sublimate.

,, . e . < Sal Jovis, used in solu-

Manates of tin, \ tion in dyeing.

Acetates of copper, Verdigris. Acetates of iron, Iron liquor.

Acetates of lead, Sugar of lead.

Prussiates of iron, Prussian blue.

Gallates of iron. Ink, black dyes.

It has been shown that the metals readily combine with a variety of substances, and that in this state of combination they lose more or less of their metallic characters. In their natural state they are most usually thus combined, and the substances in union with them are called mineralizers. These consist of certain simple substances, some acids, water, and even some metals. Under these heads may be enumerated, as commonly

occurring in natural combination with the metals

Oxygen:

Sulphur. Silex.

Carbonic acid. Arsenic acid. Water.

Sulphuric acid. Muriatic acid. Phosphoric acid. Chromic acid. Molybdic acid. Arsenic.

The result of the natural combination of these substances with metals, is called an ore.

Metallic ores are further compounded by in • eluding mixtures of more than one metal, as in the case of yellow copper ore, which contains both sulphuret of copper and of iron ; galena, or sulphuret of lead, which commonly contains silver; and many ores which contain arsenic combined with other metals. Again, the metallic ores are much intermixed with earthy substances of various kinds,which, though not in chemical union, have often such an intimate mechanical union as to alter their character and add to the variety of their appearance, and to the difficulty of extraction of the pure metal.

Some of the compounds, which have been before described as the products of art, will ap- pear again in the list of the ores ; but generally speaking, owing to the circumstances of other admixtures, or their having been formed in modes which art cannot imitate, their external characters are different in the one case from what they are in the other. One peculiarity which will strike us is the variety of form and the splendor of their crystals, each assuming a regularity in their structure which forms an ad- mirable guide by which their nature may be de- tected ; and this circumstance has been used as the foundation of a study that has rendered the greatest services to mineralogy ; it has assumed the name of crystallography, and should be at- tended to by all who intend to acquire a know- ledge of the mineral kingdom. Besides the ores resulting from combinations such as have been mentioned, certain metals are found in their pure or malleable state, and we speak of them then as native metals, such are, Platina, gold, Almost always.

Silver mercury, copper, > Frequently .

antimony, >

Arsenic, tellurium, bis- ˆ Rarely muth, iron, S

Taking then into account these and the com- pounded state of the ores, it will appear that nature presents us with the metals under a great variety of form, exciting us to careful examina- tion and diligent skill in their discovery, reduc- tion, and adaptation to our wants. It will here- after be shown that the art of reducing the metals depends upon our power of destroying these combinations, occasionally by presenting other affinities, but in all practical cases assisted by fire. The precipitation of copper, from solution by iron, affords an instance, however, of a metal being produced into its metallic state from its compound form without the aid of heat.

The metallic ores, as is well known, are not the produce of all countries, but are limited to situations in which are found certain rocks which enclose them, and which are therefore termed metalliferous rocks. These occur only in several parts of the world, and in these places only can we

expect a supply of the metals. England at present holds a distinguished place in the list of mining countries ; our produce of iron, copper, lead, and tin, is greater than of any other coun- try, and we also possess considerable quantities of zinc and manganese, with a proportion of others, such as arsenic, antimony, cobalt, and silver, and occasionally small quantities of gold. The iron-works of Great Britain are of im- mense extent, and are to be found principally in Staffordshire, Shropshire, South Wales, York- shire, Derbyshire, North Wales, Durham, and some parts of Scotland. Copper is most abun- dantly produced in Cornwall and Devonshire ; but certain quantities are also furnished from Anglesey, some parts of Ireland, and some from Staffordshire. Lead mines are abundant, and very productive on the borders .of Northumber- land, Cumberland, and Durham ; next in value may now be placed those of Flintshire and Den- bighshire. The lead mines of Derbyshire were formerly very important, but are now much de- clined in value. Yorkshire has some productive tracts ; and this metal is also found in Scotland, South Wales, Devonshire, and Cornwall. Tin is a very rare product, and but few parts of the world furnish it; in England it is quite confined to Cornwall and Devonshire, and it has there been worked from the earliest times, so as very probably to have been the first article of trade of our island, as we find the Phoenicians came here to purchase it. The ores of zinc are found in Somersetshire, Wales, Cornwall, and in other places, commonly with tthe ores of lead. Manganese is pretty abundant in the western parts of Devonshire and the adjacent parts of Cornwall. The quantity of silver raised in this country is certainly not very great; yet it is common in many of our lead ores, and is ex- tracted in Cornwall, Northumberland, and De- ronshire. It often exists, however, in a propor-

tion that does not pay for separating it from the lead. The true silver ores are not common with us : however, they have been found in some in- • stances, which are confined to Cornwall. The Herland mine, which was some time since worked, yielded some quantity ; and in the east- ern part of the county some regular silver veins are now working that produce ores similar to those of Peru or Mexico. Gold has been found in small quantities in Ireland, Cornwall, Scotland, and Devonshire ; and arsenic, antimony, cobalt, and some other inferior metals, are found in the mines of Cornwall.

The other countries in the old world, which deserve notice for the metals they afford, are Germany, particularly Saxony and the Hartz Mountains, which have for many ages been the seat of mining, and have produced silver, lead, and a variety of other metals; Hungary which is rich in gold. Sweden and Finland have been long celebrated, and particularly for iron and copper mines, which formerly supplied a great part of the world, but now have much failed in their richness. The quality, however, of the Swedish iron and copper is still unrivalled. Sibe- ri'i has been productive mines of the same metals. The rivers of Africa have long been known for the gold found in their sands, and many parts of

Asia have yielded the precious metals as well as others. Spain was celebrated for its mines, and particularly of quicksilver or mercury and lead ; and France has endeavoured to force its mines into notice, though almost too inconsiderable to deserve it In later times the great source of the precious metals has been the southern parts of America, and most of the enterprise of the ad- venturers to the new world may be attributed to the abundance of them which was soon found to exist there ; and, from the time that Europeans gained footing, the quantity of gold from the Brasils, and of silver from Mexico and Peru, has been immense.

Experience has taught us, as has been ob- served, that metals are only to be found in suffi- cient quantity to repay the labor of procuring them in certain rocks, which are therefore called metalliferous. With respect to the general po- sition of these rocks, as relating to each other and to those of a different order, it will be only ne- cessary to stale that the most important are, pri- mitive rocks : granite, gneiss, mica, slate, clay slate. Secondary rocks : gritstone or sandstone, limestone, shale or plate.

Geologists indeed enumerate many others, but miners consider them as modifications of the same.

In this country clay slate is the most produc- tive of the primitive class, and limestone of the secondary. The metallic ores are found occupy- ing certain spaces in these rocks, which have been arranged under the names of veins, beds, and masses. The two first are the most usual.

Mineral veins are to be understood as fissures, which have been filled up by different mineral substances. Professor Brardevery justly remarks that theterm vein is objectionable, as itconveys the idea of a tube or pipe filled with metal ; whereas it is a plate or lamina. They extend in nearly right lines, are of unequal thickness, penetrate to unknown depths, and usually are somewhat in- clined from the perpendicular. They contain a great variety of metals differing in different countries, and in distinct veins in the same country.

English miners have different terms for veins: in Cornwall they are called lodes, in Derbyshire rakes, and the term dyke, sometimes used, de- scribes the same thing. In these deposits the ores are accompanied by earthy substances gene- rally in a a crystallised or sparry form, called vein-stones, matrix, gangue. Beds are the other kind of regular depository of metallic ores. These are flat or tabular masses interposed between strata of rock, and thus resemble beds of coal. They are seldom very thick ; and mostly produce iron, manganese, and sometimes lead. Masses, or as they are sometimes called pipes, are irregular deposits of the metals, and, not being usual, need not occupy much of our notice. The metals or their ores are also some- times found in alluvial soil, such as gravel and sand, in valleys, and particularly gold in a native form in many places, and tin ore in Cornwall and Banca. See MINERALOGY.

We may conjecture that the first rude process, by which metals were extracted from the ores, was that of putting a quantity of ore upon a

heap of wood, and setting the pile on fire, in conformity to the manner in which ores were smelted during the burning of forests; but as the force of the fire is greatly diminished by the dispersion of its flame, and as the air acts more forcibly in exciting fire when it rushes upon it with greater velocity, it is likely that the heap of – wood and ore would soon be surrounded with a wall of stone, in which sufficient openings would be left for the entrance of the air, and thus a kind of furnace would be constructed.

The Peruvians, we are told, had discovered the art of smelting and refining silver, either by the simple application of fire, or, where the ore was more stubborn and impregnated with fo- reign substances, by placing it in small ovens or furnaces on high grounds, so artificially con- structed, that the draught of air performed the function of a bellows, a machine with which they were totally unacquainted. This method of smelting ores on high

grounds, without the assistance of a bellows, or at least of bellows moved by water, seems to have been formerly practised in other countries as well as in Peru. There are several places in Derbyshire, called boles by the inhabitants, where lead has been anciently smelted, before the invention of moving bellows by water ; these boles were always si- tuated upon high grounds, and mostly upon that side of a hill which faces the west, probably be- cause the wind proceeds most frequently from that quarter. From a pig of lead, dug up in 1766 at one of these boles, near Matlock, and bearing an inscription in relievo, from which it appears to have been smelted in the age of Adrian, many of the boles in Derbyshire seem to be of high antiquity. However, this method of smelting ore by the variable action of the wind, being a very troublesome and precarious process, has been universally disused, and the pore regular blast of a bellows has been intro- duced in its stead.

As the metals are generally intimately mixed and blended with earthy matter or spar, or often with other metallic matter of inferior value, before the processes of smelting or reduction by fire are resorted to, various mechanical opera- tions are used to free them from such admixtures as much as possible, so that they may be ren- dered as pure as these means will allow before they go to the furnace.

The following is a brief account of the pro- cesses of dressing : — The ores, when first raised from the mines, are in various states ; some in large masses from other matter, other large masses containing ores, spars, &c. ; small pieces both of pure ore and that which is mixed, and much that is crumbled to small minute frag- ments.

The first operations relate to separating them into proper sizes and qualities by spulling or knocking, sifting or gridling, and picking. The purer parts are then separated, and are often re- moved at once for smelting after having been broken down to a certain degree of fineness or size. The other or mixed parts are submitted to various processes of washing, but first must be put into a proper state of division by being bruised and sifted to uniform sizes : this is done

either by cobbing and bucking, manual opera- tions ; or by crushing and stamping by machines.

The processes of washing are very various, but depend on one general principle, that the metallic may be separated from the earthy parts by their different specific gravities. Thus, if both are agitated together in water, the heaviest will sink or be deposited first. This principle is applied by throwing the ores into streams of water, running over planes gently inclined. The ores settle at the upper, and the spar and earthy parts at the lower.

Another way much in use is by agitating the whole in sieves, so fine as to permit but little of the solid matter to pass, but to admit the water freely. By this agitation in water, the ore set- tles to the bottom of the sieve, and the spar or matrix floats at the top, where it is skimmed off and thrown away, and this is called jegging. When the ores are cleaned by dressing, they are fitted for the operations of reduction or smelting.

The following simple method of melting is practised by the natives of the province of Mekran in Persia ; which, although it may at times leave a trifling portion of the earth mixed with the metal, is, from its ingenuity, worthy of notice. When a sufficient quantity of the ore is collected, it is placed upon a pile of wood, which is set on fire, and constantly replenished with fresh fuel, until the ore melts and falls to the bottom, when it is separated from the ashes, and found to be considerably clearer than when first taken from the mine. It is then placed in a pit, made of earthern tiles, so constructed as to admit a fire under it. The ore is again melted in this pit, and a considerable quantity of the dirt and dross removed, by skimming the sur- face. After this process the metal is lifted out in a liquid state, poured into hollow cylinders of clay, and then sold.

To come to a complete understanding, relative to the processes of smelting, we must bear in mind the compound nature of these substances ; observing, first, that all the ores are much mixed with earthy matter, even after the operation of dressing or washing, so that these earthy parts often bear a large proportion to the whole. Secondly, that volatile minendisers, or substances which may be dissipated or evaporated by heat alone, enter in most cases into the com- position of the ores. These, as has beeu men- tioned, are sulphur, arsenic, carbonic acid, as the most common, and having therefore consi- derable influence on the processes. Thirdly, that other substances are found combined with the metals which cannot be evaporated simply, but may be separated by the addition of other bodies, to which they have greater chemical affi- nity. These are first and principally oxygen, and occasionally some acids. Lastly, that the metals being obtained, when the foregoing admixtures are got rid of, in a state of union one with the other, or at least to a certain extent, it must fol- low that, to have the one which we want in a pure state, the other should be separated or de- stroyed.

The processes which are employed for all these objects are, calcination or roasting ; fusion or melting ; refining, which is performed in se

vend modes. All these operations require the application of heat ; and in most of them it is urged to a great degree of intensity.

The furnaces employed are of two classes. Blast furnaces, where the fire is excited by the 'Use of bellows, or air cylinders constantly working; and air furnaces, where the effect is produced by strong draught, occasioned by the height or construction of the stacks of chimneys.

Blast furnaces are almost entirely employed in the reduction of the ores of iron, and are for that purpose constructed of large dimensions. Of a smaller size they are very commonly used in iron foundries, where pig-iron is simply melted for making various articles of cast-iron ; and similar furnaces are in use in what are called the blowing-houses in Cornwall, for the finer kind of tin, called grain-tin. Blast furnaces of a small kind, called hearths, are much employed also in Cumberland and Yorkshire for melting lead ore ; but tney are nearly confined to this district, as the Derbyshire and Welsh smelters prefer air furnaces. The fuel mostly in use for the blast furnaces is coke, or coal charred so as to drive off its 'bituminous part; this is common for iron. In lead ores the principal fuel is peat or turf, with a

small mixture of coal. And for tin ores they employ wood charcoal ; coal would not answer, as it would cake together, and pre- 'vent the proper action of the furnace.

Air furnaces for smelting are of a construc- tion which is usually called a reverberatory, though they have also some other local appella- tions. It is not unlike a large flat oven with the fire-place at one end, and the chimney at the other ; so that the matter to be acted upon being placed in the bottom, between the flame playing over it, and reverberating upon it, produces the effect desired. These furnaces are used' with a gentle draught and a moderate red heat for cal- cining or roasting, and with a stronger draught and an intense heat for fusion or flowing, and also for refining. They are the furnaces for copper ores, for lead ores in many places, and for the greater part of the tin ores. Common toal is the fuel used in them, and is the best adapted for them, as the strong flame it gives is just what is required, and the fire-places are so constructed that the fire can be stirred and sup- plied at pleasure.

The first operation which we shall notice, as it is the first in order in the large way, is that of calcination or roasting. The object here is to evaporate the volatile substances, or such as may be driven off by heat, or converted into a gase- ous or aeriform state. These are most com- monly sulphur or arsenic, and occasionally some acids.

In the roasting of ores, the following atten- tions must be given : — 1. To reduce the mineral previously into small lumps, that the surface may be increased ; but they must not be so small, nor placed so compactly, as to prevent the pas- sage of the air and flame. 2. The larger pieces must be placed at the bottom of the pile, where the greatest heat is. 3. The heat must be gra- dually applied, that the sulphur may not be melted, which would greatly retard its expul- sion ; and that the spars, fluors, and stones, in-

termixed with the ore, may not crack, fly, and be dispersed. 4. The ores not thoroughly roasted by one operation must be exposed to a second. 5. The fire may be increased towards the end, that the noxious matters more strongly adhering may be expelled. 6. Fuel which yields much flame, as wood and fossil coals free from sul- phur, is said to be preferable to charcoal or cokes. Sometimes cold water is thrown on the calcined ore, at the end of the operation, while the ore is yet hot, to render it more friable. No general rule can be given concerning the dura- tion or degree of the fire, these being very vari- ous according to the difference of the ores. A roasting during a few hours or days is sufficient for many ores ; while some, such as the ore of Rammelsberg, require that it should be continued during several months.

Sch hitter enumerates five methods of roasting ores. 1. By constructing a pile of ores am fuel placed in alternate strata, in the open air, without any furnace. 2. By confining such a pile within walls, but without a roof. 3. By placing the pile under a roof, without lateral walls. 4. By placing the pile in a furnace con- sisting of walls and a roof. 5. By roasting the ore in a reverberatory furnace, in which it must be continually stirred with an iron rod.

The German process for extracting sulphur from pyrites may be thus described : — It ought, in the first instance, to be exposed to a heat suf- ficient to sublime the sulphur, or to make it dis- til in vessels, which must be close to prevent its burning. The furnaces employed for this ope- ration are oblong, like vaulted galleries; and in the vaulted roofs are made several open- ings. These are called furnaces for extracting sulphur. In these furnaces are placed earthen- ware tubes, filled with pyritesbroken into pieces of the size of small nuts. Each of these tubes contains about fifty pounds of pyrites. They are placed in the furnace almost horizontally, and have scarcely more than an inch of descent. The euds, which come out of the furnace five or six inches, become gradually narrower. Within each tube is fixed a piece of baked earth in form of a star, at the place where it begins [to come narrower, in order to prevent the pyrites from falling out, or choking the mouth of the tube. To each tube is fitted a receiver, covered with a leaden pipe, pierced with a small hole to give air to the sulphur. The other end of the tube is exactly closed. A moderate fire is made with wood, and in eight hours the sulphur of the py- rites is found to have passed into the receivers. The residuum of the pyrites, after distillation, is drawn out at the large end, and fresh pyrites is put in its place. From this residuum, which is called burnings of sulphur, vitriol is extracted.

The eleven tubes, into which were put, at three several distillations, in all QOOlbs. of pyrites, yield from lOOlbs. to 150lbs. of crude sulphur, which is so impure as to require to be purified by a second distillation. This purification of crude sulphur is also done in a furnace in form of a gallery, in which five cucurbits are arranged on each side. These cucurbits are placed in a sloping direction, and contain about eight quin- tals and a half of crude sulphur. To them are

luted earthen tubes, so disposed as to answer the purpose of capitals. The nose of each of these tubes is inserted into an earthen pot, called the forerunner.. . This pot has three openings; namely, that which receives the nose of the tube ; a second smaller hole, which is left open to give air; and

a third in its lower part, which is stopped with a wooden peg.

When the preparations are made, a fire is lighted, about seven o'clock in the evening, and is a little abated when the sulphur begins to dis- til. At three o'clock in the morning the wooden pegs, which stop the lower holes of the forerun- ners, are for the first time drawn out, and the sulphur flows out of each of them into an earthen pot with two handles, placed below for its recep- tion. In this distillation the fire must be mode- rately and prudently conducted ; otherwise less sulphur will be obtained, and it would also be of a gray color, and not of the fine yellow which it ought to have when pure. The ordinary loss in the purification of eight quintals of crude sul- phur is, at most, one quintal.

When all the sulphur has flowed out, and has cooled a little in the earthen pots, it is cast into moulds made of beech-tree, which have been previously dipped in water, and set to drain. As soon as the sulphur is cooled in the moulds, they are opened, and the cylinders of sulphur are taken out and put up in casks. These are called roll-brimstone.

There are some ores which contain so much sulphur that part of it is actually collected in the ordinary operation of roasting, without much trouble for that purpose. Such is the ore of Ramelsberg, in the country of Hartz. This ore, which is of lead, containing silver, is partly very pure, and partly mixed with cupreous pyrites aud silver; hence it is necessary to roast it. The roasting is performed by laying alternate strata of ore and wood upon each other in an open field, taking care to diminish the size of the strata as they rise higher ; so that the whole mass shall be a quadrangular pyramid truncated above, whose base is about thirty-one feet square. Be- low, some passages are left open, to give free entrance to the air ; and the sides and top of the pyramid are covered over with small ore, to con- centrate the heat and make it last, longer. In the centre of this pyramid there is a channel which descends vertically from the top to the base. When all is properly arranged, ladles full of red- hot scoria, from the smelting furnace are thrown down the channel, by which means the shrubs aud wood placed below for that purpose are kindled, and the fire is from them communicated to all the wood of the pile, which continues burning till the third day. At that time the sul- phur of the mineral becomes capable of burning spontaneously, and of continuing the fire after the wood is consumed.

When this roasting has oeen continued fifteen days the mineral becomes greasy ; that is, it is covered over with a kind of varnish ; twenty or twenty- five holes or hollows are then made in the upper part of the pile, in which the sulphur is collected. From these cavities the sulphur is taken out thrice every day, and thrown into wa- ter. This sulphur is not pure, but crude;

and is

therefore sent to the manufacturers of sulphur to be purified in the manner above related.

The calcination of copper, lead, and tin ores, is performed in reverberatory furnaces at a mode- rate red heat. In the copper works in South Wales, each furnace contains full three tons of raw ores, which are frequently burned, to ex- pose fresh surfaces, for twelve hours. Lead oros are treated in the same manner, in the same fur- nace often, which, with a higher heat, is used to melt them, and the charge seldom exceeds a ton. Tin ores being simple oxides, and not decom- posable in this way, are roasted or calcined prin- cipally to alter the specific gravity of the pyrites with which they are mixed, which thus may be separated by subsequent dressing or washing. The furnaces for this purpose, in Cornwall, are called burning-houses. Iron ores, though com- monly oxides, are often mixed with sulphurets or iron pyrites, and are roasted 10 free them from the sulphur ; this, however, is not done in fur- naces, but the ore is stratified with refuse coal, and burnt in large heaps in the open air.

At the Paris and Mona copper mines in the island of Anglesey, where the ores are poor in metal, but contain a large proportion of sulphur, they are treated in the same way, except that they do not find it necessary to use coal, as a small quantity of wood is sufficient to set the ore on fire, and combustion goes slowly on, owing to the sulphur ; a heap of 300 or 400 tons is eight months in burning, and some of the sulphur is sublimed and is condensed in chambers or vaults, to which the flues are conducted.

In the process of calcination sulphur is gene- rally inflamed, and, uniting with the oxygen of the atmosphere, is converted into sulphurous acid gas ; which mixed, as it is, with the vapor of certain volatile metals, such as arsenic, zinc, antimony, or lead, forms a dense or suffocating smoke destructive of vegetation ; but it does not appear so prejudicial to animal life, except where lead is prevalent. Whoever has seen the country round the copper works at Swansea, will have observed the desolating eifect of the smoke ; and yet it is proved, on the best evidence, that the men are not subject to any peculiar disease. One set of works there, belonging to Messrs. Vivians, who purchase the ores from the mines in Cornwall, sometimes work at the rate of ‘600 tons per week. These gentlemen have some time back constructed, at a great expense, erec- tions to condense the noxious vapors, and upon which they have consulted Mr. Philips and other eminent chemists. They have altogether eighty- four reverberatory furnaces, of which twenty-five are used for calcining.

The ores being deprived of sulphur, or at least to a certain degree (for one

calcination does not effect this completely), the next step in smelting is to get rid of all the earthy matter, which is done at once by the simple operation of bringing the whole into a state of fusion. It has already been stated that some of the metallic oxides combine with certain earths in fusion, and act powerfully as a flux, which is a term employed for sub- stances that promote the fusibility of others in the fire. It is also necessary to remark, that although a single earth, as si lex, for instance, is nearly in'

fusible by itself in our strongest fires ; yet, by mixing the earths together, their infusibility is increased, and we obtain the power of rendering them all fluid by heat Furthei, that some of the earths and some of the. metallic oxides pos- sess this influence in a greater degree than others. Thus lime, in all its states, but particularly in that of fluor-spar, and oxide of lead, are the most powerful assistants of the fusion of earthy matter in general, or the best fluxes. Many salts, indeed, possess this property to a much greater extent ; but they are far too expensive for use in the larger operations of smelting, though they are much used for trials in the small way, called assays.

Now as the ores commonly contain different mixtures in different mines, and as it results from what has been said that such a combination as may be thus expected is useful in promoting the fusion of the whole, the smelters find it desi- rable to mix the ores from different veins on this account; but, as even this does not always suc- ceed sufficiently, an addition is commonly made of lime, limestone, or fluor-spar. With a mix- ture of these the ores are submitted to the strongest action of the fire; complete fusion of the whole mass takes place; the earthy parts form a fluid impure glass, being completely vi- trified ; the metallic parts of the ore, either quite free from sulphur, or in a degree combined with it, are also entirely melted, and a perfect separa- tion takes place ; owing to the great difference in the specific gravity of the substances : the earthy glass in a liquid state, which is now called slag or scoria, occupying the upper place, and the metallic part by its weight sinking down and fonning a liquid stratum of melted metal under- neath, where also it is prevented from oxidation and evaporation from the intense heat applied. The whole is in some cases stirred, to assist the precipitation of the metallic matter to the bottom of the furnace ; in other cases this is left to take place of itself.

The fusion of copper ore is conducted in re- verberatory furnaces at a high degree of heat, and the slag is raked off in a fluid state. Lead and tin ores are treated in a nearly similar manner.

Iron smelting is carried on in blast furnaces of very large dimensions, in which coke is em- ployed as fuei, ana /imestone is used as a flux. Copper of the first flowing is in part combined with sulphur, so as to require subsequent calci- nations and repeated fusions before it comes to the refining process. Lead is generally produced pure in one operation from the reverberatory furnace, and also from the blast-furnace, where the sulphur is dissipated partly by the applica- tion of heat, and partly by combining with the lime which is used. Tin, being produced from an oxide, some carbonaceous matter, such as small-coal, is used in mixture with the ores, the carbon unites with the oxygen and leaves the metal pure, except as it may happen to be mixed with other metallic substances.

By the operations which have been described the whole metallic contents of the ores are produced in a separate state, the volatile part being dissipated by calcination, and the earthy part by being con- verted into slag, which is easily detached from

the metal. It is evident, however, that if more metals than one exist in the ores they will all be reduced by the same treatment, and therefore we may, and often do, procure an alloy more or less complicated.

The purification of the metals is performed by various processes of refining, which are suited to their several qualities, and advantage is taken of the different properties in each to effect this. Thus, some metals are refined by their having less affinity for oxygen than others ; such as gold, silver, and copper ; these, not being easily oxi- dised in the fire, may be exposed to a strong and continued heat, which converting the inferior metals into oxides, they rise to the surface of the melted mass, fromrwhich they may be removed by various means. An example of this is the separa- tion of lead from silver. This operation is called testing or cupellation. Another mode of refining is, when one metal is more fusible than another, whereby a separation of the two may effected. Thus tin of the first melting often con- tains some iron or copper, but, being melted at a very low red heat, the tin oxides, leaving the others, which do not flow but at a higher tempera- ture. Silver is separated from copper when it is in small proportions, by adding lead to. the whole infusion. The silver unites with the" lead, and is separated with it afterwards by a heat which melts it out from the copper. This pro- cess is called eliquation. The silver is separated from the lead afterwards by cupellation, which is a process adapted also to procuring gold.

Where metals in the state of oxide are to be reduced into their malleable or proper form, it is done by fusion, in contact with carbon, as was described in the case of tin ores ; and they are therefore mixed with small-coal, wood, or char- coal. The oxygen leaves the metal, and forms, with the

carbon, carbonic acid, which escapes. Thus litharge, which is the oxide of lead ob- tained by cupellation, is again brought into the state of lead : this process is called reviving. Iron, in its perfect state, is nearly infusible, and it must be largely combined with carbon to make it melt freely; on which account we see the use of smelting the ores in contact with coke. The carbon is separated when it is converted into bar-iron ; and, in converting this into steel, car- bon is again made to combine in another pro- portion. Copper requires, after it is freed as much as possible from the other metals, a pecu- liar treatment with charcoal, and a continued melting heat ; which process is called toughen- ing. The melted metal is much stirred with wood poles, and after a time assumes the re- quired properties of extending under the ham- mer without being subject to crack. The theory of this process is rather obscure. The volatile metals would of course be dissipated if they were exposed to the heat requisite for melting them out from the substances with which they are mixed in their ores in open furnaces ; they are therefore distilled in retorts, which are gene- rally made of iron. Distillation is employed in this country for obtaining zinc, and abroad also for this metal and in the mines of mercury.

The mode of extracting the precious metals most in use in Hungary and Cither carts of Gei-

many, as well as in all the American mines, is that of amalgamation of the ores with mercury. By this process the gold or silver is dissolved by the mercury and separated from the earthy mixture, and also from baser metals, which do not so readily combine with mercury. This process requires, however, that the ores should be previously cal- cined to decompose the sulphurets, and an addi- tion of common salt is added to facilitate this de- composition ; the whole is then finely powdered and triturated in water with the mercury by ma- chines. Subsequent distillation separates and preserves the mercury, and the gold or silver is refined in the usual way.

The metals raised in this country form an im- portant part of our national wealth : they are exported in considerable quantities in their unma- nufactured state; but a greater proportion are worked up into innumerable forms, and thus con- tribute much more largely to the general stock, in the employment and encouragement of industry and ingenuity. The most important metals pro- duced in Great Britain are, iron, copper, lead, tin. With respect to the first, the iron-works of this country, as is well known, are of im- mense extent, and are rapidly increasing in pro- duce. By

improved methods of manufacture iron has, of late years, been much reduced in price, and this has increased the demand both at home and abroad. The manufacture of iron may be computed at

Wales .... 150,000 tons. Shropshire and Staffordshire 180,000 Yorkshire and Derbyshire 50,000 Scotland and other places 20,000

400,000

£5 per ton.

£2,000,000

The quantity of copper raised is about 10,000 tons ; of which about 8000 tons are produced in Cornwall, and the remainder in Anglesey, Devon, Ireland, and Staffordshire. In the year 1800 the quantity of copper raised in the Cornish mines was between 5000 and 6000 tons ; so that there has been an increase since that time of from 2000 to 3000 tons. The value of the whole quantity of copper in its unmanufactured state is about £1,000,000.

The lead of Great Britain probably amounts to from 30,000 to 32,000 tons The northern parts of the kingdom, Cumberland, Durham, and Northumberland, produce 12,000 tons. North Wales and Shropshire 8,000 Yorkshire .... 4,500 Derbyshire .... 4,000 Scotland, Devon, Cornwall, and

South Wales . . . 3,000

31,500

The value of the lead is altogether about £750,000.

Tin, as before stated, is only found in Corn- wall and Devon, and the quantity has fluctuated from 2800 to 5000 tons in the year : of late we may reckon it at somewhat above 3000 tons, and its value about £400,000. We have also certain

quantities of zinc, manganese, silver, antimony and cobalt; but of these it is difficult to esti- mate the quantity or value.*

The aggregate value of the metals of the king- dom is thus more than £4,000,000, but is in- creased enormously when manufactured ; and they are the foundation of important branches of our commerce in our unrivalled fabrication of hardware.

Iron is exported to almost all parts of the world in its raw, as well as in its

manufactured states, and in an infinite diversity of useful and ornamental forms which it would be tedious to attempt to describe.

Copper is employed largely in its simple state, particularly rolled into sheet ; and is also very much used in mixture with other metals, it being the principal constituent in brass, gun-metal, and pot-metal. The town of Birmingham alone is said to require 2000 tons a year for its varied manufactures. About 3000 tons have of late been annually sent to the East Indies and Ame- rica, United States; the West Indies and dif- ferent countries in Europe take from us consi- derable supplies.

Of the large portion of lead which our mines produce a considerable part is worked up into forms which at once destroy it, so that it does not return again for use. Thus 5000 tons a year are made into small shot, partly for home con- sumption and partly for exportation. The quan- tity made into white and red-lead and princi- pally used as pigments, and part converted into the glazing of pottery, or an ingredient of glass- making, is little, if at all, short of 10,000 tons.

Tin is an article of export to most countries ; a great deal is often sent to China; and., in the manufacture of tin plate, or thin rolled iron coated with tin in the manner before described, is a large article of commerce.

Swedenborgius has very industriously and exactly described the different processes used in most parts of Europe, for the smelting of ores of iron, for the forging of that metal, and for the conversion of it into steel ; but we do not find that he, or any other author, have, by experi- ments and discoveries, contributed much to the illustration or to the improvement of this part of metallurgy ; unless, perhaps, we except those of M. Reaumur, concerning the softening of cast- iron by cementation with earthy substances. The ores of iron are known to vary much in their appearance, in their contents, in their de- grees of fusibility, in the methods necessary for the extraction of their contained metal, and in the qualities of the metal when extracted.

Most ores require to be roasted previously to their fusion ; some more slightly, and others with a more violent and long-continued fire. Those which contain much sulphur, arsenic, or vitriolic acid, require a long-continued and repeated roasting, that the volatile matters may be ex- pelled. Of this kind is the black iron ore, from which the Swedish iron is said to be obtained . Some ores require a very slight roasting only, that they may be dried and rendered friable. Such are the ores called bog ores, and others, which being in a calcined state, and containing little sulphureous matter, would, by a faither

calcination, be rendered less capable of being re- duced to a metallic state.

The roasting of ores of iron is performed by kindling piles, consisting of strata of fuel and of ore placed alternately upon one another, or in furnaces similar to those commonly employed for the calcination of lime- stone. Some authors advise the addition of a calcareous earth to sul- phureous ores during the roasting, that the sul- phur may be absorbed by this earth when con- verted into quicklime. But we may observe, that the quicklime cannot absorb the sulphur or sulphureous acid, till these be first extricated from the ore, and does therefore only prevent the dissipation of these volatile matters; and, secondly, that the sulphur thus united with the quicklime forms a hepar of sulphur, whicli will unite with and dissolve the ore during its fu- sion, and prevent the precipitation of the metal.

The next operation is the fusion or smelting of the ore. This is generally performed in fur- naces, or towers, from twenty to thirty feet high ; in the bottom of which is a basin for the reception of the fluid metal. When the furnace is suffici- ently heated, which must be done at first very gradually, to prevent the cracking of the walls; a quantity of the ore is to be thrown in from time to time, at the top of the furnace, along with a certain quantity of fuel and limestone, or whatever other flux is employed. When the fuel below is consumed by the fire, excited by the wind of the bellows, the ore, together with its propor- tional quantity of fuel and of flux, sink gradually down, till they are exposed to the greatest heat .1 the furnace. There the ore and the flux are fused, the metallic particles are revived by the fuel, are precipitated by means of their weight through the scoria formed of the lighter earthy parts of the flux and of the ore, and unite in the basin at the bottom of the furnace, forming a mass of fluid metal covered by a glassy scoria. When a sufficient quantity of this fluid metal is collected, which is generally twice or thrice in twenty-four hours, an aperture is made, through which the metal flows into a channel or groove made in a bed of sand ; and from thence into smaller, lateral, or connected channels, or other moulds. There it is cooled, becomes solid, and retains the forms of the channels or moulds into which it flows. The piece of iron formed in the large channel is called a sow, and those formed in the smaller channels are called pigs. Some- times the fluid iron is taken out of the furnace by means of ladles, and poured into moulds ready prepared, of sand or of clay, and is thus formed into the various utensils and instruments for which cast iron is a proper material.

The scoria must be, from time to time, al- lowed to flow out, when a

considerable quantity is formed, through an aperture made in the front of the furnace for that purpose. A suffici- ent quantity of it must, however, be always left to cover the surface of the melted iron, else the ore which would fall upon it, before the separa- tion of its metallic from its unmetallic parts, would lessen the fluidity and injure the purity of the mc-lted metal. This scoria ought to have a certain degree of fluidity; for, if it be too thick, the revived metallic particles will not be able to

overcome its tenacity, and collect together into drops, nor be precipitated. Accordingly, a scoria, not sufficiently fluid, is always found to contain much of the metal. If the scoria be too thin, the metallic particles of the ore will be precipitated before they are sufficiently metal- lised, and separated from the earthy and unrae- tallic parts. A due degree of fluidity is given to the scoria by applying a proper heat and by add- ing fluxes suited to the ore.

Various substances are added to assist the fu- sion of iron ores which are difficultly fusible. These are, 1. Ores of a fusible quality, or which, being mixed with others of a different quality, be- come fusible: accordingly, in the great works for smelting ores of iron, two or more different kinds of ore are commonly mixed, to facilitate the fusion, and also to ameliorate the quality of the iron. Thus an ore yielding an iron which is brittle when hot, which quality is called red- short, and another ore which produces iron brittle when cold, or cold-short, are often mixed together ; not, as sometimes supposed, that these qualities are mutually destructive of each other, but that each of them is diminished in the mixed mass of iron, as much as this mass is larger than the part of the mass originally possessed of that quality. Thus, if from two such ores the mass of iron ob- tained consists of equal parts of cold-short and of red-short iron, it will have both these quali- ties, but will only be half as cold-short as iron obtained solely from one of these ores, and half as red-short as iron obtained only from the other ore. 2. Earths and stones are also generally added to facilitate the fusion of iron ores. These are such as are fusible, or become fusible when mixed with the ore, or with the earth adhering to it. Authors direct that, if this earth be of an argillaceous nature, limestone or some calcare- ous earth should be added ; and that, if the ad- herent earth be calcareous, an argillaceous or siliceous earth should be added ; because these two earths, though singly infusible, yet, when mixed, mutually promote the fusion of each other ; but as limestone is almost always added in the smelting of iron ores, and as in some of these, at least, no argillaceous earth appears to be contained, we are inclined to believe, that it generally facilitates the fusion, not merely by uniting with those earths, but uniting with that part of the ore which is most perfectly calcined, and least disposed to metallisation; since we know that by mixing a calciform or roasted ore of iron with calcareous earth, without any inflam- mable matter, these two substances

may be totally vitrified. Calcareous earth does indeed so powerfully facilitate the fusion of iron ores, that it deserves to be considered whether work- men do not generally use too great a quantity of it in order to hasten the operation. For, when the scoria is rendered too thin, much earthy or unmetallised matter is precipitated, and the cast iron produced is of too vitreous a quality, and not sufficiently approximated to its true metallic state.

Some authors pretend that a principal use of the addition of limestone in the smelting of iron ores is to absorb the sulphur, or vitriolic acid, of these ores : but, as we have already observed, a hepar of sulphur is formed by that mixture of

calcareous earth and sulphur, which is capable of dissolving iron in a metallic state ; and thus the quantity of metal obtained from an ore not sufficiently divested of its sulphur, or vitriolic acid (which, by uniting with the fuel, is formed into a sulphur during the smelting), must be con- siderably diminished, though rendered purer, by the addition of calcareous earth : hence the utility appears of previously expelling the sulphur and vitriolic acid from the ore by a sufficient roasting. 3. The scoria of former smeltings is frequently added to assist the fusion of the ore ; and, when the scoria contains much iron, as sometimes happens in ill-conducted operations, it also in- creases the quantity of metal obtained.

The quantity of these fusible matters to be added varies according to the nature of the ore ; but ought in general to be such, that the scoria shall have its requisite degree of thinness, as above mentioned.

The fuel used in most parts of Europe for the smelting of ores of iron is charcoal. In several works, in England and Wales, iron ore is smelted by means of pit-coal previously reduced to cin- ders, or cokes, by a kind of calcination similar to the operation for converting wood into char- coal, by which the aqueous and sulphureous parts of the coal are expelled, while only the more fixed bituminous parts are left behind. The quality of the iron depends considerably upon the quality and also upon the quantity of the fuel employed. Charcoal is fitter than cokes for producing an iron capable of being rendered malleable by forging. The quantity of fuel, or the intensity of the heat, must be suited to the greater or less fusibility of the ore. Sulphureous, and other ores easily fusible, require less fuel than ores distinctly fusible. In general, if the quan- tity of fuel be too small, and the heat not suffi- ciently intense, all the iron will not be reduced, and much of

it will remain in the scoria, which will not be sufficiently thin. This defect of fuel may be known by the blackness and compactness of the scoria; by the qualities of the iron ob- tained, which, in this case, is hard, white, light, intermixed with scoria, smooth in its texture, without scales or grains, rough and convex in its surface, and liable to great loss of weight by being forged ; and, lastly, it may be known by observing the color and appearance of the drops of metal falling down from the smelted ore, and of the scoria upon the surface of the fluid metal, both of which are darker colored than when more fuel is used. When the quantity of fuel is sufficiently large, and the heat is intense enough, the iron is darker colored, denser, more tenacious, contains less scoria, and is therefore less fusible, and loses less of its weight by being forged. Its surface is also smoother and somewhat concave ; and its texture is generally granulated. The sco- ria, in this case, is of a lighter color and less dense. The drops falling down from the smelted ore, and the liquid scoria, in the furnace, appear hotter and of a brighter color. When the quan- tity of fuel is too great, and the heat too intense, the iron will appear to have a still darker color, and more conspicuous grains or plates, and the scoria will be lighter, whiter, and more spongy. The drops falling from this melted ore, and the

fluid scoria, will appear to a person looking into the furnace through the blast- hole to be very white and shining hot. The quantity of char- coal necessary to produce 5 cwt. of iron, when the ore is rich, the furnace well-contrived, and the operation skilfully conducted, is computed to be about forty cubic feet ; but is much more in contrary circumstances.

The time during which the fluid metal ought to be kept in fusion before it is allowed to flow out of the furnace must also be attended to. How long that time is, and whether it ought not to vary according to the qualities of ores and other circumstances, we cannot determine. In some works the metal is allowed to flow out of the furnace every six or eight, and in others only every ten or twelve hours. Some workmen imagine that a considerable time is necessary for the concoction of the metal. This is certain, that the iron undergoes some change by being kept in a fluid state ; and that, if its fusion be prolonged much beyond the usual time, it is rendered less fluid, and also its cohesion, when it becomes cold, is thereby greatly dimi- nished. The marquis de Courtivron says that the cohesion may be restored to iron in this state by adding to it some verifiable earth, which he considers as one of the constituent parts of iron, and which he thinks is destroyed by the fusion too long continued. That the fusibility of cast iron does depend on an admixture of some vitrifiable earth appears probable from the great quantity of scoria forced out of iron during its conversion into malleable or forged iron, and from the loss of fusibility which it suf- fers nearly in proportion to its loss of scoria. The quantity of iron daily obtained, from such a furnace as is above described, is from two to five tons in twenty-four

hours, according to thetich- ness and fusibility of the ore, to the construction of the furnace, to the adjustment of the due quantity of flux and of steel, and to the skill em- ployed in conducting the operation.

The quality of the iron is judged of by ob- serving the appearances during its flowing from the furnace, and when it is fixed and cold. If the fluid iron, while it flows, emits many and large sparkles ; if many brown spots appear on it while it is yet red hot ; if, when it is fixed and cold, its corners and edges are thick and rough, and its surface is spotted, it is known to have a red-short quality. If, in flowing, the iron seems covered with a thin glassy crust, and if, when cold, its texture is whitish, it is believed to be cold-short. M. Reaumur says that dark- colored cast iron is more impure than that which is white. No certain rules for -judging of the quality of iron before it is. forged can be given. From brittle cast-iron sometimes ductile forged iron is produced. Cast-iron with brilliant plates and points, when forged, becomes sometimes red-short and sometimes cold-short. Large shining plates, large cavities called eyes, want of sufficient density, are almost certain marks of bad iron ; but whether it will be cold or red- short cannot be affirmed till it be forged. White- ness of color, brittleness, closeness of texture, and hardness, are given to almost any cast-iron by sudden cooling ; and we may observe that, in

general, the whiter the metal is, the harder it is also, whether these properties proceed from the quality of the iron or from sudden cooling ; and that, therefore, the darker-colored iron is fitter for being oast into moulds, because it is capable in some measure of being filed and polished, especially after it has been exposed during seve- ral hours to a red-heat in a reverberatory furnace, and very gradually cooled. This operation, called by the workmen annealing, changes the texture of the metal, renders it softer and more capable of being filed than before, and also con- siderably less brittle. M. Reaumur found that, by cementing cast-iron with absorbent earths in a red heat, the metal may be rendered softer, tougher, and consequently a fit material for many utensils formerly made of forged iron.

In Navarre, and in some of the southern parts of France, iron ore is smelted in furnaces much smaller, and of a very different construction from those above described. A furnace of this kind consists of a wide-mouth copper cauldron, the inner surface of which is lined with masonry a foot thick. The mouth of this cauldron is nearly of an oval or elliptic form. The space or cavity contained by the masonry is the furnace in which the ore is smelted. The depth of this cavity is equal to two feet and a half : the larger

diame- ter of the oval mouth of the cavity is about eight feet, and its smaller diameter is about six feet ; the space of the furnace is gradually contracted towards the bottom, the greatest diameter of which does not exceed six feet •: eighteen inches above the bottom is a cylindrical channel in one of the longer sides of the cauldron and masonry, through which the nozzle of the bel- lows passes. This channel, and also the bellows pipe, are so inclined that the wind is directed towards the lowjest point of the opposite side of the furnace. Another cylindrical channel is in one of the shorter sides of the furnace, at the height of a few inches from the bottom, which is generally kept closed, and is opened occasionally to give passage to the scoria : and above this is a third channel, in the same side of the furnace, through which an iron instrument is occasionally introduced to stir the fluid metal, and to assist, as is said, the separation of the scoria from it. The greatest height of this channel is at its ex- ternal aperture on the outside of the furnace, and its smaller height is at its internal aperture ; so that the instrument may be directed towards the bottom of the furnace ; but the second channel below it has a contrary inclination, that, when an opening is made, the scoria may flow out of the furnace into a basin placed for its reception. When the furnace is heated sufficiently the workmen begin to throw into it alternate changes of charcoal and ore previously roasted. They take care to throw the charcoal chiefly on that side at which the wind enters, and the ore at the opposite side. At the end of about four hours a mass of iron is collected at the bottom of the furnace, which is generally about 6cwt.; the bel- lows are then stopped ; and when the mass of iron is become solid the workmen raise it from the bottom of the furnace, and place it, while yet soft, under a large hammer, where it is forged. The iron produced in these furnaces is of the

best quality ; the quanti'y is also very consider- able, in proportion to the quantity of ore, and to the quantity of fuel employed. In these fur- naces no limestone or other substance is used to facilitate the fusion of the ore.

The iron thus produced by smelting ores is very far from being a pure metal ; and though its fusibility renders it very useful for the forma- tion of cannon, pots, and a great variety of uten- sils, yet it wants the strength, toughness, and malleability which it is capable of receiving by further operations.

Cast-iron seems to contain a large quantity of vitreous or earthy matter mixed with the pure iron ; which matter is probably the chief cause of its fusibility, brittleness, hardness, and other properties by which it differs from forged iron. The sulphur, arsenic, and other impurities of the ore, which are sometimes contained in cast-iron, are probably only accidental, and may be the causes of the red-short quality, and of other properties of certain kinds of iron : but the earthy matter above mentioned seems

principally to distinguish cast-iron from forged or malleable iron ; for first, by depriving the former of this earthy matter, it is rendered malleable ; and secondly, by fusing malleable iron with earthy and vitrifiable matters, it loses its malleability, and is restored to the state and properties of cast-iron.

The earthy vitreous matter contained in cast- iron consists probably of some of the ferrugi- nous earth or calx of the ore not sufficiently metallised, and also of some unmetallic earth. Perhaps it is only a part of the scoria which adheres to, and is precipitated with, the metal- lic particles from which it is more and more separated, as the heat applied is more intense, and as the fusion is longer continued. To sepa- rate these impurities from cast-iron, and to unite the metallic parts more closely and compactly, and thus to give it the ductility and tenacity which render this metal more useful than any other, are the effects produced by the following operations : — The first of these operations is a fusion .of the iron, by which much of its impu- rities is separated in form of scoria; and by the second operation a further and more complete separation of these impurities, and also a closer compaction of the metallic particles, are effected by the application of mechanical force or pres- sure by means of large hammers. Some differ- ences in the construction of the forge or furnace, in which the fusion or refining of cast-iron is performed, in the method of conducting the operation, and in other circumstances, are ob- served to occur in different places.

The following new method of shingling and manufacturing iron must not be passed unno- ticed. The ore, being fused in a reverberatory fur- nace, is conveyed, whilst fluid, into an air-fur- nace, where it is exposed to a strong heat till a bluish flame is observed on the surface ; it is then agitated on the surface till it loses its fusi- bility, and is collected into lumps called loops. These loops are then put into another air-fur- nace, brought to a white or welding heat, and then shingled into half-blooms or slabes. They are again exposed to the air-furnace, and tho half-blooms taken out and forged into anconies,

bars, half-flats, and rods for wire ; while the with the cost of removal and labor, is savec by

slabes are passed, when of a welding heat, founding it into what is required, at its first being

through the grooved rollers. In this way of pro- smelted.

ceeding it matters not whether the iron is pre- Dr. Clarke's account of the iron mines he

pared from cold or red-short metal, nor is there visited at Persberg, which is of a very interest-

any occasion for the use of finery, charcoal, coke, chafery, or hollow fire, or any blast by bellows, or otherwise ; or the use of fluxes in any part of the process

ing character, will be read with interest by the English metallurgist. The author's visit to these mines was made after he had per- sonally inspected many of the principal works ot

In one bar frequently two or more different the same nature in other countries, and espe- kinds of iron may be observed, which run along cially in his own. For the last ten years of his its whole length ; and scarcely .a bar is ever life he had been much in the habit of seeing found of entirely pure and homogeneous iron, similar works : it is not therefore owing to any This difference probably proceeds from the prac- surprise at the novelty of the scene before him, tice we have mentioned of mixing different that he has now to mention the astonishment he kinds of ores together in the smelting ; and also felt when he arrived at the mouth of one of the from the practice of mixing two or more pigs of great Persberg mines; but he is fully prepared cast-iron of different qualities in the finery of to say of it, and with truth, there is nothing like these, by which means the red-short and cold- it in all that he has beheld elsewhere. 'For gran- short qualities of the different kinds are not,, as deur of effect, filling the mind of the spectator we have already remarked, mutually counteracted with a degree of wonder which amounts to awe, or destroyed by each other, but each of these there is no place where human labor is exhibited qualities is diminished in the mixed mass of under circumstances more tremendously striking, iron, as much as this mass is larger than the part As we drew near to the wide and open abyss, a of the mass originally possessed of that quality ; vast and sudden prospect of yawning caverns and that is, if equal parts of red-short and of cold- of prodigious machinery prepared us for the

short iron be mixed together, the mixed mass will be only half as red-short as the former part, and half as cold-short as the latter. For these different kinds of iron seem as if they were only capable of being interwoven and diffused through each other, but not of being intimately united or combined.

The quality of forged iron may be known by the texture which appears on breaking a bar. The

descent. We approached the edge of the dread- ful gulph whence the ore is raised, and ventured to look down ; standing upon the verge of a sort of platform, constructed over it in such a manner as to command a view into the great opening, as far as the eye could penetrate amidst its gloomy depths : for, to the sight, it is bottomless. Im- mense buckets suspended by rattling chains were passing, and we could perceive ladders scaling

best and toughest iron is that which has the most all the inward precipices upon which the work- fibrous texture, and is of a clear grayish color, people, reduced by their distance to pigmies in This fibrous appearance is given by the resist- size, were ascending and descending. Far below ance which the particles of the iron make to the utmost of these figures, a deep and gaping

their rupture. The next best iron is that whose texture consists of clear, whitish, small grains, intermixed with fibres. These two kinds are malleable both when hot and when cold, and have great tenacity. Cold-short iron is known by a texture consisting of large, shining plates, withoutfibres; and red-short iron is distinguished by its dark dull color, and by the transverse

gulf, the mouth of the lowermost pits, was, by its darkness, rendered impervious to the view. From the spot where we stood down to the place where the buckets are filled the distance might be about seventy-five fathoms ; and as soon as any of these buckets emerged from the gloomy cavity we have mentioned, or until they entered into it in their descent, they were visible ; but

cracks and fissures on the surface and edges of below this point they were hid in darkness, j The

the bars. The quality of iron may be much im- proved by violent compression, as by forging and rolling ; especially when it is not long ex- posed to too violent heat, which is known to in- jure, and at length to destroy, its metallic pro- perties.

A foundry of iron is, when calculated to do

clanking of the chains, the groaning of the pumps, the hallooing of the miners, the creaking of the blocks and wheels, the trampling of horses, the beating of the hammers, and the loud and fre- quent subterraneous thunder from the blasting of the rocks by gunpowder, in the midst of all this scene of excavation and uproar, produced an

business on a large scale, situated near and con- effect which no stranger can behold unmoved.

nected with the ore and Ihe blast furnaces, as here it is that the ore-smelting is done; and, where that is performed, castings can be executed

We descended with two of the miners and our interpreter into this abyss. The ladders, instead of being placed like those in our Cornish mines,

better, and much cheaper, than when it is done upon a series of platforms as so many landing-

at separate establishments ; it is also better done, because, as more metal is heated at a time at such furnaces, there is a better chance of getting the castings perfect. It is cheaper from this very obvious circumstance, that, as the new metal is smelted, it is at once oast into the work required, instead of being run into pigs, as they are termed, to be re-heated in another furnace, and then to be founded. This additional heating,

places, are lashed together in one unbroken line, extending many fathoms ; and, being warped to suit the inclination or curvature of the sides of the precipices, they are not always perpendi- cular, but hang over in such a manner that even if a person held fast by his hands, and if his feet should happen to slip, they would fly off from the rock, and leave him suspended over the gulf. Yet such ladders are the only means of access

to the works below ; and, as the laborers are not accustomed to receive strangers, they neither use the precautions, nor offer the assistance, usually afforded in more frequented mines. In the prin- cipal tin-mines of Cornwall the staves of the ladders are alternate bars of wood and iron ; here they were of wood only, and in some parts rotten and broken, making us often wish, during our descent, that we had never undertaken an exploit so hazardous. In addition to the danger to be apprehended from the damaged state of the ladders, the stares were covered with ice or mud, and thus rendered so cold and slippery that we could have no dependence upon our benumbed fingers, if our feet failed us. Then to complete our apprehensions, as we mentioned this to the miners, they said, ‘ Have a care ! It was just so, talking about the staves, that one of our women fell, about four years ago as she was descending to her work.’ ‘ Fell,’ said our Swedish interpreter, rather simply. ‘ and pray what became of her ?’

- *Became of her,’ continued the foremost of our guides, disengaging*

one of his hands from the ladder, and slapping it forcibly against his thigh, as if to illustrate the manner of the catastrophe,

- *she became (pankaka) a pancake.'*

' As we descended farther from the surface, large masses of ice appeared, covering the sides of the precipices. Ice is raised in the buckets with the ore and rubble of the mine : it has also accumulated in such quantity in some of the lower chambers, that there are places where it is fifteen fathoms thick, and no change of tempera- ture above prevents its increase. This seems to militate against a notion, now becoming prevalent, that the temperature of the air in mines increases directly as the depth from the surface, owing to the increasing temperature of the earth under the same circumstances ; and in the same ratio ; but it is explained by the width of this aperture at the mouth of the mine, which admits a free pas- sage of atmospheric air. In our Cornish mines ice would not be preserved in a solid state at any considerable depth from the surface.

' After much fatigue, and no small share of ap- prehension, we at length reached the bottom of the mine. Here we had no sooner arrived, than our conductors, taking each of us by an arm, hurried us along through regions of thick-ribbed ice and darkness, into a vaulted level, through which we were to pass into the principal chamber of the mine. The noise of countless hammers, all in vehement action, increased as we kept along this level ; until at length subduing every other sound we could no longer hear each other speak, not- withstanding our utmost efforts. At this moment we were ushered into a prodigious cavern, whence the sounds proceeded ; and here, amidst falling waters, tumbling rocks, steam, ice, and gunpowder, about fifty miners were in the very height of their employment. The magnitude of the cavern, over all parts of which their labors were going on, was alone sufficient to prove that the iron ore is not deposited in veins, but beds. Above, below, on every side, and in every nook of this fearful dungeon, glimmering tapers dis- closed the grim and anxious countenances of the miners. They were now driving bolts of iron into tlie rocks, to bore cavities for the gunpowder for

blasting. Scarcely had we recovered from the stupefaction occasioned by our first introduction into this Pandsemonium, when we beheld, close to us, hags more horrible than perhaps it is pos- sible for any other female figures to exhibit, holding their dim quivering tapers to our faces, and bellowing in our ears. One of the same sisterhood, snatching a lighted splinter of deal, darted to the spot where we stood, with eyes in- flamed and distilling rheum, her hair clotted with mud, clugs naked and pendulous; and such a face, and such hideous yells, as it is impossible to describe : —

Black it stood, as Night — fierce as ten Furies — Terrible as hell.

If we could have heard what she said, we should not have comprehended a syllable ; but as several other Parcse, equally Gorgonian in their aspect, passed swiftly by us, hastening tu- multuously towards the entrance, we began to perceive, that, if we remained longer in our pre- sent situation, Atropos might indeed cut short the threads of our existence ; for the noise of the hammers had now ceased, and a tremendous blast was near the point of its explosion. We had scarcely retraced with all speed our steps along the level, and were beginning to ascend the ladders, when the full volume of the thunder reached us, as if roaring with greater vehemence because pent among the crashing rocks, whence, being reverberated over all the mine, it seemed to shake the earth itself with its terrible vibra- tions.'

The following is an improved process for hard- ening steel. Articles manufactured of steel for the purpose of cutting are, almost without an exception, hardened from the anvil ; in other words, they are taken from the forger to the hardener without undergoing any interme- diate process ; and such is the accustomed routine, that the mischief arising has escaped observation. The act of forging produces a strong scale or coating, which is spread over the whole of the blade ; and, to make the evil still more formidable, this scale or coating is unequal in substance varying in proportion to the degree of heat communicated to the steel in forging ; it is, partially, almost impenetrable to the action of water when immersed for the purpose of harden- ing. Hence it is that different degrees of hardness prevail in nearly every razor manufactured : this is evidently a positive defect ; and, so long as it continues to exist, great difference of tempera- ture must exist likewise. Razor-blades not un- frequently exhibit the fact here stated in a very striking manner : what are termed clouds, or parts of unequal polish, derive their origin from this cause, and clearly and distinctly, or rather dis- tinctly though not clearly, show how far this partial coating has extended, and where the ac- tion of the water has been yielded to, and where resisted. It certainly cannot be matter of asto- nishment, that so few improvements have been made in the hardening of steel, when the evil here complained of so universally obtains as almost to warrant the supposition that no at- tempt has ever been made to remove it. The remedy, however, is easy and simple in the ex-

treme, and so evidently efficient in its applica- tion, that it cannot but excite surprise, that, in the present highly improved state of our manu- factures, such a communication should be made as a discovery entirely

new.

Instead, therefore, of the customary mode of hardening the blade from the anvil, let it be passed immediately from the hands of the forger to the grinders; a slight application of the stone will remove the whole of the scale or coating, and the razor will then be properly prepared to undergo the operation of hardening with advan- tage. It will be easily ascertained, that steel in this state heats in the fire with greater regularity, and that when immersed, the obstacles being re- moved to the immediate action of the water on the body of the steel, the latter becomes equally hard from one extremity to the other. To this rray be added that, as the lowest possible heat at which steel becomes hard is indubitably the best, the mode here recommended will be found the only one by which the process of hardening can be effected with a less portion of fire than is, or can be, required in any other way.

We will now direct our reader's attention to a very important, though simple process con- nected with the hardening and preservation of steel, for which the scientific world is mainly in- debted to Mr. Pepys of the Poultry. In his manufactory the tempering, or reduction of the hardening, is not governed by the color only, but by a more accurate method ; the exact variations of temperature are given in a fluid, into which a Fahrenheit's thermometer graduated to the boil- ing point of mercury is immersed, and the deli- cacy of this operation may be sufficiently under- stood from the various colors produced on the steel at the various temperatures shown by the thermometer. The change or scale takes place at 430°, and finishes at nearly 600°. Nine changes of colors are observable at about 20° distance of each other.

430° Slight color inclining to yellow.

450 Straw color, pale.

470 Yellow.

490 Brown.

510 Brown with purple spots.

530 Purple

550 Bright blue.

560 Blue.

600 Blackish blue inclined to scale or oxyd.

From 430 to 470 is chiefly employed for razors and some of the finer edged surgical instruments, 470 and 490 for penknives, and some pointed in- struments. From 510 to 550 inckides pocket- knives, table-knives, carvers, scissors, &c., &c.

The experience of the workman is much re- quired, and also a knowledge for what purpose the edge is to be employed, during these three ranges of temperature.

Of amalgamation. — The process of amalga- mation in procuring the precious metals, to which we have already briefly adverted, is but little practised in this country, and yet its value has been generally admitted by the leading chemists both in South America and Europe. The treatise on this subject published by Baron Born in Germany is very rare, and but little known in this country, and we have been favored

by a perusal of those parts that have been since iransfated by Mr. Raspe, which now makes the whole process both plain and intelligible. Amal- gamation is the solution of metals in quick- silver. It depends on their elective affinities. Its object and use is either the purification of gold, silver, and other metals, or other mechani- cal purposes, of which there is no occasion to speak in this place.

The affinity of quicksilver with gold and silver was well known in the remotest antiquity. Vitruvius tells us how gold may be recovered by it from embroidery and old clothes. On this affinity also depends the gilding of metals and brass, which Pliny mentions. All our gold and silver smiths, and many other trades, are ac- quainted with it. From time immemorial quick- silver has been used in the streaming for gold, in order to purify, and collect into one body the gold dust, which is dispersed in the sands. To obtain these ends, the auriferous sand, brought into a smaller compass by washing, is mixed and triturated with quicksilver; and the amalgam, or solution of the gold, is pressed through a piece of leather, which separates the abundant quick- silver. The Gipsies on the banks of the Aranyos in Transylvania, the Russians on the banks of the Okka, the Americans in their stream works in Chili, and the Germans on the banks of the Rhine, use it in the same manner. The miner applied it for the same purposes, fetching auri- ferous stones from under ground, and pounding them to sand, which he afterwards triturated with quicksilver in particular mills. > Of these quick mills, Agricola has left us an accurate account. Metallurgy being much improved in Germany since the days of Agricola, it was found that only part of the gold was ex- tracted in these mill's ; that, to obtain the whole, the leavings must go to the fire ; and that the gold taken up by the quicksilver must be parted from the silver. All this took away much of the cre- dit of these quick mills ; they began soon to be looked upon as

superfluous. The gold was se- parated by washing, only from the first and richer stuff of the stamps ; the poorer sorts went to the fire, and the gold was parted from silver by quartation. However, in some mines in the Zillerthal in Tirol, at Gasteris in Salzburgh, in some gold works in Savoy and Chili, which produce native gold, these quick mills are still in use for the purposes of dry or wet amalgama- tion. By Schlutter's account, the native silver of Kongsberg in Norway was also extracted in quick mills, till they fell into disrepute on ac- count of the large quantities of silver they left in the residuum.

Burning and calcination of the ores promote amalgamation, in so far as it promotes their pul- verisation, and assists the quicksilver, chiefly in the treatment of gray silver and copper ores. The best symptom of sufficient calcination is their change of color and loss of brightness. All bright ores must be calcined, but with great care that no vitriol may be disengaged, for that prevents the amalgamation, or, by the subsequent saline additions, produces a salt, which dissolves the metals, and makes them unfit to unite with the quicksilver. These and other circumstances

make fusion and treatment in furnaces frequently preferable to amalgamation, chiefly where there is plenty of wood and firing. Circumstances must determine whether it be better to grind and pul- verise them before or after calcination. Their value and contents are better found by the calci- nation of the pulverised stuff. During the cal- cining fire it must be constantly stirred and turned about. From time to time some powder is taken from the furnace, and tried with quick- silver and salt, which presently shows the nature of the ore. The inspissation of the quicksilver, or the grain of the stuff, informs the artist whe- ther or what addition it may require, and whether the calcination is perfected or not. The calci- nation of ores in lumps does not act equally upon all their parts ; nor can the fire penetrate them every where. But it is attended with a smaller loss of dust, and saves much trouble and expense in the stamps and mills.

The irony ores, which resist the fire longer, are calcined with an addition of sulphur, or of sulphureous and antimonial stuff, proportioned to the iron they contain. Sulphureous and an- timonial ores require calcination with iron scoria. The arsenical ores, or those which are mixed with orpiment and sandarac, are calcined with lead glance ; and those which are infected with light or black bitumen must be exposed to the calcining fire with iron scoria or pounded lime- stone.

To determine the impurities of ores, and their proper additions, pound them coarsely, and throw them upon a heated iron plate. If the smoke be white or black, it is- a symptom of white or black bitumen ; if yellow, it argues or- piment; if red, sandarac; if yellow and green- ish, it implies sulphur. The ores or halvan stuff must never be calcined with salt, for it would calcine the silver. The duration of the calcining fire cannot be determined but by the apparent loss of brightness and change of colors which the ores undergo, and by the test of quicksilver; if, when triturated with, some of the calcined stuff, it remains white and pure, and takes a silver color, the calcination is completed. Be- sides this general rule, there are some other symptoms. If antimonial and sulphureous ores do no longer send forth a suffocating or disa- agreeable smoke, if the thick black smoke of bi- tuminous ores turns white, and if the silver in the stuff appears in white glittering sparks, in all these cases the calcination is perfected. Able masters will obtain the same and even in the calcination of pace's, negrillo's, and other vitri- olic ores, though they require a longer calcining heat and various additions of alum and salt ; but then they require no further addition in the subsequent operations, and the quicksilvei will take up all their silver in the course of four days. Also less quicksilver will be lost ; for, as there is no occasion for the frequent turning and working of the heap, it cannot be worked into impalpable and irrecoverable dust.

One circumstance cannot be too strongly re- commended ; it is, that vitriolic ores must always be lixiviated before tliey go to the calcining fire. If the calcined stuff be suspected of being vitri- olic, it must be trie-.! by quicksilver ; if it takes

a lead color, the stuff must be washed till iron put into it does no longer take a copper color. The lixivium of the vitriolic stuff, or ore, is preserved as a useful addition to some ores.

Before the master dresses his heap, he mixes the fine and sifted powder, and takes a sample of three or four pounds for the assay by fire. Ac- cording to the produce he calculates the contents of the whole for his government. Moreover, he tries the same with quicksilver, to come at the method how the whole is to be treated, and to learn what additions will be required. First he lixiviates the stuff, to extract the sulphate of copper. Then he takes one pound ot the lixi- viated stuff and tries it by trituration with salt and quicksilver, carefully observing its color and change. If the quicksilver takes the color and form of silver filings, and these quicksilver flakes turn thinner and thinner, it is proof that the amalgamation goes on successfully, and that there is no occasion for any addition. The whole is stirred from time to time, till the quicksilver seems to diminish, and to recover its natural globular form without dividing into small glo- bules. Then the stuff is washed, all the silver being then completely taken up.

Formerly the complete extraction- of silver by amalgamation, without other additions, was looked upon as impossible; but the ores of Verenguela de Pacages are actually treated only with quick- silver and salt, and yet they yield their full pro- duce. If the quicksilver takes a lead color, which the Spanish miners call plomo, then the heap requires additions of iron, lead, tin, quick- lime, and ashes ; for, with them, any silver or ore may be amalgamated. If it turns black, iron is added ; if a light lead color tin, ; if a dark lead color, lead ; if it takes a yellowish or gold color, which implies copper, it requires an ad- dition of lime.

It often divides into small white powdery globules, in consequence of the gravity or hard- ness of the mineral. This chiefly happens in the amalgamation of lead glance, marcasite, and other bright minerals1, or in that of uncalcined hard matrices or loadstones. It likewise arises from too much stirring; and may be obviated by previous calcination of the stuff, or by less stirring. Yet this quicksilver dust is hardly to be avoided in great operations. It serves the workmen for a measure of their progress, nay even for a direction how to operate. This dust is called by different names. The whitish dust, which arises simply from too great division, is called quicksilver dust. What arises from the amalgama of lead and tin is called dust of ad- dition ; and what comes from the silver amalga- ma, silver dust. They are easily distinguished. Quicksilver dust is white, without any quickness, hardly moving when the stuff is stirred with water; it rather sticks to the bottom, and on rubbing it between the fingers it clots into globules. The silver dust sinks towards the coarser stuff on the bottom, and floats about in larger or smaller flakes ; rubbed and pressed between the fingers it turns into an amalgama. The dust of addition is, as it were, intermediate between the two. Pressed between the fingers, or rubbed, it unites with the quicksilver, which

had begun to combine with silver. These dif- ferent powders are produced during the amalga- mation and washing, by too frequent stirring and turning, chiefly when lead, marcasite, and irony ores are in the mixture ; also by sul- phate of copper, which in particular brings on this too minute division of the quicksilver ; and likewise by too abundant addition of salt, which inspissates the water, and prevents the quick- silver particles from falling to the bottom. They are commonly of the color of quicksilver, and of a white, black, and lead color ; like the color of the quicksilver they indicate the various im- perfections of the heap in hand, and their respec- tive remedies.

When the master is fully informed, by smaller assays, of the quality and produce of his stuff, of the additions it requires, and of the circum- stances which may attend his operations, he ac- cordingly regulates his heap and his proceedings. The heap is wetted with water and mixed with the proper quantity of salt. In the beginning, but one-third of the quicksilver and one-half of the tin and lead are added. During the first two days, it is but once turned over every day, be- cause the quicksilver then uncombined with silver would be apt to fly into very minute glo- bules, and consequently bring on great loss of quicksilver dust. Moreover, too much quick- silver chills the heap, and its amalgamation should rather be assisted by heat. For these reasons it is but gradually added ; and though, for want of quicksilver, the work should but slowly proceed in the beginning, yet this may easily be remedied afterwards.

The additions of tin and lead are always thrown into the heap together with the quick- silver. Too much of either hurts the process, for they deaden the quicksilver, and make it unfit for taking up the silver.

Both quicksilver and other additions must be proportioned according to circumstances ; ob- serving that the quantities added at a time must be less and less, the more the amalgamation ap- proaches perfection : otherwise the whole would be overloaded with, and swim in quicksilver, whereas it should be kept rather dry, and two parts of amalgama to be in the heap to one of quicksilver. Some masters are of opinion, that abundance and superfluity of quicksilver cannot be hurtful, provided there be a sufficient quantity or proportion of additional ingredients. But this very abundance is exceedingly hurtful, by the great quantity of quicksilver dust which must arise from the turning of the stuff; more- over, if by some accident the additional ingredi- ents should be wasted or destroyed, the dust of addition will change into quicksilver dust, which, having hardly any weight, will not fall to the bottom, but swim on the surface, and run off with the water. If the addition is lime, the whole must be added at once, and the heap be turned over for two or three days, till the quick- silver is added. Too much prevents the combi- nation of the two metals, and any inconvenieucy may be remedied but this.

The heaps are frequently turned and worked over, that the quicksilver may be thoroughly mixed with the stuff, and take up the silver con- VOL. XIV.

tained in it. The turning heats the quicksilver and so far assists its attraction. The frequent rubbing purifies the silver. From the difference of their constituent parts, the heaps and the dif- ference of ores are subject to different accidents. The respective progress and obstacles of the amalgamation best appear by fine pulverisation of the stuff; and the quicksilver is the mirror in which all that appears clearly.

The quicksilver deadened by too abundant addition of lead, tin, iron, and lime, loses its oval and affects a vermicular form. Shaken in a glass or other vessel by itself, without any water, it adheres to the sides as it were in strings like thread. Thus circumstanced it is unfit for taking up silver. Its best remedy is sulphate of copper, or the lixivium of vitriolic ores, which was spoken of before. The other base metals, which by their cold nature had deadened the quicksilver, are changed by this sulphate of copper into an oxide, the quicksilver is there- by warmed and restored to life and activity. For the same purpose copper powder is thrown into the heap, and vitriol is the chief ingredient of all the additions which are intended to warm the quicksilver. Thus copper ore is calcined, and when ground fine two parts of it are mixed with one part of salt. Then it is calcined once more, adding half a pound of brass filings to 1 cwt. ; or equal parts of fine and coarse stuff and salt are calcined together ; or equal parts of copper ore, coarse stuff, and salt ; or equal parts of copper ore, coarse stuff, iron scoria, and of the fine silver stuff. They are formed into a paste and cakes which are calcined. These solvents must be thrown into the heap very cautiously, and in consequence and by the direction of smaller assays, which determine what quantity of vitriol will do it good, or disagree with it. The heaps which have too much vitriol, and no additional remedies, give a lead color to the quicksilver. Its quickness is not affected, any more than that its smaller particles appear not in a convex but spherical form.

To obviate this evil, and to protect the quick- silver against the corrosion and action of the vitriol, iron is added, as having a particular power to recal it to life, and to bring it again into one body. But, as there is no certain rule for its proportion, small samples of the heap should be submitted to experiment, nor the heap be turned over till that proportion be fully determined. Sometimes, on examining the heap whilst it is turning, the quicksilver appears in small globules connected as a bunch of grapes. This implies salt, which covers the quicksilver and prevents its combination. It is remedied by the addition of some coarse stuff, which, on being turned with the heap, cleanses the quick- silver. Some add ashes ; but the best and most natural remedy is alum, which abounds at Potosi, and whitens the silver. If the heap be not turned equally, and the quicksilver be not added at the proper time, or the silver does not unite with it, dry silver will arise, and lie on the coarser stuff like cobweb, which, if not skimmed off in time, is carried off by the washing water. To collect this dry silver, and the finest quick- silver dust, some silver amalgama is pressed upon

it through a chamois skin, and the whole is once more turned and worked over. The frequent turning, the heat of climate and season, the fermentation produced in the heap by the vitriol, and other additions, all co-operate in the amal- gamation, and promote its success; whereas cold weather, neglect of stirring, and the lead color of the quicksilver prevent it.

It is very difficult to determine upon the ma- turity .of the heap, when all the silver is taken up, and when it may go to the washing. And yet much depends upon it. If washed too soon, silver is lost in the leavings ; if worked too long there is loss of quicksilver, time, and labor. The symptoms of maturity hitherto mentioned are all of them exceedingly uncertain and fallacious. The heap may appear not to require any addi- tional quicksilver ; the silver dust may appear to be completely collected ; that of quicksilver may begin to make its appearance; the amalgama may begin to appear pure, and to show a gold color ; and yet silver may remain in the leavings. The most infallible test of the maturity of the heap is the assay of the triturated stuff by fire. If no silver is produced thereby, then so much quicksilver is thrown into the heap, that it may contain three parts amalgama to two of silver, or at least one part quicksilver to two of amalgama. By this additional fresh quicksilver, all the dust of quicksilver, and the dry and uncom- bined silver, are perfectly collected ; the amal- gama is the heavier for it, and sinks the more readily to the bottom, when brought to the washing-tub. Some clean quicksilver is also put into the bottom of this tub ; the inside of which must be!lined with iron plate, well cleaned, and rubbed with quicksilver. The stuff brought into the tub must be diluted with a great quantity of water, and be stirred round with a pestle, lined with iron plate in such a manner that it may turn round six times one side, and six times the other, always touching the bottom ; the uncon- nected bodies of quicksilver and amalgama are thereby to meet, to combine, and to fall to the bottom. To recover the salt, which had been mixed with the heap, the water, which is first thrown upon the stuff in the washing-tub, is collected, and by evaporation the salt falls to the bottom. The whole having thus been washed over, and the quicksilver being collected into one body, nothing remains in the tub but some fine quicksilver dust, which ought to be col- lected by a piece of leather or cloth. Then the whole is pressed through a piece of leather or wet cloth. The amalgama thereby obtained is beaten into a pyramidal or conical mould/ and called pinna. 100 Ibs. of amalgama commonly produce a pinna of silver of forty marcs. The finest particles of silver pass with the quicksilver through the pressing bag ; and in the boxes, in which it is preserved for further use, crusts of silver amalgama collect at the bottom. More silver runs off with warmed quicksilver. The amalgama formed into conical pinnas is com- monly distilled from earthen retorts into similar receivers, in order to free it from its quicksilver; or the same distillation is performed in iron vessels, by which nothing is lost of the

quick- silver fumes.

P. Joseoh Acosta gives the following account

*of the amalgamation of gold and silver ores : — * Commonly 6000 or 7000 cwt. of quicksilver are consumed at Potosi in the dressing of the ore, not to mention what is recovered from the leavings of the first washing. These leavings, called lamas, are burnt in particular furnaces iu order to extract the remaining quicksilver. There are upwards of fifty such furnaces near Potosi and Tarapaja. The ore annually refined amounts to about 300,000 cwt. from the leavings of which nearly 2000 cwt. of quicksilver are re covered. . Let us observe that the ores are of a different nature. Some are rich, and require but little quicksilver ; others produce little and consume a great quantity ; others again produce and destroy much of it. C6*rnmonly the richest requires most, and vice versa; and profit and loss in mining depend on the quality of the ore. The ore is first pulverised in mills, and then passed through iron or brass sieves. Pro- perly built and regulated, these mills will grind 30 cwt. in the space of twenty-four hours. The pulverised stuff is put into heaps in the open air, and salt is mixed with it in the proportion of 5 cwt. to 50 cwt. in order to macerate and cleanse it of its impurities, that it may be the better acted upon by the quicksilver. Upon these heaps, and whilst they are stirring, the quick- silver is pressed through a coarse cloth, through which it comes as a drizzling rain in small glo- bules. Before the fire-places were invented, the ore was repeatedly kneaded with quicksilver in wooden troughs, and formed into large round masses, which were left in that form for a couple of days. Then they were worked again till the quicksilver appeared embodied with the silver, which sometimes would take twenty and more, but at least nine days. When it was found that fire assists this incorporation of the silver, ovens were built, in which the mixture of salt, quick- silver, and ores, is generally heated, and the quicksilver appears to be incorporated in the course of five or six days. When the quicksilver has taken up the silver, and wholly separated it from its matrix, the lead and the copper, the ovens are opened, the stuff is taken out, and the quicksilver is expelled and recovered in the fol- lowing manner : —*

‘ The mixture is put into water-troughs, and stirred therein by means of mills and water wheels, whereby the earthy and extraneous par- ticles are washed away, and the quicksilver with the silver settles at the bottom. The sediment looks like sand. It is further washed over in flat plates, and perfectly cleansed ; what goes off with the water is collected, and further made use of under the name of relaves.

‘When in this manner the amalgama is cleansed and bright, it is put into a cloth and squeezed out. The uncombined quicksilver runs off, and the

remaining body of amalgama contains rfive parts of quicksilver, and one of silver. This amalgama is made into; silver masses, called pinnas, which have the form of a sugar loaf, are hollow within, and commonly weigh 100 Ibs. To expel the quicksilver, they are exposed to a strong fire, and covered with an earthen cap or helmet, of the form of a sugar loaf, which is ex- ternally surrounded with coal. The heat eva- porates the quicksilver in the form of steam,

which coming in contact with the earthen cover is condensed, and runs off by a pipe into a vessel filled with water, so that the quicksilver is recovered, and the silver purified. Though the silver still appears in the form of amalgama, yet it loses five parts of its weight, and looks spongy. The silver, thus collected and purified, is so fine that silversmiths cannot work it without alloy, and even in the mint some alloy must be added.'

Another writer on this subject says, ' The ores must be calcined in furnaces like lime-kilns, and the calcining fire must be kept up accord- ing to the nature of the ores ; afterwards they may be pulverised in hand, horse, or water- mills, or in stamps. The pulverised stuff is passed through fine iron sieves, and then put into earthen or copper vessels by 20 or 10 cwts. More or less salt is mixed with it, ac- cording to circumstances. The light-colored stuff requires 50 Ibs. per 1000, the darker somewhat more. To this is to be added 5 Ibs. dry tartarus, 2 Ibs. pulverised horn, and 3 Ibs. brick-dust. More or less of these additions is required ; but that depends so much on the nature of the ores, that some of them require but a small part of these additions. After this mixture has been put into the boiler, a sufficient quantity of water must be added, that the whole may be pounded into a kind of paste, neither too thick nor too thin ; and the vessels must be exposed to the sunshine, for the operation suc- ceeds better in summer than winter, when it is performed in warm rooms. When the paste begins to dry, some water must be added, and it must be worked over by pounding three or four times a day. At the expiration of three or four days, various colors appear on the surface. Then 15 Ibs. of sulphur per 1000 must be added, and the whole must be worked over again. At last 100 Ibs., or, if the ores are of a mild nature, a less quantity of quicksilver is added ; the whole mass is carefully worked over, and left at rest to settle /or about ten hours. Then fire is kindled under the boiler, and the stuff contained in it must be stirred or triturated for two days together, observing that a propor- tionate quantity of water may always keep it sufficiently liquid and diluted. At last, let it repose for twelve hours ; let it dry, and take it out. If the ores were rich and well worked, particles and globules of quicksilver amalgama

appear in it, which are collected, washed out, and kept for further use. The leavings are car- ried to a place fit for washing them over. This place must be on the slope of a hill, where a kind of pit is dug out and lined with brick and mortar. It must hold about 25 cwt. of the triturated stuff. Running water is led upon it, and it must be stirred without interruption. The superflous water runs off over the rim of the pit, and carries off the lighter particles gradually. When all the earthy and stony particles are thus washed off, the silver amalgama at the bottom is taken out, and, together with the before said grains or clots of amalgama, it is pressed through a hempen or coarse linen cloth, which may be done by hand, or other mechanical contrivances. The quicksilver, which comes through clean, is

kept for future use, the amalgama is evaporated in particular furnaces, aud the remaining silver is run into ingots. In this manner all the silver is extracted from every kind of ore in a very short time ; and, on account of its inconsiderable expense, even poor ores and poor mines can be worked to advantage.

‘ In order to extract the gold from its ores, the following practice is put in process : — The auri- ferous sand, which contains gold-grains and gold-dust, is concentrated by washing, and with- out any calcination it goes to the just mentioned washing-pit, which for this purpose need not be spacious. On its upper part is fixed a square launder, about twelve feet long, which on its bottom is covered with a woollen cloth, for the purpose of keeping the gold-dust, which may be carried off with the water and stuff gently stirred in the pit. When the water carries off no more mud, but runs off clear, the farther sup- ply is stopped, the water in the pit is pumped or taken out in buckets; the coarser sand in the bottom is separated or scraped off by the hands, and the finer heaviest sand at the bottom is mixed with quicksilver. Then it is squeezed through a piece of cloth ; the quicksilver comes off without any gold, which, separated from the sand, remains as an amalgama, and is pure after the adhering quicksilver has been evaporated. The sand and heavier dust remaining on the launder is washed and treated in the same man- ner. The auriferous ores and loadstones, how- ever, which rise from different mines, are cal- cined like silver ores, more or less, as the nature of their matrices will direct. Then they are ground and sifted ; and the auriferous stuff thus prepared is put into heaps, exposed to the sun-shine, and worked and turned about with tar- tarus and water for about three or four days. It requires no salt. Afterwards sulphur, and at last quicksilver, are added and mixed with it. There is no occasion for fire under the vessel in which it is triturated, except in winter ; and two days after, though not dried, it is immediately carried to the washing-pit, and treated like the silver amalgama.

‘ This method of extracting gold and silver is so certain and safe, that,

when other methods of amalgamation extract only one ounce of gold or silver, this produces three or four from the poorest ores in a shorter time, and with less ex- pense.'

Soon after the process of amalgamation had been introduced in Peru, in the year 1588, a Spaniard of the name of Don Juan de Corduba, applied to the court of Vienna, offering to ex- tract the silver from the ores, whether poor or rich, by the means of quicksilver, at a small ex- pense, and within the course of eight or ten days. He was referred to baron Lewis de Hoyos, who laid before him various sorts of ore, from which he is reported to have actually extracted the gold and silver by his method. Upon this he was ordered to make a great experiment upon 20 cwt. of Kultenberg, in Bohemia. From the report of the celebrated Lazarus Erker, then upper bar- master at Kultenberg, and from papers sent in with the same, it appears that Corduba received for the above experiment 20 cwt. dried

mundick stuff of the stamps of five-eighths of an ounce of silver per cwt., which on the 21st of March he mixed with 17 cwt. of quicksilver, and left to macerate nineteen days. On strain- ing 3 cwt. of the triturated stuff, he had no sil- ver, nor could he recover above one-third of the quicksilver. He took afterwards half a cwt. of the calcined stamp stuff of Kultenberg, which he left to macerate ten days ; and, straining it, he had but 1 cwt of silver, which was not full the tenth part of the real produce.

The quantity of mercury consumed in the process of amalgamation is thus described by baron Humboldt : —

' Mexico consumes annually upwards of 2,000,000 Ibs. troy of mercury. In 1803 a very useful project was formed in Spain of supplying Mexico for several years, in order that, in the unforeseen case of a war, the amalgamation might not be impeded by the want of mercury ; but this project (del requesto) shared the fate of many others (which have never been executed. Before 1770, when the working of mines was far from being so considerable as at present, New Spain received no other mercury but that of Al- maden and Huancavelica. The German mer- cury furnished by the Austrian government, of which the greatest part is from Idria, was only introduced into Mexico after the falling in of the subterraneous works of Huancavelica, at a time when the mine of Almaden was inundated in the greatest part of its works, and yielded a very inconsiderable produce. But in

1800, and 1802, this last mine was again in such a flourishing state, that it could alone have furnished more than 20,000 cwt. of mercury per annum, and there were sufficient grounds to conceive the hope of a termination of the necessity for recurring to German mercury, for the supply of Mexico and Peru. There have been years when 10,000 or 12,000 cwt. of this last mentioned mercury have been imported at Vera Cruz. Upon the whole, from 1762 to 1781, the amalgamation works of New Spain destroyed the enormous quantity of 25,124,200 Ibs. troy, of which the value in Ame- rica amounted to more than £2,400,000.

‘ When the price of mercury has progressively lowered, the working of the mines has gone on increasing. In 1590, under the viceroy Don Luis de Velasco II., a cwt. of mercury was sold in Mexico for £40 10s. But, in the eighteenth century, the value of this metal had diminished to such a degree, that in 1750 the court distributed it to the miners at £17 15s. Between 1767 and 1776, its price was £13 9s. per cwt. In 1777, under the administration of the minister Galvez, a royal decree fixed the price of the mercury of Almaden at £8 17s. 6d. and that of Germany at £13 13s. At Guanaxuato these two sorts of mercury are increased by the expensive carriage on the backs of mules, from 8s. 8d. to 10s. lOd. per cwt.

‘ The impartial distribution of mercury (el re- partimiento del azogue) is of the greatest conse- quence to the prosperity of the mines of New Spain. Unfortunately, however, the viceroys and those persons who were about them, under the old government, were jealous of the right of administering this branch of the royal revenue. They knew very well that to distribute mercury,

and especially that of Almaden, which is one- third cheaper than that of Idria, was to concede a favor ; and in the colonies, as every where else, it is profitable to favor the richest and most pow- erful individuals. From this state of things, the poorest miners, those of Tasco, Temascaltepec, or Copala, could not procure mercury, when the great works of Guanaxuato and Real del Monte had it in abundance.

The following table proves the influence of the price of mercury on its consumption. The di- minution of this price, and the freedom of trade with all the ports of Spain, have jointly contri- buted to the progress of mining.

Periods.

Price of a cwt. of mercury.

Total consumption of mercury.

1762—1766 1767—1771

1772-1777

177&— i782

£. s. d.

17 15 0 13 9 0 13 9 0 8 17 6

35,750 cwt.

42,000 53,000 59,000

‘ It was known in Mexico, in 1782, that China possesses mercury mines ; and it was imagined that nearly 15,000 cwt. might be annually drawn from Canton. The viceroy Galvez sent thither a cargo of otter skins by’way of exchange for the mercury ; but this project, wise in itself, was badly executed. The Chinese mercury obtained from Canton and Manilla was impure, and con- tained a great deal of lead ; and its price amount- ed to £17 6s. 8d. the cwt. Even at this price only a very small quantity could be procured. Since 1793 this important object has been totally lost sight of ; yet it is deserving of the utmost at- tention, especially at a time when the Mexicans experience great difficulty in procuring mercury from the continent of Europe.

- *From all the researches which I could make, the whole of Spanish America, namely, Mexico, Peru, Chili, and the kingdom of Buenos Ayres (for elsewhere the process of amalgamation is unknown), annually consume more than 25,000 cwt. of mercury, the price of which in the colo- nies amounts to more than £250,000 sterling. M. Heron de Villefosse, in an interesting table which contains the quantity of each metal ex- tracted from the mines over the whole globe, es- timates” the mercury annually drawn from those of Europe at 36*,o6o cwt. From these data we find that mercury is, after cobalt, the rarest of all metals, and that it is even twice as rare as tin.*

‘ The following table indicates the quantity of mercury lost in the processes of amalgamation, used in different districts of mines, to extract the silver from the ore. A loss (perdida y consume) of 100 Ibs. or mercury is computed

Ibs. troy of silver.

In the mines of Guanaxuato, for about . 65 In the mines of the intendancy of Guada- laxara 58

In the mines of Pachuca, Zacatecas, Som- brerete, Guadiana, Durango, Parral, Zi- chu,Tonala, Comanja, Zerralbo,Temextla, Alchichica, Tepeaca, Zimapan, Cairo, and Tlapa 52

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In the mines of Chichiapa, Tetala, Tasco, Santa Theresa de Leiba y Banos, Ituquaro, Tehuistla, San Esteban de Alhukquerque, and Chiconasi 48

In the mines of Temascaltepec, Ayuteco, and Chautla de la Sal 44

In the mines of Zacualpa, San Luis Potosi, Guautla, Sultepec, and Tlapujahua . 42

'The government regulates the distribution (repartimiento) of silver, according to these data, and the quantity of silver annually extracted from the different districts of mines.

' The amalgamation of a cwt. of ores, which contain from three and a half to four ounces of silver, costs in Mexico, including the loss of mercury, from 4s. to 5s. M. Sonneschmidt calculates the loss of mercury at ten, twelve, or fourteen ounces for eight ounces of silver; and he reckons eight ounces of mercury consumed (azogue consumido), and from three to six ounces lost (azogue pirdido).

'From December 1801 till August 1804 Spain received from its colonies £23,250,094 in gold and silver, and £13,725,961 in agricultural pro- duce. From 1788 to 1795 the total importation was only at an average, from £7,000,000 to £10,000,000 sterling per annum.

' The produce of the mines of Spanish America varies a seventh from year to year, or more than 3 1 0,000 Ibs. troy of silver. We have estimated this produce for the Spanish and Portuguese co- lonies at 17,291 kilogrammes of gold, or 75,217 Castilian marcsˆand at 795,581 kilogrammes or 4460 Castilian mares of silver, which together are of the value of £9,400,000. • Europe, Siberia, and America, furnish per annum 57,368 Ibs. in gold, and 2,175,000 Ibs. in silver, or to the va- lue of £10,755,000.'

Mercury, when native, and enveloped in much earthy or other matter, from which it cannot be separated merely by washing, is distilled either by ascent or descent. When it is mineralised by sulphur, that is, when it is contained in cin- nabar, some intermediate substance, as quick- lime or iron, must be added in the distillation, to disengage it from the sulphur.

The rich ore of Almaden in Spain is a cinna- bar, with which a calcareous stone happens to be so blended, that no addition is required to dis- engage the mercury from the sulphur. The distillation is there performed in a furnace con- sisting of two cavities, one of which is placed above another. The lower cavity is the fire- place, and contains the fuel, resting upon a grate, through the bars of which the air enters, maintains the fire, and passes into a chimney, placed at one side of the fire-place, immediately above the door through which fuel is to be in- troduced. The roof of this fire-place, which is vaulted and pierced with several holes, is also the floor of the upper cavity. Into this upper cavity, the mineral from which mercury is to be distilled is introduced through a door in one of the sides of the furnace. In the opposite wall of this cavity are eight openings, all at the same height. To each of these openings is adapted a pile of aludels connected and luted together, extending sixty feet in length. These aludels,

which are earthen vessels open at each end, and wider in the middle than at either extremity, are supported upon an inclined terrace; and the aludel of each file, that is most distant from the furnace, terminates in a chamber built of bricks, which has two doors and two chimneys.

When the upper cavity is filled sufficiently with the mineral, a fire is made below, which is continued during twelve or fourteen hours. The heat is communicated through the holes of the vaulted roof of the fire-place to the mineral in the upper cavity, by which means the mercury is volatilised, and its vapor passes into the aludels, where much of it is condensed, and the rest is discharged into the brick-chamber, in which it circulates till it also is condensed. If any air or smoke passes through the aludels along with the vapor of the mercury, they escape through the two chimneys of the chamber. Three days after the operation, when the apparatus is sufficiently cooled, the aludels are uniuted, the doors of the chamber opened, and the mercury is collected.

The metallurgical processes now resorted to in South America, for procuring the precious me- tals, are too important to be passed unnoticed. The conduct of the mines is thus described by baron Humboldt-:—

The art of mining is daily improving, and the pupils of the School of Mines at Mexico gradu- ally diffuse correct notions respecting the circu- lation of air in pits and galleries. Machines are beginning to be introduced, in place of the old method of carrying minerals and water on men's backs up stairs of a rapid ascent. In proportion as the mines of New Spain resemble more and more those of Europe, the miner's health will be less injured by the influence of the foul air, and the excessively prolonged efforts of muscular mo- tion.

From 5000 to 6000 persons are employed in the amalgamation of the minerals, or the prepa- ratory labor. A great number of these indivi- duals pass their lives in walking barefoot over heaps of brayed metal, moistened and mixed with muriate of soda, sulphate of iron", and oxide of mercury, by the contact of the atmospheric air and the solar rays. It is a remarkable pheno- menon to see these men enjoy the most perfect health. The physicians who practise in places where there are mines unanimously assert, that the nervous affections, which might be attributed to the effect of an absorption of oxide of mercury, very rarely occur. At Guanaxuato part of the inhabitants drink the very water in which the amalgamation has been purified (aqua de lava- deros) without feeling any injury from it. This fact has .often struck Europeans not intimately acquainted with the principles of chemistry. The water is at first of a grayish-blue color, and con- tains in suspension black oxide of mercury, and small globules of native mercury and amalgama- tion of silver. This metallic mixture gradually precipitates, and the water becomes limpid. It can neither dissolve the oxide of mercury nor the muriate of mercury, which is one of the most in- soluble salts we know. The mules are very fond of this water, because it contains a little muriate of soda in solution.

We have already said, that the labor of a miner

is entirely free throughout the kingdom of New Spain. No Indian or Mestizo can be compelled to devote himself to the working of mines. It is absolutely false, though the assertion has been repeated in works of the greatest estimation, that the court of Madrid sends out galley slaves to work in the gold and silver mines. The mines ot Siberia have been peopled by Russian male- factors, but in the Spanish colonies this species, of punishment has been fortunately unknown for centuries. The Mexican miner is tolerably well paid, as he earns at the least from £l to £l. 4s. per week of six days, while the wages of laborers who work in the open air, hus bandmen for example, are 6s. 3d. on the central table-land, and 7s. 6d. near the coast. The mi- ners, tenateros and faeneros, occupied in tran- sporting the minerals to the plats (despachos), frequently gain more than 4s. I0d. per day of six hours. Honesty is by no means so common among the Mexican as among the German or Swedish miners ; they make use of a thousand tricks to steal rich specimens of ores. As they are almost naked, and are searched on leaving the mine in the most indecent manner, they conceal small morsels cf native silver, or red sulphuret and muriate of silver, in their hair, under their arm pits, and in their mouths. It is a most shocking spectacle to see in the large mines of Mexico, hundreds of workmen, among

whom there are a great number of very respectable men, all compelled to allow themselves to be searched on leaving the shaft or level. A register is kept of the minerals found in the hair, in the mouth, or other parts of the miners' bodies. In the mine of Valenciana, at Guanaxuato, the value of these stolen minerals amounted between 1774 and 1787 to the sum of £63,000 sterling.

In the interior of the mines much care is em- ployed in controlling the tenateros, by whom the ores are carried towards the shaft from the place of opera'tion. At Valenciana, for example, they know to within a few pounds the quantity of work containing ore which daily goes out of the mine. I say, the work, for the rock is never there. ;m object of extraction, and is employed to fill up the vacancies formed by the extraction of the minerals. At the plats of the great shafts, two chambers are dug in the wall, in each of which two persons (despachadores) are seated at a table, with a book before them containing the names of all the miners employed in the carriage. Two balances are suspended before them, near the counter. Each tenatero loaded with ores pre- sents himself at the counter ; and two persons stationed near the balances judge of the weight of this load by raising it lightly up. If the tena- tero, who on the road has had time to estimate his load, believes it lighter than the despachador, he says nothing, because the error is advantage- ous to him ; but on the other hand, if he believes the weight of the ore he carries in his bag to be greater than it is estimated, he demands that it should be weighed, and the weight which is thus determined is entered in the book of the despa- chador. From whatever part of the mine the te- natero comes, he is paid at the rate of one real de plata (6}

There are some tenateros who perform in on a day from eight to ten journeys, and their pay is regulated from the book of the despachador. This mode of reckoning is no doubt highly de- serving of praise ; and we cannot sufficiently ad- mire the celerity, the order, and the silence with which they thus determine the weight of so many thousand quintals of ores, which are furnished by veins of six or eight fathoms in breadth, in a single day.

These ores, which are separated from the ste- rile rocks in the mine itself by the master miners (quebradores), undergo three sorts of preparation, viz. at the places for jigging or washing the ores, where women work ; under the stamping mills ; and under the tahonas or arastras. These tahonas are machines in which the work is ground under very hard stones, which have a rotatory motion, and weigh upwards of seven or eight cwt. They are not yet acquainted with washing with the tub (setz wasche), nor washing on sleeping tables (tables dormantes) (liegende-heerde), or percus- sion (stosrheerde). The preparation under the stumps (mazos), or in the tahonas, to which I shall give the name of edge mills, on account of their

resemblance to some oil and snuff mills, differs according as the ore is destined to be smelted or amalgamated. The mills properly be- long only to this last process ; however, very rich metallic grains called polvillos, which have pass- ed through the trituration of the tahona, are also smelted.

The quantity of silver extracted from the ores , by means of mercury, is in the proportion of three and a half to one of that produced by smelt- ing. This proportion is taken from the general table formed by the provincial treasuries, from the different dist'icts of mines of New Spain. There are, however, some of these districts, for example those of Sombrerete and Zimapan, in which the produce from smelting exceeds that of amalgamation.

SILVER (plata quintada) extracted from the MINES of NEW SPAIN, from the 1st January 1785 to the 31st of December 1789.

Provincial treasuries re- ceiving the fifth.

Silver ex- tracted by amalgama- tion.

Silver ex- tracted by smelting.

Mexico .

950,185

104,835

Zacatecas

1,031,360-

173;631

Guanaxuato

1,937,895

531,138

San Luis Potosi .

1,491,058

24,465

Durango

536,272

386,081

Guadalaxara

405,357

103,615

Bolanos

336,355

27,614

Sombrerete .

136,395

184,205

Zimapan

1,215

247,002

Pachuca

269,536

185,500

Rosario

477,1-34

191,368

Total in Ibs. Troy

7,572,762

2,159,454

In times of peace amalgamation gains a gra dual ascendancy over smelting, which is gene- rally badly managed. As wood is becoming

yearly more scarce on the ridge of the Cordilleras, which is the most populous part, the diminution of the produce of smelting is very advantageous to the manufactories which require a great con- sumption of combustibles. In time of war the want of mercury arrests' the progress of amalga- mation, and compels the miner to endeavour to improve the process of smelting. M. Velasquez, the director-general of the mines, supposed even in 1797, before the discovery of the rich mines of Catorse, where there is scarcely any smelting, that of all the ores of New Spain two-fifths were smelted, and the other three-fifths amalga- mated.'

The present mode of smelting gold at Villa Rica may now be adverted to. All the gold dust brought from the Comarca of Do Giro Preto, or Villa Rica, comes first into the weigh- ing room, where the escrivao da receita weighs it, and separates the fifth part from it as due to the king ; and the escrivao da conferencia enters in the list the quantity of each owner, without and with the deduction. The parts belonging to the king are thrown together, mixed, and melted into large bars ; but the four parts be- longing to private individuals, into single smaller bars. For this purpose the gold-dust is put into a crucible of proportionate size, and, as soon as it begins to melt, "it is kept there for some time with sublimate of mercury. When it appears to be perfectly melted, the metal is poured into a square iron mould, furnished with handles, in which it cools. These moulds are of very different sizes, containing from ten sitavas to an arroba of gold. 'The various combinations of the gold to be melted with iron, antimony, man- ganese, or arsenic, determine the time necessary to melt it. Gold which is more difficult to melt is mixed with a greater proportion of sub- limate; this is particularly the case with that with which much iron is mingled ; the workmen, by long experience, generally know the quantity of the addition which the gold of such mines requires. Very pure gold is perfectly melted in three hours. The color of the gold smelted at Villa Rica is of very different hues, from the most beautiful gold-yellow to reddish copper- color, bright yellow, and even gray-yellow; a specimen of every shade is preserved. The gold bar when cut comes into the hands of the assayer, who determines the weight and fineness by the trial with sublimate : for this purpose he takes a piece from one end of the bar, and in difficult cases from both. In bars from well known mines the trial is made only with the touch-stone ; for which are kept, on copper pins, the specimens from sixteen to twenty-four carats, each of which is divided into eight equal parts. The purest gold smelted at Villa Rica is of twenty -three carats and seven-eighths. The mines of Villa Rica generally produce gold from twenty to twenty-three carats; those of Sabara. and Congontras de Sabari, from eighteen to

nineteen carats ; that from the Rio das Valhas near Sa- bara gives from nineteen to twenty. The gold of Cocaes and Inficionado is very pure, though not of a very fine yellow, but often pale or cop- per-colored; When the weight and fineness, and consequently the value, of the bar are deter-

mined and entered in the list, the Brazilian arms, the number of the list, the mark of the smelting- house, the date of the year, and the degree of fineness, are stamped upon it, and a printed ticket is given with the bar, which, besides all the above particulars, states the value in rees, the weight which the proprietor gave in gold- dust, and how much was deducted for the king. Without this instrument, signed by the officers of the smelting office, the bar, which is returned to the owner, cannot legally pass instead of coin. It is strictly prohibited to export it from the province of Minas without notice ; because the royal mints are to repurchase the bars for their nominal value in ready money. But as an agio of ten per cent, is offered for the bars, even on the coasts of Brasil, this species of fraud is very common.

Arsenic, zaffre, and bismuth, are obtained generally from one ore, namely, that called cobalt. The arsenic of the ore is separated by roasting, and adheres to the internal surface of a chimney, which is extended horizontally about 200 or 300 feet in length, and in the sides of which are several doors, by means of which the arsenic, when the operation is finished, may be swept out and collected. These chimneys are ge- nerally bent in a zig lag direction that they may better retard and stop the arsenical flowers. These flowers are of various colors, white, gray, red, yellow, according to the quantity of sulphur or other impurity with which they happen to be mixed. They are afterwards purified by repeated sublimations, while some alkaline or earthy sub- stances are added to detain the sulphur, and to assist the purification.

In the same roasting of the ore by which the arsenic is expelled, the bismuth, or at least the greatest part of this semi-metal which is contain- ed in the ore, being very fusible, and having no disposition to unite with the regulus of cobalt, which remains in the ore, is secured by liquefac- tion.

The remaining part of the roasted ore consists chiefly of calx of regulus of cobalt, which not being volatile as the arsenic is, nor so easily fusible as bismuth is, has been neither volatilised nor melted. It contains also some bismuth, and a small quantity of arsenic, together with any silver or other fixed metal which happened to be contained in the ore. This roasted ore being reduced to a fine powder, and mixed with' three or four times its weight of fine sand, is the pow- der called saffre or zaffre. Or the roasted ore is sometimes fused with about thrice its quantity of pure sand and as much pure potash, by which a blue glass called smalt is produced, and a metallic mass, called speiss, is collected at the bottom of the vessel in which

the matters are fused. The metallic mass or speiss is composed of very different substances, according to the contents of the ore and the methods of treating it. The matters which it contains at different times are, nickel, regulus of cobalt, bismuth, arsenic, sulphur, copper, and silver. Bismuth is seldom procured from any other ores but that of cobalt. It might, however, be extracted from its proper ores, if a sufficient quantity of these were found, by the same method by which

it is obtained from cobalt, namely, liquefaction.

Before metallic ores are worked upon in the lart^e way, it will be necessary to enquire what sort of metal, and what portion of it, is to be found in a determined quantity of the ore ; to discover whether it will be worth while to ex- iract it largely, and in what manner the process is to be conducted, so as to answer that purpose. The knowledge requisite for this is called the art of ASSAYING, and has already been briefly adverted to under that article.

The assaying of ores may be performed either in the dry or moist way ; the first is the most ancient, and in many respects the most advan- tageous, and consequently still continues to be mostly used.

Assays are made either in crucibles under the blast of the bellows, or in tests under a muffle. The assay weights are always imaginary, some- times an ounce represents a hundred weight on the large scale, and is subdivided into the same number of parts as that hundred weight is in the great ; so that the contents of the ore ob- tained by the assay, shall accurately determine, by such relative proportion, the quantity to be expected from any weight of the ore on a larger scale.

*In the lotting of the ores, care should be taken to have small portions from different specimens, '*hich should be pulverised, and well mixed in an iron or brass mortar. The proper quantity of the ore is now taken, and if it contain either sulphur or arsenic, it is put into a crucible or test, and exposed to a moderate degree of heat, till no vapor arises from it; to assist this volatilisation, some add a small quantity of powdered charcoal. To assist the fusion of the ores, and to convert the extraneous matters connected with them into scoria, assayers use different kinds of fluxes. The most usual and efficacious materials for the composition of these are borax, tartar, nitre, sal ammoniac, common salt, glass, fluor-spar, char- coal powder, pitch, lime, litharge, &c., in differ- ent proportions. The crude*

of white flux con- sists of one part of nitre, and two of tartar, well mixed together.

The above crude flux detonates by means of kindled charcoal ; and, if the detonation be effected in a mortar slightly covered, the smoke that rises unites with the alkalised nitre and the tartar, and renders it black.

Cornish reducing flux : 10 oz. of tartar, 3 oz. and 6 drachms of nitre, and 3 oz. and 1 drachm of borax ; mixed well together. Cornish refining flux : deflagrate, and afterwards pulverise 2 parts of nitre and 1 part of tartar.

The above fluxes answer the purpose very well, provided the ores be deprived of all their sulphur, or if they contain much earthy matter, because in the latter case they unite with them and convert them into a thin glass ; but, if any quantity of sulphur remain, these fluxes unite with it, and form a liver of sulphur, which [has the power of destroying a portion of all 'the metals ; consequently the assay, under such cir- cumstances, must be very inaccurate. The principal difficulty in assaying appears to be in i he appropriation of the proper fluxes to each particular ore ; and it likewise appears that such

a discriminating knowledge can only.oe acquired from an extensive practice, or from a knowledge of the chemical affinities and actions of different bodies upon each other.

In assaying, we are at liberty to, use the most expensive materials to effect our purpose ; hence the use of different saline fluxes ; but, in the working at large, such expensive means cannot be applied, as by such processes the inferior metals would be too much enhanced in value, especially in working very pure ores. In con- sequence of which, in smelting works where the object is the production of metals in the great way, cheaper additions are used, such as lime- stone, feldt-spar, fluor-spar, quartz, sand, slate, and slags. These are to be chosen according to the different views of the operator, and the nature of the ores. Thus, iron ores, on account of the argillaceous earth they contain, require calcareous additions, and the copper ores, rather slags or vitrescent stones, than calcareous earth.

The mode of assaying ores for their particular metals, by the dry way, is deficient so far as re- lates to pointing out the different substances connected with them, because they are always destroyed by the process for obtaining the assay metal. The assay by the moist way is more correct, because the different substances can be accurately ascertained. The late celebrated Bergman first communicated this fact. It de- pends upon a knowledge of the chemical affini- ties of different bodies for each other : and must be varied according to the nature of the ore ; it is very extensive

in its application, and requires great patience and address in its execution. To describe the treatment of each variety of metallic ores would take up too much of our room ; but, to give a general idea, we shall describe the procedure, both in the dry and the humid way, on one species of all the different ores.

To assay iron ores. — The ore must be roasted till the vapor ceases to rise. Take two assay quintals of it, and triturate them with one of fluor-spar, three-fourths of a quintal of pow- dered charcoal, and four quintals of decrepitated sea salt ; this mixture is to be put into a crucible, lined on the inside with clay and powdered charcoal ; a cover must be luted upon the cru- cible, and the crucible itself exposed to a violent fire for an hour, and, when it is cool, broken ; when, if the operation has been well conducted, the iron will be found at the bottom of the cru- cible ; to which must be added those metallic particles which may adhere to the scoria. The metallic particles so adhering may be separated by pulverising it in paper, and then attracting them with a magnet. If the ore should be in a cal- ciform state, mixed with earths, the roasting of it previous to assaying, if not detrimental, is at least superfluous ; if the earths should be of the argillaceous and siliceous kind, to half a quintal of them add of dry quick lime and fluor-spar of each one quintal and a quarter, reduced to powder, and mix them with one quarter of a quintal of powdered charcoal, covering the whole with one ounce of decrepitated common salt ; and expose the luted crucible to a strong forge fire for an hour and a quarter ;' then let it gradually cool, and let the regulus be struck otf

and weighed. If the ore contain calcareous earth, there will be no occasion to add quick- lime ; the proportion of the ingredients may be as follows, viz. one assay quintal of the ore, one of decrepitated sea salt, half a quintal of pow- dered charcoal, and one of fluor-spar, anil 'the process conducted as above. There is a great difference in the reguli of iron ; when the cold regulus is struck with a hammer and breaks, the . iron is cold-short ; if it break on being struck red-hot, it is called red-short ; but if it resist the hammer both in its cold and ignited state it is good iron.

Humid assay of iron ore. — To assay the calci- form ores, which do not contain much earthy or stony matter, they must be reduced to a fine powder, and dissolved in the marine acid, and precipitated by the Prussian alkali. A determi- nate quantity of the Prussian alkali must be tried previously, to ascertain the portion of iron which it will precipitate, and the estimate made ac- cordingly. If the iron contain any considerable portion of

zinc or manganese, the precipitate must be calcined to redness, and the calx treated with dephlogisticated nitrous acid, which will then take up only the calx of zinc ; when this is separated, the calx should again be treated either with nitrous acid, with the addition of sugar, or with the acetous acid, which will dissolve the manganese, if any ; the remaining calx of iron may then be dissolved by the marine acid, and precipitated by the mineral alkali, or it may be farther calcined, and then weighed.

Zinc ores. — Take the assay weight of roasted ore, and mix it well with an eighth part of char- coal dust ; put it into a strong luted earthen re- tort, to which must be fitted a receiver ; place the retort in a furnace, and raise the fire, and continue it in a violent heat for two hours ; suffer it then to cool gradually, and the zinc will be found adhering to the neck of the retort in its metallic form.

In the humid way. Distil vitriolic acid over calamine to dryness; the residuum must be lixiviated in hot water ; what remains undissolved is siliceous earth ; to the solution add caustic volatile alkali, which precipitates the iron and argil, but keeps the zinc in solution. The precipitate must be re-dissolved in vitriolic acid, and the iron and argil separated.

Tin ores. — Mix a quintal of tin ore, previously washed, pulverised, and roasted, till no arsenical vapor rises, with half a quintal of calcined borax, and the same quantity of pulverised pitch ; these are to be put into a crucible moist- ened with charcoal-dust and water, and the cru- cible placed in an air furnace. After,the pitch is burnt, give ,a violent heat for a quarter of an hour, and on withdrawing the crucibles the regulus will be found at the bottom. If the ore be not well washed from earthy matters, a larger quantity of borax will be requisite, with some powdered glass ; and if the ore contain iron, some alkaline salt may be added.

The assay of tin ores, in the liquid way, was looked upon as impracticable, till Bergman de- vised the following method, which is generally successful : — Let the tin ore be well separated from its stony matrix by well washing, and then

reduced to the most subtile powder ; digest it in concentrated sulphuric acid, in a strong heat for several hours; then, when cooled, add a small portion of concentrated marine acid, and suffer it to stand for an hour cr two ; then add water, and, when the solution is clear, pour it off, and precipitate it by fixed alkali; 131 grs. of this precipitate, well washed and dried, are equiva- lent to 100 of tin in its reguline state, if the pre- cipitate consist of pure tin ; but, if it contain copper or iron, it must be calcined in a red heat for an hour, and then digested in nitrous acid, which will take up

the copper; and afterwards in marine acid which will separate the iron. • Lead ores. — As most of the lead ores contain either sulphur or arsenic they require to be well roasted. Take a quintal of roasted ore, with the same quantity of calcined borax, half a quintal of fine powdered glass, a quarter of a quintal uf pitch, and as much clean iron-filings. Line the crucible with wetted charcoal dust, and put the mixture into the crucible, and place it before the bellows of a forge-fire. When it is red-hot, raise the fire for fifteen or twenty minutes ; then withdraw the crucible i rid b.eak it when cold.

In the humid way. Dissolve the ore by boil- ing it in dilute nitrous acid ; the sulphur, inso- luble stony parts, and calyx of iron, will remain. The iron may be serˆarated by digestion in the marine acid, and the sulphur by digestion, in caustic fixed alkali. The nitrous solution contains the lead and silver, which should be precipitated by the mineral fixed alkalies and the precipitate well washed in cold water, dried, and weighed. Digest it in caustic volatile alkali, which will take up the calx of silver ; the resi- duum, being again dried and weighed, gives the proportion of die calx of lead, 132 grs. of which are equal to 100 of lead in its metallic state. The difference of weight of the precipitate, before and after the application of the volatile alkali, gives the quantity of silver, 129 grs. of which are equal to 100 of silver in its metallic state.

Copper ores. — Take an exact troy ounce of the ore, previously pulverised, and calcine it well ; stir it all the time with an iron rod, without re- moving it from the crucible ; after the calcination add au equal quantity of borax, half the quan- tity of fusible glass, one-fourth the quantity of pitch, and a little charcoal dust; rub the inner surface of the crucible with a paste composed of charcoal dust, a little fine powdered clay, and water. Cover the mass with common salt, and put a lid on the crucible, which is to be placed in a furnace : the fire is to be raised gradually, 1 11 it burns briskly, and the crucible continued in it for half an hour, stirring the metal fre- quently with an iron rod ; and, when the scoria which adheres fo the rod appears clear, then the crucible must be taken out, and suffered to cool ; after which it must be broken, and the regulus separated and weighed; this is called black copper, to refine which equal parts of common salt and nitre are to be well mixed together. The black copper is brought into fusion, and a tea-spoonful of the flux is thrown upon it, which is repeated three or four times, when the metal is poured into an ingot mould, and the button is found to be fine copper.

In the humid way. Make a solution of vitreous copper ore, in five times its weight of concentrated vitriolic acid, and boil it to dry- ness; add as much water as will dissolve the vitriol thus formed; to this solution add a clean bar of iron, which will precipitate the whole of the copper in its metallic form. If the solution be contaminated with iron, the copper must be redissolved in the same manner, and precipi- tated again. The sulphur may be separated by nitration.

Bismuth ores. — If the ore be mineralised by sulphur, or sulphur and iron, a previous roast- ing will be necessary. The strong ores require no roasting, but only to be reduced to a fine powder. Take the assay weight and mix it with half the quantity of calcined borax, and the same of pounded glass; line the crucible with charcoal ; melt it as quickly as possible ; and, when well done, take out the crucible, and let it cool gradually. The regulus will be found at the bottom.

In the humid way. Bismuth is easily soluble in nitrous acid or aqua-regia. Its solution is colorless, and is precipitable by the addition of pure water; 118 grs. of the precipitate from ni- trous acid, well washed and dried, are equal to 100 of bismuth in its metallic form.

Antimonial ores. — Take a common crucible, bore a number of small holes in the bottom, and place it in another crucible a size smaller, luting them well together ; then put the proper quan- tity of ore in small lumps into the upper cruci- ble, and lute thereon a cover ; place these vessels on a hearth, and surround them with stone about six inches distant from them ; the intermediate space must be filled with ashes, so that the undermost crucible may be covered with them ; but, upon the upper, charcoal must be laid, and the whole made red-hot by the assistance of hand-bellows. The antimony being of easy fusion is separated, and runs through the holes of the upper vessel into the inferior one, where it is collected.

Humid assay of arseniated antimony. Dis- solve the ore in aqua-regia, both the regulus and arsenic remain in the solution, the sulphur is separated by filtration. If the solution be boiled with twice its weight of strong nitrous acid, the regulus of antimony will be precipi- tated, and the arsenic converted into an acid, which may be obtained by evaporation to dryness.

Manganese ore. — The regulus is obtained by mixing the calx or ore of manganese with pitch, making it into a ball, and putting it into a cru- cible, lined with charcoal powder one-tenth of an inch on the sides, and one-fourth of an inch at bottom; then filling the empty space with charcoal

dust, covering the crucible with another inverted and luted on, and exposing it to the strongest heat of a forge for an hour or more.

In the humid way. The ores should be first well roasted to dephlogisticate the calx of man- ganese arid iron, if any, and then treated with nitrous acid to dissolve the earths. The resi- duum should now be treated with nitrous acid and sugar, by which means a colorless solution of manganese will be obtained, and likewise of

the iron, if any. Precipitate with the Prussian alkali, and digest the precipitate in pure water ; the prussiate of manganese will be dissolved, whilst the prussiate of iron will remain un- dissolved.

Arsenical ores. — This assay is made by sub- limation in close vessels. Beat the ore into small pieces, and put them into a matrass, which place in a sand-pot, with a proper degree of heat ; the arsenic sublimes in this operation, and adheres to the upper part of the vessel, when it must be carefully collected with a view to ascer- tain its weight. Sometimes a single sublimation will not be sufficient, for the arsenic in many cases will melt with the ore, and prevent its total volatilisation, in which case it is better to per- form the first sublimation with a moderate heat, and afterwards bruise the remainder again, and expose it to a stronger heat.

In the humid way. Digest the ore in marine acid, adding the nitrous by degrees to help the solution. The sulphur will be found on the filter; the arsenic will remain in the solution, and may be precipitated in its metallic form by zinc, adding spirit of wine to the solution.

Nickel ore. — T-he ores must be well roasted to expel the sulphur and arsenic ; the greener the calx proves, during this torrefaction, the more it abounds in the nickel; but the redder it is, the more iron it contains. The proper quantity of this roasted ore is fused in an open crucible, with twice or thrice its weight of black flux, and the whole covered with common salt. By exposing the crucible to the strongest heat of a forge-fire, and making the fusion complete, a regulus will be produced. This regulus is not pure, but contains a portion of arsenic, cobalt, and iron. Of the first it may be deprived by a fresh calcination, with the addition of powdered charcoal; and of the second by scorification ; but it is with difficulty that it is entirely freed from the iron.

By solution in nitrous acid it is freed from its sulphur; and, by adding water to the solution, bismuth, if any, may be precipitated : as may silver, if contained in it, by the marine acid ; and copper, when any, by iron.

To separate cobalt from nickel, when the cobalt is in considerable quantity,

drop a satu- rated solution of the roasted ore in nitrous acid into liquid volatile alkali; the cobaltic part is instantly re-dissolved, and assumes a garnet color ; when filtered, a gray powder remains on the filter, which is the nickel. The cobalt may be precipitated from the volatile alkali by any acid.

A brief account of the most valuable metallic alloys must close this part of our subject. We may commence with a fusible metal, 4 oz. of bismuth, 2J oz. of lead, and 1£ oz. of tin. Put the bismuth into a crucible, and, when it is melted, add the lead and tin. This will form an alloy fusible at the temperature of boiling water.

1 oz. of zinc, 1 oz. of bismuth, and 1 oz. of lead. This alloy is so very fusible that it will remain in a state of fusion if put on a sheet of paper, and held over the flame of a candle or lamp.

3 parts of lead, 2 parts of tin, and 5 parts of

bismuth, will form an alloy fusible at 197° Fah- renheit, peculiarly applicable to casting, or the taking of impressions from gems, seals, &c. In making casts with this and similar alloys, it is necessary to use the metal at as low a tempera- ture as possible ; otherwise, the water adhering to the things from which the casts are to be taken, forms vapor, and produces bubbles. The fused metal should be poured into a tea-cup, and allowed to cool, till just ready to set at the edges, when it must be poured into the mould. In taking impressioas from gems, seals, Sec., the fused alloy should be placed on paper or paste- board, and, stirred about till it has, by cooling, attained the consistence of paste, at which mo- ment the die, gem, or seal, should be stamped on it, and a very sharp impression will then be obtained.

Bath metal is a mixture of 4 J oz. of zinc, with

1 Ib. of brass.

Brass is composed of 4J Ibs. of copper, and 1J Ib. of zinc. But brass that is to be cast into plates, from which pans and kettles are to be made, and wire that is to be drawn, must, instead of using the zinc in a pure state, be composed of 56 Ibs. of the finest calamine, or ore of zinc, and 34 Ibs. of copper.

Old brass, which has frequently been exposed to the action of fire, when

mixed with the copper and calamine, renders the brass far more ductile, and fitter for the making of fine wire, than it would be without it ; but the German brass, particularly that of Nuremberg, is, when drawn into wire, said to be far preferable to any made in England for the strings of musical instru- ments.

Pinchbeck. 5 oz. of pure copper, and 1 oz. of zinc. The zinc must not be added till the cop- per is in a state of fusion. Some use only half this quantity of zinc, in which proportion the alloy is more easily worked, especially in the making of jewellery. Or 1 oz. of brass, and

2 oz. of copper, fused together under a coal of charcoal dust.

Prince's metal. 3 oz. of copper, and 1 oz. of zinc ; or 8 oz. of brass, and 1 oz. of zinc. Or 4 oz. of copper, and 2 oz. of zinc. In this last the copper must be fused before the zinc is added. When they have combined, a very beautiful and useful alloy is formed, called prince Rupert's metal.

Bell-metal. 6 parts of copper, and 2 parts of tin. These proportions are the most approved, for bells, throughout Europe, arid in China. In the union of the two metals the combination is so complete, that the specific gravity of the alloy is greater than that of the two metals in an un- combined state. Or 10 parts of copper, and 2 parts of tin. It may, in general, be observed, that a less proportion of tin is used for making church-bells than clock-bells; and that a little zinc is added for the bells of repeating-watches, and other small bells.

Tutania, or Britannia-metal. 4 oz. of plate brass, and 4 oz. of tin ; when in fusion add 4 oz. of bismuth, and 4 oz. of regulus of antimony. This is the composition, or hardening, that is to be added at discretion to melted tin, until it has acquired the requisite degree of color and hard- ness; or melt together 2 Ibs. of plate brass, 2 Ibs.

of tin, 2 Ibs. of bismuth, 2 Ibs. of regulus of anti- mony, 2 Ibs. of a mixture of copper and arsenic, either by cementation or melting. This compo- sition is to be added at discretion to melted tin; or 1 Ib. of copper, 1 Ib. of tin, and 2 Ibs. of regu- lus of antimony, with or without a little bismuth ; or 8 oz. of shrufF brass, 2 Ibs. of regulus of anti- mony, and 10 Ibs. of tin.

German tutania. 2 drachms of copper, 1 oz. regulus of antimony, and 3 oz. of nitre.

Spanish tutania, 8 oz. of scrap-iron or steel, 1 Ib. of antimony, and 3 oz. of nitre. The iron or steel must be heated to a white heat, and the antimony and nitre must be added in small por- tions. Melt and harden 1 Ib. of tin with 2 oz. of this compound. Or melt together 4 oz. of anti- mony, loz. of

arsenic, and 2 Ibs. of tin. The first of these Spanish alloys would be a beautiful me- tal if arsenic were added.

Engestroom tutania. 4 parts copper, 8 parts regulus of antimony, and 1 part bismuth. When added to 100 parts of tin, this compound will be ready for use.

Queen's metal. 4J Ibs. of tin, i Ib. of bismuth, i Ib. antimony, and i Ib. lead. This alloy is used for the making of tea-pots, and other vessels, which are required to imitate silver. Or 100 Ib. of tin, 8 Ibs. regulus of antimony, 1 Ib. bismuth, and 4lbs. copper.

White metal. 10 oz. of lead, 6 oz. of bismuth, and 4 drachms of regulus of antimony. Or 2 Ibs. of regulus of antimony, 8 oz. of brass, and 10 oz. of tin.

Common hard white metal. 1 Ib. of brass, 1J oz. of zinc, and J oz. of tin.

Tombac. 16 Ibs. of copper, lib. of tin, and 1 Ib. of zinc.

Red tombac. 5J Ibs. of copper, and J Ib. of zinc. The copper must be fused in the crucible before the zinc is added. This alloy is of a red- dish color, and possesses more lustre, and is of greater durability than copper.

White tombac, copper, and arsenio, put toge- gether in a crucible and melted, covering the surface with muriate of soda, to prevent oxida- tion, will form a white brittle alloy.

Gun metal. 112- Ibs. of Bristol brass, 14 Ibs. zinc, and 7 Ibs. block tin. Or 9 parts capper, and 1 part tin. The above compounds are those used in the manufacture of small and great brass guns, swivels, &c.

Blanched copper. 8 oz. of copper, and } or. of neutral arsenical salt, fused together, under a flux composed of calcined borax, charcoal dust, and fine powder glass.

Specula of telescopes. 7 Ibs. of copper, and when fused, add 3lbs. of zinc, and 4 Ibs. of tin. These metals will combine and form a beautiful alloy of great lustre, and of a light yellow color, fitted to be made into specula for telescopes. Mr. Mudge used only copper and grain-tin, in the proportion of 2 Ibs. to 14J oz.

Kustitian's.metal for tinning. To 1 Ib.of mal- leable iron, at a white heat, add 5oz. of regulus of antimony,and 24 Ib. of the purest Molucca tin. This alloy polishes without the blue tint, and is free from lead or arsenic.

Metal for flute-key valves. 4 oz. of lead, and 5 oz. of antimony, fused in a crucible, and cast into a bar, forms an allov of considerable hard-

ness and lustre. It is used by flute manufacturers (when turned into small buttons in a lathe) for making valves to stop the key-holes of flutes.

Printers' types. 10 Ibs. of lead, and 2 Ibs. of an- timony. The antimony must be thrown into the crucible when the lead is in a state of fusion. The antimony gives a hardness to the lead, with- out which the type would speedily be rendered useless in a printing-press. Different proportions of lead, copper, brass, and antimony, frequently constitute this metal. Every artist has his own proportions, so that the same composition can- not be obtained from different foundries ; each boasts of the superiority of his own mixture.

Small types and stereotype plates. 9 Ibs. of lead, and when melted, add 2 Ibs. of antimony, and 1 Ib. of bismuth. This alloy expands as it cools, and is therefore well suited for the forma- tion of small printing types (particularly when many are cast together to form stereotype plates), as the whole of the mould is accurately filled with the alloy ; consequently there can be no blemish in the letters. Or 8 parts lead, 2 parts antimony, and | part tin.

Common pewter. 7 Ibs. of tin, 1 Ib. of lead, 6 oz. of copper, and 2 oz. of zinc. The copper must be fused before the other ingredients are added. This combination of metals will form an alloy of great durability and tenacity ; also of considera- ble lustre.

Best pewter. 100 parts tin, and 17 parts re- gulus of antimony.

Hard pewter. 12 'Ibs. of tin, 1 Ib. regulus of antimony, and 4 oz. of copper.

Common solder. 2 Ibs.of lead-, and 1 Ib. of tin. The lead must be melted before the tin is added. This alloy, when heated by a hot iron, and ap- plied to the tinned iron with powdered rosin, acts as a cement or solder ; it is also used to join lead pipes, &c.

Soft solder. 2 Ibs. of tin, and 1 Ib. of lead.

Solder for steel joints. 19 dwts. of fine silver, 1 dwt. copper, and 2 dwts. of brass, melted to- gether under a coal of charcoal dust. This sol- der possesses several advantages over the usual zinc soda or brass, when

employed in soldering cast steel, &c., as it fuses with less heat, and its whiteness has a better appearance than brass.

Silver solder for jewellers. 19 dwts. of fine silver, 1 dwt. copper, and 10 dwts. brass.

Silver solder for plating. 10 dwts. brass, and 1 oz. pure silver.

Gold solder. 12 dwts. of pure gold. 2 dwts. pure silver, and 4 dwts. copper.

*Brass solder for iron. Thin plates of brass are to be melted between the pieces that are to- be jointed. If the work be very fine, as when two leaves of a broken saw are to be brazed to- gether, cover it with pulverised borax, melted with water, that it may incorporate with the brass powder which is added to it; the piece must be then exposed to the fire, without touching the coals, and heated till the brass is s*en to run.*

Bronze. 7 Ibs. pure copper, 3 Ibs. zinc,and 2 Ibs. tin. The copper must be fused before the other ingredients are added. These metals, when com- bined, form the bronze, so much used both in ancient and modern times, in the formation of busts, medals, and statues.

According to Pliny, the metal used by the

Romans for their statues, and for the plates on which they engraved inscriptions, was composed in the following manner : — They first melted a quantity of copper, into which they put one- third of its weight of old copper which had been long in use ; to every lOOlbs. weight of this mix- ture they added 12J Ibs. of an alloy, composed of equat parts of lead and tin.

Mock platina. Melt together 8 oz. of brass, and 5 oz. of zinc.

Useful alloy of gold with platinum. 7J dr. pure gold, and | dr. platinum. The platinum must be added when the gold is perfectly melted. The two metals will combine intimately, forming an alloy rather whiter than pure gold, but re- markably ductile and elastic ; it is also less pe- rishable than pure gold, or jewellers' gold ; but more readily fusible than that metal. These ex- cellent qualities must render this alloy an object of great interest to workers in metals. For springs, where steel cannot be used, it will prove exceedingly advantageous. It is a curious cir- cumstance that the alloy of gold and platinum is soluble in nitric acid, which does not act on either of the metals in a separate state. It is reˆ markable, too, that the alloy has very nearly the color of platinum, even when composed of ele- ven parts of gold to one of the former metal.

Ring gold. 6 dwts. 12 grs. Spanish copper. 3 dwts. 16 grs. fine silver, and 1 oz. gold coin.

Gold from 35s. to 40s. per ounce. 8 oz. 8 dwts. Spanish copper, 10 dwts. fine silver, and 1 oz. gold coin.

Manheim gold, or similor. 3J oz. copper, 1 J oz. of brass, and 15 grs. of pure tin.

Gliding metal. 4 parts of copper, 1 part of Bristol old brass, and 14 oz. of tin to every pound of copper.

For common jewellery. 3 parts of Copper, 1 part of Bristol old brass, and 4 oz. of tin to every pound of copper. If this alloy is for fine polishing, the tin maybe omitted, and a mixture of antimony and lead substituted. Paler polish- ing metal is made by reducing the copper to two or to one part.

Yellow dipping metal. 2 parts of cheadle brass, 1 part of copper, with a little Bristol old brass, and J oz. of tin to every pound of copper. This alloy is almost of the color of gold coin. Cheadle brass is the darkest, and gives the metal a greenish hue. Old Bristol brass is pale and yellow. Or 1 Ib. of copper, and 5 oz. of zinc. The copper should be tough cake, and not tile. When antimony is used, instead of tin, it should be in smaller quantity, or the metal will be brittle.

Imitation of silver. Joz. of tin, and 1 Ib. of copper, will make a pale bell-metal, which will roll and ring very near to sterling silver. ˆ

Of casting, — The casting of metal, after its preparation from the ore, is a most important part of the science of metallurgy.

The art of founding in metal, or casting, now occupies a space in our wants, which entitles it to considerable attention. If the Greeks, and after them the Romans, perfected it in as far as refers to the casting in brass and bronze, we have extended it more than they did, inasmuch as we have turned it to all the great features of general utility. Iron constitutes the grand staple in modern founding. See IRON MANUFACTURE.

Tlie great abundance of this metal, with its con- sequent cheapness, together with the develop- ments of chemistry, has, amongst us, opened to •t a field, and created for it a demand, by which its operations may go on ad infinitum, and it is hoped with a success commensurate.

For composition of brass, see CIIEMISTRY The casting figures in brass is not much prac- tised among the moderns at this time, although it was a good deal followed at the restoration of the arts in the fifteenth century. At that time brass works were had recourse to in the decora- tion of most buildings of any consideration ; and, in order to supply the metal at little cost, several of the ancient edifices then existing were muti- lated for the purpose. In Rome many of the vaultings to the temples were ornamented by having their lacunaria relieved by pateras and other decorations of brass or silver; these the popes of the times removed to compose the childish ornaments for their then erecting or newly consecrated Catholic churches. France, Germany, and England, at that time subject to the same caprice in religion as well as in the arts, adopted a similar style of decoration in their religious edifices, as numerous reliques still existing in tombs, shrines, screens, and other parts of their cathedrals and religious houses fully demonstrate. Amongst us certainly, and particularly after Henry VIII.'s separation from the church of Rome, such works were dis-

continued as Catholic and idolatrous. Elizabeth, proceeding in the reformation already com- menced by her predecessor, not only destroyed the images, but the pictures also ; and at tho same time strictly forbad any thing of the kind to be admitted in future under the severest pe- nalties. The rebellion in 1648, completed what the Reformation had begun. The fanatics of this time defaced whatever they could get at, that the former inquisition had spared ; they tore down the brass from the monuments and screens, car- ried away the plate from the altars, broke the painted windows, and dilapidated the tombs of the saints, crying out in their work of spoliation, ' cursed be he that doeth the work of the Lord deceitfully.' After this, it would be vain to look in England for works in brass of any considera- tion, as little was spared but what was too remote for the Vandals of that period to get at. From this time, among us, a void or chaos existed and continued to exist in works of art, till a more en- lightened policy began to blend itself, which happened about the close of the seventeenth century. But the effects of (the persecution had been felt so much that the liberal arts had lost their practisers ; hence the introduction of fo- reigners, and the consequent notion about our ina- bility in works of taste ; which is much too insipid and ridiculous at this time to need refutation.

We conclude with an account of our principal metalline exports, TIN, and COPPER : —

Quantity of Tin Exported.

Counties to which Exported.

British Tin.

Foreign Tin.

Cwts. qrs. Ibs.

Cwts. qrs. Ibs.

TRussia . .

4,194 0 0

348 3 20

Sweden .....

488 2 8

9ft

Norway .....

15 2 3

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Denmark .....

34 0 16

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Prussia ...

419 2 0

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Germany .....

390 2 0

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Holland

2,500 1 1

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Flandecs ....

321 2 12

France ....

14,651 3 13

3,609 2 24

“o

Portugal, Azores, and Madeira

399 0 0

B

Spain and the Canaries

473 0 0

oT

Gibraltar ....

52 1 0

Bi

0

Italy .....

4,636 1 19

176 1 5

M

3

Malta .....

100 0 0

N

Ionian Islands ....

20 0 0

Turkey and the Levant

2,592 0 0

Aisles Guernsey and Jersey

53 3 0

31,342 1 16

4,134 3 21

Asia

29 1 0

America, viz.'.—

British colonies in North America

32 0 0

British West Indies ....

195 0 22

United States . . »'

992 0 21

574 3 18

Brazil : , . « •

98 0 7

Mexico ...

600

Colombia

20 0 0

Peru .....

920

Buenos Ayres ....

800

Total, exclusive of Ireland

32,732 2 10

4,709 3 11

Ireland .....

1ˆ505 1 9

Total to all parts ....

34,237 . 3 19

4,709 3 11

350

METALLURGY.

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FOREIGN

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METAMR’PHOSE,v.a. > Fr. metumor-

*MKTAMOR’PHOSIS, n. s. jplioser; Gr.pira- t*opou. To change the form of a thing: trans- formation.*

Thou Julia, thou hast metamorphosed me ;

Made me neglect my studies, lose my time.

Shakspeare.

They became degenerate and metamorphosed like Nebuchadnezzar, who, though he had the face of a man, .had the heart of a beast. Davies on Ireland.

His whole oration stood upon a short narration, what was the causer of this metamorphosis, Sidney.

Obscene talk is grown so common, that one would

think we were fallen into an age of metamorphosis,

and that the brutes did not only poetically, but really

speak. Government of the Tongue.

From such rude principles our form began,

And earth was metamorphosed into man. Dryden.

What! my noble colonel in metamorphosis? On what occasion are you transformed ? Id.

Cowardice may be metamorphosed into prudence ; intemperance into good-nature and good fellowship.

Pope.

There are probable machines in epic poems, where the gods are no less actors than the men ; but the less credible sort, such as metamorphoses, are far more rare. Broome.

METAMORPHOSIS is used for the mythological changes related by the ancient poets ; upon which Ovid wrote fifteen books. Mythological meta-morphoses were held to be of two kinds, appa- rent and real ; thus that of Jupiter into a bull was only apparent ; whereas that of Lycaon into a wolf was supposed to be real. Most of the ancient metamorphoses include some allegorical meaning, relating either to physics or morality : some authors are even of opinion that a great part of the ancient philosophy is couched under them ; and lord Verulam and Dr. Hooke have attempted to unriddle several of them.

METAPHOR, ra.s. } Fr. wetaphore; Gr.

METAPHOR'ICAL, adj. £ ptraQopa ; fiira, trans,

METAPHOR'IC.) and 0epo>, I bear or

carry. A trope or figure of speech whereby a word is applied to a use to which, in its original import, it cannot be put; or, as Dr. Johnson says, it is a simile comprised in a word.

1 he words which were, do continue ; the only differ- ence is, that, whereas before they had a literal, they now have a metaphorical use. Hooker.

Some of the best interpreters therefore have taken this metaphor of light to imply the purity and perfect goodness of God. Bp. Halt.

The work of tragedy is on the passions, and in a dialogue ; both of them abhor strong metaphors, in which the epopoea delights. Dryden.

The metaphor of laughing, applied to fields and ineadows when they are in flower, or trees when they are in blossom, runs through all languages, which I have not observed of any other metaphor, excepting that of fire and burning when they are applied to love.

Addison.

One died in metaphor, and one in song. Pope.

METAPHOR, in poetry. A metaphor differs from a simile in form only, not in substance : in a simile the two subjects are kept distinct in the expression, as well as in the thought ; in a meta- phor the two subjects are kept distinct in the thought only, not in the expression. For exam- ple, Homer compares a hero to a lion, and de- scribes all the qualities of a lion that resemble those of the hero. The fundamental pleasure VOL. XIV.

here, that of resemblance, belongs to the thought. An additional pleasure arises from the expres- sion : the poet, by figuring his hero to be a lion, goes on to describe the lion in appearance, but in reality the hero; and his description is pecu- liarly beautiful, by expressing the virtues and qualities of the hero in new terms, which, pro- perly speaking, belong not to him but to the lion. An allegory differs from a metaphor; and a figure of speech differs from both. A metaphor is an act of the imagination, figuring one thing to be another. An allegory requires no such operation, nor is one thing figured to be another: it consists in choosing a subject having proper- ties or circumstances resembling those of the principal subject; and the former is described in such a manner as to represent the latter. The subject thus represented is kept out of view : we are left to discover it by reflection ; and we are pleased with the discovery because it is our own work. In a figure of speech there is no fiction of the imagination employed, as in a metaphor ; nor a representative subject introduced, as in an allegory. This figure, as its name implies, regards the expression only, not the thought ; and it may be defined, the using a word in a sense different from what is

proper to it. Thus youth, or the beginning of life, is expressed figuratively by the morning of life : morning is the beginning of the day ; and in that view it is employed to signify the beginning of any other series, life especially, the progress of which is reckoned by days. The following particular rules, however, may here be laid down, as proper to be observed respecting metaphors : — No comparison ought to be made where the resemblance is either too strong or too faint. A metaphor, above all, ought to be short : it is difficult, for any time, to suppose a lively image of a thing to be what we know it is not ; and, for that reason, a metaphor drawn out to any length, instead of illustrating or enlivening the principal subject, becomes disagreeable by overstraining the mind. In constructing a meta- phor the writer ought to use such words only as are applicable literally to the imagined nature of his subject : figurative words ought carefully to be avoided; for such complicated figures, instead of setting the principal subject in a strong light, involve it in a cloud. The jumbling different metaphors in the same sentence, beginning with one metaphor and ending with- another, com monly caUed a mixed metaphor, ought never t« be indulged. It is improper to join different metaphors in the same period, even where they are preserved distinct ; for, when the subject >•> imagined to be first one thing and then another, in the same period, without interval, the mind is distracted by the rapid transition. It is still worse to jumble together metaphorical and na- tural expression, so as that the period must be understood in part metaphorically, in part lite- rally; for the imagination cannot follow, with sufficient ease, changes so sudden and unpre- pared.

METAPHRASE, n.s.) Gr. lura^aatf. A

METAPHR'ASER, i verbal translation

from one language into another : a literal translator

This translation is not so loose as paraphrase, nol

so close as metaphrase. Dryden.

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METAPHYSICS.

MF-TAPIIYSIC, n.s.v Fr. metaphysique ; METAPHYS'ICS, f Gr. ^tra^vtrncr/. On

METAPHYS'ICAL, adj. (tology; the doctrine METAPHYSic'iAN,n.s. 'of the general affec- tions of being: a term first used by Aristotle. See below.

Metaphysical is used by Shakspeare for supernatural : a metaphysician is a person skilled in, or a student of, metaphysics.

Hie thee hither,

To chastise with the valour of my tongue All that impedes thee from the gold: , round, Which fate, and metaphysical aid, doth seem To have crowned thee withal.

Shakspeare. Macbeth. The raathematicks and the metaphy sicks, Fall to them as you find your stomach serves you.

Shakspeare.

Wherein the philosopher, and the superstitiously ignorant, are contrarily extreme : while the one seeks out natural causes of God's immediate and metaphysi- cal works, the other ascribes ordinary effects to super- natural causes. -Bp. Hall.

If sight be caused by intromission, or receiving in, the form of contrary species should be received con- fusedly together, which, how absurd it is, Aristotle shews in his metaphy sicks. Peacham.

Call her the metaphysickt of her sex, And say she tortures wits as quartans vex Physicians. Cleaoeland.

The metaphysick's but a puppet motion That goes with screws, the notion of a notion, The copy of a copy, and lame draught Unnaturally taken from a thought. Hvdibras.

See physick beg the Stagyrite's defence ! See metaphysick call for aid on sense !

Pope's Dunciad.

The topics of ontology, or metaphysick, are cause, effect, action, passion, identity, opposition, subject, adjunct, and sign. Wattt'i Logick.

METAPHYSICS. This term literally means af- ter physics, and originated with Aristotle. After treatitig of physics, or rather what we should term natural history, he begins his next book with the Greek words pera ra Qvauca, which we have joined together as one word — metaphysics. In the treatise of Aristotle, to which the above words are prefixed, he pretends to go beyond physics, to elevate the mind above corporeal ob- jects, to fix it on the contemplation of spiritual things, and to enable it to judge of the principles of science by abstraction. The metaphysics of Aristotle were long

a principal part of the learn- ing of the schools, in which confusion was worse confounded. Johnson remarks, in his apposite manner, that what reason did not dictate, reason cannot explain ; and this remark will apply in all its force to many unmeaning or absurd modes of expression. If we were at liberty to follow our own choice, we would rather discard the term metaphysics than attempt a definition of it. It is no longer the symbol of the absurdities that were formerly very gravely treated of under the imposing names of ontology and pneumatology ; but it is yet so worthy of its origin and particular appropriation, that scarcely any two writers can be found who would agree respecting its import. But, without attempting to define what is or

what ought to be the import of the term, we purpose to give a brief view of the most distin- guished metaphysical writers, from the period when the authority of Aristotle was shaken off, down to the present time ; and to attempt an es- timate of the reality and value of metaphysical knowledge.

*What may be designated the modern meta- physics cannot be traced back farther than the fifteenth century, — that memorable period when an extraordinary impulse was given in Europe to the human mind, and commonly called the re- vival of learning. Down to that time, through the whole of the middle or dark ages, the doc- trines of Aristotle were not only blindly received, but it was considered a kind of blasphemy to call them in question. There was now at last, however, a mental revolution, attended with ex- traordinary freedom and boldness towards re- ceived opinions and established authorities. Luther, the father of the Protestant Reformation, expresses himself with much decision concerning the futility of the Aristotelian doctrines. What does it contribute,' he asks, ' to the knowledge of things, to trifle and cavil in words conceived and prescribed by Aristotle concerning matter, form, motion, and time ?' Nihil adjumenti ex ipso ha- beri posse non solum ad theologiam seu sacras literas, verum etiam ad ipsam naturalem philoso- phiam. Quid enim juvet ad rerum cognitionem, *i de materia, form&, motu, tempore, nugari et cavallari queas verbis ab Aristotele conceptis et praescriptis. The following passage to the same purpose is quoted by Bayle, article Luther, note H. H. : ' You will not persuade me that philoso- phy is that garrulity concerning matter, motion, infinity, place, vacuum, time : — things that we learn almost wholly from Aristotle, which avail nothing to the intellect, the affections, or moral conduct of men, but which are fit only to sow and spread contentions.' Non mihi persuad- ebitis, philosophiam esse garrulitatem illam de materia, forma, motu, infiuito, loco, vacuo, tem- pore, quae ferfe in Aristotele sola discimus, talia quae nee intellectum, nee affectum, nee commu- nes hominum mores quidquam juvent ; tantum contentionibus serendis seminandisque idonea. In another of the extracts made by Boyle from Luther, the latter says that he was very desirous if he had leisure of*

exposing the quackery of Aristotle. In his Colloquia Mensalia we are told that 'he hated Aristotle, and called the schoolmen sophistical locusts, caterpillars, frogs, and lice.' See Jortin's Life of Erasmus.

It cannot be fairly said that Luther affected to hate or despise what he would not be at the trouble of learning ; for, according to tta testi- mony of Melancthon and other competent wit- nesses, he possessed much mastery in scholastic learning, and was a strenuous partisan of the sect of Nominalists, or Terminists, concerning which some notice will be taken in a subsequent part. The opinion of Luther, so freely and boldly expressed, must have had much influence in bringing the scholastic metaohysics into neglect

and contempt among the ˆProtestants. In this indeed, as in other important respects, the energy of the great reformer was counteracted by Me- lancthon, who favored to the utmost of his ability the Peripatetic jargon. ' The preservation of the Aristotelian philosophy in the Protestant colleges was chiefly owing to Melancthon, who wrote abridgments of most of its doctrines, which long prevailed in them. Et Melancthoni quidem prae- cipu6 debetur conservatio philosophise Aristo- telicae in academiis Protestantium. Scripsit is compendia plerarumque disciplinarum philoso- phise Aristotelicaj, quae in academiis diu regn£- runt. lleiiieccii, Elem. Hist. Phil.

Another person who contributed not a little towards throwing off the yoke of the old philo- sophy, and establishing that intellectual inde- pendence which now began to display itself in several parts of Europe, was the famous or noto- rious Paracelsus. This daring innovator, who had so little reverence for antiquity that he would have made a bonfire of the writings of Aristotle, Hippocrates, and all the other old authors of any intellectual authority, was born at Einfidelen, Switzerland, in 1493, and was consequently ten years younger than Luther. Le Clerc, having quoted from Paracelsus the expression which designates the philosophy of Aristotle 'a wooden foundation,' adds, ' He ought to have attempted to lay a better ; but, if he has not done this, he has at least, by discovering its weakness, invited his successors to look out for a firmer basis.'

A much better and more permanently influen- tial man than Paracelsus was Raraus, born at Cuth in Picardy in 1515. He received his edu- cation in the college of Navarre, and his thesis on being admitted to the degree of M. A. was an attack on the doctrine of Aristotle ; which occa- sioned a

violent controversy, in consequence of which Ramus was prohibited from teaching; but he was in 1551 nominated to the regius pro- fessorship in the university of Pans, where he opposed Aristotle with invincible courage. The bold and persevering spirit with which Ramus, remarks Mr. Stewart, disputed in the university of Paris the authority of Aristotle, and the per- secutions he incurred by this philosophical he- resy, entitle him to an honorable distinction fsom the rest of his brethren. He was certainly a man of uncommon acuteness as well as eloquence, and placed in a very strong light some of the most vulnerable parts of the Aristotelian logic ; without, however, exhibiting any marks of that deep sagacity which afterwards enabled Bacon, Descartes, and Locke, to strike at the very root cf the system. His copious and not inelegant style as a writer recommended his innovations to those who were disgusted with the barbarism of the schools ; while his avowed partiality for the reformed faith (to which he fell a martyr in the massacre of Paris) procured many proselytes to his opinions in all the Protestant countries of Europe. In England his logic had the honor, in an age of comparative light and refinement, to find an expounder and methodiser in the author of Paradise Lost; and in some of our northern universities, where it was very early introduced, it maintained its ground till it was supplanted by the logic of Locke. It has been justly said of

Ramus, that, ‘ although he had a genius suffi- cient to shake the Aristotelian fabric, he was un- able to substitute any thing more solid in its place ;’ but it ought not to be forgotten that even this praise, scanty as it may now appear, involves a large tribute to his merits as a philo- sophical reformer. Before human reason was able to advance, it was necessary that it should first be released from the weight of its fetters.’

How far human reason has been able to ad- vance, in the metaphysical regions, we shall en- deavour to ascertain in the proper place. It is certainly no small part of the merit of Ramus that he did not attempt to substitute any thing of his own for much that he objected to in Aris- totle, whose chief folly, as well as that of many other metaphysicians, both before and after him, was in doing any thing whatever of the kind which he attempted. When men raise questions unsus- ceptible of solution, all that they can possibly write concerning them must be of the nature of a literary nuisance ; and he performs the greatest service to the world who demolishes the babel- building and clears the whole away. It is said, by Montesquieu, that the only good book which the Spaniards have is the one which exposes the absurdity of all the rest. And we shall find, perhaps, that the best part of the best metaphy- sical book yet in existence is of this description.

Next in the order of time among the demo- lishers of the Aristotelian philosophy, but supe- rior to all the others in intellectual power, stands the great lord Bacon, justly designated the father of experimental philosophy. It

would now be idle to indulge in eulogial strains on the intellectual character of the author of Novum Organon. That he was a determined enemy to the sophistry and absurdity of the schools which had been so long dignified with the name of philosophy, and that he embraced every opportunity of exposing them, is well known to all who are acquainted with his writings. It is probable that the de- cided manner in which he expressed his opinion did more towards the exploding of the old phi- losophy than had been effected by the efforts of Luther, Paracelsus, Ramus, and all his prede- cessors, who aimed at its subversion. We must not forget, however, that, according to his own memorable words, ‘ time is the greatest of all innovators.’ We are apt to ascribe too much to particular persons, and too little to the intellec- tual state of the world at the time when they ap- peared. There is no doubt, for instance, that Luther exerted a mighty influence on the opi- nions of his contemporaries ; yet he is perhaps rather to be considered as the son than the father of the Reformation. So in reference to the school philosophy — its overthrow was owing to the progress of general knowledge in the slow course of time, rather than to any sudden crea- tion of gigantic genius or influential intellect. The simultaneous attacks upon Aristotle in so many remote parts of Europe, in Germany, Italy, Switzerland, France, and England, proves that the general mind was now prepared to throw oft’ the yoke.

‘ The merits of Bacon,’ remarks Mr. Stewart, ‘ as the father of experimental philosophy, are so universally acknowledged, that it would be

superfluous to touch upon them here. The lights which he has struck out in various branches of the philosophy of mind have been much less attended to; although the whole scope and tenor of his speculations show that to this study his genius was far more strongly and happily turned than to that of the material world. It was not, as some seem to have imagined, by sagacious anticipations of par- ticular discoveries afterwards to be made in physics, that his writings have had so powerful an influence in accelerating the advancement of that science. In the extent and accuracy of his physical knowledge he was inferior to many of his predecessors ; but he surpassed them all in his knowledge of the laws, the resources, and the limits of the human understanding. The san- guine expectations with which he looked for- wards to the future were founded solely on his confidence in the untried capacities of the mind ; and on a conviction of the possibility of invigor- ating and guiding, by means of logical rules, those faculties which, in all our researches after truth, are the organs or instruments to be em- ployed.

' Nor is it merely as a logician that Bacon is entitled to notice on the present occasion. It would be difficult to name another writer prior to Locke, whose works are enriched with so many just observations on the intellectual phe- nomena. Among these the most valuable relate to the laws of memory and of imagination ; the latter of which subjects he seems to have studied with peculiar care. In one short and beautiful paragraph concerning Poetry, under which title may be comprehended all the various creations of this faculty, he has exhausted every thing that philosophy and good sense have ever yet had to offer, on what has been since called the beau ideal : a topic which has furnished occasion to so many over- refinements among the French critics, and to so much extravagance and mysti- cism in the cloud-capt metaphysics of the new German school. In considering imagination as connected with the nervous system more parti- cularly as connected with that species of sym- pathy to which medical writers have given the name of imitation, he has suggested some very important hints which none of his successors have yet prosecuted ; and has, at the same time, left an example of cautious enquiry, worthy to be studied by all who may attempt to investi- gate the laws regulating the union between mind and body. His illustration of the different classes of prejudices incident to human nature, is, in point of practical utility, at least equal to any thing on that head to be found in Locke ; of whom it is impossible to forbear remarking, as a circumstance not easily explicable, that he should have resumed this important discussion without once mentioning the name of his great predecessor. The chief improvement made by Locke, in the farther prosecution of the argu- ment, is the application of

Hobbes's theory of association, to explain in what manner these prejudices are originally generated.

' In Bacon's scattered hints on topics con- nected with the philosophy of the mind, strictly

so called, nothing is more remarkable than the precise and j.ust ideas they display of the proper aim of this science. He had manifestly reflected much and successfully on the operations of his own understanding, and had studied, with un- common sagacity, the intellectual characters of others. Of his reflections and observations on both subjects he has recorded many important results ; and has in general stated them without the slightest reference to any physiological theory concerning their causes, or to any analogical ex- planations founded on the caprices of metapho- rical language. If, on some occasions, he assumes the existence of animal spirits, as the medium of communication between soul and body, it must be remembered that this was then the universal belief of the learned ; and that it was, at a much later period, not less confidently avowed by Locke. Nor ought it to be over- looked (I mention it to the credit of both au- thors) that in such instances the fact is commonly so stated, as to render it easy for the reader to detach it from the theory. As to the scholastic questions concerning the nature and essence of mind, — whether it be extended or unextended ? whether it have any relation to space or time ? or whether (as was contended by others) it exist in every ubi but in no place? Bacon has uni- formly passed them over with silent contempt ; and has probably contributed not less effectually to bring them into general discredit by this in- direct intimation of his own opinion, than if he had descended to the ungrateful task of exposing their absurdity.

' While Bacon, however, so cautiously avoids these unprofitable discussions about the nature of mind, he decidedly states his conviction that the faculties of man differ not merely in degree, but in kind, from the instincts of the brutes. ' I do not therefore,' he observes on one occasion, ' approve of that confused and promiscuous me- thod in which philosophers are accustomed to treat of pneumatology ; as if the human soul ranked above those of brutes merely like the sun above the stars, or like gold above other metals.

' Among the various topics stated by Bacon, for the consideration of future logicians, he did not overlook (what may be justly regarded, in a practical view, as the most interesting of all logi- cal problems) the question concerning the mutual influence of thought and of language on each other. ' Men believe,' says he, ' that their reason governs their words, but it often happens that words have power enough to re-act upon reason.' This aphorism may be considered as the text of by far the most valuable part of

Locke's Essay, — that which relates to the imper- fections and abuse of words ; but it was not till within the last twenty years that its depth and importance were perceived in all their extent. 1 need scarcely say that I allude to the excellent Memoirs of M. Prevost, and of M. Degerando, on 'Signs considered in their connexion with the Intellectual Operations.' The anticipations formed by Bacon of that branch of modern log'c which relates to universal grammar do no less honor to his sagacity. ' Grammar,' he observes, ' is of two kinds : the one literary, the other philoso-

phical. The former has for its object to trace the analogies running through the structure of a particular tongue, so as to facilitate its acquisi- tion 10 a foreigner, or to enable him to speak it with correctness and purity. The latter directs the attention not to the analogies which words bear to words, but to the analogies which words bear to things,' or, as he afterwards explains him- self more clearly, ' to language considered as the sensible portraiture or image of the mental pro- cesses.' In farther illustration of these hints he takes notice of the light which the different genius of different languages reflects on the cha- racters and habits of those by whom they were respectively spoken. ' Thus,' says he, ' it is easy to perceive that the Greeks were addicted to the culture of the arts, the Romans engrossed with the conduct of affairs ; inasmuch as the technical distinctions introduced in the progress of refine- ment require the aid of compounded words ; while the real business of life stands in no need of so artificial a phraseology.' Ideas of this sort have, in the course of a very few years, already become common, and almost tritical ; but how different was the case two centuries ago ! It would be endless to particularise the original suggestions thrown out by Bacon on topics con- nected with the science of mind. The few pas- sages of this sort already quoted are produced merely as specimens of the rest. They are by no means selected as the most important in his writings ; but, as they happened to be those which left the strongest impression on my me- mory, I thought them as likely as any other to invite the curiosity of my readers to a careful ex- amination of the rich mine from which they are extracted. His small volume of Essays, the best known and most popular of all his works, may be read from beginning to end in a few hours, — and yet, after the twentieth perusal, one seldom fails to remark in it something overlooked before. This, indeed, is characteristic of all Bacon's wri- tings, and is only to be accounted for by the in- exhaustible aliment they furnish to our own thoughts, and the sympathetic activity they im- part to our torpid faculties.'

Most of the above remarks are as critically just as they are elegantly

expressed. Perhaps a little more concentration and definiteness, or less diffuseness and vagueness of statement, could be wished. If we may express our idea of Bacon's peculiar excellence in the fewest pos- sible words, it consists in pointing out in such a manner as at once to arrest attention and flash conviction the various sources orcauses of human error. No author ever did more for sound phi- losophy, whether considered in reference to mind or to matter ; consequently, in as far as the term metaphysics imports sound thinking and reason- ing or real and useful knowledge, Bacon is en- titled to rank among the first and highest of metaphysical philosophers; but, in the more limited and usual application of the expression, Hobbes is unquestionably to be considered as the father of the modern metaphysics, variously de- signated, with too much of assumption and pre- tension perhaps, the physiology of the mind, the philosophy of the human mind, the science of mind, intellectual philosophy, &c.

HOBBES, GASSENDI, AND DESCARTES.

The end of the sixteenth and beginning of the seventeenth century was pre-eminently the age of great men. Bacon, Galileo, Kepler, Hobbes, Milton, Gassendi, Descartes, and not a few others of kindred spirit, were contemporaries. Bacon was born in 1561, Hobbes in 1588, Gas- sendi in 1592, Descartes in 1596. ' The period when Hobbes began his literary career,' says Mr. Stewart, ' as well as the principal incidents of his life, were in a singular degree favorable to a mind like his ; impatient of the yoke of autho- rity and ambitious to attract attention, if not by solid and useful discoveries, at least by an in- genious defence of paradoxical tenets. After a residence of five years at Oxford, aud a very ex- tensive tour through France and Italy, he had the good fortune upon his return to England to be admitted into the intimacy and confidence of lord Bacon ; a circumstance which we may pre- sume contributed not a little to encourage the bold spirit of enquiry, and that aversion to scho- lastic learning, which '•haracterise his writings.' '••It is very remarkable that Descartes should have thought so highly of the ethical principles of Hobbes as to pronounce him a much greater master of morality than of metaphysics. Mr. Ad- dison, on the other hand, gives a decided prefer- ence (among all the books written by Hobbes) to his Treatise on Human Nature; and to his opinion on this point I most implicitly subscribe; including, however, in the same commendation some of his other philosophical essays on similar topics. They are the only part of his works which it is now possible to read with interest ; and they every where evince in their author, even when he thinks most unsoundly himself, the power of setting his reader a thinking, which is one of the most unequivocal marks of original genius. They have plainly been studied with the utmost care both by Locke and Hume. To the former they have suggested some of his most important observations on the association of ideas, as well as much of the sophistry displayed in the first

book of his Essay on the Origin of our Knowledge, and on the factitious nature of our moral principles ; to the latter (among a va- riety of hints of less consequence) his theory concerning the nature of those established con- nexions among physical events which it is the business of the natural philosopher to ascertain, and'the substance of his argument against the scholastic doctrine of general conceptions. It is from the work of Hobbes, too, that our later Ne- cessitarians have borrowed the most formidable of those weapons with which they have combated the doctrine of moral liberty ; and from the same source has been derived the leading idea which runs through the philological materialism of Mr. Hjorne Tooke. It is probable, indeed, that this last author borrowed it at second hand from a hint in Locke's Essay; but it is repeatedly stated by Hobbes, in the most explicit and confi- dent terms. Of this idea (than which, in point of fact, nothing can be imagined more puerile and unsound) Mr. Tooke's etymologies, when heap- plies them to the' solution of metaphysical ques- tions, are little more than an ingenious expansion,

adapted and levelled to the comprehension of the multitude. The speculations of Hobbes, how ever, concerning the theory of the understanding, do not seem to have been nearly so much at- tended to during his own life as some of his other doctrines, which, having a more immediate reference to human affairs, were better adapted to the unsettled and revolutionary spirit of the times. It is by these doctrines, chiefly, that his name has since become so memorable in the annals of modern literature ; and although they now derive their whole interest from the extraor- dinary combination they exhibit of acuteness and subtlety with a dead palsy in the powers of taste and of moral sensibility, yet they will be found, on an attentive examination, to have had a far more extensive influence on the subsequent history, both of political and of ethical science, than any other publication of the same period.'

Much of the above quotation is very just, though somewhat debased with that metaphysi- cum odium so characteristic of the school of Reid, Oswald, and Beattie. Indeed Mr. Stewart writes more in the spirit of a metaphysical par- tisan, we had almost said of a persecutor, when treating of Hobbes, Gassendi, and sometimes too of Locke, than in the dispassionate temper of philosophy. In this respect Dr. Thomas Brown is a noble exception, or rather he is a striking contrast to the other moral professors of ,the Scottish universities. Instead of presenting the ethical and political principles of Hobbes to prejudice the reader against his writings in toto, in the manner of Mr. Stewart, Dr. Brown thus notices the philosopher of Malmesbury : — 'I

may now proceed farther back, to another philosopher of great eminence, whose name, unfortunately for its reputation, is associated more with his political and religious errors, than with his analytical inves- tigations of the nature of the phenomena of thought. The author to whom I allude is Hobbes, without all question one of the most acute intellectual enquirers of the country and age in which he lived. As the physiology of the mind, in Bri- tain at least, seemed at that time to be almost a new science, he was very generally complimented by his contemporary poets as the discoverer of a new land. Some very beautiful Latin verses, addressed to him, I quoted to you in a former lecture, in which it was said on occasion of his work on Human Nature, that the mind, which had before known all things, was now for the first time made known to itself. Omnia liactenus

Quae nosse potuit, nota jam primuni est sibi.

and in which he was said in revealing the mind, to have performed a work next in divinity to that of creating it.

Divinum est opus Ammum creare, proximum huic ostendere.

By Cowley, who styles him ‘ the discoverer of tlie golden lands of new philosophy,’ he is com- pared to Columbus, with this difference, that the world which that great navigator found was left by him rude and neglected, to the culture of future industry; while that which Hobbes discovered iniyht lie said to have been at once explored by liiˆt! and civilised. The eloquence of his strong

and perspicuous style, I may remark by the way, seems to have met with equal commendation from his poetical panegyrists. His style is thus described in some verses of Sheffield, duke of Buckingham : —

Clear as a beautiful transparent skin, Which never hides the blood, yet holds it in ; Like a delicious stream it ever ran, As smooth as woman, but as strong as man.’

The reader is now acquainted with some of the characteristic peculiarities of Hobbes’s intel- lect ; but no one can have an adequate concep- tion of it without reading his writings. Mr. Stewart has awarded, though reluctantly, some- thing of due praise to the treatise on Human Nature; which might have been entitled Multum in Parvo. It may be read, as Mr. Stewart re- marks of Bacon’s Essays, through in a few hours, and yet, after the twentieth perusal, one seldom fails to remark in it something overlooked before. It has not only the merit of setting the reader a thinking, as remarked by the above critic : we cannot read it, so as to enter into the author’s meaning, without thinking ; and it is impossible to give any thing

like adequate attention, with- out understanding his meaning ; for he excels not only in brevity, but in clearness and defi- niteness ; expressing with a lucidness and rigor- ous precision, peculiarly his own, his meaning, his whole meaning, and nothing but his meaning. In this respect, indeed, he not only excels — he is a contrast to nearly all other metaphysicians, especially to Locke and Hume. Much of his other excellence is owing indeed to this;, for, of all who have been aware of the connexion be- tween words and ideas for better or for worse, none ever kept the nature of that connexion so steadily and so constantly in view. To such as have studied what he has said on this subject, the third book of Locke's Essay (unquestion- ably the best in the whole work) will seem mere prosing verbiage — a wood of words, to use one of Locke's own happiest expressions.

The following paragraph at the conclusion of Leviathan is strikingly characteristic of the author, and descriptive of his opinion respecting language as the medium of thought : — ' There is nothing I distrust more than my diction : which nevertheless I am confident (excepting the mis- chances of the press) is not obscure. That I have neglected the ornament of quoting ancient poets, orators, and philosophers, contrary to the customs of late times, whether I have done well or ill in it, proceedeth from my judgment, grounded on many reasons. For, first, all truth of doctrine dependeth either upon reason or upon scripture ; both which give credit to many, but never receive it from any writer. Secondly, the matters in question are not of fact but of right, wherein there is no place for witnesses. There is scarcely any of those old writers that contradicteth not sometimes, both himself and others, which makes their testimonies insufficient. Fourthly, such opinions as are taken only upon the credit of antiquity are not intrinsically the judgment of those that cite them, but words that pass (like gaping) from mouth to mouth. Fifthly, it is often with a fraudulent design that some

stick their corrupt doctrines with the cloves of other men's wit. Sixthly, I find not that the ancients they cite took it for an ornament to do the like with those that wrote before them. Seventhly, it is a proof of indigestion when Greek and Latin sentences come up again unchanged. Lastly, though I reverence those men of ancient times, that either have written truth perspicu- ously, or that have put us in a better way to find it out ourselves ; yet to the antiquity itself I think nothing due : for, if we will reverence age, the present is the oldest time. If the antiquity of the writer is to be reverenced, I am not sure that generally they to whom such honor is given were more ancient when they wrote than I am when now writing : but, if it

be well considered, the praise of ancient authors proceeds not from reverence for the dead, but from the competition and mutual envy of the living.'

Perhaps pedantry never received a more caustic application. . The following quotations from Leviathan, the most obnoxious of all the author's productions, are presented partly on account of their importance, and partly that the reader may be enabled to form a judgment as to the soundness of Mr. Stewart's criticism con- cerning the ' only part of Hobbes's works which it is now possible to read with interest."

' When two names are joined together into an affirmation ; as thus, a man is a living creature ; if the latter name, living creature, signify all that the former name man signifies, then the affirma- tion is true ; otherwise it is false. For true and false are attributes of speech, not of things. And where speech is not, there is neither truth nor falsehood. Error there may be, as when we ex- pect that which shall not be, or suspect what has not been : but in neither case can a man be charged with untruth. Seeing then that truth consisteth in the right ordering of names in our affirmations, a man that seeketh precise truth had need to remember what every name he uses stands for, and to place it accordingly, else he will find himself entangled in words as a bird in lime-twigs ; the more he struggles, the more belimed.'

' By this it appears how necessary it is for any man, that aspires to true knowledge, to examine the definitions of former authors, and either to correct them where they are negligently set down, or to make definitions for himself. For the errors of definitions multiply themselves as the reckoning proceeds ; and lead men into absur- dities, which at last they see, but cannot avoid without reckoning anew from the beginning; in which lies the foundation of their errors. Hence it happens that they who trust to books, do as they that cast up many little sums into a greater, without considering whether those little sums were rightly cast up or not; and at last finding the error visible, and not mistrusting their first grounds, know not which way to clear them- selves, but spend time in fluttering over books ; as birds that have entered by the chimney, find- ing themselves enclosed in a chamber, flutter at the false light of a glass-window, for want of wit to consider which way they came in. So that in the right definition of names lies the first use of speech, which is the acquisition of science ; and

in wrong or no definitions lies the first abuse, from which proceed false and senseless tenets • which make those men that take their instruction from the authority of books, and not from their own meditation, to be as much below the con- dition of ignorant men, as men endued with true science are above it. For, between tr.ue science and erroneous doctrines, ignorance is in the middle. Natural sense and imagination [con- ception] are not subject to

absurdity. Mature itself cannot err : and as men abound in copi- ousness of language, so they become more wise or more foolish than ordinary. Nor is it possi- ble without letters for any man to become re- markably wise, or (unless his memory be hurt by disease an or ill-constitution of organs) remark- ably foolish. For words are wise men's counters, they do but reckon by them ; but they are the money of fools that value them by the authority of an Aristotle, a Cicero, or a Thomas.

' The names of such things as affect us ; that is, which please and displease us (because all men are not alike affected with the same thing, nor the same man at all times), are, in the com- mon discourses of men, of inconstant significa- tion. For, seeing all names are imposed to sig- nify our conceptions, and all our affections are but conceptions, when we conceive the same things differently we can hardly avoid naming them differently. For though the nature of that which we conceive of be the same, yet the diver- sity of our conception of it in consequence of different constitutions of body, and prejudices of opinion, gives every thing a tincture of our dif- ferent passions. And, therefore, in reasoning a man must take heed of words, .which, besides what we imagine to be their own signification, have a signification also of the nature, disposi- tion, and interest, of the speaker ; such as the names of virtues and vices ; for one man calls wisdom what another calls fear ; what one calls cruelty another calls justice, &c.' Leviathan, the first part of chap. iv. of Speech.

' When a man reckons without the use of words, which may be done in particular things (as when upon the sight of any one thing we conjecture what was likely to have preceded, or is likely to follow upon it) ; if that which he thought likely to follow, follow not, or that which he thought likely to have preceded it, has not preceded it ; this is called error, to which even the most sagacious men are subject. But when we reason in words of general signification, and fall upon a general inference which is false, though it be commonly called error, it is indeed absurdity or senseless speech. For error is but a deception, in presuming that somewhat is past or to come, of which, though it were not past or not to come, yet there was no impossibility dis- coverable. But when we make a general affirm- ation, unless it be a true one, the possibility of it is inconceivable. And words whereby we con- ceive nothing but the sound, are those we call absurd, insignificant, and nonsense.

' Man excels all other animals in the faculty of reason ; but this privilege is alloyed by ano- ther, and that is the privilege of 'absurdity, to which no living creature is subject but man; and, of men, those are of all most subject to it who

profess 'philosophy. For it is most true that Cicero somewhere says of them, ' that there can be nothing so absurd, but may be found in the books of philosophers. And the reason is ma- nifest, for there is not one of them that begins his ratiocinations from the definitions or expli- cations of the names he is to employ, which is a method that has been used only in geometry, whose conclusions have, therefore, been made indisputable.

'The first cause of absurd conclusions I ascribe to the want of right method in not beginning their ratiocinations from definitions ; that, is settled significations of their words ; as if they could cast accounts without knowing the value of the numeral words one, two, and three. The second cause of absurd assertions I ascribe to the giving of the names of bodies to accidents

I qualities], or of accidents to bodies. The third ascribe to the giving of the names of the qua- lities of bodies without us to the accidents or affections of our own bodies, as they do that say the color is in the object, the sound is in the air, &c. The fourth to the giving of the names of bodies to names or speeches, as they do that say there are things universal. The fifth to the giving of the names of accidents to names and speeches, as they do that say the nature of a thing is its definition, a man's command is his will, &c. The sixth, to the use of metaphor, tropes, and other rhetorical figures, instead of proper words. For though it be lawful to say, in common speech, the way goeth or leadeth hither or thither, the proverb says this or that, whereas ways cannot go nor proverbs speak; yet in reckoning and seeking of truth such speeches are not to be admitted. The seventh, to names or words that signify nothing, but are taken up and learned by rote from the schools. To him that can avoid these things, it is not easy to fall into any absurdity, unless it be by the length of an account, wherein he may perhaps forget what went before. For all men by nature reason alike and well when they have good principles ; for who is so stupid as both to mistake in geometry, and also to persist in it when another detects his error to him ? They that have no science are in a better and nobler condition with their natural prudence, than men are who, by mis-reasoning or by trusting those that reason wrong, fall upon false and absurd general rules. For ignorance of causes and of rules does not set men so far out of their way, as relying on false rules, and taking for causes of what they aspire to those that are not so, but rather causes of the contrary.' Le- viathan, chap. v. Of Reason and Science.

As remarked by Hume, Stewart, Addison, and others, the Treatise on Human Nature is un- questionably, as a whole, the best of all the works of Hobbes, and it contains little or nothing of those opinions of a theological

and ethical nature which have been considered dangerous, and which have excited so much odium. We "efer the reader to it, and will not attempt a syllabus of that which is so remarkable for bre- vity, that it might be designated a breviary or manual of intellectual analysis. The following quotations are given as a specimen ,of the au- •hor's manner to those who are not acquainted jvith his \vritinc?.

' Concerning these points, as the writings of men from antiquity downwards have still in- creased, so have doubts and controversies : and seeing true knowledge begetteth not doubt or controversy, it is nianifest, from the present con- troversies, that they who have heretofore written thereof have not well understood their own sub- ject. Harm I can do none, though I err no less than they ; for I shall leave men but as they are, in doubt and dispute ; but intending not to take my principle upon trust, but only to put men in mind of what they know already, or may know by their own experience, I hope to err the less ; and, when I do, it must proceed from too hasty concluding, which I will endeavour as much as I can to avoid. On the other side, if reasoning aright win not consent, which may easily happen from them that, being confident of their own knowledge, weigh not what is said, the fault is not mine but theirs ; for as it is my part to show my reasons, so it is theirs to bring atten- tion.'

This is sufficiently haughty towards the cour- teous and gentle reader. In this respect indeed Hobbes is a remarkable contrast to Locke ˆ which accounts, perhaps, for their opposite fate as to popularity. But, though the tone of the author of Human Nature is sufficiently confident and dogmatic, he is modest in reference to the merits of his own favorite study. He never attempts to magnify its importance by lofty language, — he never speaks of intellectual phe- nomena— of the philosophy of mind, &c., &c. As we shall have occasion in the sequel to remark, such metaphysical grandiloquentia did not come into existence till long after the days of Hobbes and Locke.

The following is the author's manner of enter- ing upon what would now be termed the physi- ology of mind : —

- *Having declared what I mean by the word conception, and other words equivalent there- unto, I proceed to conceptions themselves, to show their differences, their causes, and the man- ner of the production, so far as is necessary for this place. Originally all conceptions proceed from the action of the thing itself whereof it is the conception : now, when the action is present, the conception it produce? is also called sense, and the thing by whose action the same is pro- duced is called the object of the sense. By our several organs we have several conceptions of several qualities in the objects ; for by sight we have a conception or image composed of color and*

figure, which is all the notice and knowledge the object imparts to us of its nature by the eye By hearing we have a conception called sound, which is all the knowledge we have of the quality of the object from the ear. And so the rest of the senses are also conceptions of several qualities of their objects. Because the image in vision, consisting of color and shape, is the knowledge we have of the qualities of the object of that sense ; it is no hard matter for a ma« to fall into this opinion, that the same color and shape are the very qualities themselves ; and, for the same cause, that sound and noise are the qualities of the bell, or of the air. And this opinion hath been so long received that the contrary must needs appear a great paradox ; and yet the intro •

Auction of species visible and intelligible (which is necessary to the maintenance of that opinion) passing to and from the object, is worse than any paradox, as being a plain impossibility. I shall therefore endeavour to make plain these points.

‘ That the subject wherein color and image are inherent is not the object or thing seen.

‘That there is nothing without us (really) which we call an image or color.

‘ That the said image or color is but an appear- ance to us of the motion, agitation, or alteration, which the object worketh in the brain, or spirits, or some internal substance of the head.

‘ That, as in vision, so also in conceptions that arise from the other senses, the subject of their inherence is not the object, but the sentient.

‘ Every man has seen the sun and other visible objects by reflection in water and in glass ; and this alone is sufficient for the conclusion that color and image may be where the thing seen is not. But because it may be said that though the image in the water is not in the object, but a mere appearance, yet there may be color really in the thing itself: I will urge further this experience, that frequently men see directly the same object double, as two candles for one, the colors and figures in two such images of the same thing cannot be inherent therein, because the thing- seen cannot be in two places. One of these images therefore is not inherent in the object; consequently neither of them is absolutely in- herent.

‘ As color is not inherent in the object, but an effect thereof upon us, so

neither is sound in the thing we hear, but in ourselves. One manifest sign thereof is that, as a man may see, so also he may hear double or treble, by multiplication of echoes, which echoes are sounds as well as the original ; and, not being in one and the same place, cannot be inherent in the body that causes them : nothing can make any thing which is not in itself: the clapper has no sound in it, but mo- tion, and makes motion in the internal parts of the bell ; so the bell has motion, and not sound, that imparts motion to the air ; and the air hath motion, but not sound ; the air imparts motion by the ear and nerve to the brain ; and the brain hath motion, but not sound : from the brain it rebounds back into the nerves outward, and thence it becomes an appearance without, which we call sound. And, to proceed to the rest of the senses, it is apparent enough that the smell and taste of the same thing are not the same to every man ; and therefore are not in the thing smelled or tasted, but in the men. So likewise the heat we feel from the fire is manifestly in us, and is quite different from what is in the fire ; for our heat is pleasure or pain, according as it is great or moderate ; but in the coal there is no such thing. Thus, as in vision, so also :n conceptions that arise from other senses, the subject of their inherence is not in the object, but in the sentient. Hence also it follows that whatsoever accidents or qualities our senses make us think there are in the world, they are not actually there, but are appearances only : the things that really are in the world without us are those motions by which these appearances are caused. And this is the great deception

of sense, which is also to be corrected by sense . for as sense tells me, when I see directly, that the color seems to be in the object ; so also sense tells me, when I see by reflection, that color is not in the object.'

The reader may judge for himself how much more has been made of these matters, with all their laborious ingenuity, by Locke, Berkeley, Brown, and so many others.

The following is the germe of the famous doc- trine of the association of ideas, so amply philo- sophised by Locke, Hartley, Hume, &c. &c. : —

'The succession of conceptions in the mind, one after another, may be casual and incoherent as in dreams for the most part; and it may be orderly, as when the former thought introduceth the latter; and this is discourse of the mind. But because discourse is commonly taken for the coherence and sequence of words, I will, to avoid equivocation, call it discussion. The cause of the coherence, or sequence of one con- ception to another, is their first coherence or sequence at that time when they are produced by sense. As, for example, from St. Andrew the mjnd runs to St. Peter, because their names are read together ; from St. Peter to a stone for the same cause ; from stone to foundation, because we see them together ;

and', for the same cause, from foundation to church ; from church to people ; and from people to tumult : and accord- ing to this example the mind may run almost from any thing to any thing. But as, in the sense, the conception of cause and effect may succeed one another, so may they after sense in the imagination. And for the most part they do so ; the cause whereof is the desire of those who, having a conception of the end, have next to it a conception of the next means to that end : as when a man, from a thought of honor to which he has a desire, comes to the thought of wisdom, which is the next means thereunto ; and from thence to study, which is the next means to wisdom.'

As the above is evidently the original of all that has since been advanced concerning the association of ideas, so with hardly any excep- tion all that has been advanced on other topics by subsequent metaphysicians of greatest note may be found in a seminal or latent state in the writings of Hobbes. Mr. Stewart notices, as hardly consistent with gratitude or candor, that the only mention which Locke makes of the father of philosophic metaphysics is rather con- demnatory than eulogial. It is probable, indeed, that Mr. Locke was afraid to commend even what was good in Hobbes, or to acknowledge that he had borrowed nearly all his ideas from one who was proscribed by common consent.

Before leaving the author of Leviathan, it may be proper to notice his theological and po- litical heresies. They are unquestionably of a very objectionable nature. But it is much to be regretted that they have been much more met by violent clamor than by forcible reasoning ; and it is also matter of regret that there has been so little discrimination in established or general opinion between what is good and what is bad in the philosopher of Malmesbury; who, according to Warburton, ' was the terror of the last age.'

' The press (continues the author of the Divine Legation) sweats with controversy, and every young churchman militant would try his arms in thundering at Hobbes's steel cap.' ' Nor was the opposition to Hobbes,' remarks Mr. Dugald Stewart, ' confined to the clerical order, or to controversialists of his own times. The most eminent moralists and politicians of the eight- eenth century may be ranked in the number of his antagonists; and even at the present moment scarcely does there appear a new publication on ethics or jurisprudence where a refutation of Hobbism is not to be found/ All this confesses at least that the object of so much animadversion and refutation is an intellectual leviathan. But Mr. Stewart

might have added that there is scarcely one of the almost innumerable refutations which does justice to the hated author, or to his most hateful principles. We would give him fair play, all wicked and hateful as he is, and think the evil principles and reasonings of Hobbes might be opposed much more effect- ually and successfully than has yet been done. His atheism is not that of Epicurus or Spinoza. He was too acute a logician to blunder, in the manner of either, and he was too honest to rea- son as his disciple Hume. He Knew well how far to go, and when to stop. Nor can he be fairly charged with sophistry in argument. Grant his principle, and his reasoning is impregnable. lie plainly and boldly propounds his opinion, which is unquestionably virtual atheism, morally and religiously considered ; viz. that it is absurd to deny the being of a God, or first cause, but aqually absurd to affirm that it is possible to know what he, or rather it is ; because it is impossible to have an idea or image of God in the mind.

' Curiosity,' he says (Leviathan part I. chap. 2.), ' or love of the knowledge of causes, draws a man from consideration of the effect, to seek the cause ; and again the cause of that cause ; till of necessity he must come to this thought at last, that there is some cause whereof there is no former cause, but is eternal; which is it men call God. So that it is impossible to make any profound enquiry into natural causes without being inclined thereby to believe there is one God eternal ; though they cannot have any idea of him in their mind answerable to his nature. For as a man that is born blind, hearing men talk of warming themselves by the fire, and being brought to warm himself by the same, may easily conceive and assure himself there is some- what there which men call fire, and is the cause of the heat he feels, but cannot imagine what it is like nor have an idea of it in his mind, such as they have that see it; so also by the visible things of this world, and their admirable order, a man may conceive there is a cause of them which men call God, and yet not have an idea or image of him in his mind.'

This is perfectly true in the obvious sense of idea or image in reference to God ; and yet it does not follow that we' can have no know- ledge of the intellectual or moral nature of God, which is what, however, Hobbes means. This is the root of all his ethical and political heresies ; and we arc convinced that it admits of the full-

est and most satisfactory refutation. Indeed nothing can exhibit more strikingly the unsound- ness of the author's theory of human knowledge, in connexion with idea or image as actually con- stituting it, than the above quotation. But we must not dwell longer on the topic in this place ; it will probably come under consideration else- where.

Having said so much of Hobbes, it is not necessary to devote many sentences to his con- temporary and friend Gassendi, who may be regarded

as his metaphysical disciple, as he was an enthusiastic admirer of his writings as well as of those of Bacon. His metaphysical opinions, even when not adopted from Hobbes, coincided entirely with that of the latter philosopher, being derived from Epicurus. The intellectual character of Gassendi was certainly above mediocrity ; but he was much inferior to Hobbes in acuteness, com- prehension, and originality, and in some respects to his opponent Descartes, for he possessed less genius. Gibbon pronounces him le meilleur philosophe des litterateurs, et le meilleur litte- rateur des philosophes. ' His learning,' remarks Mr. Stewart « was at once vast and accurate ; and' as a philosopher he is entitled to the praise of being one of the first who entered thoroughly into the spirit of the Baconian logic. But his inventive powers, which were probably not of the highest order, seem to have been either dis- sipated amidst the multiplicity of his literary pursuits, or laid asleep by his indefatigable labors, as a commentator and a compiler. From a writer of this class, new lights were not to be expected' in the study of the human mind, and accordingly here he has done little or nothing, but to revive and repeat over the doctrines of the old Epicureans. His works amount to six large volumes in folio ; but the substance of them might be compressed into a much smaller compass without any diminution of their value.'

*The above critique is on the whole just ; but the last sentence was a hazardous one for a critic to risk who is more remarkable for diffuseness than for condensation. It was said of Addison that, in his rules of criticism, he supplied wea- pons against himself. In voluminousness, as well as in other respects, Gassendi was a striking contrast to his friend Hobbes, who had certainly that attribute of a wise man, according to the old proverb, that he was sparing of his words. We are told by Sorbiere that, having received De Corpore a few months before his death, Gas- sendi kissed it, adding, This book is indeed a little one, but it is full of matter, or rather it is all marrow. * Thomas Hobbius Gassendo cha- rissimus, cujus libellum De Corpore paucis ante obitum mensibus accipiens, osculatus est sub- jungens, mole quidem parvus est iste liber, verum totus, ut opinor, medulla scatet.'*

One quotation more from Mr. Stewart, respect- ing Gassendi, merits insertion. ' As Gassendi's attachment to the physical doctrines of Epicurus predisposed him to give an easier reception, than he might have otherwise done, to his opinions in metaphysics and in ethics ; so his unqualified con- tempt for the hypothesis of the Vortices seems to have created in his mind an undue prejudice against the speculations of Descartes on all

other subjects. His objections to the argument by which Descartes has so triumphantly estab- lished the distinction between mind and matter, as separate and heterogeneous objects of human knowledge, must now appear, to every person capable of forming a judgment upon the ques- tion, altogether frivolous and puerile ; amounting to nothing more than this, that all our knowledge is received by the channel of the external senses, insomuch that there is not a single object of the understanding which may not be ultimately analysed into sensible images ; and of conse- quence that, when Descartes proposed to ab- stract from these images in studying the mind, he rejected the only materials out of which it is possible for our faculties to rear any superstruc- ture. The sum of the whole matter is (to use his own language), that ‘ there is no real distinction between imagination and intellection ;’ meaning, by the former of these words, the power which the mind possesses of representing to itself the material objects and qualities it has previously received. It is evident that this conclusion coin- cides exactly with the tenets inculcated in Eng- land, at the same period, by his friend Hobbes, as well as with those revived at a later period by Diderot, Home Tooke, and many other wri- ters both French and English, who, while they were only repeating the exploded dogmas of Epicurus, fancied they were pursuing, with marvellous success, the new path struck out by the genius of Locke.

‘ It is worthy of remark that the argument employed by Gassendi against Descartes is copied almost verbatim from his own version of the account given by Diogenes Laertius of the sources of our knowledge, according to the prin- ciples of the Epicurean philosophy ; — so very little is there of novelty in the consequences de- duced by modern materialists from the scholas- tic proposition, Nihil est in intellectu quod non fuit prius in sensu. (There is nothing in the intellect or mind which was not previously in the sense or senses.) The same doctrine is very concisely and explicitly stated in a maxim for- merly quoted from Montaigne, that ‘ The senses are the beginning and end of all our knowledge ;’ a maxim which Montaigne learned from his oracle Raymond de Sebonde : which, by the pre- sent race of French philosophers, is almost uni- versally supposed to be sanctioned by the autho- rity of Locke ; and which, if true, would at once cut up by the roots, not only all metaphysics, but all ethics, and all religion, both natural and revealed.’

‘ A learned and profound writer has lately complaifled of the injustice done by the present age to Gassendi ; in whose works, he asserts, may be found the whole of the doctrine com- monly ascribed to Locke concerning the origin of our knowledge. The remark is certainly just, if restricted to Locke’s doctrine as interpreted by the greater part of philosophers on the con- tinent; but it is very wide of the truth if applied to it as now explained and modified by the most intelligent of his disciples in this country. The

main scope, indeed, of Gassendi's argument against Descartes is to materialise that class of our ideas which the Lockeists, as well as the Car-

tesians, consider as the exclusive objects of the power of reflection; and to show that these ideas are ultimately resolvable into images or conceptions borrowed from things external. It is not, therefore, what is sound and valuable in this part of Locke's system, but the errors grafted on it in the comments of some of his followers, that can justly be said to have been borrowed from Gassendi. Nor has Gassendi the merit of originality even in these errors ; for scarcely a remark on the subject occurs in his works but what is copied from the accounts transmitted to us of the Epicurean metaphysics.'

The author above referred to as complaining of the injustice done to Gassendi isDe Gerando, Hist. Comp. des Systemes, tome 1. His words are, ' Gassendi was the first author of the new philosophy of the human mind ; for it is time to render to him that justice which he has hardly ever received even from his own countrymen. It is very remarkable that, in speaking of the new philosophy of the human mind, we always say the philosophy of Locke. D'Alembert and Condellac have authorised this expression, botli ascribing to Locke exclusively the glory of this invention or discovery. Gassendi fut le premier auteur de la nouvelle philosophic de 1'esprit humain ; car il est terns de lui rendre, a cet e'gard, une justice qu'il n'a presque jamais obtenue de ses propres compatriotes. II est tres singulier en effet, qu'en parlant de la nouvelle philosophic de 1'esprit humain, nous disions toujours la philosophic de Locke. D'Alem- bert et Condillac ont autoris^, cette expression, en rapportant 1'un et 1'autre a Locke exclusive- ment la gloire de cette invention.'

There is a portion of vague and incorrect statement in the above quotation from Mr. Stewart, which we shall have occasion to notice in a subsequent part ; and it is now time to dis- miss Gassendi.

Descartes will not detain us long ; for all ad- mit that, whatever were his other merits, he was a very unsound and wild metaphysician. It is true that he did much for free enquiry, and even his errors had, in some respects, considerable use. According to Condorcet he is better enti- tled, than any other individual, to be regarded as the father of that spirit of free enquiry which distinguishes modern Europe; and, according to Mr. Stewart, he may be considered the father of the experimental philosophy of the human mind. As the last mentioned critic is sufficiently disposed to admire and praise Descartes, and as his remarks are somewhat curious, if not always sound, we shall give a few quotations from him concerning ' the father of the experimental phi- losophy of the human mind.'

‘ The first steps of Descartes are peculiarly interesting and instructive ; and it is these alone which merit our attention at present. As for the details of his system they are now curious only as exhibiting an amusing contrast to the extreme rigor of the principle whence the author sets out ; a contrast so very striking as fully to justify the epigrammatic saying of D’Alembert, that Descartes began with doubting every thing, and ended in believing that he had left nothing unexplained.

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METAPHYSICS.

*‘ Among the various articles of common belief, which Descartes proposed to subject to a severe scrutiny, he enumerates particularly the conclu- siveness of mathematical demonstration ; the ex- istence of God; the existence of the material world ; and even the existence of his own body. The only thing that appeared to him certain and incontrovertible was his own existence ; by which, he repeatedly reminds us, we are to understand merely the existence of his mind, abstracted from all consideration of the material organs connected with it. About every other proposition he con- ceived that doubts might reasonably be enter- tained; but to suppose the nonexistence of that which thinks, at the very moment it is conscious of thinking, appeared to him a contradiction in terms. From this single postulatum, accordingly, he took his departure ; resolved to admit nothing as a philosophical truth which could not be de- duced from it by a chain of logical reason. * * * Extravagant and hopeless as these preliminary steps must now appear, they had nevertheless an obvious tendency to direct the attention of the author in a singular degree to the phenomena of thought, and to train him to those habits of abstraction from external objects, which, to the bulk of mankind, are next to impossible. In this way he was led to perceive, with the evidence of consciousness, that the attributes of mind were still more clearly and distinctly know- able than those of matter; and that in studying the former, so far from attempting to explain them by analogies borrowed from the latter, our chief aim ought to be to banish, as much as pos- ;ible, from the fency, every analogy, and even every analogical expression, which, by inviting the attention abroad, might divert it from its proper business at home. In a word, that the only right method of philosophising on this subject was comprised in the stoical precept (understood in a sense somewhat different from that originally annexed to it), Nee te quaesiveris extra. A just conception of this rule, and a steady adherence to its spirit, constitutes the groundwork of what is properly called the ex- perimental philosophy of the human mind. It is thus that all our facts relating to mind must be ascertained ; and it is only on facts thus at- tested by our own consciousness that any just theory of mind can be reared.’*

This sounds high or seems wonderful ; but let us hear the sum of the whole matter. 'The glory, however, of having pointed out to his suc- cessors the true method of studying the theory of mind is almost all that can be claimed by Des- cartes in logical and metaphysical science. Many important hints indeed may be gleaned from his works; but on the whole he has added very little to our knowledge of human nature.' Alas ! for the experimental philosophy of the human mind! But let us hear Mr. Stewart once more : 'Among the principal articles of the Cartesian philosophy, •which are now incorporated with our prevailing and most accredited doctrines, the following seem to me to be chiefly entitled to notice.

'1. His luminous exposition of the common logical error of attempting to define words which express notions too simple to admit of analysis. Mr. Locke claims this improvement as entirely

his own ; but the merit of it unquestionably be- longs to Descartes, although it must be owned that he has not always sufficiently attended to it in his own researches.'

There is here a two-fold error in awarding un – merited praise to Descartes, who was not the first to remonstrate against attempting impossible definition; and in applying unmerited censure to Locke, who does not claim what Mr. Stewart terms an improvement as entirely his own. His words .are, ' The names of simple ideas are not capable of any definition, the names of complex ideas are. — It has not, that I know, been yet ob- served by any body, what words are and what words are not capable of being defined.' This admits of a very different interpretation from that put upon it by the critic ; and the modesty of Mr. Locke, in saying, ' it has not that I know been yet observed by any body,' ought to have

Erotected him from the charge of setting up a ilse claim. But let Mr. Stewart proceed with the merits of the father of the experimental phi- losophy of the human mind.

- *2. His observations on the different classes of our prejudices, particularly in the errors to which we are liable in consequence of a careless use of language as the instrument of thought. The greater part of these observations, if not the whole, had been previously hinted at by Bacon ; but they are expressed by Descartes with greater simplicity, and in a style better adapted to the taste of the present age.'*

Here, liberal as the critic in general is of praise to the English father of experimental philosophy, he would abstract some merit from him to bestow it on the French father of the experimental phi- losophy of mind. But if

Bacon failed, did not Hobbes point out with sufficient precision and simplicity the different classes of prejudice ; par- ticularly on the errors to which we are liable in consequence of a careless use of language as the instrument of thought?

‘ 3. The paramount and indisputable autho- rity, which, in all our reasonings concerning the human mind, he ascribes to the evidence of con- sciousness.’

Has not Hobbes ascribed as much to con- sciousness as Descartes ? and was not the former prior in time to the latter?

‘ 4. The most important, however, of all his im- provements in metaphysics, is the distinction which he has so clearly and so strongly drawn between the primary and the secondary qualities of matter. This distinction was not unknown to some of the ancient schools of philosophy in Greece ; but it was afterwards rejected by Aris- totle and by the schoolmen ; it was reserved for Descartes to place it in such a light, as (with the exception of a very few sceptical or rather para- doxical theorists) to unite the opinions of all succeeding enquirers. It may be proper to re- mark that the epithets primary and secondary now universally employed to mark the distinc- tion in question, were first introduced by Locke ; a circumstance which may have contributed to throw into the shade the merits of those en- quirers who had previously struck into the same path.’

We shall examine the merits of this boasted

‘

distinction, when we come to Dr. Brown’s Lec- tures. In the mean time it is evident, from Mr. Stewart’s own showing, that it was only a revival of an old opinion, which he has shown in the case of Gassendi is no great matter. But who has written more simply, more clearly, more in- telligibly, concerning the point in question than Hobbes ? We refer the reader to the quotation made from the Treatise on Human Nature.

Among the other vagaries of Descartes was his notable one in assigning the pineal gland, or conarium, as the principal seat of the soul, be- cause, among the different parts of the brain, this was the only one he could find, being single and central, that was fitted for the habitation of a being, of which he conceived unity and indivi- duality to be essential and obvious attributes. This ludicrous notion is wittily alluded to in the Alma of Prior

—

Here Matthew said

Alma in verse, in prose the mind

By Aristotle's pen defined,

Throughout the body squat or tall

Is bonl fide all in all ;

And yet slap-dash is all again

In every sinew, nerve, and vein ;

Runs here and there like Hamlet's ghost,

While every where she rules the roast.

This system, Richard, we are told

The men of Oxford firmly hold ;

The Cambridge wits, you know, deny

With ipse dixit to comply —

They say (for in good truth they speak

\Yith small respect of that old Greek)

That, putting all his words together,

Tis three blue beans in one blue bladder ;

Alma, they strenuously maintain,

Sits cock-horse on her throne the brain ;

And from that seat of thought dispenses

Her sovereign pleasure to the senses, &c. &c.

Perhaps the reader, notwithstanding all the strenuous criticism on the merits of Descartes to which we have adverted, will be disposed to say with Prior —

That, putting all his words together, 'Tis three blue beans in one blue bladder.

In connexion with Descartes some slight no- tice is due to his disciple Malebranche, who commenced his literary career about twenty-five years after the death of the former ; and who, with all his Platonic mysticism, possessed un- common genius, and wrote with great eloquence. His Search of Truth, La Recherche de la Verite", is a charming work, concerning which the reader is ready to exclaim, in the words of Cowper, in reference to his country, ' with all thy faults I love thee still.' It contains a wonderful mixture of beauty and deformity, of truth and error, wis- dom and folly.

*La Recherche de laVerite" is well characterised by Dr. Brown, in his thirtieth lecture, as * a work which is distinguished by much eloquence, and by many profound remarks on the sources of human error, but which is itself an example in the great system which it supports, of error as striking as any of those which it eloquently and profoundly discusses. It is truly unfortu- nate for his reputation, as a philosopher, that these discussions do not form a separate work,*

but are blended with his own erroneous system, the outline of which every one knows too well to think of studying its details. All that is ne- cessary to give him his just reputation is merely that he should have written less. He is chiefly known at present as the author of a very absurd hypothesis. He would have been known and studied, and honored, as a very acute observer of our nature, if he had never composed those parts of his work, to which, probably, when he thought of other generations, he looked forward as to the basis of his philosophic fame. His hy- pothesis, as many of you probably know, is, that we perceive not objects themselves, but the ideas of them which are in God.'

Locke, Hartley, Berkeley, and others, have borrowed freely from Malebranche ; the first his notion of habits ; the second, his theory of vi- brations ; the third (probably at least), his ideal theory. Berkeley had once a short interview with Malebranche (and never, perhaps, were there two men better entitled to be designated twin spirits), when the conversation turned, as might be ex- pected, on the non-existence of matter. Male- branche, who had an inflammation on his lungs, and whom Berkeley found preparing a medicine in a small pipkin, in his cell, exerted his voice so violently in the heat of dispute, that he in- creased his disorder, which carried him off a few days after, 1715, in the seventy-seventh year of his age.

Having mentioned Berkely, as a kin, meta- physically considered, to Malebranche, it is suffi- cient to say of him in the words of Dr. Brown,

*already quoted, ‘ that he is now chiefly known as the author of a very absurd hypothesis, viz that material objects have no other existence than in the mind. His writings display much acute- ness and genius, and contain many important remarks, though they are now little read, and scarcely ever alluded to ; for, as Warburton justly remarks (and the remark is not the less true and forcible for being applicable also to his own writings), * fanciful hypotheses, when grown stale, are the most naus eous of all things.’*

LOCKE AND LEIBNITZ. These names are prominently identified with the metaphysical history of the eighteenth cen- tury. To connect Locke, Leibnitz, and their most eminent contemporaries, with their yet more eminent predecessors, it may be remarked, that Bacon died in 1626, Kepler in 1630, Galileo in 1642, Descartes in 1650, Gassendi in 1655, old Hobbes, as he is sometimes designated (for he lived ninety years in the world), in 1 679. Locke was born in 1632, Malebranche in 1638, Newton in 1642, Leibnitz in 1646, Clarke in 1675. Locke is prior to Leibnitz both in the order of time and in metaphysical rank ; but as it is not necessary to say much of the latter, and as he properly classes with Cudworth, who was prior in time to Locke, we shall dispose of the German metaphysician first.

Leibnitz, the rival of Newton, was unquestion- ably a very extraordinary man ; but, metaphysi- cally considered, he is now like Descartes, Male- branche, and Berkeley, chiefly known as the author of some very wild hypotheses. The following

quotation from Mr. Stewart has the merit of more than usual simplicity and brevity, especially in his Dissertations, establishing a general view of Meta- physical, Ethical, and Political Philosophy. ‘ The opinion of Leibnitz concerning the origin of our knowledge, though expressed in a different phraseology, agrees in the most essential points with the innate ideas of the Cartesians ; but it ap- proaches still more nearly to some of the mystical speculations of Plato. The very exact coincidence between the language of Leibnitz on this ques- tion and that of his contemporary Cudworth, whose mind, like his own, was deeply tinctured with the Platonic metaphysics, is not unworthy of notice as an historical fact. ‘ The seeds of our acquired knowledge,’ says Leibnitz, ‘ or, in other words, our ideas, and the eternal truths which are derived from them, are contained in the mind itself; nor is this wonderful, since we know, by our own consciousness, that we possess within ourselves the ideas of existence, 01 unity, of substance, of action, and other ideas of a si- milar nature.’ To the same purpose we are told by

Cudworth, that ‘ the mind contains in itself naturally (as the future plant or tree is contained in the seed) general notions of all things which un- fold and discover themselves as occasions invite, and proper circumstances occur.’ The metaphysi- cal theories, to the establishment of which Leib- nitz chiefly directed the force of his genius, are the doctrine of pre-established harmony, and the scheme of optimism, as new-modelled by himself. According to the system of pre-established harmo- ny, the human mind and human body are two inde- pendent, but constantly correspondent, machines ; adjusted to each other like two unconnected c locks, so constructed that, at the same instant, the one should point the hour, and the other strike it. ‘ I cannot help coming into this no- tion,’ says Leibnitz, in his Essay entitled Theo- dicaea, ‘ that God created the soul in such a manner at first, that it should represent within it- self all the simultaneous changes in the body ; and that he has made the body also in such a manner, as that it must of itself do what the soul wills ; so that the laws which make the thoughts of the soul follow each other in regular succession must produce images which shall be co-incident with the impressions made by external objects upon our organs of .sense ; while the laws by which the motions of the body follow each other are likewise so coincident with the thoughts of the soul, as to give to our volitions and actions the very same appearance as if the latter were really the natural and necessary consequences of the former. Every thing goes on in the soul as if it had no body ; and every thing goes on in the body as if it had no soul.’

We will not trouble our readers with more of this philosophic folly. It is hardly possible to avoid the suspicion, entertained by Le Clerc and others, that the opinions maintained by Leibnitz were not his real sentiments ; but mere moot displays of ingenuity, if not a sham defence of religious and moral principles, for the purpose of more effectually delivering them over to the enemy. Indeed Gibbon unhesitatingly asserts, that, ‘ in his defence of the attributes and provi- dence of the Deity, he was suspected of a secret

correspondence with his adversary Bayle.’ The evidence contained in a letter of Leibnitz to Pfaffins, professor of theology in the university of Tubingen, seems conclusive that he was at least only in sport (a very wanton if not wicked kind of sport, however) on subjects, which are either all-important or of no importance. In the letter alluded to, Leibnitz says, ‘ It is exactly as you write concerning my Theodicsea; and I wonder that no one should have hitherto disco- vered my design. For it is not the part of phi- losophers always to treat subjects seriously ; who in framing hypotheses, as you justly remark, try the force of their genius. You who are a theo- logian, in refuting errors, act or play the theolo- gian.’ Ita prorsus est vir summe reverende, uti scribis, de Theodica;a mea. Rem acu tetigisti ; et miror, neminem hactenus fuisse, qui sensum hunc meum senserit. Neque enim philosopho- rum est rem serio semper agere; qui in fingendis

hypothesibus, uti bene mones, ingenii sui vires experiuntur. Tu qui theologus, in refutandis erroribus, theologium agis.

The manner in which Mr. Stewart attempts to nullify this evidence is curious. In reply to this, it is observed by the learned editor of Leibnitz's works, that 'it is much more probable that Leib- nitz should have expressed himself on this occa- sion in jocular and ironical terms, than that he should have wasted so much ingenuity and learn- ing in support of an hypothesis to which he at- tached no faith whatever ; an hypothesis (he might have added) with which the whole princi pies of his philosophy are systematically, and, as he conceived, mathematically connected.'

Upon this hypothesis of jocularity, or irony, what evidence of words may not be evaded? As to probability and improbability we think it very likely that Leibnitz, in his sober serious mo- ments, considered the greater part of his philo- sophical or mathematical principles, such as the sufficient reason, the law of continuity, negative quantities (concerning which his language is truly marvellous), &c. &c., in much the same light as his theory of the origin of knowledge, of pre- established harmony, and of optimism. The fact is, as we have intimated in the article MA- THEMATICS, there is an intimate connexion be- tween mathematical and metaphysical absurdity ; and therefore the profoundest mathematicians are usually the wildest metaphysicians; such as Descartes and Leibnitz ; nor are Newton and Clarke exceptions to the general rule. Thus Newton, for example, expresses himself concern- ing what it would have been more a proof of wis- dom to be silent than to darken counsel by words without knowledge, ˆfiternus est infinitus, om- nipotens, et omnisciens ; id est, durat ab aeterno ad sternum, et adest ab infinite in infinitum. Non est seternitas et infinitas, sed aeternus et in- finitus; non est duratio et spatium, sed durat et adest. Durat semper et adest ubique, et exis- tendo semper et ubique durationem et spatium constituit. Thus translated by Dr. Clarke, ' God is eternal and infinite, omnipotent and omniscient; that is, he endures from everlasting to everlasting, and is present from infinity to in- finity. He is not eternity or infinity, but eternal and infinite. He is not duration or space, bu

he endures and is present. He endures always, and is present everywhere ; and, by existing always and everywhere, constitutes duration and space.' It is on this notable definition that Clarke's celebrated a priori argument for the ex- istence of God is founded. He argues that as immensity and eternity (which force themselves on our belief as necessary to existence), are not substances but attributes, the immense and eter- nal Being whose attributes

they are must exist of necessity also. ‘ These,’ says Dr. Reid, ‘ are the speculations of men of superior genius ; but whether they be as solid as they are sublime, or whether they be the wanderings of imagination in a region beyond the limits of the understand- ing, I am at a loss to determine.’ The con- cluding part of the sentence is expressive of the writer’s modesty, or rather unwillingness to offend the admirers of Newton and Clarke ; but no one, who will really be at the trouble to think, can be at a loss to determine respecting such vain attempts to go beyond the limits of the understanding by the aid of unmeaning phrase- ology.

Having spoken of the pre-established harmony of Leibnitz, Dr. Brown adds, ‘ To say of this hypothesis, which was the dream of a great mind — but of a mind, I confess, which was very fond of dreaming, and very apt to dream — that it is a mere hypothesis, is to speak of it too favor- ably.’ And Mr. Stewart, with all his tenderness and partiality towards Leibnitz (for he is half in- clined to make him, like Descartes, a sort of father of the experimental philosophy of the hu- man mind), is constrained to say : ‘ To these visionary speculations of Leibnitz a strong and instructive contrast is exhibited in the philosophy of Locke ; a philosophy, the main object of which is less to enlarge our knowledge than to make us sensible of our ignorance ; or, as the author himself expresses it, to prevail with the busy mind of man to be cautious in meddling with things above its comprehension ; to stop when it is at the utmost extent of its tether ; and to sit down in quiet ignorance of those things, which, upon examination, are found to be be- yond the reach of our capacities.’ It would be well, indeed, if even Mr. Locke had kept this, as well as some other of his sound maxims, more constantly in view ; for he, too, not unfre- quently proses or philosophises with much pro- found inanity, or negative quantity of thought, by attempting to go beyond the length of his tether or the reach of his understanding.

‘ As a metaphysician,’ says Mr. Playfair, somewhat satirically, ‘ the acuteness and depth of Leibnitz are universally admitted ; but meta- physics are a science in which there are few dis- coveries to be made, and the man who searches in it for novelty is more likely to find what is imaginary than what is real.’ The only semblance of merit belonging to Leibnitz as a metaphysi- cian is the limitation made by him to the old maxim, descended from some of the Grecian philosophers, Nihil est in intellectu quod non fue- rit in sensu. ‘ Nempe,’ says Leibnitz, ‘ nihil est in intellectu quod non fuerit in sensu, nisi ipse intellectus.’ There is nothing in the intellect which was not, or which has not been, in the

sense or senses, except the intellect itself. The remark is excellent,’ says Mr. Stewart, ‘ and does honor to the acuteness of the critic ;’ and, accord- ing to others, it threw a new light upon the whole science of metaphysics or

philosophy of mind. The incorrectness of the remark, indeed, takes somewhat from its excellence ; for how can the intellect be in the intellect ? As expressed by Leibnitz the celebrated limitation of the scholastic maxim is a manifest bull. It is, indeed, calcu- lated to call the attention to the intellect or mind itself, which was frequently lost sight of, or which had too little assigned to it, in distinction from the senses, by those who had the maxim about the senses being the origin of knowledge much in their mouth, as if there were nothing but the senses concerned in the business. In reference to Locke, however, the celebrated bull of Leib- nitz, of the intellect itself being in the intellect, was not only a blunder in language, but founded in error of conception or a blunder of the under- standing ; as Mr. Stewart is indefatigable in show- ing to all the world. His words are, ' The misapprehensions so prevalent on the continent, with respect to Locke's doctrine on this most im- portant of all metaphysical questions, began dur- ing his own life time; and were countenanced by the authority of no less a writer than Leib- nitz, who always represents Locke as a partisan of the scholastic maxim, Nihil est in intellectu quod non fuerit in sensu ; but it is not easy to con- ceive on what grounds it should have been urged as an objection to a writer who has insisted so explicitly and so frequently on reflection as the source of a class of ideas essentially different from those which are derived from sensation. To myself it appears, that the words of Leibnitz only convey, inra more concise and epigrammatic form, the substance of Locke's doctrine. Is any thing implied in them which Locke has not more fully and clearly stated in the following sen- tence? ' External objects furnish the mind with the ideas of sensible qualities; and the min'l furnishes the understanding with ideas of its own operations.' The extraordinary zeal dis- played by Locke, at the very outset of his work, against the hypothesis of innate ideas, goes far to account for the mistakes committed by his commentators, in interpreting his account of the origin of our knowledge. It ought, however, to be always kept in view, in reading his argu- ment on the subject, that it is the Cartesian theory of innate ideas which he is here combat- ting ; according to which theory, as understood by Locke, an innate idea signifies something coeval in its existence with the mind to which it belongs, and illuminating the understanding be- fore the senses begin to operate. The very close affinity between this theory and some of the doc- trines of the Platonic school prevented Leibnitz, it is probable, from judging of Locke's argument against it with his usual candor ; and disposed him hastily to conclude that the opposition of Locke to Descartes proceeded from views es- sentially the same with those of Gassendi and of his other Epicurean antagonists. How very widely he was mistaken, in this conclusion, the numerous passages which I have quoted in Locke's own words sufficiently demonstrate.

‘ In what respects Locke’s account of the ori- gin of our ideas falls short of the truth will ap- pear when the metaphysical discussions of later times come under our review. Enough has al- ready been said to show how completely this account has been misapprehended, not only by his opponents but by the most devoted of his admirers; a misapprehension so very general, and at the same time so very obviously at va- riance with the whole spirit of his essay, as to prove to a demonstration that, in point of num- bers, the intelligent readers of this celebrated work have hitherto borne but a small propor- tion to its purchasers and panegyrists. What an illustration of the folly of trusting, in matters of literary history, to the traditionary judgments, copied by one commentator or critic from an- other, when recourse may so easily be had to the original sources of information.’

Mr. Stewart is unwearied in vindicating Locke on this point : or rather in claiming the sanction of Locke’s authority to what he deems the ‘ most important of all metaphysical questions.’ It is such a good thing that the critic thinks there cannot be too much of it : he loves the theme so much as to be ever ringing changes upon it. Whether he and Mr. Locke, however, mean the same thing respecting the ‘ most important of all metaphysical questions’ is very doubtful ; and that Mr. Locke very frequently lost sight of any origin of ideas besides the senses, as completely as Gassendi or Epicurus, is to us very evident. How else is it to be accounted for that Mr. Locke’s opponents or admirers should have equally, almost universally and uniformly, mis- understood him, according to Mr. Stewart’s own account of the matter ? Are they all to be charged with want of intelligence or with wilful and per- verse misinterpretation ? We requote a quota- tion of the critic’s from Degerando, which, as he remarks, ‘ might furnish matter for some useful reflections, but I shall leave my readers to draw their own conclusions from it.’ ‘ Another re- markable circumstance,’ says Degerando, ‘ is, that the defence of the Kantians turned, in gene- ral, not upon the truth of the disputed proposition, but upon the right interpretation of their master’s meaning ; and that their reply to all objections has constantly begun and ended with these words, ‘ You have not understood us.’ The con- stant reply of Mr. Stewart to the opponents, and to the disciples of Locke, concerning his doc- trine respecting the origin of ideas, is ‘ You have not understood him.’ It recurs, and recurs in endless succession, as if by some metaphysical law of continuity.

Having dwelt much longer on Leibnitz than we intended, we may as well dispose of German metaphysics at once by some notice of Kant; though it is not without some reluctance that we notice him at all, or give anyplace to a mere spe- cimen of his absurdities, which possess not such redeeming

qualities as those of Leibnitz ; for they are as devoid of genius as they are of sense or reason. The following extracts are inserted from a publication of his humble disciple, and enthusiastic, and adoring, admirer, Thomas Wirgman, modestly entitled 'An Entirely New ind Complete Science of Metaphysics, founded on Transcendental Philosophy.'

Metaphysics Reduced to a Complete Permanent

Science, on the Principles of Transcendenta.

Philosophy, as contained in Kant's Critic of

Pure Reason.

' 1. The mind consists of three original faculties which perform distinct functions, and are capa- ble of being completely separated from one ano- ther ; these are, sense, understanding, and rea- son. 2dly, Sense is susceptible of a complete definition, whereby it can never be confounded either with understanding or reason : it is the passive faculty of the mind, which receives im- ' pressions either from external objects or from the action of the mind upon itself, and is properly enough designated by Kant receptivity, which is again divisible into two parts arising from the original difference in the functions of these parts : the one Receptivity being constructed to receive parts following one another in strict succession, arising from the activity of the mind upon itself; which has received the name of time ; the other being constructed to receive parts that exist all at once, or that lie one near another as in a plane, and is named space. 3dly, Understanding, which is wholly active, and therefore called spontaneity ; and is divisible into twelve minor activities call- ed categories, whose joint influence or action upon the matter furnished to them by the recep- tivities of sense produces an objective unity, i. e. in fact, an object, or, as it is commonly called, an object of sense. The action of this faculty is strictly limited to time and space. Whatever therefore is without the bounds of time and space, and yet occurs in the mind, must be ac- counted for from some other faculty ; which leads us, 4thly and lastly, to reason, or the high- est degree of mental spontaneity. The original constitution of this faculty is that it acts free from time and space. It is, in fact, a connecting ac- tivity, like that of the intellect or understanding, only of a purer nature, for it connects the cate- gories themselves, which surely cannot now be confounded with the two receptivities of sense, time, and space ; it must therefore be free from them, and out of their sphere. Hence the result of the action of this faculty is, a connexion of unities so pure, as not to be denominated objects of sense, but solely intellectual objects, and which never can become objects of experience ; they may, therefore, very properly be termed ideas : such are the ideas of God, of the soul, of free will, of a

future state, and of the moral laws, which experience, i. e. natural philosophy or physics, can never furnish ; but, if they are to be met with at all, it will be in the science of meta- physics, that is, of reason itself.

‘ Transcendental philosophy has for its object the original use of understanding and reason in begetting knowledge. This science is complete- ly & priori, and has nothing in it empirical. On this science alone rests the possibility of meta- physics.

‘ Metaphysics consider the categories, or origi- nal conceptions of understanding, as the last or highest conceptions to be found in the things, or as conceptions a priori of the things ; and are di- visible into metaphysics of nature and metaphy- sics of morals. The former comprehend the complex of all knowledge a priori, of that which does exist; and is theoretical. T1ˆ latter com-

preheiul the complex of all moral conceptions, or of all that whidi ought to exist; and is prac- tical.

All philosophy that is a priori may be termed pure, in contradistinction to physics, or natural philosophy, which is & posteriori, and may be termed empirical.

The certainty and conviction that are found in the pure sciences of transcendental philosophy and metaphysics are obtained by the categorical mode of conclusion : in the mathematics by construction of the conceptions, which therefore admits of demonstration; while the certainty in the empirical science of natural philosophy can only be obtained by induction and analogy : modes of conclusion which can never beget strict universality.

But now let us see what our patient and mo- dest philosopher says upon this subject in his own words. In the preface to his Prolegomena >> all future Metaphysics, he speaks thus : —

‘ My intention is to convince all those who think it worth their while to occupy themselves with metaphysics, that it is indispensably neces- sary to suspend thei r labors for the present ; to consider every thing hitherto done, as undone ; and first of all to settle the question, whether such a thing as metaphysics be possible? If there really be such a science, how comes it that it cannot obtain, like other sciences, a universal and permanent reputation? If metaphysics be not a science, how does it happen that it conti- nually

pretends to this character, and yet con- stantly disappoints the human understanding with perpetual but unaccomplished hopes? Let us then demonstrate either our knowledge or our ignorance on this subject ; something decisive ought to be determined with respect to the na- ture of this pretended science : for it must not be suffered to remain any longer in its present state. It seems quite ridiculous that, while every other science constantly advances, this science, which is universally appealed to as the oracle of wisdom itself, has always turned round upon the same spot, and never really advanced a single step. The patrons of metaphysics are indeed greatly aecreased in number ; and we do not find that those who feel themselves strong in other sciences choose to venture their reputation in this, where every one, no matter how ignorant in other things, boldly ventures upon a decisive judgment ; con- scious, as it should seem, that no criterion has yet been discovered to distinguish sound sense from shallow prating.

‘ However, it is not a thing so very unheard of, that after long cultivating a science, and while we are congratulating ourselves on our astonish- ing advancement in it, some one unexpected- ly starts the question, whether such a science be really possible ? For human reason is so fond of building, that it has frequently erected its castle, and then had to take it to pieces again, in order to examine the foundation. It is never too late to become rational ; but it is hard to have this task to begin at an advanced period of life.

‘ To ask if a science be possible, implies that one doubts of its reality ; and such a doubt is highly offensive to those whose whole treasure Vou XIV.

consists perhaps in this pretended knowledge. They will prepare, therefore, on all sides, to de- fend their ancient and legitimate possessions.

‘ I have, however, the confidence to predict that such readers of these prolegomena as think for themselves, will not only be convinced that no science of metaphysics exists at present, but that there never can be such a science, unless the requisites here stated, upon which its possibility rests, be first complied with. As, however, the enquiry respecting this science can never be en- tirely laid aside, because the interest of human reason is too intimately connected with it, they will see that a complete reform, or rather an en- lire regeneration, of metaphysics, on a plan hitherto untried, must unavoidably take place, however it may be for some time struggled against.

‘ Since the attempts of Locke and Leibnitz, or indeed since the origin of metaphysics, as far as its history reaches, no event has occurred so cal- culated to decide the fate of this science as the attack made upon it by Hume. He brought, it is true, no light into this department of know- ledge ;

but he struck a spark, which, had it fal- len upon combustible matter, and been carefully fanned, might have produced a flame. Hume took up a single but important conception of metaphysics ; namely, that of the connexion of cause and effect (consequently the derived con- ceptions of power, action, &c.) ; and challenged reason, which holds it up as its own produce, to say by what right it concludes, that one thing may be so constituted, that if it be given, some- thing else must necessarily be inferred; for this is the meaning of the conception of a cause. He proved, beyond contradiction, that it is quite im- possible for reason to discover in the conceptions themselves any such necessary connexion, since we cannot see why, because something is, some- thing else must also necessarily be ; and conse- quently we are at a loss to know how the con- ception of such a connexion a priori can have arisen. Hence he concluded that reason entirely deluded itself with this conception, falsely consi- dering it as its own offspring, while in fact it is nothing more than a bastard of the imagination, which, being made pregnant by experience, has brought certain representations under the law of association, and substituted a sort of subjective necessity, namely, habit, for an objective one, founded upon real knowledge. He concluded, therefore, that reason had no faculty to think such connexions even generally, because its con- ceptions would in that case be mere fictions, and all its pretended knowlege a priori nothing but a false value given to common experience. In other words, that no such science as metaphy- sics is at all possible.

‘ Notwithstanding this rash conclusion, how- ever, Hume calls his very destructive philosophy by the name of metaphysics, and sets a great value upon it. ‘ Metaphysics and morals,’ says he, ‘ are the most important branches of science ; mathematics and natural philosophy are not ot half the value.’ This acute man, however, looked merely to the negative advantage, which would arise from lowering the pretensionsof speculative

reason, and quieting the disputes of men. But here he lost sight of the positive harm which would occur, were reason deprived of its most important prospects, which alone hold out to the will the highest object of all its exertions.

‘ Yet, however hasty and incorrect his inference was, it was grounded at least upon investigation; and this investigation certainly deserved that the philosophers of his day should have united their endeavours to solve, if

possible, his problem in the sense in which he delivered it ; and, had they succeeded in this, an entire reform of the science would have immediately followed. It was, how- ever, the fate of metaphysics, ever unfortunate, that no one should understand Hume's intention. It is painful, indeed, to observe how entirely his opponents, Reid, Oswald, Beattie, and Priestley, missed the point of his question, always admitt- ing, as a matter of course, the very thing which he doubted, and proving with vehemence, and mostly with great indiscretion, that which it never entered his mind to doubt. They thus overlooked his hint at improvement, and suffered every thing to remain in its original state, as if nothing had happened. The question 'was not, whether the conception of cause be correct, use- ful, and indispensable, to all knowledge of na- ture; for this Hume never doubted ? but whether this conception be thought by reason a priori, and whether it possess, on that account, an in- ternal truth, independently of all experience, and therefore a more extensive utility, not limited merely to objects of experience. It was of this great problem that Hume sought the solution. His enquiry regarded merely the origin of the conception of cause, and not its indispensability in the application. Had its origin but once rightly been made out, the conditions of its use, and the extent of its validity, would have become evident of themselves.

' But, in order to solve this problem, the op- ponents of this celebrated man would have been obliged to enter very deeply into the nature of reason, as it is occupied with pure thinking, which was not quite convenient to them. They therefore invented a more ready means of attack and defiance, which required no such deep in- sight; they appealed to common sense. Cer- tainly it is a great gift of heaven to possess com- mon sense, or, as it is sometimes termed, a plain understanding. But we must prove that we possess it by facts, by the considerate and ratior nal things which we think and say, not by the mere appeal to it as an oracle, while we can produce nothing in its justification. When our philosophy and science begin to fail, to appeal then, and not till then, to common sense, is one of the subtle inventions of modern times, by which the shallowest prater may boldly cope with and maintain himself against the deepest thinker. But, while the smallest spark of true philosophy remains, I have no doubt that we shall be cau- tious of taking refuge in this expedient. The ap- peal to common sense is, after all, but an appeal to the opinion of the multitude; which the phi- losopher must blush to make, but on which the popular witling gladly sounds his momentary triumph.

' I should conceive, however, that Hume

might lay claim to a sound understanding just as well as Beattie ; and, besides this, to something that the latter certainly did not possess ; namely a critical reason, which knew how to keep com- mon understanding within

its proper bounds, and to prevent its losing itself in speculations ; for common sense does not understand the prin- ciples on which it acts, and therefore cannot know when it is sound and when not. A common hatchet may serve very well to shape timber, but a more delicate instrument is required for fine engraving. Thus the common understand- ing, and the speculative, are both useful in their way; the one in judgments immediately applica- ble to experience, the other in general judgments, as in metaphysics, where common sense cannot judge at all.

‘ I candidly own that this hint of David Hume was the circumstance that first disturbed my dogmatical slumbers, and gave a new direction to my researches, in the field of speculative phi- losophy. I was far from listening to his inferences, which proceeded merely from his own re- presenting to himself his problem in its whole extent, but investigating merely a part of it, the solution of which was impossible without a com- prehensive view of the whole. When we nro- ceed upon a well-grounded, though not thorough-digested, thought, we may reasonably hope, by perseverance, to carry it further than the acute genius to whom we are indebted for the first spark of this light.

‘ I first examined whether Hume’s objection might not be rendered a general one ; and soon found that the idea of cause and effect is by no means the only one in which the understanding represents to itself a connexion of things a priori, but that the whole of metaphysics consists of nothing else. I endeavoured to ascertain their number ; and, having done this to my satisfaction upon a single principle, I proceeded to the de- duction of these conceptions. I now saw, very clearly, that they were not derived, as Hume had supposed, from experience, but originated in the understanding itself. This deduction, which ap- peared impossible to my acute predecessor, and which had never even entered the mind of any one else (for although every body used these conceptions, no one thought of enquiring upon what their objective validity is founded); — this deduction, however, was the most difficult task that could be undertaken for the establishment of metaphysics; and to this, unfortunately, no existing metaphysics could afford the smallest aid ; for it is this very deduction which must first constitute the possibility of metaphysics itself.

‘ Having thus succeeded in the solution of Hume’s problem, not merely in a partial view, but with reference to the whole faculty of pure rea- son ; I could now proceed, by safe, though in- deed slow, steps, to determine completely, and upon general principles, the entire compass of pure reason; to ascertain its limits, and the sphere of its exertion. This, indeed, was all that was required for erecting a system of metaphy- sics upon a proper and solid foundation. But I am aware, that the solution of Hume’s problem in its entire extent (in other words, the ‘ critic’ of

pure reason itself) may have the same fate as the problem. It will be judged of incorrectly, because it is not understood ; it will be misun- derstood, because men are more disposed to turn rapidly over the leaves of such a book than to study it thoroughly. It will be thought dry and ohscure, and be found to contradict all the re- ceived conceptions : and, besides this, it will be considered prolix.

‘ 1 freely confess that I did not expect to hear philosophers complain of the want of popularity and entertainment, in a work that treated of the existence of a valuable branch of knowledge, of a science indispensable to mankind, and which can only be attained by an adherence to the strictest rules of scholastic precision. It may indeed hereafter become popular ; but it must not make its first appearance in a popular shape. That obscurity, however, which may have arisen from the extensiveness of the plan, rendering it difficult to seize and comprehend the chief mo- ments upon which it rests, it is the object of the present prolegomena to remove.

‘ The work which contains the science of the faculty of pure reason, in its whole extent and boundary, must always be considered as the object to which these prolegomena refer, merely as pre- vious exercises. The ‘critic of pure reason’ must stand firm as a system complete in all its parts before we can think of advancing one step in metaphysics, or even entertaining the most dis- tant hope of such a science.

‘ We have been so long accustomed to see old and hackneyed observations brought out with a new title, and dressed in a systematic costume, according to the fancy of authors, that nothing further will be expected by the greater part of readers in the ‘ critic of pure reason.’ These prolegomena, however, will show, that it con- tains an entirely new science, of which no one had previously conceived the thought, and to which nothing hitherto known could at all con- tribute, except the hint afforded by the doubts of Hume, who himself, however, did not foresee the possibility of such a formal science, but in his distress, in order to save his vessel, ran her upon the shore cf scepticism, there to lie and rot; instead of which it has been my business to pro- vide her a pilot, furnished with a complete chart and compass, who shall be able to navigate her safely round the world.

‘ To enter upon a new science which is en- tirely separated from all others, and indeed the only ore of its kind, with this prejudice, that we are already able to decide upon it by means of knowledge elsewhere acquired (though,

in fact, the truth of this pretended knowledge is the very thing in question), can tend to nothing else than to make us imagine all we find in it has been previously known to us, because, perhaps, some of the expressions have been used before. The whole will, however, appear extremely dis- figured, nonsensical, and in fact mere gibberish, because we do not take the thoughts of the author as his foundation, but substitute our own in their stead, which in us have become a second nature through long habit. However, the very exten- siveness of the work, even where it depends upon the nature of the science itself, and not upon

mere style ; its unavoidable dryness and scho- lastic precision ; are properties which, while they contribute to the perfection of the science, will undoubtedly be injurious to the reception of the work itself.

‘ Every one is not endowed with the gift of writing so subtilely, and at the same time in so captivating a manner, as Hume ; or so soundly, and yet so elegantly, as Moses Mendelsohn ; I flatter myself, however, I could have given popu- larity to my style, had it been my design merely to form a plan and recommend its execution to others, and had I felt less at heart the good of the science which has so long occupied me. It does indeed require great perseverance, and no little self-denial, to give up the gratification of an immediate favorable reception for the prospect of a late, though lasting, approbation.

‘ To form plans is frequently a mere luxurious and ostentatious employment of the mind, which, with the air of an inventive genius, requires what it is unable to perform, censures what it cannot amend, and sets others upon the search for what it does not itself know where to find. Never- theless, to form a good plan merely of a general critic of reason requires something more than may be imagined, unless indeed it is to consist, as is usually the case, of mere declamation and good wishes. Pure reason is so insulated, and so thoroughly connected within itself, that we cannot touch upon a single point without af- fecting every other, and can establish no one part permanently without assigning to every other its proper place and influence upon the whole; for, as there is nothing exterior to this science that can assist in rectifying our judgment concerning its contents, the va- lidity and the use of every part must depend entirely upon the relation in which it stands to the rest; just as, in examining the structure of an organised body, the use of each organ can only be inferred from a complete conception of the whole. Hence we may say, of a critic of pure reason, that it cannot be relied upon un- less it be completely elaborated to its minutest elements ; and therefore, that, if the whole is not accomplished, we have done nothing at all.

‘ Notwithstanding, however, that such a plan, were it possible that it could

have appeared prior to the critic itself, would have been unintel- ligible and useless, yet, coming after the critic, it is of the greatest advantage, since it will enable us to overlook the whole, and to examine sepa- rately the principal points upon which it depends.

'The plan which I here offer succeeds to the work itself, and may therefore proceed now ac- cording to an analytical method, though the original work was formed synthetically, as indeed it was necessary that it should, in order that the science might exhibit all the articulations in the organisation of this peculiar faculty of know- ledee. Those who find even this plan obscure, whfch I here place as an introduction to all future metaphysics, should consider, that it is not exactly necessary for every one to study meta- physics ; that many men possess talents, well calculated to succeed in useful and even difficul: sciences, which come nearer to intuition ; but fail in enquiries that relate to mere abstract con-

ceptions; and that it is better for them to apj their intellectual exertions to other objects. But he who shall hereafter undertake to decide upon, or to construct, a new system of metaphysics, must absolutely satisfy those demands which are here made upon it. He must either adopt my so-

lution, or refute it altogether, and substitute another in its place ; from this he cannot be ex- cused.'

We feel that these extracts are abundant ; but must not omit the following method of simpli- fying the science adopted by this school : —

ELEMENTS OF METAPHYSICS.

INTUITION,

present in Time and Space.

CONCEPTION,

absent in Time and Space.

IDEA,

out of

Time and Space.

THE MIND.

SENSE. Two receptivities.

Time.

Space.

Quantity. Unity, Multitude, Totality

Absolute Totality.

UNDERSTANDING.

Twelve Categories. Quality. Relation.

Reality, Substance and Accident,

Negation, Cause and Effect, Limitation. Action and Re-action.

Modality. Possibility, Existence, Necessity.

REASON. Six ideas.

Absolute Limitation.

Absolute Substance,

Absolute Cause,

Absolute Concurrence.

Absolute Necessity.

AXIOMS OF METAPHYSICS.

1. Consciousness is the power to distinguish ourselves from surrounding objects and from our own thcugnts.

0 Time is the form ot internal sense.

3. Space is the form of external sense.

4. Sense makes Intuitions.

5. Understanding makes Conceptions.

6. Reason makes Ideas.

DEFINITIONS.

1. Intuitions joined to conceptions make

knowledge.

2. Conceptions joined to conceptions make thoughts.

Remark — The above axioms originate in trans- cendental philosophy, on which the possibility of metaphysics as a science rests.

As the preceding table exhibits the entire ele- ments of metaphysics, it is only requisite, for the establishment of the science, to give a complete explanation of each part, and to prove that these elements are neither deficient nor redundant.

THE MIND

1. The mind, in the most extensive meaning of the word, implies a faculty of representing some-

thing to itself: and therefore may be termed a representing faculty,

Proof. — In every thought, conception, know- ledge, judgment, idea, &c., the mind always represents some object to itself; or the thought, conception, &c., is perfectly empty, and com- pletely senseless.

2. Every representation requires a represent- ing subject and a represented object.

Proof. — The representing subject, by acting upon the object that has occurred in the mind, produces the representation. The subject and object taken together are the cause, and the repre- sentation is the effect. And no representation whatever is possible without these three parts : that is to say, subject and object as cause ; and representation ‘ s effect.

3. In every representation, thought, concep- tion, knowledge, &c., there must be an object consisting of parts; and these must b« united into a whole.

Proof.— For that which hath no parts is abso- lutely nothing, and therefore cannot be repre- sentable as an object; and, unless these parts are connected into a whole, or unity, no repre- sentation of any one thing would be possible.

SENSE.

1. Sense is the passive faculty of the mind, that receives the parts of which the object in the representation consists, and connects them into a whole, or unity, which is called intuition.

Proof. — For, if sense do not receive the parts of which the object or matter of every represen- tation consists, then we create the objects, which is absurd. And until these parts are connected into a whole, or unity, no object could occur in a representation.

Explanation of terms employed in the science of metaphysics.

Sense in its passive capacity is called recep- tivity; for it receives the variety or matter of all representations which the mind could not create.

Sense in its active function is called sponta- neity of the first degree, as merely uniting the parts which are received by the mind into that species of unity which is called intuition.

Remark. — An intuition is not an intelligible ob- ject, for the intellect has not yet operated upon it ; still we are conscious of the presence of an ob- ject, though we do not know what it is.

2. As sense receives, it is clear that it must receive a variety of parts, otherwise it has nothing at all to receive. Now there are only two general varieties, the one whose parts co-exist, the other whose parts are in strict succession.

Proof. — All objects in space have their parts co-existing ; all objects which are in time only, have their parts following one another. The former comprehend all external sensible objects; the latter the effects and relations of these exter- nal objects, or the internal sensible state of the subject. But these two descriptions include every possible object.

3. As the receptivity of sense receives objects, the parts of which are either co-existent or suc- cessive, it may be divided into two parts.

Remark. — This division is not only very na- tural, but it is also indispensable ; for, without it, we should be unable to give accurate defini- tions of time and space.

4. The receptivity which receives an object whose parts co-exist is external receptivity, or space.

Proof. — For, when we analyse our notion of space, we find it to consist of a variety of co- existing parts, connected together into a unity. But space alone is that whereby an object con- sisting of a variety of co-existent parts can occur; which is precisely the case with the exter- nal receptivity ; therefore space is external recep- tivity.

5. The receptivity which receives an object whose parts are successive, that is, merely the effect of some external object ; and which, therefore, exist in time only, and can only be an internal object ; is internal receptivity, or time.

Proof. — For, when we analyse our notion of 1 ime, we find it to consist of a variety of parts in strict succession, connected together into a unity ; and time is that alone wherein an object consisting of a variety of parts in succession can occur; which is precisely the case with internal receptivity ; therefore time is internal receptivity.

Explanation of terms.

Sensation is an alteration which takes place when the receptivity is affected, and is the ground of intuition.

*Intuition is a sensible representation which arises immediately upon the receptivity being affected, and is either external intuition, when its object is in space, that is, an external phenome- non ; or internal intuition, when its object is i*i time only ; that is, an internal phenomenon, or the effect of an external one.*

Phenomenon means appearance, and is used to distinguish the object in the representation from the object out of it, which is its cause, and is called noumenon.

Noumenon is the thing in itself, that is, inde- pendent of our faculties ; for it is then out of time and space ; that is, out of the sphere of knowledge. Of noumena, therefore, we can know nothing.

Conclusion. — Thus we have seen that the mind is both active and passive. Its receptivity re- ceives the matter of knowledge, which it could not create. Its spontaneity connects this matter into a unity or form, and thus produces an in- tuition. Hence, sense or the first degree of spon- taneity, constitutes the power of forming intui- tions.

UNDERSTANDING.

1. Understanding is an active faculty, a spon- taneity of the second degree. It comprehends an intuition under a conception, or under the ob- jective unity ; that is, renders it an intelligible object.

Proof. — For, until an object is classed by the understanding, it is a mere intuition, or an unin- telligible object; but, the instant the intellect has operated upon it, it becomes intelligible ; I may then say I understand it, and know what it is.

2. To render an object intelligible is to give to it a precise quantity, a particular quantity, a determinate relation, and a distinct degree of cer- tainty, called modality.

Proof. — For that thing which has no precise quantity,e. g. that is neither a mathematical point nor an entire world, nor any part of a world ; and which has no particular qualities, e. g. is neither hard, soft. &c.,and which stands perfectly alone, without any relation to other things, neither being a body, nor an effect of a body, nor a part of a whole ; is completely unintelli – gible.

3. The understanding consists of twelve pri- mary and original connecting acts called catego- ries, and classed under the four heads of quan- tity, quality, relation, and modality.

Remark.— The whole fabric of metaphysics either stands or falls upon the proof of this po- sition, which will be given in the sequel, under each head as it arises ; and, should it fail, then indeed will metaphysics be thrown into the ut- most confusion, and be again the stumbling- block of the learned ; but should it succeed, as it is presumed it will, we may then boast, that at length metaphysics has become a science which surpasses geometry, since it explains what the geometrician always assumes or takes for granted,

namely, his axioms, together with time and space.

4. Quantity consists of unity, multitude, and totality ; and must belong to every thing.

Proof. — For that which is without quantity, that is to say, which is neither one, many, nor all, is no intelligible object ; consequently not repre- sentable : i. e. it is nothing.

5. Quality consists of reality, negation, and limitation ; which means that a

thing either is, or is not; and, if it is, that it is limited

Proof. — To say that a thing is, and yet is not a real thing, is to contradict ourselves. And to say that there can be any real thing, and yet without limits, is certainly going beyond the bounds of intelligibility, which confines to limits ; for we know nothing of the infinite.

6. Relation includes only that of a substance to its properties, of a cause to its effect, or of action to re-action.

Proof. — For, when we examine really existing things, we find they stand in relation to other existing things ; and without such relation they are by no means conceivable ; e. g. we caunot conceive a substance without its properties, a cause without its effect, or a whole without its parts.

7. To constitute an intelligible object means to comprehend the intuition produced by sense under the objective unity; i. e. to judge.

Proof. — For, until an intuition is compre- hended under the objective unity, it is perfectly unintelligible. That is to say, that the under- standing, by classing an intuition under quan- tity, quality, and relation, constitutes the intelli- gibility of the given matter or object in the intuition ; so that it perfectly harmonises with the fact to say, that sense receives the matter of all knowledge, and understanding produces its form.

8. An intuition united to a conception nro- duces knowledge.

Proof. — It is evident that knowledge cannot consist of mere conceptions united together; for I cannot say, because I conceive a certain thing, that I therefore know it ; but, the instant I class a particular intuition under a certain conception, I can say I know it ; e. g. This building is a castle.

9. Modality consists of possibility, existence, and necessity. This expresses the mode or man- ner in which the intuition belongs to time; namely, it may be in any time, or it is in a cer- tain time, or it must be in all time.

Proof. — Nothing can be more evident than that an intuition may be possible ; that is, such that it may exist in any time ; or it may be actual, that is, really exist in a certain time ; or it may be necessary, that is must exist in all time; as the very contrary is impossible, e. g. a circle without a centre.

10. The twelTe categories of the understanding, as arranged under the four heads of quantity, qua- lity, relation, and modality, are not only essentially necessary to the intelligibility of objects of sense, but they are actually complete in their number, that is, neither deficient nor redundant.

/Voi)/'.— It is quite impossible to add one more category to the understanding; and, if we

take one away, the whole faculty will be de~ stroyed. For, if we speak of a number, it must either be one, many, or all ; and no other case is possible. Secondly, if we have any thing in our thoughts, it must be a reality, or the absence of a reality; but, if a reality, it cannot be infinite, therefore it must be limited by negation ; that is, there may either be a reality or no reality ; but, if there be a reality, it must be limited ; and no other case is possible. Thirdly, We can only be affected by things and their properties, by causes and their effects, or by parts and their wholes. Nothing more than this is conceivable, therefore much less knowable; for experience consists entirely of these relations. Lastly, With respect to modality; things may either be in any time, that is merely possible ; or in a certain time, that is actual ; or they may be in all time, and to be destroyed only with the destruction of time, that is, they may be necessary. Of this nature are the categories themselves, for without them there could not possibly be any experience whatever.

Explanation of Terms.

Quantity is that which is produced by adding one to one ; and expresses the conception of a number in general.

Quality is the quantity of being in time ; for every sensible reality has a being in time, that is, a beginning, middle, and end. But this series of sensations can only be measured by a degree ; therefore quality is expressed in our conception of a degree in general.

Substance is that which lasts in time, and has properties that change ; or it is the permanent in space, in which the properties or accidents in- here.

Cause is a power in one substance to act upon another, and thus to produce a third thing called effect. The first substance, or intuition is called the subject or agent ; the second or substance intu- ition is called the object, or patient, being the thing acted upon ; and thence arise necessarily and immediately the effect. Hence cause may be defined to be the action of the subject upon the object, whereby the effect is produced. Cause precedes in time, and effect succeeds ; but not vice vers&.

Concurrence means the mutual action and re- action of co-existing substances or intuitions, whereby one determines the other's place in space, and vice versa, as parts of a whole.

Conclusion. — Thus we have shown that the understanding is purely an active faculty which gives unity or form to the matter received by sense ;

that is, renders an intuition an intelligible object. This faculty is therefore a spontaneity of the second degree, but strictly limited to time and space ; or it is the power of forming concep- tions.

REASON.

1 . Reason is an active faculty, or spontaneity of the third or highest degree. It comprehends a conception together with its intuition, under an idea, and thus renders a conclusion possible.

Proof. — For what is a conclusion, but the comprehending the individual under the particu- lar, and this under the universal 7 as illustrated by the following figure: —

METAPHYSICS.

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Idea

Conception Intuition

3i or till] (Man] (Kanh—

Totality Multitude Unity

Hence the conclusion; therefore Kant is mortal. But how could a conclusion itake place without a faculty capable of producing an absolute to- tality, or a totality free from time and space, and which admits of no exceptions whatever? If the highest conception of idea in a ratiocination were particular, instead of universal, no conclusion would be possible. But of the fact of conclusion no one doubts ; therefore the faculty to produce it must be admitted.

2. To render an object comprehensible is to class it under an idea of reason, or under a con- clusion.

Proof. — If the intuition Kant were only classed under a conception of understanding, it would then be an intelligible object, but limited in all respects as to its duration and every other pro- perty ; for, as an object of experience, it would only be necessary on account of its cause ; and we could not predicate of it any thing absolutely ; but, reason being a faculty that acts free from time and space, and their conditions, it enlarges our views by allowing what the understanding has done, and yet hinting that this does not in- clude all the properties of which objects of na- ture are possessed, that they may have a nature of their own, independent of that connected with our mode of representing them ; but this it can only do by classing the object under an idea: hence the judgment, all men are mortal.

3. Reason is only capable of exerting three modes of concluding; namely the categorical, the hypothetical, and the disjunctive.

Proof. — For this faculty can only arrange ideas of things and their properties by its cate- gorical concluding act ; causes and effects by its hypothetical; and parts and wholes by its dis- junctive concluding act. But besides things and properties, causes and effects, and parts and wholes, there are no other things in the whole universe the ideas of which reason could arrange one under another. Therefore there are no other concluding acts but the categorical, hypothetical, and disjunctive.

4. Reason arranges the categories of quantity one under another, thus : unity under multitude, and these under totality ; and thereby produces the idea of absolute totality.

Proof. — Every thing connected by the un- derstanding is strictly limited. But we really have the idea of something which goes far beyond the limited things of nature ; and the only way in which this idea is obtained is by a

conclu- sion of reason ; for it is evident that the catego- ries unity, multitude, and totality, are themselves unconditioned things, and that, being connected into a unity by reason, this unity must also be absolute or unconditioned. Thus reason will have absolute completeness; and, when this

mode of action is applied to the other categories, the following ideas result.

5. Reason connects the categories of quality— which are reality, negation, and limitation, into the idea of absolute limitation.

Proof. — For every reality in time and space is limited by negations. It is a variety whose parts can be measured by degrees only, and these by other degrees still smaller ; and this without end. But reason will have absolute completeness, and thus forms the idea of absolute limitation.

6. Reason connects the categories of relation, which are each of them already compound notions, into the following ideas.

First, substance and accident into the idea of absolute substance.

Proof. — For all the substances in the world are nothing more than a collection of properties ex- isting in time and space ; and every analysis of these substances only produces another set of properties without end ; but reason, which acts free from time and space, and will have absolute completeness from the category of substance and accident, raises the idea of an absolute substance, which can never again become a predicate of any other substance.

Secondly, Cause and effect into the idea of an absolute cause.

Proof. — For all he causes in time and space are nothing more than effects from preceding causes, and these causes are again effects of other causes ad infiniturn. But reason, which will have absolute completeness in a series of causes and effects, raises to itself an idea of an absolute cause which cannot be the effect of any other cause.

Thirdly, Action and re-action into the idea of absolute concurrence.

Proof. — For all the substances in the world are endowed with causes which work upon other substances, and thus mutually determine each other's place in space. All these substances are themselves only effects of other substances, and so on ad infiniturn. But reason, which acts free from time and space, will hare an absolutely complete series of causes and effects, and thus raises the idea of absolute concurrence.

Remark. — The most important notions that concern us, as accountable beings, depend en- tirely upon this peculiar faculty of reason in raising these ideas. For how otherwise could we obtain the idea of our own soul, a first cause, or the deity ? and without these notions we should not differ from the brute creation, and must for ever give up our claim to the rank of rational beings. It may further be remarked that the sciences of psychology, cosmology, and theology, have their roots in these important ideas of rea- son. For the idea of absolute substance leads to psychology, the idea of a first cause leads to cosmology, and the idea of an absolute mutual concurrence leads to the science of theology.

7. Reason connects the categories of modality, which are possibility, existence, and necessity, into the idea of absolute necessity.

Proof. — For in time every change is determined by a preceding change, and consequently there is no absolute necessity. But reason, which acts free from time, forms an idea of something which

does not depend on a preceding change, and which is exempt from the conditions, of time ; hat is, an idea of absolute necessity.

Conclusion. — Thus we have shown that reason, i>r the highest degree of spontaneity , '; a" active faculty of so pure a nature as to be able to con- nect parts which are already out of time and space into wholes called ideas. For what are the categories of understanding, but parts of this description ? On these ideas is founded the er- roneous notion, that we can know immaterial existences ; whereas we can only have ideas of them. Hence reason, or the third degree of spontaneity, is the power of forming ideas.'

Mr. Ilorne Tooke, having made some quota- tions from Mr. Harris and lord Monboddo, ex- claims, with too much levity perhaps, ' If this be philosophy, give me back my Tom Thumb again.' But what shall we say to the ' critic' of pure reason? If this be transcendental philoso- phy, give us back the philosophy of Aristotle again ; for, taking chimera for chimera, as Gas- send i said of the vortices of Descartes and the atoms of Epicurus, we cannot help having some partiality for the one that is 2000 years older than the other. According to Dr. Willich ' The whole critique of pure reason is established upon this principle, that there is a free reason inde- pendent of all experience and sensation.' If we may believe madame de Stael this notable cri- tique of pure reason is to be regarded ' as hav- ing given the

impulse to all that has since been done in Germany both in literature and philo- sophy; but, according to the respectable testi- mony of Degerando, a pure Kantian is not to be found at present in Germany. < In short,' he remarks, ' the Critique of Pure Reason, an- nounced with pomp, received with enthusiasm, disputed about with fury, after having effected the overthrow of the doctrines of Leibnitz and Wolff, could no longer maintain itself, and has produced no permanent result but divisions and enmities, and a general disgust towards all syste- matic creeds.' But enough and more than enough.

*‘ Indignandum de isto, non disputandum est. * Quid te torques et maceras, in ea quaestione quam subtilius est contempsisse quam solvere?’ How applicable is the import of these quotations to many more than Kant, who is indeed a most worthy successor of Leibnitz, and a fit spe- cimen of German philosophers.*

LOCKE.

Having attempted to clear away some meta- physical rubbish, we now return to the celebrat- ed author of the Essay concerning Human Un- derstanding ; a work which we think with Mr. Stewart has been much more applauded than read. Indeed much of the applause, we suspect, is owing to the very circumstance that it has been little read ; and, if there be any truth in Voltaire’s criticism on Dante, the praise of Locke is likeiy tc continue and increase ‘ aye more and more ;’ r it may now almost be said that nobody reads in. This we feel confident of, that many of his “st zealous eulogists, f,ho have the phrases the r;it Locke, the immortal Locke, ever and :< >n HI their mouth, never carefully read his

great work. We have read it, and re-read it, and attempted inwardly to digest it; but we have all ways found it a laborious task, and we fear that either our digestive system is indifferent, or that much of the Essay concerning Human Under- standing is not very convertible into intellectua- aliment. That there are some things in it ‘ hard to be understood’ is evident from the very cir- cumstance so much and so often insisted on by Mr. Stewart, as1, already noticed. This unintelli- gibleness we think attributable to the following causes : —

1. Mr. Locke, notwithstanding all his sage remarks on the folly of meddling with things above the comprehension of the understanding, is ever and anon attempting to sound depths too profound for the length of his line ; or rather he plunges headlong into the abyss and chaos of scholastic subtleties. This is particularly the case in much of Book II., in not a little also of Book IV., as well as in other parts of the essay. It may seem strange indeed that Mr. Locke should have fallen into this error; but it only proves that

*philosophers, like other men, often transgress against their own maxims, not only in the conduct of life (as in the case of the philoso- pher so strikingly depicted by Johnson in his Rasselas) but in the conduct of their understand- ing— even in their speculations. What can be more judicious than the following remarks of Mr. Locke ? ‘ If, by this enquiry into the nature of the understanding, I can discover the powers thereof; how far they reach, to what things they are in any degree proportionate, and where they fail us; I suppose it may be of use to prevail with the busy mind of man to be more cautious in meddling with things exceeding its compre- hension ; to stop when it is at the utmost extent of its tether ; and to sit down in a quiet igno- rance of those things which, upon examination, are found to be beyond the reach of our capaci- ties. We should not then perhaps be so forward, out of affectation of a universal knowledge, to raise questions and perplex ourselves and others with disputes about things to which our under- standings are not suited, and of which we can- not frame in our minds any clear or distinct per- ception, or whereof (as it has perhaps too often happened) we have not any notions at all. If we can find out, how far the understanding can extend its view ; how far it has faculties to attain certainty ; and in what cases it can only judge and guess, we may learn to conttnt ourselves with what is attainable by us in this state.’ * * * ‘ This was that which gave the first rise to this Essay concerning the Understanding. For I thought that the first step towards satisfying se- veral enquiries the mind of man is apt to TUP into was, to take a survey of our own under- standing, examine our own powers, and see to what things they were adapted. Till that was done, I suspected we began at the wrong end, and in vain sought for satisfaction in a quiet and sure possession of truths that most concerned us whilst we let loose our thoughts into the vast ocean of being; as if all that boundless extent were the natura1 and undoubted possession of our understandings, wherein there was nothing exempt from its decisions, or that escaped ii-*

comprehension. Thus men, extending their en- quiries beyond their capacities, and letting their thoughts wander into those depths where they can find no sure footing, it is no wonder that they raise questions, and multiply disputes, which, never coming to any clear resolution, are proper only to continue and increase their ‘doubts, and to confirm them at last in perfect scepticism. Whereas, were the capacities of our understanding well considered, the extent of our knowledge once discovered, and the horizon found, which sets the bounds between the en- lightened and dark parts of things, between what is and what is not comprehensible by us ; men would perhaps, with less scruple, acquiesce in the avowed ignorance of the one,

and employ their thoughts and, discourse with more advantage and satisfaction in the other.' Book I. c. i.

All this had been better expressed before, that is, with less verbosity and more precision ; but the manner in which it is dwelt upon as well as many repetitions of the same thought, in different parts of the work, shows that it was not a casual, but a fixed sentiment of the author; yet how frequently does he lose sight of it ! Indeed we can hardly persuade ourselves sometimes that he was aware of what he had stated in the above paragraph, or that he could have deliberately annexed what seems to be the obvious meaning to his words.

*2. Another and a chief cause of the confusion which pervades the Essay concerning Human Understanding was the author's unskilfulnes in words, or the want of mastery in language con- sidered as the instrument and medium of thought. He is a remarkable contrast to Hobbes and even to Bacon in this respect. Indeed their admonitions and example, as to the importance of attending to the nature of language and the meaning of words, in reference to the correct re- ception and communication of knowledge, seem to have been wholly lost upon him. He says, Book III- c. ix, ' I must confess, then, that when I first began this discourse of the understanding, and a good while after, I had not the least thought that any consideration of words was at all necessary to it. But when, having passed over the original and composition of our ideas, I began to examine the extent and certainty of our knowledge, I found it had so near a connexion with words that, unless their force and manner of signification were first well observed, there could be very little said clearly and pertinently concerning knowledge, which, being conversant about truth, had constantly to do with proposi- tions. And, though it terminated in things, yet it was for the most part so much by the interven- tion of words that they seemed scarcely separable from our general knowledge. At least they inter- pose themselves so much, between our under- standing and the truth which it would contemplate and apprehend, that like the medium through which visible objects pass, their obscurity and disorder does not seldom cast a mist before our eyes, and impose on our understandings. If we consider, in the fallacies men put upon themselves as well as others, and the mistakes in men's disputes and notions, how great a part is owing to wˆrds, •*nd their uncertain or mistaken, sigrifications,*

we shall have reason to think this no small ob- stacle in the way to knowledge; which, I con- clude, we are the more carefully to be warned of, because it has been so far from being taken no- tice of, as an inconvenience, that the arts of im- proving it have been made the business of men's study, and obtained the reputation of learning and subtilty, as we shall see in the following chapter. But I am apt to imagine that, were the

imperfections of language, as the instrument of knowledge, more thoroughly weighed, a great many of the controversies, that make such a noise in the world, would of themselves cease; and the way to knowledge, and perhaps peace too, lie a great deal opener than it does.

This is the burden (for the author always seems toiling at his task — there is never that ap- pearance of ease and mastery inseparable from original genius, as in Bacon and Hobbes, and other powerful writers) of the third book, by far the best of the whole work, as justly observed by Mr. Stewart; who remarks, with equal justice, that it was an after-thought. If, indeed, it had been a forethought, many other parts of the essay would never have been written, and all the parts of it would have been written in a very different manner. It is much better written than any of the other books ; but even from this (the compo- sition is so indifferent) it is scarcely possible to extract a perfect sentence — we mean not rhetori- cally but logically considered : as to extracting a good paragraph it is out of the question.

' In one of Locke's most noted remarks con- cerning the varieties of genius, or rather the dif- ference between wit and judgment,' says Mr. Stewart, ' he has been anticipated by Malebranche, on whose clear yet concise statement he does not seem to have thrown much new light by his very diffuse and wordy commentary.' This remark concerning diffuseness and wordiness, as we ob- served of that about fanciful hypotheses by War- burton, is not the less true and forcible for coming from Mr. Stewart. Diffuseness and wordiness, or say wordiness and indistinctness, which are almost identical, are the besetting sin of all Locke's compositions. He is constantly laboring at it and about it, but seldom succeeds in expressing the truth, the whole truth, and no- thing but the truth. The third book of the essay, by far the best of the whole in every view, as already remarked, is little more than a 'very dif- fuse and wordy commentary' on a few sentences of Bacon and a few paragraphs of Hobbes ; the last of whom in particular expresses with such clearness and force the principle so much dilated and encumbered by Locke, and lays so much re- iterated emphasis upon it, as to render it almost unaccountable that the author of the Essay con- cerning the Human Understanding should have been so long before he was aware of its import- ance, and that he should have turned it to so lit- tle account.

The noted remark referred to by Mr. Stewart, as a very diffus0 and wordy commentary on a clear and concise statement of Malebranche, is in reality a deterioration of a statement given by Hobbes ; though expressed by the commentator with a clearness, and brevity, and precision, wbich he very seldom equals. We will give the

quotations in order from Locke, Malebranche, and Bacon, subjoining the statement of Hobbes which Mr. Stewart either did not know of or would not bring into the comparison before his readers.

'If in having our ideas in the memory ready at hand,' says Mr. Locke (Book II. c. xi.) 'consists quickness of parts; in this of having them unconfused, and being able nicely to distinguish one from another; when there is but the least differ- ence, consists, in a great measure, the exactness of judgment and clearness of reason which is to be observed in one man above another. And hence, perhaps, may be given some reason of that common observation, that men who have a great deal of wit, and prompt memories, have not always the clearest judgment or deepest rea- son. For wit, lies most in the assemblage of ideas, and putting those together with quickness and variety wherein can be found any resem- blance or congruity, to make up pleasant pictures and agreeable visions in the fancy ; judgment on the contrary lies quite on the other side, in sepa- rating carefully, one from another, ideas wherein can be found the least difference, thereb) to avoid being misled by similitude, and by affinity to take one thing for another.'

Let us now hear the epigrammatic Frenchman, who sacrifices nearly as much to conciseness as the prosing Englishman loses by diffusion.

' II y a done des esprits de deux sortes. Les uns remarquent aise"ment les differences des choses, et ce sont les bons esprits. Les autres imaginent et supposent de la ressemblance entr' elles, et ce sont les esprits superficiels.' Rech. de la Ve"rite. Liv. ii. Seconde Partie, chap; ix. There are two sorts of minds. The one remark easily the differences of things, and these are the good minds [or understandings]. The other imagine and conjecture their resemblance, and these are the superficial minds.

Let us now listen to one who spoice as few others have spoken.

' Maximum et velut radicale discrimen inge- niorum, quoad philosophiam et scientias, illud est ; quod alia ingenia sint fortiora et aptiora ad notandas rerum differentias ; alia, ad notandas rerum similitudines. Ingenia enim constantia et acuta, figere contemplationes, et morari, et haerere in omni subtilitate differentiarum possunt. In- genia autem sublimia, et discursiva, etiam tenuis- simas et catholicas rerum similitudines, et cog- noscunt et componunt. Utrumque autem ingenium facilb labitur in excessum, prensando aut gradus rerum, aut umbras.'

' That strain I heard was of higher mood !' ex- claims Mr. Stewart, with an enthusiastic delight in which we fully participate. It is the original strain

which has been much sung and variously altered, often deteriorated, never improved. We arc afraid of marring it, else we would do it into English for the sake of the common reader. But let us hear it from the philosopher of Malms- bury. < Natural wit consists principally in two things ; celerity of imagining (that is swift suc- cession of one thought to another), and steady direction to some approved end. On the con- trary, a slow imagination makes the defect or fault of the mind which is commonly called dul-

ness, stupidity, and sometimes by other names, that signify slowness of motion, or difficulty to be moved.

*‘ This difference of quickness is caused by the difference of men’s passions, who love and dis- like, some one thing, some another ; and there- fore some men’s thoughts run one way, some another, and are held to, and observe differently, the things that pass through their imagination. And as in this succession of men’s thoughts there is nothing to observe in the things they think on, but either in what they are like one another, or in what they are unlike, or what they serve for, or how they serve to such a purpose ; those that observe their similitudes, in case they be such as are but rarely observed by others, are said to have a good wit; by which is meant, in this connexion, a good fancy. But they that observe their differences, and dissimilitudes (which is called distinguishing, discerning, and judging), if such discerning be not easy, are said to have a good judgment. * * * The former, that is, fancy, without the help of judgment, is not commended as an excellence ; but the latter, which is judgment, is commended by itself, without the help of fancy. Besides the discretion, or distinguishing, of times, places, and persons, necessary to a good fancy, there is required also a frequent ap- plication of his thoughts to their end ; that is to say, to some use to be made of them. This done, he that has this excellence, will be easily fitted with similitudes, that will please not only by il- lustration of discourse, and adorning it with new and apt metaphors, but also by the rarity of their invention. But, without steadiness and direction to some end, a great fancy is one kind of mad- ness ; such as they have that, entering into any discourse, are snatched from their purpose by every thing that comes in thought, into so many, ‘ and so long digressions and parentheses, that they utterly lose themselves.’ Leviathan, part I. chap. viii.*

This, too, is not a bad strain, and more wor- thy of ranking with that of Bacon than either the epigram of Malebranche, or ‘ the very diffuse and wordy commentary upon it’ by Locke. But what we intended chiefly was to bring into com- parison, or rather contrast, the mode of express- ing thought, as presented in the writings of Locke, and the writings of those from whom he borrowed ; and to show how deficient he is in the use of words, or language, as the instrument or medium of knowledge. There is hardly a noted remark in the whole Essay on the Human Understanding

which may not be compared or contrasted with some passage or other of some preceding author, particularly Hobbes, from whom he borrowed more than from all other authors put together, though he hardly ever mentions the name of his benefactor except in a way of reproach. This was, perhaps, more from fear than from ingratitude, or from the desire of appropriating to himself the fame of others. In his reply to the bishop of Worcester he says, ‘ I am not so well read in Hobbes and Spinoza as to be able to say what were their opinions in this matter ; but possibly there may be those who will think your lordship’s authority of more use than justly decried names.’

*3. A third cause of the defects of the Essay of Mr. Locke has been already indicated, a want of originality, that is, want of intellectual adaptation to his undertaking. There is a manifest lack of unity of design, and much inconsistency among the parts, because they were taken from very dif- ferent minds ; and because, when taken from one and the same mind, as for example from that of Ilobbes, the commentator either did not under stand his materials fully, or wished to work them up anew in a manner, and for a purpose, to which they were not suited ; or to incorporate them with others wholly incongruous and hetero- geneous. Take, for example, what he says about truth, at the opening of the fifth chapter of the fourth book. Tie adopts the statement of Hobbes, ‘ that truth properly belongs only to proposi- tions;’ but he instantly makes nonsense of it by adding, ‘whereof there are two sorts, viz. mental and verbal ; as there are two sorts of signs com- monly made use of, viz. ideas and words.’ What the author could intend to mean by ideas being commonly made use of as signs, it is impossible for us to conjecrtire. From such a hopeful be- ginning we have this edifying sequel. — ‘To form a clear notion of truth it is very necessary to consider truth of thought and truth of words dis- tinctly one from another ; but yet it is very diffi- cult to treat of them astmder. Because it is unavoidable, in treating of mental propositions, to make use of words ; and then the instances given of mental propositions cease immediately *o be barely mental, and become verbal. For a mental proposition, being nothing but a bare con- sideration of the ideas as they are in our minds, stripped of names, they lose the nature of purely mental propositions as soon as they are put into words. And that which makes it yet harderto treat of mental and verbal propositions separately, is, that most men, if not all, in their thinkings and rea- sonings within themselves, make use of words in- stead of ideas ; at least when the subject of their meditation contains in it complex ideas.’*

Truly the case is not only hard, but desperate. What light or conduct of the understanding any man can find in statements like these we cannot divine ; yet they are a fair specimen of very many of the statements contained in Mr. Locke's celebrated work. Such indistinctness, such con- fusion, or rather such absence of conceivable meaning, cannot possibly exist where a man has distinct thoughts in his mind, and writes only from his own understanding.

We might have remarked, under the former head, that it is not merely in putting words together that the author fails, which failure is generally connected with mental confusion, but in regard to single terms as signs of ideas, to use his own expression, he is almost habitually faulty. Take, for instance, his noted word idea, which is here, and there, and every where, throughout the essay. What can be more indefi- nite than this verbal Proteus? It seems to mean any thing, every thing, and nothing, by turns. And this, though a notable, is not a solitary example. There is hardly a word of much im- portance, and frequent recurrence, which is not applied in the same loose and careless manner. This of itself is a striking proof of want of adap-

tation, or qualification, for metaphysical research and discussion. There was nothing, Hobbes said (in a passage already quoted), that he dis- trusted so much as his diction or expression ; but, notwithstanding all Mr. Locke's sage remarks and remonstrances on the subject, there seems to have been nothing that he so little distrusted.

What then, it may be said, are the merits of Mr. Locke? — We are fully disposed to allow them to be great, though not precisely such as have been generally assigned. He was a sincere lover of truth, and a most determined enemy to error and scholastic pretension and imposition. His work, though not remarkable for originality, consistency, or any thing like a luminous and in- structive exposition of the subjects on which it professedly treats, contains many judicious re- marks, brought together from various quarters ; and, though it might have been so written as to do much more, it has certainly done much in clearing away the rubbish of a false and deceitful philo- sophy, or rather of learned jargon. The third book, though very diffuse and wordy, is still calculated to be highly useful to young en- quirers: and it is impossible almost to estimate the good which the first book (unquestionably the ablest) has effected in banishing the Platonic mysticism and absurdity of innate ideas; which, so late as the times of Descartes, Leibnitz, Cud- worth, and even Price, maintained a hold of minds much above intellectual mediocrity. It is true, some harm may have been done by the same book, in leading such as Cbndillac, Hart- ley, and many others, to assign too much to the .senses and too little to the mind itself; yet we think it does not merit the treatment it has re- ceived from

Reid, Stewart, and others of the same school.

The last-named author is sometimes rather indignant at what he calls the sophistry, and ic- presents as of dangerous tendency, in the first book of the Essay : at other times he is not only extremely candid, but even eulogial towards the work as a whole. ‘ The enquiries,’ he remarks in the first and second books, ‘ which are of a much more abstract, as well as scholastic, nature, than the sequel of the work, probably opened gradually on the author’s mind in proportion as he studied his subject with a closer and more continued atten- tion. They relate chiefly to the origin and to the technical classification of our ideas frequently branching out into collateral, and sometimes into digressive, discussions, without much regard to method or connexion. The third book (by far the most important of the whole), where the na- ture, the use, and the abuse of language, are so clearly and happily illustrated, seems, from Locke’s own account, to have been a sort of after-thought ; and the two excellent chapters on the association , of ideas, and on enthusiasm (the former of which has contributed as much as any thing else in Locke’s writings, to the subse- quent progress of metaphysical philosophy) were printed, for the first time, in the fourth edition of the Essay.’

Respecting what Locke named, not very hap- pily, association of ideas, such as are more just and trenerous to the memory of Hobhes than Mr. Stewart, admit that he vtzz fbe first, at least in mo-

dern times, to state the mental fact or principle so much philosophised upon since his time (to what important purpose we hardly know notwithstand- ing Mr. Stewart’s high-sounding language about the progress of metaphysical philosophy), and that he stated it in a far more striking and philo- sophical manner than his commentator.

The following is language far more loftily panegyrical both towards Mr. Locke and meta- physics than the writer of this article could sin- cerely adopt. « But,’ says Mr. Stewart, ‘ although these considerations render the two first books inferior in point of general utility to the two last, they do not materially detract from their merit, as a precious accession to the theory of the hu- man mind. On the contrary, I do not hesitate to consider them as the richest contribution, of well-observed and well-described facts, which was ever bequeathed to this branch of science by a single individual ; and as the indisputable (though not always acknowledged) source of some of the most refined conclusions, with re- spect to the intellectual

phenomena which have been since brought to light by succeeding in- quirers/

The following perhaps may be regarded as a beautiful specimen of what we have failed iu towards Mr. Locke : —

‘ After the details given by Locke himself, of the circumstances in which his Essay was begun and completed, more especially after what he has stated of ‘ the discontinued way of writing,’ imposed on him by the avocations of a busy and unsettled life, it cannot be thought surprising, that so very little of method should appear in the disposition of his materials; or that the opinions which, on different occasions, he has pronounced on the same subject should not always seem per- fectly steady and consistent. In these last cases, however, I am inclined to think that the incon- sistencies, if duly reflected on, would be found rather apparent than real. It is but seldom that a writer, possessed of the powerful and upright mind of Locke, can reasonably be suspected of stating propositions in direct contradiction to each other. The presumption is, that, in each of these propositions, there is a mixture of truth, and that the error lies chiefly in the unqualified manner in which the truth is stated ; proper al- lowances not being made, during the fervour of composition, for the partial survey taken of the objects from a particular point of view. Perhaps it would not be going too far to assert, that most of the seeming contradictions which occur in au- thors animated with a severe love of truth, might be fairly accounted for by the different aspects which the same objects presented to them upon different occasions. In reading such authors ac- cordingly, when we meet with discordant expres- sions, instead of indulging ourselves in the cap- tiousness of verbal criticism, it would better become us carefully and candidly to collate the questionable passages; and to study so to recon- cile them, by judicious modifications and correc- tions, as to render the oversights and mistakes of our illustrious guides subservient to the precision and soundness of our own conclusions. In the case of Locke it must be owned, that this is not always an easy task, as the limitations of some

of his most exceptionable propositions are to be collected, not from the context, but from different and widely separated parts of his essay.’

We leave our readers to judge of the sound- ness of the above criticism ; but we thought it curious and worthy of insertion as a kind of contrast to our own ; and we wished that Locke might have some chance of fair play with us.

In speaking of the celebrity which the Essay on the Understanding so soon acquired, the same writer adds very justly, ‘ something I suspect must be ascribed to the political importance which Mn Locke had previously

acquired as the champion of religious toleration, as the great apostle of the revolution, and as the intrepid opposer of a tyranny which had recently been overthrown.' No doubt all this did much for the work ; and a high reputation once obtained is sure to remain unless put down by some powerful re-action of opinion. Another circum- stance was the magnitude of the work ; it seemed a complete body of metaphysics. A third fa- vorable circumstance was the modesty and ami- cableness of the author ; in this respect he was a complete contrast to his metaphysical master. But it is probable that the celebrity of the essay is owing chiefly to its indefinite character. It has been justly observed that ' most readers de- light to repose in generalities.' The author so often quoted already, when speaking of Leibnitz, remarks with more than usual acuteness, ' the phraseology is so indeterminate, that it may be interpreted in various senses essentially different from each other. Whether this vagueness of language was the effect of artifice, or of real vagueness in the author's notions, may perhaps be doubted ; but that it has contributed greatly to extend his reputation, among a very numerous class of readers, may be confidently asserted.'

As almost all sects, and parties, and persons in Britain have vied with one another in lauding Locke ; so his fame has been great on the conti- nent, particularly in France. According to Voltaire he is the Hercules of metaphysics, who has fixed the boundaries of the human under- standing. Locke est I'Hercule de la metaphy- sique, qui a pose" les bornes de 1'esprit humain. This is sublime, but another passage of the same celebrated Voltaire is quite the marvellous. ' Locke alone has developed the human under- standing in a work where there is nothing but truths, and what renders the work perfect all its truths are luminous. Locke seul a developpe" 1'entendement humain dans un livre ou il n'y a que desve"rites; et cequi rend 1'ouvrage parfait, toutes ces verites sont claires.' Is there here any evidence that this smart Frenchman ever read the perfect work concerning the human under- standing ? Or need we wonder at the unmea- sured praise of Locke after this ?

Condillac is to be regarded as the French in- terpreter and commentator of Locke ; and it is universally allowed that he has performed his task with great perspicuity and eloquence. But he has not given the whole of Locke and nothing but Locke ; for he has so much transmuted the English doctrines about the human understand- ing, that it would be more proper to call them after Gassendi ; and some French writers are now

inclined to restore the long alienated fame of the true philosophy of the

*human mind to its right- ful owner ; as has already appeared by a quotation from Degerando. According to Condillac all our ideas, thoughts, mental operations, and emotions, a*re nothing but transformed sensations. What he means by transformation he has not denned. ‘ If we consider,’ says he, ‘that to re- member, to compare, to judge, to distinguish, to imagine, be astonished, to have abstract ideas, to have ideas of number and duration, to know truths, whether general or particular, are but so many modes of being attentive; that to have passions, to love, to hate, to hope, to fear, to will, are but so many different modes of desire ; ..and that attention in the one case, and desire in the other case, of which all these feelings are modes, are themselves, in their origin, nothing more than modes of sensation, we cannot but con- clude that sensation, involves in it all the facul- ties of the soul.’ — Traite des Sensations, part I. chap. vii.*

This is a very short and simple process no doubt. The soul and all its faculties are resol- vable into the five senses, and there is an end of the matter. Locke allowed that there was something of a mind or soul to begin, with ana- logous to a sheet of white paper, and Hobbes thought it rather analogous to a slate. But ac- cording to Condillac there is nothing whatever beside or beyond, or distinct from the senses, or their agency, called sensation ; all that is sup- posed to be distinct from this is nothing but itself transformed like a harlequin into another character when performing a different part. Whatever we may think of this doctrine, says Dr. Brown, Lecture 33, as true or false, ingeni- ous or absurd, it seems, at least, scarcely possible that we should regard it as the doctrine of Locke — of him who sets out with a primary division of our ideas, into two distinct classes, one class of which alone belongs to sensation ; and who con- siders even this class of our mere ideas, not as involving all the operations of the mind with respect to them, but only as the objects of the mind in these various operations, as being what we compare, not the very feelings of our com- parison itself, the inducements to passion, not what constitutes any of our passions, as a state, or series of states of the mind. To render the paragraph quoted from Condillac at all accordant with the real doctrine of Locke, it would be ne- cessary to reverse it in almost every proposition which it involves.

We will not detain the reader longer with Condillac, who may be regarded, however, as standing at the head of the metaphysicians on the continent who consider themselves the dis- ciples of the metaphysical Hercules of England. According to both Mr. Stewart and Dr. Brown they have all misunderstood their master’s doc- trine ; whether this proves their dulness or per- versity, or his unfathomable profundity, or daz- zling brightness, the reader must judge for him- self.

HARTLEY.

Dr. Hartley is known, and was for a time, to some extent at least, admired as the author of a Work entitled Observations on Man ; in which

he propounded a very fanciful theory of vibra- tion for the purpose of explaining the operations of the mind. Dr. Brown has expended some very unnecessary refutation on the vibrating theory in one of his lectures ; especially as he states that it ‘ has now fallen into merited dis- repute even with those who are inclined, in other respects, to hold in very high estimation the merits of Hartley as an intellectual analyst.’ ‘ His followers, he continues, have generally been extravagant admirers of his philosophical genius, which I own seems to me to be very opposite to the genius of sound philosophy. That there is considerable acuteness, however, displayed in his work, and that it contains some successful analyses of complex feelings, I am far from de- nying ; and, as intellectual science consists so much in the analysis of the complex phenomena of thought, its influence in this respect has un- questionably been of service, in promoting that spirit of free enquiry, which, in a science that presents no attraction to the senses, is so easily laid asleep, or at least so readily acquiesces, as if to justify its indolence, in the authority of great names, and of all that is ancient in error and venerable in absurdity. But though the influence of his philosophy may have been of service in this respect, the advantage which has perhaps flowed from it in this way must have been inconsiderable compared with the great evil which has unquestionably flowed from it in an- other way, by leading the enquirer to acquiesce in remote analogies, and to adopt explanations and arrangements of the phenomena of mind, not as they agree with the actual phenomena, but as they chance to agree with some supposed phenomena of our material part.’

Dr. Hartley has given the same general ac- count of the origin of ideas with Condillac ; but so far from claiming the sanction of Locke’s authority he points out the difference between his own opinion and that expressed by the author of the Essay on the Understanding. « It may not be amiss (he remarks in the introduction to his work) here to take notice how far the theory of these papers has led me to differ in respect of logic from Mr. Locke’s excellent Essay on the Human Understanding, to which the world is so much indebted for removing prejudices and in- cumbrances, and advancing real and useful knowledge. First, then, it appears to me, that all the most complex ideas arise from sensation, and that reflection is not a distinct source, as Mr. Locke makes it.’

*The materialists and necessitarians have a sort of natural affection for Hartley ; and Dr. Priestley speaks in very admiring strains of the author of the vibratory and vibratiuncle theory. * Some- thing was done,’ (he says, remarks on Reid, Beattie and Oswald), ‘ in this field of knowledge by Descartes, very much by Mr. Locke, but most of all by Dr. Hartley, who*

has thrown more useful light on the theory of mind, than Newton did upon the theory of the natural world. 'What with one light and another that has been thrown upon the theory of mind, the northern lights bcth Scottish and German, and the effulgent radiance of Locke, Condillac, and Hartley, we might have expected of course to be dark, as we are, through excess of brightness.

According to Mr. Stewart the theory of Hart- ley seems to be fast passing into oblivion : ' the temporary popularity which it enjoyed in this country having in a great measure ceased with the life of its zealous and indefatigable apostle Dr. Priestley.' Yet one of his co-operators in the Supplement to the Encyclopaedia Britannica, the writer of the article Education, is almost as ar- dent an admirer of Hartley as Priestley himself. 'It is surprising/ he says, ' how little the author of the vibratory theory has left unaccomplished.' It is truly astonishing too, what Condillac, Helve- tius, and Cabanis have done ; as to Locke, of course, the Hercules of metaphysics, none but Voltaire is fit to tell his metaphysical exploits.

HUME.

Mr. Hume commenced his literary career in the twenty-fifth year of his age, by writing a work entitled a Treatise of Human Nature, suggested no doubt by that of Hobbes, bearing essentially the same title. The reception of this first work was sufficient to have extinguished the ambition of authorship in a less ardent mind. ' Never literary attempt was more unfortunate,' says the author ; ' it fell dead-born from the press without reaching such distinction as even to excite a murmur among tne zealots.' He afterwards en- deavoured to adapt the contents of the abortive publication to the public taste by modifying them anew and presenting them in the popular and fashionable form of essays. According to Mr. Stewart, with whom every thing save and except pure Hobbism, is metaphysical optimism, the Treatise of Human Nature ' has contributed, either directly or indirectly, more than any other single work, to the subsequent progress of the Philosophy of the Human Mind.' What with the sure law of continuity and infinite progres- sion, the Philosophy of the Human Mind will doubtless at last reach infinitesimal perfection in the arrangement of well authenticated facts, re- fined speculations, and all the genera and species of intellectual phenomena.

The objects contemplated in the Treatise of Human Nature are thus presented by the author : "Tis evident that all the sciences have a relation,

*greater or less, to human nature, and that, how- ever wide any of them may seem to run from it, they still return back by one passage or an- other. Even mathematics, natural philosophy, and natural religion, are in some measure de- pendent on the science of man, since they lie under the cognizance of men, and are judged of by their powers and faculties. * * * If, therefore, the science of mathematics, natural philosophy, and natural religion, have such a dependence on the knowledge of man, what may be expected in the other sciences, whose connexion with human nature is more close and intimate? The sole end of logic is to explain the principles and opera- tions of our reasoning faculty, and the nature of our ideas : morals and criticism regard our tastes and sentiments, and politics consider men as united in society and dependent on each other. * Here, then, is the only expedient from wnich we ca:i hope for success in our philoso- ph'cal researches, to leave the tedious lingering method whicn we have hitherto followed, and,*

instead of taking now and then a castle or vil- lage on the frontier, to march up directly to the capital or centre of these sciences, to human na- ture itself; which being once masters of we may every where else hope for an easy vicˆpry. From this station we may extend our conquests over all those sciences which more intimately concern human life, and afterwards proceed at leisure to discover more fully those which are the objects of pure curiosity. There is no question of im- portance whose decision is not comprised in the science of man ; and there is none which can be decided with any certainty before we become acquainted with that science. In pretending, therefore, to explain the principles of human nature, we in effect propose a complete system of the sciences, built on a foundation almost en- tirely new, and the only one upon which they can stand with security.'

See, the conquering hero come ! A precocious Kant ! A second Hercules of metaphysics, mightier far than the first ! But let us hear this wonderful projector, so pregnant with metaphy- sical wisdom, disburthen himself of his philoso- phical inspiration.

' And, as the science of man is the only solid foundation for the other sciences, so the only solid foundation we can give to this science it- self must be laid on experience and observation. 'Tis no astonishing reflection to consider, that the application of experimental philosophy to moral subjects should come after that to natural, at the distance of above a whole century ; since we find, in fact, that there was about the same in- terval betwixt the origin of the sciences; and that, reckoning from Thales to Socrates, the space of time is nearly equal to that betwixt my lord Bacon and some late philosophers in Eng- land, who have begun to put the science of man on a new footing, and have engaged the attention and excited the

curiosity of the public.'

This is all very lofty and very wonderful, and no doubt mortified the pride of the author to the last hour of his life. Hence he was always peevish and querulous on the subject of this ju- venile work as he terms it. ' Several writers,' he says, ' who have honored the author's philosophy with answers, have taken care to direct all their batteries against that juvenile work, which the author never acknowledged, and have affected to triumph in any advantage which they imagined they had gained over it : a practice very contrary to all rules of candor and fair dealing, and a strong instance of those polemical artifices which bigoted zeal thinks itself authorised to employ. Henceforth the author desires that the following pieces may alone be regarded as containing his philosophical sentiments and principles.' ' I was carried away, by the heat of youth and in- vention, to publish too precipitately. So vast an undertaking, planned before I was one-and-twenty, and composed before -twenty-five, must necessarily be very defective. — I have repented my haste a hundred and a hundred times.'

The youthful projector or aspiring adventurer in the wonder-working science of man, not suc- ceeding in his ambitious expectations in march- ing up to the capital, — in extending his con- quests,— in acquiring an easy victory,— in

pretending to explain the principles of human nature, and proposing a complete system of the sciences, built on a foundation almost entirely new, and the only one on which they can stand with security, became desperate. Retaining, like Lucifer after his fall, however, an insatiable am- bition of renown, and having a rooted antipathy to religion, he thought he might be a Hercules of scepticism, and destroy all such superstitious monsters as the vulgar principles of human be- lief. Accordingly, in turning sceptic, and cham- pion of scepticism, he turned sophist also; for the one never yet existed, in any thing like per- fection, without the other. Notwithstanding all Mr. Stewart's tenderness, or rather favoritism, towards Mr. Hume (not very intelligible but on the supposition of nationality), the author of the first treatise of human nature is in every respect honorable, and, hated as he is, lovely when com- pared with the author of the second. The first cannot, in any fairness or justice, be pronounced a sophist.

The following statement by Mr. Stewart is upon the whole just, and it is sufficiently candid or rather partial, towards Hume : — ' The funda mental principles from which Mr. Hume sets out differ more in words than in

substance [he was ambitious of standing alone and seeming to differ even from those with whom he essentially agreed, — if indeed he agreed with any one fixed principle] from those of his immediate predeces- sors. According to him, all the objects of our knowledge are divided into two classes, impres- sions and ideas : the former, comprehending our sensations, properly so called, and also our per- ceptions of sensible qualities [two things betwixt which Mr. Hume's system does not lead him to make any distinction] ; the latter, the objects ot our thoughts when we remember or imagine, or in general exercise any of our intellectual powers on things which are past, absent, or future. These ideas he considers as copies of our impres- sions, and the words which denote them as the only signs entitled to the attention ; every word professing to denote an idea, of which the cor- responding impression cannot be pointed out, being ipso facto unmeaning and illusory. The obvious result of these principles is that, what Mr. Hume calls impressions, furnish, either im- mediately or mediately, the whole materials about which our thoughts can be employed ; a conclu- sion coinciding exactly with the account of the origin of our ideas borrowed by Gassendi from the ancient Epicureans. With this fundamental principle of the Gassendists Mr. Hume com- bined the logical method recommended by their great antagonists the Cartesians ; and, what seems still more remote from his Epicurean starting- ground, a strong leaning to the idealism of Malebranche and of Berkeley. Like Descartes, he began with doubting of every thing, but he was too quick-sighted to be satisfied, like Des- cartes, with the solutions given by that philoso- pher of his doubts. On the contrary, he exposes the futility, not only of the solutions proposed by Descartes himself, hut of those suggested by Locke and others among his successors ; ending at last where Descartes began, in considering no one proposition as more certain, or even as more

probable, than another. That the proofs alleged by Descartes, of the existence of the material world, are quite inconclusive, had been already remarked by many. Nay it had been shown, by Berkeley and others, that, if the principles be ad- mitted on which Descartes, in common with all philosophers, from Aristotle downwards, pro- ceeded, the existence of the material world is impossible. A few bold thinkers, distinguished by the name of Egotists, had gone still Parther than this, and had pushed their scepticism to such a length as to doubt of every thing but their own existence. According to these the proposition cogito ergo sum is the only truth which can be regarded as absolutely certain. It was reserved for Mr. Hume to call in questioti even this proposition, and to admit only the ex istence of impressions and ideas. To dispute against the existence of these he conceived to be impossible, inasmuch as they are the immediate subjects of consciousness. But, to admit the existence of the thinking and percipient I, was to admit the existence of that imaginary sub- stance called mind,

which, according to him, is no more an object of human knowledge than the imaginary and exploded substance called matter.

‘ From what has already been said it may be seen, that we are not to look in Mr. Hume’s treatise for any regular or connected system. It is neither a scheme of materialism nor a scheme of spiritualism ; for his reasonings strike equally at the root of both these theories. His aim is to establish a universal scepticism, and to produce in the reader a complete distrust of his own faculties. For this purpose he avails himself of the data assumed by the most opposite sects, shifting his ground skilfully from one position to another, as best suits the scope of his present argu- ment. With the single exception of Bayle he has carried this sceptical mode of reasoning farther than any other modern philosopher. Cicero, who himself belonged nominally to the same school, seems to have thought, that the contro- versial habits imposed on the academical sect, by their profession of universal doubt, required a greater versatility of talent and fertility of inven- tion than were necessary for defending any par- ticular system of tenets ; and it is not improbable that Mr. Hume, in the pride of youthful genius, was misled by this specious but very fallacious idea. On the other hand, Bayle has the candor to acknowledge that nothing is so easy as to dis- pute after the manner of the sceptics ; and to this proposition every man of reflection will find himself more and more disposed to assent as he advances in life. It is experience alone that can convince us how much more difficult it is to make any real progress in the search after truth, than to acquire a talent for plausible disputation.

‘ That this spirit of sceptical argument has been carried to a most pernicious excess in mo- dern Europe, as well as among the anciei.t aca- demics, will be now very general allowed : but, in the form in which it appears in Mr. Huire’s Treatise, its mischievous tendency has b«.en more than compensated by the importance ot’ those results for which it has prepared the way. The principles which he assumes were sanctioned in common by Gassendi, by Descartes, and by

Locke; and from these, in most instances, he reasons with great logical accuracy and force. The conclusions to which he is thus led are often so extravagant and dangerous, that he ought to have regarded them as a proof of the unsoundness of his data ; but, if he had not the merit of drawing this inference himself, he at least forced it so irresistibly on the observation of his successors as to be entitled to share with them in the honor of their discoveries. Perhaps, indeed, it may be questioned if the errors which he

adopted from his predecessors would not have kept their ground till this day had not his sagacity displayed so clearly the consequences which they necessarily involve. It is in this sense that we must understand a compliment paid by the ablest of his adversaries, when he says, that Mr. Hume's premises often do more than atone for his conclusions.'

' The bias of Mr. Hume's mind to scepticism seems to have been much encouraged, and the success of his sceptical theories in the same proportion promoted, by the recent attempts of Des- cartes and his followers to demonstrate self- evident truths — attempts which Mr. Hume clearly perceived to involve, in every instance, that sort of paralogisis which logicians call reasoning in a circle. The weakness of these pretended demonstrations is triumphantly exposed in the Trea- tise of Human Nature ; and it is not very won- derful that the author, in the first enthusiasm of his victory over his immediate predecessors, should have fancied that the inconclusiveness of the proofs argued some unsoundness in the propositions which they were employed to support. It would, indeed, have done still greater honor to his sagacity if he had ascribed this to its true cause, the impossibility of confirming, by a pro- cess of reasoning, the fundamental laws of human belief. From that strong sceptical bias which led this most acute reasoner, on many important questions, to shift his controversial ground ac- cording to the humor of the moment, one favorable consequence has resulted, that we are in- debted to him for the most powerful antidotes we possess against some of the most poisonous errors of modern philosophy.'

That Mr. Hume was an acute reasoner or rather arguer, and that he has done some good which he never intended, we willingly admit; but take it altogether we hardly know of an intellec- tual character for which we feel less respect than for his.

REID, OSWALD, BEATTIE, AND STEWART.

We class these names together because they are identified with what is termed the Scotch me- taphysics ; but we mean to take no other notice of Oswald and Beattie. Even Mr. Stewart is almost ashamed to own them, with all their boasted com- mon sense. The following dexterous turn, when it seemed impossible to avoid saying something of their merits, is amusing : ' Of the other works by Scottish metaphysicians, which appeared soon after the enquiry into the Human Mind, I have not left myself room to speak ; I know of none of them from which something important may not be \earned •, w'niie several of them (particu- larly those of Dr. Campbell) have struck out

many new and interesting views. To one encomium all of them are well

entitled, that of aiming stea- dily at the advancement of useful knowledge and of human happiness. But the principles on which they have proceeded have so close an affinity to those of Dr. Reid, that I could not, without repeating over what I have already said, enter into any explanation concerning their cha- racteristical doctrines.'

We wisli indeed that, with all their good inten- tions, their manner of opposing scepticism (and the remark applies also to Dr. Reid and Mr. Stewart) had been more calculated to do good and less such as to do harm. We can speak feelingly on the subject when we say that the remark applied by Mr. Stewart to the scheme of optimism is but too applicable to the scheme of common sense as treated of by Oswald, Beattie, — we will not name any more. ' The success of his attempt (Voltaire's) was much aided by the confused and inaccurate manner in which the scheme of optimism had been recently stated by various writers, who in their zeal to vindicate the ways of God to men, had been led to hazard principles more dangerous in their consequences than the prejudices and errors it was their aim to correct.'

But it is with Dr. Reid, and his disciple and commentator Mr. Stewart, as inductive philoso- phers of the human mind, that we have to do. Somewhat more than twenty years ago the former appeared to the writer of this paper a perfect Socrates, and the latter as perfect a Plato, de- livering in divine eloquence the wisdom of his sage master ' the experimental father of the true theory of the human mind ;' but time makes great changes. The venerable father of the Scottish metaphysics, may, between Mr. Stewart (who with all his partiality has detected in him not a few mistakes) and Dr. Brown, be compared to the old gentleman in the hands of his two wives who made him quite bald and bare, one objecting to the black and the other to the white hairs on his head. Mr. Stewart, indeed, is gentle and forbearing, for real affection is always unwil- ling to offend or to hurt ; but Dr. Brown pulls up by the roots most unmercifully all Dr. Reid's claims to a'dmiration or even respect as an induc- tive philosopher : he employs three or four long, logical, eloquent, lectures in proving that Dr. Reid's grand intellectual discovery or metaphy- sical achievement was, after all that had been said of its wonderful importance, both by him- self and his disciples, nothing but an egregious blunder.

The following is the manner in which he opens his destructive battery upon the reputation of the Hercules of the Scottish metaphysics ; who it was supposed had vanquished all the giants, and annihilated all the monsters of idealism. ' While by philosophers in one part of the island, Dr. Reid's merits seem to have been unjustly under- valued, I cannot but think also that, in his own country, there has been an equal, or rather a far greater tendency to over-rate them, — a tendency arising in part from the influence of his

academic situation, and his amiable personal character, partly, and in a very high degree, from the g-eoferal regard for the moral and religious objects

•which he uniformly had in view, as contrasted with the consequences that were supposed to flow from some of the principles of the philosopher whose opinions he particularly combated ; and partly also, 1 may add, from the eloquence of his illustrious pupil and friend and biographer, whose understanding, so little liable' to be biassed by any prejudices but those of virtue and affectionate friendship, has yet, perhaps, been influenced in some degree by those happy and noble prejudices of the heart, and who, by the persuasive charms both of his lectures and of his writings, could not fail to cast, on any system of opinions which he might adopt and exhibit, some splendor of reflection from the brilliancy of his own mind.

' The genius of Dr. Reid does not appear to me to have been very inventive, nor to have possessed much of that refined and subtile acute- ness, which, capable as it is of being abused, is yet absolutely necessary to the perfection of metaphysical analysis.

*' It is chiefly on his opinions, in relation to the subject at present under our view, that his reputation as an original thinker rests. Indeed it is on these that he is inclined himself to rest it. In a part of a letter to Dr. Gregory, pre- served in Mr. Stewart's Memoir, he considers his confutation of the ideal system of perception as involving almost every thing which is truly his. * I think there is hardly any thing that can be called mine,' he says, 'in the philosophy of mind which does not follow with ease from the detec- tion of this prejudice.' Yet there are few cir- cumstances, connected with the fortune of modern philosophy, that appear to me more wonderful than that a mind like Dr. Reid's, so learned in the history of metaphysical science, and far too honorable to lay claim to praise to which he did not think himself fairly entitled, should have conceived that, on the point of which he speaks, any great merit, at least any merit of origina- lity, was justly referrible to him particularly. Indeed, the only circumstance more wonderful is, that the claim thus made by him, should have been so readily and generally admitted.'*

The claim had been long disallowed (notwith- standing all the strenuous and indefatigable efforts of the illustrious pupil), by competent judges beyond the Scottish boundaries; but it was a kind of revolution for it to be overthrown in the university of the Scottish capital, and in the very chair so

long filled by Dr. Reid's dis- ciple and commentator. No doubt, however, according to Mr. Stewart's metaphysical opti- mism, or sure and certain hope of the intellec- tual philosophy, this was, withMr. Hume's daring scepticism, working forward the science of the human mind.

It is not necessary to detain the reader longer with the author of an Enquiry into the Human Mind, and Essays on the Intellectual and Active Powers of Man. His glory is departed we sus- pect from even the Scottish universities; whose future metaphysical professors will probably be as shy of owning him as Mr. Stewart is of em- bracing affectionately the intellectual memory of his compeers Oswald and Beattie. This sage, as Dr. Currie and Mr. Stewart were wont to designate him, now stands convicted of ' much VOL- XˆV.— PART 2.

zealous blundering ' (to give Dr. Brown's words) in professing to confute what existed nowhere but as phantoms of his own confused brain.

Concerning ' his illustrious pupil' we would rather not speak our mind if we could well be silent, as we cannot sincerely characterise him as an inductive philosopher of the human mind in flattering terms, and should be unwilling to wound the feelings of an aged and excellent individual. But we think it very unfortunate for his intellectual reputation that his name is at all identified with the metaphysical history of the nineteenth century ; for, as expressed by a con- temporaneous critic, he has certainly ' mistaken his forte.' Few men perhaps who have been thrown by circumstances into abstract enquiries and abstruse speculations, have possessed less ot metaphysical adaptation for them from either nature or art: and we fear that his secondary claims as an elegant scholar and accomplished literary man, which, standing alone, might have been well supported and hare long endured, will fall with his primary pretensions. We will not discuss the merits of his intellectual faculties and powers (to use a sort of favorite expression of his own), or of his productions considered either in a mere literary or in a philosophical view ; for, though not afraid to blame, we would rather praise. But there are two points on whfch we cannot forbear expressing our opinion. The one is what we consider the philosophic bigotry of Mr. Stewart, and the other is what we call his philosophic pretension.

We have availed ourselves very freely of his two dissertations in the supplement to the En- cyclopaedia Britannica, which display the extent and the diversity of his reading; and we feel grateful for the trouble they saved and the assistance they afforded us. At the same time we must observe that they contain a very great proportion not only of unsound, but of unfair criticism. If authors happen to hold opinions deemed by Mr. Stewart adverse to what he con- siders the true theory of mind or to natural reli- gion (it would not be decorous perhaps to manifest a spark of zeal for

revealed religion), whatever be their genius or intellectual rank, they would seem fit objects for unsparing hosti- lity, we had almost said relentless persecution. He is tolerant and tender indeed towards Mr. Hume, as already noticed ; but witness his un- ceasing hostility towards Gassendi and Hobbes, and all the Epicureans as he designates them ; witness his conduct towards even Locke, not- withstanding all his courtly caution and compli- mentary courtesy, for he accuses him of sophis- try; witness his remarks on such disciples of Locke as Law, Watson, and the ingenious Tucker, of whom he thus writes : — ' Of an author whom Dr. Paley has honored with so very warm a eulogy, it would be equally absurd and pre- sumptuous to dispute the merits. Nor have I any wish to detract from the praise here bestow- ed on him as an original thinker and observer. I readily admit, also, his talent for illustration, although it sometimes leads him to soar into bombast, and more frequently to sink into buffoonery. As an honest enquirer after moral and religious truth he is entitled to the most

unqualified approbation. But I must be per- mitted to add that, as a metaphysician, he seems to me much more fanciful than solid ; and at the same time to be so rambling, verbose, and excursive (was it prudent to cast such epithets ?) as to be more likely to unsettle than to fix the principles of his readers.'

This is a favorable specimen, compared to much that might be brought forward. Mr. Stewart's antipathy seems to be in proportion to the originality of an author, if that author hap- pen to be beyond the pale of his own sect, or not included within the circle of metaphysical orthodoxy. The odium theologicum has long been proverbial ; and we say it with a sigh, for we have felt what we express, that the odium metaphysicum of Oswald, Beattie, Reid, and Stewart, has done more serious mischief than all their shallow metaphysics and blundering reason- ings. The writer of this will not yield to Mr. Stewart in religious belief, or in deep sense of the importance of religion and morality ; and his regret is, that religious and moral principles should be wounded by their professed friends, or betrayed by their weak advocates.

The second charge which we have to prefer against Mr. Stewart is that of philosophic as- sumption and pretension. Indeed we cannot believe that he is aware of what we are now com- plaining of, to the extent to which it pervades his writings, but that it has silently grown up with him into an

inveterate but offensive habit. Still the incessant recurrence of such high sound- ing, quackish looking, expressions, as intellectual data, intellectual phenomena, true theory of mind, inductive philosophy of the mind, experi- mental philosophy of the mind, the science of the mind, intellectual philosophy, &c. &c. &c., is perfectly annoying. If Mr. Stewart be not the profoundest metaphysician, the greatest intellec- tual discoverer, the acutest intellectual analyst, the most successful observer of mental pheno- mena that any age or country has produced, he will at least descend to posterity, and be the wonder of all succeeding times as the greatest inventor and improver of metaphysical grandi- loquentia that the world ever saw. All that went before him was tame and timid and sheep- ishly modest, when compared to him. If Des- cartes the father of the experimental philosophy of the mind, or Malebranche who did so much for it as an inductive science, or such Epicu- reans as Gassendi, or old Hobbes, or Hercules himself, were to come back to these lower intel- lectual regions, they would, stare with astonish- ment at our new nomenclature.

Hobbes entitled his celebrated Libellum (which Mr. Stewart thinks with Addison, and other great judges, the best of all his works), Human Nature ; Malebranche called his work the Search of Truth ; Locke, with a degree of modesty which incurred the charge of a mis- nomer, denominates his Herculean labor, an Essay concerning Human Understanding; Hume entitled his juvenile production (in which, as we have seen, there is something of the mock heroic about the science of man, whether sincere onrsuKous) a Treatise of Human Nature; that sage, or Socrates, of the common-sense metaphy-

sics, Dr. Reid, was so unassuming as to be con- tent with such humble titles as an Enquiry into the Human Mind, Essays on the Intellectual and Active Powers of Man. It was reserved for Mr. Dugald Stewart to have all the glory of being the first author and professor of the Philosophy of Mind; and of rendering intellectual science, intellectual phenomena, and many similar philo- sophic forms of speech concerning metaphysics, as familiar in our mouths as household words. In this respect he thought himself no doubt a metaphysical benefactor; judging that (to quote his own words, first dissertation, p. 59), 'above all, whatever tends to embody, in popular forms of expression, the ideas and feelings of the wise and good, augments the natural powers of the human understanding, and enables the succeed- ing race to start from a higher ground than was occupied by their fathers.'

Doubtless so far as grandiloquence is em- bodied in popular speech, and concerned in aug- menting the natural powers of the understanding, the succeeding race will start from high ground indeed ; they will at least be so much mounted towards the etherial regions as to be fairly up among the clouds, on the alpine summits of lofty phraseology. But we are sick of the

nauseous topic, and will quit it, we hope for ever, by quoting another passage from Mr. Stewart, which requires very little alteration to adapt it as com- pletely to himself and his boasted science, and his metaphysical coadjutors, as if ii had been ‘ made for them.’ ‘ The fundamental principles of Puffendorff (first dissertation, p. 130) pos- sess little merit in point of orginality, being a sort of medley of the doctrine of Grotius, with some opinions of Hobbes ; but his book is en- titled to the praise of comparative conciseness, order, and perspicuity ; and accordingly came very generally to supplant the treatise of Gro- tius, as a manual or institute for students, not- withstanding its immense inferiority in genius, in learning, and in classical composition. The authors who in different parts of the continent have since employed themselves in commenting on Grotius and Puffendorff [substitute Locke and Reid, and understand for the authors or lecturers, Scottish professors], or in abridging their systems, or in altering their arrangements, are innumerable ; but, notwithstanding all their industry and learning, it would be very difficult to name any class of writers whose labors have been of less utility to the world. The same ideas are constantly recurring in an eternal circle; the opinions of Grotius and of Puffen- dorff, where they are at all equivocal, are anxiously investigated, and sometimes involved in addi- tional obscurity ; while, in the mean time, the science of natural jurisprudence [substitute human mind], never advances one single step ; but, notwithstanding its recent birth, seems al- ready sunk into a state of dotage.’

All this, when applied to Scottish metaphysics, is strikingly just and happily expressed. It is now ascertained that the opinion of Dr. Brown concerning Mr. Stewart as a metaphysician was essentially the same as that expressed of Dr. Reid ; and that, in demolishing the claims of the one, he was, without avowedly doing it, actually

b:iitcring down the pretensions and erections of the other. Dr. Brown’s book may then (as Montesquieu said of that of Cervantes), be con- sidered the best of the kind yet produced in Scotland, not only abstractedly viewed, but be- caaso it so effectually exposes the absurdity of a!l the rest. He says, in a letter to Mr. lirskine (Life of Dr. Brown, p. 195), ‘I was very much constrained, as you may believe, by the un- pleasantness of differing so essentially from Mr. Stewart, on many of the principal points. But I conceived that it would be more honorable to state at once my own opinions, than to seem to introduce them afterwards in other years ; and Dr. Reid’s name fortunately served every pur- pose, when I had opinions to oppose in which Mr. Stewart perhaps coincided. I got off, therefore, pretty

well in that way ; though I must confess that it was one of the most unpleasant circumstances attending my situation.'

For Mr. Stewart, as an elegant scholar, an ex- cellent man, a friend of civil and religious li- berty, and of human improvement and happi- ness, we have the highest respect and regard; but, next to sophistry, we do hate, from our in- most soul, all learned and philosophic preten- sions and cant. These are the entities towards which our uncompromising and unsparing hos- tility is directed ; and, if we could encounter them in a state of pure metaphysical abstraction, we would gladly escape from the unwelcome and painful task of dealing with them in their concrete form. If they have no existence in connexion with Mr. Stewart — 'if they are not embodied in his writings (and we have no per- sonal know ledge of him), we have wronged him, and would, upon convincement of our guilt, willingly make any atonement in our power ; — but even in this case we have sinned, not wan- tonly, but ignorantly : it was in truth with ex- treme and very painful reluctance that we wrote what we have written.

As the expressions, experimental induction, &c., ' are constantly recurring in an eternal cir- cle,' throughout the Dissertations of Mr. Stewart, we quote the following just remark from those of Mr. Playfair which are so admirable in almost every respect. ' The experimentum crucis,' says Mr. Playfair, ' is of such weight in matters of induction, that in all those branches of science where it cannot be easily resorted to (as agricul- ture, medicine, political economy, &c.) — [that metaphysics is included, no reasonable person can doubt], there is often a great want of con- clusive evidence. Hence the great difficulty of separating the causes, and allotting to each its due proportion of the effect. Men deceive themselves in consequence of this continually, and think they are reasoning from facts and ex- perience, when in reality they are only reason- ing from a mixture of truth and falsehood. The only end answered by facts, so incorrectly appre- hended, is that of making error more incorrigible.'

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It is supposed that a medical course of study is favorable to metaphysical intellect. We lay

no stress on this ; though there is probably con- siderable tendency in the one to the other, aa there is certainly a sort of natural connexion be- tween the physical and metaphysical study of man ; or between the physiology of the human frame, and what some have recently named the physiology of

mind. Locke and Hartley, as well as Dr. Brown, were physicians. Dr. Brown, however, had a metaphysical bias before he studied medicine with a view to a profession. The latter no doubt acted powerfully, and in some respects favorably, on the former. There was another early, and which proved a perma- nent bias of his mind — which would seem at first sight not Very favorable to, or compatible with the other, though it existed also in the singular mind of Hobbes — a poetic turn or ten- dency, if we may not call it genius. Certain it is, from both examples of the union of a meta- physical and a poetical bias, that, if the latter was not unfavorable to the former, the metaphysical was decidedly unfavorable to the poetical energy of the mind. We think that this might be easily and perhaps satisfactorily accounted for. This, however, is not our present business ; suffice it to remark, that Brown, Hobbes, Bacon, (as all men possessed of high degrees of intellectual vigor) would seem to have been as truly possessed ab origine of the poetical genius (that is a power- ful and active imagination) as Shakspeare, Mil- ton, Homer, and Virgil, but subsequent circum- stances made the ultimate distinction as to intellectual character. We proceed to give some account of Dr. Brown's lectures.

*The first is introductory ; and we select from it the following remarks as the most essentially important. Having remarked on the futility and absurdity of the metaphysics of the schoolmen, he adds : — ' The progress of intellectual philoso- phy may indeed, as yet, have been less consider- able than was to be hoped under its present better auspices. But it is not a little to have escaped from a labyrinth, so very intricate and so very dark, even though we should have done nothing more than advance into sunshine and an open path, with a long journey of discovery still before us. We have at last arrived at the impor- tant truth, which now seems so very obvious a one, that the mind is to be known best by obser- vation of the series of changes which it presents, and of all the circumstances which precede and follow these. * * * The mind, it is evident, may like the body to which it is united, or the material objects which surround it, be considered as a substance possessing certain qualities, suscep- tible of various affections or modifications, which, existing successively as momentarily states of the mind, constitute all the phenomena of thought and feeling. The general circum- stances in which these changes of state succeed each other, or, in other words, the laws of theii succession, may be pointed out, and the pheno- mena arranged in various classes, according as they may resemble each other, in the circum- stances that precede or follow them, or in other circumstances of obvious analogy. There is, in short, a science that may be termed mental phy- siology, as there is another science relating to the structure and offices of our corporeal frame, to*

•which the term physiology is more commonly app.ied ; and as by observation and experiment we may endeavour to trace those series of changes which are constantly taking place in our material part, from the first moment of animation to the moment of death ; so, by observation, and in some measure also by experiment, we endea- vour to trace the series of changes that take place in the mind, fugitive as these successions are, and rendered doubly perplexing by the recipro- cal combinations into which they flow. * * * * 'There is a philosophic spirit which is far more valuable than any limited acquirements of philosophy ; and the cultivation of which, there- fore, is the most precious advantage that can be derived from the lessons and studies of many academic years ; a spirit which is quick to pur- sue whatever is within the reach of human intel- lect ; but which is not quick to discern the bounds that limit every human enquiry, and which, therefore, in seeking much, seeks only what man may learn : which knows how to distinguish what is just in itself, from what is merely accredited by an illustrious name ; adopting a truth which no one has sanctioned, and rejecting an error of which all approve, with the same calmness as if no judgment were opposed to its own : but which, at the same time, alive with congenial feelings to every intel- lectual excellence, and candid to the weakness from which no excellence is wholly privileged, can dissent and confute without triumph, as it admires without envy ; applauding gladly whatever is worthy of applause in a rival system, and venerating the very genius which it demon- strates to have erred.'

The second lecture is entitled Relation of the Philosophy of Mind to the Sciences; and the office of intellectual science is magnified with considerable effect ; but there is nothing very worthy of being extracted, except the following sentence which contains the germe of the whole lecture, and which it is possible some minds re- quire to have impressed upon them.

' To the philosophy of mind every speculation, in every science, may be said to have relation as to a common centre. The knowledge of any quality of matter, in the whole wide range of physics, is not itself a phenomenon of matter, more than the knowledge of any of our intellec- tual or moral affections; it is truly, in all its stages of conjecture, comparison, doubt, belief, a phenomenon of mind ; or, in other words, it is only the mind itself existing in a certain state.'

The third lecture, entitled Influence of the Philosophy of Mind on the Understanding, points out, as is done in Locke's Essay, the im- portance of

knowing the limits of our faculties, that we may attempt only possible knowledge and profitable enquiries ; and the tendency of intellectual science to render us candid, tolerant, and liberal, towards those who differ from us in opinion, with its advantages to education, criti- cism, &c.

The fourth lecture, entitled Relation of the Philosophy of Mind to Morality, contains many good remarks, but nothing very new or remark- able.

The fifth and sixth lectrres, Of Physical En-

*quiry, seem foreign to metaphysical discussion. They contain, however, some important remarks, such as the following : — ‘ AH physical science, whatever may be the variety of objects, mental or material, to which it is directed, is nothing more than the comparison of phenomena, and the dis- covery of their agreement or disagreement, or order of succession. It is on observation, there- fore, or on consciousness, which is only another name for internal observation, that the whole of science is founded ; because there can be no comparison without observation of the pheno- mena compared, and no discovery of agreement or disagreement without comparison. * * * What is it that we truly mean, when we say that we are about to enquire into the nature and properties of any substance? From the mere misunderstanding of this question, the brightest talents of a long succession of ages were wasted in enquiries as barren as the frivolous glory which attended them ; that produced indeed much contention and more pride, but nothing more; and, without giving any additional know- ledge, took away from ignorance only its humi- lity, and its power of being instructed.’*

The intention of these two lectures was to cor- rect the scholastic notions, or rather to cancel the scholastic jargon about substance or matter ; and though not very definite, lucid, or available for any important purpose, they are more successful than Locke’s attempts of the same kind. ‘ When- ever the question is put as to any object, What is it ? there are two and only two answers, that can be given with meaning. We may regard it as it exists in space, and state the elements that co- exist in it, or rather that constitute it ; or we may regard it as it exists in time, and state, in all the series of changes of which it forms an invariable part, the objects to which it is related as antece- dent.’ This is the text which the whole discus- sion labors to explain, illustrate, and establish.

The seventh lecture is on Power, Cause, and Effect, concerning which there has been so much said and written by men who frequently knew not what they said, or whereof they either af- firmed, or denied, or disputed. Dr. Brown adopts, with a slight and unimportant difference, the statement of Hume, the latter resolving our belief as to the relation between cause and

effect, or antecedent and consequent, into custom ; the former into an original principle or tendency of our intellectual constitution. The doctrine of Hume was long regarded with horror by most theists as essentially atheistical ; but it begins to be regarded as not only correct, but as having nothing necessarily atheistical about it ; nay, it is now found or fancied by some of them to be one of the most powerful of all antidotes to atheism. 'If,' says Mr. Stewart, ' it be true, as Mr. Hume contends, and as most philosophers now admit, that physical causes and effects are known to us merely as antecedents and consequents, the whole system of Spinoza is nothing better than a rope of sand, and the very proposition which it professes to demonstrate is incomprehensible by our faculties. Mr. Hume's doctrine, in the un- qualified form in which he states it, may lead to other consequences notless dangerous ; but, if he had not tlxe good fortune to lead metaphysicians

to the truth, he may at least be allowed the merit of having shut up for ever one of the most fre- quented and fatal paths which led them astray. It was, so far as I know, first shown in a satisfac- tory manner by Mr. Hume, that every demonstra- tion which has been produced for the necessity of a cause to every new existence, is fallacious and sophistical. In illustration of this assertion, he examines three different arguments which have been alleged as proofs of the proposition in question ; the first by Mr. Hobbes, the second by Dr. Clarke, and the third by Mr. Locke. And I think it will now be readily acknowledged, by every competent judge, that his objections to all these pretended demonstrations are conclusive and unanswerable.'

' To know the powers of nature," says Dr. Brown, ' is nothing more than to know what an- tecedents are, and will be followed by what consequents ; for this invariableness and not any distinct existence is all which the shorter term power, in any case expresses. By an ori- ginal law or principle of our constitution, we are led from the mere observation of change to be- lieve, that, when similar circumstances occur, the changes which we observe will also recur in the same order ; there is hence conceived by us to be a permanent relation of one event, as inva- riably antecedent to another event, as invariably consequent ; and that this permanent relation is all which constitutes power. It is a word, in- deed, of much seeming mystery ; but all which is supposed to be mysterious and perplexing in it vanishes, when it is regarded in its true light as only a short general term expressive of inva- riable antecedence ; or, in other words, of that which cannot exist in certain circumstances, without being immediately followed by a certain definite effect, which we denominate an effect in reference to the

antecedent, which we denominate a cause. To express, shortly, what appears to me to be the only intelligible meaning of the three most important words in physics, immediate, invaria- ble, antecedent, is power ; the immediate invaria- ble antecedent, in any sequence, is a cause ; the immediate invariable consequent is the correla- tive effect.'

We know not what other intelligible account can be given of the matter ; nor do we perceive how it is possible for any thing necessarily atheis- tical to lurk in the statement ; though we know that there are many good men of very respecta- ble intellect, whom it would be difficult, if at all practicable, to convince that it is perfectly safe and sound. It would have been well if Dr. Brown had relied less on abstract and elaborate argumentation, and if he had proceeded more on the principle of confuting error, or of dispel- ling mental confusion by tracing it to its source in words ; for such words as power, cause, effect, are mere relics of expressions or sentences, which were sufficiently explicit ; but when reduced, abridged, or contracted, into what are called nouns, these relics of former expressions become the occasion of much error and metaphysical mystery and prejudice. Thus by substituting antecedent for cause, and consequent for effect, the work is in effect done on which so much elaborate argument has been expended, to prove,

that is to bring men to admit, that there is no- thing else and can be nothing else meant by them in using the word cause, but what is meant by antecedent. The word power is more diffi- cult, because we happen to«have no word that seems eligible or admissible as a substitute. In such a case it would be wise to throw away the apple of discord at once rather than eternally dispute about it. Dr. Brown virtually adopts what we consider the best method of ridding the world of metaphysical confusion and unpro- fitable controversy. ' That power,' he says, ' is nothing more than the relation of an object or eventas antecedent to another object or event, its immediate and invariable consequent, may per- haps, from the influence of former habits of thought, or rather, of former abuse of language (or using it without any distinct meaning), at first appear to you an unwarrantable simplification. But the longer you attend to the notion, the more clearly will you perceive that all which you have ever understood in it, is the immediate se- quence of some change with the certainty of the future recurrence of this effect as often as the antecedent itself may recur in similar circum- stances. When a spark falls upon gunpowder, every one ascribes to the spark the power of kindling the inflammable mass. But let anyone ask himself what he means by the term, and he will find nothing more than this, that in all si- milar circumstances the explosion of gunpowder will be the immediate and uniform consequence of the application of a spark.' ,

After the elaborate lecture on power, cause, and effect, there is nothing

very worthy of notice till we come to the sixteenth lecture on the Classification of the Phenomena of Mind. In the intermediate ones there is abundance of things, or more properly, perhaps, nothings, treated of; but little that is said concerning them is very tangible, or very available. He tells us that 'analysis in the science of mind is founded wholly on the feeling of relation which one state of mind seems to us to bear to other states of mind as comprehensive of them ; ' that ' it has been strangely affirmed of the science of mind, that it is by its very nature insuscepti- ble of improvement by discovery ; ' that ' there is indeed a chaos in the mind of man, but there is a spirit of enquiry for ever moving- over it, slowly separating all its mingled ele- ments ; and it is only when these are separated that the philosophy of mind can be complete, and incapable of further discovery ; ' that ' mind is capable of existing in various states, an enu- meration of the leading classes of which is all that constitutes our definition of it;' that ' the consideration of the mind, as one substance, ca- pable of existing in a variety of states necessarily involves the consideration of consciousness and of personal identity ; ' that ' consciousness (which has a large tribute of lecture), is not, as Dr. Reid and his disciples maintain, a distinct power of the mind (and truly for the same rea- son that they make the obscure word conscious ness into a power, they might create with the breath of their mouth a thousand powers or po- tentates in the mind, or rather in the nomencla- ture of their infallible, experimental, inductive

science), but only a general term for all our feelings of whatever species these may be — sensations, thoughts, desires; in short all those states or affections of mind in which its pheno- mena consist;' that ' conscience, which is not to be confounded with consciousness is moral memory, or the memory of the heart ; ' that • the enquiry into the identity of the mind (he gives up personal identity in despair) as truly one and permanent amid all the variety of its fugitive affections, is a most important enquiry; ' that ' the manner in which the mind is united to a system of particles, which are in a perpe- tual state of flux, is indeed more than we can ever hope to explain ;' that ' our identity is the unity and sameness of that which thinks and feels; and the 'belief of our identity is intuitive and irresistible' (this, after a long, laboring, •winding, slow process of reasoning, that would try the patience of Locke himself, is the result or sum total of discovery from the most impor- tant enquiry) ; that ' it is beyond our power to solve the question, how much the mere mate- rialism of our language has operated in darken- ing our conceptions of the nature of the mind and of its various phenomena ; ' that ' it is a very egregious paradox of Locke in making per- sonal identity consist in consciousness ; ' that ' it is a very shrewd remark of a

French writer : if truth were fairly to show herself as she is, all would be ruined ; but it is plain that she knows very well of how great importance it is that she should keep herself out of sight.' This is surely humbling enough to metaphysics- — only to resign ' personal identity,' and to confess truth ' out of sight.'

The following are the most noticeable items of lectures sixteenth, seventeenth, and eighteenth, on the Classification of the Phenomena of Mind.

'The great leading division of the mental phe- nomena which has met with most general adop- tion by philosophers (and who besides ever troubled their heads about such outlandish enti- ties as phenomena?), is into those which belong to the understanding, and those which belong to the will ; a division which is very ancient, but though sanctioned by the approbation of many ages very illogical; since the will, which, in the division is nominally opposed to the intellect, is so far from being opposed to it in reality, that, even by the assertors of its diversity, it is con- sidered as exercising in the intellectual depart- ment, an empire almost as wide as in the depart- ment allotted to itself. We reason, and plan, and invent, at least as voluntarily, as we esteem, or hate, or hope, or fear. How many emotions are there too which cannot, without absolute torture, be forced into either division. To take only a lew instances out of many, to what class are we to reduce grief, joy, admiration, astonishment, which certainly are not phenomena of the mere understanding, and which, though they may lead indirectly to desires or volitions, have nothing HI themselves that is voluntary, or that can be considered as in any peculiar degree connected with the will ? The division of the mental phe- nomena into those which belong to the under- standing, and those which belong to the will, srem = , therpforp, to be as faulty as" would be the

division of animals into those which have legs and those which have wings, since the same animals might have both legs and wings, and since all tribes of animals have neither one nor the other.'

That strain was of a higher mood ! The lec- turer is himself again ! When he does not trifle among nullities and unideal abstractions, or at- tempt to go beyond the leng'h of his line (as Mr. Stewart not very • seemly or graciously remarks) he acquits himself nobly. Though he often fails in attempting to build up any thing new, as posi- tive knowledge in the science of mind, he is always skilful, and dexterous, and mighty, in pulling down philosophic nonsense and absur- dity. But let him proceed.

- *Another division of the phenomena of mind, similar to the former, and of equal antiquity, since it corresponds with the very ancient*

*divi- sion of philosophy into the contemplative and the active, is into those which belong to the intellec- tual powers, and those which belong to the active powers. This division of the mental phenomena as referrible to the intellectual and the active •powers of the mind, though it has the sanction of very eminent names (as Dr. Reid and his dis- ciples) is faulty exactly in the same manner as the former, which, indeed, it may be considered almost as representing under a change of name. Its parts are not opposed to each other, and it does not include all the phenomena which it should include. Is mere grief, for example, or mere astonishment, to be referred to our intellectual or to our active powers ? I do not speak of the facul- ties which they may or may not call into action; but of the feelings themselves, as present pheno- mena or states of the mind. And, in whatever manner we may define the term active, is the mind more active when it merely desires good, and fears evil ? when it looks with esteem on virtue, and with indignation or disgust and con- tempt on vice, than when it pursues a continued train of reasoning or fancy, or historical investi- gation ? * * * So little, indeed, are the intel- lectual powers opposed to the active, that it is only when some intellectual energy co-exists with desire that the mind is said to be active, even by those who are unaccustomed to analy- tical enquiries, or to refinements of metaphysical nomenclature. The love of power, or the love 'of glory, where there is no opportunity of intel- lectual exertion, may, in the common accepta- tion of the word, be as passive as tranquillity itself. The passion is active only when, with in- tellectual action, it compares means with ends, and different means with each other, and delibe- rates, and resolves, and executes.' * * **

' If, then, as I cannot but think, the arrange- ment of the mental phenomena, as belonging to two classes of powers, the intellectual and the active, be at once incomplete and not accurate even to the extent to which it reaches, it may be worth while to try, at least, soms other division, even though there should not be any very great hope of success. Though we should fail in our endeavour to obtain some more precise and com- prehensive principle of arrangement, there is always some advantage gained by viewing ob- jects according to new circumstances of agree- ment or analogy. We see, in this case, what

had long passed before us unobserved, while we were accustomed only to

*the order and nomen- clature of a former method ; for, when the mind has been habituated to certain classifications, it is apt in considering objects to give its attention only to those properties which are essential to the classification, and to overlook, or at least compa- ratively to neglect, other properties equally im- portant and essential to the very nature of the separate substances that are classed, but not in- cluded in the system as characters of generic resemblance. * * * A new classification, there- fore, which includes in its generic character those neglected qualities, will, of course, draw *o them attention which they could not otherwise have obtained ; and, the more various the views are which we take of the objects of any science, the juster consequently, because the more equal, will be the estimate which we form of them.'*

We wish our space would permit us to extract more ; the whole context is excellent. We must give one other quotation :—

' It may, perhaps, seem absurd, even to sup- pose, that we should think ourselves able to change, by a few generic words, the properties of the substances which we have classed ; and if the question were put to us, as to this effect of our language in any particular case, there can be no doubt that we should answer in the negative, and express astonishment that such a question should have been put. But the illusion is not the less certain because we are not aware of its influence ; and, indeed, it could no longer be an illusion, if we were completely aware of it. It requires, however, only a very little reflection on what has passed in our own 'minds, to discover that when we have given a name to any quality, that quality acquires immediately, in our imagi- nation, a comparative importance, very different from what it had before ; and, though nature in itself be truly unchanged, it is ever after, relative to our conception, different; a difference of words is, in this case, more than a verbal difference. Though it be not the expression of a difference of doctrine, it very speedily becomes so. Hence it is, that the same warfare which the rivalries of individual ambition, or the opposite interests, or supposed opposite interests of nations have pro- duced in the great theatre of civil history, have been produced, in the small but tumultuous field of •science by the supposed incompatibility of a few abstract terms; and, indeed, as has been truly said, the sects of philosophers have combated with more persevering violence to settle what they mean by the constitution of the world, than all the conquerors of the world have done to render themselves its masters. Let us now en- deavour to form some better classification of the mental phenomena than has hitherto existed.

' Our states of mind, or our affections of mind, Are the simplest terms which I can use to ex- press the whole series of mental phenomena in all their diversity, without any mixture of hypo- thesis as to the particular

mode in which the suc- cessive changes may be supposed to arise. When we consider these various states or affections of mind which form the series, one obvious circum- stance of difference is, that some of them arise immediately, in consequence of the presence of

external objects; and some as immediately n consequence of certain preceding states or affections (for the latter term is here used as exactly synonymous with the former) of the mind itself.

‘ There is then one obvious distinction of the mental phenomena in relation to their causes as external and internaf. We shall therefore call the one class external states or affections of the mind, and we shall call the other internal states or affections, merely in reference to their imme- diate causes or antecedents. The former class (our external affections) is so simple as to require but little subdivision : the latter class (our inter- nal affections or states of mind) comprehends so large a proportion of the mental phenomena, and these so various, that it requires subdivisions to enable us to derive any benefit from arrangement or classification.

« The first great subdivision of our internal affections which I would make is into our intel- lectual states and our emotions. The latter of these classes (our emotions) comprehends all or nearly all the mental states by others classed under the head of active powers, and commonly called affections and passions.

‘ We have sensations or perceptions of the ob- jects around us that affect our bodily organs; these I term the sensitive or external affections of the mind: we remember objects — imagine them in new situations — we compare their relations ; these mere conceptions or notions of objects, and their qualities as elements of our general know- ledge, are what I term the intellectual states of the mind : we are moved with certain feelings on the consideration of what we thus perceive or remember, or imagine, or compare, with feelings for example to which we apply the terms beauty, sublimity, astonishment, love, hate, hope, fear &c. ; these are what I mean by our emotions.

‘ There is no portion of our consciousness which does not appear to be included in one or other of these three divisions. To know all ou sensitive states or affections, all our intellectual states, and all our emotions, is to know all ‘that we call the mental phenomena.

‘ It must not be supposed, however, that these different mental states, though as we conceive distinguishable, may not be combined or may not coexist at the same moment. They frequently concur, but in all cases in which they do concur or co-exist it is easy to distinguish them by re-

flective analysis.'

We have made some slight change of Brown's phraseology and verbal arrangement with the de- sire rather than the hope of simplifying, concen- trating, and lucidising his statement ; but perhaps we have rather marred than mended the matter. It would have been better probably either to have done more or nothing. And we think it possible to render the expression of even such abstract meaning more simple, clear, and definite, than has been accomplished by our author. Perhaps his general threefold classification maybe all ex- pressed by the three words sensation, intellection, and emotion ; or in the plural, sensations, intel- lections, and emotions ; which is after all very much the same as has been long in existence, answering to the senses, the intellects, and the

passions We think Dr. Brown's attempt is so far successful as to have some negative utility; it is at least calculated to rid the world of some absurd forms of speech and not a little foolish theory, and pretension, and parade, or, to use an ugly but forcible expression, philosophic humbug about the intellectual powers and faculties, which as arrayed by Reid, Stewart, and Kant, may be called legion, for they are many.

Whether Dr. Brown's statements have real worth, or he, after all their analytical acuteness, ingenuity, and dexterity, only like, — The rhetorician's rules Which serve him but to name his tools, they are at least simplicity, and beauty, and rea- sonableness in perfection, when compared with the cumbrous, complex doctrines of Reid and Stewart. And notwithstanding all the sage coun- sels, and tart sarcasms, and indefatigable remon- strances on the subject, simplicity, all other things being equal (and it would be prudent perhaps for some of the lovers of complication to say less about depth and comprehension), is an eternal and immutable excellence.

0 ! how unlike the complex ways of man Heaven's artless, easy, unincumbered plan ! — Like the cerulean arch you see Majestic in its own simplicity. He his fabric of the heavens Hath left to their disputes, perhaps to move His laughter at their quaint opinions wide, Hereafter, when they come to model heaven And calculate the stais, how they will wield The mighty frame ; how build, unbuild, contrive To save appearances, — how gird the sphere, With centric and eccentric scribbled o'er Cycle and epicycle, orb in orb. ' As far as we have advanced,' says Dr. Brown, ' our division seems sufficiently distinct and comprehensive. The mind is

susceptible of certain external affections, of certain intellectual modifications which arise from these, and of cer- tain emotions which arise from both ; that is to say it is capable of existing in certain states, the varieties of which correspond with these particular designations. We see, we remember, or compare what we have seen : we regard what we see, or remember, or compare, with desire or aversion ; and of these, or of states analagous to these, the whole of life, sensitive, intellectual, or moral, is composed. Every minute, therefore, of every hour, in all its variety of occupation, is but a portion of this complicated tissue.'

This may be general, but it is extremely intel- ligible : it may be a theory, but it possesses a sort of internal evidence of genuineness, or that it is the true theory which almost irresistibly produces intuitive belief; for it is a perfect con- trast to the old systems of the mind full of quaint device, and manifestly contrived to save appear- ances, and ' scribbled o'er,' with names and de- finitions as unintelligible as Egyptian hierogly- phics.

'You will remember,' repeats our author, ' that the various affections of which the mind is suscep- tible are either external, as they arise from causes without the mind, or internal, as they arise from previous states of the mind itself; that of these internal affections, some are mere conceptions or

notions of former feelings, or of objects and of the qualities or relations of objects, as remem- bered or variously combined or compared, — – results of different susceptibilities of our intel- lectual constitution, to which different names have been given, conception, memory, imagina- tion, abstraction, reason, and other synonymous terms ; that these internal affections or states of mind which I have denominated its intellectual states, are distinctly separable in our reflective analysis, from certain vivid feelings, that may arise instantly in the mind on the consideration of these mere intellectual results, or on the per- ception of objects without feelings of admiration, love, desire, and various other analogous or oppo- site states of the mind ; but that there is such an order of vivid feelings, which arise, in many cases, on the mere consideration of what we per- ceive, or remember, or imagine, or compare : and that this order is what I wish to be distinguished by the name of emotion.

- *According to this division of the mental phe- nomena, into those which are of external and those which are of internal origin, and the sub- division which we have made of this latter class, I shall proceed to consider, 1. The external powers or susceptibilities of the mind ; 2. The intellectual powers or susceptibilities of the mind ; and, 3. Its susceptibilities of emotion, — beginning with that class which we have every reason to suppose to be first, in the actual order of*

development, the powers or susceptibilities of the mind, in its immediate relation to its own bodily organs.'

Our limits will not permit us to attempt to follow Dr. Brown through his long, laboring, winding, and we think irksome discussion, concerning what he terms the external affections of the mind. It partakes too much of almost every kind of excellence, save simplicity, .clear- ness, conclusiveness, and availableness. He is in short too acute, and subtile, and dexterously analytic in such matters to be always convincing or generally plausible. The mind is haunted with suspicions of the soundness of his statements at every step of his progress; and yet we think most of them possess more of probability than our understanding is disposed to allow fiom the over refined and untangible manner in which they are presented. Dr. Brown, however, in th.s part of his lectures is like Hartley, Locke, and almost all his metaphysical predecessors, too much infected with the old scholastic complaint of attempting impossible demonstration, and of adventuring with daring perversity on the forlorn hope of unprofitable speculation. He strives most mightily to go beyond the length of hi$ tetherˆ to adopt an allusion of his Herculean an- cestor, which is certainly more remarkable for vernacular significance than for classical elegance. We think it almost more than probable that we learn or did learn the use of our senses in much the same manner as we learned the use of our hands and feet, and tongue, pronounced by the highest authority our glory ; that it was by a. gradual (though not so slow a) process that we became capable of seeing, and hearing, and feel- ieg, and even tasting, and smelling, as well as of handling, and walkingˆ'and speaking. Butwhˆi

then, how are we to arrive at demonstrative, in- ductive, experience, or intuitive certainty ? And "fwe could arrive at infallible knowledge after .nuch laborious toil and search after it, what the wiser, or better, or happier, should we be for the acquisition ? It comes too late to be of any use, were it as sure and satisfactory, philosophically considered, as the Newtonian system of the uni- verse. If we can find out by metaphysical re- search or analysis that our mental identity is to have the benefit of a second edition of this life, by being transmigrated into the body of an em- bryo or new-born infant, the lengthy and inge- nious discussion of Dr. Brown may be of great practical utility as well as high speculative im- portance. In every other view we know not what benefit is to be derived from nearly the whole of Dr. Brown's seventeenth, eighteenth, nineteenth, twentieth, twenty-first, twenty-second twenty-third, and twenty-fourth lectures. They may indeed amuse some sorts of leisure minds, or fill up

some empty space in college studies. However we shall endeayour to glean a few of the most noticeable or seemingly available re- marks as specimens.

‘ In what circumstances the intuitive belief of an external world (if it be intuitive) arises, or ra- ther in how large a proportion of cases, in which the reference seems primary and immediate, it is more probably the effect of secondary associations transferred from sense to sense, will appear bet- ter, on minute analysis of the different tribes of sensations.’ ‘ The great essential organ of all sensations is the brain, with its appendages, par- ticularly the nerves that issue from it to certain organs, which are more strictly termed the organs of sense ; as it is there the immediate objects, or external causes of sensation, the particles of light, for example, in vision, or of odor in smell arrive, and come, as it were, into contact with the sen- sorial substance. The nervous matter has for its chief seat the great cavity of the head, but ex- tends by innumerable ramifications over the whole surface, and through the internal parts of the body. Of the nature of the connexion of this great sensorial organ with the sentient mind we shall never be able to understand more tban is involved in the simple fact, that a certain affec- tion of the nervous system precedes immediately a certain affection of the mind.’

The conclusion intuitively arising from a thousand such remarks is that nothing can be concluded : Dr. Brown, with all his physiologi- cal and metaphysical ability, has left our senses and sensation just about where he found them ; and he would have acted more judiciously per- haps if he had let them alone altogether. The twenty-fifth, twenty-sixth, twenty-seventh, and twenty-eighth lectures, are devoted to the confu- tation of Dr. Reid’s supposed confutation of idealism ; and, though Mr. Stewart had been inde- fatigably employed for almost half a century in building up the metaphysical claims of his mas- ter, Dr. Brown demolishes them in toto most triumphantly, convicting the Socrates of the Scot- tish metaphysic, or true philosophy of the hu- man mind, of much ‘zealous blundering;’ which having been put confidently forth by himself, and clamorously applauded by his disciplfs, almost

passed even beyond the borders for profound wisdom.

The twenty-ninth lecture is devoted to vision, which ought to have been disposed of among the other senses ; but which, on account of its pre- eminent importance, was probably deemed wor- thy of standing alone and far apart, at least in discussion, from the less noble senses of hearing, tasting, smelling, and feeling. All Dr. Brown’s remarks upon it are ingenious, and many carry in them much that is probable if not convincing.

‘ Vision,’ says the lecturer, ‘ simple, and im- mediate, as it now seems to us,

even in its most magnificent results, is truly the application of an art, of long and tedious acquirement, of that art with which we learn to measure forms and dis- tances, with a single glance, by availing ourselves of the information previously received from other sources ; the mixed product of innumerable ob- servations, and calculations, and detections of former mistakes, which were the philosophy of our infancy, and each of which, separately, has been long forgotten, recurring to the mind, in after life, with the rapidity of an instinct.'

The thirtieth lecture is devoted to the history of opinions regarding perception, including those of the peripatetics, ot Descartes, of Malebranche, of St. Austin, of Leibnitz. The discussion is chiefly interesting as exhibiting the error, prejudice, and folly, from which we have at last escaped. ' From all this variety of conjectural speculations (says the lecturer) the conclusion is, that which is too often the result of our researches in the history of science, that there may be, as D'Alembert truly says, a great deal of philosophising in which there is very little of philosophy.'

The external affections, as combined with de- sire and with attention, are considered in the thirty-first lecture ; which however contains no- thing very worthy of remark.

The thirty-second lecture treats of the classifi- cation of the internal affections; but contributes hardly any thing that can be regarded as infor- mation or instruction. The following remark is worth quoting : — ' The philosophy of Dr. Reid and of the metaphysicians of this part of the island has enlarged far beyond what was neces- sary the number of classes of the mental pheno- mena, which they considered as too limited before. There can be no doubt that we are now accustomed to speak of more powers or opera- tions of the mind, than even the schoolmen themselves, fond as they were of all the nicest subtilties of infinitesimal subdivisions.' Accord- ing to Dr. Brown's statement, Condillac, the head of the French school of metaphysics, and Dr. Reid, the head of the Scottish school, may be regarded as metaphysical antipodes or oppo- site points, each in the extreme from the centre ; Condillac erring by undue simplicity in repre- senting all the mental states or operations as merely transformed sensation, as he terms them; and Dr. Reid erring on the opposite extreme of complexity, by multiplying unnecessarily intel- lectual powers and faculties. Condillac and Hartley may be regarded as homogeneous ;' aod Reid and Kant, so far at least as multiplication of powers, faculties, and innate or instinctive prin- ciples are concerned.

In the thirty-third and subsequent lectures Dr. Brown proceeds with the internal states or affections ; and we only regret the narrowness of our limits in reference to them ; for they are ex- ceedingly interesting. We shall try to accom- plish multum in parvo.

‘ Our various states or affections of the mind I have already divided into two classes, accord- ing to the nature of the circumstances which pre- cede them, — the external and the internal ; and this latter class into two orders, — our intellectual states of mind, and our emotions. It is with the intellectual states or phenomena that we are at present concerned ; and this order I would ar- range under the generic capacities, that appear to comprehend in them all the phenomena of the order. The whole order, as composed of feelings, which arise immediately, in consequence of cer- tain former feelings of the mind, may be techni- cally termed, in reference to these feelings which have induced them, suggestions, but in the sug- gested feelings themselves there is one striking difference. If we analyse our trains of thought, exclusively of the emotions which may coexist or mingle with them, and of sensations that may be accidentally excited by external objects, we shall find them to be composed of two very distinct sets of feelings, one set of which art mere con- ceptions or images of the past, that rise, image after image in regular sequence, but simply in succession, without any feeling of relation neces- sarily involved, while the perception of relation, in the various objects of our thoughts, form ano- ther set of feelings, of course as various as the relations perceived, — perceptions and relations ; it is with these, and with these alone, that we are intellectually conversant. There is thus an evi- dent ground for the arrangement of the internal suggestions, that form our trains of thought, un- der two heads, according as the feeling excited directly by some former feeling may be either a simple conception, in its turn, perhaps, giving place to some other conception as transient ; or may be the feeling of a relation which two or more objects of our thoughts are considered by us as bearing to each other. There is in short, in the mind, a capacity of association ; or as, for reasons afterwards to be stated, I would rather term it, — the capacity of simple suggestion, by which feelings, formerly existing, are revived in consequence of the mere existence of other feel- ings, as there is also a capacity of feeling, resem- blance, difference, proportion, or relation in general, when two or more external objects, or two or more feelings of the mind itself, are con- sidered by us; which mental capacity, in distinc- tion from the former, I would term the capacity of relative suggestion ; and of these simple and relative suggestions, our whole intellectual trains of thought are composed.

‘ The intellectual states of the mind, then, to give a brief illustration of my division, I consider as all referrible to two generic susceptibilities, those of

simple suggestion and relative sug- gestion. Our perception or conception of one object excites of itself, and without any known cause external to the mind, the conception of some other object ; as when the mere sound of our friend's name suggests to us the conception

of our friend himself, in which Case the concep- tion of our friend, which follows the perception of the sound, involves no feeling of any common property with the sound which excites it, but is precisely the same state of mind which might have been induced by various other previous circumstances ; by the sight of the chair on which he sat, of the book which he read to us, of the landscape which he painted. This is sim- ple suggestion.

' But, together with this capacity of simple suggestion, by which conception after conception arises precisely in the same manner, and in the same state, as each might have formed a part of other trains, and in which the particular state of mind that arises by suggestion does not neces- sarily involve any consideration of the state of mind which preceded it ; there is a suggestion of a very different sort, which in every case in- volves the consideration not of one phenomenon of mind, but of two or more phenomena, and which constitutes the feeling of agreement, disa- greement, or relation of some sort. I perceive, for example, a horse and a sheep at the same moment. The perception of the two is followed by that different state of mind which constitutes the feeling of their agreement in certain respects, or of their disagreement in certain other respects. I think of the square of the hypothenuse of a right-angled triangle, and the squares of the two other sides ; — I feel the relation of equality ; I see a dramatic representation ; I listen to the cold conceits which the author of the tragedy, in his omnipotent command over warriors and lovers of his own creation, gives to his hero, in his most impassioned situations ; I am instantly struck with their unsuitableness to the character and the circumstances. All the intellectual suc- cessions of feelings in these cases, which consti- tute the perception of relation, differ from the result of simple suggestion in necessarily involv- ing the consideration of two or more objects, 01 affections of mind, that immediately preceded them. I may think of my friend in the case of simple suggestions ; that is to say, my mind may exist in the state which constitutes the conception of my friend without that previous state which constitutes the perception of the sound of his name; for the conception of him may be sug- gested by various objects and remembrances. But I cannot, in the cases of relative suggestion, think of the resemblance of a horse and a sheep; of the proportion of the squares of the sides of a right-angled triangle; or of the want of the truth of nature in the expressions of a dramatic hero, without thoSe previous states of mind which con- stitute the conceptions of a horse and a sheep, of the sides of the triangle, or the language of the warrior or lover, and the circumstances

of triumph, or hope, or despair, in which he is ex- hibited to us by the creative artist.

‘ With these two capacities of suggested feelings simple and relative, which are all that truly be- long to the class of intellectual states of the mind, various emotions may concur, particularly that most general of all emotions, the emotion of de- sire in some one or other of its various forms. According as this desire does or does not concur with them, the intellectual states themselves ap –

pear to be different ; and, by those who do not make the necessary analysis, are supposed there- fore to be indicative of different powers. By simple suggestion, the images of things, persons, events, pass in strange and rapid succession ; and a variety of names, expressive of different powers, conception, association, memory, have been given to this one simple law of our intellectual nature. But when we wish to remember some object ; that is to say, when we wish our mind to be affected in that particular manner which constitutes the conception of a particular thing, or person, or event, or when we wish to combine new images, in some picture of fancy, this coex- istence of desire with the simple course of sug- gestion, which continues s’till to follow its own laws, as much as when no desire existed with it, seems to us to render the suggestion itself different ; and recollection, and imagination, or fancy, which are truly, as we shall afterwards find, nothing more than the union of the suggest- ed conceptions, with certain specific permanent desires, are to us, as it were, distinct additional powers of our mind, and are so arranged in the systems of philosophers, who have not made the very simple analyses, which alone seem to me to be necessary for a more precise arrange- ment.

‘ In like manner those suggestions of another class, which constitute our notions of proportion, resemblance, difference, and all the variety of re- lations, may, as already remarked, arise, when we have had no previous desire of tracing the relations, or may arise after that previous desire. But, when the feelings of relation seem to us to arise spontaneously, they are not in themselves different from the feelings of relation that arise, in our intentional comparisons or judgments, in the longest series of ratiocination. Of ratiocina- tion they are truly the most important elements. The permanent desire of discovering some- thing unknown, or of establishing or confuting or illustrating some point of belief or conjecture, may coexist, indeed, with the continued series of relations that are felt, but does not alter the na- ture of that law by which these judgments or re- lative

suggestions succeed each other. There is no new power to be found, but only the union of certain intellectual states of the mind, with cer- tain desires, a species of combination not more wonderful in itself than any other complex men- tal state, as when we at the same moment see and smell a rose, or listen to the voice of a friend who has been long absent from us, and see at the same moment that face of affection which is again giving confidence to our heart and glad- ness to our very eyes.

'Our intellectual states of mind, then, are either those resemblances of past affections of the mind which arise by simple suggestion, or those feelings of relation which arise by what I have termed relative suggestions, — the one set result- ing, indeed, from some prior states of the mind, but not involving, necessarily, any consideration of these previous states of mind, which suggested them; the other set necessarily involving the consideration of two or more objects, or two or more affections of the mind, as subjects of the relation which is felt.

'How readily all the intellectual states of mind, which are commonly ascribed to a variety of powers, may be reduced to those two, will appear more clearly after we have considered and illustrated the phenomena of each set.'

Dr. Brown proceeds to treat, first, of simple, and, secondly, of relative suggestion ; and the discussion, which is one of the most important in the whole course, extends from the beginning of the thirty-fourth to the end of the forty-seventh lecture. We shall endeavour to shorten and simplify his statements, or rather to extract their essential excellence.

SIMPLE SUGGESTION. — The term suggestion, as substituted for Locke's unhappy expression, association of ideas, seems to have been adopted from Berkeley, who had used it in much the same sense, or for much the same purpose. The fol- lowing reasons are assigned for its preference and adoption. The limitation of the term as- sociation, to those states of mind exclusively de- nominated ideas, has tended greatly to obscure the subject, or at least to deprive us of the aid which might have been received from it in the analysis of the most complex phenomena. The influence of the associating principle extends not to ideas only, but to every species of affection of which the mind is susceptible. Joys, sorrows, and all the variety of emotions, are capable of being revived, in a certain degree, by the mere influence of this principle, and of blending with the ideas, or other feelings which awakened them, in the same manner as our conceptions of external things. These last, however, it must be admitted, present the most striking and obvious examples of the influence of the principle, and are therefore die fittest for illustrating it, as well as most calculated to arrest attention. The faint and shadowy elements of past emotions, as mingling in any

present feeling, it may not be easy to distinguish ; but our remembrances of things without are clear and definite, and are easily recognised as images of the past.

That, when two objects have been perceived in immediate succession or co-existence, the presence of the one will often suggest or call up the other (though that other, or a similar external cause, be not present), is that great fact of as- sociation or suggestion which we must admit, whatever opinion we may form with respect to its nature, or whatever name we may give to it. But is this fact to be resolved into a general tendency of the mind first operating at the mo- ment of the suggestion itself, or to an earlier tendency, or principle, or law? The latter sup- position would probably never have existed, but for the introduction of the ambiguous and inap- propriate term association. It is the use of this unfortunate phrase (when a term so much sim- pler as suggestion might have been employed) which appears to have filled our intellectual systems with the names of so many superfluovu powers. The supposed necessity, in our trains of thought, of some previous association, of course rendered it necessary that the conceptions ascribed to this cause should be such as be- fore existed in a similar form, since, without this previous existence, they could not be supposed to admit of previous connexion ; and, therefor?,

when the suggestions were so very different, as to have the semblance almost of a new creation, it became necessary to invent some new power, dis- tinct from that of association, to which they might be ascribed. What was in truth a mere simple suggestion, flowing from the same laws with other suggestions, became in this manner some- thing more, and was ranked as a product of fancy, or imagination ; nothing being so easy as the in- vention of a new name. A similar allusion gave rise to the supposition of various other intel- lectual powers, or at least favored greatly the admission of such powers, by the difficulty of ac- counting for suggestions, which could not have arisen from previous associations ; and one sim- ple power or susceptibility of the mind was thus metamorphosed into various powers, all distinct from each other, and distinct from that power of which they were only modifications.

That there is a tendency of ideas to suggest each other, without any renewed perception of the external objects which originally excited them, and that the suggestion is not altogether loose and indefinite, but that certain ideas have a peculiar tendency to suggest certain other rela- tive ideas, in associate trains or bands of thought, is too familiar, as a general

fact of our intel- lectual nature, to require to be illustrated by example. It is beautifully expressed by one of our most philosophic poets, Akenside : —

When the different images of things, By chance combined, have struck the attentive soul With deeper impulse, or, connected long, Have drawn her frequent eye ; howe'er distinct The external scenes, yet oft the ideas gain From that conjunction an eternal tie, And sympathy unbroken. Let the mind Recal one partner of the various league, Immediate, lo ! the firm confederate! rise, And each its former station straight resumes ; One movement governs the consenting throng, And all at once with rosy pleasure shine, Or all are saddened with the glooms of care.

Such is the secret union, when we feel

A song, a flower, a name, at once restore

Those long connected scenes when first they moved

The attention. Backward, through her mazy walks,

Guiding the wanton fancy to her scope,

To temples, courts, or fields — with all the band

Of living forms, of passions, and designs

Attendant ; whence, if pleasing in itself,

The prospect from that sweet accession gains

Redoubled influence o'er the listening mind ;

By these mysterious ties, the busy power

Of memory her ideal train preserves

Entire ; or, when they would elude her watch,

Reclaims their fleeting footsteps from the waste

Of dark oblivion.

What then are these mysterious ties ? — or, to state the question more philosophically, what are the general circumstances which regulate the successions of ideas ? That there is some regu- larity in these successions must have been felt by every one ; and there are many references to such regularity in the works of philosophers of every aˆe. The most striking

ancient reference, liowever, to any general circumstances, or, as usually called, laws of suggestion (though the enumeration is rather hinted than developed),

is that quoted by Dr. Beattie and Mr. Stewart from Aristotle. It is a passage explanatory of the process by which, in voluntary reminiscence, we endeavour to discover the idea of which we are in search. We are said to hunt for it (Qiˆ>tvo- fttv) among other ideas, either of objects existing at present, or at some former time ; and from their resemblance, contrariety, and contiguity, airo ri vvv, i) oXXa rivbg teal aip' oˆoin, f) ivavritt ff roS ffvviffvc- Aia raro yivtrai rj avaˆvijotc.

This brief enumeration ot' the general circum- stances which direct us in reminiscence merits attention on its own account, and also on account of the very close resemblance it bears to the statement of Hobbes, and to the arrangement afterwards made by Hume. As Dr. Brown has intentionally, or unintentionally, omitted all mention of Hobbes in this connexion, we shall quote his words at some length. ' By conse- quence, or train of thoughts (Leviathan, part I. chap, iii., Of the Consequence or Train of Imagi- nations), I understand the succession of one thought to another, which is called, to distinguish it from discourse in words, mental discourse. When a man thinks on any thing whatsoever, his next thought after it is not altogether so casual as it seems to be. Not every thought to every thought succeeds indifferently. But as we have no imagination whereof we have not formerly had sense, or sensation, in whole, or in part ; so we have no transition from one imagi- nation to another, whereof we have never had the like before in our senses. The reason of which is this : all fancies are motions within us, relics of those made in the sense : and those mo- tions that immediately succeed one another in the sense continue also together after sense : in- somuch as the former coming again to take place, and to be predominant, the latter follows, by coherence of the matter moved, in such man- ner as water upon a plane table is drawn which way any one part of it is guided by the finger. But because in sense sometimes one thing, some- times another, succeedeth, it comes to pass in time, that, in the imagination of any thing, there is no certainty what we shall imagine next : only this is certain, it shall be something that succeeded the same before, at one time or another.

This train of thoughts, or mental discourse, i of two sorts. The first is unguided, without de- sign, and inconstant; wherein there is no pas- sionate thought, to govern and direct those that follow, to itself, as the end and scope of some desire, or other passion : in which case the thoughts are said to wander, and seem imperti- nent one to another, as in a dream. Such are commonly the thoughts of men, that are not only without company, but also without care of any thing ; though even then their thoughts are as busy*

as at other times, but without harmony ; as the sound which a lute out of tune would yield to any man ; or, in tune, to one that could not play. And yet, in this wild ranging of the mind, a man may ofttimes perceive the way of it, and the dependence of one thought upon another. For, in a discourse of our present civil war, what could seem more impertinent than to ask, as one did, what was the value of a Roman penny ? Yet the coherence to me was manifest

enough. For the thought of the war introduced the thought of the delivering up the king to his enemies; the thought of that, brought in the thought of the delivering up of Christ ; and that again the thought of the thirty pence, which was the price of that treason ; and hence easily fol- lowed that malicious question ; and all this in a moment of time, for thought is quick.

‘ The second is more constant; as being regu- lated by some desire and design. For the im- pression made by such things as we desire or fear is strong and permanent, or, if it cease for a time, of quick return : so strong it is sometimes, as to hinder and break our sleep. From desire arises the thought of some means we have seen produce the like of that which we aim at ; and, from the thought of that, the thought of means to that mean ; and so continually, till we come to some beginning within our own power. And because the end, by the greatness of the impres- sion, comes often to mind, in case our thoughts begin to wander, they are quickly again reduced into the way ; whic + i, observed by one of the seven wise men, made him give men this pre- cept, which is now worn out, respice finem ; that is to say, in all your actions, look often upon what you would have, as the thing that di- rects all your thoughts in the way to attain it.

‘ The train of regulated thoughts is of two kinds ; one, when of an effect imagined we seek the causes, or means that produce it ; and this is common to man and beast. The other is, when, imagining any thing whatsoever, we seek all the possible effects that can by it be produced ; that is to say, we imagine what we can do with it when we have it. Of which I have not seen any sign but in man only ; for this is a curiosity hardly incident to the nature of any living crea- ture that has no other passion but sensual, such as hunger, thirst, lust, and anger. In sum, the discourse of the mind, when governed by de- sign, is nothing but seeking, or the faculty of in- vention, which the Latins call sagacitas and solertia ; a hunting out of the causes of some ef- fect, present or past ; or of the effects of some present or past cause. Sometimes a man seeks •what he has lost ; and, from that time and place wherein he misses it, his mind runs back from place to place, and

time to time, to find where and when he had it; that is to say, to find some certain and limited time and place in whir'i to begin a method of seeking. Again, from thence, his thoughts run over the same places and times, to find what action, or other occasion, might make him lose it. This we call remembrance, or calling to mind ; the Latins call it reminis- centia, as it were a re-conning of our former actions.

' Sometimes a man knows a place determinate, within the compass of which he is to seek ; and then his thoughts run over all the parts thereof, in the same manner as one would sweep a room to find a jewel ; or as a spaniel ranges the field till he find a scent; or as a man should run over the alphabet to start a rhyme [or find the name of a person, a place, a thing].

' Sometimes a man desires to know the event of an action; and then he thinketh of some like action past, and the events thereof, one after

*another; supposing like events will follow like actions. As he that foresees what will become of a criminal, re-cons what he has seen follow on the like crime before ; having this order of thought, the crime, the officer, the prison, the judge, and the gallows. Which kind of thought is called foresight, and prudence, or providence; and sometimes wisdom ; though such conjecture, through the difficulty of observing all circum- stances, is very fallacious. But this is certain, by how much one man has more experience of things past than another, by so much also he is more prudent, and his expectations the seldomer fail him. The present only has a being in na- ture ; things past have a being in the memory only; but things to come have no being at all; the future being but a fiction of the mind, apply- ing the sequels of actions past to the actions which are present ; which, with most certainty, is done by him that has most experience; but not with certainty enough. And though it l> *> called prudence, when the event answereth our expectation, yet, in its own nature, it is but pre- sumption. For the foresight of things to come, which is providence, belongs only to him by whose will they are to come. From him only, and supernaturally, proceeds prophecy. The best prophet, naturally, is the best guesser ; and the best guesser, he that is most versed and studied in the matters he guesses ; for he has most signs to guess by.'*

We have quoted more than was absolutely to our purpose, the better to enable the reader to compare the thoughts, and manner of thought and expression, in Hobbes, with those of Brown and Hume.

' Though it be too obvious, says Hume, ' to escape observation, that different ideas are con- nected together, I do not find that any philoso- pher has attempted to enumerate or class all the principles of association ; a subject however that seems worthy of curiosity. To me there appear to be*

only three principles of connexion among ideas, viz. resemblance, contiguity in time or place, and cause or effect.

‘ That these principles serve to connect ideas will not, I believe, be much doubted. A picture naturally leads our thoughts to the original. The mention of one apartment naturally intro- duces an enquiry concerning the others. And if we think of a wound we can scarcely forbear reflecting on the pain which follows it. But that the enumeration is complete, and that there are no other principles of association except these, may be difficult to prove to the satisfaction of the reader, or even to a man’s own satisfaction. All we can do, in such cases, is to run over several instances, and examine carefully the principle which bends the different thoughts to each other, never stopping till we render the principle as general as possible. The more instances we ex- amine, and the more care we employ, the more assurance shall we acquire that the enumeration which we form from the whole is complete and entire.’ — Enquiry concerning Human Under- standing, Sect. III.

On this enumeration of Mr. Hume Dr. Brown justly remarks : — ‘ Causation, so far from being opposed to contiguity, so as to form a separate

Class, is, in truth, the most exquisite species of proximity in time, and in most cases of conti- guity in place also, which could be adduced ; because it is not a proximity depending on casual circumstances, and consequently liable to be broken, but one which depends solely on the mere existence of the two objects that are related to each other as cause and effect, and therefore fixed and never-failing. On his own principles, therefore, the three connexions of our ideas should indisputably be reduced to two. To speak of resemblance, contiguity, and causation, as three distinct classes, is, with Mr. Hume’s view of causation, and indeed with every view of it, as if a mathematician should divide lines into straight, curved, and circular.

But are these truly distinct classes of sugges- tion that are not reducible to any more common principles? or are they not all reducible to a sin- gle influence ? All suggestions may, by minute analysis, he found to depend on prior co-existence.

For this reduction, however, we must take in the influence of emotions, and other feelings, very different from ideas ; as when an analogous object suggests an Analogous object by the in- fluence of an emotion or sentiment,

which each separately may have produced before, and which is therefore common to both. But, though a minute analysis may bring all our suggestions to one common influence of former proximity or co-existence of feelings, it is very convenient in illustration of the principle to avail ourselves of the most striking subdivisions, in which the par- ticular instances of that proximity may be ar- ranged ; and, by substituting contrast for the superfluous subdivision of causation, the enume- ration will stand thus: — 1. Resemblance, includ- ing every species of analogy. 2. Contrast. 3. Contiguity.

The obvious instances of the effect of strong similarity in recalling objects are innumerable. Those which produce impressions on the organs of sense, and through them directly on the mind, do not require any indication. There is another species of resemblance founded on more shadowy analogies which gives rise to an innumerable series of suggestions. To these we owe the si- mile, the metaphor, and figurative language in general. In poetry we perceive every where what Akenside calls

The charm

That seaichless nature o'er the sense of man Diffuses — to behold, in lifeless things. The inexpressive semblance of himself, Of thought and passion.

The zephyrs laugh — the sky smiles — the forest frowns — the storm and the surge contend to- gether— the solitary place not merely blossoms like the rose, but is glad : all nature becomes animated. It is the metaphor which forms the essence of the language of poetry ; and it is to a peculiar mode of the associating principle that the metaphor owes its birth, whether the analogy be derived from the moral to the physical, or from the physical to the moral world. The metaphor expresses with rapidity the analogy as it rises in immediate suggestion, and identifies it with the object of emotion which it describes; the simile

presents, not the analogy merely, but the two analogous objects, and traces their resemblance with the formality of regular comparison. The metaphor is the figure of passion ; the simile is the figure of calm description.

There is another set of resemblances, not in the objects themselves but in the mere verbal signs which indicate them, which have a power- ful though less obvious influence on suggestion, and, without appearing to have any agency, often guide the trains of our thought and emotion. Our thoughts, which usually govern our language, are themselves, in a great measure, governed by that very language over which they seem to exercise unlimited sway ; so true, in more respects than one, is the memorable and often

quoted obser- vation of Bacon, ‘ Credunt homines rationem suam verbis imperare, sed fit etiam ut verba vim suam super rationem retorqueant.’ We do not speak at present of the influence which was particularly contemplated by the remark of that great master of wisdom in detecting the sources of error and prejudice ; but of the influence which language indirectly acquires as a series of sounds, suggesting each other by their own simi- larity. Similar sounds suggest, by their mere si- milarity, similar sounds; and the words thus suggested awaken the conceptions which they are accustomed to express, and consequently the whole train of thoughts and images associated with these conceptions, which would not have arisen but for the accidental resemblance of one symbol to another.

Hence the influence of puns, rhymes, allitera- tion, &c. It is only where the direct verbal suggestion is rendered more apparent by the strange incongruity of the images, which the similar sounds chance to denote, as in the case of puns, that we usually ascribe the suggestion to the word and not to the thought itself. Even in the case of puns, it is only to the few in which the contrast of meaning is very striking that we pay any attention. How many words of similar sound arise in the mind, by this species of sug- gestion, which are never uttered as puns but pass silently away, because they are felt to be without that lucky ambiguity or opposition of meaning which alone could reconcile the hearers to this petty species of wit, or feed the vanity of the weakest mind so as to make it glory in so con- temptible a kind of success and triumph? Next to this petty species of wit, as a proof of the in- fluence of mere verbal similarities of sound in suggestion, the connecting influence of rhyme is obvious. That in rhyme sound suggests sound, and consequently operates indirectly on the train of thought by the mtre symbolic resemblance, there can be no question, since it is nothing but the re- currence of similar sounds at regular or irregular intervals; and to these recurring sounds the train of thought must ‘be, in a considerable degree, sub- servient,however great its independence mayseem. Butler wittily compares rhyme to the rudder, which, though in the rear of the vessel, and ap- parently following its direction, directs the track which the whole vessel itself is to pursue. An influence on the succession or direction of thought, similar to that of the concluding syl- lables of verse, is exercised by the initial sounds

of words in alliteration. How readily suggestions of this kind occur, so as to modify indirectly the train of images and feelings in the mind, and what pleasure they afford when they seem to have arisen without effort, is marked by the ten- dency to alliteration which is so prevalent, not in the

poetry merely, but still more in the tradi- tionary proyerbs of every country ; as also in the alliterative designation of the heroes of ro- mance. It is in verse, however, that the charm of alliteration is most powerfully felt. The fol- lowing are obvious examples.

Fill but his purse our poet's work is done, Alike to him by pathos or by pun.

Or her whose life the church and scandal share For ever in a passion or a prayer.

The alliteration of words that express opposite ideas is a species of wit, as far as the pleasure of wit consists in the sudden discovery of unex- pected resemblances, and approaches very nearly the nature of a pun, combined at the same time with the ludicrous antithesis which the objects themselves would bave produced even without alliteration. Whether the resemblance be in the whole word, as in the pun, or only in part of the word, as in alliteration, the suggestion may be considered a decisive proof of the influence which is exercised over our trains of thought by the mere accident of the agreement of arbitrary sou nds.

The force of contrast, as a suggesting prin- ciple, is next to be considered. Of this influence the instances are innumerable. The palace and the cottage — the cradle and the grave — the ex- tremes of indigence and of luxurious splendor are not connected in artificial antithesis only, but arise in ready succession to the observing or re- flecting mind without even the intervention of words, or any intention of producing effect upon any other mind. The mind of its own sponta- neous accord is often not only busy comparing, but contrasting the objects of its perception. It is this tendency of the mind to pass readily from opposites to opposites, which renders the antithesis natural. W hen skilfully and sparingly used, it is unquestionably a figure of great power, from the impression of astonishment which the rapid succession .of contrasted objects must al- ways produce. This very facility, however, of producing astonishment at little cost of real elo- quence, renders the antithesis the most dangerous and seductive of all the dangerous and seductive figures to a young orator.

We proceed to the consideration of nearness in time or place, the next general circumstance which has been specified as modifying sugges- tion. Of all the general principles of connexion in the mental trains, this is evidently the most frequent and extensive in its operation. Conti- guity, or obvious nearness, in time or place, forms the whole calendar of the great multitude of mankind, who pay little attention to the arbi- trary eras of chronology, but date events by each other, and speak of what happened in the time, or before, or after, some persecution, or rebel- lion, or great war, or frost, or famine. It is the same with nearness in place. To think of one

part of a familiar landscape is to recal thejyhole. The hill, the grove, the church, the river, the

bridge, and all the walks which lead to them, rise before the mind in immediate succession. From neighbouring place to place the thought! wander readily with a sort of untaught geogra- phy ; and but fo this connecting principle, not even the labor of the longest life could have fixed in our mind the simple knowledge of that intuitive science.*

It may be proper to enquire into the circum- stances which modify the suggesting principle, or what may be termed its primary laws (in conformity to custom, though the expression is some- what objectionable, being calculated rather to obscure and mislead than to enlighten and guide the understanding), resemblance, contrast, and contiguity. What are the modifying circum- stances which (though not very happily) may be termed secondary laws? They seem evidently the following : —

1. That which induces one associate concep- tion rather than another, is the length of time during which the original feelings (from which the associated conception arose) co-existed with, or succeeded each other. Objects slightly observed make no deep and lasting impres- sion or permanent associations in the mind. The longer we dwell on objects the more fully do we rely on our future remembrance, which is a particular determination or exercise of mental suggestion. This is so obvious, indeed, as to be in a manner truistical.

2. The parts of a train appear to be more closely and firmly associated as the original feelings have been more lively. We remember brilliant ob- jects more than those which are faint or obscure. Occasions of great joy or sorrow, pleasure or pain, rapture or perturbation, are seldom wholly forgotten ; slight pleasures and pains, &c., which occur every hour, pass away like time itself, never to return. That strong feeling of interest and curiosity which we call attention, not only fixes the mind in longer contemplation of cer- tain objects, but gives them more of vividness to our perception. Emotion then has powerful influence on the mental suggestion; and the more powerful the emotion, the more of a parti- cular determination is given to the suggesting principle.

3. The parts of any train are more readily suggested in proportion as they have been more frequently renewed. Thus we remember verses after three or four readings which we could not have remembered after one reading. This also is so obvious as to be almost truistical.

4. Feelings are connected more strongly in proportion as they are more or less recent. Im- mediately after reading any single line of poetry we are

able to repeat it, though we may have given it no particular attention ; in a few minutes or hours after, we are no longer able to repeat it accurately. There is a striking exception to this in the case of old age ; for events of youth are remembered when those of the year or perhaps week preceding aie forgotten. Yet even in the case of extreme old age the same holds when the time is not so far back ; and events which happened a few hours before are remembered, when those of as many days of priority are for- gotten.

5. Successive feelings are associated more closely and permanently in proportion as they have co-existed more exclusively, or in a state of greater separation from other feelings. The song which we have never heard but from one person, or in one place, or in a particular state of mind, can scarcely be heard again by us without re- calling that with which it was solely, so to speak, identified; but there is obviously much less chance of any such particular suggestion if we have heard the same air and words frequently sung by different persons, in different places, or in great variety of mental states as to cheerful- ness or sadness, joy or grief, pleasure or pain.

6. The influence of the suggesting principle or tendency iu consequence of (what may in compliance with custom be called the primary laws of suggestion) resemblance, contrast, and contiguity, is greatly modified by original con- stitutional differences, whether these are to be referred to the mind itself, or to varieties of bodily temperament. Such constitutional dif- ferences affect the suggesting tendencies in two ways; first by augmenting and extending the influence of all of them, as in the varieties of the general power of remembering so observable in different individuals ; secondly they modify that influence by giving greater proportional vigor to one set of tendencies than to another. It is in this modification of the suggesting principle, and the peculiar suggestions to which it gives rise, that the chief part or rather the whole of what is properly termed genius seems to consist. We have seen that the primary tendencies of suggestion are of various species, some for ex- ample arising from mere analogy, others from direct contiguity, or nearness in time or place of the very objects themselves : and it is this dif- ference of the prevailing tendency, as to these two species of suggestion, which appears to con- stitute all that is inventive in genius ; invention consisting in the suggestions of analogy, as opposed to the suggestions of grosser con- tiguity.

This is by far the most interesting statement of all in reference to suggestion ; but we have not been able to master and manage it to our satisfaction so

as to free it from all obscurity and embarrassment, or to render it concise, simple, clear, and definite. What Dr. Brown means by saying ‘ constitutional differences affect the pri- mary laws, first by augmenting and extending the influence of all of them, as in the varieties of the general power of remembering, so observable in different individuals,’ — or how if it be intel- ligible, and understood as we suppose it must be understood, it can be consistent with other parts of his statements, we are at a loss to divine. We think by leaving the clause out altogether, the whole of the other part would be correct. What he says concerning genius is so admirable (for it is almost the only thing at all like a successful attempt of the kind), that we must give it at some length.

In the mind of one poet, for example, the conception of his subject awakens only such images as he had previously seen combined with it in the works of others ; and he is thus fated, Ky his narrow and unvarying range of sugges-

tion, only to add another name to the eternal list of imitators. In a poetic mind of a higher order the conception of this very subject cannot exist for a moment without awakening, by the different tendency of the suggesting principle, groups of images which never before had existed in similar combination ; and, instead of being an imitator, he becomes a great model for the imi- tation of others. The prevailing suggestions of the one, in his trains of thought, are according to the relation of analogy, which is almost infi- nite ; the prevailing suggestions of the other are those of contiguity of the images themselves, which, by its very nature, admits of no novelty, and gives only transcripts of the parts. To tame down original genius, therefore, to mere imita- tion, and to raise the imitator to some rank of genius, it would be necessary only to reverse these simple tendencies. The fancy of the one would then, in the suggestions of mere contiguity, lose all that variety which had distinguished it, and would present only such combinations of images as had before occurred to it in similar order, in the works of former writers ; the fancy of the other, on acquiring the peculiar tendency to sug- gestions of analogy, would become instantly creative, new forms of external beauty or of internal passion would crowd upon his mind, by their analogy to ideas and feelings previously existing, and this single change of the direction of ‘ the suggesting principle would be sufficient to produce all those wonders which the poet of imagination ascribes to the influence of inspiring genii,

Who conduct the wandering footsteps of the youth- ful bard,

New to their springs and shades ; who touch his ear With finer sounds ; who heighten to his eye The bloom of nature ; and before him turn The gayest, happiest attitudes of things.

The inventions of poetic genius, then, are tht suggestions of analogy : the prevailing sugges- tions of common minds are those of mere con- tiguity ; and it is this difference of the occasions of suggestions, not of the images suggested, which forms the distinctive superiority of origi- nal genius. Copious reading and a retentive memory may give to an individual, of very humble talent, a greater profusion of splendid images than existed in any one of the individual minds, on whose sublime conceptions he has dwelt till they have become, in one sense of the word, his own. There is scarcely an object which he perceives that may not now bring in- stantly before him the brightest imagery ; but, for this suggestion, however instant and copious, previous co-existence or succession of the images was necessary ; and it is his memory, therefore, which we praise. If half the conceptions which are stored in his mind, and which rise in it now in its trains of thought by simple suggestion, as readily as they arose in like manner in accord- ance with some train of thought in the mind of their original authors, had but risen by the sug- gestion of analogy, as they now arise by the sug- gestion of former proximity, what we call me- mory, which is, in truth, only the same suggestion in different circumstances, would have been fancy or genius ; and his country and age would

have another name to transmit to the reverence and the emulation of the ages that are to follow. It is the same with inventive genius in the sciences and the severer arts ; which does not depend on the mere knowledge of all the phe- nomena previously observed, or of all the appli- cations of them that have been made to purposes of art, but chiefly on the peculiar tendency of the mind to suggest certain analogous ideas in successions, different from those ordinary succes- sions of grosser contiguity which occur to com- mon minds. He may, perhaps, be called a philosopher, who knows accurately what others know, and produces with the same means which others employ the same effects which they pro- duce. But he alone has philosophic genius, to whoso speculations analogous effects proceed from analogous causes, and who contrives prac- tically by the suggestion of analogy to produce new effects, or to produce the same effects by new and simpler means.

7. Differences of temporary emotion also (as well as constitutional differences) influence the suggesting principle. The same man is not the same in this respect at all periods of life, in all circumstances, or at all hours. As there are persons whose general character is gloomy or cheerful, we have in like manner our peculiar days or moments in which we pass from one of these characters to the other, and in which our trains of

thought are tinctured with the corre- sponding varieties. A mere change of fortune is often sufficient to alter the whole cast of senti- ment. Persons in possession of public station, and power, and affluence, are accustomed to represent affairs in a favorable light; the dis- appointed competitors for these to represent all in the most gloomy light. Much of this, at least, is fairly ascribable to the difference of coloring, in which objects appear to the success- ful and the unsuccessful.

8. The temporary diversities of state that give rise to varieties of suggestion are not mental only but corporeal. The extreme cases of intoxica- tion or actual delirium need not be referred to for the copious flow of follies which a little wine or a few grains of opium may cause to proceed from the proudest reasoner. In circumstances ess striking, how different are the trains of

thought in health and sickness, after a temperate meal and after a luxurious excess ! It is not to the animal powers only that the burthen of di- gestion may become oppressive, but to the intel- lectual also ; and often to the intellectual powers or functions more than to the animal, «-

9. Habit also has much influence in modifying the suggesting principle. When men of dif- ferent mental habits, or of different professions, observe the same circumstances, listen to the same story, or peruse the same book, their subse- quent suggestions are far from being the same ; and could the future differences of the associate feelings that are to rise be foreseen by us at the time, we should probably be able to trace many of them to former professional peculiarities, which are thus unfortunately apt to be more and more aggravated by the very suggestions to which they have themselves given rise.

The interesting nature and probable avail- VOL. XIV.

ableness of much of the above have induced us to transcribe from Dr. Brown's lectures at considerable length ; and it happened to be such as to require little modification for our purpose. On what he entitles ' The degree of liveliness of the suggesting feelings influences greatly that of the feelings suggested, and the virtual co-existence of feelings ;' there is, like the title of the discussion itself, a good deal that approaches to mysticism, and not a little of over- refinement. There is no doubt something of momentary illusion in such instances as he has adduced (and he might have given that of Dr. Johnson on one of his last visits to his native place getting up ou the bough of a tree, and swinging as if he had been actually mad) ; but whether they are to be satisfactorily accounted for in the manner attempted, may leave some doubt. The anecdotes quoted from the late Dr. Rush of Philadelphia are striking, and the first of them may perhaps be

turned to good account by persons who may be placed in similar circumstances with the narrator.

‘ During the time,’ says Dr. Rush, ‘ I passed at a country school in Cecil county in Maryland, I often went on a holiday, with my schoolmates, to see an eagle’s nest upon the summit of a dead tree in the neighbourhood of the school, during the time of the incubation of that bird. The daughter of the farmer in whose field this tree stood, and with whom I became acquainted, married, and settled in this city about forty years ago. In our occasional interviews, we now and then spoke of the innocent haunts and rural pleasures of our youth, and among other things , of the eagle’s nest in her father’s field. A few years ago I was called to visit this woman when she was in the lowest stage of a typhus fever. Upon entering her room I caught her eye, and with a cheerful tone of voice, said only, The eagle’s nest. She seized my hand without being able to speak, and discovered strong emotions of pleasure in her countenance, probably from a sudden association of ail her early domestic con- nexions and enjoyments with the words I had uttered. From that time she began to recover. She is now living, and seldom fails, when we meet, to salute me with the echo of the eagle’s nest.’

An anecdote like this in the midst of a meta- physical discussion wilt be regarded by the general reader as a rose in the desert, or a lily among thorns. The old African is a lively in- stance of the principle and power of association or suggestion.

1 An old native African obtained permission from his master, some years ago, to leave home, in order to see a lion that was conducted as a show through the state of New Jersey. The moment he saw him, in spite of the torpid habits of mind and body contracted by fifty yeaix slavery, he was transported with joy, which he vented by jumping, dancing, and loud accla- mations. Be had been familiar with that animal, when a boy, in his native country; and the sight of him suddenly poured upon his mind the re- collection of all his enjoyments, from liberty and domestic endearments, in his own country, in the early part of his life.’ No doubt th«*

thoughts and feelings of the old African on this occasion were as different from what ours would be in viewing a lion as if the object itself were wholly different.

On ‘the reduction of certain supposed facul- ties to simple suggestion,’ we consider Dr. Brown as very successful. We shall as briefly as pos- sible give

the more remarkable observations.

The supposed intellectual power 6f concep- tion, as distinct from association or suggestion, is founded on mistake respecting the nature of the latter. The power of conception and the power of association or suggestion are the same, both being only that particular susceptibility of the mind from which in certain circumstances con- ceptions arise : or, if the power of conception differ from the more general power of association, it is only as a part differs from the whole ; as the power of taking a single step differs from the power of traversing a whole field ; the power of drawing a single breath from the general power of respiration.

Memory is also resolvable into suggestion. Our remembrances are nothing more than con- ceptions united with a certain relation of time. They are conceptions of the past, felt as concep- tions of the past ; that is, felt as having a certain relation of antecedence to our present feelings. The remembrance is not a simple but a complex state of mind ; and all which is necessary to re- duce a remembrance to a mere conception is to separate from it a part of the complexity ; that part of it which constitutes the notion of a cer- tain relation of antecedence. We are con- scious of our present feeling whatever it may be; for this is in truth only another name for our consciousness itself. The moment of the present time, at which we are thus conscious, is a bright point, ever moving, and yet as it were ever fixed, which divides the darkness of the future from the twilight of the past. The present mo- ment then is a point which guides us in the most important of our measurements, in our retro- spects of the past and our hopes of the future. The particular feeling of any moment before the present, as it rises again in our mind, would be a simple conception, if we did not think of it either immediately or indirectly in relation to some other feeling earlier or later. It becomes a remembrance when we combine with it this feeling of relation ; the relation which consti- tutes our notion of time; for time as far as we are capable of understanding it, or rather of feeling it, is nothing more than the varieties of this felt relation, which in reference to one of the subjects of the relation we distinguish by the word before, in reference to the other by the word after. It is a relation which we feel nearly in the same manner as we feel the relation which bodies have to each other as co-existing in space. There is some point to which, in estimating dis- tance of space, we refer the objects which we measure, as there is a point of time in the present moment, or in some event which we have before .earned to consider thus relatively, to which di- rectly or indirectly we refer the events of which we speak as past or future, or more or less recen., We are capable of considering a variety of events, all of which are felt by us to bear to that*

state of mind which constitutes our presen consciousness, some relation of

priority or sub- sequence, which they seem to us to bear recipro- cally to each other ; and the variety of this rela- tion obliges us to invent a general name for expressing them all. This general word invented by us for expressing all the varieties of pri- ority and subsequence is time, a word, therefore, which expresses no actual reality, but only rela- tions that are felt by us in the objects of our conception. To think of time is not to think of any thing existing of itself, for time is not a thing but a relation ; it is only to have some concep- tions of objects which we regard as prior and subsequent ; and without the conception of ob- jects of some kind, as subjects of the relation of priority and subsequence, it is as little possible for us to imagine any time, as brightness or dimness without a single ray of light, propor- tional magnitude without any dimensions, or any other relation without any other subject. When the notion of time, then, is combined with any of our conceptions, as in memory, that which is combined with the simple conception is tlie feeling of a certain relation. To be capable of remembering, in short, we must have a capacity of the feelings which we term relations, and a capacity of the feelings which we term concep- tions, that may be the subjects of the relations ; but with these two powers no other is requisite, no power of memory distinct from the concep- tion and relation which that complex term de- notes.

How different is this from the jargon of the schools with which we have been so long perse- cuted concerning time, duration, memory, and such everlasting topics for mysticism and folly to practise their philosophy upon ! Dr. Brown seems to have here, as elsewhere indeed in the same way, to have fallen into a slight error from not studying the nature of words more. Time is not a general word invented by us for expres- sing all the varieties of priority and subsequence. We never invented it at all for any purpose whatever ; though false philosophy among us as well as among others has tried to make it into something it never was and never could be: and we might as well say that terminus, of which we doubt not it is a corruption, or our word term, or dies, or period, or era, or epoch, or any word connected with our measuring as to priority and subsequence is a general word invented by us for such a purpose as that time is such an in- vention. We cannot but wonder too that Dr. Brown should seem to reverence such venerable absurdity as the remark of St. Austin upon the subject. If it be ‘ one of those subjects which grow more obscure beneath our very gaze,’ why gaze at all? It was surely quite sufficient that Mr. Dugald Stewart had commented very fully on the noted text of St. Austin.

With much other false theory or idle guesses about memory, put forth with a philosophic air of importance, it has been said that there is a species of it which is under our control, or that in some respects this faculty or power is subject to our . volition as much as muscular motion. OR this Dr. Brown justly remarks that this is nothing but memory combined with desire, and

wliich is commonly called recollection; that to will any idea necessarily implies that we know what we will ; and implies the absurdity in the supposed volition acting on memory of knowing and not knowing the same thing at the same mo- ment of time ; or of desiring to become pos- sessed of what we have in our possession already. What is termed voluntary recollection, whether direct or indirect, is nothing more than the co-existence of some vague and indistinct desire with our simple trains of suggestion.

In estimating the power of memory, in all its striking diversities in different individuals, it is necessary to guard against some prevailing errors. A good memory has fallen into a sort of proverbial disrepute, as unfriendly to judg- ment, or indicative of a defect in the nobler qualities of intellect. On this subject we have a very striking illustration in some theories of lord Kames, of the correctness of the remark we have quoted from Mr. Playfair. Men think they are reasoning from fact and experience, when in reality they are only reasoning from a mixture of truth and falsehood. The only end answered by facts, so incorrectly apprehended, is that of making error more incorrigible. ' In the minds of some persons,' says lord Kames, 'thoughts and circumstances crowd upon each other by the slightest connexions. I ascribe this to a bluntness in the discerning faculty ; for a person who cannot accurately distinguish be- tween a slight connexion and one that is more intimate is equally affected by each : such a person must necessarily have a great flow of ideas, because they are introduced by any relation indifferently ; and the slighter relations, being without number, furnish ideas without end. On the other hand, a man of accurate judgment cannot have a great flow of ideas; because the slighter relations, making no figure in his mind, have no power to introduce ideas. And hence it is that accurate judgment is not friendly to declamation or copious eloquence. This reasoning is confirmed by experience ; for it is a noted observation, that a great or com- prehensive memoiy is seldom connected with a good judgment.'

In all this confirmation of experience there is i mixture of truth, but there is as great a mix- ture of error. It would seem, according to this philosopher, that a bad memory is an indispen- sable requisite to a good judgment; a very com- fortable doctrine to idle boys and to old philo- sophers, who have almost all complained or boasted of a bad memory.

It is not a good memory in its best sense, as a rich and retentive store of conceptions, that is unfriendly to intellectual excellence, but a memory of

which the predominant tendency is to suggest objects and images which existed be- fore, exactly as they did previously exist, accord- ing to tlie mere relations of contiguity. The richer the memory, the more copious will be the suggestions of analogy which constitute inven- tion. It is the quality of memory as suggesting objects in their old and familiar sequences of contiguity, not the quantity of the store of sug- gestions, that is unfriendly to genius ; though this very difference of quality may, to superficial

observers, seem like a difference of the quantity of the actual power. It is not from any defect of memory that fewer of the ideas which prevail in common conversation arise to a mind of accu- rate-judgment; but because such a mind does not feel the same interest in them, or assign the same importance to them as the voluble Mrs. Quickly : in such a mind the prevailing tenden- cies of suggestion are of a species that have little relation to mere dates, and the trivial occur- rences which are the ordinary topics of familiar discourse.

In extemporary eloquence the flow of mere words may and will be more copious in him who is not accustomed to dwell on the penna- nent relations of objects, but on the slighter cir- cumstances of perception and local connexion ; and he will doubtless be the most ready and voluble and effective orator, ad captandum vul- gus. This only proves that he has a different kind, not a richer memory, when compared with a more profound and more accurate reasoner; the whole series of whose suggestions is greater in real amount than the number of those which rise so promptly to the mind of a superficial thinker. The great difference is, as so often re- marked, the wealth of the one consists in plenty of small but ready money ; that of the other is more rare and massy, and rather deposited than carried about for current use, or to be exhibited to the vulgar gaze.

The next part of the mental phenomena (for, as the term has been introduced, it is somewhat convenient at times) is imagination, usually made to figure as a very prominent, distinct, faculty, power, or entity of the mind. We not merely perceive objects, and conceive or remem- ber them simply as they were before, but we have the power of combining them in various new assemblages into a new and varied universe, with every succession of our thought. The ma- terials of which we form them exist in every mind, but they exist there only as the stones in the quarry, that require little more than mecha- nic labor to convert them into common dwel- lings, but which rise into palaces and temples at the command of architectural genius.

Our limits will not permit us to attempt an abridgment of Dr. Brown's interesting discus- sion, in resolving imagination into suggestion. His analytic process, we think, not only ingeni- ous and minute, but perfectly

successful and satisfactory. He has effectually dispelled much false theory — he has thrown down the cumbrous complexity of his metaphysical predecessors in Scotland. But we can make room for only a few specimens.

Imagination has been generally regarded as implying a voluntary selection and combination of images, for the production of compounds dif- ferent from those which nature exhibits. This opinion is certainly false, in part at least. We have seen, in considering some other mental pro- cesses, that they assume a very different appear- ance when united with desire. Thus mere perception when united with desire becomes attention, — memory becomes recollection. A similar difference is produced by the union of desire with that spontaneous suggestion of

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images called imagination, which may be con- sidered therefore as existing without desire, or as existing in combination with desire or intention.

This distinction is so obvious that every per- son who is at all in the practice of looking inwards, or of consulting his consciousness, must be aware of it ; and must have as firm a belief of it as of his identity: it is explicitly and fully stated within the compass of the few sentences quoted from Hobbes in a preceding part. That there is imagination, says Dr. Brown, or new combinations of images and feelings unaccom- panied with any desire, and consequently alto- gether void of selection, is as true as that there is memory without intentional reminiscence, or recollection of the trains of our thought. Our conceptions often rise simply as they have exist- ed before ; they rise often mixed in various forms and proportions, as they never have ex- isted before ; and in both cases equally without any desire on our part. We as little will the various scenery of our reveries, and all the strange forms which seem to people them, as we will our dreams, or as we will the intrusion of unpleasant thoughts, remembrances, or antici- pations, which we are intensely desirous of banishing from our minds, or as we will the conception of any one with whoni we are ac- quainted, when the image of him instantly arises merely on reading his name, or seeing his portrait.

The momentary groups of images that arise independently of any desire, design, or choice on our part, and arise in almost every minute to almost every mind, constitute by far the greater number of our imaginations ; and, to suppose predetermining selection necessary to every new complex

conception, would therefore be almost to annihilate imagination itself. Such then is imagination, considered, as it most frequently occurs, without any concomitant desire — a mode of the general capacity of simple suggestion, and nothing more. 'But there are, unquestionably, cases in which desire, design, or intention of some sort, accompanies it during the whole or the chief part of the process ; and it is of these cases chiefly that we are accustomed to think, in speaking of this supposed power or faculty. Such is the frame of the mind, in composition of every species, in prose or verse. In this state, conceptions follow each other, and new assem- blages are formed. It is a continued exercise of imagination : what then is the analysis of our feelings in this state of voluntary thought, when there is a desire of forming new groups of images, and new groups of images arise ?

To sit down to compose is to have a general notion of some subject which we are about to treat, with the desire of developing it, and the expectation, or perhaps the confidence, that we shall be able to develope it more or less fully. The desire, like every other vivid feeling, has a degree of permanence which only our vivid feelings possess ; and, by its permanence, tends to keep the accompanying conception of the subject, which is the object of the desire, also permanent before us ; and, while it is thus per- manent, the usual spontaneous suggestions take place — conception following conception in rapid but relative series, and our judgment, all the

time, approving and rejecting, according to those relations of fitness and unfitness to the subject which it perceives in the parts of the train. Such seems to be a faithful picture of the state or successive states of the mind, in the process of composition. It is not the exercise of a single power, but the development of various suscepti- bilities, of desire, of simple suggestion, by which conceptions rise after conception, — of judgment, or relative suggestion (presently to be treated of) by which a feeling of relative fitness or unfitness arises, on the contemplation of the conceptions that have thus spontaneously presented them- selves. We think of some subject ; the thought of this subject induces various conceptions relat- ed to it. We approve of some, as having a relation of fitness for our end, and disapprove of others as unfit. We may term this complex state, or series qf states, imagination, or fancy, and the term may be convenient for its brevity. But, in using it, we must not forget that the term, however brief and simple, is still the name of a state that is complex, or of a succession of certain states ; that the phenomena com- prehended under it, being the same in nature, are not rendered, by this use of a mere word, different from those to which we have already given peculiar names, expressive of them as they exist separately ; and that it is to the classes of these elementary phenomena, therefore, that we must refer the whole process of imagination in our philosophic analysis, unless we exclude analysis altogether, and fill our mental vocabu- lary with as many names of powers

as there are complex affections of the mind. According to our analysis, then, there is no operation of any distinct power, or faculty (called imagination), but merely the rise of various images according to the ordinary laws of simple suggestion, in co- existence with feelings that arise from somf other common principles of the mind, particu- larly desire, and the feeling of relation.

Through the whole of this discussion the lee turer must have been in a most enviable state o mind, and he appears to more than usual advan- tage as an intellectual anatomist or analyst, whichever image of him we may choose to adopt. The mastery of his metaphysical genius is such as to seem to twirl or play with the most diffi- cult part of his subject, as if enjoying an intel- lectual amusement, rather than engaged in a gymnastic contest.

A lecture is devoted to the reduction of habit into suggestion, and refutes with abundant ease the notion of Dr. Reid, who, of course, ascribes the effects of habit to a peculiar ultimate prin- ciple, faculty, power, or potentate of the mind ; and Hartley's famous vibratiuncle theory. Per- haps Dr. Brown might have been better em- ployed than in disturbing its last moments : it might have been suffered to expire in peace, and die a natural death. One paragraph con- cerning habit is all that our limits will permit us to transcribe.

To explain the influence of habit, in increas- ing the tendency to certain actions, it must be remarked, that the suggesting influence, which is usually expressed in the phrase associ ation of ideas (though that very improper phrase

would seem to limit it to our ideas or concep- tions only, and has unquestionably produced a mistaken belief of this partial operation of the general influence) is not limited to these more than to any other states of the mind, but occurs also with force in other feelings, which are not commonly termed ideas or conceptions; that our desires, or other emotions, for example, may, like them, form part of our trains of suggestion; and that it is not more wonderful, therefore, that the states of the mind which constitute certain desires, after frequently succeeding certain per- ceptions, should, on the mere renewal of the perceptions, recur once more, than that any one conception should follow in this manner any other conception, — that the mere picture of a rose, for example, should suggest its fragrance ; or that verses, which we have frequently read, should rise once more successively in our memo- ry, when the line which precedes them has been

repeated to us, or remembered by us. To him who has long yielded servilely to the practice of intoxication, the mere sight or the mere concep- tion of the poisonous beverage to which he has sacrificed his health, and virtue, and happiness, will induce almost as if mechanically the series of mental affections on which the worse than animal appetite, and the muscular motions necessary for gratifying it, depend. Perhaps, at the early period of the growth of the passion, there was little love of the wine itself, the desire of which was rather a consequence of the plea- sure of gay conversation that accompanied the too frequent draught. But, whatever different pleasures may originally have accompanied it, the perception of the wine, and the draught itself, were frequent parts of the complex pro- cess ; and, therefore, those particular mental states which constituted the repeated volitions necessary for the particular muscular move- ments ; and it is not wonderful, therefore, that all the parts of the process should be revived by the mere revival of a single part. What is called the power of habit is thus suggestion, and nothing more. The sight of the wine before him has co-existed innumerable times with the desire of drinking it. The state of mind, there- fore, which constitutes the perception, induces, by the common influence of suggestion, that other state of mind which constitutes the desire, and the desire all those other states or motions which have been its usual attendants.

In the lecture (XLIV.) < on The Influence ˆf Particular Suggestions on the Intellectual and Moral Character, are many very important remarks ; but they are not strictly metaphysical, and we can only quote a few ot them.

Much of what is commonly called genius or of the secondary direction of genius which marks its varieties, and gives it a specific distinctive character, depends on accidents of the slightest kind that modify the general tendencies of sug- gestion, by the peculiar liveliness which they give to certain trains of thought. We are told in the Life of Chatterton, that, in his early boy- hood, he was reckoned of very dull intellect, till he 'fell in love,' as his mother expressed it, with the illuminated capitals of an old musi- cal manuscript in French, from which she taught

him his letters ; and a black-letter bible was the book from which she afterwards taught him to read. It is impossible to think of the subse- quent history of this wonderful young man, without tracing a probable connexion of those accidental circumstances, which could not fail to give a peculiar turn to certain conceptions, with the character of that genius which was after- wards to make gray-headed erudition bend be- fore it, and to astonish at least all those on whom it did not impose.

The illustrious French naturalist, Adanson, was in very early life distinguished by his pro- ficiency in classical studies. In his first years at

college he obtained the highest prizes in Greek and Latin poetry, on which occasion he was presented with the works of Pliny and Aris- totle. The interest which such a circumstance could not fail to give to the works of these an- cient enquirers into nature, led him to pay so much attention to the subjects of which they treated, that when he was scarcely thirteen years of age he wrote some valuable notes on the volumes that had been given to reward his stu- dies of a different kind.

Vaucanion, the celebrated mechanician, who, in every thing which did not relate to his art, showed so much stupidity that it has been said of him, that he was as much a machine as any of the machines which he made, — happened, when a boy, to be long and frequently shut up in a room, in which there was nothing but a clock, which, therefore, as the only object of amusement, he occupied himself with examining, so as at last to discover the connexion and uses of its parts; and the construction of machines was afterwards his constant delight and occupa- tion. The biography of many other eminent men might be referred to for multitudes of simi- lar incidents, that appear to correspond, with an exactness more than accidental, with the striking peculiarities of character afterwards displayed by them.

Speaking of the prejudice for antiquity and established authorities in literature, we have the following just remark, which in our opinion applies to many of the admirers, or rather ap- plauders, of Locke (for men can applaud in the dark) as fitly as if it had been made for them. How many are there who willingly join in ex- pressing veneration for works which they would think it a heavy burden to read from beginning to end ! Indeed this very circumstance, when the fame of an author has been well established, rather adds to his reputation than diminishes it ; because the languor of a work of course canno be felt by those who never take the trouble of perusing it, and its imperfections are not criti- cised, as they otherwise would be, because they must be remarked before they can be pointed out, while the more striking beauties, which have become traditionary in quotation, are con- tinually presented to the mind. There is much truth, therefore, in the principle, whatever injus- tice there may be in the application of the sarcasm of Voltaire on the Italian poet, Dante, that 'his reputation will now continually be growing greater and greater, because there is now nobody who reads him.'*

METAPHYSICS.

We proceed now to a most important part of Dr. Brown's discussions, On the Phenomena (we wish lie could have done without this pom- pous term, which induces some confusion where- ever it occurs) of Relative Suggestion. It is an arduous task to give the essential particulars of the extended whole in a small compass, as a map of a large country on a very reduced scale ;

but we shall do the best we can.

We have seen that there are many internal states or affections of the mind which arise sim- ply in succession in the floating imagery of our thought, without involving any notion of the relation of the preceding objects or feelings to each other, and which have been classed under the head of simple suggestion. But there is an extensive order of our feelings which involve the notion of relation, and which consist, indeed, in the mere perception of a relation of some sort. To these feelings of mere relation, as arising directly from the previous states of mind which suggest them, we have given the name of relative suggestions — meaning by this term very nearly what is meant by the term comparison, when the will or intention which the word seems necessary to imply (but which is far from neces- sary to the suggestions of relation), is excluded; or what is meant at least in the more important relations by the term judgment — if not used (as it often is in vague popular language) to denote the understanding, or mental functions in ge- neral; and if not confined (as it usually is in books of logic), to the feeling of relation in a single proposition, but extended to all the feel- ings of relation, in the series of propositions which constitute reasoning ; since these are, in truth, only a series of feelings of the same class as that which is involved in every simple pro- position. Whether the relation be of two or of many external objects, or of two or of many af- fections of the mind, the feeling of this relation arising in consequence of certain preceding states of mind is what we term relative suggestion. That is the simplest phrase which we can employ for expressing without any theory the mere fact of the rise of certain feelings of rela- tion after certain other feelings which precede them.

By an original tendency or susceptibility of the mind we are instantly sensible of the rela- tion of objects in certain respects as really as we are sensible of their existence, or have that inward feeling which we call perception. As there are various species of sensation or percep- tion, so there are various species of relations. Their number indeed, even of external things, is innumerable. The more numerous, however, these relations, the more necessary it is to have some arrangement.

All our relations (or relations felt by us) are either of external objects, or of our own internal affections or states of the mind, considered as merely co-existing without any reference to time, or considered as successive with reference to time. To take an example of each kind ; we feel that the one half of four is to twelve as twelve to seventy-two; and we feel this kind of relation merely by considering the numbers together, v, ithout any regard to time. No notion of change

or succession is involved in it. The relation was, and is, and will for ever be

the same — as often as the numbers may be distinctly conceived and compared. On the other hand, we think of summer; we consider the warmth of the sky and the profusion of flowers. We think of the cold of winter, and of flowedess fields and frozen rivulets. The warmth and the cold of the different seasons we regard as the causes of the different appearances. In this case, as in the former, we feel a relation, but it is a relation of antecedence and consequence, to which the no- tion of time or change or succession is so essen- tial, that without it the relation could not be felt.

Our first class of relations, then, are those of which the subjects are regarded without refer- ence to time. To this order of real co-existence as in matter, or of seeming co-existence as in the complex states of the mind, belong the relation of position, resemblance or difference, propor- tion, degree, comprehension.

We look at a number of men as they stand to- gether. If we merely perceived each indivi- dually, or the whole as one complex group, we should have no feeling of relation ; but we re- mark one — we observe who is next to him, who second, and who third; who stands on the sum- mit of a little eminence above all the rest ; who in the plair below. This is the feeling of the relation of position ; that is, our mind exists in those states which constitute this feeling in re- ference to the number of men contemplated or viewed standing together.

We see two flowers of the same tints and form. We lift our eyes to two cliffs of corre- sponding outline. We look at a picture, and think of the well-known face which it represents. We listen to a ballad, and seem almost to hear again some kindred melody which it wakes in our remembrance. In each of these cases, if the relative suggestion take place, our mind, after existing in the states which constitute the per- ception, or the remembrance of the two similar objects, exists immediately in that state which constitutes the feeling of resemblance, as it exists in the state which constitutes the feeling of difference, when we think of certain circum- stances in which objects, though similar, perhaps, have in other respects no correspondence or similarity whatever. The above then is the feeling of a relation of resemblance or difference. We think of the vertical angles formed by two straight lines, which cut one another; of the pairs of numbers, four and sixteen, five and twenty : of the dimensions of the columns and their bases and entablatures, in the different or- ders; and our mind exists immediately in that state which constitutes the feeling of proportion. We hear one voice, and then a voice which is louder. We take up some flowers, and smell first one, and then another, more or less fragrant. We remember many days of happiness, spent with friends who are far distant; and we look forward to the day of still greater happiness, when we are to meet again. In these

instances of spontaneous comparison our mind exists in that state which constitutes the feeling of degree. We consider a house, and its different apait-

ments ; a tree, and its branches, and stems, and foliage ; a horse, and its limbs, and trunk, and head. Our mind, which had existed in the states which constituted the simple perception of these objects, begins immediately to exist in that dif- ferent state which constitutes Jhe feeling of the relation of parts to one comprehensive whole.

In these varieties of relative suggestion, some one of which, as you will find, is all that con- stitutes each individual judgment, even in the longest series jf our ratiocination, nothing more is necessary to the suggestion or rise of the feeling of relation than the simple previous percep- tions, or conceptions, between the objects of which the relation is felt to exist When we look at two flowers it is not necessary that we should have formed any intentional comparison. But the similitude strikes us, before any desire of discovering resemblance can have arisen. We may, indeed, resolve to trace, as far as we are able, the resemblance of particular objects, and may study them accordingly ; but this very de- sire presupposes, in the mind, a capacity of rela- tive suggestion, of which it avails itself; in the same manner as the intention of climbing a hill, or traversing a meadow, implies the power of muscular motion, as a part of our physical con- stitution.

Besides a thousand other delights and benefits, it is to the results of resemblances that we owe all classification, and, consequently, almost all that is valuable in language. That classification is founded on the relation of similarity of some sort, in the objects classed together, and could not have been formed if the mind, in addition to its primary powers of external sense, had not possessed that secondary power, by which it in- vests with certain relations the objects which it perceives, is most evident. All which is strictly sensitive in the mind might have been the same as now ; and the perception of a sheep might have succeeded a thousand times the perception of a horse without suggesting the notion which leads us to form the general term quadruped, or animal, inclusive of both. The relation is truly no part of the object perceived by us, and classed as relative and correlative, each of which would be precisely the same in every quality which it possesses, and in every feeling which it directly excites, though the others with which it may be classed had no existence. It is from the laws of the mind which considers threm that the relation is derived ; not from the laws or direct qualities of the objects considered. But for our suscepti

bilities of those affections, or states of the mind, which constitute the feeling of similarity, all ob- jects would have been to us, in the scholastic sense of the phrase, things singular, and all lan- guage, consequently, nothing more than the ex- pression of individual existence. Such a lan- guage, it is very evident, would be of little service in any respect, and of no aid to the memory, which it would oppress rather than relieve. It is the use of general terms ; that is, of terms founded on the feeling of resemblance, which alone gives to language its power, enabling us to condense, in a single word, the innumer- able objects which, if we attempted to grasp them all individually i.i our corcer'.ion, \ve should be

as little able to comprehend, as to gather all the masses of all the planets in the narrow concavity of that hand which a few panicles are sufficient to fill, and which soon sinks oppressed with the weight of the few particles that fill it

That man can reason without language of any kind, and consequently without general terms, though the opposite opinion is maintained by many very eminent philosophers (not by Hobbes however, who expresses in substance the same opinion as Dr. Brown), seems not to admit of any reasonable doubt: or, if it required any proof, it would seem to be sufficiently shown by the very invention of the language which involves these general terms ; and still more sensibly by the conduct of the uninstructed deaf and dumb'; to which, also, the evident marks of reasoning in the other animals, — of reasoning as unques- tionable as the instincts that mingle with it, may be said to furnish a very striking additional argument from analogy. But it is not less cer- tain that, without general terms, reasoning must be very imperfect, and scarcely worthy of the name, when compared with that noble power which language has rendered it. The art of definition, which is merely the art of fixing in a single word or phrase the particular circum- stance of agreement of various individual objects, which, in consequence of this feeling of relation we have chosen to class together, gives us certain fixed points of reference, both for ourselves and others, without which it would be impossible for us to know the progress which we have made impossible to remember accurately the results even of a single reasoning, and to apply them, with profit, to future analysis. Nor would know- ledge be vague only ; it would, but for gerieral terms, be as incommunicable as vague; for it must be remembered that such terms form almost the whole of the great medium, by which we communicate with each other.

The perception of objects, the feeling of their resemblance in certain respects, the invention of a name for these circumstances of felt resem- blance : what can be more truly and readily con- ceivable than this process ! And yet, on this pro- cess, apparently so very simple, has been founded all

that controversy, as to universals, which so long distracted the schools ; and which far more wonderfully (for the distraction of the schools by a few unintelligible words scarcely can be counted wonderful) continues still to perplex philosophers with difficulties which themselves have made, with difficulties which they could not even have made to themselves, if they had thought for a single moment of the nature of that feeling of the relation of similarity which we are now considering.

We feel, in transcribing the words of the lec- turer, as if partaking in his triumph. This lec- ture alone, this portion of it which we have extracted, is worth all the contributions of dis- covery, and data, and phenomena, to the science of mind, we say not of Dr. Reid and his com- peers and illustrious pupil, but of all the intel- lectual philosophers since the days of Hobbes, with Hartley and Hercules at their head. This alone would have proclaimed Dr. Brown worthy of moving up to the highest place of metaphy

sical dignity, and of taking his station at the right hand of the philosopher of Malmesbury. We regard the discussion of relative suggestion as one of the mightiest achievements and proud- est triumphs of human reason. But we have neither time nor space to give vent to all our feelings, or to point .out the grounds on which our admiration rests, or the claims of Dr. Brown not only to our applause, but to our gratitude as an intellectual benefactor of the highest order. Transcription is in itself, abstractedly considered, irksome, laborious work, and we would rather give the ideas of the lecturer in our own words were we not fearful of marring his reasoning. We must transcribe his recapitulation of the preceding lecture almost verbatim.

‘ Having brought to a conclusion my remarks concerning simple suggestion, I entered, in my last lecture, on the consideration of those states of mind which constitute our feelings of relation, the results of that peculiar mental tendency to which, as distinguished from the simple sugges- tion that furnishes the other class of our intel- lectual states of mind, I have given the name of relative suggestion. The relations which we are thus capable of feeling, as they rise by internal suggestion, on the mere perception or concep- tion of two or more objects, I divided, in con- formity with our primary division of the objects oT physical enquiry, into the relations of co- ex- istence, and the relations of succession, according as the notion of time or change is or is not involved in them ; and the former of these, the relations that are considered by us without any • egard to time, I arranged in subdivisions, ac- cording to the notions which they involve, 1. Of position ; 2. Resemblance or difference ; 3. Of degree; 4. Of proportion; 5.

Of compre- hensiveness, or the relation which a whole bears to the separate parts that are included in it.

‘ These various relations I briefly illustrated in the order in which I have now mentioned them, and showed how very simple that mental process is by which they arise ; as simple, in- deed, and as easily conceivable, as that by which the primary perceptions themselves arise. On some of them, however, I felt it necessary to dwell with fuller elucidation ; not on account of any greater mystery in the suggestions on which they depend, but on account of that greater mys- tery which has been supposed to hang about them.

‘ A great part of my lecture, accordingly, was employed in considering the relation of resem- blance, which, by the general notions and corre- sponding general terms that flow from it, we found to be the source of classification and defi- nition, and of all that is valuable in language.

‘ A horse, an ox, a sheep, have, in themselves, as individual beings, precisely the same qualities. \vhether the other be or be not considered by us at the same time. When, in looking at them, we are struck with their resemblance in certain res- pects, they are themselves exactly the same indi- viduals as before ; the only change which has taken place being a feeling of our own mind. And, in like manner, in the next stage of the process of verbal generalisation, when, in conse- <|uence of this feeling of relation in our own minds, we proceed to term them quadrupeds or

animals, no quality has been taken from the objects which we have ranged together under this new term, and as little has any new quality been given to them. Every thing in the objects is precisely the same as before, and acts in pre- cisely the same mannef on our senses, as when the word quadruped or animal was uninvented. The general terms are expressive of our own internal feelings of resemblance, and of nothing more ; expressive of what is in us, and dependent wholly on laws of mind, not of what is in them, and directly dependent in any degree on laws of matter.

‘ That, in looking at a horse, an ox, a sheep, we should be struck with a feeling of their re- semblance in certain respects ; that to those res- pects in which they are felt to resemble each other we should give a name, as we give a name to each of them individually, comprehending under the general name such objects only as ex- cite, when considered together with others, the feeling of this particular relation ; all this has surely nothing very mysterious in it. It would, indeed, be more mysterious, if, perceiving the resemblance of objects that are constantly a- round us, we did not avail ourselves of language, as a mode of communicating to others our feel- ing of the resemblance, as we avail ourselves of it in the particular

denomination of the indi- vidual, to inform others of that particular object of which we speak ; and to express the common resemblance which we feel by any word, is to have invented already a general term, significant of the felt relation. The process is in itself suffi- ciently simple ; and, if we had never heard of any controversies with respect to it, we probably could not have suspected, that the mere giving of a name to resemblances which all perceive, and the subsequent application of the name only where the resemblance is felt, should have been thought to have any thing in it more mysterious than the mere giving of a name to separate ob- jects which all perceive, and the repetition of that name when the separate objects are again perceived. It assumes, however, immediately an air of mystery when we are told, that it re- lates to the predicablesof the schools, and to all that long controversy with respect to the essence of universals, which divided not merely school- man against schoolman, but nation against na- tion ; when kings and emperors, who had .so many other frivolous causes of warfare without the addition of this, were eager to take up arms, and besiege towns, and cover fields with wounded and dead, for the universal a parte rei. It is difficult for us to think that that could be simple which could produce so much fierce contention; and we strive to explain in our own mind, and, therefore, begin to see many wonderful, and per- haps unintelligible, or at least doubtful things, in phenomena which we never should have conceived to require explanation, if others had not labored to explain them, by clouding them with words.

' It is with many intellectual controversies as with the gymnastic exercises of the arena ; the dust, which the conflict itself raises, soon darkens that air which was clear before; and the longer the conflict lasts the greater the dimness which arises from it. When the combatants are very

many, and the combat very long and active, we may still, indeed, be able to see the mimickry of ti^lit, and distinguish the victors from the van- quished ; but even then we scarcely see dis- tinctly ; and all which remains when the victory at last is won, or when both parties are suffici- ently weary and choked with dust, is the cloud ot sand which they have raised, and perhaps some traces »f the spot where each has fallen.

'That the subject of generalisation should have appeared mysterious to the schoolmen is not very surprising. But I must confess that there is nothing in the history of our science which appears so wonderful as that any difficulty (at least any difficulty greater than every phenomenon of every kind involves) should now be conceived to attach to this very simple process ;

and espe- cially that philosophers should be so nearly unanimous in an opinion on the subject, which though directly opposed to the prevalent error in the ancient schools is not the less itself an error.

In the view which is taken of the process of generalisation (as of every other process) there may be error in two ways ; either by adding to the process what forms no part, or by omitting what does truly form a part of it. Thus, if we were to say, that, between the perception of a horse and sheep, and the feeling of their resem- blance in a certain respect, there intervenes the presence of some external independent sub- stance; some universal form or species of a quadruped, distinct from our conceiving mind, which acting on the mind, or being present with it, produces the notion of a quadruped, in the same way as the presence of the external horse or sheep produced the perception of these indi- vidually; we should err, in the former of these ways, by introducing into the process something of which we have no reason to suppose the ex- istence, and which is not merely unnecessary, but would involve the process in innumerable per- plexities and apparent inconsistencies, if it did exist. This redundance would be one spe- cies of error; but it would not less be an error (though an error of an opposite kind), were we to suppose that any part of the process does not iake place ; that, for example, there is no relative suggestion, no rise in the mind of an intervening general notion of resemblance, before the inven- tion and employment of the general term, but the mere perception of a multitude of objects, in the first place; and then, as if in instant succession, without any other intervening mental state whatever, the general names under which whole multitudes are classed.

‘ I have instanced these errors of supposed excess and deficiency, in the statement of the process, without alluding to any sects which have maintained them. But the two opposite errors which I have supposed are the very errors in- volved in the opinions of the realists and nomi- nalists ; the great combatants in that most dis- putatious of controversies, to which I have before anuded; a controversy which in the strong lan- guage of John of Salisbury, even at that early period, of which alone he could speak, had al- ready employed fruitlessly more time and thought than the whole race of the Caesars had found

necessary for acquiring and exercising the sove reignty of the world.

1 Realism, which descended from Pythagoras, Plato, and Aristotle, as the orthodox inheritance in metaphysics of the schoolmen, is now univer- sally admitted to be glaringly absurd : it has not been so hitherto, however, with Nominalism, which was espoused first by Roscelinusand after him by Abelard, Luther, Hobbes, Berkeley, Hume, Dr. Campbell, and almost every phi- losopher of any note. Mr. Locke and Dr. Reid may be said to have had

respectively some inter- mediate dark or confused notion of their own. The noted abstract or general triangle of the former has long been a subject of merriment. One of the most prominent and plausible nomi- nalists is Mr. Home Tooke, who holding that there is nothing general but terms, and that it is as absurd to speak of a complex idea as to call a constellation a complex star, was to accomplish wonderful logical things by his wonder-working etymology. In confidence or pretension he was almost a match for Kant the critic of pure reason. But after running his etymological race after the Northern lights, as the only infallible guides in the conduct of the understanding, he left poor human reason in the same general darkness and error in which he found it as an object of his benevolent regard or tender com- passion. He did something it is true by ety- mology for the better understanding of language as an instrument of reasoning and a medium of thought ; and he would have done more but for his blind credulity and over-weening affection towards the northern origin.' We wish Dr. Brown had studied and understood the nature and office of language as much as he did, or rather as much as his great metaphysical prede- cessor and prototype in most other respects, the philosopher of Malmesbury. In that case what would he not have effected ? But we are un- wise or unreasonable perhaps in wishing that he had been any thing but precisely what he was. But we must again permit him to address the reader and dispose of nominalism.

' Even in professing to exclude the general notion of resemblance, the nominalist uncon- sciously proceeds on it ; and no stronger proof can be imagined of the imperfectedness of the view which his system gives of our generalisa- tions than the constant necessity under which we perceive him to labor of assuming, at every stage of his argument, the existence of those very notions, or feelings of relative suggestion against which his argument is directed. The general term, we are told, is significant of all objects of a certain kind, or a particular idea is made to represent various other ideas of the same sort ; as if the very doctrine did not necessarily exclude all notion of a kind or sort, independent of the application of the term itself. ' An idea,' says Berkeley, ' which considered in itself is particu- lar, becomes general, by being made to represent or stand for all other particular ideas of the same sort ;' and he instances this in the case of any particular length, an inch, for example ; which, to a geometer, he says, becomes general, as it represents all particular lines whatsoever; so that what is demonstrated of it, is demonstrated

of all lines, or, in other words, of a line in genera!. It is truly inconceivable

that he should not have discovered, in this very statement, that he had taken for granted the existence of general notions, the very states of mind which he de- nied ; since, without these, there can be no mean- ing in the restriction of any sign to ‘ ideas of the same sort.’

But it is not necessary to accompany Dr. Brown farther in the process of a refutation of such mysticism and unmeaningness or absurdity as that of Berkeley and others in defence or de- finition of nominalism. The following is the conclusion of the whole.

‘ In the case of nominalism, as in many other cases, I have no doubt, notwithstanding the ap- parent extravagance of the paradox, that it is because the doctrine of the nominalists is very contrary to our feelings, we do not immediately discover it to be so. If it were nearer the truth we should probably discover the error which it involves much more readily. The error escapes us because our general terms convey so imme- diately to our mind that common relation which they denote, that we supply of ourselves, what is wintin in the process as described by the no- minalist; the feelings of the circumstances of resemblance, specific or generic, that are to guide us in the application as they led us to the inven- tion of our terms. We know what it is which he means, when he speaks of particular terms, or particular ideas, that became more generally significant by standing for ideas of the same sort, or the same order, or species, or genus, or kind ; and we therefore make for him, by the natural spontaneous suggestions of our own mind, the extension and limitation which would be impos- sible on his own system. But for such an il- lusion it seems scarcely impossible to understand how so many, of the first names of which our science can boast, should be found among the defenders of an opinion which makes reasoning nothing more than a mere play upon words, or, at best, reduces very nearly to the same level the profoundest ratiocinations of intellectual, or phy- sical, or mathematical philosophy, and the tech- nical labors of the grammarian or the lexicogra- pher.’*

The system of the nominalists then, though more simple than that of the realists, is not, any more than it, a faithful statement of the process of generalisation. It is true as it rejects the existence of any universal form or species, distinct from our mere feeling of general resemblance. But it is false as it rejects the general relative feeling itself, which every general term denotes, and without which, to direct us in the extension and limitation of our terms, we should be in danger of giving the name of triangle as much to a square or circle, as to any three-sided figure. We perceive objects, we have a feeling or ge- neral notion of their resemblance, we express this general notion by a general term. Such is the process of which we are conscious ; and no system which omits any part of the process can be a faithful picture of our consciousness.

We have alluded above to Mr. Locke's nota- ble general triangle. As it is calculated to set liis metaphysical mastery in a striking light,

when he ventured to quit his guides and attempt originality, we quote the passage which may be found by the reader in turning to Book IV. chap, vii. sect. 9, of the Essay concerning Human Understanding : — ' Does it not require some pains and skill,' says Mr. Locke, ' to form the general idea of a triangle (which is yet none of the most abstract, comprehensive, and difficult)? for it must be neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon ; but all and none of these at once. In effect it is something imperfect that cannot exist; an1 idea wherein some parts of several different and inconsistent ideas are put together.'

This is surely worthy of being preserved as a precious metaphysical relic of Mr. Locke, and in confirmation of the old testimony of Cicero respecting nothing being too absurd to be found in the writings of philosophers. Mr. Locke may be designated a conceptualist, to discrimi- nate him (as intermediate) from the realists on the one extreme, and the nominalists on the other ; but, in reference to either, his idea was confusion worse confounded. Dr. Brown is at some pains to show (as Mr. Stewart is inde- fatigable in showing, in reference to his making reflection a distinct origin of ideas), that Mr. Locke meant well in this matter : and none can have a higher opinion of his good intentions than we have. He was truly, in the very highest sense of the expression, a well-meaning man. As in all practical and less abstract concerns sensible and judicious, as a truly good man, as the friend of human improvement and happi- ness, as the advocate, and in some sense a father, of civil and religious liberty, or, at least, of just notions concerning them, we revere and .love his memory. But we cannot prostrate our understanding to him as a metaphysical object of worship, or sincerely profess to admire him as possessed of extraordinary intellectual acute- ness, originality, depth, or comprehension.

As an ulterior step, in the discussion of rela- tive suggestion, Dr. Brown proceeds in the forty-eighth lecture to give an analysis of the process of reasoning; and we shall endeavour to extract from it what seems most essentially important.

- *On that class of our relative suggestions which involves the feeling of the relation of the parts comprehended to the comprehending whole, it will be necessary to bestow some more illustra- tion, that you may understand clearly the nature of the process of reasoning; that most import- ant of all our mental processes, which logicians and metaphysicians have contrived to render so obscure, but which is in itself nothing more than a series of felt relations of this particular class in the instances of which I selected before, of a house and its*

apartments ; a tree and its stems and foliage; a horse and its head and limbs and trunk. The relation which I have termed the relation of comprehension, or comprehensive- ness, is so very obvious, that a mere allusion to it is sufficient, without any commentary.

‘ When I think of cases in which the relation is of a substance to parts that are themselves substances, as when I say that a room is a part of a house, or that a tree has branches, it is quite

evident lhat in these very simple propositions I merely state the rela'ion of parts to a compre- hending whole. But is the statement at all different when I speak, in the common forms of a proposition, of the qualities of objects ; when I say, for example, that snow is white, man is capable of reasoning, the wisest of mankind is fallible ? do I not merely state one of the many qualities, comprehended in that totality of qualities, which constitute the subject as known to me ? I do not indeed divide a mass into its integral parts, but I divide a complex notion into its parts, or at least separate from that com- plexity a quantity which I feel to belong, and state to belong, to that complex notion from which I have detached it. It is as it were a little analysis and synthesis. I decompose, and, expressing to others the mental decomposition which I have made, I combine again the separated elements of my thought, not indeed in the same manner (for the analytic process is as different as matter is from mind), but with the same feeling of agreement or identity that rises in the mind of a chemist when he has reduced to one mass the very elements into which he had transmuted the mass, by some one of the analyses of his wonderful art.’

What then is reasoning (which is nothing more than a number of propositions consecutive in a certain order) but a continued series of analytical operations of this kind, developing the elements of our thought ? In every propo- sition that which is affirmed is a part of that of which it is affirmed, and the proposition, however technical its language may be, ex- presses only the single feeling of this relation.

Whatever be the species of reasoning, how- ever, it is necessary that the proportions which form the reasoning should follow each other in a certain order; for without this order, though each proposition might involve some little analysis, and consequently some little accession of knowledge, the knowledge thus acquired must be very limited. There could be no deduction of remote conclusions, by which the primary object of a distant proposition might be shown, through a long succession of analyses, to have properties

which required all these various evolutions before they could themselves be evolved to view. In the proportional reason- ings of geometry, we know well that the omis- sion of a single proposition, or even a change of its place, might render apparently false, and almost inconceivable by us, a conclusion which, but for such omission or change of place of a few words of the demonstration, we should have adopted instantly, with a feeling of the absolute impossibility of resisting its evidence.

To constitute reasoning it is necessary that there should be some mutual relation of the subjects and predicates of the different proposi- tions. The order of the different propositions is so arranged, as to present to us this mutual relation of the successive subjects and predicates ; it is therefore of the utmost importance to our consecutive analyses, in the reasonings that are strictly analytic, and to our consecutive mea- surements in the reasonings which are propor- tional On what does this order depend?

The common opinion on the subject makes this order a very easy matter. We have a cer- tain sagacity, it is said, by which we find out the intervening propositions, and they are ar- ranged in the proper order because we have discovered them to be suitable for our measure- ment, and put them in their proper places. ' Those intervening ideas which serve to show the agreement of any two others,' says Locke, ' are called proofs. A quickness in the mind to find out these intermediate ideas (that shall dis- cover the agreement or disagreement of any other), and to apply them rightly, is, I suppose, that which is called sagacity. And reason itself he elsewhere defines to be the faculty which finds out these means and rightly applies them. We need not quote the common expres- sions to the same purport which are to be found in other writers.

The sagacity of which Locke and other writers speak, may (since it is nothing more than a form of our simple suggestion itself) be reduced to that peculiar tendency of the suggest- ing principle, varying in different minds, of which we have before treated, when considering the secondary laws of suggestion in their rela- tion to original genius. The same objects do not. suggest to all the same objects even where past observation and experience may. have been the same; because the peculiar suggestions of the objects, the relations of which are afterwards felt, depend in a great measure also on tenden- cies modified by long habit, and therefore vary- ing in different individuals as these habits may have been different. To some minds (the com- mon minds which in the great multitudes of our race think what others have thought, and do what others have done) the conceptions which form their trains of memory, that scarcely can be called trains of reflection, rise, as we have seen, according to the relation of jnere conti- guity, or former proximity in time, of the related images. The conceptions of minds of a higher order rise in almost infinite "ariety, because they rise according

to a relation which does not depend on former co-existence of the very images themselves, but is itself almost infinitely various.

The differences of opinion in mankind, far from being wonderful, are such as must have arisen though there had been no other cause of difference than thevariety of the conceptions, which by the simple laws of suggestion, occur in the various trains of thought of individuals, diver- sifying of course the order of propositions in their reasonings, and consequently the relation which the conclusion involves. The objects compared have, at every stage of the argument, been different; and the results of the comparison of different objects, therefore, cannot well be expected to be the same.

Having resolved the whole process of reason- ing: into simple suggestion, as so fully and clearl_ explained by him, Dr. Brown adverts to the syl- logistic art, which so long reigned triumphant in the schools, and which still lingers in the fond em- brace of a certain description of logical professors. We have already given the substance of his state- ment at the conclusion of the article LOGIC, to

which we refer the reader. The futility and ab- surdity of the syllogism are now almost univer- sally admitted; and if any syllogistic admirers are to be found, on whom the remarks of Dr. Brown have had no effect, we know not that it would be of any use to reason with them. It may be enquired, however, if the old logic be exploded are we not to have something better as a substitute? In reply, our author justly re- marks, ‘ The art of reasoning which a judicious logic affords is not so much the art of acquiring knowledge as the art of communicating it to others, or of recording it in the manner that may be most profitable for our own future advance- ment in the track which we have been pursuing. Its direct benefit to ourselves is rather negative than positive, teaching us the courses of error in our mental constitution, and in all the accidental circumstances of the language which we are obliged to use of the society in which we must mingle. Its office is to deliver us from what is false, rather than to confer on us what is true. Indeed, since we cannot, as already shown, pro- duce directly in our mind any one conception, or any one feeling of relation, it is very evident that the influence of any art of reasoning on our train of thought must be indirect only.’

Men are fond of art and rules, but these have little of positive utility : they never yet made a good reasoner any more than a great poet. After all that has been said of the conduct of the un- derstanding, the best rule of right

*reasoning that can be given is, Guard against the various causes of error and imposition, and particularly against that grand imposture the imposition of words. The great error of the theory of the syllogism (and it is an error which may operate when the syllogism itself is discarded) consisted in sup- posing that, because all our knowledge may be technically reduced in some measure to general maxims, these maxims have naturally a prior and paramount existence in our thought, and give rise to those very reasonings, which, on the con- *rary, give rise to them.*

As has been fully shown, we trust, judgment, which makes such a figure in the language and theories of logicians and metaphysicians as a faculty or power of the mind, is nothing but a feeling of relation; nor is reason, which also makes such a figure as a sort of distinct if not independent faculty, any thing but a series of judgments or felt relations. ' Those,' says Dr. Brown, ' who ascribe judgment to man, ascribe to him also another faculty which they distinguish by the name of reason : though reasoning itself is found, when analysed, to be nothing more than a series of judgments. The whole is thus represented as something different from all the parts which compose it. Whether we reason syllogistically with the schoolmen, or according to those simple processes of thought which na- ture teaches, our reasoning is divisible into a number of consecutive judgments, or feelings of relation; and, if we take away these consecu- tive judgments, we leave nothing behind which can be called a ratiocination. In a simple pro- position we take one step, or feel one relation ; in an enthymeme we take two steps, or feel two nations ; in a syllogism we take three steps, or

feel three relations; but we never think, when we speak of the motion of our limbs, that the power of taking three steps differs essentially from the power of taking one ; and that we must, therefore, invent new names of bodily faculties for every slight variety, or even every simple re- petition of movement.

' The circumstance which led to the distinc- tion of reason from judgment was not so much the mere length and mutual connexion of the series, as that mistake with respect to the power falsely ascribed to the mind, of finding out by some voluntary process the intervening propo- sitions which serve as the medium of proof. The error of this is now, we trust, sufficiently mani- fest.

' Another faculty with which the mind has been enriched by systematic writers who have ranged the different states of the mind into many powers or faculties is abstraction ; a faculty by which we are supposed to be capable of separating in our thoughts certain parts of our complex notions, and of considering them thus abstract from the rest. This supposed faculty, however, is not merely unreal but impossible, since every exer- tion of it

would imply a contradiction. In ab- straction the mind is supposed to single out a particular part of some one of its complex notions for particular consideration. But what is the state of the mind immediately preceding this intentional separation, its state at the moment in which the supposed faculty is conceived to be called into exercise? Does it not involve ne- cessarily the very abstraction which it is sup- posed to produce ? and must we not, therefore, in admitting such a power of voluntary [separa- tion, admit an infinite series of preceding ab- stractions, to account for a single act of abstrac- tion? If we know what we single out, we have, already performed all the separation which is necessary; if we do not know what we are singling out, and do not even know that we are singling out any thing, the separate parts of the complex whole, may, indeed, rise to our concep- tion (as they do rise), but it cannot arise by the operation of any voluntary faculty.

' I have now,' he says, ' brought to a conclusion my analysis of the intellectual phenomena ; and have endeavoured to show that, though commonly ascribed to many distinct faculties, they are all truly referrible only to two, the capacity of simple suggestion, which gives to us conceptions of external objects, formerly perceived, and of all the variety of our past internal feelings, as mere conceptions of fainter images of the past ; and a capacity of relative suggestion by which the ob- jects of our perception or conception that are themselves separate no longer appear to us sepa- rate, but are instantly invested by us with various relations that seem to bind them to each other, as if our mind could give its own unity to the innumerable objects which it comprehends.'

We have now followed the (lecturer step by step through his whole course of intellectual in- vestigation, and have omitted as little as possible of the topics that seemed most material. We cannot at present proceed with him to the consi- deration of our emotions, or, as commonly termed, passions; but we hone to bring h:m

soon again before the public in connexion with these. It remains that we very hastily say a few worus concerning our task, concerning our author, and concerning the science or philosophy of mind as now presented by the investigations of the late professor of moral philosophy in the university of Edinburgh.

We know not what satisfaction or dissatisfac- tion our attempt in reference to Dr. Brown will give to our readers; we have not been able wholly to

satisfy ourselves, and have only the consola- tion of the fullest consciousness that we meant well. We have endeavoured (often unsuccess- fully we fear) to popularise the greatest metaphy- sician of the age, to bring him down to the level and within the reach of the perception and ap- preciation of the general reader. In this endea- vour we have sincerely desired to confer honor on the one and a benefit on the other. We have, we trust, taken no unwarrantable liberties with the lectures, of which we have made so much use. In extracting from them we have altered, abridged, and extended by turns. Hence we have sometimes omitted quotation marks when quotations have been made almost verbatim ; but we have, in these cases, both directly and in- directly apprised the reader that the truly great moral professor was addressing them. With readers who feel any interest in such enquiries, what we have done is calculated, as it is really intended, not to mar but to promote the reputa- tion of Dr. Brown's Lectures on the Philosophy of the Human Mind. Thus much, candid reader, we have thought necessary to say in reference to our- selves. We willingly hasten away from self to the object of our admiration and gratitude.

The reader must be already fully aware that we estimate the intellectual merits of Dr. Brown very highly. We consider him as one of the most original, profound, comprehensive, and sound thinkers of any age or country. For metaphy- sical acuteness, and discriminative subtilty, and masterly analysation, he stands unrivalled. There is, indeed, an excess of this kind of excellence, which rather mars his general merits, the utility of his intellectual labors, and the measure of his fame. But take him for all in all, as an intellec- tual philosopher, we know of but one who has any title to dispute or divide with him the pre- eminence, a pre-eminence of the highest altitude above the reach of other aspirants. As to the norttern lights that played, and all the stars that twinkled in the metaphysical hemisphere, they must hide their diminished heads in the pre- sence of this glorious orb of day. Nothing but another night of metaphysics could render them beautiful and attractive : a voluntary descent 'into the deep well of scholastic notions and jargon would be almost necessary to render stars which once shone with muah brilliancy any longer visible.

This may seem extravagance, and we may have put the case somewhat hyperbolically, but the reader must not suppose that we are unreserved admirers or blind idolaters of Dr. Brown. His excellencies are of the rarest and highest order, but they are not free from some alloy of defect. He will bear a favorable comparison with his distinguished metaphysical predecessor (who was

unquestionably in part his prototype) ; but in some respects he is a complete contrast to the philosopher of Malmesbury. Dr. Brown is often too subtile, almost always too wordy, and consequently he is very generally

deficient in the important article of lucidus ordo, or perspicuity. It is often, indeed, a very great intellectual exertion to understand him. His style is radically defective considered as a medium or instrument of imparting his conceptions, and is just the re- verse of Hobbes's, as so happily characterised by Sheffield, duke of Buckingham. We may say of it frequently what he himself has said of time (considered as an abstract entity) by way of com- pliment to St. Austin and the illustrious pupil of Dr. Reid. ' Instead of growing clearer as we gaze upon it, it grows more obscure beneath our very gaze. ' Indeed our greatest wonder of all is how he should have accomplished so much with such a bad instrument, or with such unskilful manage- ment of the verbal apparatus — the most demon- strative evidence, perhaps, that could have been given of his being possessed of that creative genius which gives a sort of omnipotent inde- pendence of means or instruments. We do not now wonder at what we have heard sneeringly said of him in his life-time, that his poetry was bad prose, and his prose bad poetry. It is richly intellectual and occasionally truly eloquent, but there is a confusion and wildness about its mag- nificence that dazzle and distract the 'suggesting principle' of the beholder. There never was, perhaps, such a striking illustration of the old quotation, that 'obscurity is the usual result of laborious efforts to be explicit. Dr. Brown at- tempts too much, and therefore often fails alto- gether. He is too minute, he crowds so many topics and circumstances into the map which he gives of his mind or ratiocination that we can sometimes at least perceive nothing distinctly. He is not content with the most important points of a view or steps of a process ; he leaves nothing to the mind of the reader or to the exercise of the suggesting principle — he overwhelms it with circumstances of the minutest and fullest possible information. He is as lavishly circumstantial with the metaphysical enquirer as Mrs. Quickly with Sir John Falstaff, who would not onlj not suffer the worthy knight to forget any thing, but would not suffer, him to remember any thing of his own accord.

Dr. Brown's lectures,might however be modified and condensed into the most useful and popular metaphysical book ever given to the world. As they now stand, we fear they will not be very popular, and there will be some danger of sub- sequent moral professors marring and spoiling all, as Locke did the intellectual philosophy of old Hobbes.

Much of the evil we hare to complain of is doubtless, ascribable to the hurried manner in which (to use a sort of cant but significant phrase) the lectures were got up, for they cannot be said to have been prepared for delivery, much less for publication. Almost every one of them, it appears, was written at the urgent call of ne- cessity ; or, as we usually say, on the spur of the moment, in the short space of a few hours on the night, or morning even, immediately pre-

ceding the reading of it to the moral philosophy class in the university of Edinburgh. This too is certainly calculated to fill us with amazement at Dr. Brown's strength of tnind ; yet we cannot but regret the circumstance as much as his style itself. It is possible indeed, nay probable, we suspect, that, if the lectures had not been written in breathless haste or urgent hurry, they would not have been written at all, any more than Johnson's Rambler or Rasselas. We are not sure, however, about the soundness of the opi- nion of the author himself, as well as of his friend and biographer, as if the excellence of the lectures were mainly ascribable to the high ex- citement, that is hurry, under which they were written. High excitement is indeed favorable in a well-stored mind, to torrents of discussion or bursts of eloquence ; but it is not favorable to arrangement and condensation — to clearness and brevity. These all-important qualities of metaphysical compositions require cool judg- ment, ' waiting for thought' (to which Newton ascribes so much of his merit as a physical philo- sopher), and patientreflection. Probably Hobbes spent more time in condensing and lucidising one of his short chapters, than Dr. Brown did in writing several of his long lectures.

We are told, indeed, by the excellent and re- verend biographer of Dr. Brown, that, when he returned afterwards to the examination of his lectures, he found that he could make very little improvement upon them, which he accounted for by the high excitement under which they were written , being peculiarly favorable to in- tellectual exertion or effort. That he could not find much in his own compositions, after a short lapse of time, which seemed to require alteration or amendment is not very wonderful. When we come, particularly in a sluggish state of mind, to the examination of our own compositions, we are easily satisfied ; nor is it always easy to im- prove even very bad ones ; besides, we catch anew the delightful enthusiasm under which we produced them at first — the affection with which we gazed in the first moments of their existence upon our intellectual offspring — and love, parti- cularly parental love, is proverbially partial if not blind. Even when we have a vivid remem- brance of having written something on a given subject before, though we know not well what, and are determined not to look at it, there is something of disqualification about our mind to write better upon it anew; because the mind, instead of vigorously applying to the subject is wandering or hankering after its former produc- tion. If we may be allowed to reclaiin for a moment our old multitude of faculties (and really it is hard to do without them, the loss of them will deprive us of much ' revelry and ease '), we would compare them to a long team draw- ing tandem-wise. The first horse is genius, the second

imagination, the third memory, the fourth judgment, the fifth reason, and so on to the end of the whole series. If they be all well trained and in good condition, and draw one way, the whole intellectual machine will move forwards more cr less surely and steadily in the right di- rection ; but if any of them be restive or refrac- tory, or draw awry — if, for instance, memory be

always struggling to escape, or flying to one side after something it has enjoyed before, and that it is still very fond of, it is evident the team cannot advance — the whole intellectual machine must either remain stationary or be tumbled upside down. It is somewhat after this ludicrous and absurd image of the mind and its faculties, when we do not apply with all our might to intellec- tual subjects which we have already discussed. It is a difficult task to decompose and recompose anew our own compositions. If it were not so, how could Dr. Brown yield himself tamely up to an idle theory about the wonder-working in- tellectual power of high excitement ? How could he imagine that he could find little or nothing to require alteration, or to admit of improvement, in lectures written in the hurry of a few hours. Might he not (especially if he contemplated publication) have lopped off a thousand repeti- tions and redundancies? Might he not have im- proved a thousand passages by reducing them to a simpler, and clearer, and more tangible form ? Might he not have compressed four vo- lumes into two ?

We will put a sort of ad hominem case to the reverend biographer of Dr. Brown, merely for his convincement ; and we take it for granted that his phrenology has nothing to do with the question. We doubt not that he has two sorts of preparation for the pulpit. Sometimes he chooses his subject early, he feels deep interest in it, he wishes to do it full justice, and gives himself full time for the purpose ; at other times he drives, as we say, the business of preparation off to the last ; and, when he must delay it no longer, falls to work with all his might on Saturday evening, and writes doggedly, as Johnson ex- presses it, or under a high degree of excitement, according to Dr. Brown. Perhaps if he were to re- examine, after some lapse of time, a production of the last sort, he might find very little in it that he could alter or improve ; but which of the two descriptions of preparation for the pulpit would he coolly and deliberately send to the press? But we have, perhaps, dwelt too long on the topic, though it is quite as important as any abstract or metaphysical discussion to correct an unsound opinion respecting the high excite- ment of breathless hurry, as favorable to intellec- tual effort or exertion not only in rhetorical, but even in metaphysical productions.

Though we have insisted so much on the ob- jectionable character of Dr. Brown's general style, the reader must not suppose that he could not write

well, or express himself clearly, con- cisely, and forcibly Many very admirable pas- sages, in every view of them, might be extracted from his lectures, in addition to some that we have given. He almost always writes like a man of thoughts rather than of words, and fully con- scious that he had abundance of intellectual treasure to draw upon, and on which he might safely rely for effect. There is little or nothing of elegant verbiage or pompous grandiloquence about him. He will bear an advantageous com- parison in this respect with even professor Play fair, who appears in all the simplicity, and dignity, and native grandeur, of a true philcso- pher. He does occasionally employ such ex-

pressions as philosophy of the mind, science of mind, phenomena of mind, laws-of mind, 8cc. ; but lie evidently cared little for them, and would have been willing to do without them, and he was careful to explain how much or rather how little is meant by them. He did not ring changes upon them, or constantly repeat them in an eter- nal circle. There was nothing of philosophic cant or affectation about Dr. Brown. When, indeed, a general habit of grandiloquence is once established, as it has been with us as well as with the French, something of it is absolutely necessary to command attention, and even to convey meaning. When ‘ all the world is a stage, and all the men and women merely players,’ we cannot perform our part without something of dramatic artifice.

But we must come to a conclusion by very briefly attempting an estimate of the amount and value of metaphysical knowledge.

It is sufficiently evident, from what has been already advanced, that if there be any thing that deserves the name of a science or philosophy of mind, it must henceforth be ‘ put on a footing almost entirely new,’ as Hume expressed himself on the subject. The science of mind, as pro- pounded by Dr. Reid and his illustrious pupil, instead of progressing onward ad infinitum towards infinitesimal perfection, has been wholly overthrown. It has been as completely sub- verted as the dynasty of the Stuarts. There has been a revolution effected in the philosophy of mind far more radical and entire than the politi- cal revolution brought in with William and Mary ‘ of glorious memory.’ Whether it shall be of permanent stability, and its results of a progressively beneficial kind on the knowledge, and wisdom, and happiness of human beings — whether it shall accelerate the march of in- tellect, and its author shall be pronounced the immortal Brown, and the father of the true, experimental, inductive science of man, by a grateful and applauding posterity, is more than we dare venture to

predict. Yet we think his memory will wear well, and that it has something imperishable about it. Indeed his doctrine of human nature is, we conceive, the only one since that of Hobbes (upon which it is certainly a decided improvement, as Locke's Essay and Hartley's Theory of Man were as decided dete- riorations) which has any fair pretension to be considered a true statement of accurate analysis. There is much in Dr. Brown's lectures, to minds in unison with our own, that may be truly called the feast of reason and the flow of soul ; nor are we wholly faithless or hopeless as to bene- ficial results on all kinds of philosophies, high and low, great and small. But after all, if we were closely pressed to state, in the fewest possible words, the sum total or actual amount of positive good, or of the intellectual benefaction conferred on the world by the extraordinary analytical genius of Dr. Brown, we should be somewhat perplexed. The good is of a nega- tive rather than a positivekind. He has done much to disabuse our poor understandings, and the man that does that is a benefactor and a reformer, worthy of ranking with Martin Luther and John Knox. He who successfully detects the absup

dity, and exposes the folly, of a vain and deceit- tul philosophy, deserves to be held in grateful remembrance. It is at least something to place us in that intellectual condition in which we might have been if such men as Aristotle had never existed, and to prevail upon our busy, meddling minds ' to stop when at the utmost extent of their tether,' as good Mr. Locke says, ' and to sit down in a quiet ignorance of those things which are found to be beyond the reach of our capacities,' without adding to all the other disquiets of this imperfect state, by tortur- ing our frail intellects, and heating our unruly passions, with such entities and quiddities as those of the doctrines and jargon of the school- men.

We are not easily satisfied, however, with negative qualities in the philosophy of mind ; if an old venerable pile of intellectual incumbrance and nuisance be removed, we would straightway have something large, and stately, and imposing, erected in the room of it, even if the new erection should prove nearly as much of an obstruction, incumbrance, and nuisance, as the old one. This is the danger here — instead of reforming the reformation of Dr. Brown, we have no doubt that vigorous efforts will be made by mo- ral professors to graft upon it the old notions, or to bring it back again to something of decent conformity with the splendor and pomp of the very system which was renounced and aban- doned on account of its absurdities and impos- tures.

We may talk largely and loftily about our philosophy of the mind, but the mind has an occult philosophy or way of its own, that mocks our experimental and inductive researches and analytic processes. The whole of the intellec- tual science, as Hobbes, and Descartes, and Malebranche, and

others long ago said, and as no one who reflects for a moment can dispute, must rest upon consciousness ; but conscious- ness is a sandy foundation, soon shaken. It is so shifty and shadowy, that to attempt to rest much upon it is almost like building castles in the air. Indeed how shall we proceed to bring different intellectual philosophers to agree either about what it is, or what is its testimony ? For nothing can be more opposite and conflicting than their doctrines concerning both. There is abundant concord between the consciousness of Dr. Brown and our own, and therefore we think his doctrine the true one ; but, if a disciple of Kant or of Dr. Reid were to choose to dispute the matter with us, it would be hopeless, or rather absurd, to at- tempt mutual convincement and agreement. He sets up his consciousness against ours, and we set up our consciousness against his; and there we are without a single particle of intellec- tual data in common to start with about the science of the mind.

As it is with the foundation itself of the whole science, so it is with all the intellectual pheno- mena, which according to Condillac are nothing whatever but the ghosts of departed sensations ; and, though we think the French philosopher decidedly wrong here, yet there is something like the evidence of analogy about the notion teo; for we might as well attempt to conjure up spirits

from the vasty deep as hope to will up any of the intellectual phenomena at pleasure. We might as well expect to put the ghost of Richard III. upou the rack to make it confess any facts re- specting his nephews, as attempt to submit any of the intellectual phenomena to the experimen- tum crucis to make them give sure and faithful testimony concerning true and false philosophies of the mind. The mental phenomena indeed are not only a shadowy but a shy race of entities, as skilful and persevering in flight as the old Parthians; and 'retire the more the more we press.'

We may indeed get a sly peep of them occa- sionally, as of our own shadow over our shoulder when walking along by moon-light. But, if we turn directly round upon them, they instantly run off, and it is of no use whatever to run after them. It is as impossible to seize them and make them our prisoners, for permanent data or intellectual dissection, as to share in the deliber- ations of a tribe of fairies when assembled, it may be, in some adjoining field or wood under the light of the same moon to discuss metaphysical or political questions of the gravest importance. We only yield to the suggesting principle in re- marking that the mental phenomena are often most vivid and strongly marked or most power- fully active in the

dead hour of night when we are fast asleep ; and according to Hobbes these nightly vigils or operations of the mental pheno- mena commonly called dreams (whether from dormio to sleep, or drama we are not sure), are the prototypes of all the mythological personages of all ages and countries, or the true and original ghosts and goblins, fairies and brownies, of all the races and tribes of men. There is some show of plausibility about this notion of the old philoso- pher, but what we meant to remark was the dif- ficulty of managing and dissecting the mental phenomena, or of dealing with them in any way whatever. Many of our dreams seem at first sight to have made such a deep and lasting im- pression as to have become a part of our mental identity ; and as that we shall have no trouble with them, any more than with our identity itself, but may analyse them at our leisure. But we are scarcely wide awake and ready for work when the subjects, on which we meant to operate for the purpose of making further discoveries in the anatomy or physiology of the mind, have va- nished away ; and we have the mortification as intellectual physiologists of finding that all was but the ' baseless fabric of a vision that leaves not even a wreck behind.' But enough; we only meant to abate the pride and pretension of intellectual philosophy, and to chasten and sub- due its grandiloquence respecting mental data, phenomena, well ascertained facts, experimental researches, inductive reasonings, &c. &c.f in the science of mind. Indeed, how any man in his sober senses, consciousness, and reflection, should seriously write about the subject in the manner Mr. Stewart does, is to us one of the most won- derful phenomena in the whole range of our poor limited observation.

Dr. Brown has done much, as already intimat- ed, because he has simplified metaphysical mat- ters very considerably. He has nullified much

mystical jargon and visionary reasoning. He has swept away the whole multitude of mental powers and faculties created or conjured up by Dr. Reid out of the vasty deep of his mere ima- gination. He has reduced all that we know about the operations of the mind to simple and relative suggestion. And this seems as satisfac- tory an account of the matter as can be given. It is not wonderful that what is usually called (in consequence of Locke's having so termed what had been pointed out to him by Hobbes) association of ideas, should have been much phi- losophised about ; for it is so obviously connect- ed with consciousness, and so strikingly present- ed in a thousand different ways to our observation and reflection, that it is hardly possible to con- ceive than any human being should be so dull as not to be aware of it. Probably too the most illite- rate peasant knows nearly if not quite as much about the matter as the profoundest philosopher. The chief, if not only difference between the two is, that the peasant never thought of philosophh ing about it as if he had made a grand discovery in the science of mind unknown to all the world beside ; and, if he were to think of putting forth his thoughts concerning it, he would not be able to

express them in all the pomp and circumstance of philosophic language. The following couplet of some poor poetaster was received into the mind of the writer of this paper at such an early pe- riod of life that he has no remembrance of its reception ; it may therefore be in some sense con- sidered older as a part or parcel of his mind than his very mental identity itself. Indeed he could almost fancy it to be innate, so completely uncon- scious is he of its intromission. It implies, how- ever, the principle of suggestion or association as fully as any statement of Hobbes, Locke, Hartley, Hume, or Brown. Nor can he remem- ber a time when he was ignorant of what it im- plies, or when he was not aware of the principle. The miserable couplet referred to is,

Dumbarton drum beats bonny O, It minds me of my Jonny O.

This might be expressed or supposed to be ex» pressed by an affectionate mother, whose son had left her to 'follow the drum,' as Burns ex- presses it ; or more probably by some love-sick maid the object of whose affections (not good for much perhaps) had left her all forlorn to go and fight for his king and country. But, whatever were the occasion and the circumstances of the said couplet, the suggesting or associating princi- ple is fully implied. Indeed the difficulty would be to find any kind of composition in which it is not implied. Instances almost innumerable might be presented to show that the least informed and philosophic^of men are aware of the principle, and avail themselves of it too for practical purposes as much as if Dr. Hartley had lectured to them for a whole year upon the subject. When for instance the plain honest tradesman who wishes not to forget some one thing which is to be at- tended to, after some short space of time, ties one knot on the corner of his pocket hankerchief, or if he wishes to make two memorandums upon it ties two knots, what is he doing but practically philosophising (not the worst kind of philosophy

a&e- all) upon the suggesting principle or asso- ciation of ideas?

It may be thought, however, that the true science or philosophy of the mind, must be of vast importance for theorising this grand princi- ple of our mental constitution into the greatest possible availableness for useful purposes and application, so as to promote knowledge and wis- dom, and virtue, and happiness. We should be glad to know what it has done or what it can do in this way. Having some portion of parental solicitude, we turned lately with considerable in- tensity of desire to the article Education in the Supplement to the Encyclopedia Britannica, which we supposed must have

been written by some great intellectual philosopher or other. But alas ! when we arrived at the end of the whole matter it was with the mortification of finding that the title of the last chapter of llasse- las might have been an appropriate close. ‘ The conclusion in which nothing is concluded.’ We found indeed that the writer belonged to neither the German nor Scottish school of metaphysics, that he was a great admirer of Locke, Hartley, Condillac, Helvetius, and somewhat partial to Cabanus, that he was probably a materialist and antireligionist, but that was about the amount of discovery and conjecture. A few tritical remarks in reference to the suggesting or associating prin- ciple, such as almost any well-informed trades- man, in the present intellectual state of society, could make, were all that could be found an- swering to the title of the article. Surely society does not now require to be told by intellectual philosophers that it is wrong to associate the idea of ghosts and goblins with darkness in the minds of children ; or the idea of merit with a fine coat or splendid mansion. This is professed- iy an age of improvement, and we think it is not all mere talk ; but we must yet draw upon hope rather than fruition. We hope that the science or philosophy of political economy, of medicine or the healing art, of agriculture, of education, and all the other sciences- and philosophies any way connected with the being and well-being of men, will rapidly progress to a state of the highest perfection ; but we are afraid that the science of man himself, or the philosophy of mind, will not assist much in the simultaneous movements of progression so devoutly to be wished.

There is one topic more to which we must de- vote a few remarks. Is there a necessary con- nexion between metaphysics, or as termed by Mr. Stewart the philosophy of the mind, and re- ligion ? According to that author’s representa- tions, the philosophy of the mind is the founda- tion of, or, at least, it is necessary to natural religion ; which again is the necessary foundation of revealed religion. We have no doubt as to the goodness of his intentions in this matter, but we have considerable doubt as to the soundness of his judgment. And we fear that he, and Dr. Reid, and Dr. Beattie, have done no small dis- service to the very cause which they intended to support ; and for the support of which indeed their system of metaphysics was taken up : a most unfortunate circumstance too, for that cause, as distrust and suspicion are almost sure to be ex- “ited in inquisitive minds, when a set of princi- VOL. XIV.

pies, or a theory, is assumed for an obvious or avowed purpose. It is generally believed that there is a considerable portion of scepticism or disbelief as to religion, to be found among the highest classes of intellectual men in Scotland, and particularly in the Scottish capital. We do not wonder at the fact, and we conceive that, though not wholly ascribable to the Scottish me taphysics, yet they must (like those of Leibnitz and after him those of Kant in Germany) have had considerable influence. But

without enter- ing into the general merits of the Scottish meta- physicians who arrayed themselves against Hume, as to their ability or inability to contend with such an opponent, let us consider the natu- ral tendency of their mode of proceeding. They adopt a certain set of metaphysical notions in support of natural religion, which natural reli- gion is considered necessary to revealed religion. The one is the superstructure, the other is the foundation. Of course the superstructure re- quires only a secondary and very subordinate care or concern. All the energies of the guar- dians of religion are to be directed to the pre- serving of the foundation secure and entire. A certain set of metaphysical notions are thought to be necessary for this purpose, and therefore they are adopted. — Ultimate principles of our nature are created ad libitum ; powers and facul- ties are conferred upon the human mind, almost without number ; for it seemed the more of them the better, and the mightier the entrenchments and bulwarks thrown around that sole foundation of all that is great and good, natural religion. Dr. Reid went on creating powers and faculties for the human mind, and arranging them in due order, giving intimations too that all the powers and faculties wert not conjured up yet, and that only a sample of them was published. But his grand achievment was the overthrow of the ideal system ; and, having ceased from all his meta- physical labors, his illustrious pupil commenced his career as author of the philosophy of the mind, and nothing almost was heard of but ex- perimental researches and inductive reasonings concerning mental data, and phenomena, and many other magnificent entities. Many were dazzled and delighted with all this success and triumph, and renown of the common-sense or Scottish metaphysics, which seemed to have put scepticism and infidelity to flight. Meanwhile, among the more reflecting deep-searching few, some laughed and others grieved, according as they were well or ill affected to real religion — that religion which is not in word only but in deed and in truth.

When Mr. Stewart retires from the chair of moral philosophy, Dr. Brown succeeds him, and with a metaphysical mastery of the highest order he overthrows all the philosophy of the mind set up in Scotland by Dr. Reid and his illustrious pupil. What conclusion would many be apt to come to who have observed all this ? They would certainly be ready to argue that religion natural or revealed can stand no longer; and no doubt the representations given by Dr. Reid and Mr. Stewart of their true theory of the mind are but too much calculated to produce that opinion. Hence it is that injudicious friends are ofier.

more prejudicial to a good cause than avowed enemies. We cannot dwell

longer on the sub- ject here. We merely add that in our humble judgment the doctrines of professor Brown bear

MET

an infinitely more favorable aspect to true reE gion and morality, and human well-being, than those of professor Stewart*

METAPLASM, n. s. Lat. met aplasmus ; of Gr. pira, and ir\acau, fingo, in grammar, a change made in a word, by adding, retrenching, or altering a letter or syllable.

METAPONTJUM, or METAPONTUM, in an- cient geography, a town of Lucania, on the Sinus Tarentinus, west of Tarentum ; built by the Pylians, who returned from Troy. — Mela ; where Pythagoras is said to have taught in the time of Servius Tullius. — Livy ; and the people pretended to show, iu a temple of Mi- nerva, the tools with which Epeus built the •wooden horse of Troy. — Justin. It is now a tower, called Torre di Mare, in the Basilicata

METASTASIS, n.s. Gr. raaraa. Trans- lation or removal ; applied particularly to dis- eases.

His disease was a dangerous asthma ; the cause a metastasit, or translation of tartarous humours from his joints to his lungs. Harvey on Consumption.*

It is scarcely necessary here to point out examples of the metastasit of diseases, which are universally recognised • such are the severe attacks of disorders in the stomach, when the inflammatory gout sud- denly disappears from the extremities; the occur- rence of diarrhoea or dysentery, upon the sudden retrocession of the measles, or other extensive erup- tion of the skin ; the appearance of epileptic convul- sions upon the cessation of the haemorrhoidal, or other habitual discharge ; the inflammation of the testes in men, or of the mammae in women, which ensues, when that of the parotid glands in the disease called mumps, suddenly disappears ; and olber cases of a similar nature. Dr. A. Rees.

METASTASIO (Abbe1 Peter Bonaventure), whose real name was Trapassi, was born in Rome in 1698. His talent for poetry was first unfolded by reading Tasso; and he began to compose verses at ten years of age, which procured him the patronage of the celebrated Gravina. He was only fourteen when he composed his tra- gedy entitled II Giustino ; in which he appears too close and scrupulous an imitator of the Grecian drama. He lost his patron in 1717; who left him his heir, ‘ as being a young man of the most promising abilities.’ Metastasio, at the age of nineteen, being, by this

inheritance, su- perior to those wants which repress the exertions of genius, and to which men of abilities are too often subject, gave full scope to his inclination tor poetry. He began his dramatic career with fhe Didonne Abandonnata, which was acted at Naples in 1724; the music composed by Sarro. He soon acquired such celebrity, that, in 1729, he was invited to Vienna by Charles VI. ; who appointed him imperial poet, with a pension of 4000 florins. From that time some of his works were presented at every court festival. The courts of Vienna and Madrid vied with each other in the presents which they conferred upon him. This favorite of kings and of the muses was of a cheerful temper, and was exceedingly temoerate ; to this he was probably indebted for

uninterrupted health and the entire possession of his senses to old age. He was also extremely regular in his diet, sleep, &c. He had even his stated hours for versification ; to which he scru- pulously adhered, without waiting for the moment of poetical enthusiasm. He was attacked by a fever on the 2d of April, 1782, and died on the 12th, aged eighty-four. He left about 150,000 florins. He composed a great number of tragic operas, and several small dramatic pieces which have been set to music. Editions of them were printed in 4to. 8vo. and 12mo. ; and M. Richelet published a translation of them into French, in 12 vols. 12mo.

METATAR'SUS, n. s.) Gr. pira and rap-

METATAR'SAL, adj. \ abe, the TARSUS, which see. The middle of the foot ; belonging to this part of the foot.

The conjunction is called synarthrosis, as in the joining the tarsus to the metatarsut. Wiseman.

The bones of the toes, and part only of the meta- tarsal bones, may be carious ; in which case cut off only so much of the foot as is disordered.

Sharp's Surgery.

METATARSUS. See ANATOMY.

METARO, a river of Italy, in the marquisate of Ancona, which runs into the Adriatic near Ancona. It gave name to one of the eight departments into which the Papal dominions were divided, when they were revolutionised in March 1798, by the French, and erected into the short-lived Roman republic.

MUTATHE'SIS. Gr. juraOcinfe of pita, trans, and 0mc, position. Transposition ; a grammatical figure, whereby letters or syllables of a word are transposed, or shifted from their natural situation. Metathesis is also

used by medical writers for a change of place in such humors, or other diseased parts, as cannot be absolutely removed or sent off. Thus a metathesis of a cataract is a depression, so that it no longer shuts out the light.

METE, v. a.-v Sax. meethian ; Goth, and

ME'TER, n. s. f Swed. mata ; Belg. meaten ;

METE'WAND, « Lat. metior ; Gr. fiirplu; Heb.

METE'YARD. J mo. To measure ; reduce to measure ; give out or apportion by measure : a meter is a measurer : mete-wand and mete-yard, instruments of measurement.

Ye shall do no umighteousness in meteyard, weight, or measure. Lev. xix. 35.

I will divide Shechem, and mete out the valley of Succoth. Psalm.*

With what measure ye mtte, it shall be measured to you again. Matt. vii. 2.

A true touchstone, a sure metewand, lieth before their eyes. Ascham's Schoolmaster.

Though you many ways pursue To find their length, you'll never mete the true, But thus ; take all that space the sun Metes out, when every daily round is run. Creech.

To measure any distance by a line, apply some known measure wherewith to mete it. Holder

METEOROLOGY.

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METELLUS, the surname of the family of the Czecilii at Rome, the most celebrated of whom were, 1. A general who defeated the Achaeans, took Thebes, and invaded Macedo- nia, &c. 2. Q. Caecilius, who rendered himself illustrious by his successes against Jugurtha, king of Numidia, from which he was surnamed Numidicus. 3. Q. Csecilius, who was pontifex maximus, and saved from the flames the palla- dium, when Vesta's temple was on fire. He lost his sight and one of his arms in the action ; and the senate, to reward his zeal and piety, permitted him always to be drawn to the senate-house in a chariot, an honor which no one had ever before enjoyed. He also gained a great victory over the Carthaginians. 4. Q. Caecilius Celer, who distinguished himself by his spirited exertions against

Catiline. He married the sister of Clo- dius, who disgraced herself by her lasciviousness. He died A. A. C. 57. He was greatly lamented by Cicero, as one of the most faithful and valu- able friends. 5. L. Caecilius, a tribune in the civil wars of Caesar and Pompey. He favored the cause of Pompey, and opposed Caesar when he entered Rome with a victorious army. He refused to open the gates of Saturn's temple, in which were deposited great treasures ; upon which they were broken open by Caesar, and Metellus retired. 6. Q. Caecilius, a warlike general, who conquered Crete and Macedonia, and was sur- named Macedonicus. 7-10. He had four sons, of whom three were consuls, and the other ob- tained a triumph, all during their father's life- time. Cimber, a conspirator against Caesar, who s;ave the signal to murder him in the senate- house.

*METEMPSYCHO'SIS, n. *. > ˆ Gr. jitn/i-*

METEMPSYCHOSE', v. a. J if/riˆuaic, The

transmigration of souls from body to body. See below.

The souls of usurers after their death, Lucian af- firms to be metempsychosed, or translated into the bodies of asses, and there remain certain years, for poor men to take their pennyworth out of their bones. Peacham on Blazoning.

From the opinion of metempsychosis, or transmi- gration of the souls of men into the bodies of beasts, most suitable unto their human condition, after his death Orpheus the musician became a swan.

Browne's Vulgar Errours.

METEMPSYCHOSIS is formed of ptra., beyond and ffHJ/vxu, I animate. Pythagoras and his followers held, that after death men's souls passed into other bodies, of this or that kind, according to the life they had led. If they had been vicious, they were imprisoned in the

bodies of miserable beasts, there to do penance for several ages; at the expiration whereof they returned again to animate men. But, if they lived virtuously, some happier brute, or a human creature, was to be their lot. Pythagoras is said by some to have borrowed the notion of a metempsychosis from the Egyptians ; by others from the ancient Brachmans. It is still retained among the idolaters of India and China; and makes the principal foundation of their religion. So extremely are they bigoted to it, that they not only forbear eating any thing that has life, but many of them even refuse to defend them- selves from wild beasts. They burn no wood, lest some little animalcule should be in it ; and will redeem from the hands of strangers any animals that they find ready to be killed.

See PYTHAGORAS.

METEMPTOSIS, from fura, after, and irurru, I fall, a term in chronology, expressing the solar equation necessary to prevent the new moon from happening a day too late ; by which it stands contradistinguished from Proemptosis, which signifies the lunar equation necessary to prevent the new moon from happening too soon. The new moon's running a little backwards, that is, coming a day too soon at the end of 312 years and a half; by the proemptosis, a day is added every 300 years, and another every 2400 years : on the other hand, by the metemptosis, a bissextile is suppressed each 134 years; that is, three times in 400 years. These alterations are never made but at the end of each century ; that period rendering the practice of the calendar easy. There are three rules for making this ad- dition or suppression of the bissextile day, and for changing the index of the epacts. 1. When there is a metemptosis without a proemptosis, the next following, or lower index, must be taken. 2. When there is a proemptosis without a metemptosis, the next preceding or superior index is to be taken. 3. When there are both a metemptosis and a proemptosis, or when there is neither the one nor th« other, the same index is preferred. Thas, in 1600, we had D : in 1700, by reason of the metemptosis, C was taken : in 1800 there were both a proemptosis and metemp- tosis ; so the same index was retained. In 1900 there will be a metemptosis again, when B will be taken ; whicli will be preserved in 2000, be- cause there will then be neither the one nor the other. This is as far as we need to compute for it : but Clavius has calculated a cycle of 301,800 years ; at the end of which period the same in- dices return in the same order. See EPACT

METEOROLOGY.

METEOR, n. s. "1 Fr. meteore ; Gr. METEOR'ICAL, adj. 1 ptrtupa, a / utrtwpoc, METEOROLOGICAL, [high. Any light and METEOROL'OGIST, n. s. [fleeting aerial body; a METEOROL'OGY, j luminous body of this

METE'OROUS, adj. J kind : meteorical, re- sembling a meteor : meteorological is, relating to the doctrine of meteors : a meteorologist, he who studies or is a proficient in that doctrine : meteorology, the science which treats of it, see

below, meteorous is, having the nature of a meteor.

Looked to or red, or pale, or sad, or merrily ? What observation madest thou in this case, Of his heart's meteors tilting in his face?

Shakspeare.

She began to cast with herself from what coast this blazing star must rise upon the horizon of Ire- land : for there had the like meteor strong influence before. Baem'f Henry VII.

• *Eft*

These burning fits but meteor be, Whose matter in thee soon is spent :*

Thy beauty, and all parts which are in thee, Are an unchangeable firmament. Donne.

It is no otherwise in the firmament of the church : how many have there been, that have seemed eter- nally fixed in that high sphere, which have proved no other than base meteors, gilded with fair beams ! ihey appeared stars ; their substance was but slime.

Bp. Hall.

In a third, I see a resemblance of that meteorical light, which appears in moorish places, that seems fire, but is nothing but a slimy glittering exhalation.

Id.

The meteorologist observe, that, amongst the four elements which are the ingredients of all sublunary creatures, there is a notable correspondency.*

Howel'i Vocal Forest. From o'er the hill

To their first station, all in bright array, The cherubim descended, on the ground Gliding meteorous, as evening mist Risen from a river. Milton' Paradise Lost. In animals we deny not a natural meteorology, or innate presentation of wind and weather. Brovme. Others are considerable in meteorological divinity.*

Id.

Why was I raised the meteor of the world, Hung in the skies, and blazing as I travelled, Till all my fires were spent ; and then cast

downward To be trod out by Caesar 1 Dryden. All for Love.

0 poet, thou hadst been discreeter, Hanging the monarch's hat so high,

If tkou hadst dubbed thy star a meteor, Which did but blaze, and rove, and die.

Prior.

METEOROLOGY, from Gr. /if rswpoc, high ; or rather from /wra, denoting change of place, and a«pw, to lift up (it is worth remarking also that ptTtupoi is often used by the Greek writers, both sacred and profane, to signify being agitated or tossed about, as a ship at sea), is that science which professes to treat of the general pheno- mena of the atmosphere ; and has by some writers been considered as embracing its entire composition, changes, and appearances. Par- ticular classes of those appearances which strike the eye were long emphatically called meteors, Gr. prtwpa, Lat. impressiones, as making signs or impressions on the air; and gave their name to the whole doctrine of aerial phenomena, which has hence been treated as one and the same throughout. It is quite evident that we might as reasonably srppose every doctrine that can be expressed or impressed upon paper as one and the same.

This is therefore one of those terms of science, having their origin partly in the observations and apprehensions of the vulgar, and partly in the too early attempt to generalise that marks a par- ticular stage in the progress of all the sciences, which it is the tendency of experiment and of a maturer state of knowledge to explode. Cer- tainly there is no science of meteorology if there be any distinction worth retaining in the sciences; and if some of the most brilliant discoveries of modern science are worth any thing : what has been often thus denominated has been demon- strated to belong to ELECTRICITY, to MAGNET- ISM, or ELECTRO-MAGNETISM, in great part ;

and still more to CHEMISTRY, to COMBUSTION, to OPTICS or to PNEUMATICS; to the laws ot VISION, or to the doctrine of LIGHT and HEAT It is impossible indeed to treat of these topic? scientifically, without exhibiting the causes and laws of almost every phenomenon which mete- orology has been thought to include ; and it will eventually, we have no doubt, be felt as ab- surd to look for an account of these widely dif- ferent operations of nature under such a general head, because they appear in or through the medium of the atmosphere, as under the article ASTRONOMY itself, because a large portion of them have been long termed ‘ falling stars.’

Yet the history of what has been called mete- orology has some points of great interest about it ; and like alchemy and judicial astrology it will be found to have led forward some noble spirits to distinguished and most important at- tainments in science. For this reason we shall give a brief historical account of its progress, and present state ; the best modern

instruments employed in meteorological observations; and a list of the singular productions called meteoro- lites, or meteoric stones.

SECT. I. PROGRESS OF OPINION ON THE COMPOSITION OF THE ATMOSPHERE.

1 . The atmosphere was so denominated by the Greeks (ar/ioc, a vapor, and oaipa) from the quantity of vapor combined in it. Aristotle, it is well known, considered it a species of element occupying a middle place between fire and water : mingled with dry exhalations he states it to produce thunder, lightning, and wind ; and with moist exhalations, rain, snow, and hail. The ancients seem to have had a general belief that atmospheric air was a constituent principle of other bodies, and that they were mutually convertible into each other : thus Lucretius, as translated by Good, says

All that pours profuse From things, perpetual, the vast ocean joins Of air sublime ; which if to things again Paid not, thus balancing the loss sustained, All into air would dissipate and die. Hence, born from things, to things air still returns Ceaseless, as prove their fluctuating forms.

To the physical properties of the atmosphere, however, the actual observations of the ancients were confined : its chemical and mechanical properties cannot be said to have been the sub- jects of experiment until the beginning of the seventeenth century. Galileo led the way by pointing out its weight, a subject to which Tor- ricelli and Pascal directed their attention : its density and elasticity were ascertained by the Florentine academicians, and still more accurately by Mr. Boyle, who fully demonstrated its essen- tial connexion with combustion, the wants of animal life, &c. Together with Hooke, Newton, and Durham, he also considered its relation to sound, to light, and to electricity. Sir Isaac Newton explained the effect produced upon it by moisture ; and on this foundation Halley be- gan to explain the changes in its weight as indi- cated by the barometer. But the former had some curious opinions as to the origin of the at- mosphere: as he supposed the planets generally, to

be influenced by comets; so from the tails of the latter he thought that some of the finer parts of our atmosphere were produced. He even supposed, that from these bodies a quantity of water, imagined to be wasted in the various operations of nature, might be supplied.

Mr. Boyle, and his contemporaries, put it be- yond doubt that the

atmosphere contained two distinct substances. 1. An elastic fluid distinguished by the name of air. 2. Water in a state of vapor. Besides these two bodies, it was sup- posed that the atmosphere contained a great va- riety of other substances, which were continually mixing with it from the earth, and which often altered its properties, and rendered it noxious or fatal. But to Mayow, in particular, who suc- ceeded Boyle, we may certainly trace the nucleus of all the great modern discoveries in the ana- lysis of atmospheric air. He rejected the use of the air-pump, and made choice of glass jars, inverted in water, as the best method of confining gases. From the facts discovered by Boyle, he argues, that, since a lighted candle is extinguished much sooner in an exhausted receiver than in the same when filled with air, there must be some- thing contained in the atmosphere necessary to the continuance of flame ; and that a candle, in confined air, is not suffocated by its own fuligi- nous exhalations, but dies away for want of an aerial pabulum. The necessity of air to com- bustion is proved, says he, from the impos- sibility of kindling a combustible body in vacuo by the concentrated solar rays, or by any other method. Having established this position, he proceeds to infer that it is not the whole air but only its more active particles, that are capable of supporting flame, because a candle goes out in confined air, while yet the greatest part of j the electric fluid remains unconsumed. Also, since sulphur, when mixed with nitre, becomes capable of in- flammation in vacuo, or even under water, it fol- lows that nitre and atmospherical air contain some substance in common, which he calls fire-air particles (particulse igneo-aereae). He next determined the analogy between flame and ani- mal life; and showed, that each depended for their continuance on a supply of fire-air par- ticles : that there was an actual consumption of air in combustion and respiration he proved, by the rise of water in the jars in which a live ani- mal or a lighted candle was enclosed ; and that the loss of "bulk was owing to the abstraction of fire-air, appeared from the inability of the resi- due to support animal life. He inferred, also, that the fire-air particles were the heaviest part of atmospheric air, because, if two mice or two candles were confined in a tall cylindrical jar, inverted in water, so as that one should be near the upper part of the vessel, and the other at the bottom, the upper one, whether a candle or ani- mal, would be extinguished some time before the lower one. With regard to the proportion of fire- air in the atmosphere, he only observed, that air rendered unfit for combustion by the breathing of an animal, lost about one-fourteenth of its bulk; at the same time remarking, that there was probably only a part of the fire-air consumed : he afterwards, indeed, found that the solution of

iron in aquafortis occasioned a diminution of about 25 per cent, in atmospheric air; but though, in this case he produced nitrous gas, and thus abstracted the oxygen of the atmo- sphere, yet, as he himself draws no conclusions from it, we should rather consider this as an ac- cident than a

discovery. Mayow never obtained the fire-air of the atmosphere in a separate state, and therefore was unable to confirm his analysis of atmospheric air by the synthetical proof; nevertheless, he was warranted by a very high probability in affirming that the atmosphere con- sisted of two kinds of air, of which the igueo- aerial was in the proportion of at least one to thirteen ; that it exceeded the other part in its spe- cific gravity, and was absolutely essential to the continuance of flame and animal life. The in- fluence, however, of the prevalent hypothesis was at that time too strong to be shaken by sober experiment ; and the labors and very name of Mayow shortly sunk into oblivion, until in 1744 Dr. Priestley's discovery of what he called dephlogisticated air, accidentally revived them.

Next follow Hales, Black, Priestley, Scheele, and Lavoisier, in this department of science ; but we have already detailed their labors in the article AIR. The 'foul air' of Scheele is the phlogisticated air of Dr. Priestley and the azotic gas of the modern nomenclature. His empyreal air is the same with the dephlogisticated air of Priestley, or the modern oxygen gas.

Lavoisier, while Scheele was occupied with his experiments, was assiduously employed on the same subject, and was led by a different road to precisely the same conclusion. By oxidising mercury in a vessel filled with common air, and heated to the boiling point of mercury, he ab- stracted the greater part of its oxygen gas; and, by heating the red oxide formed, he reconverted it into mercury, and extricated a quantity of oxygen. The residuum in the first experiment possessed the properties of azotic gas ; but, when the oxygen gas extricated from the mercury was added to it, the mixture assumed again the pro- perties of common air. Hence he concluded that air is composed of azotic gas and oxygen ; and from a variety of experiments he determined the proportions to be seventy- three parts of azotic gas and twenty-seven parts of oxygen gas. He stated, too, that when air is diminished by liquid sulphurets, metals, &c., the oxygen gas which is abstracted combines with the sulphurets, &c., and converts them into acids or oxides according to their respective nature.

The general composition of the atmosphere having thus become known, it became important to determine the relative quantity of oxygen in a given portion of air, which gave rise to the invention of the EUDIOMETER. See our article of that name.

Mr. Cavendish first brought the eudiometer to such a state of precision as to be enabled to ascertain correctly the constituents of air. His method was to put 125 measures of nitrous gas into a glass vessel, and to let up into it very slowly 100 measures of the air to be examined, agitating the vessel containing the nitrous gas during the whole time. The diminution of bulk when the process was conducted in this way was

almost uniform. The greatest was 110, the least 106-8 ; the mean 108‘2. The variation he found to depend, not upon the air examined, but upon the state of the water in which the experiment was made. If this experiment was reversed, by letting up the nitrous gas to common air, he used 100 measures of each, and the diminution in that case was only ninety measures. This regular diminution of the bulk of all the different specimens of common air examined, induced Mr. Cavendish to conclude that the proportion between the oxygen and azote in common air does not vary. To find the absolute quantity of oxygen in air, he mixed together oxygen gas and azote in various proportions, and at last found that a mixture of ten measures of the purest oxygen which he could procure with thirty-eight measures of azote, was just as much diminished by the nitrous gas as the same bulk of common air. Hence he concluded that air is composed of ten parts by bulk of oxygen and thirty-eight of azote, which gives us for its composition per cent.

79-16 azote.

20-84 oxygen

100-00

or very nearly twenty-one per cent, of oxygen gas (Philosophical Transanctions, 1808, p. 107). Other philosophers, who did not pay Mr. Ca- vendish’s rigid attention to precision, obtained variable results from the nitrous gas eudiometer. Most of the circumstances which occasion the variation were pointed out by Cavendish ; but they seem to have escaped the observation of succeeding chemists.

Humboldt’s attempt to render the eudiometer of Fontana accurate did not succeed ; but Mr. Dalton explained the anomalies in a very lumin- ous manner. According to this philosopher, oxygen gas and nitrous gas are capable of uniting in two proportions : twenty-one mea- sures of oxygen gas uniting either with thirty-six measures of nitrous gas, or with twice 36, = 72 measures, and both of these compounds are soluble in water. If the tube be wide, a con- siderable portion of nitrous gas comes at once in contact with the oxygen. Hence the latter gas combines with a maximum of nitrous, espe- cially if agitation be employed. In a narrow tube the oxygen combines with the minimum of nitrous gas, provided no agitation be employed, and the residue be poured soon into another ves- sel. When intermediate proportions are used, the absorption will be immediate. Mr. Dalton

recommends a narrow tube ; the nitrous gas is only to be in the proportion requisite to form the minimum combination ; no agitation is to be employed : and, when the diminution is com- pleted, the gas must be transferred to another tube. To 100 measures of air add about thirty- six of nitrous gas ; note the diminution of bulk, and multiply it by seven-nineteenths ; the product gives the bulk of oxygen in the air examined.

In order to get rid of the anomalies which had perplexed former experimenters, Sir Humphry Davy proposed to employ the nitrous gas in a different state. He caused sulphate or muriate of iron to absorb this gas tˆ saturation, and em-

ployed the dark brown liquid thus obtained to deprive air of its oxygen. A small graduated glass tube, filled with the air to be examined, is plunged into the nitrous solution, and moved a little backwards and forwards. The whole of the oxygen is absorbed in a few minutes The state of greatest absorption ought to be marked, as the mixture afterwards emits a little gas, which would alter the result. By means of this Sir Humphry examined the air at Bristol, and found it always to contain about 0-21 of oxygen. Air sent to Dr. Beddoes from the coast of Guinea gave exactly the same result.

It appears, whatever are the varieties of this and other instruments employed, that the result is pretty uniform : they all indicate that common air consists very nearly of twenty-one parts of oxygen, and seventy-nine of azote. Gay Lussac examined air brought from the height of more than 21,000 feet above Paris, and found it pre- cisely the same as the air at the earth's surface.

' But twenty-one cubic inches of oxygen gas,' says Dr. Thomson, 'weigh 9-14 grains, and seventy-nine inches of azote weigh 23'9686 grains; these added together amount to 31-1086 grains ; which ought to be the weight of 100 inches of common air. But this is somewhat greater than the weight of 100 inches of air, ac- cording to Sir John Shuckburgh Evelyn's ex- periment, who found it only 31-012? grains. The difference, however, is not great, and is pro- bably owing to a small error in the specific gra- vities of the different gases. According to this estimate, 100 parts of air are composed by weight of

22-91 oxygen 77-09 azote

100-00

2. Of the aqueous parts of the atmosphere. — Dr. Hooke, and afterwards Dr. Halley, con- ceived that water may be dissolved in air in the manner that salt is held in solution by water. M. Le Roy endeavoured to confirm

this in 1751, and about the same time Dr. Hamilton of Dub- lin espoused the same theory. Deluc afterwards suggested, that water more probably and gene- rally exists in air in the state of vapor. But we are indebted to Mr. Dalton for the first informa- tion on the subject that can be called precise. In the Manchester Memoirs, v. p. 517, he thus states his opinions : —

(1.) It cannot be doubted, he contends, that the water which exists in air, is derived originally from the waters on the surface of the earth, which are exposed to the action of the at- mosphere. Accordingly we find that water, when exposed to the air, suffers a gradual dimi- nution of bulk, and at last disappears altogether. This diminution of the water may be owing, either to its gradual solution in air, or to its con- version into vapor. The last is the common opinion, as the phenomenon is in common language ascribed to the evaporation of the water. When water is placed in an exhausted receiver, it diminishes in bulk even more rapidly than in the open air. In this case, as no air is- present, we can only ascribe the diminution

of bulk to the conversion of the water into vapor. Accordingly we find, upon examination, that the receiver is actually filled with water in the state of vapor. The presence of this vapor very soon, by its elasticity, puts an end to the evaporation of the water. Now, since water disappears equally whether air be present or not, and exactly in the same manner, it is reasonable to ascribe its disappearing in both cases to the same cause. But in the exhausted receiver it is converted into vapor. Hence it is probable that it is converted into vapor also in the open air ; and, if so, it must exist in air in the state of vapor.

(2.) If the disappearing of water exposed to the open air were owing to solution, and not to evaporation, it ought certainly to disappear more rapidly when it is exposed to the action of a great quantity of air than when to a small quantity ; for the quantity of any body dissolved is always proportional to the quantity of the sol- vent. But the very contrary is what actually takes place with respect to the water contained in the air. Saussure has proved that water evaporates much faster at great heights than at the surface of the earth, even when th« tempe- rature and the moisture of the air in both places are the same. By comparing a set of experi- ments made upon the Col-du-Geant, at the height of 1 1 ,275 feet above the level of the sea, with a similar set made at Geneva, 1324 feet above the level of the sea, he ascertained, that, supposing the temperature and the dryness of the air in both places the same, the quantity of water evaporated at Geneva is to that evapo- rated on the Col-du-Geant in the same time and same

circumctances as 37 to 84, or nearly as 3 : 7. Now the air on the Col-du-Geant is about one-third rarer than at Geneva; so that the diminution of about one-third in the density of the air more than doubles the rate of evapora- tion. This is precisely what ought to be the case, provided the water which disappears mixes with the air in the state of vapor only ; but the very contrary ought to hold, if the water disap- peared in consequence of a solvent power in the air.

(3.) It has been demonstrated by Dr. Black, that vapor is water combined with a certain dose of caloric. Consequently, when water is con- verted into vapor, a certain portion of caloric combines with it and disappears. If, therefore, there is the same waste of caloric whenever water passes from a liquid state, and enters into the atmosphere as a component part, we have ieason to conclude that it enters into the atmo- qjhere only in the state of vapor. But it is a well-known fact, that cold is always generated during spontaneous evaporation ; that is to say, that the water as it disappears carries off with it a quantity of caloric. It is well known that, when a wet body is exposed to the air, its tem- perature is lowered by the evaporation which takes plate upon its surface. Hence, in warm countries, water is cooled by putting it into porous vessels, and exposing it to the air. The water penetrates through the vessels, evaporates from their surface, and carries off so much heat, as pven in some cases to freeze the water in the

vessel. Saussure observed, that the evaporation from the surface of melted snow caused it to freeze again when the temperature of the sur- rounding air was 4-5° above the freezing point. Dr. Black has rendered it probable that the quantity of caloric which disappears during spontaneous evaporation is as great as that which is necessary to convert water into steam. We have a right then to conclude that water, when it evaporates spontaneously, is always con- verted into vapor, which of course is only in that state that it enters into the atmosphere.

(4.) Mr. Dalton has demonstrated that the water which exists in air possesses precisely the same degree of elasticity that it does when in the state of a vapor in a vacuum at the same tempe- rature. Hence it follows irresistibly that it exists in air, not in the state of water, but of an elastic fluid or vapor. We are authorised to conclude, then, that the water which exists in the atmosphere is in the state of vapor. This vapor is held in solution by the air precisely as one species of gas is by another. Hence the reauon why it is so difficult to separate it, and why it is capable of undergoing a consider- able degree of compression without assuming the form of a liquid.

Various attempts hare been made to measure the quantity of water contained in air ; but Saussure was the first who attained any thing like

precision. This philosopher states, in his Hygro- metrical Essays, that an English cubic foot of air, when saturated with water at the tempe- rature of 66°, contains only about eight grains troy of that liquid, or about one-sixty-seventh of its weight. But the experiment of Mr. Dalton was susceptible of more precision. As the greatest part of the water of the atmosphere is in the state of vapor, the elasticity of which depends upon the temperature, it is obvious that this elasticity, provided it can be ascertained, must measure the quantity of vapor which exists in the atmosphere, the temperature being the same. The elasticity or force of vapor, was de- termined by this ingenious philosopher in the following manner, which had been originally contrived by Le Roy : he took a tall cylindrical glass jar, dry on the outside, and filled it with cold spring water fresh from the well : if dew was immediately formed on the outside, he poured the water out, let it stand the while to increase in temperature, dried the outside of the glass well with a linen cloth, and then poured the water in again. This operation was to be con- tinued till the dew ceased to be formed, and then the temperature of the water was observed ; and opposite to it in the table was found the force of vapor in the atmosphere. This experiment must be conducted in the open air, or at a window ; because the air within is generally more humid than that without. Spring water is generally about 50°, and will mostly answer the purpose of the three hottest months in the year: in other seasons an artificial cold mixture is required. From Dalton's experiments it followed that the quantity of vapor in the atmosphere is variable in quantity. In the torrid zone its force seems to vary from 0-6 to one inch of mercury. In Britain it seldom amounts to O1ˆ but is often as

great as 0'5 during summer. In winter it is often as low as O'l of an inch of mer- cury. Mr. Dalton supposes that the medium quantity of vapor held in solution at once in the atmosphere may amount to about one-seventieth of its bulk.

3. Of the carbonic acid gas of the atmosphere. — The "existence of carbonic acid gas, as a con- stituent of the atmosphere, was observed by Dr. Black immediately after he had ascertained the nature of that fluid.

*' If we expose,' says Dr. Thomson, * a pure alkali or alkaline earth to the atmosphere, it is gradually converted into a carbonate by the ab- sorption of carbonic acid gas. This fact, which had been long known, rendered the inference, that carbonic acid gas existed in the atmosphere, unavoidable, as soon as the difference between a pure alkali and its carbonate had been ascer- tained to depend upon that acid. Not only alkalies and alkaline*

earths absorb carbonic acid when exposed to the air, but several of the metallic oxides also. Hence the reason that we so often find the native oxides in the state of car- bonates. Thus rust is always saturated with carbonic acid.

‘ Carbonic acid gas not only forms a consti- tuent part of the atmosphere near the surface of the earth, but at the greatest heights which the industry of man has been able to penetrate. Saussure found it at the top of Mont Blanc, the highest point of the old continent ; a point covered with eternal snow, and not exposed to the influence of vegetables or animals. Lime-water, diluted with its own weight of distilled water, formed a pellicle on its surface after an hour and three quarters exposure to the open air on that mountain ; and slips of paper, moistened with pure potash, acquired the property of effer- vescing with acids after being exposed an hour and a half in the same place. Now this was at a height no less than 15,668 feet above the level of the sea. Humboldt has more lately ascertained the existence of this gas in air brought by Mr. Gar- nerin from a height not less than 4280 feet above the surface of the earth, to which height he had risen in an air-balloon. This fact is a sufficient proof that the presence of carbonic acid in air does not depend upon the vicinity of the earth. The difficulty of separating this gas from air has rendered it difficult to determine, with accuracy, the relative quantity of it in a given bulk of air. From the experiments of Humboldt, it appears to vary from O’OOS to O’Ol.’

Dalton’s experiments give a much smaller quantity. He found, that if a glass vessel filled with 102,400 grains of rain water be emptied in the open air, 125 grains of lime water be poured in, and the mouth then closed ; by sufficient time an,d agitation the whole of the lime-water is just saturated with the carbonic acid which it finds in the enclosed volume of air : but 125 measures of lime-water require seventy measures of car- bonic acid gas to saturate them. Hence he con- cludes that air contains only ˆth of its bulk of carbonic acid. From the experiments of Mr. Cavendish, however, we learn that lime-water is not capable of entirely depriving air of its carbonic acid. A portion still remains, which can only

be separated either by milk of lime, or by re- peated washings with new doses of lime-water. Hence the quantity of carbonic acid in air must be greater than it was found by Mr. Dalton. The three great component parts of the atmo- sphere are thus exhibited by Mr. Thomson : —

98-9 air. 1-0 vapor. 0-1 carbonic acid.

This last writer notices, in addition, the pre- sence of what he calls ‘ unknown bodies ‘ in the atmosphere, or respecting which very little satis- factory is known, as we are not in possession of instruments sufficiently

delicate to ascertain their presence. We can indeed detect several of them actually mixing with the air, but what be- comes of them afterwards we are not able to say. Dr. Thomson thus enumerates them: — 1. Hy- drogen gas is said to have been found in air situated near the crater of volcanoes, and it is very possible that it may exist always in a very small proportion in the atmosphere. From the experiments of Gay Lussac and Humboldt, it ap- pears that air does not contain so much as fj>h parts of hydrogen. 2. Carbureted hydrogen gas is often emitted by marshes in considerable quan- tities during hot weather. But its presence has never been detected in air ; so that in all proba- bility it is again decomposed by some unknown process. 3. Oxygen gas is emitted by plants during the day. We shall find reason to con- clude that this is in consequence of the property which plants have of absorbing and decomposing carbonic acid gas. Now, as this carbonic acid is formed at the expense of the oxygen of the at- mosphere, as this oxygen is again restored to the air by the decomposition of the acid, and as the nature of atmospheric air remains unaltered, it is clear that there must be an equilibrium be- tween these two processes ; that is to say, all the carbonic acid formed by combustion must be again decomposed, and all the oxygen abstracted must be again restored. The oxygen gas, which is thus continually returning to the air, keeps its component parts always at the same ratio. 4. The smoke and other bodies which are continu- ally carried into the air by evaporation, &c., are probably soon deposited again, and cannot, therefore, be considered, with propriety, as form- ing parts of the atmosphere

‘ But ˆthere is another set of bodies which are occasionally combined with air, and which, on account of the powerful action which they pro- duce on the human body, have attracted a great deal of attention. These are sometimes known by the name of matters of contagion. That there is a difference between the atmosphere in dif- ferent places, as far as respects its effects upon the human body, has been considered as an established point in all ages. Hence some places have been celebrated as healthy, and others avoided as pernicious to the human constitution. It is well known that in pits and mines the air is in such a state as to suffocate, almost instanta- neously, those who attempt to breathe in it. Some places are haunted by peculiar diseases. It is known that those who frequent the apar’ments of persons ill of certain maladies are extremely

**pt to catch the infection ; and in prisons, and other places where crowds of people are confined together, when diseases once commence, they are wont to make dreadful havoc. In all these cases it has been supposed that a*

certain noxious matter is dissolved by the air, and that it is the action of this matter which produces the mis- chief. This noxious matter is in many cases readily distinguished by the peculiarly disagree- able smell which it communicates to the air. No doubt this matter differs according to the dis- eases which it communicates, and the substance from which it has originated.'

Morveau, on attempting to ascertain its na- ture, found the chemical tests hitherto discovered altogether insufficient for that purpose. ' He has put it beyond a doubt, however,' says Dr. Thom- son, ' that the noxious matter which rises from putrid bodies is of a compound nature; and that it is destroyed together by certain agents, parti- cularly by those gaseous bodies which readily part with their oxygen. He exposed air infected by putrid bodies to the action of various sub- stances; and he judged of the result by the effect which these bodies had in destroying the fetid smell of the air. The following is the result of his experiments: — 1. Odorous bodies, such as benzoin, aromatic plants, &c., have no effect whatever. 2. Neither have the solutions of myrrh, benzoin, &c., in alcohol, though agitated in infected air. 3. Pyroligneous acid is equally inert. 4. Gunpowder, when fired in infected air, displaces a portion of it ; but what remains still retains its fetid odor. 5. Sulphuric acid has no effect ; sulphureous acid weakens the odor, but does not destroy it. 6. Vinegar diminishes the odor, but its action is slow and incomplete. 7. Acetic acid acts instantly, and destroys the fetid odor of infected air completely. 8. The fumes of nitric acid, first employed by Dr. Carmichael Smith, are equally efficacious. 9. Muriatic acid gas, first pointed out as a proper agent by Mor- veau himself, is equally effectual. 10. But the most powerful agent is oxymuriate acid gas (chlo- rine), first proposed by Mr. Cruikshanks, and now employed with the greatest success in the British navy and military hospitals.'

For the more modern opinions upon the sub- ject of the composition of the atmosphere, the reader ;s referred to the article AIR.

SECT. II. — OF THE WEIGHT AND PRESSURE OF THE ATMOSPHERE.

Meteorology has been largely conversant with the weight and pressure, or elasticity, of the atmo- sphere. It appears to be a general law of elastic fluids, that their pressure on any given surface is diminished as their bulk is increased. If, therefore, the column of mercury in the vacuum of an air-pump were sixty inches high, the air would be reduced to half its natural bulk ; and, for the same reason, the pressure of a column of thirty inches of mercury in the open air will re- duce any portion of air to half its bulk, since the natural pressure of the atmosphere, which is equal to that of about thirty inches of mercury, is doubled by the addition of an equal pressure. In this manner the density of the air in a diving- bell is doubled at

the depth of thirty-four feet

below the surface of the water, and tripled at the depth of sixty-eight feet. This law was dis- covered by Dr. Hooke ; he found, however, that when a very great pressure had been applied, so that the density became many times greater than in the natural state, the elasticity appeared to be somewhat less increased than the density.

Not only the common air of the atmosphere but also steams and vapors of all kinds, appear to be equally subject to this law : they must, however, be examined at temperatures sufficient to preserve them in a state of elasticity; for example, if we wished to determine the force of steam twice as dense as that which is usually produced, we should be obliged to employ a heat 30° or 40° above that of boiling water: we should then find that steam of such a density as to support, when confined in a dry vessel, the pressure of a column of thirty inches of mercury, would be reduced to half its bulk by the pres- sure of a column of sixty inches. But, if we in- crease the pressure much beyond this, the steam would be converted into water.

That the air of the atmosphere possesses weight, may be shown by weighing a vessel which has been exhausted by the air-pump, and weighing it a second time after allowing the air to enter. In this manner we also ascertain its specific gravity, even if the exhaustion is only partial, provided that we know the proportion of the air left in the vessel to that which it ori- ginally contained. The pressure derived from the weight of the air is also the cause of the ascent of hydrogen gas, or of any portion of air rarefied by heat ; this effect is made conspicuous when either the hydrogen gas, or the heated air, is confined as in a balloon. The diminution of the apparent weight of a body, by means of the pressure of the surrounding air, is also shown by the destruction of the equilibrium between bodies of different densities, upon their removal into the vacuum of an air-pump.

This combination of weight and elasticity in the atmosphere, induces the supposition that its upper parts are much more rare than those which are near the earth, since the density is every where proportional to the whole of the superin- cumbent weight. The weight of a column of air one foot in height is jsfogth of the pressure; consequently that pressure is increased jsj^th by the addition of the weight of one foot, and the next foot will be denser in the same proportion, since the density is always proportionate to the pressure : the pressure thus increased will there- fore still be equal to 28,000 times the weight of the next foot. The same reasoning may be con- tinued without limit ; and it may be shown, that while we suppose the height to vary by any uni- form steps, as by distances of a foot or a mile, the pressures and densities will increase in continual proportion ; thus, at the height of about 3000 fathoms, the density will be about half as great as

at the earth's surface ; at the height of 6000 one-fourth ; at 9000 one-eighth as great. Hence it is inferred that the height in fathoms may be readily found from the logarithm of the number expressing the density of the air : for the loga- rithm of the number 2, multiplied by 10,000, is 3010, the logarithms of numbers always increasing

vn continual proportion, when the numbers are taken larger and larger by equal steps. And thus we obtain an easy method of determining the heights of mountains : for if a bottle of air were closely stopped on the summit of a mountain, and, being Drought in this state into the plain below, its mouth were inserted into a vessel of water or of mercury, a certain portion of the liquid would enter the bottle : this being weighed, if it were found to be one-half of the quantity that the whole bottle would contain, it might be concluded that the air.on the mountain possessed only half of the natural density, or that its height was 3000 fathoms. Thus also it appears that the height of a column of equal density with any part of the atmosphere, equivalent to the pressure to which that part is subjected, is every where equal to about 28,000 feet. Various corrections, however, are necessary for ascertain- ing the heights of mountains with all the pre- cision that the nature of this kind of measurement admits, involving a previous knowledge of the effects of heat, and of the nature of the ascent of vapors.

On the same principles we may ascertain the height to which a balloon will ascend, if we are acquainted with its bulk and weight : thus sup- posing its weight 500 Ibs., and its bulk such as to enable it to raise 300 Ibs. more, its specific gravity must be five-eighths as great as that of the air, and it will continue to rise until it reaches the height at which the air is of the same density : but the logarithm of eight-fifths multi- plied by 10,000 is 2040; and this the number of fathoms contained in the height, which will, therefore, be a little more than two miles and a quarter. It may be found, by pursuing the cal- culation, that at the distance of the earth's semi-diameter, or nearly 4000 miles above its surface, the air, if it exist, will become so rare, that a cubic inch would occupy a space equal to the sphere of Saturn's orbit : if, on the 'other hand, there were a mine forty-two miles deep, the air at the bottom would become as dense as quick- silver.

All bodies existing on or near the earth's sur- face, therefore, may be considered as subjected to the pressure of a column of air 28,000 feet high, supposing its density every where equal to that which it possesses at the earth's surface, and which is usually such, that 100 wine gallons weigh a pound avoirdupois, creating a pressure equal to that of thirty inches of

mercury, or thirty-four feet of water, and which amounts to fourteen pounds and three quarters for each square inch. This pressure acts in all directions on every sub- stance exposed to it : but, being counterbalanced by the natural elasticity of these substances, it produces in common no apparent effect. When, however, by any mears the pressure of the air is removed from one side of a body, while it con- tinues to act on the other, its operation becomes extremely evident. Thus, when two hollow he- mispheres, in contact with each other, are ex- hausted of air, they are made to cohere with great force : Otto Guerike, of Magdeburg, con- structed two such hemispheres, of sufficient mag- nitude to withstand the draught of the emperor's six coach horses, pulling with all their force to

separate them. Hence tney are sometimes called the Magdeburg hemispheres. By a similar pressure, a thin square bottle will, when it is suffi- ciently exhausted, be crushed, and a bladde' may be torn with a loud noise : and the hand being placed on the mouth of a vessel connected with the air pump, it is fixed to it very forcibly, when the exhaustion is performed by the pressure of the air on the back of the hand ; the fluids also, which circulate in the blood-vessels of the hand, are forced towards its lower surface, and the effect which is called suction is produced. On this principle cupping-glasses are made to act : partial exhaustion is procured by means of the flame of tow, which heats the air, expelling a great part of it ; and the remainder, when it cool% becomes rarefied,

Galileo first explained the nature of suction from the effects of the pressure of the atmo- sphere ; and Torricelli confirmed his doctrines by employing a column of mercury, of sufficient height to overcome the whole pressure of the at- mosphere, and to produce a vacuum in the upper part of the tube containing it. In sucking up a fluid through a pipe, with the mouth or other- wise, the pressure of the air is but partially re- moved from the upper surface of the fluid, and it becomes capaBte of ascending to a height which is determined by the difference of the den- sities of the air within and without the cavity con- cerned ; thus, an exhaustion of one-fourth of its air would enable us to raise water to the height of eight feet and a half, and mercury to seven inches and a half above the level of the reservoir from which it rises.

But when a tube of glass, about three feet long, closed at one end and open at the other, is filled with mercury, and them immersed in a basin of the same fluid, the pressure of the atmosphere is wholly removed from the upper surface of the mercury in the tube, while it continues to act on the mercury in the basin, and by its means on the lower surface of the column in the tube. If such a tube be placed under the receiver of an air-pump, the mercury will subside accordingly as the pressure of the atmosphere is diminished ; and, if the exhaustion be rendered perfect, it will descend very

nearly to the level of the open basin or reservoir. When the air is readmitted the mercury usually rises, on the level of the sea, to the height of about thirty inches ; but, the air being lighter at some times than at others, varies between twenty-seven and thirty-one inches Such is the principle of the well-known instru- ment called the barometer. In order to observe the height of the mercury, with greater conve- nience and accuracy, the scale of this instrument has been amplified by various methods ; by bending the upper part of the tube into an ob- lique position, as in the diagonal barometer; by making the lower part horizontal, and of much smaller diameter than the upper ; or by making the tube straight, and narrow, and slightly conical ; or by placing a float on the surface of the mercury in the reservoir, and causing an axis, which car- ries an index, to revolve by its motion. See our article BAROMETER. But a good simple baro- meter, about one-third of an inch in diameter, furnished with a vernier is perhaps full as

rate as any of these more complicated instru- ments.

The method which is employed in determining the relation between the heights and densities of elastic fluids, may be extended to all bodies which are in any degree compressible, and of which the elasticity is subjected to laws similar to those which are discoverable in the air and other gases : it is even not improbable that these la%vs are generally applicable to all bodies, as far as their texture will allow them to submit to the operation of pressure. Water, for example, has been said by Canton to be compressible sjoggth of its bulk by a force equal to that of the pressure of the atmosphere ; consequently this force may be represented by that of a column of water 750,000 feet in height; the density of the water at the bottom of a lake, or of the sea, will be increased by the pressure of the superincumbent fluid; and, supposing the law of compressure to resemble that of air, it may be inferred that, at the depth of 100 miles, its density would be doubled; and that at 200 it would be quad- rupled. The same measures would also be ap- plicable to the elasticity of mercury.

SECT. III. — THE TEMPERATURE OP THE ATMO- SPHERE.

That the temperature of the air varies in different climates and seasons, as well as in the same place and in the same season, is sufficiently obvious. Nor can the cause of this perpetual variation be very simple : it cannot be the direct heat of the sun ; for tlie rays of that luminary seem to produce no effect whatever upon air, though ever so much concentrated, although they •warm the surface of the earth, which communi- cates its heat to the atmosphere : and hence it happens that the temperature of the air is highest

in those places which are so situated as to be most warmed by the sun's rays, and that it varies in every region with the season of the year. Hence, too, the reason why it diminishes accord- ing to the height of the air above the earth. That portion of the earth, for instance, which lies at the equator, is exposed to the most per- pendicular rays of the sun. Of course it is hot- test, and the heat of the earth diminishes gradually from the equator to the poles. The temperature of the air must follow the same order. Yet, as in every place the temperature of the air is con- stantly varying with the season of the year, we cannot form any precise notion of the progression without taking the temperature in every degree of latitude for every day of the year, and forming for each a mean temperature for the whole year; which is done by adding together the whole ob- servations, and dividing by their number. The quotient gives the mean temperature for the year. The diminution from the pole to the equator takes place in arithmetical progression : or, to speak more properly, the annual temperatures of all the latitudes are arithmetical means between the mean annual temperature of the equator and the pole. This was first discovered by Mr. Meyer; and by means of an equation which he founded on it, but rendered considerably plainer and simpler, Kirwan calculated the mean annual teTto»rature of every degree of latitude between

the equator and the pole. According to this cal- culation, that of the equator is 84°, and that of the pole 31°. To find the mean temperature, for every other latitude, we have only to find 88 arithmetical means between 84 and 31. In thii manner Mr. Kirwan calculated the followinz table:—

TABLE of the Mean Annual Temperature of the Standard Situation in every Latitude.

Lat.

Temp.

Lat.

Temp.

Lat.

Temp.

Lat.

Temp.

90

31-

68

38-4

46

56-4

24

75-4

89

31-04

67

39-1

45

57-5

23

75-9

88

31-10

66

39-f

44

58-4

22

76-5

87

31-14

65

40-4

43

59-4

21

77-2

86

31-2

64

41-2

42

60-3

20

77-8

85

31-4

63

41-9

41

61-2

19

78-3

84

31 5

62

42-7

40

62-

18

78-9

83

31-7

61

43-5

39

63-

17

79-4

82

32-

60

44-3

38

63-9

16

79-9

81

32-2

59

45-09

37

64-8

15

80-4

80

32-6

58

45-8

36

65-7

14

80-8

79

32-9

57

46-7

35

66-6

13

81-3

78

33-2

56

47-5

34

67-4

12

81-7

77

33-7

55

48-4

33

68-3

11

82-

76

34-1

54

49-2

32

69-1

10

82-3

75

34-5

53

50-2

31

69-9

9

82-7

74

35-

52

51-1

30

70-7

8

82-9

73

35-5

51

52-4

29

71-5

7

83-2

72

36-

50

52-9

28

72-3

6

83-4

71

36-6

49

53-8

27

72-8

5

83-6

70

37-2

48

54-7

26

73-8

0

84-

69

37-8

47

55-6

25

74-5

This table, however, only answers for the temperature of the atmosphere of the ocean. It was calculated for that part of the Atlantic Ocean which lies between 80° of N. and 45° of S. laL, and extends westward as far as the Gulf Stream, and to within a few leagues of the coast of America: and for all that part of the Pacific Ocean reaching from lat. 45° N. to lat. 40° S., from 20° to 275° of E. long, of London. This part of the ocean Mr. Kirwan calls the standard : the rest of the ocean is subject to anomalies which will be mentioned. Mr. Kirwan has also calcu- lated the mean monthly temperature of the standard ocean. The principles on which he went were these: — The mean temperature of April seems to approach very nearly to the mean annual temperature ; and, as far as heat depends on the action of the solar rays, the mean heat of every month is as the mean altitude of the sun, or rather as the sine of the sun's altitude. The mean heat of April, therefore, and the sine of the sun's altitude, being given, the mean heat of May is found in this manner : as the sine of the sun s mean altitude in April is to the mean heat of April, so is the sine of the sun's mean altitude in May to the mean heat of May. In the same manner the mean heats of June, July, and Au- gust, are found ; but the rule would give the temperature of the succeeding months too low, because it does not take in the heat derived from the earth, which possesses a degree of heat nearly equal to the mean annual temperature. The

real temperature of these months therefore must be looked upon as an arithmetical mean between 'the astronomical and terrestrial heats.

But Mr. Kirwan, after going through a tedious calculation founded upon this principle, observed the results to agree so ill with experiment, that he drew up an extensive table of the monthly mean temperature of the standard from lat. 80° to lat. 10°, from which it appears that January is the coldest month in every latitude, and that July is the warmest month in

all latitudes above 48°. In lower latitudes August is generally warmest. The difference between the hottest and coldest months increases in proportion to the distance from the equator. Every habitable lati- tude enjoys a mean heat of 60° for at least two months ; this heat seems necessary for the pro- duction of corn. Within 10° of the poles the temperatures differ very little neither do they differ much within 10° of the equator; the tem- peratures of different years differ very little near the equator, .but they differ more and more as the latitudes approach the poles.

2. That the temperature of the atmosphere gradually diminishes, according to its height above the level of the sea, is well known. Thus the late Dr. Hutton of Edinburgh found that a thermometer, kept on the top of Arthur's Seat, usually stood 3° lower than a thermometer kept at the bottom of it. Hence, then, a height of 800 feet occasioned 3° of diminution of tempera- ture. On the summit of Pinchinca the ther- mometer stood at 30°, as observed by Bouguer, while at the level of the sea in the same latitude it stood at 84°. Here a height of 15,564 feet occasioned a diminution of temperature amount- ing to 54°. But, though there can be no doubt of the gradual diminution of temperature ac- cording to the height, it is by no means easy to determine the rate of diminution. Euler sup- poses it to be in a harmonic progression ; but this opinion is contradicted by observations. Saussure supposes that in temperate climates the diminution of temperature amounts to 1° for every 287 feet of elevation. But Mr. Kirwan has shown that no such rule holds, and that the rate of diminution varies with the temperature at the surface of the earth. We are indebted to this philosopher for a very ingenious method of determining the rate of diminution in every par- ticular case, supposing the temperature at the earth's surface known. See Irish Trans, viii.

356.

Since the temperature of the atmosphere is constantly diminishing as we ascend, it is ob- vious »hat at a certain height we arrive at the region of perpetual congelation. This region varies in height according to the latitude of the place ; being highest at the equator, and descend- ing gradually nearer the earth as we approach the poles. It varies also according to the season. M. Bouguer found the cold on the top of Pin- chinca, one of the Andes, to extend from 7° to 9° below the freezing point every morning im- mediately before sun-rise. He concluded, there- fore, that the mean height of the term of conge- lation (the place where it freezes during some part of the day all the year round) between the tropics was 15-577 feet above the level, of the sea ; but, in lat. 28°, he placed it in summer at

the height of 13,440 feet. Now, if we take the difference between the temperature of the equa- tor and the freezing point, it is evident that it will

bear the same proportion to the term of con- gelation at the equator, that the difference be- tween the mean temperature of any other degree of latitude and the freezing point bears to the term of congelation, in that latitude. Thus the mean heat of the equator being 84°, the difference between it and 32 is 52 ; the mean heat of lati- tude 28° is 72‘3°, the difference between which and 32 is 40-3: Then 52 : 15577:: 40-3 ; 12072. In this manner Kirwan calculated the following Table :—

Lat.

0°

5

10 15 20 25 30 35 40

Mean bright of the Term of Congelation

Feet.

Lat.

45°

50

55

60

65

70

75

80

Mean height of the Tern of Congestion.

Feet.

7658

6260

4912

3684

2516

1557

748

120

. 15577

. 15457

. 15067

. 14498

. 13719

. 13030

. 11592

. 10664

. 9016

Beyond this height, which has been called the lower term of congelation, and which must vary with the season and other circumstances, Bouguer distinguished another, which he called the upper term of congelation ; that is, the point above which no visible vapor ascends. Mr. Kirwan considers this line as much less liable to vary during the summer months than the lower term of congelation, and therefore has made choice of it to determine the rate of the diminution of heat, as we ascend in the atmosphere. Bouguer de- termined the height of this term in a single case and Kirwan has calculated the following table o its height for every degree of latitude in the north- ern hemisphere.

TABLE of the Height of the Upper Line of Con- gelation in the different: Latitudes of the Northern Hemisphere.

N. Lai.

Feet.

N. Lat

Feet.

N. Lat

Feet.

N. Lat

Feet.

0°

28,000

26°

22,906

48°

12,245

70°

4,413

5

27,784

27

22,389

49

11,750

71

4,354

6

27,644

28

21,872

50

11,253

72

4,295

7

27,504

29

21,355

51

10,124

73

4,236

8

27,364

30

20,838

52

8,965

74

4,177

9

27,224

31

20,492

53

7,806

75

4,199

10

27,084

32

20,146

54

6,647

76

4,067

11

26,880

33

19,800

55

5,617

77

4,015

12

26,676

34

19,454

56

5,533

78

3,963

13

26,472

35

19,169

57

5,439

79

3,911

14

•26,268

36

18,577

58

‘5345

80

3,861

15

26,061

37

17,985

59

‘5251

81

3,815

16

25,781

38

17,393

60

5,148

82

3,769

17

25,501

39

16,801

61

5,068

83

3,723

18

25,221

40

16,207

62

4,989

84

3,677

19

24,941

41

15,712

63

4,910

85

3,631

20

24,661

42

15,217

64

4,831

86

8,592

21

24,404

43

14,722

65

4,752

87

3,553

22

24,147

44

14,227 66

4,684

88

3,514

23

23,890

45

1 3,730

67

4,616

89

3,475

24

23,633

46

13,235

68

4,548

90

3,432

25

23,423

47

12,740

69

4,480

METEOROLOGY.

429

This method of estimating the diminution of temperature, has been found to agree remarkably well with observation ; and hence it follows that the heat of the air at a distance from the earth would seem not to be owing to the ascent of hot strata of air from the surface of the earth, but to the conducting power of the air.

This rule, however, applies only to the tem- perature of the air during the summer months of the year. In winter the upper strata of the atmosphere are often warmer than the lower. Thus on the 31st of January, 1776, the thermo- meter on the summit of Arthur's Seat stood six degrees higher than a thermometer at Hawkhill, which is 684 feet lower. — Roy. Phil. Trans. 1777, p 777. Mr. Kirwan considers this supe- rior heat, almost uniformly observed during winter, as owing to a current of warm air from the equator, which rolls towards the north pole during our winter.

Such, then, in general, is the method of finding the mean annual temperature all over the globe. There are, however, several exceptions to these general rules, which must here be mentioned.

That part of the Pacific Ocean which lie be- tween N. lat. 52° and 66° is no broader at its northern extremity than forty-two miles, and at its southern extremity than 1300; it is reasonable to suppose, therefore, that its temperature will be influenced by the surrounding land, which consists of ranges of mountains, covered a great part of the year with snow ; and there are besides a great' many high, and consequently cold, islands scattered through it. For these reasons Mr. Kirwan concludes that its*

temperature is at least four or five degrees below the standard.

It is a well-known opinion that the southern hemisphere, beyond 40° of lat., is considerably colder than the corresponding parts of the northern hemisphere. Mr. Kirwan has shown that this holds with respect to the summer of the southern hemisphere, but that the winter in the same latitudes is milder than in the northern he- misphere.

Small seas surrounded with land, at least in temperate and cold climates, are generally warmer jn summer and colder in winter than the standard ocean, because they are a good deal in- fluenced by the temperature of the land. The Gulph ot Bothnia, for instance, is for the most part frozen in winter ; but in summer it is some- times heated to 70°, a degree of' heat never to be found in the opposite waters of the Atlantic. — Mem. Stock. 1776. The German Sea is above 3° colder in winter, and 5° warmer in summer than the Atlantic. The Mediterranean is, for the greater part of its extent, warmer both in summer and winter than the Atlantic. The Black Sea is colder than the Mediterranean.

The eastern parts of North America are much colder than the opposite coast of Europe, and fall short of the standard by about 10° or 12°. The causes of this remarkable difference are many. The highest part of North America lies between 40° and 50° of N. lat., and 100° and 110° of W. long, from London ; for there the greatest rivers originate. The very height, there- fore, makes this spot colder than', it otherwise would be. It is covered with immense forests,

and abounds with swamps and morasses, which render it incapable of receiving any great de- gree of heat ; so that the rigor of winter is much less tempered by the heat of the earth than in the old continent. To the east lie a num- ber of very large lakes ; and, ˆfarther north, Hudson's Bay ; about fifty miles on the south of which there is a range of mountains, which prevent its receiving any heat from that quarter. This bay is bounded on the east by the moun- tainous country of Labrador and by a number of islands. Hence the coldness of the north-west winds and the lowness of the temperature. But, as the cultivated parts of North America are now much warmer than formerly, there is reason to expect that the climate will become still milder when the country is better cleared of woods, though perhaps it will never equal the tempera ture of the old continent

Islands are warmer than continents in the same latitude ; and countries lying to the wind- ward of extensive mountains or forests are warmer than those lying to the leeward. Stones or sand seem to have a less capacity for retain- ing heat than the other parts of the earth which are some what moist; they heat or cool, therefore, more rapidly, and to a greater degree.

Hence the violent heat of Arabia and Africa, and thf intense cold of Terra del Fuego. Living vege- tables alter their temperature slowly, but their evaporation is great; and woody countries, as excluding the sun's rays from the earth, are much colder than those which are cultivated.

The atmosphere is affected by a general cur- rent from east to west, like that of the sea ; and there is reason, from astronomical observations, to suppose that a similar circumstance hap- pens in the atmosphere of Jupiter, on account of the actions of his satellites, which must be considerably more powerful than that of the moon.

The atmosphere is also liable to elevations and depressions analogous to those of the sea, and perhaps these changes may have some little effect on the winds and on the weather. ' The height of an aerial tide must,' says Dr. Young, ' be nearly the same with the observed height of the principal tides of the sea ; and the varia- tion of atmospherical pressure, which is mea- sured between the difference of the actual form and the spheroid of equilibrium, must be equiva- lent to the weight of a column of about ten feet of air, or only ffo of an inch of mercury. A periodical variation five times as great as this has, indeed, been observed near the equator, where the state of the atmosphere is the least liable to accidental disturbances ; but this change cannot in any degree be referred to the effect of the moon's action, since it happens always about the same hour of the day or night.'

' The exact specific gravity of atmospherical air,' says Dr. Ure, ' compared to that of water, is a very nice and important problem. By reducing to 60° Fahr., and to thirty inches of the barometer, the results obtained with great care by MM. Biot and Arago, the specific gravity of atmos- pherical air appears to be 0-001220, water being represented by 1-000000. This relation ex- pressed fractionally is gjc, or water is 820 times

*denser than atmospherical air.' Mr. Rice, in the seventy-seventh and seventy-eighth numbers of the Annals of Philosophy, deduces from Sir George Shuckburgh's experiments 0-00120855 for the specific water of air. This number gives gravity to air as 827*437 to 1. If, with Mr. Ric<», we take the cubic inch of water r= 252-525 grs., then 100 cubic inches of air, by Biot's experiments, will weigh 30-808 grains, and by Mr. Rice's estimate 30-519. He consi- ders with Dr. Prout the atmosphere to be a com- pound of four volumes of nitrogen, and one of oxygen ; the specific gravity of the first being to that of the second as 1-1111 to 0-9722. Hence*

0-8 vol. nitr. sp. gr. . 0-001166 — 0-000933 0-2 oxy. . . 0-001340 = 0-000268

0-001201

The numbers are transposed in the Aftnals of Philosophy by some mistake.

MM. Biot and Arago found the specific gra— vity of oxygen to be . . . 1-10359 and that of nitrogen . . . 0,96913 air being reckoned . . . 1-00000

Or compared to water as unity —

Nitrogen is . 0-001182338

Oxygen . . 0-001346379

And 0-8 nitrogen — 0-00094587

0-2 oxygen =: 0-00026927

0-00121514

And 0-79 nitrogen = 0-000934

0-21 oxygen =: 0-000283

0-001217

A number which approaches very nearly to the result of experiment. Many analogies, it must be confessed, favor Dr. Front's proportions ; but the greater number of experiments on the composition and density of the atmosphere agree with Biot's results. Nothing can decide these fundamental chemical proportions except a new, elaborate, and most minutely accurate series of experiments. We shall then know whether the atmosphere contains in volume 20 or 21 per cent, cf oxygen.

On the subject of the height of the atmosphere, see the article ATMOSPHERE. In addition to what is there stated, the famous problem of Kep- ler, as to its extent, should perhaps be noticed. He contended that the depression of the sun below the horizon, when twilight appears, will furnish data for ascertaining the altitude of the atmosphere, or at least of that portion of it which reflects the sun's parting rays.

Let S of the diagram, fig. 1 , be the situation of a spectator on the surface of the earth, and A the point where the sun sets. The tangent, A B, will now mark the path of the lowest solar ray, which illuminates the highest part of

the atmo- sphere at B, whence the emission of a secondary ray, B S, will barely reach the ground at A. But assuming the ordinary estimate, that twilight expires when the solar depression or the arc SA amounts to 18°, in the right-angled triangle SOB, the base O S, or the radius of the globe being 3956, and the acute angle S O B 9°, or the half of A OS, the hypothenuse 6 Bis easily found,

and hence about forty-nine miles is the excess B D of S B above S D, or the elevation of the limit of the atmosphere, enlightened by the sun's last rays. Some correction may be required for the deviation of rays from the rectilineal path, in consequence of the unequal refraction of then> in different atmospheric strata; but this calc» lation is sufficiently near, and the suggestion wa'j most ingenious.

M. Lambert, however, pushes this problem yet further. He observes (fig. 2) that we may

IT

easily conceive that the rays S B, after impinging on the earth's surface at A, will illuminate the at- mosphere to B, from which light will be darted in the direction of BCD, to tinge another ele- vated portion of the atmosphere at D, which will again cast rays on the spectator at E, or shoot onwards to the opposite sky at F, and thence reach, almost in a state of extinction, the ground at G. While, therefore, the first crepus- culum would set in the west, the second would travel like a bow over the heavens, followed at a regular distance by the dusky veil of the third and fourth.

' But it may be computed,' observes Mr. Leslie, ' from the vast length of the tracts which the light would have to traverse, that those shades would in succession be 10,000 times darker.' The clearest sky, however, on the close of evening, never appears marked by such con- trasts. ' It is most probable, therefore, that the diminution of light, after the close of evening, is owing to the prodigious rarefaction of much higher portions of the atmosphere, which still catch some faint rays of the sun, without being able, from excessive attenuation, to reflect them efficiently to the earth. But since, unless the sky be overcast, there is total darkness in no cli- mate, even It midnight ; we may, therefore, infer that the body of air extends to such an altitude as to receive the most dilute glimmer, after the

sun has attained its utmost obliquity, and sunk 90° below the horizon. It would thence follow that the elevation of the atmosphere must be equal at

least to 1638 miles, or the excess of the hypothenuse of an isosceles right-angled triangle having 3956 miles, or the radius of the earth, for its base

‘ This very great extension of a rare expansive atmosphere appears conformable to the general phenomena. But the thin investiture of our globe, at least near the equator, may stretch out much farther ; and yet its elevation can never exceed a certain absolute limit. The highest portions of the atmosphere, which is carried round in twenty-three hours and fifty-six minutes by the rotation of the earth about its axis, would be projected into space, if their centrifugal force at that distance were not less than their gravitation towards the centre. But the centrifugal force is directly as the distance, while the power of gra- vity is as its square. Consequently, when the centrifugal force at the distance of 6-6 radii of the earth is augmented as many times, the cor- responding gravitation is diminished by its square or 43-7 times, their relative proportion being thus changed to 289. Now, the centrifugal force being only the 289th part of gravity at the surface of the equator, it will therefore just balance this power at the distance of 6‘6 radii from the centre, or at the elevation of 22,200 miles.’ Art. METEOROLOGY. Supplement to the Encyclopedia Britannica.

This writer observes, in defence of his hypo- ‘hesis, that such an extent of atmosphere will occupy scarcely a twentieth part of the distance between the earth and the moon, which the ancients held to communicate with the atmo- sphere. He thus exhibits what he conceives the true figure of the earth and atmosphere. AB fig. 3 is the equatorial diameter.

Fig. 3.

B

SECT. IV.— HYPOTHESIS RESPECTING THE VARIATIONS OF THE BAROMETER.

In our article BAROMETER we have noticed the early conjectures respecting the causes of the irregularities of that important instrument, and the valuable remarks of Deluc, Laplace, &c., on this subject. Mr. Leslie is, however, dis- satisfied with every former theory on this point. ‘ The transition of the air from a state of dry ness to humidity, seemed,’ he says, ‘ to furnish the most plausible explication of the changes of the mercurial column. But the indication of the barometer was, in this case, distinctly at variance with the ordinary feelings of men. Those who suffer under a delicate or enfeebled constitution are accustomed in damp weather to complain of the air as heavier and less elastic. This lan- guage is, no doubt, metaphorical only, and descriptive of the disordered state of the nervous

system ; bui it shows the utter fallacy of trusting in philosophical matters to the loose results of vulgar observation and experience. Moisture, so far from loading the air by its weight, com- municates, like heat, increased expansion and elasticity. But, even supposing a column of air to become charged with humidity, before its subsequent dilatation had, by diffusing it, pro- duced an equilibrium, still the additional pres- sure would have been extremely small, not exceeding, at a moderate computation, the fif- teenth part of a mercurial inch. Any transition of that medium, .from dryness to humidity, would be quite inadequate, therefore, to the production of the effects actually observed.'

He afterwards suggests the deflected course of a horizontal current of air as the most probable cause of these phenomena. ' Suppose,' he says, ' a current to begin to flow from A (fig. 4) ifi

Fig. 4.

the direction of a tangent, jt will successively bend from a rectilineal track at the points B, C, D, E, F, G, &c., on the surface of the earth. The particles of the fluid are, therefore, drawn incessantly from their course by the action of gravity. Their vertical pressure is consequently diminished by the force spent in producing this deflection. During the prevalence of the wind the atmospheric column will press with inferior weight at B than at A, at C than at B, at D than at C ; thus gradually decreasing through the whole chain. Suppose the intervals A B, B C, C D, D E, &c., to be each of them a mile, and that the current readies the points B, C, D, E, &c., in successive minutes, a celerity which frequently happens; the deflection at B, owing to the curvature of the earth, would be eight inches, or two-thirds of a foot; but the space through which a body would descend in a minute, by the action of gravity, is 60 X 60 X 16 = 57600 feet, or 86400 times greater than the deviation from the tangent. Wherefore the atmospheric pressure would, on that hypothesis, be diminished by the ggWh part for each interval of a mile, from A to G. In the space of 288 miles this diminution would consequently be the jfoth part of the incumbent weight; and over an extent of 2880 miles it would amount to the thirtieth part. If we assume the very probable estimate, that storms involve the whole region of the clouds, or attain an elevation of nearly three miles, the diminu- tion of pressure, occasioned by a long series of deflections in the stream, would affect one-half

of the atmosphere. Wherefore, a wind which has blown over a track of

2880 miles, at the rate of sixty miles an hour, might cause the mercurial column to subside half an inch. If the velocity of the wind were doubled, which is probably the limit of the most tremendous hur- ricane, the fall of the barometer would be four times greater, and amount to two inches. That the same powerful wind can sweep over an immense track of surface is well ascertained. The effects of a hurricane originating in the West Indies, at the distance of 5000 miles, have often been felt on our shores. But a wind arising at A must evidently be followed, at suc- ceeding intervals, by a current from K, L, M, &c., the range of influence being thus extended over a larger track. During the flow of the air the depression of the barometer at G will be maintained, or rather augmented/

He afterwards suggests that the winds, though thus regarded as describing only great circles about the earth, may be constrained to bend into smaller ones ; and thus exert even a greater in- fluence over the barometer. Thus also he would explain the phenomena of eddies, whirlwinds, and tornadoes. See WINDS.

SECT. V. — THEORY OF MISTS, DEWS, AND RAIN.

Sir Humphry Davy in a paper inserted in the Philosophical Transactions 1819, part I., suggests that land and water cool after sunset in a very dif- ferent manner. The impression of cooling on the land is limited to the surface, and is very slowly transmitted into the interior ; whereas in water the upper stratum, when cooled, descends, and has its place supplied by warmer water from below. The surface of the water will there- fore, in calm and clear weather, and in tempe- ratures above 45° Fahrenheit, be warmer than that of the contiguous land ; and consequently the air above the land will be cooler than that above the water. When the cold air, therefore, from the land mixes with that above the water, both of them containing their due proportion of aqueous vapor, a mist or fog must be the result.

It is necessary, therefore, for the formation of mists, that the temperature of the water should be greater than that of the air: for the deposi- tion of dew (according to Dr. Wells, see our article DEW), requires that the heat of the body on which it is deposited should be less than that of the atmosphere.

There are three principal conditions to be considered, when the formation of dew is taken in conjunction with that of mist, according to an able paper of Mr. Harvey's of Plymouth, in the Edinburgh Philosophical Journal.

In the first place the temperature of the water, ind the law according to which it cools ; se- condly, the temperature of the land, and the law t>y which it radiates its heat to the sky ; and, thirdly, the quantity of vapor

contained in the air. The varied character of these conditions must necessarily impart a corresponding diversity to the results. The same circumstances of tem- perature which in one case would produce a copious deposition of dew, and a mist of con- siderable density, in another case would produce

only a moderate formation of each ; and, even if we suppose the quantity of atmospheric mois- ture to remain constant, alterations of tempe- rature will occasion innumerable varieties of both.

‘ When the atmosphere is completely saturated with vapor, the greatest quantity of dew will be deposited, when the land, by a free radiation to a pure and tranquil sky, has its temperature dimin- ished by the greatest possible quantity below that of the air reposing on its surface ; and a mist of the greatest degree of density will be formed, when the temperature of the adjacent water is above that of its superincumbent air, also by the greatest possible quantity. The temperatures of the two masses of air, although unequal, may therefore be regarded as occupying a kind of middle state between the extremes here alluded to. In all cases the density of a mist will be jointly proportional to the difference of tempe- rature between the sea and land, and the quan- tity of vapor held in solution by the atmospheii at the time of its formation.

‘ To show, however, the quantities of moisture that will be precipitated in the form of mist, fog, or rain, from the mingling together of equal masses of perfectly saturated air, of different degrees of temperature, the following examples are given ; from which it will be perceived that the moisture deposited increases with the difference of temperature of the volumes of air. The temperatures are those of the centesi- mal scale ; and the grains of vapor are what a metrical cube of air contains at the respective temperatures, when in a state of saturation, ac- cording to the experiments of professor Leslie.

Grains of

Temperatures.

Grains of vapor dis- solved in a metrical cube of Air, at the respective Tempera- tures.

Means of the pre- ceding.

Vapor dis- solved in a metrical cube of Air, at the means of the res- pective Tempera-

Grrains of Vapor de- posited in :he form of Mist, Fog, or liain.

tures.

4°

6

120-3 132-0

126-1

126-0

o-i

4

8

120-3 144-7

132-5

132-0

0-5

4 10

120-3 158-7

139-5

138-2

1-3

4

120-3

1472

144-7

2-5

12

174-1

4

120-3

155-6

151-6

4-0

14

191-0

4

16

120-3 209-5

164-9

158-7

6-2

4

18

120-3 229-7

175-0

166-2

8-8

4 20

120-3 252-0

186-1

174-1

It appears from this table that, when the dif- ference between the temperatures of the two metrical cubes of air amount to two centesimal degrees, the quantity of vapor deposited by a

metrical cube of the mixed air amounts only to masses of air, and the bodies on which they re one-tenth of a grain, whereas the union of similar spectively repose, the deposition of dew will be volumes at the temperatures of 4° and 20°, oc suspended, and likewise all tendency to the casions a precipitation of twelve grains. The farther formation of mist. The entire dissipa- greater the difference, therefore, between the tion of the latter may likewise result from the temperatures of the equal masses of air, the change. Or if we suppose a temporary inter- greater will be the density of the mist formed position of clouds, and conceive the land to by their union. It does not follow, however, radiate its heat only at intervals, corresponding that nature, in the infinite diversity of her ope- changes of temperature will immediately follow; rations, is confined, as in the particular case here an increase of heat taking place when the sky is considered, to the mingling together of equal obscured, and a diminution when its clearness volumes of perfectly saturated air, or of air con- is restored. Dr. Wells has furnished a case taining a less proportion of moisture. Two or wherein the temperature of grass increased 15° in more parts of one particular temperature, and the short space of forty-five minutes, and which with any assignable degree of moisture, may be was at the same time accompanied by an eleva- blended with other proportions of air, of a dif- tion in the temperature of the air of 3J°. Nor ferent temperature, and having other relations is it improbable but that examples sometimes of moisture; and from such will arise mists of occur, of dew and mist being deposited in the

every variety of density.

former part of the night, and both disappearing

Circumstances may be favorable, according to before the morning; or, as it may sometimes

this writer, to the deposition of dew on the bor- happen, the former be preserved, and the latter

ders of rivers, without contributing to the forma- dissipated. The first of these phenomena may

tion of mists. The atmosphere contains, at all take place, when a portion of the night, favorable

times, some moisture; and, therefore, when the to the formation both of mist and dew, is succeeded

relations of the temperature of the air and land by a brisk wind; and the second, when, by the

are suitable, and a clear and tranquil sky prevails, interposition of dense clouds, the temperature

a deposition of dew of some degree or other will of the land is raised, which, by imparting its

take place. But, although the relations of tern- influence to its superincumbent air, restores it to

perature between the land and water may be a temperature equal to, or even greater than, that

favorable to the formation of mist, it by no of the atmosphere reposing on the water, ulti-

means follows that the union of volumes of air, mately causing the mist to disappear, from the

of unequal temperatures, will produce a visible increased capacity of the air for vapor. This

condensation. In some examples which I have latter circumstance will also account for the dis-

, witnessed, says Mr. Harvey, the extreme tenuity of the mist has indicated, that the circumstances of temperature and vapor were such Uo just to admit of its formation.

‘ The deposition of dew,’ he concludes, ‘ must always precede the formation of mists. This will appear evident, when we consider the prin- ciples to which each owes its origin. Suppose at some moment an equality of temperature to

persion of mists in the morning, before the dis appearance of dew. The gentle motion that must also take place, from the mingling of the cold air from the land with the warmer air above the water, will have a tendency to increase the deposition of dew, since new volumes of air will be successively

brought into contact with the cold surface of the earth, and by depo- siting their moisture, will augment the quan-

take place between the water, the land, and the thy of dew beyond what would otherwise have volumes of air reposing over each. In conse- been formed, had the atmosphere remained per-

quence of the unequal cooling powers of the land and water, tlie former will first have its temperature reduced below that of the air : and although by this diminution the equality of tem- perature between the two volumes of air will be destroyed, and a condition created favorable to the formation of mist ; still, as the cooling of the first volume and the mingling of the two are not contemporaneous acts, dew will be the first de- posited. In proportion, however, as the land radiates freely, with the same rapidity must the temperature of the superincumbent air be di- minished, and the equilibrium between it and. the atmosphere hovering over the water be disturbed. The rapid formation of dew is therefore accom- panied by circumstances favorable to the quick formation of mist ; and it hence becomes pro- bable, that, under such conditions, mist will be formed at an earlier period of the night, than when the land radiates less copiously, and dew is deposited in less abundance.

' If, in consequence of the interposition of

a canopy of clouds, the cooling of the land

and water should be checked, and an equality

of temperature be restored between the two

fectly calm. Dr. Wells found that a blight agitation of the air was always accompanied with an increase of dew. The general tenor of these observations is confirmed by a remark of the same indefatigable observer, that 'dew is al- ways very copious on those clear and calm nights which are followed by misty or foggy mornings.' ' Dr. Button's theory of rain we have already noticed in the article CLOUDS. Mr. Leslie, who fully espouses this theory, says, ' The profuse precipitation of humidity is caused by a rapid commixture of opposite strata. The action o' swift contending currents in the atmospher brings quickly into mutual contact vast fields c air over a given spot. The separation of mois- ture is hence proportionally copious. In tempe- rate weather this deposition forms rain ; but, in the cold season, the aqueous globules, freezing in the mid-air into icy spicuhe, which collect in their slow descent, become converted into flakes of snow. Hail is formed under different circum- stances, and generally in sudden alternations of the

fine season, the drops of rain being congealed during their fall, by passing through a iowtr stratum of dry and cold air.

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‘ The drops of rain vary in their size perhaps from the twenty-fifth to a quarter of an inch in diameter. In parting from the clouds, they pre- cipitate their descent till the increasing resistance opposed by the air becomes equal to their weight, when they continue to fall with a uni- form velocity. This acquired or terminal velocity is therefore in the subduplicate ratio of the diameters of the aqueous globules. A thunder shower hence pours down much faster than a drizzling rain. In general, if d express the diameter of a drop in parts of an inch, the ter- minal velocity, according to theory, will be de- noted by 7Qˆ/d, or, if the usual correction be made for the discrepancy in fluids, it will be 67ˆ/d. Thus a drop of the twenty-fifth part of an inch, in falling through the air, would only gainˆa celerity of eleven feet and a half, while one of a quarter of an inch would acquire a celerity of thirty-three feet and a half. A flake of snow, being perhaps nine times more ex- panded than water, would descend thrice as slow. But hail-stones are often of considerable dimen- sions, exceeding sometimes the length of an inch. They may hence fall with a velocity of seventy feet each second, or at the rate of about fifty miles in the hour. Striking the ground with such impetuous force, it is easy to conceive the exten- sive injury which a hail shower may occasion in the hotter climates. The destructive power of those missiles, in stripping and tearing the fruits and foliage, increases besides in a faster ratio than the momentum, and may be estimated by the square of their velocity multiplied into mass. This fatal energy is hence as the fourth power of the diameter of the hail-stone.’

Mr. Luke Howard of London, one of our ablest writers on the subject of clouds, is inclined to attribute rain, with abbe” Nollet and Beccaria, to the electrical action of the clouds upon each other.

In the formation of the rain-cloud (nimbus), two circumstances, he thinks, claim particular attention ; the spreading of the superior masses of cloud, in all directions, until they become like the stratus one uniform sheet ; and the rapid motion, and visible decrease, of the cumulus when brought under the latter. The cirri also, which so frequently stretch from the superior sheet upwards, and resemble erected hairs, carry much the appearance of temporary conductors for the electricity, extricated by the sudden union of minute particles of vapor, into the vastly

larger ones that form the rain. By one experi- ment of Cavallo's, with a kite carrying 360 feet of conducting string, in an interval between two showers, and kept up during rain, it seems that the superior clouds possessed a positive elec- tricity before the rain, which, on the arrival of a large cumulus, gave place to a very strong nega- tive, continuing as long as it was over the kite. We are not, however, warranted from this to con- clude the cumulus which brings on rain always negative, as the same effect might ensue from a positive cumulus uniting with a negative stratus. Yet the general negative state of the lower atmosphere during rain, and the positive indications commonly given by the true stratus, render this the more probable opinion. It is not, however, absolutely necessary to determine the several states of the clouds which appeal during rain, since there is sufficient evidence in favor of the conclusion, that clouds formed in different parts of the atmosphere operate on each other, when brought near enough, so as to occa- sion their partial or entire destruction ; an effect which can be attributed only to their possessing beforehand, or acquiring at the moment, the op- posite electricities.

' It may be objected,' says Mr. Howard, ' that this explanation is better suited to the case of a shower than to that of continued rain, for which it does not seem sufficient. If it should appear, nevertheless, that the supply of each kind of cloud is by any means kept up in proportion to the consumption, the objection will be answered. Now, it is a well known fact, that evaporation from the surface of the earth and waters, often returns and continues during rain, and conse- quently furnishes the lower clouds, while the upper are recruited from the quantity of vapor brought by the superior current, and continually subsiding in the form of dew, as is evident both from the turbidness of the atmosphere in rainy seasons, and the plentiful deposition of dew in the nocturnal intervals of rain. Neither is it pretended that electricity is any farther concerned in the production of rain, than as a secondary agent, which modifies the effect of the two grand predisposing causes, — a falling temperature, and the influx of vapor.'

Mr. Dalton,who has also paid much attention to this subject, read before the Manchester Society an elaborate and interesting memoir on rain, from which we extract the following table and observations.

Mean MONTHLY an.l ANNUAL Quantities of Rain at Various Places, being the averages for

many years, by Mr. Dalton.

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Inch.

Jan.

2-310

2-177

2‘196

3-461

5-299

3-095

1-595

1-464

1-228

2.477

2-530

Feb.

2-568

1-847

1-652

2-995

5-126

2837

1-741

1-250

1-232

1-700

2-295

Mar.

2-098

1-523

1-322

1-753

3-151

2-164

1-184

1-172

1-190

1-927

1-748

April

2-010

2-104

2-078

2-180

2-986

2-017

0-979

1-279

1-185

2-686

1-950

May

2-895

2-573

2-118

2-460

3-480

2-568

1-641

1-636

1-767

2-931

2-407

June

2-502

2-816

2-286

2-512

2-722

2-974

1-343

1-738

1-697

2-562

2-315

July

3-697

3-663

3-006

4-140

4-959

3-256

2-303

2-448

1-800

1-882

3-115

Aug.

3-665

3-311

2-435

4-581

5-039

3-199

2-746

1-807

1-900

2-347

3-103

Sept.

3-281

3-654

2-289

3-751

4-874

4-350

1-617

1-842

1-550

4-140

3-135

Oct.

3-922

3-724

3-079

4-151

5-439

4-143

2-297

2-092

1-780

4-741

3-537

Nov.

3-360

3-441

2-634

3‘775

4-785

3-174

1-904

2-222

1-720

4-187

3-120

Dec.

3-832

3-288

2-569

3-955

6-084

3-142

1-981

1-736

1-600

2-397

3-058

36-140

34-118

27-664

39-714

53-944

36-919

21-331

20-686

18-649

33-977

Observations on the theory of ram.— Every one must have noticed an obvious connexion between heat and the vapor in the atmosphere. Heat promotes evaporation, and contributes to retain the vapor when in the atmosphere, and cold precipitates or condenses the vapor. But these facts do not explain the phenomenon of rain, which is as frequently attended with an increase as with a diminution of the temperature of the atmosphere.*

‘ The late Dr. Hutton of Edinburgh was, I conceive, the first person who published a cor- rect notion of the cause of rain. See Edinburgh Transactions vol. i. and ii. and Hutton’s Disser- tations, &.c. Without deciding whether vapor be simply expanded by heat, and diffused through the atmosphere, or chemically combined with it, he maintained from the

phenomena that the quantity of vapor capable of entering into the air increases in a greater ratio than the tem- perature ; and hence he fairly infers that, when- ever two volumes of air of different temperatures are mixed together, each being previously satu- rated with vapor, a precipitation of a portion of vapor must ensue, in consequence of the mean temperature not being able to support the mean quantity of vapor. The cause of rain, therefore, is now, I consider, no longer an object of doubt. If two masses of air, of unequal temperatures, by the ordinary currents of the winds are inter- mixed, when saturated with vapor, a precipita- tion ensues. If the masses are under saturation, then less precipitation takes place, or none at all, according to the degree. Also the warmer the air, the greater is the quantity of vapor precipi- tated in tike circumstances. Hence the reason why rains are heavier in summer than winter, and in warm countries than in,cold.

‘ We now enquire into the cause why less rain falls in the first six months of the year than in the last six months. The whole quantity of water in the atmosphere in January is usually

about three inches, as appears from the dew point, which is then about 32°. Now the force of vapor at that temperature is 0-2 of an inch of mercury, which is equal to 2-8 or three inches of water. The dew point in July is usually about 58° or 59°, corresponding to 0-5 of an inch of mercury, which is equal to seven inches of water; the difference is four inches of water, which the atmosphere then contains more than in the for- mer month. Hence, supposing the usual inter- mixture of currents of air in both the intervening periods to be the same, the rain ought to be four inches less in the former period of the year than the average, and four inches more in the latter period, making a difference of eight inches be- tween the two periods, which nearly accords with the preceding observations.’

On the subject of the electricity of the atmo- sphere, see ELECTRICITY.

For the current of the atmosphere and the origin of winds, see WINDS.

SECT. VI. — OF THE MODERN METEOROLOGICAL

INSTRUMENTS.

Modern times, and the researches of the many eminent experimenters in this science, have given birth to a variety of excellent meteorological in- struments which will generally be found described in their alphabetical place. See BAROMETER, HYGROMETER, THERMOMETER, WIND GAUGE, &c. Under the article THERMOMETER will be found the photometer and aethrioscope, both species of the differential thermometer;

the-at- mometer, cyanometer, drosometer, and embro- meter or rain-guage we shall here describe.

The utmome.ter, or evaporometer, is designed to measure the quantity of water evaporated in any given time. A circular basin, of uniform width from top to bottom, is the simplest form of the instrument: it is filled with water and the quan- tity evaporated may be ascertained by means of i graduated glass tube, similar to timt employed

for measuring the depth of rain. There are dif- ficulties, however, attending the use of the instru- ment, which often render it an uncertain indica- tion of the absolute quantity evaporated. If it be fully exposed to the sun and wind, the heat ac- quired by the vessel will rapidly promote eva- poration ; and if the basin be kept nearly full, as it ought to be, the water will be agitated and thrown about by the wind.

A few years ago Mr. Leslie constructed an in- strument of this kind on a very simple principle. It consisted of a ball of porous earthenware, two or three inches in diameter, into which was in- serted a glass tube, so graduated that the quan- tity of water contained between two divisions of it would cover the outer surface of the ball to the depth of the ˆth part of an inch. The ball and tube being filled with water, the top of the latter was covered with a brass cap, which, by means of a leather collar and screw, was made air-tight, and the instrument, being suspended out of doors, was freely exposed to the wind. In this state the humidity exuded through the sur- face of the ball as fast as it evaporated, and the descent of the column in the tube indicated the quantity evaporated. The pressure of the atmo- sphere being in a great measure removed, by the tightness of the collar, the water is prevented from passing through the ball of this instrument so quickly as to drop, while the space which it leaves empty at the top is occupied by the very minute stream of air which is imbibed by the moisture on the outside, and may be seen rising through the water in the tube.

‘ Of this instrument,’ Mr. Leslie says, ‘ if the atmometer had its ball perfectly screened from the agitation of wind, its indications would be proportional to the dryness of the air at the lower- ed temperature of the humid surface ; and the quantity of evaporation every hour, as expressed in the ˆth part of an inch, would, when multi- plied by twenty give the hygrometric measure. For example, in this climate, the mean dryness in

winter being reckoned 15°, and in summer 40°, the daily exhalation from a sheltered spot must in winter form a thickness of -018, and amount in summer to 048 decimal parts of an inch. Sup pose a pool for the supply of a navigable canal exposed a surface equal to ten English acres, and that the atmometer sank eighty parts during the lapse of twenty-four hours ; the quantity of water

QQ

exhaled in that time would be – nr.nr. X 660 x

1 2000

66 x 10, or 2904 cubic feet, which corresponds to the weight of eighty-one tons.

But the atmometer since invented by Mr. An- derson seems the best instrument of the kind hitherto proposed : it is thus described in the Edinburgh Philosophical Journal : —

Let A B C D E F represent a bent glass tube of sufficient width to admit of a liquid moving easily from one part to another, and swelling out into the bulbs BC and EF. Into this tube at A is introduced a quantity of alcohol, which, after being conveyed into the bulb or wider tube E F, is thrown into a state of ebullition ; and, while the steam is issuing from A, the tube is there hermetically sealed, so that the air is completely expelled from the space A B C D E.

The bulb B C is then covered with moistened silk or paper, and the in- strument freely ex- posed. In conse- quence of the pres- sure of the airbeing removed from the surface of the alco- hol, in the bulb E F, a portion of that li- quid passes into vapor, and occupies the empty part of the tube. Were the whole of the instru- ment at the same temperature, this process would in deed quickly be stopped by the pressure of the va- por itself on the surface of the alcohol ; but, as the bulb B C has its temperature reduced by the external evapora- tion from the moistened silk or paper, the vapor which rises from E F is there condensed, and runs down in a liquid state into the tube A B. This distillation goes on more or less rapidly, ac- cording to the degree of cold induced upon the bulb B C, that is, in proportion to the external evaporation ; and, consequently, the quantity of liquid collecteˆ in the tube AB is a measure of that evaporation. When the atmosphere is com- pletely saturated with moisture, or when the evaporation ceases, the temperature of AB will be the same as that of any other part of the tube; and the distillation, therefore, for the reason al- ready stated, will also cease.

‘ The measure of evaporation thus found is expressed in inches and decimals of an inch, by means of an attached scale G H, the divisions of which are determined by experiment. Suppose, for example, that the instrument is exposed to similar circumstances with an evaporating basin, and that the quantity evaporated from the latter in a given time, as determined either by weight or measurement, is found to be one-tenth of an inch, while the alcohol distilled by the former in the same time fills the tube A B to the depth of one inch ; then the scale, being divided into inches and tenths, will indicate tenths and hundredthsot an inch of evaporation. By increasing the pro- portion between the diameters of E F and A B, the quantity of evaporation may be measured to any degree of minuteness required. In using the instrument, the tube E F is to be sheltered from rain by enclosing it in a case or cover, to prevent its temperature being reduced below that of the atmosphere by subsequent evapora- tion ; and the bulb B C is to be kept constantly moist by means of a small cup containing water attached to the tube immediately below it, the silk or paper being in contact with the water, or from an adjoining vessel, as in the case of the hygrometer. The instrument is placed in a ver- tical position, and is prepared for a new observa- tion by inverting it, so that the distilled alcoho’.

i.nay be conveyed back to the tube E F. It is to be hoped that this beautiful and ingenious con- trivance will soon meet with that reception among meteorologists to which its merits so well entitle it. This atmometer has already been constructed, and is found to possess the utmost delicacy. It is probable that it may in time su- persede the use even of the hygrometer.’

The cyanometer (fvavos, coerulean or sky-blue, and ptrpov, a measure), is an invention of M. de Saussure to measure the intensity of the blue color of the atmosphere. It consists of a circular band of paper, divided into fifty-three parts, each of which was painted with a different shade of blue ; beginning with the deepest mixed with black, to the lightest mixed with white. He found that the color of the sky always corresponded with the deepest shade of blue the higher the observer is placed above the surface. The color becomes al- ways lighter in proportion to the vapors mixed with the air. From morning till noon, the color of the vertical sky darkened, but became lighter aˆain as the evening advanced ; and this transi- tion was wider and more rapid in great eleva- tions. On the Col du Geant the tint of the horizontal air at sunrise was five, it deepened to eleven and a half at noon, but again relapsed to five towards night. On the 15th of July, which was a very clear day, the atmosphere at the horizon had the eleventh shade; at the altitude of 10° the twentieth; at that of 20° the thirty- first ; at that of 30° the thirty-fourth ; at that of 40° the thirty-seventh ; and thence

with any sensible variation to the zenith. Humboldt found, in his voyage from Corunna to Cumana, the tints of the sky to vary by the cyanometer, from thirteen to twenty-four, and again to six- teen, while the color of the ocean fluctuated be- tween thirty-four and forty-four.

Some writers have considered these experi- ments to prove that the color of the atmosphere is wholly owing to its vapors ; and that, at a certain height, the blue will disappear altogether, and the sky appear black ; that is to say, will reflect no light at all. Mr. Leslie on the other hand (and we confess his reasoning appears to us correct) consi- ders air like water, to be by its constitution a co- lored fluid. The former, he says, is naturally blue, as the latter is green ; but these colors acquire in- tensity only from the depth of the transparent mass. A small body of limpid water has the appearance of crystal, but, in proportion as it accumulates, it assumes all the successive shades till it rivals the tints of the emerald and the beryl. This grada- tion is distinctly seen in the profound lakes of Switzerland, whose lustre is never stained by any vegetable infusion. The same series of colors emerges, on receding from our shores and ap- proaching the vast abyss of the Atlantic Ocean. At first the water on the shelving banks is merely translucid ; at the depth of ten fathoms it appears greenish, and the tint, by degrees, be- comes more intense till it passes into a full green, at the depth of fifty fathoms ; but, beyond sound- ings, it darkens almost into azure. In like man- ner the blue shade of the air becomes more intense in proportion to the length of the tract of light. This we perceive in viewing distant objects, whose colors are always tinted by the

deepening hues of the interjacent range of atmo- sphere. The remotest hills seem lost in a cocni- lean vesture. The mixture of aqueous vapors only diffuses a mist, which tarnishes rather than dilutes the fine blue.'

The drosometer, or dew-balance, is an instru- ment proposed by M. Weidlen of Germany, so far back as 1727, to measure, or rather weigh, the quantity of dew that falls on the surface of a body exposed to the night air. It consists of a bent balance, marked in grains which show the preponderance which a piece of glass of certain dimensions, laid horizontally in one of the scales, acquires, from the settling of the globules of moisture upon it. The main objection to this instrument, as to several others of a meteorologi- cal kind, is, that it requires to be protected from the wind, which cannot be accomplished with- out also screening it from a large portion- of the dew that falls. The steel beam, too, soon loses its polish, and thus becomes unfit for accurate observation.

A more convenient drosometer is proposed by Mr. Leslie on the principle of the ombrometer, or rain-gauge. ' Suppose a glass funnel, of about three inches diameter, whose interior sur- face is very smooth and slopes towards

the cen- tre, at an angle of fifteen or twenty degrees, to be joined hermetically to a long tube, sealed at the lower end, and having an equable bore not exceeding a quarter of an inch, with an attached scale divided into portions, corresponding to the ˆth parts of an inch, on the external aper- ture. The only difficulty is to make the dew which gathers during the night to run down the sides of the funnel into the tube. To facilitate this descent, a coat of deliquated salt of tartar may be spread with a hair pencil over the shal- low surface, and renewed as often as occasion requires. The dew, instead of settling in minute detached globules, would then be attracted by the alkaline lye, which thus becoming dilute would gradually flow into the narrow cavity of the tube. It would be easy at any time to make an allowance for the very small portion of liquid alkali blended with the dew.'

The ombrometer, or rain-gauge, is a simple in- strument, contrived to indicate the quantity or depth of rain which falls upon any spot. It has also been called an hyetometer. It is generally composed of a circular basin of iron lined with tin, soldered to the top of a vertical cylinder, which is contracted in some given proportion and close below. A small float is introduced, bearing a slender rod, distinguished by the cor- responding divisions. Mr. Partington in his Manual of Natural and Experimental Philosophy, 2 vols. 8vo., thus describes a very useful one : —

' In the accompanying figure, it is seen to consist of a funnel m, attached to the top of a cylindrical vessel 6. The bottom, a r, is fur- nished with a stop-cock to draw off the water when full, and also to open a communication with the graduated glass tube rf. The tube i divided into parts, so as to register the quantity of water that enters the vessel, and so propor- tioned as to compensate for the difference be- tween the sizes of funnel and cylinder.*

' In fixing lain gauges, ' says the above au-

thor, < care should be ta- ken that the rain may have free access to them, with- out being impeded or over- shaded by any adjacent building. It may be proper also to add that, when the quantities of rain collected in them in different places are compared together, the instruments ought to be fixed at the same height above the ground at both places ; because at different heights the quantities are always different, even in the same place. And hence, also, any register, or account of the rain in the gauge, ought to be accompanied with a note of the height at which the instrument is placed above the ground. Dalton found the rain of a gauge fifty yards high, in summer two-thirds, and in winter one-half as much as that of a gauge be-

low. The above ingenious experimentalist adds, that a strong funnel, made of sheet-iron, tinned and painted, with a perpendicular rim, two or three inches high, fixed horizontally in a conve- nient frame, with a bottle under it to receive the rain, is sufficient for this purpose.'

SECT. VII. — OF THE OPTICAL APPEARANCES AND DELUSIONS OF THE ATMOSPHERE.

At once the most regular and most splendid of these is the rainbow, a phenomenon whose laws were calculated mathematically by Descartes, but not fully explained until the optical investi- gations of Sir Isaac Newton. ' In the formation of this meteor,' says the late Dr. Mason Good, ' it is necessary to observe that the ray which issues from the centre of the sun, and does not immediately, or perpendicularly, pass through the centre of the opposed globule of rain, must, upon the common principles of dioptrics, in con- sequence of its entering a transparent body of a different medium from the atmosphere itself, in a certain degree, be bent, deflected, or refracted from the right line in which it wa< proceeding ; and hence, instead of passing out at the posterior part of the globule, immediately opposite to that at which it entered, it will be driven towards an- other limb, or marginal portion of the globule, and form an angular line co-equal to the obli- quity with which it deviates from a right line on its entrance into the globule ; just as a stake, or the oar of a boat, plunged obliquely into a river, appears to be broken, or deflected, from the point at which it enters the water. At this point the refracted ray, instead of passing out of the globule, suffers another deflection, but from a very different cause ; for the ray of light having been thrown across a certain portion of the pos- terior chamber of the glo'jule of rain, without permeating it, all behind its passage becomes necessarily a dark shade, while the globule itself forms an anterior and polished surface to it; whence a regular mirror is produced, and the i-ay is now reflected or thrown back from it, in the same manner as an incidental ray of light, or linage, is reflected or thrown back from a look-

ing-glass, or a deep and clear stream of water ; both of which, like the globule thus situated, consist of nothing more than a dark shadow with a polished surface : the obliquity of its path, in the present instance, being precisely similar to that which it has previously suffered from re- fraction ; the angular line of reflection being always co-equal with the angular line of inci- dence. It is hence obvious that the ray, or fasci- cle of parallel rays, which entered obliquely be- low the centre of the globule opposed to the centre of the sun, must be reflected obliquely above it; and as the same process necessarily takes place, but in an inversed order, with the

antagonist ray, or fascicle of parallel rays that entered with the same degree of obliquity above it, it is also obvious that, from this double re- fracting and reflecting power of an individual globule of rain, situated as above described, an angle of light must be formed, from their anta- gonism alone, exhibiting the different colors of which they consist in a definitive order, accord- ing to the degree of their refrangibility ; that the spread, or hypotheneuse of the angle must de- pend upon the diameter of the globule which produces it ; and that its point being softened or obtunded to the eye, by the distance through which it is beheld, the angle must be converted into an arch. Hence, a beautiful and variegated rainbow must necessarily result from a few rays of light acted upon by a single globule of rain, situated as above, from the fact alone of its pos- sessing the power of a binary mirror or prism.'

This writer accounts in a similar manner for the mirage, although it is chiefly to be noticed when the sky is clear and unclouded, and in the morning ; but principally upon the coasts or banks of a large river See OPTICS

' The mirage seen by M. Crantz was on the shore of the Kookoernan Islands, near the Cape of Good Hope ; it lias often been traced at the back of the Isle of Wight ; but the quarter in which, perhaps, it most frequently makes its ap- pearance, is the Faro of Messina in Italy. In all these places, when the weather is perfectly calm, and consequently the sea almost without motion, the atmosphere, more especially in a dry and hot season, imbibes a considerable portion of the water upon which its lower stratum presses ; and hence, in the night-time, becomes condensed and hazy. As the morning rises, however, and the sun-beams resume their vigor, the atmosphere once more rarefies, and re-acquires its transpa- rency. If it rarefy equably, and homogeneously, every object beheld through it must necessarily be exhibited in its real proportion and figure : but it happens, occasionally, that in some parts of its texture it seems to be more closely inter- woven than in others ; and hence in its general expansion, veins, or striae, like those often dis- covered in glass, make their appearance, of dif- ferent densities and diameters. In this case, every stria, like every globule of rain, in conse- quence of the variation of its density from the common density of the atmosphere, becomes a refracting or a reflecting body ; in other words, a prism, or a mirror, or both. If, then, a single globule of rain, properly disposed, be able to produce a phenomenon so marvellous as that of

the rainbow, what phenomena may we not ex- pect, what variation, inversion, contortion, and grotesque and monstrous representation of images, beheld through a column of the atmosphere, in- tersected by so many aerial prisms of different densities, and mirrors of different surfaces, in which the catheti may be innumerable, and for ever varying? We may hence, moreover, readily trace the cause of an occasional duplication of images in the atmosphere, of a parhelion, and paraselene, or double sun, and double moon, from the reflection of these luminaries in an op- posite part of the heavens, when they are a little above the horizon ; as also of the very curious mirage remarked by M. Monge, in the hot and sandy desert between Alexandria and Cairo; in which, from an inverted image of the ccerulean sky intermixed with the ground scenery, the neighbouring villages appeared to be surrounded with the most beautiful sheeting of water, and to exist, like islands, in its 1'quid expanse, tantaliz- ing the eye by an unfaithful represention of what was earnestly desired.'

' Our earliest enquiries,' says Mr. Leslie, ' led us to refer the origin of halos to the deflexion of light, or that property of the rays to bend and divide as they pass near the edge of a body. Thus the light admitted through a veiy narrow slit in a card, or a bit of tinfoil, spreads into bright colored fringes. The finer also is the slit, the broader are the fringes. A similar appear- ance is obtained by looking at the elongated flame of a candle through the delicate fibres of a feather, or even through the streaks of grease rubbed by the finger atong a piece of glass. But, if a very small round hole be substituted for the slit, the fringes will change into colored rings. Thus, if a piece of tinfoil, punctured with the point of a needle, be held close to the eye, the sun will appear through it surrounded by a halo very near his disc, but spreading more in pro- portion as the hole is contracted. That inge- nious artist, Mr. Troughton, constructed for us a slide of brass, and afterwards another of platina, perforated with a series of the finest conical holes, which were measured by his delicate mi- crometer. The purpose was to compare the angle subtended by the colored ring with the diameter of the perforation, it being inferred that an aqueous globule of the same dimension might, by the exterior deflexion of the solar rays, produce a similar halo. But our variable sky is very seldom fit for any refined optical experi- ment, and many delays happening to intervene, we could arrive at no very precise or certain re- sult. We may state, however, as at least an approximation, that the globules of the diffuse vapor, which occasions the appearance of colored circles about the sun and moon, vary from the 5000th to the 50,000th part of an inch in dia- meter. When the halo approaches nearest to the luminous body, the largest globules are float- ing, and therefore the atmosphere is surcharged with humidity. Hence the justness of the vulgar remark, that a dense halo close to the moon por- tends rain.' Nearly the same theory is supported by Dr. Thomas Young, as

we shall presently show.

Singular optical illusion in Baffin's 1'ivj/.—

Among the remarkable illusions which arise from local variations in the density, and consequently in the refractive power of the atmosphere, we are not acquainted with any more interesting than one which was more than once observed by the officers on the late expedition to Baffin's Bay. Upon looking at the summits of distant moun- tains, they were surprised to observe a huge opening in them, as if they had been perforated, or an arch thrown from one to another. This effect arose from the apparent junction of the tops of the mountains, produced by a variation of density in some part of the atmosphere be- tween the observer and the tops of the moun- tains, but which did not exist at a lower level, so as to affect the inferior parts of the moun- tains.

The fata morgana of the Mediterranean has been noticed by us in a distinct article. See FATA MORGANA.

*P. Minasi, whom we have quoted in the ar- ticle referred to, enquires, in his able ' Disserta- tion,' into the etymology of Morgana. After various remarks, he thinks the opinion of those who derive this word, which is so foreign to the Roman idiom, from /*u>poc tristis, and javou laetitia afficio, is not far from the truth; consi- dering the great exultation and joy this appear- ance produces in all ranks of people, who on its first commencement run hastily to the sea, ex- claiming Morgana ! Morgana ! He remarks that he has himself seen this appearance three times, and that he would rather behold it again than the most superb theatrical exhibition in the world.*

In the second chapter the author describes the city of Reggio, and the neighbouring coast of Calabria : by which he shows that all the objects which are exhibited in the Fata Morgana are derived from objects on shore.

In his third chapter, consisting of physical and astronomical observations, he affirms that the sea in the straits of Messina has the appearance of a large inclined speculum; that in the alter- nate current, or tide, which flows and returns in the straits for six hours each way, and is con- stantly attended by an opposite current along shore to the medium distance of about a mile and a half, there are many eddies and irregula- rities at the time of its change of direction : and that the Morgana usually appears at this period. Whence he enters into considerations of the re- lative situations of the sun and moon, which are necessary to afford high water at the proper time after sun-rise, as before described. It is high water, that is to say, the northern current ceases, at full and change, at nine o'clock. There

is probably a small rise and fall, though the an- notation to a large chart before me affirms that there is none.

In the fourth chapter, and subsequent part of the work, the author collects the opinion and relations of various writers on this subject ; namely, Angelucci, Kircher, Scotus, and others; and he afterwards proceeds to account for the effects, by the supposed inclination of the sur- face of the sea, and its subdivision into different planes by the contrary eddies. We must refer the reader, however, for further particulars to the work itself.

METEOROLOGY.

TLe account furnished by Mr. Latham to the Philosophical Transactions, of a remarkable atmospheric refraction, by which the coast of Picardy became distinctly visible at Hastings, :n 1798, we cannot here omit.

- *July 26th, about five o'clock in the afternoon,' says this gentleman, * while sitting in my dining- room at this place (Hastings) which is- situated on the parade, close to the sea-shore, nearly fronting the south, my attention was excited by a great number of people running down to the sea-side. On enquiring the reason, I was in- formed that the coast of France was plainly to be distinguished with the naked eye. I imme- diately went down to the shore, and was sur- prised to find that, even without the assistance of a telescope, I could very plainly see the cliffs on the opposite coast ; which, at the nearest part, are between forty and fifty miles distant, and are not to be discerned, from that low situation, by the aid of the best glasses. They appeared to be only a few miles off, and seemed to extend for some leagues along the coast. I pursued my walk along the shore to the eastward, close to the water's edge, conversing with the sailors ;ind fishermen on the subject, At first they could not be persuaded of the reality of the ap- pearance ; but they soon became so thoroughly convinced, by the cliffs gradually appearing moie elevated, and approaching nearer, as it were, that they pointed out, and named to me, the different places they had been accustomed to visit ; such as the Bay, the Old Head or Man, the Windmill, &c., at Boulogne ; St. Vallery, and other places on the coast of Picardy; which they afterwards confirmed, when they viewed s hem through their telescopes. Their observa- tions were, that the places appeared as near as if they were sailing, at a small distance, into the harbours.*

' Having indulged my curiosity on the shore for nearlyan hour, duringwhichthediffsappeared to be at some times more bright and near, at

others more faint and at a greater distance, but never out of sight, I went on the eastern cliff or hill, which is of a very considerable height, when a most beautiful scene presented itself to my view; for I could at once see Dungeness, Dover cliffs, and the French coast, all along from Ca- lais, Boulogne, 8cc., to St. Vallery ; and, as some of the fishermen affirmed, as far to the westward cyenas Dieppe. By the telescope, the French fishing-boats were plainly to be seen at anchor; and the different colors of the land on the heights, v.ith the buildings, were perfectly discernible. This curious phenomenon continued in the high est splendor till past eight o'clock, though a black cloud totally obscured the face of the sun for some time, when it gradually vanished. I was assured, from every enquiry I could make, that so remarkable an instance of atmospherical refraction had never been witnessed by the oldest inhabitant of Hastings, nor by any of the nume- rous visitors come to the great annual fair. The day was extremely hot. I had no barometer with me, but suppose the mercury must have Wen high, as that and the three preceding days vv < re remarkably fine and clear. To the best of my recollection, it was high water at Hastings

about two o'clock V. M. Not a breath of wind was stirring the whole of the day ; but the small pennons at the mast-heads of the fishing-boats in the harbour were in the morning at all points of the compass. I was, a few days afterwards, at Wincheisea, and at several places along the coast, where I was informed the above pheno- menon had been equally visible. When I was on the eastern hill, the cape of land called Dun- geness, which extends nearly two miles into the sea, and is about sixteen miles distant from Has- tings, in a right line, appeared as if quite close to it ; as did the fishing boats and other vessels, which were sailing between the two places ; they were likewise magnified to a great degree.'

In another article in the same volume of the 'Philosophical Transactions (1ˆ98), Professor Vince observes, that he remarked a similar ap- parent approximation of the French .coast to that of Ramsgate, in the summer of that year. ' Of two ships,' says he, ' which in different parts were equally sunk below the horizon, the in- verted image of one would but' just begin to appear, while that of the other would represent nearly the whole of the ship. But this I ob- served in general, that, as the ship gradually de- scended below the horizon, more of the image gradually appeared, and it ascended ; arid the contrary when the ships were ascending. On the horizon, in different pans, one ship would have a complete inverted image ; another would have only a partial image ; and a third would have no image at all. The images were in ge- neral extremely well defined ; and frequently appeared as clear and sharp as the ships them- selves, and of the same magnitude. Of the ships on this side of the horizon, no phenomena of this kind appeared. There was no fog on our coast ; and the ships in the Downs and the South Foreland exhibited no uncommon ap- pearances. The usual

refraction at the same time was uncommonly great ; for the tide was high, and at the very edge of the water I could see the cliffs at Calais a very considerable height above the horizon ; whereas they are frequently not to be seen in clear weather from the high lands about the place. The French coast also appeared, both ways, to a much greater distance than I ever observed it at any other time, par- ticularly towards the east, on which part also the unusual refraction was the strongest.

On the phenomena of double refraction Dr. Young has some excellent remarks in his Natu- ral Philosophy, vol. i.

‘ The atmospherical phenomena,’ says he, ‘ of rainbows and halos present us with examples of the spontaneous separation of colors by refrac- tion. The rainbow is universally attributed to the refraction and reflection of the sun’s rays, in the minute drops of falling rain or dew; and the halos, usually appearing in frosty atmospheres, are in all probability produced by the refraction of small triangular or hexagonal crystals of snow. It is only necessary, for the formation of a rain- bow, that the sun should shine on a dense cloud, or a shower of rain, in a proper situation • or even on a number of minute drops of water, scattered by a brush or by a syringe, so that the light may reach the eye after having undergone a

certain angular deviation, by means of various refractions and reflections ; and the drops so situated must necessarily be found somewhere in a conical surface, of which the eye is the vertex, and must present the appearance of an arch. The light, which is reflected by the external sur- face of a sphere, is scattered almost equally in all directions, setting aside the difference arising from the greater efficacy of oblique reflection; but when it first enters the drop, and is there re- flected by its posterior surface, its deviation never exceeds a certain angle, which depends on the degree of refrangibility, and is, therefore, differ- ent for light of different colors : and, the density of the light being the greatest at the angle of greatest devia’.ion, the appearance of a luminous arch is produced by the rays of each color at its appropriate distance. The rays which never enter the drops produce no other effect than to cause a brightness, or haziness, round the sun, where the reflection is the most oblique : those which are once reflected within the drop ex- hibit the common internal or primary rainbow, at the distance of about 41° from the point op- posite to the sun ; those which are twice reflected, the external or secondary rainbow, of 52° ; and if the effect of the light, three times reflected, were sufficiently powerful, it would appear at the distance of about 42° from the sun. The colors of both rainbows

encroach considerably on each other ; for each point of the sun may be considered as affording a distinct arch of each color, and the whole disk as producing an arch about half a degree in breadth for each kind of light; so that the arrangement nearly resembles that of the common mixed spectrum. There is, however, another cause of a further mixture of colors: the arch of any single color, which be- longs to any point of the sun, is accurately de- fined on one side only, while on the other it becomes gradually fainter, the breadth of the first minute containing about five times as much light as a minute at the distance of a quarter of a degree : the abrupt termination is on the side of the red, that is, without the inner bow, and within the outer; so that, for this reason, the order of colors partakes, in some degree, of the nature of the red termination of a broad beam of light seen through a prism ; but it is more or less affected by this cause, on account of some cir- cumstances, which will be explained when we examine the supernumerary rainbows, which sometimes accompany the bows more commonly observed. A lunar rainbow is much more rarely seen than a solar one, but its colors differ little, except in intensity, from those of the common rainbow.

' In the highest northern latitudes, where the air is commonly loaded with frozen particles, the sun and moon usually appear surrounded by halos, or colored circles, at the distances of about 22° and 46° from their centres ; this ap- pearance is also frequently observed in other climates, especially in the colder months, and in the light clouds which float in the highest regions of the air. The halos are usually attended by a horizontal white circle, with brighter spots, or parhelia, near their intersections with this circle, and with portions of inverted arches of various

curvatures ; the horizontal circle has also some- times anthelia, or bright spots, nearly opposite to the sun. These phenomena have usually been attributed to the effect of spherical particles of hail, each having a central opaque portion of a certain magnitude, mixed with oblong particles, of a determinate form, and floating with a cer- tain constant obliquity to the horizon. But all these arbitrary suppositions, which were imagined by Huygens, are in themselves extremely compli- cated and improbable, and are wholly unau- thorised by observation. A much simpler, and more natural, as well as more accurate explana- tion, which was suggested at an earlier period by Mariotte, had long been wholly forgotten, until the same idea occurred to me, without any pre- vi'ous knowledge of what Mariotte had done. The natural tendency of water to crystallise, in freezing, at an angle of 60°, is sufficiently estab- lished, to allow us to assume this as the constant angle of the elementary crystals of snow, which are probably either triangular or hexagonal prisms : the deviation produced by such a prism differs very little from the observed angle at which the first circle is usually seen ; and all the principal phenomena which attend this circle may be explained, by supposing the axis of the crystals to assume a vertical or a

horizontal po- sition, in consequence of the operation of gravity : thus the parhelia, which are sometimes a little more distant from the sun than the halo, are at- tributed by Mariotte to the refraction of the prisms, which are situated vertically, and pro- duce a greater deviation, on account of the ob- liquity of the rays of light with respect to their axis. The horizontal circle may be deduced from the reflection, or even the repeated refrac- tions, of the vertical facets; the anthelia from two refractions with an intermediate reflection; and the inverted arch from the increase of the deviation, in the light passing obliquely, through prisms lying in a horizontal position. The ex- ternal circle may be attributed either to two suc- cessive refractions through different prisms, or, with greater probability, as Mr. Cavendish has suggested to me, to the effect of the rectangular terminations of the single crystals. The ap- pearance of colors, in halos, is nearly the same as in rainbows, but less distinct ; the red being nearest to the luminary, and the whole halo being externally very ill defined. From the observed magnitude of these halos, I had concluded that the refractive power of ice must be materially less than that of water, although some authors had asserted that this was greater : and Dr. Wol- laston afterwards fully confirmed this conclusion, by means of the very accurate instrument which has already been described; his measurement agreeing precisely with the mean of the best ob- servations on these halos, so that ice must be considered as the least refractive of any known substance not aeriform.

« Sometimes the figures of halos and parhelia are so extremely complicated as to defy all at- tempts to account for the formation of their dif- ferent parts ; but, if we examine the representations whic!) have been triven by various authors of the multiplicity of capricious forms frequently assumed by the flakes of snow, we shall see no

reason to think them inadequate to the produc- tion of all these appearances.

In his second volume Dr. Young has given an abstract of Dr. Wollaston's observations on. the quantity of horizontal refraction. It is as follows : —

' Dr. Wollaston notices Mr. Monge's Memoir on the Mirage, observed in Egypt, as containing facts which fully agree with his own theory for- merly published. From his observations on the degree of refraction produced by the air, near the surface of the Thames, it appears that the varia- tions derived from changes of temperature and moisture in the atmosphere are by no means calculable ; but that a practical correction may be obtained,

which, for nautical uses, may super- sede the necessity of such a calculation. Dr. Wollaston first observed an image of an oar at a distance of about a mile, which was evidently caused by refraction, and, when he placed his eye near the water, the lower part of distant ob- jects was hidden, as if by a curvature of the sur- face. This was at a time when a continuation of hot weather had been succeeded by a colder day, and the water was sensibly warmer than the atmosphere above it. He afterwards procured a telescope, with a plane speculum placed obliquely before its object glass, and provided with a mi- crometer, for measuring the angular depression of the image of a distant oar, or other oblique object ; this was sometimes greater when the ob- ject glass was within an inch or two of the water, and sometimes when at the height of a foot or two. The greatest angle observed was somewhat more than nine minutes, when the air was at 50°, and the water at 63° ; in general the dry ness of the air lessened the effect, probably by producing evaporation ; but sometimes the re- fraction was considerable, notwithstanding the air was dry. Dr. Wollaston has observed but one instance which appeared to encourage the idea, that the solution of water in the atmosphere may diminish its refractive power. In order to correct the error to which nautical observations may be liable, from the depression of the appa- rent horizon, in consequence of such a refraction, or from its elevation in contrary circumstances ; and at the same time to make a proper correc- tion for the dip, Dr. Wollaston recommends that the whole vertical angle, between two opposite points of the horizon, be measured by the back observation, either before or after taking an alti- tude : and that half its excess above 180° be taken for the dip : or, if there be any doubt respecting the adjustment of the instrument, that it be reversed, so as to measure the angle below the horizon, and that one-fourth of the difference of the two angles, thus determined, be taken as extremely near to the true dip. It is indeed possible that the refraction may be somewhat different at different parts of the surface; but Dr. Wollaston is of opinion that this can rarely happen, except in the neighbourhood of land.'

To these speculations on the optical phe- nomena of the atmosphere, we may consistently add an abstract of the remarks of professor tlan- steen, in the Christiania Journal of Natural His- tory, on the Aurora Borealis and the Polar Fogs. It will be observed that he avails himself of seve-

ral of the observations of our late navigators in the Polar regions.

' With us,' he says, ' it is well known that the aurora borealis presents itself to view in the fol- lowing manner: — In the N.N.W. appears a luminous arch, the convex side of which is turned to the zenith, and the extremities of which bend towards the horizon. That part of the cir- cle of the horizon which lies between its ex- tremities forms a chord of the arch. The segment

of the circle between the arch and the horizon is, for the most part, darker than the rest of the sky ; sometimes black, sometimes dark-gray. The farther you advance towards the north, this colored segment becomes less dark ; and, in the highest latitudes, it becomes altogether undis- tinguishable. The highest point of the arch, at least in latitudes not very high, is almost always found in the magnetic meridian, that vertical plane which passes through the magnetic pole. In the North American States, where the westerly variation of the needle is only two degrees, the same luminous arch is seen, but its highest point lies due north. According to Scoresby's obser- vations on the east coast of Greenland, in lat. 65° N., the arch of the aurora borealis lies from north to south, in such a manner that its highest point is either to the east or west, as the arch lies on the one side or the other of the zenith. This agrees with the remarks of the missionary, Andrew Ginge, on the aurora borealis, in the colony of Good Hope, in Greenland (lat. 64° 107 5') ; with this difference only, that the arch com- monly appears low in the east or south-east, and more seldom approaches near to the zenith. He describes in the following manner such an arch, as seen on the 12th December, 1786. 'At half-past four, P. M., the first faint flashes of the aurora borealis arose from the east, which a quarter of an hour after reached the zenith, and from that shot out on all sides. Soon after, these were converted into an arch, which went through the zenith, and almost touched the horizon in the north and south. This arch was white, and so brilliant that it lighted up Baals River, which is a mile broad. At seven P. M. the declination had decreased, from rnid-day, from 50° 57′ to 50° 37', that is, 20'. At half— past eight the arch disappeared, and in the south was seen a comb with its teeth upwards. At that time the declination was 50° 20',' &c.

From the foregoing observations, it is easy to see that this arch must be a part of a whole lumi- nous ring, hovering over the surface of the earth at a considerable height, of which every ob- server sees his own portion. We may give an explanation of this by means of the hour-circle on a globe. Suppose a little insect creeping round the globe in the sixtieth parallel, it will only see a small part of the ring, as the largest portion of it will be concealed by the globe which forms the insect's horizon. The highest part of the arch which in this case it can see will be due north. If it approach nearer to the ring, it will see a larger portion of it ; and, when it is close under its edge, this will appear to be in the zenith. If it come nearer the pole, and within the ring, the nearest and highest part of the ring will be seen to the south, just as t\ir

ring of the aurora borealis was seen at Good Hope. Now, were the pole of the earth, or rather a point of its lengthened axis, the centre of the ring of the aurora borealis, the highest point of the arch would be seen every where in '.he true meridian, or due north. But, as this is not the case, since, with us, the highest point of the arch is seen about 20° west of due north, in North America it is seen due north, and at Good Hope, in Greenland, to the east, it follows that the centre of the ring must lie about from 20° to 30° from the pole of the earth, in a meridian passing through the states of North America. And since the arch is sometimes seen in the zenith near Iceland, and often stretches so far to the south as to pass the zenith, both here, in Christiania and in Copenhagen, and even in more southerly regions, it follows that the radius of the ring of the aurora borealis may extend from 20° to 40° and above. It is easy now to perceive in what manner the arch of the aurora borealis will appear in different meridians. If it be viewed from a point lying in the same me- ridian with its centre, its highest point will ap- pear due north ; and, if this rise so high as to pass through the zenith, its extremities will ter- minate in the east and west. If, again, it be viewed from a point lying eastward of the me- ridian of the ring, as with us in Europe, then the highest point of the arch will move to the west of the meridian, and the farther the more you advance to the north, till you come to the same latitude with the centre of the ring, between 60° and 70°. Here the highest point of the arch will lie due west; and, if the ring extend so far as to pass through the observer's zenith, it will go from north to south, that is, it will be parallel with the meridian.

' Such was the case with regard to the arch seen by captain Scoresby on the 15th of April, in lat. 64° 41′ It the place of the observer be within the circumference of the ring of the aurora borealis, as is the case with the colonies in the western districts of Greenland, the arch will be seen to the south, provided the observer be south from its centre, and to the east, if he be east from it. These rules may be shortly expressed in the following formula. If the observer be on the outside of the ring of the aurora borealis, he will see tne highest point of the arch in the same direction with the centre of the ring : if he be within the ring, the highest point of the arch will be seen in the direction opposite to that of the centre of the ring. That the centre of the ring of the aurora borealis does not coincide with the north pole of the earth is a very re- markable fact. This centre coincides as near as possible with the magnetic pole in North Ame- rica, the place of which we have determined in the first volume of this Journal (Christiania Mag. of Nat. Hist. p. 19). From this we are led to suppose that there must be some con- i exion between the aurora borealis and themag- retism of the earth.

4 This conjecture is strengthened by the obser- ˆations of captain Cook with respect to the iurora australis. When that celebrated navi- \ ator, on his second voyage, was sailing round the south pole, he often saw, in the

southern parts

of the Indian Sea, arches of the aurora australis. the highest point of which always lay to the south-east, so long as the ship sailed between the meridian of the Indian peninsula and the "paral- lel of 60". In that region the variation of the compass is between 30° and 40° W. The highest point of the arch of the aurora australis coincides here too with the direction of the needle. But as soon as he approached the meridian of Van Diemen's Land, where the variation of the com- pass disappears, the highest point of the arch of the aurora australis was found, too, in the true meridian. From this it appears that the centre of the ring of the aurora australis likewise lies at a considerable distance, from 30° to 40°, from the south pole of the earth, and in a meridian which passes through New Holland. And here, too, we have shown in the first volume, is the south magnetic pole to be found. He afterwards infers, That the polar lights spring from four points on the surface of the earth, which, so far as we have hitherto been able to determine, coin- cide with the magnetic poles of the earth. The larger luminous ring is formed round the two opposite poles of the stronger magnetic axis in North America and New Holland. Whether a similar ring, as full and as regular, be formed round the poles of the weaker axis, in Siberia' and Terra del Fuego, is a matter which, from the few observations which we are able to collect, cannot yet be so well ascertained. The arch of the polar light is seldom seen without lumi- nous beams shooting out from it. From the side of the arch turned away from the pole, beams or rather columns of light dart forth in a direction nearly perpendicular to the arch, and ascend towards the zenith. If these beams are so long as to pass a considerable way beyond the zenith, towards the south, they form, in the neighbourhood of the zenith, a kind of corona or glory, which seems to be the point of their union. This corona lies from 15° to 20° S. of the zenith, in such a situation, that if we suppose a vertical plane passing through the highest point of the arch, which with us lies about 20° W. from the meridian, and produced so as to pass through the zenith, it will come exactly upon the middle of the corona. And it is a very remarkable cir- cumstance, that the distance of this corona from the southern horizon is exactly equal to the in- clination of the needle at the place : so that the south pole of the needle points directly to the centre of the corona.

1 The formation of the corona,' he observes, ' can only be explained by supposing that the lumi- nous columns shoot from the surface of the earth in a direction parallel to the inclinationˆ of the needle, and to the direction of the earth's mag- netism; that they first become luminous when they pass out of our atmosphere ; while, on passing through it, they have the opposite effect of rendering it opaque. By this we can explain the dark segment which appears under the arch ; and also this remarkable fact, that, while the aurora borealis is in play, the sky, which is now perfectly transparent,

may, in less that a minute of time, be covered with an almost impenetrable veil, which again may vanish in a time as short, a circumstance which, in our northern regions,

may very unexpectedly derange many an astro- nomical observation. By this supposition, too, we can explain the dark-colored streaks of the aurora borealis, which I myself have frequently observed, and which are mentioned by several persons who have described these lights in Nor- way. If we turn the eye towards the magnetic zjnith (if I may be allowed to give this name to that point in the heavens to which the higher, or, with us, the southern pole of the needle points), we here see the luminous columns from the end ; and, as they are at a considerable dis- tance from one another, in this situation the eye perceives the blue arch of the heavens between them. In all other parts of the sky we see the luminous columns obliquely ; so that the one covers the other, which consequently gives them the appearance of beams darting from the arch, connected in one body.

‘ I have already hinted,’ says the professor, ‘ that there must be some connexion between the aurora borealis and the magnetism of the earth. Besides the reasons which may be derived from the facts already mentioned, I mean, that the centres of the luminous rings coincide with the four magnetic poles ; also that the lumjnous co- lumns shoot parallel to the medium direction of the magnetic powers at any one place ; and that they, beyond all doubt, follow the laws of repul- sion of the magnetic powers, and, consequently, themselves are magnetic, — there are many other reasons as strong, if not stronger, of which I shall briefly mention only the most important.

‘ 1. When the aurora borealis is vivid, the horizontal magnet becomes restless, varies in a few minutes from three, four, to five degrees from its ordinary place, and sometimes gets into a quivering motion, which shows that, at that time, the magnetic powers of the earth are in a state of great agitation. 2. A short time before the aurora borealis appears, the intensity of the mag- netism of the earth is apt to rise to an uncom- mon height ; but so soon as the aurora borealis begins, in proportion as its force increases, the intensity of the magnetism of the earth decreases, recovering its former strength by degrees, often not till the end of twenty-four hours. These changes are sometimes so sudden, that I once observed a considerable difference in the space of from two to three minutes. (The professor here details an experiment made with a fine mag- netic needle, suspended by the thread of a silk- worm. He counted its vibrations to the amount of 360;

and dividing this number into equal portions, and comparing by a chronometer the time occupied by each portion, he found a dif- ference in the number of vibrations performed in the same time, far exceeding any which could arise from the inaccuracy of the observation, proving a difference during the time of the ex- periment in the intensity of the magnetic force). From this, he says, it seems to follow, that the polar lights are the effect of an uncommonly high magnetic intensity, which intensity lets it- self off, as it were, by the polar lights, and thus sinks under its common strength. 3. During the time of a powerful display of the aurora borealis, Mallet and others have found no un- common strength of electricity in the air, which

seems to disprove the hypothesis of Franklin, 4. The Rev. Mr. Steenbuck, who was the editor, and, in a great measure, the author of the De- scription of the Kingdom of Norway, published under the name of Jessen, and who was himself born in the province of Trondheim, relates, con- cerning the arch of the aurora borealis, that, ac- cording to the accounts of old people, this arch was wont to appear lower on the horizon in Nordland, and nearer to the true north ; that, since these times, it has risen higher in the sky, and removed from the meridian towards the west. This agrees entirely with the change of place of the North American magnetic pole, by which it lies somewhat nearer to us, and in a plane which forms a larger angle with the men – dian. 5. The Swedish naturaliat Wilcke has remarked, that, during a vivid borealis, the co- rona sometimes changes its place, moving back- ward and forward several degrees. But, since the place of the corona is determined by the angle formed by the luminous columns with the surface of the earth, it is evident that the angle must likewise change. And, in such cases, he observed, that the inclination of the needle al- tered in a similar manner, so that, moving up and down, it always pointed to the centre of the corona. A change in the direction of the earth's magnetism produces also a change in the direc- tion of the luminous columns. The perpendicular height of the arch of the aurora borealis above the surface of the earth is to be computed from its height above the horizon, observed at two different places, which lie at a considerable dis- tance from one another, nearly in the same me- ridian. From a number of those arches, the cotemporaneous height of which was observed at Rome, Paris, Copenhagen, Stockholm, and other places, Mr. Mairan lias found, that the ring of the polar lights above the surface of the earth almost always exceeds 100 geographical miles. The luminous columns of which the shooting beams consist have, in all probability, the same height.

' Hudson's Bay and Straits, Baffin's Bay, and the sea around Greenland, are distinguished, in a remarkable manner, by a thick fog, which al- almost constantly prevails there. Captain Parry suffered much inconvenience from this fog, when he got into Lancaster Sound, and into the straits discovered

by him, which he calls Bar- row's Straits; and the more on this account, that the compass ceased here to have any fixed direction, or, as the sailors say, it wandered. Lieutenant (now captain) Franklin, too, if I re- member right, experienced the same thing on his land expedition, along the northern coasts of America on the Polar Sea. Captain William Scoresby's explanation of the origin of this fosj seems very admissible, though there may be found other circumstances concurring to the pro- duction of the same effect. A similar thick fog prevails likewise in the sea which surrounds Terra del Fuego. I have mentioned already, that Don Antonio de Ulloa says, in his letter to Mairan, that in sailing round cape Morn he found only a few moments when he could obtain a slight glance of the sky. As the same fog is neither so thick nor so constant in other places

of the same latitude, in Behring's Straits, for instance, or soutli from the Cape of Good Hope, it is not impossible that the streaming of the magnetic power, or of the polar lights, here, too, played their part. It is known by experience jhat, while these streamers are flowing, the sky has a tendency to become opaque and misty. While the polar lights pass through the air, they must have the effect, in penetrating the watery vapors existing in it in a transparent state, of taking from them their heat, and thereby rendering them opaque. When a solid body passes over into a •fluid, or a fluid body into a gaseous state, it ac- quires a greater quantity of heat ; and, in acquir- ing it, thus robs every surrounding body with which it comes in contact of a part of what they contain. It is thus, in warm climates, they cool vessels by surrounding them with wet cloths ; so that the evaporation of the water, in the form of steam, deprives the vessel of a great portion of its heat. In the same manner has nature pro- vided for the cooling of the animal body, in the time of excessive heat, by the increased perspi- ration, the evaporation of which preserves it in an almost unchanged temperature. Now, as the polar lights are an expansible substance, which in regions surrounding the magnetic poles is continually issuing from the surface of the earth, even at times when we who lie at a distance from these points perceive nothing of this, it may be conceived that this stream, in passing through the atmosphere, is continually lowering its temperature, and thus, in decomposing the watery vapors, producing fog. In this manner, too, may be explained another well-known phe- nomenon. It might be expected that, in the same parallels, the mean temperature would be every where nearly the same — as the length of the day, and the height of the sun, depend alone on the latitude. But this is by no means the case. In that parallel which passes the sixtieth degree of north latitude, the temperature is the lowest in Hudson's Bay, and at the south point of Green- land. As we

approach the coasts of Norway it rises, and in Christiania and Stockholm is about + 5°. In Petersburgh it has begun to descend, and the farther we advance to the east it becomes the lower ; so that a Siberian cold has become a proverbial expression. Although Cape Horn lies in the fifty-sixth degree of south latitude, that is about the same latitude with Copenhagen, the cold there is intolerable ; and yet at other points of the same parallel it is less. It seems also pretty well proved, that, in one and the same parallel, the mean temperature is least in the meridians which pass through the magnetic poles. Count Humboldt has rendered this dis- tribution of temperatures subject, in a very re- markable manner, to our observation, by con- necting, on a chart, all the points where the mean temperature is the same, by a sort of curve lines, which he calls Isothermic Lines. These lines are by no means parallel to the equator, as might be supposed, but remove to the greatest distance from it in the Atlantic Ocean, sinking again both in America and in the eastern hem- isphere. Comparing this chart with the lines of the inclination of the needle, in the seventh table of my Magnetismus der Erde, it will be found that these different lines follow very much

the same course ; a circumstance which is to be explained in this manner : a greater inclination of the needle proves a smaller distance from the magnetic poles, and| consequently, from the place from which the polar lights issue. But, if this meteor has any influence on the temperature, the mean temperature in the same parallel must decrease as the inclination increases ; and, con- sequently, the isothermic lines have the same cur- vature as the lines of inclination.

' It is a matter of experience perfectly well- ˆknown here in the north, which I have found confirmed by the observation of a good many years, that the aurora borealis is generally ac- companied by strong biting cold. When a sudden cold succeeds a milder day, it is often accompanied for the first two evenings by the aurora borealis, and likewise by a considerable increase of magnetic intensity. These three phenomena are for the most part contemporane- ous ; but, where they are not so, experience has taught me, with considerable certainty, to view the one as a near forerunner of the other. The magnetic powers seem thus to act a part in me- teorology hitherto unknown. There are, perhaps, various other powers unseen by us, operating in the great chemical laboratory of this globe. The possibility of this ought to teach the prognos- ticators of the weather some diffidence, when they imagine that, from the situation of the hea- venly bodies, or a few circumstances perhaps of little influence, they can foresee its approaching changes ; while these are the result of the ge- neral powers of the globe, acting from the centre to the surface, and from pole to pole, excited by the light of the sun and moon, and modified in countless ways, by local circumstances of the most different nature. Is it so, then, that the

polar lights have a certain connexion with the magnetism of the earth, and the diminution of temperature witli the polar lights and a higher magnetic intensity ? We are then, perhaps, pre- pared to explain the seemingly permanent changes of climate in certain northern regions of the globe, if these changes can be actually proved to have taken place. But the accurate observation of temperature by the thermometer is still too recent a discovery, and the range of thermometrical observations in the same place too limited, to enable us to determine this point with absolute certainty. In the mean time, the sur- rounding of the east coast of Greenland with ice, for a number of ages, is a very remarkable fact. The magnetic pole in North America approaches slowly towards the east ; and ought, therefore, if the foregoing possibilities have any reality, in the succession of ages, to surround the northern part of our peninsula with the same barrier, by which it has for ages shut out the east coast of Greenland from all participation in the com- motions of Europe. However desirable this might be, in some respects, we cannot help wish- ing, on other accounts, that this prediction may turn out like other prognostications of the wea- ther.'

SECT. VIII. — OF THE PRESTER OR WATZR- SPOUT.

Gassendi contended that the prester of the ancients was a mere tornado or whirlwind ; but

this was before the nature, or even the existence, of electricity, as a definite power, had been ac- curately ascertained ; and to prove that this is an error, it ii only necessary to quote the description of thb prester, as given by Lucretius, and to follow up the quotation with the explana- tion of his translator, Dr. Good, by which it will abundantly appear that the prester, like the spout of the present day, was regarded as both a sea and land meteor, or in other words as filled with water, and without water ; the term being more properly applied to the former, and the latter being correctly regarded and called a mimic, or imitative prester ; in reality the fiery whirlwind or hurricane.

The passage we advert to is as follows : lib. vi. 422.

Quod super est, facul est ex hiis cognoscere rebus, \prnrrripa.f Graiei quos ab re norainitarunt, In mare quit missel veniant ratione superne. — &c. &c.

Hence, with much ease, the meteor may we trace Termed, from its essence, PRESTER by the GREEKS, That oft from heaven wide hovers o'er the deep, Like a vast column, gradual from the skies, Prone o'er the waves, descends

it ; the vext tide Boiling amain beneath its mighty whirl, And with destruction sure the stoutest ship Threat'ning that dares the boist'rous scene approach. Thus solve th' appearance ; that the maniac wind, In cloud tempestuous pent, when unempower'd To burst its bondage, oft the cloud itself Stretches cylindric, like a spiral tube From heaven forced gradual downwards to the deep ; As though some viewless hand, its frame transpierced, With outspread palm had thrust it from above. This, when at length, the captived tempest rends, Forth flies it, fiery, o'er the main, and high Boils from its base th' exaggerated tide. For, as the cone descends, from every point A dread tornado lashes it without, In gyre perpetual, through its total fall : Till, ocean gained, the congregated storm Gives its full fury to th' uplifted waves, Tortured and torn, loud howling midst the fray.

Oft, too, the whirlwind from the clouds around Fritters some fragments, and itself involves Deep in a cloudy pellicle, and close Mimics the prester, lengthening slow from heaven ; Till, earth attained, th' involving web abrupt Bursts, and the whirlwind vomits and the storm. Yet, as on earth the mountains' pointed tops Break oft the texture, tubes like these, at land Far rarer form than o'er the marble main.

The translator's note upon this passage, in exposition of his author, is as follows, and we give it as affording a clear explanation of the nature and properties of this singular meteor : —

' Having discussed the phenomenon of thun- der and lightning, he now proceeds to consider those of the water-spout, and the hurricane ; and it is truly curious to observe how minutely he concurs with the philosophy of the present day, in regarding them as meteors of a similar nature and origin. Prester, indeed, as our poet informs us, is a Greek word, signifying a fiery or inflammatory intumescence; and such, he asserts, is the essence of which this meteor (the water-spout) consists : whence it is obvious that the term ventus, or wind, applied to it immedi- ately afterwards, is employed genetically, to

express an elastic gas or ether, for which Lu- cretius found no definite expression in his own language, rather than the nature of wind pro- perly so called. It is an igneous or fiery aura, not indeed iu the open act of combustion, but composed of the finest and most minute particles of a peculiar species of elementary fire, which, in a more concentrated form, would necessarily become luminous and burning.

' Gassendi, indeed, contends, uut the Epicu- rean prester is not an igneous meteor, but a mere vortex of elastic air. But there can be no doubt of his being mistaken ; for Lucretius not only employs a term to which fire, in

some modification or other, either elementary or com- bined, is necessarily attached, but refers us in the opening of the discussion, by way of explanation, to the constituent particles of lightning, which, he expressly declares, consist of the very finest and most attenuate fiery atoms.

- *Fiery, too, and of the common essence of lightning, is this meteor asserted to be, by the philosophy of the present day. For it is regarded as an electrical phenomenon, as, indeed, is almost every atmospherical meteor, as well as a great variety that are subterraneous. In de- scribing the powers and operation of the thunder-cloud, in note on v. 256 above, I have noticed its wonderful faculty of attracting, with almost instantaneous speed, the lighter and adscititious clouds in its vicinity, as I have also its submission to the still more strongly attractive power of that part of the earth which lies im- mediately beneath it, in a state of negative electricity, evidenced by its dipping downwards either in ragged and multiform fragments, or, where the film of the cloud is tenser, in more regular and unbroken protuberances. Retaining theu these simple facts in our recollection, it will not be difficult to account for the phenome- non of the prester, or water-spout, upon the principles of the electric theory.*

‘ A thunder-cloud, or cloud filled with electric matter, is first noticed to appear at sea in a sky so serene as to be totally destitute of adscititious clouds, and in an atmosphere so dry as to be possessed of very little and impalpable vapor. Such is the general appearance of the horizon on the commencement of the water-spout. In such a situation a thunder-storm cannot be the result, for want of the confederate assistance of additional clouds and vapors : but, from the circumstances enumerated above, a very consi- derable portion of mutual attraction must take place between this isolated cloud, and the portion of the sea immediately beneath it, more especially if the sea be at this time negatively electrified, or destitute of the electric power of which the cloud has a vast surplus. From this mutual attraction, the water directly under the cloud will become protuberant upwards, rising like a hill towards the cloud above, which, in the phenomenon we are now describing, it always does, and the cloud above will become protu- berant downwards, elongating itself towards the elevated portion of water beneath. If, in this action of straining, the texture of the cloud be very slight, it will burst into a thousand fragments, and the electric matter contained within it will

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be quietly dissipated, or attracted to the ocean; but, if it be stronger and more viscous, it will continue to stretch without bursting ; and, like every other elastic substance, the more it stretches, the narrower will be the projected tube. Such, to the mariner, is the actual ap- perance of the column of the water-spout, pre- cisely resembling a speaking trumpet, with its base or broader part uppermost. When the mouth of this projected tube touches the rising hillock of water, if the attraction of the nega- tively electrified ocean be superior, the electric aura, we may naturally suppose, will be drawn downwards, and the empty cloud be totally dissipated ; but, as will generally occur in the case of a positive force applied to a negative, if the attraction of the electric cloud prove victo- rious, it will continue to suck up the rising hillock of water till it is altogether sated, and can hold no more. At this time the cloud must necessarily burst from its own weight and disten- tion, and in proportion to its size, and the deluge of water and electricity it discharges, will be the mischief produced. It is said that it may occa- sionally be rent, at a distance, by making a violent noise on board the ship in which it is perceived by files, saws, or other discordant instruments ; and, certainly, whatever will tend to agitate the air in any considerable degree, affords some prospect of breaking the cloudy film, and thus dispersing the meteor ; but the more ordinary method of shooting at it from guns of a large calibre, gives a much stronger, and, indeed, almost certain chance of success ; for no mechanical power can agitate the sur- rounding atmosphere by any means so forcibly as the report of a large cannon ; and, if it be loaded with ball, it will give a double prospect of discharging the contents of this tremendous spectacle.'

Upon that part of the description which relates to the mimic prester, Dr. Good observes as fol- lows : ' Lucretius here alludes to meteors of a similar description, but not quite so tremendous in their effect : and is generally supposed to refer to the hurricane,or,as the Greeks termed it, «v«ˆta ; which is equally an electrical phenomenon, and may be regarded as a prester occurring on land, and consequently as an electric cloud filled with elastic air only, or other vapors received from the atmosphere, and not often with water. It is produced in the same manner as the sea-prester, has the same kind of elongated tube reaching towards the negatively electrified portion of

the earth by which it is attracted, and is accompa- nied, previous to its bursting, by a similar tor- nado of external air. This elongated tube, as well as the substance of the cloud itself, in the time of Shakspeare, was supposed to have its film or fibres condensed and rendered firmer by the operation of the rays of the sun ; but there is no necessity for such an idea : —

the dreadful spout

Which shipmen do the hurricano call, Constringed in mass by the almighty sun.

Troilus and Cressida.

‘ We may account for the phenomenon in this manner : that the thirsty cloud, in consequence

of a more elevated position than ordinary in the atmosphere, at the time it commences its attrac- tion with the water below, satiates and distends itself, by means of its proboscis, with absorbed air alone, prior to the actual contact of such pro- boscis with the hillc-:k of rising water ; so that, by the time this elongating spout extends to the attracted hillock, it is totally incapable of con- taining any thing farther.’

Cavallo supposes that electricity is rather a consequence than a cause of water-spouts ; and notices that they sometimes vanish and reappear. Dr. Franklin conceived that a vacuum is made by the rotatory motion of the ascending air, as when water is running through a tunnel, and that the water of the sea is thus raised. But it is justly observed, by Dr. Young, that no such cause as this could do more than produce a sligh. rarefication of the air, much less raise the water to above thirty or forty feet. At the same time the force of the wind thus excited might carry up much water in detached drops, as it is really ob- served to exist in water-spouts. Dr. Young re- marks moreover, in another passage, that the phenomena of water-spouts, if not of electrical origin, appear to have some connexion with elec- trical causes. A water-spout generally consists of large drops, like a dense rain, much agitated, and descending or ascending with a spiral mo- tion, at the same time that the whole spout is carried along horizontally, accompanied in gene- ral by a sound like that of the dashing of waves. Spouts are sometimes, although rarely, observed on shore, but generally in the neighbourhood of water. They are commonly largest above; sometimes two cones project, the one from a cloud, the other from the sea below it, to meet each other, the junction being accompanied by a flash of lightning : and, when the whole spout has exhibited a luminous appearance, it has per- haps served to conduct electricity slowly from the clouds to the earth.

Some of these circum- stances may be explained by considering the spout as a whirlwind, carrying up drops of water, which it has separated from the surface of the waves ; and the remainder may perhaps be de- duced from the co-operation of electricity, already existing in a neighbouring cloud.

One of the best accounts of the appearance of the genuine prester is given by Mr. Maxwell in the Edinburgh Philosophical Journal.

During several voyages to Congo, he fre- quently witnessed this interesting phenomenon ; and in a drawing in his Journal, from which fig. 1 of our plate METEOROLOGY is copied after the Edinburgh Philosophical Journal, he has repre- sented the different states of a water-spout, as they most commonly occur.

' At their first formation they appear,' he says, ' as at A, where the black cloud drops from a level surface into a conical form, before the dis- turbance at the surface of the sea, as shown at D, is observed. The effect produced at D is like that of a smoking furnace. The black conical cloud now continues to descend, as shown at B, till it almost reaches the surface of the sea, and the smoke-like appearance rises higher and higher till it forms a union with the cloud from which the spout appears to be suspended. In this si-

tuation it is said to put cm its must terrific ap- pearance to the mariners who have the misfortune to be in its neighbourhood. When the spout begins to disperse it assumes the appearance shown at C. The black cloud generally draws itself up in a ragged form, but leaves a thin transparent tube C E, which reaches to the water where the smoke-like commotion still prevails. Mr. Maxwell observed at this time in the upper part of the tube a very curious motion.'

This fact, of the existence of a transparent tube, confirms Mr. Alexander Stewart's descrip- tion in the Philosophical Transactions, of the water-spouts which he saw in the Mediterranean in 1701. ' It was observable of all of them,' says he, ' but chiefly of the large pillar, that towards the end it began to appear like a hollow canal, only black in the borders, but white in the mid- dle ; and, though at first it was altogether black and opaque, yet one could very distinctly per- ceive the sea-water to fly up along the middle of this canal as smoke does up a chimney, and that with great swiftness, and a very perceptible mo- tion ; and then, soon after, the spout or canal burst in the middle, and disappeared by little and little; the boiling up and pillar-like form of the sea water continuing always the last, even for some considerable time after the spout disap- peared, and perhaps till the spout appeared again, or reformed itself, which it commonly did in the same place as before, breaking and forming itself again several times in a quarter or half an hour.' —Philosophical Transactions 1702, p. 1077.

We copy the following from the Journal of the Royal Institution.

Extract of a letter from William Rickelts, esq. Captain in the Royal Navy, to the Right Hon. Sir Joseph Banks, Bart. 4'C. fyc.

In the month of July, 1800, captain Ricketts was suddenly called on deck, on account of the rapid approach of a water-spout among the Li- pari Islands ; it had the appearance of a viscid fluid, tapering in its descent, proceeding from the cloud to join the sea ; it moved at the rate of about two miles an hour, with a loud sound of rain ; it passed the stern of the ship, and wetted the after-part of the mainsail; hence captain Ricketts concluded that water-spouts were not continuous columns of water; and subsequent observations confirmed the opinion. See plate METEOROLOGY, fig. 2.

In November, 1801, about twenty miles from Trieste, a water-spout was seen eight miles to the southward ; round its lower extremity was a mist, about twelve feet high, nearly of the form of an Ionian capital, with very large volutes, the spout resting obliquely on its crown. At some distance from this spout the sea began to be agi- tated, and a mist rose to the height

of about four feet : then a projection descended from the black cloud which was impending, and met the ascend- ing mist about twenty feet above the sea; the last ten yards of the distance were described with a very great rapidity. Acloud of a light color ap- peared to ascend in this spout like quicksilver in t glass tube. The first spout then snapped at .ibout one-thin! of its height, the inferior part

subsiding gradually, and t!ic superior curling upwards.

Several other projections from the cloud ap- peared, with corresponding agitations of the wa- ter below, but not always in spouts vertically under them : seven spouts in all were formed ; two other projections were re-absorbed. Some of the spouts were not only oblique but curved : the ascending cloud moved most rapidly in those which were vertical ; they lasted from three to five minutes, and their dissipation was attended by no fall of rain. For some days before, the weather had been very rainy with a south-easter- ly wind ; but no rain had fallen on the day of observation.

T/te mimic or false prester, with little or no water, is a curious vagary of nature. On the 15th of August, 1617, there was observed by the Rev. Abraham De la Pry me, F. R. S., about two o'clock in the afternoon, a water-spout in the air, at Hatfield, in Yorkshire. ' It was about a mile off, coming directly to the place where I was,' says this gentleman, ' upon which I took my perspective glasses, and made the best obser- vations on it I could.

' The season was very dry, the weather ex- tremely hot, the air very cloudy, and the wind pretty strong, and what was remarkable blowing out of several quarters at the same time, and filling the air with thick and black clouds, in layers; this blowing of the wind soon created a great vortex, gyration, and whirling among the clouds, the centre of which now and then dropt down in the shape of a thick long black tube, commonly called a spout ; in which I could dis tinctly see a motion, like that of a screw, con- tinually drawing upwards, and screwing up as it were whatever it touched. In its progress it moved slowly over a hedge row and grove of young trees, which it made bend like hazel wands, in a circular motion; then, advancing forward to a large barn, in a moment it plucked off all the thatch, and filled the whole air \vith it. Coming to a very large oak tree, it made it bend like the former, and broke off one of its strongest branches, and, twisting it about, flung it to a very considerable distance off. Then coming near the place where I stood, within 300 yards of me, I beheld with great satisfaction this extraordinary phenomenon, and found that it proceeded from a gyration of the clouds, by contrary winds meeting in a point or centre ; and, where the greatest condensation and gravitation wu, railing down into a large pipe or tube, somewhat like the cochlea Archimedis ; and

which, in its work- ing or whirling motion, either sucks up water, or destroys ships, &c. Having proceeded about a quarter of a mile farther, it was dissolved by the prevalency of the wind from the east.' Phi- losophical Transactions 1702.

May the 5th, 1752, a similar phenomenon ap- peared about seven in the evening, in Deeping-Fen, which, from its effects, seemed to be a water-spout, broken from the clouds. A watery substance, as it seemed, was seen moving on the surface of the earth and water, in Deeping-Fen. It passed along with such violence and rapidity, that it carried every tiling before it, such as grass, straw, and stubble ; and, in going over the conn

try bank, it raised the dust to a great height; and when it arrived in the Wash, in the midst of the water, and just over against where Mr. R. lived, U stood still for some minutes. This watery sub- tance spouted out water from its own surface .o a considerable height, and with a terrible noise. On its second route it proceeded in a side line into a river, breaking in its passage a fishing net, and there moved along, till it came to the church, where it again stood a little while, and then made its next passage through the space between the church and the parsonage-house, towards Weston Hills and Moulton Chapel. In its way to these places it tore up a field of tur- nips, broke a gate off its hinges, and another into pieces. Those who saw it evaporate, affirm it ascended into the clouds in a long spearing vapor, and at last ended in a fiery stream. There was a mist like smoke frequently round it. Three more were seen at the same time in different places.— Id. 1751.

\Ve subjoin the following as the most modern and amongst the most able accounts of the water- spout from Dr. Brewster's Journal. It is part of a letter from captain Napier, 11. N., to that gentleman, dated 17th July 1821. 'I take the liberty of offering you the following observations, with the remarks made at the time, when the facts and appearances exhibited by this extraordi- nary phenomenon were deeply impressed upon my mind. On the 6th of September 1814, in lat. 30° 47′ N., and long, per chronometer 62° 40′ \V., at U. 30m. P. M., the wind being variable between \V. N. W. and N. N. E., the ship steering south-east, an extraordinary sort of whirlwind was obser; ed to form about three cables length from the starboard bow of H. M. S. Erne. It carried the water up along with it in a cylindri- cal form, in diameter to appearance like that of a water-butt, gradually rising in height, increasing in bulk, advancing in a southerly direction, and, when at the distance of a mile from the ship, it continued

stationary for several minutes, boiling and foaming at the base, discharging an immense column of water, with a rushing or hissing noise, into the overhanging clouds ; turning itself with a quick spiral motion, constantly bending and straightening, according as it was affected by the variable winds which now prevailed alternately from all points of the compass. It next returned to the northward in direct opposition to the then prevailing wind, and right upon the ship's star- board beam, whose course was altered to east, in hopes of letting it pass a-stern. Its approach however was so rapid, that we were obliged to resort to the usual expedient of a broadside, for the purpose of averting any danger that might be apprehended, when, after firing several shots, and one, in particular, having passed right through it at the distance of one-third from its base, it appeared for a minute as if cut horizontally in two parts, the divisions waving to and fro in dif- ferent directions, as agitated by opposite winds, till tney aˆain joined for a time, and at last dis- sipated in an immense dark cloud or shower of rain. The near edge showered $in large heavy drops on the ship's deck, until the cloud was quite exhausted.

'At the time of its being separated by the VOL. XIV.

effect of the shot, or more probably by the agi- tation occasioned in the air by the discharge of several tjuns, its base was considerably within half a mile of the ship, covering a portion of the surface of the water, at least half a furlong, or even 300 feet in diameter, from one extreme circumference of ebullition to the other, and the neck of the cloud into which it discharged itself appeared to have an altitude of 40° of the quad- rant, while the cloud itself extended over-head, and all round to a very considerable distance. Allowing, then, from the ship, a base of a littlt more than one-third of a nautical mile, say 2050 feet, and an angle of 40° to the top of the neck, we shall then have, for the perpendicular height of the spout, about 1720 feet, or very nearly one-third of a statute mile. A little be- fore it burst, two other water-spouts, of an in- ferior size, were observed to the southward, but their continuance was of short duration. When danger was no longer to be apprehended, I ob- served the barometer, and found it at 30ˆ inches, with the surface of the mercury very convex, an appearance which it had not assumed when at the same height at noon, about two hours before ; the thermometer stood at 82°, having risen 1° since that time.

' During the continuance of the water-spout, and the subsequent rain, which might be a little more than half an hour, the wind blew from ail points of the compass at different times, generally shifting at opposite points, never stronger than a fresh breeze for a moment, but in most instances quite light. It was unattended with anv thunder or lightning, and the water that fell from the cloud, and was caught in the foot of the driver, was perfectly fresh.

‘ Having witnessed this extraordinary pheno- menon, I endeavored to ascertain its cause, taking for granted the following axioms: — 1. ‘That water in a vacuum rises only to the height of thirty-two feet,’ or, in other words, ‘that a co- lumn of water thirty-two feet high is equal in weight to a column of the atmosphere of the same base.’ 2. ‘ That a column of mercury twenty-nine inches high, in vacuo, is equal to the same.’ 3. ‘ That heat rarities the air and causes a vacuum.’ 4. ‘ That when, the lower atmosphere is so much rarified as to become lighter than the impending clouds, then these clouds or vapors fall and disperse on the surface of the earth in the shape-of rain or moisture.’ 5. ‘That, when the clouds descend, the mercury in the barometer also descends, and that when the vapors nse through the lower atmospheres, becoming again more dense than the vapors themselves, the mercury in the barometer rises also.’ With these data, were next noted the various phenomena, as observed to be connected with the water-spout itself.

‘ 1. Low, heavy, black clouds were seen to the southward at noon, the barometer standing at 30ˆ, inches, and the thermometer at 81°, in a constant current of cool air ; the atmosphere, in general, becoming; hazy, even thick in some places, close and very hot, — the wind variable and attended with occasional drops of rain. A whirlwind next taking place, drawing the water up with it, apparently in a state like vapor or steam, advancing in a southerly direction to the above-

mentioned dark impending clouds, increasing also in height and bulk, with a quick spiral motion, till it came in contact with the end of a cloud which rather drooped to meet it; then discharging great quantities of water, not in a solid bulk, but in short unconnected streams or streaks as it were, attended with a rushing or hissing noise. 2. That after some time it re- turned with considerable velocity to the north- ward, in opposition to the wind prevailing at the ship, the water at the base boiling with a white foam, part projecting outwards to a certain cir- cumference, anc! part arising in thick dark vapors, which gradually arranged themselves into thin streaks, as they gained in ascent towards the clouds, till the whole was dispersed by bursting into a heavy shower. 3. That the clouds de- scended, or came gradually nearer to the surface of the sea, before they were perfectly saturated, previous to bursting. 4. That these clouds ex- tended in large dark masses over a great part of the western hemisphere, and were quite thick and dark over-head. 5. That the water-spout, at the base, covered, in

diameter, about half a furlong of water ; and in its most slender part, about two-thirds upwards, it was to appearance about six feet in diameter ; and that, in height, it misrht be estimated at 1700 feet: and, lastly, that during the operation of these extraordinary phenomena in the atmosphere, the mercury in the barometer did only become more convex than before, with the thermometer rising 1°.

‘ In proceeding to examine the subject, we shall suppose that the water rose from the sea in vacuo, or rather in a cylindrical space approxi- mating to that of a vacuum, and that it was caused so to rise, in part, by the pressure of the atmosphere circumscribing the base of the said vacuum. Having allowed so much, we can go no further without violating the well-known law, that ‘ water cannot rise in vacuo’ above thirty-two feet; admitting, therefore, that it was even as- sisted to that small height, we shall have availed ourselves of the theory, as far as truth or reason can justify. If we say that water is drawn upwards by the suction of a cloud, as proposed to be ex- emplified by Mr. Oliver with a quill over a glass of water, we shall then begin to establish the theory of ‘ suction,’ perfectly irreconcileable, also, with the equally well-known fact of the gravity of the atmosphere. Besides, the force of Mr. Oliver’s lungs, over a glass of water, can bear no analogy to that of a cloud overhanging the surface of th« sea. It appears also strange to talk of an empty cloud, or a half exhausted cloud, for clouds are not aerial bags, as some would have them to be, but vapors overhanging the earth at different heights from it, according to the proportion of humidity or density contained in themselves, and which, when, by reason of their greater weight, they fall within the sphere of the earth’s attrac- tion, begin to discharge themselves in rain, till, being reduced in size and density, if not totally consumed, they naturally rise above the sphere of attraction, and, regaining the higher parts of the atmosphere, again attract each other, and repeat such operations to the end of time.

‘ Setting aside, then, the theory of suction, and the idea that the water-spout could rise in a body

to the clouds, by the pressure of the circum- ambient atmosphere alone, we shall have the following probabilities to bring us to a more rational conclusion. 1st, That many opposite currents of wind, all pointing towards a certain centre, and coming in contact with each other with unequal forces, cause a rotatory motion or current of themselves round a central space, which, not partaking of an equal or its former pressure, naturally becomes rarified by the ex- isting heat, to such an extent, that it speedily acquires a state in a great degree approximating to that of a vacuum. 2dly, This continued ro- tatory motion of the air forms that which is usually denominated a whirlwind ; and the pres- sure of the external atmosphere at the base, forcing the water to a reasonable height up the rarified space

within, it is then carried upwards by the mechanical action of the wind in light and unconnected streaks. The space at the bottom, now becoming void, is regularly replenished by the pressure from without, till the whole spout is in due time thus perfectly completed.

‘ The water having now arrived at the region of the clouds, it is naturally attracted, diffused and connected with and among them, increasing in density and extent, till the lower atmosphere becoming now lighter than the clouds above, these enormous masses gradually settling down- wards, distend, burst and dissipate in rain. That the mercury in the barometer did not fall with the rain, but, on the contrary, became consider- ably more convex, was visible from observation and may be accounted for in the following man- ner : — That during the whole operation of the water-spout, which continued not more than thirty minutes, the commencement was too sud- den, and the duration too short, to cause any change indicative of what actually took place ; and that this convexity only prognosticated what would have taken place, had there been no water-spout at all, and what actually did happen afterwards, viz. a very clear atmosphere and hot sultry weather.

‘ Although this phenomenon was rather terrific in appearance, yet I am not inclined to think it would have been attended with any serious ca- lamity to the ship, had even the whole quantity fallen on board, allowing the loftier sails to have been taken in, the hatches battened down, and scuppers open. The cylinder or spout, coming in contact with the masts and rigging, would naturally be destroyed ; and, the air rushing in instantaneously to restore the equilibrium, the torrent would be thus checked in its fall to the mere weight or force of a tropical descent. I have heard many reports of ravages committed by these aqueous meteors, but never yet met a person who had actually witnessed or experienced any such distressing effects. Upon comparing the present account with that of Mr. Maxwell’s, illustrated by a very striking representation, it appears that, when completed, the two spouts are almost perfectly alike, but originally had de- rived their first formation from different sources. The cause of the whirlwind must be the same in all cases.

‘ Mr. Maxwell distinctly states, ‘ that, at the first formation, the black cloud drops from a

level surface into a conical form, before the dis- turbance at the surface of the sea is visible. The black conical cloud continues to descend till it almost reaches the surface of the sea, and the smoke-like appearance at the surface rises higher and higher, till it forms a union with the cloud from

which that spout appeared to be suspended.' In this instance, the whirlwind must have com- menced, and been complete, sooner in the region of the clouds than at the surface of the sea, and thus attracted and brought down with it all those vapors that first came within its influence, meet- ing in its descent a portion of water, of a ' smoke- like appearance,' rising from the sea itself, con- tained, of course, within the vacuum there more recently completed.

' This appears just as probable as that the whirlwind and spout should have commenced first at the surface of the sea, and then risen up- wards, as in the other instance ; for it has been seen that this spout traversed a considerable dis- tance to the southward, before it came in con- tact with a cloud, which ' rather drooped to meet it.' In both instances, however, the clouds and sea were connected by a long column of water, but the latter, having had its origin at the sea, increased to a much greater bulk, even to the formation of clouds themselves ; whereas the former, having originated aloft, acted merely as a canal or duct, through which the clouds dis- charged themselves into the ocean below. In the case given by Mr. Maxwell the spout must have been of smaller dimensions, and a less terrific appearance than the subject of the present paper, and from the very obvious cause of its having originated aloft instead of below. In the forma- tion of whirlwinds there can be no fixed or de- terminate rule, why a preference should be given to their being generated at any one particular altitude between the clouds and sea, in prefer- ence to another; and if we take it for granted that they are essential to the formation of water- spouts, or that a spout cannot exist without a previous whirlwind, it then naturally follows, that the dimensions of such a spout must, in a very great measure, depend upon the original proximity of the whirlwind to the sea itself, the sea affording a more copious supply of aqueous material, than the less substantial fabric of a cloud. The water that fell into the foot of the driver, on board the Erne, was certainly quite fresh to the taste, and it will be difficult to ascer- tain when and where the process of distillation was effected. In the mean time, however, it may reasonably be admitted, that the admixture of the salt-water from the sea, with the fresh- water in the clouds, the latter being in far greater proportion than the former, is of itself sufficient to account for the chemical change that had thus taken place in so short a space of time.

' Whenever we are better acquainted with the effect of coming in actual contact with one of these giants of the deep, we shall then be enabled to comply with the recommendations inserted at the end of Mr. Maxwell's paper ; but as there does exist at present, in the minds of all seamen, a most indescribable aversion to any intentional familiarity with meteors of such doubtful ten- dency, it may be difficult to find one who shall

court a closer acquaintance for the mere purpose of science, in preference to the usual employ- ment of every individual exertion of getting out of the way as fast as possible. In case of the ship's being becalmed, and every thing secured, and when one cannot do better, as was very much the case on board the Erne, it would be well to make every possible remark and observation, but such opportunities are said to be of very rare

occurrence.

SECT. IX. — OF METEORIC STONES.

These remarkable productions of the atmo- sphere, usually descending after the explosion of some of its heterogeneous compounds, have ex- cited human attention in all ages. Yet as late as the year 1 769 the French Academy of Sciences asserted their falling from the atmosphere to be impossible. The Chinese have only pushed their philosophy to the opposite pole of absurdity by considering them to be connected with contem- porary events. Yet the oriental has been, as it was likely to be, the less injurious error to science ; for it has led that wonderful people to preserve extensive catalogues of meteoric stones.

' While all Europe,' says the celebrated Vau- quelin, ' resounded with the rumor of stonesr fallen from the heavens ; and while philosophers, distracted in opinion, were framing hypotheses to explain their origin, each according to his own fancy, the honorable Mr. Howard, an able En- glish chemist, was pursuing in silence the only route which could lead to a solution of the pro- blem. He collected specimens of stones which- had fallen at different times, procured as much information as possible respecting them, com- pared the physical or exterior characters of these bodies ; and even did more, in subjecting them to chemical analysis, by means as ingenious as exact. It results from his researches that the stones which fell in England, in Italy, in Ger- many, in the East Indies, and in other places, have all such a perfect resemblance, that it is almost impossible to distinguish them from each other; and what renders the similitude more perfect and more striking is, that they are com- posed of the same principles, and nearly in the some proportions.'

' I should have abstained," continues he, ' from any public notice of an object, which has been treated of in so able a manner by the English chemist, if he himself had not induced me to do so, during his residence in Pans ; had not the stones which I analysed been from another coun- try ; and had not the interest excited by the sub- ject rendered this repetition excusable. It is therefore to gratify Mr. Howard ; to give, if pos- sible, more weight to his experiments ; and to enable philosophers to place full confidence in them, rather than to offer any thing new, that I publish this

memoir.' Journal des Mines, No. 76; and Tilloch's Mag. vol. xv. p. 346

« It is remarkable,' says Dr. Ure, ' that all the stones, at whatever period, or in whatever part of the world they 'may have fallen, have ap- peared, as far as they have been examined, to consist of the same substances ; and to have no- thing similar to them, not only among the minerals in the neighbourhood of the places

where they were found, but among all that have hitherto been discovered in our earth, as far as men have been able to penetrate. For the che- mical analysis of a considerable number of spe- cimens we are particularly indebted to Mr. Howard, as well as to Klaproth and Vauquelin ; and a precise mineralogical description of them has been given by the count de Bournon and others. They are all covered with a tliin crust of a deep black color, they are without gloss, and their surface is roughened with small aspe- rities. Internally they are grayish, and of a granulated texture, more or less fine. Four dif- ferent substances are interspersed among their textures, easily distinguished by a lens. The most abundant is from the size of a pin's head to that of a pea, opaque, with a little lustre like that of enamel, of a gray color, sometimes inclined to brown, and hard enough to give faint sparks with steel. Another is a martial pyrites, of a reddish-yellow color, black when powdered, not very firm in its texture, and not attractive by the magnet. A third consists of small par- ticles of iron in a perfectly metallic state, which give to the mass the quality of being attracted by the magnet, though in some specimens they do not exceed two per cent, of the whole weight, while in others they extend to a fourth. These are connected together by a fourth of an earthy consistence in most, so that they may be broken to pieces by the fingers with more or less diffi- culty. The black crust is hard enough to emit sparks with steel, but may be broken by a stroke with a hammer, and appears to possess the properties of the very attractible black oxide of iron. Their specific gravity varies from 3-352 to 4-281. The crust appears to contain nickel united with iron, but Mr. Hatchett could not determine its proportion. The pyrites he esti- mates at iron -68, sulphur -13, nickel 06, ex traneous earthy matter -13. In the metallic particles disseminated through the mass, the nickel was in the proportion of one part, or thereabout, to three of iron. The hard separate bodies gave silex -50, magnesia -15, oxide of iron -34, oxide of nickel -025 ; and the cement, or matrix, silex -48, magnesia -18, oxide of iron •34, oxide of nickel 025. The increase of weight in both these arose from the

higher oxi dation of the iron. These proportions are taken from the stones that fell at Benares on the 19th of December, 1798. M. G. Rose of Berlin has succeeded in separating crystals of pyroxene from a large specimen of the aerolite of Juvenas, and has measured the angles with the reflective goniometer ; one of the crystals is of the octo- hedral variety, represented in the 109th figure of Haiiy's Mineralogy. The same rocky tissue contains microscope hemitrope crystals, which appear to be felspar, with a base of soda, i. e. ilbite. In the aerolite of Pallus the olivine is perfectly crystallised. The solitary masses of lative iron that have been found in Siberia, Bohemia, Senegal, and South America, likewi.se agree in the circumstance of being an alloy of iron and nickel ; and are either ~of a cellular texture, or have earthy matter disseminated among the metal. Hence a similiar origin has been ascribed to them.

' Laueier, and afterwards Thenard, found chrome likewise, in the proportion of about one per cent., in different meteoric stones they ex- amined. In all the instances in which these stones have been supposed to fall from the clouds, and of which any perfect account has been given, the appearance of a luminous meteor, exploding with loud noise, has immediately preceded, and hence has been looked to as the cavise. The stones likewise have been more or less hot, when found immediately after their supposed fall. Different opinions, however, have been entertained on this subject, which is certainly involved in much difficulty. Some have sup- posed them to be merely projected from volca- noes ; while others have suggesteo, that they might be thrown from the moon ; o<- be bodies wandering through space, and at length brought within the sphere of attraction of our planet.

' Various lists of the periods, places, and ap- pearances of these showers of stony and earthy matters, have been given from time in the scien- tific journals. The latest and most complete is that published in the first volume of the Ed. Phil. Journ. compiled partly from a printed list by Chladni, and partly from a manuscript one of Mr. Allan, read some years ago at the Royal Society of Edinburgh. It appears that Dome- nico Troili, a Jesuit, published at Modena, in 1766, a work entitled Delia Caduta di un Sasso dall Aria, ragionamento, in which the ingenious author proves, in the clearest manner, both from ancient and modern history, that stones had re- peatedly fallen from the heavens. This curious dissertation (ragionamento) is in the possession of Mr. Allan. The compiler of the new list justly observes, that nothing can show more strikingly the universality and obstinacy of that scepticism which discredits every thing that it cannot understand, than the circumstance that his work should have produced so little effect, and that the numerous falls of meteoric stones should have so long been ranked among the in ventions of ignorant credulity. Mr. Howard's admirable dissertation was published in the Phil. Trans, for

1802. It is reprinted in the thirteenth volume of Tilloch's Magazine, and ought to be studied as a pattern of scientific re- search.'

The following table is from the thirty-first vol. of the Ann. de Chimie : —

CHRONOLOGICAL LIST OF METEORIC STONES. Sect. I. — Before the Christian Era.

Division 1. — Containing those which can be

referred pretty nearly to a date. A. C. 1478. The thunderstone in Crete, mentioned

by Malchus, and regarded probably as the

symbol of Cybele. — Chronicle of Paros, 1, 18,

19.

1451. The shower of stones which destroyed the

enemies of Joshua at Bethoron, was probably

hail. — Joshua, chap. x. 11. 1200. Stones preserved at Orchomenos. — Pau-

san'ua. 1168. A mass of iron upon Mount Ida, in

Crete — Chronicle of Parot, 1. 22.

705 or 704. The ancyle, or sacred shield, which

fell in the reign of Numa. It had nearly the

same shape as those which fell at the Cape

and at Agrarn. — Plutarch, in Alum. 654. Stones which fell upon Mount Alba in

the reign of Tullus Hostilius. ' Crebri ceci-

dere crelo lapides.' — Liv. 1. 30. 644. Five stones which fell in China, in the

country of Song. — De Guignts. 465. A large stone at ./Egospotamos, which

Anaxagoras supposed to come from the sun.

It was as large as a cart, and of a burnt color.

‘ Qui lapis etiam nunc ostenditur, magnitu-

dine vehis, colore adusto.’ — Plutarch, Pliny,

lib. ii. cap. 58.

465. A stone near Thebes. — Scholiast of Pindar. 211. Stones fell in China along with a falling

star. — De Guignes, &c. 205 or 206. Fiery stones.— Plutarch, Fab. Max.

cap. 2.

*192. Stone fell in China. — De Guignes. 176. A stone fell in the Lake of Mars. * La-*

pidem in Agro Crustumino in Lacum Martis

de ccelo cecidisse.’ — Liv. xli. 3. 90 or 89. ‘ Eodem causam dicente, lateribus

coctis pluisse, in ejus anni acta relatum est.’

— Plin. Nat. Hist. lib. ii. cap. 56. 89. Two large stones fell at Yong in China.

The sound was heard over forty leagues. — De Guignes.

56 or 52. Spongy iron fell in Lucania. — Plin. 46. Stones fell at Acilla. — Ccesar. 38. Six stones fell in Leang in China. — De

Guignes. 29. Four stones fell at Po in China. — De

Guignes. 22. Eight stones fell from heaven, in China. —

De Guignes.

12. A stone fell at Ton-Kouan. — De Guignes. 9. Two stones fell in China. — De Guignes. 6. Sixteen stones fell in Ning-Tcheon, and other

two in the same year. — De Guignes.

Division 2. — Containing those of which the date cannot be determined.

The mother of the gods, which fell at Pessinus.

The stone preserved at Abydos. — Plin.

The stone preserved at Cassandria. — Plin.

The black stone, and also another preserved in the Caaba of Mecca.

The ‘ thunderbolt, black in appearance like a hard rock, brilliant and sparkling,’ of whichv the blacksmith forged the sword of Antar. — See Quarterly Review, vol. xxi. p. 225, and Antar, translated by T. Hamilton, Esq., page

152.

The stone preserved in the coronation chair of the kings of England was not meteoric.

Sect. II.— After the Christian Era. P. C.

In the years 2, 106, 154, 310, and 333, stones fell in China. — Abel Remusot. Journ. de Phy- sique, May 1819.

A stone in the country of the Vocontini. — Plin.

452. Three large stones fell in Thrace. — Cedre- nus and Marcellini, Chronicon. p. 29. ‘ Hoc tempore,’ says Marcellinus, ‘ tres magni lapi- des e crcio in Tiiracia ceciderunt.’

Sixth century. Stones fea upon Mount Lebanon,

and near Emisa in Syria. — Damasciut. About 570. Stones near Bender in Arabia. —

Alkoran, viii. 16, and cv. 3 and 4. 648. A fiery stone at Constantinople. — Several

Chronicles.

823. A shower of pebbles in Saxony. 839. Stones fell in Japan. — Abel Remutat. 852. A stone fell in Tabaristan, in July or

August. — De Sacy and Quatremere. 856. In December, five stones fell in Egypt. —

The same.

885. Stones fell in Japan. — Abel Remusat. 897. A stone fell at Ahmedabad. — Quatremere.

In 892, according to the Chron. Syr. 921. Great stones fell at Narni. Benedictus de

Saint-Andrea, in the library of prince Chigi at

Rome. 951. A stone fell near Augsburg.— Alb. Slad.

and others. 998. Two stones fell, one near the Elbe, and

the other in the town of Magdeburg. — Cotnuu

and Spangenberg. 1009. A mass of iron fell in Djordjan. — Avi-

cenna. 1021. Stones fell in Africa between the 24th

of July and the 21st of August. — De Sacy. 1112. Stones or iron fell near Aquileja. — Val-

vusor. 11 35 or 1136. A stone fell at Oldisleben in

Thuringia. — Spangenberg, and others. 1164. During pentecost, iron fell in Misnia.

— Fabricius. 1249. Stones fell at Quedlinbourg, Ballenstadt,

and Blackenburg, on the 26th July. — Span-

genberg and Rivander. Thirteenth century. A stone fell at Wurzburg.

—Schottus, Phys. Cur. Between 1251 and 1363. Stones fell at Weli-

koi-Ustiug in Russia. — Gilbert's Ann., torn. 35. 1280. A stone fell at Alexandria in Egypt. —

De Sacy. 1300 nearly. Great stones fell in Arragon.—

Manuscript Chronicle in the national museum

of Pest in Hungary.

1304, October 1. Stones fell at Friedland or Friedberg. — Kranz and Spangenberg.

1305. Stones fell in the country of the Vandals. 1328. January 9. In Mortahiah and Dakhaliah.

— Quatremere.

1368. A mass of iron in the Duchy of Olden- bur?. — Siebrand, Meyer.

1379,~May 26. Stones fell at Minden in Ha- nover.— Lerbecius.

1421. A stone fell in the island of Java. — Sir T. S. Raffles.

1438. A shower of spongy stones at Roa, near Burgos in Spain. — Proust.

A stone fell near Lucerne.— Cysat.

1474. Two great stones fell near Viterbo. — Bibliotheca Italiana, September, 1820.

1491, March 22. A stone fell near Crema — Sintoneta.

1492, November 7. A stone of 260 Ibs. fell at Ensisheim near Sturgau, in Alsace. It is now in the library of Colmar, and has been reduced to 150 Ibs. — Trithemius, Hirsaug. Annal. Con- rad Gesncr, Liber, de Rerum Fossilium, Figu- m, cap. iii. p. 66. in Ms Opera Zurich, 1565.

1496, 'January 26 or 28. Three stones fell be-

ween Cesena and Bertonori. — Buriel and

Subellicus. 1511, September 4. Several gtones, some of

which weighed 1 1 Ibs. and others 8 Ibs., fell

at Crema. — Giovanni del Prato, and others. 1520, May. Stones fell in Aragon. — Diego de

Say us. 1540, April 28. A stone fell in the Limousin. —

Bonav. de Saint Amable f Between 1540 and 1550. A mass of iron fell in

the forest of Naunhoff. — Chronicle of the

Mines of Misnia. — — Iron fell in Piedmont. — Mercati and Sca-

liger. 1548, November 6. A black mass fell atMans-

feld in Thuringia. — Bonav. de Saint Amable. 1552, May 19. Stones fell in Thuringia near

Schlossingen. — Spangenberg. 1559. Two large stones, as large as a man's

head, fell at Miscolz in Hungary, which are

said to be preserved in the treasury at Vienna.

— Sthuanfi. 1561, May 17. A stone called the arx Julia fell

at Torgau and Eilenborg. — Gesner and De

Boot.

1580, May 27. Stones fell near Gottingen.— Bange.

1581, July 26. A stone, 39 Ibs. weight, fell in Thuringia. It was so hot that no person could touch it. — Binhard, Olearius.

1583, January 9. Stones fell at Castrovillari. —

Casto, Mercati, and Imperati. March 2. A stone fell in Piedmont of the

size of a grenade 1591, June 19. Some large stones fell at Kun-

nersdorf. — Lucas. 1596, March 1. Stones fell at Crevalcore. —

Mittarelli. In the sixteenth century, not in 1603. A stone

fell in the kingdom of Valencia. — Cassius and

the Jesuits of Coimbra. 1618, August. A great fall of stones took place

in Styria. — Hammer. A metallic mass fell in Bohemia. — Kron-

land.

1621, April 17. A mass of iron fell about 100 miles south-east of Lahore. — Jthan Gui 't Memoirs.

1622, January 10. A stone fell in Devonshire. — Humph.

1628, April 9. Stones fell near Hatford in Berk- shire; one of them weighed 24 Ibs. — Gent. Mag. December 1796.

1634, October 27. Stones fell in Charollois.— Morinus.

1635, June 21. A stone fell at Vago in Italy ?

July 7, or September 29. A stone weigh- ing about lloz. fell at Calce. — Valisnieri, Opere, vi. 64?

1636, March 6. A burnt-looking stone fell be- tween Sagan and Dubrow in Silesia. — Lucas and Cluverius.

1637, November 29. Gassendi says, a stone of a black metallic color fell on ˆount Vaision, be- tween Guillaume and Perne in Provence. It weighed 54 Ibs. and had the size and shape of the human head. Its specific gravity was 3‘5. Gassendi, Opera, p. 96. Lyons 1658.

1642, August 4. A stone weighing 4 Ibs. fell be- tween Woodbridge and Aldborough in Suffolk.

— Gent. Mag. December 1796.

1643, or 1644.— Stones fell in the sea.— Wurf- bain.

1647, February 18. A stone fell near Zwicau. —

Schmid. August. Stones fell in the bailliase of

Stolzenem in Westphalia. — Gilbert’s Annal. Between 1647 and 1654. A mass fell in the sea

— \ ill man.

1650, August 6. A stone fell at Dordrecht.— Senguerd.

1654, March 30. Stones fell in the island of Fu ne n . — Bartholinus.

A large stone fell at Warsaw. — Petr. BoreUus.

A small stone fell at Milan, and killed a Fran- ciscan.— Museum Septaliauum.

1668, June 19 or 21. Two stones, one 300 Ibs. and the other 200 Ibs. weight, fell near Verona. — Legallois, Conversations, &c., Paris 1672. Valisnieri, Opere, ii. p. 64, 66. Montanon and Francisco Carli, who published a letter containing several curious notices respecting the fall of stones from the heavens.

1671, February 27. Stones fell in Suabia. — Gilbert’s Annal. torn, xxxiii.

1674, October 6. Two large stones fell near Claris. — Scheuchzcr.

Between 1675 and 1677, a stone fell into a fish- ing-boat near Copinshaw. — Wallace's Account of Orkney, and Gent. Mag. July 1806.

1677, May 28. Several stones, which probably contained copper, fell at Ermundorf near Roosenhaven. — Misc. Nat. Cur. 1677. App.

1680, May 18. Stones fell at London.— King.

1697, January 13. Stones fell at Pentolina near Sienna. — Soldani after Gabrieli.

1698, May 19. A stone fell at Waltring.— Scheuchzer.

1706, June 7. A stone of 72 Ibs. fell at Larissa in Macedonia. It smelt of sulphur, and was like the scum of iron. — Paul Lucas.

1715, April 11. Stones fell not far from Star- gard in Pomerania. — Ann. de Gilbert, Ixxi. p.

215.

1722, June 5. Stones fell near Sheftlar in Frei- singen. — Meichelbeck.

1723, June 22. About thirty-three stones, black and metallic, fell near Plescowitz in Bohemia. — Rost and Stepling.

1727, July 22. Stones fell at Liboschitz in Bo- hemia.— Stepling.

1738, August 18. Stones fell near Carpentras. — Castillon.

1740, October 25. Stones fell at Rasgrad.— Gilbert's Annal, torn. i.

to 1741. A large stone fell in winter in

Greenland. — Egede.

1743. Stones fell at Liboschitz in Bohemia. — Stepling?

1750, October 1. A large stone fell at Niort near Coutance. — Huard and Lalande.

1751, May 26. Two masses of iroi. of 71 Ibs. and 16lbs. fell in the district of Agram, the capital of Croatia. The largest of these is now in Vienna.

1753, July 3. Four stones, one of which weighed 13 Ibs. fell at Strkow near

Tabor.- –

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Steplmg, De Pluvia Lapidea, anno 1753, ad

Strkow, et ejus causis, meditatio, p. 4. — Prug.

1754.

1750, September. Two stones, one of 20 Ibs. and

the other of lllbs., fell near the villages of

Laponas and Pin in Berne. — Lalande and

Richard. 1752, July. A stone fell in Calabria, at Terra-

nuova, which weighed 71bs. 7J oz. — Domin.

Tata. 1766, end of July. A stone fell at Alboreto in

M odena. — Trail. August 15. A stone fell at Novellara. —

Troilil 1768, September 13. A stone fell near Luce in

Maine. It was analysed by Lavoisier, &c

Mem. Acad. Par.

A stone fell at Aire. — Mem Acad. Par.

•• — November 20. A stone weighing 381bs.

fell at Mauerkirchen in Bavaria.— Imhof. 1773, November 17. A stone weighing 9lbs.

1 oz. fell at Sena in Arragon. — Proust. 1775, September 19. Stones fell near Rodach

in Cobourg. — Gilbert's Annal. torn, xxiii. or 1776. Stones fell at Obruteza in Vol-

hyuia. — Gilbert's Annal. torn. xxxi. 1776 or 1777, January or February, Stones

fell near Fabriano. — Soldani and Amoretti.

1779. Two stones weighing 3Joz. each, fell at Pettiswoode in Ireland. — Bingley, in Gent. Mag. September 1796.

1780, April 1. Stones fell near Beeston in Eng- land.— Evening Post.

About 1780. Masses of iron fell in the territory of Kinsdale, between West-River Mountain and Connecticut. — Quarterly Review, No. 59, April, 1824.

1782. A stone fell near Turin. — Tata and Amo- retti.

1785, February 19. Stones fell at Eichstadt. Picket and Stuz.

1787, October 1. Stones fell in the province of Charkow in Russia. — Gilbert's Annal. torn, xxxi.

1790, July 24. A great shower of stones fell at Barbotan near Roquefort, in the vicinity of Bourdeaux. A mass fifteen inches in diameter penetrated a hut, and killed a herdsman and a bullock. Some of the stones weighed 25 Ibs. and others 30 Ibs. — Lomet.

1 79 1 , May 1 7. Stones fell at Cassel-Beradenga, in Tuscany. — Soldani.

October 20. Stones fell at Menabilly, in

Cornwallis. — King.

1794, June 16. Twelve stones, one of which weighed 7£ oz., fell at Sienna. Howard and Klaproth have analysed these stones. — Philo- sophical Transactions, 1794, p. 103.

1 795, April 1 3. Stones fell at Ceylon.— Beck. —— December 13. A large stone weighing

55 Ibs. fell near Wold Cottage in Yorkshire. No light accompanied the fall. — Gent. Mag.

1796.

1796, January 4. Stones fell near Belaja- Zerkwa in Russia. — Gilbert's Annal. torn, xxxv.

February 19. A stone of lOlbs. fell 11

Portugal. — Southey's Letters from Spain. 1798, March 8 or 12. Stones,

one of which was

the size of a calfs head, f&H at Sales.— Mar- quis de Dree.

December 19. Stones fell in Bengal —

Howard, Lord Valencia.

1801 , Stones fell on the island of Tonneliers. — Bory de St. Vincent.

1802, September. Stones fell in Scotland? — Monthly Magazine, October 1802.

1803, April 26. A great fall of stones took place at Aigle. They were about 3000 in number, and the largest weighed about 17 Ibs.

July 4. Stones fell at East Norton.—

Phil. Mag. and Bibl. Brit.

October 8. A stone fell near Apt.

December 13. A stone fell near Eggen-

fielde in Bavaria weighing 3J Ibs.— Imhof.

1804, April 5. A stone fell at Fossil, near Glasgow. — Phil. Mag.

1807. A stone fell at Dordrecht.— Fan

Beck Calkoen.

1805, March 25. Stones fell at Doroninsk in Siberia. — Gilbert's Annal. torn. xxix. and xxxi.

June. Stones covered with a black crust

fell in Constantinople. — Kengas Ingigian.

1806, March 15. Two stones fell at St. Etienne and Valence; one of them weighed 8 Ibs.

May 17. A stone weighing 2Jlbs. fell

near Basingstoke in Hampshire. — Monthly Magazine.

1807, March 13 (June 17 according to Lucas). A stone of 160 Ibs. fell at Timochin, in the province of Smolensko in Russia. — Gilbert's Annal.

December 14. A great shower of stones

fell near Weston in Connecticut. Masses of 20 Ibs. 25lbs. and 35 Ibs. were found.— Silliman and Kingsley.

1808, April 19. Stones fell atBorgo San Donino. — Guidotti and Sgagnoni.

May 22. Stones weighing 4 Ibs. or 5 Ibs.

fell near Stannern in Moravia. — Bibl. Brit.

September 3. Stones fell at Lissa in Bo- hemia.— De Schreibers.

1809, June 17. A stone of 6oz. fell on board an American vessel, in lat. 30° 58 N., and long. 70° 25′ W.— Bibl. Brit. ?*

1810, January 30. Stones, some of which weighed about 2 Ibs , fell in Caswell county, North America. — Phil. Mag. vol. xxxvi.

— — July. A great stone fell at Shahahad in India/ It burned five villages, and killed several men and women. — Phil. Mag. xxxvii. p. 236.

August 10. A stone weighing 7} Ibs. fell

in the county of Tipperary in Ireland. — Phil. Mag. vol. xxxviii. Mr. W. Higgins published an analysis of it.

November 23. Stones fell at Mortelle, Vil

lerai, and Moulinbrule". in the department of the Loiret ; one of them weighed 40 Ibs. and the other 20 Ibs.— Nick. Journal, vol. xxxix. p. 158.

1811, March 1 2 or 1 3. A stone of 1 5 Ibs. fell in the province of Poltawa in Russia. — Gilbert's Annals, xxxviii.

July 8. Stones, one of which weighed

3Joz.,fell near Berlanguillas in Spain. — Bibl, Brit. torn, xlviii. p. 162.

1812, April 10. A shower of stones fell near Thoulouse.

April 15. A stone, the size of a child's

head, fell at Erxleben. A specimen of it is in the possession of Professor

Haussman of Brunswick. Gilbert's Annul, xl. and xli.

August 5. Stones fell at Chantonay. —

Brochant.

1813, March 14. Stones fell at Cutro in Cala- bria, during a great fall of red dust.-ˆBibl. Brit. October 1813.

September 10. Several stones, one of which

weighed 17 Ibs., fell at Limerick in Ireland. — Phil. Mag.

1814, February 3. A stone fell at Bacharut in Russia. — Gilbert's Annul, torn. i.

September 5. Stones, some of which weighed

8 Ibs., fell in the vicinity of Agen. — Phil.

Mag. vol. xlv. Novembers. Stones, of which nineteen were

found, fell in the Doab in India. — Phil. Mag.

1815, February 18. A stone fell at Duralla in India. — Phil. Mag. Journal of Science.

October 3. A Targe stone fell at Chassigny,

near Langres. — Pistollet. Ann. de Chim.

1816, A stone fell at Glastonbury in Somerset- shire.— Phil. Mag.

1817, May 2 and 3. There is reason to think that masses of stone fell in the Baltic after the great meteor of Gotlenburg. — Chladni 1

1818, February 15. A great stone appears to have fallen at Limoge, but it has not been disinterred. — Gazette de France, Feb. 25,

1818.

March 30. A stone fell near Zuborzyca

in Volhynia (analysed by M. Laugier, Ann. de Museum, 17th year, 2d number).

July 29. O. S. A stone of 7 Ibs. fell at

the village of Slobodka in Smolensko. It penetrated nearly sixteen inches into the ground. It had a brown crust with metallic spots.

1819, June 13. Stones fell at Jonzac, depart- ment of the lower Charente. These stones contain no nickel.

October 1 3. Stones fell near Politz, not far

from Gera or Kostritz, in the principality of Reuss. — Gilbert's Annals, Ixiii.

1820, 21st to 22d March. A stone fell in the night at Vedenburg in Hungary. — Hesperus, xxvii. cah. 3.

July 12. A stone fell near Likna, in the

circle of Dunaborg, province of Witepsk in Russia. — Th. Grotthus. Ann. de Gilbert, Ixviii.

1821, June 15. Stones fell near Juvenas, con- taining no nickel.

1822, June 3. A stone fell at Angers. — Ann. de Chim.

• September 10. A stone fell near Carlstadt in

Sweden. September 13. A stone fell near La Baffe,

canton of Epinal, department of Vosges. —

Ann. de Chim.

1823, August 7. A stone fell near Nobleboro in America. — Silliman's American Journal, vii.

1824, towards the end of January. Many stones fell near Arenazzo, in the territory of Bologna. One of them, weighing 12 Ibs., is preserved

in the Observatory of Bologna. — Dwrio di Roma.

beginning of February. A great stone fell

in the province of Irkutsk in Siberia. — Some journals.

October 14. A stone fell near Zebrak, circle

of Beraum, in Bohemia. The stone is pre- served in the national museum of Prague.

LIST OF MASSES OF IRON SUPPOSED TO HAVE

FALLEN FROM THE HEAVENS.

Sect. I. — Spongy or Cellular Masses containing

Nickel.

1. The mass found by Pallas in Siberia, to which the Tartars ascribe a meteoric origin. — Voyages de Pallas, torn. iv. p. 545. Paris,

1793.

2. A fragment found between Eibenstock and Johanngeorgenstadt.

3. A fragment probably from Norway, and in the imperial cabinet of Vienna.

4. A small mass weighing some pounds, and now at Gotha.

5. Two masses in Greenland, out of which the knives of the Esquimaux were made. — See Ross's Account of an Expedition to the Arctic Regions.

Sect. II. — Solid Masses where the Iron exists in Rhomboids or Octahedrons, composed of Strata, and containing Nickel.

1. The only fall of iron of this kind is that which took place at Agram in 1751.

2. A mass of the same kind has been found on the right bank of the Senegal. — Compagnon, Forster, Goldberry.

3. At the Cape of Good Hope; Stromeyer has lately detected cobalt in this mass. — Van Ma- rum and Dankelman; Brande's Journal, vol. vi. 162.

4. In different parts of Mexico. — Sonneschmidf, Humboldt, and the Gazette de Mexico, torn. i. and v.

5. In the province of Bahia in Brasil. It is seven feet long, four feet wide, and two feet thick, and its weight about 14,000 Ibs. — Mor- nay and Wollaston; Phil. Trans. 1810, p.

270, 281.

6. In the jurisdiction of San Jago del Estera. — Rubin de Caclis, in the Phil. Trans. 1788, vol. Ixxviii. p. 37.

7. At Elbogen in Bohemia. — Gilbert's Annal. xlii. and xliv.

8. Near Lenarto in Hungary. — Ditto, xlix. The origin of the following masses seems to be

uncertain, as they do not contain nickel, and have a different texture from the pre- ceding : —

1. A mass found near the Red River, and sent from New Orleans to New York. — Journ. des. Mines, 1812, Bruce's Journ.

2. Amass at Aix-la-Chapelle containing arsenic. — Gilbert's Annal. xlviii.

3. A mass found on the hill of Brianza in the Milanese. — Chladni in Gilbert's Annal. 1. u

275.

We must not omit to add, that Dr. Brewstet has furnished a very beautiful theory of the form- ation of meteoric stones.

METHEG'LIN, n. s. Welsh meddyglin. A word like the first syllable is found in both the eastern and northern languages for a sweet drink, see MEAD : the termination glyn, as Min- sheu says, signifies glutinosum, glutinous. A species of fermented honey-drink.

W hite-handed mistress, one sweet word with thee. — Honey and milk, and sugar ; there is three.

Nay then two treys ; and, if you grow so nice, Metheglin, wort, and malmsey. Shakspeare.

To' allay the strength and hardness of the wine, And with old Bacchus new metheglin join.

Dryden.

METHEGLIN is a species of mead ; one of the most pleasant and general drinks the northern parts of Europe afford, and much used among the ancient inhabitants. There are various methods of making it; one of the best is the fol- lowing:— Put as much new honey, naturally running from the

comb, into spring water as that when the honey is thoroughly dissolved an eg£ will not sink to the bottom, but be just suspend- ed in it; boil this liquor for an hour or more, till the egg swim well above the liquor ; when very cool, next morning, it may be barrelled up, adding to each fifteen gallons an ounce of ginger, as much of mace and cloves, and half as much cinnamon, all grossly pounded ; a spoonful of yeast may also be added at the bung-hole to promote the fermentation. When it has done working it may be closely stopped up ; and after it has stood a month it should be drawn off into bottles.

METHINKS', imp, v. i Me and thinks. A

METH'OUOHT, pret. \ Norman corruption, confounding me and I. as Dr. Johnson observes ; meseems, as he suggests, would be more gram- matical : it appears to me ; I think.

In all ages poets have been had in special repu- tation, and, methinks, not without great cause ; for, besides their sweet inventions, and most witty lays, they have always used to set forth the praises of the good and virtuous. Spenser on Ireland.

Methonght a serpent eat my heart away,

And you sat smiling at his cruel prey.

Shakspeare.

Methought I saw him placable, and mild, Bending his ear : persuasion in me grew That I was heard with favour ; peace returned Home to my breast ; and to my memory His promise, ' That thy seed shall braise our foe.'

Milton.

If he choose out some expression which does not vitiate the sense, I suppose he may stretch his chain to such a latitude ; but by innovation of thoughts, tnethinks, he breaks it. Dryden.

Methought I stood on a wide river's hank, Which I must needs o'erpass, but knew not how.

Id.

There is another circumstance, which, methinks, gives us a very high idea of the nature of the soul, in regard to what passes in dreams, that innumerable multitude and variety of ideas which then arise in her. Addison's Spectator.

Methinks already I your tears survey. Pope.

Far happier are the dead, methinks, than they Who look for death and fear it every day. Cowper.

METH'OD, n. s. -\ Yr. met liode ; Lat.

METHOD'ICAL, adj. I met/iodus ; Or. ptQotbc,

METHOD'ICALLY, adu. > a. path or way. Order;

METII'ODISE, i arrangement ; way ; or

METH'ODIST, n. s. J manner : meifiodical

is, orderly ; well arranged : to methodise, to dis- pose in due order; to regulate: a methodist, hardly known in our language in the genenil sense, means particularly an ancient sect of phy- sicians, and the large and respectable body of Christians described at length in the following article.

To see wherein the harm which they feel con- sisteth, the seeds from which it sprang, and the method of curing it, belongeth to a skill, the study whereof is full of toil, and the practice beset with difficulties. Hooker.

If you will jest with me know my aspect, And fashion your demeanour to my looks, Or I will beat this method in your sconce.

Shaktpeare.

To begin methodically, I should enjoin you travel ; for absence doth remove the cause, removing the object. Suckling.

Our wariest physicians, not only chemists but meth«

All the rules of painting are methodically, con- cisely, and clearly, delivered in this treatise.

Dryden.

Resolved his unripe vengeance to defer, The royal spy retired again unseen, To brood in secret on his gathered spleen, And methodize revenge. Id. Bsccace.

It will be in vain to talk to you concerning the method 1 think best to be observed in schools,

J.ochr on Education.

Notwithstanding a faculty be born with us, there are several method for cultivating and improving it, and without which it will be very uncertain.*

Addison's Spectator.

The man who does not know how to methodue his thoughts has always a barren superfluity of words ; the fruit is lost amidst the exuberance of leaves.

Id.

He can take a body to pieces, and dispose of them where he pleases ; to us, perhaps, not without the appearance of irretrievable confusion ; but, with re- spect to his own knowledge, into the most regular and methodical repositories. Roger.*

Those rules of old discovered, not devised, Are nature still, but nature methodited. Pope. Method, taken in the largest sense, implies the placing of several things, or performing several ope- rations, in such an order as is most convenient to attain some end. Wattt.

O ! what a fund of genius, pent

In narrow space, is here ! This volume's method and intent,

How luminous and clear. Camper . ' The Trial of the Spirits,' — would make an admi- rable tract on the subject. But the inconvenience is that the Methoditti would say your Lordship had written against them ; an honour which, for their own sakes, one would not wish them.

Hurd'i Litter to Warburton. METHODISTS, METHODICI, in the history of medicine, a sect of ancient physicians, who re duced the, whole art of healing to a few common principles or appearances. The Methodists were the followers of Thessalus ; whence they were also called Thessalici. They were strenuously opposed by Galen in several of his writings : who scrupled not to assert that the Methodical heresy ruined every thing that was good in the art. Qnincy erroneously uses Methodists (Me- thod ici) for those physicians who adhered to the doctrine of Galen and the schools, in opposition*

to empirics and chemists, who used violent medi- cines and pretended secrets or nostrums.

METHODISTS, in ecclesiastical history, a deno- mination applied to different sects, both of Pa- pists and Protestants.

METHODISTS, POPISH, were those polemical doctors of whom the most eminent arose in France, towards the middle of the seventeenth century, in opposition to the Huguenots or Pro- testants. These Methodists, from their different manner of treating the controversy with their op- ponents, may be divided into two classes. The one comprehends those doctors whose method of disputing with the Protestants was disingenuous and unreasonable, and who followed the exam- ples of those military chiefs who shut up their tioops in intrenchments and strong holds, in or- der to cover them from the attacks of the enemy. Of this number were the Jesuit Veron, who re- quired the Protestants to prove the tenets of their church by plain passages of Scripture, without being allowed the liberty of illustrating those passages, reasoning upon them, or drawing any conclusions from them; Nihusius, formerly a Protestant; the two Walenburghs, and others,

who confined themselves to the business of an- swering objections and repelling attacks; and cardinal Richelieu, who confined the whole con- troversy to the single article of the divine institu- tion and authority of the church. The Method- ists of the second class were of opinion that the most expedient manner of reducing the Protest- ants to silence was, not to attack them by piece- meal, but to overwhelm them at once by the weight of some general principle or presumption, some universal argument, which comprehended or might be applied to all the points contested between the two churches ; thus imitating the conduct of those military leaders who, instead of spending; their time and strength in sieges and skirmishes, endeavoured to put an end to the war by a general and decisive action. These polemics rested the defence of Popery upon pre- scription, the wicked lives of Protestant princes who had left the church of Rome, the crime of religious schism, the variety of opinions among Protestants with regard to doctrine and discip- line, and the uniformity of the tenets and worship of the church of Rome. To this class belong Ni- colle the Jansenist doctor, the famous Bossuet, &c.

METHODISTS.

METHODISTS. The rise and spread of the modern Methodists, viewed in connexion with the character of their founder and his principal associates, and the circumstances of their com- mencement and extension, present numerous subjects for interesting contemplation to the statesman, the philosopher, and the divine. On the peculiarities of Methodism the most opposite opinions have been formed, and these varying opinions have been expressed in almost all the forms and degrees of panegyric and vitupe- ration. If, however, there be taken into account the widely extending

influence of Methodism in both hemispheres, its strenuous and incessant activity, and the efficacy of its strong and plastic organisation, it will appear reasonable that per- sons should qualify themselves to form a correct opinion on the subject by calm, candid, and ex- tended enquiry. Doubtless there must be some- thing remarkable in a system which has been characterised in the strongest terms of admira- tion or censure by so many eminent observers, including persons possessing all grades of talent and opinion, between the extremes of bishops Lavington and Warburton on the one hand and Dr. Priestley on the other, and downwards again from the philosophising apostle of Unitarianism to the poetical biographer of Mr. Wesley — Dr. Southey. That which has extorted reluctant praise from many distinguished writers, who commenced their researches with no preposses- sions in its favor, cannot be credibly represented as totally worthless and mischievous; and, on the other hand, while the violence with which it has been assailed and stigmatised may justly ex- cite grave doubts respecting the competent infor- mation and candor of the impugners, their num- bers and their confidence place the ir.ethodist

system in a defensive position, as being under some presumptions of blame.

To develope this subject as copiously as the variety and importance of its topics deserve is incompatible with the brevity imposed by the nature of our work. Our aim therefore, in this article, will be not so much to express or enforce any opinions of our own as to furnish our read- ers with the means of forming their own judg- ment on the general character and influence of Methodism, in connexion with the chief particu- lars of its history.

As a term of modern use the name of Method- ists appears to have been first brought forward in the days of Puritanism ; being suggested by the Latin appellative, Methodistze, which was given to a college of physicians in ancient Rome, in consequence of the strict regimen under which they placed their patients, it was of ready ap- plication to the puritans or precisians in religion, as they were then sometimes called, which is indeed a term of much the same import with that of Methodists. Appellations of this description, which convey the idea of dislike and reproach, are not likely to be soon forgotten, and stand always ready for revival under similar circum- stances to those which gave them biith. When it came to pass therefore, about the year 1730, that Mr. John Wesley, then fellow of Lincoln College Oxford, had prevailed upon other mem- bers of the University, principally his own pupils, to join with himself in stricter religious observ- ances than were at that period fashionable in Ox— ford, adversaries and satirists of these proceed- ings soon appeared, who were not slack in reviving the puritan appellation, and fixing it upon Mr. Wesley and his companions. A few years after this Messrs. John and Charles Wes-

ley and Mr. Whitefield commenced their novel career in the religious world. Partly because they were excluded from the churches for the supposed singularity and enthusiasm of their opinions, and partly because they were carried forward by the zealous feelings which those opinions did actually inspire, they began to preach in the open air, and to organise distinct religious societies. Such proceedings would of course excite public attention ; and it was per- fectly natural that their former college contempo- raries, hearing of these things, should revive their old satirical appellative, and give it general cur- rency and circulation.

It was also to be expected, as was actually the case, that this name should at first embrace all per- sons who, with whatever varying views and princi- ples, exhibited more than ordinary concern on the subject of religion ; and this comprehensive meaning is indeed, as yet, far from being explod- ed. Viewing it more strictly, however, as a dis- tinct denomination of professing Christians, it includes the two great branches of Calvinistic, and Arminian or Wesleyan Methodists. The former, it is true, are to a considerable extent identified with the regular Independent dissent- ers. From these, however, the Calvinistic Me- thodists may be distinguished by some strongly marked features of difference.

1. As a body they adhere to the system of Calvinist doctrine in all its technical accuracy of statement, with less of modern and mitigating explanation than is customary among Independ- ents in general.

2. They have chapels in London, Bristol, and other places, which owe their erection to the pi- ous liberality of Selina, countess of Huntingdon, and the influence of Mr. Whitefield ; and the ap- pointment of ministers in these chapels is vested in trustees nominated under the regulations of the above named excellent persons, and not in members of the religious societies assembling in those chapels, according to the fundamental principles of Independency. The Calvinistic Methodists also vary from this model in another respect, being understood to be united under a federative constitution, though much looser in its provisions than that of Wesleyan Methodism.

3. The church of England in its general in- stitutions, and especially in its liturgical services, is much more favorably considered by both the great branches of the Methodists than by the re- gular dissenters. Hence it frequently occurs that the forms of the church are employed amongst the Methodists in their public worship.

The specific ground, indeed, of what may perhaps be more properly called variation from the order of the establishment than formal dissent from it, amongst Methodists of all de- scriptions, is the desire of possessing greater ad- vantages for the enjoyment of what they conceive to he spiritual religion than can be realised by a course of strict conformity Their objections to the church of England incline to the side of ad- ministration, rather than of constitution ; thus great numbers of Methodists resident in the country villages attend more or less punctually upon the services of the church, and bring up their families within its pale.

The way U now cleared for treating particu- larly of the Wesleyan Methodists, who constitute perhaps the greatest portion of the whole body of Methodists, who embrace the doctrines pro- mulgated by the Rev. John Wesley and conduct their ecclesiastical affairs on the plan of organisa- tion which he was led step by step to adopt, during a long course of successive years.

The various parts of this remarkable organisa- tion Mr. Wesley was led to adopt, as occurring circumstances called for them, and a strong con- viction of duty, overpowering his attachment to established order, seemed imperatively to require. From the doctrines of the church of England, as Dr. Southey well observes, he never knowingly or willingly departed, being conscientiously satis- fied with them after free and full enquiry. In the interpretation of these doctrines, Mr. Wesley adopts the principles of Arminius, stated, how- ever, in a remarkably guarded and moderate way. The doctrinal works which form the le- gally established standard of the body, are the first four volumes of his sermons and his notes on the New Testament. On the subject of the Trinity, and all the points of doctrine it involves, the sentiments of the Wesleyan Methodists coincide in terms with the first four general councils and the creeds and articles of the church derived from them. The doctrine likewise of the total depravity of human nature is generally held by Mr. Wesley's followers as expressed in the ninth article. Here, however, their Arminianism in- duces a particular explanation, if it be not a radically different modification of opinion. While with the article they hold that original sin is that corruption of nature whereby man is ' very far gone from original righteousness, and is of his own nature inclined to evil ;' yet they con- ceive that although man, in the abstract, so to speak, is thus totally corrupt, yet considering him in the concrete, or in the reality of his ac- tual existence, each individual of our fallen race, through the redemption which is in Christ Jesus, partakes of an ameliorating principle — a ray of vivifying light which shines in the darkness of the natural mind, and is designed to lead him fully from a death in sin to a life of righteous- ness. On the subject of justification, or the mode of constituting sinful man righteous before God, the only difference of any moment between the Wesleyan Methodists and orthodox

Chris- tians in general is this, that they connect with the personal justification of a sinner a certain impression on his mind which they term the witness of the Spirit. This they describe as a direct testimony, home by the Spirit of God, to the conscience of a penitent believer, that his sins are forgiven and himself now received into the favor of God. While, however, they strenuously assert that the witness of the Spirit thus under- stood is the common privilege of Christians, without which they ought not to rest satisfied, yet they are far from making it the absolute sine quft non of a gracious state. And, lest any per- son should be disposed to rest in the professed experience of this blessing, as superseding the necessity of a moral character formed on the precepts of the gospel, Mr. Wesley endeavours to provide a suitable guard of his doctrine in

the following terms : — ‘ Let none ever presume to rest in any supposed testimony of the Spirit, which is separate from the fruit of it. If the Spirit of God does really testify that we are children of God, the immediate consequence will be the fruit of the Spirit, even love, joy, peace, long-suffering, gentleness, goodness, fide- lity, meekness, temperance.’ On the great sub- ject of regeneration, also, it would not appear that there is any absolute irreconcilableness be- tween Mr. Wesley’s principles and those of other Christian professors. The necessity of a divine influence to create in fallen man a clean heart, and renew a right spirit within him, is common ground ; and when the Methodist doc- trine of the consummation of this regenerating change by a state which, in the theological no- menclature of the body, is called Christian per- fection, is closely and candidly analysed, it may appear more in unison, especially with the views of the Established Church, than is commonly supposed. ‘ Christian perfection,’ says Mr. Wesley, in his later and more matured writings on this subject, ‘ is a constant communion with God, which fills the heart with humble love. The only perfection of which man is capable, while he dwells in a corruptible body, is the complying with that kind command, My son, give me thine heart. It is the loving the Lord his God with all his heart, and with all his soul, and with all his mind.’ On no other doctrines than these now brought forward does there ap- pear to exist among the Methodists any material variation of statement from that usually adopted by what are called orthodox Christians. And it is proper to observe that the general scheme of Wes- leyan Methodist doctrine, while substantially Ar- minian, is, after Mr. Wesley’s example, carefully guarded from the extremes of that system, in the theological teaching of the preachers at large. The following expression of their views, as re- corded in the Minutes of Conference for 1821, is worthy of particular notice : — ‘ We again solemnly resolve, after the

example of our vene- rable father in the Gospel, to preach a free, pre- sent, and full, salvation from sin ; a salv-ation flowing from the mere grace of God, through the • edemption which is in Christ Jesus, apprehended by the simple exercise of faith, and indispensably preparatory to a course of practical holiness. And in this great work, our only reliance for suc- cess is upon the promised grace of the Spirit, by whose inspiration alone it is, that the Gospel, in any instance, is rendered the power of God unto salvation.'

The progressive steps by which the Wesleyan Methodists became a distinct religious body may be readily anticipated by careful and intel- ligent observers of human character and history. The societies collected in London, Bristol, and other parts of the island, under the ministry of the Rev. J. and C. Wesley, and other clerical co-adjutors, were divided into little companies of from ten to twenty persons, called classes, and piven in charge to a discreet person, called a leader. It was his business to preside in a weekly meeting of his class for spiritual conver- sation and prayer, to receive such contributions as his members were disposed to give to the re-

lief of the poor, and the current expenses of the society, and to pay such monies over weekly to the stewards of the society, who were persons ap- pointed to manage its temporal affairs. Soon after the formation of the society it became needful to build large rooms for general meetings of the whole society, who, thus congregated, were called body bands, and also for public worship; and thus it became needful to appoint suitable persons to conduct public service in these rooms by prayer and reading of sermons, or exposition of the Scriptures. These functionaries, as might be expected, soon became regular preachers ; and being recognised, although at first with con- siderable reluctance, by Mr. Wesley, in this new character, they were appointed by him to extend their labors to the villages and hamlets of the circumjacent country. In this manner, then, originated those important territorial divisions, in the economy of Wesleyan Methodism, which are denominated circuits. These consist of the societies and congregations in a given tract of country surrounding some considerable place, called the head of the circuit, and where the re- sidence of the preachers is ordinarily fixed. The circuits thus constituted are placed under the direction of one, two, or more, preachers, rarely exceeding five, according to their magnitude and importance, one of whom, generally the preacher of longest standing in the body, is entrusted with the general direction of the affairs of his circuit. His name of office was formerly the assistant, but now he is called the superintendant. The former of these names is important, as connected with the government of the Methodist body, dur- ing the life of Mr. Wesley, under whose personal administration it was actually placed. This sys- tem of government he carried on in a constant round of itinerancj, which brought him, at regular periods, through all those parts of the British islands in which Methodist societies were estab- lished. Thus he exercised a

personal supervision over the whole connexion, as the great body united under himself was very appropriately desig- nated . But, in Mr. Wesley's absence, the preacher selected by himself, and on that ground called the assistant, governed the societies in his circuit: it being understood, however, that, on all points of the exercise of his delegated authority, an ap- peal lay to Mr. Wesley in the conference. This body occupies a very important position in the Methodist connexion, and it will be needful briefly to trace the steps by which it has attained to it. The first conference, formally so called, was held in the year 1744, and was, in fact, nothing more than a company of persons choosing to carry on, in a methodical form, by way of question and answer, a discussion on Christian doctrines and principles, involving some leading peculiarities of Methodism. The persons meet- ing with Mr. Wesley at this first conference were clergymen. But it soon came to pass that the lay preachers, as they then were called, with the addition of two or three clergymen closely asso- ciated with Mr. Wesley, composed the confer- ence; that the entire government and discipline of the Methodist body were treated of in that assembly ; and that the discussion of these sub- jects constituted its regular functions. At these

annual assemblies, therefore, explanations of doctrine were brought forward, the stations of the preachers for the ensuing year were fixed, and the general and widely extending business of the body was transacted. During the life of Mr. Wesley he summoned to the conference such preachers as he pleased ; and, while he heard their opinions on all the affairs which might be brought forward, he strictly reserved the ultimate decision to himself. It could not, how- ever, fail to happen, and was, indeed, quite in conformity with Mr. Wesley's intentions, that the conference should by degrees acquire the respect and authority attaching to the ruling body in the Methodist connexion ; and that the preachers in that assembly who had taken pains to acquaint them- selves with the economy of the connexion, and were most largely endowed with the requisite qua- lities for managing public deliberations, should acquire a commanding influence over its decisions. This would increasingly be the case, in propor- tion as Mr. Wesley began to feel the infirmities attendant upon advancing years. His views, with regard to .the conference which he had trained up for the management of the connexion, and the full exercise, after his decease, of his own authority, are fully developed in the deed of de- claration, executed in 1784. The great object of this instrument was to specify the meaning of the term conference, so that there might be no un- certainty respecting the individuals who might legally officiate in various chapels, or meeting- houses, conveyed to trustees for the purpose of

permitting such persons as should be appointed by ‘ the conference of the people called Metho- dists’ to preach and expound the word of God therein. In this constituent act of the connexion Mr. Wesley also selects 100 of his preachers to constitute the legal conference, points out the method by which that number is to be perpe- tually kept up, and fixes an itinerancy or continual change of preachers as the unalterable rule of the body. A few years afterwards he departed this life, leaving a letter directed to the preachers who should assemble together in the first confer- ence after his decease, in which he strictly charges the 100 preachers constituting the legal conference to assume on that ground no supe- riority over their brethren, who, having completed their probationary term of four years, were re- ceived as full members of the conference : such reception is technically called ‘ being admitted into full connexion.’ In consequence of this solemn charge from their venerable founder the 100 have reserved to themselves no substantial superiority over their junior brethren, save what is due to age and experience. Of course, the ap- pointment of president and secretary of the con- ference would properly rest in their own num- ber; in this business, however, they adopt, as co-electors with themselves, all the preachers of fourteen years standing; in whose favor, also, is the provision that one-third of all the vacancies in the 100 shall be filled up by election from amongst them, and which, therefore, deviates thus much from the rule of seniority. In all other points the young men newly received into full connexion have an equal voice with the seniors. In the years immediately succeeding the deain

of Mr. Wesley serious agitations arose in the Methodist body, which especially respected, in their first development, its peculiarity of position relative to the church of England. As, on the one hand, it is to be believed that Mr. Wesley was quite sincere in all his professions of attach- ment to that church ; so, on the other, it cannot be successfully denied that the measures he took, towards the close of his life, went to organise and perpetuate another religious society, having in it all the institutions proper to a church of Christ, and differing materially from the Angli- can church in ecclesiastical regimen. Such was , the deed of declaration, the tendency of which was to legalise and perpetuate Methodism as a distinct religious system, and the ordina- tion to the full ministry of some of the preachers, first in the newly separated states of America, then in Scotland, and finally in England itself. That Mr. Wesley contemplated also the intro- duction of service amongst his people, in what are called canonical hours, is probable from his abridgment of the Liturgy for their use. For the services contained in this admirable formulary, and indeed the ordinances generally of the es- tablishment, he manifested to the end of his life the highest veneration and attachment. The fol- lowing hypothesis seems best to reconcile all the facts of the case : — Mr. Wesley’s views, in rela- tion to the system of which he

was the founder, varied considerably as the system itself was brought into operation upon the great mass of the people; he saw more and more clearly the obstacles which the deeply-rooted feelings of the clergy on the one hand, and of his own people on the other, interposed to the accomplishment of his ardent wishes respecting a close unison with the established church: he there/ore reluctantly, but conscientiously, ac- quiesced in what he was constrained to believe was the will of God ; this was that the Methodists should ultimately assume the character of a dis- tinct religious society, fully provided in itself with all things necessary to the structure of a Christian church, and yet subsisting in a form as little opposed to the church of England as was compatible with such an organisation. To this effect when, in A.D. 1788, Mr. Wesley set apart Messrs. A. Mather, Thomas Rankin, and Henry Moore, for the sacred office by imposition of hands and prayer, without sending them out of England ; he strongly advised them, that, ac- cording to his example, they should continue united to the established church, so far as the blessed work in which they were engaged would permit. — Myles't Chronological History.

Such was the posture of things in external and internal relations in which the Methodist connexion found itself at Mr. Wesley's death. On this event the conference entered into that full au- thority over the whole body, which Mr. Wesley de- signed should in that case devolve upon them. In order, therefore, to provide fully for the continu- ance of this ever active and ready supervision of the body, in the exercise of every part of its disci- pline so far as might be needful during the in- tervals of its annual sessions, they divided the connexion into districts, composed of all the iti- nerant preachers stated in a given number of

circuits; and by subsequent provisions, so far as financial matters are concerned, the stewards of the circuits are, in district meetings, associated with them. These are officers to whom is en- trusted the management of the temporal affairs of the circuits. These districts, now placed under the superintendance of a chairman, have ordinary and extraordinary functions; their ordinary func- tions consist in preparing various matters of dis- cipline and finance for the final settlement at the conference, and also in the preparatory examina- tion on given subjects of candidates for the itine- rant work. When the district is assembled for the discharge of its extraordinary functions it is called a special district meeting ; in this capa- city it investigates charges against any of the preachers, and, if it sees fit, suspends them from their office until the ensuing conference. It is, moreover, invested with authority to settle all matters of dispute and strife

which may arise in any of the circuits within its bounds, and appear sufficiently important to require its intervention, until the next annual meeting of that assembly.

But it was a much more easy task to settle the form of government, than to bring the peo- ple to understand the real situation of the Me- thodist body in respect of the established church, and to acquiesce in the general principles of go- vernment and administration which Mr. Wesley had provided for them. A party displayed itself both in the conference and the connexion, strong in numbers, enterprising in effort, and deter- mined in resolution, who sought for the immediate and unconditional establishment of service in church hours, and the administration of the sa- crament by their own preachers. They were firmly opposed, however, by another party, includ- ing in its ranks much of the real respectability and piety of the body, as existing both amongst preach- ers and people. These, adheringwith unbending tenacity to the old plan, as it was called in the controversies of those days, strongly opposed what they thought to be dangerous innovations ; their tenacity on these subjects was, in some points of view, far from discreditable to them, though it manifested a want of comprehensive regard to the spiritual wants of a widely extending popu- lation, for whose souls at that time only Metho- dism, en a large scale, cared, and alone was capa- ble, by the special provisions of Mr. Wesley him- self, of making an adequate spiritual provision for them. At the same time the party, wishing for the full developement of Mr. Wesley's plans and principles, seem to have been far from proceed- ing in their meditated designs for change in that cautious and temperate manner, which res- pecc for his wishes, and even honest prejudices as a minister of the Church of England, ought to have inspired, and which was further needful to the rendering those changes as extensive a blessing to the connexion and the kingdom as their more judicious and enlightened advocates desired. Agitations on this subject prevailed for three or four years ; at last, however, the conference made a pretty generally successful effort to reconcile these conflicting views by an act which was called the plan of pacification, which allowed, under certain circumstances, of the wished-for concessions. On this proceeding

the Rev. Richard Watson thus very properly re- marks in his Observations upon Southey. 'So far from Mr. Wresley's views and principles having lost their influence with the conference, the sacrament was forced upon none, neither was it recommended to be received from Wesleyan ministers, in preference to the clergymen of the Established Church. The old principles were held as fast as higher duties would allow, and the plan itself, adopted at once to meet a case of conscientious scruple, while it avoided en- couraging a departure from the primitive mode; and leaving every individual to act as he was persuaded in his own mind, whether to receive

the sacrament at church or meeting, has at length been cordially acquiesced in by both parties as equally warranted by principle and by prudence.'

While these disputes were going on in the connexion, and the conference for some years, as many thought very unreasonably and impro- perly, delayed the gratification of the wishes of a large proportion of the people, the power of that governing body itself came into discussion ; and it is no matter of surprise that such should have been the case in those times of general fer- ment respecting power, liberty, and government, which mark the memorable epoch, and some of the early years of the French revolution. It was stoutly contended that the power of the con- ference was unscnptural, arbitrary, and danger- ous ; and, under this impression, that body received addresses from various quarters, to this effect. ' That the people might be represented in the conference by delegates, chosen by, and from amongst themselves ; or that in future the conference might be composed of an equal number of preachers and representatives of the people.' This plan was alleged by its promoters to carry on the face of it, equity, harmony, and a pledge of future prosperity. It was not, how- ever, acceded to by the conference ; which, ne- vertheless, sought to meet the wishes of the people, and the real exigencies of the case, by important, and, as they deemed, effectual con- cessions, guarding against the abuse of the power lodged in it, and providing for the in- violability of rational and Christian liberty in the connexion. These additional regulations, limiting the exercise of power, and strictly de- fining the modes and circumstances of its ex- ercise, are published in the minutes of the Leeds conference, A.D. 1797. This year was remark- able also for the formation of the Methodist New Connexion, based on the principle already stated. Important questions are involved in the leading ground of difference between the two connexions — questions which relate to abstract theories of government in general, and the prac- tical application of those theories ; and not merely to these, but to the principles laid down in the New Testament respecting the distinctive character, proper functions, and consequent power of the ministers or pastors of the Christian church. It is fair to observe that the preachers constituting the conference of the Old Con- nexion, deny altogether the imputations officially brought forward against them by the advocates of the new system, of a fixed jealousy and dis-

trust of the people, and a degrading estimation of their ability and assistance. On the contrary they profess themselves, for Christ's sake, the willing and devoted servants of the people ; the advocates of the old

connexion, indeed, allege that their system, as now modified, secures to the body at large all needful religious privileges and advantages, by provisions, as closely con- nected with leading principles of the word of God, and as well adapted for perpetuity of vigorous operation, in repressing tyranny and arbitrary power, as were ever comprised in any human institutions. When divisions take place in any community, it is, doubtless, the peculiar business of the dissentients to establish a clear case of justification, and this principle is especi- ally applicable when differences in theory, rather than any palpable grievances in practical ad- ministration, constitute the ground of proceed- ing, which, whatever ultimate good may be expected to result from them, stand connected with immediate evils of no trivial amount, when estimated in their religious bearings. Whether the remark is applicable to the formation of the Methodist new connexion, is a mooted point which we shall not attempt to decide; it cer- tainly, however, is a truth of too correct appli- cation to the ecclesiastical history of our own times, that separating measures amongst religious bodies are far too readily adopted, and the evils resulting from them, to the general cause of Christianity, much too lightly appreciated. The abstract right of separating from any existing Christian community ought to be strenuously asserted, and kept inviolably sacred ; but per- sons in a truly Christian frame of spirit will most reluctantly resort to its actual exercise.

It is, on all hands, allowed that since the period now treated of the Methodist body has been governed on wise, moderate, and concilia- tory principles; and a disposition has been ex- tensively acted upon to associate the people with the conference in the direction, so far as financial matters are involved, of all the great affairs of the connexion. The highly important depart- ment of foreign missions is placed under the actual management of a committee, composed of an equal number of ministers and laymen, who meet statedly for the transaction of its af- fairs at the Wesleyan mission house, 77, Hatton Garden, London ; but the details of the pro- gress of this great institution, we reserve for a distinct article. It has already been observed that the distinctive character of Methodism is to be sought for, not so much in its doctrines, as in the application which it studiously makes of them to produce lively impressions and imme- diate results. The numbers also whom, by the zeal and earnestness of its ministers, it brings to more serious and influential views of religion than they have previously entertained, it im- mediately subjects to a course of discipline at once calculated to unite them with the system by closest ties, and to call forth all their energies in its support and propagation. Thus, in the system of Wesleyan Methodism, we find that there exist, in addition to its itinerant preachers or regular ministers and the leaders of its classes, local preachers, exhorters, and prayer-leaders :

these latter functionaries are employed in various services, such as their

names denote, on the Lord's days, but at other times follow the or- dinary occupations of life. Whatever be the supposed advantages or defects of this system, it will easily be seen to be admirably adapted to radiate and extend the form of Christianity which it embodies, whereVer its operation is allowed. It is therefore no matter of surprise that the Wesleyan Methodists should have been emi- nently successful in their missionary operations ; that the societies in close connexion with them in the West Indies, and especially in British America, Ceylon, South Africa, Australasia, &c., should include such rapidly increasing numbers, and exert an influence so generally beneficent and quickening upon other forms of Christianity.

At an early period of the history of the con- nexion, the attention of Mr. Wesley was directed to the British colonies on the North American continent. While the large tract of country to the north, constituting what is called New Eng- land, was generally provided with the institutions of Christianity ; in the southern and middle states there was no provision to meet the spi- ritual exigencies of a rapidly extending popula- tion. In these vast regions, therefore, Metho- dism, or some similar system, was much needed, and it has been eminently useful. The connex- ion in the United States is much more numerous, both in itself and relatively to the general po- pulation, than in the British Islands. There are some varieties also in its discipline and govern- ment, the most material of which is the episco- pacy of the American connexion. An American Methodist bishop, however, as presiding in the conferences, is rather a primus inter pares, first among equals, than resembling an English dio- cesan, recognised of an order essentially and scripturally distinct from that of Presbyters. The government of the American connexion, then, approximates to the model of archbishop Usher's reduced episcopacy, while that of the English body is purely presbyterian.

The Rev. Thomas Coke, LL.L). of Magdalen College, Oxford, who united himself with Mr. Wesley about the year 1781, made several voyages to America, and being appointed by Mr. Wesley one of the first general superinten- dents, afterwards denominated bishops, of the Methodist Church on that continent, was prin- cipally concerned in fixing the subordinate de- tails of its government, in conformity with the leading regulations of the Methodist system. Proceeding on one of his voyages from England to the United States, in company with some other preachers or missionaries, the vessel in which they had embarked was driven by stress of wea- ther to the West Indian archipelago, and the Dr. with his associates was ultimately landed in the island of Antigua. See the next article. So it came to pass that, while the Methodist body was prosecuting its first great religious undertaking without the limits of the British Isles, its attention was, in this remarkable manner, directed to a sphere of exertion in which, next to the North American con- tinent, its missionary efforts have been

crowned with the largest measure of success, and more

aerhaps j«an in any otner instance, produced the most advantageous results to the community at large. It is true that, at first, the Wesleyan missionaries met generally with every species of opposition and even legal persecution, in such degree and for such times as the colonial legis- latures and magistrates were capable of inflict- 'ng it. But the enactments authorising such proceedings have been uniformly disallowed by his majesty in council ; and the beneficial ope- ration of the labors of the missionaries upon the character of thousands of the slaves, has, in the course of years, succeeded to a considerable extent in disarming the prejudices of many of the planters, and in securing for missions, con- ducted on principles at once so energetic and so wise, the warm patronage of many persons of respectability and influence, both in the colonies and at home.

For statistic details respecting the numbers in society, &c., on Wesleyan missions we must refer to the Minutes of the last conference : it may be proper to mention that the government on mis- sionary stations is the same in form with that estab- lished in the connexion at home ; but it is neces- sarily provided that there should exist a connexion more or less strict and immediate, according to circumstances, with the committee of management in Hatton Garden, whose proceedings are sub- jected to the final control and supervision of the conference.

The following is the ' General Recapitulation ' of the conference of 1827.

ATos. Number of Members in Great Britain . 237,239

Ditto in Ireland 22,599

Ditto in Foreign Stations . . . 34,892

Under the care of the British and Irish

Conferences 294,730

Under the care of the American Confer- ences in 1826 360,800

Total, exclusive of Regular Travelling

Preachers 655,530

The Preachers of Great Britain are Regular Preachers . . 742

Supernumerary and Superannu- ated 78

In Ireland. Regular Preachers stationed in

the Circuits ... 86 Missionaries ... 21

Supernumerary and Superannu- ated Preachers ... 34

In the Foreign Stations.

Regular Preachers and assistant Missionaries

Supernumerary and Superannu- ated Preachers .

165

In the American Conneiianin 1826 Regular Preachers in Circuits

and Missionaries in the Indies 1319 Supernumerary and Superannu- ated , 87

Total throughout the world

820

141

169

1406

2536

ur particular object, in thi cle, to present our readers with facts which in their proper details, as constituting parts of the regular history of Methodism, may easily be collected from any of the works professedly treating on the subject ; but our design has rather been to furnish our readers with means for forming cor- rect views on the peculiarities of this remarkable system. These appear to be but very imperfectly understood by the intelligent public of Great Britain. Their attention, indeed, is justly called to a system which alleges itself to be admirably adapted to varying places and circumstances; which is in one place merely a religious society, but in another place, where circumstances differ and seem to call for it, a proper and complete church ; and which, in every mode of its exist- ence, presents itself to all lovers of Bible Chris- tianity, as adapted to promote their religious ad- vantage in any way, and to any extent, that they may think fit to avail themselves of its aid.

We are indebted thus far for a sketch of Me- thod ism to an able member of that community. Dr. Southey's late life of Mr. Wesley has brought forward the subject in circles where a living Methodist would be thought to spread a sort of contagion ; and as his biographer is quite sure that Methodism frequently produced a bodily disease, ' peculiar and infectious,' we suppose that many persons will prefer to remain acquainted with it solely through the medium of books. For their sakes, and injustice to the poet laureate, as well as to one branch of Methodism that has been less under the observation of the candid writer of the foregoing sketch, we avail ourselves of some ori- ginal observations on Dr. Southey's work which have already appeared in a deceased periodical, but which seem highly relevant to this interest- ing portion of modern ecclesiastical history.

' The name and character of Mr. Wesley,' says this writer, ' must ever occupy a large space in the religious history of the last century : but Methodism, which Mr. Southey has indefinitely associated with them, is often a very distinct subject. It will include the biography of Mr. Wesley as the founder of its more organised branch ; but his history is by no means that of the singular revival of religion in England which has generally been designated by this name. He was but one of its great leaders and agents, whe finally gave a distinct and permanent form to his work. The fruits of Mr. Whitfield's preaching in England, though it was of much shorter con- tinuance than that of the Arminian leader, are to the present day, perhaps, at least equally exten- sive. In this country the Calvinistic Methodists are said nearly to equal the Wesleyans in num- ber, and in Wales very considerably to exceed them. A succession, moreover, of regular cler- gymen, whose numbers have largely increased since his death, has been found to advocate the sentiments, and emulate the efforts, of this extra- ordinary man in the establishment. Like Top- lady and Romaine, they are more scrupulous of trespassing upon order, and more cautious of their associates, than was Mr. Whitfield ; but however they may have been improved, in mo- dern times, by experience or by opposition, the

evangelica. clergy were called into being by the example of this great founder of Calvinistic Methodism, a circumstance that adds considera- bly to its pretensions as a subject of history.

' We are now speaking merely to a few general facts of this theme. — The rise of Methodism was a revival of religion in England, whatever have been its irregularities and extravagancies. Since the Reformation there had been no efforts for re- ligion equally extensive ; no preaching so little sectarian ;

*no preachers with equal claims to being the /*aprwp£t of the faith. Churchmen and Dissenters were aroused from a common religi- ous slumber by Methodism; it 'came up on the breadth of the land,' with a sound and a power to awake the dead. Could no other proof of this be adduced, Dr. Southey himself tells the world how much of the entire momen- tum of its modern zeal the established church, in particular, owes to Methodism. He observes, ' it may perhaps be said to be most useful' [as a stimulant, we suppose] ' where it is least suc- cessful' [as a sect]. Be it so. Never, we be- lieve, was there a high church party in an estab- lishment so truly anxious to sustain itself by argument, as modern times have seen in Eng- land ;— by spiritual, rather than by temporal means. Never, for instance, so nobly zealous for the education of the poor, which will of it- self outgrow any thing of a sectarian spirit that now mingles with it ; and we hail, for our coun- try, the more cheering aspect of beholding her dignified churchmen thus engaged, rather than in the low intriguei for the interests of tyranny and intolerance, in which some of them could associate even with infidels in the latter days of queen Anne. Methodists, however, led the way into this noble field of exertion; for Methodism awoke the established church to the value of public opinion, and dissenters to the importance of bold and united efforts of Christian zeal. * * * But Methodism, in its systematic form, soon grew too strong fora dependent, or even an auxiliary power. Opposition taught it its own resources ; the con- tempt of some of the more enlightened classes of society happily united in throwing its light into the darkest corners of the realm ; and in developing funds, talents, and powers, among the lowest or- ders of the people, to which statesmen and mo- ralists had been alike blind forages.*

'Of the two leading systems of Methodism,' adds this writer, ' as they were left by their founders, our readers will judge according to their own habits and connexions ; and many will attach a degree of importance to the doctrines in contro- versy between them with which no other part of either system, no better or worse modification of church discipline, will be thought to compare. Others will hail that which is at once common to both systems, and ever suited to the wants of a fallen creature — a testimony to the necessity of a change of heart in all men — as a light from heaven ! The existing state of religious parties in England, at the period of the dawn of Method- ism, will render this, we should be disposed to contend, the redeeming point of its early history. This, at least, was plainly preached throughout the land. Did it awake a thousand jealousies and evil passions, because it disturbed the pro- VOL. XIV7.

fane in their works of darkness, and the pious in their dreams ? Did it break through clouds, and call up clouds of error and enthusiasm, on its first appearance ? Still it was the light of life. Angels minister the taw no more. Every great moral reformation of mankind, since vision and

prophecy have ceased, seems destined, by its in- novations, its irregularities — and by some one capital feature of dirine wisdom and simplicity pervading it — at once to attest its almighty au- thor, and that he employs but human agents in its accomplishment — but ordinary human agents, as compared with the primitive teachers of Christianity. See the beautiful imagery of the Apocalypse, chap. xxi. 14-16. The reformation of Protestant Europe in the fifteenth, and of England from semi-popery and infidelity in the eighteenth century, both proceeded in this way. The one proclaimed its justification by faith, as the articulus stautis vel cadentis ecclesirc ; the other our Saviour's own introductory message — ' Ye must be born again :' and each had its qua- lifying mixture of human imperfection and real fanaticism about it. The reformers could perse- cute, and the Methodist leaders throw their hearers into convulsions, and take pleasure in the success of their measures. We need not enquire which was the greater error.

' Are neither Whitfield nor Wesley entitled to be placed on an exact level with Martin Luther in history? Had they less general steadiness of character, less comprehension of mind, less cau- tion ? We must think so. But they were noble spirits, with all their human frailties. John Wesley would have done more for the highest interests of man, without the assistance of a Martin Luther, than Philip Melancthon ; and with a Knox, a Zwingle, or a Bucer, the Metho- dist leaders may be honorably compared. The great peculiarities of the Christian faith, which they kept always in view, were singularly like the cardinal points of Luther's doctrine and ear- ly efforts. ' He pointed out the distinction be- tween the law and the gospel,' says Melancthon ; ' he refuted the Pharisaical error, at that time in- culcated both in the schools and in the pulpit, that men may merit remission of sins by their own works, and become righteous before God. Thus he directed the minds of men to Jesus Christ ; and, like John the Baptist, pointed to the Lamb of God who taketh away the sins of the world.' Could any language more aptly de- scribe the state of religion in England at the pe- riod of which we are writing, and especially in that church in which the champions of Method- ism arose ? Some of the most popular sermons of the day, those of Atterbury, taught, ' That the virtue of charity [i. e. alms-giving, or at most a truly benevolent disposition] is of so great a price in the sight of God, that those persons who possess and exercise it, in any eminent manner, are peculiarly entitled to the divine favor and pardon, with regard to numberless slips and fail- ings in their duty, which they may be otherwise guilty of: this great Christian perfection, of which they are masters, shall make many little imperfections to be overlooked and covered ; it shall ' cover the multitude of sins.' What Me- lancthon proceeds to say of Luther might be 2H

almost transcribed, word for word, into the his- tory of either of these great Methodists. 'This revival of important truths procured him a very extensive authority, especially as his conduct corresponded with his instructions, and they pro- ceeded not merely from the lip, but from the heart. This purity of life produced a great effect upon the minds of his hearers, and the old pro- verb was verified, 'SˆtSov, we [nritv, icvpiw TO.TIJV *X« irtariv rb 7/Soc. ' Piety makes the speech persuasive.' Wherefore many worthy men, in- fluenced by the excellence of his doctrine and the sanctity of his character, were afterwards in- duced to comply with some of the changes which ne introduced in certain established ceremonies. Not that Luther at that time meditated an inno- vation upon the customary observances, or broached any alarming opinions ; but he was illustrating more and more the doctrines so es- sential to all, of repentance, the remission of sins, faith, and salvation by the cross of Christ.'

'Mr. Southey is evidently partial to Wesley: — he admires, but he neither loves nor venerates him ; he reminds us of Erasmus's good opinion of Luther. ' God had sent him to reform man- kind,' he owned, ' and the man's sentiments were true; but his course was invidious, because he at once attacks the bellies of the monks and the diadem of the pope. It grieved him that a man of his fine parts should be rendered desperate by the mad cries and bellowings of the monks.' The voet laureate may not thank us for the compli- nent ; but we see very much of his temper re- , peeling Mr. Wesley, as a whole, in the epistles t»f Erasmus to the elector of Saxony, and others .especting Luther. What said the reformer to

all this ? Just what a sensible Methodist rnighˆ say to our biographer. ' I shall not complain of you for having behaved yourself as a man es- tranged from us, to keep fair with the Papists, our enemies. Nor was I much offended that in your printed books, tp gain their favor, or to soften their rage, you have censured us with too much acrimony. We saw that the Lord had not conferred upon you the discernment, the courage, and the resolution to join with us — and therefore we dare not exact from you that which surpasses your strength and capacity. We even bear with your weakness, and honor that portion of the gift of God which is in you.' Luther's Letter to Erasmus, in 1524.

' For Mr. Whitfield, Mr. Southey has not even the cold and inconsistent ad miration he ex presses towards Wesley ; and from Calvinism he is bigotedly averse. Having quoted from Mr. Wesley what he calls the sum of all that Zan- chius and Toplady had said on predestination, our impartial biographer adds — ' This is the doctrine of Calvinism, for which diabolism would be a better name ; and, in the worst and bloodiest idolatry that ever

defiled the earth, there is nothing so horrid, so monstrous, so impious as this.' (Vol i. p. 371). And this is 'neither extenuating or exaggerating anything;' this is Mr. Southey's ' accuracy' in reporting on a con- troverted subject; Mr. Southey's 'sense of duty!!'

Some of the 'American Methodists,' not con- nected we believe with the episcopal and regular body, are called Camp Methodists, among whom are. found the lesser tribes of Shakers, Jerkers, Rollers, Jumpers, &c.

METHODIST MISSIONARY SOCIETY.

METHODIST MISSIONARY SOCIETY. The mis- sionary exertions of this large and respectable body of Christians were not reduced to system, nor were societies regularly organised for their sup- port, until the year 1817. Yet missions to the heathen were commenced and superintended by the late Rev. John Wesley, founder of this reli- gious community, and Dr Coke, one of its most useful and laborious ministers. As early as 1769 two missionaries were sent out to North America, and during the two following years four more sailed from England for the same country. In 1786 Ur. Coke and three other preachers were proceeding to Nova Scotia, but being compelled by stress of weather to steer for the Island of Antigua, and meeting with a very kind reception from the inhabitants, they considered these cir- cumstances as a providential call to establish a mission among the negro slaves in the West In- dies. Mere too the way had already been paved for this effort of benevolence ; for in 1769 Natha- niel Gilbert esq., who had experienced the power of religious truth in England, became a resident of this island, where he soon directed his atten- tion to the spiritual welfare of its inhabitants. He fir^t assmbled a few persons together in his own

house ; and, finding his exertions eminently bless- ed, notwithstanding the situation he held as speaker of the house of assembly, he went forth boldly with a truly primitive zeal and holy courage, and preached the gospel to the poor negroes. ' A mode of conduct,' says Dr. Coke, ' so unprecedented in an exalted character soon excited surprise, surprise was followed by disap- probation, and disapprobation settled into re- proach and contempt. Regardless, however, of the insults of those whose applauses he had not courted, he continued to persevere, and soon per- ceived he had not labored in vain. From among the number who attended on his ministry about 200 were joined in society, and manifested by their lives and conduct that they knew in whom they had believed.' The labors of Mr. Gilbert terminated but with his life; and, as he had no means of appointing a successor, his bereaved flock were left as sheep without a shepherd for a period of nearly twenty years. In 1778 Mr. John Baxter, a member of the Wesleyan con- nexion in England, removed to Antigua as a shipwright in the service of

government. This good man took upon himself the care of Mr. Gil- bert's society, and devoted all the leisure he

coula command to the spiritual good of those around him ; ' his usual method,' says one who has recorded the interesting tale, ' was to travel in the evening to the different plantations where the negroes were assembled to receive his instructions, and, after affectionately warning and exhorting them, he returned home, through those heavy dews which are so pernicious between the tropics, that he might be ready for the business of the ensuing day.' Thus, like a primitive apostle, while his own hand ministered to his necessities, he re- garded not even his life to supply the lack of service to these destitute and friendless people. Through his superintendance, the assistance of Mrs. Gil- bert, and the subordinate instrumentality of an old Irish emigrant who had come to the island in 1783, things went on so prosperously that they had had in their care upwards of 1000 members, chiefly blacks, who appeared anxious for all the blessings of our common Christianity. Many new places were opened for preaching, and the demand for instruction far exceeded the supply ; losses were repaired by new admissions, and many happy deaths took place which demon- strated the power of the Christian faith and hope to animate the mind in that most solemn hour, lu January, 1787, Dr. Coke resolved that Mr. Warrener, one of the missionaries originally appointed to Nova Scotia, should remain in An- tigua, and Mr. Baxter resigned his lucrative situ- tion as under store-keeper to devote himself en- tirely to the work of the ministry. In 1789 Dr. Coke again visited Antigua, and found 1000 members added to the society ; and his tes- timony to the religious character and habits of the converted negroes deserves to be recorded in such a sketch as this. The Dr. observes ' Our blessed Lord, before he quitted for heaven, gave to his followers a new commandment, namely, that they should love one another, and perhaps we can find but few places in which this com- mand has been more punctually obeyed than in Antigua. In times of sickness the members of our society visit each other with the most affec- tionate solicitude ; in those cases where medical assistance is required by a patient who is unable to provide for it, it is instantly procured without any regard to expense. It may, indeed, be said that they live like brothers ; that they are pitiful and tender hearted, and melt in sympathy at each other's woe.' A second visit (1790) amply con- firmed the expectations of prosperity which this station had induced. In 1797 a missionary named M'Donald was sent out for Antigua ; he encountered some very severe trials, when about ten leagues off Antigua they were attacked by a French privateer, captured, and confined about three weeks till an exchange of prisoners brought him aboard an English ship. Here the captain was desirous to secure his services as chaplain; but, this proposal being incompatible with his previous arrangements, M'Donald

was put on shore in the island of Dominica, whence he gain- ed Port Royal in Martinico. After a variety of sufferings and deprivations, he sailed to St. Fierres, and thence under convoy of an English pri- vateer he arrived safely in St. John's harbour in Antigua. The death of Mr. Baxter took place in November 1805, and his remains were interred

*in the chapel. This event occasioned * tempo- rary derangement of the affairs of this mission; the missionaries, however, were enabled to keep their ground, and in the course of a few years much good was done. They were, however, obliged to send repeatedly to England for additional aid, and more laborers. In April 1816 the island of Antigua was placed under martial law, in con- sequence of an insurrection which had broken out in Barbadoes ; on this occasion Mr. Wooley, one of the missionaries, in company with his col- leagues, went to the president and offered theii services in any way that might be deemed ser- viceable to government. The reply was, an ex pression of thanks for the loyal offer, and an as- surance that they could render more important service than that of bodily exercise ; to which they in return assured him that their efforts should be directed to remove any unfavorable impres- sion which the painful report might have induced to the prejudice of pure and undefiled religion. The close of the year 1818 proved an unusually sickly season; and Mr. David Jones, an excellent and promising missionary, was removed by death from the sphere of duty. In 1819, 1820, and 1821, we have, from authentic sources, accounts of the prosperity of the Antigua Sunday schools, confirmed by striking facts, — of the noble libera- lity of the inhabitants towards the erection of new school rooms, as the two in the town of Parham had been destroyed by a hurricane ; and the formation of a missionary society in St. Johns, towards which the subscriptions and col- lections amounted to about £93, exclusive of trinkets which were offered towards this good work ; this was soon followed by a branch missionary association in English Harbour, in which the negroes took a deep interest. The close of 1821 was marked by the conversion of a Mahometan negro, who was publicly baptised and renounced the delusions of the false prophet. In September 1822 a new place of worship was opened at Sion Hill ; it had been erected by the proprietor, the Hon. J. D. Taylor, for the be- nefit of his negroes. The Christian benevolence of this excellent individual is thus noticed in the account of Mr. Whitehouse, one of the preachers : — ' Among these negroes they appear rather as parents than proprietors ; the sick are fed from their table, and they are building a hospital for lying-in women almost close to their own house, that" Mrs. Taylor may have an op- portunity of seeing them several times in the day.' In December Mr. Whitehouse laid the founda- tion stone of another chapel, in Willoughby Bay : on this occasion the Moravian missionary and his wife were present, together with several*

gentlemen from the different estates ; and the negroes con- nected with the congregation of the Moravians at New Field brought a contribution of several loads of stones, some of which were already squared for use. The Annual Report of the present society for 1824 speaks of the divisions of this station, St. Johns, English Harbour, and Parham, as generally prosperous and en- couraging.

St. Vincent's.— In January, 1787, a pressing in- vitation induced Dr. Coke and three of his brethren, Messrs. Baxter, Clarke, and Hammet,

to visit this island. They were cordially received, J large warehouse was fitted up in Kingstown, and a promise given that the negroes should at- tend ; rooms were appropriated for Mr. Clarke's use, who was to remain here ; and the president of the council kindly permitted the use of the court-house, every Sabbath, for divine service. The negroes expected so much personal benefit from these new comers, and were so delighted with their visit, that some said, ' these men are im- ported for us/ In January Dr. Coke and the brethren left St. Vincent's, and Mr. Clarke re- mained to commence the labors of the Christian ministry; and on a second visit, in 1788, this mission presented a very favorable appearance. On this occasion Mr. Clarke accompanied the Dr. and his friends on a somewhat perilous journey to the Caribbean country, where Mr. and Mrs. Baxter took up their residence, but were eventually obliged to hasten from this depart- ment of the island through the fears and preju- dices of the natives, who treated them as spies sent by the king of England to explore their territories. Amongst this people Mr. Baxter labored in vain, and failed to impress this roving people with the concerns of salvation ; in the English division of the island the prospects were favorable. Two additional missionaries were appointed, and pursued their important work till 1792, when the secular arm interposed most unjustly to prevent the instruction of these poor negroes. A law was enacted, requiring aJicence for all preachers, and twelve months' residence in the island was required to render the applicant eligible. From the plan of itinerating from place to place they knew that this law would effectually operate against the society's missionaries. For the first offence the punishment was by fine or imprisonment; for the second corporal punish- ment at the discretion of the court, and banish- ment ; and finally, on return from banishment, death. This atrocious measure was hurried through the assembly, and veiy obnoxious to the people at large. Mr. Lamb, a missionary, was a victim to this oppressive enactment; he was

seized and imprisoned, but afterwards released. On the return of Dr. Coke to England he pre- sented a memorial to his majesty in council ; enquiries were instituted ; the reports were highly favorable to the character and conduct of the mission, and the act of the assembly was disan- nulled. ‘ Thus,’ says the Dr., ‘ did religious liberty triumph over the private endeavours of oppressive violence, through the goodness of a king enthroned in the hearts of his people.’ In 1794 this mission was renewed in the persons of Messrs. Owens and Alexander and their succes- sors, who found ample employment, and pur- sued their course through evil and good report; through the difficulties and dangers which the habits and acts of this uncultivated people necessarily opposed to the promulgation of pure and primitive Christianity, of which wars with the Caribs, and an intolerant and persecuting spirit amongst the islanders, were the principal causes. ‘ Yet,’ as one of the missionaries ob- serves, ‘ notwithstanding these hindrances, God vouchsafes to convince the poor Africans of sin, and savingly converts them to himself; and

some of them die, not only with a hope of hea ven, but triumphing in full assurance.’ In the autumn of 1804 the West India Islands were visited by two tremendous storms of thunder and lightning : the door of a magazine, in Fort Charlotte, was wrenched open by the lightning, and, but for the interposition of divine providence, Kingstown, with all its inhabinants, would have fallen a sacrifice: for several hundred barrels of gunpowder were at the time in the fort. In 1815 the three missionaries, resident in St. Vincent’s, took up their stations in three different parts of the island, and at this time the society consisted of about 800 members, all slaves. A recent insur- rection in the island of Barbadoes furnished a pretext to the enemies of the gospel to bring the missionary system into discredit; and in 1816 the legislature intimated their intention to em- barrass the mission; but the session passed without the adoption of any such measures. From this period to 1824 the intelligence received is favorable; and, during that year, 226 new members were admitted, and thirty-eight re- mained on trial as candidates for similar privi- leges.

St. Christopher’s. — This mission commenced in January 1787. By a visit which Dr. Coke and others paid to the island great benefits were soon apparent from the introduction of the Gos- pel. In 1802 the members amounted to 22,587. In 1824 a branch missionary society was formed, on which occasion William Warton Rawlins, speaker of the house of assembly, presided ; and in January 1825 a new place of worship was opened in the town of Basseterre, when his ex- cellency the governor contributed to its erection, and, with his suite, attended at its dedication.

Barbadoes. — In December 1788 the inde- fatigable Dr. Coke directed his attention to this island, where, from his reception and other favorable

circumstances, he anticipated for the mission a favorable prospect of success. Mr. Pearce, who accompanied the Dr., commenced his labors ; but was soon exposed to violent op- position. Mobs were collected to disturb the worship, and volleys of stones were thrown against the doors ; an appeal to the authorities led to the singular decision, that, as the offence complained of was committed against Almighty God, it was not within the jurisdiction of the magistrate ! Thus were the assailants secretly encouraged ; but a second application led to the apprehension and punishment of five of the rioters. This circumstance did some good, but the disaffection to the missionary labors exhibited a gloomy prospect for several years. In 1816 an insurrection broke out among! the negroes : and this was falsely attributed to the preaching of the missionaries. The report of the commit- tee, however, as might be expected, traced this mischief to far different causes. About the year 1820 the prospects began to improve. In 1821 an auxiliary society was instituted ; and the friends of souls gradually surmounted opposi- tion. In June 1822, at the anniversary of the missionary society, the chapel was overfilled ; the collections doubled that of the preceding year, and even some Jews gave their silver and gold to further the good work. The sun, however

bright as it was, suddenly became eclipsed ; and, about three months subsequently to this pleasing scene, a storm, which had long been gathering, suddenly burst, with destructive fury. From per- sonal abuse, and sinister encouragement, the populace proceeded to open violence; and, not contented with attacking the chapel, placed the lives of the worshippers in jeopardy. After the missionary had resided three years and a half in the colony, he was summoned to answer for not having enrolled himself in the militia; a peti- tion to the council met with no attention; and, in the course of that very week, the mob levelled the chapel with the ground, and the poor servant of God and his family were compelled to escape to St. Vincent's to save their lives. After the departure of the principal persons the mem- bers of society who were left became the objects of lawless aggression. The destroyers of the house of God, says a minute historian of these transactions, on the 19th of October, 1823, re- solved to celebrate the anniversary of the demo- lition of the chapel in honor of their signal tri- umph over methodism, and determined to end the anniversary by razing the dwelling house of one who yet dared to uphold this obnoxious system ; and an appeal to the authorities led to the prohibition of any such meetings in future ; while it protected the intended victim from the threatened outrage by the interposition of constables. Soon after these disgraceful scenes IVlr. Buxton, the member for Weymouth, spon- taneously brought

the subject under the consider- ation of parliament; and, although Mr. Canning oid not consider it advisable to adopt Mr. Bux- ton's resolution, the amendment which he substi- tuted embraced all the strong points of the original motion, and was carried nem. con. This declaration of indignation by the British parlia- ment, at such daring violations of the law, may be considered preparatory to the free enjoyment of religious worship, and the rights of con- science ; and impose a powerful restraint on such rash acts of bigotry and intolerance.

Dominica. — In 1788 Mr. M'Conock was left in this island by Dr. Coke with a sufficient pro- bability of success ; but he fell a sacrifice to a malignant fever. Several missionaries followed in succession to this scene of labor; and in 1813 Mr. Willis, who was appointed to this station, narrowly escaped the effects of one of those hurricanes so common in this part of the world. In 1816 Mr. Boothby commenced his labors in Dominica ; and, although he found things in a discouraging situation, his exertions were crowned with success. But his career was short ; for, during the same year, he fell a victim to a severe cold, which, in ten days, destroyed his life. He had been well received by the inhabi- tants in general ; and the governor of the island, with many other gentlemen, followed his remains to their last earthly resting place. In 1822 the earl of Huntingdon assumed the government of this island, and became the zealous patron of all attempts to better the moral condition of the people, and instruct the negroes in the truths of Christianity. In October of this year his excel- lency and suite, with many of the authorities, civil and military, were present at laying the first

stone of a new Methodist chapel in Roseau. This chapel was opened in May 1823 under similar auspices. In 1824 Mr. Felous was zea- lously employed in instructing the negroes of the island of St. Joseph, where Roman Catholic su- perstitions are very prevalent. The recent intelli- gence is, that the new chapel in Roseau is well attended ; that at St. Joseph there is an in- crease of members ; and that, generally, the Do- minica mission is in a prosperous and satisfac- tory condition.

Tortola. — Missionary exertions commenced in 1789, and Mr. Hammet was appointed to divide his labors between this and the adjacent islands of Santa Cruz, till other preachers should arrive from England. The preachers sent out to this part of the world are spoken of in-high terms with regard to their loyalty, and the good effects of their labors on the minds of negroes, if considered only in a political point of view. In 1796 a Wesleyan chapel was erected in Spa- nish Town, and success followed the promulgation of the Gospel. In 1799 Messrs. Murdoch and Stengem were obliged to suspend their labors from illness. During this interval some irregu- larities appeared, and a spirit of insurrection broke out among the slaves ; which, as usual,

was laid to the charge of the instructions they had received. The missionaries, however, com- pletely exonerated themselves. In 1804 Mr. Brennel succeeded Mr. Murdoch ; but with- drew, in 1806, in consequence of a furious and brutal outrage, to which a faithful delineation of the character of these people, written to the di- rectors in England, and the contents of which were known in Tortola, had given rise. In 1807 his colleague Mr. Evans died ; and, in Decem- ber, Mr. Hodgson succeeded him in his useful labors. The gratitude with which he was wel- comed evinced the sincere attachment of the people to the ministry of the gospel. The effect of instruction on the morals of the slaves was s

Jamaica. — The mission to Jamaica com- menced in 1789; Dr. Coke preached a few

times, and his account of the people is, that iniquity prevailed in all its forms; at the beginning the laborers in this vineyard had much to endure from persecution, opposition, and fatigue ; abuse of all kinds was resorted to ; but the fury abated gradually, and painful suffering was succeeded by useful and effectual exertion in the great and beneficial cause of pure Christianity. In June 1795 a dreadful confla- gration broke out in the town at Montego Bay, on which occasion, though surrounded with symptoms of utter desolation, a man was heard to swear most profanely. A negro, who had listened attentively to the blasphemy and im- piety, suddenly exclaimed, Oh Massa no use to curse and swear now, cursing and swearing do all dis! a conclusion worthy of the clearest in- tellect and the most pious Christian. In April 1797, when a subscription was set on foot to assist the mother country in carrying on the war, the members of various societies raised among themselves £150 in token of their duty and loyalty, and both whites and blacks, slaves and freemen, manifested equal zeal in the necessary exertions which this important crisis demanded. In the spring of 1802 some local preachers visited a village called Morant Bay, and, finding the people well disposed, formed a small society. The enemies of religion attempted to put them down by representing the preaching houses as nuisances, but in vain ; the meetings were there- fore continued with unabated zeal.

An event occurred at the close of this year which was productive of great evil, and arose from the wish to close at once all avenues of religious instruction to the slaves of this island. The legislative assembly passed a law, forbidding any but qualified persons to preach in any con- gregation of negroes or people of color, under severe penalties of fines, imprisonment,

and hard labor. In Morant Bay Mr. Williams became a victim of this oppressive enactment, and at Kingston, Messrs. Campbell and Fish, supposing themselves shielded by their English licenses, continued their public labors without interruption, but when Mr. Campbell went to preach at Morant Bay he was committed to prison. The rigor, says Dr. Coke, which was aimed at by the new law, defeated the purpose for which it was passed, an application to the throne caused it to be forthwith disannulled ; it had completely silenced all the local preachers, who returned to their labors with renewed vigor on its repeal. In Kingston an ordinance was passed by the corporation, which, although it recommended the instruction of slaves in the doctrines of the established church, prohibited the Wesleyan missionaries from teaching them by fines of £20 for every slave proved to be present at their meetings. The chapel was by these temporary and oppressive measures closed for several years. In 1815 it was re-opened by Mr. Shipman, who succeeded in obtaining a license, as did other of the society's missionaries, and in 1818 a second chapel was opened in Kingston, and licensed by the magistrates. The effects of divine truth on the slaves was soon obvious and beneficial. Their free countrymen, however, were too much wedded to their super-

stitions to reap a similar advantage. In 1821 this mission sustained a heavy loss by the deaths of two valuable missionaries, one of whom had spent eighteen years in the West Indies. Since this period several new stations have been added, as Port Royal, Stoney Hill, St. David's, Bath, Manchioneal, St. Ann's Bay, Bellemont, Goshen Estate, Guy's Hill, and Grateful Hill, and it is gratifying to learn that the congregations are numerous, the spirit of hearing very considerable, and the conduct of the people ornamental to their Christian profession.

Bermuda. — In 1798 application was made by a benevolent individual for a Wesleyan mission- ary, and in 1799 Mr. John Stephenson, a native of Ireland, proceeded from Dublin, through New York to this spot. He was met by the foolish prejudices of the inhabitants, who con- cluded as he was an Irishman he must be a rebel; this feeling gradually decreased, and in 1800 an increasing congregation and a new chapel were the pleasing proofs of the value of his services. Here, again, in a short time an obnoxious law, similar in its character to those noticed above, confined this servant of God in prison, brought him to trial and the alternative of fine or a long period of incarceration. An offer of liberty was subsequently made on con- dition that he should quit the island within sixty days, which he nobly spurned, and continued voluntarily a prisoner till the close of his allotted period. His health was hereby seriously under- mined, and, as the legal valedictions prevented his labors, he was recalled in 1802. Here, again, an appeal to the good sense of his majes- ty's government at home led to the repeal of the obnoxious act, but the hostility of the people still

continued. In 1808 another effort was made, and Mr. Marsden eventually succeeded in having a chapel erected, and a congregation established ; and in 1811 the circulation of Bibles and tracts produced a mighty and pleasing moral transformation. In 1824 an admirable and just eulogy was pronounced on the missionaries of this society, at the annual meeting of the auxiliary society held at Hamilton in May, by the Hon. J. C. Eston, chief justice of the island, who presided on the occasion. ‘ I will maintain,’ said he, ‘ that your missionaries in the scene of their operations, of all others the most interesting to us, I mean the West Indian colonies, have entitled themselves to the thanks of the established church, which they cannot without being calumniated be accused of undermining.’

Bahama Islands. — Mr.Turton, a West Indian, began to preach to the inhabitants of these islands in October 1801, and before the end of the year a chapel was opened in the eastern district with permission to instruct the slaves; he had to meet the frowns of the established clergy, but diligently persevered till 1804, when Mr. Rutledge arrived as his coadjutor; the sphere of their labors comprehended the adjacent islands of Exuma and Elenthera. In 1811 the arrival of Mr. Dovvton extended this sphere to Harbour Island, Abaca, and Providence Island : multitudes attended and much good was done. In 1816 a prohibiting edict interposed, and con-

tinued in force about four years, but was after- wards repealed, when the missionaries became successful and the congregations increased. In 1824 a dreadful hurricane produced a most afflicting and calamitous scene in these islands.

St. Domingo This mission may be dated from the year 1816, wnen Messrs. Brown and Catts were sent out to Port au Prince, the capital of Hayti in St. Domingo, an intimation having been re ceived that the Protestant missionaries would not only be tolerated but patronised by go- vernment. In 1818 the prospects continued very encouraging ; they had found access to the moun- tainous districts, and the congregations in the capital were very attentive, but in 1819 a reverse occurred, and they were obliged to quit a station where they had indulged the most pleasing anti- cipations of success ; a party was formed to drive them from the island, although a military force was sent to protect them. His excellency the governor, however, thought for some reason that it was not expedient for them to preach any more ; yet he gave a promise, since fu!611ed, of presenting to the society a bill of exchange for £500 sterling. The missionaries removed from Port au Prince after two years labor, but left behind thirty approved members and eighteen on trial, under the care of two young men of pro- mising talents. This society continued stedfast in their profession, but the spirit of

persecution still continued, and many suffered much for the cause of their master ; in 1824 we hear that this persecuted body had increased to ninety, and, although not allowed to hold public meetings for worship they continued stedfast.

In addition to the stations already noticed Wes- leyan missions have been established in the islands of St. Eustatia, Nevis, Grenada, St. Bartholo- mew, Trinidad, Anguilla, St. Martin's, Tobago, and Montserrat, and in the colony of Demerara.

Mission to the island of Ceylon. — The great and generous Dr. Coke had offered to defray the whole outfit of the first missionaries to Ceylon and India. He at length induced the Wesleyan conference to sanction his plan; and, regardless of his own advanced years, he determined to accom- pany the persons destined to this station. In December 1813 he embarked at Spithead with six missionaries, and the fleet in which they sailed arrived in safety at its destination ; part of the brethren sailed in the Cabalva, and part in the Lord Melville. One of the missionaries had to commit his wife to the mighty deep, and a still heavier calamity was in reserve ; the venerable friend and father of this little band was suddenly removed by an apoplectic seizure, and they were compelled to proceed on their voyage and to the scene of their anticipated labors bereft of him whose knowledge, experience, and paternal character, were so desirable. On their arrival at Ceylon they experienced the most gratifying re- ception from the governor, the chief justice, the commandant, and the senior colonial chaplain. At the suggestion of the governor they agreed to separate to Jaffna and Batticaloa for the study of the Tamul language, and to Galle and Matura for that of the Cingalese ; and it was further agreed that they should each undertake the superinten- dance of an English school at their respective

stations, as this would introduce them, give them influence, and furnish an effectual method of learning the native tongue. Messrs. Lynch and Squance on their way to Jaffna were treated with great kindness at Colombo, the seat of govern- ment ; and to their care a convert from Maho- metanism who had been recently baptised was entrusted by the government for religious instruc- tion. Soon after their arrival tl»ey were requested to perform divine service in the Fort Church, and they subsequently established a Sunday evening and week-day lecture ; this, with other circumstances of a favorable kind, rendered the commencement of this mission most auspicious. In July Mr. Ault proceeded to his station at Batticaloa, and found the inhabitants heavily afflicted with sickness: the heat was excessive, and no suitable residence could at first be ob- tained. Some friends provided him an abode. His encouragement was considerable, and his congregations good ; and, being anxious to pro- mote the interests of the idolatrous natives, he studied hard at the Tamul language, and soon

commenced his itinerations amongst the native huts. Mr. Erskine was gone to his station at Matura, the English school was opened, and in the Dutch Church he had a small and attentive congregation : he prepared himself for his future work by close attention to the Cingalese lan- guage. At Galle Mr. Clough continued to per- form an English service in the Dutch Church every Lord's day, and this infant cause was essen- tially benefited by the decided patronage ef lord Molesworth, whose influence exerted both in public and private produced the most gratifying results ; the military became attentive auditors of the sacred truths of the gospel, and the mis- sion presented a pleasing aspect : the indispo- sition of Mr. Harvard having detained him at Bombay he did not reach Ceylon till February 1814. On Christmas day in this year an idola- trous priest of Budha, who had arrived at a firm conviction of the truth of Christianity, amidst the violent opposition of some and the affecting entreaties of others, who were his relatives, was publicly baptised in the presence of a large con- gregation, his name was Petrus Panditta Sehara. This event produced a powerful sensation, and the fact was inserted in the Ceylon Gazette with an appropriate introduction by the governor him- self. On account of the illness of Mr. Ault, which soon after terminated his life, Mr. Harvard was stationed at Colombo : here the government seminary contained many Cingalese youths, who, from the knowledge they possessed of the English tongue, were selected by the mission- aries as interpreters of religious truth to their countrymen : here a Sunday school was esta- blished, and, on the arrival of a printing press, several thousands of elementary works were put in circulation ; and a new and handsome chapel was erected, to which the public authorities and the archdeacon generously contributed. A person known by the appellation of the Ava priest became a convert to Christianity, and after a suitable probation was baptised by the name of Benjamin Parks. In the summer of 1815 this mission was strengthened by the arrival of five other missionaries, who wore disposed of as

follows : Mr.Callowayto Matura, Mr. M'Kennie to Galle, Messrs. Broadbent and Jackson to Trincomalee and Batticaloa, and Mr. Carver to Jaffnapatam. In 1816 a school was established at Negombo, about twenty miles from the seat of government; and in 1817 a school-house was opened at Colpetty.

An anxiety which had been long felt to intro- duce the gospel into the Kandian territories was gratified in the year 1819 ; and in 1821 Mr. New- stead was enabled, by permission of the lieute- nant governor and the friendship of Henry Wright, esq., to commence a missionary esta- blishment at Kornegalle, a place considerably ad- vanced in the Kandian territory ; the beneficial results were soon apparent, especially in the strict observance

of the Lord's day. On the 30th of De- cember 1821 the first place of worship in the Kandian kingdom was publicly dedicated to the worship of the Most High, in the presence of a large assembly ; the Te Deum in Cingalese was sung, and produced a very solemn effect. During this year the mission at Trincomalee sustained a great loss by the death of a native teacher who had recently been converted from heathenism to Christianity ; as his illness became serious his relations and friends brought the heathen instru- ments wherewith they were accustomed to per- form the ceremonies for the sick ; he begged them to forbear, saying, ' What have I to do with these ? I am a Christian — I am going to my Saviour — O Lord Jesus save me.' The death bed of this Christian believer was powerfully instructive. The last accounts from the different stations in Ceylon are in the highest degree encouraging to all who are interested in the promulgation of the Chri stain faith.

Missions in South Africa. — The benevolent exertions of the Wesley an community were di- rected to this quarter of the world in 1 816. Mr. Barnabas Shaw having previously attempted, but without effect, to obtain permission to instruct the slaves at Cape Town, directed his attention, with the approbation of the governor, to the in- terior of Africa. About this time Mr. Sohmlen, an agent of the London Missionary Society, ar- rived at the Cape with about a dozen others, and encouraged Mr. Shaw to proceed in his under- taking, at the same time promising to render him all the aid in his power. In the beginning of September they left Cape Town, and met six Hottentots, who had come from Namaqua Kraal, a journey of between 300 and 400 miles, to seek for some individual who might teach them the way of salvation. Receiving this incident as a token for good they proceeded on their way ; and, when they had arrived at Namaqua Kraal, Mr. Shaw was left by his companions, who took their departure, and with only his wife as a com- panion was thus isolated in a strange land, sur- rounded by heathens, and comparatively ignorant of the language of the people. He instantly commenced his work ; he soon collected a small congregation, and in May, 1817, began to in- struct them in reading and agricultural pursuits. In June he baptised ten of these poor Hotten- tots, who pave proofs of the sincerity of their faith. In 1818 Mr. Edwards joined Mr. Shaw, and brought with him from the committee in

London a quantity of iron for implements of husbandry. Repeated calls from the perishing heathen around them to come and preach to thetn the everlasting gospel was a loud appeal for additional help. Permission was obtained from the governor to establish a new settlement among the Bastard Hottentots at Reid Fountain; and on the arrival of Mr. and Mrs. ArchbeH, they occupied this new station ; this took place on the 10th of August, 1819. In the month of March 1820 Mr. Shaw undertook a journey to some of the tribes beyond the Great Orange River, to explore the interior

; and returned to Khamies Bay, after an absence of fourteen weeks. The account of this town, as contained in the Missionary Reports, is highly interesting. ‘ In the spring of 1821, on the arrival of Messrs. Broad- bent, Hodgson, and Kay, it was determined to extend the Mission; and accordingly Mr. Arch- bell and a Hottentot assistant were sent among the Great Namaques — Messrs. Kay and Broad- bent to the Bootchuana country — Mr. Hodgson remained at the Cape, and Mr. Shaw accompa- nied a party of settlers to Salem in Albany, about 100 miles from Algoa Bay. Here the sphere of usefulness was so extensive, that Mr. Threlfall was sent out to his assistance. The next point to which our missionary, Mr. Shaw, directed his attention was a mission among the Caffres ; and in August 1822 he set out with two other missionaries and an interpreter on a visit to king Geika. To one of the missionary sta- tions in Caffreland was given the name of Wes- leyville, in honor of the founder of the society ; and here the work of the ministry and the in- structions of the natives proceeded in a pleasing and prosperous manner. This mission was strengthened in the month of March by the ar- rival of Mr. Whitworth ; and they commenced a journey to the Tambookie country, to ascertain the disposition of the several chiefs as to the ob- ject of their mission. Here they found several fine openings, which invited their occupation ; and at a district meeting in Albany in May, 1825, Mr. Kay was appointed to this service; and in company with Mr. Shaw proceeded to visit die chief Islambic. His sons conducted our mis- sionaries to a spot on the banks of the rivulet Umkangisa, the most eligible situation for their purpose, to which they agreed to give the name of Mount Coke, in memory of the great and use- ful laborer in the Christian cause — the Rev. Dr. Coke.’

Mission in New Zealand. — The Wesleyah mis- sionary, Mr. Leigh, who had been for some time stationed at New Zealand, sailed from Sydney in January 1822 for New Zealand, with a letter of introduction from the Rev. Mr. Marsden to the Church Missionaries stationed here. His first object was to attain a knowledge of the language, and teach the natives to read English. He found the New Zealanders very docile and attentive. Here he observed with much sorrow the grossness and absurdity of their opinions with regard to the Supreme Being, and the na- ture of the human soul, and the blood-thirsty cruelty which prevailed in this region of igno- rance ; but he occasionally had to rejoice in the attention and apparent interest with which

they listened to his instructions. In April 1823 ..e visited Ho-do-do in Doubtful Bay, and held some conversation with the natives. On his re- turn he- was joined by three fellow-laborers from England ; illness obliged him to return to New South Wales, and two alone remained at Wan- garoa on the river Thames, whose situation was at times very painful. In 1824 Messrs. Bennett and Tyerman bein'^ sent as a deputation to exa- mine the Otaheitan missions, called at New Zea- land on their way to Pert Jackson, and whilst the Endeavour, the vessel in which they had arrived, was lying at anchor in Wangaroa, their lives were placed in great peril, but were mercifully deli- vered from the hands of these barbarians. On their arrival at New South Wales they commu- nicated the result of their observations to the Wesleyan Missionary Society in London. A communication from Mr. Turner the missionary, in March 1825, states that some friends belong- ing to the Church Missionary Society, having heard of the perils in which they had been placed

by the conduct of the inhabitants, had visited the station and decidedly recommended their immediate removal to the settlement; but when this communication was sent, Mr. Turner says, ' we now think it will be best to continue at our post for the present and quietly wait for the salvation of God.'

It only remains to be observed that, in addition to these several stations of active missionary ex- ertion, the Wesleyan Society have others still in operation, the principal are, in' America — Canada, Nova Scotia, and Newfoundland; in Western Africa, at SierraLeone. In New South Wales — Van Diemen's land, and the Friendly Isles. In Asia — Palestine and Continental India. In Eu- rope— Ireland, France, Gibraltar, and Malta. In some of these stations much good has been dome, in others the grain which has been sown is ap- parent only in the blade, but promises by and by to produce an abundant and glorious har- vest.

METHODIUS, a father of the church, bishop of Olympus or Patara in Lycia, and afterwards of Tyre in Palestine. He suffered martyrdom at Chalcis in Greece towards the end of Dioclesian's persecution in the year 302. He composed many works, in a clear and elaborate style, which were extant in Jerome's time. F. Com- besis collected several considerable fragments of this writer, cited by Epiphanius, Photius, and others ; and printed them with some of his own, together with the works of Amphilochius, and Andreas Cretensis, in folio, Paris 1644.

METHUSELAH, Heb. nbinno, or Mathu- sala, or Mathushelah, the son of Enoch, was born A.M. 687, begat Lamech in 874, and died in 1 656, being the very year of the deluge, at the age of 969, the greatest age attained to by any man. Gen. v. 21, 22, &c. See ENOCH.

METIS Otijnc, wisdom). The mother of Minerva, daughter of Oceanus and Tethys, the wisest of gods and men. The Palus Meeotit takes its name from her ; and her sanctuary, where she was worshipped as the Great Mother, was at the mouth of the Borysthenes.

METIUS (Adrian), professor of mathematics and medicine at Franeker, was author of several treatises on astronomy and geography. He died at Franeker in 1635.

METIUS (James), brother of Adrian, said by some to have been the inventor of telescopes with glasses, one of which he presented to the States General in 1609, was born in Alcmaer.

METIUS SUFFETIUS, a general of the Albans, who, proving treacherous to Tullus Hostilius, the third king of Rome, was torn to pieces by horses. See ROME.

METO, or METON, was a celebrated mathe- matician of Athens, who flourished 432 years B. C. In the first year of the eighty-seventh Olympiad, he observed the solstice at Athens, and published his cycle of nineteen years, by which he endeavoured to adjust the course of the sun and moon, and to make the lunar and solar years begin at the same point of time.

This is called the golden number, from its great use in the calendar. Meton was living about 412 B. C., for, when the Athenian fleet was sent to Sicily, he escaped a share in that disastrous expedition by counterfeiting insanity.

METCECI, a name given by the Athenians to such as had their fixed habitations in Attica, though foreigners by birth. The metoeci were admitted by the council of Areopagus and en- tered in the public register. They differed both from the iroXirat and £ivo» ; because the polite or citizens were freemen of Athens, and the xeni or strangers had lodgings only for a short time ; whereas the metceci, though not freemen of Athens, constantly resided upon the spot whither they had removed.

METONYMY, n. s. •% Fr. metonymie ; Gr.

METONYM'ICAL, adj. ˆiitruwfiia. Arheto-

METONYM'ICALLY, adv. jrical figure, by which

one word is put for another, as the matter for

the materiate ; thus, he died by steel, that is, by

a sword.

METONYMY. See ORATORT. METOPE, in architecture, the interval or square space between the triglyps of the Doric frieze, which among the ancients used to be painted or adorned with carved work, represent- ing the heads of oxen, or utensils used in sacri- fices.

METOPOS'COPY, n. «. Fr. metoposcopie ; Gr. fitTtovov and

*METRE, n. *.) Lai.metrvm; Gr. /« rpw. MET'RICAL, adj. S See METE. Speech or writ- ten language confined to a certain number and harmonic disposition of syllables ; verse ; mea- sure ; numbers : metrical, pertaining to verse or metre.*

Abuse the city's best good men in metre, To laugh at lords.

Pope. The establishing metrical psalmody in England

was the consequence of the Reformation and our communication with foreign Protestants.

Dr. A. Reet.

METRE. See POETRY.

METRODORUS, a Greek physician, born at Chios, was the disciple of Democritus the philo- sopher, and the master of Hippocrates the physi- cian, and Anaxarchus the philosopher. He maintained that the universe was infinite and eternal ; but his works are lost. He lived about 444 B. C.

METRODORUS, a celebrated philosopher and painter of Stratonice, who flourished about 170 A. A. C. Paulus ffimilius, after defeating Per seus, demanded of the Athenians a philosopher to instruct his children, and a painter to paint his temples; upon which they sent him Metro- dorus, who satisfied him in both characters.

METRONOMII, the name given by the Athenians to five officers in the city and ten in the piraeus, whose duty it was to inspect all sorts of measures, except those of corn.

METROP'OLIS, n. s. - Fr. metropok;*

METROPOLITAN, n. s. & adj. > Lat. metropolis ;

METROPOLIT ICAL. J of Gr. pjjrijp,

mother, and TroXif, a city. The mother or chief city of a country or province : a metropolitan is the bishop of a mother church : as an adjective, metropolitan means belonging to a metropolis : metropolitical, chief or principal among towns or cities.

He fearing the power of the Christians was gone as far as Gratia, the metropolitical city of Stiria.

Krwlles.

Their patriarch, of a covefcus desire to enrich himself, had forborn to institute metropolitan bishops.

Raleigh.

He was promoted to Canterbury upon the death of Dr. Bancroft, that metropolitan, who understood the church excellently, and countenanced men of the greatest parts in learning. Clarendon.

His eye discovers unaware

The goodly prospect of some foreign land,

First seen : or some renowned metropolis,

With glistering spires and pinnacles adorned.

Miltm.

We stopped at Pavia, that was once the metropolis of a kingdom, but at present a poor town.

Additon on Italy.

METROPOLIS is also applied to archiepiscopal churches, and sometimes to the principal or mother church of a city. The Roman empire having been divided into thirteen dioceses and 120 provinces, each diocese and each province had its metropolis, where the proconsul resided. To this civil division the ecclesiastical was after- wards adapted, and the bishop of the capital city had the direction of affairs, and the pre-eminence over all the bishops of the province. His resi- dence in the metropolis gave him the title of metropolitan. This erection of metropolitans is referred to the end of the third century, and was confirmed by the council of Nice.

METTLE, n. s.ˆ As Dr. Johnson thinks

MET'TLED, adj. > corrupted from METAL: but

MET'TLESOME. J the Belg. nwedwell, and

Teut. tnutwill, signify animation; spirit; courage;

gprightliness : mettled and mettlesome are, brisk ;

fiery ; gay.

What a blunt fellow is this grown to be :

He was quick mettle when he went to school.

Shaksyea-.e Oh thou ! whose self-same mettle,

Whereof thy proud child, arrogant man it puft,

Engenders the black toad, and adder blue. Id.

Upon this heaviness of the king's forces, inter- preted to be fear and want of mettle, divers resorted to the seditious. Hayward's Edward VI.

Such a light and mettled dance Saw you never. Ben Jonson

He had given so frequent testimony of signal courage in several actions, that his mettle was never suspected. Clarendon.

Their force differs from true spirit, as much as a vicious from a mettlesome horse. Tatler.

Nor would you find it easy to compose ˆ

The mettled steeds, when from their nostrils flows, > The sc "rching fire that in their entrails glows. 3

Addison.

Tis more to guide than spur the muse's steed, Restrain his fury than provoke his speed ; The winged courser, like a generous horse, Shows most true mettle when you check his course.

Pope.

But little wist she Maggie's mettle — Ae spring biought off her master hale, But left behind her ain grey tail : The carlin claught her by the rump, And left poor Maggie scarce a stump. Burnt.

METTRIE (Julian Offray de la), M.D., a French physician, born at St. Maloes in 1709. He wrote the Natural History of the Soul, in •which he denied its immateriality; and also a work against the physicians, for which he was compelled to leave France. He then retired to Leyden, where he wrote an atheistical work en- titled L'Homme Machine, which was publicly burnt. He next went to Berlin, and was pa- tronised by Frederick the Great. He died in 1751. His works were published in Berlin in 1 vol. 4to.

METZ, MEDTOMATRICES, DIVODURUM, or So- CIA C I VITAS, an ancient, large, and strong city in France, the chief place of the department of the Moselle, a post-town, and the seat of a bishop, containing 42,000 inhabitants. It is the principal military station of the third division, and has a royal court for the departments of the Moselle and the Ardennes; an inferior court; a chamber of commerce ; and an exchange. Here is a royal school of artillery; also a univer- sity academy; societies of literature, arts, and sciences, and for the encouragement of agricul- ture and industry ; a royal college ; schools for drawing and painting, and mutual instruction in music ; and public lectures in midwifery and botany.

This city is finely situated in a magnificent basin, at the confluence of the rivers Moselle and Seille. It is generally well built, and adorned with several excellent public edifices, particu- larly the governor's palace, the town-hall, court- house, military hospital, arsenals, college, assem- bly-room, a superb building, with a portico of the Tuscan order ; and the cathedral, remarkable for the boldness, and yet astonishing lightness, of its architecture. The streets are broad, straight, and well paved, and next to Strasburg it is the best fortified place in France : there are seven gates, furnished with drawbridges ; some of these

gates are double, treble, and even fourfold. The citadel, on the right bank of the Moselle, is cnuacious and very strong ; and the ancient fortifications have been replaced by immense works constructed according to the modern system of defence, under the direction of marshals Vauban and Belleisle.

Metz was founded by the Gauls at a very early period, and was the capital of the Medio- matrices, a powerful nation of Belgic Gaul. It was a considerable place in the time of the Ro- mans, who adorned it with several fine monu- ments. In 452 it was laid waste by Attila; afterwards the Franks invaded it, and it became the metropolis of the kingdom of Austrasia ; it was successively subject to the emperors of Germany and the kings of France, till the eleventh century, when it became independent, under the protection of the empire, and enjoyed the privileges of a free city until the year 1552, when it again fell into the power of France, after Charles V. had besieged it with an army of 100,000 men, and been compelled to retire, having for sixty-five days assaulted it. It is the native place of Fabert, the illustrious warrior ; of Adam Philippe Custine, commander-in-chief of the army of the north, executed at Paris on the 17th of August, 1793; of his son Fran- £ois Custine, who also suffered on the 7th of January, 1794; of Lacretelle the elder, distin- guished for his learning; of the brothers Lalle- mand ; and general Lasalle, who was slain at the battle of Wagram.

Manufactures are carried on here of coarse cloths, flannels, woollen stuffs, gold and silver lace, hats, embroidery, walking-sticks, paper- hangings, glue, &c. There are also cotton-spin- ning factories, numerous brass-foundries, starch, nail, and tile manufactories, and considerable tan-yards. The inhabitants trade in brandy, excellent beer, confectionary, drugs, spices, lea- ther, iron and ironmongery, furniture, and tim- ber of various sorts. Among the public places may also be mentioned the library, the cabinet of natural history, the botanical garden, the square of Croislin, and the esplanade, a very delightful walk. About five miles from the city, near the village of Jouy-aux Arches, are the remains of an aqueduct, which formerly served to conduct the waters of the Gorze to a naumachia toward the southern extremity of the town; seventeen arches are still standing, seven of which are entire. Metz is in long. 3° 51′ E., and lat. 49° T. Thirty-six miles south of Luxemburg, 123 north- west of Strasburg, and 237 east of Paris.

METZU (Gabriel), an eminent painter, born in Leyden in 1615. His

subjects were usually taken from low life, and were all designed after nature, such as women selling fish, fowls, or hares; sick persons attended by the doctor; chemists in their laboratories; dead game, painters' shops, and drawing schools hung with pictures, &c. He died in 1658.

MEVANIA, in ancient geography, a town of the Cisappenine Umbria ; seated at the conflu- ence of the Tina and Clitumnus, on the Via Flaminia; famous for its herds of white cattle, brought up there for sacrifice. Mevania was the country of Propertius.

MEULEN (Anthony Francis Vander), a ce lebrated painter of battles, &c., born at Brussels in 1634. Some of his compositions, happening to be carried to Paris, were shown to M. Colbert, who soon discerned his abilities, and by his ge- nerous offers induced him to settle in Paris. Here he was employed by Louis XIV., and had a pension of 2000 livres beside payment for his work. He attended the monarch in most of his expeditions in the field, and designed on the spot the sieges, attacks, encampments, and marches of the king's armies ; and from those sketches he composed the paintings which were intended to perpetuate the remembrance of those military exploits. He died in 1690. His chief works are at Versailles and Marli ; but many of his easel pictures are dispersed through England, France, and Flanders.

MEURTHE, a department of France, con- sists of the southern part of the former province of Lorraine, and takes its name from the river Meurthe, which flows through it from south to north. The principal place of this prefecture is Nancy ; it is divided into five arrondissements or subprefectures, Nancy containing 114,678 inhabitants; Chateau Salins 64,215; Luneville 73,817; Sarrebourg 64,780; and Toul 62,485 ; being a total population of 379,975 souls, on a superficial extent of 2790 square miles. These are subdivided into twenty-nine cantons, and 718 communes, yield ing a revenue of 17,500,000 francs. It is in the third military division, hav- ing a royal court and a bishopric at Nancy, and is divided into three electoral arrondissements, which send five members to the chamber of deputies. This department is bounded by that of the Moselle on the north, on the east by that of the Lower Rhine, on the south by that of the Vosges, and on the west by that of the Meuse.

The face of the country is remarkable for the beauty of its scenery, and the variety of its pro- ductions ; it is co/ered with mountains and hills, intersected by fine and fruitful plains, that are watered by the Moselle, the Sarre, the Meurthe. the Seille, the Verouze, the Madon, and the Mortagne, of which the Moselle and the Meurthe only are navigable here. Some of the hills are covered with vines, which produce good wine , the tops of the mountains are crowned with forests, and abound in excellent pastures. The

soil of the plains, especially in the valley of the Meurthe and the Seille, is fertile in grain, of which a great quantity is exported. Hemp and flax also are successfully cultivated here, as well as wall-fruit trees, especially the apricot of Nancy. The meadows are rich and extensive, but the breed of horses and black cattle is small ; the inhabitants are supplied with great quantities of fish from the rivers and ponds scattered over the country, and the forests abound in game of all sorts. There are likewise some mineral springs, and salt springs, that are very produc- tive, and a stratum of rock salt, of an immense extent, of which the produce is incalculable. This country, which is rather stony, is cultivated by horses, and affords more than sufficient for its inhabitants; there are 218,980 hectars of forest land, chiefly oak and beech, and 13,500 heclars

of vineyards, the average produce of the hectar of arable land being 24 francs 12 centimes.

Besides the above productions, we may men- tion potatoes, beet-root, hops, rapeseed, plants of all sorts, excellent butter, horned cattle, me- rino and other sheep, goats, pigs, asses, mules, geese, bees, &c. There are also fine quarries of marble, freestone, graystone, grindstones, litho- graphic stones, earth for glass furnaces, and pot- ter's clay. At Nancy there is a botanical garden, and a stud for horses at Bouxibres. The inhabi- tants carry on manufactures of common cloths, hempen and cotton linen, embroidery of all kinds, playing-cards, paper-hangings, looking- glasses, crystals, pipes, liqueurs, mineral acids, candles, oil, basket-work, and turnery. They have also cotton-spinning factories, refining- houses for beet-root sugar, forges, bell-foundries, glass-houses, dye-houses, paper-mills, tan-yards, and potteries. Royal salt-works are established at Dieuze, Moyenvie, and Chateau Salins. . In all the above articles a considerable trade is maintained with the whole country round.

This department is crossed by the great roads of Strasburg, Metz, Verdun, Bar-le-duc, Langres, Epinal, and Colmar.

MEUP.THE, THE, a river in France, which, rising in the Vosges Mountains, at the back of Mount Bonhomme, divides itself into two streams, that descend the mountains of Valtin and Montaben, and unite below the bridge of Sandrouville, six miles to the south of St. Die". It passes by Plainfaing, Faize, St. Marguerite, St. Die, Raon-l'Etape, Baccarat, Luneville, Rosieres,

Dombasle, St. Nicolas, and Nancy, and falls into the Moselle below Frouard. This river flows at first with rapidity over a channel of gravel and flint, but it afterwards becomes more slow in its course, especially in the depart- ment to which it gives its name. It runs about 108 miles, receiving on its way the Verouze, the Mortagne, the Sanon, and several other small streams. It begins to be passable by rafts at Plainfong, in the department of the Vosges, and becomes navigable a little above Nancy. Along this river are conveyed chiefly fir timber in planks, which are sent down to Holland in floats of from 2000 to 3000 each, and fir wood.

MEURSIUS (John), a learned and laborious writer, born at Losdun, near the Hague, in 1579. He early discovered a fondness for the sciences; and at the age of sixteen he wrote a commentary on Lycophron. In 1610 he was made professor of history at Leyden ; and afterwards Greek professor. In 1611 the magistrates of the United Provinces appointed him to write the history of his country. During fourteen years residence at Leyden he published more works than the whole body of professors had done from the foundation of the university in 1575. Christian IV. king of Denmark, in 1625, conferred on him the places of historiographer royal and professor of history and politics in the academy of Sora, •where he resided twelve years. In 1638 he had a violent attack of the stone, from which he re- covered, but died of a consumption induced by it on the 20th of September, 1639. He left be- behind him a son and a daughter. lie was the author of many excellent historical, critical, and miscellaneous works ; but the Meursii Elegantiae

Latinae Sermonis, a scandalous indecent piece published in his name, was the production of one Westrenius, an advocate of Copenhagen.

MEUSE, a department of France, formed out of part of the former province of Lor- raine, and taking its name from the river Meuse, which crosses it from south to north. The chief place of this prefecture is Bar-le-duc ; it is divi- ded into four arrondissements, Bar-le-duc, con- taining 76,889 inhabitants; Commercy 78,577; Verdun 74,426 ; and Montmedy 62,493 ; being a total population of 292,385 souls, on a surface of 2862 square miles. It consists of twenty- eight cantons, and 591 communes, yielding a revenue of 14,281,000 francs; and is part of the second military division, and of the diocese of Nancy, where there is also a royal court. It is further divided into two electoral arrondisse- ments, which send four members to the chamber of deputies. This department is bounded on the north and north-west by that of the Ardennes, on the east by those of the Moselle and the Meurthe, on the south-east by that of the Vosges, on the south-west by that of the Upper Marne, and on the west by that of the Marne.

The face of the country is intersected with mountains, valleys, and plains ;

the mountains are lofty, covered with extensive forests, and abounding in game of all kinds ; on the less elevated hills the vine is cultivated with success, and produces excellent wine, especially in the neighbourhood of Bar. The soil in the plains is in general poor and rather barren ; but the val- leys are exceedingly fruitful, yielding vast quan- tities of grain, rapeseed, flax, hemp, vegetables, and every sort of fruit. The Meuse is bordered with fine meadows and pastures, that feed a great number of cattle, in which the inhabitants carry on an extensive commerce. The ground, which is rather rocky, is cultivated with horses and oxen, and affords an ample supply for its inhabitants. There are 180,000 hectars of forests (oak, hornbeam, and beech), and 15,000 of vineyards, each hectare of cultivated land producing about 22 francs.

Besides what has been mentioned, this country produces fine red and white gooseberries, and fish of different sorts, especially trout and crabs. It has also numerous mines abounding in iron, and quarries of freestone, potters' clay, marl, and curious fossils. There are manufactures ot cotton balls, cloths, and caps; casks, small shot, liqueurs, oils, and Gruyere cheese; cotton-spin- ning factories, forges, glass-houses, paper-mills, potteries, brass-foundries, tan-yards, and dye- houses, famous for the Adrianople red. In all the productions of these manufactories, as well as those of the soil, the inhabitants carry on a good trade.

The principal rivers that water this department are the Meuse, navigable; the Aire, the Ornain, the Chiers, the Ortain, the Saux, theTeinte, and the Orme. It is crossed by the great roads of Chalons-sur-Marne, Nancy, and Chaumont.

MEUSE, THE, a considerable river in France, which rises just above the village of Meuse, in the department of the Upper Marne. It is navi- gable from Verdun, in the department of the Meuse, as far as the frontiers of the kingdom, for an extent of about 150 miles, and from that plac«j

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to its mouth, a further extent of nearly 200 miles. The Meuse, after passing hy Bourmont, suddenly disappears at the village of Bargaille, about three miles from Neufchateau ; it afterwards flows by Domremy, Vaucouleurs, Commercy, St. Michael, Verdun, Dun, Stenay, Mouzon, Sedan, Mezieres, Charleville, Montherme', Kevin, Fumay, and Givet ; below this last town it enters the king- dom of the Low Countries, near Dinant, passes by Namur,

Liege, Maestricht, Iluremonde, Vanlo, and Ravenstein ; eighteen miles below this town it unites in two places with that arm of the Rhine which bears the name of the Waal, and is called for some distance the Merwe ; at Dordrecht it separates into two streams, one of which resumes the name of the Meuse, and the other, retaining that of the Merwe, passes on to Rotterdam ; these two branches unite again at some distance, opposite to Wardingen, and under the name of the Meuse fall into the North Sei, between the Breille and Gravesend. The whole course of this fine river is about 480 miles, receiving, in its progress to its mouth, tne Chiers, the Semoy, the Lesse, the Sambre, the Ourth, the Boer, and many other stream.*

MEW, n. s. & t>. a. Fr. mue ; barb. Lat. niuta; Ital. muta. A bird-cage or coop; ‘ pro- perly,’ says Mr. Thomson, ‘a receptacle for hawks changing their feathers, and a place for changing carriages, horses, and whatever be- longed to the chaise.’ Hence, therefore, our use of the term ‘ mews.’ To confine or shut un ; to shed the feathers or any outward attire or dis- tinction, as the hawk and other birds.

MEWING, the falling off or change of nair, feathers, skin, horns, or other parts of animals, which happens in some annually, in others only at certain stages of their lives : but the generality of beasts mew in the spring. An old hart casts his horns sooner than a young one, which is com- monly in February and March, after which they begin to button in March or April : and as the sun grows strong, and the season of the year ad- vances, their heads grow, and are summed full by the middle of June.

*MEXICO. The Republic of the United States of Mexico, in central America, comprise the former Vice-royalty of Spain, and is bounded on the north by the United States of America and the Gulf of Mexico; on the east by the United States, Gulf of Mexico, and Bay of Honduras ; on the south*by Guatimala ; and on the west by the Pacific Ocean ; it is situated between lat. 15° and 42° N. and between long. 87° and 124° E. It extends 1850 miles in length, by about 1000 in breadth and contains an area of 1,690,000 square miles. The popu- lation exceeds 7,000,000 of inhabitants. Its geographical features are peculiar : embracing every species of soil, from the most recent allu- vial to mountain valleys, or rather plateaus, elevated nearly 8000 feet above the sea. These plains are again broken by colossal masses, rising from twelve to seventeen thousand feet. From the difference of elevation, and from the extensive range which it embraces within the tropics, Mexico may be conˆiderpd to possess every climate of the earth, and to ot capable of*

producing every species of vegetable necessa’y to the wants or sought by the luxuries of human life ; and from the great internal capability of

production it follows, that few parts of the globe are better calculated to compose one indepen- dent political community. The mineral treasures of this country are perhaps its most important. They are placed within the valleys of the great mountain chains ; and the richest mines of Mexico, those of Real del Monte, Guanaxuato, Tasco, and Zacatecas, are situated at an elevation of from five to six thousand feet above the sea. Gold is found in little straw-like fragments, and native silver in great abundance. Some of these mines have been worked to extraordinary depths: one in particular is excavated to the depth of 1640 feet, and its galleries extend a length of eight miles. The agricultural produce is of the most luxuriant kind, and raised with little labour. Wheat, rye, and barley are extensively cultivated, besides, two and three crops of each are taken annually. Logwood and mahogany are cut in the districts of Campeachy and Honduras, and cocoa and cochineal form articles of export, and here also grow the trees yielding the balsam of capaiva and tolu. Mexico possesses but few good harbours ; Vera Cruz and Tampico, on the Gulf of Mexico, are the most frequented ou the east shore, and Acapulco and San Bias on the west. The territorial sub-division of the Re- public includes 18 intendancies and 3 territories. The former are named Mexico, Puebla, Guana- zuato, Jalisco, Oajaca, Yucatan, Zacatecas, Mi- choachan, Durango, Vera Cruz, San Luis Potosi, Chihuahua, Queretaro, Chiapas, Tabasco, Ta- maulipas, Nuevo Leon, Coahuila, Sonora, and Sinaloa. The territories are those of New Mexico, Alta California, and Baja California. The little territories or districts of Tlaxcala and Colima, consist of those cities respectively, with a small extent of contiguous country. In 1519. Cortez and his Spanish followers discovered Mexico, and founded VeraCroj. The country was then governed by Momezuma ; after his death, in 1520, Mexico was seized by the Spa- niards, and Cortez became Captain-General of New Spain (Mexico) un»il 1535, when he was displaced by a Viceroy. The country may be said to have groaned under Spanish mis- government, or to have lain exhausted, for three centuries : after which it at length arose from its lethargic and fallen state, and in 1821 declared itself totally independent of Spain, and formed its numerous provinces into the federal republic of Mexico. The capital of the new republic is the city of Mexico.

MEXICO, a city of North America, the capital of the country of this name, is the oldest city of the New World of which we have any account. The original town, called by the natives Ten- ochtitlan, was lounded in 1325 in the valley of Mexico on a group of islands in the lake Tez- cuco. Three principal causeways of stone and earth connected it with the mainland. They were thirty feet wide, we are told, and of great length ; the western one, or that of Tacuba, being a mile and a half; that of Tapeaca, on the north- west, three miles ; and that of Cuoyacan, towards the south, six

miles long. The bases of them

still exist, and form, with some modern additions, great paved ways across the marshy grounds, securing the city from being overflowed by the neighbouring lakes. The old city is said by Cortez, in a letter to Charles V., to be as large as Seville or Cordova. ‘ The streets, I merely speak of the principal ones,’ he writes, ‘ are very narrow and long; some are half dry and half occupied by navigable canals, furnished with very well constructed wooden bridges, broad eno’ugh for ten men on horseback to pass at the same time. The market-place, twice as large as that of Seville, is surrounded with an immense portico, under which are exposed for sale all sorts of merchandise, eatables, ornaments made of gold, silver, lead, pewter, precious stones, bones, shells, and feathers ; delft ware, leather, and spun cotton. We find hewn stone, tiles, and timber, fit for building. There are lanes for game, others for roots and garden fruits : there are houses where barbers shave the head with razors made of obsidian ; and there are houses, resembling our apothecaries shops, where pre- pared medicines, unguents, and plasters, are sold. There are houses where drink is sold. The market abounds with so many things that I am unable to name them all to your highness. To avoid confusion, every species of merchandise is sold in a separate lane; every thing is sold by the yard, but nothing has hitherto been seen to be weighed in the market. In the midst of the great square is a house, which I shall call 1’audiencia, in which ten or twelve persons sit constantly, for determining any disputes which may arise respecting the sale of goods. There are other persons who mix continually with the crowd, to see that a just price is asked. We have seen them break the false measures which they had seized from the merchants.’

This city was taken by Cortez, as we have seen, in the year 1521, after a siege of seventy- five days. The Spaniards were so irritated at this protracted resistance that they resolved to raze it to the ground, and, especially as the de- struction of the streets on the exterior facilitated their approaches to the other and main parts of the town. The ancient Tenochtitlan was thus completely levelled, and the present city has risen from the ruins, although, from the diminu- tion of the waters of the lake Tezcuco, it is situ- ated about a league distant from its shore.

The valley in which it stands is nearly in the middle of the Cordillera of Anahuac, on the ridge of mountains which runs to the N.N.W. It is surrounded with an oval barrier of moun- tains, which inclose it like a wall, and is eigh- teen leagues and one-third in length, and twelve and a

half in breadth. Baron Humboldt ascer- tained it by barometrical survey, to be raised to the height of 7200 feet above the level of the sea. At this elevation the city, notwithstanding its tropi- cal position, enjoys a temperate climate, and even a considerable degree of cold is felt, from winds which at certain seasons burst from the north; the thermometer having been known at these times to fall below the freezing point. But this is rare ; the winters are usually as mild as at Naples. In the cold season the mean heat is from 55° to 70° of Fahrenheit's thermometer :

the thermometer in summer never rises above 75°. The whole neighbourhood, except on the east side, which is in fact the old bed of the lake and is impregnated with saline particles, is laid out in estates in the highest cultivation; orchards and gardens pour in a continual supply of fruits, flowers, and vegetables of all kinds, for the use of the inhabitants : the plan of the city is a square, extending from north to south, and from east to west, about four English miles. The streets are drawn at right lines, and are very spacious : the ground on which it stands quite level. It is sur- rounded with a wall of uncemented stone ; and va- rious small canals disperse the waters of the lake through some beautiful streets. In a great central square is the viceroy's palace: and there are dif- ferent markets, where there is a regular supply of all the necessaries and luxuries of the climate. The chief public buildings whose magnificent architecture attracts attention are, 1. The cathe- dral, partly in the Gothic stile : the body of the edifice having two towers ornamented with pi- lasters and statues of very beautiful symmetry. 2. The treasury, adjoining the state palace. 3. The great convent of St. Francis, which from alms alone once possessed a revenue of £20,000 sterling. 4. The two united hospitals, of which the one maintains 600, and the other 800 chil- dren and old people. This noble establishment has a revenue of £10,000 a-year. 5. The accor- dada, or prison, in which the apartments are generally spacious, and in which they reckon that more than 1000 individuals are often con- fined. 6. The school of mines ; and the whole provisory establishment, with its collections n; physics, mechanics, and mineralogy. 7. The university and its public library. 8. The aca- demy of fine arts, with a collection of ancient casts. 9. The sepulchral monument consecrated to Cortez, in a chapel of the Hospitale de los Na- turales. 10. The mint of Mexico, said to be the largest and richest in the world. It is a building of very simple architecture, belonging to the palace; but its interior arrangements are very superior. It was begun in the year 1535 ; the coinage being at first carried on by individuals to whom the government farmed it; but since 1733 all the works have been placed under the direction of government officers. The number of workmen employed has often amounted to 400 ; and it is possible to coin here with ease pieces to the amount of £30,000,000 annually.

The chief manufactures carried on in Mexico are the printing of calicoes, manufactures of cloth, hard soap, and tobacco, which last was long a royal monopoly : the working of gold and silver, in its various branches, is also carried to great perfection. Wrought plate, vases, and church ornaments, were annually executed be- fore the revolution to a great amount ; and great taste was displayed in the execution of them.

Mexico is favorably situated for carrying on commerce both with Europe and Asia. Equally distant (i. e. about sixty-nine leagues) from the port of Vera Cruz on the east coast of America, and from Acapulco, the port on the western shore it is a central point between these two great con- tinents, and well adapted for becoming a great depot of their produce. At present the difficul-

ties of the roads, and the unsettled state of the governments around, alike present great obsta- cles to free internal intercourse.

According to the latest data, the population of this city, including military, appears to be from 135,000 to 140,000 souls, in something like the following proportion :

Europeans 2,500

White Creoles .... 65,000 Indigenous copper colored . . 33,000 Mestizoes, mixture of whites and

Indians .... 56,000 Mulattoes 10,000

Total

166,500

The clergy, until very lately at least, formed a numerous and powerful body, amounting, in- cluding all descriptions, to 2392. The arch- bishop possessed revenues equal to £l 8,000 per annum.

MEXITLI, a god of war among the ancient Mexicans. The worship of this idol was most horribly bloody. Numberless human sacrifices were offered up at his shrine. Clavigero and bishop Zumarraga say, that 20,000 persons were annually sacrificed to this idol in Mexico alone. Gomara makes the

number 50,000. The breasts of the victim were cut open alive, and their hearts torn out and sacrificed.

MEYER (Felix), an eminent landscape pain- ter, born at Winterthur in 1653, and taught by a painter at Nuremburg. He was afterwards a disciple of Ermels, whose style he followed. In search of still greater improvement, however, he travelled to Italy; but, the climate not agree- ing with his constitution, he retired to Switzer- land, where, as he was indefatigable in surveying all the beauty, the wildness, and the magnifi- cence of nature in those romantic scenes, he made a multitude of noble designs, which pro- cured him very high reputation. But he was not expert at painting figures. Such of his land- scapes as were supplied with figures by Roos, or Rugendas, are most esteemed. He died in

1713.

MEYER (James), a Flemish historian, born in 1491 near Ballieul, whence he is also named Ba- liolianus. He was rector of Blankenberg, and wrote, 1. Annales Rerum Flandricarum, fol. 2. Flandricarum Rerum Decas, 4to. He died in

1552.

MEYNT, or MEINT, part. adj. From Sax. menje, to mingle. Mingled. Obsolete. For even of love the sicknesse,

Is meint with swete and bitternesse. Chaucer. The salt Medway, that trickling streams

Adown the dales of Kent, Till with the elder brother Thames

His brackish waves be meynt.

Spenser's Pastoral.*

MEYWAR, an extensive district of Hindos- tan, in the province of Ajmeer, situated between 25° and 26° of N. lat. It is possessed by a number of Rajpoot chiefs, dependent on the rajah of Odeypore, and is in general hilly, but produces sugar, tobacco, cotton, and grain ; horses, camels, and cattle. Its principal manu- factures are swords, matchlock musquets, and cotton cloths. The chief towns Odeypore, Shah-

poorah, and Bilarah ; its largest river is the Banasa.

MEY WAT, a district of Hindostan, in the province of Delhi, is situated between 27° and 29° of N. lat. ; and, although within twenty-five miles of

the capital of India, its inhabitants have always been described as singularly savage and brutal ; so that the epithet of Meywatty has become synonymous with that of robber. This district has changed masters often enough perhaps to account for this : it is now nominally pos- sessed by the Machery rajah, whose capital is the town of Alvar.

MEZANDERAN, a province of Persia, bounded east by Chorasan, south by Chusistan, Irak, west byChilan, and north by the Caspian Sea. The south part is mountainous but very healthful ; the north is so extremely fertile that it is styled the garden of Persia. Silk is the chief manufacture. Ferbad is the capital.

MEZENTIUS, in fabulous history, a king of the Tyrrhenians, infamous for his cruelties. Among other barbarities he tied the living and the dead together. Being expelled by his sub- jects he fled to Turnus, and fought under him against ˆneas, by whom he was killed, with his son Lausus. — Virg. j£.n. vii. 648, &c.

MEZERAI, orMEZERAY (Francis EˆJcsde), an eminent French historian, the son of Isaac Eudes, a surgeon, born at Rye, in Lower Nor- mandy, in 1610; and who took the surname of Mezeray, from a hamlet near Rye. Having studied at Caen, he discovered a strong inclina- tion for poetry ; but going to Paris he applied himself to politics and history, and procured the place of commissary at war, which he held for two campaigns. He then shut himself up in the college of St. Barbe, in the midst of books and MSS., and, in 1643, published the first volume of the History of France, in folio; and, some years after, the second and third. He surpassed all who had written the History of France before him, and was rewarded by the king with a pension of 4000 livres. In 1 668 he published an Abridg- ment of his History of France, inSvols. 4to, which was well received by the public ; but as he in- serted in that work the origin of most of the taxes, with very free reflections, M. Colbert complained of it, when Mezeray promised to correct what he had done in a second edition ; but, those corrections being only palliations, the minister caused half of his pension to be sup- pressed. Mezeray complained of this in very severe terms ; when he obtained no other answer than the suppression of the other half. Vexed at this treatment, he resolved to write on subjects that could not expose him to such disappoint- ments ; and composed his treatise on the Origin of the French. He was elected perpetual secre- tary to the French academy; and died in 1683. He is said to have been so careless in his dress that he often passed for a beggar, and was one morning actually seized by the parish officers ; which was so far from provoking him that he was highly diverted with it, and told them that ‘ he was not able to walk on foot, but that, as soon as a new wheel was put to his chariot, he would attend them wherever they thought pro- per.’ With regard to religion he affected Pyrr-

Ironism ; which, however, was not so much in his heart as in his mouth. This appeared from his last sickness ; for having sent for those friends who had been the most usual hearers of his li- centious conversation about religion, he desired them ‘ to forget what he might formerly have said upon the subject of religion, and to remem- ber that Mezeray dying was a better believer than Mezeray in health.’ He also wrote, 1. A Continuation of the History of the Turks. 2. A French translation of John de Sarisbury’s Latin treatise on the vanities of the court. 3. Several satires against the government, under the name of Sandricourt.

MEZE’REON, n.s. Arab, mexereon. Daphne or spurge laurel.

Mezereon is common in our gardens, and on the Alps and Pyrenean mountains : every part of this shrub is acrid and pungent, and inflames the mouth and throat. Hill.

Mezereon too,

Though leafless, well attired, and thick beset

With blushing wreaths, investing every spray.

Cowper.

MEZEREON. See DAPHNE.

MEZIERES, a small but strong town, the principal place of the department of the Arden- nes, in France, possessing societies of agricul- ture, arts and sciences and commerce. It is a post-town, and of the fourth division, with an inferior court at Charleville, and contains 3,600 inhabitants ; it is situated at the foot of a hill on the right bank of the Meuse, which divides it from Charleville ; it is surrounded with con- siderable fortifications, and defended by a citadel. It is very confined, and in general badly built. In the year 1521 it was besieged by the emperor Charles V. with a powerful army, and bravely defended by the chevalier Bayard. In has, in- deed, never been taken. Here are some famous tan yards, brass foundries, and edge-tool manu- factories ; and a trade is carried on in leather, serges, hats, linen, &c. The public library con- tains 4000 volumes. This town is fifteen miles W. N. W. from Sedan, sixty north-east from Rheims, and 177 north-east from Paris; in east Ions;, from that city 2° 23’, and N. lat. 49° 51’.

MEZIRIAC (Claude Gasper Backet sieur de), an ingenious author of the seventeenth century, was born at Bresse of an ancient and noble fa- mily. He was an excellent grammarian, a Greek scholar, and an admirable critic. He was deeply skilled in algebra and geometry, of which last he gave proof by publishing the six books of Diophantus, with a very able commen- tary and notes. In his youth he spent a consi- derable time in Paris and in Rome ; at which last place he wrote a small collection of Italian poems, in competition with Vaugelas, who was there at the time ; among which there are imi- tations of the most beautiful similies contained in the first eight books of the /Eneid. He also translated Ovid's Epistles ; a great part of which he illustrated with very curious notes. He be- gan a translation of Plutarch's works, with notes; which he had nearly finished, when he died at Bourg in Bresse in 1638, aged forty-five. He left behind him several finished works in MS.

MEZUZOTH, in the Jewish customs, pieces

of parchment which the Jews affixed to the door- posts of their houses, taking literally that precept of Moses, ' Thou shalt never forget the laws of thy God, but thou shalt write them upon the posts of thy house, and on thy gates.' But, in order to avoid the profanation of the wicked, they wrote these words upon a square piece of parchment pre- pared on purpose, with a particular ink, and a square kind of character : Deut. vi. 4, 5, 6, 7, 8, 9. ' Hear, O Israel, the Lord our God is one Lord,' &c. Then they left a space, and after- wards went on, Deut. xi. 13, ' And it shall come to pass, if thou shalt hearken diligently to my commandments,' &c. as far as, ' Thou shalt write them upon the door-posts of thy house,' &c. After this they rolled up the parchment, and put it into a case, on the end of which the word Shaddai, one of the names of God, was written ; and they put it at the doors of their houses, chambers, &c. and fixed it to the knockers of the door, on the fright side ; and, as often as they entered in or went out, they touched it in this place with the end of their finger, which they afterwards kissed out of devotion. The Hebrew word mezuza properly signifies the door-posts of a house ; but it is also given to this roll of parchment now mentioned. Leo of Modena may be consulted on this custom.

MEZZOTINTO is a particular manner of re- presenting figures on copper, so as to form prints in imitation of painting in Indian ink. This invention has been attributed to prince Rupert. But baron Heinikin, a very judicious writer upon engraving, asserts, with great ap- pearance of truth, that it was a lieutenant-colonel de Siegan, in the service of the landgrave of Hesse, who first engraved in this manner; and that the print which he produced was a portrait of the princess Amelia Elizabeth of Hesse, en- graved in i643. Prince Rupert learned the secret from this gentleman, and brought it into England, when he came over the second time with Charles II. Prince

Rupert's print of an executioner holding a sword in one hand and a head in the other, a half length, from Spagno- letto, is dated 1658. This art has never been cultivated with success in any country but in England. The prince laid his grounds on the plate with a channelled roller ; but one Sherwin, about the same time, laid his grounds with a half round file, which was pressed down with a heavy piece of lead. Both these grounding-tools have been laid aside for many years ; and a hand-tool, resembling a shoemaker's cutting board knife, with a fine crenelling on the edge, was introduced by one Edial, a smith by trade, who afterwards became a mezzotinto painter. It is very different from the common way of engrav- ing. To perform it, they rake, hatch, or punch the surface of the plate all over with a knife, or instrument made for the purpose, first one way, then the other, across, &c., till the surface of the plate be thus entirely furrowed with lines or furrows, close, and, as it were, contiguous to each other ; so that if an impression was then taken from it, it would be one uniform blot or smut. This done, the design is drawn or marked on the same face; after which, they proceed with burnishers, scrapers, &c., to expunge and

take out the dents or furrows, in all the parts where the lights of the piece are to be ; and that more or less as the lights are to be stronger or fainter ; leaving those parts bhick which are to represent the shadows or deepenings of the draught. As it is much easier to scrape or bur- nish away parts of a dark ground corresponding •with the outline of any design sketched upon it, than to form shades upon a light ground by an infinite number of hatches, strokes, and points, which must all terminate with exactness on the outline, as well as differ in their force arid man- ner ; the method of scraping, as it is called in mezzotinto, consequently becomes much more easy and expeditious than any other method of engraving. The instruments used in this kind of engraving are cradles, scrapers, and burnishers. In this engraving, the plate must be prepared and polished in the same manner as for other en- graving ; and afterwards divided equally by lines parallel to each other, and traced out with very soft chalk. The distance of these lines should be about one-third of the length of the face of the cradle which is to be used ; and these lines should be marked with capital letters, or strokes of the chalk. The cradle is then to be placed exactly between the first two lines, and passed forwards in the same direction ; being kept as steady as possible, and pressed upon with a moderate force. The same operation must be repeated with respect to all the other lines; till the instrument has thus passed over the whole surface of the plate. Other lines must be then drawn from the extremities of the other two sides, in the same manner ; which, inter- secting the first at righˆ angles, will with them form squares ; and the same operation must be repeated with the cradle as in the case of the tirst. New lines must then be drawn diagonally, and the cradle passed betwixt

them as before ; and, when the first diagonal operation is per- formed, the lines must be crossed at right angles as the former, and the cradle passed betwixt them in the same manner. The plate having undergone the action of the cradle, according to the disposition of the first order of lines, a second set must be formed, having the same distances from each other as the first. But they must be so placed as to divide those already made into spaces one-third less than their whole extent ; i. e. every one after the first on each side will take in one-third of that before it, e. g. beginning at A, of which the first third must be left out; a third of B will consequently be taken in, and so of the rest. These lines of the second order must be marked with small letters, or lesser strokes, to distinguish them from the first ; and the same treatment of the plate must be pursued with respect to them as was practised for the others. When this second operation is finished, a third order of lines must be made; the first of which, e. g. in A, must omit two-thirds of it, and consequently take in two-thirds of B, &c. By these means the original spaces will be exactly divided into equal thirds ; and the cradle must be again employed betsvixt these lines as before. When the whole of this ope- ration is finished it is called one turn ; but, in order to produce a very dark and uniform VOL. XIV.

ground, the plate must undergo the repetition o all these several operations for above twenty times ; beginning to pass the cradle again betwixt the first lines, and proceeding in the same man- ner through all the rest. When the plate is pre- pared with a proper ground, the sketch must be chalked on it, by rubbing the paper on the back side with chalk. It is also proper to overtrace it afterwards with black-lead or Indian ink. The scraping is then performed, by paring or cutting away the grain of the ground in various degrees ; so that none of it is left in the original state, ex- cept in the touches of the strongest shade. The general manner of proceeding is the same as drawing with white upon black paper. The masses of light are first begun with ; and those parts which go off into light in their upper part, but are brown below : the reflections are then en- tered upon; after which the plate is blackened with a printer's blacking-ball made of felt, to discover the effect; and then the work is pro- ceeded with, observing always to begin every part in the places where the strongest lights are to be. The art of scraping mezzotintoes has been applied to the printing with a variety of colors, in order to produce the resemblance of paintings. The inventor of this method was J C. Le Blon, a native of Frankfort, and pupil ot Charles Marata, between 1720 and 1730. It was established by the inventor on this principle, that there are primitive colors, of which all the rest may be composed by mixing them in va- rious proportions ; that any two of these colors being mixed together, preserve their original power, and only produce a third color, such as their compound must necessarily give ; but if transparent colors be mixed, and three primitive kinds be compounded

together, they destroy each other, and produce black, or a tendency to it, in proportion to the inequality or quality of the mixture ; and that if, therefore, three colors be laid, either separately or upon each other, by three plates, engraved correspondently on these principles to the coloring of the design, the whole variety of teints necessary may be pro- duced. The requisites, therefore, to the execu- tion of any design in this method of printing, are as follows : — 1. To settle a plan of the color- ing to be imitated ; showing where the presence of each of the three simple colors is necessary, either in its pure state, or combined with some other, to produce the effect required ; and to re- duce this plan to a painted sketch of each, in which not only the proper outlines, but the de- gree of strength, should be expressed. 2. To engrave three plates according to this plan, which may print each of the colors exactly in the places where, and proportion in which, they are wanted. 3. To find three transparent sub- stances proper for printing with these three pri- mitive colors.

The manner in which M. Le Blon prepared the plates was as follows : — The three plates of copper were first well fitted with respect to size and figure to each other, and grounded in the same manner as those designed for mezzotinto prints ; and the exact place and boundary of each of the three primitive colors, conformably to the design were sketched out on three papers,

answering in dimensions to the plate. These sketches were then chalked on the plates ; and all the parts of each plate, that were not to con- vey the color to which it was appropriated to the print, were entirely scraped away, as in forming the light of mezzotinto prints. The parts that were to convey the colors • were then worked upon ; and, where the most light or diluted teints of the color were to be, the grain in the ground was proportionably taken off; but where the full color was required it was left entire. In this regard was had, not only to the effects of the co- lor in its simple state, but to its combined ope- ration, either in producing orange-color, green, or purple, by its admixture with one alone ; and likewise to its forming brown, gray, and shades of different degrees, by its co-operation with both the others. But, though the greatest part of the engraving was performed in the mezzo- tinto manner, yet the graver was employed occasionally for strengthening the shades, and for correcting the outline, where it required

great accuracy and steadiness. It was necessary some- times to have two separate plates for printing the same color, in order to produce a stronger effect ; but the second plate, which was used to print upon the first, was intended only to glaze and soften the colors in particular parts that might require it. As to the black and brown teints, which could not be so conveniently pro- duced in a due degree by the mixture of the colors, umber and black were likewise used. As to the order in which the plates are to be applied, the color which is least apparent in the picture should be laid on first, that which is be- twixt the most and least apparent next, and that which predominates last ; except where there may be occasion for two plates for the same co- lor, or where there is any required for adding browns and shades. M. Le Blon applied this art to portraits, and showed, by the specimens he produced, the possibility of its being brought, by farther improvements, to afford imitations of painting which might have some value. It is nevertheless much better adapted to the simpler subjects, where there are fewer intermixtures of colors ; and where the accuracy of the reflec- tions, and demi-teints, are not so essentially ne- cessary to the truth of the design, from the greater latitude of the form and disposition of the color, as in plants, anatomical figures, and some subjects of architecture. But perhaps plates engraved, or rather finished with the tool, particularly with respect to the outline, would be better accommodated in some of these cases than those prepared only by scraping. Mr. Cochin remarks, at the end of an account given of M. Le Blon's manner, that though this inge- nious artist confined his method principally to the use of three 'colors ; yet, should this inven- tion be again taken up and cultivated, there would be more probability of success in using a greater variety ; and that several different kinds might be printed by one plate, provided they were laid on in their proper places by printing-balls, which should be used for that color only. His hint might, however, be very greatly improved, by the further assistance of pencils, accommodated to the plates, for laying on the colors in the proper parts.

The art of mezzotinto engraving was at first considered as only adapted to broad subjects ; and, where high minute finishing was required, it was thought vain to attempt it ; but the great advance made since the introduction of the art has convinced every artist and amateur to the contrary ; and the successful works of Eaclom (especially his masterly flower-pieces) are admi- rable specimens of its power, as also are the beautiful productions of Hodges, Dixon, and many other artists of the present day. It is de- cidedly most appropriate for the engraving of portraits, both as to touch and effect. The art of scraping mezzotinto has been applied to the printing with a variety of colors, in order to pro- duce the resemblance of paintings.

MEZZOVO, a considerable trading town of Albania, Greece. It is an inland

place, and about twenty-two miles north by east of Joan- nina. Inhabitants (descendants of a colony of Bulgarians) about 7500.

MIAMI, a country of the United States, in the south-west part of Ohio, North America; watered by the Miami Rivers, including the countries of Champaign, Clinton, Clermont, Green, Hamilton, Warren, Butler, Preble Mont- gomery, Miami, and Dark. — It is the name also of three inconsiderable townships of the Ohio state.*

MIAMI, a county of the United States, 'in Ohio. Troy is the chief town.

MIAMI BAY, a bay on the south-west shore of Lake Erie, in North America, at the mouth of the Miami of the Lakes. It is about eighteen miles in circumference. It affords good anchor- age and shelter.

MIAMI, GREAT, a river of the United States, in Ohio, which has its rise in the Indian coun- try, between lat. 40° and 41° N. from two branches. The united streams flow south and south-west, and enter the Ohio in lat. 39° 4′ N. twenty miles below Cincinnati. It interlocks with the head branches of the Wabash ; and with those of the Miami of the Lakes and the Scioto. Its entire length is 130 miles : it is 200 yards wide at its mouth ; and flows through a wide and fertile valley, liable to partial inunda- tion. . It is navigable for boats seventy-five miles.

MIAMI, LITTLE, has its source in Green county, in the state of Ohio, and falls into the river Ohio, six miles above Cincinnati. Its length in a direct line is not more than sixty miles, but twice that distance if its windings are taken into the account. It is 150 yards wide at its mouth during high water, and its course is nearly parallel with the Great Miami, being no- where more than twenty miles distant. The channel is precipitous, affording an immense number of mill-seats. Several paper-mills are already established on its banks.

MIAMI OF THE LAKES, a river of the United States, which rises in Indiana, and is formed by the St. Joseph's and St. Mary's, and running E.N.E. through the north-west part of the Ohio state. It flows into Miami Bay, at the west end of Lake Erie. It is navigable to Fort Wayne 120 miles, interrupted only by the rapids above Fort Meigs, which are fifteen miles long, «u.d commence eighteen miles from its mouth.

MI' ASM, n. «. > Gr. fuaivta, to daub, or in-

MIAS'MA, > feet. Impurity, real or sup- posed, in the air, such as to communicate infec- tion or disease.

The plague is a malignant fever, caused through pestilential miasmt insinuating into the humoral and consistent parts of the body.

Harvey on Consumplioru.

The variety of effects induced by different impuri- ties of the air renders it absolutely necessary to dis- criminate them with as much accuracy as possible. We shall, therefore, confine the term miasma to its original meaning, as used by Hippocrates, and, as all the rest have appropriate terms, we shall defer them to the articles in ttieir order. Dr. A. Bees.

MIAVA, a town of Hungary on the Miava River, which joins the Morava. It contains 10,000 inhabitants, chiefly Lutherans, and some manufactures of woollen and linen, consider- able distilleries. Population (of Sclavonian origin) 10,000. Forty-five miles N. N. E. of Presburg, and sixty-three north-east of Vienna.

MICAH, the seventh of the twelve minor pro- phets. He is cited by Jeremiah, and prophe- sied in the days of Jotham, Ahaz, and Hezekiah. He censures the reigning vices of Jerusalem and Samaria, and denounces the judgment of God against both kingdoms. He also foretels the confusion of the enemies of the Jews, the coming of the Messiah, and the glorious success of the church.

MICAH, or THE BOOK OF MICAH, a canonical book of the Old Testament, written by the pro- phet Micah.

MICAIAH, the son of Imlah, an Ephraimite, a faithful prophet of Israel, under Ahab, who predicted the death of that monarch. See 1 Kings, xxii. 8 — 28, and AHAB.

MICHAEL, or MICHEL, i. e. who is like to God ? The scripture account of Michael is, that he was an archangel, who presided over the Jewish nation, as other angels did over the Gen- tile world, as is evident of the kingdoms of Per- sia and Greece (Dan. x. 13); that he had an army of angels under his command (Rev. xii. 7) ; that he fought with the dragon, or Satan, and his angels ; and that, contending with the Devil, he disputed about the body of Moses (Jude 9). As to the combat between Michael and the Dragon, some authors understand it literally. Others take it in a figurative sense : and refer it either to the contest that happened at Rome between St. Peter and Simon Magus, in which the apostle prevailed over the magician, or to

those violent persecutions under which the church labored for 3CO }ears. The Romish church celebrates three appearances of Michael, which happened, they say, long after the age of the apostles : viz. 1. At Colossae in Phrygia, but when is uncertain. 2. At Mount Garganus, in Naples, about the end of the fifth century. 3. His appearance to Au- bert bishop of Avranches, A. D. 706, upon a rock called the Tomb, where the abbey of St. Michael stands. The first of these festivals is observed on the 6th of September, the second on the 8th of May, and the last on the 16th of October. It has been supposed that it was Michael who conducted the Israelites in their journey through the wilderness (see Exod. xxxii. 34. and xxxiii. 2) ; who appeared to Moses in

the burning bush, to Joshua in the fields of Jericho, and to Gideon and Manoah the father of Sampson. In a word, to him have been imputed the greatest part of the most remarkable appear- ances in the Old and New Testament. Bishop Horsely, in his remarkable sermon on Dan. iv 17, labors to prove that Michael the archangel is the Redeemer.

MICHAEL, MOUNT, one of the most celebrated state prisons of France, lies about twenty miles from Granville. It is a rock situated in the middle of the bay of Avranches ; and is only accessible at low water. One side is naturally completely fortified by its craggy and almost perpendicular descent, which renders it imprac- ticable to climb it by any address or courage, however consummate. The other parts are sur- rounded by walls fenced with semilunar towers after the Gothic manner, but sufficiently strong, together with the advantage of its situation, to render it impregnable to any attack. At the foot of the mountain begins a street or town, which winds round its base to a considerable height. Above are chambers where state-pri- soners were kept, and where there are other buildings intended for residence. On the summit is erected the abbey itself, occupying a prodi- gious space of ground ; and of a strength and solidity equal to its enormous size; as it has for many centuries withstood all the injuries of the weather, to which it is so much exposed. In an apartment, called the Sale de Chevalerie, the knights of St. Michael used to meet in solemn convocation, on important occasions. They were the defenders and guardians of this moun- tain and abbey, as those of the temple, and of St. John of Jerusalem, were of the holy sepulchre.

MICHAEL (St.,) or ST. MICHAEL'S, a borough of Cornwall, between St. Columb and Truro, 247 miles from London. Though one of the oldest boroughs in the county by prescription, it is now a mean hamlet in the parishes of New- land and St. Enidore ; yet it is governed by a portreeve, chosen annually by a jury of the chief inhabitants, out of the six chief tenants, called deputy lords of the manor, because they hold lands in the borough. It has two fairs, and a court-leet is held twice a-year. It was

formerly called Modishole.

MICHAEL (St.), GULF OF, a bay of South America, on the south-east side of the Gu4f of Panama, and formed by the mouths of the rivers Congo, Santa Maria, &c. It has several islands which form a very good shelter for a large fleet, and its sides are surrounded with man- groves.

MICHAELIS (John David), a celebrated biblical critic, and author of many esteemed works, was the eldest son of a professor in the university of Halle in Lower Saxony, and was born there, February 27th 1717 He received the first part of his education in a celebrated Prussian seminary, called the Orphan-house, at Glauche, near Halle. He commenced his academical career at Halle in 1733, and took his degrees of A.M. and of philosophy in 1739. In 1741 he came to England, where his know- ledge of the oriental languages, which was in- creased by his indefatigable researches in the

Boa"leian library at Oxford, introduced him to the acquaintance and esteem of our first literary characters ; with several of whom, particularly bishop Lowth, he corresponded for many years. He returned to Halle in fifteen months, and began to rend lectures on the historical books of the Old Testament, which he continued after his removal to Gottingen in 1754. In 1746 he was appointed professor extraordinary, and soon after of philosophy. In 1747 he was appointed secretary to the Royal Society there, of which he was director in 1761, and was soon after made Aulic counsellor by the court of Hanover. In 1764 a publication relative to a journey to Arabia, which was undertaken by several literary men, at the expense of the king of Denmark, procured him the honor of being chosen a mem- ber of the Academy of Inscriptions at Paris, of whom the institution admitted only eight; and in the same year he became a member of the society at Haerlem. In 1775 count Hopkin, who eighteen years before had prohibited the use of his writings at Upsal, when chancellor of that university, prevailed upon the king of Sweden to confer on him the order of the polar star, as a national compensation. In 1768 he was ap- pointed a privy counsellor of justice by the court of Hanover; and in 1788 received his last lite- rary honor, by being elected F. R. S. of London. His great critical knowledge of the Hebrew, which he displayed in a new translation of the Bible, and in other works, raised him to a degree of eminence almost

unknown before in Ger- many ; and his labors were indefatigable in in- structing the numerous students of all countries who attended his admirable lectures, which he continued to deliver on the sacred writings in half yearly courses, and on the Hebrew, Arabic, and Syriac languages, to the last year of his life. He was professor in the university of Gottingen forty-five years, and died October 22d, 1791, aged seventy-four. He left behind him several valua- ble MSS.

MICHAELMAS, n. s. Michael and mass. The feast of the archangel Michael, celebrated on the 29th of September.

They compounded to furnish ten oxen after Michaelmas for thirty pounds price. Carew.

MICHAELOVKA, a town in the govern- ment <

MICHE, v. n. > Sax. msectan; Teut. mau-

MICH'ER, n. s. j chen, to conceal. To lie hid or neglected • mich and mick are still used pro- vincially for an idle, or small (easily concealed) person : a micher is used below for a loiterer. How tenderly, her tender hands between,

In ivory cage she did the micher bind. Sidney.

Marry this is miching malicho ; if means mischief.

Shakspeare.

Shall the blessed son of heaven prove a micher, and eat blackberries'! a question not to be asked. Shall the son of England prove a thief, and take purses ? a question to be asked. Id.

MICHIGAN LAKE, a lake of North Ame- rica, belonging to the United States, is 262 miles

in length, and fifty-five in breadth, containing, according to Hutchings, 10,368,000 acres. It has a depth of water sufficient for vessels of any size, and has a communication with Lake Huron, by the river or channel of Michillimackinack. The waters of this, as well as of the other great lakes, are clear and wholesome, and contain abundance of fish. Its banks are fertile, and in the north-west are two excellent bays, i. e. No- quet's and Green's.

MICHIGAN TERRITORY, a territory of the United States, is a large peninsula, bounded on the north by the straits of Michillimack- inack; on

the north-east by Lake Huron; on the east by St. Clair's River and Lake, by Detroit River, and Lake Erie; on the south by Ohio and Indiana; and on the west by Lake Michigan. Long. 82° T to 85° 20′ W., lat. 41° 45′ to 45° 34′ N.; two hundred and fifty miles long, from north to south, and one hundred and fifty miles broad ; and containing about thirty thousand square miles.

The territory is divided into 18 counties, 14 of which lie to the east, and 4 to the west of Lake Michigan. They are,

Berrien Monroe Wayne

Cass Oakland Deiroit, City

Jackson St. Clair Brown -ˆ West

Lenamee St. Joseph Chippevva f of Lake

M:icomb Van Buren Crawford /Michi-

*MichiilimackinacWashtenawTowa * gin.*

The chief towns are Detroit, Niles, Edwards- bury, and Mackinac, and the population of the territory amounts to 31,260 inhabitants, few of whom are in slavery.

The rivers of this territory are numerous, and mostly navigable for boats to their sources. Those flowing into Lake Michigan are St. Jo- seph's, Black, Marame, Barbice, Raisin, Grand, Mastigon, White, Rocky, Beauvais, St. Nicholas, Marguerite, Monistic, Aux Sables, and Grand Traverse. Saganaum River flows in Saganaum Bay in Lake Huron. •

There are no mountains in this territory ; the interior is table land, having a northern and western inclination, interspersed with small lakes and marshes, from which issue the head branches of the river. There are prairies, from the banks of St. Joseph's to Lake St. Clair ; some of an ex- cellent soil, others sandy, wet, and sterile. There are also extensive forests of lofty timber, con- sisting of oak, sugar maple, beach, ash, poplar, white and yellow pine, cucumber, buckeye, bass-wood, hickory, cedar, plum, crab apple, cherry, black and honey locust. The timbered lands are well adapted to the production of most kinds of grain. There is no part of the United States more abundantly supplied with fish, aquatic fowls, and wild game.

The climate generally is accounted healthy. In the southern part it resembles that of the west part of New York and Pennsylvania. In the northern part it is more severe.

MICHILLIMACKINACK, a broad river or strait, by which Lake Huron communicates with that of Michigan. It is six miles wide, and from twenty to thirty long.

MICHILLIMACKINACK, or MACKINAW, an is- land and fort, situated in the above straits. The island is of anˆelliptical form, full of wood, and about seven miles in circumference, rising to- wards the centre, its figure suggesting to the Aborigines the appropriate name of Michi Mackina, or Great Turtle. The fort stands on a rising ground, 150 feet above the waters of the lake, 100 from its shores. It is a strong stockade, neatly built, and exhibits a fine appearance from the water. A village near the fort contains a Roman Catholic church, and 100 or 150 small houses. It is considerably resorted to by all the north-west traders. The climate is severe. 200 miles N.N.W. of Detroit.

MIC'KLE, adj. Sax. micel ; Goth, and Swed. micktl; Scot, muckle. Much; great. See MUCH. This reade is rife that oftentime

Great cumbers fall unsoft :

In humble dales is footing fast, The trode is not so tickle,

And, though one fall through heedless haste, Yet is his miss not mickle. Spenser's Pastorals.

O, mickle is the powerful grace, that lies In plants, herbs, stones, and Jheir true qualities.

Shakspeare.

Many a little makes a mickle. Camden'i Remains.

All this tract that fronts the falling sun, A noble peer, of micklt trust and power, Has in his charge. Milton.

MICKLE (William Julius), the celebrated translator of the Lusiad, was born about 1735, and was educated by his father. After the death of his father he came to Edinburgh to reside with an uncle who was a brewer there, and who admitted him into a share of his business ; but disliking the trade he went to London about 1761, with a view to procure a commission in the

marine service. The first of his poems which appeared in print was published in one of the Edinburgh magazines, and entitled On passing through the. Parliament Close of Edin- burgh at Midnight. In 1756 he published the poem which first brought him into notice, en- titled Pollio, an Elegiac Ode, written in the

wood near R (Roslin) Castle, 4to. This

was an elegy on the death of his brother, which, previously to its publication, had been shown to lord Lyttleton, and received some corrections from him. The latter, in an epistle to Vhe author, spoke of it as equal to any thing of the kind in our language. In 1767 he published a poem called The Concubine, in two Cantos, after the manner of Spenser, 4to. ; and in 1769 a Letter to Mr. Harwood, wherein some of his evasive Glosses, false Translations, and blundering cri- ticisms, in support of the Arian heresy, con- tained in his Literal Translation of the New Testament, are pointed out and confuted, 8vo. In 1770 he published Mary Queen of Scots, an elegy ; Hengist and Mary, a ballad ; and Know- ledge, an ode ; in Pearche's Collection of Poems : also Voltaire in the Shades, or Dialogues on the Deistical Controversy, 8vo. About this time Mr. Mickle was a frequent writer in the Whitehall Evening Post; but a more important work now engaged his attention. This was the translation of the Lusiad of Camoens into the English Language, and which he completed in 1775. A second edition was prepared in 1778,

vrith a plate prefixed to it, executed by Mortimer ; on whom Mr. Mickle wrote an epitaph in 1779. This year also he published a pamphlet, en- titled A Candid Examination of the Reasons for depriving the East India Company of its Charter. Bishop Lowth would have provided for him in the church, but this was not agreeable to our author's disposition ; and he was soon after appointed secretary to commodore Johnstone, who had obtained the command of the Romney man of war. In 1771 he arrrived at Lisbon, and was named by his patron joint agent for the prizes which were taken. In this capital he re- sided above six months, and during this period he wrote his poem, entitled Almada Hill, which in 1781 was published in 4to. In 1782 he pub lished the Prophecy of Queen Emma, an an- cient ballad lately discovered, written by Johan- nes Turgottus, prior of Durham, in the reign of William Rufus ; to which is added by the Edi- tor, an Account of the Discovery, and hints towards a vindication of the Authenticity of tfie Poems of Ossian and Rowley, 8vo. In June 1782 he married Miss Tomkins, daughter of Mr. Tomkins of Forest-hill. Having received some fortune with this lady, and having saved some money himself when in the service of com- modore Johnstone, he now enjoyed a comfortable independence. Having fixed his residence at Wheatley, in Oxfordshire, the last seven years of his life were employed in writing for the Euro- pean Magazine. The

fragments of Leo, and some of the most approved reviews of books, in that work were of his production. He died on the 25th of October 1788 at Wheatley, leaving one son.

MI'CROCOSM, n. s. From Gr. fuepoc, little, and KOIT/IOC, world. The little world : a term often metaphorically applied to man.

You see this in the map of my microcosm.

Shakspeare.

She to whom this world must itself refer, As suburbs, or the microcosm of her ; She, she is dead ; she's dead, when thou knowest this, Thou knowest how lame a creeple this world is.

Donne.

How doth the head of this microcosm resemble that round celestial globe. - Bp. Hall.

As in this our microcosm, the heart, Heat, spirit, motion, gives to every part. So Rome's victorious influence did disperse All her own virtues through the universe.

Denham.

Philosophers say that man is a microcosm, or little world, resembling in miniature every part of vthe great ; and the body natural may be compared to the body politick. &»!/'•

MICROCOSMIC SALTS. A triple salt of soda, ammonia, and phosphoric acid, obtained from urine, and much used in assays by the blowpipe. This compound is best procured by mixing equal parts of the phosphate of soda and phosphate of ammonia in solution, and then crystallising. A faint excess of ammonia is use- ful in the solution.

*MICROG'RAPHY,n.s.\ Of p.icpoc, little, MICUOM'ETER, /and rpa?w, to d**

MI'CROSCOPE \scrile; /itrpoy, a

MICROSCOP'IC, adj. I measure, ar.d ato-

MitROsrop'iCAt. J irtu, to inspect.

MICROMETER.

Micrography is the description of small, or mi- croscopic, objects : micrometer, an instrument for measuring small spaces or distances, particu- larly in the heavens : microscope, an optical in- strument for magnifying small, and otherwise invisible, bodies. See the scientific description of both these important instruments.

The honey bag is the stomach, which they always fill to satisfy and to spare, vomiting up the greater part of the honey to be kept against winter ; a curious description and figure of the sting see in Mr. Hook's micrography. Crew's Museum.

If the eye were so acute as to rival the finest mi- croscopes, and to discern the smallest hair upon the leg of a gnat, it would be a curse, and not a blessing to us ; it would make all things appear rugged and deformed ; the most finely polished crystal would be uneven and rough ; the sight of our own selves would affright us ; the smoothest skin would be beset all over with ragged scales and bristly hairs. Bentley.

Make microscopical observations of the figure and bulk of the constituent parts of all fluids.

Arbuthnot and Pope. The critick eye, that microscope of wit. Sees hairs and pores, examines bit by bit.

Dunciad.

Why has not man a microscopic eye ? For this plain reason, Man is not a fly : ,

Say what the use, were finer opticks given, T' inspect a mite, not comprehend the heaven ?

Pope.

Evading even the microscopic eye ! Full nature swarms with life.

Thomson's Summer.

MICROMETER. The telescope and microscope both owe their most important applications to the use of this instrument. To the modern in- troduction of the micrometer for the use of the astronomer, and the improvement of the tele- scope, may indeed be attributed our accu- rate and extensive acquaintance with the uni- verse of matter ; while, from the perfection to which the microscope has recently been brought, an equal

acquaintance with the minute or- ganisation of bodies may be expected. By the application of the micrometer to this latter in- strument the power of the naturalist is mate- rially extended ; while the micrometer is of the utmost value for trigonometrical surveys, and in military or naval operations.

M. de la Hire, in a discourse on the era of the inventions of the micrometer, pendulum clock, and telescope, before the Royal Academy of Sciences, makes M. Huygens the inventor of this instrument. ‘ That author,’ he observes in his observations on Saturn’s ring, &c., published 1659, ‘gives a method of finding the diameters of the planets by means of a telescope, viz. by putting an object which hf calls a virgula, of a size proper to take in the distance to be mea- sured, in the focus of the convex object-glass; in this case, says he, the smallest object will be seen very distinctly in that place of the glass. By such means, he adds, he measured the dia- meter of the planets, as he there delivers them/ ‘This micrometer,’ continues the same ingenious author, ‘ is so very little different from that pub- lished by the marquis de Malvasia, in his Ephe- inpr des, three years after, that they oui,’”” to be esteemed the same; and the micrometer of the

marquis differed yet less from that published four years after his, by Azout and Picard. Hence de la Hire concludes ‘ that it is to Huygens the world is indebted for the invention of the mi- crometer, without taking any notice of the claim of our countryman Gascoigne, which, however, is many years prior to any of them.’

We may now, however, proceed to a more mi- nute examination of this instrument, commenc- ing with its simplest form.

The wire micrometer is an instrument fitted to the eye-piece of a telescope, for the purpose of measuring the angles subtended by small spaces in the heavens, such as the diameters of the planets, &c., by comprehending these spaces be- tween two delicate parallel fibres, which retain their parallelism while they are opened and shut by a mechanical contrivance. This instrument is represented in plate I. MICROMETER, figs. 1 and 2, as attached, along with the eye-piece G F, to the tube of the telescope A A, by means of a screw round the circumference of the circular plate d, figs. 1 and 2. Within this circular plate is fixed a conical ring e e, fig. 2, fastened to a second ring B B, by three small screws, the ends of which maybe seen in fig. 2. By turning the screw D, therefore, which works in teeth cut upon the circumference d, the whole eye-piece, along with the micrometer M N, may be made to revolve upon the conical ring ee as a centre. The inclination of the micrometer to the horizon is pointed out upon the flat surface of the ring d, which is divided into 360°, &c. Into the ring B B is screwed the common Huygeniai eye-piece FG. The micrometer itself is con-

tained in the box EE, figs. 1 and 3, which moves freely through the square holes in the ring B B, that the observer may follow an object while it is passing quickly through the field of the tele- scope. To show the interior construction of the instrument we have represented it, in fig. 3, with one of the sides removed. The fork of brass n n is fixed to the largest of the two small screws on the right hand side of the figure, and on the other end of the screw is placed a nut, L, united to the divided head N, and moving, with its female screw, upon the male screw already mentioned. By turning the nut L the fork n n may be moved backwards and forwards in the directions N M, M N, without any lateral shake. Within the fork nn is placed a second fork o o, fixed to another male screw on tin, left hand side of the figure, which may in like manner be moved backwards and forwards by means of the nut M, fixed to the divided head P. Across the lower side of each fork is extended a delicate fibre, or silver-wire, e e, which partakes of the motion of the fork to which it belongs, and both these fibres are so fixed that they always con- tinue parallel, whatever be the distance to which they are separated by the motion of the forks. The lower sides of the forks are made in such a manner that the wires can just pass each other without touching; and at the instant of their passage they must coincide so com- pletely as to appear one wire. When this takes place, the index should point to the zero of the scale a within the micrometer, each division 01 which is equal to the interval between any 01

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the threads of the male screw, and is of course passed over by either of the wires, during one complete revolution of the nut L or M. The graduated heads N and P are each divided into 100 parts, so that the distance between the wires can at any time be ascertained to the ˆth part of one of the divisions of the scale a. These di- visions are generally the fiftieth of an inch each, so that every unit on the graduated head corres- ponds to the T&jgth paft °f an inch. A third •win? 6, lying in the direction of the screws, bisects the other two wires at right angles, and is intended to point out the direction in which the angle is to be measured. The angle sub- tended by the wires, when separated to any dis- tance, is found by counting the number of revo- lutions, and parts of a revolution, of the divided head N or M, which are necessary to make the one wire move up to the other, and

coincide with it. The number of seconds passed over by any of the wires, during one revolution of the head N or M, must be ascertained by actual ex- periment, that is, by measuring a base, and observing the space comprehended between the wires at the end of that base, where they are separated by so many revolutions ; or by ob- serving the time employed by an equatorial star in passing from the one wire to the other. When the angle is thus determined which corresponds to any given number of revolutions it may be found by simple proportion for any other num- ber of revolutions ; and these results may be conveniently put down in the form of a table, to prevent the necessity of future calculation.

Let it be required, for example, to measure the sun's diameter, and let us suppose that two revolutions of the divided head separate the wires to such a distance that they subtend exactly an angle of sixty seconds. Having di- rected the telescope to the sun, turn round the micrometer by means of the screw D, till the lower limb of the sun S s, fig. 4, just passes along the lowest parallel wire C D. Then turn the nut which moves the other wire A B, till it is at such a distance from C D that the upper limb of the sun just passes along it. The sun Ss is now comprehended exactly between the wires, and the angle which they subtend is, therefore, a measure of his diameter. Let the wire A B be now moved towards C D till they coincide, and suppose that it requires sixty revolutions of the divided head, and ˆjjjths of a revolution, to produce this coincidence. Then, since two re- volutions are equal to sixty seconds, 60-45 revo- lutions will be equal to 30-235', or 30′ 13-5', the diameter of the sun required. The diameter thus measured is obviously perpendicular to the direction of the sun's motion ; but, when we wish to measure the diameter which is parallel to the line of his daily motion, we must guide his upper or his lower limb along the wire which bisects the parallel wires, and then separate the wires till the one extremity of the diameter is in contact with the first wire, at the very instant that the other extremity is in contact with the second wire. The motion of the sun, however, renders this observation so extremely difficult, that it is almost impossible to make it with any degree of accuracy.

By attending to the principles upon which this instrument is constructed, it will be easy to discover the numerous sources of error to which it is liable. The difficulty of finding the real zero of the scale, or the instant when the two wires appear to be in contact ; the error aris- ing from the want of parallelism in the wires, OP from a lateral shake in the forks which carry them; the inflexion of light which takes place when the wires are near each other; the complicated structure of the instrument; the minuteness of the scale and all its parts ; but especially the dif- ficulty of procuring screws in which the distance of the thread is always the same, are objections inseparable from the construction of this in- strument.

The lamp micrometer, contrived by the late Sir William Hercshel, appears well calculated for its intended purpose, and is described by the inventor in vol. Ixxii. of the Transactions of the Royal Society. A B G C F E, fig. 5, is a stand nine feet high, upon which a semi-circular board qhogp is moveable upwards or downwards, in the manner of some fire-screens, as occasion may require, and is held in its situation by a peg p, put into any one of the holes of the upright piece A B. This board is a segment of a circle of fourteen inches radius, and is about three inches broader than a semi-circle, to give room for the handles, r D, e P, to work. The use of this board is to carry an arm L, thirty inches long, which is made to move upon a pivot at the centre of ihe circle, by means of a string, which passes in a groove upon the edge of the semi-circle pgo hq ; the string is fastened to a hook at o (not expressed in the figure, being at the back of the arm L), and passing along the groove from oh to q is turned over a pulley at q, and goes down to a small barrel e, within the plane of the circular board, where a double- jointed handle e P commands its motion. By this contrivance we see the arm L may be lifted up to any altitude from the horizontal position to the perpendicular, or be suffered lo descend by its own weight below the horizontal to the reverse perpendicular situation. The weight of the handle P is sufficient to keep the arm in any given position ; but, if the motion should be too easy, a friction spring applied to the barrel will moderate it at pleasure.

In front of the arm L a small slider, about three inches long, is moveable in a rabbet from the end L towards the centre backwards and forwards. A string is fastened to the left side of the little slider, and goes towards L, where it passes round a pulley at m, and returns under the arm from m, n, towards the centre, where it is led in a groove on the edge of the arm, which is of a circular form, upwards to a barrel (raised above the plane of the circular board) at r, to which the handle r D is fastened. A second string is fastened lo the slider, at the right side, and goes towards the centre, where it passes over a pulley n, and the weight 10, which is suspended by the end of this string returns the slider towards the centre, when a contrary turn of the handle permits it to act.

a anil b are two small lamps, two inches high, one and a half in breadth by one and a quarter

in depth. The sides, back, and top, are made so as to permit no light to be seen, and the front consists of a thin brass folding-door. The flame in the lamp a is placed three-tenths of an inch from the left side, three-tenths from

the front, and half an inch from the bottom. In the lamp b it is placed at the same height and distance measuring from the right side. The wick of the flatne consists only of a single very thin lamp- cotton thread ; for, the smallest flame being suf- ficient, it is easier to keep it burning in so con- fined a place. In the top of each lamp must be a little slit, lengthways, and also a small opening in one side near the upper part, to permit air enough to circulate to feed the flame. To pre- vent every reflexion of light, the side opening of the lamp a should be to the right, and that of the lamp b to the left. In the sliding door of each lamp is made a small hole with the point of a very fine needle, just opposite the place where the wicks are burning, so that when the sliders are cut down, and every thing dark, no- thing shall be seen but two line lucid points of the size of the two stars of the third or fourth magnitude. The lamp a is placed so that its lucid point may be in the centre of the circular board, where it remains fixed. The lamp 6 is hung to the little slider which moves in the rab- bet of the arm, so that its lucid point, in a hori- zontal position of the arm. may be on a level with the lucid point in the centre. The moveable lamp is suspended upon a piece of brass fastened to the slider by a pin exactly behind the flame, upon which it moves as a pivot. The lamp is balanced at the bottom by a leaden weight, so as always to remain upright, when the arm is either lifted above, or depressed below, the hori- zontal position. The double-jointed handles r D, e P, consist of light deal rods ten feet long, and the lowest of them may have divisions marked upon it near the end P, expressing ex- actly the distance from the central lucid point in feet, inches, and tenths.

From this construction we see that a person at a distance of ten feet may govern the two lucid points, so as to bring them into any required position south or north, preceding or following, from 0° to 90°, by using the handle P, and also to any distance, from six-tenths of an inch to five or six-and- twenty inches, by means of the handle D. If any reflexion or appearance of light should be left from the top or sides of the lamps, a tem- porary screen, consisting of a long piece of pasteboard, or a wire frame covered with black cloth, of the length of the whole arm and of any required breadth, with a slit of half an inch broad in the middle, may be affixed to the arm by four bent wires projecting an inch or two be- fore the lamps, situated so that the moveable lucid point may pass along the opening left for that purpose.

Fig. 6 represents part of the arm L, half the real size ; S the slider; m the pulley, over which the cord xtyz is returned towards the centre; v the other cord going to the pulley n of fig. 5 ; it the brass-piece moveable upon the pin c, to keep the lamp upright. At R is a wire riveted to the brass piece, upon which is held the lamp by ;t nut and screw. Figs. 7 and 8 represent

the lamps a, b, with the sliding doors open, to show the situation of the w.cks. W is the leaden weight with a hole d in it through which the wire R

of fig. 6 is to be passed when the lamp is to be fastened to the slider S. Fig. 9 repre- sents the lamp a with the sliding door shut, / the lucid point, and i k the openings at the top, and s at the sides for the admission of air.

Every ingenious artist will soon perceive that the motions of this micrometer are capable of great improvement by the application of wheels and pinions, &c. ; but as the principal object is only to be able to adjust the two lucid points to the required position and distance, and to keep them there for a few minutes, while the observer goes to measure their distance, it will not be ne- cessary to say more on the subject.

We have now to show the application of this instrument. It is well known to opticians and others, who have been in the habit of using optical instruments, that we can with one eye look into a microscope or telescope, and see an object much magnified, while the naked eye may see a scale upon which the magnified picture is thrown. In this manner Sir William Herschel generally determined the power of his telescopes ; and any one who has acquired a facility of taking such observations, will very seldom mistake so much as one in fifty, in determining the power of an instrument ; and that degree of exactness is fully sufficient for the purpose.

The Newtonian form is admirably adapted to the use of this micrometer ; for the observer stands always erect, and looks in a horizontal direction, notwithstanding the telescope should be elevated to the zenith. Besides, his face being turned away from the object to which his telescope is directed, this micrometer may be placed very conveniently without causing the least obstruction to the view. Sir W. Hurschel observed that, when he used this instrument, he put it at ten feet distance from the left eye, in a line perpendicular to the tube of the telescope, and raised the rnoveable board to such a height that the lucid point of the central lamp may be upon a level with the eye. The handles lifted up, are passed through two loops fastened to the tube, just by the observer, so as to be ready for his use. It may be proper to state that the end of the tube is cut away so as to leave the left eye entirely free to see the whole micrometer.

Having now directed the telescope to a double star, view it with the right eye, and at the same time with the left see it projected upon the mi- crometer : then, by the handle P, which com- mands the position of the arm, raise or depress it so as to bring the two lucid points to a similar situation with the two bars ; and, by the handle D, approach or remove the moveable lucid point to the same distance of the two stars, so that the two lucid points may be exactly covered by, or coincide with, the stars. A little practice in this business soon makes it easy, especially to one who has already been used to look with both eyes open.

What remains to be done is very simple. With a proper rule, divided into inches and fortieth parts, take the distance of the lucid points, which may be done to the greatest nicety,

because the little holes are made with the point of a very fine needle. The measure thus ob- tained is the tangent of the magnified angle under which the stars are seen to a radius of ten feet ; therefore, the angle being found and divided by the power of the telescope gives the real angular distances of the centres of a double star.

The late Mr. Ramsden described two valuable micrometers, which he contrived with the view of remedying the defects of those that had been previously constructed. One of these is a ca- toptric micrometer, and can have no aberration, nor is It liable to any defect arising from the imperfection of the materials or execution ; as the extreme simplicity of its construction requires no additional mirrors or glasses to those required for the telescope; and the separation of the image being effected by the inclination of the two specula, and not depending on the focus of any lens or mirror, any alteration in the eye of an observer cannot affect the angle measured. It has also the advantages of an adjustment, to make the images coincide in a direction perpen- dicular to that of their motion; and also of measuring the diameter of a planet on both sides of the zero, which is of no small advantage to observers, who know how much easier it is to ascertain the contact of the external edges of two images, than their perfect coincidence. A, fig. 10, represents the small speculum of a reflecting telescope, of Cassegrain's construction, to which this micrometer is adapted, divided into two equal parts ; one of which is fixed on the end of the arm B ; the other end of the arm is fixed on a steel axis X, which crosses the end of the telescope C. The other half of the mirror A is fixed on the arm D, which arm at the other end terminates in a socket y, that turns on the axis X ; both arms are prevented from bending by the braces a a. G represents a double screw, having one part, e, cut into double the number of threads in an inch to that of the part g ; the part e having 100 threads in one inch, and the partg fifty only. The screw e works in a nut F, in the side of the telescope, while the part g turns in a nut H, which is attached to the arm B ; the ends of the arms B and D, to which the mirrors are fixed, are separated from each other by the point of the double screw pressing against the stud h, fixed to the arm D, and turning in the nut H on the arm B. The two arms, B and D, are pressed against the direction of the double screw eg, by a spiral spring within the part n, by which means all shake or play in the nut H, on which the measurement depends, is entirely prevented.

From the difference of the threads on the screw at e and g, it is evident that the progressive motion of the screw through the nut will be half the distance of the separation of the two halves of the mirror, and consequently the half mirrors will be moved equally in contrary directions from the axis of the telescope C.

The wheel V, fixed on the end of the double screw, has its circumference divided into 100 equal parts, and numbered at every fifth divi- sion, with 5-10, &c. to 100; and the index I shows the motion of the screw with the wheel

round its axis, while the number of revolu- tions of the screw is shown by the divisions on the same index. The steel screw, R, may be turned by the key S, and serves to incline the small mirror at right angles to the direction of its motion.

The other micrometer, invented by Mr. Rams- den, is suited to the principle of refraction, and is thus described by Mr. Partington : — 'This micrometer is applied to the erect eye- tube of a refracting telescope, and is placed in the conju- gated focus of the first eye-glass ; in which po- sition, as the image is considerably magnified before it comes to the micrometer, any imper- fection in its glass will be magnified only by the remaining eye-glasses, which in any telescope seldom exceeds five or six times ; and besides, the size of the micrometer glass will not be the ij^th part of the area which would be required, if it were placed at the object-glass ; and yet the same extent of scake is preserved, and the images are uniformly bright in every part of the field of the telescope. This micrometer is represented at fig. 11. A is a convex or concave lens, di- vided into two equal parts by a plane across its centre ; one of these semi-lenses is fixed in a frame B, and the other in the frame E, which two frames slide on a plate H, and are pressed against it by thin plates a a; the frames B and E are moved in contrary directions by turning the button D; L is a scale of equal parts on the frame B ; it is numbered from each end towards the middle with 12, 20, &c. There are two ver- niers on the frame E, one at M and the other at N, for the conveniency of measuring the diame- ter of a planet, &c., on both sides of the zero. The first division, on both these verniers, coin- cides at the same time with the two zeros on the scale L ; and, if the frame is moved towards the right, the relative motion of the two frames is shown on the scale L, by the vernier M ; but, if the frame B be moved towards the left, the re- lative motion is shown by the vernier N.

' This micrometer has a motion round the axis of vision, for the conveniency of measuring the diameter of a planet, &c., in any direction, by turning an endless screw F ; and the inclination of the diameter measured with the horizon is shown on the circle g, by a vernier on the

plate V. The telescope may be adjusted to distinct vision by means of an adjusting screw, which moves the whole eye-tube with the micrometer, nearer or farther from the object-glass, as tele- scopes are generally made ; or the same effect may be produced in a better manner, without moving the micrometer, by sliding the part of the eye-tube m on ihe part n, by the help of a screw or pinion. The micrometer is made to take off occasionally from the eye-tube, that the telescope may be used without it.' Vide Manual of Natural and Experimental Philosophy, by 'C. t\ Partington.

Mr. Cavallo has contrived a micrometer of very simple and easy construction. It consists of a thin and narrow slip of mother-of-pearl finely divided, and situated in the focus of the eye-glass of a telescope, just where the image of the object is formed. It is immateria" whe- ther the telescope be a refractor or reflector, pro-

vided the eye-glass be a convex lens, and not a concave one as in the Galilean construction.

The simplest way of fixing it is to stick it upon the diaphragm, which generally stands •within the tube, and in the focus of the eye-glass. When thus fixed, if you look through the eye- glass, the divisions of the micrometrical scale will appear very distinct, unless the diaphragm is not exactly in the focus ; in which case the micrometrical scale must be placed exactly in the focus of the eye-glass, either by pushing the diaphragm backwards or forwards, when that is practicable ; or else the scale may be easily re- moved from one or the other surface of the diaphragm by the interposition of a circular piece of paper or card, or by a bit of wax. This construction is fully sufficient when the telescope is always to be used by the same person ; but, when the different persons are to use it, then the diaphragm, which supports the micrometer, must be constructed so as to be easily moved back- wards or forwards, though that motion need not be greater than about a tenth or an eighth of an inch. This is necessary, because the distance of the focus of the same lens appears different to the eyes of different persons, and therefore, whoever is going to use the telescope for the measurement of any angle, must first of all unscrew the tube, which contains the eye-glass and micrometer, from the rest of the telescope, and, looking through the eye-glass, must place the micrometer where the divisions of it may appear quite dis- tinct to his eye.

The mother-of-pearl micrometer may be ap- plied to a microscope, and it will thus serve to measure the lineal dimensions of the object. The value of

its divisions may be ascertained by placing an object of a known dimension before the microscope, and by observing how many di- visions of the micrometer measure its magnified image. For instance, place a piece of paper, which is exactly one-tenth of an inch long, before the microscope; and, if it is found that fifty di- visions of the micrometer measure its magnified image, the observer may conclude that each di- vision denotes an extension of ˆth part of an inch in the object ; for, if fifty divisions measure one-tenth, 500 divisions must measure the whole inch.

Mother-of-pearl was found by Cavallo, after many trials, to be a much more convenient sub- stance than either glass, ivory, horn, or wood, as it is a very steady substance, the divisions are easily marked upon it, and, when made as thin as common writing-paper, it has a very useful degree of transpare?icy.

Mr. Watt has furnished a description of seve- ral micrometers that he contrived, and of which he published an account in the Edinburgh Phi- losophical Journal. One was sirggested about the year 1770, and was used in the surveys for the Crinan and Caledonian Canals.

The instrument he used was a telescope, with an object-glass of twelve inches,and an eye-glass of one inch and a half focus, consequently mag- nifying eight times. In the focus of the eye- glass there were placed two horizontal hairs, fig. I. plate 2, and one perpendicular hair. The ho- rizontal liaii-s were about one-tenth of an inch dis-

tant from each other, and as strictly parallel, am at right angles to the perpendicular as possible. A rod being placed upright at twenty chains distance, or any other convenient distance on level ground, an index, consisting of a round disc of about eight inches in diameter, painted white, with a horizontal line of one inch wide, painted on its horizontal diameter with vermilion, was fixed upon the rod about one foo» from the ground, and another similar index was moved up and down the rod, until, upon looking through the telescope, the two horizontal hairs covered the red stripes on the lower and upper indexes , the telescope being turned on its axis until the perpendicular hair was parallel to the rod. The indexes being thus covered accurately by the horizontal hairs, the upper index was fixed to the roif, and the distance between the middle of the red stripes on the two indexes was divided upon the rod into twenty parts, representing so many chains, which, with the instrument Mr. Watt used, were upon the rod about four inches and a half each; and, for distances exceeding five chains, this division into equal parts was suffici- ently accurate ; but for shorter distances it is not strictly so. He therefore fixed a pin at every chain, and, holding up the rod at each of them, made the necessary correction ; and, as the focus of the object-glass is also affected by the dis- tance, it is proper to

adjust the eye-glass to it at each station. The divisions on the rod being marked with the number of chains they repre- sent, it was only necessary to send an assistant with the rod to any place the distance of which was wanted to be measured, and by signs to make him move the upper index up and down, until the two horizontal hairs covered the red stripes on the upper and lower indexes ; the di- visions on the rod then showed the distance, which could be ascertained to within less than ijjth part of the whole distance, and with a higher magnifying power could be done propor- tionally more accurate. The rod commonly used was twelve feet long, and consequently could measure thirty chains ; but by sliding another rod upon it, so as to lengthen it, he measured greater distances; and, where still greater were wanted, a tape was stretched hori- zontally, and turning the telescope on its axis, made the single hair parallel to it, fixing one index at the end of the tape, and sliding the other along it subtended the distance between the wires. Mr. Watt then measured the sub- tended tape with the rod, and so ascertained the distance.

It is plain that this instrument possesses the advantage of measuring all distances with equal accuracy, until the imperfection of vision at great distances interposes, as the scale on which they are measured expands with the distances, and in uneven ground it possesses more accuracy than the chain, and is very valuable in measur- ing distances from one hill to another, and across bays of the sea, where the chain cannot be used.

Another micrometer, with a prism, Mr. Watt invented about that time ; it consisted of a thin prism, with its surfaces nearly parallel, or inclined one degree or two as in fig. 2. This prism was

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MICROMETER.

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cut by a diamond into two parts, which, when they were fixed in the same plane, refracted all the rays which passed through them equally ; but one of them remaining fixed, and the other vnoving on a centre at a, according to the dotted .me, would refract that portion of the rays which passed through it more than those which passed through the fixed part, and, being placed in the focus of the object-glass of a telescope, two images were formed of each object, by which its diameter could be measured. An index, and di- vided sector of a circle, served to measure the comparative refractions.

‘ The cross-hair micrometer, as described,’ ob- serves Mr. Watt, ‘ reaving me too much in the power of my assistants, where the distances were greater than permitted me to read off the number of chains on the rod myself, I thought of ano- ther about 1772, which consisted of a telescope with an object glass of a long focus, viz. three or four feet; this was placed in a tube with a slit in one side of it, nearly as long as the focus of the telescope, and the object-glass being fitted to a short tube, which slid from end to end of the slit, could be moved backwards and forwards by means of a piece of metal fixed to the short tube, and coming out through the slit ; a glass of six to nine inches focus was all fixed in the outer tube, of the nature of what is called a field-glass, and to this was added an eye-glass, with a cross hair piece in its focus.

‘ Now it is evident that, if the object-glass be moved nearer the field-glass, their common focus will be shortened, and the image at the cross- hairs diminished proportionally, until the glasses come into contact, when their common focus will be shorter than that of the field-glass alone ; and two indexes fixed upon a rod being subtended by the cross hair at any given distance, the same rod with its indexes being removed nearer the ob- server, upon sliding the object-glass nearer the eye, they may again be subtendpd by the cross- hairs, and a scale on the side of the tube will show the comparative distance they have been removed ; and, the distance of the first object being known, that of the second will also be so. This scale could not, however, be a scale of equal parts, but one which could easily be laid down.’

The common divided object-glass micrometer consists of two semi-lenses AB, fig. 3, of the same focal length, formed by dividing a convex lens into two equal parts, by a plane which passes through its axis. The centres of these semi-lenses are made to separate and ap- proach each other, by means of a screw or pinion along the line A B ; and the distance of their cen- tres is measured upon a scale subdivided by a vernier, or, as in the wire micrometers, by a graduated head fixed upon the screw.

If it be required to measure the angle sub- tended by two objects, M, N, the semi-lenses are separated till the two images of these objects are in contact, or till the image of M, formed by the semilens A, appears to be in contact with the image of N, formed by the semilens B. When this happens, the angle subtended by the objects is equal to the angle subtended by A B, the dis- unce of the centres of the semilenses at the

point F, or the focus of the lenses where the contact of the image takes place. It is manifest that an image of M will be formed in the line A F, and at F the focus of rays diverging from M. In like manner an image of N will be formed in the line B F, and at F the focus of rays proceeding from the

radiant point N. Hence it is obvious that the angle subtended at F, by M N, is the same as the angle subtended by A B at F. The angle A F B may be easily found tri- gonometrically, the sides A B and O F being known ; but, as this angle is generally very small, it may, without any perceptible error, be considered as proportional to the subtense A B, or the distance between the centres of the semi- lenses. By determining, therefore, experimen- tally, the angle which corresponds to any dis- tance A B of the semilenses, we may by simple proportion find the angle for any other dis- tance.

The new divided object glass micrometer con- trived by Dr. Brewster consists of an achromatic object glass L L, fig. 4, having two semilenses A B, represented in fig. 5, moveable between it and its principal focus/. These semilenses are completely fixed, so that their centres are invari- ably at the same distance ; but the angle sub- tended by the two images which they form is varied by giving them a motion along the axis Of of the lens L L. When the semilenses are close to L L the two images are much separated, and form a great angle ; but, as the lenses are moved towards f, the centres of the images gra- dually approach each other, and the angle which they form is constantly increasing. By ascer- taining, therefore, experimentally, the angle formed by the centres of the images, when the semilenses are placed close to L L, and also the angle which they subtend when the semilenses are at/, the other extremity of the scale, we have an instrument which will measure with the ut- most accuracy all intermediate angles.

In constructing this micrometer, for astrono- mical purposes, the semilenses may be made to move only along a portion of the axis O/, par- ticularly if the instrument be intended to measure the diameters of the sun and moon, or any series of angles within given limits. By increasing the focal length of the semilenses, or by diminishing the distance between the centres, the angles may be made to vary with any degree of slowness, and of course each unit of the scale will corres- pond to a very small portion of the whole angle. The accuracy and magnitude of the scale, indeed, may be increased without limit; but it is com- pletely unnecessary to carry this any farther than till the error of the scale is. less than the probable error of observation.

Let us now examine the theory of this microme- ter, and endeavour to ascertain the nature of the scale for measuring the variations of the angle. For this purpose let L L, fig. 4, be the object- glass which forms an inverted image, m », of the object M N, and let the semilenses A B, having their centres at an invariable distance, be inter- posed between the object-glass and its principal focus, in such a manner that their centres are equidistant from the axis Of. Now it is ob- vious that the size of the image mn is proper-

tional to the size 6f the object M N ; and, as the angle subtended by M N depends upon its size, the magnitude of the image m n may, in the case of small angles, be assumed as a measure of the angle subtended byMN. As the rays which proceed from the point M are all converged to m, by means of the lens L L, the ray b A, which passes through the centre of thesemilens A, must of course have the direction b m ; and, as it suffers no refraction in passing through the centre of A, it will proceed in the same direction bA.m, after emerging from the semilens, and will cross the axis at F. For the same reason the ray c B, pro- ceeding from N, and passing through the centre of B, will cross the axis at F as it advances to n. If the distance of F from A and B happens to be equal to the focal length of the lenses A and B, when combined with L L, distinct images of M and N will be formed at F, and they will ap- pear to touch one another; and the line mn, being the size of the image that would have been formed by the lens L L alone, will be a measure of the angle subtended by the points M N. If the point F, where the lines AOT, Bn, cross the axis, should not happen to coincide with the focus of the lenses A, B, when combined with L L, then let this focus be at F', nearer A and B than F. Draw the lines A F' m, B F' n, then it is obvious that, if the angle subtended by M N were enlarged so as to be represented by rim, instead of nm, or so that the lens LL alone would form an image of it equal to rim', the point of intersection F would coincide with the focus F' ; so that in every position of the lenses A, B, with respect to L L, the points M N may always be made to subtend such an angle that, when they are placed before the telescope, the points F F' will coincide, and consequently the images of the points MN will be distinctly formed at F', and will be in contact. Whenever this happens the space nm will be a measure of the angle thus subtended by M N. Hence it follows that, whatever be the position of the semilenses AB, on the axis Of, the rays b A, c B, which pass througli the centres of the semi- lenses, will cross the axis at some point F, cor- responding with the focus of rays diverging from M N, and will mark out the size of the image nm', and consequently the relative magnitude of the angle subtended by the two points M,N.

From the equality of the vertical angles A F" B, n' F' m', and the parallelism of the lines A B, n' m', we shall have

rim'-. AB = /P : G F', and calling/F' r: b, and considering that G F' i =

•p L

- – j-, F being the focal length of the semi-

lenses, we have

¥ b

ri m : A B — b : ,- – r— , and consequently r J o

‘ _ A R – AB X b

n m l^ A r$ -\ — — — . r

Now, calling A B = 2, F = 10, and b — 1, 2, 3,

*successively, we shall obtain **

„’„,’= 2

n m – 2

= 2-2

2×2

~

= 2-4

from which it appears that, when b is in arith- metical progression, the angle ri m’ varies at the same rate; and consequently the scale, which mea- sures the variations of the angle subtended by the centres of the two images, is a scale of equal parts.

This instrument undergoes a very singular change when constructed, as in fig. 6, so that the semilenses are outermost and immoveable, while another lens, L L, is made to move along the axis Gf. In this case a double image is formed as before, but the angle subtended by the centres of the images never suffers any change during the motion of the lens L L along the axis of the telescope. If the two images are in contact when the lens LL is close to the semilenses, they will continue in contact in every other position of L L ; but the magnitude of the images is con- stantly increasing during the motion of LL tow- ards f, the principal focus of the semilenses. The reason of this remarkable property will be un- derstood from fig. 6, where M N are two objects placed at such an angle that the rays, passing through the centres A B of the semilenses, cross the axis at F, and will consequently be in con- tact. If the lens L L is removed to the position L’L’, the rays M m, N n, which are incidentupon it at the points m and n, having the same degree of convergency as before, will be refracted to F’, the focus of the combined lenses for rays di- verging from M N. Two distinct images of the object will

therefore be formed at F', and these images will still be in contact. In like manner it may be shown, that whatever be the position of the lens L L between G and /, the rays M /, Ny, will cross the axis at a point coinciding with the focus of the combined lenses, and will there form two images always in contact. Hence it follows that, though the magnifying power of the instrument is constantly changing with the po- sition of the lens L L, yet the angle subtended by the centres of the two images never suffers the least variation.

The circular micrometer is an instrument which has been, for many years past, much used on the continent, and is still held in high and deserved estimation there by astronomers of the first rank. From the simplicity of its construction, and the facility with which it may be used in any posi- tion of the telescope, it is frequently preferred, even in public and national observatories, to micrometers of a more complex nature, which require to be adjusted to the equatorial motion of the star. Moreover there is no necessity for its being illuminated ; on which account it is peculiarly adapted to the observation of comets and small stars ; and it is, indeed, to these two classes of the heavenly bodies that Us application is now principally confined ; although some astronomers of great eminence have considered that it is capable of equal accuracy to the wire micrometers. To voyagers and others it will prove of considerable advantage. The smallness of its size (not being much larger than a shilling) renders it very convenient for carriage ; and the simplicity of its construction prevents any liabi- lity to injury.

Astronomy is indeed more indebted to this little instrument than is perhaps generally known. Three out of the four new planets which have been discovered in the present century were discovered with very small telescopes, and their motions watched, and the elements of their orbits deduced from observations made with the circular micrometer only ; whereby astronomers were enabled to look out for them with certainty at the time of their re-appearance at the next oppositions. And at the present day it is almost the only instrument used on the conti- nent for the obsprvation of comets. To the labors of Others, Bessel, and Frauenhofer, we are indebted for the high reputation which this instrument has attained. To the two former for the talent which they hare displayed 'in ex- plaining the analysis by which the observations may be reduced ; and to the latter for the recent improvements which he has introduced in the construction of the instrument.

M. Frauenhofer 's micrometers are formed by means of very fine lines cut on glass with a diamond point in a peculiar manner, and placed in the focus of the telescope. One of these micrometers consists of concentric circular lines, drawn at unequal distances from each other; and the other consists of straight lines crossing each other at a given angle. The mode of cut- ting these lines has furnished M. Frauenhofer with a method of illuminating them, which, at the same time that it renders the lines visible, leaves the other part of the field of the telescope in darkness ; so that the transits of the smallest stars may be observed by means of these mi- crometers, the lines appearing like so many sil- ver threads suspended in the heavens.

The circular mother-of-pearl micrometer, which Dr. Brewster has often used, both in de- termining small angles in the heavens and such as are subtended by terrestrial objects, is repre

sented in fig. 7, which exhibits its appearance in the focus of the first eye-glass. The black ring which forms part of the figure is the diaphragm, and the remaining part is an annular portion of mother-of-pearl, having its interior circumference divided into 360 equal parts. The mother-of- pearl ring, which appears connected with the diaphragm, is completely separate from it, and is fixed at the end of a brass tube, which is made to move between the third eye-glass and the diaphragm, so that the divided circumference may be placed exactly in the focus of the glass next the eye. When the micrometer is thus fitted into the telescope, the angle subtended by the whole field of view, or by the diameter of the innermost circle of the micrometer, must be determined either by measuring a base, or by the passage of an equatorial star; and the angles subtended by any number of divisions or de- grees will be found by a table constructed in the following manner: —

Let A. m p n b, fig. 8, be the interior circumfer- 'ence of the micrometer scale, and let m n be the object to be measured. Bisect the arch m n in p, and draw C m CpCn. The line Cp will be at right angles to m n, and therefore m n will be twice the sine of half the arch m p n. Conse- quently A B m n ~ Rad. Sine of £ m p n; therefore m n X R = sin. J m p n X A B, and

sin. J m p n . n . m p n =: =-n — X A B, a formula by

which the angle subtended by the chord of any number of degrees may b« easily found. The

\ m p n .

1 1C

=•

, .

first part of the formula, viz.

constant, while A B varie.5 with the size of the micrometer, and with the magnifying power which is applied. The following table, there- fore, has been computed, which contains tnt value of the constant part of the formula for every degree or division of the scale:—

8

•

ft

«

Q

Constant part of the Formula.

fit

4)

p

Constant part of the Formula.

B

m

Q

Constant part of the Formula.

•

M

1

Constant part of the Formula.

V

Q

Constant part of the Formula.

1

•0087

37

•3173

73

•5948

109

•8141

143

•9537

2

•0174

38

•3256

74

•6018

110

•8192

146

•9563

3

•0262

39

•3338

75

•6088

111

•8241

147

•9588

4

•0349

40

•3420

76

•6157

112

•8290

148

•9613

5

•0436

41

•3502

77

•6225

113

•8339

149

•9636

6

•0523

42

•3584

78

•6293

114

•8387

150

•9659

7

•0610

43

•3665

79

•6361

115

•8434

151

•9681

8

•0698

44

•3746

80

•6428

116

•8480

152

•9703

9

•0785

45

•3827

81

•6494

117

•8526

153

•9724

10

•0872

46

•3907

82-

•6561

118

•8572

154

•9744

11

•0958

47

•3987

83

•6626

119

•8616

155

•9763

12

•1045

48

•4067

84

•6691

120

•8660

156

•9781

13

•1132

49

•4147

85

•6756

121

•8704

157

•9799

14

•1219

50

•4226

86

•6820

122

•8746

158

•9816

15

•1305

51

•4305

87

•6884

123

•8788

159

•9833

16

•1392

52

•4384

88

•6947

124

•8829

160

•9848

17

•1478

53

•4462

89

•7009

125

•8870

161

•9863

18

•1564

54

•4540

90

•7071

126

•8910

162

•9877

19

•1650

55

•4617

91

•7133

127

•8949

163

•9890

20

•1736

56

•4695

92

•7193

128

•8988

164

•9903

21

•1822

57

•4771

93

•7254

129

•9026

165

•9914

22

•1908

58

•4848

94

•7314

130

•9063

166

•9925

23

•1994

59

•4924

95

•7373

131

•9100

167

•9936

24

•2079

60

•5000

96

•7431

132

•9135

168

•9945

25

•2l”64

61

•5075

97

•7490

133

•9171

169

•9954

26

•2250

62

•5150

98

•7547

134

•9205

170

•9962

27

•2334

63

•5225

99

•7604

135

•9239

.171

•9969

28

•2419

64

•5299

100

•7660

136

•9272

172

•9976

29

•2504

65

•5373

101

•7716

137

•9304

173

•9981

30

•2588

66

•5446

102

-7771

138

•9336

174

•9986

31

•2672

67

•5519

103

•7826

139

•9367

175

•9990

32

•2756

68

•5592

104

•7880

140

•9397

176

•9994

33

•2840

69

•5664

105

•7934

141

•9426

177

•9996

34

•2923

70

•5735

106

•7986

142

•9455

178

•9998

35

•3007

71

•5807

107

•8039

143

•9483

179

1-0000

36

•3090

72

•5878

108

•8090

144

•9511

180

1-0000

In order to find the angle subtended by any number of degrees we have only to multiply the constant part of the formula corresponding to that number in the table by A B, or the angle subtended by the whole field. Thus, if A B is 30', the angle subtended by 1° of the scale will be 30′ x 0087 z= 15§", and the angle sub tended by 40° will be 30′ x '342 = 10′ 15".6; and by making the calculation it will be found that, as the angle to be measured increases, the accuracy of the scale also increases ; for, when the arch is only 1° or 2°, a variation of 1° produces a variation of about 16′ in the angle ; whereas, when the arch is between 170° and 180°, the variation of a degree does not produce a change of much more than 1″ in the angle.

The single-lens micrometer, contrived by Dr. Wollaston, must now be adverted to. Having had occasion to measure some yery small wires, with a greater degree of accuracy than he was enabled to do by any instrument hitherto made use of for such purposes, he was led to contrive other means that might more effectually answer the end proposed. The instrument to which Dr. Wollaston had recourse is furnished with a sin-

gle lens of about one-twelfth of an inch focal length. The aperture of such a lens is necessarily small ; so that, when it is mounted in a plate of brass, a small perforation can be made by the side of it in the brass as near to its centre as one-twenty-fifth of an inch. When a lens thus mounted is placed before the eye, for the purpose of examining any small object, the pupil is of sufficient magnitude for seeing distant objects at the same time through the adjacent perforation ; so that the apparent dimensions of the magnified image might be compared with a scale of inches, feet, or yards, according to the distance at which it might be convenient to place it. A scale of smaller dimensions attached to the instrument will, however, be found preferable on account of the steadiness with which the companion may be made ; and it may be seen with sufficient distinctness by the naked eye, without any effort of nice adaptation, by reason of the smallness of the

hole through which it is viewed. The con- struction that Dr. Wollaston chose for the scale is represented in fig. 9. It is composed of small wires, about one-fiftieth of an inch in diameter, placed side by side, so as to form a scale of

«> qual parts, which may with ease be counted by means of a certain regular variation of the lengths of the wires.

The external appearance of the whole instru- ment is that of a common telescope, consisting of three tubes. The scale occupies the place of the object-glass, and the little lens is situated at the smaller end, with a pair of plain glasses sliding before it, between which the subject of examination is to be included. This part of the apparatus is shown separately in fig. 11. It has a projection at a, with a perforation, through which a pin is inserted to connect it with a screw represented at b, fig. 10. This screw gives late- ral motion to the object, so as to make it cor- respond vvith any particular part of the scale. The lens has also a small motion of adjustment by means of the cap c, which renders the view of the magnified object distinct.

Before the instrument is completed it is ne- cessary to determine with precision the indica- tions of the scale, which must be different accord- ing to the distance to which the tube is drawn out. In Dr. Wollaston's instrument one division of the scale corresponds to jˆ of an inch whei it is at the distance of 16-6 inches from the lens ; and, since the apparent magnitude in small anoles varies in the simple inverse ratio of this distance, each division of the same scale will cor- respond to 5ˆ at the distance of eight inches and three-tenths, and the intermediate fractions jˆ,, 75JHJ, &c., are found by intervals of 1-66 inch marked on the outside of the tube. The basis on which these indications were founded, in this in- strument, was a wire carefully ascertained to be 5ˆ5 of an inch in diameter, the magnified image of which occupied fifty divisions of the scale, when it was at the distance if 16'6 inches, and

hence one division ~ zz . Since

50X200 10000

any error in the original estimate of this wire must pervade all subsequent measures derived from it, the substance employed was pure gold drawn till fifty-two inches in length weighed ex- actly five grains. If we assume the specific gra- vity of gold to be 19-36, a cylindrical inch will weigh 3837 grains, and we may thence infer the diameter of such a wire to be jjg of an

inch, more nearly than can be ascertained by any other method. For the sake of rendering the scale more accurate, a similar method was in fact pursued with several gold wires, of different sizes, weighed with equal care, and the subdivisions of the exterior scale were made to correspond with the average of their indications.

In making use of this micrometer, for taking the measure of any object, it would be sufficient at any one accidental position of the tube to note the number on the outside as denominator, and to observe the number of divisions and de- cimal parts which the subject of examination oc- cupies, on the interior scale, as numerator of a fraction expressing its dimensions in proportional parts of an inch ; but it is preferable to obtain an integer as numerator, by sliding the tube inward or outward till the image of the wire is seen to correspond with some exact number of divisions, not only for the sake of the greater simplicity in .he arithmetical computation, but because we

can by the eye judge more accurately of actual coincidence, than of the comparative magnitudes of adjacent intervals.

The smallest quantity, which the graduations of this instrument profess to measure, is less than the eye can readily appreciate in sliding the tube inward or outward. If, for instance, the object measured be nearly f^, it may appear TjjJjRj or 5^5, in which case the doubt amounts to one-fiftieth part of the whole quantity. But the difference is here exceedingly small in compari- son to the extreme division of other instruments where the nominal extent of its power is the same. A micrometer with a divided eye-glass may profess to measure as far as j, of an inch ; but the next division is j or j^,; and, though the eye may be able to distinguish that the truth lies between the two, it receives no assistance within one-half part of the larger measure.*

We may now notice the micrometer made of rock crystal suggested by Mr. Dollond. Rock crystal having been applied to telescopes in vari- ous ways, for the purposes of micrometrical measurements, particularly that which is recom- mended by M. Arago, induced him to consider if a more simple mode of applying the crystal could not be discovered, and the following ac- count of its application to the eye-tube of a tele- scope is the result.

The improvement consists in making a sphere or lens from a piece of rock crystal, and adapting it to a telescope in the place of the usual eye- glass; and, from its natural double refracting power, rendering it useful as a micrometer.

The advantages of thus applying the crystal are, in the first place, the great

saving of the time required to find the proper angle for cutting the crystal ; also of cutting the prisms to their proper angles, and working their surfaces with sufficient accuracy to render them useful as micrometers, in the manner that is recommended by M. Arago, Dr. Wollaston, and others.

Upon this plan it is only necessary to select a piece of perfect crystal ; and, without any know- ledge of the angle that will gire the greatest double refraction, to form the sphere of a proper diameter for the focal length required.

The second advantage is derived from being able to take the angle on each side zero, without reversing the eye-tube; also of taking interme- diate angles between zero and the greatest sepa- ration of the images, without exchanging any part of the eye-tubie, it being only required to move the axis in which the sphere is placed.

Thirdly, it possesses the property of an eye- tube or lens that is not intended for micrometri- cal measurements; for, when the axis of the crys- tal is parallel to the axis of the object-glass of the telescope, only one image will be formed, and that will be as distinctly formed as with any lens that does not posses the double refracting property.

The eye-tube is so constructed that the plane through which the two images move can b« placed parallel to the line in the object which is to be measured ; and, if this motion is furnished with a divided circle, it will correctly answer the purpose of a position micrometer.

The value of the scale is found from the known diameter of any distan object, and wi'l

vary in proportion to the magnifying powers of the eye-tube ; its value increasing in proportion to the increase of those magnifying powers.

Fig. 12 is a section of the eye-tube; and fig. 13 a general view of the same; both of the full size.

The sphere, or lens, a, fig. 12, is formed of rock crystal, and placed in half holes, from which is extended the axis b b, with an index at- tached ; which index registers the motion of the sphere, the extent of that motion being shown upon the divided face C, fig. 13. The sphere is so placed in the half holes that, when its natural axis is parallel to the axis of the telescope, only one image of the object is seen. In the other direction, or that which is

at right angles to the axis of motion, it must be so placed that when it is moved the separation of the images, viz. the ordinary and extraordinary, may be parallel to that motion. The method of acquiring this ad- justment is, by turning the sphere in the half holes parallel to its own axis.

The field of view of the eye-tube is increased, and the magnifying power varied, by the intro- duction of the lens d, fig. 12, between the sphere and the primary image of the object-glass ; and its distance from the sphere will be in proportion to the magnifying power required ; the magnify- ing powers are engraved upon the eye-tube at e, and will vary in proportion to the focal length of the object-glass to which the eye-tube is applied. Those marked in the figure are for an object-glass of forty-four inches in focal length.

The object of Mr. Babbage's new zenith mi- crometer is to supersede the necessity of extreme accuracy in the divisions. The principle on which this instrument depends may be readily comprehended by imagining a parallelogram, admitting of free motion about its four angles, to be placed with two of its sides in a horizontal position, and the whole in a vertical plane, and a telescope to be fixed at right angles to the lower horizontal bar of this parallelogram. Here every motion of one of the perpendicular bars of the instrument round its upper joint will not change the angle which the telescope makes with the meridian ; but will merely remove it into a new position in which it will point to the same object in the heavens. But, if either of the ho- rizontal bars of the instrument be lengthened by a very small quantity, this parallelism of the telescope will no longer be preserved; but any movement of the upright bars round their axes will not only remove the telescope from its posi- tion, but will cause it to form a very small angle with its former direction. The magnitude of that angle will depend on the alteration in the length of the arm of the parallelogram, and also on the angle which that arm makes with its first direction. The arc which is actually measured in the heavens, by means of this instrument, is determined by a formula in which the sum of three arcs is taken from the semicircumference, one of them resulting from the actual observation ; the other two from a cosine and a tangent, ascer- tainable by computation from the theorem itself. In an extensive use of this micrometer tables may easily be formed to far.j 4ate the computa- tion.

It may now be advisable to examine the Jibrei proper for micrometers, and on the method of adjusting them to the eye-piece.

In the micrometer constructed by Huygens. the object whose angle was required was com- prehended between the edges of two plates of brass. Stiver wires, and sometimes hairs, were afterwards substituted instead of the plates, and continued in use till about the end of the last century. The

finest silver wire ever made was drawn in France to the thickness of 1(faj of an inch. The plates used for this purpose, and the secret of making them, are said to have been lost amid the convulsions of the revolution. The smallest wire which is made in this country does not exceed gˆth of an inch.

The impossibility of obtaining wire of a dia- meter sufficiently minute for micrometers in- duced Felix Fontana, in 1775, to recommend the spider's web as an excellent substitute for silver wire. This suggestion of Fontana, however, did not excite much notice, till the use of the spider's web was introduced by the late celebrated Mr. Troughton, who found this fibre to be so fine, opaque, and elastic, as to answer all the ob ects of practical astronomy. We are informed, how- ever, by this distinguished artist, that it is only the stretcher, or the long line which supports the web, that possesses these valuable properties. The other parts of the web, though equally fine and elastic, are very transparent, and therefore completely unfit for micrornetrical purposes. The difficulty of procuring the proper part of the spider's web has compelled many opticians and practical astronomers to employ the raw fibre of un wrought silk, or, what is much worse, the coarse silver wire which is manufactured in this country. But, whatever be the comparative ad- vantages of these different substances, they are all liable to the error arising from the inflexion of light, which renders it impossible to ascertain the exact contact between the fibre and the luminous body. This disadvantage has been experienced by every astronomical observer and has always been considered as inseparable from the wire micrometer. After numerous trials, Dr. Brewster succeeded in obtaining a delicate fibre, which appears to remove the error of in- flexion while it possesses the requisite properties of opacity and elasticity. This fibre is glass, which is so exceedingly delicate that it can be drawn to any degree of fineness, and can always be procured and prepared with facility ; a circum- stance of no small importance to the practical astronomer, who is frequently obliged to send his micrometers to a great distance when they re- quire to be repaired.

When the vitreous fibre is formed, and stretched across the diaphragm of the eye-piece of a telescope, it will appear perfectly opaque, with a delicate line of light extending along its axis. This central transparency arises from the refraction of the light which falls upon the edges of the cylindrical fibre, and therefore the diame- ter of the luminous streak must vary with that of the fibre itself. In a micrometer which Dr. Brewster fitted up in this way the glass fibres are about the 1200th part of an inch in diameter, and the fringe of light which stretches across

their axis, is distinctly visible, though it does not exceed in diameter the ˆth part of an inch. In using these fibres for measuring the angle subtended by two luminous points, whether they be two stars, or the opposite extremities of a lu- minous disc, we may, as has hitherto been done, separate the fibres till the luminous points are in contact with their interior surfaces ; but, in or- der to avoid the error arising from inflexion, Dr. B. proposes that the separation should be continued till the rays of light issuing from the luminous points dart through the transparent axes of the fibres. The rays, thus transmitted, suffer no inflexion in passing through the fibre to the eye ; and, besides this advantage, we have the benefit of a delicate line, about one-third of the diameter of the fibre itself.

On some occasions Dr. Brewster employed threads of melted sealing-wax, which may be made extremely fine, though not of such a regu- lar diameter as silver wire, or the fibres of glass. 1 1 is a very singular fact, that one of these fibres of wax was exposed, without injury, to the heat of the sun, concentrated in the focus of an ob- ject-glass, with an aperture of 2'3 inches, and twenty-nine inches in focal length.

These fibres are placed in delicate parallel grooves formed upon the diaphragm of the first eye-glass, and may be fixed in their places for temporary purposes by a thin layer of bees-wax ; but, when they are required to be kept at an in- variable distance, it is safer to pinch them to the diaphragm by a small screw-nail near the extre- mity of each wire.

The diaphragm should be constructed so as to move along the axis of the eye-piece, in order that the fibres may be placed exactly in the an- terior focus of the first eye-glass ; and, before any observation is made, the eye of the observer ought to be fixed for a short time upon the fibres alone, till it is accommodated to that distance ; and, while it is thus fixed, distinct vision should be produced by the motion of the eye-tube. By attending to this suggestion, which is of great practical importance, the rays that diverge from the fibres, and those that diverge from the dis- tinct image, will unite on the same points of the retina. From the great facility which the eye possesses of adjusting itself to different distances, the adaptation of that organ, to the fibres and to the image, could not have been effected by look- ing at the image alone, while distinct vision was produced by the motion of the eye piece ; for, as the eye has not any permanent focus like a lens, the image might appear distinct before the pen- cils of rays had actually

converged to a point ; and, when this does happen, the rays proceeding from the fibres cannot unite with those proceed- ing from the image on the same points of the retina.

When the micrometer is employed in terres- trial observations the end of the eye-tube, into which the observer looks, should be furnished with an aperture smaller than that which is used for common purposes, and this small aperture should be used when the sun shines, or when the light of the day is very great. If the fibres hap- pen to be small, they will either cease to become, visible in very strong light, or will appear to have a kind of vibratory motion which injures VOL XIV.

the eye of the observer, and prevents him from making the observation. Hence it becomes ne- cessary to diminish the light by means of a small aperture.

Professor Wallace, of the Royal Military College, has suggested the employment of as- bestos fibres in lieu of the fine wire or spider's web; and a filament about $3, of an inch in dia- meter, having been applied to a telescope, was found to answer very perfectly the purpose fof which it was intended.

The inventive genius of Dr. Wollaston has, however, far outstripped those who preceded him in the production of a micrometer fibre. The contrivance by which it is effected, is so in- genious, and promises to be productive of such valuable results, that it may be advisable to no- tice the account of the process employed by this philosopher : —

The extremity of a platinum wire having been fused into a globule nearly one-fourth of an inch in diameter, was next hammered out into a square rod, and then drawn again into a wire jl^ of an inch in diameter. One inch of this wire duly coated with silver, was drawn till its length was extended to 182 inches; consequently the proportional diminution of the diameter of the pla- tina will be expressed by the square root of 182,

so that its measure had become

253 X 13-5~

- . .. The specific gravity of the coated wire

was assumed to be 10-5 ; and since the weight of 100 inches was 114 grains, its diameter was inferred to be ^ th of an inch, or just eighty times that of the platina contained in it.

MICRO PUS, bastard cudweed, a genus of the polygamia necessaria order,

and, syngeuesia class of plants ; natural order forty-ninth, com- posite ; receptacle paleaceous : CAL. calyculat- ed ; there is no radius of the corolla. The fe- male florets are wrapped in the scales of the calyx. There are two species ; viz.

1. M. erectus, and

2. M. supinus. The latter only is cultivated in gardens. It is an annual plant, growing na- turally in Portugal, in places near the sea. . The root sends out several trailing stalks, about six or eight inches long, which are garnished with small, oval, silvery leaves, whose bases embrace the stalks. The flowers come out in clusters from the wings of the stalks, and are very small, and of a white color. It flowers in June and July ; and is frequently preserved in gardens on account of its silvery leaves. It is easily propa- gated by seed sown in autumn, and requires no other culture but to be kept free from weeds.

MICROSCOPE. — This instrument has tended most materially to enlarge the boundaries of our knowledge in almost every branch of natural his- tory. Its invenlion is attributed by the cele- brated Dutch mathematician, Huygens, to a countryman of his, named Drebell (for it must be observed that it was entirely lost in the mid- dle ages). He constructed them about the year 1621, or thirty-one years after the invention of the telescope.

According to Borelli, the microscope was in- vented by Jansen, the reputed contriver of the

telescope, who presented some instruments of his first construction to prince Maurice, and Al- bert archduke of Austria. These instruments were six feet in length, and consisted of a tube of gilt copper, one inch in diameter, supported by thin brass pillars, in the shape of dolphins, on a base of ebony which was adapted to hold the objects to be examined. Of the internal con- struction of this microscope we have no precise fcx:ount ; though there is reason to think that it was nothing more than a telescope converted into a compound microscope.

The construction both of single and compound microscopes has, within the last fifty years, been brought to a degree of perfection ; and for all the purposes of amusement, and general observa- tion, these instruments may be considered as suf- ficiently perfect. But when we employ the microscope

as an instrument of discovery, to examine those phenomena of the natural world which are beyond the reach of unassisted vision, and when we use it in ascertaining the anatomi- cal and physiological structure of plants, insects, and animalcula, we soon find that a limit, ap- parently insuperable, is set to the progress of discovery, and that it is only some of the ruder and more palpable functions of these evanescent animals that we are able to bring under observa- tion. Naturalists, indeed, are less acquainted with the organisation of the microscopic world, and the beings by which it is peopled, than astronomers are with those remote systems of the universe which appear in the form of nebulae and double stars. It was the improvement cf the telescope alone which enabled Dr. Herschel to fix the views of astronomers upon those re- gions of space, to which, at a former period, their imaginations could scarcely extend; and, when the microscope shall have received a simi- lar improvement, we may look for discoveries equally interesting, though less stupendous, even in those portions of space which are daily trampled under the foot of man.

It is both important and interesting to enquire into the cause of this limitation of microscopical discovery. The construction of single lenses, for the simplest form of the instrument, has been brought to great perfection. Dr. Brewster has in his possession glasses, executed by Mr. Shuttleworth, of the focal length of one-thirtieth, one-fortieth, and one-fiftieth of an inch, which are ground with great accuracy ; and the performance of single lenses has been recently improved by Dr. Wollaston, who separates two hemispherical segments by means of a small plate of brass perforated in the centre. We cannot, therefore, expect any essential improve- ment in the single microscope, unless from the discovery of some transparent substance, which, like the diamond, combines a high refractive power with a low power of dispersion.

It is usual to say that the microscope magni- fies objects seen through it; but this is true only with regard to the apparent, not the real magni- tude of objects ; they indeed appear to be larger with, than without the microscope, but in truth they are not ; and the reason why they appear to be magnified will be easy to apprehend, by any person who understands the nature of the optic

angle. The apparent magnitude of objects is measured by the angle which they are seen under by the eye ; and those angles are reciprocally as the distances from the eye. If, therefore, at the distance of six inches, we can but just discern an object, and then, by interposing a lens, or other body, we can view that very object at a nearer distance, the object will appear to be as much larger through the lens than before, to the naked eye, as its distance from the lens is less than its distance from the eye. See OPTICS.

That this is the case, is evident from fig. 1, plate MICROSCOPE, where A is a point in an ob- ject not clearly visible to the naked eye, at a less distance than A B, because the rays which pro- ceed from it are too divergent to admit of dis- tinct vision till they have passed that distance ; but if the same object be placed in the focus C of the lens D, fig. 2, the rays which proceed from it will become parallel, by passing through the said lens, and therefore the object is dis- tinctly visible to the eye E, placed any where before the lens D. Consequently it will appear as much larger through the lens than to the naked eye, as C D is less than A B.

If an object, AB, fig. 3, be placed in one focus C, of a lens D E, and the eye in the other focus F, the eye will see just so much of the ob- ject as is equal to the diameter of the lens ; for the rays AD and BE, which go from the object to the extremities of the lens D and E, and are united at the focus F, must necessarily proceed from the object to the lens parallel to the axis F C, and therefore parallel to each other ; con- sequently the part of the object A B, seen by the rays DF, EF, will be equal to the diameter D E of the said lens.

If only the part d e of the lens be open, then only so much of the object a b as is equal thereto will be perceived by the eye. Now, since A B is equal to D E, or a b to d e, therefore the angle DFE, or d? e, is the optic angle under which the part of the object AB, or a b, appears to the eye at F; and, since GF is but one-half FC, therefore the angle DFE, or d F e, is double to that under which the part AB, or a b, would ap- peai to the naked eye at the distance F C ; that is, the eye sees the object, situate as above, twice as large with the lens as it would do without it.

If you would see a portion of an object larger than the lens, your eye must be placed nearer the lens than its focus. Let the lens be D E, fig. 4, its two foci F and C ; in the focus C, let there be an object, A B, larger than the lens ; suppose the rays AD, BE, proceed from the extremities of the object to those of the lens ; it is evident from the figure they will be convergent, and therefore will, by the lens, be united in a point K, between the lens D E and its focus F : if then the eye be placed at K, it will take into its view an object greater than the lens D E.

Again, let G H be a portion of an object, A B, less than the lens DE; draw GD, HE, which will be diverging rays, and therefore will be united at a point I, farther distant from the lens than the focus F ; hence, if an eye be placed far- ther from the lens than its focal distance, it can never see any object, or part of an object, r.tone view, so large as the lens, but always smaller

And universally, the visible part of an object will be to the lens, as the focal distance of the lens to the distance of the eye.

Since then it is evident the nature of a convex lens is such as will render an object distinctly visible to the eye at the distance of its focus, the reason why they are used as microscopes is very plain. For suppose the distance A B, figs. 1 and 2, be six inches, where the naked eye B can but just perceive the object A distinctly, and let the focal distance C D of the lens D be half an 'Inch ; then, since CD is but one-twelfth of A B, the length of the object at C will appear twelve times as large as at A : if it were a surface, it would be 144 times as great, and the solidity or bulk would be magnified 1728 times.

If C D, the focal distance of the lens D, be but one-fourth part of an inch, then will that be but one-twenty-fourth of AB, equal six inches, and so the length of objects will be magnified twenty- four times, the surface 576 times, and the solidity 13,824 times ; for those numbers are the square and cube of twenty-four. Whence it appears, that single glass lenses make very good microscopes, which hsve these advan- tages, that the object appears itiost clear, they oc- cupy little room, are extremely portable, are pro- cured at a small expense, and are more easily used.

Various methods have at different times been described, by means of which persons of ordi- nary ingenuity may construct for themselves single microscopes of a very high magnifying power, and possessing a very considerable de- gree of distinctness. The most common method is to take up with the point of a wetted wire several small fragments of crown glass, and to hold them in the flame of a candle till round globules are formed upon them. These globules, being carefully detached, are placed between two plates of lead, copper, or brass, the fractured part being carefully kept out of the field of view. The method recommended by Mr. Gray, of making microscopes of drops of water, can be considered in no other light than as an amusing experiment ; and the single microscopes made by drops of transparent varnish, upon one or both sides of a plate of glass, and tried by Dr. Brews- ter, though they give excellent images, are still deficient both in portability and durability. The defect of the glass globules formed by the ordi- nary method is, that we cannot increase their diameter beyond a very small size ; that it is diflRcult to give them a perfect figure ; and that there is considerable trouble in fixing them in the brass or copper after they are made.

The following method, proposed and executed by'Mr. Siveright, is free from the greater part of these defects, and will no doubt be considered as a

valuable acquisition by those who either cannot afford to purchase expensive microscopes, or who are at such a distance from an optician that they cannot be supplied in any other way. Take a piece of platinum leaf, about the thick- ness of tinfoil, and make two or three circular holes in it, from one-twentieth to one-tenth of an inch in diameter, and at the distance of about half an inch from each other. In the holes put pieces of glass, which will stick in them without fall ing through, and which are thick enough to fill

the apertures. When the glass is melted at the fkme of a candle with the blow-pipe, it forms a lens which adheres strongly to the metal, and the lens is therefore set and formed at the same time. The pieces of glass used for this purpose should have no mark of a diamond or file upon them, as the mark always remains, however strongly they are heated with the blow-pipe.

The lenses which were made larger than one- tenth of an inch were not so good as the rest, and the best were even of a smaller size than one-tenth. As the lenses thus formed sometimes contain air bubbles, the best way is to make se- veral, and select those which are freest from faults. An eye or loop, made by bending the extremity of a platinum wire, may be used instead of the platinum leaf. The reason for using platinum is, that the glass is more easily and perfectly melted in this than in other metals, which may perhaps arise from its being a bad conductor of heat, and from preserving its brightness. As platinum does not oxidate, the glass adheres better to the edges of the hole, and it may be used very thin, as it does not melt with the heat necessary for the complete fusion of the glass.

The first idea of fluid microscopes was sug- gested by Mr. Stephen Gray, who published an account of them in the Philosophical Transac- tions. They consisted merely of a drop of water, which was taken up on the point of a pin, ami placed in a small hole one-thirtieth of an inch in diameter, in the middle of a spherical cavity about one-eighth of an inch broad, and a little deeper than half the thickness of the plate. On the opposite side of the plate was another spherical cavity, half as broad as the former, and so deep as to reduce the circumference of the small hole to a sharp edge. When the water is placed in these cavities, it will form a double convex lens with unequal convexities, which may be employed like any other single microscope in the examination of minute objects.

As water, however, has a considerable disper- sive power, and a low power of refraction, fluid microscopes of a more perfect kind may be formed by using sulphuric acid, castor oil, oil of ambergris, or alcohol. The sulphuric acid has a very low dispersive power, and a greater refractive power than water, and will, therefore, make a more perfect lens than any other fluid body. Castor oil may be employed with almost equal advantage; and oil of

ambergris and alcohol would answer the same purpose from their optical properties, though their volatility may render them less easily managed. The best method, however, of constructing fluid micro- scopes, is to take Canada balsam, balsam of capivi, or pure turpentine varnish, and let a drop of any of them fall upon a thin piece of parallel glass. The drop will form a plano-convex lens, and its focal length may be regulated by the quantity of fluid which is used. These fluid lenses are represented in fig. 5, as suspended upon the parallel glass ; but the proper position is when the plate of glass is horizontal. If the lens is uppermost, the gravity of the fluid will make it more flat, and diminish its focal length. This, however, may be avoided, and the contrary effect produced, by inverting the niece of glass

If these lenses are preserved from dust, they will he as durable as those which are made of glass; and, when thick Canada balsam is used, the lenses will soon be indurated into a hard gummy substance, and resist any change of figure from the gravitation of their parts.

Ellis's single, or aquatic microscope is repre- sented in fig. 6, where K is the box that contains the whole apparatus, which is generally made of fish-skin ; on the top of the box there is a female screw for receiving the screw which is at the bot- tom of the brass pillar A, and which is to be screwed on the top of the box K. D, a brass pin, which fits into the pillar : on the top of the pin is a hollow socket to receive the arm which carries the magnifiers : the pin is to be moved up and down, in order to adjust the lenses to their focal or proper distances from the object.

In the representation of this microscope, the pin D is delineated as passing through a socket at one side of the pillar A : it is now usual to Tiake it pass down a hole bored down the mid- He of the pillar. F, the box which carries the nagnifying lens ; it fits into the socket X, which s at the top of the pillar D. This arm may be noved backwards and forwards in the socket X, nd sideways by the pin D, so that the magnifier, ?hich is screwed into the ring at the end F of ais box, may be easily made to traverse orer any tart of the object lying on the stage, or plate B. .•" is a polished silver speculum, with a magni- fying lens placed at the centre thereof, which is perforated for this purpose. H, a brass semi- circle which supports the mirror I ; the pin R, affixed to the semicircle H, passes through the hole which is towards the bottom of the pillar A. B, the stage on which the objects are to be placed ; it fits into a small dovetailed arm which is at the upper end of the pillar A. C,

a plane glass, with a small piece of black silk stuck on it. This j;lass is fitted to a groove made in the stage B ; i pair of nippers is fixed to the hole of the stage a, by the pin K; the steel wire of these nippers slides backwards and forwards in the socket; and this socket is moveable upwards and downwards, by means of the joint, so that the position of the object may be varied at pleasure. The object may be fixed in the nippers, or stuck on the point. To use this microscope, begin by screwing the pillar A to the cover ; pass the pin R of the semicircle which carries the mirror through the hole that is near the bottom of the pillar A ; push up the stage into the dovetail at B: slide the pin into the pillar; then pass the bar E through the socket X, which is at the top of the pin D, and screw one of the magnifying lenses into the ring at F. Now place the object either on the stage or in the nippers L, and in such a manner that it may be as nearly as pos- sible over the centre of the stage ; bring the speculum F over the part you mean to observe; then pet as much light on the speculum as you can, by means of the mirror I. The light re- ceived on the speculum is reflected by it on the >bject. The distance of the lens F from the •bject is regulated by moving the pin D up and own until a distinct view of it be obtained. 'he rule usually observed is, to place the lens

yond its focal distance from the object, and

en gradually slide it down until the object ap-

pear sharp and well defined. The adjustment of the lenses to their foci, and the distribution of the light on the object, are what require most attention. These microscopes are sometimes fitted up with a rack and pinion to the pillar A, and pin D, for the more ready adjustment of the glasses to their proper foci.

The form of a very convenient microscope is represented in fig. 7, where A B is a circular piece of wood, ivory, &c., in the middle of which is a small hole, one-twentieth of an inch in diameter ; upon this hole is fixed, with a wire, a small lens C, whose focal distance is C D. At that distance is a pair of plyers D E, which may be adjusted by means of the sliding-screw, as in the figure, and opened by means of the two little studs a e ; with these you take up any small object O, and view it with the eye placed in the other focus of the lens at F ; and according to the focal length of the lens, the object O will appear more or less magnified, as represented at T M. If the focal length be half or one-fourth of an inch, the length, surface, and bulk, of an object, will be magnified as before described. Thi? small instrument may be put into a case, and carried about in the pocket without any incumbrance. Those lenses whose focal lengths are three-tenths, four-tenths, and five-tenths of an inch, are the best for common use.

In the combination of single lenses to form the compound microscope, opticians have arrived at a great degree of perfection. The aberration of refrangibility can now be completely removed by a suitable arrangement of the individual lenses ; and every artifice has been exhausted in suiting the apparatus to the various tastes of the purchasers, and to every purpose of popular ob- servation. No attempt, however, appears to have been made by opticians to fit up the mi- croscope as an instrument of discovery, to se- cond the labors of the naturalist in preparing the subjects of his research, and to accommodate the instrument to that particular kind of prepa- ration which is indispensably necessary for the preservation and inspection of minute objects.

In perusing the writings of those naturalists who have applied the microscope to the exami- nation of minute objects, we find that the most difficult and perplexing part of their labor con- sisted in preserving and preparing the different insects and substances which they wished to iq- spect. Small insects instantly shrivel up, and lose their natural form as soon as they are killed, and the minute parts of plants suffer a similar change from exposure to the air. Hence Swam- merdam and Lionet killed the insects which they meant to examine by suffocating them, either in water, spirit of turpentine, or diluted spirits of wine. The softness and transparency of their parts were thus preserved during the process of dissection, and, when they were completely de- veloped, the insect was allowed to dry before it was presented to the microscope. Its parts were consequently contracted, and lost not only their proper shape, but that plumpness, and that freshness of color, which they possessed when alive.

In the preparation, indeed, of almost every object of natural history that is composed of minute and delicate parts, it must be pre-

served by immersion in a fluid ; the dissec- tion must often be performed in the same me- dium; it must be freed from all adhesive and extraneous substances, by maceration and ablu- tion in water ; and, when it has undergone these operations, it is in a state of perfection for the microscope. Every subsequent change which it undergoes is highly injurious ; it shrivels and collapses by being dried, its natural polish and brilliancy are impaired; the minute parts, such as tlie horns and down adhere to one another; and the general form of the object, as well as the disposition of its individual parts, can no longer be distinctly seen. It is therefore a matter of considerable importance to be able to examine the object when wet, and before it has suffered any of these changes ; and, by fitting up the mi-

croscope in the following manner, this may be effected without even exposing the object to the air.

The object-glass of the compound microscope should have the radius of the immersed sur- face about nine times the focal distance of the lens, and the side next the eye about three-fifths of the same distance. This lens should be fixed into its tube with a cement which will resist the action of water or spirits of wine ; and the tube, or the part of it which holds the lens, should have an universal motion, so that the axis of the lens may coincide to the utmost exactness with the axis of the tubes which contain the other glasses.

Several small glass vessels must then be pro- vided, having different depths, from one inch to three inches, and having their bottom composed of a flat piece of glass, for the purpose of ad- mitting freely the reflected light which is intended to illuminate the object. The fluid in which the object has been preserved, or prepared, is next put into the vessel ; and the object itself placed upon a glass stage, or, if necessary, fixed to it, is immersed in the fluid. The glass vessel is now laid upon the arm of the microscope, which usually holds the object, and the lens is brought into contact with the fluid in the vessel. The rays which divide from the object emerge directly from the fluid into the object-glass, and therefore suffer a less refraction than if it had been made from air; but the focal length of the lens is very little increased, on account of the great radius of its anterior surface. The object may now be observed with perfect distinctness ; unaffected by any agitation of the fluid, its parts will be seen in their finest state of preservation ; delicate muscular fibres, and the hairs and down upon insects, will be kept separate by the buoy- ancy of the fluid ; and if the object, when alive, or in its most perfect state, had a smooth sur- face, its natural polish will not only be preserved but heightened by contact with the fluid. Aqua- tic plants and animals will thus be seen with unusual distinctness, and shells and unpolished minerals will have a brilliancy communicated to their surfaces which they could never have re- ceived from the hands of the lapidary. If the specific gravity of the substance under exami- mination should happen to be less than that of the fluid, and if it cannot easily be fixed to the glass stage, it may be kept from rising to the top

by a piece of thin parallel glass, or by a small grating of silver wire stretched across the vessel. In order to find the magnifying power of such a microscope, let /zz focal length of object- glass ; F zz focal length of amplifying-glass ; d zz distance of object from object-glass ; D zz distance between the object-glass and the ampli- fying-glass ; m zz magnifying power of the eye- glass ; M zz magnifying power of the microscope- Then we shall find —

_df n

When the object-glass is equally convex, and when its anterior surface is immersed in water we shall have

1-37/rf

1-37 f

When the object-glass is unequally convex, and a b are its radii, a being immersed in water, we

*shall have/ zz — — ; and, by using the **0o a "T" o*

value of fin the first equations, the magnifying power will be proved.

The method of fitting up and using the com- pound microscope, which has now been de- scribed, enables us, in a very simple manner, to render the object-glass perfectly achromatic without the assistance of any additional lens. The rays which proceed from the object im- mersed in the fluid will form an image of it nearly at the same distance behind the lens as if the object had been placed in air, and the rays transmitted through a plain concave lens of the fluid combined with the object-glass. If we, therefore, employ a fluid whose dispersive power exceeds that of the object-glass, and ac- commodate the radius of the anterior surface of that lens to the difference of their dispersive powers, the image will be formed perfectly free from any of the primary colors of the spec- trum. The fluids most proper for this purpose

Oil of cassia, Oil of anisesecds, Oil of cummin, Oil of cloves,

Oil of sassafras, Oil of sweet fennel seeds Oil of spearmint, Oil of pimento.

These oils are arranged in the order of their dispersive powers ; and, when those at the top of the list are used, the anterior surface of the ob- ject-glass will require a greater radius of curva- ture than when those at the bottom of the list are employed. Thus, in order to render the ob- ject-glass achromatic when it is made of crown glass, and when the fluid is oil of cassia, the radius of the anterior or immersed surface should be to that of the surface next the eye as 2-5 to 1. Lest these proportions should not exactly correct the chromatic aberration, it would be preferable to make the radii as 2-2 to 1, and then reduce the dispersive power of the nil of cassia by oil of olives, or any other less disper- sive oil, till the correction of color is complete

If the oil of sweet fennel seeds is used, the radius of the anterior should be to that of the posterior surface as 0‘8 to 1 .

The camera obscura microscope is usually composed of a tube, a reflecting mirror, and a convex lens, in addition to the ordinary micro- scopic apparatus. The sun’s rays being directed by the looking-glass through the tube upon the object, the image or picture is thrown distinctly and beautifully upon a screen of white paper, or a white linen sheet, placed at some distance to receive it, and considerably magnified. The apparatus for this purpose, as represented in fig. 8, is as follows : A, a square wooden frame, through which two long screws pass, and by means of two nuts, 1,1, fasten it firmly to a window shutter, in which a hole is made for its reception, the two nuts being let into the shutter.

A circular hole is made in the middle of this frame to receive a piece of wood of a circular figure B. The edge projects a littre beyond the frame, and contains a shallow groove furnished with a band, which, by twisting round and then crossing over a brass pulley 4, affords an easy motion for turning round the circular piece of wood B, with its connecting parts, to follow the course of the sun. C is a brass tube screwed into the middle of the circular piece of wood, forming a case for the uncovered brass tube D, which may be drawn backwards or forwards.- E a smaller tube of about one inch in length, screwed to the end of the larger tube D.

In the large tube is a convex lens, whose focus is about twelve inches, designed to collect the sun’s rays, and throw them more strongly upon the object. G a looking-glass of an oblong figure, set in a wooden frame, fastened by hinges to the circular piece of wood B, round which it revolves.

II a jointed wire passing through the wooden frame to enable the observer, by putting it back- wards or forwards, to elevate or depress the glass, according to the sun’s altitude.

When the microscope is employed the room must be rendered as dark as possible ; for on the darkness of the room, and the brightness of the sun-rays, depend the sharpness and perfec- tion of the image. Then, putting the looking- glass G through the hole in the window-shutter, the observer must fasten the square frame A to the said shutter by its two screws and nuts 1,1; this done, adjust the looking-glass to the eleva- tion and situation of the sun by means of the jointed wire II, together with the pulley and band.

As soon as this appears, screw the tube C into the brass collar provided for it in the middle of the woodwork, taking care not to alter the look- ing-glass ; then, screwing the magnifier to be em- ployed to the end of the microscope, take away the lens at the other end, and place a slider,

containing the object to be examined, between the thin brass plates, as in the common micro- scope.

Things being thus prepared, screw the body of the microscope to the short brass tube E, and p-iil out the tube D, less or more, as the object is capable of enduring the sun's heat. Dead uojects may be brought within about an inch of

the focus of the convex lens ; but the distance must be altered for living insects, or they will speedily be deprived of life. The short tube E, which the microscope is screwed to, enables the observer, by moving it backwards or forwards in the tube D, to bring the objects to their true focal distance, which will be known by the sharp- ness and clearness of their appearance ; they may also be turned round by the same means without the effect being injured.

The solar microscope we have just been ex- amining is calculated only to exhibit transparent objects, or at least such as permit a part of the incident light to pass through them ; to view opaque objects another mirror must be used, in order that they may be seen by the light that they reflect.

In fig. 9 the mirror a, and the lens c, are the same as in the common solar microscope ; but the converging rays from c are met by a mirror e n, placed diagonally, and which reflects the rays upon the opaque object S R ; from the ob- ject they are reflected to the magnifier o, from which they proceed, diverging to the screen p q, where the object will be painted, and its apparent size increased.

Compound microscopes have been constructed of almost every possible dimension, from a few inches in length to that of twenty feet ; but from practical experience it appears evident that, when their magnitude is augmented beyond a certain point, the performance of the instrument is deteriorated, though we suppose the amplify- ing power of both microscopes the same ; in- deed, those of the larger description, which have been made to examine objects of considerable dimensions, cannot be considered of any use except for amusement. The reason, however, why the smaller instrument produces a better re- presentation of the object, has not been deter- mined ; for in both instruments (mathematically) the proportional errors are the same, but it may be that the errors in the smaller instrument, though existing, are not so divided as to be dis- coverable to the organ of vision. At present no certain proportion between the length of the body of the instrument and the focus of the ob- ject-glass has been determined, except that the body requires to be lengthened when the focal length of the object-glass is increased, to give its maximum effect. The average length of body for different object-glasses is from five to ten inches ; for when the

rays after once being acted upon are allowed to travel any considerable dis- tance, to form the image in the focus uf the eye- piece, they will be so much separated and weak- ened that the eye-piece will not be able to col- lect them truly. And it may be further re- marked that the power should always be obtained by the object-glass in preference to the eye-piece ; and, although it is well known that a flat and more extended field is obtained by the latter, yet when these are procured no distinct idea of ihe structure of the object is discoverable, and thus the very intention of the microscope is de- stroyed, which ought to unfold to our perception the nature and functions of bodies too minute for ordinary inspection.

Some time ago an eminent natural philoso-

pher, professor Amici of Modena, constructed a very excellent catoptrical microscope, in which he seems to have avoided the imperfections to which the instruments formerly constructed upon tne same principle were liable, and to have com- bined several advantages which are not possessed by the best dioptrical microscopes now in use. The ingenious inventor has published a minute description of this improved instrument, in a memoir inserted in the eighteenth volume of the Transactions of the Italian Society. The body of this microscope consists of a horizontal brass tube, twelve inches in length, and one inch and one-tenth in diameter. At one end of the tube is placed a concave speculum of metal, whose axis coincides with that of the tube, and whose super- ficies is elliptical ; and so calculated, that of the two foci, the one falls at the distance of two inches and six-tenths, and the other at twelve inches from its centre. A small arm within the tube carries a small plain mirror of metal of an oval form, placed ai the distance of one inch and six-tenths from the former, opposite to it in an oblique di- rection, and supported by an oblique section of a metal cylinder five-tenths of an inch in diame- ter. The centre of the polished surface of this mirror coincides with the axis of the concave mirror, which is situated at the distance of one inch and five-tenths from the centre of the other.

This plain mirror is so placed that, while it receives the image of the object (which is placed on a moveable object-bearer attached to the pillar below it), by means of a small aperture in the under part of the body of the tube, it throws it towards the concave mirror, in which it may be examined by the eye of the observer, applied to the opposite end of the tube, through a greater or smaller number of magnifying eye-glasses, which may be fitted to it.

The internal diameter of the tube, which re- gulates that of the large mirror, may be one inch and one-tenth, and the thickness of the surround-

*ing metal about one-twentieth of an inch. Upon this construction, the object to be examined may always be at the distance of half an inch from the edge of the tube, and consequently be very well lighted on every side, — transparent objects from below, by means of a common illumin- ating mirror, fitted to the pillar, and moveable, — and opaque bodies from above, either by the natural light falling directly in, or by concen- trating an artificial light, by means of a convex glass fitted to the object-bearer — or, still better, by means of a pierced mirror of metal, which is fitted to the tube below, over the object, so as to be brought more or less near to it. The large illuminating mirror below should be concave, having a diameter of three inches, and a focal distance of 2*5 at the utmost.*

The effects of the two last mentioned mirrors may be reciprocally combined, by means of a common corresponding adaptation, — by receiv- ing and reflecting the rays of light so as to pro- duce the highest degree of intensity of light, and the most perfect illumination of the object on all sides, both as a whole, and in its different parts, an advantage indeed, which may be ob- tained in dioptrical instruments by similar

The inventor considers the proportions above given as best adapted for the convenient use of the instrument, in order to preserve, along witii a high degree of effect, and even the highest de- gree of magnifying power, a moderate distance of the object from the microscope, viz. half an inch, which not only allows the most simple and perfect illumination from above, but also ad nits of our examining objects of considerable size entire, without separating the parts, and also small animals alive.

A common dioptrical microscope, whose ob- ject-glass has a focal distance of six lines, would correspond with this state of the object, and con- sequently admit of similar advantages, but witli a much diminished magnifying power, of about 1500 or 2000 in the area. Professor Amici has accordingly compared the best English micro- scopes of Adams and Oollond with his own ; and, upon a comparative examination of the same ob- jects, he maintains that his instrument shows the object more clearly and distinctly, even when mag- nified in the same degree. The professor had no opportunity of making experiments with the mi- croscope of De la Barre, and those made at Benedictbeuern by Utzschneider and Fraunhofer ; but he thinks himself justified in concluding that his own admits of a far greater degree of magnifying power than the latter, as he perceives that their largest microscope does not magnify the objects above 22,500 times in the area, while his goes the length of 1,000,000. He has also endeavoured to show, by a mathematical calcu- lation, that such a high degree of magnifying power cannot be attained in a dioptrical instru- ment.

The following, according to Amici, are the ad- vantages of his microscope;

1. The observer has the convenience of being able to examine the object in a horizontal position, while, in those • constructed on the dioptrical principle, the ob- ject is examined in a vertical position, that is from above. The observer, therefore, may be seated, has no occasion to bend his head, and can examine objects more conveniently, or for a longer time than with a large dioptrical instru- ment on the common construction. 2. The different degrees of magnifying power can be easily and speedily applied and changed, nothing more being necessary for this purpose than to change the eye-glass, without varying the position or distance of the object, so that it may be ex- amined with great rapidity in all different degrees of magnitude, without the least variation of the points of view ; while, in the dioptrical instru- ments, it is necessary not only to change the ob- ject-glass, but also the visual distance, which not only occasions loss of time, but very seldom admits of the object being again seen in the same position, and in the same point of view. 3. As in this new instrument the object always remains in the same position, and is kept con- stantly at the distance of half an inch from the body of the microscope, it consequently admits of our examining objects immersed in fluids, and animals swimming, and that nearly at an equal depth, and in every degree of magni- tude. With dioptrical instruments, on the othor hand, this is quite impossible, on account of lie

shortness of the focal distance in the highest degrees of magnifying power, as the object- lens must be brought so near the object as almost to come in contact with the fluid. 4. The light may be brought to bear upon all sides and in all directions, even by means of a lamp or taper, as the flame can be brought rery near the illuminating mirror, without being trouble- some to the observer. 5. As metallic specula do not disperse the light, and consequently produce no colors, the objects appear of their natural color. 6. The diameter of the concave mirror being so large, compared with its focal distance, we may expect so much more distinctness. 7. As the distinctness of the image produced by re- flection is greater than that produced by reifrac- tion, the degree of magnifying power may be carried much higher.

While speaking of the compound microscope, it may be proper to state that the most valuable object-glasses for this species of instrument are those that are rendered achromatic ; as a much larger angle of aperture may thus be obtained than by the ordinary arrangement. These were first constructed at the suggestion and expense of Dr. Goring, by Mr. W. Tully, in the summer of 1824, and more recently in France, by M. Che- valier. The aplanatic of

Mr. Tully consists of a concave of Guinard's flint glass placed between two convex lenses of crown and Dutch plate glass. The apertures obtained in these object- glasses are equal to half their focal distances, which are from 0-2 to 1-0 inch focus. By the increase of aperture which is here attainable the penetrating power is augmented, so that the varied markings on objects are rendered visible with these large apertures, which with common object-glasses of the same power are wholly un- discernible. This property of the penetration of a microscope being always as the angle of aper- ture, was first pointed out by Dr. Goring, and is fully borne out by experiment. In the telescope the penetrating power necessary to observe stars and nebula is dependent on the area of the ob- ject-glass or metal, without relation to its focal distance ; but in the microscope it is the result of the aperture in proportion to their focal distance. The difficulties that present themselves in cor- recting the aberrations of these object-glasses, when of short focus, is considerably increased, though their penetrating powers are always im- proved by a diminution of their focal length. The spherical aberration is greater and more difficult to correct than in telescopes (the convex seldom having sufficient abberration to correct the con- cave) ; and, as the rays enter diverging from the object, the calculations of their radii are more abstruse than in a telescope for parallel rays. The curvatures and dimensions of one of Mr. Tully's object-glasses are as follows : —

Sidereal focus of the object-glass Total diameter of the lenses Clear aperture

Inch.

Radius of 1st surface 0-825) convex Ditto 2nd 0'525 $ crown

Inch.

0-933 0-55 0.5

Inch.

Radius of 3rd surface 0-5) concave Ditto 4th 0-5 \ flint.

Ditto 5th 0-575 (convex

Ditto 6th 0-575 1 Dutch plate.

Inch.

Specific gravity of crown . 2-527

Thickness of ditto . .0-15

Specific gravity of flint . 3-627 {

Thickness of ditto . . 0-164 i

Specific gravity of Dutch . 2-519)

*Thickness of ditto . . 0-175 *

The object-glasses of M. V. Chevalier are constructed on the principles laid down by Euler, and consist of a double and equally convex lens of plate glass cemented to a plano-convex of Guinard's flint. The construction is remarkably simple, the radii of all their surfaces being alike. The measures of one of these achromatics ob- tained by Mr. Lister are as follows : —

Inch.

Radii of the isosceles convex . .0-66 Radius of the plano-concave flint . 0'66 Thickness of the concave at the edge . 0-7A Thickness of the convex at the centre . 0-72 Diameter of the lenses . . . 0-36

When these object-glasses came first into this country, although achromatic, and two of them were combined, which is a considerable im- provement on the single ones, they could not show the test objects, the aperture being cut off by a small stop ; but on removing this stop Dr. Goring was enabled to make them effective on most of them.

The combination of three sets of achromatic lenses for an object-glass has recently been exe- cuted by professor Amici, who, in order to have the body of the microscope horizontal and ob- ject-glasses vertical, introduces a right-angular prism to change the direction of the rays. But the introduction of so many surfaces, viz. fifteen, has a tendency to weaken the outline of the ob- jects. Mr. Dollond has, however, lately com- bined two triple object-glasses of one inch focus, and about half an inch aperture, which perform extremely well : they can also be used separately. It is necessary for us to remark here that, as the ray after passing through the first aplanatic combination is in a different state to what it is on entering the second, due correction ought to be made when these glasses are intended to be used separately and combined ; indeed, in those of short focus, such correction is absolutely re- quisite ; so that, if they are perfect when com- bined, only one can be so if employed singly. When a triple one and a double one are com- bined, the performance seems best of all.

If we are desirous of producing an aplanatic object-glass, without using the achromatic com- binations above described, that of Mr. Herschel will be found of great value, as it is free from all spherical aberration in the axis. One has been executed of only one-sixth of an inch focus, with an aperture

of the one-fifteenth of an inch, which brings out all the test objects and exhibits opaque ones with facility. This combination is made of crown glass.

MIDDLE AGES.

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MIDDLE AGES. That portion of dura- tion is called the middle ages, in the history of Europe, which begins with the final destruction of the Roman empire, and ends with the Refor- mation ; or with the discovery of America ; or with the taking of Constantinople ; or with the invention of the art of printing : the propriety of selection being regulated by the object of each historian. In general, the middle ages may be said to embrace that space of history in which the feudal system was established down to the most prominent events which led to its over- throw; although its consequences and influence are still observable in the states of Europe. The dark ages mean the first centuries of the middle ages, a name which they certainly deserve; still, however, the destruction of the Roman institu- tions, by the irruption of barbarous tribes, is often unduly lamented, and the beneficial consequences attending ft overlooked. It is certainly to be re- gretted that acquisitions, which cost mankind ages of labour, were lost in the, general wreck, and only regained by the efforts of many suc- cessive generations; the flowers of civilization trampled under foot by barbarian warriors; and those nations to which Roman civilization ex- tended, previous to the great Teutonic invasion, thrown back into primaeval barbarism.

The feudal system filled Europe with power- ful barons, possessing vast landed estates, and commanding the services of numerous armed adherents. Proprietors of the soil, with arms perpetually in their hands, they were too proud to obey any laws but those of honour, which they had themselves enacted, and despised all engaged in peaceful occupations, as ignoble and created to obey. In this state of society the classes, not military, preserved their indepen- dence by union, which afforded them mutual protection, enabled them to exercise their call- ings unmolested, and thereby acquire wealth, which served as a counterpoise to the landed possessions of the barons : this necessity led to the foundation of cities. These small states gradually grew up into great ones ; and many citizens acknowledged no superior, except the highest authority of the nation to which they belonged. Strong walls, in conjunction with the valour of the townsmen, secured the freedom of those that dwelt within, and protected them from the tyrants of the land ; well ordered civil insti- tutions preserved peace and prosperity within ; and both were secured by the wealth acquired by trade and manufacturing industry. The barons endeavoured to retain their hold over the citizens, by establishing

themselves within the walls, and expressing an ambition to be- come chief magistrates of these little common- wealths. Tn some instances they soon usurped the exclusive power, by flattery and apparent condescension ; while in those states that were imperfectly organized, and where the pride of the nobles was excessive, the power and pros- perity of the cities rose to such an height, that in Germany and Italy they became formidable even to the emperor ; and the people, a third estate, was fully developed in Arragon as early as the twelfth century.

The third estate, the cities, united with the

barons in wresting the magna charta from king John of England, in 1215; arid their growth in France may be traced to the con- duct of Louis Le Gros, and his successors, particularly Philip the Fair, 200 years after him, who deemed it their wisest policy to pro- tect them against the nobility, and thereby in- crease their own ability of resisting that powerful order. Cities acquired the earliest and the greatest pre-eminence in Germany and Italy : what could not be accomplished by single towns in France and England, was effected by the unions or leagues of several in the great empire ; the league of the Lombard cities in Italy ; the IJan- seatic, Rhenish, and Suabian leagues in Ger- many, appeared at the same time as great and formidable powers. Under the protection of such associations, and sheltered by embattled walls, all arts and trades, and every species of civilization, made rapid progress. Many im- pcrtant inventions originated amongst the citi- zens of those free states, or were suggested by their active, commercial, and manufacturing spirit.

It is remarkable that the ancient and modern republics were equally exposed to the overwhelm- ing powerof ambitious individuals, so dangerous to all free communities : the oppressed portion of the citizens were again compelled to have recourse to the same means of relief that had originally given rise to the parent city, and generally bound themselves to each other by some formal con- tract, for the better protection of their rights. From such associations, usually formed amongst those of the same trade, and having for their object, next to security from external enemies, the maintenance of internal order in those stormy periods, arose corporations or guilds, which were under the direction of a master. At first none were admissible into these bodies who had not served an apprenticeship to some particular trade : at a later period admission was purchased by individuals who wished to share in the ad- vantages of the association ; this was frequently the case in the 1 4th century, when the corpora- tions obtained almost exclusive possession of the government of the cities ; the corporations taught the nobles that, as they contributed nothing to the prosperity of the place, by their industry, it did not become them to govern it. As long as the nobility continued in the cities, after this ex- clusion from

power, they preserved themselves in close connexion, and with those in the country formed confederacies against the corporate power. Associations, the only means of security against the disorders of the 'time, became so universal, that every where persons of the same trade or profession were closely united, and had certain laws and regulations amongst themselves : even knowledge, in the universities that were esta- blished, was obliged to do homage to the spirit of the age, and the liberal arts themselves, in the latter part of the middle ages, were fet- tered by the restraints of corporate rules.

The most remarkable and characteristic insti- tution of the middle ages was chivalry. The profession of the nobles was war ; no one of their order, who had not served as a knight, could bear a lance or command a troop of cavalry ; and the service of years, as an attendant or

squire, was necessary to entitle even one of the highest order to be dubbed a knight ; but squire, knight, and baron, were all inspired with the same romantic spirit of honour, gallantry, and devotion. The religious zeal of the middle ages induced hundreds of youths, of both sexes, in the bloom of life, to shut themselves up within the gloomy walls of a cloister, or retire to wild deserts, and there pass their lives in penitence and prayer ; thousands of bare-footed pilgrims annually tra- velled across sea and land, to pray and do penance at the tomb of the Saviour ; hundreds of thousands flocked thither also, with the cross in one hand and the sword in the other, to free the Holy Land from the pollution of infidels. The artful and ambitious, taking advantage of this enthusiastic spirit, established by its means intolerance, the destruction of the Jews and heretics, the splendour of the papal court, and the all-embracing system of the hierarchy. In opposition to the secular, which rested on the feudal system, and was sustained only by armies of vassals, the pope formed, from arch- bishops, bishops, priests, still more from the generals of religious orders, provincials, abbots, and monks, an immense army, invincible through its power over the conscience, and through the spiritual weapons which belonged to it and to its head.

All the kings of the West acknowledged the pope to be the living vicegerent of Christ : many were his vassals, many tributary ; almost all obe- dient and subject to him, and in a short time victim of a vain resistance.*

Arnold of Brescia, the Waldenses, Wick- liffe and II us, and their followers, endea- voured to overthrow the corrupt hierarchy by reminding the people of the simplicity and poverty of the primitive church ; they found,

unhappily, that their contemporaries were not yet ripe for freedom of mind, and their noble efforts, consequently, in a great measure failed. Mendi- cant orders of friars, and the institution of the in- quisition, obstructed the dawning light of the 13th century : excommunications and interdicts held all Christendom in terror; till at length, with the diffusion of a free spirit of investigation, the establishment of more rational order amongst monarchies, and the cooling of religious enthu- siasm, the veil of darkness was drawn aside, the close of the middle ages approached, and Luther arose, to free the mind from bondage.

Poetry was revived, and much cultivated, in those ages. The chivalrous knightsof those times were passing their lives in battle, in romantic deeds, in festive pomps, and religious exercises. Poetry first appeared amongst the knights dur- ing the 1 2th century, in the southern pro- vinces of France ; there chivalry first sprang up, and with it shot forth the first sparks of modern poesy. The founders of modern poetry were provincial Troubadours, who sung at the court of Brerengarious of Toulouse : soon after these the French trouveres, and the German minne- singers, poured out their lays in their mother tongue: the Italians, mistrusting their own, sang in the Provencal; and the English, from a similar apprehension, in the French tongue. The Italians are indebted for their high poetic fame to Dante,

who brought the Tuscan dialect into honour, and enabled the minstrels to establish a national poe— try. In Spain the Catalonian poetry was the same as the Provenyal, but the Castilian and Portuguese partook more of the Arabians. The modern epic is distinguished from the poetic narration of the ancients, by its majestic tone, its indefinite longing for something more elevated than the realities of earth, which have conferred upon it the title of romantic.

The subjects of the romantic epics are limited to three cycles or collections of stories : the first of these is the truly German, Nibelungen, the stories of Attila, and the heroes of the time of the general migration of nations ; next to these rank the equally old tales of the British king Arthur, his round table, and the Sangraal, which, according to the old Welsh fables, was sung in France, and afterwards in Germany, and to which Tristan, the enchanter Merlyn, and others belong : to these a third collection is to be added, originally French, of Charlemagne and his peers, of Ro- land, the enchanter Malegys, and the four sons of Harymon : as to the famous romance of Amadis de Gaul, this belongs peculiarly to the Spanish, and not to one of the three collections here mentioned.

Historic events of ancient and modern times, particularly the exploits of Alexander the Great, the Crusades, Scripture History, and the incidents of

the ancient epics of Homer and Virgil, fur- nished subjects for poetical works towards the close of the middle ages. Poetry gradually declined in the two last centuries of those ages. In the thirteenth century there was not a story in the three cycles, before mentioned, that was not eagerly sung by many poets, and upwards of 1400 songs, written by 136 poets of this century, are contained in the Manesse col- lection alone : the voice of the minstrel was al- most wholly silent in Germany, France, and Spain, in the fourteenth century ; but Italy boasted of her Petrarch and Boccacio, and Eng- land of her Chaucer: after the 14th century, hardly a single poet appeared amongst the knights. Epic poetry was replaced by romances in prose ; and the lyric poetry of France and Ger- many fell into the hands of the Master-singers, who, by a studied observance of rules, preserved its formal existence : so did it continue until the 15th century, when all were attentive only to the great events that were in preparation ; and ac- tuated by a spirit of thinking, were far removed from that free flow of feeling which had given birth to the poetry of the past time. Ariosto, the Italian Homer, flourished at the close of the middle ages, when the early spirit of poetry lived only in remembrance. A new national poetry was introduced in England by Shakspeare, and in Spain by Cervantes.

Architecture and painting attained the highest excellence : the noblest buildings of the ages that had long preceded, appeared only as tne orna- mented forms of habitations which necessity had created, aad can at most be called fine buildings : but the Gothic or pointed architecture of the middle ages was founded on a great con- ception; this conception, which appears in the union of the grandeur of great masses with the

finished delicacy of parts, was the sylvan temple of the first inhabitants, was the representation of the world. Painting and other arts came from Greece, in the 14th and 15th centuries, into the Western kingdoms, and attained their greatest splendour in the middle ages, upon the Lower Rhine and in Italy.

Scientific learning at that period was almost wholly neglected. Charlemagne encouraged the growth of science, and endeavoured to instruct the people, but his exertions hardly produced any effect beyond his life ; and even some centuries after his reign the German tribes considered no knowledge of advantage, but that of managing the lance and steed. In those days the most distin- guished could scarcely read or write, and whoever obtained

further learning, particularly in mathe- matics or national science, exposed himself to the hazard of being burned as a sorcerer. The learning of the ancients was preserved through those ages, and handed down to us by the monks, who were educated in the monastic schools, and whose natural occupation was litera- ture. They copied old writers, particularly the fathers of the church, registered passing events in chronicles, and succeeding ages are indebted to them for the preservation of the valuable remains of antiquity, for the materials and stimulan's to new improvements.

In the history of the Eastern empire the intro- duction of Mohammedanism and the Arabic literature is analogous to the middle ages of the West, in marking epochs in their history. In the llth century a partial taste for literature was given by the monks, and afterwards by the arts and industry that prevailed in the cities : learning was encouraged by Henry II. of Eng- land, by the Hohenstaufen, St. Louis, the Alphonsos, and other intellectual princes : and from these times, the age of Lanfranc, Abelard, and John of Salisbury, the middle ages pro- duced distinguished men, whom the coldness of their contemporaries, in the cause of science, only urged to a more ardent pursuit of it.

Dialectics, from whence the church dogmatics were formed, were much cultivated ; a disputa- tious spirit awoke, that was not calmed until the theses of Luther in Wirtemberg shed a new light upon science. The Reformation was the cause and origin of high intellectual exertion and freedom of thought, and materially assisted the striv- ing after freedom of conscience, which originated some centuries before, with the flight of the Greek scholars from Constantinople ; and both were aided in their operation by the invention of printing, which had been encouraged by the princes of Italy, and had shone forth in Ger- many, in the brotherhood of Deventer, in Wes- sel, Erasmus, Celtes, Reuchlin, and others : with the appearance of these men, with the rise of the sun of the new day, the romantic twilight of the middle ages faded.

MIDAS, in fabulous history, the son of Gor- dius by the goddess Cybele, a king of Phrygia.

MIDAS, in zoology, the ear shell, the smooth ovato-oblong buccinum, with an oblong and very narrow mouth. It consists of six volutions, but the lower one alone makes up almost the whole sheil.

MIDDLEBURG, a considerable and well- built town of the Netherlands, on the island of Walcherin, forty-six miles south-west of Rot- terdam.

MIDDLEBURY is a post town, and the capital of Addison county, states of

Vermont, United States, standing on both sides of Otter Creek ; eleven miles south-east of Vergennes, thirty-one south of Burlington, thirty-two north of Rutland, and fifty-one south-west of Mont- pelier.

MIDDLEBOROUGH, a post town of Ply- mouth county, Massachusetts ; is ten miles west of Plymouth, and thirty-nine south of Boston, United States. Population 4400. This is a large township, and contains a rolling and slit- ting mill, a shovel manufactory, two forges, two furnaces, two cotton manufactories, a town-house, an academy, and eight houses of public worship, three for Congregational ists, and five for Baptists.

MIDDLESEX, an inland county, containing the capital of England, obviously derives its name from its situation, being inhabited by the Middle Saxons. Prior to the Roman invasion it was inhabited by the Trinobantes. After the complete subjugation of the island this district was made part of the division named Flavia Caesariensis. Middlesex is situated towards the south-east part of the island, and bounded on the south by Surrey, from which it is divided by an imaginary line down the middle of the river Thames ; on the east by Essex, from which it is divided by a similar line drawn along the middle of the river Lea ; on the west by Buckingham^ shire, from which it is divided by a supposed line drawn down the middle of the Coin ; and on the north by Hertfordshire, from which county it is divided by an irregular line of parish boun- daries. This county is of a very irregular shape ; but if its shape were reduced to a parallelogram, of equal superficies, the medium length and width would be about twenty miles by fourteen; and consequently it contains 280 square miles, or 179,200 acres. It is in the province of Can- terbury, and diocese of London. It is divided into Edmonton hundred, Elthorne hundred, Os- sulston hundred, Finsbury division,Gore hundred, Holborn division, Isleworth hundred, Kensington division, Spelthorn hundred, Tower division, the city of London within the walls, and the city and liberties of Westminster. These are subdivided into 230 parishes, precincts, and extra-parochial places, whereof 122 are within the city of Lon- don, ten in the city and liberties of Westminster, and ninety-eight in the rest of the county. Here are also two cities, and seven market-towns.

Of the climate of this county, Mr. Middleton, in his Agricultural Report, observes that the tem- perature of the atmosphere, except, perhaps, so far as the influence of London fires extend, is nearly the same through the whole county ; there being no situation so much elevated as to pro- duce the cold and thin air that we find in moun- tainous countries. In general it is healthy, owinu to the greater part of the soil being natu- rally dry; and the more moist situations, being well-drained, are consequently free from those unhealthy vapours which usually arise from stag- nant waters. The fires of I-ondon, in which are

consumed upwards of 800,000 chaldrons of coals mutually, have a sensible effect on the climate in its neighbourhood, by drying and warming the atmospherical air; which, being thus rarefied by heat, constantly passes upwards, and makes way for a fresh supply to come in from every side. The most stationary winds are from the south- west and north-east. All others are variable and unsettled. Those from the south-west are sup- posed to blow six-twelfths of the year, and those from the north-east about five-twelfths. The varying winds blow from all the other points of the compass about the other one-twelfth. The winds seldom blow with so much force in this district as to shake the grain out of the ripe ears of the standing corn. The greatest falls of rain come from a few points west of the south, and are of the longest continuance when the wind has passed through the west to the south. In the spring months the damp on low ground is some- times congealed by cold, when there is no such appearance on the hills ; and thereby some of the young shoots of the most tender shrubs and plants are destroyed in the former situation, when no injury happens to those in the latter. This phenomenon probably happens less frequently in Middlesex than in such counties as abound more with hill and dale. The extremes of heat and cold are often very great. The thermometer has been known to rise as high as 84°, and to full as low as 6° below 0° : these extremes, how- ever, fortunately, never last long. Dr. Fordyce says that the heat of the air in London is very variable, seldom remaining equal for many days ; and every year differing entirely from the pre- ceding ones, not only in heat, but also in mois- ture and rains. Sometimes the winter is severely cold, with frost from November till May. In the month of February, 1814, the writer of this sketch, with many thousands besides, walked along the river Thames, from Blackfriars Bridge to nearly London Bridge, so firmly rivetted was the ice at that time. A second or third 'Thames Fair' was held on the ice, which lasted many days. This, however, is a very unusual circum- stance. Sometimes, however, the water in this county is not frozen for more than ten or twelve days. Most commonly there is a little frost in November and December; but otherwise these months are usually very foggy and moist. The principal frost generally is in January; February is commonly a mild, open, and moist month ; March is generally cold and dry. The summer months vary as much : sometimes there are three months very warm ; sometimes not more than a week ; the latter half of July is commonly the hottest. In August heavy rains often fall, espe- cially in the last half of the month. The most common summer heat is from 65° to 75°. The most common winter heat, when it freezes, is be- tween 20° and 30° ; the most frequent, when it does not freeze, between 40° and 50°. These ob- servations respecting the climate should be un- derstood to refer more

particularly to the cities of London and Westminster.

The soil of this county varies extremely, from the operation of the elements, from its being more or less manured, and from cultivation ; so that tlie surface of all the lands assumes more or less the appearance of loam. Accordingly a sur-

face of perfect sand, clean gravel, or pure clay, is not now u be found in any part of the county. The following account of the soil and fertility of Middlesex, extracted from Norden's Speculum Britannia (written in the reign of Queen Eliza- beth), may amuse the reader who wishes to compare ancient with modern time? : — ' The soil of Middlesex is excellent, fat, ar.a fertile, and full of profile ; it yeeldeth corne and graine not onlie in abundance, but most excellent good wheate, especially about Heston, which place may be called Granarium tritici regalis, forthesingularitie of the corne. The vaine of this especiall corne seemeth to extend from Heston to Harrow-on- the-Hill, between which, as in the midway, is Perivale, more truely Purivale, &c., &c. Yet doth not this so fruitfull soyle yeeld comforte to the wayfaring man in the winter time, by reason of the claieish nature, which, after it hath tasted the autumne showers, waxeth both dyrtie and deep; but unto the countrie swaine it is a sweet and pleasant garden, in regard to his hope of future profile, for

The deep and dirtie loathsome soyle Yields golden graine to painful toyle.

The industrious and painful husbandman will refuse a pallace to droyle in these golden pud- dles.' ' The wheat of Heston was so famous that Queen Elizabeth, as it is reported, had the mosl parl of her provisions from that place, for manchet for her Highnesse's own diet.' The summits of most of the highest hills in the counly consisl of sand and gravel, though frequently intermixed with loam. Hampstead Hill consists of eight or ten feet of yellow iron-stained sand, with some loam or rounded flints, on a pure while sand of many more feel. The surface is covered wilh furze, excepl where the ground is dug. Loamy sand, or turnip and barley land, includes all that portion of country lying between the road leading from Hounslow to Colnbrook on the north, and the river Thames on the south, containing in depth from one foot to ihree (though for the most part from eighteen inches to two feet), on the gravel of small flints, six, eight, or ten feet in thickness ; and under the gravel is a leaden-colored tenacious earth, used by the tile- makers, of greal deplh. On ihe easl side of the county, the whole way from Tottenham to Enfield Wash, the superstratum is of the same light nature, of from six inches to two feet in depth, on a gravel of small flints, which can only be dug, for the repairing of roads, to the depth of from two feet to five, owing to its then putting on the appearance of a quicksand, so filled with 'vater as to prevent all deeper digging. Sandy loam will include

all the land between the Colnbrook and Uxbridge roads, on the west side of Han- well and Hounslow, of from eighteen inches to upwards of five feet in depth, on six or eight feel of the gravel of flints, on a subsoil of impervious leadened-colored earlh. Of ihis description is the south side of the parish of Harefield, and the parishes of Twickenham, Isleworth, Baling, Chiswick (the soil of which is from a strong to a tender or sandy loam, and from a rich and fertile to a white and sharp sand and gravel), Kensington, Fulham (consisting of a light, black, and fertile soil), Brompton, and Chelsea. Strong

loam : all the land from llyslip and Ickenham on the west, to Greenford, Apperton, and Harrow, on the east, is composed of strong loam. The land about South Mimms is also of this kind. The level between Islington, Hampstead, and Hornsey, is a strong but very productive loam. Loamy clay, which is generally called clay, as is the leaden-colored impervious subsoil before re- peatedly mentioned, constitutes the north aspect of a hill between Uxbridge Common and Hare- fie'd, the land north-west of Ryslip, the greater part of Hanger Hill, a wood near the east end of Hillington Heath, and the land between the river Brent and Hampstead, on the Hendon road. The meadows on the north-west side of Hendon church, towards Page Street, are of nearly the like kind ; much of this parish, indeed, is of a clayey nature, yet there are patches of sand, and more of gravel. From Nightingale Hall by Col- ney Hatch to Whetstone the land is of a loamy clay, mixed with pebbles of flints ; and from Potter's Bar, for about two miles towards South Mimms, the soil is the same. The north side of Highwood Hill has a thin skin of loamy clay, on a subsoil of yellow clay ; and in many of these places the subsoil is a yellow clay ; but all the varieties abound with rounded flints. Peat : The moors near the river Coin, the whole dis- tance from Rickmansworth to Staines, consists principally of peat on a substratum of the gravel of flints, which occasionally in almost every place about here shows itself on the surface. Peat has also been found on the borders of the river Lea, and in the Isle of Dogs. This isle which contains nearly 1000 acres, most or all of the land on the flat borders of the rivers Lea and Coin, some inconsiderable quantity of land on the side of the Brent, the small islands in the river Thames, and many pieces of land situated in the various nooks and windings of that river, come under the description of marsh land. The surface of this county, though ' gently waving,' can no where make pretensions to what is called the picturesque.

No ragged woody mountains nor craggy ivy- bound rocks here present

themselves to intercept the traveller on his way, or to captivate the fancy of the painter ; but the more chaste, beau- tiful, and ornamented scenes may be found in many parts of the county. The inequalities of the surface which we meet with in this district contribute to health, ornament, and beauty. Here are not many dingy heaths nor sombre-colored woods to offend the sight in the gay season of May ; but shady groves, diversified plantations, and meandering rivers. Numerous villas, orna- mented grounds, lawns, and medallions of beau- tifully flowering shrubs almost every where pre- sent themselves to the view of the traveller ; which, together with the great number of lofty spires and gay carriages, cannot fail to remind him of being in the vicinity of a metropolis which may very justly be called the Centre of Commerce, Wealth, and Fashion. The north border of the county is high ground ; and, by the shelter it affords, adds considerably to the fruirfulness of the other parts. The principal lulls are Highwood and Hendon, the hill at Bar- net, another between that place and Elstree, also

Brockley Hill; which, together with the High- gate and Hampstead lulls, are the highest in the county. Their summits are nearly of the same level, which is about 400 feet above the level of the tide. Mr. Middleton is of opinion that Hampstead is a little higher than Highgate ; and as it is considerably higher than Harrow, and most other ground in the county, he estimates its apparent height in the following manner: viz. as near as can be judged by the eye, it is a small matter higher than the top of St. Paul's cross ; therefore, suppose St. Paul's church-yard to be above the tide thirty feet ; the height of St. Paul's is said to be 340 feet ; and this writer thinks Hampstead is higher by about thirty feet : which several dimensions make Hampstead to be above the level of the tide 400 feet, as above stated. From Norwood to Cowley, for a length of six miles on the Uxbridge Canal, the surface is eighty- five feet above low-water mark at Brentford Bridge ; at Uxbridge it is ninety-six feet ; and in the meadows near Harefield it is 107 feet above the said mark. All the land to the south of the road, passing from Brentford through Hounslow to Longford, is so nearly level as to have no more than a proper drainage, and much the greater part of it is less than ten feet above the surface of the river Thames at Staines Bridge, and not more than from three to five feet above the level of the rivulets flowing through this district. From Staines, through Ashford and Hanworth Common to Twickenham, a distance of seven miles and a half, is a perfect level, and generally from ten to twenty feet above the surface of the river Thames. Round the one mile-stone on the Kingsland Road, the surface is lowered from four to ten feet (average five), by the earth having been dug and manufactured into bricks, over an extent of more than 1,000 acres. The recent works on High- gate Hill, now forming one of the noblest roads in the kingdom, and called the Highgate Tunnel, or Archway, have lowered the hill many yards, thougb they have no sensible effect on the general face

of this part of the county.

Middlesex is abundantly supplied with very excellent water. The Thames, the prince of ri- vers, divides this country from Surrey. The largest ships in the service of the East India Company can safely come up this river, to the edge of the county at Black wall. It is navigable for West India ships to London Bridge, and for barges all along the southern border of the county. This river is rendered famous by the port of London in every commercial part of the world. The tide flows for about twenty-three miles ap the Thames, along the side of the county. This river, from Oxford to Maidenhead, falls about twenty-four feet every ten miles; from Maidenhead to Chertsey Bridge nineteen feet every ten miles ; from Chertsey Bridge to Mortlake thirteen feet every ten miles; and thence to London one foot per mile ; and the fall gradually diminishes till it is lost as the river ap- proaches the sea. To this noble and capacious river the county of Middlesex, and indeed the kingdom in general, is much indebted for the assistance it affords, not only as an easy and cheap conveyance of the products of our island, but also as being the means of bringing to our

very doors the various productions of the whole habitable globs; serving at the reflux of the tide as a useful drain to carry off the filth and super- fluous water of the capital and surrounding country : then, by the wonderful chemical opera- tions of nature, returning to us with its excellent purified stream,

Though deep, yet clear; though gentle, yet not

dull; Strong without rage ; without o'erflowing, full !

The river Lea forms the eastern border of the county. The Brent, the Coin, and the small river Cam, are also rivers of this county ; and the Regent's Canal and Park are now amongst its beautiful geographical features.

From the Brent is derived the name of the county town, Brentford. This is indeed called the county town, and here the elections for the county take place ; but it is a low, miserable place, with scarcely a good house in it. The Serpentine River in Hyde Park is artificial, made about the year 1730. Spring water is to be obtained in many parts of the county at a small expense of sinking, and there are several mineral springs. But little can be said of the natural produce of this county. It owes almost every thing valuable of this nature to cultivation. There are no mines in the county ; nor have any metallic strata been discovered here.

Middlesex returns fourteen members to parlia- ment : viz. two for the county, four for the city of London, two for the city of Westminster, two for the borough of -Finsbury, two for Mary-le- bone, and two for the Tower Hamlets. See LONDON 510

The eminent persons that have been born in this county are almost too numerous even for a bare list of names. For the sake of uniformity, however, such a list shall be here attempted : — Michael Alford. Jacob Allestrey. Edward Al- leyn. Launcelot Andrews. Francis Anthony. John Anthony. John Argall. John Arnold. William Arnell. Dr. T. Arne. George Ashton. Albricius, a physician and philosopher of the eleventh century. George Ashwell. Francis Bacon. John Bacon. Henry Baker. Joshua Barnes. Dr. Isaac Barrow. Thomas Birch. William Bowyer. Thomas Broughton. Sir Thomas Browne. James Butler. Richard Owen Cambridge. William Camden. Sir Thomas Chaloner. Geoffry Chaucer. Charles Churchill. Colley Gibber. Susanna Maria Gibber. Dr. John Colet. Anthony Ashley Cooper, earl of Shaftesbury. Samuel Cooper. Abraham Cow- ley. William Cowper, dean of Durham. John Davenport. Thomas Day. Dr. John Dee. John Dennis. Dr. Philip Doddridge. John Donne. John Ellis. Thomas Farnaby. Tho- mas Flaxman. Dr. W. Fleetwood. Dr. T. Franklin. John Gale. Richard Gough. John Gaunt. Thomas Gray. Dr. Maurice Green. Sir Thomas Gresham. Dr. Edmund Halley. Robert Harley, earl of Oxford. John Hampden. Dr. William Hawes. James Heath. John Hen- derson. John Heywood. Eliza Hey wood. Jo- seph Highmore. Aaron Hill. Bishop Hoadly. Dr. J. Hoadly. William Hogarth. Thomas Holcroft. Thomas Hollis. John Hoole. John

Hoppner. Bishop Horsley. Dr. John Jebb. Soame Jenyns. Ingulplms. Inigo Jones. Sir W. Jones. Dr. J. Jortin. J. Keeple. Anne Killigrew. Dr. William King. Thomas King. Dr. S. Knight. J. Leland. Wm. Lowth. Isaac Madox. Michael Maittaire. Henry Mill. John Milton. Sir Thomas More. George Morland. Thomas Mortimer. John Motley. Robert Nelson. George North, M. A. Anne Oldfield. John Palmer, the comedian. Samuel Paterson, the bibliographer. William Penn, the Quaker, of immortal memory. Catherine Phillips. Alex- ander Pope. Percival Pott, F. R. S. James Quin, the comedian. Isaac Reed. Dr. William Rowley. William Seward. James Shirley. Stephen Skinner. Rev. Dr. Thomas Smith. Edmund Smith. Dr. Daniel Charles Solander. Edmund Spenser. P. D. Stanhope, earl of Chesterfield. George Stepney. John Stowe. John Strype. James Stuart, called Athenian Stuart. Sir William Temple. Bonnel Thornton. Andrew Tooke. Thomas Twining. Richard Verstegan, antiquary, &c. George Vertue. Dr. John Ward. Thomas Wentworth. Bulstrode Whitelock. John Wilkes. Henry Woodward, comedian. Daniel Wray. All the above, an.d doubtless many more, many of them equally de- serving of notice, were natives of London. The following were born, most probably, in some other part of the

county: — Henry Aldrich. Eustace Andrews. Sir Arthur Aston. Allen Bathurst. Thomas a Becket. Henry Bennet. T. Betterton. Sir Thomas Pope Blount. An- thony Collins. Martin Folkes. Dr. John Hough, bishop of Worcester. John Howard, of immortal memory. Sir William Killegrew. Thomas Killegrew Dr. H. Killegrew. Dr. William King- Dr. R. Mead. James Nares. Lacy Ryan. Dr. Robert South. Dr. Brook Taylor. Dr. Joseph Toms. Edward Vernon. Paul Whitehead.

The manufactures, trade, and commerce of Middlesex embrace every species of traffic, art, and occupation, that the whole kingdom itself can boast. See, however, the description of LONDON.

MIDDLESEX, a county of Massachusetts, North America, is bounded north by New Hampshire, east by Essex county, south-east by Norfolk county, and west by Worcester county. Popu- lation 52,789. Chief towns Charlestown, Cam- bridge, and Concord.

MIDDLESEX, county of Connecticut, is bound- ed north by Hartford county, east by New Lon- don county, south by Long Island Sound, and west by New Haven county. Population 20,723. Chief town, Middletown.

MIDDLESEX, county of New Jersey, is bounded north by Essex county, east by Staten Island and Raritan Bay, south-east by Monmouth county, south-west by Burlington county, and north-west by Somerset county. Population 20,381. Chief towns New Brunswick, and Amboy.

MIDDLESEX, county of the east part of Virginia; bounded N. N. E. by the Rappahannock, east by Chesapeake Bay,south and south-west byMathews, Gloucester, and King and Queen counties, and north-west by Caroline county. Population 4414. Slaves 2476. Chief town Urbanna.

MIDDLETON (Dr. Conyers), a celebrated English divine, the son of a clergyman in York- shire, was born at Richmond in 1683. He dis- • inguished himself, while fellow of Trinity College, Cambridge, by his controversy with Dr. Bentley his master, relating to some mercenary conduct of the latter in that station. He afterwards had a controversy with the whole body of physicians, on the dignity of the medical profession ; con- cerning which he published De Medicorum apud veteres Romanos De gentium Conditione Dissertatio ; qua, contra viros Celeberrimos Ja- cobum Sponium et Richaruum Meadium, servi- lem atque ignobilem earn fuisse, ostenditur. Hitherto he had stood well with his clerical brethren ; but he drew their resentment on him in 1 729, by writing A Letter from Rome, .showing an exact conformity between popery and pagan- ism, &c. ; which

appeared dangerous to the cause of miracles in general. In 1741 came out his great work, The History of the Life of M. Tullius Cicero, 2 vols. 4to. ; which is indeed a fine per- formance. In 1748 he published A Free En- quiry into the Miraculous Powers which are sup- posed to have subsisted in the Christian Church from the earliest ages, through several successive centuries. He was now attacked from all quar- ters ; but, before he took any notice of his an- tagonists, he supplied them with another subject in An Examination of the Lord Bishop of Lon- don's Discourses concerning the use and extent of Prophecy, &c. He was in 1723 chosen prin- cipal librarian of the public library at Cambridge ; and, if he rose not to dignities in the church, he was in easy circumstances, which enabled him to assert a dignity of mind often forgotten in the career of preferment. He died in 1750, at Hil- dersham in Cambridgeshire, an estate of his own purchasing; and in 1752 all his works, except the life of Cicero, were collected in 4 vols. 4to.

MIDDLETON (Sir Hugh), a public-spirited goldsmith and citizen of London, born at Den- bigh ; to whom the inhabitants of that great city are indebted for the benefit of the New River, which he began February 20th, 1608, after the scheme had been given up as impracticable, by uniting two streams in Middlesex and Hert- fordshire; and at last happily accomplished in 1613, but at the expense of his whole fortune. King James I., who greatly approved and pa- tronised the plan, and agreed to pay half the expense, rewarded his public spirit by creating him a knight, and afterwards a baronet. Sir Hugh died in the reign of Charles I. and left a share in the New River to the poor of the Gold- smith's Company.

MIDDLETON (Thomas Fanshaw), D.D. F.R.S., the first bishop of Calcutta, was the son of the rector of Kedleston, Derbyshire, and born in 1769. He was educated at Christ's Hospital, and proceeded upon a school exhibition to Pem- broke Hall, Cambridge, where he took his first degree in 1792. He took orders this year as curate of Gainsborough in Lincolnshire, where he wrote a periodical paper called The Country Spectator. Attracting, in 1794, the attention of Dr. Pretyman, archdeacon of Lincoln, he em- ployed him as a tutor to his sons, and obtained

for him the rectory of Tansore, to whicn, in 1802, was added in commendam that of Little and Castle Bytham. The late Rev. R. G. Robinson LL. R., vicar of Harborne, &c., was the friend to whom the bishop's father was indebted for the opportunity of placing his son at Christ's Hospital. This circumstance the bishop never forgot ; for Mr. R. was among the first to hear of any success of the bishop's, and Mr. R.'s son was pressed very much by him to accompany him to India as his chaplain. The following is an extract of a letter to Mr. R. from the bishop : —

Peterboro', May 29, 1795.

' Mr. Pretyman has presented me to the rectory of Tansore, in Northamptonshire, and I am now at Peterborough for institution. I give you almost the earliest intelligence of this affair, because I am aware that this, and every othei success which may attend me, must ultimately be ascribed to you.'

He took his doctor's degree in 1808; and the same year appeared his work on the Greek Article, the doctrine of which he has most ably illustrated. In 1809 he was promoted to a stall in the diocese of Lincoln, the vicarage of St. Pancras, Middlesex, and the rectory of Putten- ham, Herts: in 1812 he was made archdeacon of Huntingdon. When government resolved to establish a bishop in India, Dr. Middleton was selected for that station, and, being consecrated at Lambeth in May, arrived at Calcutta in No- vember, 1814. In 1820 he laid the foundation stone of Calcutta church, and a school for the education of the Christian poor : a missionary college was soon after established. Dr. Middle- ton died in the midst of these labors of a fever, ˆuiy 8th, 1822. His sermons and charges have been collected by Dr. Bonney into 1 vol. 8vo., with a biographical memoir.

MIDDLETOWN, a town of the United States, the capital of Middlesex county, Connecticut, is situated on the west bank of Connecticut River, thirty-four miles above its mouth. It is a plea- sant and flourishing town,

and has considerable trade and manufactures. It contains a court- house, a jail, four churches for Congregationalists, Episcopalians, Independents, and Baptists. It has, besides, a large woollen manufactory. The river is navigable to this place for all vessels drawing ten feet of water; and in 1816 the quantity of shipping that belonged to the port amounted to 19,499 tons. Two miles from the city is a lead mine. Population 2014 ; and, in- cluding the township, 5382. Twenty-five miles N. N. E. of New Haven. 2. A township of the United States, in Monmouth county. New Jersey, south of Ran tan Bay. Population 3849.

3. A flourishing town of the United States, in Dauphin county, Pennsylvania, situated on the north-west side of Swatara Creek, a little above its junction with the Susquehannah. It carries on a considerable trade in wheat and flour. Ninety-two miles west by north of Philadelphia.

4. A township of the United State , in Delaware county, New York. Population 2318. 5. A township of Bucks county, Pennsylvania. Population 1663. 6. A township of Delaware coun ty, Pennsylvania. Population 948.— It is also*

the name of various inconsiderable townships in the United States.

MIDDLEWICH, or MIDDLEWICK, a town of Cheshire, 166 miles north-west of London. It stands near the conflux of the Croke and Dan, below the junction of the Wheelock and Dan, where are two salt-water springs, from which are made great quantities of salt, the brine being said to be so strong as to produce a full fourth part salt. It is an ancient borough, governed by burgesses, and its parish extends into many adjacent townships. It has a spacious church, and a market on Tuesday ; and fairs on St. James's day, July 25th, and Holy Thursday. It has an inland navigation of above 500 miles, by the Mersey. See MERSEY. It lies twenty- four miles east of Chester.

MIDHURST, a town of Sussex, which has been represented in parliament ever since the 4th of Edward II. It is a neat small town, on a hill surrounded with others, having the river Arun at the bottom ; and is a borough by pre- scription, governed by a bailiff, chosen annually by a jury at a court-leet of the lord of the manor. It has a market on Thursday ; fairs on March 21st, and the Thursday after. It is 11 miles north by east of Chester, and 50 west by south of London. It sends one member to parliament.

MIDIAN, or MADIAN, in ancient geography, a town on the south side of Arabia Petraea; so called from a son of Abraham by Keturah.

MIDIAN, a town near the Arnon and in ruins in Jerome's time.

MIDIANITES, the people of Midian. With their daughters the Israelites committed fornica- tion and idolatry. A branch of the Midianites dwelt on the Arabian Gulf, and were called Kenites ; some of whom turned proselytes, and dwelt with the Israelites in the land of Canaan.

MIDNAPORE, a district of Bengal, once a portion of Jellasore, and of the province of Orissa, but transferred to Bengal about the year

1706. It contains 6000 square miles, ana 1,500,000 inhabitants. For a long period in the hands of the Afghauns it has a greater number of Mahometans than most other districts. It was ceded to the East India Company by the nabob Cossim Aly Khan. It contains a grea» number of small forts, one of which was some time since discovered in the middle of a forest, containing twenty pieces of cannon, in an un- serviceable state. These old forts and the forests still serve as a refuge for robbers. Mid- napore, though not so fertile as Burdwan, pro- duces abundance of sugar, grain, tobacco, cot- ton and indigo. Its chief manufacture is sannas, a fine calico. Its chief towns are Midnapore, Jellasore, Piply, and Narraingur ; its rivers the Cassia and Subunreeka.

MIDNAPORE, the capital of the above men- tioned district, formerly possessed a brick fort, surrounded by a ditch. This is now converted into a jail. It is the station of a judge, collector, &c., and has a cantonment for two battalions of infantry. Long. 87° 25′ E., lat. 22° 25′ N.

.MID'RIFF, n. t. Sax. mn>hruFe ; Goth, mid- rif, mid and hrife, the belly. The diaphragm. See the extract from Quincy.

Whereat he inly raged, and, as they talked, Smote him into the midriff with a stone That beat out life. Milton's Paradise Lost.

In the gullet, where it perfbrateth the midriff, the carneous fibres of that muscular part are inflected.

•&»>/•

The midriff divides the trunk of the body into two cavities ; the thorax and abdomen : it is composed of two muscles ; the first and superior of these arises from the sternum, and the ends of the last ribs on each side. The second, and inferior muscle, comes from the vertebras of the loins by two productions, of which that on the right side comes from the first, second,

and third vertebras of the loins : that on tha left side is somewhat shorter ; and both these produc- tions join and make the lower part of the midriff.

Quincy.

MIDWIFERY.

MID'WIFE, n. s. J From the Goth, mit , met, MID'WIFERY. 5 wise, cunning, and rif(huif, a woman's hood) wife : Scot, cannie wife. Skin- ner and Junius confound the first syllable with the Sax. mi", meed, a reward. But the French retain the old northern idea of the word in their saecfenane, and the Dutch in their vroed-moeder, wise mother or woman. Strictly, a woman who assists the human female in child-birth : in the modern acceptation midwifery includes the medical treatment, by either sex, of all the symp- toms and consequences of pregnancy, and of the child or children produced, while suckling. See below.*

And it came to pass, when she was in hard labour, that the midu-ife said unto her, Fear not ; thou shalt have this son also. Gen. xxxv. 17.

Without a midwife these thtir throes sustain, A.nd, bowing, bring their issue forth with pain.

Sandys.

When man doth die, our body, as the womb, And as a midwife, death directs it home. Donne.

There was never any thing propounded for publick good that did not meet with opposition ; arising from the humour of such as would have nothing brought into the world but by their own midwifery.

Child's Discourse on Trade. There saw I how the secret felon wrought, And treason labouring in the traitor's thought, And midwife time the ripened plot to murder brought.

Dry den.

I had as clear a notion of the relation of brothers between them, as if I had all the skill of a midwife.

Locke.

So hasty fruits, and too ambitious flowers, Scorning the midwifery of ripening showers. In spight of frosts, spring forth the' unwilling earth.

Stepney.

But no man, sure ! e'er left his house And saddled Ball with thoughts so wild,

*To bring a midwife to his spouse, Before he knew she was with child. Prior**

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HISTORY OF MIDWIFERY.

MIDWIFERY, in the present and extended import of the term, includes not only the assist- ance directly afforded to women in the act of child-birth, but the relief of the diseases con- nected with their sexual system, as well as those of their infants during the period of lactation.

We shall endeavour to present to our readers a brief, yet a connected sketch, of this branch of medical science; dwelling very slightly on the eai'ly periods of its history, when the notions of the ancients were so erroneous, and their prac- tices so absurd, as scarcely to reward the trouble of investigation.

The practice of midwifery, or rather the be- stowment of help on parturient women, was al- most co-existent with the human species. ' There must have been a time,' says Dr. Den man, ' when the rude but well-meant endeavours of one friend to relieve another in distress ceased, and application was made to those who were supposed to have more information or greater skill. This would properly be the origin of the art.'

From all the passages of Scripture where midwives are mentioned, it is plain that women were the only practitioners of this art among the Hebrews and Egyptians. It is equally certain that the Greeks and the Romans confided this most important branch of medicine to women. Rachel, the wife of Jacob, and Thamar, who was delivered of twins, were assisted by midwives. Pharaoh, king of Egypt, commanded the mid- wives to destroy all the male children of the He- brew women; but they nobly disobeyed. Pha- narete, the mother of Socrates, was a midwife ; and Plato explains the functions, and regulates the duties undertaken by these females. He remarks that at Athens they had the right of proposing and making marriages. Hippocrates, Aristotle, Ga- len, and /Ltius, allude to midwives in their works; and Aspasia, who was probably celebrated amongst the women of this order, is not unfre- quently cited by /Etius.

These instances are interesting, inasmuch as they prove that a distinct class of females was employed to render assistance in labor. In these early ages

every circumstance would favor the health and energy of the species ; and where the difficulties of parturition were trivial, not arising from malconformation or a debilitated system, a little longer time, and the encouragement of the midwife, associated perhaps with manual help, more apparent than real, would be amply sufficient to overcome every obstacle. In other instances, as we cannot suppose they enjoyed an entire exemption from pelvic deformity and extensive haemorrhage, more especially at Athens and Rome, where luxury and voluptuous dis- sipation were widely prevalent, such assistance as the imperfect state of their knowledge on this ubject enabled them to bestow could not have prevented a most painful mortality amongst par- urient women. It ought, however, to be remem- Dered, that the warmth of the climate would exert a genial influence, and very much facilitate the progress of labor. To this circumstance we may perhaps fairly attribute a great portion of that success, which to us, at this period, appears to have exceeded any reasonable expectation. VOL. XIV.

Hippocrates, who practised medicine in Greece 460 years before the Christian era, it styled by some authors the father of midwifery as well as of physic. It is needless to dwell on the un- bounded veneration with which his name has been regarded by succeeding ages. His works will ever excite the highest admiration, as carry- ing with them indubitable proofs of profound and laborious research. His sagacity and expe- rience fully entitle him to our praise ; and yet, by only glancing at his obstetric views, we shall afford our readers ample means to estimate the very little progress which the science had then made. To female diseases, not immediately associated with parturition, he evidently paid much attention ; there was little or no difficulty in the way of personal observation, and his opi- nions and method of treatment are to this day, in some measure, the objects of enquiry.

In midwifery, on the contrary, he had no such opportunities ; his information was not gained at the bedside of the patient. The precise character of the circumstances to be remedied, and the ‘ ratio medendi’ of the means proposed, came to him through the medium of persons incapable of forming a correct opinion, and of making a just report. It is not wonderful, therefore, that we now smile at his notions, and hold in little estimation his uncouth and curious remedies. He is, notwithstanding, a splendid example of ancient medical knowledge and practice.

Hippocrates was acquainted with no other kind of natural labor than that in which the head presents. Here, if the progress was slow and difficult, he recommended sternutatories ; and, if these failed, the patient was to be held by the shoulders, and gently shaken at intervals till her pains expelled the child. He represents pre- sentations of the feet as generally fatal ; and in these, as well as where the arm, leg, or side pre- sents, he recommends

returning them as soon as possible into the uterus, and to bring down the head. If from any untoward circumstance, as the death of the child, or the swelling of its body, its delivery could not be effected, he di- rects that it shall be brought away piece-meal. His injunctions relative to the management of the placenta are replete with danger. Its imme- diate extraction is recommended ; and pul'ing at the funis, in various ways, is the principal method of procedure. From this period till after the commencement of the Christian era midwifery made no progress. Celsus, who flourished in the reign of the emperor Tiberius, A. D. 37 although an ardent admirer and a close copy- ist of Hippocrates, threw some new light on parturition. He recommended, in the case of a dead child, the introduction of the hand ; and the delivery by the feet in cases where the arm presented ; and was of course aware of the error of Hippocrates in attaching such fatal conse- quences to footling cases. He also recommends the dilatation of the os uteri, from which, how- ever, little benefit and much injury may often arise. This improved method of delivery did not meet with all the credit and support which it deserved ; for Galen, who lived A. D. 131, about 600 years after Hippocrates, condemned it an decidedly as his great predecessor had done.

Pliny too, who lived under Vespasian and Titus, accords with Galen ; and, although not a physi- cian himself, attests the opinions of the physi- cians of his time. lie asserts the difficulty attendant on labor where the feet present, deno- minates it preternatural, aud adds, that children coming into the world in this manner were called agrippa, that is to say, born with much difficulty.

This opposition to delivery by the feet was not easily overcome ; for, although men of repu- tation approved and recommended it, we find that, as late as the middle of the seventeenth century, Riverius publicly condemned footling labor ; and Mauriceau remarks, in the first edition of his book printed in 1664, that many authors were still of opinion that, in such cases, it would be better to turn, and bring down the head of the child. After having, however, observed that it is difficult, if not impossible, to execute this, he concludes, ' it is much better to extract the child by its feet, when they present, than to run the hazard of doing worse by turning it.'

The advantages of this first great improvement in obstetric science are so apparent, and the principle on which it proceeds is so simple, — so •uperior to the laborious, and in many cases in- superably difficult and dangerous practice of bringing down the head, that we are filled with surprise at the

hostility opposed to its adop- tion. It is impossible to place in a clearer light, the ignorance and irresponsibility of the writers and practitioners of midwifery at this period ; they propose almost as auniversal remedy a procedure which can rarely be adopted with safety, and the employment of which must have been attended, in the majority of instances, with the most calamitous results. Turning a child, by the most skilful practitioner, and in the most favorable circumstances, is a truly undesira- ble occurrence ; we can, therefore, easily con- ceive its consequences in such a rude and undigested condition of the principles and prac- tice of the art.

It would seem no useful purpose to dwell on the series of writers who succeeded Celsus; they were, for the most part, devoted followers of Hippocrates ; and, where this was not the case, they were little more than transcribers of each other. Amongst the number may be men- tioned Moschion, in the reign of Nero ; Rufus, Ephesius, Galen, in the reign of the emperor Adrian ; Oribasius, and Paulus ./Egineta, who closes the list of ancient Greek writers on medi- cine.

Le Clerc, in whose History of Physic much curious and very interesting matter will be found, places Paulus at the end of the fourth or the beginning of the fifth century ; at or before which period the western Roman empire had been overturned by the Goths and Vandals. Le Clerc supposes that the celebrity of Alexandria, for centuries the chief seat of philosophy and science, though now past the meridian of its splendor, had induced him to prosecute his stu- dies in that city ; to have done which, according to Ammianus Marcellinus, in the time of the emperor Valens, was a sufficient pretence for any one to commence the practice of physic.

Soon afterwards the library of Alexandria waj burned, its scientific treasures were dispersed, and its learned men driven into exile by the ruthless hand of Mahometan intolerance. Thus terminated the splendor of the last of the ancient schools. But the Saracens were happily destined in their turn to carry forward philosophical and intellectual enquiries ; and in Arabia astronomy, geometry, and medicine, were cultivated with great zeal and no small success. Nor can we forget that to them we are indebted for the use of numerical characters, and that their physicians first presented to the world an account of the small-pox. Yet our notices of the medical writers of this school must necessarily be brief ; although, as they devoted themselves in some degree to midwifery, our history would be im- perfect were we not to present to our readers some short abstract of their labors.

Serapion treats, at some length, of the dis- eases of pregnant women, with the method of cure.

Rhazes follows in the same course, and ad- vises the membranes to be

ruptured by the nail, or by a small knife, when, by their rough- ness, they impede the labor.

Avicenna, who lived at Ispahan aoout the year 1000, possessed amazing celebrity, and his writ- ings maintained their fame till the restoration of learning. It was he who gave the first description of the forceps, or an instrument to be employed in difficult parturition, with the double purpose of saving the life both of the mother and the child. In all preternatural cases Avicenua ad- heres to the erroneous practice of reducing the head into the natural position ; but where this is impossible he enjoins delivery by the feet, and pronounces it the safest of the preternatural pre- sentations.

Albucasis, the last Arabian writer to be men- tioned here, lived in the eleventh century at Cy- nopolis, on the Caspian Sea ; and according to Dr. Smellie, to whom we are indebted for some valuable facts introduced in this sketch, ' is the same person who was also known by the name of Alsaharavius, at least so it appears from an Arabian manuscript now in the Bodleian library.' Albucasis has merely followed his predecessors, annexing a more particular description of the instruments then used in midwifery.

Having thus briefly traced the progress of medical science, so far as midwifery is con- cerned, from the earliest ages, we must remark that about this period (the twelfth century) the study of physic began to decline in the east. We have already seen that at the destruction of the Alexandrian library the dispersion of the learned in ditferent countries was productive of good. By these events, in themselves so disas- trous, science was diffused over many parts of the world, which might otherwise have remained in darkness and error.

After the conquest of Rome by Odoacer, the eastern part of this vast empire survived for many centuries. Constantinople, its capital, was distinguished not only by its splendor and magnificence, but by its cultivation of the arts. Men, devoted to science, here found an asylum, till its final subjugation by the Turkish arms,

under Mahomet the Second. But the religion and manners of the Turks were most unfavorable to literature; they were led to circumscribe all philosophy and knowledge within the narrow limits of their own intolerant and fanatical faith. It is therefore naturally to be supposed that individuals devoted to literary pursuits would seek elsewhere the tranquillity which the bar- barity of their conquerors would necessarily deny. So that the wisdom of Providence in this, as in other instances, educed extensive good for

mankind from devastation and war.

Many of these individuals would doubtless re- pair to the schools which had been established in Italy since the eighth century, from which wes- tern Europe first derived their knowledge ; and amongst these Padua was especially famous for the cultivation of medicine. It must also be re- membered that the darkness of the middle ages was now passing away ; that the dawn of that day had appeared, which, in its full splendor, was to enlighten the whole of Europe, and to create a period distinguished by historians as the ' revival of letters.' The minds of men, too, were arising, perhaps for ever, from the igno- ranoe and degradation in which they had been so long lost; and the art of printing, now fully established, had removed every serious impedi- ment to the attainment and distribution of hu- man learning. The accumulated stores of the ancients were exposed to observation and en- quiry throughout Europe; and the Greek MSS. preserved after the destruction of Alexandria, and which had been already translated into the Syriac, Persian, and Indian languages, were brought from Constantinople by the learned Greeks, after the taking of that city in the year 1453. The universities of Paris and Mont- pelier succeeded those of Italy, and continued, till the eighteenth century, to attract not only the students of medicine, but those also who were desirous of improvement in general literature and science.

But it is now time to direct the attention of our readers nearer home, and to trace before them the progress which medicine, and more especially midwifery, were destined to make in England. It would be very easy to show that our own country has afforded no pleasing exception to that slow and very gradual attainment of knowledge which has marked the early history of all nations. The wars in which the Britons were so frequently en- gaged were little conducive to scientific attain- ments ; and perhaps no individual before Roger Bacon, who flourished in the thirteenth cen- tury, ought to be considered as at all learned. This enquiry is however foreign from our pur- pose. We shall, therefore, at once remark that the establishment of the College of Physicians in London, by the charter of king Henry VIII. in 1518, may be considered almost the first event directly favorable to the improvement of medi- cine. Linacre, a man, according to Dr. Freind, of a bright genius and clear understanding, as well as unusual knowledge in different parts of learning, was its first president, and remained so till his death. He published a translation in Latin of different parts of Galen, of which it has been remarked that, from the exactness and pro-

priety of the style, any one might have supposed it was written in a classical age. Dr. Freind iu eulogising Linacre, more especially for the foun- dation of the college, observes, ' The wisdom of such an institution speaks

for itself. His scheme without doubt was not only to create a good understanding and unanimity among his own profession (which of itself was an excel- lent thought), but to make them more useful to the public ; and he imagined that by separat- ing them from the vulgar empirics, and setting them upon such a reputable foot of distinction, there would always arise a spirit of emulation among men liberally educated, which would ani- mate them in pursuing their enquiries into the nature of diseases, and the methods of cure for the benefit of mankind. And perhaps no founder ever had the good fortune to have his designs succeed more to his wish ; this society having constantly produced one set of men after another, who have done both credit and service to their country by their practice and by theii writings.' In proof of this statement we may refer to the discovery of the circulation of the blood by Harvey, to the labors of Glisson on irritability, to those of Willis on the brain and the nervous system, and to the gieat improvement of our knowledge of the glandular and lympha- tic systems by Joliffe, VVharton, and Needham, and more especially in later times by Dr. W. Hunter.

Dr. Denman laments that Linacre did not print his works in English, in which language they would have been generally read, have afforded immediate instruction, stood as good examples, and taught a proper method of wi iting. He attributes to this defect of Linacre the con- tinuance of English medical writers in their former style ; and for many years little real pro- gress in knowledge was made, or any titles heard of but those of Urinals, Judgment of Urynes, Anatomy of Urynes,Tieasures of Health, Mirroures of Health, &c. In 1540 was pub- lished the first book on the subject of midwifery in England, entitled The Byrth of Mankynde, otherwise named The Woman's Book, by Thomas Raynold, physician; it underwent a second edition by Thomas Ray a printer, whose name is not much known. It was illustrated with prints, and was held in high estimation. Dr. Raynold informs his readers that this book had been translated from the original Latin some years before by a studious and learned clerk ; who having performed the task incor- rectly, he, Dr. Raynold, had been at great pains to revise and enlarge it in another translation. Its original author, according to Dr. Smellie, was Eucharius Rhodion, whose book was in great es- teem all over Germany ; and in the year 1532, being translated into Latin and other languages, from the original high Dutch, became universally the Woman's Book over all Europe, and was in- troduced into England, when it was translated by this Dr. Raynold.

In the year 1578 the celebrated Harvey was born at Folkstone in Kent, and, having completed his studies at Cambridge, he went to Padua, where he graduated in 1602. In 1603 he pub- lished his treatise on generation; and afterward,*

engaging in the practice of midwifery, he pub- lished his Exercitatio de partu. Sydenham also soon afterwards noticed the diseases incident to childbed women, and those of young child- ren.

It is now proper to remark that more general attention began to be bestowed on midwifery ; its great importance, as a part of the healing art, was fully appreciated ; and the example of Harvey, who had personally engaged in its practice, was followed by the calling in of men practitioners in all difficult cases. Astruc assures us that the epoch of the employment of men midwives goes no farther back than the first lying in of madame De la Valiere, mistress of Louis XIV., in 1663. She sent for Julian Clement, a surgeon of high rep"ta.- tion. He was conducted with great secresy to the house, the lady's face was covered with a hood, and the king is supposed to have been concealed in the curtains. The same surgeon was em- ployed m the subsequent labors of this lady, and, as he was very successful, men midwives after- wards came into repute ; the name of accoucheur being given to them.

It is then the fact that obstetric science made but little progress in Europe till the seventeenth century. The very reverse of this appears to be the case in China. In that empire, according to the latest accounts, both physic and surgery are still in a state of the utmost degradation ; but, for some hundred years, the art of midwifery has been practised by a set of men destined to the purpose by order of government. These men, who hold in society the same rank which lithotomists formerly did in this country, are called in whenever a woman has been a certain number of hours in labor, and employ a mecha- nical contrivance for completing the delivery, without injury to the infant. A certain number of these individuals is allotted to each district of a certain population. It is said that the Chi- nese government was led to make this provision in consequence of many women dying unde- livered, and that, in the majority of cases, the obstacles might have been removed by very simple mechanical expedients. These facts were communicated by a gentleman whb resided upwards of twenty years as surgeon to the British factory at Canton.

About 1634 the works of Ambrose Pare1, the first modern who had made any considerable improvement in midwifery, were given to the world. The reputation of Raynold's book, which had maintained its standing for nearly a century, was now destroyed. Pare" expressly orders, in all preternatural

cases, that the child shall be turned, and brought away by the feet, thus at once deviating from the erroneous practice of the ancients, which had in a greater or less degree prevailed until his day. At this time surgery was more cultivated in Paris than in any part of the world ; and the obstetric de- partment of the Hotel Dieu was erected, into which poor women with child, destitute of the necessaries of life, were admitted. In the year 1668 Mauriceau published a Treatise on Mid- wifery, which exceeded every thing before made public on that subject. He gives a rery full

account of all the different kinds of labor; and the book having been translated into Eng- lish, by one of the sons of the celebrated Dr. Chamberlen, it continued in great estimation for many years. Dr. Chamberlen and his three sons were contemporary with Mauriceau, and for some time they preserved to themselves the exclusive advantage arising from the knowledge of the forceps and lever. Chapman, however, made public a description of this instrument in 1773; although, previously to this period, in- struments, differing from those described by the Arabian writers, had been used in Germany, France, and other places. The success atten- dant on the practice of the Chamberlens in- duced a too frequent use of the forceps; which gave rise to publications, impugning the pro- priety of interfering with the efforts of nature, and of any endeavours to hasten the birth of the child.

Dr. Maubray, the first public teacher of mid- wifery in this country, coincided in these views and in a book entitled The Female Physician, •>r the whole Art of new improved Midwifery, h° violently declaims against the use of instru- ments. The names of Dionis and Deventer may be rext mentioned, both of whom concurred in deprecating the use of instruments in midwifery. Deventer was originally a watchmaker. He entertained the opinion that the wrong positions of the os internum and fundus uteri are the prin- cipal causes of lingering, difficult, and dangerous labors.

In 1727 appeared Dr. Simson's work, entitled The System of the Womb, a production of con- siderable ingenuity, but not of much use in practice. Chapman, who was the second public teacher of midwifery in London, published a Treatise on its Improvement in 1773. His de- scription of the forceps appeared in the third volume of the Edinburgh Medical Essays. In the year 1734 Dr. Hody published A Col- lection of Cases in Midwifery, written by Mr. William Giffard. He gave a plate representing the forceps; and was, it is generally believed, the first who asserted that the placenta might be attached over the os uteri.

About this time lived Sir Richard Manning- ham, who devoted himself to the practice of midwifery, and established a small hospital for the reception of parturient women only, which was the first thing of the kind in the

British do- minions.

*It is, perhaps, scarcely necessary to pursue this narrative any farther. The names of Smellie, Dr. William Hunter, Denman, and of Levnet, in France, are familiar to all professional readers, and a perusal of their works cannot fail to excite a high admiration of their talents and industry. To use the words of Dr. Denman, ‘ The English might be said from this time (1740) to have been in full possession of the subject ; all the books written in the neighbouring countries being translated, public lectures given, and hospitals established, for the further improvement of the art • and, as all the books printed since that time may rea- dily be procured, every one has an opoortunity of forming his own opinion of their respective merits.**

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A variety of circumstances thus concurred to forward the progress of the obstetric art ; and it may with truth be affirmed that, although its cultivation was so long deferred, it has attained a degree of certainty and perfection which places it at least in an equal, if not a superior rank, with any other department of medicine. We are weir aware that many other distinguished individuals might be mentioned, who have con- tributed very largely to the general store of obstetric knowledge; but some of them are still living; and we much prefer an allusion to their individual contributions in the subse- quent part of this treatise, bringing forward their opinions on those subjects which they have either discovered, illustrated, or connrmea.

We shall comprise the whole of our remarks on midwifery in four divisions : —

I. We shall first explain the obstetric proper- ties of the pelvis, carefully noticing those devia- tions which may obstruct parturition. Under this head we shall treat on the healthy and mor- bid circumstances of menstruation.

II. The second division will include the de- scription of the gravid uterus, with the doctrines of conception, sterility, and the signs and diseases of pregnancy.

III. In the third part of the treatise we shall dwell very fully on labor, in all its varieties, and on the various kinds of flooding.

IV. And, to conclude, we shall treat as briefly as possible, consistently with practical purposes, on the diseases which occur soon after delivery.

PART I. EXPLANATION OF THE PELVIS.

1 . It is not our intention to enter at large into the anatomical description of the bones, joints, and ligaments of the pelvis : we shall consider them only so far as they are essentially connected with parturition and its consequences; the minuter details having been already dwelt upon in an earlier part of this work.

2. We find in the foetus and young subject, that the pelvis is composed of eight bones, viz. two ossa ilia, two ossa pubis, two ossa ischia. the sacrum, and the coccyx. Till the age of puberty these bones remain distinct, and this arrangement obviously affords mobility, and allows the bones to adapt themselves to pres- sure. In difficult parturition therefore, and es- pecially in breech presentations, labor may be thus somewhat facilitated. In the adult, on the contrary, from the consolidation of the bony structure, we can enumerate only four bones : the ossa innominata, or side bones of the pelvis ; the sacrum fitted in behind, and serving as a basis for the support of the spine ; and the os coccygis subjoined to the end of the sacrum.

3. Ossa innominata. — These bones form the principal part of the bulk of the pelvis, yet they are not very essentially connected with parturi- tion. Bearing in mind that each os innominatum is made up of three distinct bones, the ilium, the os pubis, and the ischium, it is easy to understand the construction of the anterior curve of the outlet

denominated the arch of the pubes. The ante- rior part of the ossa puhis forms its top, the processes of the ischia and pubes its sides, and the tuberosity of each ischium its base. Each os innominatum may also be divided into the body and wing, and it is by their junction with each other that an angle or edge is formed, which is known by the appellation of the brim of the pelvis.

4. Sacrum is a bone of considerable sire, triangular in its shape, and curved, its convexity being posterior, its concavity in front, this latter part being denominated by accoucheurs the hollow of the sacrum. At the basis of this tri- angular bone there is a middle projection, which, in connexion with the body of the last lumbar vertebra, forms what is so frequently mentioned in midwifery, the promontory of the sacrum.

5. Os coccygis. — This bone possesses a con- siderable degree of interest to the accoucheur. It is usually described as consisting of one piece only. This, however, is not correct, it being in reality made up of several, not unfrequently con- nected together by cartilage, hence acquiring a certain degree of flexibility, and in consequence a slight power of adaptation during the passage of the head of the child. In a few instances this bone is anchylosed with the sacrum, and in consequence is shortened and turned inwards, so as to diminish the advantages which are ob- tained by its

receding when the child comes into the world. Denman says, that the im- pediment occasioned thereby at the time of la- bor may be, and usually is, overcome by the force with which the head of the child is pro- pelled, and the os coccygis is again separated from the sacrum, with a noise loud enough to he distinctly heard. He had known more than one circumstance of this kind. Burns ob- serves that by falls or blows it may be luxated ; and if this be not discovered, and the bone replaced, suppuration occurs about the rectum, and the bone is discharged. The insertion of the coccygei muscles of a portion" of the leva- tores ani, and of slips of the sacro-sciaric liga- ments into the sides of the coccyx, keep it steady and prevent any lateral motion.

6. Ligaments. — The obturatores, and the ex- ternal and internal sacrc-ischiatic ligaments, alone possess obstetric importance, and they have been, fully described in another place.

7. Joints. — The hip, the lumbar, the sacrc- iliac joints, the sacro-coccygeal joints, and the symphyses pubis, may all be enumerated as be- longing to the pelvis ; but the last three claim from us peculiar attention.

8. Sacro-coccygeal joint. — This joint, as we have already observed, is moveable, enlarging, perhaps posteriorly, the outlet of the pelvis, to the extent of an inch. Its construction is similar to the other joints of the body. It has articu- lating surfaces invested with cartilage and covered with synovial membrane. A capsular ligament connects the two bones arising all round from the extremity of the sacrum, and inserted all round into the base of the coccyx ; this completing th« articulation. This joint is occasionally the sub- ject of disease.

9. It3 anchylosis we have already mentioned, which Dr. Blundell (sec his Lectures, reported in the Lancet) thinks of very rare occurrence ; and he believes it still more rarely produces any serious obstruction to parturition. We have, however, seen one case in which the birth of the child was very much retarded by the encroach- ment of this bone on the capacity of the inferior outlet of the pelvis. It much more frequently happens, says Dr. Blundell, that instead of an- chylosis there is a rigidity of the parts. A woman may be forty years of age before she is married, and perhaps has a child at forty-one ; her health being vigorous, her flesh firm, her fibre rigid and unyielding. Now here a ri- gidity of the sacro-coccygeal joint, with a rigidity of all the adjacent parts, may prove a very formi- dable obstacle to labor, requiring the most able and judicious management. There can be no doubt, and the occurrence is admitted and pro- vided for by Dr. Blundell, that in a case of this kind the perforation may be required. It more

frequently happens, however, that the obstruc- tion yields to powerful uterine efforts, and that no further injury ensues than a painful degree of tenderness, produced by inflammation about the joint. Such was the result, in the instance we have mentioned, where the lady for some months was compelled to resort to a contrivance when sitting, by which she avoided the possibility of pressure on the part.

10. In Dr. Den man's admirable work on Midwifery cases of the disruption of the sacro- coccygeal joint are mentioned. It is evident their treatment must be conducted on the general principles of surgery ; and care must be taken that in their re-union the coccyx does not en- croach on the capacity of the pelvis.

11. It is scarcely necessary to state that in- flammation of these joints will require the em- ployment of the same means which are resorted to in inflammation of other parts of the body ; such as leeches, cupping, fomentation, and a regimen of the antiphlogistic kind, suited to the strength of the patient.

12. In scrofulous individuals the treatment must be modified. Sea air, sea bathing, and generous diet, being invariably productive of the most benefit.

13. Symphysis pubis. — This joint has engrossed a large share of obstetric attention, and has ever been thought of great importance. It does not vary in its structure from other joints; it unites the ossa innominata in front, the ends of which are invested with cartilage, connected together by an interarticular portion of fibrous substance. The principal strength of this joint depends on its capsular ligament, the fibres of which are far more numerous on the outer than on the inner part, an arrangement wisely intended to prevent any narrowing of the antro-posterior diameter of the pelvis, in which direction con- traction or deformity is most frequently found.

14. Thesymphysis pubis is occasionally the sub- ject of acute inflammation, which goes on to the suppurative stage : this may arise spontaneously or f- om injury done to the joint; but it is more fre- quently associated with gestation. The pain and heat about the part, its tenderness when pressed,

and abo re all the exacerbation of suffering on the slightest motion of the joint, cannot fail to lead us to the seat of disease. It is here mani- festly desirable to put a period to the malady in its earliest stage, and to prevent the formation of matter.

15. General and local blood-letting, purgatives, diaphoretics, and above all

rest, cannot be too strictly enjoined. If, notwithstanding the adop- tion of these measures, suppuration should en- sue, it will be easily ascertained. In some cases the general disturbance of system may be so great, that the patient may sink before the eva- cuation of matter : in others, who are more ro- bust, the ligament may yield to absorption, and the pus may thus make its escape; it will however be the duty of the practitioner, if the irritation be alarming, to anticipate this giving way of the ligament, and, by opening the joint, to procure for its contents an early vent.

16. Sacro-iliac joints. — These are susceptible of inflammatory action, and sometimes, though very rarely, of suppuration. Mr. Mansfield Clarke, in his very able work on the diseases of women accompanied with discharge, mentions relaxation of these joints as not of infrequent occurrence. Pain in the back, and an incapabi- lity of standing for half a minute unless support- ed on each side, are the diagnostic symptoms. Time is here the principal remedy, although considerable relief may be obtained from the application of a well-adjusted bandage. It is worthy of remark that the same arrangement of ligamentous fibres occurs here as in the symphy- sis pubis, the greater portion being found on the outer side of the joint : a provision intended no doubt to prevent any impediment to the passage of the child.

OF THE SEPARATION OF THE BONES OF THE PELVIS.

17. Great difference of opinion hes existed on this point. It is a fact that, in many mammifer- ous animals, immediately previous to labor, a relaxation of ligaments, producing a separation of the joints, does occur. Ruysch and Harvey, judging from their own observations, were con- vinced that a similar separation almost invariably takes place in the human female. Dr. Denman was inclined to believe that the degrees of sepa- ration of the junctions of the bones of the pelvis may be very different, and that when it proceeds beyond a certain degree it is to be considered as morbid. Smellie ventures to assert, from expe- rience and observation, that this separation is by no means a usual symptom, though sometimes it may happen, in which case the patient suffers great pain, and continues lame in those parts for a considerable time after delivery. Burns con- siders the separation as no advantage, but a seri- ous evil ; and in cases of deformed pelvis, when we should naturally look for its operation, did it really exist, we do not observe it taking place.

18. It is well known, he says, to every prac- titioner, that owing to the distension of the muscles during pregnancy, very considerable pain is sometimes felt at the insertion of therec- tus muscle into the pubes, and it is also known, that sometimes, in consequence of pregnancy,

the parts about the pelvis, and especially the bladder and the urethra, and even the whole vulva, may beoome very irritable. This tender state may be communicated to the symphysis, or some irritation less in decree than that already mentioned may exist, which, in particular cases, seems to extend to the articulation, producing either an increased effusion of interstitial fluid in the intermediate cartilage, and thus loosening the firm adhesion of the bones ; or a tenderness and sensibility of the part, rendering motion painful. In either case exertion may produce a separation, and certainly in some cases has done so. The separation is always attended with inconvenience, and often with danger, especially when it occurs during parturition; for abscess may take place, and the patient sink under hectic fever ; or inflammation may be communicated to the peritonaeum, and the patient die in great pain.

19. For ourselves we are not inclined to be- lieve that any such invariable relaxation of the joints of the pelvis, as would materially facilitate the progress of difficult labor, forms any part of the parturient process ; and we are the more in- clined to this opinion from the fact that, when any separation has occurred sufficient to pro- duce this result, it has been much more than compensated by increased suffering at the time, and by a painfully prolonged inability to walk afterwards.

OF THE PELVIS, CONSIDERED IN RELATION TO THE PRACTICE OF MlDWIFERY.

20. Having thus described the various bones, ligaments, and joints, of which the bony case of the pelvis is made up, we shall now point out the obstetric properties which attach to the pelvis as to a whole ; and, in doing so,our remarks will refer to what may be denominated a stand- ard pelvis, or that which is most frequently found, when the skeleton is well formed.

21. The pelvis of the human species, which is stronger in proportion to its size than in any quadruped, may be considered as an arch, sup- porting the weight of the superincumbent body. Its position is such that a line passing from the third lumbar vertebra will fall upon the superior edge of the symphysis pubis : the cavity of the pelvis being projected so far backwards that the i_isa pubis principally sustains the enlarged uterus in advanced pregnancy. Hence we see the rea- son of that weakness and pain which during this state is so frequently referred to the junction of these bones.

22. It is perhaps worthy of remark, even in so condensed a treatise as the

present, that the powers and properties of the pelvis depend much on its position. Dr. Denman observes that, in those animals which possess the greatest share of strength, the position of the pelvis is nearly perpendicular, and the two apertures of the cavity nearly horizontal, as may be seen in the elephant. In those which are distinguished by their speed or agility the position of the pelvis is nearly horizontal, and the two apertures nearly perpendicular, as may be seen in the^tag. In mixed animals, or those in which strength and speed are united, the position of the pelvis

is neither horizontal nor perpendicular, but in- clined, so as to partake, by different degrees of inclination, of the advantages of either po- sition, as may be seen in the horse and ass.

23. Accoucheurs usually divide the pelvis into two regions, the one lying above, the other below the brim, the former being the false, the latter the true pelvis. Of that region which is lying above the brim it will be sufficient to observe, that anteriorly it is wide open, being bounded posteriorly by the lumbar vtr- tebra, and laterally by the iliac fossae. Its breadth, from the anterior superior spine of one ilium to another, is usually eight or nine inches, and its depth from three to four. It is evident that if the abdominal parietes are relaxed by the recumbent position, and the elevation of the knees and shoulders, we shall be able to ex- amine the contents of this region satisfactorily, and ascertain pretty correctly any morbid cir- cumstances connected with the pelvic viscera. The true pelvis, which as will readily be con- ceived is of great importance in the practice of midwifery, has been divided into three parts, the brim, the outlet, and the intermediate cavity; or supposing the whole of the true pelvis to form a kind of canal, whose entrance and outlet are somewhat narrower than the middle, it has been distinguished into the superior strait, the inferior strait, and an excavation.

24. The brim is generally of an oval figure, the long measure being from side to side, and the short diameter from before backward. The average measurement of the short diameter is four inches, five inches from side to side, and five and one-eighth, or five and one-fourth, for the oblique diameter, which is described by a line stretching from the back of the acetabula to the sacro-iliac synchondroses.

25. The brim varies in its make, being in some circular, in others more oval, in some small, in others large, but in general it is of tn elliptical form, the regularity of the oval being broken by the promontory of the sacrum. The thorough comprehension of these simple facts will exert a very powerful influence on the management of cases where there is any deviation from the natural progress of parturition. In an ordinary labor, when the vertex of the child presents, we find, in the commencement of the

process, that the face is lying towards one side of the pelvis, and the occiput towards the other ; and thus, as the long axis of the head of the child corresponds with the long diameter of the brim of the pelvis, we find that it rapidly descends.

26. If, however, this state of things be re- versed, and the head of the child be so placed that its face, instead of lying laterally, is situated in front, it is very evident that difficulty must arise, as the long axis of the head is directly op- posed to the long axis of the brim ; and if the head be large and the pelvis small, or if labor has proceeded so far that the head is wedged in its situation, we may be compelled to use the perforator.

27. In presentations of the feet, if the pelvis should be small and the head large, the child may be lost, and the soft parts of the mother materially injured, by want of attention to these

facts. Now, in these cases, if, instead of any violent efforts at extraction, the practitioner were adroitly to introduce his hand, and turn the face of the child to the one side of the pelvis, so as to make the long measure of the head correspond with the long measure of the brim, the progress of the labor would be facilitated, and the diffi- culty overcome.

28. It is also worthy of remark that, when we introduce the hand into the uterus, a proceeding never to be adopted without absolute necessity, we should carry it forward, when near the brim, by the side of the aperture, because there we find most room.

29. In the dimensions of the inferior aperture, or outlet, the proportions are reversed ; the nar- rowest part being from side to side. This how- ever, it must he recollected, is entirely owing to the retreat of the coccyx, in consequence of the pressure it sustains from the child's head. From side to side the diameter is four, and, from before backwards, five inches. The form of the inferior aperture is very irregular, consisting, according to Dr. Blundell, to whose very valuable and comprehensive lectures, published in the Lancet, we are much indebted, of three large scallops, one upon either side, and one in front, of vast obstetric interest, known under the name of the arch of the pubes. If, however, we examine a pelvis, with the ligaments still in connexion, the shape of the outlet is quadrangular. It is here necessary to dwell for a moment, as it is important in practice, on the difference between the long axis of the brim, which is from side to side, and that of the outlet, which is from before backward.

30. The head of a child enters the pelvis with the face to one side , and the occiput to the other ; before it emerges a change in its situation occurs, and the face is thrown into the hollow of the sacrum, while the occiput is found under the arch of the pubes. The reason of this proce- dure is plain : the long axis of the head is there- by made to correspond with the long axis of the outlet, and in crural presentations it is very ne- cessary to attend to this point of anatomy; for if at the brim there be great difficulty, when the axes are in opposition at the outlet, we shall find an equal obstacle if the face be situated towards the pubes instead of in the hollow of the sacrum.

31. We cannot better impress this fact on the minds of our readers than by the statement that the cavity of the pelvis is incurvated, and that, in consequence of this incurvation, a straight line will not pass through its centre. The axis of the brim is downward and backward ; that of the outlet is downward and forward ; and the line of motion of the child's head must of course correspond to the axis of that part of the pelvis in which it is situated.

32. In the cavity of the pelvis we must espe- cially notice the hollow ot the sacrum, as the facility or difficulty of parturition very much de- pends upon it. It serves as a receptacle, making room for whatever part of the child may be de- scending, in presentations of the vertex, of the face, and of the breech.

33. The depth of the pelvis is a point of con- sequence, more especially in estimating the pro-

gress of labor. We find at thesymphysis pubii it does not exceed an inch and a hair, or at most two inches, posteriorly from the base of the sa- crum to the point of the os coccygis ; when under pressure it is about four times as deep as in front ; and laterally the depth of the inferior extremities of the ischia is about four inches. Bearing these facts in mind we shall not always allow ourselves to imagine, because we can readily feel the child's head in the front of the pelvis, that its birth is instantly to take place ; but, re- membering the intermediate depth of the pelvis laterally, and its very much greater depth pos- teriorly, we shall be fully aware that difficulty may be experienced from incarceration.

34. In making examinations it is well to avail ourselves of theshallownessofthepelvis in front, which affords the utmost facility for carrying the fingers considerably beyond the brim. We may remark here that the arch of the puhes in ordi- nary labor, when the head is at the outlet, serves the very important purpose of allowing the oc- ciput sufficient space to lie forth in front, by which it relieves the pressure, and facilitates the passage of the face through the hollow of the sacrum.

35. The upper edge of the ossa pubis is slightly everted, thus preventing any impedi- ment to the entrance of the head of the child into the cavity of the pelvis ; and, at its lower edge, there is some degree of divergence ; an arrangement by which the advancing motion of the head is very much facilitated.

36. We cannot better conclude our observa- tions on the general properties of the female pelvis than by pointing out its bearing on the spine, and by a description of those marks which distinguish it from the pelvis of the male.

37. By the plane of the brim, says Dr. Blun- dell, is meant an imaginary surface, closing in the superior aperture of the pelvis, and forming- a sort of flooring there. The pelvis unites with the spine in such a bearing that the plane and the spine form an obtuse angle with each other j the sacrum lying above and posteriorly ; the symphysis anteriorly, and below. In the living female, when the womb, enlarged by gestation, is resting on the brim, the mouth or neck lie in- feriorly and backward, while the fund us or upper parts are placed anteriorly so as to lie out beyond the ensiform cartilage. By a knowledge of these facts we are enabled to place our pa- tients in positions which will materially facilitate obstetric operations.

38. In placing the brim vertically the body should be inclined forwards in its horizontal position ; the patient should be placed in the semi-recumbent posture, or half sitting, half lying; if, for the reduction of a retroverted uterus, it is desirable to invert the plane of the brim, this may be effected by placing the patient on her knees and elbows.

39. The observation that the whole of the female skeleton is in general smaller, lighter, and smoother than that of the male, is particu- larly applicable to the female pelvis ; in addition to which we cannot fail to notice that the spines and processes of the ossa innominata are farther distant from each other.

MIDWIFERY.

40. The os sacrum is broader and incurvated to enlarge the cavity of the pelvis. The wings of the ossa ilia are flatter and more expanded : in the male the brim of the pelvis is circular, and has its greatest extent between the ossa pubis and os sacrum ; in the female the brim is oval, and the largest diameter is from side to side.

41. In the male the pelvis is of considerable depth ; in the female it is shallow. The arch of the pelvis in the male is contracted ; in the female it is capacious to make room for the head of the child. In the male the outlet is small ; in the female of considerable capacity.

42. Of the head of the child, and its passage through the pelvis. — Having now completed our observations on the pelvis generally, and having noticed its particular properties, and the various purposes they are intended to promote, we shall proceed to examine the structure and dimen sions of the child's head ; as, on the proportion •which these measurements bear to the bony canal through which it is destined to pass, the facility or difficulty of delivery will much de- pend. The head, which is oviform in its shape, has its greatest length from the chin to the ver- tex, which, on the average, is about five inches and a quarter.; from side to side, between the tuberosities of the parietal bones, the measure is three inches and a half; from the lower part of the occiput to the upper part of the forehead it is about four inches ; and, from the lower part of the forehead to the upper part of the occiput, about four inches and a half. These are the average or standard dimensions of the head; yet it is clear, owing to the nature of the sutures, and the conformability of the bones, the shape of the head may be altered, and its length be in- creased, while its breadth is diminished. Dr. Joseph Clarke (Philosophical Transactions, vol.

the temporal bones, compose the projecting ˆartof the cranium, and it is in the connexion "f these bones by suture that certain indications arise which it is of great importance to the accoucheur fully to understand.

45. The frontal suture unites the two pieces of the os frontis together, and is stretching from the sagittal suture to the root of the nose. The coronal suture extends across the head from ear to ear, crossing the sagittal and frontal at right angles, and joining the os frontis to the osaa parietalia. The lambdoidal suture is situated posteriorly, and unites the occipital bone with the ossa parietalia. The sagittal, the most im- portant suture of all in practice, passes from the front of the head to the back, uniting the ossa parietalia to each other. If we examine the foetal head still further we shall perceive two openings, formed by a deficiency of bony mat- ter, which slightly pulsate, and which are deno- minated the fontanels. The large fontanel is situated anteriorly, at the junction of the sagittal and frontal with the two limbs of the coronal suture; it may be distinguished by its quadran- gular shape, by its extent, and by the meeting of four sutures for its formation. The lesser fonta- nel is situated posteriorly at the point of union between the sagittal and lambdoidal sutures, and is distinguished by its triangular shape, and by the meeting of only three sutures for its forma- tion. These remarks comprise the whole of what is important to be known, in relation to the standard head of the foetus ; and we shall now pass on to explain the mode by which the child passes into the world, previously premising that by the term presentation we mean that part of the child which lies over the centre of the pelvis, and by the term situation, when speak- ing of the passage of the child through the

Ixxvi.) says that the size of the male head is pelvis, we mean its place in relation to the sur- generally a twenty-eighth or thirtieth part larger rounding bones. Thus, when the vertex pre- sents, one ear is situated in the symphysis pi.bis, and the other to the sacrum, the face is towards one side of the pelvis, and the occiput to the other.

46. Burns, in the third section of his fifth

than that of the female ; and he farther supposes that one-half more of our males than females are born dead, owing to tedious labor, or increased pressure on the brain ; and to the same causes he ascribes the greater number of deaths of males

after birth. In twin cases again, as the chapter, has given a very simple description of

the progress of the head through the pelvis, which we shall present to our readers. He says, by comparing the size of the head with the ca- pacity of the pelvis, it is evident that the one

completely ossified^ and consequently firm, com- can readily pass through the other. But he pact, and unyielding. The foetal cranium, on apprehends that the comparison is not always the contrary, is made up of various bones, loosely correctly made ; for the child does not pass with connected by membranes, and possessing a de- the long diameter of its cranium parallel to a

children are smaller, he calculates that only one- rifth more of males than females are still born.

43. The head of the child differs from the head of the adult ; the cranium of the latter is

gree of flexibility, which admirably adapts it to the pressure it may have to sustain in its trans- mission through the pelvis. Its sutures are not riveted together, the bony edge of one bone being directly united with the bony edge of the adjoining, as in the adult : they are maintained in connexion by the interposition of cartilage ; and hence arises the great conformability of the foetal skull, the advantage of which cannot fail to be perceived when its bulk is greater than natural, or when there is any diminution of the capacity with any deformity in the shape of the pelvis.

44. The frontal, the parietal, the occipital, and

line drawn in the direction of the long diameter of the brim of the pelvis, but it descends ob- liquely, so that less room is required. The central

*portion of the sagittal suture passes first, the chin being placed on the breast of the child. Now, the length of a line, drawn from the nape of the neck to the crown of the head, is three inches and a half; aline intersecting this, drawn from the one parietal protuberance to theotlie:, measures no more. We have, therefore, \hen the head passes in natural labor, a circular body £oing through the brim whose diameter is not above three inches and a half, and thus no ob stacle or difficulty can arise from tie size of th**

pelvis. There is so much space super-abound- ing, betwixt the pubes and the sacrum, as to pre- vent all risk of injury from pressure on the bladder, urethra, or rectum ; and, as the long diameter of the head is descending obliquely, the sides of the brim of the pelvis are not pressed on. This is so certainly the case that the head may, and actually often does, pass without any great additional pain or difficulty, although the capacity of the pelvis be a little contracted. But when the shoulders, which measure five inches across, come to pass, then the brim is completely occupied. If, however, any contrac- tion should take place in the lateral diameter, the child would still pass one shoulder, de- scending obliquely before the other.

47. It is of great consequence to understand the passage of the child's head in natural labor, for upon this depends our knowledge of the treat- ment of difficult labor. The head naturally is placed with the vertex directed to one side, or a little towards the acetabulum ; and the forehead, owing chiefly to the action of the promontory of the sacrum, is turned in the same degree towards the opposite sacro-iliac junction. When labor begins and the head comes to descend, the chin is laid on the sternum, and the central portion of the sagittal suture is directed downwards, nearly in the axis of the brim of the pelvis, when, by the contraction of the uterus, the head is forced a little lower, its apex comes to touch the plane of the ischium. Upon this the posterior sloping part of the parietal bone slides downwards and forwards, as on an inclined plane, the head being turned gradually, so that in a little time the face is thrown into the hollow of the sacrum, and the vertex prˆents at the orifice of the vagina. This is not fully accomplished till the cranium has got entirely into the cavity of the pelvis. As the basin is shallow at the pubes, the head is felt near the orifice of the vagina, and even touching the labia and perinwum, before the turn is completed, and when the ear is still at the pubes. The head, while its long diameter lies transversely, continues to descend in the axis of the brim of the pelvis, but when it is turned it passes in the axis of the outlet. When the turn is being made the direction of the motion is in some intermediate point; and this fact should, in operating with instruments, be studied and remembered.

48. When the pelvis is narrow above, and the sacrum projects, the hemispherical part of the head is long before it reaches the inclined plane of the ischium; and, when the head is lengthened' out so as to come into contact with it, we find that, although the projection of the sacrum directs the vertex sometimes prematurely a little for- ward, yet the tendency to turn fully is resisted by the situation of the bones above, a great part of the cranium and all the face being above the brim, and perhaps in part locked in the pelvis. By a continuation of the force, the shape of the head may be altered ; even the vertex may be turned a little to one side, its apex not corres- ponding exactly to the extremity of the long diameter of the head ; the integuments may be tumefied, and a bloody serum be effused be- tween them, so as greatly to disfigure the presen-

tation. As therefore in tedious labor, occa- sioned by a deformed pelvis, the skull may be much lengthened and misshapen, we are not to judge of the situation of the head by the position of the apex of the tumor which it forms ; but we must feel for the ear, which bears a steady rela- tion to that part of the head which presents the obstacle. The back and upper part of the head are compressible, but the base of the skull and face are firm. A line drawn from the neck to the forehead, passing over the ear, is to be con- sidered as the boundary betwixt these parts of opposite character; and therefore we attend to the relative situation of the ear, as it ascertains both the position of the head and its advance- ment through the brim.

49. Of deformity of the pelvis. — Under this appellation we. intend to class all those devia- tions from the standard pelvis which at all inter- fere with the natural progress and completion of labor. It will be manifest, from a slight exa- mination of the deformed pelves which are to be found in our museums, that distortion may arise from various causes, and that no part of this bony structure is exempted from its preju- dicial influence. It is, however, a pleasing cir- cumstance, that we do not frequently meet with those higher degrees of contraction which require us to sacrifice the life of the child to the safety of the mother.

50. Fracture and rickets are not infrequent causes of a distorted pelvis; but to mollities ossium, or a softness of the bones, we may at- tribute the majority of cases ; and here the false as well as the true pelvis partakes of the defor- mity, and, of this latter region, both the brim and the outlet may exhibit incurvation. Frequently, where there is a good deal of distortion about the pelvis generally, certain parts may suffer much less than others ; thus while the brim is greatly dis- torted the outlet may deviate but slightly from the standard dimensions. Specimens are in ex- istence which, while they show great contraction or distortion on one side, make a near approxi- mation to the natural dimensions on the other.

51. Dr. Blundell observes that, these distor- tions of the pelvis occurring, there is no end to the variety of forms the bones may assume; nevertheless he has observed, on making an ex- amination of his specimens, that there are two leading shapes or forms to which these varieties may be reduced, and which may not be inaptly denominated the angular and the ellipsoidal.

52. At the brim we sometimes meet with elliptical distortions produced by the approxi- mation of the promontory of the sacrum towards the symphysis pubis, the length of the brim being increased between the sides, and abbreviated between the front and back. At the outlet, also, the ellipsoid contraction may occur, the symphysis pubis being approximated to the lower extremity of the sacrum and the coccyx, so as to obstruct or render impracticable the passage of the fo?tus, even after its bulk has been reduced by the per- foration.

53. The second variety, or the angular form of distortion, is produced at the brim inconsequence of the acetabula and the promontory of the sa- crum being all of them pushed inward upon the

axis of the pe.ris ; of this kind of distortion Dr. Blundell once possessed an example in which the acetabula and promontory were so nearly approximated that the brim was, as it were, di- vided into three fissures, two laterally and one in front. At the outlet, also, the angular distor- tion occurs ; and here it is occasioned by the ap- proach of the tuberosities of the ischia, and the incurvation and advance of the sacrum and coccyx.

54. We believe that, in the greater number of instances of deformity, the brim of the pelvis is principally in fault ; and that, when the contrac- tion of this part is so considerable as to require the employment of instruments, it will most fre- quently be found narrowed from before back- wards and not from side to side : ihe contraction here may arise from an approximation of the ossa pubis to the sacrum, or from the acetabula encroaching upon the diameter of the brim in the same direction.

55. In addition to these obstacles to partu- rition, there may be impediments arising from other causes. Exostosis from the pelvis bones may materially diminish the capacity of the brim, the intermediate cavity, or the outlet. Stea- tomatous and scirrhous tumors, incapable per- haps from their size or hardness of being pushed out of the way of the child's head may as se- riously obstruct the progress of lahor, as though they were producing absolute distortion. An enlarged ovarium or vaginal hernia may oppose

delivery, and instances are on record where such obstacles have been attended with fatal results.

56. Mr. Burns once met with a dreadful case of tumor obstructing delivery, which we shall relate in his own words, as it is highly creditable to his skill and courage. The attachments of this tumor were so extensive, and it was of so great size as to fill the pelvis, permitting only one finger to be passed between it and the right side of the basin. It adhered from the symphysis pubis round to the sacrum, being attached to the urethra obturator muscle and rectum intimately adhering to the brim of the pelvis, and even overlapping it a little towards the left acetabu- lum. It was hard, somewhat irregular, and scarcely moveable. The patient was in the ninth month of pregnancy ; there was no choice, except between the Caesarian operation and the extir- pation of the tumor. The latter was agreed on, and with the assistance of Messrs. Cowper, Rus- sell, and Pattison, Mr. Burns performed it on the 16th of March, a few hours after slight labor pains had come on. 'An incision was made on the left side of the orifice of the vagina, perinanim and anus through the skin, cellular substance, and transversalis perinei muscles. The levator ani being freely divided, the tumor was then easily touched with the finger. A catheter was intro- duced into the urethra, and the tumor separated from its attachments to that quarter. It was next separated from the uterus, vagina, and rectum, partly by the scalpel, partly by the finger. I ould then grasp it as a child's he.id, but it was quite fixed to the pelvis. An incision was made into it with the knife, as near the pt'lvis as possi ble; but, from the difficulty of acting safely with that instrument, the scissors, guideJ Ivy the

finger, were employed when I came near the back part ; and, instead of going quite through, I stopped when near the posterior surface, lest I should wound the rectum or a large vessel, and completed the operation with a spatula. The tumor was then removed, and its base or attach- ment to thd bones dissected off as clcsely as pos- sible. Little blood was lost, the pains immedi- ately became strong, and before she was laid down in a bed they were very pressing. In foui hours she was delivered of a still-born child above the average size; peritoneal irflaramation, with considerable constitutional irritation, came on; but, by the prompt and active use of the lancet and purgatives, the danger was soon over, and the re- covery went on well. In the month of May the wound was healed. On examining her vagina, the vagina is felt adhering as it ought to do to the pelvis, rectum, &c. The side of the pelvis is smooth, and a person ignorant of the previous history of the case, or who did not see the ex- ternal cicatrix, would not be able to discover that any operation had been performed. After a lapse of more than two years she still continues well.'

57. A small pelvis will occasionally give rise to difficulty in parturition ; for

although it gene- rally happens, if the woman be small, that her child will be small also, and as this kind of pelvis exists apart from contraction, maintaining indeed its shape and symmetry, labor will very frequently proceed with facility. Yet it may so happen that a small woman shall produce large foetuses. An instance of this lately occurred to us, where, in consequence of the dispropor- tion existing between the child and the pelvis, we were compelled to use the perforator, after having in vain employed the forceps.

58. The treatment of these cases is by no means easy; we are only aware, indeed, of two methods, by which, if the deformity extreme, arid the full term of pregnancy be completed, women can be relieved from this most calamit- ous situation. We may perform embryotomy or the Caesarian operation. And, in relation to the first of these proposals, Burns has ascertained that when the standard head is reduced in the best possible way, by the removal of the frontal, parietal, and squamous bones, it will require for its passage an aperture of three inches in length, and of one inch and three quarters in breadth. If this space does not exist, the Caesarian ope- ration, of the success of which we do not in «his country ertertain any very favorable anticipa- tions, must be resorted to.

59. Mr. Barlow, of Blackburn, used to relate the following case: — A robust countrywoman in vigorous health, the mother of several children, was thrown out of a cart, which went over her and broke her pelvis to pieces. She was car- ried home, and lay a long time ; but at last re- covered. She again became pregnant, and was attended by a woman ; but the pelvis was so contracted by the displacement of the fracture! bones, and the mass of osseous matter by which they were consolidated, that the n idwife »UN unable to deliver her. Mr. B-arlow was new called in, and was persuaded she could not be delivered without the Caesarian operation. A»«

soon as she was willing to submit to it, feeling there was no hope in any other way, he per- formed it, and a dead child was extracted. The mother herself did very well ; in a fortnight after the incisions were made she got up, and in three weeks she was attending to her usual concerns.

60. In cases where the deformity does not so materially diminish the capacity of the pelvis as in the instances we have described, we shall be justified in waiting for the full exertion of the natural powers. The obstacle may exist in one particular point of the brim, and, this being sur- mounted, the future progress of the labor may be uninterrupted. We have ourselves

been sur- prised, after waiting twenty-eight hours without any advance of the head, and having determined to perforate, suddenly to discover that the dif- ficulty was overcome, and the labor was com- pleted with unusual celerity. It may appear singular, but it is nevertheless true, that such changes do arise as sometimes to render the use of instruments unnecessary in a labor occurring in immediate succession to one where their em- ployment had been absolutely required. We were once called to a case of presentation of the breech, where, owing to contraction of the brim, from before backwards, we were compelled to diminish the capacity of the head before we could extract the child. This lady again became pregnant, and at the commencement of labor it was ascertained that the vertex presented, the waters passed off, and the pains continued re- markably powerful and forcing for eighteen hours. At the expiration of this time she was much exhausted, but the head remained im- moveably jammed at the brim. The long for- ceps was applied, but no justifiable force which could be exerted with it enabled us to sur- mount the obstacle, and we were at length driven to the use of the perforation. In a third labor of this lady, occurring at the full time, al- though summoned very early we could not reach her before the birth of an average-sized child. A fourth labor, in which we have only a few weeks since attended her, has proved equally for- tunate, and the child is by no means small.

61. Dr. Blundell's rule in cases of this kind, and indeed whenever instruments are thought to be required, is remarkably simple and very ap- plicable. If, says he, no dangerous symptoms appear, we ought to give a fair trial to the full efforts of the uterus for twenty-four hours, after the discharge of the liquor amnii, abstaining as long as may be from the use of instruments, for they are great evils, and a meddlesome mid- wifery is bad. But should dangers arise re- ferrible to the prolongation of the labor, or should the woman be in labor for twenty-four hours after the discharge of the waters, the head not advancing, a trial of the lever or forceps be- comes necessary. Further, should the danger- ous symptoms become pressing, or should the womb have been in action for eight-and-twenty hours, the head still not advancing, the perfora- tor must be employed. Again, a woman may have had several children destroyed in succes- sion, and, pregnancy still occurring, she is very Anxious to become the mother of a living child.

Here we may propose to induce labor at seven months, or seven months and a fortnight; thus preventing that complete growth of the foetus which in all probability renders its destruction unavoidable ; and, as children do live when born at this period, we give our patient a chance of bringing into the world a living child.

62. It is possible that women who are known to have very considerable deformity of the pelvis may become pregnant ; and perhaps this may occur

after their lives have been put in the ut- most jeopardy by a previous case of embryotomy. Dr. Blundell has made a proposition for the management of these cases, which deserves to be mentioned. Let us suppose that a woman is not advanced above two or three months, and that an attempt to discharge the liquor amnii has failed. Under these circumstances he strongly recommends an opening to be made a little above the symphysis pubis, in or near the linea alba, carefully avoiding the bladder; at this opening introduce the fore finger of the left hand, so as to get a bearing on the uterus, this accomplished, take some slender-pointed instrument, and pretty stiff, and, by a sort of acupuncture, carry this instrument through the body of the uterus into its cavity, and on enter- ing the uterine cavity move the wire cautiously, yet effectually, in different directions, so as to break the ovum all to pieces, and put an enec- tual stop to the generative process. The ovum destroyed, draw up the fallopian tube, which is easily done; first on the one side, then on the other, cutting out a portion of it, so as to render it impervious, by which you secure future steri- lity. In performing the operation great care is to be taken that the ovum is thoroughly broken up, even if it occupy fifteen or twenty minutes.

63. Large pelvis. — Having described the diffi- culties incident to those deviations from the standard pelvis which are produced by contrac- tion and distortion, as well as those which arise from a pelvis naturally small, yet retaining its symmetry and shape ; we shall now detail the inconveniences produced by a pelvis exceed- ing in its dimensions that which we denominate standard.

It is very evident that difficulty in the passage of the child cannot originate from a pelvis o> this kind. The uterus may, however, in conse- quence of augmented pelvic capacity, remain long below the brim, and thus increase the pro- bability of its prolapse ; and, if the bladder be distended, of its retroversion.

64. These are circumstances which will rea- dily suggest themselves on the slightest reflection, and we need not dwell on the treatment by which they must be remedied. Another, and perhaps the most serious evil arising in cases of this kind, is the suddenness with which labor may come on, the uterus descending to the orifice of the vagina before the os tincje is fully dilated. We were in attendance not long since on a patient who had borne many children, where the pelvis was capacious, and the softer parts relaxed. A few monitory and slight pains had been experienced, but as there was scarcely any progress made, we were preparing to leavn the house; before we reached the door one single

pain expelled the child. Occurrences of this nature should induce great caution whenever we are called upon for a legal opinion. A woman, pregnant perhaps for the first time, and of an illegitimate child, is naturally ignorant of the changes which precede labor; her pelvis is un- usually large, and in an attempt to relieve the bowels the child is suddenly precipitated into a situation where its destruction is inevitable. All this may occur without any guilty intention on her part to sacrifice the infant ; and in a court of law she ought to have the full benefit of these palliative circumstances.

65. Deviations from the standard head. — A head unusually small, as we have just now ob- served of a pelvis unusually large, can originate no difficulties in parturition. The converse of this proposition is true of a head which exceeds in its dimensions that with which we generally meet ; more especially if the pelvis be small, and the bones of the head more than commonly ossified.

66. When the vertex or face has been long incarcerated at the brim, or in the cavity of the pelvis.it is very possible to be deceived as to the part which really presents. If the face be over the centre of the pelvis it may suffer compression, the blood accumulating, and the soft parts be- coming swelled and tense. Here we do not find the inequalities which generally characterise this presentation ; the same remarks may be reiterated of the vertex, where it has been long detained in its passage through the pelvis. We have seen many cases where the scalp has been so exceed- ingly tumefied as to resemble the breech more than the head. The hydrocephalic cranium may generally be detected by the distension and stiff- ness of the vertex, by the breadth of the sagittal suture, and perhaps by an obscure fluctuation in this part, and towards the fontanel. We are not always to suppose that a watery head presents insuperable obstacles to the completion of the birth by the natural efforts ; give to these efforts a fair trial, and the result will frequently exceed the most sanguine expectations ; for, although there are many in which instrumental aid will be required, yet if we act in accordance with the rule already laid down, of not interfering till after a certain period, and not even then unless symptoms arise plainly indicative of consti- tutional and local excitement, we shall fre- quently be gratified by the emergence of the head, without the assistance of either the forceps or the perforator. These remarks are equally applicable when there is disproportion between the size of the head and the capacity of the pelvis; ever remembering that the bones of the foetal cranium may by compression very much overlap each other, and thus its bulk may be so far diminished as to bring it within the success- ful influence of the uterine powers.

67. We cannot better conclude this section of our subject than by quoting the words of Ban- delocque, a name of high repute in obstetric science. ‘

The accoucheur,' says this author, ' who has not yet by long practice enabled himself to form a just estimate of the process of nature, may easily deceive himself in these cases, and in the first judge a delivery to be im-

possible which is ready to terminate, and in the second declare that to be easy which is about to be opposed by difficulties, that art can alone surmount; or which at the least, ren- der it extremely tedious aud painful. More than forty persons were witnesses to the disagreeable consequences of a mistake of this kind, in a woman whose pelvis he possessed. The operator having pronounced that the woman would be speedily delivered, on account of the facility with which the child's head had engaged with the first pains, and attributing the obstacles which soon after obstructed its passage to another cause, and not to the narrowness of the inferior strait, which had remained unnoticed, he waited two days in per- fect security ; and then, by a more blind temerity than the former, used the crotchet on a child whose life might have been by other means pre- served.

68. Of pelvimeters, or the examination neces- sary to ascertain whether the pelvis be well or ill formed. — A variety of instruments have been de- vised for obtaining an accurate knowledge of the different measurements of the pelvis ; some being constructed for the attainment of this informa- tion from within the pelvis, while others, with the same design, have only been intended for exter- nal application. It is evident that much diffi- culty must be experienced in the use of mecha- nical means for this purpose; and, even when employed successfully, we doubt whether their indications be superior to those which may be procured by the skilful and experienced enquiry of the fingers. We believe, if the fore finger be passed to the brim of the pelvis, a sufficiently correct notion of its capacity for obstetric pur- poses may be secured, by carefully noting the length of space it requires to pass from the sytn- pliysis pubis to the promontory of the sacrum, and the extent it must traverse before it can stretch from one side to the other. By moving about the fingers in the cavity and the outlet, similar information may be acquired ; and if in addition to all this we ascertain whether the head has entered the brim to any extent, and the time which has been required for the progress thu far, we shall not be very ignorant of the dimen- sions of this most important part. The only pelvimeter we have seen, of easy application, is one designed to measure the pelvis externally. It may be denominated a pair of callipers, one leg of which is fixed on the symphysis pubis, and the other a little below the spine of the last lumbar vertsbra, three inches being allowed for the thickness of the sacrum and the symphysis : thus, if the thickness of the whole be seven inches, we deduct three, leaving four inches as the measurement of the brim, in its antro-posterior diameter. Bandelocque expresses himself well pleased with this kind of measurement, and says that he has not found a difference of a line in the examination of five-and-thirty pelves, dis- torted and contracted in*

all ways and in all pos- sible degrees. The roundness of the hips, and their equality, the prominence of the mons veneris, the space of eight or nine inches between the anterior superior spines of the ossa ilia, and the moderate depression of the superior and pos- terior parts of ihe sacrum, are evidences of a

favorable conformation. The converse of these circumstances, more especially if there be any curvature of the lumbar spine, denotes a faulty construction of the pelvis.

69. Of the soft parts contained within the pelvis. — The observations hitherto made on the pelvis have referred to that condition where it is di- vested of the lining it receives in the recent state, from muscles as well as from ligamentous and membraneous expansions. There can be no doubt, that the structure of parts is much better understood in this way ; for, by regarding them at first as they really are in the skeleton, we ac- quire much clearer notions of the purposes they serve, of the manner in which other parts exert their influence upon them, and of the combined and finished operations of the whole. The ne- cessity of some lining of this kind is sufficiently manifest when we consider the importance and delicacy of the organs situated in the pelvis; among which may be enumerated the uterus, urethra, bladder, and ovaries, fallopian tubes, rectum, &c.

70. The pelvis has been frequently described as connected with the cavity of the abdomen; but, as we shall not meddle either with the structure or diseases of the abdominal organs, it appears de- sirable to look upon the pelvic cavity as dis- tinct from that of the abdomen. We find two muscles at each side of the pelvis internally, the iliacus and the psoas. The former by its radiated fibres fills up the iliac fossae; and the psoas, originating from the lateral parts of the lumbar spine, descends to the inner edge of the brim to be inserted with the psoas, into the tro- chanter minor of the femoral bone. The levator ani is arising from the whole circumference of the brim of the pelvis, and descending, may be traced all the way round to the extremity of the rectum. Under the symphysis it is pierced by the urethra and vagina, and, during the passage of the child's head, it is easy to suppose that these fibres must be considerably stretched and dis- tended.

71. From the membrane that fills up the thy- roid hole, and from the innei surface of the ischium, the obturator internus arises, running backwards and downwards, and terminating by a tendon to be inserted into the rest of the tro- chanter. The pyriformis originates from the under part of the

hollow of the sacrum, and passes out at the sacro-sciatic notch to be inserted with the obturator. These muscles sustain pressure and perhaps injury in difficult and pro- tracted labor, which may explain the uneasiness so often felt in moving the thighs. Thecoccygeus commerces frcfm the spine of the ischium, run- ning posteriorly to be inserted into the side of the coccyx, in order to move and support it. We now SCP how the pelvis is lined with muscular substance, affording a slight compressible support to the gravid uterus and pelvic viscera. On a parallel with the inner margin of the psoas, along the posterior half of the brim of the pelvis, we find the course of the iliac artery and vein, and encroaching a little when distended on the lateral capacity of the brim. They quit the l:nea-ilio pectinea at between two and three inches from the symphysis, and, passing over the

acetabula, they leave the pelvis with the psoas muscle. The iliac vessels escape pressure entirely during labor, but the hypogastric must in certain positions and sizes of the head sustain pressure.

72. The first, second, and third pair of lumbar nerves, furnish some branches, which, passing out through the substance of the muscles lining the iliac fossffi, supply the upper and outer parts of the thigh ; and it is to the stretching and tension of these nerves, especially in the latter periods of gestation, that we must attribute the painful uneasiness which is so often experienced about the pubes, groins, and in the small of the back. So likewise we must attribute to the obturator and crural nerves that weakness and uncertainty of gait which characterises some pregnant women. The lymphatics preserve the same course as the iliac vessels, forming a plexus from Poupart's ligament to the lumbar vertebra. The rectum is by no means an unimportant part of the con- tents of the pelvis ; it is situated at the left side of the projection of the sacrum, and is known sometimes to acquire an immense size from the accumulation of feculent matter, giving rise to very uncomfortable feelings.

ON MENSTRUATION.

73. A description of the external and internal generative organs of the female having preceded this article, we shall refer the reader to the treatise on ANATOMY, for any information he may require, and go on to notice the important function of menstruation. We do not pretend to throw any new light on the causes of this periodical discharge, with which the health and comfort of the sex is so intimately associated ; but we shall endeavour to place before our readers a clear narration of the various circumstances which are found to belong to its healthy and morbid condi- tions. We are not aware of any change which so much affects the whole course of female life as menstruation. Every process of the female eco- nomy to the time of puberty is incomplete and defective, if the menses do not appear ; and in

after years, when the generative faculties are in exercise, and when the most important functions and duties of female life are to be performed, their health and efficiency are most materially dependent on the regularity and natural charac- ter of the menstrual fluid : — and it is equally notorious, when women have passed the middle period of life, and have escaped the dangers inci- dent to parturition, that they may be yet placed in jeopardy, by the final cessation of this func- tion. We believe there is now little difference of opinion as to the nature of the menstrual fluid. That it is not blood seems sufficiently evident from its scarcely possessing one property in com- mon with it, excepting the color ; and even here there is not perfect agreement ; for, while the co- loring matter of the menstrual fluid is permanent, that of the blood is not so. In the London Practice of Midwifery, it is stated that Mr. Brande analysed some menstruous discharge, sent to him by Mr. Money of Northampton, which

**was collected from a woman with prolapsus uteri, and was consequently perfectly free from admixture of other secretions. It had the pro- perties of a very concentrated solution of the*

coloring matter of the blood in a diluted serum. It has been observed that artificial solutions of the coloring matter of the blood invariably exhi- bit a green tint, when viewed by transmitted light. This peculiarity is remarkably distinct in the menstruous discharge. No globules could be discovered in this fluid ; and, although a very slight degree of putrefaction had commenced in it, yet the globules observed in the blood would not have been destroyed by so trifling a change. The menstrual fluid does not soon pu- trefy, even if exposed to summer heat, nor does it coagulate ; and we particularly remember that Mr. Mansfield Clarke, in his lecture on this sub- •ect, exhibits a specimen of the menstrual dis- charge, which has remained in a fluid state for many years. Much more might be said on this point ; but we conceive we are fully justified, from what has been already advanced, in defin- ing the menstrual fluid to be a secretion from the uterine arteries, and perfectly different from blood.

74. The age at which menstruation begins varies in different individuals, as well as in dif- ferent climates. In this country its commence- ment may generally be dated from the fourteenth or fifteenth year, while in Persia the females ad- vance to womanhood at ,nine or ten years old ; but in Lapland, and the north, puberty does not arrive till the age of eighteen or twenty ; and, ac- cording to some authors, menstruation in these very cold countries only occurs in the summer season. There is a great variety in the quantity

of the discharge ; for while in this country from four to six ounces are generally lost at each pe- riod, in the east, and in the Archipelago more especially according to Hippocrates, eighteen or twenty ounces of this secretion are thrown forth from the uterus. The time during which women continue under the influence of this discharge is not regulated by any very certain rule. The au- thor of this paper has attended two patients, one of whom invariably continues unwell eight or nine, and the other never more than two days, and yet they are both equally healthy. Writers do, however, agree in considering three or four days as the average time. The commencement of menstruation is generally, though not invaria- bly characterised by attendant indisposition. On enquiry, we frequently find that there are uneasy sensations in the stomach and bowels, distressing feelings of languor and pain in the lumbar and pelvic regions, accompanied by ano- malous and hysterical symptoms.

75. These affections may not be immediately succeeded by the discharge ; for, in the majority of cases, the health is slightly impaired for two or three months. During one of these seasons of indisposition, when these ailments are perhaps more than usually severe, a serous discharge takes place from the vagina, at first only slightly red, and not becoming entirely sanguineous for several periods. Tha health continues frequently delicate till the full establishment of this new function ; after which, if there be no suppression Jrom exposure to cold or general illness, men- struation may continue to be performed for many years, without any other inconvenience «han a slight pain in the back, or trifling hyste- rical complaints.

76. Nor is this period of female life unattend- ed by alterations, both in character and person, which fully denote that the age of puberty has arrived. The complexion of girls is improved, their countenance is more animated, the tone of their voice more harmonious, their mental powers are much stronger, and they have acquired dispo- sitions and feelings of which they were previously unconscious. The uterus and the vagina are in- creased in size, the mons veneris is developed and covered with hair, the pelvis is augmented in capacity, and the glandular substance of the breasts, as well as the cellular membrane with which it is invested, is gradually unfolded. Nee minus notum est, quanta virginea alteratio cou- tiugat, increscente primum et tepefacto utero ; pu- bescit nempe; coloratior evadit, matnmte pro- tuberant, pulchrior vultus renidet, splendent oculi, vox canora, incessus, gestus, senno, omnia, decora fiunt. — Hart;. Exercitat de par tit.

77. Although the menses are invariably sup- pressed in pregnancy, and generally during lacta- tion, their appearance in the latter state is by no means an unfrequent occurrence.

78. The cause of menstruation has greatly ex – ercised the ingenuity of professional men ; for while some have attributed it to the influence of the moon, others have supposed it to result from a ferment in the blood, or more especially in the uterus. Dr. Cullen thought that this discharge was not dependent on general but local plethora, and that the uterus was thereby fitted for the healthy discharge of its functions. That the moon exerts no influence in menstruation is evident from the fact that women, and even the same woman, menstruates on every day in the month, without any regard to lunar increase or decline. No part of the anatomical structure of the womb seems to favor the opinion that it may be attributed either to general or uterine ferment ; nor are we at all more successful when we look for its cause in universal or local plethora. Were this the case, the quantity of menstrual fluid ought to be influenced by the abstraction of blood from the arm, before or during menstrua- tion, which is not the fact. We were lately par- ticularly impressed with the superior relief of pain affordea only by the commencement of the discharge, to that which we procured by the ab- straction of blood in a patient, who was supposed to be suffering under peritonaea! inflammation, and from whom under that impression sixteen ounces of blood were abstracted. She had long been the subject of dysmenorrhoea, and in twelve hours after the venesection she became unwell, and the cessation of the pain, which was scarcely relieved by the bleeding, was remarkably mani- fest and decided. Further than this, women in whom no kind of plethora can by possibility be supposed to exist, who, in consequence of dis- sipation, have impaired their appetites and dimi- nished their strength, yet regularly menstruate.

79. We believe it to be one of the instances in which the researches of able and intelligent men will terminate in their tracing it to the will of thft Creator ; in other words, they will regard it as a law of nature, that the fleshy uterus of the human female shall, once every month, by a secretory action, produce a certain sanguineous fluid, there are some women to whom the menses are

denied, and such instances are on authentic re- cord, nature almost invariably attempts to reme- dy the misfortune by setting up some other evacuation, which in a measure supplies the place of the proper one, as far as concerns their health. In some we find a periodical discharge of blood from the nose, from the anus, from the puncta lachrymalia, from the ears, or the nipples, and Bandelocque knew a woman of seven or eight and forty who, from the age of fifteen, had been regularly attacked every month by a vomit- ing and purging, which lasted three or four days. She never had the

menses.

80. The penal regulations adopted by the Jew- ish legislator, and promulgated in Leviticus, and which were afterwards carried out by the physi- cians of the Arabian schools and their successors, originated the belief that some peculiarly noxious properties were inherent in the menstrual discharge. It is certain that in Holy Writ there are the most precise and authoritative directions as to every circumstance connected with this function ; and, supposing them to have no other end in view than the simple prevention of inter- course and the disposal of the secreted fluid, it is not to be wondered at that opinions of its bane- ful influence should have arisen. In our own times these apprehensions are nearly if not en- tirely extinct, and in this country women are subject to no restraint or separation during this periodical secretion. Peculiar circumstances, as impaired health and diseased states of the uterus, may render this discharge slightly more offensive and acrimonious than the great volume of the circulating fluid ; but with these exceptions we entertain no other notion respecting it than that it is entirely innocuous.*

81. Menstruation is generally supposed to serve the important purposes of maintaining the uterus in a state fit for conception, and during pregnancy of affording nourishment to the child To the former of these opinions we unhesitatingly subscribe, as we believe every fact in physiology demonstrates the impossibility of conception where menstruation from the uterus does not ex- ist, although there may be vicarious discharges from other parts of the body. Thus far we pro- ceed on certain grounds, and if we remain in doubt as to the precise kind of influence which menstruation exerts on the female system, as a whole, we have no hesitation in believing that it is absolutely essential for the healthy performance of the function of the uterus. The oestrum of animals, when they are salacious, may be regard- ed as equivalent to menstruation ; and, although

- *Penis cum menstruata concumbentis excoriatur: si novella vitis eo tangatur, in perpetuum laeditur : steriles fiunt tactae fruges, moriuntur insita, exurun- tur hortorum germina : si mulier praegnans alterius menstrua supergrediatur, aut illis circumlinatur abor- tum facit ; ei autem quaj uterum non gestat, conci- piendi spem adimit, purgantis spiritus, et vapor ab ore, specula atque eboris nitorem obscurat ; gusta- tus hie sanguis canes in rabiem agit, homines vero diris cruciatihus affligit, comitialem morbum, piloruru effluvium, aliaque elephanticorum vitia: idcirco 4 yeteribus inter venena relatus ; pari malignitate ex- istimatur, atque sanguinis elephantiaci potus.*

De Granf, p. cxxiv.

it is most frequently mucous, yet in rery hot seasons and climates it has been frequently ob- served to be sanguineous.

The latter opinion, that the menstruous blood, during pregnancy serves for the nourishment of the foetus, is not very satisfactory. We find all animals, whether menstruating or not, nourishing the embryo contained in their uteri ; and if the whole quantity of menstrual fluid which would have been secreted, supposing pregnancy had not occurred, were bestowed on the foetus, we can- not suppose that it would contribute very mate- rially to the building up of a child whose weight at the birth, is, on an average, from eight to ten pounds.

82. Women generally cease to menstruate in this country from the forty-fourth to the forty- eighth year; the precise time a good deal de- pending upon the early or late appearance of the secretion. Thus when menstruation com- mences at ten, twelve, or thirteen years of age, it will frequently disappear at forty ; whereas if puberty, the consequence and not the cause of menstruation, has not been established till the sixteenth or eighteenth year, the menstrual dis- charge may continue till fifty-two or fifty-three, and even later than this. Women, however, seldom bear children in this country after forty- five or forty-six years of age ; and thus the pro- pagation of the species, and the active duties consequent thereon, are associated with the most vigorous periods of existence. ‘ Had any other law prevailed, children might have become pa- rents, and old women might have borne children, when they were incapable of affording them pro- per nourishment.’

83. It is worthy of remark that the final cessa- tion of the menses is frequently a critical time in female life. Tendencies to disease, and that of the organic kind, for years dormant, may now be excited into activity, and the uterus and mamma; demand watchful attention. The irregularity of the catamenia, and their obstruction for several ironths, sometimes induces swelling of the abdo- men, sickness, and loathing of food. These symptoms resemble pregnancy ; and there are some women, as La Motte remarks, who would rather persuade themselves that they are again to become mothers, than that they are growing old, and this persuasion they indulge ; ‘ donee tan- dem spes omnis in flatum et pinguedinera faces- seret.’

84. Dr. Marshall Hall, whose Commentaries on some of the more important Diseases of Females we would especially recommend to all who are interested in puerperal and parturient affections, observes that the general treatment, in regard to the final cessation of the catamenia, involves two points; the restoration of the general health, if this be impaired, and especially the da ly obser- vation of the state of the bowels, and attention to diet, air, and exercise; and the second to pro- mote, by

every gentle means, the flow of the ca- tamenia when they do appear. The head is fre- quently requiring attention, as sudden flushes, vertigo, and drowsiness, are common affect ons at this time ; nor can we too forcibly enjoin re- gular evacuations from the bowels, and the occa- sional abstraction of blood, by cupping, ftom the

back of the neck, not only during the exact period of the cessation of the discharge, but for some time afterwards.

85. Sir Astley Cooper and Dr. Farre have mentioned a case, occurring at this penod, in which both the uterus and the mammae became schirrous in the same subject. The period, says Dr. Hall, including several years before the dis- appearance of the catamenia, the space occupied by this change, anˆ several years afterwards, may with great propriety be termed the first climacteric period of female life.

86. Of diseased states of the menstrual secre- tion.— It is the opinion of many that women suffer more than men at their approach to puberty; and judging from what we see in this country, where girls are luxuriously educated, often living in warm rooms, and lying on soft beds, we incline to this opinion. We believe there is little dispute as to the greater liability of women to cancer than men, especially at the final cessation of the menses. Notwithstanding these facts, we do think that certain advantages accrue to the sex from menstruation; more especially when discharges of blood are required for the relief of peculiar symptoms and con- ditions of the system, these are made with the utmost facility through the medium of the menstrual discharge, and not as is too often the case in men, when a vicarious secretion is neces- sary, with injury to the parts which furnish it. It cannot, however, be denied that the circum- stances attendant on menstruation are frequently demanding medical relief, and we propose to consider them in the usual order.

87. Obstruction of the menses. — Authors have usually included two forms of disease under this denomination, that in which the menses do not appear at the period of life when they may naturally be expected, or emansio mensium ; and that in which, having once appeared, they are suppressed or amenorrhoea. It is right to remark that these terms are frequently indis- criminately employed, and for ourselves we do not see any real distinction between them.

88. Amenorrhoea is a disease of such unbound- ed variety, and involving

to so great an extent, if it be of long continuance, the health and energy of the system, as to preclude our en- tering fully into its details; we must content ourselves with observing, that it appears in some instances to spring from debility of con- stitution, while in others it is associated with plethora and florid complexion. The latter form of this affection is by far the most manageable ; and, as it is generally more easy to remove that which is redundant than to furnish what may be deficient in the system, so we find in amen- orrhcea, arising from fulness of circulation, that by the careful, and perhaps repeated abstraction of blood, by persevering attention to the con- dition of the alimentary canal, and by the observance of a spare diet, we soon induce the salutary flow of the menstrual discharge.

89. In chlorosis, on the contrary, character- ised by pallor and slight tumidity of the coun- 'enance, by a quick and small pulse, and by a general exsanguineous state of the system ; the trea'ment is by no means so simple or so (juickly

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successful. The disease may be so ronfirmed and inveterate, and so mixed up with the affec- tion of different organs, as to render the ca»e truly perplexing. We frequently find, in this form of the malady, that the legs and ancles swell at night, and that the face and eyelids are puffy and distended in the morning.

90. The source of these appearances is oedema ; and we know that the interstitial fluid lodged in the cellular substance of the face subsides du- ring the day, the erect posture being generally maintained, and that the cells below are gradu- ally filled again towards night, producing swel- ling of the ancles. It would be difficult, says Dr. Marshall Hall, to trace the series of causes and effects in the pathology of this affection ; but I do think the first cause is in the state of the bowels; that a concurrent cause is the peculiarity of constitution already described ; and that an exciting cause is the inactive and sedentary mode of life usually obtaining in female youth. The stomach suffers from its continuity with the intestines, the uterus possibly by contiguous, the head and the heart by remote, sympathies; the pain of the side is peculiar, ami too common to be a mere accidental compli- cation; and it therefore probably also depends upon the state of the large intestines.

91. To the symptoms already enumerated, we may subjoin those which arise from derangement of the stomach. Flatulence and capricious ap- petite are very distressing. The patient is an- noyed by an uncontrollable desire for chalk, cinders, and other substances equally unnatural. The bowels are very irregular, sometimes very much confined, and at others in

a state of diarrhoea. The breathing is hurried, performed with great difficulty on the slightest exertion, and there is often palpitation of the heart. Cul- len says, as a certain state of the ovaria in females prepares and disposes them to the exer- cise of the genital organs, about the very period at which the menses first appear, it is to be pre- sumed that the state of the ovaria and that of the uterine vessels are in some measure connected together; and, as generally symptoms of a change in the state of the former appear before those of the latter, it may he inferred that the state of the ovaria has a great share in exciting the action of the uterine vessels', and producing the menstrual flux. But, analogous to wha happens in the male sex, it may be presumed that in females a certain state of the genitals is necessary to give tone and tension to the whole system ; and, therefore, that if the stimu- !us arising from the genitals be wanting, the whole system may fall into a torpid and flaccid staie, and thence chlorosis and retention may arise.

92. The treatment of chlorosis was formerly conducted upon what may be termed the empirical plan. Specific medicines, called emmenagojrues, supposed to exert an immediate influence on the uterus, in compelling it to secrete the menstrual fluid, were given ; and very frequently with the smallest success. Blood-letting can very seldom be required in these cases ; and we allude to it as we have lately witnessed its bad effects. A chlorotic patient was bled from the arm bv her

medical attendant for the relief of difficult res- piration, and was partially, of course not fully relieved. It was thought advisable to repeat the bleeding, which was again followed by tem- porary relief; after this period we saw the case, and nothing could be more conspicuous than its bad effects. Her prostration of strength was extreme ; the breathing was more laborious, and an anasarcous state of the body was univer- sally apparent. It is needless to remark that many months elapsed before an opposite plan of treatment was successful in the restoration of the health ; and we are sure that events, similar to the one now related, have not unfrequently arisen from the too lavish use of purgatives.

93. We believe that venesection will generally aggravate the evils of this condition; for, while it affords only temporary relief, it will perma- nently augment the weakness, and the disposition to dropsy. Remedies of the tonic kind, although they may not directly induce the flow of the menses, will

certainly where there is pallor of the countenance, with the other indications of debi- lity, facilitate the desired result. Previously to their use some mild aperient, and perhaps a gentle emetic, should be administered. We prefer the preparations of iron to any other re- medies of this class, and we have seldom expe- rienced any decided difficulty in their exhibition. Either the sulphate or the carbonate may be employed. The diet should be generous, and wine and water may be allowed. Exercise is very important ; and dancing, riding on horse- back, or swinging, and country air, will exert a most beneficial influence. The chalybeate wa- ters of our own country will be found a useful auxiliary to other means ; and tepid bathing or pediluvia, as well as bathing in the sea, will be of use. Dr. Denman observes that the guides to the ladies contrive to go into the water during the time of menstruation, without any inconve- nience. We must remember, in the exhibition of medicine for the removal of suppression of the menses, that there are peculiarities in the con- stitution of some women, which prevent the good effects of the most approved remedies. Here we are not to be discouraged, but we must call into action other means even if of less gene- ral efficacy.

94. All the remedies denominated emmena- gogues possess a stimulating property, and their employment is of very doubtful tendency where there is exhaustion, or a large share of debility; if the patient, on the contrary, be plethoric, they are not without danger ; for, failing to pro- duce the uterine discharge, they may originate haemorrhage in some other organ or part. Dr. Home has eulogised the powers of madder root, as a deobstruent in one or two large doses, im- mediately before the expected period, or in doses of half a drachm twice or three times a day during the interval. Friction of the lower extremities, and electricity, may be strongly re- commended. As a local stimulant, and not liable to the objections already urged against constitutional remedies of a similar kind, we must not fail to mention the ammoniacal injec- tion. \ e have used it many times; and in one or two instances, when the amenorrhcea was of

several years standing, we have witnessed its decidedly good effects. It may be employed hy adding Sill or 3ij of the liquor ammoniac pur. to twelve or sixteen ounces of warm milk, and throwing up six or eight table spoonfuls into the vagina four or five times daily.

95 . Of menorrhagia, or profute menstruation. — Menorrhagiae, Cullen, cxxxvii.dorsi, lumborum, ventris, parturientium instar, dolores; menstruo- rum copiosior vel sanguinis, fe vagina prater ordinem fluxus.

96. This condition of the menstrual secretion is exactly the reverse of amenorrhoea ; and if it has existed long, or to any considerable extent, the symptoms are similar to those which are produced by haemorrhages of any

other kind, only excepting the peculiar uterine circum- stances with which they are associated. Authors generally describe two kinds of menorrhagia : that in which, by the frequency of return of the menses, a debilitating drain is set up; or when the period is not more frequent than natural, but when the quantity of blood lost at each time (for in excessive flow of the menses or me- norrhagiae the secretion is apt to assume the character of blood) is greater than is compatible with the strength of the patient.

97. We believe this disease most commonly arises from the haemorrhages which accompany early abortions, or that it is symptomatic of some affection of the uterus itself. It may consist with very different states of constitutional power, either in those who are plethoric, robust, and vigorous, or where there is weakness and partial emaciation. In the one case the undue dis- charge occurs in consequence of distension or over action, in the other from debility. To whatever extent menorrhagia may proceed, it is invariably accompanied by indications of uterine irritation, such as pain in the back and loins, and about the pelvis, nor do the uncomfortable symptoms stop here : if there be frequent returns of the haemorrhage, the general health suffers, the loss of strength is very manifest, dyspepsia harrasses the patient, leucorrhcea occurs in the intervals, and the foundation is laid of visceral disease, and eventually of dropsy.

98. Burns says that the causes giving rise to menorrhagia may be divided into those which occasion the two predisposing states of plethora and weakness of the vascular system, and those which act more immediately on the vessels of the uterus. Of the first kind, may be mentioned those which on the one hand increase the quan- tity of blood, as rich diet, indolence, &c. ; and, on the other, debilitate the body, as fatigue, abstinence, and profuse discharges.

Amongst the exciting causes, or those more particularly affecting the uterine vessels, may be mentioned the excitement produced by costive- ness, or dyspepsia, and that morbid condition of the womb occasioned by abortion, or labo- rious parturition.

Married women are most liable to menorrha- gia ; frequent parturition or undue lactation being a powerfully predisposing cause. We are now in attendance on a lady who, in oppo- sition to advice, has persevered in nursing fifteen months with health gradually declining ; tor the

last half year she has regularly and rather exces- sively menstruated; but it was not till thn wean- ing was fully accomplished, that any profuse haemorrhage occurred ; immediately on the com- pletion of the process, the uterine vessels, weak- ened by the drain of long continued lactation, poured forth a Urge quantity of blood. A repe- tition of this hiemurrhage has prostrated her little remaining strength, and months will be required to restore her health.

99. The treatment must of course vary with the degree, and the longer or shorter continuance of the disease. The recumbent position, absti- nence from stimuli and every kind of exertion, and perhaps, in the very commencement, vene- section, will suffice for the removal of menor- rhagia, where it is slight and connected with only an occasional feverishness of system. We must prohibit the use of animal food, and preserve an aperient, not a purged state of the bowels, by the infusion of roses and sulphate of magnesia. These measures will generally suffice for the re- moval of the simplest kind of menorrhagia; but when it is more severe we must resort to local measures, as the application of cold to the pu- denda and loins, and, if necessary, the injection of styptic and astringent lotions into the vagina. There are cases, not of very unfrequent occur- rence, in which astringent injections, and even cold water, cannot be borne, as they not only produce uncomfortable and painful sensations, and occasionally inflammation of the vagina and uterus, but manifestly increase the discharge. Here we must trust almost entirely to constitu- tional measures. Digitalis, in an excited state of the circulation, has been productive of great good ; but the propriety of not lowering the pa- tient, beyond the point absolutely required for the restraining of the hemorrhage, will be appa- rent to all.

100. We might enter more at length into the treatment of excessive and consequently highly dangerous cases of menorrhagia; but as some authors think that instances of this latter kind, in which the blood poured out coagulates, ought to be regarded as haemorrhages from the uterus, ra- ther than menorrhagia ; and, as we intend fully to describe the treatment to be observed in ute- rine haemorrhage, we shall refer our readers to that part of this treatise for the desired informa- tion ; and shall conclude the remarks on profuse menstruation by a review of the measures to be adopted, in the intervals of the menstrual pe- riods, to prevent the return of the disease. To effect this purpose a mild and nutritious diet, country or rather the sea air, chalybeate water, and the injection of astringent washes into the vagina, will do much. In addition, all painful exertion, or rather every degree of exercise which exceeds the limits of comfort, by inducing fatigue, should be avoided. We must however bear in mind that in cases where the weakness giving rise to menorrhagia is local, not constitu- tional, we incur some degree of hazard by the employment of general tonic

measures, as we are told that by these means we increase the strength of both parts at the same time. We confess we are not very fearful on this point, if due care be displayed in the treatment of the local debility : let

cold astringent injections be perseveringly thrown into the vagina, at the same time allowing the general health every opportunity to recruit, and we feel assured that greater benefit will be ob- tained than if we had carried forward the treat ment by a preponderance in favor of local, to the disregard of constitutional remedies.

101. It is scarcely necessary to remark that long continued menorrhagic discharge gives rise to very complicated affections of the general health, in which almost every organ seems to suffer. Here we may exhibit, having previously regulated the state of the bowels, the sulphate of iron, or the sulphate of quinine, in small re- peated doses.

102. Dysmenorrhaa, or painful menstruation. — This disease is not of very unfrequent occur- rence, especially in cities and large towns, where dissipated and irregular habits so generally pre- vail. If the menstruation be painful it is gene- rally very sparing, at least for the first two or three days, till by the influence of remedies the cause of obstruction is removed. It is most pro- bably dependent on an imperfect or partially established catamenial action ; an opinion sup- ported by the beneficial results of mild emme- nagogues ; and by a knowledge of the way in which the discharge comes on. The approach to the period is characterised by continued and severe pain in the lumbar, dorsal, and pelvic regions, which is tardily followed by a very slight flow of the secretion ;.this, as we have just now ob- served, continues imperfectly forthe first few days and, as the discharge increases in quantity, the pain becomes less severe, till at last it is scarcely regarded. We attended a lady three years ago, in dysmenorrhcea, where there was superadded to the disease the most violent spasm of the intes- tines we ever recollect to have seen ; it was not uncommon for her to remain delirious for some hours from the violence of the pain. Opium, sinapisms, and the warm bath, gave slight and temporary relief; but it was not till the employ- ment of the ammoniacal injection with opium, continued through many periods, that she was permanently improved. This patient resides in the West of England, and we have lately heard that her menstruation is performed with very trifling pain, and so abundant in quantity as to free her from congestion about the head, for- merly one of her most distressing symptons. The remedies we have now mentioned are to be resorted to during the attack, and the opium is particularly beneficial, if combined with ipeca- cuanha, and given in such doses in tepid dilu- ents as to produce perspiration.

The interference with the general health must be treated on general

principles, ever taking care to prevent any accumulation in the alimentary canal, by the judicious exhibition of laxatives.

103. Having concluded our general remarks, we subjoin the following observations on men- struation.

104. All the common circumstances, as Dr. Denman observes, attending menstruation, have been well and fully described by various authors; but having very often observed a substance ex- pelled with the menstrual discharge, which has hitherto escaped notice, and apprehending the

knowledge of this substance may be of use in practice, he felt it incumbent to describe it.

105. In the examination of that discharge, for the purpose of investigating the state of the ute- rus, and the discovery of some complaints there- on depending, a membranous substance was often showame, which was usually considered as the token of an early conception, or as the casual form of coagulated blood. But, on examining this substance with more attention, I constantly found that one surface had a flocky appearance, and the other a smooth one; that it had in all respects the resemblance of that membrane which Ruysch had called the villous, of the formation of which Harvey had given a very curious description, and which the late Dr. Hunter described with his usual precision and called the decidua. To put the matter out of doubt, seve- ral years ago I requested the favor of Dr. Baillie to examine some portions of this membrane, and he agreed with me in thinking it an organised membrane, similar in structure to the decidua. As the first cases in which this membrane was discharged were those of women who were mar- ried, a doubt arose in my mind whether it was not really a consequence of early conception ; but I have lately had the most undoubted proofs that it is sometimes discharged by unmarried women, and may be found previously to and without connubial communication; and that the uterus has occasionally, or constantly in some women, the property of forming it, at, or in the interval between the periods of the menstrual discharges. It seerns particularly necessary to establish this fact, as the appearance of the membrane has more than once given rise to er- roneous opinions and unjust aspersions. Nor is this the only circumstance in which some women, at each period of menstruation, have symptoms like those which accompany preg- nancy or parturition. In every case, in which

this membrane has been discharged, the wo- men have menstruated with pain, and the discharge has flowed slowly, and apparently with difficulty, till the membrane was come away, which in some cases has been in small flakes, and in others in pieces equal to the extent of half the cavity of the uterus, or more, of which they retain the shape. I suspect, but my experience does not enable me to decide, that this membrane is expelled in every case of habitually painful menstruation.

106. Morgagni (vide Epist. xlviii. Art. 12) describes this disease very accurately. The membrane, he says, is triangular, corresponding to the shape of the uterine cavity ; the inner sur- face is smooth, and seems as if it contained a fluid ; and that it does so I have no doubt, from my own observation ; the outer surface is rough and irregular. According to Morgagni, the ex- pulsion is followed by lochial discharge.

1 07. Dr. Denman supposes that no woman can conceive who is affected with this disease ; but some cases, says Mr. Burns, and amongst others that related by Morgagni, are against this opinion. Mercury, bark, chalybeates, myrrh, and injections, have all been tried without much effect. Time in general removes the disease bet- ter than medicine, which is only to be advised

for the relief of pain, weakness, or any other symptom which may attend or succeed to this state.

PART II.

OF THE GRAVID UTERUS.

108. Having completed the first division of our subject, in which we have endeavoured to present to our readers a practical rather than an elaborate abstract of the obstetric properties of the female pelvis, including the natural and dis- eased conditions of menstruation :

109. We shall proceed to the description of the gravid uterus, comprising in this section the changes induced in the uterus and its appen- dages by impregnation, the various uterine pro- ducts of conception, the doctrine of conception itself, and the diseases of pregnancy, together with its earlier and later signs. Here we shall pursue the same course as in the former part of the treatise, disencumbering the subject as much as possible of all irrelevant and unimportant de- tails, and concentrating the attention of our read- ers on those facts and symptoms which are independent of controversy, and which lead to useful results in practice.

110. It is scarcely necessary to observe that the whole genital system of the female undergoes most important changes from impregnation ; and, in

treating of the gravid womb, we shall principally dwell on the alteration in its volume, in its figure, in its structure, in its situation, ard in the action of which it becomes susceptible.

111. The uterus, in its gravid state, contain the ovum, which consists of the fetus and its ap- pendages, viz. the placenta, the membranes, the funis umbilicalis, and the liquor amnii. It will hence be apparent, on the slightest reflection, that the properties of this viscus, at the close of pregnancy, must differ very widely from those by which it is characterised at its commencement, or during its unimpregnated condition.*

Its volume and weight are conspicuously in- creased ; so that the uterus, which before preg- nancy attracted no notice from its size, and pro- duced no unpleasant effects from its weight, is now most prominent from its increased volume, and is giving rise to troublesome symptoms solely by its augmented gravidity. Its enlargement is more apparent in the latter than in the earlier months of pregnancy ; although this remark is true only with regard to its absolute increase, as in the first month after conception it probably doubles its natural size. It does not go on in this ratio, not being twice as large in the ninth as it is in the eighth month. The uterus increases in every direction during pregnancy, yet all its diameters do not increase in the same propor- tion in every period, and hence arises its atten- tion in shape. The longitudinal axis of this vis- cus increases much more from the third to the sixth than from that to the ninth month ; whilst the other dimensions augment much less in the earlier than in the latter periods, when the cavity grows rounder in all parts : not, however, entirely losing that oval figure which is natural to it in the unimprepnated condition.

112. The position of the uterus is much

changed during pregnancy ; and it is of great mo- ment to be well informed on this point, as we may be called upon to distinguish between preg- nancy and ascites, schirrous or dropsical ovaria, or any other abdominal intumescence ; and the right surgical operations for the relief of these morbid conditions will depend on the correct- ness of our diagnosis.

113. It is not necessary hereto enumerate the various marks on a knowledge of which will depend the truth of our opinion. These have been already alluded to, and they will hereafter be dwelt on more fully. The os uteri, at the close of pregnancy, is situated inferiorly and posteriorly, pointing towards the middle of the sacrum ; the fundus is anteriorly beyond

the point of the ensiform cartilage ; having above posteriorly, and at its sides the intestines, and t>elow and in front the bladder whe'n distended. The ascent of the uterus is never directly up- wards, but generally inclining a little to one or the other side, and, according to Hamilton, most commonly to the right. Three causes may be adduced as giving rise to conspicuous deviation in the position of the uterus. The relaxed con- dition of the abdominal parietes, generally if not always increased by child-bearing ; the boldness of the lumbar curve, by which the womb is thrown unnaturally forward, and deformity of the pelvis. The accoucheurs of the last century, and especially Deventer, ascribed to the relaxed condition of the abdominal parietes the obliqui- ties, as he termed them, of the uterus, to which he erroneously imputed the interruption of labor ; overlooking the two last-mentioned causes, to which he might with propriety have attributed most of the obstacles to parturition.

114. While the uterus is thus altered in its figure, position, and volume, by pregnancy, it does not suffer less change in its composition and development. ' Its fibres not only unfold and lengthen during this state, but they become soft, red, and spongy, till at length we recognise in them all the appearances of muscular organi- sation.' Blumenbach, and some of the conti- nental anatomists, have denied the muscularity of the uterus, principally from their not being able to discover such structure in its unimpreg- nated state. We cannot concur in such an opinion. In the mammalia generally the womb is indisputably muscular ; and, in the womb of the rabbit, there are two distinct sets of fibres, annular internally, and longitudinal without, the action of which, in a rabbit whose abdomen was opened at the close of pregnancy, we have seen more distinctly than the peristaltic action of the intestines. In the impregnated uterus the mus- cularity of its structure is obvious, as many pre- parations in our various museums will testify. Like other structures of the same kind, it is acted on by specific stimuli, the erˆot, the distension produced by the child at the full period, the pre- sence of the placenta, and by the accidental re- maining behind of a clot of coagulated blood. Allowing these facts their full weight it is, to say the least of it, opposed to the simplicity of nature, so apparent in all her operations, to deny the muscularity of the human uterus, especially when strengthened, as we have already observed,

by the established knowledge of its irritability and power of contraction. Anatomists are not agreed as to the regularity of the course of these fibres. Ruysch, and Dr. Hunter in his splendid work on the Gravid Womb, describe them as transverse in the body of the uterus, but forming at the fundus concentric circles around the fal- lopian tubes.

115. The ligaments of the uterui, the ovaria, and the fallopian tubes, are not, towards the close of gestation, situated as formerly, loose in the pelvis;

for the duplicatures of the broad liga- ment, in which they are contained, are now spread over the womb ; and these parts are necessarily confined by the stretched peritonaeum. The blood-vessels are much enlarged during preg- nancy, especially in the part occupied by the placenta, where some of them are dilated in a surprising degree. The capacity of the veins is so much increased that they have sometimes re- ceived the name of sinuses, and, in the part oc- cupied by the placenta, many of them are large enough to receive a goose's quill. Nor is it these vessels alone which are so developed ; the lym- phatics are much more so when we consider their original diameters. Cruikshank says they become as large as quills, and are so numerous in the latter periods as almost to induce the be- lief that the uterus is nothing but a composition of these vessels. The nerves participate in this increase of development; and, when we con- sider the numerous sources of their origin, we cannot wonder at the sympathy of so many parts with the uterus, or at the variety of symptoms produced by the diseases which affect it

116. There has been much controversy about the increase of thickness in the gravid uterus ; some affirming that its thickness was greatly aug- mented, while others have strenuously denied the fact, and have stated that it is even thinner than in its virgin condition. If its parietes do not preserve all their natural thickness, while it is acquiring a larger capacity, at least they lose so little of it that many authors have thought it remains the same in all periods. We are not aware of any facts which enable us to speak with absolute certainty on this point; as we have seen, in the obstetric museum of Guy's Hospital, four preparations of the pregnant womb, which de- monstrate its thickness and thinness in an extra- ordinary degree.

117. Denman says that, if healthy, it retains its original thickness through the whole period, to whatever degree it may be distended. He also considers this thickness the medium of its strength, by which it is capable of exerting infi- nitely greater power for the expulsion of its con- tents than the uterus of any animal. If the womb be increased in thickness there is no practical deduction of importance connected with it; if ou the contrary it be extraordinarily attenuated it is evident that especial caution should be employed in the performance of any manual or instrumental operation within its cavity ; as rupture and laceration are accidents of not very rare occurrence. The place where the placenta is attached is that where the thick- ness of the parieles is most considerable, and the vicinity of the orifice is the thinnest part. To

judge as correctly as possible, on this point, our examination should be made when the uterus is in its state of greatest dilatation, or before the waters have passed off; for the thickness will of course .ncrease in proportion to the diminution of its contents.

118. Little need now be said as to the nature of the uterine enlargement ; that it is not owing to mere mechanical distension is, we conceive, sufficiently proved by what we have already ad- vanced : we must attribute it to the gradual and increasing development of all the structures entering into the composition of the womb, and also to the very large quantity of blood which is circulating through its vessels. It is accompa- nied by real growth, and by the accretion of cellular substance.

119. The follicular apparatus about the neck of the womb, as it serves the important purpose of protection to the membranes from any foreign body, is deserving of notice. During the whole period of gestation these glandular follicles secrete a viscid gelatinous fluid, closing the mouth of the uterus, and rendering it impervious after conception. It is from this source that the glairy fluid, at the commencement of labor, de- nominated show, is principally furnished.

120. Thus pregnancy is not only giving rise to changes in every part of the original structure of the uterus, and which become more apparent as gestation draws towards a close, but at the time of labor we find a new principle super- added, for the purpose of putting a stop or ter- mination to the further ascent and enlargement of this viscus. It is this principle which gives a disposition to the uterus to act upon, and to exclude, whatever is contained in its cavity; and, if any further proof were wanting of its muscularity, the way by which it thus rids itself of its contents would abundantly furnish such testimony. This action has been considered as of two kinds ; tonic action, which is equal and constant; and spasmodic contraction, which is sudden and transitory, and is that species of power which is called into exercise by the exi- gencies of parturition. Perhaps the more simple and correct statement is that which represents both these species of action as the same in their nature, differing only in their degree ; this differ- ence being produced by the large volume of contents upon which the womb has to act, and which oppose such various degrees of difficulty and resistance to the completion of its purposes, as to render necessary such contractile efforts as must be attended by spasmodic and painful sensations.

121. Various opinions have been entertained by physiologists as to the precise nature of the uterine action, but we are not aware of their having arrived at any satisfactory result. The original or genuine cause of its action may exist in its structure, form, or properties, or perhaps in some inexplicable impression produced on the uterus by the child. The circumstances of the constitution, as its strength and disposition to act, and more especially the blood, appear to exert an important influence as to the manner in which the effects of uterine action are produced.

122. The prevailing opinion is that which vv? have already stated, hat the action of the mus-

cular fibres of the uterus very nearly resembles that of other parts, and that the pain peculiarly attendant on its exercise arises principally, if not solely, from the obstacles it has to sur- mount, and which are inseparably connected with human parturition. Amongst the most conspicuous of these obstacles may be enume- rated spasm, the firmness of the os uteri, and the resistance of the perinaeum and vagina. Having now presented a brief, but we hope a sufficiently explicit view of the womb and its contents gene- rally, at the termination of pregnancy, we shall pass on to notice in the same manner the prin- cipal circumstances connected with the expul- sion of these contents. Immediately after the rupture of the membranes, and the passing off of the waters, a new series of action is commencing in the womb, and the very reverse of that power, which during the period of gestation has been incessantly employed in building up the uterine structure, is now called into exercise to carry back the uterus, as far and as quickly as is con- sistent with the uniform perfection of nature's operations to its original unimpregnated con- dition. The same contractile effort which rup- tured the membranes, having acquired fresh force by the removal thus far of the obstacles which opposed its exercise, acts with increased power upon the remaining portion of the uterine contents, and soon completes the work of their entire expulsion. It is natural to suppose, what is really the case, that after such extraordinary efforts the whole system, but more especially the uterus, remains for some little time torpid and exhausted; this condition, if the labor has been favorable, as to its severity and continuance, is but of short duration ; and on examination of the uterine region, very soon after entire delivery, we are surprised at the collapse which the uterus has undergone ; for instead of a womb consider- ably larger than the adult head, occupying the greater part of the abdominal region, we find a hard, round, firm body, scarcely as large as the foetal cranium, occupying a situation a little above the ossa pubis. This, although the most prominent and desirable event, and that which is most frequently occurring after a well mana- ged labor, is not the only one which demands our strict and anxious attention. The vagina, whose parietes have been

greatly distended by the passage of the child, is longer in recovering so much of its original dimensions as places it beyond the reach of any untoward accident. Its laxity is such as to admit very easily of inser tion, more especially, if any injudicious attempts have been made to extract the placenta, by pul- ling at the funis. Inversion of the uterus may be produced by the same cause, and, whenever any degree either of instrumental or manual force has been employed in the labor, it is highly important that we should satisfactorily assure ourselves that all is right. This is best effected by laying the hand above the symphysis pubis, not removing it till we have grasped and dis- tinctly felt the uterus.

123. Another method may be practised with extreme caution, which consists in passing up two or three fingers into the vagina ; when, if there be any great degree of inversion, either

of the vagina or uterus, it will easily be ascer- tained. We would here deprecate the indiscri- minate practice of thrusting the whole hand into the uterus, on slight occasions, as replete with danger of the worst kind; nothing justifies the introduction of the hand, excepting cases of extreme hazard and difficulty. It will be suffi- ciently evident, after what has been already stated, as to the great enlargement or develop- ment of all the structures of the uterus, that, even where nature's intentions with regard to the con- traction of this viscus shall have been fully answered, its blood-vessels must necessarily re- main for some time of large capacity. The vessels which during pregnancy have been shooting from the uterus into the placenta, are, as we have already said, of very large size, and it is only by the contraction of the muscular fibre of the uterus around them, which ties them up, as by a ligature, that they are rendered secure. Hence the increasingly great importance of procuring this contracted state of uterus, which is without doubt the only permanent safe- guard against haemorrhage. External pressure, carried to the extent of griping the uterus, with the administration of cold, either externally or internally, or both, are amongst the most efficient measures. We need scarcely add that any cir- cumstance calculated to give impulse to the circulation, whether of a mental or physical kind, ought most sedulously to be avoided.

124. The next object of our enquiry will be the womb during gestation ; and here we shall dwell a little more in detail on those circum- stances which by their gradual development have produced the results already described. Though we do not perceive very clearly what passes in the uterus at the instant of conception, and although we are not very sensible of its

en- largement in the first months of pregnancy, it may be assumed, as a fact beyond all contro- versy, that the womb does possess this principle of gradual growth ; and so large does it become, in the latter periods, that our greatest difficulty is in conceiving how its vast increase of size lias been accomplished. For the first two or three months the uterus suffers little alteration in its shape, its cavity remaining, as before im- pregnation, pretty much of a triangular figure. Its weight, however, is increased after conception; and one of the first effects produced is its subsidence rather lower into the vagina, the shortness of which has been considered one of the equivocal signs of pregnancy. The uterus, thus confined within the bony cavity of the pelvis, has a natural tendency from its increasing bulk to gravitate downwards, which satisfactorily accounts for many of the distressing and trou- blesome symptoms of which women at that period complain. – The fund us uteri is the part first distended; and, notwithstanding the increased weight, after a certain time begins to as- cend. About the fourth month the uterus may be manifestly felt above the brim by applying the hand to the hypogastric region. In the fifth it is midway between the pubes and navel ; in the sixth it is a little below, and in the seventh a little above the navel. In the eighth it is half way between the scrobiculus cordis and umbili-

cus; at the ninth it has reached the cnsiforra cartilage or scrobiculus cordis ; and, at the com- mencement of labor, it is frequently not much higher than during the seventh month. In the second month the uterus is enlarged in every part, without much change of shape ; at the end of the third month it generally measures from the mouth to the fundus above five inches, one of which belongs to the cervix ; in the fourth it measures five inches from the fundus to the be- ginning of the neck ; in the fifth about six inches from the cervix to the fundus. In two months more it measures eight inches ; and in the ninth month it generally measures ten or twelve inches, and is oviform in its shape.

125. In the fifth month the cervix uteri begins to stretch, and one quarter of its length has be- come distended. In another month one half of the cervix is suffering this change; and in the eighth the neck is completely effaced, and its orifice is as high as the brim of the pelvis.

126. The changes of the os uteri are princi- pally effected during the ninth month, when its lips shorten, and sometimes disappear, although more generally they continue to project a little until labor commences. The mucous follicles too become more developed, and they pour out a fluid which serves the purpose of lubricating the parts and giving the first pretty certain indi- cation of labor.

127. The umbilical cord is the channel of communication between the

mother and the child, and is passing from the abdomen of the latter to the placenta, into which it is generally inserted about one-third from its edge. It consists of two arteries, continuations of the arteriae hypogastricae, and one vein protected by a membranous coat, the space between the vessels being filled up by a glutinous nucleus. It is worthy of remark that neither absorbents nor nerves enter into the composition either of the funis or placenta, and that the funis under various modifications is found not only in oviparous and viviparous ani- mals, but also in plants. The course of these vessels is not always straight ; they run some- times in a spiral direction, the arteries coiling round the vein, both chorion and amnion entering into the composition of the sheath, ' the chorion adhering firmly to the cord every where, but the amnion not adhering to the chorion ; it is not even in contact with it at the placental extremity, but forms there a slight expansion, which from its shape has been called by Albinus the pro- cessus infundibuliformis.' Burn, p. 143.*

128. For some weeks after conception, if the embryo be examined, no trace of the umbilical cord can be perceived, the abdomen of the child firmly adhering to that which afterwards becomes the placenta. This bond of union, by Us subse- quent extension, is converted into the funis um- bilicalis, the length and thickness of which are not always in proportion to the size of the fetus. The length of the cord varies greatly in some cases, being double the length it is in others; and, in a twin labor we once attended, it was so preternaturally short as scarcely to allow suffi- cient space for the application of the ligatures. Its average length is two feet, although the range of variation is from six inches to four feet.

129. The funis is sometimes knotted, and in a case we lately attended we counted five dis- tinct knots, but there was no diminution in the size or vital powers of the child. The varicose state of these vessels is said sometimes to inter- fere with the circulation and growth of the child, and even to destroy it altogether : this we do not doubt, but we have frequently met with this va- ricose state of the cord entirely unaccompanied by these circumstances. Sometimes by the rup- ture of the vessels blood is poured into the uterus, exciting pain and a sense of distension.

130. This, however, is only known when the membranes are ruptured by the discharge of coagula. If the foetal and maternal portions should communicate, the mother is weakened and may even faint, and in every instance the child suffers but does not always die. Vide. Bandelocque I' Art., note to section 1084.

131. In a case which occurred to us some time since, where the cord was very much twisted round the neck, body, and thighs of the child, we divided it in preference to any attempt at untwisting. The latter measure we feel con- vinced, had it been ever so carefully performed, would have ruptured the funis. The shoulders of the child had here been delayed twenty minutes after the expulsion of the head, and we are per- suaded the birth could not have occurred, unless the placenta had accompanied or immediately followed the child ; or that such pressure, prior to its expulsion, would have been made on the cord as to have destroyed its life, if the funis had not been divided ; of course the fatal por- tion of the funis was instantly secured by ligature, and the shoulders were seen in the world. Burns, in a quotation from M. Anel, says the cord may, by a fall or violent cqncussion of the body, be torn at a very early period of gestation. In this case the child dies, but is not always im- mediately expelled. It may be retained for se- veral weeks ; afterwards the ovum is thrown off, like a confused mass, enclosing a foetus, corre- sponding in size to the period when the accident happened. The cord may be filled with hy- datids.

132. Mauriceau proposed, where the cord was unusually thick, that two ligatures instead of one should be applied on the portion which remains attached to the child, as it may so hap- pen that by the shrinking of the cord a fatal ha;morrhage may ensue.

*133. Placenta. — There can be no doubt, not- withstanding our ignorance of the precise man- ner in which the functions of the placenta are performed, that it exerts a most important in- fluence on the vitality of the foetus. Changes, analogous in some degree to respiration, are re- quired by the foetal blood, and these it receives by its circulation through the placenta ; and, although we cannot trace the connexion between its maternal and foetal portions, yet we know, if th*e placenta be injured by the rupture of the vessels passing between its inner surface and the womb, the child being deprived of its proper blood would perish, while the mother might ex- perience no very serious injury.*

134. The human placenta is a circular flat i>ody, about six inches in diameter, and one in

thickness. In quibusdam placenta reperitur crassior,amplior, et sanguine abundantior. — Harv. The centre is generally its thickest part, from which to its circumference it is gradually atten- uated, so as to lose itself in the involucra or membranes.

135. The shape of the placenta varies, being sometimes oblong, and at others curiously lobu- lated ; and we lately met with an example of the termination of the umbilical cord in the mem- branes at a very short

distance from the placenta. The human placenta appears to consist of blood vessels and a cellular web (placentae substantia non constat glandulis sed mire vasculosa est. — Ruysch), but possessing neither absorbents nor nerves. Dr. Haighton used to consider it as made up of three systems, the maternal or cel- lular, in which the arteries terminate, and the veins commence ; the fatal or vascular ; and the intermediate, consisting of pulpy or cellular substance, and in which, if they exist, are to be found the communicating vessels between me maternal and fetal portions. If we throw ever so fine an injection into the umbilical arteries of the foetus, we shall thereby distend a considerable part of the placenta, but we shall find that the vessels of the maternal portion receive no part of the injection. On the contrary, if we inject from the uterine arteries, we shall again distend the placenta, but we shall find the umbilical vessels and their ramifications perfectly unin- fluenced. Hence we may infer the separation of the two portions of this viscus. It i> also ad- mitted that the blood of the foetus, with regard to its formation, increase, and circulation, is to- tally unconnected with, and independent of the parent, except that the matter by which the blood of the foetus is formed must be derived from the parent. Abunde me demonstraturum arbitror, viviparorum quoque fcetum, dum adhuc in utero continetur, non matris sanguine nutriri spirituque ejus vegetari, sed anirno viribusque suis frui, ut pullus in ovo solet proprioque san- guine gaudere. Harv. Exercitat. xxxiv.

136. Thus in all probability, analogous to the adult circulation through the lungs, the blood fitted for the foetal circulation is deposited by the uterine arteries in minute vessels or cells, situated in the intermediate portion of the pla- centa, where the ramifications of theumbilical vein, either by a secretory process or by actual absorp- tion of some of its finer parts, take up that which is necessary to the well-being of the fetus, and convey it along the funis to its ultimate destina- tion. In like manner, when the circulating fluid of the foetus requires any change, it is returned by the umbilical arteries of the funis to the cells of the placenta, whence the placental veins reconvey it to the general circulation of the parent. From all this it appears that Harvey was not far from the truth when he promulgated the opinion of the placenta performing the office of a gland, and secreting from the blood brought by the ma- ternal arteries that which is necessary for the nourishment of the fetus, much after the man- ner of the breasts and the liver. Ego itaque placentae et caruncularum tale munus existtmo, quale hepati atque mammis vulgo tribuitur : licpar nompe chylum ex intestinis haitstuin cor-

pori alendo ulterius prseparat : et placentae simi- liter succum«alibuem a matre provenientem nutriendo feetui porro concoquit. — Harvey de Placenta.

137. The membranes. — Great diversity of opinion has obtained in relation to the number and struc- ture of the membranes, which, together with the placenta, contain the foetus, the navel string, and the liquor amnii. This has principally arisen from the different periods of gestation when they were examined ; and from the confusion of terms and the variety of descriptions which have been annexed to them. It does not appear very im- portant, for practical purposes, to enter into a lengthened 'examination of the time when the membranes become consolidated or adherent one to the other ; and we shall, therefore, describe them as they are found in the latter months of pregnancy ; consisting of the amnion, and true chorion, and the decidua or spongy chorion ; which last is furnished entirely by the uterus, and serves for its connexion with the vessels of the foetus.

138. The ovum, says Mr. Burns, when it de- scends into the uterus, consists of two mem- branes, one within the other, having very trans- parent jelly interposed between them ; but in process of time the innermost, which is called the amnion, grows so much faster than the outermost, called the chorion, that it comes in contact with it, or at least has only a thin layer of jelly interposed. The amnion is transparent, and thinner than either of the two other mem- branes, although, at the termination of preg- nancy, it is stronger than either; it adheres to the internal surface of the chorion and placenta, and, being reflected over the funis, it terminates at the umbilicus.

The decidua, as we have already observed, is provided entirely by the uterus ; it is not a co- vering of the foetus, but the lining of the womb falling off after delivery, and generally discharged with the lochia. Ruysch remarks that these membranes, in the advanced state of pregnancy, cohere slightly to each other ; though, in some ova, there is a considerable quantity of fluid col- lected between them, which, being discharged when one of the outer membranes is broken, forms one of the circumstances which have been distinguished by the name of by or false waters. Haller supposed that the decidua was formed by the uterine vessels. Dr. Hunter thought the decidua originated in coagulable lymph. John Hunter attributed its formation to coagulated blood, forming a pulpy substance on the inner surface of the uterus.

139. Burns says that the decidua consists of two layers, one is highly vascular, proceeding directly from the uterus ; the other, which is most probably formed by these vessels, is more fibrous and gelatinous ; and, when this is re- moved, the primary vessels or outer layer may be seen like a fine efflorescence covering the sur- face of the uterus. In some cases the

decidua extends a little into the fallopian tubes ; in other instances it does not. In no case does the cervix form decidua. It is only produced by the fun- dus and body of the womb, and immediately above the cervix the decidua strclches across so as to form a circumscribed bag within the uterus.

In some instances we have observed this conti- nuation to be wanting, although the parts were opened with ease. In all other circumstances these uteri resembled those where the decidua was continued across; but perhaps, notwith- standing this, there may have been a difference of two or three days in the period of impregna- tion occasioning this variation. In every case the decidua, consisting of two layers, is com- pletely formed before the ovum descends. When the embryo passes down through the tube it is stopped, when it reaches the uterus, by the inner layer, which goes across the aperture of the tube, and thus would be prevented from falling into the cavity of the uterus, even were it quite loose and unattached. By the growth of the embryo, and the enlargement of the membranes, this layer is distended, and made to encroach upon the cavity of the uterus, or, more correctly speaking, it grows with the ovum. This disten- sion or growth gradually increases, until at last the whole of the cavity of the uterus is filled up, and the protruded portion of the inner layer of the decidua comes in contact with that portion of itself which remains attached to the outer layer. We find, then, that the inner layer is turned down and covers the chorion, from which circumstance it lias been called the reflected de- cidua. Thus we see that wherever the ovum descends it is encircled by a vascular covering from the uterus, which unites in every point with those shaggy vessels which sprouted from the chorion, and which made what was called the spongy chorion. One part of these vessels forms the placenta, and the rest gradually disappear, leaving the chorion covered by die decidua. The liquor amnii, or the waters, as they are de- nominated in labor, are generally transparent, though they are sometimes of a dusky brown color. They are contained, as the name implies, within the bag of the amnion, and, when ana- lysed, they yield principally water, with a small proportion of mucus, saline matter, and earth. This fluid serves several important purposes in pregnancy ; it furnishes a yielding and easy support for the foetus in utero in the early months ; it protects the foetus from any mecha- nical or spasmodic contractions of the womb ; and in the latter months it equally preserves the uterus from the plunging and kicking of the child. It allows of easy motion within the ute- rine cavity, gently distending it, and preventing any morbid adhesion of its parts. In the time of parturition every practical accoucheur is aware how much more quickly the os uteri is dilated by the membranes forced down in the form of a cone than by any part of the child' body.*

ON CONCEPTION.

140. We do not intend to lay before our readers even a small part of what has been said and written on this wonderful and diffi- cult subject; but, as a treatise on obstetric science would be incomplete without a slight view of the different opinions respecting gene- ration, we shall, as briefly as possible, detail some of the theories which have prevailed in the different ajies of the world, premising our obli- gation to Dr. Denman for the materials of th

sketch. With him we believe that the first part of the process by which primordial existence is established, from the minuteness and complica- tion of the objects to be described, and from the retirement of the attending circumstances, is probably involved in too much obscurity to be discovered.

141. In reference to this subject we cannot deny ourselves the pleasure of quoting literally the following passage from Denman's Intro- duction to the Practice of Midwifery, p. 105 : — ' Through all nature there is not found a single body which consists of materials lying in confu- sion. However small, and apparently insignifi- cant, every particle exhibits proof of the majesty and wisdom of God ; and it may be presumed that the minutest elementary parts of every sub- stance are originally composed and wrought up in the most regular order into what is called form ; yet, in mineral substances, it is a form so immerged in matter, that it is ever restrained from the acquisition of the excellence of a living body, unless there be a previous destruction of its pre- sent form ; but the more refined the matter the more perfect is the form, and the more perfect the form the more exquisite are the properties. Hence the common observation seems to have been made of the encroachment, as it may be called, of one order of natural bodies upon another; of the near accession of the finest minerals to the lowest vegetables, and of the first vegetables to the lowest animals, in such a manner that they can scarcely be distinguished.'

142. Impregnation may be defined that func- tion whereby the seminal fluid, applied to the female genital organs, excites the various genera- tive actions, thus ultimately producing the foetus. Pythagoras supposed that, from the brain and nerves of the male, a moist vapor de- scended in the act of coition, from which similar parts of the embryo were formed ; the grosser parts were composed of the blood and humors contained in the uterus, and, according to the laws of harmony, seven, nine, or ten months were required for the perfection of the foetus.

143. Empedocles thought that some parts of an embryo were contained in

the semen of the male and others in that of the female, and that, by the mixture, the embryo was formed. He was likewise of opinion that the desire of pro- creation originated in the natural tendency of the separated parts to be united.

144. Hippocrates approached very nearly to this view of the subject, maintaining that con- ception took place in the cavity of the uterus by the admixture of the male and female semen ; both of which contained the organic principles of the embryo.

145. Aristotle, forgetting that menstruation is not common to all animals, who nevertheless propagate themselves, denied the existence of semen in the female, imagining that the material parts of the embryo were formed by the men- struous secretion, and that the semen of the male impressed upon them, when formed, the prin- ciple of life, by which the embryo was brought to perfection.

146. "jtden believed that the embryo was pro- duced from the male, but that it obtained nourish- ment from the female.

147. The illustrious Harvey, whose researches, on generation occupied a considerable part of his life, seems to have been fully aware of the almost impenetrable mystery in which the process was involved ; for after detailing many observations, the results of his sagacious and persevering en- quiry, he explains his opinion on conception, by an allusion to the almost incomprehensible properties of the magnet ; he tells us that as iron, by friction with a magnet, becomes possessed of magnetic properties, so the uterus, by the act of coition, acquires a plastic power of conceiving an embryo, in a manner similar to that by which, the brain is capable of apprehending and think- ing. Videtur sane faemina, post tactum in coitu spermaticum, eodem modo aflici, nulloque sen- sibili corporeo agente prolifica fieri, quo ferrum a magnete tactum, hujus statim vi dotatur, alia- que ferramentaad seallicit. — Harv. Exercitat. de Concept.

148. The opinion of Hamme, adopted by Leuwenhoeck, obtained great celebrity and ap- plause, as the facts on which it rested were sup- posed to be demonstrated by the microscope. He asserted that in the semen of all male animals there was an infinite number of animalcule, in each of which were contained the perfect rudiments of a future animal of the same kind ; and that these required no other assistance from the female but a proper bed for their habitation, and nutriment for their expansion. This opinion was soon met by the observation of mixed generation, as in the case of a hybrid or mule, which, being procreated by two animals of different species, partakes in an equal degree of the nature and likeness of the male and female parent. This seems an unanswerable refutation of the doctrine,

and it is now universally believed that Leuwen- hoeck's animalcule are nothing more than parts fitted for organisation.

149. At length the aid of chemistry wa? brought to bear upon the subject. The chemists presumed that the male semen was of an acid and the female of an alkaline quality, from the mixture of which an effervescence arose. From some particles which subsided, on the conclusion of the effervescence, they fancied that the embryo was formed, the fluid parts becoming the waters of the ovum.

150. Dr. Blundell, in some published 'experi- ments on a few controverted points respecting the physiology of generation,' says that among the various questions which have been raised, respecting the generation of animals, there is one as yet undecided ; which has not, perhaps, been hitherto investigated with all the care it deserves. It may be demonstrated that, in this curious pro- cess, the male furnishes the semen, and the fe- male the rudiments ; but whether these two sub- stances must have access to each other, in order that the young animal may be formed, is a question which still admits of dispute. Notwithstanding the labors of physiologists, we are not as yet in possession of any regular system of experiments, proving that the semen must have access to the rudiments in those forms of brute generation which most nearly resemble our own. In the present state of our knowledge the result of this position seems, at least, not improbable, as the experiments of Dr. Haighton have shewn that

evidences of generation may be produced in the ovaries, although the semen has been excluded previously to sexual intercourse by the closure of the fallopian tube.

151. On a review of the results of his experi- ments, Dr. Blundell thinks it not improbable that, for the completion of generation, the semen must have access to the rudiments, and yet that, notwithstanding the necessity of these approaches for its completion, the process to a certain ex- tent may be accomplished without them. These are the two leading propositions it has been his endeavour to establish : at the same time he has further attempted to show that the corpus luteum is not a proof of genuine impregnation ; that the semen, at least occasionally, penetrates as far as the ovaries; and that, however copiously this fluid may be absorbed into the vessels, it is in- capable of giving rise, by any impression there, to the complete circle of the generative actions.

152. Sterility. — Sterility may depend upon many causes ; but the chief are, we think, too early marriage, ill health, too frequent sexual in-

tercourse and dysmenorrhcea. We have frequently observed that very young married females have not had children, and that a deranged state of the female health has prevented conception, which has taken place where the health has been restored. The effect of frequent intercourse in inducing sterility is obvious from the case of prostitutes, in whom it is said, the fallopian tubes frequent- ly contract adhesions with the contiguous parts of the peritonaeum ; and the influence of an op- posite state of things is deducible from the fact of the prolific results of the marriages of old men with young wives. Dysmenorrhoea, menorrhagia, and the formation and evolution of a false mem- brane from the internal surface of the uterus, are frequently attended by sterility. In one lady there was dysmenorrhoea, with a profuse flow of the catamenia and of coagula for ten years of marriage, and then conception took place ; but at this very time the uterus itself was diseased, with morbid growths and partial suppurations formed in its substance, of which the patient died a few days after delivery. This subject is altogether a very interesting one ; but it requires fresh inves- tigation. To restore the general health — to limit the frequency of intercourse — and, incases of dys- menorrho3a, a mercurial course, offer the greatest chances of success in the removal of this evil.

OF THE SIGNS AND DISEASES OF PREGNANCY.

153. It is to be expected that so important an organ as the uterus, on the occurrence of any great change in its condition, should evidence such change by indications in other parts of the body. The law of sympathy is one of universal preva- lence, and the uterus may fairly be considered the great centre of this influence in the female system. We have already seen that the perfect development of the uterus, or the establishment of that function which capacitates it for concep- tion, is attended by many remarkable conse- quences, and in pregnancy these effects are not less astonishing : there is scarcely any part or viscus, there is scarcely any action throughout the whole system, which is not influenced in a greater or less degree by impregnation.

154. These changes have naturally excited much attention, not only from their furnishing proof that conception had occurred, but also from their originating symptoms which, if not controlled, would in many instances induce an abortive result of the generative action. Hence it is that medical writers have elaborately inves- tigated these circumstances, and with the signs of pregnancy have generally dwelt at length on these changes, which they have denominated its diseases.

155. It is evident that the term disease, in this use of it, requires some

qualification. We do not attach the same meaning to it as in affections independent of pregnancy ; but, as some of the dis- ordered actions of this state are so trivial as to be regarded merely as signs of its existence, so there are others, especially in the more advanced periods, which require judicious medical aid. We shall here adopt the common division, and shall class the affections of this state under two heads, the symptoms of early, and the symptoms and diseases of more advanced pregnancy : regarding the quickening as the point of separation between the two By this arrangement we follow out our own view of the subject, that the changes immediately consequent on conception rarely demand the appellation of disease ; while those of the latter class, however naturally connected with the gravid state, do sometimes require the most decided and prompt treatment It must, however, be remarked that, as in fever there are scarcely two cases which exactly resemble each other, so in pregnancy there is the utmost di- versity ; some women, if they suffer at all, com- plain only of the slightest inconvenience ; while others regard the time of gestation as replete with indisposition and miserable sensations. In some instances there is so little sympathy or consent of parts that pregnancy seems to proceed indepen- dently of any other organ ; while in others every function of the body partakes of the irritability which impregnation has induced. And, although the division we have adopted is generally correct, we do find that some women are so affected, by the least increase in the weight of the uterus, that the symptoms arising from pressure on the neighbouring parts appear in the early months. On the whole the gravid state is not necessarily one of disease; it is an altered condition, produc- tive of less or greater inconvenience in propor- tion to the observance or neglect of a simple and natural course of life. If, because of conception, healthy exercise be abandoned, and the ordinary occupations of life be laid aside, while the same quantity of nutritive and perhaps stimulant food continues to be taken, we have here a cause of dis- ease which, independently of pregnancy, would induce the most injurious effects. And, while wt- are aware of the necessity which sometimesexists in certain periods of this state for quietude and re- pose, we cannot forbear the expression of our opinion, that a moderate degree of activity will con- duce not only to less inconvenience during gesta- tion itself, but to an easier labor. The example of women of the lower classes, who follow laborious occupations in the open air, without scarcely any regard to pregnancy, is decidedly in favor of tins conclusion. Nor can we divest ourselves of the

belief, that the favorable or unfavorable circum- stances of the mother, during pregnancy, more especially as it regards her active or sedentary and

luxurious mode of life, do very often ma- terially influence the health and vigor of her off- spring 1 We do not assert this as an established fact, but we hare been led to a conclusion of the kind from observing, in a few instances, where we knew the mother to have been remarkably inactive arid indqlent during her pregnancy, that the children were torpid and sluggish in the perform- ance of all their functions; more especially in the healthy evacuations of the contents of the intes- tines. In two instances, occurring in the same family, we thought we could perceive great ten dency to hydrocephalus from this cause.

156. Signs of the early months. — The suppres- sion of the menses is generally the first circum- stance which leads women to suspect pregnancy. It is undoubtedly true that amenorrhoeamay, and frequently does, arise from other causes; but, as a single sign, we think it of great value. Dr. Denman affirms that he has never known a preg- nant woman menstruate ; and in this opinion we agree, although instances have occurred to us where there hare been, in the early months, seve- ral returns of a sanguineous discharge, thrown off in clots and coagulating, similar to the men- ses in color, and arising, perhaps, from the upper part of the vagina and about the cervix uteri.

157. These discharges have not observed any regular intervals ; they were not ushered in by any symptoms characteristic of approaching men- struation ; nor did they continue beyond the third or fourth month. The discharges of a later period may, we conceive, be explained on other grounds.

158. We have lately been called upon for an opinion in some cases of doubtful pregnancy; and though there was in all of them abdominal and mammary enlargement, and in others more or less of the various symptoms of this state, in none was there suppression of the menses. For ourselves we should feel more confident of the existence of pregnancy from an entire sup- pression of the menses, all other signs, with the exception of abdominal increase, being absent, than we should from the united assemblage of all the other indications, if the menstrual secre- tion continued with its accustomed regularity.

159. Cardialgia, nausea, and vomiting, are almost constantly attendant on conception ; there are instances, and we have known several, where there is scarcely a sensation of sickness through- out the whole period ; these are, however, very rare, as it much more constantly happens that during the whole of the early months, im- mediately on getting out of bed, there is a vomit- ing of a glairy, and sometimes of a bilious, fluid. Puzos considered vomiting as very salutary; and Denman says, if it should not be very violent, and if it occur only in the early part of the day, it is generally

found to be serviceable by exert- ing a more vigorous action of the uterus, and by bringing the stomach into a better state ; for the vomiting of pregnant women is not always a mere effort of straining, or a discharge of the 1'ood and common humors of the stomach. The matter evacuated sometimes shows a very dis-

turbed state of the stomach, or a morbid secretion of such a kind as to be offensive to the stomach itself ; and besides correcting or evacuating the offending humors, it is necessary that we use our endeavours to change or to appease the present action before the indication to vomit be sup- pressed. We know not how far vomiting may be beneficial in this state ; it certainly does occa- sionally relieve the stomach from an accumula- tion of disordered secretion, and thus far is of service ; if, however, it should continue to the later months, when the abdomen is large, and its parietes distended, we shall hear very frequent complaints of the straining and spasm to which it gives rise. At this time, as well as earlier, it will be right to attempt its mitigation by the various remedies usually employed for this pur- pose. The application of leeches to the pit of the stomach, of a small blister, or of an opiate plaster, with an additional quantity of this sub- stance in its composition, or of brandy and opium in a liquid form, all being externally em- ployed, will frequently produce great relief. One grain, or a half, of solid opium, we have fre- quently given with most decided advantage ; and in the latter periods, when the head sympa- thises in the disturbance, it may be necessary to take away blood from the arm or from the back of the neck ; mild aperients and laxatives must be exhibited. It is deserving of notice that the vomiting generally comes on when the patient changes from the lying to the erect position ; and it is frequently useful to maintain for some little time the recumbent posture. We lately attended a lady who was much distressed by heart-burn ; and, after going through the whole round of reme- dies, she commenced taking prepared chalk, and through several pregnancies consumed an ounce of it every two or three days. It had this addi- tional advantage, that it not only relieved the heart-burn, but preserved the bowels in an in- variably aperient and comfortable state. It is manifest that these affections are only important as signs of pregnancy when they concur with the whole series of indications appertaining to this state ; for no one would presume a woman to be pregnant, in the absence of other proofs, merely because she was sick and vomited. Loss of ap- petite accompanies pregnancy, but it is a sign on which evidently no dependence can be placed. Pregnancy is often accompanied by a continual teu- dency to febrile excitement, the pulse is increased, the palms of the hands and the cheeks are not un- frequently flushed, and emaciation and irritabi- lity of manner are the result. If any inflamma- tory disease should occur in pregnancy, and even independently of such circumstance, the blood, when drawn, will have a sizy appearance :

its constituent principles being slightly altered.

160. Great stress has been laid on the enlarge- ment of the mammae, and, if it be accompanied with tenderness, flying pains, and a secretion of milk, it is a very satisfactory sign. It must, in- deed, be recollected, that the increased enlarge- ment of the breasts may arise from adeps as well as pregnancy.

161. If it be merely an accretion of cellular substance, or fat, it will have a soft cushiony feel; if it be originating from p:e;nancy it will

have a glandular, rather knotted, and uneven character.

162. The areola has been regarded almost as an infallible sign in first pregnancies. We have known three instances where it was increased in breadth, decidedly darkened in color, and where there was slight secretion from its surface, without the existence of pregnancy. If it con- cur with, the other indications, it is a valuable auxiliary corroboration.

163. Having now described those changes which almost invariably attend early pregnancy, we shall briefly notice some anomalous and oc- casional affections, arising from peculiarity of constitution, such peculiarity being excited into activity by gestation.

1 64. Frightful dreams are, in some individuals, a very good diagnostic sign ; and Dr. Haighton used to relate the case of a lady, under Dr. Low- der's care, who was compelled to hire a nurse to awake her when she was very much discom- posed in countenance. We occasionally attend a lady, who invariably knows herself to be preg- nant, by pain in the teeth ; and many women unerringly arrive at the same conclusion, from the existence of painful sensations in unusual parts, as the toes, fingers, ears, &c.

165. We may remark here that the anomalous signs are not very valuable in fiist cases, and for this reason, that, not having been previously pregnant, a patient cannot tell whence they arise, or with what state of system they are con- nected. We have before observed that preg- nancy is not a morbid, but an altered state, and plethora or increase of the circulating fluid may be enumerated amongst the causes giving rise to some of the diseases of pregnancy. There is one affection, probably arising from this cause, which is very distressing, although happily not very common, we mean the prurigo pudendo- rum muliebrium. We are aware that women are subject to this disease independently of impreg- nation ; and we mention

this fact the more wfl- lingly, from having seen two cases, where conception seemed to have been prevented by its continuance ; at all events, it occurred im- mediately on its cure.

166. The most interesting case occurred in a lady of twenty-six, who had been married five years, and had menstruated regularly during that time. For the last three years she had suffered so acutely from prurigo as to render connubial intercourse impossible. She had followed almost every professional opinion, and every remedy seemed to have been tried unsuccessfully. We put her on a gentle mercurial course, there not being the slightest reason for suspecting any ve- nereal taint ; and the affection of the gums was kept up in a slight degree for two months. At the end of this period she was so much im- proved as to disregard the prurigo, and in ano- ..her month she became pregnant. The child when born was healthy and strong.

167. Irritability of a nervous and hysterical kind is frequently appearing in pregnancy ; it will not be relieved by the abstraction of blood ; mild aperients may be given ; but when it occurs, as is generally the case, with women of spare and delicate habits, calumba bark and valerian,

or any stomachic, given in the form of infusion, will do good. Women, when but little advanced in pregnancy, often complain of inability to walk, accompanied by pain in making water, and a discharge from the vagina, which last, as it may be satisfactorily attributed to pregnancy, ought not hastily to be considered venereal. In cases of suppression of urine Dr. Haighton used to recommend that females should be instructed to relieve themselves, by passing up the finger to the os uteri, raising it up, and thus taking off the mechanical pressure from the womb ; and if, in addition to this, they hold their breath, and force down, the urine will often be discharged.

168. Retrovertion of the utervt used to be re garded with extreme apprehension, and, were we to judge from what has been written respecting it, we should think it an occurrence of the most dangerous kind. The fears which were for- merly indulged are considerably modified ; it being now well known, that in many instances the timely and continued introduction of the catheter will suffice for its removal ; and even where this is not the case, if other circumstances are favorable, it may be allowed to continue for some time without fear of injury. We do not urge these remarks as an apology for igno- rance and inattention, but rather to allay any undue excitement either in the practitioner or the patient, and to prevent any unnecessary and meddlesome interference, which might, by pro- ducing abortion, originate a mischief worse than the original affection. Retroversion consists in an alteration of the position of the womb ; and, for

the first accurate description of the change which the uterus suffers, we are in this country indebted to Dr. Hunter, in 1759, Gregoire and Levret having previously written upon it.

169. If the pelvis be of the usual size, it may occur in the third or fourth month, and, if rather more capacious than common, as late as the fifth. The attention of the patient is first excited by difficulty in passing the urine ; and by tenes- mic sensations in emptying the rectum. If the retroversion be complete we shall, on examina- tion, discover a tumor formed by the fundus uteri, between the vagina and the rectum ; and the os uteri, if felt at all, will be found turned upwards and forwards towards the pubes. If an examination be made, per anum, the fundus uteri will be ascertained forcing the rectum into the hollow of the sacrum ; and, if the .finger of the other hand be in the vagina at the same time, it is not difficult to determine that the uterine tumor is confined between the rectum and the vagina.

170. Retention of urine is the most common cause of retroversion (Dr. Denman's Introduc- tion to Midwifery, p. 78) ; and women who live in an humble situation of life, or in an unre- fined state of society, are scarcely ever liable to this complaint, because they are free from the restraint of company, and can evacuate the con- tents 6f the bladder whenever it is necessary. Those in the highest ranks, not being ashamed to withdraw from company, are nearly in the same situation.

171. But those, who, in a middle state of life, with decent yet not over refined manner?, ha»e

not cast off the bashfulness of the former, nor acquired the freedom of the latter, are most sub- ject to the retroversion of the uterus. The great danger in this case arises from not ascertaining the precise character of the disease ; although even here, if the bladder be emptied, alarming consequences are not likely to ensue. Our first object then is to evacuate the urine, and the ca- theter may be slightly curved, the concavity being directed to the sacrum, or we may use a flexible male catheter, although in general the common instrument succeeds. The catheter must be very slowly and delicately introduced, and should not be pushed further into the blad- uer than is necessary to relieve the distension. We may, perhaps facilitate its passage, where there is difficulty, by introducing the finger into the vagina, and depressing the os uteri, at the same time relieving the bladder from th vaginal tumor. Pressure on the abdomen will enable us more completely to empty the bladder. As soon as we nave completed this operation, a clyster

or some aperient medicine should be exhibited.

172. Instances are recorded where the retro- version has been immediately removed on the evacuation of the contents of the bladder ; but it may continue, and Denman seems to think that, if the symptoms are not urgent, the uterus may remain in a retro verted state for many days or weeVs, without any other detriment than what may be occasioned by the temporary interruption of the discharges by stool or urine : and, contrary to all expectation, it has been proved that the uterus, when retroverted, will often be gradually and sometimes suddenly restored to its position, without any assistance, provided the cause be removed by the occasional use of the catheter. It appears that the enlargement of the uterus, from the increase of the ovum, is so far from ob- structing the ascent of the fundus that it contri- butes to promote the effect; the distension of the cervix becoming a balance to counteract the de- pression of the fundus ; for no cases of the retro- verted uterus admit of reposition with such diffi- culty as in women who were not pregnant, in whom the uterus underwent not any or no mate- rial change.

173. In the practice to which these statements would give rise we accord to a great extent, but if, in the course of a short time, a reposition of the uterus did not spontaneously occur, we should feel disposed, by manual assistance, to at- tempt the replacement. Having put the patient in such a position that the hips shall be more elevated than the shoulders, and the thighs brought to right angles with the body, we may pass one or two fingers into the rectum; and then, by the aid of a piece of sponge, fastened to the end of a small bit of cane, according to Dr. Haighton's suggestion, gently pushed upˆthe gut, until it comes in contact with the promontory of the sacrum, we may act on the retroverted womb ; and now two fingers may be advantage- ously introduced into the vagina, so as to de- press the cervix uteri, thus influencing the womb from two points. If we fail, after a judicious re- petition of these measures, Dr. Hunter advises that the ovum should be tapped, so that, by let-

ting off the water, its bulk should be diminished Even if we succeed the bladder will require se- dulous attention ; and, at least till quickening is fully established, we must prevent any extensive accumulation of urine in this visous : of course, when the uterus has fairly emerged from the pel- vis into the abdominal cavity, it cannot again be retroverted.

OF QUICKENING.

174. The quickening of the child, so termed because, at this period, it was erroneously sup- posed to be endowed with the principle of life, is an important event. The earlier affections of pregnancy, or those which may

be supposed more especially to depend on the irritability connected with this state, are now yielding to a new class of affections, which result in a great measure from the increased weight of the womb, and from its consequent pressure on surrounding parts. We must allude, before we proceed fur- ther, to the erroneous opinion, so long entertain- ed, and on which the English law is founded, that when the child quickens it first acquires vi- tality. From the moment of impregnation the foetus is in possession of this principle ; and it is only at this time, from circumstances we are about to explain, that it affords increased mani- festations of this power. It is to be expected, when the uterus is confined within the cavity of the pelvis, and when the proportion of the liquor amnii is large compared with the size of the child, that its movements should be indistinct ; but when the relative quantity of water is smaller, when the womb has fully emerged from the pelvis cavity, into a situation where it is less restrained, and where the sensibility is perhaps greater, the motion is stronger and more de- cidedly felt. It is possible for women to be deceived by the intestinal movements of wind, fancying that they are the motions of the child.

175. This deception most frequently occurs where there is a disposition to favor the idea of pregnancy. If this feeling did not exist it would be easy to convince such patients that genuine uterine sensations, produced by a child in the cavity of the womb, can only be felt in certain parts of the abdomen. We are now in attend- ance on a lady who, from irregularity in the menstrual discharge, supposed herself in a state of pregnancy ; she is twenty-six years old, and has been married five years without having been once pregnant. Several of the early signs of pregnancy, as slight nausea, darkening of the ariola, and capricious appetite have existed. The breasts are much enlarged, and the abdominal intumescence is considerable. We have always entertained doubts as to this lady's state; for during the eight months of supposed gestation she has very sparingly menstruated six or seven times. On examining the abdomen we perceiv- ed the fundus uteri behind the ossa pubis, and we felt convinced, on further pressure by the hand, that the abdominal enlargement was prin- cipally attributable to adeps and air. On ex- amination, per vaginam, the cervix uteri was not at all developed; it was of its original length, and we were able distinctly to ascertain that the ute- rus was not at all increased in si'/e. We think

these are the cases of supposed pregnancy most commonly occurring; a lady is desirous of having a family, never having perhaps been a mother, or having advanced to that age when it is im- probable she shall again bear children. From some accidental circumstance the menses become irregular,

or they are suppressed for a few weeks beyond the usual period. Expectations are che- rished ; rest is enjoined ; and capricious appetite, in conjunction with some other of the early signs, leads the patient to believe that she is most probably pregnant. When menstruation again occurs it is thought rather unnatural ; but as every effort is employed to diminish its quan- tity, and to shorten the time of its flow, it may not continue more than a day and a half, or two days. Indolence and indulgence succeed to ac- tivity; the same quantity of nutritious food con- tinues to be taken ; the bowels become torpid from want of exercise, and from the accumulation of the ingesta. If we add to these circumstances the secretion of air in the intestinal canal, the deposition of adipose matter in the abdominal integuments, and the fatty enlargement of the mammae, we have no difficulty in comprehend- ing how patients may deceive, not only them- selves, but, by strong statements of their symptoms, even their medical attendants.

176. We could enumerate several such cases as these, and one in particular, where the abdo- men was never exceeded in size, in the ninth month of pregnancy, except perhaps in the case of twins ; and where there was every concurrent indication, excepting the suppression of the men- strual secretion. It is needless to add, that even here there was no pregnancy. We wish to ob- serve that the practitioner ought never absolutely to commit himself, as to the existence of preg- nancy, without an examination of the uterus itself; and, as much as possible to simplify and illustrate this important and practical part of our subject, we shall recapitulate a few particulars. The fundus uteri, when it ascends from the cavity of the pelvis, is situated forwards, and its mouth and cervix posteriorly; it is manifest, therefore, that the intestines cannot lie before it (an important circumstance in external enquiry) ; but they must be situated posteriorly and at its sides.

177. The fundus again, previously to its as- cent, and in proportion to its increasing de- velopment, will afford a large surface for the pressure of the superincumbent intestines ; and the mouth and cervix uteri, will necessarily be forced lower down in the vagina. The mouth of the uterus is always sufficiently open, in the unimpregnated state, to admit easily the tip of the finger. Soon after conception it is closed, and is only to be penetrated, if gentle efforts are employed first within its edgs. As preg- nancy advances it becomes gradually softer, al- though it is not till the fifth month that the cervix is decidedly developing itself. In the seventh month this process is so far advanced that we may, by a vrell conducted examination, feel the head of the child ; in the eighth month the neck is completely destroyed for the purpose of enlarging the uterine cavity; and it is situated as high as the brim of the pelvis.

178. These facts should always be impressed on the mind, whenever we make an examina- tion ; and if we conduct it slowly, remembering that the indications furnished by disease re- semble to some extent those of the gravid state, we shall not be liable to error. If we examine in the second month, which is seldom required, and still more rarely necessary, we shall perceive the gravitation of the uterus downwards, and the 'cervix will be closed. When elevated by the finger it will to an experienced examiner feel heavier, and rather more resisting than in the unimpregnated state. We should not, however, express a decided opinion from the indications of this early period. In the third and fourth months, we may arrive at greater certainty, from the increased size and weight of the womb. During the fifth month an examination may be conducted with confidence, the uterus having risen above the brim, and by pressing its fundus we may impart to the fingers in the vagina a distinct sensation of resistance and rolling. Under these circumstances we can at any rate pronounce the womb to be enlarged ; and, if we hesitate as to the precise nature of its contents, we have at least obtained some positive informa- tion. After this period the alterations of the cervix, the increasing development of the uterus, and the movements of the child, will generally conduct us to a certain and well grounded opinion. If there be any doubt, after examining by the vagina alone, we advise the practitioner to introduce one or two fingers into the rectum, thus placing the uterus between the action of both hands, in which case he can scarcely fail to ascertain with precision the extent of the enlarge- ment. He may also introduce a catheter into the bladder, and, by gently moving about its rounded extremity in the cavity of this viscus, he may press the uterus backward against his fingers in the rectum, and thus acquire addi- tional information as to its size and condition.

179. We shall now treat of the class of com- plaints incident to the advanced stage of utero- gestation, of which it is scarcely necessary to observe that they are more painful and danger- ous than those we have already enumerated. For, while the death and premature expulsion of the foetus is the worst result of the one, the safety of the mother, as well as the destruction of the child may be involved in the other.*

180. Nausea and vomiting may still continue to render it necessary to maintain an almost en- tirely empty state of stomach, nourishment being acquired by clysters of beef-tea and jelly. The occasional exhibition of solid opium will prove highly advantageous, notwithstanding which the vomiting may go on to harass and debilitate the patient, and may reduce her toastate of extreme danger. In these circumstances it is very justi- fiable to induce premature labor; and we regret that an attempt of the kind was not made in the subjoined case. Dr. Marshall Hall mentioned to us the case of a lady, in whom vomiting con- tinued in spite of every remedy which a most experienced practitioner could suggest, and in- duced a fatal

termination in the seventh month.

181. Jaundice sometimes occurs in the latter stage of utero-gestation, more as the consequence

of the state than from any schirrosity of the liver or disease of the biliary ducts. The treat- ment is generally confined to palliatives, al- though there is perhaps no sufficient reason why pregnant women should not bear the ope- ration of the proper remedies for its cure. For ourselves we should especially recommend an early regard to affections of the liver during pregnancy, if they be conjoined with inflamma- tion. A lady, the wife of a very able prac- titioner in the country, was attacked with symp- toms of jaundice in the latter months; they were not disregarded, but inflammation of the liver succeeded, and in spite of the most vigorous treatment it terminated fatally in a few days.

182. Costiveness is often a very troublesome attendant of the later periods of gestation, arising from the pressure of the enlarged uterus on the rec- tum. We do not advocate the continued exhib- ition of purgatives, much less those of an aloetic or drastic kind; still, as torpor of the bowels is naturally incident to pregnancy, we are always desirous of preventing any such accumulation of feculent matter as may give rise to what has been vulgarly denominated the ‘ ball stool.’ Not to dwell on the distressing sensations pro- duced by excessive and almost continual con- stipation previously to labor, we have known during the act of parturition itself very serious delay arising from this cause, and more than once we have been compelled to empty the rectum before the head could be propelled into the world. Denman says ‘ that he was at one time very assiduous in preventing costiveness; but that afterwards he became much less so, ob- serving that all women who went on properly, especially in the early part of pregnancy, were liable to this state of the bowels, which may have some relation to the strong action of the uterus at that time. Costiveness may, therefore, be considered as a state of the bowels correspond- ing with that of the uterus ; and we never can believe that to be injurious which occurs so fre- quently as to be esteemed a common conse- quence.’ We may further observe, in corrobo- ration of this statement of Dr. Denman’s, that not only is abortion most frequent in those patients who are habitually prone to too relaxed a state of the bowels, but that it is frequently produced by the relaxation which succeeds the exhibition of aperients or purgatives.

183. Women during pregnancy must resort to opening medicine, and we

should enjoin the use of that which is most simple and mild. A tea-spoonful of castor oil taken three or four times a week on going to bed, aided on the following morning by the injection of a pint of warm water into the rectum, will frequently preserve a comfortable aperient state of the bowels throughout the whole period of gestation. Mag- nesia in small doses, perseveringly taken, is some- times productive of equal benefit; although from its chemical properties it is often uncertain, and sometimes violent in its operations.

184. Hemorrhoids are occasionally requiring treatment, and gentle aperients or some of the preparations of sulphur are productive of good. If they are very numerous and much tumefied, leeches may be employed ; but pressure on each

individual pile, till its cavity be emptied of the blood it contains, will impart much relief.

185. Affections of the brain, of the slighter kind, are not very unusual in utero-gestation, and from whatever cause they may arise, whether from a fulness in the vessels of the brain, in- duced by compression of the vessels of the lower parts of the body, or from an unusual degree of the irritation which to a greater or less extent almost invariably characterises pregnancy, they demand the most careful, and, in some instances, the most prompt treatment. We cannot divest ourselves of anxiety, lest vertigo and head-ache in the latter months should pre- cede convulsions, immediately before or during labor : nor can we expect a complete removal of their effects, if they have been severe, til! after parturition. We were a few months since called to a patient in the fifth month, who had suddenly lost the power of distinct articulation, and the perfect command of the left side of the body. The abstraction of sixteen ounces of blood slightly restored her speech, but it was not until blisters, leeches, cupping, and purgatives had been employed, that she spoke at all distinctly. This lady was confined prematurely, without any disposition to convulsion, and the child was born alive. Two months elapsed after delivery before she fully regained her usual articulation.

186. Syphilis is occasionally complicated with pregnancy, and there is no doubt of the perfect safety of submitting a patient, under such cir-cumstances, to a judicious and mild mercurial course. By this treatment the mother will be cured, but we are not always so successful with the child; for, although it may be born free from any appearance of disease, yet in the course of a few weeks symptoms of syphilis are not un- frequently occurring. In a lady we lately treated for this disease, and who became pregnant during its continuance, the child was born with copper- colored spots all over its body, although the mother had been perfectly cured for at

least five months previously to delivery. This infant was subsequently affected by thrush, and ulcers soon appeared on the arms and labia pudendi. At this time we were not in attendance, but we were informed by the gentleman who had charge of the case that these sores resisted all the simple methods of treatment, and did not hf>al, till a mercurial plan was pursued. Mr. Hey, whose reputation has scarcely been excelled by any surgeon in this country, states ‘ that syphi- lis in its secondary form may be communicated by the mother to the foetus in utero-‘ ‘ That the foetus may be contaminated when the mother has never been previously affected with lues venerea in the organs of generation, and when no apparent disease existed in the father at the time of impregnation.’ ‘ That the mother re- maining in health shall produce several children each of which shall in succession become af- fected with syphilis a few weeks after its birth • and that the disease shall assume a milder form, in each child comparatively, until it be finally worn out.’ Mr. Hey confirms these separate statements by a reference to clearly defined cases, in the treatment of which he co npletely succeeded by the mercurial plan

187. When dropsy or a true ascites is connected with pregnancy, the treatment will require very serious consideration. If the degree of the ab- dominal distension is not incompatible with delivery, we shall remain satisfied to palliate the symptoms, and as much as possible to restrain the increase of the fluid. This procedure is of course to be pursued independently of any consequences occurring after delivery, these remaining to be treated according to the circum- stances which may then arise. If, however, the distension occasions great pain, and endangers the life of the woman, we cannot then wait for natural delivery, we must either bring on prema- ture labor, or the operation of tapping must be performed. Dr. Denman’s views on this subject display a timidity not in accordance with the general tenor of his opinions : he says, ‘ if any active remedies are used for the cure of the dropsy, the child will of necessity be often destroyed, and an abortion or premature labor occasioned; and, when the operation of para- centesis has been performed, it has been known to prove fatal to mother and child, always reflecting great discredit, both upon the operator and the profession.’

188. It therefore seems necessary to establish this general rule, that no woman at a time of life, or under any circumstances which in the most distant manner subject her to a suspicion of pregnancy, should ever be tapped or other- wise treated for dropsy, till by examination per vaginam, or by waiting a due time, we are con- vinced she is not pregnant, even

though she may have before undergone the operation.

139. Burns says, 'when dropsy is arising from the ordinary causes, or from disease of the liver, medicine has seldom much effect in pal- liating or removing the disease, and the woman usually dies within a week or two after delivery, whether the labor has been premature or delayed till the full time.' Burns is of opinion that if the distension be very great, especially at an early stage, a great part of the fluid may be safely drawn off after quickening, if during the operation, and afterwards, the abdomen be care- fully and uniformly supported by a bandage. He thinks the operation is more likely to be succeeded by labor, if performed in the last month, than earlier. A case of ascites, con- nected with utero-gestation, most ably treated by Mr. Langstaff, is recorded in the twelfth volume of the Medico Chirureical Transactions. In this case Drs. Farre and Davis, having seri- ously considered the important nature of the disease, were of opinion that the bringing on of premature labor was preferable to drawing off the water. The unwieldly state of the abdomen, the inability to recline in the horizontal posture, and the immense size of the legs and thighs, Tenderer1, the patient indescribably miserable. The liquor aronii, in accordance with these opinions, was discharged ; but on the following day as there were no signs of labor commencing, and as dissolution appeared rapidly approach- ing, Mr. Langstaff cut down to the peritonaeum, about two inches below the umbilicus, carefully perforating that membrane, with a moderate sized instrament such as is commonly employed VOL. XIV.

in performing the operation paracentesis abdo- minis. The fluid, which flowed very freely, was transparent, and, when about ten pints of it had passed off, a moderately large, smooth, and soft elastic gum catheter was introduced through the opening, which, passing downwards for several inches between the anterior part of the peritonaeum and uterus, drew off the remainder of the fluid, amounting in the whole to twenty- five pints. Three days after this operation labor occurred, attended by no remarkable cir- cumstance, excepting the detention of the pla- centa. In the interval between the tapping and the delivery it was found necessary to abstract fifty ounces of blood twenty ounces being taken at one time, and thirty afterwards. In nine- teen days after the labor this lady was consi- dered out of danger, and without any dread of re-accumulation of fluid in the peritonfeal sac. In conclusion Mr. Langstaff remarks that, from the favorable result of this and Scarpa's case (page 249 of the Quarterly Journal of Foreign Medicine and Surgery), he should be induced to recommend tapping before the hydropic symptoms became so distressing ; and from what he has seen of dropsy, occasioned by plethora, or an inflammatory state of the arteries, he should expect that the further effusion ot fluid into the peritonaeal sac, during pregnancy , might, if detected before the accumulation was considerable, be prevented by blood-

letting, and ultimately the absorbents might be induced by proper treatment to carry off the fluid. . But this fortunate termination could only be expected where effusion was merely the result of simple inflammatory action, unconnected with visceral disease.

PART III. LABOR IN ALL ITS VARIETIES.

190. Having now completed the preliminary divisions of our subject, and trusting that al- though concisely they have been clearly ami comprehensively treated, we shall at once proceed to the practical part of the science, by which the truth and value of all its principles must ultimately be tried. If hitherto we have endeavoured to select, from the general store of obstetric knowledge, what appeared necessary to be fully known ; so in this part, by far the most impor- tant and responsible in midwifery, we shall aim to present the rules of the art in as simple and efficient r. form as possible. Here we discover the improvement of midwifery, and we shall feel surprised, if we retrace its progress for the last 150 years, at the perfection it has attained. We think there are few if any cases, excepting anomalous ones, which a practitioner may not be prepared to encounter; and if, with the informa- tion to be thus attained, he combines judicious promptitude, tact, and delicacy, there is no dif- ficulty iu believing that he may practise mid- wifery with comfort and success. Let it however be remembered, that if, in the case of an impor- tant artery being wounded, it may be necessary for the surgeon Instantly to exercise his anato- mical knowledge and surgical skill ; so in sudden haemorrhage, occurring in parturition, if the mair-

ner of procedu re have not been previously arranged the patient may die in the few minutes required for deliberation. The term of utero-gestation in the human species has been much controverted; a variety of causes has contributed to this differ- ence of opinion ; females on such subjects do not give correct and precise information ; prac- titioners commence their calculations at different periods, some immediately before, others directly after, the last appearance of catamenia , while it is by far the most common to commence the reckoning from a fortnight subsequent to the last menstruation. We believe that few cases of pregnancy will be found to exceed forty clear weeks from the time of conception ; although we are not disposed to acquiesce in the opinion recently delivered in the house of lords, that the term of pregnancy cannot exceed 280 days, or ten lunar months. We find in other points re- lative to conception, gestation, and parturition, an almost infinite variety ; nor can we yet discover any facts

irrefragably proving that the general term of human pregnancy cannot be exceeded. We are fully aware that this question will not admit of arguments from analogy, or these would favor the opinion to which we incline. We trust that future and more correct observation will determine this litigated point, not merely for the purpose of demonstrating who are right, but that in cases where it is neces- sary to induce premature labor, we may do it with the utmost probability of preserving the life of the child. A few years since we at- tended a lady who gave us the following parti- culars, and on their accuracy we can rely. She ceased to be regular on the 25th of January ; a few days afterwards her husband set out on a journey, and remained absent about six weeks ; there was no return of the catamenial discharge, and she was not confined till November the 27th of the same year, a period probably of 304, but at all events of 300 days, from the last menstrua- tion. This lady was unusually large, and her child much finer than any she had previously borne. Hippocrates extends the term of utero- gestation to ten months ; and the Roman law, founded probably on the opinion of Hippocrates, allows ten months to ensue between the death of the husband and the legitimate birth of the off- spring. France, we believe, has adopted this term ; and Haller has furnished examples of preg- nancy extending to eleven and even twelve months. Our own law has not prescribed any imperative rule on this subject, preferring rather to be guided in its decisions by facts, which, in the opinion of those most capable of estimating their value, may influence individual cases.

191. Dr. Merriman, the author of a valuable work on difficult parturition, has bestowed con- siderable attention on this subject. He informs us, ‘ that he is very exact in ascertaining the last day on which any appearance of catamenia was distinguishable, and has reckoned forty weeks from tnis day, assuming that the 280th was to be considered as the legitimate day of parturition. Of the births of 114 mature children, calculated from, but not including the day on which the catamenia were last distinguishable,

3 occurred in the 37th week.

13 . . 38th.

14 . . 39th. 33 . . 40th. 22 . . 41st.

15 . . 42nd. 10 . . 43rd.

4 . . 44th.’

The position of the child in utero has been variously described; it used formerly to be thought that it sat or rested with the breech on the brim of the pelvis, the foreparts of the child being turned towards the abdomen of

the mother. Before the different stages of labor were correctly understood and described it was believed that at the time of parturition, principally by its own weight, the head descended into the cavity of the pelvis, in such a direction that its vertex was turned towards the ossa pubis, and its face into the hollow of the sacrum.

192. Harvey has investigated the position of the fcetus in utero with great care, and we shall present his account to our readers, premising that the arrangement of its parts is such as to occupy the least possible space, affording the utmost facility to its own movements, and as little inconvenience as possible to its parent. We may also remark that it is highly probable its situation remains the same during the whole term of gestation, so that, if the head lie over the centre of the pelvis in the commencement, it will generally be so situated at the termination of pregnancy, unless there have been any violent actions or movements on the part of the mother.

193. The general position is as follows : — the knees are drawn up to the belly, the legs are re- flected backwards, the feet crossed, and lying close to the breech ; the elbows are in contact with its sides, and the hands turned up to its head, one of which is often placed upon the cheek or ear. The spine is incurvated, and, the neck being bowed, the chin rests upon its knees. There is that inflexion of the body into which we spontaneously fall, when we seek repose ; and, as it is our position before we are born, it is that also to which we have an inclination in the decrepitude of old age. Adductis ad abdomen genibus, flexis retrorsum cruribus, pedibus de- cussatis, manibusque sursum ad caput sublatis, quarum alteram, circa tempora vel auriculas, alteram ad genam detinet, spina in orbem flec- titur, caput ad genua incurvato collo propendet; tali membrorum situ, qualem in somno quietem quaerimus. — Harv. Exercitat de partu. The bulk of the body of the child is not placed against the spine, but on one side, most commonly on the right, and the limbs are turned towards the left, so that the abdomen of a woman with child is in general evidently distended more on one side than the other. No suspicion need in consequence be entertained that the presentation at the time of birth will be unnatural.

194. Before we commence the history of labors, in order to simplify and facilitate the comprehension of them, they may be divided into classes and orders, bringing together those which agree in some essential particulars, and

which require nearly the same treatment. By this method we shall be able to convey the prac- tical precepts of the art with perspicuity and force. The terra labor is not solely applicable to human parturition, as it may express any act performed with difficulty and pain ; we cannot, however, controvert the peculiar propriety of its employment to characterise the whole of this momentous process, the circumstances of which it is well suited to describe.

195. We shall divide labors into three classes :

I. Natural.

II. Difficult.

III. Complex, or anomalous. CLASS 1. Natural labor may be defined that

which is occurring at the full time, the head of the child presenting, and the process being com- pleted within twenty-four, or twelve, or frequently within six hours, without artificial aid, or the occurrence of any morbid affection. This com- prises three orders.

Order 1. Quick labor, in which the process is easily completed within the prescribed time.

Order 2. Lingering labor, the head of the child still presenting, but continuing beyond twenty-four hours, instrumental aid not being required.

Order 3. Twin labor.

CLASS II. Difficult labors, or those in wmch the child may or may not present the head, and where the natural powers are generally insuffi- cient to accomplish the delivery. This comprises three orders.

Order 1. Presentations of the breech, of the superior or inferior extremities, or any com- oinations of these presentations, and which require manual aid.

Order 2. Labors which cannot be completed without the aid of extracting instruments, of which some are designed to save the lives both of the mother and the child ; while others are intended to preserve the life of the mother, at the expense of the life of the child.

Order 3. Impracticable labor, or that in which the child, even when as much as possible reduced in size, cannot pass through the pelvis, and where the Caesarean operation becomes neces- sary.

CLASS III. Labors of a camples or anomalous character, comprising three orders.

Order 1 . Labor complicated with uterine hae- morrhage, including those labors where the pla- centa fully or only partially presents.

Order 2. Labor complicated with convulsions and syncope.

Order 3. Labor complicated with rupture of the uterus, suppression of urine, or rupture of the bladder.

196. It is very important to obtain clear and precise ideas of the progress and circumstances of natural labor; for if we have a standard pel- vis and a standard head, of which all other pelves and crania may be considered only as va- rieties ; so natural labor may form a standard, to which all others, in a greater or less degree, must approximate, their safety or danger being correctly estimated by their likeness or dissimi- 'arity to natural parturition.

197. Thus, if any of the marks in the defini-

tion of natural labor be wanting, it must come under some other class. If, for instance, the head is not the presenting part, it must be placed in the class of difficult labors ; and, if manual aid be required, it will form part of the first order of this class. Again, if the head should present, and convulsions should occur, it will not be a natural labor, but must be considered as belonging to the class of complex parturition. A natural labor, says Denman. was the last thing well understood in the practice of mid- wifery ; because scientific men, not being formerly employed in the management of common labors, had no opportunity of making observations upon them. Practitioners were then engaged in qua- lifying themselves for the manual exercise of their art, whenever they might be called on to give assistance ; and not in making nice dis- tinctions, or investigating the particular cases in which only it might be necessary to exercise it. 198. Dr. Smellie supposes that, out of 1000 women in labor, eight shall be found to require instruments, or to have the child turned in order to avoid them; two children shall present the superior extremities; five the breech ; two or three the face ; one or two the ear ; and ten shall present with the forehead turned to the acetabulum.

199. Dr. Bland says that, out of 1897 women, 1 792 had natural labor. Sixty-three, or one out of thirty, had unnatural labor; in eighteen of these the child presented the feet ; in thirty-six the breech ; in eight the arm ; and in one the fun is. Seventeen, or one out of 111, had labo- rious labor ; in eight of these the head of the child required to be lessened ; in four the

forceps was employed ; and in the other five the face was directed toward the pubes. Nine, or one in 210, had uterine haemorrhage before or during labor. It is evident that this register cannot form a ground for general calculation; and we' perceive that the number of crotchet cases exceeds those requiring the forceps, which is not observed in the usual cases of practice.

200. We cannot form any correct opinion from the practice of individuals, as some may, from peculiar circumstances, encounter more of difficult midwifery than is fairly proportioned to the number of their patients. Thus Dr. Hage of Berlin says that, out of 350 patients, he em- ployed the forceps ninety-three times, and the crotchet in twenty-eight cases ; twenty of his patients died. Dr. Dewees, of Philadelphia, says that in more than 3000 cases he has not met with one requiring the use of the crotchet.*

201. On the change immediately previous to parturition.— At the expiration of forty weeks changes occur, which intimate pretty clearly that some important process is about to be com- menced, and these changes have been denomi- nated the predisposing signs of labor. There is at this period a partial subsidence of the abdomi- nal enlargement ; and many women are able cor- rectly to foretell, from this circumstance alone, the early occurrence of labor. Whenever the fundus of the uterus is thus descending, it indi- cates a favorable disposition to parturient action ; for, it is well known, if, after the commencement of labor, the patient complains that the child H*

very high, it is unfavorable, proving that the iundus is either inactive, or disposed to act ir- regularly.

202. The follicular apparatus about the neck of the womb is now pouring out a glairy and viscid secretion; which, when it immediately precedes labor, and from the rupture of some small vessels, is of a sanguineous color, we de- nominate show.

203. Some women, from their manner of walking at this period, and from the statement of their feelings about the pelvis, would induce the belief that there was some relaxation of liga- ments, and that the popular expression of falling in pieces is not altogether unjustifiable. These changes are often accompanied by irritation of the bladder, and by griping tenesmic sensations in the intestines and rectum. These are the principal circumstances inducing the belief that the expulsatory action of the uterus

is about to commence ; and, in the language of old Avicenna, that the ‘ appointed time having arrived, labor comes on by the command of God.’

204. Delivery. — It is scarcely necessary to re- mark that in the term delivery we include the complete expulsion of the foetus and the secuu- dines ; but as there are certain parts of the pro- cess which are distinct, and as protracted inter- vals may occur between them, we shall consider parturition as divided into three stages ; the first stage terminating with the complete expansion or dilatation of the os uteri, the rupture of the membranes, and the discharge of the waters; the second stage including the complete expul- sion of the child ; and the third, which we re- gard as the most important, terminating with the detachment and expulsion of the secundines. In the first stage of this process our interference is not very frequently necessary ; in the second we may have to put in practice the difficult, yet almost certainly efficient, rules of the art; but in the last stage of parturition, when danger from flooding arises, the life of the mother will almost entirely depend on the knowledge and promptitude of the medical attendant. It is a rule in midwifery to see a patient about to be confined as early as possible ; for there may be a preternatural presentation; and from the rup- ture of the membranes, and the escape of the water, the favorable moment for turning may be lost previously to the arrival of the accoucheur. Flooding may endanger the life of the patient; and, in presentations of the feet, the expulsion of the child may have been so far accomplished, as that its head and body, being retained within the uterus, pressure on the umbilical cord may destroy the life of the child, when prompt ob- stetric aid might have preserved it. We should advise every accoucheur to carry about him the tincture of opium, a catheter, a tracheal pipe, and of course a lancet. It is scarcely necessary to illustrate this advice, by pointing out the various circumstances in which their employ- ment may be required. Opium is invaluable in allaying the irritability produced by false or spasmodic pains; and every one is aware of the relief it affords in those necessary contractions of the womb occurring after almost every labor, with the exception of the first.

205. No one would employ obstetric instru- ments without previously ascertaining the state of the bladder, and this viscus is generally loaded with urine in difficult parturition. Where the os uteri is rigid, and the patient robust and plethoric, the abstraction of sixteen ounces of blood, at the commencement of labor, is fre- quently attended with marked benefit. The tracheal pipe is of great value in resuscitating the child, all other means being decidedly less efficient for this important purpose.

206. We have already alluded to certain changes indicative of approaching parturition ; on these presumptive signs, however, we cannot give an opinion that the process has commenced ; to do this with certainty we must

examine per vaginam, which at the time of labor is denomi- nated 'taking or trying a pain.' Women will scarcely ever allow this examination till they are convinced that labor has actually commenced, and then they are solicitous to be informed of its progress, and the probable period of its ter- mination. The position in which this enquiry, and indeed the delivery, is to be conducted, varies amongst different nations, and in different districts of the same country. The German ladies are delivered while sitting, so that the full effect of the pains is exerted on the child's head over the centre of the os uteri. In Ireland they are frequently placed on the knees and elbows. But, in our own country, women generally re- pose on the bed upon their left side, with their knees bent, and drawn towards the abdomen; and this is sufficiently convenient for all common purposes.

207. This examination is to be conducted with the utmost delicacy and tenderness, as an unfavorable opinion of the accoucheur's skill and kindness may retard the progress of the labor. It may be needful to ascertain, per vagi- nam, even when labor is thought to have com- menced, whether there be any disease of the uterus or of the parts in its immediate neigh- bourhood, whether a woman be really pregnant, to determine whether she be really in labor, what progress has been made, the character of the presentation, and whether the pelvis be well formed or distorted.

208. The author of this paper was once sent for to a case where the accoucheur had been up two nights expecting the birth of the child, and, on examination per vaginam, the uterus was found in its unimpregnated condition, the abdo- minal intumescence having arisen partly from adeps and partly from air. Dr. Blundell relates a case of this kind attended by a mosˆ unfortu- nate result, which we shall present in his own words : — ' A gentleman called at my house and told me, not without earnestness, that he had under his care a case of labor about which he was very anxious. ' The mouth of the womb," said he, ' is beginning to open, and I can feel the child ; but the patient is somewhat weak, and labor makes but little progress.' On en- quiring how long delivery had been protracted, a few hours was the reply, and he added that there was no very pressing symptom.

209. ' A meddlesome midwifery is bad ' I rejoined ; ' therefore it is better to wait, and not

vnwisely and rashly distrust the best of accouch- eurs, Nature, the mother of us all.' A day or two passed away, after which he called on me again,

observing that his patient, still undelivered, •was getting weaker and weaker, and that he wished me to give her a visit. On entering the appartment I saw the woman lying in state, with nurses, accoucheur, and all the formalities at- tending a delivery ; one small point only want- ing to complete the labor, which was, that she should be pregnant; for, although the practi- tioner had distinguished the head of the child in the uterus, there was in reality no foetus there. A few hours afterwards the patient died ; and, on examining the abdomen, we found the peri- tonaeum full of water, but the womb, clearly un- impregnated, was no bigger than a pear; and thus it sometimes happens that we are called to reputed deliveries when, in truth, the patients are not even pregnant ; and it is, therefore, one office, which, in natural labor, devolves on the the accoucheur to decide, in dubious cases, whether pregnancy exist or not.

2 10. The first stage of labor is generally the most tedious : it is attended by frequent, short pains, which are generally characterised as cut- ting and grinding. There is seldom much diffi- culty, when these have existed some little time (and we are not often called in before), to deter- mine whether labor has really commenced ; the greater difficulty is, to give a correct opinion as to the time which may be required for its completion. For this latter purpose great judg- ment and experience are required, and, even when these are fully possessed, it will be better, while we are careful not to discourage the patient, to lean to the side of doubt rather than of confi- dence. We may observe here, without attempt- ing any explanation of the facts, that labors do really seem to proceed in regular periods of time, so that a labor which commenced at twelve o'clock at night, if not terminating at noon the next day, will frequently continue till twelve o'clock the next night. The remark is almost proverbial that uterine operation is suspended through the day, more especially in summer, to be again resumed during the night.

211. If it be really important to say precisely whether labor has begun, and to afford encou- ragement as to its progress, we muit not form our opinion from the mere openness or relax- ation of the os uteri during the absence of pain, but from the degree of dilatation which the ac- cession and continuance of pain really produces. In cases where labor has been suspected, and where we have been allowed to examine, we have frequently found a considerable degree of relaxation, even where labor did not occur for some days or even weeks afterwards. Supposing the pains to continue, we may easily ascertain the extent to which the os uteri is affected ; for if, from a degree of dilatation scarcely sufficient to admit the tip of the finger, the pain induces such uterine contraction as shall enlarge its disc to the size of a shilling, and by a few succeeding efforts to that of a dollar, we can entertain no doubt that the labor is really begun. If addi- tional certainty be desired, the state of the mem- branes, during pain, will

afl'ord some criterion.

If, from being flaccid, they become tense, and are protruded downwards, we may feel certain of the commencement of labor. If the mem- branes are ruptured, the same observations may be made on the head, which will advance and retreat during the pressure and inactivity of the uterine effort.

212. It is worth while to remark that women, especially if they have once gone through a difficult labor, will anxiously enquire « if it be all right,' in other words, if the head is the presenting part ; now, although this knowledge cannot always be obtained in so early a stage as that we are now describing, we may sometimes succeed in passing one or two fingers into the mouth of the womb, and, through the membranes, distin- guish the presenting part. If we fail in this we may insinuate the fingers between the os uteri and the symphysis pubis, and if the vertex be presenting we shall easily feel it behind and above the ossa pubis.

213. A diversity of practice has obtained in the management of the membranes ; some prac- titioners invariably leaving their rupture to the natural efforts, while others as invariably break them by artificial means so soon as they are within reach, and before the dilatation of the os uteri is accomplished. Of the latter practice we do not approve; the rule should be to leave their rupture to the natural efforts; the exception to produce it by artificial means. There are two instances in which the rupture of the cyst is fully justifiable; first, when, at the sixth or seventh month, there is an attempt to throw off the ovum entire and unbroken, in which case there may be most alarming haemorrhage from the placental vessels, and the foetus may probably be drdwned in its own waters. And again, when the membranes are unusually tough and un- yielding. Here we have known labor delayed several hours from an unwillingness to interfere with its natural progress. If, however, we find the membranes pushed down along the vagina, and protruding beyond the vulva, we may feel assured the os uteri is fully expanded ; and we cannot err if, during the height of a pain, we force a stilette through the cyst, after which the child will sometimes be immediately expelled. Supposing the membranes to have been ruptured, and the liquor amnii to have escaped, the first stage of parturition is completed, and the very important duty of ascertaining the presentation devolves upon the accoucheur. It may be true in labors generally, and the remark is not rare in relation to the whole of obstetric practice, that it is of very little importance whether we know the presentation or not, as it is most com- monly a natural one, and the child will be safely born independently of our assistance. But this docs not always happen; the child may lie un- favorably ; the aid of a skilful practitioner may be required, and complete success will very much depend on the bestowment of that aid before the uterus has fairly contracted itself round the body of the child.

We cannot, therefore, be toe parti- cular in promptly ascertaining the presentation. When the head has passed through the os uteri, and the pains continue forcing and powerful, we must carefully watch its progress, lest, by ti\e

suddenness of its prolusion, the perinaeum may be lacerated.

214. In first labors, and where there is a rigid unyielding condition of the softer parts, the pro- tection of the perinaeum is of great moment. It is not perhaps possible, and if it were so, it is not desirable, forcibly to prevent the descent and expulsion of the head ; as rupture of the uterua may occur if the birth be too long delayed. To protect the perinaeum we always employ the right hand, without the interposition of any napkin ; kneeling by the side of the bed, the patient being in the usual position, we apply the naked hand over the perinceum, the fingers, supposing it to be a vertex presentation, reaching as far forward as the occiput. If the pains are not very vehe- ment we merely request the patient not to force down during their continuance ; if, however, there is a great degree of tension, laceration of the perinaeum may occur, and then we resist the violent propulsion of the head, as much as we dare, by forcible pressure on all the parts of it within our influence. Lard and pomatum may be largely employed, as they not only lubricate the parts, but diminish the sensations of heat. The child generally comes into the world with the occiput forwards and the face posteriorly ; and, when it has fully emerged, there is no ne- cessity to hasten, by any efforts of ours, the ex- pulsion of the shoulders. We ought ever to bear in mind that the less we interfere in natural tabor the better. The ordinary efforts, in eight cases out of ten, will expel the shoulders, and the uterus will contract itself more regularly and effectively, and the placenta will be much more safely and quickly detached, where no attempts at extraction have been made. In the little in- terval which thus occurs we may examine whether the navel-string be round the neck of the child ; and, where it is so, we may generally succeed in disentangling it, by gently drawing down another portion of it, and then passing it over the chin and face, thus setting it at liberty. If, as in an instance which lately occurred to us, the cord be coiled round the neck five or six times, although the birth may be a little delayed, we had better defer any attempt to disentangle it till the child is born, when it may be untwisted with the utmost facility.

215. In bringing away the child its abdomen should be kept, as nearly as possible, to the ex- ternal generative organs of the. mother. The reasons for

this procedure are obvious. The cord, although usually two feet in length, may be preternaturally short; and, were the child to be suddenly removed to some distance from the mother, the womb might be inverted or the placenta partially detached. Both these events are obviated by an observance of the above rule. \Vlten the child has cried the first thing to be done is to tie the cord. This may be accom- plished by a broad ligature, composed of coarse thread, or silk, several times doubled; for if the ' navel-strings,' as they are termed, be made up of only a few threads, they may cut the cord, giv- ing rise to a fatal hemorrhage. It is usual to ap- ply tlve first ligature at a distance of three or four finders' breadth from the navel; first making a single knot, and, having passed it round the

cord in the same crease twice more, we may conclude by a double knot, firmly and tightly made. The second ligature is one of minor im- portance, and on thfe continent is seldom used ; it maybe applied at two or three inches, distance from the former, nearer to the placenta, and a single knot will suffice. In afterwards dividing the cord, by a pair of scissors, between the two ligatures, we must be careful not to cut it too near the first, as the ligature may afterwards slrp, and endanger the life of the child. We \vish to observe that when the child has cried vigorously, and moves about powerfully, we need not hesitate immediately to apply the liga- ture ; if, on the contrary, its breathing is imper- fect, and scarcely perceptible, from whatever cause it may proceed, we should defer the ap- plication of the ligature, and afford it the advan- tage of the placental circulation, till, by the warm bath and artificial respiration, we have fully es- tablished its independent vitality.

216. Before we attempt the delivery of the placenta, which constitutes the principal duty of the third and last stage of labor, we should as- certain whether there are any more children. This may be done by laying the hand upon the belly, and gently grasping its contents; if there be no other child, we shall find the ab- dominal parietes soft and flaccid, while the uterus, now become a circumscribed hard body, like a child's head, will be felt in the centre. Under this state of the uterus we need not hesi- tate to deliver (he placenta, more especially as it will generally be found lying in the vagina. We may lay hold of the funis by the left hand, and passing up one or two fingers of the right, to the insertion of the cord, we may gently draw down, and we shall soon find the placenta passing through the os externum. Some practi- tioners are very particular in their directions about the membranes, and for ourselves we inva- riably attempt, by a very gentle withdrawal of the placenta, to insure the complete extraction of the secundines; thus obviating the painful con- tractile efforts which are subsequently made to expel them from the uterine cavity, and at the same time removing a source of annoyance, in the offensive smell to which, by their putridity, they may give rise. The bandage contrived by Mr. Gaitskell

of llotherhithe, which we have used, or a long towel, may be applied round the abdomen so firmly as to give a feeling of support, and, if there be any faintness or ex- haustion, a few spoonfuls of brandy and water, flavored with spice, may be given. These, then, are the principal circumstances occurring in na- tural delivery, which, as it serves for the stand- ard of all others, we shall briefly recapitulate. Let it be remembered that we have rarely to de- termine whether the woman be in a state of pregnancy, and that, from the existence of the grinding and sawing pains, we are still more rarely called upon to ascertain whether labor has or has not commenced. The rule is, not to rup- ture the membranes • the exceptions arising from their unusual toughness, or from a disposi- tion prematurely to throw off the whole ovum. In every labor the presentation is to be made out as early as possible : if not previously at least

when the waters have passed off. In the first and spice are injurious, excepting when the labor stage of labor little interference is necessary ; is tedious, and when exhaustion is delaying the but, when the head approaches the outlet, the perinaeum should be carefully guarded. When the head has emerged, ascertain whether the cord be coiled round the child's neck, and, if it

can be easily effected, disentangle it. The shoulders are not to be extracted by force, as the

delivery, in which case wine alone, or wine and water according to previous habits, may be al- lowed. Sleep should be encouraged in the intervals of pain ; and cheerful lively conversation is productive of good. 220. The practitioner is occasionally to leave

womb contracts more perfectly when allowed to the room, to afford an opportunity for evacuating expel the child by its natural efforts. the bladder and rectum. In the first stage of

217. The foetus is to be kept near the genitals labor, which is usually attended with frequent, of the mother till the cord is divided; and when sharp, cutting, and grinding pains, the woman this division of the funis has occurred ascertain need not be confined to the bed, she may walk that the ligature appertaining to the child is se- about the room, and place herself in any posture cure ; and lastly, by care, and the application of which is most easy. In this stage there is no the abdominal bandage, guard against uterine necessity to examine frequently, as the head can- haemorrhage, not be

expelled till the os uteri is dilated. After-

218. Observations on natural labor. — We be- wards however, when the head is advancing lieve, in a state of nature, there is very little towards the outlet, we must frequently inform our- solicitude entertained, and very little preparation selves of its progress, and prevent as much as possi- made for delivery. We find, from the accounts ble that restlessness and irritability of the patient, of various authors, that a seclusion of a few hours which, even under Dr. Denman's management, in some retired spot, or in a rudely constructed was once the cause of laceration of the perinaeum. hut, is all which women living in a state of na- Cramps, which are occasionally arising from tural simplicity require for the completion of pressure on the obturator and sciatic nerves, are their labors ; and after some slight ablutions, if favorable, inasmuch as they indicate the rapid religious custom does not demand their separa- descent of the child through the pelvis. Vomit- tion, they almost immediately return to their ings, shiverings, and rigors, are often occurring usual mode of life. during the dilatation of the os uteri ; and, as they

In countries where a high degree of civilisa- are proofs of the sympathy of the system with the tion prevails, and especially in Europe, parturi- uterine action, they need not excite alarm. It is tion excites much attention, and is conducted seldom necessary to employ any remedies for with great care. Some patients prefer being de- their removal : if the vomiting be very severe, livered on a couch or bed distinct from that on you may give the saline effervescent mixture; . which they are afterwards to sleep, a manifestly and if symptoms of pyrexia, with affection of undesirable arrangement, as their removal after the head, follow the rigors, more especially if the

pulse be high and the arteries about the head throb, the abstraction of sixteen, twenty, or even five-and-twenty, ounces of blood from the 'arm will be very desirable. 221. Children, though not dead, are sometimes

labor, especially if it has been severe, may be attended with syncope and alarming haemorrhage. The bed is to be guarded ; and this will be best effected by laying a large skin of red leather on that part of it where the hips are placed, and over this one or two blankets, or two or three sheets, so folded as to form a mass, which may absorb any fluid discharged during the; labor;

still born, or they are incapable of crying, and of manifesting other indications of vitality. This effect is generally produced by pressure on the

over these spread out another sheet, which, if umbilical cord, or, where the

head has been long fastened to the bed-posts, will keep the whole jammed in the pelvis, it may arise from com-

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apparatus in its proper place.

219. The guarding of the bed is the office of the nurse, and with it the accoucheur has little concern ; but it is necessary to touch on this familiar topic as, when the accoucheur is of puerile appearance, nurses will sometimes enquire, ex insidiis, in what manner so as alternately to enlarge and diminish the ca- he wishes the bed to be guarded. Now if he pacity of the chest, thus keeping up an imper- fect artificial respiration. This mode of proce- dure we have adopted several times, but in vain, as it is not probable that much air enters the lungs. The second method, or that of blowing

pression of the brain. Three modes of resuscitat- ing the child, when still born, have been proposed : pressure on the ribs, blowing into its mouth, and the performance of artificial respiration by the tracheal pipe. The first is to be effected by pressing down the ribs, which are very elastic,

were at a loss here : if he were ignorant of the apparatus ; if, surprised, he were to ask what the woman meant, adding perhaps surlily that the only guard necessary was himself, she would infer that he had seldom been at the bedside be- fore, and presume that he was ignorant of more important matters. ‘ Parva leves capiunt ani-

into the mouth is very inefficient, as, with the ut- most care, it is doubtful whether you can inflate the pulmonary cells. The tracheal pipe is the

mos.’ The lying-in room should be kept cool, only instrument by which we can so effectually and the nurse and one or two female friends are fill the lungs as to afford any satisfactory pros- sufficient for every purpose. Whispering, and pect of resuscitating the child. The warm bath

may ever be regarded as a most powerful auxi- liary. Le Gallois removed the head of a rabbit and secured the vessels of the neck ; the animal seemed dead, but, when artificial respiration

indeed every circumstance calculated to excite alarm and apprehension, of which parturient wo- men are extraordinarily susceptible, should be avoided. There is no reason why simple and nutritious food should be forbidden : stimulants

was commenced, signs of vitality were soon

apparent. The heart acted ; the circulation was again carried on ; and muscular irritability was renewed throughout the whole system. Thus in a decapitated animal, by means of artificial breathing, he maintained for one, two, and three hours active vitality. No stronger proof can be adduced of the efficacy of pulmonary in- flation, in renewing and supporting the action of the heart and arteries. In performing this artifi- cial function for new-born children, it has been frequently observed, that, while the respiration was continued, the cord pulsated, ceasing to beat in a few seconds when the operation was sus- pended. The tracheal pipe, is a little tube of silver, designed to pass into the trachea, its end closed like a catheter, with a long broad fissure on either side, to give free vent to air and mucus. In order to introduce this instrument, pass the forefinger of the left hand down upon the root of the tongue, and into the rima glottidis ? and then, taking the tube with the right hand, slide it along the surface of the finger, till reaching the rima, when the tube is to be inserted into the trachea, immediately the finger is withdrawn, afterwards feeling on the front of the neck, whether the in- strument is lying in the trachea or oesophagus. This do'ie, the child may be taken into the hands of the accoucheur, and from his lungs the lungs of the child may be inflated. Operating in this manner the artificial respiration may be executed with the best success. A woman, whose case we recollect, having been run over by a coach, was carried into St. Thomas's Hospital, and died in a few minutes after admission. She was at the end of pregnancy, and the Caesarean operation was performed by Mr. Green in thirteen minutes from the last respiration of the mother ; the child was taken out, and, in fifteen minutes from the last respiration, Dr. Blundell began the artificial respiration. During fifteen minutes longer it was continued, ultimately completely resuscitat- ing the child. Mr. Tomkins of Yeovil once used resuscitants for an hour and five minutes by the watch, before obvious signs of life appeared, the child recovering at last and living for some time. 222. Onhizmorrkage occurring immediately before or immediately after the birth of the child. — We have already remarked that the third stage of parturi- tion is the most important, and involves the most momentous consequences. The birth of the child, in natural labor, is generally accomplished by the natural efforts ; and, if we except the protection of the perinaeum, no exertion is demanded from the practitioner, beyond what sound discretion will readily enable him to bestow. This, how- ever, is far less frequently the case in relation to the placenta ; for, without any error on the part of the accoucheur, partial detachment of this vis- cus, giving rise to alarming haemorrhage and ir- regular contraction of the uterus, detaining the placenta in its cavity, may occur. After a well conducted natural labor we

generally find, in fifteen or twenty minutes from the birth of the child, that uterine pain is again returning; and, if we pass the finger along the course of the funis, we shall probably discover the placenta lying cither low down in the vagina, or at the os uteri. In these circumstances, the slightest bearing on :lic funij secures the birth of the placenta; and,

as its situation in this case presupposes the com- plete contraction of the uterus, we need only re- mark that its extraction is to be conducted with delicacy and care. The contraction of the womb is the basis on which we must found all rules for the extraction of the placenta, as well as all pleas- ing expectations of the future safety of the patient. By this process the womb not only diminishes its internal surface, but, in a greater or less degree, it acts upon and expels its contents, and subse- quently secures itself from the risk of haemorrhage and inversion. The various conditions in which the uterus is found, after parturition, are dependent on the more or less po%verful exertions of this principle. Where we find the uterus circum- scribed, round, and hard, we know that contrac- tion has taken place ; and that neither flooding nor inversion is likely to occur. Where, on the contrary, the uterus is large, lax, and .soft to the feel, its parietes being so ill defined as scarcely to enable us to ascertain its precise dimensions, we must proceed with the utmost caution. There are other conditions, varieties of these, in which the womb may after delivery be found, but as they will only require a modified treatment we shall not particularly describe them. A diversity of management in these different states has been instituted ; and, observing the fatal consequences which followed the artificial separation and de- livery of the placenta, Buysch, Hunter, and Den man recommended in all cases after the birth of the child, that the expulsion of the placenta, like that of the fetus, should be committed to the natural powers ; believing ‘ that the same natural powers which were adequate to expel the child, were also adequate to expel the placenta.’ And we can easily conceive where women live in a savage and barbarous state, that little danger will ensue. Experience has however proved that, if the expulsion of this important viscus be left to the unaided powers of uterine contraction, patients frequently die: The prac- tice has been tried both in Holland and in this country, and is now we believe entirely laid aside. Different rules have been prescribed as to the precise time when artificial assistance is to be rendered. Hunter and Denman regulated their interference according to time ; and, if the pla- centa did not come away within four hours after the birth of the child, they conceived themselves fully warranted in the employment of manual as- sistance.

223. Other practitioners have formed their cri- terion of interference from the degree of pain,, and the situation of the placenta in the uterine cavity. These rules are all individually good, but if a determinate one is to be formed, or as near an approach as possible to a fixed law of procedure is

to be attempted, much freedom must be allowed to the exertion of individual judgment and discretion. In the slighter cases of haemorrhage after labor we should not enjoin a hasty delivery of the placenta; if we wait twenty or thirty minutes, the uterus will in some degree have recovered its tone, the circulation of the mother will be less hurried, and the re- moval of this viscus will be accomplished with less subsequent risk. We need scarcely say that, before commencing any attempt at removal,

we must ascertain distinctly whether there be another child. If there be twins, there may be a common placenta, and its abstraction before the birth of the other child might be productive of suffocation to the unborn foetus. Having de- termined to extract the placenta, and having placed the woman on her left side, we may lay hold of the umbilical cord with the right hand, passing two or three fingers of the left into the vagina, so as to secure a bearing on the body of the placenta; and, if the pains are occurring at in- tervals, it is better to wait for and cooperate with these than to extract without them. If, how- ever, they are, wanting, we must draw down stea- dily in a direction from the umbilicus to the coccyx, securing each advance by a firmer hold of the funis : and, if the circumstances are such as to justify its removal, we shall seldom find much difficulty. We have now described the most simple case of extraction of the placenta, where there can exist little difference of opinion as to the propriety of the measure. And we would here again remark, that the placenta is much more readily and speedily separated from its uterine attachment, and that the uterus itself is much more likely to be found low in the abdo- men, firm, circumscribed, and well contracted, if the latter part of the labor has been delibe- rately performed, than when, from an anxiety to terminate the process, the body and lower ex- tremities of the child hare been manually ex- tracted, during the absence of uterine pain. It will occasionally happen, after the expiration of an hour or longer from the birth of the child, and when by external pressure, and the exhibi- tion of some slight stimulant, we have endea- voured to excite the contractile efforts of the uterus, that it still continues high in the abdomi- nal cavity, flaccid, ill-contracted and of large size. This condition may exist under two states of the uterus in relation to the placenta. The placenta may either be separated from its uterine attachment, and, remaining loose, cannot be ex- cluded out of the cavity of the womb from a de- ficiency of contractile effort ; or it may be mor- bidly or schirrously adherent to its internal surface, in which case we shall wait in vain for its natural expulsion.

224. We have already remarked that the pla- centa cannot safely be left

for an indefinite period in the womb ; and when we remember the solicitude of the patient and her friends, and the painful suspense which a retained placenta must ever excite in the mind of the accoucheur, and that it may be morbidly or schirrously ad- herent, we cannot entertain any doubt as to the propriety of its safe and timely removal. Dr. Ramsbotham, whose Practical Observations on Midwifery deserve a place in the library of every obstetric practitioner, says, that ‘ the in- troduction of the hand into the uterus, after the birth of the child, is, to use the mildest language, a harsh and severe measure : it always gives con- siderable pain, and it cannot be practised with impunity without some risk, present or future.’ It must be acknowledged that this opinion is well-founded, that a meddlesome midwifery is bad, and yet, if any circumstances justify this measure, the retention of the placcata with loss

of blood especially does so. An accoucheur cannot commence tins most serious proceeding with too powerful an impression of the delicacy of the parts on which he is about to operate ; and yet, if he conduct the extraction slowly and skil- fully, he will not often have to regret its perform- ance. We are somewhat disposed to believe that a share of the difficulty and danger, conse- quent on this operation, may depend on the length of time which is so often, through timidity or dread of the consequences, allowed to elapse before the commencement of the manual extrac- tion ; the womb having had time firmly to con- tract itself around those contents which are now to be considered as extraneous bodies, and as ob- stacles to its natural diminution of size. ‘ It will rarely be necessary to exceed two hours, before recourse be had to this proceeding ; more fre- quently its necessity will be obvious before the expiration of this time ; indeed, on an average of cases, it will be found that, if the placenta be not thrown off within one hour after the birth of the child, it is detained by some unusual cause. If haemorrhage,or other pressing symptoms, suddenly intervene, an earlier removal will be required, otherwise every thing like hurry or haste ought carefully to be avoided.’ Vide Dr. Ramsbotham’s Observations, p. 57.

225. If then the placenta be retained after labor, by that irregular action of the uterus which has been denominated the hour-glass con- traction, and haemorrhage supervene, or if we have reason to suspect its morbid adhesion to the internal surface of the uterus, from trie conti- nuance of this latter organ in the state we have already described, and, from our inability to trace the progress of the end to its termination in the placenta, there is no other alternative than by the introduction of the hand to overcome in the one instance the contraction, when the placenta will generally be immediately expelled ; and in the other, by the same means, carefully to separate its morbid adhesions. In order to effect this purpose the left arm should be bared, and well smeared with lard, the woman having been pre- viously placed on her left side, with her knees drawn up

towards the abdomen, and her nates at the edge of the bed. The accoucheur may sit on a low chair ; or, which is much more conve- nient, he may kneel at the side of the bed. Hav- ing accomplished the introduction of the hand into the uterus, he will soon discover the cause of retention ; if it arise from irregular contrac- tion, whether it be of the longitudinal kind, or globe-like, he may advantageously apply the right hand over the uterine tumor externally, thus aiding his operations by steadying the womb, and preventing any rolling motion; the con- tracted part is to be slowly and cautiously dilated, till the hand can obtain admittance so far as to include within its grasp the whole or greater part of the placenta, when it may be gradually with- drawn. If the placenta be found partially or generally adherent to the inner surface of the uterus, the fingers must be cautiously insinuated between its edˆe and the womb, and earned forward till the whole mass is separated, when it may be removed as in the former case. It w.ll not unfre<;uently happen that the contractile

efforts will be so violent as to impair the sensi- bility of the fingers, and indeed of the whole hand ; in this case we may allow it to remain for a short time at rest in the uterine cavity, but we should, if possible, avoid its retraction, as its reintroduction will give great pain, and be at- tended with renewed risk. If the pbcenta be retained merely from torpor of the uterus, which often happens after laborious and protracted de- livery, the stimulus of the hand within its cavity will generally induce a sufficient return of contractile effort for its entire expulsion.

226. We have now dwelt at length on those floodings and their treatment which are oc- curring between the birth of the child and the expulsion of the placenta; and we are from experience disposed to believe that they gene- rally arise from its greater or less adhesion .to the uterine surface ; nor are we aware of any measure to which we can look for safety, but to the introduction of the hand, inducing thereby contraction of the uterus, and the consequent expulsion of the placenta. We are not always so fortunate as to secure contraction, even where we have succeeded in bringing away this adherent viscus ; for, a little time ago, we were compelled to watch a patient four hours in these circumstances, and during the whole time to maintain a griping, grasping action on the ute- rine parietes, thus preventing haemorrhage.

227. Flooding after the birth of the placenta. — The first circumstance requiring attention after the expulsion of the placenta, supposing we are satisfied that there is not another child, is to insure firm and permanent

contraction of the uterus. The patient is now to be kept remark- ably quiet ; and it is important, if she be prone to haemorrhage, that stimulants should not be given. The condition of the uterus should be frequently examined, and even the slight grasping of its parietes by the hand will often be sufficient to maintain it in a state of firm and satisfactory contraction. The bandage is to be applied round thi» region of the uterus, tightened so much as to afford an agreeable feeling of sup- port. It may so happen, however, that notwith- standing every precaution the uterus may become suddenly relaxed, and even under a very slight degree of relaxation, if the force of the circula- tion is extrordinarily great, it may, according to some cases published by Dr. Gooch, in the Medico-Chirurgical Transactions, be able to overcome the ordinary closure of the orifices, and thus a profuse haemorrhage may arise, al- though the uterus be contracted.

228. Dr. Gooch has also noticed the fact of the alternate contractions and relaxations of the uterus in haemorrhage, which every practitioner in midwifery must frequently have met with. Supposing the haemorrhage to have been con- siderable, and the patient in a state of alarming exhaustion, with bleached face, and scarcely a perceptible pulse, it is evident there is no time to be lost, if the uterus does not contract, the flooding may recur, and the patient may soon be placed beyond the reach of remedies. In these cases, if the uterus is large and flaccid, we must not hesitate, after the exhibition of some power- ful stimulant, as brandy or rum to apply cold

vinegar and water to the pudenda and loins, and pounded ice to the abdomen. We have indeed seen cases where these remedies were not efficient in restraining the haemorrhage ; and we have in several instances, and with the best effect, dashed cold water from a considerable height on the naked abdomen. We shall subjoin the follow- ing cases as illustrative of the vigorous treatment which these floodings demand; we could add many more of the same kind, but here, and in subsequent parts of this treatise, we shall generally be satisfied with the insertion of one good example, illustrative of the practice recom- mended, as we feel assured where the cases are genuine, and the treatment correct, practitioners will verify and apply the rules by a reference to their own experience. Our great aim is to afford information which will be available at the bed- side of the patient, and to render our obser- vations essentially practical.

229. On the 4th of November, 1823, Mrs. ,

aged twenty-three, after a lingering labor of twenty-eight hours, was confined of a girl, her first child. The head was large, and from ex- treme rigidity of the parts, and the severity of the expulsatory pains, she had suffered greatly before its birth ; previously to the extraction of the placenta the abdominal bandage was ap- plied, and she expressed much pleasure at

the support it afforded. After fanning her, and giving a little simple gruel, the pains recurred, and the placenta was low down in the vagina before its extraction was attempted. Imme- diately after its removal she lost perhaps a pint of blood; but the uterus contracted well, and she remained tolerably tranquil for twenty mi- nutes. The uterine parietes were now most suddenly relaxed, and an alarming quantity of blood was impetuously pumped out. Cloths, wetted with the coldest water, were thrown rather forcibly on the abdomen, pudenda, and thighs; a draught of the coldest spring water was swallowed, the bandage was tightened, and the uterus griped by the hand. These measures restored her from a state of collapse and syncope, and induced firm contraction of the womb, which might now be felt as large as a child's head, and almost as hard. She progressed very satis- factorily for a full hour, when, having left the room for a few minutes, we were hastily sum- moned to the patient, whose appearance was very alarming. Jhe eyes were closed, the lips colorless, her extremities cold and thrown out, as in the last act of life, and the action of the heart was scarcely perceptible. Several pints more blood had been lost, and, without wait- ing a moment, we dashed from a considerable height a large ewer full of cold water on the naked abdomen ; poured several wine-glasses full of nearly pure brandy down the throat, and determined to trust no longer to the continuance of uterine contraction. The uterus was once again small, and both the hands of the accouch- eur were now applied to its parietes, keeping up such griping pressure as was necessary to in- sure a continuance of its contractile action. By the aid of the nurse, and two female relatives of the lady, we maintained this manual pressure for six hours, sfter which no further Haemorrhage

ensued. This patient had a very protracted and painful recovery.

230. It is worthy of remark, in this case, that the hand was not introduced into the uterus, and, where coagula are not preventing the contraction of this organ, we think the means now described will generally put a stop to the haemorrhage without resorting to this objectionable and ha- zardous proceeding.

231. Mrs. , aged twenty-seven, was con- fined on the 4th of July, 1824, of her first child, after a labor of only a few hours duration. The practitioner in attendance, before we saw the pa- tient, stated that the uterus contracted well after the expulsion of the placenta. Four hours after labor the nurse discovered she was flooding, and requested the attendance of her accoucheur, who applied cold cloths, and, supposing the flooding to have stopped, took his leave. On examination of the abdomen we were astonished at the bulk of the uterus, and from the exhausted and powerless

state of the system, we were convinced that the inter- nal haemorrhage was large and alarming. The hand was passed into the uterine cavity, and at least three or four pints of coagula were removed, after which the uterus powerfully contracted. This did not continue long; relaxation again occurred, and more blood was lost. Brandy, and the griping of the uterus for two hours, permanently restrained all further haemorrhage ; of course the abdominal bandage was applied. This lady continued in a precarious state for some days, and was very long in regaining her strength.

232. For patients predisposed to haemorrhage during labor we have been for some years in the habit of prescribing a less nutritious diet for one or two months preceding confinement; and in one case, which it is not important fully to de- tail, we have, before two successive confinements, taken away sixteen ounces of blood with deci- ded advantage.

233. Some able remarks of Dr. Gooch in the paper to which we have already referred, so en- tirely coincide with circumstances of daily oc- currence, that we shall present them in his own words. ‘ I could easily understand that a con- traction of the uterus, which would preclude haemorrhage in the ordinary state of the circula- tion, might be insufficient to prevent it, during violent action of the blood-vessels ; and the in- ference I drew was, that in cases of haemorrhage dependent not on wantof contraction of the uterus, but on the want of tranquillity of the circulation, a mode of treatment which would produce a cool skin and a quiet pulse would be the best for presenting a recurrence of these floodings. How often a disturbance of circulation plays an im- portant part in uterine haemorrhage it is diffi- cult for an individual to know; but I suspect sufficiently often to deserve theespecial attention of practitioners. I advise them, when they meet with patients subject to hemorrhage after deli- very, to notice the state of the circulation before labor, and, if disturbed, to employ means for tranquillisitig it before labor comes on. I ad- vise them during labor to use cordials cautiously, lest the placenta should separate during an ex- uted state of circulation. 1 advise them, after

delivery, though the uterus may feel contracted, to be slow to leave their patient if the circulation be greatly disturbed.’

234. In the concluding part of this paper Dr. Gooch recommends a practice, in which, without greater qualification than he has annexed, we cannot coincide. We refer to his opinion ‘ that when haemorrhage occurs after the removal of the placenta, the quickest way to stop it is to intro- duce the left hand closed within the uterus, ap- plying the right hand open to the outside of the abdomen, and then between the two to compress the part where the placenta was attached, and from which chiefly the blood is flowing.’ We are aware that, in alarming and desperate flood- ings, any

measure, however severe, is justifiable ; the intention is to save a life which appears on the very point of extinction, and after conse- quences must yield to this momentous purpose. We do not deny that as a • dernier resort' the carrying of the hand into the uterus may be ab- solutely necessary ; but we are equally convinced that the griping or grasping pressure of the womb commenced immediately after the birth of the placenta, when there is an habitual proneness to flooding, or when the contraction of the uterus is unsatisfactory, will generally supersede its em- ployment. The introduction of the hand into the uterrhe cavity is always attended with risk, and it cannot be less so when, owing to the exhausted and powerless state of the system, the uterus and vagina may easily suffer rupture or lacera- tion. It may too be urged against this practice, when it is performed during syncope or approach- ing collapse, that it must of necessity destroy coagula or clots which are forming about the mouths of the bleeding vessels, and may thus originate fresh haemorrhage. Briefly then to re- capitulate what we have advanced, on this deeply interesting subject, we remark that, immediately on the birth of the child, flooding may arise ; that it may depend on torpor of the uterus, rendering it incapable of expelling the placenta, or on the schirrous or otherwise morbid adhesion of this viscus to the internal uterine surface ; that a va- riety of circumstances as to the time and manner of interference are demanding consideration ; and that, while the bestowment of hasty and unneces- sary assistance is to be deprecated, it should not be withheld for more than two hours, and when the haemorrhage is alarming immediate extraction is necessary.

235. After the birth of the placenta, dangerous floodings, and these are by far the most numer- ous, may also arise ; notwithstanding every effort to tranquillise the circulation, and to induce uterine contraction. In these cases we are to apply the abdominal bandage, and cold washes to the pudenda, thighs, and loins, to maintain a constant griping pressure externally on the uterine parities, and to support the vital powers by stimulants, if necessary, in large quantities; if these fail, we may inject cold water into the uterus, and as a last expedient, by the introduction of the hand into its cavity, excite contraction; in addition to all measures, we must strictly enjoin wherever there is serious flooding the most entire and absolute rest, not even allowing a change of posture if it can by any means be avoided.

236. On transfusum. — The subjoined remarks are copied from the lecture of Dr. Blundell on this subject, as published in the Lancet.

237. If transfusion, with all its defects and ex- cellencies about it, should be found hereafter to be as safe as other received operations of surgery (venesection for example), it may then, I conceive be performed in those cases where there have jeen large discharges of blood from the uterus, although the danger arising from the inanition may not be very imminent. In the present state of knowledge, however, and until we have further proofs of its efficacy and safety, in cases which are not desperate to appearance, I should not re- commend the operation of transfusion ; but if you have under care a patient in whom the flood- ing has been copious, in whom further the womb has been emptied, and the haemorrhages stopped; should this woman, as I have myself on several occasions seen, be sinking gradually into the grave, so that, even to those who have seen much of floodings, the case appears to be with- out hope : under such circumstances, I affirm, that it is highly proper to have recourse to the operation of transfusion, provided we are com- petent to perform ft.

238. In performing this operation, which I shall presently explain to you more at large, it is not necessary you should inject any very copious quantity of blood ; for, in the present state of our knowledge, it would be unwise to endeavour by large injections to raise the patient at once from a moribund condition to a state of vigor. / What is the ordinary average measure of blood required, in order to turn the trembling balance in our fa- vor, has not as yet been clearly ascertained by facts and observations. From what little I have observed, however, T should suppose that from half a pint to a pint may be considered as a very ample supply; and I feel persuaded that, of those women who have sunk under floodings, the greater number would not have been lost, could they but have retained the last ten or sixteen ounces of the blood which they have lost.

239. Although I have said an operation of this sort is not to be rashly prescribed, and although in the present state of knowledge it ought to be confined to those cases only which, according to our honest judgment, must be considered as desperate without it; yet let me add further, in the way of caution, that where there is need of the operation it is obvious the sooner it is per- formed the better. I have myself seen two wo- men die, whose lives, I feel persuaded, might have been preserved to society, had transfusion been more promptly begun. Anxious to refrain from the operation, while there remained a hope of life without it, I delayed the use of the sy- ringe so long that, before transfusion could be commenced, the patient in each instance was oreathinff her last.

2 10 To give you a summary then of win t appears to me to be important on this point, I Conceive that under the lar^e eruptions of blood trom the uterus, if well managed, in general (say in nineteen cases in twenty) your pa- tients, though they may alarm and shake your nerves, will nevertheless

ultimately do well, •Jiui transfusion will not be required. 1 main-

tain, however, notwithstanding what is asserted to the contrary, and I boldly maintain, for I am irresistibly borne out by facts, that under the best and most judicious treatment, and certainly under treatment of average excellence, dissolu- tions may occur, sometimes so suddenly that you have not time to act ; more frequently in a gradual manner, so that you see the patient sinking slowly, by little and little, into the grave. Now, in cases of this kind, when the patient is sinking gradually, I am not sure that transfusion might not be proper, even though the ovum were still in the uterus ; but certainly such cases are not adapted to the splendid suc- cess of the operation, for, so long as the womb is unemptied, the bleeding may return, and the blood may be lost again as soon as it is injected; but when the uterus has been emptied, and the haemorrhage has been stopped (and of all the cases these are the most common) ; then under the conditions stated the syringe should be tried, provided the case be obviously desperate without it ; provided too you feel conscious that lying in the situation of the patient you would wish the essay to be made on your own person. The operation once obviously necessary, beware of delaying it too long ; beware of subjecting your- selves to the painful mortification of seeing your patient perish at the entrance of the port ; sink at the very moment when you are at length pre- pared with the very operation that might have saved them. From six to ten ounces of blood will probably be sufficient to turn the wavering balance in our favor. From one or two friends, males in preference to women, this supply may be obtained ; a large injection is not desirable ; reaction of a lively kind will sometimes come forward on the subsequent day. Adhere to these rules, and you cannot wander far from the line of duty; and let me ask now where is the folly, where the enthusiasm of all this?

Class 1. Order 2. — Lingering labor.

Dystocia diutina : Merriman. — Lingering labor : Smellie. — Slow and painful labor : Watts. — Lingering and perplexing labor : Cooper. — Tedious labor: Burns. Class IV.— Difficult (but natural) labor : Hogben. — Dystocia pro- tracta : Young's Nosology, Class V.

241. When we consider the circumstances at- tendant on human parturition, that certain expul- sory powers are required to bring about the birth of a child, which of necessity implies a principle at

1 east of passive resistance,we can easily understand that on the degree of harmony or want of accord- ance existing between the two will depend, in a great measure, the natural or difficult character of labor. We accordingly find that lingering labor, so called from being protracted beyond twenty-

four hours, and yet ultimately terminating with safety to the mother and without instru- mental aid, is mainly dependent on two causes : defect of pains, or in other words deficiency o. the expulsory power, and increased resistance to the passage of the child.

242. Defect of pains or expulsory power may arise from original or acquired weakness of sys- tem, and in labor it will be characterised by insuf-

ficient, irregular, or partial action of the uterus. Increased resistance to the passage of the child is principally produced by the rigid aud undilatable condition of the os uteri and external parts, the large size of the foetal head, and the want of conformability in its bones, or on the small size of the pelvis, associated with an unyielding con- dition of the os coccygis. Monstrous formations of the fetus do not admit of the application of regular rules ; for, when these unfortunate devia- tions do occur, they are not constructed on any established principles, and their management must of course be left to the skill and judgment of the practitioner. Extreme distension of the uterus by the liquor amnii, and extraordinary thick- ness of membranes enclosing it, admit of such easy remedy, by the measures already alluded to, that we shall not bestow upon them a dis- tinct consideration.

243. In the treatment of lingering labor, where there is deficiency of pain from original or ac- quired weakness of system, great scope is af- forded for the exercise of the patience and pas- sive firmness of the accoucheur. The natural powers are often distrusted, where they ultimately prove themselves capable to accomplish the delivery ; and where, if they have not been interfered with, the subsequent recovery will b«» very satisfactory. We cannot form a correct opinion of the degree of pain required in different cases of labor to complete the delivery. In some women the most powerful and continued efforts are necessary for the birth of the child ; while in lingering cases, where there seems to have been scarcely any really good pains for twenty-four hours, we nevertheless find the head protruding at the external parts ; and one or two rather severe efforts are sufficient for its expulsion. We are always unwilling to hasten the progress of lingering parturition, if symptoms of debility, of cerebral affection, or of pressure on the parts themselves, do not indicate the necessity for in- terference. In some patients there is so little irritability, so little anxiety about the protrac- tion of the labor, if the circumstances of de- lay are candidly and judiciously stated, that we are not at all induced to employ any stimu- lant

remedies. In other women, the converse of this statement is true, and they will more quickly require assistance.

244. The patient's strength must be supported by mild nourishment, such as beef-tea, veal-broth, &c. These, however, so often produce flatu- lence and uncomfortable distension of the sto- mach, that small quantities of solid food, as sandwiches, at proper intervals, are sometimes preferable. Dr. Hunter used to say in his lec- tures, that he had attended a patient three days and nights and one whole fourth day, the woman crooked and the child large. She lived all the time on tea and gruel only. Dr. Merriman appends the following remark, ' had the doctor allowed this patient cordials and stimulants, with a view of keeping up her strength, is it probable that the labor would have terminated so favora- ble ?' We think that it would not ; still there are cases where stimulants may be exhibited, and for this simple reason, that instrumental aid will be required if some safe impulse cannot be given

to the uterine system. We are decidedly op- posed to wine, or stimulants in any form at the commencement of labor, or to their injudicious exhibition during its continuance ; but we hare seen the happiest effects result from this treat- ment, in the protracted stages of lingering labor. We were lately called to a case, and requested to use instruments, whore the patient had been forty-eight hours in labor of her first child; the parts had been rigid, and sixteen ounces ot blood had been early abstracted ; the head had rested many hours in its present situation below the brim, and pressing on the perinaeum, and the pains were ineffective and at distant inter- vals. Here we encouraged the patient .to hope for a safe delivery, ordered some solid nourish- ment, and port-wine negus ; and in three hours the labor was safely completed, although the child was dead. The bowels should be cleared of feculent or other accumulations by mild aperients and clysters ; the patient is not to be fatigued, and if the pains merely harass, and do not benefit her, she may take ttt.xv. vel mxx. of the tincture of opium. Much larger doses than these have been recommended, and we have seen their bad effect in an entire suspension of ute- rine action.

245. In those cases where the os uteri is nearly or fully dilated, and where the head has remained in one position some hours, with inef- fective pains, we may consider the action of the uterus arrested ; and, if the means already pointed out are not successful in restoring its contractile energy, we may have recourse to the ergot of rye, which is universally allowed to increase the uterine pains, and consequently to hasten the delivery of the child. It is given in infusion ; a dram, infused in a teacupful of boiling water for fifteen minutes, is the usual dose, and, if it should not produce any effect within an hour, it may be repeated. It has been considered very destructive to the life of the child; but from what we have seen of its effects,

and from the extensive enquiries we have made, we are inclined to think that the death of the child in many of the instances ought in fairness to have been at- tributed to other causes, as the lonsj continuance of the labor, pressure on the umbilical cord, 3cc. It does sometimes fail to produce any good effect; but this is common to all remedies ; and when given before the head is in the cavity of the pelvis during rigidity of the softer parts, or where there is any deformity, we can easily conceive that the powerful contractive efforts to which it gives rise may induce serious injun both to the mother and the child. A most extra- dinary circumstance, in relation to the ergot, is noted by Dr. Bibby of New York, that where the fetus has been some time dead, and putrc faction to any extent has taken place, the remedy is altogether inert. In no case where it has been used has haemorrhage occurred, and in natural labor when haemorrhage does occur, it has been employed with great advantage.

246. Increased resistance to the passace of the child, which we have already enumerated as one of the principal causes of lingering labor, may be produced by the rigid and undilatable con dition of the os uteri and external parts. These

are very trying cases, for the pains are some- times so frequent and powerful as to render it necessary, for the satisfaction of the patient, that the accoucheur should be in attendance for hours before his assistance is really required. We are fully aware how constantly rigidity is the cause of tedious labor, and we believe that its treatment has not obtained perhaps all the consideration to which it is entitled; yet we cannot concur in the following opinion of Dr. Dewees, a distinguished American practi- tioner. See a valuable Practical Treatise on Midwifery, by Dr. Dewees, 1825. 'Writers have but very imperfectly considered the rigidity of the soft parts as a cause of difficult or tedious labor; some, indeed, do not mention it, and others do so merely en-passant. It is so common a case that every practitioner must have met with it; but it has failed to make a proper impression, because time and severe suffering have eventually overcome it, though not always with safety either to mother or child.' We cannot perceive that Dr. Dewees has thrown any new light on this subject ; he has certainly recommended larger abstractions of blood (a practice previously enjoined by Manriceau to a moderate extent), than we should feel disposed to adopt, unless the rigidity was extreme, the pulse very full and frequent, and the general tendency to inflammation and fever marked and decided. We trust we shall never hesitate to adopt the boldest and most vigorous treat- ment, when absolutely required ; but as partial fatuity, in our

opinion, has often resulted from the unnecessarily large abstractions of blood in apoplectic disease, so a painful and protracted recovery, with its attendant evils, will, we think, often occur, from bleedings to the extent of thirty forty, or even fifty ounces in these cases.

247. Were we called to a patient with rigid- ity of the softer parts, whose previous labors had been protracted from the same cause, we should consider venesection as the first in the series of remedies. In rigidity of a moderate kind, or during a first labor, we should first of all empty the rectum, whose feculent accumulations we have frequently known to obstruct labor. The bladder should not be distended, and the erect posture, short of fatigue, may be maintained ; every thing is to be avoided at all likely to pro- duce fever. Tea, toast and water, barley-water, milk and water, or veal-broth, may be taken ; and the apartment should be airy and cool. We have twice rubbed in the belladonna, as advised by Dr. Conquest, but without any benefit : we have many times been much gratified with the effect of opiate clysters, or suppositories intro- duced into the rectum, even after opium has been taken internally, without any apparently good effect. Opium should not be given until the bowels have been relieved, and of course, if bleeding has been previously employed, it will be exhibited under the most advantageous cir- cumstances.

248. The author of this paper sometime since

attended Mrs. , aged twenty-two, in her

first confinement, the edges of the os uteri feeing much attenuated, very hot, not at all moist, nor disposed to dilatation. There was neither fulness

of pulse nor heat of surface, beyond what is commonly occurring in the commencement of labor. The bowels were fully relieved by cas- tor-oil, and the pains had been tranquillised by thirty minims of the tincture of opium. After an hour's sleep, she awoke refreshed, and the pains recurred. Eighteen hours had now elapsed since the commencement of the labor, and there was no alteration in the os uteri. A drachm of the extract of belladonna was rubbed about the cervix and os uteri, but, after waiting for two or three hours, there was no perceptible effect. The pains were very vehement and forcing, but the attenuated edges and heated condition of the os uteri still continued, and it was not dilated more than enough to admit the tip of the finger. A clyster composed of linseed tea and sixty minims of the tincture of opium was thrown into the rectum : it remained nearly an hour, and immediately on its expulsion two grains of solid opium, softened by mucilage, were insinuated into the bowel, just beyond the sphincter ani ; very shortly afterwards the condition of the os uteri began to change, and, before the expiration of three hours from the giving of the injection, the

head was protruding at the outlet. We have frequently since this period adopted the practice of giving opiate clysters and supposi- tories, and always with decided advantage.

249. Some practitiouers, says Dr. Merriman, are fond of introducing lard or pomatum, in order to induce relaxation, but this never does good, unless the rigidity is confined to the vagina, or external parts, it may then be fre- quently used with advantage. The best method of using greasy applications in such cases is to have very good tallow, scraped and roiled up into a ball, about the size of a nutmeg; this should be carried by the finger as high as possi- ble into the vagina ; here it gradually dissolves, and is dispersed over the whole surface. It an- swers best in those cases where the natural mucus of the parts is either not duly secreted, or has been accidentally or incautiously separated.

250. The large size of the foetal head, and the diminished capacity of the pelvis, oppose nearly the same obstacles to the full effect of the expul- satory powers of the uterus. It is manifestly impossible exactly to predetermine in what pro- portion the diminution of capacity of the pelvis may consist with the passage of the child's head, reduced as much as possible in bulk by the overlapping of the cranial bones ; but we have seen the foetal head so altered in shape, and so diminished in bulk, by the operation of this principle of conformability, as to induce us to wait for many days, provided no alarming symptoms arise, before we should class it amongst the difficult labors, and avail ourselves of instrumental aid. The elongated, squeezed, and sugar-loaf heads, which we so often see, and where although much compressed the child »s yet born alive, must induce great confidence in the natural powers. It is a common re- mark, and without entirely assenting to its truth, we may repeat it here „ .nat, after the most severe labors, women frequently have the best re- coveries. Letthe patient avoid stimuli, except by the permission of her medical attendant ; let

her mind be tranquillised by an assurance of the probability of her welfare, and labor will very often terminate safely and well.

251. We wish, in concluding our remarks on lingering labor, to renew the cautions already expressed relative to rupturing the membranes. We .have said that, to allow the membranes to be raptured by the natural efforts is the rule; their artificial rupture the exception. We may now add, that the progress of labor may be sometimes accelerated by this procedure —

If the os uteri is fully dilated ;

If the head, or a large portion of it, has fairly descended into the cavity of the pelvis ; and

If the perinaeum is thin and dilatable.

251 . The premature evacuation of the waters, occurring either spontaneously, or from the effort of the accoucheur, renders the woman extremely uncomfortable, as they may continue dribbling away for some days, attended by occa- sional harassing but unprofitable pains, the patient being kept in constant anxiety about the coming on of parturition. It is worthy of ob- servation that laboi seldom occurs, in these cases, till the whole of the liquor amnii has passed off; but, when the contractile efforts of the uterus do supervene, the process is generally quickly terminated, and quite as safely as in other cases.*

252. The funis may pass down with the wa- ters, and descend below the head, and the pro- traction of the labor, which it was intended to avoid by the artificial rupture of the membranes, is frequently produced thereby, as the compara- tively hard and unaccommodating head of the child is substituted for the soft and elastic bag containing the waters, in the process of dilating the os uteri and upper part of the vagina.

253. It is, therefore, very evident that the in- terruption of the natural progress of delivery, and the injudicious management of the attendant, may convert that which was natural into linger- ing, and perhaps difficult labor.

254. The indiscriminate exhibition of cor- dials, the inactivity of the woman herself, and the excitement of friends, is prejudicial. We must dissuade her from bearing down or forcing the pain, as it is termed, till the parts are prepared for the expulsion of the child ; we must not irritate and inflame the parts by too frequent examinations ; and we must not allow the bladder to become unduly distended.

Chapman, in his fortieth case, gives an account of a poor woman who died undelivered, in con- sequence of an over-distended bladder

Class I. Order 3,— Twin labor

Anomalous Labor, order 3 : — Denman. Preter- natural Labor, order 7 : — Burns. Distokia Gemina: — Merriman. Plural Birth :— Aitken.

255. As it is universally allowed that no infal- lible criterion exists by which we can discover a plurality of children in utero before their birth, so it is a matter of congratulation that in their de- livery we need not greatly

deviate from those rules which govern the labors of single children. No

difference of opinion can exist as to the birth o the first child; if it present naturally, it will of course be managed as a natural labor; if preter- naturally it will require treatment suited to its individual case. It does sometimes happen that a part of the second child is combined with the presentation of the first, and thus the case is ren- dered clear, before the completion of the first birth. After this it is proper in every case, previously to any attempts for the extraction of the placenta, and more especially where we sus- pect a plurality of children, carefully to examine the abdomen, and, if we are not satisfied by such an examination, to pass two fingers to the os uteri, when we can scarcely fail to discover the precise case. Practitioners of midwifery have differed in several points relative to the birth of the second child, as to whether it should be en- tirely committed to the natural powers, or, if as- sistance be necessary, at what time it shall be afforded. These questions may be satisfactorily answered by an observance of facts, and the simplest deductions therefrom.*

256. Obstetric science admits of great certain- ty in its practical details ; occurrences of a gene- ral or of a peculiar kind may arise, and they may be met by general or peculiar laws ; still, how- ever, much must depend on the judgment of the accoucheur in individual cases. If the birth of the first child has been preternatural, or if it has required instrumental aid ; if it has been succeed- ed by haemorrhage, or complicated with convul- sions ; we see every reason why the expulsion of the second child should be accomplished with as little delay as possible ; and if the converse of this statement were true as to the first child, and if the second presentation were natural, we should not hesitate, after recruiting the patient's strength, to rupture the membranes, the parts having been already dilated by the passage of the first child ; and, if the presentation of the second child were preternatural, we should with equal solicitude make the earliest attempt to bring it into the world.

257. When both the children present naturally, and the labor of the first terminates without arti- ficial assistance, we may properly wait for the occurrence of the next pains ; if these, however, are deferred beyond an hour, we rupture the se- cond set of membranes, provided the patient be sufficiently recovered from the first labor, and the second birth is seldom protracted, as all the softer parts have been previously dilated.

258. We have found great advantage from the application of the abdominal bandage immedi- ately after the first birth, as, by gentle pressure of the uterine parietes, we induce a speedier re- turn of the contractile efforts and more effectually prevent any subsequent flooding. A very sin- gular case of complicated labor, from locking of the heads of

twins, is related by Mr. Allan in the second part of the twelfth volume of the Medico- Chirurgical Transactions. Dr. Clough also pub- lished a curious instance of twins in the Medical and Physical Journal, both of which were dis- covered by the midwife, one presenting with the feet, and the other with the head. The labor ad- vanced very s!owly, on which account Dr. Clough

was called in. He found the feet and body of one child, with the arms down on each side, protruded through the external orifice, and assist- ed to extract the shoulders. Still finding a diffi- culty he examined again, and ascertained that the head of the second child and that of the first were in the pelvis together. By the efforts of the uterus, the head of the second child was ex- pelled, and then that of the first : both had been long dead ; the mother recovered. A greater number of twin than of single children die dur- ing infancy, and of quadruplets very few reach maturity.

The following statements and observations are extracted from appendix, No. 20, to Dr. Merri- man's Synopsis of Difficult Parturition.

259. ' There seems to be a very extraordinary variety in the averages of twin and triplet births in different countries, and under different cir- cumstances. Thus the average of twin births has been stated,

By Dr. Clarke, at the Dublin lying- in-hospital, as . . . . 1 in 56 J

By Dr. Bland, at the Westminster

Dispensary, ... 1 in 80

By professor Boer, in the Vienna ly- ing-in-hospital, ... 1 in 80

By Dr. Denman, at the British hos- pital, 1 in 91

By Dr. Denman, at the Middlesex

hospital, 1 in 93

By Mr. Burns in his own practice . 1 in 95

By Madame Boioin, at the Hospice de

la Matenrite", ... 1 in 132

By Mons. Tenon, surgeon to the Sal-

petriere Paris, ... 1 in 96

‘ Respecting triplets the averages are still more various : many accoucheurs, of very extensive practice, have passed through a long life with- out once witnessing three children at a birth.

260. ‘ Dr. Bland kept a very exact register of 1897 women delivered at the expense of the Westminster General Dispensary, among whom there was one case of triplets ; while I held the office of physician accoucheur to that charity, about 3500 women were delivered, among whom I was twice called to triplet labors.’

261. In the first 18,300 women delivered at the British lying-in-hospital not a single in- stance of triplets had occurred; but there were three such cases among 20,357 women delivered at the Hospice de la Maternite”, at Paris, and nineteen among 59,354 women at the Dublin lying-in-hospital, or one in 3124. The averages of four children at a birth can scarcely be ascer- tained, yet several such instances are known to have happened ; and there are a few authentic histories of five at a birth. Dr. Osborn is said to have once witnessed an expulsion of six abor- tive ova ; and Borellus asserts that, about three years before he published his second Century of Observations, the wife of a nobleman in Langue- doc was delivered of eight at a birth. Borellus, it must he acknowledged, tells many other mar- vellous stories. Haller says upon the subject ‘ Non raro fsemina geminos foetus parit ; rarius paulo tres, neque unquam supra quinque.’ Wii/siulogia, 929.

CLASS II. — DIFFICULT LABOR.

Dystocia Transversa : — Merriman. Dvstocia :\ foetus situ : — Sauvages. Preternatural labor : — Burns. Accouchement conlre nature: — Baudeloque Gardien. Accouchement manuel : — Capuron. Unnatural labor : — Burns. Definition. — See page 547.

Order 1. — Labors requiring manual assistance ; when the nates, the superior and the inferior ex- tremities present.

262. In this order of labors the early know- ledge of the presentation is of great importance, and we are not aware of any other method by which it can be ascertained than by examination per vaginam. If, when the finger is at the os uteri, we cannot feel any part of the child, we presume there is something unusual in the pre- sentation, and this opinion is strengthened, when during pain the membranes are thrust down into the vagina in the shape of a cone, there being still no distinct presentation. Under these circumstances a patient requires great attention from her accoucheur, as much of the facility of delivery will depend on the period when assist- ance is afforded.

263. The os uteri being deprived, except in xhe case of the presentation of the nates, of early dilatation, the first stage of preternatural labor will generally require a long time for its completion. It is evident that, in this order of labor, presentations of the arm alone, or perhaps when complicated with some other parts of the child, absolutely require turning. Presentations of the breech, and of any part of the inferior extremities, will pass through the pelvis, demanding little if any more assist- ance than some of the presentations of the head : indeed we are inclined to believe, with the ex- ception of the greater risk to the child, that face cases are more difficult and painful than presen- tations of the breech. The operation of turning, the first great improvement in obstetric science, is one oftentimes of considerable difficulty, and always of some degree of risk. The precise time and circumstances under which it is to be at- tempted have excited much controversy, although the opinions of practitioners are now pretty unanimous on certain important points.

264. Where the os uteri is undilated, and the genital organs rigid, turning ought never to be attempted. Where however the os uteri is di- lated, even if the vagina and the perinaeum are only beginning to expand, turning may be attempted ; as, under any circumstances, the vagina and the parts about the outlet cannot re- ceive their full dilatation till the nates are making pressure upon them. Supposing the os uteri to be expanded, to the size of a dollar, turning with great care may if necessary be commenced. It' the membranes are ruptured, and the liquor am- nii has escaped, the contractile efforts of the uterus are more powerful, and, from its closer

approximation about every part of the child, the difficulties of the operation are much increased. Our own practice, in these cases, is to make out as early as possible the presenting part, and, if the pains are at all powerful and frequent, not again to leave the patient, so that we may seize

the most favorable opportunity for the introduc- tion of the hand. If the os uteri is not dilated, of course, we wait; and, if it continue rigid, we employ the means already prescribed to induce a contrary state. If, however, the mouth of the uterus is sufficiently expanded, and the other genital parts are at all in a favorable condition, proceed to the delivery, much preferring that the waters shall not have passed off.

265. For the following observations on spon- taneous evolution, and the exvisceration of the fetus, the author of this paper is indebted to his friend Dr. Francis Ramsbotham.

266. Since the time when Ambrose Parey adopted the comparatively safe and easy opera- tion of turning the child, and delivering by the feet in arm and shoulder presentations, the su- periority of that mode of terminating the labor over others previously followed has been so generally acknowledged that it may be said to have become a universal practice. Few men in the present day will rely on the unassisted powers of nature for accomplishing the patient's release, and fewer still will attempt the dangerous and often impracticable expedient of returning the shoulder into the uterus and bringing the head to the pelvic brim.

267. Although the merit of having first sug- gested this improvement in practical midwifery be not conceded to Parey, still it must be allowed that he is entitled to our warmest praise for having by his recommendation made it generally knnwn, and by his personal example proved its safety and its efficacy. So evident indeed are the advantages of Parey's operation that its re- vival and adoption may be considered almost an era in the history of midwifery.

258. It is not denied, however, that in some cases of shoulder presentation, the labor has been concluded by the natural efforts alone, unaided by manual interference. Dr. Denman was well aware of this fact, and has described the case as being a 'spontaneous evolution.' This talented and observant practitioner considered that a true evolution actually took place; he thought that the foetus was too large to pass through the pel- vis doubled ; that the breech, being acted on by the continued uterine contractions, was

gradu- ally forced lower into the pelvis ; and that at the same time the shoulder retreated into the womb, occupying the space which had been evacuated by the breech.

269. Dr. Denman's explanation was con- sidered perfectly correct, and generally received by the profession, until Dr. Douglas of Dublin, in a pamphlet first published in 1811, proved that the description was inaccurate ; he observes that it is incompatible with the received ideas of uterine action to suppose that the uterus, when contracting so powerfully as to force down that part of the child which was at its fundus, could at the same moment form a vacuum into which another portion already low down in the pelvis should recede.' The uterus indeed embraces and closely surrounds the foetal body ; the shoulder cannot recede either into the uterine or vaginal cavities, since the space evacuated by the breech no longer remains, but is destroyed by the con- tinued uterine contractions.

270. To Dr. Douglas, therefore, we are in- debted for a true history of the process. He has clearly demonstrated that the foetus does .pass the pelvis in a doubled position, describing a partial evolution indeed, and turning on the lowest point of the symphysis pubis as its centre.

271. He has given to the profession the fol- lowing observations. ' In all the cases related by various practitioners, on the subject of the evo- lution, it is acknowledged that shortly before its occurrence the shoulder of the child had been forced very low into the pelvis ; and that the thorax had occupied so much of its cavity as to preclude the practicability of the hand of the accoucheur being passed up into the uterus for the purpose of turning, as is usually done in such presentations. The shoulder and thorax, thus low and impacted, instead of receding into the uterus, are at each successive pain forced still lower, until the ribs of that side corresponding with the protruded arm press on the perinaeum. At this period not only the entire arm, but the shoulder also can be perceived externally, with the clavicle lying under the arch of the pelvis. By further uterine contractions the ribs are forced more forward, appearing at the os externum, as the vertex would in a natural labor, the clavicle having been by degrees forced round on the anterior part of the pubes with the acromion looking towards the mons veneris.' The body of the foetus then is bent into a curve ; the head rests above the pubes internally ; the clavicle presses against the lowest point of the symphysis pubis partly externally ; the arm and shoulder are entirely protruded ; the acromion is turned up towards the mons veneris ; and a part of the side of the thorax closes the genital fissure. The abdomen and loins at the same time occupy the lower part of the pelvis, and the breech has either entered the pelvic cavity or lies at the brim ready to descend into it. By a continuance of uterine action the breech is expelled,

sweeping the hollow of the sacrum, and distending the perinaeum to a vast extent. It will be evident that, during this expulsion of the foetus in this doubled form, the perinaeum must be placed much more on the stretch than happens in a natural labor or a case of original breech presentation.

272. The spontaneous evolution is not to be expected where there exists a contracted pelvis ; it can only take place when that cavity bears a large proportion to the size of the foetus, and is most likely to happen under premature labor. From the pressure which the foetal body must necessarily suffer it is not likely that the child will be born with life. Some cases, however, noticed by Dr. Denman sufficiently prove that the compression is not necessarily fatal to the infant. The longer the time occupied in the completion of the evolution, the more powerful the uterine exertions which are required to per feet it, and the smaller the mother's pelvis, the less probability will there be of the child's being preserved.

273. The knowledge that the delivery may possibly take place under the circumstances de- tailed above must be considered a great point gained in practical midwifery, since, in a few of those cases where the attendant is unable to in-

troduce his hand into the uterus in consequence of its firm contraction, he may trust with safety to the natural powers ; especially if together with a small or premature foetus there be a large pelvic cavity, strong uterine action, and an apparent disposition in the child to pass doubled. But, should these fortunate occurrences be wanting, he may have recourse to another mode much less likely to injure the mother than the forcible pas- sage of the hand into the uterus under a state of strong and permanent contraction ; namely, that of lessening the bulk of the foetus, by taking away the viscera of the chest and abdomen, and afterwards imitating the ' spontaneous evolu- tion,' or in other words extracting the body in a collapsed state.

274. Let it not be supposed that we should recommend this operation to supersede the com- mon practice of turning under ordinary cases of shoulder presentation, but that it should only be resorted to by the practitioner in those rare in- stances when being called upon to deliver, per- haps many hours after the rupture of the mem- branes, he finds any continued attempts at turning would be attended with the danger of uterine

laceration.

275. The operation is in itself easily per- formed ; and the appalling feeling which every man must experience on perforating the head of a foetus while ignorant of its life or death here can have no place ; because the pressure on the child's body must have deprived it of vitality before the operation can have become necessary. The powerful objections, therefore, which obtain igainst the use of the perforator in general are not applicable in these cases.

276. No other instruments will be found ne- cessary than the perforating scissors and the crotchet ; the scissors are much preferable to the perforators in common use, as they possess a cutting edge both externally and within ; with them, therefore, the separation of the viscera from their attachment is more easily effected.

277. The woman having been placed on her left side, the position most suitable for the per- formance of all obstetrical operations, as large an aperture as possible must be made into the chest at the most convenient part, by the division of one or more ribs ; and through this opening the heart and lungs must be extracted, the diaphragm must then be perforated, and the liver may 'be easily removed ; the intestines also may be drawn out without difficulty. The bulk of the foetus being thus reduced, the body will collapse ; and, if the uterine efforts continue, the evolution as described above will most probably speedily occur. Should the pains, however, have ceased, and the breech not descend after the removal of the viscera, the crotchet may be introduced through the aper- ture, and fixed within on some point of the foetal pelvis ; sufficient force may then be applied to extract, and the breech will be protruded, sweep- ing the sacrum and perinaum.

278. This operation Dr. Francis Ramsbotham thought it right to perform three times, and he has been present on two other occasions when it was had recourse to ; nor has he found any par- ticular difficulty attending it.

279. The separation of the head from the body

at the neck is another mode by which delivery may be effected in cases of shoulder presentation, when the contracted state of uterus prevents the child being turned. In the case requiring this, as well as the preceding operation, the death of the child must have already taken place, and the objections against it are the difficulty of its per- formance, and the unsuitableness of the instru- ments which have until lately been proposed for the purpose. The scissors invented by the late Dr. Coombe have not been found to answer. The best instrument with which I am acquainted is a

cutting hook made some years since by Dr. Ramsbotham Senior, of which a correct represen- tation is given in Dr. D. Davis's excellent work on Instrumental Midwifery. This instrument pos- sesses the curve of a large sized blunt hook ; its cutting edge extends throughout the inner side of the whole curve to within half an inch of the extremity ; and it is intended to be introduced over the neck, being carefully directed by the finger. When applied it is to be used as a saw, and by a gradual pressure downwards, the verte- brae and soft parts are divided.

280. On the separation of the head being effected, the body may be extracted by means of one or other of the arms, and should the pains have subsided the head may afterwards be ex- tracted by a blunt hook or crotchet introduced either into the foramen magnum or the mouth. The possibility of any injury being inflicted on the soft parts of the mother may be prevented by the index finger of the left hand being kept against the blunt extremity of the instrumenl during its action.

281. Should the pelvis be filled by the fcetal chest, or abdomen, exvisceration will be most expedient ; if, on the contrary, the neck origi- nally presented over the centre of the brim, which must very rarely occur, the best mode of proceeding will be to decapitate the child. To. one instance, in consequence of the narrowness of the pelvis, even after the child had been com- pletely exviscerated, the body would not pass ; we were therefore obliged to separate the head before extraction could be effected.

282. Of the presentation of the nates. — Many causes have been assigned for transverse or cross labors, such as the obliquity of the uterus, the shortness or the circumvolutions of thefunis round the body of the child, and shocks affecting the mother during pregnancy. It is, however, very doubtful whether any of these circumstances in- fluence the precise situation of the foetus, as we have frequently met with every one of these occurrences, and still the head has been the pre- senting part. We are more disposed to attribute them to some peculiarity in the manner of descent of the ovum into the womb, or to some disproportion existing in the earliest months be- tween its various parts.

283. An early examination – will generally enable us to discover the presentation before the rupture of the membranes, and when the supe- rior extremities lie over the centre of the pelvis, this is of no small importance. The breech 'may be distinguished by the pulpy softness of its feel, by the cleft between the buttocks, by the parts of generation, and sometimes by the dis-

charge of the meconium with the liquor amr.ii. The head, and more especially the face, is some- times confounded with the breech. The roundness and hardness of the head, together with its sutures and fontanelles, and the inequalities of the face, will enable us to form a correct diagnosis between the two parts.

284. Labors, where the head of the child did not present, were as we have already seen in the history of obstetric science, much dreaded ; and till a very much later period than the time of Celsus, thrusting up the part, and endeavouring to bring down the head, was the common prac- tice. Celsus gives the following recommenda- tion : — ‘ Et si clunes os uteri urgere caeperunt, iterum retro repellendae sunt, conquisitusque. pes ejus adducendus.’ Portal, who practised with great celebrity in Paris, about 1668, enter- tained correct notions and gave very judicious directions for the management of presentations of the feet and nates. He says (chap. iv.p. 211), ‘ If the feet of the child come foremost, search the inward orifice of the womb, which if you find thick and not open as yet, you must not be too hasty, nor hazard any violent delivery of the child, but stay till the womb is sufficiently open to afford a passage for the birth. When the buttocks come foremost you must not be im- patient; for, though the labor proceeds very slowly, yet it is not much more difficult than a natural birth : whence it is that our midwives say, by way of proverb, that where the buttocks can pass the head will follow of course. The position of the child in this case is doubled, with the thighs upon the belly ; and the passage being once opened for the buttocks, by the re- iterated pains, the head follows without much trouble ; you must take hold of the feet as soon as they come out, and afterwards the head and shoulders.’

285. The erroneous and generally fatal practice, as to the child, of pushing up the nates, still con- tinued : so difficult is it to shake off prejudices handed down from antiquity. Smellie was evi- dently doubtful both of the natural powers and of the standard capacity of the pelvis ; in rela- tion to breech cases we find him giving directions about stretching the external parts, dilating the os uteri, pulling down the legs, and raising and pushing up the nates. Dr. Hunter says, ‘ When I first began practice, I followed the old doc- trines in breech presentations, although I did not like them, but yet dared not broach new ones till I got myself a little settled in life ; at this time I lost the child in almost all the breech cases, but since 1 have left these cases to nature I always succeed.’

286. There is now no difference of opinion as to the propriety of leaving these cases to the natural efforts ; for although the nates do not accomodate themselves so completely to the shape of the pelvis, yet they do

not require so much room as the head ; and if the labor, espe- cially in its first stage, be allowed to proceed uninterruptedly, the nates will ultimately be protruded through the external parts ; when the case must be managed as a footling presentation. We have seen many presentations of the nates ; and although the protracted biith of the head,

even when every measure had been employed to facilitate its expulsion, has rendered us less successful in the preservation of the child's life than Dr. Hunter, we are quite convinced that the preservation of the child will greatly depend on our little interference in the early part of the process.

287. Of presentations of the inferior extremi- ties.—•These have generally been regarded as the simplest and probably the safest of all the pre- ternatural presentations, so far as regards the mother. The child, however, is in jeopardy, more particularly if it be a first labor, and the mother be rather advanced in life, and of rigid fibre. The foot may be distinguished from the hand, by the weight and resistance it gives to the touch, by the shortness and evenness of the toes, except the prominent great toe, and by the pro- jection of the heel.

288. The early delivery of the head in these presentations is of vast importance, as, between it and the pelvis, the umbilical cord may suffer fatal compression. We are not to hasten the delivery of the child's body under the presump- tion that, by so doing, we diminish the risk of pressure on the cord ; for on the contrary its slow passage dilates the parts of the mother, and affords greater space for the passage of the head, The rule therefore is, not to interfere till the nates are born ; not to rupture the membranes ; and supposing we are not called till the waters are evacuated, and the feet in the vagina, not even then by pulling them down to anticipate ' the effects of the natural pains. If, when the umbilicus passes beyond the os uteri, the funis descends further, a portion of it should be drawn out of the uterine cavity, that it may be stretched and compressed as little as possible when the head emerges from under the pubis.

289. If the nates are fairly in the world, the period to render assistance has arrived ; and the roles for its bestowment are equally applicable to breech as to footling cases. A warm napkin, or flannel, is to be wrapped round the lower extremities of the child, and by swaying it a little backwards and forwards, or from side to side, its descent is facilitated. We have already ex- plained the importance of the turn which the head makes in descending from the brim into the cavity of the pelvis in natural labor. In pre- sentations of the breech and feet this turn is equally desirable ; and if, when the nates have reached the external parts, we find the toes pointing towards the symphysis pubis, we know the head is unfavorably situated. Grasping the parts firmly, having previously covered them with a napkin,

we wait for the next pain, and then we give such an inclination to the body of the child as shall direct its abdomen towards its mother's spine. Some practitioners have thought the arms ought not to be brought down, alleging that, while extended by the sides of the head, they prevent the os uteri from contracting round the neck of the child, and that by extracting them we endanger their dislocation or fracture. In these opinions we do not concur ; for, if the early part of the labor has been deliberately conducted, the os uteri will generally be too fully dilated to allow of its contraction round either the neck or

the upper part of the child's head. It may so happen, if the pelvis be large and the head small, that the arms and cranium of the foetus may with difficulty be brought away together; but as thus situated they occupy much room, producing delay and a compression of the softer parts, we prefer the previous extrication of the upper extremities. When, therefore, the axillae of the child are on a level with the external genitals of the mother, the body of the foetus must be placed completely out of the way, and two or more fingers may be passed to the bend of the elbow, when the arm may generally, with some little management, be brought down over the face. Having accomplished the birth of one arm, there is seldom much difficulty in getting away the other, and thus the passage of the head is facilitated. If, however, there are any obstacles to the birth of the cranium, and the uterine efforts alone are seldom sufficient for ts expulsion, it is important that assistance ;hould be speedily afforded, as compression on he cord will quickly destroy the life of the child.

290. For this purpose, we pass two or three ingers of the right hand over the nape of the neck, and insinuate a finger of the left hand into he child's mouth ; by these means we depress the :hin, alter the position of the head, and better idapt it to the pelvis ; and, by a moderate ex- tracting force, we bring forward the head, taking :are lest by violence we injure the foetus.

291. In cases of extreme difficulty the blunt hook is required; or a silk handkerchief passed over the bend of each thigh, giving us a com- plete command of the parts, may be employed ; by either of these means we may, co-operating with the pains, draw down the nates to the out- let. We were lately called to a breech case by one of Dr. Blundell's pupils, in the management of which we had extreme difficulty. The woman was forty years of age, having a pelvis greatly deformed in its antro-posterior

diameter. The waters had been evacuated many hours — the os uteri was fully dilated — the womb was contract- ing powerfully — and the breech might perhaps be considered as having just entered the cavity of the pelvis. She had three times previously been delivered by instruments. Hoping, how- ever, that, as the breech occupies less space than the head, as she was a strong woman, and as no unpleasant symptoms . had occurred, the breech might be thrust into the world by the na- tural efforts, we determined to give a few more hours for their full exertion. The bladder was emptied by the catheter, and the rectum was un- loaded by a clyster. Six hours elapsed without any further advance of the presenting part, and we determined to use the blunt hook. Having fixed it successively in the fold of each thigh ; and, having drawn down with the greatest caution for up- wards of three quarters of an hour, very little progress had been made ; nor was it till the point of the instrument was hitched over the sacro-iliac symhondroses that we could extract the breech. It ought to be stated that during the process there were intervals of rest, and the ef- forts at extraction were temporarily intermitted when the pulse was getting above 120 or 130 : the child had been dead some days.

293. Of presentations of tfte superior extremi-

*ties.— There are no cases in obstetric practice requiring a union of firmness and skill in a higher degree than presentations of the superior extre- mities. If they are discovered early, and their treatment be commenced under the most favor- able circumstances, great tact and delicacy are necessary to avoid injury to the uterus and softer parts. And whether the hands, the elbow, or the shoulders present, they cannot pass through the pelvis without some alteration in their position. We have already noticed, as an era in obstetric science, the partial approximation to the present plan of treatment in the turning of a dead child by Celsus, although the principal merit of its re- vival and complete establishment, as an invaria- ble rule, must be given to Ambrose Pare1 ; who enjoins in all these presentations to turn the child and to bring it into the world by the feet ; Dr. W. Hunter, believing that the parts would be much more dilated for the subsequent passage of the head if the breech was brought away first, instead of the feet, recommended to his pupils * to introduce their hands into the uterus and gently to put up the arm and to turn the child to a breech presentation. Reduce it, if possible, to a perfect breech case, that it may come more gradually, on account of the head and navel string, lest you strangle the child. If, however, you find this impracticable, let it come footling, but sustain the child at the hips as long as you can, they being, next to the head, the largest and most unyielding part.'*

294. If perfect agreement exist as to the way in which this operation is to be performed, there is great diversity of opinion as to the precise time when

it shall be undertaken. Supposing we find the arm protruding through the os uteri, the membranes unbroken, and the os uteri fully dilated, there need be no hesitation. The arm of the operator is to be bared and smeared with some unctuous substance ; and having, if they re- quire it, gently dilated the external parts, the hand may be slowly carried to the os uteri, tak- ing care to insinuate it through this part during the absence of pain. The membranes are now to be ruptured, and the hand will come in im- mediate contact with some part of the child. Having reached the feet, the operator must be care- ful so to draw down as that the abdomen of the child shall be placed towards the mother's spine. Continuing the extraction, the presenting arm will be gradually drawn into the uterus; and when the feet have cleared the external parts it becomes precisely similar to a presentation of the feet; and the rules already prescribed are appli- cable to its management.

295. Where the waters have been long evacu- ated before the practitioner sees his patient, the os uteri not fully dilated, and the pains vehe- ment and quick, turning must not be attempted. We are aware that some practitioners do not concur in this opinion, urging that the uterus will most probably be ruptured by the continu- ance of the pains, the child remaining in this untoward position. The danger of rupture from delay, in this case, cannot exceed the risk of la- ceration, were the hand, for the purpose of turn- ing, to be introduced into a uterus so powerfully contracting. In these cases, and we have seen

several, we bleed the patient if at all plethoric, to fourteen or twenty ounces, and follow up the abstraction, by sixty or eighty drops of the tinct. opii ; by these means the uterine action will most probably bemu;'; dimin.v.ed, and then the turning may be safely attempted. It may be urged that, although the uterus be not rup- tured, yet the continuance of the pain will force the arm, the shoulder, or perhaps the head of the child so firmly into the uterus as to render it impossible to turn, even when its inordinate action has ceased. We are quite alive to the difficulty and risk which attends this jamming of the foetus into the pelvis ; but we think it less than what would accrue from thrusting the hand into this viscus when rigid, powerfully contract- ing, and irritable. The first case of turning we saw was one in which attempts had been made during the contractile efforts, to rectify the posi- tion of the child. Opium alone had been given, without any previous abstraction of blood. Three attempts proved unsuccessful, and eighty drops of laudanum were exhibited, the woman being undisturbed for two hours ; after this period the child was extracted with ease, but the

uterus had ruptured, and she died a few hours after delivery. The hands may be distinguished by their flatness, thickness, and breadth, by the length and inequality of the fingers, by the shortness of the thumb, and by the thumb bend- ing into the palm of th,e hand.

Class II. Order 2.

296. Labors which cannot be completed with- out the aid of extracting instruments, of which some are designed to save the lives both of the mother and the child, while others are intended to preserve the life of the mother at the expense of the life of the child.

297. We have already considered lingering labor as dependent on one of two causes, either on diminished power, or increased resistance ; and, when either of these exist to so great an extent as seriously to retard the progress of parturition, the skill, the promptitude, and the experience of the accoucheur are immediately inexercise. If after a fair trial of every expedient which the pecu- liar circumstances of the case may suggest, and after having allowed the fullest exertion of the natural powers compatible with the safety of the woman, the labor makes no advance, we must have recourse to instrumental aid. It is true that this necessity seldom arises ; and we believe when the early stages of labor are well under- stood, where there is no undue interference, either from timidity or haste, the cases requiring the use of extracting instruments will be few in- deed. Yet! aborsare occasionally occurring which cannot be terminated by the natural powers, where, from the disproportion between the pelvis and the head of the child, or from seme deficiency in the expulsatory power, from the passions of the mind, or the diseases to which the human species are incident, the performance of duties is required from the practitioner, which he is solely enabled to discharge, because he has, made midwifery a study, and is intimately acquainted, not only with natural but difficult parturition. These are the cases which distinguish the judi-

cious accoucheur from the man who thinks that midwifery is undeviatingly simple and easy, and who at length discovers that he has neglected to acquire that knowledge without which the safety of his patients, and his own character, will soon be compromised. It is here that officious interfe- rence, neglect in the early stages manually to remedy a mal-position, the exhibition of stimu- lants under a mistaken idea that they impart strength, with many other errors equally perni- cious, render that labor difficult and instrumental which, under other treatment, might have been concluded by the exertion of the natural powers.

298. Writers have been accustomed to enu- merate a variety of appearances, which they have considered as presumptive signs of difficult

labor ; but the least reflection rrust convince us that as women of every form, of every com- plexion, and of the most diversified mental and physical powers and dispositions, have both na- tural and difficult labors, the knowledge of these supposed indications cannot be of any great im- portance in actual practice. A necessity for artificial aid is principally arising, first, from an excessive degree of those symptoms which hsive been already described under lingering labor ; and which, from their continuance, induce such ,a powerless state of system as to call for the employment of instruments, intended to pre- serve the lives both of the mother and child ; and, secondly, from distortion of the pelvis exist- ing in every degree, from the slightest intrench- ment on its capacity to absolute deformity, creating of itself a disproportion between the relative size of the foetal head and the canal through which it must pass. It is needless to remark that these cases frequently demand the use of the perforator.

299. In the first kind of parturition the pains become weak, short, and inefficient, producing no effect on the head of the child ; sometimes they are entirely suspended ; and although their cessation within the first twenty-four hours does not justify the use of instruments, as it may be only temporary, yet if it occur at the end of the second or third day, if the pulse, the counte- nance, and the general appearance of the wo- man are expressive of extreme debility and fa- tigue, a strong presumption is afforded of the inability of the natural powers to complete the delivery without the assistance of art. If, in ad- dition to these symptoms, we have shivering and vomiting, a pulse of 120 or 130, furred tonpˆie, a hot dry skin, great thirst, restlessness, heat and soreness in the vagina and os uteri, we may feel assured our patient has approached to a state from the evil consequences of which instru- mental aid will alone deliver her. The forceps will now be required ; and, before we pass on to the next variety of labor, we shall describe the manner of its application, first enjoining a few preliminary measures. The forceps is an instrument intended to lay hold of the head of the child in difficult labor, and to extract it as it presents ; and, as now improved, in the hands o a prudent and cautious operator, it may be em- ployed without doing the least injury either to mother or child.

300. The bladder and rectum should be pre-

viously evacuated, not only to enlarge as much as possible the capacity of the pelvis, but to pre- vent the risk of injury to these parts themselves.

301. The first stage of labor must be com- pleted, and the os uteri and

pennaeum in a dilatable and yielding condition, ere we think of employing instruments. It is a rule in the use of the forceps to be, entirely guided by the cir- cumstances of the mother, or rather no attempt must be made to save the life of the child when the mother may thereby be placed in jeopardy. The assistance given by instruments should co-operate with the contractile efforts of the uterus ; and, if the pains have entirely ceased, intervals of rest must be observed ; and it will be attended with advantage to watch the pulse, and to pause when it is exceeding 125 or 130.

302. The extracting efforts should always be made in the direction of the axis of the pelvis; so if we are employing the long forceps, and the head is above the brim, we should draw down in a line towards the coccyx ; but, when the head is approaching the outlet, the direction of the extracting force must be forwards, or towards the pubes. The time occupied in instrumental deliveries greatly varies ; for, while some may be safely terminated in a very short time, others re- quire perhaps an hour for their completion. The usual obstetric position will do sufficiently well for instrumental purposes ; the nates should be brought close to the edge of the bed, and the knees should be drawn up at right angles with the abdomen. When we can feel the ear in a vaginal examination, the case is manageable by the forceps; as its blades, being twice the length of the finger, will embrace the head. Dr. Den- man, whose invaluable aphorisms on this sub- ject ought to be consulted by every obstetric practitioner, says, the difficulties which attend the application and use of the forceps are far less than those of deciding upon the proper time when, and the cases in which, it ought to be applied. We may subjoin to this remark that, except where syncope is occurring from haemorr- hage, the ear may have remained in this situa- tion some hours before the forceps is absolutely required.

303. The instruments now in use are : —

1st. Those intended to save the life both of the mother and the child ; they consist of the Short forceps, Long forceps, Vectis, and Blunt hook.

2d. Those in the use of which the life of the child is sacrificed to the safety of the mother ; they are the

Perforator,

Craniotoir.y fo'ceps,

*Crotchet, au < **

Scalpel.

Cases of the powerless labor such as we have already described,

presentations of the vertex, and of the face, forehead, and ear, are all manageable by the forceps or lever, if circum- stances do not exist rendering the employment of the perforator necessary.

304. There is no occasion, says Dr. Denraan,

and it would be hurtful to attempf, to change the position of the head when trie forceps is applied, before we begin to extract. For, if the action with the forceps be slow, the head of the child will turn in the same manner, and for the same reasons, as in a natural labor. Therefore the forceps, being fixed upon the head, must also change its position according to its descent, and the handles be gradually turned from the ossa pubis and sacrum, where they were first placed, to the sides of the pelvis. The handles of the forceps likewise, though originally placed far back towards the sacrum, that is, in the di- rection of the cavity of the pelvis, will be gradu- ally turned, as the child advances, more aiul more towards the pubes, that is, in the direction of the vagina. The first action with the forceps must be to bring the handles, firmly grasped in one or both hands, slowly towards the pubes, till they come to a full rest. After waiting till the pains return, or an imaginary interval if there should be a total want of pain, the handles are to be carried back in the same slow and cautious manner till the lock reaches the perinaeum, using at the same time a certain degree of extracting force. The subsequent actions must be from handle to handle, or occasionally by simple at- traction ; but the action of that blade which was towards the pubes must be stronger and more extensive throughout the operation than the action with the other blade, which has no fulcrum to support it. By a repetition of these actions, always directed according to the posi- tion of the handles, with their force increased, diminished, or continued, according to the exi- gence of the case, we shall, in a short time, per- ceive the head of the child descending. \Vhen the head begins to descend the force of the action with the forceps must be abated ; and, as that advances, the direction of the handles must change by degrees more and more to each side and towards the pubes. The lower the head of the child descends the more gently we must pro- ceed, in order to prevent any injury or lacera- tion of the perinseum or external parts, which are likewise to be supported in the same manner as in a natural labor. In some cases the mere ex- citement occasioned by the application of the forceps, or the very expectation of its beii.fr applied, will bring on a return or an increase of the pains sufficient to expel the child without its assistance. In other cases we are obliged to exert very considerable force, and to continue it for a long time ; so that one operation may be safely and easily finished in twenty minutes, or even a less time, and another may require more than an hour for its completion, and the repeated exertions of very considerable force. In some cases it happens also that the obstacles to the delivery exist at one particular part of the pel- vis, and, when that is surmounted, the remainder of the

operation is easy ; but in other cases there is some difficulty through the whole course of the pelvis. Before the exertion of much force we are always to be convinced that a small or a moderate degree of force is not equal to our purpose. In every case in which the forceps has been applied it are not to be moved before the head is extracted, even though we might

'nave little or no occasion for it. When the head of the child is born the forceps is to be "emoved, and the remaining circumstances are to be managed as if the labor had been natural.

305. Of the vectis. — We have not space, in an elementary treatise like the present, to enter at "large into the enquiry of which is the better in- strument the forceps or the lever; we know that men well qualified to form an opinion have em- braced different views of this question, arising probably from their individual skill in their em- ployment. It must we think be allowed that the lever is a very powerful instrument, and if the soft parts of the woman be constituted its fulcrum, its use will be highly dangerous ; not- withstanding it may be applied to any part of the head, and may he used earlier than the for- ceps, we think the forceps by far the better in- strument.

Class II. Order 2.

306. We shall now detail a few particulars re- lative to those difficult cases of parturition, which, from the size of the head, or from distor- tion in the pelvis, can neither be protruded by the force of the natural pains, nor extracted by the forceps; and which consequently require the life of the child to be sacrificed for the safety of the mother. This operation was, by the ancients, called embryotomy. ' The reluctance,' says Dr. Merriman, ' which every well regulated mind must feel at employing the perforator, even in cases of the greatest necessity, while the infant is yet living, naturally occasions a wish to delay the operation, till there are some indications of the child's death ; and these indications are sought for in certain symptoms which most writers on midwifery have been careful to enu- merate. These symptoms are, a want of foetal motion and pulsation at the fontanels ; a rolling, as of a lump or dead weight, to that side on which its mother is lying ; shivering fits on the part of its mother, flaccidity of the breasts ; fcetor of the uterine discharges ; and an emphysematous and very loose feel of the bones of the cranium.

307. When the head, from its extraordinary bulk, is detained at the brim of

the pelvis, on evacuating the contents the bones of the cranium immediately collapse, and the head is afterwards propelled by the force of the labor pains. If these are insufficient, the extraction must be made with the craniotomy forceps. The unfavor- able position of the head is, of itself, a cause insufficient to justify the use of destructive instru- ments, which ought never to be employed but in extreme cases, after every milder method has failed. From the difficult access to the cranium, in order to make a perforation and evacuate the brain, a face case makes a very troublesome and dangerous crotchet one ; very fortunately in nar- row pelves the face rarely presents, and very seldom advances fay in that direction , at other times the position may be so altered that the crown, the back of the ear, or some other part of the cranium, can be reached : otherwise, the crotchet must be fixed in the mouth or orbit of the eye, and the head brought along in tfiat direction, till the perforator can be employed to open the skull

308. But the grand cause of difficult labor is the narrowness or distortion of the pelvis. For when at the brim, instead of four inches and a quarter from pubes to sacrum, it measures no more than one and a half, one and a quarter, two, or two and a quarter, the use of instru- ments becomes absolutely requisite; and very frequently in those of two and a half and three inches ; or when the diameters through the cavity, or at the inferior aperture of the pelvis, are retrenched in the same proportion, difficulties will arise, and the delivery, except the labor be premature or the child of a small size, cannot be accomplished without the assistance of destruc- tive instruments.

309. We judge of the form and size of the pelvis by the external make and form of the woman, by the progress of the labor, and by the touch. When the fault is at the inferior aperture the touch is pretty decisive ; if a protuberance is felt in the os sacrum, instead of a concavity ; if the coccyx is angulated ; if the symphysis pubis projects inwards, in form of an acute angle ; if the tuberosities of the ischia approach too near each other, or the one tuber be higher than the other ; such appearances are infallible marks of a distorted pelvis. But, when the narrowness is confined to the brim, this is only to be discovered by the introduction of the hand within the pelvis. The projection of the lumbar vertebra over the sacrum is a species of narrow pelvis that most frequently occurs in practice. In this case the cnild's head, by the pressure it sustains between the pubes and sucium, is moulded into a conical or sugar-loaf form, the parietal bones are squeezed together, overlapping one another, and will be felt to the touch, when the labor is advanced, as an acute ridge. Instead of the complicated in- strumental apparatus, invented by the ancients, such as screws, hooks, &c., for fixing in, laying hold of, and extracting, the head as it presented, an operation in many cases difficult and danger- ous, when the head was bulky or the pelvis nar- row, as the woman frequently lost her life in the

attempt; the practice of diminishing the size of the head, by opening the cranium and eva- cuating the brain previous to the extraction, is a modern improvement, and an important one ; the instruments for this purpose consisting of the I. erforator, a blunt hook, and the craniotoroy for- ceps.

310. When the accoucheur is under the ne- cessity of destroying the child to preserve the mother, she must be laid in the position already advised for the application of the forceps, and the same rules recommended for the one opera- tion will in general apply to the other. Thus in the narrowest pelvis that occurs, previous to opening the cranium, the soft parts should be completely dilated, and the head of the child fixed steadily in the pelvis and advanced as far as possible; for, while the head is high and loose above the brim, the application of instru- ments is very difficult as well as hazardous.

311. The perforator must be cautiously in- troduced into the vagina, directed by the hand of the accoucheur ; its points must be carefully guarded till they press against the cranium of the child, which they must be made to perforate

with a bowing kind of motion, till they are pushed on as far as the rests ; they must then be opened fully, carefully reshut, half turned, and again widely opened, so as to make a sufficient aperture in the cranium.

312. They must afterwards be pushed beyond the rests, opened diagonally again and again in such a manner as to tear and break to pieces the bones of the cranium; they must then be shut with great care, and withdrawn along the hand in the same cautious manner as they were intro- duced, lest they should bruise or tear the uterus, vagina, or any other part of the woman. The teguments of the scalp should now be brought over the ragged bones of the cranium, and the woman should be allowed to rest an hour or two, according to her strength and other circumstances ; the bones of the cranium will now collapse, and if the woman has much strength remaining, or the pelvis be not much distorted, the head, being thus diminished, will be protruded by the force of natural pains, otherwise it must be extracted by the craniotomy forceps introduced in the same manner, and guarding the point on the opposite side while making the extraction.

Class II. Order 3.

Impracticable labor, or that in which the child, even when as much as possible reduced in size, cannot pass through the pelvis, and where the Caesarian operation becomes necessary.

OF THE CAESARIAN OPERATION.

313. This operation consist? in making an in- cision through the abdominal and uterine pari- etes, sufficiently large to allow the introduction of the hand, and the extraction of the foetus and its appendages. We know of only one instance in this country, where the preservation of the mother's life has attended its performance, while on the continent, according to M. Baudeloque, it has been abundantly successful. In England this measure is never contemplated till every other remedy has been tried ; and one reason of its little success may perhaps be found in the exhaustion which these previous means may have induced. Of twenty-two cases operated on in these islands, twenty-one of the mothers died ; of the children ten were born dead ; and of the twelve extracted alive, four survived only a few days. The whole number of lives preserved therefore does not exceed nine.

314. The most astonishing case is that of Alice O'Neil, an Irishwoman, operated on by Mary Donally, a bold but ignorant midwife ; she made aH incision through the abdomen and uterus with a razor, and held the lips of the womb together with the hand, till some one went a mile, and returned with silk and the common needles which tailors use. With these she joined the lips in the manner of the stitch employed ordinarily for the hare lip, and dressed the wound with white of eggs. The woman recovered in twenty-seven days, and the case is authenticated by Mr. Duncan Stewart, surgeon in Dungannon, and Dr. Gabriel King of Ar- ina< }li.

•51.5. The cases are very rare indeed which demand this operation; as, when the perforator

has been fully employed, children have beet?, delivered, although the distance between tfieossa pubis and os sacrum did not exceed one inch and a half, and not more than two inches from one side to the other. There can be no doubt of the propriety of the Caesarian section, where women near the full time of pregnancy die un- delivered, since by this measure the child may be preserved.

316. The danger and the sacrifice of life which invariably attended the use of the perforator, and which frequently followed the Caesarian opera- tion, induced many enquiries for a plan of treat- ment which, while it might hola out a fair expectation of safety to the child, should not compromise the welfare of the mother.

317. The section of the symphysis pubis, ab- stinence on the part of the mother, and the bringing on of premature labor, have been tried for this purpose. Of the first we need only say that it has sunk into complete desuetude, the success attending it not being at all commensu- rate with the

danger incurred.

318. Of the second, proposed by Mr. James Lucas, surgeon to the infirmary at Leeds, in the Memoirs of the Medical Society of London, Signior Assalini relates a case in which it was usefully enjoined ; but remarks that no great re- liance is to be placed upon it, for women who constantly reject, by vomiting, every particle of food they swallow, have, notwithstanding, on many occasions, large children.

319. Of the third, we believe, most practition- ers think highly; and, although it cannot be denied that the mother incurs some degree of danger, it may be affirmed that she is placed in as much, if not more danger, by the use of the perforator.

320. Smellie mentions the case of a woman whose pelvis measured less than two inches and a half of conjugate diameter ; she had been five times delivered, and only one child was saved, by being born in the eighth month of a very small size. He has likewise given two plates, showing a pelvis of two inches and a quarter conjugate diameter. One of these demonstrates the impossibility of a full grown foetus, though the bones of the head are very much compressed, passing immutilated ; the other exhibits a seven months foetus clearing the strait.

321. Dr. Merriman says, that he has been made accurately acquainted with the particulars of thirty-three cases of labor prematurely in- duced, in the eighth month of pregnancy, on account of extreme distortion of the pelvis. In twenty-one of these the children were born dead ; in four, one of which was a case of twins, they were born alive, but incapable of living more than a few hours; nine were born alive, and capable of being reared. Thus nearly one-third of the children were saved, who must have lost their lives had the women gone to their full times, and been delivered by the perforator; and all the women recovered, the majority of whom, if not the whole number, must have been lost, had the Caesarian section been performed. There are two ways in which premature partu- rition may be induced, either by the careful puncturing of the membranes within the o»

uteri, by the stilette of a catheter or by intro- ducing the finger within the os uteri, to detach the decidua, thus exciting parturient action, by which the membranes may be forced upon, and will dilate the os and cervix uteri, as in natural labor. The management of the subsequent de- livery, which generally occurs in from twenty- four to seventy-two hours, will of course

depend on its ordinary or preternatural character.

Class III. — LABORS OF A COMPLEX OR ANO- MALOUS CHARACTER.

Order 1. Labor complicated with uterine hae- morrhage, including those labors where the pla- centa fully, or only partially presents.

322. Having already treated of those haemorr- hages which occur before and after the birth of the placenta, we shall now briefly advert to the losses of blood we so often witness in abortion ; and to those which occur in more advanced pregnancy, or at the full term of utero-gestation. Denman says, that all expulsions of the foetus be- fore the termination of the sixth month of preg- nancy, may be called abortions; but that all expulsions in the last three months are to be considered as labors premature or regular. The practical reason for this distinction, he conceives to be of great importance : before the termination of the sixth month, these cases, generally speak- ing, neither require nor allow of manual assist- ance ; but in the last three months, they admit of manual interference, if it be required, though not with equal ease ; for the longer the time which is wanting to complete the period of utero-gestation, the greater will be the difficulties attending any operation it may be thought necessary to perform. In this rule we do not fully concur, as there are abortions, during the first four months, where haemorrhage occurs to so great an extent, as would not only endanger but destroy life, were not the ovum removed by artificial help, generally per- haps, by the aid of the fingers. We were lately called to a poor woman in the third month of pregnancy (and the preparation of the ovum is now in the museum of St. Thomas's Hospital), who nearly died from haemorrhage occurring at this period. On entering the room we were struck with the ghastly and dying appearance of the patient, whose early pregnancy had deterred the medical attendant from making any attempt to bring away the ovum.

323. The haemorrhage was very excessive and the collapse alarming ; of course nothing could be attempted as to the removal of the embryo, in this powerless state of system ; and, having poured some nearly pure brandy down the throat, after an interval of about ten minutes vitality was partially restored, but with its resto- ration there was also a renewal of the flooding. We now introduced two or three fingers of the left hand into the vagina, insinuating them a little distance within the os uteri ; here we found the ovum partly adherent and partly detached ; with some slight difficulty we entirely separated it from the internal surface of the uterus, and its extraction was easily effected. The flooding im- mediately ceased, although the recovery was painfully protracted. The exceptions to this rule of Denman's are not unfrequent. Mr. Randall, of Finsbury Circus, lately met with a

case of four months' pregnancy, where the pla- centa was partially adherent to the os uteri, in which the patient would have been lost had not the foetus been manually extracted.

324. Abortion is a subject entitled to the fullest consideration of medical men, as it is a complaint of common occurrence during pregnancy, and frequently productive of serious injury to the fe- male constitution. It is not invariably happen- ing in weakly and debilitated women, as might naturally be expected ; for consumptive patients seldom abort, and it is scarcely possible to point out a more feeble and irritable state. We may remark that weakness, or irritability in general, is seldom a cause of abortion, but some weakness or imperfection originating in or affecting the uterus and its appendages ; or a peculiar kind of irritability thence proceeding, distinguishable enough in the female character, by a careful ob- server, which creates impatience of mind and restlessness of body, in which every occurrence is the source of ungrounded fear and solicitude, and every office is performed with hurry and vexation.

325. Abortions are not very often dangerous in the first five months ; but a frequent habit of miscarriage debilitates the system, shatters the constitution, and lays the foundation of chronic diseases of the most obstinate and dangerous na- ture. In the advanced months the prognosis will be more or less favorable, according to the pa- tient's former state of health ; the occasional cause and symptoms with which it is attended. The proximate cause of abortion is the same with that of true labor, viz. a contracting effort of the uterus and abdominal muscles, assisted by the other expulsive powers. The remote causes can- not be explained with precision, as manycircum- stances, with regard to the nature of impregna- tion and connexion of the foetus with the placenta and uterus, are subjects still involved in darkness. They may in general, however, be reduced to whatever interrupts the regular circulation be- tween the uterus and placenta : every cause that excites the spasmodic contraction of the uterus, or other assisting powers : whatever oo- casions the extinction of life in the foetus. Amongst the first are, diseases of the uterus ; imperviousness or spasmodic constriction of the extremities of the uterine blood-vessels ; partial or total separation of the placenta or chorion from the uterus ; determination to other parts.

326. To the second general head belong all causes that produce a strong contraction of the elastic fibres of the uterus or of the parts that can press upon it ; or that occasion a rupture of the membranes, such as violent agitation of the mind or body ; a disease of the membranes ; too large a quantity of the liquor amnii ; the cross posi- tion of the foetus ; its motion and kicking.

327. The third and last head includes the nu- merous causes of the death of the child, which, besides those referred to in the preceding classes, may be occasioned by diseases peculiar to itself: diseases communicated by the parents ; external accidents happening to the mother, or accidents incident to the foetus in utero ; diseases of the placenta or funis ; knots and circumvolutions of the chord ; too weak an adhesion of the placenta or chorion to the uterus ; and every force that tends to weaken or destroy this attachment.

328. As to the treatment, it must be varied ac- cording to the particular circumstances of the case ; nor is it possible to point out particular indications, or propose any regular plan to be pursued for this purpose. Abortion is often pre- ceded by no apparent symptoms, till the rupture of the membranes and evacuation of the waters announce the approaching expulsion of the fcstus. Either to remove threatening symptoms, or to prevent miscarriage when there is reason to ap- prehend it, often baffles our utmost skill ; be- cause it generally happens that there is a cessation of growth in the ovum, or in other words an ex- tinction of life in the fotus, some time previously to any appearance of abortion. For instance, in early gestation a woman often miscarries about the eleventh or twelfth week, but the age of the fcetus at this time is generally no more than eight weeks. At other times, when by accident the foitus perishes, perhaps about the fifth or sixth month, it will still be retained in utero, and the expulsion will not happen till near the comple- tion of the full time.

329. As women who have once miscarried are liable to a recurrence from a like cause, at the same particular period ; such an accident in fu- ture pregnancies should be guarded against with the utmost caution. On the first appearance of threatening symptoms the patient should be con- fined to a horizontal posture ; her diet should be light and cooling; her mind should be kept as tranquil as possible ; a little blood from the arm may be taken occasionally, and opiates adminis- tered according to circumstances ; but excepting so far as depends on these, and such like precau- tions, in the way of medicines very little can be done. The medical treatment of abortion must therefore be considered with a view only to the prophylactic cure, and this will consist chiefly in a proper regimen.

330. Of the proper regimen during pregnancy. — Women when pregnant should live a regular temperate life ; moderation in eating and drink- ing should be carefully observed, and every thing having a tendency to disagree with the stomach should be avoided ; in other respects the manner of life

should be much as usual. If com- plaints occur they should be treated as at other times, only guarding against such things as, by violent operation, may endanger miscarriages. If the patient has formerly been liable to this accident, the cause should be carefully considered and suitable remedies applied ; if plethoric, for instance, a little blood may be advantageously abstracted, she may live abstemiously, and pre- serve the utmost tranquillity till she gets beyond the dangerous period. If she be weak, delicate, and nervous, bark, light aromatic bitters, mineral waters, and the cold bath (if able to bear it) will be the best remedies. The cold bath has in many cases cured the most obstinate fluor albus, and sometimes even sterility itself, and in relaxed ha- oits, disposed to miscarriage, when every other means has failed it has done considerable ser- vice ; the practice may safely be continued for several months after conception, when it has been early begun or the patient has been accustomed to it. Such a shock will, however, have very dif- ferent effects on different constitutions, and ou per-

sons not accustomed to the cold bath ; hence it is an expedient by no means to be indiscriminately used in the pregnant state.

331. Abortions that happen in early gesta- tion, and that come on suddenly, without any presaging sign, can only be prevented by avoid- ing all occasional causes, by counteracting mor- bific dispositions, and by confinement to a

‘ horizontal posture for some time before and after the critical period is over. When ? ve- nereal taint in the parents is suspected to be the cause, either of abortion or the death of the fcetus, the like accident can only be prevented by putting both parties on a mercurial course.

332. Pregnant women require a free pure air; their amusements should be often varied ; their companions should be agreeable and cheerful ; their exercise should be moderate, and suited to their inclination, constitution, and the season ; they should avoid crowds, confinement, and tra- velling over rough roads in a carriage. Women should with the utmost care guard against con- fining the breasts or abdomen; and they should keep themselves as loose and easy as possible through the whole term of gestation. When the abdomen is pendulous, towards the latter months, a gentle support by a proper bandage will prove useful ; and the woman, when fatigued, should occasionally through the day indulge in resting on a bed or sofa.

333. Of the floodings occurring nearly at the full term of utcro-gestation, and at the commence- ment of labor. — There is, perhaps, no circum- stance attendant on parturition which excites such solicitude in the accoucheur, or exposes the patient to such imminent danger, as repeated or

large losses of blood at the termination of pregnancy, or in the commencement of labor. We can readily conceive how uncertain and in- efficient the treatment of such floodings must have been, prior to the appearance of Dr. Rig- by's most excellent and invaluable work, who tells us that most of the authors whom he had read on this subject describe these cases as pe- culiarly embarrassing, acknowledging that they have always been at a loss, when such have oc- curred to them, to determine with any degree of certainty and satisfaction which of the two methods of practice hitherto recommended it has been most proper to adopt, whether to en- deavour to restrain the discharge by the means before mentioned for that purpose, and leave nature by her own efforts to expel the child, as is the case in floodings of the early months ; or at once to introduce the hand into the uterus and bring it away by art. This doubt about the propriety of waiting, or the necessity of removing the contents of the womb, they say, is ever owing to the uncertainty of knowing the quan- tity of blood that has been lost ; and, if it were known, to the impossibility of ascertaining the degree of loss a woman might sustain without manifest risk of life. These statements Dr. Rig- by proved to be incorrect, observing that a knowledge of the true causes that produce floodings will give us all the information, which may be considered as the first requisite towards an improvement in the practice ; ffr these fioodines arise from two verv different causes.

which are very different in the danger they pro- duce, and which require a very opposite method of treatment. The separation of the placenta from the uterus before the delivery of the child, and the consequent opening of its vessels, must be looked upon as the proximate cause of every considerable discharge of blood from the womb at that time ; but this premature separation may be produced by very different causes. These causes it is necessary to understand, that we may see the reason why the same apparent complaint should very often so widely differ in its termina- tion and treatment.

334. There is no particular part of the uterus to which nature seems constantly and uniformly to fix the placenta ; it is nevertheless for the most part so situated, that if the woman be healthy, and no accident befal her, it does not separate until the full term of pregnancy, nor then before the entire expulsion of the child ; after which it becomes disengaged from the uterus, and is thrown off, making room for its entire contraction, which shutting up the mouths of the vessels effectually prevents any conside- rable loss of blood ; for which purpose his plain it must be fixed to some part of the womb which does not dilate during labor, namely, to the fun- dus or

side of it. In this case, then, when a flooding comes on before the delivery of the child, it is obvious that the separation of the placenta must be owing to some accidental cir- cumstance, to violence done to the uterus by blows or falls, to some peculiar laxity of the uterine vessels from the badness of habit, or fever, or to some influence of the passions of the mind, suddenly excited, such as fear, anger, &c.

335. But, from the uncertainty with which nature fixes the placenta to the uterus, it may happen to be so situated, that when the full term of pregnancy is arrived, and labor begins, a flooding necessarily accompanies it, and with- out the intervention of any of the above acci- dental circumstances ; that is, when it is fixed to that part of the womb which always dilates as labor advances, namely, the collum and os uteri ; in which case it is very certain that the placenta cannot, as before described, remain secure till the expulsion of the child, but must of necessity be separated from it, in proportion as the uterus opens ; and by that means a hemorrhage must unavoidably be produced.

336. That floodings which arise from these two different causes, which may be distinguished by the names of accidental and unavoidable, though they may appear exactly similar in their first symptoms, should terminate very differently if left to nature, assisted only by the palliating means before mentioned, cannot seem strange ; nor can it be a doubt that, of these two kinds of floodings, only one of them, namely, that which is produced by an accidental separation of the placenta, can be relieved by the use of these pal- liatives ; and that the other, in which the pla- centa is fixed to the os uteri, and the flooding is therefore unavoidable, cannot possibly be sup- pressed by any other method whatever than the timely removal of the contents of the womb; for, supposing the discharge to be for a while re- strained, by bleeding, medicine, cool air, &c., it

will inevitably return when nature is so far re- covered as again to bring on labor ; in the first case, if haemorrhage have been checked by the use of the above means, it 13 not impossible but labor may come on, and the child be safely expelled by the natural pains before it returns ; or, if it should return, it may not increase in quantity, as, in this case, very probably the sepa- rated part of the placenta which occasions the discharge remains nearly the same ; whereas, in the other case, in which t're dilatation of the os uteri produces the separation of the placenta, every return of pain must be a return of the bleeding, and it must become greater and greater as the uterus opens more and more ; and the placenta is in proportion detached, till it in- creases to a degree that exhausts the patient, and she dies before nature has been able to expel the child. That such must inevitably be the pro- gress and event of floodings, arising from such a cause, if left to nature, is too obvious to be further insisted on.

337. Admitting then that floodings are pro- duced by these two different causes, and that they require a treatment so widely different, we cannot be at a loss, says Dr. Rigby, when such do occur to us and we have discovered the par- ticular cause from which they arise, how to act ; as in the one case we shall be encouraged to wait, and to make use of such means to restrain the discharge as will be more particularly men- tioned hereafter ; and in the other we shall not hesitate to have recourse to delivery by turning the child. Dr. Rigby has not only fully proved the necessity of turning the child, whenever the placenta is fully attached over the os uteri, but he has also established the value of the practice of rupturing the membranes, when flooding ap- pears before delivery, and the placenta is not to be felt. Of sixty-four cases of accidental hae- morrhage, treated in this way, every patient was saved, although some had lost a large quantity of blood, and were very faint, previously to the operation being performed. In many indeed the flooding was trifling; but even in these sufficient to excite some degree of alarm.

All practitioners are now fully agreed that, whenever the placenta wholly presents, the best chance of saving the patient is by delivering at the most suitable opportunity ; and that in acci- dental haemorrhage the most successful practice is to rupture the membranes, and leave the case to be perfected by the natural powers ; provided the flooding cease on the evacuation of the liquor amnii. There is still, however, a diversity of opinion as to the course to be pursued where the placenta is only partially adherent to the os uteri, in which some accoucheurs invariably re- sort to artificial delivery ; while others, and amongst them Dr. Francis Ramsbotham, pur- sue a different plan. If not more than one-third of the os uteri is occupied by placentar attach- ment, an attempt is to be made to relieve the patient by evacuating the waters, and allowing time for the uterus to act, carefully watching the patient lest the draining be kept up after the membranes have been ruptured. Dr. 11. urges, in support of this practice, the great fatality which has attended placenta, and partial pla-

centa presentations, generally in his practice, when treated by turning; and the great danger of suddenly evacuating the uterus at any time, and especially under the state of faintness pro- duced by loss of blood. After the evacuation of the waters, besides the blood-vessels of the uterus being very much diminished in their cali- bre, and allowing less blood to circulate through them, if uterine action come on, the head will, in passing through the os uteri, close by its pres- sure the mouths of the bleeding vessels, and in this manner suspend the haemorrhage; and, should the contractions

continue, the child is ultimately expelled. Provided, however, the uterus does not act sufficiently strongly to restrain the haemorrhage, and expel the foetus, it will be more or less flaccid, and there will be but little or no impediment to the passage of the hand into the uterus, and the delivery by the feet; the only resistance being the contracted uterus, when contraction has not taken place there can be no difficulty ; the case is perhaps more likely to terminate favorably when turning is had recourse to after the water has been evacu- ated some time, and the uterus has slightly em- braced the body of the child, than when a more hasty delivery is effected ; because in that case the uterus is to a certain degree lessened in volume, there is not so sudden a diminution of bulk, and the dreaded collapse is not so likely to occur. Dr. R. has seen many cases in which this plan has been adopted, when the patient's existence was depressed to its lowest ebb, and where it has been attended with the happiest re- sults. At the same time he presses on the recol- lection, that, should haemorrhage continue after the perforation of the membranes, so as to en- danger the patient's life, there is but one mode to be adopted, that of as speedy a delivery as possible. Order 2. Labor complicated with convulsions.

338. Cases of puerperal convulsion bear a strong analogy to epileptic fits; so much so that it is nearly impossible to distinguish them at first sight, excepting from the different degree of vio- lence attending each ; the fit of puerperal con- vulsions being much more violent than any fit of epilepsy. Indeed, the paroxysm is so violent that a woman, who, when in health, was by no means strong, has shaken the room with her exertions.

339. Puerperal convulsions may arise at any period between the sixth month and the com- pletion of labor; rarely or never do they occur before the sixth month. They may arise as the first symptom of labor — in the course of labor — or after the labor is in other respects finished. Puerperal convulsions always occur in paroxysms, and those paroxysms occur periodically, like labor-pains : so that there is a considerable time, perhaps two hours, between the two first attacks : after this they become more frequent. They not only occur with the labor-pains, but in the inter- vals ; and, whether there have been labor-pains or not before they come on, we shall always find the os uteri dilated, and it is sure to become di- lated from the continuance of these convulsions; and at length, if the woman be not relieved, and the convulsions continue without destroying her life, the child is actually expelled without an

labor-pains. In severe cases, where death has occurred previous to the birth of the child, it has been found partly expelled by the contrac- tion of the uterus ; which power had been exerted even after the death of the mother. Ir one case the whole child was expelled except the head.

340. It is a disease depending on the uterus, and brought on by labor-pains ; or, if arising be- fore them, is of itself capable of expelling the child, if the woman survive long enough. It oc- curs in all presentations; sometimes with the first child, and sometimes with those born after- wards. It resembles hysteria, as well as epilepsy; but is more violent than either. No force can restrain a woman when in these convulsions, be the same woman naturally ever so weak. The distortion of the countenance, also, is beyond any thing that can be conceived ; in regard to deformity, surpassing any thing the imagination of the most extravagant painter ever furnished : nothing bears any resemblance to the progress of this disease; the rapidity with which the eyes open and shut, the sudden whirlings of the mouth, are altogether inconceivable.

341. These convulsions are by no means ex- ternal only ; respiration is affected with a hissing and catching. The patient stretches herself out, and immediately the convulsion begins. The next symptom appears after the convulsive mo- tions have continued with their utmost violence for some time : the woman foams at the mouth, and snores like an apoplectic patient, indicating great fulness of the cerebral vessels. These symptoms are succeeded by a comatose sleep, from which she awakes astonished, when told what has happened, not being aware that she has been in any fit : and then she will fall into another fit, out of which she will again recover as before. It rarely happens that the under- standing is taken away in this disease, until it has been repeated several times. In the fit, the skin becomes dark and purple, proving that the circulation through the lungs is not free : this gradually disappears after the subsidence of the fit. The uterus, as well as the respiratory muscles, is affected : this may be known by intro- ducing the hand when the convulsions come on; the uterus will contract, but with a tremulous in- decisive force, perfectly different from its usual contraction.

342. There are two cases of puerperal convul- sions which are very distinct: one is a convulsion dependent on some organic affection of the brain ; the other on an irritable state of the nervous system. Where puerperal convulsion arises from the former, but more especially from ful- ness of vessels or extravasation, it is always pre- ceded by some symptoms, which, if watched, will enable us to relieve the patient, provided that we are very quickly summoned.

343. In a patient strongly disposed to this disease there will be a sense of great fulness in the region of the brain, which amounts even to pressure; giddiness in the latter periods of preg- nancy; and a sensation of weight when the head stoops forward, which gives her the idea that she will be unable to raise it again ; imperfect vision ; and dark or luminous v>n^;^ — ni v.0 dancing

before the eyes. This state of the eyes denotes fulness of the vessels of the head more surely than any other symptom ; and, if allowed to con- tinue, will lead to extravasation and puerperal convulsions. The disturbed vision is a very im- portant symptom, and must never be passed by. If attended to early, even though symptoms of the complaint are present, still it may, by timely assiduity on our part, be prevented from ending in premature labor. Here repeated bleedings and purgatives are all in all ; the sole object being to remove stimuli. After bleeding, and before any aperient is given by the mouth, we should inject, per anum, a solution of soft soap in warm water ; it is the quickest and the surest means ; after this administer a purgative mixture, containing Epsom salts and manna. By these means, that is, by bleeding, purging, and absti- nence from all solid food and wine, the quantity of circulating fluid in her body is diminished, and she gradually recovers.

344. When convulsions arise from a generally irritable state of the nerves, it is difficult to dis- tinguish the disease before it becomes established. It is most frequent in large towns, and in women who lead an indolent life ; hence it is most fre- quently found in the first circles of fashion: and there is one grand circumstance which has great influence in its production — viz. a woman's being pregnant when she should not. Obliged perhaps to live secluded from society for some months, she reflects and broods over every thing which relates to her situation, and which gives her pain ; she recollects that she is not to enjoy the society of her babe, but, on the con- trary, will be obliged perhaps to part with it for ever : she is afraid of her situation being known, and that she will be considered an outcast from society. In this way will she brood in solitude, till at last the mere irritation of labor will be suf- ficient to induce convulsions. The difference between this kind of puerperal convulsions and the other, does not probably consist in any thing visible ; it is not possible to tell the difference exactly ; but, just as it is coming on, the woman will complain of a violent pain in her head or stomach, which is expressed in the same terms by all women ; they all say that they cannot sur- vive a return of the pain. The mode of treatment will not essentially vary from that already men- tioned : our plan should however be less active ; and opiates should succeed the primary measures.

345. These observations, be it remembered, relate to convulsions antecedently to labor. We now proceed to the same disease during labor. It has sometimes happened that a woman has died of the first convulsion : but it more gene- rally happens that a number come on in succes- sion, arising either after or before delivery. The patient very rarely dies in the fit,

though she dies from the convulsions : she dies in the comatose stage which succeeds the convulsion ; and if we be suddenly called to a patient in this state, where we are unable to learn the circum- stances of the case, and we evidently see that there is great fulness about the head, we should immediately open a vein, and draw blood largely, being regulated by the appearance of the patient,

and by what we can learn from the by-standers. From twelve to twenty ounces may be the extent of the first bleeding; if the disease continue, and the os uteri be not at all dilated, the convul sions not subsiding, and the pulse in such a state as to warrant the measure, we should bleed again and again. Some practitioners have with the greatest advantage taken sixty ounces of blood in a day. A woman in this state will bear very large divided bleedings. This takes off the pressure of the distended blood-vessels from the brain, and presents the chance of extra- vasation. This being promptly effected, the head must be shaved, and a large blister applied over the whole cranium. The next means of relief is to get the bowels into action as quickly as possible ; first, by throwing up a solution o'f soft soap, and then by giving her to drink a solution of some neutral salt in infusion of senna.

346. If it be a case of convulsions depending upon irritation, we may certainly do something more by the use of opiates ; and in this case we must be more cautious in abstracting blood. The proportion of blood removed must be small in this case, compared with that in plethora. Eight or ten ounces will be a full bleeding; and, if it be necessary to take more, we may apply leeches to the temples, never neglecting to keep the bowels freely opened. It has been directed that the patient be placed in a warm bath, but experience contradicts its use : the fits have been found to be more violent in it, and the patient is liable to bruise herself, or be otherwise much injured.

347. It is an extremely dangerous disease; her brain cannot bear the excessive pressure of her situation ; opium therefore, in cases of irri- tation, is proper, and should be given to the greatest possible extent. With this we may join the affusion of cold water. This, when resolved on, must not be done by sprinkling a little on the patient's face ; but we must have both a full and an empty pail, the patient's head being brought over the side of the bed, and, before the fit comes on, we may, as in other convulsions, detect its approach by observing the intercostal muscles, the violent action of which will warn us that no time must be lost ; when we should im- mediately dash the pail-full over the head. Whenever this complaint appears at or near the time of labor, it is uniformly proper to deliver : to dilate the os uteri, and deliver immediately. This is the only cure for puerperal convulsions.

348. If convulsions occur some days after labor, it should be treated as in other cases of the same disease.

Order 3. Labors complicated with rupture of the uterus, vagina, perinaeum, &c.

349. These cases are very rarely occurring in well managed parturition, and they will require only a brief notice. Dr. Denman attributes one occurrence of lacerated perinaeum, in his own practice, to extreme restlessness and irritability of the patient, preventing the necessary precautions from being used. He further says that the frequent occurrence of this laceration in the hu- man species, allowing that it is in some cases

and in some degree unavoidable, ought to be imputed to some accidental cause, or to error in conduct, rather than to any peculiarity in the construction of the part, or in the circumstances of their parturition ; because, when women were delivered without assistance, he has not in any case observed any very considerable laceration. We believe that the power necessary to be exerted in parturition is, excepting in some rare instances, nicely proportioned to the degree of resistance which it has to overcome, and we of course concur in the opinion expressed by Dr. Denman in the preceding lines. Laceration of the perinaeum is most frequently occurring from the premature and sudden propulsion of the head through the external parts, previously to their complete dilatation, when the perinaeum is thick and rigid. We may add to this cause the voluntary force, or bearing down the pains, so common at the time of parturition, in the performance of which women exert a consider- able degree of voluntary power, often indeed their whole strength, with the hope and intention of finishing their labors speedily. This accident therefore rarely happens in very slow or difficult labors, whatever may be the size or position of the head of the child.

350. It is generally recommended, when sup- porting the perinaeum, to interpose a soft nap- kin between it and the hand ; from this injunc- tion we dissent, as it is manifest if the napkin be three or four times doubled, and it cannot very well be less if it afford any soft cushiony support to the part, the accoucheur must be in ignorance as to the precise condition of the perinaeum, it may or it may not be in a fit condition to allow the passage of the head : laceration almost invariably occurs, not because the head is too large, or from its passing in any particular direction, but because it passes too speedily or presses, as we have before remarked, too violently or

suddenly, upon the undilated parts : of all these circumstances, the naked palm of the hand will enable us to judge much more correctly than if a napkin be interposed. We have seen one case of laceration arising from this want of correct information, the head passed down to the outlet suddenly, the attend- ant immediately supported the perinseum by a soft napkin ; the perinaeum was lacerated, and the child immediately thrust into the world.

35 1 . The cure of a lacerated perinaeum is very tedious ; and, although no danger arises from the accident, yel if it divide the partition or septum between the vagina and rectum, the % patient is rendered truly miserable; for, having little or no power of retaining her faeces, she cannot go into society.

352. Sutures have been advised in the treat- ment of lacerated perinaeum, it being supposed that the parts might be retained in opposition sufficiently long to establish firm union between them : they have not been attended with success, as the ligatures have sloughed away , and the patient has been left in a worse condition than before. We have seen two instances of lacerated perinEeum, and in one, where the rectum and vagina communicated, we induced tolerably firm union in six months; quite enough to

enable the lady to retain her fceces, and to per- form her usual duties. This lady maintained the recumbent position with the thighs closed during nearly the whole of this time; the wound was occasionally touched with the argenti nitras and the nitric acid lotion. Eighteen months after the occurrence of the accident she was again confined ; and, although there was a good deal of relaxation about the parts, they did not separate : since this period no inconvenience worth mentioning has been experienced.

353. Laceration, or rupture of the uterus. — Dr. Merriman says that this accident has hap- pened from a morbid state of the uterus, before the period of utero-gestation has been com- pleted, and the foetus, having escaped into1 the cavity of the abdomen, forms what is called an extra-uterine conception of the ventral kind. Sometimes the laceration of the uterus appears to have been produced by the untoward situ- ation of the uterus in the pelvis; hence ulcer- ation has taken place, and the foetus has been transferred into the cavity of the pelvis, and finally discharged through the vagina or rectum in a dissolved, or putrid state.

354. But more commonly the rupture is occa- sioned during labor from the violence of the pains acting irregularly, or impetuously, against some projecting part of the child ; upon which the uterus splits : and this is more likely to happen in cases of distorted pelvis, or of preternatural presentation of the child. Or it may be occa- sioned by the rude and forcible attempts of

the operator to turn the child in utero ; or by incon- siderate and violent endeavours to introduce instruments ; and sometimes the immense bulk of an emphysematous child, in passing through the os uteri and vagina, has torn these parts asunder.

355. If the rupture of the uterus has taken place before the full term of gestation is accom- plished, and while the os uteri is undilated, it is obviously impossible to afford the patient any kind of manual assistance ; the case must there- fore be trusted to nature, and, under such cir- cumstances, some women have wonderfully re- covered ; the child, in a dissolved state, having, in a few instances, after months or years, made its way through the parieties of the abdomen by the process of ulceration. The operation of gas- trotomy has been recommended, to give nature an earlier opportunity of getting rid of the bur- den, but the success of such an operation is doubtful.

356. When a laceration happens during the pains of labor, the following symptoms usually occur : —

1. A sense of something giving way internally preceded by a very severe pain, generally do scribed as a cramp.

2. A sensation of great languor and debility.

3. A speedy, sometimes an instantaneous, vomiting of the contents of the stomach.

4. A vomitrng of a brownish, or coffee-colored, fluid.

5. A very quick, weak, fluttering, pulse : a cold sweat ; great difficulty of breathing ; an im- mediate cessation of the labor-pains.

357. If now the patient is examined, per vagi-

nam, it will generally be found that the presenting pare of the child, which had before been pressed .some way into the pelvis, is retracted, and no ionger within reach of the finger; and if the hand be carried through the os externum, in order to make a more accurate examination, the child will be discovered to have passed, either wholly or in part, through a rent, into the cavity of the abdomen. There are, however, a few instances in which the child has remained in utero, not- withstanding the laceration.

358. The mode of practice recommended by many authors, in these unfortunate cases, is to give the patient a chance of recovery by introducing the hand through the rent till it reaches the feet of the child, wheresoever they are to be found, and extracting the child footling. In a few instances this plan has succeeded in saving the patient's life, but more commonly all that is done proves unavailing, and death speedily ensues.

359. The practice here recommended was countenanced by Dr. Den man in his Introduc- tion to Midwifery; but circumstances have, since that time, induced him to reconsider this case more particularly ; and, after much enquiry and reflection, he seems to be convinced that, upon many occasions, the patient would have a better chance of recovery, if the case were re- signed to the natural efforts, than by any opera- tion or interposition o'f art. Either of these plans must be preferred according to circum- stances. If, in a case of this kind, it should be found that the child had only in part escaped into the cavity of the abdomen, we should consider that it was the best practice to bring down the feet, if they were within reach, or to deliver by means of the forceps, if the situation of the head allowed of the application of this instrument. And even if the child had been wholly forced through the rent, that it would be expedient to extract it by the feet, provided there was a ready passage for the hand into the cavity of the abdomen, and the accident had not been of long duration ; but if some hours had elapsed after the parts had given way, or if there were a difficulty in passing the hand, on account of the contraction of the uterus, it would then perhaps be more prudent to leave the event to nature.

We have now concluded the three principal divisions of our subject; and the circumstances, and some of the diseases, immediately succeed- ing parturition alone remain to be noticed : we shall first allude to

THE TREATMENT AFTER DELIVERY.

360. Immediately after the placenta is ex- pelled, the finger ought to be introduced into the vagina, to ascertain that the perinaeum, or recto-vaginal septum, be not torn, and that the uterus be not inverted. Then, if the woman be not much fatigued, or if she be prone to haemorrhage, Mr. Gaitskell's belt, supposing it to have been pre- viously applied, may be gently tightened. We are not greatly inclined to the practice of turning the patient on her back and submitting her to the process of fastening round the abdomen a broad bandage, intended to give a feeling of agreeable support. We believe, in the majority of instances, if the placenta has been slowly ex-

tracted, and if the uterus be afterwards slightlv grasped by the hand, firm and permanent coiv- traction will be induced : at least we have not

unfrequently known partial haemorrhage to arise from the disturbance of circulation produced by this putting on of the bandage. Circumstances must, however, in all these cases, regulate our procedure; and, if any additional comfort or se- curity can arise to the patient from this application of the abdominal roller, it certainly ought not to be neglected. The wet sheet is also to be pulled from below her (vide Burns's Midwifery, p. 387), and an open flannel petticoat to be put on ; it has a broad top band, and is introduced and pinned like the bandage. A warm napkin is then to be applied to the vulva, and the woman raised in an easy posture, having just so many bed-clothes as make her comfortable. If she desire it, she may now have a little panada, after which we leave her to rest. But, before retiring, it is proper to ascertain that the bandage be left suf- ficiently tight, that there be no considerable haf- morrhage, and that the after pains are not com- ing on severely. It is also proper to mark the state of the pulse, and to leave strict directions with the nurse that every exertion and all stimu- lants be avoided.

361. Having thus simply stated what appears to be necessary, I must next say what ought to avoided. It is customary with many nurses to shift the patient completely ; and, for this pur- pose, to raise her to an erect posture. Now this practice may not always be followed by bad consequences, but it is very reprehensible; for the patient is thus much fatigued, and if she sit up, even for a short time, haemorrhage or syncope may be produced. The pretext for this is gene- rally to make the patient comfortable ; and, in- deed, if the clothes be wet with perspiration or discharge, there may be some inducement to shift her. But this ought to be done slowly, without raising her, and, if she have been fatigued, not until she has rested a little. Another bad prac- tice is the administration of stimulants, such as brandy, wine, or cordial waters. I do not deny that these, in certain cases of exhaustion, are sa- lutary ; but I certainly maintain that generally they are both unnecessary and hurtful, tending to prevent sleep, to promote haemorrhage, and excite fever and inflammation. A third practice, no less injurious, is keeping the room warm with a fire, drawing the bed-curtains close, in- creasing the bed-clothes, and giving every thing warm to promote perspiration. This is apt to produce debility, and many hysterical affections, as well as a troublesome species of fever, which it is often difficult to remove. It also renders the woman very susceptible of cold — a shivering fit is very readily excited. Lastly, talking, and noise of every kind, is hurtful, by preventing rest, occasioning head-ache or palpitation, as well as other bad symptoms.

362. At our next visit, which ought to be within twelve hours after delivery, we should en- quire whether the patient have slept, and ascer- tain that the pulse be not frequent ; that the after pains have not been severe; nor the discharge copious. We should also particularly enquire if she have made

water ; and if she have not, by

have a desire to do so without the power, a cloth dipped in warm water and wrung pretty dry, should be applied to the pubes. If this fail, the urine will often be voided if the uterus be gently raised a little with the finger; or the ca- theter may be introduced. There are two states in which we are very solicitous that the urine be voided : the first is when the woman has much pain in the lower belly, with a desire to void urine ; the second is after a severe or instrumen- tal labor.

363. A motion should be procured within twenty-four hours after delivery, either by means of a clyster or gentle laxative. If the patient usually have the milk fever smartly, or the breasts are disposed to be painful and tense, a mild dose of some saline laxative is better than a clyster. But if she be delicate, and have for- merly had little milk, a clyster is to be preferred. If she is not to suckle the child, then the laxative should be rather brisker, and may be repeated at the interval of two days.

364. After delivery there is a discharge of sanguineous fluid from the uterus for some days, which then becomes greenish, and lastly pale, and decreases in quantity, disappearing altogether within a month, and often in a shorter time. This is called the lochial discharge. During this time, it is necessary that the vaginal and ex- ternal parts be daily washed with tepid milk and water.

365. During the latter end of gestation, milk is generally secreted in a small quantity in the breasts, and sometimes it even runs from the nipples. After delivery the secretion increases, and about the third day the breasts will be con- siderably distended. Many women, indeed, complain at this time of much tension and un- easiness ; and there is usually some acceleration of the pulse. A pretty smart fever may even be induced, which is called the milk fever. The best way to prevent these symptoms from be- coming troublesome is to keep the bowels open, and apply the child to the breasts before they have become distended. This may generally be done twelve hours after delivery.

366. The diet of women in the puerperal state ought to be light ; and, if they are not to nurse, liquids should be avoided, the food must be of the dry kind, and thirst should be quenched rather with fruit than with drink. If they are to nurse, the diet, for the first two days, should con- sist of tea and cold toasted bread for breakfast, beef or chicken soup for dinner, and

panada for supper ; toast or barley water may be given for drink, but malt liquor should be avoided. Un- less the patient be feeble, and at the same time have no fever, wine should not be allowed for the first two days ; a little may then be added to the panada or sago, which is taken for sup- per ; and a small glass, diluted with water, may be taken after dinner. A bit of chicken maybe given for dinner, and, in proportion as recovery goes on, the usual diet is to be returned to.

367. The time at which the patient should be allowed to rise a little, to have the bed made, must be regulated by her strength and other cir- cumstances. It ought never to be earlier than the third day ; and in a day or two longer she

may be allowed to be dressed and sit a little , but even in the best recovery, and during sum- mer, the woman ought not to leave her room within a week. She ought not to go out for an airing, in general, till the third week. In cold weather, and when the patient is delicate, she must be longer confined. By rising too soon, and making exertion, a prolapsus uteri may be occasioned, and still more frequently the lochia are rendered profuse, and the strength impaired. If there be, or have formerly been, the smallest tendency to prolapsus, it is absolutely necessary to keep the patient very much for some time in a recumbent posture on a sofa, avoiding, how- ever, that degree of heat which relaxes the sys- tem. It is also necessary to stimulate the uterine lymphatics to absorption by a smart purgative once in three or four days, to bathe the external parts with rose water, having a third part of spirits added to it ; and at the end of a fortnight begin a tonic, mixed with a mild diuretic.

368. Of after pains. — Few women proceed through the early part of the puerperal stale with- out feeling attacks of pain in the belly, which are called after pains. These are generally least severe after a first labor. They proceed from the contraction of the uterus in an irregular manner, excited by the presence of coaguta or other causes ; and each severe pain is generally fol- lowed by the expulsion of a clot. They come on usually very soon after delivery, and last for a day or two. They are often increased when the woman first applies the child to the breast. They are distinguished from inflammation of the uterus or peritonaeum, by remitting or going off. The belly is not painful to the touch, the uterine dis- charge is not obstructed, the patient has no shivering nor vomiting, the milk is secreted, and the pulse is seldom frequent. When the pulse is frequent, then we must always be on our guard ; for, if this be the case before the ac- cession of the milk fever, the patient is not out of danger ; and, if any other bad symptoms ap- pear, we must be prompt in our practice. After pains may also be caused by flatulence and cos- tiveness, which we know by the usual symptoms; but a combination of this state, with uterine after pains, is often

attended with a frequency of the pulse, and may give rise to a fear that in- flammation is about to come on, but other symp- toms are absent. Uterine after pains are relieved by opiates and fomentations ; and, if protracted, by a purgative, and this is always proper when the pulse is frequent. A severe constant pain in the hypogastric region is sometimes produced by an affection of the heart, and proves fatal, yet the uterus is found healthy. Upon this subject it may not be improper to mention, that a young practitioner may mistake spasmodic affections or colic pains for puerperal inflammation ; for in such cases there is often itching and sensibility of the muscles, which renders pressure painful. But there is less heat of the skin, the tongue is moist, the pulse, though it may be frequent, is soft, the feet are often cold, the pain has great remission if it do not go off completely, there is little fullness of the belly, and the patient is troubled with flatulence.

369. It requires laxatives, antispasmodics

anodyne clysters, and friction with camphorated spirits. Oil of turpentine acts both as a laxative and antispasmodic. In doses of half an ounce, it often relieves spasmodic pain in the stomach or bowels. Blood drawn in this disease, after it has continued for some hours, even when the woman is not in child-bed, is sizey ; and is always so in the puerperal as well as the pregnant state, although the woman be well.

370. It is necessary to attend carefully to the duration and situation of pain after delivery, and to the symptoms connected with it. For it may proceed from inflammation of the viscera ; or in some cases it is felt near the groin, and may be the forerunner of swelled legs ; or about the hip, ending in a kind of rheumatic lameness ; or, in consequence of the application of cold, pain may be felt in some part of the recti and oblique muscles, which, if not removed by fo- mentations and frictions, may end in tedious abscess, exciting hectic fever. Such an abscess ought to be opened with a lancet or caustic.

371. Rheumatism affecting the muscles of the abdomen and pelvis is accompanied by less fever than puerperal inflammation, and wants the other symptoms. The pain is shifting and acting, or gnawing, though sometimes it is sharp like a stitch. It is relieved by friction with laudanum, by sinapisms, and by mild diapho- retics, bark, and other usual means. When speaking of rheumatic pain it may not be im- proper to mention, that chronic rheumatism, es- pecially of the extremities, is very troublesome

when it occurs after parturition. It requires the usual remedies. Cod-liver oil, in doses of half an ounce three times a day, has been much recommended. I have formerly noticed those pains in the limbs which may succeed the use of the crotchet.

372. Of the milk fever. —The secretion of the milk is usually ushered in by a slight degree of fever, or, at least, a frequency of the pulse. But sometimes it is attended with a smart febrile fit, preceded by shivering, and going off with a perspiration. This attack, if properly managed, seldom continues for twenty-four hours ; and, during this time, the breasts are full, hard, and painful, which circumstance distinguishes this from more dangerous fevers. Sometimes, during the hot fit, there is a slight delirium. A smart purge generally cures this disease, and is often used in plethoric habits, on the third day after delivery to prevent it. Mild diaphoretics during the hot stage are also proper. Applying the child early to the breats is a mean of prevention.

373. We have great pleasure in laying before our readers the following successful case of complete extirpation of the uterus : the propriety of so bold and difficult an operation has been much questioned, yet we feel assured that in diseases of the womb, otherwise irremediable and fatal, this measure, adopted with discrimination and executed with skill, may preserve a life which without it would certainly be sacrificed. The author of this paper is indebted to Dr. Blundeil, Lecturer on Physiology and Midwifery, Guy's Hospital, for the subjoined particulars, whose ability and zeal in the diffusion and improvement

of obstetric science deserves, and will obtain, higher praise than it is in his power to bestow. It is proper to observe that this is the second time Dr. Blundeil has performed this operation : in the former instance the patient died.

374. Mrs. M., at fifty, the mother of two children, the younger of which is sixteen years old, with a uterus about as large as a goose's egg, and a lax vagina, was seized with leucorrhoeal discharges and frequent eruptions of blood from the womb; so that for six or seven months together she was scarcely ever free from flooding more or less copious, always increased by bodily exertion and generally succeeded by syncope. Though not prone to speak hyperbolically, she states that on repeated occasions the bleeding was so excessive, that it soaked through a bed twice as thick as an ordinary sofa cushion, and formed a small pool on the floor beneath. It may be difficult to conceive whence so large a quantity of blood could be derived, yet it is her own considerate opinion that for weeks together, she must have

lost from half a pint to a pint of blood daily. Her person is short and broad, her complexion apparently of the sanguine kind, and her digestive organs on the whole more powerful than we generally find them under uterine disease. Her strength being much re- duced, her appearance exsanguineous, frequent faintings occurring, and no relief having been obtained under the care of three or four respecta- ble practitioners, she was referred to Dr. Blun- deil, who found on examination an enlargement and induration of the os uteri and the adjacent portion of the vagina, extend ing perhaps through one-fourth part of its length above, about two- thirds of the mouth of the womb being already destroyed by incipient malignant ulceration. Under these circumstances, Dr. Bluudell in- formed her that extirpation of the diseased structure, though not disproved to be dangerous in a high degree, comprehended her only remain- ing chance of life. After deliberating for two or three days, and from the occurrence of another large haemorrhagy, being entirely confined to her bed, she determined to submit to the operation. The bladder and the intestines having been thoroughly cleared of their contents, she was placed without ligature or restraint of any kind in the usual obstetric position, on the left side, close upon the edge of the bed, with the shoul- ders forward, the loins posteriorly, the knees and bosom approximated, so that the thighs lay before the abdomen, the spine somewhat incur- vated, and the front of the body facing a little toward the bed ; in a word, the members of the body were composed much after the same man- ner as the foetus in utero. The operator then kneeling close at the foot of the bed, the index and second finger of his left hand were carried along the back of the vagina to the line of union between the diseased "and healthy structure. This accomplished, by means of a pointed blade with cutting edge, not unlike a dissecting seal pel, mounted upon a stem handle ten or eleven inches in length, stiff yet flexible, the fore finger of the left hand was, as it were, converted into a cutting point, the blade, for this purpose, being carried about one-eighth of an inch beyond the

tip of the finger. Thus a transverse opening was gradually made through the back of the vagina, towards the front of the rectum, into the recto vaginal portion of the peritonaea! cavity, the knife being frequently withdrawn below the tip of the finger and the part delicately investigated by the finger so as to ascertain when the vaginal texture was cut through. An opening as large as the orifice of the urethra having in this manner been warily effected, and the knife being drawn down, the index finger was made into a

kind of dilator, which bearing out through the aperture, enlarged its dimensions without the risk of wounding sny of the contents of the peritonaeum. The knife being again raised, so that its point was guarded by the tip of the index, and its cutting edge advanced beyond the side of the finger, so as to communicate to it laterally a cutting power, and thus convert it into a temporary knife possessing the advantage of sensibility; the incision was carried through the vagina transversely, to the root of the broad ligament on the left or under side of the pelvis. It was now easy by reversing operations, and communicating the cutting power by means of the mounted blade, to the fore-finger laterally on the other side, to carry the transverse incision through the vagina, up to the root of the broad ligament on the right or superior side of the pelvis. At this time the intestines could be felt, and steadiness and caution became of great importance. The transverse incision through the back of the vagina having been effected in this manner,without injury to contiguous parts, the whole of the left hand was cautiously, yet resolutely, passed into the vaginal cavity below, the first and second fingers were carried through the opening, and so far ad- vanced that their tips were nearly brought into contact with the abdominal integuments, an inch or two above the symphysis pubis, and poste- riorly they reached to the vicinity of the fundus uteri. The uterus itself could not, however, in this instance, owing to its lubricity and rotundity, be brought down by them ; it was therefore ne- .essary, under guard of the fingers, which lay on xhe back of the womb, to insert a double hook into the middle of its body. This was attended with lit- tle pain to the patient, and then, by the action of the hook, the entire uterus being cautiously drawn towards the point of the coccyx, while at the same t'me the fingers were urged onwards and incur- red over the descending fundus, this part of the hand, so important in the whole operation, was used as a blunt hook, by means of which the womb was retroverted into the hollow of the palm, just within the genital fissure. It was now in great measure under view, its fundus lying in the vicinity of the coccyx, and its mouth upon the neck of the bladder. The sides of the uterus retained their connexion with the pelvis, through the medium of the broad ligaments which were put moderately on the stretch. Under these circumstances the rest of the operation was easily completed by a narrow bistoury ; the broad ligaments were cut through, and, great care being taken to avoid the uterus, the diseased mass was dissected away from the neck of the biadde., which was drawn down almost within sigh.. The openu.on was facilitated by previous child-

bearing, although, notwithstanding the discharge there was little tendency to prolapsus uteri. Though the womb had bled so freely before the operation, owing to the weakness of the circula- tion and other causes, yet not more than four or five ounces of blood were effused during its pro-*

gress, the greater part coming away when the diseased structure was detached from the bladder and vagina in front. The pain was not greater than that of an instrumental delivery, nor per- haps so great, nor did the patient require to be at all confined. The principal suffering was experienced when the vagina was divided behind, and when it was dilated by the introduction of the hand. There was no decided collapse when the peritonaeum was first laid open, the intestines ap- proached the aperture, but did not protrude ; after the operation the sides of the vagina collapsed, and the aperture above seemed to be covered by a retroversion of the bladder. An indurated portion of the left side of the vagina, as large as the first joint of the little finger, was separately detached by the knife after the com- pletion of the rest of the operation. The pulse was distinct enough in the wrist during the greater part of the time ; but when the diseased portions had been completely removed, on the occurrence of the haemorrhage before mentioned, the beat of the radial artery was lost for about five minutes, the respiration being very feeble, and the patient lying, as after large floodings, very quiet. When brought to greater perfection, this method of operation will probably not occupy many minutes ; but in this instance, that it might be done more safely, it was performed very slowly, and, like some deliveries by the forceps, it required more than an hour for its completion. It was not necessary in this case to vary the posture, the horizontal position being maintained through- out. The first incision was made at four o'clock, and the extirpation was finished by a quarter past five. Two ounces of gin and water were given during the operation, and the same quan- tity after its termination, with sixty drops of the tincture of opium. Previously to the operation the pulse was 120, tongue clean and rather white, and her manner composed ; during its continuance, and when at the height of agitation, it rose to 140 in the minute, when she became faint, and approached nearly to a state of as- phyxia. Two hours subsequently to the opera- tion she was lying comfortably as if asleep, the whole body was warm, the pulse ninety-two and distinct, and the manner and countenance encou- raging. On the third day there was great agitation and vomiting, and the pulse 112, without any obvious cause. Considerable solicitude was now entertained respecting her; but, happily, every uncomfortable symptom disappeared when the bowels were freely relieved. For ten days there was a reddish-brown discharge, and then for eight or nine more days it assumed a muco- purulent character, the flow from the vagina ceasing in a great measure on the nineteenth, and altogether on the twenty-first day. Shooting pain was more or less felt during the first three weeks after th: removal of the uterus, on the left side, especially where the crural nerve is crossing the brim of the pelvis-, under Poupart's ligament.

MIDWIFERY.

She is now, at the expiration of nearly six weeks, perfectly well.

*375. Of puerperal mania and phrenitis. — All women, in the puerperal state, are more irritable, and more easily affected, both in body and mind, than at other times, *ud some even become deli- rious. The period at which th.s mental disease appears is various, but it is seldom if ever sooner than the third day, often not for a fortnight, and in some cases not for several weeks after delivery. It usually appears rather suddenly ; the patient awakening, perhaps, terrified from a slumber, or it seems to be excited by some casual alarm. She is sometimes extremely voluble, talking in- cessantly, and generally about one subject, sup- posing, for example, that her child is killed, or stolen ; or, although naturally of a religious dis- position, she may utter volleys of oaths with great rapidity. In other cases she is less talka tive, but is anxious to rise and go abroad. It is not, indeed, possible to describe the different varieties of incoherence, but there is oftener a tendency to raving than melancholy. She al- ways recognises surrounding objects, and either answers any question put to her, or becomes more exasperated by it. She can by dint of perseverance, or by proper management, be for a time interrupted in her madness, or rendered in some degree obedient. In some instances she reasons for a little pretty correctly on her insane idea. The eye has a troubled appearance, the pulse, when there is much nervous irritation, or bodily exertion, is frequent, but it is not in general permanently so, though it is liable to ac- celerations ; the skin is sometimes rather hot, the tongue white ; the secretion of milk is often, but not always diminished ; and the bowels are usu- ally costive. There is seldom permanent head- ach ; but this symptom is sometimes produced pretty severely by attempts to go to stool, if ac- companied by tenesmus, or by efforts to void urine in strangury. In some instances the pa- tient recovers in a few hours, in others the mania remains for several weeks, or even some months ; but I believe it never becomes permanent, nor does it prove fatal unless dependent on phrenitis. Venesection has been advised in this disease ; but I agree with those who consider it as hurtful, or at least as useless. The best practice, I think, is to apply leeches to the temples, open the bow- els with a smart dose of calomel, keep the sur- face gently moist by means of saline julap, and afterwards allay irritation with liberal doses of camphor. Blisters have by some, for whose opi- nion I have much regard, been considered as useless, or detrimental ; but I am confident I have seen them do good after they had discharged freely. Opium is a very doubtful remedy; it oftener makes the patient restless, than procures «leep ; but in the wane of the disease it does in some cases agree with the patient, and is produc- tive of great benefit. There is sometimes con- siderable difficulty in keeping the patient in bed, and making her take either food or medicine. It is therefore of great advantage to have early re-*

course to the strait waistcoat, which not only commands the patient, but tends to make her exercise self control. In the progress of the disease attention must Tie paid to the bowels,

and it must be remembered that often the patient voids both urine and faeces without telling, not from being unable to retain them, but from inattention or perversity. The mind is not at first the subject of management, but, in the progress of the complaint, it may by prudent efforts be aided in convalescence by cheerful conversation, light reading, music, and afterwards by daily walking and change of scene.

376. Some are peculiarly liable to this disease after delivery, in consequence of the irritable state of che nervous system at that time. In such cases the patient must be carefully watched after par- turition. Every irritation must be removed, every source of alarm or agitation obviated, and the camphorated julap with gentle laxatives will be proper remedies, these being the most power- ful means of diminishing the excessive irritability of the nervous system. The diet is also to be regulated. If the patient do not sleep well hyoscyamus should be given. It is often of service to get the patient up as soon as can be done with safety, and have the mind occupied with such amusements and pursuits as keep it equally exercised, without risking irritation.

377. Melancholy usually comes on later than furious delirium. The disease differs nothing in appearance and symptoms from melancholy mad- ness - occurring at other times. It is obstinate ; but generally goes off after the child is weaned, and the strength returns. It is therefore proper to remove the child, and send the patient to the country as soon as possible. In some instances both kinds of madness seem to be dependent on a morbid irritation, such as inflammation of the mamma, &c. Here our attention must be directed to the cause.

376. Inflammation of the brain usually appears still earlier than delirium from irritation. It may be caused by determination of blood to the head, or preternatural irritability of the sensorium, or may occur in consequence of a constitutional tendency to mania. 'It must be distinguished from puerperal delirium which is seldom dangerous, whilst this is a most fatal disease. It generally appears within the third day after parturition, but it may also take place later. The pulse usually conti- nues frequent from the time of delivery. The patient does not sleep soundly, and indeed is watchful. She soon complains of throbbing within the head, or in the throat, or ears ; then of confusion, hears acutely, dislikes the light, and speaks in a hurried manner, and often is unusu- ally interested about some trifle. Then all at once furious delirium comes on. She talks rapidly and vociferously, the eyes move rapidly, are wild and sparkling, and very

sensible to the light. This state may continue, with little inter- ruption, till symptoms of compression appear, or there may be a short interval of reason, but presently the furor returns, and alternates per- haps with sullenness. The case is in these re- spects modified according to the inflammation ; for sometimes it comes on rapidly and to a great extent, at other times it proceeds more slowly. The lochia are not suppressed, nor are the bowels bound, but the secretion of milk ceases. In three or four days she becomes paraVytic in one side, and then sinks into a low comatose

state ; the extremities become cold, the breath- ing laborious, and sometimes convulsions pre- cede death. This disease requires the prompt and early use of the antiphlogistic treatment, general and local blood-letting, the use of pur- gatives, and the application of a blister to the scalp. The inflammatory symptoms being sub- dued, the delirium abates, or goes off, by the use of remedies formerly pointed out.

379. Ofhysteralgia. — By hysteralgia I under- stand uterine pain proceeding from spasm, and not from inflammation. This may occur soon after delivery, and is marked by severe pain in the back and lower belly, frequent feeble pulse, sickness, and faintness. This is sometimes ac- companied with discharge, or succeeded by ex- pulsion of a coagulum. It requires an opiate immediately. Another modification of this comes on later, but always within three or four days after delivery, and attacks in general very sud- denly. Perhaps the patient has risen to have the bed made, becomes sick, or vomits, and is seized with violent pain in the lower part of the belly, or between the navel and pubis. There is no shivering, at least it is not a common attendant, and the pulse becomes very rapid, being sometimes above 120, the skin is hot, the lochia usually obstructed, and the uterine region somewhat painful on pressure. After some hours the severity abates, and presently, by pro- per means, the health is restored.

380. As the lochial discharge is usually obstruct- ed, this obstruction has been considered as the cause of the pain and other symptoms ; but it is merely an effect, and sometimes does not exist. The cause appears to consist in a deranged state of action in the uterus, which is productive of spasm of the uterine fibres, and sometimes of the intestines. This is more apt to occur after a severe or tedious, than after an easy labor ; but it may occur in any case, especially if exposed to cold. The symptoms will vary a little in se- verity and in appearance, according as the uterus alone is

affected, or as spasm of the bowels is combined with the uterine pain. It is distin- guished from inflammation by the sudden nature of the attack, the absence of shivering in general, the pain becoming speedily more severe than it does at the same period of inflammation; and frequently it greatly remits, or goes almost en- tirely away for a short time, It is possible, however, for this state, especially if it be, ne- glected, to excite inflammation, which is marked by constant pain, more or less severe according to the part affected, and an obstinate continuance of the fever.

381. The first thing to be done is to administer a turpentine clyster to open the bowels. Then the belly is to be fomented, and, if speedy relief be not obtained by these means, an anodyne injection is to be given, and the saline julap is to be taken freely, with the addition of a little antimonial wine, in order to excite a free perspi- ration. If the symptoms continue, I strongly advise the detraction of blood. Purgatives are useful, and a blister must be applied to the pained part of the belly to prevent inflamma- tion.

382. Of diarrhoea. If the patient have been cos

tive before delivery, large masses of faeces may come down afterwards, producing violent pains in the belly, piles, tenesmus,x>r uterine haemorrhage; or the same cause may excite diarrhoea with the passage of scybalae. Both states require the use of gentle laxatives. Diarrhoea may also occur without previous costiveness; the stools are then foetid or bilious. In this case the diet is to be strictly regulated ; gentle laxatives are to be first given to evacuate the offensive matter, and then opiates are to be immediately resorted to. If neglected, great weakness, uterine haemorrhage, or other serious consequences may be produced. When it is accompanied with bilious vomiting, and cramps or spasms, opiates are the principal remedy, and these must, if vomited, be given in the form of clysters.

383. Of the signs that a woman has been recent- ly delivered. — We discover that a woman has been recently delivered, by finding that the ex- ternal parts are relaxed, and redder, or of a darker color than usual. There is a sanguineous or lochial discharge. The uterus is enlarged, and has neither the shape of the gravid or unimpreg- nated uterus ; the cervix is indistinct, and the os uteri is nearly circular, and will admit two or more fingers. The abdomen is prominent, and the integuments relaxed, wrinkled, and covered with light-colored broken streaks. The breasts are enlarged, have the areola very distinct, and contain milk; but it is possible for this secretion to take place independently of pregnancy. By examination per vaginam, within a fortnight or three weeks after delivery, the uterus may still be felt larger than usual, its lips softer, and capable of admitting the point of the finger without much difficulty. The milk at this period will not have left the breasts, which are firm, and have a dark areola round the

nipple. Very contradictory ac- counts have been given by anatomists, of the ap- pearance and size of the uterus, when inspected at different periods, after delivery. If the woman die of haemorrhage, or from any cause destroying her, soon after delivery, the uterus is found like a large flattened pouch, from nine to twelve inches long. The cavity contains coagula or a bloody fluid, and its surface is corered with re- mains of the decidua. Often the marks of the attachment of the placenta are very visible. This part is of a dark color, so that the uterus is thought to be gangrenous, by those who are not aware of the circumstance. The surface being cleaned, the sound substance of the womb is seen. The vessels are extremely large and numerous. The fallopian tubes, round ligaments, and surface of the ovaria, are so vascular, that they have a purple color. The spot where the ovum escaped is more vascular than the rest of the ovarian sur- face. This state of the uterine appendages con- tinues until the womb has returned to its unim- pregnated state. It is a month at least, before the uterus return to its unimpregnated state, but the os uteri rarely, if ever, closes to the same de- gree as in the virgin state. We know that the woman has had a recent miscarriage, by the state of the breasts, the sanguineous discharge from the vagina, the size of the uterus, and the softness and dilatation of its mouth. If the woman die, the womb is found enlarged, Us inner surface

covered with the decidua, or maternal portion of Hie placenta. The vessels are enlarged, the tubes and ligaments very vascular; the calyx of the ovum is bloody. This, at a more advanced pe- riod, forms a kind of cicatrix, or a dusky yellow- ish body, called corpus luteum. This mark may exist, although the woman have not borne a child,

for the ovum may be blighted, perhaps even in the ovarium. It has been conjectured by some, that it may be produced even without sexual in- tercourse, but this point cannot be determined. It is supposed, however, that in such cases, the marks are not real corpora lutea; they have not ever been injected.

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MIEL (John), or Giovanni della Vite, a most eminent painter born in Flanders in 1599. He was a disciple of Gerard Seghers, and afterwards \isited Italy to improve his style. At Rome he studied the works of the Caracci and Corregio; and was admitted into the academy of Andrea Sacchi. But he preferred the style of Bamboccio, whom he equalled. His general subjects were hunting, carnivals, gypsies, beggars, and pastoral scenes. But his easel pictures are his finest performances. He also painted historical pieces in a large size in fresco, and in oil. His pictures of hunts are particularly admired ; the figure? and animals being designed with uncommon spirit and truth. The transparence of his coloring, and the clear tints of his skies, enliven his compo- sitions. His merit recommended him to

Charles Emmanuel duke of Savoy, who invited him to his court, appointed him his principal painter, honored him with the order of St. Mauritius, and gave him a cross set with diamonds of great value. He died in 1664.

MIEN, n. s. Fr. mine ; there is also a Dan. and Swed mene ; Isl. menu.. Look; countenance ; behaviour; manner.

la her alone that owns this book is seen Clorinda's spirit, and her lofty mien. • Waller. What can have more the figure and mien of a ruin than craggs, rocks, and cliffs] Burnet.

She asked the reason of his woe ; She asked, but with an air and mien That made it easily foreseen She feared too much to know. Prior.

What winning graces, what majestic mien! She moves a goddess, and she looks a queen. Pope. Yours is, she said, the nobler hue,

And yours the statelier mien .' And, till a third surpasses you,

Let each be deemed a queen. Cowper.

Hail, Innocence ! whose bosom all serene, Feels not fierce passion's raving tempest roll !

Oh ne'er may Care distract that placid mien!

Oh ne'er may Doubt's dark shades o'erwhelm thy soul ! Beattie.

With all that chilling mystery of mien, And seeming gladness to remain unseen, He had (if 'twere not nature's boon) an art Of fixing memory on another's heart. Byron.

MIERIS (Francis), the Old, a justly cele- brated painter, born in Leyden in 1635. He was at first placed under Abraham Toorne Vliet, and afterwards became a disciple of Gerrard Douw. He soon far surpassed all his companions. His pictures have been sold at vast sums. He painted silks, velvets, carpets, &c., in a peculiar manner. Portraits, conversations, musicians, patients at- tended by the doctor, chemists at work, mercers' shops, &c., are his usual subjects. It is his at- tention to minutiae, united to breadth and truth, which give so much value to his works ; which are very rare, and of course very costly. His own valuation of his time was a ducat an hour : and for one picture of a lady fainting, with a physician attending her, and applying remedies, he was paid at that ratio, so large a sum as 1500 florins. The grand duke of Tuscany is said to haveoffered 3000 for it, but was refused. Several of his pictures are still an ornament to the Flo-

rentine collection. Ore of them, a girl holding a candle, is accounted (he most valuable. Hou- / braken mentions an incident in his life, which, as it tends much to his honor, may not be unac ceptable to the reader. Mieris had conceived a real friendship for Jan Steen, and delighted in his company, though he was by no means so fond of drinking freely as Jan was accustomed to do every evening at the tavern. Notwithstanding this he often passed whole nights with his friend, in a joyous manner, and frequently returned very late to his lodgings. One evening, when it was very dark, and almost midnight, as Mieris strolled home from the tavern, he unluckily fell into the common sewer, which had been opened for the purpose of cleansing, and the workmen had left it unguarded. There he must have perished, if a cobbler and his wife, who worked in |a neigh- bouring stall, had not heard his cries, and in- stantly run to his relief. Having extricated Mieris, they took all possible care of him; and procured the best refreshment in their power. The next morning, Mieris having thanked his preservers, took his leave ; but particularly re- marked the house, that he might know it another time. The poor people were totally ignorant of the person who had been relieved by them, but Mieris had too grateful a spirit to forget his be- nefactors, and, having painted a picture in his best manner, he brought it to the cobbler and his wife, telling them it was a present from the person whose life they had contributed to save ; and de- sired them to carry it to his friend Cornelius Plaats, who would give them the full value for it. The woman, unacquainted with the real worth of the present, concluded she might receive a mo- derate gratuity for the picture ; but her astonish- ment was inexpressible when she received the sum of 800 florins. He died in 1681.

MIERIS (John), son of Francis, was born in Leyden in 1660, and learned the art of painting from his father. He travelled to Germany and thence to Florence, where his father's merit pro- cured him an honorable reception from the grand duke, who wished to retain him in his service. But Mieris declined it, and proceeded to Rome, where his great abilities were well known, and his works much sought after. In that city he continued to work with great application, till an attack of the stone ended his days in 1690, when he was only thirty.

MIERIS (William), called the Young Mieris, brother to John, was born in Leyden in 1662. During his father's life he made a remarkable progress; and afterhis death, by studying nature nearly equalled his father. He painted Rinaldo sleeping on Armida's lap, which sold at a high ppjice. He also painted landscapes and animals with great truth ; and he modelled in clay and wax in a very accurate manner. He is allowed to have been an artist of extraordinary meri. He died in 1747.*

MIGDOL, or MAGDOL, in ancient geography, a place in the Lower Egypt,

on this side Pihahi- roth, or between it and the Red Sea, towards its extremity. The name denotes a tower or fortress It is probably the Magdolum of Herodotus, a> the Septuagint render it by that name.

MIGHT. The preterite of may. See MAY.

MIGHT, n.s.

Sax. miT.hr, or majht;

-\ ax. miT.r, or mj; – f Goth, and Dan. maght MI'GHTILY, adv. ((Goth, meiga, to have MIGHTINESSES.) power). Strength; pow- er; force: mighty is, strong; powerful; mtiu tial; hence valiant; great in number; vast; bulky; efficacious; excellent in any way; im- portant: as an adverb, in low language, in a great degree: mightily and mightiness follow these senses.

Nimrod began to be a mighty one in the earth.

Genesis.

They sank as lead in the mighty waters. Erodus.

Intreat the Lord, for it is enough, that there be no more might v thunderings and hail. Id.

Woe to them that are mighty to drink wine.

Isaiah.

If the mighty works which have been done in thee had been done 'in Sodom, it would have remained.

Matthew.

Right so, quoth he, but he that never would, Could never ; will to might gives greatest aid.

Spenser.

With whom ordinary means will prevail, surely

the power of the word of God, even without the help Louis XIV., who ennobled him, made him his of interpreters, in God's church worketh mightily, principal painter, and appointed him director of not unto their confirmation alone which are converted,

Thou fallest where many mightier have been slain.

Broome.

The enemies of religion are but brass and iron, their mischiefs mighty, but their materials mean.

Delany.

Linked with success, assumed and kept with skill. That moulds another's weakness to its will ; Wields with their hands, but, still to these unknown, Makes even their mightiest deeds appear his own.

Byron.

MIGNARD (Nicholas), a very ingenious French painter, born at Troyes in 1628 ; hut, set- tling at Avignon, he is generally styled Mignard of Avignon. He was afterwards employed at court, and became rector of the royal academy of painting at Paris. There were many of his his- torical pieces and portraits in the palace of the Thuilleries. He died in 1690.

MIGNARD (Peter), the brother of Nicholas, was born at Troyes in 1640; and acquired much of the taste of the Italian school. He had a supe- rior genius to his brother. He painted popes Alexander VII. and Urban VIII., many of the Roman nobility, several Italian princes, and Louis XIV., who ennobled him, made him his

Id.

Id.

but also to their conversion which are not. Hooker. An oath of mickle might. Shakspeare. Henry V. Do as adversaries do in law, strive mightily, but eat and drink as friends. Shakspeare.

There's ne'er a one of you but trusts a knave That mightily deceives you.

Think you see them great, And followed with general throng and sweat Of thousand friends ; then, in a moment, see How soon this mightiness meets misery. I'll sing of heroes and of kings, In mighty numbers, mighty things. Coieley. Wherefore should not strength and might There fail, where virtue

fails ?

Milton's Paradise Lost. The Creator, calling forth by name His mighty angels, gave them several charge.

Mi/ton.

Amazement seized

The rebel thrones, but greater rage to see Thus foiled their mightiest. Id.

Giants of mighty bone and bold emprise. Id. Lydiate excelled the mighty Scaliger and Selden.

Echard. With might and main they chaced the murderous

fox, With brazen trumpets and inflated box. Dryden.

the manufactories. Almost all the illustrious nobles of the French court followed the example of their sovereign, and were painted by Mignard. His style of execution in these portraits is wrought up with all the false taste and pompous parade which distinguished that period of the French nation ; when parade passed current for true splendor ; what was only specious or subtle, was received as useful and learned; and bombast assumed the station due only to true dignified simplicity. His pictures are all nutter ; every thing seems in motion; even when the scene is laid in a close room, the draperies are flying about as in a high wind. The actions of his figures are in assumed airs ; like pompous, and not un- frequently bad actors ; and the coloring of his pictures, though fresh and vigorous, is not true, but teinted, and reminds the observer of the pa- lette. With these defective points in his charac- ter, as an artist, Mignard is not unworthy of regard. His drawing is correct : his arrange- ment of parts is ingenious : and his invention fertile. He contrived to make his pictures orna- mental, and is the best portrait painter of the French school. He died in 1695.

MIGNON, or MINJON (Abraham), a cele- brated painter of flowers and still life, born at Frankfort in 1639. His father left him in very necessitous circumstances when only seven years of age. James Murel, a flower painter in that

Jove left the blissful realms above, Such is the power of mighty love. Id.

The mighty master smiled. Id.

An ass and an ape conferring on grievances; the

ass complained mightily for want of horns, and the city, took him into his house, instructed him in ape for want of a tail. L'Estrange. his art till he was seventeen years old, and after-

wards took him to H'olland, where he placed him as a disciple with David De Heem, whose style Mignon imitated and adhered to; adding daily to his improvement by studying nature. He was well paid for his works. Weverman mentions one of a most capital kind, in which a cat has thrown down a pot of flowers that lie scattered on a marble table. It is so wonderfully natural that the spectator can hardly persuade himself that the

ape

I was mightily pleased with a story applicable to this piece of philosophy. Spectator.

This privilege the clergy in England formerly con- tended for with all might and main. Ayliffe.

Lord of his new hypothesis he reigns ; He reigns : How long? Till some usurper rise, And he too, mighty thoughtful, mighty wise: Studies new lines. Prior.

These happening nearer home made so lasting im- pressions upon their minds, that the tradition of the old deluge was miyhtily obscured, and the circum- stanres of it interwoven and confounded with those oi Uicse later deludes. Woodward.

water spilt from the vessel is not reaiiy running down from the marble. Mignon died in 1679, aged forty.

MIGNOT (Stephen), a member of the Aca- demic des Inscriptions, France, was born in 1698, and graduated D. D. in 1722. He was the author of a variety of tracts, upon subjects con- nected with the discipline of the church of Rome. The principal are, A History of the Disputes between king Henry II. of England, snd St. Thomas a Becket, 12mo. ; On the Rights of the Monarch and the Civil Government over Ihe Revenues of the Church, 6 vols. ; A History of the Reception of the Council of Trent in the Catholic States, 2 vols.; The real History of the Church of St. Omer; A Paraphrase on the Psalms ; and an elaborate treatise, Des prfets de Commerce, in five

duodecimo volumes. He died in 1771.

MIG NOT (Vincent), a nephew of the celebrated Voltaire, was born at Paris in 1 730, and obtained, without being a priest, several benefices, among which was the abbey of Sellieres. He became counsellor to the grand council, which place he resigned in 1765, reserving to himself the honorary title. In conjunction with the marquis de Ville-Vielle, he signed the profession of faith which Voltaire is said to have made just before his death; and transported the remains of that individual to the abbey of Sellieres, whence they were subsequently removed to the pantheon, or church of St. Genevieve, Paris. Mignot was the author of Histoire de 1'Empire Ottoman, depuis son Origine jusqu'a la Paix de Belgrade, en 1740, Paris, 1771, 4 vols. 12mo., of which there is an English translation ; Histoire de 1'Impera- trice Irene, 1760 12mo. ; Histoire de Jeanne I., Rein de Naples, 12mo. ; Histoire des Rois Ca- tholiques Ferdinand et Isabelle, 2 vols. 12mo. ; and he translated Quintius Curtius, and Cicero de Senectute and de Amicitia. His death took place in 1790.

MI'GRATE,u.a.-) Lat. migro, migratio.

MIGRATION, n. s. >To change residence or

*MIGRATORY,***//. > place of abode; to wander: migration, the actor habit of changing residence; removal.*

Aristotle distinguisheth their ttmes of generation, latitancy and migration, sanity and venation.

Browne's Vulgar Errours.

Although such alterations, transitions, migration of the centre of gravity, and elevations of new islands, had actually happened, yet these shells could never have been reposed thereby in the man- ner we find them. Woodward's Natural History.*

Besides the swallow, Mr. Pennant enumerates many other birds which migrate from Britain at dif- ferent times of the year, and are then to be found in other countries ; after which they again leave these countries, and return to Britain. The reason of these migrations he supposes to be a defect of food at cer- tain seasons of the year, &c. Dr. M. Good.

MIGRATION OF BIRDS/- It is generally be- lieved that many different kinds of birds an- nually pass from one country to another, and spend the summer or winter where it is most agreeable to them ; and that even the birds of our own island seek the most distant southern regions of Africa, when directed by a peculiar instinct to leave their own country. It has long

been an opinion pretty generally received that swallows reside during winter in the warm southern re- gions; and Pennant enumerates many other

birds which migrate from Britain at different timei of the year, and are then to be found in other countries; after which they again leave these countries, and return to Britain. The reason of these migrations he supposes to be a defect of food at certain seasons of the year, or the want of a secure asylum from the persecution of man during the time of courtship, incubation, and nu- trition. See ORNITHOLOGY.

MIGUEL (St.), or ST. MICHAEL, one of the principal and most fertile of the Azores. It ap- pears to be entirely volcanic. A good account of it was published in the Philosophical Transac- tions, vol. Ixviii. by Masson. 'The productions,' he says, ' differ greatly from those of Madeira. None of the trees of the latter are found in it ex- cept the saya. The mountains are covered with the erica vulgaris, and an elegant ever-green shrub very like a phyllyrea, which gives them a most beautiful appearance. It lies nearly east and west. Its length is about eighteen or twenty leagues ; its breadth from two to five leagues, and its circumference sixty miles. It contains about 80,000 inhabitants, who carry on a considerable trade in corn, wine, and cattle. Its capital Ponta del Guda, or Puntadel Guada, is situated on the south side of the island, on-a fine fertile plain, and pretty regularly built ; the streets are straight, and of a good breadth. It is supplied with good water, from mountains nine miles distant. The churches are elegant and well built. There is a large convent of Franciscan friars, another of those of St. Augustin, four convents for pro- fessed nuns, and three recolhimentos for young women and widows not professed. The vessels anchor in an open road, but it is not dangerom, as no wind can prevent their going to sea in case of stormy weather. The country around the city is plain for several miles, well cultivated, and laid out with good taste into spacious fields, which are sown with wheat, barley, Indian corn, pulse, flax, &c., and commonly produce annually two crops. The soil is remarkably easy to work, be- ing mostly composed of pulverised pumice-stone. There are in the plains a number of pleasant country seats, with orchards of orange trees, es- teemed the best in Europe. The second town is Ribeira Grande, on the north side of the island, containing a large convent of Franciscan friars, and one of nuns. The third town is Villa Franca, on the south side of the island, about eighteen miles east of the capital. It has a convent of Franciscan friars, and one of 300 nuns. About half a mile from the shore lies a small island called Ilhao, which is hollow in the middle, and contains a fine basin with only one entrance into it fit to hold fifty vessels secure from all weather. There are also several smaller towns viz. Alagoa, Agoa de Pao, Brelanha, Fanaes de Ajuda, and many hamlets. About twelve miles north-east of Villa Franca lies Furnas, a round deep valley, in the east part

of the island, sur- rounded with high mountains, and about eighteen miles in circuit. The mountains are very steep, covered with beautiful ever-greens, and number- less rivulets run down their sides. The valley is well cultivated, and the fields are planted round with beautiful pyramidal poplars ; which with a number of boiling fountains throwing up clouds

of steam, and a fine lake in the south-west part about six miles round, compose a prospect the finest that can be imagined. In the valley the roads are smooth and easy, there being no rocks but a fine pulverised pumice-stone. Of the nu- merous hot fountains in the valley, and on the sides of the mountains, the most remarkable is the Chaldeira, on a small eminence on the east by the side of a river, on which is a basin about thirty feet in diameter, where the water continu- ally boils with prodigious fury. A few yards from it is a cavern in the side of the bank, in which the water boils in a dreadful manner, throwing out a thick, muddy, unctuous water several yards from its mouth with a hideous noise. In the middle of the river are several places where the water boils up so hot, that one cannot dip a finger into it without being scalded; along its banks are several apertures, out of which the steam rises to a considerable height, so hot that there is no approaching it ; in other places one would think that a hundred smiths' bellows were blowing altogether, and sulphureous steams issuing out in thousands of places. Native sul- phur is found in every chink, and the ground covered with it like hoar-frost. Near these boiling fountains are several mineral springs ; two in particular whose waters have a very strong quality, of an acid and bitterish taste. About half a mile to the west, and close by the river, are several hot springs; and on the side of a hill west of St. Ann's Church are many others, with three bathing-houses. These waters are very warm, although not boiling hot; but at the same place issue several streams of cold mineral water, by which they are tempered, according to every one's liking. About a mile south of this place, and over a low ridge of hills, lies a fine lake about six miles in circumference, and very deep, the water thick, and of a greenish color. At the north end is a plain, where the sulphure- ous steams issue out in many places, with a sur- prising blowing noise. This lake seems to have no visible outlet. The other springs form a consider- able river, called Quente, which runs about eight or nine miles through a deep rent in the moun- tains, and falls into the sea on the south side ; near which are several places where the water boils up at some distance in the sea. This wonderful place had been little noticed until about thirty years ago, when some persons, afflicted with virulent disorders, tried its waters, and found immediate relief from them. Since that time it has been much frequented : several persons troubled with eruptions, and others

who had lost the use of their limbs by the palsy, have been cured. A clergyman, a friar, and several gen- tlemen, afflicted with the gout, tried these waters, and were soon perfectly cured. The east and west parts of the island consist of high moun- tains, but the middle is low, interspersed with round conic hills, all of which have very recent marks of fire ; the parts below the surface con- sisting of melted lava lying very hollow. Most of the mountains on the west have their tops hollowed out like a punch-bowl, and contain water. Near the west end is an immense deep valley, culled Sete Cidades, surrounded with very abrupt mountains, about twenty-four miles

round ; in the bottom is a deep lake about nine miles in circuit, frequented by many water- fowls. All these mountains are composed of a white crumbly pumice-stone. This island was almost destroyed in 1638 by an earthquake, which continued eight days from the 26th of June. It lies in long. 22° 45′ W., lat. 38° 10′ N.

MIHIEL, a little town of the department of the Meuse, France; the chief place of a can- ton in the arrondissement of Commercy. It has an inferior court for the arrondissement, and a court of assize for the department, a commercial college, and a post-office.

This town is situated in a pleasant valley on the right bank of the Meuse. In ancient times it was fortified, and endured several sieges at different periods, especially in 1 635, when Louis XIII. attacked it in person, and narrowly es- caped being killed before it ; on this he caused its fortifications to be levelled with the ground. The inhabitants are manufacturers of cotton- cloths, woollen-drapery, and edge tools; they have also hydraulic cotton-spinning factories, forges, and tan-yards, and carry on a trade in corn, wine, wood, rape seed, table-linen, lace, paper, &c. In the parish church there is a beautifu' monument of sculpture, worthy to fix the atten- tion of all lovers of the fine arts. It is known by the name of the Sepulchre, and represents the tomb of Jesus Christ ; it is made out of a single stone, of the production of the country, which for whiteness and fineness of grain almost equals marble. It is beautifully executed by Ligier Michier, a pupil of the celebrated Michael Angelo. Population 5200. This town is twelve miles north of Commercy, and twenty-four north-east of Bar-le-Duc. E. long, from Paris 3°, N. lat. 48° 56'.

MILAN, a late duchy of Italy, now included in the Austrian possessions of that peninsula, was bounded by the duchy of Savoy, the princi- pality of Piedmont, and duchy of Montserrat, on thexwest; by Switzerland on the north; by the late Venetian territories, the duchies of Mantua, Parma, and Placentia, on the east ; and by the Appennines and the Genoese territories on the south ; extending about 100 miles from north to south, and 108 from east to west. It is esteemed one of the finest provinces in Italy, being

water- ed by the Tessino, Sesia, Adda, Po, Oglio, I-am- bro, and other rivers, as well as by several canals and lakes ; particularly lakes COMO, GARDA, LU- GANO, and MAGGIORE, which see. The whole of the Milanese, divided into four departments, was lately comprised in the Cisalpine republic ; then in the kingdom of Italy : but on the reinstate- ment of the old order of things, in 1814, the part belonging to the king of Sardinia was restored, and the remainder incorporated with the Aus- trian, or Lombardo- Venetian kingdom of Italy. It there forms, along with the duchy of Mantua and the Valteline, the government of Milan, or more western of the two great divisions of Austrian Italy. Its extent is about 7700 super- ficial square miles, and its population 2,083,000. It is divided into the nine delegations of Milan, Pavia, Lodi, Como, Cremona, Sondrio, Bergamo, I?rescia, and Mantua. Of these, that of Milan contains 670 square miles, and 427,000 innabi

tants. The Sardinian, situated to the west of the Austrian Milanese, or government of Milan, and separated from it by the Ticino, a large river flowing from north to south, contains about 3300 square miles, and 556,000 souls, who in- habit eight large and 689 market-towns and vil- lages. It is divided into the provinces or districts of Alessandria, Lumellina, Tortona, Voghera, Bobbio, Siccomario, Vigevanasco, No- vara, and Sesia. See ITALY, AUSTRIAN.

Anciently this duchy, containing the north part of the old Liguria, was called Insubria, from its inhabitants the Insubres, who were conquered by the Romans, as these were by the Goths ; who in their turn were subdued by the Lombards. See our article ITALY. Didier, the last king of the Lombards, was taken prisoner by Charlemagne, who put an end to the Longobar- dic empire, and appointed governors of Milan. These governors, being at a distance from their masters, soon began to assume an independency, which brought a dreadful calamity on the coun- try; for, in 1152 the capital itself was levelled with the ground by the emperor Frederic Barba- rossa, who committed great devastations through- out the duchy. Under this emperor flourished Galvian, a nobleman, descended from Otho, a Milanese. Galvian served with William prince of Montserrat, in the crusade, when Godfrey of Bouillon took Jerusalem : he killed in single combat the Saracen general, whom he stripped of his helmet, which was adorned with the image of a serpent swallowing a youth ; and this ever afterwards was the badge of that family. His grandson Galvian, having opposed the emperor, was taken prisoner, and carried in irons into Germany, whence he escaped, and, returning to Milan, died in the service

of his country. From him descended another Otho, at the time that Otho IV. was emperor, and who, being educated under cardinal Octavian Ubaldina at Rome, soon distinguished himself by his accomplish- ments.

In the mean time, Torriano, a nobleman of unbounded ambition, attempted to make him- self master of Milan. The popular faction had for some time been caballing against the nobility ; and this chief, putting himself at their head, ex- pelled the bishop, and put to death or banished all the nobility : by which means the popular government was fully established ; but Torriano ruled every thing. He was, however, soon op- •posed by Francis Sepri, who formed a party to deliver the city from his tyranny. But, while these parties were collecting their forces, cardinal Ubaldini was projecting the destruction of both, by means of his favorite Otho, whom he ap- pointed archbishop of Milan ; which was con- firmed by pope Urban IV. The nobility now began to gather strength. Otho had no sooner procured a show of an army than he advanced towards Lake Maggiore, and took Arona, a strong post near that lake : but Torriano, marching against him with all his troops, obliged him to abandon the place. This was followed by the destruction of the castles of Arona, Anghiari, and Brebia: soon after which Torriano died, and was succeeded by his brother Philip, who got himself elected praetor of Milan for ten years.

During his life, however, the party of the no- bility increased considerably under Otho. Philip died in 1265, with great reputation for courage and conduct.

His successor Napi rendered himself terrible to the nobility, many of whom he proscribed and put to death. He acted with such fury, against that unfortunate party, that pope Clement IV. interdicted Milan, and excommunicated Napi and all his party. On this Napi began to lose his popularity, and Otho kept up the spirit of his party, who chose for their general Squar- cini Burri, a man of great courage, whose daugh- ter was married to Matthew Viscouti, afterwards called Matthew the Great. At the same time they renewed their confederacy with the marquis of Montserrat, who was son-in-law to the king of Spain. The nobility having collected an army, which was joined by 600 Spanish cavalry, and a body of foot, gained some advantages. But in the mean time, Napi, having gathered together a superior army, attacked Otho and Burri, whom he defeated. After this disaster Otho applied to the pope ; and Napi invited the emperor Ro- dolph into Italy, who constituted Napi his go- vernor and vicar-general in Lombardy, and sent him a body of German horse, the command of which was given to Cassoni, Napi's nephew.

The Milanese exiles, however, soon became formidable, and chose for their general Godfrey, count of Langusio, a noble Pavian, who, being rich and

powerful, enlisted many German mer- cenaries, at whose head he marched towards the lake Maggiore. All the towns in that country opened their gates to him, through the interest of the Visconti family. Godfrey being defeated and taken prisoner, he and thirty-four nobles had their heads struck off. This defeat greatly affected Otho ; but after several battles, with alternate success, Otho totally defeated and took prisoner Napi himself. After this victory Cas- soni was obliged to abandon Milan, and Otho kept possession of it till 1295, when he died, aged eighty-seven. He was succeeded by Mat- thew Visconti above-mentioned ; and Milan con- tinued in subjection to that family without any remarkable occurrence till 1378, when, by the death of Galeatius or Galeazzo II., his brother Barnabas became sovereign of Milan. He was brave and active, but excessively profuse in his expenses, as his brother Galeazzo had also been; and, to procure money to supply his extravagan- cies, resorted to every kind of oppression.

Galeazzo had engaged in an enterprize against Bologna, and the siege of it was continued by Barnabas. It lasted nine years; and cost nearly £40,000,000 sterling. Both the brothers were excessively fond of building. Barnabas erected a bridge over the Adda, consisting of three stories ; the lowest for chariots and heavy car- riages, the middle for horses, and the uppermost for foot passengers. He built another bridge which was carried over houses. To accomplish these, and other expensive schemes, he became very tyrannical, and every day produced fresh instances of his rapacity and cruelty. He insti- tuted a chamber of enquiry, for punishing all those who had for five years before been guilty of killing boars, or even of eating them. They

\vho could not redeem themselves by money were hanged, and above 100 wretches perished in that manner. Those who had any thing to lose were stripped of their substance, and obliged to labor at the public works. He obliged his subjects to maintain his hunting dogs, and each district was taxed a certain number. This ty- ranny rendered the public ripe for a revolutiou, which was accomplished by his nephew John Galeazzo. He affected a solitary, devout life, Toid of ambition ; but in the mean time had spies at his uncle's court, who gave him information of all that passed. Under pretence of paying a vow, to visit the church of the blessed Virgin upon mount Varezzio, he led Barnabas and two of his sons to accompany him to a private place on the road, where he had soldiers placed to seize them ; and the houses of those who had followed them were given up to be plundered. The booty in plate, money, and rich furniture, was immense. The ministers of Barnabas were put to death ; the citadel fell into the hands

of Galeazzo, who found in it an immense sum of money. Barnabas was carried prisoner to his castle of Tritici, where his mistress, Dominia Porra, shut herself up a voluntary prisoner with him, and remained with him as long as he lived, which was only seven months after his degradation.

John Galeazzo was the first who took the title of duke of Milan. He made war with the Flo- rentines, took Pisa and Bologne, and defeated the emperor in 1401, so that he entertained hopes of becoming master of all Lombardy ; but his designs were frustrated by death, in 1402, in his nfty-fifth year. After his decease the Milanese fell into the most violent distractions, so that the government could not be supported, even in peace, without "an army of 20,000 foot and as many horse. In 1421, however, Philip duke of Milan became master of Genoa : but, though he gained great advantages in all parts of Italy, the different states still found means to counterba- lance his successes, and prevent him from en- slaving them : so that Milan never became the capital of any extensive government; and in 1437 Genoa revolted, never afterwards to be re- duced. Philip died in 1448, and by his death the male line of the Visconti family was ended. The next lawful heir was Valentina his sister, who had married the duke of Orleans, son to Charles V. of France. By the contract, the lawful issue of that marriage were to succeed to the duchy of Milan, in failure of the heirs male of the Visconti family ; but this succession was disputed by Sforza, who had married Philip's natural daughter, and who obtained possession of the duchy. Louis XII., however, afterwards put in his claim, as grandson to John Galeazzo. For some time he was successful ; but the French behaved in such an insolent manner that they were driven out of the Milanese by Maximilian Sforza and the Swiss. The Swiss and Milanese were now in their turn expelled by Francis I., who obliged the Sforza family to relinquish the government for a pension of 30,000 ducats a-year. Francis Sforza, the son of Maximilian, however, being assisted by the emperor and the pope, re- gained the possession of the Milanese about

1521 ; and, in 1529, the French king, by the treaty of Cambray, gave up his claim on the duchy. The emperors of Germany, however, seem to have had the fairest title to the Milanese in right of their having been long sovereigns of Italy. On the death of Francis Sforza, there- fore, in 1536, Charles V. declared the Milanese to be an imperial fief, and granted the investiture of it to his son Philip II., king of Spain. In his family it continued till 1706, when the French and Spaniards were driven out by the Imperial-ists, and the emperor again took possession of it. It was confirmed to his house by the treaty of Baden in 1714, by the quadruple alliance in 1718, and by the treaty of Aix-la-Chapelle in 1748. But in June 1796 this country was over- run by the French under Buonaparte, and became an easy conquest. In 1797 it was revolutionised, and formed into several departments, as the Cisalpine republic. In April 1799 it was again overrun

and reduced by the Austrians and Rus- sians under Suwarrow : but, upon Buonaparte's return from Egypt, in was in 1800 once more reduced by the French ; erected into the depart- ment of Olona, 13th of May 1801, and included in the Italian republic in December 1801, then in the kingdom of Italy, and finally restored to Austria as we have intimated.

MILAN, or MILANO, a very considerable and populous city of Italy, the capital of the Aus- trian Lombardo-Venetian kingdom, is nearly circular in its form, and extends to a circum- ference of nearly ten miles on the small river Olona : that is, the outer wall is of this extent, but it includes numerous gardens and plantations.

The streets are generally irregular and narrow ; but the modern parts are in better taste, and the private houses, without having many preten- sions to elegance, are tolerably built, and from three to five stories in height. Sumptuous family mansions occasionally appear, as in Rome and Genoa. The great entrance into the city is from the north-west, by the esplanade or arena, in the middle of which stands the Gothic castle of the family of Visconti. This arena, called the Piazza di Castello, was orna- mented by prince Eugene Beauharnois, when viceroy of Italy, with plantations, grass plots, and gravel walks, and converted into a spacious garden ; but the most popular public walk is the Corso, and the adjacent gardens, on the eastern side of the city. The fortifications are" not of any available strength.

The cathedral is considered one of the finest Gothic churches in Europe. It is of fine white marble, and though begun in the sixteenth cen- tury, ages have passed over it and left it in- complete ; ' the immense sums lavished upon it by wealthy sinners,' says a late traveller, ' to for- ward its continuation, seem to have retarded the work, by extending its plan. St. Charles Bor- romeo (the citizen saint of Lombardy) did much towards its completion ; but, on his death, two centuries succeeded without hastening the pro- gress of the erection, and the foundation of Ga- ieazzo still remained unfinished, when a usur- ps/ lite himself, influenced by the same motives, and gifted with the same energies, at once com- pleted it. Buonaparte is said to have contem

plated this temple, on his first arrival at Milan, with unsatiated delight; and to him it owes the fabrication of two-thirds of its splendid facade, a considerable number of its 400 statues, which rather incrust than decorate it, and the perfect condition in which it now strikes the eye with wonder

and admiration.

*‘ As we first saw it,’ continues lady Morgan, * in the radiance of the mid-day sun, its masses of white and polished marble, wrought into such elegant filigree as is traced on Indian ivory by Hindoo fingers, its slim and delicate pinnacles, tipped with sculptured saints, light as ‘ e’er danced on the point of a needle, or rode on the beams of the sun,’ it looked (all gigantic as it is) like some fairy fabric of virgin silver ; and left the eye dazzled, and the imagination fascinated. Its exterior lustre was strikingly contrasted with its interior solemnity ; and, as we drew back the folds of the heavy drapery which shades the en- trance of this as of all Italian churches, nothing could be more impressive than that long solemn sweep of nave, whose deep perspective fades and mellows as it recedes from the eye, and is finally almost lost in distance and obscurity. Before the high altar stands the shrine of St. Charles Borromeo, with its circle of burning lamps ; the spacious choir rises behind it. The lateral aisles with their massive columns of red granite, and votive chapels, the porphyry baptismal font, the marble pavement, were tinged with the brilliant hues which fell through the high-arched and richly painted windows. A procession of the chapter, with their archbishop at their head, was issuing from the choir, and disappeared through a lateral door leading to the sacristy. Another less splendid but more solemn procession came forth from a chapel, announced by the ringing of a bell, the glare of torches, and accompanied by a guard of soldiers with fixed bayonets ; it was the sacrament, borne on a velvet cushion, and under a superb canopy — the viaticum of some dying sinner.’ It ‘ is 490 feet long, 298 broad, and 260 high. The fa9ade is magnificent, and the three other sides hardly inferior. The roof is covered with slabs of marble; and above the dome there rises an elegant tower or spire, in the shape of an obelisk. All parts of the build- ing are crowded with elegant marble statues, said to amount, inside and out, to the number of 4000. Here is a subterranean chapel, containing the body of Charles Borromeo, enclosed in a shrine of rock crystal. Several of the other churches, though far inferior to the cathedral, are worth attention, chiefly for the statues and paintings of celebrated masters which decorate them. The church of Laurentius has a Roman colonade of the Corinthian order, in marble of Paros.*

When the emperor Joseph began those eccle- siastical reforms which the late republican go- vernment attempted to complete, tne ecclesiastical buildings of Milan occupied more than one- third of the city. There are still abundantly enough for all the purposes of religious worship.

The hospitals and other charitable institutions amount in all to about thirty. The Ospedale Maggiore is an immense edifice, capable of containing 1200 patients. It has a revenue of 100,000 rix-dollars. The foundling

hospital

receives about 4000 children. A lazaretto, outside of the city, is also on a vast scale, but is opened only for epidemics. ‘ In the refectory, or hall of the convent of the Dominicans,’ says Mr. Eustace, ‘ was, as is well known, the cele- brated Last Supper by Leonardo da Vinci, sup- posed to be his masterpiece. The convent was sup- pressed ; and the hall turned into a store-room of artillery ; and the picture was used as a target for the French soldiers to fire at. The heads were their favorite marks ; and that of our Sa- viour, in preference to the others.’ Lady Mor- gan, however, wholly contradicts this story ; she saw the picture after Mr. Eustace, and could not trace the marks of a single shot, though the whole was in a decayed and faded state. ‘ The first object that meets the eye, on approaching this fresco,’ she says, ‘ is a door cut through the legs of the principal figure, and that the figure of our Saviour! ‘ The history of this door is well known at Milan. The dishes served at the monks’ table were found to cool in passing along the clois- ters ; and it was decreed by the chapter that a com- munication should be opened from the refectory to the kitchen, which stood behind the picture of Leonardo. Thus the Last Supper was destroyed, that the abbot’s dinner might be served hot! This anecdote, which might so well have served as a pendant for the ‘ target of the French sol- diers,’ Mr. Eustace has not mentioned, though, if he visited the picture, this door could not possibly escape him.

The Brera, or palace of the arts and sciences, has been dignified of late with the name of a University, for the education of young nobles. Under the recent government of the kingdom of Italy it changed its name to the Institute. Its revenues were augmented, its building (unfinish- ed at the Revolution) was completed by the pre- sent government, and it was solemnly opened for public instruction, and for the service of the arts and sciences. Its schools are numerous : those for painting in all its branches, architecture, ana- tomy as applied to the arts, perspective, &c., being directed by native artists of great merit and celebrity. The school of engraving, under the admirable Longhi, is one of the first in Italy. The observatory, raised by the Jesuits in 1766, after a plan of Boscovich, is filled with the most expensive astronomical instruments, purchased in France, Germany, and England ; among others a fine telescope by Herschel : the corridors with models of machinery, of ships, and other objects connected with the marine, &c. &c. The upper portico of this fine building contains a magnificent gallery, into which all that could be obtained or purchased of the ancient school of Lombardy is elegantly arranged : and the pub- lic library, where to the books left by the Jesuits were added the library of Pertusati, a part of that of Ilaller, and a small collection left by the car- dinal Durini, together with a portion of the books collected from the suppressed convents. A sum was also assigned by the government for

the purchase of new and valuable works, whicn sum was never permitted to accumulate. A lew medals, once preserved, or neglected at the rain!, were given to this institution, and formed Ui« basis of a collection, which under the direction

of Signore Cataneo, one of the most learned nu- mismatists in Europe, has grown to an extent almost unrivalled even in Italy.

Milan owes to the cardinal Frederic Borromeo her great and deservedly celebrated public li- brary, the Bibliotheca Ambrosiana. The libra- ries of the Benedictines formed the nucleus of this collection, which has gradually extended to its present importance. The treasures of the collection are the MSS. of Leonardo da Vinci, called Codice Atlantico, from the size of the volume. They consist of a number of loose leaves, which Leonardo covered with sketches, notes, mathematical figures, and problems. Ano- ther celebrated MS. of the Ambrosian library is a Virgil, said to have been copied by Petrarch, in which he has traced some marginal annotations, and some lines on the death of Laura.

The church and the theatre are two of the principal engines with which the little govern- ments of Italy have sustained their power. After the Duomo, there is no public building in Milan so attended, and so prized, as the theatre of the Scala. The ideas of pleasure and of devotion may in- deed be here mingled in a truly Catholic manner; for it was on the ruins of the ancient church of Santa Maria della Scala that in 1778 this splen- did theatre was built. The exterior is very hand- some. ‘ The corps d’edifice is faced with arcades, which shelter the company, in descending from their carriages, from the inclemencies of the wea- ther. Above these a broad terrace with a ba- lustrade leads to the ridotto, or gaming rooms, which are under the protection of the govern- ment. Below, a very insignificant vestibule leads to the lower boxes and pit, whence stair- cases conduct to the upper circles. This theatre, which is said to be larger than the Opera house of London, has six circles of boxes, and a most spacious and well-arranged pit. Each circle has forty-six boxes. The imperial box, in the cen- tre, is a superb open apartment, occupying the place of three boxes, and extending through three tiers in height. It is resplendent with gilding, and is surmounted with the imperial crown and cross. The proscenium is decorated with Corinthian columns, and the vaulted roof is richly painted in compartments by Pirego. In that part of the proscenium where, in England, is placed the king’s escutcheon, there is here, as in the other theatres of Italy, a clock, whose dial with its transparent figures revolves

before a strong light, to indicate the time to all parts of the house. The drapery of the boxes is uniform and rich ; and great magnificence is displayed in their interior decoration, in hangings of silk and velvet cushions, with chandeliers (lighted at plea- sure), and for the most part a small adjoining apartment for supper or play. All belonging to this establishment, except the corps dramatique, shows how material an object it is both to the government and people.

This is the evening home of almost all ranks, the recreation of the tradesmen, ihe exchange of the merchant, the closet of the critic, and the rendezvous of the politician. 'There alone,' says lady Morgan, ' amidst the openest publicity, can privacy find an asylum against the intrusions of espionage. The box is sacred — none can in-

trude there but the intimate friends of the lady or her husband : and the numerous ' arie di sorbetta' (dull pass of music) call for no attention even from musical enthusiasm ; while with their ac- companiments they drown the whispered conver- sation, whatever may be its tendency. Besides those whom pleasure or business, the perform- ance or the rendezvous, bring to the Scala, it is frequented by another class, which under the new order of things daily increases through Italy. Its ranks, once so numerous, were supplied by the cadets of noble families, or of those who, shackled by birth, without opulence to enjoy, or business to occupy, lounge through life in indolent listless- ness. In the evening these gros garcons are seen stuffed in their grandmothers' calashes at the Corso ; at night they take their places, at stated times, in the boxes of such female friends as are good-natured enough to receive them. They are sure to arrive the first, and take their solitary seat in darkness and in silence. With the first coup d'archet, they fall into probationary stupor, from which they are only aroused by the arrival of the mistress of the box; when having bowed profoundly to her cordial ciavo, and kiss- ed reverentially her graciously extended hands, they relapse into a doze, that resembles baron Trenck's sleep ; for it is disturbed every ten mi- nutes by successive visitors, to each of whom they are obliged to give up in turn their place ; until at last, reaching the door, they make a pro- found bow and retire, to sleep out the rest of the evening in the successive boxes to which they have by prescription the entree.'

There are three or four smaller theatres : but that of Girolamo della Crena alone disputes the popularity of the Scala. This is so called from the name of the principal puppets, who is a very powerful rival of the veteran Policinello. What- ever piece is represented upon this stage, Giro- lamo is always the principal actor. His distinc- tive character is, that he speaks Piedmontese, and makes stupid mistakes to please the inhabi- tants of Milan, and to feed their municipal prejudices against their neighbours ; exactly as the Milanese Menichino performs for the amuse- ment of the rest

of the north of Italy, and as ho- nest Pat is travestied on the London stage to flatter the cockney prejudices of John Bull. This species of wit is, in general, of tolerably cheap production, and it does not belong to very kind- ly dispositions; nevertheless Girolamo is suffi- ciently facetious, and, if his jokes are offensive to national vanity, after all, he is but a puppet In ‘ Zemire ed Azore’ (the piece we saw per- formed) Girolamo was the servant of the old merchant who gets into the enchanted palace, and he exhibits the usual quota of timidity that belongs to the servant of low comedy. He al- ways addresses the beast by the appellation of ‘ mostro gentile,’ or ‘ gentleman monster ;’ and, though more of action lay in his right leg than was strictly necessary for the development of the plot, yet some of his poetic flights were very ludicrous. His invocation to gloomy night, which he pronounced to be ‘ dark as a tailor’s conscience,’ is a fair specimen of his excellence in the anti-climax.’ The people of fashion, at Milan go once in the season to Girolamo, as, at

Paris, the same class go to the Ambigu and the Gaiete”, and it is thought good fun, once in a way ; but the people find Girolamo good fun every night in the year, and rarely desert him.’ The piazza del Duomo, we are told, also nightly ex- hibits puppet-shows, and the steps of the cathe- dral are crowded with an audience who have not the means of paying for a box at Girolamo’s little theatre.

Of the ancient fortresses of Milan two antique towers alone remain. It is supposed that the castle erected by Galeazzo Visconti was begun in the year 1358. This having been demolished, a second was built by John Galeazzo : but, that also exciting the jealousy of the republican citi- zens, it became a sacrifice to the liberty of the country. Francis Sforza erected, for the third time, a fortification to overawe the people of Milan. Of this latter edifice the two towers just mentioned are a remnant. The rest of the build- ing was levelled by the French ; and a modern barrack occupies the site of the ancient keep. The remainder of the space was dedicated, by the late Italian government, to the amusement of the people; and was laid out into regular walks and grass-plats, with rows of trees, under the direction of Canon ica, an architect of cele- brity. This really elegant promenade was, at the epoch of its formation, called, in the lan- guage of that day, Forum Buonaparte ; at present it is known under the more orthodox appellation of Place du Chateau.

At the point where the grand road over the Simplon terminates in the city of Milan, at the end of this promenade, a superb triumphal arch was

commenced in Buonaparte's time, after the design of the marquis Luigi Cagnola. It is a work which, for magnitude and beauty, is well worthy the greater work whose successful termi- nation it celebrates. But it is completed to scarcely more than one-third of its intended height. At the restoration tht: work was sus- pended, and the arch remains, as it was left in 1814, surrounded by masses of marble, as they were drawn from Carrara, and blocks of granite torn from the acclivities of the Simplon .

The Corso della Porta Orientale is particu- larly striking. Several new palaces, standing upon the site of demolished convents and churches, rise on either side. The fayades are chiefly of the Greek order, and contrast forcibly with the massive, monastic fronts of the old buildings which are usually of Spanish architec- ture. On the left of this beautiful Corso is the public garden, which was but just finished at the restoration. It is separated from the street by a range of granite pillars, with a cornice sur- mounted by antique vases; and a light iron- railing, decorated with armorial bearings. The garden is cut into irregular alleys, diversified with trees and glass-plats, and watered by a canal. The buildings are in good keeping : they tonsist of an amphitheatre, a carousel or large pavilion, and an edifice in the centre for the public amusements. This temple of pleasure was, a few years back, a convent of nuns of a rigid order ; and, if the spirit of some old lady abbess still visits the haunts of her power or penance, it must, all soirit as it may be, be

struck with wonder. A flight of stairs leads from this garden to a public walk, which has been made and planted upon the ramparts, from the Porta della Tenaglia to the Porta Romana, a very considerable extent.7 The Villa lleale, a resi- dence of the viceroy, adjoins, and adds consider- ably to the magnificence of the scene.

Lady Morgan notices, with enthusiasm, the Royal and Imperial Pensionat, a superb female seminary, founded by the late government ' There, however,' she says, ' lameness and gen- tility, conventional grace and arbitrary elegance, were the prevailing characteristics. Of all the benefits which the revolution has conferred upon Italy, the greatest, the most permanent, is the new and liberal system of female education, raised upon the ruins of that demoralising bigotry which was calculated to make women concu- bines and devotees, but which could not produce good wives and good mothers. In most of the great capitals Buonaparte, or the Italian govern- ments that acted under his influence, have formed establishments for the education of girls of all ranks, and endowed them with sufficient reve- nues ; being fully aware how powerfully women contribute in determining the character of so- ciety ; and how much a generation of well-edu- cated females must contribute to raise it from that gulf of immorality into which the vices and feebleness of the old governments had plunged this

part of Europe. The church, convent, and grounds of San Filippo Neri, belonging to an order of nuns, with a considerable revenue, were appropriated by the government to this establishment, intended as a national school for females, and more particularly for the orphan daughters of the officers of the army who fell in the service. It is a fact that, when this seminary was established, no Italian lady, fitted by education or experience, could be found, who was willing to accept the place of its directress ; and the baroness de Lor, a lady of distinguished talent and irreproachable conduct, was taken from a similar establishment near Paris, to superin- tend the foundation at Milan.

' In our visit to this seminary we were accom- panied by Madame de Lor herself; a lady whose society we afterwards sought upon all occasions with pleasure, and enjoyed with profit. As there is no English school of this description, no com- parison can be drawn ; but in the great points of air, space, elegance, and accommodation, neatness, freshness, and good order, it is impos- sible that it should be exceeded. The convent of St. Philip Neri resembles a royal palace : its arcades below, and its open galleries above, surround a beautiful and well cultivate) garden. The dormitories are spacious, and provided with dressing-rooms abundantly supplied with water in superb fountains. There are also warmed apartments (scaldatorj), in which the children are permitted to amuse themselves before they retire to rest. The rooms are lighted at night by pending lamps, which are enclosed in glass bells, and burn till day-light, no can-lies being allowed. The hospital bed-rooms are on the upper story, and

roeut, filled with every article of female dress, made by the children themselves for their own use ; the materials being found by the establishment. Another room is appropriated to works of ornament. There are also separate apartments for each class, all opening into the garden ; by which the disadvantage of a close and heated atmosphere, so common even in our own best schools, is effectually avoided. We saw groups of little children hurrying from one class to another through blooming shrubs and orange trees, each with her little straw bonnet and basket on her arm. We afterwards saw them assembled in a vast and handsome hall, from whence they proceeded to an excellent dinner. When Madame de Lor entered several of the little ones clung around her, and each had her nom de caresse, or some mark of affection and familiarity. She addressed them all in French, to show us the progress they had made, and made them laugh

heartily at their own mistakes. Italian is much cultivated ; Milanese is rarely allowed. Their studies are liberal, and must shock many of their noble grandmothers, who scarcely learned to read and write ; and who see their illustrious descendants (condemned by their birth to worthlessness and indolence) thus occupied in cutting out shifts, making stays, in- venting dresses, and mending stockings, conver- sant in all the details of which no mother or mistress of a family should be ignorant, and combining these homely duties with languages, the arts, the sciences, and literature !'

As lately as 1743 a French traveller describes the archbishop's palace and the governor's house of Milan as the only residences in the city where the windows were completely glazed. Glass was then 'quite a distinction, as it still is in the vil- lages about Rome and Naples ; and some of the handsomest edifices in Lombardy had their win- dows covered with oiled paper. Glazing is now, however, general : though, amidst many great and beneficial changes introduced into Milan, much remains to be done : while the higher arts, for instance, have been well attended to, the art by which a door is hinged, or a window closed, is still in its infancy.

The trade of this city is not extensive, being chiefly confined to the import of its manufactory, consisting of silk stuffs, ribands, printed cottons, leather, paper, earthenware, and most beautiful porcelain. There is a considerable manufacture of tobacco and snuff also carried on on account of government. The carrying trade is favored by the two canals which connect it with the Adda on the one side, and the Ticino on the other.

Since 1800 the population of Milan has been in a state of progression. In 1805 it was esti- mated at 120,000; in 1806 at 125,000; in 1808 at 129,000; and in 1820 at 140,000. It is seventy-five miles E.N. E. of Turin ; 145 north- west of Florence ; and 280 north-west by north of Rome.

MILBORN PORT, a post town of Somer- setshire, seated on a branch of the Parrat, 117 miles from London. It formerly sent two repre- sentatives to parliament, but is neither a market- town nor a corporation ; but it appears in

Domesday book to have once had a market, and fifty-six burgesses. It is surrounded by Dorsetshire. Here are nine capital burgesses, who yearly choose two bailiffs, that have the go- vernment of the borough under them, and jointly returned members to parliament with the two stewards, who are chosen yearly out of nine commonalty stewards, and have the custody of the corporation seal. These two stewards also distribute the profits of the lands given to the poor here, of which the commonalty stewards are trustees. There are two fairs, June 6th and October 28th. This ancient borough was dis- franchised by the Reform Bill.

MILBOURN E (Luke), was the son of a non- juring divine of that name, who was ejected from his living of Wroxhall in Warwickshire, where the subject of this article was born in 1667. He received his education at Pembroke Hall, Cambridge, when he took the degree of A. M., and, entering the church, obtained .the rectory of St. Ethelburga, and the lectureship of St. Leonard's Shoreditch, London, lie pub- lished Remarks on Dryden's Translation of the .ZEneis, which Johnson speaks of contemptuously. His name has also been introduced by Pope in the Dunciad. The remainder of his writings consist of a Version of the Psalms, and about thirty sermons. He died in 1720.

MILBURY, a post town of Worcester county, Massachusetts, six miles south of Worcester. This town has been formed of a part of Sutton since the last census, and is watered by Black- stone river. It contains a woollen manufactory, a saw mill, an iron manufactory, a rolling and slit- ting mill, a nail manufactory, six scythe shops, a gun manufactory employing forty or forty-five workmen, extensive tanneries, and paper and oil mills.

MILCH, adj. From MILK, which see. Yield- ing milk.

And then he blasts the tree, and takes the cattle And makes milch kine yield blood. Shaktpeare.

The best mixtures of water in ponds for cattle, to make them more milch, fatten, or keep them from murrain, may be chalk and nitre. Bacon.

Not above fifty-one have been starved, excepting infants at nurse, caused rather by carelessness and infirmity of the milch women. Graunt.

With the turnips they feed sheep, milch-cows, or fatting cattle. Mortimer's Husbandry.

MILD, adj.) Sax. mile; Goth, and Teut.

MiLD'LY,adi;. ymild; Swed. milder. Soft;

MILD'NESS,W. s. J tender ; lenitive; not sharp or acrid : hence gentle; kind; tender; merciful ; indulgent: the adverb and substantive corre- sponding.

Be not full of chidyng, but temporal, schewyng all myldenesse to all men. Wiclif. Tyte. iii.

This milky gentleness and course of yours ; You are much more at task for want of wisdom, Than praised for harmful mildness. Slmkapeare.

The execution of justice is committed to his judges, which is the severer part ; but the milder part, which is mercy, is wholly left in the king.

Bacon's Advice to Villiers.

The air once heated maketh the flame burn more mildly, and so helpeth the continuance.

Id. Natural History.

The Irish were transplanted from the woods and OTO"<»«:QS into the plains, that, like fruit trees, thev*

ni:oht grow the milder, and bear the better and sweeter fruit. Dailies.

The rosy mom resigns her light, And milder glory, to the noon. Waller.

Nothing reserved or sullen was to see, But sweet regards, and pleasing sanctity ; Mild was his accent, and his actions free.

D-yden.

Prince, too mildly reigning, Cease thy sorrow and complaining. Id.

The same majestic mildness, held its place ; Nor lost the monarch in his dying face. Id.

The folding gates diffused a silver light, And with a milder gleam refreshed the sight.

Addi$on.

His probity and mildness shows, His care of friends and scorn of foes. Id.

Suppose your eyes sent equal rays I'pon two distant pots of ale, Not knowing which was mild or stale. Prior. It teaches us to adore him as a mild and merciful being, of infinite love to his creatures. Rogers.

Their qualities are changed by rendering them acrimonious or mild. Arbuthnot on Aliments.

Sylvia's like autumn ripe, yet mild as May, More bright than noon, yet fresh as early day.

Pope.

MIL/DEW, n. s. Sax. mildeape; Teut. mil- low, i. ros melleus. — Minsheu. A disease or blight in plants, accompanied by a dewy mois- ture.

Here is your husband, like a mildewed ear,

Blasting his wholesome brother.

S/takspeare. Hamlet.

The mildew cometh by closeness of air ; and there- fore in hills, or champaign grounds, it seldom cometh.

Bacon.

Down fell the mildew of his sugared words.

Fairfax.

Soon blasting mildews blackened all the grain.

Dry den.

Morals snatch from Plutarch's tattered page, A mildewed Bacon, or Stagy ra's sage. Gay's Trivia.

Mildew is a disease of plants, caused by a dewy moisture which falls on them, and continuing, for want of the sun's heat to draw it up by its acrimony, corrpdes, gnaws, and spoils the plant : or mildew is rather a concrete substance, which exudes through the pores of the leaves. H ill.

MILDEW, in agriculture, a disease frequently destructive to corn, pulse, and garden-crops. It is occasioned, says Hill, by a dewy moisture which falls on them, and continuing, for want of the sun's heat to draw it up, by its acrimony corrodes, and destroys the plant. Others say that mildew is a thick clammy vapor exhaled in the spring and summer from the plants, blos- soms, and even the earth itself, in close, still weather, where there is neither sun nor wind. Miller thinks the true cause of the mildew ap- pearing most upon plants which are exposed to the east, is a dry temperature in the air when the wind blows from that point, which stops the pores of the plants, and prevents their perspira- tion ; whereby the juices of the plants are con- creted upon the surface of their leaves, which, being of a sweetish nature, insects are enticed thereto. It sometimes rests on the leaves of trees

in form of a fatty juice, and sometimes on the ears of corn. It is naturally very tough and viscous, and becomes still more so by the sun's heat exhaling its more fluid parts ; by which VOL. XIV.

means the young ears of corn are so daubed over, that they can never arrive at their full growth. Bearded wheat is less subject to the mildew than the common sort ; and it is observed that newly dunged lands are most liable to mil- dew. The best remedy is a smart shower of rain, and immediately afterwards a brisk wind. If the mildew is seen before the sun has much power, it has been recommended to send two men into the field with a long cord, each holding one end; and, drawing this along the field through the ears, the dew will be dislodged from them before the heat of the sun is able to dry it to that viscous state in which it does the mis- chief. Some also say, that lands which have for many years been subject to mildews, have been cured of it by sowing soot along with the corn, or immediately after it. Mr. J. S. Sagar, the author of a treatise upon this subject, observes, that the mildew is of such a sharp corrosive nature, that it raises blisters on the feet of the shepherds who go barefoot, and even consumes the hoofs of the cattle. He considers the mildew as a principal cause of epidemical distempers among the cattle. The mildew producing these diseases, he says, is that which dries and burns the grass and leaves. It falls usually in the morning, particularly after a thunder-storm. Its poisonous quality (which does not continue above twenty-four hours) never operates but when it has been swallowed immediately after its falling. The disorder attacks the stomach, is accompanied with pimples on the tongue, loss of appetite, a desiccation of the aliments on the stomach, a cough, and difficulty of respiration. See RURAL ECONOMY.

M ILE, n. s. I Fr. mille ; -Ital. miglio ; Lat.

MILE'STOXE, J mille (a thousand paces). An English road measure of 1760 yards : mile stone, the stone set to mark each mile.

We must measure twenty miles to-day.

Shakspeare.

Within this three mile may you see it coming, A moving grove. Id. Macbeth.
'

When the enemy appeared, the foot and artillery were four miles behind. Clarendon.

Millions of mites, so rapid is their race,

To cheer the earth they in few moments pass.

Blackmore.

A MILE is a measure of length or distance containing eight furlongs. The English statute mile is eighty chains. Three miles make one league (see LEAGUE) ; but it varies in different countries. See WEIGHTS and MEASURES.

MILETUS, in ancient geography, a town of Crete, mentioned by Homer. It is said to be the mother town of Miletus in Caria, whither a colony was led by Sarpedon, the brother o/ Minos. Ephorus, quoted by Strabo.

MILETUS, in ancient geography, a celebrated town of Asia Minor, on the confines of Ionia and Caria. It was the capital city of Ionia, and famous both for the arts of war and peace. It was situated about ten stadia south of the mouth of the Mzeander, near the sea-coast. It was founded by a Cretan colony under Miletus, the companion of Bacchus ; or, according to others, by Nileus the son of Codrus; or by Sarpedon a son of Jupiter. It has successively been

*called Lelegeis, Pithyusa, and Anactoria. The Milesii were very powerful, and long maintained an obstinate war against the kings of Lydia. They early applied themselves to navigation ; and planted no less than eighty colonies, or, ac- cording to Seneca, 380, in different parts of the world. It was taken by Alexander with much difficulty. It gave birth to Thales, Anaximancler, Anaximenes, and other great men. According to Virgil, it was noted for its excellent wool, and for a temple and oracle of Apollo Didymaeus. In this town St. Paul preached his farewell ser- mon to the elders of Ephesus. See Acts xx. 18 — 35. It is now called by the Turks Melas. MIL'FOIL, n. *. Lat. millefolium. Yarrow.*

Milfoil and honey-suckles pound, With these alluring savors strew the ground.

Dry den.

MILFOIL, or YARROW. See ACHILLEA. MILFORD, a town of Hillsborough county, New Hampshire, on the Sowhegan ; two miles south- west of Amherst, and forty-eight north- west of Boston. Population 1117. It

is a pleasant town, and contains two cotton manu- factories, and two houses of public worship, one for Congregationalists, and one for Baptists.

MILFORD HAVEN, one of the first harbours in Europe, and indisputably the best in Britain, js situated in Pembrokeshire in South Wales, and lies on the north side of the Bristol Channel. It is very large, safe, and deep; there is no dan- ger of going in or out with the tide, or almost with any wind. If a ship comes in without a cable or anchor, she may run ashore on the ooze, and there lie safe till she is refitted ; and in an hour she may get out of the harbour into the open sea. It is very convenient for ships bound from the English or Bristol Channels to Ireland, or farther west, and 1000 sail of any size may "ide secure in it. It has sixteen deep and safe creeks, five bays, and thirteen roads. The spring tide rises thirty-six feet; so that ships may at any time be laid ashore. Dale harbour is a -eady outlet for small vessels, where they may ride in two or three fathoms at low-water. In •he reign of queen Elizabeth, before the Spanish invasion, two forts were begun at the entrance of Milford Karen, one on each side, called Nangle and Dale blockhouses ; but they were not then finished. — The stack rock rises here above water, near the middle of the entrance between Nangle and Dale. Penermouth is the opening of that branch of the haven on which Pembroke is seated, and where the custom-house of Mil- ford is kept. The breadth of the entrance be- tween rock and rock is but 200 yards at high- water, and 112 at low-water. There is a ridge of rocky ground named Carrs, which runs almost across Milford Haven, from Peter church toward Llanstadwell, where it renders the land- ing-place difficult to strangers, from its not ap- pearing at low water. As this harbour lies near the mouth of the Severn, a ship in eight or ten hours may be over on the coast of Ireland, or off the I- and's End in the English Channel ; and a vessel may get out hence to the west much sooner than from either Plymouth or Falmouth. This harbour has been greatly improved by new works, at the expense of government. The par-

liament in 1759 granted £10,000 for fortifying the harbour of Milford, all of which was ex- pended on the fort of Neyland, which, however, still remains unfinished. A quay and several new buildings have lately been erected by a so- ciety of Quakers, who have established themselves here from America. It has a commodious cus- tom-house at the lower end of the town, which is independent of that of Pembroke, but the trade of the port is at present inconsiderable. This place has lately been established as one of his majesty's principal dock-yards for ship- building.

MILHAU, a town of France, in the depart- ment of the Aveyron, on the Tarn. Its manu- factures are of gloves, hats, and leather. Popu- lation 6100 : twenty-seven miles south-west ot Rhodez.

MILHAUD, or MILLAU, a very ancient town, the chief place of a sub-prefecture of the same name, in the department of the Aveyron in France, having an inferior court, a chamber of commerce, an agricultural society, and a com- munal college. It is a post-town, containing 6000 inhabitants. It stands in a fine valley on the right bank of the Tarn, a little below the spot where it joins the Gambie, and is sur- rounded by hills planted with peach and almond trees ; the houses are well built ; the streets, though narrow, are well ventilated, and adorned with sever?.! public fountains ; there is also a very pretty square, and some pleasant walks. This town was known in the time of Julius Caesar by the name of TEmilianum ; it was once fortified, and became one of the strongest places in the possession of the Calvinists : Louis XIII. however, having carried it by assault in the year 1629, caused its fortifications to be demolished. Manufactures are carried on here of cloth, serge, gloves, and chamois, white and other leathers; the inhabitants also trade in wool (raw and spun), leather, building wood, staves, cheese, wine, almonds, cattle, &c. It is the native place of general Solignac ; and is forty-two miles south- east of Rhodez, twenty-one north-east of St. Affrique, fifty-four south-west of Florae, and 456 S. S. E. of Paris.

MILIARENSIS, in antiquity, a silver coin of the empire, substituted by Constantine the Great in the room of the denarius; and so called because he fixed the price of the pound of gold at 1000 pieces of this new silver. But as he divided the pound of gold also into seventy-two solidi, each solidus really contained 13| milia- renses, though it passed for fourteen ; which dif- ference between the real and current value of the solidus, in relation to the miliarenses, must have occasioned disputes in the payment of small sums. To remedy this inconvenience, it was thought proper to alter the weight of the silver money, and, having fixed the price of the pound of silver at five solidi, to coin sixty pieces out of it, which retained the name miliarenses. though the pound of gold was worth but 864. It does not appear how many miliarenses Constantine coined out of the pound of silver ; but, if the piece of gold was nearly the same in his reign as when five solidi were worth a pound of sil- ver, the pound must have been worth 14| pounds

of silver; and 1000 divided by 14f gives 69$ for tlie number of miliarenses coined out of the pound. ^ Therefore it is probable that Con- stantine'snumberwas either sixty-nineor seventy.

MIL'IARY, adj. Fr. miliaire ; Lat. milium (millet). Small; resembling millet :

applied medically to small eruptions.

The scarf-skin is composed of small scales, between which the excretory ducts of the miliary glands open.

Cheytie,

MILIARY FEVER. See MIDWIFERY.

MILPCE, n. s. fr.milice. Standing force. A word, says Dr. Johnson, innovated by Tem- ple, but unworthy of reception.

The two-and-twentieth of the prince's age is the time assigned by their constitutions for his entering upon the public charges of their milice. Temple.

MILITANT, adj. Fr. militante ; Lat. mi- titans. Warlike; fighting; often applied to the spiritual warfare of the Christian church.

Against foul fiends they aid us militant ; They for us fight ; they watch and duly ward, And their bright squadrons round about us plant.

Spenser.

Then are the public duties of religion best or- dered, when the militant church doth resemble, by sensible means, that hidden dignity and glory where- with the church triumphant in heaven is beautified.

Hooker.

The state of a Christian in this world is fre- quently compared to a warfare : and this allusion has appeared so just, that the character of militant has obtained as the common distinction of that part of Christ's church sojourning here in this world, from that part of the" family at rest. Rogers.

MIL'ITAR, adj.) Fr. militaire; Lat. mili-

MIL'ITARY. $ tar is. Warlike; engaged as a soldier; soldierly. Militar is now wholly out of use.

In the time of Severus and Antoninus, many, being soldiers, had been converted unto Christ, and notwithstanding continued still in the military course of life. Hooker.

He will maintain his argument as well as any military man in the world. Shakspeare. Henry V.

Although he were a prince in militar virtue ap- proved, yet his cruelties weighed down his virtues. Bacon's Henry VII.

He was with general applause, and great cries of joy, in a kind of militar election or recognition, sa- luted king. Bacon.

Numbers numberless

The city gates out-poured, light-armed troops Tn coats of mail and military pride. Milton.

The wreathes his grandsire knew to reap

By active toil, and military sweat,

Pining incline their sickly leaves. Prior.

MILITARY AFFAIRS. In the time of the Anglo-Saxons the military force of England was in the hands of the dukes or heretochs, who were constituted through every province and county in the kingdom ; being chosen out of the principal nobility, and such as were most re- markable for being sapientes, fideles, et animosi. Their duty was to lead and regulate the English armies, with a very unlimited power ; prout eis visum fuerit, ad honorem coronse et utilitatem reuni. And they were elected by the people in their full assembly, or folkmote, in the same manner as sheriffs were elected ; following that old fundamental raaxim of the Saxon constitu- tion, that where any officer was entrusted with

such power as, if abused, might tend to the oppression of the people, that power was dele- gated to him by the vote of the people them- selves. The ancient Germans, the ancestors of the Saxons, had also their dukes, as well as kings, with an independent power over the mili- tary, as the kings had over the civil state. The dukes were elective, the kings hereditary, as appears from Tacitus. In electing their kings the blood-royal was regarded ; in choosing their dukes or leaders warlike merit; as Caesar relates of them, in his time, that whenever they went to war they elected leaders to command them. This large share of power thus conferred by the people, though intended to preserve the liberty of the subject, was detrimental to the preroga- tive of the crown ; and Edric, duke of Mercia, in the reign of Edmund Ironside, who by his office of heretoch was entitled to a large com- mand in the king's army, by his repeated treach- eries at last transferred the crown to Canute the Dane. It is agreed by all historians that king Alfred first settled a national force in England, and by his prudent discipline made all his subjects soldiers: but we are uninformed as to the particulars of his celebrated regulation ; though the dukes seem to have been left in possession of too large a power, which enabled duke Harold, on the death

of Edward the Con- fessor, though not of the royal blood, to mount the throne in prejudice of Edgar Atheling the rightful heir. Upon the Norman conquest the feudal law was introduced in all its rigor, and all the lands in the kingdom were divided into above 60,000 knight's fees ; and for every knight's fee a knight or soldier, miles, was bound to attend the king in his wars for forty days in a year ; in which time, before war was reduced to a science, the campaign was generally finished, and a kingdom either conquered . or victorious. By these means the king had, with- out expense, an army of 60,000 men always at his command. And accordingly we find a law of William I. which enjoins the personal attend- ance of all knights and others; quod habeant et teneant se semper in armis et equis, ut decet et oportet, &c. This personal service in time de- generated into pecuniary commutations or aids; and at last the military part of the feudal system was abolished at the restoration. In the mean- time, however, the kingdom was not left without defence, in case of insurrections or invasions. Besides those who by their military tenures were bound to perform forty days' service in the field. And now arose the coincidence between these tenures and our early militia laws ; the progress of which will be given in the following article.

When the nation was engaged in war, more ve- teran troops and more regular discipline were es- eemed necessary, than could be expected from a mere militia ; and therefore at such times more rigorous methods were adopted for raising armies, and for the due regulation and discipline of the soldiery. Martial law, Sir M. Hale observes, which is built upon no settled principles, but is entirely arbitrary in its decisions, is in truth no law, but something indulged rather than allowed as a law. The necessity of order and discipline in an army is the only thing which can give it

countenance; and therefore it ought not to be permitted in time of peace, when the king's courts are open for all persons to receive justice according to the laws of the land. Wherefore, Thomas earl of Lancaster being convicted at Pontefract 15 Edw. II. by martial law, his at- tainder was reversed, 1 Edw. III., because it was done in time of peace. And it is laid down, that if a lieutenant, or other that hath commis- sion of martial authority, doth in time of peace execute any man by color of martial law, this is murder; for it is against magna charta. The petition of right enacts that no soldier shall be quartered on the subject without his own con- sent ; and that no commission shall issue to pro- ceed within this land according

to martial. And whereas, after the Restoration, king Charles II. kept up about 50QO regular troops, by his own authority, for guards and garrisons, which James II. by degrees increased to no less than 30,000, all paid from his own civil list ; it was made one of the articles of the bill of rights that the rais- ing or keeping a standing army within the king- dom in time of peace, unless with consent of parliament, is against law. But as the keeping of standing armies (first introduced by Charles VII. in France, 1445) has of late universally pre- ' vailed over Europe, it has also for many years past been annually judged necessary by our le- gislature, for the safety of the kingdom, and the defence of the possessions of the crown of Great Britain, to maintain in time of peace a standing body of troops, under the command of the crown ; who are, however, ipso facto disbanded at the expiration of every year, unless continued by parliament. To keep this body of troops in order, an annual act of parliament passes, called the Mutiny Act, ' To punish mutiny and deser- tion, and for the better payment of the army and their quarters.' This regulates the manner in which they are to be dispersed among the several inn-keepers and victuallers throughout the king- dom : and establishes a law martial for their government. By this it is enacted that if any officer or soldier shall excite, or join any mutiny, or, knowing of it, shall not give notice to the commanding officer, or shall desert, or list in 'any other regiment, or sleep upon his post, or leave it before he is relieved, or hold correspond- ence with a rebel or enemy, or strike or use vio- lence to his superior officer, or shall disobey his lawful commands ; such offender shall suffer such punishment as a court-martial shall inflict, though it extend to death itself. However expe- dient the most strict regulations may be in time of actual war, yet, in times of profound peace, a little relaxation of military rigor would not be productive of much inconvenience. And, upon this principle, though, by our standing laws, de- sertion in time of war is felony without benefit of clergy, and the offence is triable by a jury, and before the judges of the common law, yet, by our militia laws, a much lighter punishment is inflicted for desertion in time of peace. But any of the faults above mentioned are, equally at all times, punishable with death itself, if a court martial shall think proper. This discre- tionary power of the court martial is indeed to be guided by the directions of the crown, which,

with regard to military offences, has almost an absolute legislative power. ' His majesty,' says the act, ' may form articles of war and constitute courts- martial, with power to try any crime by such articles, and inflict such penalties as the articles direct.' A vast and most important trust! an unlimited power to create crimes, and to annex to them any punishment not extending to life or limb ! These are indeed forbidden to be inflicted, except for crimes declared to be so punishable by this act. But as soldiers, by this annual act, are thus put in a worse condition than other subjects;

so, by the humanity of our standing laws, they are in some cases put in a better. By stat. 43 Eliz. c. 3, a weekly allow- ance is to be raised in every county for the relief of soldiers that are sick, hurt, and maimed : besides the benefit of the royal hospital at Chel- sea, for such as are worn out in their duty. Officers and soldiers, that have been in the king's service, are by several statutes entitled to use any trade or occupation they are fit for, in any town in the kingdom, except the two universi- ties. And soldiers in actual military service may make nuncupative wills, and dispose of their goods, wages, and other personal chattels, with- out those forms, solemnities, and expenses, which the law requires in other cases. See WAR.

MILITARY EXERCISE. See EXERCISE and MANUAL.

MILITARY MANCEUVRES. The military ma- noeuvres of our army might historically in- clude all the triumphs of the British arms. But they are taken technically for the entire detail of the exercise and movements of the military body ; and in this we understand very decided improvements are in agitation at the War Office. Our informant adds that the new book of Regu- lations may be expected to be issued monthly : we shall therefore refer the reader for a brief account of its contents, and a comparison of the ancient and modern manoeuvres, to the article WAR.

MILITARY TENURES. See FEUDAL SYSTEM and TENURE.

MILITARY WAYS, vise militares, are the large Roman roads which Agrippa procured to be made through the empire, in the time of Augus- tus, for the more convenient marching of troops and conveyance of carriages. N. Bergier has written the history of these military roads, which were paved from the gates of Rome to the ex- treme parts of the empire.

MILITES, adscriptitii, supernumerary, men that followed the Roman armies for the purpose of filling up any vacancies which might occur through death or sickness. No particular duties were exacted from them, except that of marching in front of the troops, in order to annoy the enemy with their cross-bows.

MILITES CAUSARII, among the Romans, sol- diers who were discharged on account of sick- ness, and inability to serve, or from some other cause.

MILITES CONSUMMATI, soldiers among the Romans who had served their prescribed period. They were also called emeriti.

MILITES MERCENARII, auxiliary troops, or soldiers, who were hired by the Romans in the

MILITIA.

time of war. Hence men hired to fight are called mercenaries.

MILITES PROVINCIALES," troops which com- posed the Roman legions, and consisted wholly of Romish citizens. The auxiliary troops were originally drawn out of the Italian provinces, that were in alliance with Rome ; and, when they afterwards became Roman citizens, soldiers were enlisted and paid from other countries. Thus, before Barbary fell under the Roman yoke, large levies were obtained from that quarter of the globe.

MILITES STATIONARII, bodies of armed men, among the Romans, who were distributed through the empire, in order to check disorders, prevent plunder, and so escort the guilty to the tribunals of justices.

MILITES SUBITARII, troops raised upon emer- gency, especially on the breaking out of unex- pected hostilities. On these occasions men of all ages were obliged to enrol themselves.

MILITES URBANI, a class of Roman soldiers, ov rather an armed portion of the inhabitants of Rome, which remained in the capital, without any particular mark of distinction among them- selves, in order to protect it during the absence of the regular troops, on the sudden commence- ment of hostilities. During the reign of the em- perors, these men became the janissaries of Rome, for they insensibly grew into so much impor- tance that they yielded in rank and considera- tion, as a body, to. the praetorian bands only. They had regular camps in the city, which were called castra urbana. They were in high favor with the emperors, and generally shared a large proportion of the legacies which were left by the former in their wills. The privates received half the pay and subsistence which were allowed the praetorian bands ; enjoyed exclusive privi- leges, and could only be commanded by the prefect of Rome.

The French, in imitation of the Romans, have called the different bodies of armed men oelonging to 'the several towns and districts, troupes urbanes, urban troops.

MILITIA, n. s. Lat. militia. The train- bands; a standing military force.

Let any prince think soberly of his forces, except his militia be good and valiant soldiers. Bacon.

The militia was so settled by law, that a sudden army could be drawn together. " Clarendon.

Unnumbered spirits round thee fly,

The light militia of the lower sky. Pope.

Thus nature's refuse, and the dregs of men,

Compose the black militia of the pen. Young.

The MILITIA, or standing national force of this country, is traced by most historians to king Alfred, who by his prudent discipline made all the subjects of his dominions soldiers.

The feudal military tenures soon became in- volved in this force : they were established for the purpose of protection, and sometimes of at- tack, against foreign enemies ; while for the fur- ther defence, in cases of domestic insurrections or foreign invasions, various other plans have been adopted, all of them tending to unite the character of a citizen and soldier. The legal authorities thus class them : — First the assise of arms, enacted 27 II. II., and afterwards the sta-

tute of Winchester, 13 Ed. I. c. 6, obliged every man, according to his slate and degree, to pro- vide a certain quantity of such arms as were then in use ; and it was part of the duty of con- stables under the latter statute to see such arms provided. These weapons were changed by stats. 4 and 5, P. & M. c. 2, into more modern ones; but both these provisions were repealed by stats. 1 Jac. 1, c. 25; 21 Jac. 1, c. 28. It was now usual, from time to time, for our princes to issue commissions of array ; the form of the commission was settled anno 5 Hen. IV., so as to prevent the insertion therein of any new penal clauses. Rushw. pt. 3, p. 662, 667. See 8 Rep. 375, 8tc. But it was also provided, by stats. 1 E. III. stat. 2, c. 5, 7, and 25 E. III. stat. 5, c. 8, that no man should be compelled to go out of the kingdom at any rate, nor out of his shire but in cases of urgent necessity ; hor should provide soldiers unless by consent of parliament. We first find lord-lieutenants of counties mention- ed as known officers in the stat. 4 and 5 P. & M. c. 3, though they had then not been long in use ; for Camden speaks of them, in the time of queen Elizabeth, as extraordinary magistrates constituted in times of difficulty and danger. But the introduction of these commissions of lieutenancy, which contained in substance the same powers as the old commissions of array, caused the latter to fall into disuse. Thus things continued till the repeal of the statutes of armour in the reign of king James I. ; after which, when king Charles I. had, during his northern expeditions, issued commissions of lieutenancy, and exerted some military powers which, having been long exercised, were thought to belong to the crown, it became a question in the long parliament how far the power of the militia did inherently reside in the king ; being now unsupported by any statute, and founded only upon immemorial usage. This question, long agitated with great heat and resentment on both sides, became at length the immediate cause of the fatal rupture between the king and his parliament: the two houses not only denying this prerogative of the crown, the legality

of which might perhaps be somewhat doubtful, but also seizing into their own hands the entire power of the militia, of the illegality of which step there could never be any doubt at all.

After the Restoration, when the military tenures were abolished, it was thought proper to ascertain the power of the militia, to recognise the sole right of the crown to govern and com- mand them, and to put the whole into a more regular method of military subordination. And the order in which the militia now stands by law is principally built upon the statutes 13 Car. II. c. 6 ; 14 Car. II. c. 3 ; 15 Car. II. c. 4 ; which were then enacted. It is true the two last of them are apparently repealed : but many of their provisions are re-enacted, with the addition of some new regulations, by subsequent militia laws; the general scheme of which is to disci- pline a certain number of the inhabitants of every county, chosen by lot, formerly for three, but now for five years (liable to be prolonged by the circumstance of the militia being called out and embodied), and officered by the lord-lieutt—

nant, the deputy lieutenants, and other principal landholders, under a commission from the crown. They are not compellable to march out of their counties unless in case of invasion or actual rebellion within the realm (or any of his majesty's dominions or territories, stat. 16 Geo. III. c. 3), nor in any case compellable to march out of the kingdom. They are to be exercised at stated times ; and their discipline in general is liberal and easy ; but, when drawn out into ac- tual service, they are subject to the rigors of the martial law, as necessary to keep them in order. This is the constitutional security which our laws have provided for the public peace, and for pro- tecting the realm against foreign or domestic vi- olence. See 1 Coram. 410, &c.

The last general acts, reducing into one all the laws relating to the militia, are 42 Geo. III. c. 90 for England, and c. 91 for Scotland ; these ascertain the particular quota to be raised in each county and district : but which has, from time to time, been augmented and altered by subsequent acts. It is provided that, in cases of actual in- vasion or imminent danger thereof, and in cases of rebellion and insurrection, his majesty may embody and increase the militia: and, if parlia- ment is not then sitting, they are to meet by proclamation in fourteen days. The militia of Ireland is regulated on principles nearly similar, by stat. 49 Geo. III. c. 120, amended by 53 Geo. III. c. 48; 54 Geo. III. c. 179, &c. The interchange of the British and Irish militia, so that each may serve in any part of the united kingdom, is

allowed and regulated under stats.

51 Geo. III. c. 118, 128; 54 Ge'o. III. c. 10 (a temporary act).

The wives and families of militia men are provided for, when requiring parish relief, under the acts 43 Geo. III. c. 47 for England; 43 Geo. III. c. 89 for Scotland; and 51 Geo. III. c. 78,

52 Geo. III. c. 28 for Ireland. The pay and clothing of all the militia is provided for by an- nual acts.

The militia having, under various temporary acts, volunteered into the regular army, from time to time, and being at length considered as peculiarly applicable to that purpose, it was found expedient ' that a local militia should be established, trained, and permanently maintained, to be called forth and employed in case of inva- sion in aid of the regular forces for the defence of the realm.' This was accordingiy effected, first as to England by 48 Geo. III. c. Ill, and after- wards for Scotland by 48 Geo. III. c. 150. These acts are amended by several subsequent ones ; but the system has never been extended to Ireland.

The militia of the city of London is regulated I y stats. 36 Geo. III. c. 92, and 39 Geo. III. c. 3 ' ; and that of the Tower Hamlets by 37 Geo. lll.c. 25, 75, 53 Geo. III. c. 132.

U ith respect to the militia of the cinque ports

e 42 Geo. III. c. 90, § 155, referring to 13 and M Cr.r. II. c. 2 and 15 Car. II. c. 4. See also 43 Gnr,. HI. c. 10o.

MILIUM, millet, in botany, a genus of the digynsa order, and triandria class of plants ; natural order fourth, gramina: CAL. bivalved, and uniflorous : COR. very short; stigmata pencil-

like. There are eight species; of which the most remarkable is the

M. panicum, common millet, a native of India, but now commonly cultivated in many parts of Europe as an esculent grain. It rises, with a reed-like stalk, three or four feet high, and channelled : at every joint there is one reed-like leaf, which is joined on the top of the sheath, and embraces and covers that joint of the stalk below the leaf; this sheath is closely covered with soft hairs, but the leaf which is expanded has none. The top of the stalk is terminated by a large loose panicle, which hangs on one side, having a chaffy flower, which is succeeded by a small round seed. There are two varieties; one with white, and the other with black seeds ; but they differ in no other particular. This plant is seldom cultivated in Britain but

in small gar- dens, for feeding poultry ; the seeds generally ripen well. They must be sown in the beginning of April, upon a warm dry soil, but not too thick, because the plants divide into several branches, and should have much room. When they come up they should be cleaned from weeds , after which they will in a short time get the bet- ter of them, and prevent the future growth. In August the seeds will ripen, when the plant must be cut down, and the seeds beaten out, as is practised for other grain ; but, if it is not pro- tected from birds, they will devour it as soon as it begins to ripen.

MILK, n.s. &u. a. MILK'EN, adj. MILK'ER, n. s. MILK'INESS,

MlLK'LIVERED, adj.

MILK'MAID, n. s.

MILK'MAN,

MILK'PAIL,

MILK'PAN,

MILK'POTTAGE,

MILK'SCORE,

MILKSOP,

MILK'TOOTH,

MILK'THISTLE,

MILK'VETCH,

MILK'WEED,

MILK'WHITE, adj.

MILK'WORT, n.s.

MILK'WARMER,

Sax. meelc, mile ; Goth, mialk ; Tent. melch ; Dan. and Belg. melk. The liquor with which the mammalia supply their young; hence a name some- times given to the white juice of certain plants : •as a verb, to draw or suck out milk: milken and milky mean, con- sisting of, resembling, or yielding milk; and metaphorically, soft, tender, gentle : a milker is one who draws off the milk from animals : milklivered, cowardly, timorous : a milkman

and milkmaid are deal-

Mi LK'Y, adj.

MILK'YWAY, n. s. ers in milk : milksop, a spiritless, effeminate man : milk-tooth, an early kind of foal's tooth, see be- low : milk-thistle, milk-vetch, and milk-weed, are plants : milk-wort, a flower : milky-way, the galaxy ; that part of the heavens which appears of a confused milky whiteness, from the abun- dance of its stars.

She a black silk cap on aim begun To set, for foil of this mittwhite to serve.

Sidney.

Of a most notorious thief, which lived all his life- time of spoils, one of their bards will say, that he was none of the idle milksops that was brought up by the fire-side, but that most of his days he spent in arms, and that he did never eat his meal before lie had won it with his sword. Spenser.

Come to my women's breasts,

And take my milk for gall. Zhakspeare. Macbeth.

MIL

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MIL

I fear thy nature,

It is too full o' the milk of human kindness To catch the nearest way. Id. King Lear.

I have given suck, and know How tender 'tis to love the babe that milht me.

Sliakfpeare. Milklioered man ! That bear'st a cheek for blows, and head for wrongs.

Id.

A milksop, one that never in his life Felt so much cold as over shoes in snow. Id.

The bolt of Cupid fell, It fell upon a little western flower ; Before milkwhite, now purple with love's wound ; And maidens call it love in idleness. Id.

This milky gentleness and course of yours, You are much more at task for want of wisdom, Than praised for harmful mildness. Id.

Pistachoes, so they be good and not musty, joined with almonds in almond milk, or made into a milk of themselves, like unto almond milk, are an excellent nourisher. Bacon.

Sir Fulke Grevil had much and private access to Queen Elizabeth, and did many men good ; yet he would say merrily of himself, that he was like Robin Goodfellow ; for when the maids split the milkpant, or kept any racket, they would lay it upon Robin : so what tales the ladies about the queen told her, or other bad offices that they did, they would put it upon him. Bacon's Apophth.

Some stars there are in our hemisphere, like those little sparkles in the galaxy, or milky circle, wherein ye can scarce discern any light. Bp. Hall.

Perhaps my passion he disdains, And courts the milky mothers of the plains.

Roscommoii.

Illustrious robes of satin and of silk, And wanton lawns more soft and white than milk.

Beaumont.

The remedies are to be proposed from a constant course of the milken diet, continued at least a year.

Temple.

When milk is dried with heat, In vain the milkmaid tugs an empty teat.

Dry den.

His kine with swelling udders ready stand, And lowing for the pail invite the milker's hand.

Id.

Would I could share thy balmy, even temper, And milkiness of blood ! Id. Cleomenes.

A milkwhite goat for you I did provide ; Two milkwhite kids run frisking by her side.

Dry den.

For breakfast and supper milk and milkpottage are very fit for children. Locke.

A lovely milkmaid he began to regard with an eye of mercy. Additon.

He is better acquainted with the milkscore than his steward's accounts. Id.

But give him port and potent sack ; From milksop he starts up mohack. Prior. Some plants upon breaking their vessels yield a milky juice. Arbuthnot on Aliments.

Even your milk'coman and your nursery-maid have a fellow-feeling. Id. History of John Bull.

Broths and mt'/fc-meats are windy to stomachs troubled with acid ferments.

Flayer on the Humours.

The saltness and oyliness of the blood absorbing the acid of the chyle, it loses its milkiness. Floyer.

Milkteeth are those small teeth which come forth before when a foal is about three months old, and which he begins to cast about two years and a half after, in the same order as they grew. Farrier.

Nor need we with a prying eye survey The distant skies to find the milky-way : It forcibly intrudes upon our sight. Creech.

Capacious chargers all around were laid Full pails, and vessels of the milking trade. Pop.*

Not tasteful herbs that in these gardens rise. Which the kind soil with milky sap supplies, Can move the god. Id.

How many stars there must be, a naked eye may give us some faint glimpse, but much more a good telescope, directed towards that region of the sky called the milhy-way. Cheyne.

That very substance which last week was grazing in the field, waving in the milkpail, or growing in the garden, is now become part of the man.

Watts's Improvement of the Mind. O, bid him save their harmless lives, Frae dogs, an' tods, an" butchers' knives ! But gie them guid cow-mi/A their fill. Till they be fit to fend themsel. Burns.

MILK is a well known nutritious fluid, natu- rally formed in the breasts of women, and ud- ders of other females, for the nourishment of their young. It consists of three parts, viz. the caseous, butyrous, and serous. The first comprehends the grosser earthy particles, which serve to sus- pend the butyrous part ; and which, when coaeu- lated by art, are formed into cheese. The second ingredient comprises the oily particles, or cream, which float on the surface of the milk, and can by agitation be converted into butter. The serous is the watery part which constitutes whey. The most wholesome milk is that which contains a due proportion of these three con- stituent parts. The milk of women, mares, and asses, nearly agree in their qualities, being very dilute, sweet though ascescent, and, when coagu- lated, easily broken down. The milk of cows, goats, and sheep, possesses properties widely dif- ferent. Of these, cows' milk approaches nearest to that of the human breast. But the milk of goats is of a peculiar nature ; as its oily and co- agulable parts do not separate spontaneously, throw up no cream, and yield no butter. That of sheep is rich and nourishing ; produces abun- dance of butter, but too unpalatable for use. Both these fluids afford a large proportion of strong and tough cheese. Cows' milk forms a very essential part of human sustenance, being adapted to every state of the body, but particu- larly to infants, after being weaned. It shoulJ therefore be drawn from sound, young, and healthy animals; as it is most nutritious when these are between three and four years old. Goats' milk is totally divested of smell, and per- fectly white; and although, in general, when used medicinally, or by adults, it ought to be taken undiluted, yet the addition of a little water renders it more easily digestible by the in- fantine stomach.

MILK, in the wine trade, makes an efficacjous forcing for the fining down of all white wines, arracks, and small spirits ; but it is by no means to be used for red wines, because it discharges their color. Thus, if a few quarts of well-skimmed milk be put to a hogshead of red wine, it will soon precipitate the greater part of the color, and leave the whole nearly white; and this is of known use in the turning red wines, when pricked, into white ; in which a small degree of

acidity is not so much perceived. Milk, is, frjm this quality of discharging color from wines, of use also to the wine-coopers, for whitening wines that have acquired a brown color from the cask, or from having been hastily boiled before fer- menting; for the addition of a little skimmed milk, in these cases, precipitates the brown color, and leaves the wines almost limpid, or of what they call a water-whiteness, which is much admired

abroad, in wines as well as in brandies. MILK, MEDICINAL QUALITIES OF. Dr. Cul- len reckons milk an intermediate substance be- tween animal and vegetable substances ; as well as between the chyle taken up from the intestines and the fully elaborated animal fluid. He ob- serves that milk is suited to almost all tempera- ments ; and it is even so to stomachs disposed to acescency, more than those substances which have undergone the vinous fermentation ; it cures the heart-burn, checks vinous fermentation, and precipitates the lees, when, by renewal of fer- mentation, the wine happens to be fouled. Tt therefore very properly accompanies a great deal of vegetable aliment ; although sometimes its as- cescency is troublesome, either from a large pro- portion taken in, or from the degree of it. It is reckoned among those foods which occasion cos- tiveness. Hoffman, in his experiments on milk, i'ound that all kinds of it contained much water; and, when this was dissipated, found the re- siduum very different in solubility. Milk re- quires only a small exertion of the animal powers for its assimilation. In hectic complaints there is wanted an oily, bland food, approaching the animal nature; on these accounts milk is a diet peculiarly adapted to them, and, in general, to most convalescents, but chiefly those of inflam- matory temperaments. Physicians have generally recommended boiled milk in preference to fresh, because milk kept for some time exposed to the air has gone so far to a spontaneous separation; whereas the heat thoroughly blends the whole; hence its resolution is not so easy in the stomach; and thus boiled milk is more costive than raw, and gives more faeces. Again, when milk is boiled, a considerable quantity of air is detached, as appears from the froth on the surface ; and air is the chief instrument of fermentation in bodies; so that after this process it is not so liable to acescency : for these reasons it is proper for the robust and vigorous. Another difference of milk is, according as it is fluid or coagulated. The coagulated is of two kinds, as induced by rennet, or the natural acescency of the milk. The former preparation makes the firmer and less easily soluble coagulum ; though, when taken with the whey unseparated, it is less difficult of solution, though more so than any other coagulum in the same case. Many nations use the latter form, which is easier soluble, but very much acescent, and therefore, in point of solution, should be confined to the vigorous, in point of acescency,

to those who live on alkalescent food ; and, in the last case, the Laplanders use it as their chief acescent condiment. From the same con- siderations it is more cooling, and in its other effects like all other acescent vegetables.

Dr. James Anderson, in his View of the Agri- culture of the County of Aberdeen, has the fol- lowing remark on the proper method of keeping milk and butter, which we quote, as it may prove useful. ' The pernicious practice,' says he, 'of keeping milk in leaden vessels, and salt- ing butter in stone jars, begins to gain ground among some of the fine ladies in this

county, as well as elsewhere, from an idea of cleanliness. The fact is, it is just the reverse of cleanliness; for, in the hands of a careful person, nothing can be more cleanly than wooden dishes; but under the management of a slattern they discover the secret which stone dishes indeed do not. In return, these latter communicate to the butter and the milk, which has been kept in them, a poisonous quality, which inevitably proves destructive to the human constitution. To the prevalence of this practice I have no doubt we must attribute the frequency of palsies, which begin to prevail so much in this kingdom ; for the well known effect of the poison of lead is bodily debility — palsy — death !'

In Ireland, instead of collecting cream from day to day until a sufficient quantity is procured, as the practice is in this country, they churn the whole of the milk together. Thus, in summer, it is prepared in one or two days at most ; and, it is worthy of remark, that the butter made in the hottest weather in Ireland is as completely cured for exportation as that which is made in autumn. Hence the advantages of the Irish dairies over those in England arise, not from the climate or soil, for they are nearly the same ; nor from the slock, for that in Ireland is greatly inferior to the stock in England, and the best breed they have is in England ; certainly, then, the difference must arise in the manufacturing only.

MILK- VETCH. See ASTRAGALUS.

MILK-VETCH, BASTARD. See PHACA.

MILKWORT is a species of euphorbia.

MILKWORT. See POLYGALA.

MILKY WAY. See ASTRONOMY.

MILL (John), D. D., a very learned divine, born at Shap in Westmoreland, about 1645. He was a servitor of Queen's College, Oxford ; and, on his entering into orders, became an emi- nent preacher, and was made prebendary of Exeter. In 1681 he was created D.D., and ap- pointed chaplain in ordinary to king Charles II. ; and in 1685 he was elected principal of St. Ed- mond's Hall in Oxford. His edition of the Greek Testament, which renders his name memorable, was published about a fortnight be- fore his death, which happened in June 1707 Dr. Mill was employed thirty years in preparing this edition.

Sax. myln ; Dan. mcclle ; Belg. molen mculen ; Ital. and Span, molina muela ; V> Wei. melen; Lat. I mola ; Or. /ivXij. An I engine for grinding; I applied also in fen J countries to drainage-

MILL, n. .«. & v. a.

MILL'COG, n. s.

MILL'DAM,

MILL'-HORSE,

MILL'-STONE,

MJLL'-TEETU,

MIL'LER,

M i L'LER'S -THUMB.

MILL'-WORK.

engines of a similar form : to mill is to grind or beat small ; also, probably from the over- whelming force employed, to stamp coin : the mill-cog is the wheel-cog : mill-dam the mound by which water is kept up for the use of a mill : mill-teeth, the denies molares, or grinders : a miller, the manager or proprietor of a mill : mil- ler's-thumb, a small fish, also called a bull's-head : mill-work, the machinery belonging to a mill.

No man shall take the nether or the upper mill- stone to pledge. Deut. xxiv. 6.

The table, and we about it, did all turn round by water which ran under, and carried it about as a. mill.

Sidney. A mill-horse, still bound to go in one circle. Id.

More water glideth by the mill Than wots the miller of. Shakspectre.

What use were there of the grain, but for the edge of the sickle, wherewith it is cut down ; the stroke of the flail, wherewith it is beaten ; the weight and attrition of the mill, wherewith it is crushed ; the fire of the oven, wherewith it is baken 1

Bp. Hall.

Gillius, who made enquiry of millers who dwelt upon its shore, received

answer, that the Euripus ebbed and flowed four times a day. Browne.

Olives ground in mills their fatness boast.

Dry den.

The timber is useful for mill-cog. Mortimer. A layer of lime and of earth is a great advantage in the making heads of ponds and mill-dams. Id.*

It would be better for your milled medals, if they carried the whole legend on their edges ; but, at the same time that they are lettered on the edges, they have other inscriptions on the face and the reverse.

Addison.

The best instruments for cracking bones and nuts are grinders or mill-teeth. Arbuthnot on Aliments.

A miller had his arm and scapula torn from his body by a rope twisted round his wrist, and suddenly drawn up by the mill. Sharp's Surgery.

Wood's half-pence are not milled, and therefore more easily counterfeited. Swift.

Not so where, scornful of a check, it leaps The mill-dam, dashes on the restless wheel, And wantons in the pebbly gulf below : No frost can bind it there. Cowper.

Tis here ; this oval box, well filled With best tobacco finely milled, Beats all Anticyra's pretences To disengage the encumbered senses. Id.

ˆEsop's beasts saw further into a mill-stone than our mobile. L' Estrange.

A MILL is a machine for grinding corn, &c., of which there are various kinds, according to the different methods of applying the moving power ; as water-mills, wind-mills, mills worked

by hoises, &c. The first obvious method of re- ducing corn into flour for bread, was by the sim- ple expedient of pounding ; which was for ages practised by the various descendants of Adam, and even continued in use among the Romans below the reign of Vespasian. But the process was very early improved by the application of a grinding power, and the introduction of mill- stones. This was equally known in the east and west. The Gauls and Britons were fa- miliarly acquainted with the use of hand-mills before their conquest by the Romans ; the Bri- tons particularly distinguishing them, as the Highlanders and we do at present, by the ap- pellation of

querns, carnes, or stones. And to these the Romans added the very useful inven- tion of water-mills. These machines were com- mon in the country at the conquest of Lancashire. That the Romans introduced these, with their other refinements among us, the British appella- tions of a water-mill seem to prove ; the melin of the Welsh and Cornish, the mul, meill, and melin of the Armoricans, and the Irish muilean and muiland, being all evidently derived from the Roman mola and molendinum. The Britons universally adopted the Roman name, but ap- plied it, as we do, only to the Roman mill ; and one of these was probably erected at every sta- tionary city in the kingdom. One (says Mr. Whitaker) plainly was at Manchester, serving equally the purposes of the town and the accom- modation of the garrison. And one alone would be sufficient, as the use of hand-mills remained very common in both, many having been found about the site of the station particularly; and the general practice having descended among us nearly to the present period. Such it would be peculiarly necessary to have in the camp, that the garrison might be provided against a siege. And the water-mill at Manchester was fixed immediately below the Castle Field and the town, and on the channel of the Medlock. There, a little above the ancient ford, the sluice of it was accidentally discovered about thirty years ago. On the margin of Dyer's Croft, and opposite to some new constructions, the current of the river accidentally swelled with the rains, and, obstructed by a dam, broke down the northern bank, swept away a large oak upon the edge of it, and disclosed a long tunnel in the rock below. This has been since laid open in part with a spade. It appeared entirely un- covered at the top, was about a yard in width, and another in depth, but gradually narrowed to the bottom. The sides showed every where the marks of the tool on the rock, and the course of it was parallel with the channel. It was bared by the flood about twenty-five yards only in length, but was evidently continued for several yards farther ; having originally begun, as the na- ture of the ground evinces, just above the large curve in the channel of the Medlock.

MILL WORK. Some of the principal mecha- nical arrangements employed for communicating

motion, in the construction of a mill, have already been examined under the head of MECHANICS; and the formation of COTTON and FLAX mills have been discussed in the articles devoted to those subjects. We are now, however, to examine those branches of the mill-wright art, which lead to a more practical acquaintance with the con- struction of wheels.

A mill, in the proper sense of the word, sig- nifies a machine for grinding corn ; though, in a more general sense, it is applied to all machines which have a horizontal circulatory motion. Mills are distinguished by particular names, sometimes taken from the powers by which they are moved, and sometimes from the uses to which they are applied. Hence they are called hand-mills, horse-mills, water-mills, fulling- mills, wind-mills, corn-mills, boring-mills, &c.

It may be advisable, prior to our entering upon the formation of the teeth of wheels, to furnish a general definition of the terms most commonly in use :

Cog-wheel is the general name of any wheel which has a number of teeth or cogs placed round its circumference.

Pinion is a small cog-wheel that has not in general more than twelve teeth ; though, when two toothed wheels act upon one another, the smallest is not unfrequently distinguished by this term ; as is also the trundle, lantern, or wallower, when talking of the action of two wheels.

Trundle, lantern, or wallower, is sometimes used in lieu of a pinion.

When the teeth of a wheel are made of the same material, and formed of one piece with the body of the wheel, they are called teeth ; when of wood, or some other material, and affixed to the outer rim of the wheel, cogs ; in a pinion they are called leaves ; in a trundle, staves.

When speaking of the action of wheel-work, in general, the wheel which acts as a mover is called the leader, and the one upon which it acts the follower.

If a wheel and pinion are to be so constructed that the one shall give, and the other receive impulse, so that the pinion shall perform four revolutions in the time that the wheel is per- forming one, they must be represented by two circles, which are in proportion to each other as 4 is to 2. When these two circles are so placed that their outer rims shall touch each other, a line drawn from the centre of the one to the centre of the other, is termed the line of centres ; and the radii of the two circles, the proportional radii. These circles are sometimes called pro- portional circles ; but by mill-wrights in general, pitch lines.

The teeth, which are to communicate motion, must be formed upon these two circles. The distance from the centres of two circles to the extremities of their respective teeth, is called the real radii ; and in practice the distance between the centres of two contiguous teeth, that is, the distance from the centres of two teeth mea- sured upon their pitch line, is called the pitch of the wheel. The straight part of a tooth, which receives the impulse,

is called a flank; and the curved part, that imparts the impulse, the face.

Two wheels acting upon one another in the same plane, having their axes parallel to each other, are called spur geer; when their axes are at right, or other angles, bevelled geer.

If two cylinders be placed in close contact, motion cannot be communicated »o the one without that motion, by means of the irregulari- ties of their surfaces, being communicated to the other, and the smaller cylinder shall perform exactly as many revolutions, to one revolution of the larger cylinder, as the larger cylinder con- tains upon its circumference so many measured circumferences of the smaller cylinder.

Wheels, however, which act by their surfaces only, are ill calculated to transmit motion to any considerable extent, as the motion which the follower has acquired is not of sufficient power to overcome the great resistance which would, in such case, be opposed to it ; consequently it becomes necessary to have projections or teeth, and that form of the teeth will be the best which causes the wheel to act as though the motion were communicated by contact of the pitched lines. See WHEEL WORK.

Spur geer. If the three circles 1, 2, 3, fig. 1, plate I, MILL WORK, in contact with the point a, be made to revolve about their centres, so that they shall continually touch at the point a, their motions will be similar to what would have been generated by one communicating motion to the other two by contact ; and circle 3 will move as though rolling on the external surface of circle 1, and internal surface of circle 2, and consequently become the generating circle of the exterior epicycloid on circle 1, and the generating circle of the interior epicycloid on circle 2. As the diameter of circle 3 is equal to the radius of circle 2, the interior epicycloid will be a straight line passing through B, the centre of circle 2 ; and, supposing the point a to have performed that portion of a revolution which places it at K, a portion of the exterior epicycloid will be represented by the line EK, and a portion of the interior er ˆcycloid by DK. Therefore, as the epicycloids, I K and E K, are both generated by one motion of the same point on the same circle, they will continually touch at the generating point, and the total surface of E K will pass over the total surface of D K ; and if the epicycloid E K be affixed to the external surface of circle 1, and act upon the portion of the epicycloid DK, it will transmit motion to circle 2, as though that motion were communi- cated by contact of the pitch lines; which proves that EK presents us with the best form of tooth, and which tooth would, when acting upon the radii of the wheel to be driven, move it as though the motion were communicated by contact.

Fig. 2 represents a mode of forming the teeth of wheels when they are to

act upon a trundle. Circle 1 represents the pitch line of the wheel ; and circle 2 the pitch line of the trundle ; which are supposed to act by contact at the point a. When a arrives at a1, it will have traced that portion of an epicycloid represented by a1 a2; and, as a is the generating point of the epicycloid, the distance from a to a1, and from a to a1, will be equal ; and the epicycloid a1 a8, being gene- rated by the proportional circle or pitch line of

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PLATE I.

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MILL WORK.

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the trundle, presents us with the most proper form for the tooth of a wheel that is to drive a rundle with circular staves posited in its pitch jne.

We shall now proceed to the practical mode of applying these rules. Let circle 2 be the pro- portional circle or pitch line of a trundle ; and circle 1 the pitch line of a wheel which is to drive that trundle; and by the revolutions of these two circles let the portion of an epicycloid, a1 a3, be generated, so that when a line is drawn from a3 to the centre of circle 1, it will intersect that circle at b, whose distance from a1 is such, that, when the semi-diameter of a staff of the trundle is subtracted from it, the remainder will be equal to half the intended thickness of the tooth of the wheel. Set off perpendicularly to the epicycloid inwards the semi-diameter of one of the staves, at so many points that you will be able to trace through the points thus set off a line parallel to the epicycloid a1 as, which line will be the face of the tooth»of the wheel, being less than the tooth formed by the epicycloid a1 a3 by the semi-diameter of a staff of the trundle : indeed the diminution must be rather more, as the width, gg, must be made sufficient for the staves to clear themselves, as the whole of the epicycloidal line must act upon their surface.

To describe the teeth of a wheel for a trundle, by means of circular arcs, let us suppose AB, fig. 3, to be the line of centres, C D the pitch line of the wheel, E F the pitch line of the trun- dle, and the centre of the staff G to be in the line of centres AB; then, by placing one foot of the compasses in the centre of the staff G, we can describe the arc m n, which is the form of the face of a tooth, sufficiently near that of an epicycloid for common

purposes.

To find the form for the teeth of a wheel, and the leaves of a pinion, which are to act together, we must set off on the pitch lines the points m n a, and p q r, &c., fig. 4, according to the proper thickness of, and distance between, the teeth and leaves, and from these points draw radii to serve as the flanks of the teeth. The spaces must be of sufficient depth to allow for the action of the curved part of the teeth and leaves.

Then, with the generating circle 1, whose diameter is equal to the proportional radius of the pinion, describe upon the extremities of the sides of each tooth, and upon the circumference of the proportional circle of the wheel as a base, the epicycloids ab,bn; and, with the generating circle 2, describe upon the proportional circle of the pinion as a base the epicycloid q D, which will give the required form of the teeth and leaves.

For, if the projecting epicycloid a b push against the radius/r of the proportional pinion, the wheel and pinion will move with equal ve- locity : and a similar effect will be produced by the epicycloid p D being pushed by the radius o m of the wheel towards the line of centres.

When one wheel is to conduct another, it is not necessary that the wheel to be conduced should have teeth of an epicycloidal form ; and, were the teeth not subject to wear by friction, there would be no occasion to extend the teeth of thp conducted wheel beyond the pitch line ;

but, such being the case, it becomes necessary to form the teeth of the conducted wheel in the manner represented in fig. 5 by the dotted lines.

Mr. Buchanan, in his Essay on the Teeth of Wheels, objects to this mode of forming the teeth of the conducted wheel, and recommends that a trundle, or wheel with cylindrical staves, should be adopted, as it will be less acted upon in approaching the line of centres, and conse- quently have less friction than a pinion or wheel the sides of whose teeth tend to the centre.

‘ This will appear,’ says he, ‘ by fig. 6, which represents a staff a of a trundle, and a leaf b of a pinion, turning round on the same centre A, and a tooth adapted to each, turning on a com- mon centre B. The thickness of each of the teeth, and the proportional circle of both wheels, are the same, and the proportional circles of the pinions are also equal, and teeth are each made of the greatest length which the intersection of the curves will admit, which turns out consider- ably greater in the tooth adapted to the staff. The shaded parts represent the tooth adapted to, and acting upon, the staff; and the dotted lines represent the tooth adapted to, and acting upon, the leaf. The teeth, in both cases, are repre- sented as just at the point

where they would cease to move the leaves or staff uniformly ; and it appears the staff is conducted considerably further beyond the line of centres than the leaf; hence the staff will be less acted upon in ap- proaching the line of centres.'

As the trundle in common use is very weak and imperfect, Mr. Buchanan conceived that a wheel might be made which would combine the advantages of both the pinion and trundle ; and accordingly had some wheels made, which ap- peared to answer every expectation.

' These wheels,' says he, ' were made of cast iron ; they were each cast of one solid mass. Fig. 7 represents the edge view, and fig. 8 a section of one of them ; whereby is shown the manner in which the teeth are supported like the staves of a trundle at each end, and like the leaves of a pinion at the roots, but so very thin there as to run no risk of having the common fault of pi- nions just now noticed. I mentioned,' he con- tinues, ' in cases where the pinion had few teeth, that in the conductor, whether wheel or pinion, staves should be preferred ; but it is ob- vious that the method ju?? described, of making a small trundle of cast ir >u, would not apply to a wheel of a great number of staves. Nor is it in that case so necessary ; as the greater the number of teeth are, the longer they will be in losing their proper figure. In such cases, therefore, staves, strictly speaking, should not be used, but teeth made so as to produce the same effect ; that is, having their acting parts of the figure of a staft. What is meant will be better understood by in- specting fig. 9, where the lines show the altera- tion necessary on the tooth A, in order to make it produce the effect of a staff; which staff is represented by the faint dots. The dotted lines on d represent the alteration requisite to adapt it to the staff; it being necessary, as formerly proved, to have it a different epicycloid from what is required to adapt it to a tooth whose acting part is a straight line, tending to the centre of its proportional circle.'

' Teeth,' says Mr. Tredgold, ' seem to be very well adapted for various purposes, when formed on the principle recommended in the preceding article. I therefore will endeavour to show a simple method of desciibing such teeth. It must be observed, that the teeth, to resemble staves, are to be always on the conducted wheel or pi- nion; thus affording the peculiar advantage of the wheel and trundle in either increasing or di- minishing velocity.

' Let the teeth be divided as usual on the pitch lines EE, FF, fig. 10; and on

the conducted wheel C describe circles, as though they were to be staves. Conceive the centre of one of these staff teeth to be in the line of centres at A, and draw the line A B joining the centres of the staff teeth. Then the radius A b, from the centre A, will describe the curved side b c of the tooth of the conductor, and the curved part b a of the conducted wheel. And since this radius is equal to the pitch diminished by half the diameter of the circle of the staff teeth, and the centres will always be in the pitch lines of the wheels, all the other teeth may be easily described.'

When a pinion is to act internally, as in fig. 1 plate 2, it is evident that the teeth may be formed on the principles already laid down, with this difference only, that the epicycloid, gener- ated by the proportional circle of the pinion upon that of the wheel, should be an interior epicy- cloid. The internal pinion may be adopted in many cases with advantage, as it has less friction than the external one.

To illustrate this, let A, fig. 2, be the pitch line of a wheel, B that of an internal pinion, and c that of an external pinion. Suppose the circle A to be moved till the point a arrives at b, and that the points c, d, in the circles B, C, have both moved over a space equal to a, b. Now it is evident that the distance from c to b is much less than that from b to d, and, conse- quently, had the circles moved one another by means of teeth, a tooth of the interior circle B, in the same part of a revolution, would have slid over a smaller part of a tooth of the circle A than a tooth of the exterior circle C, and there- fore would have had less velocity. But, other things being equal, the less the velocity, the less the friction ; an interior pinion has consequently less friction than an exterior one.

It is upon this principle that bevelled wheels have less friction than external spur wheels ; bevelled wheels acting in a mean situation be- tween external and internal spur wheels.

The rack and pinion should be made on the principles of spur geers ; with this difference only, that, in forming the teeth, the cycloid is, for reasons obvious from its definition, used in place of the epicycloid.

Dr. Johnson gives this definition of the cy- cloid : — ' A geometrical curve, of which the genesis may be conceived by imagining a nail in the circumference of a wheel : the line which the nail describes in the air, while the wheel revolves in a right line, is the cycloid.'

Thus A B C, fig. 3, is a cycloid generated by 'he point a in the circle D, while it revolves in :he ri^ht line A C.

Fig. 4 represents the teeth of a rack and

pinion, formed in what seems the best mode, in cases where a great weight is attached to the rack. The leaves of the pinion are made as long as the curve will admit, in order to prevent them from beginning to act before they arrive in the line passing through the centre of the pinion, perpendicular to the rack. Were they to act much before they arrived in that line, which may be considered as the line of centres, and against a very great weight, they would be apt to jam, and run the risk of their being broken, or at least very much increase the friction.

Mistaken attempts at economy have often prompted the use of wheels of too small diame- ter. This is an evil which ought carefully to be avoided. Knowing the pressure on the teeth, we cannot, with propriety, reduce the diameter of a wheel below a certain measure.

Suppose, for instance, a water-wheel of twenty horses' power, moving at the pitch line with a velocity of three feet and a half per second : it is known that a pinion of four feet diameter might work into it without impropriety ; but we also know that it would be exceedingly improper to substitute a pinion of only one foot diameter, although the pressure and velocity at the pitch lines in both cases would be, in a certain sense, the same. In the case of the small pinion, how- ever, a much greater stress would be thrown on the journeys (or journals) of the shaft. Not, in- deed, on account of torsion or twist, but on account of transverse strain, arising as well .from greater direct pressure as from the tendency which the oblique action of the teeth, particu- larly when somewhat worn, would have to pro- duce great friction, and to force the pinion from the wheel, and make it bear harder on the journals. The small pinion is also evidently liable to wear much, on account of the more frequent recur- rence of the friction of each particular tooth.

That these observations are not without foun- dation is known to mill-wrights of experience. They have found a great saving of power by al- tering corn mills, for example, from the old plan of using only one wheel and pinion (or trundle) to the method of bringing up the motion by means of more wheels and pinions, and of larger diameters and finer pitches. The increase of power has often, by these means, been nearly doubled, while the tear and wear has been much lessened ; although it is evident the machinery, thus altered, was more complex.

The due consideration of the proper communi- cation of the original power is of great import- ance for the construction of mills on the best principles. It may easily be seen that, in many cases, a. very great portion of the original power is expended before it is actually applied to the work intended to be performed.

Notwithstanding the modern improvements in this department there is still much to be done. In the usual modes of constructing mills due at- tention is seldom given to scientific principles. It is certain, however, that, were these principles better attended to, much power that is neces- sarily expended would be saved. In general this might be in a great measure obtained by bringing on the desired motions in a gradual manner, beginning with the first very slow, and

gradually bringing up the desired motions by wheels and pinions of larger diameters. This is a subject which should be well considered be- fore we can determine, in any particular case, what ought to be the pilch of the wheels. In the case above alluded to, where the supposition is a pinion of four feet diameter, or of one foot diameter, it is obvious that the same pitch for both would not be prudent. That for the small pinion ought to be much less than that which might be allowed in the case of the larger pinion. It is also equally obvious that the breadth of the teeth, in the case of the small pinion, ought to be much greater than that in the case of the larger pinion. It is evident, however, that, although great advantage may often be derived from a fine pitch, there is a limit in this respect, as also with regard to the breadth.

Hitherto our enquiry has been confined to what is called spur-geer, or the action of wheels and pinions whose axes are parallel ; we come now to speak of bevel-geer, or the action of wheels of which the axes are angular to each other.

The principle consists in two cones rolling on the surface of each other, as the cones A and B revolving on their centres a b, ac, fig. 5 ; if their bases are equal they will perform their revolu- tions in one and the same time ; or any other two points equally distant from the centre a, as dl, d 2, d3, &c., will revolve in the same time as f1,f%,f3, &c. In the like manner, if the cones a, d, e be twice the diameters at the base de as the cones a,f, e, are, then if they turn about their centres, when the cone afd, figs. 6 and 7, has made one revolution, the cone ade will have made but half a revolution ; or

when a fe has made two revolutions, ade will have made but one, and every part equally distant from the centre a, as/1,/2,/3, &c., will have made two revolutions to e\,e 2, e 3, &c. ; and if the cones were fluted, or had teeth cut in them, diverging from the centre a to the bases d, c, e,f, they would then become bevel geer. The teeth at the point of the cone, fig. 8, being small, and of little use, may be cut off at E and F, figs. 8 and 9, where the upright shaft a b, with the bevel-wheel cd, turns the bevel-wheel efwith its shaft bg, and the teeth work freely into each other. The teeth may be made of any dimensions, according to the strength required ; and this method will enable them to overcome a much greater resist- ance, and work smoother than a face-wheel and wallower of the common form can possibly do ; besides, it is of great use to convey a motion in any direction, or to any part of a building, with the least trouble and friction.

The method of conveying motion in any direc- tion, and proportioning or sharpening the wheels thereto, is as follows :— let the line a b represent a shaft coming from a wheel ; draw the line c d to intersect the line a b fig. 10, in the direction that the motion to be conveyed is intended, which will now represent a shaft to the intended motion.

Again, suppose the shaft c d is to revolve three times, whilst the shaft a b revolves once; draw the parallel line i i, at any distance not too great

(suppose one foot by a scale), then draw the parallel line kk at three feet distance, after which draw the dotted line w i, through the intersection of the shaft a b and c d, and likewise through the intersection of the parallel lines < i and kk, in the points .r and y, which will be the pitch-line of the two bevel-wheels, or the line where the teeth of the two wheels act on each other, as may be seen fig. 11, where the motion may be conveyed in any direction.

In almost all modern mills the shafts or spin- dles for the conveyance of motion, and support of wheels, are made of iron, either wrought or cast. Square shafts are the most common, but sometimes octagon and round ones are used ; and if they are very large they are cast hollow, like pipes, and the gudgeons fixed in at the ends by wedges ; but the pivots should always, if pos- sible, be formed of the same piece of metal, as the slightest possible deviation from the straight line causes them to strain, and work very irre- gularly in their bearings. In wooden shafts this is impracticable, and it is one of the greatest objections to the use of them. The best method of fixing gudgeons into wooden shafts is shown in fig. 12. Here A is the gudgeon, made in cast iron, turned true ; it has four leaves a, b, c, d, forming a cross, which is let into the end of the wooden shaft R ; the front edge of each leaf is considerably thinner than the back, so that a pair of strong iron hoops rr, being driven tight on the end of the shaft, closes the

wood round the cross, and holds it fast, and, the back of the leaves being wider than the front, it will not come out. As an additional security screws are sometimes put in : these are put through holes in the arms of the cross, which are then made flat the other way, and do not go so far into the wood. The screws go into the timber a considerable distance, where a mortise is cut into the wood, to meet the end of the bolt, and an iron nut is dropped in, to screw the bolt into, when it is turned round by a screw-driver. By this contrivance a gudgeon may be fitted into a wooden shaft very fast ; but still it will never come into competition with iron shafts, when the gudgeon is made all in one solid piece with the whole of the shaft. A judicious mechanic will never make more than two bear – ings upon any one shaft, if it can be avoided, because, if the three by any means, as the warping of the frame work or other cause, pet the smallest possible quantity out of the straight line, they can never work well afterwards, but will always strain and wear the bearings with great friction. In very extensive mills, such as woollen and cotton mills, breweries, &c., when the buildings are of great length, it becomes ne cessary to join several shafts together in length, to reach from one end to the other of a mill. The manner of making the joinings is of some consequence : it is necessary that every shaft should have a bearing at e;ich end, and conse- quently that the connexion of the ends of every one should be made by uniting the ends of the shafts which project beyond their bearings. This can be done in various ways ; one is by having the ends of each of the shafts provided with circular heads A B, fig. 13, which have teeth in one, and corresponding indentations in the other,

to receive them, and thus one is made to turn the other about, at the same time that if any slight settlement of the building or other cause depresses one of the bearings, or raises another, so as to put the two shafts out of the perfect straight line they ought always to preserve, these joints will admit the slight flexure, and still com- municate the motion of one shaft to the other.

As this accidental settlement in large buildings is almost unavoidable, in some degree, care should be taken to make such joints as will admit of a trifling bending. Sometimes the ends of the shaft are made circular, and turned quite true in the lathe ; then a metal tube or collar is fitted truly upon both, to cover the joint, and connect them, a bolt being put through each end, which unites both shafts with the collar, and thus by means of it causes the one to turn the other round. This method is sometimes used to save the great expense of having a bearing at each end of every length of shaft, one bearing to each length being then sufficient, the other end of the shaft being supported by this collar, connecting it with the end of the

adjacent length just where it projects beyond its bearing. But this is not a good method, as the shafts are apt to bend and work with so much friction in the bearings, if they get the least out of the straight line, because these kind of joints will not admit any flexure of the shaft; or, if they do, they will only bend on one side, whereas it is necessary for the joints to bend successively on all sides, when the bear- ings are not precisely in a straight line. Fig. 14 represents a coupling-box, used by Messrs. Murray and Co. of Leeds, for connecting the lengths of a long line of shaft which are to carry a heavy strain : it is so made that it will com- municate the motion in the manner, of a uni- versal joint, if they should be out of the line. Let A, B, be the two shafts to be united ; C, D, their necks or collars which lie in the bearings : the ends projecting beyond these have boxes E, F, fixed on them, either by a square with wedges, or by a round part with a fillet ; one of these boxes E has a piece projecting from the inside of it on each side, and extending into the other box, as is shown at a a, No. 2, which is an inside view : the other box F has two similar pieces projecting from it at b b into the other box E; within the boxes an iron cross ccdd is situated ; it has screws fixed into the ends of the cross, and by these the motion is communicated : thus the pieces a, a, when the shaft A and box E are turned round in the direction of the arrows No. 2, act against the screws c, c, of the cross, and turn it about : at the same time the other two screws d, d, at the other arms of the cross, press against the pieces b,b, which belong to the box and shaft B, thus turning them round : the cross is placed quite detached in the boxes, and thus acts as a universal joint, to communicate the motion of one to the other: the screws cc, dd, at the ends of the cross, are only put in that the acting points may be made of steel, and made smooth to have but little friction in these parts. Another method of uniting shafts by Mr. Mur- ray is shown at fig. 15: it has the advantage of requiring only one bearing for every length of shaft, whereas the above method requires one

for each end of every length. A, B, represent the two shafts ; each has a pivot formed at the end : these pivots are fitted into a coupling piece C D E, which is bored out truly to fit them in- side, and the outside turned true, with a neck D D, which is received and fitted into a bear- ing : the two shafts A, B, are connected with the coupling piece D, at C and E, by means of a cross key /m, put through each shaft, and the ends of them received in notches made within side of the coupling piece at C and E, where it receives the ends of the shafts. It is to be ob- served that the shafts do not fit tight in these parts E and C, but only in the pivots a, b, within, by which means they have liberty of a little motion, and this without straining the bearing in which D runs, because it is only the short coupling piece which is received therein ; and consequently any trifling deviation from the straight line will not strain it, because of the play allowed in the fittings.

In treating of the mill in its complete state we may commence with its simplest form. The hand-mill will first engage our attention. It is shown in fig. 1, plate III. where A and B re- present the two stones between which the corn is ground, and of which the upper one A turns round, but the lower one B remains fixed and immoveable. The upper stone is five inches thick, and twenty-one inches broad ; the lower one somewhat broader. C is a cog-wheel, having sixteen or eighteen cogs, which go into the trundle F, having nine spokes fixed to the axis G, the latter being firmly inserted into the upper stone A, by means of a piece of iron. H is the hopper into which the corn is put : I the shoe to carry it by little and little through a hole at K, in betwixt the stones, where being ground into meal it comes out through the eye at L. Both stones are enclosed in a circular wooden case, of such a size as will admit the upper one to run freely within it. The under surface of the upper stone is cut into grooves, as represented at Q, which enable it to throw the meal out at the eye L more perfectly than could be done if it were quite plain. Neither of them are entirely flat, the upper one being somewhat concave, and the under one convex. They nearly touch at the edges, but are at some distance in the middle, in order to let the corn go in between them. The under stone is supported by strong beams, not represented in the figure ; the spindle G stands on the beam M N, which lies upon the bearer O. One end of this bearer rests upon a fixed beam, and the other has a string fixed to it, and going round the pin P, by the turning of which the timbers O and M N may be raised or lowered, and thus the stones put nearer, or removed far- ther from each other, in order to grind fine or coarse. When the corn is to be ground it must be put into the hopper by little at a time. A man turns the handle D, and thus the cog-wheel and trundle are carried round also together with the stone A. The axis G is angular at K ; and, as it goes round, shakes the shoe I, and makes the corn fall gradually through the hole K. The upper stone going round grinds it, throwing out the meal, as already said, at the eye L. Ano- ther handle, if thought proper, may be put at

the other end of the handle E. The spindle must go through both stones, in order to reach the beam M N, and the hole through which it passes is fastened with leather or wood, so that no meal can pass through.

The construction of a horse-mill does not dif- fer very materially from that

of the hand-mill just described ; instead, however, of the handle D, the spindle is furnished with a long horizon- tal lever and cogged wheel, which turns the trundle and stones, as already mentioned. — The stones are much heavier than in the hand-mill.

The mills most commonly in use for grinding corn are water-mills, the construction of which is not essentially different from that of the hand or horse-mills. The lower mill-stone, as already mentioned, is fixed, but the upper one more- able upon a spindle. . The opposite surfaces of the two stones are not flat, but the one convex and the other concave, though in a very small degree. The upper stone, which is six feet in diameter, is hollowed only about an inch iu the middle, and the other rises three-quarters of an inch. They approach much nearer each other at the circumference, and the corn begins to be ground about two-thirds of the radius dis- tance from the circumference, and there it makes the greatest resistance, the space between the two stones being in that place only about two- thirds or three-fourths of the thickness of a grain of corn ; but as these stones, as well as those of the hand-mill or horse-mill, can be se- parated a little from each other, the meal may be made fine or coarse in them, as well as in the two former mills.

To cut and grind the corn, botn the upper and under stones have furrows cut in them, as is ob- served in the hard-mil1 These are cut perpen- dicularly on one side, and obliquely upon the other, by which means each furrow has a sharp edge, and by the turning of the stones the furrows meet like a pair of scissars, and by cutting the corn make it grind the more easily. They are cut the same way in both stones when they lie upon their backs, by which means they run cross- ways to each other when the upper one is in- verted and turned round ; and this greatly pro- motes the grinding of the corn, great part of which would be driven onward in the lower furrows, without being ground at all, if both lay the same way. When the furrow becomes blunt and shallow, by wearing, the running stone must be taken off, and the furrows cut deeper in both by means of a chisel and hammer. Thus, how- ever, by having the furrows cut down a great number of times, the thicknesses of both stones are greatly diminished ; and it is observed, that in proportion to the diminution of the thickness of the upper stone, the quantity of flour also diminishes.

By means of the circular motion of the upper stone the corn is brought out of the hopper by jerks, and recedes from the centre towards the circumference by the centrifugal force; and, be- ing entirely reduced to flour at the edges when the stones nearly touch one another, it is thrown at last out at the hole called the eye, as already mentioned. In Scotland it is frequent to have the stones without any furrows, and only irregu-

larly indented with small holes, by means of an iron instrument. Stones of this kind last a much shorter time than those with furrows, the latter being fit for use for thirty or forty years, while the former seldom or never last more than seven. The under mill-stone is considerably thicker than the upper; and therefore, when both have been considerably worn by use, the lower one is fre- quently taken up, and the upper one put in its place, the former being converted into a running stone.

Water-mills are of three kinds, viz. breast- mills, undershot-mills, and overshot-mills. In the former the water falls down upon the wheel at right angles to the float-boards or buckets placed all round to receive it; if float-boards are used it acts only by its impulse ; but, if buckets, it acts also by the weight of water in the buckets in the under quarter of the wheel, which is considerable. In the undershot-wheel float-boards only are used, and the wheel is turned merely by the force of the current running under it, and striking upon the boards. In the over- shot-wheel the water is poured over the top, and thus acts principally by its weight ; as the fall upon the upper part of the wheel cannot be very considerable, lest it should dash the water out of the buckets. Hence it is evident that an undershot-mill must require a much larger sup- ply of water than any other ; the breast-mill the next, unless the fall is very great ; and an over shot-mill the least. Dr. Desaguiliers found that a well-made overshot-mill would perform as much work as an undershot one, with one- tenth part of the quantity of water required by the other.*

Plate III. fig. 2, shows the construction of a common water-mill, where A A is the large water-wheel, commonly about seventeen or eigh- teen feet diameter from a, the extremity of any float-board, to b the extremity of the opposite one. This wheel is turned round by the falling of the water upon the boards from a certain height, and the greater the height, provided the water runs in an uninterrupted stream, the smaller quantity will be sufficient to turn the mill. • This wheel is without the mill-house, but the wheel has an axle B B of considerable length, which passes throngh a circular hole in the wall, and has upon it a wheel D, of eight or nine feet diameter, having sixty-one cogs, which turn a trundle E of ten staves or spokes ; by which means the trundle, and consequently the mill- stone, will make six revolutions and one-tenth for every revolution of the wheel. The odd cog, commonly called the hunting cog, is added, that as every one comes to the trundle it may take the staff behind that one which it took at the last revolution ; and thus all the parts of the cogs and rounds which work upon one another will wear equally, and to equal distances from one another, in a little time ; by which means a true uniform motion will be produced through the whole work. Tine trundle is fixed upon an iron axis called the spindle, the lower end of which turns in a brass pot fixed at F in die ho- rizontal beam S T, called the bridge-tree ; and the upper part of the

spindle turns in a wooden bush, fixea into ihe lower mill-stone, wbich lies

upon beams in the floor Y Y. The top part of the spindle above the bush is square, and goes into a square hole in a strong iron cross, abed, fig. 3, called the rind ; under which, close to the bush, is a round piece of thick leather upon the spindle, which it turns round at the same time that it does the rind. The latter enters into the grooves in the under surface of the"running mill- stone G, fig. 2, and thus turns it round along with the trundle E, by means of the cog-wheel D. In the middle of the upper mill-stone is a large hole called the eye, through which the middle part of the rind and upper part of the spindle may be seen : the ends being hid in the grooves below the stone. The end T of the bridge-tree TS, which supports the upper mill- stone G upon the spindle, is fixed into a hole in the wall ; and the end S is let into the beam QR, called the brayer; one end R of which remains fixed in a mortise, while' the other end Q hangs by a strong iron rod P, which goes through the floor Y Y, and has a screw-nut on its top O ; by the turning of which nut the end Q of the brayer is raised or depressed at plea- sure, along with the bridge-tree T S and upper mill-stone. Thus the upper mill-stone may be raised as high from the under one, or let down as close to it as the miller pleases ; by which means the meal or flour is made either coarse or fine at pleasure. The upper mill-stone G is en-closed in a round box H, which leaves a vacant space of about an inch all round. On the top of this box stands a frame for holding the hop- per k k, at which hangs the shoe I, by two lines fastened to the hinder part of it, fixed upon hooks in the hopper, and by one end of the string K to the fore part of it at i, the other end being twisted round the pin L. As the pin is turned one way the string draws up the shoe closer to the hopper, and so lessens the aper- ture between them ; and, as the pin is turned the other way, it lets down the shoe, and widens the aperture. If it be drawn quite up to the hop- per, no corn can fall out from the latter into the mill, and the quantity will be greater or less as the shoe is farther from the hopper or nearer to it. This happens by reason of the hopper be- ing open at bottom, and the shoe at the forepart towards the end i over the middle of the eye of the mill-stone. There is also a square hole in the top of the spindle, in which is put the feeder e, fig. 3. Thus the shoe is shaken three times in each revolution, and the corn runs constantly down from the hopper through the shoe into the eye of the mill-stone, where it falls upon the top of the rind, and, by the motion of that and of the leather beneath, is introduced betwixt the stones, and by the violent motion of the upper one acquires a centrifugal force ; and, proceed- ing gradually from the eye of the mill-stone towards the circumference, is thrown at last out in flour, at the hole

called the eye of the mill.

Some degree of nicety is requisite in feeding the mill ; for, if too great a quantity be poured into it, the stones are separated from each other more than they ought to be, and their motion is also impeded; while, on the other hand, if it be fed too slowly, the stone moves with too great velocity, and the attrition of the two is apt to

make them strike fire. This matter is regulated by turning the pin L backwards or forwards as the miller thinks prope.. Sometimes, where plenty of water can be had, there are two trun- dles applied to the cog-wheel by means of a single large one turned immediately by the per-pendicular cog-wheel, and carrying round with it a horizontal cogged wheel ; on each side of which are placed the smaller trundles above- mentioned, carrying the stones. In like manner the water-wheel may be made to drive fanners, bolting-mills, &c. ; but it must always be remem- bered, that, by complicating machinery to a great degree, it becomes more ready to give way ; and the frequent reparation of which it stands in need will, by the delay of business, be found at last more expensive than if separate machines had been used.

The wind-mill is furnished with an apparatus similar to the water-mill, but necessarily differs in the external apparatus for applying the power. This is done by means of the two arms A B and C D fig. 4, intersecting each other at right angles in E, and passing through the axis E F, and about thirty-two feet in length. On these yards are placed two sails or vanes, in the shape some- times of parallelograms, and sometimes of trape- ziums, with parallel bases ; the greater whereof H I is about six feet, and the length of the smaller F G is determined by radii drawn from the centre E to I and H.

As the direction of the wind is very uncertain, it becomes necessary to have some contrivance for turning the sails towards it, to receive its force in whatever way it may turn ; and for this purpose two general methods are in use. In the one, the whole machine is sustained upon a moveable arbor or axis, perpendicular to the horizon, and which is supported by a strong stand or foot very firmly fixed in the earth ; and thus, by means of a lever, the whole machine may be turned round as occasion requires. In the other method, only the roof, which is circu- lar, can be turned round by means of a lever and rollers, upon which the circular roof moves. This last kind of wind-mill is always built of stone, in the form of a round turret, having a large wooden ring on the top of it, above which, the roof, which must likewise be of wood, moves upon rollers, as has been already mentioned. To effect this motion the more easily, the wooden ring, which lies on the top of the building, is furnished with a groove, at the bottom of which are placed a number of brass truckles at certain distances, and within the

groove is placed ano- ther ring, by which the whole roof is supported. The beams a b and a e are connected with the moveable ring, and a rope is fastened to the beam a b in b, which at the other extremity is fitted to a windlass or axis in peritrochio ; and this rope being drawn through the iron hook G, and the windlass turned round, the sails and roof will be turned round also, in order to catch the wind in any direction. Both these methods of construction have their advantages and disad- vantages. The former is the least expensive, as the whole may be made of wood, and of any form that is thought proper; while the other re- quires a costly building of stone ; and, the roof

being round, the building must also be so, while the other can be made of any form, but has the inconvenience of being liable to be carried off altogether by a very high wind.

Plate III. fig. 5, shows the internal mechanism of a wind-mill. A HO is the upper room; H o Z the lower one; A B the axle-tree passing through the mill ; S T V W the sails covered with canvass set obliquely to the wind, and turning round in the order of the letters. C D is the cog-wheel, having about forty-eight cogs a, a, a, &c., which carry round the lantern E F, having eight or nine trundles c, c, c, &c., along with the axis G N. I Kis the upper mill-stone, L M the lower one ; O II is the bridge support- ing the axis or spindle G N, which rests upon the beams c d, X Y, wedged up at c, d, and X : Z Y is the lifting tree, which stands upright ; a b and ef&re levers, having Z and e as centres of motion ; fg h i is a cord, with a stone i wound about the pins g and A, and which thus serves as a balance or counterpoise. The spindle t N is fixed to the upper mill-stone I K by means of a piece of iron called the rind, and fixed in the lower side of the stone, the whole weight of which rests upon a hard stone fixed in the bridge Q It at N. The trundle E F and axis G may be taken away ; for it rests its lower part by t in a square socket, and the top runs in the edge of the beam w. By bearing down the end of the leverˆe we raise b, which raises also Z Y, and this raises Y X, which lifts up the bridge Q R, with the axis N G, and the upper stone I K ; so that by this contrivance the stones may. as in a water-mill, be set at any distance. The lower stone is fixed upon strong beams, and is broader than the upper one ; the flour being conveyed through the tunnel no into'a chest. P is the hopper into which the corn is put, and which runs along the spout r into the hole t, and so falls between the stones, where it is ground. The square axis G t shakes the spout r as it turns round, and makes the corn run out; r is a string going round the pin s, which serves to bring the spout nearer or let it go farther from the axis, and thus

makes the corn to run faster or slower, according to the velocity of the wind. If the wind be very strong, only part of the sails S, T, V, W, is covered, or perhaps only one-half of the two opposite «ails. Another cog-wheel B is placed towards the end B of the axle tree, with a trundle and mill-stones like those already described ; so that when the wind is strong the mill may do twice the business it ordinarily does. When only one pair is to grind, the trundle E F and axis G t are taken out from the other ; xy I is a girt of pliable wood, fixed at the end x ; and the other end / is tied to the lever km, moveable about /c; and the end m, being put down, draws the girt xyl close to the cog-wheel ; and thus the motion of the mill may be stopped at pleasure ; p q is a ladder for ascending to the higher part of the mill ; and the corn is drawn up by a ope rolled about the axis A B.

[n all mills it is necessary that a considerable

power be employed in order to accomplish the

intended purpose. Water is the most common

power, and indeed the best, as being the most

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constant and equable ; while wind comes at some times with great violence, and at others is totally gone. Mills may also be moved by the force of steam, as were the Albion mills at Lon- don; but the expense of fuel must undoubtedly prevent this mode of constructing mills from ever becoming general. In all cases it is abso- lutely necessary to make the most of the power that we can, by making it act to the greatest ad- vantage. Hence the best methods of construct- ing water and wind-mills have been investigated by those who were most conversant in the prin- ciples of mechanics ; and so difficult has been the investigation, that the principles are not yet settled absolutely without dispute.

In the fifty-first volume of the Philosophical Transactions, Mr. Smeaton has considered at great length the best methods of constructing all these mills from machines and models made on purpose ; but, conscious of the inferiority of models to actual practice, did not venture to give his opinion without having seen them ac- tually tried, and the truth of his doctrines esta- blished by practice.

Having described the machines and models used for making his experiments, he observes that, with regard to power, it is most properly measured by the raising of a weight : viz. if the weight raised be multiplied by the height to which it can be raised in a given time, the pro- duct is the measure of the power raising it; and, of consequence, all those powers are

equal whose products made by such multiplication are equal ; for if a power can raise twice the weight to the same height, or the same weight to twice the height, in the same time that another can, the former power will be double the latter ; but if a power can only raise half the weight to double the height, or double the weight to half the height, in the same time that another can, the two powers are equal. This, however, must be understood only of a slow and equable motion, without acceleration or retardation; for if the velocity be either very quickly accelerated or retarded, the vis inertia', in our author's opinion, will produce an irregularity.

*' To compute the effects of water-wheels exactly, it is necessary to know, in the first place, what is the real velocity of the water which im- pinges on the wheel ; 2. The quantity of water expended in a given time ; and, 3. How much o. the power is lost by the friction of the machinery. 1. With regard to the velocity of the water, Mr. Smeaton determined by experiments, with the machinery described in the volume referred to, that with a head of water fifteen inches in height, the velocity of the wheel is 8-96 feet in a minute. The area of the head being 105*8 inches ; this, multiplied by the weight of a cubic inch of water, equal to -579 of an ounce avoirdupois, gives 61-26 ounces for the weight of as much water as is contained in the head, upon one inch in depth ; and by farthei calculations, derived from the machinery made use of, he computes that 264-7 Ibs. of water descend in a minute through the space of fifteen inches. The power of the water, therefore, to produce mechanica. effects in this case will be 264-7 X 15, or 3970. From the result of the experiment, however, it*

appeared that a vast quantity of the power was lost; the effect being only to raise 9-375 Ibs. to the height of 135 inches ; so that the power was to the effect as 3970 to 9-375 X 135 = 1266, or as 10 to 3-18.

This, according to our author, must be consi- dered as the greatest single effect of water upon an undershot wheel, where the water descends from a height of fifteen inches ; but, as the force of the current is not by any means exhausted, we must consider the true proportion betwixt the power and effect to be that betwixt the quantity of water already mentioned and the sum of all the effects producible from it. This remainder of power, it is plain, must be equal to that of the velocity of the wheel itself, multiplied into the weight of the water. In the present experi- ment, the circumference of the wheel moved with the velocity of 3'123 feet in the second, which answers to ahead of 1-82 inches, and this height being multiplied by 264-7,

the quantity of water expended in a minute gives 481 for the power of the water after it has passed the wheel ; and hence the true proportion betwixt the power and the effect will be as 3849 to 1266, or as 11 to 4. These calculations are founded upon the known maxim in hydrostatics, that the velocity of spouting water is nearly the same with that which a heavy body would acquire by falling from a height equal to that of the reservoir, and is proved by the rising of jets nearly to the height of their reservoirs.

As the wheel revolved eighty-six times in a minute, the velocity of the water must be equal to eighty-six circumferences of the wheel ; which, according to the dimensions of the apparatus used by Mr. Smeaton, was as 86 to 30, or as 20 to 7. The greatest load with which the wheel could move was 9 Ibs. 6oz. ; and by 12 Ibs. it was entirely stopped. Whence our author concludes, that the impulse of the water is more than double of what it ought to be according to theory : but this he accounts for by observing, that in his experiment the wheel was placed not in an open river, where the natural current, after it has communicated its impulse to the float, has room on all sides to escape, as the theory sup- poses, but in a conduit, to which the float being adapted, the water cannot otherwise escape than by moving along with the wheel. It is ob- servable, that a wheel working in this manner, as soon as the water meets the float, receiving a sudden check, it rises up against the float like a wave against a fixed object ; insomuch that, when the sheet of water is not a quarter of an inch thick before the float, yet the sheet will act upon the whole surface of a float whose height is three inches ; and consequently, were the float no higher than the thickness of the sheet of water, as the theory also supposes, a great part of the force would be lost by the water dashing over the float.

Mr. Smeaton next proceeds to give tables of the velocities of wheels with different heights of water ; and from the whole deduces the follow- ing conclusions: — 1. The virtual or effective head being the same, the effect will be nearly as the quantity of water expended. 2. The ex- pense of water being the same, the effect will be

nearly as the height of the virtual or effective head. 3. The quantity of water expended being the same, the effect is nearly as the square of the velocity. 4. The aperture being the same, the effect will be nearly as the cube of the velocity of the water. Hence, if water passes out of an aperture in the same section, but with different velocities, the expense will be proportional to the velocity ; and therefore, if the expense be not proportional to the velocity, the section of the water is not to the same. 5. The virtual head, or that from which we are to calculate the power, bears no proportion to the head of water ; but when the aperture is larger, or the velocity of the water less, they approach nearer to a co- incidence ; and consequently, in the large open- ings of mills and sluices, where great

quantities of water are discharged from moderate heads, the head of water, and the virtual head deter- mined from the velocity, will nearly agree, which is also confirmed by experience. 6. The most general proportion betwixt the power and effect is that of 10 to 3 ; the extremes 10 to 3‘2, and 10 to 2-8. But it is observable that, where the power is greatest, the second term of the ratio is greatest also ; whence we may allow the propor- tion subsisting in great works to be as 3 to 1. 7. The proportion of velocity between the water and wheel is in general about 5 to 2. 8. There is no certain ratio between the load that the wheel will carry at its maximum, and what will totally stop it; though the proportions are contained within the limits of 20 to 19, and 20 to 15; but as the effect approaches nearest to the ratio of 20 to 15, or of 4 to 3 when the power is greatest either by increase of velocity or quan- tity of water, this seems to be the most appli- cable to large works ; but as the load that a wheel ought to have, in order to work to the best advantage, can be assigned by knowing the effect that it ought to produce, and the velocity it ought to have in producing it, the exact knowledge of the greatest load it will bear is of the least con- sequence in practice.

Mr. Smeaton, after having finished his experi- ments on the undershot mills, reduced the num- ber of floats, which were originally 24, to 12; which caused a diminution in the effect, by rea- son that a greater quantity of water escaped be- tween the floats and the floor than before ; but on adapting to it a circular sweep, of such a length that one float entered into the curve before the other left it, the effect came so near that of the former as not to give any hopes of advancing it by increasing the number of floats beyond twenty-four in this particular wheel.

He next proceeds to examine the power of water when acting by its own gravity in turning an overshot wheel : ‘in reasoning without expe- riment,’ says he, ‘one might be led to imagine that however different the mode of application is, yet whenever the same quantity of water descends through the same perpendicular space, the natural effective power would be equal, sup- posing the machinery free from friction, equally calculated to receive the full effect of the power, and to make the most of it : for if we suppose the height of a column of water to be thirty inches, and resting upon a base or aperture of

one inch square, every cubic inch of water that departs therefrom will acquire the same velocity or momentum, from the uniform pressure of thirty cubic inches above it, that one cubic inch let fall from the top will

acquire in falling down to the level of the aperture ; one would therefore suppose that a cubic inch of water, let fall through a space of thirty inches, and there impinging upon another body, would be capable of produc- ing an equal effect by collision, as if the same cubic inch had descended through the same space with a slower motion, and produced its effects gradually. But however conclusive this reasoning may seem, it will appear, in the course of the following deductions, that the effect of the gravity of descending bodies is very different, from the effect of the stroke of such as are non- elastic, though generated by an equal mechanical power.

Having made such alterations in his machinery as were necessary for overshot wheels, our au- thor next gives a table of experiments with the apparatus so altered. In these the head was six inches, and the height of the wheel twenty-four inches; so that. the whole descent was thirty inches; the quantity of water expended in a minute was 96|lbs. ; which, multiplied by thirty inches, gives the power r: 2900 : and, after mak- ing the proper calculations, the effect was com- puted at 1914; whence the ratio of the power to it comes to be nearly 3 to 2. If, however, we compute the power from the height of the wheel only, the power will be to the effect nearly as 5 to 4.

From another set of experiments the following conclusions were deduced : —

1. The effective power of the water must be reckoned upon the whole descent: because it must be raised to that height in order to be able to produce the same effect a second time. The ratios between the powers so estimated and the effects at a maximum, differ nearly from 4 to 3, and from 4 to 2. Where the heads of water and quantities of it expended are the least, the pro- portion is nearly from 4 to 3 ; but, where the heads and quantities are greatest, it comes nearer to that of 4 to 2 : so that by a medium of the whole the ratio is nearly as 3 to 2. Hence it appears that the effect of overshot wheels is near- ly double to that of undershot ones ; the conse- quence of which is, that non-elastic bodies, when acting by their impulse of collision, communi- cate only a part of their original impulse, the re- mainder being spent in changing their figure in consequence of the stroke. The ultimate conclu- sion is, that the effects as well as the powers are as the quantities of water and perpendicular heights multiplied together respectively.

2. By increasing the head it does not appear that the effects are at all augmented in propor- tion ; for, by raising it from three to eleven inches, the effect was augmented by less than one-seventh of the increase of perpendicular height. Hence it follows, that the higher the wheel is, in propor- tion to the whole descent, the greater will be the effect ; because it

depends less upon the impulse of the head, and more upon the gravity of the water in buckets : and, if we consider how ob- liquely the water issuing from the head must

strike the buckets, we shall not be at a loss to account for the little advantage that arises from the impulse thereof, and shall immediately see of how little consequence this is to the effect of an overshot wheel. This however, as well as other things, must be subject to limitation ; for it is necessary that the velocity of the water should be somewhat greater than the wheel, otherwise the latter will not only be retarded by the striking of the buckets against the water, but some of the power will be lost by the dashing of the water over the buckets.

3. To determine the velocity which the cir- cumference of the wheel ought "to have, in order to produce the greatest effect, Mr. Smeaton ob- serves that the more slowly any body descends by the force of gravity, when acting upon any piece of machinery, the more of that force will be spent upon it, and consequently the effect will be the greater. If a stream of water falls into the bucket of an overshot wheel it will be there retained till the wheel discharges it by moving round, and, of consequence, the slower the wheel moves, the more water it will receive ; so that what is lost in velocity is gained by the greater pressure of water upon the buckets. From the experiments, however, it appears that, when the wheel made about twenty turns in a minute, the effect was greatest ; when it made only eighteen and a quarter, the motion was irregular; and, when loaded so as not to admit its turning eigh- teen times, the wheel was overpowered with the load. When it made thirty turns, the power was diminished by about one-twentieth; and, when the number of turns was increased to forty, it was diminished by one-fourth. Hence we see that in practice the velocity of the wheel should not be diminished farther than what will procure some solid advantage in point of power ; because, ceteris paribus, the buckets must be larger as the motion is slower ; and, the wheel being more loaded with water, the stress will be proportion- ably increased upon every part of the work. The best velocity for practice therefore will be that when the wheel made thirty turns in a minute, which is little more than three feet in a second. This velocity is applicable to the highest overshot wheels as well as the lowest. Experience how- ever determines, that high wheels may deviate further from this rule before they will lose their power, by a given aliquot part of the whole, than low ones can be permitted to do ; for a wheel of twenty-four feet high may move at the rate of six feet per second ; while our author has seen one of thirty-three feet high move very steadily and well with a velocity of little more than two feet. The reason of this superior velocity, in the twenty- four feet wheel, may probably be owing to the small proportion that the head requisite to give the proper velocity to the wheel bears to the whole height.

4. The maximum load for an overshot wheel is that which reduces the circumference of the wheel to its proper velocity ; which is known by dividing the effect it ought to produce in a given time by the space intended to be described by the circumference of the wheel in the same time: the quotient will be the resistance overcome at the circumference of the wheel, and is equal to

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the load required, including the friction and re- sistance of the machinery.

5. The greatest velocity that an overshot wheel is capable of depends jointly upon the diameter or height of the wheel and the velocity of falling bodies ; for it is plain that the velocity of the circumference can never be greater than to de- scribe a semi-circumference, while a body let fall from the top describes the diameter, nor even quite so great ; as the difference in point of time must always be in favor of that which falls through the diameter. Thus, supposing the diameter of the wheel to be sixteen feet and an inch in diameter, a heavy body would fall through this space in one second ; but such a wheel could never arrive at this velocity, or make one turn in two seconds, nor could an overshot wheel ever come near it ; because, after it has acquired a certain velocity, great part of the water is prevented from entering the buckets, and part is thrown out again by the centrifugal force ; and, as these circumstances have a con- siderable dependence upon the form of the buckets, it is impossible to lay down any general rule for the velocity of this kind of wheels.

6. Though in theory we may suppose a wheel to be made capable of overcoming any resistance whatever, yet, as in practice it is necessary to make the wheel and buckets of some certain and determinate size, we always find that the wheel will be stopped by such a weight as is equal to the effort of the water in all the buckets of a semi-circumference put together. This may be determined from the structure of the buckets themselves; but, in practice, an overshot wheel becomes unserviceable long before this time ; for, when it meets with such an obstacle as diminishes its velocity to a certain degree, its motion becomes irregular ; but this never happens till the velocity of the circumference is less than the two feet per second, when the resistance is equable.

7. From the above observations we may easily deduce the force of water upon breast-wheels, &c. But, in general, all kinds cf wheels, where the wa-

ter cannot descend thrpugh a given space unless the wheel moves with it, are to be considered as overshot wheels ; and those which receive the impulse or shock. of the water, whether in an ho- rizontal, oblique, or perpendicular direction, are to be considered as undershots. Hence a wheel, in which the water strikes at a certain point below the surface of the head, and after that descends in the arch of a circle, pressing by its gravity upon the wheel, the effect of such a wheel will be equal to that of an undershot whose head is equal to the difference of level between the sur- face of the water in the reservoir and the point where it strikes the wheel, added to that of an overshot whose height is equal to the difference of level between the point where it strikes the wheel and the level of the tail-water.

In the sixty-sixth volume of the Transactions, Mr. Smeaton considers some of the causes which nave produced disagreements and disputes among mathematicians upon this subject. He observes, that soon after Sir Isaac Newton bad given his definition, ‘ that the quantity of motion is the measure of th« same, arising from the ve- locity and quantity of matte r conjointly,’ it was

controverted by his contemporary philosophers, They maintained that the measure of the quan- tity of motion should be estimated by taking the quantity of matter and the square of the velocity conjointly. On this subject he remarks that, from equal impelling powers acting for equal intervals of time, equal augmentations of velocity are acquired by given bodies when they are not resisted by a medium. Thus a body descending one second by the force of gravity, passes through a space of sixteen feet and an inch ; but at the end of that time it has acquired a velocity of thirty-two feet two inches in a second ; at the end of two seconds it has acquired one that would carry it through sixty-four feet four inches in a second. If, therefore, in consequence of this equal increase of velocity, we define this to be a double quantity of motion generated in a given time in a certain quantity of matter, we come near to Sir Isaac’s definition ; but, in trying experiments upon the effects of bodies, it appears that when a body is put in motion, by whatever cause, the impression it will make upon an uni- formly resisting medium, or upon uniformly yielding substances, will be as the mass of mat- ter of the moving body multiplied by the square of its velocity. The question, therefore, properly is, whether these terms, the quantity of motion, the momenta, or forces, of bodies in motion, are to be esteemed equal, double, or triple, when they have been generated by an equable impulse acting for an equal, double, or triple time ? or that it should be measured by the effects being equal, double, or triple, in overcoming resist- ances before a body in motion can be stopped ? For, according to the meaning we put upon these words, the momenta of equal bodies will be as the velocities or squares of the velocities of the moving bodies.

Undershot wheels had been greatly preferred by M. Belidor to those of any other construction. He had even concluded, that water applied in this way will do more than six times the work of an overshot wheel ; While Dr. Desaguliers, in overthrowing Belidor's proposition, asserted that an overshot wheel would do ten times the work of an undershot wheel with an equal quan- tity of water. Between these two celebrated au- thors, therefore, there is a difference of no less than sixty to one. In consequence of such enormous disagreement, Mr. Smeaton began the experiments above described. From them, be- sides the positions already deduced, it appears that, where the velocity of water is double, the ad- jutage or aperture of the sluice remaining the same, the effect is eight times ; that is, not as the square, but as the cube of velocity. In the other conclusion of Desaguliers and Maclaurin, the error was no less ; for, from thence it would fol- low, that by means of the wheel only j!,ths of the water expended would be raised back again to the height of the reservoir from which it de- scended, exclusive of the friction, which would still diminish the quantity; but from Mr. Smea- ton's experiments it appears that in some cases upwards of one-fourth had been raised. Ir large works the effect? had been still greater, ap- proaching in an undershot wheel to one-halt, and in an overshot one to the whole ; which

would be the limit, if it were possible to remove the friction and resistance of the air. The velo- city of the wheel also, which, according to the conclusions of M. Parent and Dr. Desaguliers, amounted to no more than one-third of the ve- locity of the water, varies, according to Mr. Smea- ton, between one-third and one-half. But in all great works the maximum lies much nearer to one-half than a thiid ; the former appearing to be the true maximum, if ull friction, resistance of the air, and scattering of water could be avoided. To make these matters plain to mechanics, and to prevent them from running into practical errors, in consequence of a fallacious theory, Mr. Smeaton, in the year 1759, instituted another set of experiments ; the immediate object of which was to determine what proportion or quantity of mechanical power is expended »n giving the same body different degrees of velo- city. Having constructed a proper apparatus for the purpose, and with it made a number of experi- ments, he concludes, ' that time, properly speak- ing, has nothing to do with the production of mechanical effects, otherwise than as by equally flowing it becomes a common measure ; so that whatever mechanical effect is found to be pro- duced in a given time, the uniform continuance of the action of the same mechanical power will in a double time produce twice that effect. A mechanical power, therefore, properly speaking, is measured by the whole of its mechanical effects

produced, whether that effect be produced in a greater or less time : thus, having treasured up 1000 tons of water, which I can let out upon the overshot wheel of a mill, and descending through a perpendicular of twenty feet ; this power, ap- plied in a proper manner, will grind a certain quantity of corn in an hour : but supposing the mill to be capable of receiving a greater impulse with as great disadvantage as a less ; then, if the corn be let out twice as fast, the same quau- tity of corn will be ground in half an hour, the whole of the water being likewise expended in that time. What time has therefore to do in the case is this : let the rate of doing the business, or producing the effect, be what it will; if tliis rate is uniform, when I have found by experiment what is done in a given time, then, proceeding at the same rate, twice the effect will be produced in twice the time, on a supposition that I have a supply of mechanic power to go on with. Thus, 1000 tons of water descending through twenty feet perpendicular, being, as has been shown, a given mechanic power, let it be expended at what rate it will ; if, when this is expended, we are to wait another hour till an equal quantity can be procured, then we can only expend twelve such quantities in twenty-four hours. But if, while the JOOO tons of water are expending in one hour,

the same quantity is renewed, we can then ex- pend twenty-four such in twenty-four hours, or go on without intermission. The product or effect will then be in proportion to time, which is the common measure ; but the quantity of mechanic power arising from the flow of the two rivers, compared by taking an equal portion of time, is double in the one to the other; though each has a mill that, when going, will grind an equal quantity of corn in an hour.'

Mr. Ferguson, in his directions to mill-wrights, has adopted the maxim which Mr. Smeaton con- demns as erroneous, viz. that, when the velocity of the wheel is but one-third of that of the water, it then acts to the greatest advantage. He adds that the mill-stone ought to make about sixty turns in a minute ; for when it makes only forty or fifty turns it grinds too slowly ; and, when mo.e than seventy, it heats the meal too much, aud cuts the bran so small that a part of it mixes with the meal, and cannot be separated from it by any means. The utmost perfection of millwork, therefore, accord- ing to this author, lies in making the train so that the mill-stones shall make about sixty turns in a minute, when the wheel moves with one-third of the velocity of the water. To accomplish this, he lays down the following rules : — 1 . Mea- sure the perpendicular height of the fall of water above the middle of the aperture, where it is let out to act by impulse against the float-boards on the lower side of the undershot wheel. 2. Mul- tiply this constant number 64-2882 by the height of the fall in feet, and extract the square roct of the product, which will give the number of feet that the water moves in a second. 3. The ve- locity of the floats of the

wheel is equal to one- third of the velocity of the water just newfound. 4. Divide the circumference of the wheel by the velocity of its floats, and the quotient will be the number of seconds in one turn of the great water wheel, on whose axis the cog-wheel that turns the trundle is fixed. 5. Divide sixty by the number of seconds in a turn of the water-wheel, and the quotient will be the number of turns it makes in a minute. 6. By this number of turns divide sixty, the number cf turns that a mill-stone ought to have in a minute ; the quotient is the number of turns that the mill-stone oue;ht to make for every one of the large wheel. 7. Then, as the number of turns required of the mill-stone in a minute is to the number of turns of the cog-wheel in a minute ; so must the number of cogs in the wheel be to the number of staves in the trundle on the axis of the mill-stone, in the nearest whole number that cans be found. On these principles Mr. Ferguson has constructed the following table, for the sake of such as have occasion to construct mills, and are not willing or able to make particular calculations : —

Height of the fall of water.

Velocity of the fall of wa- ter per se- cond.

Velocity of the wheel per second.

Revolutions of the wheel per

minute.

Revolutions of the mill-stone for one of the wheel.

Cogs in the wheel, and staves in the trundle.

Revolutions of the mill-stone per minute, by these staves and cogs.

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2

11 34

3 78

4 00

30 00

210 7

120 00

3

13 89

4 63

4 91

24 44

196 8

120 28

4

16 04

5 35

5 67

21 16

190 9

119 74

5

17 93

5 98

6 34

18 92

170 9

119 68

6

19 64

6 55

6 94

17 28

156 9

120 20

7

21 21

7 07

7 50

16 00

144 9

120 00

8

22 68

7 56

8 02

14 96

134 9

119 34

9

24 05

8 02

8 51

14 10

140 10

119 14

10

25 35

8 45

8 97

13 38

134 10

120 18

11

26 59

8 86

9 40

12 76

128 10

120 32

12

27 77

9 26

9 82

12 22

122 10

119 80

13

28 91

9 64

10 22

11 74

118 10

120 36

14

30 00

10 00

10 60

11 32

112 10

118 72

15

31 05

10 36

10 99

10 92

110 10 i 120 96

16

32 07

10 09

11 34

10 58

106 10

120 20

17

33 06

11 02

11 70

10 26

102 10

119 34

18

34 02

11 34

12 02

9 98

100 10

120 20

19

34 95

11 65

12 37

9 70

98 10

121 22

20

35 86

11 95

12 68

9 46

94 10

119 18

1

2

3

4

5

6

7

For the practical construction of water mills, Mr. Imison has laid down the following rules. To find the velocity or force of any moderate stream of water; let it be obstructed by a dam, in such a manner as to force the whole stream into a spout, by which it may be conveyed into a large vessel or reservoir. Measure then the quantity of water which falls into the reservoir in one second or minute ; and, multiplying by the number of seconds or minutes in an hour, we have the whole force of the stream of water per hour. In streams which are too large to be measured in this way the velocity is deter- mined (though, we must own, in a vague manner) by

that of straw or other light body floating down it; and calculations may be made accordingly. Mr. Imison differs materially from Mr. Ferguson in the number of revolutions which a mill-stone ought to make in a minute ; the latter being of opinion that sixty revolutions of a mill-stone in a minute are sufficient, while Mr. Imison re- quires 120 ; though he agrees with him that the velocity of the wheel should be only one-third of that of the water. The mill-stone, according to Mr. Ferguson, ought to be five feet in diameter; but Mr. Irnison makes it only four feet and a half.

To construct a mill by this table, find the height of the fall of waler in the first column, and against that height, in the sixth column, you have the number of cogs in the wheel, and staves in the trundle, for causing the mill-stone, four feet six inches diameter, to make about 120 revo- lutions in a minute, as nearly as possible, when the wheel g—>cs with one-third part of the velocity

of the water. And it appears, by the seventh column, that the number of cogs in the wheel and staves in the trundle are so near the truth for the required purpose, that the least number of revolutions of the mill-stone in a minute is 118, and the greatest number never exceeds 121 ; which, according to our author, is the velocity of the best mills he had seen.

With regard to the mere mechanical part, our author observes, that an overshot wheel acts with greater power than a breast or undershot wheel ; so that where there is a considerable descent, and only a small quantity of water, the overshot wheel ought always to be made use of. Where the water runs only upon a little declivity, it can act but slowly upon the under part of the wheel ; in which case the motion of the wheel will be very slow : the float boards therefore ought to be very long, though not high, that a large body of water may act upon them ; so that what is want- ing in velocity maybe made up in power: in which case the cog-wheel may have a greater number of cogs, in proportion to the staves of the trundle, in order to give the mill-stone a suffi- cient degree of velocity.

In the construction of wind-mills Mr. Smea- ton has been at no less pains to explain the prin- ciples than in those which go by water. For this purpose he constructed a machine, of which a particular description was given in the fifty-first volume of the Philosophical Transactions. The general principle of this was, that by means of a determinate weight it carried round an axis with a horizontal arm, upon which were four small

moveable sails. Thus the sails met with a con- stant and equable blast of air ; and, as they moved round, a string with a weight affixed to it was wound about their axis, and thus showed what kind of size or construction of sails answered the purpose best. With this machine a great num- ber of experiments were made ; the results of which were as follows : —

1. The sails set at the angle with the axis, pro- posed as the best by M. Parent and other geo- metricians, viz. 55°, was found to be the worst proportion of any that were tried.

2. When the angle of the sails with the axis was increased from 72° to 75°, the power was augmented in the proportion of 32 to 45 ; and this is the angle most commonly in use when the sails are planes.

3. Were nothing more requisite than to cause the sails to acquire a certain degree of velocity by the wind, the position recommended by M. Parent would be the best. But if the sails are intended, with given dimensions, to produce the greatest effects possible in a given time, we must, if planes are made use of, confine our angle with- in the limits of 72° and 75°.

4. The variation of a degree or two, when the angle is near the best, is but of little conse- quence.

5. When the wind falls upon concave sails, it is an advantage to the power of the whole, though each part separately taken should not be disposed of to the best advantage.

6. From several experiments, on a large scale, Mr. Smeaton has found the following angles to answer as well as any. The radius is supposed to be divided into six parts and one-sixth, reck- oning from the centre, and is called 1, the extre- mity being denoted 6 :

No.

Angle with that Axis.

Angle with the Plane of Motion.

1

72°

18°

2

71

1&

3

72

18 middle

4

74

16

5

77i

124

6

83

7 extremity.

7. Having thus obtained the best method of weathering the sails, i. e. the most advantageous manner in which they can be placed, our author's next care was to try what advantage could be derived from an increase of surface upon the same radius. The result was, that a broader sail requires a large angle ; and, when the sail is broader at the extremity than near the centre, the figure is more advantageous than that of a paral- lelogram. The figure and proportion of enlarged sails, which our author determines to be the most advantageous on a large scale, is that where the extreme bar is one-third of the radius or whip (as the workmen call it), and is divided by the whip in the proportion of 3 to 5. The triangu- lar or loading sail is covered with board from the point downward of its height, the rest as usual with cloth. The angles abovementioned are likewise the most proper for enlarged sails;

it being found in practice that the sails should rather be too little than too much exposed to the di rect action of the wind.

Some have imagined that the more sail the greater would be the power of the windmill, and have therefore proposed to fill up the whole area; and by making each sail a sector of an ellipsis, according to M. Parent's method, to intercept the whole cylinder of wind, in order to produce the greatest

effect possible. From our author's experiments, however, it appeared, that when the surface of the sail exceeded seven-eighths of the area, the effect was rather diminished than aug- mented. Hence he concludes that, when the whole cylinder of wind is intercepted, it cannot then produce the greatest effect, for want of proper interstices to escape. ' It is certainly desirable,' says Mr. Smeaton, ' that the sails of windmills should be as short as possible; but it is equally desirable that the quantity of cloth should be the least that may be, to avoid damage by sudden squalls of wind. The best structure, therefore, for large mills, is that where the quantity of cloth is the greatest that can be in a given circle; on this condition, that the effect holds out in pro- portion to the quantity of cloth ; for otherwise the effect can be augmented in a given degree by a less increase of cloth, upon a larger radius, than would be required if the cloth was increased upon the same radius.'

8. The ratios between the velocities of wind- mill sails unloaded, and when loaded to their maximum, turned out very different in different experiments, but the most common proportion was 3 to 2. In general it happened, that where the power was greatest, whether by enlargement of the surface of the sails, or an increased velo- city of the wind, the second term of the ratio was diminished.

9. The ratios between the least load that would stop the sails, and the maximum with which they would turn, were confined betwixt that of 10 to 8 and 10 to 9 ; being at a medium about 10 to 8-3, and 10 to 9, or about 6 to 5 ; though, on the whole, it appeared that, where the angle of the sails or quantity of cloth was great- est, the second term of the ratio was less.

10. The velocity of wind-mill sails, whether unloaded or loaded, so as to produce a maximum, is nearly as the velocity of the wind, their shape and position being the same. On this subject Mr. Ferguson remarks, that it is almost incre- dible to think with what velocity the tips of the sails move when acted upon by a moderate wind. He has several times counted the number of re- volutions made by the sails in ten or fifteen minutes ; and, from the length of the arms from tip to tip, has computed that if a hoop of the same size was to run upon plain ground with- an equal velocity, it would go upwards of thirty miles in an hour.

11. The load at the maximum is nearly, but somewhat less, than as the square of the velocity of the wind ; the shape and position of the sails being the same.

12. The effects of the same sails at a maximum are nearly, but somewhat less than, as the cubes of the velocity of the wind.

13. The load of the same sails at a maximum

is neany as tne squares, and the effect as the cubes of their number of turns in a given time.

14. When sails are loaded so as to produce a maximum at a given velocity, and the velocity of the wind increases, the load continuing the same; then the increase of effect, when the increase of the velocity of the wind is small, will be nearly as the squares of these velocities ; but, when the velocity of the wind is double, the effects will be nearly as 10 to 27J ; and, when the velocities compared are more than double of that where the given load produces a maximum, the effects increase nearly in a simple ratio of the velocity of the wind. Hence our author concludes that wind-mills, such as the different species for drain- ing water, &c., lose much of their effect by act- ing against one invariable opposition.

15. In sails of a similar figure and position the number of turns in a given time will be re- ciprocally as the radius or length of the sail.

16. The load, at a maximum, that sails of a similar figure and position will overcome, at a given distance from the centre of motion, will be as the cube of the radius.

17. The effects of sails of similar position and figure are as the square of the radius. Hence, augmenting the length of the sail, without aug- menting the quantity of cloth, does not increase the power ; because what is gained by the length of the lever is lost by the slowness of the motion. Hence also, if the sails are increased in length, the breadth remaining the same, the effect will be as the radius.

18. The velocity of the extremity of the Dutch sails, as well as of the enlarged sails, either un- loaded, or even when loaded to a maximum, is considerably greater than that of the wind itself. This appears plainly from the observations of Mr. Ferguson, already quoted, concerning the velocity of sails.

19. From many observations of the compara- tive effects of sails of various kinds, Mr. Smea- ton concludes that the enlarged sails are superior to those of the Dutch construction.

Having thus discussed the subject of the com- mon wind-mills with oblique vanes, Mr. Smea- ton next proceeds to the consideration of those called

horizontal wind-mills, in which it is at- tempted to make the wind impinge directly upon the wheel, as in the case of water-mills. To set the probable advantage of this scheme in its pro- per point of view, Mr. S. proceeds in the fol- lowing manner : — ‘ Let A B, fig. 6, be the section of a plane, in which let the wind blow in the direction C D, \-\h such a velocity as to describe a given space, B E, in a given time, suppose one second; and let AB be moved pa- rallel to itself in the direction C D. Now if the plane A B moves with the same velocity as the tvind; thdl is, if the point B moves through the spaco B E in ihe same time that a particle of air •vould move through it, it is plain that in this rasa there can be no pressure or impulse of the »v:nii upon the plane; but if the plane moves slower than the wind, so that the point B may move to F, while a particle of air setting out fro’n I; would reach E, then B F will express tlit vfc’ocity of the plane; and the relative velo- city of the wind and plane would be expressed

by the line F E. Let the ratio of F E to B E be given, suppose 2 to 3 ; let the line A B repre- sent the impulse of the wind upon the plane A B when acting with its whole velocity B E ; but, when acting with its relative velocity F E, let its impulse be denoted by some aliquot part of A B, as for instance j ; then will Jths of the parallelogram A F represent the mechanical power of the plane, that is, jth A B x 1 B E. Let I N be the section of a plane inclined in such a manner that the base I K of the right- angled triangle I K N may be equal to A B, and the perpendicular N K ~ BE : let the plane IN be struck by the wind in the direction L M, per- pendicular to I K ; then, according to the known rules of oblique forces, the impulse of the wind upon the plane I N, tending to move it accord- ing to the direction L M or N K, will be denoted by the base I K ; and that part of the impulse tending to move it, according to the direction I K, will be expressed by the perpendicular N K. Let the plane I N be moveable in the direction of I K only ; that is, the point I in the direction of I K, and the point N in the direction N Q, parallel thereto. Now it is evident that, if the point I moves through the line I K, while a par- ticle of air, setting forwards at the same time from the point N, moves through the line N K, they will both arrive at the point K at the same time; and consequently there can be no pressure or impulse of the particle of air upon the plane I N. Now let I O be to I K as B F to B E ; and let the plane I N move at such a rate that the point I may arrive at O,and acquire the position

0 Q, in the same time that a particle of air would move through the space N K ; as O Q is parallel to I N, by the properties of similar tri- angles it will cut N K in the point P in such a manner that N P will be equal to B F, aWd P K to F E. Hence it appears that the plane I N, by acquiring the position () Q, withdraws itself from the action of the wind, by the same space N P that the plane A B does by acquiring the posi- tion F G ; and consequently, from the equality of P K to F E, the relative impulse of the wind P K upon the

plane O Q will be equal to the re- lative impulse of the wind upon the plane F G; and since the impulse of the wind upon A B, with the relative velocity F E, in the direction B E, is represented by jj A B ; the relative •im- pulse of the wind upon the plane I N in the direction N K will, in like manner, be repre- sented by $ I K; and the impulse of the wind upon the plane I N, with the relative velocity P K in the direction I K, will be represented by j N K : and consequently the mechanical power of the plane in the direction I K will be repre- sented by j of the parallelogram I Q : that is,

1 IK X jj N K : that is, from the equality of I K to A B, and N K to B E, we shall have

the area of the parallelogram AF.

‘ Hence we deduce this general proposition, that all planes, however situated, that intercept the same section of the wind, and have the same relative velocity in regard to the wind, when reduced into the same direction, have equal powers to produce the same mechanical effects For \vhat is lost by .Ic ‘-bliouuy of the

impulse is gained by the velocity of the motion. Hence it appears that an oblique sail is under no disadvantage in respect of power, compared with a direct one ; except what arises from a diminution of its breadth, in regard to the sec- tion of the wind ; the breadth I N being by ob- liquity reduced to I K.

‘ The disadvantage of horizontal wind-mills, therefore, does not consist in this, that each sail, when directly exposed to the wind, is capable of a less power than an oblique one of the same dimensions ; but that, in a horizontal wind-mill, little more than one sail can be acting at once : whereas, in the common wind-mill, all the four act together ; and therefore, supposing each vane of a horizontal wind-mill to be of the same size with that of a vertical one, it is manifest that the power of a vertical mill will be four times as great as that of a horizontal one, let the number of vanes be what we will. This disadvantage arises from the nature of the thing ; but if we consider the further disadvantage that arises from the dif- ficulty of getting the sails back again against the wind, &c., we need not wonder if this kind of mill is in reality found to have not above one- eighth or one-tenth of the power of the common sort : as has appeared in some attempts of this kind.’

The regulation of the velocity of a mill is a matter of very great importance

to preserve a uniformity of motion, either when the force of the first mover is fluctuating, or when the resist- ance, or work of the mill, varies in its degree : either or both of these causes will occasion the mill to accelerate or diminish its velocity; and in many instances it will have a very injurious effect upon the operations of the mill. Thus, in a mill for spinning cotton, wool, flax, &c., driven by a water-wheel, are a multiplicity of move- ments, many of which are occasionally disen- gaged, in different parts of the mill, for various purposes. This tends to diminish the resistance to the first mover, and the whole mill accelerates. Or, on the other hand, the head of water, which drives the wheel, may be liable to rise and fall suddenly, from many causes to which great and rapid rivers are subject, and cause similar ir- regularities in the speed of the wheel. For such cases judicious mechanics have adopted contri- vances, or regulators, which counteract all these causes of irregularity; and a large mill, so regu- lated, will move like a clock, with regard to its regularity of velocity. . These regulators are usually called governors, the application of which is most conspicuous in the steam engine, when that machine is applied to manufacturing purposes.

Let AB, fig. 7, be a vertical axis, which is made to revolve by the bevelled wheel A, acted on by the other parts of the machinery, and so that it always revolves with a velocity propor- tional to that of the fly-wheel. Two heavy balls C C' are attached- to metal rods, which work on a pivot at B, so that they are capable of reced- ing from the axis A B. As they recede from the axis, the joints D D' recede from one another, and the joint E is drawn down. This joint E is connected with the end of a lever, or a system «f levers, the action of which we shall presently explain.

Now, by the revolution of the spindle or axis, AB, the balls CC' acquire an obvious tendency to fly off from the axis, and this tendency is re- sisted by their weight; so thai, when the instru- ment is revolving with a certain velocity, the balls will remain suspended. The property from which this apparatus derives its whole efficacy is, that at whatever distance or in whatever position the balls remain suspended, and neither move to or from the axis, the spindle A B must be revolv- ing with the same velocity. A greater velocity would cause the balls to fly, and a less velocity would cause them to fall towards the axis.

If the action of the levers with which the joint E is connected be directed upon the first mover in such a manner that its energy is dimi- nished when E is depressed, and increased when E is elevated, it is plain that the uniformity of velocity which is sought may be obtained. Let us suppose that the levers on which E works communicate with a valve which admits steam to the piston of a steam-engine to which this governor is applied ; and suppose that, when E is raised, and the balls CC' rest in their seats, the valve is fully open, so as to allow the steam to flow in a full stream to the

piston ; but that according as E is depressed the levers gradually close the valve, so as to admit the steam in a constantly diminished quantity. Now suppose that the engine has been working twenty printing presses, and that the action of ten of them is suddenly suspended. The engine thus loses half its load, and would, if the same power of steam continued to be admitted, move with about twice its former velocity. But the moment an in- creased velocity is perceived in the machine, the balls CC' recede from the axis, draw down the joint E, partially close the valve, and check the supply of steam to the cylinder. The impelling power is thus diminished; and, if it be dimi- nished in exactly the same degree as the load, the machine will move with its former velocity; but if it should, at first, be more diminished, the velocity will be less than its former velocity, and the balls will again move towards the axis and open the valve, and will, at length, settle into that position in which the steam admitted to the cylinder is exactly proportioned to the load on the machine ; and the proper velocity will thus be restored.

In the employment of machinery, it is evi- dently of great importance to be provided with an easy and ready method for discovering at all times whether the motion of the machine is quicker or slower than what is known to be best adapted for the object in view. This advantage is derived from the tachometer, an instrument contrived by Mr. Donken, for which he was re- warded by the Society for the Encouragement of Arts, &c., with their gold medal.

A front view of the tachometer is represented in fig. 8, and a side view in fig. 9. XYZ, fit. 8, is the vertical section of a wooden cup, made of box, which is drawn in elevation at fig. 9. The whiter parts of the section in fig. 8 represent what is solid, and the dark parts what is hollow. This cup is filled with mercury up to the level LL, fig. 8. Into the mercury is im- mersed the lower part of the upright glass tube*

A B, which is filled with colored spirits of wine, and open at both ends, so that some of the mer- cury in the cup enters at the lower orifice, and, when every thing is at rest, supports a long column of spirits, as represented in the figure. The bottom of the cup is fastened by a screw to a short vertical spindle D; so that, when the spindle is whirled round, the cup, whose figure is a solid of revolution, revolves at the same time round its axis, which coincides with that of the spindle.

In consequence of this rotation, the mercury in the cup acquires a centrifugal force, by which its particles are thrown outwards, and that with

the greater intensity, accordingly as they are more distant from the axis, and according as the angular velocity is greater. Hence, on account of its fluidity, the mercury rises higher and higher as it recedes from the axis, and conse- quently sinks in the middle of the cup; this ele- vation at the sides and consequent depression in the middle increasing always with the velocity of rotation. Now the mercury in the tube, though it does not revolve with the cup, cannot continue higher than the mercury immediately surrounding it, nor indeed so high, on account of the superincumbent column of spirits. Thus the mercury in the tube will sink, and conse- quently the spirits also ; but, as that part of the tube which is within the cup is much wider than the part above it, the depression of the spirits will be much greater than that of the mercury, being in the same proportion in which the square of the larger diameter exceeds the square of the smaller.

Let us now suppose, that, by means of a cord passing round a small pulley F, and the wheel G, or in any other convenient way, the spindle D is connected with the machine whose velocity is to be ascertained. In forming this connexion we must be careful to arrange matters so that, when the machine is moving at its quickest rate, the angular velocity of the, cup shall not be so great as to depress the spirits below C into the wider part of the tube. We are also, as in the figure, to have a scale of inches and tenths ap- plied to AC, the upper and narrower part of the tube, the numeration being carried downwards from zero, which is to be placed at the point to •which the column of spirits rises when the cup is at rest.

Then the instrument will be adjusted if we mark on the scale the point to which the column of spirits is depressed, when the machine is moving with the velocity required. But as in many cases, and particularly in steam- engines, there is a continued oscillation of velocity, in those cases we have to notice the two points between which the column oscillates during the most advan- tageous movement of the machine.

Here it is proper to observe that the height of the column of spirits will vary with the tempera- ture, when other circumstances are the same. On this account the scale ought to be moveable, so that, by slipping it upwards or downwards, the zero may he placed at the. point to which the column reaches when the cup is at rest; and thus the instrument may be adjusted to the par- icular temperature with the utmost facility, and

with sufficient precision. The essential parts of the tachometer have now been mentioned, as well as the method of adjustment, but certain circumstances remain to be stated.

The form of the cup is adapted to render a smaller Quantity of mercury sufficient than what must have been employed either with a cylindri- cal or

hemispherical vessel. In every case two precautions are necessary to be observed: — First that, when the cup is revolving with its greatest velocity, the mercury in the middle shall not sink so low as to allow any of the spirits in the tube to escape from the lower orifice, and that the mercury, when most distant from the axis, shall not be thrown out of the cup. Secondly, that, when the cup is at rest, the mercury shall rise so high above the lower end of the tube that it may support a column of spirits of the proper length.

Now in order that the quantity of mercury, consistent with these conditions, may be reduced to its minimum, it is necessary, first, that if M M, fig. 8, is the level of the mercury at the axis when the cup is revolving with the greatest velocity, the upper part, M M X Y, of the cup should be of such a form as to have the sides covered only with a thin film of the fluid; and, secondly, that, for the purpose of raising the small quantity of mercury to the level L L, which may support a proper height of spirits when the cup is at rest, the cavity of the cup should be in a great measure occupied by the block K K, having a cylindrical perforation in the middle of it for the immersion of the tube, and leaving sufficient room within and around it for the mercury to move freely both along the sides of the tube and of the vessel.

The block K K is preserved in its proper po- sition in the cup or vessel X Y Z, by means of three narrow projecting slips or ribs placed at equal distances round it, and is kept from rising or floating upon the mercury by two or three small iron or steel pins inserted into the under side of the cover, near the aperture through which the tube passes.

It would be extremely difficult, however, nor is it by any means important, to give to the cup the exact form which would reduce the quantity of mercury to its minimum ; but we shall have a sufficient approximation, which may be executed with great precision, if the part of the cup above M M is made a parabolic conoid, the ver- tex of the generating parabola being at that point of the axis to which the mercury sinks at its lowest depression, and the dimensions of the parabola being determined in the following manner : — Let V, G, fig. 11, represent the axis of the cup, and V the point to which the mer- cury sinks at its lowest depression ; at any point G above V draw G H perpendicular to V G ; let n be the number of revolutions which the cup is to perform in 1″ at its quickest motion ; let v be the number of inches which a body would describe uniformly in l”,with the velocity required in falling from the rest, through a

height equal to G V, and make G H — -ˆ-TT— •

Then the parabola to be determined is that which has v for its vertex, V G for its axis, and G H

MIL

6!

MIL

<:or its ordinate at G. The cup nas a lid to pre- vent the mercury from being thrown out of it, an event which would take place with a very moderate velocity of rotation, unless the sides were raised to an inconvenient height ; but the lid, by obstructing the elevation at the sides of the cup, will diminish the depression in the middle, and consequently the depression of spirits in the tube : on this account a cavity is formed in the block, immediately above the level LL, where the mercury stands when the cup is at rest; and thus a receptacle is given to the fluid which would otherwise disturb the centri- fugal force, and impair the sensibility of the instrument.

It will be observed, that the lower orifice of the tube is turned upwards. By this means, after the tube has been filled with spirits by suc- tion, and its upper orifice stopped with the ringer, it may easily be conveyed to the cup and im- mersed in the quicksilver, without any danger of the spirits escaping, a circumstance which other- wise it would be extremely difficult to prevent, since no part of the tube can be made capillary, consistently with that free passage to the fluids which is essentially necessary to the operation of the instrument:

We have next to attend to the method of put- ting the tachometer in motion whenever we wish to examine the velocity of the machine. The pulley F, which is continually whirling during the motion of the machine, has no connexion whatever with the cup, so long as the lever Q R is left to itself. But, when this lever is raised, the hollow cone P, which is attached to the pul- ley and whirls along with it, is also raised, and, embracing a solid cone on the spindle of the cup,

communicates the rotation by friction. When cur observation is made we have only to allow the lever to drop by its own weight, and the two cones will be disengaged and the cup retrain at rest.

The lever Q R is connected by a vertical ro 1 to another lever S, having, at the extremity S, a valve, which when the lever Q R is raised, and the tachometer is in motion, is lifted up from the top of the tube so as to admit the external air upon the depression of the spirits; on the other hand, when the lever Q R falls, and the cup is at rest, the valve at S closes the tube and

pre- vents the spirits from being wasted by evapora- tion.

It is, lastly, to be remarked that both the sen- sibility and the range of the instrument may be infinitely increased ; for, on the one hand, by en- larˆing the proportion between the diameters ot the wide and narrow parts of the tube, we enlarge in a much higher proportion the extent of scale corresponding to any given variation of ve- locity ; and on the other hand, by deepening the cup, so as to admit when it is at rest a greater height of mercury above the lower end of the tube, we lengthen the column of spirits which the mercurv can support, and consequently en- large the velocity which, with any given sensibi- lity of the instrument, is requisite to depress the spirits to the bottom of the scale. Hence the ta- chometer is capable of being employed in very delicate philosophical experiments, more espe- cially as a scale might be applied to it, indicating equal increments of velocity. But in the present account it is merely intended to state how it may be adapted to detect in machinery every devia- tion from the most advantageous movement.

MILLAR (John), LL.D., professor of civil law in the university of Glasgow, was born in the parish of Shotts, in Lanarkshire, in 1735. He was admitted a member of the faculty of ad- vocates in 1760; and appointed professor in ITo'l. In 1771 he published a small work en- titled Observations concerning the Ranks in Society ; which passed through several editions in Britain, and acquired such celebrity on the continent, that M. Garat translated it into French. In 1787 he published An Historical View of the English Constitution ; from the settlement of the Saxons in Britain to the accession of the house of Stuart. But it was chiefly as a public lec- turer on law that Mr. Millar's talents were useful to his contemporaries. From his lectures on law and government, many of the first characters of the present age imbibed the rudiments of politi- cal science, and received the first impressions of attachment to freedom. He died in Glasgow, in June 1301. He was married and had several children.

MILLEDGVILLE, a town of the United States, in Baldwin county, Georgia, the seat of the state government. It is situated in the Oconee, 300 miles, by the river, from the sea, and was founded in 1806. It contains a state-house, court-house, jail, and various other public buildings. Two weekly newspapers are pub-

lished here. Population 2000 : 160 miles W. N.W. of Savannah.

MILLENARY, adj. ~) Fr. mille-

*MILLENA'RIAN, n. *. & adj. I natn ; miltena- MIL'LENNIST, [ri««, Lat. Con-*

MILLEN'NIUM, f sisting of a

MILLENNIAL, adj. I thousand : a

MILLESIMAL. J millenarian, Or

millennist, is one who expects the millennium ; which is taken theologically for the reign of a thousand years, which our Saviour is expected to exercise hereafter upon earth : millennial is, per- taining to the millennium : millesimal is thou- sandth, consisting of thousandth parts.

Now if there be any other amongst those sixty- five places alledged by Alstedius, wherein the fa- vourers of the millenarian reign can place any con- fidence for the evicting of their opinions, 1 should be glad to see it driven up to the head. Bp. Hall.

There is no passage in the whole book of God, wherein this millenary reign of saints is punctually expressed, save only this of the Revelation. Id.

For, besides that the millenary opinion is ex- pressly taught by papias, Ji styn Martyr, and divers others famous in their time: Justin Slartyr in his dialogue against Tryphon says it was the belief of all Christians exactly orthodox. Jtr. Taylor.

We must give a full account of that state called the milleiwium. Bvmet's Theory of the Earth.

To be kings and priests unto God, is the charac-

teristic of those that are to enjoy the milennial hap- piness. Burnet.

The millennary sestertium, in good manuscripts, is marked with a line across the top thus HS-

Arbuthiiot on Coins.

To give the square root of the number two, he labored long in millestimal fractions, till he confessed there was no end. Watts.

MILLENNIUM. A thousand years; gene- rally signifying the 1000 years during which, according to an ancient tradition in the church, grounded on a text in the Apocalypse, our Sa- viour is to reign with the faithful upon earth after the resurrection, before the final completion of beatitude.

MILLENNIUM is derived from mille anni, 1000 years. Though" there has been no age of the church in which the millennium was not ad- mitted by individual divines of the first eminence, yet it is evident from the writings of Eusebius, Irenaeus, Origen, and others, among the ancients, as well as from the histories of Dupin, Mosheim, and all the moderns, that it was never adopted by the whole church, or made an article of the established creed in any nation. About the middle of the fourth century, the Millenarians held the following tenets : 1st, That the city of Jerusalem shall be rebuilt, and that the land of Judea shall be the habitation of those who are to reign on earth 1000 years. 2dly, That the first resurrection is not to be confined to the martyrs ; but that after the fall of antichrist all the just are to rise, and all that are then on the earth are to continue for that space of time. 3rdly, That Christ shall then come down from heaven, and be seen on earth, and reign there with his ser- vants. 4thly, That the saints, during this period, shall enjoy all the delights of a terrestrial para- dise. These opinions were founded upon several passages of Scripture, which the millenarian& among the fathers understood in a literal sense, but which the moderns, who hold that opinion, consider as partly literal and partly metaphorical. Of these passages, that upon which the greatest stress has been laid is in Rev. xx. 1 — 6. Most modern critics contend that the prophecies of the millennium point, not to a resurrection of martyrs and other just men to reign with Christ 1000 years in a visible kingdom upon earth, but to that state of the Christian church which, for 1000 years before the general judgment, will be so pure and so widely extended, that, when compared with the state of the world in the ages preceding, it may be called a resurrection from the dead.

Such is a brief and fair historical view of this question. In modern times the extended circu lation of the Scriptures has brought this, in com- mon with every other topic of God's word, into more frequent consideration : able men have espoused the opinions of the old millenarians ; while some have advocated a theory that seems to involve two millennia; and others (the most modern expounders of the subject), connect the millennium with the immediate return of the Jews to Palestine, and an exclusive exaltation of that people, under the personal reign of the Messiah, over all the nations of the earth. The nu'st common modern opinion confines all the

predictions respecting what has been called the millennium to a spiritual reign of Christ DV means of the universal reception of the gospel, and has been thus stated : — 1 . That the Scrip- tures afford us ground to believe that the church will arrive to a state of prosperity which it never has yet enjoyed, Rev. xx. 4, 7. ; Psal. Ixxii. 11 ; Isa. ii. 2, 4; xi. 9; xlix. 23; Ix. ; Dan. vii. 27 2. That this will continue at least 1000 years, or a considerable space of time, in which the work of salvation may be fully accomplished in the ut- most extent and glory of it. In this time, in which

*the world will be filled with real Chris- tians, and continue full by constant propagation to supply the place of those who leave the world, there will be many thousands born and live on the earth, to each one that has been born and lived in the preceding 6000 years; so that, if they who shall be born in that 1000 years shall be all, or most of them, saved (as they will be), there will, on the whole, be many thousands of mankind saved to one that shall be lost. 3. This will be a state of great happiness and glory. While some think that Christ will reign per- spnally on earth, and that there will be a literal resurrection of the saints, Rev. xx. 4, 7, these writers suppose that the reign of Christ and resurrection of saints alluded to in that passage, are only figurative ; and that nothing more is meant than that, before the general judgment, the Jews shall be converted, genuine Christianity be diffused through all nations, and that Christ shall reign, by his spiritual presence, in a glori- ous manner. It will, however, be a time of eminent holiness, clear light and knowledge, love, peace, and friendship, agreement in doc- trine and worship. Human life, perhaps, will rarely be endangered by the poisons of the mi- neral, vegetable, and animal kingdoms. Beasts of prey, perhaps, will be extirpated, or tamed by the power of man. The inhabitants of every place will rest secure from fear of robbery and murder. War shall be entirely ended. Capital crimes and punishments be heard of no more. Governments placed on fair, just, and humane foundations. The torch of civil discord will be extinguished. Perhaps Pagans, Turks, Deists, and Jews will be as few in number as Christians are now. Kings, nobles, magistrates, and rulers in churches shall act with principle, and be for- ward to promote the best interests of men : tyranny, oppression, persecution, bigotry, and cruelty, shall cease. Business will be attended to without contention, dishonesty, and covetous- ness. Merchandise between distant countries will be conducted without fear of an enemy. Learning, which has always nourished in pro- portion as religion has spread, shall then greatly increase, and be employed for the best of pur- poses. Above all, the Bible will be more highly appreciated, its harmony perceived, its supe- riority owned, and its energy felt by millions of human beings. In fact, ‘ the earth shall be filled with the knowledge of the Lord as the waters cover the sea.’ 4. The time when this millen- nium will commence cannot be fully ascertained; but the common idea is, that it will be in th’e 7000th year of the world. It will, most probably come on by degrees, and be in a manner intro**

duced years before that time. The overthrow which popery has had in places where it has been so dominant for hundreds of years seems to prepare for it; the fulfilment of prophecy re- specting infidels, and the

falling away of many in the last times ; and yet, in the midst of all, the number of missionaries sent into different parts of the world, together with the increase of gos- pel ministers; the thousands of ignorant children that have been taught to read the Bible, and the vast number of different societies that have been instituted for the benevolent purpose of inform- ing the minds and impressing the hearts of the ignorant. — See Hopkins on the Millennium ; Whitby's Treatise on it, at the end of the second volume of his Annotations on the New Testa- ment ; Bishop Newton's Twenty-fifth Dissertation on tlie Prophecies; Bellamy's Treatise on the Millennium, fyc.

*Dr. Gill is an advocate for both a spiritual and a personal future reign of Christen earth. Consider- ing the antichrist of John and the ' man of sin' of St. Paul, as identical, he observes that, of the latter, it is said he shall be consumed by the * spirit of Christ's 'mouth,' which is the preach- ing of the gospel : this, he conceives will bring an the period of the ' fulness of the gentiles' when the Jews shall be converted (popery having been destroyed): that they shall then join them- selves every where, and, as it were, simultane- ously to Christian churches: when ' they will return to their own land and possess it, being assisted by the Protestant princes, who will drive out the Turk.' Afterwards he expects the large conversions to God mentioned Isa. Ix. ; and that the interest and church of Christ will ' make the greatest figure it ever did in the world.'*

To this, nearly similar with the foregoing view of Christ's spiritual reign, he adds, as his opinion, that ' Christ will have a special, pecu- liar, glonons, and visible, kingdom' on earth im- mediately succeeding his second coming, and the resurrection of all deceased believers : he un- derstands, therefore, literally the former part of Rev. xx. and St. Paul in 1 Thess. iv.

But the most remarkable of modern opinions on this subject, and one worth recording, per- haps, that events may testify to its truth or error, is that so warmly espoused of late by several evan- gelical clergymen of the church of England and the Rev. Mr. Irving. The latter has, at least, made himself intelligible on this subject; and protests that he is greatly afflicted because of the present unawakened and even dead condition of all the churches with respect to the coming of our Lord Jesus Christ, which is, as he believes, ' close at hand.' He thus delivers his judgment on the subject.

1. 'That the present visible church of the Gentiles, which hath been the depository of the oracles and the sacraments, and the ordinances, since the Jewish state was dissolved, I mean the mixed multiude who are baptised in the name of the Father, and the Son, and the Holy Ghost, under that seal including Protestants, Rom?n Catholics, Greek church, Armenians, &c., and all the sects of each, as Scottish, English, Irish, Lu- theran and Calvinistic churches, with the dis- senters and seceders from each, that this

body of

baptised men, which I call the Gentile church, who should every one of them have been a saint; being ‘ by baptism ingrafted into Christ Jesus to be made partakers of his justice, whereby our sins are covered and remitted ;’ standeth threat- ened in the Holy Scriptures because of its hypo- crisies, idolatries, superstitions, infidelity, and enormous wickedness, ‘ because it hath tran- gressed the laws, changed the ordinance, and broken the everlasting covenant (Isaiah xxiv.), with such a terrible judgment, as hath not been, nor ever shall again be seen upon the earth ; in the which deluge of wrath she shall be titan dis- solved, as the synagogue was heretofore in the destruction of Jerusalem, when she in like man- ner had tilled up the measure of her iniquity : — which fearful consummation I judge to be close at hand, both by the signs of the times, and from the prophetic numbers expressly given to guide as in the anticipation of these great Gentile judgments, which are mentioned in Scripture wherever and whenever the coming of the Lord is mentioned.*

2. ‘ When the Lord shall have finished the taking of witness against the Gentiles, and summed up the present dispensation of testi- mony in this great verdict of judgment, and while the execution is proceeding, he will begin to prepare another ark of testimony, or rather to make the whole earth an ark of testimony ; and to that end will turn his Holy Spirit unto his ancient people the Jews, and bring unto them those days of refreshing spoken of by all the holy prophets since the world began : in the which work of conveying to them his Spirit, by the preaching of the word, he may, and it is likely will, use the election ‘according to grace, who still are faithful amongst the Gentiles ; though I believe it will chiefly be by the sending of Elias, who is promised before the dreadful and terrible day of the Lord, and by other mighty and miraculous signs. This outpouring of the Spirit is known in Scripture by ‘ the lat- ter rain,’ of which I deem the religious revivals of the last thirty years to be as the first drop- pings of the shower, and our religious works and societies to be a sickly uncertain hue of verdure, which the withered stump by the scent of the waters hath put forth, and like all God’s gifts it will be given to those who will receive it, both Gentiles and Jews, and will prove the touchstone of both ; — amongst the Gentile church awaken- ing those persecutions of the last Antichrist which the faithful are taught to expect imme- diately before the coming of the Lord, and of which” they have already had a foretaste in seve- ral of the Protestant churches abroad ; in the Jewish church accomplishing that refining and passing through the fire which is spoken of im- mediately on their restoration. (Mai. iii. 3; Zech. xiii. 9). Which Antichristian spirit among the Gentiles, and enraged infidel spirit among the Jews, may amalgamate with one another, to produce a spurious restoration of the nations to their own land, and occasion that great warfare in the

neighbourhood of Jerusalem, when Anti- christ shall fall, and his powers be broken, in the battle of Armageddon. But the faithful amonir the Jews, now brought to believe on him whom

they have pierced, shall in the mean time be prepared by much sorrow, and distress, and sup- plication, for the coming of the Lord to settle and establish them surely and for ever in their own land ; and the faithful among the Gentiles shall be expecting the Lord to deliver them, according to the promises which he hath made to his elect church of being raised from the dead, or changed among the living at his coming, and all gathered to him in that day. It was my second proposition, that in this way the Lord will be preparing for himself an ark of testimony in the Jewish nation, through whom to make the whole world one great and universal ark of faithful testimony.

3. 'That these judgments upon the Gentile nations, and all the earth, he will finish by his own personal appearance in flaming fire, taking vengeance on those who know not God and obey not the gospel of our Lord Jesus Christ; raising those who sleep in Jesus, and changing those of the Gentile church who still abide in life ; and preserving the mourning Jew- ish church, as Goshen was preserved in the plagues of Egypt : and when the promised land shall have been cleared of all intruders, and they themselves by suffering perfected for the habi- tation of it, he shall lead them into it with a mighty and outstretched arm : and sit upon the throne of David, judging and seeking judg- ment, and hasting righteousness ; and send forth the law from Zion, and the word of the Lord from Jerusalem; and rule among the nations, and be the prince of universal peace; using in this judgment and government of the earth his risen saints, who shall be his ministers to execute whatever his pleasure is. And thus, Satan being cast out, and the prince of light, and the heavenly Jerusalem, the dwelling place of his elect church being present, the. Jerusalem on earth, with the house of Jacob, and all the nations, shall enjoy that fulness of peace and joy, that millennial reign of righteousness, for which we all hope and pray, and diligently labor.'

He afterwards thus meets what he considers as the two principal objections to his theory : —

' But here two questions present themselves. 1. If, as you have argued, the world be of such rebellious stuff, that in the face of this dis- pensation of witness and testimony, sustained all the while by an active Providence, it

will "not amend its obstinate ways, but persevere in them to the end ; yea, and wax bolder and bolder against God and his chosen ones; until it is necessary to take measures that the cause of righteousness perish not utterly, by coming upon the confident world with a series of judgments, which shall make it reel to and fro like a drunk- ard, and consume its inhabitants, till hardly 'a gleaning as of the vintage grapes is left ;' how all at once shall it come to pass that the most obstinate of the nations shall at once be converted, and the whole world follow in its train, and persevere in a state of peace and bles- sedness? This is precisely the question to which I desire the attention of the church. How, in- deed, will that great revolution be effected? I have a means most effectual in the casting out of Satan with all his angels from the possession of

the earth and the heavens, in tne destruction of all his works of despotism and superstition, infi- delity and radicalism from the face of the whole earth. He who was the beginner of the declen- sion, and of all the mischief which the earth has endured, must be cast out by the seed of the woman, before the warfare will end which the seed of the woman in his church hath maintained till this hour against the serpent and his gene- ration of vipers. This is the great work behind the scenes in the spiritual world, out of the ob- servation of the sense of man, which will prepare the way for the great work of peace and blessed- ness, which will then follow, almost as of course, before the scenes, that is in the intercourse and conduct of men. I say almost of course, yet not altogether of course ; because though Satan shall then be cast out of the world, and his active temptations wholly at an end, men will still be in the flesh and heirs of death, during the whole period of the millennial kingdom. And therefore they will need government, both civil and eccle- siastical, a law and a religion, or rather a law in a religion ; that is, the same law of righteousness which we now possess, administered according to the wisdom of Christ and his reigning church, without any opposition or strife of Satan. Power shall then be holy; and the creation shall then be pure, and the bondage of Satan shall have ceased. There is not only this negative, but also another provision of a positive kind, which answers to the second question that might be started from the premises, viz. And what is to become of those spiritual witnesses, who since the calling of Abraham have been raised up in the likeness of Christ Jesus, to preserve the testimony of the righteousness which is by faith in his blood ? What is to become of this elect church that have suffered, before his incarnation and since his incarnation, by the same eternal Spirit, and for the same end of the Father's glory for which he suffered? To this I answer that the whole Scripture, from the begin- ning to the ending of it, doth testify that they shall come with Christ to be partakers of his glory, that he may be glorified in them in whom also he was dishonored ; and that they may be the sharers of that throne, and kingdom, and power, whereof he

hath the promise from the Father, and is now expecting the fulfilment. These are the dead who shall hear the voice of the Son of God and live. These are they who shall be changed. These are they who shall meet the Lord in the air, and reign with him on the earth, and be for ever with the Lord, in that new Jerusalem which cometh down from heaven. This new Jerusalem is that which flesh and blood cannot inherit, where they neither marry nor are given in marriage, but are like the angels of God. And this is that of which the pillar of fire was the emblem in the wandering church ; and the Shechinah, or glory between the cherubim, was the emblem in the resting church. There shall be to the whole earth such a glory, beyond the light of the sun, as there was in the holy of holies in the temple of Jerusalem; in which shall dwell the shining ones, the com- panions cf the Lord, the true priesthood after the order of Melchisedek, who shall undertake the

government of the whole earth, and carry it on under the great king ; by whose active ministry, by wnose speedy obedience, passing to and fro at will with angelic freedom and readiness, they shall preserve and maintain that peace and bles- sedness amongst the sojourners of the earth, in which the millennium will consist. And thus, without going into further particulars, it is that the change in the world's temper and condition will be accomplished ; and thus that the elect church will be rewarded by being made the spouse, the sister of the king, the joint-heirs, the fellow-judges, and governors, and possessors of the kingdom.

' Such, in few words, is the form of doctrine concerning the second advent of our blessed Lord, which was made known to me in the much study of the Holy Scriptures ; and which, after several months of secret meditation, I began last Christmas, with all discretion and with fear and trembling, to break up and deal out to the church which God hath committed to my charge, resting and grounding the substance of it all upon the very words of our Lord himself, and using the Old Testament only when the language manifestly carried me thither, and the other books of the New Testament for further expo- sition and unfolding of those seeds of truth which are all contained in our Lord's own recorded discourses. For I hold it to be a great principle, which may almost be laid down as a canon of exposition, that every fundamental truth of faith should b« shown to be present under some form or other, in every part, or rather T should say in every period, of divine revelation, unfolding itself more and more on- wards to the end.'

We cannot afford space for a more enlarged view of this new scheme. The above are extracts from the Preliminary Discourse of this popular commentator, prefixed to his Translation of a Spanish work entitled La Venida del Mesias en Gloria y Majestad, 1827.

MILLE PASSUS, or MILLIA PASSUUM, a very common expression among the ancient Romans for a measure of distance, commonly called a mile. Milliarium was rarely used. Heyschius made it to consist of seven stadia ; Plutarch little short of eight ; but Strabo, Polybius, and many others, make it just eight stadia. This distance is sometimes called lapis. Each passus consisted of five feet.

MILLEPEDES, n. s. Fr. , mille-pieds ; Lat. mille and pes, foot. A species of wood-lice, well furnished with feet, as well as teeth.

If pheasants and partridges are sick, give them millepedes and earwigs, which will cure them.

Mortimer's Husbandry.

MILLEPES, or wood-louse, in entomology, a species of oniscus. These insects are found in cellars, under stones, and in cold moist places ; in the warmer countries they are rarely met with. Millepedes have a faint disagreeable smell, and a somewhat pungent, sweetish, nauseous taste.

MILLEPORA, in natural history, a genus of lithophytes, of a hard structure and full of holes, which are not stellate or radiated, and whose animal is the hydra. It differs from the madre- pora, and comprehends fourteen different species.

The animal, which forma and inhabits the mille- pora, occupies the substance ; ami the millepor grow upon one another ; these little animals pro- duce their spawn, which, attaching itself either to the extremity of the body already formed, or un- derneath it, gives a different form to this produc- tion. Hence the various shapes of the millepora, which is composed of an infinite number of the cells of those little insects, which all together ex- hibit different figures, though every particular cellula hats its essential form, and the same di- mensions, according to its own species.*

MILLER (Joseph), a witty actor, whose name is identified with a low kind of wit when- ever the English language is known, was bora in London in 1684, and was a favorite low comedian. He performed Sir Joseph Wittol, in Congreve's Old Bachelor; and Ben in Love for Love. Another of his characters was Teague, in The Committee. He died August 15th, 1738, and was buried in the church-yard of St. Cle- ments, where a stone (recently renewed) waa placed to his memory, with an epitaph, written by ' Stephen

Duck. The jests which have immortalised his name were collected by John Mottley, author of the Life of Peter the Great, and other works. They had run through eleven editions in 1751, and were reprinted, after a lapse of thirty years, by Barker, of Kussel Street. A copy of the original edition was lately valued at ten guineas.

MILLER (James), an English dramatic wri- ter, born in Dorsetshire, in 1703. He studied at Oxford, entered into orders, and published, 1. The Humors of Oxford, a comedy; acted in 1729 : 2. Mahomet, a tragedy ; which had a great run : 3. A volume of Sermons : 4. Poems, &c. He died in 1743.

MILLER (Philip), F.R.S., a celebrated bota- nist and gardener, born in Scotland, in 1691. He succeeded his father as gardener to the Apo- thecaries' Company at Chelsea, in 1722. He published several works, the principal of which is his Gardener's Dictionary, in folio. He died in 1771.

MILLER (Edward), music doctor, was of hum- ble parentage and bom at Norwich in 1736. Eloping from his father, he went to Lynn, where Dr. Burney first discovered his genius for music. He obtained in 1756 the appointment of organ- ist at Doncaster, and after continuing in this situation thirty years took his doctor's degree at Cambridge. To his skill on the organ, he added that of an excellent flute player, and performed upon this instrument in Handel's oratorios. Dr. Miller was the author of The elements of Thorough Bass and Composition ; The Institutes of Music ; and of a topographical work of merit on the History and Antiquities of Don- caster. He also arranged and published a set of new melodies for the Psalms. His death' took place at Cambridge in 1807.

MILLERIA, a genus of the polygamia neces- saria order, and syngenesia class of plants; na- tural order, forty-ninth, composite.

MILLES (Jeremiah), F. R.S., a learned anti- quary and divine, born in Hampshire, in 1713, and educated at Eton and Baliol Colleges, Ox- ford ; of which his father, Jeremiah, was tutor and

fellow. He took his degree of A. M. in 1735, and of D.D. in 1747. His uncle, Thomas Milles, bishop of Waterford, gave him a prebend, and left him a large fortune in 1740. He mar- ried a daughter of archbishop Potter, through whom he obtained various preferments in Eng- land, the last of

which was the deanery of Exeter, in 1762. In 1759 he was elected president of the Antiquarian Sociey. He published an ele- gant edition of Rowley's Poems, with a glossary ; but was treated with great asperity by his oppo- nents in that controversy. He also published a sermon, several papers in the Archeologia, and left many curious MSS. on Doomsday Book, on the Danish coinage, and ample materials for a history of Devonshire. He died at London, February 13th, 1784, aged seventy-one, leaving three sons and two daughters.

MILLESIMO, a town of France, in the de- partment of the Stura, and late duchy of Mont- serrat, ten miles east of Ceva. On the llth of April; 1796, the denies leading to it were forced by the French under Buonaparte and Augereau, and the Austrians under general Provera, de- feated with the loss of 1500 grenadiers; and on the 16th a second battle took place,, in which the Austrians were again defeated, about 1000 men killed, and general Provera obliged to surrender with 9000 men, thirty-two pieces of cannon, and fifteen pairs of colors.

MIL'LET, n. s. Fr. millet ; Ital. milgio ; Lat. milium. A plant, see MILIUM. Also mis- printed for MULLET, a fish, which see.

Some fish are gutted, split, and kept in pickle ; as whiting, mackerel, millet. Carew.

In two ranks of cavities is placed a roundish stud, about the bigness of a grain of millet.

Woodward on Fossils.

Millet is diarrhcetick, cleansing, and useful in dis- eases of the kidneys. Arbuthnot on Aliments.

The millet hath a loose divided panicle, and each single flower hath a calyx, consisting of two leaves, which are instead of petals, to protect the stamina and pistillum of the flower which afterwards becomes an oval shining seed. This plant was originally brought from the eastern countries, where it is still greatly cultivated, from whence we are annually fur- nished with this grain, which is by many persons much esteemed for puddings. Miller.

MILLET, in botany. See MILIUM. MILLET GRASS. See PANICUM. MILLET, INDIAN. See HOLCUS. MILLET1ERE (Theophilus Brachet), lord of, a Protestant French advocate of the seventeenth century, who studied the law at Heidelberg; afterwards studied Hebrew, became a divine, and obtained an office in the consistory of the church of Paris. Being elected a representative of the assembly of Rochelle, he had a principal hand in their

most spirited resolutions, and wrote a work encouraging the reformers to take up arms; upon which he was imprisoned and put to the torture. Yet, after all this, being liberated, he turned Roman Catholic, in 1645, and wrote several tracts for the purpose of reconciling the Huguenots to the mother-church, which only pro- cured him the ill will of both parties. He died in 1665.

MILLIARIUM AUREUM was a gilded pillar in the forum of Rome, at which all the highways

of Italy met, as one common centre. From tins pillar the miles were counted, and at the end o every mile a stone was put down. The miliary column was erected by Augustus Caesar, and U still U be seen.

MI'LLINER, n.s. I believe from Milaner, an inhabitant of Milan, as a Lombard is a banker.— Johnson. But there is a Goth, and Swed. milla and molla, to divide, and also to deal. One who sells ribands and dresses for women. He was perfumed like a milliner ;

And 'twixt his finger and his thumb he held

A pouncet box, which ever and anon

He gave his nose.. Shakspeare. Henry IV.

The mercers and milliners complain of her want of publick spirit. Tatler.

If any one asks Flavia to do something in charity, she will toss him half a crown, or a crown, and tell him, if he knew what a long milliner's bill she had just received, he would think it a great deal for her to give. Law.

MILLION, n. s.) Fr. million ; Ital. milliogne.

MILLIONTH, adj. j Ten hundred thousand; taken proverbially for any very large number.

Within thine eyes sat twenty thousand deaths, In thy hands clutched as many millions, In thy lying tongue both numbers. Shakspeare.

There are millions of truths that a man is not con- cerned to know. Locke.

She found the polished glass whose small convex Enlarges to ten millions of degrees The mite, invisible else. Phillips.

Midst thy own flock, great shepherd, be received ; And glad all heaven with millions thou hast saved.

Prior.

The first embrio of an ant is, supposed to be as big as that of an elephant ; which nevertheless can never arrive at the millionth part of the other's bulk.

Bentley.

The million flit as gay As if created only like the fly, That spreads its motley wings in the eye of neon, To sport their season, and be seen no more.

Cowper.

MILLO, a part of mount Zion at its extre- mity ; and therefore called Millo of the city of David (2 Chron. xxxii.), taken in with the wall that encompassed mount Zion. It is uncertain whether Beth-Millo (Judges ix. 20) denotes a place ; if it did, it lay near Shechem.

MILLOT (Claude Francis Xavier), a member of the French academy, born at' Besancon, in March 1726, and for some time a Jesuit. He continued to preach after he left the Society : but the weakness of his voice and his timidity, not permitting him to continue in this profession, he relinquished it. The marquis of Felino, minis- ter of Parma, having instituted an historical class for the benefit of the young nobility, he gave the charge of it to abbe" Millot. After having filled the historical chair, with great approbation; he returned to France, and was appointed precep- tor to the duke of Ensrhien. In this situation he died, A. D. 1785, aged fifty-nine. He com- posed several works, which are digested with great care, and written in a pure, simple, and natural style. The principal are, 1. Elemens de 1'Histoire de France, depuis Clovis jusque a Louis XIV. 3 vols. 12mo, 2. Elemens de 1'His- toire d'Angleterre, depuis son origine sous les

Remains, jusqu' a George II. ; 3 vols. 12mo. 3. Elemens de 1'Histoire Universelle, 9 vols. 12mo.

4. L'Histoire des Troubadours, 3 vols. 12mo, compiled from the MSS. of M. de Sainte-Pulaie.

5. Memoires Politiques et Militaires, pour servir a 1'Histoire de Louis XIV, et do Louis XV., com- posed from original papers collected by Adrian

Maurice, duke of Noailles, marshal of France, in 6 vols. 12mo. 6. Several Discourses on Philo- sophical Questions ; and 7. Translations of the most Select Harangues in the Latin Historians.

MILMAN (Sir Francis), M. D., baronet, was the son of a clergyman of Devonshire, where he was born in 1746. After receiving a gram- matical education with a view to the church he entered of Exeter College. Oxford, where, in 1767, he took the degree of M. A., but directed his attention to physic : in 1770 he proceeded to the degree of bachelor in that faculty. In 1776 he completed his graduation as a doctor, and now entered into orders, actually taking his degree of B. D. in 1778. Returning to the practice of physic, he travelled on Dr. Radcliff's foundation, and attended the duke of Gloucester at Rome. This circumstance fixed his professional pur- suits ; on his return to England, he became a member of the Royal Society, and a fellow of the College of Physicians, by whom, in 1780, he was appointed to deliver the Gulstonian lecture. After this he was nominated physician to the king and the royal household ; which procured his elevation to the baronetage. He died June 24th 1821. Sir Francis was the author of Animadversiones de Natura Hydropis ejusque curatione, 8vo. 1779; and A Treatise on the Source of the Scurvy and Putrid Fever, 8vo.

1782.

MILNE (Colin), LL. D., a divine and botanist, was born at Aberdeen, and educated at the Marischal College there, under his uncle, Dr. Campbell. Thence he removed to Edinburgh ; after which, becoming tutor to lord Algernon Percy, he took orders in the church of England, and was presented to the rectory of North Chapel, Essex. He was also chosen lecturer of Dept- ford, and obtained the degree of doctor of laws from Aberdeen. He died in 1815. He pub- lished 1. A Botanical Dictionary, 8vo. 2. Lin- naei Institutiones Bolannicae, 4to. 3. Indigenous Botany, or the Habitats of English Plants. 4. A volume of sermons, 8vo.

MILNER (Joseph), a modern divine, and ecclesiastical historian, was the son of a poor weaver at Leeds, and born there in 1744. He was educated at the free grammar-school, and at Catherine Hall, Cambridge, where he took his bachelor's degree in 1766, and obtained one of the chancellor's medals. Entering into orders he became master of the grammar-school, and after- noon lecturer, at Hull. He was afterwards pre- sented to the vicarage of North Ferriby ; and lat- terly to that of i he Holy Trinity church in Hull. He died November 15th, 1797. His works are, 1. The Life of William Howard. 2. Answer to Gibbon's Attack on Christianity. 3. Essays on the Influence of the Holy Spirit. 4. A History of the Church of Christ, 4 vols. 8vo. 5. Two volumes of sermons, with his life prefixed.

preceding, was actually brought up to the weaving business; but, while at the loom, was so intent on study, and so devoted to the classic* and mathematics, that his brother took him for an assistant in the grammar-school, and after- wards sent him to Queen's College, Cambridge, where, in 1774, he was senior wrangler, and gained the first mathematical prize. He soon became a tutor in that science ; and, among other pupils, had Mr. Wilberforce and Mr. Pitt, with whom he made a tour on the continent. In 1783 he was appointed professor of natural philosophy; and in 1788 elected master of his college. The same year he was made dean of Carlisle; in 1792 he served the office of vice- chancellor; and in 1798 succeeded Waring as Lucasian professor of mathematics. He died in 1820. His publications are, 1. Animadversions on Hawker's Church History. 2. A Continuation of his brother's Ecclesiastical History. 3. Stric- tures on the Publications of Dr. Marsh, respect- ing the Bible Society. 4. Life of Mr. Joseph Milner, prefixed to his sermons.

MILO, the son of Diotimus, a celebrated ath- lete of Crotona in Italy. He early accustomed himself to carry the greatest burdens, and by degrees became a prodigy of strength. It is said that he carried on his shoulders a young bullock, four years old, for above forty yards ; afterwards killed it with one blow of his list, and ate it up in one day. He was seven times crowned at the Pythian games and six at the Olympian. He pre sented himself a seventh time ; but no one had the courage or boldness to enter the lists against him. He was a disciple of Pythagoras ; and to his uncommon strength, it is said, the learned preceptor and his pupils owed their lives. The pillar which supported the roof of the school sud- denly gave way, but Milo supported the whole weight of the building, and gave the philosopher and his auditors time to escape. In his old age, Milo attempted to split a growing tree, and partly effected it; but his strength being gra- dually exhausted, the tree, when half cleft, re- united, and his hands remained pinched in tin- body of the tree. He was then alone; and, being unable to disentangle himself, he wa* devoured by wild beasts, about A. A. C. 500.

MILO (T. Annius), a native of Lanuvium, whf attempted to obtain the consulship at Rome. Clodius the tribune opposed his views, yet Milo would hare succeeded had not an unfortunate circumstance taken place between his suite and that of Clodius as he was going to the country. Clodius and eleven of his servants were killed, and the body of the murdered tribune was car- ried to Rome and exposed to public view. Ci- cero, as is well known to every classical student, undertook the defence of Milo, but with IK. effect ; he was condemned and banished to Maa- salia.

MILO, an island in the Archipelago, anciently called Melos, about sixty

miles in circumference, with a harbour, which is one of the largest in the Mediterranean. This island was formerly rich and populous. From the earliest times of anti- quity it enjoyed liberty; but, the Melians having refused to join the Athenians in the Peloponne- sian war, the latter made a descent upon the

island, and, although in two different expeditions they failed of their purpose, they accomplished it in the third, and killed or carried captive all the inhabitants. See MELOS. This act of cruelty disgraces the Athenian name. But Lysander, the Lacedemonian general, expelled the Athenian colony and re-established the remains of its ori- ginal inhabitants. Melos afterwards lost its liberty when the Romans conquered all the isles of the Archipelago. In the partition of the em- pire, it feJl to the eastern emperors, was governed by dukes, and was at last conquered by Soliman II. Since that period it has groaned under the yoke of Turkish despotism, and has lost its opu- lence and splendor. At the commencement of the eighteenth century it had seventeen churches, eleven chapels, and above 20,000 inhabitants. It was very fertile in corn, wine, and fruits ; and the whole space from the town to the harbour, which is nearly two miles, was laid out in beau- tiful gardens. M. Tournefort, who visited it in 1700, gives the following fine description of it. ‘ The earth, being constantly warmed by subter- raneous fires, produced almost without interrup- tion plentiful crops of corn, barley, cotton, vines, and melons. St. Elias, the finest monastery in the island, and on the most elevated spot, is encir- cled with orange, citron, cedar, and fig trees. Its gardens are watered by a copious spring. Olive trees grow in great abundance around it. The vineyards afford excellent wine. In a word, all the productions of the island are the very best of their kinds ; its partridges, quails, kids, and lambs, are highly valued, and yet may be bought at a very cheap price.’ But M. Savary says, in his forty-second Letter on Greece, that ‘ were M. Tournefort to return to Milo, he would no longer see the fine island which he has described. He might still see alum, in the form of feathers, and fringed with silver thread, hanging from the arches of the caverns; pieces of pure sulphur filling the cliffs of the rocks ; a variety of mine- ral springs ; hot baths, though these are now only a set of small dirty caves; the same subterraneous fires which in his days warmed the bosom of the earth, and were the cause of its extraordinary fertility : but instead of 5000 Greeks, paying the capitation tax, he would now find

no more than about 700 inhabitants on an island eighteen leagues in circumference. He would sigh to be- hold the finest lands lying uncultivated, and the most fertile valleys converted into morasses ; of the gardens scarcely a vestige left ; three-fourths of the town in ruins, and the inhabitants daily decreasing. During the last fifty years, Milo has assumed a quite different appearance. The plague, which the Turks propagate every where, Jias cut off one part of its inhabitants ; the inju- dicious administration of the Porte, and the oppressive extortions of the pacha, have destroyed the rest. For want of hands, they cannot cut out a free channel for their waters, which stagnate in the valleys, corrupt, and infect the air with tneir putrid exhalations. The salt marshes, being equally neglected, produce the same effects. Sulphureous exhalations arise all over the island, by which the inhabitants of Milo are afflicted with dangerous fevers during three- fourths of the year. Yet a judicious and en-

lightened government might expel those evils. The whole inhabitants of this island are now be- low 1000, of whom not the fifth part inhabit the petty village which is the chief place. Long, of the harbour of Milo, 24° 13′ 32′ E., lat. 36° 42′ 30 N.*

MILT, n. s. & v. a. (Saxon milt • Belgic

MIL'TER, S mildt ; Teut. milts ;

Ital. milltg. The spleen ; the sperm of a male fish : to milt is to impregnate the roe or spawn of the female fish : milter is a name for the male.

You shall scarce take a carp without a melt, or a female without a roe or spawn. Walton's Angler.

The spawner and milter labor to cover their spawn with sand. Id.

MILT, or MELT, in natural history, the soft roe in fishes, thus called from its yielding, by expression, a whitish juice resembling milk.

MILTHORP, a town of Westmoreland, at the mouth of the Can, five miles from Kendal. It is the only sea-port in the county, and goods are brought hither in small vessels from Grange in Lancashire. Here are two paper-mills. It has a market on Friday, with a fair on old May- day ; and a good stone bridge over the rivet Betha, which runs through the town.

MILTIADES, an Athenian general, son of Cypselus. He obtained a victory in a chariot- race at the Olympic games. He led a colony of Athenians to the Chersonesus. The causes of this appointment are striking and singular. The Thracian Dolonci, harassed by a long war with the Absynthians, were directed by the ora- cle of Delphi to take for their king the first man they

should meet in their return home, who should invite them to come under his roof, and partake his entertainments. They met Miltiades, whom their appearance, with their strange arms and garments, struck. He invited them to his house, and was made acquainted with the com- mands of the oracle. He obeyed ; and, when the oracle of Delphi had approved a second time the choice of the Dolonci, he departed for the Chersonesus, and was invested by the in- habitants with sovereign power. The first mea- sure he took was to stop the further incursions of the Absynthians by building a strong wall across the Isthmus. When he had established himself, and fortified his dominions, he turned his arms against Lampsacus. He was afterwards taken in an ambuscade, but Croesus, king of Lydia, procured his release. He lived a few years after he bad recovered his liberty. As he had no issue he left his kingdom and possessions to Stesagoras, the son of Cimon, who was his brother by the same mother. The memory of Miltiades was greatly honored by the Dolonci ; and they regularly celebrated festivals in com- memoration of a man to whom they owed their preservation and greatness.

MILTIADES, the son of Cimon, and brother of Stesagoras above mentioned, was, some time after the death of the latter, who died without issue, sent by the Athenians, with one ship, to take posses- sion of the Chersonesus. At his arrival Miltiades appeared mournful, as if lamenting the recent death of his brother. The principal inhabitant" of the country visited the new governor to con- dole with him ; but Miltiades abused their con-

fidence, ttized their persons, and made himself absolute in Chersonesus. To strengthen himself he married Hegesipyla, the daughter of Olorus, king of the Thracians. When Darius I., king of Persia, undertook an expedition against the Scythians, and throwing a bridge across the Danube marched into their country, he entrusted the guard of the bridge to the Ionian Greeks, the commanders of whom he had attached to himself by raising them to the supreiae authority in their several cities. Miltiades, who was one oi" them, excited by that spirit of Grecian patriotism to which every other duty was made subservient, urged the other leaders to break down the bridge, in order that a prince so en- tirely inimical to Grecian liberty might never return in safety. His council was approved by all the rest except Hystiaeus the Milesian, who had influence enough to prevent its taking effect. Miltiades, judging it imprudent to await the monarch's return, embarked for Athens, and in his way took possession of the isle of Lemnos for his countrymen. At the celebrated battle of Marathon all the chief

officers ceded their power to him ; and, by his superior abilities, an impor- tant victory was gained over the more numerous forces of the Persians. Some time after Milti- ades was entrusted with a fleet of seventy ships, ind ordered to punish those islands which had • evolted to the Persians. He was successful at first ; but, on a sudden report that the Persian fleet was coming to attack him, as he was be- sieging Paros, he raised the siege, and returned to Athens. He was accused of treason, and Miltiades, not being able to come into the assembly on account of a wound which he had received before Paros, his enemies, taking advan- tage of his absence, became more eager in their accusations. He was condemned to death, but the rigor of his sentence was retracted on account of his great services to the republic ; and he Nvas put in prison till he should pay a fine of fifty talents to the state. His inability to dis- charge so great a sum detained him in confine- ment ; and, his wounds becoming incurable, he died a prisoner about A. A.C. 489. His body was ransomed by his sou Cimon, who was obliged to borrow fifty talents to give his father JL decent burial. The accusations against him were the more readily believed, because he had made himself absolute in Chersonesus. Corne- lius Nepos has written the life of Miltiades ; but lie confounds the actions of the son of Cimon with those of the son of Cypselus.

MILTON (John), the most illustrious of the English poets, was descended of a genteel family seated at Milton in Oxfordshire. He was born December 9th, 1608, and received his education first under a private tutor, afterwards at London, in which his father had settled as a scrivener. At the age of seventeen he was sent to Christ's Col- lege, Cambridge, where he made a great pro- gress in all parts of academical learning. In 1628 he proceeded A. B., having performed his exercise for it with great applause. His father designed him for the church ; but young Mil- ton's attachment to the muses was so strong that it became impossible to engage him in any other pursuit. In 1G32 he took the degree oi A. M.,

and retired to the residence of his parents at Horton, near Colnbrook, in Bucks, where he enriched his mind with the choicest stores of Grecian and Roman literature ; and wrote his poems of Comus, L'Allegro, II Penseroso, and Lycidas. About five years afterwards he tra- velled into France and Italy, and at Paris became acquainted with the celebrated Grotius. Upon his return he set up an academy in Aldersgate- Street, London. In 1641 he began to write in defence of the Presbyterian party; and in 1642 he married the daughter of Richard Powel esq. of Forest Hill, in Oxfordshire ; who being a zea- lous royalist she was soon advised to return to her relations ; which so incensed her husband that he resolved never to take her again, and wrote and published several tracts in defence of the Doctrine and Discipline of Divorce. He also paid his addresses to another lady ; but this incident proved the means of a reconciliation with Mrs. Milton, who

purposely threw herself in his way at the house of a mutual relation, and on her knees entrea'ed and received his forgive- ness. This affecting incident made a deep im- pression on Milton's sensibility, and enabled him to paint to the life the beautiful scene in his Paradise Lost, b. x. v. 940 ; where, describing Adam's feelings, he says,

Soon his heart relented Towards her, his life so late and sole delight, Now at his feet submissive in distress.

In 1644 he wrote his Tract upon Education and the restraint on the liberty of the press being continued by act of parliament, he wrote boldly and nobly against that restraint. In 1645 he published' his juvenile poems; and about two years after, on the death of his father, he took a smaller house in High Holborn, the back of which opened into Lincoln's Inn Fields. Here he quietly prosecuted his studies rill the death of Charles I., on which occasion he published his Tenure of Kings and Magistrates in justification of the fact. He was now taken into the sen-ice of the commonwealth, and made Latin secretary to the council of state, who resolved neither to write to foreign princes, nor to receive any an- swers, except in the Latin tongue, which was common to them all. The famous Eucwv Ba

vigor to his genius, which, in fact, seems to have been the case. Thus animated, he again ven- tured upon matrimony; and married the daughter of captain Woodcock of Hackney, who died in childbed about a year after. On the deposition of the protector, Richard Cromwell, and on the return of the long parliament, Milton being still continued secretary, he appeared again in print, pleading for a further reformation of the laws relating to religion ; and, during the anarchy that ensued, he drew up several schemes for re- establishing the commonwealth, exerting all his abilities to prevent the return of Charles II. England's destiny, however, and Charles's good fortune, prevailing, Milton retired to a friend's house in Bartholomew Close. A prosecution was intended against him; but the just esteem to which his admirable genius and extraordinary accomplishments entitled him, had raised him so many friends, even among those of the oppo- site party, that he was included in the general amnesty. This storm over, he married his third wife, Elizabeth, daughter of Mr. Minshull, a Cheshire gentleman ; and, not long after, he took a house in the Artillery Walk. This was his last stage, where he resided longer than he had done any where. He now applied himself to finish his grand work, Paradise Lost ; one of the noblest

poems that ever were produced by human genius. It was published in 1667, and his Paradise Re- gained in 1670. After this he published many pieces in prose ; for which we refer our readers to Millar's edition of his whole works in 2 vols. 4to. 1753. This great man died at his house in Bun- hill Fields, November 10th, 1 674, in his sixty-sixth year. A monument was erected to his memory in 1737, in Westminster Abbey, by Mr. Benson. His person was remarkably handsome, but his con- stitution was tender, and by no means equal to his incessant studies. Though he had lost great part of his fortune at the Restoration, yet he died worth £1500 in money, beside household goods. He left behind him three daughters, whom he had by his first wife ; the youngest of whom was married and had ten children. Mr. Walpole pays as high a compliment to Milton's taste and genius in gardening as the public in general have allowed to his merits in poetry. His re- mains were interred in the church of Cripplegate, where the elder Samuel Whitbread has erected a monument to his memory. In 1750 the masque of Comus was performed for the benefit of one of his grand-daughters, named Foster, then in a very humble situation.

In 1825 was published his Treatise on Christian Doctrine in Latin and English, 4to. found among the state papers by Mr. Lemon. With it were found corrected copies of Milton's foreign despatches, and several papers relating to the popish trials and rye-house plots. The whole was wrapped in an envelope, addressed 'To Mr. Skinner, Merchant,' the well knoˆn friend of the poet. The authenticity of the MS. appears indeed un- questionable : it attests the Arianism of its great author ; defends the sentiments he is well known to have adopted on the subject of divorce ; ad- vocates polygamy anthropomorphitism (which Mr. LocLa has somewhere said to be almost confined to the ignorant), the eternity of matter,

and the abrogation of the Sabbath. His Latin style is always easy, often beautiful ; the trans- lation undertaken by order of his majesty (Geo. IV.) was made by Mr. Sumner, a royal chaplain. On the whole the work has disappointed the ad- mirers of Milton. It has few claims to origi- nality of thought or expression ; was looked for with avidity, but will ever be read, we are per- suaded, with difficulty by those who are at all acquainted with the subjects on which he writes, and presents to our view the melancholy exhibition of a grea prostrate intellect struggling in the fetters of various and contradictory systems of theology — to make a worse.*

MILTON, a post town of Saratoga county, New York, thirty miles north of Albany. Popr- lation 2763. It contains valuable mills, a woollen manufactory, and five houses for public worship. MILTON, a market town of Kent, near Sitting- bourn and the isle of Sheppey, six miles north- west of Feversharn, and forty east of London ; also called Middleton from its situation near the middle of the county, between Deptford and the Downs.

The kings of Kent had a castellated palace here, which stood below the church, but was burnt down in Edward the Confessor's time by earl Godwin. The church stands a mile off. On approaching the town up the Thames, by east Swale, it seems hid among the creeks ; yet it is large, and has a considerable market on Saturday, and a fair 24th July. The oysters taken hereabouts are the most famous in Kent. It is governed by a portreeve, and lies fourteen miles north-east of Maidstone.

MILTON, a town of Kent, a mile on the east side of Gravesend, incorporated with it in the reign of queen Elizabeth under a portreeve, jurats, &c. King Henry VIII. raised a platform here for the defence of both towns and the river. It has a fair 25th January.

*MILVIUS, MOLVIUS, or MULVIUS, PONS, a bridge on the Tiber, two miles from Rome, on the Via Flaminia, built by jErailius Scaurus the censor, in the time of Sylla, and repaired by Augustus. From this bridge the ambassadors of the Allobroges were brought back to Rome by Cicero's order, and made a discovery of Cati- line's conspiracy. — Sallust. Near it Maxentius was defeated by Constantine. — Eutropius. MILVUS, in ornithology, a species of falco. MI'ME, n. s. & v. n. *} Fr. mime; Ital. MI'MER, n. s. I mimo ; Lat. minius,*

MIME'TIC, adj. mimicus; Gr. /u/ioc-

MIM'IC, n. i. adj. & v. a. [Mime, mimer, and MIM'ICAL, adj. MIM'ICALLY, adv. MIM'ICRY, n.s.

mimic, alike mean a jester, antic imitator, or buffoon : to mime

MIMOG'RAPHER. J or mimic is to imi-

tate as a buffoon ; ridicule by burlesque imita- tion : mimic, as an adjective, signifies imitative, resembling : mimetic, having the faculty of mimicing : mimicry, burlesque or ridiculous imitation-: a mimographer is a word which we find only in Johnson for a writer of farces.

Think'st thou, mime, this is great? or that they

strive,

Whose noise shall keep thy miming most alive, Whilst thou dost raise some player from the grave, Out-dance the babion, or out-boast the brave 1

Ben Jonsmi.

MIMOSA.

*JS*J£ al CreKatfT th6 m°St mmkal in &*- ele*ies> of which 0nlX a few fragments a,e pre- tures, styles, speech, fashion, or accents. —J < < • • •*

Wotton on Education.

Let us grant these faculties so fixed upon any na- tion, that all our water must necessarily be fetched at their well, and add unto these a few waste com- pliments and mimical courtesies, which must needs be put into the match of our ordinary travel.

Bp. Hall.

Jugglers and dancers, anticks, mummers, mimert.

Milton.

In reason's absence mimick fancy wakes To imitate her ; but misjoining shapes, Wild work produces oft, and most in dreams.

Id.

Is not this plainly the life of a child, that is ever busy, yet never hath any thing to do 7 or the life of that mimical brute which is always active in play- ! TE: CAL> quinquedentate : COR. quinque-

served, were so much admired, that Horace pre- ferred them to those of Callimachus. He com- posed one, as we learn from Pausamas, upon the battls between the people of Smyrna and the Lydians, under Gyge; ; ind another in elegiac verse, quoted by Strabo, entitled Nanno. With respect to amorous poetry, Horace celebrates his abilities Ep. vi. lib. i. v. 65; and Propertius (lib. i. el. 9, v. 11) says,

Plus in amore valet Mimnermi versus Homero.

MIMOSA, the sensitive plant, a genus of the icecia class of plants, lomentaceae : HERMA-

ing uncouth aud unlucky tricks.

ay- .

Barrow. ld ; stamina five or more ; pistil one, and a

. .

Singers and dancers entertained the people with ‘e?umen : MALE CAL. quinquedentate : COR.

quinquefid, with five, ten, or more stamina. The name mimosa signifies mimic, and is given to this genus on account of the sensibility of the leaves, which seem to mimic the motion of ani- mals. To this genus Linnaeus joins many of the acacias, and it comprises many different species, all natives of warm climates. Of the sorts cul- tivated in our stoves, &c., some are of the shrub and tree kind, and two or three are herbaceous perennials and annuals. The sensitive plants are exceedingly curious in the very singular cir-

light songs and mimical gestures, that they might not go away melancholy from serious pieces of the the- atre. Drydeni Juvenal. Morpheus expressed

The shape of man and imitated best ;

The walk, the words, the gesture, could supply,

The habit mimick, and the mien belye. Id.

A mimical daw would needs try the same ex> periment ; but his claws were shackled.

L’Ettrange.

By an excellent faculty in mimickri/, my corre- spondent tells me, he can assume ray air, and give

my taciturnity a slyness which diverts more than auy cumstance of their leaves receding rapidly from

the touch, and running up close together ; and in some sorts the foot-stalks are affected, so as instantly to fall downward as if fastened by hinges ; which last are called humble sensitives. They have all winged leaves, each wing consist- ing of many small pinnae. In the Systeraa 'e- getabilium this genus, including the mimosas properly so called, and the acacia, is divided into several sections, distinguished by the figure, situation, and arrangement of the leaves ; as simple, simply pinnated, bigeminous and terge-*

thing I could say. Spectator.

Like poor Andrew I advance,

False mimick of my master’s dance :

Around the cord awhile I sprawl,

And thence, though slow, in earnest fall. Prior.

Who would with care some happy fiction frame, So mimicks truth, it looks the very same. Granville. The busy head with mimick art runs o'er

The scenes and actions of the day before. Swift.

I called moreover into action my mimetic powers, and, before the expiration of my eleventh year, was

able to imitate, with no small share of success, the minous, conjugate and pinnated, doubly pin-

*tone and manner of the writing usher in pronouncing * Very well, master Simkins, I shall sartinly get you vipt for dartying on your breeches." Canning.*

MIMI, MIMES, from //t/xto/iai, to imitate; in the ancient comedy, buffoons or mimics, who entertained the people by imitating and caricaturing certain characters. There were, on the Roman stage, female performers of this kind called Mimae. Some of the mimi acted their parts to the sound of the tibia ; these they called mimauli.

MIMI were also a kind of farces or ludicrous comedies generally performed by one person. They had no acts, nor any exordium. They were introduced upon the Roman stage long after comedy and tragedy had arrived at perfection. The actor wore no mask, but smeared his face with soot, was dressed in lambskin, wore gar- lands of ivy, and carried a basket of flowers and herbs in honor of Bacchus, and diverted the au- dience with ridiculous tricks and dances. They afterwards underwent many alterations. See PANTOMIME.

MIMNEKMUS, an ancient poet and musi- cian of Smyrna, who flourished about A. A.C. 590, and was contemporary with Solon. Athe- nreus says he invented pentameter verse. His

nated. The following are the most remarkable species : —

1. M. arborea, the wild tamarind tree, is common in all the woodlands in Jamaica. It rises to a considerable height, and is pfoportion- ably thick. The timber is excellent, and serves many purposes in rural economy; it is of the color of cedar, pretty hard, and takes a good polish. The leaves are numerous ; the flowers globular and white. The pods are abont a foot long, of a fine scarlet color; when ripe they open and become twisted. The seeds

then ap- pear : they are oblong, smooth, and of a shining black and quite soft. The leaves, flowers, and pods exhibit a singular and beautiful contrast. It is raised m hot-houses in this country, but might be made to grow in the open air. .

2. M. asperata, the Panama sensitive plant. Of this curious species, which has been well described by Dr. Browne, there is a good figure in the Reliquiae Houstonianse, published by Sir Joseph Banks. It grows in moist places, and by the sides of rivulets, in Jamaica. It seldom rises above three feet, but its slender branches extend considerably on the neighbouring bushes. It is armed with crooked sharp spines so thickly set on the trunk, branches, and leaves

that there is no touching it with safety. But it is very beautiful : the flowers are yellow and globular, growing at the extremity of the branches. The pods are hairy, brown, and jointed, each containing a small, flat, and brown seed. The leaves are numerous, small, and winged, and very irritable, contracting with the least touch, and remaining so for several minutes after. This species would form a good hedge round a garden, and, by being trimmed now and then, may be easily kept from spreading.

3. M. catechu grows only to about the height of twelve feet, and one foot in diameter; it is covered with a thick rough brown bark, and, towards the top, divides into many close branches ; the leaves are bipinnated, or doubly winged, and are placed alternately upon the younger branches. The partial pinnae are nearly two inches long, and are commonly from fifteen to thirty pair, having small glands inserted be- tween the pinnae ; each wing is usually furnished with forty pairs of pinnulae or linear lobes, beset with short hairs ; the spines are short, recurved, and placed in pairs at the bases of each leaf ; the flowers are hermaphrodite and male, and stand in close spikes, which arise from the axillae of the leaves, and are four or five inches long : the calyx is tubular, hairy, and divides at the limb into five oval pointed segments ; the corolla is monopetalous, whitish, and of the same form as the calyx, but twice its length; the filaments are numerous, capillary, double the length of the corolla, adhering at the base of the germen, and crowned with roundish antherae ; the germen is oval, and supports a slender style, which is of the length of the filaments, and terminated by a simple stigma ; the fruit or pod is lance- shaped, brown, smooth, compressed, with an undulated thin margin ; it contains six or eight roundish flattened seeds, which produce a nau- seous odor when chewed. From this tree, which, grows plentifully on the mountains of

Hindostan, where it flowers in June, is produced the officinal drug long known in Europe by the name of terra japonica.

4. M. cinerea, and M. pinnata, cashew bushes. These species are common about Kingston and .Spanish town, Jamaica, and rise by slender trunks to about twenty feet. Dr. Roxburgh, of Madras, found the lac insect on these species.

5. M. cornigera, the horned Mexican mimosa, or great horned acacia, has a shrubby upright deformed stem, branching irregularly, armed with very large, horn-like, white spines, by pairs, connated at the base; bipinnated leaves thinly placed ; and flowers growing in spikes. This species is esteemed for the oddity of its large spines, resembling the horns of animals, and which are often variously wreathed, twisted, and contorted.

6. M. cornuta, the horned ergett, a native of Abyssinia, described by Mr. Bruce. The flower very much resembles that of the acacia vera in size and shape, excepting that it is attached to the branch by a strong woody stalk of consider- able length, which grows out at the bottom of the branch bearing the leaves, and is sheltered as in a case by the lower part of it. The branches are all covered with short, strong, and sharp-pointed

thorns, having their points inclined backwards towards the root. The pods are covered with a prickly kind of hair, which easily rubs off witli the fingers, sticks to them, and gives a very un- easy sensation. They have thirteen divisions, in each of which are three hard, round, and shining seeds, of a dusky brown color.

7. M. farnesiana, the fragrant acacia, grows in woodlands and waste lands in Jamaica ; rising twenty-five or thirty feet, with suitable thickness. The bark of the trunk is brown and scaly, the branches are alternate. It is adorned with bi- pinnated leaves of a bright green color, and yel- low globular flowers from the axillae, of a fia- grant smell. The pods are about three inches long, and half an inch broad : they are of a light brown color, smooth, compressed, and contain five or six smooth flat seeds. Formerly the flowers of this tree were used as an ingredient in the theriaca andromachi of the old dispensato- ries. It is sometimes planted for a hedge round enclosures ; and the timber, though small, is useful in rural economy.

8. M. latifolia, shag-bark, or white wild tama- rind. This excellent timber tree is very common in Jamaica, and rises to a moderate height and good thickness. The trunk is rough and scaly : the leaves are numerous, of a rhomboidal figure, and yellowish cast. The flower-spikes are from the axillae ; their color is yellow. The seed ves- sels are flat, jointed, and

twisted. The seeds are of the bigness of a vetch, white, and finely streaked with blue.

9. M. nilotica, the true Egyptian acacia, rises to a greater height than the preceding: the bark of the trunk is smooth, and of a gray color ; that of the branches has commonly a purplish tinge : the leaves are bipinnated, and placed alternately: the partial pinnae are opposite, furnished with a small glana between the outermost pair, and beset with numerous pairs of narrow elliptical pinnulae ; the spines are long, white, spreading, and proceed from each side of the base of the leaves : the flowers are hermaphrodite and male; of a globular shape, and standing four or five together, upon slender peduncles, which arise from the axillae ; the calyx is small, bell-shaped, and divided at the mouth into five minute teeth ; the corolla consists of five narrow yellowish seg- ments : the filaments are numerous, capillary, and furnished with roundish yellow antherae ; the germen is conical, and supports a slender style, crowned with a simple stigma : the fruit is a long pod, resembling that of the lupin, and contains many flattish brown seeds. It is a na- tive of Arabia and Egypt, and flowers in July. Though this species grows in great abundance over the vast extent of Africa, yet gum arabic is produced chiefly by those trees which are si- tuated near the equatorial regions ; and in Lower Egypt the solar heat is never sufficiently intense for this purpose. The gum exudes in a liquid state from the bark of the trunk and branches of the tree, like the gum often produced upon the cherry trees, &c., in this country : and by expo- sure to the air it soon acquires solidity. In Se- negal it begins to flow when the tree first opens its flowers, and continues during the rainy season till December, when it is collected for the first

time. Another collection of it is made in March, from incisions in the bark. Gum arable is now usually imported from Barbary in large casks. The various figures which it assumes depend upon accidental circumstances during its transu- dation and concretion. The pale yellowish gum is most esteemed ; pieces which are large, rough, of a roundish figure, and of a brownish or red- dish hue, are less pure, being produced from a different species ; but the Arabian and Egyptian gum is commonly intermixed with pieces of this kind. Gum arabic does not admit of solution by spirit or oil; but in twice its quantity of wa- ter it dissolves into a mucilaginous fluid, of the consistence of a thick syrup; and in this state answers many useful pharmaceutical purposes, by rendering oily, resinous, and pinguious sub- stances, miscible with water. It is preferred to most other gums as a demulcent in catarrhal affections, &c., and has been generally employed in

cases of ardor urinae and strangury. See CHE- MISTRY and MEDICINE.

10. M. Pernambucana, the Pernambuca sloth- ful mimosa, with unshrubby, procumbent, un- armed stems, branching two or three feet around; bipinnated leaves of three or four pairs of short winged foliola; and, at the axillae drooping spikes of pentandrous flowers, the lower ones castrated. This species recedes very slowly from the touch, only contracting its pinnae a little when smartly touched ; hence the name slothful.

11. M. plena, the annual, or double-flowered sensitive mimosa, rises with an herbaceous, erect, round, unarmed stem, closely branching and spreading every way, three or four feet high ; bipinnated leaves of four or five pairs of winged lobes, of many pairs of pinnae ; and at the axillas and termination of the branches, spikes of yellow pentandrous flowers, the lower ones double ; suc- ceeded by short broad pods. It is only sensitive in the foliola, but extremely sensible of the touch or air.

12. M. pudica, the bashful humble plant, rises with an undershrubby, decimated, prickly stem, branching two or three feet around, armed with hairy spines; pinnated, digitated leaves, each leaf being of five or more long folioles, at- tached by their base to a long foot-stalk, and spread out above like the fingers of a hand ; and at the sides and ends of the branches roundish heads of greenish white flowers, succeeded by small jointed prickly pods. This is truly of the humble sensitive kind : for by the least touch the leaves instantly recede, contract, close, Snd with the foot-stalk quickly decline downward.

13. M. punctata, the punctuated sensitive mi- mosa, rises with a shrubby, upright, taper, spot- ted, unarmed stem, branching erectly five or six feet high ; bipinnated leaves, of four or five pairs of long- winged folioles, having each about twenty pairs of pinnae ; and at the axillas and termina- tion of the branches oblong spikes of yellowish decandrous flowers, the inferior ones castrated ; succeeded above by oblong seed-pods. This sort, though naturally shrubby and perennial in its native soil, yet in this country sometimes decays in winter. It is only sensitive in the foliola, but quick in the motion.

14. M. quadrivalvis, the perennial, or quadri-

valve humble mimosa, has herbaceous, slender, quadrangular, prickly stems, branching and spreading all around, armed with recurved spines; bipinnated leaves of two or three pairs of winged lobes, having each many pinnae ; and at the axillas globular heads of purple flowers succeeded by quadrivalvular pods. Both leave' and foot-stalks recede from the touch.

15. M. scandens, cacoons, mafootoo wyth, or the climbing mimosa. This species is frequent in all the upland valleys and woodlands on the north side of Jamaica. It climbs up the tallest trees, and spreads itself in every direction by its cirrhi or claspers, so as to form a complete arbor, and to cover an English acre from one root. This has a bad effect on the trees or bushes so shaded. Light, air, and rain, being shut out, the leaves drop off, the tree gradually rots, and the limbs fall down by the weight o, this parasite. The roots run superficially under the ground or herbage. The trunk is seldom thicker than a man's thigh, and sends off many branches, with numerous shining green leaves, each of which terminates in a tendril or clasper, that serves to fasten it to trees or bushes. The flower-spikes are from the axillae; they are slender, and the florets small and numerous. The pod is perhaps the largest and longest ot any in the world ; being sometimes eight or nine feet long, five inches broad, jointed, and contain- ing ten or fifteen seeds, which are brown, shining, flattened, and very hard, and called cacoons. They are mentioned in the Philosophical Trans- actions as being thrown ashore on the Hebrides and Orkneys. Thjs happens in the following manner : the seeds or beans fall into the rivers, and are conveyed to the sea. The trade winds carry them westward till they fall into the gulf stream, which drives them northwards along the coast of America, and Bahama Islands. As the winds blow frequent and strong from America, these seeds are driven eastward, till they are thrown ashore and left with the tide as aforesaid. This bean, after being long soaked in water, is boiled and eaten by some negroes ; but the chief use made of it is for a sort of snuff-box.

16. M. Senegalensis, the Senegal mimosa, is a native of Guinea, and was some time ago intro- duced into Jamaica. Dr. Wright saw both this anrl the nilotica, of the size of a cherry-tree, growing at Dr. Paterson's in the parish of Ha- nover, Jamaica. The flowers are globular, yel- low, and fragrant. The pods are brown, and of the size of a goose-quill. The tree, on being wounded, exudes gum-arabic, though in a smaller quantity, and less transparent, than that of the shops, which is obtained from the nilotica.

17. M. sensitiva, the common humble sensi- tive plant, rises with an undershrubby prickly stem, branching six or eight feet high, armed with crooked spines ; conjugated, pinnated leaves, with bijugated partial lobes or wings, having the inner ones least, each leaf on a long foot-stalk ; and at the sides and ends of the branches many purple flowers in roundish heads, succeeded by broad, flat, jointed pods, in radiated clusters. The leaves and foot-stalks recede from the touch, though not with such fa- cility as in some other species.

18. M. viva, the lively mimosa, or smallest sensitive weed, has many creeping-roots, and spreads itself so as to cover large spots of ground. It rises at most to two inches, has winged leaves, with numerous small pinnae. The flower is glo- bular, of a bluish color, and grows in clusters from the axillae; these are followed by little short hairy pods, containing smooth, shining seeds. This is the most sensible of all the mi- mosas, the pudica 'not excepted. By running a stick over the plant, a person may write his name, and it will remain visible for ten minutes.

The sensitive plants are well known to possess a kind of motion, hy which the leaves and stalks are contracted and fall down upon being slightly touched, or shaken with some degree of violence. The contraction of the leaves and branches of the sensitive plant when touched, is a very sin- gular phenomenon. Different hypotheses have been formed by botanists to explain it; but these have generally been deduced rather from analogical reasonings than from a collection of facts and observations. The following are the most important facts collected upon this curious subject : — It is difficult to touch the leaf of a healthy sensitive plant so delicately that it will not immediately collapse, the foliola or little leaves moving at their base till they come into contact, and then applying themselves close together. If the leaf be touched with a little more force, the opposite leaf will exhibit the same appearance. If a little more force be applied, the partial foot-stalks bend down towards the common foot-stalk, from which they issue, making with it a more acute angle than before. If the touch be more violent still, all the leaves situated on the same side, with the one that has been touched will instam y collapse, and the partial foot-stalk will approach the common foot-stalk to which it is attached, in the same manner as the partial foot-stalk of the leaf ap- proaches the stem or branch from which it issues; so that the whole plant, from having its branches extended, will immediately appear like a weep- ing willow. These motions on the plant are performed by means of three distinct and sensi- ble articulations. The first that of the foliola or lobes to the partial foot-stalk ; the second that of the partial foot-stalk to the common one ; the third that of the common foot-stalk to the trunk. The primary motion of all is the closing of the leaf upon the partial foot-stalk, which is per- formed in a similar manner, and by a similar articulation. This, however, is much less visible than the others. These motions are wholly in- dependent on one another. Winds and heavy rains make the leaves of the sensitive plant con- tract and close ; but no such effect is produced from slight showers. At night, or when exposed to much cold in the day, the leaves meet and close in the same manner as when touched, fold- ing their upper surfaces together, and in part oi-er each other like scales of tiles, so as to expose as little as possible of the upper surface to the air. The opposite sides of the

foliola, or leaves, do not come close together in the ni°ht ; for when touched they apply themselves closer together. Dr. Darwin kept a sensitive plant in .1 dark place for some hours after day-break;

the leaves and footstalks wtre collapsed ; and on exposing it to the light, above twenty minutes passed before it was expanded. In August, a sensitive plant was carried in a pot out of its usual place into a dark cave, the motion that it received in the carriage shut up its leaves, and they did not open till twenty-four hours after- wards ; at this time they became moderately open, but were afterwards subject to no changes at night or morning, but remained three days and nights with their leaves in the same moder- ately open state. At the end of this time they were brought out again into the air, and there recovered their natural periodical motions, shut- ting every night and opening every morning, ;is naturally and as strongly as if the plant had not been in this forced state ; and while in the cave it was observed to be very little less affected with the touch than when abroad in the open air. The great heats of summer, when there is open sunshine at noon, affeot the plant in some degree like cold, causing it to shut up its leaves a little, but never in any very great degree. The plant, however, is least of all affected about nine A. M., and that is consequently the properest time to make experimeuts on it. A branch of the sensitive plant, cut off and \aid by, retains yet its property of shutting up and opening in the morning for some days, and it holds it longer if kept with one end in water, than if left to dry more suddenly. The leaves only of the sensitive plant shut up in the night, not the branches ; and if it be touched at this time, the branches are affected in the same manner as in the day, shutting up or approaching to the stalk or trunk in the same manner and often with more force. It is of no consequence what the substance is with which the plant is touched ; but there is a little spot, distinguishable by its paler color in the articulations of its leaves, where the greatest and nicest sensibility is evidently placed. Du Hamel having observed, about the 15th of September in moderate weather, the natural motion of a branch of a sensitive plant, remarked, that at nine A. M. it formed with the stem an angle of 100° ; at noon 112°; at three P. M. it returned to 100°; and after touching the branch, the angle was reduced to 90°. Three-quarters of an hour after it had mounted to 112°; and at eight P. M. it de- scended again without being touched to 90°. The day after, in finer weather, the same branch at eight A. M. made an angle of 135° with the stem ; after being touched, the angle was di- minished to 80°; an hour after it rose again to 135° ; being touched a second time it descended again to 80°; an hour and a half after it had risen to 145°; and upon being touched a third time descended to 135°, and remained in that position till five P. M., when, being touched a fourth time, it fell to 110°. The parts of the plants which have collapsed, afterwards unfold themselves, and return to their former

expanded state. The time required for that purpose varies according to the vigor of the plant, the season of the year, the hour of the day, the state of the atmosphere. Sometimes half an hour is requisite, sometimes only ten minutes. The order in which the parts recover themselves

vanes m like manner; sometimes il is the com- mon foot-stalk ; sometimes the rib to which the leaves are attached ; and sometimes the leaves themselves are expanded, before the other parts have made any attempt to recover their former position. If, without shaking the other smaller leaves, we cut off the half of a leaf or lobe belonging to the last pair, at the extremity or summit of a wing, the leaf cut, and its antagonist, that is to say, the first pair, begin to approach each other ; then the second, and so on succes- sively, till all the smaller leaves, or lobes of that wing, have collapsed in like manner. Fre- quently, after twelve or fifteen seconds, the lobes of the other wings, which were not immediately affected by the stroke, shut; whilst the stalk and its wing, beginning at the bottom, and proceed- ing in order to the top, gradually recover them- selves. If, instead of one of the lesser extreme leaves, we cut off one belonging to the pair that is next the foot-stalk, its antagonist shuts, as do the other parts successively, from the bottom to the top. If all the leaves of one side of a wing be cut off, the opposite leaves are not affected, but remain expanded. With some address, it is possible even to cut off a branch without hurting the leaves or making them fall. The common foot-stalk of the winged leaves being cut as far as three-fourths of its diameter, all the parts which hang down collapse, but quickly recover without appearing to have suffered any considerable violence by the shock. An incision being made into one of the principal branches to the depth of half the diameter, the branches betwixt the section and the root will fall down; those above the incision remain as before, and the lesser leaves continue open; but this direction is soon destroyed, by cutting off one of the lobes at the extremity. A whole wing being cut off with precaution, near its insertion into the com- mon foot-stalk, the other wings are. not affected by it, and its own lobes do not shut. No motion ensues from piercing the branch with a needle or other sharp instrument. If the end of one of the leaves be burned with the flame of a candle, or by a burning glass, or by touching it with hot iron, it closes up in a moment, and the opposite leaf does the same, and after that the whole series of leaves on each -side of the partial or little foot-stalk ; then the foot-stalk itself; then the branch or common foot-stalk ; all do the same, if the burning has been in a sufficient degree. This proves that there is a very nice communication between all the parts of the plant, by means of which, the burning, which is only applied to the extremity of one leaf, diffuses its

influeuce through every part of the shrub. If a drop of aquafortis be carefully laid upon a leaf of the sensitive plant, so as not to shake it in the least, the leaf does not begin to move till the acrid liquor corrodes the substance of it; but at that time, not only that particular leaf, but all the leaves placed on the same foot- stalk, close themselves up. The vapor of burn- ing sulphur has also this effect on many leaves at once, according as they are more or less ex- posed to it ; but a bottle of very acrid and sul- phureous spirit of vitriol, placed under the branches unstopped, produces no such effect.

Wetting the leaves with spirit of wine has been observed also to have no effect, nor the rubbing oil of almonds over them, though this last ap- plication destroys many plants. From the pre- ceding experiments the following conclusions may be fairly drawn : — The contraction of the parts of the sensitive plant is occasioned by an external force, and the contraction is in proportion to the force. All bodies which can exert any force affect the sensitive plant ; some by the touch or by agitation, as the wind, rain, &c. ; some by chemical influence, as heat and cold. Touching or agitating the plant produces a greater effect than an incision or cutting off a part, or by applying heat or cold. Attempts have been made to explain these curious phenomena. Dr. Darwin, in the notes to his. Botanic Garden, lays it down as a principle, that ‘ the sleep of animals consists in a suspension of voluntary motion ; and, as vegetables are subject to sleep as well as animals, there is reason to conclude,’ says he, ‘ that the various actions of closing their petals and foliage may be justly ascribed to a voluntary power ; for without the faculty of volition sleep would not have been necessary to them.’ Whe- ther this definition of sleep when applied to animals be just, we shall not enquire; but it is evident that the supposed analogy between the sleep of animals and the sleep of plants has led Dr. Darwin to admit this astonishing conclusion, that plants have volition ! As volition presup- poses a mind or soul, it were to be wished that he had given us some information concerning the nature of a vegetable soul, which can think and will. We suspect, however, that this vege- table soul will turn out to be a mere mechanical or chemical one ; for it is affected by external forces uniformly in the same way, its volition is merely passive, and never makes any success- ful resistance against those causes by which it is influenced.

MIMULUS, in botany, monkey flower, a genus of the angiospermia order, belonging to the didynamia class of plants ; natural order fortieth, personatse.

MINA, or MAN EH, in Jewish antiquity, a species of money, which properly signifies one part or ounce. This word occurs in the books of Kings, Chronicles, Ezra, and Ezekiel. This last prophet tells us (xlv. 12),

that the minah or maneh was valued at sixty shekels ; which it; gold make of our English money about £54 15. and in silver, almost £7.*

MINA, in Grecian antiquity, or the attic mina, which is probably that mentioned in the books of the Maccabees and in the New Testament, is valued at 100 drachmae, or about £2 17. sterling. There was also a lesser mina, valued at seventy- five drachmae.*

MINAB, a flourishing sea-port of Kirwar, on the Persian Gulf; the territory around abounds in dates, and supplies the neighbouring country with grain. Forage is so plentiful that, during the dry season, the cattle of the adjacent districts are sent in great numbers here to pasture. Long. 56° 40′ E., lat. 27° 8′ N.

MINA'CIOUS, adj. ~\ Lat. minor, minor.

*MISAC'ITY, n. *. ' Threatening ; abound- MIN'ATORY, adj. > ing in threats; this*

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both the adjectives signify : minacity, proneness to threaten. Words seldom used.

The king made a statute monitory and minatory, towards justice of peace, that they should duly execute their office, inviting complaints against them.*

Bacon Henry VII.*

MIN'ARET. Fr. minaret ; Pers. minor. A round tower, generally encircled by balconies, and erected near the mosques in Mohammedan countries, from which the Muezzin summons the people to prayer, and announces the hours ; bells not being in use among the Mussulmans.

MINAS GERAES, a province ot Brasil, extend- ing from north to south from 600 to 700 miles, and about the same distance east and west. It is bounded on the north by Bahia, on the west by Goyaz, and on the south by the Paraibuna, which divides it from the capitania of Rio de Janeiro. From Espiritu Santo and the coast it is separated by an immense chain of mountains, and a country little known. It contains the four districts of St. Joao del Rey, Sabara, Villa Rica, and Cerro do Fio, which produced much more gold a few years after they were discovered than in modern times ;

though, according to Mr. Mawe, in 1809 the royal fifth amounted to 150 arrobas of 32 Ibs. each, or about £1,100,000. Abundance both of gold and diamonds are still, therefore, found ; besides which the country yields platina, iron, antimony, bismuth, and chromate of lead. It is rich also in sugar, cotton, wheat, «and almost all sorts of grain. In the woods the finest trees are frequently destroyed by the creeping plants ; but they abound with trees of various quality, and fit for all purposes. Aromatic shrubs, and occasionally the mulberry and silk-worm, are found, but the latter are not well managed. The palma Christi grows spontaneously ; beans, peas, and pulse in gene- • ral are also fine, as well as pumpkins and cab- bages. Here also the rose is extremely fragrant, and in bloom all the year. Varieties of the passion-flower, pinks, carnations, with number- less other flowers, grow in great profusion. The regular military establishment was at a late pe- riod 1400 cavalry. Their principal station is Villa Rica. They escort diamonds and treasure to the capital. The regiment enjoys a high re- putation, so that numbers are continually offering to enlist. Besides this force there is a militia, in which all the male inhabitants of the capitania are enrolled. The population is estimated at 360,000, of whom 200,000 are negroes ; the Indians are not included, but they are not con- sidered numerous.

MINCE, v. «. & n. s. } Fr. mincer. To cut MINC'INOLY, adv. J into small pieces; hence to speak cautiously) or communicate a small portion of information at a time ; to speak af- fectedly : as a neuter verb, to walk in short steps ; to walk delicately or affectedly : mincingly, in small parts ; not fully or largely.

By her side did sit the bold Sansloy, Fit mate for such a mincing minion, V\ ho in her looseness took exceeding joy.

Faerie Queene.

.1 ustice requireth nothing mincingl'j, but all with "resscd and heaped, and even over-enlarged measure.

Hooker.

She &aw Pyrrhus make malicious sport, In mincing with his sword her husband's limbs.

Shakspeart. lago,

Thy honesty and love doth mince the matter, Making it light to Cassio. Id. Othello.

These gifts,

Saving your mincing, the capacity Of your soft chevenl conscience would receive, If you might please to stretch it. Shakspeare.

I'll turn two mincing steps

Into a manly stride. Id. Merchant of Venice. With a good chopping knife mince the two capons as small as ordinary minced meat. Bacon.

A good schoolmaster mincet his precepts for chil- dren to swallow ; hanging clogs on the nimbleness of his own soul, that his scholars may go along with him. Fuller.

I'll try to force you to your duty : For so it is, however you mince it, Ere we part I shall evince it. Hudibras.

If, to mince his meaning, I had either omitted some part of what he said, or taken from the strength of his expression, I certainly had wronged him.

Drydcn.

The reeve, miller, and cook, are as much distin- guished from each other, as the mincing lady prior- ess and the broad-speaking wife of Bath.

Id. Fables.

What means the service of the church so imper- fectly, and by halves, read over ? What makes them mince and mangle that in their practice, which they could swallow whole in their subscriptions 1

South's Sermons.

These, seeing no where water enough to effect a general deluge, were forced to mince the matter, and make only a partial one of it, restraining it to Asia.

Woodward. Revive the wits ; But murder first, and mince them all to bits.

Dunciad.

A harlot form soft sliding by, With mincing step, small voice, and languid eye.

Id.

MINCH, an arm of the North Sea, which separates the Isle of Sky from the Long Island. MINCHA, in the Jewish customs, offerings of meal, cakes, or biscuits, made in the temple. The LXX have sometimes preserved this word

in their translation ; but, instead of mincha, they read manaa, which doubtless was the received pronunciation in their time. Manaa is used in the same sense, in Baruchi. 10, Levit. ii. 3, &c. See the Septuagint of Jerem. xvii. 26 ; Dan. ii, 46 ; 2 Kings viii. 5, 9, xvii. 7, xx. 12; 2 Chron. vii. 7 ; Nehem. xiii. 5, 9, &c.

MINCIO, a river of Italy, flowing southward from the Garda Lake, and which, after forming the marshes that surround Mantua, falls into the Po, eight miles below that city. Its banks are uncommonly fertile, and celebrated for the de- scriptions of their scenery by Virgil. Several streams flow from the mountains into the lake ; that, commonly considered as the commencement of the Mincio, is the Sarca, rising in the south of the Tyrol.

MIND, n. «., v. a. & v. n.~} Sax. mob je- MIND'ED, adj. } mind ; Goth, and

MIND'FUL, I Swed.rwod; Dan.

MiND'FULLY,odt> Tminde. Intellect;

Miun't.Ess, adj. \ intellectual power

MIND'STKICKEN, J orcapacity; hence

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thought, sentiment, opinion, judgment, memory: to mind is to mark or heed ; attend ; put in re- membrance ; and, as a neuter verb, to incline ; be disposed : minded is disposed ; inclined; af- fected : mindful, attentive ; careful ; having me- mory (taking of) ; mindless, without intellectual powers; inattentive; heedless; stupid: mind- stricken, violently moved or affected in mind.

Hast thou a wife after thy mind ? forsake her not.

Ecclus.

I am not high-minded, I have no proud looks.

Ptalm.

Be of the same mind one towards another.

Rom. xii. 16.

He had been so mind-stricken by the beauty of virtue in that noble king, though not born his sub- ject, he ever professed himself his servant. Sidney.

His mournful plight is swallowed up unwares, Forgetful of his own, that minds another's cares.

Spenser's Faerie Queene.

When one of them mindeth to go into rebellion, he will convey away all his lordships to feoffees in trust. Spenser.

Our question is, Whether all be sin which is done without direction by scripture, and not whether the Israelites did at any time amiss, by following their own minds, without asking counsel of God 1

Hooker. I am a very foolish, fond old man ;

I fear I am not in my perfect mind. Shahtpeare.

Being so hard to me that brought your mind, I fear she'll prove as hard to you in telling her mind.

Id. I will have nothing else but only this ;

And now methinks I have a mind to it. Id.

Let me be punished, that have minded you

Of what you should forget. Id. Winter's Tale. Vie come to know

How you stand minded in the weighty difference

Between the king and you. Id. Henry VIII.

Cursed Athens, mindless of thy worth, Forget now thy great deeds, when neighbour states, But for thy sword and fortune, trod upon them.

Shakrpeare.

This word being often used for the soul giving life, is attributed abusively to madmen, when we say that they are of a distracted mind, instead of a broken understanding : which word, mind, we use also for opinion ; as, I am of this or that mind : and some- times for men's conditions or virtues ; as, he is of an honest mind, or a man of a just mind : sometimes for affection ; as, I do this for my mind' sake ; sometimes for the knowledge*

of principles, which we have without discourse , oftentimes for spirits, angels, and intelligences, &c. Raleigh.

They had a mind to French Britain ; but they have let fall their bit. Bacon' War u'ith Spain.*

The king knows their disposition ; a small touch will put him in mind of them. Bacon.

A man who cannot mind his own business, is not to be trusted with the king's. Saville.

God first made angels bodiless, pure minds ;

Then other things, which mindless bodies be :

Last, he made man. Daviei.

0 envy, the corrosive of all ill mind/, and the root of all desperate actions.

Bp. Hall' Contemplations.*

The proverbs of several nations were much stu- died by Bishop Andrews, and the reason he gave was, because by them he knew the mind of several nations, which is a brave thing. Selden.*

1 acknowledge the usefulness of your directions, and I promise you to be mindful of your admoni- tions. Hammond.

We wiy that learning's endless, and blame fata For not allowing life a longer date, He did the utmost bounds of knowledge find, He found them not so large as was his mind.

Cowley.

Who this observes, may in his body find Decrepit age, but never in his mind. Denham. Waller coasted on the other side of the river, but at such a distance that he had no mind to be engaged.

Clarendon. Sudden mind arose

In Adam, not to let the occasion pass, Given him by this great conference, to know Of things above this world.

Milton's Paradise Lost. Not then mistrust, but tender love enjoins. That I should mind thee oft, and mind thou me.

Milton.

Whose fellowship therefore unmeet for thee, Good reason was thou freely should'st dislike, And be so minded still. Id. Paradise Lost.

Somewhat always of suspicion and ill opinion will stick in the mind of those who have given ear to slander. Barrow.*

Truth is the special ornament of our minds, deck- ing it with a graceful pleasant lustre. Id.

If, in the raving of a frantic muse, And minding more his verses than his way, Any of these should drop into a well.

Rotcommon.

All the arguments to a good life will be very insig- nificant to a man that hath a mind to be wicked, when remission of sins may be had upon such cheap terms. Tillotson's Sermons.

If men were minded to live virtuously, to believe a God would be no hindrance to any such design, but very much for its advancement. Tilletion.

I thought the eternal mind Had made us masters. Dryden.

These, and more than I to mind can bring, Menalcus has not yet forgot to sing. Id.

Cease to request me ; let us mind our way ; Another song requires another day. Id.

This mind me of a cobbling colonel. L'Estrangf. These men are of the mi«d, that they have clearer ideas of infinite duration than of infinite space, be- cause God has existed from all eternity ; but there is no real matter co-extended with infinite space.*

Locke.

I shall only mind him, that the contrary supposi- tion, if it could be proved, is of little use. Id.

Pyrrhus is nobly minded; and I fain Would live to thank him. Philips.

I desire to mind those persons of St. Austin.

Bw-net.

They are the same beams that shine and enlighten, and are apt to scorch too ; and it is impossible for a man engaged in any wicked way, to have a clear understanding of it, and a quiet mind in it altoge- ther. Smith.

Suppose that after eight years peace he hath a mind to infringe any of his treaties, or invade a neighbouring state, what opposition can we make 7

Addison.

As the strong eagle in the silent wood, Mindless of warlike tage, and hostile care, Plays round the rocky cliff, or crystal flood.

Prior.

He is daily called upon by the word, the ministers, and inward suggestions of the Holy Spirit, to attend to those prospects, and mind the things that belong to his peace. Rogers.

They will put him in mind of his own waking thoughts, ere these dreams had as yet made their impressions on his fancy. Atterbury's Sermons.

The gods permitting traitors to succeed, Become not parties in an impious deed ; And, by the tyrant's murder, we may find, That Cato and the gods were of a mind.

Granville.

A wholesome law time out of mind, Had been confirmed by fate's decree. Swift. Whether this last sentiment be right or wrong, I am not accountable ; it is an original component feature of my mind. Burns.

Streams never flow in vain, where streams abound ; How laughs the land with various plenty crowned! But time, that should enrich the nobler mind, Neglected, leaves a dreary waste behind. Cowper. Come, then, Philander ! for thy lofty mind

Look down from far on all that charms the great,*

Beattte.

MIN'DANAO. See MAGINDANAO.

MINDEN, a government of Prussia, com- prising the north-east part of what has been, since 1815, the province of Westphalia, and made up of the old principalities of Minden, Paderborn, Rittberg, and Corvey, the baili- wick of Reckeberg, and the lordship of Rheda. Its area is about 2000 square miles ; its popula- tion 330,000. It is divided into thirteen dis- tricts, or circles, viz. Minden town, Minden district, Rahden, Bunde, Herford, Bielefeld, Halle, Wiedenbruck, Paderborn, Buren, War- burg, Hoxter, and Brakel. The soil is unequal, but the greatest part is fertile in corn, hemp, and flax. The manufactures are linen and thread. The pasturage is good, and the cattle numerous. The principal minerals are iron, lead, and salt. The chief river the Weser.

MINDEN, a town of Prussia, and the capital of the above government, 'stands in a pleasant situation, partly on eminences, on the bank of the Weser. While the see of a bishop, it formed a petty republic under his protection, and is a very old town. Over the Weser is a bridge 600 feet in length, and an object of cu- riosity to architects, for the correct and excellent form of its arches. It has three Lutheran, one Calvinist, and two Catholic churches ; a gymna- sium, orphan-house, and four hospitals. It has also a Lutheran convent ; but the Catholic con- vent and ancient episcopal chapter, are sup- pressed. Here are manufactures of woollen, linen, leather, &c. Brewing is also a main pur- suit ; and the river affords the means of export- ing corn and timber. In the vicinity is a number of saw-mills ; and the Porta Westphalica, an opening in the neighbouring mountains, through which the Weser passes, is considered an object of curiosity. In 1757 Minden was taken by the French, and retaken the following year by the Ha- noverians. In 1759 the French entered once more ; but a memorable action, highly honorable to the British troops, being fought in the neighbour- hood on the 1st of August, they were obliged to]uit it immediately. It was occupied in 1806 oy the French, and finally ceded to Prussia in 1814. Inhabitants 6800. Thirty-four miles west from Hanover.

MINDEN, a post town of Montgomery, county of New York, on the south side of the Mohawk ; sixty-two \V. N. W. Albany, west 448.

MINDORO. See PHILIPPINE ISLANDS.

MˆNE, pron pass. Sax. myn; Teut. mein ; Fr. mien; Lat. meus. Of or belonging to me. It was the ancient practice to use ray before a consonant, and mine before a vowel, which euphony still requires. Mine is still used also when the substantive precedes : as, this cat is mine.

Jhesus answeride to hem, and seide, myn doctrine is not myn, but his that

sente me. Wielif. Jon. 7.

A friend of mine is come to me, and I have no- thing to set before him. Luke.

While fortune unfaithfull favoured me with light godes, that sorrowful houre, that is to saie, the deth, liad almoste drent myne hedde ; but now for fortune cloudie hath chaunged her decevable chere to mewarde, myne unpitous life draweth along ungreable dwellynges. Calvile.

Thou art a soul in bliss, but I am bound Upon a wheel of fire ; that mine own tears Do scald like molten lead.

Shakspcare. King Lear.

When a wise man gives thee better counsel, give me mine again. Id.

That palm is mine. Dryden.

My son ! my son ! may kinder stars

Upon thy fortune shine ; And may those pleasures gild thy reign, That ne'er wad blink on mine ! Burns.

MINE, n. s. v. n. & v. a., "| Belg. myn;

MI'NER, n. s. \ Teut. Dan. and

MIN'ERAL, n. s. & adj. (ft. mine ; Swed.

MIN'ERALIST, [and Span, mina;

MINERAL'OGIST, j Wei. mum ; Fr.

MINERAL'OGY. J mineral ; Lat.

mineralia. A mine is a place or cavern whence minerals are dug ; hence a cavern or hollow place dug under a fortification : to mine is to dig or form mines or burrows ; to sap ; ruin by mining; hence to destroy by degrees or secretly : a miner is one who digs in or forms mines : a mineral is a fossile substance dug from mines ; an inorganic body of the mass of the earth : as an adjective, consisting of fossile substances; a mineralist, is a person working or skilled in mi- nerals : mineralogy, is the science or doctrine of these bodies, and particularly of their classifica- tion, see below : a mineralogist one who treats of, or is skilled in this science.

Surely there is a mine for the silver.

Job xxviii. 1. Marg.

By what eclipse shall that sun be defaced ? What mine hath erst thrown down so fair a tower t What sacrilege hath such a saint disgraced ?

Sidney.

Build up the walls of Jerusalem, which you have broken down, and fill up the mines that you have digged. Whitgift.

It wiH but skin and film the ulcerous place, While rank corruption, mining all within, Infects unseen. Shabspeare. Hamlet

She did confess, she had For you a mortal mineral ; which, being took, Should by the minute feed on life, and lingering By inches waste you. Id. Cymbeline.

The minerals of the kingdom, of lead, iron, cop- per, and tin, are of great value. Bacon.

They mined the walls, laid the powder, and rammed the mouth ; but the citizens made a countermine.

Hauuard.

MINE.

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The ranging stork in stately beeches dwells ; The climbing goats on hills securely feed ; The mining coneys shroud in rocky cells. Wotton.

Part, hidden veins digged up, nor hath this earth Entrails unlike, of mineral and stone. .Milton.

Others to a city strong

Lay siege, encamped ; by battery, scale, and mine, Assaulting. Id.

The covetous man is a downright servant, a draught horse without bells or feathers, a man condemned to work in mines, which is the lowest and hardest con- dition of servitude. Cowley.

Though streighter bounds your fortune did confine, In your large heart was found a wealthy mine.

Waller.

A workman, to avoid idleness, worked in a groove or mine-pit thereabouts, which was little esteemed.

Boyle.

A mine-digger may meet with a gem or a mineral, which he knows not what to make of till he shows it a jeweller, or a mineralist. Id.

The metals and minerals which are lodged in the perpendicular intervals do still grow, to speak in the mineralist'a phrase, or receive additional increase.

Woodward.

By experience upon bodies in any mine, a man may conjecture at the metallick or mineral ingre- dients of any mass found there. Id.

Of this various matter the terrestrial globe con- sists from its surface to the greatest depth we ever dig or mine. Id. Natural History.

By me king's palaces are pushed to ground, And miners crushed beneath their mines are found.

Drifden.

As the bombardeer levels his mischief at cities, the miner busies himself in ruining private houses.

Tatler.

A man whose great qualities want the ornament of superficial attractions, is like a naked mountain with mines of gold, which will be frequented only till the treasure is exhausted. Rambler.

Can gold calm passion, or make reason shine 1 Can we dig peace, or wisdom, from the mine ? Wisdom to gold prefer ; for 'tis much less, To make our fortune, than our happiness. Young.

MINE, in the military art, a subterraneous passage, dug under the wall or rampart of a for- tification intended to be blown up by gunpowder. It is commonly about four feet square; at the end of this is the chamber of the mine, which is a cavity of about five feet in width and in length, and about six feet in height, and here the gunpowder is stowed. The saucis.se of the mine is the train, for which there is always a little aperture left. Two ounces of powder are capa- ble of raising two cubic feet of earth ; conse- quently 200 oz., or 12 Ibs. 8 oz., will raise 200 cubic feet, which is only

sixteen feet short of a cubic toise, because 200 oz. together have proportionably a greater force than two ounces, as being a united force. All the turnings a miner uses to carry on his mines, and through which he conducts the saucisse, should be well filled with earth and dung ; and the masonry in pro- portion to the earth to be blown up, as three to two. The entrance of the chamber of the mine ought to be firmly shut with thick planks, in the form of St. Andrew's cross, so that the enclosure be secure, and the void spaces shut up with dung or tempered earth. If a gallery be made below, or on the side of the chamber, it must absolutely be filled up with the strongest masonry, half as

long again as the height of the earth; for this gallery will not only burst, but likewise obstruct the effect of the mine. The powder should al- ways be kept in sacks, which are opened when the mine is charged, and some of the powder strewed about ; the greater the quantity of earth to be raised is, the greater is the effect of the mine, supposing it to have the due proportion of powder. The branches which are carried into the solidity of walls do not exceed three feet in depth, and two feet six inches in width nearly; this sort of mine is fit to blow up the strongest walls. The weight of a cubic foot of powder should be 80 Ibs.; one foot one inch cube will weigh 100 Ibs. ; and one foot two inches and eleven-twelfths, 150 Ibs. ; and 200 Ibs. of powder will be one foot five inches cube ; however, there is a diversity in this, according to the quantity of saltpetre in the gunpowder. If, when the mines are made, water be found at the bottom of the chamber, dry planks are laid, on which the powder is placed either in sacks or barrels of 100 Ibs. each. The saucisse must have a clear passage to the powder, and be laid in an auget or wooden trough, through all the branches.. When the powder is placed in the chamber, the planks are laid to cover it, and others again across these ; then one is placed over the top of the chamber, which is shaped for that purpose; between that and those which cover the powder props are placed, which shore it up ; some inclining towards the outside, others to the inside of the wall, all the void spaces being filled with earth, dung, bricks, and rough stones. Afterwards planks are placed at the entrance of the chamber, with one across the top, whereon they buttress three strong props, whose other ends are likewise propped against another plank situated on the side of the earth in the branch ; which props being well fixed between the planks, with wedges, the branch should then be filled up to its entrance with the forementioned materials. The saucisses which pass through the side branches must be exactly the same length with that in the middle, to which they join; the part which reaches beyond the entrance of the mine is that which conveys the fire to the other three; the saucisses, being of equal length, will spring together. See FORTIFICATION.

The force of a mine is always towards the weakest side ; so that the disposition of the chamber of a mine does not at all contribute to determine

this effect. The quantity of powder must be greater or less in proportion to the greater or less weight of the bodies to be raised, and to their greater or less cohesion ; so that we must allow for each cubic fathom of loose earth 9 Ibs. or 10 Ibs. Of firm earth and strong sand, 11 Ibs. or 12 Ibs. ; of flat clayey earth 15 Ibs. or 16 Ibs. ; of new masonry, not strongly bound, 15 Ibs. or 20 Ibs. ; and of old masonry, well bound, 25 Ihs. or 30 Ibs. The aperture, or en- tonnok of a mine, if rightly charged, is a cone, the diameter of whose base is double the height taken from the centre of the mine. When the mine has been overcharged, its entonnoir is nearly cylindrical, the diameter of the upper extreme not much exceeding that of the chamber. Be- sides the shock of the powder against the bodies

it takes up, it likewise crushes all the earth that borders upon it, both underneath and sidewise. To charge a mine, so as to have the most advan- tageous effect, the weight of the matter to be carried must be known ; that is, the solidity of a right cone, whose base is double the height of the earth over the centre of the mine ; thus, hav- ing found the solidity of the cone in cubic fa- thoms, multiply the number of fathoms by the number of pounds of powder necessary for raising the matter it contains; and, if the cone contains matters of different weights, take a mean weight between them all, always having a regard to their degree of cohesion. As to the disposition of mines, there is but one general rule, viz. that the side towards which one would determine the effect be the weakest ; but this va- ries according to circumstances.

It has been found by experiments that the figure produced by the explosion is a parabo- loid, and that the centre of the powder, or charge, occupies the focus. The place where the powder is lodged is called the chamber of the mine, or fourneau. The passage leading to the powder is called the gallery. The line drawn

from the centre of the chamber, perpendicular to the nearest surface of the ground, is called the line of least resistance. The pit, or hole, made by springing the mine, is called the excavation.

The fire is communicated to the mine by a pipe, or hose, made of coarse cloth, whose dia- meter is about one inch and a half, called a sau- cisson (for the filling of which near half a pound of powder is allowed to every foot), extending from the chamber to the entrance of the gallery, to the end of which is fixed a match, that the miner who sets fire to it may have time to retire before it reaches the chamber.

To prevent the powder from contracting any dampness, the saucisson is laid in a small trough, called an auget, made of boards, three inches and a half broad, joined together lengthwise, with straw in it, and round the saucisson, with a wooden cover nailed upon it.

Some authors call the end of the saucisson that comes within the work, and which is to be set fire to, the foyer, or focus ; but, by most people, this is generally understood to be the centre of the chamber, though a different view i taken of the matter in Muller's Treatise.*

MINES.

MINES. To carry on all the processes of the mine requires the combination of very conside- rable skill in several difficult branches of engi- neering. Most countries in which metallic veins are found, have the strata under the upper soil, consisting of rock of various degrees of hardness, it is therefore an essential part of the miner's art, and what indeed particularly distinguishes him from a common laborer, to be able to break ground of this sort under all the disadvantages of being cramped for room, exposed to constant streams of water, and not unfrequently to un- wholesome air.

In Cornwall the workmen generally divide the ground, or rock, into two general classes, one of which they call working ground, and the other is distinguished by the name of shooting ground. The first class includes all such kinds of rock as may be separated or broken by the use only of the pick and wedge, which latter is technically called a gad.

The latter denomination is applied to all rock that is so hard as to require the use of gunpow- der, which is bored by tools of steel, and loosened and detached by the explosion of the charges rammed into the holes.

The tools used by the miners of Cornwall and Devon are simple, and in their hands very effec- tive ; the form of the principal ones is delineated in MINING, plate I.

The pick, fig. 2, is usually of the shape shown in the drawing, but it is varied a little for some purposes, or for different kinds of rock; the one side is used as a hammer, and is called the poll, it serves to drive the gads, or to detach and loosen projecting parts ; the point is steel, carefully tempered, and drawn under the hammer to its proper form, in which considerable nicety is re- quired, as one kind of point will not do for all

kinds of ground. The weights of picks are like- wise various, according to the situation and cir- cumstances in which they are to be used, but are never very heavy, as experience has fully shown that a rapid succession of smart blows, which may be given by a light tool, produces more effect than

a less number from a weighty in- strument, which soon tires the workman.

The gads, fig. 3, are wedges of steel, which are driven into crevices of the rock, or into small openings made with the point of the pick, and, in skilful hands, they serve to loosen ground of very dense texture.

The miners' shovel, fig. 4, has a pointed form, which is necessary to make it possible to force it into or under the coarse and hard fragments of which the waste from a mine principally consists. It is furnished with a long handle somewhat bent, by which a man's power is applied in the most convenient form without stooping the body.

The tools for blasting, or, as it is technically called, shooting, consist of the

Sledge, or mallet, Borer

Claying bar Needle, or nail, Scraper, Tamping-bar,

Fig.

. 7 . 8 . 9 . 10 . 11 . 12

Besides these tools there are required a pow- der-horn, rushes to be filled with powder, occa- sionally tin cartridges for very wet ground, and paper rubbed with gunpowder, or sometimes grease, for the snufts or fuses.

The borer, fig. 8, is a bar of iron, with a steel end, formed like a thick chisel, and is used by one man holding it in the hole and constantly turning it round, while his comrade strikes the

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J.Shurj Sculp.

upper end with the iron sledge or mallet, fig. 7. The hole is occasionally cleaned out by the scraper, fig. 11, which is an iron rod turned up at one end ; or if the ground is very wet, and the hole fills with mud, a stick beat at the extre- mity till it forms a kind of brush is used, and is called a swab-stick.

Holes for blasting are generally about one inch and a quarter in the bore, and of various depths from ten or twelve inches to three feet ; but these, as well as the position and direction in which they are bored, and the charge of powder em- ployed, are subject to the skill and discretion of the miner. The rules by which he is guided are to direct the effort of the explosion to a part of the rock which is most easily displaced, and to proportion the charge to the effect required, so as to shake and loosen a larger portion rather than to blow out a less quantity.

Fig. 6 serves to explain the process of blast- ing, and represents a section of a hole ready for firing. When the hole is bored it must be made as dry as possible ; to do which it is partly filled with good tenacious clay and a round iron bar, nearly fitting the bore of the hole, but somewhat tapering, and called the claying-bar; this is driven in with great violence, which so forces the clay into all the crevices of the rock, that, when the bar is withdrawn, the hole usually re- mains dry. Where this plan fails, from the great flow of water all round, it becomes necessary to use tin cartridges furnished with a stem or tube through which the powder may be inflamed. A section of one of these cartridges is shown in the plate, fig. 13.

When the hole is dry, either by clay, or other- wise, the proper charge of gunpowder is intro- duced, and the nail, a small taper rod which ought to be made of copper, is inserted, and reaches to the bottom of the hole ; the hole is then ready to receive the tamping, which is the most difficult and dangerous part of the process. It is by this that the gunpowder is confined, and the effect produced; different substances are in use for ramming into the hole for this pur- pose ; that most usually employed is any soft kind of rock, which is free from quartz or flinty matter. Small quantities at a time are intro- duced into the hole, and rammed very hard by the tamping bar, which is held by one man, and struck with a sledge by another ; this is con- tinued until the hole is filled up, and the nail being then drawn out by putting a bar through the eye, and striking it upward, leaves a small perforation or vent for the rush which conveys the fire.

The danger of beating the tamping with iron tools in hard rock, and the many dreadful acci- dents that frequently happen in this operation, have led to the introduction of contrivances to diminish the risk; but, though some of these have been well adapted for the purpose, yet, as they occasion a little more trouble, they have not been generally adopted by the miner. The sim- plest and best precaution against danger is to have the nail of copper instead of iron ; but, as the former is not so easily made or repaired by the smiths on a mine as the latter, they are not so well liked by the workmen.

The other mode of preventing danger in tamping is by employing substances

to confine the gunpowder which 'require little or no force in beating them into the hole, and as dry sand will .often serve the purpose if the rock is not very hard it may be sometimes used ; but there are many cases in mines where it will not suc- ceed, and therefore it is seldom attempted. A better substance to confine gunpowder in holes is good tough clay, and this will answer in many cases where sand will fail particularly in wet ground, or in holes that are inclined up- wards, it will produce the proper effect in all but very hard rocks, and, if the men could be induced to use it, would undoubtedly tend to the saving many lives.

When the tamping is completely rammed in, and the nail drawn out, a small vent or touch- hole remains, which is to receive the rush to communicate the fire. Any small tube filled with gunpowder will answer for this purpose, but nothing is better or more easily prepared than those in common use. For this purpose, the green rushes which grow in wet marsh lands are chosen, and are selected as long and large as can be had. By making a slit in one side, and drawing along in it the sharp end of a piece of stick, the pith may be taken out very completely, and from the elasticity of the skin of the rush the slit closes again. To fill this tube with gun- powder, the rush is held in one hand so as to pass through a small quantity of powder retained in the palm of the hand ; and by opening the slit with a small wedge, and pushing the nish along through the powder at the same time, it is made to embrace a quantity sufficient to communicate inflammation.

To fire the hole, one of these charged rushes is dropped through the vent, and is made steady by a piece of clay ; a paper snuff is then fixed to the top, which is so adjusted as to burn a sufficient time to permit the man who fires it to retreat to a proper distance.

Fig. 6 represents a section of a charged hole in a rock. The portion which would be dis- lodged by the explosion is that part included between A and B. The charge of powder is shown by the white part, which reaches as high in the hole as C : from that point to the surface of the rock the hole is filled with tamping, ex- cepting the small orifice which contains the rush, and which has the snuff affixed at D.

Fig. 14 is a drawing of a wheelbarrow, such as is used under ground for conveying ore and waste to the shafts : these barrows are very simple in their construction, and adapted to the narrow and low levels through which they have to pass. They are usually made all of deal, this timber being the most fitted to the purpose. The wheel has a narrow band of iron round it.

Fi?. 5 is an iron bucket, or, as it is called in Cornwall, a kibble, and is used for holding the ore and waste while it is drawn up the shafts by machines,

worked by horses, called whims. Kibbles are generally made of wood, having very stout staves, very strongly bound with heavy iron binds or hoops ; but as those made with iron plates are to be preferred, and need not muc'» exceed the others in weight, we are glad to be

able to exhibit a drawing of one of the latter of an approved form and construction.

A kibble, such as is used with horse-whims, holds about 300 weight of ore, and 120 kibbles will just clear a cubic fathom of rock.

Miners' work under ground is chiefly divided into sinking, driving, and stoaping.

Sinking is applied to shafts, and to other smaller perpendicular openings from one level to another, usually called winzes.

Shafts are of different dimensions according to the purposes they are designed for; the largest kind is the engine-shaft, in which are generally placed the pumps for draining the mine of wa- ter, the ladders for the men, and a part divided off and called the whim-shaft, for the kibbles to pass up and down. Plate II., MINING, will be found to represent a perspective view of a part of the interior of these shafts.

A good engine shaft measures about eight feet by twelve, though some are sunk of larger ili- mensions. Shafts intended only for hauling ores through, and those for air and foot-ways, may be about six feet by four.

In large shafts, a set of twelve men are usually employed ; in smaller ones eight, or even six, are a sufficient complement to keep the work going. They work two or three at a time, and relieve each other every six or eight hours, keep- ing good the whole twenty-four without intermis- sion. The miners are attended by laborers, or winze men, who haul up the stuff out of their way as it is broken.

Sinking is contracted for by the fathom in depth, and the price therefore varies according to the dimensions of the shaft, as well as accord- ing to the hardness of the ground, and the cir- cumstances relating to water, air, &c. A medium price is about £20 a fathom for shafts at some depth from the surface, but some have cost £80, and others are executed as low as £5.

Driving is the term applied to the execution of horizontal passages, which

are called adits when used for the conveyance of water near the surface, and levels when made for opening the lode or vein, and forming communications from one shaft to another under ground. . Levels ought to be seven feet in height, and two feet and a half wide; by constructing them as high as this, room is given to admit contrivances for ventilation, so that they may be continued to considerable lengths without inconvenience. More than two miners cannot work at one time on the end of a level, and the set of men there- fore employed may consist of six, relieving every eight hours, or of four relieving twice in the twenty-four hours, or two men only, who may work as long as circumstances will permit. Driving is paid for by the fathom in length, the height and width being limited; a grˆeat variation of prices takes place according as the rock is hard or soft, as work of this sort is done from 10s. a fathom to £30, but about £5 a fathom is the most usual sum paid for this kind oi work. These prices here, as well as in sinking shafts, include every expense, as the men pay for their tools, candles, and gunpowder, and likewise are charged with the wheeling the stuff, and hauling it to the surface.

Stoaping is that kind of work which is not in eluded in sinking- or driving, but more generally means the breaking away the ground between the levels on the course of the lode or vein, to get the ore. When the men work over head, it is called stoaping the backs, and when the work is carried downwards it is denominated stoaping the bottoms. As both these operations usually take place where ore is obtained, the mode of payment is quite different from that in sinking or driving, and is here called tribute-work, while the other is called tutwork. Tribute means payment by a proportion of the produce, so that the men agree to undertake a particular piece of ground for a certain part of the value of the ore they may procure, when completely mer- chantable and fit for sale, every operation and process to make it so being conducted at their expense. This mode of contracting is of great advantage to the owners of the mine, as the men have a constant interest concurring with that of their employers, in discovering and procuring the greatest possible quantities of ore, and of returning it in the best and cheapest manner. The proportion paid to the miner, varies of course exceedingly, as many things must be taken into account in estimating a fair tribute for any particular part of a mine, but the con- tracts are made at so much out of every pound's worth sold, and this fluctuates often i n different parts of the same mine from three-pence to four- teen shillings. Nothing shows the necessity of a mine being in the hands of skilful and honor- able managers more than the great variation in the prices of all kinds of work carried on in these extensive undertakings.

An engine-shaft is delineated in MIXING, plate II.

A, A, A, A, timber-framing put in to support the ground, where, from the

rock not being suf- ficiently hard to stand securely, this precaution becomes necessary. Where boarding is required the planks are driven perpendicularly between the transverse timber and the ground.

B, B, B, B, are dividing-pieces, or beams thrown across the shaft. They serve to support the sides of the shaft, to attach the casing- boards to, which part off the whim-shaft from the foot-way and pump, or engine-shaft (it being usual to consider a large shaft of this kind as divided into the three kinds, each bearing its par- ticular name). And, lastly, the dividing-pieces support the ends of the bearers which carry the pujnps, ladders, &c.

C, C, C, C, casing-boards which part off the whim-shaft from the other parts ; they are stout planks securely spiked to the dividing-pieces, and, when the shaft is not .perpendicular, the kibbles slide upon them.

D, the whim-kibble which conveys up the ore and waste, two of which are employed in a shaft, one going up while the other goes down.

E, F, ladders for the workmen, forming what is usually called the foot-way.

G, sailer, a small platform at the foot of each ladder.

H, a column of pumps drawing out of a cistern K, which is supplied by a lower tier of pumps I, furnished at the top with a collar

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launder J, which delivers into the cistern, which likewise receives the stream flowing from the level at L.

M, a set off, which connects the pump rods, so that Dne set goes into the column I, and another is continued lower to a deeper lift of pumps.

N, N, N, N, bearers, or timber beams, which support the pumps and keep them steady in their places.

The ventilation of mines is so important a subject that we insert at length the following ac- count of a machine invented and applied to that purpose by Mr. Taylor, late the manager of the principal copper mines in Devon;

and for which he received the silver medal from the society for the Encouragement of Arts, Manufac- tures, and Commerce.

‘ Next in importance to the means employed for draining underground works from water, may be reckoned those which are intended to afford a supply of pure air, sufficient to enable the workmen to continue their operations with ease and safety to themselves, and to keep up, undi- minished, the artificial light upon which they depend. It is well known, indeed, to all who are practically engaged in concerns of this kind, that men are frequently obliged to persevere in their labor, where a candle, will scarcely burn, and where not only their own health materially suffers in the end, but their employers are put to considerable additional expense by the un- avoidable hindrance and the waste of candles and other materials.

‘ The following remarks are confined to such mines as are worked upon metalliferous veins, according to the practice of this district, and that of the great seat of mining in the neigh- bouring county of Cornwall, from which indeed ours is borrowed. We find then that a single shaft, not communicating by levels to another, can hardly be sunk to any considerable depth, nor can a level (or, as the foreign miners call it, a gallery) be driven horizontally to any great distance, without some contrivance for procuring currents of air to make up the deficiency of oxygen, which is so rapidly consumed by res- piration and combustion in situations like these, where otherwise the whole remains in nearly a stagnant condition.

‘We are here unacquainted with the rapid production of those gases which occasionally in the collieries are the cause of such dreadful ef- fects ; such as hydrogen gas, or the fire-damp, carbonic acid, or the choke-damp; the incon- venience we experience takes place gradually as we recede from the openings to the atmosphere, and seems to arise solely from the causes which have been before assigned, though it is found to come on more rapidly in certain situations than in oihers.

‘ The most obvious remedy, and that which is most frequently resorted to, is the opening a communication either to some other part of the mine, or to the surface itself; and as soon as this is done, the ventilation is found to be com- plete, by the currents which immediately take place, often with considerable force, from the different degrees of temperature in the subter

ranean and upper atmospheres ; and these cur- rents may be observed to change their direction! as the temperatures alternate.

‘The great objection to this mode of curing the evil is the enormous expense

with which it is mo»t commonly attended. In driving a long level, or tunnel, for instance, it may happen to be at a great depth under the surface, and the intervening rock of great hardness ; in such a case every shaft which must be

‘ To avoid this, recourse has been had to divid- ing the shaft or level into two distinct parts, communicating near tne part intended to be ventilated, so that a current may be produced in opposite directions on each side the partition ; and this, where room is to be spared for it, is often effectual to a certain extent. It is found, however, to have its limits at no very great dis- tance, and the current at best is but a feeble one, from the nearly equal states of heat in the air on each side. The only scheme besides” these has hitherto been to force down a volume of purer air, through a system of pipes placed for the purpose, and a variety of contrivances have been devised for effecting this ; most of them are so old that they may be found described in Agricola’s work, De Re Metallica. The most common am by bellows worked by hand ; by boxes or cylin- ders of various forms placed on the surface with a large opening against the wind, and a smallet one communicating with the air-pipes by a cy- linder and piston working in it, which when driven by a sufficient force has great power. But the cheapest and most effectual scheme for this purpose, where circumstances will admit of its being applied, is one which was adopted some time since in’ die tunnel of the Tavistock canal. It is by applying the fall of a stream of water for this purpose, and it has been long known that a blast of considerable strength may may be obtained in this manner, which has the advantage of being constant and self-acting. The stream, being turned down a perpendicular column of pipes, dashes in at a vessel so con- trived as to let off the water one way, with an opening at another part for the air, which, being pressed into it by the falling water, may be con- veyed in any direction, and will pass through air-pipes with a strong current, which will be found efficacious in ventilating mines in many instances, as it has likewise, in some cases, been sufficient for urging the intensity of fires for the purposes of the forge. It is easily procured where a sufficient fall is to be had ; and the per- pendicular column can be so fixed as that the water from the bottom may pass off, while the air is forced into a pipe branching from the air- vessel, and which is to be continued to the part of the mine where the supply of fresh air is re- quired.

‘ It has been found, however, that the forcing into vitiated air a mixture of that which is purer, even when the best means are used, though

a measure which affords relief, is not, in bad cases, a complete remedy ; and, where the opera- tion depends on manual labor, or any means that are not unremitted in their action, it be- comes quite ineffectual. The foul air, charged •with the smoke of gunpowder used in blasting, and which it strongly retains, is certainly meli- orated by the mixture of pure air, but is not re- moved. While the blast continues, some of it is driven into the other parts of the mine ; but, when the influx of pure air ceases, it returns again : or if, during the influx of pure air, a fresh volume of smoke be produced by explosions, which are constantly taking place, it is not until some time afterwards that it becomes sufficiently attenuated for the workmen to resume their sta- tions with comfort.

‘ A consideration of these circumstances led me to the supposition that the usual operation of ventilating engines ought to be reversed, to afford all the advantages that could be desired; that, instead of using the machines which serve as condensers, exhausters should be adopted; and thus, instead of forcing pure air into that in a vitiated state, a complete remedy could only be had by pumping out all that was impure as fast as it became so.

- *Many modes of doing this suggested them- selves, by the alteration of the machines com- monly applied, arid by producing an ascending stream of air through pipes by a furnace con- structed for the purpose. The latter mode would, however, have been here expensive in fuel as well as in attendance ; and the others required power to overcome the friction of pistons, and so on, or considerable accuracy in construction.*

‘ At length the machine was erected of which the annexed is a drawing; which, while it is so simple in construction, and requires so small an expense of power, is so complete in its opera- tion, and its parts are so little liable to be in- jured by wear, that nothing more can be desired where such an one is applied. This engine oears considerable resemblance to Mr. Pepys’s gazometer, though this did not occur to the in- venter until after it was put to work. It will readily be understood by an inspection of the engraving, plate III., where the shaft of the mine is represented at A; and it may here be observed that the machine will be as well placed at the bottom of the shaft as at the top, and, in either case, it is proper to fix it upon a floor, which may prevent the return of the foul air into the mine, after being discharged from the exhauster: this floor may be furnished with a trap door, to be opened occasionally for the passage of buckets through it.

‘ B, the air-pipe from the mine passing through the bottom of the fixed vessel or cylinder C, which is formed of timber, and bound with iron hoops

, this is filled with water nearly to the top of the pipe B, on which is fixed a valve opening upwards at D.

‘ E, the air or exhausting-cylinder made of cast-iron, open at the bottom and suspended over the air-pipe, immersed some way in the water. It is furnished with a wooden top, in which is an opening fitted with a valve likewise opening upwards at F.

‘ The •‘xhausting-cylmder has its motion up and down given to it by the bob G, connected to any engine by the horizontal rod H, and the weight of the cylinder is balanced, if necessary, by the counterpoise I.

‘ The action is obvious — When the exhaust- ing-cylinder is raised, a vacuum would be pro- duced, or rather the water would likewise be raised in it, were it not for the stream of air from the mine rushing through the pipe and valve D. As soon as the cylinder begins to de- scend, this valve closes, and prevents the return of the air which is discharged through the valve F.

‘ The quantity of air exhausted is calculated of course from the area of the bore of the cylin- der, and the length of the stroke.

‘ The dimensions which have been found suf- ficent for large works are as follow : —

‘ The bore of the exhausting-cylinder two feet.

‘ The length six feet, so as to afford a stroke of four feet.

‘ The pipes which conduct the air to such an engine ought not to be less than six-inch bore.

1 The best rate of working is from two to three strokes a minute ; but, if required to go much faster, it will be proper to adapt a capa- cious air-vessel to the pipes near the machine, which will equalise the current pressing through them.

‘ Such an engine discharges more than 200 gallons of air in a minute ; and I have found that a stream of water supplied by an inch and a half bore falling twelve feet is sufficient to keep it regularly working.

‘ A small engine to pump out two gallons at a stroke, which would be sufficient in many cases, could be worked by a power equal to raising a very few pounds weight, as the whole machine may be put into complete equilibrium before it begins to work, and there is hardly any other friction to overcome but that of the air passing through the pipes.

‘ The end of the tunnel of the Tavistock Canal, which it was my object to ventilate, was driven into the hill at a distance of nearly 300 yards from any opening to the surface ; and being at a depth of 120 yards, and all in hard schistus rock, air-shafts would have been attended with an enormous expense ; so that, the tunnel being a long one, it was most desirable to sink as few as possible, and, of course, at considerable dis- tances from each other. Thus a ventilating ma- chine was required which should act with suffi- cient force through a length of nearly half a mile ; and, on the side of the hill where it first became necessary to apply it, no larger stream of water to give it motion could be relied on than such a one as is mentioned after the description of the engine, and even that flowed at a distance from the shaft where the engine was to be fixed, which made a considerable length of connexion- rods necessary.

‘ Within a very short time after the engine be gan to work, the superiority of its action over those formerly employed was abundantly evident. The whole extent of the tunnel, which had been uninterruptedly clouded with smoke for some months before, and which the air that was forced*

in never could drive out, now became speedily so cleat that the clay-light and even objects at its mouth were distinctly seen from its furthest end. After blowing up the rock, the miners could instantly return to the place where they were employed, unimpeded by the smoke, of which no appearance would remain under-ground in a very few minutes, while it might be seen to be discharged in gusts, from the valve at the top of the shaft. The constant current into the pipe at the same time effectually prevented the accu- mulation of air unfit for respiration. The influx of air, from the level into the mouth of the pipe, rushes with such force as instantly to extinguish the flame of a large candle; and any substance applied, so as to stop the orifice, is held tight by the outward pressure.

‘It is now more than two years since the machine was erected, and it has been uninter- ruptedly at work ever since, and without repair. The length of the tunnel has been nearly dou- bled, and the pipes, of course, in the same proportion, and no want of ventilation is yet perceptible.

‘Two similar engines have been since con- structed for other parts of the same tunnel, and have in every respect answered the purpose for which they were designed.

‘The original one is worked by the small stream of water before-mentioned,

by means of a light overshot-wheel twelve feet in diameter, and about six inches in breast. The two others are attached to the great overshot-wheel which pumps the water from the shafts which are sink- ing upon the line ; and, as their friction is com- paratively nothing, this may be done in any case, with so little waste of power for this purpose as not to be an object of consideration, even if the power be derived from more expensive means.

‘ The size of the exhauster may always be pro- portioned to the demand for air; and, by a due consideration of this circumstance, this engine may be effectually adapted not only to mines and collieries, but also to manufactories, work- houses, hospitals, prisons, ships, and so on.

‘ Thus, if it were required to ventilate a shaft of a mine, or a single level, which is most fre- quently the case, where three men are at work at one time, and we allow that those three men vitiate each twenty-seven cubic inches and a half of air per minute (as determined by the experi- ments of Messrs. Allen and Pepys), and allowing further that their candles vitiate as much as the men, there will be six times twenty-seven and a half cubic inches of air to be drawn out in a minute, equal to 165.

‘ Now a cylinder five inches in diameter, work- ing with a stroke at nine inches, will effect this by one stroke in a minute ; though it would cer- tainly be advisable to make it larger.

‘ Not being practically acquainted with col- lieries, or mines that suffer from peculiar gases that are produced in them, I cannot state, from actual experiment, what effect this machine might have in relieving them ; but it must appear evi- dent, to every person at all acquainted with the first principles of pneumatics, that it must do all that can be wished, as it is obvious that such a machine must in a given time pump out the whole

volume of air contained in a given space, and thus change an impure atmosphere for a better one. And in constructing the machine it is only necessary to estimate the volume of gas produced in a certain time, or the capacity of the whole space to be ventilated. It is easy to judge how much more this must do for such cases as these, than such schemes as have lately been proposed of exciting jets of water, or slaking lime, both of which projects, likewise, must fail when applied ; as one of them has when applied to the case of hydrogen gas. But with such a machine as this, if the dreadful effects of explo- sions of this air are to be counteracted, it may be done by one of sufficient size to draw off the air as fast as it is generated ; and by carrying che pipes into the elevated parts of the mine, where from its lightness it would collect. If, on the other hand, it is desired to free any sub- terraneous work from the carbonic acid gas, it may as certainly be done by suffering the pipe to terminate in the lower parts, where this air

would be directed by its gravity.

'• In workhouses, hospitals, manufactories, &c., it is always easy to calculate the quantity of air contained in any room, or number of rooms, and easy to estimate how often it is desirable to change this in a certain number of hours, and to adjust the size and velocity of the engine accordingly. Where this change of foul air for pure is to take place in the night, means for working the machine may be provided by pumping up a quantity of water into a reservoir of sufficient height to admit of its flowing out during the night in a small stream, with sufficient fall, so as to give motion to the engine ; or by winding up a weight of sufficient size, or by many other means which are easily devised.

' If, for instance, a room in which fifty persons slept was eighty feet long, twenty wide, and ten high, it would contain 16,000 cubic feet of air, and, if this was to be removed twice in eight hours, it would require a cylinder of thirty inches diameter, working with a four-feet stroke four times in a minute, to do it ; or nearly that. Such a cylinder could be worked by the descent of ten gallons of water ten feet in a minute ; or, for the whole time, by eighty hogsheads falling the same height.

' But this is a vast deal more than could be required, as the fifty people would in eight hours vitiate only 3000 gallons of air, which could be removed by 150 strokes of a cylinder, twelve inches diameter, with a four feet stroke, which would not require an expenditure of more than 1500 gallons of water properly applied, or aboiy twenty-eight hogsheads.'

Mr. Price, in his Treatise on the Cornish mines, observes, ' that the comparative smallness of the largest fissures to the bulk cf «he whole earth is really wonderful. In the finest yottery we can make, by a microscopic view, we may discover numerous cracks and fissures, so small as to be impenetrable by any fluid, and impervious to the naked eye ;' as, by the laws of nature origi- nally imposed by the Creator, it happens that matter cannot contract itself into solid large masses, without leaving fissures between them, and yet the very fissures are as necessary and

useful as the strata through which they pass. They are the drains that carry off the redundant moisture from the earth ; which, but for them, would be too full of fens and bogs for animals to live, or plants to thrive on. In these fissures, the several ingredients which form lodes, by the continual passing

of waters, and the menstrua of metals, are brought out of the adjacent strata, collected and conveniently lodged in a narrow channel, much to the advantage of those who search for them ; for if metals and-minerals were more dispersed, and scattered thinly in the body of the strata, the trouble of finding and getting at them would be endless, and the expense of procuring them exceed the value of the acqui- sition. The insides of the fissures are commonly coated over with a hard, crystalline, earthy sub- stance or rind, which very often, in the breaking of hard ore, comes off along with it, and is com- monly called the capels or walls of the lode : but Mr. Price is of opinion that the proper walls of the lode are the sides of the fissure itself, and not the coat, which is the natural plaster upon "those walls, furnished perhaps by the contents of the fissures, or from oozings of the surrounding strata. The breadth of a lode is known by the distance betwixt the two incrusted sides of the stone of ore ; and, if a lode yields any kind of ore, it is a better sign that the walls be regular and smooth, or at least that one of them be so, than otherwise ; but few of these fissures have regular walls until they have been sunk down some fathoms. Thus the inner part of the figure, in which the ore lies, is all the way bounded by two walls of stone, which are generally parallel to one another, and include the breadth of the vein or lode. Whatever angle of inclination some fissures make in the solid strata, at their beginning, they generally continue to do the same all along. Some are small at their upper part, and wide underneath, and vice versa. Their breadth, as well as depth, varies much; for, though a fissure may be many fathoms wide in one place, yet a little further east or west it may not be one inch wide. This excessive variation happens generally in very compact strata, when the vein is squeezed, as it were, through hard rocks which seem to straiten it. A true vein, however, is never entirely obliterated, but always shows a string of metallic ore, or of a veiny sub- stance ; which often serves as a leader for the miners, until it sometimes leads them to a richly impregnated part. Their length is in a great measure unlimited. The richest state for copper, according to Mr. Price, is from forty to eighty fathoms deep : for tin from twenty to sixty ; and, though a great quantity of either may be raised at eighty or 100 fathoms, yet 'the quality is often too much decayed and dry for metal.' He says that the fissures or veins of the Cornish mines extend from east to west; or, more pro- perly, one end of the fissure points west and by south, or west and by north ; while the other tends east and by south, or east and by north. Thus they frequently pass through a considerable tract of country with few variations in their di- rection, unless interrupted by some intervening cause. But, besides this east and west direc- tion, there is what the miners cs-Y. the underlying*

or hade of the vein or lode, vit. the deflection or deviation of the fissure from its perpendicular line, as it is followed in depth like the slope of the roof of a house, or the descent of the steep side of a hill. This slope is

*generally to the north or south ; but varies much in different veins, or sometimes even in the same vein ; for it will often slope or underlie a small space in different ways, as it may be forced by hard strata o.i either side. Some of the fissures do not vary much from a perpendicular, while some deviate more than a fathom ; that is, for every fathom they descend in perpendicular height, they de- viate likewise as much to the south or north. Others differ so much from the perpendicular that they assume a position almost horizontal ; whence they are also called horizontal or flat lodes, and sometimes lode plots. Another kind has an irregular position with regard to the rest ; widening horizontally for a little way, and then descending perpendicularly almost like stairs, with only a small string or leader to follow after ; and thus they alternately vary and yield ore in several flat horizontal fissures. This, by the Cornish tinners, is called (but in Mr. Price's opinion erroneously) a floor or squat; which, properly speaking, is a hole or chasm impreg- nated with metal, making no continued line of direction or regular walls. Neither does a floor of ore descend to any considerable depth ; for underneath it there appears no sign of a vein, either leading directly down or any other way. This kind of vein is very rare in Britain. The fissures most common in Britain are the perpen- dicular and inclined, to whatever point their direc- tion be. The perpendicular and horizontal fissures (Mr. Price says) remain little altered from their first position, when they were formed at the in- duration of the strata immediately after the waters left the land. The perpendicular fissures are more commonly situated in level ground, at a distance from hills, and from the sea shore ; but with regard to the latter, the upper and under masses of strata differ in their solidity and pro- perties. * Hence (says Mr. Price) it is plain, that inclined fissures owe their deflection to some secondary cause, violence, or subsidence of the earth; for, though perpendicular fissures are seldom to be seen, yet such as are inclined at very considerable depths become more and more perpendicular, as the more central strata, by reason of the vast superincumbent weight, do not seem so likely to be driven out of their po- sition as those which lie nearer the surface.' The fissures are often met with fractured as well as inclined ; the reason of which, Mr. Price thinks, has been a subsidence of the earth, from some extraordinary cause. 'The original position, says he, must have been horizontal, or parallel to the surface of the earth : but we often find these strata very sensibly declined from the first po- sition; nay, sometimes quite reversed, and changed into perpendicular. When we see a wall lean, we immediately conclude that the foundation has given way, according to the an- gles which the wall makes with the horizon ; and, when we find the like declination in strata, we may conclude, by parity of reason, that there has been a like failure of what supported them,*

in proportion to that declination ; or that what- ever made the strata to fall so much awry, must also cause every thing included in those strata to fall proportionally. Wherever the greatest sub- sidence is to the north the top of the lode or fis- sure will point to the north, and of consequence underlie to the south, and vice versS. : the slide or heave of the lode manifests the greater subsi- dence of the strata ; but the same lode is fre- quently fractured and heaved in several places : all of which, by due observation, will show us they were occasioned by so many several shocks or subsidences, and that the strata were not un- footed, shaken, or brought to fall once only or twice, but several times.'

Mr. Price observes that, though the metallic veins generally run from east to west, they are frequently intersected by veins or lodes of other matters, which run from north to south. Some of these cross veins contain lead or antimony, but never tin or copper. Sometimes one of these unmetallic veins intersects the true one at right angles, sometimes obliquely ; and some- times the mixture of both is so intimate that the most expert miners are at a loss to discover the separated part of the true vein. When this last is intercepted at right angles it is moved, either north or south, a very little way, perhaps not above a fathom ; in which case, having worked to a small distance in one of these directions, if they find themselves disappointed, they turn to the other hand, and seldom fail of meeting with what they expected. Sometimes they are direct- ed in their search by the pointing of a rib or string of the true vein ; but, when the interrup- tion happens in an oblique direction, the diffi- culty of finding the vein again is much greater. When two metallic veins near each other run in an oblique direction, and meet together, they commonly produce a body of ore at the place where they intersect ; and, if both are rich, the quantity: will be considerable; but if one be poor and the other rich, then both are either en- riched or impoverished by the meeting. After some time they separate again, and each will continue its former direction near to the other ; but sometimes, though rarely, they continue united. It is a sign of a poor vein when it separates or diverges into strings ; but, when several of them are found running into one, it is accounted a promising sign. Sometimes there are branches without the walls of the vein in the adjacent strata, which often come either obliquely or transversely into it. If these branches are impregnated with ore, or if they underlie faster than the true vein, that is, if they dip deeper into the ground, then they are said to overtake or come into the lode, and to enrich it ; or, if they do not, then they are said to go off from it, and to impoverish it. But neither these nor any other marks, either of the richness or poverty of a mine, are to be entirely depended upon ; for many mines, which have a very bad appearance at first, turn out extremely well afterwards ; while others, which in the beginning seemed very rich,

turned gradually worse ; but in gene- ral, where a vein has a very bad appearance at tirst, it will be imprudent to be at much expense with it. Veins of metal are often so compressed

betwixt hard strata that they are not an inch wide ; nevertheless, if they have a string of good ore, it will generally be worth while to pursue them ; and they often turn out well at last. It is an encouragement to go on, if the leaden of ore enlarge either in width or depth as they are worked ; but it is a bad sign if they con- tinue horizontal without inclining downwards; though it is not proper always to discontinue the working of a vein which has an unfavorable as- pect at first. Veins of tin are worth working when only three inches wide, provided the ore be good : and copper ores, when six inches wide, will pay very well for the working. Some of the great mines, however, have very large veins, with a number of other small ones very near each other. There are also veins crossing one another sometimes met with, which are called contras, vulgarly caunters. Sometimes two veins run down into the ground in such a manner that they meet in the direction of their depths ; in which case the same obser- vations apply to them which are applicable to those that meet in a horizontal direction. Sometimes a vein suddenly disappears, by be- coming narrower, or of worse quality ; which by the miners is called a start or leap, and is com- mon in the mines of Cornwall. In one day they may thus be disappointed in the working of a rich vein of tin, and have no further sign of any thing to work upon : at the fractured extremity of their vein they perceive a body of clay or other matter ; and the method of recovering their vein is to drive on their work in the direc- tion of the former part, so that their new work shall make the same angle with the clay that the other part of the vein does. Sometimes they sink a shaft down from the surface; but it is generally a matter of difficulty to recover a vein when thus lost.

The method of discovering mines is a matter of so much difficulty that it seems surprising how those who were totally unacquainted with the nature of metals first thought of digging them out of the earth. Lucretius says, the discovery was made by the conflagration of woods, which melted the veins of metal in the earth beneath them ; and Aristotle tells us that, some shepherds in Spain having set fire to the woods, the earth was thus heated to such a degree that the silver near the surface of it melted and flowed into a mass ; and that in a short time the metallic mass was discovered by the rending of the earth in the time of an earthquake. The same story is told by Strabo, who ascribes the discovery of the mines of Andalusia to this accident. The dis- covery of gold has been ascribed to Mercury, Cadmus, Thoas of Thrace, Piseus king of Italy, Caeacus, and other fabulous heroes ; but ˆEschy- lus attributes the discovery of all the metals to Prometheus. The copper mines in Cyprus were first discovered by Cinyras, the son of Agriopas ; and Ilesiod ascribes the discovery of the iron mines of Crete to

the Cretan Dactyli Idsci. The extraction of lead or tin from its ore, in the island of Cassiteris, according to several ancient authors, was discovered by Midacritus. Moses, however, ascribes the invention of brass and iron, 01 at least of the methods ot working them,

lo Tubal Cain, before the flood. In later times, mines have been often discovered by accident ; as in sea-cliffs, among broken craggy rocks, by the washing of the tides or floods, also by irrup- tions and torrents of water issuing out of hills and mountains, and sometimes by the wearing of high roads. Mr. Price mentions, among other methods by which mines have been dis- covered, one by fiery corruscations, ignes fatui, or falling stars, and says, ‘ the tinners generally search with uncommon eagerness the ground over which these jack-a-lanterns have appeared.’ But this mode of judging of mines has now lost all credit. Mines are now most commonly dis- covered by investigating the nature of such veins, ores, and stones, as seem most likely to turn to account: but there is a particular sagacity, or habit of judging from particular signs, which can be acquired only by long practice. Mines, especially those of copper, may also be dis- covered by the harsh and disagreeable taste of the waters which issue from them ; though this only happens when the ore lies above the level of the water ; for it does not seem likely that the taste of the ore could ascend, unless we were to suppose a pond or lake of water standing above it. The presence of copper in any water is easily discovered by immerging in it a’ bit of polished iron, which will thus instantly be turned of a copper color, by the precipitation of Ihe metal upon it. A candle, or piece of tallow, put into water of this kind, will in a short time be tinged green. Another, and still more won- derful method of discovering mines, is said to be by the virgula divinatoria, or divining-rod ; which, however incredible the stories related concerning it may be, is still relied on by some, and among others by Mr. Price. It is not known who was the inventor of this method ; but Agricola sup- poses that it took its rise from the magicians, who pretended to discover mines by enchant- ment. No mention is made of it, however, be- fore the eleventh century, since which time it has been in frequent use ; and the Corpuscu- lar Philosophy has even been called in to account for it. It is said to be performed in consequence of a certain unaccountable attraction which the metals have for rods of nut or other fruit-trees. But the account given by Price, which he had from a Mr. Cookworthy of Plymouth, who is said to have had the first information concerning this rod from one captain Ribera, a deserter from the Spanish service in queen Anne’s reign, and afterwards captain-commandant in the gar- rison of Plymouth, is so very incredible, not to add unintelligible and unphilosophical, that we think it unnecessary

to quote it; and shall there- fore leave it to be investigated from Mr. Price's work, by such of our readers (if any such there be) as have faith in the obsolete and occult sci- ences of astrology, enchantment, and magic. Another, and very ancient mode of discovering mines, but extremely difficult and precarious, is that called shoding; that is, tracing them by loose stones, fragments, or shodes, which may have been separated and carried off to a con- siderable distance from the vein, and are found by chance in running waters, on the surface of the ground, or a little under. ' When the tin-

ners,' says Mr. Price, ' meet with a loose single stone of tin ore, either in a valley, or in plough- ing cr hedging, though at 100 fathoms distance from the vein it came from, those who are accus- tomed to this work will not fail to find it out. They consider that a metallic stone must originally have appertained to some vein, from which it was severed and cast at a distance by some violent means. The deluge, they sup- pose, moved most of the loose earthy coat of the globe, and in many places washed it off from the upper towards the lower grounds, with such a force that most of the backs or lodes of veins which protruded themselves above the fast were hurried downwards with the mass : whence the skill in this part of their business lies much in directing their measures according to the situation of the surface.' Afterwards, however, our author complains, that this art of shoding, as he calls it, is in a great measure lost. The fol- lowing account of a method of finding silver mines, by Alonzo Barba, seems to be similar to that of shoding : — ' The veins of metal,' says he, 'are sometimes found by great stones above ground ; and if the veins be covered they hunt them out after this manner : viz. taking in their hands a sort of mattock, which has a steel point at one end to dig with, and a blunt head at the other, wherewith to break stones, they go to the hollows of the mountains, where the current of rain water descends, or to some other part of the skirts of the mountains, and there observe what stones they meet with, breaking in pieces those that seem to have any metal in them ; whereof they find many limes both middling sort of stones and small ones also of metal. Then they consider the situation of that place, and whence these stones can tumble, which of necessity must be from higher ground, and follow the tract of them up the hill as long as they can find any of them,' &c. Another way, says Mr. Price, of discovering lodes, is by working drifts across the country, as we call it, that is, from north to south, and vice versa. I tried the experiment in an adventure under my management, where I drove all open at grass about two feet in the shelf, very much like a level to convey water upon a mill-wheel ; by so doing I was sure of cutting all lodes in my way ; and did accord- ingly discover five courses, one of which has produced above 180 tons of copper-ore, but the others were never wrought upon. This method of discovering lodes is equally cheap and cer- tain ; for 100 fathoms in

shallow ground may be driven at 50s. expense.' In that kind of ground called by our author feasible, and which he ex- plains by the phrase tender-standing, he tells us that 'a very effectual, proving, and consequen- tial way is, by driving an adit from the lowest ground, either north or south, whereby there is a certainty to cut all lodes at twenty, thirty, or forty fathoms deep, if the level admits of it. In driving adits or levels across, north or south, to unwater mines already found, there are many fresh reins discovered, which frequently prove better than those they were driving to.'

After the mine is found, the next thing to be considered is, whether it may be dug to ad- vantage. To determine this we are dulv to

weigh the nature of the place, and its situation, as to wooJ, water, carriage, healthiness, and the like ; and compare the result with the richness of the ore, the charge of digging, stamping, washing, and smelting. The form and situation of the spot should be well considered. A mine must either happen, 1. In a mountain; 2. In a hill; 3. In a valley; or, 4. In a flat. But mountains and hills are dug with much greater ease and convenience, chiefly because the drains and burrows, that is, the adits or avenues, may be here readily cut, both to drain the water, and to form gangways for bringing out the lead, &c. In all the four cases we are to look out for the veins which the rains or other accidental thing, . may have laid bare ; and, if such a vein be found, it may often be proper to open the mine at that place, especially if the vein prove tolerably large and rich ; otherwise the most commodious place for situation is to be chosen .for (he purpose, viz. neither ou a flat, nor on the tops of mountains, but on the sides. The best situation for a mine is a mountainous, woody, wholesome spot, of a safe and easy ascent, and near a navigable river. The places abounding with mines are generally healthy, as standing high, and every where ex- posed to the air; yet some places where mines are found prove poisonous, and can upon no account be dug, though ever so rich : the way of examining a suspected place of this kind is to make experiments upon brutes, by exposing

them to the effluvia, to discover their effect. Devonshire and Cornwall, where there are many mines of copper and tin, are very mountainous ; which gives an opportunity to make adits or subterraneous drains to some valley at a distance, by which to carry off the water from the mine, which otherwise would prevent them from getting the ore. These adits are sometimes carried a mile or two, and dug at an expense of from £2000 to £4000, especially where the ground is rocky ; and yet they find this cheaper than to draw up the water out of the mine quite to the top, when*

the water runs in plenty and the mine is deep. Sometimes, indeed, they cannot find a level near enough, to which an adit may be carried from the very bottom of the mine ; yet they find it worth while to make an adit at half the height to which the water is to be raised, thereby saving half the expense. The late Mr. Costar, considering that sometimes from small streams, and sometimes from little springs or collections of rain water, one might have a good deal of water above ground, though not a sufficient quantity to turn an overshot-wheel, thought that, if a sufficient fall might be had, this collection of water might be made useful in raising the water in a mine to the adit, where it may be carried off. But now the most general method of draining mines is by the steam engine. See STEAM ENGINE, METALLURGY, and MINERALOGY.

MINEIIEAD. an ancient seaport and market- town of Somersetshire, with a harbour in the Bris- tol Channel, near Dunster Castle, formerly much frequented by passengers to and from Ireland. It was incorporated by queen Elizabeth, with great privileges, on condition of keeping the quay in repair; but its trade falling off, the quay was neglected, and the privileges were lost. A statute was obtained in the reign of William III. for recovering the port, and keeping it in repair; find the quay was rebuilt. In pursuance of another act, a new head was built to the quay, and the beach cleared . It was formerly governed

by a portreve, and now oy two constables chosen annually at a court-leet, held by the lord of the manor. Its chief trade is with Ireland, whence about forty vessels used to come hither in a year with wool. The market is on Wed- nesday, and fair on Whitsun-Wednesday. Mine- head is thirty-one miles north of Exeter, and 163 west by south of London.

MINERAL ACIDS. See ACIDS and CHE- MISTRY.

MINERAL ALKALI. See ALKALI and CHE

MISTRY.

MINERAL PITCH. See CHEMISTRY.

MINERAL WATERS.

MINERAL WATERS, or MINERAL SPRINGS. All waters naturally impregnated with any heter- ogeneous matter which they have dissolved within the earth may be called mineral waters, in the most extensive meaning of that name ; which might therefore comprehend almost all those that flow within or upon the earth ; for almost all these contain some earth or selenites. But waters containing only earth or selenites are not generally called mineral, but hard or crude waters. These, when chemically analysed,

show no marks of an acid or alkali, nor of any volatile, sulphureous, or metallic matters. Waters which contain calcareous earth change the color of syrup of violets to a green ; and those that contain selenites, being mixed with a solution of mercury in nitrous acid, form a turbith mineral; and, when a fixed alkali is added, they

are rendered turbid, and a white sediment is precipitated . These waters do not dissolve soap well. Any water which produces these effects is a hard, earthy, or selenitic water. The waters impregnated with gases are also hard. Although the waters of the sea and saline springs be not generally enumerated amongst mineral waters, they might nevertheless be justly considered as such j for, besides earthy and selenitic matters, they also contain a large quantity of mineral salts. But mineral waters, properly so called, are those in which gas, or sulphureous, saline, or metallic substances, are discovered by chemi- cal trials. As many of these are employed successively in medicine, they are also called medicinal waters. Mineral waters receive their peculiar principles by passing through earths containing salts, or other mineral substances, in

a state of decomposition. Some of these are valuable for the quantity of useful salts which they contain, particularly of common salt, see SALT, and others for their medicinal qualities. ‘ All waters,’ says Dr. Thomson, ‘ which are distinguished from common water by a peculiar smell, taste, color, &c., and which, in conse- quence of these properties, cannot be applied to the purposes of domestic economy, have been called mineral waters. These occur in different parts of the earth, constituting wells, springs, or fountains ; sometimes of the temperature of the soil through which they pass, sometimes warm, and in some cases even at the boiling tempera- ture. Mineral springs,’ continues this writer, ‘ attracted the attention of mankind in the earliest ages, and were resorted to by those who labored under diseases, and employed as a medicine. But it was not till towards the end of the seven- teenth century that any attempt was made to detect the ingredients of which these waters were composed, or to discover the substances to which they owed their properties. Mr. Boyle may be considered as the first who pointed out the method of examining water. He first as- certained the existence of air in it, and pointed out a number of tests, by which conjectures might be made concerning the saline bodies which the water held in solution. In 1665 Dominici Du Clos attempted to examine the mineral waters in France. He employed almost all the re- agents recommended by Boyle, and added several of his own. In 1680 Hierne published a set of experiments on the mineral waters of Sweden.

Soon after, various improve- ments were introduced by Regis, Didier, Burlet, and Homberg; and in 1726 Boulduc pointed out a method of precipitating several of the saline contents of water by alcohol. But it was not till after the discovery of carbonic acid, by Dr. Black, that any considerable progress was made in ascertaining the composition of mineral waters. That subtile acid which is so often contained, and which serves as a solvent to many of tiie earths, and even metallic bodies, had thwarted all the attempts of former chemists to detect the composition of these liquids. Since the discovery of this acid the analysis of mineral waters has advanced with great rapidity, in con- sequence, chiefly, of the admirable dissertation on the subject published by Bergman in 1778. Since that period, much has been done by Gio- anetti, Black, Klaproth, Westrumb, Fourcroy, Brez£, Kirwan, and many other eminent chemists; so that, notwithstanding the difficulty of the sub- ject, scarcely any branch of chemistry has made greater progress, or is farther advanced, than the knowledge of mineral waters.

Dr. Ure has very ably digested the latest in- formation on this subject : we quote his chemical analysis, as below, together with his table of the principal mineral waters. To Dr. Ryan late of Kilkenny, now of London, we are indebted for the ample list of all the known mineral waters which follows. It was first published by him in the London Medical and Physical Journal; but he has favored us with his own latest corrections of the original paper.

'Tiie topography of the place where these wa-

ters rise is the first thing to be considered,' ob serves Dr. Ure. ' By examining the ooze form- ed by them, and the earth or stones through which they are strained and filtered, some judg- ment may be formed of their contents. In filter- ing through the earth, and meandering on its surface, they take with them particles of various kinds, which their extreme attenuation renders capable of being suspended in the fluid that serves for their vehicle. Hence we shall some- times find in these waters, siliceous, calcareous, or argillaceous earth ; and at other times, though less frequently, sulphur, magnesian earth, or, from the decomposition of carbonated iron, ochre.

The following are the ingredients that may occur in mineral waters :—

1. Air is contained in by far the greater number of mineral waters : its proportion does not exceed one twenty-eighth of the bulk of the water.

2. Oxygen gas was first detected in waters by Scheele. Its quantity is usually inconsiderable ; and it is incompatible with the presence of sul-

phuretted hydrogen gas or iron.

3. Hydrogen gas was first detected in Buxton water by Dr. Pearson. Afterwards it was disco- vered in Harrowgate waters by Dr. Garnet, and in those of Leamington Priors by Mr. Lambe.

4. Sulphuretted hydrogen gas constitutes the most conspicuous ingredient in those waters, which are distinguished by the name of hepatic or sulphurous.

The only acids hitherto found in waters, except in combination with a base, are the carbonic, sulphuric, and boracic.

5. Carbonic acid was first discovered in Pyr- mont water by Dr. Brownrigg. It is the most common ingredient in mineral waters, 100 cubic inches of the water generally containing from six to forty cubic inches of this acid gas. According to Westrumb, 100 cubic inches of Pyrmont water contain 187 cubic inches of it, or almost double its own bulk.

6. Sulphurous acid has been observed in seve- ral of the hot mineral waters in Italy, which are in the neighbourhood of volcanoes.

7. The boracic acid has also been observed in some lakes in Italy.

The only alkali which has been observed in mineral waters, uncombined, is soda ; and the only earthy bodies are silex and lime.

8. Dr. Black detected soda in the hot mineral waters of Geyser and Rykum in Iceland ; but in most other cases the soda is combined with car- bonic acid.

9. Silex was first discovered in waters by Bergman. It was afterwards detected in those of Geyser and Rykum by Dr. Black, and in those of Karlsbad by Klaproth. Hassenfratz ob- served it in the waters of Pougues, as Breze did in those of Pu. It has been found also in many other mineral waters.

10. Lime is said to have been found uncom- bined in some mineral waters ; but this has not been proved in a satisfactory manner.

The only salts hitherto found in mineral waters are the following: — sulphates, nitrates, muriates, carbonates and borates; and of these tiie carbo-

nates and muriates occur by far most commonly, and the berates and nitrates most rarely.

11. Sulphate of soda is not uncommon, espe- cially in those mineral waters which are distin- guished by the epithet saline.

12. Sulphate of ammonia is found in mineral waters near volcanoes.

13. Sulphate of lime is exceedingly common in water. Its presence seems to have been first detected by Dr. Lister in 1682.

14. Sulphate of magnesia is almost constantly an ingredient in those mineral waters which have purgative properties. It was detected in Epsom waters in 1610, and in 1696 Dr. Grew published a treatise on it.

15. Alum is sometimes found in mineral wa- ters, but it is exceedingly rare.

16. Sulphate of iron occurs sometimes in vol- canic mineral waters, and has even been observ- ed in other places.

17. Sulphate of copper is only found in the waters which issue from copper mines.

18. Nitre has been found in some springs in Hungary, but it is exceedingly uncommon.

19. Nitrate of lime was first detected in water by Dr. Home, of Edinburgh, iti 1756. It is said to occur in some springs in the sandy deserts of Arabia.

20. Nitrate of magnesia is said to have been found in some springs.

21. Muriate of potash is uncommon ; but it has lately been discovered in the mineral springs of Uhleaborg in Sweden by Julin.

22. Muriate of soda is so extremely common in mineral waters that hardly a single spring has been analysed without detecting some of it.

23. Muriate of ammonia is uncommon, but it has been found in some mineral springs in Italy and Siberia.

24. Muriate of barytes is still more uncommon, but its presence in mineral waters has been an- nounced by Bergman.

25 and 26. Muriates of lime and magnesia are common ingredients.

27. Muriate of alumina has been observed by Dr. Withering, but it is very uncommon.

28. Muriate of manganese was mentioned by Bergman as sometimes occurring in mineral waters. It has lately been detected by Lam be in the waters of Leamington Priors, but in an extremely limited proportion.

29. The presence of carbonate of potash in mineral waters has been mentioned by several chemists ; if it do occur, it must be in a very small proportion.

30. Carbonate of soda is, perhaps, one of the most common ingredients of these liquids, if we except common salt and carbonate of lime.

31. Carbonate of ammonia has been discover- ed in waters, but it is uncommon:

32. Carbonate of lime is found in almost all waters, and is usually held in solution by an ex- cess of acid. It appears from the different ex- periments of chemists, as stated by Mr. Kirwan, and especially from those of Berthollet, that water saturated with carbonic acid is capable of holding in solution 0-002 of carbonate lime. Now water saturated with carbonic acid, at the temperature of 50°, contains very nearly 0-002 of its weight

of carbonic acid. Hence it follows that carbonic acid, when present in such quantity as to satu- rate waters, is capable of homing its own weight of carbonate of lime in solution. Thus we see 1000 parts by weight of water, when they contain two parts of carbonic acid, are capable of dissolv- ing two parts of carbonate of lime. When the proportion of water is increased, it is capable of holding the carbonate of lime in solution, even when the proportion of carbonic acid united with it is diminished. Thus 24,000 parts of water are capable of holding two parts of carbonate of lime in solution, even when they contain only one part of carbonic acid. The greater the proportion of water, the smaller proportion of carbonic acid is necessary to keep the lime in solution ; and, when the water is increased to a certain proportion, no sensible excess of carbonic acid is necessary. It ought to be remarked also, that water, however small a quantity of carbonic acid it contains, is capable of holding caihonate of lime in solution, provided the weight of the carbonic acid present exceed that of the lime. These observations ap- ply equally to the other earthy carbonates held in solution by mineral waters.

33. Carbonate of magnesia is also very co m- mon in mineral water?, and is almost always ac- companied by carbonate of lime.

34. Carbonate of alumina is -aid to have been found in waters, but -ts presence has not been properly ascertained.

35. Carbonate of iron is by no means uncom- mon ; indeed, it forms the

most remarkable in- gredient in those waters which are distinguished by the epithet of chalybeate.

36. Borax exists in some lakes in Persia and Thibet, but the nature of these waters has not been ascertained.

37 and 38. The hydrosulphurels of lime and of soda have been frequently detected in those waters which are called sulphurous, or hepatic.

Mr. Westrumb says, that all sulphurous waters contain more or less hydrosulphuret of lime. To detect this he boiled the mineral water, ex- cluding the contact of atmospheric air, to expel the sulphuretted hydrogen gas and carbonic acid. Into the water thus boiled he poured sulphuric acid, when more sulphuretted hydrogen gas was evolved, and sulphate of lime was thrown down ; fuming nitric acid, which separated from it sulphur ; and oxalic acid, which expelled sul- phuretted hydrogen, and formed oxalate of lime. The water evaporated in open vessels let fall sul- phate of lime, and gave out sulphuretted hydro- gen gas. To ascertain the quantity of sulphuretted hydrogen gas and carbonic acid, Mr. Westrumb proceeded as follows : — He introduced the sul- phurous water into a matrass, till it was filled to a certain point, which he marked ; fitted to it a curved tube, which terminated in a long cylin- der; filled this cylinder with lime water for the one experiment, and with acetate of lead, with excess of acid, for the other ; luted the apparatus ; and boiled the water till no more gas was ex- pelled. When the lime water is used, carbonate of lime is precipitated in the proportion of twenty grains to every ten cubic inches of car- bonic acid gas; when the solution of acetate of lead, hydrosulphuiet of lead is thrown down, in

Beside these substances, certain vegetable and animal matters have been occasionally observed in mineral waters. But in most cases these are rather to be considered in the light of accidental mixtures, than of real component parts of the •waters in which they occur. From this synop- tical view of the different ingredients contained in mineral waters, it is evident that these sub- stances occur in two different distinct states : 1 . As being suspended in them ; and 2. As being dissolved in them chiefly in the form of a salt.

The investigation of mineral waters consists, 1. In the examination of them by the senses : 2. In the examination of them by re-agents : 3. In the analysis properly so called.

The examination by the senses consists in ob- serving the effect of the water as to appearance, smell, and taste. The appearance of the water, the instant in which it is pumped out of the well, as well as after it has stood for some time, affords several indications, from which we are enabled to form a judgment concerning its contents. If the water be turbid at the well, the substances are suspended onl/, and not dissolved ; but if the water be clear and transparent at the well, and some time intervenes before it becomes tur- bid, the contents are dissolved by means of car- bonic acid. The presence of this gas is like- wise indicated by small bubbles, that rise from the bottom of the well, and burst in the air while they are making their escape, though the water at the same time perhaps has not an acid taste. This is the case, according to count Ra- zoumowski, with respect to the tepid springs in Vallais, and the cold vitriolated chalybeate springs at Astrakhan. But the most evident proof of a spring containing carbonic acid is the ge- neration of bubbles on the water being shaken, and their bursting with more or less noise while the air is making its escape. The sediment de- posited by the water in the well is likewise to be examined : if it be yellow, it indicates the pre- sence of iron ; if black, that of iron combined with sulphur ; but,chalybeate waters being seldom sulphuretted, the latter occurs very rarely. As to the color of the water itself, there are few in- stances where this can give any indication of its contents, as there are not many substances that color it. The odor of the water serves chiefly to discover the presence of sulphuretted hydro- pen in it : such waters as contain this substance have a peculiar fetid smell, somewhat resem- bling rotten eggs. The taste of a spring, pro- vided it be perfectly ascertained by repeated trials, may afford some useful indications with respect to the contents. It may be made very sensible by tasting water in which the various salts that are usually found in such waters are dissolved in various proportions. There is no certain dependence, however, to be placed on this mode of investigation ; for, in many springs, the taste of sulphate of soda is disguised by that of the sea salt united with it. The water too is not only to be tasted at the spring, but after it lias stood for some time. This precaution must be particularly observed with respect to such waters as are impregnated with carbonic acid ;

for the other substances contained in them make no impression on the tongue, till the carbonic acid has made its escape ; and it is for the same reason that these waters must be evaporated in part, and then tasted again. Though the spe- cific gravity of any water contributes but very little towards determining its contents, still it may not be entirely useless to know the specific weight of the water, the situation of the spring, and the kind of sediment deposited by it.

The examination of the water by means of re-agents shows what they contain, but not how much of each principle. In many instances this is as

much as the enquiry demands ; and it is always of use to direct the proceedings in the proper analysis. It is absolutely necessary to make the experiment witli water just taken up from the spring, and afterwards with such as has been exposed for some hours to the open air ; and sometimes a third essay is to he made with a portion of the water that has been boiled and afterwards filtered. If the water contain but few saline particles, it must be evaporated ; as even the most sensible re-agents do not in the least affect it, if the salts, the presence of which is to be discovered by them, are diluted with too great a quantity of water. Now, it may happen, that a water shall be impregnated with a considerable number of saline particles of different kinds, though some of them may be present in too small a quantity ; for which reason the water must be examined a second time, after having been boiled down to three-fourths.

The substances of which the presence is dis- coverable by re-agents, are : —

1. Carbonic acid. When this is not combined with any base, or not with sufficient to neutralise it, the addition of lime water will throw down a precipitate soluble with effervescence in muriatic acid. The infusion of litmus is reddened by it: but the red color gradually disappears, and may be again restored by the addition of more of the mineral water. When boiled it loses the property of reddening the infusion of litmus. According to Pfaff, the most sensible test of this acid is acetate of lead.

2. The mineral acids, when present uncom- bined in water, give the infusion of litmus a permanent red, even though the water has been boiled. Bergman has shown that paper stained with litmus is reddened when dipped into water containing ˆ of sulphuric acid.

3. Water containing sulphuretted hydrogen gas is distinguished by the following properties: It exhales the peculiar odor of sulphuretted hy- drogen gas. It reddens the infusion of litmus fugaciously. It blackens paper dipped into a solution of lead, and precipitates the nitrate of silver black or brown.

4. Alkalis, and alkaline and earthy carbonates, are distinguished by the following tests : — the infusion of turmeric, or paper stained with tur- meric, is rendered brown by alkalis; or reddish- brown, if the quantity be minute. This change is produced when the soda in water amounts only to 55ˆ7 part. Paper stained with Brasil wood, or the infusion of Brasil wood, is rendered blue; but this change is produced also by the alkaline and earthy carbonates. Bergman as-

certained that water, containing jˆjth part of car- bonate of soda, reddens paper stained with Brasil wood blue. Litmus paper reddened by vinegar is restored to its original blue color. This change is produced by the alkaline and earthy carbonates also. W nen these changes are fugacious, we may conclude that the alkali is ammonia.

5. Fixed alkalis exist in water that occasions a precipitate with muriate of magnesia after being boiled. Volatile alkali may be distin- guished by the smell ; 01 it may be obtained in the receiver by distilling a portion of the water gently, and then it may be distinguished by the above tests.

6. Earthy and metallic carbonates are preci- pitated by boiling the water containing them ; except carbonate of magnesia, which is preci- pitated but imperfectly.

7. Iron is discovered by the following tests : — The addition of tincture of gall gives water, con- taining iron, a purple or black color. This test indicates the presence of a very minute portion of iron. If the tincture have no effect upon the water, after boiling, though it colors it before, the iron is in the state of a carbonate. The follow- ing observations of Westrumb on the color which iron gives to galls, as modified by other bodies, deserve attention. A violet indicates an alkaline carbonate, or earthy salt. Dark purple indicates other alkaline salts. Purplish-red indicates sul- phuretted hydrogen gas. Whitish, and then black, indicates sulphate of lime. Mr. Phillips has lately ascertained that, while the iron is little oxided, the presence of lime rather facilitates the application of this test; but the lime prevents the test from acting, provided the iron be consi- derably oxidised. The prussian alkali occasions a blue precipitate in water containing iron. If an alkali be present, the blue precipitate does not appear unless the alkali is saturated with an acid.

8. Sulphuric acid exists in waters that form a precipitate with the following solutions : mu- riate, nitrate, or acetate of barytes, strontia, or lime, or nitrate or acetate of lead. Of these the most powerful by far is muriate of barytes, which is capable of detecting the presence of sulphuric acid uncombined, when it does not exceed the TOocjHith part of the water. Acetate of lead is next in point of power. The muriates are more pow- erful than the nitrates. The calcareous salts are least powerful. All these tests are capable of indicating a much smaller proportion of uncom- bined sulphuric acid than when it is combined with a base. To render muriate of barytes a certain test of sulphuric acid, the following pre- cautions must be observed : — The muriate must be diluted ; the alkalis or alkaline carbonates, if the water contain any, must be previously satu- rated with muriatic acid; the precipitate must be insoluble in muriatic acid ; if boracic acid be suspected, muriate of strontia must be tried, which is not precipitated by boracic acid.

The hydrosulphurets precipitate barytic solutions, but their presence is easily discovered by the smell.

9. Muriatic acid is detected by nitrate of iilver, which occasions a white preci >itate or a

cloud, in water containing an exceedingly minute portion of this acid. To render this test certain, the following precautions are necessary : — The alkalis or carbonates must be previously saturated with nitric acid. Sulphuric acid, if any be pre- sent, must be previously removed by means of nitrate of barytes. The precipitate must be in- •oluble in nitric acid. Pfaff says, that the raild nitrate of mercury is the most sensible test of muriatic acid ; and that the precipitate is not coluble in an excess of any acid.

10. Boracic acid is detected by means of ace- tate of lead, with which it forms a precipitate in- soluble in acetic acid. But, to render this test certain, the alkalis and earths must be previously saturated with acetio acid, and the sulphuric and muriatic acids removed by means of acetate of strontia and acetate of silver.

11. Barytes is detected by the insoluble white precipitate which it forms with diluted sulphuric acid.

12. Lime is detected by means of oxalic acid, which occasions a white precipitate in water con- taining a very minute proportion of this earth. To render this test decisive the following pre- cautions are necessary : — The mineral acids, if any be present, must be previously saturated with an alkali. Barytes, if any be present, must be previously removed by means of sulphuric acid. Oxalic acid precipitates the magnesia but very slowly, whereas it precipitates lime instantly.

13. Magnesia and alumina. The presence of these earths is ascertained by the following tests : pure ammonia precipitates them both, and no other earth, provided the carbonic acid have been previously separated by a fixed alkali and boil- ing. Lime water precipitates only these two earths, provided the carbonic acid be previously removed, and tlie sulphuric acid also, by means of nitrate of barytes.

The alumina may be separated from the mag- nesia, after both have been precipitated together, either by boiling the precipitate in caustic po- tassa, which dissolves the alumina and leaves the magnesia; or the precipitate maybe dissolved in muriatic acid, precipitated by an alkaline car- bonate, dried in the temperature of 100°, and then exposed to the action of diluted muriatic acid, which dissolves the magnesia without touching the alumina.

1 4. Silex may be ascertained by evaporating a portion of water to dryness,

and redissolving the precipitate in muriatic acid. The silex re- mains behind undissolved.

By these means we may detect the presence of the different substances commonly found in waters; but, as they are generally combined so as to form salts, it is necessary we should know what these combinations are. This is a more difficult task, which Mr. Kirwan teaches us to accomplish by the following methods : — 1. To ascertain the presence of the different sulphates. The sulphates which occur in water are seven; but one of these, namely, sulphate of copper, is so uncommon, that it may be excluded alto- gether. The same remark applies to sulphate of ammonia. It is almost necessary to observe, that no sulphate need be looked for, unless both its acid and base have been previously detected in

the water. Sulphate of soda may be detected by the following method : — Free the water to be ex- amined of all earthy sulphates, by evaporating it to one-half, and adding lime water as long as any precipitate appears. By these means the earths will all be precipitated except lime, and the only remaining earthy sulphate will be sulphate of lime, which will be separated by evaporating the liquid till it becomes concentrated, and then dropping into it a little alcohol, and, after filtra- tion, adding a little oxalic acid. With the water, thus purified, mix solution of lime. If a precipitate appear, either immediately or on the addition of a little alcohol, it is a proof that sul- phate of potassa or of soda is present Which of the two may be determined, by mixing some of the purified water with acetate of barytes. Sul- phate of barytes precipitates. Filter and evapo- rate to dryness. Digest the residuum in alcohol. It will dissolve the alkaline acetate. Evaporate to dryness, and the dry salt will deliquesce if it be acetate of potassa, but effloresce if it be ace- tate of soda. Sulphate of lime may be detected by evaporating the water suspected to contain it to a few ounces. A precipitate appears, which, if it be sulphate of lime, is soluble in 500 parts of water ; and the solution affords a precipitate with the muriate of barytes, oxalic acid, carbonate of magnesia, and alcohol. Alum may be detected by mixing carbonate of lime with the water sus- pected to contain it. If a precipitate appear, it indicates the presence of alum, or at least of sul- phate of alumina ; provided the water contains no muriate of barytes or metallic sulphates. The first of these salts is incompatible with alum : the second may be removed by the alkaline prussiates. When a precipitate is produced in water by muriate of lime, carbonate of lime, and muriate of magnesia, we may conclude that it contains alum or sulphate of alumina. Sulphate of magnesia may be detected by means of hydro- sulphuret of strontia, which

occasions an im- mediate precipitate with this salt, and with no other; provided the water be previously deprived of alum, if any be present, by means of carbonate of lime, and provided also that it contain no un- combined acid. Sulphate of iron is precipitated from water by alcohol, and then it may be easily recognised by its properties.

2. To ascertain the presence of the different muriates. The muriates found in waters amount to eight, or to nine if muriate of iron be in- cluded. The most common by far is muriate of soda. Muriate of soda and of potassa may be de- tected by the following method : Separate the sulphuric acid by alcohol and nitrate of barytes. Decompose the earthy nitrates and muriates by adding sulphuric acid. Expel the excess of muriatic and nitric acids by heat. Separate the sulphates thus formed by alcohol and barytes water. The water thus purified can contain nothing but alkaline nitrates and muriates. If it form a precipitate with acetate of silver, we may conclude that it contains muriate of soda or of potassa. To ascertain which, evaporate the liquid thus precipitated to dryness. Dissolve the acetate in alcohol, and again evaporate to dryness. The salt will deliquesce, if it be ace- tate of potassa ; but effloresce if it be acetate of

soda. Muriate of barytes may be detected by sulphuric acid, as it is the only barytic salt hi- therto found in water. Muriate of lime may b« detected by the following method. — Free the water from sulphate of lime and other sulphates by evaporating it to a few ounces, mixing it with alcohol, and adding last of all nitrate of barytes, as long as any precipitate appears. Filter the water; evaporate to dryness; treat the dry mass with alcohol ; evaporate the alcohol to dryness ; and dissolve the residuum in water. If this solution give a precipitate with acetate of silver and oxalic acid, it may contain muriate of lime. It must contain it in that case, if, after being treated with carbonate of lime, it give no precipitate with ammonia. If the liquid in the receiver give a precipitate with nitrate of silver, muriate of lime existed in the water. Muriate of magnesia may be detected by separating all the sulphuric acid by means of nitrate of barytes. Filter ; evaporate to dryness ; and treat the dry mass with alcohol. Evaporate the alcoholic solution to dryness, and dissolve the residuum in water. The muriate of magnesia, if the water contained any, will be found in this solution. Let us suppose, that, by the tests for- merly described, the presence of muriatic acid and of magnesia, in this solution, has been ascer- tained. In that case, if carbonate of lime afford no precipitate, and if sulphuric acid and evapo- ration, together with the addition of a little alcohol, occasion no precipitate, the solution con- tains only muriate 01 magnesia. If these tests give precipitates, we must separate the lime which is present by sulphuric acid and alcohol, and distil off the acid with which it was com- bined. Then the magnesia is to be separated by the oxalic acid and alcohol, and the acid with which it was united is to be distilled off. If the liquid in the

retort give a precipitate with nitrate of silver, the water contains muriate of magnesia. Muriate of alumina may be discovered by satu- rating the water, if it contain an excess of alkali, with nitric acid, and by separating the sulphuric acid by means of nitrate of barytes. If the liquid, thus purified, give a precipitate with carbonate of lime, it contains muriate of alumina. The muriate of iron or of manganese, if any be pre- sent, is also decomposed, and the iron precipi- tated by this salt. The precipitate may be dis- solved in muriatic acid, and the alumina, iron, and manganese, if they be present, may be sepa- rated by the rules laid down below.

3. To ascertain the presence of the different nitrates. — The nitrates but seldom occur in waters ; but, when they do, they may be detected by the following results : — Alkaline nitrates may be detected by freeing the water examined from sulphuric acid by means of acetate of barytes, and from muriatic acid by acetate of silver. Evaporate the filtered liquid, and treat the dry mass with alcohol ; what the alcohol leaves can consist only of the alkaline nitrates and acetate of lime. Dissolve it in water. If carbonate of magnesia occasion a precipitate, lime is present. Separate the lime by means of carbonate and magnesia. Filter and evaporate to dryness, and treat the dried mass with alcohol. The alcohol now leaves only the alkaline nitrates, which may be easily recognised, and distinguished by their

respective properties. Nitrate of lime. — To de- tect this salt, concentrate the water, and mix it with alcohol to separate the sulphates. Fi.ter, and distil off the alcohol ; then separate the mu- riatic acid by acetate of silver. Filter; evaporate to dryness; and dissolve the residuum in alcohol. Evaporate to dryness, and dissolve the dry mass in water. If this last solution indicate the pre- sence of lime by the usual tests, the water con- tained nitrate of lime. To detect nitrate of magnesia, the water is to be freed from sulphates and muriates exactly as described in the last paragraph. The liquid thus purified is to be evaporated to dryness, and the residuum treated with alcohol. The alcoholic solution is to be evaporated to dryness, and the dry mass dis- solved in water. To this solution potash is to be added, as long as any precipitate appears. The solution, filtered, and again evaporated to dry- ness, is to be treated with alcohol. If it leave a residuum consisting of nitre (the only residuum which it can leave), the water contained nitrate of magnesia. Such are the methods by which the presence of the different saline contents of waters may be ascertained. The labor of analy- sis may be considerably shortened, by observing that the following salts are incompatible with each other, and cannot exist together in water, except in very minute proportion :

Salts. Incompatible with.

/•Nitrates of lime and magne- Fixed alkaline 1 sia, sulphates j Muriates of lime and mag- V nesia. f Alkalis,

Sulphate of lime< Carbonate of magnesia, C Muriate of barytes. / Alkalis,

\ Muriate of barytes,

Alum ˆNitrate, muriate, carbonate of

I lime,

vCarbonate of magnesia. . t Alkalis, Sulphate of mag—? Muriate of barytes,

nesia C Nitrate and muriate of lime.

f Alkalis,

Sulphate of iron 2 Muriate of barytes, (. Earthy carbonates.

Muriate of Mjˆj^lbOMlW.

C. Earthy carbonates.

f Sulphates, except of ume, Muriate of lime < Alkaline carbonates,

C. Earthy carbonates. Muriate of mag- (Alkaline carbonates, nesia \ Alkaline sulphates.

/• Alkaline carbonates,

„.. f,. \Carbonate of magnesia and Nitrate of lime ˆ a]umina>

(.Sulphates, except of lime.

Besides the substances above described, there is sometimes found in water a quantity of bi- tumen combined with alkali, and in the state of soap. In such waters acids occasion a coagula- tion ; and the coagulum collected on a filter dis- covers its bituminous nature by its combusti- bility. Water also sometimes contains extractive matter ; the presence of which may be detected

by means of nitrate of silver. The water sus- pected to contain it must be freed from sulphuric and nitric acid by means of nitrate of lead : after this, if it give a brown precipitate with nitrate of silver, we may conclude that

extractive matter is present.

But it is not sufficient to know that a mineral water contains certain ingredients ; it is necessary to ascertain the proportions of these, and thus we arrive at their complete analysis. 1. The different aerial fluids ought to be first separated and estimated. For this purpose, a retort should be filled two-thirds with the water, and connected with a jar full of mercury, standing over a, mer- curial trough. Let this water be made to boil for a quarter of an hour. The Aerial fluids will pass over into the jar. When the apparatus is cool, the quantity of air expelled from the wa.er may be determined either by bringing the mer- cury within and without the jar to a level ; or, if this cannot be done, by reducing the air to the proper density by calculation. The air of the retort ought to be carefully subtracted, and the jar should be divided into cubic inches and tenths. The only gaseous bodies contained in water are common air, oxygen gas, nitrogen gas, carbonic acid, sulphurated hydrogen gas, and sulphurous acid. The last two never exist in water together. The presence of either of them must be ascertained previously by the applica- tion of the proper tests. If sulphurated hydro- gen gas be present, it will be mixed with the air contained in the glass jar, and must be separated before this air be examined. For this purpose the jar must be removed into a tub of warm water, and nitric acid introduced, which will ab- sorb the sulphurated hydrogen. The residuum is then to be again put into a mercurial jar, and examined. If the water contain sulphurous acid, this previous step is not necessary. Intro- duce into the air a solution of pure potash, and agitate the whole gently. The carbonic acid and sulphurous acid gas wih be absorbed, and leave the other gases. The bulk of this residuum, subtracted from the bulk of the whole, will give the bulk of the carbonic acid and sulphurous acid absorbed. Evaporate the potash slowly, almost to dryness, ana leave it exposed to the atmosphere. Sulphate of potash will be formed, which may be separated by dissolving the car- bonate of potash by means of diluted muriatic acid, and filtering the solution : 100 grains of sulphate of potash indicate 36‘4 grains of sul- phurous acid, or 53-66 cubic inches of that acid in the state of gas. The bulk of sulphurous acid gas ascertained by this method, subtracted from the bulk of the gas absorbed by the potash, gives the bulk of the carbonic acid gas. Now 100 cubic inches of carbonic acid, at the tempe- rature of 60° and barometer thirty inches, weigh 46-6 grains. Hence it is easy to ascertain its weight. The gas remaining may be examined by the common eudiometrical processes. When a water contains sulphurated hydrogen gas, the bulk of this gas is to be ascertained in the fol- lowing manner : fill three-fourths of a jar with the water to be examined, and invert it in a water trough, and introduce a little nitrous pas. Tins gas, mixing with the air in the upper part of the

jar, will form nitrous acid, which will render the water turbid, by decomposing the sulphureted hydrogen, and precipitating sulphur. Continue to add nitrous gas at intervals as long as red fumes appear, then turn up the jar and blow out the air. If the hepatic smell continue, repeat this process. The sulphur precipitated indicates the proportion of hepatic gas in the water ; one grain of sulphur indicating the presence o nearly three cubic inches of this gas.

2. After having estimated the gaseous bodies, the next step is to ascertain the proportion of the earthy carbonates. For this purpose it is neces- sary to deprive the water of its sulphureted hy- drogen, if it contain any. This may be done, either hy exposing it to the air for a considerable time, or treating it with litharge. A sufficient quantity of the water, thus purified if necessary, is to be boiled for a quarter of an hour, and fil- tered when cool. The earthy carbonates remain on th« filter. The precipitate thus obtained may be carbonate of lime, of magnesia, of iron, of alumina, or even sulphate of lime. Let us sup- pose all of these substances to he present toge- ther. Treat the mixture with diluted muriatic acid, which will dissolve the whole except the alumina and sulphate of lime. Dry this resi- duum in a red heat, and note the weight. Then boil it in carbonate of soda, saturate the soda with muriatic acid, and boil the mixture for half an hour. Carbonate of lime and alumina pre- cipitate. Dry this precipitate, and treat it with acetic acid. The lime will be dissolved, and the alumina will remain. Dry it and weigh it. Its weight, subtracted from the original weight, gives the proportion of sulphate of lime. The muri- atic solution contains lime, magnesia, and iron. Add ammonia as long as reddish precipitate ap- pears. The iron and part of the magnesia are thus separated. Dry the precipitate, and expose it to the air for some time in a heat of 200° ; then treat it with acetic acid to dissolve the mag- nesia ; which solution is to be added to the mu- riatic solution. The iron is to be re-dissolved in muriatic acid, precipitated by an alkaline car- bonate, dried and weighed. Add sulphuric acid to the muriatic solution as long as any precipi- tate appears ; then heat the solution and concen- trate. Heat the sulphate of lime thus obtained to redness, and weigh it: 100 grains of it are equivalent to 74-7 of carbonate of lime dried. Precipitate the magnesia by means of carbonate of soda. Dry it and weigh it. But, as part re- mains in solution, evaporate to dryness, and wash the residuum with a sufficient quantity of dis- tilled water, to dissolve the muriate of soda and sulphate of lime, if any be still present. What remains behind is carbonate of magnesia. Weigh it, and add its weight to the former. The sul- phate of lime, if any, must also be separated and weighed.*

3. We have next to ascertain the proportion of mineral acids or alkalis, if any be present uncombined. The acids which may be present, omitting the gaseous, are the sulphuric, muriatic, and boracic. The proportion of

sulphuric acid is easily determined. Saturate it with barytes water, and ignite the precipitate. 100 grains of sulphate of barytes, thus formed, indicate 34‘0 of

real sulphuric acid. Saturate the muriatic acid with barytes water, and then precipitate the ba- rytes by sulphuric acid : 100 parts of the ignited precipitate are equivalent to 23-73 grains of real muriatic acid. Precipitate the boracic acid by means of acetate of lead. Decompose the borate of lead by boiling it in sulphuric acid. Evapo- rate to dryness. Dissolve the boracic acid in alcohol, and evaporate the solution ; the acid left behind may be weighed. To estimate the proportion of alkaline carbonate present in a water containing it, saturate it with sulphuric acid, and note the weight of real acid necessary. Now 100 grains of real sulphuric acid saturate 120-0 potash, and 80-0 soda.

4. The alkaline sulphates may be estimated by precipitating their acid by means of nitrate of barytes, having previously freed the water from all other sulphates; for 14-75 grains of ignited sulphate of barytes indicate 9‘0 grains of dried sulphate of soda; while 14-75 sulphate of ba- rytes indicate eleven of dry sulphate of potash. Sulphate of lime is easily estimated by evaporat- ing the liquid containing it to a few ounces (hav- ing previously saturated the earthy carbonates with nitric acid), and precipitating the sulphate of lime by means of weak alcohol. It may then be dried and weighed. The quantity of alum may be estimated by precipitating the alumina by carbonate of lime or of magnesia (if no lime be present in the liquid). Eleven grains of the alumina, heated’ to incandescence, indicate 100 of crystallised alum, or fifty-five of dried salt. Sulphate of magnesia may be estimated, pro- vided no other sulphate be present, by precipi- tating the acid by means of a barytic salt, as 14-75 parts of ignited sulphate of barytes indi- cate 7-46 of sulphate of magnesia. If sulphate of lime, and no other sulphate, accompany it, this may be decomposed, and the lime precipi- tated by carbonate of magnesia. The weight of the lime, thus obtained, enables us to ascertain the quantity of sulphate of lime contained in the water. The whole of the sulphuric acid is then to be precipitated by barytes. This gives the quantity of sulphuric acid; and, subtracting the portion which belongs to the sulphate of lime, there remains that which was combined with the magnesia, from which the sulphate of magnesia may be easily estimated. If sulphate of soda be present, no earthy nitrate or muriate can exist. Therefore, if no other earthy sulphate be present, the magnesia may be precipitated by soda, dric-ci and weighed ; 2-46 grains of which indicate 7-46 grains of dried sulphate of magnesia. The same process succeeds when sulphate of lime ac- companies these two sulphates; only in this case the precipitate, which consists both of lime and magnesia, is to be dissolved in sulphuric acid evaporated to dryness, and treated with twice its weight of cold water, which dissolves the sulphate of

magnesia, and leaves the other salt. Let the sulphate of magnesia be evaporated to dryness, exposed to a heat of 400°, and weighed. The same process succeeds, if alum be present instead of sulphate of lime. The precipitate in this case, previously dried, is to be treated with acetic acid, which dissolves the mag- nesia, and leaves the alumina. The magnesia

may be again precipitated, dried, and weighed. If sulphate of iron be present/ it may be sepa- rated by exposing the water to the air for some days, and mixing with it a portion of alumina. Both the oxide of iron and the sulphate of alu- mina, thus formed, precipitate in the state of an insoluble powder. The sulphate of magnesia may then be estimated by the rules above given. Sulphate of iron may be estimated by precipitat- ing the iron by means of prussic alkali, having previously determined the weight of the precipi- tate produced by the prussiate in a solution of a given weight of sulphate of iron in water. If muriate of iron bs also present, which is a very rare case, it may be separated by evaporating the water to dryness, anil treating the residuum with alcohol, which dissolves the muriate, and leaves the sulphate.

5. If muriate of [otash, or of soda, without any other salt, exist in water, we have only to decompose them by nitrate of silver, and dry the precipitate; for 18-4 of muriate of silver indicate 9-5 of muriate of potash ; and 18-4 of muriate of silver indicate 7-5 of common salt. The same process is to be followed if the alkaline carbonates be present ; only these carbonates must be pre- viously saturated with sulphuric acid ; and we must precipitate the muriatic acid by means of sulphate of silver instead of nitrate. The pre- sence of sulphate of soda does not injure the success of this process. If muriate of ammonia accompany either of the fixed alkaline sulphates, without the presence of any other salt, decom- pose the sal ammoniac by barytes water, expel the ammonia by boiling, precipitate the barytes by diluted sulphuric acid, and saturate the mu- riatic acid with soda. The sulphate of barytes, thus precipitated, indicates the quantity of mu- riate of ammonia, 14-75 grains of sulphate indi- cating 6‘75 grains of this salt. If any sulphates be present in the solution they ought to be previously separated. If common salt be accom- panied by muriate of lime, muriate of magnesia, muriate of alumina, or muriate of iron, or by all these together, without any other salt, the earths may be precipitated by barytes water, and re- dissolved in muriatic acid. They are then to be separated from each other by the rules formerly laid down ; and their weight, being determined, indicates the quantity of every particular earthy muriate contained in the water. For fifty grains of lime indicate 100 of dried muriate of lime; thirty grains of magnesia indicate 100 of the muriate of that earth; and 21-8 grains of alu- mina indicate 100 of the muriate of

alumina. The barytes is to be separated from the solution by sulphuric acid, and the muriatic acid expelled by heat, or saturated with soda; the common salt may then be ascertained by evaporation, subtracting in the last case the proportion of common salt indicated by the known quantity of muriatic acid from which the earths had been separated. When sulphates and muriates exist together they ought to be separated either by precipitating the sulphates by means of alcohol, or by evaporating the whole to dryness, and dis- solving the earthy muriates in alcohol. The salts thus separated may be estimated by the rules already laid down. When alkaline and earthy

muriates and sulphate of lime occur together, the last is to be decomposed by means of muriate of barytes. The precipitate ascertains the weight of sulphate of lime contained in the water. The es- timation is then to be conducted, as when nothing but muriates are present ; only from the muriate of lime that proportion of muriate must be de- ducted which is known to have been formed by the addition of the muriate of barytes. When muriates of soda, magnesia, and alumina, are present together with sulphates of lime and mag- nesia, the water to be examined ought to be di- vided into two equal portions. To the one por- tion add carbonate of magnesia, till the whole of the lime and alumina be precipitated. Ascertain the quantity of lime which gives the proportion of sulphate of lime. Precipitate the sulphuric acid by muriate of barytes. This gives the quantity contained in the sulphate of magnesia and sulphate of lime : subtracting this last por- tion, we have the quantity of sulphate of mag- nesia. From the second portion of water preci- pitate all the magnesia and alumina by means of lime water. The weignt of these earths enables us to ascertain the weight of muriate of magne- sia and of alumina contained in the water, sub- tracting that part of the magnesia which existed in the state of sulphate, as indicated by the exami- nation of the first portion of water. After this estimation, precipitate the sulphuric acid by barytes water, and the lime by carbonic acid. The liquid, evaporated to dryness, leaves the common salt.

6. It now only remains to explain the method of ascertaining the proportion of the nitrates which may exist in waters. When nitrate ac- companies sulphates and muriates, without any other nitrates, the sulphates are to be decom- posed by acetate of barytes, and the muriates by acetate of silver. The water, after filtration, is to be evaporated to dryness, and the residuum treated with alcohol, which dissolves the acetates, and leaves th« nitre, the quantity of which may be easily calculated. If an alkali be present it ought to be previously saturated with sulphuric or muriatic acid. If nitre, common salt, nitrate of lime, and muriate of lime or magnesia, be present together,

the water ought to be evaporated to dryness, and the dry mass treated with alco- hol, which takes up the earthy salts. From the residuum, redissolved in water, the nitre may be separated, and calculated as in the last case. The alcoholic solution is to be evaporated to dryness, and the residuum redissolvea in water. Let us suppose it to contain muriate of magnesia, nitrate of lime, and muriate of lime. Precipitate the muriatic acid by nitrate of silver, which gives the proportion of muriate of magnesia and of lime. Separate the magnesia by means of car- bonate of lime, and no'e its quantity. Thisgivei the quantity of muriate of magnesia; and, sub- tracting the quantity of muriatic acid contained in that salt from the whole acid indicated by the precipitate of silver, we have the proportion of muriate of lime. Lastly, saturate the lime added to precipitate the magnesia with nitric acid. Then precipitate the whole of the lime by sul- phuric acid ; and subtracting from the whole of the sulphate thus formed that portion formed by

the carbonate of lime added, and by the lime contained in the muriate, the residuum gives us the lime contained in the original nitrate ; and thirty-five grains of lime form 102-5 of dry nitrate of lime.

In the year 1807 Dr. Marcet advanced some new ideas on the art of analysing mineral waters,- in an admirable paper on the water of the Dead Sea, inserted in the Philosophical Transactions. ' It is satisfactory to observe,' says this excellent che- mist, ' that Dr. Murray adopted, several years afterwards, a mode of proceeding precisely simi- lar, and indeed that he proposed, in a subse- quent paper, a general formula for the analysis of mineral waters, in which this method is pointed out, as likely to lead to the most accu- rate results. And this coincidence is the more remarkable, as it would appear, from Dr. Murray not mentioning my labors, that they had not at that time come to his knowledge.' — Philosophical Transactions, 1819, part ii.

We prefix, after Dr. Ure, the results of the recent analysis by M. Berzelius of the waters of Carlsbad. They are very extraordinary, and he has found many substances not hitherto sus- pected to exist in them.

Sulphate of soda . . 2-58714 Carbonate of soda . . 1-25200 Muriate of soda . . 1-04893

Carbonate of lime . . 0-31219

Fluate of lime . . . 0-0033 I

Phosphate of lime . . 0-00019

Carbonate of strontites . 0-00097

Carbonate of magnesia . 0-18221

Phosphate of alumina . 0-00034

Carbonate of iron . . 0-00424

Carbonate of manganese a trace

Silica 0-07504

5-46656

Ann. de Chim. et Phys. xxi. 248.

The following table exhibits the compositions of the principal mineral waters as well as that of the sea. The reader will find, in the Philosophi- cal Transactions for 1819, a very valuable dis- sertation on sea-water, by Dr. Marcet, of which a good abstract is given in the second volume of the Edinburgh Philosophical Journal. This phi- losopher shows that in Baffin's Bay, the Medi- terranean Sea, and the tropical Seas, the tempe- rature of the sea diminishes with the depth, ac- cording to the observations of Phipps, Ross, Parry, Sabine, Saussure, Ellis, and Peron ; but that in the Arctic or Greenland Seas the tempe- rature of the sea increases with the depth. This singular result was first obtained by Mr. Scoresby, in a series of well conducted experiments, and has been confirmed by the later observations of lieutenants Franklin and Beechy, and Mr. Fisher

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MINERAL WATERS.

AN ALPHABETICAL LIST OF THE MINERAL WA- TERS OF EUROPE AND THEIR QUALITIES BY

DR. RYAN.

Abcourt, St. Germain’s, France, contains carbo- nate of iron and soda ; is diuretic and aperient, and used in dropsy, jam dice, visceral obstruc- tions, and eruptions.

Aberbrothick, Forfar, Scotland; a carbonated chalybeate, used in dyspepsia.

Acton, Middlesex, contains sulphate of magnesia and muriate of soda.

Aghaloo, Tyrone, contains sulphur, carbonate of soda, and aperient salts ; used in scrofula.

Abe. in Provence ; used in piles, diseases of the kidney and bladder, in fluor albus, excessive menstruation, and gonorrhoea ; is somewhat similar to Plombieres.

Aix-la-Chapelle, Germany, contains carbonate of lime, muriate and carbonate of soda, and sul- phur; is diaphoretic and purgative, and has been used in heartburn, asthma, ague, exces- sive menstruation ;

externally, in rheumatism, palsy, tremors, contractions, tumors, and cutaneous diseases.

Albermarle, or Aumale, Rouen, contains carbo- nate of iron.

A'.ford, or Awford, Somersetshire, is saline and strongly purgative.

Alvenan, Switzerland, is famous for bathing.

Annfield, Burrisoleigh, Tipperary, an excellent simple chalybeate.

Annaduff, Leitrim, is a sulphurous water.

Antrim, Ireland, contains muriate of soda, carbo- nate of lime, and bittern ; has been used in dropsy, scurvy, jaundice, and visceral ob- structions.

Ashwood, Fermanagh, is a saline and sulphurous water.

Ash ton, Wiltshire, is a carbonated chalybeate water.

Askeron, Yorkshire, is a saline and sulphurous water.

Athlone, Roscommon, is a simple, weak chaly- beate.

Athimonus, Leitrim, strongly sulphurous ; much used in scrofula.

Austria is said to contain mineral waters, at Sell- rain, Merain, Sexton, Prax, Agums, Brutz, Rabi, Pei, Stiria, Carinthia, and Carniola.

Baden, Germany, is a hot sulphurous water, re- sembling Aix-la-Chapelle.

Bagnigge, Middlesex, contains sulphate and mu- riate of magnesia ; is aperient.

Baia, Italy, is a strong sulphurous water.

Balemore, Worcestershire, contains carbonate of iron ; is strongly tonic.

Balaruc, near Montpelier, contains purging salts ; is aperient and diuretic , has been em- ployed in jaundice, palsy, scrofu.a, in diseases of the kidney and bladder- and externally in cutaneous affections.

Ballycastle, Antrim, is a chalybeate and sulphur- ous water ; its effects are like Bale^iore.

Ballynahinch, Down, contains iron, caibonic acid, and sulphur; has been praised in scor- butic and dyspeptic cases. There is also a pure chalybeate

in its vicinity.

Ballyspellan, Johnstown, Kilkenny, contains

iron, carbonic acid, and muriate of soda ; haˆ been greatly esteemed in dyspepsia, chlorosis, lowness of spirits, and visceral obstructions.

Bagniers, Upper Pyrenees, said to be similar to Aix-la-Chapelle.

Bagnols, Guard, France, is a tepid, sulphurous water, and used in phthisis, affections of kid- ney, psora, palsy, and rickets.

Bandola, Italy, contains carbonic acid, iron, soda, and sulphur; is aperieni, diaphoretic, and diuretic.

Bandon, Cork, is a simple chalybeate water.

Bareges, France, on the Pyrenees, contains mu- riate and carbonate of soda, lime, and sulphur; its temperature 115°; it is said to be similar to Bath. It has been used in nervous, oedema- tous, and cutaneous affections ; in visceral obstructions, in rheumatism, chlorosis, and consumption ; is aperient and diuretic.

Barnet, Hertfordshire, contains sulphate of mag- nesia and carbonate of lime.

Barrowdale, Cumberland, contains muriate of soda in great quantity, and carbonate of lime.

Bath, Somersetshire, contains carbonic acid, azotic gas, sulphate and muriate of soda, sili- ceous earth, selenite, carbonate of lime, and oxide of iron; temperature, 11 2° to 11 6°. — Saunders on Mineral Waters. It is diuretic, sudorific, and aperient ; but, if drunk in small quantities at the commencement, it induces constipation and stupor. It has been employ- ed in diseases of the stomach, liver, and bowels ; in gout, rheumatism, and partial paralysis ; in chlorosis, and, according to the excellentTrea- tise of Dr. Barlow on Bafli Waters, in chronic eruptions.

Bologne, near Calais, contains carbonate of iron.

Bigova, Russia, a similar water to the last named.

Bonnes, Lower Pyrenees, similar to Bareges; temperature, 102°.

Bourbon 1'Archambaud, near Moulins, is saline, and has been used in diseases of the liver, jaun- dice, bowel affections, and apoplexy.

Bourboune Lancy, is aperient, diuretic, and eir menagogue ; has been used in cachexia, diarr- hoea, fluor albus, cedenyl, and asthma. Exter- nally, in palsy, tremors, rheumatism, and cutaneous affections.

Bourbonne, France, is a warm, saline, and sul- phurous water.

Borset, near Aix-la-Chapelle, a warm, alkaline, and sulphurous water ; 132°.

Brentwood, Essex, contains sulphate of magnesia and lime ; purgative

Brighton, a chalybeate.

Bristol, Somersetshire, contains lime, muriate of soda, sulphate of magnesia, and selenite ; tem- perature, 74°. It has been considered as a specific in consumption ; allavs hectic ; is used in bilious diarrhoea, dysentery, diabetes, calculous and cancerous disorders, and fluot albus.

Bromley, Kent, a carbonated chalybeate; is diu- retic and corroborative.

Broughton, Yorkshire, said to be similar to Ilar- rowgate.

Brownstown, Kilkenny, contains carbonate of iron, lime, magnesia, and muriate of soda. It has been used with advantage in stomach, liver

cr other visceral diseases; in calculous and uterine disorders ; and against tcenia lum- bricus.

Buxton, Derbyshire, contains muriate and car- bonate of soda, and lime ; temperature, 82° ; is praised in gout and rheumatism, and in dis- eases where bathing is useful.

Buda, in Hungary, is famed for its excellent baths.

Buzot, Spain, is a warm chalybeate water.

Caldas, also famed for baths, Portugal, contains sulphur, gas, argilla, and muriate of soda ; it is famed for chronic rheumatism and dyspepsia.

Calabria, Italy, a saline water, containing sul- phate of soda.

Cape Clear, a saline, purgative water.

Carlsbad, Germany, a warm, alkaline, aperient water.

Caroline baths, Bohemia, contain iron, carbonic acid, carbonate of lime, muriate and carbonate of soda, carbonate and sulphate of magnesia ; are used in scrofula, dyspepsia, &c., in baths.

Carrickfergus, Antrim, from its blue color, said to contain copper.

Carrickmore, Cavan, contains carbonate of soda; is aperient.

Cartmel, Lancashire, contains muriate of soda and Epsom salts.

Castlecomer, Kilkenny, situated in the beautiful and classic demesne of the dowager countess of Ormond and Ossory. It was analysed by the late professor Higgins, of the Royal Dub- lin Society, and was found to contain iron, carbonic acid, and muriate of soda; results which I observed from my own experiments ; and Drs. Wade, Garnet, and Ryan, thought it one of the best chalybeates in Ireland.

Castleconnel, Limerick, contains carbonate of iron ; is said to resemble the German spa, and has been very much frequented for many years.

Castleleod, Rosshire, Scotland, contains carbonate of soda and sulphur.

Castlemain, Kerry, contains iron, sulphur, and carbonic acid.

Cawley, Derbyshire, contains sulphate of magne- sia and sulphate of lime.

Cawthorp, Lincolnshire, contains iron, carbonic acid, and carbonate of soda ; is aperient and antacid.

Cavan Spa is a chalybeate.

Cauteres, Upper Pyrenees, near Bagnieres, is a warm water; temperature 102° to 120°. Is much praised in acidity of the stomach, asthma, consumption, suppression of menses, and cutaneous affections.

Chadlington, Oxfordshire, contains carbbnate and muriate of soda, and sulphur; is an ape- rient.

Chaude Fontaine, Germany, same as Ai-Ia-*

Chapelle.

• *Cheltenham, Gloucestershire, contains calcareous earth, iron, sulphate of magnesia, and muriate of soda; is aperient and tonic, and much used in dyspepsia, bilicus complaints, scurvy, and gravel.*

Chippenham, Wiltshire, contains carbonate of iron.

Clashmore, Waterford, said .to contain sulphate of iron, by Elliot.

Cleves, Germany, similar to Pyrmont.

Clifton, near Bristol ; to which it is similar.

Clonmell, Tipperary, a sulphurous water, much praised for scrofula.

Cobham, Surrey, contains iron and purging salt.

Codsalwocd, Staffordshire, resembles Askeron water.

Colchester, Essex, contains sulphate of magnesia and carbonate of lime.

Coalcullen, Kilkenny,is a carbonated chalybeate.

Cork county contains many mineral waters, not given in this account, of minor note. (See my Treatise on the Mineral Waters of Ireland, 1824, Longman).

Corstophine, Mid Lothian, contains sulphur and sulphate of magnesia.

Corville, Roscrea, Tipperary, a simple chaly- beate water.

Coventry, Warwickshire, contains carbonate of iron and purging salt.

Cransac, Aveiron, contains carbonate of iron and sulphur.

Crosstown, Waterford, contains sulphate of iron ; is diuretic and purgative.

Daswild Bad, Germany, contains carbonate of iron and saline matter ; in visceral diseases.

Dax, near Bayonne, similar to Aix-la-Chapelle ; discharges 543 cubic feet of water in fifteen minutes ; is exhibited in affections of the kidney, in asthma, palsy, and rheumatism, in baths.

Deddington, Oxford, contains iron, sulphur, car- bonated earth, muriate and carbonate of soda; greatly praised in cutaneous diseases.

Derby, Derbyshire, contains carbonate of iron.

Derryinch, Fermanagh, contains sulphur and carbonate of soda.

Derrindaff, Cavan, contains sulphur and purging salt.

Derrylester, Cavan, a strongly sulphurous water.

Digne, Lower Alps, warm, saline, and sulphur- ous ; aperient and diuretic. Is used in dys- pepsia, scrofula, asthma, visceral obstructions, and eruptions.

Dog and Duck, near London, contains sulphate of magnesia and muriate of soda ; it is said to be a cooling purgative.

Doneraile, Cork, a chalybeate.

Drigwell, Cumberland, similar to Deddington.

Driburgin, Westphalia, a saline chalybeate.

Dronisnamullock, Leitrim, a very strong sulphur ous water.

Droppingwell, Yorkshire, contains carbonated earth ; is astringent and tonic.

Drumasnave, Leitrim, one of the strongest sul- phurous waters, in Ireland.

Dudley, Worcestershire, sulphurous and chaly- beate.

Dublin salt springs, Francis Street, and Hanover Lane waters.

Dulwich, Kent, contains muriate of soda and sul- phate of magnesia.

Dunnard, Dublin, a simple carbonated chaly- beate.

Dunse, Scotland, contains iron, muriate of soda, «.nd bittern.

Durham contains sulphur and muriate of soda. A saline spring there.

Egra, Bohemia, said to be similar to Cheltenham.

Ems, Germany, famed for sulphurous baths.

Emsem, Germany, properties not described.

Enghien, Netherlands, contains sulphureted hy- drogen.

Epsom, Surrey, contains muriate and sulphate of magnesia.

Fairburn, Rosshire, Scotland, contains sulphur and sulphate of soda.

Fahara, Switzerland, famed for baths.

Felstead, Essex, similar to Islington.

Filah, Yorkshire, is powerfully diuretic and aperient.

Forges, Rouen, contains carbonate of iron.

Frankfort, Germany, is similar to Harrowgate.

Gainsborough, Lincolnshire, contains sulphur, iron, and Epsom salts.

Geyser, Iceland, contains pure soda.

Galway is similar to Tunbridge.

Garryhill, Carlow, a chalybeate.

Glastonbury, Somersetshire, similar to Clifton.

Glendy, Kincardine, Scotland, similar to Peter- head.

Granshaw, Ireland, similar to the German Spa.

Gran, Hungary, not described.

Grossal, Germany, a calcareous water.

Haigh, Lancashire, contains carbonate and sul- phate of iron ; is emetic.

Hampstead, Middlesex, similar to last-named.

Hanhridge, Lancashire, similar to Scarborough ; is less aperient.

Hanlays, Shropshire, contains purging salts, is aperient.

Harrowgate, Yorkshire, discovered 1571, by captain Slingsby ; found to contain sulphur, muriate of soda, and purging salt. It is al- terative and purgative ; destroys worms ; is praised in scurvy, scrofula, palsy, and chiefly in cutaneous diseases.

Hartfell, Scotland, contains sulphate of iron ; is astringent and tonic, and used in all internal haemorrhages.

Hartlepool, Durham, contains sulphur, iron, and carbonic acid.

Healinglake, Cavan, cures scrofula, and is at- tested by many respectable persons.

Holt, Wiltshire, is mildly purgative, and used in ulcers and eruptions.

Jerpoint Abbey spa, Kilkenny, is a strong sul- phurous water.

Italy contains many sulphurous and warm springs, of little note.

Joseph's-well, Surrey, contains a large portion of sulphate of magnesia.

Johnstown, see Ballyspellan.

John's-well, Kilkenny, same as Johnstown ; not so strong.

Ilmington, Warwickshire, contains carbonate of iron and soda.

Inglewhite, Lancashire, a sulphurous chalybeate.

Islington, near London, contains carbonate of iron ; is tonic and diuretic.

Kanturk, Cork, contains iron and sulphur; used in scrofula and eruptions.

Kedlestone, Derbyshire, is similar to Harrowgate.

Kensington, near London, is similar to Actoi.

Kilbrew, Meath, similar to ShadweL.

Kilburn, England, a sulphurous and saline water.

Kilcoran, Clare, a.chalybeate.

Kilagee, Down, a chalybeate.

Killashen, Fermanagh, a sulphurous water.

Kileshan, Queen's County, a weak chalybeate.

Kilkenny college and canal spas, sulphurous and chalybeate.

Kilroot, Antrim, is similar to Barrowdale.

Kinalton, Nottinghamshire, a saline aperient water.

Kilmainham, Dublin, a sulphurous chalybeate.

Kincardine, Scotland, similar to Peterhead.

Kingscliff, Northamptonshire, similar to Chelten- ham. .

Kirkby, Westmoreland, a saline chalybeate.

Knaresborough, see Droppingwdl.

*Klintschyselo, Russia, warm springs at. — Clarke** Russia.*

Knowsley, Lancashire, same as. Scarborough.

Kuka, Bohemia, contains carbonate of soda ; is diaphoretic and sialagogue.

Lancaster, similar to Tunbridge.

Langeac, Upper Loire, a cold acidulous water.

Latham, Lancashire, similar to Tunbridge.

Leuck, Switzerland, not described chemically.

Llanndridad, Wales, a sulphurous chalybeate.

Lucca, Italy, a warm spring.

Llangybi, Wales, properties unknown.

Lisbeak, Fermanagh, strongly sulphurous.

Lemington, Warwickshire, contains muriate of soda and carbonate of lime ; is strongly ape- rient, and much frequented.

Leez, Essex, same as Islington.

Listerlin, Kilkenny, a chalybeate.

Loansbury, Yorkshire, is sulphurous and aperient, used in eruptions.

Lough Neagh, Down, said to cure running ulcers.

Madrid, a mineral water there contains sulphate of soda very largely.

Mallow, Cork, is similar to Bristol ; discovered 1689, by Dr. Rogers, of Cork, one of whose patients drank of the water accidentally. It discharges twenty gallons in the minute ; is clear and limpid when drawn from the fountain, with a vapor arising from it. I have seen the most decided good effects from this water in consumptive habits, even in cases which were considered hopeless. It is used in the same manner as the Bristol water.

Maherabeg, Kerry, is a saline aperient water.

Malvern, Worcestershire, contains carbonic acid, lime, and magnesia, united with carbonic and muriatic acids ; is tonic and diuretic. Is used in muco-purulent affections of the bladder, in hectic and consumptive cases ; in bilious and female diseases; in scrofulous and chronic eruptions.

Markshall, Essex, same as Islington.

Maudley, Lancashire, sulphurous and saline.

Matlock, Derbyshire, similar to Bristol ; tempe- rature 66°.

Micham, Fermanagh, a sulphurous water.

Miers, France, aperient and diuretic.

Millar's Spa, Lancashire, same as Tunbridge.

Miltown Malbay, Clare, a chalybeate water.

Moffat, Annandale, Scotland, contains sulphur, muriate of soda, and an earth. Is alterative, diuretic, and purgative ; is used as a bath. Mont d'Or, France, same as Aix-la-Chapelle.

Mont Pallas, Cavan, a chalybeate water.

Montmorency, Paris, a sulphurous spring.

Monfrin, Nimes, France, is aperient and diu- retic.

Mosshouse, Lancashire, same as Islington.

Moreton, Shropshire, similar to Holt.

Motte, near Grenoble, is a warm sulphurous water.

Neville Holt, Leicestershire, contains carbonated earth and Epsom salts.

Naphtha, Russia, a chalybeate.

New Cartmel, Lancashire, saline and aperient.

Naples, a sulphurous and chalybeate water, near St. Luke's church.

Newnham Regis, Warwickshire, similar to Scar- borough.

, Newtondale, Yorkshire, contains carbonate of lime and magnesia.

Newtown Stewart, Tyrone, is similar to Tun- bridge.

Nezdenice, Germany, carbonate of iron and soda ; diuretic and tonic.

Nobber, Meath, is similar to Hartfell.

Nocaria, Italy, famed for baths.

Normandy, Yorkshire, is similar to Askeron water.

Nottingham, Dorsetshire, sulphurous and saline: used in eruptions.

Oakfield, Cavan, a chalybeate.

O'Brien's Bridge, Clare, a strong sulphurous water.

Oersten, Denmark, little frequented.

Orston, Nottingham, contains carbonic 'acid in excess, iron, and sulphate, and muriate of soda. It induces intoxication.

Oulton, Norfolk, same as Islington.

Owen Bruen, Cavan, same as Askeron.

Pancras, London, contains sulphate of magnesia and carbonated earth.

Petsrhead, Aberdeen, a strong chalybeate.

Passi, near Paris, similar to Pyrmont and Cran- sac.

Perekop, Russia, a chalybeate.

Pettigre, Donegal, same as Askeron.

Phoenix Park, Dublin, a chalybeate and sulphu- rous water.

Pisa, Italy, a warm spring : also famed for baths.

Pithkeatly, Perthshire, Scotland, contains mu- riate of soda, and an earth.

Plombieres, Lorraine, France, a saline and sul- phurous warm spring ; used in affections of the bladder and asthma; and externally in scro- fula and cutaneous diseases.

Pontgibault, France. There are thirty-two springs here, whose temperatures vary from 82° to 124° ; their effects are diuretic and laxative.

Pongues, Nivernois, France, contains calcareous earth, magnesia, carbonate of soda, muriate of soda, and siliceous earth; diuretic and aperient.

Pyrmont, Westphalia, contains carbonate of iron, calcareous earth, magnesia, sulphate of mag- nesia, and muriate of soda. It is diuretic, diaphoretic, and aperient ; and used in female complaints, in relaxed habits, in cutaneous and nervous diseases, urinary obstructions; and considered the best restorative in broken constitutions.

Prussia, Warmburn ; the only mineral water there.

Queen Carmel, Somersetshire, contains sulphur, muriate of soda, and calcareous earth ; is used in scrofulous and cutaneous affections.

Richmond, Surrey, same as Acton.

Rippon, Yorkshire, sulphurous and saline.

Riviera de Abajo, Spain, near Oviedo ; said to be similar to Bath.

Road, Wiltshire, a sulphurous and chalybeate water ; very strong.

Rykum, Iceland, contains pure soda.

St. Amands, Valenciennes, sulphurous ; is used in eruptions, calculous cases, and piles.

St. Bartholomew's, Cork, same as Tilbury.

St. Bernard's, Edinburgh, is a strong sulphurous water, same as Harrowgate ; and is used in scorbutic and scrofulous diseases.

St. Erasmus' Well, Staffordshire, same as Bar- rowdale.

St. Windfrede's, Wiltshire, resembles Malvera.

Sarepta, Russia, a chalybeate.

Scarborough, Yorkshire, contains carbonate of lime, sulphates of magnesia and soda, and iron ; is diuretic and purgative.

Scolliensis, Switzerland, contains iron, carbonate of soda, and carbonic acid.

Scool, Clare, is a chalybeate. Sea-water, which contains muriate of soda and magnesia, and selenite.

Sedlitz, Bohemia, contains sulphate of magnesia, and is strongly purgative ; is used in stomach, nervous, hemorrhoidal, and oedematous com- plaints, and in anomalous cases succeeding cessation of the menses.

Seltzer, Germany, contains carbonic acid, carbo- nate of soda, calcareous earth, and magnesia ; is used in gravel, haematuria, scurvy, scrofula, dyspepsia, heartburn, acidity, and in billious and calculous disorders.

Sene, or Sende, Wiltshire, is similar to Islington.

Scydschutz, Germany, same as Sedlitz.

Shadwell, near London, contains sulphate of iron.

Shapmoor, Westmoreland, is sulphurous and sa- line ; same as Askeron.

Shettlewood,Derbyshire, is similar to Harrowgate.

Shipton, Yorkshire, same as last-named.

Skibbereen, Cork, a sulphurous water.

Somersham, Huntingdonshire, contains sulphate of iron ; applied to old ulcers.

Spa, Germany, contains carbonate of soda, iron, carbonated earth, sulphate of magnesia, and muriate of soda ; is used in suppression and retention of menses, hysterical and dropsical affections, and fluor albus.

Spain contains several waters of little note.

Stanger, Cumberland, contains sulphate of iron.

Stenefield, Lincolnshire, similar to Orston.

Streatham, Surrey, contains caibonated earth, sulphate and muriate of magnesia.

Suchaldza, Hungary, similar to Nezdenice.

Sweden mineral waters, said to contain muriate of potass.

Swansea, Glamorganshire, similar to Sbadwell.

Swabia, Baden, is a warm sulphurous water; temperature 132°.

Sydenham, Kent, is similar to Epsom.

Tarleton, Lancashire, is similar to Scarborough.

Teutuccia, Italy, famed for baths.

Tewksbury, Gloucestershire, similar to Acton.

Thetford, Norfolk, contains carbonate of soda and iron, and carbonic acid.

Thorston, Nottingham, same as Orston.

Thursk, Yorkshire, same as Scarborough.

Tilbury, Essex, contains carbonate of soda ; is diuretic and diaphoretic.

Tibshelf, Derbyshire, is similar to Spa.

Toberbony, Dublin, is an alkaline water.

Tonstein, Germany, is similar to Seltzer.

Toplitz, Bohemia, a saline water; famed also for baths.

Tralee, Kerry, is similar to Castleconnel.

Tunbridge, Kent, contains iron, muriate of soda, and calcareous earth ; used in all diseases in which chalybeates are serviceable.

Turkey, waters of, very little known.

Vals, Dauphiny, contains carbonate of soda ; is diuretic and diaphoretic.

Vesoul, Upper Soane, is aperient, refrigerant, and diuretic.

Vichy, near Moulins, contains carbonate of soda and sulphate of iron ; is used in jaundice, af- fections of the kidney and bladder, and in sterility.

Viterbo, in Italy, said to contain sulphurous acid.

Wardrew, Northumberland, is similar to Harrow- gate.

Wellingborough, Northamptonshire, same as Is- lington.

West Ashton, Wiltshire, similar to last-named.

Westwood, Derbyshire, same as Shadwell.

Wexford spa, is said to be like Islington. Wisbaden, Germany, a carbonated water ; 19

famed for baths. Whiteacre, Lancashire, contains carbonate of

iron and lime.

Wildungen, Germany, said to be similar to Bath. Wildbad, Germany, famed for warm baths. Witham, Essex, contains carbonate of iron and

muriate of soda. Wirksworth, Derbyshire, sulphurous, saline, and

chalybeate.

Wurtemburg, Germany, famed for baths. Zahorovice, Germany, similar to Nezdenice.

MINERAL WATERS, ARTIFICIAL. To imitate closely Cheltenham water. — Take Epsom salts 12~grs., iron filings 1 gr., Glauber salts 4 oz., wa- ter 4 gals. ; mix and impregnate with the gas arising from 2 oz. oil of vitriol, and 2 oz. pow- dered marble.

Artificial Harrowgate water. — Take common salt 5 oz., water 3 pints ; impregnate with gas from liver of sulphur and oil of vitriol, of each 4 oz.

Artificial Pyrmont water. — Take Epsom salts 15 grs., common salt 5 grs., magnesia 10 grs., iron filings 5 grs., water 3 pints ; mix and impreg- nate with gas of marble and oil of vitriol, of each 7 drachms. For further information on this part of the subject, see Forsyth's Dieteticon, Tliomsons London Dispensatory for 1826, &c.

MINERALOGY.

MINERALOGY is that department of natural history which teaches us to describe, recognise, and classify the different objects of inorganic nature. The mineral kingdom can never be confounded with either of the others ; it com- prises within its limits mere masses of dead un- organised matter, subject, as far as we are able to judge, to the laws of chemistry alone, and increasing only by the mechanical addition of extraneous substances ; they are not fed by nourishment, nor modified by internal operations, nor supported by any known principle of vita- lity. Modern mineralogists,

indeed, consider this science to treat not only of the earthy and stony substances, which the vulgar have been in the habit of styling minerals, but also of atmo- spheric air, water, the sulphuric and muriatic acids, and even of hydrogen and carbonic acid gas ; at the same time earths loosely aggregated, minerals and many clays, are said to be more properly objects of geological curiosity and eco- nomical value, than interesting to the mineralo- gist (Jameson). We confess this seems to us ‘ passing strange ;’ but more of the reigning systems anon.

From a superficial view of minerals in their natural deposits at or near the surface of the earth, it would hardly be supposed possible to arrange them in orders or classify them in groups. Nothing appears further removed from the influence of uniform laws or established principles, than the mineral kingdom, when cur- sorily observed. It consists of bodies aggre- gated, not organised, and collected together

without the slightest apparent arrangement. AH at the first glance appears confusion, while

Hot, cold, moist and dry, four champions fierce Strive here for mastery, and to battle bring Their embryon atoms.

But a closer inspection and more comprehen- sive view of the subject, will convince us that this is ‘ harmony not understood.’ and that this portion of his works is not without the impress of the Deity. To be convinced that the mineral kingdom affords suitable objects for scientific research, we need but glance at two or three of its most interesting phenomena. The properties which some minerals possess of phosphorescence, electricity, and magnetism, may serve to excite the attention of the curious, while the ablest mathematician may find ample employment in the more abstruse problems of crystallisation and polarised light. This is, at the same time, the science which includes within its ample range, the marbles of the statuary and architect, the metals of the manufacturer, the gems of the jeweller, and the soils of the agriculturist. It can never, therefore, be deemed uninteresting or unimportant. Nothing can be more beautiful than the caverns to be met with in primitive rocks, whose walls are lined with pure and vari- ously colored crystallised topaz, beryl, and rock crystal ; and the gneiss, granite, and mica slate, with their embedded grains and crystals of sapphire, chrysoberyl, garnet, emerald, axinite, and ruby, seem to realise the oriental tales of diamond valleys and emerald caves. But

it is not the beauties of the gems alone that attract our attention ; the varying composition of the mighty masses which compose tne crust of the earth's surface, and their conversion into soils, the operations at once mighty and minute which turn the hard and sterile rock into soft and fertile earth, are well worthy of notice. Some idea may be conveyed of the method in which this is performed, by referring to the instance of porcelain granite. ' This substance,' says Sir Humphry Davy, ' consists of three ingredients, quartz, feldspar, and mica. The quartz is almost pure siliceous earth in a crystalline form. The feldspar and mica are very compounded sub-1 stances ; both contain silica, alumina, and oxide of iron ; in the feldspar there are usually lime and potassa; in the mica lime and magnesia. When a granite rock of this kind has been long exposed to the influence of air and water, the lime and the potassa contained in its constituent parts are acted upon by water or carbonic acid ; and the oxide of iron, which is almost always in its least oxidised state, tends to combine with more oxygen ; the consequence is, that the feldspar decomposes, and likewise the mica ; but the first the most rapidly. The feldspar, which is as it were the cement of the stone, forms a fine clay ; the mica, partially decomposed, mixes with it as sand ; and the nndecomposed quartz appears as gravel or sand, of different degrees- of fineness. As soon as the smallest layer of earth is formed on the surface of a rock, the seeds of lichens, mosses, and other imperfect vegetables which are constantly floating in the atmosphere, and which have made it their resting place, begin to vegetate ; their death, decomposition, and decay, afford a certain quantity of organisable matter, which mixes with the earthy materials of the rock ; in this improved soil, more perfect plants are capable of subsisting; these in their turn absorb nourishment from water and the atmo- sphere; and, after perishing, afford new mate- rials to those already provided: the decomposi- tion of the rock still continues ; and at length, by such slow and gradual processes, a soil is formed in which even forest-trees can fix their roots, and which is fitted to reward the labors of the cultivator.'

Mineralogy is, however, almost the creation of the last fifty years. Previous to the year 1780, though tolerably understood by many as an art, it could scarcely be deemed a science, being, for want of precise definitions of its objects, inca- pable of communication; the same substance, from slight variation of appearance, was often denoted by different names, and different sub- stances by the same name ; its descriptive lan- guage was, for the most part, arbitrary, vague, and ambiguous, each author using that which seemed to him best to answer his purpose. To obviate the confusion thence arising, chemical tests were applied ; but even these were found in many cases insufficient, unless the substances exposed to them were thoroughly analysed, a work of great difficulty, involving an intolerable length of time, and, when executed, demonstra- tive only of the individual

substance to which it was applied. When any new specimen oc- curred, it might still be questioned whether it

was or was not of the same nature as that already analysed ; recourse must then have been had to description, and thus the same inconveniences recurred.

Since the time of Werner, however,, the pro- gress of this science has been rapid, owing greatly to the discoveries in chemistry, but still more to the orderly arrangements and sober attention to facts evinced in the works of the more modern mineralogists. An excessive fond- ness for theorising, unconnected with accurate observation, was the sin of the scientific writers of the sixteenth and seventeenth centuries ; and mineralogy, in common with several other of the physical and experimental sciences, has had more difficulty in removing the rubbish her ill- judging admirers had placed in her way, than in overcoming the natural obstructions of the path. Limestone, for example, was formerly considered as entirely the result of animal action, and the various formations of that rock were viewed as accumulations of altered shells and corals. But neither shells nor corals occur in primitive mountains, although they often contain extensive beds of limestone, and although lime has been proved to enter into the composition of most of the simple minerals of which primitive rocks are composed. It is therefore evident that lime is an original substance in primitive mountains, and has been formed at times independently of animals.

Before the discovery of potassa in lepidolite, a primitive mineral, by Klaproth, this alkali was also considered as entirely a production of the ve- getable kingdom; but no vegetable remains occur in primitive rocks; and, therefore, in this case, the potash has been formed by some other agency than that of vegetation. Phosphate of lime, the principal constituent of the bones of animals, was also maintained by the ancient chemists to be invariably an animal production. It, how- ever, has been found in large masses in the pri- mitive formations, and is thus proved to exist in nature, independently of the agency of the organic kingdom.

In this treatise we shall submit to the reader 1st. A history of mineralogy, embracing an ac- count of all the celebrated earlier systems. 2dly. An analysis and comparison of the modern sys- tems. And 3dly, An arrangement and brief notice of the known mineral substances. This will, of course,nnclude only the simple minerals, the description of the compound masses, which form the crust of the earth, having been already given at considerable length in the article GEO- LOGY, to which we refer the reader.

PART I. HISTORY OF MINERALOGY.

The knowledge of some mineral substances must, of course, have been coeval with the earli- est ages of the world. Tubal Cam probably discovered the difference between metals, earths, and stonos; but the ancients appear to have been totally unacquainted with any thing in the shape of systematic mineralogy; and during the dark ages but little regard was paid to the scanty information to be gleaned from the works ot Pliny and Theophrastus. It was not, indeed,

until the introduction of the Arabian chemistry, or alchemy, that any valuable attention was de- voted to the study of unorganised bodies.

Avicenna, the ‘ Prince of Arabian philosophy,’ in the eleventh century, divided minerals into four classes, viz. stones, salts, sulphureous or in- flammable bodies, and metals; and this arrange- ment was generally adopted by the chemists of those times. Agricola, the first systematic writer this science can boast, was also the first who paid attention to the external characters of mineral substances. He divided them into simple or homogeneous minerals, and compound or he- terogeneous minerals. The simple minerals he divided again into ,1. Terra. 2. Succus concretus. 3. Lapis. And 4. Metallum. ‘Terra’ he defines as a fossil body, which when moistened with water can be rubbed down in the hand, or with which mud may be formed. < Suc- cus concretus' he calls a dry and moderately hard fossil, which, when moistened with water, either is not softened, or if softened, differs much from the ' terra ' in its consistence, or in its com- position. ' Lapis' is a fossil, hard and dry, which either long exposure to water scarcely softens, and violent heat converts to dust, or which water cannot soften, but which intense heat melts. ' Metallum' he considers as a fossil by nature, either liquid or hard, but which melts at a violent heat. He divides compound mi- nerals into 1. 'Mixtures of stones and juices (succi).' 2. ' Mixtures of stones and metal.' 3. ' Mixtures of earth and metal.' And 4. ' Mix- tures of juice, stone, and metal/ Such is the system of George Agricola ; and though his total ignorance of chemical science occasionally led him into error, still it is valuable as the first at- tempt at mineralogical arrangement, while the logical precision of its execution is such as but few of our modern treatises exhibit.

The celebrated botanist Csesalpinus was the first who properly separated the salts from the inflammable fossils. The divisions of his sys- tem are 1. Mineralia humore solubilia, i. e. minerals dissolvable in water, among which he includes the earths and salts. 2. Mineralia oleo solubilia, i. e. those dissoluble in oil, which con- tain sulphureous substances, orpiment,

&c. 3. Illiquibilia, that cannot be melted, comprehend- ing the rocks, all stones, corals, &c. And 4. laquibilia, that can be melted, including only the metals.

Many writers on mineralogy appeared at the olose of the seventeenth, and the beginning of the eighteenth century. The most celebrated perhaps of these was Joachim Becher, wnose Physica Subterranea, in which he proposed to arrange

mineral substances on chemical principles, passed through several editions. The stones he divides into 1. ‘ Those that either calcine or vi- trify by heat.’ 2. ‘ Those that preserve their solidity or become friable when ignited.’ And 3. ‘ Those that when ignited, and immersed in. water, either remain solid or crumble to pieces.’ In his work we, for the first time, find antimony, zinc, and bismuth, classed as semi-metals, and mercury as a compound or decomposed body. The perfect metals of which he has but six, are thus ingeniously distinguished ; two of them, gold and silver, melt in a red heat ; two, copper and iron, are red-hot before they melt ; and twor tin and lead, melt before they can be brought to a red heat. Next he treats of the decompo- sita, or such minerals as are composed of dif- ferent earths and stones, earths and metals, or mixtures of metals, and they are divided into terrea, lapidea, metallica, and aquea.

In 1730 Magnus Van Bromell, a pupil of Boerhaave, published a system of mineralogy, in which he not only availed himself of the labors of his predecessors, but also proposed a new chemical division of stony substances into such as are refractory (apyri), such as are calcinable, and such as are vitrescible in the furnace.

After Van Bromell, Linne appeared, who, in his earlier years, devoted a considerable share of time to the study of mineralogy ; and, although his arrangement of the mineral kingdom is far inferior to his masterly systems of zoology and botany, yet this science acquired, through his works, a degree of notice and popularity it had never before enjoyed. It has been justly urged against the applicability of his system, that it is founded on an erroneous principle, viz. on the supposition that the crystalline form of mineral substances is always due to different salts, and that they are to be classed accordingly ; but even this error served to direct attention to the im- portant characters derived from the diversity of crystallisation, of which subsequent mineralo- gists have availed themselves for the distinction and classification of mineral substances. It was in 1736 that his system first appeared, and in this he arranges fossil bodies in three classes, namely petrae, minerae, and fossilia. These were again subdivided into petrae vitrescentes, calcariae, and apyrae. Minerse salia, sulphurea, and mer- curialia. And fossilia concreta, petrifacta, and terrestria. This arrangement,

however, did not meet with his own final approval ; for, in 1 768, he published the following system, in which he preserved the outline of his three classes, but altered materially their subdivisions.

Class I. PETR&.

Order I. HUMOS.C. 1. Schistus.

Order II. CALCARM,

2. Marmor,

3. Gypsum,

4. Stirium,

5. Spatum.

Order III. ARGILLACE.*

6. Talcum,

7. Amiantus,

8. Mica.

Order IV. ARENATJE. 9. Cos,

10. Quartzum,

11. Silex.

Order V. AGGREGATE.

12. Saxum.

Class II. MINEIUE.

Order I. SALIA. ,

13. Nit rum,

14. Natrum,

15. Borax,

16. Muria,

17. Alumen,

18. Vitriolum.

Order II. SULPHURA.

19. Am bra,

20. Succinum,

21. Bitumen,

22. Pyrites,

23. Arsenicum.

Order III. METALLA.

24. Hydrargyrum,

25. Molybdenum,

26. Stibium,

27. Zincum,

28. Vismuthum,

29. Cobaltum,

30. Stannum,

31. Plumbum,

32. Ferrum,

33. Cuprum,

34. Argentum,

35. Aurum.

Class III. FOSSILIA.

Order I; PETBIFICATA.

36. Zoolithus,

37. Ornitholithus,

38. Amphibiolithus,

39. Ichthyolithus,

40. Entomolithus,

41. Helmintholithus,

42. Phytolithus,

43. Graptolithus.

Order II. CONCBETA.

44. Calculus,

45. Tartarus,

46. Aetites,

47. Pluroex,

48. Stalactites,

49. Tophus.

Order III. TERR.*

50. Ochra,

51. Arena,

52. Argilla,

53. Calx,

54. Humus.

In the mean time the discoveries of Henckel of Saxony, and his coadjutor Pott, had clearly demonstrated the important advantages which mineralogy may derive from chemistry. Much information was afforded by Henckel, particularly with regard to metals and their ores; but the system of external

characters was entirely re- jected by him as vague and unsatisfactory. More accurate chemical knowledge, however, marks the works of the celebrated Pott, justly styled the Klaproth of his age ; and his unremit- ting attention in submitting to analytic examina- tion the simple earths, enabled him to determine their characters with precision, and arrange them witli accuracy. He divides them into four classes, viz. 1. Alkaline earth, or that which by burning forms quicklime, and produces efferves-

cence when dissolved in acids. 2. Siliceous earth, insoluble in acids, but little altered by ig- nition. 3. Argillaceous earth, which, being viscid and ductile, is capable of being turned in a lathe, becomes hard in the fire, and is insoluble in acids. 4. Gypseous earth, which, by turning, is converted into gypsum which resists the acids; vitri liable, but with difficulty.

Woltersdorf, the pupil of Pott, proposed a system embracing the whole mineral kingdom on a similar plan ; but bis chemical knowledge appears to have been inadequate to the task which he undertook, and his system is therefore imperfect. He comprehended the mineral king- dom under seven classes, in tha following man- ner:—

BlTUMIMA.

Fluida, Solida.

7. PETRIFACTA.

Sanguineonim,

Insecta,

Testacea,

Vegetabilia,

Marina.

Nearly about the same time Wallerius pub- a second edition of which he thus completes hi:

lished his Mineral uke indelt oeh Beskrifirt, in arrangement:—

Class II. LAPIDES. Class III. MIKER. Class IV. CONCMTA.*

Calcarei, Salia, Pori,

Vitrescentes, Sulphura, Petnfacta,

Fusibiles, Semimetalla, Figurata,

Apyri, Metalla. Calculi. Saxa.

uti

IJE.

2. LAPIDES.

3. SALIA.

lacesc,

Vitrescentes,

Acida,

[in:

ae.

Argillacei,

Alkalina,

Gypsei,

Intermedia.

Alkalini.

5.

SEMIMETALLA.

6.

METALLA.

Fluida,

Nobllia,

Solida.

Ignobilia.

Class I. TERR. Macrae, Tenaces, Minerales.*

MINERALOGY.

Wallerius was the first by whom the princi- ples on which systematic writers had hitherto arranged mineral substances were subjected to a strict examination. He rejected all characters derived from the value, use, or geognostic situa- tion, and established it as a rule that the order and genera should be founded on chemical characters alone, while the species "should be principally determined by their external charac- ter. The genera were distinguished by him with great precision, and augmented by the ad- dition of some new ones. In these respect Waller holds a distinguished place among mineralogical writers, and his work may be ad- vantageously consulted by the student of oryctog- nosy.*

The appearance of Cronstedt of Stockholm, as a writer on mineralogy, forms an important epoch in the history of that science. In his work (Forsogtil Mineralogie, Stockholm 1758),

Class I. Class II. TERR. SALIA.*

A

Class III. PHLOGISTICA.

or

BlTUMINA.

including Plumbago.

1. Calcareae 2. Siliceae. 3. Granatinse 4. Argillacese. 5. Micacese.

6. Fluores. 1. Acida. 7. Asbestinae. 2. Alkalina. 8. Zeolithicae. 9. Magnesias.

No work on mineralogy ever created a greater sensation than that of Cronstedt. In a short time after its appearance, it was translated into almost all the European languages ; in all civi- lised countries the system was studied ; and with some occasional deviations was adopted by most writers on minerals. Yet this system is not without great defects, and it is a matter of great difficulty to become acquainted with a mineral by consulting the description he gives of it. Cronstedt improved the classification of minerals, but the task of giving perfection to description, so indispensably necessary for the diagnosis of fossils, was reserved for his suc- cessor, whom it now becomes our duty to notice.

The celebrated Abraham Werner first pub- lished his classical work on the external charac- ter of minerals (Vonden auffem Kennzeichen der Fossilien, Leipsic) in 1774 ; laid the foun- dation of a settled descriptive terminology that entirely banished the vague and arbitrary lan- guage then in use, and justly entitled its author to the title of the ‘ father of systematic mineralogy.’ ‘ In this work,’ says professor Jameson, ‘ he gave the first example of the true method of describing mineral species. In these descriptions, all the characters presented by the species-suite are detailed with a certain degree of minuteness, and in a determinate order ; so that we have a complete picture of it, and are furnished with characters that distinguish it from all known species, and from every mineral that may here- after be discovered.’

In 1780 Werner published a German trans- lation of Cronstedt’s mineralogy with copious notes, in which he gives an outline of his own ideas respecting a system of oryctognosy. All the other expositions of h’is system are by his pupils; they are of various merit, an-i some of them but ill-calculated to convey an adequate

he commences with some highly interesting and important observations on the gradual effects produced by fire and water on mineral sub- stances, and on the slow, but unremitted changes they experience from various physical and che- mical agents in the bowels of the earth. His system is throughout chemical, and the principles on which the classes and orders are established are still pretty generally acknowledged by syste- matic writers. He was the first who showed that petrifactions ought not to occupy a separate place in the system merely on account of their form, and also that the compound primitive rocks are not admissible into a system which professes to treat only of simple substances. For the first time, we find the ther newly discovered platina, and also nickel, one of Cronstedt’s own discoveries. The following “brief sketch may serve to give the reader some idea of his method of arrangement :

Class IV. METALLA.

1. Perfecta.

2. Semimetalla.

idea of its excellencies. Mr. Kirwan was the first who introduced it in this country ; but for the most complete account of it we are indebted to professor Jameson of Edinburgh.

The fundamental principle laid down by Wer- ner, in the systematic arrangement of fossile bodies, is th« natural affinity, which he allows to be

founded on the chemical mixture of their component parts. The Wernerian arrangement is, therefore, to a certain degree a mixed method. It is not supposed that an arrangement founded on these principles will always coincide with the experiments of the chemist ; for it is only when chemical results agree with the natural alliances of the system that they are permitted to have a place in it, and in most cases where no satisfac- tory analysis existed of the mineral, the external characters alone decided its genus. In forming the metallic genera, says Werner, an attention to the constituent parts of minerals is unavoida- ble ; for, were these genera to be established by external characters, independent of chemical analysis, the various species of ores, belonging to the same metal, would not always be collected into the same genus. Indeed several species of ores would undoubtedly be arranged among earthy minerals. Thus no one, relying on exter- nal characters only, would associate carbonate of lead with the other ores of that metal, nor even place it in any metallic genus. But in the natural history method of arrangement chemistry is entirely neglected, and different ores of the same metal are widely separated from each other. The reasons given for this alteration will be dis- cussed anon.

Werner enumerates three different kinds of af- finity in minerals, viz. thp chemical, depending on a similarity of component parts, the minera- logical, consisting in the resemblance of their external characters, and the geological affinity

denoting a similarity of situation, relative age, fee.

The divisions and subdivisions introduced by Werner into the mineral kingdom are as follows ; viz. class, order, genus, species, sub-species, kind. Certain species having a general resemblance have been collected into families, as the zeolite family, the felspar family. There are four classes, viz. earths, salts, inflammables, and metals. Each class .is subdivided into genera. In most cases the genera are determined by the earth, salt, combustible, or metal, which is sup- posed to be either the predominant, or charac- teristic ingredient. It will be observed that a distinction is here made between the predomi- nant and characteristic ingredient. It is indeed commonly the case, that the characteristic ingre- dient, or that which is most effective in producing the peculiar characters of the mineral, is also predominant in quantity. But there are some minerals which are not characterised by that in- gredient which is present in the largest propor- tion. This distinction is undoubtedly impor- tant ; and could we, in cases of minerals composed of several earths, estimate the relative energies as well

as the relative quantities of the different ingredients, we might ascertain all that is essen- tial to their true composition.

The following tabular sketch of the arrange- ment of the genera of Werner in 1789 will enable the reader to judge of the comparative merit of his system, and those of his prede- cessors : —

WERNERIAN SYSTEM, 1789. CLASS I.— EARTHS. Order I. — SILICEOUS.

Order III— TALCS.

Genera.

1. Steatite,

2. Nephrite,

3. Fuller's earth,

4. Meerschaum,

5. Bole.

Genera.

6. Serpentine,

7. Talc,

8. Asbestus,

9. Cyanite, 10. Actinolite.

Order IV. — CALCAREOUS.

Genera.

1. Cactiform,

2. Chalk,

3. Marble,

4. Compact marble,

*5. Stalactite,**

6. Pisolite,

7. Slaty spar,

8. Magnesiac spar,

9. Swine-stone, 10. Marl,

CLASS II

Genera.

11. Bituminous marly schist,

12. Apatite,

13. Boracite,

14. Fluor,

15. Gypsum,

16. Selenite,

17. Witherite,

18. Ponderous spar

—SALTS.

Order I. — VITRIOLIC. Genera. Genera.

1. Native vitriol, 4. Halotrichum,

2. Rock butter, 5. Native salamur

3. Alum,

Order II. — NITROUS.

Genus. Common native saltpetre.

Order III. — MURIATIC. Genera. Genera.

Common rock salt, Sal ammoniac

Order IV.— BORAX.

Genus. Native Borax.

Genera.

Genera.

Order V. — ALCALISE.

1.

Lapis diaboli,

15.

Quartz,

(jCDUS.

2. 3.

Diamond, Chrysoberyl,

16. 17.

Horustone, Flint,

Natural mineral alkali.

4.

Zircon,

18.

Chalcedony,

CLASS III.— INFLAMMABLES.

5. 6.

Hyacinth, Chrysolite,

19. 20.

Lithoxylon, Heliotrope,

Order I. — BITUMINOUS.

7. 8. 9.

Garnet, Ruby, Sapphire,

21. 22. 23.

Chrysoprase, Schistous silex, Obsidian,

Genera. Genera, t. Naphtha, 5. Petroleum, 2. Asphalt, 6. Spissexylon,

10.

*r r **

Topaz,

24.

Cat's eye,

3. Coal, 7. Meliedite.

11.

Emerald,

25.

Phrenite,

4. Amber,

12.

Beryl,

26.

Zeolite,

Order II. — SULPHUREOUS.

13.

Schorl,

27.

Lapis lazuli.

Genera.

14.

Lapis thumensis,

1. Common native sulphur,

Order II. — ARGILLACEOUS.

2. Volcanic sulphur.

Genera.

Genera.

Order III. — GRAPHITE.

1.

Pure argil,

15.

Coticula,

Genus.

2.

Porcelain earth,

16.

Tripoli,

Native graphite.

3.

4.

Common clay, Jasper,

17. 18.

Mica, Chlorite,

CLASS IV.— METALS.

5.

Opal,

19.

Chalkolite,

Genera. Genera.

6.

Pitchstone,

20.

Hornblende,

1. Platina. Mercurial hepatic ore,

7.

Adamantine spar,

21.

Wacke,

Native platina. Cinnabar.

8.

Felspar,

22.

Basalt,

2. Gold. 4. Silver.

9.

Clay state,

23.

Lava,

Native gold. Native silver,

10.

Bituminous state,

24.

Pumice,

Nagiaker ore. Nagiaker silver,

11.

Aluminous earth,

25.

Green earth,

3. Mercury. Arsenical silver,

12. 13.

Aluminous schist, Aluminous stone,

26. 27.

Lithomarge, Mountain soap,

Native mercury Horn ore Native amalgam, Black silver ore

14.

Nigrica,

28.

Ochre.

Mercurial horn ore, Vitreous silver ore

MINERALOGY.

Genera. Genera. Brittle silver ore Yellow lead earth, Red silver ore Gray lead earth,

logy, we shall defer their present consideration, proceeding at once to Werner't Mineral System in 1815.

White silver ore. Red lead earth,

5. Copper. 8. Tin.

Class I.— EARTHY FOSSILS.

Native copper, Tin pyrites,

1. DIAMOND GENUS.

Copper glance, Tinstone,

Variegated copper ore, Cornish tin ore.

Diamond.

Copper pyrites, 9. Bismuth.

2. ZIRCON GENUS.

White copper ore, Native bismuth,

Zircon Family.

Gray copper ore, Bismuth glance, Black copper, Bismuth ochre.

2. Zircon, 4. Cinnamon-stone 3. Hyacinth,

Red copper ore, 10. Zinc.

J

Tile ore, Blende,

3. FLINT GENUS.

Azure copper, Calamine.

Augite Family.

Malachite, 11. Antimony.

5. Chrysoberyl, c. Conchoidal,

Copper green, Native antimony,

6. Chrysolite, d. Common.

Iron-shot copper green, Gray antimony ore,

7. Olivine, 10. Baikalite,

Olivine ore. Red antimony ore,

8. Coccolite, 11. Sahlite,

6. Iron. White antimony ore,

9. Augite, 12. Diopside,

Native iron, 12. Manganese.

a. Granular, 13. Fassaite.

Iron pyrites, Gray manganese ore,

b. Foliated,

Magnetical pyrites, Black manganese ore, Magnetical iron ore, Red manganese ore. Iron glance, 13. Nickel. Red ironstone, Copper nickel, Brown ironstone, Nickel ochre.

Garnet Family. 14. Vesuvian, 21. Garnet, 15. Grossulare, «. Precious, 16. Leucite, 6. Common.

Sparry ironstone, 14. Cobalt. Clay ironstone, Gray cobalt ore, Bog iron ore, Glance cobalt, Blue iron earth, Black earthy cobalt,

17. Pyrenite, 22. Staurolite or grena- 18. Melanite, tite, 19. Allochroite, 23. Pyrope. 20. Colophonite,

Green iron earth, Brown earthy cobalt,

Ruby Family.

Emery, Yellow earthy cobalt,

24. Automalite, 29. Corundum,

Pitchblende. Red cobalt.

25. Ceylanite, 30. Diamond-spar,

7. Lead. 15. Arsenic.

26. Spinel,

Lead glance, Native arsenic,

27. Sapphire, 31. Topaz

Blue lead ore, Arsenical pyrites,

28. Emery,

Brown lead ore, Orpiment.

Beryl Family.

White lead ore, 16. Molybdena. Green lead ore, Molybdena. Black lead ore, 17. Scheelium. Red lead ore, Tungsten, Yellow lead ore, Wolfram.

J «7

32. lolite, a. Precious beryl, 33. Euclase, b. Common, 34. Emerald, 36. Schorlous beryl, 35. Beryl, 37. Tourmaline.

Pistadle Family.

This system exhibits some curious anomalies.

38. Lievrile, 42. Anthophylite,

Thus sapphire is placed in the siliceous genus

39. Pistacite, a. Radiated,

although composed of alumine nearly pure.

40. Diaspore, b. Foliated,

But this stone is thus arranged in perfect con-

41. Zoisite, 43. Axinite.

formity with the principles of the system ; for a certain number of external characters, which

Quartz Family.

siliceous minerals usually exhibit, being taken

44. Quartz, b. Carnelian,

for the type of the genus, every mineral possess- ing these characters is to be arranged under this

a. Amethyst, a. Common, a. Common, ft. Fibrous,

genus whether it contain any silex or not. Two other instances may be adduced of minerals ar-

ft. Thick fibrous,50. Hyalite, b. Rock crystal, 51. Opal,

ranged merely in consequence of their external characters in direct opposition to their true com-

c. Milk quartz a. Precious, d. Common quartz, b. Common opal,

position. One of these is the diamond, com-

e. Prase, c. Semi-opal,

posed of pure carbon, and belonging to the class of combustibles ; the other hallite or halyt from the Greek

45. Iron-flint, d. Wood-opal, 46. Hornstone, 52. Menilite, a. Splintery, a. Brown menilite,

genus of salts though arranged with the earths.

b. Conchoidal, b. Gray menilite/

Such was the Wernerian arrangement of 1789. We shall now give, from professor Jameson's cele-

c. Woodstone, 53. Jasper, 47. Flinty-slate, «. Egyptian jasper

brated work on Mineralogy, his edition of Wer-

a. Common, a. Red,

ner's system in 1815. For although other sys- tems were in the mean time published by various authors, yet, in order to present the reader at one view with the whole of the Wernerian Minera-

b. Lydian-stone, /3. Brown, 48. Flint, b. Striped jasper, 49. Chalcedony, e. Porcelain jasper, a. Common, d. Common jasper,

MINERALOGY.

669

a. Conchoidal, f,5. Chrysoprase, p. Earthy, 56. Plasma,

57. Cat's eye,

58. Faser Kietel,

59. Elaolite.

e. Opal jasper, /. Agate jasper, 54. Heliotrope,

Pitchttone Family.

60. Obsidian, 62. Pearlstone,

61. Pitchstone, 63. Pumice.

Zeolite Family.

64. Phrenite, d. Foliated do.

a. Fibrous, 67. Ichthyophthalm,

b. Foliated, 68. Cubicite,

65. Natrolite, 69. Cross-stoue or cru-

66. Zeolite, cite,

a. Mealy Zeolite, 70. Laumonite, 6. Fibrous do. 71. Schmelzstein. z. Radiated zeolite,

Axurestonc Family

72. Azurestoue, 74, Blue-spar.

73. Azurite.

Felspar Family.

75. Andalusite, a. Common,

76. Felspar, ft. Variolite,

a. Adularia, 77. Spodumene,

b. Labrador, 78. Scapolite,

c. Glassy, a. Red scapolite,

d. Common felspar, 6. Gray scapolite, a. Fresh, a. Radiated, ft. Disintegrated, ft. Foliated,

«. Hollow spar, 79. Mei'onite, /. Compact felspar, 80. Nepheline, 81. Ice-spar.

4. CLAY GENUS. Clay Family.

82. Pure clay, d. Slate clay,

83. Porcelain earth, 85. Claystone,

84. Common clay,

a. Loam,

b. Potter's clay, a. Earthy, ft. Slaty,

c. Variegated clay, 90. Alum-stone.

Clay-Slate Family.

91. Alum-slate, 93. Drawing-slate,

a. Common, 94. Whet-slate,

b. Glossy, 95. Clay-slate.

92. Bituminous shale,

Mica Family.

96. Lepidolite, a. Chlorite earth.

97. Mica. b. Common chlo-

98. Finite, rite,

99. Potstone, c. Chlorite slate, 100. Chlorite, d. Foliated chlorite.

Trap Family.

103. Basalt,

104. Wacke,

105. Clinkstone,

106. Iron clay,

86. Adhesive slate,

87. Polishing or polier

state,

88. Tripoli,

89. Floatstone,

101. Paulite,

102. Hornblende,

a. Common,

b. Basaltic,

c. Hornblende- slate,

107. Lava. Lithomarge Family.

108. Green earth, 110. Rock-soap,

109. Lithomarge, 111. Umber,

a. Friable, 112. Yellow earth.

6. Indurated,

5. TALC GENUI.

Soapttone Family.

113. Native magnesia, 116. Fuller's earth,

or talc-earth, 117. Steatite,

114. Meerschaum, 118. Figurestone.

115. Bole,

Talc Family.

119. Nephrite, 122. Talc,

a. Common ne- a. Earthy, phrite,

b. Axe-stone,

120. Serpentine, a. Common, 6. Precious,

a. Conchoidal, ft. Splintery,

121. Schillerstone,

b. Common,

c. Indurated, 123. Asbestus,

a. Rock-cork, 6. Amianthus,

c. Common asbes- tus,

d. Rock-world.

Aclywllte Family. 124. Kyanite, 127. Tremolite,

a. Asbestous,

b. Common,

c. Glassy, 128. Sahlite,

125. Actynolite, a. Asbestous, 6. Common,

c. Glassy,

d. Granular,

129. Rhatizite.

126. Spreustein or chaff- stone.

6. CALCAREOUS GENUS.

A. Carbonates.

144. Arragon,

130. Rock milk,

a. Common,

131. Chalk,

b. Prismatic.

132. Limestone,

a. Compact,

B. Phosphatet.

a. Common,

145. Appatite,

ft. Roestoue,

146. Asparagus stone.

b. Foliated,

a. Granular,

C. Fluatct.

ft. Calcareous

147. Fluor,

spar,

a. Compact,

c. Fibrous,

b. Fluor spar.

a. Common,

ft. Calc-sinter,

*D. Sulphate**

d. Pea-stone,

148. Gypsum,

133. Calc-tuff,

a. Spumous gypsum.

134. Schaum earth, or

b. Earthy gypsum,

foam earth,

c. Compact gypsum,

1 35. Slate spar,

d. Foliated gypsum,

136. Brown spar,

e. Fibrous gypsum,

a. Foliated,

149. Selenite,

b. Fibrous,

150. Muriacite.

137. Schaalstone,

a. Anhydrite,

138. Dolomite,

b. Gekrostein,

139. Rhomb-spar,

c. Conchoidal mur

140. Anthracolite.

d. Fibrous mur.

141. Stinkstone,

e. Compact mur.

142. Marl,

a. Marl earth,

E. Boratet

b. Indurated marl,

151. Datolite,

143. Bituminous marl-

152. Boracite,

slate,

153. Botryolite.

7. BARYTE GENUS.

154. Witherite,

155. Heavy spar,

a. Earthy heavy

spar, 6. Compact heavy-

spar,

c. Granular heavy- spar,

d.Curved lamellar heavy-spar,

e. Straight lamellar, heavy-spar,

a. Fresh, g. Prismatic spar,

/3. Disintegrated, A. Bolognese, or /. Columnar spar, Bolognian spar.

8 STRONTIAN GENUS.

156. Strontian, a. Fibrous,

a. Compact, b. Radiated,

b. Radiated, c. Lamellar,

157. Celestine, d. Prismatic.

9. HALLITE GENUS. 158. Cryolite.

CLASS II.— FOSSIL SALTS. 1. Carbonates. b. Lake-salt,

159. Naturalsodaorna-162. Natural sal-ammo-

tron. niac.

2. Nitrates. 4. Sulphates.

160. Natural nitre. 163. Natural vitriol,

3. Muriates. 164. Hair-salt,

161. Natural rock-salt, 16.5. Rock-butter,

a. Stone-salt, 166. Natural Epsom-salt, a. Foliated, 167. Natural Glauber-
/3. Fibrous. salt.

CLASS III.— INFLAMMABLE FOSSILS. 1. SULPHUR GENUS.

168. Natural sulphur, ft. Conchoidal, a. Crystallised, c. Mealy,

6. Common, d. Volcanic.

a. Earthy,

2. BITUMINOUS GENUS.

1 69. Mineral or fossil d. Paper coal,

oil, e. Common brown,

170. Mineral pitch, coal,

a. Elastic, f. Moor coal,

b. Earthy, 172. Black coal.

c. Slaggy, a. Pitch coal,

171 . Brown coal, b. Columnar coal, o. Bituminous c. Slate coal,

wood, d. Cannel coal,

b. Earth coal, e. Foliated coal,

c. Alum earth, /. Coarse coal.

3. GRAPHITE GENUS.

173. Glance-coal, 174. Graphite,

a. Conchoidal, a. Scaly,

b. Slaty, b. Compact,

175. Mineral charcoal.

4. RESIN GENUS.

176. Amber, b. Yellow,

a. White, 177. Honey stone.

CLASS IV.— METALLIC FOSSILS.

1. PLATINA GENUS.

178. Native Platina.

2. COLD GENUS.

1 79. Native gold, b. Brass yellow,

a. Gold yellow, c. Grayish yellow.

3. MERCURY GENUS.

180. Native mercury, 183. Mercurial liver-

181,

182

Natural amalgam, «. Semi-fluid, 6. Solid,

Mercurial horn- ore,

184,

ore,

a. Compact,

b. Slaty, Cinnabar, a. Dark red, b Light red.

185. Native silver, a. Common, 6. Auriferous,

186. Antimonial silver,

187. Arsenical silver,

188. Molybdena silver,

189. Corneous silver-

4. SILVER GENUS.

190. Silver-black,

191. Silver-glance,

192. Brittle silver-

glance,

193. Red silver-ore,

a. Dark,

b. Light,

ore, or horn-ore, 194. White silver-ore. 5. COPPER GENUS.

CO

204.

205. 206.

207. 208.

195. Native copper, “1 96. Copper- glance,

a. Compact,

b. Foliated,

197. Variegated

copper-ore

198. Copper-py-

rites,

199. White cop-

per-ore.

200. Gray copper-

ore,

201. Black copper- 209.

k. ore>

202. Red copper-ore, 210.

a. Compact, 211.

b. Foliated, 212.

c. Capillary, 213.

203. Tile-ore,

a. Earthy,

b. Indurated,

Azure copper-ore,

a. Earthy,

6. Indurated or

radiated, Velvet copper-ore, Malachite,

a. Fibrous,

b. Compact, Copper-green, Ironshot copper- green,

a. Earth,

214.

OOJ 7

Emerald copper- ore,

Copper mica, Lenticular-ore. Oliven-ore, Muriate of copper, Phosphateˆ of cop- per.

6. IRON GENUS.

215. Native iron,

216. Iron-pyrites.

a. Common py-

rites,

b. Radiated py- 225.

rites, 226.

c. Liver or hepatic

pyrites,

d. Cock's-comb 227.

pyrites,

e. Cellular pyrites,

217. Capillary pyrites,

218. Magnetic pyrites,

219. Magnetic iron-

stone,

a. Common,

b. Iron-sand, 210. Chrome-ironstone.

221. Menac ironstone,

222. Iron-glance, a. Common,

a. Compact; j3. Foliated, 228. 6. Iron-mica,

223. Red ironstone,

a. Red iron-froth,

b. Ochry red iron- 229.

stone, 230.

c. Compact, 231 .

d. Red haematite, 232.

224. Brown ironstone, 233. a. Brown iron

froth,

b. Ochry brown

ironstone,

c. Compact,

d. Brown haematite, Sparry ironstone, Black ironstone,

a. Compact,

b. Black haematite, Clay-ironstone,

a. Reddle,

b. Columnar clay-

ironstone,

c. Lenticular clay-

irons tone,

d. Jaspery clay-

ironstone,

e. Common clay-

ironstone, /. Reniform clay- ironstone, g. Pea-ore, or pisi- form ironstone, Bog iron-ore,

a. Morass-ore,

b. Swamp-ore,

c. Meadow-ore, Blue iron -earth, Pitchy iron-ore, Green iron-earth, Cube-ore, Gadolinite.

MINERALOGY.

671

234,

235, 236, 237, 238,

244, 255,

247. 248, 249

251

253 254,

259, 260,

263,

7. LEAD GEMUS. Galena, or Lead- 239. Green lead-ore,

240. Red lead-ore,

241. Yellow lead-ore,

242. Lead-vitriol,

243. Earthy lead-ore,

or lead earth,

a. Coherent,

b. Friable.

glance,

a. Common,

b. Disintegrated,

c. Compact, Blue lead-ore, Brown lead-ore, Black lead-ore, White lead-ore,

8. TIN GENUS.

Tin pyrites, 246. Cornish tin-ore.

Tinstone,

9. BISMUTH GENUS.

Native bismuth, 250. Arsenical bismutti- Bismuth-glance, ore.

Bismuth-ochre,

10. ZINC GENUS. Blende, /3. Fibrous,

a. Yellow, y. Radiated,

b. Brown, c. Black, a. Foliated, 252. Calamine.

11. ANTIMONY GENUS. Native antimony, 255. Black antimony- Gray antimony-ore, ore, a. Compact, 256. Red antimony-ore, 6. Foliated, 257. White antimony-

c. Radiated, ore,

d. Plumose, 258. Antimony-ochre.

12. SYLVAN GENUS.

Native sylvan, 261. White sylvan-ore, Graphic-ore, 262. Nagyag-ore.

13. MANGANESE GENUS. Gray manganese- 264. Black manganese- ore,

a. Radiated, 6. Foliated,

c. Compact,

d. Earthy,

ore, 265. Piedmontese man-

268. 269.

271. 272

274,

275,

278. 279.

283,

ganese-ore,

266. Red manganese

ore,

267. Manganese-spar.

14. NICKEL GENUS. Copper-nickel, 270. Nickel-ochre. Capillary-pyrites,

15. COBALT GENUS. Family of Speiss Cobalt.

White cobalt-ore, 273. Glance-cobalt. Gray cobalt-ore,

Family of Cobalt-Ochre. Black cobalt-ochre,276. Yellow cobalt- o. Earthy, ochre,

b. Indurated, 277. Red cobalt-ochre,

Brown cobalt- a. Cobalt-crust,

ochre, b. Cobalt-bloom.

16. ARSENIC GENUS. Native arsenic, 280. Orpiment, Arsenic pyrites, a. Yellow,

a. Common, b. Red,

b. Argentiferous, 281. Arsenic bloom.

17. MOLYBDENA GENUS.

282. Molybdena.

18. SHEELE GENUS. Tungsten, 284. Wolfram.

19. MENACUINE GENUS.

285. Menachan, 290. Brown menachine-

286. Octahedrite, ore,

287. Rutile, 391. Yellow menachine-

288. Nigrine, ore.

289. Iserine,

20. URAN GENUS.

292. Pitch-ore, 294. Uran-ochre.

293. Uran-mica,

21. CHROME GENUS.

295. Acicular-ore, 296. Chrome-ochre.

22. CERIUM GENUS. 297. Cerium-stone.

Having given this general idea of Werner's system, we cannot proceed to notice that of Bergman without making honorable mention of the celebrated Rome1 d 1'Isle, whose indefati- gable researcties so eminently contributed to the progress of the science, and whose Christallo- graphie ou Description des formes propres & tous les corps du regne Minerale, published in 1783, has been deservedly characterised as the result or labors immense in their extent, almost entirely novel in their object, and of the highest import- ance on account of their utility.

In this elaborate performance the author gives a description of the forms proper to every sub- stance of the mineral kingdom, in a saline, stony, and metallic combination; with figures of all the known crystals, arranged according to the num- ber and disposition of their angles. He asserts, which is generally admitted, that every species in the mineral kingdom always takes a poly- hedral primitive form, which is regular, constant, and peculiar to itself. See CRYSTALLOGRAPHY.

The celebrated Bergman, who succeeded Wal- lerius in the mineralogical chair of Upsal, also published a sketch of a mineral system in his Physical Description of the Earth, 1784. lite divided the mineral kingdom into four classes in the following manner :—

Class I. SALIA. Orders.

1. Acida. 4. Terrestria.

2. Alkalina. 5. Metallina.

3. Neutralia. 6. Triplicitercombinata.

Class II. TERBJE.

Orders.

1. Ponderosae. 4. Argillacete.

2. Calx. 5. Silicise.

3. Magnesix.

Class III. BITUMINA.

Orders.

1. Bitumen. 3. Adamas.

2. Petroleum.

Class IV. METALLA. Including all the metals in one order.

The next vrriter of importance is the cele- brated Kirwan of Dublin, the founder of the Dublin Mineralogical Society, and the first who introduced the Wernerian system to notice in this country. His Elements of Mineralogy, which appeared in 1784, may be considered as the first work of importance on the subject published in

Great Britain, and principally excited that atten- tion to the science which it has since so deser- vedly enjoyed. The following extract will exhibit the most prominent features of his mineralogical arrangement :—

The classification of earths, says Mr. Kirwan, and stones, consists in their arrangement in a certain order relatively to each other.

Order, when not arbitrary, necessarily sup- poses both distinction and resemblance. With- out distinction all the bodies to be arranged .would be

equally entitled to the same place in 'the series. Without resemblance no reason could be assigned why a body should occupy one particular place rather than another place, there being no relation to connect it with the preceding.

Hence it follows that those bodies which re- semble each other most should be grouped together ; and, consequently, that there should be as many heads of general division as there are general grounds of resemblance.

If it be asked whence this resemblance should be taken ; whether from the external or internal characters ? I answer, it should be taken from both, it being the result of the joint consideration of both.

Now, upon examining the totality of homoge- neous earths and stones, it will be found that those resemble each other most that contain the largest proportion of the sarnie simple earth, or most of the characterising properties of the same simple earth; and, as there are nine simple earths, it follows that there must be nine genera, or primary divisions of homogeneous earths and stones. In the same manner, under each head or genus, we may consider those substances as specifically different that resemble each other least, or that differ in some important property relatively to human uses; for systems being fabricated to help the memory, by pointing out the most important distinctions, and none being more so than those that are applicable to human uses, should never lose sight of their primary end and designation.

Hence, 1. The generic earths, combined with an acid, are specifically different from those that are not. 2. The same generic earth, combined with different acids, forms different species. 3. The same generic earth, combined with a nota- ble proportion of one or more of the other earths, forms a different species from the same generic earth, either uncombined or combined with a less important proportion of other earths. I call a proportion, continues this writer, notable or important when it introduces a considerable alteration in the external or internal characters of the compound. Thus such a proportion as in- duces a considerable change in the specific gra- vity, or in the fusibility of any substance, is notable or important ; so in the calcareous genus such a proportion of foreign earth, or earths, as would prevent it from burning to lime, is «er- tainly of importance, and the distinction gfound- ed in nature : so proportions that alter the fusi- bility of substances, with respect to the degree at which they are fusible, are certainly notable, and a good foundation for specific distinctions. But varieties of proportion, or even of ingre-

dients, that produce no notable change, either in the internal or external properties of a com- pound, make no alteration in the species ; and in fact

there are scarcely any earths or stones that have, strictly speaking, the same proportion of ingredients. Traps or basalts, and zeolytes, vary considerably. 4. Any earth which- forms less than one-twentieth of a compound, is almost always of little importance. 5. Water forms an important part of any compound when it ex- ceeds one twenty-fifth of the whole. 6. Calces of iron influence in some measure the properties of a compound, when they exceed one thirty- third of the whole. If they are themselves mag- netic, they communicate that property to com- pounds of which they form above one-tenth.

Species are further divisible from some par- ticular points of agreement into families, or classes and families ; sometimes it is necessary to form distinctions where specific characters are not decided ; in which case I distribute the classes into tribes and families, as will be seen in the sequel. The minuter diversifications are called varieties. The term specimen corres- ponds with that of individual in the animal kingdom.

In this system Mr. Kirwan adopted the classes of Werner, but varied the orders and distribu- tion of the genera as follows : —

Class I.— EARTHS.

This class includes the orders Calcareous, Bary- tic, Muriatic, Argillaceous, Siliceous, Aggre- gate, and Mixed Earth, and each order the following genera: —

Order I. CALCAREOUS.

Genera.

Genera.

Native lime,

Marlite,

Aerated calx,

Pyritaceous limestone

Agaric mineral chalk,

Argentine,

Arenaceous limestone,

Sidero-calcite,

Testaceous tufa,

Ferro-calcite,

Compact limestone,

Elastic marble,

Swinestone,

Gypsum,

Oviform,

Fluor,

Baryto-calcite,

Phosphorite,

Muri-calcite,

Tungsten.

Marl,

Order II

. BARYTIC.

Genera.

Genera.

Baroselenite,

Liver-stone.

Order III

. MURIATIC.

Genera.

Genera.

Kiffekil,

Asbestus,

Martial muriatic spar,

Amianth,

Calci-murite,

Mountain-cork,

Argillo-murite, Chlorite,

Amianthinite, Asbestinhe,

Talcite,

Actinolite,

Talc,

Jade,

Steatite,

Boracite,

Pot-stone,

Baikal ite.

Serpentine,

Order IV.

ARGILLACEOUS.

Genera.

Genora.

Native argill,

Potter's clay,

Porcelain clay,

Indurated clay,

MINERALOGY.

Schistose,

Micarelli,

Gypsum, Trap,

Shale,

Hornblend,

Potstonc, Argillite,

Fuller's earth,

Basaltine,

Steatites, Ilonibleud-slate, &c.

Lithomarge,

Labrador hornblend,

Calciferous asbestinite, Iron shot quartz,

Bole,

Schiller spar,

Serpentine, Earthy quartz, Sec.

Argillaceous marl,

Schistose hornblend,

Appendix I.

Colored chalk,

Wacken,

Oiumond.

Green earth, Umber,

Mill In, Kragg,

Appendix II.

Tripoli, Phospholite,

Trapp, Basalt,

Genera. Genera. Lavas, Pumice,

Lepidolite,

Cain,

Enamels, Zeolites,

Sapparre,

Argillite,

Terras, Traps,

Mica,

Novaculite.

Tufas, and

Order V.

SILICEOUS.

Piperino, Basalts.

Genera.

Genera.

Class II.— SALTS.

Quartz,

Chalcedony,

This class includes the orders Acid, Alkaline,

Amethyst,

Cat's eye,

Neutral ; and, under each, the following ge-

Emerald,

Flint,

nera : —

Beryl,

Hornstone,

Order I. ACID.

Prase,

Schisthose hornstone,

Genera. Genera.

Oriental ruby,

Siliceous schist,

Caibonic, Phosphoric,

Spinel,

Basamite,

Vitriolic, Arsenical,

Accidental ruby,

Hornslate,

Sulphureous, Boracic,

Hyacinth,

Japper,

Nitrous, Molybdenous,

Garnet,

Egyptian pebble,

Muriatic, Tungstenic.

Chrysoberyl,

Sinople,

Sparry, Succinous.

Chrysolite, Olivin,

Porcellanite, Heliotrope,

Order II. ALKALINE,

(‘ fiioni Ocncni.

Obsidian, Shorl,

Wood stone, Elastic quartz,

Vegetable, Volatile alcalies. IVIineral

Tourmalin, Thumerstone,

Felspar, Labrador-stone,

Order III. NEUTRAL.

Cicn6r3.. Ci oners..

Phrenite, ./Edilite, Zeolite, Stauwhite, Kubellite,

/~\ 1

Petrile, Felzite, Argentine felspar, Red-stone, Siliceous spar,

Tartar-vitriolate, Nitrated magnesia, Glauber’s salt, Salt of Sylvius, Vitriol-ammoniac, Common salt, Epsom-salt, Sal ammoniac, Alum, Muriated

barytes,

Opal, Semiopal, Pitchstone,

Agate, Stronthian, Jargon,

A In ntini-vnn n«bn.A ftf\V

Hydrophanes, Hyalite,

Sidneia, Adamantine earth.

Order VI.

AGGREGATE.

Genera.

Genera.

Nitrated soda, Borax,

Granite (quartz, fel-

Granilite (aggregates of

calx, Tincal.

spar, mica).

four).

Class III. INFLAMMABLES.

Sienite (quartz, fel- spar, hornblend, or quartz,felspar,horn-

Gneiss, Schistose, mica (quartz and mica).

This class comprehends the orders Aerial, Bitu- minous, Carbonaceous, and Vegeto-bitumi- nous, and under each the following genera: —

blend, mica). Granitine triplets, formed of any triple aggregation. Norka, or murker

Porphyry, Amygdaloid, Pudding-stone, Sand-stones, Rubble-stone,

Order !• AERIAL. Genera. Genera. Inflammable, Hepatic. Order II. BITUMINOUS.

(quartz, mica, gar- net). Grunsten (hornblend and mica, horn-

Breccias, Nagel fluhe, Anomalous grits, Horn rock,

Genera. Genera. Napththa, Maltha, Petiol, Mineral tallow, Mineral tar, Mineral caoutchou.

blend and felspar.

Serpentine rock,

Mineral pitch,

Granitell (duplicates),

Topaz rock,

Order III. CARBONACEOUS.

Stellstein (quartz

Garnet rock,

Genera. Genera.

and mica).

Steatitic rock

Coal, Carbonated wood,

Rapikivi (felspar and

Variolites.

Plumbago, Turf and peat.

mica).

Order IV VEGETO-BITUMINOUS.

Order VII.

MIXED EARTHS.

Genera. Genera.

Genera.

Genera.

Jet, Copal,

Lime-stones, Calces of iron,

Spars, Marls,

Amber, Honey-stone, Ambergris, Sulphur. 2 X

MINERALOGY.

Class IV.— METALS.

This class comprehends the following metals under the three orders, Perfect, Imperfect, Semimetals.

Order I. PERFECT. Genera. Genera.

Platinum, Silver,

Gold, Quicksilver.

Order II. IMPERFECT.

Genera. Genera.

Copper, Lead,

Iron, Tin.

Order III. SEMIMETALS.

Genera. Genera.

Zinc, Uranite,

Antimony, Tungstonite,

Arsenic, Molybdaenite,

Bismuth, Sylvanite,

Cobalt, Menachanite,

Nickel, Titanite. Manganese,

Mr. Kirwan's works on mineralogy were long considered standard authorities ; his Elements were translated into several languages, and his system was received with considerable applause even by the continental mineralogists. The clearness of his descriptions, and the accuracy of his experiments, entitle him to the warmest gra- titude of the student ; who may obtain much valuable information by a perusal of his works.

Although in this historical sketch we have rather endeavoured to present the reader with an account of mineralogical arrangements than of discoveries in the science of mineralogy, yet we must not omit to notice the celebrated Klaproth, whose works have perhaps contributed more to the chemical knowledge of minerals than those of any other writer. Were we to attempt to exhibit the chief merit of Klaproth, as a chemist, we should place it not so much in the discovery of new metals and earths as in the invention of a more exact and more perfect method of analy- sis than was previously attempted. The former kind of merit is more adapted to draw the atten- tion of the public at large; but the latter is of infinitely greater consequence to science. We can here only notice the two principal me- thods of analysis with which he enriched the science of experimental chemistry.

The first of these was the complete resolution of the hardest minerals, by means of fluid caustic alkali, instead of the former treatment with dry caustic alkali, which bad introduced the use of silver crucibles and saucers. The complete resolution of the hardest stones, by this method of analysis, has enabled us to ascertain, with extreme accuracy, the quantity of earths, oxides, metals, and even of acids, which mine- rals contain. Exact analyses of this kind remain sure for ever, and are of importance to the science, independently of any discoveries which may be made respecting the particular nature of the substances mentioned. As, for instance, the capability of being decomposed, which was afterwards discovered to belong to the earths, makes not one cypher incorrect or superfluous in such analysis. The advantage of this method is particularly evident in the decomposition of

corundum or diamond-spar. As Klap-tMh first attempted the analysis of these bodies, by the old methods of decomposition, he found a con- siderable remainder of matter unaccounted for. On the suspicion, which he then expressed, that this remainder might perhaps be a new, and yet undiscovered earth, many compilers of school books were in a hurry to admit the earth of co- rundum into the list of the simple earths. But when Klaproth repeated the analysis, by means of the liquid alkali, he found that this substance was one of the many compositions of siliceous and argillaceous earths which had not previ- ously been known, and which in former analyses had sometimes been referred to the one kind of earth, and

at other times to the other. In the same manner, the chemists of England gave an account of a species of sand, which had been brought from New Holland, as a new earth ; but Klaproth showed, by his new method of analysis, that this body also, which had already been in- troduced into introductory treatises, under the name of the Austral Earth, was nothing but an intimate mixture of siliceous and argillaceous earth. Indeed, the first analyses that can be considered as certain are those which have been undertaken on this plan. Hence, by this dis- covery, almost all the more early analyses have lost their value.

In the numerous exact analyses which Klaproth conducted according to this method, there was al- most always discovered at last to be a small loss, that is to say, the weight of all the single compo- nent parts was ascertained to be somewhat less than the weight of the mineral which had been analysed. He in every case stated this loss with great precision, and by this undeviating regard to truth, obviously procured for the results of his labors a much greater certainty than if he had permitted himself, as he might easily have done, to conceal this loss under inconsiderable changes in the decimal figures. He also never gave his results, as he likewise easily might have done, in a great crowd of decimals, by which means the appearance of much exactness is sometimes gained, but he gave only as many cyphers as were pure. As long as the loss amounted only to a few thousand parts of the whole, it might easily be referred to those small mistakes which in every course of experiments are unavoidable, from the limited nature of our senses and instruments. But in some analyses, as for instance in that of Felspar, a loss of some hundred parts was discovered. Such a loss, considering the care with which Klaproth la- bored, could only arise from some of the con- stituent parts having entirely escaped observation during this method of resolution. Convinced that this could be neither an earth nor a metal, nor an acid, nor water, nor any other volatile matter, he at last began to suspect that perhaps many minerals might contain a hitherto unsus- pected quantity of fixed alkali, which could not be discovered by the method of analyses by means of these alkalies. This consideration led to Klaproth's second great invention, viz. the method of analysis by means of Barytes, al- though, as was formerly remarked, the excellent Rose had a considerable part in this invention.

Having thus given as detailed a history as our limits would permit of the ancient systems, we proceed to

PART II.

AN ANALYSIS AND COMPARISON OF THE MODERN SYSTEMS OF MINERALOGY.

Of these, the first is that of the abbe" Haiiy, whose labors in CRYSTALLOGRAPHY have occu- pied our attention in that article. We have there given a succinct account of his Theory of the Structure of Crystals, to which we refer the reader. Several memoirs of Haiiy on this sub- ject were followed in 1801 by that celebrated professor's great work, entitled Traite de Mine- ralogie, in which his crystallographic theory is made subservient to the classification of mine- rals. He here defines the mineralogical species to be a collection of bodies whose integrant parts are alike, and composed of the same prin- ciples united in the same proportion. Accord- ing to his idea of the subject, minerals have both a geometrical and chemical limit, the former con- sisting in the invariable form of the molecule, the latter in the composition of the same molecule. Haiiy prefers making use of the geometrical limit for determining the species, not only be- cause minerals being in general more or less mixed with heterogeneous matter, so often that the best chemical analysis is but imperfect, whereas mechanical division invariably furnishes the same form of the molecule, but principally because the geometrical limit is far more obvious and palpable, since to obtain it nothing more is often necessary than to divide the substance mechani- cally.

Notwithstanding the great reliance which M. Haiiy places on the form of the integrant parti- cle, he has remarked, in his Tableau Comparatif, that he does not consider a knowledge of the form of the integrant particle indispensable to the admission of a mineral to the rank of a distinct species, provided its composition be well ascer- tained, and found to be different from that of any known species. And it was under these circumstances that he first introduced the chro- mate of iron, as a distinct species. It appears that M. Haiiy's first object in forming his system of crystallography was to unite different crystal- lised varieties of the same species about one common point, as a nucleus or primitive form ; and he was thus almost necessarily led to form an arrangement of crystallised minerals only. But, however perfect this system may be in re- gard to the laws by which various secondary forms are derived from the same primitive form, it is not, even by its celebrated author, supposed equally competent to establish a mineralogical method. As therefore the character of the inte- grant molecule is not sufficient, the abbe" adds to it another chemical or physical : thus, for instance, the property -of dissolving in water superaddedto the cubic form, determines muriate of soda (common salt) ; but, if the same form is united to the property of becoming electric by heat, we have borate of magnesia or common boracite.

The following is Haiiy's distribution, taken principally from his Tableau

Comparatif des

Resultats de la Crystallographie, et de 1'Analyse Chimique, Paris, 1809. The names in paren- theses are those of the Wernerian school.

Class I.— ACIDIFEROUS SUBSTANCES. Order 1 . — Disengaged acidiferout substances. 1st. genus. Sulphuric acid. 2d. genus. Boracic acid.

Order II. — Earthy acidiferous substances. A. with simple base : — 1st genus. Chaux(lime).

I, 3. Ch. carbonate'e (comprising all the Wer- nerian species of carbonates of lime, with the ex- ception of the following species).

4. Arragonite.

5. Ch. phosphate'e (apatite).

6. Ch. fluate'e (fluor).

7. Ch. sulfate'e (gypsum and selenite).

8. Ch. anhydro-sulfate"e (anhydrite).

9. Ch. nitrated.

10. Ch. arseniate'e (arsenic bloom; pharmaco- lite, Klapr.)

2d genus. Baryte.

I 1 . Baryte sulfate'e (barytes or heavy spar)

12. B. carbonate'e (witherite). 3d genus. Strontian.

13. S. sulfatee (celestine).

14. S. carbonate'e (strontian). 4th genus. Magnesie.

15. M. sulfatee (natural Epsom or bitter salt).

16. M. boratee (boracite).

17. M. carbonate'e (native magnesia or talc earth).

5th genus. Lime and silica.

18. Chaux boratee siliceuse (datholite). 6th genus. Silica and alumine.

19. Silice fluatee alumineuse (topaz and pyc- nite, or short beryl).

Order III. — Acidiferous alkaline substances. 1st genus. Potasse.

20. P. nilrate'e (natural nitre). 2d genus. Soude.

21. S. sulfatee (natural Glauber salt).

22. S. muriatee (rock-salt).

23. S. borate'e (tinkal, K.)

24. S. carbonate'e (natural soda or natron). 3d genus. Ammoniaque.

25. A. sulfate'e (mascagnin, K.)

26. A. muriatee (natural sal ammoniac).

Order IV. — Acidiferous alkaline earthy sub- stances.

27. Alumine sulfate'e alcaline (alum). Appendix.

28. Alumine fluatee alcaline (kryolite).

29. Glauberite.

Class II.— EARTHY SUBSTANCES.

(No subdivision into orders).

30. Quarz (the whole of Werner's quart fa- mily, comprising fourteen of his species).

31. Zircon (zircon and hyacinth).

32. Corindon (corundum, sapphire, diamond, spar, emery).

33. Cymophane (chrysoberyl),

34. Spinelle (spinel, ceylanit).

35. Emeraude (emerald, beryl).

36. Euclase

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37. Grenat (garnet, melanite).

38. Amphigene (leucite).

39. Idocrase (Vesuvian).

40. Meionite.

41. Feld-spath (feldspar).

42. Apophyllite (fish-eye stone or ichthyoph- thalmite).

43. Triphane (spodumen).

44. Axinite.

45. Tourmaline (shorl).

46. Amphibole (all the sub-species of horn- blende, except Labrador hornblende, actinote, augite, and tremolite partly.

47. Pyroxene (augite, sahlite).

48. Yenite.

49. Staurotide (staurolite).

50. Epidote (pistazite, zoisit).

51. Hypersthene (Labrador hornblende).

52. Wernerite (arktizit).

53. Paranthine (scapolite).

54. Diallage (variety of arctinote, schillers- tein).

55. Gadolinite.

56. Lazulite (azur-stone).

57. Mesotype fibrous and mealy zeolite, nadel- stein.

58. Stilbite (radiated and foliated zeolite).

59. Laumonite (lomonit).

60. Prehnite.

61. Chabasie (schabasit).

62. Analcime (kubizit).

63. Nepheline (nephelin ; sommit K.)

64. Harmotome (cross-stone).

65. Peridot (chrysolite, olivine).

66. Mica (glimmer or mica).

67. Finite.

68. Disthene (cyanite).

69. Dipyre (schmelz-stein ; dipyr, K.)

70. Asbeste.

71. Talc.

72. Marie (hollow spar ; chiastolite, K.)

To this class are appended the following sub- stances, the characters of which are not sufficiently well understood to assign them their respective places in the system : —

Allochroite (splintery garnet, K.)

Alumine, pure (pure clay).

Amianthoide.

Antophillit, Schum. and Wern.

Aplome.

Bergmannit, Schum.

Diaspore.

Feldspath apyre, H. (andalusit).

Feldspath bleu (variety of compact feldspar).

Fibrolite, Bourn.

Gabbronite, Schum.

Jade (common nephrite, axe-stone).

Jolithe, W. and K.

Kaneel or cinnamon stone, W.

Lazuli, W.

Latialite (hauyne).

Lepidolite, W.

Melilite, Fleuriau.

Natrolite, W.

Pseudo-sommit, Fleur de B.

Spath en tables (schaalstein).

Spinellane.

Spinelle zinciftre? (automalite).

Spinthere, H.

Talc ? granuleux (earthy talc), and T. glaphique (bildstein ; agalmatolite, K.) Class III.— COMBVSTIBLE NOT METAL- LIC SUBSTANCES. Order 1. — Simple.

73. Soufre (sulphur).

74. Diamant (diamond).

75. Anthracite (kohlenblende, glanz-kohle).

Order II. — Compounds.

76. Graphite.

77. Bitume (mineral oil ; mineral pitch).

78. Houille (black coal).

79. Jayet (pitch coal).

80. Succin (amber).

81. Mellite (honey-stone).

Class IV.— METALLIC SUBSTANCES. Order 1. — Not immediately oxidable except by a very high degree of heat, and immediately re- ducible. 1st genus. Platina.

82. P. natif ferrifere (native platina). 2d. genus.

83. O. natif. (native gold). 3d. genus. Argent.

84. A. natif (native silver). '

85. A. antimonial (antimonial silver) ; as ap- pendix to it,

A. antimonial ferro-arse"nifere (arsenical silver).

86. A. sulfurˆ (vitreous silver-ore).

87. A. antimonie" sulfure (red-silver-ore) ; and, as appendix to it,

A. antimonie" sulfure" noir (brittle vitreous silver).

88. A. carbonate".

89. A. muriate" (horn-ore or horn-silver).

Order II. — Immediately oxidable and reducible : Mercure.

90. M. natif (native mercury).

91. M. argental (native amalgam).

92. M. sulphure" (cinnabar) ; and, as appendix, Mercure sulfure" bituminifere (mercurial

liver-ore).

93. Mercure muriate" (mercurial horn-ore). Order III. — Oxidable, but not immediately re- ducible.

a, sensibly ductile. 1st genus. Plomb.

94. P. natif volcanique.

95. P. sulfure” (galena) ; by way of appendix, P. sulf. antimonifere, and

P. sulf. antimonifere et argentifere (weiss- gultig-erz).

96. P. oxyde rouge.*

97. P. arseniate” (flokken-erz, K).

98. P. chromate” (red lead-ore).

99. P. carbonate” (white lead-ore) ; and, as appendix,

P. carb. noir (black lead-ore, lead earth ; and

P. carb. cuprifere.

100. P. phosphate” (brown and green lead- ore).

101. P. molybdate” (yellow lead-ore).

102. P. sulfate” (natural lead vitriol). 2d genus. Nickel.

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103. N. natif (capillary iron pyrites).

104. N. arsenical (copper nickel). f05. N. oxyde’ (nickle ochre).

3d genus. Cuivre.

106. C. natif (native copper).

107. C. pyriteux (copper pyrites) ; and, as appendix,

C. pyr. he”patique (variegated copper- ore).

108. C. gris (gray copper ore).

109. C. sulfure” (vitreous copper ore).

110. C. oxydule (red copper ore and tile ore).

111. C. muriate” (saltz-kupfer).

112. C. carbonate” bleu (copper azur).

113. C. carb. vert (malachite; copper green).

114. C. arseniate (lenticular copper ore ; olive ore) ; as appendix,

C. arsen. ferrifere (cupreous arseniate of iron, Bourn).

115. C. dioptase (copper emerald).

116. C. phosphate".

117. C. sulfate' (copper vitriol, K). 4th genus. Fer.

118. Fer natif (native iron).

119. F. oxydule" (magnetic iron stone); and, by way of appendix,

F. oxydule" granuliforme (iron-sand).

120. F. oligiste (specular iron, iron mica, red iron froth, red hematite ; compact red iron-stone, columnar clay iron-stone).

121. F. arsenical (common arsenical pyrites) ; and, as appendix,

F. arsenical argentifere (weiss-ertz, W. noble arsenical pyrites, K).

122. F. sulfure" (common pyrites); and, as appendix,

F. sulfure" £pigene (leberkies, but not of Werner), and

F. sulfure" ferrifere (magnetical pyrites).

123. F. oxyd6 (brown haematite ; reniform and lenticular clay iron-stone; green iron-earth); and, as appendix,

F. oxyde' resinite (eisenpech-erz.or pitchy iron-ore); also part of F. oxyde" carbonate (sparry iron-stone).

124. F. phosphate" (blue iron earth).

125. F. chromate" (eisen-chrom, K.)

126. F. arseniatt; (cube ore).

127. F. sulfate (native vitriol). 5th genus. Etain.

128. E. oxyde" (tin-stone); and, as appendix, E. oxyde" concretionnd (Cornish tin ore,

or wood tin).

129. E. sulfur6 (tin pyrites). 6th genus. Zinc.

130. Z. oxyde (calamine).

131. Z. carbonate.

132. Z. sulfure (blende).

133. Z. sulfate (zinc vitriol, K). b, not ductile.

7th genus. Bismuth.

1 34. B. natif (native bismuth).

135. B. sulfur6 (bismuth glance) ; and, as ap- pendix,

B. sulf. plumbo-cuprifere (needle ore).

136. B. oxide (bismuth ochre). 8th genus. Cobalt.

137. C. aisenical (white and gray cobalt-ore).

138. C. gris (cobalt glance).

139. C. oxid6 noir (black cobalt ochre).

140. C. arseniate (red cobalt ochre). 9th genus. Arsenic.

141. A. natif (native arsenic).

142. A oxid6 (arsenic bloom).

143. A. sulfurˆ (yellow and red orpiment). 10th genus. Manganese.

144. M. oxid6 (gray and black manganese ore) ; and, as appendix,

M. oxid6 carbonateˆ (red manganese- ore).

145. M. sulfure (manganese glance, K).

146. M. phosphate ferrifcre (phosphor, man- gan, K).

llth genus. Antimony.

147. A. natif. (native antimony).

148. A. sulfure (gray -antimony ore).

149. A. oxide (white antimony ore; antimony ochre).

150. A. oxide sulfur6 (red antimony ore). 12th genus. Uran.

151. U. oxidulr (pitch ore).

152. U. oxide (uran mica; uran ochre). 13th genus. Molybdena.

153. M. sulfuro (molybdena). 14th genus. Titahe.

154. T. oxide (rutil ; menakan).

155. T. anatase (octaedrit).

156. T. siliceo-calcaire (sphen). 15th genus. Scheelin.

157. S. ferrugine (wolfram).

158. S. calcaire (tungsten). 16th genus. Tellure.

159. T. natif; auro-ferrifer6 (native sylvan), argentifere (graphic ore) ; auro-plombifere (nag- yag ore.)

17th genus. Tantale.

160. T. oxide ferro-manganesifere (tantalit, K). and ytirifere (yttro-tantalite, K).

IHth genus. Cerium.

161. C. oxide silicifere (cererit, K).*

The abbe" Haiiy's works are the first in which a truly scientific exposition of crystallography is to be found ; but, by designating most of the forms by separate names, he has presented them to the mind rather as independent individuals than as parts of such groups as should render their relations to each other, and hence their mineralogical relations, apparent. One of his sources of error may be disc&vered in an appa- rently groundless notion that nature has imposed limits to the angles at which the primary planes of crystals incline to each other. And some of the mistakes which originate from this supposi- tion are so important as to cast a shade of doubt over his determinations relative to the primary forms of crystals. His inaccuracy with respect to the angle of carbonate of lime is a well known example of one of these theoretic errors. And, by assigning to the magnesian and ferriferous carbonates of lime the same angle as to the simple carbonate,

the error became still greater.

His inaccurate measurements of many of the anirlps of crystals have probably been occasioned by the comparatively imperfect instrument wit i wliicli thcv were tal en. That he should conti-

nue to prefer this to the more perfect goniometer invented by Dr. Wollaston may possibly have been owing to the decay of sight incident to that period of his life when he first entered into these investigations, and to that dislike to change which is frequent in old age. Although the measurements above quoted have been since repeatedly verified by experiment, the abbe" not only continued to insist on the superior accu- racy of his own measurements, but discusses, through several pages, how it could have happened that the iron should have displaced the lime in the crystals of carbonate of iron, which his original error led him to regard as pseudomorphous. With all the inaccuracies, however, which his works contain, they present to the reader truly philosophical views of the sciences of which they treat, and cannot be perused with- out affording considerable gratification and im- provement.

The labors of M. C. S. Weiss, formerly pro- fessor of mineralogy at Leipzic, and now we believe in the university of Berlin, have greatly contributed to the advancement of mineralogical and crystallographic knowledge. His first paper, which contains some valuable remarks on the different axes of the primitive forms, was pub- lished in 1815, and is entitled Des Divisions Naturelles des Systemes de Cristallization. In 1817 a memoir of his appeared in the Transac- tions of the Academy of Berlin, explaining his method of describing all the crystalline faces of any system whatever, in relation to the funda- mental axes of the system, which is, however, too elaborate for us to detail.

We must now proceed to the consideration of the most celebrated of the modern systems of mineralogy, viz. that of professor Mohs, of Frei- burg, which has been followed by Jameson of Edinburgh, and, indeed, by most of the mine- ralogists of the present day. A pupil of the ce- lebrated professor has, in the third volume of the Edinburgh Philosophical Transactions, given the most concise and lucid exposition of the prin- ciples upon which his crystallographic and mi- neralogical systems are founded, that has yet appeared in this language. We could wish that our limits would allow us to give it entire ; but, as this is not the case, we shall endeavour to pre- sent the reader with an abridgment of his prin- cipal remarks.

The following problem is presented as an ex- ample of the method in which the simple forms are discovered to be combined in the compound ores. Let fig. 1. Plate I., MINERALOGY, repre- sent a crystallisation of calcareous spar. The form is a compound one, and all the faces of the same description belong to the same simple form contained in it. The junction of those simple forms is symmetrical, because it possesses the highest degree of regularity which their nature and position can permit. The symmetry in this case is expressed by the parallelism of the several edges of combination ; and the general problem of crystallography is here transformed into the special one, of finding the circumstances under wtiich the edges of combination obtain their pa- rallelism. If in any combination the homologous

faces (the faces agreeing in figure and position) are enlarged, till, all the rest having disappeared, they alone bound the whole solid on every side, the simple forms which the combination in- cluded, will successively appear. By this ope- ration, from the faces g, P,/, m, b, of fig. 2, we obtain five rhomboids (figs. 3, 4, 5, 6) ; and from the planes x, y, a, three scalene six-sided pyramids, — pyramids consisting of scalene tri- angles, as in fig. 10.

The rhomboids have a particular arrangement in the combination, viewed in the distribution presented by this example, the edges of any rhomboid ; and the oblique diagonals drawn upon the faces of the one which follows it, lie in the same vertical plane. Such combinations as do not include an uneven number of rhom- boids are arranged so that the edges of one rhomboid lie in the same vertical plane with the edges of the next, and the diagonals of the one with the diagonals of the next. In figs. 3, 4, 5, 6, and 10, this arrangement is observable.

If the faces of any two rhomboids, which stand contiguous in the above- mentioned order, g and P for instance, or P and /, orˆ and ro, or m and b, of fig. 2, are simultaneously enlarged, till all the other faces disappear, and the faces of this pair include the whole solid ; a form results, which is a combination of those rhomboids, and the edges of combination made by its faces with each other are parallel, as in fig. 1 . This paral- lelism evidently arises from the dimensions of the rhomboids, in other words, from the magni- tude of their angles, because it disappears when- ever the dimensions of the one or the other are changed. The foregoing problem, therefore, requires to find the ratio of the dimensions by which the edges of combination are rendered parallel.

Solution. — Place a rhomboid in such a posi- tion that the straight line passing through two corners (solid angles) formed by equal plane angles, may be vertical. Those corners are named the summits that line the axis. In

this position the rhomboid stands upright. Rhom- boids, therefore, stand upright when their axes are perpendicular. From those solid angles of a rhomboid, which are not summits, let fall per- pendiculars upon a horizontal plane, and connect the points where they meet the plane by straight lines. The figure which results will be a regular hexagon ; it is called the horizontal projection of the rhomboid.

Derivation of a more obtuse rhomboid. — Bring a rhomboid into the upright position; and through those edges which meet in the extremity of the axis, stretch planes equally inclined to the faces of the rhomboid. Extend these planes till they all intersect each other : the solid bounded by them will in its turn be a rhomboid. Figs. 4 and 5, fig. 5 the original, fig. 4 the derived with the original. The axis of this new rhom- boid is equal to that of the preceding. The horizontal projection is equal in area to four times, in periphery to twice, the horizontal pro- jection of the latter. Together they produce parallel edges of combination. This new rhom- boid has a position different from that of the

first. The edges of the former have a similar situation with the oblique diagonals of the latter; that is to say, they lie in the same vertical plane with those diagonals. If sections are drawn parallel to the faces of the new rhomboid, and lying nearer the axis or middle point, those sections will truncate the edges of the original ihomboid : from which will arise the form of a combination of two rhomboids, having the edges of combination parallel.

To give the foregoing proportions a more con- venient expression, suppose the horizontal pro- jections of the rhomboids, or the sides of those projections, to be equal, the axis of the new rhomboid will then become equal to half the axis of the original rhomboid. It follows that, if two rhomboids produce parallel edges of combination with each other, the axis of the one must be half that of the other, the ho- rizontal projections being equal. This is merely the proportion between the two rhomboids, expressed by their axes, on the supposition of equal horizontal projections. The absolute dimensions of the rhomboids must be sˆich that both together may be capable of contributing to bound the solid.

On each of the obtuse rhomboids formed by the foregoing process the same process may be again repeated. A new rhomboid in its turn will result, whose axis, if the axis of the horizontal projec- tions are equal, being half the rhomboid imme- diately preceding, will consequently be fitted to produce parallel edges of combination with it.

Inversion of the process. — The process may be inverted. Draw the diagonals; through every two oblique aud one horizontal diagonal extend cutting planes, and deduct the portions which lie without them. The remainder, the part en- closed within the cutting planes, will likewise be a rhomboid. The axes of both these rhomboids are equal. The horizontal projection of the new rhomboid is the fourth part of the horizontal projection belonging to the original rhomboid ; the sides of the former are equal to half those of the latter ; and consequently, when the horizon- tal projections are considered equal, the axis of the secondary will be double that of the original rhomboid. This process may be continued in- definitely ; and, of all the rhomboids that result from it, any two following in immediate succes- sion will always exhibit such mutual proportions as to produce parallel edges of combination with each other.

All those rhomboids which are produced by the above operations are consequently subject to the general law, that, their horizontal projection being equal, their axes must increase or diminish as the powers of the number 2. These axes, therefore, follow each other in a geometrical pro- gression, and the rhomboids constitute a series which may be developed out of any given mem- ber, and expanded indefinitely on both sides.

Designation of the series. — Let the fundamen- tal rhomboid be designated by r ; the next more acute one, obtained from the second process, by r j 1, so that this expression may point out the rhomboid's place, or its distance from r ; the next more obtuse one, obtained from the first

process, by r — 1, so that by this means the dis- tance or the position, with regard to r, may in like manner be expressed; and the rest in a si- milar mode ; then, if the axis of r is put =: 1, the first of the three following lines will represent the series of rhomboids, the second their axis, and the third those powers of 2 by which they are expressed, —r — 3.r— 2.r — l.r. r + l.r + 2.r+3—

• • i • | . 1. . | , 4. 8. 2-». 2-. 2-‘. 2-°. 2’. 23. 2».*

These progressions may be prolonged on botli sides as far as we please. The horizontal pro- jections being equal, the axes by this means perpetually augment on the one hand, and per- petually diminish on the other. If they become infinitely small, the rhomboids are converted into regular six-sided prisms, the one of which has an axis infinitely great, the other an axis infinitely small. These prisms are named the limits to the series of rhomboids; their designation is r ± oo : and hence within its limits the series is —

r— a, r— 1 .r. r-fl r+co

Base of the regular Rhomboid Unlimited re- six-sided prism, whose axis gular six-sided ~ 1. prism.

Forms of infinite dimensions are not exhibited by nature. The limits appear, therefore, only in combinations. The completed regular six-sided prism, as displayed in nature, is a combination of both limiting forms.

Nature confirms the law of this rhomboidal series within its limits in all minerals that assume such forms. In calcareous spar, of which all the figures in plate I. are varieties, let P, fig. 5, be represented by r ; that is to say, by the rhomboid which constitutes the basis of derivation, and whose axis has been put = 1 ; then is g :r r — 1 , fig. 4 ;f— r + 1, fig. 6 ; m — r + 2, fig. 3. All these rhomboids have pretty exactly the dimen- sions which they would have if calculated ac- cording to the foregoing proportions, from the rhomboid P, estimated m 104° 28'. If, in place of that number, we employ 105° 5', the result of numerous measurements instituted for this pur- pose, the dimensions of the derived rhomboids, calculated upon this supposition agree still more exactly with nature, c, fig. 7, is — r + oo .

In different minerals, particularly in calca- reous spar, several rhomboids appear which are not included in the preceding series. They still, however, follow the same general law. The .terms of the accompanying series are capable of being found by a deduction similar to that used in the principal series; but the narrowness of our limits will not allow us to exemplify this method. Isosceles six-sided pyramids. — Suppose fig. 8 to represent a crystalline form proceeding from iron-glance. If the faces P are enlarged till they comprehend the entire solid, the figure will be changed into a rhomboid. If the faces n are enlarged till they likewise completely include the whole solid, we obtain an isosceles six-sided pyramid, fig. 9. The faces of the pyramid, unit- ing with those of the rhomboid, produce parallel edges of combination. The particular relation

of the pyramid to the rhomboid, upon which this parallelism depends, is, that the horizontal projec- tions being equal, the axis of thfi pyramid is to that of the rhomboid as j to 1.

On rhomboids of infinitely great or infinitely small axes, there depend, in like manner, isos- celes six-sided pyramids of infinitely great or infinitely small axes. They also are regular six- sided prisms, distinguished from the preceding by their different position in combinations. These prisms

constitute, moreover, the limits of the isosceles six-sided pyramids.

Di-rhwnboid. — Bisect those edges of the rhpm- boid which do not meet the axis. Connect the points of bisection and the summits of the rhomboid by straight lines, and through these lines extend cutting-planes which may take away from the rhomboid segments, such as_/, k, I, fig. 12. The remainder will be an isosceles six- sided pyramid, represented in fig. 9. This pyra- mid must not be confounded with the preceding, because it has not the same proportions to the rhomboid, from which it originates. If we suppose that a rhomboid, as fig. 12, combines with itself in a position different by 60°, the py- ramid will, in like manner, originate , from this union. The figure, in consequence of its origin, is therefore not a simple form ; but, as it mani- fests in all respects the same relations as the sim- ple rhomboid, it will henceforth be named a di- rnornboid.

Let any rhomboid be placed in an upright position. Produce the axis, to any distance, equally on both sides of the summits. From the corners of the rhomboid draw straight lines to the extremities of the produced axis, through every contiguous pair of those lines, and the in- termediate edge of the rhomboid ; let planes be extended ; the solid which those planes include will be a scalene six-sided pyramid, fig. 10. In this pyramid the edges which do not meet at the summit occupy the same position as the corres- ponding edges of the rhomboid ; they are hence named rhomboidal edges ; the others pyramidal or axis edges. Of a scalene six-sided pyramid, whose rhomboidal edges agree in situation with the same edges of a rhomboid, we say that it is derived from the rhomboid, or depends upon it.

Nature presents no scalene-pyramids, but such as are capable of uniting among themselves, or with other forms derived from the rhomboid, to produce symmetrical combinations. We obtain pyramids of this sort, if the axis of the rhomboid from which they are derived (32) is in the first place doubled, in the second tripled, and in the third place quintupled. A pyramid obtained by doubling the axis is called a primary, by tripling it a secondary, and by quintupling it a ternary pyramid. Primary pyramids of this species are designated by (pi n)'; secondary pyramids by (p it »)" '•> ternary by (p + «)"' ; so that the primary pyramid depending on r would be marked (p)'; the secondary (p)" ; the ternary (p)'"; the primary pyramid depending on r + 2 would be marked (p + 2)'; the secondary (p + 2)" ; the ternary (p f 2)"'.

The regular six-sided prism has already been considered as a rhomboid with an axis infinitely great. The question now arises, what will be

the condition of a primary, secondary, or ter- nary pyramid, originating from a rhomboid with an axis infinitely great? Draw two sections per-

pendicular to the axis of a pyramid, and so as to pass through the extreme points of the rhomboi- dal edges. The surfaces of these sections will be irregular hexagons, whose angles have a fixed relation to those of the transverse section. Exa- mine now that segment of the pyramid com- prised between the two sections just drawn. Its length, or altitude, is one-third of the axis of that rhomboid from which the pyramid is de- rived. Hence, if the rhomboid's axis be infinite, the altitude of this segment must likewise be infinite.

Besides those two faces, which are perpendi- cular to the axis, this segment is bounded by twelve scalene triangles. In proportion as the ratio of the rhomboid's axis to the side of its horizontal projection augments, so much the nearer will two of the angles in each triangle ap- proach to 180°, — the third to 0° ; and when the rhomboid's axis, in comparison with the side of its horizontal projection, becomes infinite, and the rhomboid thus changes into a regular six- sided prism, then the bounds are reached, the triangles become unlimited parallelograms, and the middle segment of the pyramid becomes an unlimited irregular twelve-sided prism. This prism will have for its base the transverse section of the primary pyramid, if the middle segment in question belongs to a primary pyramid ; the transverse section of the secondary, when that segment belongs to a secondary pyramid; and the transverse section of a ternary, when to a ternary pyramid. The rhomboid, with its axis infinitely great, that is to say, the regular six- sided prism constituting the limit of the rhom- boidal series, has thus dependent on it three scalene six-sided pyramids, also with axes infi- nitely great, of which one is a primary, the next a secondary, the last a ternary ; and which, there- fore, assume the appearance of irregular twelve- sided prisms, each dependent on its appropriate transverse section. These prisms are the limits of the scalene six-sided pyramids. It is obserr- able that the regular six-sided prisms, which form the limits of the isosceles pyramids, have no twelve-sided prisms of this sort : hence these prisms appear in combinations, only in one and the same position. These prisms which, like all forms having one of their dimensions unlimited,, can only appear in combinations, are exemplified by nature, in tourmaline, in emerald ; some of their faces |are found even in calcareous spar. In tourmaline, the prism, which depends on the secondary pyramid, is designated by h ; the gene- ral expression for these prisms is(p ± »)mr where m, as above, signifies the characters.', ", "'-

On glancing back over the ground we have passed, one is astonished at the multitude and variety of forms which may be deduced from a given rhomboid, and submitted to very simple laws ; yet the whole compass of this subject is still far from exhausted, and many remarkable phenomena relating to it have been omitted for want of room. Nature combines these forms in crystalline figures. From their dependence upon each other, and

from the proportions in which

they mutually stand, we may comprehend that all such combinations must possess the highest degree of regularity admitted by their simple figures, and therefore be completely symmetrical. At the present stage of the enquiry nothing is better calculated for giving a palpable represen- tation of this symmetry, than to study the crys- tallisations of calcareous spar ; and nothing for exciting a greater interest about that study than to consider how ample the proportions are on which nature has founded that symmetry.

Four-sided pyramids, with square bases. — Be- sides the forms already noticed, no other can be derived from the rhomboid. Hence, no other is capable of entering into combination with the rhomboid, or with any form derived from it. If, however, we take a four-sided py- ramid, having a square base, fig. 13, and treat it as described, we shall obtain a series of four- sided pyramids with square bases, which will proceed according to the powers of ˆ/2, and whose limits will be rectangular four-sided prisms. As the horizontal projections of two consecutive pyramids are not parallel to each other, these prisms must be regarded as in two different positions.

Nature demonstrates the existence of this se- ries within its limits, in the case of zircon, tungsten, vesuvian, tinstone, yellow-lead, uran- mica, rutule, anatase, and others. Upon this series depends also an accompanying series of four-sided pyramids, with square bases ; its co- efficient is — – — 2ˆ/2.

Scalene eight-sided pyramid. — Three pyramids of this kind depend upon each four-sided one with a square base, in the principal series ; and the axes of the former are to those of the latter as 3 : 1, 4 : 1, 5 : 1. In the order here assigned to them, like the six-sided pyramids formerly mentioned, they are named the primary, se- condary, and ternary. The manner in which these eight-sided pyramids originate from the four-sided pyramids cannot, however, be here detailed for want of room. The limits which bound this single series of eight-sided pyramids are eight-sided prisms, having the same unequal angles as the transverse section of the pyramid to which they belong. Since the horizontal pro- jections of two consecutive four-sided square- based pyramids occupy different places, these prisms must be considered as having two different positions.

Nature displays the existence and the limits of this series of eight-sided pyramids in the follow- ing examples. In zircon, fig. 13 and 14, let P be = p; then is x = (/>)', that is to say, the simple form that arises from augmenting the faces,ˆ is the primary scalene eight-sided pyra- mid,

originating from the four-sided square- based one, designated by P ; and the axis of the former is consequently equal to three times that of the latter. In this same mineral are likewise found (p)" and (p)'" ' ; as the Institute's collection exemplifies. Whatever was above established, respecting those forms which originate in rhom- boids, may also be applied to those forms which originated in four-sided square-based pyramids, The remarkable analogy which exists in all points

between the one class and the other, contributes not a little to augment the interest arising from the study of both. The latter, like the former, constitute among themselves a group, and pro- duce symmetrical combinations, into which they admit nothing that cannot be derived from the fundamental form, in the mode already ex- plained.

Four-sided pyramids with oblique bate. — A similar group will result, if, with some very slight alterations, we apply the process of deri- ' vation, explained above, to a four-sided pyramid with an oblique base. From that operation several series of four-sided oblique-based pyramids arise ; in some of which the transverse section at right angles to the axis is similar to the transverse section of the original pyramid ; in others not. The limits of these series are oblique-angled four-sided prisms, whose axis, if the pyramid is in its upright position, are vertical. By this derivation, however, we also obtain prisms whose axes (the fundamental oblique-based four-sided prism being in its upright position) lie horizontally, and are parallel to the diagonals of the oblique base. From the union of two hori- zontal prisms, a form results which some crystal- lographers have named a four-sided pyramid, with a longish rectangular base.*

Hexahedron, and the forms that result from it. — A multitude of forms yet remain which are not connected with any of the preceding. Such are those that possess the greatest, sometimes even a geometrical regularity in their simple forms, and the highest degree of symmetry in their com- binations. They can all be derived from the hexahedron (cube), by placing it upright, and considering the position of a moveable plane with regard to its faces and edges. Forms of this sort, lever assuming infinite directions, have no limit like the preceding. Some of them, however, have constant dimensions, while the dimensions of others are variable. The former may be viewed as limits of the latter. Every simple form, from which other simple forms are derived, is called a fundamental form ; and the class of figures derived from that fundamental form, a system of crystallisations. Hence, in the mineral kingdom, there are four fundamental forms, and four systems of crystallisations. Tim rhorabohedral ; the pyramidal, derived from a four-sided isosceles pyramid ; the prismatic, de- rived from a scalene four-sided pyramid ; and, lastly, the tessular, or that which is derived from the hexahedron.

Three of our fundamental forms are indeter- minate in their dimensions; the fourth, the hex- ahedron, is constant in its dimensions. The dimensions of all derived 'forms depend upon those of the fundamental forms, the variations of which they follow to their limits, in the rhom- boidal and pyramidal systems : and in the pris- matic system, to the rectangular four-sided prism, which remains always the same, how different soever the dimensions of the fundamental forms may become. In any of these three systems, if the dimensions of the fundamental form are de- termined, we obtain from it, by derivation, a train of forms having determinate dimensions, among which the general proportions of the

system are observed. Whenever the dimensions of the fundamental form are altered, the dimen- sions of all such forms as result from it are al- tered likewise, without, however, changing the mutual ratios which they bear to each other.

The different series of crystallisations are of the highest importance for properly determining the species of minerals, the systems of crystal- lisations for determining their characteristics. And, as all minerals do not present themselves in a crystallised state, the cleavage comes forward to compensate for the absence of crystallisation ; because any form of cleavage, not a limiting form, represents some member in the series of crystallisations belonging to that species. A limiting form, however, determines the system of crystallisations, provided it be not a straight four-sided rectangular prism, in which case the choice, lying between the pyramidal, prismatic, and tessular systems, must be determined by the circumstances.

When any cleavage form is a straight rectan- gular four-sided prism, though from any other quarter the smallest hint were not given us by which the particular system of crystallisations it belongs to could be determined, the following simple considerations will be sufficient to fix that point : — A straight four-sided prism presented to us may be 1. The hexahedron. 2. The limits of the pyramidal system. 3. A combina- tion of the limiting forms of the prismatic sys- tem. If the faces of the cleavage, in regard to their completeness and lustre, are each of a different nature, the form comes under the first case. If two faces of the cleavage are of the same, the third of a different nature, then the form must come under the third case. Examine the cleavage in the direction of the diagonal. If this, once more, affords a rectangular four- sided prism, it indicates the pyramidal system; if it affords an oblique angular four-sided prism, it indicates the prismatic

system. When all the cleavage faces are of the same nature, the form may come under any of the whole three cases. Between the second and the third a decision must be made as above. If the additional cleavage produces a rectangular four-sided prism, seek to obtain the same figure in the direction of another axis. If we obtain it, the form is a hexahedron ; if we cannot obtain it, the form is the limit of the pyramidal system.

It is well known how far our judgments of cleavage and cleavage-forms are rendered easy and certain by a little practice. To such a de- gree is this the case, that an observer can often, with great facility, determine the form in minerals, which, but for this simple artifice, would scarcely have exhibited to «is any traces of regu- lar conformation. All these and similar advan- tages assist us in applying the system of crysr tallisations to die purpose of determining minerals. But, notwithstanding the universality of its application, nothing can be accomplished by means of it alone. To render it effectual, some other characteristics must be combined with it. Specific gravity, hardness, and lustre are the most important of these characters.

The remarks on mineralogical nomenclature in this sketch are, however, too important to be matted .

The word with which we designate a single object, remarks our author, is called a name. This object may be such as to include a number of others. If the name has an epithet annexed, it is called a denomination. This denomination no longer designates that object on which the name was bestowed, but some single object in- cluded under it; and this last may, in its turn, include other objects. This distinction between names and denominations will afterwards be use- ful on account of brevity.

By names alone no mutual relation of the things which bear them can ever be expressed. A denomination effects this; the name, by its annexed epithet, marking a stricter designation. Hence, in a systematic nomenclature, the species bear denominations not names.

To give the name a more definite signification in the case of the species, it is applied to the genus, or the order, or some of the higher steps of classification. The name refers not to one single production of nature, or to one species, but to a class of greater extent ; it reaches to the former only in so far as their characters entitle them to a place under that class. It is by this arrangement tl.nt the systematic nomenclature is enabled to restrict the arbitrary application of names. A newly discovered mineral, though not belonging to any known species, would probably belong to some known genus, and therefore ob- tain the name of that genus, or to some known order, and hence take its name from that order.

The names M. Mohs has employed are, pyrites, ore, glance, spar, &c. The term pyrites has al- ready been applied to certain minerals belonging to one order ; it is, therefore, employed to denote an order. Some other substances, which like- wise belong to that order, have therefore neces- sarily received this designation, and laid aside their previous names, — nickel, for example, glance-cobalt, and others. The signification of the order settles what is or is not pyrites ; and whatever, according to that signification, is py- rites,— in other words, whatever belongs to the order bearing this name, must also be called pyrites. The same kind of management has been followed with the other names, as may be seen by inspecting the mineralogical system, to which the new nomenclature is applied.

Next to the name, the most important point is the first restriction of it, that adjunct, to-wit, by which the name of an order is transformed into the name of a genus. The generic name ought to be founded on the natural historical nature of the genus. Of this kind are garnet-blend, ruby- blend, glance-blend. These three genera all be- long to the order of blends. The first, however, has the appearance of garnet; the second, at least in some varieties, of ruby ; the third of glance. This mode of forming the generic name would, doubtless, be the most advantageous, be- cause it leads to no delineations which are foreign to natural history. It cannot, however, be universally applied, without introducing a m…ti- tude of new names ; and hence, in conformity to the previous rule, with the sacrifice of uni- formity it is true, two other means have been attempted. The first is to make use of some customary trivial names for settling the genera ; the other to apply to this an arrangement not

properly arising from natural history. On the former principle .-ire felspar, augite-spar, azure- spar, on the latter, iron-pyrites, cobalt-pyrites, lead-glance, molybdenum-glance, and others. No doubt, the second class of names have a chemical sound ; hut they have no chemical meaning ; and all depends upon the meaning. Of a simi- lar, yet not altogether identical nature, are fluor- haloid, calcareous-haloid, gypsum-haloid ; but not less exceptionable in that respect.

The farther restriction of the generic names into specific ones is brought about simply by means of an adjective, indicating the systems of crystallisations, or some relation of the cleavage, or in general that character by which the species of a genus are most advantageously distinguished. Such are hexahedral, prismatic, rhomboidal, iron-pyrites ;

rhomboidal, octahedral, prismatic corundum; octahedral, rhomboidal, prismatic irou ore, and many others. When the forms of two species in a genus belong to the same sys- tem of crystallisations, the same process is fol- lowed ; to the one adjective is joined another, by which the nature of the cleavage is more accurately denoted. This has been done in cases such as rhomboidal and prismato-pyramidal titanium ore and the like. In these instances no idea must be entertained of the transposition or mingling of two systems of crystallisations. In the first example the denomination merely signifies, that the form of the species belongs to the rhomboidal system, and that the cleavages, on the other hand, takes place according to prisms which can be no other than regular six- sided prisms. In the second example the de- nomination indicates, that the forms belong to the pyramidal system, and that the cleavage takes place according to prisms which must, therefore, be rectangular four-sided prisms. When the system of crystallisation and the cleavages of two or more species agree, as in several calcare- ous haloids, augite-spars, and others, a particular property of the crystallisations, &c., is chosen to form the special denomination ; such as long or short-axed, right or oblique angled, and so on. The term axifrangible, or axis-cleaving, denotes a particular direction of cleavage perpendicular to the axis, as in axifrangible zeolite ; prismatoidal denotes one particular direction of cleavage, parallel to the axis, as in prismatoidal antimony- glance.

Professor Mohs has arranged the mineral kingdom under three classes.
Class I.

If solid ; sapid. No bituminous odor. Sp. gr. under 3-8. It has four orders.
Order I.— GAS.

Expansible. Not acid.

Order II.— WATER.

Liquid. Without odor or sapidity. Sp. gr. 1 Order III. — ACID.

Acid. Sp. gr. 0-0015 to 3-7. Order IV.— SALT.

Not acid. Sp. gr. 1-2 to 2‘9. Class II.

*Insipid. Sp. gr. above 1*8.*

Order I. — HALOIDE (salt-like).

Not metallic. Streak uncolored.

If pyramidal or prismatic; H. hardness, — 4 and less. If tessular, H •=.

4-0. If single, perfect, and eminent faces of cleavage; sp. gr. zr 2-4 and less.

H. — 1-5 to 5-0. If under 2-5, sp. gr. =r 2-4 and less. Sp. gr. — 2-2 to 3‘3. If 2-4 and less, H. under 2-5 ; and no resinous lustre. Order II. — B A BYTE.

Not metallic. If adamantine or imperfect metallic lustre ; sp. gr. r= 6-0 and more. Streak uncolored, or orange-yellow. If orange-yellow ; sp. gr. := 6-0 and more, and H. :z 3-0 and less.

H. = 2-5 to 5-0. If 5-0; sp. gr. under 4‘5.

*Sp. gr. = 3-3 to 7-2. If under 4-0 and H. = 5*0; cleavage di prismatic.*

Order III. — K.ERATE (Horny).

*Not metallic. Streak uncolored. No single eminent cleavage. H. =: 1*0 to 2-0. Sp. gr.*

= 5-5.

Order IV. — MALACHITE.

*Not metallic. Color blue, green brown. If brown color of streak ; H. — 3-0 and less ; and sp. gr. above 2‘5. If uncolored streak ; sp. gr. = 2-2 and less ; and H. — 3-0. No single emi- nent faces of cleavage. H. = 2*0 to 5‘0. Sp. gr. — 2-0 to 4-6.*

Order V.— MICA.

If metallic ; sp. gr. under 2-2. If not metal- lic ; sp. gr. above 2-2. If yellow streak, pyra- midal. Single eminent cleavage. II. ~ 1-0 to 4-5. If above 2‘5 ; rhombohedral. Sp. gr. := 1-8 to 5-6. If under 2-5 ; metallic. If above 4-4 ; streak uncolored.

Order VI.— SPAB.

*Not metallic. Streak uncolored, brown. If rhombohedral ; sp. gr. 2*2 and less, or H> ~*

6-0.

H. z: 3-5 to 7. If 4-0 and less ; single emi- nent cleavage. If above 6‘0 ; sp. gr. under 2-5, or above 2-8 ; and pearly lustre. Sp. gr. — 2‘0 to 3-7. If above 3-3 ; hemiprismatic, or H. z= 6‘0 ; and no adamantine lustre. If 2-4 and less ; not without traces of form and cleavage. Order VII.— GEM.

Not metallic. Streak uncolored. H. •=. 5-5 to 10. If 6-0 and less ; sp. gr. = 2-4 and less; and no traces of form and cleavage. Sp. gr. ~ 1-9 to 4-7. If under 3-8 ; no pearly lustre. Order VIII.— ORE.

*If metallic ; black. If not metallic ; adaman- tine, or imperfect metallic lustre. If yellow or red streak; H. = 3*5 and more; and sp. gr. := •18 and more. If brown or black streak; H. — 5-0 and more, or perfectly prismatoidal. H. r: 2-5 to 7‘0. If 4-5 and less ; red, yellow, or black streak. If 6‘5 and more; and streak un- colored ; sp. gr. = 6-5 and more. Sp. gr. = 3-4 to 7-4.*

Order IX. — METAL.

Metallic. Not black. If gray ; malleable ; and sp. gr. = 7-4 and more. H. — 0-0 to 4-0, or malleable. Sp. gr. = 5-7 to 20”0.

Order X.— PYRITES.

Metallic. H. = 3-5 to 6‘5. If 4-5 and less ; sp. gr. under 5‘0. Sp. gr. = 4‘1 to 77. If 5‘3 and less; color yellow or red.

Order XI.— GLANCE.

Metallic. Gray, black. H. = 1-0 to 4-0. Sp. gr. — 4-0 to 7-6. If under 5-0, and single perfect cleavage : lead-gray. If above 7‘4 ; lead- gray.

Order XII.— BLEKDE.

*If metallic ; black. If not metallic ; adaman- tine lustre. If brown streak ; uncolored. Sp. gr. between 4-0 and 4-2 ; and the form tessular. If red streak ; sp. gr. :z 4-5 and more; and H. ~ 2*5 and less.*

H. = I’O, 4-0. Sp. gr. = 3-9, 8‘2. If 4‘3 and more ; streak red.

Order XIII. — SULPHUR. Not metallic. Color red, yelbw, or brown. Prismatic. H. rr 1-0 to 2-5. Sp. gr. =, 1-9 to 3-6. If above 2‘1 ; streak yellow, or red.

Class III.

If fluid ; bituminous odor. If solid ; insipid. Sp. gr. under 1-8.

Order I. — RESIN.

Fluid, solid. Streak uncolored, yellow, brown, black. H. = 0-0 to 2-5. Sp. gr. = = 0-7 to 1-6. If 1-2 and more; streak uncolored.

Order II.— COAL.

Solid. Streak, brown, black. H. r= 0-1 to 2-5. Sp. gr. — 1-2 to 1-5.

The following is his arrangement of simple minerals : —

Class I. Order I.— GAS. Genus I. Hydrogen gas.

1. Pure hydrogen gas.

2. Carbureted hydrogen gas.

3. Sulphurated hydrogen gas.

4. Phosphureted hydrogen gas. Genus II. Atmospheric air.

1 . Pure atmospheric air.

Order II. — WATER. Genus I. Atmospheric water.

1. Pure atmospheric water. Genus II. Sea water.

1. Common sea water.

Order III.— ACID. Genus I. Carbonic acid.

1. Aeriform carbonic acid. Genus II. Muriatic acid.

1. Aeriform muriatic acid. Genus III. Sulphuric acid.

1. Aeriform sulphuric acid.

2. Liquid sulphuric acid. Genus IV. Boracic acid.

1. Prismatic boracic acid, jenus V. Arsenic acid.

1 . Octahedral arsenic acid. Order IV.— SALT Genus I. Natron.

1. Prismatic natron. Genus II. Glauber's salt.

1. Prismatic Glauber's salt. Genus III. Nitre.

1. Prismatic nitre. Genus IV. Rock salt.

1. Hexahedral rock salt. Genus V. Sal ammoniac.

1. Octahedral sal ammonia;'.

Genus VI. Vitriol.

1. Hemiprismatic vitriol, ir green vitriol.

2. Prismatic vitriol, or blue vitriol.

3. Pyramidal vitriol, or white vitriol . Genus VII. Epsom salt.

1. Prismatic Epsom salt. Genus VIII. Alum.

1. Octahedral alum. Genus IX. Borax.

1. Prismatic borax. Genus X. Glauberite.

1. Prismatic glauberite.

Class II.

Order I. — HALOIDE. Genus I. Gypsum.

1. Prisraatoidal gypsum, or common gyp-

sum.

2. Prismatic gypsum, or anhydrite. Genus II. Cryolite.

1. Prismatic cryolite. Genus III. Alum stone.

1. Rhomboidal alum-stone. Genus IV. Fluor.

1. Octahedral fluor. Genus V. Apatite.

1. Rhomboidal apatite. Genus VI. Limestone.

1. Prismatic limestone, or arragonite.

2. Rhomboidal limestone.

3. Macrotypous limestone.

4. Brachytypous limestone, or rhomb-spar.

Order It. — BARYTE.

Gerrus I. Sparry iron.

1. Rhomboidal sparry iron.

- *Spharosiderite. Geuus II. Red manganese.*

1. Rhomboidal red manganese

- *Manganese spar. Genus III. Calamine*

1. Prismatic, or electric calamine.

2. Rhomboidal calamine. Genus IV. Tungsten, or scheelium.

1. Pyramidal tungsten. Genus V. Baryte.

1. Pyramido-prismatic baryte, or strontia-

nite.

2. Di-prismatic baryte, or witherite.

3. Prismatic baryte, or heavy spar.

4. Prismatoidal baryte, or celestine. Genus VI. Lead-spar.

1. Di-prismatic lead-spar, or white and

black lead-spar.

2. Rhomboidal lead-spar, or green and

brown lead-spar.

3. Hemiprismatic lead-spar, or red lead-

spar.

4. Pyramidal lead-spar, or yellow lead-

spar.

5. Prismatic lead-spar, or sulphate of lead.

- *1. Corneous lead-spar. — 2. Arseniate of lead. — 3. Plomb Gomme.*

Order III. — KERA.TE. Genus I. Corneous silver.

1. Hexahedral corneous silver. Genus II. Corneous mercury.

1. Pyramidal corneoxis mercury.

Order IV. — MALACHITE. Genus I. Copper green.

1. Uncleavable copper green. Genus II.- Liriconite.

1. Prismatic liriconite, or lenticular arse-

niate of copper.

2. Hexahedral liriconite, or cubical arse-

niate of iron. Genus III. Olivenite.

1. Prismatic olivenite, or prismatic arse-

niate of copper.

2. Di-prismatic olivenite.

Genus IV. Blue malachite, or blue copper. 1. Prismatic blue malachite.

- *Velvet blue copper. Genus V. Emerald malachite. .*

1. Rhomboidal emerald malachite. Genus VI. Green malachite.

1. Prismatic green malachite, or phosphate

of copper.

2. Di-prismatic green malachite, or com-

mon malachite.

- *Atacamite.*

1 . Prismatic atacamite, or muriate of copper.

Order V.— MICA. Genus I. Copper mica.

1. Rhomboidal copper mica, or micaceous

arseniate of copper.

2. Prismatic copper-mica. Genus II. Uran-mica, or uranite.

1. Pyramidal uran-mica.

- *Uran-ochre.*

Genus III. Cobalt-mica, or red cobalt

*1. Prismatic red cobalt. * Cobalt-ochre.*

1. Black cobalt-ochre.

2. Brown cobalt-ochre.

3. Yellow cobalt-ochre.

Genus IV. Antimony-mica, or white antimony.

1. Prismatic white antimony.

- *Antimony ochre. Genus V. Blue iron, or iron mica.*

1. Prismatic blue iron, or phosphate of iron. Genus VI. Graphite.

1. Rhomboidal graphite. Genus VII. Talc-mica.

li Prismatic talc-mica, or talc.

- *1. Native magnesia, or hydrate of mag- nesia.— 2; Ophite. — 3. Pikrolite. — 4. Nephrite.— 5. Steatite, or soap stone. — 6. Figurestone, or algalmatolite. — 7. Magnesite. — 8. Meerschaum. — 9. Li- thomarge. — 10. Mountain soap. — 11. Bole.*

2; Rhomboidal talc mica, or common mica.

- *Finite.*

Genus VIII. Pearl-mica.

1. Rhomboidal pearl-mica.

Order VI.— SPAR. Genus I. Schiller-spar.

1. Diatomous schiller-spar, or common

schiller-spar.

2. Axotomous schiller-spar, or green dial-

lage.

3. Hemiprismatic schiller-spar, or bronzite.

4. Prismatoidal schiller-spar, or hypers-

thene.

5. Prismatic schiher-spar, or anthophyllite.

Genus II. Kyanite.

1 . Prismatic kyanite. Genus III. Spodumene.

1. Prismatic spodumene. Genus IV. Prehnite.

1. Axotomous prehnite.

- *Karpholite. Genus V. Datolite.*

1. Prismatic datolite. Genus VI. Zeolite.

1. Trapezoidal zeolite, or leucite.

2. Dodecahedral zeolite, or sodalite.

3. Hexahedral zeolite, or analcime.

4. Paratomous zeolite, or cross-stone.

5. Rhomboidal zeolite, or chabasite.

6. Diatomous zeolite, or laumonite.

7. Prismatic zeolite, or mesotype.

8. Prismatoidal zeolite, or stilbite.

9. Hemiprismatic zeolite.

10. Pyramidal zeolite, or albine.

11. Axotomous zeolite, or apophyllite. Genus VI. Petalite.

1. Prismatic petalite. Genus VII. Felspar.

1. Rhomboidal felspar, or nepheline.

2. Prismatic felspar, or common felspar.

3. Pyramidal felspar, or scapolite, &c.

- *Elaolite. Genus VIII. Augite.*

1. Paratomous augite, or common augite,

&c.

2. Hemiprismatic augite, or hornblendeˆ

&c.

3. Prismatic augite, or epidote.

4. Prismatic augite, or tabular spar. Genus IX. Azure-spar.

1. Prismatic azure-spar, a lazulite.

2. Prismatoidal azure-spar, or blue spar.

- *1. Azure-stone, or lapis lazuli. — 2. Hauyne. — 3. Calaite, or mineral tur- quois. — 4. Amblygonita. — 5. Diaspore. — 6. Gehlenite,*

Order VII.— GEM. Genus I. Andalusite.

1. Prismatic andalnsite.

- *Fibrolite. ** Chiastolite. Genus II. Corundum.*

1. Dodecahedral corundum, or spinel.

2. Octahedral corundum, or automolite.

3. Rhomboidal corundum, or sapphire.

4. Prismatic corundum, or chrysoberyl. Genus III. Diamond.

1. Octahedral diamond. Genus IV. Topaz.

1. Prismatic topaz. Genus V. Emerald.

1. Prismatic emerald, or euclase.

2. Rhomboidal emerald. Genus VI. Quartz.

‘ 1. Prismatic quartz, or io?it.*

2. Rhomboidal quartz.

3. Uncteavable quartz.

4. Fusible quartz. Genus VII. Axinite.

1. Prismatic axinite. Genus VIII. Chrysolite.

1. Prismatic chrysolite. Genus IX. Boracite.

1. Octahedral boracii”

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Genus X. Tourmaline.

1. Rhomboidal tourmaline. Genus XI. Garnet.

1. Pyramidal garnet, or vesuvian.

2. Tetrahedral garnet, or helvine.

3. Dodecahedral garnet.

4. Prismatic garnet, or cinnamon-stone.

5. Prismatoidal garnet, or grenatite.

- *Aplome. Eudialite. Genus XII. Zircon.*

1. Pyramidal zircon. Genus XIII. Gadolinite.

1. Prismatic gadolinite.

Order VIII.— ORE. Genus I. Titanium ore.

1. Prismatic titanium ore, or sphene.

2. Peritomous titanium ore, or rutule.

3. Pyramidal titanium ore, or octahedrite. Genus II. Zinc ore.

1. Prismatic zinc ore, or red zinc ore. Genus III. Red copper ore.

1. Octahedral red copper ore. Genus IV. Tin ore.

1. Pyramidal tin ore. Genus V. Wolfram ore.

1. Prismatic wolfram. Genus VI. Tantalum ore.

1. Prismatic tantalum ore.

- *Tantalite. Genus VII. Uranium ore.*

1 . Uncleaveable uranium ore. Genus VIII. Cerium ore.

1. Uncleavable cerium ore.

- *Allanite, or prismatic cerium ore. ** Cerin.*

Genus IX. Chrome ore.

1 . Prismatic chrome ore, or ehromate of iron. Genus X. Iron ore.

1. Octahedral iron ore, or magnetic iron ore.

- *Titanitic iron ore. ** Iserine. *** Menachanite.*

2. Rhomboidal iron ore, or red iron ore.

3. Prismatic iron ore, or brown iron ore.

- *Bog iron ore. ** Lievrite. Genus XI. Manganese ore.*

1. Prismatic manganese ore, or black man

ganese.

- *Scaly brown manganese ore.*

2. Prismatoidal manganese ore, or gray

manganese.

- *1. Earthy gray and brown manganese ore, or wad. — 2. Phosphate of manga- nese.*

Order IX. — NATIVE METALS. Genus I. Arsenic.

1. Native arsenic. Genus II. Tellurium.

1. Native tellurium. Genus III. Antimony.

1. Dodecahedral antimony.

2. Prismatic antimony, or antimonial silver. Genus IV. Bismuth.

1. Octahedral bismuth. Genus V. Mercury.

1. Liquid native mercury.

2. Dodecahedral mercury, or native amal-

gam. Genus VI. Silver.

1. Hexahedral silver.

Genus VII. Gold.

1. Hexahedral gold. Genus VIII. Platina.

1. Native platina. Genus IX. Iron.

1. Octahedral iron.

1. Subsp. terrestrial native iron.

2. — — meteoric native iron. Genus X. Copper.

1. Octahedral copper.

- *1. Osmium. — 2. Palladium. — 3. Nickel.*

Order X. — PYRITES.

Genus I. Nickel pyrites, or copper nickel. 1. Prismatic nickel pyrites.

- *Nickel ochre. ** Black nickel.*

Genus II. Arsenic pyrites.

1. Axotomous arsenic pyrites.

2. Prismatic arsenic pyrites. Genus III. Cobalt pyrites.

1. Hexahedral cobalt pyrites, or silver white

cobalt.

2. Octahedral cobalt pyrites, or tin white

cobalt

- *Gray cobalt pyrites. ** Cobalt kies.*

- *Radiated tin white cobalt pyrites. Genus IV. Iron pyrites.*

1. Hexahedral iron pyrites.

2. Prismatic iron pyrites.

3-. Rhomboidal iron pyrites, or magnetic

pyrites. Genus V. Copper pyrites.

1. Pyramidal copper pyrites, or yellow cop- per pyrites. Undetermined pyrites.

- *1. Nickeliferous gray antimony. — 2. Common tin pyrites.*

Order XI. — GLANCE. Genus I. Copper glance.

1. Tetrahedral copper glance, or gray and

black copper.

2. Prismatoidal copper glance.

3. Prismatic copper glance, or vitreous

copper.

- *1. Variegated copper. — 2. Argentiferous*

copper glance. — 3. Plumbiferous cop- per glance. — 4. Tennantite. — 5. Eu- kairite. Genus II. Silver glance, or vitreous silver.

1. Hexahedral silver glance. Genus III. Galena, or lead glance.

1 . Hexahedral galena, or lead glance.

- *Blue lead.*

Genus IV. Tellurium glance, or black tellurium

1. Prismatic tellurium glance. Genus V. Molybdena, or molybdena glance.

1. Rhomboidal molybdena.

- *Molybdena ochre. Genus VI. Bismuth glance.*

1. Prismatic bismuth glance.

- *Bismuth ochre.*

- *Acicular bismuth glance, or needle ore. Genus VII. Antimony glance.*

1. Prismatic antimony glance.

2. Prismatoidal antimony glance, or gray

antimony.

3. Axotomous antimony glance, or bourno-

nite.

Genus VIII. Melane glance.

1. Diprismatic Melane glance, black anti- mony ore of Werner.

'J. Prismatic raelane glance, brittle silver glance of Werner.

Order XII.— BLENDE. Genus I. Manganese blende.

1. Prismatic manganese blende. Genus II. Zinc blende, or garnet blende.

1. Dodecahedral zinc blende. Genus III. Antimony blende, or red antimony.
1. Prismatic antimony blende, or red anti- mony. Genus IV. Ruby blende.

1. Rhomboidal ruby blende, or red silver.

2. Peritomous ruby blende, or cinnabar.

Order XIII. — SULPHUR, Genus I. Sulphur.

1. Prismatoidal sulphur, or yellow orpi-

ment.

2. Hemi-prismatic sulphur, or red orpi-

ment.

3. Prismatic sulphur, or common sulphur.

CLASS II.

Order I. — RESIN. Genus I. Mellilite, or honey-stone.

1. Pyramidal mellilite, or honey-stone. Genus II. Mineral resin.

1. Yellow mineral resin, or amber.

2. Fossil copal.

3. Black mineral resin.

4. Retinite.

5. Dysodilite.

Order II.— COAL. Genus I. Mineral coal.

1. Bituminous mineral coal.

2. Glance coat.

The nomenclature of the species in the above system is founded on the primitive forms of the minerals, on the nature of their cleavage, or the position of their bevelment. Thus in the genus corundum there are three species, the different primitive forms of which are the octahedron, rhomboid, and prism, and hence these are named octahedral, corundum rhomboidal, corundum and prismatic corundum. In the genus Zeolite there are seven species ; one of them is named prismatoidal the cleavage being prismatoidal, another axifrangible on account of its axifran- gible cleavage.

Professor Jameson of Edinburgh thsoughout his valuable works on mineralogy has adhered to the above system with but few alterations. His definitions of the species, &c., are the same, and also his nomenclature ; but he has occasion- ally altered the order of the genera, and arrang- ed them under four classes instead of three. His system, however, so nearly resembles that of Mohs that it would be difficult to notice them separately.

The celebrated Berzelius has attempted to es- tablish ‘ A pure scientific system of mineralogy by the application of th” electro-chemical theory, and the chemical proportions.’ The views which he has disclosed are noviel and highly important. He defines mineralogy to be the science which treats of the elementary combinations of unor-

ganic substances found in or upon the earth, and of the various forms and the different foreign admixtures under which these bodies make their appearance. By the influence of electricity on the theory of chemistry, this last science has ex- perienced a greater change than by the doctrines either

of Lavoisier or Stahl. The object of Ber- zelius is to show that the influence of the electro- chemical theory extends as much to mineralogy as to chemistry ; and also that the doctrine of definite chemical proportions is equally appli- cable, and will give the same degree of mathe- matical certainty to the arrangements of a mine- ralogical system which it has already given to chemistry. From the electro-chemical theory, we have, says he, been taught to seek in every compound body for ingredients of opposite electro-chemical properties ; and we have learn- ed from it that the combinations cohere with a force which is in proportion to the degree of opposition in the electro-chemical nature of the ingredients. Hence it follows that, in every compound body, there are one or more electro-positive, with one or more electro-negative in- gredients. By electro-positive ingredients, he designates such as have inflammable bodies, or salts for bases; and, by electro-negative, the oxygen and oxides which go to the negative pole of the Voltaic battery. In other words, every substance called a basis, in chemical com- bination, must have another which acts the part of an acid, though the latter, when uncombined, may not be distinguished by a sour taste, or the property of changing vegetable blues to red. The body which, in one case, is electro-negative, may, in another case, be electro-positive, and may be united to a stronger electro-negative, that is, it may be the basis to a stronger acid.

That silex performs the functions of an acid in the mineral kingdom was an opinion advanced by Mr. Hume so early as 1805, and he adduces its neutralising effects on alkalies in the forma- tion of glass as an example. Berzelius regards this new view respecting the combinations of silex with different bases as the most important step which mineralogy has yet made towards its perfection as a science. It is the most abun- dant substance of which the surface of the globe is composed, aud, according to Berzelius, the illustration of that order of minerals in which it supplies the place of an acid, being the electro- negative ingredient, throws the greatest light over other branches of mineralogy. The mine- rals of this order are, however, the most nume- rous, and he has given to them the name of siliciates. As an acid, silex possesses the pro- perty of forming siliciates of many different de- grees of saturation. The most common are those in which the silex contains the same quantity of oxygen as does the base. These he denominates simply siliciates. When the silex contains twice the oxygen of the base, they are called bisili- ciates. When thrice, trisiliciates. But, when the base contains more oxygen than the silex does, they are called subsiliciates, and are de- signated by the terms bi-subsiliciates, tri-subsi- liciates, ficc., to announce that the base possesses twice or three times the oxygen of the silex.

The mineralogical arrangement proposed by

Berzelius, is founded on the orderof the electro- chemical properties of bodies, beginning with the most electro-negative oxygen, and termi- nating with the most electro-positive potassium, and placing every compound body according to its most electro-positive ingiedients. But he observes that, in the present state of science, we must be content with an arrangement only approximating to precision. Ha divides simple bodies into three classes. 1. Oxygen; 2. Simple non-metallic inflammable bodies, which he calls Metalloids; 3. Metals. He arranges them in the order in which they follow one another, from the most electro-negative to the most electro- positive, in every class. This order Is nearly as follows :—

1. OXYGEN. 2. METALLOIDS.

Sulphur, Fluoric radicle,

Nitricum, or the radicle Boron,

of azote, Muriatic radicle, Carbon,

Phosphorus,

Hydrogen.

3. METALS.

Arsenic,

Lead,

Chromium,

Tin,

Molybdenum,

Nickel,

Tungsten,

Copper,

Antimony,

Uranium,

Tellurium,

Zinc,

Silicium,

Iron,

Tantalum,

Manganese,

Titanium,

Cirium,

Zirconium,

Yttrium,

Osmium,

Glucinim,

Bismuth? (uncertain)

Alumnium,

Iridium,

Magnesium,

Platinum,

Calcium,

Gold,

Strontium,

Rhodium,

Barytium,

Palladium,

Sodium,

Mercury,

Potassium.

Silver,

Every one of these bodies can constitute a mineralogical family, which will consist of that single body, and all its combinations with bodies that are electro-negative towards it, that is, all those which with some few exceptions precede it in the above series. Thus there may be as many families as there are simple substances. The families he divides into orders, according to die different electro-negative bodies with which the most electro-negative are combined. It must be confessed that the obstacles which oppose themselves to the formation of a complete mine- ralogical system, on the principles proposed by Berzelius, appear to be great, particularly with respect to many of the mineials that never occur crystallised, as it seems that we have no means of determining the proper constituent ingre- dients from the mechanical admixtures which they may contain. If, indeed, chemistry should ever attain that high degree of perfection which will enable us to discover the limits of all the possible combinations of the elementary parts of minerals, we may then subtract from our ana- lyses those parts which do not fall within these

limits, as being in mechanical admixtures, in the same manner as the chemist is now enabled to determine, from the doctrines of definite propor- tion alone, the quantity of uncombined acid or alkali that exists in a saline solution, when either of the ingredients is in excess.

If one class of stony bodies consists of salts, in which silex performs the functions of an acid, combining with them in definite proportions, the discovery of these proportions in the different combinations is certainly most important.

The late Dr. Clarke of Cambridge also pub- lished an arrangement of minerals purely che- mical, in which the earths are considered as the oxides of metals, which cannot exist in any other state in our atmosphere. Thus barytes is an oxide of barium and silicium, zircon of zirco- nium and silicium, garnet an oxide of silicium, calcium, aluminum, and iron, and so on with the other genera. This system, however, has not been generally received, and indeed a more intimate acquaintance with the chemical pro- perties of minerals than we at present possess will be necessary before any complete chemical arrangement can be formed.

Mr. Brooke, in his well known work on Crys- tallisation, has recommended

an alphabetical arrangement of mineral substances as greatly facilitating the reference to particular specimens ; and it will appear to deviate less from natural classification when we recollect that, strictly speaking, there is no natural connexion or order to supersede this method. No natural proper- ties can determine whether zircon should be placed before or after silex, or whether lead should precede or follow iron or copper. There may be conceived to be as many natural classi- fications of minerals as there are physical pro- perties common to the substances to be arrang- ed. Thus the metals might be arranged accord- ing to their fusibility, or their ductility, or their specific gravity. Either of these characters might be adopted as the basis of a natural clas- sification, and the order of the substances thus classed would vary according to the generic cha- racter adopted.

Acting upon these principles Mr. Brooke has given an arrangement of the mineral genera in alphabetical order, collected however into certain chemical groups, and containing accurate de- scriptions of the primitive forms.

In the year 1817 Dr. Brewster announced to the Royal Society the existence of what he calls a physical law, by which the primitive forms of crystallised bodies can be referred from the number of their axes of double infraction. He also asserts that every variation in the position, the intensity, and the character of these axes in smaller minerals is found to be accompanied by a difference of chemical composition ; while a difference of chemical composition also denotes a difference of optical structure. All the com- binations also of the sulphuric and tartaric acids with a single, earthy, alkaline, and metallic base, are found to have two axes of double refraction. In a memoir printed in the Wernerian. Transac- tions Dr. Brewster pursued tins subject to a greater length and stated that the law having been established, by a comparison of his own ex-

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MINERALOGY.

penments on polarised light with the tables of primitive forms given by the abbe Haiiy, there appeared to be eleven exceptions, which were as follows : —

Sulphate of magnesia, Cryolite, Chromate of lead, Harmotome,

Mesotype, Chabasie,

Carbonate of barytes, 10 Sulphate of iron,

5 strontites, Essonite.

lolite,

‘ These exceptions, says Dr. Brewster, to a law otherwise general and comprehensive, were as- cribed by myself and others to the circumstance of the primitive forms of the minerals having been erroneously determined ; and as I was then aware, from actual experiment, that the optical structure of a crystal was dependent on the mechanical condition of its parts, I did not scruple to predict, and to publish the prediction, that all these eleven exceptions had their foun- dation in crystallographic errors, and that these minerals would be found to possess primitive forms, in perfect conformity with the general optical law which I had discovered Crystal- lography and optics were thus fairly placed at issue, and there was no method of evading the decision of the mineralogists of Europe. If these eleven bodies were found to possess the primitive forms assigned to them by Ilaiiy, the optical law which I promulgated must have instantly fallen to the ground as an imposing though imperfect generalisation, and the crystal- lographic method must have enjoyed the proudest triumph. The result, however, of this trial of strength was very different indeed. All the mi- nerals out of the eleven which have been care- fully re-examined by mineralogists, have been found to have different primitive forms from those assigned to them by Haiiy, and in all of them has rny prediction been accomplished.’

‘ That optical law,’ continues the doctor, ‘ which connects the primitive forms of mine- rals with the number of their axes of double re- fraction stands pre-eminent among crystallogra- phic generalisations, without a single ascertained exception; it has corrected the deductions of the most distinguished crystal lographers of Europe ; it has enabled those who confide in its accuracy to predict the results of crystallogra- phic researches ; and, what has not been suffi- ciently attended tc, it is a law founded on ex- perimental evidence, that the optical phenomena are the necessary results of a mechanical struc- ture, and that their indications must infallibly harmonise with the sound deductions of crystal- lography. It not only decides the class of pri- mitive forms, but it determines, which

crystallo- graphy is incapable of doing, those limiting solids which form the nodes of every series of geometrical bodies. If we take a crystal, for ex- ample, bounded by six equal square faces, the crystallographer will content himself with calling it a cube ; but the optical mineralogist will only call it a cube when it has no double refraction. He will maintain it to be a rhomb, if it has a single axis of double refraction, coincident with one of its diagonals; and he will consider it as a right prism with a square base, if it has a single VOL. XIV.

axis of double refraction, perpendicular to any two of its faces. The position of the axis of double refraction shows, that the mechanical condition of the parts of the crystal is related to that line in which it is invariably found in every rhomboid, and in every prism with a square base.' Dr. Brewster concludes by contending that, if the physiology of mineral bodies shall ever at- tain to the dignity of a science, its foundations must be laid upon optical results, and its pro- gress directed by the unerring light of optical analysis !

Of the comparative meritt of the various sys- tems we have described our different readers will form their ideas according to the degree in which they may have previously investigated them : while those who have never examined the subject will perhaps feel intimidated from under- taking any estimate. Into a particular or lengthened analysis of their differences our li- mits will not allow us to enter : a comparative sketch of their most striking features is all we can afford.

But the same reasons which require a distribu- tion of natural science into different branches render subdivisions and arrangement in each branch peculiarly useful and important, and make necessary an acquaintance not only with the mere facts involved, but with the mutual re- lations that exist between them. On the basis of the whole must be established a just syste- matic arrangement. Such arrangements have already been successfully effected in zoology and botany ; but in mineralogy difficulties arise which do not exist in classing the animal and vegetable tribes : — they make their appearance, indeed, at the very foundation of the system, viz. in form- ing the species. Could we satisfactorily deter- mine what constitutes a mineral species, little difficulty would remain in forming the other divisions ; but, deprived of organisation, a mine- ral has not the power of producing another like itself, a circumstance which, in the animal and vegetable kingdoms, is the great preservative of all the species. In bodies possessing organic structure, therefore, one species never passes into another by imperceptible degrees ; whereas minerals, being formed merely by the juxtaposi- tion of their parts, and being continually subject to the influence of external agents during the period of their formation, are frequently con- taminated by foreign substances, by which dif- ferent species become

confounded in their ap- pearance and properties.

It must hence be obvious that no small difficulty attends the determination of the species in mineralogy ; and accordingly we find that dif- ferent opinions have been entertained, and dif- ferent methods employed. These however may be all comprised under the four following heads : — I. The chemical system, or that which is founded on a knowledge of the different elements of which minerals are composed, and the different proportions in which they are combined. II. The mixed method, advocated by Werner, Hoff- man, and Kirwan, in which the species are de- termined and arranged according to the chemical and external character conjoined. III. The ex- ternal or crystallographic method, depending

principally on the primitive crystalline forms of minerals as determined by their cleavage &c. And, IV. The optical system, which professes to arrange minerals according to their various powers of polarising and modifying light. Of these we certainly feel inclined to prefer a mixed method, similar to that of professor Cleaveland of New York, and in which the chemical charac- ter should certainly predominate. The arrange- ments of science, like the letters of the alphabet, may be used by children as mere objects of amusement, but are employed Ijy men with some ultimate view, to express ideas, or to explain phenomena. In botany and zoology the objects, as they exist, are made conducive to the comfort of man ; but the greater part of the mineral sub- stances must be decomposed before they can be used by him. An arrangement having some connexion therefore with their properties when so decomposed must obviously be the most useful : we must in some cases rely chiefly on the exter- nal, and in others chiefly on the internal, charac- ters ; but, in all cases in which ambiguity remains, the final decision, in our view, should rest with the latter.

The chemical system, however, is not without its objections, and of these the most important appears to be the imperfection of its analysis. When the chemist determines that two bodies have the same ingredients, he is ignorant of the manner in which these ingredients are combined. If the analysis of a quadruped and a bird indi- cated the same elements, he could not discover that these formed horn and hair in the one, while, in the other, they displayed themselves in the finest plumage. The chemist must always fail in detecting structures, because he commences his operations by destroying them. He examines a mineral in its ruins ; and after its parts

have been separated, by the disintegrating power either of heat or acids, he may determine the quantity ; but he is frequently ignorant of the nature of those volatile parts which escape dur- ing the destroying process. The fluoric acid, for example, in certain micas, eluded the penetration of Vauquelin, and the same gas was not dis- covered by Berzelius in his first analysis of apo- phyllite. With all the skill of modern chemis- try, we are yet unable to determine which of the component parts of minerals are essential to the composition of the substance analysed, and which are but accidental mixtures. In the in- stance of the crystallised sandstone from Fon- tainbleau, no doubt can be entertained that either the carbonate of lime, or the grains of sand, must be regarded as accidental mixture, and foreign to the constitution of the species, accord- ing as we choose to consider the specimens, as arenaceous quartz agglutinated by carbonate of lime, or as cafbonate of lime enclosing grains of quartz. It would, however, present little diffi- culty to the chemist to determine that the silex and lime are not chemically combined in the sandstone : but there are numerous other in/' stances in which even the sagacity of a Berze- iius has probably failed in discriminating the matter accidentally present in several of the species of minerals which have been analysed, from that which is essential to the composition

of each particular species. In some instances the destruction of the mineral in order to analyse it cannot be allowed. Diamonds, rubies, eme- ralds, and other precious stones, were well dis- tinguished by their external characters long be- fore their internal properties were known, if even now they can be said to be so. It were indeed a melancholy circumstance for a jeweller if he had no other certain way of distinguishing his gems but by one which necessarily implies their previous destruction.

- *In regard to the human intellect,' observes professor Mobs, ' the value of the information derived from natural history and from chemistry is absolutely equal. It is an erroneous idea that chemistry penetrates into the interior of bodies, and, therefore, a reprehensible practice to re- proach natural history with being confined to their external appearances. It will always re- main impossible to perceive the internal disposi- tion. The analysis of a body does not disclose its interior, or its component particles, but only the exterior of the results obtained by the opera- tions, the substances themselves, and their rela- tions to each other. The body which has been analysed disappears, as it were, from nature; and in its stead other bodies are produced, which, as such, did not exist before. In the same man- ner, two or more bodies, if joined by chemical action, will disappear, and give rise to a new one, in which they no longer exist as they were before.'*

It is indeed sufficiently evident that neither chemistry nor natural history can disclose the essence or interior of bodies ; but surely that in- vestigation which exhibits most of the properties for which they are valuable to man is most worthy of his aUenlion. But chemistry alone will not suffice for the basis of a mineral arrange- ment; for unless we could again recognise, by its external character, a species already analysed, each individual must be destroyed to discover its place in the system. To unite the two sys- tems seems, therefore, the most advisable plan.

Concerning the prevailing system of M. Mohs we fear, however, that we entertain very hereti- cal opinions. We object to the undue promi- nence given in this system to crystallography ; which, as very many important classes of mine- rals, as coal, chalk, slate, &c., are destitute of crystalline structure, can never be of universal application. The destruction, even of a crystal- lised unknown species, is equally necessary to discover its primitive form, as to complete its chemical analysis; and, when we take into con- sideration the frequent occurrence of isomor- phous crystals, little more accuracy can be claimed for one mode than for the other. ' It demand?,' observes Mr. Brooke, ' great precision of hand and eye to obtain the true measurements of angles to a minute only, and we cannot say that a difference of species may not exist, with a difference of only a few seconds in the angles of inclination of their planes. We know that the greater angle of a right rhombic prism must lie somewhere between 90° aud 180°. If the angle were 90°, the prism would be square, and 180° would reduce the prism to a plane. But, between 90° and 180°, we do not know how many dif-

ferent prisms may exist. If they differed by de- grees only, their number could exceed eighty- nine. If the difference consisted of. minutes, there might be 5399 such prisms, all distinguishable by the goniometer ; but, if the differences con- sisted of seconds only, there might evidently be 323,999 rhombic prisms, of which no more than 5399 could be distinguished by the ordinary go- niometric instrument;?.' We objecl again to that vagueness of definition which canallow the intro- duction of atmospheralia into a mineral arrange- ment, and the collection of earthy and metallife- rous minerals into one class merely because their specific gravity is above 1 8. From M. Mohs's de finition it is really impossible to understand what simple minerals are. Porcelain, earth, and green earth, are rejected because chemistry, whose as- sistance the professor seems to despise, has dis- covered them to be decompositions of felspar and talc-mica. Iron-flint, heliotrope, jasper, tile-ore, clay, tripoli, yellow earth, and

many others, are considered to be mixtures as much as granite, though the component particles are un- distinguishable, by reason of their smallness. Hence no one of them is treated even as a par- ticular species in his arrangement of the mineral kingdom. Basalt, claystone, serpentine, &c., are likewise held to be mixtures.

In the mean time water and atmospheric air are ranked as simple minerals, although certainly chemical compounds ; and the interference of the chemist is deprecated, though the system is founded upon the results of his labors. If hy- drogen be included among minerals, merely because it is produced by the earth in certa-in places, then with equal propriety may oxygen, be arranged among the piants, because produced by them naturally and constantly. ‘ Surely this system,’ to adopt a favorite phrase of professor Mohs’s, ‘ carries with it its own refutation.’ Yet it should be observed, that the professor consi- ders the application of his ideas ‘ too confined, if we consider as natural productions only those bodies for which nature itself has produced the essential circumstances and causes of formation. A number of salts, and other bodies, obtained by the aid of chemistry, would in that case be excluded, and considered as artificial produc- tions, although the part which art, or the control of man, takes in their formation, is entirely li- mited to the mere production of those circum- stances under which nature may exert, in pro- ducing those new combinations, the same powers which enter into action when the other bodies are produced.’ We need only observe that the same arguments would reduce the whole of che- mical philosophy, and even caloric and light, within the scope of professor Mohs’s mineral kingdom. We cannot better conclude these re- marks on the external system than by the following queries of professor Cleveland : —

‘ Can similarity of color,’ says he, ‘ or of form, fracture, hardness, fcc., constitute a resem- blance so perfect, as that which arises from identity of composition 1 Or can a difference of color, form, fracture, 8cc., establish so impor- tant a distinction- between minerals, as that •vhich is produced by dissimilarity of composi- tion 1 Would not two minerals, both composed

of phosphoric acid and oxide of lead, in the same proportion, belong to the same species, although the color of one should be brown, and that of the other green 1 Would not two mine- rals, composed of phosphoric acid and lime, in the same proportion, belong to the same species, although the forms of their crystals, essentially the same, should exhibit different modifications? In fine, can properties liable to numerous variations, from trivial and accidental causes, be supposed to establish the identity of two or more minerals with that degree of evi- dence which is afforded by a well ascertained similarity in composition ‘. We hesitate not to answer these questions by saying, that the true composition of minerals ought to be the

basis of arrangement ; and by this ought the species to be established. The composition of a mineral, that is, the ingredients proper and essential to its composition, may remain unaffected by the accidental presence of certain foreign ingredients, which materially change several of the external characters.'

The optical system of Dr. Brewster has been before the public so short a time that no final opinion can be given as to its merits. He appears to have examined a very considerable number of mineral and other bodies by means of polarised light, and has been led by this examination to the following optical classifica- tion of crystals: — 1st. Those in which only one axis of double refraction has been yet observed ; which include nearly all the crystals comprised in the first and second of Mohs's systems. 2dly, Those which possess two axes, consisting of nearly, if not entirely, the whole of Mohs's third system. But some, which crystallographically belong to the first and second systems, are also included by Dr. Brewster in this. 3dly, Those in which no double refraction has been yet disco- vered, either by direct experiment, or by means of polarised light, and which belong to the fourth system of Mohs.

Out of these facts, which, we must allow, are very numerous, and hence very imposing, Dr. Brewster has produced two optical systems ; one relating to mineralogy generally; and the other relating to compounds of sulphuric and tartark acids, with earthy, alkaline, and metallic bases, all of which are said to have two or more axes of double refraction. But in the Philosophical Transactions for 1816, Dr. Brewster announce? the discovery, that muriate of soda, Jtuor-spar and diamond, which belong to the tes$ular system oT Mohs, and hence ought to possess no double refraction, may receive that property by compres- sion or dilatation. Arr.1, in the volumes for 1816 and 1818, it is stated, that all the prapertiet of regular crystals might 6e communicated perma neatly to glass, and other crystallised bodies, by heat.. This completely, in our humble estimate, overturns the basis of the system. If optical phenomena are to constitute specific characters among minerals, does it not follow either that glass changes its species with its change of optical character, or that optical characters are insuffi cient to distinguish species 1 ,W0 fear we must conclude with Mr. Brooke, ' that the connexion between the optical characters of minerals and*

their crystalline forms is not yet sufficiently un- derstood to make it available for mineralogical purposes.

PART III.

THE ARRANGEMENT OF KNOWN MINE- RAL SUBSTANCES.

The description of minerals, and their arrange- ment in systematic order, seem most naturally to result from an investigation of certain relations which minerals bear to our senses, or to other objects. Some of these are discoverable by mere inspection, or, at most, require some simple ex- periment to be made upon the mineral to ascer- tain its hardness, structure, &c., but without producing any important change in its natural state ; while others cannot be observed without a partial or complete decomposition of the mineral. All these properties, when employed for the purpose of discriminating minerals, are usually called characters, and are as follows : —

GENERAL CHARACTERS.

The general characters are, color, cohesion, unctuosity, coldness, weight, smell, taste.

Color. — The colors of minerals are distin- guished into fundamental and compound. Fun- damental colors are eight in number; namely, snow-white, as Carrara marble ; ash-gray, as wacken ; velvet-black, as jet ; Berlin or Prussian blue, as sapphire ; emerald-green, as fluor spar ; lemon-yellow, as in yellow orpiment ; carmine- red, as in cinnabar. Chestnut brown, the color 01 the ripe chestnut.

Compound colors are, 1. Of the whites, red- dish-white, or snow-white mixed with a crimson- red, as porcelain ; yellowish-white, or snow- white with a lemon-yellow, as white amber; silver-white or grayish-white, as silver ; green- ish-white, or snow-white mixed with a little emerald-green, and ash-gray, as gypsum, quartz, &c. ; milk-white, or snow-white, with a little Berlin and ash-gray, as chalcedony. 2. Of the giays, the lead-gray, or ash-gray, with a little blue metallic lustre, as galena; bluish-gray, or ash-gray, with a little blue, as bluish gray clay ; smoke-gray, or ash-gray, with a little brown, as gray-hornstone ; pearl-gray, i.e. gray with a little crimson-red and blue, as quartz ; greenish-gray, i. e. with a little emerald-green, and sometimes a trace of yellow, as in cat's-eye, prehnite, &c. ; yellowish-gray, i. e. with lemon- yellow and a trace of brown, as yellowish-gray chalcedony ; steel-gray, i. e. gray with a little blue and a metallic lustre, as gray copper ore.

3. Of blacks, the grayish-black, or velvet-black, with a little ash-gray, as in basalt ; iron-black, darker than the preceding, with a metallic lustre, as in magnetic iron-stone; pitch-black, with a little brown and yellow, as pitch-

stone; raven- black, with a little brown, yellow, and green, as in black blende ; bluish-black, as in black cobalt.

4. Of blues, the indigo blue, or Berlin blue, with a little black, as in blue martial earth; azure-blue, with a little red, as in lapis lazuli ; violet-blue, with much red, and a little brown, as in fluor spar and amethyst, &c.; lavender

*blue, with a little gray, as in jasper ; smalt-bin*1, with white, a little gray, and a trace of red, ar in azure copper ore ; sky-blue, as in blue fluor spar. 5. Of greens, the verdigris-green, or emerald green, with much Berlin blue, and a little white, as in green copper ore : mountain green, with a little yellowish gray, as in actyno- lite ; apple-green, with a little grayish-white, as in chrysolite ; grass-green, with a little lemon- yellow, as in chrysoprase ; blackish-green, with a considerable portion of black, as in green ser- pentine; pistachio-green, with a little yellow and brown, as in chrysolite ; asparagus green, with a little grayish-white, as in chryso-beryl ; olive-green, with much brown, as in garnet; siskin-green, with much lemon-yellow, and a little white, as in green lead ore. 6. Of yel- lows, the sulphur-yellow, or lemon-yellow, with much emerald green and white, as in native sulphur ; gold-yellow, straw- yellow, with much grayish-white, as in calamine and bismuth ochre; honey-yellow, with chestnut-brown ; wax-yellow, i. e. reddish-brown, with a little ash-gray, as in common opal ; ochre-yellow, with much chestnut- brown, as in iron ochre, calamine, &c. ; orange-yellow, with a little carmine-red, as in red orpi- ment ; brass-yellow, with the metallic lustre, as copper pyrites ; cream color, or Isabella-yellow, with grayish-white, and a little brown and red, as in sparry iron ore; wine-yellow, with reddish, brown, and gray, as yellow calcareous spar. 7. Of reds, the aurora-red, or carmine-red, mixed with much lemon-yellow, as in red orpiment ; hyacinth- red with lemon-yellow, and a little brown, as in the hyacinth, and in brown blende ; brick-red, with much grayish-white, as in porcelain jasper ; scarlet-red, with a very little lemon-yellow, as in red cinnabar; copper- red, as in native copper ; blood-red, scarlet-red mixed with brownish-black, as in Bohemian garnet ; cochineal-red, carmine- red mixed with bluish-gray, as in cinnabar ; crimson-red with much blue, as in ruby ; colum- bine-red, with more blue, and a little black, as in red cobalt ore ; flesh-red with grayish white, as in felspar ; rose-red, cochineal-red mixed with white, as in red zeolite; peach-blossom-red, crimson-red mixed with white, as in striated and earthy red cobalt ores ; cherry-red, crimson-red mixed with much brownish-black, as in red argillaceous iron-stone; brownish-red, blood-red mixed with brown, as in red earthy iron-stone 8. Of browns, the chestnut-brown, mixed with a little red and yellow, as in brown tin ore ; clove- brown, with cochineal-red and a little black, as in rock crystal; hair-brown, clove-brown mixed with ash-gray, as in wood-tin ore from Cornwall ; yellowish-brown, chestnut-brown with a considerable*

portion of lemon-yellow, as in brown iron ochre and jasper; pinchbeck-brown with the metallic lustre, as brown mica; wood- brown, yellowish-brown with much ash-gray, 9S in bituminous wood ; liver-brown, as in brown cobalt ore ; blackish-brown, chestnut-brown and black, as in mineral pitch.

In respect to intensity, colors are either dark, deep, or light ; or they are said to incline to one another, or to pass into one another ; and, when they lose their original color, to be tarnished. When different colors appear in the same mineral,

they may be disposed in clouds, dots, streaks, rings, veins, zones. 8cc.

Cohesion. — In respect to cohesion minerals are either solid, friable, or fluid.

Unctuosity. — In respect to unctuosity they are either greasy or meagre.

Coldness, fyc. — In respect to coldness they vary only in degree ; and in respect to smell and taste the distinctions are too obvious to need description.

Weight . — The weight of minerals is accurately discovered by taking the specific gravity by means of a hydrostatic balance.

Specific gravity. — The specific gravity of a body is its weight, compared with that of another body of like magnitude. The usual standard employed is distilled water, 1 cubic foot of which weighs 1000 ounces avoirdupois. This may be called 1000, or 100, or 10, or 1, adding decimals. If we assume 1 as the standard, then, as the weight which a body loses in water is to its absolute weight, so is 1 to the specific gravity required. If the mineral be lighter than water, add the weight which is necessary to sink it in water to its weight in air ; and say, as the sum is to its weight in air, so is air to its specific gravity.

On this principle is founded the method of taking specific gravities by the instrument com- monly called Nicholson's Portable Balance. The body of this instrument is a hollow cylinder of tinned iron, of which each extremity terminates in a cone. From the vertex of the upper cone a small stem of brass rises perpendicularly, bear- ing on its upper extremity a small tin cup. From the vertex of the lower cone is suspended a similar cup, attached to a cone of lead under- neath it as a ballast. Both the cups may be re- moved, when the balance is not in use. When this instrument is placed in a vessel of water, a portion of the cylinder ought to swim above the surface. The tin

cup is then to be loaded with weights, till the instrument sinks so far that the surface of the water may exactly coincide with a mark on the brass stem. The quantity neces- sary to make the instrument sink thus far may be marked on the cup, as a given quantity for future use.

Suppose this quantity to be 600 grains, which may be called the balance weight, and will serve for taking the specific gravity of any substance, whose absolute weight is not greater than that of the balance weight. To ascertain the specific gravity of a mineral, place it alone in the upper cup, and add weights, till the mark on the stem coincides with the surface of the water; and suppose this to be 210 grains. Subtract the 210 grains from the balance weight of 600 grains ; and the remaining 390 grains is the absolute weight of the mineral in air. Let the mine- ral be now removed to the lower cup ; but, as it weighs less in water than in air, the mark on the stem will rise a little above the surface of the water. Additional weights must now be placed in the upper cup, till the mark on the stem again coincides with the surface of the water. Sup- pose this to be eighty grains, which will of course be the weight of a quantity of water precisely

equal in bulk to the mineral. We now have the absolute weights of equal bulks of water and of the mineral ; then say, as 80 : 390 : : 1000 : 4875, the specific gravity.

If the mineral under examination be lighter than water, it must be confined, when weighed in the lower cup ; and the weight of whatever confines it is to be regarded as belonging to that of the instrument. ID other respects the process is the same as the preceding.

If the mineral very sensibly absorb water, the weight of the water imbibed must be ascertained by again weighing the mineral in air ; and is then to be added to the first term of the propor- tion.

PARTICULAR CHARACTERS.

The particular characters comprehend the general aspect, aspect of the surface, aspect cf the cleavage, aspect of the distinct concretions, hardness, and adhesion to the tongue.

General aspect. — Under the general aspect arc- comprehended the transparency, streak, and soiling.

In respect to transparency, minerals are said to be transparent when objects can be seen distinctly through them ; semilransparent when seen indistinctly through them.; translucent when light passes through them, but not in such quan- tity that objects may be discerned through them ; opaque when no light is transmitted ; hydropha- nous when opaque minerals become

transparent in water. When objects are seen double through a transparent mineral they are said to refract doubly. The streak, or scratch, is the mark left by the scratching a mineral, which is termed similar if it be of the same color as the mineral, or dissimilar if of a different color. Soiling is the stain which some minerals leave when rubbed on the fingers, or on paper.

Aspect of the surface. — To the aspect of the fracture belong the shape of the mineral, the kind of surface, and the lustre of the surface. The external shape is common when it is too irregular to be compared, in respect to form, with any other body, as when it composes the part of a solid rock, and is called massive ; or when it is very small, and is said to be disseminated. When it occurs loose it is either in angular pieces, in grains, in plates, or in membranes. The exter- nal shape is denominated particular when it may be compared with that ot any other body. Of this desciiption are the dentiform, filiform, capil- lary, globular, reniform, cellular, amorphous, ve- sicular, &c., whereby is indicated the body which the mineral resembles in shape. The shape of minerals is moreover denominated regular when they occur in a crystallised state (vide CRYSTAL- LISATION and CHEMISTRY); and extraneous when they are of the nature of petrifactions. The external surface of minerals is uneven when it has small unequal elevations and depressions; granulated when composed of small round ele- vations, like shagreen : rough when the elevations felt are too small to be distinctly seen ; smooth, as in the haematites ; streaked, as in rock crys- tals, &c. ; and drusy when coated with small crystals, as the quartz. External lustre is of two

kinds, common and metallic ; the latter of which is subdivided into semimetallic, adamantine, pearly, resinous, and glassy. In point of inten- sity, tlie lustre is splendent when it may be seen at a great distance in the daylight ; shining when the light is reflected weakly at a distance ; glistening when the lustre is visible at no greater distance than an arm's length ; glimmering when the sur- face held near in full daylight presents a number of shining points ; dull when the surface has no lustre.

Aspect of the ckanage. — Cleavage is the pro- perty which minerals possess of splitting in cer- tain determinate directions. The faces or planes thus obtained, which are termed the faces of the cleavage, are more or less smooth and shining. The forms contained under these faces are called forms of cleavage, or cleavage forms.

The cleavage-forms represent members of the series of crystallisation of

those mineral species to which the mineral having the cleavage belongs. The same may be inferred of such individuals or species as possess more than any cleavage form. Hence cleavage extends the application of crystallography in the mineral kingdom, because a mineral, although it be not crystallised, may be cleavable, and thus allow the series, at least the system of crystallisation, to be made out by cleavage in most of the cases, where no regular crystallisations occur.

The cleavage forms are designated like those of crystallisation. Cleavage-forms, Mohs re- marks, if among the number of those which in the preceding pages served as a basis to the de- rivation, are by preference chosen for represent- ing the fundamental form in the species to which they belong; as in rhomboidal calc-spar, the rhomboid of 105° 5'. This rule, however, suffers an exception in the case of a rhomboid or a pyramid, which occur as cleavage-forms, being too obtuse or too acute. For this reason, in py- ramidal copper pyrites, the fundamental form is P, though the cleavage form is P+l- No cleavage form whose dimensions are infinite can be employed as a fundamental form.

Hardness. — The degrees of hardness or their limits are by Kirwan, Mohs, and others expressed by numbers. The most precise scale of hardness is that of Mohs, in which the degrees are deter- mined according to the following scale : —

1 . Denotes the degree of hardness of common talc and Venetian talc.

2. Is the hardness of a variety of prismatoidal uypsum, with an imperfect cleavage and imper- fect transparency. Varieties perfectly transparent :uul crystallised are commonly too soft.

3. Hardness of a cleavable variety of calcare- ous spar.

4. Hardness of fluor spar.

5. Hardness of apatite.

6. Hardness of prismatic felspar.

7. Hardness of rhomboidal quartz.

8. Hardness of prismatic topaz.

9. Hardness of rhomboidal corundum.

10. Hardness of octahedral diamond.

Atlhc! > i(»i to thr tongue. — This property.in mi- vi.nes in the degrees of strong, rather

strong, weak, and very weak. Some admit of no adhesion.

The above-mentioned properties are all com- prehended under the general name of external characters, in distinction from the physical and chemical characters by which some minerals are known.

PHYSICAL CHARACTERS.

The most common and obvious of the physi- cal characters is the electrical property which some minerals possess. Some minerals become electric when heated, others when rubbed. The electricity thus excited is in some positive or vitreous; in others it is negative or resinous. The magnetic property of some minerals, parti- cularly of the iron ores, is well known, as also the phosphorescent property of others, particu- larly the varieties of the blende. To the Lem- nian earth, and othei boles, belong the peculiar property of making a crackling noise when split and thrown into water; and other minerals have particular properties by which they might be sufficiently distinguished.

CHEMICAL CHARACTERS.

By chemical experiments the nature of many mineral substances may be easily and quickly ascertained. The fusibility of many minerals is determined by the blow-pipe. The effervescing property of some bodies is determined by means of acids, particularly nitrous acid. Ammonia, or the volatile alkali, dissolves copper, and assumes a blue color ; acetic acid is employed as a test of lead, by its communicating to the acid a sweetish taste. In this manner discriminating characters are derived from the chemical proper- ties of minerals, which may answer the purpose of classification in many cases full as well as the external characters.

Of the analysis of earths and stones. — When any of these substances are to be tried, we must not begin immediately with the blow-pipe; till some preliminary experiments be made, by which those in the fire may afterwards be directed. For instance, a stone is not always homogeneous, or of the same kind throughout, although it may appear to be so. A magnifying glass is therefore necessary to discover the heterogeneous particles, if there be any ; and these ought to be separated, and every part tried by itself. This might hap- pen with some of the finer micae, which are now and then found mixed with small particles of quartz, scarcely to be perceived by the eye. The trapp (German schwartzstein) is also some times mixed with very fine particles of feldt spar (spatum scintillans), or of

calcareous spar, &c.

After this experiment the hardness of the stone must be tried with steel. The flint and garnets are known to strike fire with steel ; but there are also other stones, which are so hard as likewise to strike fire. There is a kind of trapp of that hardness, in which no particles of feldt spar are to be seen. Colored glasses resemble true gems; but, as they are very soft in proportion to these, they are easily discovered by the file. The common quartz crystals are harder than colored

glasses, but softer than gems. The loadstone discovers the presence of iron, when it is not mixed in too small a quantity in the stone, and often before the stone is roasted. Some kinds of haematites, and particularly the ceerulescens, greatly resemble some other iron ores; but this is distinguished from them by a red color when pounded, the others giving a blackish powder.

The management of the BLOW-PIPE is de- scribed under that article; but a few particulars must be here added.

The blue flame is the hottest ; this ought, there- fore, to be forced out when a great heat is re- quired ; and only the point of the flame must be directed upon the subject which is to be assayed. Its upper end must be bended towards the mat- ter intended to be heated, and the stream of air must be directed along the surface of the bended part, so as not absolutely to touch it.

The piece of charcoal made use of in these experiments must not be apt to crack. If this should happen it must gradually be heated until it does not crack any more, before any assay is made upon it. If this be not attended to, but the assay made immediately with a strong flame, small pieces of it will split off in the face and eyes of the assayer, and often throw along with them the matter that was to be assayed. Char- coal which is too much burnt consumes too quick during the experiment, leaving small holes in it, wherein the matter to be tried may be lost ; and charcoal that is burnt too little catches flame from the candle, burning by itself like a piece of wood, which likewise hinders the process.

Of the substance to be assayed, only a small piece must be broken off, not bigger than that i he flame of the candle may be able to act upon it at once, if required; which is sometimes ne- cessary, as when the matter requires to be made red-hot throughout, the piece ought to be broken ;is thin as

possible ; the fire having then more influence upon the subject, and the experiment being more quickly made.

Some mineral bodies are very difficult to be kept steady upon the charcoal during the experiment, before they are made red-hot; be- cause, as soon as the flame begins to act upon them, they split asunder with violence, and are dispersed. Such are, for instance, the cal- careous spar, the sparry gypsum, sparry fluor, white sparry lead ore, the potter's ore, the tessel- lated mock lead or blende, Stc., and all the com- mon fluors which have no determinate figure. These not being so compact as common hard stones, when the flame is immediately urged upon them, the heat forces into their clefts or pores, and causes this violent expansion and dispersion. Many clays are likewise apt to crack >n the fire, which is mostly owing to the humi- dity, of which they always retain a portion.

The only way to prevent this inconvenience is to heat the body as slowly as possible. First heat that place of the charcoal where the piece is intended to be put, and afterwards lay it thereon : a little crackling will then ensue, but commonly of no great consequence. The flame is then to be blown very slowly towards it, in the beginning not directly upon, but somewhat above it, and so approaching nearer and nearer

with the flame until it become red-hot. This will do for the most part ; but there are never- theless some, which, notwithstanding all these precautions, it is almost impossible to keep on the charcoal. Thus the fluors are generally the most difficult; and as one of their principal cha- racters is discovered by their effects in the fire per se, they «ought necessarily to be tried that way. For this purpose it is best to make a little hole in the charcoal to put the fluor in, and then to put another piece of charcoal as a covering upoi. this, leaving only a small opening for the flame to enter. As this stone will nevertheless split and fly about, a large piece thereof must be taken, in order to have something of it left. But, if the experiment is to be made upon a stone with fluxes, then a piece of it ought to be forced down into melted borax, when always some part of it will remain in the borax, not- withstanding the greatest part may sometimes fly away by cracking.

• As the stones undergo great alterations when exposed to the fire by themselves, whereby some of their characteristics, and often the principal, are discovered, they ought first to be tried that way. The following are generally the results of this experiment :

Calcareous earth or stone, when pure, does not melt by itself, but becomes white and friable, so as to break freely between the fingers ; and if suffered to cool, and then mixed with water, it becomes hot, like quicklime. As in these expe- riments only very small pieces are used, this last effect is best

discovered by putting the proof on the outside of the hand, with a drop of water to it, when instantly a very quick heat is felt on the skin. When the calcareous substance is mixed with the vitriolic acid, as in gypsum, or with a clay, as in marl, it commonly melts by itself, yet with more or less difficulty in proportion to the differences of the mixtures. Gypsum produces generally a white, and marl a gray, glass or slag. When there is any iron in it, as a white iron ore, it becomes dark, and sometimes quite black, &c.

The siliceae never melt alone, but become ge- nerally more brittle after being burnt. Such of them as are colored become colorless, and the sooner when it does not arise from any contained metal ; for instance, the topazes, amethysts, Sec., some of the precious stones, however, excepted ; and such as are mixed with iron grow dark in the fire, as some of the jaspers, &c.

The garnets melt always into a black slag, and sometimes so easily that they may be brought into a round globule upon the charcoal.

The argillaceoe, when pure, never melt, but become white and hard. The soap-rock is easily cut with a knife ; but, being burnt, it cuts glass, and would strike fire with steel, if as large a piece as is necessary for that purpose could be tried in this way. The soap rocks are sometimes found of a dark brown, and nearly black color, but ne- vertheless become quite white in the fire. But care must be taken not to urge the flame from the top of the wick, there being for the most part a sooty smoke, which will darken all that it touches ; and, if this be not observed, a mistake in the experiment may happen. But if it is mixed with

iron, as it sometimes is, it does not so easily part with its dark color. The argillaceae, when mixed with lime, melt by themselves. When mixed with iron, as in the boles, they grow dark or black ; and, if the iron is not in too great a quan- tity, they melt alone into a dark slag ; the same happens when they are mixed with iron and the vitriolic acid, as in the common clay, &c.

Mica and asbestos become somewhat hard and brittle in the fire, and are more or less refractory, though they give some marks of fu- sibility.

The fluors discover one of their chief charac- teristics by giving a light like phosphorus in the dark, when they are slowly heated ; but lose this property, as well as their color, as soon as they are made red hot. They commonly melt in the fire into a white opaque slag, though some of them not very easily.

Some sorts of the zeolites melt easily, and foam in the fire, sometimes nearly as much as borax, and become a frothy slag, &c.

Many of those mineral bodies which are im- pregnated with iron, as the boles, and some of the white iron ores, Sec., as well as some of the other iron ores, viz. the bloodstone, are not at- tracted by the loadstone before they have been thoroughly roasted, &c.

After the minerals have been tried in the fire by themselves, they ought to be heated with fluxes, to discover if they can be melted or not, with some other phenomena attending this ope- ration. For this purpose, three different kinds of salts are used as fluxes, viz. soda, borax, and sal t'usibile microcosmicum. See FLUX.

The soda is, however, not much used in these small experiments, its effects upon the charcoal rendering it, for the most part, unfit for it; be- cause, as soon as the flame begins to act upon it, it melts instantly, and is almost wholly absorbed by the charcoal. When this salt is employed to make any experiment, a very little quantity is wanted at once, viz. about the cubical contents of an eighth part of an inch. This is laid upon the charcoal, and the flame blown on it with the Mow-pipe ; but, as this salt commonly is in form of a powder, it is necessary to go on very gently, that the force of the flame may not disperse the minute particles of the salt. As soon as it begins to melt, it runs along on the charcoal, almost like melted tallow ; and when cold it is a glassy matter, of an opaque dull color, spread on the coal. The moment it is melted, the matter which is to be tried ought to be put into it, as otherwise the greatest part of the salt will be soaked into the charcoal, and too little of it left for the in- tended purpose. The flame ought then to be di- rected on the matter itself; and if the salt spreads too much about, leaving the proof almost alone, it nay be brought to it aˆain by blowing the tiame on its extremities, and directing it towards the subject of the experiment. In the assays made with this salt, we may find whether the mineral bodies which are melted with it have been dis- solved by it or not ; but we cannot tell with any certainty whether this is done hastily and with force, or gently and slow ; nor whether a less or a greater part of the matter has been dissolved ; neither can it be well distinguished if the matter

has imparted any weak tincture to the slag; b«- cause this salt always bubbles upon the charcoai during the experiment, nor is it clear when cooi ; so that scarcely any color, except a very deep one, can be discovered ; although it may some- times be colored by the matter that has been tried.*

*In the following lists, the articles marked f effervesce very little ; those marked J not at all ; those marked * require a larger quantity of the flux and a longer continuance of heat than the rest ; those marked || are more*

difficultly dis- solved than the others.

The following earths are entirely soluble in soda, with effervescence : — agate, chalcedony, carnelian, Turkey stone f, fluor minerals f, onyx, opal, quartz, common flint, ponderous spar. The following are divisible in it, with or without ef- fervescence, but not entirely soluble : — amian- thus, asbestos, basaltes, chrysolite J, granatej, horn-blende, jasper, marl-stone, mica, the mine- ral of alum from Tolfa, petrosilex, aluminous slate and roof-slate from Helsingia, emeralds, steatites, common flint, schorl, talc, trapp, tnpoli, tourmalin. And the following are neither fusi- ble nor divisible in it: — diamond, hyacinth, ruby, sapphire, topaz.

The other two salts, viz. borax and the sal microcosmicum, are very well adapted to these experiments, because they may by the flame be brought to a clear, uncolored, and transparent glass ; and, as they have no attraction to the charcoal, they keep themselves always upon it in a round globular form. The sal fusibile micro- cosmicum is very scarce ; it is made of urine.

The folio wing earths are soluble in borax, with more or less effervescence: — Fluor mineralisf, marl, micaf the mineral of alum from Tolfa, aluminous slate and roof-slate from Helsingia f, ponderous spar, schorl, talc f, tourmalin. And the following without effervescence : — Agate, diamond, amianthus, asbestus, basaltes, chalce- dony, carnelian, chrysolite, Turkey-stone, gra- nate, hyacinth ***, jasper, lapis ponderosus, onyx, opal, petrosilex, quartz****, ruby, sapphire, com- mon flint *, steatites, trapp, trippel, or tripoli, topaz, zeolite hydrophanes.*

In the microcosmic salt, the following are so- luble, with more or less effervescence : — Ba- saltes-ˆ, Turkey-stone |, fluor mineralis f, marl, mica, the mineral of alum from Tolfa, schistus aluminaris, schistus tegularis from Helsingia f, schorl, spathum ponderosum, tourmalin f, lapis ponderosus ; and the following without visible effervescence : — Agate, diamond, amianthus, as- bestus, chalcedony, carnelian, chrysolite, granate, hyacinth, jasper, onyx ||, opal, petrosilex, quartz ||, ruby, sapphire, common flint ||, emerald, talc, topaz, trapp, trippel, zeolite, horn-blende, hy- drophanes, lithomarga, steatites.

Calcareous earth, ponderous spar, gypsum, and other additaments, often assist the solution, both in the microcosmic salt and in borax. To observe the effervescence properly, the matter added to the flux should be in the form of a small particle rather than in fine powder; be- cause in this last there is always air between the particles, which, being afterwards driven off by the heat, afford the appearance of a kind of effervescence

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The quantity of these two salts required for an experiment is almost the same as the soda; but as the former are crystallised, and consequently include a great deal of water, particularly the borax, their bulk is considerably reduced when melted, and therefore a little more of them may be taken.

Both these salts, especially the borax, when exposed to the flame of the blow-pipe, bubble very much, and foam, before they melt to a clear glass, which for the most part depends ou the water they contain. And as this would hinder the assayer from making due observations on the phenomena of the experiment, the salt which is to be used must first be brought to a clear glass, before it can serve as a flux ; it must, therefore, be kept in the fire until it become so transparent that the cracks in the charcoal may be seen through it. This done, whatsoever is to be tried is put to it, and the fire continued.

For the assays made with any of these two fluxes on mineral bodies, no larger pieces must be taken than that altogether they may keep a globular form upon the charcoal ; as it may then be better distinguished in what manner the flux acts upon the matter during the experiment. If this be not observed, the flux, communicating it- self with every point of the surface of the mine- ral body, spreads all over it, and keeps the form of this last, which commonly is flat, and thus hinders the operator from observing all the phe- nomena. Besides, the flux being in too small a quantity, in proportion to the body to be tried, will be too weak to act with all its force upon it. The best proportion, therefore, is abo'it a third part of the mineral to the flux ; and as the quan- tity of the flux above mentioned makes a globe of a due size, in regard to the greatest heat that is possible to procure in these experiments, so the size of the mineral must be a third part less here than when it is to be tried in the fire by itself. Soda is not of much use in these experiments ; nor has it any particular qualities, in preference to the two last-mentioned salts, except that it dissolves the zeolites easier.

The microcosmic salt shows almost the same effects in the fire as the borax, only differing from it in a very few circumstances ; of which one of the principal is, that, when melted with manga- nese, it becomes of a crimson hue, instead of a iacinth color, which borax takes. This salt is, however, from its scarcity, still very little in use, borax being commonly employed. Whenever a mineral body is melted with any of these two salts, it is easily seen, whether it quickly dis- solves ; in which case an effervescence arises, that lasts till the whole be dissolved ; whether the solution be slowly performed, in which case lew and small bubbles only rise from the matter; or, whether it can be dissolved at all ; because, if not, it is observed only to

turn round in the rlux, without the least bubble, and the edges look as sharp as before.

To illustrate farther these experiments, we shall give a few examples of the effects of borax upon the mineral bodies. The calcareous sub- stances, and all those stones which contain lime, dissolve readily and with effervescence in the borax. The effervescence is the more violent,

the greater the portion of the lime contained in the stone. This cause, however, is not the only one in the gypsum, because both the constituents of this readily mix with the borax, and therefore a greater effervescence arises in melting gypsum with the borax than lime alone. The silicea- do not dissolve, some few excepted, which contain a quantity of iron. The argillaceae, when pure, are not acted upon by the borax ; but, when mixed with some heterogeneous bodies, they are dissolved, though very slowly ; such are the stone marrow, common clay, &c. The granates, zeolites, and trapp, dissolve but slowly. The fluors, as- bestinae, micaces, dissolve for the most part very easily. Some of these bodies melt to a colorless transparent glass with the borax; for instance, the calcareous substances, when pure, the fluors, some of the zeolites, &c. Others tinge the borax with a green transparent color, viz. the grana'es, trapp, some of the argillaceae, and some of tlie micaces and asbestinae.

Borax can only dissolve a certain proportional quantity of the mineral. Of the calcareous kind it dissolves a vast quantity ; but turns at last, when too much has been added, from a cle.ir transparent to a white opaque slag. When the quantity of the calcareous matter exceeds but little in proportion, the glass looks very clear as long as it remains hot ; but, as soon as it begins to cool, a white half-opaque cloud is seen to arise from the bottom, winch spreads over the third, half, or more of the glass globe, in proportion to the quantity of calcareous matter; but the glass or slag is nevertheless shining, and of a glassy texture when broken. If more of this matter be added, the cloud rises quicker and is more opaque, and so by degrees till the slag be- comes quite milk white. It is then no more of a shining, but rather dry appearance on the sur- face ; is very brittle, and of a grained texture when broken.

Of the analysis of metals and oret. — In ex- amining metals and ores an exact knowledge and nicety of procedure are the more necessary, that the metals are often so disguised in their ores, as to be very difficultly known by their ex- ternal appearance, and liable sometimes to be mistaken one for the other : — some of the cobalt ores, for instance, resemble much the pyrites arsenicalis; there are also some iron and lead ores which are very like one another, 8cc.

As the ores generally consist of metals minera- lised with sulphur or arsenic, or sometimes both, they ought, first to be exposed to the fire by themselves, not only to determine with which of these they are mineralised, but also to set them free from those volatile mineralising bodies : this serves instead of calcination, by which they are prepared for further assays. Whenever any metal or fusible ore is to be tried, a little con- cavity must be made in that part of the charcoal where the matter is to be put ; to prevent it from rolling off. When an ore is to be tried, a small bit is laid upon the charcoal, and the flame blown on it slowly. Then the sulphur or arsenic be- gins to part from it in form of smoke; these are easily distinguished by their smell ; that of sul- phur beinu sufficiently known, and the arsenic smelling like garlick. The flame ought to Le

blown very gently as long as any smoke is seen to part from the ore ; but, after that, the heat must be augmented by degrees, to make the cal- cination as perfect as possible. If the heat be applied very strongly from the beginning, upon an ore that contains much sulphur or arsenic, the ore will presently melt, and yet lose very little of its mineralising bodies; thus rendering the calcination very imperfect. It is, however, impossible to calcine the ores in this manner to the utmost perfection, which is easily seen in melting down a calcined potter's ore with borax, as it will bubble upon the coal, which depends on the sulphur still left, the vitriolic acid of this uniting with the borax, and causing this motion. However, lead in its metallic form, melted in this manner, bubbles upon the charcoal, if any sul- phur remains in it. But as the lead, as well as some of the other metals, may raise bubbles upon the charcoal although they are quite free from the sulphur, only by the flames being forced too violently on it, these phenomena ought not to be confounded with each other.

The ores being thus calcined, the metals con- tained in them may be discovered, either by being melted alone or with fluxes; when they show themselves, either in their pure metallic state or by tinging the slag with a color peculiar to each of them. In these experiments it is not to be expected that the quantity of metal con- tained in the ore should be exactly determined ; this must be done in larger laboratories. This cannot, however, be looked upon as any defect, since it is sufficient for a mineralogist to find out what sort of metal is contained in the ore. There is another and a more real defect in the minia- ture laboratories, viz. that some ores are not at all capable of being tried by so small an appa- ratus ; for instance, the gold ore called pyrites aureus, which consists of gold, iron, and sulphur. The greatest quantity of gold which this ore con- tains is about one ounce, or

one ounce and a lulf, out of 100 pounds of the ore, the rest being iron and sulphur: and, as only a very small oit i:j allowed for these experiments, the gold con- tained therein can hardly be discerned by the eye, even if it could be extracted ; but it goes ulong with the iron in the slag, this last metal being in so large a quantity in proportion to the other, and both of them having an attraction lor each other.

The blendes and black jacks, which are mine- ral zinc ores, containing zinc, sulphur, and iron, cannot be tried this way, because they cannot be perfectly calcined, and besides the zinc flies off when the iron scorifies. Neither can those blendes which contain silver or gold, mineralised with them, be tried in this manner, which is par- ticularly owing to the imperfect calcination. Nor are the quicksilver ores fit for these experi- ments ; the volatility of that metal making it impossible to bring it out of the poorer sort of ores ; and the rich ores, which sweat out the quicksilver when kept close in the hand, not re- quiring any of these assays. These ores ought to be assayed in larger quantities, and by such other methods as cannot be used upon a piece of charcoal. Some of the rich silver ores are >-;!sily tried; e.g. mincra argenti vitrea, or silver

glass, which consists only of silver and sulphur. When this ore is exposed to the flame, it melts instantly, and the sulphur flies off in fumes, leaving the silver pure upon the charcoal in a globular form. If this silver should be of a dirty appearance, which often is the case, it must be melted anew with a very little borax; and after it has been kept in fusion for a minute or two, so as to be perfectly melted and red-hot, suffered to cool, it may then be taken off the coal, and, being laid upon the steel plate, the silver is separated from the slag by one or two strokes of the hammer. The brass ring ought first to be placed upon the plate, to hinder the proof from flying off by the violence of the stroke, which otherwise would happen. The silver is then found enclosed in the slag of a globular form, and quite shining, as if it was polished. When a large qnantity of silver is contained in a lead ore, viz. in a potter's ore, it can likewise be discovered by the blow-pipe.

Tin may be melted out of the pure tin ores in its metallic state. Some of these ores melt very easily, and yield their metal, if only exposed to the fire by themselves : but others are more re- fractory ; and, as these melt very slowly, the tin, which sweats out in form of very small globules, is instantly burnt to ashes before these globules have time to unite and compose a larger globe, which might be seen by the eye, and not so soon destroyed by the fire ; it is therefore neces- sary to add a little borax to these from the be- ginning, and then to blow the flame violently at file proof. The borax preserves the metal from being too soon calcined, and even contributes to the readier collecting of the small metallic parti- cles, which soon form a globule of metallic tin at the bottom of the whole mass, nearest to the

charcoal. As soon as so much of the metallic tin is produced as is sufficient to convince the ope- rator of its presence, the fire ought to be discon- tinued, though the whole ore be not yet melted ; because the whole of this kind of ore can seldom or never be reduced into metal by these experi- ments, a great proportion being always calcined : and, if the fire is continued too long, even the metal already reduced may be burnt; for tin is very soon deprived of its metallic state by fire.

Most of the lead ores may be reduced to a metallic state upon the charcoal. The minerae plumbi calciformes, which are pure, are easily melted into lead ; but such of them as are mixed with an ochra ferri, or any kind of earth, as clay, lime, &c., yield very little lead, and even none at all, if the heterogenea are combined in any large quantity. These therefore are not to be tried but in larger laboratories. However, every mineral suspected to contain any metallic sub- stance may be tried by the blow-pipe, so as to give sufficient proofs whether it contain any or not, by its effects being different from those of the stones or earths, &c.

The minera plumbi mineralisita leave the lead in a metallic form, unless too large a quan- tity of iron is mixed with it. When a tessellated or steel-grained lead ore is exposed to the flame, its sulphur, and even the arsenic, if there be any, begins to fume, and the ore itself to melt into a globular form ; the rest of the sulphur continues

then to fly off, if the flame be blown slowly upon the mass ; but, on the contrary, very little of the sulphur will go off, if the flame be forced vio- lently on it : in this case, the lead crackles and dissipates, throwing about every minute metallic particles. The sulphur being driven out as much

obtained in two ways : the one, by keeping the proof in fusion for about a minute, and after- wards nuffering it to cool ; when it will be found to have a dark and uneven appearance externally, but which, after being broken, discovers the me- tallic copper of a globular form in its centre,

as possible, which is known by finding no sul- surrounded with a regulus, which still contains phureous vapor in smelling at the proof ; the some sulphur and a portion of the metal; the whole is suffered to cool, and then a globule of other by being melted with borax, which last

metallic lead will be left upon the coal. If any iron is contained in the ore, the lead, which is melted out of it, is not of a metallic shining, but rather of a black and uneven surface : a little bo- rax must in this case be melted

with it ; and, as soon as no bubble is seen to rise any longer

way sometimes makes the metal appear sooner.

The minerse cupri pyritaceze, containing cop- per, sulphur, and iron, may be tried with the blow-pipe if they are not too poor. In these ex- periments the ore ought to be calcined, and after that the iron scorified. For this purpose a bit

from the metal into the borax, the fire must be of the ore must be exposed to a slow flame, that discontinued : when the mass is grown cold, the as much of the sulphur as possible may part iron will be found scorified with the borax, and from it before it is melted, because the ore com- the lead left pure and of a shining color. Borax monly melts very soon, and then the sulphur is does not scorify the lead in these small experi- more difficultly driven off. After being melted, ments when it is pure ; if the flame is forced with it must be kept in fusion with a strong fire for violence on it, a bubbling will ensue, resembling about a minute, that a great part of the iron may that which is observed when borax dissolves a be calcined ; and, after that, some borax must be body melted with it; but, when the fire ceases, added, which scorifies the iron, and turns with it the slag will be perfectly clear and transparent, to a black slag. If the ore is very rich, metallic and a quantity of very minute particles of lead copper will be had in the slag after the scorifica- will be seen spread about the borax, which have tion. If the ore be of a moderate richness, the been torn off from the mass during the bubbling, copper will still retain a little sulphur, and some- If such a lead ore is rich in silver, this last times iron : the product will therefore be brittle, metal may likewise be discovered by this experi- and must with great caution be separated from ment ; because, as the lead is volatile, it may be the slag, that it may not break into pieces ; and, forced off, and the silver remain. To efftct this, if this product is afterwards treated in the man- the lead, which is melted out of the ore, must be ner above described of the gray copper ores, the kept in constant fusion with a slow heat, that it metal will soon be produced. But, if the ore is may be consumed. This end will be sooner ob- poor, the product, after the first scorification, tained, and the lead part quicker, if during the must be brought into fusion, and afterwards fusion the wind through the blow-pipe be directed melted with some fresh borax, to calcine and immediately, but not forcibly, upon the malted scorify the remaining portion of iron ; after which mass, until it begin to cool ; when the fire must it may be treated as mentioned in the last para- be directed on it again. The lead, already in a graph. The copper will in this case be found in volatilising state, will thus be driven out in form a very small globule.

of a subtile smoke ; and by thus continuing by The cupper is not easily

scorified with this

turns to melt the mass, and blow off the lead, apparatus, when it is melted with borax, unless

until no smoke is perceived, the silver will at last it has first been exposed to the fire by itself to be

be obtained pure. As only very little bits of calcined. When only a little of this metal is

ores can be employed in these experiments, it dissolved, it instantly tinges the slag of a reddish-

wu be difficult to extract the silver out of a poor brown color, and mostly opaque ; but as soon as

on. , for some part of it will fly off with the lead, this slag is kept in fusion for a little, it becomes

and what might be left is too small to be dis- quite green and transparent : and thus the pre-

-erned by the eye. The silver thus obtained is sence of the copper may be discovered by the

.iMly distinguished from lead by the following color, when it is concealed in heterogeneous

murks • it must be red-hot before it can be bodies, so as not to be discovered by any other

melted , it cools sooner than lead ; it is brighter experiment. If metallic copper is melted with

and whiter than lead ; and harder under the borax by a slow fire, and only for a very little

hammer. li'.ne, the slag becomes of a fine transparent blue

The minera cupri calciformes, at least some of or violet color, inclining more or less to green :

them, when not mixed with too much stone or but this color is not entirely owing to the copper,

earth are easily reduced to copper with any flux; because the same color is

to be had in the same

if the copper has not its natural bright color, it manner from iron; and those glasses which are

must be melted with a little borax, which purifies colored with either of these metals soon lose

it Some of these ores do not discover their their color if exposed to a strong fire, and become

metal, if not immediately melted with borax ; quite clear. Besides, if this glass, tinged blue

the heterogenea contained in them hindering the with the copper, is again melted with more of

fusion before these are scorified by the flux. this metal, it becomes of a good green color,

The gray copper ores, which only consist of which remains long unchanged in the fare. copper and sulphur, are tried almost in the same The iron ores, when pure, can never be melt- mariner. Being exposed to the flame by them- ed, per se by the blow-pipe alone ; nor do they selves th-y nstantly melt, and part of their sul yield their metal when melted with fluxes; be- phur goes off The copper may afterwards be cause they require too strong a heat to be bruugh

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MINERALOGY.

into fusion ; and both the ore and the metal are very soon calcined. This easy calcination is also the reason why the fluxes readily scorify this ore, and even the metal itself. The iron is more easily scorified than the copper. The iron is, however, discovered without much difficulty, although it were mixed but in a very small quan- tity with Heterogeneous bodies. The ores are all attracted by the loadstone, some without any previous calcination, and others without being roasted. When a clay is mixed with a little iron, it commonly melts by itself in the fire ; but, if iron is contained in a limestone, it does not pro- mote the fusion, but gives the stone a dark and sometimes a deep black color, which is always the character of iron. A minera fern calciformis pura crystallisata is commonly of a red color : This, being exposed to the flame, becomes quite black ; and is then readily attracted by the load- stone, which it was not before. Besides these signs, iron is discovered by tinging the slag of a green transparent color, inclining

to brown, when only a little of the metal is scorified ; but, as soon as any large quantity thereof is dissolved in the slag, this becomes first a blackish-brown, and afterwards quite black and opaque.

Bismuth is known by its communicating a yel- lowish brown color to borax ; and arsenic by its volatility and garlick smell.

Antimony, both in form of regulus and ore, is wholly volatile in the fire when it is not mixed with any other metal except arsenic ; and is known by its particular smell, easier to be dis- tinguished than described. When the ore of antimony is melted upon the charcoal, it bubbles constantly during its volatilising.

Zinc ores are not easily tried upon charcoal but the regulus of zinc exposed to the fire upon it burns with a beautiful blue flame, and forms itself almost instantly into white flowers, called flowers of ziuc.

Cobalt is remarkable for giving to the glass a blue color, which is the zaffre or smalt. To pro- duce this, a piece of cobalt ore must be calcined in the fire, and afterwards melted with borax. As soon as the glass, during the fusion, from being clear, grows opaque, it is a sign that it is tinged a little ; the fire is then to be discontinued, and the operator must take hold, with the nippers, of a little of the glass, whilst yet hot, and draw it out slowly in the beginning, but afterwards very quickly, before it cools, whereby a thread of the colored glass is procured, more or less thick, wherein the color may easier be seen than in a globular form. This thread melts easily, if only put in the flame of the candle without the help of the blow-pipe. If this glass be melted again with more of the cobalt, and kept in fusion for a while, the color becomes very deep; and thus the color may be varied at pleasure. When the co- balt ore is pure, or contains but little Iron, a cobalt regulus is almost instantly produced in the borax during the fusion ; but, when it is mixed with a quantity of iron, this last metal ought first to be separated, which is easily performed, as it scori- fies sooner than the cobalt; therefore, as long as the sla£ retains any brown or black color, it must be separated, and melted again with fresh borax, until it shows the blue color.

Nickel is very seldom to be had ; and as its ores are seldom free from mixtures of other me- tals, it is very difficultly tried with the blow-pipe- However, when mixed with iron and cobalt, it is easily freed from these heterogeneous metals, and reduced to a pure nickel regulus by scorification with borax, because both the iron and cobalt sooner scorify than the nickel. The regulus or nickel itself is of a green color when calcined : it requires a pretty strong fire before it melts, and tinges the borax with a hyacinth color. Manganese gives the same color to borax ; but its other qualities are

quite different, so as not to be confounded with the nickel.

When those ores are to be reduced whose me- tals are very easily calcined, as tin, zinc, &c., it may be of service to add hard resin, as the char- coal cannot afford enough of it in the open fire of these assays. The manner of melting the vo- latile metals out of their ores per descensum might also be imitated : for instance, a hole might be made in the charcoal, wide above and very narrow at the bottom ; a little piece of the ore being then laid at the upper end of the hole, and covered with some very small pieces of the charcoal, the flame must be directed on the top ; the metal might thus run into the hole below, concealed from the violence of the fire, particu- larly if the ore is very fusible.

The use of the apparatus above referred to, and which may be called a pocket laboratory, as the whole admits of being packed into a small case, is chiefly calculated for a travelling miner- alist. But a person who always resides at one place may make it more commodious to himself, and avoid the trouble of blowing with the mouth. For this purpose he may have the blow- pipe go through a hole in a table, and fixed un- derneath to a small pair of bellows with double bottoms, such as some of the glass-blowers use, and then nothing more is required than to move the bellows with the feet during the experiment ; in this case a lamp may be used instead of a candle. It would only be necessary to observe that, in proportion as the nozzle of the pipe is enlarged, the quantity of the flame must be aug- mented by a thicker wick in the lamp, and the force of blowing increased by weights laid on the bellows ; a much intenser heat would thus be produced by a pipe of considerable opening at the end, by which the experiments must undoubt- edly be carried farther than by the common blow- pipe.

A traveller, who has seldom an opportunity of carrying many things along with him, will find this laboratory and its apparatus sufficient for most experiments that can be made on a jour- ney. He should also have a little box including the different acids, and one or two matrasses to try mineral bodies in liquid menstrua. These are, the acids of nitre, of vitriol, and of common salt. Most of the stones and earths are attacked, at least in some degree, by the acids ; but the calcareous are the easiest of all to be dissolved by them. The acid of nitre is that which is most used in these experiments ; it dissolves the lime- stone, when pure, perfectly, with a violent effer- vescence, and the solution becomes clear : when the limestone enters into some other body, it is

tievertheless discovered by this acid, through a greater or less effervescence

in proportion to the quantity of the calcareous particles, unless there are so few as to be almost concealed from the acid by the heterogeneous ones. A calcareous body, which nearly resembles a siliceous or ar- gillaceous one, may be thus known from these latter, without the blow-pipe, merely by pouring one or two drops of this acid upon it ; which is very convenient, when there is neither opportu- nity nor time to use this instrument.

The gypsa, which consist of lime and the vi- triolic acid, are not in the least attacked by the acid of nitre, if they contain a sufficient quantity of their own acid ; because the vitriolic acid has a stronger attraction to the lime than the acid of nitre ; but, if the calcareous substance is not per- fectly saturated with the acid of vitriol, then an effervescence arises with the acid of nitre, more or less in proportion to the want of the vitriolic acid. These circumstances are often very essen- tial in distinguishing the calcarea and gypsa.

The acid of nitre is likewise necessary in trying the zeolites, of which some species have the sin- gular effect to dissolve with effervescence in this acid ; and within a quarter of an hour, though sometimes not until several hours after, to change the whole solution into a clear jelly, of so firm a consistence that the glass wherein it is contained may be inverted without its falling out. If any mineral body is tried in this menstruum, and only a small quantity is suspected to be dissolv- ed, though it was impossible to distinguish it with the eye during the solution, it can be easily discovered by adding to it ad saturitatem a clear solution of the alkali, when the dissolved part will be precipitated, and fall to the bottom. For this purpose the soda is very useful. The acid of nitre will suffice for making experiments upon stones and earths ; but, if the experiments are to be extended to the metals, the other two acids are also necessary.

Another instrument is also necessary to a com- plete Pocket Laboratory, viz. a washing trough in which the mineral bodies, and particularly the ores, may be separated from each other, and from the adherent rock, by water. This trough is very common in laboratories, and is used of different sizes ; but here only one is required of a mode- rate size, such as twelve inches and a half long, three inches broad at one end, and one inch and a half at the other end, sloping down from the sides and the broad end to the bottom, where it is three-quarters of an inch deep. It may, however, be made of much smaller dimensions. It is commonly made of wood, which ought to be chosen smooth, hard, and compact, wherein are no pores in which the minute grains of the pounded. matter may lie concealed. If any such matter is to be washed as is suspected to contain some native metal, such as silver or gold, a trough should be procured for this purpose of a very shallow slope, because the minute particles of the native metal have then more power to assemble together at the broad end, and separate from

the other matter.

The management of this trough, or the man- ner of washing, is this : — When the matter is mixed with about three or four times its quan-

tity of water in the trough, this is kept very loose between two fingers of the left hand, and some light strokes given on its broad end with the right, that it may move backwards and for- wards ; by which means the heaviest particles assemble at the broad and lower end, from which the lighter ones are to be separated by inclining the trough, and pouring a little water on them. By repeating this process all such particles as are of the same gravity may be collected to- gether, and separated from those of different gravity, provided they were before equally pounded : though such as are of a clayey nature are often very difficult to separate from the rest, which, however, is of no great consequence to a skilful and experienced washer. The washing process is very necessary, as there are often rich ores, and even native metals, found concealed in earths and sand in such minute particles as not to be discovered by any other means.

For performing experiments in the humid way the chief articles (and which must be kept in a separate case) are, a collection of phials, containing the principal acids, tests, precipitant, and re-agents, both for examining mineral bodies by the humid way, and for analysing the various kinds of mineral waters. Those with acids and corrosive solutions have not only ground stop- ples, but also an external cap to each, bound over the stopple, and secured downward by a bit of wax between both to confine the corrosive and volatile fluids. But those which contain mild fluid liquors do pot need such external caps : and those with dry inoffensive substances are only stopped with corks. There are also two smaller cylindrical phials to exhibit the changes of color produced by some of the re- agents in those analytical assays. There are also two or three small mattrasses to hold the sub- stances with their solvents over the fire ; a small glass funnel for pouring the fluids ; a small porce- lain mortar, with its pestle ; one or two cruci- bles of the same substance ; a small wooden trough to wash the ground ores; some glass sticks to stir up the fluid mixtures ; and, finally, pieces of paper tinged red, yellow, and blue, by the tinctures of Fernambuc wood (commonly called Brasil wood), turmeric, and litmus, thickened with a little starch.

The lamp furnace laboratory, for experiments both by the humid and the dry way, is a very cu- rious and useful, though small apparatus. It if an improvement of one contrived by M. Mor- veau, in consequence of the information he received from his friend the president de Virly, who saw at Upsal how advantageously the late eminent Sir T. Bergman availed himself of this convenience for many analytical processes in miniature, by the use

of very small glass vessels about an inch diameter, and other implements of proportional size, for performing various chemical operations.

When these processes are properly conducted, though in miniature, the lamp furnace will prove amply sufficient to perform, in a few minutes, and with very little expense, the various solu- tions, digestions, and distillations, which other- wise would require large vessels, stills, retorts, reverberatorv furnaces, &c., to ascertain the com-

ponent parts of natural bodies ; though it is not always sufficient to ascertain their respective quantities. In this last case operations must be performed in great laboratories, and on a large scale, at a considerable expense. But the sub- stances are sometimes too valuable ; for instance, when precious stones are to be examined, the last way never can ˆe attempted.

These small processes have likewise another advantage which cannot be obtained in large works, viz. that one can observe the gradual pro- gress of each operation ; retard or urge it, as it may require ; and ascertain at pleasure each step of every experiment, with the phenomena attend- ing it. See CHEMISTRY.

Before a mineral is submitted to analysis it ought to be reduced to an impalpable powder. This is by no means an easy task when the stone is extremely hard. It ought to be raised to a bright red or white heat in a crucible, and then instantly thrown into cold water. This sudden transition makes it crack and break into pieces. If these pieces are not small enough the opera- tion must be repeated on each, till they are re- duced to the proper size. These fragments are then to be beaten to small pieces in a polished steel mortar; the cavity of which should be cy- lindrical, and the steel pestle should fit it exactly to prevent any of the stone from escaping during the act of pounding. As soon as the stone is reduced to pretty small pieces it ought to be put into a. mortar of rock crystal, or flint, and reduced to a coarse powder. This mortar should be about four inches in diameter, and rather more than an inch in depth. The pestle should be formed of the same stone with the mortar.

When the stone has been reduced to a coarse powder, a certain quantity, weighing exactly 100 grains for instance, ought to be reduced to as fine a powder as possible. This is best done by pounding small quantities of it at once, not exceeding ten grains. The powder is as fine as possible when it

feels soft, adheres together, and as it were forms a cake under the paste. It ought then to be weighed exactly. It will almost al- ways be found heavier after being pounded than it was before, owing to a certain quantity of the substance of the mortar being rubbed off during the grinding, and mixed with it. This additional weight must be carefully noted ; and, after the analysis, a portion corresponding to it must be subtracted.

It is necessary to have a crucible of pure silver, or, what is far preferable, of platinum, capable of holding rather more than seven cubic inches of water, with a cover of the same metal ; and a spatula of the same about four inches long. The dishes in which the solutions, evaporations, &c., are performed ought to be of glass or por- celain. Those of porcelain are cheaper because they are not so apt to break. Those which Vau- r;uelin uses are of porcelain ; they are sections of spheres, and are glazed both within and with- out, except that part of the bottom which is im- mediately exposed to the fire.

Let 100 or 200 grains of the stone to be ana- lysed, previously reduced to a fine powder, be mixed with three times its weight of pure potass and a little water, and exposed in the silver or

platinum crucible to a strong heat. The heat should at first be applied slowly, and the matter should be constantly stirred to prevent the potass from swelling and throwing any part out of the crucible. When the whole water is evaporated the mixture should be kept for half an hour or three-quarters in a strong red heat.

If the matter in the crucible melts completely, and appears as liquid as water, we may be cer- tain that the stone consists chiefly of silica ; if it remains opaque, and of the consistence of paste, the other earths are most abundant ; if it remains in the form of a powder alumina is the prevalent earth. If the matter be of a dark or brownish-red color it contains oxide of iron ; if it is grass green, manganese is present ; if yel- lowish green, chromum. When the crucible has been taken from the fire, and wiped on the outside, it is to be placed in a capsule of porce- lain, and filled with water. This water is to be renewed from time to time, till all the matter is detached from the crucible. The water dissolves a part of the combination of the alkali with the silica and alumina of the stone ; and, if a suffi- cient quantity were used, it would dissolve the whole of that combination.

Muriatic acid is now to be poured in till the whole of the matter is dissolved. At first a flaky precipitate appears, because the acid combines with the alkali which kept it in solution. Then an effervescence takes-place, owing to the decompo- sition of some carbonate of potass, formed during the fusion. At the same time the flaky precipitate is redissolved ; as is also

that part of the matter which, not having been dissolved in the water, had remained at the bottom of the dish in the form of a powder. This powder, if it consists only of silica and alumina, dissolves without effervescence; but, if it contains lime, an effer- vescence takes place. If this solution be color- less, we may conclude that it contains no me- tallic oxide, or only a very smalLportion ; if its color be purplish red, it contains manganese ; orange red indicates the presence of iron ; and golden yellow that of chromum.

This solution is to be poured into a capsule of porcelain, covered with paper, and evaporated to dryness in a sand bath. When the evapora- tion is drawing to its completion, the liquor as- sumes the form of jelly. It must then bestirred constantly with a glass or porcelain rod, to faci- litate the disengagement of the acid and water, and to prevent one part of the matter from being too much and the other not sufficiently dried. Without this precaution the silica and alumina would not be completely separated from each other.

When the matter is reduced almost to a dry powder, a large quantity of pure water is to be poured on it; and, after exposure to a slight heat, the whole is to be poured on a filter. The powder which remains on the filter is to be washed repeatedly, till the water with which it has been washed ceases to precipitate silver from its solutions. This powder is the whole of the silica which the stone we are analysing contained. It must first be dried between folds of blotting paper ; then heated red hot in a platinum a

silver crucible, and weighed while yet warm. It ought to be a fine powder, of a white color, not adhering to the fingers, and entirely soluble m acids. If it be colored, it is contaminated with some metallic oxide ; and shows that the evapo- ration to dryness has been performed at too high a temperature. To separate this oxide the silica must be boiled with an acid, and then washed and dried as before. The acid solution must be added to the water which passed through the filter, and which we shall denominate A.

The watery solution A is to be evaporated till its quantity does not exceed thirty cubic inches, or nearly an English pint. A solution of car- bonate of potass is then to be poured into it, till no more matter precipitates. It ought to be boiled a few minutes to enable all the precipitate to fall to the bottom. When the whole of the pre- cipitate has collected at the bottom, the superna- tant liquid is to be decanted off; and, water being substituted in its place, the precipitate and water are to be thrown upon a filler. When the water has run off, the filter, with the precipitate upon it, is to be placed

between folds of blotting paper. When the precipitate has acquired some consistence, it is to be carefully collected by an ivory knife, mixed with a solution of pure potass, and boiled in a porcelain capsule. If any alu- mina or glucina be present, they will be dissolved in the potass; while the other substances remain •jntouched in the form of a powder, which we shall call B.

nto the solution of potass as much acid must be poured as will not only saturate the potass, but completely redissolve any precipitate which may have at first appeared. Carbonate of am monia is now to be added in such quantity that the liquid shall taste of it. By this addition the whole of the alumina will be precipitated in white flakes, and the glucina will remain dis- solved, provided the quantity of carbonate of ammonia used be not too small. The liquid is now to be filtered ; and the alumina, which will remain on the filter, is to be washed, dried, heated red hot, and then weighed. To see if it be really alumina, dissolve it in sulphuric acid, and add a sufficient quantity of sulphate or ace- tate of potass ; if it be alumina, the whole of it will be converted into crystals of alum.

Let the liquid, which has passed through the filter, be boiled for some time ; and the glucina, if it contains any, will be precipitated in a light powder, which may be dried and weighed. When pure, it is a fine, soft, very light, tasteless powder, which does not concrete when heated, as alumina does.

The residuum B may contain lime, magnesia, and one or more metallic oxides. Let it be dissolved in weak sulphuric acid, and the solu- tion evaporated to dryness. Pour a small quan- tity of water on it. The water will dissolve the sulphate of magnesia and the metallic sul- phate ; but the sulphate of lime will remain un- dissolved. Let it be heated red-hot in a crucible and weighed. The lime amounts to 0‘42 of the weight. Let the solution, containing the re- maining sulphates, be diluted with a large quan- tity of water ; let a small excess of acid be added ; and then let a saturated carbonate of potass be

poured in. Tl e oxides of chromum, iron, and nickel, will be precipitated, and the magnesia and oxide of manganese will remain dissolved. The precipitate we shall call C.

Into the solution let a solution of liydrosul- phuret of potass be poured, and the manganese will be precipitated in the state of a hydrosul- phuret. Let it be calcined in contact with air, and weighed. The manganese may then be precipitated by pure potass, washed, exposed to a red heat, and then weighed.

Let the residuum C be boiled repeatedly with nitric acid, then mixed with

pure potass ; after being heated let the liquid be decanted off. Let the precipitate, which consists of the oxides of iron and nickel, be washed with pure water ; and let this water be added to the solution of the nitric acid and potass. That solution contains the chromum converted into an acid. Add to this solution an excess of muriatic acid, and evaporate till the liquid assumes a green color ; then add a pure alkali. The chromum precipi- tates in the state of an oxide, and may be dried and weighed.

Let the precipitate, consisting of the oxides of iron and nickel, be dissolved in muriatic acid ; add an excess of ammonia : the oxide of iron precipitates. Let it be washed, dried, and weighed. Evaporate the solution, and the oxide of nickel will also precipitate. Its weight may be ascertained in the same manner with the other ingredients.

The weights of all the ingredients are now to be added together, and their sum total compared with the weight of the matter analysed. If the two are equal, or if they differ only by 0-03 or 0'04 parts, we may conclude that the analysis has been properly performed ; but, if the loss of weight be considerable, something or other has been lost. The analysis must therefore be re- peated with all possible care. If there be still the same loss of weight, we may conclude that the stone contains some substance, which has either evaporated by heat, or is soluble in water.

A fresh portion of the stone must therefore be broken into small pieces, and exposed in a por celain crucible to a strong heat. If it contain water, or any other volatile substance, they wi'. come over into the receiver ; and their nature and weight may be ascertained. If nothing comes over, or if what comes over is not equal to the weight wanting, we may conclude, that the stone contains some ingredient which is soluble in water.

To discover whether it contains potass, let the stone, reduced to an impalpable powder, be boiled five or six times in succession, with very strong sulphuric acid, applying a pretty strong heat to- wards the end of the operation, to expel the ex- cess of acid ; but taking care that it be not strong enough to decompose the salts which have been formed.

Water is now to be poured on, and the resi- duum, which does not dissolve, is to be washed with water till it becomes tasteless. The watery solution is to be filtered, and evaporated to dry- ness, in order to drive off any excess of acid which may be present. The salts are to be again

dissolved in water; and the solution, after being boiled for a few moments,

is to be filtered and evaporated to a consistence proper for crystal- lising. If the stone contains a sufficient quantity of alumina, and if potass be present, crystals of alum will be formed ; and the quantity of potass may be discovered by weighing then, it being nearly one-tenth of their weight. If the stone does not contain alumina, or not in sufficient quantity, a solution of pure alumina in sulphuric acid must be added. Sometimes the alum, even when potass is present, does not appear for se- veral days or even weeks ; and sometimes, when a great quantity of alumina is present, if the so- lution has been too much concentrated by evapo- ration, the sulphate of alumina prevents the alum from crystallising at all. Care, therefore, must be taken to prevent this last source of error. The alum obtained may be dissolved in water, and barytic water poured into it as long as any precipitate forms. The liquor is to be filtered and evaporated to dryness. The residuum will consist of potass, and a little carbonate of potass. The potassa may be dissolved in a little water. This solution, evaporated to dryness, gives us the potassa pure ; which may be examined and weighed.

If no crystals of alum can be obtained, we must look for some other substance than potassa. The stone may contain soda. The presence of this alkali may be discovered by decomposing the solution in sulphuric acid, already described, by means of ammonia. The liquid which re- mains is to be evaporated to dryness, and the residuum is to be calcined in a crucible : the sulphate of ammonia will thus be volatilised, and the soda will remain. It may be redissolved in water, crystallised, and examined.

If sulphuric acid does not attack the stone, as is often the case, it must be decomposed by fusion with soda, in the manner formerly di- rected with potassa. The matter, after fusion, is to be diluted with water, and then saturated with sulphuric acid. The solution is to be evaporated to dryness, the residuum again dissolved in water, and evaporated. Sulphate of soda will crystal- lise first ; and by a second evaporation, if the stone contains potassa and alumina, crystals of alum will be deposited. The presence of po- tassa may be discovered by mixing with a some- what concentrated solution of muriate of plati- num the salt obtained, either by decomposing the stone immediately by an acid, or by satu- rating with an acid the matter obtained by fusing the stone with soda. If any potassa be present, a very red precipitate will be formed. This precipitate is a triple salt, composed of potassa, muriatic acid, and oxide of platinum. Ammo- nia, indeed, produces the same precipitate, but has not hitherto been discovered in stones.

In this manner may simple stones and aggre- gates be analysed. As to saline stones, their analysis must vary according to the acid which they contain. But almost all of them may be decomposed by one or other of two methods : viz.

I. Analysis of carbonate of strontian. — Klaproth analysed this mineral, by dissolving 100 parts of it in diluted muriatic acid : during the solution

thirty parts of carbonic acid escaped. The so- lution crystallised in needles, and, when dissolved in alcohol, burnt with a purple flame. Therefore i« contained strontian. He dissolved a grain of sulphate of potassa in six ounces of water, and let fall into it three drops of the muriatic solu- tion. No precipitate appeared till next day. Therefore the solution contained no barytes ; for, if it had, a precipitate would have appeared im- mediately. He then decomposed the muriatic acid solution, by mixing it with carbonate of potassa. Carbonate of strontian precipitated. By the application of a strong heat the carbonic acid was driven off. The whole of the earth which remained was dissolved in water. It crystallised ; and, when dried, weighed sixty- nine and a half.

II. Analyses of sulphate of strontian. — Vau- quelin analysed an impure specimen of this mineral as follows : — on 200 parts of the mineral, diluted nitric acid was poured. A violent effer- vescence took place, and part of the mineral was dissolved. The undissolved portion, after being heated red hot, weighed 167. Therefore thirty- three parts were dissolved. The nitric solution was evaporated to dryness : a reddish substance remained, which indicated the presence of oxide of iron. This substance was redissolved in water, and some ammonia mixed with it ; a red- dish precipitate appeared, which, when dried, weighed one, and was oxide of iron. The re- mainder of the solution was precipitated by carbonate of potassa. The precipitate weighed, when dried, twenty, and possessed the proper- ties of carbonate of lime. Therefore 200 parts of this mineral contain twenty of carbonate of lime, one of oxide of iron, and the remainder of the thirty-three parts he concluded to be water.

The 167 parts, which were insoluble in nitric acid, were mixed with 500 parts of carbonate t f potass, and 700 parts of water, and boiled for a considerable time. The solution was then fil- tered, and the residuum washed and dried. The liquid scarcely effervesced with acids ; but with barytes it produced a copious precipitate, totally indissoluble in muriatic acid. Therefore it con- tained sulphuric acid. The undissolved residu- um, when dried, weighed 129 parts. It dissolved completely in muriatic acid. The solution crys- tallised in needles : when dissolved in alcohol it burnt with a purple flame, and, in short, had all the properties of muriate of strontian. Therefore these 129 parts were carbonate of strontian. Now 100 parts of this carbonate contain 30 of carbonic acid, therefore 129 contain 38-7. Therefore the mineral must contain, in 200 parts, 90- 3 of strontian. Now the insoluble residuum of 167 was pure sulphate of strontian; anˆ we have seen that it contained 90-3 ofstrontian. Therefore the sulphuric acid must amount to 76-7 parts.

Nearly in the same manner as in the first of these examples, may the analysis of carbonate of lime and barytes be performed ; and nearly in the same manner with the second may we ana- lyse the sulphates of lime and barytes-

Phosphate of lime may be dissolved in muri- atic acid, and the lime precipitated by sulphuric

acid, and its quantity ascertained by decom- posing the sulphate of lime contained. The liquid solution may be evaporated to the consis- tence of honey, mixed with charcoal powder, and distilled in a strong heat. By these means . phosphorus will be obtained. The impurities with which phosphate may be contaminated, will partly remain undissolved, and partly be dis- solved in muriatic acid. They may be detected and ascertained by the rules laid down in the beginning of this chapter.

The fluate of lime may be mixed with sulphu- ric acid and distilled. The fluoric acid will come over in the form of gas, and its weight may be ascertained. What remains in the retort, which will consist chiefly of sulphate of lime, may be analysed by the rules already laid down.

The borate of lime may be dissolved in nitric or sulphuric acid : the solution may be evapo- rated to dryness, and the boracic acid sepa- rated from the residuum by alcohol, which will dissolve it without acting on any of the other in- gredients. The remainder of the dry mass may be analysed by the rules laid down in this chapter.

*The diamond is a precious stone which has been known from the remotest ages. Its figure varies considerably, but most commonly it is crystallised in the form of a six-sided pyramid. It is the hardest of all bodies; the best tem- pered steel makes no impression on it; diamond powder can only be obtained by grinding one diamond against another. Its specific gravity is about 3*5. It is a non-conductor of electricity.*

As the diamond is not affected by a consider- able heat, it was for many ages considered as in- combustible. Sir Isaac Newton observing that combustibles refract light more powerfully than other bodies, and that the diamond possesses this property in great perfection, suspected it, from that circumstance, to be capable of com- bustion. This singular conjecture was verified in 1694 by the Florentine academicians, in pre- sence of Cosmo III., grand duke of Tuscany. By means of a burning-glass, they consumed several diamonds.

No attempt, however, was made to ascertain the product till 1772. Lavoisier, in a memoir published that year, showed that when the diamond is burnt carbonic acid is obtained, and that there is a striking analogy between it and charcoal. In 1785 Guy ton Morveau found that the diamond is combustible when dropped into malted nitre ; that it burns without leaving any residuum, and in a manner analogous to char- coal. This experiment was repeated with more precision by Mr. Tennant in 1797. The conclu- sion he drew from it was, that, when a diamond is burnt, the whole of the product is carbonic acid gas ; that a given weight of diamond yields just as much carbonic acid gas as the same weight of charcoal ; and that diamond and char- coal are both composed of the very same substance.

This conclusion, that diamond is nothing else but charcoal, was directly contrary to what one would have expected from comparing the two substances together. Their color, hardness, spe- cific gravity, and electrical properties are ex- VOL. XIV

ceedingly different ; nor do they resemble each other in their combustibility. Charcoal takes fire at 370°, gives out a great deal of heat, and, when once kindled in oxygen gas, continues to burn till it be wholly consumed. The diamond, before it can be burnt, must be exposed to the sun's rays in the focus of a large burning-glass, or to a heat not under 5000° : even then it con- sumes but slowly, and ceases to burn the instant the action of the burning-glass is withdrawn. Its surface assumes a black color like charcoal ; this crust is soon wasted, and another is formed in its place. In this manner a diamond, weigh- ing 3-089 gr. Troy, gradually wasted away completely, when exposed by Morveau for one hour and forty minutes in the focus of the cele- brated burning-glass of Tschirnhausen, while a thermometer exposed to the sun stood at 104°.

Coal is composed of charcoal, bitumen, and some portion of earth. The earths may be detected by burning completely a portion of the coal to be analysed. The ashes which remain after incineration consist of the earthy part. Their nature may be ascertained by the rules laid down in the preceding chapter. For the method of ascertaining the proportion of charcoal and bitu- men in coal, we are indebted to Dr. Kirwan.

*When nitre is heated red hot, and charcoal is thrown on it, a violent detonation takes place ; and, if the quantity of charcoal be sufficient, the nitre is completely decomposed. Now it re- quires a certain quantity of pure charcoal to de- compose a given weight of nitre. From the experiments of Lavoisier it follows, that, when the detonation is performed in close vessels under water, 13*21 parts of charcoal are capable of decomposing 100 parts of nitre. But, when the detonation is performed in an open crucible, a*

smaller proportion of charcoal is necessary, because part of the nitre is decomposed by the action of the surrounding air. Scheele found that, underthese circumstances, ten parts of plum- bago were sufficient to decompose ninety-six parts of nitre ; and Dr. Kirwan found that nearly the same quantity of charcoal was sufficient for producing the same effect.

Macquer long ago observed that no volatile oily matter will detonate with nitre, unless it be previously reduced to a charcoal ; and that then its effect upon charcoal is precisely proportional to the charcoal which it contains. Dr Kirwan, upon trying the experiment with vegetable pitch and maltha, found that these substances did not detonate v/ith nitre, but merely burn upon its surface with a white or yellow flame; and that, after they were consumed, nearly the same quan- tity of charcoal was necessary to decompose the nitre which would have been required if no bitumen had been used at all. Now coals are chiefly composed of charcoal and bitumen. It occurred therefore to Dr. Kirwan that the quan- tity of charcoal which any coal contains may be ascertained by detonating it with nitre: for, since the bitumen of the coal has no effect in de- composing nitre, it is evident that the detonation and decomposition must be owing to the char- coal of the coal ; and that, therefore, the quan- tity of coal necessary to decompose a given oortion of nitre, will indicate the quantity of

carbon which it contains : and the proportion of charcoa. and earth which any coal contains, be- ing ascertained, its bituminous part may be easily had from calculation.

The crucible which he used in his experiments was large ; it was placed in a wind furnace, at a distance from the flue, and the heat in every ex- periment was as equal as possible. The moment the nitre wˆis red hot, the coal, previously re- duced to small pieces of the size of a pin's head, was projected in portions of one or two grains at a time, till the nitre would no longer detonate ; . and every experiment was repeated several times to ensure accuracy. He found that 480 grains of nitre required fifty grains of Kilkenny coal to decompose it by this method. Therefore ten grains would have decomposed ninety-six of nitre ; precisely the quantity of charcoal which would have produced the same effect. There- fore Kilkenny coal is composed almost entirely of charcoal.

Canntl coal, when incinerated, left a residuum of 3-12 in the 100 parts of

earthy ashes: 66-5 grams of it were required to decompose 480 grains of nitre ; but fifty parts of charcoal would have been sufficient : therefore 66‘5 grains of cannel coal contained fifty grains of charcoal and 2‘08 of earth ; the remaining 14-42 grains must be bitumen. In this manner may the composi- tion of any other coal be ascertaintni.

As for sulphur, to ascertain any accidental im- purities with which it may be contaminated, it ought to be boiled in thirty times its weight of water, afterwards in diluted muriatic acid, and lastly treated with nitre-muriatic acid. These substances will deprive it of all its impurities, without acting on the sulphur itself, if the proper cautions be attended to. The sulphur may then be dried and weighed. The deficiency in weight will mark the quantity of the substances which contaminate the sulphur. The solutions may be evaporated and examined according to the rules laid down in th2 second and fourth chapters.

The diversity of metallic ores is so great that no general method of analysis can be given.

Gold ores. The presence of gold may easily be detected, by treating the mineral supposed to contain it with nitro-muriatic acid, and dropping muriate of tin into the solution. Jf the solution contains any gold, a purple precipitate immedi- ‘ ately appears.

Native gold ought to be dissolved in nitro- muriatic acid ; the silver, if any be present, falls to the bottom in the state of muriate, and may be separated by filtration and weighed. Pour sul- phate of iron into the solution, and the gold is precipitated in the metallic state. The copper, if any be present, may be precipitated by a plate of iron. The presence of iron may be ascertained by dropping tincture of nut-galls into a portion of the solution.

The auriferous pyrites may be treated with diluted nitrous acid, which dissolves the iron, and separates the sulphur. The gold remains insoluble in the state of small grains.

Ores of platinum. — The most complete treatise on the analysis of this metal is that of Proust. But even his experiments are not sufficient to make us thoroughly acquainted with this com-*

plicated ore. Proust first separates the sana with which the grains of platina are mixed by exposing them to the blast of air. By heat he evaporates the mercury which still adheres to them, and then picks out the grains of gold, thus rendered visible. The ore is then dissolved in an acid composed of one part nitre and three parts muriatic acid. A black powder remains. This

powder, when roasted, gives out phosphorus and sulphur. After this it is dissolved by nitro- muriatic acid, except a small residuum, which is plumbago. The solutions are then mixed. They consist of muriates of platinum and oxy-muriates of copper and iron. By evaporating till the liquid, when cold, assumes a consistency greater than honey, and inclining the retort, the oxy- muriates run off, and leave the muriate of plati- num, which may be obtained pure by repeated solutions and crystallisations. The solution con- taining the muriates, and perhaps also a little platinum, is to be diluted with a great propor- tion of water, and pure ammonia dropt in. The red oxide of iron precipitates, and may be esti- mated by weighing it. When the solution is somewhat concentrated, ammonia precipitates the platinum in the state of a triple salt ; and the copper, which now only remains, may be preci- pitated by a plate of iron.

Ores of silver. — The analysis of the ores of silver has been always considered as very im- portant, on account of the great value of the metal.

1. Native silver is to be dissolved in nitric acid. The gold, if the ore contains any, remains in the state of a black powder, and may be dried and weighed. The silver may be precipitated by common salt : 100 parts of the precipitate, dried, denote about seventy-five parts of silver. The presence of copper may be ascertained by the green color of the solution, and by the blue color it assumes on adding ammonia. The copper may be precipitated by a plate of iron, or by the rules laid down hereafter. When the ore contains arsenic, its proportion may be esti- mated by weighing before and after fusion ; for the arsenic is dissipated by heat ; or the ore may be dissolved in nitric acid, which acidifies the arsenic. After the separation of the silver, the arsenic acid may be precipitated by nitrate of lead; 100 parts of the dry precipitate indicating about twenty-two of the arsenic.

2. Alloy of silver and antimony is to be treated with nitric acid, which dissolves the silver, and oxidates the antimony. The silver is estimated as above. The oxide of antimony may be re- duced by fusion with four times its weight of black flux and a little soap.

3. Sulphuret of silver is to be treated with diluted nitric acid, which dissolves the silver, leaving the greater part of the sulphur untouched. The residuum is to be dried, and then the sul- phur burnt off. The loss of weight gives the sul- phur. The residuum is the gauge of the ore, which may be analysed by the rules laid down in the last chapter. The silver is to be precipi- tated by common salt; and the other metals, if any be present, may be ascertained as above. Part of the sulphur is always acidified. The acid thus formed may be precipitated by nitrate of

barytes ; 100 parts of the dried precipitate indi- cating about 14-5 of sulphur.

4. Antimoniated silver ore was analysed by Klaproth thus : 100 parts were boiled in diluted nitric acid. The residuum, washed and dried, was twenty-six. These twenty-six were digested in nitro-muriatic acid. The residuum now weighed thirteen (so that thirteen had been dis- solved), twelve of which were sulphur, and burnt away, leaving one part of silica. The nitro-muriatic solution, when diluted largely with water, let fall a precipitate, which weighed thir- teen (or ten of pure antimony), and had the pro-perties of oxide of antimony ; for they did not evaporate till heated to redness; but, at that temperature, were dissipated in a gray smoke. The nitric solution was green. Common salt occasioned a precipitate, which weighed 87-75, equivalent to 65-81 of pure silver. After the separation of this muriate of silver, sulphate of soda occasioned no precipitate. Therefore the solution contained no lead. When supersaturated with soda, a gray precipitate fell, weighing five parts. On burning coals this precipitate gave out an arsenical smell. It was redissolved in nitric acid ; sulphureled alkali occasioned a smutty brown precipitate ; and the prussic alkali a prussian blue, which, after torrefaction, was magnetic. Hence he concluded that these five parts were a combination of iron and arsenic acid. Tr.e nitric solution, which had been super- saturated with ammonia, was blue; he therefore suspected that it contained copper. To discover this, he saturated it with sulphuric acid, and put into it a polished plate of iron. The quantity of copper was so small that none could be collected on the iron.

5. Sulphuret of silver and copper may be ana- lysed as No. 3, separating the copper by a plate of iron.

6. Calciform silver ore may be analysed as No. 2, separating the copper by an iron plate, and estimating the carbonic acid that escapes when the ore is heated or dissolved in nitric acid.

*7. Red silver ore was analysed by Vauquelin thus : 100 parts were digested in 500 parts of nitric acid previously diluted with water. The undissolved resiuuum, being washed and dried, weighed 42 06. Being treated with muriatic acid, it was all dissolved except 14-66 parts, which were sulphur. The muriatic solution, when diluted with a great quantity of water, de-pnsited a white powder, which weighed 21*25, and was oxide of antimony. The nitric acid so- lution remained to be examined. Muriatic acid occasioned a heavy precipitate, which weighed 70-66 parts, and which was muriate of silver. Re-agents showed that the acid retained no other substance in solution.*

8. Muriate of silver was analysed by Klaproth as follows : 100 parts were mixed with thrice their weight of pure carbonate of potassa, and melted together in a glass re ort. The mass was dis- solved in water, and the solution filtered. A re- siduum remained, which was dissolved in nitric acid, with, the exception of a red powder; which, treated with nitro-muriatic acid, was dissolved, except a little muriate of silver, which, when re- duced, yielded 0-5 of pure silver. Ammonia

precipitated from the nitro-muriatic solution 2-5 parts oxide of iron. The nitric solution was pre- cipitated by common salt; the muriate of silver thus obtained, yielded, when reduced, 67-25 of pure silver. The original aqueous solution of the alkaline mass was saturated with acetous acid, on which it deposited 1-75 parts of alumina. The solution was evaporated to dryness, and the dry mass treated with alcohol, which dissolved theace- tite of potassa. The residuum, amounting to 58-75 parts, was dissolved in water; and, being treated with muriate of barytes, fifteen parts of sulphate of barytes precipitated, indicating the presence of about 0-5 of sulphuric acid, 0-75 sulphate of potassa. The remaining fifty-eight parts were muriate of potassa, indicating about twenty -one parts of muriatic acid.

Ores of mercury. — We have very few exact analyses of the ores of mercury, owing, perhaps, to the facility with which the mercury is extracted from them by distillation.

1 . Native mercury and amalgam may be dis- solved in nitric acid. The gold, if any be pre- sent, remains in the state of powder, and may be estimated by its weight. The affusion of water precipitates bismuth Common salt precipitates the silver and part of the mercury ; but the lat- ter may be redissolved by a sufficient quantity of water, or, which is far better, of oxy-muriatic acid, while the muriate of silver remains insolu- ble. Lastly, the mercury may be precipitated by sulphate of iron, and estimated.*

2. Native cinnabar may be treated with a mix- ture of three parts muriatic and one nitric acid, which dissolves the mercury, and leaves the sul- phur. The mercury may then be estimated, as the last.

3. Hepatic mercurial ore has not been analysed. It may be attempted as in No. 2; or by dis- solving it in nitric acid.

4. Muriate of mercury may be digested in muriatic acid till the whole is dissolved. Muriate of barytes precipitates the sulphuric acid, 10O parts of which are equivalent to 186 of sulphate of mercury ; and, the proportion of this salt being known, we have that of muriate.

Ores of copper. — 1 . Native copper sometimes contains gold, silver, or

iron. It may be dis- solved in nitric acid ; the gold remains in the state of a blackish, or rather violet-colored pow- der; the silver may be separated by a polished plate of copper (or precipitated from a portion of the solution by common salt) ; the iron may be separated by boiling the solution to dryness, and treating the residuum with water. By this pro- cess, the nitrate of iron is decomposed ; the oxide of iron remains, while the water dissolves the nitrate of copper. This salt may be decomposed by boiling it with potassa : the precipitate, dried in a red heat, is black oxide of copper : 100 parts of it denote eighty of metallic copper.

2. Sulphuret of copper may be dissolved in diluted nitric acid. Part of the sulphur remains unaltered, and may be estimated by weighing it, and burning it off. Part is acidified, and may be precipitated by nitrate of barytes ; 100 parts of the dried precipitate indicating 14-5 of sul- phur. By evaporation to dryness, and solution of water, the iron is separated ; and the copper

may be estimated as in No. 1 ; or muriatic acid may be used instead of nitric ; but in that case it is more difficult to obtain a complete solution.

3. Gray copper ore was analysed by Klap- roth thus : 300 parts of it were digested with four times their weight of nitric acid. This operation was repeated, and the two acid liquids mixed. The undissolved residuum was 188 parts. The nitric solution was green, and when common salt was added muriate of silver preci- pitated. The solution being now supersaturated with ammonia, 9‘5 parts of a flaky red precipi- tate were obtained ; which was found to be com- posed of silica, alumina, and iron by dissolving it in muriatic acid, and proceeding according to the rules laid down in the second chapter. A polished iron plate precipitated from the nitric solution sixty-nine parts of copper. The 188 parts residuum were boiled with six times their weight of muriatic acid ; 105-5 parts remained, which were sulphur and silica. The muriatic acid solution being concentrated, yielded a little muriate of silver. Being diluted with a large portion of water, a white powder precipitated, which weighed 97‘5 parts, and was oxide of antimony.

4. lied copper ore has only to be dissolved in muriatic acid, and the copper precipitated by a plate of iron : eighty-eight parts of the precipi- tated copper being equivalent to 100 of the orange oxide, of which the ore is

composed.

5. The analysis of the oxides and carbonates of copper scarcely requires any remarks. The water and carbonic acid must be estimated by distillation in close vessels, and coliecting the products. The ore may then be dissolved in nitric acid, and its copper ascertained as above.

6. Arseniate of Copper was thus analysed by Mr. Chenevix : the ore was dissolved in diluted nitric acid, and nitrate of lead poured in. The solution was evaporated till a precipitate began to appear, and then mixed with alcohol. Arse- niate of lead precipitated : 100 parts of this salt indicate thirty-three of arsenic acid. The cop- per was separated from the nitric acid by boiling it with potass.

VI. Ores of iron. — Notwithstanding the great variety of iron ores, they may all, as far as ana- lysis is concerned, be arranged under three heads : viz. 1. Sulpliurets; 2. Oxides; and 3. Salts.

1 . Pyrites, or sulphureled iron, may be treated repeatedly with boiling nitric acid, till the sul- phur is acidified. Muriatic acid is then to be added, and the digestion continued till the whole be dissolved. Muriate of barytes is then to be added, to precipitate the sulphuric acid ; 100 of the dried precipitate indicates 14‘5 of sulphur. If the solution contains only iron, it may be precipitated by carbonate of soda, calcined to redness and weighed. But, if earths or manga- nese be present, we must proceed by the rules laid down in the second chapter.

2. If the oxides of iron be pure, i. e. contain nothing hut iron, we have only to dissolve them in muriatic acid, and precipitate them as above. But it is very seldom that ores possess this degree of purity. The iron is usually combined with manganese, alumina, silica, or a’ll these together. The analyses are to be conducted exactly by the rules in the second chapter.

3. The sparry iron ore may be analysed in the same manner, excepting only that the carbonic acid must be separated by distillation or solution in close vessels, and estimated.

4. Arseniate of iron was analysed by Mr. Che- nevix thus : 100 parts of it were boiled with pot- ass till the arsenic acid was separated. Nitrate of lead was mixed with the solution ; 100 parts of the solution indicated thirty-three of arsenic acid. That portion of the ore which eluded the action of the potass was treated with muriatic acid ; the undissolved residuum was silica. The muriatic acid was supersaturated with ammonia. The iron precipitated, but the copper was dissolved by the ammonia.

VII. Ores of tin. — For the method of ana- lysing the ores of tin we are

solely indebted to Klaproth.

1. The sulphuret of tin was thus analysed by Klaproth: 120 parts of the ore were digested with nitro-muriatic acid : forty-three parts re- mained undissolved. Of these, thirty burnt away with a blue flame, and were sulphur; of the remaining thirteen, eight dissolved in nitro- muriatic acid : the undissolved five were heated with wax, and yielded a grain of iron attracted by the magnet. The rest was a mixture of alumina and silica. The nitro-muriatic solution was completely precipitated by potass, and the precipitate redissolved in muriatic acid. A cylinder of tin precipitated forty-four parts of copper from this solution, and lost itself eighty- nine parts of its weight. A cylinder of zinc precipitated 130 parts of tin; so that, deducting the eighty-nine parts of tin dissolved during the precipitation of the copper, forty-one remained for the tin contained in the ore.

2. Tinstone was thus analysed by Klaproth : 100 parts of the ore were heated to redness, with 600 parts of potass in a silver crucible; and, the mixture being treated with warm water, eleven parts remained undissolved. These eleven, by a repetition of the treatment with potass, were re- duced to two and a quarter. This small resi- duum dissolved in muriatic acid. Zinc precipi- tated from the solution one half part of tin, and the prussian alkali gave a blue precipitate, which indicated one- fourth part of iron. The alkaline solution was saturated with muriatic acid; a white precipitate appeared, but was redissolved by adding more acid. The whole was precipi-tated by carbonate of soda. The solution, which had a yellowish color, was re-dissolved in muri- atic acid; and, a cylinder of zinc being inserted into the solution, seventy-seven of tin were ob- tained, indicating nearly ninety-eight parts oxide of tin.

VIII. Ores of lead.— I. Sulphuret of lead usually contains a little silver, and sometimes also antimony and zinc. It may be treated with diluted nitric acid, which leaves only the sulphur undissolved, the weight of which is to be taken, and its purity determined by combustion. If antimony be present, it will either remain in the state of a white oxide, or, if dissolved, will bs precipitated by diluting the solution with water. Muriatic acid is to be added, and the solution evaporated till it is reduced to a small portion. Muriate of lead and of silver precipitate. The

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first of these may be dissolved in boiling water ; the second remains insoluble. Westrum sepa- rated the muriate of silver, by digesting the pre-cipitate with ammonia. The liquid from which the muriates are separated

may contain iron, /inc, copper. The iron may be precipitated by am- monia added in excess : the copper by a plate of zinc : the zinc by carbonate of soda, reduced to the metallic state and weighed, subtracting what had been separated from the plate of zinc.

2. Plumbiferous antimoniated silver ore was thus analysed by Klaproth : it was digested with seven timers its weight of nitric acid, by which part was dissolved. The residuum was treated repeatedly with muriatic acid, which was poured off while boiling hot. What remained undissolved was sulphur mixed with a little silica. Com- mon salt was added to the nitric solution : two precipitates appeared; 1. A heavy fleaky one, which was muriate of silver ; 2. Acicular crystals of muriate of lead. These crystals were dissolved in water, and the solution added to the nitric solution. From this solution, sulphate of soda precipitated a heavy white powder, which was sulphate of lead. Lastly, ammonia afforded a precipitate, which was a mixture of iron and alumina. The muriatic solution being concen- trated, crystals of muriate of lead appeared ; the concentration was continued as long as any crystals formed. The residuum, being diluted with water, gave a white precipitate, which was jxide of antimony.

3. The bismuthic silver ore was analysed by Klaproth in nearly the same manner.

4. Carbonate of lead may be dissolved in nitric acid, collecting and estimating the carbonic acid. By boiling the solution, the iron and antimony (if present) will be separated, and may be esti- mated by solution in muriatic acid ; precipitating the antimony by water, and the iron by ammo- nia. From the nitric solution the lead may be precipitated by sulphuric acid, and the earth may be examined by the rules laid down in the second chapter.

5. Phosphate of lead may be dissolved in boiling muriatic acid. The solution is to be diluted with water till the crystals of muriate of lead are dissolved ; being then saturated with ammonia, the lead and iron are precipitated. Dissolve the precipitate in muriatic acid, evapo- rate to dryness, and treat the dry mass with alcohol. The muriate of iron is dissolved ; but the muriate of lead remains. Finally, drop lime water into the ammoniacal solution, as long as any precipitate appears. That precipitate indi- cates the proportion of phosphoric acid.

6. Arseniate of lead has not been analysed. It might be treated with an alkali which would separate the lead. This metallic precipitate is then to be redissolved in nitric acid, and ana- lysed by the methods above described. The alkaline arseniate may be dissolved in water, and treated with nitrate of lead ; 100 parts of the dry precipitate indicate thirty-three of lead.

7. Molybdate of lead was thus analysed by M. Hatchet : the ore was boiled repeatedly with sulphuric acid, till the acid refused to dissolve any more. Tiie solution contained themolybdic acid. The undissolved powder (sulphate of lead)

was boiled for an hour with carbonate of soda, and then washed. Nitric acid now dissolved it, except a little silica. The lead was precipitated from this solution by sulphuric acid ; after which ammonia separated a little oxide of iron. The sulphuric acid solution was diluted with sixteen parts of water, and saturated with ammo- nia ; a little oxide of iron gradually precipitated. The solution was now evaporated to dryness, and the mass strongly healed, to separate the sulphate of ammonia. The residuum, repeatedly treated with nitric acid, was converted into yel- low molybdic acid.

IX. Ores of nickel. — No exact method of ana- lysing the ores of nickel has yet been publ shed.

1. Kupfer nickel may be dissolved in nitric acid, by which the greater part of the sulphur win be separated. The arsenic may be after- wards precipitated by the affusion of water. A plate of iron will expel the copper. Precipitate by potass added in excess, and boil the precipi- tate, which will separate the arsenic and sulphur completely. Dissolve the precipitate (previously exposed moist for some time to the air) in ace- tous acid, and add an excess of ammonia. The iron is precipitated; but the cobalt and nickel remain in solution. Evaporate, and the cobalt is deposited ; then, by continuing the evapora- tion to dryness, the nickel is obtained.

2. The arseniate of nickel may be boiled with potass, which separates the acid ; the residuum may be analysed as No. 1.

X. Ores of zinc. — 1. Blende maybe treated with diluted nitric acid, which will separate the sulphur, the. siliceous gangue, &c. The parity of the sulphur is to be ascertained by combus- tion, and the residuum analysed in the manner formerly described. Precipitate the nitric solu- tion by soda: redissolve in muriatic acid; prec'pitate the copper by a plate of iron : sepa- rate the iron by an excess of ammoniji. The zinc now only remains in the solution, and may be obtained by evaporating to dryness, n-dissolv- ing in muriatic acid, and precipitating by soda.*

2. Calamine may he digested in nitric acid, and the insoluble residuum boiled with muriatic acid repeatedly; what remains, after dilution with boiling water, is silica. The nitric solution contains zinc, and probably also iron and alumi- na; evaporate to dryness, re-dissolve, and add an excess of ammonia. The iron and alumina either remain undissolved, or are

precipitated, and may be separated by potass. The zinc may be precipitated by an acid, or by evaporation to dryness. The muriatic solution probably con- tains iron and alumina, which may be precipi- tated by the rules already laid down.

XI. Ores of antimony. — 1. Native antimony may be treated with nitric acid, which will oxi- date the antimony, and partly dissolve the arsenic. This last metal may be precipitated by concentration and the affusion of water. What remains with the antimony may be dissolved by digestion in boiling water.

2. Sulphuret of antimony is to be treated with nilro-muriatic acid. The sulphur and the mu- riate of silver, if any be present, will remain. Water precipitates the antimony, sulphuric acid the lead, and ammonia the iron.

XII. Oret of bismuth.— Native bismuth may be treated with nitric acid. Repeated concen- trations and affusions of water precipitate the bismuth, and perhaps the arsenic ; but this last may be redissolved in boiling water. The cobalt remains, and may be examined by the rules laid down in § XV. The same analysis succeeds with the other ores of cobalt. The sulphur, when present, remains undissolved.

XIII. Ores of tellurium. — Klaproth dissolved the white gold ore of Fatzbay in nitro-muriatic acid, and added potass in excess to the solution. A brown precipitate remained undissolved, which was a mixture of gold and iron. It was redis- solved in nitro-muriatic acid ; the gold first pre- cipitated by nitrate of mercury, and then the iron by potass.. The potass in the first solution being saturated with muriatic acid the oxide of tellurium precipitated. The other ores may be analysed in the same manner, only the precipi pitate occasioned by the potass must be treated according to the metals of which it consists.

XIV7. Ores of arsenic. — 1. Native arsenic may be treated with nitro-muriatic acid. The silver and gold remain ; the first in the state of a mu- riate, the second maybe dissolved by nitro-muri- atic acid, and precipitated by sulphate of iron. The arsenic may be precipitated by concentrating the nitric solution, and then diluting with water. The iron may then be precipitated by ammonia.

2. The sulphureted ores of arsenic may also be treated with diluted nitro-muriatic acid. The sulphur remains undissolved ; the arsenic may be precipitated by concentration and the affusion of water; the iron by

ammonia.

3. Oxide of arsenic may be dissolved in six- teen parts of water. The solution displays acid properties, and nitrates of silver and of mercury occasion precipitates ir it

XV. Ores of cobalt. — 1. White cobalt ore was thus analysed by Tassacrt : — To ascertain the pro- portion of arsenic he treated the ore with diluted nitric acid, and obtained a complete solution. Crystals of white oxide of arsenic were depo- sited, and by repeated evaporations he separated the whole of the arsenic, and ascertained its weight. He then boiled a new portion of the ore with four times its weight of nitric acid, and thus acidified the arsenic and obtained a solu- tion. This solution was treated with potassa, which retained the arsenic acid, and separated the other bodies. A precipitate of arsenic of co- balt, which had fallen when the nitric solution was diluted with water, was treated with potassa. The residuum, with the precipitate occasioned by the potassa, was dissolved in nitric acid, and ammonia added in excess. Part was retained in solution by the ammonia, but part was precipi- tated. The precipitate was dissolved in acetous acid, and the solution repeatedly evaporated to dryness. By this process the oxide of iron gra- dually separated in the form of a red powder. The dissolved part was acetite of cobalt. It was decomposed by the addition of ammonia in excess, which redissolved the cobalt. By these processes the arsenic and iron were separated ; the cobalt was retained by the ammonia, and was obtained by evaporation. To ascertain the proportion of sulphur in the ore, a new portion

was boiled with nitric acid. On cooling, crystals of white oxide of arsenic were deposited. These being separated, nitrate of barytes was added to the solution ; 100 parts of the dried precipitate indicated 14-5 of sulphur. The other ores of co- balt may be analysed nearly in the same way. See § XII.

XVI. Ores of manganese. — 1. Barytated man- ganese was treated by V'auquelin with muriatic acid ; oximuriatic gas passed over, and the whole was dissolved except a little charcoal and silica. The solution, when evaporated, yielded crystals of muriate of barytes. These were separated, and the liquid, evaporated to dryness, yielded a yellow mass soluble in alcohol, and tinging its flame with yellow brilliant sparks. The pro- portion of barytes was ascertained by precipi- tating it in the state of a sulphate; the manganese by precipitating it by carbonate of potassa.

2 The gray ore of manganese was treated by the same chemist with muriatic acid ; some silica remained undissolved. Carbonate of potassa was added to the solution. The precipitate was at first white, but became black when exposed to the air. It was treated with nitric acid, which dissolved

every thing. The nitric solution, when mixed with carbonate of potassa, deposited only carbonate of lime. The black residuum was mixed with sugar, and treated with nitric acid. The solution was complete ; therefore no iron was present.

XVII. Ores of tungsten. — 1. Wolfram was analysed by the Elhuyarts, and by Vauquelin and Hecht, nearly as follows : — The ore was boiled with muriatic acid, and then digested with ammonia alternately till the whole was dis- solved. The ammoniacal solution, being eva- porated to dryness and calcined, left the yellow oxide of tungsten in a state of purity. The muriatic solutions were mixed with sulphuric acid, evaporated to dryness, and the residuum redissolved in water. A little silica remained. Carbonate of potassa precipitated a brown pow- der from this solution. This powder was treated with boiling nitric acid repeatedly till the iron which it contained was oxidated to a maximum. It was then digested in acetous acid, which dis- solved the manganese, and left the iron. Finally the manganese was precipitated by an alkali.

2. Tungsten of lime may be treated with nitro- muriatic acid till every thing soluble is taken up. The residuum is yellow oxide of tungsten. Its purity may be tried by solution in ammonia. The nitro-muriatic solution contains lime, and perhaps a little iron and alumina. It may be examined by the rules laid down in the second chapter.

XVIII. Ores of molybdenum. — Molvbdena may be treated with nitric acid, and successively boiled upon it till it is converted into a white powder. This powder, washed and dried, is molybdic acid. The liquid obtained by washing the acid, on the addition of potassa, deposits some more molybdic acid. This being separated, muriate of barytes is to be dropt into it as long as any precipitate appears : 100 parts of this precipitate indicate 14-5 of sulphur.

XIX. Ores of uranium. — l.Pechblende, or the black ore of uranium, was dissolved by Klaproth

in nitric acid. The undissolved part is a mix- ture of silica and sulphur. By evaporating the solution nitrate of lead was precipitated ; then nitrated uranium in crystals. The solution being now evaporated to dryness, and treated again with nitric acid, left the iron in the state of red oxide.

2. Uranitic ochre may be treated with nitric acid, which dissolves the uranium, and leaves the iron. The purity of the iron may be tried by the

rules already laid down.

3. Green mica was dissolved by Klaproth in nitric acid, and ammonia added in excess to the solution. The oxide of uranium was precipi- tated ; that of copper retained.

XX. Ores of titanium. — 1. The ores of titanium, reduced as usual to a fine powder, are to be fused with potassa or its carbonate. The melted mass is then to be dissolved in hot water. 'A white precipitate gradually appears, which is the white oxide of titanium. This is all that is necessary to analyse the first species.

2. But when iron and silica are present the following method of Chenevix may be adopted : — Saturate the alkaline solution with muriatic acid ; white oxide of titanium precipitates. Separate the precipitate, and evaporate the solution to dryness. Redissolve the residuum in water. The silica remains behind. Precipitate the solution by an alkali-; add the precipitate to the whole oxide obtained, and dissolve the whole in sul- phuric acid. From this solution phosphoric acid precipitates the titanium, but leaves the iron.

3. The third species, which contains lime and no iron, is to be fused with potassa, dissolved in muriatic acid, and the silica separated in the usual way. After this the titanium is first to be separated from the muriatic solution by am- monia ; and afterwards the lime by an alkaline carbonate.

XXI. Ores of chromum. — l.Vauquelin ana- lysed the chromate of lead thus : — When boiled with a sufficient quantity of carbonate of potassa, a lively effervescence takes place ; the acid com- bines with the potassa, and the carbonate of lead is formed, and remains undissolved. It may be dissolved in nitric acid, and its quantity ascer- tained by precipitation with sulphuric acid. Or the chromate may be treated with muriatic acid ; muriate of lead precipitates, and chromic acid remains in solution. This process must be re- peated till the whole of the ore is decomposed. There remains in solution chromic acid, mixed with a little muriatic, which may be separated by oxide of silver.

2. Tassaert analysed the chromate of iron as follows : — It was melted with eight times its weight of potassa in a crucible. The resulting mass dissolved in water except a brown powder. This residuum was treated with muriatic acid, which dissolved a part of it. The residuum was treated as at first with potassa and muriatic acid, till the whole was dissolved. The alkaline solution con- tained the chromic acid ; the muriatic solution the iron, still mixed with a little chromum. It was precipitated by potassa, and the precipitate boiled with that alkali, to separate the whole of the chromic

acid. What remained was pure oxide of iron. The chromic solutions were saturated with

nitric acid, and mixed with nitrate of lead. The resulting precipitate indicated the propor- tion of chromic acid ; for 100 parts of chromate of lead indicate about thirty-five of chromic acid. The method of analysing the different ores with precision being ascertained, we have it in our power to obtain the metals in a state of pu- rity.

1. Gold. To obtain pure gold we have only to dissolve the gold of commerce in nitro-mun- atic acid, and precipitate the metal by dropping a very diluted solution of sulphate of iron ; the powder which precipitates, after being well washed and dried, is pure gold.

2. Platinum can scarcely be obtained perfectly pure in the metallic state, at least in any consi- derable quantity ; because a sufficient heat for melting it cannot be obtained. But its oxide may be procured quite pure from the muriate of platinum and ammonia. This salt is to be de- composed by a violent heat, and the residuum, if necessary, may be redissolved in nitre-muriatic acid, and precipitated with soda.

3. Silver. — Dissolve the silver of commerce in nitric acid, and precipitate with a diluted so- lution of sulphate of iron. The precipitate is pure silver. Or precipitate with common salt ; form the precipitate into a paste with soda ; put it into a crucible lined with soda, and fuse >t with a brisk heat. This process gives a button of pure silver.

4. Mercury may be obtained pure by distilling a mixture of two parts cinnabar, and one part iron filings, in an iron retort. The mercury comes over, and the sulphuret of iron remains; or the oxy-muriate of mercury may be decom- posed by ammonia, and the precipitate heated either by itself or mixed with oil.

5. Copper may be dissolved in muriatic acid, and the copper precipitated by a polished plate of iron : or the black oxide of copper, obtained by decomposing cuprated ammonia, may be melted wfth its own weight of pounded glass and pitch.

6. Iron can scarcely be obtained perfectly free from carbonate. The processes described in a former part of this work furnish it as pure as it can be procured. See IRON.

7. Tin may be obtained pure by solution in strong nitric acid : the white oxide of tin is formed, which is insoluble. Let it be digested first with muriatic acid, and afterwards with aqua regia. Mix the oxide, thus purified, with its weight of pitch and a little borax, and melt it in a cru-

cible.

8. I^nd may be dissolved in nitric acid, and precipitated by sulphate of soda; wash the pre- cipitate, and melt it in a crucible with two and a half times its weight of black flux.

9. Nickel may be obtained pure from kupfei nickel, by roasting the ore previously mixed with charcoal ; dissolving it in nitric acid ; eva- porating the solution to dryness ; redissolving it in water; precipitating by potass; and boiling the precipitate with potass. The precipitate is then to be edulcorated, dissolved in acetous acid, the solution evaporated' to dryness, re-dissolved in water, and precipitated by ammonia in excess, which redissolves the oxides of cobalt and nick-

*el. By evaporating this solution the cobalt is precipitated, and the solution becomes blue. This last solution, evaporated to dryness, gives pure oxide of nickel. Form this oxide into a paste with oil ; mix it with two or three parts of black flux, and put it into a crucible, covering it up with borax and common salt. Heat the crucible violently for an hour and a*1 half in a smith's *orge. A button of pure nickel is obtained.*

10. Zinc may be dissolved in sulphuric acid, and a plate of zinc allowed to remain for a con- siderable time in the solution. It is then to be filtered, and the zinc to be precipitated with soda. The precipitate, edulcorated" and dried, is to be mixed with half its weight of pure charcoal, and distilled in an earthenware re- tort. The zinc is found pure in the neck of the retort.

11. Antimony may be dissolved in nitro- muriatic acid, and precipitated by the affusion of water. The precipitate is to be1 mixed' with twice its weight of tartar, and fused in a cruci- ble. A button of pure antimony is obtained.

12. Bismuth may be dissolved in nitric acid, and precipitated by water. The edulcorated precipitate, formed into a paste with oil, and ra- pidly fused with black flux, gives a button of pure bismuth.

13. Tellurium was obtained pure by Klaproth by forming its oxide into a paste with oil, and heating it to redness in a retort. The metal was lapidly revived.

14. Arsenic, in the state of white oxide, may be dissolved in muriatic acid, precipitated by the affusion of water, redissolved and a plate of zinc inserted into the solution, mixing with it at the same time a little alcohol.

The arsenic is precipitated in the metallic state.

15. Cobalt ores ought to be roasted for some time, adding charcoal or oil to favor the evapora- tion of the arserXc They are then to be dis- solved in nitric acid, the solution evaporated to dryness, and redissolved in water. The solution is to be precipitated by potass, and the precipi- tate boiled with that of alkali. It is then to be edulcorated, dissolved in acetous acid, the solu- tion evaporated to dryness, and redissolved in water. Precipitate by ammonia, and redissolve the precipitate in ammonia. Evaporate the ammoniacal solution to dryness. Mix the oxide thus obtained with oil and black flux ; pour it into a crucible; cover it with borax; and expose it for an hour and a half to the heat of a forge. A pure button of cobalt is obtained.

16. Manganese. — Digest the black oxide of manganese repeatedly in nitric acid; then mjx it with sugar; and dissolve it in sugar. Filter the solution; precipitate by an alkali : form the white oxide thus obtained into a paste with oil; and put it into a crucible well lined with char- coal. Expose the crucible for an hour to the strongest heat of a forge.

17. Tungsten was obtained by Elhuyart by heating the yellow oxide violently in a crucible lined with charcoal; but this process has not succeeded with other chemists.

18. Molybdenum may be obtained by forming molybdic acid into a paste with oil, and heating it violently in a crucible lined with charcoal.

19. Uranium is procured by forming the yel- low oxide of that metal into a' paste with oil, drying it in a moderate heat, putting it into a crucible lined with charcoal, with a little lamp- black strewed over it. After luting on the cover, it is to be heated, at first gently, and then rio- lently, for three-quarters of an hour.

20. Titanium, in a very small proportion, was obtained in the metallic state by mixing together 100 parts of the red oxide of the metal, fifty parts of borax, and five parts of charcoal, and forming the mixture into a paste with oil. This paste was put into a crucible lined with charcoal, and exposed for an hour and a half to the violent heat of a forge.

21. Chromum was obtained by Vauquelin, in the metallic state, by putting a portion of chro- mic acid into a charcoal crucible, enclosed in a common crucible lined with charcoal, and ex- posing it for an hour to the violent heat of a forge.

For the phenomena of the phosphorescence of minerals, see our article LIGHT.

We have now to present to the reader nn arrangement of the principal mineral substances with which this science is conversant; and can- not better accomplish the task than by tran- scribing the Tabular View of simple minerals, contained in professor Cleveland's Elementary Treatise. The divisions into species and the nomenclature of the species are, he observes, as strictly chemical as the present state of minera- logical knowledge will permit. In the class of earthy compounds, an accurate division into genera is impracticable. An attempt has there- fore been made to arrange the species of this class, in some degree, according to their compo- sition, as far as that can be ascertained from the results of chemical analysis. In other words, those minerals which most resemble each other in the results of their analysis, are collected into the same group. We are hereby enabled to determine how far those minerals which appear to be composed of the same ingredients, united in different proportions, resemble each other in their external characters. In forming these groups, the latest analyses of the most experi- enced chemists have been employed, and prin- cipally those made by Klaproth, Vauquelin, and Chenevix. It has also been an object to select analyses made on the purest crystallised speci- mens. In general, no ingredient has been con- sidered essential which does not occur in at least five per cent, in specimens apparently pure; while, at the same time, some ingredients, which occur in greater proportions in specimens ob- viously impure, have been rejected as accidental. After all, it must be obvious that this arrange- ment of the earthy minerals is liable to various alterations, in proportion as chemical analysis becomes more correct.

In this Tabular View, subspecies, varieties, and subvarieties, are distinguished from each other by a different type, and by their position in the column : a number of species recently disco- vered, and concerning which little is yet known, are alphabetically arranged in an appendix to the earthy class : those species which have never been analysed are marked by an asterisk. The place of such minerals, when not contained »»»

the appendix, is determined merely by some ex- ternal analogies. Subvarieties, though included in the Tabular View, are not numbered in the descriptions.

We have only to 'add that it is amongst the most pleasing portions of our duty to acknow- ledge important aid in this walk of science from the New World. Thus commenced the truly noble career of the United States. During the war that achieved her independence, she taught us electricity ; and her well ascertained anJ well defended liberty will increasingly enable her, we do not doubt, not only to take the lead, as she does, in all the scientific pursuits of her own hemisphere, but to yield back to Europe ' a full reward ' for all the early lessons of civilisation and science she received from us. Her most distinguished sons, at any rate, are always most ready to remember these, as, with feelings far removed from jealousy, we deem it imperative upon us thus to acknowledge this practical kind of return.

TABULAR VIEW.

The species printed in Italics have not hitherto been observed in crystals, nor even with a crystalline structure. — Substances enclosed by a parenthesis, in the column of subspecies, are appendices to the species or subspecies.

Class I. — SUBSTANCES NOT METALLIC, COMPOSED ENTIRELY, OR IN PART, OF AN ACID.

This class contains four orders. In the first order the acid is free or not combined ; in the second it is combined with an alkali ; in the third with an earth or earths; and in the fourth with both an alkali and an earth. Hence the presence of an acid, provided it be not united to a metallic base, characterises this class. Order I. — ACIDS NOT COMBINED. The base of the acid determines the genus. All the species in this order have oxygen, as a common ingredient, so combined with a base as to produce an acid.

Genus I.

Species 1. Sulphuric acid. 2. Sulphurous acid.

Genus II. 1. Muriatic acid.

1.

1.

Genus III. Carbonic acid. Genus IV. Boracic acid

Order II. — ALKALINE SALTS. These salts are composed of an alkali, united to an acid. Hence an alkali, so combined as to form a(salt, characterises this order. Each al- kali designates a genus.

Genus I. — Ammonia.

1. Sulphate of ammonia.

2. Muriate of ammonia. Genus 2. — Potuisa.

1. Nitrate of potassa.

Genus III. — Soda.

1. Sulphate of soda.

2. Muriate of soda.

Carbonate of soda. Borate of soda.

Order III. — EARTHY SALTS. These consist of an earth or of earths, united to an acid. Hence an earth, so combined as to form a salt, characterises this order. Each genus is determined by the earth it contains.

Genus I. — Earytet. Species. Subspecies.

Varieties and

Subvarietiet.

1. Sulphate of barytes.

lamellar.

curved, crested, columnar, radiated, fibrous, concreted, granular, compact, earthy, fetid.

2. Carbonate of Barytes.

Genus II. — Strontian.

1. Sulphate of strontian.

foliated, fibrous, calcareous.

2. Carbonate of strontian.

3. Barystrontianite.

Genus III. — Lime. 1. Carbonate of lime.

Calcareous spar, crystallised, laminated, granular, fibrous.

Satin spar, compact.

earthy.

Blue Vesuvian. Chalk. Agaric mineral.

Fossil farina concreted.

Oolite. Pisolite.

Calcareous sinter. Stalactite. Alabaster. Calcareous tufa.

incrusting Argentine.

Aphrite. magnesian.

crystallised.

Miemite. Dolomite.

columnar. Magnesian limestone.

Gurhofite. Brown spar, siliceous. Madreporite. fetid.

bituminous, ferruginous.

Species. Subspecies.

other; they frequently contain some metallic

Varieties and

oxide, and sometimes an alkali, or acid.

Subvarieties.

Mori

Species. Subspecies.

IVlun.

Varieties and

indurated.

Subvarieties.

Septa ria.

fl. Quartz.

earthy.

Bituminous marlite.

common.

2. Arragonite.

limpid, smoky.

fibrous, coralloidal.

yellow.

3. Phosphate of lime.

rose red.

Apatite.

irised.

Asparagus stone.

aventurine.

fibrous.

milky.

massive, pulverulent.

greasy, radiated.

siliceous.

tabular.

4. Floate of lime.

granular.

Fluor spar.

arenaceous.

massive.

pseudomorphous.

compact.

Amethyst.

earthy.

Prase.

argillaceous.

f A.' J

ferruginous.

fetid.

yellow.

/!. Sulphate of lime.

red.

Selenite.

greenish.

massive.

fetid.

acicular.

Cat's eye.

Gypsum.

Chalcedony.

fibrous.

common.

granular.

Caoholong.

compact.

Carnelian.

branchy.

Silex nearly

Sardonyx.

snowy.

pure. '•» Plasma.

earthy.

Siliceous sinter.

Plaster stone. 6. Anhydrous sulphate of lime.

Hyalite. Michaelite.

sparry.

Heliotrope.

granular.

/!*

Chrysophrase.

fibrous.

Opal.

compact, convoluted.

n precious, common

silico-anhydrous. 7. Siliceous borate of lime.

Hydrophane. Girasol.

Botryolite. 8. Arseniate of lime.

Semi-opal. Menilite.

9. Nitrate of lime.

ferruginous.

Genus IV. — Magnesia. 1. Sulphate of magnesia.

(Opalised wood). Flint.

2. Carbonate of magnesia, crystallised, compact, pulverulent.

swimming. Hornstone. (Agatised wood). Silicecalce.

3. Borate of magnesia.

Buhrstone.

Genus V. — Alumine.

Jasper.

1. Mellate of alumine.

common.

2. Phosphate of alumine. 3. Subsulphate of alumine.

striped. Egjptiaa. (rorcellanite.)

Order IV.— SALTS WITH AN ALKALINE AND

Leelite.

EARTHY BASE.

(Agate.)

1. Subsulphate of alumine and potassa. siliceous.

‘2. Sapphire, perfect.

2. Sulphate of alumine and potassa. 3. Fluate of soda and alumine.

blue, violet. «j

4. Glauberite. 5. Polyhalite.

Alumine nearly pure.

red. yellow, green.

Clas- TI. — EARTHY COMPOUNDS, OR STONES.

limpid, chatoyant.

The minerals which belonp to this class are

asteriated. Corundum.

Composed chiefly of earths, combined with each

L Emery.

MINERALOGY.

715

Species. Subspecies.

Species. Subspecies.

Varieties and

Varieties and

Subvarieties.

Subvarieties.

*Alumine and $ 3- Diaspore. water. * *• lurquoue. f 5. Spinelle. Alumine and .' Ruby, magnesia. £ Ceylanite. f 6. Fibrolite. 1 7. Cyanite. Rhztizite.*

f Petuntze. granular compact

Silex, alumipej n Jet]d' lime, and alkali. } 36- J"de; Nephrite. Saussunte. L Axestone.

Alumine and ˆ 8 Staurotide.

r37. Emerald.

9. Pmite. 1 10. Bucholzite. ˆ11. Nepheline. Alumine, silex, .«, AnJalusite

, Hi 1* ***. . xA.IltlalU3llC***

and alkali. Alumine, mag- f 13. Lazulite. nesia, and silex. \ Blue spar.

Silex, alumine, < precious, and glucine. 1 Beryl. v 38. Euclase. Silex, aluraine, C 39. lolite. and magnesia. \ Peliom. C Stein heilite. C 40. Basalt. columnar.

Alumine, siiex, . ,-,, , , and lime. 14′ Chrysoberyl.

tabular, globular.

f 15. Topaz. Alumine, silex,) Pyrophysalite.

amorphous. 41. Wacke.

& fluoric acid. ˆ Pycnite.

Iron city.

... 16. Brucite.

Alumine, suex,

42. Dipyre.

and zinc. 17- Gahnite.

43. Scapolite.

Yttria, silex, Gadolinite. and cerium.

44. Indianite. 45. Axinite.

_. . , r!9. Zircon. Zirconia aad \ common.

“lex- ˆ Hyacinth.

46. Garnet, precious. Pyrope.

rZO. Siliceous slate.

Topazolite.

13asanite.

Succinite.

21. Clinkstone.

Silex, alumine, and lime.

common Melanite.

22. Pumice.

Pyrcneite.

23. OLsidian.

Grossular.

vitreous.

Allochroitc.

Pearlstone.

Colophonite.

24- Pitchstone.

manganesian.

25. Spodumene.

(Romanzovit).

Killinite. ‘

47. Aplome.

26. Petalite.

48. Epidote.

27. Lepidolite.

Zoisite.

28. Mica.

arenaceous.

Siiex, alumine,

and alkali ˆ

laminated lamellar.

manganesian. 49. Cinnamon stone.

prismatic.

50. Idocrase.

29. Leucite.

Egeran.

30. Fettstein

51. MeTonite.

Gabronite. Lythrodes.

52. Byssolite. 53. Prehnile.

31. Lapis lazuli.

crystallised.

32. Schorl.

Koupholite.

common.

fibrous.

Tourmaline.

f&4. ˆdelite

• green.

55. Stilbite.

yellow, white. Indicolite.

Silex, alumine, lime, and water. <

56. Zeolite. Natrolite. mealy.

Rubellite.

Crocalite

33. Haiiyne.

57. Laumonite.

/-34. Gehlenite.

*58*Melilite.*

135. Feldspar.

Silex, alumine, C

common.

soda, and muri- Z 59. Sodalite.

green. Adularia. siliceous, lime, ana di- ˆ Alhit.*

atic acid. v r60. Analcime. Silex, »lumine, V Sarcolite.

kali.

.

alkali, and wa-.‘6i. Bildttcin.

Icespar.

ter. yg2. Nacrite.

opalescent.

avp-‘liri-p.

V63. Chabasie

Species. Subspecies.

Varieties and

Subvarieties

Species.

Subspecies.

Varieties and

Subvarieties.

Silex, alumine. (-. T, , ,.. and water. \ 64′ ˆarphohte.

ouuvdueues.

c:i._ C 86. Chlorite, oiiex, magne- V

sia and alu- < common.

Silex, lime, and f , y •

mine. / earthy.

iron. {

v slaty.

water lm'e' ˆ \ 66′ Schaa!stein-

(Green earth). (Pimelite).

Silex, lime, al- $ 67. Apophyllite.

87. Argillaceous slate.

kali, and water. C Albin.

Argillite.

Silex, barytes, C alumine, and s 68. Harmotome.

water. «

shining. Roof slate. Shale.

Silex and mag- nesia.

Silex, magnesia, and lime.

£69. Chrysolite. \ common, <. Olivine.

/ meteoric. 1ˆ70. Hypersthene. r71. Tremolite. common.

glassy. fibrous. Baikalite.

72. A sliest us. Amianthus.

bituminous. Novaculite. Aluminous slate, shining, graphic. 88. Tripoli. Rotten stone. Polishing slate. 89. Clm,stone. 90. Clay. Kollyrite. Allophane. Lenzinite.

common.

Wallerite.

Mountain cork.

Kaolin.

ligniform.

Cimolite.

compact.

adhesive.

73. Amianthoide.

Potter's.

L74. Diopside

Pipe clay.

f 75. Augite.

variegated.

common.

Loam.

Sahlite.

Lithomarge.

Fassaite.

Mountain soap.

Coccolite.

Fuller's earth.

76. Hornblende.

Bole.

common.

Reddfc.

basaltic.

Yellow earth.

lamellar.

Umber.

fibrous.

Silex, alumine,

slaty.

APPENDIX.

lime, and mag-< nesia.

Carinthin. Actynolite. common.

*1. *Amblygonite. 12. *Helvin. 2. *Bergmanite. 13. *Humite.*

massive.

*3. *Cereolite. 14. *Limbilite.*

glassy, acicular.

*4. *C/ilorophaite. 15. *Siderodepte. 5. *Chusite. 16. *Sphferulite.*

fibrous.

*6. *Conite. 17. *Spmellane.*

Pargasite. 77. Anthophyllite.

*7. *Desmine. 18. *Spinthere. 8. Fahlunite. 19. *Thulite.*

78. Diallage.

*9. *Freisleben. *Eudialyte.*

green.

*10. *Fuscite. Gibbsite.*

metalloidal. Bronzite.

*11. *Haydenite. *Gieseckite.*

*179. Pyrailolite. 80. *Macle.*

Class III.— COMBUSTIBLES.

81. Native lime.

1 . Hydrogen gas.

82. Hydrate of magnesia.

carbureted.

83. Magnesite. Meerschaum.

sulphureted. 2. Sulphur.

Argillomurite.

3. Bitumen.

84. Serpentine.

Naphtha.

precious.

Petroleum.

common.

Maltha.

85. Talc.

elastic.

Silex, magne- sia and water. “~ >

common, fibrous, indurated.

Asphaltum. (Retinasphaltum). (Fossil copal).

scaly.

(Hatchetine).

Steatite.

4. Amber.

common.

earthy.

Potstone. 5. Diamond.

Species.

6. Anthiaciie.

7. Griphite.

8. Coil.

Subspecies.

Varieties and

Subvarieties.

slaty, granular, conchoidal. columnar. (Mineral charcoal).

foliated, granular.

MINERALOGY.

Species.

717

cannel. slaty. . coarse, sooty.

(Dysodile). 9. Lignite.

Jet.

brittle.

Bituminous wood.

brown.

earthy.

A luminous earth .

10. Peat.

fibrous, compact.

Class IV.— ORES. Genus I.— Gold. 1. Native gold.

argentiferous.

Genus II. — Platina. 1 . Native platina.

Genus III. — Indium. 1. Native iridium.

Genus IV. — Palladium. 1. Native palladium.

Genus V. — Silver.

1. Native silver.

auriferous.

2. Antimonial silver. '3. Arsenical silver.

4. Sulphuret of silver.

cupreous. (Silver black).

5. Cupreous seleniuret of silver.

6. Sulphureted antimonial silver.

brittle.

7. Carbonate of silver.

8. Muriate of silver.

argillaceous. Genus VI. — Mercury.

1 . Native mercury.

2. Argental mercury.

3. Sulphuret of mercury.

common fibrous, compact, slaty. (Bituminous cinnabar).

4. Muriate of mercury.

Genus VII.— Copper.

1. Native copper.

2. Sulphuret of copper.

pseudomorphous. (Black copper).

3. Pyritous copper.

variegated.

Subspecies.

Varieties and

Sobrarietie.*

4. Gray copper.

arsenical, antimonial. Tennantite. (White copper):

5. Seleniuret of copper.

6. Red oxide of copper.

foliated, capillary, compact, ferruginous.

7. Carbonate of copper.

blue.

earthy, green.

fibrous.

compact. (Copper green).

8. Anhydrous carbonate of copper.

9. Dioptase.

0. Muriate of copper.

sandy.

1 . Sul phate of copper.

12. Phosphate of copper.

13. Arseniate of copper.

obtuse octahedral, acute octahedral, hexahedral. prismatic, fibrous, earthy, ferruginous.

Genus VIII.— Iron.

1 . Native iron.

meteoric.

2. Arsenical iron.

argentiferous.

3. Sulphuret of iron.

common.

capillary, cellular, radiated.

cockscomb, hepatic, magnetic, arsenical.

4. Magnetic oxide of iron.

Native magnet. Iron sand, earthy.

5. Specular oxide of iron.

micaceous.

6. Red oxide of iron.

scaly.

Red hematite,

compact.

ochry.

7. Brown oxide of iron.

scaly, hsmatitk. compact, ochry.

8. Argillaceout oiide of iron.

columnar, granular, lenticular nodular.*

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MINERALOGY.

Species. Subspecies.

Varieties and

Subvarieties. Argillaceous oxide of iron.

common.

jaspery. Bog ore

(Pitchy iron ore). (Vitreous black oxide of iron). (Stilpnosiderite). (Blue ironstone). (Hedenbergite). 9. Carbonate of iron.

10. Sulphate of iron.

11. Phosphate of iron.

crystallised. earthy. (Green iron earth).

12. Arseniate of iron.

(Skorodite).

13. Chromate of iron.

crystallised, gran alar, amorphous.

14. Muriate of iron.

Genus IX. — Lead.

1 . Native lead,

2. Sulphuret of lead.

common.

granular.

compact.

specular.

striated, antimonial. argeoto-antimoniaL argcnto-bismuthaL arsenical, cobaltic.

3. Oxide of lead.

aluminous.

4. Carbonate of lead.

acicular. colamnar. earthy, black.

5. Carbonated muriate of lead.

6. Sulphate of lead.

7. Phosphate of lead.

acicular. arseniated. (Blue lead).

8. Arseniate of lead.

reniform.

9. Chromate of lead.

cupreous.

10. Molybdate of lead.

11. Tungstate of lead.

Genus X. — Tin. . Oxide of tin.

fibrous 2. Pyritous tin.

Genus XI. — Zinc. 1 Stlonuret of zinc.

y«Ilow. brown, black, fibrous.

2. Red oxide of zinc.

3. Frank linite.

•4. Siliceous oxide of zinc.

Species. Subspecies.

Varieties and

Subvarieties

5. Carbonate of zinc.

compact.

earthy.

cupreous.

6. Sulphate of zinc.

Genus XII.— Nickel

1. Native nickel.

2. Arsenical nickel.

(Black nickel).

3. Arsenite of nickel.

Genus XIII.— Cobalt 1. Arsenical cobalt

2. Gray cobalt

3. Sulphuret of cobalt.

4. Oxide of cobalt.

5. Sulphate of cobalt

6. Arseniate of cobalt.

dull.

black.

brown.

yellow.

acicular. earthy.

argentiferous.

Genus XIV. — Manganese.

1. Sulphuret of manganese.

2. Oxide of manganese.

radiated.

argentine, compact, earthy, ferruginous.

3. Siliceous oxide of manganese.

4. Carbonate of manganese.

5. Phosphate of manganese.

Genus XV — Arsenic.

1. Native arsenic.

concreted.

specular.

amorphous.

2. Sulphuret of arsenic.

Realgar. Orpiment.

3. Oxide of arsenic.

Genus XVI.— Bismuth.

1. Native bismuth.

2. Sulphuret of bismuth.

cupreous.

plu mbo-cu preous.

3. Oxide of bismuth.

Genus XVII. — Antimony.

1. Native antimony.

arsenical.

2. Sulphuret of antimony.

radiated.

foliated.

compact.

plumous. argentiferous, nickeliferous. cupreous.

3. Oxide of antimony.

earthy, (ferruginous).

4. Sulphureted oxide of antimony.

MINERALOGY.

Species. Subspecies.

Varieties and

Subvarieties.

Genus XVIII.— Tellurium. 1. Native tellurium.

auro-argentiferous. auro-plumbiferous. Genus XIX.— Chrome. 1. Oxide of chrome.

Genus XX.— Molybdena.

1. Sulphuret of molybdena.

2. Oxide of molybdena.

Genus XXI.— Tungsten. ‘ . Yellow oxide of tungsten.

2. Calcareous oxide of tungsten.

3. Ferruginous oxide of tungsten.

Genus XXII.— Titanium.

1 . Red oxide of titanium.

reticulated.

2. Ferruginous oxide of titanium.

Menachanite. Nigrine. Iserine. (Crichtonite).

3. Silico-calcareous oxide of titanium.

4. Octahedral oxide of titanium.

Genus XXIII. — Uranium. 1. Black oxide of uranium.

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Species.

Subspecies.

Varieties and

Subvaireties. 2. Green oxide of uranium.

crystallised, earthy.

Genus XXIV.— Columbium.

1. Ferruginous oxide of rolumbium.

2. Yttnous oxide of colurabium.

Genus XXV.—Cmi0«.

1. Siliceous oxide of cerium.

2. Allanile.

3. Fluate of cerium.

neutral. Subfluate. yttrious. (Y.ttrocerite).

Genus XXVI.— Selenium. Genus XXVII.— Cadmium.

We add, in justice to some brilliant discove- ries of that philosopher, the following tables, exhibiting the effects of polarised light on • air ras mineral substances, by Dr. Brewster. They ap- peared in his Edinburgh Philosophical Journal, to which we have to acknowledge those nume- rous obligations which have rendered its discon- tinuance a matter of unfeigned regret to us.

I. — LIST of ABSORBING CRYSTALS with ONE Axis.

Names of crystals.

Color when its axis is in the plane of primitive polarisation.

Color when its axis is perpendicular to that plane.

Zircon

Brownish white

A deeper brown

Sapphire

Yellowish green

Blue

Ruby

Pale yellow

Bright pink

Emerald

Yellowish green

Bluish green

Emerald

Bluish green

Yellowish green

Beryl blue

Bluish white

Blue

Beryl green

Whitish

Bluish green

Beryl yellow green

Pale yellow

Pale green

Rock crystal, almost trans-

parent

Whitish

Faint brown

Rock crystal yellow

Yellowish white

Yellow

Amethyst

Blue

Pink

Amethyst

Grayish white

Ruby red

Amethyst

Reddish yellow

Ruby red

Tourmaline

Greenish white

Bluish green

Rubellite

Reddish white

Faint red

I doc rase

Yellow

Green

Mellite

Yellow

Bluish white

Phospnate of lime (lilac)

Bluish Bluish green

Reddish Yellowish green

Phosphate of lead Calcareous spar

Bright green Orange yellow

Orange yellow Yellowish white

The property which these crystals possess of absorbing the different tints indifferent positions of the axis, with regard to the plane of primitive

polarisation, does not belong to every specimen. There are many crystals of ruby, sapphire, eme- ald, &c., which give an ordinary and an extraor

dinary image of the same color; and, whenever this is the case, they are destitute of the property of absorbing polarised light. These two classes of phenomena are indeed invariably connected, and will ultimately be tbund to have the same origin.

II. — LIST of ABSORBING CRYSTALS with Two AXES.

1

Plane of the resultant axes in the plane of primary polarisation.

Plane of the resultant axes perpendicular to the plane of primary polarisation.

Topaz blue green . grayish blue pink pink yellow

White White Reddish gray Pink Pink Yellowish white

Lemon yellow Lemon yellow

Gamboge yellow White Blue Yellowish white Brown Pink white Reddish brown

Blue Green Blue White Yellow Orange

Purple Yellowish white

Yellowish white Blue Yellowish white Yellowish Sap green Yellowish white Reddish white

Sulphate of barytes yellowish purple

yellow Kyanite Dichroite Cymophav.e Epidote olive green

Mica

III. — The following TABLE shows the CHARACTERS of the TINTS in CRYSTALS with Two AXES which have not been examined in every azimuth.

Axis of prism in the plane . of primitive polarisa- tion.

Axis of prism perpendicu- lar to the plane of primi- tive polarisation.

Mica

Blood red

Pale greenish yellow

Acetate of copper

Blue

Greenish yellow

*Muriate of copper**

Greenish white

Blue

Ohvine

Bluish green

Greenish yellow

Sphene

Yellow

Bluish

Nittate of copper

Bluish white

Blue

Chromate of lead

Orange

Blood red

Staurotide

Brownish red

Yellowish white

Augite

Blood red

Bright green

Anhydrite

Bright pink

Pale yellow

Axinite

Reddish white

Yellowish white

Diallage

Brownish white

White

Sulphur

*Yellow **

Deeper yellow

Sulphate of strontites

Blue

Bluish white-

*AAv.ni**

Pinlr

Bnclc red

Olivine.

i 1I1K

Brown

Brownish white

In the last eight crystals of the preceding table the tints are not given in relation to any fixed line.

IV. — The following TABLE contains the CHARACTERS of the Two PENCILS in CRYSTALS the num- ber of whose axes I have not yet determined.

Phosphate of iron Actinolite

Fine blue f Green

Bluish white Greenish white

Precious opal Serpentine Asbestos

Yellow Dark green Greenish

Lighter yellow Lighter green Yellowish

Blue carbonate of copper Octohedrite (one axis)

Violet blue ‘ Whitish brown

Greenish blue Yellowish brown

i

MIN

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Mltf

MINERVA, ATHENA, or PALLAS, in Pagan •worship, the goddess of sciences and of wisdom, who sprung completely armed from Jupiter’s brain ; and on the day of her nativity it rained .gold at Rhodes. She disputed with Neptune the honor of giving a name to the capital of Ce- cropia, when they agreed that whosoever of them should produce what was most useful to mankind, should have that advantage. Neptune, with a stroke of his trident, fbrmed a horse; and Mi- nerva caused an olive to spring from the ground, which was judgea by the unanimous voice of the gods to be the

most useful, from its being the symbol of peace ; whereupon she gave her name Athenae to the city, and became its tutelar goddess. Minerva changed Arachne into a spider, for pretending to excel her in making tapestry. She fought the giants ; favored Cadmus, Ulysses, and other heroes ; and refused to marry Vulcan, choosing rather to live in a state of celibacy. She also deprived Tiresias of sight, turned Me- dusa's locks into snakes, and performed several other exploits. Minerva is usually represented by the poets, painters, and sculptors, completely armed, with a composed but agreeable counte- nance, bearing a golden breast-plate, a spear in her right hand, and her aegis or shield in the left, on which is represented Medusa's head encircled with snakes, and her helmet usually entwined with olives. Minerva had several temples both in Greece and Italy. The usual victim offered her was a white heifer, never yoked. The ani- mals sacred to her were the cock, the owl, and the basilisk.

MINERVA ARX, MINERVA CASTRUM, MINER- VIUM, or Templum Minervae, a citadel, temple, and town on the Ionian Sea, beyond Hydrus; seen a great way out at sea , now called Cas- tro, a town of Otranto in Naples. Long. 19° 25′ E., lat. 46° 8′ N.

MINERVAE PROMONTORIUM, in ancient geo- graphy, the seat of the Sirens, a promontory of Italy, in the Sinus Paestanus, the south boun- dary of Campania on the Tuscan coast ; so called from a temple of Minerva on it : situated south of Surrentum, and therefore called Surren- tinum: now Capo della Minerva, on the west coast of Naples, over against the island Capri.

MINERVALIA, in Roman antiquity, festivals celebrated in honor of Minerva ; in March the scholars had a vacation, and usually made a pre- sent to their masters, called from this festival Minerval.

MIN'GLE, »;. a., v. n. & n. s. Sax. menjen ; Teut.and Belg. mengen, mengelen ; Goth, meinga. To mix, unite, compound; hence to join dissimi- lar things ; to confuse ; to contaminate : as a neuter verb, to be mixed or united with : as a sub- stantive it is used as synonymous with mixture, medley, confused accumulation or mass.

Alcimus had defiled himself wilfully in the times of their mingling with the Gentiles. 2 Mac. xiv. 13.

Ourself will mingle with society, And play the humble host.

Shakspeare. Macbeth. Trumpeters,

With brazen din blast you the city's ear. Make mingle with our rattling tabourines. Id.

Sulphurous and nitrous foam They found, they mingled, and with subtle art, VOL. XIV.

Concocted and adusteJ, they reduced

To blackest grain. Milton.

To confound the race

Of mankind in oae root, and Earth with Hell To mingle and involve. Id.

Neither can I defend my Spanish Fryar ; tb jugh the comical parts are diverting, and the Vriou moving, yet they are of an unnatural mingle.*

Drytlen'i Dufretnoy.

Lament with me ! with me your sorrows join, And mingle your united tears with mine ! H'akh. Nor priests, nor statesmen,

Could have completed such an ill as that,

If women had not mingled in the mischief.

Rove.

She, when she saw her sister nymphs, suppressed Her rising fears, and mingled with the rest.

Addison.

The best of us appear contented with a mingled im- perfect virtue. Rageri$ Sermont.

Our sex, our kindred, our houses, and our very names, we are ready to mingle with ourselves, and cannot bear to have others think meanly of them.

H'attt's Logic.

To have fought together in such a cause — to have mingled banners, and to have mingled blood in battle of such interests, and leading to such results, must undoubtedly cement an eternal union between the British and Portuguese nations. Canning.*

MINGRELIA, a part of Western Georgia, in Asia, anciently called Colchis ; bounded on the east by Iberia, or Georgia properly so called ; on the west by the Euxine Sea; on the south by Armenia, and part of Pontus; and on

the north by mount Caucasus. It is watered by many rivers, particularly the Corex, the Hippus, the Cyaneus, the Charistus, the Phasis, where the Argonauts landed, the Absarus, the Cissa, and the Ophis, all running into the Euxine Sea. The whole kingdom of Colchis was in ancient times very pleasant and fruitful, as it is still where duly cultivated ; abounding in all the ne- cessaries of life ; and was enriched with many mines of gold, which gave occasion to the fable of the Golden Fleece and the Argonautic expe- dition, so much celebrated by. the ancients. Sir John Chardin tells us, that this country extends above 100 miles in length and sixty in breadth; being not nearly so extensive as the ancient Col- chis, which reached from the frontiers of Iberia or Georgia Proper, west to the Palus Maeotis : that it is beautifully diversified with hills, moun- tains, valleys, woods, and plains, but badly cul- tivated : that besides vines, all kinds of fruits found in England grow wild, but tasteless for want of culture : that there are many rivers which rise in mount Caucasus, particularly the Phasis, now called the Rione : that the country abounds with beeves, hogs, wild boars, stags, partridges, pheasants, and quails : that falcons, eagles, pelicans, lions, leopards, tigers, wolves, and jackals, breed on mount Caucasus, and sometimes greatly annoy the country : that the people are generally handsome, the men strong and well made, and the women very beautiful ; but both sexes very debauched : that they marry their nieces, aunts, or other near relations, indif- ferently ; and take as many wives and concubines as they please: that they not only sell their chil- dren, but even murder them, or bury them alive, when thev find it difficult to bring them up : that

they use a sort of paste, made of a plant called gom, instead of bread; but that of the su- perior ranks consists of wheat, barley, or rice : that the gentry have an absolute power over their vassals, extending to life, liberty, and estate : that their arras are bows and arrows, lances, sabres, and bucklers ; that they eat sitting cross-legged upon a carpet, like the Persians ; but the poorer sort upon a mat or bench : that the country is very thin of inhabitants, no fewer than 12,000 being sold yearly to the Turks and Persians: fliat the principal commodities ex- ported from it are honey, wax, hides, castor, skins, flax-seed, thread, silk, and linen cloth ; but there are now no gold or silver mines, and very little money : that the annual revenue of the viceroy amounts to about 20,000 crowns : that the

inhabitants call themselves Christians ; but that they and their priests are altogether ig- norant of the doctrines of Christianity : that their bishops are rich, have a great number of vassals, and are clothed in scarlet and velvet : and that their service is according to the rites of the Greek church, with a mixture of Judaism and Paganism. The cities of most note in this country in ancient times were Pityus ; Dioscu- rias, or Dioscorias, so called from Castor and Pollux, by whom it is said to have been founded, and who in Greek are styled Atc

MIN'IATURE, n. s. Fr. miniature ; Span. miniatura ; Lat. minio, to paint with minium. Perhaps, originally, painting with powders mixed with gum and water, first appropriated to small figures : diminutive representation. But see another etymology in the article.

The water, with twenty bubbles, not content to have the picture of their face in large, would in each of these bubbles set forth the miniature of them.

Sidney.

The hidden ways

Of nature would'st thou know ; how first she frames All things in miniature ? thy specular orb Apply to well dissected kernels : lo ! Strange forms arise, in each a little plant Unfolds its boughs : observe the slender threads Of first beginning trees, their roots, their leaves, In narrow seeds described. Philipt.

If the ladies should once take a liking to such a diminutive race, we should see mankind epitomised, and the whole species in miniature: in order to keep our posterity from dwindling, we have instituted a tall dub. Addison's Guardian.

Here shall the pencil bid its colors flow,

And make a miniature creation grow. Gay.

MINIATURE PAINTING is a delicate kind of painting, in which the subjects are represented on a very small scale. The word comes from the French mignature, from mignon, fine or pretty, on account of its smallness and delicacy ; and it may be ultimately derived from /itepoc, small, or minimus, least. Miniature is distin- guished from other kinds of painting by the smallness and delicacy of its figures; on which

account it requires to be viewed very closely. — As many persons wish to amuse themselves with painting in miniature, who know little or nothing of

the principles of drawing or painting, various methods have been invented, such as copying by squares, on oiled paper, &c. Perhaps one of the best mechanical inventions to assist such persons is the mathematical compass called a PENTAGRAPH, which see. See also DRAWING and PAINTING.

For a long time miniature painting was em- ployed upon vellum, paper, &c. ; but, in the present improved state of the art, ivory is more used than any of these materials. Yet ivory being a solid substance, and wanting that absor- bent surface which constitutes the excellence of vellum, it renders the management of the colors much more difficult and laborious. No tints can be produced by the expeditious mode of wash- ing ; but all must be done by dint of labor, by dotting or hatching. Gumming is the next ex- pedient resorted to, to fix the first lays in order to take the subsequent colors ; and so on till the work is finished. In conseqence of these diffi- culties, so perplexing to every artist, miniature painters have of late confined themselves chiefly to portrait painting, and the higher branch of history has been much neglected. This obstacle to historical painting in miniature is now how- ever likely to be done away ; Mr. Einsle, an in- genious artist in London, having discovered a method of producing, by a chemical process, a white skinny surface on the ivory, at once smooth and absorbent, so as to unite all the qualities required for washing and painting upon it, in the same manner as on vellum. The colors, when properly ground and mixed up with gum, produce a gloss without the assistance of gum- ming; and admit of being laid on one lay after another to any depth, without removing those underneath. To the same artist we are indebted for a peculiar preparation of the colors usually employed in miniature painting ; which are both superior to the old, and fewer in number. The chief colors made use of for painting in minia- ture are, carmine ; Venice and Florence lake ; rose pink ; vermilion ; red lead ; brown red ; red orpiment ; ultramarine ; verditer; indigo; gall- stone ; yellow ochre ; Dutch pink ; gamboge ; Na- ples yellow ; pale masticot ; deep yellow masticot ; ivory black; lamp black; true Indian ink; bistre or wood-soot ; raw umber ; burnt umber ; sap- green ; verdigris; and flake white. Most of these colors may easily be prepared by attending to the directions given under the article COLOR- MAKING. But they can all be had ready prepared, in complete sets, from the color shops. Pro- vide an wory pallet, very smooth, as big as your hand ; on one side of which the colors for the carnation, or naked parts of a picture, are to be arranged thus : in the middle put a great deal of white, pretty largely spread ; because it is the color most made use of: and upon the edge, from the left to the right, place the following co- lors at a little distance from the white : Masticot ; Dutch pink ; orpiment ; yellow ochre ; green, composed of verditer, Dutch pink, and white, in equal quantities ; blue, made of ultramarine, in- digo, and white, to a great degree of paleness;

yermilion ; carmine, bister, and black On the other side of th< pallet, spread some white in the same manner as for the carnation. When draperies, or the like, are to be painted, place near the white the color they are to be made of. To work well in minature, it must be done in a room that has but one window, with a table and desk almost as high as the window. The painter must place himself near it, in such a manner that the light may always come in on the left side, and never forwards or on the right. To lay the color on all parts equally strong, as for a ground, make the mixtures in shells, and put in enough for the thing to be painted ; for, if there be not enougli, it is a great chance but the color mixed afterwards is too dark or too light. Begin by dead coloring, i. e. by laying the colors on with liberal strokes of the pencil, in the smoothest man- ner, as the painters do in oil ; not giving it all the force it is to have for a finishing. Make the lights a little brighter, and the shades less dark, than they ought to be ; because in dotting upon them, as must be done after dead coloring, the color is always fortified, and would at last be too dark. There are several ways of dotting. Some make their dots perfectly round ; others a little longish ; others hatch by little strokes that cross each other every way, till the work appears as if it had been wrought with dots. This last method fi the best, the boldest, and the soonest done : therefore learners ought to use it, and to inure themselves from the first to dot in the plump and the soft way ; that is, where the dots are lost, in a manner, in the ground, and only so much ap-]>ears as is sufficient to make the work seem dott- ed. The hard and dry way is quite the reverse, and always to be avoided, as it makes the work seem rough and uneven. Study likewise to lose and drown the colors one in another, so that it may not appear where they disjoin ; and, to this end, soften or allay the touches with colors that partake of both, so that it may not appear to be the touches which cut and disjoin them. By the word cut is meant what manifestly separates and divides, and does not run in and blend itself with the neighbouring colors; which is rarely practised but upon the borders of drapery. When the pieces are finished, to heighten them a little, and give them a fine air, give, upon the extremity of the lights, small touches with a color yet lighter, which must be gradually lost with the rest. When the colors are dry upon the pallet or in the shells, they must be diluted with water. And when they want gum, which is seen when they easily rub off the" hand or the vellum, they must be tempered with gum water instead of pure water, till they are in condition. See PAINTING.

MIN'IKIN, adj. &n.s.) Goth. Belg. and MIN'IM, n. s. STeut. min; Lat. mi-

diminutive : any thing or person very small ; a dwarf.

Sleepest, or wakest thou, jolly shepherd1? Thy sheep be in the corn ;

And for one blast of thy minikin mouth. Thy sheep shall take no harm.

Shaltspeare. King Lear. Get you gone you dwarf; You minimus, of hind'rino knot grass made; You bead, vou accrn.

MINIM, a character or note in music, equil in duration to the sixteenth part of a largp, one eighth of a long, one fourth of a breve, and one half of a semi-breve

MINIMS, a religious order in the church of Rome, founded by St. Francis de Paula, towards the end of the fifteenth century. Their habit is a coarse black woollen stuff, with a woollen girdle, of the same colors, tied in five knots. They are not permitted to quit their habit and girdle night nor day. Formerly they went hare- footed, but are now allowed the use of shoes.

MINIMUM, in the higher geometry, the least quantity attainable in a given case.

MIN'ION, n. i. Teut. minion ; Fr. mifiwn ; the root Mr. Thomson .thinks is the Gothic tr« or mm, affection, love. A favorite ; an insigni- ficant or low dependent ; a contemptuous cogno- men.

Minion, said she ; indeed I was a pretty one in those days ; I see a number of lads that love you.

Sidney.

They were made great courtiers, and in the way of minions, when advancement, the most mortal offence to envy, stirred up their former friend to overthrow them. Sirinry.

One who had been a special minion of Andromanas, hated us for having dispossessed him of her heart.

lit.

Go rate thy minion ; Becomes it thee to be thus bold in terms Before thy sovereign ? Shaktpeare. Henry VI.*

Edward sent one army into Ireland ; not for con- quest, but to guard the person of his minion, Piers Gaveston. Davit.*

If a man should launch into the history of human nature, we should find

the very minions of princes linked in conspiracies against their master.

L" Estrange.

The drowsy tyrant by his minions led, To regal rage devotes some patriot's head.

Swift.

I speak of the neglected many, whose nerves, whose sinews, whose days, are sold to the minions of fortune. Buna.

MIN'IOUS, adj. \ Lat. minium. Of the color

MIN'ITM, n.. 5 i of red lead : red lead.*

Some conceive that the Red Sea receiveth a red and miniout tincture from springs that fall into it.

Brown.

Melt lead in a broad earthen vessel ungla«ed, and stir it continually till it be calcinated into a gray powder ; this is called the calx of lead ; continue the fire, stirring it in the same manner, and it becomes yellow ; in this stale it is used in paintinr, and is called masticot or massicot ; after this put it into a reverberatory furnace, and it will calcine further, and become of a fine red, which is the common minium or red lead : among the ancients minium was the name for cinnabar ; the modern minium is used externally, and is excellent in cleansing and healing old ulcers.

MIN'ISH, v. a. From diminish, or Gothic minn; Lat. minus, minuo. To make small or smaller; to lessen, impair; lop, clip.

Ye shall not minish ought from your bricks of youl daily task. Erod- v- 19-

They are minished and brought low through oppres- sion. Psalm nrii. 3£

Another law was to bring in the silver of the realm to the mint, in making all dipt, miniihed. or impaired coins of silver, not to be current in payments. Bacon'. Htnry VII.

3 A.1

MIN'ISTER, n. s., v. a. & v. n.*\ Fr. minis-

MINISTE'RIAL, adj. tre; Ital.

MINISTE'RIALIST, n. *. | Span, and

MINISTE'RIALLY, adv. ! Port, minis-

MIN'ISTRAL, adj. \tro ; Lat. mi-

MIN'ISTRANT, nister. An

MLNISTRA'TION, n. s. | agent, atten-

MIN'ISTRY, J dant, assis-

tant, servant ; particularly a servant of God in any of the offices of the church ; a servant of the king or state ; a member of the administrative government; an official; adelegate: to minister is to supply, give, or afford ; and, as a neuter verb, to attend, serve in any office ; give supplies: ministerial and ministrant mean, attendant ; act- ing under command or agency ; sacerdotal ; official : a ministerialist, in political affairs, is an adherent, or writer in favor of an administration : ministral, pertaining to a minister, or a ministry : ministration, agency ; operation or influence ; in- tervention ; dispensation of God's will ; ecclesi- astical service : ministry, office ; service ; particu- larly of the church; administrative part of a government ; business.

His modir seith to the mynystris, whatever thing he seye to you, do ye. Wicllf. Jon. 2.

Others ministered unto him of their substance.

Luke.

Whether prophecy, let us prophesy according to the proportion of faith ; or ministry, let us wait on our ministering. Rom. xii. 7.

Now he that ministereth seed to the sower, both minister bread for your - food, and multiply your seed sown. 2 Cor. ix.

Kpaphras, a faithful minister of Christ.

1 Col. i. 7.

You, whom virtue hath made the princess of feli- city, be not the minister of ruin. Sidney.

These speeches of Jerora and Chrysostom plainly allude unto such ministerial garments as were then in use. Hooker.

Can'st thou not minister to a mind diseased, Pluck from the memory a rooted sorrow, Raze out the written troubles of the brain ?

Shakspeare. Macbeth.

Rumble thy belly full ; spit fire ! spout rain ! Nor rain, wind, thunder, fire, are my daughters ; I tax not you, you elements, with unkindness : But yet I call you servile minitters, That have with two pernicious daughters joined Your high-engendered battles, 'gainst a head So old and white as this. Id. King Lear.

If wrongfully,

Let God revenge ; for I may never lift

An angry arm against his minister. Shakspeare.

Kings must be answerable to God ; but the minis- ters to kings, whose eyes, ears, and hands they are, must be answerable to God and man. Bacon.

F« the minitterial officers in court there must be an eye upon them. Bacon's Advice to Villiers.

The faithful miniiter provideth not only whole- some but plentiful food for his people. Fuller.

They that will have their chamber filled with a good scent, make some odoriferous water be blown about it by their servants' mouths that are dexterous in that ministery. Digby.

God made him the instrument of his providence to me, as he hath made his own land to him, with this difference, that God, by his ministration to me, in- tends to do him a favor. Taylor.

A ministerial headship or the prime minister cannot in any capacity become the foundation of the church to any such purpose. Jer. Taylor.

At table Eve

Ministered naked, and their flowing cups With pleasant liquors crowned. Milton

This temple to frequent With ministerir.s due, and solemn rites. Id.

Him thrones, and powers, Princedoms, and dominations ministrant, Accompanied to heaven-gate. Id. Paradise Lett. Their ministry performed, and race well run, Their doctrine and their story written left, They die. Id.

Though sometimes effected by the immediate fiat of the divine will, yet I think they are most ordina- rily done by the ministration of angels.

Hale't Origin of Mankind.

Unto him it ministereth a free address upon all oc- casions, with him it alloweth us continually a most sweet and pleasant intercourse. Barrow.

Understanding is in a man ; courage and vivacity in the lion's service, and ministerial omciousness in the OX. Broune.

The wounded patient bears The artist's hand, that ministers the cure.

Otway.

The infernal minister advanced, Seized the due victim. Dryden.

He safe from loud alarms,

Abhorred the wicked ministry of arms. Id.

There is no truth which a man may more evidently make out than the existence of a God ; yet he that shall content himself with things as they minister to> our pleasures and passions, and not make enquiry a little farther into their causes and ends, may live long without any notion of such a being. Locke.

Saint Paul was miraculously called to the ministry of the gospel, and had the whole doctrine of the gos- pel from God by immediate revelation ; and was ap- pointed the apostle of the Gentiles for propagating it in the heathen world. Id.

So far is an indistmction of all persons, and, by consequence, an anarchy of all things, from being agreeable to the will of God declared in his great household, the world, and especially in all the minis- tries of his proper household the church, that there was never yet any time, I believe, since it was a number, when some of its members were not more sacred than others. Sprat's Sermons.

He who has a soul wholly void of gratitude, should set his soul to learn of his body ; for all the parts of that minister to one another. South.

To all but thee in fits he seemed to go, And 'twas my ministry to deal the blow.

Parnel.

The ministers are always preaching, and the gover- nors putting forth edicts against dancing and gaming.

Addison.

Fasting is not absolutely good, but relatively, and as it minister to other virtues.*

Smalridge't Sermons. From essences unseen, celestial names, Enlightening spirits, and miniiterial flames, Lift we our reason to that sovereign cause, Who blessed the whole with life. Prior.

Abstinence, the apostle determines, is of no other real value in religion, than as a ministerial cause of moral effects as it recalls us from the world, and gives a serious turn to our thoughts. Rogers.

The ministers of the gospel are especially required to shine as lights in the world, because the distinc- tion of their station renders their conduct more ob- servable ; and the presumption of their knowledge, and the dignity of their office, give a peculiar force and authority to their example. Id.

Those good men, who take such pleasure in re-

lieving the miserable forChrist's sake, would not have been less forward to minister unto Christ himself.

Atterbury.

If the present ministration be more glorious than the former, the minister is more holy. Id,

Other spirits governed by the will, Shoot through their tracks, and distant muscles fill ; This sovereign, by his arbitrary nod, Restrains or sends his ministers abroad. Blackman.

Supremacy of office, by mutual agreement, and voluntary ceconomy,

belongs to the father; while the son, out of voluntary condescension, submits to act minitterially , or in capacity of mediator.

Waterland.

The poets introduced the ministry of the gods, and taught the separate existence of human souls.

Bentley.

Miniitrant to their queen with busy care, Four faithful handmaids the soft rites prepare.

Pope.

I converse in full freedom with many considerable men of both parties ; and if not in equal number, it is purely accidental, as happening to have made ac- quaintance at court more under one ministry than another. Swift.

Calidus contents himself with thinking that he never was a friend to hereticks and infidels ; that he has always been civil to Ihe minister of his parish, and very often given something to the charity-schools.

Law.

The profession of a clergyman is an holy profes- sion, because it is a ministration in holy things, an attendance at the altar. Id.

Yet if I could collect my faultering breath, Well were I meet for such sad ministry, For grief hath left my voice no other sound.

Maturin.

A MINISTER, in the presbyterian ecclesiastical polity, is a clergyman, who preaches, performs religious worship in public, administers the sacraments, &c.

MINISTER, FOREIGN, is a person sent into a foreign country, to manage the affairs of his province, or of the state to which he belongs. Of these there are two kinds : those of the first rank are ambassadors and envoys extraordinary, who represent the persons of their sovereigns; the ministers of the second rank are the ordinary residents.

MINIUM, or red lead, is an oxide of lead of a vivid red color, which it acquires by a slow cal- cination and reverberation. See CHEMISTRY, Index. The minium in commerce is chiefly brought from Holland, where large quantities of it are manufactured. The method in which minium is

made in large quantities with us is this : they first burn lead in a furnace into a kind of litharge, by continually stirring it while melted with an iron rake ; this they afterwards grind with two pairs of stones, which deliver it from one to another; the first pair grinding it coarser, the second finer ; these are worked by means of a mill, which moves six pairs of them at once. When thus reduced to a fine powder, it is washed and then put into a furnace, and is burnt with a reverberatory fire for two or three days; all the while they continue stirring it with a large iron rake, hung on a swivel or iron hook ; and toward the end of the time they watch its color. When this is doing, the fire must not be carried beyond a certain degree, lest the matter clot and run together. The furnace is of the

reverberatory kind, with two fire-places at the ends; each fire-place being separated frora the area, or body of the furnace, by a wall twelve inches high. The fire-places are fifteen inches broad, and their length is equal to the breadth of the whole furnace, which is about eight or nine feet. The length of the area, from one place to the other, is nine or ten feet. The quantity of lead used in one operation is about 1500 Ibs., of which nine parts are lead obtained from furnaces where the ore is smelted, and one part is lead extracted from the scoria which is formed in smelting the ore. This latter kind is said to be necessary, as the former could not alone be reduced into powder. AH the lead is it once put into the area, the bottom of which is level. The calx, as fast as it is formed, is drawn to one side, by a rake suspended by a chain be- fore the mouth of the furnace. In four or five hours the whole quantity of the lead is calcined, or, if any pieces remain uncalcined, they are separated, arid kept for the next operation. The heat employed is that of a cherry red ; and the fire-places and mouth are kept open that the air may accelerate the calcination. The calx is to be frequently stirred to prevent its concreting ; and, when this operation has been continued about twenty-four hours, the matter is taken out of the furnace, and laid on a flat pavement. Then cold water is thrown on it, to give it weight, as the workmen say; but rather, as Mr. Jars thinks, to make it friable. It is then to be ground in a mill, and the finer part is separated by washing, while the coarser part, reserved for some following operation, is to be placed at the mouth of the furnace in order to retain the melted lead. The fine powder, which is now of a yellow color, is again put into the same or a similar furnace, and exposed to a very moderate fire, from thirty-six to forty-eight hours; during which time it is stirred frequently to prevent its concreting; and the powder gradually acquires its proper red color. The minium is then to be taken out of the furnace, cooled, and sifted through an iron sieve placed in a cask. The bright color of minium might render it valuable in painting, if it could stand with certainty in either oil or water. But, as it is subject to be- come black, it cannot be safely trusted, except in hard varnishes ; and is, therefore, seldom used in oil, or even in water,

unless for very gross purposes, or as a ground for vermilion. The goodness of minium may be distinguished by the brightness of its color ; and the adulteration to which it is liable may be detected by putting an ounce of it into a crucible with an equal quantity of charcoal dust, well mixed together, and placing the crucible in a common fire suf- ficient to melt lead, which is to be covered with another small crucible inverted into it. When it has been continued for some time on the fire, take it out and strike it against the ground. The minium will thus be reduced to its metallic state ; and its diminished weight, when freed from the charcoal dust, &c., will indicate the proportion of adulterated matter. Minium is also used as a flux in forming the enamel for grounds, and in glazing, &c It is now called red oxide.

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MINNIN, a stringed instrument of music among the ancient Hebrews, having three or four chords to it. There is reason to question the antiquity of this instrument ; both because it requires a hair-bow, which was a kind of plec- trum not known to the ancients, and because it so much resembles the modern viol. Kircher took the figures of this, the machul, chinor, and psaltery, from an old work in the Vatican li- brary.

MIN'NOCK, n. s. Sax. man or myn and 05 : Goth, ug, a boy- An elf or mischievous urchin : It is not unlikely, as Dr. Johnson says, that min- nock and minx were originally the same word.

Ml'NNOW, n. s- Fr. menue ; Span. menu, of Lat. minus. A very small fish.

MINK (mustela). The animal known in the United States under the name of mink is so si- milar to the European quadruped of the same name that they have been generally confounded with each other. The common name of both spe- cies is derived from the Swedish menk. The Ame- rican animal is the M. vison of naturalists, and is generally to be found on the banks of streams, es- pecially near farm-houses and mills It swims and dives well, and can remain under water for a considerable time. It preys upon small fish, muscles, &c., but also commits depredations on the poultry yard, and will devour rats, mice, &c. The mink, when irritated, exhales a very fetid smell, almost equal to that of the skunk. It is easily tamed, and is capable of strong attachment, but, like the cat kind, is readily offended, and will bite on a sudden provocation. The fur is of little value. — The European mink (M. lutreola) inha- bits the northern parts of Europe, and, like the

American species, lives on the banks of streams, feeding on frogs, craw- fish, &c. It is of a brown- ish-red color. It has a strong musky smell, and its fur is very fine.

The MINNOW is a species of Cyprinus.

MI'NOR, adj. & n. s.~\ Lat. minor; F

MI'NORATE, v. a. {minoritc; Ital. mi;

MINOR A'TION, re. s. (rita ;§>])a.n.minoridad .

MINOR'ITY. 3 Little, petty ; inconsi-

derable ; less : a person under age ; a legal infant; the second or inferior proposition of a syllogism : to minorate, is to make less or di- minish : minoration, the act of lessening. (Both this verb and noun are of questionable autho- rity.) Minority, the state of being less; the smaller number ; state of being under age.

I moved the king, my master, to speak in the be- half of my daughter, in the minority of them both.

Shakspfare.

The second or minor proposition was, that this kingdom hath cause of just fear of overthrow from Spain. Bacon.

Henry the Eighth, doubting he might die in the minority of his son, procured an act to pass, that no statute made during the minority of the king should bind him or his successors, except it were confirmed by the king at his full age. But the first act that passed in king Edward the Sixth's time was a repeal of that former act ; at which time nevertheless the king- was minor. Id.

King Richard the Second, the first ten years of his rei^n, was a minor. Duties on Ireland.

Fr.

mino-

These changes m religion should be staid, until the king were of years to govern by himself : this the people apprehending worse than it was, a question was raised, whether, during the king's minority, such alterations might be made or no. Hayward.

It is the affection of too early ripeness that makes them prodigal of their children's safety and hopes ; for, that they may be wise betimes, they send them forth to the world in the minority both, of age and judgment. Bp. Hall.

They altered this custom from cases of high con- cernment to the most trivial debates, the minor part ordinarily entering their protest. Clarendon.

This it doth, not only by the advantageous as- sistance of a tube, but by showing in what degrees distance minorates the object. Glanritle.

If there are petty errours and minor lapses, not con- siderably injurious unto faith, yet it is not safe V> contemn inferior falsities. Browne.

We hope the mercies of God will consider our de- generated integrity unto some minoration of our offences. Id.

From this narrow time of gestation may ensue a minority, or smallness in the exclusion. Id.

Their counsels are warlike and ambitious, though something tempered by the minority of their king.

Temple.

If there be evidence that it is not many ages since nature was in her minority, this may be taken for a good proof that she is not eternal.

Bur-net's Theory of the Earth.

Though we seem grieved at the shortness of life in general, we are wishing every period of it at an end. The minor longs to be at age, then to be a man of business, then to make up an estate, then to arrive at honors, then to retire. Addison.

A minor or infant cannot be said to be contuma- cious, because he cannot appear as a defendant in court, but by his guardian. Ayliffe's Parergon.

He and his muse might be minors but the liber- tines are full grown. Collier's View of the Stage.

He supposed that a philosopher's brain was like a forest, where ideas are ranged like animals of several kinds , that the major is the male, the minor the female, which copulate by the middle term, and engender the conclusion. Arbuthnot.

Long as the years dull circle seems to run,

When the brisk minor pants for twenty-one.

Pope.

The noblest blood of England having been shed in the grand rebellion, many great families became ex- tinct, or supported only by minors. Swift.

MINOR, in law, denotes a person under age; or who, by the laws of the country, is not arrived at the power of administering his own affairs, or the possession of his estate. Among us, a per- son is a minor till the age of twenty-one ; before which time his acts are invalid. See AGE, IN- FANT. It is a maxim in the common law that in the king there is no minority, and therefore he hath no legal guardian ; and his royal grants and assents to acts of parliament are good, though he has not, in his natural capacity, at- tained the legal age of twenty-one. It is arso provided, by the custom and law of parliament, that no one shall sit or vote in either house, unless he be twenty -one years of age. This is expressly declared by stat. 7 and 8 Will. Ill cap. 25, with regard to the house of commons.

MINOR, in logic, is the second proposition of a formal or regular syllogism, called also the as- sumption.

MINORS, in music, is applies to certain con-

cords, which differ from or are lower than others of the same denomination, by a less semitone or four commas. Thus we say, a third minor or less third, or a sixth major and minor. Con- cords that admit of major and minor, i. e. greater and less, are said to be imperfect concords. See MAJOR.

MINORS, FRIARS, MINOR, or MINOEITES, appellations which the Franciscans assume. See FRANCISCANS. There is also an order of Regu- lar Minors at Naples, which was established in 1588, and confirmed by Sixtus V.

MINORCA, the second of the Baleares islands, belonging to Spain, is forty miles long, north- west and south-east, and twelve broad, contain- ing 800 square miles. The channel between it and Majorca, in the narrowest part between Capes Pera and d'Artush, is thirty miles. Mi- norca was taken by the English in 1708, and confirmed to them by the treaty of Utrecht, 1713. In 1756 it was retaken by the Spaniards and French, and admiral Byng fell a victim to the exasperation of the public mind, and to the safety of

ministers, for not relieving it, with a force greatly inferior to that of the enemy.

In general this island is level, having but one hill of any elevation, named mount Toro, nearly in the centre of the island. The climate is less mild and temperate than that of Majorca, want- ing the shelter which this latter receives from the mountains of Catalonia, against the violent northerly winds from the Gulf of Lyons, the ef- fects of which are strikingly visible in the naked barrenness of the north coast, whose few trees are stunted and bent to the south. The want of elevations to arrest the clouds renders the sum- mers hot and dry, while the autumns are wet, and the winter raw, though there is seldom snow or ice : the spring is therefore the only agreeable season, being pure and serene. The varia- tions of the thermometer are between 48° and 80°. In general this island presents a base of calcareous rock, covered with a layer of earth and sand, and possessed of different degrees of fertility, according to the depth of this soil, or the preponderance of these substances. The island furnishes limestone, marbles, slate, potter's clay, and talc or muscovy glass. Iron ore is also met with, and it has some poor veins of lead. On the east coast are several lagoons, se- parated from the sea by narrow strips of land, through which the sea-water niters. They abound with excellent millet. In Levant winds their level is higher than the sea, and with westerly winds lower ; the waters of the lake not following; with equal celerity the irregular movements of the sea caused by these winds.

The only timber trees are pines and ever-green oaks. The crops of wheat, rye, barley, and In- dian corn, taken together, are insufficient for the consumption. The wild quadrupeds are, a very few hares, abundance of rabbits, and some por- cupines ; the land tortoise is also met with. The domestic animals were, in 1805, 600 horses, asses and mules, 6000 to 7000 horned cattle, 40,000 to 45,000 sheep and goats, and 10,000 hogs. The larger cattle are similar to those of Majorca ; the sheep and goats small and lean. The hogs, which are large, are in the autumn turned into

the woods to feed on the acorns ; and in win- ter are fed with barley, which renders their flesh excellent : and pork is the chief animal food of the Minorcans as well as Majorcans. The reptiles met with on the island are snakes and lizards ; scorpions and centipedes are com- mon. The birds taken for food are the red- legged partridge, quail, Vild pigeons, doves, thrushes, woodcocks, snipes, wild duck, and teal.

The population of the island is about 30,000. In 1805 its military establishment consisted of 1500 chasseurs, 3100 infantry of the line, ninety cavalry, and 500 artillery : total 5,190 regulars; of whom 350 form the garrison of Ciudella, fifty of Fornels, and the remainder (with the

exception of some small detachments of four to eight men, in the small forts and towers on the coast), are stationed at Port Mahon, where is also a park of field artillery. The go- vernor is usually a brigadier in the armies of Spain. The inhabitants retain the partiality of their ancestors to the use of the sling ; but they are a simple inoffensive race, who give themselves very little concern about the rest of the world, provided their course of life is not interrupted. They are not, however, incapable of activity ; and, when the island belonged to Great Britain, they carried on a tolerably active shipping trade in the Mediterranean. They are very fond of processions, and of dancing to the sound of their rude musical instruments. Their dress and lan- guage are similar to those of Majorca.

The principal capes of the island are, Cape de Sella, the north point. Cape Mola, north of the entrance of Port Mahon, is a lofty peninsular promontory, descending perpendicularly to the sea ; on it is a signal tower, and at its foot are three steep rocks. Cape d'Artush, the south-west point of the island, is low, with eighteen to twenty fathoms close to it, and E.S. E. of it a shoal, on which the sea only breaks in bad wea- ther, with a passage within it for small craft only. Cape Bayoli is the west point of the is- land.

Port Mahon, the principal place of the island, is on the east coast, and one of the best harbours of the Mediterranean, being five miles deep ; its greatest breadth one mile, and at its entrance only ninety fathoms. In the port are four islands ; the first, called King's or Bloody Island, has on it a large building, erected for the naval hospital by the English in 1773 : it was intended to hold 250 patients. On the second island are magazines and lodgings for receiving the cargoes and pas- sengers of vessels arriving from the Levant, with clean bills of health, while performing quaran- tine. The name of the third, Lazaretto Island, denotes its uses ; it is joined to the main land by a narrow neck, covered at high water. Redonda, the fourth island, is a circular mass of rock com- municating with the main by a wooden bridge. On it were the English naval magazines and dwellings of the officers of the naval department, surrounded by a wall flanked with square towers ; a pier runs out from it, at the extremity of which are masting shears, and alongside of which the largest ships heave down.

Opposite Lazaretto Island, on the south shore of the port, is the village of San Carlos, entirely

inhabited by sea-faring persons; here are also barracks for 4000 men. Midway, between this village and the city of Mahon, was the famous fort St. Philip, or the Ravalle, a league in cir- cuit, which commanded the entrance of the port ; but the works of which have been entirely blown up

by the Spaniards, so that, at present, the only defences are a battery on the south shore, of twenty-three guns, eighteen and twenty- four pounders; Fort Philipet on the opposite shore, in which are but four or five guns ; and a Martello tower, with but a single gun on the same shore. On one of the heights that line the north shore is a tower, which repeats to Mahon the signals from Mount Toro ; which latter commands a view of the sea all round the is- land.

The city of Mahon is on the south shore, near the head of the port; it is built on elevated rocky ground, whence it enjoys the two advan- tages of a fine view and salubrity. The streets, which in general are narrow and crooked, are paved with large pebbles ; the houses tolerably built of stone, with windows and chimney-places in the English manner, and each has a cistern to preserve the rain water. The principal public buildings are the government house, town house, a church, two convents of men, one of women, and a civil hospital. The town was formerly surrounded by a wall, of which the vestiges of one gate alone remain.

Commencing at port Mahon, and tracing the circuit of the island by the north, we meet in succession with the isle Coloms, tolerably high, with only a passage for boats within it. On its west is the road of Sessilanes, fit for vessels of middling size, sheltered from all winds but north-west, which throws in a great sea ; but with good cables there is little danger. There is also a road on the south-east of the island, sheltered from all winds but E. N. E. to E. S. E., and a little haven for small craft entirely land- locked.

Port Adaye has depth only for small craft ; off it are three islands, one of which is elevated and the two others very low. Port Fornels is an ex- tensive basin, with a narrow entrance; but in which is seventeen to twenty fathoms, and no danger but what is apparent. Its entrance is defended by a little square fort, within which are barracks for 100 men, and by a tower on the opposite shore with an eighteen pounder. At the head of the port the English constructed a wooden fort of two stages, the lower serving for the lodgment of the soldiers, and in the upper one are port holes for four large guns. All these works are neglected by the Spaniards, who have here only fifteen soldiers. On the right shore of the port is a little hamlet of fishermen, its only inhabitants.

The gulf of Anfros is a large bay with high shores and several coves. Port Sanitge, half a mile deep, and one and a half cable's length broad at the entrance, can receive small vessels, which lie sheltered from all winds, opposite a cavern on the west shore. On the north-west of the port is the island Porcos, elevated on the north and very low on the south ; the channel within it is only fit for small craft, The rock of

Antichrist is a high head-land west of Port Sanitge .

Ciuda-della, or Cittadella, the capital of the island, is on the west end, south of Cape JBayoh, it is surrounded by a wall with bastions, and has barracks for 600 infantry and thirty horse ; a cathedral, two parish churches, and four con- vents; with four cisterns of hewn stone to pre- serve the rain water. The streets are narrow, crooked, and badly paved. Its port is by no means good; for, though the entrance is narrow, west and south winds make a great swell in it: it terminates in marshy shoals. On the right side of the entrance is a Martello tower with two guns; and near it the church of St. Nicholas, held in great veneration by the Minorcan seamen. On the opposite shore is another tower. Saint Andros Cove, north of Cape d'Artush, is only fit for small craft. Saint Galdan's Cove, two miles east of the same cape, is the best road on the south coast, having shelter from all winds but west in four fathoms.

The Layre de Mahon is a small barren rocky island off the south-east point of Minorca, very low on the north-west, and rises to the south- east, where it terminates perpendicularly; in the channel within it is seven fathoms. A little salt is made on it.

MINOS I., in fabulous history, king of Crete, son of Jupiter and Europa. He flourished about A. A. C. 1432. He gave laws to his sub- jects, which remained in force in the age of the philosopher Plato, about 1000 years after his death. His justice and moderation procured him the titles of the favorite of the gods, the con- fident of Jupiter, and the wise legislator, in every city of Greece ; and, according to the poets, he was rewarded for his equity after death with the office of supreme judge in the infernal regions. In this character he is represented sitting in the shades and holding a sceptre in his hand. The dead plead their causes before him ; and the im- partial judge shakes the fatal urn, which is filled with the destinies of mankind. He married Ithona, by whom he had Lycastes, the father of Minos II.

MINOS II., the grand-son of Minos I., and king of Crete, married Pasiphae, the daughter of Apollo and Perseis, by whom he had many chil- dren. He increased his dominions by the con- quest of the neighbouring islands. He took Megara by the treachery of Scylla; and obliged the Athenians to send annually to Crete seven chosen boys and seven virgins to be devoured by the Minotaur. This bloody tribute was abolished when Theseus destroyed the monster. When Daedalus, whose industry and invention had fabricated the labyrinth, and whose impru- dence in assisting Pasiphae in the gratification of her desires had offended Minos, fled with ar- tificial wings from the place of his confinement, and arrived safe in Sicily, Minos pursued him, resolved to punish his infidelity. Cocalus, king of Sicily, who

had hospitably received Dcedalus, entertained his royal guest with dissembled friendship : and, to preserve an artist whose in- genuity and abilities he so well knew, he put Minos to death, about thirty-five years before the Trojan war. He was father of Androgeus,

Glaucus, Deucalion, Phaedra, and Ariadne.

Many authors have confounded the two Minuses ; but Homer, Plutarch, and Diodorus, prove plainly that they were two different persons.

MI'NOTAUR, n. s. Fr. minotaure ; Lat. mi- nos and tuurus. A monster of the poets, half man and half bull ; said to be kept in Daedalus's laby- rinth.

Thou may'st not wander in that labyrinth, There minotaurs, and ugly treasons lurk.

Shakspeare.

The MINOTAUR, in fabulous history, was the fruit of Pasiphae's amour with a bull. Minos having refused to sacrifice a white bull to Nep- tune, which he had received from the god for that purpose, Neptune, in revenge, made Pa- siphae, the wife of Minos, enamoured of this fine bull. Daedalus prostituted his talents subservient to the queen's unnatural desires; and by his means Pasiphae's passions were gratified, and the Minotaur came into the world. Minos confined in the labyrinth this monster, where he devoured the young men and ir.aidens annually exacted from the Athenians. Theseus delivered his coun- try from this barbarous tribute, when it had fallen to his lot to be devoured ; and by means of Ariadne, the daughter of Minos, destroyed the monster, and escaped from the windings of the labyrinth. The fable of the Minotaur has been thus explained: — Pasiphae was enamoured of one of her husband's courtiers called Taupoc, or Tauros (which in Greek, as well as Latin, signi- fies a bull); and Daedalus favored the passion of the queen, by allowing his house to become the retreat of the two lovers. Pasiphae brought forth twins, one of whom greatly resembled Mi- nos, and the other Taurus ; whence originated the name, and the fable of the Minotaur.

MINSK, or MINKSK, an important province of western European Russia, comprehending the old palatinate of Minsk, and portions of Polotzk, Novogrodek, and Wilna. Extending from the Dwina on the north to

Volhynia south. Its area is about 37,000 square miles, containing 950,000 inhabitants. It is divided into ten cir- cles. Minsk is little better than a dead flat, but productive wherever the soil is called into operation by culture ; but a great part, particu- larly of the south, is overrun with marshes and forests. The rivers are numerous, and some of considerable size. The chief are the Dwina, Dnieper, Niemen, and Beresina ; the last memor- able for the struggle on its banks between the Russians and the French, in the retreat of the latter from Moscow, in 1812. All the produc- tions of Lithuania are found here; but wood and potash are the chief articles of export. The in- habitants are Poles, Lithuanians, Tartars, Ar- menians, Greeks, Jews, and gypsies. The chief part are Catholics ; but there is also a number of Protestants, and members of the Greek church.

MINSK, a town of Russian Lithuania, the capi- tal of the government of this name, is situated on the Swislocz, and has an abbey of the Greek church. Population 2000, chiefly Jews. 310 miles E. N. E. of Warsaw.

MIN'STREL, n.s. I Span, meneslrrl ; low

MIN'STRELSY- S I.zi.menestralus. A mu- sician ; one who performs instcu mental music:

minstrelsy, the music or harmony resulting; also a number of musicians, taken collectively.

I to the vulgar am become a jest ; Esteemed as a minttrel at a feast.

Sandm'i Paraph.

Hark how the minttrelt 'gin to shrill aloud Their merry musick that resounds from far,

The pipe, the tabor, and the trembling croud, That well agree withouten breach or iar.

Spenter.

I will give you the miiutrel. — Then I will give you the serving creature.

Apollo's self will envy at his play, And all the world applaud his mtnitrt

*Davie**

That loving wretch that swears, 'Tis not the bodies marry but the minds, Which he in her angelick finds,

Would swear as justly, that he hears, In that day's rude hoarse minttreluy,

the spheres

Donne.

The Israelitish dames, when they saw their dan- ger, though they might have left their timbrels behind them ; yet now they live to renew that forgotten minitreUey and dancing. Bp. Mall.

1 began,

Wrapt in a pleasing fit of melancholy, To meditate my rural miiutrelsey, Till fancy had her fill. Aft/tor.

These fellows

Were once the mirutreU of a country show ; Followed the prizes through each paltry town, By trumpet cheeks and bloated faces known.

Dryden.

Often our seers and poets have confessed, That musick's force can tame the funous beast ; Can make the wolf, or foaming bear restrain His rage ; the lion drop his crested mane, Attentive to the song ; the lynx forget His wrath to man, and lick the miiutrtl't feet.

Prior.

MINSTREL is by others derived from the French menestrier, and was not used in England before the Norman conquest. They united the powers of melody, poem, and dance. The Saxons, as well as the ancient Danes, had been accustomed to hold men of this profession in the highest reverence. Their skill was considered as some- thing divine, their persons were deemed sacred, their attendance was solicited by kings, and they were every where loaded with honors and re- wards. In short, poets and their art were held among them in that rude admiration, which is shown by an ignorant people to such as excel them in intellectual accomplishments. When the Saxons were converted to Christianity, in proportion as letters prevailed among them, this rude admiration began to abate, and poetry was no longer a peculiar profession. The poet and the minstrel became two persons. Poetry was cultivated by men of letters indiscriminately; and many of the most popular rhymes were com- posed amidst the leisure and retirement of mo- nasteries. But the minstrels continued a dis- tinct order of men, and obtained their livelihood by singing verses to the harp at the houses of the great. There they were still hospitably and respectfully received, and retained many of the honors shown to their predecessors, the bards and scalds. And, indeed, though some of them only recited the compositions of

others, many of

*them still composed songs themselves; and all of them could probably form a few stanzas on oc- casion. In the fourth year of Richard II. John of Gaunt erected at Tetbury, in Staffordshire, a court of minstrels, with a full power to receive suit and service from the men of his profession within five neighbouring counties, to enact laws, tnd determine their controversies; and to ap- prehend and arrest such of them as should re- fuse to appear at the said court, annually held on *he 16th of August. For this they had a charter, by which they were empowered to appoint a king of the minstrels, with four officers to preside over them. These were every year elected with i/itai ceremony; the whole form of which is cas-.iitied by Dr. Plott; in whose time, however, they seem to have become mere m-usicians. Even so late as the reign of king Henry VIII. the reciters of verses or moral speeches intruded, without ceremony, into all companies ; not only in taverns, but in the houses of the nobility. We find that the minstrels continued down to the reign of queen Elizabeth ; in whose time they had lost much of their dignity, and were sinking into neglect. One of them is thus described by a contemporary writer : — 'About his neck a red ribband suitable to his girdle. His harp in good grace depending before him. His wrest tyed to a green lace and hanging by : under the gorget of his gown a fairflaggon chain, silver, as a squire minstrel of Middlesex, that travelled the country unto fair and worshipful men's houses. From his chain hung a scutcheon, with metal and color resplendent, upon his breast, of the ancient arms of Islington.' Towards the end of the sixteenth century this class of men had lost all credit, and were sunk so low in the public opinion, that, in the 39th of Elizabeth, a statute was passed by which ' minstrels, wander- ing abroad,' were included among ' rogues, vaga- bonds, and sturdy beggars,' and were adjudged to be punished as such. This act seems to have put an end to the profession.*

MINT, 7i. s. Sax. mmte ; Tr.ment/ie; Lat. mentha,

MINT (mentha); a genus of labiate plants, distinguished, however, by having the corolla divided into four nearly equal lobes. The stamens are four, two of them longer than the others. The species are herbaceous, nearly all perennial, having square steins, 'which bear op- posite and simple leaves ; the flowers are small, verticillate, collected into bunches in the axils of the leaves. Sixty species are known, all growing in temperate climates, and most of them European. Two or three species only inhabit the United States. They abound in resinous dots, which contain an essential oil.

They have an agreeable odor, and have been celebrated, from remote antiquity, both in my- thology and from their useful qualities. They partake, in the highest degree, of the tonic and stimulating properties which are found in all labiate plants. The ˆlentha piperita, or pepper-mint, is the most powerful, and, on this account, is most generally employed in medicine. The Mentha viridis, or spear-mint, is milder, more agreeable, and is very commonly employed for culinary purposes.

MINT, n. s. & v. a.~\ Sax. mynenan; Befg.

MINT'AGE, n. i. I munten ; Tent, muntzen,

MINT'ER, vto coin. A place where

MIWT'MAN, i money is coined ; hence,

MINT'MASTER. J (meta.) a place productive

of inventions or conceits : as a verb, to mint is

to coin or invent: mintage, coinage ; also duty

paid or allowance made for coining : a rninter, is

a coiner : mintman, one skilled in this art :

mintmaster, one who presides over or directs it ;

also an inventor or discoverer.

A man in all the world's new fashion planted, That hath a mint of phrases in his brain.

Shahspeare.

Sterling ought to be of pure silver called leaf sil- yer, the minter must add other weight, if the silver be not pure. Camden.

That which is coined, as mintmasters confessed, is alloyed with about a twelfth part of copper. Boyle.

The great mintmasters of these terms, the schoolmen and metaphysicians, have wherewithal to content them. Loche.

What is a person's name or face, that receives all his reputation from the mint, and would never have been known had there not been medals.

Addison on Medals.

As the mintt of calumny are at work, a great number of curious inventions are issued out, which grow current among the party. Addison.

When Scandal has new minted an old lie,

Or taxed invention for a fresh supply,

'Tis called a satire, and the world appears

Gathering round it with erected ears. Cawper.

An actor is in the capacity of a steward to every living muse, and of an executor to every departed one ; the poet digs up the ore ; he sifts it from the dross, refines and purifies it for the mint : the actor sets the stamp upon it, and makes it current in the world. Cumberland.

MINT. The mint, which now forms so real an ornament to the eastern side of Tower Hill, has derived its name from the important busi- ness of coining having been originally conducted within the Tower.

This attribute of sovereign power was exer- cised by our Anglo-Saxon monarchs. Mr. Tur- ner (History of Anglo-Saxons, vol. II. 134) con- siders that the use of coined money cune in with the Roman ecclesiastical power; but no gold coins of this period of our history have reached us : that metal our historian thinks was only used in an uncoined state. See the article COINS. Mints were established (Wilkins's Leg. Anglo-Saxons) at various considerable places beside the capital; indeed, from Domesday- book, they seem to have been a usual appendage of large towns.

Atlielstan, according to Mr. Rudjng, first enacted regulations for the government of the mints. In his laws, promulgated about the year 928, he provided that one sort of coin only should be current throughout the kingdom, and granted to certain towns, by name, a number of raoneyers, proportionate to their size and con- sequence, and to all boroughs of inferior rank one moneyer each. These mints were under the general control of that within the tow>r of Lon- don, from which, as paramount, the dies were issued ; and for which the moneyers paid a regular fee upon every alteration of the coins.

They also paid an annual rent, which, in the city of Lincoln, amounted to

£75 (according to the statement of Doomsday-book), a very con- siderable sum at that time. The rents of the other mints were, however, much smaller.

As well as these, the author of Annals of the Coinage notices certain early mints not directly subordinate to the crown, and founded either upon usurpation or upon grants of the sore- reign to individuals or corporate bodies. Of these several are mentioned as in the hands of the barons in the reign of Stephen Athelstan confined the ecclesiastical mint to Canterbury, where the archbishop was allowed two money- ers, and the abbot one ; and to Rochester, where the bishop was authorised to employ a single moneyer: but in these and all succeeding grants from the crown, while the profits of the coinage effected was assigned to the church, the dig- nitaries in question were forbid to use any dies but what they received from the tower of Lon- don, and for the use of which they were com- pelled to pay a rent to the master of the mint. In later times, however, certain ecclesiastics were permitted to add distinguishing signs, or mint marks to their money, or, at least, on the smaller coins ; for it was one of the articles of impeachment against Wolsey, that he inserted a cardinal's hat on the larger ones.

Connected with the various provincial mints were exchanges, established jn certain large towns for the purpose of receiving in the old, and distributing new coins. Here also bullion and plate were purchased in the name of the sovereign ; foreign coin exchanged for that of the kingdom, or supplied to travellers and mer- chants, according to public tables of their value.

The series of coins from the metropolitan and other ecclesiastical mints terminates in the reign of Henry VIII., Cranmer and Lee, the arch- bishops of Canterbury and York of that period, being the last who exercised this privilege : but it was not until the reign of queen Mary that the subordinate royal mints were finally abolished. The coinage has ever since been exclusively conducted at the tower, with the exception of a short period in the reign of Charles I. ; another in that of his son; and during the great re- coinage immediately after the Revolution, when mints were once more put in operation in York, Chester, Exeter, Bristol, and Norwich. To these exceptions the annalist finally adds the new ' era' which 'started up' in the late reign, i.e. in the mint for the copper coinage, conducted by Mr. Boulton at Soho.

In 1806, the other uses to which the tower buildings had become devoted having rendered the part appropriated to the mint within the tower very inadequate for the purpose, a portion of what was called the Little Tower Uill (for- merly occupied as the government tobacco ware- house) was selected as the site of a new mint. Grants of money were made by parliament from this time to 1810, amounting in the whole to £261,977

for the erection of the present elegant and commodious structure, with its machinery ; and in no part of the world besides, we believe, are equally effective and scientific coinage oper- ations now carried on.

The head officer of this establishment is the matter of the mint, an appointment of sufficient influence and emolument to be considered tech- nically ministerial; and it generally therefore follows the usual changes of administration. To Mr. Wellesley Pole, who held it during the ministry of lord Liverpool, the mint is indebted for its existing and completely renovated consti- tution, founded on a report of that gentleman to a committee of the privy council ; and which took effect in the year 1815. According to this the practical duties of the mint are thus regu- lated : —

1. The deputy-matter, and worker, is to re- ceive, on account of the master and worker, his majesty's own bullion of gold and silver, aa well as the bullion of any other person, brought to the mint for coinage : to give acknowledgments for the same, specifying the number of ingots, or parcels of coin, according to the purport of any invoice or bill delivered therewith : to see the ingots safely deposited in the care and joint cus- tody of himself and the master's assayer, for the purpose of being assayed previous to their im- portation into the office of receipt : to cause ingots, when duly assayed, to be brought into the office of receipt without delay, there to be weighed in the presence of the importers and check-officers : to make out a mint bill, to be delivered to the importer, testifying the weight, fineness, and value of the several ingots, &c., together with the day and order of the delivery into the mint, and to sign a receipt annexed to the said bill, witnessed by the comptroller and king's clerk : to give di- rections to the master's first clerk, for the com- bining or potting the ingots for the melting, with the proper portion of alloy ; and to see that the same be duly entered by the said first clerk and melter, in the pot-book, and the said 'book exa- mined by the comptroller and king's clerk ; and to deliver out of the strong hold such ingots and bullion as are potted, and charge the melter there- with, according to the standard weight of each pot : to keep an account of the bars received from the melting-house, and delivered to the moneyers, and also of the scissell returned by the moneyers to the melter, for which their respec- tive receipts will be given and entered in the pot- book, that they may be charged therewith : to receive the coined monies from the moneyers, after the same hare been duly tried at the pix by the king's assayer, comptroller, and king's clerk ; and to deliver the same to the importer, receiv- ing back at the same time the mint bill which had been given ; or, if the same be not cleared off, to require that such portion thereof as has been delivered, be indorsee on the bill by the parties, by a receipt, till the whole be discharged : to seal and lock up in the usual chest, in conjunc- tion with the king's assayer and comptroller, the pieces reserved for the public trial of the pix, and to make good to the parties the pieces so

taken, by payment in their sterling value; chai»- ing the same to the public expense.

As first executive officer of the mint, to walch over every branch of the department, and to iu- spect and orrrsee, as much as lies in his power, the meltings, assayings, and all the different pro- cesses of the coinage, and to renort to the master

on the conduct of the officers : to draw and in- dite all letters, instructions, commissions, and other writings agreed upon and ordered by the master and worker, for the service of the office, and to have the same recorded by the clerk of the papers : to receive all monies issued at the exchequer or elsewhere, for the service of the mint; and to keep the public account of the master, to be laid annually before the auditors of public accounts, with the proper vouchers, the said account to be signed and attested by the master himself: to make quarter books of the salaries, wages, allowances, &c., due to the se- veral officers, clerks, artificers, and others belong- ing to the establishment ; and to make payment thereof on the quarter days, namely the 5th of January, the 5th of April, the 5th of July, and 10th of October, whenever there shall be funds for that purpose : also, to pay the moneyers' and melters' charges for coinage, according to the rates set forth in their respective agreements with the master ; the same to be payable out of the monies issued for the service of the mint, the salaries &c., being previously discharged : also, to pay the incidental expenses and disbursements usually incurred in the different offices ; and to pay the solicitor his account for disbursements in carrying on prosecutions for offences against the laws relating to the coin, out of such monies as shall be impressed from time to time, for that service, exclusive of the ordinary allowance : to receive all the fees arising to the master's office under the indenture or otherwise, and to apply the said fees to the payment of the master's salary, in the manner directed by the act 39th Geo. III., and to account for the same to the lords commis- sioners of his majesty's treasury, by half yearly statements, showing the deficiency of the fees, and the sum to be provided, or the excess, as may happen ; and to make out a yearly account to the treasury.

For this office he is to give the usual security, or such other as may be required by the lords of the treasury : in conjunction with the comptroller, to inspect and examine the accounts of the clerk of the irons, as to the dies supplied to 'the en- graver and moneyers, and the faulty ones de- stroyed ; to attend the duties prescribed by the act 14th Geo. III. respecting the standard money weights.

2. The king's assayer is to keep a book of the assays made by him, of all such gold and silver as may be brought into the mint, whereby the quantity and fineness may appear. If the mas- ter of the mint, or the merchant, or importer, who brings his gold or silver for coinage, may not accord between them of the true value of the bullion, or if it be not malleable and fit for work- ing, or sufficiently nigh to the standard, accord- ing to the customs of the mint, the king's assayer is to try the truth in that part, in the presence of the master and comptroller, and the master shall receive the same in manner as it becometh : to report (after the bullion has been weighed, potted, and melted) the assay of every several pot, commonly called the pot assay, which pot assay shall be made of some bar of the said bul- lion, to be taken by the comptroller, the king's assayer, or surveyor of meltings, or anv one of

them, after the pot is cast out ; the said report to be made in writing, and delivered through the office to the surveyor of melting : to take care that the bars of gold and silver be melted, and the monies made agreeably in fineness to the in- dented trial plates, made by direction, and order- ed to be used by the royal authority ; whereof one trial plate for the gold, and one for the sil- ver, shall remain with the king's assayer.

In conjunction with the other principal officers to oversee and survey the assaying, and melting, and making the monies, at all times and in all places : and endeavour and procure that the said monies, and every of them, shall be properly made and perfected : to see and procure, with the comptroller, and weigher, and teller, that the balances and weights be put to point from time to time, when they shall need it ; so that no de- fault be found in them, to the hurt of his majesty and his people: to make proof (by a process called the pixing) of the monies before their de- liverance to the bringers in of the bullion ; the said proof to be made in the presence of the master and worker, comptroller, and king's clerk, by an assay to be taken of the fineness as well as of the weight, by such quantity, and after such sort as shall be agreed on or as has been cus- tomary, namely, by weighing the pound weight in tale ; and taking one piece out of every jour- ney weight of gold and silver respectively for the assay of the fineness, as directed by the mint re- gulations. To report thereon, and the report to be entered in thepix books: in conjunction with the master, and worker, and comptroller, to see a portion, namely, one piece out of every journey weight of the said monies (after they have been proved to be good), ensealed in a packet, and put into a box (called the pix-box), to be locked up under the separate keys of the said officers, there to remain until trial thereof by jury (called the trial qf the pix) shall be made before the king, or such of his council as are usually appointed at Westminster, or elsewhere for that purpose.

He shall be bound to instruct in the art of as- saying, the probationer assayer, who shall be no- minated by the king's assayer, and approved by the master and worker: to attend the duties pre- scribed by act 14th Geo. III. respecting the standard money-weights.

3. The comptroller is to enter on record, in a journal or ledger, all such bullion of gold and silver as shall, from time to time, be brought into the mint, which entry shall comprehend the weight as declared by the weigher and teller ; the fineness as reported by the master's assayer ; and the value, of the said bullion, the parties' names that brought it, and what day : to deposit at the office of receipt in the strong-hold, of which he shall possess a key (in conjunction with the deputy-master and worker, and king's clerk), the bullion, after it shall have been received, and the assays and weight thereof made, reported, and entered, there to remain until it is required to be delivered by the deputy-master for the meltings : in conjunction with the king's clerk, to tyke an account of the ingots delivered by the deputy-master out of the strong-hold for the meltings, according to the entry made by the master's first clerk and melter in the pot-book

and to examine the said book as to the calcula- tions of the quantities and fineness, of all manner of gold and silver and alloy, combined and put to each pot respectively for the meltings, and to subscribe the same with his initials : to take also an account and oversee the weighings of the bars and scissel, passed through the office between the melter and moneyers ; for which their respective receipts shall be entered in the pot-book : to keep an account of all the deliveries of the monies ; and to ascertain, at the end of every month or oftener, the balances due by the master to the several importers, and also the balances in the hands of the moneyers and melter, and agree the same with the deputy master, who is to charge the said moneyers and melter therewith accordingly : in conjunction with the other prin- cipal officers, to oversee the melting, rolling, sizing, and making, the monies, at all times and in all places ; and endeavour and procure that the said monies and every of them shall be made and perfected : to see and procure, with the king's assayer, and weigher, and teller, that the balances and weights shall be put to point from time to time when they shall need it so that no default be found to the hurt of his majesty or his people.

To attend the proof and trial (called pixing) of the monies before their deliverance to the im- porter, and to try the weight of some of the pieces in each journey weight singly, as a check that there may be no great variation from the true weight ; and also to retain two pieces from each journey

weight, one to be delivered to the king's assayer for his assay, and the other to be locked in the pix-box, to be tried before the king or his council ; — to docquet the parcel containing the pieces for the pix, and with the pther officers en- seal the same, and lock it in the pix-box : to de- liver upon oath, before one of the barons of exchequer, a roll, which shall be called a comp- troller's roll, containing an account of all the gold and silver monies coined monthly in the said mint: in conjunction with the deputy-mas- ter to inspect and examine the accounts of the clerk of the irons, as to the dies supplied to the engraver and moneyers, and that the faulty ones be destroyed : to attend the duties prescribed by ant 14th Geo. III. respecting the standard mo- ney-weights.

4. The superintendent of machinery and clerk of the irons is to inspect, from time to time, the several steam-engines and boilers, and the ma- chinery, apparatus, and implements, used in the coinagfe, and to see that the same are kept in pro- per order for immediate working at all times : to oversee and direct, in conjunction with the com- pany of moneyers, the artificers and workmen employed by government about the machinery in doing all manner of work that may be expedient, and likewise in the construction of all the smaller implements and tools necessary to carry on the coinage, upon, the principle of the machinery erected ; the repairs and work being ordered un- der the authority of the master and board of mint officers: to superintend the working of the ma- chinery, and instruct (to the best of his ability) the officers and moneyers in the use and manage- ment of it ; and to report to the board upon any

neglect or misuse : to examine the several ac- counts of expenses incurred in the machinery,— certifying, in pursuance of the agreements enter- ed into between the master and the moneyers, the charges, both in respect to the bills, and also the wages to the artificers, which shall respective- ly be borne both by the government and the moneyers.

As clerk of the iron, to superintend the die press-rooms ; and purchase, or procure *o be forged, at tht cheapest rate, to be approved by the board, all such dies as shall be ordered by the board, and to take care that the same are of the best quality and properly forged : to over- see the workmen in the die-press room, and that the dies be skilfully sunk and hardened, and properly turned ; and to attend to all matters and things for the well ordering and conducting this service : to keep a true account of all the blank dies, matrices, and puncheons for coinage, which shall be delivered to the engravers, or that shall be sunk or stamped by the engravers, and after stamping made fit for use and hardened : to require the engravers, monthly, to return as many dies as shall be found faulty and worn : to give an account, as often as required, to the master and comptroller, of the blank dies de- livered to the engravers, and the faulty ones returned, that a*

just account may be kept, and all the faulty dies defaced : to unlock and be present whenever the great die-press for multi- plying the dies is used ; to be responsible for its not being applied for improper purposes; and that no medals, pattern-pieces, or coin of any description be struck, but by a written order from the master or his deputy.

5. The king's clerk, and clerk of the papert, is to attend the weighings in, and enter in his ledger-book an account of all such bullion of gold and silver, as shall be brought into the mint, describing the weight and fineness as reported, th e parties names that brought it, and the day : to deposit at the office of receipt in the strong-hold, of which he shall possess a key in conjunction with the deputy-master and comp- troller, the bullion, after it shall have been weighed in, and the weight and assays reported ; there to remain until it shall be required to be delivered over by the deputy-master for the meltings.

In conjunction with the comptroller, to take an account of the ingots delivered by the deputy- master to the melter, as set down in the pot-book, and to examine the calculations of the pot-book as to the quantities and fineness of all manner of gold, and silver, and alloy, put to each pot, and to subscribe the same with his initials : also to take an account and oversee the weighing of the bars and scissel passed through the office between the melter and moneyers, for which their respective receipts shall be entered in the pot-book : to attend the pix and deliverance of the monies, and record the same, and agree the master's, melter's, and moneyer's balances, up to the end of every month : to enter (as clerk of the papers) in the record-book, all office-letters, papers, appointments, warrants, and proceedings of the board : to assist the deputy-mastf r in the secretary department, and instruct the master's

second clerk in the keeping the proper entries of bills and accounts for expenses incurred, or in making copies of all such papers as shall be required by the master or his deputy, or by the board.

6. The master's atsayer is to receive from the master and worker all manner of gold and silver ingots brought to the mint : to deposit the same in the joint custody of the deputy-master and himself, in the strong-hold of the assay office, till the assays are made : to cut one or more pieces from each ingot (as he may think proper), and assay the same : to make written reports of the assay of each ingot, describing the fineness, date, and name or mark of the importer, and keep a record thereof. To make also such re-

marks on the quality of the bullion as may be needful for the master's information, and to deliver the list usually given by the importer of the purchase assays : to give instructions for the classing of certain of the ingots together, so that the bullion may be mixed and worked as close to the standard as possible, and advantages procured by the mint assay : to deliver the ingot when assayed into the office of receipt.

7. The master's first clerk and melter is to superintend and carry on the operations of the meltings and refinings, according to agreements (stating the prices and conditions) to be made from time to time between the master and melter : to attend the weighings in at the office, and rate and standard the ingots in conjunction with the other officers; and their several accounts agreeing to enter the same in his journal ; so that no difference may arise between the deputy- master and himself as to the value of the bullion to be delivered to melt: to arrange under the direction of the deputy-master from the said journal, and from the list of ingots classed by the master's assayer, the combination of the bullion for melting, and to make the proper calculations of the quantities and fineness of all manner of gold and silver and alloy put to each respective pot, and to enter the same fairly in a book (called the pot-book), and subscribe his ini- tials to each pot so made up : to receive the bullion so prepared from the deputy-master, to be de- posited and melted under the joint custody and inspection of himself and the surveyor of melt- ings : to melt and cast the bars (according to agreement) ; and, after they have been assayed and reported standard by the king's assayer, to deliver them into the office of receipt ; there to be weighed by the weigher and teller, in pre- sence of a check officer, and passed to the moneyers : to receive the returns of scissel, light work, and ends (according to agreement), from the moneyers, to be weighed in like manner, the receipts between the moneyers and melter for the bar and scissel being entered in the pot- book : to receive from the deputy-master all such gold and silver as may be necessary to refine ; to make up an account in the pot-book of each charge, showing the standard amount, to be signed with his initials, and examined by the comptroller and king's clerk ; and to supply a quantity of fine ingots, equal in standard weight by computation to the amount delivered to refine, the same to be assayed by the master's

assayer, and weighed into the office of receipt, and rated and standarded so as to combine and pot with the coarse insots : to agree the balances remaining in his hands with the deputy-master at the end of each month : to employ and in- struct the master's second clerk in the art of meltinar bullion; and, lastly, to be ready to do his work at all times, when he shall be warned by the master and worker; and to attend to his majesty's service as need shall require, both morning and afternoon, and to work so many hours every day (Sundays excepted) at such tasks as shall be thought fit by the master, and appointed by the board.

8. The provost and company of moneyers are to superintend and carry on jointly as a company, the several processes for the manufacture of the coin, in the rolling, annealing, blanching, cutting out, sizing, and stamping, according to agree- ments (specifying the prices and conditions) to be made from time to time, between the master and worker, and the provost and company : to receive the standard bars of gold and silver for making the monies, from the melter at the office of receipt, there to be weighed by the weigher and teller, in the presence of a check officer, and to give receipts for the same to be entered in the pot-book : to coin such quantities of the different species of the monies as shall be directed by the master (according to agreement), and to bring the said monies (in clean pieces) into the office of receipt, in journey weights; there to be tried at the pix and weighed : to deliver the monies proportionally in weight, according to the bars received ; and, if any thing lack of the weight at the time of deliverance, to content and pay unto the master the balance at the time of the delivery : to make out of the bars which shall be delivered to them clean and fit to be wrought, seven-twelfth parts into money, so that there be but five parts in twelve scissel : to return the scissel, light work, and ends to be remelted, proportionally (according to agreement); the same to be delivered into the office of receipt, to be weighed by the weigher and teller, in the presence of a check officer, and to take receipts from the melter to be entered in the pot-book : to agree with the deputy-master the balance remaining in their hands at the end of each month, that they may be charged therewith ; and from time to time (as the master shall require) make full payment and deliverance of all man- ner of monies, with all convenient speed, in order to discharge the said balances, or bring in sufficient supplies of gold and silver, bullion, or ingots, equal iu value, according to the weight and assay to be made thereof at the time : not to take either singly by the provost, or jointly by the company, any apprentice to be instructed in the art or mystery of a moneyer, or any part thereof, without the license and permission of the master first had and obtained under his hand in writing.

*To oversee, in conjunction with the superin- tendent of machinery, who is to direct the same, the artificers enployed by government about the machinery, in doing all manner of work that may be expedient, and in the construction of the smaller tools and implements for the coinage**

to be ready to do their work at all times without denial, wlwm they shall be warned by the mas- ter : duly to attend his majesty's service, in the present way of coining, as need shall require, both morning and afternoon ; and to work at such tasks, and so many hours every day (Sun- day only

excepted), as shall be thought fit by the master, and appointed by the board, accord- ing to the labor of their respective tasks, and the length of days : neither the provost, nor any of the moneyers, their apprentices or servants, at any time, to vend, pay, or distribute any piece or pieces of the coined monies, until the same shall have been delivered by them, according to the course of the mint, into the office of receipt, and duly assayed and pixed.

9. The chief engraver is to make and frame such draughts and embossments, or receive such models for engraving, as the master shall direct: to engrave from the said designs or models all such matrices and dies as the master shall direct, and the service of the mint require : to oversee from time to time the multiplication of the pun- cheons and dies, in the die press-room, and to receive the dies from the superintendent and •clerk of the irons, that they may be delivered to the surveyor of the money presses in a proper state for the use of the coinage : to return monthly to the superintendent and clerk of the irons as many dies as shall from time to time be found faulty, and worn by using or other- wise.

Not to work, or make, or grave any pun- cheons, matrices, dies, or stamps, for the making or coining of any money, but only in such places in the mint as shall have been assigned there- unto : to oversee the striking of the monies in the coining press-room, and to direct all such dies as are" faulty to be taken out of the press, and fresh dies put in, that the monies may be properly struck.

10. The weigher and teller is to weigh at the office of receipt, under the master's direction, all manner of bullion brought to the mint to be coined, or for the service of the king : to weigh the bullion, according to such weight or draught (near to a journey weight) as has been customary : all importations to be weighed in the presence of the deputy-master, or master's clerk, comp- troller, or king's clerk, and the importer, who is to state the weight of each ingot from his list, for the guidance of the weigher : to declare the weight aloud from his scale, that the same may be taken down by the officers and importers: in conjunction with the other officers, to see that the bullion is free from dirt, and in a fit state for weighing, and to do strict justice, as much as in him lies, between the parties.

To weigh the bars and scissel, passed between the moneyers and melters, and declare the weight of each draught; and also all supplies of fine ingots received from the melter ; and the balance or supplies of ingots, &c., made from time to fime by the moneyers and melter : to weigh the toined monies from the moneyers to be delivered to the importers in even journey weights, or to declare the plus or minus on each draught, that die same may be recorded, and the moneyers made answerable for the deficiency of weight

or

balance at the time of deliverance : to attend the pix, and tell out the number of pieces con- tained in a pound weight Troy of the respective species of monies to be delivered to the king' assayer for trial : to undertake by himself, or by a proper workman in the mint (according to an agreement of prices and conditions), to clean and adjust the beams, 8cc., in the office of receipt, and to keep the same in order, so that they be always ready and perfect for working.*

11. The surveyor of melting is to surrey the meltings of all gold and silver, and to take care that the ingots or bullion, according to the num- ber and description in the pot-book, with their proper alloy only, to be weighed by himself, be put into the pot they are respectively set out for : to see that nothing but scissel or such returns of ends as be clean and good, of gold and silver, respectively, be put into the pots of scissdl : du- ring the time the pots are melting not to absent himself, or to be out of view of the pots so melting, until they have been poured off: to take two or more assay pieces from some bar or portion of each pot cast from the top, middle, or bottom, of the pot, as agreed with the king's assayer : to fold up each assay-piece in a paper, docqueted with a description of the ingots and alloy, or scissel, &c., molted in each pot, the number of the pot and the date, and to deliver the same to the king's assayer : to possess a key of the strong-holds in the melting house, and not to suffer any bars of gold or silver to be de- livered out of his custody, until such time as they have been duly assayed and reported good, which reports will be made to him in written notices, transmitted through the office by the king's assayer : to keep a book containing the weight of all gold and silver as shall be molten from time to time, with the alloys put into the same.*

12. The surveyor of the money prettet »s to in- spect the coining presses, and to have a distinct and separate lock upon each of the presses : to be present at the striking of the monies, and not to suffer the presses to be used for striking any pieces or coins but such as the master shall di- rect : to have the custody of the dies received from the engraver and clerk of the irons, to give out the same for coinage, and return the faulty ones to the chief engraver, to be delivered to the clerk of the irons : to polish the dies, or oversee the doing of the same, when the moneyers are coining : to inspect the monies, that they be well made and free from brokages, and faulty or dirty pieces; and to do, execute, and perform, all such other works and services in the said office as the master shall direct and appoint.

13. The probationer atsayer is to receive in- structions from the king's assayer for acquiring a knowledge and proficiency in the art of assay- ing : to do all such services, in carrying on the business of the assay-office, as

the king's assayer shall require and the master direct.

14. The masters tecond clerk is to make out fair copies and entries of all such accounts and papers as might be required in the roaster's office, and to do all such services in the said office as the master or deputy-master shall direct or appoint : to receive instructions from the

master's first clerk and melter in the art and un- dertaking of the meltings.

15. The assistant engraver is to assist the chief engraver in the engraving of the reverses, let- tering, or such other parts of the dies as the chief engraver shall appoint : to receive instruc- tion from the chief engraver in the art of en- graving, and to render all such services in the department as the chief engraver shall require, and the master direct.

16. The mint or bullion porter is to attend the office daily, if required : to be present at all importations and deliveries at the office : to mark on the assay paper the weight of each ingot weighed at the scale : to arrange, with the assistance of the master's porter, the ingots in the strong-hold, and put them together in pots, to be carried down to the melting-house : to oversee the under porters in giving all proper assistance at all the weighings, and in the receipt into the mint of all bullion, and deliverance of monies or bullion : to give the regular notices for the attendance of the officers, and other persons at the office, for business, and to do all such services as shall be directed by the master or board.

17. The warden of the mint is in conjunction with the master and comptroller, and with the assistance of the king's assayer, to make the weights of a guinea and of a shilling, according to the establisned standards, and also parts and multiples of the same, to be presented to council, and, if approved, to become standard weights, to be lodged in the mint : to have the custody of the said weights at the mint, in conjunction with the master and comptroller : to make also, in conjunction with the master and comptroller, and with the assistance of the king's assayer, copies or duplicates of the said weights, to be lodged with an officer called the stamper of money weights : to summons once, or oftener, in every year, by warrant under the hands of himself, the master and comptroller; the stamper of money weights to appear before them, and produce the said duplicates of the standard weights, to be examined and compared with the standard weights lodged at the mint office in their custody : to pay the salary allowed to the stamper of money weights out of monies to be

entrusted to him for that service by the master of the mint.

No person to be appointed to act as deputy to the warden, without the sanction of the lords of the treasury.

18. The stamper of money weights is to attend the summons of the warden, master, and comp- troller, and to have the duplicate weights in his possession compared with the standard weights at the office, at least once a year: to adjust the duplicate weights by the said standard weights, that all weights for weighing gold and silver money may be regulated by the said dupli- cates : to stamp the weights made use of in weighing the money, receiving a fee of one penny on every twelve weights stamped or marked pursuant to act of parliament : no other weights but those stamped by the stamper of weights, to be accepted by law, for determining the weight of the coins ; and persons counterfeiting the

stamps, or altering weights so stamped, to be fined and imprisoned: not to interfere with the weights of the founders' company, if they have their weights sized and marked as above : to re- ceive the salary allowed to his office from the warden or his deputy.

19. The solicitor of the mint is to attend the board of mint officers every Wednesday, or such other day as may be appointed, to lay before them such information and depositions, in regard to persons offending against the laws relating to coin, and to receive the board's orders for acting thereupon : to act in conformity to such order, in the prosecution of all such persons as shall clip, counterfeit, melt down, wash, file, or di minish the current coin of the kingdom, or alter any counterfeit coin, knowing the same to be counterfeit, or be guilty of any crime or offence concerning the said coin or money, or against the laws relating to them.

For the better carrying on of the prosecutions that may happen, at the same time, in different counties, to substitute and employ such other person as he .shall see fit in his stead : to make out quarterly accounts of the expenses of the prosecutions, with the proper vouchers, to be examined by the board of mint officers, showing the disbursements made by him ; and to make an abstract account at the end of every year, of monies received and expended, that the balance may be ascertained and the account discharged.

20. The general instructions for the common duties of the principal officers, i. e. the deputy master and worker, king's assayer, comptroller, superintendant of the machinery, and king's clerk.*

i. To make their ordinary habitations and abode in houses assigned them within the mint : to meet in the board-room at the mint office every

Wednesday (after the delivery of the monies), or on such other day and hour as the master or the service of the mint shall require, there to form a board. Three members (the master or his deputy being one) are competent to act.

ii. To consult together, and order all business appertaining to them concerning the office, de- termining the hours of attendance of the several officers, the receipts of the bullion, and the delivery of coin : to consider and give direc- tions to the solicitor of the mint, from infor- mation laid by him before the board, for under- taking prosecutions for offences relating to the coin, and require him to report, from time to time, as to the state of the prosecutions and con- victions.

iii. To take up and employ such smiths, workmen, and laborers, as may be severally wanted in the die department and assay offices ; and for assisting in the porterage and weighing of the bullion and coin in the office of receipt, and to order the superintendant of machinery, and clerk of the irons, to purchase or procure to be forged all such dies as are necessary for the coinage or service of the mint, and to provide all necessaries, and do all manner of business within the mint as may be needful

iv. To observe, follow, and perform, all orders, warrants, or significations of the master and worker, whether grounded upon warrants from the king, the lords of the committee of council

for coin, or the lords commissioners of the treasury ; and in all things to obey jointly or severally, in their respective places, such di- rections as he shall from time to time judge ne- cessary and fit to give for the service of the mint.

v. To see that the accounts of the office for the receipt of the bullion and delivery of the coin, as well as the check and control thereof, be kept in due manner as prescribed, and that the comptrolment roll of the monies coined monthly, be exhibited yearly to the auditors of public accounts.

vi. To see also that the receipts and payments of all monies, for the service of the mint, be charged and accounted for in the master's pub- lic account, and that all bills, accounts, and statements, belonging thereto, be examined and allowed under at least three signatures of the principal officers, of which the master's deputy is to be one, previously to its being laid before the audit office : also to examine and report to the lords commissioners of the treasury on the fees derived to the master's office ; and the ap- plication

thereof, pursuant to the act 39 Geo. III., as stated in the receiver's account; in order that the same may be declared and passed.

vii. To prescribe to the under officers and servants, their several charges and duties, and to see the due performance of them ; and, in case of negligence or unfaithful conduct, to report to the master, or, as far as the board are authorised, remove them from their situations : not to suffer the works of the mint to be viewed without an order signed by the master ; or any stranger or foreigner, not having business at the mint, with- out any knowledge of his quality, to have inter- course with the officers while performing their duties.

The foregoing official rules will give the reader a general impression of the business conducted at this establishment : we shall now endeavour to conduct him through the several offices as they are ordinarily engaged in performing it.

From the bank of England almost all the coined money of the kingdom is first received in the shape of bullion ; which is sent to the ' mas- ter of the mint's assay office', and received into what is called the strong-hold, where it is kept until its fineness is ascertained, in order that its value may be computed.

This being ascertained, the parties concerned are desired to attend at the office of receipt and delivery to witness its weight, and to be informed of its fineness, and, consequently, of its value ; the standard weight of the bullion being deter- mined by the calculation of the respective offices : a mint-bill is now handed to the owner or owners of the bullion, on which the exact value of that, deposit is recorded.

The next thing is to deliver the bullion to the melting-house, which is furnished with a variety of apparatus, adapted, not only to the melting of the gold and silver, but the lifting in and out the pots containing the precious metals, with safety, ease, and expedition. The silver is melted in pots of cast-iron, but the gold is melted in smaller pots manufactured from black-lead, •which, according to the modern chemistry, is a 'ot.. XIV.

carburet of iron. The silver is run into plates ten inches long, seven wide, and about five- eighths of an inch thick : the gold-plates are .en inches in length, foui in breadth, and three- eighths of an inch in thickness. While the metal is pouring into the moulds, there are three portions taken, from the top, the middle, and bottom of each pot, and carried to the king's assay-office, there to be examined by the master of that office, and not permitted to pass into work until the fineness of the metal is accurately determined. The furnaces used are air-furnaces, and the fuel is coke. In the process of

melting, as there will necessarily be waste, every thinR that can possibly contain any portion of the pre- cious metals, such as the sweepings of the melt- ing-house, &c., are collected and carried to another apartment, in which are erected two grinding and two triturating mills, where the sweep is worked up, and the fine metals in part recovered, in the manner practised by refiners and goldsmiths.

The sweep, thus brought together, is ground into a powder, and passed through a fine sieve, by whjch the larger grains of metal are obtained. The sweep is then put, in small portions, into a wooden bowl, having two iron handles, by which it is carefully washed : the lighter particles, being absorbed by the water, are collected in a large tub ; the heavy or metallic ones are found de- posited at the bottom of the bowl. By these means the most considerable of the particles of gold and silver are obtained. The powdered sweepings, however, which have been collected after the washing process, still contain portions of metal ; to obtain these, the sweep, in certain portions, is put into a mill, containing generally about 100 cwt of mercury, the remainder of the mill being filled with water : this is c6m- monly called the triturating mill, and each charge is agitated about four hours with an instrument, having four arms placed horizontally, in the shape of a cross, and fixed to the centre of the mill ; and, for the better agitation of the sweep and mercury, the motion of this mill can be re- versed at pleasure.

From the melting-house, the plates, provided they are found by the assay-master to be of the exact degree of fineness, are carried to the rol- ling-mill. They are first hot-rolled, that is, made red-hot, in a furnace adapted to the pur- pose, and then passed through a pair of cast-iron rollers. In the room in which this operation is performed there are four pairs of rollers, which (as they require an immense power) are put in motion by a steam-engine, of a power equal to that of thirty horses. The roller are placed very near the furnaces, and the metal, being brought to what is called a blood-red heat, is taken out by a man with a pair of smith's tongs, and immediately returned by another man, and again passed through while hot two or three times, by which it is greatly extended ; after this. it is annealed. This is called the breaking-down rolling, and when finished the plates of silver are about three-sixteenths of an inch thick. They are then cut into slips by a pair of circular shears attached to the shafts, by which the rollers are worked, after which they are finished in what*

are called the adjusting-rollers, which are also made of cast-iron, and very finely polished. In this process the slips are rolled cold, and, when a piece cut from the middle of each is found of the proper standard weight, they are carried to another apartment, called the cutting-out room, containing twelve machines worked by a steam- engine if the power of sixteen horses. With these machines the blank pieces are cut out from the strips or laminae just mentioned with great ease and velocity. The only manual labor required, is that performed by a boy nine or ten years old at each machine ; he quickly l«arns the art of presenting the lamina to the cutters, which instantly cut out the blank pieces of me- tal-; these so struck fall through a hole that con- ducts to a box placed below to receive them. Each machine will cut sixty pieces in a minute, of course the twelve will produce 720 in a minute, or 43,200 in an hour. Formerly these machines were worked by hand by a man or boy at each cutter, but no manual labor can operate so accu- rately and well as the power obtained by the steam-engine. The instruments with which the blanks are cut (called a bed and punch), are made of steel, of the exact diameter of the piece of money required.

The blanks are now carried to the adjusting- room, where every piece is most accurately weighed, the gold twice, at least, and the silver once ; those pieces that are found too heavy are reduced by the file, called a float, and those that are found too light, which occasionally occurs, are re-melted.

The blanks, properly adjusted, are then con- veyed to the milling-room. Into this no stranger is allowed to enter; the process of milling being a secret by the very constitution of the mint : and this has always been the case since the time of Peter Blondeau, who introduced the milling in 1662, as appears from Folkes's ' tables of English silver coins.' The blanks, when milled, are annealed, or softened, in order that they may be fitted to receive the impression.

The next operations are pickling and cleaning. The process of pickling is to throw the pieces of gold, thus annealed, into a strong solution of super-sulphate of alumine ; those of silver into a solution of the super-sulphate of potash. The drying and cleaning is performed by agitation in sieves, containing saw-dust, over a gentle heat. The pieces are now taken to what is properly called the coining-room. In this apartment there are eight coining-presses worked by a ten horse power steam-engine; the apartment also is, in the winter months, heated with steam, so as to be kept to a uniform temperature. The machines are worked with the most perfect accuracy, and with such rapidity that each will produce about sixty in a minute ; and on the average, allowing for the necessary delays in working forty pieces of money, that is 320 guineas, &c.$ will pass through the eight machines in a minute, or about 19,200 in an hour. These machines require also one boy of ten or twelve years of age to each, who, by supplying the

machine with the planchets, runs no risque of injury to his fingers, as the machine contains in itself a. self-feeder or layer-on ; the business of

*the boy being only to fill the layer-on, throrgh a tube, with the blanks. From this tube, the machine places the blanks upon the dye, and when struck displaces one piece ai*d replaces another, and so on as long as the steam-engine is kept at work. The coin thus completed is carried to the mint-office, where the king's assayer attends, and where the process called FIXING (which see), takes place, to ascertain the weight and fineness of the monies before de- livery. Both faces of the coin are struck at once, the upper and under dye being both en- graved for the purpose. The dyes are the work- manship of some capital engraver ; he, of course, makes the pattern upon soft steel : from this, many others are taken at an office in the mint, and hardened. The engraver is called upon to verify the accuracy of the dies made use of. with the pattern or mould which he has furnished. See MONEY, and MONETARY ART.*

MINTO (Walter), LL. D., professor of ma- thematics in the college of New Jersey, was born at Minto in Roxburghshire, about 1755. His father gave him a liberal education, and, having removed with his family to Edinburgh, young Walter passed through the usual course of education, with the intention of studying divinity. His education was newly completed when he received an offer of a very lucrative situation from an uncle, who having made money in Jamaica, and purchased a plantation, wished his nephew to come and superintend it as over- seer. But he yielded this appointment to his younger brother rather than have any connexion with the slave trade. Meantime, while he was waiting for an opportunity of a vacancy among the churches of the Associate Synod, an offer of an appointment was made to him by David Hume, to accompany two sons of governor Johnstone as a tutor, in their travels on the continent. This proposal was readily accepted, and in consequence of it he spent several years abroad, particularly at Pisa in Italy, and became acquainted with a number of the Italian literati, particularly with the celebrated Dr. Joseph Slop, of Cadenberg, professor of astronomy in the university of Pisa, and member of the academy of Bononia. He returned to Edinburgh in 1783 ; obtained the degree of LL. D. from the university of Aberdeen ; went to America in 1784, by the advice of the earl of Buchan ; and not long after obtained the professorship of mathematics and natural philosophy in the college of New Jersey ; where he taught those useful branches of science, till the 21st of October, 1796, when he died at Princeton, leaving a widow. He published several treatises; particularly, 1. Re- searches into some parts of the Theory of the Planets, 8vo. London, 1783. 2. An Inaugural Oration on the Progress and Importance of the Mathematical Sciences, 8vo., Trenton, 1788. He also wrote, in conjunction with the earl of Buchan, 3. An Account of the Life, Writings, and Inventions of John Napier of Merchiston, 4to. Perth ;

wherein the origin of geometry, arithmetic, &c., is treated at considerable length. MINTURNjE, a town of Campania, between Sinuessa and Formiae. In the marshes near it Marius concealed himself in the mud to avoid

the partizans of Sylla. The people condemned him to death ; but when his voice alone had terrified the executioner, they favored his escape. See MARIUS.

*MINUET, n. *. Fr. minuet; Ital. minuto ; perhaps of Lat. minute, nice, skilful. A stately regular dance.*

The leader creature could not see his fate,

With whom she danced a minuet so late.

Spenter.

John has assurance to set up for a minuet dancer.

Spectator.

MIN'UM, n. s. Lat. minus. A small sort of printing letter ; also a note of slow time, two of which make a semibrief, as two crotchets make a minum.

He's the courageous captain of compliments ; he fights as you sing pricksongs, keeps time, distance, and proportion: rests, his minum, one, two, and the third in your bosom. Stutkspeare.

MINUTE', adj. & v. o.~\ Lat.minuto. Small,*

MIN'UTE-BOOK, /slender in bulk or

MINUTE'LY, adj. (appearance; incon-

MINUTE'NESS, n. s. J siderable : to minute is to make small or short hints or memoranda : a minute-book, the book used for such purpose : minutely and minuteness, exactly or nicely ; small ness; inconsiderableness.

Some minute philosophers pretend, That with our days our pains and pleasures end.

Denham.

In this posture of mind it was impossible for him to keep that slow pace, and observe minutely that order of ranging all he said, from whieh results an obvious perspicuity. Locke.

I no sooner heard this critick talk of my works, but I minuted what he had said, and resolved to en- large the plan of my speculations. Spectator.

Such an universal superintendency has the eye and hand of providence over all, even the most minute and inconsiderable things. South' Sermons.*

Into small parts the Wbndrous stone divide,

Ten thousand of minutest size express

The same propension which the large possess.

Bluckmore.

The serum is attenuated by circulation, so as to pass into the mrnutett channels, and become fit nutri-

Jment for the body. Arbuthnot.

The animal spirit and insensible particles never fall under our senses by reason of their minuteness.

Bentley.

In all divisions we should consider the larger and more immediate parts of the subject, and not divide it at once into the more minute and remote parts.

Watts' Logic. Change of night and day, And of the seasons ever stealing.round, Minutely faithful. Thornton's Summer.*

General history cannot descend to minute details of domestick life and private transactions, the passions and foibles of great personages, &c. Johnson.

I do by no means advise you to throw away your time in ransacking, like a dull antiquarian, the minute and unimportant parts of remote and fabulous times.

Chesterfield.

MIN'UTE, n.s. } Lat. minutum. The six- MIN'UTE-GLASS, Mieth part of an hour: any MIN'UTE-WATCH j small part of time : the

minute-glass and watch mark the period in

question.

Tell her that I some certainty may bnng ; I go this minute to attend the king. Dryden.

Casting our eyes upon a mtnutt- watch, we found that from the beginning of the pumping, about two minute , after the coals bad been |>nt in glowing, to the total disappearing of the fire, there had passed hut three minute*. BoyU.*

MINX, n. «. Contracted probably from Mm- NOCK, which see. A young, pert, wanton girl

Lewd minx ! Come, go with me apart. Shakipeare.

Some torches bore, some links, Before the proud virago minx. Hudibrat.

She, when but yet a tender minx, began To hold the door, but now sets up for man.

Dryde.*

MINY.&, the ancient inhabitants of Orcho- menos in Boeolia, so named from Minyai king of the country. Orchomenos the son of Min- yas gave his name to the capital ; but the inhabi tants still retained their original appellation, in contradistinction to the Orchomenians of Arca- dia. A colony, of [Orchomenians passed into Thessaly and settled'in lolehos ; and were called Minye ; because their chiefs were descended from the daughters of Minyas. Part of the Orchomenians accompanied the sons of Codrus when they migrated to Ionia. The Argonauts, as well as their descendant" received likewise the name of Minyae. They were driven from Lemnos by the Pelasgi about A. A. C 1160, and came to settle in Laconia, whence they passed into Calliste with a colony of Lacedemo- nians.*

MINYAS, in fabulous history, a king of Bceotia, the son of Neptune by Ttitegenia, daughter of /Eolus. He had six sons, of whom the most famous were Orchomenos and Atha- mas ; and three daughters.

MIQUELETS; the inhabitants of the Southern Pyrenees, in Catalonia, and in the French de- partments of the Upper and Eastern Pyrenees, on the heights of tlte chain of mountains which forms the boundary between

France and Spain. They are mostly herdsmen, hunters, coal-burn, ers, &c. They are warlike, and inclined to plunder. They also accompany travellers on the mountain-passes, and receive high pay for their protection. In war, they are dangerous partisans, who often descend into France in troops. In the war with Napoleon, they made themselves formidable to the French troops in Catalonia.

MIQUELON ; an island in the Atlantic ocean, near the southern coast of Newfoundland, be- longing to France; lat. 57° 4′ N.; Ion. 56° 20 W. To the south of it lies Little Miqueloo (Petite Miquelori), which, since 1783, has been connected with it by a sand-bank. These is- lands are under the direction of the commandant of St. Pierre, and are occupied only by a few families engaged in the fisheries.

MIRABEAU, count or marauis Mirabeau, a French [nobleman celebrated for his literary attainments, and founder of the sect of (Eco- nomists. He enjoyed several imponant oftices under government.ˆ Besides several other pieces he published a famous work, entitled 1,'Ami des llommes, or the Friend of Mankind. He died in 1786.

MIRABEAU (Gabriel Honore Riquteti count),

the eldest son of the preceding, was born in Paris, in 1749. He showed grea. abilities at an early age ; but, having been guilty of some juve- nile indiscretions, his father treated him with so much severity that he fled from his persecu- tions in 1769, and took refuge in Holland ; where he published a book against despotism both ,regal and paternal. On his return to France, he was seized on a lettre de cachet, obtained by his father, and shut up in a state prison ; but the walls of a dungeon could not damp the vigor of his mind, nor repress the activity of his genius ; for, amidst the gloom and melancholy of a rigorous confinement, he wrote his much admired work on Lettres de Cachet, which was published soon after he had obtained his liberty, and circulated through France, and soon after through all Europe. But, while his literary fame was thus rising, his moral character was sullied by repeated scenes of dissipation, which his father in vain endeavoured to repress by successive imprisonments, insomuch that it is said he had obtained no fewer than thirty, Dr. Watkins says sixty-seven, lettres de cachet against him. But, while the old count was even meditating how to

disinherit him, young Gabriel was released from farther persecution by his death. Soon after this, he travelled through Germany, Switzerland, England, and Flanders ; and, upon his return, was appointed by M. de Calonne a kind of private envoy to the court of Berlin, Frederick the Great being then in his decline, and the French court wishing to be acquainted with the genius and capacity of the prince royal. The count fulfilled the object of his mission with success, and disclosed the situa- tion, the views and characters of the Prussian court, in a work that attracted the attention of all Europe. This work was entitled The Secret History of the Court of Berlin, and was con- demned by the parliament of Paris. Yet at this period the count's ambition aspired no higher than to fill some inferior diplomatic office. But M. de Calonne either did not justly appreciate his abilities, or viewed them with envy ; for he neither gave him a new appointment, nor pro- perly rewarded him for what he had done. But Mirabeau was ordained soon to figure in a much more conspicuous situation. At the meet- ing of the States of Provence, in 1787, he deli- vered an oration, which not only procured him the highest applause for his eloquence and pat- riotism, but inspired all who heard it with the same zeal for liberty and hatred of despotism that seemed to influence himself. This memor- able oration procured him to be elected a mem- ber of the Constituent National Assembly, both by the citizens of Marseilles and those of Aix. He took his seat for the latter, and soon dis- tinguished himself as the most able advocate that I- ranee had seen for the rights of the people. In that assembly of the greatest and most learned men that France ever convened together, Mira- beau was elected president. But his patriotic career was ordained to be short. In the midst of his glory and of his schemes for the perma- nent establishment of a free constitution under a limited monarchy, he was seized with a rheu- matic gout, which from -its commencement

prognosticated a fatal issue. All Paris was in anxious alarm, but although he had the best medical advice he died on the 2nd of April, 1791. He continued to the last to talk of public affairs, and, when no longer able to converse, expressed his sentiments on some important subjects in writing. His works consist of eighteen treatises, chiefly in favor of democracy.

MIRABIL1S, marvel of Peru, a genus of the monogynia order and pentandria class of plants : COR. funnel-shaped above : CAL. infe- rior; the nectarium globular, containing the germen. The most remarkable species are these : —

1. M. dichotoma, the dichotomous, or forked marvel, has a thick fleshy root, an upright, thick, swollen, jointed stem, branching forkedly two or three feet high ; oblong opposite leaves, and smallish red flowers at the axillas, singly and close-sitting.

2. M. jalappa, the common marvel of Peru. It has a large, thick, fleshy

root, an upright, thick, jointed stalk, dividing and branching numerously, widely, and erectly, a yard or more high; garnished with oblong, broad, opposite leaves; and all the branches and shoots termi- nated by numerous flowers in clusters, of differ- ent colors in the varieties. Of these there are varieties with, 1. white flowers; 2. yellow; 3. purple ; 4. red ; 5. white and yellow ; 6. white and purple ; 7. purple and yellow ; 8. red and yellow flowers. Several other varieties often rise from seed ; but, although several of the above colors and variegations are sometimes common to the same plant, yet it is rare that a plant of this species produces flowers of one of these colors alone; sometimes, however, the same plant will exhibit only white and purple flowers separate, and sometimes both colors in the same flowers, intermixed with the plain ones ; the same is also observable in the red and yellow; others have plain flowers of several different colors, and sometimes of variegated flowers also on the same plant. This species has a large tap root, which, when cut across, resembles that of the true jalap; but, when dried, is white, light, and spongy.

3. M. longiflora, or the long flowered marvel, has a large, thick, and fleshy root, a thick stalk, dividing low into many declinated spreading branches, extending two or three feet every way ; large heart-formed, hairy, viscous leaves, in op- posite pairs ; and all the branches and shoots terminated by white flowers in clusters, having very long tubes, nodding downward. All these plants flower in July, continuing in plentiful succession until October, very conspicuous and elegant. They have the singularity of being shut all day, and expanding towards the even- ing when the sun declines; hence the inha- bitants of the Indies, where they grow natu- rally, called them four o'clock flowers ; their time of opening here, however, depends on the weather ; for if cloudy, or that the sun is not very vehement, they often open great part of the day. They are naturally perennial in root ; but in this country are commonly considered as annuals ; for they rise from seed in the spring, and the same year produce flowers and perfect

•seed ; and, if left ,.5 nature in the open air, totally perish in winter, at the first attack of frost or excessive rain. If in autumn, however, when the stalks begin to assume a state of decay, the roots are taken up, preserved in sand in a dry room, and planted again in spring, they shoot out afresh stronger than at first, and some- times rise four or five feet high, with very spread- ing heads ; or if plants growing in pots having the stems cut down in autumn, and the pots placed in a green-house, or garden frames under glasses, the roots may also be preserved sound, and will shoot out again in spring as above. The roots of all these plants are purgative ; but require to be given in a great quantity to operate.

MIR'ACLE, n. s. ~\ Fr. mracle ; Lat. MIRAC'ULOUS, adj. tmiraculum, of miror, MiRAc'uLOCSLY,odu. t to wonder. Asuper-
MiRAc'uLOUSNESS,n.s.3 natural effect or

event: miraculous, by miracle, marvellous;

the adverb and substantive corresponding.

And many camen to him, and seiden for dide no

miracle. Wiclif. John x.

It was a singular providence of God, to draw those northern heathen nations down into those Christian parts, where they might receive Chris- tianity, and to mingle nations so remote miraculously to make one blood and kindred of all people, and each tp have knowledge of him. Spenser on Ireland.

Nothing almost sees miracle But misery. Shakspeare. King Lear*

Be not offended, nature's miracle, Thou art allotted to be ta'en by me.

Shakspeart.

Arithmetical progression might easily demonstrate how fast mankind would increase, overpassing as miraculous, though indeed natural, that example of the Israelites, who were multiplied in two hundred and fifteen years from seventy unto six hundred thousand able men. Raleigh's Essays.

Restore this day, for thy great name, Unto his ancient and miraculous right. Herbert. Either the sun goes back in heaven, that his sha- dow may go back on earth ; or the shadow no less miraculously goes back on earth, while the sun goes forward in heaven. Bp- Hall.

Why this strength

Miraculous yet remaining in those locks ? His might continues in thee not for naught.

Milton.

We may observe both their expectation of miracu- lous works from the Messias, and the efficacy which such works had upon them. Borrow.

At the first planting of the Christian religion, God was pleased to accompany it with a miraculous power.

Tillotson.

Turnus was to be slain that very day ; and yfineas, (rounded as he was, could not have engaged him in angle combat, unless his hurt had been miraculously healed. Dryden.

The miracles of our Lord are peculiarly eminent above the lying wonders of demons, in that they fvere not made out of vain ostentation of power, and o raise unprofitable amazement ; but for the real be- nefit and advantage of men, by feeding the hungry, nealing all sorts of diseases, ejecting of devils, and reviving the dead. Bentley.

The third by agriculture, the only honest way, wherein man receives a real increase of the seed thrown into the ground, in a kind of continal mira- cle, wrought by the hand of God in his favour.

MIRACLE is defined by Dr. (now bishop) Gleig, ‘ an effect contrary to the established con- stitution and course of things, or a sensible devia- tion from the known laws of nature. That the universe (continues he) is governed by stated ge- neral rules, or that there is an order of causes and effects established in every part of the visible sys- tem of nature, is a fact which cannot be contro- verted. If the Supreme Being be the only real agent in the universe we have the evidence of ex- perience, that, in the particular system to which we belong, he acts by stated rules. If he employs inferior agents to conduct the various motions from which the phenomena result, we have the same evidence that he has subjected those agents to certain fixed laws, commonly called the laws of nature. On either hypothesis, effects which are produced by the regular operation of these laws, or which are conformable to the established course of events, are properly called natural ; and every deviation from this constitution of the na- tural system, and the correspondent course of events in it, is called a miracle. If this defini- tion be just, no event can be deemed miraculous merely because it is strange, or even to us unac- countable; since it may be nothing more than a

regular effect of some unknown law of nature. In this country earthquakes are rare; and for monstrous births perhaps no particular and satis- factory account can be given : yet an earthquake is as regular an effect of the established laws of nature as any of those with which we are most intimately acquainted ; and, under circumstances in which there would always be the same kind of production, the monster is nature's genuine issue, ft is therefore necessary, before we can pronounce any effect to be a true miracle, that the circum- stances under which it is produced be known, and that the common course of nature be in some degree understood ; for, in all those cases in which we are totally ignorant of nature, it is impossible to determine what is, or what is not, a deviation from its course. Miracles therefore are not as some have represented them, appeals to our ig- norance. They suppose some antecedent know- ledge of the course of nature, without which no proper judgment can be formed concerning them ; though with it their reality may be so apparent as to prevent all possibility of a dispute. Thus, were a physician to cure a blind man of a cata- ract, by anointing his eyes with a chemical pre- paration which we had never before seen, and to the nature and effects of which we are absolute strangers, the cure would undoubtedly be won- derful ; but we could not pronounce it miracu- lous, because, for any thing known to us, it might be the natural effect of the operation of the un- guent on the eye. But were he to recover his patient merely by commanding him to see, or by anointing his eyes with clay and spittle, we should with the utmost confidence pronounce the cure to be a miracle ; because we know perfect- ly that neither the human voice nor human saliva has, by the established constitution of thinns, any such power over the diseases of the eye. No one is now ignorant that persons apparently dead are often restored to their families and friends, by being treated in the manner recom- mended by the Humane Society. To the vulgar, and sometimes even to men of science, these

effects appear very wonderful ; but, as they are known to be produced by physical agency, they can never be considered as miraculous deviations from the laws of nature. On the other hand, no one could doubt of his having witnessed a real miracle who had seen a person that had been four days dead come alive out of his grave at the call of another, or who had even beheld a person exhibiting all the symptoms of death instantly re- suscitated, merely by being commanded to live. Thus it is easy, in all cases in which the course of nature is understood, to determine whether aˆy particular event be really a miracle ; while in circumstances where we know nothing of nature and its course, even a true miracle could not be admitted as such, or carry any conviction to the mind of a philosopher. If

miracles be effects contrary to the established constitution of things, we are certain that they will never be performed on trivial occasions. The constitution of things was established by the Creator and Governor of the universe, and is undoubtedly the offspring of infinite wisdom pursuing a plan for the best of purposes. From this plan no devia- tion can be made but by God himself, or by some powerful being acting with his permission. The plans of infinite wisdom must be absolutely perfect. From this consideration, some have concluded that no miracle was ever wrought, or can rationally be expected ; but mature reflection must satisfy us that all such conclusions are hasty. Man is unquestionably the principal creature in this world, and apparently the only one in it who is capable of being made acquaint- ed with the relation in which he stands to his Creator. We cannot, therefore, doubt but that such of the laws of nature as extend not their operation beyond the limits of this earth, were established chiefly, if not solely, for the good of mankind ; and if, in any particular circum- stances, that good can be more effectually pro- moted by an occasional deviation from those laws, such a deviation may be reasonably expect- ed. Were man, in the exercise of his mental and corporeal powers, subjected to the laws of phys'cal necessity, the circumstances supposed would indeed never occur, and, of course, no miracle could be admitted. But such is not the nature of man.'

' Without repeating what has been said under Metaphysics,' continues this writer, ' of neces- sity and liberty, we shall take it for granted, that the relation between motive and actions, is dif- ferent from that between cause and effect in physics ; and that mankind, by their voluntary conduct, can make themselves in a great degree either happy or miserable. We know likewise from history that almost all mankind were once sunk in the grossest ignorance of the most im- portant truths; that they knew not the Being by whom they were created and supported; that they worshipped: stocks, stones, and the vilest reptiles; and that they were slaves to the most impious, cruel, and degrading superstitions. From this depraved state it was surely not un- worthy of the common Father of All to rescue his helpless creatures, to enlighten their under- standings that they might perceive what is right, ami to present to them motives of sufficient force

to engage them in the practice of it. But the understandings of ignorant barbarians cannot be enlightened by arguments ; because of the force of such arguments, as regard moral science, they are not qualified to judge. The philosophers of Greece and Rome inculcated, indeed, many ex- cellent moral precepts, and they sometimes ven- tured to expose the absurdities of the reigning superstition; but their lectures had no influence upon the multitude; and they had themselves imbibed such erroneous notions respecting the Supreme Being, and the nature of the human soul, and established those notions as first prin- ciples, of which they would not

*permit an exa- mination, that even among them a thorough reformation was not to be expected from the powers of reasoning. It is likewise to be remark- ed that there are many truths, of the utmost im- portance to mankind, which unassisted reason could never have discovered. Among these we may reckon the immortality of the soul, the terms upon which God will be reconciled to sinners, and the manner in which the all-perfect Being may be acceptably worshipped; about all of which philosophers were in such uncertainty that, according to Plato, ‘ Whatever is set right, and as it should be, in the present evil state of the world, can be so only by the particular inter- position of God.’ (De Repub. Lib. 6). An immediate revelation from heaven, therefore, was the only method by which infinite wisdom and perfect goodness could reform a bewildered and vicious race. But this revelation must have been made directly either to some chosen individuals commissioned to instruct others, or to every man and woman for whose benefit it was ultimately intended. Were every person instructed in the knowledge of his duty by immediate inspiration, and were the motives to practise it brought home to his mind by God himself, human nature would be wholly changed : men would not be masters of their own actions ; they would not be moral agents, nor be capable either of reward or pun- ishment. It remains, therefore, that if God has been graciously pleased to enlighten and reform mankind, without destroying that moral nature which is essential to virtue, he can have done it only by revealing his truth to certain persons chosen to be the immediate instructors of their contemporaries, and through them of succeeding ages. Let us suppose this to have been the case,, and consider how these inspired teachers could communicate to others every truth which had been revealed to themselves. They might easily deliver” a sublime system of natural and mora< science, and establish it upon the common basis-' of experiment and demonstration ; but what foundation could they lay for those truths which unassisted reason cannot discover,and which, when revealed, appear to have no necessary relation to- any thing previously known? To a bare affirma- tion that they had been immediately received from. God, no rational being could be expected to as- sent. The teachers might be men of known ve- racity, whose simple assertion would be admitted as sufficient evidence for any fact, in conformity with the laws of nature ; but, as every man has the evidence of his own consciousness and expe- rience that revelations from heaven are deviation**

from these laws, an assertion so apparently ex- travagant would he rejected as false, unless sup- ported by some bettei proof than the mere asser- tion of the teacher. In this state of things, we can conceive no evidence sufficient

to make such doctrines he received as the truths of God, but the power of working miracles committed to him who taught them. This would, indeed, be fully adequate to the purpose. For if there were no- thing in the doctrines themselves impious, im- moral, or contrary to truths already known, the only thing which could render the teacher's as- sertion incredible, would be its implying such an intimate communion with God as is contrary to the established course of things, by which men are left to acquire all their knowledge by the exercise of their own faculties. Let us now suppose some one of those inspired teachers to tell his coun- trymen that he did not desire them, on his ipse dixit, to believe that he had any preternatural communion with the deity, but that for the truth of his assertion he would give them the evidence of their own senses; and, after this declaration, let us suppose him immediately to raise a person from the dead in their presence, merely by call- ing upon him to come out of his grave. Would not the only possible objection to the man's ve- racity be removed by this miracle ? and his asser- tion that he had received such and such doc- trines from God be as fully credited as if it related to the most common occurrence ? Un- doubtedly it would ; for, when so much preterna- tural power was visibly communicated to this person, no one could have reason to question his having received an equal portion of preternatural knowledge. A palpable deviation from the known laws of nature, in one instance, is a de- cisive proof that such a deviation is possible in another ; and, in such a case as this, it is the tes- timony of God to the truth of a man. Miracles, then, under which we include prophecy, are the only direct evidence which can be <;iven of di- vine inspiration. When a religion, or any religi- ous truth, is to be revealed from heaven, they appear to be absolutely necessary to enforce its reception among men ; and this is the only case in which we can suppose them necessary, or be- lieve that they ever have been or will be per- formed. The history of almost every religion abounds with relations of prodigies and wonders, and of the intercourse of men with the gods ; but we know of no religious system, those of the Jews and Christians excepted, which appealed to miracles as the sole evidence of its truth and di- vinity. The pretended miracles mentioned by Pagan historians and poets are not said to have been publicly wrought to enforce the truth of a new religion contrary to the reigning idolatry. Many of them may be clearly shown to have been mere natural events. See MAGIC. Others are represented as having been performed in secret on the most trivial occasions, and in obscure and fabulous ages long prior to the era of the writers by whom they are recorded. And such of them as at first view appear to be best attested are evidently tricks contrived for interested pur- poses : to flatter power, or to promote the pre- vailing superstitions. For these reasons, as well as on account of the immoral character of

the divinities by whom they are said to have been wrought, they are

altogether unworthy of examination, and carry in the very nature of them the completes! proofs of falsehood and impos- ture^ But the miracles recorded of Moses and of Christ bear a very different character. None of them is represented as wrought on trivial oc- casions. The writers who mention them were eye-witnesses of the facts ; which they affirm to have been performed publicly, in attestation of the truth of their respective systems. They are indeed so incorporated with these systems that the miracles cannot be separated from the doc- trines ; and, if the miracles were not really per- formed, the doctrines cannot possibly be true. They were also wrought in support of revelations which opposed all the religious systems, super- stitions, and prejudices, of the age in which they were given : a circumstance which of itself sets them, in point of authority, infinitely above the Pagan prodigies, as well as the lying wonders of the Romish church. It is indeed universally admitted, that the miracles mentioned in Exodus and the Gospels might, to those who saw them performed, be sufficient evidence of the divine inspiration of Moses and of Christ; but to us it may be argued that they are no evidence what- ever, as we must believe in these miracles upon the bare authority of human testimony. Why, it has been asked, are not miracles wrought in all ages and countries ? If the religion of Christ was to be of perpetual duration, every generation of men ought to have complete evidence of its truth and divinity. To the performance of miracles in every age and in every country, the same ob- jections lie as to the immediate inspiration of every individual. The very end of all miracles would be defeated by their frequency. Miracles so often repeated would have no authority, be- cause it would be difficult, if not impossible, to distinguish them from natural events. If they recurred regularly, at certain intervals, we could not prove them to be deviations from the known laws of nature, because we should have the same experience for the regular succession of preter- natural effects, as for the established constitution and course of things. We may farther affirm, that for the reality of the Gospel miracles we have evidence as convincing to the reflecting mind, though not so striking, as those had who were contemporary with Christ and his apostles, and actually saw his mighty works. To the ad- mirers of Mr. Hume's philosophy this assertion will appear an extravagant paradox ; but we hope to demonstrate its truth from principles, which, consistently with himself, that author could not have denied. He has indeed endea- voured to prove (in his Essay OD Miracles), that ' no testimony is sufficient to establish a miracle ; ' and the reasoning employed for this purpose is, ' that a miracle being a violation of the laws of nature, which a firm and unalterable experience has established, the proof against a miracle, from the nature of the fact, is as entire as any argu- ment from experience can be; whereas our ex- perience of human veracity, which (according to him), is the sole foundation of the evidence of testimony, is far from beins< uniform, and can never preponderate

which admits of no exception.' This boasted and plausible argument has with equal candor and acutcness been examined by Dr. Campbell, in his Dissertation on Miracles, who justly observes, that so far is experience from being the sole foundation of the evidence of testimony, that, on the contrary, testimony is the sole foundation of by far the greater part of what Mr. Hume calls firm and unalterable experience; and that if, in certain circumstances, we did not give an implicit faith to testimony, our knowledge of events would be confined to those which had fallen under the immediate observation of our own senses. But though Dr. Campbell has exposed the sophistry of his opponent's reasoning, and overturned the principles from which he reasons, we are persuaded that he might safely have joined issue with him upon those very prin- ciples. The testimony upon which we receive the Gospel miracles is precisely of that kind which Mr. Hume has acknowledged sufficient to establish even a miracle. ' No testimony,' says he, ' is sufficient to establish a miracle, unless the testimony be of such a kind that its falsehood would be more miraculous than the fact which it endeavours to establish. When one tells me that he saw a dead man restored to .life, I immediately consider with myself whether it be more probable that this person should either deceive or be deceived, or that the fact which he relates should really have happened. I weigh the one miracle against the other ; and, according to the superiority which I discover, 1 pronounce my decision, and always reject the greater miracle.' In this pas- sage every reader may remark, what did not escape the perspicacious eye of Dr. Campbell, a strange confusion of terms ; but as all miracles are equally easy to the Almighty, and as Mr. Hume has elsewhere observed, ' that the raising of a fea- ther, when the wind wants ever so little of a force requisite for that purpose, is as real a miracle as the raising of a house or a ship into the air ; ' candor obliges us to suppose, that by talking of irreater and less miracles, and of always rejecting the greater, he meant nothing more, but that, of two deviations from the known laws of nature, he always rejects that which in itself is least proba- ble. If, then, we can show that the testimony given by the apostles and other first preachers of Christianity, to the miracles of their master, would, upon the supposition that those miracles were not really performed, have been as great a deviation from the known laws of nature as the miracles themselves, the balance must be consi- dered as evenly poised by opposite miracles ; and, whilst it continues so, the judgment must remain in a state of suspense. But, if it shall appear, that in this case the false testimony would have been a deviation from the laws of nature, less probable in itself

*than the miracles recorded in the Gospels, the balance will be instantly destroyed ; and, by Mr. Hume's maxim, we shall be obliged to reject the supposition of falsehood in the testimony of the apostles, and admit the milacles of Christ to have been really performed. In this argument we need not waste time in |>ioving that those miracles, as they are repre- *•• — itpfi in the New Testament, were of such a natur^. and performed before so many witnesses,*

that no imposition could possibly be practised on the senses of those who affirm that they were pre- sent. From every page of the Gospels this is so evident, that the philosophical adversaries of the Christian faith never suppose the apostles to have "been themselves deceived, but boldly accuse them of bearing false witness. But, if this accusation be well founded, their testimony itself is as great a miracle as any which they record of themselves or of their master. It has been shown elsewhere that by the law of association, which is one of the laws of nature, mankind, in the very process of learning to speak, necessarily learn to speak the truth ; that ideas and relations are in the mind of every man so closely associated with the words by which they are expressed in his native tongue, and in every other language of which he is mas- ter, that the one cannot be entirely separated from the other ; that therefore no man can on any occasion speak falsehood without some effort ; that by no effort can a man give consistency to any premeditated detail of falsehood, if it be of any length, and include a number of particulars ; and that it is still less possible for several men to agree in such a detail, when at a distance from each other, and cross-questioned by their ene- mies. It therefore follows, if the testimony of the apostles to their own and their Master's miracles be falsf, either that they must have concerted a consistent scheme of falsehood, and agreed to publish it at every hazard ; or that God, or some powerful agent appointed by him, must have dissolved all the associations formed in their minds between the ideas of sense and the words of language, and arbitrarily formed new associa- tions, all in exact conformity to each other, but all in direct contradiction to truth. One or other of these events must have taken place, because, upon the supposition of falsehood, there is no other alternative. But such a dissolution and formation of associations as the latter implies, must, to every man who shall attentively consider it, appear to be as real a miracle, and to require as great an exertion of power, as the resurrection of the dead. Nor is the supposed voluntary agreement of the apostles in a scheme of false- hood an event less miraculous. The very resolu- tion of the apostles to propagate the belief of false miracles, in support of such a religion as that which is taught in the New Testament, is as great a miracle as human imagination can easily conceive. When they formed this design, either they must have hoped to succeed, or they must have foreseen that they should fail in their under-

taking ; and, in either case, they cliose evil for its own sake They could not, if they foresaw that they should fail, look for any thing but that con- tempt, disgrace, and persecution, which were the inevitable consequences of an unsuccessful en- deavour to overthrow the established religion. Nor could their prospects be brighter upon the supposition of their success. As they knew themselves to be false witnesses, and impious deceivers, they could have no hopes beyond the grave ; and by determining to oppose all the re- ligious systems, superstitions, and prejudices of the ages in which they lived, they wilfully exposed themselves to inevitable misery in the present life, to insult and imprisonment, to stripes and

death. Nor can it be said that they might look forward to power arid affluence when they should, through suffering, have converted their country- men ; for so desirous were they of obtaining nothing but misery at the end of their mission, that they made their own persecution a test of the truth of their doctrines. They introduced the Master, from whom they pretended to hare re- ceived these doctrines, as telling them that ‘ they were sent forth as sheep in the midst of wolves ; that they should be delivered up to councils, and scourged in synagogues ; that they should be hated of all men for his name’s sake ; that the brother should deliver up the brother to death, and the father the child ; and that he who took not up his cross and followed after him was not

when we take into consideration the different purposes for which these opposite miracles were wrought, the balance is instantly destroyed. The miracles recorded in the Gospels, if real, were wrought in support of a revelation, which, in the opinion of all by whom it is received, has brought to light many important truths, which could not otherwise have been made known to men ; and which, by the confession of its adver- saries, contains the purest moral precepts by which the conduct of mankind was ever directed. The opposite series of miracles, if real, was per- formed to enable, and even to compel a com- pany of Jews, of the lowest rank, and of the narrowest education, to fabricate, with the view of inevitable destruction to themselves, a consis-

worthy of him.’ The very system of religion, tent scheme of falsehood, and by an appeal to

therefore, which they invented and resolved to im- pose upon mankind, was so contrived, that the worldly prosperity of its first preachers, and even their exemption from persecution, was incompa- tible with its success. Had

these clear predictions of the Author of that religion, under whom the apostles acted only as ministers, not been verified, all mankind must have perceived that their pre- tence to inspiration was false, and that Christianity was a scandalous and impudent imposture. All this the apostles could not but foresee, when they formed their plan for deluding the world. Whence it follows, that, when they resolved to support their pretended revelation by an appeal to forged miracles, they wilfully, and with their eyes open, exposed themselves to inevitable misery, whether they should succeed or fail in their enterprize ; and that they concerted their measures so as not to admit of the possibility of a recompense to themselves, either in this life or that which is to come. But if there be a law of nature, for the reality of which we have better evidence than we have for others, it is, that ‘ no man can choose mi- sery for its own sake,’ or make the acquisition of it the ultimate object of his pursuit. The exist- once of other laws of nature we know by testimony and our own observation of their effects. The ex- istence of this law is known to us not only by these means, but also by the still clearer and more con- clusive evidence of our own consciousness. Thus, then, do miracles force themselves upon our as- sent in every possible view which we can take of this interesting subject. If the testimony of the first teachers of Christianity was true, the mira- cles recorded in the Gospel were certainly per- formed, and the doctrines, of our religion are derived from heaven. But, if that testimony was false, either God must have miraculously effaced from the minds of those by whom it was given all the associations formed between their sensible ideas and the words of language, or he must have endowed those men with the gift of pre- science, and have impelled them to fabricate a pretended revelation for the purpose of deceiving the world, and involving themselves in certain and foreseen destruction. The power neces- sary to perform the one series of these miracles may be as great as that which would be requi- site for the performance of the other; and, con- sidered merely as exertions of preternatural power, they may seem to balance each other, and to hold the mind in a state of suspense. But,

forged miracles to impose it upon the world as a revelation from heaven. The object of the former miracles is worthy of a God of infinite wisdom, goodness, and power. The object of the latter is absolutely inconsistent with infinite wisdom and goodness. Whence it follows that the supposi- tion of the apostles bearing false testimony to the miracles of their Master implies a series of de- viations from the laws of nature infinitely less probable in themselves than those miracles ; and therefore, by Mr. Hume’s maxim, we must ne- cessarily reject the supposition of falsehood in the testimony, and admit the reality of the mira- cles. So true is it, that, for the reality of the Gospel miracles, we have evidence as convincing to the reflecting mind, as those had who were contemporary with Christ and his apostles, and were

actual witnesses to their mighty works.' See THEOLOGY.

MIRANDA, a river of Spain, which, rising among the mountains of Asturias, flows north- wards, separates that province from Galicia, and falls into the Atlantic.

MIRANDA DE CORVO, a town of the province of Beira, Portugal, on the river Duca. Popu- lation 2700. Twelve miles south-east of Coimbra.

MIRANDA (Francis), a South American revolu- tionary general, was a native of Peru. He entered first into the Spanish service and, having made an attempt at Guatimala to free his countrymen, his project was prematurely discovered, and he was obliged to make his escape. He now pre- sented to different European courts plans for the emancipation of the Spanish American colonies ; and, thinking at last that the French republican government was more likely to second his schemes, he went to Paris in 1792, and connected himself with the Girondists. While waiting to commence operations in America, Miranda was offered an appointment as general of division in the army of Dumouriei. His conduct at the siege of Maestricht, and at the battle of Ner- winde, did him, it is said, no credit ; and some time after he was imprisoned in consequence of his political intrigues. He was liberated in July 1794, but immediately commanded to quit the territories of France, which order he evaded. A second sentence of deportation, in 1797, obliged him to come to England. In 1804 he again repaired to Paris, where his ir.tritrues caused him to be a third jime arrested, and to be ordered by the consular government, to leave*

France. He returned to America in 1806. Within five years he succeeded in revolutionising a part of the country. In 1811 he endeavoured to established a consular government at Caraccas ; but his scheme was ruined by the disputes of his followers. He now fled to Carthagena, where he was taken prisoner by the Spaniards, sent to Cadiz, and thrown into a dungeon, where he re- mained till his death in 1816.

MIRANDOLA, a considerable fortified and inland town in the states of Modena and Italy, the capital of a province of the same name, situ- ated on, the Burana. It is defended by a citadel and castle, called La Rocca, and contains a cathedral, fifteen churches, and 8200 inhabitants, who manufacture silk and linen. Sixteen miles N. N. E. of Modena, and twenty-two south-east of Mantua.

MIRADOR', n. s. Span, mirador, mirar, of Lat. miror, to look.

Mean time your valiant son, who had before Gained fame, rode round, to every mirador ; Beneath each lady's stand a stop he made, And bowing, took the applauses which they paid.

Dryden.

MIRE, n. s. &v. a. > Belg. moer ; Goth.

MI'RY, adj. 5 and Swed. mira. Mud;

dirt; the foul sediment of water; to mire is to

overwhelm or bespatter with mud : miry, dirty ;

abounding with mire.

The dog is turned to his own vomit again, and the sow that was washed to her wallowing in the mire.

2 Pet. ii. 22.

He his rider from his lofty steed, Would have cast down, and trod in dirty mire.

Spenser.

Here's that, which is too weak to be a sinner, honest water, which ne'er left man i' the mire.

Shakspeare. Timon of Athens. Why had I not, with charitable hand, Took up a beggar's issue at my gates ? Who smeared thus, and mired with infamy, I might have said no part of it is mine.

Shakspeare.

Shall thou and I sit round about some fountain Looking all downwards to behold our cheeks, How they are stained like meadows, yet not dry, With miry slime left on them by a flood. Id.

I'm Ralph himself, your trusty squire, Wh' has dragged your donship out o' the mire.

Hudibras. Now plunged in mire, now by sharp brambles torn.

Roscommtm.

I appeal to any man's reason, whether it be not better that there should be a distinction of land and sea, than that all should be mire, and water.

More against Atheism.

All men who lived lazy lives, and died natural deaths, by sickness or by age, went into vast caves under ground, all dark and miry, full of noisome creatures, and there grovelled in endless stench and misery. Temple.

Deep, through a miry lane she picked her way, Above her ancle ros« the chalky clay.

Gay's Trivia.

So have I seen ill-coupled hounds Drag different ways in miry grounds, Swift. MIRECOURT, a little town of the depart- ment of the Vosges in France, and the chief place of a subprefecture, having an inferior court and a chamber of commerce. It is also a post town containin 5400 inhabitants. This town

is situated in a fertile country, on the left brinic of the Madon ; it is generally badly built, out the suburbs are pleasant and well cultivated. It was in ancient times a place of some strength, with a good castle ; but its fortifications were razed in 1670. The inhabitants carry on manu- factures of lace, musical instruments of different sorts, as violins, bassviols, organs, &c., and lea- ther; they also trade in corn, wine, brandy, sheep, wood, wrought iron goods, and the articles above mentioned. There is a public library con- taining 6000 volumes. It is twenty-one miles north-west of Epinal, twenty-seven east of Neufchateau, and 264 E. S. E. of Paris.

MIREVELT (Michael Jansen), portrait- painter, was the son of a goldsmith, and born at Delft in 1568. His father placed him with one of the Wierixes, of whom he learned to draw in crayons and to engrave. At the age of twelve he executed a print of the Samaritan woman ; and not long after a figure of Judith holding Holofernes's head. These performances attracted the notice of Anthony Blockland, a historical painter of great note ; and under his instructions Mirevelt greatly improved. He was very suc- cessful in painting history ; but, finding portraits more profitable, he applied himself to portrait painting only. His reputation became so great that he exacted what price he pleased, never taking less than 150 florins a piece. His portraits are exceedingly numerous, and many of them were excellently engraved by William James Delft, a near relation, and a very skilful artist. He died in 1641.

MIREVELT (Peter), son of Michael, was born at Delft in 1596, and died in 1632. In his man- ner of design, style of coloring, and delicacy of pencil,

he resembled his father ; and by the best judges was accounted in no degree inferior to him.

MIRIAM, the sister of Aaron and Moses. It was owing to her that her mother was em- ployed by Pharaoh's daughter as nurse to Moses. She put herself at the head of the women of Israel after their passage over the Red Sea, in order to sing the song which the men had sung before. She joined with her brother Aaron in murmuring against Moses, and was severely chastised for that action : for she became leprous, and continued separate from the rest without the camp for seven days. She died before her bro- thers, though in the same year, and was buried at the public expense.

MIRK'SOME, adj. Dan. morck, dark. Dark ; obscure. See MURKY.

Through mirktome air her ready way she makes. Faerie Queene.

MIROPOLJE, a town of European Russia, to the south of Moscow, in the government of Kursk. It contains seven churches, and 6300 inhabitants, who are employed more in agricul- ture than in manufactures. It is surrounded by a wall and ditch. Eighty-eight miles N. N. W. of Charkov.

MIRROR, n. s. Fr. miroir ; Span, mirar; Lat. miror. An instrument valued for its bright, reflecting surface ; whether of metal or glass : any thing which reflects objects ; hence a pat- tern or example of any thing; an antitype.

MIR

If ony man is an heerer of the word, and uot a doer, this schal be lickened to a man that biholdith the cheer of his birthe in a myrrour.

Widiff. Jamet i.

I his mtrrour eke that I have in min bond, Hath swiche a might that men may in it see. Whan ther shal falle ony adversity, Unto your regne or to yourself also.

Chaucer. Cant. Talei.

And in his waters, which your mirror make, Behold your faces as the crystal bright. Spenser.

O goddess, heavenly bright, Uirrour of grace and majesty divine.

Faerie Queene.

1 he works of nature are no less exact, than if she did both behold and

study how to express some ab- solute shape or mirror always present before her.

Hooker. How farest thou, mirror of all martial men?

Shakspeare.

That power which gave me eyes the world to view, To view myself infused an inward light, \ hereby my soul, as by a mirror true, Of her own form may take a perfect sight. Dairies.

Less bright the moon, But opposite in level west was set His mirror, with full face borrowing her light From him. Milton' Paradise Lost.*

Mirroir of poets, mirroir of our age, Which her whole face beholding on thy stage, Pleased and displeased with her own faults, endures A remedy like those whom musick cures. Waller.

By chance he spyed a mirroir while he spoke, And gazing theie beheld his altered look ; Wond'ring, he saw his features and his hue So much were changed, that scarce himself he knew.

Dry den. Mirroir of ancient faith in early youth. Id.

Late as I ranged the crystal wilds of air, In the clear mirroir of thy ruling star, I saw, alas ! some dread event impend. Pope. The night was dark, and the thick mist allowed Nought to be seen save the artillery's flame, Which arched the horizon like a fiery cloud, And in the Danube's waters shone the same, A mirrored hell ! Byron.

MIRROR is also used for any polished body that forms the images of objects, by reflection of the rays of light. Mirrors are either plain, convex, or concave. The first reflect the rays of light in a direction exactly similar to that in which they fall upon them, and therefore represent bodies of their natural magnitude. The convex ones make the rays diverge much more than before reflection, and therefore greatly diminish the images of those objects which they show : while the concave ones, by collecting the rays into a focus, not "only magnify the objects they show, but will burn very fiercely when exposed to the rays of the sun ; and hence they are commonly known by the name of burning mirrors. In ancient times mirrors were made of some kind of metal ; and from a passage in the Mosaic •writings we learn that the mirrors used by the

will act very powerfully as ourning mirrors Even polished ivory, or straw nicely plaited together, will form mirrors capable of burning, if large. Since the invention of glass, and the application of quicksilver to it, became generally known, it has been universally employed for those plain mirrors used as ornaments to houses; but in making reflecting telescopes they have been found much inferior to metallic ones. It does not appear that the same superiority belongs to the metalline burning mirrors, considered merely as burning glasses; since the mirror will, which Mr. Macquer melted platiua, though only twenty-two inches diameter, and which was made of quicksilvered glass, produced much greater effects than M. Villette^s metalline speculum, which considerably exceeded it in size. It is very probable, however, that this mirror of M. Villette's was by no means so well polished as it ought to have been ; as the art of preparing the metal for taking the finest polish has but lately been discovered and published in the Phi- losophical Transactions by Mr. Mudge. See OPTICS and GLASS.

*MIRTH, n.. **j Sax. roynSe. Merriment; MIRTH'** ta, adj. \ hilarity ; laughter : mirth- MIRTH'LESS. J fnl, cheerful; abounding in mirth or gaiety : mirthless, joyless ; cheerless. What then can move her, if nor mirth, nor mono She is no woman, but a senseless stone. Spenter.*

To give a kingdom for a mirth, to sit, And keep the turn of tippling with a slave.

Shtikrpeare.

His eye begets occasion for his wit ; For every object that the one doth catch, The other turns to a mirt/i-moving jest. Id.

No simple word,

That shall be uttered at our mirthful board, Shall make us sad next morning. Ben Jonson. Most of the appearing mirth in the world is not mirth but art : the wounded spirit is not seen, but walks under a disguise. South.

The feast was served ; the bowl was crowned ; To the king's pleasure went the mirthful round.

Prior.

With genial joy to warm the soul. Bright Helen mixed a mirth inspiring bowl.

Pope.

MIRZAPORE, a town of the province of Allahabad, Hindostan, is situated

at the foot of a range of hills, on the south bank of tht river Ganges, and in the district of Chunar. It is a flourishing trading town ; the chief mart for silk and cotton between the British and Mahratta territories. It has also a manufacture of carpets, and iron works. The opulent merchants and indigo planters have handsome stone houses, intermixed with Hindoo temples, and flights of stone stairs leading to the river. Long. 83° 35 E., lat. 25° 10′ N.

MIRZAPORE, a town of Hindostan, province

Jewish women were made of brass. The Jews of Berar, formerly the capital of the district of

certainly had been taught to use that kind of ”'-

mirrors by the Egyptians ; whence it is probable

that brazen mirrors were the first kind used in

the world, any metal, indeed, when well polished,

will reflect very powerfully ; but silver reflects

the most, though it is too expensive a material

for common use. Gold also is very powerful ;

and metals, or even wood gilded and polished,

Corair, belonging to the Chohan rajah, a tribu- tary gf the Mahrattas. There are several small places of the same name in India.
MISACCEPTATION, n.. Of Fr. ww, and*

Teut. mes, a prefix denoting failure, deprivation, or deviation, in all the Gothic dialects, and ac- ceptation. The taking an expression in sense.

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The apostle fears none of the currish oblatrations ; but, contemning all impotent misacceptations, calls them what he finds them, a froward generation.

np. Hall.

MISADVENTURE, n. s. 1 Fr. mesaventure ;

MISADVEN'TURED, adj. $ mis and adven- ture. Mischance; misfortune; ill luck : misad- ventured is unfortunate.

Your looks are pale and wild, and do import Some misadventure. Shakspeare, Romeo and Juliet.

From forth the fatal loins of these two foes, A pair of starcrost lovers take their life ;

Whose misadventured piteous overthrows Do with their death bury their parents' strife.

Shakspeare.

\V hen a commander, either upon necessity or mis- adventure, falleth into danger, it much advanceth both his reputation, and enterprise, if bravely he be- haveth himself. Hayward.

The body consisted, after all the losses and mis- adventures, of no less than six thousand foot

Clarendon. Distinguish betwixt misadventure and design.

L'Estrange.

The trouble of a misadventure now and then, that reaches not his innocence or reputation, may not be an ill way to teach him more caution.

Locke on Education.

MISAIM'ED, adj. Mis and aim. Not aimed rightly.

The idle stroke enforcing furious way, Mifesing the mark of his misaimed sight, Did fall to ground. Faerie Queene.

MIS'ANTHROPE, n. s. \ Fr. misanthrope ; MISAN'THROPOS, > Gr. / i«rav0pw7roc,

MISAN'THROPY. 3 of p

avflpwTToc, man. A hater of mankind: misan- thropy is hatred of mankind.

I am misanthrophos, and hate mankind.

Shakspeare.

Was it heresy, or phrensy, or blasphemy, or all these, in the paternians of old, revived of late times, by Postellus at Paris, that man's lower parts were of a worse author 1 Away with that mad misanthro- py : there is no inch of this living pile, which doth not bewray steps of an all-wise and holy omnipo- tence. Bp Hall.

Alas, poor dean ! his only scope Was to be held a misanthrope ; This into general odium drew him. Swift.

MISAPPLICATION, n.s.l Mis and ap- MISAPPI/V', v.a. $ply. To apply

wrongfully, or to an improper purpose.

Virtue itself turns vice, being misapplied, And vice sometime by action's dignified.

\ Shakspeare.

The holy treasure was to be reserved, and issued lor holy uses, and not misapplied to any other ends.

How el.

The indistinction of many in the community of name, or the mitapplication of the act of one unto another, Rath made some doubt thereof.

Browne's Vulgar Erraurs.

lie that knows that whiteness is the name of that color he has observed in snow, will not misapply that word as long as he retains that idea. Locke.

It is our duty to be provident for the future, and to guard against whatever may lead us into misappli- cations of it. Roger.*

The vigilance of those who preside over these cha- Mties IE so exemplary, that persons disposed to do

good can entertain no suspicions of the misapplication of their bounty. Atterbury.

MISAPPREHEND', v. a. > Mis and app're- MISAPPREHEN'SION. Shend. Mistake;

misinterpretation.

It is a degree of knowledge to be acquainted with the causes of our ignorance : what we have to say under this head, will equally concern our misappre- hension! and errors. Glanville.

That your reasonings may lose none of their force by my misapprehending, or misrepresenting them, I shall give the reader your arguments. Locke.

MISARRANGE'MENT, n.s. Mis and ar- rangement. Wrong arrangement, if such there be ; but the word cannot be well supported.

Here glittering turrets rise, upbearing high (Fantastic misarrangement !) on the roof Large growth of what may seem the sparkling trees And shrubs of fairy land. Cowper.

MISASCRIBE', v. v. Mis and ascribe. To ascribe falsely.

That may be misascribed to art which is the bare production of nature. Boyle.

MISASSIGN', v.a. Mis and assign. To assign erroneously.

We have not misaisigned the cause of this pheno- menon. Boyle.

MISBECOME', v. a. & v.n. Mis and be- come. Not to become; to be unseemly or un- suitable.

Either she has a possibility in that which I think impossible, or else impossible loves need not mis- become me. Sidney. What to the dauphin from England ?

— Scorn and defiance, slight regard, contempt,

And any thing that may not misbecome

The mighty sender. Shakspeare. Henry V.

That boldness which lads get amongst play-fel- lows, has such a mixture of rudeness and ill turned confidence, that those misbecoming and disingenuous ways of shifting in the world must be unlearned to make way for better principles. Locke.

Portius, thou may'st rely upon my conduct ;

Thy father will not act what misbecomes him.

Addison.

MISBEGOT, adj. i Begot or begotten with

MISBEGOT'TEN. i mis. Unlawfully or irre- gularly begotten.

Contaminated, base, And misbegotten blood, I spill of thine. Shakspeare.

Your words have taken such pains, as if they

laboured

To bring man-slaughter into form, set quarrelling Upon the head of valor ; which, indeed, Is valour misbegot, and came into the world When sects and factions were but newly born. Id.

The misbegotten infant grows, And, ripe for birtu, distends with deadly throes The swelling rind, with unavailing strife, To leave the wooden womb, and pushes into life.

Dryden.

Down, immediately, should go fools from the high places where misbegotten chance has perked them up, and through life should they-skulk, ever haunted by their native insignificance, as the body marches ac- companied by its shadow. Burns.

MISBEHAVE', v. n. l Mis and behave. To

MISBEHAVED', adj. 1 act ill or improperly : untaught ; ill bred.

Happiness courts thee in her best array ;

But, like a misbehaved and sullen wench,

Thou pout'st upon thy fortune and thy love.

Shuhiipeare.

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The misbehaviour of particular persons does not at all affect their cause, since a man may act laudably in some respects, who does not so in others.

Addison's Freeholder.

MISCAL', v. a. Mis and call. To name im- properly.

My heart will sigh when I miscal it so.

Skakspeare.

The third act, which connects propositions and de- duceth conclusions from them, the schools call dis- course ; and we shall not miical it if we name it reason. Glanville's Scepsis.

What you miscal their folly is their care.

Dry den.

MISCA'LCULATE, v. a. Mis and calculate. To reckon wrong.

Say, did I not miscalculate thy power, Which, though o'ergrown it seems, is yet so small. Shakspeare.

After all the care I have taken, there may be, in such a multitude of passages, several misquoted, misinterpreted, and miscalculated.

Arbuthnot on Coins

MISCA'RRY, v. n.) Mis and carry. To MISCAR'RIAGE, n. s. $ fail; not to produce the intended event ; not to succeed : miscarriage is, failure; ill conduct; accident.

Give them a miscarrying womb and dry breasts.

Has. ix. 14.

Have you not heard of Frederick, the great soldier, who miscarried at sea 1 Shahspeare.

Is it concluded he shall be protector! — It is determined, not concluded yet : But so it must be if the king miscarry. Id.

Resolutions of reforming do not always satisfy justice, nor prevent vengeance for former miscarriages.

King Charlet.

There must be miscarriage! and abortions ; for there died many women with child. Graunt.

It (charity) covereth all things, studiously con- niving at real defects, and

concealing assured mil- carriages : how much more not divulging imaginary or false scandal. Barrow.

When a counsellor, to save himself, Would lay miscarriages upon his prince, Exposing him to public rage and hate, — O, 'tis an act as infamously base, As, should a common soldier sculk behind And thrust his general in the front of war.

Dryden.

If the neglect or abuse of the liberty he had, to examine what would really make for his happiness, misleads him, the miscarriages that follow on it must be imputed to his own election. Locke.

So many politick conceptions so elaborately formed and wrought, and grown at length ripe for a delivery, do yet, in the issue, miscarry and prove abortive.

South'i Sermons. Your cures aloud you tell, But wisely your miscarriages conceal.

Garth.

I could mention some projects which I have brought to maturity, and others which have miscarried.

Addison's Guardian.

A great part of that time which the inhabitants of the former earth had to spare, and whereof they made so ill use, was now employed in digging and plow- ing ; and the excess of fertility which contributed so much to their miscarriages, was re»racted and cut off.

Woodward's Natural History. How, alas ! will he appear in that awful day, when even the failings and miscarriage of the righteous shall not be concealed, though the mercy of God be magnified in their pirdon. Rogers.*

His wife miscarried ; but the abortion proved a female foetus. Pope and Ariiuthimt.

1'ou have proved yourself more tender of another's embrios, than the fondest mothers are of their o n ; for you have preserved every thing that I miscarried of. Pope.*

No wonder that this expedient should so often mis- carry, which requires so much art and genius to ar- rive at any perfection in it. Suii't.

MISCA'ST, v. a. Mis and cast. To take a wrong account of.

Men miscatt their days : for in their age they de- duce the account not from the day of their birth, but the year ot our Lord wherein they were born.

Browne's Vulgar Erroun.

MISCELLANE', n. t.) Lat. mitctllaneut.

MISCELLANEOUS, adj. >Any thing mixed;

MISCEL'LANY, n. i. j particularly mixed corn ; miscellaneous is, mingled ; composed of various kinds or ingredients : miscellany, a com- pound ; a mass of various kinds.

It is thought to be of use to make some miscellane in corn ; as if you sow a few beans with wheat, your wheat will be the better. Bacon's Natural History.

The power of Spain consisteth in a veteran army, compounded of miscellany forces of all nations.

Bacon.

Being miscellaneous in many things, he is to be re- ceived with suspicion ; for such as amass all relations must err in some, and without offence be unbelieved in many. Brown.

And what the people but a herd confused, A miscellaneous rabble, who extol Things vulgar and well weighed scarce worth the praise? Milton's Paradise Lost.

I acquit myself of the presumption of having lent my name to recommend miscellanies or works of other men. Pope.

When they have joined their pericranies, Out skips a book of miscellanies. Swift.

MISCHANCE', n. t. Mis and chance. Ill luck; ill fortune; misfortune; mishap.

The lady Cecropia sent him to excuse the mischance of her beasts ranging in that dangerous sort.

Sidney.

Sleep rock thy brain, And never come mischance between us twain.

Shakspeart.

Extreme dealing had driven her to put herself with a great lady, by which occasion she had stumbled upon such mischances as were little for the honour of her family. Sidney.

Nothing can be a reasonable ground of despising a man but some fault chargeable upon him ; and nothing can be a fault that is not naturally in a man's power to prevent ; otherwise it is a man's unhappi- ness, his mischance or calamity, but not his fault.

So.th. I, for their thoughtless, careless sakes,

Would here propone defences, Their donsie tncks, their black mistakes.

Their failings and mischances. Burns

*MIS'CHIEF, n. *. & v. a.} Old F. metchef, MISCHIEF-MAKER, n.s. j or mis-oc he ivance . MIS'CHIEF-MAKINO, adj. [Harm; hurt; MIS'CHIEVOUS, j misdeed; any*

MIS'CHIEVOUSLY, adv. thing ill done, ill-

MIS'CHIEVOUSNESS, n. ». J intentioned, or vexatious: as a verb to injure, harm (obsolete). The Derivatives follow these senses.

Thy tongue deviseth mischiefs. Ptal. lii. 2.

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The law in that case punisheth the thought ; for setter is a mischief than an inconvenience.

Spenser on Ireland. These mad mischiefs Would dare a woman.

Beaumont and Fletcher. Come you murthering ministers ! Wherever in your sightless substances You wait on nature's mischief.

Shakspeare. Macbeth.

Purely to seek God's honour, and in all our actions to regara it as our principal aim, greatly disparageth all worldly glory as vain, transitory, mischievous.

Barrow.

Was I cause of mischief, or the man, Whose lawless lust the fatal war began ?

Dryden.

I'm but a half-strained villain yet ; But mongrel mischievous. Id.

Nor was the cruel destiny content To sweep at once her life and beauty too ; But like a hardened felon took a pride To work se mischievously slow,

And plundered first, and then destroyed.

Id.

If the greatest inward heat be not sweetened by meekness, or not governed by prudence, can it bring to our souls any benefit 1 rather it mischiefs them.

Spratt's Sermons.

This false, wily, doubling disposition is intolerably mischievous to society. South's Sermons.

Compare the harmlessness, the tenderness, the modesty, and the ingenuous pliableness, which is in youth, with the mischievousness, the slyness, the craft, the impudence, the falsehood, and the confirmed obstinacy found in an aged, long-practised sinner.

Id.

Come not thou with mischief -making beauty, To interpose between us, look not on him. Rowe.

He had corrupted or deluded most of his servants, telling them that their master was run mad ; that he had disinherited his heir, and was going to settle his estate upon a parish boy ; that if he did not look after their master he would do some very mischievous thing. Arbuthnot't History of John Bull.

States call in foreigners to assist them against a common enemy ; but the mischief was, these allies would never allow that the common enemy was sub- dued. Swift.

To smile at a jest that plants a thorn in another's breast, is to become a principal in the mischief.

Sheridan.

MISCHNA, or MISNA, from HJttT, iteravit, i. e. he repeated, the first part of the Jewish Talmud. The Mischna contains the text ; and the Gemara,i which is the second part of the Talmud, contains the commentaries. See GE MARA. The Mischna consists of various tra- ditions of the Jews, and of explanations of several passages of Scripture : these traditions, serving as an explication of the written law, and sup- plement to it, are said to have been deli- vered to Moses during his abode on the Mount ; which he afterwards communicated to Aaron, Eleazar, and Joshua. By these they were trans- mitted to the seventy elders, by them to the prophets, who communicated them to the men of the great sanhedrim, from whom the wise men of Jerusalem and Babylon received them. Ac- cording to Pridcaux, they passed from Jeremiah to Baruch, from him to Ezra, and from Ezra to the men of the great synagogue, the last of whom was Simon the Just ; who delivered them to

Antigonus of Socho : and from him they came down in regular succession to Simeon, who took our Saviour in his arms ; to Gamaliel, by whom Paul was educated ; and last of all to Rabbi Judah the Holy, who committed them to writing in the Mischna. But Dr. Prideaux, rejecting this Jewish fiction, observes, that after the deatii of Simeon the Just, about A. A. C. 299, the Mischnical doctors arose, who, by their com- ments and conclusions, added to the number of those traditions which had been received by Ezra and the men of the great synagogue ; so that towards the middle of the second century, under Antoninus Pius, it was found necessary to commit these traditions to writing ; especially as their country had considerably suffered under Adrian, and many of their schools had been dis- solved, and their learned men cut off; and therefore the usual method of preserving their traditions had failed. Rabbi Judah on this oc- casion being rector of the school at Tiberias, and president of the sanhedrim in that place, undertook the work, and compiled it in six books, each consisting of several tracts, which altoge- ther make up the number of sixty-three. Prid. Connect, vol. ii. p. 468, &c. ed. 9. This learned author computes, that the Mischna was composed about A. D. 150; but Dr. Lightfoot says, that Rabbi Judah compiled the Mischna about A. D. 190, in the end of the reign of Commodus ; or, as some compute, A. D. 220. Dr. Lardner is of opinion, that this work could not have been finished before the year 190, or later. Collection of Jewish and Heathen Testimonies, &c. vol. i. p. 178. Thus the book called the Mischna was formed ; a book which the Jews have generally received with the greatest veneration. The original has been published with a Latin trans- lation by Surenhusius, with notes of his own, and others from the learned Maimonides, &c., in 6 vols. fol. Amsterdam A. D. 1698—1703. See TALMUD. It is written in a much purer style, and is not nearly so full of dreams and visions as the Gemara.

MIS'CIBLE, adj. Lat. misceo. Possible to be mingled.

Acid spirits are subtile liquors which come over in distillations, not inflammable, miscible with water.

4rbuthnot.

MISCITA'TION, n. s. Mis and citation. Un- fair or false quotation.

Being charged with miscitation and unfair dealing, it was requisite to say something ; honesty is a ten- der point. Collier.

MISCLAIM', n. s. Mis and claim. Mistaken claim.

Error, misclaim, and forgetfulness, become suitors for some remission of extreme rigour. Bacon.

MISCOMPUTATION, n. s. Mis and com- putation. False reckoning.

It was a general misfortune and miscomputation of that time, that the party had so good an opinion of their own reputation and interest. Clarendon.

MISCONCEIT', n. s. } Mis and conceit, MISCONCEIVE', v. a. £ and conception. MJSCONCEP'TION, n. s. j False opinion, or no- tion : to misconceive is to misjudge; have a false notion of.

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Nor let false whispers, breeding hidden fears, Break gentle sleep with misconceived doubt.

Spenser.

Our endeavour is not so much to overthrow them with whom we contend, as to yield them just and rea- sonable causes of those things, which, for want of due consideration heretofore, they misconceived.

Hooker.

The other which instead of it we are required to accept is only by error and misconceit named the ordi- nance of Jesus Christ ; no one proof being as yet brought forth, whereby it may clearly appear to be so in very deed. Id.

Misconceived Joan of Arc hath been A virgin from her tender infancy.

Shakspeare. Henry VI.

It cannot be that our knowledge should be other tnan an heap of misconception and error. GlanvilU. Great errors and dangers result out of miscon- cepiion of the names of things.

Harvey on Consumption.

It will be a great satisfaction to see those pieces of most ancient history, which have been chiefly pre- served in scripture, confirmed anew and freed from those misconceptions or misrepresentations which made them sit uneasy upon the spirits even of the best men. Burnet's Theory of the Earth.

MISCON/DUCT, n. s. Mis and conduct. Ill behaviour; ill management.

They are industriously proclaimed and aggravated by such as are guilty or innocent of the same slips or misconducts in their own behaviour. Add'uoni.

It highly concerned them to reflect, how great obli- gations both the memory of their past misconduct, and their present advantages, laid on them, to walk with care and circumspection. Roger's Sermont.

*MISCONJECTURE, n. *. Mis and conjec- ture. A wrong guess.*

I hope they will plausibly receive our attempts, or candidly correct our misconjectures. Browne.

MISCON'STRUE, v.a. > Mis and construe.

MISCONSTRUC'TION, n.s. \ To interpret wrong: wrong interpretation.

That which, by right exposition, buildeth up Chris- tian faith, being misconstrued breedeth error ; between true and false construction the difference reason must shew. Hooker.

We would have had you heard

The manner and the purpose of his treasons ;

That you might well have signified the same

Unto the citizens, who, haply, may

Misconstrue us in him. Shakspeare. Richard HI.

It pleased the king, his master, very lately To strike at me upon his misconstruction, When he conjunct, and flattering his displeasure, Tript me behind. Id. King Lear.

Many of the unbelieving Israelites would have mis- construed this story of mankind. Raleigh.

Others conceive the literal acceptation to be a misconstruction of the symbolical expression.

Browne.

Those words were very weakly inserted where they are so liable to misconstruction. Stillingflttt.

Do not, great Sir, misconstrue his intent, or call rebellion what was prudent care, To guard himself by necessary war. Dryden. A virtuous emperor was much afflicted to find his actions misconstrued and defamed by a party.-

Addistm.

MISCOUN'SEL, u. a. Mis and counsel. To advise wrong.

Every thing that is begun with reason Will come by ready means unto his end, But things miscminielUd must needs miswend.

Spenter.

*MIS'CREANCE, n. t.~i¥r. metereance, or MIS'CREANCY, >tnetcroia*ce. Unbe-*

MIS'CREANT. J lief; false faith;

adherence to a false religion: a miscreant is strictly one that holds a false faith; hence a bad man of any kind ; a wretch.

If thou wilt renounce thy miicreaner,

And my true liegeman yield thyself for ay,

Life will I grant thee for thy valiance.

Spenser.

Their prophets justly condemned them as an adul- terous seed, and a wicked generation of miscreants, which had forsaken the living God. Hooker.

Now, by Apollo king, Thou swear'st thy gods in vain. — O vassal, miscreant.

Shakspeare. King Lear.

How unnatural is the villainy of those miscreants, that can be content to be actors in capital wrongs offered to sovereign authority. Bp. Hmll.

The more usual causes of deprivation are murder, man-slaughter, heresy, miscreancy, atheism, simony.

Ayliffe.

If extraordinary lenity proves ineffectual, those miscreants ought to be made sensible that our con- stitution is armed with force.

Addison'i Freeholder.

MISCREATE', adj. 1 Mis and create. Pro- MISCREA'TED. > duced unnaturally or il-

legitimately ; made as by a blunder.

Then made he head against his enemies, And Y inner slew or Logis miscreate.

Faerie Queens.

Eftsoons he took that miscreated fair, 4nd that false other sprite, on whom he spread A seeming body of the subtile air. Spenser.

God forbid, my lord.

That you should fashion, wrest, or bow your reading ; With opening titles mi.wrate, whose right Suits not in native colours with the truth.

Shakspeare. MISDEED', n.t. Mis and deed. Evil action.

OGod,

If thou wilt be avenged on my misdeeds, Yet execute thy wrath on me alone. Shakspeare. Evils which our own misdeeds have wrought.

Milton.

Chased from a throne, abandon'd, and exil'd For foul misdeeds were punishments too mild.

Dryden.

MISDEEM', v. a. Mis and deem. To judge ill of; to mistake.

All unweeting an enchanter bad His SCUM- abus'a, and made him to misdeem, My loyalty, not such as it did seem.

Fatrit Queenf.

Besides, were we unchangeable in will, And of a wit that nothing could misdeem ;

Equal to God whose wisdom shineth still And never errs, we might ourselves esteem.

Domes.

*MISDEMEAN', v. a. \ Mis and demean. MISDEME'ANOR, n. *. S To behave ill : misde- meanor is offence ; ill behaviour ; something less than an atrocious crime.*

From frailty

And want of wisdom, you, that best should teach us, Hare misdemeantd yourself.

Shakspeare. Henry Vlll.

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The house of commons have only power to cen- sure the members of their own house, in point of election or misdemeanors, in or towards that house.

Bacon.

Ct is no real disgrace to the church merely to lose her privileges, but to forfeit them by her fault or mis- demeanor. South.

These could never have touched the head, or stopped the source of these unhappy misdemeanors, for which the punishment was sent. Woodward.

MISDEVOTION, n. s. Mis and devction. Mistaken piety.

A place, where misdevotion frames

A thousand prayers, t: saints, whose very names

The church knew not, heaven knows not yet.

Donne.

MISDI'ET, n. s. Mis and diet. Improper food.

A dropsy through his flesh did flow, Which by misdiet daily greater grew.

Faerie Queene.

MISDISTIN'GUISH, v. a. Mis and distin – guish. To make wrong distinctions.

If we imagine a difference where there is none, because we distinguish where we should not, it may not be denied that we misdistinguish. Hooker.

MISDO', v. a. bv.n.y Mis and do. To do MISDO'ER, n. s. > wrong; to commit;

MISDO'ING, n. s.) faults ; a misdoer is,

an offender ; criminal : misdoing, offence ; devia- tion from right.

Were they not contained in duty with a fear of law, which inflicteth sharp punishments to misdoers, no man should enjoy any thing.

Spenser on Ireland.

Afford me place to show what recompence T'wards thee I intend for what I have misdone.

Milton.

Try the erring soul Not wilfully misdoing, but unaware Misled. /i/. Paradise Regained.

I have misdone, and I endure the smart, Loth to acknowledge, but more loth to part.

Dry den.

The worst is, to think ourselves safe so long as we keep our injuries from the knowledge of men, and out of our own view, without any awe of that

all- seeing eye that observes all our misdoingi.

L'Ettrange.

MISDOUBT', v. a. & n. s. Mis and doubt. To suspect of deceit or danger : suspicion of crime or danger.

If she only misdoubted me, I were in heaven ; for quickly I would bring sufficient assurance. Sidney.

The bird that hath been limed in a bush, With trembling wings misdoubteth every bush And I, the hapless male to one sweet bird, Have now the fatal object in my eye, Where my poor young was limed, was caught, and killed. Shakspeare. Henry VI.

York, steel thy fearful thoughts, And change misdoubt to resolution.

Shahrpeare.

To believe his wiles my truth can move, Is to misdoubt my reason or my love. Dryden. MISE, in law, is us«d in various senses : sometimes for costs or expenses ; in which sense it s commonly used in entering of judgments in actions personal. It is also used for the issue to lie tried on the grand assize ; in which case, joining of the mise upon the mere right is put

ting in issue, between the tenant and demandant, Who has the best or clearest right?

MISE also signifies a tax or tallage, 8cc. An honorary gift, or customary present from the people of Wales to every new king or prince of Wales, anciently given in cattle, wine, and corn, but now in money, being £5000 or more, is de- nominated a mise : so was the usual tribute of 3000 merks paid by the inhabitants of the county palatine of Chester at the change of every owner of the said earldoms, for enjoying their liberties. At Chester they have a mise-book, wherein every town and village in the county is rated what to pay towards the mise. The 27 Hen. VII. c. 26 ordains that lords shall have all such mises and profits of their lands as they had in times past, &c.

MISE is sometimes also corruptly use;l for mease, in law French mees, a messuage ; as a mise place, in some manors, such a messuage or tenement as answers the lord a heriot at the death of its owner.

MISEMPLOY', v. a. t Mis and employ.

MISEMPLOY'MENT, n.s. $ To use to wrong purposes : improper

application.

An improvident expense, and misemployment of their time and faculties. Male's Origin of Mankind.

Their frugal father's gains they misemploy, And turn to point and pearl, and every female toy.

Dryden.

Some, taking things apon trust, misemploy their powers by lazily enslaving their minds to the dictates of others. Locke.

That vain and foolish hope, which is misemployed on temporal objects, produces many sorrows.

Addison's Spectator.

They grew dissolute and profane : and, by misem- ploying the advantages which God had thrown into their lap, provoked him to withdraw them.

Atterburu.

MISENUM, or MISENUS, in ancient geogra- phy, a promontory, port, and town of Italy, in Campania, south-west of Baiae, in the Sinus Pu- teolanus, on the north side. Here Augustus had a fleet, called Classis Misenensis, for guarding the Mare Inferum; as he had another at Ra- venna for the Superum. On this peninsula a villa was built by Caius Marius, with a degree of elegance that gave great offence to the more austere among the Romans, who thought it ili suited to the character of so rough a soldier. Upon the same foundation Lucullus, the plun- derer of the eastern world, erected an edifice, in comparison of which the former house was a cottage; but even his magnificence was eclipsed by the splendor of the palace which the empe- rors raised upon the same spot. To these proud abodes of heroes and monarchs, which have long been levelled to the ground, a few fishing huts, as Mr. Swinburn informs us, and a lonely public house, have succeeded ; hither boatmen resort to tipple, perhaps on the identical site where the voluptuous masters of the world quaffed Chian and Falernian wines.

MI'SER, n. s. Lat. miser. An unhappy wretch ; hence, particularly, a covetous wretch ; one who in wealth i» miserable for the fear of po- verty.

Do not disdain to carry with you the woeful words

«;f a miser now despairing ; neither be afraid to ap- pear before her bearing the base title of the sender.

Fair son of Mars, that seek with warlike ipoU And great atchievements, great yourself to make, Vouchsafe to stay your steed for humble miser's sake.

Spenser.

Decrepit miser ! base ignoble wretch ! I am descended of a gentler blood.

Shakspeare.

1 hough she be dearer to my soul than rest To weary pilgrims, or to misers gold, Rather than wrong Castalio I'd forget her.

Otway.

No silver saints by dying misers giv'n, Here bribed the rage of ill-requited heaven ; But such plain roofs as piety could raise, And only vocal withˆthe Maker's praise.

Pope.

MIS'ERABLE, adj.) Fr. miserable; Lat. MIS'ERABLY, adv. £ miser. Unhappy ; MIS'ERY, n. $. J wretched ; mean; sor-

did : miserably is, unhappily, calamitously; meanly : misery, is also used both for wretch- edness, unhappiness, calamity, and in an obsolete sense for covetousness, avarice.

Miserable comforters are ye all. Job. xvi. 2.

As the love I bear you makes me thus invite you, so the same love makes me ashamed to bring you to a place where you shall be so, not spoken by cere- mony but by truth, miserably entertained. Sidney.

O nation miserable,

VVith an untitled tyrant, bloody sceptered ! When shall thou see thy wholesome days again ?

Shakspeare.

My heart is drowned with grief, My body round engirt with misery. Id.

He looked upon things precious as they were The common muck o' th

world : he covets less Than misery itself would give.

Shakspeare. Coriolamis. When we our betters see bearing our woes We scarely think our miseries our foes.

Shakspeare.

He that hath pity on another man's sorrow, shall be free from it himself, and he that delighteth in, and scorneth the misery of another, shall one time or other fall into it himself. Raleigh.

In a fabrick of a forty thousand pounds charge, I wish thirty pounds laid out before in an exact model ; for a little misery may easily breed some absurdity of greater charge. Wotton.

What hopes delude thee, miserable man ? Dryden.

MISERERE (Latin, have mercy}; the name of a celebrated church song, taken from the fifty- seventh psalm, beginning, in the Vulgate, Mir erere mei, Domine. The miserere forms part of certain liturgies, and various great composers have taken it as a subject. The miserere of Allegri (q. v.) is particularly famous; and this alone, sung by the Papal choir, in the capella Sistina, in the Passion week, would repay the trouble of a visit to the "eternal city."

MISERERE is also the name given to pictures representing the dying Saviour. A terrible dis- ease, produced by obstruction of the bowels, is also called by this name.

MISERICORDIA, in law, an arbitrary fine

imposed on any person for an offence : this is

called misericordia, because the amercement

ought to be but small, and less than that required

by magna charta. If a person be outrageously amersed in a court that is not of record, the writ called moderata misericordia lies for moderating the amercement according to the nature of the fault.

MISERICORDIA (mercy; in Greek, JX«>c) was personified as a deity. She had a celebrated altar in the market-phce of Athens, constituting an asylum. Mixericordia Domini is the name given to the second Sunday after Easter, because the mass for this day begins with Miserieord'uu Domini cantabo in atemum. Mitcricorde 'vFrench) 'was also the name of the dagger of the knights in the middle ages. Fauchet derives irs name from its putting men out of pain when irrecoverably wounded, or from the sight of it causing the vanquished to cry out for mercy.*

M1SFASHION,». a. Mis and fashion. To ibrm wrong.

-MISFORM, v. a. Mis and form. To put in an ill form.

His monstrous scalp down to his teeth it tore, And that mitformed shape misshaped more.

Speiuer.

MISFORTUNE, n. «. Mis and fortune. Ca- lamity; ill luck ; want of good fortune.

Fortune thus 'gan say, misery and mu for tune u all

one, And of mitfnrhme, (n tuno h«h only the gift,*

MISFORTUNE, or chance, in law, is a deficiency of the will in committing an unlawful act ; or by chance, and not by design. In such case the will does not co operate with the deed ; which, therefore, wants one main ingredient of a crime. See CRIME. For this, when it affects the life of another, see the article HOMICIDE. Here we need only observe that if any accidental mischief happens to follow from the performance of a lawful act, the party stands excused from all guilt : but if a man be doing any thing unlaw- ful, and a consequence ensues which he did not foresee or intend, as the death of a man or the like, his want of foresight shall be no excuse ; for being guilty of one offence, in doing antece- dently what is in itself unlawful, he is criminally guilty of whatever consequence may follow the ^-«t misbehaviour.

MISGIVE", v. a. I Mis and give. To fill

*MISGIV'ING, n. *. S with doubt; deprive of confidence. Used with the reciprocal pro- noun: misgiving is doubt; distrust.*

As Henry's late presaging prophecy Did glad my heart with hope of this young Rich- mond ;

So doth my heart misgive me in these conflicts What may befal him, to his harm or ours.

Shalupeart. Vet oft his heart divine of something ill,

Misgave him. Milton.

If a conscience thus qualified and informed, be not the measure by which a man may take a true es- timate of his absolution, the sinner is left in the plunge of infinite doubts, suspicions, and misgivings, both as to the measures of his present duty, and the final issues of his future reward. South.

His heart miˆai him, that these were so many meeting-houses ; but, upon communicating his sus- picions, I soon mode him easy. Addison'i Freeholdtr.*

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MISGOVERN, v. a. ~\ Mis and govern.

MISGOVERNED, adj. (. To govern ill; ad mi-

MISOOV'ERNANCE, n.s. f nister unfaithfully :

*MISGOV'ERNMEXT, n. s. * misgovernment is, rude ; uncivilised : misgovernance, irregularity ; ynonymouswith misgovernment, or ill adminis- ration of affairs.*

Thy muse too long slumbereth in sorrowing

Lulled asleep through love's misgovernance.

Spenser.

Solyman charged him bitterly, that he had mis- governed the state, and inverted his treasures to his own use. Knolles.

Rude, misgoverned hands, from window tops, Threw dust and rubbish on King Richard's head.

Shakspeare.

There is not chastity enough in language, Without offence, to utter them: thus, pretty lady, I am sorry for thy much misgovernment. Id.

Men lay the blame of those evils whereof they know not the ground, upon public misgovernment.

Raleigh' Essays.*

Men are miserable, if their education hath been so undisciplined as to leave them unfurnished of skill to spend their time ; but most miserable, if such misgovernment and unskilfulness make them fall into vicious company. Taylor.

MISGUIDE', v. a. } Mis and guide. To

MISGUI'DANCE, n. s. 5 direct ill or wrong: mis- guidance, false direction.

The Nicene council fixed the equinox the twenty- first of March for the finding out of Easter : which has caused the misguidance from the sun which we lie under in respect of Easter, and the moveable feasts. Holder on Time.

Hunting after arguments to make good one side of a question, and wholly to neglect those which favor the other, is wilfully to misguide the under-standing; and is so far from giving truth its due value, that it wholly debases it. Locke.

Whosoever deceives a man makes him ruin him- self ; and by causing an error in the great guide of his actions, his judgment, he causes an error in his choice, the misguidance of which must naturally en- gage him to his destruction. South. Misguided prince ! no longer urge thy fate,

Nor tempt the hero to unequal war. Prior.

Of all the causes which conspire to blind

Man's erring judgment, and misguide the mind,

What the weak head with strongest bias rules

-E pride, the never-failing vice of fools. Pope.

MISHAP', n.s. Mis and hap. Ill chance or luck ; calamity.

To tell you what miserable mishaps fell to the young prince of Macedon his cousin, I should too much fill your ears with strange horrours. Sidney.

Since we are thus far entered into the consideration of her mishaps, tell me, have there been any more such tempests wherein she hath thus wretchedly been wrecked? Spenser.

Rome's readiest champions, repose you here, Secure from worldly chances and mishaps.

Shakspeare. Tt cannot be

But that success attends him ; if mishap, Ere this he had returned, with fury driven, By his avengers ,• since no place like this Can fit his punishment, or your revenge. Milton.

If the worst of all mishaps hath fallen, Speak ; for he could not die unlike himself.

Denham. MISINFER', w.o. Mis and infer. To infer

Nestorius teaching rightly, that God and man are distinct natures, did thereupon misinfer, that in Christ those natures can by no conjunction make one person. Hooker.

MISINFORM', v.a. a Mis and inform.

MISINFORMATION, n.s. 5 To deceive by false accounts: misinformation, false intelligence; false accounts.

Some belonged to a man of great dignity, and not as that wicked Simon had misinformed.

2 Mac. iii. 11.

By no means trust to your servants, who mislead you, or misinform you ; the reproach will lie upon yourself. Bacon.

Let not such be discouraged as deserve well, by misinformation of others, perhaps out of envy or treachery. Id.

Bid hfer well beware,

Lest, by some fair appearing good surprised,

She dictate false ; and misinform the will

To do what God expressly hath forbid. Milton.

The vengeance of God, and the indignation of men, will join forces against

an insulting baseness, when backed with greatness, aud set on by misinformation, South's Sermons.

MISINTER'PRET, v.a. Mis and interpret. To explain to a wrong sense, or wrong intention.

The gentle reader rests happy to hear the worthiest works misinterpreted, the clearest actions obscured, and the innocentest life traduced. Ben Jonson.

After all the care I have taken, there may be several passages misquoted and misinterpreted.

Arbuthnot on Coins.

MISJOIN', v.a. Mis and join. To join un- fitly or improperly.

In reason's absence mimick fancy wakes To imitate her ; but misjoining shapes, Wild work produces oft, and most in dreams ; Ill-matching words, and deeds, loˆg past, or late.

Milttm.

Luther, more mistaking what he read, Misjoins the sacred body with the bread.

Dry den.

MISITRA, a town of Modern Greece, the capital of the Morea, renowned in the ancient history of Greece under its original names of LACEDJEMON and SPARTA. See these articles. It has an impregnable castle seated on a rock ; several churches, one of them called Perileptos, said to be one of the most beautiful in the world ; a superb Turkish mosque and hospital, with three Jewish synagogues ; and two large suburbs. It is the see of a Greek archbishop ; the residence of a bey, an aga, and a waywode ; and contains about 12,000 inhabitants. It is seated on the Vasilipotamo, forty miles S. S. W. of Argos, forty E. N. E. of Navarin, sixty south of Corinth, ninety east of Lepanto, and ten south- west of Athens or Setines. It was taken by the Russians in 1770. Long. 22° 30′ E., lat. 37° 11′ N.

MISJUDGE', v. n. & v. a. Mis and judge. To form false opinions ; judge ill : to mistake ; judge ill of.

You misjudge ;

You see through love, and that deludes your sight : As, what is straight,

seems crooked through th» water. Id.

Where we misjudge the matter, a miscarriage draws pity after it ; but, when we are transported b / pride, our ruin lies at our own door. '

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By allowing himself in what is innocent, he breeds offence to his weak and misjudging neighbour.

Atterbury. Insensate !

Too long misjudging have I thought thee wise,

But sure relentless folly steels thy breast. Pope.

MISKOLCZ, a considerable and well built town of Hungary, in the county of Borschod, of which it is the capital. It contains 13,600 in- habitants, the majority of whom are Magyars, or Hungarians proper; the rest are Slowacs, Kussniacks, Walachians, Germans, Greeks, Jews, and gypsies. The greater number are Calvinists, who have one of their gymnasia or high schools here, as well as several elementary schools. The Catholics, Lutherans, and Greeks have their own churches; the Jews a synagogue; and the Mi- norites a monastery. There are no extensive manufacturing establishments. It is thirty-three miles west of Tokay.

MISLAY', v. a. I Mis and lay. To lay in ', TS.S. i

a wrong place: one that puts in a wrong place.

The midayer of a mere stone is to blame ; but the unjust judge is the capital remover of landmarks, when he defineth amiss of lands. Bacon.

Mean time my worthy wife our arms misluyed, And from beneath my head my sword conveyed.

Dry den.

The fault is generally mislaid upon nature ; and there is often a complaint of want of parts, when the fault lies in want of a due improvement. Locke.

If the butler be the tell-tale, mislay a spooon, so as he may never find it. Swift's Rules to Servant. MISLEAD', v. a. ^ Preterite and participle*

MISLEAD'ER, n.s.) passive misled. Mis and lead. To guide a wrong way; to betray to mis- chief or mistake : one that leads to ill.

They have disclaimed and abandoned those hereti- cal phantasies touching our Saviour, wherein by their misleaders they had been anciently plunged.

Brerewood on Languages. Take, oh take those lips away, That so sweetly were forsworn ;

And those eyes, the break of day, Lights that do mislead the mom. Shakspeare. When thou dost hear I am as I have been, Approach me, and thou shall be as thou wast, The tutor and the feeder of my riots ; Till then I banish thee on pain of death, As I have done the rest of my misleaders. Id. Trust not servants who mislead or misinform you.

Bacon.

Poor misled men : your states are yet worthy pity. If you would hear, and change your savage minds, Leave to be mad. Ben Jonson't Catiline.

O thievish night,

Why shouldest thou but for some felonious end, In thy dark lanthorn thus close up the stars, That nature hung in heaven, and filled their lamps With everlasting oil, to give due light To the misled and lonely traveller 1 Milton.

What can they teach and not mislead ; Ignorant of themselves, of God much more T Id. The imagination, which is of simple perception, doth never of itself, and directly mislead us ; yet it is the almost fatal means of our deception.

Glanville's Scepsis.

Thou who hast taught me to forgive the ill, And recompense, as friends, the good misled ;

If mercy be a precept of thy will, Rtttiirn that mercy on thy servant's head.

Drvden.

\ liatever necessity determines to the pursuit of real bliss, the same necessity estˆtlishes suspense, and scrutiny of each successive desire, whether the satisfaction of it does not interfere with our true hap- piness, and mislead us from it. Iˆockt .

Tis hard to say, if greater want of skill Appear in writing or in judging ill ; But of the two, less dangerous is the offence To tire our patience, than

mulead our sense.

MISLIKE', v.a. &n.«. > Mis and like. MISLI'KER, n. ». $ To disapprove ; dis-

like: disapprobation ; distaste: a misliker is one that disapproves.

Open flatterers of great men, privy mitlikert of good men, fair speakers with smiling countenances.

Atcham.

Himself stood director over them, with nodding or stamping, showing he did like or auslUte those things he did not understand. Sidney.

Setting your scorns and your muliket aside, Tell me some reason, why the lady Grey Should not become my wife. ShaMspeare. Henry VI.

Tertullian was not deceived in the place; but Aquinas, who mulUted this opinion, followed a worse.

RaUigh.

Their angry gestures with mislike disclose, Plow much his speech offends their noble ears.

Fairfax.

Judge not the preacher, for he is thy judge : If thou mislike him, thou conceiv'st him not.

Herbert.

We have religion enough to mitlike pleasures ; not to overcome them. But if we be once conquerors over ourselves, and have devoted ourselves wholly to God, there can be nothing but heavenly mirth to the soul. Bp. Hall.

MIS'LEN, n.s. From MISCELLANE, which see. Mixed corn : as, wheat and rye.

They commonly sow those lands with wheat, mis. len, and barley. Mortimer's Husbandry.

MIS'LE, v.n. From MIST. To rain in im- perceptible drops, like a thick mist : properly mistle.

Ynough thou mourned hast. Now ginnes to mizzle, hie we homeward fast

Spenter.

The very small drops of a misling rain descending through a freezing air, do each of them shoot into one of those figured icicles. Greic't Cosmologia.

In misling days when I my thresher heard, With happy beer I to the barn repaired.

Gay's Pastorals.

This cold precipitates the vapours either in dews, or, if the vapours more copiously ascend, they are condensed into misling. or into showers of small rain, falling in numerous, thick, small drops.

Derham't Physico-Theology.

MISLI VE', v. n. Mis and lire. To live ill.

Should not thilke God, that gave him that good, Eke cherish his child if in his ways he stood. For if he mislive in lewdness and lust, Little boots all the wealth and the trust. Spenser.

MISMAN'AGE, v. a. \ Mis and manage.

MISMANAGEMENT, n.t. J To manage ill: ill management or conduct.

The debates of princes' councils would be in danger to be mismanaged, since those who have a great stroke in them are not always perfectly knowing in the forms of syllogism. Locke.

It is mismanagement more than want of abilities, that men have reason to complain of in tho« that dif- fer. «•*

The falls of fav'rites, projects of the great,

Of old mismanagement, taxations new,

All neither wholly false, nor wholly true. Pope.

MISMARK', v. a. Mis and mark. To mark with a wrong token.

Things are mismarked in contemplation and life for want of application or integrity. Coltter.

MISMATCH', v. a. Mis and match. To match unsuitably.

What at my years forsaken ! had I

Ugly, or old, mismatched to my desires

My natural defects had taught me

To set me down contented. Southern.

MISNAME', v. a. Mis and name. To call by the wrong uame.

They make one man's fancies, or perhaps failings, confining laws to others, and convey them as such to their succeeders, who are bold to misname all unob- sequiousness to their incogitancy, presumption.

Boyle on Colours.

A MISNOMER, in law, a misnaming or mis- taking a person's name. The Christian name of a person should always be perfect ; but the law is not so strict in regard to surnames, a small mistake in which will be dispensed with to make good a contract, and support the act of the party. See PLEA TO INDICTMENT.

MISO, a substance resembling salt butter, and used as a substitute for it by the Japanese, pre- pared from a plant called daidsu, a species of dolichos. To make it they take a measure of mame, or the beans produced by the plant; after boiling them for a considerable time in water, and to a proper degree of softness, they beat or bray them into a softish pulse, incorporating with the mass a large quantity of salt, four mea- sures in summer and three in winter. The less salt that is added, the substance is more palata- ble ; but what it gains in point of taste it loses in durability. They then add to this mixture a certain proportion of rice, called koos ; and, having formed the whole into a compost, remove it into a wooden vessel which had lately con- tained their common ale, named sacki. In two months it is fit for use. The koos gives it a grateful taste ; and the preparing of it, like the palenta of the Germans, requires the skilful hand of an experienced master. For this reason there are people who make it their sole business to prepare the koos, and who sell it ready made for making miso : a substance which cannot fail to be greatly valued in those countries where butter fiom the milk of animals is unknown.

MISOBSERVE', v.a. Mis and observe. Not to observe accurately.

They understand it as early as they do language ; and, if I misobserve not, they love to be treated as rational creatures sooner than is imagined. Locke.

MISOR'DER, v. a. &n.s. (Mis and order.

MISOR'DERLV, adj. t To conduct ill :

irregularity; disorderly proceedings: misorderly is irregular; unlawful.

If the child miss either in forgetting a word or misordering the sentence, I would not have the master frown. Ascham.

His over-much fearing of you drives him to seek some misorderly shift, to be helped by some other book, or to be prompted by some other scholar.

Atckam's Schoolmaster.

The time miwrdered doth in common sense Crowd us, and crush us to this monstrous form, To hold our safety up. Shakspeare. Henry IV.

When news was brought to Richard the Second, that his uncles, who sought to reform the misorders of his counsellors, were assembled in a wood near unto the court, he merrily demanded of one Sir Hugh a Linne, who had been a good military man, but was then somewhat distraught of his wits, what he would advise him to do ? Issue out, quoth Sir Hugh, and slay them every mother's son ; and when thou hast so done thou hast killed all the faithful friends thou hast in England. Camden.

MISPEL', v. a. Mis and spell. To spell wrong.

She became a profest enemy to the arts and sciences, and scarce ever wrote a letter to him without wilfully mispelling his name. Spectator.

MISPEND', v. a. \ Preterite and part, pas- MISPEND'ER, n. s. J sive mispent. Mis and spend. To spend ill; waste; consume to no purpose : mispender, one who spends prodi- gally.

What a deal of cold business doth a man mispend the better part of life in ! In scattering compliments, tendering visits, gathering and venting news.

Ben Jonson's Discovery.

First guilty conscience doth the mirrour bring, Then sharp remorse shoots out her angry sting ; And anxious thoughts, within themselves at strife, Upbraid the long mispent luxurious life. Dryden.

Now let the arched knife their thirsty limbs Dissever, for the genial moisture due To apples, otherwise mispendt itself In barren twigs. Phillips.

I suspect the excellency of those men's parts who are dissolute, and careless mispenders of their time.

A orris.

He who has lived with the greatest care will find, upon a review of his time, that he has something to redeem ; but he who has mispent much has still a greater concern. Rogers.

I this writer's want of sense arraign, Treat all his empty pages with disdain, And think a grave reply mitpent and vain.

Blachmore.

Let him now endeavour to redeem what he hath mispent by employing more of that leisure in this duty for the future. Duty of Man.

O man ! while in thy early years,

How prodigal of time ! Mispending all thy precious hours,

Thy glorious youthful prime ! Burns. MISPERSUA'SION, n. s. Mis and persua- sion. Wrong notion ; false opinion.

Some mispersuasions concerning the divine attri" butes tend to the corrupting men's manners.

Decay of Piety.

MISPLACE', v. a. Mis and place. To put in a wrong place.

I'll have this crown of mine cut from my shoulders, Before I'll see the crown so foul misplaced.

Shakspeare.

What little arts govern the world ! we need not An armed enemy or corrupted friend, When service but misplaced, or love mistaken, Performs the work. Denham's Sophy.

Is a man betrayed by such agents as he employs 1 He misplaced his confidence, took hypocrisy for fide- lity, and so relied upon the services of a pack of villains. South.

Shall we repine at a little misplaced charity, we who could no way foresee the effect" Atterburii.

MISPRISE', v. a. a Either from Fr. met-

MISPEIS'ION, n. s. $prendre, mistake, or me- priser, undervalue, disdain. To mistake, or slight ; despise : the noun follows one or other of these senses ; but both words are obsolete.

You spend your passion on a mitprised mood ; I am not guilty of Lysander's blood. Shakspeare. Pluck indignation on thy head ;

By the misprising of a maid, too virtuous

For the contempt of empire. Id.

Thou hast mistaken quite,

And laid thy love-juice on some true love's sight ; Of thy mitprinon must perforce ensue Some true love turned, and not a false turned true.

Id.

To vindicate oUr religion from such miipruions, and that we may be engaged to prise and cherish it, 1 shall endeavour to declare that Christian faith doth worthily deserve all the commendations and the ad- vantages granted thereto. Barrow.

We feel such or such a sentiment within us, and herein is no cheat or misprision ; it is truly so, and our sense concludes nothing of its rise.

Glanmlles Scepsis.

MISPRISIONS, from the old French, mespris, a neglect or contempt, are, in the English law, generally understood to be all such high offences as are under the degree of capital, but nearly bor- dering thereon; and a misprision is contained in every treason and felony whatsoever; and, if the king please, the offender may be proceeded against for the misprision only. Upon this prin- ciple, while the jurisdiction of the star-chamber subsisted, it was held that the king might remit a prosecution for treason, and cause the delin- quent to be censured in that court, merely for a high misdemeanor ;

as happened in the case of Roger, earl of Rutland, in 43 Eliz., who was concerned in the earl of Essex's rebellion. Mis- prisions are generally divided into two sorts, viz. negative, which consist in the concealment of something which ought to be revealed ; and positive, which consist in the commission of something which ought not to be done.

MISPRISIONS, NEGATIVE, are either misprision of treason or of felony.

MISPRISION OF FELONY is the concealment of a felony which a man knows, but never assented to ; for, if he assented, this makes him either principal or accessory. And the punishment of this, in a public officer, by stat. Westm. 1. 3 Ed. I. c. 9, is imprisonment for a year and a day : in a common person, imprisonment for a less discretionary time ; and in both, fine and ransom at the king's pleasure; which pleasure of the king must be observed, once for all, not to signify any extrajudicial will of the sovereign, but such as is declared by his representatives, the judges in his courts of justice, voluntas regis in curia, non in camera.

MISPRISION OF TREASON consists in the b knowledge and concealment of treason, without any degree of assent thereto : for any assent makes the party a principal traitor ; as indeed the concealment, which was construed aid" and abetting, did at the common law ; in like manner, as 'the knowledge of a plot against state, and not revealing it, was a capital crime Florence, and other states of Italy. But il enacted, by stat. 1 and 2 P. & M. c. 10, that a

oare concealment of treason shall be only held a misprision. This concealment becomes cri- minal if the party apprised of the treason doe not, as soon as conveniently may be, reveal it to some judge of assize or justice of the peace. But if there be any probable circumstances of assent, as if one goes to a treasonable meeting, knowing beforehand that a conspiracy is intended against the king; or being in such company once by accident, and, having heard such treasonable conspiracy, meets the same company again, and hears more of it, but conceals it, this is an im- plied assent in law, and makes the concealer guilty of actual high treason.*

MISPRISIONS, POSITIVE, are generally deno- minated contempt or high misdemeanors; of which the principal is the mal-administration of such high offices as are in public trust and em- ployment. This is usually punished by the me- thod of parliamentary impeachment ; wherein such penalties, short of death, are inflicted, as to the wisdom of the house of peers shall seem proper; consisting usually of banishment, im- prisonment, fines, or perpetual disability. Hither also may be referred the offence of embezzling the public money, called among the Romans peculatus ; which the Julian law punished with death in a magistrate, and with deportation,

or banishment, in a private person. In the English law it is not capital, but subjects the committer of it to a discretionary fine and imprisonment. Other misprisions are, in general, such con- tempts of the executive magistrate as demon- strate themselves by some arrogant and undu- tiful behaviour towards the king and government. For a detail of which see Btackst

MISPROUD, adj. Mis and proud. Viciously proud. Obsolete.*

Now I fall thy touch commixtures melt,

Impairing Henry, strengthening nutproud York.

Shahspeare.

MISQUOTE', v. a. Mis and quote. To quote falsely.

Look how we can, or sad, or merrily, Interpretation will muquote our looks.

After all the care I have taken, there may be seve- ral passages misquoted. Arbuthnot on Coin.*

MISRECITE', v. a. Mis and recite. To recite not according to the truth.

He misrecites the argument, and denies the con- sequence, which is clear. Bramhall agaitut Hobbet.

MISREC'KON, v. a. Mis and reckon. To reckon wrong; to compute wrong.

Whoever finds a mistake in the sum total, must allow himself out, though after repeated trials he may not see in which article he has mureckoned. Swift.

MISRELATE', v. a.) Mis and relate. To

MISRELA'TION, n.i. i relate inaccurately or falsely : false or inaccurate narrative.

Mine aim was only to press home those things in writing, which had been agitated between us by word of mouth ; a course much to be preferred be- fore verbal conferences, as being less subject to mis- takes and misretationi, and wherein paralogisms are more quickly detected. BranAoU.

To satisfy me that he misrrlnted not the experiment he brought two or three small pipes of glass, which gave me the opportunity of trying it.

MIS

MISREMEM'BER, v.n. & v. a. Mis and remember. To mistake by trusting to memory.

If I much misremember not, I had such a spirit from peas kept long enough to lose their verdure.

Boyle,

MISREPORT, v.a.&n.*. Mis and report. To give a false account of: false or malicious representation.

His doctrine was misreported, as though he had every where preached this not only concerning the Gentiles, but also touching the Jews. Hooker,

A man that never yet Did, as he vouches, misrepor* your grace.

Shakspeare. We defend him not,

Only desire to know his crime : 'tis possible It may be some mistake or misreport, Some false suggestion, or malicious scandal.

Denham.

The wrong judgment that misleads us, and makes the will often fasten on the worst side, lies in mis- reporting upon the various comparisons of these.

Locke.

As by flattery a man is usually brought to open his bosom to his mortal enemy, so by detraction, and a slanderous misreport of persons, he is often brought to shut the same even to his best and truest friends. Souih's Sermons.

MISREPRESENT, v. a. > Mis and re-

MISKEPRESENTA'TION, w.s. 3 present. To fal- sify, or represent to disadvantage: the act of misrepresenting.

The character of the scholars of the present age will not be much injured or misrepresented by saying that they seem to be superficially acquainted with a multitude of subjects, but go to the bottom of very few. Adventurer.

Since I have shewn him his foul mistakes and in- jurious

misrepresentations, it will become him publicly to own and retract them. At Urinary.

Two qualities necessary to a reader before his judgment should be allowed, are common honesty and common sense ; and that no man could have misrepresented that paragraph, unless he were utterly destitute of one or both. Swift.

MISRULE', TZ. s. Mis and rule. Tumult; confusion ; revel ; unjust domination.

In the portal placed, the heaven-born maid, Enormous riot, and misrule surveyed. Pope.

And through his airy hall the loud misrule Of driving tempest is for ever heard. Thomson.

MISS, n. s. Contracted from mistress : but there is a Belgic meisje, a little girl : the term of honor to a young girl ; also a concubine; a loose woman.

All women would be of one piece, The virtuous matron and the miss. Hudibras. This gentle cock, for solace of his life,

Six misses had besides his lawful wife. Dryden.

Where there are little masters and misses in a house they are great impediments to the diversions of the servants. Swift.

It cannot reasonably be doubted, but a little mis, dressed in a new gown for a dancing-school ball, receives as complete enjoyment as the greatest orator who triumphs in the splendour of his eloquence, while he governs the passions and resolutions of a numerous assembly. Hume.*

Even misses, at whose age their mothers wore The backstring and the bib, assume the dress J)i womanhood, sit pupils in the school < <: i aid-devoted time, and night by night

Placed at some vacant corner of the board, J^earn every trick, and soon play all the game.

Cowper.

Miss, v. a., v. n. &n.s. Sax. mir-pan ; Teut, and Belg. missen ; Goth, and Swed. missa. To go beside a mark ; not to hit an object of any kind ; omit ; do without ; perceive or feel the omission, or want cf something : as a neuter verb to fly away from a mark or object ; fail ; mistake ; be lost ;

miscarry : as a substantive (ob- solete or only used in low language) omission ; loss ; want ; mistake ; hurt or harm.

Thy shepherds we hurt not, neither was there ought missing unto them. 1 5am. xxv. 7.

In vain have I kept all that this fellow hath in the wilderness, so that nothing was missed.

1 5am. xxv. 21.

Without him I found a weakness, and a mistrust- fulness of myself, as one strayed from his best strength, when at any time I missed him. Sidney.

In humble dales is footing fast, The trode is not so tickle,

And though one fall through heedless haste,

Yet is his misse not mickle. Spenser's Pastorals.

He did without any great misi in the hardest points-

of grammar. Ascham's Schoolmaster.

Grittus missing of the Moldavian fell upon Maylat,

Krwlles.

So may I, blind fortune leading me, Miss that, which one unworthier may attain ; And die with grieving.

Shakspeare. Merchant of Venice. We cannot miss him ; he does ma ke our fire, Fetch in our wood. Id. Tempest.

My lord,

Upon my lady's missing, came to me With his sword drawn. Id. Cymbeline. I could have better spared a better man. Oh, I should have a heavy miss of thee, If I were much in love with vanity.

Shakspea~e.

The general root of superstition is, that men ob- serve when things hit, and not when they mm : and commit to memory the one, and forget and pass over the other. Bacon.

If I die, the world shall miss me but a little : I shall miss it less. Not it me,

because it hath such store of better men : not I it, because it hath so much ill, and I shall have so much happiness.

Bp. Hall.

To heaven their prayers Flew up, nor missed the way. Milton.

For a time caught up to God, as once^ Moses was in the mount, and missing long, And the great Thisbite, who on fiery wheels Rode up to heaven, yet once again to conie. /

thought Impossible. Id. Paradise Lost.

Flying bullets now To execute his rage, appear too slow, They miss or sweep but common souls away.

Wal'rr.

Where shall a maid's distracted heart find rest, If she can mm it in her love'r's breast! Dry den.

When a man misses his great end, happiness, he will acknowledge he judged not right. Locke.

*If these papers have that evidence in them, there will be no great mi** of those which are lost, and my reader may be satisfied without them. Id.*

He who was a firm, sincere friend, may want all the rest without missing them. South

MIS

759

MIS

She would never mitt one day, A walk so fine, a sight so gay. rVtor.

The moral and relative perfections of the Deity are easy to be understood by us ; upon the least reflec- tion we cannot mias of them. Atterbury.

He that is so tender of himself, that he can never find in his heart so much as to miss a meal, by way of punishment for his faults, shews he is not much fallen out with himself. Duty of Man.

The life you boasted to your javelin given, Prince, you have mused. Pope,

The man who threatens the world is always ridicu- lous ; for the world can easily go on without him, and, in a short time, will cease to miss him.

Johnson. The good we never miss we rarely prize.

Cowper.

We ought not to believe that the banks of tht ocean are reahv deiorraet, because they have not the form of a regular bulwar ; nor that the mountains are misthapen, because they are not exact pyramids or cones; Bentleuft Sermont.*

Some figures monstrous and misshaped appear, Considered singly, or beheld too near, Which but proportioned to their site or place. Due distance reconciles to form and grace. Pope. MIS'SILE, adj. Lat. murilu. Thrown by the hand ; striking at distance.

We bend the bow, or wing the missile dart.

xJISSIO, in Roman antiquity, was a full dis charge given to a soldier after twenty years ser vice, and differed from the exauctoratio, which

MIS'SAL, n. s. Fr. missel ; Lat. missale. The Was a dis£,harge from duty after seventeen years

service. Every soldier had a right to c;aim Ins raissio at the end of twenty years.

MIS'SION, n. ».\ Lat misiio ; Fr. mistio MIS'SIONARY, f naire, mittive. Errand or MISSIONER, £ message from a supreme MIS'SIVE.) authority : persons, taken

collectively, sent on such an errand : used by Shakspeare for faction ; party : in an obsolete sense, discharge ; dismission. A missionary or missioner is an individual so sent. See below. A missive, a letter or messenger.

Glorious deeds, in these fields of late, Made emulous missions 'mongst the gods themselves. And drove great Mars to faction. Shakspeare.

Rioting in Alexandria, you Did pocket up my letters ; and with taunts Did gibe my missive out of audience. Id.

Great aids came in to him ; partly upon miuiiet, and partly voluntary from many parts. Bacon.

In Caesar's army, somewhat the soldiers would have had, yet only demanded a mission or discharge, though with no intention it should be

granted, but thought to wrench him to their other desires ; where- upon with one cry they asked mission . 'Id.

1 n these ships there should be a mission of three of the brethren of Solomon's house, to give us know- ledge of the sciences, manufactures, and inventions of all the world, and bring us books and patterns , and that the brethren should stay abroad till the new mission. Id. New Atlantis.

Her son tracing the desert wild, All his great work to come before him set, How to begin, how to accomplish best, His end of being on earth, and mission high.

MiUor.

Like mighty missioner you come, Ad partes infideliura. Dryden.

In vain with darts a distant war they try, Short, and more short, the missive weapons fly

Id.

The king grants a license under the great seal, called a conge d'elire, to elect the person he has nominated by his letters missive . Ayliffe't Parergon.

The divine authority of our minion, and the powers vested in us by the nigh-priest of our profession, Christ Jesus, are publickly disputed and denied.

Atterbvry.

You mention the presbyterian missionary, who hath been persecuted for his religion. Su ;'f .

MISSION, MISSIO, among the Romans, a term used to signify the emperor's sending to rescue a wounded gladiator from his antagonist. The munerarii, or persons who exhibited the games, and likewise the people, were allowed to rescu a favorite gladiator. The manner of their stg*

mass book of the Romish church.

By the rubrick of the missal, in every solemn mass, the priest is to go up to the middle of the altar.

Stilting fleet.

MISSAY', v. n. Mis and say. To speak ill of; censure. Obsolete.

Their ill behaviour garres men mitsay, Both of their doctrine and their fay.

Spenser's Pastorals.

We are not dwarfs, but of equal stature, if Vives missay not. Hakewill on Providence.

MISSEEM', v. n. Mis and seem. To make false appearance.

Foul Duessa meet,

Who with her witchcraft and misseeming sweet Inveigled her to follow her desires unmeet.

Faerie Queene. Never knight I saw in such misseeming plight.

Id.

MISSERVE', v.a. Mis and serve. To serve unfaithfully.

Great men, who misserved their country, were fined very highly. Arbuthnot on Coin.*

MISSHAPE', v.a. J Part, misshapen and mis-

MISSHA'PEN, adj. S shaped. Mis and shape. To shape ill or badly : ill-shaped : in Shaks- peare, perhaps, it only signifies ill directed : as, to shape a course.

Him then she does transform to monstrous hues. And horribly misshapes with ugly sights,

Captived eternally in iron mews. Faerie Queene.

A rude misshapen, monstrous rabblement. Id.

His monstrous scalp down to his teeth it tore, And that misformed shape, misshaped more. Id.

Let the misshaped trunk that bears this head Be round impaled with a glorious crown.

Shakspeare. Thy wit, that ornament to shape and love,

Misshapen in the conduct of them both,

Like powder in a skill-less soldier's flask,

I set on fire. Id. Romeo and Juliet.

If the world will be so vain as to misshape itself, we may not be so foolish as to follow it. Bp. Hall.

Pluto hates his own misshapen race, Her sister furies fly her hideous face.

Drydtn.

Pride will have a fall : the beautiful trees go all to the wreck here, and only the misshapen anil despi- cable dwarf is left standing. L' Estrange.

They make bold to destroy ill-formed and mis- shaped productions. Lockr.

The Alps broken into so many steps and precipices, form one of the most irregular, misshapen scenes in the world. AdJiton.

nifying this favor was pollice presso, or with the thumb hid in the palm of the hand. However, the gladiator was only saved for that time; whereas by the rudis he had a free discharge.

MISSION, in theology, denotes a commission to preach the gospel. Jesus Christ gave his dis- ciples their mission in these words, ' Go and teach all nations,' &c. The Romanists reproach the Protestants that their ministers have, strictly, no mission, as not being authorised in the exer- cise of their ministry, either by an uninterrupted succession from the apostles, or by miracles, or by any extraordinary proof of a vocation. Many ajnong Protestants hold a similar doctrine as to episcopal succession and ordination ; while others deny any other mission necessary for their minis- try than the talent to discharge it.

MISSION is also used for an establishment of people zealous for the glory of God and the sal- vation of souls ; who go and preach the gospel in remote countries. Among the Romanists, the religious orders of St. Dominic, St. Francis, St. Augustine, &c., &c., have missions in the Le- vant, America, &c. The Jesuits had likewise missions in China, and all other parts of the globe where they were able to penetrate. Protes- tant missions, for diffusing the light of Chris- tianity through the benighted regions of Asia, America, and the South Seas, are numerous. An early undertaking of this kind was the Danish mission planned by Frederic IV. in 1706. See MISSIONARY.

MISSIONARY SOCIETIES. Under this article we need only notice that the zealous and laudable exertions of various bodies of Christians, who, within these few years, have associated for the purpose of propagating the gospel both at home and abroad, are detailed by us under the names adopted by the principal societies. The most pleasing success has of late attended their labors, and the system can need no defence in these pages.

But a writer whom we have already quoted on the prospects of the church (see our article MILLENNIUM), the Rev. E. Irving, has boldly questioned the entire claims of these societies to a scriptural or apostolical character. He accuses the modern missionary societies of ' patching and mending, helping and repairing, and accom- modating the unchangeable constitution of the Messiah to the changeable constitution of the world.' He insists that what he calls the mis- sionary charter is contained in Matt. x. 5-42 ; and that the ninth and tenth verses are still binding on modem missionaries. In his own peculiar manner he exclaims, ' I have been tempted to indignation and wrath, that the insti- tution and appointment of the great Head of the church should have been so widely departed from in these modern times, and, being honestly and plainly stated, should find so little favor in the eyes of a generation which prideth itself in the evangelical character of its missionary under- takings. And that, instead of going about to seek men who were advanced in faith to the height of the undertaking, they have gone about to reduce the undertaking to the measure of an ordinary faith, and have attracted to the servjce many who were hardly fit for a pastoral

care in the church at home, much less for laying the foundation of Christian empire abroad. But most of all hath a holy indignation risen within my breast, when, to keep up the popular glory and renown of their work, which they should be ever rectifying by the word of God, they should be content rather to obliterate and annul that part of his holy word which is able to give them counsel. It is instructive of the self-exaltation of man to hear with what cool indifference they would consign to uselessness those immortal counsels which our Lord gave for the conduct of Christian missionaries, in order that they may have the field open for their own infallibility. They would break through all rules and laws of inter- pretation, and, to a passage whose every word and sentence breathes immortality, they would give a temporary application, destroying its obligation, losing its comfort, and abolishing its promises to the evil- entreated messenger of peace : all be- cause it contains in its bosom two clauses which were necessary to make it useful and applicable to the time which then was, as well as to the times which were to come. Against this I have argued by an analysis of the passage, against it I have protested by an appeal to the apostolical times, in the .hope of being able to prevail by argument and appeal ; though, I confess with slender hope in a time when names or periodical organs of opinion have obtained almost the whole

authority in the church.'

These novel views of the subject have been al- ready animadverted upon by Mr. Orme of Cam- berwell. He contends that the language of Christ must be interpreted of those whom' alone it can concern. ' I hold as decidedly as you,' he ss.ys in his Expostulatory Letter to Mr. -Irving,' that all who can preach the gospel are bound to preach the gospel; that all who can heal the sick, and cast out devils, are obliged to do so ; that all who can speak with tongues, or interpret tongues, are called to exercise their gifts. Show me the man who can convey himself 10,000 miles across the pathless ocean without purse or scrip, who does not need to be brought on his way, or whose necessities, when at a distance, require not to be relieved, and I will show the man on whom the commands of Christ, in their most literal interpretation, are as binding now as they were when first delivered.

' But this leads us to the consideration of the obligations upon all missionaries literally to comply with all the injunctions of this discourse ; particularly with those contained in verses nine and ten. You admit that there are in the discourse two, and only two, restrictive clauses, or local and temporary directions. These relate to the limits of the first commission, and the ex- clusion of the Gentiles and Samaritans. If I do not succeed in proving that there are several other peculiar and temporary circumstances in- volved in this document, I shall willingly submit to any epithet which you may think proper to apply".

' The apostles themselves, then, when they first received their Lord's instructions, were re- stricted, both by the nature of the commission, and by their inability -to execute it in a more enlarged acceptation. They fulfilled it however

to the extent of their ability, and this was all that was required of them; and is all that Christ ex- pects of us.

' In the second place I hope you will admit, Sir, that the part of the chapter which relates to ' healing the sick, cleansing the lepers, raising the dead, casting out devils, ' is temporary, if not local ; binding only on those who possess the power. I am sure I need not dwell on this; yet it constitutes another grand peculiarity of this missionary charter, and shows that there are more parts of it than you acknowledge binding only on a particular class of individuals.

' The third exceptive clause is that which you admit limits the field of labor

to the land of Is- rael; but which I contend includes also what was peculiar to that land, and to this particular period of the apostolic ministry.

‘ Before taking up another point, I must refer to a fourth limitation or peculiarity in this charge. It occurs in the ninteenth and twenty- first verses. ‘ But when they deliver you up, take no thought how or what ye shall speak ; for it shall be given you in that same hour what ye shall speak : for it is not ye that speak, but the spirit of your father that speaketh in you.’ Do you mean to contend for the literal adoption of these words by all Christian ministers and mis- sionaries ? You do, indeed, say, ‘ that the assu- rance that the Lord would put into their mouth what they should say, hath always been the fountain of their [Christ’s confessors] eloquence.’ And you affirm that ‘ this hath been the judgment of the whole church.’ Excuse me,Sir, from thinking that this is either the faith of the church or your own. ‘Take no thought,— settle it in your hearts not to meditate before ‘(Luke xxi. 14), is a positive prohibition of premeditation, either re- specting the testimony or the defence of the gos- pel ; most appropriate to divinely inspired men, but utterly unsuitable to others. Does the minister of Ilatton Garden not premeditate before he ad- dresses his orations to the people ? Did he take no thought, when, like Cicero, ‘ he retired into the quiet and peaceful country, to prepare him- self with every preparation of the mind and of the spirit,’ in order to the production of ‘ For Missionaries after the Apostolical School, a Series of Orations ?’ Yet this is child’s play compared with being brought before ki’-.gs and governors for Christ’s sake.

‘ You anticipate an objection to the literal adoption of the prohibition respecting provision drawn from Luke xxii. 35 — 38. ‘ And he said unto them, When I sent you without purse, and scrip, and shoes, lacked ye any thing? And they said, Nothing. Then he said unto them, But now, he that hath a purse, let him take it, and likewise his scrip; and he that hath no sword, let him sell his garment, and buy one. For I say unto you, that this that is written must yet be accomplished in me, And he was reckoned among the transgressors : for the things concern- ing me have an end. And they said, Lord, be- hold, here are two swords. And he said unto them, It is enough.’

‘ I do not wonder, Sir, that you have put forth all your strength on this passage, which, 1 feel confident, must piove the ruin of your whole

theory. I shall not enter into your general e«- planation, farther than to say, I do not perceive the force of many of your reasonings. You contend against the literal application of the latter part of the passage. So do I. You do so because a literal adoption of the command would be at va- riance with scripture and common sense; so think I. You limit obedience to the injunction to a particular, and that a rery short period, the hour of our

Lord's darkness and desolation. This is adopting the very ground of your oppo- nents respecting local and temporary obligations. And then you abandon the literal interpretation altogether, and contend for a figurative meaning. In the following passage you have surrendered your cause, and relieved any one from following you farther : —

' Fn all this there is nothing which hath or can have a wicer application than to that hour of dark- ness, during which the glory of his kingdom was eclipsed. And, even of this season, that it was not to be literally interpreted is manifest from the scene which immediately took place. The disciples, mistaking his meaning, made answer to him in these words, ' Lord, here are two swords.' And he answered them, ' It is enough ;' that is, it is enough that I have reduced your minds from these high and towering expectations of power, which would have cast you upon ruin, to the lowly sense of your weakness, and the prudent thought of your safety. But they, imagining that he really meant them to use these two swords with which they were provided, said, when the rout came upon him in the garden, ' Lord, shall we smite with the sword?' And Peter actually lifted up his sword, and smote the high priest's servant, and cut off his ear; to which action our Lord made the reply, ' Put up again thy sword into his place : for all they that take the sword shall perish by the sword.' Which shows that not only did he not intend the sen- tence under consideration to be understood of the propagation, but not even of the defence of his cause ; that, so far from intending it to be applied literally to all times, he did not intend it to be literally applied even to that time of op- pression, for the sake of which it was spoken. That it was to be understood, as we have ex- plained it, for a strong and figurative way of re- ducing their minds from the ambitious thoughts of a power which their question indicated, down to a lowly sense of their true condition, its trials, and its dangers.'

We recommend the whole of this masterly letter to the consideration of such of our readers as feel interested in this important subject.

MISSIONARY SOCIETY, CHURCH. See SOCIETY, CHURCH MISSIONARY.

MISSISSIPPI, a river of the United States of North America, which rises from Ibasca I>ake, long. 95° 8′ W., lat. 47° 47′ N., and, after a course of about 600 miles, reaches the falls of St. Anthony in lat. 44° N. It forms a junction with the Missouri in lat. 38° 50′ N., and flows into the Gulf of Mexico by several mouths, the prin- cipal of which, called the Balize, is in long. 89° 30′ W., lat. 29° 6′ N.

This river overflows its banks every spring, and lays the country, for many miles in exten-

under water. It is from one to two miles in width, and of an uncommon depth. The navi- gation is difficult and dangerous. Vessels are from five to thirty days on their passage up to New Orleans; though, with a favorable wind, they will sometimes descend in twelve hours. From New Orleans to the Illinois the voyage requires eight or ten weeks. Boats of forty tons ascend to St. Anthony's Falls; but ships seldom ascend above Natchez. The navigation is now greatly facilitated by the use of steam-boats, the tonnage of six of which, some time since, ex- ceeded 300, and one 400, tons. They are em- ployed with great advantage, and their number is rapidly increasing. The principal towns on the Mississippi are New Orleans, Natchez, and St. Louis.

The whole length of the Mississippi is about 3000 miles. The length, above its junction with the Missouri, upwards of 1600 miles. The length of the Missouri, above the junction, is 3096 miles. The Missouri, being both longer and larger, may properly be considered the main river. On this principle the following table is constructed, ex- hibiting a view of the principal tributaries of this unrivalled stream. The first column ex- presses the distance of one junction from the preceding, the second the distance of the junction from the entrance into the Gulf of Mexico by the course of the stream, and the third the estimated length of the tributary river.

Dist.

Whole Dist.

Length.

Red River . . .

344

1500

Arkausaw . . .

398

500

2170

White River . . . Ohio

14 336

514 1092

1200 1350

Mississippi . . . Osage .... Grand ....

192 133 107

1284 1417 1524

1620 600 600

Kansas ....

100

1624

1200

Platte ....

260

1884

1800

Yellowstone . .

1280

3164

1100

BRANCHES OF THE TRIBUTARIES. Branches of the Mississippi.

Illinois Monies

Tennessee Cumberland

Ouachitta Bighorn

Of the Ohio.

Of Red Rirer. Of the Yellowstone.

Length.

. 500 . 800

. 1100 . 750

. 600

. 800

The above distances from the mouth of the Mississippi to the junction of the Missouri are given according to Mr. Darby. Some others make the distances greater. Above the junction the distances are given according to Lewis and Clark. Besides the above, there are a great number of other rivers, many of them large, that How into the Mississippi and its tributaries.

The following table exhibits an estimate of the

extent of country watered by this river and its branches. It comprises nearly three-fifths of the whole territory of the United States.

Square Miles.

Missouri Territory, 2-3 . . . 1,000,000

Northwest Territory, J . . . 73,500

Illinois Territory, the whole . . 52,000

Indiana, 19-20 35,150

Ohio, 4-5 31,300

Pennsylvania, 1-3 14,600

New York, 1-100 460

Maryland, 1-100 120

Virg.nia, 2-5 25,600

North Carolina, 1-50 . . . 960

South Carolina, 1-150 . . . 190

Georgia, 1-100 . 620

Kentucky, the whole . . . 42,000

Tennessee, the whole . . . 40,000

Mississippi, 3-5 27,000

Louisiana, 2-3 32,000

Total, 1,375,500

Mississippi is one of the United States of North America, erected into a state in 1817 ; bounded north by Tennessee, east by Alabama Territory, south by the Gulf of Mexico and Louisiana, and west by Pearl and Mississippi Rivers, which separate it from the state of Louisi- ana. Long. 80° Stf to 81° 35′ W., lat. 30° 10 to 35° N. 312 miles long from north to south, and 150 from east to west; containing about 45,000 square miles.

The Mississippi Territory was divided, in 1817, into two parts nearly equal ; the western part forming the state of Mississippi, and the eastern forming the Alabama Territory. The population of the whole, in 1810, was 40,352; and, in 1830, 136,806, of whom 65,659 were slaves. The counties, population, and chief towns of the state of Mississipi, in 1816, are ex- hibited in the following table : —

Counties. Pop. Chief Towns.

Adams 12,129 Natchez

Amite 7.943 Liberty

Claiborne 9,818 Port Gibson

Franklin 4,622 Meadville

Greene 1,849 Leaksville

Hancock 1,961 Pearlington

Jefferson 9,755 Fayette

Lawrence 5,321 Monticello

Marion 3,701 Columbia

Pike 5,402 Holmesville

Warren 7,661 Warren

Wayne 2,778 Winchester

Wilkinson 11,693 Woodville

Washington 1,976 Princeton

Yaroo 6,550 Benton

These are the principal counties.

Monticello is the present seat of government. Natchez is the largest town, and Washington is next to Natchez in size. The other towns in the state are very small. A bank is established at Natchez with "a capital of 3,000,000 dollars, hav- ing several branches. A college was incorpo- rated, in 1802, at Washington, and another has been recently incorporated at Shieldsborough. There are academies at Natchez, Monticello, and Woodville.

The principal rivers are the Mississippi, Pearl, Pascagoula, Yazoo, Black, Tennessee, and the western branches of the Torabigbee. The Mis- sissippi forms the western boundary from lat. 31° to 35° N.; 308 miles in a right line, but, by the course of the river, nearly 700 miles.

The southern part of the territory, extending about 100 miles north from the Gulf of Mexico, is mostly a champaign country, with occasional hills of moderate elevation, and is covered with forests of the long leaved pine, interspersed with cypress swamps, open prairies, and inundated marshes. A considerable portion of this part is susceptible of cultivation. The soil is generally sandy, sometimes gravelly and clayey. It is capable of producing cotton, corn, indigo, sugar, garden vegetables, plums, cherries, peaches, figs, sour oranges, and grapes. In proceeding north the face of the country becomes more elevated and agreeably diversified. The growth of timber consists of poplar, hicko-y, oak, black walnut, sugar-maple, buckeye, elm, hackberry, &c.; and the soil is exceedingly fertile, producing abundant crops of cotton, corn, sweet potatoes, indigo, garden vegetables, and fruit. Nearly all the country watered by the Yazoo is described as incomparably fertile, well-watered, and health- ful.

Cotton is the staple production of the state. Tobacco and indigo have both been cultivated ; but the former is nearly, and the latter entirely,

abandoned by the planters. Peaches and figs are the fruits most easily produced. Apples, plums, lemons, and oranges, are common. The climate is temperate, and in the elevated parts generally healthy. The local situation of this state, the fertility of its soil, the temperature of its climate, and the value of its productions, will doubtless cause it to remain an important part of the union.

The Choctaw and Chickasaw Indians possess a large portion of the territory of this state, em- bracing the northern and eastern parts. The tracts possessed by these tribes comprise some of the finest parts of the state, abounding with extensive and beautiful prairies.

MISSON (Francis Maximilian), an eminent French lawyer, who distinguished himself by his pleadings before the parliament of Paris in favor of the reformers. He retired into England after the revocation of the edict of Nantz, and became a strenuous advocate of the Protestant religion. In 1687 and 1688 he travelled to Italy as gover- nor to an English nobleman ; in consequence of which he published, at the Hague, A New Voy- age to Italy, 3 vols. 12mo. ; which was translated into English with many additions. He pub- lished also the Sacred Theatre at Cevennes, or An Account of Prophecies and Miracles per- formed in that part of Languedoc ; London, 1707 ; Observations and Remarks of a Traveller, 12mo., Hague. He died at London in 1721.

MISSOURI, a river of North America, which rises in the rocky mountains, and, uniting with the Mississippi, flows into the gulf of Mexico. The three head branches are Jefferson's, Madi- son's, and Gallatin's Rivers, which are navigable for some distance. The following table of dis- tances is taken from Lewis and Clark's Travels;

and the distance, from the junction with the Mis- sissippi to the gulf of Mexico, from Schulu.

*From the extreme point of navigation, in long. 111°45'W., lat. 43*31′ N., to*

Mile.*

Whole Dist.

The Gates of the Rocky Mountains .... Great Falls

411 110

411

Yellowstone River . . . Fort Mandan .... Chyenne River .... Platte River .... Kansas River .... Grand River .... Osage River .... Mississippi River . . . Gulf of Mexico . . .

695 280 290 710 260 100 107 133 1395

1216 1496 1786 2496 2756 2856 2963 3096 4491

The only interruption of the navigation through this whole distance is at the Great Falls. At these falls the river descends, in the space of eighteen miles, 357 feet. The greatest cascade is eighty-seven feet perpendicular, and exhibits a view of singular beauty and grandeur. There is another pitch of forty-seven feet. About 100 miles below these falls there are natural walls of stone, in several places, on the banks of the river. They rise 200 or 300 feet high, nearly perpen- dicular, exhibit a most extraordinary and roman- tic appearance, and are regarded as a great curiosity. The place where the river makes its escape from the mountains, called the ' Gates of the Rocky Mountains,' presents an object of ex- traordinary curiosity. For the distance of five miles and three-quarters the rocks rise perpen- dicularly from the water's edge nearly 1200 feet. The river is here compressed to the width of 150 yards ; and, for the first three miles, there is but one spot, and that of only a few yards, on which a man could stand between the water and the perpendicular ascent of the mountain. From the Mississippi to the Great Falls the Missouri is not difficult of navigation ; but, above the falls, the navigation is considerably obstructed by rocks and rapid currents. The breadth of this river, at its junction with the Mississippi, is from half to three-quarters of a mile; its waters are very turbid and muddy. See MISSISSIPPI.

MISSOURI TERRITORY, a country belonging to the United States. In the most extended sense it includes all the country of Louisiana not com- prised within the limits of the state of Louisiana. For its extent, boundaries, &c., see LOUISIANA.

If the western boundary of the state of Louisi- ana were continued due north to lat. 40° 30′ N., and a line extended thence due east to the Mis- sissippi, these limits, with the Mississippi on the east, and the state of Louisiana on the south, would include all the settlements made in the Missouri Territory, except on the Missouri and Mississippi rivers. The number of square miles in this region is about 98,000, of which 16,000 lie north, and 82,000 south, of the Missouri. The extended line on the western side would cross the Missouri fifteen or twenty miles below the mouth of the Kansas.

In 1810 this territory was divided into five districts, and contained 20,895 inhabitants, of whom 3618 were blacks.

In 1830 it comprised 33 counties, the princi pal of which, with their chief towns, are exhibited in the following table.

Counties. Chief Towns.

Boon Columbia

Gape Girardeau Jackson Howard Fayette

Lincoln Troy

New Madrid New Madrid

St. Chsrles St. Charles

St. Geruevieve St. Genevieve

St. Louis St. Louis

Washington Potosi

Wayne Greenville.

The present population is estimated at about 140,074. St. Louis is the chief town. The other most considerable towns are St. Charles, St. Genevieve, Jackson, and Franklin. There are two banks at St. Louis. The principal rivers are the Mississippi, Missouri, Osage, Grand, Charlatan, Marameck, St. Francis, White, Ar- kansaw, and Ouachitta.

There are extensive alluvial tracts on all the rivers. This land, where it is not subject to in- undation, is of excellent quality. Howard county, sometimes called Boone's Lick, which lies on both sides of the Missouri, extending south as far as Osage River, is represented as in- cluding some of the most fertile tracts in America. The land produces abundant crops of wheat, Indian corn, rye, oats, barley, potatoes, white clover, timothy, and blue grass. Various kinds of garden vegetables and fruits are cultivated. The forest trees are walnut, hickory, various kinds of oak, locust, ash, cotton- wood, pawpaw, coffee nut, sycamore, elm, maple, hackberry, box, &c. The

climate is very pleasant and healthy.

The land in this territory on the Arkansaw is mostly alluvial, and, where not liable to inunda- tion, excellent. The region watered by White River has immense strata of limestone and mar- ble, and a great portion of it is of a very produc- tive soil. Here are some prairies, but they are not very fertile or extensive. The country wa- tered by the St. Francis is less fertile than that watered by White River. The country between these two rivers, for more than 100 miles above their junction, is overflowed ; as is also the coun- try between the St. Francis and the Mississippi. The southern part of the territory is well adapted to the culture of cotton, and some cotton is raised for domestic use north of Osage River.

This territory has an abundance of salt springs, from which salt is manufactured. It also has coal, iron, and lead mines. The famous lead mines of this country include a district about fifty miles in length, and twenty-five in breadth; the whole of which abounds in lead ore, so ex- ceedingly rich that 1 00 Ibs. of the ore will yield eighty or ninety of fine lead. The mines are so extensive that it is supposed that lead enough might be obtained from them to supply the world. They are forty-five miles west of Her- culaneum, which is the present store-house of '.he mines.

MISSOURI, LITTLE, a river of Louisiana, which

runs into the Missouri 1690 miles from the Mis- sissippi. Length about 500 miles.

MISSPEAK, v. a. & v. n. Mis and speak. To speak wrong ; blunder in speech.

It is not so ; thou hast mitpoke, misheard , Tell o'er thy tale again. Shahtpeare. King Lear.

A mother delights to bear Her early child misspeak half-utterea words.

Donne.

MISSUS, in the Circensian games, were the matches in horse or chariot races. The usual number of missus or matches in one day was twenty-four; though Domitian presented the people with 100. The last match was generally made at the expense of the people, who made a collection for the purpose; hence it was called, Missus ./ERARIUS, a subscription plate. MIST, n. s. & v. a. ~) Sax. mir-t; Beig. and MIS'TINESS, n. s. >Teut. mist. Vapor; a low MIS'TY, adj. _) thin cloud ; small thin

rain : hence metaphorically any thing that be- dims or darkens :

Shakspeare uses it as a verb for to cover with a cloud or vapor: misty is cloudy ; vapory.

The morrow fair with purple beams Dispersed the shadows of the misty night.

Faerie Queene.

Loud howling wolves arouse the jades, That drag the tragick melancholy night ; Who with their drowsy, slow, and flagging wings Clip dead men's graves, and from theii misty jaws Breathe foul contagious darkness in the air.

Shakspeare.

Good Romeo, hide thyself, — Not I, unless the breath of heart- sick groans Mistlike infold me from the search of eyes. Id.

Lend me a looking-glass : If that her breath will mitt or stain the stone, Why then she lives. Id. King Leur.

The speedy depredation of air upon watery moist- ure, and version of the same into air, appeareth in the sudden vanishing of vapours from glass, or the blade of a sword, such as doth not at all detain or imbibe the moisture, for the mistiness scattereth im- mediately. Bacon.

Parents overprize their children, while they behold them through the vapours of affection, which alter the appearance, as things seem bigger in misty morn- ings. Wotton.

My people's eyes once blinded with such mists of suspicion, they are misled into the most desperate actions. King Charles.

Old Chaucer, like the morning star, To us discovers day from far ; His light those mists and clouds dissolved Which our dark nation long involved.

Denham.

And mitts condensed to clouds obscure the sky, And clouds dissolved the thirsty ground supply.

Roscvmmm.

His passion cast a mist before his sense, And either made or magnified the offence.

Dry den.

A cloud is nothing but a mist flying high in the air, as a mist is nothing but a cloud here below.

Locke.

As a mist is a multitude of small but solid glo- bules, which therefore descend ; so a vapour, and therefore a watery cloud, is nothing else but a con- geries of very small and concave globules, which therefore ascend to that height in which they are of equal weight with the air, where they remain sus- pended, till by some motion in the air, being broken,

they descend in solid drops; either small, as in a mitt, or bigger, when many of them run together, as in rain. Grew.

Now smoaks with showers the wtiity mountain

ground, And floated fields lie undistinguished round. Pope.

Are mist begotten? who their Father knew 1 '•'rom whom descend the pearly drops of dew 1*

Young.

All in this rnottie, misty clime, I backward mused on wasted time. How I had spent my youthfu' prime,

An' done nae-thing.

Burnt.

MISTAKE', v. a., v.n. &n.i.} Mis and

MISTA'KABLE, adj. > take. To take

MISTA'KIKGLY, adv.) or conceive

•wrongfully; err: mistake is also put for the misconception or error made : mistakable, is liable to be misconceived : mistakingly, errone- ously ; foolishly or falsely.

The towns, neither of the one side nor the other, willingly opening their

gates to strangers, nor stran- gers willingly entering for fear of being mistaken.

Sidney.

This dagger hath mistaken, for lo ! the sheath Lies empty on the back of Montague, The ooint missheathed in my daughter's bosom

Sltakipeare.

England is so idly kinged : — You are too much mistaken in this king : Question, your grace, the late ambassadors, How modest in exception, and withal How terrible in constant resolution. Id.

Seeing God found folly in his angels ; men's judgments, which inhabit these houses of clay, can- not be without their mistaking. Raleigh.

The most general enmities and oppositions to good arise from mistahingt. Bp. Hall.

He never shall find out fit mate ; but such As some misfortune brings him, or mistake. Milton.

Look, nymphs, and shepherds, look, What sudden blaze of majesty,

Too divine to be mistook. fd.

It is not strange to see the difference of a third part in so large an account, if we consider how dif- ferently they are set forth in minor and less mistake- able numbers. . Br

Mistaken Brutus thought to break their yoke, But cut the bond of union with that stroke.

Waller.

The error is not in the eye, but in the estimative faculty, which mittakingly concludes that colour to belong to the wall which' does indeed belong to the ,,biect. Boyle on Colours.

Infallibility is an absolute security of the under- standing from all possibility ot mittahe in what it believes! ™fo < ™-.

*These did apprehend a great affinity between their invocation of saints and the heathen idolatry, or else there was no danger one should be mistaken for the other. StiUi»nf*t*

This will make the reader very much mutate anc misunderstand his meaning.

Fancy passes for knowledge, and what is prettily said is mistaken for solid.

Those terrors are not to be charged upon religion, which proceed either from the want of religion, or superstitious mistakes about it. Fools into the notion fall, That vice or virtue there is none at all : Ask your own heart, and nothing is so plan 'Tis to mistake them costs the time and pain.

Servants mistake, and sometimes occasion misun- derstanding among friends. Su-i/l.

There are few, very few, that will own themselves in a miitahe, though all the world see them to be in downright nonsense. Id.

Where men are the most sure and arrogant, they are commonly the most mistaken, and have there given reins to passion, without that proper deliberation and suspense, which can alone secure them from the grossest absurdities. Hume.

MISTAKEN POIHT, a point on the west of Cape Race and east of Cape Pini, at the south- east point of the island of Newfoundland.

M (STATE7, v.a. Mis and state. To state wrongly.

They mistate the question, when they talk of press- ing ceremonies. Bp. Sounder™.*

MISTEACH', t>. a. Mis and teach. To teach wrong, or wrongly.

Such guides shall be set over the several congre- gations as will be sure to muteach them.

Saunderton.

The extravagancies of the lewdest life are the more consummate disorders of a mistaught or ne- glected youth. L' Estrange.

MISTEM'PER, v.a. Mis and temper. To temper ill ; to disorder.

This inundation of mistemptrtd humour Rests by you only to be qualified. Shoksfxare. MISTER, adj. Fr. mettier, trade. What mister means what kind of. Johnson. Obsolete.

The redcross knight toward him crossed fast, To weet what mister wight was so dismayed, There him he finds all senseless and aghast.

Spenser.

MISTERM', v. a. Mis and term. To term erroneously.

Hence banished, is banished from the world ; And world exiled is death. That banished Is death mittermed.

Shakipeare. Romeo and Juliet.

MISTIIINK', v. a. Mis and think. To think ill ; to think wrong.

How will the country, for these woful chances, Misthink the king, and not be satisfied ! Shaktpean.

We, the greatest, are muthovght For things that others do.

Id. Anthony and Clevpat-a.

Thoughts ! which how found they harbour in thy

breast, Adam ! Misthtmght of her to thee so dear ! Milto.*

MISTION, n. t. Lat mittui. The state of being mingled.

In animals many actions are mixt, and depend upon their living form as well as that of mutum, and though they wholly seem to retain unto the body, depart upon disunion. Bnme.

Both bodies do, by the new texture resulting from their motion, produce colour. Boyle on Colours.

*MISTLETOE, n. «. Sax. myr*eltan ; 3elg. mittel, bird-lime, and ran, a twig. A plant. See below.*

If snowe do continue, sheepe hardly that fare Crave mittle and ivie for them for to spare. Tusstr.

A barren and detested vale, you see it is : The trees, though Summer, yet forlorn and lean. Overcome with moss, and baleful misteltoe.

Missettoe proweth chiefly upon crab trees, apple trees, sometimes upon hailes. and rarely upon oaks ; the miveltfie whereof is counted vety medicinal : ever preen Winter and Summer, and beareth a white

glistering berry ; and it is a plant utterly differing from the plant upon which it groweth. Bacon.

All your temples strow

With laurel green, and sacred misletoe. Gay. MISTLETOE. SeeViscuai. The flower of the mistletoe consists of one leaf, which is shaped like a basin, divided into four parts, and beset with warts ; tbe ovary, which is produced in the female flowers, is placed in a remote part of the plant from the male flowers, and consists of four shorter leaves; this becomes a round berry full of a glutinous substance, enclosing a plain heart- shaped seed. This plant is always produced from seed, and is not to be cultivated in the earth, but will always grow upon trees ; whence the ancients, who thought it to be an excrescence on the tree without seed, accounted it a superplant. The manner of its propagation is said to be as fol- lows : the misletoe thrush, which feeds upon the berries of this plant in winter, when they are ripe, opens the seed from tree to tree; for the viscous part of the berry, which immediately surrounds the seed, sometimes fastens it to the outward part of the bird's beak, which to get disengaged of, he strikes his beak at the branches of a neighbouring tree, and leaves the seed sticking by this viscous matter to the bark, which, if it lights upon a smooth part of the tree, will fasten itself, and the following winter put out and grow : the trees on which this plant grows most readily are the apple, the ash, and some other smooth rind trees.

MISTRESS, n.s. Fr. maistresse. The fe- minine of master; a woman who possesses, governs, or is skilled in something : a contemptu- ous cognomen ; a concubine.

There had she enjoyed herself while she was mis- tress of herself, and had no other thoughts but such as might arise out of quiet senses. Sidney.

Here stood he in the dark, his sharp sword out, Mumbling of wicked charms, conjuring the moon To stand 's auspicious mistress.

\ Shakspeare. King Lear.

Let us prepare Some welcome for the mistress of the house.

Shakpeare.

He'll make your Paris Louvre shake for it, Were it the mistress court of mighty Europe. Id. I will not charm my tongue ; I'm bound to speak ; My mistress here lies murthered in her bed.

Id. Othello.

Look you pale, mistress, Do you perceive the ghastness of her eyes ?

Shakspeare.

Rome now is mistress of the whole world, sea, and land, to either pole. Ben Jonson's Catiline.

They would not suffer the prince to confer with, or very rarely to see, his mistress, whom they pre- tended he should forthwith marry. Clarendon.

Wonder not, sovereign mistress ! if perhaps Thou can'st, who art sole wonder ; much less arm Thy looks, the heaven of mildness, with disdain.

Mi/ton.

This is indeed the highest philosophy ; the true culture and medicine of our soul ; the true guide of life, and mistress of action ; the mother of all virtues.

Barrow.

Ages to come, that shall your bounty hear, Will think you mistress of the Indies were ; Though straiter bounds your fortune did confine, In your large heart was found a wealthy mine.

Waller.

A letter desires all young wives to make them- selves mistresses of Wingate's Arithmetic. Adduon.

Those who assert the lunar orb presides O'er humid bodies, and the ocean guides ; Whose waves obsequious ebb, or swelling run With the declining or increasing moon ; With reason seem her empire to maintain As mistress of the rivers and the main.

Blackmore.

What a miserable spectacle, for a nation that had been mistress at sea so long ! Arbuthnot on Coins.

Nice honour still engages to requite False mistresses and proud with slight for slight.

Granville,

Erect public schools, provided with the best and ablest masters and mistresses. Swift.

Fame is a public mistress nope enjoys But, more or less, his rivals' peace destroys ; With fame, in just proportion, envy grows ; The man that makes a character makes foes.

Young.

Sweet Poll ! his doting mistress cries, Sweet Foil ! the mimic bird replies,

And calls aloud for sack. Cowper.

MISTRETTA, a large inland town of Sicily, in the Val di Demona, situated on a small river, about five miles from the great road from Paler- mo to Messina. , Population 6000. Fifty miles east by south of Palermo.

MISTRUST', n.s. & v. a.~\ Mis and trust.

MISTRUST'FUL, n. s. I Suspicion ; want

MISTRUSTFULNESS, n.s. V of confidence ;dif-

MISTRUST'FULLY, adv. i fidence : to mis-

MISTRUST'LESS, adj. J trust is to doubt;

suspect; disbelieve: the other derivatives follow

these senses.

Without him I found a weakness, and a mistrust- fulness of myself, as one strayed from his best strength, when at any time I missed him. Sidney,

Will any man allege those human infirmities, as reasons why these things should be mistrusted or doubted of? Hooktr.

He needs not our mistrust, since he delivers Our offices, and what we have to do, To the direction just. Shakspeare. Macbeth.

By a divine instinct, men's minds mistrust Ensuing danger ; as by proof we see, 1'he waters swell betore a boisterous storm.

Shakspeart I hold it cowardice

To rest mistrustful, where a noble heart Hath pawned an open hand in sign of love. Id. Where he doth in stream mistrustless play, Veiled with night's

robe, they stalk the shore abroad.

Carew.

How shall I depend on him, for raising my body from dust, and saving my soul, if I mistrust him for a crust of bread towards my preservation 1

Bp. Hall.

Fate her own book mistrusted at the sight, On that side war, on this a single fight. Cowley. Not then mistrust, but tender love, injoins That I should mind thee oft ; and mind thou me !

Milton.

The rehttion of a Spartan youth, that suffered a fox concealed under his robe to tear out his bowels, is mistrusted by men of business. Browne.

Here the mistrustful fowl no harm suspects, So safe are all things which our king protects.

Waller.

The generous train complies, Nor fraud mistrusts in virtue's fair disguise.

Pope.

MIS 767

How aften didst thou pledge and vow,

Thou wad for aye be mine ! And my fond heart, itsel sae true,

It ne'er mistrusted thine. Burnt.

MISUND'ERSTAND, v. a. > Mis and un-

MISUND'EBSTANDING, n. s. \ derstand. To mistake ; misinterpret ; misconceive ; difference of understanding : dissension ; disagreement.

The words of Tertullian, as they are by them alledged, are misunderstood. Hooker.

He failed in distinguishing two regions, both called Eden, and altogether misuiulerstood two of the four rivers. Raleigh.

Sever the construction of the injury from the

MIT

*Every thing begun with reason. Will come by ready means unto his end : But things miscounselled must needs muv*nd.*

HublerJ.

In this maze still wandered and mitwent, For heaven decreed to ccnceal the same, To make the miscreant more to feel his shame.

Fairfax

MI'SY, n.i. Gr. pt

Misy contains no vitriol but that of iron : it is a very beautiful mineral, of a fine bright yellow colour, of friable structure, and resembles the golden marca- sites. HiiL

There is a great misunderstanding betwixt the cor- puscular philosophers and the chemists. Boyle.

This, if it be neglected, will make the reader very much mistake and misunderstand his meaning.

Locke.

In vain do men take sanctuary in such misunderstood expressions as these ; and, from a false persuasion that they cannot reform their lives, never go about it.

South.

Were they only designed to instruct the three suc- ceeding generations, they are in no danger of being misunderstood. Addison.

MITCHELSTOWN, a post town of Ireland,

. – .- in the county of Cork, 102 miles from Dublin,

*point of contempt, imputing it to muunderstand.ng or It has a coUege for {he support Qf twfilve ^^*

' ' g^™" and., J"JlT. gentlewom«n> who have*

£.40 ffSf jS? handsomeuapartmeDt3, and a chaplain at £100 a year, with a house. Divine service is daily performed in a neat chapel be- longing to the college : the whole was founded by the late earl of Kingston. Here is

also a most magnificent seat of lord Kinzsborough. Near this town, at the foot of one of the Galtee moun- tains, is the cave of Skeheenrinky, which is de- scribed by Arthur Young in his Irish Tour, and

preferred by him to the famous cave in the peak

isunaerstood. Adduon. of DerbyShire, as it was by lord Kingsborough

The example of a good man is the best direction to the Grot d>Aucel in Burgundy. Fairs are

we can follow in the performance of our duty ;• the . i 1 „ .• „ oru. TI „ j ., £ w v.

most exact rules and precepts are subject to be mis- he”” °” ‘ [he 30th W an 12t£ November.*

*understood ; some at least will mistake theirmeaning. _ MITE, «• *• Fr. mU ; Belg. migt, myte ;*

Roger’* Sermons Teut- meit> *****; all» P^aps, of Goth. mi/A,*

Roger’*

Servants mistake, and sometimes occasion misun- derstandings among friends. Swift.

MISUSE’, v.a. 3 Fr. metuser, mis and use.

MISU’SAGE, n. s. i To treat or use improperly; i” abuse : misusage is ill usage; bad treatment. You misuse the reverence of your place,

As a false favorite doth his prince’s name

In deeds dishonourable. Shakspeare. Henry IV.

Upon whose dead corpse there was such misuse, Such beastly, shameless transformation, By those Welshwomen done, as may not be Without much shame retold. Shaktpeare.

It hath been their custom shamefully to misuse the fervent zeal of men to religious arms, by converting the monies that have been levied for such wars to their own services. Raleigh.

Bacchus, that first from out the purple grape Crushed the sweet poison of misused wine. Mi/ton.

How names taken for things mislead the under- standing, the attentive reading of philosophical wri- ters would discover, and that in words little sus- pected of any such misuse. Locke.

Machiavel makes it appear, that the weakness of Italy, once so strong, was caused by the corrupt

minute. A small insect; smalt coin or particle; any thing very small.

And he saw a certain poor widow casting in thither two mites : and he said, Of a truth I say unto you, that this poor widow hath cast in more than they all.

Luke zxi. 43.

Through any man's corn they do bite, They will not allow him a mite. Tusser.

Virginity breeds mites, like a cheese consumes itself to the very paring, and dies with feeding its own stomach. Shaktpeart.

Are you defrauded, when he feeds the poor ? Our mite decreases nothing of your store. Dtyden.

The idea of two is as distinct from the idea of three, as the magnitude of the earth from that of a miif. Locke.

Put blue-bottles into an ant-hill, they will be stained with red, because the ants thrust in their stings, and instil into them a small mitt of their stinging liquor, which hath the same effect as oil of vitriol. Roy on the Creation.

The polished glass, whose small convex

Enlarges to ten millions of degrees

The mile invisible else, of nature's hand

Least animal. Philip.*

The Seville piece of -eight contains thirteen penny

practices of the papacy, in depraving and misusing weights twenty-one grains and fifteen mites, of which

religion. South. there are twenty in the grain, of sterling silver, and

We have reason to humble ourselves before God js in value forty-three

English pence and eleven

by fasting and prayer, lest he should punish the mis- hundredths of a penny. Arbutknot.

use of our mercies, by stopping the course of them. Did I e'er my mi<« with-hold

Atterbury. From the impotent and old T &nf«.

MISWEEN', v n. Mis and ween. To mis- MITE, in zoology. See ACARUS.

judge; to distrust. Obsolete. MITE, in Jewish antiquity, a small piece of

money mentioned in Luke xu. 59, and xxi. J.

. * _ * . • •* * .»

times things more unknown shall show, i should witless man so much mitween ?

I 'tttcr

Why then

MISWEND', v. n. to go. To go wrong.

Faerie Qneenc.

In the Greek it is Aiirriv, and is one half of the , and therefore one-eighth of the Ro-

Mis Obsolete.

and "Sax. peni>an, man denarius, or of seveupence-halfpenny of oar

money.

MIT

768

MIT

MITELLA, bastard American sanicle, a ge- nus of the digynia order and decandria class of plants ; natural order thirteenth, succulentae : CAL. quinqviefid : COR, pentapetalous, and in- serted into the calyx ; petals pinnatifid : CAPS. unilocular and bivalved, with the valves equal. There

are four species, all natives of North America, rising with annual herbaceous stalks, from five or six to eight or nine inches, and pro- ducing spikes of small whitish flowers, whose petals are fringed on their edges. They are ea- sily propagated, by parting their roots, in a shady situation and soft loamy soil.

M1THRA, or MITHRAS, a god of Persia and Chaldea, supposed to be the sun. He is generally represented as a young man, whose head is co- vered with a turban after the manner of the Per- sians. He supports his knee upon a bull that lies on the ground, and one of whose horns he holds in one hand, while with the other he plunges a dagger into his neck . The grand festi- val of Mithras was celebrated six days in the middle of the month of Mihir, which began Sep- tember 30th aud ended October 30th. On these days only was it lawful for the kings of Persia to get drunk and dance.

MITHRIS, FEASTS OF, in antiquity, feasts cele- brated among the Romans in honor of Mithras. The most ancient instance of this worship among the Romans occurs in an inscription dated in the third consulate of Trajan, or about A. D. 101, on an altar thus inscribed, Deo Soli Mithrae.

But the worship of Mithras was not known in Egypt and Syria in the time of Origen, who died about A. D. 263. The worship of Mithras was proscribed at Rome in 378 by order of Gracchus prefect of the praetorium. According to M. Freret, the feasts of Mithras were derived from Chaldea, where they had been instituted for ce- lebrating the entrance of the sun into the sign Taurus.

MITH'RIDATE, n. s. Fr. mithridate.

Mithridate is one of the capital medicines of the shops, consisting of a great number of ingredients, and has its name from its inventor Mithridates, king of Pontus. Quincy.

But you of learning and religion,

And virtue, and such ingredients, have made A mithridate, whose operation

Keeps off, or cures, what can be done or said.

Donne.

MITHRIDATE is a composition, in form of an electuary, supposed to serve either as a remedy or a preservative against poisons. See PHAR- MACY. It takes its name from the inventor, Mi- thridates VII. king of Pontus. The recipe was found in his cabinet, written with his own hand, and was carried to Rome by Pompey. It was translated into verse by Damocrates, a

famous physician; and afterwards by Galen, from whom we have it ; though it is supposed to have under- gone considerable alterations since the time of its royal prescriber.

MITHRIDATE MUSTARD. See THLASPI.

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LONDON ENCYCLOPAEDIA.

VOL. XV.

MITHRIDATES TO NOX.

J. H addon, Printer, Castle Street, London.

THE

SCIENCE, ART, LITERATURE, AND PRACTICAL MECHANICS,

COMPRISING A

POPULAR VIEW OF THE PRESENT STATE OF KNOWLEDGE.

ILLUSTRATED BY

NUMEROUS ENGRAVINGS, A GENERAL ATLAS,

AND APPROPRIATE DIAGRAMS.

Sic oportet ad librum, presertim miscellauei geuerif, legendum accedere leetorem, lit solet ail coiiviviuui conviva cirilii. Coorivator unnititur omnibui satisfacere ; ft tamen si quid appoiiitur, quod hujus ant illius palato non retpondeat, et hie et ille urbane dissimulaut, el alia fercula probant, ne quid contristent comrivatorem.

A'reader should sit down to a book, especially of the miscellaneous kind, as a well-behaved visitor does to a banquet. The master of the feast exerts himself to satisfy his guests ; but if, after all his care and pains, something should appear on the table that does not suit this or that person's taste, they politely pass it over without notice, and commend other dishes, that they may not distress a kind host. Translation.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITANA,

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

IN TWENTY-TWO VOLUMES. VOL XV.

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1837.

MITHRIDATES, the name of seven kings of Pontus. See PONTUS.

MITHRIDATES VII., suruamed Eupator the Great, succeeded to the throne at the age of eleven years, about A. A. C. 123. The beginning of his reign was marked by ambition, cruelty, and artifice. He murdered his own mother, who had been left by his father coheiress of the kingdom; and he fortified his constitution by antidotes against the poison with which his enemies at court might attempt to destroy him. He early inured his body to hardship, and employed himself in the most manly exercises, often remaining whole months in the country, and mak-ing frozen snow and the earth the place of his repose. Ambitious aud cruelˆhe spared no pains to acquire power and dominion. He murdered the two sons whom his sister Laodice had by Ariarathes king of Cappadocia, and placed one of his own children, only eight years old, on the throne. These proceedings alarmed Nicomedes king of Bithynia, who had married Laodice the widow of Ariarathes. He suborned a youth to be king of Cappadocia, as the third son of Ariarathes; and Laodice was sent to Rome to impose upon the senate, and assure them that her third son was now alive , and that his claim to the kingdom of Cappadocia was just. Mithridates, on his part, sent to Rome Gordius the governor of his son ; who solemnly declared before the Roman people, that the youth who sat on the throne of Cappadocia was the third son and lawful heir of Ariarathes, and that he was supported as such by Mithridates. The Roman senate, to settle the dispute, took Cappadocia from Mithridates, and Paphlagonia from Nicomedes. These two kingdoms, being thus separated from their original possessors, were presented with their freedom and independence; but the Cappadocians refused it, and received Ariobarzanes for king. Such were the first seeds of enmity between Rome and the king of Pontus. Mithridates, to destroy their power in Asia, ordered all the Romans in his dominions to be massacred in one night ; when no fewer than 150,000, according to Plutarch, or 80,000, as Appian mentions, were made the victims of his cruelty. This called aloud for vengeance. Aquilius, and soon after Sylla, marched against Mithridates with a large army. The former was made prisoner ; but Sylla obtained a victory over the king’s generals ; and another decisive

engagement rendered him master of all Greece, Macedonia, Ionia, and Asia Minor. This ill fortune was aggravated by the loss of about 200,000 men, who were killed in the several engagements that had been fought ; and Mithri-Vor. XV.

dates, weakened by repeated ill success by sea and land, sued for peace; which he obtained on condition of defraying the expenses which the Romans had incurred by the war, and of remaining satisfied with his paternal possessions. But Mithridates not long after took the field with an army of 140,000 infantry and 16,000 horsemen, which consisted of his own forces and those of his son-in-law Tigranes king of Armenia. With such a numerous army he soon made himself master of the Roman provinces in Asia ; as the Romans, relying on his fidelity, had withdrawn the greatest part of their armies. But the news of his warlike preparations were no sooner heard than Lucullus marched into Asia, and blocked up the camp of Mithridates, who was then besieging Cyzicus. The Asiatic monarch escaped, and fled into the heart of his kingdom. Lucullus pursued him, and would have taken him prisoner after a battle, had not the avarice of his soldiers prevented. The appointment of Glabrio to the command instead of Lucullus, was favorable to Mithridates, who recovered the greatest part of his dominions. The sudden arrival of Pompey, however, soon put an end to his victories. A battle was fought near the Euphrates by moonlight, and a universal overthrow ensued. Mithridates, bold in his misfortunes, rushed through the thickest ranks of the enemy at the head of 800 horsemen, 500 of whom perished in the attempt to follow him. He fled to Tigranes, but that monarch now refused him an asylum. He however found a safe retreat among the Scythians; and though destitute of power, friends, and resources, yet he still meditated the overthrow of the Roman empire. But his wild projects were rejected by hjs followers, and he sued for peace. Pompey declared that, to obtain it, Mithridatas must ask it in person. Scorning to trust to his enemy, he resolved to conquer or die ; but his subjects refused to follow him, and revolting, made his son Pharnaces king, who, according to some, ordered him to be put to death. This unnatural treatment broke the heart of Mithridates; he obliged his wife to poison herself, and attempted to do the. same. But the frequent antidotes he had taken in youth fortified his constitution against the poison ; and, when this failed, he attempted to stab himself. The blow not proving mortal, a Gaul, at his own request, gave him the fatal stroke, about A. A. C. 64. Such was the miserable end of a man, who, according to Roman authors, proved a more powerful and indefatigable adversary to Rome than Pyrrhus, Perseus, Antiochus, 04

even Hannibal himself. Mithridates has been commended for his virtues, and censured for his vices. As

a commander he deserves tlie most unbounded npplaust; ; and it creates admiration to see him waging war, with such success, during so many years, against the most powerful people on earth, led to the field by a Sylla, a Lucullus, and a Potnpey. The greatest rejoicings took place in Rome and in the Roman armies at the news of his death : twelve weeks were appointed for pub-lic thanksgivings to the gods; and Pompey, who had sent the rirst intelligence of his death to Rome, and partly hastened his fall, was rewarded witli uncommon honors. It is said that Mithridates conquered twenty-four nations, whose different languages he knew, and spoke with the same fluency as his own. He was acquainted with the Greek, language, and even wrote in it a treatise on botany. His skill in physic is well known. Superstition as well as nature had unit-ed to render him great ; and Justin says his birth was accompanied by the appearance of two large comets, for seventy days successively, whose splendor excelled that of the meridian sun.

MITHRIDATICUM BELLUM, the Mithridatic war, one of the longest and most celebrated wars ever carried on by the Romans against a foreign power.

MIT'IGATE, v.a. > Fr. mitiger; Lat. miti-MITIOA'TION, n. *. \go. To temper; allay; alleviate: mitigation, abatement, or qualification, of that which is harsh, penal, or painful.

Mishaps are mastered by advice discreet, And counsel mitigates the greatest smart.

Faerie Queene.

We could greatly wish that the rigour of their opinion were allayed and mitigated. Hooker.

They caused divers subjects to be indicted of sun-dry crimes ; and when the bills were found they committed them, and suffered them to languish long in prison, to extort from them great fines and ransoms, which tiiey termed compositions and mitiga-tMiu. Bacon's Henry VII.

I undertook

Before thee ; and, not repenting, this obtain

Of right, that 1 may mitigate their doom.

On me derived. Milton’t Paradise Lost.

A man has frequent opportunity of mitigating the fierceness of a party, of softening the envious, quiet-ing the angry, and rectifying the prejudiced.

Addisons Spectator.

Since that period, remedies have been applied to it, if not of permanent cure, at least of temporary mitigatim. Canning.

MITRA, in Roman antiquity, a cap or covering for the head, worn by the ladies, and sometimes by the men ; but it was looked upon as a murk of effeminacy in the last, especially when it was tied upon their heads.

MITRE, n. s.) Fr. mitre ; Lat. mitra ; Gr.

MI’TRED, adj. 5/wrpa. An ornament or crown

for the head ; particularly a priestly or episcopal

crown : hence a carpenter’s pointed joint, i. e.

like the acute-angled ornaments of a mitre.

Nor Pantheus, thee, thy mitre, nor the bands Of awful Phoebus, saved from impious hands.

Dryden.

ˆfitrfd abbots, among us, were those that were

f vi ‘ < pt from the diocesan’s jurisdiction, as having

⬛⬛ifi n theiˆown precincts episcopal authority, and

l > ’-i.’\ lords in parliament werecalled abbots sovereign.

At/life’s Parergoit.

Shall tlie loud herald our success relate, Or mitred priest appoint the solemn day 1 Prior. Bishopricks or burning, mitres or faggots, have been the rewards of different persons, according as they pronounced these consecrated syllables, or not.

Watts.

A MITRE is a sacerdotal cap pointed and cleft at top, worn by bishops and certain abbots on solemn occasions. The high-priest among the Jews wore a mitre, as did also the inferior priests.

MITRE, in architecture, is an angle that is just 45►►, o: halt" a right one. If the angle be a quarter of a right angle, they call it a half mitre. To describe such angles, they have an instrument called the mitre square ; with this they strike mitre lines on their quarters or battens ; and for despatch they have a mitre box, as they call it, which is made of two pieces of wood, each about an inch thick, one nailed upright on the edge of the other ; the upper piece has the mitre lines struck upon it on both sides, and a kerf to direct the saw in cutting the mitre joints readily, by only applying the piece into this box.

MITRE is used by the writers of the Irish history for a sort of base money, which was very common there about 1270, and for thirty years before and after. There were several other pieces called, according to the figures impressed upon them, rosaries, lionades, eagles, &c. They were imported from France and other countries, and were so much below the proper currency, that they were not worth a halfpenny each. They were at length decried in 1300, and good coins struck in their place. These were the first Irish coins in which the sceptre was left out. They were struck in the reign of Edward, the son of Henry III., and are still found among the other antiquities of that country. They have the king's head in a triangle full-faced. The penny, when well preserved, weighs 22 grs. ; the halfpenny 101 grs.

MITROWITZ, a town on an island in live ri-ver Save in the Austrian states of Sclavonia. It is the chief place of the frontier district of Peter Waradein, and has a good trade in hides and cattle. It was ceded to Austria by the Turks, in 1699. Population 3500. Sixteen miles S. S. W. of Peter Waradein.

MITTAU, or MIETAU, the capital of the government of Courland, in European Russia, is situated on the river Aa, in the province of Semi-gallia. It has above 12,000 inhabitants, of whom nearly half are

Germans, and about 1000 Jews. rlhe town has generally an uninviting aspect ; and the ramparts are fallen into decay. The churches are a Catholic, a Calvinist, and two Lutheran, in only one of which the service is performed in Lettonian, the language of the country : in the others the German is used. ,►► The public school of Mittau is the principal in Courland : it has also an academical gymnasium, founded by the duke of Courland, in 1775, but both like the ancient castle are in a' decayed state. The manufactures are linen, stockings, leather, and soap. This town was for several years during his exile the residence of Louis XVIII. of France. It is 140 miles north of Konigsberg, and fifty-six west of Riga.

MITTENS, n. s. Kr. mitaine ; Lat. manicu. Gloves without fingers.

December must be expressed with a horrid aspect, as also January clad in Irish rug, holding in furred mitteia the sign of Capricorn.

Peacltam on Drawing.

MITTENT, adj. Lat. m'titem. Sending out or forth.

The fluxion proceedeth from humours peccant in quantity or quality, thrust forth by the part mittent upon the inferior weak parts. Wiieman's Surgery.

MITTENWALD, the capital of the county of Wenderfels, Bavaria, is situated on the Iser, and has 1800 inhabitants. Thirteen miles N. N. W. of Innspruck.

MITTERBURG, a town of the Austrian kingdom of Illyria, has a castle and a rock, and a population of 1650. Thirty miles southeast of Trieste.

MITTIMUS, n. ►►. Lat. mittimus, mitto, to send. A warrant by which an offender is committed to prison.

The evil spirit hath said the evening before, to-morrow shalt thoube with me ; and now Saul hasteth to make the devil no liar. Rather than fail, he gives himself his own mittimus. Bp. hall.

MITTIMUS, in law, has two significations: 1. A writ for removing or transferring of records from one court to another. 2. A precept or command in writing, under the hand and seal of a justice of the peace, directed to the gaoler of some prison, for the receiving and safe keeping of an offender charged with any crime, until lie be delivered by due course of law.

MITTWEYDA, a town of Saxony, in the circle of Leipsic, has manufactures of cotton, muslin, linen, hats, and worsted stockings. Population 3800. Old Mittweyda is a small adjoining village. Thirty-two miles west by south of Dresden. Both have often suffered by fire.

MITURE, a large river of the Caraccas, entering the Caribbean Sea, near the mouth of the gulf of Maracaibo, in lat. 11►► 27' N. There is a settlement of the same name on its banks.

MITYLENˆ, MITYLEKE, or MYTELENE, in ancient geography, a powerful and affluent city, capital of the island of Lesbos. It received its name from Mitylene, thn daughter of Macareus, a king of the country. It is greatly commended by the ancients for the stateliness of its buildings and the fruitfulness of its soil, but more particularly for the great men it produced :. Pit-tacus, Alcaeus, Sappho, Terpander, Theophanes, Hellanicus, See., were all natives of Mitylene. It was long a seat of learning ; and, with Rhodes and Athens, had the honor of having educated many of the great men of Rome and Greece. In the Peloponnesian war the Mityleneans suffered greatly for their revolt from Athens ; and in the Mithridatic wars they had the boldness to resist the Romans, and disdain the treaties which had been made between Mithridates and Sylla. It is now called Metelin.

MITZLER (Laurence Charles de Kolof), a German musical composer of eminence, was born at Vettlesheim in 1711. He received his education at Anspach, and studied music under Erhman and Carby. In 173i we find him at the university of Leipsic, where he made a respect-

able proficiency in mathematics and natural philosophy, and after a residence of twelve years gave public lectures in these branches of science, lie published a treatise on the claims of music to be considered as a science, and lectured upon it. At length he accompanied a Polish nobleman to Warsaw, and grew into so great favor at court as to obtain from the king a patent of nobility. Other works of his are, a Musical Library, or an Analysis of Books and Writings on Music, Leipsic, 3 vols. published between the years 1738 and 1754; A Musical Illustration of the War carried on by the emperor Charles VI., against the Allied Forces, Witten-berg, 1753; The Elements of Thorough Bass, Leipsic, 1739; The Musical Oculist, &c., 1740; and a German Translation of Fux's Gradus ad Parnassum, 1742. His death took place in

1788.

MIX', v. a. & v. n. ˆ Teut. mischin ; Lat. MIX'TION, n. ►►., fmisceo. To mingle ; unite MIX'TURE. j to something else ; form

of different substances or materials ; to be united in one substance : raixtion and mixture mean, intromission ; the art of mixing ; state of

being mixed ; or the mass formed ; in particular that which is added or mixed.

A mired multitude went up with them, and flocks and herds. Exod. xii. 38.

Ephraim hath Mixed himself among the people.

Has. vii. 8.

He sent out of his mouth a blast of fire, and out of his lips a flaming breath, and out of his tongue he cast out sparks and tempests ; and they were all mixed together. 2 Esdr.

0 happy mixture, wherein things contrary do so qualify and correct the one the danger of the other's excess, that neither boldness can make us presume, as well as we are kept under with the sense of our own wretchedness ; nor, while we trust in the mercy of God through Christ Jesus, fear be able to tyrannise over us ! Hooker.

Brothers, you mix your sadness with some fear ; This is the English not the Turkish court.

Shakspeare.

Come, phial! ???

What if this mixture do not work at all ? Id.

1 have chosen an argument, mixt of religious and civil considerations ; and likewise mitt between contemplative and active. Bacon's Holy War.

To raise desert and virtue by my fortune, Though in a low estate, were greater glory, Than to mix greatness with a prince that owns No worth but that name only. Masringer.

Others, perceiving this rule to fall, short, have pieced it out by the mirtion of vacuity among bodies, believing it is that which makes one rarer than another. Digby on Bodies.

She turns, on hospitable thoughts intent ; What choice to choose for delicacy best, What order, so contrived as not to mir Tastes, nor well joined, inelegant, but bring Taste after taste, upheld with kindest change.

Miltoii.

But is there yet no other way, besides These painful passages, how we may come To death, and mix with our connatural dust ?

H.

Air, and ye elements, the eldest birth Of nature's womb, that in quaternion run Perpetual circle, multiform ; and mi* And nourish all things. 14.

They are not to be lightly passed over as elementary or subterraneous mirtion*. Browne.

Neither can God himself be otherwise understood, than as a mind free and disentangled from all corporeal mixtures, perceiving and moving all things.

StiUi*gfle*t.

Cicero doubts whether it were possible for a corn-

been the same with Menes, the fust king of Egypt. See EGYPT. Hence

MIZRAIM, or MISRAIM, is used in scripture to denote the Higher and Lower EGYPT, which see. It sometimes occurs singular, Mazor : 2 Kings xix. ; Isaiah xix. ; Micah vii.

MIZ'ZEN, n. s. Dan. and Swed. mesan ;

munitv to exist, that had not a prevailing mixture of .

Setv in its constitution. Addisons Freeholder. Ital. mazana ; Span, mezana; Belg. buaan; Fr.

While we live in this world, where good and bad batennc. The mast nearest a ship's stern, men are blended together, and where there is

also a The miszen is a mast in the stem or back part of a

mixture of good and evil wisely distributed by God, ship : in some large ships there are two such masts ;

that standing next the main mast is called the main mizzen, and the other near the poop the bona-venture missen: the length of a mizzen mast is half

by’thefc ►►’&;.►►. convetl the aliment into an animal that of the main mast, or the same with that of the

Arbuthnot. main topmast from the quarterdeck, and the length of the mizzen topmast is half that. Bailey.

A commander at sea had his leg fractured by the fall of his mizxen topmast. Wiseman ‘►► Surgery.

MIZ’ZLE, or MISTLE, v. n. From MIST, which see. To rain in small or dew-like drops.

A woman of fashion who is employed in remarks upon the weather, who observes from morning to

to serve the ends of his providence

Atterbury’s Sermon*

Those liquors are expelled out of the body, which, y the liquid

I, by baleful furies led, With monstrous mixture stained my mother’s bed.

Pope.

The best punch depends on a proper mixture of sugar and lemon. Shenstone.

MIXTURE is a compound of several different bodies in the same mass. Simple mixture con-

sists only in the simple apposition of parts of noon tnat it is likely to rain, and from noon to night

different ‘bodies to each other. Thus, when powders of different kinds are rubbed together, the mixture is only simple, and each of the powders retains its particular characters. In like man-ner, when oil and water are mixed together, though the parts of both are confounded, so that the liquor may appear to be homogeneous, we cannot say that there is any more than a simple apposition of the parts, as the oil and water may very easily be separated. But the case is very different when bodies are chemically mixed ; for then one or both bodies assume new properties, and can by no means be discovered in their proper form without a particular chemical process adapted to this purpose. Hence chemical mixture is attended with many phenomena which are never observed in simple mixtures, such as heat, effervescence, &c. To chemical mixture belongs the union of acids and alkalies, the amalgamation of metals, solution of gums, &c., and upon it depend many of the principal operations of chemistry.

MIXTURE, in pharmacy, a medicine which differs from a julep in this respect, that it receives into its composition not only salts, extracts, and other substances dissoluble in water ; but also earths, powders, and such substances as cannot be dissolved.

MIZMAZE, n. s. Of MAZE, reduplicated. A cant word to express a maze, labyrinth, or any thing confused.

Those who are accustomed to reason have got the true key of books, and the clue to lead them through the mizmuxe of variety of opinions and authors to truth. Locke.

that it spits, that it mizzles, that it is set in for a wet evening ; and, being incapable of any other discourse, is as insipid a companion, and just as pedantic, as he who quotes Aristotle over his tea, or talks Greek at a card-table. B. Thornton.

MNEMONICS, or artificial memory, had its advocates and professors in the ancient world. Herodotus tells us it was accurately taught and practised in Egypt; whence it travelled to Greece. Chiron, the astronomer, we know, also arranged the stars upon a method of this kind twelve centuries before Christ. The Romans, likewise, cultivated this art with success. ††† Cic. de Rhet. lib. iii., and de Oral. lib. ii.;

Quint. Inst. Orat. lib. xi.

In modern times artificial memory has been elaborately treated by Dr. Grey, in his well known Memoria Technica. We have been favored, for the use of this work, with a commi>- nication from Mr. Todd, of Winchester, accompanying his splendid Historical Tablets and Medallions, 4to., founded on the principle, but exhibiting much more simplicity than Dr. Grey's scheme. This author quotes a happy passage from Addison, as suggesting the original idea of his work.

' There is one advantage,' says that great writer, Dialogues upon Ancient Medals, ' that seems to me very considerable, which is the great help to memory one finds in medals : for my own part, I am very much embarrassed in the names and ranks of the several Roman emperors,

and find it difficult to recollect upon occasion the different parts of their history ; but your me-dallists, upon the first naming of an emperor,

MIZQUE, a p_rovinceˆ in the government of will immediately tell you his age, family, and

life. To remember where he enters in the succession, they only consider in what part of the cabinet he lies; and, by running over in their thoughts such a particular drawer, will give you an account of all the remarkable parts of his reign.' But this is not all. ' For this too,' says the same author, ' is an advantage medals have over books ††† that they tell their story much quicker, and sum up a whole volume in twenty

Santa Cruz de la Sierra, Peru, bounded south by the province of Yamparaes, south-west by that of Charcas, west by that of Cochabambas, and north by the Andes.. It is of hot temperature, and produces wheat, maize, pulse, sugar-cane, and wine. Population 62,000. The capital is a decayed town of the same name.

MIZRAIM, or MISRAIM, the second son of Ham, and grandson of Noah ; supposed to have

M >’ KM 0-?⬚⬚ llTSo

tj/. y. Cabinet ot’ <^4*\w<-i<jJx>/\? JCey .

Yumtrical Keif.

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MNEMONICS.

or thirty reverses. They are indeed the best epitomes in the world, and let you see, with one cast of an eye, the substance of above a hundred pages. Another use of medals is, that they not only show you the actions of an emperor, but at the same time mark out the year in which they were performed. Every exploit ha* its date set to it. A cabinet of medals is a body of history.’ ‘ It was the conviction of these facts,’ continues Mr. Todd, ‘ united with the preceding observations, that suggested the idea upon which the following tablets are founded. The theory is simply this : ⬚⬚⬚ Instead of a large room or building, which, as we have already explained, was formerly made use of for this purpose, there is a cabinet or associating key, Plate MNEMONICS, fig. 1, consisting of nine distinct parts, arranged and disposed in order. Each of these parts, or tablets (as they are afterwards called), is distinguished by its peculiar color, and subdivided into twelve equal squares, or compartments, the whole of which are numbered in consecutive order. Each color occurs twice, but in such regular order, and so far separated, that no mistake can easily arise : five perfectly distinct co-lors, thus arranged, being less liable to confusion than nine not so well contrasted. They appear thus : ⬚⬚⬚

Blue. Brown. Green. Pink. Yellow.

12345 6789

Frequently repeat these, and revolve them in your thoughts, till you have obtained such an accurate knowledge of their relative situation, as to be enabled to run them over one after another without hesitation, and in any order that may be necessary. Impress them, by these means, so strongly upon the memory, that every part, and every single square in each part, may be perfectly familiar to the mind’s eye,

even long after the engraving is removed. These compartments are intended, as the subsequent plates will exemplify, for the reception of one or more series of medals, properly arranged, commemorating a regular succession of events, the names of sovereigns, or other historical subjects which you may wish to remember, with the date of each attached. And it will afterwards be found almost impossible, when reviewing the several parts and subdivisions of this cabinet or key, not to associate the medal, together with its inscription, previously annexed to each particular square. A very few repetitions, with ordinary attention, will be found sufficient to impress the series al-most indelibly upon the memory.

‘ But we shall frequently find it necessary to know and preserve something more than the mere idea of things ; we shall wish for, 2. The ready and accurate remembrance of their dates : the accomplishment of which is usually found to be a very difficult and uncertain task. It will be generally admitted that there is the greatest difficulty in retaining numbers. They are like grains of sand, which will not cohere in the order in which we place them ; but by transmuting figures into letters, which easily cohere in every form of combination, we fix and retain numbers in the mind with the same ease and

certainty with which we remember words ; and if Janguage could have been so contrived, that the same word, or nearly the same word, which gave the name of a thing, should also have contained its date, there would have been little, if any, difficulty in the attainment.

‘ In the first place, then, it is necessary to learn perfectly the numerical key, Plate MNEMONICS, fig. 2, which, corresponding with the first part of the cabinet, consists of twelve squares, in each of which will be found its proper figure, together with one consonant, and one vowel, or diphthong.* These letters are to represent the figures to which they are respectively attached ; so that you may be able, at pleasure, to form any number into a technical syllable, or to resolve such a syllable already formed into the number which it stands for. Thus,

10 may be represented by az or by.

325 … tel or idu.

431 … jib or ota.

1491 …. afna or bana.

200 …. *eg.* 4000 …. oth.

and so for any other numbers.

Now, to remember the date of any single event in history or chronology, a word is formed, the beginning of which, being invariably the first syllable or syllables of the thing for which a date is sought, will, by frequent repetition, of course suggest the latter or chronological part, which is so contrived, by the method already explained, as to give the date. Thus, the Deluge happened in the year B. C. 2348 ; this is signified by the technical word Deleter ††† Del. standing for Dzuige, and etor for 2348. So, the emperor Constantine the Great removed the seat of em-pire to Constantinople, A. D. 328 ; for this you have the word Constanter ††† Constan. standing for CoNSTANtine, and ter for 328. A reference to the tablets will, it is hoped, clear up any little obscurity in this description.

‘ The situation or locality of any medal in the tablet, having already suggested the general and relative period of the event sought ††† which in-deed will often be sufficient for the occasion ††† the technical word will not fail to furnish the

* Note. ††† The diphthongs are to be considered but as one letter, or rather as representing only one figure. Note, also, that i/ may be pronounced as u-i, for the more easily distinguishing it from f ; as syt, 603, pronounced su’it. The letters are assigned to the figures somewhat arbitrarily ; but the following reasons, trifling as they are, may contribute to impress the series more deeply on the memory. Vowels ††† a, e, i, o, u, in order, naturally represent 1, 2, 3, 4, 5. The diphthongs represent the total of the two vowels of which they are composed, as au (composed of a 1, and u 5,) stands for 6; and so of the rest Consonants. ††† When they can be conveniently retained, the initials are made use of, as t for three, f four, s six, and n nine. The letter p is the emphatic letter in the Latin word sePtem, seven, and r may be easily remembered for eight. The first consonant b represents 1 , and *, being the Roman letter for 50, stands for 5. For the cipher, 0, you the two last letters of the alphabet, y and z. 100 there is g, and ih for J*tousand.

MNI (

particular year in which it happened. First, the tablet: then the square; and, lastly, the word which brings the date ; they are so linked

together, and have been so closely associated in your mind, from first to last, that it will be almost impossible to retain a separate idea of either, unconnected with the others. Those things which are first and always seen together, learnt together, and deposited together in the mind, will not be recollected, except in the same connexion : the memory will restore with equal readiness and fidelity that which was entrusted to it with so much care, and in such particular order. And to render this connexion more complete and. useful, as well as to shorten his first labor, the student should commit the technical words and lines to memory chiefly from the medals themselves, and occasionally repeat them with the tablets, either actually or mentally, before his eyes : for vision, or the sense of seeing, is to be considered throughout as the very essence of our system.'

We may add, there is an appropriate explanation to each series of tablets, and the reader is assured, by way of encouragement, that the whole may be perfectly learnt, without the aid of extraordinary abilities, in the space of a few days; and, what is more, that when once well learnt, and supported by occasional practice, it will never be forgotten.

MNEMOSYNE, in the mythology, the daughter of Ccelus and Terra. She married Jupiter, by whom she had the nine Muses. Mnemosyne signifies ' memory ;' and therefore the poets rightly called Memory the mother of the Muses, because it is to that mental endowment that mankind are indebted for their progress in science

MNIUM, marsh moss, a genus of the natural order of musci, and cryptogamia class of plants. The anthera.is operculated ; the calyptra smooth, the female capitulum naked and powdery, re-mote. There are .numerous species, of which several are natives of Britain ; but none have any remarkable property except the two following.

M. fontanum is an elegant moss, frequent in bogs, and on the borders of cold springs. It is from two to four inches high : the stalks are simple at the base, and covered with a rusty down ; but higher up are red, and divided into several round, single, taper branches, which proceed nearly from the same point. The leaves are not more than one-twelfth of an inch long, lanceolate and acute, of a whitish green color; and so thinly set that the red stalk appears between them. This moss, as it may be seen at a considerable distance, is a good mark to lead to the discovery'of clear and cold springs. Linnfe informs us that the Laplanders are well acquainted with this sign. Mr. Withering informs us that, wherever this moss grows, a spring of fresh water may be found without much digging.

M. hygrometricum, grows in woods, heaths, garden-walks, walls, old trees, decayed wood, and where coals or cinders have been laid. It is stemless, has tips inversely egg-shaped, noddins, and bright yellow. If the fruit-stalk is moistened at the base with a little water or

steam, the head makes three or four revolutions : if the head is moistened, it turns back again.

MO, or MOE, adj. Sc adv. Sax. ma, mane ; Goth, mar; jner; Scotch, mae. An old method of writing MORE, which see.

And if ye vouchsauf that it be so Telle me anon withouten wordes mo And I wol early shapen me therefore.

Chaucer. Cant. Tales.

With oxbows, and oxyokes, with other things mo, For oxteem and horse teem in plough for to go.

Timer.

Calliope and muses mo, Soon as your oaken pipe begins to sound Their ivory lutes lay by. Spenser.

Sing no more ditties, sing no mo, Of dumps so dull and heavy ;

The frauds of men were ever so, Since Summer first was leafy. Shakrpeare.

MOAB, in ancient geography, a country of Arabia Petraea; so called from Moab the son of Lot, to whose posterity this country was allotted by divine appointment, Deut. ii. 9. It was originally occupied by the Emims, a race of giants extirpated by the Moabites, ih. 10. Moab anciently lay to the south of Ammon, before Sihon the Amorite stripped both nations of a part of their territory, afterwards occupied by the Israelites, Numb. xxii. ; and then Moab was bounded by the Arnon on the north, the Asphal-tites on the west, the brook Zared and the mountains Abarhn on the east. See MAB.

MOAN, v. a., v. n., & n. s. Sax. mcenan, to grieve. To lament; express grief; grieve: as a substantive it means audible grief or lamentation ; a low sorrowful noise.

I have disabled mine estate, By shewing something a more swelling port Than my faint means would grant continuance ; Nor do I now make moan to be abridged From such a noble rate.

Shakspeare. Merchant of Venice. The fresh stream ran by her, and murmured her

moan* ; The salt tears fell from her, and softened the stones.

Shukspeare. Sullen moans, Hollow groans,

And cries of tortured ghosts. Pope's St. Cf cilia. The generous band redressive searched Into the horrors of the gloomy jail, Unpitied and unheard, where misery moans. Thornton.

MOAT, n. s. & v. a. Fr. matte ; Span, and Port. meta; barb. Lat. niota ; or, as Minsheu quaintly says, ' quod sit submota terra, et immersa aqua.' A canal or ditch round a building or enclosed grounds : to surround with such a canal.

The castle I found of good strength, having a great moat round about it, the work of a noble gentleman, of whose unthrifty son he had bought k.

Sidney?

I will presently to St. Luke's ; there at the moated Grange resides this dejected Mariana.

Shakspeare. Measure for Measure. The fortress thrice himself in person stormed ; Your valor bravely did the assault sustain, And filled the moot* and ditches with the slain.

Dryden.

An arm of Lethe, with a gentle flow, The palace moats, and o'er the pebbles creeps, Aud with soft murmurs calls the coming sleeps. Id.

MOAT, or ditch, in fortification. The brink of the moat, next the rampart, is called the scarp ; and the opposite one, the counterscarp. A dry moat round a large place, with a strong garrison, is preferable to-one full of water ; because the passage may be disputed inch by inch, and the besiegers, when lodged in it, are continually exposed to the bombs, granades, and other fire-works, which are thrown incessantly from the rampart into their works. In the middle of dry moats there is sometimes another small one, called cuneite ; which is generally dug so deep till they find water to fill it. The deepest and broadest moats are accounted the best: but a deep one is preferable to a broad one : the ordinary breadth is about twenty fathoms, and the depth about sixteen. To drain a moat that is full of water, they dig a trench deeper than the level of the water, to let it run off; and then throw hurdles upon the mud and slime, covering them with earth or bundles of rushes, to make a firm passage. See FORTIFICATION.

MOATAZALITES, or Separatists, a religious sect among the Turks, who deny all forms and qualities in the Divine Being; or who divest God of his attributes.

MOB, n. s. & v. a -\ Lat. mobile, moveable MOB'ILE, f (applied metaphorically

MOBIL'ITY, I to a crowd). The crowd;

MOB'LE, v. a. J a tumult: to overbear

with clamor: mobile (Fr. mobile) is also used for the crowd, but is a gallicism : mobility is used both in the literal sense of the power of being moved, activity or nimbleness; and for the populace, or crowd,' Moved with a feather, tickled by a straw.' To moble, written also mable, perhaps by a ludicrous allusion to the Yr.je m'habille, says Johnson, ' is to dress grossly or inelegantly.'

But who, oh ! who, had seen the mobled queen, Run barefoot up and down. Shakspeare. Hamlet.

Iron, having stood long in a window, being thence taken, and by acork balanced in water, where it may Lave a free mobility, will bewray a kind of inquietude.

Walton.

The present age hath attempted perpetual motions, whose revolutions might outlast the exemplary mobility, and out-measure time itself.

Browne's Vulgar Errouri.

She singled out with her eye as commander-in- chief of the mobility. Dryden's Dim Sebastian.

Dreams are but interludes, which fancy makes, When monarch reason sleeps, this mimick wakes ; Compounds a medley of disjointed things, A court of cobblers, and a mob of kings. Dryden.

The mobile are uneasy without a ruler, they are restless with one. L' Estrange.

Long experience has found it true of the unthinking mobile, that the closer they shut their eyes the wider they open their hands. South.

A cluster of mob were making themselves merry with their betters. ' Addison's Freeholder.

You tell, it is ingenite, active force, Mobility, or native power to move ; Words which mean nothing. Blackmore.

The Romans hail the advantage by the bulk of their slaps, and the fleet of Antiochus in the swiftness and mobility of theirs, which served them in great stead in the flight. .-h-bnihuot.

By this time T suppose you have ventured to take

your fingers out of your ears, being delivered from the deafening shouts of the most zealous mob that ever strained their lungs in the cause of religion.

Cowper's Letters.

MOBILE, a small country, post town, and port of entry, Alabama territory, on the west side of the river of the same name at its entrance into Mobile Bay; thirty-three miles north of Mobile Point, which is on the east side of the mouth of the bay, fifty west by north of Pensacola, ten W.S.W. of Blakeley, 100 by land, and 120 by water south of St. Stephen's, 1 70 E. N. E. of New Orleans. The site of the town is on a beautiful and extensive plain, elevated about twenty feet above the level of the river, and open to refreshing breezes from the bay, of which it commands a handsome prospect. The approach to the harbour, for vessels drawing more than eight feet of water, is circuitous and difficult. Within alow grassy island, which lies opposite to the town, there is a good shelter for vessels.

Mobile was taken possession of by the United States in 1813, at which time it contained about 100 houses, mostly mean decaying wooden buildings of one story. It has since increased considerably, and is now in a very flourishing state, and has considerable trade. It contains a Roman Catholic church, and a printing office, and is defended by a fort. The shipping owned here, in 1816, amounted to 594 tons. A steam boat was then plying between this town and St. Stephen's, and another was building, which was to ply between Mobile and New Orleans, through lake Pontchar-train.

MOBILE, a river of Alabama, which is form-ed by the union of the Alabama and Tombigbee. It widens into a large bay and communicates with the Gulf of Mexico.

MOBILE ISLAND, an island formed by the divided stream of the river Mobile, about twenty-six miles long, and five wide. Long. 87►► 55' W., lat. 31►► N.

MOBILE, PERPETUUM. See MOTION. MOBILE, PRIMUM, in the ancient astronomy, was a nintli heaven or sphere, imagined above those of the planets and fixed stars. This was supposed to be the first mover, and to carry all the lower spheres round along with it; by its rapidity communicating to them a motion whereby they revolved in twenty-four hours. But the diurnal revolution of the planets is now

accounted for, without the assistance of any such primum mo-bile.

MOCENIGO (Andrew), a native of Venice, in the sixteenth century. lie served his country with zeal, being employed in various public affairs, which he managed with success. He was the author of a History of the War sustained by the Republic of Venice, in consequence of the League of Cambray, in four books, which is esteemed for its accuracy. He also wrote a Latin poem on the war with Bajazet II.

MOCHA, a large city of the province of Ye-men, Arabia, the principal port of the Red Sea. It was first visited in l.r>13, by Alphonso Albuquerque, but was then of little consequence. In 161 Owe have the first account of any attempt tu open a trade here by the British expeditions uu - i!er Sharpey and Sir Henry Middleton ; when

the latter was surprised, and made prisoner, with a number of his men. He afterwards compelled the government to make him redress : and ever since Mocha has continued the chief emporium of this part of the world. The Dutch first established a factory there : they were followed by the French in 1708, and soon after by the English. We had nearly monopolised the small but steady trade carrying on till 1803, when the Americans became formidable rivals in the coffee trade ; and soon took off the largest quantity. We believe this was the case down to the late period of the opening of the East India trade.

The country around Mocha is a dreary plain bounded by mountains, and consisting entirely of arid sand. Around the town, indeed, date trees appear in considerable numbers ; but their stunted growth shows the poverty of the soil. The climate is intensely hot. The southeast wind blows here for eight months in the year over the burning sands of the interior, and, for the other four months, a north-west wind which has passed over the sands of Arabia. The appearance of the town and its three chief minarets from the sea is handsome; all its buildings are white washed, and the dead line of the flat roofs is agreeably broken by several noble tombs. On entering the place, the filth of the streets and open spaces is sufficiently disgusting : the houses are found to be built of unburnt bricks, with little lime; and hence, if a house be awhile neglected, it becomes a heap of rubbish and mud. The dola's residence is large and lofty, having one front to

the sea, and another to a square. Another side is filled up by the residence of the secretary of state, and by an extensive serai built by the Turks. The best houses are facing the sea. They have turreted tops, with ornaments in white stucco. The windows are small, and the upper ones usually circular, formed by thin strata of a transparent stone found in the neighbourhood. The interior is ill contrived, the passages being long and narrow, and the staircases steep. The lower ranks live in wicker huts, covered in the inside with mats, and on the outside with a little clay thatched.

The town of Mocha is supposed by lord Valentia to contain about 5000 inhabitants, and is enclosed by a wall about sixteen feet high extending for about half a mile, in nearly a straight line facing the sea. It is too thin every where to resist a cannon shot, or to bear the firing of cannon upon it; while the forts towards the sea would He levelled to the ground by a single broadside from a man of war. They chiefly serve to exclude the Wahabees, whose only mode of reducing a town is to storm it by cavalry. The garrison consists of about 200 musqueteers, and eighty horse.

The staple of Mocha is coffee, of which this part of Arabia has the most excellent in the world. It is here a small shrub, rising to the height of sixteen or eighteen feet, and having leaves about five inches long and two broad. The fruit grows in clusters, and is gathered when of a deep red. Before 1803 nearly the whole quantity was conveyed from Mocha to Jidda, whence it was conveyed to Alexandria, Constantinople, and Europe. The quantity then sent to Jidda is fstimated by lord Yalentia at 16,000 bales of

305 Ibs. each, making 4,880,000 Ibs. In 1803, when the Americans began to export it on a great scale, the competition raised the price from thir-ty-six or forty to fifty dollars per bale. In the following years, 8000 bales were exported by the Americans, and 2000 by the British.

At Mocha are also obtained gum arabic, myrrh, and frankincense (brought from the opposite coast of Berbera in Africa) ; balm of Gilead or of Mecca, a resinous juice much used in the east as a cosmetic; senna; sharks' fins; rhinoceros' horns and hides ; acacia ; and civet. The imports , from Bombay, chiefly in grain and piece goods, are of very considerable amount. From 1802 to 1806 inclusive they were as follows :

Sicca rupees.

1802 …. 2,082,531

1803 …. 1,617,650

1804 …. 2,107,010

1805 …. 1,768,339

1806 …. 1,574,452

Total, 9,149,982

or about ––914,998 sterling. The returns are al most entirely in money or bullion.

About 250 Banians or Gentoo merchants, who are subject to great oppression, carry on this trade : they do not venture to bring their families thither; but their profits are great : and it is considered more eligible to treat with them than with the Moors or Turks. The English pay a duty of three per cent, on the business done ; but other foreigners five. A three masted vessel must pay, on its arrival, duty to the amount of 384 dollars. Those with two masts half. This however is not paid, unless something be sold. Presents are also necessary for permission to land. Long. 43–– 20’ E.,lat. 13–– 20’ N.

MOCHA, an uninhabited island on the coast of Chili, upwards of sixty miles in circumference. It is very fertile, and was formerly settled by the Spaniards : at present it is frequented by the whalers of the United States and England, who begin fishing here, as it is well supplied with wild hogs. ‘Lat. 38–– 40’ S.

MOCHO STONE, n. s. From Mocha, and therefore more properly Mocha-stone.

Mncho-gtones are related to the agat, of a clear horny grey, with declinations representing mosses, shrubs, and branches, black, brown, red, in the substance of the stone. Woodward.

MOCK, v. a., v. n., n. s., Sc adj.’} Fr. moc—

MOCK’ABLE, adj. I quer ; Wei.

MOCK’ER, n. s. [moccio ; Gr.

MOCK F.RY, n. s. j puicao). To

MOCR’ING-BIRD, n. s. imitate in

MOCK’INGLY, adv. J derision; to

mimic; ridicule: hence to deceive by false appearances or pretensions ; delude ; tantalise : as a neuter verb, to make contemptuous sport : as a substantive it signifies ridicule ; contempt ; sneer; gibe; mimicry: mockable is exposed or liable to derision : mocker, one who practises it ; a scorner ; scoffer : mockery, derision ; scorn ; insulting imitation or merriment ; vain attempt, or show : mocking-bird, a species of parrot, remarkable for imitating other birds : mockingly contemptuously; insultingly; delusively.

MOD ‘ i

I am as one mocked of his neighbour ; the just upright man is mocked to scorn. Job xii. 4. Fools make a mock at sin. Prov. xiv. 9. Of the holy place they made a mockery.

2 Mac. viii. 17.

The forlorn maiden whom your eyes have seen, The laughing-stock of fortune’s mockeries, And the only daughter of a king and queen.

Faerie Qveene.

A new method they have of turning things that are serious into mockery ; an act of contradiction by way of scorn, wherewith we were long sithence fore-warned. Hooker.

Many thousand widows

Shall this his mock mock out of their dear husbands ;

Mock mothers from their sons, mock castles down.

Sliaksveare.

Our very priests must become mocker $, if they shall encounter such ridiculous subjects as you. *(*.

MOCKING BIRD (turdus polyglottus). This capricious little mimic is of a cinereous color; paler beneath. It inhabits America from New England to Brazil, but is rare and migratory in the Northern States, whilst it is common and resident in the Southern. This bird, although it cannot vie with most of the American species in brilliancy of plumage, is much sought for on account of its wonderful faculty of im'itating the tone of every inhabitant of the woods, from the twitter of the humming-bird to the scream of the eagle. But its notes are not entirely imitative ; its own song is bold, full, and exceedingly varied, during the utterance of which it appears in an ecstasy of delight. In confinement, it loses little of its power or energy. To use the words of Wilson, "He whistles for the dog; Caesar starts up, wags his tail, and runs to meet his master. He squeaks out like a hurt chicken, and the hen hurries about, with hanging wings and bristled feathers, clucking, to protect her injured brood. The barking of the dog, the mew-ing of the cat, the creaking of the passing wheel-barrow, follow with great truth and rapidity. He repeats the tune taught him by his master, though of considerable length, fully and faithfully. He runs over the quiverings of the canary, or the clear whistlings of the Virginia nightingale or red-bird, with such superior execution and effect, that the mortified songsters feel their own inferiority, and become altogether silent ; while he seems to triumph in their defeat, by redoubling his exertions." ××× The female lays from four to five eggs, of an ash-blue color, marked with patches of brown ; she incubates fourteen days, and is extremely jealous of her nest, being very apt to de××ert it if much disturbed. During the period when the young are in the nest, neither cat, dog, or man can approach it without being attacked. When intended for the cage, they are taken from the nest when they are very young, or at a later period by trap-cages.

MO'CK EL, adj. The same with mickle. See MICKLE. It is variously written mickle, mickel, mochil, mochel, rauckle. Much ; many.

The body bigg, and mightily pight, Thoroughly rooled, andwond'rous height, Whilom had been the king of the field, And mockeil mast to the husband did yield.

> MOD

MOCWANPOOR, a district of Northern Hindostan, situated between 27►► and 28►► of N. lat., and bounded to the south by the districts of Bettiah and Tirhoot in Bahar. The fertile valley of this name is of no great extent, not stretching further to the eastward than six or seven miles, and terminating near Nagdeo on the Hettowrah side. It yields abundance and great variety of rice, and the cultivators enjoy considerable immunities from the Nepaul government, to which the district belongs. The ancient rajah was deposed by the Goorkhalies.

MOCWANPOOR, a town in Northern Hindostan, the capital of the district of the same name, stands in lat. 27►► 28' N., long. 85►► 18' E. The hill fort is distinguishable by the naked eye from the banks of Ihe Kurrah, and is a place of strength. When the Nepaulese were pressed by the Chinese, the regent and some of the principal chiefs despatched a great part of their valuable property to this fort; and in 1762 Cossim Ali's general, Goorgeen Khan, made an attempt on it, but did not succeed.

MODE, n. s. ►►►* Fr. mode, module; Ital.

MO'DAL, adj. > modo ; Lat. modus, modalis.

MODAL'JTY,TI. s. j Form ; fashion ; custom ; manner; way; outward variety; degree; gradation ; state as to outward things : modal is relating to the form or manner, as distinct from the essence of a subject or thing : modality, external or accidental difference.

My death

Changes the mode : for what in me was purchased, Falls upon thee in a much fairer sort, For thou the garland wearest successively.

Shakspeare.

When we speak of faculties of the soul, we assert not with the schools their real distinction from it, but only a modal diversity. GUinmlLe.

The duty itself being resolved upon, the mode of doing it may easily be found. Taylor's Guide.

There are certain garbs and modes of speaking which vary with the times ; the fashion of our clothes being not more subject to alteration than that of our speech. Denham,

Our Saviour beheld A table richly spread, in regal mode, With dishes piled.

Milton's Paradise Regained. They were invited from all parts ; and the favour of learning was the humour and mode of the age.

Temple.

The motions of the mouth by which the voice is discriminated, are the natural elements of speech ; and the application of them in their several compositions, or words made of them, to signify things, or the modalities of things, and so to serve for communication of notions, is artificial. Holder.

We are to prefer the blessings of Providence be-fore the splended curiosities of mode and imagination.

L'Estrange.

As we see on coins the different faces of persons, we see too their different habits and dresses, according to the mode that prevailed. Addison on Medals. What modes of sight betwixt each wide extreme, The mole's dim curtain, and the lynx's beam ; Of smell, the headlong lioness between. And hound sagacious on the tainted green. Pope.

If faith itself hns difTrent dresses worn, What wonder modes in wit should take their turn ?

Id.

M o o a.

A mode is that which cannot subsist in and of ###.tself, but is always esteemed as belonging to, and subsisting by, the help of some substance, uhich, for that reason, is called its subject. Watts'* Logic.

Few allow mode to be called a being in the same perfect sense as a substance is, and some modes Live evidently more of real entity than others.

Wattt.

Though wrong the mode, comply ; more sense is

shewn In wearing others follies than your own. Young.

MODE, or MOOD, in GRAMMAR. See that article.

MODE, in metaphysics, seems properly to denote the manner of a thing's exister.ee : but Mr. Locke uses the word in a sense somewhat different from its ordinary signification. ' Such complex ideas, which, however compounded, contain not in them the supposition of subsisting by themselves, but are considered as dependencies on, or affections of substances,' he calls modes. Of these there are two sorts ; First, those which are only variations, or different combinations of the same simple idea, without the mixture of any other, as a dozen or a score ; which are nothing but the ideas of so many distinct units added together : these he calls simple modes. Secondly: There are others compounded of simple ideas of several kinds put together to make one complex one; v. g. beauty, consistingof a certain composition of color and figure, causing delight in the beholder : theft, which being the concealed change of the possession of any thing without the consent of the proprietor, contains, as is visible, a combination of several ideas of several kinds; and these he calls mixed modes.

MODE, in music, a regular disposition of the air and accompaniments relative to certain principal sounds upon which a piece of music is formed, and which are called the essential sounds of the mode. There

is this difference between the mode and the tone, that the latter only determines the principal sound, and indicates the place which is most proper to be occupied by that system which ought to constitute the bass of the air; whereas the former regulates the thirds, and modifies the whole scale agreeably to its fundamental sounds. Our modes are not, like those of the ancients, characterised by any sentiment which they tend to excite, but result from our system of harmony alone. The sounds essential to the mode are three, and form together one perfect chord. 1. The tonic or key, which is the fundamental note both of the tone and of the mode: See TONE and TO-NIC. 2. The dominant, which is a fifth from the tonic. 3. .The mediant whicli properly constitutes the mode, and which is a third from the same tonic. As this third may be of two kinds, there are of consequence two different modes. When the mediant forms a greater third with the tonic the mode is major ; when the third is lesser, it is minor. The major mode is immediately generated by the resonance of sounding bodies, which exhibit the third major of the fundamental sound ; but the minor mode is not the product of nature ; it is only found by analogy and inversion. This is equally true upon the system of Sig. Tartini as upon that of M. Rameau. This last author has

explained the origin of this minor mode in different ways, of which his interpreter M. d'Aleru bert was satisfied with none. For this reason he has founded this origin on a different principle. See Music. When the mode is once determined, every note in the scale assumes a mean expressive of its relation to the fundamental sound, and peculiar to the place which it occupies in thai particular mode. We subjoin the names of all the notes significant of their relative values and places in each particular mode, taking the octave at ut as an example of the major mode, and of la as an example of the minor.

Major, ut re mi fa sol la si ut Minor, If si ut re mi fa sol la

Mediant.

s" &

c'

3.

c

o”

= -

A

Dominant

Subdomi

& t& W TJrti/3 C/3)y2O 2 o

When the seventh note is only a semitone distant from the highest in the octave, i. e. when it forms a third major with the dominant, a* si natural in the major mode, or sol sharp in the minor, that seventh sound is then called a sensible note, becaust it discovers the tonic and renders the tone appreciable. Nor does each gradation only assume that name which is suitable to it ; but the nature of each interval is determined according to its relation to the mode. The rules established for this are as follows: 1. The second note must form a second major above tin-tonic, the fourth note and the dominant should form a fourth and fifth exactly true ; and this equally in both modes. 2. In the major mode, the mediant or third, the sixth and the seventh from the tonic, should always be major ; for by this the mode is characterised. For the same reason these three intervals ought always to be minor in the minor mode; nevertheless, ‘as it is necessary that the sensible note should likewise there be perceived, which cannot be effectuated without a false relation whilst the sixth note still remains minor ; this occasions exceptions, of which, in the course of the air or harmony, oare must be taken. But it is always necessary that the cleff, witli its transpositions, should preserve all the intervals, as determined with relation to the tonic according to the species of the mode. (See Cleff, in Rousseau’s Musical Dictionary.) As all the natural chords in the octave of ut give, with relation to that tonic, all the intervals prescribed for the major mode, and as the case is the same with the octave or’ la for the minor mode, the preceding example may serve as a formula for the rule of the intervals in each mode. This rule has its source in the generation of harmony. If you give a perfect major chord to the tonic, to the dominant, and the subdominant, you will have all the sounds of the diatonic scale for the major mode ; to obtain that of the minor, leaving still its third major to the dominant, give a third minor to the two other chords. Such is the analogy of the mode. There are properly only two modes ; but there are twelve different sounds ir

the octave which may be made fundamental sounds, and of consequence form as many keys or tones ; and, as each of these tones is susceptible of the major or minor mode, music may be composed in twenty-four modes. Nay, in the manner of writing music, there are even thirty-four possible modes ; but in practice ten are excluded ; which, when thoroughly examined, are nothing but a repetition of the other ten, under relations much more difficult, in which all the chords must change their names, and where it must cost any one some trouble to know what he is about. Such is the major mode upon a note raised above its natural pitch by a semitone, and the minor mode upon a note depressed by a semitone. The composer does not always continue in the same mode, nor in the same key, in which he has begun an air ; but, whether to alter the expression or introduce variety, modes and keys are frequently changed, according to the analogy of harmony; yet always returning to those which have been first heard ; this is called modulation. Thence arises a new division of modes into such as are principal and such as are relative ; the principal is that in which the piece begins and ends ; the relative modes are such as the composer interweaves with the principal in the flow of the harmony. Others have proposed a third species, which they call a mixed mode, because it participates the modulation of both the others, or rather because it is composed of them ; a mixture which they did not reckon an inconveniency, but rather an advantage, as it increases the variety and gives the composer a greater latitude both in air and harmony. This new mode, not being found by the analysis of the three chords, like the two former, is not determined, like them, by harmonies essential to the mode, but by an entire scale which is peculiar to itself, as well in rising as descending ; so that, in the two modes above-mentioned, the scale is investigated by the chords, and in this mixed mode the chords are investigated by the scale. The following notes exhibit the form of this scale in succession, as well rising as descending, mi fa sol la si ut re mi. Of which the essential difference is, as to the melody, in the position of the two semitones ; of which the first is found between the first and the second note, and the last between the fifth and sixth ; and, with respect to the harmony, the difference consists in this, that upon its tonic it carries a third minor in the beginning, and major in ending, in the accompaniment of this scale, as well in rising as descending.

MOD’EL, n. s. & v. a. i Fr. models, modeler > Moo’F.LLER,n.s. $ Lat. modulus. Outward representation; pattern; mould; representation : to model is to shape after a pattern ; mould ; form : a modeller, one who

plans, contrives, or shapes the outward forms of things.

A fault it would be if some king should build his mansion-house by the model of Solomon's palace.

Hooker.

I'll draw the form and model of our battle ; Limit each leader to his several charge, And part in just proportion our small strength.

Shakspeare.

I have commended to his goodness The model of our chaste loves, his young daughter. , Id.

England ! model to thy inward greatness,

Like little body with a mighty heart. Id.

They cannot see sin in those means they use, with intent to reform, to their modelt what they call religion- King Charles. When they come to mndel heaven,

And calculate the stars, how they will wield

The mighty frame. Milton's Paradite Losi.

Our great modeller* of gardens have their magazines of plants to dispose of. Spectator.

You have the model* of several ancient temples, though'the temples and the gods are perished.

Add'uon.

The government is modelled after the same manner with that of the Cantons, as much as so small a con> munity can imitate those of so large an extent.

Id. on Italy.

As he who presumes steps into the throne of God, so he that despairs measures providence by his own little contracted model. South.

People seldom improve when they have no other model but themselves to copy after. Goldtmith.

MODEL is particularly used in building, for an artificial pattern made of wood, stone, plaster, or other matter, with all its parts and proportions, for the better conducting and executing some great work, and to give an idea of the effect it will have in large. In all great buildings, it is much the surest way to make a model in relievo, and not to trust to a bare design or draught. There are also models for the building of ships, &c., and for extraordinary staircases, &c. They also

use models in painting and sculpture ; whence, in the academies, they give the term model to a naked man, disposed in several postures, to afford an opportunity to the scholars to design him in various views and attitudes.

Models, in imitation of any natural or artificial substance, are most usually made by means of moulds composed of plaster of Paris. For the purpose of making these moulds, this kind of plaster is much more fit than any other substance,, on account of the power it has of absorbing water, and soon condensing into a hard substance, even after it has been rendered so thin as to be of the consistence of cream. This happens in a shorter or longer time as the plaster is of a better or worse quality ; and its good or bad properties depend very much upon its age, to which, therefore, particular regaid ought to be had. It is sold in the shops at very different prices ; the finest being made use of for casts, and the middling sorts for moulds. It may be very easily colored by almost any kind of powder excepting what contains an alkaline salt; for this would chemically decompose the substance of it, and render it useless. A very considerable quantity of chalk would also render it soft and useless, but lime hardens it to a great degree. The addition of common size will likewise render it much harder than if mere water is made use of. In making either moulds or models, however, the mixture must not be made too thick at first ; for if this is done, and more water added to thin it, the composition must always prove brittle and of a bad quality. The particular manner of making models, or casts, as they are called, de-12

pends on the form of the subject to be taken. The process is easy where the parts are elevated cnly in a slight degree, or where they form only z. right or obtuse angle with the principal surface from which they project ; but where the parts project in smaller angles, or from curves inclined towards the principal surface, the work is more difficult. This observation, however, holds good only with regard to hard and inflexible bodies ; for such as are soft may often be freed from the mould, even though they have the shape last mentioned. The moulds are to be made of various degrees of thickness, according to the size of the model to be cast ; and may be from half an inch to an inch, or, if very large, an inch and a half. Where a number of models are to be taken from one mould, it is necessary to have it of a stronger

contexture than where only a few are required.

MODELS OF LIVING PERSONS. Besides the models which are taken from inanimate bodies, it has been frequently attempted to take the exact resemblance of people while living, by using their face as the original of a model, whence to take a mould ; and the operation, however disagreeable, has been submitted to by persons of the highest ranks in life. A considerable difficulty occurs in this, however, by reason of the person's being apt to shrink and distort his features when the liquid is poured upon him ; neither is he altogether without danger of suffocation unless the operator well understands his business. To avoid the former inconvenience it will be proper to mix the plaster with warm instead of cold water, by which means the person will be under no temptation to shrink; and, to prevent any danger ot a fatal accident, the following me-thod is to be practised : ††† Having laid the per-son horizontally on his back, the head must first be raised by a pillow to the exact position in which it is naturally carried when the body is erect ; then the parts to be represented must be very thinly covered over with fine oil of almonds by a painter's brush ; the face is then to be first covered with fine fluid plaster, beginning at the upper part of the forehead, and spreading it over the eyes, which are to be kept closed, yet not so strongly as to cause any unnatural wrinkles. Cover then the nose and ears, plugging first up the meatus and torii with cotton, and the nostrils with a small quantity of tow rolled up, of a proper size, to exclude the plaster. Du-ring the time that the nose is thus stopped, the person is to breathe through the mouth : in this state the fluid plaster is to be brought down low enough to cover the upper lip, observing to leave the rolls of tow projecting out of the plaster. When the operation is thus far carried on, the plaster must be suffered to harden ; after which the tow may be withdrawn, and the nostrils left free and open for breathing. The mouth is then to be closed in its natural position, and the plaster brought down to the extremity of the chin. Begin then to cover that part of the breast which is to be represented, and spread the plaster to the outsides of the arms and upwards in such a man-ner as to meet and join that which is previously laid on the face : when the whole of the mass has acquired its due hardness it is to be cautiously

lifted without breaking. After the mould is constructed it must be seasoned with linseed oil, litharge, &c. ; and when the mould is cast it is to be separated from the model by means of a small mallet and chisel. The eyes, which are necessarily shown closed, are to be carved, so that the eye-lids may be represented in an elevated posture ; the

nostrils hollowed out ; and the back part of the head, from which, on account of the hair, no mould can be taken, must be finished according to the skill of the artist. The edges of the model are then to be neatly smoothed off, and the bust fixed on its pedestal.

When models are made of such large objects, that the model itself must be of considerable size, it is vain to attempt making it in the way above described. Such models must be constructed by the hand with some soft substance, as wax, clay, putty, &c. ; and, it being necessary to keep all the proportions with mathematical exactness, the construction of a single model of this kind must be a work of great labor and expense, as well as of time. A beautiful model was made, in wood, of the New Town of Edinburgh, before it was begun to be built. A model was also made of a bridge over the Neva, of uncommon strength as well as elegance. But, of all the models which have been undertaken by human industry, perhaps the most remarkable is that which was constructed by general Pfiffer, to represent the mountainous parts of Switzerland. It was composed of 142 compartments, of different sizes and forms, respectively numbered, and so artfully put together that they could be separated and replaced with the greatest ease. The model itself was twenty feet and a half long, and twelve broad, and formed on a scale which represented two English miles and a quarter by an English foot ; comprehending part of the cantons of Zug, Zurich, Schweitz, Underwaldeu, Lucerne, Berne, and a small part of the mountains of Glarus ; in all, an extent of country of eighteen leagues and a half in length and twelve in breadth. The highest point of this model, from the level of the centre, which is the lake of Lucerne, was about ten inches ; and as the most elevated mountain represented therein rises 1475 toises, or 9440 feet, above the lake of Lucerne, at a gross calculation, the height of an inch in the model was about 900 feet. The whole was painted of different colors, in such a manner as to represent objects as they exist in nature. So minute also was the accuracy of the plan that it comprised not only all the mountains, lakes, rivers, towns, villages, and forests, but every cottage, bridge, torrent, road, and even every path. The principal materials employed in the construction of this extraordinary model were a mixture of charcoal, lime, clay, a little pitch, with a thin coat of wax; and it was so hard that it might be trod upon without damage. It was begun in 1766, when the general was about fifty years of age, and employed him till August 1785; during all which long space of time his task was not only most laborious, but even dangerous. He raised the plans with his own hands on the spot, took the elevation of mountains, and laid them down in their several proportions. In the prosecution of this employ-MOD

ment he was twice arrested as a spy ; and, in the popular cantons, was frequently forced to work by moonlight, in order to avoid the jealousy of the peasants, who imagined that their liberty would be endangered should such a plan of their country be taken. Being often obliged to remain on the tops of some of the Alps, where no provisions could be procured, he took along with him a few milch goats. When any part was finished he sent for the people residing near the spot, and desired them to examine each mountain with accuracy, to see whether it corresponded, as far as the smallness of the scale would admit, with its natural appearance; arrd then, by frequently retouching, he corrected the 'ieficien-cies. Even after the model was finished he continued his Alpine expeditions witli the same ardor as ever, and with a degree of vigor that would fatigue a much younger person. All his elevations were taken from the level of the lake of Lucerne : which, according to Saussure, is 1408 feet above the level of the Mediterranean.

In painting this is the name given to a man or woman who is procured to exhibit him or herself in a state of nudity for the advantage of the students. These models are provided in all academies and schools for painting, and it is customary for the students who have acquired a tolerable use of the pencil to be introduced to this kind of study, and urged to exertion and emulation in it. By this means the details and proportions of the human shape, the play of the muscles, the varieties of expression, &c., are displayed and inculcated far better than by any course of lectures or any study of former works. The term model is, however, at the same time extended to the great masters and to their admirable performances, and it is clear that the enlarged meaning we first applied to it fully warrants such an extension.

It is desirable that the living models used in an academy, or even in a private painting room, should be changed as frequently as possible, or the student is in danger of falling into mannerism. Millin speaks of a model, of the name of Descharnps, who did duty in this way upwards of forty years in the academy at Paris, and grows quite facetious in alluding to the facility with which this person's form and features might be recognised, in every variety of subject or of expression, in all the paintings of the students of that period.

MODENA, a duchy of Italy, extending between the Po and the

Appennines, which bound it north and south ; or from long. 9►► 54' to 1 1►► 20' E., and from lat. 44►► 6' to 44►► 55' N. It is bounded east by the states of the church, and west by Parma, and is an inland tract of country, eighty-four miles in length, with a medium breadth of twenty-five. The territory, strictly speaking, consists only of the six districts of Modena, Reggio, Mirandola, Correggio, Carpi, and Navellara ; but the principality of Massa and Carrara will by law revert, on the death of its present sovereign, to the house of Modena. The extent and population of the six districts of Modena Proper is 1740 square miles, with 332,000 inhabitants; Massa and Carrara is 320 square miles, with 38,000 inhabitants. Total 2060

square miles, and 370,000 inhabitants. The chief towns are Modena, having 20,000 inhabitants; Reggio 13,300; Massa 10,000; Mirandola 8200; Navellara4100; Correggio 3500.

The country is one gently undulating plain, rising into considerable elevations, but not mountainous, except in the southern provinces, where it is traversed by the Appennines. Its rivers are the Po, the Crostolo, the Panaro, and the Seech ia, and a number of small tributary streams and rivulets. The climate is beautifully mild and clear, and the soil rich and fruitful, except in the higher districts, in corn, wine, olives, mulberry-trees, hemp, and pasturage, but the corn raised is not equal to the consumption. Cattle are reared in large numbers ; bees likewise are objects of attention ; but the chief article of culture and manufacture is silk. The other manufactures consist of canvas, leather, paper, and glass. The best marble of Italy is found at Carrara, and a kind of mineral oil (olio di fossa) in various subterraneous cavities ; also amber and petroleum.

This duchy forms a small independent state, possessed in full sovereignty by the archduke of Este. The revenue is ►►140,000 sterling, and the regular troops 1500 men. The family is one of the most ancient in Europe. In 1796 the duke was expelled by the French, and soon after resigned his claims in favor of his son-in- law the archduke Ferdinand of Austria. In the treaty of Campo Formio, the Modenese possessions were incorporated with the Cisalpine republic, and the archduke received as an indemnity the Brisgall and Ortenall in Suabia. In 1814 the congress of Vienna restored to the archduke Francis of Este the territory of Modena, with the limits which it had before the peace of Campo Formio ; and gave to his mother, the archduchess Maria Beatrix, the duchy of Massa and principality of Carrara, to revert, on the death of the archduchess, to her son.

MODENA, the capital of the above duchy, is situated in a delightful valley between the Panaro and Secchia. It has a citadel, and is surrounded with ramparts, which together however have little strength. The houses are well built, and the streets clean and regular. The finest is the Strada Maestra, but almost all of them are bordered with arcades. The population is about 20,000. The best public building is the ducal palace, situated in a large square. The cathedral is a mean Gothic building, only remarkable for its marble tower, said to be one of the highest in Italy. The other churches claim little attention, with the exception of those of St. Vicenzo and St. Agostino. The college is spacious and handsome ; its library containing about 80,000 volumes, among which are many rare editions of the fifteenth century, and several valuable MSS. The traveller finds here better inns and baths than in most other places in Italy. The trade is not considerable. It is twenty-two miles W. N.W. of Bologna, and thirty E. S. E. of Parma.

MOD’ERATE, adj. & v. a.~\ Fr. modcre ;

MOD’ERATELY, adv. f Ital. moderato ;

MOD’F.RATESESS, n.s. i Lat. moderator.

MOD’ERATOR. j Temperate; so-

ber; qualified; reasonable; mild; not in an extreme : hence to regulate ; restrain ; pacify ; qualify ; repress : the adv. & n. s. corresponding : a moderator is a person who acts with a view to calm or restrain others; and particularly one who presides with this view at a disputation or discussion.

Sound sleep cometh of moderate eating, but pangs of the belly are with an insatiable man.

Ecclvt. xxxi. 20.

\Vith equal measure she did moderate The strong extremities of their rage. Spenser. \Vas it the purpose of these churches, which abolished all popish ceremonies, to come back again to the middle point of evenness and moderation 1

Hooker.

There's not so much left as to furnish out A moderate table. SliaJitpeare. Timon of Athens. Sometimes the moderator is more troublesome than the actor. Bacon' t Essay*.

Sorrows, because they are lingering guests, I will entertain but moderately ; knowing, that the more they are made of, the longer they will continue.

Bp. Hall. Equally inured

By moderation either state to bear. Prosperous or adverse. Milton'* Paradise Lost. Angling was, after tedious study, a calmer of unquiet thoughts, a moderator of passions, and a procurer of contentedness. " alton.

How does Philopolis seasonably commit the opponent with the respondent, like a long-practised moderator"! Mure.

Each nymph but moderately fair, Commands with no less rigor here. Waller. More moderate gifts might have prolonged his

date, Too early fitted for a better state. Dryden.

These are tenets which the moderated of the Ro-manists will not venture to affirm. Smalridyg.

Ye swarthy nations of the torrid zone, How well to you is this great bounty known ! For frequent gales from the wide ocean rise To fan your air, and moderate your skies.

Blackmore.

A zeal in things pertaining to God, according to knowledge, and yet duly tempered with candour and prudence, is the true notion of that much talked of, much misunderstood virtue, moderation.

Atterburti.

3y iis astringent quality it moderate* the relaxing quality of warm water. Arbuthnot on Aliments.

Blood in a healthy state, when let out, its red part should congeal strongly and soon, in a mass moderately tough, and swim in the serum. Id.

In moderation placing all my glory, While lories call me whig, and whigs a tory.

Pope.

Fixed to one part, but moderate to the rest. Id. A number of moderate members managed with so much art as to obtain a majority, in a thin house, for passing a vote, that the king's concessions were a ground for a future settlement. Swift.

The first person who speaks when the court is set, opens the case to the judge, chairman, or moderator of the assembly, and gives his own reasons for his opinion. Watts.

Whilst shame keeps its watch, virtue is not wholly extinguished from the heart, nor will moderation be utterly exiled from the minds of tyrants. Bttrke.

MOD'ERN, adj. Sc n. s.-\ Fr. moderne ; MOD'ERNISE, v. a. ˆ Ital. Span, and Port.

MOD'ERN ISM, n.s. imodcrno ; barb. Lat.

MOD’ERNNESS, n. $. J modernus, either a

corruption ofliotLernus, ‘ vel potuis ab adverbio modo, niodernus, ut a die diurnus.’ Late; re-cent; arising in late time: Shakspeare uses it for vulgar, common : as a substantive it is chiefly used in the plural, for those who live or have lived in recent times : to modernise is to adapi something ancient to modern form or usage : a modernism is something unduly modern or un-classical, being itself ‘a modernism’ of Swift’s : raodernness, lateness ; novelty.

Trifles, such as we present modem friends withal.

Shakspeare. The justice,

With eyes severe and beard of formal cut, Full of wise saws and modern instances. Id. Some of the ancient, and likewise divers of the modern writers, that have laboured in natural magic, have noted a sympathy between the sun and certain herbs. Bacnn.

There are moderns who, with a slight variation, adopt the opinion of Plato. Boyle 011 Cdours.

The glorious parallels then downward bring To modern wonders, and to Britain’s king.

Prior.

Some by old words to fame have made pretence ; Antients in phrase, mere modernt in their sense !

Pope.

Scribblers send us over their trash in prose and verse, with abominable curtailings and quaint modernisms. Swift.

In this part of our work, where caprice has long wantoned without control, and vanity sought praise by petty reformation, I have endeavoured to proceed with a scholar’s reverence for antiquity. I have attempted a few alterations, and among these perhaps the greatest part is from the modern to the ancient practice. Dr. Johnson’s Preface to Dictionary.

MOD’EST, adj. ~\ Fr. modeste ; Ital. Span .

MOD’ESTLY, adv. /and Port, ntodesto ; Lat.

MOD’ESTV, n. s. { modestus, from modus.

MODESTY-PIECE. J Strictly ; in the perfect mode or right manner: chaste ; becoming ; moderate; not forward, impudent, or presuming: modesty is opposed, therefore, both to arrogance and looseness, or licentiousness of behaviour : modesty-piece is defined in the extract.

They cannot with modesty think to have found out absolutely the best which the wit of man may devise. Hooker.

Resolve-me with all modest haste, which wav Thou mightest deserve, or they impose this usage.

Sliakxpenre.

Mrs. Ford, the honest woman, the modest wife : the virtuous creature, that hath the jealous fool to her husband. Id.

Bid the cheek be ready with a blush Modest as morning, when she coldly eyes The youthful Phoebus.

A/. T roil us and Cretsida A lord will hear you play ; But I am doubtful of your modeitiet, Lest over-eying of his odd behaviour, You break into some merry passion.

Shaksjteare.

True piety is modest, and stands not upon terms of reputation, in the business of God. Bp. Hull.

Poverty is like a girdle about our loins, it binds hard, but it is modest and useful. Jer. Taylor.

Her face, as in a nymph, displayed A fair fierce boy, or in a boy betrayed The blushing beauties of a modest maid.

Dryden.

MOD]

During the lost four years, by a madest computatation, there have been brought into Brest above six millions sterling in bullion. Addison..

A narrow lace which runs along the upper pait of the staj s before,

being a part of the tucker, is called the modett \i-piece. Id.

Tho' learned, well-bred ; and tho' well-bred, sincere, Modestly bold, and humanly severe. Pope.

First he modestly conjectures, His pupil might be tired with lectures : Which helped to mortify his pride, Yet gave him not the heart to chide. Swift. Of boasting more than of a tomb afraid ; A soldier should be modest as a maid. fauna. Talk not to a lady in a way that modesty will not permit her to answer. Clarissa.

MODICA, a district and town of southern Sicily, in the Val di Noto : the district, about thirty miles in length and ten in breadth, contains five other good towns, and about 80,000 inhabitants. It has an independent court of justice. The town is situated on the river Scieli, and surrounded by some of the most imposing scenery of this beautiful island ; where the fruits of almost all climates mingle, and the corn, wine, and oil are abundant. Its manufactures are chiefly domestic, and the inhabitants are largely connected with agriculture. They are said to amount to upwards of 20,000. It is thirty miles W. S W. of Syncum, and forty-five S. S. W. of Catania.

MODICUM. Lat. modicum. A small portion or pittance.

What modicums of wit he utters : his evasions have ears thus long. Shakspeare. Troilut and Cressida.

Though hard their fate, A cruise of water, and an ear of corn, Yet still they grudged that modicum. Drt/den. Though nature weigh our talents, and dispense To every man his modicum of sense, And conversation in its better part May be esteemed a gift, and not an art, Y'et much depends, as in the tiller's toil, On culture and the sowing of the soil. Cou-per.

MOD'IFY, v. a. & v.n.-\ Fr. modifier, of MODIFI'ABLE, or f Lat. mor/u and /were.

MODIF'ICABLE, adj. 1 To change the mode, MODIFICATION, n. x. J external shape, or qualities of a thing : hence to soften ; to moderate ; and, as a neuter verb, to extenuate : the adjective and noun substantive follow these significations.

Yet there is that property in all letters, of aptness to be conjoined in syllables, and words through the voluble motions of the organs, that they modify and discriminate the voice without appearing to discontinue it. Holder.

The chief of all signs is human voice, and the several modifications thereof by the organs of speech, the letters of the alphabet, formed by the motions of the mouth. Jd,

Of his grace

He modifies his first severe decree, The keener edge of battle to rebate. Dryden. After all this descanting and modifying upon the matter, there is hazard on the yielding side.

L’ Estrange.

It appears to be more difficult to conceive a distinct, visible image in the uniform, invariable essence of God, than in variously modifiable reatter ; but the manner how I see either still escapes my comprehension. Locke.

The middle parts of the broad beam of white light which fell upon the paper, did, without any confine of shadow to modify it, become coloured all over with one uniform colour, the color being always the same in the middle of the paper as at the edges. Kewton.

If these powers of cogitation, Tolition and sensation, are neither inherent in a matter as such, nor acqnirable to matter by any motion and modification of it, it necessarily follows that they proceed from some cogitative substance, some incorporeal inhabitant within us, which we call spirit. Bentley.

As the generality of meat-roasting, with its several modifications, as to beef, mutton, pullets, &c., does not inhere in any one part of the jack ; so neither does consciousness, with its several modes of sensation, intellection, volition, &c., inhere in anv one, but is the result from the mechanical composition of the whole animal. I’ope.

MODIL’LON. Fr. modillon; Lat. modiolns. \ kind of bracket.

The modilltni or dentelli made a noble show by graceful projections. Sper’ntor.

MO’DISH, adj.) Fr. mode. See MODE.

MO’DISHLY, adv. ►► According to mode, faMO’DISHNESS, n. s.) shion, or custom : modishness is used for an affectation of the fashion.

Hypocrisy, at the fashionable end of the town, is

very different from hypocrisy in the city; the modish

hypocrite endeavours to appear more vitious than he

really is, the other kind of hypocrite more virtuous.

Addison’ t Spectator.

MODON (Mothone) ; a strong city and port of the Morea, on the Mediterranean; lat. 36►► 51’ N.; Ion. 21►► 40’ E. It is entirely surrounded by the sea, and connected with the main land by a wooden bridge. The port is unsafe, but important on account of its road and its proximity to the gulf of Coron. The city is small and badly built ; the streets narrow and dirty. The Greeks became masters of it in the war of Grecian independence, and, in 1825, Miaulis burnt a Turkish fleet in the road. Ibrahim Pacha took possession of Modon soon after his arrival in the Morea, but was compelled by the French to evacuate it in 1828. Previously to the war, the inhabitants amounted to about 7000. In 1829, they did net exceed 500.

MODREVIUS (Andrew Frichius), secretary to Sigismund Augustus king of Poland, who acquired considerable reputation by his learning and works. He left the Romish church, favoring the Lutherans and Antitrinitarians, and took great pains to unite all Christian societies under the same communion. Grotius has placed him among the reconcilers of the different schemes ot religion. His principal work is entitled De Republica. Emendendft ; printed in

1554.

MOD’ULATE, v.‘a.-\ Lat. modular. To

MODULA’TION, n.s. ►►form sounds to a given

MOD’ULATOR. J key, or into concord:

modulation is the act of doing this, or the harmony affected ; a modulator he who modulates.

Th&nose, lips, teeth, palate, jaw, tongue, weasand, lungs, muscles of the chest, diaphragm, and muscles of the body, all serve to make or modulate the sound. Grew’t Cosmologia.

The speech, as it is a sound resulting from the modulation of the air,

has most affinity to the spirit, but, as it is uttered by the tongue, has immediate cognation with the body, and so is the fittest instrument

to manage a commerce between the invisible powers and human souls cloathed in flesh.

Government of the Tongue.

The number of the simple original minerals has not been rightly fixed : the matter of two or more kinds being mixed together, and, by the different proportion and modulation of that matter variously diversified, have been reputed all different kinds.

Woodward.

The tongue is the grand instrument of taste, the .aithful judge of all our nourishment, the artful modulate* of our voice, and the necessary servant of mastication. Derham.

Could any person so modulate her voice as to deceive so many ? Broome

Innumerous songsters in the freshening shade, Their modulations mix, mellifluous.

Thomson's Seutvns. Echo propagates around Each charm of modulated sound. Anon.

MODULATION, in reading. See READING.

MODULATION, in music, is susceptible of several different significations. It frequently means no more than an air, or a number of musical sounds properly connected and arranged. Thus it answers to what Mr. Malcolm understands by the word tune when he does not expressly treat concerning the tuning of instruments. Thus likewise it expresses the French word chant ; for which reason, in music, the one word is often expressed by the other. But the precise and technical

acceptation to which it ought to be confined is the art of composing melody or harmony agreeably to the laws prescribed by any particular key, that of changing the key, or of-regularly and legitimately passing from one key to another.

Modulation, says Rousseau, is properly the manner of ascertaining and managing the modes ; but at this time the word most frequently signifies the art of conducting the harmony and the air successively through several modes, in a manner agreeable to the ear, and conformed to rules. If the different modes be produced by harmony, thence likewise must spring the laws of modulation. These are simple in conception, but difficult in practice. To modulate properly in the same tone it is necessary, 1. To tun through all the sounds of it in an agreeable air, frequently repeating the sounds most essential to it, and dwelling upon these with the most remarkable emphasis ; that is to say, that the chord containing the sensible notes, and that of the tonic, should frequently be heard in it, but under different appearances, and obtained by different procedures to prevent monotony. 2. That reposes or cadences should only be established upon these two chords : the greatest liberty, however, which ought to be taken with this rule is, that a cadence or repose may be established on the chord of the subdominant. 3. In short that none of the sounds of the mode ought ever to be altered ; for without quitting it we cannot introduce a sharp or a flat which does not belong to it, nor abstract any one which in reality does belong to it. But, passing from one mode to another, we must consult analogy, we must consider the relations which a key bears to the other notes in the series, and to the number of sounds common to both the modes, that from which

we pass, and that into which we enter. If we pass from a mode major, whether we consider the fifth from the key as having the most simple relation with it except that of the octave, or whether we consider it as the first sound which enters into the harmonics of the same key, we shall always find that this fifth, which is the dominant of the mode, is the chord upon which we may establish the modulation most analogous to that of the principal key. This dominant, which constituted one of the harmonics of the first key, makes also one of its own peculiar key, of which it is the fundamental sound. There is then a connexion between these two chords. Besides, that same dominant carrying, as well as the tonic, a perfect chord major upon the principle of resonance, these two chords are only different one from the other by the dissonance, which, passing from the key to the dominant, is the sixth superadded, and when reascending from the dominant to the key

is the seventh. Now these two chords, thus distinguished by the dissonance which is suitable to each, by the sounds which compose them when arranged in order, form precisely the octave, or the diatonic scale, which we call a gammut, which determines the mode. This series of the key, altered only by a sharp, forms the scale belonging to the mode of the dominant ; which shows how striking the analogy is between these two tones, and gives the easiest opportunity of passing from one to the other by means of one single alteration alone. The mode then of the dominant is the first which presents itself after that of the key in the order of modulations. The same simplicity of relations which we find between a tonic and its dominant is likewise found between the same tonic and its subdominant : for that fifth, in ascending, which is formed by the dominant with the tonic, is likewise formed by the subdominant in descending : but that subdominant does not form a fifth with the tonic, except by inversion ; it is directly a fourth if we take that tonic below, as it ought to be ; and which fixes the degree of their relations : for in this sense the fourth, whose ratio is as 3 to 4, immediately follows the fifth, whose ratio is as 2 to 3. So that, if that subdominant does not enter into the chord of the tonic, in return the tonic enters into its perfect chord. For let ut mi sol be the chord of the tonic, that of the subdominant shall be_/►► la ut : thus it is the ut which here forms the connexion, and the two other sounds of this new chord, are exactly the two dissonan-.es of the preceding. Besides we need not alter more sounds for this new mode than for that of the dominant ; they are both in the one and the other quite the same chords of the principal mode, except one. Add a flat to the sensible note si or B, and all the notes in the mode of ut or C will serve for that of fa or F. The mode of the subdominant then is scarcely less analogous to the principal mode than that of the dominant. After having made use of the first modulation in order to pass from a principal mode ut or C, to that of the dominant sol or G, we are obliged to make use of the second to return to the principal mode : for, if sol or G be the dominant in the mode of ut or C, ut is the subdominant in the mode of s&l :

thus one of these modulations is no less necessary than the other. The third sound which en-ters into the chord of the tonic is that of the third formed by its mediant ; and after the preceding it is likewise the most simple of relations, $J. Here then is a new modulation which presents itself, and which is so much the more analogous, because two of the sounds of the principal tonic enter likewise into the minor chord of its mediant : for, the former chord being ut mi sol, the latter must be mi sol si, where it may be perceived that tni and sol are common. But what renders this modulation a little more remote is the number of sounds which are necessary to be altered, even for the minor mode, which is most suitable to this mi.

Rousseau, in his Musical Dictionary, has given the formula of a scale both for the major and minor; now, by applying this formula to the minor mode, we find nothing in reality but the fourth sound fa heightened by a sharp in ascending ; but in rising we find two others which are altered, *viz.* the principal tonic ut, and its second re, which here becomes a sensible note: it is certain that the alteration of so many sounds, :md particularly of the tonic, must remove the mode and weaken the analogy. If we should invert the third as we have, inverted the fifth, and take that third below the tonic on the sixth note la which ought here to be called a sub-me- diant, or the mediant below, we shall form upon this note la a modulation more analogous to the principal tone than that of mi ; for, as the perfect chord of this sub-mediant is la ut mi, there once more we find, as in that of the mediant, two of the sounds which enter into the chord of the tonic, *viz.* ut and mi : and moreover, since the scale of this new key is composed, at least in descending, of the same sounds with that of the principal key ; and since it has only two sounds altered in ascending, i. e. one fewer than the series of the mediant, it follows that the modulation of this sixth note is preferable to that of the mediant; and by so much the more that there the principal tonic forms one of the sounds essential to the mode ; which is more proper for approximating the idea of the modulation. The mi may afterwards follow. Here then are four sounds, mi fa sol la, upon each of which we may modulate in passing from the major mode of ut. Ke and si remain, which are the two harmonics of the dominant. This last, as being a sensible note, cannot become a tonic by any proper modulation, at least it cannot immediately become one : this would be an abrupt application of ideas too much opposed to the same sounds, and would likewise be to give it a harmony too re-mote from the principal sound. As to the second note, re, we may likewise, by favor of a consonant procedure in the fundamental base, modu-l.ite upon it in a third minor; but this must only be continued for an instant, that the audience may not have

time to forget the modulation of ut, which is itself altered in that place ; otherwise, instead of returning immediately to ut, we must pass through intermediate modes, where we must run great hazard of deviation. By following the same analogies we may modulate in the following order, to make our exit VOL XV

from a minor mode: first upon the mediant, afterwards the* dominant, next the subdominant, then the sub-mediant, or sixth note. The mode of each of these accessory keys is determined by its mediant taken from the principal sound. For instance, issuing from the major mode of ut to modulate upon its mediant, we render the mode of that mediant minor ; because sol, the dominant of the principal sound, forms a third minor with that mediant, which is mi. On the contrary, in our egress from the minor mode ot la, we modulate upon its mediant ut in the major mode ; because mi, the dominant of the tone whence we issue, forms a third major with the key of that into which we enter, &c. These rules, comprehended in one general formula, import, that the modes of the dominant and of the subdominant are like that of the tonic, and that the mediant and the sixth note require a mode opposed. We must, however, remark that by the right which we have of passing frorr. the major to the minor, and vice versa, upon the same key, we may likewise change the order of modes from one key to another: but, whilst we thus remove from the natural modulation, we must presently think of our return; for it is a general rule that every piece of music ought to terminate in that key with which it began. In his Musical Dictionary, plate B, figs. 6 and 7, Rousseau has collected, in two examples, which are very short, all the modes to which we may immediately pass ; the first in passing from the major mode, and the second from the minor. Each note indicates a particular modulation ; and the value of the notes in each example likewise shows the relative duration suitable to each of these modes, according to its relation with the principal mode. These immediate transitions from one mode to another furnish us with the means of passing by the same rules to modes still more remote, and from thence to return to the principal mode, of which we should never lose sight. But it is not sufficient to know what course we ought to pursue ; we must likewise be acquainted with the method of entering into it. A summary, therefore, of the precepts given in this department shall immediately follow. In melody, to discover and introduce the modulation which we have chosen, nothing is necessary but to render perceptible the alterations which it causes in the sounds of that mode whence we issue, to make them proper for the mode into which we enter. Are we now in the major mode of ut ? there needs no more than

to sound the note fa sharp that we may discover the mode of the dominant ; or a si flat, that we may show the mode of the subdominant. Afterwards we may run over the sounds essential to the mode in which we enter ; if it be well chosen our modulation will always be just. In harmony the difficulty is a little increased ; for, as it is necessary that the change of modes should be made at the same time through all the parts, care must be taken of the harmony, and of the air, that we may avoid pursuing different modulations at the same time. Huygens remarks, that the prohibition of two fifths in immediate succession proceeds upon this rule as its principal : in reality between two parts it is scarcely possible to form

a number of just fifths in uninterrupted succession without operating in two different modes. All the possible modes of passing from one mode to another are reducible to five with respect to the major mode, and to four with respect to the minor ; which, in the Musical Dictionary, plate B fig. 8, will be found implied in a fundamental basis intended for each modulation. If there be any other modulation which cannot be resolved into some one of these nine, unless that modulation be enharmonic, it must infallibly be illegitimate. See Music.

MOD'ULE, n. s. I.at. modulus. A model. The word is redundant in our language.

My heart hath one poor string to stay it by, Which holds but till thy news be uttered ; And then, all this thou see'st, is bv;t a clod And module of confounded royalty. Sha/upeare.

MO'DUS, n.s. Lat. modus. Strictly a mode ; but used particularly for the compensation or mode by which tithes, or an equivalent for them, ;ire paid.

One terrible circumstance of this bill, is turning the tithe of flax and hemp into what the lawyers call a modus, or a certain sum in lieu of a tenth part of the product. Swift.

MOE, adj. Sax. ma. See Mo. More ; a greater number.

The chronicles of England mention no moe than only six kings bearing the name of Edward since the conquest, therefore it cannot be there should be more. Hooker.

MOEHSEN (John Charles William \ M. D , was born at Berlin in 1722, and studied at the universities of Jena and Halle. Taking the de-gree of M. D. at the age of twenty, he returned to Berlin, and succeeded his grandfather, M. Horch, as physician to the gymnasium of Joachim. In 1778 he was appointed physician to Frederick the Great, whom he attended in the war of the Bavarian succession. lie now became a member of various learned institutions, and in 1795 was chosen an associate of the royal academy of arts and sciences at Berlin. His death

took place in the same year. His works relate to the history of medicine and its professors, including De Medicis Equestria Dignitate ornatis, 1768, 4to. ; A Catalogue of a Collection of Engraved Portraits of celebrated Physicians, 1771, 4to. ; A Description of Medals or Jettons struck in honor of Physicians, with Memoirs explaining the Coinage of the Ancients, as connected witli Medical History and Literature, 1773, 2 vols. 4to. ; and Remarkable Experiments to Determine the Utility of Inoculation for the Small-Pox, 1782, 8vo.

MCERIS, a king of Egypt, the last of 300, who are suicl to have reigned between Menes and Sesostris. He ordered the kke to be dug which bears his name, and reigned sixty-eight years.

MCERJS, a celebrated artificial lake of Egypt, said to have been 220 miles in circumference, intended as a reservoir for the waters of the Nile during its extraordinary overflowings. There were two pyramids in it, one half of which lay under water.††† Herodot. lib. ii. c. 12.

MOGADOR, or MOGODOR, so named from Sidi Mogodol, an Arab saint, called also Suerah,

a town of Morocco entirely built since 1760, has a handsome appearance from the sea, the houses being of stone. Like those of all Mahometan towns, however, the streets are very narrow, and standing on a desert spot of sand nearly surrounded by the sea ; the town has no water but what is brought from half a mile distance: for its vegetables it is obliged to send from four to twelve miles. There are, indeed, two towns here ; one, which may more properly be called the citadel, containing the custom-house, treasury, the residence of the Alkaid, and the houses cf the foreign merchants ; and an outer town lately inhabited by the Jews who are not foreign merchants : but this part of Mogador is also walled and fortified. The houses of the foreign merchants aie spacious, having from eight to twelve rooms on a floor, opening into a gallery which surrounds the house inside, and encloses an interior space, generally used as a warehouse. The roofs are flat and serve as a walk in the evening, far preferable to those on the ground, which present nothing but barren sands drifting before the wind. The port is within a little island a mile in circuit, and a quarter of a mile from the main; it can only receive small vessels : several good batteries defend its entrance. It is the emporium of the foreign, and indeed of the entire trade of Morocco, and has 10,000 inhabitants.

The exports in 1804 were,

Almonds Gum arabic .

senega .

sandarach

Bees’ wax

Olive oil

Cow and calfskins

Wool .

Ostrich feathejrs Elephants’ teeth Pomegranate peels Dates .

Anniseed

Gingenceandfen- / nel seed S

Tallow

Goat skins

Ibs.

600,000 chiefly to Holland. 300,000 Holland and England.

100,000 England. 30,000 England and Holland.

200,000 Leghorn,Marseilles,

Cadiz and Lisbon,

60,000 Holland and Lisbon

120,000 London, Leghorn,

and Marseilles. 100,000 Holland and Marseilles. 500 London. 800 Holland. 50,000 Ditto. 25,000 London and Lisˆ

bon. 6000 Holland.

2500 Ditto.

1500 Ttneriffe. dozens. 130,000 England.

Besides gold-dust, mats, carpets, mules, and minor articles ; total value ––128,000.

The imports in the same year (including ––25,000 in Spanish dollars) amounted to ––150,000 in ship timber, arms, ammunition, woollens, linens, cottons, lead, bar iron, hardware, tea, sugar, spices, trinkets, &c. The ports with which Mogador principally trades are London, Amsterdam, Leghorn, Lisbon, Cadiz, and Teneriffe. The population is estimated by Mr. Jackson at 10,000. Long 9––– 20* W., lat. 31––– 50’ N

MOGULS.

MOGULS, a celebrated nation of Asia, whose conquests were formerly most rapid and extensive. They deduce, we are told, their origin from Japhet, or, as they call him, Japhis, the ion of Noah. His son Turk, they say, was the first king, or khan, of those nations afterwards known by the separate names of Turks, Tartars, and Moguls; and the Tartars, especially, assert that their proper designation is Turks. To this prince is attributed many of those inventions which barbarous nations commonly ascribe to their first sovereigns. He was succeeded by Taunak ; in whose reign the whole posterity of Turk were divided into four large tribes, called the ordas of Erl.it, Gialiar, Kaugin, Berlas or Perlas ; of which last came the famous Timur Beg, or Tamerlane. From this time to that of Alanza khan we meet with nothing remarkable. In his reign the Turks, being immersed in all kinds of luxury, universally apostatised into idolatry. Having two sons, Tartar and Mogul, he divided his dominions among them, and thus gave rise to the two empires of the Tartars and Mo-guls.

The two nations had not long existed before they began to make war upon each other ; and, after long contention, II Khan, emperor of the Moguls, was totally overthrown by Siuntz Khan, emperor of the Tartars; and so great was the de-feat that the Mogul nation was almost exterminated. Only two of II Khan's family survived. These were Kajan his youngest son, and Nagos his nephew, who were both of an age, and had both been married the same year. These two princes, with their wives, had been taken prisoners by Siuntz Khan, but made their escape to tiicir own country. Here they seized upon all the cattle which had not been, carried off by the Tartars ; then, stripping some of the slain, they took their clothes, and retired into the mountains. They passed several mountains without much difficulty ; but at last advanced to the foot of one exceedingly high, which had no way over it but a very small path made by certain animals, called in the Tartar language archara. This path they made use of, though it was so strait that only one could pass at a time, and he was in the most imminent danger of breaking his neck at the least false step. Having ascended the mountain on one side by this path, they descended by the same on the other side ; and were agreeably surprised to find themselves in a most delightful tract, interspersed with rivulets and meadows, abounding with a vast variety of fruits, and enclosed on all sides by inaccessible mountains, so as to shelter them from all future pursuits of the Tartars. Here they lived some time, and gave this beautiful country the name of Irgana-kon, from its situation ; Irgana, signifying in the old language of the Moguls, a valley, and Kon, a steep height. In process of time these two families very much increased. Kajan, whose

posterity was the most numerous, called his descendants Kajath but the people springing from Nagos were divided into two tribes ; Nagosterand Durlagan. These two Mogul princes and their descendants lived in this place for more than 400 years ; but the latter then finding it too narrow for them, meditated a return to the countrv whence their

ancestors had been expelled. For some time however they found this impracticable, as the path that conducted their ancestors had long been destroyed. At last they discovered that one part of the high mountain above mentioned was not very thick in acertain place ; and that it consisted of iron ore. To this, having first set fire to a layer of wood and another of charcoal, laid along the foot of the mountain, they applied seventy large bellows, and at last melted the mountain in such a manner that an opening was made, large enough for a loaded camel to pass ; and through this passage they all marched out.

The Moguls, having thus issued as it were from a new world, overthrew the Tartars in their turn; and continued to be a very considerable nation, till the time of their great hero Tenaujin, afterwards called Jenghiz Khan, whom they extol in the most extravagant manner. It is difficult, however, to say how tar their dominions extended at this time. It seems certain that great part of the vast region now called Tartary was then in a state of considerable civilisation, and extremely populous, as mention is made of many cities which the Moguls destroyed ; and the incredible multitudes whom they slaughtered show tlte populousness of the country. On the east the country of the Moguls and Tartars had the great desert which divides Tartary from China : on the west it had the empire of Karazm, founded by Mahmud Gazni ; and on the south were the countries now named llindostan, Siam, Pegu, Tonquin, and Cochin-China. Thus it compr0-hended the east part of modern Tartary, and all Siberia. The whole region was divided among a great number of Aymacks, or tribes ; who had each one or more khans, according as it was more or less numerous, or divided into branches. Among these, that of the Karaites was the most powerful; their prince assumed the title of grand Khan, and the Moguls were tributary to him ; but, according to the Chinese historians, both were tributary to the emperor of Kitay or Katay. China was divided into two parts : the nine southern provinces were then in the hands of the Chinese emperors of the Song dynasty, who kept their court at Hang-chew, the capital of the pro-aiuce of Che-kyang (see CHINA); the five north provinces, excepting part of Shensi, were possessed by the Kin, a people of Eastern Tartary, from whom are

descended the Manchew Tartars, at present masters of China. This vast dominion was named Kitay, and was divided into two parts : that which belonged to China was properly called Kitay ; and the part which belonged to Tartary Karakitay, in which some include the territories of the Moguls, Karaites, and other tribes, which are the subject of the present article. The west part of the empire of Kitay was possessed by a Turkish prince, who had lately founded a new kingdom there, called Hya; whose capital was Hya-chew, now Ninghya in Shensi, whence the kingdom took its name. On the west of Hya lay Tangut ; a country of great extent, and formerly very powerful ; but reduced to a low state, and divided among many princes ; some of whom were subject to the emperor of Haya, and others to the emperor of China. All TarHirv to the west us far as the Caspian Sea,

with the greater part of Little Buk'iaria, which then passed under the general name of Turkeston, was subject to Ghurkhan, Khurkhan, or Kavar Khan ; to whom even the Gazni monurchs were tributary. This Ghurkhan had been prince of the west Khan or Lyau ; who, driven out of Kitay by the king, settled in little Bukharia, and the country to the north, where they founded a powerful state, about A. D. 1124. Thus the Moguls, properly so called, had but a very small extent of empire which could be called their own, if indeed they had any, when Tetnujin made his appearance. This hero is said by the Tartars to have been of divine origin, as his family could be traced no farther back than ten generations, the mother of whom became pregnant by a spirit. The names and transactions of his predecessors are equally uncertain and unimportant ; but he himself was born in 1163, and is said to have come into the world with congealed blood in his hands ; whence it was prognosticated that he would be a great warrior, and obtain the victory over all his enemies. This prediction, if any such there was, Temujin most literally fulfilled.

At the time of his father's decease, his subjects amounted to between 30,000 and 40,000 families ; but of these two-thirds quickly deserted, and Temujin was left almost without subjects. When only thirteen

years of age, he fought a bloody battle against these revolters : but either was defeated, or gained an indecisive victory ; so that he remained in obscurity for twenty-seven years longer. His good fortune at last he owed to the friendship of Vang Khan, who ruled over a great number of Tartar tribes north of Kitay, and was named Prester John among the Europeans. This prince took Temujin under his protection ; and, a rebellion being afterwards raised against himself, Temujin was made his general, and the khan was kept in possession of his throne ; soon after which, Temujin subdued the tribes which had revolted from himself, and treated them with the utmost barbarity. This happened in 1201 ; but Vang Khan, instead of continuing the friend of Temujin, now became jealous, and resolved to destroy him by treachery. With this view he proposed a marriage between Temujin's son Juji and his own daughter, and another between Temujin's daughter and his own son. Temujin was invited by the Vang Khan to celebrate this double marriage ; but, receiving intelligence of his intention, he excused himself to Vang Khan's messengers, and desired that the ceremony might be put off to some other time. A few days after the departure of these messengers, Badu and Kishlik, two brothers, who kept the horses of one of Vang Khan's chief domestics, came and informed Temujin that the grand khan, finding he had missed his aim, was resolved to set out instantly, and surprise him next morning, before he could suspect any danger. Temujin, on this, quitted his camp in the night, and retired with all his people to some distance. He was scarcely gone when Vane: Khan's troops arrived, and discharged an incredible number of arrows among the empty tents ; hut findine nobody there, they pursued Temujin in such haste that they fell into great

disorder. In this condition they wore suddenly attacked and routed by Temujin ; after which an open war with Vang Khan took place. By this quarrel almost all the princes of Tartary were put in motion, some siding with Temujin, and others with Vang Khan. But at last Vang Khan was overthrown in a battle, where he lost 40,000 men ; and was obliged to fly for refuge to a prince named Tayyan Khan, who was Temujin's father-in-law, and by whom he was ungenerously put to death. Temujin immediately began to sieze on his dominions, great part of which voluntarily submitted ; but a confederacy was formed against him by a number of Vang Khan's tributaries, at the head of whom was Jamuka, a prince who had already distinguished himself by his enmity to Temujin; and even Tayyan Khan himself was drawn into the plot, through jealousy of his son-in-law's good fortune. But Temujin was well prepared; and in 1204 attacked Tayyan Khan, routed his army, killed himself, and took Jemuka prisoner, whose

head he caused instantly to be struck off; after which he marched against the other tribes who had conspired against him. Them he quickly reduced ; took a city called Kashim, where he put all to the sword who had borne arms against him ; and reduced all the Mogul tribes in 1205. Temujin now, having none to oppose him, called a general diet, to be held on the first day of spring 1206. To this diet were summoned all the great lords, both Moguls and Tartars ; and, in the mean time, to establish good order in the army, he divided his soldiers into bodies of 10,000, 1000, 100, and ten men, with their respective officers, all subordinate to the generals, or those who commanded the bodies of 10,000; and these were to act under his own sons. On the day of holding the diet, the princes of the blood and great lords appeared dressed in white. Temujin, dressed in the same manner, with his crown on his head, sat down on his throne, and was complimented by the whole assembly ; who confirmed the Mogul empire to him and his successors, adding all those kingdoms which he had subdued, the descendants of whose vanquished khans were deprived of all right or title to them ; after which he was proclaimed emperor with much ceremony. During this inauguration, a pretended prophet declared that he came from God to tell the assembly that thenceforth Temujin should assume the name of Jenghiz Khan, or the most great Khan of khans ; prophecying also that all his posterity should be khans from generation to generation. This prophecy, which was no doubt a trick of Temujin's, had a surprising effect on his subjects. Jenghiz Khan, having now reduced under his subjection all the wandering tribes of Moguls and Tartars, began to think of reducing those countries to the south and south-west of his own, where the inhabitants were much more civilised that his own subjects, and the countries full of fortified cities. He began with the emperor of Ilya, whose dominions he invaded in 1209, who at last submitted to become his tributary. But in the mean time Jenghiz Khan himself was supposed to be tributary to the emperor of Kitay; who, in 1210, sent him an officer, demanding the customary tribute.

This was refused with the utmost indignation, and a war commenced,

which only ended with the dissolution of the empire of Kitay. In 1216 Jenghiz Khan resolved to carry his arms westward, and therefore left his general Muchuli to pursue his conquests in Kitay. In his journey westward he overthrew an army of 300,000 Tartars, who had revolted against him ; and, in 1218, sent ambassadors, desiring an alliance with Mohammed Karazm Shah, emperor of Gazna. His ambassador was haughtily treated ; however, the alliance was concluded, but soon after broken through the treachery of the Gaznian monarch's subjects. This brought on a war attended with the most dreadful devastations, and which ended with the entire destruction of the empire of Karazm or Gazna, as related under the article GAZNA. After the reduction of Karazm, part of the Moguls broke into Iran or Persia, where also they made large conquests, while others of their armies invaded Georgia and the countries to the west ; all this time committing such enormities that the Chinese historians say both men and spirits burst with indignation. In 1225 Jenghiz Khan returned to Hya, where he made war on the emperor for having sheltered some of his enemies. The event was, that the emperor was slain, and his kingdom conquered, or rather destroyed ; which, however, was the last exploit of this most cruel conqueror, who died in 1227, as he marched to complete the destruction of the Chinese.

At the death of Jenghiz Khan the Mogul empire extended over a prodigious tract of country ; being more than 1800 leagues in length from east to west, and upwards of 1000 in breadth from north to south. Its princes, however, were still insatiable, and pushed on their conquests on all sides. Otkay was acknowledged emperor after Jenghiz Khan ; and had uncle, his immediate government Mogulestan (the country of the Moguls properly so called), Kitay, and the countries eastward to the Tartarian Sea. Jagatay his brother governed under him a great part of the western conquests. The country of the Kipjacks, and others on the east, and north-east, north, and north-west were governed by Batu or Patu the son of Juji, who had been killed in the wars ; while Tuli or Toley, another son of Jenghiz Khan, had Khorassan, Persia, and what part of India was conquered. On the east side the Mogul arms were still attended with success ; not only the empire of Kitay, but the southern part of China was conquered. On the west side matters continued much in the same way till 1254, when Magu, or Menko, the fourth khan of the Moguls, who was afterwards killed at a siege in China, raised a great army, which he gave to his brother Hulaku, to extend his dominions westward. In 1255 he entered Iran, where he suppressed the Ismaelians or Assassins (see ASSASSINS); and two years afterwards he advanced to Bagdad, which he took, and cruelly put the khalif to death, treating the city with no

more lenity than the Moguls usually treated those which fell into their hands. Every thing was put to fire and sword ; and in the city and its neighbourhood the number of slain, it is said, amounted to 1,600,000. The next year he

invaded Syria ; the city of Damascus was delivered up, and, as it made no resistance, the inhabitants were spared ; but Aleppo being taken by storm, a greater slaughter ensued there than had taken place at Bagdad, not even the children in their cradles being spared. Some cities of this country revolted in a year or two after ; but falling again into the hands of the Moguls, they were plundered, and the inhabitants made slaves, or butchered without mercy. Hulaku died in 1264, and at his death we may fix the greatest extent of the Mogul empire. It now comprehended the whole continent of Asia, ex cepting part of Hindostan, Siam, Pegu, Cochin China, and a few countries of Lesser Asia, which had not been attacked by them ; and during all these vast conquests no Mogul army had been conquered, except one by Jaloloddin. From this period, however, the empire began to decline. The ambition of the khans having prompted them to invade the kingdoms of Japan and Cochin-China, they were miserably disappointed in their attempts, and lost a great num-ber of men. The same bad success attended them in Hindostan ; and in a short time this mighty empire broke into several smaller ones The governors of Persia, being of the family of Jenghiz Khan, owned no allegiance to any superior; those of Tartary did the same. The Chinese threw off the yoke ; and thus the continent of Asia wore much the same face that it had done before Jenghiz Khan began his conquests.

The successors of Hulaku reigned in Persia till 1335; but that year Abusaid Khan, the eighth from Hulaku, dying, the affairs of that country fell into confusion for want of a prince of the race of Jenghiz Khan. The empire, therefore, was divided among a great number of petty princes, who fought against each other almost without intermission, till, in 1369, Timur Bek, or Tamerlane, one of these princes, having conquered a number of others, was crowned at Balkh, with the pompous title of Saheb Karan ; that is, ‘ the emperor of the age, and conqueror of the world.’ As he had just before taken that city, and destroyed one of his most formidable rivals, who had shut himself up in it, the new emperor began his reign with beheading some of the inhabitants, imprisoning others, burning their houses, and selling the women and children for slaves. In 1370 he crossed the Sihun, made war on the Getes, and attacked Karazm. Next year he granted a peace to his enemies ; but, two years after, he again invaded the country of

the Getes, and by the year 1379 had fully conquered that country as well as Korazan ; and from that time he continued to extend his conquests in much the same manner as Jenghiz Khan had done, though with less cruelty. In 1387 he had reduced Armenia, Georgia, and all Persia; the conquest of which last was completed by the reduction of Ispahan, 70,000 of the inhabitants of which were slaughtered 0:1 account of a sedition. After the reduction of Persia, Timur turned his arms northward and westward, subduing all the countries to the Euphrates. He took Bagdad, subdued Syria, and, having ravaged great part of Russia, returned to

Persia in 1396, where he splendidly feasted his whole army. In 1398 he invaded Ilindostan, crossed the Indus on the 17th of September, reduced several fortresses, and made a vast number of captives. However, being afraid lest, in case of any emergency, these prisoners might take part with the enemy, he ordered his soldiers to put all their Indian slaves to death ; and, in consequence of this inhuman order, more than 100,000 of these poor wretches were slaughtered in less than an hour. In the beginning of 1399 Timurwas met by the Indian army, whom, after a desperate battle, he defeated witli great slaughter, and soon after took the city of Delhi, the capital of the country. Here he seated himself on the throne of the Indian emperors, and here the shanfs, kadis, and principal inhabitants of the city, came to make their submission, and begged for mercy. The tame elephants and rhinoceroses likewise were brought to kneel be-fore him, as they had been accustomed to do to thft Indian emperors, and made a great cry as if they implored his clemency. These war-ele- phants, 120 in pumber, were, at his return, sent to Samarcand, and to the province where his sons resided. After this, at the request -of the lords of the court, Timur made a great feast; at which he distributed presents to the princes and principal officers. Delhi at this time consisted of three cities called Seyri, Old Delhi, and Jehan Penah. Seyri was surrounded with a wall in form of a circle. Old Delhi was the same, but much larger, lying south-west of the other. These two parts were joined on each side by a wall ; and the third, lying between them, was called

Jehan Penah, which was larger than Old Delhi. Penah had ten gates; Seyri had seven, three of which looked towards Jehan Penah; this last had thirteen gates, six to the north-west, and seven to the southeast. Every thing seemed to be quiet, when, on the 12th of January 1399, the soldiers of Timur, being assembled at one of the gates of Delhi, insulted the inhabitants. The great emirs were ordered to put a stop to these disorders, but could not; and, the gates being open, above 15,000,more soldiers got in, while a far greater number of troops committed greater disorders in Seyri and Jehan Penah. The inhabitants in despair fell on them, while the disorder was increased by the admission of more troops ; so that by the morning of the 13th the whole army was entered, and this great city was totally destroyed, and the people massacred or sold for slaves. The spoils in jewels, plate, &c., were immense. On the 15th, in Old Delhi, the Indians retired into the great mosque to defend themselves; but being attacked by the Tartars, they were slaughtered, and a dreadful carnage ensued throughout the whole city. The artisans were divided among the princes and commanders; but the masons were reserved for the emperor, to build a spacious stone mosque at Samarcand. After this terrible devastation, Timur marched into the different provinces of Hindostan, every where defeating the Indians who opposed him, and slaughtering the Ghebres or worshippers of fire. On the 25th of March he set out on his return, and or th►► Olh of May arrived at Samar-c-and. In a few months after his arrival, he

was obliged to go into Persia, where affairs were in the utmost disorder by the misconduct of his son, whom he had appointed sovereign of that empire. Timur soon settled matters ; after which he again set out on an expedition westward, reduced many places in Georgia which had not submitted, and conquered Syiia. At the same time he quarrelled with Bajazet the Tuikish sultan, then busied in an enterprise against Constantinople. Bajazet had demanded tribute from a prince who was under Timur s protection, and returned an insulting answer to the Tartar ambassadors, who were sent to him on that business. Timur, being an enthusiast in the cause of Mahometanism, and considering Bajazet as engaged in the cause of heaven wnen besieging a Christian city, was very unwilling to disturb him in so pious a work ; and therefore undertook several expeditions against the princes of Syria and Georgia, to give the Turkish monarch time to cool. Among other places he again invested Bagdad, which had cast off its allegiance ; and, having taken it by storm, made such a dreadful massacre of the inhabitants that 120 pyramids were erected with the heads of the slain. In the mean time Bajazet continued to give fresh

provocation, by protecting one Kava Yusef, a rob-ber, who had insulted the caravan of Mecca; so that Timur at length resolved to make war upon him. Bajazet, foreseeing the danger of bringing such a formidable enemy ,against himself, asked pardon, by a letter, for what was passed, and promised obedience to Timur's will for the future. This embassy was graciously received ; and Timur returned for answer, that he would forbear hostilities, provided Bajazet would either put Kava Yusef to death, send him to the Tartar camp, or expel him out of his dominions. Along with the Turkish ambassadors he sent one of his own ; telling Bajazet that he would march into the confines of Antolia, and there wait his final answer. Though Bajazet had seemed at first willing, to come to an agreement with Timur, yet he now behaved in such an unsatisfactory manner that the Tartar monarch desired him to prepare for war ; upon which he raised the. siege of Constantinople; and, having met Timur with an army greatly inferior to the Tartars, was utterly defeated and taken prisoner. This victory was followed by the submission of many places of Lesser Asia to Timur; the Greek emperor owned himself his tributary, as did also the sultan of Egypt. After this, Tituur once more returned to Georgia, which he cruelly ravaged ; after which he marched to Samarcand, where he arrived in 1405. Here, being now old, this mighty conqueror began to look forward to that state which at one time or other is the dread of all mankind; and, to quiet the remorse of his conscience, came to the following curious resolution, which he communicated to his friends ; *viz.* that ' as the vast conquests which he had made were not obtained without some violence, which had occasioned the destruction of a great number of God's creatures, he was resolved, by way of atonement for his past crimes, to perform some good action ; namely, to make war on the infidels, and exterminate the idolaters of China.' This atonement, however, he did not live to

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accomplish ; for he died the same year of a burning fever, in the seventy-first year of his age, and thirty-sixth of his reign.

On the death of Tamerlane, his empire fell immediately into great disorder, and th►► civil wars continued for five or six years ; but at last peace was restored, by the settlement of Shah Ilukh, Timur's son, on the throne. He did not, however, enjoy the empire in its full extent, or indeed much above one-half of it; having only Karazm, Khorassan, Kandahar, Persia, and part of Hmdostan. Neither was he able, though a brave and warlike prince, to extend his dominions, though he transmitted them to his son Ulag Beg. H? proved a wise and learned monarch ; and is famous for the astronomical tables which he caused to be composed. He was killed in 1448 by his son Abdollatiff, who six months after was put to death by his own soldiers. After the death of Abdollah, a grandson of Shah Rukh, seized the throne ; but after ►►►eigning one year, was expelled by Abusaid Atirza, the grandson of Miran Shah, the son of Fimur. His reign was one continued scene of wars and tumults ; till at last he was defeated and taken prisoner by one Hassan Beg, who put him to death in 1468. From this time we may consider the empire of Timur as dissolved, though his descendants still reigned in Persia and Hindostan. On the death of the above mentioned monarch, his son Baber succeeded him, but was soon driven out by the Usbeck Tartars; after which he resided some time in Gazna, when he made incursions into Hindostan, and at length became master of the whole empire, excepting the kingdoms of Dekan, Guzerat, and Bengal. For the transactions subsequent to this pefiod, see HINDOSTAN and INDIA.

MO'HAIR, n.s. Fr. mohere, moire; Belg. and Teut. moor. Stuff made of camels' or other hair.

She, while her lover pants upon her breast, Can mark the figures on an Indian chest, And when she sees her friend in deep despair, Observes how much a chintz exceeds mohair.

Pope.

MOHAIR, in commerce, is the hair of a kind of goat frequent about Angora in Turkey ; the inhabitants of which city are all employed in the manufacture of camblets made of this hair. Some give the name mohair to the camblets or stuffs made of this hair : of these there are

two kinds : the one smooth and plain, the other watered like tabbies. The difference between the two only consists in this, that the latter is calendered, the other not. There are also mohairs, both plain and watered, whose woof is of wool, cotton, or thread.

MOHAMMED (Sheick), the founder of the sect of the Wahebites, who derive their appellation from Abd el Waheb, the father of Mohammed, was born in Arabia, about the commencement of the eighteenth century, and claimed to be descended from the prophet of his religion. At an early age he formed the project of founding a new sect; and carefully studied the laws and traditions of the moslems. Ill-treated by his father, heat first fled and took refuge atBassora;

afterwards he travelled through Syria and Arabia Mohammed Ibn Seoud, governor of oun of the provinces of Arabia, at length gave him an asylum, and permitted him freely to propagate his opinions. From this chief he obtained a detachment of troops to assist his missionary labors ; and, like his great namesake and predecessor, he offered to the choice of his hearers the alternative of conversion or death. On the death ††† of his protector, he found the same favor with his successor, Abd el Aziz, who, at the head of his troops, converted to Wahebism all the tribes of the province of Nejd. An ineffectual attempt, made by the pacha of Bagdad, to crush this sect in 1798, added to their power; and in 1800 they made themselves for some time masters of Mecca. In the course of the expedition, however, Mohammed died at an advanced age ; and Ebd el Aziz, who survived him a few years, was assassinated in 1803. The sect thus founded receive the Koran as of divine authority, but reject the traditions of the doctors ; and their profession of faith is confined to the words, ‘ There is no other God but God,’ without the addition, ‘that Mahomet is the prophet of God.’

MOHAWK, a river of New York, North America, which rises about twenty miles north of Rome. It passes by Rome, Utica, Schenectady, &c., and flows into the Hudson by three mouths between VVaterford and Troy. Its length from Rome to the Hudson is about 1 17 miles. It is connected with Wood Creek by a canal one mile and a half long. There are also canals at German Flats and Herkimer. A boat navigation has been opened for several years from Schenectady through the Mohawk, Wood Creek, Oneida Lake, and Oswego River, to the Lake Ontario. This river, about two miles west of the Hudson, has remarkable falls, called Cahoes or Cohoes. The river, just above the falls, is between 300 or 400 feet wide, and descends at high water

in one sheet nearly seventy feet. About three quarters of a mile below, a bridge is erected across the river, from which there is a most sublime and beautiful view of the cataract.

MOHAWK, a river in Delaware county, New York, which unites with the Popachton and forms the Delaware.

MOHAWKS, a nation of North American Indians, acknowledged by the other tribes of the six nations to be the true old head of the confederacy. They were formerly very powerful, and inhabited the above country. Being strongly attached to the family of Sir William Johnston, a part of them emigrated with Sir John Johnston to Canada in 1776. About 300 of these reside in Upper Canada. The rest left their settlement at Hunter Fort in spring 1780, and settled on the Grand River. They had made great advances in civilisation ; most of them could speak English, and many of them professed their faith in the Christian religion.

MOHILEV, a considerable government of West European Russia, to the east of the government of Minsk, lying between 28►► 50’, and 32►► 40’ of E. long./and 53►► 5’ and 55►► 10’ of N. lat. Its area is 18,500 square miles, and its population about 800,000, of whom the majority are Poles. Here are likewise jrreat rummers of

Jews. It has an immense extent of forests, and marshes, which, however, contain iron ore that might be turned to good account. The soil is also in general fertile, and produces rye, barley, oats, maize, hemp, and flax, in abundance. The principal rivers are the Dnieper, the Druz, and the Sosha: the largest lake the Sennoje. Timber is conveyed to Riga and the ports of the Black Sea : the other exports are corn, cattle, leather, glass, and paper. The manufactures are. confined to a few tanneries, paper mills, and glass and iron works. The other trade is not considerable. It is divided into twelve circles.

MOHILEV, a town of European Russia, the capital of the above government, is situated o;i the right bank of the Dnieper, and divided into four quarters, of which the castle, surrounded by an earthen mound, is the most conspicuous. It stands on a rising ground. In the centre of the town is an octagonal area, surrounded with neat stone buildings. The government offices, and archbishop’s palace, are also handsome edifices. Here is a Greek and a Latin archbishop : the latter

being the superior of all the Catholics in Russia and Poland. The Jesuits, on the suppression of their order, found an asylum here, and still retain their college. The population is about 12,500, part of whom manufacture leather, while others trade with Riga, Memel, and Dantzic, to which they export the country produce, and receive in return foreign goods ; particularly thrown silk. The number of Jews is nearly 2000. It consists chiefly of one long street. The church is a very handsome building, of the architecture of Henry VII. On the Bailey Hill, on the north of the town, are some towers of its strong and ancient castle. In the vicinity of the town are large cotton mills. Market on Saturday. Population 5083

MO/HOCK, n. s. The name of a nation of American Indians, given to ruffians who infested, or rather were imagined to infest, the streets of London. ××× Johnson.

From milk-sop he starts up mohock. Prior. Who has not trembled at the mohock's name ?

Gay.

Thou hast fallen upon me with the rage of a mad dog, or a mohock. Dennis.

MOIDOR', n. s. A Portuguese coin, rated at one pound seven shillings. See COINS.

MOI'ETY, n. I. Fr. moitie, from moien the middle; or Lat. medietas. Half; one of two

equal parts.

This company being divided into two equal moieties, the one before, the other since the coming of Christ ; that part which, since the coming of Christ, partly hath embraced, and partly shall embrace, the Christian religion, we term, as by a more proper name, the church of Christ. Hooker.

The death of Antony

Is not a single doom ; in that name lay

A moiety of the world.

Shakspeare. Antony and Cleopatra.

As this is likely to produce a cessation of arms among one half of our island, it is reasonable that the more beautiful moiety of his majesty's subjects should establish a truce. Addison.

The militia was settled, a moiety of which should be nominated by the king, and the other moiety by the parliament. Clarendon.

MOIL, v. a. & v. n. Fr. mouiller ; Scot. ––r/7-dle. To dirt with mire or dirt: to labor in the mire ; to toil or drudge in any way.

All they which were left were moiled with dirt and mire by reason of the deepness of the rotten way.

Knolles.

Moil not too much under-ground, for the hope of mines is very uncertain. Bacon's Essays.

No more tug one another thus, nor moil yourselves,

receive Prize equal. Chapman'* Iliad.

The name of the laborious William Noy, attorney-general to Charles the First, was anagrammatised, 1 nutyl in Law. Howel.

.Now he must moil and drudge for one he loaths

Dryden.

Oh the endless misery of the life I lead ! cries the moiling husband ; to spend all my days in ploughing.

L' Estrange. With thee 'twas Marian's dear delight

To moil all day, and merry-make at night. Gay.

MOINE (Peter le), a French poet, born at Chaumont in Bassigni, AD. 1602. He joined the society of Jesuits, and enjoyed several offices among them. He is chiefly known by his verses, which were collected into one vol. folio in 1671. They show genius and fancy, but are very extravagant and bombastic. Among his prose works am, 1. La Devotion aisee, Paris, 1652, 8vo ; 2. Pensees Morales ; 3. A short Treatise on History, in 12mo. He died at Paris, August 22nd, 1672, aged seventy.

MOINE (Stephen le), a learned French protestant minister, born at Caen 1624. He was well skilled in the Greek, Latin, and oriental tongues, and professed divinity with high reputation at Leyden ; where he died in 1689. Several dissertations of his are printed

together, entitled Varia Sacra, in 2 vols. 4to. He also wrote other works.

MOISSAC, an ancient town and chief place of a subprefecture in the department of the Taru-et- Garonne, France. It is a post town with an inferior court and a chamber of commerce, and contains 9000 inhabitants. This place is very advantageously situated on the right bank of the Tarn, which is here navigable, and favors a brisk trade that is carried on with Bourdeaux. It stands in a fruitful vale, surrounded by hills covered with vineyards and orchards, producing abundance of excellent fruit. Its manufactures consist of minots, a name given to a certain sort of meal for the supply of the colonies, in which the inhabitants trade, as also in corn, wine, oil, saffron, fish, salt, wool, &c. Among the objects worthy of note may be mentioned the bridge lately built over the Tarn, ai/d the fountain. It is twenty-one miles north-west of Montauban, thirty-six E. S. E. of Agen, and 504 south of Paris.

MOIST, adj. & v. a.-\ French moite ; Arm.

MOIS'TEN, v. a. f moves. Wet; damp;

MOIS'TENER,TZ. s. V juicy : to moist ot

MOIST'NESS, V moisten is to makn

MOIS'TTJRE. f damp or wet in a small

degree: moistener, the person or thing that moistens: moistness and moisture, state of being damp or moderately wet: hence a small quantity of liquid.

MOI &

His breasts are full of milk, and his bones are ed with marrow. Job xxi. 24.

Sometimes angling to a little river near hand, which, for the moisture it bestowed upon roots of some flourishing trees, was rewarded with their shadow.

Sidney.

Write till your ink be dry ; and with your tears Moitt it again ; and

frame some feeling line.

Shakspeare.

All my body's moisture

Scarce serves to quench my furnace-burning heat.

Id.

A pipe a little moiitened on the inside, so as there be no drops left, maketh a more solemn sound than if the pipe were dry. Bacon.

Set such plants as require much mohlurt upon sandy, dry grounds. Id. Natural History.

Pleasure both kinds take in the moistness and density of the air. Id.

MOITTE, Jean GuiFleaume, a French statuary, was born at Paris, in 1747, 'of a family which produced several distinguished engravers and architects, and early displayed so much talent for drawing, that Pigalle, then the most eminent sculptor in Paris, requested that he might receive the young artist as a pupil. In 1768, Moitte went to Italy, and studied the remains of ancient art, without neglecting (the study of nature, lie returned to France in 1773, was one of the first members of the national institute, received the cross of the legion of honour from Napoleon, and died in 1810. His works are distinguished for correctness of design, elevated conception, beauty of proportion, variety of expression, and delicacy of taste. A statue of a tacrificnteur (1783) the bass-reliefs of several of the barriers of Paris; that of the frontis-piece of the Pantheon, representing the country crowning the civic and warlike ˆ virtues (destroyed after the restoration, wtien the Pantheon was consecrated as the church of St. Genevieve) ; that for the tomb of Desaix : several bass-reliefs in the Louvre, representing the muse of history, with Moses and Numa ; warriors devoting themselves for their country, in the chamber of peers, ††† are among his principal productions.

MOIVRE (Abraham), F. R. S., an eminent mathematician, born at Vitri in Champagne in 1667. On the revocation of the edict of Nantes, he determined to fly into England rather than abandon the Protestant religion. Before he left France, he had begun to study mathematics ; and, having perfected himself in that 'science in London, he resolved to teach it. Newton's Principia showed him how little progress he had made in a science of which he thought himself master. From this work he acquired a knowledge of the geometry of infinites with as great

facility as he had learned the elementary geometry. His success in these studies procured him a seat in the Royal Society of London, and in the Academy of Sciences at Paris. His merit was so much esteemed that he was called in to decide the famous dispute between Leibnitz and Newton, concerning the differential calculus. He published a Treatise on Chances in 1738, and another on Ai.nuities in 1752 ; both extremely accurate. The Philosophical Transactions contain many interesting memoirs of his composition, some on the method of fluxions; other} on the lunula of Hippocrates; others on physical astronomy, in which he resolved many important problems; and others on the analysis of the games of chance. He died in London in 1754, aged eighty-seven. He was intimately acquainted with the best authors of antiquity ; and was often consulted about difficult passages in their works.

MOKDASI, a title among the oriental Christians, similar to that of hadsji among the Turks, given to those pilgrims who have not only performed the journey to Jerusalem, but kept the passover in it, and assisted at all the ceremonies of the holy weeks.

MOKONTPORE, or MUKKUNPORE, a town of Hindostan, in the province of Agra, is situated on the bank of the Issah River, and contains the mausoleum of the celebrated Mahometan saint Syed Bedia Addeen, or Shah Mudar. Immense numbers of pilgrims resort to this tomb in the Jummad al Avul of every year, and remain here a fortnight. From all the large towns they go in bodies, distinguished by flags, and accompanied by drums and music. The town is chiefly occupied by attendants on the tomb, clothed in black, who lay the pilgrims under heavy contributions. Long. 80►► 20’ E., lat. 26►► 45’ N.

MOKSCHAN, a town of the government of Penza, European Russia. It has five churches, a monastery, and 4100 inhabitants, chiefly employed in agriculture. It stands near the river Moksha, thirty-six miles W. N. VV. of Penza. Long. 44►► 50* E., lat. 58►► 40” N.

MOLA, a considerable but decayed town of Italy, in the southeast part of the kingdom of Naples, on the Adriatic, and in the province of Bari. It has a good harbour, but the streets are irregular and gloomy. The chief trade is in the products of the adjacent soil. Twelve miles southeast of Bari.

MOLA, or MOLA DI GAETA, a town of Italy, situated on, the Via Appia, and around which are seen ruins of tombs and other structures. It is in the north-west part of the kingdom of Naples, in the Terra di

Lavoro, and is a long straggling place, but has a pleasant neighbourhood, and a fort. The inhabitants, about 2000, live in great poverty, bearing the appearance of, an3 being in reality little better than banditti. The most remarkable ruins are those of the Villa Ciceronis, in the neighbourhood of Formiae. Three miles north of Gaeta, and thirty-seven north-west of Naples.

MOLA SALSA, salt cake, in antiquity, was bar-ley parched, and afterwards ground to meal or flour, then mixed with salt and frankincense, with the addition of a little water. Thus prepared, it was sprinkled between the horns of the victim before it was killed in sacrifice. This act was called immolatio, and was common to the Greeks and Romans; with this difference, that the mola of the Romans was of wheat. The Greeks called it ××Xij or ××\oi>xr××j.

MOLAI (James de), the last grand master of the Knights Templars, was admitted into the order about 1265. On the death of William de Beaujeu, he was unanimously elected to the office of grand master. The great wealth and power

of the order, with their pride and dissolute manners, had at this time created them a multitude of enemies. In 1 307 an order was issued for the general arrest of the knights throughout France. They were accused of heresy, impiety, and hideous crimes. Fifty-seven were burnt in the year 1311, and the order was abolished the following year by the council of Vienne. Molai was detained in prison at Paris till 1313, when his trial took place before commissioners appointed by the pope, and confessing the crimes alleged against him, he was condemned to perpetual seclusion. Having subsequently retracted his confession, he was executed as a relapsed heretic, and perished in the flames at Paris, March 18th, 1314.

MOLARES, or denies molares, in anatomy, the large teeth, called in English the grinders. See ANATOMY.

MOLDAU, a large, rapid river of Bohemia, rising near the mountains that separate it from Bavaria, to the south-west of Prachatitz. It passes by Budweis, Teyn,. and Prague, and joins the Elbe above Melnik. In its course it receives the Malsch, Buschnitz, Woltawa, Sasawa, and Miess, and is navigable as far as Hohenfurt.

MOLDAU, or MOLDAVA, a considerable river of Germany, rises in the Carpathian Mountains, traverses the Austrian province of the Bukowine, after which it enters the Turkish province of Moldavia, to which it gives name, and joins the Sereth at the town of Roman.

MOLDAVIA, a north-eastern province of European Turkey, situated between long. 26°° 16' 45' and 28°° 30' 15' E., and lat. 45°° 25' and 48°° 13' N., bounded on the east by Russia, on the west by Transylvania, on the north by Austrian Poland, and on the south by Wallachia and Bulgaria. Its length from north to south is nearly 200 miles ; its breadth about 120, and its superficial extent since 1812, when its eastern division was ceded to Russia, not above 17,000 square miles. It is divided into Upper Moldavia, or Zara de Suss, and Lower Moldavia, or Zara de Schass ; the first containing four, and the last nine minor districts. The surface of the country is one vast undulating plain, generally covered with grass, and without hedges or landmarks. The great Carpathian chain separates it from Transylvania; and various small lakes diversify the landscape. The principal rivers are the Danube, the Pruth, and the Sereth. The larger lakes those of Bratetsch and Dorohoe. The climate, though warm in summer, is severe in winter; and in the neighbourhood of marshes unhealthy in the warm season. Its chief products are wheat, barley, maize, and millet, wine, and tobacco. Large quantities of wine are exported to Poland and Russia. Some qualities bear a considerable resemblance to Champagne, and all the white wines of the mountains are fine. It has been estimated that more than a fortieth part of the arable land is in a state of tillage : the far greater part being in pasture, and supporting large numbers of cattle, beautiful horses, and sheep. The inhabitants are careful, likewise, of their breed of cattle, of which the annual export (chiefly to Silesia and Bohemia) is computed at 40,000: the export of horses is about 10,000:

that of sheep 220,000. The total number of sheep and goats in the country has been estimated at more than 3,000,000. Hogs are also largely fed in the forests, and bees are abundant ††† their honey is sent to Constantinople ; their wax to Venice. The mineral productions are considerable, but few of the mines are wrought. Several of the rivers bring down small particles of gold. The trade of Moldavia is small, and it has no manufactures but for home consumption. The chief commerce, especially that of woollens and silks, is managed by Greek merchants. The Jews settled here deal chiefly in jewellery ; the Russians in leather and tobacco; the Turks in Morocco leather, groceries, and perfumes.

Moldavia composed part of the ancient kingdom of Dacia, finally conquered by Trajan. The present inhabitants are the descendants of Goths, Huns, Tartars, and other barbarous tribes. They are governed by princes, called hospodars, who are always Greeks, and appointed by the sultan. Most of the inhabitants profess Christianity; but both boyars (nobles) and peasants are free from the capitation tax paid by other rayahs, or tributary Christians.

Mr. Wilkinson gives the following account of the present state of the common people : ••• The boyars resemble the barons in the feudal times of Europe. ‘ Their religious notions, grounded upon the most ridiculous superstitions, are extremely singular. They firmly believe in all sorts of witchcraft, in apparitions of the dead, in ghosts, and in all kinds of miracles performed by the images of saints, and by the virtues of the holy water. In illness, they place an image near them, and when they recover, though it were through the assistance of the ablest physician, they attribute their return to health to the good offices of the image alone. Their observance of Lent days is so strict, that the threats of instant death would hardly prevail upon any one to taste the aliments specified in the eii’lless catalogue of forbidden food. Their other Christian duties, although similar to those of the superior classes of their countrymen, are carried to greater excess. Invoking the holy Virgin, or any saint, is always substituted for regular prayer. Divine providence is never directly addressed. The villages throughout the country are principally composed of peasants’ huts, all built in the same style and of the same size. The walls are of clay, and the roofs thatched with straw, neither of which are calculated to protect the lodgers from the inclemency of the bad season. The ground floors are, however, occupied as long as the weather will permit, and in winter they retire to cells under ground, easily kept warm by means of a little fire made of dried dung and some branches of trees ; which at the same time serves to cook their scanty food. Each family, however numerous, sleep in one of these subterraneous habitations, men, women, and children, all heaped up together ; and their rpspective beds consist of one piece of coarse woollen-cloth, which serves in the double capacity of mattrass and covering.

‘ Their ordinary food is composed of a kind of dough, to which they give the name of rnam malinga, made of the flour of Indian wheat, sometimes mixed with milk. The first two or

three days after a long Lent they sparingly indulge themselves in meat ; but the greater part cannot afford even so great a treat, and content themselves with eggs fried with butter, and milk to their mammalinga. They continue the whole day out of doors at work, and they hear with indifference all the extremes of the weather. Their industry, however, is not of a very active kind, and they take frequent rest.

‘ Notwithstanding this mode of life, and the supposed influence of an ungenial climate, the generality of the peasants are a fine race of people. They have no peculiar turn of features which may be called characteristic; from long intercourse with foreign nations, their blood seems to have become a mixture of many. The Eastern black eye and dark hair, the Russian blue eye and light hair, the Greek and Roman nose, and those features which distinguish the Tartars, are equally common amongst all the orders of these two nations. The dress of the male peasants bears some resemblance to that of the Da-cians, as represented in the figures on Trajan’s pillar at Rome. Their feet are covered with sandals made of goat skin. They wear a kind of loose pantaloon, which is fastened to the waist by a tight leather belt, and closes from the knee downwards. The upper part of the garment is composed of a tight waistcoat, and a short jacket over it, of coarse cotton stuff ; and in winter is added a white sheep-skin, which is hung over the shoulders in the manner of a hussar’s pelisse. The head is not deprived of any part of its hair, which is twisted round behind, and a cap is used to cover it, also made of sheep-skin, but which in summer is exchanged for a large round hat. The beard is shaved, and the whiskers alone are left to their natural growth. The women are clothed from the neck to the ancles with a long gown of thick cotton stuff, of a light color, made tight at the waist in such a manner as to render the whole shape visible. They generally go barefooted, and they cover their heads with a common handkerchief, merely meant to keep up the hair On holidays they add to their common shift a colored gown of a better sort; they button it up from the waist to the neck, round which they wear, as an ornament, one or more strings of beads or paras, pierced through for the purpose.’ Moldavia also contains a considerable number of gypsies.

Moldavia has few towns , its thinly scattered population not exceeding altogether 300,000.

Situated between Russia, Austria, and Turkey, this province often becomes the scene of hostile operations, and for the last century the inhabitants have hardly had time to breathe after one disastrous war, before another commenced. The administration of justice is in a very imperfect state ; the frequent change of rulers, and the riˆht which

they have of a mulling all the decrees of their predecessors, preventing all improvement : education is neglected : the revenue consists chiefly in a sort of capitation tax, collected in small monthly payments, and imposts on cattle and different sorts of provisions, afford-insr a total of nearly ––200,000. The direct tribute to the Porte is about ––15,000 ; the presents to the sultan, his mother, and ministers, are said to amount to about an equal sum.

MOLE, ►►.►►. Sax. mcel; Teut. mahl; French mole ; Lat. mola. A natural spot on the skin.

To nourish hair upon the motet of the face, is tho perpetuation of a veiy ancient custom.

Brov>ne't Vulgar Errourt.

Such in painting are the warts and moles, which, adding a likeness to the face, are not therefore to be omitted. Dryden.

That Timothy Trim and Jack were the same per-son, was proved, particularly by a mole under the left pap. Arbuthnot.

The peculiarities in Homer are marks and moles, by which every common eye distinguishes him.

Pope.

MOLE, ►►. *. Fr. mole ; Lat. moles. A mound ; or dyke.

Sion is -straightened on the north side by the sea-ruined wall of the mole. Sandys.

\Vith asphaltic slime the gathered beech They fastened ; and the mote immense wrought on Over the foaming deep high-arched ; a bridge, Of length prodigious. Milton's Paradise Lost.

The great quantities of stones dug out of the rock could not easily conceal themselves, had they not been consumed in the moles and buildings of Naples.

Addison on Italy.

Bid the broad arch the dangerous flood contain, The mole projected break the roaring main. Pope.

MOLE, n. s. ~] Belg. mol. An animal. MOLE'CAST, | The TALPA, which see : a MOLF/CATCHER, ! molecast and molehill are MOLE'HILL, (the hillock thrown up by MOLE'TRACK, | the mole: molecatcher, one MOLE' WARP, J who lives by catching and destroying these animals : moletrack, their course under ground :

molewarp, another nameforthem.

Get moulecatcher cunningly moule for to kill, And harrow and cast abroad every hill. Tusser.

You fill your solitariness with the conceits of the poets, whose liberal pens can as easily travel over mountains as molehills. Sidney.

Tread softly, that the blind mole may not

Hear a foot fall ; we now are near his cell.

Shakspeare. The molewarp's brains mixt therewithal.

And with the same the pismire's gall. Drayton.

The rocks, on which the salt-sea billows beat, And Atlas tops, the clouds in height that pass, Compared to his huge person molehills be. Fairfax.

A churchwarden, to express Saint Martin's in the Fields, caused to be engraved a martin sitting upon a molehill between two trees. Peacham.

Mountains, which to your Maker's view

Seem less than molehills do to you. Roscommon.

What is more obvious than a mole, and yet what more palpable argument of Providet-ce ? More.

Strange ignorance ! that the same man who knows How far yond' mount above this molehill shows, Should not perceive a difference as great Between small incomes and a vast estate ! Dryden.

In Spring let the molecatts be spread, because they hinder the mowers. Mortimer'* Husbandry.

The pot-trap is a deep earthen vessel set in .he ground, with the brim even with the bottom of the moletraclts. tfnrtimrr.

Moles have perfect eyes, and holes for them through the skin, not much bigger than a pin's head.

Kait on the Creation.

Our politician having baffled conscience, must not be nonplused with

inferior obligations ; and, having leapt over such mountains, lie down before a molehill.

South' s Sermons.

MOL

28

Thy arts of building from the bee receive ; Learn of the mole to plow, the worm to weave.

Pope,

Superficial writers, like the mole, often fancy themselves deep, when they are exceeding near the surface. Shenstone.

MOLE, in architecture, a massive work formed of large stones laid in the sea by means of coffer dams, extended either in a right line or an arch of a circle, before a port, which it serves to close ; to defend the vessels in it from the impetuosity of the waves, and to prevent the passage of ships without leave.

MOLE, moles, among the Romans, was also used for a kind of mausoleum, built in manner of a round tower on a square base, insulate, encompassed with columns, and covered with a dome. The mole of the emperor Adrian, now the castle of St. Angelo, was the greatest and most stately of all the moles. It was crowned with a brazen pine-apple, wherein was a golden urn containing the ashes of the emperor.

MOLE, in zoology. See TALPA. Moles in the fields may be destroyed by taking a head or two of garlic, onion, or leek, and putting it into their holes ; on which they will run out, and you may kill them with a spear or dog. Or pounded hellebore, white or black, with wheat-flour, the white of an egg, milk, and sweet wine, or metheglin, may be made into a paste, and pel-lets as big as a small nut may be put into their holes: the moles will eat this with pleasure, and will be killed by it. In places where you would not dig nor break much, the fuming their holes with brimstone, garlic, or other unsavory things, drives them away ; and, if you put a dead mole into a common haunt, it will make them forsake it. Or take a mole-spear or staff, and where you see them cast go lightly ; but not on the side betwixt them and the wind, lest they perceive you ; and, at the first or second putting up of the earth, strike them with your mole-staff, downright, and mark which way the earth falls most ; if she casts towards the left hand, strike somewhat on the right hand ; and so on the contrary, to the casting up of the plain ground, strike down and there let it remain ; then take out the tongue in the staff, and with the spattle, or flat edge, dig round about your grain to the end thereof, to see if you have killed her ; and, if you

have missed her, leave open the hole and step aside a little, and perhaps she will come to stop the hole again, for they love but very little air; and then strike her again ; but, if you miss her, pour into the hole two gallons of water, and that will make her come out. Many may also be taken, when going out in a morning to feed, or coming home when fed.

MOLEHILLS are a very great prejudice to pasture lands, not only in wasting so much of the land as they cover, but in hindering the scythe in mowing. In the west of England they use a peculiar kind of instrument for the breaking up of these ; it is a flat board, very thick, and of j.bout eight inches in diameter, into which there is fastened a perpendicular handle of three or four feet long. It has four broad and sharp iron teeth at the front, which readily cut through the hill, and spread the earth it consists of; and be-

hind there is a large knob for break ing the clods. There is, however, a better instrument for destroying these hills, where they are in very great numbers. This is a kind of horse-machine ; it has a sharp iron about three feet over, and with a strong back. It is about four or five inches broad, and has two long handles, for a horse to be harnessed to, and a cross bar of iron to strengthen it at the bottom of the handles, reaching from the one handle to the other. The middle of this cross bar is furnished with one, two, or more, sharp pieces of iron like small plough-shares, to cut the molehills into two, three, or more parts. The iron behind is of a semicircu- lar figure. A single horse is harnessed to this machine, and a boy must be employed to drive it, and a man to hold and guide it ; the sharp irons or shares are the first things that meet the hill ; they run through it, break its texture, and cut it into several parts ; and the circular iron, following immediately behind them, cuts up the whole by the roots, and leaves the land level. This instrument will destroy as many molehills in one day as a common laborer can in eight, and would be of very great advantage to the kingdom if brought into general use. It is to be observed, that, this leaving a naked space in the place of every hill, it will be necessary to go over the land, and sow them with hay-seed, otherwise these spots will want the produce of grass the first years. The farmers in some parts of England are not willing to destroy the molehills, but let them stand from year to year, supposing that they get some ground by them, but the advantage by this means is so little that it does not balance the unsightliness and damage to the mowing.

MOLECULES, in chemistry, is used to signify the constituent particles

of bodies. Chemists have divided them into integrant molecules and constituent molecules. The former are such as have the same properties as the mass, and are therefore compound or simple, as the mass is one or the other. Thus a mass of pure metal consists of integrant molecules, each of which has the metallic properties of the mass. A mass of alloy, in the same manner, is composed of integrant molecules, each of which is compounded of the different substances forming the alloy. If we decompose a compound integrant molecule, we obtain the constituent molecules of which it consists. An integrant molecule of water is composed of constituent molecules of oxygen and hydrogen.

MOLEST, v. a. ˆ Fr. molester ; Latin MOLESTA'TION, n. s. $ molesto. To disturb ; vex ; trouble.

If they will firmly persist concerning points which hitherto have been disputed of, they must agree that they have molested the church with needless opposition. Hooker.

MOLESWORTH (Robert), lord viscount Molesworth, an eminent statesman and writer, born in Dublin in 1656. He was attainted by king James for his activity on the invasion by the prince of Orange ; who, when settled on the throne, made him a member of the privy-council, and sent him envoy-extraordinary to Denmark.

MOL

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Here he resided above three years, s.nd then returned upon some disgust, without an audience of leave. Upon his return he drew up his Account of Denmark, in which he represented that government as arbitrary ; and hence gave great offence to George prince of Denmark. The Danish envoy presented a memorial to king William concerning it; and furnished materials for an answer, which was executed by Dr. William King. Mr. Molesworth was member of the houses of commons in both kingdoms: king George I. made him a commissioner of trade and plantations, and advanced him to the peerage of Ireland, by the title of baron Philipstown, and viscount Molesworth of Swords. He died in 1725. He wrote an address to the house of commons, for the encouragement of agriculture ; and translated Franco-Gal lia, a Latin treatise of the civilian Hottoman.

MOLE VILLE (Francis Bertrand de), a French statesman and historian, born in 1744, first occupied the situation of attendant of the finances in liritanny. In Oc'ober 1791 he was appointed minister of the marine. Being accused in the Legislative Assembly of having favored the emigration of the officers, in March 1792, he resigned his post. He subsequently took refuge in England, where he employed himself in literary undertakings. He died at Paris in 1819. Among his works are, A Chronological History of England, 6 vols. 8vo. ; Memoirs relative to the last Year of the reign of Louis XVI. ; and Annals of the Frenoh Revolution ; all which were first published in English, being translated from the MSS. of the author.

MOLIERE (John Baptist), a famous French comedian, whose original name was Pocquelin. He was the son of a valet de chambre, and was born at Pans about 1620. He studied the classics under the Jesuits in the college of Clermont, and was designed for the bar; but, on quitting the law schools, he became an actor. From his fondness for the drama, he continued till his death to exhibit plays, which were greatly applauded. It is said the first motive of his going upon the stage was to enjoy the company of an actress, for whom he had contracted a violent affection. His last comedy was Le Malade Imaginaire, which was first acted in 1673 ; and Moliere died on the fourth night of its representation ; some say in acting the very part of the dead man; but others say he died in his bed that night, from the bursting of a vein in his lungs by coughing. The king prevailed with the archbishop of Paris to suffer him to be buried in consecrated ground; though he had

irritated the clergy by his Tartuffe. The best editions of his works are thosp of Amsterdam, 5 vols. 12mo., 1699 ; and Paris, 6 vols. 4to., 1734.

MOLINA, a celebrated Jesuit, founder of the sect of the Molinists. He taught that the operations of divine grace were entirely consistent with the freedom of human will ; and introduced a new hypothesis to remove the difficulties attending the doctrines of predestination and liberty, and to reconcile the jarring opinions of Augustines. Thorn ists, Semi-Pelagians, and other polemical divines. He affirmed that the decree of predestination to eternal glory was founded

upon a previous knowledge and consideration of the merits of the elect; that the grace, from whose operation these merits are derived, is nor efficacious by its own intrinsic power only, but also by the consent of our own will, and because it is administered in those circumstances in which the Deity, by that branch of his knowledge which is called scientia media, foresees that it will be efficacious. The kind of prescience, denominated in the schools scientia media, is that foreknowledge of future contingents that arises from an acquaintance with the nature and faculties of rational beings, of the circumstances in which they shall be placed, of the objects that shall be presented to them, and of the influence which their circumstances and objects must have on their actions.

MOLINOS (Michael), a Spanish priest, born in the diocese of Saragossa in 1627. He entered into priest's orders, but never held any benefice. He wrote a work entitled II Guida Spirituale, containing his peculiar notions, which was much read in Italy and Spain. His followers are called Quietists ; because his chief tenet was that men ought to annihilate themselves to be united to God, and afterwards remain in quietness of mind, without being concerned about what may happen to the body. He was taken up in 1687, and his sixty-eight propositions were examined by the pope and inquisitors, who decreed that his doctrine was false and pernicious ; that his books should be burnt; and that he should re-cant his errors publicly in the Dominican church. Thus he was condemned to perpetual imprisonment, in his sixtieth year, for doctrines which he had been spreading twenty-two years before. He died in prison in 1692.

MOLISE, the ancient Samnium, a mountainous province of Naples, surrounded by the Capitanata, Abruzzo, Principato Ultra, and Terra di Lavoro. It contains about 1200 square miles, and is watered by the

Tainaro, Bifuno, and Tregno rivers ; its forests and pasturages are extensive, but are occupied by goats, sheep, and hogs more than cattle. Inhabitants 207,000.

MOL’LIfiNT, adj. ~\ Lat. molliens, mollit.

MOLLIFI’ABLE, /Softening: mollifiable

MOLLIFICA’TION, n.s.)□□□ means that which may

MOL’LIFIER, MOL’LIFY, v. a.

be softened : siollin- ‘ cation, the act of mol-

lifying ; purification ; mitigation : mollifier, a thing or person that softens or mitigates: to mollify (Fr. rnollir), to assuage; soften; quiet ; qualify.

Sores have not been closed, neither bound up neither mollified with ointment. Isaiah i. 6.

Neither herb, nor mollifying plaister, restored them to health. Wisd. xvi. 12.

Thinking her silent imaginations began to work upon somewhat, to mollify them, as the nature of musick is to do, I took, up my harp. Sidney.

He brought them to these savage parts, And with sweet science mMijied then stubborn hearts. Spenser.

Some mollification, sweet lady.

Shahfpeart.

For induration or mollification, it is to be inquired what will make metals harder and harder, and what will make them softer and softer. Bacon.

The root hath a tender, dainty beat ; which, when

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it cometh above ground to the sun and air, vanisheth ; for it is a great muUifier. ^-

Otir proceedings in the cure of the painful tu-mors of the body, direct us what to do in the spiritual : we lay suppling and mollifying plaisteis to these angry swellings, ere we make use of the lancet. BP-n”►►-

They would, by yielding to some things, when they refused others, sooner prevail with the houses to mol ify their demands, than at first to reform them.

Clarendon.

The crone on the wedding night, finding the knight’s aversion, speaks a good word for herself, in hope to mollify the sullen bridegroom. Dryden.

Cowley thus paints Goliah : ‘ The valley, now, this monster seemed to fill, And we, methought, looked up to him from our

hill ;’

where the two words, seemed and methought, have mollified the figure. Dryden.

MOLLOY (Charles), Esq., a well-known writer of the eighteenth century, was born in Dubl.n, and educated at Trinity College, of which he became a fellow. On his coming to England he entered of the Middle Temple, and is said to have had a very considerable hand in a periodical paper called Fog’s Jouinal; and to have been almost the sole author of another well-known paper, entitled Common Sense. He had large offers made him to write in defence of Sir Robert Walpole, but rejected them ; notwithstanding which, at the change of the ministry in 1742, he was entirely neglected. But, having married a lady of fortune, he treated the ingratitude of his patriotic friends with contempt. He also wrote three dramatic pieces, *viz.* The Perplexed Couple ; The Coquet; and The Half-pay Officers; none of which met with much success. He died 16th July, 1767.

MOLLUCELLA, in botany, a genus of plants belonging to the didynamia class, and gymnospermia order: CAL. campanulate, dilated,

broader than the corolla, spinous. Species six, natives of the Molucca Islands, Syria, and Tartary ; some of them shrubs, others annual herbaceous plants.

MOLLUGO, African chickweed, a genus of the trigynia order, and triandria class of plants; natural order twenty-second, caryophyHese: CAL. pentaphyllous: COR. none: CAPS, trilocular and trivalved. Its characters are these: the empalement of the flower is composed of five oblong small leaves, colored on their insides, and permanent ; the flower has five oval petals shorter than the empalement, and three bristly stamina, which stand near the style, terminated by single summits ; it has an oval germen, having three furrows, supporting three very short styles ; the germen becomes an oval capsule with three cells, filled with small kidney-shaped seeds. There are several species, few of which are admitted into gardens. Miller reckons two, and Linne” five species. This plant is said to have an aperitive virtue.

MOLLUSCA, in zoology, the second genus of vermes or worms. These are simple naked animals, not included in a shell, but furnished with limbs, and comprehend eighteen subordinate genera, and 110 species.

MOLMUTIN LAWS, in ancient British history,

the laws of Dunwalla Molmutius, the sixteenth king of the Britons. They are saiil to have been in use till the Norman conquest.

MOLO, a philosopher of Rhodes, called also Apollonius. Some are of opinion that the philosopher Apollonius and Moio were different persons, both natives of Alabanda, and disciples of Menecles. They both visited Rhodes, and there opened a school ; but Molo came some time after Apollonius. Molo had Cicero and Julius Caesar among his pupils.

MOLOCH, or MOLECH, Heb. rV?►►, i. e. king, a false god of the Ammonites, who dedicated their children to him by making them ‘ pass through the fire,’ as the Scriptures express it. There are various opinions concerning this method of consecration. Some think the children leaped over a fire sacred to Moloch ; others that they passed between two fires ; but the most probable opinion is that they were really burnt in the fire, as sacrifices to this god. For, although it was usual among the pagans to lustrate or purify with fire, yet it is expressly said that the inhabitants of Sepharvaim burnt their children in the fire to Anamelech and Adramelech; deities similar to Moloch of

the Ammonites. Moses, in several places, forbids the Israelites to dedicate their children to this god as the Ammonites did, and threatens utter extirpation to such as were guilty of this abominable idolatry. The Hebrews were, however, much addicted to this barbarous superstition. Amos, and after him Stephen, reproaches them with having carried along with them into the wilderness the tabernacle of their god Moloch. Solomon built a temple to Moloch upon the mount of Olives; and Manasseh, long after, imitated his impiety, by making his son pass through the fire in honor of Moloch. It was chiefly in the valley of To-phet and Hinnom, east of Jerusalem, that the Israelites paid their idolatrous worship to tins false God. See BEN-HINNOM and GEHENNA. Some mythologists make Moloch the same with Saturn, to whom human sacrifices were offered ; others the sun. Moloch was likewise called Milcom, as appears from 1 Kings xi. 5, 7, 33.

MOLOGA, a town of European Russia, in the government of Jaroslav, situate at the junction of the Mologa River with the VVolga, in long. 38►► 22' E., and lat. 58►► 1' N. Population, generally employed on the Wolga, 2000.

MOLOSSES, or MOLASSES, that gross fluid mat-ter remaining of sugar after refining, and which no boiling will bring to a consistence more solid than that of syrup ; hence also called syrup of sugar. Properly, molosses are only the sediment of one kind of sugar called chypre, or brown sugar, which is the refuse of other sugars not to be whitened or reduced into loaves. Molosses are much used in Holland for the preparation of tobacco, and also among poor people instead of sugar. There is a kind of brandy or spirit made of molosses.

MOLOSSES, ARTIFICIAL. There has been found a method of making molosses from apples, without the addition of sugar. The apple that succeeds best in this operation is a summer-sweeting of a middle size, pleasant to the taste, and so full of juice that seven bushels will yield a barrel of

cyder. The method of making it is this: ►►► The apples are to be ground and pressed ; then the juice is to be boiled in a large copper, till three-quarters of it be evaporated ; this will be done, with a moderate fire, in about six hours, with the quantity of juice above-mentioned: by this time it will be of the consistence and taste, as well

as of the color, of molosses. These new molosses serve all the purposes of the common kind, and are of great use in preserving cycler. Two quarts, put into a barrel of racked cyder, will preserve it, and give it an agreeable color. The invention of this kind was owing to Mr. Chandler of Woodstock in New England, who, living at a distance from the sea, and where the common molosses were very dear and scarce, provided this for the supply of his own family, and soon made it the practice among people of the neighbourhood. It is to be observed that this sort of apple, the sweeting, is of great use in making cyder, one of the very best kinds we know being made of it. The people in New England also feed their hogs with the fallings of their orchards of these apples ; in consequence of which their pork is the finest in the world.

MOLOSSES SPIRIT, a very clean and pure spirit, much used in England, and made from molosses or common treacle dissolved in water, and fermented in the same manner as malt, or the common malt spirit. Sec DISTILLATION. Molosses spirit coming dearer than that of malt, it is frequently met with basely adulterated with a mixture of that spirit, and indeed seldom is to be bought without some dash of it. Many have a way of mixing malt in the fermenting liquor: by this the produce of the whole is greatly increased, and the maker may assure the buyer thai the spirit is pure as it ran from the worm. In most of the nice cases in our compound distillery, the molosses spirit supplies the place of a pure and clean spirit. Cinnamon, citron, and other fine cordial waters, are made with it ; for the malt spirit would impart to these a very disagreeable flavor. Molosses spirit gives a yellow stain to the hands, or other substances dipped into it; and may therefore be of use in dyeing. The vinegar-makers may also find use for it; but the most advantageous of all its uses is to the distiller; a quantity of it added to new treacle for fermentation is of great use in the process, and increases very considerably the quantity of spirit; but the proportion, in regard to the new matter, must not be too great.

MOLOSSIA, or MOLOSSIS, a territory of Epi-rus, so named from king Molossus, son of Pyrrhus and Andromache. This country had the bay of Ambracia on the south, and the country of the Perrhaebeans on the east. The dogs of the place were famous, and received the name of Molossi among the Romans. Dodona was the capital of the country, though others reckon it the chief city of Thesprotia.

MOLOSSUS, in the Greek and Latin poetry, a foot consisting of three long syllables. As audiri, cantabant, virlutem. It takes its name either from a dance in use among the Molossi, or from the temple of Jupiter Molossus, where odes were sung, in which this foot had a great share ;

or else because the march of the Molossi, when

they went to the combat, was composed of thes►► feet, or had the cadence thereof. The same foot was also called among the ancients, vertumnus, extensipes, hippius, et canius.

MOLSA (Tarquinia), daughter of Camillo Molsa, a knight of the order of St. James of Spain, a most accomplished lady, who was bom at Ferrara. Her father early observing the excellence of her genius, procured her the best masters in every branch of literature and science. Lazarus Labadini taught her polite literature ; and her Latin compositions show that she profited by his instructions. She studied Aristotle under Camillo Corcapani ; Anthony Guarini taught her astronomy ; she learned poetry under Francis Patricius ; Greek, logic, and philosophy under P. Latoni. The rabbi Abraham taught her the Hebrew language; and John Marier Barbier instructed her in the Tuscan, in which she wrote a great number of elegant verses, letters, and other pieces, which are still held in esteem. She also translated several pieces from Greek and Latin in an elegant manner. She attained the highest degree of perfection in music ; and played upon the violin and lute, and sung to them in a most exquisite taste. She instituted a choir of ladies, over which she presided. She was in high reputation at the court of Alphonsus II. duke of Ferrara. But the most decided com pliment to her merit she received from Rome. By a decree of the senate, she was honored with the title of Singular, and the rights of Roman citizens were granted to her and the whole family. She was married, but lost her husband without having any children.

MOLTEN, part, pass of MELT, which see. Brass is molten out of the stone.

Job xxviii. 2.

In a small furnace made of a temperate heat ; let the heat be such as may keep the metal molten, and no more. Bacon.

The riches and pride of their outward habit, are they willing to part with, to their molten god.

Bp. Hall.

Love’s mystick form the artizans of Greece In wounded stone, or

molten gold express. Prior.

MOLUCCA ISLANDS. The Moluccas, in the former extent of this name, included all the islands situated to the east of the Molucca passage, or in about long. 126►► E. The word seems to be Arabic, and to signify Royal Islands, each of them being anciently the residence of a sovereign. This name was afterwards more particularly applied to the Spice Islands of BANDA AMBOYNA, CERAM, TERNATA, TIDORE, and BATCUI AN, which see in their alphabetical places

These islands present the appearances of hav ing undergone some great natural convulsionˆ being singularly broken, and rising in enormous peaks from the ocean ; most of them are also volcanoes either extinct or active. Earthquakes are likewise very frequent, though seldom violent.

The nature of the climate, and of the soil in most of these islands, prevent the cultivation of any kind of grain ; the former being, for one season, a constant rain, and for the other an uninterrupted drought ; while the latter is in general either spongy or rocky ; hence the staple food ol the islanders is derived from the sago palm,

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winch nature has given to them in vast profusion, ###AS if to compensate for the corn she has denied them. The chief riches of these islands, however, and without which they would never have attracted the notice of Europeans, are their nutmegs and cloves, which are indigenous in no other region of the globe. The most remarkable animals are the babeeroussa, or hogdeer, the opossum, the phalanger, the moschus pygmaeus, and the wild hogs and common deer.

Valentyn notices a singular phenomenon in that part of the sea usually called the Banda Sea. Between June and September, every year, a current of white water occupies this part, first appearing towards the southeast, near the islands of Key and Timor Laut, and gradually spreading to the shores of Ceram on the north, and of Ombay on the west, beyond which it disappears between Flores and Celebes. During the day its color is that of milk, and in the night it emits a light similar to that of the horizon ; the water which composes it seems to be agitated internally, and, while the phenomenon lasts, the fish disappear from the coasts.

The Portuguese, who first came hither in 1510, succeeded in establishing themselves in possession of the islands, which were wrested from them by the Dutch in 1607. They remained with the Dutch since that period, till their capture by the British during the late wars, by whom, however, they were again surrendered in 1814 to their former rulers. They were formerly subject in succession to tlie Chinese, the Javanese, and the Malayans ; and the Mahometans had begun to settle in them, and convert the inhabitants, but a little before they were discovered by the Portuguese. We have described each of these islands under its particular appellation.

MO’LY, n. s. Fr. moly ; Lat. moly Swe d. mola. A plant. See below.

Sweet is the nut, but bitter is his pill ; Sweet is the bloomflower, but yet sour enough ;

And sweet his m, > lii, but his root is ill ; To every sweet with sour is tempered still,

That maketh it be coveted the more : For easy things, that may be got at will,

Most sorts of men do set but little store.

Spencer.

Hfoly, or wild garlick, is of several sorts ; as the great moly of Homer, the Indian moly, the mo/i/ of Hungary, serpent's moly, the yellow moly, Spanish purple moly, Spanish silver-capped moly, Uioscotides's nuily, the sweet moly of Montpelier : the roots are tender, and must be carefully defended from frosts : as for the time of their flowering, the moly of Homer flowers in May, and continues till July, and so do all the rest except the last, which is late in September : they are hardy and will thrive in any soil.

Mortimer.

The sovereign plant he drew, \nd shewed its nature, and its wonderous power, 151 uck was the root, but milky white the flower ; Moly the name. Pope's Odyssey.

MOLY, has been rendered famous by Homer; and hence has been much enquired into, as to its true sense, by the botanists of almost all times. The old interpreters of Homer explain this word by the wild rue ; and the only reason for this is, that at some time, probably long after the days

of Homer, the people of Cappadocia called the wild rue moly. But this plant is wholly different from the moly of Homer, which Theophrastus affirms grew in his time in Arcadia in great plenty, and had a round bulbous root like an onion, and long and grassy leaves like the squill. On the whole, the moly of Homer seems to have been a species of allium or garlic.

MOLYBDENUM, in chemistry and metallurgy, a metal which is found mineralized by sulphur in the ore called sulphuret of molybdena. This ore, which is very scarce, is found at Glenely in Inverness-shire, imbedded in chlorite-slate, and its granite at Thap in Westmoreland, Cold-beck in Westmoreland, and Huel Gorland in Cornwall. It occurs also in Norway, and in other parts of Europe, in Greenland, and in Siberia. It appears to be a compound of 60 molybdenum and 40 sulphur, and so much resembles plumbago in many of its properties, that they were long considered as varieties of the same substance. It is of a light lead-grey color ; its surface is smooth, and feels unctuous ; its texture is lamellated; it soils the fingers, and marks paper blueish-black, or silver-grey. It may be cut with a knife. It is generally found

in compact masses ; seldom in particles, or crystallised.

Scheele, in 1778, showed that from this ore a peculiar acid might be obtained, and in 1782 molybdenum was first procured in a metallic state by Hielm. To obtain this metal is a task of the utmost difficulty. Few chemists have since succeeded in producing this metal, on account of its great infusibility. The method recommended in general is the following : ††† Molybdic acid is to be formed into a paste with oil, dried at the fire, and then exposed to a violent heat in a crucible lined with charcoal. By this means the oxide becomes decomposed ; a black agglutinated metal is obtained, very brittle under the finger, and having a metallic brilliancy. The globules are grey, brittle, and extremely infusible. When heated in open vessels, this mettle combines with the oxygen of the atmosphere and is converted into the white or peroxide. It is susceptible of three states of oxidisement, giving a brown, a blue, and a white oxide. The two latter having acid properties, are known also by the names of the molybdous and the molybdic acids. Nitric acid readily oxidises and acidifies the metal. Nitre detonates with it, and the remaining alkali combines with its oxide. Molybdenum unites by fusion with several of the metals, and forms brittle or friable compounds. No acid acts on it but the nitric and mtromuriatic. Several acids act on its oxide, and afford blue solutions. The specific gravity of molybdenum U 8*011. When dry, molybdate of ammonia is ignited in a crucible with charcoal powder, it is converted into the brown oxide of the metal. This has a crystallised appearance, a copper-brown color, and a specific gravity of 5-66. It does not form salts with acids. Sec Cm MISTUY.

MOLYBDIC ACID. The native sulphuret of molybdenum being roasted for some time, and dissolved in water of ammonia, when nitric acid is added to this solution, the molybdic acid precipitates in fine white scales, which bscome yel-low on melting and subliming them. It changes

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the vegetable blues to red, but less readily and powerfully than the molybdous acid.

M. Bucholz found that 100 parts of the sulphuret gave 90 parts of molybdic acid. In other experiments, in which he oxidised molybdenum, he found that 100 of the metal combined with from 49 to 50 of oxygen. Berzelius, after some vain attempts to analyse the molybdates of lead and barytes, found that the only method of obtaiinng an exact result was to form a molybdate of lead. He dissolved 10 parts of neutral nitrate of lead in water, and poured an excess of solution of crystallised molybdate of ammonia into the liquid. The molybdate of lead, washed, dried, and heated to redness, weighed 11 -068. No traces of lead were found in the liquid by sulphate of ammonia; hence these 11-068 of lead evince 67-3 per cent, of oxide of lead. This salt then is composed of

Molybdic acid . . 39‘194 9‘0

Oxide of lead , 60-806 14-0

100-000

And from Bucholz we infer, that this prime equivalent 9, consists of 3 of oxygen -j-6 metal ; while molybdous acid will be 2 oxygen + 6 metal iz 8-0.

Molybdic acid has a specific gravity of 3-460. In an open vessel it sublimes into brilliant yellow scales; 960 parts of boiling water dissolve one of it, affording a pale yellow solution, which reddens litmus, but has no taste. Sulphur, charcoal, and several metals, decompose the molybdic acid. Molybdate of potash is a colorless salt. Molybdic acid gives, with nitrate of lead, a white precipitate, soluble in nitric acid ; with the nitrates of mercury and silver, a white flaky precipitate ; with nitrate of copper a greenish precipitate ; with solutions of the neutral sulphate of zinc, muriate of bismuth, muriate of antimony, nitrate of nickel, muriates of gold and platinum, it produces white precipitates. When melted with borax it yields a bluish

color ; and paper dipped in its solution becomes, in the sun, of a beautiful blue.

The neutral alkaline molybdates precipitate all metallic solutions. Gold, muriate of mercury, zinc, and manganese, are precipitated in the form of a white powder ; iron and tin, from their solutions in muriatic acid, of a brown color; cobalt of a rose color ; copper, blue ; and the solutions of alum and quicklime, white. If a dilute solution of recent muriate of tin be precipitated, by a dilute solution of molybdate of potash, a beautiful blue powder is obtained.

The concentrated sulphuric acid dissolves a considerable quantity of the molybdic acid, the solution becoming of a fine blue color as it cools, : t the same time that it thickens; the color disappears again on the application of heat, but returns by cooling. A strong heat expels the sulphuric acid. The nitric acid has no effect on it; but the muriatic dissolves it in considerable

auanlity, and leaves a dark blue residuum when istilled. With a strong heat it expels a portion of sulphuric acid from sulphate of potash. It also disengages the acid from nitre and common salt hy distillation. It has some action upon the filings of the metals in the moist way. VOL. XV.

The molybdic acid has not been yet emp-cyed in the arts.

MOLYBDOUS ACID. The deutoxide of molybdenum is of a blue color, and possesses acid properties. Triturate 2 parts of molybdic acid, with 1 part of the metal, along with a little hot water, in a porcelain mortar, till the mixture assumes a blue color. Digest in 10 parts of boiling water, filter, and evaporate the liquid in a heat of 120►►. The blue oxide separates. It reddens vegetable blues, and forms salts with the bases. Air or water, when left for some time to act on molybdenum, converts it into this acid. It consists of about 100 metal to 34 oxygen.

MOLYN (Peter), surnamed Tempesta, an eminent painter, born at Haerlem in 1637. He was the disciple of Snyders, whose style of painting he at first imitated. But his genius led him to the study of dismal subjects; and as he excelled in painting tempests, storms, and shipwrecks, he was called Tempesta. His pictures are very rare, and held in great estimation. The name of Pietro Mulier, or de Mulieribus, was given him on account of having caused his wife to be

assassinated, in order to marry a young lady of Genoa. Buˆ this villainous transaction being discovered, he was seized, imprisoned, and capitally condemned. However, his great merit as an artist occasioned a mitigation of the sentence ; but he was still detained in prison, where he followed his profession, and would have continued there in all probability for life, had he not escaped to Placentia, when Louis XIV. bombarded the city of Genoa, after he had been in confinement sixteen years. To this artist are attributed several very neat prints, executed with the graver only, in a style greatly resembling that of John Vander Velde. They consist chiefly of candle-light pieces and dark subjects.

MOLYN (Peter), the elder, a native of Holland, and a painter ; but not so eminent nor so infamous as Tempesta. Some suppose the prints above mentioned ought to be ascribed to the latter ; as, though very neatly executed, they are labored heavy performances, and not equal in any degree to what one might expect from the hand of an artist of so much repute as Tempesta.

MOLYNEUX (Dr. William), a celebrated mathematician and astronomer, born in Dublin, in 1656. In 1675 he entered in the Middle Temple, where he spent three years in the study of the law; but the bent of his genius strongly tended towards mathematics and philosophy. Returning to Ireland, in 1678, he married Lucy, the daughter of Sir William Domville, attorney-general. Being master of an easy fortune, he continued to prosecute his studies in natural and experimental philosophy, particularly astronomy ; and about 1681 commenced a literary correspondence with Flamstead the king's astronomer, which he kept up for several years. In 1683 he formed a design of erecting a philosophic society at Dublin, in imitation of the Royal Society at London ; and by the countenance of Sir William Petty, who accepted the office of president, they began a weekly meeting that year, when our author was appointed their first secretary. Mr. Molyneux's reputation for learning recommended

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him, in 1684, to the favor of the duke of Ormond, then lord lieutenant of Ireland ; by whose influence he was appointed that year, with Sir William Robinson, surveyor-general of the king's buildings, and chief engineer. In 1686 he was sent abroad to view the principal fortresses in Flanders. He travelled with lord Mountjoy through that country, Holland, part of Germany, and France. Upon his return from Paris to London, in April 1689, he published his Sciothe-ricum Telescopium, containing a description of the structure and use of a telescopical dial invented by him. He spent two years with his family at Chester, where he wrote his Dioptrics, dedicated to the Royal Society. Here he lost his lady, who died soon after she had brought him a son. As soon as tranquillity was restored in Ireland, he returned home ; and upon the convening of a new parliament, in 1692, was chosen one of the representatives for Dublin. In 1695 he was elected for the University, whom he represented to the end of his life; and that learned body conferred on him the degree of L.L. D. He was likewise nominated a commissioner for the forfeited estates, with a salary of ––500 a year; but declined it as an invidious office. In 1698 he published The Case of Ireland stated, in relation to its being bound by Acts of Parliament made in England. Among those with whom he maintained correspondence and friendship Mr. Locke was in a particular man-ner attached to him, as appears from their letters. In 1698, which was the last year of his life, he went to England, to visit that great man ; and soon after his return to Ireland was seized with a fit of the stone, of which he died. He published several pieces in the Philosophical Transactions.

MOMBACA, a kingdom and large town on the eastern coast of Africa, to the south of Melinda. The town was visited by Vasco de Gama in 1497, who was well received, but afterwards an attempt was made to betray him, from which he escaped with some loss. In revenge for this the town was attacked and plundered by Almeda, in 1507. The natives afterwards recovered possession ; but in 1529 is was retaken and occupied by the Portuguese till 1631, when the native king, having collected a large force, took it by storm, and put to death all the Portuguese. Since that time the natives have retained possession here, and have treated in the most hostile manner all Europeans. The consequence is, that it is rarely if ever visited. The country is represented as fertile in rice, millet, fruits, and cattle, and the climate as temperate and healthy. It is much frequented by Arab vessels. The

town is situated on an island, and defended by a *brt.

MOME, n.s. 7 Either Fr. momom, a game MOMMERY. \ played in silence ; or Belgic ###noom. A dull, stupid blockhead ; a stock ; a post : an unmeaning show.

Mnme, malthorse, capon, coxcomb, idiot, patch ! Either get thee from the door, or sit down at the hatch. Shakspeare.

All was jollity,

Feasting and mirth, light wantonness and laughter, Piping and playing, minstrelsy and masking,

Till life fled from us like an idle dream, A shew of mommery without a meaning.

MO'MENT, n. s. ~} Fr. moment ; Lat.

MO'MENTALLY, adv. I momintum, impulse,

MOMENTA'NEOUS adj. [or any thing causing

MO'MENTANY, (motion : hence the

MO'MENTART, | smallest motion, and

MOMEN'TOUS. J hence, probably, that

small particle of time called a moment. Weight ;

active power ; consequence ; importance ; a

small indivisible portion of time : momentally

for a moment: momentaneous, momentany, and

momentary, all mean lasting for, or done in a

moment : momentous, weighty ; important.

We do not find that our Saviour reproved them ot error, for thinking the judgment of the scribes to be worth the objecting, for esteeming it to be of any moment or value in matters concerning God.

Hooker.

Small difficulties, when exceeding great good is

sure to ensue ; a►►d, on the other side, momentany

benefits, when the hurt which they draw after them

is unspeakable, are not at all to be respected. Id

What towns of any moment but we have 1

Shakspeare.

If I would go to hell for an eternal moment, or so, I could be knighted. Id. Merry Wives.

Momentary as sound, Swift as a shadow, short as any dream.

Shakspeare.

Flame above is durable and consistent ; but with us it is a stranger and momentary. Bacon.

Can these or such be any aid to us 1 Look they as they were built to shake the world ? Or be a moment to our enterprise f Ben Jonson.

Scarce could the shady king The horrid sum of his intentions tell,

But she, swift as the momentary wing Of lightning, or the words he spoke, left hell.

Crashaw.

How doth the momentariness of this misery add te the misery ! what a flower, a vapour, a smoke, a bubble, a shadow, a dream of a shadow our life is ‘.

Bp. Hall.

Air but momentally remaining in our bodies, hath no proportionable space for its conversion, only of length enough to refrigerate the heart. Browne.

Touch with lightest moment of impulse His free-will, to her own inclining left lu even scale. Milton’s Paradise Lost.

The imaginary reasoning of brutes is not a distinct reasoning, but performed in a physical moment.

Bah,

But soft, my friend, arrest the present moments ; For be assured they all are arrant tell-tales ; And though their flight be silent, and their path

trackless

As the winged couriers of the air, They post to Heaven, and there record thy fony.

Cotton.

Swift as thought the flitting shade Through air his momentary journey made.

Dry den.

Great Anne, weighing the events of war Momentous, in her prudent heart thee chose.

Philips.

If any false step be made in the more mnmentout concerns of life, the whole scheme of ambitious designs is broken. Addison.

It would be a very weak thing to give up so momentous a point as this, only because it has been contested. WaterL

MOUIERS : a Protestant sect of recent origin, in Geneva and some other parts of Switzerland, founded by Empeytaz, a student of theology and follower of the baroness von Krudener (q. v.) about 1813. He held conventicles for the edification of those who were not satisfied with the ordinary religious exercises : and when he had completed his course of theology, the consistory of .Geneva required of him a promise to discontinue these private meetings. This Empeytaz refused, and published a work on the divinity of Christ, in which he charged the clergy of Geneva with denying the divinity of Christ. The clergy of Geneva then required of all young candidates a promise to abstain from treating of the nature of Christ, original sin, grace and predestination, in the pulpit. This excited some discontents, and Malan, a clergyman of Geneva, at the head of the dissatisfied, and in connexion with Mr. Drummond, an Englishman, with Empeytaz and others, formed a new church, or Orthodox church, and attacked their adversaries in pamphlets, with charges of Arianism, Socinianism, deism, and atheism. The Genevese clergy kept silence ; and, since 1823, Malan has erected a house of worship, and administers the Lord's supper. His doctrines are of a mystical character. The name Momiers was at first given to the sect by way of contempt (from momerie, mummery), but lias since been commonly used as their appropriate designation.

MOMENTUM, in mechanics, signifies the same with impetus, or the quantity of motion in a moving body ; which is always equal to the quantity of matter multiplied into the velocity. See MECHANICS.

MOM'MERY, or MUMMERY, n. t. From Fr. momerie. An entertainment in which maskers play frolics. See MOME.

All was jollity,

Feasting and mirth, light wantonness and laughter, Piping and playing, minstrelsy and masking, Till life fled from us like an idle dream, A shew of mommery without a meaning. Roue.

MOMORDICA, male balsam apple, a genus of the syngenesia order, and moncecia class of plants ; natural order thirty-fourth, cucurbitacese : MALE CAT., quinquefid : COR. sexpartite; the filaments are three in number: FEMALE CAL. trifid : COR. quinquepartite ; style trifid ; fruit an apple parting asunder with a

spring. The most remarkable species are : ###

1. M. halsamina, the male balsam apple, is a native of Asia, and has a trailing stalk like the melon, with smooth leaves, cut into several segments, and spread open like a hand. The fruit is oval, ending in acute points, having several deep angles, with sharp tubercles placed on their edges. It changes to a red or purplish color when ripe, opening with an elasticity, and throwing out its seeds. This species is famous in Syria for curing wounds. The natives cut open the unripe fruit, and infuse it in sweet oil, which they expose to the sun for some days, until it become red, and then present it for use. Dropped on cotton, and applied to a fresh wound, the Syrians reckon this oil the best vul-nerary next to balsam of Mecca. It often cures

large wounds in three days. The leaves ana stems are used for arbors or bowers.

2. M. elaterium, wild or spurting cucumber, has a large fleshy root somewhat like briony, whence come forth every spring several thick, rough, trailing stalks, dividing into many branches, and extending every way two or three feet : these are garnished with thick, rough, al-most heart-shaped leaves, of a gray color, standing upon long foot-stalks. The flowers come out from the wings of the stalks : these are male and female, growing at different places on the same plant like those of the common cucumber : but they are much less, of a pale yellow color, with a greenish bottom ; the male flowers stand upon thick, short foot-stalks, but the female flowers sit upon the young fruit : which, after the flower is faded, grows into an oval form, an inch and a half long, swelling like a cucumber, of a gray color like the leaves, and covered over with short prickles. The elaterium of the shops is the fruit, or rather the inspissated faecula, of the juice of the unripe fruit of this species. It is usually sent from Spain and the southern parts of France, where the plant is common, in small, flat, whitish lumps, or cakes, that are dry, and break easily between the fingers. It is of an acrid, nauseous, bitter taste, and has a strong offensive smell when newly made ; but these, as well as its other properties, it loses after being kept forsome time. It is a very violent purge and vomit, and is now seldom nsed. From the property which the plant has of throwing out its seeds, with a violent force, upon being touched, it has sometimes been called Noli me tangere.

MOMUS, in mythology, the god of rail-lery, or the jester of the celestial assembly, who ridiculed both gods and men. Being chosen by

Vulcan, Neptune, and Minerva, to give his judgment concerning their works, he blamed them all : Neptune for not making his bull with horns before his eyes, in order that he might give a surer blow ; Minerva for building a house that could not be removed in case of bad neighbours ; and Vulcan for making a man without a window in his breast that his treacheries might be seen. For his free reflections upon the gods Momus was driven from heaven. He is generally represented raising a mask from his face, and holding a small figure in his hand.

MONA, in ancient geography, an island in the sea, between Britain and Ireland, described by Ctesar as situated in the mid passage between both islands, and stretching out in length from south to north ; called Monaaeda by Ptolemy ; Monapia, or Monabia, by Pliny : supposed to be the Isle of Man.

MONA, another island, between Britain and Ireland, mentioned by Tacitus, more to the south, and of greater breadth, than the above ; situated on the coast of the Ordovices, and separated by a narrow strait, an ancient seat of the Druids, now Anglesey. See ANGLESEY.

MONA, and MONITA, *i.e.* the monkey and his cub, two West India Islands in the middle of the passage between Hispaniola and Porto Rico. The Mona Isle is seven miles from east to west, and nearly two wide, once in good cultivation. It is now abandoned to wild goats, and so seldom

approached, that a sailor has been known to have been six months on it before any passing vessel observed his signals.

MONACO, a principality of the Sardinian states, bounded by the county of Nice, the Genoa territory, and the sea. Its superficial extent is fifty-five square miles ; sheltered on the north side by lofty mountains, and open on the south to the Mediterranean. Its climate is of a high temperature, and favorable to the growth of oranges, lemons, olives, &c. The pastures also are good, and the cattle numerous. Inhabitants about 6000. The towns are Monaco and Mentone, containing together about 3000 inhabitants. Monaco, until 1702, was governed by its own princes : in that year the French incorporated it with their republic, and retained possession of it until 1815, when it was placed under the king of Sardinia, reserving, however, the rent of the Jands (about ––5000 a year) to the prince.

MONACO, a small town, the capital of the above principality, is situated on a steep rock, projecting into the sea. Population 1200. It is seven miles west of Nice.

MO'NAD, n. s. i Gr. porac. An indivisi—

MO'NADE. J ble thing.

Disunity is the natural property of matter, which of itself is nothing but an infinite congeries of physical monads. More.

MONAGHAN, a county in the province of Ulster, and kingdom of Ireland. It is bounded on the north by Tyrone, on the east by Armagh, on the south by Cavan, and on the west by Fer-managh county. Monaghan comprises 288,500 statute acres, of which 72,855 are exempted from county cess. A loss, in this case, much to be regretted, many of the great landed proprietors being natives and residents of the sister kingdom. The baronies are Cremoume, Dartney, Farney, Monaghan, and Trough, divided into but twenty parishes, averaging about 14,000 acres to each. The population amounts to 195,000 ; the number of dwellings to 35,000 ; and the number of children receiving

gratuitous education exceeds 7000. The chief towns are Monaghan, the place of assizes, having a jail, a barrack, and an endowed classical school, Bal-lybay, Clones, Newbliss, Castle-Blaney, Carrickmacross, Smithborough, Emyvale, and Glasslough. The surface of Monaghan is hilly, but not mountainous, save on the north-west angle, where the Sliebh-Raughley range in- ––trudes. There are many small lakes scattered amongst the numerous little eminences that encumber the face of this county, but uo river of magnitude except the Blackwater.

Monaghan is not deficient in mineral treasures. Rich lead ore and antimony have been discovered in the elevated lands stretching from Bal-lybay to Clontibrid ; and coal of a good quality at Carrickmacross. The staple of Monaghan is linen cloth, most of the county being devoted to its manufacture : no fewer than fourteen bleach mills exist on one small stream, issuing from an insignificant pool in the high lands. The roads of this county are in general excellent : but one claims particular notice, that is, the great road from Dublin to Derry, which, in passing through this county, has been most skillfully constructed.

The funds for this purpose were advanced by government, and are to be repaid by instalments from the grand jury. The parishes of Monaghan, but few in number, are provided with churches, glebe houses, and lands upon a very liberal scale, and the tithes of most of them are now arranged under the commutation act of Mr Goulburne.

MONAGHAN, the chief town in the above county, is eighty-four miles distant from Dublin on the new line of road. The streets are wide, and well laid out; the jail is an architectural and well designed edifice ; and the diocesan school is an imposing object. This town would undoubtedly derive much benefit from the execution of the proposed canal that is to connect Lough Erne with Lough Neagh.

MON’ARCH, n. s.-\ Fr. monarch ; Gr. po—

MON’ARCHIAL, adj. I vapx––t-A supreme gov—

MONARCH’ICAL, Vernor; a king: to mo—

MON’ARCHISE, v.n. i narchise is to assume

MON’ARCHY, n. s. j kingly state : monarchy, the system of monarchical government, or the state governed.

Your brother kings and mrmarchs of the earth

Do all expect that you should rouse yourself.

Shukspeare.

Come, thou monarch of the vine, Plumpy Bacchus, with pink eyne, In thy vats our cares be drowned. Id.

Allowing him a breath, a little scene

To monarckise, be feared, and kill with looks. Id.

I past

Unto the kingdom of perpetual night. The first that there did greet my stranger soul, Was my great father-in-law, renowned Warwick, Who cried aloud, What scourge for perjury Can this dark monarchy afford false Clarence 1 Id.

That storks will only live in free states is a pretty conceit to advance the opinion of popular policies, and from antipathies in nature to disparage monarchical government. Browne.

Satan, whom now transcendent glory raised Above his fellows, with monarchal pride, Conscious of highest worth, unmoved thus spake.

Miltoir.

The father of a family or nation, that uses his servants like children, and advises with them in what concerns the commonweal, and thereby is willingly obeyed by them, is what the schools mean by a monarch. Temple.

The monarch oak > the patriarch of the trees

Three centuries he grows, and three he stays

Supreme in state, and in three more decays.

Dryden. With ease distinguished, is the regal race,

One monarch wears an open, honest face ;

Shaped to his size, and godlike to behold,

His royal body shines with specks of gold. Id.

Our author provides for the descending and conveyance down of Adam's monarchical power to posterity, by the inheritance of his heir, succeeding to his father's authority. Locke.

While the monarchy flourished, these wanted not a protector. At tertiary' s Sermtmi,

Returned with dire remorseless sway,

The monarch savage rends the trembling prey.

/’(□□;;□□.

It is certain, that ours is a mixed government, and the perfection of our constitution consists in this, that the mmuirchicol, aristocratical, and democratical forms of government are mixed and interwoven iu ours, so as to give us all the advantages of each.

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without subjecting us to the dangers and inconveniences of either. Sir R. Walpole.

The decretals resolve all into a monarchical power at Rome. Baker'* Reflections on Learning,

A MONARCHY is a state governed by an individual head : or where the supreme power is lodged in the hands of a single person. Of the three forms of government, *viz.* democracy, aristocracy, and monarchy, the last is the most powerful, all the sinews of government being knit together, and united in the hand of the prince ; but then there is imminent danger of his employing that power to oppressive purposes. As a democracy is the best calculated to direct the end of a law, and an aristocracy to invent the means by which that end shall be obtained, a monarchy is most fit for carrying these means into execution.

Of monarchies some are absolute and despotic, where the will of the monarch is uncontrol-able; others are limited, where the prince's authority is restrained by laws, and part of the supreme power lodged in other hands, as in Britain. Some monarchies again are hereditary, ###where the succession devolves immediately from father to son ; and others are elective, where, on the death of the monarch, his successor is appointed by election, as in Poland, before its dismemberment. The most ancient monarchy was that of the Assyrians, which was founded soon after the deluge. Historians usually reckon four grand or almost universal monarchies or empires, the ASSYRIAN, PERSIAN, GRECIAN, and ROMAN, of which we treat in their due order, or alphabetical place. The strong resemblance of these four universal empires to the prophetic description of them given by Daniel, under the similitude of four great beasts (an emphatical scriptural expression for the various tyrannies that have prevailed among mankind), and this vision being seen too by the prophet at a time when only the first of them had begun to exercise its tyranny over the world, must satisfy every man of the divine inspiration of that prophet. See Daniel ii., vii., and viii. ; Prideaux's Connexion ; Selden, De Quatuor Monarchiis, &c.

MONARDA, Indian horehound, Oswego tea, or American field basil, in botany, a genus of the monogynia order, and diandria class of plants ;

natural order forty-second, verticillatae : COR. unequal, with the upper lip linear, involving the filaments: SEEDS four. The most remarkable species is : ###

M. zeylanica, a native of the East Indies. It rises with an herbaceous four-cornered, hoary stalk, and bears leaves that are entire, nearly heart-shaped, woolly, deep-notched on the edges, and having foot-stalks. The flowers, which are purplish and fragrant, surround the stalk in whorls, each whorl containing about fourteen flowers ; and are succeeded by four small kid-ney-shaped shining seeds, lodged in the bottom of the permanent flower cup. The Indians superstitiously believe that a fumigation of this plant is effectual for driving away the evil spirit; and from this imaginary property its name, in the Ceylonese language, is derived. Grimmius relates, in his Laboratorium Ceylonicum, that for taste and smell this species of horehound

stands remarkably distinguished. A water and subtile oil are obtained from it, both of which are greatly commended in obstructions of the matrix. A syrup is likewise prepared from it, which is useful in these disorders, as well as in diseases of the stomach.

MONARDES (Nicholas), an excellent Spanish physician of Seville, who lived in the sixteenth century, and deservedly acquired great reputation by his skill and writings. His Spanish works were translated into Latin by Clusius, into Italian by Annibal Brigantus, and those upon American drugs have appeared in English. He died about 1 578.

MONASTEREVAN, a post town of Ireland, in Kildare, Leinster, thirty-six miles from Dub-lin. This town has its name from a magnificent monastery which was founded here, in which St. Evan, in the beginning of the seventh century, placed a number of monks from St. Munster, and which was a sanctuary. St. Evan's festival is held on the 22d December. At the suppression of monasteries this abbey was granted to George lord Audley, who assigned it to Adam Loftus, viscount Ely. It afterwards came into the family of Moor, earls of Drogheda, and has been beautifully repaired by lord Drogheda, yet still preserving the venerable appearance of an abbey. The grand canal is carried up to this town from Dublin, since which it has been much enlarged with new buildings. It is a market town, and holds four fairs.

MON'ASTERY, n. s ˆ Fr. monastere; Lat.

MONAS'TIC, adj. f-monasterium. A reMONAS'TICALLY, adv. j ligious

house or convent : monastic, of or pertaining to such an establishment, or to the habits of a monk.

I drave my suitor to forswear the full stream of the world, and to live in a nook merely monastick.

Shakspeare. At You Like It.

When young, you led a life monattick, J

And wore a vest ecclesiastick ; Now in your age you grow fantastick. Denham. }

The silicious and hairy vests of the strictest orders of friers derive the institution of their monastick life from the example of John and Elias.

Browne's Vulgar Erroun.

Then courts of kings were held in high renown ; There, virgins honourable vows received, But chaste as maids in monasteries lived. Dryden.

In a monastery your devotions cannot carry you so far toward the next world, as to make this lose the sight of you. Pope.

I have a dozen years more to answer for, all mo-nasticalty passed in this country of liberty and delight. Swift.

MONASTERY, is only properly applied to the houses of monks, mendicant friars, and nuns : abbeys, priories, &c., are more properly called religious houses. The houses belonging to the several religious orders in England and Wales were cathedrals, colleges, abbeys, priories, preceptories, commanderies, hospitals, friaries, hermitages, chantries, and free chapels. These were under the direction and management of various officers. The dissolution of houses of this kind began so early as 131 2, when the templars were suppressed ; and in 1323 their lands, churches, advowsons, and liberties, in England, were given by 17 Ed. II. stat. 3 to the prior and brethren of the hospital

of St. John at Jerusalem. In 1390, 1437, 1441, 1459, 1497, 1505, 1508, and 1515, several other houses were dissolved, and their revenues settled on different colleges in Oxford and Cambridge. Soon after the last period Cardinal Wolsey, by license of the king and pope, obtained a dissolution of above thirty religious houses for the founding and endowing his colleges at Oxford and Ipswich. About the same time a bull was granted by the pope to cardinal Wolsey to suppress monasteries where there were not above six monks, to the value of 8000 ducats a year, for endowing Windsor and King's College, Cambridge ; and two other bulls were granted to cardinals Wolsey and Campeius, where there were less than twelve monks, and to annex them to the greater monasteries ; and another bull to the same cardinals to enquire about abbeys to be suppressed in order to be made cathedrals. Although nothing appears to hare been done, in consequence of these bulls, the motive which induced Wolsey and many others to suppress these houses was the desire of promoting learning : and archbishop Cranmer engaged in it with a view of carrying on the Reformation. There were other causes that concurred to bring on their ruin : many of the religious were loose and vicious; the monks were generally thought to be in their hearts attached to the pope's supremacy ; their revenues were not employed according to the intent of the donors ; many cheats in images, feigned miracles, and counterfeit relics, had been discovered ; the observant friars had opposed the king's divorce from queen Catharine ; and these circumstances operated, in concurrence with the king's want of a supply and the people's desire to save their money, to forward a motion in parliament, that, in order to support the king's state, and supply his wants, all the religious houses might be conferred upon the crown which were not able to spend above ––200 a year ; and an act was passed for that purpose 27 Hen. VIII. c. 28. By this act about 380 houses were dissolved, and a revenue of ––30,000 or ––32,000 a year came to the crown ; besides about ––100,000 in plate and jewels. The suppression of these houses occasioned discontent, and at length an open rebellion : when this was appeased, the king resolved to suppress the rest of the monasteries, and appointed a new visitation; which caused the greater abbeys to be surrendered; and it was enacted by 31 Hen. VIII. c. 13 that all monasteries, &c., which had been surrendered since the 4th of February in the twenty-seventh year of his reign, and which hereafter shall be surrendered, shall be vested in the king. The knights of St. John of Jerusalem were also suppressed by the 32 Hen. VIII. c. 24. The suppression of these greater houses by these two acts produced a revenue to the king of above

MONASTERY, a place where monks live in a state of separation from the world, and in the practice of religious duties. The monasteries in Europe were, in the middle ages, the only places of learning, and the only asylums for the poor and sick. The revenues of the monasteries in England, at the time of their dissolution, were, according to Stow, ⁂100,000 a year, besides a large sum in plate and jewels. The last act of dissolution in this king's reign was the act of 37 Hen. VIII. c. 4 for dissolving colleges, free chapels, chantries, &c., which act was farther enforced by 1 Ed. VI. c. 14. By this act were suppressed ninety colleges, 110 hospitals, and 2374 chantries and free chapels. The number of houses ami places suppressed from first to last, so far as any calculations appear to have been mad* has been estimated at 3182 ; besides many others of inferior rank, of which no account was kept. The total annual revenue of these is estimated at no less that ⁂140,784 19s. 3fd, all of which, besides a vast quantity of silver plate, came into the king's hands. The total number of persons contained in these houses is estimated at 50,000. As there were pensions paid to almost all those of the greater monasteries, the king did not immediately come into the full enjoyment of their whole revenues : however, by means of what he did receive, he founded six new bishoprics, *viz.* those of Westminster (which was changed by queen Elizabeth into a deanery, with twelve prebends and a school), Peterborough, Chester, Gloucester, Bristol, and Oxford. And in eight other sees he founded deaneries and chapters, by converting the priors and monks into deans and prebendaries, *viz.* Canterbury, Winchester, Dur-ham, Worcester, Rochester, Norwich, Ely, and Carlisle. He founded also the colleges of Christ-church in Oxford, and Trinity in Cambridge, and finished King's College there. He likewise founded professorships of divinity, law, physic, and of the Hebrew and Greek tongues, in both the said universities. He gave the house of Gray-friars and St. Bartholomew's hospital to the city of London, and a perpetual pension to the poor knights of Windsor, and laid out great sums in building and fortifying many ports in the channel. It is observable, upon the whole, that the dissolution of these houses was an act, not of the church, but of the state ; in the period preceding the Reformation, by a king and parliament of the Roman Catholic communion, in all points except the king's supremacy ; and an act to which the pope himself, by his bulls and licenses, had led the way. See MONK.

MONASTIR,Toli,or Bistolia, a considerable town of Greece, in Macedon, situated on the slope of a hill ; watered by the Vistritza, or He-brus. It is inhabited by the descendants of Bulgarians; and, though nearly 100 miles from the sea, may, when compared with most other towns in this country, be called rich and commercial. Population 15,000. Ali Pacha took forcible possession of this town, carrying away the most valuable property of the inhabitants ; but it is still a flourishing place. It is ninety-five miles W. N. W. of Salonica.

MONAVAR, a town of Spain, in Valencia, twenty miles west of Alicant. It contains 8000 inhabitants, who manufacture some linen.

MONBODDO (James Burnet), lord, an eminent Scottish judge, descended of an ancient family in Kincardineshire. He was born in 1714, and educated at one of the Scotch universities, at a period when an enthusiastic admiration of the classical Mterature of Greece and Rome was very predominant. Having gone through the usual course of studies preparatory to the profession of a lawyer with uncommon diligence, he was admitted a member of the faculty of advocates in 1737; and, in 1767, was appointed one of the senators of the college of justice ; an office which he discharged with assiduity, integrity, and ability. He married Miss Farquarson, by whom he had one son and two daughters, all

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of whom died before him, except the eldest, who was married to Kirkpatrick Williamson, esq. He had the offer of a seat in the court of justiciary, but refused it, as its additional duties would have detached him too much from his favorite literary studies. The course of these, and his particular habits of thinking, led him to entertain a most enthusiastic veneration for the wisdom and learning of the ancients, and a proportional degree of contempt for those of the moderns. The first evidence he gave to the public of this admiration of ancient authors was in his work Of the Origin and Progress of Language ; the first volume of which was published at Edinburgh in 4to. 1772. This and the subsequent volumes were perused by critics with sentiments of mingled respect, indignation, and ridicule. Together with the philosophical history of language, his plan included that of civilisation and science ; upon all of which he advanced opinions equally singular and whimsi-cal. Those who were partial to modern literature, or were strangers to the deeper mysteries ⬛⬛⬛of Greek erudition, condemned his lordship's work with the most severe censures. The Scottish literati, almost to a man, declared it to be unworthy of perusal, unless as a piece of amusement from its ridiculous absurdity. In England, however, its reception was somewhat more favorable;

*

Ee'n then did Albion's heedless sons submit, And Scottish taste decided English wit.

In the late Mr. Harris of Malmesbury iord Monboddo found an admirer and correspondent, who was equally well acquainted witli Grecian learning and philosophy, and who had cultivated these branches of science with equal ardor as himself. During the vacations of the court of session lord Monboddo retired every spring and autumn to his seat of Monboddo, where he usually lived in a style of the most primitive simplicity, dressed in the habit of a country farmer, in coarse cloth of Scotch manufacture. Among his tenants he lived familiarly like the kind father of a large family. His patrimonial estate did not afford above ⬛⬛300 a year ; yet he never raised their rents, but reckoned the chief improvement of an estate to consist in the increase of the number and happiness of its inhabitants. It was in this patriarchal retreat in the Mearns that he had the pleasure of a visit from the celebrated Dr. Johnson, and his friend Mr. Boswell. To

vindicate the honor of the ancients, and the principles of the Grecian philosophy, more fully than he had done in his former work, lord Monboddo published another 4to. volume, entitled Ancient Metaphysics, which was much more favorably received than the former. Naturally endued with a good constitution, which was strengthened by air, exercise, and temperance, he prolonged his life till the eighty-fifth year; and died in Edinburgh on Sunday the 26th May, 1799.

MONCHABOO, a city of the Birman empire, and during a short period its capital, is surrounded by a wall of brick and mud, about twenty feet high by twelve feet thick, and surrounded by 9 litch. It is a regular square, of almost 1000

paces on each side. It derives its fame from being the birth place of the emperor Alompra, founder of the reigning dynasty, and is situated fifty miles north of Ummerapoora, and twelve miles tnerth of the Irrawuddy River. Inhabitants 4000. Long 96►► 20' E., lat. 22* 46' N.

MONCHIQUE, a town of Portugal, in Algarva, at the foot of a ridge of mountains. Population 4800. Fifteen miles west of Silves.

MONCRIF (Francis Augustin Paradis, De), secretary to count Clermont, one of the forty of the French academy, and a member of the academies of Nanci and Berlin, was born in Paris in 1687, and died there November 12th 1770, aged eighty-three. His principal works are, 1. Essai sur la Necessite" et sur les moyens de plaire, in 12mo. 2. Les Ames Rivales, a romance. 3. The Abderites, a comedy; 4. Poesies Diverses, and some dissertations, published at Paris 1743, in 12mo. He also cultivated lyric poetry, and wrote, 5. L'Empire de 1' Amour, a ballad ; 6. Trophee" ; 7. Ames reunis, a ballad ; and 8. Ero-sine, a heroic pastoral. 9. L' Histoire des Chats. His works were collected, in 1761, in 4 vols. 12n►►o.

MONDARDIER, a town of France in the department of the Gard, to the south of Vigan. It consists, in fact, of three adjacent villages. Population 2500.

MONDAY is so called as being anciently sacred to the Moon, or to Mona, the Diana of the Saxons.

MONDEGO, a river of Portugal, in Beira, which rises in the Sierra de Estrella, flowing westward, and falls into the Atlantic at Buarcos. It is navigable to a considerable distance from mouth, and its banks were

the scene of important military movements of the British and French in September 1810, and in March 1811.

MOMDEGO, or Embotetieu, a river of Paraguay, in South America, which enters the great river Paraguay, or La Plata, in lat. 20►► 30’ S.

MONDOVI, a town and province of Piedmont, situated on the river Ellero. The town at some distance is picturesque in its appearance but loses much of its interest by contrast with the surrounding Alps. It is divided into the Town Proper, or Piazza, situated on a mountain, at an elevation of 1700 feet above the level of the sea, surrounded with feeble walls, and the three suburbs, Carassoner Bred, and Piano della Valle. The distance between the upper and lower part of the town is considerable. Beside a small citadel, Mondovi Proper contains a great number of churches and religious houses, and its inhabitants are chiefly clergy and country gentry. The suburbs, on the contrary, are entirely given to trade. Here are manufactures of woollen and muslin, tanneries and irob forges; but the chief branch of industry is the spinning of silk. The total population is about 20,000. It is the see of a bishop, and of several seminaries. Mondovi is comparatively modern, having been founded in th►► year 1232. On the 22d of April, 1796, Buonaparte obtained here a victory over the Piedmontese, which led the court of Turin to separate from Austria. In 1799 the Piedmontese peasants assembled here to the number of 40,000, to intercept the retreat of the French, who on a slight

alarm of their attempting to assassinate some officers began an indiscriminate butchery of the people, and pillaged the town. Here Beccaria first drew breath. Fifteen miles E. N. E. of Coni, and forty-five S. S. E, of Turin.

MON DRAGON, a town of Spain, m Guipuz-coa, on the river Deva, thirty miles S. S. VV. of Sebastian. Three miles off is a mine of excellent iron and native steel, from which were made the famous sword-blades of Toledo and Salamanca, as well as those so long in repute as blades, and called Ferrara, from the name of the celebrated

Andrew Ferrara.

MONETARIUS, or MONEYER, a name which antiquaries and medalists give to those who struck the ancient coins or monies. Many of the old Roman coins have the name of the monetarius, either at length, or at least his initial letters.

See NUMISMATOGRAPHY.

MONETARY ART. The object of coinage is commercial convenience; in the accomplishment of which the protection of the ignorant and unsuspecting fromunfairand fraudulent imitations is the chief, if not the only, difficulty. Direct barter was the first mode of commerce ; then various imperfect media received by general consent at a determinate value ; and which were often the necessaries of life -(see our article COINS) ; then the precious metals, where they were known, unwrought, as Mr. Turner contends was the case with regard to gold, as a medium of commerce, with our Anglo-Saxon ancestors; then a piece of metal stamped or coined by public authority. It is to be remarked, however, that in commercial affairs considered on a large scale, or as embracing the intercourse of all civilised nations, the last contrivance is not to be regarded as that real progressive step, or improvement, that it truly is with respect to the internal commerce of a nation. That is, the chief object of a good coinage is to mark the genuineness, the ascertained weight and purity, of the money coined ; in other words, to bring it back in the public estimation to the penultimate step of commercial media to which we have adverted. What is called the standard of fineness in all the civilised countries of the world is well known to the bullion merchants and other large traders interested in the transactions proceeding between them ; and, while the known portion of alloy is used to make the precious metal employed more serviceable as a coin, that very service is in fact only a method of recording the quantity of bullion used ; so that the metal, considered as unalloyed and unwrought, is obviously the standard of value. This simple view of the limits of the use of coinage we apprehend to be absolutely necessary for the rectification of some serious errors respecting it, which have their advocates in modern times. It is, in fact, as a medium of domestic commerce that coined money is chiefly beneficial, or of any comparative importance to mankind.

We are happy to find so able a judge as Mr. Rudiiig confirming this view of the subject in the conclusion of his valuable Annals of the Coinage of Great Britain. He adds a further consideration in confirmation of the necessity of Limiting our ideas of the application

of this art,

which cannot be better expressed than in his own words. ‘ The theory of coinage,’ he says, ‘ must be simplified, by casting out of it the consideration of the manner in which our money will be received by neighbouring nations. For they will take it only as bullion, and if the balance of trade be against us, and must be made good by gold and silver, it is most expedient that it should be done by the plain metal, which wjll cost nothing in the coinage.’

The king of England, as the head of the executive government, has always claimed the prerogative both of coining money, and of regulating the rate at which foreign coin is to be received. Since the reign of Henry VII. our kings have not often exercised this prerogative without consulting parliament, though it appears doubtful whether they have not a legal right so to do : and a royal proclamation is always the instrument whereby (Hale’s Pleas of the Crown, vol. ii. p. 197),

Foreign coin is legitimated and made current : Base coin, or coin of a standard below sterling is legitimated:

To ‘ inhanse ‘ any coin already current to a higher denomination : and

To decry any coin that is current in usuage or payment.

Blackstone quotes a dictum of Sir Edward Coke, according to which ‘ the money of England must be .either gold or silver ;’ for at the period when the latter wrote, copper had never been issued by our monarchs. This was first the case in the copper coinage of 1672 under Charles II.

The Anglo-Saxons coined silver and brass; but, the Norman monarchs rejecting the latter, silver became for a long period the sole material of coinage; indeed until gold was introduced into the mint by Henry III. No halfpennies or farthings are known of any of the Anglo-Norman monarchs before Edward I., but silver pieces of this value continued to be coined at intervals from this period until the reign of Edward VI. To supply their place, when their small size caused them to be discontinued, James I. directed farthing tokens of brass and copper to be struck, out these were of such inferior value as soon to fall into utter contempt and disuse. The commencement of the regular copper coinage must be dated in the year above mentioned, *viz.* 1672.

Tin was also coined by Charles II. in 1684. His illfated successor

James II. endeavoured to give currency to metals still less valuable, *i.e.* gun-metal and pewter ; but the projector of a coinage of this description was ruined by the first adventure, and the attempt was not repeated.

The precious metals have been then for ages the chief materials of coinage. Of an intrinsic worth, compact, divisible, and durable, they seem by the common consent of mankind to be best calculated for the ordinary purposes of a currency ; they possess, however, other properties which become a draw-back upon them. Their value as bullion is perpetually fluctuating; it often varies sufficiently to render the temptation to melt them down irresistible ; and it al-

ways affords a considerable inducement to the issuer of counterfeits and the clipper of coin. The first of these disadvantages is perhaps the greatest, as before its mighty influence the greatest part both of our gold and silver coinage is regularly swept away. It results, however, from the intrinsic and inherent value of the materials in question ; and as it has been truly observed, ‘ can only be palliated but not absolutely removed.’

There is only one instance in history of a na-tion endeavouring to meet this disadvantage of the intrinsic value of a coinage by rendering it useless for other purposes; that is, the well known Spartan one, in which Lycurgus ordered the iron coins to be quenched in vinegar. But this was a failure : it utterly precluded in their case intercourse with the neighbouring states ; and the Spartans had no other medium of exchange. This by no means demonstrates, however, the fallacy of the principle on which that great lawgiver acted ; especially with relation to internal commerce.

Our article COINS will be found to contain am-ple tables of all the existing gold and silver money of the commercial world, together with rules for standard ing gold and silver. It is admitted throughout the scientific world that we have carried the art of coinage to its highest perfection in this country. The crowns and half-crowns of the

Protectorate, for instance, will advantageously sustain comparison with any existing French coins. This has especially be<m the case since the year 1815, and under the new constitution of the MINT. This we have also exhibited in the article of that name : we therefore propose in this paper to advert briefly to the supply of bullion to that important establishment, and to give as detailed an account of the machinery and methods of the coinage as our limits will admit.

SECT I. ††† HISTORICAL VIEW OF THE SUPPLY OF BULLION TO THE MINT.

Strabo and Tacitus enumerate gold and silver as among the products of this island ; and some writers have conjectured that Roman mints were worked here with the supplies they afforded. This setms to be, however, altogether doubtful. Silver is found only impregnating our lead ores ; but the working of mines of either metal has been long unknown to our history : the com-mon law may very harmlessly, therefore, give all mines of these metals, as we beheve it does, to the king. But so late as 1 Wil. &, Mary some disputes it appears arose which rendered a de-claratory statute on this subject necessary. It was at this period therefore enacted that no mines of base metal should be considered as royal, notwithstanding gold or silver might be extracted from them in any quantities ; but that the king, or persons claiming royal mines under his authority, should have the ore (other than tin ore in the counties of Devon or Cornwall), paying for the same a price stated in the latter of those acts. ††† Blackstone's Commentaries, vol. I. p. 294.

The earliest instance which Mr. Ruding finds of the claim to a mine royal being enforced occurs in the forty-seventh year of Henry 111.,

at which time a writ was directed to the sheriff of Devonshire, in which it was stated that the king had been given to understand that there were within his county aurifodince et cuprifodi-nce, that is, mines containing gold together with copper, and he was commanded not to permit any one to occupy the same until the king should have provided that which the law required to be done. His successor Edward I., we are told, received great help towards the maintenance of his wars, and other charges, from the silver mines which, in his days, were found in Devonshire. In the accounts of William de Wymondham, warden of the mint, it appears that, between the 12th of August and the 31st of October, in the twenty-second year of his reign, there was tried and fined out, at Martinstowe in that county, by

times, so much of fine silver as amounted to 370 Ibs. weight. In the next year ––521 10s. were fined at the same place, and brought to London.

In the year 1296, 337 miners were brought hither from the Wapentake of the Peak in Derbyshire, who fined and cast into wedges, in the course of that year, ––704 3s. Id. From September 30th to November 6th in the same year there were received into the mint, from the king's mines, ––709 10*. 4Jd. ––– Mint Accounts in the Exchequer. In the next year 348 miners were brought from the same place, and to them were added twenty-five, from Wales, besides others of the county of Devon and other places. William de Aulton, clerk, keeper of the king's mines in Devonshire and Cornwall, was accomptant of the issues and profits of the king's mines there from March 4th 1298 to April 18th 1299, and yielded up his account both of silver and lead ; which seems distinctly to prove that the silver was the produce of lead mines rich in that metal.

In the early part of this reign, according to Mr. Ruding, the mines in Ireland which afforded silver were supposed to be sufficiently rich to merit the attention of government. The king, therefore, in a writ directed to Robert de Offerd, justiciary of Ireland, and the bishop of Waterford, his treasurer there, stated that he was certainly informed that mines of silver were found in that country, of which considerable profit might be made, and commanded those persons to cause such mines to be opened and worked, in any way that to their judgment should seem expedient. The mint, however, did not depend solely upon these mines for a supply of metal. From an account of the same William de Wymondham, it appears that foreign bullion was purchased to a considerable amount.

During the reign of Edward II. silver was still brought to the mint from the royal mines, and that which was purchased was distinguished by the names of argentum cismarinum, transmari-num, and billon. These terms continued to be used in the reign of Edward III., after which we do not meet with them. In his twelfth year he granted, and in his fifteenth year confirmed, by statute, free liberty to all persons to dig within their own soil for mines of gold and silver, and for hid treasure, under the inspection of clerks to be appointed for that purpose, on condition

that all the silver so found should be carried to the mint to be coined there, at their cost, and that one-third of the money so struck should re-main to the king, and two-thirds to the owner of the soil : and that all the gold should be brought to the exchequer, at their expense, one moiety thereof to be retained for the king's use, and the other moiety to be retained to the said owner of the soil. But if they should neglect to dig for the said mines, &c., then the king and his heirs to have power to do it, without hindrance from any one.

In the eighteenth year of Edward III. is found the first entry of gold, brought into the mint for the purposes of coinage, which remains upon record. It consisted either of foreign coins, or of bullion purchased for the mint, or sent hither by merchants to be coined ; but the author of the annals of the coinage has not met with any instance where that metal is entered as the produce of the royal mines.

In the reign of James I. Sir Hugh Middleton discovered those lead mines of Cardiganshire, from which silver has ever since been extracted with some success.

It was discovered at an early period that working mines on the king's account was unprofitable ; such as were claimed were therefore, so far back as the fourteenth century, leased out to different persons, reserving certain portions of the produce for the purposes of the mint ; sometimes they were obliged to bring the whole thither. Mr. Ruding gives a table too long to extract of these curious transactions.

' In order to facilitate ihe working of these mines the lessees were sometimes authorised to take a certain number of workmen, wheresoever they should find them, within the county wherein the mines were situated. They had power also over their laborers, &c., to exercise justice in all pleas, except those of land, life, or limb ; and if any offended so that they ought to be imprisoned, then the patentees or lessees were authorised to arrest and lodge them in the next jail, there to be detained until they should be released by them. As the claim of the crown respecting mines royal was but ill defined, an attempt was made in the fifteenth year of Charles II. to pass a statute for the purpose of ascertaining it more clearly ; but after the bill was read a second time, and the amendments of the committee to which it

was referred were reported, it seems to have been dropped, as no farther proceedings are to be found ; and the claim remained in its unsettled state, until it was finally determined by the 1st and 5th of William and Mary, which have been already recited.

‘ But the supply of the mint,’ adds this writer, ‘ with bullion was in early times considered to be a circumstance of too much importance to be trusted to natural means alone ; and the aid of alchymy was therefore resorted to for that purpose. Thus the gold, of which the nobles of Edward III. were formed, is said to have been produced by Raymond Lully. Ashmole, in his Notes upon Norton’s Ordinall, and Hermes Bird, has given a very circumstantial account of the bringing of Lully into England by Cremer. abbot of Westminster ; of his agreeing

to make the king rich by his art, in consequence of that monarch’s promise to enter into a war against the Turks ; of his refusal to work any longer, when he found that Edward would not keep that promise ; and of his being clapt up in the tower in consequence. The gold, he says, is affirmed (by an unwritten verity) to have been made by Raymond Lully, in the Tower of Lon-don ; and, besides the tradition, the inscription is some proof; for, upon the reverse is a cross fleury, with Lioneux, inscribed, ‘ Jesus autem transiens per medium eorum ibat ;’ that is ‘ as Jesus passed invisible, and in most secret man-ner, by the midst of the Pharisees, so that gold was made by invisible and secret art amidst the ignorant.’

‘ That Edward was, in some degree, a believer in the powers of alchymy, and therefore not improbably the dupe of Lully, will, I think, appear from the following record. The Patent Roll of his third year states, that the king had been given to understand that John le Rous and Master William de Dalby could make silver by art of alkemony; that they had heretofore made it, and still did make it ; and that by such making of that metal they could greatly profit the realm : he therefore commanded Thomas Gary to find them out, and to bring them before the king, with all the instruments, &c., belonging to the said art. If they would come willingly, they were to be brought safely and honorably ; but, if not, they were to be seized, and brought be-fore ihe king wherever he might be. All sheriffs, &c., were commanded to assist the said Thomas Carey. This belief in the creation, or, at least, transmutation of metals, was in the reign of Henry IV. so firmly established, that we find in his fifth year a statute which solemnly ‘ ordained and established that none from henceforth shall use to

multiply gold or silver, nor use the craft of multiplication ; and if any the same do, that he incur the pain of felony in this case.

‘ In consequence of the restraint which this statute imposed upon the operations of alchymy, John Cobbe, in the twenty-second year of Henry VI. presented a petition to the king, in which he stated, that he was desirous of operating upon certain materials, by art philosophical, *viz.* to transubstantiate the inferior metals, by the said art, into perfect gold and silver, so as to endure every trial ; but that certain persons had suspected this to be done by art unlawful, and therefore had power to hinder and disturb him in giving proof of it. His majesty, having considered the premises, and being willing to see the conclusion of the said operation, granted, of his special grace, license to the said John to practise the said art in future, without molestation from any of his officers ; provided always that it was not contrary to law. Soon after this, however, his majesty’s curiosity became too impatient to endure the restraint of statutes, and he granted licenses of the same kind to various persons to carry on their operations, notwithstanding any statute, act, ordinance, or provision to the contrary.

In his thirty-fifth year he appointed, by letters patent, commissioners to enquire into the truth of this art, by the professors of which he had

bee*\ promised wealth sufficient to pay all his debts in gold and silver, to the great advantage of the kingdom. The commissioners were not selected with any particular attention to their qualifications for such a scrutiny; for they consisted of Augustine and preaching friars, of the queen’s physician, the master of St. Laurence Pontigny college, an alderman of London, a fishmonger, two grocers, and two mercers. Their report does not appear; but, without doubt, it was favorable to the art, as another license to practise it is found in his thirty-ninth year. This differs from those formerly granted, in being for the term of two years only, whilst the others were unlimited. Notwithstanding the disappointments which must have been perpetually experienced from the professions of those alchy-mists, it is

certain that a reliance on the powers of their art continued as late as the seventeenth year of Edward IV.

Notwithstanding the importance of the subject the mint accounts seem to have been strangely neglected, even in comparatively modern times. Our annalists could only .find data in the exchequer extending from the reign of Henry III. to the eleventh of Henry VIII. respecting the supply of bullion. Latterly one great and growing corporation, the bank of England, has become the sole customer of the mint : in return for the benefit derived from its charter that establishment is charged with the duty of ‘ providing, except during the suspension of payments in cash, all the gold and silver used in the coinage of money.’

SECT. II. ††† OF THE METHODS AND MACHINERY OF THE MINT COINAGE.

The bullion brought into the mint has for a long period been regularly assayed, and reduced to standard an account of which is given (see our article MINT), to the parties bringing it in ; and then formed into money.

The first, and long-continued, mode of coinage was by the hammer ; the blank piece of me-tal oeing placed by hand between two dies, or steel punches, containing the design of the coin, and the upper one being struck with a hammer. This operation was always imperfect, from the uncertainty of placing the dies exactly over each other ; and also from the difficulty of striking a blow with such force as to make all parts of the impression equal. Hammer money, however, continued to be current until the reign of William III., when it was found in a most wretched condition from clipping and other mutilations, although the plan of coining, by the screw or press, had been introduced from France as early as 1562 But the press did not continue in use more than ten years, as being considered too expensive: there was a prejudice also against it as a foreign invention. In 1662 the use of the hammer was, however, finally relinquished : the milling upon the edges of coins was introduced about this period, and great confidence was placed in this new device, as being supposed to secure the coin both from clipping and wearing. But it was quickly discovered that the new money, both of gold and silver, could be deteriorated by a process termed sweating, or by

abstracting a portion from the whole surface by an acid, which left few or no traces of its operation. The coins were also clipped and filed

as before and a new milling impressed upon it, notwithstanding every effort of the mint to keep the process of milling a secret. We believe the officers concerned in this process are still sworn not to disclose it.

The fly coining-press, or mill, is an invention generally ascribed to Antonie Brucher, the French king's engraver in 1553. After about thirty years use of it, in the royal mint of Paris, it was abandoned for the same alleged reason of expense that queen Elizabeth resigned it for; and remained in disuse until early in the following century, when Briot, a French engraver, induced the English government again to have recourse to this machine, and was made, in 1623, engraver to the tower mint. It seems to have been used with the hammer, and at intervals only, until the year 1662, when Charles II. introduced the last important regulations of the mint, prior to its late new constitution. At the same period he took upon the government the whole expense of the coinage of money.

An extensive silver coinage in king William Illd's reign was executed at several country mints, besides the mint at the Tower. The principle of this coinage was a subject of great controversy between the celebrated Mr. Locke, Mr. Lowndes, and others. The latter proposed to regulate the coinage by the existing market price of silver ; although that price (exceeding its mint price) arose from the deficiency in the weight of those coins by which silver and all other commodities were bought and sold. Mr. Locke perceived this, and contended that if the coinage were executed at a higher rate than the standard of the 46th of Elizabeth, or 5s. Id. per ounce, it would be done at the expense of justice and integrity between the government and the people, and this noble argument prevailed.

In September 1717 Sir Isaac Newton delivered in a report to the lords of the treasury, giving it as his opinion that gold was considerably overrated in the mint with respect to silver : in consequence of this the guinea was, by proclamation dated the 22d of December, 1717, declared current at 21s., which has ever since been its standard value. The price of gold now became fixed at ––3. 17s. \Q\d. per ounce at the mint.

In 1774, and subsequent years, there was a general recoinage of the gold currency ; the ob-ject of which was stated to be a reformation of the light and defective coins then in circulation ; ––4 in fact of the gold coin then abroad would not weigh more than an ounce ; and this, according to the bank accounts, was the market price. The holders of bank notes demanding new and heavy coins for them, required the bank to have a large coinage of gold to supply this demand. The coins

were therefore melted, and sold in the state of bullion to the bank for ►►4 per ounce ; to remedy which the recoinage was completed. It had the effect desired, Mr. Mushet tells us; for the price of gold, for upwards of twenty years, never exceeded, but was rather under, its mint price.

A committee of the privy council ordered to

lake into consideration the state of the coins in 1798, being desirous to ascertain whether that loss was occasioned by any defect, either in the quality of standard gold, or in the figure or impression of the coins, requested Mr. Henry Cavendish and Mr. Hatchett to examine, by such experiments as should be deemed requisite, whether any of those defects really existed.

The two following questions were principally recommended to their consideration : ►►►

‘ 1st. Whether very soft and ductile gold, or gold made as hard as is compatible with the process of coining, suffers the most by wear, under the various circumstances of friction to which coin is subjected in the course of circulation?

* 2d. Whether coin with a flat, smooth, and broad surface, wears less than coin which has certain protuberant parts raised above the ground or general level of the pieces ?’

From a set of well contrived experiments, which were extended to a considerable length, it appeared that gold of moderate ductility is best calculated for coin, and that the quality of ►►he present standard gold is well adapted to re-sist abrasion, especially in the case of the friction of coin against coin ; and that the wear is greater upon raised or embossed surfaces than upon those wnich are flat and plain. The wear of standard silver appeared to be nearly equal to that of fine gold ; but more than that of gold made standard by silver or by copper.

In the course of this year the officers of the mint repeated the experiments which they had made in the year 1787, respecting the actual wear of the silver coins, from which it appeared that a considerable loss had been occasioned by the wear of eleven years only; for it was found that

12$ Crowns, 27$ Half crowns, 82& Shillings, 200$ Sixpences,

were requisite to make up a pound troy, instead of

12J{j Crowns, 24$ Half crowns, 62 Shillings, 124 Sixpences, as issued from the mint.

This deficiency amounted in the Crowns to 3J?J per cent. Half crowns 9fl$, per cent. Shillings 24,$$ per cent. Sixpences 38ˆ) per cent.

and the increased deficiency in the course of eleven years,

In the Crowns to ffi per cent. In the Half crowns to 1$$ per cent In the Shillings to 5j$9 per cent. In the Sixpences to 3$$ per cent. Details of the more modern coinage do not properly belong to this paper : we proceed to observe that the old machinery in use at the mint, prior to the great alterations introduced by Mr. Boulton, were, 1. The rolling mill, for reducing the plates of metal to a proper thickness. 2. The cutting machine, for punching

them into a proper size. 3. The milling machine: and, 4. The coining press, properly so

11 J

called.

Mr. Boulton first became connected with the mint in consequence of his undertaking an extensive copper coinage for government in the year 1799. This he executed at his own works at Soho, near Birmingham : he was afterwards employed to re-stamp, without melting, a large quantity of Spanish dollars ; and after the governments of France, Russia, and Denmark, as well as the East India Company, had availed themselves of his scientific apparatus, he was called upon to furnish the principal machines of the new mint, established on Tower Hill, in

1811.

We may first describe the new rolling press, erected, we believe, by J. Rennie, esq. This machine is for the purpose of laminating or rolling the bars of metal, whether of gold or silver, into a proper thickness for the cutting-out mill. Those of gold are rolled cold, and can be reduced from an inch thick to the thinness of half a sovereign, without being annealed. The silver bars are rolled when heated to redness, in a reverberatory furnace.

Figs. 1 and 2, plate I., MONETARY ART, are the rollers exhibited in a sectional view, and in a perspective view of one roller. U and L are the upper and, lower rollers; SS the standards of a cast-iron frame in which they are fixed, by bearing brasses, regulated by the screws QQ. Each of these screws has a cog-wheel fixed on the upper end of it, turned by worms, fixed on a common axis, by the handle shown in front. This handle raises or lets fall the upper roller, but always in a parallel direction to the lower one. The standards being bolted down to the cast-iron sills, OO, the latter are embedded in the masonry beneath.

The moving power of this machine is steam, and is received by the large wheel W, which moves the long shaft F F, connected by cogs with the smaller wheels L and K, which turn the upper roller. R, R, are sockets by which the shafts are joined, and which admit a little yielding when the roller is moved upwards. The wheels I, J, also fixed on the shaft N, turn the lower roller, being connected by an intermediate wheel applied on one side, and which operates so that the two rollers L and L, are turned in opposite directions.

Fig. 2 needs little description ; but it more fully exhibits the chief parts of each roller : the metal is introduced on the table T. Fig. 3 is a steel gauge, or pair of rulers, used for ascertaining the exact thickness to which the metal is reduced by the operation of rolling, and which is marked by the degree to which it will allow them to open upon it.

The planchet, or cutting-out mill, i. e. that which cuts the metal to its right width after it comes from the rolling mill, is exhibited in plate II., fig. 1. A A is the frame work of the machine, attached to a strong sill, and connected by a wheel, W, with the shaft F of the rolling mill. C and D are two cop wheels moving the circular shears S, S, between which is conducted the rolled plate of metal at E ; and G is the guide of

the width to which it is cut, which, in the silver coins, is generally double that of the coin wanted.

When thus cut, the planchets were until lately subjected to a second rolling, to give them more exactly the thickness required in the coin : this was accomplished by a finishing rolling machine, made tighter by wedges and screws; and altogether a very clumsy contrivance. Of late, Mr. Barton, comptroller of the mint, has brought into use a far more accurate mode of effecting the object in view, by drawing the slips of metal between dies, in the manner of -drawing wire. This has produced a uniformity in the thickness, of great practical consequence, and reduced the remedy on gold coin from forty to twelve grains troy. We regret that it is too complicated for description in this place.

The blank .cutting out press is now resorted to ; and twelve of these are fixed round an immense wheel, turned by steam, and having a large regulating fly on its own axis. The whole of the presses are fixed on a circular stone basis, and form a handsome colonnade, in a circular room of the mint : they operate so simply and uniformly that boys are employed to feed them.

Each press resembles, in appearance, the com-mon fly press, used to

take seal and other impressions, and is worked on the principle of a weight used as a fly. F F is the iron frame-work, supporting the action of the screw S, which terminates in a steel punch, P, fitting exactly into the die underneath it: to the punch is attached a circular piece of iron, which holds down the metal when the punch rises from it. On G, at the top of the screw, is fixed the arm A, furnished with a weight at one end, and striking at the other against a wooden spring which checks the motion after a stroke: Above this is seen a spindle, B, connected with another arm ???which consists of two parts. D E is immediately operated upon by the tooth, or large cog, C, of the immense wheel of which we have spoken, and of which a portion is shown in fig. 3 : that is, the cog of this wheel impinging on E produces the stroke which turns the screw and lifts up the punch from the die. At H is a rod connected with this upper lever by a joint; the other end of the rod being connected with a bended lever, shown in fig. 4, from the other arm of which descends a rod with a piston affixed to it. This piston moves in a close cylinder, and, when drawn up, creates a vacuum ; when the pressure of the atmosphere causes a reaction, and the moment the other end E escapes, or slips from the tooth T of the great wheel, the reaction of the piston draws the joint II back, and makes the screw turn round in that direction, which causes the punch to penetrate the die. To stop the machine a catch rises up and hooks the lever, so that it cannot return.

I, fig. 4, is moveable on a joint L and thrown upwards by a spring seen underneath. To this spring a cord N is fastened, which the boy who feeds the machine works by a common treadle. The air cylinders mentioned are contained in hollow pilasters, which seem to sustain the dome at the top of the apartment.

The blanks thus cut are, if needful, finely rectified as to weight by filing ; but this, according

to the improved process, is now often not needed : and the pieces are now ready for milling. This operation is not shown in our mint, but has been thus described by a gentleman connected with it. Two steel bars or rulers, having their adjacent edges cut or fluted, are placed parallel to each other, and the piece of money is made to run on its edge between them. One bar is immoveable, being fastened down by clamps to a cast-iron plate, forming the base of the machine ; the other bar is prevented from rising, but has the liberty of moving backwards and forwards in the direction of its length.

The coining-press, properly so called, and the most ingenious and important of the whole series of machines, may now be noticed in detail. It consists of a frame work, screwed by bolts on a basis of stone. On the top of the large screw is placed a heavy fly, the whole being moved by the spindle connected with a moving power in an upper apartment. The weights at the extremities of the arms of the fly are limited in their motion, by cheeks affixed to iron beams, extending from one column to the other : these are made very strong; the columns are of oak. The recoil of the fly, after having struck a coin, is checked by its coming against a piece, fitted into a tube, fixed to the great iron beam, and having a concealed spring to ease the blow. The upper moveable die is beneath the screw; and turns round with it whilst making the impression. The screw is cylindrical at each end, and is fitted in very accurate bearings, adjustible by screws above and below ; between these it is cut into a worm or screw, and is received in a proper nut,but it depends on this only for its ascent and descent, the fittings at the ends keeping it vertical. The coin is therefore struck with a twisting motion, which is supposed to give it a better impression.

The blanks are placed in this machine by a set of very ingenious contrivances : it is, in fact, the most perfect species of automaton. A sliding pair of tongs takes in the small tube into which the blanks are put, ten or twelve at once, and takes them away one at a time. The principal lever is furnished with a joint near the lower end, and two springs, which act in the same manner as the springs in the back of a knife, to keep it straight, and carry the tongs forward; but, if any obstruction arises, the lever bends. The centre of the lever is adjustible to regulate the length of its motion by a sliding centre, fitted upon a vertical bar.

We have thus described the principal machines used at the mint in the art of coining, properly so called. Those for reducing the silver to proper ingots are also very creditable to the establishment; but our limits prevent us from entering into a particular account of them. On the whole we apprehend that while important ends of public security, and the defence of the ignorant from imposture, are answered by the monopoly of this art by government, it would receive great improvement in private hands ; and has, at the present time, its due share of multiplied offices and machinery about it, compared to what we should find in case it were pursued fo* private emolument. For the trial of the pix, see Fix.

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MON’EY, n. s. MON’EY BAG, MON’EYBOX, MON’EYCHANGER, MON’EY ED, adj. MON’EYER, n. s. MON’EY LESS, adj. MON’EY MATTER, n. s. MON’EYSCRIVENERS, MON’EY’SWORTH.

Sax. mynet; French monnoyc ; Lat. moneta. Coined metal ; moneyed is rich in money, or .affluent: moneyer either ‘a dealer in, or coiner of

money : moneyless, pennyless ; poor : mo-ney’sworth, something j valuable, or that will bring money : the other compounds do not seem to require explanation.

But petir seide to him the money be with thee into perdicioun, for thou gessidist the ghifte of god schulde be had (or money. Wictif. Dedis. 8.

I will give thee the worth of it in money.

1 Kings xxi. 2.

Importune him for monies : be not ceast With slight denial.

Shakspeare. Timon of Athens. The jealous wittolly knave hath masses of money.

Shakspeare.

You need my help, and you say Shylock, we would have monies. Id.

Look to my house ; I am right loth to go ; There is some ill a brewing towards my rest, For I did dream of moneybags to night. Id.

Invite moneyed men to lend to the merchants for the continuing and quickening of trade. Bacon.

Wives the readiest helps To betray heady husbands, rob the easy, And lend the monies on return of lust.

Ben Jonson.

He that gives alms that he may keep his lust, loses his soul and his

money too. Jer. Taylor.

There is either money or money'rworth in all the controversies of life ; for we live in a mercenary world, and it is the price of all things in it.

L' Estrange.

Money differs from uncoined silver, in that the quantity of silver in each piece of money is ascertained by the stamp it bears, which is a publick voucher. Locke.

If exportation will not balance importation, away must your silver go again, whether moneyed or not moneyed ; for, where goods do not, silver must pay for the commodities you spend. Id.

My discourse to the hen-pecked has produced many correspondents ; such a discourse is of general use, and every married man's money.

Addison.

My place was taken up by an ill-bred puppy, with a moneybag under each arm. Id. Guardian.

The usurers or moneychangers being a scandalous employment at Rome, is a reason for the high rate of interest. -Arbuthnot.

What if you and I, Nick, should enquire how ###toneymatters stand between us ? Id.

Suppose a young unexperienced man in the hands of moneyscriveners ; such fellows are like your wire-drawing mills, if they get hold of a man's finger, -hey will pull in his whole body at last.

Id. History of John Bull.

People are not obliged to receive any monies, except of their own coinage by a public mint.

Swift.

Those hucksters or money jobbers will be found neeossary, if this brass money is made current in the exchequer. Id.

Several turned their money into those funds, merchants as well as other moneyed men. Id.

The strong expectation of a good certain salary will outweigh the loss

by bad rents received out of lands in moneyless times. Id.

Shall I withhold a little money or food from my fellow creature, for fear he should not be good enough to receive it from me 1 Law.

See what money can do ; that can change Men's manners ; alter their conditions ! How tempestuous the slaves are without it. O, thou powerful metal ! what authority Is in thee ! thou art the key of all men's Mouths. Broome.

Money and time are the heaviest burthens of life, and the unhappiest of all mortals are those who have more of either than they know how to use.

Johnson.

MONFALONT, or MOMFLOT, a large town of Upper Egypt, on the left bank of the Nile, about a mile from the river, is well built, and carries on an extensive commerce in grain. There is also a very large cloth manufactory here. On the opposite side of the Nile is a spacious Coptic monastery, surrounded with high walls, the entrance to which is by a basket drawn by pulleys : it is called the Convent of the Pulley. Long. 31►► 36' E., lat. 27►► 42' N.

MONFIA, a low island off the eastern coast of Africa, to the south of Zanzibar. It is nearly 100 miles in length from north to south, but seldom more than eight or ten in breadth. The surface is fertile ; but it is little frequented. Lat. 7►► 30' S.

MONGAULT (Nicholas Hubert), an ingenious and learned Frenchman, and one of the first writers of his time, born in Paris in 1674. At sixteen he entered the congregation of the oratory, and was afterwards sent to Mans to learn philosophy. Although that of Aristotle was then the only one permitted to be taught, Mongault, with that spirit which usually distinguishes men of abilities, ventured in a public thesis to oppose the opinions of Aristotle, and to maintain those of Descartes. Having studied theology with the same success, he quitted the oratory in 1699 ; and soon after went to Thoulouse, and lived with archbishop Colbert, who had procured him a priory in 1698. In 1710 the regent duke of Orleans committed to him the education of his son the duke of Chartres. In 1714 he had the abbey of Chartreuse given him, and that of Villeneuve in 1719. The duke of Chartres, becoming colonel general of the French infantry, appointed Mongault secretary general ; made him secretary of the province of Uauphiny, and raised him to other

considerable employments. In 1714 he published in Paris, in 6 vols. 12mo., an edition of Tully's Letters to Atticus, with an excellent French translation, and judicious comment. In this work he has happily illustrated many passages which the interpreters before him had given up as inexplicable. He published also a very good translation of Herod ian from the Greek; the best edition of which is that of 1745, in 12mo. He died at Paris in 1746. He was a member of the French academy, and of the academy of inscriptions and belles lettres.

MONGE (Caspar), a celebrated French mathematician and philosopher, was born at Beaune in 1746, and studied under the fathers of the oratory at Beaune and Lyons. He became a teacher at the age of sixteen, and was soon after employed at the military school of Mezieres, as assistant to Bossut the professor of mathematics,

and to Nollet, professor of physics, whom he succeeded. He removed in 1780 to Paris, on being admitted into the Academy of Sciences, and became the coadjutor of Bossut, in a course of lectures on hydrodynamics. Quitting Mezieres finally in 1783, he composed a Treatise on Statics, afterwards used for the Polytechnic school. Through the influence of Condorcet, he was made minister of the marine in 1792, and held the portfolio of minister of war during the active service of general Servan. As a member of the executive council of government, he disgraced himself by signing the order for the execution of Louis XVI., and shortly after resigned. He was now engaged, with other men of science, in improving the manufacture of gunpowder. When the Normal School was founded, with which he became connected, he published his Geometric Descriptive. He also principally contributed to the establishment of the Polytechnic school; after which, in 1796, he was sent into Italy, to collect, or more properly speaking to plunder, the treasures of art and science from the countries conquered by the republic. In 1798 he accompanied Buonaparte to Egypt ; on his return he resumed his functions as professor at the Polytechnic School, in the success of which he greatly shared ; while the attachment which he manifested to Buonaparte led to his being nominated a member of the senate. The emperor also bestowed on him the title of count of Pelusium, the senatorial lordship of Liege, and an estate in Westphalia. He was a grand cordon of the legion of honor, and. a little before the Russian expedition, received a present of 200,000 francs. On the fall of his benefactor he was

expelled the Institute and deprived of all his employments. On this he is said to have become disordered in his faculties, and died July 28th, J818. Besides the above work, Monge published Description de 1'Art de fabriquer les Canons, 4to. ; and Application de 1'Analyse a la Geometric des surfaces, 4to. ; as well as various memoirs on mathematical and physical science.

MON'GER, n. s. Sax. manjene, a trader; from Sax. manjian, to trade. A dealer ; seller; and sometimes a meddler in any thing. A word seldom or never used alone, or otherwise than after the name of a commodity to express a vender of that commodity : as, a fishmonger ; a newsmonger, &c.

Whore-mongm and adulterers God will judge.

Heb. xiii. 4.

Do you know me 1 ††† Yes, excellent well, you are a fishmonger. Shakspeare.

Neither did his departed soul want, somewhere, as is reported, suffrages and oblations of mass-mongers in this behalf. Bp. Hall.

The impatient states-monger Could now contain himself no longer.

Hudibras.

MONGHIR, a considerable and well cultivated district of Bahar, Hindustan, situated between 26†† and 28†† of N. lat. To the north it is bounded by Tyrhoot and Purnah ; on the soutli by Ramgurand Birbhoom ; to the east by Ilajemal and Birbhoom ; and to the west by the Bahar district and Ramgur. In 1784 this district, in all its dimensions, contained 8270 square miles,

of which only 2817 are in the Boglipoor division on both sides of the Ganges.

Monghir seems formerly to have been inhabited only by Thudufarkers, of the class denominated Rick, who resided in the woods. One of these whose, habitation was upon a rock in the Ganges, is said, with the assistance of Vishwa Karma, the god and patron of artists, to have built a fort, and named it Monghir. The country is described as being at that time a complete uncultivated jungle, containing a temple dedicated to the goddess Chandi. The district is now one of the best cultivated in the Company's dominion. The fields in the neighbourhood of the town are divided into squares, and cultivated with great care. They produce a great variety ××× of leguminous plants, mustard seed, castor oil, opium, and various grains.

In this district is now a hotwell, named See-tacoond, situated about half a mile from the banks of the Ganges, in a plain backed by hills and rocks. The spring is considerable, and the water is too hot to admit keeping the hand long in it, yet there are cold springs on the sides, at the distance of about twenty paces. In 1801 the inhabitants of the Monghir, or Boglipoor district, were estimated at 600,000.

MONGHIR, a town and fortress of Bahar, situated on the south bank of the river Ganges, in lat. 25×× 23' N., long. 86×× 38' E.

The fort, which is of great antiquity, is large, surrounded by a wall and deep ditch, and most beautifully s'tuated on the Ganges, which, in the rainy season, forms here a prodigious expanse 01 water. It was the chief residence of sultan Su-jah during his government of the Bengal province. Subsequently it became the residence of Cossim Ali Khan, at the time he intended to throw off all dependence on the English. He added considerably to the fortifications, but it was taken by the English after a siege of nine days. The point of the rock at this place, which withstands the whole force of the Ganges, is con sidered as a sacred bathing place, and during the season the crowd here is prodigious. The place is at present occupied by invalid sepoys, their commandant having possession of the ruins of the palace.

Travelling distance from Monghir to Calcutta, by Birbhoom, 275 miles; by Moorshedabad, 301 miles.

MONGOLIA, a region of Central Asia, north and north-west by China, and situated between that empire and Asiatic Russia. Its limits are

vague, and the country is only traversed by the wandering hordes of Mongols, or Moguls, who have been so celebrated in the annals of Asia. At present they have lost all settled dominion, and are split into a number petty states, dependent upon Russia or China. The proper limits of Mongolia are, to the east, the country of the Alantchous ; to the west, the mountains continued northwards from the Beloor and the lake Palcati Nor; to the west of this is the country of the Tartars ; on the south Mongolia is bounded partly by China, and partly by Turkistan. Nearly the whole of this immense territory consists of a level plain, which borders on the Altai, and other mountain chains that form the Russian

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frontier. It includes a considerable part of the desert of Shamo, or Gobi ; the habitable part is composed entirely of pasturage. The chief vegetable produce is rhubarb. In this region rise some of the greatest rivers of Russia and China, the Hoangho, the Amour, and even the Irtysch; but scarcity of water is a common want here. The inhabitants are distinguished decidedly from both the Turks andTartars. They are muscular and strongly built ; of middle size ; their faces square, broad, and flat ; their noses particularly low, and their eyes oblique, small, and dark. They have thick lips, a short chin, little beard, and large ears. Their black and strong hair is almost wholly shaven off, except a tuft on the crown. The common dress consists of sheep or lambs' skins, with the wool inwards, which retain a scent which is perceptible at some distance. The rich wear cotton lined with skins. Their food consists entirely of milk and flesh, and they esteem horseflesh a delicacy. Their favorite liquor is fermented mare's milk, or kounuss. Their tents are composed of a thick, gray, or white felt, of a conical form, with a hole at the top. They use tea, mead, and tobacco ; but their horses are their pride, and they are peculiarly ex-pert in training them. These horses are in general small, but some of them would be considered handsome in Europe : their sheep are of that species common throughout Tartary, distinguished by large tails. The country abounds in deer and other game, particularly wild horses and mules, and animals of the elk and lynx species. A few sables are found, though not of great beauty. The internal government is here carried on by native princes, called khutuktus, or regulos, who, at the time of the last conquest, were divided into forty-nine standards or tribes. Tribute to any power is the extent of their allegiance ; but in many cases, instead of paying, they receive it. They are rude, but frank and hospitable, gay and cheerful, and spend a considerable part of their time in sports and exercises. Polygamy is permitted, but little practised. They have national songs and music, but the lat-ter is said to be very disagreeable. They profess the religion of Fo, and have resident among them Lamas, who pretend to the gift of immortality, and are held in the highest reverence by the people, while, however, they are very many of them unable even to read. The doctrine of the transmigration of souls is an established part of their creed. Besides the Mongols proper a number of other nations are found here, of which the principal are the Kalkas and the Eluths. The Buriats of Asiatic Russia are of Mongol origin.

MON’GREL, adj. Sax. mans ; Belg. men-gen, to mix. Of a mixed breed: written also mungrel.

This zealot

Is of a mongrel, divers kind, Clerick before, and lay behind.

Hudibrat.

Ye mongrel work of heaven, with human shapes, That have but just enough of sense to knov The master's voice. Dryden's Don Sebastian.

I'm but a half-strained villain yet, Hut mongrel mischievous. Dryden.

Base, groveling, worthless wretches ; Mongrels in faction ; poor faint-hearted traitors.

Add'uon.

His friendships, still to few confined, Were always of the middling kind ; No fools of rank, or monyrel breed, Who fain would pass for lords indeed.

Swift's Miscellanies. And in that town a dog was found,

As many dogs there be, Both mongrel, puppy, whelp, and hound, And curs of low degree. Goldsmith.

MONJOUS, a people of Eastern Africa, in the interior, north-easterly from Mosambique. They appear to occupy but a small territory, and the only authentic account we have of them, is from a caravan with slaves, ivory, &c., which arrived at Mosambique in 1809, during Mr. Salt's residence there. The distance of their country from the coast is conjectured by the time which the caravan had employed in traversing it, i. e. about two months ; but, as a considerable period had been spent in rest, the real travelling period was only forty-five days, which, at fifteen miles a day, would give between 600 and 700 miles. This people are said to be black negroes of the ugliest description, with high cheek bones, thick lips, and small knots of woolly hair. Their weapons are bows and arrows ; and they have a mode of exciting flame by rubbing two pieces of hard wood against each other, similar to that described by Bruce, as practised by a tribe near Sennear. They appeared milder than the same tribes in the neighbourhood of Mosambique.

MON'ISH, v. a. -\ Latin moneo. To MON'ISHER, n. s. I advise;

admonish;

MONIT'ION, V correct: monition is

MONIT'OR, i advice; hint; infor—

MON'ITORY, adj. & n. s. } mation : a monitor, one who gives hints or advice, or who informs or minds of a duty : monitory, conveying instruction or admonition : also the instruction or admonition conveyed.

And sithe that she and I accorde Have upon him misericorde, For I you praie, and eke moneste, Nought to refus in our requeste. Chaucer.

Monish him gently, which shall make him both willing to amend, and glad to go forward in love.

Ascham's Schoolmaster.

You need not be a monitor to the king ; his learning is eminent : be but his scholar, and you are safe.

Bacon.

A king of Hungary took a bishop in battle, and kept him prisoner ; whereupon the pope writ a monitory to him, for that he had broken the privilege of holy church. Id.

We have no visible monition of the returns of any other periods, such as we have of the day, by successive 1'ght and darkness. Holder on Time.

We can but divine who it is that speaks; whether Persius himself, or his friend and monitor, or a third person. Dryden.

Unruly ambition is deaf, not only to the advice of friends, but to the counsels, and monitiont of reason itself. L'Estrange.

Losses, miscarriages, and disappointments, are monitory and instructive. Id.

The pains that come from the necessities of nature are monitors to us to beware of greater mischiefs.

MONK.

It was the privilege of Adam innocent to have these notions also firm and untainted, to carry his monitor in his bosom, his law in his heart, and to have such a conscience as might be its own casuist.

South'* Sermons.

lie is so taken up still, in spite of the monitory hint in my essay, with particular men, that he neglects mankind. Pojie.

Then alter sage monition* from his friends, His talents to employ for nobler ends, He turns to politicks his dangerous wit. Swift. MONK, n.s. ~v Sax. monec; LaL mona-MoNK'tRY, {chits; Gr. povaxoc-A re-MONK'HOOD, i ligious recluse. See below. MONR'ISH, adj. J Monkery and monkhood mean the state or habits of a monk : monkish, monastic; pertaining to the so-called religious life.

Abdemeleck, as one weary of the world, gave over all, and betook himself to a solitary life, and became a melancholy Mahometan monk. Knolles.

'T would prove the verity of certain words, Spoke by a holy monk. Shakspeare. Henry VIII. Neither do I meddle with their evangelical perfection of vows, nor the dangerous servitude of their rash and impotent votaries, nor the inconveniences of their monkery. Hall.

Monks, in some respects, agree with regulars, as in the substantial vows of religion ; but in other respects monks and regulars differ ; for that regulars, vows excepted, are not tied up to so strict a rule of life as monks are. Ayliffe't Parergon.

Rise, rise, Roscommon, see the Blenheim muse, The dull constraint of monkish rhyme refuse. Smith. The dronish monks, the scorn and shame of manhood,

House and prepare once more to take possession, And nestle in their ancient hives again. Rowe.

He had left off his monkhood too, and was no longer obliged to them. Atlerbttry.

Those publick charities are a greater ornament to this city than all its wealth, and do more real honour to the reformed religion, than icdounds to the church of Rome from all those monkish and superstitious foundations of which she vainly boasts. Id.

MONK, denoted anciently ‘ a person who retired from the world to give himself up wholly to God, and to live in solitude and abstinence.’ The original word ˆovaˆcc, solitary, is derived from fiovoc, alone. The persecutions which attended the first ages of the Gospel forced some Christians to retire from the world, and live in deserts and unfrequented places, in hopes of finding that peace and comfort among beasts which were denied them among men. And this being the case of some very extraordinary persons, their example gave so much reputation to retirement that the practice was continued when the reason of its commencement ceased. After the empire became professedly Christian instances of this kind were numerous ; and those ###whose security had obliged them to live in solitude became afterwards united into societies. The mystic theology also, which gained ground towards the close of the third century, contributed to produce the same effect, and to drive men into solitude for the purposes of enthusiastic devotion. St. Cyril of Alexandria, in one of his letters, censures certain monks in Egypt, who, under pretence of devoting themselves to prayer, led a lazy scandalous life; a censure but too often applicable to monks in general. VOL. XV.

The ancient monks were distinguished into solitaries, coenobites, and sarabaites. The solitary were those who lived alone, remote from all towns, as do still some of the hermits. The cce-Dobites were those who lived in community with others in the same house, and under the same superiors. See C<ENOBITE. The sarabaites were strolling monks, having no fixed rule or residence. The houses of monks again were of two kinds, *viz.* monasteries and laurae. See LAURA and MONASTERY. Those we now call monks are cceaobites, who live together in a monastery : who make vows of living according to a certain rule established by the founder, and wear a habit which distinguishes their order. Those that are endowed, or have a fixed revenue, are most properly called monks; as the Chartreux, Benedictines. Bernardines, &c. The Mendicants, or those that beg, as the Capuchins and Franciscans, are more properly called religious and friars ; though the names are frequently confounded.

The first monks were those of ‘St. Anthony ; who, in the fourth century, formed them into a regular body, engaged them to live in

society with each other, and prescribed to them fixed rules for the direction of their conduct. See ANTHONY. These regulations, which Anthony had made in Egypt, were soon introduced into Palestine and Syria by his disciple Hilarion. Al-most about the same time, Aones and Eugenius, with their companions Gaddanas and Azyzas, instituted the monastic order m Mesopotamia and the adjacent countries; and their. example was followed with such rapid success, that in a short time the whole east was filled with a lazy set of mortals, who, abandoning all human connexions, advantages, and concerns, wore out a languishing and miserable life amidst the hardships of want, and -various kinds of suffering, in order, as they pretended, to arrive at a more close and rapturous .communication with God and angels. From the east this gloomy institution passed into the west, and first into Italy and its islands ; though it is uncertain who transplanted it thither. St. Martin, bishop of Tours, erected the first monasteries in Gaul, and recommended this religious solitude with such efficacy, that his funeral is said to have been attended by no| fewer than 2000 monks. From hence the monastic discipline extended through the other countries of Europe. There were besides the monks of St. Basil (called in the east Calogeri, from icaXoc ytpwv, good old man), and those of St. Jerome, the hermits of St. Augustine, and afterwards those of St. Benedict and St. Bernard ; at length came those of St. Francis and St. Dominic, with a legion of others. See BE-NEDICTINES, CALOGERI, &c.

Towards the close of the fifth century the monks, who had formerly lived only for themselves in solitary retreats, and had never thought of assuming any rank among the sacerdotal or-der, were gradually distinguished from the populace, and endowed with such opulence and honorable privileges that they found themselves in a condition to claim an eminent station among the supports and pillars of the Christian community. The fame of their piety and sanctity was so great that bishops and presbyters we-e often

chosen out of their order; and the passion of erecting edifices and convents, in which the monks and holy virgins might serve God in the

most commodious manner, was at this time carried beyond all bounds. However their licentiousness, even in this century, was become proverbial, and they excited the most dreadful tumults and seditions in various places. The monastic orders were at first under the immediate jurisdiction of the bishops, from which they were exempted by the Roman pontiff about the end of the seventh century ; and the monks, in return, devoted themselves wholly to advance the interests and to maintain the dignity of the bishop of Rome. This immunity which they obtained was a fruitful source of licentiousness and disorder, and occasioned the greatest part of the vices with which they were afterwards so justly charged. In the eighth century the monastic discipline was extremely relaxed both in the eastern and western provinces, and all efforts to restore it were ineffectual. Nevertheless this kind of institution was in the highest esteem, and nothing could equal the veneration that was paid, about the close of the ninth century, to such as devoted themselves to the sacred gloom of a convent. This veneration induced several kings and emperors to call them to their courts, and to employ them in civil affairs of the greatest mo-ment. Their reformation was attempted by Louis the Meek, but the effect was of short duration. In the eleventh century they were exempted by the popes from the authority of their sovereigns, and new orders of monks were continually established ; insomuch that in the council of Lateran, held in 1215, a decree was passed by the advice of Innocent III., to prevent any new monastic institutions; and several were suppressed. In the fifteenth and sixteenth centuries, it appears, from the testimonies of the best writers, that the monks were generally illiterate, profligate, and licentious Epicureans, whose views in life were confined to opulence, idleness, and pleasure. However the reformation had a manifest influence in restraining their excesses, and rendering them more circumspect in their external conduct. See REFORMATION.

It is fair, perhaps, to insert from an accredited source the modern doctrine of the church of Rome on this point.

Respecting the celibacy of the clergy at large, she says, ‘ The discipline of our church in this point has not always been, it is plain, precisely what it is at present ; but because it is discipline, therefore may it be changed, as in the alteration of times and circumstances it has seemed”, or shall seem, good to our ecclesiastical rulers. In the Greek and Latin churches the discipline is not the same ; but in both the advice of St. Paul, founded on the justest views, if it did not always enforce the practice, served to establish the expediency of clerical celibacy.’

In regard to the religious or monastic state, it is afterwards said, ‘ On the advice given by Christ and by the apostle in these passages (Matt. \ix. 10, 11, 20; 1 Cor. vii. 7, 8, 38 40) is founded the opinion which Catholics entertain of the expediency of what are called the evangelical counsels, that is of voluntary poverty, per-

petual chastity, and entire obedience. ‘ When counsel is given,’ says St. Jerome, ‘ the will is free ; when a command, strict obedience is required.’ To live up to these counsels constitutes the character of the monastic profession ; the vows or solemn promises which are freely made induce the obligation, and from this arises the perfection of the state. The fathers are unanimous in their praises, and it was early in the Christian church that the state was embraced by many. It was not, however, before the fourth century that the eremitical life took a regular form in Egypt and other parts of the east ; in the west St. Benedict, towards the close of the fifth, gave that rule to his followers which is most admired, and which has been very generally adopted by the various founders of religious orders, male and female, in the western church. Berringtons Faith of the Catholics confirmed by Scripture, and attested by the Fathers of the Jlrst Jive centuries.

Monks are distinguished by the color of their habits into black, white, gray, &c. Some are called monks of the choir, others professed monks, and others lay monks ; which last are destined for the service of the convent, and have neither clericate nor literature. Cloistered monks are those who actually reside in the house, in opposition to extra monks, who have benefices depending on the monastery. Monks are also distinguished into reformed, whom the civil and ecclesiastical1 authority have made masters of ancient convents, and put in their power to retrieve the ancient discipline which had been relaxed; and ancient, who remain in the convent, to live in it according to its establishment at the time when they made their vows, without obliging themselves to any new reform. Anciently the monks were all laymen, and were only distinguished from the rest of the people by a particular habit and an extraordinary devotion. Not only the monks were prohibited the priesthood, but even priests were expressly prohibited from becoming monks, as appears from the letters of St. Gregory. Pope Syricius was the first who called them to the clericate, on occasion of some great scarcity of priests, that the church was then supposed to labor under ; and, since that time, the priesthood has been usually united to the monastical profession.

MONK (George), the principal agent in restoring the British monarchy,

in the person of ki ►► Charles II., was descended from a very ancient family, and born in Devonshire in 1608. He dedicated himself to arms from his youth, and obtained a pair of colors in the expedition to the Isle of Rhee ; he served afterwards in the Low Countries with reputation in both king Charles's northern expeditions ; and did such service, in quelling the Irish rebellion, that he was appointed governor of Dublin, but was superseded by the parliament. Being made major-general of the Irish brigade, employed in the siege of Nantwich in Cheshire, he was taken prisoner by Sir Thomas Fairfax, and remained confined in the Tower of London until 1646; when, to procure his liberty, he took the covenant, and accepted a command in the Irish service under the parliament. He obtained the command in chief of all the parliamentary forces

:n the north of Ireland, where he did signal service, until he was called to account for a treaty made with the Irish rebels. But he served in Scotland under O.iver Cromwell with such success, that he was left there as commander-in- chief; and he was one of the commissioners for uniting that kingdom with the commonwealth. He served at sea also against the Dutch ; and was treated so kindly on his return, that Oliver is said to have been jealous of his fame. He was, however, again sent to Scotland as coin-mander-in-chief, and continued there five years; when he dissembled so well, and improved circumstances so dexterously, that he restored the king without any disturbance ; for which he was duly rewarded. He was created duke of Alber-marle, with a grant of ►►7000 per annum estate, beside other emoluments. After his death in 1670 there was published a treatise composed by him while he was prisoner in the Tower, entitled Observations on Military and Political Affairs, folio.

MON'KEY. A diminutive of Sax. mon, man. An ape ; baboon : hence a jackanapes or man ►►►who plays tricks like those of this animal: a term of contempt. See SIMIA.

One of them shewed me a ring that he had of your daughter for a monkey : ►►► Tubal, it was my turquoise ; I would not have given it for a wilderness of monkeys, Shakspeare.

This is the monkey's own giving out ; she is persuaded 1 will marry her. Id.

Poor monkey ! how wilt thou do for a father ? Id.

Other creatures, as well as monkeys, destroy their young ones by senseless fondness.

Locke on Education.

With glittering gold and sparkling gems they

shine, But apes and monkeys are the gods within.

Granville.

MONKLAND, an extensive district of La-narkshire, originally forming only one parish, so named from the monks of Newbottle. But a part of it being, about 1640, erected into a separate parish, called New or East Monkland, the remainder of the district was named Old or West Monkland.

MONMOUTH (James), duke of, son of king Charles II. by Mrs. Lucy Walters, was born at Rotterdam in 1649. Upon the Restoration he was called over to England, created earl of Ork-ney, and afterwards of Monmouth, and took his seat in the house of peers. He married Anne, the heiress of Francis earl of Buccleugh ; and hence he had also the title of Buccleugh, and took the surname of Scott. . In 1668 his father made him captain of his life-guard of horse ; and in 1672 he attended the French king in the Netherlands, and gave proofs of bravery and conduct. In 1673 the king of France made him lieutenant-general of his army, with which he came before Maestricht, and behaved with great gallantry, being the first who entered it. He returned to England, was received with all possible respect, and made chancellor of the University of Cambridge. After this he went to assist the prince of Orange to raise the siege of Mons, and contributed much towards it. He returned

to England, and was sent, as his father's general, to quell an insurrection in Scotland, which he effected. Being a Protestant, he was deluded into, ambitious schemes, upon the hopes of the exclusion of the duke of York; he conspired against his father and the duke : and, when the latter came to the throne, he openly appeared in arms, encouraged by the Protestant army ; but coming to a decisive battle before be had sufficient forces to oppose the royal army, he was defeated, taken soon after concealed in a ditch, tried for high treason, condemned, and beheaded in 1685, aged thirty-six.

MONMOUTH, a borough and market town of England, the county-town of Monmouthshire, is situate at the conflux of the Monnow and Wye, over which there are three bridges; there is another also over the small river Trothy, which falls into the Wye. It is twenty-five miles west from Gloucester, and 132 west by north from London. A broad and handsome street leads to the market-place, in which stands the town-hall, built over a handsome colonnade, and ornamented with the statue of Henry V., who was born in this place. At the extremity of the town is the gaol, a stone building, commodiously constructed, and under excellent regulations. St Mary's, the parish church, is also of stone, and has a spire 200 feet high. St. Thomas's is a small ancient church near Monnow-bridge. A little to the north are the remains of an alien priory of Benedictines. There was a strong Saxon fortress here, of which the remains are very slight. A free-school is here founded by a William Jones, a native of Newland, in Gloucestershire, who also endowed alms-houses for twenty poor people, who receive 3s. 6d. per week : a stipend of ––100 per annum is allowed to a lecturer. The chief business of the town arises from the navigation of the Wye, which supplies the surrounding country with necessaries, and gives it a share in the trade between Bristol and Hereford. Iron and tin-works in the vicinity also employ a few hands ; as well as the preparing of bark, which is brought down in considerable quantities from the woods in the upper districts, and, being here picked and cleaned, is exported to the south of England and Ireland. In the neighbourhood is a conical hill, named the Kymin, on the top of which is a naval pavillion, affording a very extensive prospect. Monmouth is thought to have been a Roman station, and, in conjunction with Usk and Newport, sends one member to parliament. The market on Saturday is well supplied with corn and provisions. Twenty-one miles west by south of Gloucester, fifteen north of Chepstow, and 130 west

by north of London.

MONMOUTH, a county of New Jersey, bounded on the north-west by Middlesex county, on the north by Raritan Bay, on the east by the Atlantic, and on the south-west by Burlington county. Population 22,150. Chief town, Freehold.

MONMOUTU, a town of Monmouth, county of New Jersey, sixty-three miles E. N.E. of Philadelphia. The British troops under general Clinton were defeated here on the l7th of June, 1777, by the Americans under getiemi Washington.

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MONMOUTHSHIRE.

MONMOUTHSHIRE, a county of England, on the borders of the principality. At the time of the Roman invasion Monmouthshire was inhabited by the Silures. It was formerly called Wentset and Wents-land, and by the Britons Gwent, from an ancient city of that name. The present name is derived from the county-town. The British name was Mongwy, so called from its peninsular situation on the rivers Mon and Wye, or the mouth of the Mon (Monnow). It was originally a county of Wales, and once obtained considerable celebrity against the Roman and Saxon invaders. It sometimes formed a separate district under the name of Gevent, and at others was comprehended in Morganoc, or the kingdom of Glamorgan. When Henry VIII. abolished the government of lords marchers of Wales, and divided Wales into twelve counties, he included this county in England. ‘ A happy change,’ says Mr. Coxe, ‘ from the oppression of feudal tyranny, to the just and equal administration of English laws.’

Monmouthshire is situated on the north shore of the Bristol Channel, or Severn Sea ; and is bounded on the west by the river Ruinney, which separates it from Glamorganshire; on the north by small brooks and landmarks, and by the rivers Usk and Monnow, which separate it from the counties of Brecknock and Hereford ; on the east by Gloucestershire, from which it is separated by the river Wye, from Redbrook to the Severn. ‘ The extreme points of the county,’ says Mr. Hassell, whose Agricultural Survey is here quoted, ‘ taken east, west, north, and south, are from lat. 52►► 22* to 54►► 0*, and from long. 2►► 41’ to 3►► 19’ W. from Greenwich.’ The superficial

contents, according to a map of the county published by C. Smith of London in 1801, amount to 316,800 acres; the length being thirty-three miles from north to south, and the breadth from east to west twenty-six miles. The county is divided into six hundreds and seven towns. It is in the diocese of Llandaff, except six parishes, four being in the diocese of Hereford, and two in that of St. David's ; and in the province of Canterbury.

The climate of this county is mild in the vales and southern parts, but gradually colder, ascending the hills towards Breconshire, where the snows sometimes remain on the ground till a late period of the spring. The general humidity of the western districts of the kingdom is felt in this county, where the tains are of long continuance, the great estuary of the Severn attracts the clouds of the Western Ocean, and causes torrents of rain to fall on its north and south shores, much more frequently than on the inland parts of Wales, and the West of England. The soil of this county is thus described by the Agricultural Survey : that ridge of land in the hundred of Wentloog, extending from Rumney Bridge to Newport, consists of clay, loam, and gray soil ; the clay being for the most part towards the west end of the ridge, the loam along its south and middle, and the gray soil to the northern confines of it, but not nearly of equal extent with the loam, the latter extending itself along the Rumney to Machen and Bedwas, and up the vale from Tredegar to Risca. The substratum of these soils is rock or rubble, excep. in a few place*, where the clay is deep. Beds of limestone also occur in several parts, which afford an ample supply of manure to the tillers of the ground. The soil of the level is for the most part loamy, a mixture of mud, brought down by the influx of the Severn, Wye, Usk, Rumney, and other rivers, and marine sand thrown in by strong tides from the westward. The clays are here as in most other counties. Of Caldicot Level, extending along the coast from the river Usk to Portskewit, the soil is a rich loam, with more or less strength in proportion to the quantity of mud or sand mixed with it. The substratum is limestone in part, and a brown or gray rock in other parts ; not ranging in regular strata, but breaking out here and there in a promiscuous manner. The soil of the Usk hundred is more argillaceous than that of Caldicot, and may be reckoned on the whole a clay district; about Usk, however, and for the space of two miles up the river, the land is sandy and rather light, with a good depth in most parts. There are also some spots of sandy land along the river downwards. The county westward of the Usk maintains the general character of the hundred, being a clay or strong loam. Ragland hundred has soils of various sorts. In the vale district, and for several miles round Ragland, it is a strong clay. The vale part, indeed, is

altogether of a strong argillaceous kind, with as little variety as can be expected in a county consisting of undulated lands. Neither high hills nor extensive levels are to be found ; but a waving surface every where prevails. The substratum consists mostly of rubble and detached stones, except in such parts as where beds of clay are found to a great depth. On the hilly ridge from Wobes Newton in the south to Pennalth in the north, the soil is loamy, sometimes of a reddish color, sometimes gray, and lying in broken strata without any regular courses of either sort. The substratum is mostly a rubble, with here and there a quarry of tolerable stone for building. The limestone ends to the southward of Tintern Abbey, and is not found again as you travel northward through this district, except a few partial spots near Dingestow. Skenfreth hundred borders on Herefordshire, and exhibits more of the agricultural practice of that county than any other district in the county of Monmouth. The vale lands around Monmouth, and skirting the hills to Llangattock, Vibonavel, and White Castle, consist mostly of clay soil, with a substratum of rubble ; in some parts grit or loose gravel, with a mixture of sand ; in others deep clays. The lands about the Wye and Monnow rivers are rich meadows, whenever they lie low enough to receive the overflowing of those rivers whose waters bring down the rich mucilaginous mud of Herefordshire. The hilly part of this hundred, stretching towards the north-west from Rockfield, consists of more light and loamy soil than the vale ; the lands are interspersed with woods. The soil of Abergavenny hundred is exceedingly variable ; many parts of it consist of a brown loam, sometimes approaching to ted ; others of a gray loam : and many of the old enclosed farms, and of the wastes adjacent to them,

are of a moist and peaty soil, requiring draining and cultivation. The soil of the hills extending northward from Abergavenny to the confines of Herefordshire, beyond Llanthony Abbey, and eastward to Compston Mountain, consist of a brown or reddish loam, varying in depth according to the situation and steepness of the lands, from five inches to fifteen.

The principal rivers are the Wye, which enters the county two miles above Monmouth, and passing that town and Chepstow falls into the Severn Sea three miles below the latter; the Usk enters the county near Clydach, passes Abergavenny, Usk Caerleon, and Newport, and falls into the Severn Sea three miles below the latter; and the Rumney, which forms the western boundary of the county. The most important source of commercial intercourse, until a recent period, was little known in this county. The Monmouthshire Canal, commenced in 1792 and completed in 1798, consists of two branches, which unite at Malpas. This canal commences on the west side of the town of Newport, having a basin connected with the river Usk. Passing between the town and the river, it crosses the Chepstow road, and pursues its route parallel by Pont y Pool to Pontnewyndd. The principal produce of this county consists in corn, fine oxen, and sheep.

This county returns four members to parliament, *viz.* two for the shire, and two for the Borough of Monmouth. The great family of Mor-gan Tredegar for a long time almost constantly represented this county.

This county has not produced many persons of eminence. Geoffrey of Monmouth, whose proper name was Geoffery ap Arthur, was, as is thought, a native of Monmouth. He was a learned monk of the Benedictine order, and wrote a translation into Latin of a British history, entitled Brut y Breninodd, or the Chronicle of the Kings of Britain. He lived in the twelfth century. Henry V., king of England, was also born here. The county town, Monmouth, gives the title of earl to the Mordaunt family ††† Abergavenny gives the title of earl and baron to the Neville family ††† Chepstow gives the title of baron to the Somerset family ††† Lathony gives the title of baron to the Buller family ††† Ilagland and Gower the same to the Somersets ††† and Gros-mount the title of viscount to the same.

This county formerly manufactured large quantities of flannel and narrow cloth ; but the quantity now made is so inconsiderable as not to be an object among its productions. The manufacture of japan ware was also famous in its day ; this also has declined, and is only continued on a very narrow scale at Pontypool and Usk. The iron works are the boast, and certainly, in every point of view, the most important objects of trading consideration in Monmouthshire. The attention of the county was first excited to this lucrative branch of manufacture in the reign of queen Elizabeth; and from that period, considered by many the time of their origin, the iron business of this district, and in the adjacent one of Glamorganshire, made a rapid progress ; and much surprise had been expressed why they should have been so long;

neglected. This surprise, indeed, may almost rise into wonder, when it is recollected that iron was manufactured in this part of the island at an epoch beyond the reach of history. Large heaps of cinders, or slag, have often been discovered, evidently the refuse of Roman or British bloomeries, the process in which was the ancient method of fusing iron. The iron trade again declined, after its revival in the time of Elizabeth, from a variety of causes. The. troubles in the reign of Charles I., ;md the 'hanges which took place in point pf \ roperty, occasioned an alteration in the genius of thf people : agriculture was more attended to ; the lands were cleared ; the forests were neglected. Mr. Coxe, who wrote in the year 1801, says ' that about forty years ago a sudden renewal of the works took place, occasioned by the discovery that pit-coal would form a useful substitute for charcoal in the making of pig-iron ; and its utility was further extended to the manufacturing of bar-iron. The local advantages of this county, in these respects, are peculiarly great, as the district abounds in iron ore, coal, lime, numerous streams of water, and every requisite proper for this branch of business. These have been powerfully aided by the mechanical powers, the use of the steam-engine, the improvement in hydraulic machinery, and the adoption of rollers instead of forge hammers, called the puddling process, by which bar-iron is formed with a degree of despatch and exactness previously unknown. From this occurrence of circumstances, the success has been no less rapid than extraordinary. Fifteen years ago the weekly quantity of pig-iron made in this part of Monmouthshire, and in the contiguous district of Glamorganshire, did not exceed sixty tons ; at present it scarcely falls short of 600. At that period no bar-iron was manufactured, but now the quantity amounts weekly to more than 300 tons. The works are rapidly increasing in ex-tent and importance, and appear likely to surpass the other iron manufactories throughout the kingdom.'

MONNET (Anthony Grimoald), a French chemist of eminence, and inspector-general of mines, was born of low parentage, in Auvergne, in 1734. He settled as an apothecary at Rouen, but, becoming known as a superior chemist, he removed to Paris, and obtained in 1774, through the patronage of Malesherbes, the place of inspector-general of mines. He now prepared, in conjunction with Guettard, a mineralogical atlas of France, and was one of the few chemical philosophers who rejected and opposed the theories of Lavoisier. Deprived of office at the Revolution, he passed the latter part of his life in retirement, and died at Paris in 1817. He wrote also Memoire Historique et Politique sur les Mines de France, 1790, 8vo. ; Demonstration de la Faussete des Principes des Nouveaux Chi-misles,

1798, 8vo. ; besides a great number of analyses and memoirs in the Journal de Physique, &c.

MONNOYE (Bernard de la), an eminent French writer, born at Dijon in 1641. He was a man of great learning, and gained some of the first prizes instituted by the French academy,

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till he discontinued to write for them at their own solicitation ; a circumstance which reflects the highest honor on him. He was equally skilful in Latin and French poetry, and Menage and Bayle bestowed the highest encomiums on his Latin poetry. His Greek and Italian poems are likewise very good. He had also a very accurate and extensive knowledge of the languages; He wrote Remarks on the Menagiana; in the last edition of which, in 4 vols. 12mo, printed in 1715, are several pieces of his poetry, and a curious dissertation on the book De Tribus Im-postoribus. His Dissertation on Pomponius Laetus is inserted in Baillet's Jugemens des S9avans, in 1722, with remarks and corrections by La Monnoye. He also embellished the Anti-Baillet of Menage with many corrections and notes. He was of great service to the republic of letters, not only by productions of his own, but by freely assisting upon all occasions the learned of his time. He favored Bayle with many curious particulars for liis Dictionary, and was highly applauded by him. He died in Paris, October 15th, 1728, in his eighty-eighth year. Mr. De Sallinger published at the Hague a Collection of his Poems, with his eulogium. He also left behind him a Collection of Letters, mostly critical ; several curious Dissertations ; 300 Select Epigrams from Martial, and other poets, in French verse ; and several other works in prose and verse, in French, Latin, and Greek.

MONNOYER (John Baptist), ' one of the greatest masters,' according to Mr. Walpole, 'that have appeared in flower painting. They are not so exquisitely finished as Van Huysum's, but his coloring and composition are in a bolder style.' He was born at Lisle in 1635 ; and educated at Antwerp. Going to Paris in 1663, he was received into the academy with applause ; was employed at Versailles, Trianon, Marly, and Meudon ; and painted in the hotel de Breton-villiers at Paris, Sec. The duke of Montagu brought him to England, where many of his pieces are to be seen at Montagu House, Hampton Court, and Kensington. But his most curious work is a looking-glass at Kensington Pa-lace, which he adorned with flowers for queen Mary II., who honored him with her presence nearly the whole time he was busied in the performance. He went/ several times to France, wher□□□□ his daughter had married a French painter. He died in Pall-mall in 1699.

MONOCEROS, unicorn, in astronomy, a southern constellation formed

by Hevelius, containing in his catalogue nineteen stars, and in the Britannic catalogue thirty-one.

MONOCEROS, in ichthyology. See MONODON.

The MONOCHORD is used as well in the natural as in tempered scales. Originally it had, as its name implies, only one string ; but it is better constructed with two, as we have, by means of this additional string, an opportunity of judging of the harmony of two tempered notes in every possible variety of temperament. See TEMPERAMENT and TONE. It consists of a brass rule placed upon a sound-board, and accurately divided into different scales, according to tne purposes for which it is chiefly intended. Above this rule the strings are to be stretched

over two fixed bridges, between which there is a moveable fret, so contrived as to divide at plea> sure one of the strings into the same proportional parts as are engraved upon the scales beneath. The figure of the instrument, the manner of striking the strings so as to produce the sound, as likewise the construction of the moveable bridge, may be varied at pleasure according to the wish and ingenuity of the artist. But with the assistance of such an instrument, accurately constructed, any person with a good ear may be enabled to tune a keyed instrument with sufficient precision to answer every practicable purpose. See TUNING. The curious reader, who may wish for further information respecting the construction and use of monochords, will be highly gratified in perusing the appendix of Mr. At-wood's Treatise on Rectilinear Motion, and Mr. Jones's ingenious and entertaining observations on the scale of .music, monochord, &c., in his Physiological Disquisitions.

MONOCULAR, adj. ►► Gr. pevoc, one, and

MOJJOC'ULOUS. I oculus. One-eyed ;

having only one eye.

He was well served who, going to cut down an antient white hawthorn tree, which, because she budded before others, might be an occasion of superstition, had some of the prickles flew into his eye, and made him monocular. Howel.

Those of China repute the rest of the world monoculous. Glanville's Scepsis.

MONOCULUS, in entomology, a genus of insects of the order aptera. Its body is short, of a roundish figure, and covered with a firm crustaceous skin ; the fore legs are ramose, and serve for leaping and swimming; it has but one eye, which is large and composed of three smaller ones. Of this genus, many of which have been reckoned among the microscopic animals, authors enumerate a great number of species. The name monoculus has been given to this genus, as consisting of individuals which apparently have but one eye : and, from the manner in which they proceed forward in the water by leaping, they have also been called water fleas. The branching antennae serve them instead of oars, the legs being seldom used for swimming. The tail forked in some species, in others simple, serves them for a rudder. Their color varies from white to green, and to red, more or less deep, doubtless in a ratio to the fragments of the vegetables on which they feed. The red tincture they sometimes give to the water has made some think that the water had turned to blood. Too weak to be carnivorous,, they fall a prey to other aquatic insects, even to the polypi. Their body, compact and hard, is so transparent that in some the eggs with which the abdomen is filled are discernible. The water parrot and the shell monoculus are remarkable. This latter is provided with a bivalvular shell,, within which he shuts himself up, if drawn out of the water. The shell opens underneath, the insect puts forth its antennae, by means of which it swims very expeditiously in various directions, seeking a solid body to adhere to, and then it is it uses its feet in walking, by stretching them out through the aperture of its shell. ‘ I preserved a pair of these insects,’ says Mr. Barbut, ‘ in a

small glass tumbler, the one male, the other fe-male, having a bag filled with eggs affixed on each side the abdomen. In the spaceof fourteen days the increase was astonishing : it would have been impossible to have taken a single drop of water out of the glass, without taking with it either the larva or a young monoculus. I again repeated the experiment, by selecting another pair ; and at the expiration of the last fourteen days my surprise was increased beyond measure. The contents of the glass appeared a mass of quick-moving animated matter; and being diversified by colors of red, green, ash-color, white, &c., afforded, with the assistance of the magnifier, considerable entertainment.

JM. quidricornis, the four-horned monoculus, a very small species, about half a line in length, and of an ashen-gray color. From the head

arise four antennas, two forwards and two backwards ; all furnished with a few hairs, which give them the figure of a branch. Between the antennae, on the fore part of the head, is situated a single eye. From the head to the tail the body goes down, decreasing in shape like a pear ; and is composed of seven or eight rings, which grow continually more straitened. The tail is long, divided into two ; each division giving rise outwardly to three or four bristly hairs. The ani-mal carries its eggs on the two sides of its tail, in the form of two yellowish parcels filled with small grains, and which, taken together, nearly equal the insect in bigness. This minute insect is found in standing pools. A number of them being kept in a bottle of water, some will be seen loaded with their eggs, and after a while depositing the two parcels, either jointly or separately.

MONODON, in ichthyology, a genus of fishes belonging to the order of cete ; the characters of which are these : there are two very long, straight, and spirally twisted teeth, which stick out from the upper jaw ; and-the spiracle, or breathing hole, is situated on the anterior part of the skull. There is but one species :

M. monoceros, the horned narwhal, sometimes grows to twenty-five feet in length, exclusive of the horn, or, as some authors say, to forty, or even sixty feet lon, and twelve broad ; but the usual size is from sixteen to twenty. It is particularly noted for its horn or horns. Of these there are always two in young animals ; though the old ones have generally but one, sometimes none. From the circumstance of only one tooth being usually found, the animal has acquired the name of unicorn fish, or sea unicorn. They inhabit the northern seas, from Norway to within the Arctic Circle : they are plentiful in Davis's Straits and the north of Greenland ; where the natives, for want of wood, make rafters of the horns. From the tooth or horn may be distilled a very strong sal volatile : the scrapings are esteemed alexipharmic, and were used of old in malignant fevers, and against the bites of serpents. The use of it to the animal seems to be chiefly as a weapon of offence, and a very powerful one it appears to be : there are many instances of its having been found in the bottom of ships which returned from the north seas, probably owing to the animal's mistaking the ship for a

whale, and attacking it with such fury as not to be able to get out the weapon from the wood. It may also serve as an instrument to loosen

and disengage from the rocks or bottom of the sea the sea plants on which it feeds. These fishes swim swiftly, and -can only be struck when numbers happen to be found together, and obstruct their own course with their horns. Their skin is white, with black spots on the back, and has a great quantity of blubber underneath. The tooth of this animal was anciently imposed upon the world as the horn of a unicorn, and sold at a very high price. There is a magnificent throne made of this species of ivory for the Danish monarchs, which is still preserved in the castle at Rosenberg. The price of this material was superior to gold.

MON'ODY, n. s. Fr. monodie ; Gr.ˆovu►►ta. A poem sung by one person, not in dialogue : or see below.

Monody, compounded of /unroy, solus, and ►►S►►i, a song, in the ancient poetry, is a kind of mournful song or ditty sung by a person alone, to utter his grief. Dr. A. Rees.

MONODY, from povoc, alone, and a►►w, I sing, was, in ancient poetry, a mournful kind of song, sung by a person all alone, to give vent to his grief.

MONCECIA, from ˆovoc, alone, and oucta, a house ; the twenty-first class in Linnaeus's sexual method. See BOTANY.

MONOG'AMY, n. s. > Fr. monogamie ; Gr MONOG'AMIST. S fiovnf and yoˆoc, marriage. The marriage of one wife : one who disallows polygamy, or second marriages.

Monogamy is the state or condition of those who have only married once, or are restrained to a single wife. Dr. Rees.

MONOGYNIA, from /wvoc, alone, and yvvij, a woman, the first order in the first thirteen classes of Linnaeus's sexual method; consistingof plants which, besides their agreement in their classic character, generally derived from the number of their stamina, have only one style, or female or-gan. See BOTANY.

MON'OLOGUE, n. s. Fr. monologue ; Gr. juovoc and \6yog. A scene in which a person of the drama speaks by himself; a soliloquy.

He gives you an account of himself, and of his returning from the country, in monologue ; to which unnatural way of narration Terence is subject in all his plays. Dryden.

MONONGAHELA, a river of the United States, which rises at the foot

of Laurel Mountain in Virginia; thence meanders north by east into-Pennsylvania ; thence winding north by west separates Fayette and Westmoreland from Washington County, and, passing into Alleghany County, joins the Alleghany at Pittsburg, and forms the Ohio. See OHIO. About fifteen miles from its mouth it receives the Youghiogany from the southeast. It is about 220 miles long from its source to its mouth, and 300 yards broad for ninety-five miles.

MONOPHYSITES, from fiovof, alone, and $I > < TIC, nature, a general name given to thosa churches in the Levant who own only one nature

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in Jesus Christ ; and who maintain that the di-rine and human nature of Christ were so united as to form only one nature, yet without any change, confusion, or mixture of the two natures. The monophysites, however, properly so called, are the followers of Severus, a learned monk of Palestine, who was created patriarch of Antioch in 5 13, and of Petrus Fullensis. They were encouraged by the emperor Anastatius, but depressed by Justin and succeeding emperors. However, this sect was restored by Jacob Baradaeus, an obscure monk, insomuch, that when he died bishop of Edessa A. D. 588, he left it in a most flourish ing state in Syria, Mesopotamia, Armenia, Egypt, Nubia, Abyssinia, and other countries. The laborious efforts of Jacob were seconded in Egypt and the adjacent countries by Theodosius bishop of Alexandria ; and he became so famous, that all the monophysites of the east considered him as their second founder, and are called Ja-cobites, in honor of their new chief. The monophysites are divided into two sects or parties, the one African, the other Asiatic : at the head of the latter is the patriarch of Antioch, who resides for the most part in the monastery of St. Ana-nias, near the city of Merdin : the former are under the jurisdiction of the patriarch of Alexandria, who generally resides at Grand Cairo, and are subdivided into Cophts and Abys-sinians. From the fifteenth century downwards, all the patriarchs of the monophysites have taken the name of Ignatius, to show that they are the lineal successors of Ignatius, bishop of Antioch in the first century, and consequently the lawful patriarchs of Antioch. In the seventeenth century, a small body of the monophysites in Asia abandoned for some time the doctrine and institution of their ancestors, and embraced the communion of Rome : but the African monophysites, notwithstanding that poverty and ignorance which exposed them to the seductions of sophistry and gain, stood firm in their principles, and made an obstinate resistance to the promises, presents, and attempts employed by the papal missionaries to bring them under the Ro-man yoke ; and, in the eighteenth century, those of Asia and Africa have persisted in their refusal to enter the communion of the Romish church, notwithstanding the earnest entreaties and alluring offers that have been made from time to time by the pope's legates, to conquer their inflexible constancy.

MONOPOLI, a well built town of Naples, in the Terra di Bari, on the Adriatic. It contains a fine cathedral, a number of other churches, and has 15,600 inhabitants. Its manufactures are hempen and other stuffs;

and its trade in these articles, wine and cloves. Six miles off are the remains of the ancient ‘Egnotia, and several curious subterranean villages in the neighbourhood.

MONOPOLY, n.$.f Fren. monopole ; Gr.

MONOP’OLIST, >/iovof and wwXtw, to

MONOH’OLISE, v. a. j sell. The sole privilege of sale : exclusive right of market : it is commonly used for an usurped privilege or advantage of this kind : monopolist is one who obtains this privilege in anyway: to monopolise is to engross the sole power or privilege of sale.

If I had a monopoly on’t they would have part on’t. Shahspcare.

How could he answer it, should the state think fit, To question a monopoly of wit 1 Cowlcy.

One of the most oppressive monopolies imaginable ; all others can concern only something without us, but this fastens upon our nature, yea upon our rea-son. Government of the Tongue.

Shakspeare rather writ happily than knowingly and justly ; and Jonson, who, by studying Horace, had been acquainted with the rules, yet seemed to envy posterity that knowledge, and to make a monopoly of his learning. Dryden’s Juvenal.

He has such a prodigious Hade, that if there is not some stop put, he will monopolize ; nobody will sell a yard or drapery, or mercery ware, but himself.

Arbuthnot.

It moves me more perhaps than folly ought. When some green heads, as void of wit or thought, Suppose themselves monopolist* of sense, And wiser men’s -ability pretence. Cowper.

A MONOPOLY, in law, is the act of one or more persons making themselves the sole masters of the whole of a commodity, manufacture, and the like, in order to make private advantage of it, by selling it again at a very advanced price : or it is a license or privilege allowed by the king for the sole buying and selling, making, working, or using any thing whatsoever. Monopolies had been carried to an enormous height during the reign of queen Elizabeth ; and were

heavily complained of by Sir Edward Coke, in the beginning of the reign of king James I.: but were in great measure remedied by statute 21 Jac. I. c. 3, which declares such monopolies to be contrary to law, and void (except as to patents, not exceeding the grant of fourteen years, to the authors of new inventions, and except also patents concerning printing, saltpetre, gunpowder, great ordnance, and shot) ; and monopolists are punished with the forfeiture of treble damages and double costs, to those whom they attempt to disturb; and if they procure any action, brought against them for these damages, to be stayed by any extrajudicial order, other than of the court wherein it is brought, they incur the penalties of prsemunire. Combinations also, among victuallers or artificers, to raise the price of provisions, or any commodities, or the rate of labor, are in many cases severely punished by particular statute; and, in general, by statute 2 and 3 Edw. VI. c. 15, with the forfeiture of ––10 or twenty days' imprisonment, with an allowance of only bread and water, for the first offence ; ––20 or the pillory for the second ; and ––40 for the third, or else the pillory, loss of one ear, and perpetual infamy. In the same manner, by a constitution of the emperor Zeno, all monopolies and combinations to keep up the price of merchandise, provisions, or workmanship, were prohibited, under pain of a forfeiture of goods and perpetual banishment. Dr. Smith's opinion respecting engrossing and forestalling is well known; the popular fear respecting them he compares to the popular terrors and suspicions of witchcraft, and he concludes by observing, that the law which should restore entire freedom to the inland trade of corn would probably prove as effectual to put an end to the popular fears of engrossing and forestalling, as the law which put an end to all

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prosecutions for witchcraft, destroyed the fear and suspicion of it, by taking away the great cause which encouraged and supported them.

‘ If/ says Dr. Smith, ‘ a merchant erer buys up com, either going to a particular market, or in a particular market, in order to sell it again soon after in the same mar-ket, it must be because he judges that the market cannot be so liberally supplied through the whole season as upon that particular occasion, and that the price, therefore, must soon rise. If he judges wrong in this, and if the price does not rise, he not only loses the whole profit of the stock which he employs in this manner, but a part of the stock itself, by the expense and loss which necessarily attend the storing and keeping of corn. He hurts himself, therefore, much more essentially than he can hurt even the particular people whom he may. hinder from supplying themselves upon that particular market day, because they may afterwards supply themselves just as cheap upon any other market day. If he judges right, instead of hurt-ing the great body of the people, he renders them a most important service. By making them feel the inconveniences of a dearth somewhat earlier than they otherwise might do, he prevents their feeling them afterwards so severely as they certainly would do, if the cheapness of price encouraged them to consume faster thau suited the real scarcity of the season. When the scarcity is real, the best thing that can be done for the people is-to divide the inconveniences of it as equally as possible through all the different months, and weeks, and days of the year. The interest of the corn merchant makes him study to do this as exactly as he can : and as no other per-son can have either the same interest, or the same knowledge, or the same abilities to do it so exactly as he, this most important operation of commerce ought to be trusted entirely to him ; or, in other words, the corn trade, so far at least as concerns the supply of the home market, ought to be left perfectly free.’

Indeed, when we consider the numerous and great obstacles and difficulties which must lie in the way of every person who attempts to get into his possession the whole, or the greater part of any commodity ; the immense capital or credit which he must possess; the confidence he must place on the integrity of his agents, and the reliance he must have on their skill and judgment ; the effect on the price of the commodity, which his attempts to monopolise it must necessarily produce ; and the great probability that he will be

compelled to desist from his undertaking long before he has brought it to a close, from an erroneous calculation of his means : it will ap-pear evident that it cannot be the interest of any man to risque his capital in such an absurd and impracticable undertaking. If there should be persons so blind to their own interests as to begin the attempt, their punishment may safely be left to flow from their own measures, as long before they can materially, or even in a trifling degree, injure the public, they will either open their eyes to their own folly, or be incapacitated by their own ruin from proceeding in their enterprise.

MONOPTOTE, n. s. Gr. povoc and Trrifftc-A noun used only in some one oblique case.

MON’OSTITCH, n. t.

composition of one verse.

MON’OSYLLABLE, n.

Gr.

Fr. monosylla-

, n. *. j r. mo

MON’OSYLLABICAL, adj. >be; Gr.po MON’OSYLLABLEP. J <n>XAa/3►►j. A word.

of only one syllable; consisting of one syllable.

Nine taylors, if rightly spelled, Into one man are monoiullahted. Cleavelaiui.

My name of Ptolemy ! It is so long it asks an hour to write it : I’ll change it into Jove or Mars ! Or any other civil monosyllable, That will not tire my hand.

Drydent Cleomem-. .

Monosyllable lines, unless artfully managed, are stiff or languishing; but may be beautiful to express melancholy. Pope.

Poets, although not insensible how much our language was already overstocked with monosyllables, yet, to save time and pains, introduced that barbarous custom of abbreviating words, to fit them to the measure of their verses. Swift.

Monosyllables and words accented on the last sylla ble, ending with a single consonant preceded by a single vowel, double that consonant, when thev take another syllable beginning with a vowel.

Murray.

MONOTHELITES, from Moi/oC, single, and 5t\T)[ia, will, an ancient sect which sprung out of the Eutychians ; thus called, as only allowing of one will in Jesus Christ. The Monothelites had their rise in 630, and had the emperor Heraclius for an adherent : they were the same with the Acephalous Severians. They allowed of two wills in Christ, considered with regard to the two natures ; but reduced them to one, by reason of the union of the two natures ; thinking it absurd there should be two free wills in one and the same person. They were condemned by the sixth general council in 680, as being supposed to destroy the perfection of the humanity of Jesus Christ, depriving it of will and operation. Their sentiments were afterwards embraced by the Maronites.

MONOTONY, n.s. Gr. ftovorovia; povoc and rovof, sound ; Fr. monotonie. Uniformity of sound ; want of variety in cadence.

I could object to the repetition of the same rhymes within four lines of each other as tiresome to the ear through their monotony. Pipe's Letters.

A mechanical attention to these resting-places has perhaps been one cause of monotony, by leading the reader to a similar tone at every stop, and a uniform cadence at every period. Murray.

MONOTROPA, birdVnest, a genus of the monogynia order, and monandria class of plants : CAL. none; petals ten ; and of these the five exterior have a melliferous hollow at the base : CAPS. quinquevalved. In some of the flowers a fifth part of the number is excluded. There are two species. The most remarkable is,

M. hippopithys, a native of Britain and some of the more northerly kingdoms of Europe. It is about five inches high, having no other

leaves than oval scales, and. terminated with a nodding spike of flowers, which in the seeding state becomes erect : the whole plant is of a palt yellow color, smelling like the primrose, or like beans in blossom. The country people in Sweden give the dried plant to cattle that have a cough.

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MON RE ALE, a charming town of Sicily, about two miles W. S. W. of Palermo : its situ-ition in particular is beautiful, and its cathedral one of the finest specimens extant of the enriched Gothic architecture. Its roof is supported by pillars, and the walls are covered with morasses. Population about 8000. In the vicinity is a well endowed convent.

MONRO (Dr. Alexander), senior, a most eminent physician and anatomist. He showed an early inclination to the study of physic ; and his father, after giving him the best education that Edinburgh afforded, sent him successively to London, Paris, and Leyden. In London he attended the lectures of Messrs. Hawksbee and Whiston on experimental philosophy, and the anatomical demonstrations of Mr. Cheselden. In Paris he attended the hospitals, and the lectures on physic and surgery. In autumn 1718 lie went to Leyden, and studied under the great Boerhaave, by whom he was particularly esteemed. On his return to Edinburgh, in autumn 1719, Messrs. Drummond and Macgill, who were then conjunct nominal professors of anatomy to the Surgeon's Company, having resigned in his favor, he began to read public lectures on anatomy, which were the first regular course of lectures on any of the branches of medicine that had ever been read at Edinburgh, and may be considered as the opening of that medical school which has since acquired such great reputation all over Europe. About 1720 his father communicated to the physicians and surgeons at Edinburgh a plan, which he had long formed in his own mind, of having the different branches of physic and surgery regularly taught at Edinburgh ; which was highly approved of by them, and by their interest regular professorships of anatomy and medicine were instituted in the university, of the former of which Dr. Monro was the first professor. But, although he was elected to tin's professorship in 1721, he was not inducted into the university till the year 1725. From this time he regularly gave a course of lectures on anatomy and surgery, from October to May. A task in which he persevered with the greatest assiduity, and without the least interruption, for nearly forty years ; and so great was the reputation he had acquired, that students flocked to him from the most distant corners of the em-pire. In 1759 our professor entirely relinquished the anatomical theatre to his son Dr. Alexander, who had returned from abroad, and had assisted him in the course of lectures in 1758. He still, however, rendered his labors useful to mankind, by reading clinical lectures at the hospital. He had the satisfaction to behold that seminary of medical education

which his father had planned, and he had begun, frequented yearly by 300 or 400 students : and to see it arrive at a degree of reputation far beyond his most sanguine hopes, .icing equalled by few, and excelled by none in Europe. He was elected F. R. S. of London, and an honorary m emberof the Royal Academy of Surgery at Paris. He died July 10th 1767, in the seventieth year of his age. A collection of all his works, properly arranged, corrected, and il-Sustrated with copper plates, has been published

by Dr. Alexander Monro, his son and successor in a splendid 4to volume ; Edinburgh, 1781 ; to which he prefixed a life of the author, by another of his sons.

MONRO (John), M. D., an eminent English physician, born at Greenwich in Kent, but descended of a Scottish family. He was educated in London, and afterwards at St. John's College, Oxford, of which he became a fellow, and from which he received his degree while he was abroad ; for he studied physic at several universities. In 1757 he was appointed joint physician along with his father, to Bridewell and Bethlehem hospitals. He published an excellent answer to Dr. Battie's Treatise on Madness, and died in 1791.

MONS, a fine old fortified town of the Netherlands, the capital of Hainault, stands partly on a hill, and partly in a plain, on the small river Trouille. It is surrounded by an earthen mound and ditch, and is the only strong place between Brussels and the French frontier. It has several squares, and tolerably regular streets. The market place contains the government-house, and the house of the provincial council. The hotel de ville, a large old building, erected in 1716, has a fine steeple, and is situated in a square where the principal streets meet. The church of St. Elizabeth is remarkable as occupying the site of an ancient castle, demolished in 1618, and said to have been founded by Julius Caesar. The charitable institutions are, a large hospital constructed by Vauban, a foundling hospital, and a workhouse. The public library is extensive : and Mons has woollen, cotton, linen, and lace manufactories of good extent. Its command of coal has led likewise to the establishment of iron foundries, salt works, earthenware, oil, and soap works ; in all of which articles its trade is considerable. It communicates with Paris by the canal of St. Quentin. Mons has frequently experienced the depopulating effects of war. In 1691 it was besieged by Louis XIV. ; when, to prevent its bombardment, the citizens compelled the governor to capitulate. In 1709 it was taken by the duke of Marlborough and prince Eugene,

after the battle of Malpla-quet. In 1746 it was again taken by marshal Saxe ; and in the wars of the French revolution (1792, 1793, 1794), it was successively taken and retaken by opposing parties. Twenty-three miles E. N. E. of Valenciennes, and thirty-six S. S. W. of Brussels. Population 20,000.

MONS SACER, in ancient geography, a mountain of the Sabines beyond the Anio, to the east of Rome ; whither the people retired once and again to avoid the tyranny of the patricians. From this secession, and the altar of Jupiter Terribilis erected there, the mountain took its name.

MONSELICE, a town of Italy, in the province of Padua, situated on a navigable canal. It is ten miles from the Adige River, and twenty from the Po, and has considerable manufactures of woollen and linen. It has also a brisk trade by its canal with Padua. Population 9000. fen miles S. S. W. of Padua.

MON'SIEUR, n.s. Fr. Sometimes a term of reproach for a Frenchman.

A Frenchman his companion ; An eminent monsieur, that, it seems, much loves A Gallian girl. Shakspeare. Cymheline.

MONSIGNORI (Francesco), a celebrated painter, born at Verona in 1455. He studied under Andrea Mantegna, by whose precepts he acquired a good taste for historical composition, ana an excellent style of portrait painting. His talents procured him the patronage of the marquis of Mantua, who allowed him a large pension, and employed him several years. He was accustomed to amuse himself often in observing Monsignori at work ; .and, one day taking particular notice of a picture representing the death of Sebastian, the marquis acknowledged every part of the painting to be elegant, but objected that the expression of the figure was not natural, as neither in the look, the limbs, or attitude, appeared the agony of a person in such a situation, bound with cords, and pierced with arrows. The painter asserted the truth of his figure, and endeavoured to justify it, by affirming, that he had taken every part from nature, having engaged a porter for his model, who was tied in the posture described in the painting. The marquis desired to see the porter in the proper position the next day, that it might be determined which of them judged best, according to truth and nature. As soon, therefore, as the marquis was informed j.hat the apparatus was ready, he rushed suddenly into the room, having in his hand a cross-bow fixed for execution; and, with a countenance distorted with fury, cried aloud to the porter, ‘ Traitor ! prepare for death ! ††† you shall die instantly !’ ††† As he approached, the porter, terrified, struggled, and strained every muscle, joint, and limb, to disengage himself, each line of his face expressing the agony of his mind. ‘ Now,’ said the marquis to the painter, ‘ compare your two models ; what he was yesterday, while unterrified ; and what he is now, under the dread of execution ; and do you determine which has most of nature, and which expression is most suitable to the situation of Sebastian.’ The painter profited by the experiment, confessed the justice of the observation, altered his design, and improved it so much that it was allowed to be the finest of all his performances. Monsignori copied animals with astonishing accuracy, and excelled in perspective. He died in 1519.

MONSOON’, n. s. Fr. monson, mon$on ; Arab. nionsom.

The monsoons and trade winds are constant and periodical even to the

thirtieth degree of latitude all around the globe, and seldom transgress or fall short of those bounds. Ray.

Monsoons are shifting trade winds in the East India Ocean, which blow periodically ; some for half a year one way, others but for three months, and then shift and blow for six or three months directly contrary. Harris.

The monsoons in the Indian Ocean may be reduced to two, one on the north and another on the south side of the equator, which extend from Africa to the longitude of New Holland and the east coast of China, and which suffer partial changes in particular places from the situation and inflection of the neighbouring countries. Thompson.

MONSOONS. In the Indian ocean' these winds are partly general, and blow all the year round the same way, as in the Ethiopic Ocean; and partly periodical, i. e. half the year blow one way, and the other half nearly on the opposite points : and these points and times of shifting differ in different parts of this ocean. These latter are what we call monsoons. The shifting of these monsoons is not all at once ; in some places the time of the change is attended with calms, in others with variable winds, and particularly those of China, at ceasing to be westerly, are very apt to be tempestuous; and such is their violence that they seem to be of the nature of the West India hurricanes, and render the navigation of those seas very unsafe. These tempests the seamen call the breaking up of the monsoons. Monsoons take their name from an ancient pilot, who first crossed the Indian sea by means hereof: but others derive the name from a Portuguese word, signifying motion or change of wind and sea. Lucretius and Apollonius mention annual winds which arise every year, etesia flabria, which seem to be the same with what in the East Indies we now call monsoons. See WIND.

MONSTER, n. s. & v. a.~} French motutre, MONSTROS'ITY, n. s. I momtreux ; Latin

MONSTRUOS'ITY, [i/ioiistrostis. An

MON'STROUS, adj. & adv. (unnatural produc-MON'STROUSLY, adv. \ tion ; something

MON'STRODSNESS, n. s. J physically or morally deformed, or unshapely, strange er wicked : Shakspeare uses it as a verb for to disorder, or put out of the common order of things : monstrosity and

monstruosity are the state of being monstrous: monstrous is, strange; irregular; enormous ; unusually hateful or shocking : as an adverb it is generally used in banter or reproach. The other derivatives explain themselves.

If she live long,

And, in the end, meet the old course of death, Women will all turn monster*.

S/iakspeare. King Lear. Her offence

Must be of such unnatural degree That monsters it. Id.

This is the monstruosity in love, that the will is infinite, and the execution confined. SliuJtspeare.

Is it not monstrous that this player here, But in a fiction, in a dream of passion. Could force his soul so to his conceit, That, from her working, all his visage waned ?

Id.

He walks ;

And that self-chain about his neck, Which he forswore most monstrously to have.

LI.

See the mmistrousnets of man, When he looks out in an ungrateful shape ! Id. Such a tacit league is against such routs and shoal* of people, as have utterly degenerated from nature, as have in their very body and frame of estate a moit-strosity. Raom .

This was an invention given out by the Spaniards to save the monstrous scorn their nation received.

Id.

Oil of vitriol and petroleum, a dram of each, turn into a mouldy substance, there residing a fair cloud in the bottom, and a monstrous tV.icV oil on the top.

Id.

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Methinks heroic poesie till now. Like some fantastic fairy land did shew, Gods, devils, nymphs, witches, and giants race, And all but man in man's chief work had place. Then, like some worthy knight with sacred arms, Dost drive the monster thence, and end the charms.

Cowley.

In our bodies we find weakness, and imperfection, ###ometimes crookedness, sometimes monstrosity ; filthiness, and weariness, infinite number of diseases, and an uncertain cure. Jer. Taylor.

Nature there perverse.

Brought forth all monstrous, all prodigious things, Hydras, and gorgons, and chimeras dire. Milton.

This was the cause of that monstrous infidelity in the Israelites, which baffled all the methods which Cod used to persuade and convert them. Hmruw.

These truths with his example you disprove, Who with his wife is monstrously in love. Dryden.

Add, that the rich have still a gibe in store, And will be monstrous witty on the poor. Id.

She was easily put off the hooks, and monitrout hard to be pleased again. L' 'Estrange.

It ought to be determined whether montters be really a distinct species ; we find, that some of these monttrow productions have none of those qualities that accompany the essence of that species from whence they derive. Locke.

Every thing that exists has its particular constitution ; and yet some monstrous productions have few of those qualities which accompany the essence of that species from whence they derive their originals.

Id.

Tiberius was bad enough in his youth, but superlatively and monstrously so in his old age.

Smith's Sermons.

We read of monstrous births, but we often see a greater monstrosity in education ; thus, when a father has begot a man, he trains him up into a beast.

Id.

By the same law monstrosity could not incapacitate from marriage, witness the case of hermaphrodites. Arbuthnot and Pope. All human virtue, to its latest breath, Finds envy never conquered but by death ; The great Alcides, every labour past, Had still this monster to subdue at last. Pope. No monstrous height, or breadth, or length ap-pear, The whole at once is bold and regular. Id.

A MONSTER is a birth or production of a living being, degenerating from the proper and usual disposition of parts in the species to which it belongs : as, when there are too many members, or too few ; or some of them are extravagantly out of proportion, either on the side of defect or excess. Aristotle defines a monster to be a de-fect of nature, when, acting towards some end, it cannot attend to it, from some of its principles being corrupted. Monsters do not propagate their kind; for which reason some rank mules among the number of monsters, as also hermaphrodites. But Buffon and other naturalists affirm that mules do sometimes propagate. See MIDWIFERY.

MONSTER is also used for an animal enormous for bulk ; such as the elephant among terrestrial quadrupeds, and the shark and the whale among sea animals ; for other animals remarkable for fierceness and cruelty ; and for animals of an extraordinary species, arising from the copulation of one animal with another of a different

MONSTERS, VEGETABLE. Monsters are more common in the vegetable than in the animal kingdom, because the different juices are more easily deranged and confounded together, and because the methods of propagation are more numerous. Leaves are often seen, from the internal parts of which other leaves spring forth ; and it is not uncommon to see flowers of the ranunculus, from the middle of which issues a stalk bearing another flower. M. Bonnet informs us that, in certain warm and rainy years, he has frequently met with monsters of this kind in rose-trees. He saw a rose, from the centre of which issued a square stalk of a whitish color, tender, and without prickles, which at its top bore two flower-buds opposite to each other,

and totally destitute of a calyx ; a little above the buds issued a petal of a very irregular shape. Upon the prickly stalk, which supported the rose, a leaf was observed whick had the shape of trefoil, together with a broad flat pedicle. He also mentions some monstrous productions which have been found in fruits with kernels, analogous in their nature to those which occur in the flowers of the ranunculus and of the rose-tree. He has seen a pear, from the eye of which issued a tuft of thirteen to fourteen leaves, very well shaped, and many of them of the natural size. He has seen another pear which gave rise to a ligneous and knotty stalk, on which grew another pear somewhat larger than the first. The lilium album polyanthos, observed some years ago at Breslaw, which bore on its top a bundle of flowers, consisting of 102 lilies, all of the com-mon shape, is well known. These vegetable productions which are so extraordinary, and so contrary to the common course of things, nevertheless present deviations subject to particular laws, and reducible to certain principles, by distinguishing such as are perpetuated either by seed or by transplanting, from those which are only accidental and passing. Monstrosities which are perpetuated exist in the original organisation of the seed of the plant, such as marked or curled leaves,t&c. The word monster is more properly applied to those irregularities in plants which arise from frequent transplantation, and from a particular culture, such as double flowers, &c. : but those monstrosities which are not perpetuated, and which arise from the accidental and transient causes deranging the primitive organisation of the plant, when it comes to be unfolded, from a superfluity or scarcity of juices, a depravation of the vessels contributing to nutrition, the sting of insects, or contusions and natural grafts, retain also the name of monsters. Of this kind are knobs or swellings, stunting, gall-nuts, certain streaks, and other similar defects. One species may be compared with another; but a monster can only be put in comparison with an individual of the species from which it comes. See the Observations Botaniques of M. Schlotterbec, of Basil, concerning monsters in plants.

MONT’ ANT, n.s. Fr. montant. A term iu fencing.

Vat be all you, one, two, tree, four, come for 1 ••• To see thee fight, to see thee pass thy puncto, thy stock, thy traverse, thy distance, thy montant.

Sfujk&peare.

MONSTIER, MOUTIER, or MousTiER,atown of France in the department of Mont Blanc, cide-vant Savoy, near the conflux of the Isere and Doron. It was anciently called Forum Claudii, next Monasterium Centionum, from a monastery ; hence Monstier. It has fine salt-springs and salt-works. It lies twenty-seven miles E.S.E. of Chambery, forty-five southeast of Geneva, and sixty-two north-west of Turin. Long. 6►► 23' E., lat. 45►► 30' N.

MONSTIER EN DER, a town of France, in the department of Upper Marne, twelve miles from St. Dizier.

MONSTRELET (Enguerrand de), a famous chronicler of the fifteenth century, was born at, and governor of, Camhray. His History of his Own Times, from 1400 to 1467, was finished, as to the last fifteen years, by another hand. It contains a copious and faithful narrative of the contentions of the houses of Orleans and Burgundy, the capture of Normandy and Paris by the English, their expulsion, &c., and was published under the title of Chronique d'Enguerrand de Monstrelet, Gentilhomme, jadis demeurant ►► Cambrai, en Cambresis. The best edition is that of Paris, 1572, 2 vols. folio. He died in

1453.

MpNTAGUE (Charles), earl of Halifax, was born in 1661. He was educated at Westminster and Cambridge, and quickly made great progress in learning. In 1685 he wrote a poem on the death of king Charles II., in which he displayed his genius to such advantage that he was invited to London by the earl of Dorset; and, upon his coming thither, he increased his fame, by a piece which he wrote in conjunction with Prior, published at London in 1687, entitled The Hind and the Panther transversed to the Story of the Country Mouse and the City Mouse. Upon the abdication of king James II. he was chosen a member of the convention, and recommended by the earl of Dorset to king William, who allowed him a pension of ►►500 a-year. Having given proofs of his abilities in the house of commons, he was made a commissioner of the treasury, and soon after chancellor of the

exchequer. In 1698 he was appointed first commissioner of the treasury; and, in 1699, was created baron Halifax. In 1701. the house of commons impeached him of six articles, which were dismissed by the house of lords. He was attacked again in 1702, but without success. In 1705 he wrote An Answer to Mr. Bromley's Speech in relation to the occasional Conformity Bill. In 1706 he was a commissioner for the union with Scotland ; and, upon passing the bill for the naturalisation of the house of Hanover, and for security of the Protestant succession, he was appointed to carry that act to Hanover. Upon the death of queen Anne, when king George I. had taken possession of his throne, his lordship was appointed first commissioner of the treasury, and created earl of Halifax and K. G. He died in 1715. His lordship wrote several other pieces, which, with some of his speeches, were published together in 1716, in 1 vol. 8vo.

MONTAGUE (F.dward), earl of Sandwich, an ..lustrious Englishman, who, from the age of nineteen, united the qualifications of general, ad-

miral, and statesman. He acted early against Cnarles I.; he persuaded Cromwell, whom it i* said he admired, to take the crown ; and he was zealous for the restoration of Charles II. ! Upon general Monk's coming into England, he sailed with the fleet to Holland, and soon after he convoyed king 'Charles II. to England. For this service he was created knight of the garter, baron Montague, viscount Hinchinbrooke, and earl of Sandwich; made a member of the privy council, master of the king'[illegible] wardrobe, admiral of the Narrow Seas, and lieutenant admiral to the duke of York. He performed some very essential services in the Dutch wars, and lost his life by refusing to quit his ship, after it was on fire. His body was interred with great state in Henry VII.'s chapel. His lordship's writings are, I . The Art of Metals, translated from the Spanish of Alvaro Alonzo Barba, 8vo. 2. Several letters during his embassy to Spain, published with Arlington's letters. 3. A letter to secretary Thurloe. 4. Original letters and negotiations of Sir Richard Fanshaw, the earl of Sandwich the earl of Sunderland, and Sir William Godol-phin, wherein divers matters between England, Spain, and Portugal, from 1663 to 1678, are set in a clear light ; 2 vols. 8vo.

MONTAGUE (lady Mary Wortley), was eldest daughter of Evelyn, duke of Kingston, and the lady Mary Fielding, daughter of William, earl of Denbigh. She was born at Thoresby in Nottinghamshire, about 1690. Under bishop Bur-net she acquired considerable knowledge of the Greek, Latin, and French languages. In 1712 she married Edward

WortJey Montague, who was sent ambassador to the Porte in 1716, whither she accompanied him. Here we find, from her correspondence, that she had added an acquaintance with the German, Italian, and Turkish languages to her other acquirements. After her return she introduced inoculation for the small-pox into this country, as she had seen it practised with success in the east. Her wit and literature led her to form intimacies with all the eminent poets and scholars of her brilliant era. Her health declining, in 1739, she went to Italy, where she remained till 1761, when her husband died. She then returned to England ; but she survived him only till the 21st of August, 1762. In 1763 a collection of her letters was published, which had been surreptitiously obtained ; but her grandson, the marquis of Bute, gave her en-tire works to the public, in 5 vols. 12mo. containing her Life, Letters, Translation of the Enchiridion of Epictetus, Poems, and Essays.

MONTAGUE (Edward Wortley), commonly known as the Turk, was the son of the preceding. From Westminster school, where he was placed for education, he ran away thrice. He exchanged clothes with a chimney-sweeper, and followed for some time that sooty occupation. He next joined a fisherman, and cried flounders at Rotherhithe. He then sailed as i cabin-boy to Spain ; where he had no sooner arrived than he ran away from the vessel, and hired himself to a driver of mules. After thus vagabondising it for some time, he was discovered by the con-sul, who returned him to his friends in England. They received him with joy, and a private tutor

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was employed to recover those rudiments of learning which a life of dissipation and vulgarity might have obliterated. Wortley was sent to the West Indies, where he remained some time ; and on his return to England was chosen a member of parliament, and served two successive sessions. His expenses exceeding his income, he became involved in debt, and quitted his native country. Having visited most of the eastern countries, he contracted a partiality for their manners. He drank little wine; a great deal of coffee ; wore a long beard ; smoked much ; and, even whilst at Venice, was habited in the eastern style. He sat cross-legged in the Turkish fashion from choice. With the Hebrew, the Arabic, the Chaldaic, and the Persian languages, he was as well acquainted as with his native tongue. He published several pieces. One on the Rise and Fall of the Roman Empire. Another on the Causes of Earthquakes. He had seraglios of wives ; but the lady whom he married in England was a washerwoman, with whom he did not cohabit. When she died without leaving issue to him, being unwilling that his estate should go to the Bute family, he set out for England to marry a young woman already pregnant, whom a friend had provided for him ; lie died on his journey.

MONTAGUE (Richard), D.D., a learned English prelate, born in Bucks, about 1577, and educated at King's College, Cambridge, of which he became fellow. In 1616 he was made dean of Hereford ; and in 1621 published an answer to Selden's History of Tithes. He afterwards engaged in a controversy with the Papists, and published a piece, entitled Appello Caesarem, for which he was summoned before the house of commons, in the first parliament of Charles L, and subjected to ►►2000 bail. The king, however, made him bishop of Chichester in 1628, and translated him to Norwich in 1638, where he died in 1641. Besides controversial tracts, such as An Answer to the Gagger of the Protestants, in 1624, 8cc. ; he wrote several learned works, on the doctrines and discipline of the church.

MONTAGUE (John), fourth earl of Sandwich, born in 1718, studied at Eton, whence he removed to Trinity College, Cambridge. He set out on his travels at about twenty years of age, and visited Sicily, Malta, Turkey, and Egypt, bringing home a valuable collection of antiquities, particularly a marble vase obtained at Athens, which he presented to Trinity College. An account of his Voyage round the Mediterranean, drawn up by himself, with memoirs of his life, by the Rev. J. Cooke,

was published after his death, in 1799, 4to. ; a second edition appeared in 1807. On his return home he became a lord of the admiralty; and in 1746 was despatched as minister plenipotentiary to the congress of Breda. He was engaged also in negociating the peace of Aix-la-Chapelle, and on his return to England was made first lord of the admiralty. Though removed in 1751, he twice afterwards held the same office, and died in 1792.

MOKTAGUE ISLAND, an island in the North Pacific Ocean, near the west coast of North America, about fifty miles long, and ten broad,

and situated at the west side of the entrance into Prince William's sound. Long. 147►► to 148►► W., lat. 59►► 50' to 60►► 30' N.

MONTAIGNE (Michael de), a French gentleman, born in Perigord in 1533. His father educated him with great care, and made him learn Latin as other children learn their mother tongue. His tutors were Nicholas Gronchi, who wrote De Comitiis Romanorurn; William Guerenti, who wrote on Aristotle ; George Buchanan ; and Anthony Muret. He was also taught Greek by way of recreation ; and was awakened every morning with the sound of music. He was a counsellor in the parliament of Bourdeaux, and afterwards mayor of Bourdeaux. He published his celebrated Essays in 1580. He had a great deal of wit and subtlety, but no small share of conceit and vanity. The learned are much divided in their opinions about his works. He died in 1592.

MONTALEMBERT (Marc Rene, marquis de), a French general and mathematician, was born at Angouleme in 1714. At the age of eighteen he entered the army ; was at the siege of Kehl in 1733, and at that of Philipsburg in the following year. He afterwards served in Bohemia, and at the peace devoted himself to the study of the exact sciences. He constructed in Anjou and Perigord forges for casting cannon. In the seven years' war he was on the staff of Russian and Swedish armies. In 1761 he announced his celebrated work on Fortification, which thegovernmentprevented him from committing to the press for some years It is entitled L'Art defensif superieur a 1'offensif, par une nouvelle maniere d'employer 1'Artillerie, ou la Fortification Perpendiculaire, Paris, 1793, 1 1 vols.4to. He was besides the author of several papers in the Memoirs of the Academy of Sciences, and other works. His death took place in 1800.

MONTANINI (Peter), or Petruccio Perugino, an eminent landscape painter, born at Perugia in 1619. At first he was instructed by his

uncle Peter Barsotti ; but was afterwards placed as a disciple with Giro Ferri. Yet he did not long adhere to the manner of either of these masters, choosing to study under Salvator Rosa ; whose style he imitated with great success. His landscapes were much admired ; the rocks, torrents, and abrupt precipices, were designed with spirit ; and his figures had very uncommon correctness, propriety, and elegance. He died in 1689.

MONTANISTS, a sect which sprung up about A. D. 171, in the reign of the emperor Marcus Aurelius. They were so called from their leader, the heresiarch Montanus, a Phrygian by birth; whence they are sometimes styled Phrygians and Cataphrygians. They formed a schism, and set up a society under the direction of those who called themselves prophets. Montanus, in conjunction with Priscilla and Maximilla, was at the head of the sect. These sectaries made no alteration in the creed. v They only held, that the Holy Spirit made Montanus his organ for delivering a more perfect form of discipline than what was delivered by the apostles. They refused communion for ever to those who were guilty of notorious crimes, and be

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lieved that the bishops had no authority to reconcile them. They held it unlawful to fly in time of persecution. They condemned second marriages, allowed the dissolution of marriage, and observed three lents. The Montanists be-came separated into two branches; one of which were the disciples of Proclus, and the other of ./Eschines. The latter are charged with following the heterodoxy of Praxeas and Sa-bellius concerning the Trinity. See MONTAWUS.

MONTANUS, a heretic of the second century, born in Phrygia. He embraced Christianity, in hopes of rising to the dignities of the church. He pretended to inspiration ; and gave out that the Holy Ghost had instructed him in several points, which had not been revealed to the apostles. Priscilla and Maximilla, two enthusiastic women of Phrygia, presently became his disciples; and in a short time he had a great number of followers. The bishops of Asia, being assembled, condemned his prophecies, and excommunicated those who dispersed them. Afterwards they wrote an account of what had passed to the western churches, where the pretended prophecies of Montanus and his followers were likewise condemned.

MONTANUS (Benedict Arias), a learned Spanish theologian, born in the diocese of Badajoz, about 1528. He assisted at the council of Trent with great reputation; and his merit and writings recommended him to Philip II. of Spain, who employed him in publishing a new polyglot bible after the Complutensian edition, which was printed under the care of cardinal Ximenes. This bible was printed at Antwerp, whither Montanus went in 1.571 ; and on his return to Spain he refused the bishopric which Philip offered him for his reward, but spent the rest of his days at Seville, where he died about 1598. Montanus had vast erudition, loved solitude, was very laborious, never drank wine, and seldom ate flesh.

MONTANUS (John Baptist), an eminent Italian physician, styled the Galen of his country. He was born at Verona, in 1488 ; and studied at Padua, where he displeased his father by preferring physic to law ; but, though deprived of his assistance, he soon made such progress that he was promoted to the professor’s chair at Padua, after having practised physic with great success in several other cities. His fame became so great that he was invited to Paris, Florence, and Vienna, by Francis I., duke Cosmo, and Charles V., but preferred his professorship

at Padua; where he died of the stone, in 1551. He wrote many medical and some poetical works.

MONTARGIS, an ancient town of the department of the Loiret in France, and the principal place of a subprefecture of the same name. It has an inferior court of judicature, and a chamber of commerce, and is a post town with 6500 inhabitants. Pleasantly situated near a beautiful forest, at the foot of a mountain, on the river Loing, where it forms a junction with the canals of Briare and Orleans. This town is surrounded with walls, and rather badly built, though its general appearance is pleasing. It was in ancient times a very strong place, and

defended by ►► good castle ; the English besieged it without success in 1427, but in 1431 they took it, and it remained in their possession until 1438. The inhabitants manufacture common cloths, cot-ton yarn, and leather, and in the suburbs there are some fine paper-mills. A considerable trade is carried on in corn, wine, saffron, wax, honey, wool, leather, iron, and cattle. The church of the Magdalen is remarkable for the b►►auty of its architecture, and the boldness and loftiness of its pillars. This town is fifty-one miles E. N. E. of Orleans, thirty-nine south of Fontainebleau, and eighty-four south of Paris.

MONTAUBAN, a large and handsome city, the principal place of the department of the Tarn-et-Garonne in France, having a royal court at Toulouse, an inferior court of judicature, a chamber of commerce, a board of trade, societies of arts and sciences, agriculture, and belles lettres, a faculty of theology belonging to the reformed church, a communal college, and a free drawing school. It is a post town with 25,000 inhabitants.

This city stands in a fine situation, on a hill at the foot of which flows the Tarn, dividing the town into several parts, and working a great number of manufacturing establishments for the making of coarse cloth, serge, flannel, silk stockings, soap, pasteboard, and delf ware, brandy distilling, wool spinning, cloth dressing, dying, brass founding, tanning, &c. Its appearance is magnificent, its air wholesome, and the suburbs present a most agreeable scene, with pleasant country houses scattered on all sides over a verdant country. It is generally well built, and the streets are extremely clean. The public edifices are respectable, particularly the cathedral, built in 730, and the town-hall; the architecture of the town gates is very fine, and there are two beautiful walks, the Allee de Car-mes, and the superb avenue jde

Coussarde, besides a fine platform, from which, in clear weather, there is a most beautiful view of the Pyrenees, which are more than 150 miles distant.

Montauban was built in 1144, by Alphonso, earl of Toulouse, near the ancient monastery of Mons Albanus. The inhabitants, having embraced the reformed religion, fortified it ; it was besieged by Louis XIII. in the year 1622, but without success, and it did not submit till 1629, when its fortifications were soon afterwards destroyed by order of cardinal Richelieu. In the reign of Louis XIV. it was depopulated by the dragonnades, and in 1815 it suffered much from a persecution raised against the protestants by an infuriated and bigotted rabble.

A considerable trade is carried on here in corn, flour, leather, cloth, wool, oil, goose-feathers, drugs, and spices ; this place is indeed the mart of several towns of the kingdom, especially for grain. Among the objects worthy of particular notice are the fountain of Grison, and the public library containing 10,000 volumes. It is thirty-nine miles south of Cahors, sixty west of Alby, forty north of Toulouse, and 505 south of Paris; in N. lat. 44□□, E. long, from Paris 1□□.

MONTBELIARD, a post town, with 4500 inhabitants, and the chief place of a subprefecture of

the same name, it the department of Doubs, France, having an inferior court of judicature, and a communal college. This town is pleasantly situated in the centre of a valley, covered with ‘meadows, watered by the Halle and the Luzine, and surrounded by hills, woody and planted with vines. It is generally well built, and the streets airy and adorned with fountains, while on an elevated rock stand the ruins of a castle, which in ancient times commanded the town, and from which there is a very fine view of the adjacent country. The walls were rased in 1677 by order of Louis XIV. This is the native place of Cuvier, the celebrated naturalist.

There are manufactures here of clocks, pendulums, watch springs, iron and steel wire for clocks, silk hats, linen, cloth, scythes, agricultural instruments, &c. The inhabitants trade in corn, spices, cheese, &c.; and this place is the centre of considerable commerce with Switzerland. Among the public places may be mentioned the library containing 8000 volumes, the town hall, the church of St. Martin eighty feet long, and fifty broad, the market house, &c. Montbeliard is sixty-four miles north-east of Besancon, thirty-nine east of Vesoul, and 101 E.S.E. of Paris.

MONT BLANC. See BLANC, MONT.

MONTBRISON, a small, but ancient town, the principal place of a subprefecture of the same name, in the department of the Loire, France. It is a post town, containing 5000 inhabitants, with an inferior court, a communal college, and a society of agriculture and commerce. Its royal court is at Lyons. It stands in the midst of a fertile plain, commanded by a volcanic rock of a picturesque form, from the top’ of which the barbarous baron of Adrets forced the catholics, whom he had made prisoners, to precipitate themselves upon the points of the crags, with which the base is environed. It is generally ill-built, and the streets close ; but, though not so populous and commercial as several other places in the department, its situation is very advantageous for the establishment of manufactories : the river Vizezy, which descends from the mountains and flows through the town, furnishing at all times of the year a sufficient supply of water for such purposes. In the neighbourhood are some mineral springs of considerable celebrity, and a few remains of Roman antiquities. There are manufactures here of linens, lawns, and cambrics, and a trade is carried on in corn, wool, and cattle.

Among the public institutions and buildings may be mentioned the fine library, the corn market, and the assembly room ; the departmental nursery, and the newly planted boulevards, are also worthy of notice. This town is forty-three miles south of Roanne, fifty-eight W.S.W. of Lyons, the same distance north-west of St. Etienne, and 367 southeast of Paris, in N. iat. 45►► 36', and E. long, from Paris 1►► 44'.

MONT-DE-MARSAN, a well-built town, the chief place of a subprefecture, in the department of the Landes, France, having an inferior court of justice under the royal court of Paris, an agricultural society, a society of arts and sciences, and a communal college. It is a post-

town, containing 3000 inhabitants, standing on an eminence, in a sandy plain, well cultivated and shaded with fine trees, at the confluence ot the Douze and the Midon. This place has been much enlarged and embellished since the division of France into departments. The streets are clean and airy, adorned with several public fountains. A bridge thrown over the Douze, which begins to be navigable here, the prefect's palace, the barracks, and a court house built within these few years past, give it an importance to which it had few pretensions before the end of the last century ; and it is surrounded with magnificent avenues and walks recently planted. There are some mineral waters here that are held in estimation. Manufactures are carried on of counterpanes, coarse cloths, linen for veils, and tanning. The trade of the town consists in the produce of the neighbourhood. It is the mart of commerce of Bourdeaux and Bayonne for wines, brandy and wool being furnished by the adjacent departments. There is a public library containing 12,000 volumes, an establishment of baths, and a bridge over the Midouze. Mont-de-Marsan is situated in 2►► 49' E. long, from Paris, Iat. 43►► 54' N. Eighty-four miles south from Bourdeaux, eighty-seven north-east of Bayonne, and 570 south-west from Paris.

MONTDIDIER, an ancient town of the department of the Somme in France, and the chief place of a department of the same name, having an inferior court of justice, a board of trade, an agricultural society, and a communal college. It is a post town, with 4500 inhabitants ; and is built upon a hill near the river Don. It was formerly fortified, and the residence of several of the kings of France in the twelfth century.

Some remains of its ancient fortifications are still to be seen. This is the native place of Parmentier, the celebrated political economist. The inhabitants carry on the manufacture of hats, calicoes, serge, and stockings ; they have also cotton spinning factories, dye-houses, tan-yards, and curriers' shops ; and trade in corn, vegetables, cattle, coal, and turf. This town is twenty-seven miles S. S. E. of Amiens, and sixty-nine north of Paris.

MONT-D'OR, a small chain of mountains, reaching from the Puy-de-dome to the gates of Lyons, and peopled with many villages the country round, which is excellently cultivated. There are fine pastures on them, feeding numerous herds of .cows and goats, the latter of which yield the richest milk, of which fine cheeses are made, known by the name of Mont-d'or cheeses. These goats, to the number of from 18,000 to 20,000, are fed in the stable all the year round, and their hair is very valuable.

MONT-D'OR (the), one of the highest mountains in the department of Puy-de-Dome, which gives a name to a mass of mountains situated in the Lower Auvergne, about sixty miles in circumference. It is celebrated for its hot baths, which are supplied by springs that issue from the mountain of Puy-de-1'Angle, and is 3000 feet above the village of the baths, and 8868 feet above the level of the sea. Above the village a magnificent valley opens from south to north, of nearly five miles long and one broad, through which runs the Dordogne, along cultivated lands

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and smiling pastures; it is closed in at its upper extremity by a semicircle of lofty peaks. Two of these are particularly worthy of attention, one of them being furrowed with the most frightful ravines, and the other opposite to it presenting an enormous volcanic rock, on which are elevated a number of immense basaltic prisms. On the other side it is enclosed by eminences, among which towers Mont-d'or, giving to the whole an air of grandeur and majesty seldom seen. In the midst of the ravines rises the uppermost peak, supporting a bank of lava, from which a cascade precipitates. itself, the waters of which form the small river that crosses the valley ; the red bottom of the ravine rendering more brilliant the silvery whiteness of the stream. This rich scene would be admired even separate from the objects that surround it; but here it delights the beholder, placed as it is in the centre of the val-ley, and forming the crowning feature of a magnificent picture. From the top of this noble eminence the Alps are visible, and its summit may be seen from Nevers, which is ninety miles distant, and even from Montauban, at the distance of 120 miles.

This mountain takes its appellation from a little brook called the Dor, which rises near the source of another called the Dogne ; these two streams, after their union, form the river called the Dordogne. On the top, in the crater of an old volcano, is a lake called Paven, the waters of which are very clear, and at least 288 feet deep ; it is surrounded with a curtain of verdure of 120 feet wide, which delightfully crowns its brink on every side. This enclosure, which is on a precipitous slope, is covered with short grass, and the greater part with wood ; and, from a gap in the crater, the waters of the lake burst forth, flowing over a bed of lava, and precipitating itself into a channel, which it has hollowed out on the declivity of the mountain, until it reaches the vale that is crossed by the Couse, when it falls with that river into the Al-lier, between the Brionde and the Allier.

MoNT-D'oR, or MONTE ROTONDO, a high mountain of Corsica, situated almost in the cen-tre of the island. From its summit the whole extent of Corsica may be seen, as well as the Sardinian coast, the Mediterranean, and several of its islands; while, in the distance, France and Italy are visible. It is covered with snow during a great pait of the year.

MONT-D'OR-LES-BAINS, a smal. town in the arrondissement of

Issoire, department of the Puy-de-Dome, situated in the midst of a group of mountains, abounding in mineral springs and medicinal plants, and famous for its establishment of warm baths. The springs which supply these baths rise in the mountain called Puy-Del'Angle, whence the waters issue in great quantities from different openings. The first, called St. Margaret's, pours its waters into a freestone basin, not far from which is another spring, more abundant, but of the same quality. The second, called Cesar's bath, rises a little be-low the top of St. Margaret's mountain, the small building, which receives its waters, being of a very high antiquity. The third, called the great bath, a short distance from the last, is contained VOL. XV.

within a square building of Gothic architecture. The fourth spring, called the Magdalen's, rises at the bottom of the Angle mountain, and flows into a modern square building, in the middle of the Place-du-Pantheon, and is universally resorted to by those who come to drink the waters. A large building, recently erected by government, unites within its enclosure all these springs, and is divided into three parts, affording accommodations for all classes. In the front of this establishment is a newly made walk, planted with trees, at the lower end of which flow the united streams of the Dor and the Dogne. In the year 1825 a grant was made from the public purse of 100,000 francs for the building of a hospital on Mont-d'or, in which the poor may receive gratuitously all the succors of nature and art. Two of the springs are cold, and are generally used for drinking ; they are particularly suitable for persons afflicted with pulmonary consumption; the temperature of the warm waters does not ex-ceed 37►►; they are used in baths, and produce excellent effects on gouty and rheumatic persons. The season for taking the waters commences on the 25th of June, and continues till the 20th of September. The fine roads that lead to this place render the communications safe and easy. It is twenty-seven miles south-west of Clermont, thirty-six west of Issoire, and twenty-one southeast of Rochefort.

MONTE CHRISTI, a cape, bay, and town on the north side of the island of St. Domingo. The cape is a high hill, situated in long. 71►► 44 W., lat. 19►► 5V N. On doubling the cape, the bay extends in a south-west direction, and contains a small island of this name. The town, which was formerly large, is now but a poor place. Population of the town and territory 3000.

MONTECUCULI (Raymond), generalissimo of the emperor's army, and one of the greatest commanders of his time, was born in Modena, of a

distinguished family, in 1608. Ernest Montecuculi his uncle, who was general of the artillery in the imperial army, resolved that he should serve first as a common soldier, and that he should pass through all the military degrees be-fore he was raised to command. This he did with applause. In 1644, when he was at the head of a party of 2000 horse, he surprised by a precipitate march 10,000 Swedes, who laid siege to Nemessau in Silesia, and obliged them to abandon their artillery and baggage ; but soon after he was defeated and taken prisoner by general Banier. Having obtained his liberty, at the end of two years, he joined his troops to those of John de Weil; and defeated general Wrangel in Bohemia, who was killed in the bat-tle. In 1657 the emperor made him general marshal de camp; and sent him to the assistance of John Casimir, king of Poland. Montecuculi vanquished Ragotzi prince of Transylvania, drove out the Swedes, and distinguished himself in an extraordinary manner against the Turks in Transylvania and Hungary. In 1673 he commanded the imperial army against the French, and took Bonne: he then proceeded with feint marches to deceive Turenne, in which he obtained great honor. However, the command of that army was taken from him iii 1674, but

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was restored to him in 1675, that he might make head against the great Turenne. All Europe had their eyes fixed on these two able warriors, who then made use of all the stratagems which genius and military knowledge were capable of suggesting. Marshal Turenne was obtaining the superiority when he was taken off by a cannon ball. Montecuculi wepl at the death of so formidable an enemy, and bestowed upon him the greatest praises. The great prince of Conde, being the only remaining French general fit to oppose Montecuculi, was sent to the Rhine, and stopped the imperial general ; who considered this last campaign as the most glorious of his life, not from his being conqueror, but for his not being conquered, when he was opposed by a Turenne and a Conde. He spent the rest of his life at the imperial court; and died at Lintz in 1680. He wrote Memoirs ; the best edition is that of Strasburg, in 1735.

MONTEGO BAY, a sea-port town on the north coast of Jamaica, in a bay of the same name. It was made a legal port in 1758, and is now a flourishing town, with about 250 houses. In 1795 it was greatly damaged by an earthquake. The loss sustained amounted to ►►200,000. 150 vessels clear out here annually. Long. 77►► 50' W., lat. 18►►29'N.

MONTE LEONE, a large town of Naples, in Calabria Ultra, near the gulf of Eufemia: though almost overthrown by the earthquake of 1783, its present population is 8000, and it has manufactures of silk, and is the see of a bishop. Twelve miles N. N. E. of Nicotera, and twenty-five south-west of Squillace.

MONTELIMART, a well built town of the department of the Drome, and the principal place of a subprefecture, having an inferior court of judicature and a communal college. It is a post town, with 6500 inhabitants, situated at the foot and on the side of a hill near the confluence of the little rivers Roubion and Jabron, which, after uniting their streams just below its walls, mingle with the waves of the majestic Rhone. It is overlooked by an ancient castle, and surrounded with rich and fertile plains, and hills abounding in vines, mulberry trees, olives and orange trees, which grow here in the open field. Environed and intersected by various canals, this town offers great advantages for the establishment of manufactories. Round the walls both within and without there is a double road, by which

carriages may make the entire circuit of the town. Four gates form an entrance to it, which front the four cardinal points of the compass. Manufactures are carried on here of linens, liqueurs, baskets, tanned leather, and highly esteemed morocco. There is also a considerable commerce in grain, flour, vegetables, fruit, wax, honey, walnut, and olive oil, silk wrought and in twist, earthenware, cattle, &c. This is the mart of forty or fifty towns, which bring hither their fruits and provisions and other produce of their industry. In the valley below the town the system of irrigating the meadows is carried to a degree of perfection that deserves particular attention. There is in this town a library of 3000 volumes. Faujas de St. Ford, the learned geologist, was bom here. It is thirty-six miles south of Valence, and 472 southeast of Paris.

MONTKLOVE/,, a - ivy of Mexico, the capital of Cohahuila, is situated on a small stream, and is about a mile in length ; having two pub-lic squares, seven churches, powder magazines, mills, and a hospital. It is the principal mili tary depot for the provinces of Cohahuila and Texas, and its population is about 3500.

MONTEM. The origin of the singular cus-tom celebrated at Eton school every third year, on Whit Tuesday, cannot be satisfactorily ascertained, but the custom itself seems to have been coeval with the foundation of the college.

The procession is made to a tumulus, near the Bath road, which has acquired the name of Salt-hill. The chief object of this ceremony, which has of late years been conducted with more decorum than formerly, is to collect money for salt, as the phrase is, from all persons travelling on the road. The scholars who collect the money are called salt-bearers, and are dressed in rich silk habits. ‘ Tickets, inscribed with some motto, by way of pass word, are given to such persons as have already paid for salt, as a security from any further demands. The procession has been frequently honored with the presence of his majesty and the royal family, whose liberal contributions, added to those of many of the nobility and others, who have been educated at Eton, and purposely attend the meeting, have so far augmented the collection, that it has been known to amount to more than ––800. The sum so collected is given to the senior-scholar, who is going off to Cambridge, for his support at the university.’ ––– Lysens Magna Britaniu.

MONTENEGRO, a mountainous district of Greece, having Albania to

the south, and the province of Herzegovina to the north. Its territorial extent is about 3000 square miles, surrounded by a chain of lofty mountains. The interior contains very little level ground ; but is occasionly enlivened with beautiful verdant plains. The soil is altogether pretty fertile, but agriculture is sadly neglected. The common objects of culture are, corn, potatoes, and vegetables : but the chief subsistence of the inhabitants are their flocks and herds. It is calculated that 120,000 sheep, large quantities of cattle, and about 300 tons of cheese, are exported annually. Fishing in the rivers and lakes is also a large source of support. Game is abundant ; and the timber of the forests valuable; though but little present advantage is derived from it.

The inhabitants are a rude, courageous, and independent race ; their friendships are firm and inviolable, and their hospitality frank.

Though included in the pachalic of Scutari, Montenegro has for more than a century withdrawn its allegiance from Turkey : it can bring into the field 10,000 fighting men, and, calculating on the aid of allies, the farther number of 5000. The country takes the name of Montenegro, or, as it is called by the natives, Czerna-Gora, from the dark appearance of its forest-covered mountains. There are seven small towns, each with nearly 2000 inhabitants: and 110 villages. Inhabitants altogether about 40,000.

MONTEREAU-FAULT-YONNE, an ancient town and chief place of a canton in the department of the Seine-et-Marne, France. It is a post town, with 4000 inhabitants, very pleasantly

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situated at the confluence of the Yonue and the Seine, over which there is a very fine bridge. On this bridge Jean-sans-peur, duke of Burgundy, was assassinated in 1419, and in 1814 the French, commanded by Napoleon, obtained a victory over the allied powers. There are some earthenware potteries in this town, and some tan-yards. A considerable trade is carried on in corn and cattle for the Paris market, for which the Yonne and the Seine afford great facilities. Near the town on the top of a hill stands the chateau of Surville, a fine building in the form of a crescent commanding a view over the whole town, the plain round it, and the surrounding roads.

MONTE'RO, n. ►►. Span, montero. A horseman's cap.

His hat was like a helmet, or Spanish montero.

Bacon.

MONTESQUIEU (Charles de Secondat), ba-ron, a celebrated French writer descended from a noble family of Guienne, and born at the castle of Brede, near Bourdeaux, in 1689.- He showed an early genius, and at the age of twenty had prepared materials for his Spirit of Laws, by well digested extracts from those immense volumes of civil law which he had studied. He became a counsellor of the parliament of Bourdeaux in 1714, and in 1716 was received president a mortier. In 172J he published his Persian Letters ; in which, under the screen of Oriental manners, he satirized those of France. He was received into the French Academy in 1728; and, having quitted his civil employments, he travelled through Germany, Italy, Switzerland, Holland, and England, in which last country he resided three years. On his return he retired for two years to his estate at Brede, where he finished his work On the Causes of the Grandeur and Declension of the Romans; which appeared in 1734. The reputation acquired by this work only cleared the way for his great undertaking, the Spirit of Laws, which was printed at Geneva, in 2 vols. 4to. 1750. This was immediately attacked in a multitude of anonymous pamphlets. Montesquieu drew up a defence of it ; which for moderation, and elegance of satire, may be regarded as a model. He d;ed in Paris on the 10th or February, 1755. His conversation was spirited, agreeable, and instructive. Beside the above works, he wrote several small pieces, as the tem-ple of Gnidus, Lysimachus, and an Essay upon Taste, which

is left unfinished. His works have been collected since his death, and printed in Paris in a splendid edition, in 4to. ; and have all been translated into English.

MONTETH , n. s. From the name of the inventor. A vessel in which glasses are washed.

New things produce new words, and thus Mon—

teth Has by one vessel saved his name from death.

King.

MOXTE VIDEO, a town of South America, in the province of Buenos Ayres, situated on the north side of the river Plata, in a small bay, twenty leagues west of Cape Santa Maria, and entirely vvalle.l round. ••• It derives its name from a mountain that overlooks the place, and on which is a lighthouse. The town is described by Mr. Caldcleugh, who was here in 1821, as in-

differently built, on A slope to the rirer; th* houses are flat roofed, and formed in part of stone and burnt brick ; the windows to the street strongly barricadoed. The streets had been lately paved by the Portuguese troops in the occupation of the town, at the expense of the inhabitants. There was, nevertheless, an air of desolation about them, which did not accord with the reported prosperity of the town. The cathedral presented an appearance but little imposing. It was thronged with ladies dressed in black, after the fashion of the country ; and it was im possible not to be struck with their great personal charms.

‘ They were kneeling at their devotions on pieces of carpet, carried thither by their female servants, another proof that I had arrived in a more cleanly country, for this custom is not yet adopted in the north : the numbers of well dressed females in the streets was also a novel sight. In the evening I attended the play, and was introduced by one of the governor’s staff to all the most celebrated beauties of the city, who were extremely polite, and, according to custom, pressed me to eat more sweatmeats than I could have wished. The theatre was small and ill-ar- ranged ; the actors, it may be supposed, not of the best. One of the farces exhibited, El Inglez con Splin, gave rise to many good natured, yet witty observations from the ladies, on our national character.

‘ During the winter months of June, July, and August, Montevideo

enjoys,' according to this writer, ' a cool climate. The soil is productive, yielding remarkably fine wheat, beans, and In-dian corn, with-melons, and some of the fruits of Europe, such as apples and peaches, in abundance. The extensive plains are still covered with herds of cattle and horses, although not to the ex-tent formerly the case ; a circumstance to be attributed to the disturbed" state of the country, previous to its occupation by the Portuguese. The principal objects of exportation are tallow and hides to England, and jerked beef to Brasil: Since the restoration of tranquillity the trade has considerably increased : such at one time was the unsettled state of Buenos Ayres, that it was more advisable to land, cargoes at Montevideo and pay a regulated duty, than run the risk of a difficult navigation of 100 miles, and then pay an extravagant demand for customs, or a proportion of the cargo, for the expenses of smuggling. The chief imports arc manufactured goods from England, and the products of a warmer climate, such as coffee and sugar from Brasil. The population has been rated at as much as 15,000 souls; but of late years it has decreased, from the unsettled state of the country. It scarcely reaches 10,000 at present, comprising a small proportion of blacks. The bay is protected by the Mount ; and, although the water is occasionally low, yet, from the nature of the bottom, a soft mud, no mischief occurs by heavily laden vessels ap-proachine the shore, and taking the ground. It is decidedly the best harbour in the river.

In 1806 the British force, which was despatched to make an attack on the Spanish territories in this quarter, took Monte Video by assault, after a desperate conflict and a heavy loss, one-third of

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the troops engaged having been either killed or wounded. After the unsuccessful attack of Buenos Ayres by the British, in 1807, Monte Video was evacuated with all the other Spanish settlements. 120 miles E. N. E. of Buenos Ayres.

MONTEZUMA, or MONTECUMA, was emperor of Mexico when Cortez invaded that country in 1518, and obliged him to acknowledge himself in public the vassal of Charles V. ; in name of tribute for which homage, Cortez received 600,000 merks of pure gold. Montezuma soon afterwards fell a sacrifice to his submission to the Spaniards. He and Alvaro, the lieutenant of Cortez, were besieged in the palace by 200,000 Mexicans. The emperor proposed to show himself to his subjects, that he might persuade them to desist from the attack : but the Mexicans no longer considered him in any other light but as the slave of foreign conquerors. In the midst of his speech, he received a blow with a stone, and he expired soon after, A. D. 1520. See CORTES and MEXICO. This unfortunate prince left two sons and three daughters, who embraced the Catholic faith. The eldest son obtained from Charles V. lands, revenues, and the title of count de Montezuma.

MONTFAUCON (Bernard de), a learned Benedictine of the congregation of St. Maur, fa-mous for his knowledge of Pagan and ecclesiastical antiquities, was born of an ancient and no-ble family in Languedoc, in 1655. He served for some time in the army ; but on the death of his parents, in 1675, he commenced Benedictine monk and applied himself to study. Though his life was long, healthy, retired, and laborious, his voluminous publications seem sufficiently to have employed the whole ; exclusive of his greatest undertaking, for which he will be always memorable. This was his Antiquite expliqne, written in Latin and French, illustrated with elegant plates, in 10 vols. folio; to which he added a supplement of 5 vols. He died at the abbey of St. Germain in 1741.

MONTFERRAT, a duchy of Northern Italy, and a part of the Sardinian states, is bounded by Piedmont, Genoa, and the Milanese. Its territorial extent is 900 square miles, containing a number of hills and small mountains. The climate is very salubrious, and the soil productive in corn, wine, vegetables, fruit, chestnuts, flax, and hemp. It has likewise extensive and well-stocked pastures. It is watered by

the Stura, the Bormida, the Belbo, the Orba, the Erro, and the Po. Here are four towns of tolerable size, Casale, Acqui, Alba, and Trino, and nearly 180 small towns and villages. Besides the labors of agriculture the inhabitants employ themselves in silk-spinning and other domestic manufactures. The duchy is divided into the two provinces of Acqui and Casale. Population 186,000.

MONTFORT (Simon), count de, descended from an illustrious and flourishing family, was lord of a small town of the same name ten leagues from Paris. He was one of the greatest generals of his ase, and he displayed his bravery' in the wars with the English and Germans. The strength of his constitution enabled him to support the severest labors of the field, and his majestic stature distinguished him in battle. In the greatest

dangers he possessed the utmost coolness and presence of mind : he observed every emergency ; and was ready to bring assistance, while he himself was employed in attacking the bravest of his enemies ; but he was guilty of great cruelties af-ter victory. He was appointed to conduct the crusades against the Albigenses in 1209. He took Bezieres and Carcassonne, raised the seige of Castalnau, and gained a great victory in 1213 over Peter king of Arragon, Raimond VI. count of Toulouse, and the counts of Foix and Cominges. He was killed at the siege of Toulouse on the 25th of June 1218 by a stone thrown by a woman. His younger son afterwards made a great figure in England as earl of Leicester.

MONTGERON (Lewis Basil Carre de), was born at Paris, A. D. 1686. His father was mas-ter of requests. He was scarcely twenty-five years of age when, he purchased the place of counsellor in parliament, where by his wit and external qualifications he gained considerable reputation. He was given up to irreligion and vice, when in 1731, he was converted by witness-ing, according to his own account, miracles at the tomb of Deacon Paris. He had not long been the disciple of Jansenism when he suffered persecution. When the chamber of inquests was banished, in 1732, he wassent into the mountains of Auvergne, where he collected the proofs of the miracles wrought at abbe Paris's tomb, and composed a Demonstration of them, which in 1737 he presented to the king at Versailles, and for which he was confined till his death in 1754.

MONTGOLFIER (Stephen James), the celebrated aeronaut, was a native of Amiens. He was first a paper-manufacturer at Annonay,

where in conjunction with his brother in 1782 he made the first known experiments in AERONAUTICS, see that article. He also invented a kind of vellum paper, for which he was rewarded with a pension and the order of St. Michael. He died in 1799, at the age of fifty-two. ††† Joseph Montgolfier his brother was the inventor or improver of a machine which he denominated the hydrostatic ram, and died at the baths of Balaruc, whither he had gone for the benefit of his health, in June 1810, in his seventieth year.

MONTGOMERY (James), lord of Lorges in the Orleannois, one of the bravest men of his age and famous under the title of Loges in the wars of Francis I. In 1545 he succeeded John Stuart count d'Aubigny in the command of the 100 archers in the Scotch guard. He wounded Francis I. in the chin with a firebrand, in some frolic with that prince, and thus occasioned the wearing of long beards in France for fifty years. Loges died aged above eighty, a short time after Henry II. He obtained the title of count de Montgomery in 1553, which he claimed as belonging to his ancestors, and as being descended by the earls of Eglinton in Scotland, from a younger son of the ancient house of Montgomery in England.

MONTGOMERY (Gabriel de), count Montgomery in Normandy, the son of the preceding, was remarkable for his valor and noble achievments, but still more so for occasioning the death of Henry II., by accidentally wounding him in the eye at a tournament, in 1559. After this un-

luckj accident, Montgomery visited Italy and other foreign countries ; and did not return to France till the commencement of the civil wars, when he joined the Protestants, and became one of their principal leaders. In 1562 he defended Rouen against the royal army with great valor. The city being at length taken by storm, he slept into a galley; and having surmounted by dint of rowing a chain which had been thrown across the Seme at Caudebec, to prevent succors from England, he escaped to Havre. In 1.569 he was sent to the assistance of Beam, which the Catholics, under Terrides, had almost entirely

wrested from the queen of Navarre. He executed his commission with so great despatch, that Terrides was obliged to raise the siege of Navarreins, and retire with precipitation to Orthez. Montgomery pursued him to this city, which he took by assault ; and Terrides and his principal officers were taken prisoners. After this the rest of Beam submitted. He was at Paris at the time of the massacre on St. Bartholomew's day 1572, and narrowly escaped. He took refuge with his l'►►.rr.ily, first in the island of Jersey and afterwards in England. In 1573 he carried a considerable fleet, which he had armed and fitted out in England, to the relief of Rochelle, which was then besieged by the Catholics: but,'perhaps distrust-ing his forces, he left the road without fighting the Catholic fleet, and went to pillage Belleisle. Having disbanded his fleet, he returned to England to Henry de Champernon, his son-in-law, coast admiral of Cornwall. On the renewal of a war in France, in 1573, Montgomery, then in Jer-sey, passed over into Normandy, and joined the Protestant nobility of that province. Matignon, lieutenant-general in Lower Normandy, to whom Catherine de Medicis had given a particular charge to endeavour to seize the count, came unexpectedly upon him in St. Lo, and laid siege to that city. On the evening of the fifth day of the seige Montgomery left St. Eo with between sixty and eighty horse, forced the guard in the suburbs, and escaped amid a shower of musket bullets, without losing a single man, leavingthe command of the place to Coulombieres Francis de Brique-ville. Montgomery arrived at Domfront May 7th, 1574, with only twenty followers, intending to make no longer a stay in that place than was necessary to recruit them after the fatigues of so rapid a march. The same day he was joined by several gentlemen with a company of forty horse. ►►► Meanwhile Matignon, enraged at haviror lost his prey, flew at the head of a party of horse, and vsrived on the 9th before Domfront. He blocked up the place and attacked it with such violence lhat Montgomery was soon obliged to retire into the castle with the garrison, amounting to only 150 men. He sustained a furious assault, fought with the greatest boldness and obstinacy, and exposed himself in the breach like one who wished for death. Perceiving, however, that his soldiers, partly by the fire of the enemy and partly by constant desertion, were reduced almost to nothing, he capitulated on the 27th of May : he was carried to Paris, tortured and beheaded in Io74. Montgomery married in 1549 Elizabeth de la Fouche, of a noble family in Brittany, by whom left several chil<lrpn,

MONTGOMERY, a market and borough town and the chief town of Montgomeryshire, North Wales, is pleasantly situated near the Severn,

on a rocky hill. It is in general well built, clean, and has an air of peculiar neatness. The ruins of the cas le stand on an eminence north of the town. This was built in the time of William the Conqueror, and was the scene of various actions in the subsequent reigns. The church is an elegant building in the form of a cross. Near the castle stands a new county jail, and ihe guild-hall, where the sessions are held alternately with Welsh Pool. The county courts are held here alternately with Machynleth. Montgomery sends a member to parliament, chosen by about eighty voters. It is governed by a high steward, two bailiffs, and a town-clerk. Population 032. Market on Thursday. Twenty-six miles south-west of Hereford, and 161 north-west of Eondon.

MONTGOMERY, a county of the United States, in New York, bounded north by Hamilton's county ; east by Essex, Warren, and Saratoga counties ; south by Schenectady, Schohane, and Otsego counties ; and west by Oneida and Lewis counties. Its greatest length north and south is eighty-nine miles, and its ureatest breadth is thirty-eight. The whole area is 2762 square miles, or 1,767,680 acres. The Mohawk runs eastward quite across the whole county ; and to the south of this river the county is rich and fertile ; that on the north is of little value. Montgomery sends five members to the house of assembly. Johnstown is the chief town.

MONTGOMERY, a county of the United States, in Pennsylvania, is bounded north-east by Buck's county, E. S. E. by Philadelphia county, S. S. W. by Delaware and Chester counties, and W.N.W. by Berks county. Chief town, Norriston.

MONTGOMERY, a county of the United States, in Maryland, bounded north-west by Frederick county, north-east by Anne Arundel county, southeast by Prince George county and the district of Columbia, andsouth-west by the Potomac.

MONTGOMERY, a county of the United States, in Ohio. Population, in 1810, 7722 ; in 1815 13,700. Dayton is the chief town.

MONTGOMERY, a county of the United States, in the south-west of Virginia, bounded N. N. W. by Giles and Monroe counties, E. N. E. by Bo-tetourt county, southeast by Franklin and Patrick counties, and south-west by Grayson, Wythe, and Tazewell counties. The Spaniards had here very lately a military post, which they call a presidio, erected for the purpose of civilis-ing the Indians ; and in this benevolent task they exerted themselves with great prudence. The prt/'dio was the residence of the governor of the provi..:e. 2P8 miles from Washington.

Chief town Christiansburg.

MONTGOMERY, a county of the United States, in the centre of North Carolina. Chief to\n, Henderson.

MONTGOMERYSHIRE, a county of North Wales, is by the Welsh called SirTre Baldwyn, or the shire of Baldwin, after the name of a lieutenant of the Marches, who swore fealty and did homage to William the Conqueror for this part of Cambria The district comorehfiidinsj the present county of Montgomery, anciently aaiouc

the Britons was included in the territory occupied by the Ordovices ; and, on the prevalence of the imperial arms over the aboriginal inhabitants, was, with other parts of the island lying west of the Severn, comprised in the province of Britan-nia Secunda.

Montgomeryshire is bounded on the north by Denbighshire, by Shropshire on the east and north-east, on the southeast by Radnorshire, on the south-west by Cardiganshire, and by Merionethshire on the west. The dimensions have been variously given ; but the most accurate statement seems to be that which makes the length north to south, and from the extremities of Llangurig, on the borders of South Wales, to Pistyl Rhaiadar, a noted cataract in the Berwyn hills, thirty-five miles ; and its breadth, east to west from Montgomery to Machynleath, thirty miles ; comprising, according to Templeman's statement, 444,800 acres. By computation .560,000; but by a recent survey, taken from Evans's map of North Wales, the average appears to amount to 491,000. About 60,000 of these are arable ; 180,000 under pasturage ; and about 250,000 waste or in an uncultivated state, including woodlands and other plantations. It is divided into nine hundreds, *viz.* Llanfyllin, Deuddwr, Pool, Cawrse Mathrafal, Machynleth, Llanydloes, Newtown, and Montgomery ; comprising forty-seven parishes and seven market-towns, *viz.* Montgomery, a borough, and the county town, Welsh Pool, Llanfyllin, Llanfair, Machynleth, Newtown, and Llanydloes. For ecclesiastical jurisdiction it is distributed into three portions, part lying in the

diocese of Ban-go r, part in St. Asaph, and part in Hereford ; and all included in the province of Canterbury. It sends two representatives to the imperial parliament, one as knight of the shire, and the other as burgess of the boroughs of Montgomery. Its honorial distinctions are confined to two families ; Powys Castle gives the title of an earldom to that of Clive, and Montgomery to that of Herbert.

Owing to the great irregularity of surface, there arises a very considerable difference as to the state of climate in this county. The midland, western, and south-western parts, are unfavorable to the growth of corn, both from the unsenial nature of the soil, and the elevated exposure. The narrow valleys are more friendly to vegetation, and highly productive both in corn and grass. But the finest arable land lies on the eastern side of the county, bordering on Shropshire, where agriculture has of late years received considerable improvement, and the management of the land varies but little from that adopted in the adjacent county. The air of the hills is bleak, that of the confined valleys is frequently boisterous but highly salubrious ; as the numerous instances of longevity, recorded on the stones 4 that mark the humble annals of the poor,' abun- "lantly testify. There are many orchards in the ⬜⬜⬜⬜⬜⬜⬜alleys abounding with fruit ; yet all attempts to introduce them profitably in the highest parts of the district have hitherto proved abortive. The greater part of the county assumes a mountainous characteristic, and considerable portions exhibit strong features of forbidding sterility. A line, commencing at Pumlumon. or Plinlimmon, on the

south-eastern part of the district, runs in a north-westerly direction between Llanbrynmair and Cams, to Llyn Gwyddior Lake ; thence to Bwlch y Groes, where, near Aran Fowddior. it enters the adjacent county, through which it continues in nearly the same line, till it terminates in the valley of Festeniog. This has been termed the back bone of Montgomeryshire and Merioneth-shire. A person may v/alk this line of fifty miles in extent without crossing a rivulet, as it is the parting ridge of the eastern and western streams; and a farm-house in this line, near Drws y Nant, is so situated that the rain-water which falls on the western side of the roof flows into Cardigan Bay at Barmouth ; and that which falls on the eastern side, flows into the Irish Sea at Chester Bar. The Freidden or Briedden hills form a noble group on the eastern side of the county ; one of which, Moel y Golfa, stands most conspicuously preeminent; and CefryCastell lit-tle less so. On the south, the Biga mountains lying on the north side of the valley, through which the Severn flows, and a collateral branch of the

Plinlimmon ridge, form a line of high table land several miles in extent. Besides these, numerous isolated hills and crags present themselves in almost every direction.

The main streams that falls on the western side of the ridge are the Traeth-bach River, flowing through the valley of Festinoig; the Mau, watering the lowlands near Dolgclley ; and the Dovey, which, passing the Vale of Machynleth, may be considered to a considerable extent as claimable by Montgomeryshire. On the western side of this geological spine are found the sources-of the Wye, Severn, Vyrnwy, Tanat, Rhaiadr Ceireog, and Dee. The last two have been no ticed in Denbighshire, and the former four originate in this county. These, with several other secondary streams, run nearly in a parallel course ‘ towards the vale of Chester, or the plains of Salop. (The Wye is not here mentioned first for its being the most considerable river, but on account of placing the Severn in order with its contributary rivulets.) The Wye, rising on the south side of Plinlimmon, and taking an easterly course, is joined by the Bedw rivulet at Llanger-rig ; whence, flowing in a south-easterly direction,, it soon leaves the county. The Severn rises on the side of Plinlimmon, and, as connected with this district, it may be proper to remark that the character of the Severn does not much assimilate with its mountainous origin, and it soon loses its native rapidity, forming long vales, and generally burying itself within deep banks. Its color is far less transparent than that of the Wye, nor does it in any respect equal that river in picturesque beauty or variety of grand scenery, though it is greatly superior in commercial importance, and the population of its several districts, with their rich plains and fine cities. Even at Llanydloes it ceases to be a torrent, and from thence it forms a delightful valley, more like the extensive vales of England than those stripes of cultivation which prevail within the mountains of Wales. Every appearance of fertility exists in this happy district ; and agriculture, with its attendant population, contributes to enrich it. Many villages lie spread beneath the hills ; the

handsome town of Newtown adorns its banks ; and the fragments of Montgomery Castle start forward on a high mount, sheltering the remains of a town once more considerable. As the Se-vern, turned apparently by this bulwark, inclines to the north, the vale expands greatly in front of the insulated hills of Brythen and Moelygolfa, while the river flows beneath the superb groves, lawns, and terraces of Powis Castle, to commence its commercial importance at the opulent town of Welsh Pool. Soon after it quits the source, the Severn receives the waters of three powerful streams, called assistant rivers, *viz.* the Bacho, the Glusslyn, and the Grayling. These also rise on the side of Plinlitnmon, and, becoming confluent, concur with the larger stream of the Hasren to form the original Severn, previous to its receiving a copious contribulary, called the Si or Se, near the town of Llanydloes. The Byrnwy, rising in the vicinity of Bylch y Groes, takes an easterly direction to the town of Llanfair; whence it suddenly turns to the north-east, and at Llanymynech changes its course again to gain the Severn, near Llandrinia. The Tanat, or Ta-nad, after having been joined by the Rhaiadr a little below the village of Llanrhaiadr, the latter coming in an easterly direction from the Berwyn mountains on the confines of Denbighshire, continues it course in a similar direction, then turns suddenly to the south, and becomes confluent with the Vyrnwy, near Llansaintfraid-ymmechen. A canal, forming a branch of the Ellesmere, passes through, or ratner penetrates, a portion of this county. The line subject to the control of the Montgomeryshire canal company, commences near Lanymynech lime-works, from which there is an iron railway about two miles and a half long, by which the limestone is conveyed to the boats. From thence it proceeds southerly, and is carried over the river Vyrnwy by means of an aqueduct, consisting of five arches, each forty feet in the span, and twenty-five feet above the ordinary surface of the water, exclusive of several collateral arches for the discharge of the surplus water brought down by the land floods in rainy seasons. Thence, passing Welsh Pool, it goes on to Garthmill, below Berhiew.

The soil and substratum vary, but not to so great an extent as in some of the adjacent counties, the substance of the vales being chiefly of an argillaceous, and the mountains of a schistose nature. Thus the substance of Plinlimmon, or Severn range of hills, is chiefly an homogeneous shale, becoming friable in the air, and easily abraded by water, and in all probability contains but few ores of metals ; therefore when held in solution, and afterwards deposited by water, it becomes the general matrix of vegetation. Northward from the Severn the mountains retain their shaly and friable character, a few isolated rocks excepted, quite up to the vale of Vyrnwy, where, on the north

side, the gray semi-indurated mountain rock commences, and continues still northward to the vale of Tanat, which receives its soil deposition from the Berwyn range of mountains, consisting of argillaceous schistus. Thus it maybe seen, that not only the fertility of the soil, but also the ex-tent of a vale, depends upon the nature arid quality of the mountains and rocks bv ivhu:!i

they are surrounded. The Severn vale acquired its present superiority of extent and fertility over those more northern, owing to the facility with which the diluvian tides excavated the friable shale of its surrounding eminence. All valleys at their sources, where the streams that water them flow rapidly, consist generally of a light gravelly soil; but the farther they extend, and the more expansive they become, from the waters proceeding nearly in a level in their course, the more loamy will be the sediment, and consequently the richer and more productive the soil. Limestone strata are rarely found in this district ; the only limestone rocks of any consideration are in the vicinity of Llanymynech, the termination of a ridge which comes from the north-west of Anglesey, in a line through the counties of Caernarvon and Denbigh. Lead ore of various qualities and divers quantities has been discovered in many parts of this district. Slates are principally found in the vicinity of Llangynnog. From a stupenduous rock preeminently rising on the north side of the village are obtained those slates, which for strength and durability are celebrated for the purposes of roofing throughout this and the adjacent counties. In an angle of the county, at Coedwae, on the borders of Salop, a few coal-pits have been opened, capable of producing about twelve tons per day. The state of husbandry in this district is extremely various, owing to causes partially arising from the different nature of the soils, the confined prejudices of ignorant farmers, or the more enlightened views of liberal agriculturists. The manufacture of this county consists chiefly of flannels, which are principally manufactured in the south-west of the county.

MONTH, n. s. -\ Sax. mona* ; Teut.

MONTH’S MIND, sinonut ; Lat. mensis ;

MONTHLY, adj. & adv,) Gr. ˆv. Four weeks, or see below : month’s mind is use 1 by Shakspeare for strong desire : monthly is continuing ; performed or occurring once in a month.

Wher ye seyen not, that yit foure monthes ben ; and ripe corn cometh

1 Wiclif. J[illegible]n 4.

From a month old even unto five years old.

Lev. xxvii. 6.

If the one may very well monthly, the other may as well even daily, be iterated. Hooker.

Till the expiration of your month, Sojourn with my sister.

Shakspeare. King Iˆear. You have a month's mind to them.

Shakspeare.

O swear not by the moon, the inconstant moon, That changes moHtA/v in her circled orb ; Lest that thy love prove likewise variable.

For if a trumpet sound, or drum beat, Who has not a month's mind to combat ?

Hudibrat.

Months are not only lunary, and measured by the moon, but also solary, and terminated by the motion of the sun, in thirty degrees of the ecliptick.

Browne's I'ulgar Erroun. As many months as I sustained her hate, So many years is she condemned by fate To daily death. Drudfit's Then, and t/onoru.

'[‘he. youth of heavenly birth 1 viewed, For whom our nwnthhi victims are renewed.

Drtatn.

I would ask concerning the monthly revolutions of the moon about me

earth, or tne iliurnal ones of the earth upon its own axis, whether these have been finite or infinite. Bentley.

MONTH, in its proper acceptation, is that space of time which the moon takes up in passing from any certain point to the same again, which is called a periodical month ; or, it is the space of time between two conjunctions of the moon with the sun, which is called a synodical month. That space of time which the sun takes up in passing through one sign, or twelfth part of the zodiac, is also called (but improperly) a month. So that there are two sorts of months ; lunar, which are measured by the moon (see CHRONOLOGY) ; and solar, which are measured by the sun. A solar month contains, upon a mean calculation, thirty days, ten hours, twenty-nine minutes, five seconds. The Jews, Greeks, and Romans, made use of lunar synodical months ; but, to avoid fractions, they consisted alternately of twenty-nine and thirty days. The former, the Romans called cavi, and the Greeks ˆoiXoi; the latter were termed pleni and irXrjptic.

MONTHS, GRECIAN. The months of the Athenian year consisted alternately of twenty-nine and thirty days. The first month, according to Me-ton's reformation of thekalendar, began with the first new moon after the summer solstice, and was called hecatombaeon, answering to the latter half of June, and the former half of July. The order of the months, with the number of days of each, were as follows : ###

1 Hecatombaeon 30 2 Metageitnion . 29 8 Boedromion . 30 4 Mzemacterion . 29 5 Pyanepsion . 30 6 Anthesterion . 29

7 Posideon . 30 8 Gamelion . 29 9 Elaphebolion 30 10 Munychion . 29 11 Thargelion . 30 12 Skirrophorion 29

days alternately, fell short of the solar year eleren days six hours. To remedy this defect, the cycle of four years, called rtrpatrjjptc, was invented. In this cycle, after the two first years, they added an intercalated month called t/i/SoXi/Joc, consisting of twenty-two days ; and again, after the expiration of two years more, they inserted another month of twenty-three days, the fourth part of a day having in the space of four years amounted to a whole year. .See YEAR.

MONTHS, HEBREW. The Hebrew months were ranged differently in their sacred and in their civil year.

Order of the sacred Year.

Order of the civil Year.

1 Nisan Mar.

1 Tisri Sep,

2 Jair Apr.

2 Marschevan Oct.

3 Sivan 5 May

3 Casleu 5 Nov.

4 Thammuz ►► June

4 Thebet ►► Dec.

5 Ab - July

5 Sebat *” Jan.

6 Elul ePAug.

6 Adar g > Feb.

7 Tisri 5 Sep.

7 Nisan ‘►► Mar.

8 Marschevan | Oct.

8 Jair :* Apr.

9 Casleu 5 Nov.

9 Sivan = May

10 Thebet Dec.

10 Thammuz June

11 Sebat Jan.

11 Ab July

12 Adar Feb.

12 Elul Aug.

Each month was divided into three decades of days called &x►►j/“pa-The nrst was ca”e(l MTJVOC apxoptvH or t<?a/jjjv►►, or the decade of the beginning of the month; the second was MJJVOC p,t- (THvroc, or the decade of the middle ; and the third wasMrjvoc ˆSivovrof, Travofiivu or Xt/yovroc, the decade of the expiring month. The first day of the first decade was termed Ntojuijvia, because the first month began with the new moon ; the second day was Sivrtpa, i<?a/i►►v►► ; the third rptri; irafiivu, &c. The first day of the second decade was jrpwrrj fitffnvog, the second Stvrtpa *xfffsvrof, &c.* ►►► *the days of this decade were also called Trpuirjj firt Ctect, Sfvrtpa tin &ea, Sec. The first day of the third decade was wptorjj ctr’ tucaSi ; the second day was EtvTtpa tir’ mcaSi, &c., i. e. the first, second, &c., after twenty, because the ‘ast decade began on the twentieth day. This fecade was also counted by inversion thus : ˆStvovrog ►► iKaTri the twenty-first; <j>SrivovTOf twarr) tlie twenty-second ; 03ij>ovroc oySotj the twenty-third ; and so of the rest of the last day of the month, which was called tvtj KOI via, the old and the new, because one part of that day belonged to the old and the other to the new moon ; hut after the time of Demetrius, the last day of the month was called from him Af*p/iptac ; it sometimes was named rpiaicac. Ihe Grecian r.ionihs-thus consisting of twenty-nine and thirty

These months, being lunar, cannot exactly answer to our solar months; but every Jewish month must be conceived to answer to two of ours, and partake of both. As these twelve lunar months consisted only of 354 days, the Jews, in order to bring it nearer to the true year, took care every three years to intercalate a thirteenth month into the number, which they called ve-adar, or the se-cond adar. The new moon was always the beginning of the month ; and it is said the Jews had people posted on elevated places, to give notice to the Sanhedrim as soon as she made her appearance. After this, proclamation was made by sound of trumpet, and ‘ the feast of the new moon’ resounded among the people. The ancient Hebrew months were of thirty days each, excepting the last, which consisted of thirty-five; so that the year contained 365 days, with an intercalary month at the end of 120 years, which, by absorbing the odd hours which remained at the conclusion of each year, brought it back nearly to its proper place. This regulation of the year was borrowed from the Egyptians.

MONTHS, ROMAN. The Roman year under Romulus consisted of ten moi.ths only, and began with March, which contained thirty-one days, then followed April, which had thirty, May thir-ty-one, June thirty, Quintilis thirty-one, Sextilis thirty, September thirty, October thirty-one, November thirty, December thirty. These ten months containing no more than 304 days, this division was soon found deficient. Numa Pom-pilius, therefore, took away one day from each of these six months, April, June, Sextilis, September, November, December ; and to the six days thus obtained he added fifty-one, which was the number that Romulus's year, in his opinion, wanted to make it perfect. Numa had now fifty-seven days to dispose of; he therefore divided them, and constituted two other months, January and February ; the former consisting of twenty-nine and the latter of twenty-eight days. January,

MON

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which he placed at the winter solstice, he made instead of March, to begin the year. Thus Numa's year consisted of 355 days ; but, this being found eleven days six hours short of the solar year, he made use of the intercalation of ninety days at the expiration of eight years perpetually ; which number, being made up of the eleven days and a quarter, kept the year pretty well to its place. The beginning of the year in Julius Cesar's time had anticipated its true place sixty-seven whole days; these he intercalated betwixt November and December; so that the year consisted of fifteen months, or 445 days. This reformation was called the Julian correction, and this year the year of confusion. At the er-d of twelve years, by the ignorance of priests, who
लid not understand intercalation, twelve days had been intercalated for nine. This was observed by Augustus, and rectified, by ordering twelve years to pass without any intercalary days. The order and succession of months was the same as that of Numa; but January, March, May, Quintilis, Sextilis, October, and December, bad each thirty-one days; April, June, September, thirty; and February, in common years, twenty-eight, but every fourth year or bissextile twenty-nine. This, with a very little difference, is the account observed at present. Quintilis, in compliment to Julius Caesar, was called July, because in this month he was born ; and Sextilis, in honor of Augustus, was called August, both which names are still continued. See YEAR. Each month by the Romans was divided into kalends, nones, and ides, all of which were reckoned backwards. The kalends were the first day of the month. See KALENDAR.

MONTJOYE, a town of Prussia, in the duchy of Juliers. It has a castle on an eminence; and a small stream, the Tigenbruch, divides the town. It is surrounded by steep rocks, and is situated in a barren district; but it has extensive woollen manufactures. Population 3200. Sixteen miles S. S. E. of Aix-la-Chapelle.

MONTINIA, in botany, a genus of the tetrandria order, belonging to the direcia class of plants. MALE perianth, of the male quadri-dented superior ; petals four: FEMALE CAL. and COR. as in the male; filaments barren; style bi-fid ; CAPS, oblong and bilocular.

MONTMORENCI, or MONTMORENCY (Ann de), a peer, marshal, and constable of France, and one of the greatest generals of the sixteenth century. He defended, in 1512, the city of Menziers against the

emperor Charles V., and obliged the count of Nassau to raise the siege. In 1513 he was made marshal of France; and, in 1525, following king Francis I. into Italy, he was taken with that prince at the battle of Pavia, which was fought contrary to his advice. The important services he afterwards rendered the state were rewarded by the sword of constable of France, with which he was presented by the kinir, February 10th, 1538. He afterwards underwent various revolutions of fortune both ;it court and in the field. At last, being wounded at the battle of St. Denis, which he pained on the 10th of November, 1567, he died of his wounds two days after, aged seventy-four. A corc'elier offering to prepare him for death,

when he was covered with blood ana wounu?, after the battle of St. Denis, he replied in a firm and steady voice : ' Do you think that a man who has lived nearly eighty years with honor, has not learnt to die for a quarter ;,f an hour?'

MONTMORENCI, a river of Canada, falling into the St. Lawrence about stten miles below Que-bec. It runs altogether a very irregular course, through a thickly wooded country and over a bed of broken rocks, till it comes to the brink of a precipice, down which it descends in one beautiful uninterrupted and nearly perpendicular fall of 240 feet. The stream, except at the time of floods, is but scanty ; .but being broken into foam, by rushing with such rapidity as it does over the rocks at the top of the precipice, it is much dilated. The breadth at top, from bank to bank, is about fifty feet only. In its fall it is said to have the exact appearance of snow, as when thrown in heaps from the roof of a house. The spray at the bottom is considerable, and, when the sun happens to shine, the prismatic hues are exhibited in it in all their variety.

MONTMORENCY-ENGHIEN, lately called Emile, the principal place of a canton in the department of the Seine-et-Oise, France, is a post-town with 1800 inhabitants, and situated on an eminence, which overlooks a valley celebrated for its fertility. The view is one of the most delightful that can be conceived, and the air pure and serene. There is a chateau in the neighbourhood, very finely situated, with an extensive park, intersected by the river Notre, and containing some excellent springs and plantations. The forest of Montmorency is near the town, at the extremity of which is the house once inhabited by J. J. Rousseau, called The Hermitage. In the chestnut grove adjoining, the towns-peo- ple and peasantiy assemble to dance at the festival of the guardian saint of Montmorency on the two Sundays which follow

the 28th of July. Near the pool of this town, in the valley, is a sulphureous spring, almost equal to that of Ba-rege, which has been the occasion of a celebrated establishment of warm baths at Enghien. These are open from the fifteenth of June to the end of September, when the fine park of Saint Gratien, and the large lake of Montmorency, furnish the bathers with charming walks through plantations extending over more than 500 acres, and disposed after the English manner; while the expenses of the place are very moderate, considering the improvements that have been made. Coaches start for Paris several times in the day for the convenience of the visitors. Manufactures of lace and embroidery are carried on here : vegetable, fruits, and fruit-trees, especially cherries, are much cultivated, and there is some traffic in all these articles. The parish church is remarkable for its architecture and Gothic sculpture, the production of the sixteenth century. This place is fifteen miles southeast of Pontoise, and nine north of Paris.

MONTPELIER, a post town of Washington county, Vermont, on Onion River; thirty-eight miles E. S. E. of Burlington, sixty north of Windsor, 120 S S.E. of Montreil, 150 N.N.E. cf Albany, 160 N.N.W. of Boston. It is the permanent seat of the stale government, and the

shire town of the county. The village is situated on the south-west part of the township, and contained in 1822 a state-house built of wood, a court-house, a jail, an academy, two paper-mills, two carding machines, two clothiers' works, a printing-office, and about 100 dwelling-houses, the most of which are handsomely built. It is a flourishing place, and has considerable trade. But the site on which it is built is low, being surrounded by hills of considerable height. It is situated within ten miles of the centre of the state, and is a great thoroughfare.

iMONTPELLIER, or MONTPELIER, Mons Puellarum, a large and handsome city, the chief place of a prefecture of the same name, in the department of Herault, France, having a royal court for the departments of Herault, the Aude, the Avey-ron, and the Eastern Pyrenees ; an inferior court of justice, chamber of commerce, an agricultural society, an academy, faculties of medicine and science, an athenaeum, a royal college, a veterinary school, and a bishopric. It is the first place of the ninth military division, and a post town, containing 32,000 inhabitants. It stands in a fine situation on a hill, at

the foot of which flow the Lez and the Merdanson. The surrounding country is beautiful, adorned with elegantly built country houses, covered with gardens and orchards, and encircled with hills crowned with shrubberies and planted with vines and olives.

The town is generally built of freestone ; but most of the streets are narrow and steep, and the public squares are small and irregular; yet the general appearance of the place is pleasing. There are several beautiful parts, some fine fountains, a spacious esplanade, a noble botanical garden, a magnificent walk, and several well executed monuments.

The history of Montpellier does not go farther back than the eighth century ; before that epoch it was only a village formed out of the ruins of Maguelone, the bishopric of which was afterwards transferred hither. Charles Martel increased the number of its inhabitants and gave them a taste for commerce ; in a few years it be-came an important town, and the reputation of its physicians was celebrated as early as the twelfth century. One of the daughters of William, the lord of this place, having married Peter II., king of Arragon, in 1204, it passed into the hands of the sovereigns of Majorca. Philip de Valois obtained possession of it in 1349; but a short time after Charles V. ceded it to Charles the Bad, king of Navarre, and it did not come into the possession of the kings of France until towards the end of the reign of Charles VI. Montpellier has been the theatre of many bloody tragedies on religious accounts. The Huguenots obtained it in the reign of Henry III., and established a republican government, which lasted till the year 1622 : after that, having sustained a terrible sieˆe, it submitted to Louis XIII., who caused a citadel to be built in it. It owes great part of its celebrity to its medical school, so much famed through all Europe, and which originated with the Arabs, who were driven out of Spain by the Goths and hospitably received by the earls of Montpellier. During seven centuries that it lias been estab-MON

lished it has not belied its reputation, but always attracted a great number of students.

There are here manufactures of cloth, woollen counterpanes, muslins, handkerchiefs, verdigris, mineral acids and other chemicals, soap, corks, liqueurs and perfumes; also cotton-spinning factories, numerous distilleries for brandy and other spirits, sugar refining-houses, tan yards, &c. A considerable trade is here carried on in wines, brandies, olive oil, citrons, oranges, dried fruits, leather, wool, copper, and

verdigris. An institution has been set on foot for lending sumj of money without interest. The medical school has a fine amphitheatre, the marble seat in which was found the arena of Nlmes, and a public library occupying several rooms, and containing 35,000 volumes ; together with a number of very valuable manuscripts, an anatomical museum, and a public hall, decorated with busts. Among the other places worthy of notice may be mentioned the city public library, the museum of pictures, and the botanical garden, in which more than 8000 plants are cultivated. In one of the walks of this garden stands the tomb of Narcissa, Dr. Young's daughter. The promenade of Peyrou is very fine; it is a magnificent platform, surrounded with bulustrades, raised ten or twelve feet above another promenade, which surrounds it with its covered vista; the ascent is by steps, and you enter by a gate. At one end is a chateau with six fronts, adorned with pillars; within this building is a basin, from which a sheet of water falls in a cascade over a fine imitation of rocks into another basin below. The water is brought to it by a noble aqueduct of modern construction, built of freestone in the style of the ancients, consisting of three rows of arcades, one over the other, and crossing a valley about nine miles broad. The most magnificent prospect is enjoyed from this promenade. The assembly room is a building of great simplicity, capable of containing 2000 spectators. Besides these there are the exchange, the observatory, the tower of pines, the general infirmary, the fountain of Jacques Cceur, and the triumphal arch called the gate of Peyrou, of the Doric order. About five miles south of Montpellier, at the pool of Magueloune, are to be seen the ruins of the town of that name.

This city is situated in lat. 41►► 36' N., long. 1►► 32' E. from Paris, being about 598 miles south of that metropolis, forty south-west of Nemes, seventy north-west of Avignon, and 126 W.N.W. of Marseilles.

MONT-PERDU, a very lofty mountain in the Pyrenees, on the frontier of France and Spain. It is about 100 miles from the bay of Biscay, west, and considerably more from the Mediterranean ; having a double summit, of which the higher is computed at 10,700, and the lower at 10,400 feet. The line of perpetual con-gelation begins here, 7500 feet. Adjoining is the great mountain of Marbore, and the remarkable cleft in its rocks, called la Breche de Roland.

MONTREAL, an important town, or city, r.f Upper Canada, on the south side of the island of this name. It is divided into the Upper and Lower town, subdivided into wards. The streets are airy and the new ones particularly com-

modious ; some of them running the whole length of the town, parallel to the river, and intersected by others at right angles. The houses are, for the most part, of a gray stone ; and sheet iron or tin is the universal roofing. It perhaps has on the whole a heavy and gloomy appearance ; the houses being seldom more than two stories above the ground floor, including garrets ; and the doors and window-shutters being covered with large sheets of tin, painted of a red or lead-color. The only open place or square in the town, except the two markets, is the Place d'Armes, where, under the French government, the garrison troops were paraded.

The principal street of the Lower Town, extending from north to south, the whole length of the city, at the water side, is called Paul Street. Here are situated the principal stores, the lower market-place, the post-office, and the Hotel Dieu : and this is the chief mart of the trade and commerce. Notre Dame Street runs in a parallel line, extending along the whole length of the city, and here the dwelling-houses of the principal merchants are situated. These two streets are considerably lengthened to the northward by the suburb of Quebec ; and to the southward by those of St. Antoine and Recollet. In the centre of the street of Notre Dame branches off a long street to the westward, forming the suburb of St. Lawrence. It is also the high road to the interior of the island. In one of the short streets leading to the upper town, opposite the court-house, a new market-place has been constructed.

The chief public edifices are the Hotel Dieu, founded in 1644, for administering relief to the destitute sick, and containing a superior and thirty-six nuns, who attend on the patients; general hospital, or convent of the Gray Sisters; a refuge for invalids; and for the aged poor; the convent of Notre Dame, composed of a superior and sixty sisters, for the instruction of females in all the necessary branches of their education ; the cathedral church, in the Place d'Armes, a large substantial stone building; and the seminary of St. Sulpice, for the education of youth, adjoining the cathedral. The petit seminaire, or new college, in Recollet suburbs, is a handsome edifice, and the court-house in Notre Dame Street is respectable : here the courts of civil and criminal judicature are held. The jail of the district is near the court-house, and is a substantial building, erected in a healthy situation, on the site of the old one, destroyed by fire in 1803. At the western extremity of Notre Dame Street stands the old monastery of the recollets.

Montreal is the depot of the fur-trading companies of North America; it is also the channel through which is carried on the commerce between Canada and the United states. The harbour, though not large, is secure for shipping during the time the river is open; and vessels drawing fifteen feet water can lie close to shore. The general depth is from three to four and a half fathoms, with good anchorage every where between the Market Gate Island and the shore. In the spring this island is nearly covered by the tides. The greatest disadvantage is the rapid of St Mary, about a mile below it, whose current is so powerful, that, without a strong north-easterly wind, ships cannot stei.' it, and are sometimes

detained even for weeks, about two raftei only from the place. A few log-houses formed, in 1640, the commencement of Montreal : its population soon amounted to 4000 ; when, in consequence of the hazards to which the new establishment* were exposed from the irruptions of the Iroquois, a barrier was drawn round it with palisades, and it was surrounded with a high wall and battlements. All danger of this kind of hostility hav-ing long ago ceased, the wall has been allowed to fall into decay, and the last remains of it have been removed by a recent act of the provincial legislature. In 1760 this town was taken by the English, under general Arnherst, and in 177.5 by the Americans, under general Montgomery ; but soon after evacuated. It is 120 miles south-west of Quebec, the town of Trois Rivieres being about half-way; 220 north by west of Boston, and 286 north-east of Niagara. Long. 73►► 35’ W., lat. 45►► 31’ N.

MONTREAL, an island and county of Lower Canada, at the confluence of the Grand or Ot-tawa River with the St. Lawrence. It is of a triangular shape, thirty-two miles loqg by ten and a half broad. The Riviere de Prairie separates on the north-west from the isle Jesus. The is-land contains the following nine parishes, St. Ann, St. Genevieve, Point Claire, La Chine, Sault au Recollet, St. Laurent, Riviere des Prairies, Pointe-au-Tremble, and Longue Pointe. With some exceptions, it exhibits a level surface-, watered by rivulets. From Montreal city to the eastward the shores are from fifteen to twenty feet above the level of the St. Lawrence; but in the opposite direction, towards La Chine, they are lower. Between the Coteau St. Pierre and the river the land is very flat and marshy. The soil, if a few insignificant tracks be overlooked, can scarcely be excelled, and is highly productive in grain of every species, vegetables, and fruits.

In the neighbourhood of Montreal are two or three considerable mountains. The largest is about a mile from the town, and is environed with neat country houses and gardens. The riew from this place embraces a prodigious expanse of country, with the river St. Lawrence winding through it, and sending the action of its rapids, hurried over the rocks, even up to the summit of the mountain ; on the left appears the town of Montreal, with its glittering spires, and shipping. This island belongs to the seminary of St. Sulpice, by whom it was settled about the year 1657.

MONTREAL, a district of Lower Canada, bounded on the north-east by the district of Three rivers, on the south by the states of New York and Vermont, where the boundary line, running parallel of 45►► N. lat., divides the territories of the English and American governments ; on the south-west by the province of Upper Canada and the Grand or Ottawa River ; and on the north and north-west it runs as tar as the unascertained limits of the province in that direction. The perpendicular breadth from St. Regis, along the general course of the river, is seventy-three miles and a half. It contains the counties of York, Eflingham, Leinster, Warwick, Huntingdon, Kent, Surrv, Bedford, Richelieu, and Montreal.

MOMK;:AL BAY, a 1 ►►►►►►►►►►►►►►►►►►►►► en the east side uf

MON

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Lake Superior. Long. 84►► 50’ W., lat. 47►► 10’ N.

MONTREAL, an island in Lake Superior, near the east coast. Long. 84►► 50’ W., lat. 47►► 9’ N.

MONTREAL, a river of North America, which runs into Montreal Bay.

MONTREUIL, a town of France, on a hill adjoining the river Canche, about nine miles from the sea. It contains several good buildings, and has a few manufactures of flannel, woollens, and leather. Pupulation 3400. Twenty miles southeast of Boulogne.

MONTREUIL, a town of France, six miles east of Paris. It sends peaches and garden herbs to Paris to the computed value of ►►12,000 annually. Population 3200.

MONTROSE, a parish of Scotland in Angus-shire, anciently called Celurca. The most probable derivation of its modem appellation is from the Gaelic, in which Moinross signifies the fenny promontory, and it is called by ihe vulgar Mon-ross to this day. Buchanan and others have given it a derivation more flattering than just, when they assert, that it properly means the mount of roses, Mons rosarum. Yet in allusion to this, the town’s seal is impressed with roses. It is three miles long from north to south, and two and a half broad.

MONTROSE, a town in the above parish, situated at the mouth of the Esk, on the German Ocean. The town -stands on a gently rising ground, in one of those low sandy flats which occur so frequently on the shores of the German Ocean, and which, from their slight elevation above the sea-level and other circumstances, ap-pear to have been once overflowed by the water. ft has the German Ocean on the east, at the distance of about half a mile, and to the west is a tract of low and level sands, about four square miles in extent, and nine miles in circumference, through which the South Esk winds its way to the sea, passing close to the town on its south side. These sands lie below the level of high water, and above the level of low water ; and, the river opening a communication with the sea, it necessarily happens, that every rising tide rushes up the channel of the river, and inundates the whole of this sandy flat to the west of the town, which is again left uncovered by the reflux of the tide. The channel through which this great body of water is alternately poured in and discharged, is

suddenly contracted at the south end of the town to the breadth of 700 feet at high water, and 400 feet at low spring tides; and, in consequence of this, the stream rushes in or out with great violence, according as the tide is either flowing or ebbing, and it is over the narrow part of the channel that the bridge is erected ; the narrowness here, which both strengthens and deepens (he current, rendering the situation in other respects favorable fora structure of this nature. This low land, over which, at each return of the tide, are spread the waters of the ocean, after they have made their way through the narrow channel of the South Esk, is called the basin, which forms a striking object in the scenery of the place, ap-peanrur, when the tide is full, a large and beautiful lake, and in a few hours afterwards, when tne waters l.ave retired, a desolated sandy marsh, in 1792 a fine timber bridge was erected over th" corce of this island to the island of Inch-brayock, which, together with the stone bridge from the island to the south shore, afforded an open communication with the south part of the country. But the strength of the current undermining the piers of the timber bridge, in 1824, the commissioners requested plans of Mr. Buchanan, and one or two other surveyors, for the construction of a new one of iron, the expense of which was calculated at about ––12,650. Whether they have made any progress in this we do not know. Two lighthouses have lately been erected as guides into the harbour, and a large house has been built for receiving unfortunate sufferers by shipwreck and otherwise. Montrose is a port of the custom house, comprehending, within its bounds, the coast from the lights of Tay, on the south to Bervie-Brow, to the Tod-head on the north. The vessels of this port are chiefly employed in the coasting and Baltic-trade, and in the whale fishery ; and their num-ber is continually increasing. The principal manufactures are linen-yarn and thread ; and the sheeting and sail-cloth manufactures are carried on to a great extent. Here is an extensive tan-work, and several rope walks ; also a foundry, two starch and several soap and candle manufactories. The houses are neat, built of stone, and many of them in the modern taste. The most remarkable public buildings are, the old and new town-houses, the church, the lunatic hospital, the public library, and an elegant episcopal chapel, situated in the links. The salmon fisheries on these rivers are very valuable, and form a considerable branch of commerce. This town has a theatre, monthly assemblies, and other places of amusement ; and, for several years past, has been distinguished for its well attended races. Montrose unites with Aberdeen, Bervie, Brechin, and Arbroath, in electing a representative in the imperial parliament. The town council consists of a provost, three bailies, dean of guild, treasurer, and thirteen councillors. It lies forty-seven miles north-east of Perth, and twenty-three from Dundee.

MONTSERRAT, or MONSER RAT, a mountain of Spain, in Catalonia, remarkable for its hermitages, and a rich monastery of Benedictines. It extends in the direction of east and west, on the river Llobregat, and is about twenty-four miles in circumference. It consists of an assemblage of conical hills, attaining a height of more than 3000 feet. Twenty-eight miles north-west of Barcelona.

MONTSERRAT, one of the West India Islands belonging to Great Britain, is small, but very pleasant and fertile, and was so called by Columbus from its resemblance to the above mountain. It has Antigua on the north-east, St. Christopher's and Nevis on the north-west, and Guadaloupe lying S.S. E. at the distance of about nine leagues. In its figure it is nearly round, about nine miles in extent every way, twenty-seven in circumference, and supposed to contain about 40,000 acres. The climate is warm, but less so than in Antigua. The surface is mountainous, but interspersed with pleasant, rich valleys: the hills are covered with cedars ard other fine trees. Here are all the animals, vegetable?. and fruits of the climate in perfection. The inhabitants raised formerly a considerable quanti'v

of indigo, which they cut four times a year. The present produce is cotton, rum, and sugar. There is no good harbour, but three tolerable roads, at Plymouth, Old Harbour, and Ker's Bay, where they ship the product of the island. The effects of industry have been no where more conspicuous than in this island of late years. The population was,

Whites. Free people of color. Slaves.

1787 . . 1300 . . 200 . . 10,000 1805 . . 1000 . . 250 . . 9,500

The official value of the imports from the island into England, and exports to the island, were, Imports. Exports.

1809 . . ►►3.>,407 . . ►►10,460

1810 . . 62,462 . . 16,816

The principal imports of the island's produce

were,

Sugar. Rum. Cotton.

cu’ts. galls. Ibs.

1809 . . 21,917 . . 51,182 . . 29,455

1810 . . 41,112 . . 48,880 . . 48,313

In 1632 Sir Thomas Warner, governor of St.

Christopher’s, first sent here a small English co-lony : this was reinforced by lord Willoughby soon after, and the colony quickly rose into no-tice. In 1C68 the French reduced it; and in 1712 burnt all the shipping in the road. Its militia at present is 500 in number: and it is divided into two parishes.

MON’UMENT, n.s. \ FT. monument ; Lat. MONUMEN’TAL, adj. \ monumentum. A memorial : particularly a tomb, or memorial of the dead.

The flowers which in the circling valley grow, Shall on his monument their odours throw. Sandys.

Some others were driven and distent Into great ingots and to wedges square, Some in round plates withouten moniment.

Faerie Queene.

Perseverance keeps honour bright : To have done, is to hang quite out of fashion Like rusty mail in monumental mockery. Shakspeare.

On your family’s old monument Hang mournful epitaphs, and do all rites That appertain unto a burial. Id.

In his time there remained the monument of his tomb in the mountain Jasius. Raleigh.

He is become a notable monument of unprosperous disloyalty. King Charles.

Therefore if he needs must go, And the fates will have it so, Softly may he be possest Of his monumental rest. Crashatv.

A man's best monument is his virtuous actions.

Bp. Hall.

So many grateful altars I would rear Of grassy turf; and pile up every stone Of lustre from the brook ; in memory, Or monument to ages : and thereon Offer sweet-smelling gums.

Milton's Paradise /.osf. When the sun begins to fling His flaring beams, me, goddess, bring To arched walks of twilight groves, And shadows brown that Sylvan loves, Of pine or monumental oak. Milton.

In a heap of slain, Two youthful knights they found beneath a load opprest

Of slaughtered foes, whom first to death they sent, The trophies of their strength, a bloody monument.

Dry den.

1 MON

Of ancient British art A pleasing monument, not less admired Than what from Attick or Etruscan hands Arose. PhUipi.

Ihe destruction of the earth was the most monumental proof that could have been given to all the succeeding ages of mankind. Woodward.

With thee on Raphael's monument I mourn, Or wait inspiring dreams at Maro's urn. Pope.

The polished pillar different sculptures grace, A work outlasting monumental brass. Id.

MONUMFOJT, THE, of London, a remarkable pillar of the Doric order, erected on Fish Street Hill, to commemorate the cause and providential cessation of the fire of London. It is 202 feet high, that being also the distance of its base from the spot where the fire commenced. The pedestal is forty feet high, and the plinth twenty-eight feet square ; the shaft of the column is 120 feet high : it is hollow, and encloses a staircase of black marble, consisting of 345 steps, by which a balcony, within thirty-two feet of the top, is reached. The column is surmounted with an urn forty-two feet high,

with flames issuing from it.

On three sides of the pedestal are inscriptions, and the fourth is occupied with apiece of sculpture allegorically representing the destruction and rebuilding of the city. In one compartment the city appears in flames ††† the inhabitants, with outstretched arms, calling for succor ††† the insignia of the city lying thrown down and mutilated††† while a female, wearing a civic crown and holding a sword, shews that the municipal authority was" still maintained. The king, Charles II., occupies a conspicuous situation; he is represented in a Roman habit, and is trampling under his feet Envy, who seeks to renew the calamity by blowing flames out of his mouth. Near the sovereign are three females, representing Liberty, Imagination, and Architecture. Time is offering consolation to the distressed, and Providence gives assurance of peace and plenty. There are also several other figures, including Mars and Fortitude. The whole was executed by that eminent sculptor Caius Gabriel Gibber.

The inscriptions on the pedestal are in Latin ; one of ihem details the great calamity, observing, ' that to the estates and fortunes of the citizens it was merciless, but to their lives very favorable, that it might, in all things, resemble the last conflagration of the world.' The second inscription records the activity with which, under the auspices and direction of the sovereign, the city was rebuilt. On the third side of the pedestal the names of the chief magistrates of the city, during whose mayoralties the monument was erected, are inscribed ; and round the base there is an inscription attributing the destruction of the city to a ' popish faction,' in order to carry on the ' horrid plot for extirpating the protestant religion and old English liberty, and the introducing popery and slavery.'

This last inscription was defaced during the reign of James II.; but on his abdication, and the accession of William III., it was very deeply re-engraved. It is due to the memory of the great architect, Sir Christopher Wren, to state the inscriptions were not suggested by him, but adopted contrary to his wishes, instead of more

elegant and less illiberal compositions which he had prepared.

A person is constantly in attendance at the monument to admit visitors, who for a fee may as-cend to the gallery, and two or three

instances have occurred in which this facility has been used to a fatal purpose. The first was on the QQth of June, 1750, when a man, apparently a weaver, fell from the top, but -whether accidentally or designedly is not known. Of the two remaining instances there is, however, no doubt : on the 7th of July, 1788, John Cradock, a baker, threw himself over the north side of the monument, and fell outside the railing ; and on the 18th of January, 1810, Mr. Lyon Levy, a diamond merchant, threw himself from the east side of the gallery, and fell against the pedestal ; as the height of the gallery from which they precipitated themselves is 175 feet, it is scarcely necessary to state that they were all killed on the spot.

MONZA, a town of Italy in a district of this name, late part of the duchy of Milan on the Lambro, eight miles N. N.E. of Milan. In this town is preserved the ancient iron crown, with ###which the emperors and kings of Italy were crowned. It is called the iron crown, though made of gold, and enriched with jewels, from an iron ring in the inside of it. It lately adorned the brows of the Jacobin, Republican, Consular, imperial, and royal Napoleon Buonaparte. Population 18,000.

MOOD, n. s. } Sax. moˆ; Goth, and Swecl. MOOD'Y, adj. $ mod ; Fr. mode ; Lat. modus. See MODE. Form of argument; grammatical change or form of a verb ; stile of music ; also mental temper (i. e. form or outward character of the mind) ; disposition ; state of mind : moody is used both for mental, intellectual; and as meaning angry, out of temper.

And on bis bare knees adoun they falle, And wold have kist his feet ther as he stood, Till at the last aslaked was his mood ; For pitee rennith sone in gentil herte.

Chaucer. Cant. Tales.

The trembling ghosts, with sad amazed mood, Chattering their iron teeth, and staring wide With stony eyes. Faerie Queene.

That which we move for our better instruction's sake, turneth into anger and choler in them ; yet in their mood they cast forth somewhat wherewith, un-der pain of greater displeasure, we must rest contented. Hooker.

Solyman, in a melancholy mood, walked up and down in his tent a great part of the night. Knollet.

Chide him reverently,

When you perceive his blood incline to mirth, Hut being mood}i, give him line and scope, J ill that his passions, like a whale on ground, <Jor.found themselves with working. Shaktpeare.

Eyes unused to the melting mood, Drop tears as fast as the Arabian trees Their medicinal gum. Id. Othello.

How now, moody?

What is't thou can'st demand 1 Id. Tempest. Clorinda changed to ruth her warlike mood, lew silver drops her vermil cheeks depaint.

Fairfax. They move

In perfect phalanx, to the Dorian mood Of (lutes, and soft recorders.

Milton's Paradise Lett.

S MON

She was in fittest mood For cutting corns, or letting blood, hjdibras.

These two kids, to appease his angry mood, I bear, of which the furies give him good. Dryden.

Every peevish, moody malecontent Shall set the senseless rabble in an uproar. Rowe.

He now profuse of tears, In suppliant mood fell prostrate at our feet.

Addismi.

Mood is the regular determination of propositions according to their quantity and quality, i. e. their universal or particular affirmation or negation.

W atts's Logick.

Aristotle reduced our loose reasonings to certain rules, and made them conclude in mood and figure. Baker on Learning.

Then ××× with the hurried tread, the upward eye, The clenched hand, the pause of agony, That listens, starting, lest the step too i××*ar Approach intrusive on that mood of feai. By\n.

MOOLTAN, or MOULTAN, a considerable province of Hindostan, situated between 28×× and 31×× of N. lat. It is bounded to the north by Lahore and Afghaunistan, to the west by Baloo-chistan, to the south by Ajmeer and Sinde, and to the east by Lahore and Ajmeer. The northern and eastern districts of Mooltan are fertile, being watered by the rivers of the Punjab ; but it becomes gradually sandy and barren as it approaches the desert between Sewee and Bekher or Backar, and over which during the summer months the pernicious simoon frequently blows. To the west of the river Indus the sterility increases and terminates in a ridge of black rocks. The province produces fine camels and an excellent breed of horses called LackhyTazees. It was invaded about the year 712, by a body of Arabs under the command of MohammedCossim, who took possession of the towns, and converted a number of the Afghauns and natives of the Jat tribe. Early in the eleventh century it was invaded by the celebrated Mahmoud of Ghizne. For a long period it continued subject to the monarchs of his dynasty, and afterwards to those of Delhi.

In the end of the fourteenth century the province of Mooltan was taken possession of by Shaikh Yusuf Coreishy, and remained independent till reconquered by the celebrated Shire Shah, in the middle of the sixteenth century ; it soon after became subject to the Moguls, upon whose decline it fell into the hands of various chiefs. The greater part of it is now subject to a nabob of Mooltan, who is obliged to pay tribute to the Afghauns, to the Seiks, and to Sinde. The population consists of Afghauns, Jats, and other Hindoo tribes, its chief towns are Mooltan, Behawulpore, Adjodin, Cutch, and Debal-pore.

MOOLTAN, the Malli probably of Alexander, is the capital of the above province. It was taken by the Arabs in 712; and, on account of the immense plunder found, was named Daral Zeheb, or house of gold, and Kubbeh al Islam, the cupola of faith. It is thus described by Ibeu Haukal, in the middle of the tenth century : ††† ‘ The city of Mooltan is about half the size of Mansoureh-Buckhur, and is called the Golden-house; for there is in this city a certain idol, to which the natives of the country come on a religious pilgrimage every year, and bring gTC.it

riches with them. The temple is situated in the middle of the city ; and over the centre of the temple there is a great cupola or dome. All around this building are various houses, in which the servants and attendants of the idol reside. The idol ij made in the form of a man sitting upon a square throne, the hands resting on the knees (the figure of Boodh). All the riches which are brought to this idol are taken by the ameer (Arab governor), who distributes a portion among the servants of the temple. Whenever the Indians come against Mooltan in a hostile manner, the ameer threatens to destroy the idol, which causes them, to desist. This ameer is a Coreishy Arab, and a descendant of Sam, who first conquered Mooltan. He has not any power over Mansoureh, but the Khutbeh is read in the name of the khalif.'

In 1010 this city fell with the province into the hands of the sultan Mahrnoud of Ghizne, and its chief, an Afghaun named Daoud Khan, was taken prisoner. It was, however, recovered by the Afghauns, and again captured by Mahommed Ghory in 1176. From that period it was subject to the kings of Delhi, till 1398, when it was captured by Timour or Tamerlane. After his retreat from Hindostan it became the capital of an independent dynasty, as we have seen.

It was visited in 1808 by Mr. Elphinstone, who describes it as standing about four miles southeast of the Chenab, or Acesinies River, and surrounded by a fine wall forty feet high, and four miles in circumference, with towers at regular distances. It has a citadel situated on a rising ground, and several handsome tombs. Mooltan is famous for its silks and carpets, and the country immediately around he found very pleasant and well cultivated. The chief tombs are those of two Mahometan saints, named Beha ad Deen, the splendor of religion, and Rukkun ad Deen, the pillar of religion. They have high cupolas ornamented wiˆh painted tiles, which give them a magnificent appearance ; they are also exceedingly rich, being visited annually by many thousands of pilgrims. The town is inhabited both by Hindoos and Mahometans, many of whom are very expert imitative artists. Long. 71►► 19 E., lat. 30►► 35' N.

MOON, n. s. "| Sax. mena. mo—

MOON'BEAM, na ; Isl. mona ;

MOON'CALF, Goth, and Swed.

MOON’EYED, adj. mena,mana; Belg.

MOON’FISH, n. *. maan ; Teut. mon,

MOON’ LESS, adj. mond ; Gr.

MOON’LIGHT, n. s. & adj. ˆ The satellite of the MOON’SEED, n. s. MOON’SHINE, n. s. & adj. MOON’SHINY, adj. MOON’STRUCK, MOON’TREFOIL, n. s. MOON’WORT, MOON’Y, adj. natic ; affected by the

Dearth : a moon-calf is a sort of poetical monster ; a false conception: moon-eyed, dim-eyed ; purblind : J moonstruck ; lu-moon : moon-wort, a

name for the station flower: moony, lunated. The other compounds are explained by the extracts below.

Their bishop and his clergy, being departed from them by moonlight, to choose in his room any other bishop, had been altogether impossible. Hooker.

The moon shines bright : ‘twa►► n.ct a nigh* ?►►

this,

When the sweet wind did gently kiss the trees. And they did make no noise. ‘ Shakspeare.

How cam’st thou to be the siege of thisrootm-ca//?

Id.

Thou hast by moonlight at her window sung, With feigning voice, verses of feigning love* Id.

If you will patiently dance in our round, And see our moonlight revels, go with us. Id. Pinch him, and burn him, and turn bim about, Till candles, and starlight, and moonshine be out.

Id.

I am some twelve or fourteen moonshinet Lag of a brother. id. King Lear.

The division and quavering, which please so much in musick, have an agreement with the glittering of light, as the moon beams playing upon a wave.

Bacon'* Natural H'utory.

Diana hath her name from moisten, which is the property of the moon, being by nature cold and moist, and is feigned to be a goddess huntress.

Peacham.

Beneath the mighty ocean's wealthy caves, Beneath the eternal fountain of all waves, Where their vast court the mother waters keep, And, undisturbed by moons, in silence sleep. Cowley. Although it was a fair moonshine night, the enemy thought not fit to assault them. Clarendon.

Demoniack phrenzy, moping melancholy, And moonstruck madness. Milton's Paradise Lott.

On the water the moon-beams played, and made it appear like floating quicksilver. Dryden.

And now four days the sun had seen our woes, Four nights the moon beheld the incessant fire ;

It seemed as if the stars more sickly rose, And farther from the feverish North retire. Id.

Assisted by a friend, one moonless night, This Palamon from prison took his flight. Id. I, by the moonshine, to the windows went : And, ere I was aware, sighed to myself. Id.

The potion works not on the part designed, But turns his brain, and stupifies his mind ; The sotted moon-calf gapes. Id. Juvenal.

Moon-fsh is so called, because the tail-fin is shaped like a half-moon, by which, and his odd trussed shape, he is sufficiently distinguished.

Greta's Museum. Encountering fierce The Solymean sultan, he o'erthrew His moony troops, returning bravely smeared With Panim blood. Philip.

I went to see them in a moonshiny night. Addison.

The Soldan galls the Illyrian coast ; But soon the miscreant moony host Before the victor-cross shall fly. Fenton.

What beckoning ghost along the moonlight shade Invites my steps, and points to yonder glade ? Pope.

The moon-trefoil hath a plain orbiculated fruit, shaped like an half-moon. Miller.

The moon-seed hath a rosaceous flower : the pointal is divided into three parts at the top, and afterward becomes the fruit or berry, in which is included one flat seed, which is, when ripe, hollowed like the appearance of the moon. Id. While thirteen moons saw smoothly run

The Nen's barge-laden wave, All these, life's rambling journey done,

Have found their home ××× the grave. Covper.

'Tis sweet to hear

At midnight on the blue and moonlit deep The song and oar of Adria's gondolier,

By distance mellowed, o'er the waters sweep.

Byron.

MOO

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MOON, LVNA, in astronomy, one of the heavenly bodies often ranked among the planets ; but more properly a satellite, or secondary planet. As all the other planets move primarily round the sun, so does the moon round the earth: her orbit is an ellipsis, in which she is retained by the force of gravity ; performing her revolution round the earth, from change to change, in twenty-nine days, twelve hours, and forty-four minutes, and round the sun with it every year : she goes round her orbit in twenty-seven days, seven hours, and forty-three minutes, moving about 2290 miles every hour; and turns round her axis exactly in the time that she goes round the earth, which is the reason of her keeping always the same side towards us ; and that her day and night taken together are as long as our lunar month. See ASTRONOMY, Index. Among the ancients, the moon was an object of prime regard. By the Hebrews she was more regarded than the sun, and they were more inclined to worship her as a deity. The new moons, or first days of every month, were kept as festivals among them, which were celebrated with sound of trumpets, entertainments, and sacrifice. SeeNumb.xxviii.il; x. 16; 1 Sam. xx. 5 ††† 18. People were not obliged on these days to rest. The feasts of new moons were the miniature representation of the feast of trumpets, which was held on the first of the month Tisri, which was the beginning of the civil year. Thfi Jews, not being acquainted with the physical causes of eclipses, looked upon them, whether of sun or moon, as signs of the divine displeasure. The Grecians looked upon the moon as favorable to marriage; and the full moons or the times of conjunction of the sun or moon, were held the most lucky seasons for celebrating marriages ; because they imagined the moon, to have great influence over generation. The full moon was held favorable for any undertaking by the Spartans ; and no motives could induce them to enter upon an expedition, march an army, or at-tack an enemy, till the full of the moon. The moon was supposed both by Greeks and Romans to preside over child-birth. The patricians at Rome wore a crescent on their shoes, to distinguish them from the other orders of men. This crescent was called Lanula. Some say it was of ivory, others that it was worked upon the shoe, others that it was only a particular kind of fibula or buckle.

MOOR, n. t. *} Sax. more ; Teut. mor ; MOOK'COCK, I Goth, nioar, mtsr; Belgic, MOOR'HEN, I moer. Marshland ; fen ;

Moon’isn,ac►►;’. Vdark boggy earth or soil: MOOR’LAND, n .*. moorcock and hen are fen-MOOR’STONK, | birds well known : moor-MOOII’Y, adj. j stone, a species of granite: moory, marshy ; watery ; applied to soils.

Let the marsh of Klsham Bruges tell: \ hat colour were their waters that same day, And all the moor ‘twixt Elversham and Dell.

Spenser.

Water-fowls, as seagulls and moorhens, when they flock and fly together from the sea towards the shores, foreshew rain and wind. Bacon.

The dust the fields and pastures covers, As when thick mists arise from monry vales.

Fairfax.

While in her girlish age she kept sheep on the moor, it chanced that a London merchant passing hy saw her, and liked her, begged her of her poor parents, and carried her to his home. I’urew.

In the great level near Thorny, several oaks and firs have lain there till covered by the inundation of the fresh and salt waters, and moorish earth exaggerated upon them. Hale.

In Essex, moory land is thought the most proper.

Mortimer,

In the south part of Staffordshire they go to the north for seed corn, and they of the north to the south, except in the moorlands. Id. Husbandry.

The third stratum is of great rocks of moor&tone and sandy earth. l'oodicard on P’ossiti.

Or like a bridge that joins a marish To moorlands of a different parish. Swift.

Along the moorish fens Sighs the sad genius of the coming storm.

Thomson

Farewell old Coila's hills and dales, Her heathy moort and winding vales. Burns. Now westlin winds, and slaughtering guns,

Bring autumn's pleasant weather ; The moorcock springs, on whirring wings, Amang the blooming heather. Id.

MOOR, n. s. Ital. and Span, tnoro ; Lat. mau-rus. A negro ; a black man.

I shall answer that better than you can the getting up of the negro's belly ; the moor is with child by you. Shakspeare.

MOOR, v. a. & v. n. Fr. morer. To fasten Ly anchor or otherwise ; to be so fastened or made stationary.

Three more fierce Eurus in his angry mood

Dashed on the shallows of the moving sand,

And in mid ocean left them moored at hand.

Dry den .

ˆEneas gained Cajeta's bay : At length on oozy ground his gallies moor, Their heads are turned to sea, their sterns to shore.

Id. My vessel, driven by a strong gust of wind,

Moored in a Chian creek. Addison's Ovid.

He visited the top of Taurus and the famous Ararat, where Noah's ark first moored.

Arbuthnot and Pope's Mart. Scrib.

MOOR (Sir Karel), or Sir Charles, de, a painter of portraits, history, and conversations, born at Ley den in 1656; and a disciple of Gerard Douw, with whom he continued for a considerable time. He afterwards studied successively under Abraham Vanden Tempel, Francis Mieris, and Godfrey Schalcken. He painted the portraits of prince Eugene and the duke of Marlborough on horseback ; a picture for which he was created a knight of the Roman empire. He likewise painted the portrait of Peter the Great of Muscovy ; and an extraordinary number of other portraits, for which he received great

prices. He died in 1738.

MOOR, a town of South-West Hungary, unfortunately subject to earthquakes ; in January and February 1810 a repetition of shocks threw down towers, dried up the wells, opening new springs, and producing fissures in the earth, which, though but a foot in width, extended to the length of sixty and even 100 fathoms. Inhabitants 2500. Fifteen miles N. N. W. of Stuhl-Weissemberg.

MOOR LAND, or moory soil, in agriculture, is a black, light, and soft earth, very loose, without

a.iy admixture of stones, and with very little clay or sand. The uppermost stratum of the fen lands is usually of this earth, and it commonly constitutes a moderately thick or deep bed. Intermixed with water it cannot easily be worked up into a paste ; and, when with labor worked up into somewhat of a firm mass, its surface appears spongy and porous ; and, as soon as dry, it easily moulders away to powder. It is usually soft to the touch, unless it be worked very closely between the ringers ; then it shows a mixture of a small quantity of sand, both to the touch and to “the eye. It seems indeed to consist almost entirely of pure vegetable matter; and this, lying in such plenty on the surface of the fen-lands, is the cause of their being so very fertile. The great disadvantage of the places which have this soil is their being liable to be glutted with wet. To remedy the inconveniences thence-arising, the farmers who rent these lands burn the soil at proper seasons. It burns very freely and easily, the surface feadily catching flame ; and a substance somewhat bituminous, usually contained among the soil, assists the burning.

MOORE (John), M. D., author of Travels through France and Italy, of Zelucco, a novel, &c. The style of his travels is a model of ease and perspicuity ; and in the construction of Zelucco, there are a strength, originality, and true coloring, which will render it a lasting monument of national genius. He died at his house at Richmond, February 20th, 1802. His private character as a man was as good as his public one as an author was great. His early and liberal patronage of Burns affords a specimen of his sensibility as well as of his taste.

MOORE (lieutenant-general Sir John), eldest son of the preceding, was born at Glasgow 13th of November 1761. At the age of fifteen he entered the army as an ensign of the fifty-first regiment, and in 1790 was made a lieutenant-colonel. He afterwards served in Corsica, where he was wounded. He accompanied Sir Ralph Aber-crombie in 1796 to the West Indies, as brigadier general, and, having assisted in the capture, was appointed governor of St. Lucia. The following year he was employed in Ireland, where he was promoted to the rank of major-general. In 1799 he went to Holland, where he was severely wounded ; and was subsequently engaged and again wounded in the expedition to Egypt. He was made a knight of the Bath, after his return to England ; and in 1808 commanded a body of troops sent to the assistance of the adventurous Gustavus IV. of Sweden, but he

became involved in a dispute with that prince, who placed him under arrest, from which, however, he extricated himself and returned home. In October this year he landed in Spain, at the head of an English army ; but after advancing some distance, and meeting with little support from the Spaniards, he felt obliged to retreat before a superior body of the French to Corunna, where was fought the celebrated battle of that name (see CORUNNA), on the 16th of January 1809, when the general was killed by a cannon-ball, and interred on the field of battle.

MOORING, the act of confining and securing VOL. XV.

a ship in a particular station, by chains or cables, which are either fastened to the adjacent shore, or to anchors in the bottom. A ship may be either moored by the head, or by the head and stern : i. e. she may be secured by anchors before her, without any behind ; or she may have anchors out, both before and behind her; or her cables may be attached to posts, rings, or moorings, which answer the same purpose. When a ship is moored by the head with her own anchors, they are disposed according to the circumstance of the place where she lies, and the time she is to continue therein. Thus, wherever a tide ebbs and flows, it is usual to carry one an-chor out towards the flood, and another towards the ebb, particularly where there is little room to range about ; and the anchors are laid in the same manner, if the vessel is moored head and stern in the same place. The situation of the anchors, in a road or bay, is usually opposed to the reigning winds, or those which are most dangerous ; so that the ship rides therein with the effort of both her cables. Thus, if she rides in a bay, or road, which is exposed to a north wind and heavy sea from the same quarter, the anchors passing from the opposite bows ought to lie east and west from each other: hence both the cables will re-tain the ship in her station with equal effort against the action of the wind and sea.

MOORINGS, in sea language, are usually an assemblage of anchors, chains, and bridles, laid athwart the bottom of a river or haven, to ride the shipping contained therein. The anchors employed on this occasion have rarely more than one fluke, which is sunk in the water near low-water mark. Two anchors being fixed in this manner, in the opposite side of the river, are furnished with a chain extending across from one to the other. In the middle of the chain is a large square link, whose lower end terminates in a swivel, which turns round in the

chain as about an axis, whenever the ship veers about with the change of the tide. To this swivel-link are attached the bridles, which are short pieces of cable, well served, whose upper ends are drawn into the ship at the mooring ports, and afterwards fastened to the masts or cable-bolts. A great number of moorings of this sort are fixed in the harbours adjacent to the king's dock-yards, as Deptford, Chatham, Portsmouth, Plymouth, &c.

MOORLANDS, a tract so called in the north part of Staffordshire, where the land rises gradually into small hills, which run through the midst of England in one continued ridge, rising higher and higher to Scotland, and sending forth many rivers. The soil here is so foul and cold that the snows lie almost all the year on the tops of the hills ; and it is withal very rugged and barren : it, however, yields plenty of coal, lead, copper, ranee-marble, and millstones; and some of the limestone hills bear a sweet though short grass, very grateful to the oxen, of which there is a very good breed.

MOORS. See MOROCCO.

MOORS, in the Isle of Man, those who sum-mon the courts for the several sheadings; such as the lords bailiffs. The office is similar to that of bailiff of the hundred.

MOORSHUDABAD, a city of Bengal, and the capital of that province during about half the eighteenth century. It was originally called Mukhsoosabad.

Including Cossimbazar this place extends eight miles along the eastern bank of the Bhagirutty River, about 129 miles above Calcutta. The houses have seldom above one story, and tiled roofs; the streets are narrow and dirty ; but the nabob's palace, which has been lately rebuilt, and the imambury and mosques are in good condition. It is also the residence of the British civil establishment, and a judicial court of circuit. It was plundered by the Mahrattas in 1742, but still carries on a considerable trade in silk, raw and manufactured; and, notwithstanding the river is nearly dry during six months, the surrounding district is very fertile. During the rainy season it is subject to inundation, which has frequently rendered the city unhealthy.

MOOSSO, a town of Southern Africa, to the north of Leetakoo, and capital of a tribe called the Murahlongs. It is said to be mucb larger than Leetakoo, and to contain from 10,000 to 12,000 inhabitants.

MOOT, v. a. & adj. Lat. mottan; Goth, mo-ta, motgian, to encounter. To dispute ; plead : hence to state a point of law by way of exercise, as was commonly done in the inns of court : a moot case or point is a point or case unsettled and disputable.

In this moot case your judgment to refuse,

Is present death. Dryden's Juvenal.

Would you not think him cracked, who would require another to make an argument on a moot point, who understands nothing of our laws]

Locke on Education.

Let us drop both our pretences ; for I believe it is a moot point, whether I am more likely to make a master Bull, or you a master Strutt.

Arbuthnot's History of John Bull.

MOP, n.s & v.a. Wei. moppa; Lat. mappa. A flocky household utensil, used with a long handle : to mop is to take up or clean with a mop.

Such is that sprinkling which some careless quean Flirts on you from her mop, but not so clean. You fly, invoke the gods ; then turning, stop To rail ; she singing, still whirls on her mop.

Swift.

MOP, v. n. Either from MOCK, as Dr. Johnson conjectures: or MOUTH, which see. To make wry mouths in contempt.

Each one tripping on his toe Will be here with mop and mow.

Shakspeare.

Fire fiends have been in poor Tom at once ; of lust, as Obdicut ; Hobbididen, prince of dumbness; Mahu, of stealing; Mohu, of murder; and Flibber-tigibbet, of mopping and mowing who since possesses chamber-maids. Id.

An ass fell a mopping and braying at a lion.

L'Est,ange.

MOPE, v. n. & v. a. l Barb. Lat. mopus, of

MOPUS, w. s. jmyops. To be stupid;

inactive ; drowsy : to make stupid or spirit-less.

What a wretched and peevish fellow is this king of England, to mope with his fat-brained followers.

Shakspeure.

Even in a dream, were we divided from them, And were brought moping hither. Id.

Josiah is not moped with a distractive grief, or an. astonishing fear ; but, in the height of his passion, sends n>e choice messengers to Huldah the prophetess, to enquire of the Lord, for himself, for Judah. Bp. Hall.

Intestine stone, and ulcer, cholick pangs,

Demoniack frenzy, mop ny melancholy,

And moonstruck madness.

Mi/ton's Paradise Lost.

They say there are charms in herbs, said he, and so he threw a handful of grass ; which was so ridiculous, that the young thief took the old man to be moped. L' Estrange.

Severity breaks the mind : and, then in the place of a disorderly young fellow, you have a low-spirited moped creature. Locke.

The busy craftsmen and o'erlaboured hind

Forget the travel of the day in sleep ;

Care only wakes, and moping pensiveness ;

With meagre discontented looks they sit,

And watch the wasting of the midnight taper.

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I'm grown a mere mopus ; no company comes But a rabble of tenants. Swijt's Miscellanies.

MOP'PET, n. s. 3 From mop. A puppet MOP'SEY. 5 made of rags ; a doll ; a

little girl.

Our sovereign lady : made for a queen 1

With a globe in one hand, an 1 a sceptre in the other 1

A very pretty moppet ! Dryden's Spanish Fryar.

MOPSUS, in fabulous history, a celebrated prophet, son of Apollo, by Manto, the daughter of Tiresias, who flourished about the time of the Trojan war. After death he was ranked among the gods, and had an oracle at Malia, celebrated for the true and decisive answers which it gave.

MOPSUS, the son of Ampyx and Chloris, born at Titaressa in Thessaly. He was the prophet and soothsayer of the Argonauts, and died at his return from Colchis, by the bite of a serpent in Libya. Jason erected a monument to him on the sea-shore, where afterwards Africanus built a temple where he gave oracles. He has often been confounded with the son of Manto, as their professions and their names were the same.

MOQUEBAH, a province and town of Peru, sixteen leagues from the Pacific Ocean. The province though cold, is fertile in wine, brandy, and olives. It is forty-two leagues long. The town is situated at the foot of the Cordillera in a pleasant valley, and has a good church and several convents. It suffered severely by an earthquake in 1715. Population 6000 : seventy miles south of Arequipa.

MORADABAD, a considerable town of Hindostan in the province of Delhi, and district of Bareily. It is delightfully situated on the Ram-gonga River, and the houses are generally built of stone or brick, two or three stories high. It formerly was the residence of one of the Rohilla chiefs, and had a mint.ˆ It is now the station of the British civil establishments. Long. 78►► 45’ E., lat. 28►► 52’ N.

MOR./EA, in botany, a genus of the monogynia order and triandria class of plants, natural order sixth, ensatae : COR. hexapetalous ; the three interior petals patent, the rest like those of the iris.

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MORAI, the name given at Otaheite to the bur) ing-grounds, which were also places of worship, and consisted of a pile of stone raised pyramidically upon an oblong base or square 267 feet long and eighty-seven wide. On each side was a flight of steps; those at the sides being broader than those at the ends ; so that it terminated not in a square of the same figure with the base, but in a ridge like the roof of a house. There were eleven of these steps to one of these morais, each four feet high, so that the height of the pile was forty-four feet ; each step was formed of one course of white coral stone, neatly squared and polished; the rest of the mass (for there was no hollow within) consisted of round pebbles. The foundation was of rock stones, also squared. In the middle of the top stood an image of a bird carved in wood, and near it the broken one of a fish carved in stone. The whole of this pyramid made part of one side of a spacious area or square 360 feet by 354, walled in with stone, and paved with flat stones in its whole extent. About 100 yards to the west of this building was another paved area or court, in which were several small stages raised on wooden pillars about seven feet high, called by the Indians ewattas, and seem to be a kind of altars, as upon these were placed provisions of all kinds, as offerings to their gods. On some of them were seen whole hogs, and on others the skulls of above fifty, besides the skulls of many dogs. The male deities (for they had them of both sexes) were worshipped by the men, and the female by the women ; and each had morais, to which the other sex was not admitted.

MOR’AL, adj., n. s. & v. n.ˆ Fr. morale ;

MOR’ALIST, n. s. I Lai. mctralis. ReMORAL’ITY, llating to duty;

MOR’ALIZE, v. a. & v. n. C or to the practice

MOR’ALLY, adv. \ of man in regard

MOU’ALS, n. $. * to virtue or vice ;

virtuous : belonging to manners ; and hence, according to the customary manner ; popular ; such as is generally admitted, as in the phrase’ a moral certainty :’ a moral is a doctrine or general duty inculcated in a fable ; and the word is used by Prior, after the French, for morality : to moral, by Shakspeare for to moralize : a moralist is a teacher of human duties : morality, ethics ; the science of morals or

MORAL PHILOSOPHY, see the article : to moralize, to explain or apply in a moral sense ; to speak or write on moral subjects : morally, ethically ; virtuously ; popularly, or as generally understood : morals, used only in the plural in this sense ; behaviour in respect to others ; practice in regard to vice or virtue.

Fierce wanes and faithful loves shall moralize my 1 song. Faerie Queene.

Keep at the least within the compass of moral actions, which have in them vice or virtue.

Hooker.

In moral actions divine law helpeth exceedingly the law of reason to guide life, but in supernatural it alone guideth. Id.

France spreads his banners in our noiseless land, With plumed helm thy slayer begins his threats, Whilst thou, a moral fool, sit’st still and criest.

Shakspeare.

Benedictus! why benedictus’ von have torn* moral in this benedictus.

❓❓❓ Moral ! No, by my troth I have no moral meaning ; I meant plain holy thistle. M.

When I did hear

The motley fool thus moral on the time, My lungs began to crow like chanticleer, That fools should be so deep contemplative.

Id.

Did he not moralise this spectacle ? ??? O, yes, into a thousand similies. Id.

We may too certainly conclude, that much more than a single act of contrition, and a moral revocation, that is, a sorrow and a nolition of the past sins, may be done upon our death bed without effect, without a being accepted to pardon and salvation.

Jer. Taylor.

Physical and mathematical certainty may be stiled infallible ; and moral certainty may properly be stiled indubitable. Wilkim.

1 am from the nature of the things themselves morally certain, and cannot make any doubt of it, but that a mind free from passion and prejudice is more fit to pass a true judgment than such a one as is biassed by affections and interests. Id.

Mathematical things are capable of the strictest demonstration ; conclusions in natural philosophy are capable of proof by an induction of experiments ; things of a moral nature by moral arguments ; and matters of fact by credible testimony.

Tillotson. Now, brandished weapons glittering in their

hands,

Mankind is broken loose from moral bands ; No rights of hospitality remain, The guest, by him who harboured him, is slain.

Dry den.

The moral is the first business of the poet, as being the groundwork of his instruction ; this being formed, he contrives such a design or fable as may be most suitable to the moral. Id. Dvfresnoy.

To take away rewards and punishments is only pleasing to a man who resolves not to live morally.

Dry den.

It is morally impossible for an hypocrite to keep himself long upon his guard. L' Estrange.

This fable is moralized in a common proverb.

Id.

Because this, of the two brothers killing each other, is an action morally unnatural ; therefore, by way of preparation, the tragedy would have begun with heaven and earth in disorder, something physically unnatural. Rymer.

We have found, with a moral certainty, the seat of the Mosaical abyss.

Burnet's Theory of the Earth.

That they may quit their morals without any discredit to their intellectuals, they fly to several stale, trite, pitiful objections and cavils. South,

The morality of an action is founded in the freedom of that principle, by virtue of which it is in the agent's power, having all things ready and requisite to the performance of an action, either to perform or not perform it. Id. Sermons.

By good, good morally so called, bonum honestum, ought chiefly to be understood ; and that the good of profit or pleasure, the bonum utile or jucnndura, hardly come into any account here. South.

Some, as corrupt in their morals as vice could make them, have yet been solicitous to have their children soberly, virtuously, and piously brought up.

Li. Sermont.

The advice given by a great moralist to his friend was, that he should compose his passions ; and let

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tnat be the work of reason, which would certainly be the work of time. Addison.

‘I heir moral and ceconomy, Most perfectly they made agree. Prior. High as their trumpets tune his lyre he strung. And with his prince’s arms he moralized his song.

Id.

The concurring accounts of many such witnesses render it morally, or, as we might speak, absolutely impossible that these things should be false.

Atterbttry’i Sermons.

Learn then what morals criticks ought to show : Tis not enough wit, art, and learning join; In all you speak, let truth and candour shine.

Pope.

All nations have agreed in the necessity of a strict education, which consisted in the observance of moral duties. Swift.

The system of morality, to be gathered out of the

writings of ancient sages, falls very short of that delivered in the gospel. Id. Miscellany.

1 (bund a moral first, and then studied for a fable, but could do nothing that pleased me. Id.

A moral universality, is when the predicate agrees to the greatest part of the particulars which are contained under the universal subject. Watts.

A necessity of sinning is as impossible in morality, as any the greatest difficulty can be in nature.

Baker on Learning.

There is nothing that God has judged good for us. that he has not

given us the means to accomplish both in the natural and moral world. Burke.

From heaven, he cried, descends the moral plan ; And gives society to savage man. Durum.

Every one must see and feel, that bad thoughts quickly ripen into bad actions; and that if the latter only are forbidden, and the former left free, all morality will soon be at an end. Porteut.

MORAL PHILOSOPHY.

MORAL PHILOSOPHY. ‘Ethics,’ says Mr. Locke, ‘is the seeking out those rules and measures of human actions which lead to happiness, and the means to practise them. The end of this is not bare speculation and the knowledge of truth; but right, and a conduct suitable to it.’ ‘Moral philosophy,’ says Dr. Hutcheson, ►► which is the art of regulating the whole of life, must have in view the noblest end; since it undertakes, as far as human reason can go, to lead us into that course of life which is most according to the intention of nature, and most happy : to which end whatever we can obtain by other arts should be subservient. And since all philosophers, even of the most opposite schemes, agree, in words at least, that happiness either consists in virtue and virtuous offices, or is to be obtained and secured by them, the chief points to be enquired into in morals must be, what course of life is according to the intention of nature? wherein consists happiness? and what is virtue?’ ‘ Moral philosophy (Encyclopaedia Britannica) is the science of manners or duty ; in other words, it is the knowledge of our duty and felicity, or the art of being virtuous and happy. It is denominated an art, as it contains a system of rules for becoming virtuous and happy. It is likewise called a science, as it deduces those rules from the principles and connexions of our nature, and proves that the observance of them is productive of our happiness. It is an art and a science of the highest dignity, importance, and use. Its object is man’s duly, or his conduct in the several moral capacities and connexions which he sustains. Its office is to direct that conduct ; to show whence our obligations arise, and where they terminate. Its use, or end, is the attainment of happiness ; and the means it employs are rules for the right conduct of our moral powers.’ ‘ Moral philosophy, morality, ethics, casuistry, natural law,’ says the plain practical Paley, ‘ mean all the same thing, namely, that science

which teaches men their duty and the reasons of it.' 'The science of ethics/ says Dr. Brown (lecture LXXIIL), 'lias relation to our affections of mind, not simply as phenomena, but as virtuous or vicious, right or wrong/

More of these definitions have been proposed which, as Dr. Paley says concerning the distinctions of virtue, it is not worth while to set down. We will merely add, as a kind of curiosity, the correction of the doctor's definition attempted by the Unitarian triumviri the Rev. W. Shepherd, the Rev. J. Joyce, and the Rev. Lant Carpenter, LL. D., in their Systematic Education. ' Precision of language and correctness of thought,' they inform us, 'are so dependent upon one another, that it may be worth while to point out a singular error into which that eminently useful writer Dr. Paley has fallen in his very first sentence. ' Moral philosophy, morality, ethics, casuistry, natural law,' he says, ' mean all the same thing, namely, that science which teaches men their duty, and the reasons of it :' but he is undoubtedly wrong; moral philosophy is the science of morals : it investigates the grounds and reasons of duty : it traces that quality of actions and dispositions which renders them obligatory upon a reasonable being like man : it shows what classes of actions and dispositions possess this quality : it ascertains by this means the best rule of life : and it lays down those principles by the aid of which the rule of life may be most successfully applied. The terms ethics and morals, though correctly applied to the science, are more appropriate to the art of morality (understanding by the word art, as opposed to science, a system of rules for the proper attainment of any end) ; and in this sense the terms are not strictly applicable to investigations respecting the grounds and reasons of duty. Nevertheless the art of morals can scarcely fail to include some reasoning respecting its foundation and principles, just as the science of morals can scarcely fail to include, in some measure, the preceptive part. Morality commonly refers to the quality of an action or disposition which makes it the subject of reward or punishment; but it is also used (as when we speak of a system of morality) in reference to the art of morals. Casuistry has for its sole object the difficulties of duty, and classes sometimes with the science, and sometimes with the art of morals. It often requires subtle investigations,

and nice and refined distinctions; and, when it is not regulated by an invariable attention to the (.‘rand principles of morality, it often leads to great intricacy and perplexity. Such discussions have indeed not unfrequently led, through the sophistry of vanity or self-justification, to opinions which confound all moral distinctions. The moral reasoner must have some fixed points of duty, and when he has seen that these have a solid foundation in the nature of the human mind, and the circumstances of man, he ought on no account to give them up. If any opinions are in clear opposition to them, the principles on which those opinions are founded should be regarded as absurd, if not practically dangerous.

‘The term natural law denotes that system of duty which is derived from considerations independent, or supposed to be independent, of di-vine revelation, or the law of God.’

We hope the reader can make something out of all this elaborate correction of Paley’s singular error, by critics of extraordinary precision of language and correctness of thought. If however he be disposed with us to prefer the error to the correction, perhaps he will consent to the following slight modification of Paley’s statement : ››› Moral philosophy, morality, ethics, casuistry, natural law, in so far as they mean any thing, mean much the same thing, and relate to the duty of men and the reasons of it. This is at least better than unmeaning petty refinements, destitute of even the semblance of logical and moral analysis. We must not however tarry longer at the threshold, but proceed to the object proposed, which is not to compile or construct a system of moral philosophy, but to give a view of the systems which have been attempted. Of course we can advert only to the more eminent treatises and theories of morals : and here the ancient moral philosophers claim some attention, but we will dispose of them as quickly as possible, that we may reserve more space for those of modern times.

Socrates is universally regarded as the father of moral philosophy ››› and, as some one remarks, he is decidedly the hero of all the Ciceros and declaimers upon morality ; yet, after all that has been said and sung to his memory, we may, in allusion to his own modest confession of ignorance, truly profess to know only this ››› that we know almost nothing about him, and still less about his moral philosophy. We are told that, observing with regret how much the

opinions of the Athenian youth were misled by philosophers who spent all their time in refined speculations concerning nature and the origin of things, and by sophists who taught in their schools the arts of false eloquence and deceitful reasoning, he formed the wise and generous design of instituting anew and more useful method of instruction, and assumed the character of a moral philosopher: that he estimated the value of knowledge by its utility, and recommended the study of geometry, astronomy, and other sciences, only so far as they admit of a practical application to the purposes of human life : that his great object, in all his conferences and discourses, \vas to lead nien to an acquaintance with themselves, to convince them of their follies and vices, and to furnish them with useful moral instruction. All this was very good and laudable ; and Cicero awards the praise to Socrates of being the first who called down philosophy from heaven to earth, and introduced her into the public walks and domestic retirements of men, that she might instruct them concerning life and manners.

The system of morality which Socrates made it the business of his life to teach is said to have been raised on the firm basis of religion. But what that firm basis of religion was, it is difficult, or rather impossible, to ascertain, amidst the obscure, doubtful, and conflicting statements respecting it which have come down to our times.

The first principles of virtuous conduct are, according to Socrates, common to all mankind, and therefore laws of God, which cannot be violated with impunity. ‘ It is frequently possible (Memorabilia of Socrates by Xenophon) for men to screen themselves from the penalty of human laws ; but no man can be unjust or ungrateful without suffering for his crime : hence I conclude that these laws must have proceeded from a more excellent legislator than man.’

It is probable that the moral theory of Socrates was much the same as that of Shaftesbury and Ilutcheson, and that the opinions which he uttered in his discourses were variously modified and worked up into those fine sentiments about virtue which were flourished in the speeches and writings of subsequent moralists, and particularly the stoics.

If we can glean little satisfactory information from the literary remains of antiquity respecting Socrates, we are equally unsuccessful as to the moral philosophy of his illustrious pupJ Plato, who, if he received any sound principles from his moral master, took good care to conceal them from the perception of the profane vulgar. The most notable particulars of his moral doctrine are such as the following: ††† Our highest happiness consists in the knowledge and contemplation of the

first good, which is mind or God. All those things which are called good by men are in reality such only so far as they are derived from the first and highest good. The only power in human nature which can acquire a resemblance to the supreme God is reason. The minds of philosophers are fraught with valuable treasures ; and, after the death of the body, they shall be admitted to divine entertainments ; so that whilst, with the gods, employed in surveying the fields of truth, they will look down with contempt upon the folly of those who are contented with earthly shadows. Goodness and beauty consist in the knowledge of the first good and the first fair. That only which is becoming is good : therefore virtue is to be pursued for its own sake; and, because it is a divine attainmem, it cannot be taught, but is the gift of God. lie alone who has attained the knowledge of the first good is happy. The end of this knowledge is to render men as like to God as the condition of human nature will permit. This likeness consists in prudence, justice, sanctity, temperance. In order to attain this state it is necessary to be convinced that the body is a prison, from which the soul must be released before it can arrive at the

knowledge of those things which are real and immutable. Virtue is the most perfect habit of mind which adorns the man, and renders him firm, resolute, and consistent, in action and speech, in solitude and society. The virtues are so nearly allied that they cannot be separated ; they are perfect, and therefore neither capable of increase nor of diminution. The passions are motions of the soul excited by some apparent good or evil : they originate in the irrational parts of the soul, and must be regulated and subdued by reason. This is perhaps sufficient as a specimen of the wisdom and philosophy of Plato. Those who wish for more may consult his writings, Brucker's Historia Critica Philosophic, or its abridgment by Enfield.

After Plato some notice is due to his disciple Aristotle, who was not so mystical, and more acute and subtle, as well as more profound and comprehensive than his master. It is very difficult, however, to extract any thing definite, intelligible, or useful, from his writings. The

following is a brief enumeration of his more remarkable notions about morals : ††† Felicity con- ‘sists neither in the pleasures of the body, nor in riches, nor in civil honor, power, or rank, nor in the contemplation of truth, but in the virtuous exercise of the mind. A virtuous life is in itself a source of delight; external good, such as friends, riches, power, beauty, and the like, are instruments or means by which illustrious deeds may be performed. Virtue is either theoretical, or practical : theoretical virtue consists in the due exercise of the understanding ; practical, in the pursuit of what is right and good. ‘ Practical virtue is acquired by habit and exercise.

Virtue, as far as it respects ourselves, and the government of the passions, consists in preserving that mean in all things which reason and prudence prescribe ; it is the middle path between two extremes, one of which is vicious through excess, the other through defect. Virtue is a spontaneous act, the effect of design and volition. It is completed by nature, habit, and reason. The first virtue is fortitude, which is the mean between timidity and rash confidence. Temperance is the mean between the excessive pursuit and the neglect of pleasure. Liberality is the mean between prodigality and avarice. Magnificence preserves a due decorum in great expenses, and is the mean between haughty grandeur and low parsimony. Magnanimity respects the love of applause, and the judgment a man forms of his own merit ; and holds the middle place between meanness of spirit and pride. Moderation respects distinction in rank, and is the mean between ambition and the contempt of greatness. Gentleness is the due government of the irascible passions, and observes a proper medium between anger and insensibility. Affability respects the desire of pleasing in the ordinary occurrences of life, and pursues the middle path between moroseness and servility. Simplicity in the practice of virtue is the mean between arrogant pretensions to merit, and an artful concealment of defects. Urbanity respects sports and jests, and avoids rusticity and scur-rility. Modesty is a certain apprehension of incurring disgrace, and lies in the middle between

impudence and bashfulness Justice includes the observance of the laws for tne preservation of society, and the discharge of obligations and debts between equals. Equity corrects the rigor of laws, or supplies their defect. Friendship is nearly allied to virtue ; it consists in perfect affection towards an equal. Friendships are formed for the sake of pleasure, convenience, or virtue. Friendship is cherished by mutual acts of generosity ; it is begun in kindness, and preserved by concord ; its end is the pleasant enjoyment of life. Pleasures are

essentially different in kind: Disgraceful pleasures are unworthy of the name. The purest and noblest pleasure is that which a good man derives from virtuous actions. Happiness, which consists in a conduct conformable to virtue, is either contemplative or active. Contemplative happiness, which consists in the pursuit x > f knowledge and wisdom, is superior to active happiness, because the understanding is the higher part of human nature, and the objects on which it is employed are of the noblest kind. The happiness which arises from external possessions is inferior to that which arises from virtuous actions ; but both are necessary to produce perfect felicity. This may serve as a specimen of the moral philosophy which is to be found in Aristotle's book of Ethics, in his Greater Morals, and his .discourse on the Virtues. The remarks (for they cannot be called principles or reasonings), are miserably poor philosophically considered; yet they have sufficient semblance of truth and excellence to catch even aged boys; and the reader must be able to recognise them as familiar acquaintances; for they have been much hackneyed. Virtue, as consisting in the golden mean between two extremes, has had many admirers, and has been presented under very many forms and aspects. All the world has heard of the sapience of Socrates, and without all controversy he must have possessed much more moral wisdom than Plato or Aristotle, both of whom, like some modern moral philosophers, were much fonder of metaphysics than of ethics ; and, like these too, they were very apt to get beyond their depth.

As a sort of middle link, between the moral philosophy of .Socrates and that of the Stoics, some notice may be taken of the doctrine of the Cynics, so designated, it would seem, from th& snarling severity of their temper, in which they gloried as the point of honor, or distinguishing peculiarity of their sect. .Yet there were some good points about them, and their moral maxims and wise saws will bear an advantageous comparison with those of any of the ancient sages.

' Virtue,' say they, ' alone is a sufficient foundation for a happy life. Virtue consists not in a vain ostentation of learning, or an idle display of words, but in a steady course of right conduct. Wisdom and virtue are the same : a wise man will always be contented with his condition, and will live rather according to the precepts of vir-tue, than according to the laws or customs of his country. Wisdom is a secure and impregnable fortress ; virtue, armour which cannot be taken away. Whatever is honorable is good ; whatever is disgraceful is evil. Virtue is the only bond of friendship. It is better to associate with a fcw good men against the vicious multitude., than

to join the vicious, however numerous, against the good. The love of pleasure is a temporary madness. As rust consumes iron, so does envy consume the heart of man. That state is hastening to ruin in which no difference is made between good and bad men. The harmony of brethren is a stronger defence than a wall of brass. A wise man converses with the wicked as a physician with tne sick, not to catch the disease, but to cure it. The most necessary part of learning is to unlearn our errors. A philosopher gains at least one thing from his manner of life, the power of conversing with himself. Virtue of mind, as well as strength of body, is chiefly to be acquired by exercise and habit. Nothing can be accomplished without labor, and every thing may be accomplished with it. Even the contempt of pleasure may, by the force of habit, become pleasant. All things belong to wise men to whom the gods are friends. The ranks of society originate from the follies and vices of mankind, and are therefore to be despised. Laws are necessary in a civilised state ; but the happiest condition of human life is-that which approaches the nearest to a state in which all are equal, and the only ground of distinction is virtue. The end of philosophy is to subdue the passions, and prepare for every condition of life.'

There is something of a mental and moral elevation about these maxims, and they are manifestly the rudiments of all the doctrines of the Stoics. They are ascribed to Antisthenes and Diogenes ; and there can be no reasonable doubt that many things reported of these Cynics unfavorable to their reputation were mere calumnies, invented and propagated by malignity. They might offend such a sickly sense of propriety as that of their Grecian contemporaries without rudeness and insolent brutality.

The Stoics (thus designated from the Greek word stoa, the portico or porch of their school, said to have been the most famous in Athens), at the head of whom stands Zeno, the founder of the sect, are to be considered as the Cynics under a new name and different modification of doctrine and discipline. But it is difficult to give a brief statement of their moral philosophy. Like the other ancient philosophers, they were much perplexed with the great question concerning the origin of evil.

Some of them adopted the notion of the Platonists, and ascribed it to the evil or perversely refractory nature ot matter, which it was not in the power of the Great Artificer to change ; but most of them attempted to relieve the difficulty by having recourse to fate, saying that evil was the necessary consequence of that eternal necessity, to which the great Whole, comprehending both God and matter, is subject. Indeed the sturdy Stoic had another method of getting rid of the difficulty and of evading the notion ; or, at least the admission of evil altogether ; for that pain was not an evil he would utter with a groan extorted by the force of suffering.

It was their fundamental doctrine in ethics, that one ultimate end ought, for its own sake, to be pursued ; and that this end was to live agreeably to nature, or to be conformed to the law of fate by which the world is governed. Strange

things were propounded and asserted by them on this head ; such as that we should yield to the impressions of nature, contemplate trutli, and imitate God, by making the eternal reason and immutable law of the universe the rule of our actions; that to live according to nature is virtue, and virtue is happiness; that every man, having within himself a capacity of discerning and following the law of nature, has his happiness in his own power, and is a divinity to himself; that external things contribute nothing towards happiness, and therefore are not in themselves good ; that pain, which does not belong to the mind, is no evil ; that the wise man will be happy in the midst of torture; that every virtue being a conformity to nature, and every vice a deviation from it, all virtues and vices are equal; that the real wise man (a sort of beau ideal man of the Stoical brain), feels neither pleasure nor pain ; that he exercises no pity ; that he is free from faults; that he is divine ; that he can neither deceive nor be deceived ; and much more of the same sort which it is not worth while to set down.

The Stoics distinguished duties into three classes (and the same distribution of them is al-most universally adhered to in modern times), as they respect God, ourselves, and our fellow-creatures. The duties of religion are, to think justly concerning God, and to worship him piously. He thinks justly of God who believes him to be the supreme director of human affairs, and the author of all that is good or fitting in human life. He worships God piously who reveres him above all beings ; who perceives and acknowledges him in all events ; \vho is in every thing resigned and obedient to his will ; who patiently receives whatever befals him, from a persuasion that whatever God

appoints must be right ; and who cheerfully follows wherever Di-vine Providence leads him, even though it be to suffering and death.

The sum of man's duty towards himself is, to subdue his passions of joy and sorrow, hope and fear, and even pity. He who is, in this respect, perfectly master of himself is a wise man; and in proportion as we approach a state of apathy we advance towards perfection. Virtuous self-command consists not in preventing the casual impressions of external objects upon the senses, in which the mind is rather passive than active ; but in not giving a voluntary assent to those passions which external objects excite. A wise man may justly and reasonably withdraw from life whenever he finds it expedient ; not only because life and death are among those things which are in their nature indifferent, but because life may be less consistent with virtue than death. Since all duty arises from a conformity to nature, it may hap-pen that a man may be in such circumstances, that to remain in life may be more contrary to nature than to depart. A wise man will, at the close of every day, take a retrospective survey of his words and actions, that he may confess his errors and amend. The first and noblest exercise of wisdom is to examine ourselves, and regulate our dispositions and actions by the law of virtue. Hence will arise self-denial, and a contempt of pleasure. A wise man will never suffer himse.f to be diverted from his duty by any prospect of

indulgence, or any fear of loss, pain, or death.

The duty we owe to others is to love all men, even our enemies. A good man will love his neighbour, will abstain from injuring him, and take pleasure in protecting, assisting, and benefiting him. He will not think that he is born for himself, but for the common good of mankind. He will consider himself sufficiently rewarded by the consciousness of well-doing, and will never cease to do good, though he may have no witness of his deeds or prospect of receiving any applause or recompense for his beneficence. The wise man never remits the punishment due to a criminal through pity, which is a weakness not to be indulged ; but, in cases where reason suggests sufficient grounds for clemency, he will not treat a delinquent with rigor. He will relieve the sick, assist the shipwrecked, afford protection to the exile, or supply the hungry with food, but with an undisturbed

mind and a serene countenance; disdaining all sorrow arising from sympathy, as well as from personal sufferings. No one is more ready than the wise man to exercise lenity and benignity, and to attend to the welfare of those around him, and the general interest of mankind.

There is in all this perhaps not a little extravagance and absurdity ; and something of very mischievous moral tendency ; but there is much also truly excellent and noble, ‘ good and profitable* to men. And when we consider the peculiar circumstances of the ages in which the stoical doctrines chiefly flourished, which presented every where around the few reflective and contemplative minds privileged with something of right thought and good feeling, a cold and gloomy despotism, that permitted them only to gaze on misery if they did not strive to rise wholly above it, and set evil at defiance; we cannot wonder that a philosophy which gave, or which promised, aid to this necessary elevation above the scene of human suffering and ignominy, should have been the favorite philosophy of every better spirit, of all those whom at the distance of so many centuries we still venerate, as if they were more than mortal deliverers of mankind. Indeed, some have been disposed to consider the stoical philosophy as a special provision of nature, or as raised up in the course of providence in aid of oppressed humanity. ‘ Among the different schools,’ says Apollonius in his Eulogy of the Emperor Marcus Aurelius Antoninus, ‘ he soon found one which taught man to rise above himself. It discovered to him a kind of new world, in which pleasure and pain were annihilated ; where the senses had lost all their power over the soul ; where poverty, riches, life, death, were nothing, and virtue alone existed. Romans ! it was this philosophy which gave you Cato and Brutus, and which supported them amidst the ruins of liberty. It extended and increased under your tyrants. It seemed to have become necessary to your oppressed ancestors, whose precarious life was incessantly under the axe of the despot. In those times of degradation, it alone maintained the dignity of human nature. It taught to live it taught to die ; and, while tyranny was degrading the soul, it lifted it up again with more force and grandeur. This

heroic philosophy was made for heroic souls. Aurelius marked, as one of the most fortunate days of his whole life, that day of his boyhood when he first heard of Cato. He preserved with gratitude the names of those also who made hitn acquainted with Brutus and Thraseas; and he thanked the gods that he had enjoyed the privilege of reading the maxims of Epictetus.’

This emperor was himself one of the most illustrious specimens of the doctrine of Zeno, which found in him a favorable soil ; and we willingly yield ourselves up for a time to the impassioned eloquence of his stoical panegyrist, which is almost equalled in intensity of admiration by philosophers of recent times. ‘ If,’ says Montesquieu, De 1’Esprit des Lois, liv. xxiv. chap. 10, ‘ I could for a moment cease to think that I am a Christian, I should not fail to rank the destruction of the sect of Zeno among the misfortunes of the human race. It was extravagant only in feelings which possess a moral grandeur, ??? in the contempt of pleasures and pains. It alone made great citizens and great men ; it alone made emperors worthy of being called great. While the stoics regarded as nothing riches, grandeur, pleasures, and afflictions, they occupied themselves solely with laboring for the happiness of others in the discharge of the various social duties. They seemed to re-gard that holy spirit, the portion of the divinity which they believed to be in man, as a sort of bountiful providence that was watching over the human race. Born for society they considered that their office was to labor for its good ; and ,they labored at little cost to the society which they benefited, ??? because their reward was all within _themselves : their philosophy sufficed for their happiness ; or. rather the happiness of others was the only accession which could increase their own.’

This we must remember is panegyric, which usually admits of much deduction and abatement. That there was much of what was very fine and brilliant about the moral philosophy of Zeno and his followers is readily admitted, but we are not qnite so confident about its moral efficacy, or that what was so fine in theory and beautiful on paper worked well in practice. The very best of the stoics were after all men of very equivocal character. And if, as we believe Dr. Campbell has somewhere remarked, those who overstrain piety or virtue so as to render it impracticable be its greatest enemies, we fear Zeno, Cleanthes, and Chrysippus, can hardly be ranked among its friends. It is well to have a high mark of moral excellence, because the higher we aim the higher we are likely to rise in actual attainment. The mark, however, must not be placed above the reach of possibility, or beyond our very thoughts and persuasions, and expectations. But, if some parts of the stoical morality had been as attainable in practice as we deem them absurd and impossible, they would still have been the reverse of real excellence or virtue. ‘ If it had been possible for human na-ture to feel an absolute indifference as to every thing external, unless from some relation which it bore, or was imagined to bear, to the Divinity, how much of all that tenderness which renders

the domestic and friendly relations so delightful, would have been destroyed by the mere cessation of the little pleasures and little exercises of kindness and compassion which foster the benevolent regard. In relation to these private affections, the stoical system must have been practically injurious to virtue.'

One peculiarity of the moral philosophy of Zeno is very attainable; but there are comparatively few moral reasoners who will applaud it, though some have been disposed to justify it. The reader will perceive we allude to suicide, which had the fullest permission, if not the merit, of an act of moral heroism awarded to it, ††† at least there was nothing of blame or disgrace associated with it in the mind of a stoic. This in-deed is a strange anomaly in a moral system, especially in a system extravagantly boastful of an impracticable kind of resignation, patience, fortitude, and of conformity to nature and of submission to the will of God. On the whole, we must conclude that the ethics of Zeno and his followers, however splendid, and in some respects good, deviated as a system from all sound principles, and had a tendency to produce artificial characters, and to encourage moral affectation and hypocrisy. The piety taught by this system is nothing but a quiet submission to irresistible fate. The self-command enjoined would annihilate the best affections of the heart, and many of the most endearing virtues of life. The indulgence granted to suicide is inconsistent not only with the genuine principles of piety, but even with that constancy which was the most essential ingredient of stoical perfection: and was, therefore, itself a suicide of the scheme.

There is one remark more before leaving the system of the stoics. The reader must have perceived, in the best and truly excellent parts of it, a striking resemblance of the moral features of the gospel, or something like the spirit and sentiments of Christianity : such as self-denial, resignation to the divine will, universal benevolence and beneficence, doing good to all men, relieving the afflicted, and loving even enemies. This may be accounted for in various ways. The coincidence might perhaps be casual, or Christianity might borrow from stoicism, or the latter might borrow from the former. Now of all these three suppositions the last is the only one that we consider at all

probable. It is in the latest editions of stoicism that we find most resemblance of Christian principle and sentiment. It is comparatively faint in the moral writings of Cicero, who borrowed the materials of his moral declamation chiefly from the stoics ; but it is strongest in the writings of Seneca, and in the recorded sentiments of Epictetus and other stoics who lived subsequently to the general diffusion of the Gospel in the Roman empire.

Many have believed that Seneca was secretly a Christian. We know of no sufficient evidence to warrant this belief; but he was certainly a philosopher likely to make himself acquainted with the more remarkable doctrines of Christianity, particularly those of a moral nature ; and he was a likely enquirer also to avail himself of sentiments that were favorable to what he considered pure and sublime moral doctrines. This

seems, indeed, to have been what his heart was set upon, without caring much whence he had the materials. It has been questioned, indeed, whether he ought to be ranked among the stoic or the eclectic philosophers ; and the freedom of judgment which he expressly claims, together with the respect which he pays to philosophers of different sects, clearly prove that he did not implicitly attach himself to the system of Zeno. He speaks, indeed, of our Cleanthes and our Chrysippus; but he speaks in the same friendly and fraternal style of our Demetrius and our Epicurus. There can be no doubt, however, from the general strain and spirit of his writings, that he adhered in the main to the system of the stoics. Almost all, indeed, who were eminent for philosophic spirit of that time in the Roman empire were more or less attached to the same system. Most of the poets and historians were evidently well acquainted with it ; and some of their loftiest moral sentiments derived their sublimity from its elevating influence.

The only other ancient system of moral philosophy entitled to notice is that of Epicurus ; and it is the very antithesis of that of Zeno ; for no two systems can well be imagined more dissimilar, or more opposed to one another. They may be regarded as the two opposite extremes in the ancient moral systems ; and probably the mutual repulsion or antipathy of their respective founders and partisans was the principal reason of their receding so far from the golden mean, so that the one became impracticable, vain, and visionary, and the other degenerated into the licentiousness of the most debasing sensual gratification that ever had the impudence to plead the sanction of philosophy. But,

though epicurism has long been the name of gross pleasure, it does not appear that Epicurus himself was either its slave or its patron. His priciples, however, had a sort of natural tendency to that with which his name has been so long identified.

Epicurus must certainly be considered as atheistical in doctrine ; consequently his moral philosophy could have no higher end or relation than the present life and human advantage in this world. In this view it may be considered as identical with the moral philosophy of Hume, who makes utility the standard and measure ot virtue. The only difference is in the name given to this standard and measure. Epicurus called it pleasure ; Hume called it utility.

The doctrine of Epicurus concerning nature differs from that of the stoics chiefly in these particulars : ihe latter considered God to be the soul of the world, diffused through universal nature : the former admitted no primary intelligent nature into his system, but held atoms and space to be the first principles of all things, and ascribed every appearance in nature to a fortuitous collision and combination of atoms. When reduced to inextricable difficulties, by the absurdity of his system, he attempted to propound something like theism, or to employ a language not manifestly subversive of the very idea of an intelligent cause of all things ; but he was compelled to seek refuge in the common asylum of philosophic ignorance and pretension, ??? wcrds without meaning.

The science of physics (in which he was certainly in some respects nearer the truth than many of the other ancient philosophers) was, according to the admission of Epicurus, subordinate to that of ethics ; and his whole doctrine concerning nature was professedly adapted to rescue men from the dominion of troublesome passions, and to lay the foundation of a tranquil and happy life. The following is a summary of the principles of his moral philosophy, so far as the statements of Cicero, Laertius, and others, can be ascertained and relied on.

The end of living, or the ultimate good, which is to be sought for its own sake, according to the universal opinion of mankind, is happiness ; yet men for the most part fail in the pursuit of this object, either because they do not form a right idea of the nature of happiness, or because they do not employ proper means for its attainment. Since it is every man's interest to be happy, through the whole of life, it is the wisdom of every one to employ philosophy in the search of felicity without delay ; and there cannot be greater folly than to be always beginning to live. The happiness of man is that state in which he enjoys as much of the good, and suffers as little of the evil, incident to human nature as possible. A wise man, though deprived of sight and hearing, may experience happiness in the enjoyment of what yet remains of good in his possession; and when suffering torture, or laboring under a painful disease, he can mitigate the anguish by patience, and enjoy, under the severest affliction?, the consciousness of his own constancy. But it is impossible that perfect happiness can be possessed without the pleasure which attends exemption from pain and the enjoyment of the good things of life. Pleasure is in its nature good ❓❓❓ pain is in its nature evil; therefore the one is to be pursued, the other avoided for its own sake. Pleasure or pain is not only good or evil in itself, but the measure of what is good or evil in every object of desire, or of aversion ; for the ultimate reason why we pursue one thing and avoid another is because we expect pleasure from the one and apprehend pain from the other. If we sometimes decline a present pleasure, it is not because we are averse to pleasure itself, or do not make it the ultimate reason of choice and preference, but because we conceive that, in the present instance, it will be necessarily connected with greater pain. In like man-, ner, if we sometimes voluntarily submit to present pain, it is because we judge it to be necessarily connected with, or conducive to, greater pleasure. So that in voluntarily refusing present pleasure, and choosing to endure

immediate pain, it is in each case from a sense of interest, or from a desire and preference of pleasure. Though all pleasure, therefore, is essentially good, and all pain is essentially evil, it does not necessarily follow that in every single instance the one ought to be pursued and the other avoided ; but reason is to be exercised in distinguishing and comparing the nature, and degrees, and duration of each, that the result may be a wise choice of that which shall appear to have the greatest amount of good.

That pleasure is the chief good appears from

the inclination which every animal, from its first birth, discovers to pursue pleasure and avoid pain ; and is confirmed by the universal experience of mankind, who are incited to action by no other principle, than the desire of avoiding pain, or of obtaining pleasure. There are two kinds of pleasure; one consisting in a state of rest, in which both body and mind are undisturbed by any kind of pain ; the other arising from an agreeable agitation of the senses, producing a corresponding emotion in the mind. It is on the former of these that the enjoyment of life chiefly depends. Happiness may therefore be said to consist in bodily ease, and mental tranquillity. When pleasure is asserted to be the end of living, we are not then to understand that violent kind of delight or joy which arises from the gratification of the senses and passions, but merely that placid state of mind which results from the absence of every cause of pain or uneasiness. Those pleasures which arise from agitation are not to be pursued as in themselves the end of living, but as means of arriving at that stable tranquillity in which true happiness consists. It is the office of reason to confine the pursuit of pleasure within the limits of nature, for the attainment of that happy state in which the body is free from every kind of pain, and the mind from all perturbation. This state must not, however, be conceived to be perfect in proportion as it is inactive and torpid, but in proportion as all the functions of life are quietly and pleasantly performed. A happy life neither resembles a rapid torrent, nor a standing pool, but is like a gentle stream that glides smoothly and silently along.

We will interrupt, for a moment, the statement of the particulars contained in the doctrine of Epicurus, for the sake of presenting a remark or two from Aristippus, the nearest of all the ancient philosophers to Epicurus, though more of a libertine both in theory and practice. Human nature, said Aristippus, is subject to two contrary affections, pain and pleasure. Pleasure is the ultimate object of human

pursuit; and ,it is only in subserviency to this that fame, friendship, and even virtue, are to be desired. This is very explicit. But the sentence we wished to compare with the concluding part of the statement we have already given of the opinions of Epicurus is the following : ††† Happiness consists not in tranquillity or indolence, but in a pleasing agitation of the mind, or active enjoyment. This is happier than the illustration of happiness by Epicurus when he says it resembles neither the torrent nor the standing pool, but a gentle stream that glides smoothly and silently along : and we may compare with it a passage from Paley's inimitable chapter on happiness in his Moral Philosophy. ' Happiness consists, secondly, in the exercise of our faculties either of body or mind, in the pursuit of some engaging object. It seems that no plenitude of present gratifications can make the possessor happy, for a continuance, unless he have something in reserve, something to hope for and look forward to. This I conclude to be the case from comparing the alacrity and spirits of men who are engaged in any pursuit which interests them,

with the dejection and ennui of almost all, who are either born to so much that they want nothing more, or who have used up their satisfactions too soon, and drained the sources of them. Hope, which thus appears to be of so much importance to our happiness, is of two kinds ; where there is something to be done towards attaining the object of our hope, and where there is nothing to be done. The first alone is of any real value ; the latter being apt to corrupt into impatience, having no power but to sit still and wait, which soon grows tiresome. * Those pleasures are most valuable, not which are most exquisite in the fruition, but which are most productive of engagement and activity in the pursuit. A man who is in earnest in his endeavours after the happiness of a future state has in this respect an advantage over all the world ; for he has constantly before his eyes an object of supreme importance productive of perpetual engagement and activity, and of wliich the pursuit (which can be said of no pursuit besides) lasts him to his life's end. Yet even he must have many ends besides the far end ; but then they will conduct to that, be

subordinate, and in some way or other capable of being referred to that, and derive their satisfaction, or an addition of satisfaction, from that.' Reader, we need not tell you that this is admirable ; and we thought that we could not do better than present this beautiful specimen of true philosophy in connexion with the doctrines of Epicurus and Aristippus, that you might see how much modern wisdom excels the boasted wisdom of the ancients, and how much better the moral philosophy of Christians is, than that of the most celebrated heathens. But we must return to Epicurus.

The happy life, which resembles a gentle stream, can be attained only by a prudent care of the body and steady government of the mind. The diseases of the body are to be prevented by temperance, or cured by medicine, or rendered tolerable by impatience. Against the diseases of the mind philosophy provides antidotes ; and the means which it employs are the virtues, the origin of which is prudence or wisdom ; which instructs men to free their understandings from the mists of prejudice; to exercise temperance and fortitude in the government of themselves ; and to practise justice towards others. Though pleasure or happiness, which is the end of living, be superior to virtue, which is the only means to the end, it is the interest of every one to practise all the virtues ; for, in a happy life, ††† pleasure can never be separated from virtue.

A prudent man will, to secure his tranquillity, consult his natural disposition in the choice of his plan of life. If he be persuaded that he should be happier in the married state than in celibacy, he ought to marry ; but, if he be convinced that matrimony would impede his happiness, he ought to remain single.

Temperance is the discreet regulation of the desires and passions, by which we are enabled to enjoy pleasures without suffering any consequent inconvenience. They who maintain such a constant self-command as never to be enticed, by the prospect of present indulgence, to do that

which will be productive of evil, obtain the truest pleasure by declining pleasure. As some desires are natural and necessary ; others natural but not necessary ; others again neither natural nor necessary, but the offspring of false judgment; it must be the office of temperance to gratify the first class, as far as nature requires ; to restrain the second within the bounds of moderation ; and, as to the third, resolutely to op-pose, and if possible entirely repress them.

Sobriety, as opposed to gluttony and inebriety, is of admirable use in convincing men that nature is satisfied with a little, and enabling them to content themselves with simple and fru-gal fare. Such a manner of living is conducive to health, renders a man alert and active in all the business of life, gives an exquisite relish to the occasional varieties of a plentiful board, and prepares to meet every reverse of fortune without the dread of want.

Continence is a branch of temperance, which prevents the diseases, infamy, remorse, and punishment, usually incurred by indulgence iu illicit attachments. Music and poetry, frequently incentives to licentious pleasures, are to be sparingly and cautiously used.

Gentleness, as opposed to an irascible temper, greatly contributes to tranquillity and happiness, by preserving the mind from perturbation, and by arming it against the assaults of calumny and malice. A wise man, who puts himself under the government of reason, will be able to receive an injury with calmness, and to treat the person who committed it with lenity. He will rank injuries among the casual events of life, and will prudently reflect that he can no more stop the natural current of human passions than he can curb or calm the stormy winds. Disobedient or disorderly members of a family, or of a state, should be chastised or punished without wrath.

Moderation, in the pursuit of honors and riches, is the only security against disappointment and vexation. A wise man, therefore, will prefer the simplicity of a country life or humble station to the magnificence of courts. A wise man will consider future events as wholly uncertain, and will not suffer himself to be elated with confident expectation, anxiously disquieted with doubt or depressed by despair, all which are equally destructive of tranquillity. It wilV contribute to the enjoyment of life to consider death as its termination, and that it becomes us to retire like satisfied guests, neither regretting the past nor solicitous about the future.

Fortitude, the virtue which enables us to en-dure pain and banish fear, is of great use in producingˆ tranquillity. Philosophy instructs us to pay homage to the gods, not from hope or fear, but from veneration of their superior nature. It enables us also to conquer the fear of death by teaching us that it is no proper object of terror ; since, whilst we live, death is not, and when death comes we live not: therefore, it concerns neither the living nor the dead. The only evils to be apprehended are bodily pain and mental distress. Pain of body it becomes a wise man to bear with firmness ; because if slight it may be easily borne, and if intense it cannot last long. Distress of mind commonly

arises not from nature but from opinion ; a wise man will therefore arm himself against it by reflecting that the gifts of fortune, the loss or privation of which he may be inclined to deplore, were never his own, but depended on circumstances which he could not command. If, therefore, they happen to leave him, he will endeavour as soon as possible to obliterate the remembrance of them, by occupying his mind in pleasing contemplation, and engaging in agreeable avocations.

Justice respects man as a social being, or as iivnig in society, and is the common bond, without which no society can exist. This virtue, like the rest, derives its value from its tendency to promote the happiness of life. It is not only never injurious to the man who practises it, but nourishes in his mind calm reflections and pleasant hopes ; whereas it is impossible that the mind in which injustice dwells should not be full of disquietude. As it is impossible that iniquitous actions should promote the eujoyment of life, since remorse, legal penalties, and public disgrace, must increase its trouble, every one who follows the dictates of sound reason will practise the virtues of justice, equity, and fidelity. The necessity of the mutual exercise of justice in society, to the common enjoyment of the gifts of nature, is the foundation of those laws by which it is prescribed. It is the interest of every individual in a state to conform to the laws of justice ; for by abstaining from injuring others, and by rendering them their due, he contributes his part towards the preservation of the social union, on the perpetuity of which his own safety depends. Nor ought any one to think that he is at liberty to violate the rights of his fellow-citizens, provided he can do it securely ; for he who has committed an unjust action can never be certain that it will not be discovered ; and, however successfully he may conceal it from others, this will avail him little, since he cannot conceal it from himself, or rid himself of the rankling disquiet of being conscious of the fact, and privy to his own disgrace: suspicion and apprehension will haunt his mind. In different communities different laws may be enacted, according to their respective circumstances ; for a law good for one

community may not be good for another. Whatever is thus prescribed is to be considered as a rule of justice, so long as the society shall judge the observance of it to be for the general good or benefit of the community considered as a whole. But, whenever any rule of social conduct is found by experience to be no longer useful or conducive to the public good, it should be no longer enforced, but repealed.

Nearly allied to justice are the virtues of beneficence, compassion, gratitude, piety, and friendship. He who confers benefits on others procures to himself the satisfaction of seeing the stream of plenty flowing around him from the fountain of his own beneficence; and he enjoys at the same time the pleasure of being esteemed by others. The exercise of gratitude, filial affection, and reverence for the cods, is necessary to avoid the hatred and contempt of all men. I'riendships are contracted for the sake of mu-tual benefit; but, by degrees, they ripen into

such disinterested attachment that they are continued without any prospect of advantage, or calculating regard to interest. Between friends there is a kind of league that each will love the other as himself. A true friend will partake of the wants and sorrows of his friend as if they were his own ; he will relieve him when in want, visit him in prison, or in the chamber of sickness ; nay, situations may occur in which he would not hesitate to die for him. It cannot then be doubted that friendship is one of the most useful means of procuring a secure, tranquil, and happy life.

'The above is a summary of the Epicurean system of moral philosophy, taken chiefly from such authorities as Laertius and Cicero, by Brucker, and drawn up, as he himself expresses it, from Brucker by Dr. Enfield, whom we have followed, with little variation of expression, and no essential difference of statement. The inquisitive reader may consult Brucker, Enfield. and Stanley, concerning the history of ancien* philosophy and philosophers; and, if he think ir worth the time and trouble, he may verify their statements by examining their authorities.

The moral philosophy of Epicurus is for th►► most part very plausible ; it is all very fine ; ana much of it may be profitable to men, if they cau but avail themselves of its philosophic wisdon,. The reader must have perceived from it, too how little there is new in these matters unde the sun ; and that most of the fine things whip-? have been said and sung by the Cicero's ant. Addison's, and Horace's and Pope's, were trit1 cal sentiments in the world, long before they were

born. The same remark applies to many of the modern moral philosophers, who have borrowed and retailed the opinions of the ancients, in a manner which would induce common readers to consider them as new and fresh from the spring of original invention or discovery. Considered as a whole, the system has the merit of much simplicity, intelligibleness, and congruity. There is indeed some mere verbiage and paralogism about the different parts, but not so much as is usually to be found in moral systems,and the machinery is altogether well adj usted . We can almost always tell what this philosopher is about. We see him lay his foundation, and build upon it the whole superstructure of his ethics, such as they are. He does nothing in the dark, or up among the clouds. All is on terra firma, and in broad daylight. In this respect Epicurus is a perfect contrast to most of the ancient philosophers, such as Plato and Aristotle, and particularly Zeno, to whom, in moral philosophy, he stands most decidedly opposed. We need not wonder therefore that, notwithstanding all the abuse heaped upon his memory, he should have been the favorite with all the better reasoners of modern times, such as Bacon, Gassendi, Hobbes, Newton, Locke, not to mention many others.

It is almost wholly unnecessary to attempt any analysis of the moral system of Epicurus ; for it is so plain and simple as to require no exposition. We shall have occasion, however, to re-fer to it when we come to examine some of the modern theories of morals ; for it may be considered as essentially identical with the doctrine of Hobbes, of Mandeville, and of Hume.

MORAL PHILOSOPHY.

The pleasure or happiness of Epicurus is the greatest possible amount of enjoyment in this life. This happiness is the chief good ; the only object of man’s supreme regard. It is the standard and measure of virtue; or rather virtue is nothing but practical prudence in the pursuit of the greatest possible quantity of enjoyment. Not only temperance and fortitude, but justice, beneficence, compassion, gratitude, piety, and friendship, are virtues merely because they are useful to the individual, or subservient to his happiness. All is resolvable into self-love, or rather self-interest. Virtue is nothing but driving the best bargain we can in the world. It is the wisest speculation we can enter upon and prosecute, to realise a large profit. It is not only the

profitable pursuit, as piety and virtue have been sometimes quaintly designated, it is the pursuit of profit. According to Epicurus, self-love, or the desire of happiness, is the sole spring of moral action ; self-interest, or the greatest amount of attainable happiness, is the goal ; and virtue, wisdom, or prudence (for there is no real difference in this case between the one and the other), is the means to that end. Vice is the folly of one who makes himself poor when he might become rich ; virtue is the wisdom of one who, instead of beggaring his enjoyment, enriches it with the greatest possible accumulation of wealth and possession.

It is not necessary to say more. We cannot wonder that the doctrine of Epicurus immediately degenerated into the vilest licentiousness, however harmless it might be in the management of such an intellectual man as its author. It is essentially a doctrine after the heart of every selfish being; and selfish human beings are, for the most part, sensual. But if sensuality had been no necessary consequence of the doctrine, nay, if it had been found rather to diminish than to increase the sensual tendency in its disciples, it would not have been for that worthy of all acceptation, even on the ground of social utility. Human society has been always bad enough ; but it would be infinitely worse, if it were from the highest to the lowest, and from the oldest to tlve youngest, thoroughly principled and influenced with the moral philosophy of Epicurus. What could we expect of a set of beings, not only selfish, but philosophising the selfish principle into such dignity and importance as to constitute it the object of supreme regard ; the standard and measure of all excellence? In this view we need not wonder that the lovers of expiring liberty in the Roman empire hehl the Epicurean system in abhorrence, whilst they cordially embraced the nobler system of Zeno with all its faults.

We might proceed at once from the moral philosophy of Epicurus to that of the moderns most akin to his, as contained in the writings of Hobbes, Mandeville, and Hume. But, for the sake of presenting a fuller historical view, some intermediate notice may be taken of those who went before them after the revival of learning. In the section of his work which treats of Mo-dern Attempts to improve Moral and Political Philosophy, Dr. Enfield says, after Brucker (who was not remarkable for critical sagacity),

* Scarcely had philosophy emerged out of the darkness of barbarism, when learned men, tired of treading for ever the barren path of scholastic controversy, began to visit the flowery and fertile fields of

moral philosophy. Several of those writers, to whom the world is indebted for the revival of polite learning, wrote moral treatises after the manner of the ancients. Among these, the first of eminence is Montaigne, whose essays, consisting of miscellaneous observations, chiefly moral, are written with great ingenuity and vivacity. Many of his reflections, it must be owned, have a tendency to encourage scepticism; and sometimes he indulges a luxuriance of fancy, and freedom of language, which grossly violate the rules of decorum ; but he must not be wholly excluded from the class of useful moralists.'

We have intimated that we do not consider Brucker a very sound critic. That the essays of Montaigne possess much ingenuity and vivacity is freely admitted ; but that he is a useful moralist is somewhat doubtful. According to Mr. Dugald Stewart, both he and Rochefoucault have had a very pernicious influence on the good people of France. Certain it is, however, that Montaigne was the first author of eminence among the moderns who wrote about morals.

Brucker makes honorable mention of the moral philosophy of Placcius, a native of Lu-beck. ' This writer,' he says, ' was, if not the first, certainly among the first, who distinguished the science of ethics from that of jurisprudence, and attempted to assign each its proper limits. But these subjects were afterwards more fully and scientifically handled by Grotius and Puffendorff, whose eminent services, in this and other branches of science, entitle them to particular notice.'

The reputation of Grotius and Puffendorff has been for some time very much on the decline. The former is however considered a sort of father of moral philosophy in modern times. ' One celebrated work alone,' says Mr. Stewart, ' the treatise of Grotius De Jure Belli et Pacis,' first printed in 1625, ' arrests our attention among the crowd of useless and forgotten volumes, which were then issuing from the presses of Holland, Germany, and Italy. The influence of this treatise, in giving a new direction to the studies of the learned, was remarkable, and continued lo.ng to operate with undiminished effect. Notwithstanding the just neglect into which Grotius and his successors have lately fallen, it will be found, on a close examination, that they form an important link in the history of modern literature. It was from their school that most of our best writers on ethics have proceeded, and many of our most original enquirers into the human mind ; and it is to the same school that we are chiefly indebted for the modern science of political economy.

Mr. Stewart is evidently not a little charmed with the flowers and fruits growing out of Grotius and Puffendorff, though he is constrained

to admit the stocks or stems to be almost worthless. ‘???In perusing,’ he remarks, ‘ their systems, it is impossible not to feel a very painful dissatisfaction, from the difficulty of ascertaining the precise object aimed at by them. So vaLjue and

indeterminate is the general scope of their researches, that not only are different views of the same subject taken by different writers, but even by the same writer in different parts of his work ; a circumstance which of itself sufficiently accounts for the slender additions they have made to the stock of useful knowledge; and which is the real source of that chaos of heterogeneous discussions through which the reader is perpetually forced to fight his way.’ This is almost as severe, upon the far famed Grotius and Puffendorff, as the remarks of Jeremy Benthnm in his Introduction to the Principles of Morals and Legislation. ‘ Of what stamp,’ he asks, ‘ are the works of Grotius, Puffendorff, and Burle-maqui? Are they political or ethical, historical or juridical, expository or censorial. Sometimes one thing, sometimes another: they seem hardly to have settled the matter with themselves.’

It is both amusing and instructive to place, in contrast with the above, the eulogial and almost adoring strains on Grotius, of the moral professors in the Scottish universities 100 years ago. Take as a specimen the following from the pen of Mr. Carmichael, professor of moral philosophy in the university of Glasgow, and predecessor to Dr. Hutcheson and Dr. Adam Smith : ‘ No person liberally educated can be ignorant, that, within the recollection of ourselves and of our fathers’, philosophy has advanced to a state of progressive improvement hitherto unexampled. Nor does this remark apply solely to natural philosophy : the other branches of philosophy have been prosecuted during the last century with no less success ; and none of them in a more remarkable degree than the science of morals. This science so much esteemed, and so assiduously cultivated by the sages of antiquity, lay, for a length of time, in common with all the other useful arts, buried in the rubbish of the dark ages, till (soon after the commencement of the seventeenth century) the incomparable treatise

of Grotius, De Jure Belli et Pacis, restored to more than its ancient splendor that part of it which defines the relative duties. Since that period the most learned and polite scholars of Europe, as if suddenly roused by the sound of a trumpet (quasi classico dato) have vied with ––ach other in the prosecution of this study, ––– so strongly recommended to their attention, not merely by its novelty, but by the importance of its conclusions, and the dignity of its object.'

This will match any of the eulogies of professor Stewart on the philosophy of mind, so recently in its turn the wonder of the day, at least in the Scottish universities; and which drove the lucubrations of Grotius and Puffendorff, and Carmichael and Hutcheson, to the back settlements of the moral hall. Some minds are of a most happy conformation for eulogial persuasion. We can hardly help envying their gracious assurance, and gratulatory delight, in magnifying the verity and importance of their favorite pursuit ; even if the object of it be some obscure phantom, as Bentham designates the law of nature. But let us hear a little about the modern father of moral philosophy, from the elegant mind of Mr. Stewart.

* Among the different views which have been

formed of natural jurisprudence, one of the most common supposes its object to be, to lay down those rules of justice which would be binding on men living in a social state, without any positive institutions ; or (as frequently called by writers on this subject) living together in a state of nature. This idea seems to have been uppermost in the mind of Grotius, in various parts of his treatise.' It was only in such a mind that such au idea could be either uppermost or undermost.

–––To this speculation about the state of nature Grotius was manifestly led by his laudable anxiety to counteract the attempts then recently made to undermine the foundations of morality. That moral distinctions are created entirely by the arbitrary and revealed will of God, had, be-fore his time, been zealously maintained by some theologians even of the reformed church; while, among the political theorists of the same period, it was not unusual to refer these distinctions (as was afterwards done by Hobbes) to the positive institutions of the civil magistrate. In opposition to both, it was contended by Grotius, that there is a natural law coeval with the human constitution, from which positive institutions derive all their force ; a truth which, how obvious and tritical soever it may now

appear, was so opposite in its spirit to the illiberal systems taught in the monkish establishments, that he thought it necessary to exhaust in its support all his stores of ancient learning. The older writers on jurisprudence must, I think, be allowed to have had great merit in dwelling so much on this fundamental principle ; a principle which renders man a law to himself, and which, if once admitted, reduces the metaphysical question concerning the nature of the moral faculty to an object merely of speculative curiosity. To this faculty the ancients frequently gave the name of reason ; as in that noted passage of Cicero, where he observes that ‘ right reason is itself a law, congenial to the feelings of nature; diffused among all men ; uniform ; eternal ; calling us imperiously to our duty, and peremptorily prohibiting every violation of it. Nor does it speak one language at Rome, and another at Athens, varying from place to place, or time to time; but it addresses itself to all nations and to all ages, deriving its authority from the common sovereign of the universe, and carrying home its sanctions to every breast, by the inevitable punishments which it inflicts on transgressors.’

We know not that we could have had any thing better than this for an opening into what Brucker calls the flowery and fertile fields of our modern moral philosophy ; though they are such flowers and fruits as grow upon thorns and briers and thistles, and therefore we are not over fond of them. But, as Paley justly remarks, almost any kind of employment is better than none, and we shall try to make our path through these thorny mazes of controversy as pleasant as possible to such as are willing to accompany us. It is not wholly useless to know something about the different philosophies of the world; indeed some competent acquaintance with them is necessary in self-defence. It is the part of a reasonable being to find out whether thej have

any thing good about them; and still-more to see that they do him no mental or bodily harm. These points we endeavour to keep steadily in view, and we have some observations connected with them to offer upon the passage just quoted from Mr. Stewart’s Dissertation in the supplement to the Encyclopaedia Britannica. We would have willingly indeed taken our final Jeave of him in the article METAPHYSICS, but he nas unexpectedly come in our way once more in an ethical shape. And here, though we should be better pleased to praise, we are again

constrained to blame him ; for in the passage just quoted there is not a little artful management of eulogistic and dyslogistic phraseology, and of dexterous assumption to accomplish a purpose. The term arbitrary for instance, which he connects with the revealed will of God, is obviously dyslogistic, that is invidious, or rather odious. No sound theologian ever spoke of the revealed will of God as arbitrary. The published will ??? the edicts of a Russian autocrat are often arbitrary ; but no pious mind would liken the will of the Supreme Being to that of an earthly des-pot. Mr. Stewart speaks of 'a natural law coeval with the human constitution, from which positive institutions derive all their force; a truth,' he adds, ' however obvious and tritical it may now appear.' This is a remarkable specimen of that dexterous assumption in which he always excels. He says moreover that this obvious and tritical truth 'was opposite in its spirit to the illiberal systems taught in the monkish establishments.' Of course, what was not only obviously true, but also opposite in its spirit to illiberal systems and monkish establishments, must have every possible kind of excellence and recommendation ; but what had monkish establishments to do with the question? They are not in the record or among the premises. The parties to be tried in the cause of moral distinctions were on the one hand theologians of the reformed church, who would resolve them into the revealed will of God ; and, on the other, political theorists, who would resolve them into the positive institutions of the civil magistrate. What business had monks and their illiberal systems among theologians of the reformed church and political theorists ? ' The older writers on jurisprudence,' Mr. Stewart tells us, 'had great merit in dwelling so much on this fundamental principle, which renders man a law to himself.' But, if they had so much merit in dwelling on it, what would their merits have been had they first established it ? Was not the latter first in the order of nature and reason ? If the one was well done, surely the other ought not to have been left undone. As to the dexterous quotation from Scripture, it is sufficient to remark, that Satan showed quite as much dexterity in that way long ago. He too could quote Scripture when he thought he could make it suit his purpose, though his attempts did not prove very successful. ' The principle on which Grotius and Puffendorf so meritoriously dwelled so much, Mr. Stewart adds, ' if it be once admitted, reduces the metaphysical question concerning the nature of the moral faculty to an object merely of speculative curiosity.' This is a sort

of regular manoeuvre with our intellectual and moral philosopher, when he has to effect his retreat from some invincible difficulty.

However important the question may be, if it cannot be fairly met, and logically disposed of, it is slurred over, or got rid of, as an object merely of speculative curiosity ; which always puts us in mind of the fox and the grapes in the fable. When he could not reach them, he scorned to have them, for they were sour worthless things, not worth taking.

We might as well call the foundation on which the whole superstructure must rest an ob-ject merely of speculative curiosity, as make the same affirmation concerning the nature of the moral faculty. The question of its nature is but another form of words for the question of its en-tity, and, without first of all ascertaining what it is, we are attempting, in raising a structure of ethics, to build without a foundation.

We, who call ourselves moral philosophers, may all agree to admit or assume that there is a moral principle or faculty coeval with the human constitution, even though our different theories concerning it be mutually destructive of one another, and our tongues as divided as the builders of Babel ; we may moreover vie with one another in quoting from Cicero splendid declamations in praise of the unknown principle, on which we are professedly at work to raise a moral tower that shall reach the heavens ; but the question will after all occur, to every one who is resolved not to take such a matter for granted, what is it ? I demand some description of it. If you cannot agree among yourselves in what it consists, what evidence hare I that it exists at all ?

If we seek satisfaction in this important particular from those of the same persuasion with Mr. Stewart, though better reasoners, we shall not find it. Dr. Smith says, in his Theory of Moral Sentiments, part III. chap. 5, ‘Upon whatever we suppose that our moral faculties are founded, whether upon a certain modification of reason, upon an original instinct, called a moral sense, or upon some other principle of our nature, it cannot be doubted that they were given us for the direction of our conduct in this life. They carry along with them the most evident badges of this authority, which denote that they were set up within us to be the supreme arbiters of all our actions, to superintend all our senses, passions, and appetites, and to judge how far each of them was to be either indulged or restrained. The rules, therefore, which they prescribe are to be regarded as the commands and laws of the deity, promulgated by those vicegerents which hehassetupwithinus.’

This is quite as affirmative, almost as decla-matory, and altogether as

unsatisfactory, as the noted and ever-to-be-quoted passage of Cicero. Indeed there is so much appearance of striving and straining about it, that we cannot divest ourselves of the suspicion that it was wrought up as a sort of shield against the charge of virtual atheism, in resolving morality into sympathy. This is the principle of our nature, according to Dr. Smith, which is the origin of our mora. faculties; or the local habitation of the vice-

gerents of the Deity, set up within us to promulgate his laws, to be the supreme arbiters of all our actions, and to wear the badges of authority, and superintend and judge all our senses, passions, and appetites. But, according to lord Shaftesbury and Dr. Hutcheson, it is instinct, or a particular sense which they called the moral sense, that is the origin of all the moral faculties Dr. Smith speaks of, and of all the moral distinctions of any description which can possibly exist in connexion wtth human nature. Professors Stewart and Brown do not agree with Dr. Smith in making sympathy the origin of moral distinctions, or the basis of their moral philosophy; nor do they exactly say after Dr. Hutcheson and lord Shaftesbury, in pronouncing for moral instinct as the origin and basis of morality ; but it is difficult to say precisely what they would be at; for they seem to have been unwilling to commit themselves by explicit statements. If, however, any thing can be made, of their statements, they are essentially the same as that of Hutcheson.

The vagueness of Mr. Stewart has long ceased to be a matter of wonder with us ; but we were not a little disappointed and mortified when we came to the ethical part of Dr. Brown's lectures. No where is he so unsatisfactory, and particularly as to the origin of moral distinctions. But the reader shall have an opportunity of judging for himself. ' In surveying,' says Dr. Brown, Lecture 81, 'either our own conduct or the conduct of others, we do not regard the actions that come under our review as merely useful or hurtful, in the same manner as we regard inanimate things, that are independent of our will. "Tiere is a peculiar set of emotions to which the actions of

voluntary agents in certain circumstances give rise that are the source of our moral sentiments, or rather which are themselves our moral sentiments, when considered in reference to the actions that excite them. To these emotions we give the name of moral approbation or moral disapprobation, feelings that are of various degrees of vividness as the actions which we consider are various. The single principle upon which these principles depend is the source of all our moral notions ; one feeling of approbation, as variously regarded in time, being all which is truly meant when we speak of moral obligation, virtue, and merit, that in the works of ethical writers are commonly treated as objects of distinct enquiry ; and that, in consequence of the distinct enquiries to which they have led, and the vain attempts to discover essential differences where none truly exist, have occasioned so much confusion of thought and verbal tautology as to throw a sort of darkness on morality itself.

‘ Instead, then, of enquiring first, what it is. which constitutes virtue, and then what it is which constitutes merit, and then what it is which constitutes our moral obligation to do what we have seen to be right and meritorious, one enquiry alone is necessary, ××× what actions excite in us, when contemplated, a certain vivid feeling ? since this approving sentiment alone, in its various references, is all which we seek in these different verbal enquiries. If a particular action be meditated by us, and we feel, ofi considering

it, tnat it is one of tnose which, if performed by us, will be followed in our own mind by the painful feeling of self reproach, and in the minds of others by similar disapprobation ; if a different action be meditated by us, and we feel that our performance of it would be followed in our own minds, and in the minds of others, by an opposite emotion of approbation, this view of the moral emotions that are consequences of the actions is that which I consider as forming what is termed moral obligation, the moral inducement which we feel to the performance of certain actions, or to abstinence from certain other actions. We are virtuous if we act in conformity with this view of moral obligation ; we are vicious if we act in opposition to it : virtuous and vicious meaning nothing more than the intentional performance of actions that excite, when contemplated, the moral emotions. Our action, in the one case, we term morally right, in the other case morally wrong ; right and wrong, like virtue and vice, being only words that express briefly the actions which are attended with the feeling of moral approbation in the one case, of moral disapprobation in the other case.

‘ When we speak of the merit of any one, or of his demerit, we do not suppose any thing to be added to the virtue or rice ; we only express, in other words, the fact that he has performed the action which it was virtuous or vicious to perform ; the action which, as contemplated by us, excites our approval, or the emotion that is opposite to that of approval. Moral obligation, virtue, vice, right, wrong, merit, demerit, and whatever other words may be synonymous with these, all denote then, as you perceive, relations to one simple feeling of the mind, the distinctive sentiment of moral approbation or disapprobation, which arises on the contemplation of certain actions ; and which seems itself to be various, only because the action of which we speak or think, meditated, willed, or already performed, is variously regarded by us, in time, as future, present, past. There are, in short, certain actions which cannot be contemplated without the instant feeling of approval, and which may therefore be denominated morally right. To feel this character of approvableness in an action which we have not yet performed, and are only meditating on as future, is to feel the moral obligation or moral inducement to perform it; when we think of the action in the moment of volition, we term the voluntary performance of it virtue ; when we think of the action, as already performed, we denominate it merit; in all which cases, if we analyse our moral sentiment, we cannot fail to discern that it is one constant feeling of moral approval, with which we have been impressed, that is varied only by the difference of the time at which we regard the action as future, immediate, orxpast.’

This is the concisest statement of the whole matter we could select ; and it is professedly a brief recapitulation, or, as the author terms it, ‘a short retrospect of his original speculation;’ yet it is wondrous long, ××× a mighty maze of words without any substantial meaning, ××× much ado about nothing, ××× or rather a wonderful effort of striving and straining to make a shadow into a

substance, that he might escape the conscious and manifest folly of attempting to build an ethical structure on nothing, or without a

foundation. Whilst at the drudgery of transcribing this wordy retrospect of the author's original speculation, we were longing most eagerly for a nice morsel of Dr. Smith's delightful philosophic romance, The Theory of Moral Sentiments. Even Dr. Hutcheson's moral philosophy, though somewhat light and frothy, would be choice syllabub in comparison with such a bundle of dry verbal ities about the origin of moral distinctions. But we must surfer Dr. Brown to state the difference between his notion concerning the origin of moral distinctions and that of Dr. Hutcheson. We must, however, abbreviate his statement, both for our own sake and that of the reader.

' In tracing,' says the moral lecturer, 'to an original susceptibility of the mind our moral feelings, we may be considered as arriving at a principle like that which Dr. Hutcheson, after lord Shaftesbury, has distinguished by the name of the moral sense. In our moral feelings, however, I discover no peculiar analogy to perceptions or sensations, in the philosophic meaning of these terms; and the phrase ' moral sense' has had a very unfortunate influence on the controversy as to the original moral differences of actions from the false analogies which it cannot fail to suggest. Were I to speak of a moral sense at present, you would understand me as speaking metaphorically of the original principle of our nature on which the moral emotions depend. But by Hutcheson it was asserted to be truly and properly a sense, ••• as much a sense as any of those which are the source of our direct external perceptions; and the scepticism, which would have been just with respect to such an organ of exclusive moral feeling, has been unfortunately extended to the certain moral principle itself, as an original principle of our nature. Of the impropriety of ascribing the moral feelings to a sense, I am fully, aware then, and the place which I have assigned to them among the moral phenomena, is, therefore, very different.'

The author's enlightened friend Mr. Erskine, in a letter written from Calcutta, justly observes that he can perceive little or no real difference between Brown's statement and that of Hutcheson, though he was rather inclined to the explanation of Mr. Stewart. The difference is this : Hutcheson calls the assumed original principle, a sense ; Brown calls it a susceptibility : and surely to call an original principle or tendency a susceptibility is quite as great a violation of established phraseology as to call it a sense. There is, however, a wonderful conveniency and advantage to the theorist in the adoption of such a phrase as moral susceptibility of our nature ; for who can deny it? Whatever morality consist in, or in whatever manner we come by the no-tion and even feeling of it, there must be an original susceptibility of it ; and, if this susceptibility be what is meant by

original principle of our constitution, or by the right reason of Cicero, we can, if not applaud, at least admit all his assertions about it to be something more than mere empty declamation. We shall give one other quotation from Dr. Brown in this connex-VOL. XV.

ion, as it shows that he considered his notion almost if not altogether identical with that of Hutcheson, and as it leads to a consideration of what seems most objectionable about it.

‘ But though Dr. Hutcheson may have erred in not analysing with sufficient minuteness the moral ideas of which he speaks, and in giving the name of a moral sense to the susceptibility of a mere emotion akin to our other emotions, this error is of little consequence as to the moral distinctions themselves. Whether the feeling that attends the moral contemplation of certain actions admit of being more justly classed with our sensations, or perceptions, or with our emotions, there is still a susceptibility of this feeling or set of feelings, original in the mind, and as essential to its very nature as any other of the principles or functions, which we regard as universally belonging to our mental constitution ; as truly essential to the mind, indeed, as any of those senses among which Dr. Hutcheson would fix its place. The sceptical conclusions which some writers have conceived to be deducible from the doctrine of a moral sense, might be considered equally deducible from the doctrine of moral emotions for which I have contended ; since the emotions may be regarded as almost the same feelings under a different name. You will find the objection stated and illustrated at great length in Dr. Price’s elaborate, but very tedious, and not very clear, Review of the principal Questions of Morals. It is more briefly stated by Mr. Stewart in his outlines.

‘ From the hypothesis of a moral sense,’ says Mr. Stewart,’ various sceptical conclusions have been deduced by later writers. The words right and wrong, it has been alleged, signify nothing in the objects themselves to which they are applied, any more than the words sweet and bitter, pleasant and painful ; but only certain effects in the mind of the spectator. As it is improper, therefore, to say of an object of taste that it is sweet, or of heal that it is in the fire, so it is equally improper to say of actions that they are right or wrong. It is absurd to speak of morality as a thing independent and unchangeable ; inasmuch as it arises from an arbitrary relation between our constitution and particular objects. To avoid these supposed consequences of Dr. Hutcheson’s philosophy, an attempt has been made by some later writers, in particular by Dr. Price, to review the

doctrines of Cudworth, and to prove that moral distinctions, being perceived by reason or the understanding, are equally immutable with all other kinds of truth.'

The following is the manner in which Dr. Brown meets the objection ; and, whether successful or not, it displays his usual acuteness and mastery of analysis. What he says of virtue and vice not being absolute or abstract entities, but merely relations, is particularly worthy of attention. Most of the confusion and self-contradio- tion, to be met with in moral statements and reasonings, have arisen from the neglect of the very obvious truth that virtue and vice are not absolute entities which have a separate existence of themselves, like the objects presented to our senses.

‘ That right and wrong signify nothing in the objects themselves is indeed most true : they are words expressive only of relation, and relations are not existing parts of objects or things, to be added to them or taken from them. There is no right nor wrong, virtue nor vice, merit nor demerit, existing independently of the agents who are virtuous or vicious; and, in like manner, if there had been no moral emotions to arise on the contemplation of certain actions, there would have been no virtue, vice, merit, demerit, which express only relations to these emotions. But, though there be no right or wrong in the abstract, the virtuous agent is not the same as the vicious agent : I do not say merely to those whom he benefits or injures, but to the most remote individual who contemplates that intentional production of benefit or injury. AH are affected, on the contemplation of these, with different emotions ; and it is only by the difference of these emotions that these actions are recognised as morally different. We feel that it will be impossible, while the constitution of nature remains as it is, that the lorer and intentional producer of misery as misery, should ever be viewed with tender esteem ; or that he, whose only ambition has been to diffuse happiness more widely than it could have flowed without his aid, should be regarded on that account with the detestation which we now feel for the murderer of a single helpless individual, or for the oppressor of as many sufferers as a nation can contain in its whole wide orb of calamity ; and a distinction which is to exist while God himself exists, or at least which has been, and as we cannot but believe will be, coeval with the race of man, cannot surely be regarded as very precarious. It is not to moral distinctions only that this objection, if it had any force, would be applicable. Equality, proportion, signify nothing in the objects themselves to which they are applied, more than vice or virtue. They are as truly mere relations as the relations of morality. Though the three sides of a right angled triangle exist in the triangle itself, and constitute it what it is, what we term the properties of such a triangle do not exist in it, but are results

ot a peculiar capacity of the comparing mind. It is man, or some thinking being like man, whose comparison gives birth to the very feeling ;hat is termed by us a discovery of the equality of the squares of one of the sides to the squares of the other two, that is to say (for the discovery of the truth is nothing more) it is man, who, contemplating such a triangle, is impressed with this relation, and who feels afterwards that it would be impossible for him to contemplate it without such an impression. If this feeling of the relation never had arisen, and never were to arise in any mind, though the squares themselves might still exist as separate figures, their equality would be nothing, exactly as justice and injustice would be nothing, where no relation of moral emotion had ever been felt ; for equality, like justice, is a. relation, not a thing ; and, if strictly analysed, exists only, and can exist only, in the mind, whicli on the contemplation of certain objects is impressed with certain feelings of relation ; in the same manner as ricrht and wrong,

virtue and vice, relate to emotions in some mind lhat has contemplated certain actions, without whose contemplations of the actions there could be no right nor wrong, virtue nor vice, as there could be no other relation without a mind that contemplates the objects said to be related.

‘ If, then, it be not necessary, in the case of a science which we regard as the surest of all sciences, that the proportions of figures should be any thing inherent in the figures, why should it be required, before we put confidence in morality, that right and wrong should be something existing in the individual agents? It is not easy, indeed, to understand what is meant by such an inherence as is required in this postulate; or what other relations actions can be supposed to have as right or wrong than to the minds which are impressed by them with certain feelings. Of this, at least, we may be sure, that if any doubt can truly exist as to relations which we and all mankind have felt, since the creation of the very race of man, the reference which Dr. Price (and he might have joined Cudworth, Clarke, and Wollaston) would make of our moral sentiments to reason, would leave the difficulty and the doubt exactly where they were before ; since reason is but a principle of our mental frame, like the principle which is the source of moral emotion, and has no peculiar claim to remain unaltered in the supposed general alteration of our mental constitution. What we term reason is only a brief expression of a number of separate feelings of relation, of which the mind might or might not have been formed to be susceptible. If the mind of man remain as it is, our moral feelings,

in relation to their particular objects, are as stable as our feelings of any other class ; and, if the mind of man be altered in all its functions, it is absurd for us to make distinctions of classes of feelings in the general dissolution of every thing which we at present know : it is absurd even to guess at the nature of a state which arises from a change that is imaginary only, and that by our very supposition is to render us essentially different in every respect from the state with which we are at present acquainted. It is a very powerless scepticism, indeed, which begins by supposing a total change of our nature. We might perhaps have been formed to admire only the cruel, and to hate only the benevolent ; as, in spite of an axiom that now seems to us self-evident, we might all have been formed to think with the lunatic, that the cell in which he is confined is larger than the whole earth of which it is a part.'

The above bears the striking impress of a master mind. If Cudworth and Price, Clarke and Wollaston, with all their ostentatious erudition, and mathematical science, had understood the nature of reason, of relation, and of proportion half as well as Dr. Brown, they would never have furnished us with so much literary lumber, for dark dusty corners of neglected shelves, visited only by moths and book-worms. We cannot do better perhaps than give at once, in connexion with the above, a few abbreviated selections from Dr. Brown's Lectures, which we had intended to insert somewhere on account of their instructive importance ; and

it is but justice to his memory, to prevent, if possible, misapprehensions of his statements concerning the nature of right and wrong, virtue and vice, as not being absolute entities but mere relations.

' Much of the perplexity which has attended enquiries into the theory of morals has arisen from distinctions which seemed to be the result of nice and accurate analysis, but in which the analysis was merely verbal and therefore not real. What is it that constitutes an action virtuous? What is it which constitutes the moral obligation to perform

certain actions? What is it which constitutes the merit of him who performs certain actions ? These have been considered as questions essentially distinct ; and because philosophers have been perplexed in attempting to give different answers to all these questions, and have still thought that different answers were necessary, they have wondered at difficulties which themselves created ; and, struggling to discover what could not be discovered, have often been entangled in scepticism themselves, or have stated so many unmeaning distinctions as to furnish occasion of ridicule and scepticism to others. One simple proposition has been converted into an endless circle of propositions, each proving and proved by that which precedes or follows it ; though in fact nothing is proved but the confusion of the writer entangled in a thicket of verbalities. Why has any one merit in a particular action? Because he has done an action that was virtuous. And why was it virtuous? Because it was an action which it was his duty in such circumstances to do. And why was it his duty in such circumstances ? Because there was a moral obligation to perform it. And why do we say that there was a moral obligation to perform it? Because if he had not performed it he would have violated his duty and been unworthy of our approbation. In this circle we might whirl round for ever, with the semblance of reasoning indeed, but only with the semblance; our answers, though verbally different, being merely the same proposition repeated in different forms, and requiring therefore in all its forms to be proved or not requiring proof in any of them. To have merit, to be virtuous, to have done our duty, to have acted in conformity with obligation ××× all mean the same thing, and have reference to one feeling of the mind, that feeling of approbation which attends the consideration of virtuous actions.

‘Virtue is nothing in itself, but only a general name for certain actions, whfch agree in exciting, when contemplated, a certain emotion of the mind. There is philosophically considered, and in strict accuracy of speech, no virtue, no vice, but there are virtuous agents and vicious agents. In thinking of virtue we are not to look for anything self-excited like the universal essences of the schools, and eternal like the Platonic ideas ; but a felt relation and nothing more. We are to consider only agents and the emotions which these agents excite ; and all that we mean by the moral differences of actions is their tendency to excite one emotion rather than another.’

We have seen then that as Dr. Hutcheson’s

theory of morals rests upon the assumption of a kind of moral instinct,

or moral sense, that of Dr. Brown differs in nothing from it except that instead of instinct or sense he prefers an original or innate kind of emotion or susceptibility of our nature. Dr. Smith again pronounces for sympathy as the origin and foundation of moral distinctions ; the notion of which was probably suggested to his mind by the following passage of Hutcheson's Moral Philosophy, Book 1. chap. 9. ' There are other still more noble senses and more useful : such is that sympathy or fellow-feeling, by which the state and fortunes of others affect us exceedingly, so that by the very power of nature (the Dr. could jump into a conclusion or first principle) previous to any reasoning or meditation, we rejoice in the prosperity of others (of course antipathy is an original sense too, so that, by the very power of nature, some men at least rejoice in the adversity of others), and sor-row with them in their misfortunes ; as we are disposed to mirth when we see others cheerful, and to weep with those that weep, without any consideration of our own interests. Hence it is that scarce any man can think himself sufficiently happy, though he has the fullest supplies of all things requisite for his own use or pleasure ; he must also have some tolerable stores for such as are dear to him ; since their misery or distress will necessarily disturb his own happiness. By means of this sympathy, and of some disinterested affections, it happens, as by a sort of contagion or infection, that all our pleasures, even those of the lowest kind, are strangely increased by their being shared with others. There is scarce any cheerful or joyful commotion of mind which does not naturally require to be diffused and communicated. What is agreeable, pleasant, witty, or jocose, naturally bursts forth, and breaks out among others, and must be imparted. Nor on the other hand is there anything more uneasy or grievous to a man than to behold the distressing toils, pains, griefs, or misery of others, especially of such as have deserved a better fate.'

We rather think this notable passage is to be considered as the germ of the theory of sympathy. The following remarks upon it by Dr. Brown are so much to the purpose that we shall present them instead of any criticism of our own :❖❖❖ ' Dr. Smith professes to explain, by the intervention of sympathy, feelings which must have existed previously to the sympathy itself. It is on a mere assumption, or rather on an inconsistency still more illogical than a mere assumption, that the great doctrine of his system is founded. That his own penetrating mind should not have discovered the inconsistencies involved in his theory, and that these should not have obviously appeared to many of his philosophic readers and admirers, may in part have arisen, like many other seeming wonders of the kind, from the ambiguities of language. The meaning of the word sympathy is not sufficiently

definite to present always one clear notion to the mind. It is generally employed to signify a mere participation of the feelings of others ; but it is frequently used also as significant of approbation. To say that we sympathise with any one, in what he has felt or done, means often that

we thoroughly approve of his feelings ; and, in consequence of this occasional use of the term, the theory which would identify all our moral approbation with sympathy was doubtless admitted more readily both by its author and his followers ; since what was not true of sympathy, in its strict philosophic sense, was yet true of it in its mixed popular sense. If the word had been always strictly confined to its two accurate meanings, it seems as impossible that any one should have thought of ascribing moral sentiments to sympathy as of ascribing to an echo the original utterance of the voices which it returns to our ear, or the production of the colors presented to our eye in the mirror, to the mirror it-self which has only received and reflected them.

‘ Of all the principles of our mixed nature sympathy is perhaps one of the most irregular, varying not in different individuals only, but even in the same individual in different hours or different minutes of the same day, and varying not with slight differences, but with differences of promptness and liveliness, with which only feelings the most capricious could be commensurable. If our virtue and vice, therefore, or our views of actions as right and wrong, varied with our ever varying sympathy, we might be virtuous at morning, vicious at noon, and virtuous again at night, without any change in the circumstances of our action, except in our greater or less tendency to vividness of sympathy, or to the expectation of more or less vivid sympathies in others.’

Sympathy is manifestly as unsuitable a foundation of morals as a shifting sand bank would be for the superstructure of a temple ; we only wish that the foundation which Dr. Brown himself attempted to lay were far more firm and certain. If the reader has never seen Smith's Theory of Moral Sentiments, he must not suppose that the book, though wrong in its first principle, is wholly absurd or worthless. It has much real excellence, and we know of few books half so charming. We have spoken of it as a delightful philosophic romance, and we do not envy those their taste who would not prefer it to any romance or novel ever yet published. It is full of profound reflections which seem almost too obvious to merit attention merely because they are presented in an easy playful manner. Dr. Smith's genius nowhere appears to such advantage as in the Theory of Moral Sentiments. Dr. Brown pronounces upon it one of his happiest eulogies, when he says, ' It is valuable, not for the leading doctrine of which we have seen the futility, but for the minor theories which are adduced in illustration of it; for the refined analysis which it exhibits in many of these details ; and for an eloquence which adapts itself to all the temporary varieties of its subject, familiar with a sort of majestic grace, and simple even in its magnificence, can play amid the little decencies and proprieties of common life, or rise to all the dignity of that sublime and celestial virtue which it seems to bring from heaven indeed, but to bring it down cently and humbly to the humble bosom of man.' Tins is truly fine in the best sense, and evidently con amore: genius ever delights to contemplate, admire, and praise genius.

It appears then that, notwithstanding their di-

versities, Shaftesbury, Hutcheson, Stewart (though he is somewhat equivocal and almost a nonde-script), Brown, and Smith, may all be classed together as natural-sentiment moral philosophers. The three varieties of the class are instinct or moral sense, susceptibility or emotion, and sympathy. The class nearest to the above are the intellectualists, or immutable and eternal principle moral philosophers, such as Cudworth and Price, Clarke and Wollaston. They will not detain us long after the notice already taken of them ; for they are now almost quite obsolete.

Concerning Cudworth we have the following notice from the pen of Mr. Stewart, who was sufficiently disposed to eulogise the author of the Intellectual System and of the treatise of Immutable Morality. ' Cudworth (he remarks, First Dissertation p. 65) was one of the first

who successfully combatted the philosophy of Hobbes. In the prosecution of his very able argument on this subject, he displays a rich store of enlightened and choice erudition, penetrated throughout with a peculiar vein of sobered and subdued Platonism, whence some German systems (such as that of Kant) have borrowed their richest materials. But the principal importance of Cudworth as an ethical writer, arises from the influence of his argument concerning the immutability of right and wrong on the various theories of morals which appeared in the course of the eighteenth century. To this argument may more particularly be traced the origin of the celebrated question, Whether the principle of moral approbation is to be ultimately resolved into reason or sentiment ? a question which has furnished the chief ground of difference between the systems of Cudworth and of Clarke on the one hand, and those of Shaftesbury, Hutcheson, Hume, and Smith on the other.

‘ The intellectual system of Cudworth embraces a field much wider than his treatise of Immutable Morality. The latter is particularly directed against the ethical doctrines of Hobbes and the Antinomians ; but the former aspires to tear up by the roots all the principles, both physical and metaphysical, of the Epicurean philosophy. It is a work, certainly, which reflects much honor on the talents of the author, and still more on the boundless extent of his learning; but it is so ill suited to the taste of the present age, that, since the time of Mr. Harris and Dr. Price, I scarcely recollect the slightest reference to it in the writings of our British metaphysicians. Of its faults (beside the general disposition of the author to discuss questions placed altogether beyond the reach of our faculties) the most prominent is the wild hypothesis of a plastic nature ; or in other words ‘ of a vital and spiritual but unintelligent agent created by the Deity for the execution of his purposes. Notwitstanding, however, these and many other abatements of its merits, the Intellectual System will for ever remain a precious mine of information to those whose curiosity may lead them to study the spirit of the ancient theories ; and to it we may justly apply what Leibnitz has somewhere said, with far less rea-son, of the works of the schoolmen, ‘ Scholasticos agnosco abundare ineptiis ; sed aurxim est in illo

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There is a fair portion of the writer's usual grandiloquence in this ; but, notwithstanding all the pomp and circumstance of lofty statement, it is abundantly manifest that, even according to his own judgment or reluctant admission, the merits of Cudworth are of such a kind as to reflect no reproach upon the present age that they are little suited to its taste. If other Harrisses and Prices were to arise, we would insist on no other proof of the sincerity of their admiration for Cudworth, but that they should do penance by patiently reading him carefully over once at least every year. But we will give the reader the most favorable specimen which Mr. Stewart could select of the chastened and subdued Platonism of Cudworth. ' The mind,' according to this author, ' perceives, by occasion of outward objects, as much more than is represented to it by sense, as a learned man does in the best written book, than an illiterate person or brute. To the eyes of both the same characters will ap-pear, but the learned man in those characters will see heaven, earth, sun, and stars ; read profound theorems of philosophy or geometry ; learn a great deal of new knowledge from them, and admire the wisdom of the composer ; while, to the other, nothing appears but black strokes drawn on white paper. The reason of which is that the mind of the one is furnished with certain previous inward anticipations, ideas, and instruction, that the other wants. In the room of this book of human composition, let us now substitute the book of nature, written all over with the characters and impressions of divine wisdom and goodness, but legible only to an intellectual eye. To the sense both of man and brute there appears nothing else in it, but as in the other, so many inky scrawls ; that is, nothing but figures and colors. But the mind, which hath a participation of the divine wisdom that made it, upon occasion of the sensible delineations, exerting its own inward activity, will have not only a wonderful scene and large prospects of other thoughts laid open before it, and variety of knowledge, logical, mathematical, and moral displayed; but also clearly read the divine wis-dom and goodness in every page of this great volume, as it were written in large and legible characters.' Mr. Stewart remarks, on this quotation, ' I do not pretend to be an adept in the philosophy of Kant, but I certainly think I pay it a very high compliment, when I suppose that, in the Critic of Pure Reason, the leading idea is somewhat analogous to what is so much better expressed in the foregoing passage.' So it would seem Cudworthism is the germ or embryo of Kantism. This idea is not without some verisi-militude. Indeed some of the Germans themselves have remarked the identity of their doctrines. ' That Cudworth,' says Mr, Stewart, ' has blended with his principles a vein

of Platonic mysticism which is not to be found in Kant is undeniable ; but it does not follow from this that none of Kant's leading ideas are borrowed from the writings of Cudworth.'

Buhle, who will not allow by any means that Kant borrowed from Cudworth, finds a wonderful resemblance in the doctrines of Kant and those of Price. La philosophic morale de Price

presente en effet une analogic frappante avec celle de Kant. The moral philosophy of Price presents in effect a striking agreement with that of Kant. And again, he says, ' The most remarkable of all the modern moral philosophers of England is without contradiction Richard Price. We perceive a very striking conformity in his ideas concerning the foundations of morality with those of Kant, yet it is not possible to raise the least doubt as to the entire originality of the latter.' Upon this Mr. Stewart asks, ' Is there any thing of importance in the system of Price which is not borrowed from the Treatise of Immutable Morality? The distinguishing merit of this learned and most respectable writer is the good sense with which he has applied the doctrines of Cudworth to the sceptical theories of his own times. Our critic can blow cold and hot, and he does not always speak thus respectfully of Dr. Price ; but can admit that the Review of the Principal Questions in Morals is very confused and obscure ; which we have already seen was the opinion also of Dr. Brown. The truth is, the work of Dr. Price was an abortive attempt to revive the obsolete doctrines of Cudworth. Dr. Price was we believe a worthy man and a very respectable mathematician and calculator (though his calculations were somewhat awry about the national debt) ; but whenever he meddles with metaphysical matters his mind seems muddled.

We have hitherto forborne to analyse the the-ory of Cudworth and Price because it is essentially the same as that of Clarke, and as we shall find of Wollaston also. The only difference is that, in addition to the unideal vacuity and obscurity common to them all, Cudworth's and Price's notions have their local habitation in the Platonic regions ; or rather perhaps they are in a kind of friendly alliance or combination with Platonic mysticism. Platonic mysticism, however, does not do well when chastened and subdued, as Mr. Stewart terms it, in his eulogy of Cudworth. It does not combine well when partially used as an ingredient in intellectual systems, or moral theories ; and had Cudworth and Price possessed more metaphysical sagacity they would have either taken Platonism entire or not taken it at all.

The moral theory of Clarke and Wollaston is so indefinite that it is almost as difficult to deal with it or decide upon it as about the color of the chameleon ; for after all their elaborate statements and ratiocinations about it, and about it, w”e never feel absolutely sure what they really mean. They ring many changes upon fitness and congruity and conformity to truth ; they employ many very learned formi of speech and many pompous terms about these entities, but when we would strip off the cumbrous apparel or gorgeous array of words, and examine the bare thoughts, they seem to perish in the act of undressing them. The remarks of Dr. Brown on these once famed, but now almost forgotten authors, have so much brevity and justness that we cannot do better perhaps than quote them.

‘ These considerations must convince you of the inadequacy of the moral systems which make virtue, in our contemplation of it, a sort of pro-

duct of reasoning like any other abstract relation, which we are capable of discovering intellectually; that of Clarke, for example, which supposes it to consist in the regulation of our conduct, according to certain fitnesses which we perceive in things, or a peculiar congruity of certain relations to each other ; and that of Wollaston, which supposes virtue to consist in acting according to the truth of things, in treating objects according to their real character, and not according to a character or to properties which they truly have not, ††† a system which is virtually the same as that of Clarke, expressing only more awkwardly what is not very simply developed indeed, even in Dr. Clarke’s speculations. These systems, independently of their general defect in making incongruity the measure of vice, assume, it must be remembered, the previous existence of feelings for which all the congruities of which they speak are insufficient to account.

* Every human action, in producing any effect whatever, must be in conformity with the fitnesses of things ; the limitation of virtue, therefore, to actions which are in conformity with these fitnesses, has

no meaning unless we have previously distinguished the ends which are morally good from those that are morally evil, and limited the conformity of which we speak to one of these classes. In this case, however, the theory of fitnesses, it is evident, far from accounting for the origin of moral distinctions, proceeds on the admission of them; it presupposes a distinctive love of certain virtuous ends, by their relation to which all the fitnesses of actions are to be measured ; and the system of Dr. Clarke, therefore, if stripped of its pompous phraseology and translated into common language, is nothing more than the very simple truism or tautology, that to act virtuously is to act in conformity with virtue.

‘ From this doctrine of conformity to the fitness of things the theory of Wollaston, in which virtue is made to consist in the conformity of our actions to the true nature of things, scarcely differs in any respect except as being a little more circuitous and complicated. The work of Mr. Wollaston, with all its ostentatious erudition, contains so much manifest, absurdity, that, if I were desirous of convincing any one of the influence of a system in producing in the mind of its author a ready acquiescence iri errors the most absurd, in explanations far more necessary to be explained than the very difficulties which they professed to remove, I know no work which I could put into his hands better suited for this purpose than the Religion of Na-ture Delineated.’

We do not think that Wollaston’s work ever attained much credit. It did not drop still-born from the press, for the author had some fortune ; but it was very soon laid out for dead on old book-stalls, where it may still be seen among other literary mummies, though it has almost ceased to have even that kind of existence. We do not remember how long it is since the notice of the author first appeared in Gen. Diet. ; but there it is said that his Religion of Nature Delineated is an attempt to prove the truth of religion on mathematical principles. It is a curious

work, but very abstruse. His predecessor, in the high a priori demonstrative way, had for a time at least a better fate ; for it was a part of the literary fashion or idolatry, forty or fifty years ago, to cry up Dr. Samuel Clarke as a sort of second Newton, an intellectual prodigy in mighty mathematico-metaphysical reasoning, only too profound or sublime for common minds to comprehend him, which could only therefore stare at a distance in wonder and astonishment. It is true that wicked wit, Voltaire, designated him a reasoning machine; and if he had compared him to a barrel organ, made to play off some

dozen self-designated demonstrations with wonderful noise and facility, he would have been perhaps still nearer the mark. When we wish to have an image of a mathematico-metaphysico-automatou we think of Dr. Samuel Clarke. We are aware of the circumstance which contributed mainly to the high reputation of Dr. Clarke. But we have much doubt as to the wisdom of hailing with rapture and applause such champions of religion and morality.

The religious and moral utility of such demonstrative grandiloquence, self-importance, and vituperation as the following, we confess, comes to our mind in a very questionable shape. Having professed to have done we know not well what demonstrative feats of intellectual might and heroism, Dr. Clarke opens his Discourse concerning the Unalterable Obligations of Natural Religion, in the following high and confident manner: ••• ‘ It remains, now, in order to complete my design of proving and establishing the truth and excellency of the whole superstructure of our most holy religion, that I proceed, upon this foundation of the certainty of the being and attributes of God, to demonstate in the next place the unalterable obligations of natural religion, and the certainty of divine revelation ; in opposition to the vain arguings of certain vicious and profane men, who, merely upon account of their incredulity, would be thought to be strict adherers to reason, and sincere and diligent enquirers into truth ; when in-deed, on the contrary, there is but too much cause to fear, that they are not at all sincerely and really desirous to be satisfied in the true state of things, but only seek, under the pretence and cover of infidelity, to excuse their vices and debaucheries, which they are so strongly inslaved to, that they cannot prevail with themselves upon any account to forsake them ; and yet a rational submitting to such truths, as just evidence and unanswerable reason would in-duce them to believe, must necessarily make them uneasy under, and self condemned in, the practice of them. It remains, therefore, 1 say, in order to finish the design I proposed to my-self of establishing the truth and excellency of our holy religion, in opposition to all such vain pretenders to reason as these, that I proceed at this time, by a continuation of the same method of arguing by which I before demonstrated the being and attributes of God, to prove distinctly the following propositions : •••

1 . ‘ That the same necessity and eternal different relations, that different things bear to one another ; and the same consequent fitness or un-

fitness of the application of different things or different relations one to another ; with regard to which the will of God always and necessarily does determine itself to choose to act only what is agreeable to justice, equity, goodness, and truth, in order to the welfare of the whole universe ; ought likewise constantly to determine the wills of all subordinate rational beings, to govern all their actions by the same rules for the good of the public in their respective stations ; that is, these eternal and necessary differences of things make it fit and reasonable for creatures to to act ; they cause it to be their duty, or lay an obligation upon them so to do, even separate from the consideration of these rules being the positive will or command of God ; and also antecedent to any respect or regard, expectation or apprehension, of any particular private and personal advantage or disadvantage, reward or punishment, either present or future, annexed either by natural consequence, or by positive appointment, to the practice or neglecting those rules.

2. * That though these eternal moral obligations are indeed of themselves incumbent on all rational beings, even antecedent to the consideration of their being the positive will and command of God ; yet that which most strongly confirms, and in practice most effectually and indispensably inforces them upon us, is this, that both from the nature of things, and perfections of God, and from several other collateral considerations, it appears that as these eternal moral obligations are really in perpetual force, merely from their own nature and the abstract reason of things ; so also they are moreover the express and unalterable will, command, and law of God to his creature, which'

But enough and more than enough. We have as little affection for the atheistical opinions of Hobbes or of Spinoza, as Dr.Clarke could possibly have, yet we blush and grieve to think that they should be assailed, and religion defended in this manner, by a learned doctor of high mathematical and metaphysical celebrity ; and that in the eighteenth century of the Christian era, the wisest and best men of all denominations of the Christian church should vie with one another in applauding it as triumphant championship. \ewill not give utterance

to our thoughts and feelings, else we could a tale unfold as to the effects of such theological and ethical championship on some minds ; for, compared with such reasonings as those of Clarke, our experience pronounces the reasonings of Hobbes, Spinoza, Boyle, and Hume, powerless and inert, or rather salutary. But we are sincerely desirous of doing nothing but good to the minds of men ; and, being afraid to take our own experience as a criterion for other minds, we frequently know not well what to do, or how to write. We are convinced, however, at least of this, that it is now time to dismiss Clarke and Wollaston after Cudworth and Price. We will therefore take our full and final leave of them with two or three remarks.

It must have appeared to the discerning rea-der that whilst there is a sort of ueneral or essential agreement in the opinions of Cudworth,

Price, Clarke, and Wollaston, so far as they can be ascertained ; yet the statements of no two or more of them are absolutely identical. Price was not quite satisfied with the doctrine of Cudworth, and attempted (very unsuccessfully) to reform or remould it into a less questionable or less objectionable shape, by chastening and subduing yet more the chastened and subdued Platonism of his master. Clarke would have nothing to do with the chaste and tame Platonism of Cudworth, but was fully prepared and duly qualified to demonstrate the eternal and immutable nature of morality in the high a priori way ; and was an ethical Hercules or logical Boanerges among ‘ the necessary and eternal relations that different things bear to one another, and the consequent fitness or unfitness of the application of different things or different relations one to another.’ Wollaston was not quite satisfied with Clarke’s manner of putting this mighty matter, or, having too much spirit and originality to say merely after him as the clerk says after the priest, he would not have fitness and unfitness, but conformity and disconformity to truth, as the eternal and immutable principles of natural religion and morality. There is something in all this to put one in mind of what is related of the old builders of Babel. If we view these immutable-principle moral philosophers, in connexion with their natural-sentiment fellow-la-borers, their tongues are still more strangely divided. Indeed Dr. Price was evidently alarmed at the ethical efforts of Shaftesbury and Hutcheson as equally destructive and subversive of all moral distinctions with the atheistical reasonings of the most avowed antimoral-dis- tinction philosophers, and hoped to perform a most meritorious service to religion and morality by calling in the aid of Cudworth as the only means of staying the plague in the camp. We are

far from thinking that the fears of Dr. Price were groundless or visionary. It is true, the natural-sentiment moral philosophers have their fears and apprehensions too, and strenuously assert that the natural-sentiment principle is the only rock of moral safety and defence ; that if this be abandoned we must be plunged headlong into the eternal abyss of absolute scepticism; and that if a moral principle be not admitted or assumed as innate or inherent in the human mind, itself prior to and independent of all acquired notions and feelings, there can be no moral distinctions, no virtue and vice, no right and wrong whatever.

‘if the natural-sentiment moral principle be any thing ; that is, if the doctrines of Shaftesbury, Hutcheson, Smith, Stewart, and Browne (and they would have it seems, according to Mr. Stewart’s classification, Mr. Hume to belong to them) mean any thing, we are to admit or assume that there is in the human mind an instinctive, a natural, an inherent, love for virtue, and hatred to vice. If this were any thing more or better than mere theoretic assumption, sure enough virtue would be put on a firm footing or solid foundation among us. It might be liable to a few accidental injuries perhaps ; casualties will happen in the best ordered state of things we are at present acquainted with

but in the case supposed, vices being merely casualties or anomalous deviations and exceptions,, the human mind, and consequently human society, will soon right itself again by the vis naturae ••• the inherent force of natural original tendency. This, or at least something very like this, would seem to be the fair import or necessary consequence of some of Dr. Brown’s most eloquent lectures. But, much as we admire his genius and talent, we are afraid the doctrine is too good to be true. We have not been able to find any confirmation of it from experience, from observation, from history, sacred or profane. All our experimental and inductive researches (concerning which Mr. Stewart pays so many handsome and flattering compliments to his Philosophy of Mind) for that purpose have hitherto proved fruitless. Nothing we conceive is more devoutly to be wished than that virtue

should be put upon a sure footing or firm foundation ; and we are only sorry that the success both of the intellectual-principle and natural-sentiment principle moral philosophers has not been equal to the goodness of their intentions, or to their strenuous efforts. As Adam Smith so
 ॠ well remarks, we naturally judge by the event rather than the intent: it is success or triumph that makes the hero of our admiration and applause.

In direct opposition to all the above moral theorists, we have to present another group of philosophic theorists concerning human nature; but we know not well how to designate them, though they are unquestionably of the same class, distinguished indeed by considerable varieties. We might, perhaps, if it would not seem invidious, term them the atheistical, or antimoral-distinction, or utilitarian theorists. Perhaps Mr. Stewart would have them called Epicurean moral philosophers ; and certainly they have much affinity to Epicurus, and might in a general way be conveniently classed with him. We wish not to offend Mr. Bentham by using dyslogistic terms or designations. But that philanthropic philosopher will admit that the fault is to be charged to our established language rather than to us who use it, for, without much very troublesome or inefficient circumlocution, how are we wholly to avoid dyslogistic phraseology ? How indeed is it practicable to avoid it without fabricating a new language ? We are persuaded that the individual alluded to (for whom, as a philanthropic philosopher and jurisconsult, we entertain every sentiment of esteem) is not satisfied with his attempts to construct a neutrologistic language. We try as much as possible to use the language we have ready made to our hand neutrologistically, but we are too diffident of our ability and success to imitate Mr. Bentham in attempting to fabricate a new one. In short, we have as little odium theologicum or odium philosophicum or any odium whatever towards those whom we have attempted to indicate, and of whom we are now to write, as towards Cudworth and Price, or Smith and Brown. Our wish is to deal fairly and honestly with those who come under consideration as philosophers, without fear or favor, fondness or antipathy, on account of their peculiar opinions.

Perhaps, indeed, we shall incur the imputation of being too tender and partial towards those of whom we are about to speak.

The philosophers alluded to as belonging to the same ethical class or genus are Hobbes, Mandeville, Hume, Bentham, and we might add, if it were worth while to notice them, Montaigne, Rochefoucault,

Diderot, llelvetius, and in short all those usually called the French philosophers, or the advocates of the new philosophy. We intend only, however, to take some notice of Hobbes, Mandeville, and Hume. The last mentioned indeed is so equivocal that it is difficult to know where to put him, except by himself. We have seen that Air. Stewart ranges him among the natural-sentiment moral philosophers, with Shaftesbury, Hutcheson, and Smith ; and he is really so much of a senti-mentalist and sophist withal as not to be very worthy of standing in juxtaposition with Hobbes and Mandeville ; but he may bo conveniently treated of after them.

Before remarking on Hobbes an observation or two may be offered respecting Locke, who is so equivocal as to be a sort of ethical nondescript. Beattie and Mr. Stewart do not well know what to make of him. The latter is very unwilling to give him up; and, wishing to have the sanction of his established authority, labors might and main to make him perfectly orthodox, though somewhat unguarded and blundering in some of his statements. We shall give a few specimens of his attempts, as throwing some glimmerings on Locke's ethical memory, from that amusing olio the First Dissertation of the Supplement to the Encyclopaedia Britannica.

' Among the doctrines of Locke, there are two of fundamental importance, which have misled many of his successors. The first of these relates to the origin of our ideas; the second to the power of moral perception, and the immutability of moral distinctions. On both questions, the real opinion of Locke has, if I am not widely mistaken, been very grossly misapprehended, or misrepresented, by a large portion of his professed followers, as well as of his avowed antagonists. ' The first book,' says Dr. Beattie, ' of the Essay on Human Understanding tends to establish this dangerous doctrine, that the human mind, previous to education and habit, is as susceptible of any one impression as of any other : a doctrine which, if true, would go near to prove that truth and virtue are no better than human contrivances ; or, at least, that they have nothing permanent in their nature, but may be as changeable as the inclinations and capacities of men. Surely this is not the doctrine that Locke meant to establish ; but his zeal against innate ideas and principles put him off his guard, and made him allow too little to instinct, for fear of allowing too much.' It is fortunate for Locke's reputation, that, in other parts of his Essay, he has disavowed, in the most unequivocal terras, those dangerous conclusions which, it must be owned, the geneial strain of his first book has too much the appearance of favoring. Lord Shaftesbury was one of the first who sounded the alarm against what he conceived to be the drift of that philosophy which denies the existence of innate

principles

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Various strictures occur in the Characteristics ; particularly in the treatise entitled Advice to an Author; but the most direct of all his attacks on Locke is in his Eighth Letter, addressed to a student at the university. ‘ All those called free writers, now-a-days,’ he observes, ‘ have espoused those principles which Mr. Hobbes set a foot in this last age. Mr. Locke, as much as I honor him on account of other writings, and as well as I know him, and can answer for his sincerity as a most zealous Christian and believer, did, however, go in the self-same track. It was Mr. Locke that struck the home blow: for Mr. Hobbes’s character, and base slavish principles of government, took off the poison of his philosophy. It was Mr. Locke that struck at all fundamentals, threw all order and virtue out of the world, and made the very idea of these (which are the same with those of God), unnatural and without foundation in our minds.’

This is the very same kind of language as that employed by the bishop of Worcester and the other ecclesiastical dignitaries and’antagonists of Locke ; though he was more than a match for them in argumentation. In opposition to all such imputations and charges Mr. Stewart insists, of course, that all the world, friends and foes, misunderstood Mr. Locke; and he brings forward some detached passages from his writings in confirmation of his ethical orthodoxy ; such as the following : ‘ He that hath the idea of an intelligent, but frail and weak, being, made by and depending on another, who is omnipotent, perfectly wise, and good, will as certainly know that man is to honor, fear, and obey God, as that the sun shines when he sees it; nor can he be surer, in a clear morning, that the sun is risen, if he will but open his eyes and look that way. But yet these truths, being never so certain, never so clear, he may be ignorant of either, or of all of them, who will never take the pains to employ his faculties as he should to inform himself about them.’ ‘ There is a law of nature, as intelligible to a rational creature and studier of that law, as the positive laws of commonwealths.’ ‘ There is a great deal of difference

between an innate law and a law of nature; between some-tiling imprinted on our minds in their very original, and something that we, being ignorant of, may attain to the knowledge of, by the use and due application of our natural faculties. And I think they equally forsake the truth who, recurring into the contrary extremes, either affirm an innate law, or deny that there is a law knowable by the light of nature, without the help of positive revelation.' ' He that, with Archelaus, shall lay it down as a principle that right and wrong, honest and dishonest, are defined only by laws, and not by nature, will have other measures of moral rectitude and pravity than those who take it for granted that we are under obligations antecedent to all human constitutions.'

Of course Mr. Stewart was dazzled and delighted with all this evidence that Mr. Locke, notwithstanding many suspicious reasonings, and though not a natural-sentiment or innate instinctive moral philosopher, might yet be ranked with Clarke and Wollaston as perfectly orthodox in the main, respecting the immutability of moral

distinctions, founded in the fitness of things, or in conformity to eternal truth. Nay, such was Mr. Locke's confidence in the law and light of nature, that he was disposed to make little or nothing of the law and light of revelation in comparison with them. Thus, in the concluding paragraph of the ninth chapter, in the third book of his essays, he says : ''' ' Nor is it to be wondered that the will of God, when clothed in words, should be liable to that doubt and uncertainty which unavoidably attends that sort of conveyance. And we ought to magnify his goodness that he hath spread before all the world such legible characters of his works and providence, and given all mankind so sufficient a light of reason, that they to whom the written word never came could not (whenever they set themselves to search), either doubt of the being of a God or of the obedience due to him. Since then the precepts of natural religion are plain and very intelligible to all mankind, and seldom come to be controverted ; and revealed truths are liable to the common and natural obscurities and difficulties incident to words ; methinks it would become us to be more careful and diligent in observing the former, and less magisterial, positive, and imperious, in imposing our sense and interpretations of the latter.

Such were the notions of Mr. Locke respecting the clearness and certainty of the light and law of nature ; but such were not the notions of Hobbes, from whom he borrowed the mass of his materials. The truth is, Mr. Locke's great work is a motley mixture of eclectic

inconsistencies, jumbled together with very little method ; and, therefore, it is not very wonderful that Mr. Stewart should have to accuse all the world of misunderstanding him. Only it would have been more reasonable if the metaphysical critic had dwelt more fully and explicitly on the evidence which exists, that Mr. Locke did not understand himself, or know well what he was about. Since, however, according to the high authority of lord Shaftesbury ‘ it was Locke who struck the home-blow at all fundamentals, and threw all order and virtue out of the world,’ it surely becomes his admirers to be more tolerant towards the memory of his master, who was as superior, philosophically considered, to the disciple as ever Newton was to William \Vhiston.

In speaking of the ethical doctrines (for we thus term their speculations for the sake of brevity), of Ilobbes and of Mandeville, we must be-gin by remarking that they are founded on a very bad opinion of human nature. In this respect their theories are diametrically opposite to those of most of the natural-sentiment moral philosophers. These last have a sort of beau ideal of human nature, around which their reasonings constantly revolve ; ††† they trace all that is great and good in human society, or is recorded in history, to good principles, tendencies, or instincts, in human nature ; and much of what is manifestly evil, too, they would seem to trace to a good original tendency. On the other hand, Hobbes and Mandeville (and others whom it is not worth while to notice), would trace naturally all that is bad in the history of mankind to an evil original tendency, or to selfishness ; but even all that is

good, by a skilful management of the evil natural principle. Consequently the former are sentimental panegyrists; the latter are bitter satirists of human nature and human life. It has been laid down, as a kind of axiom, that there is usually more truth in satire than in panegyric ; and we suspect the axiom will hold in the present case ; and that there is at least a basis of truth about the doctrines of Hobbes and Mandeville which cannot be found in the opposite theories. They

seem, at least, to accord best with the actual state and history of mankind ; and what is very observable they harmonize very much with the doctrine of the bible ; which pronounces the 4 heart of man deceitful above all things and desperately wicked ;' and that men ' go astray from the womb speaking lies.' If the doctrines of the bible be calculated to abase man, and to stain the pride of human glory, the same may be affirmed of those of Hobbes and Mandeville. The former of these may be compared to Heraclitus, the latter to Democritus ; for, as there was something of gloom in the one at beholding the evil which he described, it seems to have been a wicked pleasure to the other to paint human na-ture in the ugliest and most contemptible forms and colors. Hogarth could never enjoy the work of his hand more than this coarse Dutchman the broad graphic touches of his pen in describing human nature. Mandeville is indeed the Hogarth of moral painters, and we always fancy that we see him in propria personˆ grinning from behind the canvas. VVe would have all the ardent lovers of the beau ideal of human nature read Mandeville ; and their dulness or their resentment at the insult offered to human dignity must be very powerful indeed if they can long maintain their gravity. If it be all a false picture, or wicked, wilful, misrepresentation, of our noble nature which he gives, he has at least the art of caricaturing its imperfections with infinite dexterity. But though there be much acuteness and talent, and much philosophy too, about the author of the fable of the Bees, or Private Vices Public Benefits, we cannot praise him, or regard him as any thing but a licentious satirist, who wantonly compounds all moral distinctions. In representing human nature as radically bad he accords with the testimony of sacred Scripture ; but at that point, abstractedly considered, the accordance stops. The manner and spirit of Mandeville, and his deductions and reasonings from the doctrine of human pravity, are as opposite to those of the bible as darkness is to light. The good men described as writing that book under supernatural guidance, and most of all He whom reverence will not permit us to name in such a connexion, resembled Heraclitus rather than Democritus or Mandeville. The following is a concise but just statement of Mandeville's theory :

' In some measure akin to the theory of such political moralists as Hobbes, since it ascribes morality, in like manner, to human contrivance, is the system of Mandeville, who considers the general praise of virtue to be a mere artifice of political skill; and what the world consents to praise as virtue in the individual, to be a mere imposition on the part of the virtuous man.

Human life, in short, according to him, is a constant intercourse of hypocrisy with hypocrisy ; in which, by an involuntary self-denial, present enjoyment of some kind or other is sacrificed for the pleasure of that praise which society, as cunning as the individual self-denier, is ready to give, but gives only in return for sacrifices made to its advantage. That man, like all other animals, is naturally solicitous only of his personal gratification, without regard to the happiness or misery of others ; that the great point with the original lawgivers, or tamers of these human animals, was to obtain from them the sacrifice of individual gratification, for the greater happiness of others ; that this sacrifice, however, could not be expected from creatures that cared only for themselves, unless a full equivalent were offered for the enjoyment sacrificed ; that as this, at least in the greater number of cases, could not be found in objects of sensual gratification, or in the means of obtaining sensual gratification, which are given in exchange in common purchases, it was necessary to have recourse to some other appetite of man; that the natural appetite of man for praise readily presented itself for this useful end, and that, by flattering him into the belief that he would be counted nobler for the sacrifices which he might make, he was led accordingly to purchase this praise by a fair barter of that, which, though he valued it much, and would not have parted with it but for some equivalent or greater gain, he still valued less than the praise which he was to acquire; that the moral virtues, therefore, to use his strong expression, are ‘ the political offspring which flattery begot upon pride ;’ and that when we think we see virtue, we see only the indulgence of some frailty, or the expectation of some praise.’

The above theory is worked up with much ef-fect, and enlivened by striking sketches from low life ; and it must be confessed there has always been too much in the actual character of society to give an air of fidelity to the whole representation. In fact, we doubt whether it be not actually a true picture as to the great majority of every people. Rochefoucault, who had so much opportunity and talent for observing the society of a court, resolves all virtue, like Mandeville and Montaigne, and some other acute and reflecting men, into self-love, of which the desire of praise is merely one of its many forms. And sure enough much of what passes and is praised as virtue in the world is quite worthy of such an ignoble origin ; and it is amusing to observe what description of illustrations the moral philosophers run to, with breathless eagerness, whenever they wish to set off, to the best advantage, the beau ideal of human excellence, the native dignity of man, and his innate delight in virtue. If our space would permit, we would give some admirable specimens from Dr. Adam Smith’s Theory

of Moral Sentiments, and from Dr. Brown's Lectures ; for we would not think of quoting for the purpose from inferior authors, or mere sentimental declaimers. If however all men could be brought to think absolutely with Mandeville, we might expect indeed that a ' home blow would be struck at all fundamentals, and that al! real virtue would be thrown out of

the world.' But there has always been a portion of moral salt in the earth ; there have, even in the worst times, been higher principles and influences in operation than those which the Mandeville's understand, and which alone they are qualified to appreciate.

The theory of Hobbes, as already indicated, if not absolutely the same as that of Mandeville, is at least nearly akin to it; in short, the one is, as much as the other, only a modification of the same atheistical system, which assumes the original moral indifference of actions, which considers all morality as mutable and adventitious, a mere entity of circumstances, being sometimes right, sometimes wrong, at one time or place good, at another bad, according to human opinions, prejudices, passions, and habits. This is the basis of what is usually called the new or French philosophy. And it is well for the world that it finds, at least in many of the best and most influential minds, something as steady and powerful as a moral instinct to repel it. Nor is it without benefit to mankind (for thus good is educed from evil) that such a philosophy should have an opportunity occasionally of developing its latent qualities, and of performing its mighty works or miracles in the open theatre of the world, and in the full view of all nations. The whole process of the French revolution was a sort of experiment in the new philosophy, to demonstrate how innoxious and salutary, how good and profitable to men, atheism is, in all its tendencies, operations, and results. If, according to the followers of Epicurus, fear was the creator of the gods, atheism has had a good chance of being deified and worshipped ; for even many of its boldesfand most reckless advocates have been dismayed with terror when they have seen its goings forth in the sanctuary of infidelity, arrayed in the awful majesty of irresistible power. The most benevolent ameliorators of the social union or political condition, the most philanthropic utilitarian philosophers, have had enough of evidence laid before them to make them despair of doing much good

to the human race on Epicurean principles. Perhaps if the author of De Give and of Leviathan were to return to our world, and write upon political and moral subjects, his reasonings would have less affinity with those of Aristippus, of Archelaus, or of Epicurus, than they had before. The moral and political speculations and experiments that have been made within the last hundred years would not be lost upon him ; and we would willingly trust his understanding in metaphysical matters, provided it were free from every theoretic bias, and were not under the influence of any moral antipathy to religion.

Hobbes was an acute metaphysician, but he was in effect, or rather in reality, a confirmed atheist. He admitted the Being of a God, or first cause, but he denied the possibility of knowing any thing about Him or It, or what that first cause is or was. Of course this is to all intents and purposes atheism. If we were not afraid of being misunderstood we would say that Hobbes was too good a metaphysician ††† loo acute and reflective ††† too much of an analytic reasoner to be a mere deist. Such assumptions, and

paralogisms, and conclusions, as satisfy the com-mon multitude of deists, could not satisfy his mind ; and, being invincibly opposed to revelation, he embraced a particular modification of atheism as the least absurd or most reasonable kind of belief that he could, or rather would, find Hobbes could not have reasoned and written, as Mr. Locke has done, about the clearness and certainty of the law of nature, and of the precepts of natural religion.

From atheism of every description or modification the absolute moral indifference of actions necessarily follows; or, as Shaftesbury expresses it, all virtue is thrown out of the world ; there may be qualities and actions of human beings that they like or dislike in one another, and reward or punish ; there may be political distinctions, and virtues, and vices ; but there can be nothing that has been usually called, or that deserves to be called, moral distinctions, or virtues and vices. Hobbes was too acute not to perceive this, and he was too frank not to own it ; and therefore he at once resolved all right and wrong, all morality, into the discretionary decision of political authority. In short, according to Hobbes, the government, whatever that government be, whether a democracy or aristocracy, a mixed or simple monarchy, or pure despotism, is the sole lawgiver and judge of morality. This supreme authority can do no wrong, and whatever it decrees is right; and conformity to its decrees is the only immutability morality admits of. The will of king, lords, and commons, is to enact, abrogate, alter,

and amend, the moral code, as seemeth good. We have been long said to have an act-of-parliament religion ; but it appears we ought to have an act-of-parliament morality also. Nay, we may have an established national morality by a much shorter process, if we choose to enjoy all its benefits. The royal will of a Philip or Ferdinand, of a czar or grand signior, of a Nero or Caligula, is, according to Hobbes, the sole origin, and standard, and measure, of right and wrong, of virtue and vice. But enough ; this is too palpable to require refutation. Yet strange, absurd, and bad, as it appears to us, what was Hobbes to do in the matter of morality on his previously assumed atheistical principles? What have others, upon the same principles, been able to do materially different, or better ? Let us enquire by examining Mr. Hume's theory of morals.

We have said Mr. Hume's theory ; but the term, though sufficiently vague, is too definite to be applied to the opinions or speculations of such a subtle, flexible, shifting reasoner, as the author of An Enquiry concerning the Principles of Morals, who always contrives to make one set of reasonings counterbalance another, and one sort of principle supersede some other sort of principle ; as if the only conclusion possible to come to is, that nothing can be concluded, and that all is vanity, and vexation, and scepticism. Mr. Addison has somewhere said, that lie could never rise from the reading of those authors who cive degrading representations of our noble nature without beiuu out of humor with himself and every body about him ; and we seldom rise from the reading of Hume without being out

of humor with him and his reasonings. Having, in his usual manner of mooting the question as alternate plaintiff and defendant, drawn up in counterarray the arguments pro and con, he then takes his seat on the tribunal of dispassionate judgment, and sums up the whole with the most calm and grave indifference imaginable. ' These arguments on each side (and many more might be produced) are so plausible, that I am apt to suspect, they may, the one as well as the other, be solid and satisfactory ; and that reason and sentiment concur in almost all moral determinations and conclusions. The final sentence, it is probable,

which pronounces characters and actions amiable or odious, praiseworthy or blameable ; that which stamps on them the mark of honor or infamy, approbation or censure ; that which renders morality an active principle, and constitutes virtue our happiness, and vice our misery. It is probable, I say, that this final sentence depends on some internal sense or feeling which nature has made universal in the whole species. For what else can have an influence of this nature? But in order to pave the way for such a sentiment, and give a proper discernment of its object, it is often necessary, we find, that much reasoning should precede, that nice distinctions be made, just conclusions drawn, distant comparisons formed, complicated relations examined, and general facts fixed and ascertained.'

This is the first hearing of the chancery case concerning the principles of morals ; and our philosopher has had an opportunity of showing all the world that he was as wonderful in judgment as mighty in counsel ††† that he could be as able a judge on the bench, as erst he was a special pleader at the bar. The claims of reason and of sentiment are held to be equally good, and the question is kept in abeyance. Accordingly in the further hearing of the case the claims of reason seem not only admitted, but exclusively in the first steps of progress attended to ; and utility is with some doubt and hesitation thought to be probably, in part at least, the origin and measure of virtue. ' We may observe, that in displaying the praises of any humane beneficent man, there is one circumstance which never fails to be amply insisted on, namely, the happiness and satisfaction derived to society from his intercourse and good offices. * As such topics of praise never fail to be employed, and with success, where we would inspire esteem for any one ; may it not thence be concluded, that the utility resulting from the social virtues forms at least a part of their merit, and is one source of that approbation and regard so universally paid to them?

' When we recommend even an animal or plant as useful and beneficial, we give it an applause and recommendation suited to its nature. * A machine, a piece of furniture, a vestment, a house well contrived for use and conveniency is so far beautiful, and is contemplated with pleasure and approbation. * In general, what praise is employed in the simple epithet useful! 'VN hat reproach in the contrary !'

It would seem then that in part at least utility is merit, and that a good man has at least as much virtue about him as a good machine, or juccc of furniture, or vestment, or well-contrived

house. In the further hearings of the case, our judge gets rid of his doubt and hesitation, and pronounces finally and absolutely in favor of utility, as forming not a part merely, but the whole of merit. All the virtues are resolved into or ascribed to utility. This is the principle of all moral distinctions ††† the only source and standard and measure of all human excellence ; and as reason must find out what is useful about men or machines, or vestments, of course moral distinctions are referrible to reason and not to sentiment. Now then that morality is placed on the firm and broad foundation of utility, in conformity with reason, it will surely rest and remain secure. We might have supposed, at least, that the judge would not have disturbed his own decision, so fully and gravely delivered, after so hesitatingly and patiently weighing all the arguments and evidence ; but it was scarcely recorded when the sentence must be reversed ; for it is found out, by a sort of after-process of reasoning, that utility and reason have nothing at all to do with merit, or virtue, or morality; but that the whole is ascribable to mere blind sentiment, for which no reason can be assigned, the very attempt to account for which, indeed, is ridiculed as absurd. The philosophic advocate of utility as the sole foundation of all morality can easily abandon his client, unsay all his wise sayings, counterargue all his own arguments, and wriggle out of all the obligations of consistency into full and free liberty to take up whatever new position vanity, or scepticism, or sophistry may present. The following is the prelusive nourish in showing a more excellent way of moral philosophy than that of utility and reason :

‘ Treating vice with the greatest candor, and making it all possible concessions, we must acknowledge, that there is not in any instance the smallest pretext for giving it the preference above virtue, with a view to self-interest ; except, perhaps, in the case of justice, where a man, taking things in a certain light, may often seem to be a loser by integrity. And though it is allowed that without a regard to property no society could subsist ; yet, according to the imperfect way in which human affairs are conducted, a sensible knave, in particular incidents, may think that an act of iniquity or infidelity will make a considerable addition to his fortune, without causing any considerable breach in the social union and confederacy. That ‘ honesty is the best policy,’ maybe a good general rule ; but is liable to many exceptions : and he, it may perhaps be thought, conducts himself with most wisdom who observes the general rule, and takes advantage of all the exceptions. I confess that if a man thinks that this reasoning requires an answer, it will be a little difficult to find any which will to him appear satisfactory and convincing.’

Very well stated : we wish not to have the doctrine of utilitarian moral

philosophy differently handled ; this is at least one useful and convincing way of examining its character and credentials. But hear him out : ‘ If the foregoing hypothesis be received, it will now be easy for us to determine the first question started, (started truly to be run down !) concerning the

general principle of morals, * we may re-sume it at present, and examine how far either reason or sentiment enters into all decisions of praise or censure. One principal foundation of moral praise being supposed to lie in the useful-ness of any quality or action, it is evident that reason must enter for a considerable share in all decisions of this kind ; since nothing but that faculty can instruct us in the tendency of qualities and actions, and point out their beneficial consequences to society and to their possessor, la many cases this is an affair liable to great controversy : doubts may arise ; opposite interests may occur; and a preference must be given to one side from very nice views, and a small over-balance of utility. * Though reason, when fully assisted and improved, be sufficient to instruct us in the pernicious or useful tendency of qualities and actions, it is not alone sufficient to produce any moral blame or approbation. Utility is only a tendency to a certain end ; and, were the end totally indifferent to us, we should fee’ the same indifference towards the means. It is requisite a sentiment should here display itself, in order to give a preference to the useful above the pernicious tendencies.’

Our moral philosopher soon becomes more explicit and peremptory; and if the sceptic be any where transmuted into a dogmatist it is when treating of what he terms ‘ the blind but sure testimony of taste and sentiment.’ ‘ The hypothesis (he says, Appendix 1, concerning Moral Sentiment) which we embrace is plain. It maintains that morality is deternv.ned by sentiment ; it defines virtue to be whatever mental action or quality gives a spectator the pleasing sentiment of approbation ; and vice the contrary. We then proceed to examine a plain matter of fact, to wit, what actions have this influence : we consider all the circumstances in which these actions agree : and

thence endeavour to extract some general observations with regard to these sentiments. If you call this metaphysics, and find any thing abstruse here, you need only conclude that your turn of mind is not suited to the moral sciences. * \Vhen Nero killed Agrippina, all the relations between himself and the person, and all the circumstanceˆ of the fact, were previously known to him : but the motive of revenge, or fear, or interest, prevailed in his savage heart over the sentiment of duty and humanity. And when we express that detestation against him, to which he himself in a little time became insensible ; it is not that we see any relations of which he was ignorant ; but that, from the rectitude of our disposition, we feel sentiments against which he was hardened, from flattery and a long perseverance in the most enormous crimes. In these sentiments then, not in a discovery of relations of any kind, do all moral determinations consist. Before we can pretend to form any decision of this kind, every thing must be known and ascertained on the side of the object or action. Nothing remains but to feel, on our part, some sentiment of blame or approbation ; whence we pronounce the action criminal or virtuous.

‘ This doctrine will become still more evident, if we compare moral beauty with natural, to which, in many particulars, it bears so near a re-

semblance. * In all decisions of taste or external beauty, all the relations are before hand obvious to the eye ; and we thence proceed to feel a sentiment of cowipbcency or disgust, according to the nature of the object and disposition of our organs. * Attend to Cicero, while he paints the crimes of a Verres or a Catiline ; you must acknowledge that the moral turpitude results, in the same manner, from the contemplation of the whole, when presented to a being, whose organs have such a particular structure and formation. The orator may paint rage, insolence, barbarity on the one side : meekness, suffering, sorrow, innocence, on the other : but if you feel no indignation or compassion arise in you, from this complication of circumstances, you would in vain ask in what consists the crime or villany which he so vehemently exclaims against ; at what time, or on what subject, it first began to exist ; and what has become of it a few months afterwards, when every disposition and thought of all the actors is totally altered, or annihilated. No satisfactory answer can be given to any of these questions upon the abstract hypothesis of morals ; and we must at last acknowledge, that the crime or immorality is no particular fact or relation, which can be the object of the understanding : but arises entirely from the sentiment of disapprobation, which, by the structure

of hu-man nature, we unavoidably feel on the apprehension of barbarity or treachery.

‘ It appears evident that the ultimate ends of human actions can never, in any case, be accounted for by reason, but recommend themselves entirely to the sentiments and affections of mankind without any dependence on the intellectual faculties. * Something must be desirable on its own account, and because of its immediate ac-cord or agreement with human sentiment and affection. Now as virtue is an end, and is desirable on its own account, without fee or reward, merely for the immediate satisfaction which it conveys ; it is requisite that there should be some sentiment which it touches ; some internal taste or feeling, or whatever you please to call it, which distinguishes moral good and evil, and which embraces the one and rejects the other. Thus the distinct boundaries and offices of reason and of taste are easily ascertained. The former conveys the knowledge of truth and falsehood : the latter gives the sentiment of beauty and deformity, vice and virtue. The one discovers objects, as they really stand in nature, without addition or diminution: the other has a productive faculty, and gilding or staining all natural objects with the colors, borrowed from internal sentiment, raises in a manner, a new creation.’

It would be superfluous to quote more, though pages might be presented to the same purpose. This is one of the doctrines of Hume which he varies and repeats incessantly. It meets us every where in his Essays, particularly in one entitled The Sceptic, and in another on the Standard of Taste. The reason is obvious : it is a t.ue sceptical doctrine; and scepticism was his intellectual centre of gravity, or the easy chair in .‘o which he naturally ‘ fell back’ (to use his own expression) to enjoy philosophic tranquillity. Virtue and vice, like beauty and deformity, are wholly an affair of

‘ blind sentiment’ or taste, and all the world knows that there is no disputing about taste ; and that it would be as wise to rest any thing weighty or important upon it as to attempt to build a palace on a sand-bank or a temple on a wave ! ‘ All sentiment is right (Essay 23.

Of the Standard of Taste) because sentiment has a reference to nothing beyond itself, and is always real, wherever a man is conscious of it. * A thousand different sentiments excited by the same object are all right : because no sentiment represents what is really in the object. It only marks a certain conformity or relation between the ob-ject and the organs or faculfies of the mind ; and, if that conformity did not really exist, the sentiment could never possibly have being. Beauty is no quality in things themselves : it exists merely in the mind which contemplates them ; and each mind perceives a different beauty. One person may even perceive deformity where another is sensible of beauty; and every individual ought to acquiesce in his own sentiment, without pretending to regulate those of others. To seek the real beauty, or real deformity, is as fruitless an enquiry as to pretend to ascertain the real sweet or real bitter. According to the disposition of the organs, the same object may be both sweet and bitter ; and the proverb has justly determined it to be fruitless to dispute concerning tastes. It is very natural, and even quite necessary, to extend this axiom to mental as well as bodily taste ; and thus common sense, which is so often at variance with philosophy, especially with the sceptical kind, is found, in one instance at least, to agree in pronouncing the same decision.'

This is no doubt a true account of ' blind sentiment' or mere mental taste as understood by Mr. Hume; and he has been so explicit as to make us fully comprehend his intention in committing all moral distinctions to its ' sure and unerring testimony' and arbitrement. Nor is there a particle of essential difference between his doctrine concerning the origin and standard of morality and that of Shaftesbury, Hutcheson, Smith, and Brown. Indeed the last mentioned, says after Hume almost word for word and to the fullest extent of admission. Mr. Stewart, we have seen, classes Hume with Hutcheson and Smith, and the other natural-sentiment moral philosophers in contradistinction to Cud worth and Clarke. He was too prudent himself, however, to pronounce in an unqualified manner for either statement, and therefore attempted a sort of compromise between the two.

It seems sufficiently evident from Mr. Hume's own statement that to make ' blind sentiment* the foundation of moral decisions is in effect to do away with morality altogether. In short there is according to this scheme neither virtue nor vice absolutely, any more than beauty and deformity. ' Sentiment has reference to nothing beyond itself: a thousand different sentiments excited by the same object are all right.' This requires neither comment nor argumentation ; and we ought to be as ready as Dr. Reid and ' his illustrious pupil' to eulogise Mr.

Hume and acknowledge our great obligations to him ; for certainly 'his conclusions do more than compensate his premises.' But for his manner of stating the doctrine of moral senti-

ment, as inherent in our mental constitution, we might perhaps have been bewildered by verbal ambiguities. And we confess that though the moral-sense or moral-instinct, or moral-sentiment theory of virtue has long appeared a very questionable sort of entity, we never understood it half so well as since we examined it closely in the statements of Mr. Hume.

Considered either ethically or theologically the natural-sentiment theory has nothing to recommend it. Considered philosophically (we mean as if it had nothing to do with religion and morality) it possesses no claim to assent. In truth it appears so unphilosophical that we cannot help wondering it should ever have received the sanction of any analytic reasoners who did not delight like Hume in scepticism and sophistry. Though directly opposed to his theory of utility it was perfectly worthy of his intellectual character. Omnis Aristippum decuit color. That such reasoners as Shaftesbury and Hutcheson should sincerely embrace the notion of innate moral instinct, sense, or sentiment as the only firm foundation of religion and virtue is perfectly intelligible ; but how Smith and Brown could satisfy themselves, or attempt to satisfy others with it, is not so obvious. The supposition of a strong anti-revelation bias may perhaps account for the phenomenon. Indeed we know not what mere theistical moral philosophers could do materially different from what the natural-sentiment theorists have attempted, after the manifest failures of Cudworth, Clarke, and Wollaston. And none but the lower class of metaphysicians would attempt such a clumsy kind of compromise or accommodation as that of uniting the two notions of sentiment and reason into one complex theory.

Concerning the question now under consideration we would recommend a careful examination of the doctrines of Hartley ; which may be easily dissociated from his vibratory theory ; and, when separated from the nonsense about vibrations and vibratiuncles, they will be found to convey no small portion of instruction. In resolving all the mental and moral phenomena into association he reasons much more philosophically than any of those who would stop short at ' blind sentiment' as Hume terms it; and his statements will bear an advantageous comparison or rather contrast with theirs. The following is a specimen : ⁂

‘The moral sense or judgment is sometimes considered as an instinct, sometimes as determinations of the mind, grounded on the eternal reasons and relations of things. Those who maintain either of these opinions may, perhaps, explain them so as to be consistent with the foregoing analysis of the moral sense from association. But if by instinct be meant a disposition communicated to the mind so as to be quite independent of association ; and by a moral instinct, such a disposition producing in us moral judgments concerning affections and actions; it will be necessary to produce instances where such judgments arise in us independently of prior associations determining thereto.

‘In like manner, if by founding the morality of actions, and our judgment concerning this morality, on the eternal reasons and relations of things, be meant, that the reasons drawn from the

relation of things, by which the morality or immorality of certain actions is commonly proved, and which with the relations are called eternal from their appearing the same, or nearly the same, to the mind at all times, would determine the mind to form the corresponding moral judgment independently of prior associations, this ought also to be proved by the allegation of proper instances. To me it appears, that the instances are, as far as we can judge of them, of an opposite nature, and favor the deduction of all our moral judgments, approbations, and disapprobations, from association alone. However some associations are formed so early, repeated so often, rivetted so strong, and have so close a connexion with the common nature of man and the events of life which happen to all, as, in a popular way of speaking, to claim the appellation of original and natural dispositions ; and to appear like instincts when compared with dispositions evidently facti-tious ; also like axioms, and intuitive propositions, eternally true according to the usual phrase, when compared with moral reasonings of a compound kind.'

The following is a statement of the question by Paley with that charming simplicity and perspicuity which characterise all his writings.

' They who contend (Moral Philosophy, book 1, chap. 5, The Moral Sense) for a moral sense, say that we approve examples of generosity, gratitude, fidelity, &c., and condemn the contrary instantly without deliberation, without hav-ing any interest of our own concerned in them, oft-times without being conscious of, or able to give any <eason for our approbation ; that this approbation is uniform and universal, the same sorts of conduct being approved or disapproved in all ages and countries of the world ; circumstances, say they, which strongly indicate the operation of an instinct or moral sense.

' On the other hand, answers have been given to most of these arguments by the patrons of the opposite system.

* First, as to the uniformity above alleged, they controvert the fact. They remark from authentic accounts of historians and travellers that there is scarcely a single vice which, in some age or country of the world, has not been countenanced by public opinion : thatinone country it is esteemed an office of piety in children to sustain their

aged parents ; in another to despatch them out of the way ; that suicide, in one age of the world, has been heroism, in another felony : that theft, which has been punished by most laws, by the laws of Sparta was not unfrequently rewarded ; that the promiscous commerce of the sexes, although condemned by the regulations and censures of all civilised nations, is practised by the savages of the tropical regions without reserve, compunction, or disgrace; that crimes, of which it is no longer permitted us even to speak, have had their advocates among the sages of very renowned times ; that if an inhabitant of the polished nations of Europe be delighted with the appearance, wherever he meets with it, of happiness, tranquillity and comfort ; a wild American is no less diverted with the writhings and contortions of a victim at the stake ; that even amongst ourselves, and in the present improved state of

moral knowledge, we are far from a perfect consent in our opinions or feelings : that you shall hear duelling alternately reprobated and applauded according to the sex, age, or station of the person you converse with : that the forgive-ness of injuries and insults is accounted by one sort of people magnanimity, by another meanness : all which, they observe, looks very little like the steady hand, and indelible characters of nature.'

The natural-sentiment tendency, instinct, or innate principle, moral philosophers, make poor work of all this when they attempt to reconcile it with their theory. Whoever prefers assumption and paralogism to sound reasoning, and rhetorical declamation to sober argument, will find abundance of them in Brown's ethical lectures, though all he contends for is so little worth any contention, either logical or rhetorical, that he might have been as cold and indifferent about the matter, as his philosophic relative Mr. Hume. According to the statements of both, and those of Adam Smith too, we may truly say of vice, what Fontenelle so madly said of female inchastity : if we know it, if we perceive it, it is no great matter; if we do not perceive it, or feel a sentiment of disapprobation, it is nothing. The concluding paragraphs of Paley concerning the moral sense have a depth of import in them which the lovers of powerful language rather than of forcible signification are in danger of missing. ' Upon the whole, it seems to me, either that there exist no such instincts as compose what is called the moral sense, or that they are not now to be distinguished from prejudices (acquired sentiments) and habits ; on which account they cannot be depended upon in moral reasoning : I mean, thatitisnota safe way of arguing, to assume certain principles as so

many dictates, impulses, and instincts of nature, and then to draw conclusions from these principles, as to the rectitude or wrongness of actions independent of the tendency of such actions, or of any other consideration whatever. * For which reason I suspect that a system of morality, built upon instincts, will only find out reasons and excuses for opinions and practices already established, and will sel-dom correct or reform either.

‘ But further, suppose we admit the existence of these instincts, what it may be asked is their authority? No man, you say, can act in deliberate opposition to them without a secret remorse of conscience. But this remorse may be borne with : and if the sinner choose to bear with it for the sake of the pleasure or profit which he expects from his wickedness ; or finds the pleasure of the sin to exceed the remorse of conscience, of which he alone is the judge, and concerning which, when he feels them both together, he can hardly be mistaken, the moral-instinct man, so far as I can understand, has nothing more to offer. For if he allege that these instincts are so many indications of the will of God, and consequently presages of what we are to look for hereafter ; this I answer is to resort to a rule and motive ulterior to the instincts themselves, and at which rule and motive we shall by and by arrive by a surer road : I sa> surer, so long as there remains a controversy whe-112

ther there be any instinctive maxims at all ; or any difficulty in ascertaining what maxims are instinctive.’

We thought it right to give the natural-senti- ment theory of morals a further hearing when obtruded upon us by Mr. Hume ; but we must now return to the position taken up by him though he was pleased to abandon it, and conclude his famous essay, ‘ incomparably the best he ever wrote,’ according to his own account, by resolving the whole of virtue and vice into sentiment or taste and not into utility. It is obvious at first view that the theory of utility and that of blind sentiment are neither identical nor compatible with one another. What Mr. Hume therefore advances for the one, if the other be admitted, is to be regarded as so much mere philosophic flourish; or rather what he advances concerning first the one and then the other is to be considered as so much moot argumentation, as a display of logical

subtlety and dexterity. So far, therefore, as Hume, and such as resemble him, are concerned, this theory of utility is as little worthy of serious refutation as that by which he himself supplanted it. But there are moral reasoners of a better description who make much mention of the principle which he only brought forward, to have the pleasure of deserting it. However fickle and inconstant he might be in his speculations, and theoretic attachments, they are sincere and true lovers of utility ; and, whatever common relation as philosophers Mr. Hume and Mr. Bentham may have to Epicurus, our moral sentiment is not so blind as not to discriminate between them and prefer the one to the other. We may regret the absence of what we deem essentially necessary in moral reasonings ; but we admire sincere logic and ardent philanthropy as much as we despise a vain and heartless sophistry.

The theory of utility is very good in certain respects, and to a certain extent. Indeed there is a show of evidence about it which we look for in vain in the natural-sentiment hypothesis ; and the only wonder is (if indeed we can wonder at any thing of the kind) that Mr. Hume did not resolve all moral sentiment into utility and there leave the matter ; for that the former should be generated by the latter is perfectly intelligible. Nor is any other account of what he and Smith and Brown mean by moral sentiment either intelligible or plausible. It must be either instinctive or acquired. That it is not instinctive there is every kind and form and degree of evidence that the case admits of. It must, therefore, be acquired, for there is no other conceivable way in which it can exist at all. Nor have the whole race of moral-instinct or natural-sentiment moral ptiilosophers ever yet advanced any thing in support of their theory but gratuitous assumption and resolute assertion.

As fully accounting for all that they really mean by sentiment, as the origin and standard of moral distinctions, we consider the reasonings of Mr. Hume concerning utility not only perfectly satisfactory but absolutely unanswerable. Nor is this sentiment though acquired (so far as it is worth ;my thirur) less a law of God written on the heart than if it were innate. For if he lias constituted

the world, that certain dispositions and actions are found by universal experience to be good and profitable to men, and their opposites to be bad or mischievous, the judgment or sentiment corresponding to them implanted in the mind is just as really derived from, and referrible to him as if it were instinctive, according to Hutcheson's no-tion, or as if

it were brought with the soul out of a pre-existent state, according to the notion of Plato. On the supposition that the moral sense or sentiment is not innate but implanted ; not derived from within but from without ; not born with man but generated in him after his birth, all the fine things that have been said by Cicero and others will hold good, and be just as pregnant with meaning and importance, as on the other supposition of inherent moral tendency prior to association or the formation of mental character.

‘ It cannot be denied (Paley’s Moral Philosophy, book i. chap. 5,) that some sorts of actions command and receive the esteem of mankind more than others ; and that the approbation of them is general. This may be accounted for without the assistance of a moral sense. Having experienced a particular conduct to be beneficial to ourselves, or observed that it would be so, a sentiment of approbation rises up in our minds; which sentiment afterwards accompanies the idea or mention of the same conduct, although the private advantage which first excited it no longer exists. And this continuance of the passion, after the reason of it has ceased, is nothing more than what happens in other cases. * By these means the custom of approving certain actions commenced : and, when once such a custom has got footing in the world, it is no difficult thing to explain how it is transmitted and continued ; for then the greatest part of those who approve of virtue, approve of it from authority, by imitation, and from a habit of approving such and such actions, inculcated in early youth, and receiving as men grow up the continual accessions of strength and vigor, from censure and encouragement, from the books they read, the conversations they hear, the current application of epithets, the general turn of language, and the various other causes by which it universally comes to pass, that a society of men, touched in the feeblest degree with the same passion, soon communicate to one another a great degree of it. This is the case with most of us at present; and is the cause also that the process of association is little now either perceived or wanted.

‘ Amongst the causes assigned for the continuance and diffusion of the same moral sentiments amone mankind we have mentioned imitation. The efficacy of this principle is most observable in children : indeed, if there be any thing in them which deserves the name of an instinct, it is their propensity to imitation. Now there is nothing which children imitate or apply more readily than expressions of affection and aversion, approbation, hatred, resentment, and the like ; and when their passions and expressions are once connected, which they soon will be by the same association which unites words with their ideas, the passion will follow the expression, and attach upon the object to

which the child has been accustomed to apply the epithet. In a word, when

almost every thing else is learned by imitation, can we wonder to find the same cause concerned in the generation of our moral sentiments?'

This is the only account of the matter that appears to us satisfactory, or even intelligible. Of course it resolves the moral sentiment of Shaftesbury and his followers into utility, taken according to Hume's theory. As amounting therefore to all the ethical certainty and import really contended for by them, that theory is, we conceive, as firm and impregnable as any thing of the kind caa possibly be. It is an easy task to call it the selfish system of morals, and declaim against it with much rhetorical effect; but how is it to be overturned ? Not surely by mere assumption and assertion, however much varied, and combined, and reiterated. Not by taking it for granted that the moral sentiment is an original instinct or determination of the mental constitution for which no reason can be assigned, and that it is so because it is so ? Taking it then for what it is really worth as a philosophic exposition of the kind of moral sentiment which has universally orevailed, without any reference to divine communication or influence, we consider the theory of utility as the only one propounded that possesses any evidence of truth.

Before we examine this theory more closely, it is proper to remark that, in human legislation, utility must be considered as the guiding principle. Mr. Bentham and his disciples do well to shape their courses on the ocean of jurisprudence by this polar star; and we hope they will make many valuable discoveries. We only wish that they had more hopeful materials than human beings and human societies for their jurisprudential wisdom to operate upon If their utilitarianism were purely political, and if they would be perfectly neutrologistic as to religion and irreligion, we would hail them as sage and philanthropic jurisconsults. But neutrologism in such matters is hardly practicable, and we expect no good from principles and reasonings which have any affinity or affiance with atheism.

Having admitted the theory of utility propounded by Mr. Hume, as much more satisfactory than the natural-sentiment or moral -sense-theory it will be said this is making almost nothing of moral distinctions ••• it is placing them on a very uncertain foundation. Granted ; but we do not mend the matter by adopting the other hypothesis ; for what can be less certain than blind sentiment or mere taste ? What can possibly amount to less ethical import or avail than the doctrines of Hutcheson, Smith, and Brown ? But, though the theory of utility be admitted as accounting for the moral sentiment which has generally existed among mankind, it does not account for all the moral principle that has existed ; and still less can it be considered as the only possible origin and standard of morals. Much of what Mr. Hume would resolve into utility or into sentiment is referrible to a much higher origin, though he chose to keep it out of view ; but that which he and most of the other moral philosophers, would seem to discard, as of little or no account, is the only sure foundation on which any ethical struc-VOL XV.

ture of much importance can rest. In this connexion his own remarks on the difference between Homer and Fenelon as to moral sentiment may be fitly introduced.

'In all questions (Essay xxiii. Of the Standard of Taste) which regard conduct and manners, the difference among men is greater than at first sight it appears. It is indeed obvious, that writers of all nations and all ages concur in applauding justice, humanity, magnanimity, prudence, veracity ; and in blaming the opposite qualities. Even poets and other authors, whose compositions are chiefly calculated to please the imagination, are yet found, from Homer down to Fenelon, to inculcate the same moral precepts, and to bestow their applause and blame on the same virtues and vices * but it is obvious that when Homer draws particular pictures of manners, and represents heroism in Achilles, and prudence in Ulysses, he intermixes a much greater degree of ferocity in the former, and of cunning and fraud in the latter, than Fenelon would admit of. The sage Ulysses in the Greek poet seems to delight in lies and fictions, and often employs them without any necessity or advantage : but his more scrupulous son, in the French epic writer, exposes himself to the most imminent perils, rather than depart from the most exact line of truth and veracity.'

A very just discrimination between Homer and Fenelon as to their moral sentiment or notions of virtue and vice ; but whence the difference? Why was the son of Ulysses in the French epic writer more

scrupulous about truu. and falsehood than his lying father, as drawn by Homer? Was it not that which made the amiable Joseph so scrupulously virtuous when he exclaimed with all the force of conscientious purpose and pious emotion, ‘ How can I do this great wickedness, and sin against God?’

The plain case is, that a moral system of sentiment derived from utility; that is, growing up out of ihe praise and blame which men by general consent award to virtue and vice on account of the beneficial operation of the one, and mischievous operation of the other, though better than no moral system, and absolutely necessary to social existence, and though sufficient to account for much of what passes as virtue in the world, yet is of a very defective and inefficient nature, when considered in reference tr what i? wanted, and what true religion produce? But what would be the consequence if all men, or even the majority of them, were to theorise concerning ethics in the manner of Hume by ascribing all moral distinctions and obligations to utility, or what is if possible yet worse, by resolving them into sentiment or taste ? Would they not adopt the very maxims which he has deduced from his own doctrines? Such as the following: ‘That honesty is the best policy, though a good general rule is liable to many exceptions ; and that he conducts himself with most wisdom who observes the general rule and taˆes advantage of’ all the exceptions.’ This doctrine is closely allied to that avowed by theJesuits, and so long acted on by the fathers of the Pro-pagandi. A more ruinous one to the happinessand moral character of man we can hardly conceive.

MORAL PHILOSOPHY.

The only other system of moral philosophy which we will examine is that of Paley ; and we approach it with mingled feelings of pleasure and regret; for in some respects it is admirable, in others, and these the most essential, it is any thing but what could be wished. The simplicity of Paley's statements and reasonings is almost inimitable. Nothing can be more unscholastic, plain, perspicuous, and perfectly free from pomp and pedantry. The nearest to Paley's style in this respect are the best parts of Locke's, Hartley's, and Franklin's writing ; though we think he excels even Franklin in vernacular plainness and homely simplicity. Nothing from the pen of Paley seems to smell either of the lamp or the library ; all is as fresh and sweet as if it had been composed on the bank of a clear stream, by the side of Isaac Walton. No man who owed so much to books ever had more of the happy art of losing sight of them when he set about making new ones. The manner is all his own ; in this he is original, and his originality is not only beautiful, but often striking and truly graphic. The following will match in expression any of the sketches of Mandeville : ‘ If you shall see a flock of pigeons in a field of corn ; and if (instead of each picking where and what it liked, taking just as much as it wanted, and no more) you should see ninety-nine of them gathering all they got into a heap ; reserving nothing for themselves but the chaff and the refuse ; keeping this heap for one, and that the weakest, perhaps worst, pigeon of the flock; sitting round, and looking on all the winter, whilst this one was devouring, throwing about, and wasting it ; and if a pigeon more hardy or hungry than the rest, touched a grain of the hoard, all the others instantly flying upon it, and tearing it to pieces; if you should see this, you would see nothing more than what is every day practised and established among men. Among men you see the ninety and nine toiling and scraping together a heap of superfluities for one (and this one too, oftentimes the feeblest and worst of the whole set a child, a woman, a madman, or a fool); getting nothing for themselves all the while, but a

little of the coarsest of the provision, which their own industry produces ; looking quietly on whilst they see the fruits of all their labor spent or spoiled : and, if one of the number take or touch a particle of the hoard, the others joining against him, and hanging him for the theft.' The first paragraph of book 3, chap. I. Of Property.*

* However beautiful the style of our author, in this case, it must still be conceded that the inference intended to be drawn from his elegant allegory is most fallacious. An unequal distribution of property has ever existed, even in patriarchal times, and the spur that it offers to mankind, by inducing them to aim at excelling each other, alone oilers an advantage more than commensurate to all the inconvenience that appears to have resulted.

ED.

In addition to the charming simplicity, the practical character of Paley's writings deserves the highest praise. They are not only level-to the humblest capacity, but directly applicable to real life, and available for useful purposes. The best chapter in the work, in our judgment, is the sixth of the first book, concerning Human Happiness ; and, as it is the most excellent, it is the most original, and characteristic of the author. We would have persons of all ranks and conditions and ages read and inwardly digest it ; and the young ought to get it by heart. We have already quoted part of it, and we transcribe one small specimen more, merely for the sake of its expressive representation of the author's mental character; He wrote directly from his own reflections and experience, and therefore, with all the unreserve and frank-ness imaginable, threw a piece of preferment into the enumeration.

' Engagement is every thing : the more significant, however, our engagements are, the bet-ter : such as the planning of laws, institutions, manufactures, charities, improvements, public works, and the endeavouring by our interest, address, solicitations, and activity, to carry them into effect ; or, upon a smaller scale, the procuring of a maintenance and fortune for our families by a course of industry and application to our callings, which forms and gives motion to the common occupations of life; training up a child, prosecuting a scheme for his future establishment, making ourselves masters of a language or a science, improving or managing an estate, laboring after a piece

of preferment, and lastly, any engagement which is innocent is bet-ter than none ; as the writing of a book, the building of a house, the laying out of a garden, the digging of a fish pond ; even the raising of a cucumber or tulip.'

The rich especially should study this chapter, and all who have not been already cured of the error of supposing that idleness is conducive to happiness, or even compatible with it. For how many in spite of experience, observation, and reflection, drag on a miserable existence under the malady which the French call ennui ; and for which most of them have no better antidote than frivolity or amusement. We hope the reader will turn to the quotation already made from this inimitable chapter of Paley in connexion with the statement of the doctrines of Epicurus concerning happiness. The remark respecting religion is in particular most important.

For plainness and practicalness, then, th ethical work of Paley possesses the highest merit, and stands unrivalled. It is entitled to very high praise of another kind ; for Paley is almost the only ethical writer of any eminence, in recent times, who has professed to connect morals with religion, and to give a system of moral philosophy on Christian principles. Whilst the lectures and treatises of the moral-instinct or natural-sentiment philosophers are almost as heathenish as if they had been composed at Pekin, or written by Epicurus or Chrysippus; the work of Paley is at least professedly Chris

Ian, and makes several appeals to the sacred scriptures. His remarks in this connexion are so just as to merit transcription.

' As the will of God is our rule (book ii. chap. 4) ; to enquire what is duty, or what we are obliged to do, in any instance, is, in effect, to enquire what is the will of God, which consequently becomes the whole business of morality. * Mr. Hume, in his fourth Appendix to his Principles of Morals, has been pleased to complain of the modern scheme of uniting ethics with the Christian theology. They who find themselves disposed to join in this complaint, will do well to observe

what Mr. Hume himself has been able to make of religion without this union. And, for that purpose, let them read the second part of the ninth section of the above essay, which part contains the practical application of the whole treatise ××× a treatise which Mr. Hume declares to be ‘ incomparably the best he ever wrote.’ When they have read it over, let them consider whether any motives there proposed are likely to be found sufficient to withhold men from the gratification of lust, revenge, envy, ambition, avarice, or to prevent the existence of these passions, unless they rise up from this celebrated essay with stronger impressions upon their minds than it ever left upon mine, they will acknowledge the necessity of additional sanctions. But the necessity of these sanctions is not now the question. If they be in fact established ; if the rewards and punishments held forth in the Gospel will actually come to pass, they must be considered. Such as reject the Christian religion are to make the best shift they can to build up a system, and lay the foundation of morality, without it. But it appears to me a great inconsistency in those who receive Christianity, and expect something to come of it, to endeavour to keep all such expectations out of sight in their reasonings concerning human duty.’

Doubtless there is a glaring inconsistency in such moral philosophers, and there is an equal inconsistency in universities professedly Christian having any but professedly Christian moral professors. The moral chair ought in consistency either to be filled with a Christian lecturer or abolished ; and the last would perhaps be the best measure, and we feel quite sure it would occasion no serious loss. The moral-instinct or natural-sentiment theory of morals is admirably calculated to save appearances, and this we suspect is its main recommendation to its advocates ; for, upon this hypothesis, a Hume, a Smith, or a Brown, is as eligible to the moral chair as Dr. Chalmers. The veriest sceptic or atheist may appear as orthodox and as zealous for virtue, and even natural religion, as any of them. It is worthy of remark, that Dr. Paley not only opposes the moral-sense notion, but as decidedly connects his moral philosophy with divine revelation, and-professedly founds his system of ethics on the will of God.

We sincerely wish that we could extend our praise of his work farther ; but here we are constrained to stop. Much as we approve and admire most of his writings, Paley was not well qualified for moral philosophy, either intellectually or ethically considered. He cannot be

considered as a profound metaphysician. He wanted depth and comprehension, and was very deficient in the necessary quality of

analysation. He was both acute and discriminative in a certain way, and could select judiciously from the mass of materials created to his hand by more original and more powerful thinkers ; but the secondary excellencies of intellect can never compensate for the absence of the primary ones in philosophic discussions. His biographer has told us that Paley was never a hard student, but the information might have been spared ; it is sufficiently impressed on all the author s productions ; and on none of them more than his Moral Philosophy. It every where convinces as fully as il Paley himself had told us that he was determined to be easy, and not worry his mind, or rack his brain about the matter. His conclusion of the chapter on the moral sense amused us, as remarkably coincident with the manner of Mr. Stewart, when retreating from before some metaphysical question of much difficulty. This celebrated question, therefore, becomes in our system a question of pure curiosity ; and as such we dismiss it to the determination of those who are more inquisitive than we are concernec1 to be, about the natural history and constitution of the human species. This was his own ; the arguments with which he so successfully combated the moral sense were all borrowed.

Owing to what has been just indicated, the defects of Paley's work are of a deep and radical nature ; and yet probably if it had been freer from such defects, and more sound, self-consis- tent, and logically entire, it would have been less popular. The logical discrepancies we allude to would seem to be, to the multitude of readers, like discords skilfully introduced to the lovers of music, or rather, perhaps, they are too deep to be perceived by such as are still more superficial than the author himself; and in the case before us this is not to be wondered at, when there is so much that is plausible, and when the manner of the whole is agreeable and charming. But the duty imposed upon us is the ungrateful one of dissection ; and though we have admitted all the charms and beauties of Paley's moral philosophy, and that it abounds with excellent remarks, yet the radical errors are such as to vitiate the whole considered as a system ; indeed, as will presently appear, it is not one system, but two or more, jumbled together. There is no unity of design or execution ; no mutual affinity or coherency among the different parts; and, what is still -worse, the principles intended to support and bind the whole are essentially faulty. Much of this is referable to an intellectual origin, or metaphysical defect in the author ; but we are sorry to say that much of the evil is ascribable to a deficiency of the moral and religious sense, if we may thus for once express it; so far from being prepared conscientiously to pronounce, with Dr. Carpenter, the Moral Philosophy of Paley a useful work, we are constrained to say that we think it of a very mischievous tendency,

so far as it has any actual influence. Not that we are alarmists ; for we know how very powerless moral systems are, and what very little influence they have upon human minds and

human conduct. But the tendency of the work in question is, in our humble opinion, manifestly bad. The doctrines of the author concerning the connexion of religion and virtue are as erroneous, we opine, as they can well be ; and, concerning morality iu general, as lax as almost any libertine could wish.

Take, for example, his chapter on Subscription to Articles of Religion, or that on lies, and we may as well begin at the end, or in the middle, as at the beginning. What can be more Jesuitical or more latitudinarian than his statements? Proceeding on the principle of utility (like Hume, from whom indeed he borrowed it) as the basis or origin and standard of morals, he thus defines, and then argues : ‘ A lie is a breach of promise ; for whoever seriously addresses his discourse to another tacitly promises to speak the truth, because he knows the truth is expected.’ This was not of his own inventing, but it will match in sophistry any legal or ca-suistical fiction ever invented. Not feeling sure of his lame principle, he provides two crutches for it ‘ Or, he adds, ‘ the obligation to veracity may be made out from the direct ill consequences of lying to social happiness. Which consequences consist, either in some specific injury to particular individuals, or in the destruction of that confidence which is essential to the intercourse of human life; for which latter reason a lie may be pernicious in its general tendency, and therefore criminal, though it produces no particular or visible mischief to any one.’ Such are the definitions and positions, now for the deductions, or demonstrations, and corollaries ‘ There are falsehoods which are not lies (this is surely too bad, or too barefaced) ; that is, which are not criminal ; as,

1. ‘Where no one is deceived ; which is the case where the declared design of the speaker is not to inform, but to divert; compliments in the subscription of a letter, a servant’s denying bis master, a prisoner’s pleading not guilty, an advocate asserting the justice, or his belief of

the justice, of his client's cause. In such instances, no confidence is destroyed, because none was reposed ; no promise to speak the truth is violated, because none was given or understood to be given.

2. ' Where the person to whom you speak has no right to know the truth ; or, more properly, where little or no inconveniency results from the want of such confidence in such cases ; as where you tell a falsehood to a madman for his own advantage ; to a robber to conceal your property ; to an assassin to defeat or divert him from his purpose. The particular consequence is by the supposition beneficial ; and, as to the general consequence, the worst that can happen is, that the madman, the robber, the assassin, will not trust you again, which is sufficiently compensated by the immediate benefit which you propose by the falsehood.

' It is on this principle, that, by the laws of war, it is allowed to deceive an enemy by feints, false colors, spies, false intelligence, and the like.'

This is no doubt the genuine doctrine of Hume, and of his theory of utility, when fol-luvved up or carried out to its full extent. And it

is well to have it presented in ail its aspects and bearings without disguise or concealment in the simple and graphic statements of Paley, as well as in the subtle but reckless reasonings of Hume, Such is the morality of Paley (who is reported to have said that he could not afford to keep a conscience), and such is the morality of the world ; but is it like the morality of the Gospel ? The question is a kind of indignity offered to the purity of that moral excellence which is from above. Epicurus could teach as good morality 'as this moral philosopher, though professedly Christian. Jeremj Bentham, staunch utilitarian as he is, would reprobate at least some parts of this doctrine ; and he has borne his enlightened and honest testimony against the legal wickedness, or pernicious perversity, of compelling a criminal, conscious of guilt, to add to all his other guilt that of denying it iu the face of his judge and juiy, and the whole court, and pleading not guilty. There have been some painful cases lately of burdened and scrupulous consciences in culprits undergoing much varied treatment from the court to bring them to conformity with a perverse rule to take their trial ; and it is to be hoped that what is more honored in the breach than in the observance will be abolished at no gieat distance of time. It gave us unfeigned pleasure to hear one of the first ministers of the crown declare in full parliament, respecting one of those abuses of

words, commonly called ‘ law-technicalities and legal fictions,’ that he wished to set an example of respect for the import of terms to the inferior courts. It is desirable to have in some statesmen, more intellectual and moral rectitude than we find in such moral philosophers as Paley and his compeers ; and most afflicting, to a mind of correct feeling, to witness a moral teacher delivering such doctrines, as if he were not only ignorant or indifferent respecting their bearings and tendencies, but as utterly unconscious as a Machiavel of their reproachful nature.

The system of Paley is so loose and discordant, the parts composing it are so miscellaneous and heterogeneous, there is so little of unity and identity about the whole, that there is some difficulty in attempting to analyse it, or in finding a proper beginning for the purpose. The most favorable opening seems to be presented at his statement concerning the will of God. ‘The will of God is our rule,’ he writes, ‘ which conse ××× quently becomes the whole business of morality Now there are two methods of coming at the will of God on any point : ×××

1. ‘ By his express declarations, when they are to be had and which must be sought for in Scripture.

2. ‘ By what we can discover of his designs and dispositions from his works ; or, as we usually call it, the light of nature.’

This is not exactly the light in which the light of nature is usually presented. But the difference is too obvious to require indication ; nor is it of much importance as to any theoretical or practical purpose. Paley ‘s light of nature is certainly a simpler, more intelligible, and more tangible sort of entity than what is usually called by the same name.

‘ And here,’ continues our author, ‘ we may observe the absurdity of separating natural and revealed religion from each other. The object of both is the same, to discover the will of God ; and, provided we do but discover it, it matters nothing by what means.’ What a convenient

and pleasant kind of logic this is ! How envia-ble the mental conformation that can use it with perfect satisfaction ! It makes the most difficult matters smooth and easy without any trouble. But we know not what the author means exactly by the terms he employs, or how they can stand consistently with any distinct meaning in the connexions or relations in which he has placed them. The will of God, we had supposed to be rather the origin and standard, or the foundation of religion than its object. How religion can exist apart from the will of God, as the eye apart from the object atwhich it looks, or is employed to discover, we cannot imagine. However this also is of no great importance ; we can at least form a rough guess what the archdeacon meant to express if he had been endowed with a little more of metaphysical acumen and logical accuracy. Whether right or wrong, we have his meaning more explicitly in the following paragraph : ###

‘ The method of coming at the will of God, concerning any action, by the light of nature, is to enquire into the tendency of the action to promote or diminish the general happiness. This rule proceeds upon the presumption that God Almighty wills and wishes the happiness of his creatures ; and, consequently, that those actions which promote that will and wish must be agreeable to him ; and the contrary.

‘ As this presumption is the foundation of our whole system, it becomes necessary to explain the reasons upon which it rests.’

Then follow a few loose remarks headed Chapter 5, The Divine Benevolence ; such as the following : ### ###’ The contemplation of universal nature rather bewilders the minrl than affects it. There is always a bright spot in the prospect, upon which the eye rests ; a single example perhaps by which each man finds himself more convinced than by all others put together.’ The instance that pleased the author best, and seemed most effectually to establish the presumption which he made the foundation of his whole sys-tem, was a child at its sport. ‘ But the example,’ he adds, ‘ which strikes each man most strongly is the true example for him : and hardly two minds hit upon the same ; whicli shows the abundance of such examples about us.’ We really know not which of all Paley’s kinds of simplicity we ought most to admire. The conclusion of the whole ceremony of proving the presumption, and laying the foundation, is as follows : ### ‘ We conclude, therefore, that God wills and wishes the happiness of his creatures. And, this conclusion benis once established, we are at liberty to go on with the rule built upon it.’ It is not usual to build rules on foundations,### but this is nothing. Next follows, as in reason ought, Chapter 6, Utility ; which dashes boldly

off with the doctrine of Hume and Epicurus.

‘ So then actions are to be estimated by their tendency. Whatever is expedient is right It

is the utility of any morai rule alone which constitutes the obligation of it.’

This is as dexterous a method of cheating atheism out of the moral doctrine of utility to give it to natural religion as can well be imagined. What is essentially bad, however, is not so very transmutable as to be converted into much good by mere slight of hand operations; and we refer the reader to the author’s chapter on lies, for proof, what a rogue iu grain the doctrine of utility is, whether found under the patronage of Hume, or in the service of archdeacon Paley. It is not necessary to say more. The statements and distinctions of Paley, for the purpose of giving it a written character, are just sufficiently plausible to impose upon such as are incapable of analysis, or who will not be at the trouble to search below the surface. If mere phraseology, or ver-bal but unreal distinctions, could reconcile contrarieties into perfect affinity and immutable union, or change the very essence of things so as to make evil good, then might such attempts as the following, to justify the doctrine of utility, amount to something more than the mere saving of appearances.

‘ Actions in the abstract are right or wrong, according to their tendency ; the agent is virtuous or vicious, according to his design. * It is evident that our concern is with actions in tke abstract.’ ‘ There are occasions in which the hand of the assassin would be very useful. The present possessor of some great estate employs his influence and fortune to annoy, corrupt, or oppress all about him. His estate would devolve by his death to a successor of an opposite character. It is useful therefore to despatch such a one out of the way as soon as possible; as the neighbourhood will thereby exchange a pernicious tyrant for a wise and generous benefactor. It might be useful to rob a miser and give the money to the poor. It may be useful to get possession of a place, a piece of preferment, or of a seat in parliament, by bribery or false swearing. * Must we admit these actions to be right, which would be to justify assassination, plunder, and perjury ; or must we give up our principle that the criterion of right is utility? It is not necessary to do either. The true answer is this; that these actions after all are not useful, and for that reason, and that alone, are not right. To see this point perfectly it must be observed that the bad

consequences of actions are twofold, particular and general. The particular bad consequence of an action is the mischief which that single action directly and immediately occasions. The general bad consequence is the violation of some necessary or general rule.'

This sort of reasoning would no doubt convince and satisfy a great many ; and Paley was sufficiently subtle to have made a good lawyer, and no bad casuist among the Jesuists. He has really done as much for utility to make it out to be a good, sure, and safe moral principle, as any advocate could well do for a bad client ; and, if he had not committed himself so palpably in some parts of his special pleading, particularly in trying to make black lies appear white ones, we should have thought it necessary to strip off lh< mask of plausibility fiom his subtle distinction

about particular and general consequences, and abstract and concrete actions. To do this as fully and effectually as we could wish would require more space than can be now allotted to the purpose. We refer the reader to that part of Dr. Brown's ethical lectures which discusses the question of actions as absolutely and relatively considered, and whether they can be both right and wrong, according to a supposed difference which no where exists but in verbal ambiguities. On this question, which goes much deeper than Paley's sophistry, Dr. Brown will be found in full possession of that logical and analytic mastery which he always displays when combating false theories and reasonings.

It would be a comparatively easy task to show that the general superstructure of Paley's moral philosophy is as faulty as the presumption upon which the whole is constructed. But we must now hasten to a brief notice of the theological part or parcel (for we know not well what to call it) of his work. Here he is, if possible, still wider of the mark, and proves himself to be as defective a theologian as metaphysician. In-deed it is difficult to conceive how a clergyman, however destitute of an experimental acquaintance with divine truth, could be so theoretically ignorant of it as to write in the manner lie

has done. He adopts the strangely absurd (in every view) definition of virtue, given in Gay's Preliminary Dissertations. 'Virtue is the doing good to mankind, in obedience to the will of God, and for the sake of everlasting happiness.' This combines the two opposite faults of being at once deficient and redundant ; and, what is still worse, it is as unsound and as directly opposed to the revealed will of God as can well be imagined. Not only is there nothing to warrant the principle of the definition in the sacred scriptures, but it is remarkably at variance with their general import ; and directly contrary to the gospel or doctrines of Christ and his apostles. It is in fact the very principle which, above all others, they strenuously opposed, and which they insisted, upon the authority of God, must be renounced to receive eternal life, or everlasting happiness, as the gift of God through Jesus Christ.

Paley's principle of virtue is decidedly anti-scriptural, and it is as manifestly selfish. In this last view Dr. Brown combats it with great force of argument, though his arguments are in some respects vitiated by an error of another kind, ××× the assumption of the natural-sentiment principle of morality, or, in other words, that human nature is naturally virtuous, and that this natural and necessary tendency of the human mind is the only possible origin and standard of virtue. We give the following quotations from his lectures in opposition to the doctrine of Paley:×××

' After these two lights in which the system (as presented by Mandeville and Hume) commonly distinguished by the name of the selfish system of morals, has been considered by us, there remains still one other light in which it is to be viewed, that in which the obligation of virtue is supposed to consist merely in an exclu-Hve regard to our own individual eternity of

happiness in another life ; and virtue itself to consist in obedience to the will of the Supreme Being ; not on account of the moral excellence of that Supreme Being, or of his bounty to us, which might seem of itself to demand compliances that are the only possible expressions of the gratitude of dependent creatures to him from whom their power, as well as their happiness, is derived, but without any such views of reverence or gratitude, merely on account of the power which the ruler of the universe possesses, to give or withhold the happiness which is our only object. This form of the selfish system, which has been embraced by many theological writers of undoubted piety and purity, is notwithstanding, I cannot but think, as degrading as any

other form of the doctrine of absolute selfishness; or rather it is in itself the most degrading of all the forms which the selfish system can as-sume ; because, while the selfishness which it maintains is as absolute and unremitting as if the objects of personal gain were to be found in the wealth or honors, or sensual pleasures, of this earth : this very selfishness is rendered more offensive by the noble image of the Deity which is continually presented to our mind, and presented in all his benevolence, not to be loved, but to be courted with a mockery of affection.

‘ The doctrine of the absolute selfishness of our homage to God, and of our social virtues, considered as the mere conformity of our wills to the mere command of Him who is the dispenser of eternal happiness and eternal misery, for the sole reason of his power of thus dispensing happiness or misery, and not on account of his own transcendant excellence that of itself might seem to demand such a conformity, is a doctrine of very old date. But the writer who, in modern times, has led to the widest diffusion of this doctrine is archdeacon Paley, the most popular of all our ethical writers ; and one of the most judicious in the mere details of ethics, however false and dangerous I consider his leading doctrines to be. Virtue he defines to be the doing good to mankind in obedience to the will of God and for the sake of everlasting happiness. The last part of the definition is the most important part of the whole ; for the knowledge of this everlasting happiness he supposes to be all which constitutes moral obligation ; meaning by obligation the influence of happiness as an object of physical desire, and of pain as an object of physical aversion , one or other of which is to follow our obedience or disobedience to the command of the power who is the supreme dispenser of both. The will of God is our rule, he says, but ‘ private happiness is our motive,’ and therefore our obligation. * The doctrine of Paley differs, as you perceive, from the general selfish system only by the peculiar importance which it very justly gives to everlasting happiness and misery when compared with the brief pains or pleasures of this life. In the scale of selfish gain it is a greater quantity of physical enjoyment which it has in view. It is a sager selfishness, but it is not less absolute selfishness, which it maintains ; and it is therefore subject to all the objections which I urged before at great length. An obvious answer presents itself to all

those selfish systems which convert the whole of virtue into prudence ; and make the difference of virtue and vice in every respect precisely the same in kind as those of speculations in the market of commerce, who have employed their capital more or less advantageously in the different bargains that have been offered to them.'

In perfect consistency with the definition adopted by Paley we find him making such strange and anti-evangelical remarks as the following:❖❖❖ 'The Christian religion hath not ascertained the precise quantity of virtue necessary to salvation.' ' That a state of happiness is not to be expected by those who are conscious of no moral or religious rule : I mean those who can-not with truth say that they have been prompted to one action, or withholden from one gratification, by any regard to virtue or religion either immediate or habitual.' But it would be superfluous to animadvert more particularly on this work ; which, notwithstanding all the good remarks it contains, and the beautiful simplicity which pervades the whole, is as abortive a performance philosophically considered, as it is objectionable theologically and ethically.

Our strong objections to Dr. Paley's doctrine of general consequences are so happily and eloquently confirmed by Mr. Coleridge, in a number of his much neglected work The Friend, that the reader we are sure, and we trust the able author, will pardon an ample quotation from it.

' Much and often have I suffered from having ventured to avow my doubts concerning the truth of certain opinions, which had been sanctified in the minds of my hearers, by the authority of some reigning great name : even though, in addition to my own reasons, I had all the greatest names from the Reformation to the Revolution on my side. I could not, therefore, summon courage, without some previous pio-neering, to declare publicly, that the principles of morality taught in the present work will be in direct opposition to the system of the late Dr. Paley. This confession I should have deferred to a future time, if my opinien on the grounds of international morality had not been contradictory to a fundamental point in Paley's System of moral and political Philosophy. I mean that chapter which treats of general consequences, as the chief and best criterion of the right or wrong of particular actions. Now this doctrine I conceive to be neither tenable in rea-son nor safe in practice : and the following are the

grounds of my opinion.

‘ First : this criterion is purely ideal, and so far possesses no advantage over the former systems of morality, while it labors under defects, with which those are not justly chargeable. It is ideal ; for it depends on, and must vary with, the notions of the individual, who, in order to determine the nature of an action, is to make the calculation of its general consequences. Here, as in all other calculations, the result depends on that faculty of the soul in the degrees of which men most vary from each other, and which is itself most affected by accidental advantages or disadvantages of education, natural ta-lent, and acquired knowledge ××× the faculty, I mean, of foresight and systematic comprehen-

sion. But surely morality, which is of equal importance to all men, ought to be grounded, if possible, in that part of our nature which in all men may and ought to be the same : in the conscience and the common sense.

‘Secondly: this criterion confounds morality with law; and when the author adds, that in all probability the tlivine justice will be regulated in the final judgment by a similar rule, he draws away the attention. from the will, that is, from the inward motives and impulses which constitute the essence of morality, to the outward act: and thus changes the virtue commanded by the gospel into the mere legality which was to be enlivened by it. One of the most persuasive, if not one of the strongest, arguments for a future state, rests on the belief, that although by the necessity of things our outward and temporal welfare must be regulated by our outward actions, which alone can be the objects and guides of human law, there must yet needs come a juster and more appropriate sentence hereafter, in which our intentions will be considered, and our happiness and misery made to accord with the grounds of our actions. Our fellow-creatures can only judge what we are by what we do; but in the eye of our Maker what we do is of no worth, ex-cept as it flows from what we are. Though the figtree should produce no visible fruit, yet if the living sap is in it, and if it has struggled to put forth buds and blossoms which have been prevented from maturing by inevitable contin-gencies of tempests or untimely frosts, the virtuous sap will be accounted as fruit: and the curse of barrenness will light on many a tree, from the boughs of which hundreds have been satisfied, because the omniscient Judge knows that the fruits were threaded to the boughs artificially by the outward working of base fear and selfish hopes, and were neither

nourished by the love of God or of man, nor grew out of the graces engrafted on the stock by religion.

‘ 1 return to the question of general consequences, considered as the criterion of moral actions. The admirer of Paley’s System is required to suspend for a short time the objection, which, I doubt not, he has already made, that general consequences are stated by Paley as the criterion of the action, not of the accent. I will endeavour to satisfy him on this point, when I have completed my present chain of argument. It has been shown that this criterion is no less ideal than that of any former system : that is, it is no less incapable of receiving any external experimental proof, compulsory on the understandings of all men, such as the criteria exhibited in chemistry. Yet, unlike the elder systems of morality, it remains in the world of the senses, without deriving any evidence therefrom. The agent’s mind is compelled to go out of itself in order to bring back conjectures, the probability of which will vary with the shrewdness of the individual. But this criterion is not only ideal : it is likewise imaginary. If we believe in a scheme of Providence, all actions alike work for good. There is not the least ground for supposing that the crimes of Nero were less instrumental in bringing about our present advantages, than the virtues of the Antonines. Lastly : the

criterion is either nugatory or false. It is demonstrated, that the only real consequences can-not be meant. The individual is to imagine what the general consequences would be, all other things remaining the same, if all men were to act as he is about to act. I scarcely need remind the reader, what a source of self delusion and sophistry is here opened to a mind in a state of temptation. Will it not say to itself, I know that all men will not act so : and the immediate good consequences, which I shall obtain, are real, while the bad consequences are imaginary and improbable ? When the foundations of morality have once been laid in outward consequences, it will be in vain to recall to the mind, what the consequences would be, were all men to reason in the same way; for the very excuse of this mind to

itself is, that neither its action nor its reasoning is likely to have any consequences at all, its immediate object excepted. But suppose the mind in its sanest state. How can it possibly form a notion of the nature of an action considered as indefinitely multiplied, unless it has previously a distinct notion of the nature of the single action itself, which is the multiplicand ? If I conceive a crown multiplied a hundred fold, the single crown enables me to understand what a hundred crowns are ; but how can the notion hundred teach me what a crown is ? For the crown substitute X. Y. or abracadabra, and my imagination may multiply it to infinity, yet remain as much at a loss as before. But if there be any means of ascertaining the action in and for itself, what further do we want ? Would we give light to the sun, or look at our own fingers through a telescope ? The nature of every action is determined by all its circumstances : alter the circumstances and a similar set of motions may be repeated, but they are no longer the same or similar action. What would a surgeon say, if he were advised not to cut off a limb, because, if all men were to do the same, the consequences would be dreadful ? Would not his answer be ‘ WThoever does the same under the same circumstances, and with the same motives, will do right ; but if the circumstances and motives are different, what have I to do with it?’ I confess myself unable to divine any possible use, or even Cleaning, in this doctrine of general consequences, unless it be, that in all our actions we are bound to consider the effect of our example, and to guard as much as possible against the hazard of their being misunderstood. I will not slaughter a lamb, or drown a litter of kittens in the presence of my child of four years old, because the child cannot understand my action, but will understand that his father has inflicted pain, and taken away life from beings that had never offended him. All this is true, and no man in his senses ever thought otherwise. But methinks it is strange to state that as a criterion of morality, which is no more than an accessary aggravation of an action bad in its own nature, or a ground of caution as to the mode and time in which we arc to do or suspend what is in itself good or innocent. The duty of setting a good example .s no doubt a most important duty; but the ‘ xample is good or bad, necessary or unnecessary, according as the action may be. which has a chance of being imitated.

‘ The question may be thus illustrated. At Florence there is an unfinished bust of Brutus, by Michael Angelo, under which a cardinal wrote the following distich :

Dum Bruti effigiem sculptor de marmore finxit

In mentem sceleris venit, et abstinuit. As the sculptor was forming the

effigy of Brutus in marble, he recollected his act of guilt, and refrained. ‘ An English nobleman, indignant at this distich, wrote immediately under it the following: ††† Brutum etfinxisset sculptor, sed mente recursat

Multa viri virtus sistit et obstupuit.

The sculptor would have framed a Brutus, but the vast

and manifold virtue of the man flashed upon his

thought : he stopped and remained in

astonished admiration.

‘ Now which is the nobler and more moral sentiment, the Italian cardinal’s, or the English nobleman’s ? The cardinal would appeal to the doctrine of general consequences, and pronounce the death of Caesar a murder, and Brutus an assassin. For (he would say) if one man may be allowed to kill another because he thinks him a tyrant, religious or political phrenzy may stamp the name of tyrant on the best of kings : regicide will be justified under the pretence of tyrannicide, and Brutus be quoted as authority for the Clements and Rarilliacs. From kings it may pass to generals and statesmen, and from these to any man whom an enemy or enthusiast may pronounce unfit to live. Thus we may have a cobbler of Messina in every city, and bravos in our streets as common as in those of Naples, with the name Brutus on their stilettos.

‘ The Englishman would commence his an-swer by commenting on the words ‘ because he thinks him a tyrant.’ No ! he would reply, not because the patriot thinks him a tyrant ; but because he knows him to be so, and knows likewise that the vilest of his slaves cannot deny the fact, that he has by violence raised himself above the laws of his country ††† because he knows that all good and wise men equally with himself abhor the fact ; If there be no such state as that of being broad awake, or no means of distinguishing it when it exists ; if because men sometimes dream that they are awake, it must follow that no man, when awake, can be sure that he is not dreaming; if because an hypochondriac is positive that his legs are cylinders of glass, all other men are to learn modesty, and cease to be so positive that their legs are legs ; what possible advantage can your criterion of general consequences possess over any other rule of direction? If no man can be sure ihat what he thinks a robber with a pistol at his breast demanding his purse, may not be a good friend enquiring after

his health ; or that a tyrant (the son of a cobbler perhaps, who, at the head of a regiment of perjured traitors, has driven the representatives of his country out of the senate at the point of the bayonet, subverted the constitution which had trusted, enriched, and honored him, trampled on the laws which before God and man he had sworn to obey, and finally raised himself above all law) may not, in spite of his own and his

neighbours' knowledge of the contrary be a lawful king, who lias received his power, however despotic it may be, from the kings his ancestors, who exercises no other power than what had been submitted to for centuries, and been acknowledged as the law of the country; on what ground can you possibly expect less fallibility, or a result more to be relied upon in the same man's calculation of your general consequences ? Would he, at least, find any difficulty in converting your criterion into an authority for his act ?

' I must now in a few words answer the objection to the former part of ray argument (for to that part only the objection applies), namely, that the doctrine of general consequences was stated as the criterion of the action, not of the agent. I might answer, that the author himself had in some measure justified me in not noticing this distinction by holding forth the probability that the Supreme Judge will proceed by the same rule. The agent may then safely be included in the action, if both here and hereafter the action only and its general consequences will be attended to. But my main ground of justification is, that the distinction itself is merely logical, not real and vital. The character of the agent is determined by his view of the action : and that system of morality is alone true, and suited to human nature, which unites the intention and the motive, the warmth and the light, in one and the same act of mind. This alone is worthy to be called a moral principle. Such a principle may be extracted, though not without difficulty and danger, from the ore of the stoic philosophy; but it is to be found unalloyed and entire in the Christian system,' and is there called faith.'

What is the inference to be drawn, then, from the extraordinary popularity of Paley's Moral Philosophy? Plainly this, that any sort of work bearing that title, agreeably and plausibly written, especially by an author of some note, will be generally received as very excellent. Moral philosophy is such an imposing, high sounding, sort of entity, but so indefinite withal, ††† such an obscure phantom, that i{ may be written about in almost any manner. It may be set up in direct opposition to the gospel on either deistical or atheistical principles ;

and an unholy alliance may be attempted between it and the gospel by compromising first principles; as if light could have fellowship with darkness, ††† as if genuine Christianity could be amalgamated with deism or atheism. We have looked at several treatises on moral philosophy of less note than Paley's : such as that of Belsham, of Estlin, and the professedly deistical production of Mr. Jevons, junior, with some others. It is some satisfaction to find these, if not innoxious, at least very impotent. Perhaps the least noxious and the most respectable (unquestionably so morally considered) production of the same school (which has been very prolific of ethical offspring) is the ar-licle Moral Philosophy in ' Systematic Education,' written we believe by Dr. Carpenter. He discovers much correctness of judgment on many points, and much good moral feeling ; and he remonstrates not only against some of the worst statements of Paley, but even against some of his brother Belsham's. ' The following statement,' he writes, ' in Mr. Belsham's Elements (p. 432) is very objectionable : ††† Hence it follows that there can be but one rule of right, namely, the tendency of an action or affection to the ultimate happiness of the agent, or what completely coincides with this, under the government of perfect wisdom and benevolence to the greatest general good ? Certainly this is more objectionable than even Paley's manner of putting the doctrine of utility ; and, though sufficiently reckless for Hume himself, it bears very little other resemblance to that subtle and sceptical reasoner, ††† is so very harmless as almost to merit a eulogy. We believe the work of this humble disciple of Dr Priestley is now very quiet and inoffensive, and it is a sort of duty to tread lightly on the ashes of the dead. Indeed the offspring we have been noticing, though somewhat numerous, are not only of obscure parentage, but so shortlived that one epitaph will serve for all,

Born but to die.

Ethics and the evidences are the two great subjects to which a certain class of religious and moral reasoners run when they are in eager haste to come before the public with literary oblations. But it may be truly said to them, Who hath required this at your hands ? Whether weighed in the balance of the sanctuary, or tried by the standard of utility, their professed services to religion and morality are wofully wanting.

We have now examined the various systems of moral philosophy of any note both ancient and modern with a view to their essential principles, and have found them not only generally at variance with one another, but so radically deficient in right principle, that it is somewhat difficult to say which of them is most objectionable. This

circumstance will seem to some, perhaps, to be a foundation for absolute scepticism ; but with all who cannot be satisfied with absolute scepticism (and whom can it satisfy or felicitate?) it ought to recommend that which alone is worthy of all acceptation ††† the moral philosophy of revelation††† the theory of moral sentiment delivered by infinite wisdom. But it must be taken pure and entire as it came from the fountain of intelligence to make us wise unto eternal life, and partakers of such principles and influences as are the commencement of that moral rectitude, and purity, and felicity, which are to be consummated in the eternal world. If the gospel be rejected there is nothing for us of an ethical nature to look to but a vain and deceitful philosophy which is as devoid of any moral power as it is incapable of convincing sound reason

MORANT (Philip), F.S.A., a learned and indefatigable antiquary and biographer, born at St. Saviour's in the isle of Jersey, in 1700; educated at Abingdon school, and Pembroke College, Oxford, where he took the degree of B. A. m 1721, and that of M.A. in 1724. Between 1733 and 1745 he obtained six benefices in Es-sex; and in 1748 he published his History of Colchester, of which only 200 copies were printed. In 1751 he was elected F.S.A. ; and in February 1768 he was appointed by the house of peers to prepare for the press a copy of the rolls of parliament; a service to which he diligently attended till his death, on November 25th, 1770. Besides the above work, and many useful translations, abridgments and compilations, &c., he wrote all the Lives in the Biogra-phia Britannica marked C ; also, the Life of Stillingfleet; the History of Essex, 1760, 1768, 2 vols. folio ; the Life of King Edward the Confessor; and about 150 Sermons. He prepared the rolls of parliament as far as the 16th of Henry IV. The continuation of the task devolved upon Thomas Astle, esq., who had married his only daughter.

MORASS', n. s. Fr. morals ; Swed. morass ; TeuLmorast. Fen; bog; marsh.

Landscapes point out the fairest and most fruitful spots, as well as the

rocks, and wildernesses, and moratses of the country. Watts on the Mind.

Nor the deep morass

Refuse, but through the shaking wilderness

Pick your nice way. Thomson' t Autumn.

MORATA (Olympia Fulvia), an Italian lady, born at Ferrara, in 1526, and distinguished for her learning. Her father, after teaching the belles lettres in several cities of Italy, was made preceptor to the two young princes of Ferrara, the sons of Alphonsus I. The abilities he discovered in his daughter determined him to give her a superior education. Meanwhile, the princess of Ferrara studying polite literature, it was judged expedient that she should have a companion in the same pursuit; and Morata was chosen as one of the most learned females of her age. Her father dying, she was obliged to return home to superintend the education of her brother and three sisters. Here she married Andrew Gruntler, a young German physician, and went with her husband to Germany ; and, after staying a short time at Augsburg, went to Schweinfort in Franconia, where her husband was born ; but they had not been there long be-fore that town was besieged and burnt; on which they fled in the utmost distress to Hammelburg. This place they were also obliged to quit, and were reduced to the last extremities, when the elector palatine invited Gruntler to be professor of physic at Heidelberg, and he entered on his new office in 1554. But they no sooner began to taste the sweets of 'repose, than a disease, occasioned by the distresses and hardships they had suffered, seized upon Morata, who died in 1555, in the twenty-ninth year of her age; and her husband did not long survive her. She composed several works, great part of which were burnt with the town of Schweinfort; the remainder, which consists of orations, dialogues, letters, and translations, were collected and published

under the title of Olympia? Fulviae Moratae fne-minre doctissima, et plane divinae, opera omnia quae hactenus inveniri potueruru ; quibus Cceli Secundi Curionis epistolae ac orationes accesse-runt; which has gone through several editions in 8vo.

MORATALLA, a large town of Murcia, Spain, on a river of the same name. It has a church and eight monasteries, two hospitals, and 6000 inhabitants. Fifty miles W.N.W. of Murcia.

MORAY A, or the March, a large river of Austria, having its source at the foot of the Schneeberge mountain, situated on the frontiers of

Bohemia, Moravia, and the county of Glatz. Its course is from north to south, and, flowing through Moravia, it separates lower Austria from Hungary, and then falls into the Danube above Presburg. It is joined by the Theya, the Hanna, and the Becswa.

MORAVIA, a province of the Austrian em-pire, bounded by Hungary on the east, by Austria Proper on the south, and by Bohemia on the north and west. With Austrian Silesia, now annexed to it, it contains 10,700 square miles, and a population of 1,681,000; of these 184C square miles, and 347,000 inhabitants, belong to Silesia. Moravia Proper is divided into the circles of Brunn, Olmutz, Hradisch, Prerau, Znaym, and Iglau. The principal towns are,

Inhabitants.

Brunn (the capital), with 26,000

Olmutz 11,000

Iglau 11,000

Troppau 10,000

Sternberg …… 8,000

Nikolsburg 7,600

Teschen 5,400

Znaym 5,200

Cremsier 3,200

Fulneck 3,10C

Prerau 2,900

Hradisch 1,700

Moravia is intersected by several mountain ranges, of which the highest are toward Bohemia. A branch of the Sudetic chain extends from the north-west of the province to the centre ; a lofty branch of the Carpathian occupies the east and north-east: and another, but less lofty one, extends across the south. The cavern of Maczocha, of extraordinary depth, is considered a great natural curiosity. The most lofty ridges of Moravia are diversified with fertile valleys and extensive plains. The rivers include the March or Morava, which, after

absorbing most of the other numerous streams, particularly the Theya or Taja, flowing from the west, holds a course nearly south, and falls into the Da-nube.

Though the soil is in general fertile, little corn is exported. Flax is cultivated in the circles of Brunn and Olmutz, and in quality is second only to that of Silesia. In certai.i situations the soil and climate are favorable to the grape ; but the government interfered in 1803 to prohibit the further laying out of vineyards. According to M. Hlumenbach, Moravia contained, in 1816, 50,856 joch of vineyard : the annual produce

was estimated at 458,542 eimers; but, by an average of twenty-seven years, it was found to be only 431,425; each joch yielding nearly eight eimers and a half. The forests are well attended to, and profitable in timber : the pasture grounds are extensive in the mountains ; and a great proportion of the Austrian heavy horse is furnished from hence. Horned cattle are exported, but not largely : also hogs and geese. In 1739 the average yearly produce was reckoned to be 1,581,101 metzen of wheat, 4,741,605 nietzen of rye, 2,104,152 metzen of barley, 9,291,146 metzen of oats; altogether 17,718,004 metzen, on 1,714,942 joch of arable land. After subtracting 571,647 joch for tallow, each of the remaining 1,143,295 joch yields an average of 15J metzen.

Moravia, though inland, is subject to sensible variations in its temperature, the mountains and valleys having a considerable influence on the wind, which commonly blows from the north-west or southeast. The west, south-west, and south winds, are attended by rain, storms, or fog ; the north-west winds are cloudy, and the southeast render the air serene.

The mines have been long famous ; those of Iglau being discovered in the eighth century, and having been well managed in the thirteenth. The gold and silver mines were lost sight of during the fifteenth and sixteenth centuries ; the most productive at present are those of iron

and lead. The working of coal mines is as yet in its infancy. Here is a fossil incense, a species of amber ; and a kind of clay very useful and superior for making tobacco pipes.

The inhabitants of Moravia, being a mixture of Germans, Sclavonians, and Jews, participate in the manners and customs of all these stocks. Their greatest general resemblance is to the Bohemians. Near Olmutz, a small tract is occupied by a people of Sclavonic origin, who are supposed by the native writers to be the unmixed descendants of the aborigines of the country. They are called Haunacks, probably from the river Hauna which flows here. They are lo%v of stature, strong, and muscular; having preserved, in their manner of life, much primitive simplicity ; and from their plain and temperate habits live to an advanced age. They are reproached by their neighbours with indolence, but they plead the fertility of their soil as a palliation of the charge, and look-down on their accusers as an inferior race of beings. ‘ The young women,’ says Dr. Neale, ‘ are remarkable for the grace and elegance of tlieir forms, and the neat adjustment of their dresses, which are very picturesque, and show oft’, to great advantage, a considerable share of personal beauty with which their wearers are gifted. Their summer dress consists of a large white linen cap, the lappets of which, bordered with lace, and embroidered with black silk, fall over their shoulders. Their long hair is suffered to float in tresses ; or, when the cap is laid aside, is gracefully twisted and tied over the head with knots of ribands ; their well-turned ankles are set oft’ with white or red stockings, with black shoes and red heels. The dress of the men con-sis►►s of a round hat, adorned with various colored nliunds; a waistcoat, commonly green, embroidered with silk, surmounted by a broad leathern girdle, with brown pantaloons and boots, joined to the vest by means of large buckles. This is their summer costume ; but in winter they cover their heads with a large and singularly-shaped fur cap, and throw over their shoulders an undressed sheep or wolf-skin, in the absence of which they wear a brown woollen cloak, with a large hood, like that of a Capuchin friar.”

The Moravian language is a dialect of the Sclavonian, and seems to have been first reduced to writing by Cyrillus, the missionary, who, with Methodius, was sent hither by the emperor Michael, in the ninth century. They established the Greek ritual, and the service was performed in the native language to a late period, when the influence of Austria obtained the substitution of the Catholic forms. Although, in the fifteenth century, the Hussites in this province were so completely successful, and in the sixteenth the doctrines of the reformation spread with uncommon rapidity, the settled intolerance of the Austrian court compelled many families to return to the Catholic

church, and great numbers emigrated. When Joseph II. proclaimed liberty of worship, the Protestants were found to consist of only 12,000 Calvinists, and 11,000 Lutherans.

Moravia has a nominal assembly of representatives, who meet once a year to determine the mode of levying taxes. The sessions are short, but a committee sits the whole year. A governor and court of appeal conduct the civil administration. There are seven gymnasia or classical schools in Moravia; one normal school for the formation of teachers, and a great number of elementary schools. A university was founded at Olmutz in 1567, which in 1782 was converted into a lyceum.

Moravia has of late made considerable progress in manufactures, and is on the whole one of the most flourishing portions of the Austrian empire. Woollens, linen, and cotton in particular, are made on a large scale ; consuming not only all the wool and flax, but requiring a large importation of wool from Hungary, and flax from Silesia and Poland. Near Iglau above 40,000 pieces are woven annually, and sent to Leipsic, Frankfort, and other parts of the empire. Woollens are manufactured on a large scale at Fulnek and Maehrisch Neustadt, and at Brunn and Peltsch. Dyeing is also carried on in great perfection at Brunn. The number of persona employed in Moravia in weaving woollens is estimated at 16,000; in spinning at 24,000, exclusive of family weaving for consumption. The chief manufacture of thread is near llothwasser. The cottoo works of Lettowitz occupy 2000 individuals. The other manufactures .ire paper, leather, pot ash, and glass ; and the whole give rise to a brisk export trade. The imports are chiefly flax, cotton, oil, and silk, as materials of manufacture; and cattle, wine, and hardware, for consumption. The eoods are chiefly conveyed in waggons, along the two great commercial roads leading from Vienna, by Prague, Znaym, and Iglau, west; and by Brunn and Olmutz in the centre of the province. Much English machinery has been introduced here.

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Moravia was anciently inhabited by the Qua-di, who were driven out by the Sclavi. Its kings, who were once powerful and independent, afterwards became dependent on, and tributary to, the German emperors and kings. At last, in 908, the Moravian kingdom was parcelled out among the Germans, Poles, and Hungarians. In 1086 that part of it properly called Moravia was declared a marquisate by the German king Henry IV., and united with Bohemia. The margraves do not seem, however, to have reigned in tranquillity: several resigned their dignity in succession, and Moravia fell next into the hands of the Hungarians ; but a long series of troubles, occasioned by the Hussite wars, and by other internal dissensions, obliged the Hungarian sovereigns to relinquish the acquisition. Moravia for a time resumed its independence; but, after various changes, became again subject to Bohemia; and in 1527, on Ferdinand I. succeeding to the crowns of Hungary and Bohemia, was added to the possessions of Austria, with whom it has ever since remained.

MORAVIANS, in ecclesiastical history. See UNITAS FRATRUM.

MORA W A, a large river of Servia, European Turkey, consisting of two great arms, the East and West, which, after flowing in different directions, unite near the small town of Rasna, and fall into the Danube, considerably to the east of Belgrade. It is joined by the Ibar, Mitrovitza, Nissa, and a number of others flowing from the mountains that traverse European Turkey from east to west.

MOR'BID, adj. "} Lat. morbus, morbidus, MOR'BIDNESS, n. s. \ morbosus ; Fr. morbifique.. MORBIF'IC, adj. (^ Diseased; unhealthy: MORBIF'ICAL, [morbidness, and morbo-MORBOSE', I sity, mean the state of

MORBOS'ITY, n. s.] being out of health or diseased : morbific and morbifical, causing disease ••• morbose, proceeding from disease.

The inference is fair, from the organ to the action, that they have eyes, therefore some sight was designed, if we except the casual impediments or mor-Lotities in individuals. Browne.

The air appearing so malicious in this morbifick conspiracy, exacts a more particular regard ; wherefore initiate consumptives must change their air.

Harvey on Consumptions.

Malphigi, under galls, comprehends all preternatural and morbose tumours and excrescences of plants. Ray on the Creation.

Though every human constitution is morbid, yet are there diseases consistent with the common functions of life. Arbuthnot.

This disease is cured by the critical resolution, concoction, and evacuation of the mm-bijick matter.

Id.

MORBIHAN, a department in the north-west of France, bounded by the sea on the south, and by the Cotes du Nord on the north. Its superficial ex-tent is 2800 square miles ; its population 403,500. The surface is in great part an undulating sandy plain, containing much marshy land. It is watered by the Vilaine, the Blavet, the Claye, the Oust, and the Scorf. The soil is not of great fertility ; the climate temperate, but the air, from the vicinity of the sea, generally humid and cloudy. The corn raised, however, is equal to

the consumption, and flax, hemp, and fruit, are cultivated: but the wealth of the country consists in its cattle. The fisheries are also extensive ; and salt is made along the coast. The manufactures are linen and yarn : the exports, cattle in great numbers, some corn, butter, honey, wax, salt-fish, and linen. This department belongs to the diocese of Vannes, which is the capital ; but L'Orient is the larger town.

MORBIHAN, a large salt-water bay or basin on the north-west coast of France, from which the1 department above mentioned takes its name.

MORBUS, CHOLERA. See MEDICINE.

MORBUS COMITIALIS, a name given to the epilepsy ; because if on any day when the people were assembled in comitia upon public business, any person suddenly seized with this disorder should fall down, the assembly was dissolved, and the business of the comitia, however important, was suspended. See COMITIA.

MORDA'CIOUS, adj.~\ Lat. mordax, mor—

MORDAC'ITY, n. s. f dacitas, mordeo ; Fr.

MOR’DICANT, adj. ►► mordacite, mordicant.

MORDICA’TION, n. s. J Both the adjectives mean biting, or apt to bite ; acrid : mordacity the quality or aptitude of biting : mordication, the act of biting or corroding.

It is to be inquired, whether there be any menstruum to dissolve any metal that is not fretting or corroding, and openeth the body by sympathy, and not by mordacity, or violent penetration.

Bacon.

Another cause is mordication of the orifices, especially of the mesentery veins ; as any thing that is sharp and biting doth provoke the part to expel, and mustard provoketh sneezing. Bacon.

lie presumes, that the mordicant quality of bodies must proceed from a fiery ingredient ; whereas the light and inflammable parts must be driven away by that time the fire has reduced the body to ashes.

Boyle.

MORDANT is a name given to various substances used in dyeing, to enable the coloring matter to adhere more fixedly to the material to be colored, and which it was formerly supposed to do, by eating its way into the texture of such material, whence it derives its name. A more accurate knowledge of chemistry, however, has now taught us that this effect is produced not by any corrosive property in the substance denominated a mordant, but in consequence of its equal attraction or affinity for the coloring material and the material to be colored, by which they are kept in a state of union. Other substances are also called mordants, which have merely the effect of increasing the intensity and brightness of the color. Of the first kind we have decided examples in alum and oxide of iron. In order to demonstrate the effect of affinity in tho operations where alum is used, we may give a short description of the process of printing a piece of calico. Since the alumina or base of the alum has been discovered to be the essential ingredient, it has been also found that when the acetate of alumine is employed, the stuff takes the earth from that acid with greater facility than it does from the sulphuric acid, when alum (sulphate of alumina) is used. For this purpose the alum is mixed in certain pro-MOR

portion with the acetate of lead. By this means the acetate of alumine is obtained in solution,
ववwhile the sulphate of lead can be separated on account of its insolubility. The acetate of alumine is then mixed up to the right consistence, and applied to the stuff. After this, the whole of the piece is dipped into a madder bath. Those parts where the alumine has been applied assume a deep and lively color, while the ground is very faint, and of a dirty hue. If the stuff be now repeatedly boiled with bran, and exposed to the air and light, the ground becomes white, while the printed parts remain permanent. In this process it is clearly shown that the stuff in itself has not a sufficient attraction for the coloring matter to receive a permanent dye, without the presence of the alumina, which, by its common affinity to both, renders the color intense and permanent.

MORDAUNT (Charles), earl of Peterborough, a celebrated commander both by sea and land, was the son of John lord Mordaunt, viscount Avalon, and was born about 1658. In 1675 he succeeded his father in his honors and estate. While young he served under admirals Torrington and Narborough, in the Mediterranean, against the Algerines; and in 1680 embarked for Africa with the earl of Plymouth, and distinguished himself at Tangier when it was besieged by the Moors. In the reign of James II. he voted against the repeal of the test act ; and, disliking the measures of the court, obtained leave to go to Holland to command a Dutch squadron in the West Indies. He afterwards accompanied the prince of Orange into England, and, upon his advancement to the throne, was made a privy-councellor, a lord of the bedchamber, first commissioner of the treasury, and earl ofMonmouth. But in November, 1690, he was dismissed from the treasury. On the death of his uncle Henry earl of Peterborough, in 1697, he succeeded to that title; and, upon the accession of queen Anne, was appointed captain-general and governor of Jamaica. In 1705 he was again made a privy-councillor, general and commander in chief of the forces sent to Spain, and joint admiral of the fleet with Sir Cloudsley Shovel, of which, in 1706, he had the sole command. His taking Barcelona with a handful of men, and afterwards relieving it when greatly distressed by the ene-my; his driving out of Spain the duke of Anjou and the French army, which consisted of 25,000 men, though his own troops never amounted to 10,000 ; his gaining possession of Catalonia, Valencia, Arragon, and Majorca, with part of Murcia and Castile, and thereby giving the earl of Galway an

opportunity of advancing to Ma-drid without a blow, are astonishing instances of his bravery and conduct. For these important services his lordship was declared general in Spain by Charles III. afterwards the sixth emperor of Germany ; and, on his return to England, he received the thanks of the house of lords. He was afterwards employed in several embassies to foreign courts, installed K. G., and made governor of Minorca. In the reign of George I. he was general of all the marine forces in Great Britain, in which post he was continued by king George II. He died on a passage to

Lisbon, in 1735. To the greatest personal COM rage and resolution, he added all the talents of a general, and a great knowledge of ancient and modern literature. He was very reudy at repartee : and being once surrounded by a mob, who took him for the duke of Marlborough, then very unpopular ; he said, ‘ I will convince you I am not the duke : in the first place, I have but five guineas in my pocket; and, secondly, here they are, much at your service :’ he threw his purse among them, and got off with loud acclamations.

MORDECAI, Heb. ××3TWO, i. e. bitter, the son of Jair, a celebrated Jew of the tribe of Benjamin, uncle and guardian of Esther, queen of Persia. His saving the life of king Ahasue-rus, the enmity of Haman against him, the downfall and destruction of that proud minister, and the promotion of Mordecai to his office, with the other interesting circumstances which contributed to save the Jewish nation from extirpation, are recorded in the Book of Esther.

MORDELLA, in zoology, a genus of insects, of the coleoptera order. The antennae are thread-shaped and serrated ; the head is deflect-ed under the neck ; the pappi are clavated, compressed, and obliquely blunted ; and the elytra are bent backwards near the apex. There are thirty-four species, mostly natives of Europe.

MORE, adj., adv. & n. s. Sax. mape ; Goth. meri ; Teut. meter ; Swed. mere ; a Lat. major. Minsheu. The comparative of some ; great, or much; greater in quantity, size or number: as an adverb, to a greater degree : a particle expressing comparativeness ; longer ; a second time ; again : as a substantive, a greater quantity : hence greater thing ; longer time or second

time

He loved Rachel more than Leah.

Gen. xxix. 30.

MORE, Hannah, the youngest of five daughters of a clergyman at Wrington, ‘near Bristol. All her leisure hours in childhood were devoted to reading. Her sisters having for some time conducted a small school, their reputation enabled them to venture on taking pupils of a higher class. They removed to Bristol, about 1765, and opened a boarding-school, which soon be-came one of the most celebrated in the west of England. Miss Hannah More removed with them, and she quickly acquired the friendship of the reverend doctor Stonehouse, a man of taste and knowledge. He encouraged her to write, and corrected all her early effusions. The Search after Happiness, a Pastoral Drama, was her first publication, and was so favourably received, that she was encouraged to print, in 1774, her Sir Eldred of the Bower, the Bleeding Rock, and a tragedy, called the Inflexible Captive, founded on the story of Regulus. Mr. Gamck advised her to write for the stage. Her Ode to Dragon, Mr. Garrick’s house-dog, came from the press in 1777, as did also a volume of Essays on several Subjects, designed for Young Ladies. Next year, her tragedy of Percy came out ; it was well received, and established her fame as a dramatic writer. In 1779, she produced Fatal Falsehood, a tragedy. Miss More s thoughts, however, soon took a more serious

turn ; and in 1782, she published Sacred Dramas, with Simplicity, a poetical epistle. Some of these dramas had previously been acted by the pupils of Miss M ore’s school. She afterwards took an opportunity, in an edition of her works, to declare that she did not think the stage in its present state becoming the countenance of a Christian, and she renounced all dramatic attempts, except as poems for the closet. She and her sisters retired, about twenty-five years ago, with an easy fortune, from Bristol to Mendip, in Somersetshire, where they effected

a great improvement among the colliers, by establishing charity-schools. In 1785, she wrote a Biographical Preface to the Poems of Anne Yearsley, a milk-woman. In 1786, Florio, a tale, and the Bag Bleu, or Conversation, two poems. Thoughts on the Manners of the Great was published the same year anonymously. This was soon followed by Estimate of the Religion of the Fashionable world, which excited much attention; Village Politics (1793) ; Remarks on the Speech of Monsieur Depont, on Religious Education (1793) ; and Strictures on the Modern System of Female Education (2 vols., 8vo., 1799). When the education of the princess Charlotte became a subject of. national importance, Mrs. More, it is said, was consulted by the first lady in the kingdom on the subject, in consequence of which she produced (in 2 vols., 12mo., 1808) Hints towards forming the Character of a Young Princess. This excellent woman was long confined to her bed by an excruciating disease, but still continued to write, and in that state produced some of her best performances, among which were Ccelehs in Search of a Wife, which appeared in 1809, and was so much admired, that it ran through ten editions in one year ; Practical Piety (2 vols., 1811); Christian Mo-rals (2 vols., 1812); Essay on the Character and Writings of St. Paul (2 vols., 8vo., 1815) ; and Moral Sketches of prevailing Opinions and Manners (1819). Her miscellaneous works have been collected ; and she has written many small pieces, which are not yet printed in her works. She died at her residence, Windsor-terrace, Clifton, on the 7th of September, 1833, leaving considerable property, above ►► 10,000 of which she bequeathed to charitable and religious institutions. She was interred, amidst sincere demonstrations of sorrow, in the church of Wrington, near to the remains of Locke,

MORE (Alexander), a French protestant di-vine, born at Castros in 1616. His father was a Scotsman, and principal of the college of the Calvinists in that city. Alexander was sent to Geneva, where he was made professor of Greek and of Theology, and at the same time discharged the office of a pastor. But the irregularity of his conduct excited a great number of enemies against him, and Saumaise invited him to Holland, where he was first appointed professor of theology of Middleburg, and afterwards of history at Amsterdam. The duties of these stations he discharged with great ability ; and in 1625 went to Italy, where he published his beautiful poem on the defeat of the Turkish fleet by the Venetians. This work procured torn a gold chain from the republic. He afterwards

went to Charenton, where his sermons attracted a numerous audience,

by the satirical allusions and witticisms with which they abounded. He died in Paris in 1670, aged fifty-four. He was never married. His works are, 1. A Collection of Controversial Tracts. 2. Orations and Poems, in Latin. 3. An Answer to Milton, entitled Alexandri Mori fides publica.

MORE (Henry), D. D. and F. R. S., an eminent English divine and philosopher in the seventeenth century, was educated at Eton school, and Christ's College, Cambridge, of which he became a fellow, and spent his life in a retired way, publishing a great number of theological works. He refused bishoprics both in Ireland and England. He was an open-hearted sincere Christian philosopher, who studied to establish men in the belief of providence against atheism. His writings have been published in Latin and English, folio.

MORE (John), D. D., bishop of Ely, an eminent English prelate, born in Leicestershire, and educated at Cambridge, where he took his degree in 1681. After various preferments he was made bishop of Norwich in 1691, ani translated to Ely in 1707. He died in 1714. His sermons were published by Dr. Samuel Clarke, who was his chaplain. He collected a most magnificent library, which was purchased by king George II. for 6000 guineas, and presented to the university of Cambridge

MORE (Sir Anthony), an eminent painter, born in Utrecht in 1512. He became the disciple of John Schooveil, but studied the manner of Holbein, to which he approached nearer than to that of the great masters at Rome. Like Holbein he was a close imitator of nature, but did not arrive at his extreme delicacy of finishing; on the contrary he sometimes struck into a bold and masculine style. He had a good knowledge of the chiaro scuro. In 1522 he drew Philip II.; and was recommended by cardinal Granvelle to Charles V. who sent him to Portugal, where he painted king John III., Catherine his queen, and the infanta Mary, first wife of Philip II. For these three pictures he received 600 ducats, besides a gold chain of 1000 florins value, and other presents. He had 100 ducats for his com-mon portraits. He afterwards came to England to paint the portrait of queen Mary, then engaged to the same Philip, and for that picture received ––100, a gold chain, and was made painter to their majesties, with a pension of ––100 per quarter. He remained in England during Mary's reign, and was very much employed, so that most of the noble mansions in the country are adorned with some rf his pictures. On the death of that queen, More returned with Philip to Spain, highly favored by the king, whose familiarity with him placed his life in danger; for More ventured to return a slap on the shoulder, which Philip in a playful

moment gave him, by rubbing some carmine on his majesty's hand. This behaviour was accepted by the monarch as a jest, but it was hinted to More that the holy tribunal might regard it as a sacrilege, and he fled, to save himself, into Flanders, where he was employed by the duke of Alva. At Utrecht he was employed by the duke to draw several of

his mistresses, and was made receiver of the revenues of West Flanders ; a preferment with which he was so much elated, that he burned his easel and gave away his painting tools. He was a man of a stately handsome figure, and went to Brussels, where h6 lived magnificently; but died at Antwerp in 1568. His portrait, painted by himself, is in the chamber of painters at Florence.

MORE (Sir Thomas), lord high chancellor of England, son of Sir John More, one of the judges of the King's Bench, was born in 1480 at London ; where he received the rudiments of his education. He was afterwards introduced into the family of cardinal Moreton, who, in 1497, sent him to Canterbury College, Oxford, where he attended the lectures of Linacre and Grocinus, on Greek and Latin. In 1499 he came to New Inn, London, to study the law; whence he removed to Lincoln's Inn, of which his father was a member. He was now about twenty years old, and, notwithstanding his application to the law, was so bigoted to monkish discipline, that he wore a hair-shirt next his skin, and often fasted and slept on a bare plank. In 1503, being then a burgess in parliament, he distinguished himself in the house, in opposition to the motion for granting a subsidy and three-fifteenths for the marriage of Henry VI I. 's eldest daughter Margaret to king James V. of Scotland. The motion was rejected ; and the king was so highly offended at this opposition from a beardless boy, that he revenged himself on his father, by sending him to the Tower, and obliging him to pay ––100 for his liberty. Unwilling to involve his father or friend again in the king's displeasure, he retired from public notice, and passed several years in privacy. Being now called to the bar, he was appointed law-reader at Furnival's Inn, which he held

about three years. About this time he also read a public lecture in St. Lawrence's church, Old Jewry, upon St. Austin's treatise, De Civitate Dei, with great applause. He had intended to become a Franciscan friar, but was dissuaded from it; and, by the advice of Dr. Colet, married the eldest daughter of John Colt, esq., of Newhall in Essex. It has been said, that in visiting this gentleman he was attracted by the charms of the second daughter ; but that, unwilling to mortify the eldest, he paid his addresses to her. In 1508 he was appointed judge of the sheriffs court in London, was made a justice of the peace, and became very eminent at the bar. In 1516 he went to Flanders with bishop Tonstal and Dr. Knight, who were sent by Henry VIII. to renew the alliance with the archduke of Austria afterwards Charles V. On his return, Cardinal Wolsey would have engaged him in the service of the crown, and offered him a pension which he refused. But he soon after accepted the place of master of the requests, was created a knight, and a privy counsellor, and in 1520 made treasurer of the exchequer. About this time he built a house at Chelsea, and married a second wife, whose name was Middleton, a widow, old, ill-tempered, and covetous ; yet Erasmus says he was as fond of her as if she had been a young maid. In 1523 he was made

speaker of the house of commons; in which capacity he had the courage to oppose the then powerful minister, Wolsey, in his demand of an oppressive subsidy; yet he was, soon after, made chancellor of Lancaster, and was treated by the king with singular familiarity. The king, having once dined with Sir Thomas at Chelsea, walked with him near an hour in the garden, with his arm round his neck. After ht was gone, Mr. Roper, Sir Thomas's son-in-law, observed how happy he was to be so familiarly treated by the king; to which Sir Thomas replied, ' I thank our lord, son Roper, I find his grace my very good lord indeed, and believe he doth as singularly favor me as any subject within this realm ; hewbeit, I must tell thee I have no cause to be proud thereof, for, if my| head would win him a castle in France, it would not fail to go off.' In 1526 he was sent with Cardinal Wolsey and others, on a joint embassy to France, and in 1529 with bishop Tonstal to Cambray. The king, it seems, was so well pleased with his services on these occasions, that in 1530 he made him chancellor; which seems the more extraordinary, as Sir Thomas had repeatedly declared his disapprobation of the king's divorce. He executed that office about three years, with wis-dom and integrity, sullied only by employing all the authority of his office in assisting the popish clergy in their rigorous proceedings against the reformers. It is even asserted, on good authority, that he caused one Bainham, a gentleman of the

temple, to be whipped and tortured in his own presence. He in 1533 resigned the seals, probably to avoid the danger of his refusal to confirm the king's divorce, and retired to his house at Chelsea ; dismissed many of his servants ; sent his children with their respective families to their own houses (for hitherto he had maintained all his children, with their families, in his own house, in the true style of an ancient patriarch) ; and spent his time in study and devotion ; but the capricious tyrant would not suffer him to enjoy this tranquillity. Though now reduced to a private station, his opinion of the legality of the king's marriage with Anne Boleyn was deemed of so much importance that various means were tried to obtain his approbation ; but, all persuasion proving ineffectual, he was with some others attainted in the house of lords of misprision of treason, for encouraging Elizabeth Barton/the Holy Maid of Kent, in her treasonable practices. When she opened her commission, to admonish the king of his crimes against the church, she called upon More, and made him privy to her pretended revelations. Her affected simplicity and holiness seem to have made considerable impression upon him ; he wrote her a letter, and, on this circumstance being made known, the king directed him to be prosecuted as an accomplice with her, and they were named together in one bill of attainder. While this was suspended over him, a committee was appointed to hear his justification of himself; this plan was not, however, intended to free the accused, but with the view of entrapping him to assent to the king's divorce, which Henry thought he would gladly do, to escape the dan-ger that threatened him. He nobly withs.ood

the temptation, and so completely cleared himself from every imputation of crime, that they were obliged to strike his name out of the bill. lie was then accused of other crimes, but with the same effect ; till, refusing to take the oath fnjoined by the act of supremacy, he was committed to the Tower, and, after thirteen months imprisonment, was tried in the king's Bench for high treason, in denying the king's supremacy. The proof rested on the sole evidence of Rich, the solicitor general, whom Sir Thomas, in his defence,

sufficiently discredited ; nevertheless the jury brought him in guilty, and he was condemned to suffer as a traitor. Sir Thomas More was unmoved at the sentence, which, though quite conscious of his innocence, he probably expected; and he was ordered back to the Tower. On his road, his favorite daughter, Mrs. Roper, who had been anxiously waiting the event, burst through the throng, fell on her knees before her father, and closely embracing him, could only utter the words, ‘ My father, Oh! my father!’ He tenderly returned her embrace, exhorted her to patience and resignation to the divine will, and parted from her. Scarcely had they separated, when, in a new uassion of grief, she again burst through the crowd, and clung round his neck in speechless anguish. His firmness was now overcome ; .‘ears flowed plentifully down his cheeks, till, with a final kiss, she left him. On the fatal day, July 5th, 1.535, he dressed himself in his best apparel, and walked cheerfully to the place of execution ; observing that the scaffold was but slenderly built, he turned to the lieutenant of the Tower and said, ‘ I pray you, Mr. Lieutenant, see me safe up, and for my coming down let me shift for myself.’ He requested the spectators to offer up their prayers for him, and to bear witness that he died in and for the Holy Catholic Church, and had been a faithful servant of God and the king. He then addressed himself to his Maker, and calmly submitted to the blow of the executioner, having first requested him to stay his hand till he had removed his l>eard, ‘ which at least,’ said he, ‘ has committed no treason.’ His body, which was first interred in the Tower, was begged by his daughter Margaret, and deposited in the chancel of the church at Chelsea, where a monument, with an inscription written by himself, had been erected. She also procured his head after it had remained fourteen days upon London bridge, and placed it in a vault belonging to the Roper’s family, under a chapel near St. Dunstan’s church in Canterbury. Sir Thomas More was a man of some learning, and an upright judge ; a very priest in religion, yet cheerful, and even witty on many occasions, particularly at his execution. He wanted not sagacity, where religion was out of the question ; but in that his faculties were so enveloped, as to render him a weak and credulous enthusiast. He left one son and three daughters. Sir Thomas was the author of various works, though his Utopia is the only performance that has survived, the rest being chiefly of a polemic nature. His English works were collected and published by order of queen Mary in 1557; his Latin at Basil in 1563, and at Louvain in 1506.

MORK (Margaret), the eldest daughter of Sir Thomas More, was celebrated for her knowledge of the Greek and Latin languages. She

married Mr. Roper of Well-hall in Kent, whose Life ot Sir Thomas More was published by Mr. Hearne at Oxford in 1716. She died in 1544, and wa►► buried in the vault of St. Dunstan's in Canterbury.

MOREA, anciently called Peloponnesus, a peninsula south of Greece, to which it is joined by the isthmus of Corinth. Its form resembles a mulberry-leaf, and its modern name is derived from its abounding with mulberry-trees. . It is about 180 miles long and 130 broad. The ait is temperate, and <he land fertile, except in the middle, where it is full of mountains, and is watered by many rivers. See GREECE and PE-LOPONNESUS.

MOREAU (James), an eminent French physician, born at Chalons sur Saone, the disciple and-friend of the famous Guy Patin. He drew upon himself the jealousy and hatred of the old physicians by his public theses. He died in a very advanced age in 1729. He wrote in French, 1. Consultations on the Rheumatism. 2. A Chemical Treatise on Fevers. 3. A Physical Dissertation on the Dropsy; and other works which are.still esteemed

MOREAU (Jean Victor), one of the oldest and most celebrated of the French revolutionary generals, was born in 1761 at Morlaix in Lower Brittany. His father was a respectable advocate in that town; a profession which, it appears, had been followed by the family for generations. Young Moreau was also intended for the law, and, after the usual studies, was sent to the university of Rennes to take his degrees. In 1788 he was prevot de Droit, or head of the students in law at Rennes, a body of young men at all times remarkable for their turbulence and public spirit, and over whom he had considerable influence. In the petty squabbles which at that period took place between the court of France and the parliament, Moreau was, in consequence, appointed their leader, and styled the general of the parliament, whose cause was at that time considered as that of public liberty. In the winter following, however, Moreau acted at the head of this youthful band against that very parliament and the states of Brittany, who were then proceeding against the orders of the court, and the wishes of the people, in resisting the convocation of the general states of the kingdom ; for even in his early career Moreau's leading principles appear to have been a sincere love for rational liberty. On those occasions Moreau evinced an equal degree of prudence and courage; and his gentlemanly manners and graceful person added not a little to his popularity. In January, 1790, he acted as president of the confederation of the youth of Brittany, assembled at Pontivy ; and, on the formation of the national guards, was named commandant of one of the battalions of that province. Moreau had

then, for the first time, an opportunity of embracing permanently a profession so congenial to his feelinsrs ; and his labors in the new career he had entered were incessant. His battalion was first reviewed in May 1790; and the inspecting

general, count de Thiars de Bissy, notwithstanding the jealousy which the troops of the line then entertained of the national guard, could not help saying, ‘ that few colonels of the line, with their old coips, could have afforded him the gratification of seeing so much regularity, discipline, and precision, as in the evolutions of that battalion of national guards.’ ‘The count de Thiars has done me much honor (said Moreau, returning from the review), but I hope he will live long enough to see me command not only national guards, but the army of the line.’ Moreau, however, did not take the steps which were likely to insure his rapid promotion; he showed too openly his hatred of the measures and principles of the anarchists ; and the battalion-was the last to accept the too famous constitution of 1793, at a time when hesitation was punished with instant death. The convention, however, were in want of good officers; and, in July 1793, he was promoted to the rank of general of brigade by the committee of public safety. His first action as a commander was on the 14th of September, when, with a division of the army of the Moselle, he attacked the Prussian army commanded by the duke of Brunswick. He was defeated ; but the duke of Brunswick in his report to the king of Prussia, of the 15th of September 1793, said, that ‘his able plan of attack was surpassed only by his yet abler dispositions for retreat ; and that the corps he commanded was neither dispersed nor dishonored.’ In the autumn of 1793, Moreau became acquainted with Pichegru, who obtained for him the command of a division in the army of the Rhine to which he had been appointed. Under that able master, Moreau, in a variety of enterprises, in which it is not our intention to follow him, acquired that military experience, and those comprehensive views, of which he afterwards so successfully availed himself. It was in the midst of these successes that the Jacobins of Morlaix sent to the guillotine his aged father, who was considered as the father of the poor. The first

resolution of Moreau, at hearing the fatal intelligence, was to leave the service of these monsters, and to join the emigrants armed to punish their crimes. He accordingly tendered his resignation to his friend general Pichegru. But Pichegru was of a very different opinion. ‘ What do you intend to do ?’ he asked Moreau, ‘ To quit the army and France !’ was the reply. ‘ To quit the army and France !’ repeated Pichegru : ‘ do you not then see the manner in which the Emigres are treated by the foreign powers ? I do not accept of your resignation. I beg of you, as a friend, to reflect on the step you intend to take ००० come to me again to-morrow. It is not thus that you should intend to avenge the death of your father ! You must think of acquiring a glory and an importance which may one day put you in a situation to avenge it. I shall soon furnish you with an opportunity of distinguishing yourself.’ Moreau came the day after to Pichegru, and told him that he was convinced by his reasoning, which appears to have influenced the whole of his conduct afterwards. We shall not follow this commander in his brilliant military career ०००that belongs to history ; but we cannot avoid VOL. XV.

observing, that thrice he had the honor of saving the French armies from impending destruction, and on two of these occasions he acted as a simple volunteer, or in subordinate situations in the army, having been superseded by the accomplices of his father’s murderer, who dreaded the just vengeance of a man whom his exploits and moral conduct had made so popular with the troops and the people. It was on this occasion that a French colonel, then attached to Moreau’s army, asked him, when the order of the directory for superseding him had been just received, ‘ General, will you obey so insulting a mandate ?’ ‘ Yes, answered Moreau, as a general, an officer, or a soldier, Moreau is always ready to serve France.’ His talents as a general again brought him forward, and in 1798 he was sent to command the army of Italy, where, after some brilliant successes, he was obliged to give way to the Russian force under Suwarrow, and he conducted another retreat with great skill. On the return of Buonaparte from Egypt, he at first cordially supported him ; but a coldness afterwards ensued, notwithstanding which, Napoleon, as first consul, entrusted him with the command of the armies of the Danube and the Rhine. The celebrated passage of these rivers, with the battles of Moes-kirch, Memmingen, Hochstedt, Nedenheim, and others, followed, ending with the decisive victory of Hohenlinden, which induced the Austrians to seek for peace. On his return to Paris he was received by the first consul with the most flattering attention, and he soon after contracted an alliance with a young lady of birth and fortune, and retired to his

estate at Grosbois. He finally appears to have implicated himself in the conspiracy of Pichegru and Georgts. He was brought to trial, finally declared guilty, and sentenced to two years' imprisonment, and to bear the expenses of the suit. He was, however, allowed to travel in lieu of imprisonment, and to seek an asylum in the United States of America. He accordingly embarked at Cadiz in 1805, and safely reached America, where he bought a fine estate, near Morinville. Here lie remained some years in peace, until listening to the invitation of the allies, and more especially of Russia, he embarked for Europe in the July of that year, and reaching Gottenburg, proceeded to Prague. Here he found the emperors of Austria and Russia, with the king of Prussia, all of whom received him with great cordiality. His first appearance in a military character was before the walls of Dresden, where he was in the act of giving some opinion on military matters, while passing with the emperor of Rus-sia behind a Prussian battery, to which two batteries were answering, one in front and the other in flank ; and lord Cathcart and Sir R. Wilson were listening to him, when a ball struck his thigh, and almost carried his leg off, passed through his horse, and shattered his other leg to pieces. He gave a deep groan at first ; but, immediately after the first agony of pain was over, he spoke with the utmost tranquillity, and called for a c'igar. He was brought safely to Laun, where he seemed to be going on well, till a long conference took place between him and three or four of the allied generals, by which

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he was completely exhausted. Soon after this he became extremely sick, and hourly grew worse. Through the whole of his sufferings he bore his fate with heroism, and appeared to those with whom he conversed to endure but little pain, from his extreme composure and calmness. He died the 3d of September 1813.

MOREAU, a post town of Saratoga county, New York, on the Hudson ; sixteen miles north-east of Balston-Spa, fifty north of Albany. Population 1347.

MOREBAT, a sea-port on the southern coast of Arabia, on a bay bounded by a cape of this name. The town is about two miles south of the cape. The bay is the safest, and provisions may be had here on the coast', but the inhabitants carry on little trade. Long. 55►► 4' E., lat. 17►► N.

MORELSE (Paul), an eminent painter, born at Utrecht in 1575. He studied painting under Michael Mirevelt. He was very successful, in portraits, historical subjects, and architecture, after he had improved his taste in Italy. There are some excellent wood-cuts in chiaro-scuro by his artist, who died in 1638.

MOREL', ns. > Lat. morilla (solarium);

MOREL'LA. J Fr. morelle. A plant ; an acid kind of cherry.

The morella cherry is commonly planted against north walls, where they grow large and hang long, as they are commonly not wanted till late in the season to preserve. Abererombie.

Morel is a black cherry, fit for the conservatory before it be thorough ripe, but it is bitter eaten raw.

Mortimer. Spungy morels in strong ragouts are found,

And in the soup the slimy snail is drowned.

Gay.

MOREL (Andrew), a very eminent antiquary, born at Berne in Switzerland. Having a strong fancy for the study of medals, he travelled through several countries, and made large collections. In

1683 he published, at Paris, in 8vo., Specimen Universae rei Nummariae Antiquae. The great work of which this was the specimen was to be a complete collection of all ancient medals, of which he had then 20,000 exactly designed. Soon after this essay appeared Louis XIV. gave him a place in his cabinet of antiques, in which capacity he brought himself into great danger by speaking too freely of M. Louvois on some private account, and he was committed to the Bastile for three years ; nor was he released until the death of Louvois, when the canton of Berne interceded in his favor. He afterwards accepted an invitation from the count of Schwartz-burg in Germany, by whom he was furnished with every thing necessary for carrying on his grand work. In 1703 he died; and in 1734 was published at Amsterdam part of this collection, in two volumes, folio, under the title of Thesaurus Morellianus, sive familiarum Romanorum numismata omnia, diligentissime undique con-quisita, &c. Nunc primum edidit et commentario perpetuo illustravit Sigibertus Havercam-pus These volumes contain an explication of 3539 medals, engraved, with their reverses.

MOREL (Frederick), interpreter in Greek and Latin, and printer to the king of France, was heir to Vascosan, whose daughter he had mar-

ried. He was born in Champagne, and he died at an advanced age at Paris in 1583. His sons and grandsons also distinguished themselves in literature, and maintained the reputation which he had acquired by printing. The edition of Gregory of Nyssa, by his son Claude Morel, is held in great estimation by the learned.

MOREL (Frederick), son of the preceding, and still more celebrated than his father, was professor and interpreter to the king, and printer of the Hebrew, Greek, Latin, and French languages. He was so devoted to study, that when he was told his wife was at the point of death, he would not stir till he had finished the sentence which he had begun. Before it was finished, he was informed that she was actually dead ; ‘ I am sorry for it,’ replied he coldly, ‘ she was an excellent woman.’ He acquired great reputation from his works, which were numerous and well executed. From the MSS. in the king’s library, he published treatises of St. Basil, Theodoret, St. Cyrille, &c., and accompanied them with a translation. His edition of the works of (Ecumenius and Aretas, in 2 vols. folio, is much esteemed. He died June 27, 1630, aged seventy-eight.

MOREL (William), regius professor of Greek, and director of the

French king's printing house at Paris, died in 1564. He composed a Diction-naire Grec-Latin-Francois, which was published in 4to., in 1622, and some other works which indicate very extensive learning. His editions of the Greek authors are exceedingly beautiful.

MORELL (Thomas), D. D. and F. SS. R. and A., a learned English divine and lexicographer, born in 1701. He published, 1. An edition of Ainsworth's Latin Dictionary, 2. A useful abridgement of it; London 1774: 8vo.

3. Hedericus's Greek Lexicon. He also wrote,

4. Annotations on Locke's Essay, which appeared after his death ; and he selected the scriptures for Handel's Oratorios. He died in 1784

MORENA, in ancient geography, a district of Mysia, in the Hither Asia. A part of it was occupied by Cleon, formerly at the head of a band of robbers, but afterwards priest of Jupiter Abret-tenus; and enriched with possessions, first by Antony, and then by Julius Caesar.

MORENA, SIERRA, Montes Marianae, a mountain-chain of the Peninsula, extending along great part of the south of Spain and Portugal, and separating the valleys of the Guadiana and Guadalquiver. Commencing on the eastern border of La Mancha, it runs westward along the boundaries of that province and Estrernadura, and separates them from Jaen, Cordova, and Seville. On the borders of Portugal it is crossed by the Guadiana ; but soon re-appears to the west, separating Alentejo from Algarva, and terminates at the Atlantic in Cape St. Vincent. The chief parts are the Sierra de Cordova and the Guadalcanal mountains in Spain, and the Serras de Caldeirao and Monchique in Portugal. No part of its elevation exceeds 3000 feet, and in many places of its eastern and western extremities it is much less. Its central part occupies nearly the whole of Cordova. There is much romantic and gloomy scenery on the great roads that run near, and the extensive forests, rocks,

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and precipices, afford a secure retreat for robbers. In 1767 the Spanish minister, Olavide, attempted to settle Lere some colonies of French and Germans : they consisted of about 10,000 individuals; spread over a space of 1350 square miles; but, on nis removal from office, they were neglected, and soon decayed. In 1791, however, the settlers here amounted to 6200, employed partly in tillage, and partly in manufactures of glass, linen, and woollen. The district inhabited is part of the province of Jaen, and the chief place Carolina.

MOREO'VER, adv. More and over. Be-yond ; besides ; likewise ; over and above. Moreover by them is thy servant warned.

Psalm xix. 11. Moreover he hath left you all his walks.

Shakspeare. lie did hold me dear

Above this world ; adding thereto, moreover, That he would wed me, or else die my lover. Id.

MORERI (Lewis), compiler of the Historical Dictionary, was born at Barge-mont in Provence, 1643. He studied rhetoric and philosophy at Aix, and divinity at Lyons. At eighteen years of age he wrote a small piece, entitled Le Pays d' Amour, and a collection of fine French Poems, entitled Doux plaisirs de la Poesie. He learned Spanish and Italian; and translated out of Spanish into French the work entitled La Perfection Chretienne de Rodriguez. Being ordained priest, he preached at Lyons, and undertook, when thirty years of age, a new Historical Dictionary, printed at Lyons in one vol. folio, 1673. But his continual labor impaired his health, and he died in 1680, aged thirty-seven. His second volume was published after his death ; and four more have since been added. He left also some other works.

MORES (Edward Rowe), a learned English antiquary, born at Tunstall, in Kent, in 1730, and educated in London, and Queen's College, Oxford. He published a curious relic of antiquity, entitled Nornina et Insignia Gentilitia No-bilium, Equitumque, sub Eduardo I. rege mili-tantium. Oxon 1748. 4to. In 1752 he was elected a fellow of the Society of Antiquaries ; and projected the Equitable Society for Insurance on Lives and Survivorship, by annuities, He wrote, 1. The History and Antiquities of Tunstall in Kent; 2. A Dissertation on Founders and Foundries : and other works. He died in

MORESBY, a harbour of Cumberland, above Whitehaven, in and near which many remains of antiquity have been dug up, such as altars and stones, with inscriptions ; and several caverns have been found called Pict's Holes. It is supposed to have been a Roman fortification.

MORES K, MORESQUE, orMoRtsKO, a kind of painting, carving, 8cc., executed after the manner of thf> Moors ; consisting of several grotesque pieces and compartments promiscuously intermingled, containing a wild resemblance of birds, beasts, trees, &c. These are also called arabes-ques, and are particularly used in embroideries, damask work, &c. See ARABESQUE.

MORGAGNI (John Baptist), M.D. and F. R. S., first professor of anatomy in the univer-

sity of Padua, and member of several of the most eminent societies in Europe, was born in 1682, at Forli, in Romagna. He commenced his studies at Forli, but soon removed to Bologna, where he obtained the degree of M. D. when he had but just reached his sixteenth year. His peculiar taste for anatomy found an able preceptor in Valsalva ; and such was the progress he made under him, that when but twenty years of age he himself taught anatomy with high reputation. Soon, however, the fame of his prelections, and the number of his pupils, excited the jealousy of the professors, and gave rise to invidious persecutions. But his abilities and prudence gained him a complete triumph ; and all opposition was finally teminated on his being appointed by the senate of Bologna to fill a medical chair. But the duties of this important office did not occupy the whole of his time. He soon communicated the fruits of his labors to the public in his Adversaria Anatomica, the first vol i e of which was published in 1706, the second and third in 1717, and the three last in 1719. This excellent work spread his fame far beyond the limits of Bologna. The republic of Venice offered him the second medical chair in the university of Pa dua; and doubled the emoluments. While iri this department, he published his Nova Institu-tionum Medicarum Idea, Padua, 1712, and soon after he rose to be first professor of anatomy in that celebrated university. Although he was thus finally settled at Padua, he gave proofs of his gratitude to Bologna, by exerting his utmost efforts to establish its academy, of which he was one of the

first associates ; and he enriched their publications with several valuable papers. Soon after this, the royal societies of London and Paris received him among their number. Not long after, he began his Epistolae Anatomicae, the first of which is dated Padua, 1726. He was not more eminent as an anatomist than as a successful physician. In 1760, when he was near eighty years of age, he published his large and valuable work De Causis et Sedibus Morborum per Anatomiam Indagatis. This last and most important of all his productions will afford convincing evidence of his industry and abilities to latest posterity. He also published, at different periods, several miscellaneous pieces, which were afterwards collected into one volume, and printed under his own eye at Padua, in 1765. He was endeavouring to collect for publication a complete edition of all his works, when, after he had nearly arrived at the ninetieth year of his age, death put a period to his long and glorious career, on the 5th of December 1771.

MORGANA, FATA. See FATA MORGANA.

MORGUES (Matthew de), Sieur de St. Germain, preacher to Louis XIII., and almoner to Mary de Medicis, was born in Languedoc, in 1582. He wrote the Life of Louis the Just, and several severe satires against cardinal Richelieu ; particularly one in defence of Mary de Medicis, whom he followed out of the kingdom, and did not return till after Richelieu's death. He died in Paris in 1670.

MORHOFF (Daniel George), a learned Ger-man, born at Wismnr in Mecklenburgh, i'i 1639. The duke of Holstein, when he founded a uni
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versity at Kiel, in 1665, made him professor of eloquence and poetry, and afterwards of history; and, in 1680, librarian to the university. He was the author of many orations, dissertations, theses, and poems ; but his chief work was his Polyhistor, sive de Notitia Auctorum et rerum Commentarii, first published at Lubec in 1688; which has been greatly enlarged since his death in 1691, and gone through several editions. The best is that by John Albert Fabricius, 3 vols. 4to.

1732.

MORIAH, an eminence of Jerusalem, on which Abraham went to offer his son, and David intended to build the temple. The threshing floor of Araunah was upon it, originally narrow, so as scarce to contain the temple, but enlarged by ramparts, and surrounded with a triple wall, so as to add great strength to the temple. It may be considered as a part of Mount Sion, to which it was joined by a bridge and gallery. Josephus.

MORILLOS (Bartholomew), a native of Seville in Spain, born in 1613. After having cultivated painting with success in his own country, he travelled into Italy, where he was greatly admired for a style peculiar to himself. The Italians compared him to the celebrated Paul Veronese. On his return to Spain, Charles II. brought him to court, intending to make him his first painter; but he declined the offer. He died in 1685, aged seventy-two.

MORIN (John Baptist), physician and regius professor of mathematics in Paris, was born at Villefranche in Beausolois, in 1583. After commencing M. D. at Avignon, he went to Paris, and lived with Claude Dormi bishop of Boulogne, who sent him to examine the mines of Hungary ; and thereby gave occasion to his first production, Mundi sublunaris Anatomia, published in 1619. Upon his return to the bishop, he contracted an attachment to judicial astrology, concerning which he furnished the world with, a great number of books not worth enumerating. He died in 1656, before he had finished the favorite labor of his life, his Astrologia Gallica. Louisa Maria de Gonzaga, queen of Poland, gave 2000 crowns to carry on the edition ; and it appeared at the Hague in 1661, in 1 vol. folio.

MORIN (John), a learned Frenchman, born at Blois, of►► Protes'ant parents, in 1591 ; but converted by cardinal du Perron to the Catholic religion. He published, in 1626, Exercitations upon the origin of Patriarchs and Primates, and the ancient usage of ecclesiastical censures; dedicated to pope Urban VIII. In 1628 he superintended the edition of the Septuagint Bible, with Nobilus's version ; and prefixed to it a preface, in which he treats of the authority of the Septuagint, and prefers the version made at Rome by order of Sixtus V. to the present He-brew text, which he affirms has been corrupted by the Jews. About the same time he gave a French History of tlie Deliverance of the Church by the emperor Constantine, and of the temporal greatness conferred on the Roman church by the kings of France. He afterwards published Exercitations upon the Samaritan Pentateuch, and revised the Samaritan Pentateuch for the

Polyglot then preparing at Paris. He was greatly caressed at Rome, to which he was invited by cardinal Barberini, and whence, after living nine years, he was recalled by cardinal Richelieu, and died in Paris in 1659. His works are very numerous; and some of them much valued for their oriental learning.

MORIN (Lewis), M. D., was born at Mans in 1635. He went on foot to Paris to study philosophy, and collected herbs during the journey. He afterwards studied physic, and lived like an anchorite ; bread, water, and a few fruits, being his whole subsistence. Paris was to him a hermitage, with this exception, that it furnished him witli books, and with the conversation of the learned. He received the degree of M.D. in 1662. Madam de Guise chose him for her first physician, and the Academy of Sciences for one of its members. He died A. D. 1715, aged eighty. He left a library valued at 20,000 crowns, an herbal, and a cabinet of medals; which seem to have been his whole fortune. An index to Hippocrates, in Greek and Latin, much more copious and better finished than that of Pinus, was found among his papers.

MORIN (Peter), a learned French critic, born at Paris in 1531. He went into Italy and was employed by the learned Paul Manutius in his printing-house in Venice. ►►► He afterwards taught Greek and cosmography at Vincenza, whence he was called to Ferrara by the duke. St. Charles Borromeus, informed of his profound knowledge in ecclesiastical antiquities, offered him his patronage, and engaged him to go to Rome in 1575. The popes Gregory XIII. and Sixtus V. employed him on an edition of the Septuagint, 1587, and on one of the Vulgate, 1590, in folio. He also spent much of his time on an

edition of the Bible translated from the Septuagint, and published in Rome, 1588, in folio; on an edition of the Decretals to the time of Gregory VII., published at Rome, 1591 ; and on a Collection of General Councils, likewise published at Rome, 1608, 4 vols. He died in Rome 1608, aged seventy-seven. His character was open, simple, sincere, gentle, and honest ; his temper was equal and agreeable. He left behind him Un Trait6 du bon Usage des Sciences, and some other writings, published by F. Quetif, a Dominican friar, in 1675.

MORIN (Simon), a celebrated fanatic of the seventeenth century, born at Richemont, near Aumale. He had been clerk to M. Charron, general paymaster of the army ; and, after broach-ing his whimsies in conversation, had got them privately printed, in 1647, under the title o Pensees de Morin dediees au Roi. This book is a medley containing the chief errors which were afterwards condemned in the Quietists but Morin carries them to a much greater length for he affirms ‘ that the most enormous sins do not remove a sinner from the state of grace, bu serve on the contrary to humble the pride of man. He adds, ‘ that there would soon be a general reformation in all nations, effected by the seconc coming of Jesus Christ, and Morin incorporatec with him.’ ††† He was in prison at Paris when Gassendi’s friends were writing against the astrologer John Baptist Morin, whom they upbraidec

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with being the brother of this fanatic. This was about 1650; after which Simon was set at liberty as a visionary, and suffered to continue so till 1661, when Des Marets de St. Sorlin, who, though a fanatic and visionary himself, had conceived a violent aversion to him, discovered his whole scheme, and had him taken up. Des Ma-rets pretended to be one of his disciples, and carried his treachery so far as to acknowledge him for ‘ the Son of man risen again.’ This so pleased Morin, that he conferred upon him the office of being his harbinger, calling him John the Baptist revived. Then Des Marets impeached him ; upon which Morin was tried, and condemned to be burnt alive. This barbarous sentence was executed at Paris, March 14th, 1663; and after making the amende honorable in his shirt, with a cord about his neck and a torch in his hand, he was burnt alive, together with his Pense”es, and all his papers ; and his ashes were thrown into the air. His accomplices, too, were condemned to assist at his execution, and to serve in the galleys for life, after having been whipped by the hangman, and marked with a burning iron with fleurs de hs upon both shoulders. Morin gave out that he would rise again the third day; which made many gather together at the place where he was burnt.

MORIN (Stephen), minister of the Protestant reformed religion at Caen, his birth place, was, for his learning, admitted a member of the Academy of Belles Lettres in that city, notwithstanding an express law which excluded Protestants. After the revocation of the edict of Nantes, he retired toLeyden in 1685, and thence to Amsterdam, where he was appointed professor of oriental languages. He died in 1700, aged seventy-five. He published eight dissertations in Latin on subjects of antiquity, which are extremely curious. The Dordrecht edition of 1700, 8vo., is the best. He wrote likewise the Life of Samuel Bochart.

MORINA, in botany, a genus of the monogynia order, and diandria class of plants ; natural order forty-eighth, aggregate : COR. unequal ; CAL. of the fruit monophyllous and dentated ; that of the flower bifid ; SEED one under the latter.

MORINDA, in botany, a genus of the monogynia order, and pentandria class of plants : natural order forty-eighth, aggregate. The flowers are aggregate and monopetalous ; the stig-mata bifid ; fruit plums aggregate, or in clusters.

MORINI, an ancient nation of Gallia Belgica, who lived on the coast of the British Ocean. They were styled extremi hominum by the Romans, from their situation on the extremities of Gaul. They had two cities.

MORINIERE (Adrian Claud Le Fort, De la), an elegant French writer, born in Paris in 1696. He wrote, 1. Choix des Poesies Morales; 2. Bibliotheque Poetique ; 3. Passe-Terns Poetiques, Historiques, et Critiques. He died in

1768.

MORINORUM CASTELLUM, in ancient geography, or simply Castellum (Antonine), a city of Gallia Belgica, belonging to the Morini, situated on an eminence, with a spring of water on its top ; now called Mont Cassel in Flanders.

MO'RION, n. s. Fr. morion ; Ital. morione. A helmet or casque ; armour for the head.

For all his majesty's ships a proportion of swords, targets, morions, and cuirass of proof should be allowed. Raleigh.

Polished steel that cast the view aside, And crested morions with their plumy pride.

Dri/den.

MORIS'CO, n.s. Span, morisco. A dancer of the Moorish or morris-dance, which see.

I have seen

Him caper upright like a wild morisco, Shaking the bloody darts, as he his bells

Shafupeare.

MORISON (Robert), M. D., professor of botany at Oxford, was born in Aberdeen in 1620, educated at the university there, and professed philosophy for some time in it ; but became chiefly famous for his skill in botany. The civil wars obliged him to leave his country, after he had signalised his zeal for the king, in a bat-tle fought between the inhabitants of Aberdeen and the Presbyterian troops, on the bridge of Aberdeen, in which he received a dangerous wound on the head. As soon as he was cured of it, he went into France; and, fixing in Paris, he applied assiduously to botany and anatomy. He was introduced to the duke of Orleans, who gave him the direction of the royal gardens at Blois. He exercised this office till the death of that prince, and afterwards went over to England in 1660. Charles II., to whom the duke of Orleans had presented him at Blois, sent for him to London, and gave him the titles of his physician, and professor royal of botany, with a pension of ––200 a year. The Praludium Bota-nicum, which he published in 1669, procured him so much reputation that the university of Oxford invited him to the professorship of botany in 1669; which he accepted, and acquitted himself in it with great ability. He died at London in 1683, aged sixty-three. He published a second and third part of his History of Plants in 2 vols. folio, entitled Plantarum Historia Ox-oniensis Universalis.

MORISONIA, in botany, a genus of the polyandria order, and monadelphia class of plants : natural order twenty-fifth, putaminea : CAL. single and bifid : COR. tetrapetalous ; pistil one ; berry having a hard bark, unilocular, polyspermous, and pedecellated.

MOR'KIN, n. s. Among hunters, a wild beast, dead through sickness or mischance. ––– Minsheu and Bailey.

MORLAIX, a large and well built town in France, in the department of Finisterre, situated about five miles from the sea, on a river of this name, which forms a harbour, and by which coasters, or other small vessels of 100 tons, come up to the town. Larger vessels find a safe anchorage in the spacious bay, where there is a fort (Fort Taureau) and a small town called Yiniec. Morlaix has two large streets; and oil the bank of the river there is a fine quay, bordered with handsome

houses, along which '.here extends a row of piazzas, forming an agreeaM. promenade, called La Lance, and serving also as an exchange. The public buildings are churches of no great architectural beauty, and an hospital.

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The trade embraces cattle, tiax, hemp, and linen, and its manufactures of paper, tobacco, and leather. Morlaix was appropriated to the reception of flags of truce from England in 1810, and often dui'ing the late war. It was the birth-place of Moreau. Population 10,000. Thirty-four miles E. N. E. of Brest.

MORLAND (George), an ingenious, dissipated, and unfortunate painter. As he had no other education than what was connected with the pencil and pallet, he shunned the society of the well-informed and the well educated; and his pictures accordingly are taken, for the most part, from low life, and from the most humble, if not the most shocking, situations in which mankind consort. The following anecdote will give a sufficient view of Morland's character. ' He was found (says his biographer) at one time in a lodging in Somer's-Town, in the following extraordinary circumstances ; his infant child, that had been dead nearly three weeks, lay in its coffin in one corner of the room ; an ass and foal stood munching barley-straw out of the cra-dle ; a sow and pigs were solacing themselves in the recess of an old cupboard ; and himself whistling over a beautiful picture that he was finishing at his easel, with a bottle of gin hung up on the side, and a live mouse sitting (or kicking) for its portrait.' His dissipated habits at length led him into the king's-bench prison, where his talents were laid under contribution by frame-makers, picture-dealers, and others, who taking advantage of his weak addiction to liquor, indulged his caprice and his wants ; taking in re-turn the ingenious productions of his pencil. These they sold again to great profit; and when some of them, more speculative than the rest, released him from imprisonment, it was only to immerse him in a private house,- and take to themselves all the benefit of his labors ; preventing any knowledge to the world of the place where he resided, and keeping him in almost a constant state of intoxication. It could not b►► expected, that in such a mode of existence the vital spark should long support the bodily frame. His constitution rapidly gave way, and he died in 1804 before he had reached his fortieth year. MOR'LING, n. s. \ French, mart. Wool MORT'LING. $ plucked from a dead

sheep. ►►► Minsheu and Ainsworth.

MORN, TZ. s. \ Sax.manne,mon—

MOR’NING, n. s. & adj. ‘ jen; Goth, morgan;

MOR’XIXG-GOWN, n. s. (Dan. and Teut. mor—

MOR’N ING-STAR. Jgcn. The first, or

early part of the day : early : morning-gown and

morning-dress are a dress used, and the most

remarkable star in the morning, i. e. Venus.

Let us go down after the Philistines by night, and spoil them unto the morning light. 1 Sam. xiv. 36.

Bright as dolh the morning-star appear, Out of the East with flaming locks bedight, To tell the dawning day is drawing near.

Faerie Queene. She looks as clear As morning roses newly washed with dew.

Shakspeare.

The cock, that is the trumpet to the morn, Dotli with his lofty and shrill-sounding throat Awake the god of day. Id. Hamlet.

By the second hour in the morning Desire the earl to see me. Id. Richard 11 i. What shall become of us before night, who aie weary so early in the morning 1

Taylor’s Guide to Devotiun. Can you forget your golden beds, Where you might sleep beyond the morn ? Lee. The morning is the proper part of the day for Study. Drtiden.

Seeing a great many in rich morning gowns, he was amazed to find that persons of quality were up so early. Addison.

Friendship shall still thy evening feasts adorn, And blooming peace shall ever bless thy muni.

Prior.

The twining jessamine and blushing rose, With lavish grace their morning scents disclose. Id.

All the night they stem the liquid way, And end their voyage with the morning rav-

‘Pope.

Every morning sees her early at her prayers ; she rejoices in the beginning of every day, because it be-gins all her pious rules of holy living, and brings the fresh pleasures of repeating them. Law.

Frae morn to e’en it’s nought but toiling, At baking, roasting, frying, boiling ; And though the gentry first are stechin, Yet even the ha’ folk fill their pechan Wi’ sauce, ragouts, and sic like trashtrie, That’s little short o’ downright wastrie.

Burns.

By night I heard them on the track, Their troop came hard upon our back, With their long gallop, which can tire The hound’s deep hate, and hunter’s fire ; Where’er we flew they followed on, Nor left us with the morning sun. Byron.

MORNAY (Philip de), lord of Plessis-Marly, was born at Buhy or Bishuy in Upper Norman-day, November 5th, 1549, and educated at Paris. He made a rapid progress in the learned languages, theology, and the belles lettres. He was at first destined for the church ; but the principles of Calvinism, which he had imbibed from his mother, effectually excluded him from ecclesiastical preferment. After the horrible massacre of St. Bartholomew he made the tour of Italy, Germany, England, and the Low Countries ; and on his return joined the king of Navarre, then leader of the Protestant party, afterwards the celebrated Henry IV. This prince sent him to conduct a negociation with Elizabeth, queen of England ; and left him wholly to his own discretion in the management of that business. He was successful in almost every negociation, and conducted them like an upright as well as able politician. He tenderly loved Henry IV. ; spoke to him on all occasions as to a friend; and did every thing in his power to raise him to the throne. But, when he renounced the Protestant faith, he reproached him in the bitterest manner, and retired from court. Henry still loved him, and was extremely affected with an insult which he received in 1597 from one St. Phal, who assaulted and left him for dead. Mornay’s knowledge, probity, and valor, made him the soul of the Protestant party, and procured him the appellation of the pope of the Huguenots. He defended their doctrines by speech, writing, and military prowess. One of his books, on the Iniquity of the Mass, having

stirred up all the Catholic divines, he refused to make any reply to their criticisms except in a public conference. This was appointed to be held in 1600, at Fountainbleau, where the court then was. The two champions were, Du Perron, bishop of Evreux, and Mornay. After many arguments and replies on both sides, the victory was adjudged to Du Perron. The Calvinists, \ however, claimed the victory ; and this conference, instead of putting an end to the differences, was productive of new quarrels among the con-troversialists, and of mucli profane wit among the libertines. He retired to Saumur, an important place on the Loire, of which he was governor ; his attention being constantly occupied in defending the Huguenots. When Louis XIII. was making preparations against the Protestants, Mornay wrote him a letter, dissuading him against such a measure, in consequence of which remonstrance he was deprived of the government of Saumur. He died November llth, 1623, aged seventy-four, at his barony of Foret sur Seure, in Poitou. The Protestant cause never had an abler supporter, or one who did it more credit by his virtues and abilities. He wrote, 1. Un TraitS de 1' Euchariste, 1604, in folio. 2. Un Traite" de la verite" de la Religion Chretienne, 8vo. 3. La Mystere d'lniqui-tˆ, 4to. 4. Un Discours sur le droit pretendu par ceux de la maison de Guise, 8vo. 5. Memoirs from 1572 to 1629, 4 vols. 4to. David dee Liques published his life in 4to.

The MORNING-STAE is Venus when a little to the west of the sun ; that is, when she rises a little before him. In this situation she is called by the Greeks Phosphorus ; by the Latins Lucifer, &c. See ASTRONOMY.

MOROCCO, also called West Barbary, in-eludes the kingdoms of Fez and Morocco, properly so called. It extends eastward from the Straits of Gibraltar to the borders of Algiers, and southwards to the Great Sahara ; or from about 28►► to 36►► of lat., and from 1►► 30' to more than 10►► of W. long. The coast along the Mediterranean is upwards of 200 miles, and that along the Atlantic nearly 600. Its breadth varies from 200 to 400 English miles ; but this space includes

the province of Suse, rather a nominal than a real part of this empire. It is bounded on the north and west by the Mediterranean and the Atlantic ; Algiers forms a part of the eastern frontier, and on all the other sides it terminates in the wide expanse of the deserts.

The grand geographical characteristic of this country is the chain of the Atlas, by which it is traversed in its whole extent. Its summits are covered with perpetual snow, and are estimated at not less than 13,000 feet above the level of the sea. It descends in Eastern Barbary ; but here it contains mines of iron, tin, antimony, and copper ; which, however, with the exception of antimony, are seldom worked ; but the latter is extensively used in cosmetics. Mineral salt occurs in great abundance ; and makes a considerable article of export to Soudan. Morocco is traversed by the great chain of Atlas, as already mentioned in the general view. A comparatively plain or level country is comprised between the Atlas chain and the sea, of about 400 or 500 miles in length,

and from fifty to 100 in breadth, which forms the most fertile and populous part of the empire. Beyond the Atlas it includes the provinces of Darah, Tafilelt, and Sigilmessa, which at first are fertile, abounding in dalrs and wool, but gradually pass into the Great Sahara. This re-gion forms a kind of gradual transition from the fertile plains on the northern coast to the barren deserts of the interior. Dates are its chief produce, and at once form the principal food of the inhabitants and their most valuable article of commerce. The barbarous races here, in proportion as they are removed from the seat of empire, shake off the restraint of sovereign authority, till at last they set the power of the sultan at defiance.

Mr. Jackson states the climate of Morocco to be healthy and invigorating. From March to September the atmosphere is scarcely ever cloudy, and even in the rainy season, from September to March, there is seldom a day in which the sun does not shine during some part of it. The climate on the opposite of the range is much hotter and much less refreshed by rain than that on the northern, while it is at the same time more exposed to the hot winds from the arid plains of the interior. Some of the western districts of Barbary, AH Bey says, remind him of the green fields of England, notwithstanding their neglected husbandry ; but this character is far from being applicable to the whole ; for that celebrated traveller and his attendants had nearly perished in .one of the eastern deserts. In reference to this, he observes, ‘ there is no animal of any kind to be seen in this desert,

neither quadrupeds, birds, reptiles, nor insects, and the traveller who is obliged to pass through it is surrounded by the silence of death.' The climate, it deserves to be remarked, also, is sometimes subject to great heat, for Ali Bey says, that, in the beginning of June, Reaumur's thermometer stood at 26'7►► in the tent, though the day was cloudy. This is about 92►► of Fahrenheit.

The principal streams that descend from the north-west side of the Atlas chain are the Seboo, the Morbea, the Tensift, and the Suse, in Morocco, all of which fall into the Atlantic ; and the Mouluia into the Mediterranean. The superior fertility of this part of Africa is obviously produced by the more copious supply of moisture from the chain of Atlas ; for wherever that supply eithei fails, or is more scanty, the soil, which is light and sandy, becomes an arid desert, similar to those in the more southern parts. The soil in other districts, however, consists of a pure clay, about as destitute of vegetation as a brick floor ; and in others the desert is covered with a Kind of calcareous stone, which Ali Bey considers as a volcanic production.

The vegetable productions are not materially different from those of southern Europe ; the chief grain being wheat and barley. The crop* are generally good, and there is only one annual harvest. Several kinds of pulse are cultivated, with esculent vegetables, herbs and fruit; and, in addition to those on the opposite side of the Mediterranean, may be named the palm-tiee jnd lotus.

The domestic animals of North Afnra are alsr.

allied to those of Southern Europe, with the addition of the camel. This animal is in common use throughout Morocco. The maherry, or herie, desert camel, is a light and swift species, much used for travelling ; and the breed of horses is praised. They were the boast of ancient Numidia, and are still held in high estimation. Asses and mules are chiefly employed in domestic labor. Cattle are also kept, and large flocks of sheep on the sides of the mountains ; while goat skins supply the Morocco leather, so much admired. The wild animals

of these regions present an extensive theme. The Numidian lion maintains his ancient character for strength and ferocity ; and it often requires all the precaution and ingenuity of the inhabitants to guard against him. , The panther, the wild boar, and the hyaena, are common. The antelope, or gazel, bounds over the precipices, and has become their nighest term for female beauty. The jerboa and the jerd are two small animals, not much bigger than a rat, which burrow in the ground, and are said to be good food. Besides these, there are apes, jackals, foxes, hares, serpents, lizards, and cameleons. Jackson describes an animal called the Aoudad, which inhabits the steep and inaccessible cliffs of Mount Atlas, and is about the size of a calf, with a beautiful beard growing from the }ower part of the neck ; he is very wild, and rarely taken alive. The serpent tribes are numerous, and some of them furnished with most deadly poison. Others are suffered to live in the houses without molestation, and in some places are even considered a benediction on the household. The boa constrictor is seen on the south of the Atlas, from sixty to eighty feet long. The most destructive of this class of reptiles are the scorpions, which are numerous in all the Barbary states, but the sting is less venomous on the north than on the south side of the mountains.

Ostriches are taken in the southern parts of Barbary, and their feathers more valuable than in any other part of Africa. Besides these there are pelicans, eagles, flamingoes, storks, herons, bustards, wild-geese, pigeons, turtle-doves, ring-doves, partridges, plovers, and a variety of small birds. The insect tribes are numerous, beautiful, and varied. But the most formidable, from its numbers and resistless progress, is the locust, which frequently proves a most terrible enemy. They are bred on the confines of the great desert, but at irregular intervals are impelled by necessity towards the cultivated tracts of the north.

Under the name of Mauritania this country was once occupied by a hardy Nomadic race, who were never thoroughly subdued by the Romans. At a later period it yielded to the arms of the Saracens, whose different dynasties disputed its possession. At length a reaction took place from the vast deserts south and east ; and, in the eleventh century, a chief of Lemptuna assumed the character of a reformer of the Mahometan religion, and acquired so high a reputation that all the neighbouring tribes flocked to his standard. His followers, under the appellation of Almoravides, conquered Morocco, Barbary, and even Spain, thus establishing a great empire, entitled that of Mogrcb, or the West. In the

following century they were supplanted by a new dynasty, called the Almohades, who soon found other rivals. At length, in 1547, an Arabian chief of the race of Scheriffs, or descendants of Mahomet, ascended the throne of that region, which his posterity have ever since maintained and established here perhaps the most complete despotism on the face of the earth.

Different statements hare been made as to the present population of Morocco. That of Mr. Jackson, many years British consul at Mogadore, makes it much greater than any other writer. He instituted numerous enquiries on the subject, and was allowed to consult the ‘ Imperial Register of the inhabitants of each province.’ He gives the following as the result : ###

Population.

City of Morocco …. 270,000

Fez 380,000

Mequinez … 110,000

Other cities …. 235,000

Province of Erreef … 200,000

El Garb … 200,000

Benihassen . . 300,000

Tedla … 450,000

Fez … . 1,280,000

Duquella … 966,000

Temsena and Shawia . 1,160,000

Abda …. 500,000

Shedma … 550,000

Morocco … 1,250,000

Haha … 708,000

Draha … 350,000

Suse … 2,427,000

Tafilelt . i . 650,000

Brebers . . 3,000,000

14,986,000

Chenier and Hoest conceive that the whole number of this people cannot exceed 5,000,000 or 6,000,000. In particular the city of Morocco, estimated at 270,000, cannot, they suppose, contain more than 30,000. From these and other circumstances it may be doubted whether these archives are not referrible to a former period. The emperor, as we have before observed, is absolute ; there is neither an ulema here as in Turkey, at the head of the religion, nor even any divine or public council at the head of the state. All is*at the single command and determination of the sovereign, and no one is supposed to have either life or property but at his disposal. He orders one person to do this, and another that, according to his caprice. Some of these monarchs have been said to consider adherence to their engagements as an unlawful check on their power. ‘ Takest thou me for an infidel,’ said one of them to a traveller, ‘ that I must be a slave of my word?’ He cannot, however, safely invade the domestic privacy of his subjects, nor shock any of those customs to which long establishment has given the force of law. He is expected also to give public audience four times a week, where he administers justice to all, even the poorest, on horseback. Yet prudent persons usually think it more eligible to acquiesce in the sentence of the cadi, than to afford to the emperor any insight into their private affairs. Muley

Ismael greatly contributed to establish the present determined and ferocious character of this power ; he first employed negro

mercenaries among his regular troops. Besides these there are now 12,000 to 14,000 Moors (chiefly cavalry) in the emperor's service, and might be disciplined to make excellent soldiers. Ali Bey states the imperial revenue at ––1,250,000.

The trade carried on between England and these northern regions of Africa has not been hitherto considerable; but English articles are now in request in many parts. With a view of encouraging commerce the emperor, in February 1818, issued a decree, granting to European merchants the liberty of settling in his dominions, promising them protection, and commanding the governors and magistrates to take care that they were not defrauded by the natives. The imports are sugar, spices, iron, tin, lead, copper, woollens, linens, raw silk, gums, hardware, glass, beads, toys, and various other minor articles, besides Mexican dollars, which, in 1804, amounted to 99,000. The exports, almonds, gums, skins and hides, bees' wax, olive oil, wool, ostrich feathers, pomegranate peels, and dates. The ports with which Morocco chiefly communicates are London, Amsterdam, Marseilles, Leghorn, Lisbon, Cadiz, and Tenehffe. Jackson states the value of the imports, in 1804, at ––151,450, and of the exports ––127,679. Besides the trade with European nations a considerable intercourse is carried on with the interior of Africa by caravans, which travel to Tombuetoo and Soudan. The articles with which these are freighted are salt, cloths, toys, beads, and various European goods ; for which they bring in return gold, ivory, gums, and slaves.

The religion of Morocco is the most intolerant Mahometanism ; under pretence of which fanatics constantly raise themselves to the character of saints by working pretended miracles. There is not, however, any body of priests, like the Ulema; while they generally indulge to the utmost of their power in the number of their wives and concubines. The same sanctity is usually ascribed to idiots. The state of knowledege in such a community may be easily conceived.

' Those rich plains of Fez and Morocco,' says M. Sismondi, ' which, five centuries ago, were illumined by so many academies, so many universities, and so many libraries, are now reduced to deserts of burning sand, for the possession of which tyrants contend with tigers. All the gay and fertile shores of Mauritania, where commerce, the arts, and agriculture, had arisen to the highest prosperity, are now the nests of pirates, who spread terror on the seas, and who retire from their labors to the most shameful debaucheries, till the plague annually returns to mark out its victims, and to avenge offended humanity. In this vast extent of country nothing is to be found but ignorance, slavery, terror, and death.' Another writer observes, ' Nor

have these doctrines had less influence on the political state, than on the physical scenery or domestic manners of these regions, and hence the barbarous politics of a nation of tyrants and slaves, where each man is alternately degraded by the power of those above

him, to the one state, or raised by the abject-ness of those below him, to the other, presents but an uninviting picture to the enlightened mind, and can afford little satisfaction, except by increasing our attachment to that mild sys-tem of laws, and heightening our ideas of the purity of that religion, which, as Englishmen, providence has allotted us. For, among the governments of Barbary, all the bad passions which render their possessors the scourge and terror of society ••• envy, jealousy, and avarice, exasperated by ferocity of temper and of manners, rendered permanent by immutable prejudices, but rarely illumined by transient flashes of magnanimity ahd courage ••• seem to rage without control in the unhappy courts of these states.'

The basis of the population is formed of what are called Moors, consisting of the original people, now mixed with their Arab conquerors, and with the tribes who have at various times poured in from the African deserts. To these is added a considerable number of the Moors whose ancestors once reigned in Spain. All these be-ing moulded nearly into one, by the strict and uniform character of the Mahometan observances, the cities present the same gloomy as-pect as in all Moorish states; that of strict seclusion of the female sex ; habits of gravity and silence among the men, who meet only in the public coffee-houses ; high national pride and contempt for all other people. In the country the habits of life are entirely different. There the people live chiefly in douars, or moveable villages, composed of tents, which, whenever the spot on which they are placed is exhausted, they strike, and move in search of a more productive quarter. The women are not confined ; but being subjected to hard labor, tanned by the sun, and sometimes even yoked to the plough, these habits of hardihood banish every attraction.

When the Moor appears any where abroad he generally assumes a degree of solemnity, gravity, and decorum, in his outward deportment, which have little correspondence with his sentiments and actions. This character, however, is more applicable to the western, than the eastern countries, where a commercial and seafaring life has imparted to the people activity, animation, and bustle, whilst il has not diminished their native ferocity. The Moors, though altogether

strangers to literature, arts, and sciences, are frequently engaged in commerce. Mr. Jackson, who had good opportunities of becoming acquainted with the mercantile part, describes them as ‘ suspicious, deceitful, and cruel ; they have no respect for their neighbours, but will plunder one another whenever it is in their power ; they are strangers to every social tie and affection, for their hearts are scarcely susceptible of one ten-der impression ; the father fears the son, the son, the father; and this latnenahle mistrust, and want of confidence, diffuses itself throughout the whole community. The pride and arrogance of the Moors are unparalleled ; for though they live in the most deplorable state of ignorance, slavery, and barbarism, yet they consider themselves as the first people in the world, and contemptuously term all others barbarians.’ Th

same writer, however, allows them the merit of possessing fortitude in a very eminent degree, and of acting upon their faith in the doctrines of Mahomet, in a way that would put some Christians to the blush. ‘ It must be confessed,’ he says, ‘ that some of the well-educated Moors are courteous and polite, and are possessed of great suavity of manners. They are affable and communicative, where they repose confidence ; and if, in conversation, the subject of discussion be serious, and the parties become warm in dispute, they have generally the prudence to turn the subject in a delicate manner ; they are slow at taking offence, but when irritated are noisy and implacable. There is one noble trait in the character of this people, which I cannot avoid mentioning, that is fortitude under misfortune : this the Moor possesses in an eminent degree; he never despairs, no bodily suffering, no calamity, however great, will make him complain, he is resigned in all things to the will of God, and waits in patient hope for the melioration of his condition.

The Moors are generally of the middle stature, but less robust than Europeans. Their legs ap►► pear clumsy, which some have supposed to arise from their always sitting cross-legged. From in-termarriage, and frequent intercourse with the negroes of Soudan, their complexion

is of all shades from black to white. The women of Fez are nearly as fair as Europeans, with the exception of their eyes and hair, which are always black. The females of Mequinez are proverbially handsome ; and both sexes have good teeth. In some parts they dye their hands and feet with the juice of henna.

Their dress is described as consisting of a shirt and drawers, the former being worn over the lat-ter, and reaching about to the knee. Over this they wear a caftan, or coat, which buttons down the front. The head is covered with a red cap and turban, and the feet with yellow slippers or sandals. When they go out, a piece of white cotton or silk, five or six yards long and five feet broad, called a hayk, is carelessly thrown over the head, and, when in the presence of a superior, the hayk rests on the shoulders instead of the head. The dress of the women resembles that of the men, except in the adjustment of the hayk, and the slippers being red. They also wear numerous rings, bracelets, and other ornaments. The most gaudy colors are generally preferred. Some slight modifications may take place in the different states, but this is the general Moorish costume. Marriage is conducted, as in other Mahometan countries, entirely by the parents, and the parties sometimes never see each other till after the ceremony is past. Polygamy is allowed, and the number of concubines is unlimited. In Tully's Narrative of a ten years' residence at Tripoli, it is stated that ' the Moors marry so extremely young, that the-mother and her first-born are often seen together as playmates, equally anxious and angry in an infantine game. The women here are often grandmothers at twenty-six or twenty-seven years of age; it is no wonder, therefore, that they live to see the children of several generations.'

Nearly all these recions abound in Arab pas-

toral tribes, who retain much of the Asiatic manners and appearance. An Arab tribe was met on its march by Col. Keating, producing a very characteristic and picturesque group. ' The men and boys naked, with long staves, drove cattle of every description blended. The camels presented the whole menage of the family ; three ladies, muffled up to the eyes, sat upon the summit ridge of the awkward animal, surrounded below by the heads of the young broods, and domestic fowls dotted here and there throughout the groups. A few men, mere skin and bone, on horses nearly as decharnes as themselves, with fire-arms in their hands, and suspicion in their countenances, guarded the fair, their families, goods, and chattels.'

Another distinct class found here are the brebers, or berebbers, who inhabit the declivities of Mount Atlas, particularly the northern part of the chain. They appear to be descendants of the aboriginal inhabitants, who have been driven from the plains by foreign invasion. They live chiefly in tents, and are occupied in husbandry and keeping bees. They are a robust, nervous people, divided into various tribes, and regard with great indignation the people by whom the lower parts of the country are occupied, while the idea formed of them, by their Saracen conquerors, may be readily perceived from their character as drawn by a celebrated Arabian wri-ter, who says, ‘ they are the offspring of the giant Goliah, whom they resemble in strength and wickedness.’ Their language is wholly distinct from the Arabic in common use among the other tribes. It is supposed by Adelung to be the same with Tibboo, the Tuarick, and other indigenous tongues spoken in that part of Africa.

The southern sides of the Atlas are peopled by the Shelluhs, who live in towns, or villages, and are chiefly occupied in husbandry, like the brebers, but differ from them in appearance, language, and manners. They are smaller and more civilised : and several of the families are supposed to be descended from the Portuguese, who once occupied most of the towns on the west coast of Barbary. Their language is considered merely as a dialect of the brebers. In addition to these tribes great numbers of negroes, are annually brought from Soudan as slaves.

The Jews are very numerous in Morocco, particularly in the cities, and carry on all the mercantile and money transactions. Every species of oppression and contempt, however, is heaped upon them. They are not allowed to mount on horseback, nor even to sit before a Moor with crossed legs. The meanest Moors will insult or maltreat them, or even enter their synagogues for the purpose ; neither may they read or write Arabic, which, as the language of the koran, is considered too holy for them. When the emperor, or men in power, happen to be in want of money, they hesitate not to relieve their difficulty by stripping the Jews of large portions of wealth, however carefully it may be concealed. Catholic convents, however, are protected, though liable to various vexations, at Morocco, Mogodor, Tangier, and Mequinez.

MOROCCO, the capital of the above state, called

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also Marakasch by the natives, is situated on a fertile plain interspersed with groves of lofty palm-trees, and bounded on the southeast by the snowy mountains of Atlas, the nearest of which is about twelve miles distant: being the principal residence'of the emperor, it is generally considered as the capital of the empire, though Fez contains a much greater population. It was founded about the middle of the eleventh century, and before the termination of the twelfth attained its highest prosperity. The space included between the walls is capable of containing a population of more than 300,000 individuals; but much of it is now covered with gardens and dilapidated building and the present number of its inhabitants is estimated at 40,000. But see the above article. The situation is in general salubrious, and the mountains defend it from the Shume, or hot winds of the desert, but the plague sometimes makes great ravages. The streets are narrow, irregular, and gloomy, and the houses without front windows. A few are built of stone, but the greater number are composed of earth and lime. The streets are subject to all the inconveniences of not being paved. Morocco, however, has many tokens of its former grandeur. Its temples and mosques are numerous, large, and splendid. The walls are thick and high, and strengthened by towers. The palace of the sultan stands beyond them, on the south, and comprises a vast group of buildings, courts, and gardens ; the whole space being enclosed about three miles in circumference. Fez is the capital of the kingdom of that name, and situated auout 230 miles north-east of Morocco. It is quite certain that the recent capture of Algiers, by the French, will entirely change the political character of this despotic government.

MOROCCO, or MARROQUIN, the skin of a goat, or some other animal resembling it, dressed in sumach or galls, and dyed of any color at pleasure; much used in book-binding, &c. The name is derived from the kingdom of Morocco, whence the method of preparing these skins was first borrowed. Morocco skins are brought from the Levant, Barbary, Spain, Flanders, and France ; red, black, yellow, blue, &c. See LEATHER. MOROSE', adj. \ Lat. morosus. Sour; pee-MOROSE'LY, adv. J vish ; sullen : the adverb MOROS'ITY, n. s. r and substantive correspond.

Why then be sad,

But entertain no morosity, brothers, other Than a joint burthen laid upon us.

Shakspeare. Some morositiei

We must expect, since jealousy belongs To age, of scorn, and tender sense of wrongs.

Denham,

The pride of this man, and the popularity of that ; the levity of one, and the morosity of another.

Clarendon.

And thus they took prisoner the earl of Bath in Devonshire, who neither had, or ever meant to do the king the least service ; but only out of the morosity of his own nature, had before, in the house, expressed himself not of their minds. Id.

It (love) avoideth that unreasonable suspicious-ness and diffidence, that timorous shyness, that crafty resenredness, that supercilious morosity, that fastidious sullenness, and the like untoward disuositions,

which keep men in estrangement, stifling good inclinations to familiarity and friendship. Barrow.

Mankind may be divided into the merry and the serious, who, both of them, make a very good figure in the species, so long as they keep their respective humours from degenerating into the neighbouring extreme ; there being a natural tendency in the one to a melancholy moroseness, and in the other to a fantastic levity. Addison.

Without these precautions, the man degenerates into a cynick, the woman into a coquette ; the roan grows sullen and morote, the woman impertinent.

Spectator.

Take care that no sourness and morosenest mingle with our serious frame of mind. Nelson.

Too many are as morosely positive in their age, as they were childishly so in their youth.

Government of the Tongue.

Learn good humour, never to oppose without just reason ; abate some degree of pride and morosenest.

Watt*.

Some have deserved censure for a morose and affected taciturnity, and others have made speeches, though they had nothing to say. Id. on the Mind.

A poet, that fails in writing, becomes often a morose critic. The weak and insipid white wine makes at length excellent vinegar. Shenstone.

MOROXYLIC ACID, in chemistry, derives its name from Gr. /zopov a mulberry, and gvXov wood, because found in the wood of that tree. In the botanic gordcn of Palermo, Mr. Thompson found a curious saline substance on the trunk of a white mulberry tree. It appeared as a coating on the surface of the bark in little granulous drops of a yellowish and blackish-brown color, and had likewise penetrated its substance. Klaproth, who analysed it, found that its taste was somewhat like that of succinic acid ; on burning coals, it swelled up a little, emitted a pungent vapor scarcely visible to the eye, and left a slight earthy residuum. 600 grains of the bark loaded with it were lixiviated with water, and afforded 320 grains of a light salt, resembling in color a light wood, and composed of short needles united in radii. It was not deliquescent ; and, though the crystals did not form till the solution was greatly condensed by evaporation, it is not very soluble, since 1000 parts of water dissolve but 35 with heat and 15 cold.

This salt was found to be a compound of lime and a peculiar vegetable acid, with some extractive matter. To obtain the acid separate, Klaproth decomposed the calcareous salt by acetate of lead, and separated the lead by sulphuric acid. He likewise decomposed it directly by sulphuric acid. The product was still more like succinic acid in taste; was not deliquescent ; easily dissolved both in water and alcohol; and did not precipitate the metallic solutions, as it did in combination with lime. Twenty grains being slightly heated, in a small glass retort, a number of drops of an acid liquor first came over ; next a concrete salt arose, that adhered flat against the top and part of the neck of the retort in the form of prismatic crystals, colorless and transparent ; and acoally residuum remained. The acid was then washed out, and crystallised by spontaneous evaporation. ††† Thus sublimation appears to be the best mode of purifying the salt, but it

adhered too strongly to the lime *o be separated

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from it directly by heat without being decomposed. See CHEMISTRY, Index.

MORPETH, a handsome borough and market town of Northumberland, fifteen miles from Newcastle, seated on the Gammas, with a bridge over the Wansbeck. It is an ancient borough by prescription, and had once an abbey and a castle, now in ruins, situated about a quarter of a mile to the south of the town and river Wansbeck, on an eminence which overlooks them both. The market place is conveniently situated near the centre of the town ; and an elegant town-house was built by the Carlisle family in 1714, in which the quarter-sessions are held for the county. It is built with hewn stone, with a piazza. The church being a quarter of a mile from the town, a tower containing a, good ring of bells stands near the market place. Near the bridge is the county gaol, a modern structure. Morpeth has a free grammar school, a chapel near the river, on the site of a chantry that was granted for the support of the school, which was part of the old structureˆ and an hospital. In 1215 the townsmen burnt their town out of hatred to king John, that he might find no shelter in it. It has a good market on Saturday for corn, cattle, and provisions; and another on Wednesday, extremely well supplied with live cattle. It is a post town and thoroughfare, with many good inns, plenty of fish, and several mills. The earl of Carlisle's steward holds a court twice a-year, one on Monday after Michaelmas, when four persons are chosen by the free burgesses, who are about 107, and presented to the steward, who names two of them to the bailiffs, who, with seven aldermen, are its governors for the year following. It sends one member to parliament. It lies ninety-one miles south of Edinburgh, and 292 north by west of London.

MORPHEUS, in the mythology, the god of sleep, or, according to others, one of the ministers of Somnus. He caused sleepiness, and represented the forms of dreams. Ovid styles him the kindest of the deities ; and he is usually described in a recumbent posture, and crowned with poppies.

MORPHIA, in chemistry, the alkaline narcotic principle of opium first obtained pure by M. Sertiirner in 1817.

Two somewhat different processes for procuring it have been given by

M. Robiquet and M. Choulant.

According to the former, a concentrated infusion of opium is to be boiled with a small quantity of common magnesia for a quarter of an hour. A considerable quantity of a grayish deposite falls. This is to be washed on a filter with cold water, and, when dry, acted on by weak alcohol for some time, at a temperature beneath ebullition. In this way very little morphia, but a great quantity of coloring matter is separated. The matter is then to be drained on a filter, washed with a little cold alcohol, and afterwards boiled with a large quantity of highly rectified ulcohol. This liquid being filtered while hot, on cooling it deposits the morphia in crystals, and very little colored. The solution in alcohol, and crystallisation, being repeated two or three 1 iiiies, color ess morphia is obtained

The theory of tins process is the following :••• Opium contains a meconiate of morphia. The magnesia combines with the meconic acid, and the morphia is displaced.

Choulant directs us to concentrate a dilute watery infusion of opium, and leave it at rest till it spontaneously let fall its sulphate of lime in mi-nute crystals. Evaporate to dryness ; redissolve in a little water, and throw down any remaining lime and sulphuric acid, by the cautious addition, first of oxalate of ammonia, and then of muriate of barytes. Dilute the liquid with a large body of water, and add caustic ammonia to it, as long as any precipitate falls. Dissolve this in vinegar, and throw it down again with ammonia. Digest on the precipitate about twice its weight of sulphuric ether, and throw the whole upon a filter. The dry powder is to be digested three times in caustic ammonia, and as often in cold alcohol. The remaining powder being dissolved in twelve ounces of boiling alcohol, and the filtered hot solution being set aside for eighteen hours, deposits colorless transparent crystals consisting of double pyramids. By concentrating the supernatant alcoholic solution, more crystals may be obtained.

Dr. Thompson directs us to pour caustic ammonia into a strong infusion of opium, and to separate the brownish-white precipitate by the filter ; to evaporate the infusion to about one-sixth of its volume, and mix the concentrated liquid with more ammonia. A new deposite of impure morphia is obtained. Let the whole of the depositesbe collected on the filter, and wash-ed with cold water. When well drained, pour a little alcohol on it, and let the alcoholic liquid pass through the filter. It will carry off a good deal of the coloring matter,

and very little of the morphia. ‘ Dissolve the impure morphia, thus obtained, in acetic acid ; and mix the solution, which has a very deep brown color, with a sufficient quantity of ivory black. This mixture is to be frequently agitated for twenty-four hours, and then thrown on the filter. The liquid passes through quite colorless. If ammonia be now dropped into it, pure morphia falls in the state of a white powder. If we dissolve this precipitate in alcohol, and evaporate that liquid slowly, we obtain the morphia in pretty regular crystals. It is perfectly white, has a pearly lustre, is destitute of smell, but has an intensely bitter taste Dr. Thompson states the constituents of morphia as follows : ###

Or nearly in volumes.

Hydrogen

Carbon

Oxygen

0-0555 0-4528 0-4917

1-0000

18 24 10

Hence the weight of an integrant particle of morphia is 40-25.

M. Choulant says, it crystallises in double four-sided pyramids, whose bases are squares or rectangles. Sometimes in prisms with trapezoidal bases.

It dissolves in eighty-two times its weight of boiling water, and the solution on cooling deposits regular, colorless, transparent crystals. It is

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soluble in thirty-six times its weight of boiling iilcohol, and in forty-two times its weight of cold alcohol, of 0‘92. It dissolves in eight times its weight of sulphuric ether. All these solutions change the infusion of Brasilwood to violet, and the tincture of rhubarb to brown. The saturated alcoholic and etherous solutions, when rubbed on the skin, leave a red mark.

Sulphate of morphia crystallises in prisms which dissolve in twice their weight of distilled water. They are composed of,

Acid . . 22 5-00

Morphia . 40 9‘09

Water . . 38

100

Nitrate of morphia yields needle-form crystals, in stars, which are soluble in one and half time their weight of distilled water. Its constituents

Acid Morphia Water

20 36 44

100

6-75 12-15

Muriate of morphia is in feather-shaped crystals, and needles. It is soluble in ten and a half times its weight of distilled water. Its constituents are,

Acid Morphia Water .

35

41 24

100

4-625 5-132

The acetate crystallises in needles ; the tartrate in prisms; and the carbonate in short prisms. Dr. Thompson states the ultimate constituents of morphia to be,

Hydrogen . . 0-0555 Carbon … 0 4528 Oxygen … 0-4917

1-0000

from the analysis of one grain, by ignited peroxide of copper. He imagines the atom to be either 40-25, or 20-125. The former number approaches to that of Pelletier and Caventou ; the latter is much greater than any of Choulant's deduced from the above saline combinations, the mean of which gives about 8-25.

Morphia acts with great energy on the animal economy. A grain and a half, taken at three different times, produced such violent symptoms upon three young men of seventeen years of age that Sertiirner was alarmed lest the consequences should have proved fatal.

Morphia, according to its discoverer, melts in a gentle heat ; and in that state has very much the appearance of melted sulphur. On cooling, it again crystallises. It burns easily ; and, when heated in close vessels, leaves a solid resinous black matter, having a peculiar smell. See CHEMISTRY, Index.

MOR'RIS, n. s. ˆ Span, morcsco (dancaol mo—

MORRIS' DANCE. S rcsco) ; Port, and Ital. mo-resca ; Belg. moorish ; Fr. moresquc. A dance in which bells are gingled, or staves or swords

clashed, which was practised by the Moors, and probably a kind of Pyrrhick or military dance. One in his catalogue of a feigned library, sets down this title of a book, the morris-dance of heretics. Bacon.

The queen stood in some doubt of a Spanish invasion, though it proved but a morris-dance upon our waves. Wotton,

I took delight in pieces that shewed a country village, morrice-dancing, and peasants together by the ears. Peacham.

The sounds and seas, with all their finny drove, Now to the moon in wavering morrice move.

Milton.

There went about the country a set of mcrricc-dancers, composed of ten men, who danced a maid marian and a tabor and pipe. Temple.

Four reapers danced a morru to oaten pipes.

Spectator.

MORRIS DANCE. See MORESQUE DANCES. MORRIS, 'a county of

New Jersey, bounded north by Bergen county, east by Essex county, south by Somerset and Hunterdon counties, and north-west by Sussex county. Chief town, Mor-ristown.

MOR'PHEW, n. t. Fr. morphee ; Ital. mor-fea ; low Lat. morptuca. A scurf on the face.

The shape is changed with disease or casualty of age ; while the man is the same ; the face that was fair is now distorted and morphewed ; the hair that was yellow or black, turned white or vanished.

Bp. Hall.

MORRISTOWN, a post town, the capital o' Morris county New Jersey; eighteen miles W.N.W. of Newark, and twenty-eight W.N.W. of New York. It is a pleasant and flourishing place, containing a court-house, a jail, a bank, an academy, and two houses of public worship, one for Presbyterians, and one for Baptists. A newspaper is published here.

MOR'ROW, n.s. Saxon monjen ; Belgic morghen; Teut. morghen. The original meaning seems to have been morning. To-morrow as the Fr. demain, is of similar origin and signification ; the day next after the present.

So I caste out fendis and I make perfightly heel this, to day and to-morrowe ; and the thirdde day I am endid." Wiclif. Luk 13.

The Lord did that thing on the morrow.

Exod. ix. 6. I would not buy

Their mercy at the price of one fair word ; To have it with saying, good morrow.

Shakspeare. Thou

Canst pluck night from me, but not lend a morrow.

Id.

Peace, good reader, do not weep, Peace, the lovers are asleep ; Let them sleep, let them sleep on. Till this stormy night be gone, And the eternal morrow dawn, Then the curtains will be drawn. Crasnate. To-morrow you will live, you always cry, In what far country does this morrow lie 1 That 'tis so miehty long ere it arrive : Beyond the Indies does this morrow live ? Tis so far-fetched this morrow, that I fear

‘Twill be both very old, and very dear : To-morrow will I live, the fool does say, To dav itself s too late, the wise lived yesterday.

Cowleu

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Our yesterday's to morrow now is gone, And still a new to-morrow does come on. We by to-morrows draw out all our store, Till the exhausted well can yield no more. Id.

To-morrow, didst thou say 1 Me thought I heard Horatio say to-morrow. Go to ††† 1 will not hear of it††† to-morrow ! Tis a sharper, who stakes his penury Against thy plenty ††† who takes thy ready cash, And pays thee nought but wishes, hopes, and promises,

The currency of idiots. Cotton.

To-morrow is the time when all is to be rectified.

Spectator.

To-morrow comes ; 'tis noon ; 'tis night : This day like all the former flies ; Yet on he runs to seek delight To-myrrow, till to night he dies. Prior.

Sweet fa's the eve on Craigie-bura,

And blithe awakes the morrow, But a' the pride o' spring's return

Can yield me nocht but sorrow. Burns. Beware of desperate steps. The darkest day, Live till to-morrow, will have passed away.

Cowper.

MORS, or MORSOE, the largest island of the gulf of Lyrnfiord, in the north of Jutland, lies in lat. 56†† 41' N. It contains 136 square miles, and a population of about 7800. The surface is in general level, except on the south side ; and in several places the sea has formed subterraneous excavations, over which the ground has given way. The climate is variable; but the soil is very fertile, and two-thirds of the whole island is under cultivation. The rest is moor; but will eventually, it is thought, be converted into mea-dow or arable land. The inhabitants speak a dialect of their own ; and they are a simple contented race. From Nykiobing, the only town, there is a large export of corn.

MORS, Death, one of the infernal deities, born of Night without a

father. She was worshipped by the ancients with great solemnity. She was not represented as an actually existing power, but as an imaginary being. Euripides introduces her in one of his tragedies on the stage. The moderns represent her as a skeleton armed with a scythe and a scymitar.

MORSCHANSE, a town of European Russia, in the province of Tambov, on the river Zna. It has manufactures of paper, linen, and canvas; and some fulling and saw mills. The Zna communicating with the Wolga, the town has the command of a very extensive water carriage, and a brisk traffic in corn. Population 4200. Seventy-eight miles north of Tambov.

MORSE, n. s. Goth, mar, the sea, and ors, a horse (Thomson). The phoca or sea-horse.

That which is commonly called a sea-horse is properly called a morse, and makes not out that shape.

Browne.

It seems to have been a tusk of the morse or waltron, called by some the sea-horse. Woodward.

MOR'SEL, n. s. Fr. morceau, morcella ; Latin niwtus, a bite. A mouthful ; small piece or quantity ; a meal.

And aftir the mossel, thanne Satanas entride into him, and Jesus seith to him, that thing that thou doist, do thou swithc. Wirlif. J(m. 13.

1 dwell wita hem that proudc y be, ,

And ful of wiles and subtilte, And faine him pore, and him self fiden With gode morcils delicious, And drinkin gode wine precious.

Chaucer. Cant. Tain. Yet earnest thou to a morsel of this feas Having fully dined before.

Shakrpeare. Coriolamis.

And me his parent would full soon devour For want of other prey, but knows that I Should prove a bitter morsel, and his bane.

Milton.

On these herbs, and fruits, and flowers, Feed first ; o;i each beast next, and fish and fowl, ••• No homely mortels! Id. Paradise Lost.

Of the morsels of native and pure gold, he had seen some weighed many pounds. Boyle.

He boils the flesh, And lays the mangled morsels in a dish.

Dry den.

A dog crossing a river with a moriel of flesh in his mouth, saw, as he thought, another dog under the water, upon the very same adventure. L'Estrange.

A wretch is prisoner made, Whose flesh, torn off by lumps, the ravenous foe In morsels cut to make it farther go.

Tate's Juvenal.

Every morsel, to a satisfied hunger, is only a new labour to a tired digestion. Soutb't Straumi.

A letter to the keeper of the lion requested that it may be the first morsel put into his mouth.

Addison.

Hard is the fate of the infirm and poor ! Here, as I craved a morsel of their bread, A pampered menial drove me from the door, To seek a shelter in an humbler shed. Moss.

MORT, n. s. Fr. mart. A tune in hunting sounded at the death of the game.

To be making practised smiles, As in a looking-glass, and to sigh as 'twere The mort o' th' deer ; oh that is entertainment My bosom likes not. Shakspeare. Winter's Tale.

MORTAGNF, a town of Normandy, France, in the department of the Orne. It is situated on a hill near the river Chyppe ; and contains 5800 inhabitants, who manufacture linen, thread, and leather. A great deal of cyder is made here. The great disadvantage of the place is the want of good water. Fifteen miles E.S.E. of Seez and eighteen E.N. E. of Alencon.

MORTAL, adj. &,n.s.~\ Fr. tnortel; Lat.

MORTAL’ITY, >mortalis. Liable or

MOR’TALLY, adv. j subject to death ;

bringing, or producing death ; deadly ; and, by a usage that should teach a good lesson, human; pertaining to man; man: mortality is subjection or liability to death ; power or frequency of death ; death ; humanity, or human nature : mortally means fatally ; irrecoverably ; to death.

This corruptible must put on incorruption, and this mortal must put on immortality. 1 Cor. xv. 53.

Who for each fickle fear from virtue shrinks, Shall in this world enjoy no earthly thing, No mortal man the cup of surety drinks ; But let us pick our good from out much bad, That so our little world may know its king.

Sir P. Sitlnei,.

MORTALITY.

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So from immortal race he does proceed, That mortal hands may not withstand his might ;

I >oe for his derring foe, and bloody deed ; Foi all in blood and spoil is his delight.

Faerie Queene.

‘I hough every sin of itself be mortal, yet all are not equally mortal ; but some more, some less.

Perkint. I beg mortality, Ratner than life preserved with infamy.

Shakrpeare.

Mortality and mercy in Vienna Live in thy tongue and heart. Id.

Nature does require

Her times of preservation, which, perforce, I her frail son amongst my brethren mortal Must give my attendance to. Id. Henry VIII.

Come, all you spirits

That tend on mortal thoughts, unsex me here, And fill me from the crown to th' toe, top full Of cruelty. Id. Macbeth.

They met me in the day of success ; and I have learned by the perfectest report, they have more in them than mortal knowledge. Id.

Macbeth

Shall live the lease of nature, pay his breath To time and mortal custom. Id.

The mortalett poisons practised by the \Test Indians, have some mixture of the blood, fat, or flesh of man. Bacon.

When I saw her die,

I then did think on your mortality. Carew. Heavenly powers, where shall we find such love 1 Which of ye will be mortal to redeem Man's mortal crime ; and just, the unjust to save 1

Milton. The fruit

Of that forbidden tree, whose mortal taste Brought death into the world, and all our woe.

Id.

The day thou eatest thereof, my sole command Transgrest, inevitably thou shall die ; From that day mortal : and this happy state Shalt lose. Id. Paradise Lost.

The voice of God

To mortal ear is dreadful ; they beseech That Moses might report to them his will, And terror cease. Id.

Gladly would I meet Mortality my sentence. Id.

The rise of keeping those accounts first began in the year 1592, being a time of great mortality.

Graunt.

Success, the mark no mortal wit, Or surest hand can always hit. Butler.

Some circumstances have been great discouragers of trade, and others are absolutely mortal to it.

Temple.

Hope not base man ! unquestioned hence to go, For I am Palamon, thy mortal foe. Dryden.

A single vision so transports them, that it makes up the happiness of their lives ; mortality cannot bear it often. Id.

In the battle of Landen you were not only dangerously, bu , in all appearance, mortally wounded.

Id.

No one enjoyment but is liable to be lost by ten thousand accidents, out of all mortal power to prevent. South' s Sermons.

I can behold no mortal now ; For what's an eye without a brow. Prior. Warn poor mortals left behind. Ttckel. Safe in the hand of one disposing power, Or in the natal, or the rrn-rtal hour. Pope.

Take these tears, mortality't relief, And, till we share your joys, forgive our grief.

Id.

I point out mistakes in life and religion, that we might guard against

the springs of error, guilt, and sorrow, which surround us in every state of mortality.

Wattt's Logick. All men think all men mortal but themselves.

Young.

Preposterous madmen, void of fear or shame, Lay their crimes bare to these chaste eves of Heaven, Yet shrink and shudder at a mortal's sVht. Id. '

And for this ???

A being of the race thou dost despise, The order which thine own would rise above, Mingling with us and ours, thou dost forego' The gifts of our great knowledge, and shrink'st back To recreant mortality. Byron.

MOR'TAL, adj.) Sax. rmeri* ; Isl. morgt ; ˆ MOR'TALLY, adv. i Goth, margt, murth, a heap. Great ; extreme ; extremely. Obsolete in good writing, but retained in the vulgar phrase, 'a mortal deal.'

The birds were in a mortal apprehension of the beetles, till the sparrow reasoned them into understanding. L'Lstrange.

Adrian mortally envied poets, painters, and artificers, in works wherein he had a vein to excel.

Bacon's Eˆiut.

Know all, who would pretend to my good grace, I mortally dislike a damning face. Graneille.

MORTALITY, BILLS OF, are accounts or registers specifying the numbers born, married, and buried, in any parish, town, or district. In general they contain only these numbers ; and, even when thus limited, are of great use, by showing the degrees of healthiness and prolific-ness, and the progress of population, in the places where they are kept. It is therefore much to be wished that such accounts had been always correctly kept in every kingdom, and regularly published at the end of every year. We should then have had under our inspection the comparative strength of every kingdom, as far as it depends on the number of inhabitantsˆ and its increase or decrease at different periods. But such accounts are rendered more useful, when they include the ages of the dead, and the distempers of which they have died. In this case they convey some of the most important

instructions, by furnishing us with the means of ascertaining the law which governs the waste of human life, the values of annuities dependent on the continuance of any lives, or any survivorships between them, and the favorableness or unfavorableness of different situations to the duration of human life. There are but few registers of this kind ; nor has this subject, though so interesting to mankind, ever engaged much attention till lately. The first bills containing the ages of the dead were those for the town of Breslaw in Silesiu. It is well known what use has been made of these by Dr. Ilalley, and after him by De Moivre. A table of the probabilities of the duration of human life at every ase, deduced from them by Dr. Ilalley, was published in the Philosophical Transactions (see the Abridgment, vol. iii. p. 669), and is the first table of this sort that was published. Since the publication of this table, similar bills have been established in a

few towns of this kingdom ; and particularly in London, in 1728, and at Northampton, in 1735. At Northampton, though more males are born than females, and nearly the same number die, yet the number of living females appeared, by an account taken in 1746, to be greater Jian the number of males, in the proportion of 2301 to 1770, or thirty-nine to thirty. At Berlin it appeared, from an accurate account which was taken of the inhabitants in 1747, that the number of female citizens exceeded the number of male citizens in the proportion of 459 to 391. And yet, out of this smaller number of males, more had died for twenty years preceding 1751, in the proportion of nineteen to seventeen. At Edinburgh, in 1793, the number of females was to the number of males as forty-four to thirty-seven. But the females that died annually were to the males in no higher proportion than three and one-sixth to three. Whoever will take the trouble to examine the accounts in Phil. Trans. Abr., vol. vii.,part iv., p. 46, &c.,will find, that though in the towns there enumerated, the proportion of males and females born is no higher than nineteen to eighteen, yet the proportion of boys and girls that die is eight to seven; and that, in particular, the still-born and chrysom males are to the still-born and chrysom females as three to two. In thirty-nine parishes of the district of Vaud and Switzerland, the number of males that died during ten years before 1766 was 8170; of females 8167; of whom the numbers that died under one year of age were 1817 males and 1305 females; and, under ten years of age, 3099 males and 2598 females. In the beginning of life, therefore, and before any emigrations can take place, the rate of mortality among males appears to be greater than among females. And this is rendered yet more certain by the following accounts. At Vevey, in the district of Vaud, there died in twenty years, ended at 1764, in the first month after birth, of males 135 to eighty-nine females; and in the first year 225 to 162. It appears from a table given by Susmilch, in his Gottliche Ordnung, vol. ii. p. ‘31 7, that in Berlin 203 males die in the first month, and but 168 females ; and in the first year 489 to 395 ; and also, from a table of Struycks, that in Holland 396 males die in the firsl year to 306 females. The authorities for these facts, and much more on this subject, may be found in the fourth essay in Dr. Price’s Treatise on Reversionary Payments, and in the supplement. We shall here only add the following table, taken from a memoir of Mr. Wargentin’s, published in the collection of the Memoirs of the Royal Academy of Sciences at Stockholm, printed at Paris in 1772. In all Sweden for nine years, ended in 1763, the

proportion of females to males that died out of a given number living, was,

Under the age of one year From 1 to 3 years of age

3 5 10 15 20 25

5 10 15 20 25 30

1000 to 1099 1000 to 1022

1042

1074

1080

1097

1283

❖❖❖ 1161

30 35

35 40

40 45

45 50

50 55

55 60

60 65

65 70

70 80

80 90

Above 90

1000 to 993

1159

1115

1340

1 :139

1292

1115

1080

1022

1046

1044

Registers of mortality, on an improved plan, were established in 1772 at Chester, and also, in 1773, at Warrington in Lancashire ; and they are so comprehensive and correct, that there is reason to expect they will afford much instruction on the subject of human mortality, and the values of lives. But the country hitherto most distinguished in this respect is Sweden; for in that kingdom exact accounts are taken of the births, marriages, and burials, and of the numbers of both sexes that die at all ages in every town and district, and also, at the end of every

period of five years, of the numbers living at every age: and at Stockholm a society is established, whose business it is to superintend and regulate the enumerations, and to collect from the different parts of the kingdom the registers, in order to digest them into tables of observation. These regulations were begun in 1755 ; and tables, containing the result of them from 1755 to 1763, have been published in Mr. Wargentin's memoir just referred to ; and the most material parts of them may be found in an essay by Dr. Price on the Difference between the Duration of Human Life in Towns and in Country Parishes, printed in the 65th vol. of the Phil. Trans., part ii.

In the fourth essay in Dr. Price's Treatise on Reversionary Payments and Life Annuities the following account is given of his principles of observation on the registers of mortality ; and of the proper method of forming tables so as to render them just representations of the number of inhabitants, and the probabilities of the duration of human life in a town or country. In every place which just supports itself in the number of its inhabitants, without any recruits from other places, or where, for a course of years, there has been no increase or decrease, the number of persons dying every year at any particular age, and above it, must be equal to the number of the living at that age. The number, for example, dying every year at all ages, from the beginning to the utmost extremity of life, must, in such a situation, be just equal to the whole number born every year. And, for the same reason, the number dying every year at one year of age and upwards, at two years of age and upwards, and so on, must be equal to the numbers that attain to those ages every year; or to the numbers of the living at those ages. It is obvious, that, unless this happens, the number of inhabitants cannot remain the same. If the for-mer number is greater than the latter, the inhabitants must decrease ; if less, they must increase. From this observation it follows, that in town or country, where there is no increase or decrease, bills of mortality which give the ages at which

all die, will show the exact number of inhabitants, and also the exact

law according to which human life wastes in that town or country. To find the number of inhabitants, the mean numbers dying annually at every particular age and upwards must be taken as given by the bills, and placed under one another in the order of the second column of the following tables. These numbers will, it has appeared, be the numbers of the living at one, two, three, &c., years of age; and consequently the sum diminished by half the number born annually will be the whole number of inhabitants. This subtraction is necessary for the following reason : In a table formed in the manner here directed it is supposed that the numbers in the second column are all living together at the beginning of every year Thus the number in the second column opposite to 0 in the first column, the table supposes to be all just born together on the first day of the year. The number, likewise, opposite to 1, it supposes to attain to one year of age just at the same time that the former number is born. And the like is true of every number in the second column. During the course of the year, as many will die ;it all ages as were born at the beginning of the year ; and consequently there will be an excess of the number alive at the beginning of the year above the number alive at the end of the year, equal to the whole number of the annual births; and the true number constantly alive together is the arithmetical mean between these two numbers ; or, agreeably to the rule here given, the sum of the numbers in the second column of the table lessened by half the number of annual births. In such a series of numbers, the excess of each number above that which immediately follows it will be the number dying every year out of the particular number alive at the beginning of the year; and these excesses set down regularly, as in the third column of the table to which we have referred, will show the different rates at which human life wastes through all its different periods, and the different probabilities of life at all particular ages. What has been now said goes on the supposition that the place whose bills of mortality are given supports itself, by procreation only, in the number of its inhabitants. In towns this very seldom happens, on account of the luxury and debauchery which generally prevail in them. They are, therefore, commonly kept up by a constant accession of strangers, who remove to them from country parishes and villages. In these circumstances, in order to find the true number of inhabitants, and probabilities of life, from bills of mortality containing an account of the ages at which all die, it is necessary that tiie proportion of the annual births to the annual settlers should be known, and also the period of life at which the latter re-move. Both these particulars may be discovered by the following method: ××× If, for a course of years, there has been no sensible increase or decrease in a place, the number of annual settlers will be equal to the excess of the annual burials

above the annual births. If there is an increase, it will be greater than this excess. If there is a decrease, it will be less. The period of life at which these settlers remove will appear in the VOL. XV.

bills by an increase in the number of deaths a that period and beyond it. Thus in the London bills the number of deaths between twenty and thiity is generally above double, and between thirty and forty nearly triple, the number of deaths between ten and twenty ; and the true account of this is, that, from the age of eighteen or twenty to thirty-five or fifty, there is an afflux of people every year to London from the country, which occasions a great increase in the number of inhabitants at these ages; and consequently raises the deaths for all ages above twenty considerably above their due proportion, when compared with the number of deaths before twenty. This is observable in all the bills of mortality for towns with which we are acquainted, not excepting even the Breslaw bills.

Dr. Halley takes notice that these bills gave the number of deaths between ten and twenty too small. This he considered as an irregularity in them owing to chance ; and therefore, in forming his table of observations, he took the liberty so far to correct it as to render the proportion of those who die, to the living in this division of life, nearly the same with the proportion which, he says, he had been informed die annually of the young lads in Christ Church Hospital. But the truth is, that this irregularity in the bills was derived from the cause we have just assigned. During the five years for which the Breslaw bills are given by Dr. Halley, the births did indeed a little exceed the burials ; but it appears that this was the effect of some peculiar causes that happened to operate just at that time: for during a complete century, from 1633 to 1734, the an-nual medium of births was 1089, and of burials 1256. This town, therefore, must have been all along kept up by a number of yearly recruits from other places, equal to about a seventh part of the yearly births. It appears from the account in the Phil. Trans. Ahr., vol. vii. No. 380, p. 46, &c., that from 1717 to 1725 the annual medium of births at Breslaw was 1252, of burials 1507; and that the greatest part of the births died under ten years of age. From a table in Susmilch’s works, vol. i. p. 38, it appears that in reality the greater part of all that die in this town are children under five years of age. W hat has been now observed, concerning the period of life at which people remove from the country to settle in towns, would appear sufficiently probable were there no such evidence for it as has been mentioned ; for it might be well reckoned that these people in general must be single persons in the beginning of

mature life, who, not having yet obtained settlements in the places where they were born, migrate to towns in quest of employments. It is proper next to endeavour to explain distinctly the effect which these accessions to towns must have on tables of observation formed from their bills of mortality. This is a subject proper to be insisted on, because mistakes have been committed about it ; and because also the discussion of it is necessary, to show how near to truth the values of lives come as deduced from such tables. The following general rule may be given on this subject. If a place has for a course of years been maintained in a state nearly stationary, as to number of inha-L

hitants, by recruits coming in every year, to prevent the decrease that would arise from the ex-cess of burials above the births, a table formed on the principle, ‘ that the number dying annually, after every particular age, is equal to the number living at that age,’ will give the number of inhabitants, and the probabilities of life, too great, for all ages preceding that at which the recruits cease ; and after this it will give them right. If the accessions are so great as to cause an increase in the place, such a table will give the num-ber of inhabitants and the probabilities of life too little after the age at which the accessions cease : and too great if there is a decrease. Be-fore that age it will in both cases give them too great ; but most considerably so in the former case, or when there is an increase. Agreeably to these observations, if a place increases, not in consequence of accessions from other places, but of a constant excess of the births above the deaths, a table constructed on the principle that has been mentioned will give the probabilities of life too low through the whole extent of life ; because, in such circumstances, the ??? number of deaths in the first stages of life must be too great, in comparison of the number of deaths in the later stages; and more or less so as the increase is more or less rapid. The contrary in all respects takes place where there is a decrease arising from the excess of the deaths above the births. For example, let us suppose that 244 of those born in a town attain annually to twenty years of age, and that 250 more, all likewise twenty years of age, come into it annually from other places, in

consequence of which it has for a course of years been just maintained in the number of its inhabitants, without any sensible increase or decrease; in these circumstances, the number of the living in the town of the age of twenty will be always 244 natives and 250 settlers, or 494 in all ; and since these are supposed all to die in the town, and no more recruits are supposed to come in, 494 will be likewise the number dyingannually at twenty and upwards. In the same manner it will appear, on these suppositions, that the number of the living, at every age subsequent to twenty, will be equal to the number dying annually at that age and above it; and consequently that the number of inhabitants and the decrements of life, for every such age, will be given exactly by the table. But, for all ages before twenty, they will be given much too great. For let 280 of all born in the town reach ten ; in this case 280 will be the true num-ber of the living in the town at the age of ten ; and, the recruits not coming in till twenty, the number given by the bills as dying between ten and twenty will be the true number dying annually of the living in this division of life. Let the number be thirty-six ; and it will follow that the table ought to make the numbers of the living at the ages between ten and twenty, a series of decreasing means between 280 and (280 diminished by thirty-six, or) 244. But, in forming the table on the principle just mentioned, 250 (the number above twenty dying annually in the town who were not born in it) will be added to each num-ber in this series; and therefore the table will give tin-numbers of the living, and the probabilities of

life in this division of life, almost twice as great as they really are. This observation, it is manifest, may be applied to all the ages under twenty. Such a table will give the number of inhabitants and the probabilities of life equally wrong before twenty, whether the recruits all come in at twenty, agreeably to the “supposition just made, or only begin then to come in. In this last case the table will give the number of inhabitants and probabilities of life too great throughout the whole extent of life, if the recruits come in at all ages above twenty. But, if they cease at any particular age, it will give them right only from that age ; and before, it will err all along on the side of excess ; but less considerably between twenty and that age than before twenty. For example : if, of the 250 supposed to come in at twenty, only 150 then come in, and the rest at thirty ; the number of the living will be given 100 too high at every age between twenty and thirty ; but,’ as just shown, they will be given 250 too high at every age before twenty. In general, therefore, the number of the living at any particular age must be given by the supposed table as many too great as there are annual settlers after that age ; and if these settlers come in at all ages

indiscriminately, during any certain interval of life, the number of inhabitants and the probabilities of life will be continually growing less and less wrong the nearer any age is to the end of that interval. These observations prove, that tables of observation formed in the common way, from bills of mortality for places where there is an excess of the burials above the births, must be erroneous for a great part of the duration of life, in proportion to the degree of that excess. They show likewise at what parts of life the errors in such tables are most considerable, and how they may be in a great measure corrected. All this shall be exemplified in the particular case of London. The number of deaths between the ages of ten and twenty is always so small in the London bills, that it seems certain few recruits come to London under twenty, or at least not so many as before this age are sent out for education to schools and universities. After twenty, great numbers come in till thirty, and some perhaps till forty or fifty ; but, at every age after fifty, it is probable that more retire from London than come to it. The London tables of observation, therefore, being formed on the principle already mentioned, cannot give the probabilities of life right till forty. Between thirty and forty they must be a little too high ; but more so between twenty arid thirty, and most of all so before twenty. It follows also that these tables must give the number of inhabitants in London much too great. The first of the following tables is formed in the manner here explained, from the London bills for ten years, from 1759 to 1768, and adapted to 1000 born as a radix. The sum of the numbers in the second column, diminished by half the number born, is 25,757. According to this table, then, for every 1000 deaths in London there are 25| as many inhabitants ; or, in other words, the expectation of a child just born is 25| ; and the inhabitants are to the annual burials as 25 1 to one. But it has appeared, that the numbers in the second column,

being given on the supposition that all those who die in London were born there, must be too great ; and we have hence a demonstration, that the probabilities of life are given in the common tables of London observations too high for at least the first thirty years of life ; and also

that the num-ber of inhabitants in London must be less than 25J multiplied by the annual burials. The com-mon tables, therefore, of London observations undoubtedly need correction, as Mr. Simpson suggested, and in some measure performed, though too imperfectly, and without going upon any fixed principles, or showing particularly how tables of observation ought to be formed, and how far in different circumstances, and at different ages, they are to be depended on. The way of doing this, and in general the right method of forming genuine tables of observation for towns, may be learned from the following rule : ××× From the sum of all that die annually, after any given age, subtract the number of annual settlers after that age; and the remainder will be the number of the living at the given time. If, therefore, the number of annual settlers in a town at every age could be ascertained, a perfect table of observations might be formed for that town from bills of mortality, containing an account of the ages at which all die in it. But no more can be learned in this instance, from any bills, than the whole number of annual settlers, and the general division of life in which they enter. This, however, may be sufficient to enable us to form tables that shall be tolerably exact. For instance, suppose the annual deaths in a town, which has not increased or decreased, to have been for many years in the proportion of four to three to the annual births; it will hence follow, that ×× of the persons who die in such a town are settlers, or emigrants from other places, and not natives ; and the sudden increase in the deaths after twenty will also show, agreeably to what was before observed, that they enter after this age. In forming, therefore, a table for such a town, a quarter of all that die at all ages throughout the whole extent of life must be deducted from the sum of all that die after every given age before twenty ; and the remainder will be the true number living at that given as;e. And if at twenty, and every age above it, this deduction is omitted, or the number -of the living at every such age is taken the same with the sum of all that die after it, the result will be (supposing most of the settlers to come in before thirty, and all before 40) a table exact till twenty; too high between twenty and thirty ; but nearly right for some years before forty ; and after forty exact again. Such a table, it is evident, will be the same with the table last described at all aizes above twenty, and different from it only under twenty. It is evident also, that, on account of its giving the probabilities of life too great for some years after twenty, the number of inhabitants deduced from it may be depended on as somewhat greater than the truth ; and more or less so as the annual recruits enter in general later or sooner after twenty. Let us now consider what the result of these remarks will be, when applied particularly to the London bills. It must be here first observed that at least one quarter of

all that

die in London are supplies or settlers from the country, and not natives. The medium of an-nual burials for ten years, from 1759 to 1768, was 22,956; of births 15,710. The excess is 7246, or near a third of the burials. The same excess during ten years before 1750 was 10,500 or near half the burials. London was then decreasing. For the last twelve or fifteen years it has been increasing. This excess, therefore, agreeably to the foregoing observations, was then greater than the number of annual settlers, and it is now less. It is, however, here supposed, that the number of annual settlers is now no more than a quarter of the annual burials, in order to allow for more omissions in the births than the burials ; and also in order to be more sure of obtaining results that shall not exceed the truth. Of every 1000, then, who die in London, only 750 are natives, and 250 are recruits, who come to it after eighteen or twenty years of age ; and, consequently, to obtain from the bills a more correct table than the first of the following tables, 250 must be subtracted from every one of the numbers in the second column till twenty; and the numbers in the third column must be kept the same, the bills always giving these right. After twenty the table is to be continued unaltered ; and the result will be, a table which will give the numbers of the living at all ages in Lon-don much nearer the truth, but still somewhat too high. Such is the third of the following tables. The sum of all the numbers in the second co-lumn of this table, diminished by 500, is 20,750. For every 1000 deaths, therefore, in London, there are, according to this table, 20,750 living persons in it ; or, for every single death, 20J inhabitants. It was before shown that the number of inhabitants in London could not be so great as 25 times J the deaths. It now appears (since the numbers in the second column of this table are too high), that the number of inhabitants in London cannot be so great as even twenty times J the deaths. And this is a conclusion which every one who will bestow due attention on what has been said, will find himself forced to receive. It will not be amiss, however, to confirm it by the following fact, the knowledge of which is derived from the particular enquiry and information of Mr. Harris, the late ingenious master of the royal mathematical school in Christ Church Hospital. The average of lads in this school has, for thirty years past, been 831 . They are admitted at all ages between seven and eleven ; and few stay beyond sixteen : they are, therefore, in general lads between the ages of eight and sixteen. They have better accommodations than children commonly have ; and about 300 of them have the advantage of being educated in the country. In such circumstances, it may be well

reckoned, that the proportion of children dying annually must be less than the general proportion of children dying annually at the same ages in London. The fact is, that for the last thirty years 12* have died annually, or one in 70?. According to table III. one in s'eventy-three dies between ten and twenty, nnd one in seventy bet-veen eight and sixteen. That table, therefore, probably gives the decrements of life in London at these aˆes too little, and the numbers of the living too grfvit : and if

this is true of these ages, it must be true of all other ages under twenty ; and it follows demonstrably, in conformity to what was before shown, that more people settle in London after twenty than the fourth above supposed ; and that from twenty, to at least thirty or thirty-five, the numbers of the living are given too great, in proportion to the decrements of life. In this table, the numbers in the second column are doubled at twenty, agreeably to what really happens in London ; and the sum of the numbers in this column, diminished by half the whole number of deaths, gives the expectation of life, not of a child just born, as in other tables, but of all the inhabitants of London at the time they enter it, whether that be at birth or at twenty years of age. The expectations, therefore, and the values of London lives under twenty, cannot be calculated from this table. But it may be very easily fitted for this purpose, by finding the number of births which, according to the given decrements of life,

TABLE I.

Showing the probabilities of life in London, on the supposition that all who die in London were born there. Formed from the bills for ten years, from 1759 to 1768 :

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386

9

64

118

7

3

619

29

34

377

9

65

111

7

4

590

21

35

368

9

66

104

7

5

569

11

36

359

9

67

97

7

6

558

10

37

350

9

68

90

7

7

548

7

38

341

9

69

83

7

Si

541

6

39

332

10

70

76

6

9

535

5

40

322

10

71

70

6

10

530

4

41

312

10

72

64

6

11

526

4

42

302

10

73

58

5

12

522

4

43

292

10

74

53

5

13

518

3

44

282

10

75

48

5

14

515

3

45

272

10

76

43

5

15

512

3

46

262

10

77

38

Hi

509

3

47

252

10

78

33

4

17

506

3

48

242

9

79

29

4

18

503

4

49

233

9

80

25

3

19

499

5

50

224

9

81

22

3

20

494

7

51

215

9

82

19

3

21

487

8

52

206

8

83

16

3

22

479

8

53

198

8

84

13

2

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475

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190

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85

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183

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86

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2

25

455

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56

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2

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169

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5

1

27

439

8

58

162

7

89

4

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28

431

9

59

155

8

90

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422

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60

147

8

30 413

9

61

139

7

will leave 494 alive at twenty; and then adapt-ing the intermediate numbers in such a manner to this radix, as to preserve all along the number of the living in the same proportion to the numbers of the dead. This is done in the second of the following tables, and this table may be recommended as better adapted to the present state of London than any other table. The values of lives, however, deduced from it, are in general nearly the same with those deduced by Mr. Simpson from the London bills as they stood seventy years ago. The main difference is, that after fifty-two, and in old age, this table gives them somewhat lower than Mr. Simpson’s table. The difference between the rate of human mortality in great towns and in country parishes and villages, may be found from various tables in Sir J. Sinclair’s Statistical Account of Scotland ; as well as from the Rev. Dr. Wilkie’s table and calculations for the county of Fife.

TABLE II. ††† MORTALITY.

Showing the true probabilities of life in London for all ages. Formed from the bills for ten years, from 1759 to 1768 :

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832

85

33

386

9

64

118

7

3

747

59

34

377

9

65

111

7

4

688

42

35

368

9

66

104

7

5

646

23

36

359

9

67

97

7

6

623

20

37

350

9

68

90

7

7

603

14

38

341

9

69

83

7

8

589

12

39

332

10

70

76

6

9

577

10

40

322

10

71

70

6

10

567

9

41

312

10

72

64

6

11

558

9

42

302

10

73

58

5

12

549

8

43

292

10

74

53

5

13

541

7

44

282

10

75

48

5

14

534

6

45

272

10

76

43

5

15

528

6

46

262

10

77

38

5

16

522

7

47

252

10

78

33

4

17

515

7

48

242

9

79

29

4

IB

508

7

49

233

9

80

25

3

19

501

7

50

224

9

81

22

3

20

494

7

51

215

9

82

19

3

21

487

8

52

206

8

83

16

3

22

479

8

53

198

8

84

13

2

23

471

8

54

190

7

85

11

2

24

463

8

55

183

7

86

9

2

25

455

8

56

176

7

87

7

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26

447

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57

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M O R T A R.

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TABLE III.’ ××× MORTALITY.

Showing the true probability of life in London

till the age of nineteen.

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340

21

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259

3

5

319

11

17

256

4

6

308

10

18

253

7

298

7

19

249

8

291

6

20

494

9

285

5

21

487

10

280

4

&c.

&c.

11

276

4

The numbers in the second column to be continued as in table I.

We thus give the most accredited observations on this important subject, up to a recent period. But in our article SURVIVORSHIP we hope to show that much greater accuracy of calculation is attainable by the table of Mr. Babbage : while we are writing, the government

plan of annuities, formed on the above calculations in part, has been so successfully attacked by Mr. Ferguson, that a bill is on its passage through parliament for discontinuing the granting any more annuities upon it.

MORTANCESTRY, BRIEF OF, in Scots law, anciently the ground of an action at the instance of an heir, in the special case where he had been excluded from the possession of his ancestor's estate by the superior, or other person pretending right.

MORTAR, n. s. Belg. morter ; Fr. mortier ; Lat. mortarium. A strong utensil for pounding or braying various materials : hence a gun of the same shape ; hence also the materials pounded or brayed : the common name for the cement made of lime, sand, &c.

Though thou shouldest bray a fool in a mortar among wheat with a pestle, yet will not his foolish-ness depart from him. Proverbs.

They had brick for stone, and slime for mortar.

Gen. xi. 3.

I will tread this unbolted villain into mortar, and daub the wall of a jakes with him. Shakspeare.

Except you could bray Christendom in a mortar. and mould it into a new paste, there is no possibility of an holy war. Bacon.

The action of the diaphragm and muscles serves for the comminution of the meat in the stomach by their constant agitation upwards and downwards, resembling the pounding of materials in a mortar. Ray on the Creation.

Those arms which for nine centuries had braved The wrath of time on antique stone engraved, Now torn by mortars stand yet undei'aced On nobler trophies by thj valour raised. Granville.

Mortar, in architecture, it a preparation of lime Hfic! sand mixed up with water, serving as a cement, aud used by masons and bricklayers in building of

walls of stone and brick. Wolfius observes, that the sand should be dry and sharp, so as to prick the hands when rubbed, yet not earthy, so as to foul the water it is washed in : he also finds fault with masons and

bricklayers as committing a great error, in letting their lime slacken and cool before they make up their mortar, and also in letting their mor-tar cool and die before iliey use it; therefore he advises, that if you expect your work to be well done, and to continue long, to work up the lime quick, and but a little at a time, that the mortar may not lie long before it be used. Johnson.

MORTAR. See CEMENT. Under that article is given Dr. Anderson's theory of mortar, which has received a farther confirmation by the discovery, that if the lime is slaked, and the mortar made up with lime-water instead of common water, the mortar will be much better. The reason is, that in common water, especially such as is drawn from wells, there is always a considerable quantity of carbonic acid gas, which, mingling with the mortar previous to its being used, spoils it by reducing the quick lime in part to an inert calcareous earth like chalk ; but, when it is built up in a perfectly caustic state, it attracts the air so slowly, that it hardens into a kind of stony matter, as hard as was the rock from whence the limestone was taken. The 'ancients differed in the composition of their building cements, and indeed sometimes do not seem to have used any ; the Greeks having possessed the art of joining the surfaces of their stones in so skilful a way that it is difficult to discover the points of union. Sometimes they fixed them together by means of wooden pegs or bolts ; sometimes by cramp irons dovetailed, as has been observed in an Athenian temple, and in those of Agrigentes. In the instance of the Coliseum at Rome, as well as that of the amphitheatre at Verona, the freestone is held firmly by means of cramp irons, and without mortar. It is, however, possible that mortar might have been used of a nature sufficiently fine and subtle to blend and assimilate itself in course of time to the masses of which it formed the cement. A large reservoir constructed at Sparta with pebble-stone attests that the kind of mortar employed among the Greeks was extremely solid. The method followed by the Romans, both in making and using their mortar, was in some respects similar to our own. The sand used by them was of different colors and qualities. From the quarries they extracted three sorts ††† black, white, and red, of which the latter was deemed the preferable. Besides these, there was a volcanic sand, the produce of Etruria. Of all these varieties, to which must be added those of the rivers and of the sea, such were selected and esteemed as contained fewest earthy particles.

A MORTAR, in chemistry, is a utensil very useful for the division of bodies, partly by percussion and partly by grinding. Mortars have the form of an inverted bell. The matter intended to be pounded is to be put into thi-m, ami is struck and bruised by a long instrument called a pestle. The motion given to the pestle ought to vary according to the

nature of the substances to be pounded. Those which are easily broken, or which are apt to fly out of the mortar, or which are hardened b>- the stroke of the pestle.

require that this instrument should be moved circularly, rather by grinding or bruising than by sti iking. Those substances which are softened by the heat occasioned by rubbing and percussion, require to be pounded very slowly. Those which are very hard, and not capable of being softened, are easily pounded by repeated strokes of the pestle. They require no bruising but when they are brought to a certain degree of fineness. As mortars are constantly necessary in chemistry, they ought to be kept of all sizes and materials ; as of marble, copper, glass, iron, gritstone, and agate. The nature of the substance to be pounded determines the choice of the kind of mortar. The hardness and dissolving power of that substance are particularly to be attended to. One of the principal inconveniences of pulverisation in a mortar proceeds from the fine powder which rises abundantly from some substances during the operation. If these substances be precious, the loss will be considerable ; and, if they be injurious to health, they may hurt the operator. These inconveniences may be remedied, either by covering the mortar with a skin, in the middle of which is a hole, through which the pestle passes, or by moistening the matter with a little water when this addition does not injure it; or, lastly, by covering the mouth and nose of the operator with a fine cloth, to exclude this powder. Some substances, as corrosive sublimate, arsenic, calxes of lead, can-tharides, euphorbium, &c., are so noxious, that all these precautions ought to be used, particularly when a large quantity of them is pounded. Large mortars ought to be fixed upon a block of wood, so high that the mortar shall be level with the middle of the operator. When the pestle is large and heavy, it ought to be suspended by a cord or chain fixed to a moveable pole, placed

horizontally above the mortar : this pole considerably relieves the operator, because its elasticity assists the raising of the pestle.

MORTAR. Fr. mortier. In the military art a short piece of ordinance, thick and wide, having a chamber less than the size of its bore, and used to discharge bombs or carcasses into a fortified place. The bomb, or shell, is a great hol-low ball, filled with powder, which, falling into a fortification, See., destroys the most substantial buildings by its weight, and, bursting asunder, creates the greatest disorder and mischief by its splinters. To prevent the shell from bursting at the first moment of discharge, it is furnished with a fuse, calculated to continue burning du-ring its flight; and, to increase the weight of its fall, the mortar is elevated to a considerable angle above the horizon. The chambers of mortars are extremely different in their figures, and each of those figures is defended by better or worse arguments. Thus they are spherical, cylindrical, conical, bottled, or concave. Indeed, nothing appears to be less determined upon true principles or experiments than the proportions of the several parts of a mortar.

MORTARS, LAND, are those used in sieges, and in battles, mounted on beds made of solid tim-ber, consisting generally of four pieces, those of the royal and Cohorn excepted, which are but one single block ; and both mortar and bed are transported on block carriages. There is likewise a kind of land mortars, mounted on travelling carriages, invented by count Buckeburg, which may be elevated to any degree ; whereas ours are fixed to an angle of 45►►, and firmly lashed with ropes. The following table shows the weight of land-mortars and shells ; together with the quantity of powder the chambers hold when full ; the weight of the shells, and powder for loading them : ►►►

Diameter of Mortars.

13-inch.

10-inch.

8-inch.

5-8 inch royal.

4-6 inch cohora.

Mortar’s weight Shell’s weight .

Shell’s content of powder . Chamber’s cont. of powder

cwt. qr. Ib.

25 0 0

cwt. qr. Ib.

10 2 18

cwt. qr. Ib.

4 0 20

cwt. qr. Ib.

1 1 0

cwt. qr. Ib.

030

1 2 15

0 2 25

0 1 15

0 0 12

Ib. oz. gr.

1 1 8

007

Ib. oz. gr.

948

Ib. oz. gr.

4 14 12

Ib. oz. gr.

238

Ib. oz. gr.

080

9 1 8

400

2 0 10

1 0 0

080

An elevation of 70►► or 80►► is commonly chosen for rendering mortars most serviceable in casting shells into towns, forts, &c., though the greatest range be at 45►►. AH the English mortars are fixed to an angle of 45►►, and lashed strongly with ropes at that elevation ; although in a siege there is only one case in which shells should be thrown with an angle of 45►►; that is, when the battery is so far off that they cannot otherwise reach the works : for when shells are thrown out of the trenches into the works of a fortification, or from the town into the trenches, they should have as little elevation as possible, in order to roil along, and not bury themselves ; whereby the damage t,iev no, and the terror they occasion, are much greater than if they sink into

the ground. On the contrary, when shells are thrown upon magazines or any other buildings with an intention to destroy them, the mortars

should be elevated as high as possible, that the shells may acquire a greater force in their fall, and consequently do greater execution. If all mortar-pieces were, as they ought to be, exactly similar, and their requisites of powder as the cubes of the diameters of their several bores, and if their shells, bombs, carcasses, &c. were also similar ; then, comparing like with like, their ranges on the plane of the horizon, under the same degree of elevation, would be equal ; and consequently one piece being well proved, i. e. the range of the grenado, bomb, carcase, &c., being found to any degree of elevation

the whole work of the mortar-piece would be-come very easy and exact. But, as mortars are not thus similar, it is required that the range of the piece, at some known degree of elevation, be accurately found by measuring; and hence all the other ranges may be determined. Thus, to find the range of the piece at any other elevation required : say, as the sine of double the angle under whici. the experiment was made is to the sine of double the angle proposed, so is the range known to the range required. Suppose, for instance, it be found, that the range of a piece, elevated to 30□□, is 2000 yards : to find the range of the same piece with the same charge, when elevated to 45□□, take the sine of 60□□, the double of 30□□, and make it the first term of the rule of three ; the second term must be the sine of 90□□, the double of 45□□ ; and the third the given range 2000; the fourth term will be 2310, the range of the piece at 45□□. If the elevation be greater than 45□□, instead of doubling it, take the sine of double its complement to 90□□. As, suppose the elevation of a piece be 50□□, take the sine of 80□□, the double of 40□□. Again, if a determinate distance to which a shot is to be cast be given, and the angle of elevation to produce that effect be required ; the range known must be the first term in the rule of three, which suppose 2000 yards ; the range proposed, which we suppose 1600 yards, the second term; and the sine of sixty double of the elevation for the range of 2000 yards, the third term. The fourth term will be found the sine of 43□□ 52’, whose half 21□□ 56’ is the angle of elevation the piece must have to produce the desired effect. And, if 21□□ 56’ be taken

from 90□□, you will have 68□□ 4’ for the other elevation of the piece, with which the same effect will likewise be produced. To avoid the trouble of finding sines of double the angles of proposed elevations, Galileo and Torricelli give us the following table, wherein the sines of the angles sought are had by inspection :

Deg.

Deg.

Rang.

Deg.

Deg.

Rang.

90

0

0

0

0

0

89

1

349

66

24

7431

88

2

698

65

25

7660

87

3

1045

64

26

7880

86

4

1392

63

27

8090

85

5

1736

62

28

8290

84

6

2709

61

29

8480

83

7

2419

60

30

8660

82

8

2556

59

31

8829

81

9

3090

58

32

8988

80

10

3420

57

33

9135

79

11

3746

56

34

9272

78

12

4067

55

35

9397

77

13

4384

54

36

9511

76

14

4695

53

37

9613

75

15

5000

52

38

9703

74

16

5299

51

39

9781

73

17

5592

50

40

9841

72

18

5870

49

41

9903

71

19

6157

48

42

9945

70

20

6428

47

43

9976

69

21

6691

46

44

9994

68

22

6947

45

45

10000

67

23

7193

The use of the table is obvious. Suppose, for instance, it be known by experiment that a mor-tar elevated 15►►, charged with three Ibs. of pow-der, will throw a bomb to the distance of 350 fathoms ; and it be required, with the same charge, to throw a bomb 100 fathoms farther; seek in the table the number answering to 15C, and you will find it 5000. Then as 350 is to 450, so is 5000 to a fourth number, which is 6428. Find this number in the table, and opposite to it you will find the elevation of the mortar.

To load the mortar the proper quantity of gunpowder is put into the chamber, and if there be any vacant space they fill it up with hay ; some choose a wooden plug ; over this they lay a turf, some a wooden tampion fitted to the bore of the piece ; and lastly the bomb ; taking care that the fuse be in the axis thereof, and the orifice be turned from the muzzle of the piece: what space remains is to be filled up with hay, straw, turf, &c., so as the load may not be exploded without the utmost violence. The quantity of gunpowder to be used is found by dividing the weight of the bomb by thirty ; though this rule is not always to be strictly observed. When the proper quantity of powder necessary to charge a sea mortar is put into the chamber, it is covered with a wad well beat down with the rammer. After this the fixed shell is placed upon the wad, as near the middle of the mortar as possible, with the fuse-hole uppermost, and another wad pressed down close upon it, so as to keep the shell firm in its position. The officer then points the mortar according to the proposed inclination. When the mortar is thus fixed, the fuse is opened ; the priming iron is also thrust into the touch-hole of the mortar to clear it, after which it is primed with the finest powder. This done, two of the matrosses or sailors,

taking each one of the matches, the first lights the fuse, and the other fires the mortar. The bomb, thrown out by the explosion of the powder, is carried to the place intended : and the fuse, which ought to be exhausted at the instant of the shell's falling, inflames the powder contained in it, and bursts the shell into splinters ; which, flying off circularly, occasion incredible mischief wheresoever they reach. If the service of mortars should render it necessary to use pound-shots, 200 of them with a wooden bottom are to be put into the thirteen-inch mortar, and a quantity of powder not exceeding five pounds ; and 100 of the above shot with two pounds and a half of powder, for the ten-inch mortar, or three pounds at most. Carcasses are also thrown out of them. There are a sort of shells with five holes, filled with pitch, and other combustibles, in order to set buildings on fire : and sometimes baskets full of stones, the size of a man's fist, are thrown out of them upon an enemy placed in the covertway during a siege.

MORTARS, SEA, are those which are fixed in the bomb-vessels for bombarding places by sea: and, as they are generally fired at a much greater distance than that which is required by land, they are made somewhat longer and much heavier than the land mortars. The following table exhibits the weight of the sea-mortars and shells, and also of their full charges : ###

Nature of the Mortar.

Powder contained in the chamber when full.

Weight of the Mortar.

Weight of the shell when fixed.

Weight of powder contained in the shell.

10-inch howitzer

Ib. oz.

12 0

cwt. qr. Ib.

31 2 26

Ib.

Ib. oz.

13-inch mortar .

30 0

81 2 1

198

7 0

10-inch mortar .

12 0

34 2 11

93

MORTGAGE,n.s.&i;.a. } Fr. mort and

MORT'GAGEE, n. s. ˆS►►Se- ˆ dead

MORT'GAGEE. J pledge ; a thing

put into the hands of a creditor ; state of being pledged : the mortgagee is he who takes, and the mortgager he who gives, in

mortgage. See below.

They make the widow's mortgaged ox their prey.

Sandys.

The land is given in mortgage only, with full intention to be redeemed within one year. Bacon.

Let men contrive how they disentangle their mortgaged souls. Decay of Piety.

An act may pass for public registries of land, by which all purchasers or mortgagees may be secured of all monies they lay out. Temple's Miscellanies.

The estate runs out, and mortgages are made,

Their fortune ruined, and their fame betrayed.

Dry den. The broker,

Bent on some mortgage, to avoid reproach, He seeks bye-streets, and saves the expensive coach.

Gay.

The Romans do not seem to have known the secret of paper credit, and securities upon mortgages.

Arbuthnot.

Their not abating of their expensive way of living lias forced them to mortgage their best manors. Id.

Some have his lands, but none his treasured store, Lands unmanured by us, and mortgaged o'er and o'er. Harte.

No man can mortgage his injustice as a pawn for his fidelity. Burke.

MORTGAGE, in English law (mortuum vadium, or dead pledge), is where a man borrows of another a specific sum (e. g. ––200), and grants him an estate in fee, on condition that if he, the mortgager, shall pay the mortgagee the said sum of ––200 on a certain day mentioned in the deed, the mortgager may then re-enter on the estate so granted in pledge ; or, as is now the more usual way, that the mortgagee shall re-convey the estate to the mortgager : in this case the

land which is so put in pledge is, by law, in case of non-payment at tHe time limited, for ever dead and gone from the mortgager; and the mortgagee's estate in the lands is then no longer conditional, but absolute. But so long as it continues conditional, that is, between the time of lending the money and the time allotted for payment, the mortgagee is called tenant in mortgage. But as it was formerly a doubt, whether, by taking such estate in fee, it did not become liable to the wife's dower, and other incumbrances of the mortgage (though that doubt has been long ago over-ruled by our courts of equity), it therefore became usual to grant only a long term of years, by way of mortgage; with condition to be void on repayment of the mortgage money ; which o-urse has been since continued, principally because, on the death of the mortgagee, such terms become vested in his personal representatives, who alone are entitled in equity to receive the money lent, of whatever nature the mortgage may happen to be. As soon as the estate is created, the mortgagee may immediately enter on the lands; but is liable to be dispossessed, upon performance of the condition by payment of the mortgage money at the day limited. And therefore the usual way is to agree that the mortgager shall hold the land till the day assigned for payment ; when, in case of failure, whereby the es-tate becomes absolute, the mortgagee may enter upon it and take possession, without any possibility at law of being afterwards evicted by the mortgager, to whom the land is now for ever dead. But here again the courts of equity interpose; and though a mortgage be thus forfeited, and the estate absolutely vested in the mortgagee at the common law, yet they will consider the real value of the tenements compared with the sum borrowed. And, if the estate be of greater value than the sum lent thereon, they will allow the mortgager at any reasonable time to recal or redeem his estate ; paying to the mortgagee his principal, interest, and expenses : for otherwise, in strictness of law, an estate worth ––1000 might be forfeited for non-payment of ––100, or a less sum. This reasonable advantage allowed to mortgagers is called the equity of redemption ; and this enables a mortgager to call on the mortgagee, who has possession of his es-tate, to deliver it back, and account for the rents and profits received on payment of his whole debt and interest, thereby turning the mortuum into a kind of vivum vadium. See VADIUM. But, on the other hand, the mortgagee may either compel the sale of the estate, in order to get the whole of his money immediately ; or else call upon the mortgager to redeem his estate presently, or, in default thereof, to be for ever fore-closed from redeeming the same ; that is, to lose the equity of redemption, without possibility of recall. And also, in some cases of fraudulent mortgages, the fraudulent mortgager forfeits all equity of redemption whatsoever.

It is not, however, usual for mortgagees to take possession of the mortgaged estate, unless where the security is precarious, or small ; or where the mortgager neglects even the payment of interest ; when the mortgagee is often obliged to bring an ejectment, and take the lands into his own hands, in the nature of a pledge, or the pignus of the Roman law : whereas, while it remains in the hands of the mortgager, it more resembles their hypotheca, which was where the possession of the thing pledeed remained with the debtor. But by statute 7 Geo. II. c. 20, after payment or

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tender by the mortgager of principal, interest, and costs, the mortgagee can maintain no ejectment; but may be compelled to re-assign his securities. In Glanville's time, when 'he universal method of conveyance was by livery of seisin or corporal tradition of the lands, no gage or pledge of lands was good unless possession was also delivered to the creditor : si non sequator ipsius vadii traditio, curia domini regis hujus-modi priratas conventiones tueri non solet : for which the reason given is, to prevent subsequent and fraudulent pledges of the same land ; cum in tali casu possit eadem res pluribus aliis credi-toribus, turn prius turn posterius, invadiari. And the frauds which have arisen, since the exchange of these public and notorious conveyances for more private and secret bargains, have well evinced the wisdom of the ancient law.

MORTIER, an ensign of dignity, borne by the ci-devant chancellor and grand presidents of the parliament of France. That borne by the chancellor was a piece of cloth of gold, edged and turned up with ermine ; and that of the first president a piece of black velvet, edged with a double row of gold lace, while those of the other presidents were only edged with a single row. These they carried on their heads, in grand ceremonies, such as the entry of the king ; but ordinarily they carried them in their hands.

MORTIF'FyROUS, adj.~\ Latin, mortifer ;

MOR'TIFY, v. a. & v. n. > Fr. mortlfier, morti—

MORTIFICA'TION, n.s. jjication. Deadly ; fatal : to mortify is to destroy vital or active powers ; hence to subdue passion ; to vex ; distress : and hence to harass ; macerate ; reduce the body under mental discipline : as a neuter verb, to corrupt ; gangrene ; be subdued ; decayed ; practice religious severity : mortification follows all these senses.

Let my liver rather heat with wine, Than my heart cool with mortifying groans.

Shakspeare.

The breath no sooner left his father's body, But that his wildness mortified in him, Seemed to die too. Id. Henry V.

Their dear causes

Would to the bleeding and the grim alarm Excite the mortified man. Id. Macbeth.

It appeareth in the gangrene, or mortification of flesh, either by opiates, or intense colds. Bacon.

Inquire what gives impediment to union or restitution, which is called mortif cation ; as when quicksilver is mortified with turpentine. Id.

He mortified pearls in vinegar, and drunk them up. Hakewill.

These murmurings, like a mortiferous herb, are poisonous even in their first spring.

Government of the Tongue.

What is it but a continued perpetuated voice from heaven, to give men no rest in their sins, no quiet trom Christ's importunity, till thev awake from the lethargick sleep, and arise from so dead, aomortiferous a state, and permit him to give them life ?

Hammond.

Let the penitent be infinitely careful that he does not mortifie one vicious habit by a contrary vice, but by a contrary virtue. For to what purpose is it that you are cured of prodigality, and then die by covetousness. Jer. Taylor.

'My griefs ferment and rage, Nor less than wounds immedicable, Rankle and fester, and gangrene, To black mortification. Milton'* Agonittes. The elevation of that mysterious serpent upon a pole did render it visible, and attracted the eyes of people toward it; whereby God's power invisibly accompanying that sacramental performance, they were cured of those mortiferout stings which they had received. harrow.

We mortify ourselves with fish, and think we fare coarsely if we abstain from flesh. Browne.

Oil of tartar per deliquium has a great faculty to find out and mortify acid spirits. Boyle.

The mortification of our lusts has something in it that is troublesome, yet nothing that is unreasonable.

TilloUon.

Mortifyed he was to that degree, A poorer than himself he would not see.

Dryden.

It is one of the vexatious mortification* of a studious man, to have his thoughts disordered bˆ a tedious visit. L'Estrange.

\ e had the mortification to lose the sight of Mu nich, Augsburg, and Ratisbon. Addison ––n Italy.

How often is the ambitious man mortified with the very praises he receives, if they do not rise so high as he thinks they ought. Id. Spectator.

Suppress thy knowing pride, Mortijy thy learned lust, Vain are thy thoughts, while thou thy thyself art

dust. Prior.

A diet of some fish is more rich and alkalescent than that of flesh, and therefore very improper for such as practise mortification.

Arbuthnoc on Aliments. He modestly conjectures, His pupil might be tired with lectures, Which helped to mortify his pride. Swift. This makes him careful of every temper of his heart, give alms to all that he hath, watch, and fast, and mortify, and live according to the strictest rules of temperance, meekness, and humanity. Law.

You see no real mortification, or self-denial, no eminent charity, no profound humility, no heavenly affection, no true contempt of the world, no Christian weakness, no sincere zeal, or eminent piety, in the common lives of Christians. Id.

With fasting mortifyed, worn out with tears, And bent beneath the load of seventy years.

Harte.

It is a great mortification to the vanity of man, that his utmost art and industry can never equal the meanest of nature's productions, either for beauty or value. Hume.

If our hopes and joys centre here, it is a mortifying thought that we are every day departing from our happiness ; but, if they are fixed above, it is a joy to think that we are every day drawing nearer to the object of our highest wishes. JUaton.

Not many wise, rich, noble, or profound In science, win one inch of heavenly ground, And is it not a mortifying thought The poor should gain it and the rich should not?

Cmcper.

MORTIFICATION, in medicine and surgery, is a total extinction of the natural heat of the body, or a part thereof. Some define mortification a disease, wherein the natural juices of any part quite lose their proper motion : and thus fall into a fermentative one, and corrupt and destroy the texture of the part. Surgeons divide mortifc-cation into two species, the one preceded by in-

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flammation, the other without it. In inflammations terminating in mortifications, there is a diminution of power joined to an increased action ; this becomes a cause of mortification, by destroying the balance of power and action, which ought to exist in every part. There are, however, cases of mortification that do not arise wholly from that as a cause : of this kind are the carbuncle, and the slough, formed in the small-pox pustule. Healthy phlegmonous inflammation seldom ends in mortification, though it occasionally does so when very vehement and extensive. Erysipelatous inflammation is observed most frequently to terminate in gangrene; and whenever phlegmon is in any degree conjoined with an erysipelatous affection, which it not unfrequently is, it seems thereby to acquire the same tendency, being more difficult to bring to resolution, or suppuration, than the true phlegmon, and more apt to run into a mortified state.

Causes which impede the circulation of the part affected, will occasion mortification, as is exemplified in strangulated hernia, tied polypi, or a limb deprived of circulation from a dislocated joint.

Preventing the entrance of arterial blood into a limb is also another cause. Paralysis, conjoined with pressure, old age, and ossification of the arteries, may produce mortification ; also cold, particularly if followed by the sudden application of warmth ; and likewise excessive heat applied to a part.

The symptoms of mortification that take place after inflammation are various, but generally as follows : ††† the pain and sympathetic fever suddenly diminish, the part affected becomes soft, and of a livid color, losing at the same time more or less of its sensibility.

When any part of the body loses all motion, sensibility, and natural heat, and becomes of a brown livid or black color, it is said to be affected with sphacelus. When the part becomes a cold, black, fibrous, senseless substance, it is termed a slough. As long as any sensibility, motion, and warmth continue, the state of the disorder is said to be gangrene. When the part has become quite cold, black, fibrous, incapable of moving, and destitute of all feeling, circulation, and life ; this is the second state of mortification, termed sphacelus.

When gangrene takes place the patient is usually troubled with a kind of hiccough : the constitution always suffers an immediate dejection,

the countenance assumes a wild cadaverous look, the pulse becomes small, rapid, and sometimes irregular ; cold perspirations come on, and the patient is often affected with diarrhoea and delirium. See SURGERY.

MORTIFICATION, in religion, is any severe penance observed on a religious account. The practice has been very ancient and almost universal. See FAST.

MORTIMAR (Athenais de), marchioness Montespan, wife of the marquis of Montespan, and one of Louis XlV's mistresses, who by her wit and beauty gained a complete ascendancy over that monarch. Her husband, instead of thinking himself honored by the connexion, became en-

raged, and even struck her in the palace, for which he was banished to his estate ; but 100,000 crowns purchased his silence, his wife, and his honor. She held the monarch captive till 1675, when he became the victim of Mad. de Mainte-non's superior charms. These two rivals, however, kept up an intimacy, and even agreed to write memoirs of all that passed at court, but the work was never completed. Athenais had three children by Louis ; a son created duke of Maine, and married to a grand daughter of the great Conde, and two daughters, married, the one to a grandson of that prince, and the other to the duke of Chartres. She died at Bourbon in

1717.

MORTIMER (John Hamilton), an English artist, born at East Bourne in Sussex, in 1739. He studied under his uncle ; afterwards under Hudson and Sir Joshua Reynolds. In 1779 the king appointed him a royal academican, but he died that year at his house in Norfolk Street, aged forty. King John granting the Magna Charta to the barons, and the battle of Agincourt, two of his best pictures, have been engraved. The first was nearly finished by Mr. Ryland and completed by Mr. Bartalozzi. His piece representing St. Paul converting the Britons gained the Society's prize of 100 guineas.

MORTIMER (Thomas), was born in London in 1730, and received a liberal education. He obtained early in life the appointment of his majesty's vice-consul for the Austrian Netherlands ; but, having been displaced, he adopted the profession of an author, which he exercised

with great assiduity and respectability. His chief works are, The British Plutarch, 1762, 6 vols. 12mo; Dictionary of Trade and Commerce, 1766, 2 vols. folio ; The Elements of Commerce, Politics, and Finances, 1772, 4to, of which a German translation, by J. A. Englebrecht, was published at Leipsic in 1781 ; History of England, 3 vols. folio ; and the Student's Pocket Dictionary, or Compendium of History, Chronology, and Biography, 12mo. He also translated Necker's Treatise on the Finances of France ; and edited Beawes's Lex Mercatoria. In 1809 Mr. M. published a General Dictionary of Commerce, Trade, and Manufactures, 8vo., distinct from his former dictionary, and died in December of that year.

MORTISE, n. s. & v. a. Fr. mortaise ; Wei. mortaise, or mortoise : Ital. moirtis. A joint in wood ; to make such a joint.

The walls of spider's legs are made, Well mortised and finely laid.

Drayton's Nymphid.

A fuller blast ne'er shook our battlements , If it hath ruffianed so upon the sea, What ribs of oak, when mountains melt on them Can hold the mortise. Shakspeare. Othello.

'Tis a massy wheel,

To whose huge spoke ten thousand lesser things Are mortised and adjoined. Id. Hamlet.

The tree is raised up ; and now, not without a vehement concussion, settled in the mortite.

Bp. Hall.

Under one skin are parts variously mingled, some with cavities, as mortises* to receive, others with tenons to fit cavitias. Buy.

MORTMAIN.

The one half of the ship being finished, and by help of a screw

launched into the water, the other half was joined by great brass nails mortised with lead. Arbuthnot on Coins.

MORT'MAIN, n. i. Fr. morte and main. Such a state of possession as makes it unalienable ; whence it is said to be in a dead hand, or one that cannot dispose of the property.

It were meet that some small portion of lands were allotted, since no more mortmains are to be looked for. Spenser.

MORTMAIN. I. DEFINITION. ††† The alienation, or transfer of lands and tenements, is prohibited by the statutes of mortmain from being made to any corporation without the king's license, and that of the lord of the manor. The term mortmain is used because it is the policy of the law that the services or profits attached to or arising out of lands should not, without license, come into a dead hand, or one so dedicated to pious uses as to be different from other lands or hereditaments, and not to revert to any temporal or common use.

II. COMMON LAW. ††† By the common law any man might dispose of his lands to any other private man at his own discretion, especially when the feudal restraints were worn away ; yet it always was, and still is, necessary for corporations to have a license in mortmain to enable them to purchase lands. Such licenses were necessary among the Saxons before the Norman conquest. The influence and ingenuity of the clergy, however, soon surmounted this obstacle, and the most considerable acquisitions of religious houses happened within two centuries of the conquest. When a license could not be obtained it was contrived that, as the forfeiture for alienation accrued in the first place to the immediate lord of the fee, the tenant who meant to alienate first conveyed his lands to the religious house, and instantly took them back again, to hold as tenant to the monastery ; which kind of instantaneous seisin was probably held not to occasion any forfeiture : and then, by pretext of some other forfeiture, surrender, or escheat, the society entered into those lands, in right of such their newly acquired seigniory, as immediate lords of the fee. When these donations began to grow numerous it was observed that the feu-dal services ordained for the defence of the kingdom were every day visibly withdrawn ; that the circulation of landed property from man to man began to stagnate ; and that the lords were curtailed of the fruits of their seigniories, their escheats, wardships, reliefs, and the like. Hence originated the several statutes of mortmain, the substance of which we now proceed to state.

III. STATUTES. ††† By Magna Charta, cap. 36, it is declared that it

shall not be lawful for any person to give his lands to any religious house, and to take the same land again to hold of the same house, &c., upon pain that the gift shall be void, and the land shall accrue to the lord of the fee.

This prohibition, however, extending only to religious 'houses,' bishops and other sole corporations were not included therein ; and the aggregate ecclesiastical bodies found many means to evade the statute, by buying lands that

were bonk fide held of themselves as lords of the fee, and thereby evading the forfeiture ; or by taking long leases for years, which first introduced those extensive terms for 1000 or more years, which are now so frequent in conveyances. The devices thus resorted to produced the statute de religiosis, 7 Ed. I., commonly called the statute of mortmain, which provided that no person, religious or other whatsoever, should buy or sell, or receive, under pretence of a gift, or term of years, or any other title whatsoever, nor should, by any art or ingenuity, appropriate to himself any lands or tenements in mortmain, upon pain that the immediate lord of the fee, or on his default for one year the lords paramount, and in default of all of them the king might enter thereon as a forfeiture. This seemed to be a sufficient security against all alienations in mortmain ; but, as these statutes extended only to gifts and conveyances between the parties, the religious houses began to set up a fictitious title to the lands which it was intended they should have, and to Bring ' an action to recover' it against the tenant who, by fraud and collusion, made no defence, and thereby judgment was given for the religious house, which then recovered the land by sentence of law upon a supposed prior title, and thus they had the honor of inventing those fictitious adjudications of right which have since become the great assurance of the kingdom under the title of common recoveries.

This new evasion was followed by the statute of Westminster 13 Edw. I. c. 32, which enacted that in such cases a jury shall try the true right of the demandants or plaintiffs to the land, and if the religious house or corporation be found to have it, they shall still recover seisin, otherwise it shall be forfeited in the manner prescribed by the former act. Still the bounds were not sufficiently set to ecclesiastical ingenuity. When thus driven out of the former holds, a new me-thod of conveyance was devised, by which the lands were granted not to themselves directly, but to nominal feoffees to the use of the religious houses : thus distinguishing between the possession and the use, and

receiving the actual profits, while the seisin of the lands remained in the nominal feoffee; who was-held by the courts of equity (then under the direction of the clergy) to be bound in conscience to account to his cestui que use for the rents and emoluments of the estate. And it is to these inventions that our practisers are indebted' for the introduction of uses and trusts, the foundation of modern conveyancing.

The statute of 15 Rich. II., c. 5, soon curtailed this new device, and enacted that lands which had been so purchased to uses should be amortised by license from the crown, or else be sold to private persons; and that for the future uses should be subject to the statute of mortmain, and forfeitable like the lands themselves. And as the statutes had been eluded by purchasing large tracts of land adjoining to churches, and consecrating them by the name of church-yards, such subtile imagination is also declared to be within the compass of the statutes of mortmain Civil or lay corporations, as well as ecclesiastical, are also de'clared to be within the mischief pn.-

vitled against, and of course within the remedy provided by those salutary laws. And lastly, as, during the times of popery, lands were frequently given to superstitious uses, though not to any corporate bodies ; or were made liable in the hands of heirs or devisees, to the charge of obits, chaunteries, and the like, which are equally pernicious in .a well-governed state, as actual alienations in mortmain ; therefore at the reformation the statute 23 Hen. VIII., c. 10, declares that all future grants of lands for any of the purposes aforesaid, for a longer term than twenty years, shall be void. The crown, however, had the power, during all this time, by granting a license of mortmain, to remit the forfeiture so far as related to its own rights, and to enable any spiritual or other corporation to purchase and hold any lands or tenements in perpetuity ; which prerogative was confirmed by 18 Edw. III. stat. 3, c. 3, and subsequently by 7 and 8 Will. III. c. 37.

By the 39th Eliz. c. 5 the gift of lands, &c., to hospitals is permitted without obtaining licenses of mortmain. For the purpose of augmenting poor livings, it was also enacted, by 17 Car. II. c. 3, that

appropriators may annex the great tithes to the vicarages ; and that all benefices under ––100 per annum may be augmented by the purchase of lands, without license of mortmain in either case. The like provision has been since made in favor of the governors of queen Anne's bounty, 2 and 3 Ann. c. 11.

To prevent, however, persons on their death-beds from making large and improvident grants, even for good purposes, and defeating the political ends of the statute of mortmain, it is enacted, by 9 Geo. II. c. 36, that no lands or tenements, or money to be laid out thereon, shall be given for, or charged with, any charitable uses whatsoever, unless by deed indented, executed in the presence of two witnesses, twelve calendar months before the death of the donor, and enrolled in the court of chancery within six months after its execution (except stocks in the public funds which may be transferred within six months previous to the donor's death), and unless such gift be made to take effect immediately, and be without power of revocation : and that all other gifts shall be void.

IV. CONSTRUCTION OF THE STATUTES. ––– It has been held that the statute 32 Hen. VIII. c. 10, did not extend to any thing but superstitious uses, and thtt therefore a man may give lands for the maintenance of a school, an hospital, or any other charitable use. 1 Rep. 24. It has been declared since the last mortmain act, that there is no restriction whatsoever upon any one from leaving a sum of money by will, or any other personal estate, to charitable uses ; provided it be to be continued as a personalty, and the executors or trustees are not obliged or under a necessity of laying it out in land, by virtue of any direction of the testator for that purpose. 2 Burn Ecc. 509. A bequest of money to be laid out in land for the establishment of a minister of a chapel is void, and cannot be supported by –––supposing a discretion in the trustees not to lay it out in land, the directions in the will being imperative. 1 Vesey 548.

Money left to repair parsonage houses, or to build upon land already in mortmain, is held not to be within the statute. But a legacy to the corporation of queen Anne's bounty is void, as by the rules of the corporation it must be laid out in land.

Though every corporation was capable, at the common law, of purchasing lands for themselves and successors, they cannot now, whether ecclesiastical or lay, purchase without license from the crown. This license is usually granted by act of parliament, charter of

incorporation, or letters patent, and charities which are not thus licensed choose from among themselves certain persons to be trustees, and to purchase in their names, and take the lands in trust for the charity. If bought in the name of the institution, not being incorporated, they would instantly vest in the crown, as a forfeiture in mortmain. The stat. 9 Geo. II. c. 36 is so construed by the courts as to give it full force ; yet all proper encouragement is given to those gifts and bequests to charities which do not contravene the policy of the statute of mortmain. And although the gift of money or personal estate ‘ to be laid out in lands ‘ for charitable uses is prohibited, yet money or other personalty given generally is not forbidden. So a gift of money to be laid out in lands or otherwise to a charitable use is valid, on account of the option given to lay it out in personal securities.

The courts also favor bequests made for intended charities, though not existing at the time of making the will. The two universities, their colleges, and the scholars upon the foundation of the colleges of Eton, Winchester, and Westminster, are excepted by the 9 Geo. II. c. 36 ; but the latter part of the exception being confined to any disposition ‘ for the better support and maintenance of the scholars only upon those foundations,’ a device for any other purpose would probably be declared void. A bequest to trustees of real and personal estate, for the purpose of establishing a perpetual botanical garden, was declared void upon the expression of the testator that ‘ he trusted it would be a public benefit.’ ××× 6 Vesey 194.

MORTON (Thomas), a learned English bishop in the seventeenth century, bred at St. John’s College, Cambridge, and logic-lecturer of the university. After several preferments he was advanced to the see of Chester in 1615, and translated to that of Litchfield and Coventry in 1618. In 1632 he was translated to the see of Durham, in which he sat with great reputation till the opening of the long parliament, which met in 1640 ; when he was committed twice to custody. The parliament, upam the dissolution of bishoprics, voted him ××800 a year, of which he received but a small part. He died in 1659, in the ninety-fifth year of his age, and forty-fourth of his consecration. He published Apologia Catholica, and several other works ; and was a man of extensive learning and great piety.

MORT’PA Y, n. s. Fr. mart and pay. Dead pay ; payment not made.

This parliament was merely a parliament of war, with some statutes conducing thereunto ; as the

MOR

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severe punishing of mortpayes, and keeping back of con, should have, at the death of every cleivv soldier's wages. Bacon. man dying therein, his best horse or mare, bridle

..,.1.11.. 1 i ❖❖❖ i .

MOR'TRESS, n. s. Abridged from mortier de sagesse. ❖❖❖ Skinner. A dish of meat of various kinds beaten together.

A mortrest made with the brawn of capons,

saddle, and spurs; his best gown or cloak, hat, upper garment under his gown, and tippet, and also his best signet or ring. But, by stat. 28 Geo. II. c. 6, this mortuary is directed to cease, and" stamped, strained, and mingled with like quantity of the act has settled upon the bishoo an eauiva—

almnnrl luittcr is pxrp.llpnt to nnnriaVl thp weak lont ,, T>. *

lent m its room. The king's claim to many goods, on the death of all prelates in England, seems to be of the same nature ; though Sir Edward Coke apprehends that tins is a duty upon death, and not a mortuary ; a distinction which seems to be without a difference. For not only the king's ecclesiastical character, as supreme ordinary, but also the species of the goods cla.med, which bear so near a resemblance to those in the archdeaconry of Chester, which was an acknowledged mortuary, puts the matter out of dispute. The king, according to the record vouched by Sir E. Coke, is entitled to six things; the bishop's best horse or palfrey, with his furniture ; his cloak or gown, and tippet ; his cup and cover ; his basin and ewer; his gold ring ; and lastly his muta canum, his mew or kennel of hounds. This variety of customs with regard to mortuaries, giving frequently a handle to exactions on one side, and frauds or expensive litigations on the other, it was thought proper, by stat. 21 Hen. VIII. c. 6, to reduce them to some kind of certainty. For this purpose it is enacted that all mortuaries, or corse presents to parsons of any parish, shall be taken in the following manner, unless where by custom less or at all none is

due : *viz.* for every person who does not leave goods to the value of ten marks, nothing : for every person who leaves goods to the value often marks, and under ––30, 3$. 4d. ; if above ––30 and under ––40, 6s. 8d. ; if above ––40, of what value soever they may be, 10*., and no more. And no mortuary shall, throughout the kingdom, be paid for the death of any feme-covert; nor for any child; nor for any one of full age, that is not a housekeeper ; nor for any wayfaring man; but such wayfaring man's mortuary shall be paid in the parish to which he belongs. And upon this statute stands the law of mortuaries to this day.

MORTY, a pleasant island of the Eastern Seas, in long. 128–– 23' E., and lat. 2–– 15' N., separated from the north-east part of the island of Gilolo by a channel about twenty-five miles wide, called the Strait of Morty. It is said to abound in sago trees ; and is sixty-five miles long by about seventeen broad.

MORVEAU GUYTON (L. Bernard), one of the most celebrated of modern chemists, was the son of a lawyer of Dijon, and born in 1737. He became advocate-general in the parliament of Dijon, and attorney-general of the Cote d'Or: previously to the French Revolution he also distinguished himself by the study of chemistry and natural philosophy. In 1777 he discovered a lead mine in the province of Burgundy. Guy-ton Morveau was a contributor of articles on chemistry to the Encyclopedic Methodique; and had a share in the researches which led to the foundation of the antiphlogistic theory of chemistry ; was one of the authors of the reformed chemical nomenclature, &c. He relinquished

almond butter, is excellent to nourish the weak.

Bacon's Natural History.

MORTUARY, n. s. Fr. mortuaire ; Lat. mortuarium. A gift left by a man at his death to his parish church, for recompense of personal tythes and offerings not duly paid.

MORTUARY, in law, is a sort of ecclesiastical heriot, being a customary gift claimed by and due to the minister in very many parishes on the death of his parishioners. It seems originally to have been only a voluntary bequest to the church ; being intended, as Lyndewode informs us from a constitution of archbishop Lang-ham, as a kind of expiation and amends to the clergy for the personal tithes,

and other ecclesiastical duties, which the laity in their life time might have neglected or forgotten to pay. For this purpose, after the lord's heriot or best good was taken out, the second best chattel was reserved to the church as a mortuary. And therefore, in the laws of king Canute, this mortuary is called soul-scot, or symbolum animse. And in pursuance of the same principle by the laws of Venice, where no personal tithes had been paid during the life of the party, they were paid at his death out of his merchandise, jewels, and other moveables. So also, by a similar policy in France, every man that died without bequeathing a part of his estate to the church, which was called dy-ing without confession, was formerly deprived of Christian burial ; or, if he died intestate, the relations of the deceased, jointly with the bishop, named proper arbitrators to determine what he ought to have given to the church, in case he had made a will. But the parliament, in 1409, redressed this grievance. It was anciently usual in England to bring the mortuary to church along with the corpse when it came to be buried; arid thence it is sometimes called a corse-present : a term which bespeaks it to have been once a voluntary donation. However, in Bracton's time, so early as Henry III., we find it rivetted into an established custom : insomuch that the bequests of heriots and mortuaries were held to be necessary ingredients in every testament of chattels. Imprimis autem debet quilibet, qui testamentum fecerit, dominum suum de meliori re quam habuerit recognoscere ; et postea ecclesiam de alia meliori ; the lord must have the best good left him as an heriot ; and the church the second best as a mortuary. But yet this custom was different in different places : in quibusdam locis habet ecclesia melius, animal de consuetudine; in quibusdam secundum, vel tertium melius: et in quibusdam nihil : et ideo considerandi est consuetudo loci. In Wales a mortuary or corse-present was due, upon the death of every clergyman, to the bishop of the diocese; till abolished upon a recompence given to the bishop, by the stat. 12 Ann. st. 2, c. 6.ˆ And in the archdeaconry of Chester a custom also prevailed that the bishop, who is also archdea-158

his office of advocate-general, after having published his pleadings at the bar. At the commencement of the Revolution (September 1791) he became a deputy for the department of Cote d'Or, and was afterwards a member of the convention. He was a violent republican at this time, and voted for the death of the unhappy Louis XVI. Buonaparte

decorated him with the insignia of the legion of honor, and he was one of the first members of the Institute. He left Ele”mens de Chimie, Dijon, 1777, 3 vols. 12mo. Digressions Academiques, &c., 12mo. ; and various memoirs in the Annales de Chimie. He died 21st December, 1815.

MORUNG, a woody district of north Hindostan, tributary to Nepaul. It is situated in about the 27►► of lat. and is very mountainous, some parts being 7000 feet higher than Bengal. The timber is sometimes floated down the river Cosa ; but it is extremely unhealthy and little known.

MORUS, the mulberry-tree, a genus of the tetandria order, and moncecia class of plants ; natural order fifty-third, scabridae : MALE CAL. quadripartite ; COR. none : FEMALE CAL. tetraphyllous; COR none; styles two; calyx becoming a berry with one seed. There are seven principal species : ►►►

. M. alba, the white mulberry-tree, rises with an upright trunk, branching twenty or thirty feet high; garnished with large, oblique, heart-shaped, smooth, light-green, shining leaves, and monoecious flowers, succeeded by pale-whitish fruit. There is a variety with purplish fruit. The leaves of the mulberry-tree afford the principal food of that valuable insect the silk-worm. The leaves of the alba are preferred for this purpose in Europe ; but in China, where the best silk is made, the worms are said to be fed with those of the morus tartarica. The advantage of white mulberry-trees is not confined to the nourishment of worms: they may be cut every three or four years like sallows and poplar trees to make faggots ; and the sheep eat their leaves in winter before they are burnt. This kind of food, of which they are extremely fond, is very nourishing ; it gives a delicacy to the flesh, and a fineness and beauty to the wool. In short in every climate, and in most fields, it might be proper, as is the case in Spain, to wait for the first hoar-frost shaking off the leaves, which are gathered and placed to dry in sheds or cart-houses, taking care always to stir them from time to time. In Spain the sheep are fed on these leaves during the cold and frosts. By this method no injury is done to the mulberries, which produce leaves every year : and it is thought that the beauty and fineness of the Spanish wool is in a great measure owing to the use of this kind of food. From these considerations M. Bourgeois infers, that even in countries where, from the nature of the climate, the scarcity of workmen and the high price of labor, or any other particular causes, silk-worms could not be raised to any advantage, the cultivation of mulberry-trees ouˆht not to be neglected. The fruit of the \vhite mulberry his a sweetish and very insipid taste. Birds,

however, are rery fond of it. 2. M. Indica, the Indian mulberry, has ovate

oblong leaves, equal on both sides, but unequally serrated.

3. M. nigra, the common black-fruited mulberry-tree, rises with an upright large rough trunk, dividing into a branchy and very spreading head, rising twenty feet high or more. It has large heart-shaped rough leaves, and monoecious flowers, succeeded in the females by large succulent blackberries. There is a variety with jagged leaves and smaller fruit. Considered as fruit-trees, this species is the only proper sort to cultivate here ; the trees being not only the most plentiful bearers, but the fruit being larger and much finer flavored than that of the alba, which is the only other sort that bears in this country. It is exceedingly grateful to the taste, and is at the same time laxative and cooling. Like the other acid sweet fruits, it allays thirst (as Dr. Cullen observes), partly by refrigerating, and partly by exciting an excretion of mucus from the mouth and fauces; a similar effect is also produced in the stomach, where, by correcting putrescency, a powerful cause of thirst is removed. A syrup is made from the berries, gathered before they are ripe, which, taken as a gargle, is excellent for allaying inflammations of the throat, and for cleansing ulcers in the mouth. The bark of the root, which has an acrid bitter taste, possesses a cathartic power, and has been successfully used as a vermifuge, particularly in cases of taenia ; the dose is half a drachm of the powder, or a drachm of the fusion. The juice of the fruit is also employed to give a color to certain liquors and confections. Some make from it an agreeable wine ; others employ it for giving a high color to red wine, which it likewise contributes to make sweet. Although this juice is not used in dyeing, it gives a red color to the fingers and to linen, which is very difficult to remove. Verjuice, sorrel, lemon, and green mulberries, remove spots of this kind from the hands ; but, with respect to linen, the best way is to wet the part which has been stained, and to dry it with the vapor of sulphur; the vitriolic acid which escapes from this substance during combustion instantly takes off the stain. The wood is yellow, tolerably hard, and may be applied to various uses in turnery and carving : but to separate the bark, which is rough, thick, thready, and fit for being made into ropes, it is proper to steep the wood in water.

4. M. papyrifera, the paper mulberry-tree of Japan, grows twenty or thirty feet high, having large pal mated leaves, some trilobate, others quinquelobed ; and monoecious flowers, succeeded by small black

fruit. This species has its name from the paper used by the Japanese, being chiefly made of the bark of its branches. See PAPER. The leaves also serve for food to the silk-worm, and it is cultivated with success in France. It thrives best in sandy soils, grows faster than the common mulberry, and at the same time is not injured by the cold. M. de la Bouviere affirms that he procured a beautiful vegetable silk from the bark of the young branches of this species, which he cut while the tree was in sap, and afterwards beat and steeped. The women of Louisiana procure the same from the shoots which issue from the stock of the mul-MOSAIC WORK.

berry, and which are four or five feet high. After taking off the bark they dry it in the sun, and then beat it, that the external part may fall off; and the internal part, which is fine bark, remains entire. This is again beaten to make it still finer; after which they bleach it with dew. It is then spun, and various fabrics are made from it, such as nets and fringes : they even sometimes weave it and make it into cloth. The finest sort of cloth among the inhabitants of Otaheite, and others of the South Sea Islands, is made of the bark of this tree. See BARK.

5. M. rubra, the red Virginia mulberry tree, grows thirty feet high, is garnished with very large, heart-shaped, rough leaves, hairy underneath, and has monoecious flowers, succeeded by large reddish berries. This and the last species, as well as the alba, are here chiefly employed to form variety in our ornamental plantations, though abroad they are adapted to much more useful purposes.

6. M. tinctoria, dyer's mulberry, or fustic, has oblong leaves more extended on one side at the base, with axillary thorns. It is a native of Brasil and Jamaica. This is a fine timber tree, and a principal ingredient in most of our yellow dyes, for which it is chiefly imported into Eu-rope. The berries are sweet and wholesome, but not much used, except by the winged tribe, by whose care it is chiefly planted. This and the last species, and the Indica, are tender plants in this country ; but the other four are hardy, and succeed in any common soil and situation. The leaves are generally late before they come out, the buds seldom beginning to open till the middle, or towards the end of May, according to the season ; and, when these trees begin to expand their foliage, it is a good sign of fine warm settled weather;

the white mulberry, however, is generally forwarder in leafing than the black. The flowers and fruit come out soon after the leaves ; the males in amentums, and the females in small roundish heads; neither of which are very conspicuous, nor possess any beauty but for observation. The female or fruitful flowers always rise on the extremity of the young shoots, or short spurs; and with this singularity, that the calyxes of the flowers become the fruit, which is of the berry kind, and composed of many tuberances, each of them furnishing one seed. The fruit matures here gradually from about the 15th August to the 15th September. In dry warm seasons they ripen in great perfection ; but in very wet weather they ripen indifferently, and prove devoid of flavor.

MORWARA, a town of Hindostan, in the province of Gujerat, governed by an Hindoo chief of the Rajpoot tribe: the surrounding country is often plundered by the Coolies. It is situated thirty miles S. S. W. from Theraud.

MOSA'IC, adj. Fr. mo&rique. Supposed to be corrupted from Lat. musaus, or Greek pov—

ff.KOf.

Mosaick is a kind of painting in small pebbles, cockles, and shells, of sundry colours ; and of late days likewise with pieces of glass figured at pleasure ; an ornament, in truth, of much beauty, and long life,, but of most use in pavements and floorings.

Wotton.

Each beauteous flower. Iris all hues, roses, and jessamin, Reared high their flourished heads between, and

wrought Uosaiek. Milton i Paradise Lott.

The most remarkable remnant of it is a very beautiful motaick pavement, the finest 1 have ever seen in marble ; the parts are so well joined together, that the whole piece looks like a continued picture. Addiion on Italy.

MOSAIC WORK is an assemblage of pieces' of glass, marble, precious stones > &c.ˆ of various co-lors, cut square, and cemented on a ground of stucco, in such a manner as to imitate the colors and gradations of painting. Critics are divided as to the origin and reason of the name.

Some derive it from Mosaicum, a corruption of mu-saicum, as that is of musivum, as it was called among the Romans. Scaliger derives it from the Greek fiava, and imagines the name was given to this sort of work as being very fine and ingenious. Nebricensis is of opinion it was so called because ‘ ex illis picturis ornabantur musea.’

MOSAIC WORK IN GLASS. ††† In a very amusing work of the celebrated Gothe, entitled Winkel-mann und sein Jahrhundert, it is stated that about 15,000 varieties of color are employed by the workers in mosaic in Rome, and that there are fifty shades of each of these varieties, from the deepest to the palest, thus affording 750,000 tints, which the artist can distinguish with the greatest facility. We should imagine, with the command of 750,000 tints of color, that the most varied and beautiful painting might be perfectly imitated ; yet this is not the case, for the mosaic workers find a want of tints even amidst this astonishing variety.

The enamel, consisting of glass mixed with metallic coloring matter, is heated at the manufactory for eight days in a furnace, each color in a separate pot. The melted enamel is taken out with an iron spoon, and poured on a polished marble placed horizontally ; and another flat marble slab is laid upon the surface of the melted enamel, so that the enamel cools into the form of a round cake, of the thickness of three-tenths of an English inch.

In order to divide the cake into smaller pieces, the cake is placed on a sharp steel anvil, called Tagliulo, which has the edge uppermost, and a stroke of an edged hammer is given on the upper surface of the cake ; the cake is thus divided into long parallelepipeds, or prisms, whose base is three-tenths of an inch square ; and these parallelepipeds are again divided across their length by the tagliulo and hammer into pieces of the length of eight-tenths of an inch, to be used in the mosaic pictures. The cakes are sometimes made thicker, and the pieces larger.

For smaller pictures, the enamel, whilst fused, is drawn into long parallelepipeds, or quadrangular sticks ; and these are divided across by the tagliulo and hammer, or by a file; sometimes also these pieces are divided by a copper blade and emery ; and the pieces are sometimes polished on a horizontal wheel of lead with emery.

Gilded mosaic is formed by applying the gol i leaf on the hot surface of a brown enamel, immediately after the enamel is taken from the fur-

nace; the whole is put into the furnace again for a short time, and when it is taken out the gold is firmly fixed on the surface. In the gilded enamel used in mosaic at Rome there is a thin coat of transparent glass over the gold.

To apply these several pieces, and out of them to form a picture, first procure a cartoon or de-sign to be drawn ; this is transferred to the ground or plaster by calking, as in painting in fresco. See FRESCO. As this plaster is to be laid thick on the wall, and therefore will continue fresh and soft a considerable time, so there may be enough prepared at once to serve for as much work as will take up three or four days. This plaster is composed of lime made of hard stone, with brick-dust very fine, gum tragacanth, and whites of eggs: when this plaster has been thus prepared and laid on the wall, and made the design of what is to be represented, they take out the small pieces of glass with a pair of plyers, and range them one after another, still keeping strictly to the light, shadow, different teints, and colors, represented in the design before; pressing or flatting them down with a ruler, which serves both to sink them within the ground and to render the surface even. Thus, in a long time, and with a great deal of labor, they finish the work, which is the more beautiful in proportion as the pieces of glass are more uniform, and ranged at an even height. Some of these pieces of mosaic work are performed with that exactness, that they appear as smooth as a table of marble, and as finished as a painting in fresco ; with this advantage, that they have a firw lustre, and will last for ages. The best works of this kind that have remained till our time, and by which the moderns have retrieved the art, which was in a manner lost, are those in the church of St. Agnes, formerly the temple of Bacchus, at Rome ; and some in Pisa, Florence, and other cities of Italy. The most esteemed among the works of the moderns are those of Joseph Pine and the chevalier Lanfranc, in the church of St. Peter at Rome : there are also very good ones at Venice.

MOSAIC WORK OF MARBLE. ††† The ground of mosaic works, wholly marble, is usually a massive marble, either white or black. On this ground the design is cut with a chisel, after it has been first calked. After it has been cut of the depth of an inch or more, the

cavities are filled up with marble of a proper color, first fashioned according to the design, and reduced to the thickness of the indentures with various instruments. To make the piece thus inserted into the indentures hold fast, whose several colors are to imitate those of the design, they use a stucco composed of lime and marble dust ; or a kind of mastic which is prepared by each workman after a manner peculiar to himself. The figures being marked out the painter or sculptor draws, ,vith a pencil the colors of the figures not determined by the ground, and in the same manner makes strokes or hatchings in the place where shadows are to be : and, after he has en-graven with the chisel all the strokes thus drawn, he fills them up with a black mastic, composed partly of Burgundy pitch poured on hot; taking off afterwards what is superfluous with a piece

of soft stone or brick, which, together with water and beaten cement, takes away the mastic, polishes the marble, and renders the whole so even that one would imagine it only consisted of one piece. This kind of mosaic work is used in large works, as the pavements of churches, basi-lics, and palaces, and in the veneering of their walls. It is seen in the fine church of the invalids at Paris, and the fine chapel at Versailles.

MOSAIC WORK OF PRECIOUS STONES. ••• For this purpose, other and finer instruments are required than those used in marble; as drills, wheels, &c., used by lapidaries and engravers on stone. As none but the richest marbles and stones enter this work, to economise them they are sawn into the thinnest leaves imaginable, scarcely exceeding half a line in thickness : the block to be sawn is fastened firmly with cords on the bench, and only raised a little on a piece of wood, one or two inches high. Two iron pins which are on one side the block, and which serve to fasten it, are put into a vice contrived for the purpose; and with a kind of saw or bow made of fine brass wire, bent on a piece of spongy wood, together with emery steeped in water, the leaf is gradually fashioned by following the stroke of the design, made on paper and glued on the piece. When there are pieces enough fastened to form an entire flower, or some other part of the design, they are applied to the ground. The ground which supports this mosaic work is usually of free stone. The matter with which the stones are joined together is a mastic, or kind of stucco, laid very thin on the leaves as they are fashioned ; and, this being done, the leaves are applied with plyers. If any contour, or side of a leaf, be not either squared or rounded sufficiently, so as to fit the place exactly into which it is to be inserted, when it is too large, it is to be brought down with a brass file

or rasp ; and, if it be too small, it is managed with a drill and other instruments used by lapidaries. This kind of mosaic work is only used in small works, as ornaments for altar pieces, tables for rich cabinets, precious stones being so very expensive.

MOSAIC WORK OF THE FEATHERS OF BIRDS, &c. ††† In Clavigero's History of Mexico is described a curious kind of mosaic work made by the ancient Mexicans of the most delicate and beautiful feathers of birds. They raised for this purpose various species of birds of fine plumage with which that country abounds, not only in the palaces of the king, where there were all sorts of animals, but likewise in private houses; and at certain seasons they carried off their feathers to make use of them in this kind of work, or to sell them at market. They set a high value on the feathers of those birds which they call huitzitzilin, and the Spaniards picafloros, on account of the smallness, the fineness, and the various colors of their plumage. In these and other beautiful birds, nature supplied them with all the colors which art can produce, and also some which art cannot imitate. At the undertaking of every mosaic work several artists assembled. After having agreed upon a design, and taken their measures and proportions, each artist charged himself with the execution of a certain part of the image, and exerted himself to it with such

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patience and application, that he frequently spent a whole day in adjusting a feather ; first trying one, then another, viewing it sometimes one way, then another, until he found one which gave his part that ideal perfection proposed to be attained. When the part which each artist undertook was finished, they assembled again to collate the en-tire image. If any part was accidentally deranged, it was wrought again until it was perfectly finished. They laid hold of the feathers with small pincers, that they might not injure them, and pasted them on the cloth with tzauhtli, or some other glutinous matter ; they then united all the parts upon a little table, or a plate of copper, and flattened them softly, until they left the surface of the image so equal and smooth that it appeared to be the work of a pencil. These were the images so much celebrated by the Spaniards and other European nations. ‘ These images,’ says Acosta, ‘ are deservedly admired ; for it is wonderful how it was possible, with the feathers of birds, to execute works so fine and so equal, that they appear the performance of the pencil ; and what neither the pencil nor the colors in painting can effect, they have, when viewed from a side, a most beautiful appearance, so lively and animated. Some Indians, who are able artists, copy whatever is painted with a pencil so perfectly with plumage, that they rival the best painters of Spain.’ Cortes, Bernal Diaz, Gomara, Torquemada, and all the other historians who saw them, were at a loss for expressions sufficient to praise their perfection. Several works of this kind, our author says, are still preserved in the museums of Europe, and many in Mexico ; but few, he apprehends, belong to the sixteenth century, and still fewer, if any, are of those made before the conquest. The mosaic works also which the Mexicans made of broken shells were extremely curious : this art is still practised in Guatimala.

MOSAMBIQUE, a city and sea-port, the principal settlement of the Portuguese on the east coast of Africa, stands on an island of the same name, which, with several others, forms the best harbour on this coast, the depth being four fathoms and a half at low water. The country round is low, with groves of cocoa-nut trees. Fresh water is scarce, there being but two wells not brackish, one on the island and the other on the main ; provisions are also dear, the settlement chiefly depending on Madagascar. 10,000 slaves were annually exported from hence to a late period, and chiefly to Portuguese America, besides ivory, gold dust, columbo root, ambergris, amber, and cowries. A

considerable contraband trade is also carried on by the English, though foreigners are prohibited trading.

The town is well fortified, and as usual in Portuguese colonies has a great number of churches and convents. About a musquet shot from the anchorage is the landing place, rendered very commodious by a pier built on arches, with steps on each side. The town is reckoned by Mr. Salt to contain 500 Portuguese, 800 persons of. Arabian extraction, and 1500 negroes. The government house he describes as handsome, but the settlement on the whole VOL. XV.

has few traces of its early importance. The oc* tagonal fort, indeed, is strongly built, with six bastions, and defended by eighty pieces of cannon. These, however, are totally neglected, and the garrison consists merely of a few sentries, and some confined felons. Its state of. defence was such, when the traveller just named was there, that an Arabian trader assured him that, with 100 stout Arabians, he would undertake to drive the Portuguese out of this boasted capital of their empire. It is, however, sufficiently strong to resist the Madagascar pirates.

The economy of the government-house retains remnants of its former splendor. Tea is set out in a service of pure gold in the evening, when the house is thrown open to all the principal inhabitants, who may then visit it, and are entertained with that beverage. The governor wears a very costly golden chain; and the negro attendants are almost bent beneath profuse ornaments of that metal. The governor and principal citizens have country houses at Mesuril, on the peninsula of Caboceiro, at the head of the bay. Beyond this the Portuguese have no settled dominion. Several chiefs, indeed, receive from them a formal investiture, and pay them a trifling tribute ; among the principal of whom are the sheiks of Quintangone, St. Cul, and the queen of Sereima ; the first of whom can bring 4000 or 5000 men into the field, the second 3000, and the third 1500. The former sheik of Quintangone being long at enmity with them, and having been accidentally taken prisoner, was fired from the mouth of a cannon, the memory of which has secured, it is said, the allegiance of his successor. These alliances, however, scarcely en-able the government to make head against the Makooa; a powerful race, who sometimes ex-tend their ravages to the peninsula of Caboceiro.

In his first voyage to India Vasco de Gama touched here, and found a large trading city. He was at first well received, but a plot was soon

laid to destroy him and his followers, and he judged himself fortunate in being able to escape. In 1508 the Portuguese obtained permission to erect a fort and factory at Mosambique, by means of which they soon expelled the Arabs. Its vicinity to the gold mines, and its convenience as a station of refreshment to Indian ships, soon placed it at the head of their East African empire. This atone time was estimated at 2000 miles of coast, including the large and populous trading places of Sofala, Mosambique, Quiloa, Mombaca, and Melinda. Most of these have been successively wrested from them, and their dominion is now bounded by Cape Delgado on the north, and Cape Corrientes on the south, including no place of importance except Mosambique and Sofala.

MOSCHATF.L. See ADOXA.

MOSCIIION, a name common to four dif ferent authors, whose compositions, characters, and native places, are unknown. Some fragments of their writings remain, some few verses, and a treatise, De Mulierum Aflfectibus.

MOSCHUS, a Grecian poet of antiquity, usually coupled with Hion. They were both contemporaries with Theocritus. In the time of the latter Grecians, all the ancient Idvlliums were

collected and attributed to Theocritus ; but the claims of Moschus arid Bion have been admitted to some few minor pieces. All that is known about them is collected from their own remains. Moschus, by his elegy on Bion, has given the best memorials of Bion's life. Moschus and Theocritus have by some critics been supposed the same person; others will have Moschus as well as Bion to have lived later than Theocritus, upon the authority of Suidas : while others again suppose him to have been the scholar of Bion, and probably his successor in governing the poetic school ; which, from the elegy of Moschus, does not seem improbable. Their remains are to be found in all the editions of the Poets Minores Graeci.

MOSCHUS, in zoology, a genus of quadrupeds of the order of pecora, having no horns. There are eight small cutting teeth in the lower jaw; in the upper, no cutting or fore teeth ; but two long tusks, one on each side, projecting out of the mouth.

1. M. Americanus, or the Brasilian musk, is of a reddish-brown color, with a black muzzle and white throat, and scarcely so large as a roe-buck. The fur is soft and short ; the color of the head and upper part of the neck is dark brown ; the lower part of the neck and throat are white; the body and limbs are reddish-brown; the hind legs are longer than the fore. These animals, which inhabit Guiana and Brasil, are exceedingly timid, active, and swift. Numbers are often seen swimming in the rivers, and are then easily taken. The Indians hunt them, and their flesh is esteemed very delicate. The French of Guiana call them biches or does, because, notwithstanding their likeness to deer, both sexes are without horns.

2. M. Javanicus, the Javan musk, is of a ferruginous color on the upper parts of the body, and white all alons the under ; the tail is long and hairy, white below and at the tip ; its legs are similar to those of the pigmy musk, and furnished with very small spurious hoofs. This

and the meminna seem only varieties of the pigmaeus.

3. M. Indicus, the Indian musk, has short hair r i & tawny color on the upper, and whitish on ihe under, parts of the body ; the tail is short, and the feet have spurious hoofs. They inhabit India ; and are much of the same size with the moschiferus, but the tail is longer and more perceptible ; the legs are very slender ; and the head resembles that of a horse, with erect oblong ears.

4. M. meminna, or the Ceylon chevrotin, is seventeen inches long from the nose to the rump, and of a cinereous olive color; the throat, breast, and belly, are white ; the sides and haunches spotted, and barred transversely with white; and the ears are large and open: the tail is very short; and the feet have no spurious hoofs. They inhabit Ceylon and Java.

5. M. moschiferus, the Thibet musk, has abag or tumor on the belly, near the navel, and a very short tail almost hid in the fur. The length of the male is about three feet three inches from the nose to the origin of the tail, and about two feet tliree inches high at the shoulder; tlie female is

less than the male, has a sharper nose, has no tusks nor musk-bag, and is provided with two teats. The head resembles that of the roe : the fur is coarse, like that of the animals of the deer kind; but softer, very smooth, erect, plentiful, thick, and long : the color varies according to the age of the animal and time of the year; but is chiefly blackish-brown on the upper, and hoary, seldom white on the under parts of the body ; the hoofs are long, black, and much divided, and the spurious hoofs of the fore-feet are very long. They inhabit the Asiatic Alps, especially the highest rocky mountains from the Altaic chain to that which divides Thibet from India ; likewise in China and Tonquin, and in eastern Siberia; and about lake Baikal, and the rivers Jenisea and Argun. They avoid mankind, dwelling solitarily in the most precipitous places of the mountains, among rocks in the small narrow valleys surrounded by those snowy hills, and the pine forests which grow in their interstices. They are very gentle and timid animals, except in rutting time, when the males fight violently with their tusks for the females ; they are exceedingly ac-tive in leaping, running, climbing, and swimming, and very difficultly tamed; the flesh is eatable, and that of the younger animals delicate. The chaee of them is a trade equally difficult and hazardous ; if pursued, they seek the highest tops of the snowy peaks, inaccessible to men or dogs. They

take amazing leaps over the tremendous chasms of their Alps, and from rock to rock ; treading so lightly on the snow, with their true and false hoofs extended, as scarcely to leave a mark ; while the dogs which pursue them sink in, and are forced to desist from the chace. They are so fond of liberty as never to live long in captivity. They are mostly taken in snares, or shot by cross-bows placed in their tracks, with a string from the trigger for them to tread on and discharge. The Tungusi shoot them with bows and arrows. The skins are used for bonnets and winter dresses. The Russians often scrape off the hair, and have a way of preparing them for summer clothing, so as to become as soft and shining as silk. The noted drug, the musk, is produced from the male. The bag or follicle that contains it is situated near the prepuce ; and is of a somewhat oval figure, flat on one side and rounded on the other, having a small open orifice. In young animals this bag is empty ; but in adults it is filled with a clotted, oily, friable matter, of a dark brown color : this is the true musk, of which each bag contains from a dram and a half to two drams. The best comes from Thibet; that which is produced in Siberia having somewhat of the flavor of castor. 6. M. pigmaeus, the pigmy musk, is marked as to color like the Indicus, but has no spurious hoofs. The body and head measure only nine inches and a half in length ; the tail is about an inch long ; and the legs are smaller than a man's finger. They inhabit the East Indies and several Indian islands ; and are called kant chel by the Malayes, and poet-jang by the inhabitants of Java. The natives catch them in great numbers, carry them in cages to market, and sell them fot 2►►ri. a-piece. See MUSK.

MOSCOW.

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MOSCOW, an important government of European Russia, situated between 35►► 10' and 38►► 40' of E. long, and 54►► 40' and 56►► 30' of N. lat., is surrounded by the governments of Tver, Wladimir, Riazan, Tula, Kaluga, and Smolensko. Its area is about 10,000 square miles, and its population 1,126,000; or that of one of the most thickly peopled provinces of the Russian empire. It largely imports corn, owing to the consumption of the capital, and to the extent to which the country is laid out in orchards, gardens, and hop-

grounds. Rearing of horses is a favorite object here. Most of the houses throughout the province are of wood, but some are of stone, and the working of the quarries affords a considerable employment. The trade and manufactures are chiefly confined to the capital. This province contains a number of small rivers and streams. The largest are the Oka, Moskva, and Kliasma, which are all navigable. It is divided into thirteen districts or circles.

Moscow, or MOSKVA, an immense city of European Russia, long the seat of the government, and still the capital of the whole interior of the empire, is of an oval form, having its length from north to south, its breadth from east to west. Its extent, exclusive of the suburbs, is three miles by two and a half; but with the suburbs it is above five miles by four, having a circumference of more than twenty miles, or about equal to the circuit of London, South-wark, and Westminster collectively. This space is however occupied greatly by spacious courts, gardens, and other open areas. The houses of the lower orders are of one story only, and the streets are wide. The river Moskva or Mousqua, flowing with a serpentine course from west to east, receives, towards the middle of the town, a rivulet called the Neglina, and soon after the Jausa. Both of these flow in from the north. Of the buildings, by far the greatest part are to the north of the Moskva.

Dr. Clarke thus describes it, as it appeared before the catastrophe of 1812 : ‘ Moscow is in every thing extraordinary ; as well in disappointing expectation as in surpassing it ; in causing wonder and derision, pleasure and re-gret. Numerous spires glittering with gold, amidst burnished domes, and painted palaces, appear in the midst of an open plain, several versts before you reach the city. One might imagine all the states of Europe and Asia had sent a building by way of representative to Moscow : and, under this impression, the eye is presented with deputies from all countries holding congress ; timber huts from regions beyond the Arctic ; plastered places from Sweden and Denmark, not white-washed since their arrival ; painted walls from the Tyrol; mosques from Constantinople ; Tartar temples from Bucharia; pagodas, pavilions, and virandas from China ; cabarets from Spain ; dungeons, prisons, and public offices from France ; architectural ruins from Rome ; terraces and trellises from Naples ; and warehouses from Wapping. Having heard accounts of its immense population, you wander through deserted streets. Passing suddenly towards the quarter where the shops are situated,

you might walk upon the heads of thousands. The daily throng is

there so immense, that, unable to force a passage through it, or assign any motive that might convene such a multitude, you ask the cause ; and are told that it is always the same. Nor is the costume less various than the aspect of ihe buildings ; Greeks, Turks, Tartars, Cossacks, Chinese, Muscovites, English, French, Italians, Poles, Germans, all parade in the habits of their respective countries. Taken altogether,' continues our lively traveller, ' it is a jumble of magnificence and ruin ; old buildings repaired, and modern structures not completed ; half-open vaults, and mouldering walls, and empty caves, amidst white-washed brick-buildings, and towers and churches with glittering gilded, or painted domes. In the midst of it some devotees are daily ˆeen entering a little mean structure, more like a stable than a church. This, they tell you, is the first place of Christian worship erected in Mos-cow, ft was ongiually constructed of the trunks of trees, felled upon the spot, at the foundation of the city ; but now it is of brick, built in imitation of the original wooden church. Its claims to antiquity cannot be great, as, according to accounts published in our own country, the whole city of Moscow was burned by the Tartars of the Crimea, on the 24th of May, 1571 ; the old wooden church was probably then destroyed. There is nothing within the structure worthy of notice. The view of Moscow from the terrace in the Kremlin, near the spot where the artillery is preserved, would afford a fine subject for a panorama. The number of magnificent buildings, the domes, the towers, and spires, filling all the prospect, make it, perhaps, the most novel and interesting sight in Europe. All the wretched hovels and miserable wooden buildings, which appear in passing through the streets, are lost in the vast assemblage of magnificent edifices : among these the Foundling Hospital is particularly conspicuous. Below the walls of the Kremlin, the Moskva, already be-come a river of importance, is seen flowing towards the Volga. The new promenade forming on its banks, immediately beneath the fortress, is a superb work, and promises to rival the famous quay at St. Petersburgh. It is paved with large flags, and is continued from the stone bridge to another, peculiarly called the Moskva Bridge, fenced with a light, but stron-r iron palisade, and stone pillars, executed in very good taste. A flight of stairs leads from this walk to the river, where the ceremony of the benediction of the water takes place. Another flight of wooden steps leads through the walls of the Kremlin, to an area within the fortress.'

Another English traveller, Mr. James, who visited Moscow in June 1814, thus describes the coup d'ceil of the city from the Petrovsky Palace : ' It was from the road, as it passes under the turrets of the Petrovsky Palace,' savs he, ' that we first beheld the thousands of

domes and steeples that yet glittered among the relics of Moscow ; and a short hour brought us to the barriers. At our first entrance, only a few occasional symptoms of the conflagration (of 1812) occurred, and little that was of a nature to correspond to the gloomy appearance which we had

been led to expect. But, as we advanced, the quarters of the Slabode, or fauxbourg, where wood had chiefly been used in building, exhibited destruction in its fullest extent, ××× for the most part, a campagne ras××e. Now and then, the shell of a house was seen standing in a blank space; or here and there a few brick stoves, yet remaining, pointed out the spot where a dwelling once had been. Moving onwards, we crossed the avenues of the boulevards : the trees were in full leaf and beauty, seeming to vary the view only to heighten its melancholy aspect. Leaving this, we passed to the central parts of the town, that were constructed with more durable materials, exhibiting occasionally a richness and elegance of exterior that must have equalled, if not surpassed, the architectural magnificence of the most beautiful towns of Europe. But all was now in the same forlorn condition ; street after street greeted the eye with perpetual ruin ; disjointed columns, mutilated porticos, broken cupolas, walls of rugged stucco, black, discolored with the stains of fire, and open on every side to the sky, formed a hideous contrast to the glowing pictures which travellers had drawn of the grand and sumptuous palaces of Moscow. The cross lanes looked, even at this interval, as if unused to the sound of the human tread. The grass had sprung up amidst the mouldering fragments scattered over the pavements ; while a low smoke, issuing perhaps from some obscure cellar corner, gave the only indications of human habitation, and seemed to make desolation visible.

‘ There ‘are few towns vrhose quarters present a more simple plan of distribution. The ancient Kremlin and Kitaigorod are situated on a central eminence above the river Moskva; and around these, as a

nucleus, the circles of the Beliogorod, the Semlianogorod, and the Slabode or fauxbourg, are severally discernible, marking by their lines the growth of the place in successive eras. The Kitaigorod, or Tatartown, besides some religious buildings, contains within its walls the public exchange and the chief houses of trade. All these had been completely gutted by the fire, but the spirit of the place still remained : shops and stalls, and tents of every denomination, were erected amidst the ruins; and the chief street was even now the theatre of much bustle and activity. The Kremlin is a large walled circle, containing many old churches, as well as the public offices and apartments of state ; and hither we made a daily visit, as to a point that afforded the only specimen of the ancient magnificence of the capital of the grand dukes and the czars. It stood uninjured amidst the flames of the late conflagration ; but the barbarous fury of Buonaparte attacked whatever Russian piety had spared ; and, with unutterable malignity, he marked out for devastation some of the fairest portions of this proud citadel. The most peremptory command was given to the de-i;:r:hment occupying the Kremlin, after his departure, to discharge their orders with despatch; i1 <··· mines were prepared, and at two o'clock on the lust night of their stay this horrid purpose was carried into execution. By the first two explosions, part of the walls and one of the towers

towards the river were destroyed; by the third the church of St. Nicholas and the four great bells of Moscow were blown up with tremendous violence ; at the same moment the lofty tower of Ivan Veliki, the first of the czars, was rent from the top to its base, and the cross of the cupola crowning its summit buried in ruin below. The fourth shock was by far the most dreadful ; the walls of the arsenal, which were upwards of three yards in thickness, with a part of the gate of St. Nicholas, and several adjoining pinnacles, were at once blown into the air, a concussion succeeding, that shook the whole city to its foundations.

' A short time previously to the break ing, out of the war, a ukase was issued by the emperor, ordering three and thirty churches at Moscow to be pulled down ; by no means an unreasonable step, since the total number in the city and suburbs amounted to 2000, and many of them were in a dilapidated state. The common people, however, very generally entertained the idea, that their late calamities were owing to this act of impiety. The emperor has now vowed to erect a new church at Moscow, in commemoration of the deliverance of Russia, for which a de-sign has been given by Mr. Wilbers, formerly a pupil of the

academy at St. Petersburgh. A column, formed out of the cannon taken from the French, forms part of the design. The imperial palace, which stands on a point, commanding; the whole town, was the residence, as before stated, of Buonaparte. But even these walls, that had formed his abode, were given to destruction by his orders, and now showed themselves in the most forlorn condition, stripped of every article, and completely gutted from top to bottom. The same scene of waste was exhibited in an interesting antique edifice, containing the chamber of the throne. As the public hall of audience, at the coronation of the czars and emperors, it had been often made the scene of festivities in this most pompous and splendid court. But now not a vestige of ancient ornament could any where be traced ; the activity of devastation had been great, and scarcely a beam or a stone rested one on the other. The other parts of the Kremlin remained untouched, and it was impossible to conceive a more imposing spectacle than was here afforded. A high terrace overhung the walls towards the river, at the extremity of which, to the left, appeared the fantastical structure of the Trinity Church, and the awe-com- manding portals of the Holy Gate, through which every passenger walks bare-headed. At the other end was a cluster of domes rising from the church of St. Nicholas, that of the Assumption, and the chapel and palace of the czars, with the lofty temple of Ivan Veliki towering far above them all, and reflecting the beams of the sun from a globe of gold. The palace of the czars does not boast an antiquity of more than 200 years ; but it is an edifice raised with princely costliness in the carved work with which that style abounds. This was one of the most showy examples of the gorgeous architecture of the Kremlin, though the whole circle offered an assemblage of bright, gay colors, and a display of gaud and richness that vied with the wealth of

Ormus and of Incl. The cupolas and roofs were gilt, or stained green pr red, the walls and towers covered with glazed tiles of blue, and white, and yellow; in other parts adorned with storied paintings from Holy Writ; while a me-hnge was seen on every side, of pear-shaped domes, Tartar battlements, Golhic tracery, Grecian columns, the star,

the crescent, and the cross. Looking below, we beheld the stream of the Moskva, winding itscourse amidst the streets and houses of the town, all indeed now in ruin, but still interspersed with many a glittering steeple, with cottage, garden, and palace, intermixed, and offering to view the endless variety of a Russian city. This scene was backed by an extensive landscape on the west, dotted with country houses and monasteries, and surmounted by the long gloomy line of the Sparrow Hills, over which the French army first showed them-.elves, before the work of abomination was begun.'

Moscow consists of four divisions, circular or semicircular, each surrounding the other, and each increasing in circuit, in proportion to its distance from the centre. 1. The central, or court and mercantile quarter, containing the Kremlin and the Kitaigorod. 2. The Bielogorod, or White town, extending around the central part like a half moon, deriving its name from the white stone walls which surrounded it till 1767. 3. The Semliano-gororl, or Earthen town, much more extensive than either of the preceding, and surrounding them both. It derived its name from its former earthern ramparts. 4. The Slobodes, or suburbs, which, to the num-ber of nearly thirty, surround the whole.

The Kremlin stands so high as to command a prospect over almost the whole city. The Moskva flows past it, and is crossed by two bridges. Here is the famous ancient palace of the czars, which so narrowly escaped the conflagration of 1812, and is now rebuilt with improvements. Here also is the church of St. Michael, containing the tombs of the czars, and the church of the Assumption of the Virsin Mary, in which the emperors are crowned. The Kremlin contains several other churches and monasteries with gilded cupolas.

The Kitaigorod, or Chinese town, is said to have derived its name from the trade it formerly carried on with China. Here are the bazaars and shops, as also the only street of this city in which the houses adjoin each other. Though of small extent, the Kitaigorod contains several public buildings ; as, a strong brick edifice for the public archives ; the printing-house of the synod ; the university, founded in the middle of the eighteenth century ; and the Krasnaga Plotschael, or Beautiful Place, one of the most sing\ilar and most handsome squares in Europe. It is 1260 feet long, by 434 broad. Here also is the dead-fish market, a great curiosity. No sooner has the winter so far advanced that the sledge-roads are passable, than a large supply of fish is regularly brought from Archangel, and from a grea lake in the Government of Novogorocl. These are here piled up like walls, snow serving to fill the interstices. The sterlet, sturgeon, and beluga, or great sturgeon, are always in groat

supply Tbe more important shops, besides bsing locked at night, are all sealed up, a piece of cord or thread being twined round the pad-lock, and soft wax with an impression affixed over the ends or on the door. A Russian, according to Dr. Lyall, will much less readily break a seal than a lock.

The Bielogorod contains several of the widest street's of Moscow ; the arsenal and cannon foundry; the foundling hospital; bible society house ; the fruit market, and provision market. No building erected since the calamity of 1 81 2 excites more surprise in Moscow than the Exercise-house, erected here in 1817. This enormous edifice is 560 feet in length, the breadth at each end is 168 feet, and the height from forty-two to forty-three and a half feet. The mechanical construction of the roof is admirable ; although of such length, breadth, and weight of materials, it rests merely on the walls. A considerable part of this quarter escaped the great conflagration.

The Semlianogorod has also wide streets, ana contains, from its magnitude, a large proportion of the population. The most singular edifice here is the Vinnoi Dvore, the depot for votki, a spirituous liquor, occupying two large squares. ' In this great magazine are deposited the spirits, or votki, made at the distilleries belonging to the crown, or brought from the country by the distillers, and sold to the crown, according to special regulations. From this depot all Mos-cow and its neighbourhood, that is, all the drinking-houses as well as private individuals, are supplied with votki in abundance. The buildings have enormously thick walls, and are all vaulted. In them and the court-yards are lodaed thousands of barrels of the precious votki, the nectar of the Russian peasants, which is measured in strength by the hydrometer, and sold according to law. Good votki by no means deserves the reproach thrown upon it by some travellers. As sold in the kabaks and in the shops it is generally diluted and adulterated, and certainly is a fiery, slowly operating poison. It resembles Scotch whiskey. It is a kind of proof spirit, according to pharmaceutical phraseology. It is called brandy by the mistakes of travellers, and sometimes Russian brandy.' The Slobodes, or suburbs, are mean, and look like so many detached villages, with the exception of one called the Nemetska Sloboda, or German suburb, which is inhabited by a number of foreign mechanics. Here is the monastery of Spaso Andronief, remarkable for its fine spire, which has a massy foundation, and consists of four stories. The first, which is very elevated, has a tower, surmounted on each side by a cross : through this is a high, elegant, arched entrance, with a fine iron pate, over

which is an image of our Saviour, called the image not made with hands. The second story is adorned with columns of the Doric order; the other two stories, with Corinthian columns, and with arches for the bells. The spire terminates in a tapering pear-shaped head, with fluted sides, over a ball, and bearing a highly gilded cross.

The police of Moscow is on a very cood military footing ; all its agents wear a uniform. The city is divided into twenty-four districts, each

under a police court, with a major at its head : Ihe armed force consists of dragoons, to which mere are sometimes added Cossack patroles. In each of the courts in the twenty-four quarters is a high tower ; and stationed sentinels, to give the alarm on the first discovery of a fire, a calamity of frequent occurrence here.

The churches and the treasury in the Kremlin were stript of their most precious ornaments in 1812, prior to the entry of the French : the persons belonging to the public establishments, such as the university, the seminary for the daughters of noblemen, and the foundling-hospital, were removed to Kasan, in the interior; and barks, loaded with corn, were sunk in the Moskva, to prevent their cargoes falling into the enemy's hands. The decisive battle of Boro-dino being fought on the 8th of September, about seventy miles from Moscow, the hospitals of the city were soon filled with wounded : many of whom perished afterwards in the flames. When the retreat of the Russian army became known, a general movement took place in Mos-cow ; and the roads, in all other directions but that of the enemy's march, became covered with fugitives ; those who remained saw at night the horizon illuminated to the westward, by their troops retiring Hfore the French, and destroying the villages

When, on the 13th, the enemy drew near, the mass of the population of Moscow left their nomes, and spread themselves over the country. Count Rostopchin, the governor, carefully concealing the project of destroying the city, sent a flag of truce to request the French to spare it. He then left the city, along with all the public officers ; and the

vanguard of the French, on entering it on the 14th, were surprised at the silence which prevailed. The prisons were thrown open, and none were left but the few that were unable to fly, and those who remained for plunder, or to execute the orders of the governor. About five o'clock on Monday evening, the advanced guard of the French, under Murat, arrived, and immediate possession was taken of the Kremlin. Before night, Buonaparte arrived at the gate of Smolensko, where he actually waited for some time, expecting a deputation from the municipality, as he had been wont whenever he entered any captured town ; but none came. On sending to enquire the rea-son, he was told, Moscow was deserted. He sent one of his generals to make further search and enquiries. Not a Russian was to be seen ; not the least smoke rose from a single chimney ; not the slightest noise issued from this immense and populous city : its 300,000 inhabitants seemed to be struck dumb and motionless by enchantment ; it was the silence of the desert.

In the course of the ensuing night, Mortier pointed out to him smoke issuing from houses closely shut up, untouched and uninjured without. Flames shortly afterwards were seen in other quarters. On Tuesday evening they assumed a very serious aspect, and all efforts to stop them were in vain. The city appeared on fire in so many quarters, that the troops employed to <-top the conflagration were distracted ; and, while t'nus employed, they were surrounded and in

great and immediate danger. Doubts had at first been entertained, whether the conflagration was accidental or not ; but now it was certainly known to be intentional. The wind, indeed, blowing strong, first from one quarter, and then from another, favored the designs of the incen-diaries : and it was not until Saturday morning that it fell ; when the smoke gradually cleared off, and the extent of the desolation became visible.

At first the conflagration was represented throughout Europe as the work of the French ; but, from the authorities quoted by Dr. Lyall, it appears to have been undoubtedly a plan premeditated by the Russian governor Rostopchin. His object was to render Moscow totally unfit for the winter quarters of the enemy ; and in this he succeeded completely. At the same time it is to be added that the French, before their departure, sprang many mines, and thus added to the destruction of a fine city they could not re-tain. ' From all accounts,' says Dr. Lyall, ' we shall probably be very near the truth in concluding, that 7000 numeros, or courts, were destroyed in 1812 ; and that these

numeros contained 7000 principal edifices, and at least 14,000 structures, making a grand sum total of 21,000 buildings.' The destruction of the Semlianogorod was so general, that, in a circuit of fifteen versts, not more than fifty habitable houses remained. The destruction of the Beliogorod was not quite so general. The Kitaigorod was burning six days without intermission. In the Kremlin, the new imperial palace alone became the prey of the flames. None of the hospitals suffered ; but all the public education establishments, except one, fell a prey to the flames.

This review of tne memorable attempt of the French emperor to combat with nature, or rather nature's God, as well as man, was necessary to explain the late and present situation of this city. Within a few months after the French left Moscow, orders were given to clear away the rubbish, and begin the rebuilding of the cily. Thousands of workmen were employed in every street and lane ; and Moscow at present is said to present no traces of the dreadful calamity of 1812. It is rebuilt with considerable regard to consistency and taste, and no longer presents such numerous and strong contrasts of palaces and huts as it did before. The Kitaigorod, or quarter for the exchange and mercantile warehouses; the more extensive quarter of the Semlianogorod ; and even the Slobodes, or suburbs, were all rebuilt before the close of 1818; ami the population of Moscow was carried to nearly its former magnitude. The deficiency is in the mansions of the nobility; many of these have not been rebuilt, having been on a scale too large for the income of their owners. Before the conflagration, the total of the registered edifices \vns-9158; in 1819 the number rebuilt, added to those that had been preserved, was about 7000.

Though the public buildings in Moscow are of stone, the great majority of the dwellings, since the rebuilding, it is to be regretted are of wood. A market, held in a large open space in one of the suburbs, exhibits a curious variety of materials for house-building ; they consist of

trunks of trees, cut, shaped, and morticed into one another. The

person who wants a dwelling repairs to the spot, explains the number of rooms he requires, examines the different timbers, which are regularly numbered, and bargains for what suits him. The whole is either paid for on the spot, and then taken away by the purchaser, or the seller may agree to transport and erect it. A dwelling is often thus bought, transported, raised, and inhabited, in the space of a week. The new city has still wider streets than the old, and greater uniformity in all its buildings; the Asiatic taste is, however, preserved in the churches ; but those lately erected are distinguished by a more simple and regular architecture. The streets are paved partly with stone, partly, as in other Russian towns, with trunks of trees. The university having been rebuilt was opened on the llth of November 1818, and the former course of study resumed.

The Kremlin was, in 1817, completely repaired and enlarged by a long lateral building: its ramparts are replaced by beautiful alleys. This is the great depot of the curiosities of Mos-cow. It has the highest spire in the city, called the tower of Ivan, still amply replenished with bells, and which formerly contained the largest bell in the known world, the weight being above 200 tons. This fell to the ground in the last century, in consequence of the tower being bunied, and is now considerably sunk in the earth, and fractured.

‘ Taken as a whole,’ says Dr. Lyall, the Krelme, or Kremlin, ‘ is one of the most singular, beautiful, and magnificent objects I have ever beheld. Its commanding situation on the banks of the Moskva River, its high and venerable white walls, its numerous battlements, variously colored towers, and steeples ; the number and the magnificence of some of its fine edifices, with their differently painted roofs ; the variety of its cathedrals, churches, monasteries, and belfries, with their almost innumerable domes, gilt, tin-plated, or green; ††† indeed the whole picture presents at the same time a varied unity, ††† a consonance and incongruity of objects, ††† a contrast of ancient and modern works of art and taste, ††† a beauty, grandeur, and magnificence indescriba-ble and altogether unique. To be conceived it must be seen ; and when seen it never fails to excite astonishment and delight.’ All travellers agree that the view of the city from this place, especially from St. Ivan’s Tower, surpasses every other in singularity and splendor

Situated on the north side of the Moskva, which, in this part, bends into the form of a crescent, the shape of the entire Kremlin is triangular, the circumference about two miles. A high wall surrounds it, strongly built of brick, faced at the foundation with stone. There are five gates ; at four of these there are steeples, and there are

numerous watch towers. In passing through one of these, called Spaskiya Yoro-tui, or the Gate of Our Saviour, every male, from the sovereign to the peasant, takes off his hat, and remains uncovered ; if a stranger neglects this, a sentinel directs or forces him to comply. Of the turrets with which the wails of the Kremlin are ornamented, almost all are of a square

base and pyramidal elevation, yet exhibiting different styles of architecture. The most interest* ing is that immediately to the south of Our Saviour's Gate, on which was anciently suspended the alarm bell, and from which the ancient sovereigns of Muscovy used to witness or superintend the infliction of punishments, and the celebration of festivals. There are no regular streets in the Kremlin, but three open spaces called plostchads, or squares, of a very irregular shape, and abundance of room otherwise, for the numerous carriages and foot passengers with which it is always crowded in summer. The houses have in general stone foundations : in all cases the superstructure now consists of brick stuccoed, and painted generally in gaudy colors. All the houses belong to the crown. Besides the government-offices, the Kremlin contains the palace, the senate-house, the arsenal, the imperial mu-eum, and a number of cathedrals, churches, and monasteries, among which is the most splendid and most sacred edifice in the empire, *viz.* the cathedral of the assumption of the Virgin Mary. This was built in 1479, on the site of the original edifice, and exhibits a specimen of the Greco-Italian architecture of the period. It is loaded with ornaments to a most extravagant degree. On the walls are painted 249 full images, and 2066 half-lengths and heads, many larger than nature. There are said to have been employed in embellishing it 210,000 gold leaves. The lustres are particularly magnificent and costly. In the middle of the church is suspended a crown of massy silver, accompanied with forty-eight chandeliers, all of a single piece, and weighing nearly 3000 Ibs. There are also numerous candlesticks, almost as high as a man, some of silver, others of silvered copper, holding candles as thick as a man's leg. The cathedral of St. Michael ranks next to this, and was the sepulchre of the czars to the close of the sixteenth century.

The palace of the czars within the Kremlin is the next object mostworthy of notice. Dr. Lyall says that this edifice ' is probably the most notable instance of constant change and renovation among all the large and more ancient edifices of Moscow.' In 1820 it consisted of three parts ; the ancient palace of the czars, the audience-chamber, and the new palace. The ancient palace was built by an Italian

architect at the beginning of the sixteenth century ; but the style of it is so singular that it has been called Grecian, Gothic. Tartar, and Hindoo. In the belvi-dere are two small arched rooms, which were the czar's peculiar apartments. They communicated, by a narrow staircase, with an observatory, ' a kind of royal police-box,' where, at a certain fixed hour, the czar daily took his station, while crowds of supplicants assembled in the courts below, deposited their petitions upon a large stone adjoining the small church called Spas na Baru. These petitions were brought to the sovereign, who examined them, and dictated the answers, which were in like manner laid on the same stone till the petitioners came to receive them. Peter the Great was born in the old pa-lace.

The new palace was originally built in 174S

by the empress Elizabeth ; but it has been repeatedly altered and enlarged. The empress Catharine formed the project of erecting a most magnificent palace in the Kremlin. The plan was actually executed, and a superb model of it exists in the Imperial Museum. This, according to Dr. Clarke, is one of the most curious things in Moscow. ' If the work had been completed,' he remarks, ' it would have been the wonder of the world. The architect who constructed the plan was a Russian who had studied at Paris. This model cost 50,000 rubles. The expense necessary for the accomplishment of the undertaking (as the architect Camporesi, who made the estimate, assures us), would have been 50,000,000 of rubles. The calculation laid be-fore the empress stated the amount only at 20,000,000. The work was begun, but, it is said, the falling in of a part of the foundation determined the empress against its prosecution. The plan was to unite the whole Kremlin, having a circumference of two miles, into one magnificent palace. Its triangular form, and the num-ber of churches it contains, offered some difficulties; but the model was rendered complete. Its fronts are ornamented with ranges of beautiful pillars, according to different orders of architecture. Every part of it was finished in the most beautiful manner, even to the fresco painting on the ceiling of the

rooms, and the coloring of the various marble columns intended to decorate the interior. It encloses a theatre and magnificent apartments. Had the work been completed it would have surpassed the temple of Solomon, the propylreum of Amasis, the villa of Adrian, or the forum of Trajan.'

The apartments of the new palace are not very large; but they are furnished in a most superb manner. ' Inlaid floors of various figures and colors, of oak and other wood ; beautiful Wilton and Russian carpets ; tapestry-colored walls of all shades ; immensely large looking-glasses, some of which have many flaws, and others are joined ; tables of mahogany, of Siberian beech, of nat-wood, stained and unstained, gilt and un-gilt, of marble, of imitation lapis lazuli, and of malachite ; chairs of the same woods, plain or covered with silk, and gilded ; large crystal and bronze lustres, and a crowd of other ornaments, are all found here.' The audience-chamber, built at the close of the fifteenth century, was burnt in 1812; but it is now completely repaired and fitted up in its former style : its architecture is simple. The granovitaya palata, or square hall, from which the whole edifice takes its name, is a room about sixty-five feet square. ' In its centre rises an enormous square and highly gilt pillar, which loses itself by expansion into the ###arches, and with them supports the ceiling : the vaults are four in number, and each is crossed by a gilt twisted stucco cord, which has a good effect. Over each window are the arms of three of the governments of Russia. The walls are covered with crimson velvet, bronze chandeliers, and gilded ornaments, and the floor is overlaid with red cloth. Numerous lustres are suspended from the ceiling. The base of the central pillar is surrounded with shelves, on which, on great occasions, are arranged the gold and silver utensils and vessels belonging to the court. The throne on the south side is equally elegant with that in the palace. The room is disfigured by a number of seats like an orchestra in one of the chambers. Opposite the throne and near the roof is a semi-lunar window, from whence the imperial family, when not present in the hall, could observe the ceremonies after the coronation in the cathedral of the assumption, or witness the reception of ambassadors by his majesty. When the court is at Moscow balls are frequently given in this hall. On occasion of a ball in 1818 it was illuminated by 3500 wax candles, and presented a most magnificent appearance.'

The church of St. Philip in the Kremlin contains the patriarchal treasury, the riches of which consist of manuscripts and books, mitres and sacerdotal dresses and ornaments, vessels for holy oil, &c. The most valuable manuscripts are those of the Sclavonic New Testament, which date as far back as the eleventh and twelfth centuries. Dr. Lyall

was shown ‘ a small parchment volume a good deal sullied, said to be the Gospel of St. Luke in his own hand-writing.’ The vessels for the preparation of the holy oil consist of two large silver kettles or boilers, gilt inside, two feet and a half in diameter, which, together with silver stirrers and ladles, were presented to the synod by Catharine II. Between these boilers stands a large silver receiver, also a present of the empress. They weigh together upwards of 700 Ibs. From the receiver the oil is emptied into sixteen elegant silver vases presented to the synod by the emperor Paul. The ‘ holy oil ‘ is made once a year with great ceremony.

Dr. Lyall took pains to ascertain the history of the great bell of Moscow, and its exact size and weight. According to him it originally contained 8000 poods weight, and was cast in 1654. Being destroyed by fire it was recast, and 2000 additional poods of metal added to it in 1734. At this time it was actually suspended over the place where it was cast, at no great height. In 1737 the wooden edifice erected over it took fire, and the bell, becoming hot, was most probably cracked in consequence of cold water being thrown upon it to extinguish the flames. Ac inscription on it, recording its second casting, expressly states its weight to be 10,000 poods, equal to 360,000 English pounds. According to the measurement of Mr. Murray, an English engineer, the height, if it had been a full cast, would have been twenty-one feet : it is actually only twenty feet seven inches. The greatest diameter at the mouth of the bell is twenty-two feet eight inches. The top of the bell, or double ring, measures three feet one inch. Dr. Clarke makes the circumference sixty-seven feet four inches ; the perpendicular height twenty-one feet four inches and a half; and the thickness of the metal, in its stoutest part, twenty-three inches. The top of the crack is five feet seven inches from the ground. The clapper, which lies at the foot of Ivan Veliki, is fourteen feet long On festivals the peasants visit this bell as they would a sanctuary, regarding it as an act of devotion, and crossing themselves all the way as they descend and ascend to it.

MOSCOW.

Moscow has long been the seat of an archbishop: his palace is in the

Kremlin, and contains the regalia of the empire, with the relics of the patriarchs of Russia ; in particular the splendid robes worn by them in ancient days : likewise a number of precious stones. The treasury contains also the crowns of Kasan, Astracan, Georgia, and Poland ; a collection of swords from Damascus, and saddles studded with pearls, sapphires, and turquoises. These valuable appendages were removed and placed in safety, before the entrance of the French ; but the latter stript the Kremlin of the celebrated cross of St. Ivan, or John, and carried it in their retreat as far as, and even beyond Wilna, but abandoned it in the height of their disasters.

The population of Moscow in summer does not much exceed 200,000 ; but in winter it is nearly 300,000, partly by the resort of traders, and yet more by the arrival from the country of families of rank, with a countless host of servants; for Moscow, not Petersburg, is still the great resort of the Russian nobility. Every thing here is in curious extremes; the nobility live in magnificence, while the populace are shivering with cold and hunger; and eagerly devouring their portions of meagre soup, cooked in the open air : even one part of the domestics of the same mansion are gaudily dressed, while another part are in rags.

The processions and popular joy on the saints and festival days of the different churches and monasteries are highly characteristic of this part of the world. On the festivals of the cathedrals and monasteries of this city there is a holy procession from the cathedral of the Assumption, of a greater or smaller number of the clergy, according to the importance of the festival. They walk on foot, with uncovered heads, in regular order, accompanied by the holy banners, crosses, hooks, &c., and are protected from the crowd by the police and gens d'armes on horseback. The innate of the saint to whom the church is dedicated is peculiarly distinguished, and numerous burning candles are placed before it.

The Donskoi monastery, in the suburbs, is one of the first class. Dr. Lyall gives the following lively picture of its festival, held on the 19th of August : ××× ' The fete begins with the chiming of tbe bells and divine service, the completion of which is the signal for general mirth : in fact, for the commencement of a Bartholomew fair. Crowds of visiters arrive throughout the day, and pay their devotions before the image of the Donskaya, Holy Mother of God. In the evening, at the entrance under the north belfry, is placed an image of the Virgin Mary, with abundance of holy water. Every visiter makes his devotions before this image, is sprinkled with holy water by a priest, deposits his charity, and passes into the interior. 1 remarked that the

peasantry are really sprinkled with dexterity and in very rapid succession, but that the priest slowly dropped the water from the end of the bmsh into the hands of the nobility, and with it they rubbed their faces. For some days preceding this fete, many hands are employed in erecting tents, puppet-shows, stands of various kinds, horizontal and vertical swinging machines,

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-indeed, all the scenery which characterises a fair in England. On the plain before the monastery are grocers' stalls, cook-shops, fish-shops, taverns, and kabaks ; also teatents, in which the gipsies sing, dance, &c. A great Tariety of fruit and vegetables is here to be found ; and a num-ber of circular elegant tents are elevated, around the interior of which are placed numerous great copper pots or tubs, filled with votki. Theˆpersons employed to sell this nectar of the day can scarcely answer the demands of the crowd,'who, according to the quantity they purchase, receive it in a larger or smaller unglazed, shallow, earthen vessel, for which a deposit is given till returned. Spots of ground by the north wall of the monastery are covered with water-melons in great profusion. What attracts our greatest attention are crowds of peasantry every where squatted upon the field; men, women, and children, married and unmarried, forming different parties, and enjoying their various refreshments, while some others obtain a place within the drinking-tents or the teatents. All bellow forth their rude, untutored music, in merry chorus, especially after the votki has exhilarated their spirits, and the air resounds with the noise of revelry. In eating and drinking, dancing and singing, ogling and courting, enjoyment takes a hundred forms. Then come quarrels and abuse : drunkenness, and rolling, and tumbling, usually conclude the day Such a fete is a perfect Russian scene, where much of the low national manners and customs of the people may bestudied. The police are stationed every where about the monastery, to preserve order, and to regulate the procession of the innumerable carriages of the nobility, and especially of the merchants, who arrive at the monastery in the afternoon, perform their devotions, and then see the fair. As soon as the twilight approaches, the police interdict the sale of votki ; but, when the weather is fine, great exertions are requisite to disperse the crowd, so that it is eleven or twelve o'clock at night before the curtain drops.'

Of the grand ceremonies at Lent and Easter, the third and most magnificent is celebrated two hours after midnight on the morning of Easter Sunday, and called the ceremony of the Resurrection. All the markets and shops of Moscow the night before are filled with flesh,

butter, esgs, poultry, pigs, and every kind of food. Every foot-passenger has his hands and even his arm* filled with provisions, and thedroskies are ready to break down beneath their weight. Dr. Clark" says, that this ceremony at Moscow exceeds every thing of the kind at Rome, not even excepting the papal benediction of the holy week. lie thus describes the scene : ••• ' At midnight, the ureat bell of the cathedral tolled ; its vibrations seenn-.l to be the rolling of distant thunder ; and they %vere instantly accompanied by the noise of ail the bells of Moscow. Every inhabitant was stirring, and the rattling of carriages in the streets was ereater than at noonday. The whole city was in a blaze; lights were seen in all the windows, and innumerable torches in the streets. The tower of the cathedral was illuminated from its foundation to its cru<s. The same ceremony takes pl.UT in all l!ir-cluirc'H-; and w!:at is

truly surprising, considering their number, they are all equally crowded. We hastened to the cathedral : it was filled with a prodigious assembly, consisting of all ranks of both sexes, bearing lighted wax tapers, to be afterwards heaped in rows upon the different shrines. The walls, the ceiling, and every part of the building, are covered with the pictures of saints and martyrs. At the moment of our arrival the doors were shut, and on the outside appeared Plato, the archbishop, preceded by banners and torches, and followed by all his train of priests, with crucifixes and censers, who were making, three times in procession, the tour of the cathedral, chanting with loud voices, and glittering in sumptuous vestments, bespangled with gold, silver, and precious stones. The snow had not melted so equally within the Kremlin as in the streets of the city ; this magnificent procession was therefore constrained to move upon planks over the deep mud which surrounded the cathedral. After completing the third circuit, they all halted opposite the great doors, which were still closed ; the archbishop with a censer then scattered incense against the doors and over the priests. Suddenly these doors were opened, and the effect was magnificent beyond description. The immense throng of spectators within, bearing innumerable tapers, formed two lines, through which

the archbishop entered, advancing with his train to a throne near the centre. The profusion of lights in all parts of the cathedral, and, among others, those of the numerous chandeliers in the centre, the richness of the dresses, and the vastness of the assembly, filled us with astonishment. Hav-ing joined the suite of the archbishop, we accompanied the procession, and passed even to the throne ; here the police-officers permitted us to stand among the priests, near an embroidered stool of satin placed for the archbishop. The loud chorus, which burst forth at the entrance to the church, continued as the procession mov-ed towards the throne, and after the archbishop had taken his seat ; when my attention was for a moment called off, by seeing one of the Russians earnestly crossing himself with his right hand, while his left was em ployed in picking my companion's pocket of his handkerchief. Soon after, the archbishop descended, and went all round the cathedral ; first offering incense to the priests, and then to the people as he passed along. When he had returned to his seat, the priests, two by two, performed the same ceremony, beginning with the archbishop, who rose and made obeisance, with a lighted taper in his hand. From the moment the church doors were opened, the spectators had continued bowing their heads and crossing themselves, insomuch that some of the people seemed really exhausted by the constant motion of the head and hands.

' \Ve had now leisure to examine the dresses and figures of the priests, which were certainly the most striking we had ever seen. Their long dark hair, without powder, fell down in ringlets, or straight and thick, far over their rich robes and shoulders; their dark thirk beards also entirely covered their breasts. Upon the heads of

the archbishops and bishops were high caps, covered with gems, and adorned with miniature paintings set in jewels, of the crucifixion, the virgin, and the saints. Their robes, of various colored satin, were of the most costly embroidery, and even upon these were miniature pictures set with precious stones. Such, according to the consecrated record of ancient days, was the appearance of the high priests of old : holy men, standing by the tabernacle of the congregation in fine raiment, the workmanship of ' Be-zaleel, the son of Uri, the son of Hur, of the tribe of Judah.' It is said, there is a convent in Moscow, where women are entirely employed in working dresses for the priests. After two hours had been spent in various ceremonies, the archbishop advanced, holding forth a cross, which all the people crowded to embrace, squeezing each other nearly to suffocation. As soon, however, as their eagerness had been somewhat satisfied, he

returned to the sacristy, under a pretence of seeking for the body of Christ; where, putting on a plain purple robe he again advanced, exclaiming three times in a very loud voice, ‘ Christ is risen.’

‘ The most remarkable part of the ceremony now followed. ††† The archbishop, descending into the body of the church, concluded the whole ceremony by crawling round the pavement on his hands and knees, kissing the consecrated pictures, whether on the pillars, the walls, the altars, or the tombs ; the priests and all the people imitating his example. Sepulchres were opened, and the mummied bodies of incorruptible saints exhibited ; all of these underwent the same general kissing.’

Dr. Lyall reckons the population to have been in 1817, 312,000: of these 197,482 were males, and 114,518 females. In the same year the births amounted to 3437, and the deaths to 4463. In 1805, -when the total population is supposed to have been 208,883, the nobility were reckoned at 12,165; the servants attached to their houses at 14,445 ; the slaves resident for a time at 45,155 ; those constantly resident at 12,540; priests, deacons, &.c., with their wives, 3508 ; and foreigners 3811 ; of these last, upwards of 1000 were Germans.

A number of curious hackney-coaches are stationed in the streets. These vehicles are without tops, have mostly four wheels, and are provided either with a long bench, or one, two, or three separate seats, like armed chairs, placed sideways ; these fares are so reasonable that servants occasionally use them upon errands to distant parts of the city. The coachman generally drives at the rate of eight or nine miles in an hour.

‘There are such specimens of female loveliness among the nobility at Moscow,’ says Sir R. K. Porter, * that were I a Praxiteles, I need go no further to form my Venus ! Before I came into this country,’ he adds, ‘ I was led to believe that I should find the morals on a par with those of France. To me it seems totally the reverse. I never saw married people more happy, or apparently more affectionate towards each other. I never, in any country, met with young women more amiable and virtuous. Every country has

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its mauvais sujets; ††† but, from what I have been able to judge, Moscow, for a city whose sole ob-ject is pleasure, possesses less ofwhat is called fashionable vice than may be found in countries where more seeming austerity is practised.' Dr. Clarke and Dr. Lyall give, however, a much less favorable account of the state of morals here.

The manufactures of Moscow and its environs are silk, cotton, linen, paper, leather, and sugar; many of these establishments, being set on foot by individual noblemen, they are therefore liable to frequent fluctuations, and are often abandoned at the caprice of the founder or his family. Moscow is the grand entrepot of the internal of the Russian empire. Riga and St. Petersburg send hither goods by the Baltic ; Astracan affords a communication with the Caspian, and Odessa wi;h the Black Sea ; while furs and skins form here an important branch of commerce, both for domestic use and for export to the very heart of Asia. The Moskva is navigable in spring for barks, but in the rest of the year only for rafts.

Moscow possesses several scientific collections and societies : one of the most interesting of the former is an assemblage of Russian antiquities, and productions of India and China, made by a M. de Beauce. The medical profession is here filled in all its departments by foreigners.

The public officers are, besides those named, the military governor and the vice-governor, a civil governor, and the judges who preside in different courts, the business of which is conducted by written pleadings. There is here a criminal court ; a tribunal of commerce, and several civil courts ; together with boards for the management of public business. The number of ecclesiastics of all ranks is between 3000 and 4000.

The climate is subject to extremes, the thermometer frequently falling to 0†† of Fahrenheit, and even 10†† or 15†† below it ; while in summer it rises to 85††, 90††, and even 95††. Yet Moscow is not unhealthy ; a free circulation of air is al-ways secured : and the ground on which it stands is high.

This city was founded in the middle of the twelfth century, previous to which Kiev was the capital of Russia. It was enlarged in the thirteenth

and fourteenth centuries; and taken in 1382, after a short siege, by Tamerlane, it subsequently fell more than once into the hands of the Tartars. Their last attack on it took place in 1571, when they set fire to the city, but were unable to force the Kremlin, to which the czar retired. Moscow was after this rebuilt with great splendor. In 1611 the Poles set the town on fire, ‘so that there was nothing left but the castle.’ Yet, in 1636, Olearius describes it as about three leagues in circumference, and containing above 40,000 houses. ‘ It is, out of all question,’ he says, ‘ one of the greatest cities in Europe.’ It remained for a century and a half the sole capital of Russia. It continued the frequent residence of the court, until the commencement of thereien ofCatherine 11., and is now considered twelve times as large as its rival St. Petersburg. It is in a direct line, 397 miles southeast of St. Petersburg, and 1042 east by north of Vienna. Long. 37►► 33’ E., la!. ►►5►► ►►►J5’ 45►► N.

MOSELLE, department of the, France, is formed out of the former district of Messin, French Luxembourg, and part of Germain Lorraine, and derives its name from the river Moselle, which crosses it from south to north. The chief place of this prefecture is Metz, and it is divided into four arrondissements; Metz containing 138,336 inhabitants ; Briey 55,559; Sar-guemines 105,036, and Thionville 74,661 ; being a total population of 373,592 souls on a surface of 2790 square miles. It is subdivided into twenty-seven cantons, and 566 communes, yielding a territorial revenue of 16,528,000 francs, forming part of the third military division, having a royal court and bishopric at Metz, and consisting of four electoral arrondissements, that send seven members to the chamber of deputies. This department is bounded on the north and north-east by the kingdom of the Netherlands ; on the east by the department of the Lower Rhine ; on the south by that of the Meurthe, and on the west by that of the Meuse.

It is generally a mountainous and woody country ; but, along the course of the Moselle, this department presents some vast well cultivated plains, and fine meadow lands with good pasturage, and large fish ponds. < The elevated parts are covered with forests, that are stocked with game of all kinds. The hills are well planted with fruit trees, and those on the left bank of the Moselle are covered with vines that yield wine of a good quality ; the most esteemed is that of Say, Jussy, Dole, and St. Ruffine. The soil produces abundance of grain, vegetables, hops, flax, and hemp ; and the numerous nurseries that are found in this country prove the care of the inhabitants in

cultivating the best sorts of fruit. The cultivation is chiefly by horses, and the supply more than sufficient ; there are 132,070 hectars of forest land, chiefly oak and beech, and 4500 hectars of vineyurds, the average produce of each hectar of arable land being twenty-five francs, sixty-five cent. The country also abounds in great and small game, such as wolves, various birds of passage, ortolans, &c. There are mines of iron, manganese, and coal ; quarries of freestone, silicious graystone, quartz, plaster, crucible, and potters' clay, &c., likewise a few salt springs.

Manufactures are carried on here of clothing for the troops, common cloths, flannels, painted papers, hats, gold and silver lace, embroidery, pipes, glue, paper snuff-boxes, leather arms, scythe blades, and other ironmongery. There ;ire also cotton and woollen spinning factories, refining houses for beet root, distillerif-s, considerable manufactures of warlike weapons, numerous forges and blast furnaces, glass houses, delf potteries, tile and lime kilns, brass foundries, &c. A considerable trade is carried on in wine, brandy, confectionary, honey, bacon, hams, wool, iron in oars, plate iron, nails, and building wood. The principal rivers are the Moselle and the Sarre navigable, the Chiers, the two Nieds, the Seille, the Orne, the Crune, and the Albe, and it is crossed by the great roads from Verdun, Nancy, Chalons, Strasburg, and Luxembourg.

MosnUT, a considerable river of Frawi-. rises at the foot of the Tnvo. :il-or.; the ►►ii,ar►►- < >, Mus-

sang, in the arrondissement of Remiremont, department of the Vosges. Passing thence to Ra-monchamp, Epinal, Chatel, Charmes, Bayon, Pont St. Vincent, Toul, Frouard, Pont-a-Mous-son, Metz, Thionrille, and Sierck, below which it enters the grand duchy of the Lower Rhine, waters Treves, Berncastel, and Trarbach, and falls into the Rhine at Coblentz. lu its course, which is about 390 miles, it receives the waters of the Madon, the Meurthe, the Seille, the Ormes, the Sarre, and numerous other rivers. It begins to be practicable for floats near Dominar-tin in the department of the Vosges, and becomes navigable

at Frouard in the Meurthe. The goods transported along it may be seen in the description of the department of the same name. It mostly flows between rocks over a sandy and gravelly bottom, and that with great rapidity ; its waters are delightfully clear and fructifying.

MOSES, Ileb. Httnn, *i.e.* drawn up, the son of Amram, and great-grandson of Levi, was born in the year 1571 B.C. Pharaoh king of Egypt, perceiving that the Hebrews were become a formidable nation, had issued an edict commanding all the male children to be put to death. .Toohe-bed, the mother of Moses, having, to avoid this cruel edict, concealed her son for three months, at length made an ark of bulrushes, daubed it with pitch, laid the child in it, and exposed him on the banks of the Nile. Thermuthis, the king's daughter, walking by the river's side, perceived the floating cradle, commanded it to be brought to her, and, struck with the beauty of the child, determined to preserve his life. In three years afterwards she adopted him for her son, called his name Moses, and caused him to be instructed in all the learning of the Egyptians. But his father and mother, to whom he was restored by a fortunate accident, were at still greater pains to teach him the history and religion of his fathers. Many things are related by historians concerning the first period of Moses's life, which are not recorded in the Old Testament. According to Josephus and Eusebius, he made war on the Ethiopians, and completely defeated them. They add, that the city Saba, in which the enemy had been forced to take refuge, was betrayed into his hands by the king's daughter, who became deeply enamoured of him, when she beheld from the top of the walls his valorous exploits at the head of the Egyptian army. But the truth of this expedition has been doubted. But from the sacred records we learn events of much greater importance, which commenced in the fortieth year of Moses's age. His leaving the court of Pharaoh, and visiting his oppressed brethren; his killing one of their oppressors, and consequent flight to Midian ; his forty years' residence with Jethro, marriage with his daughter Zipporah, and birth of his son Gershom ; his vision of the burning, but unconsumed bush; his mission by the Almighty to Pharaoh ; his hesitation, and the miracles wrought with his rod to encourage him; his meeting with his brother Aaron ; their reception by the Egyptian tyrant, and consequent increase of the 1 lebrews' tasks; their miracles wrought to convince him without effect; the threatenings and execution of the ten plagues; 1. By the change of the waters of Egypt into blood ; 2. By

swarms of frogs; 3. Of lice; 4. Of flies; 5. By pestilence among the cattle ; 6. By ulceis and fiery boils; 7. By a dreadful storm of thunder,

lightning, and hail; 8. By swarms' of locusts; 9. By thick darkness ; and, 10, by the death of the first-born ; with Pharaoh's reluctant consent to liberate the Hebrews ; his pursuit of them, and destruction in the Red Sea; are particularly recorded in Exod. ii. ††† xx. Profane authors, who have written of Moses, seem to have been partly acquainted with these mighty wonders. That he performed miracles has been allowed by many, by whom he was considered as a famous magician ; and he could scarcely appear in any other light to men who did not acknowledge him for the messenger of the Almighty. Both Diodorus and Herodotus mention the distressed state to which Egypt was reduced by these terrible calamities. The subsequent history of Moses and the Israelites we have from the same authentic records. Their journeyings and various encampments in the wilderness; their battles with the Amalekites; their arrival at Mount Sinai; Moses's recept on of the law from the Almighty ; the idolatry of the people while he was on the mount, which made him break the tables; their punishment; his receipt of the two tables a second time; his illuminated appearance on his return; his erection and consecration of the tabernacle, which served instead of a temple till the building of the famous one by Solomon ; his consecration of Aaron and his sons, and the Levites, to the priesthood ; his theocratic government of the Hebrews, under the immediate authority and direction of the Almighty, with their repeated murmurings ; his dying blessing upon them, with his prophecy of our Saviour; his distant view of the promised land from Mount Pisgah, and his death, are recorded, with other important particulars, in the last four books of the Pentateuch. He died, without sickness or pain, in the 120th year of his age, and 145! years B. C. Moses is incontestably the author of the first five books of the Old Testament, which are acknowledged to be inspired by the Jews, and by Christians of every persuasion. Thomas Paine and others, however, have denied that Moses was the author of these books, because he always speaks of himself in the third person. But this manner of writing is not peculiar to Moses ; it occurs in several celebrated ancient historians, such as Xenophon, Caesar, Josephus, &c., who have thus evidenced more modesty and good sense than some modern historians, whose egotism is altogether disgusting.

MOSES (Chorenensis), an historian and geographer, archbishop of Chorene in Armenia A. D. 462. He translated several Greek works into the Armenian, was well acquainted with the Syriac, and a proficient in music and poetry. His chief work, A History of Armenia, from the deluge to the middle of the fifth century, was published with a Latin version by John and William Whiston, sons of William Whiston, in 1736, and though mixed up with fable contains many authentic

particulars not elsewhere to be found. He was also the author of an Abridgment of Geography, published at Amsterda 1668, and several canticles, which are sung i:i

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Armenian on the anniversary of Christ's presentation.

MOSES ˆEGYPTIUS. See MAIMONIDES.

MOSHEIM (John Laurence), an illustrious German divine, born in 1695, of a noble family, which might have opened to his ambition a fair path to civil promotion ; but his thirst after knowledge, and his taste for sacred literature, induced him to devote his talents to the church. The German universities loaded him with literary honors; the king of Denmark invited him to Copenhagen : the duke of Brunswick called him thence to Helmstadt, where he filled the academical chair of divinity, was made ecclesiastical counsellor to the court, and presided over the seminaries of learning in Wolfenbuttle and Blanckenburgh. To give a degree of lustre to the university of Gottingen, Dr. Mosheim was placed at the head of it, as chancellor ; and he died there, universally lamented, in 1755. In judgment, taste, eloquence, erudition, and philosophy, he had certainly very few superiors. His principal work is his Ecclesiastical History, from the birth of Christ to the beginning of the eighteenth century, written in Latin. It was translated into English, and accompanied with notes and chronological tables, by Archibald Maclain, D.D., 1758, in 5 vols. 8vo.

MOSKVA, a river of Moscow, which gives name to the capital, and flows through it in a winding channel ; but, excepting in spring, is only navigable for rafts. It receives the Yarna in the Semlianogorod, and the Neglina at the western extremity of the Kremlin ; the beds of botli these last-mentioned rivulets are in summer little better than dry channels.

MOSQUE, n. i. Fr. mosqvce ; Ital. mo&chia ; Arab, musjid. A Mahometan temple, or place of divine worship.

Accordingly, at the aforesaid times, of which pub-lic notice is given by the muedhekins, or criers, from the steeple of their mosques (for they use no bells) every conscientious moslem prepares himself for prayer, which he performs either in the mosque or any other place, provided it be clean, after a prescribed form. Sale's Koran.

MOSQUES, are square buildings, generally constructed of stone. Before the chief gate there is a square court paved with white marble; und low galleries round it, whose roof is supported by marble pillars.

In these galleries the Turks wash themselves before they go into the mosque. In each mosque there is a great num-ber of lamps; and between these hang many crystal rings, ostrich's eggs, and other curiosities, which, when the lamps are lighted, make a fine show. As it is not lawful to enter the mosque with stockings or shoes on, the pavements are covered with pieces of stuff sewed together, each being wide enough to hold a row of men kneeling, sitting, or prostrate. The women are not allowed to enter the mosque, but stay in the porches without. About every mosque there are six high towers, called minarets, each of which has three little open galleries, one above another : these towers, as well as the mosques, are covered with lead, and adorned with gilding and other ornaments; and thence, instead of a bell, the people are called to prayers by certain

officers appointed for that purpose. Most of the mosques have a kind of hospital belonging to them, in which travellers of what religion soever are entertained three days. Each mosque has also a place called tarbe, which is the burying-place of its founders; within which is a tomb six or seven feet long, covered with green vel-vet or sattin ; at the ends of which are two tapers, and round it several seats for those who read the koran, and pray for the souls of the deceased. The mosque of St. Sophia, at Constantinople, is equally celebrated throughout Christendom and Islam for its beauty, magnitude, and splendor. If the Arab temples astonish by their huge extent and prodigious colonnades supporting their arches and vaults, those of the Turks possess another kind of claim to notice and admiration, in the grandeur and height of their various cupolas. Every province of Turkey has its own particular style and taste with regard to these religious structures ; and as the Moresque architecture possesses no fixed rules, deeming lightness and elegance alone to be the fundamental laws of the art, the architect is allowed to follow the bent of his own fancy freely. The ornaments of the Turkish mosques, although perhaps redundant and superfluous, yet have a species of harmony among themselves, and, united, present a general effect which is in no slight degree pleasing and impressive. M. Denon bestows high commendations on many of these buildings and their constructors, who, he says, are able to achieve wonders, considering the still imperfect and inferior nature of their tools and materials.

MOSQUITOS, or the Mosquito Bank, is the name of a cluster of islands, near the coast of Honduras, which gives name to a tract of country on the continent, the Mosquito shore. See below. Loner. 82►► 10' W., lat. 14►► 30' N.

MOSQUITO SHOUE, a tract of country lying along part of the northern and eastern shore of Honduras, claimed by the British. We held this country for eighty years, and abandoned it in 1787 and 1788 : the Spaniards, however, call it a part of Honduras, and claim it as such. It is an unhealthy, hot country, chiefly inhabited by Mosquito Indians, formerly a powerful and numerous race; but European diseases and rum have diminished their numbers. They inhabit, however, nearly the whole coast of Honduras, and have a large settlement near Cape Gracios a Dios. This has, however, been the subject of many enquiries and disputes, as these Indians differ in their persons from the other natives, and it is said by many authors that they are the descendants of the slaves of a Guinea ship, wrecked near this cape. They are called the Samboc Mosquitoes.

MOSS, n.s. & v. ►►.} Sax. meoj-; French

Moss'i N ESS, n. s. ►► mousse ; Ital. mots ; Belg.

MOSSY, adj. r mosch ; Latin muscm.

A plant once considered an excrescence on trees : to cove" with moss. Mossiness is the state of being covered or overgrown with this plant. Mossy, abundant in, or overgrown with moss.

An oak whose boughs were messed with age, And high top bald with dry antiquity. Shaksjvarr.

Moss is a kind of mould of the earth and lives ;

but it may be better sorted as a rudiment of germination. Bacon.

Old trees are more mossy far than young ; for that the sap is not so frank as to rise all to the boughs, but tireth by the way, and putteth out moss.

Id. Natural History.

The herbs withered at the top, showeth the earth to be very cold, and so doth the mosiinest of trees.

Bacon.

Neither doth penitent Manasseh build God a new altar, but he repairs the old ; which by long disuse lay waste, and was mossy and mouldered with age and neglect. Bp. Hail.

About the mossy brooks and springs, And all inferior beauteous things. Cowley. Houses then were caves, or homely sheds With twining oziers fenced, and most their beds.

Dry den.

Such mosses as grow upon walls, roofs of houses, and other high places, have seeds that, when shaken out of their vessels, appear like vapour or smoke.

Ray on the Creation. The mossy fountains and the sylvan shades

Delight no more. Pope's Messiah.

Though moss was formerly supposed to be only an excrescence produced from the earth and trees, yet it is no less a perfect plant than those of greater magnitude, having roots, flowers, and seeds, yet cannot be propagated from seeds by any art. The botanists distinguish it into many species ; it chiefly flourishes in cold countries, and in me winter season, and is many times very injurious to fruit trees ; the only remedy in such cases, is to cut down part of the trees, and plough up the ground between those left remaining; and in the spring, in moist weather, you should with an iron instrument scrape off the most,

Miller.

Moss, or MOSSES, in botany. See Muscr.

Moss, on trees, in gardening. The growth of large quantities of moss on any kind of tree is a distempei very prejudicial to its increase, and greatly damages the fruit of the trees of many orchards. The usual remedy is the scraping it off from the body and large branches by a kind of wooden knife that will not hurt the bark, or with a piece of rough hair-cloth, which does very well after a soaking rain. But the most effectual cure is the taking away the cause, by draining off all the superfluous moisture from about the roots of the trees ; and may

be guarded against in the first planting, by not setting them too deep. If trees stand too thick in a cold ground, they will always be covered with moss. The best remedy is to thin them. When the young branches of trees are covered with a long and shaggy moss, it will utterly ruin them ; and there is no way to prevent it but to cut off the branches near the trunk, and even to take off the head of the tree if necessary ; for it will sprout again ; and if the cause be in the mean time removed by thinning the plantation, or draining the land and stirring the ground well, the young shoots will continue clear after this. If the trees are covered with moss in consequence of the ground being too dry (as this will happen from either extreme in the soil), the proper remedy is laying mud from the bottom of a pond or river pretty thick about the root, opening the ground to some distance and depth to let it in. This will not only cool it, and prevent its giving growth to any great quantity of moss, but will also prevent any other mischief which fruit trees

are liable to in dry grounds, by the falling of the fruit too early. The mosses which cover the trunks of trees, as they always are most vigorous on the side which points to the nonh, jf only produced on that side serve to preserve the trunk of the tree from the severity of the north winds, and direct the traveller in his way, by always plainly pointing out that part of the compass.

Moss is also a name given by some to the boggy ground in many parts of England, otherwise called a bog or fen. In many of these grounds, as well in Britain and Ireland as in other parts of the world, there are found vast numbers of trees standing with their stumps erect, and their roots piercing the ground in a natural posture as when growing. Many of these trees are broken or cut off near the roots, and lie along, usually in a north-east direction. To account for this many authors have resolved it into the effect of the deluge in the days of Noah; but this conjecture is proved false by many decisive arguments. The waters of this deluge might indeed have washed together a great number of trees, and buried them under loads of earth ; but then they would have lain irregularly and at random ; whereas they mostly lie lengthwise from south-west to north-east, and the roots all stand in their natural perpendicular posture, as close as the roots of trees in a forest. Besides, these trees are not all in their natural state, but many of them have evident marks of human workmanship upon them, some being cut down with an axe, some split, and the wedges still remaining in them ; some burnt in different parts, and some bored through with holes. These things are also proved to be of a later date

than the deluge, by other relics found among them, such as ancient utensils and coins of the Roman emperors. It appears from the whole, that all the trees, which we find in this fossile state, originally grew in the very places where we now find them, and have only been thrown down and buried there, not brought from other places. It may appear indeed an objection to this opinion, that most of these fossile trees are of the fir kind ; and that Caesar says expressly, that no firs grew in Britain in his time : but this is easily answered by observing, that these trees, though of the fir kind, yet are not the species usually called the fir, but pitch tree; and Csesar has no where said that pitch trees did not grow in England. In Hatfield Marsh, where such vast numbers of the fossile trees are now found, there has evidently once been a whole forest of them growing. The last of these was found alive, and growing in that place within these last eighty years, and cut down for some common use. It is also objected by some, to the system of the firs growing where they are found fossile, that these countries are all bogs and moors, whereas these trees grow only in mountainous places. But this is a mistake ; for though in Norway, in Sweden, and some other cold countries, the fir kinds all grow upon barren and dry rocky mountains, yet in warmer places they are found to thrive as well on wet plains. Such are found plentifully in Pomerania, Livonia, and Courland,&c.; and in the west parts of New England

there are vast numbers of fine stately trees of them in low grounds. The truth seems to be, that these trees love a sandy soil ; and such is found at the bottoms of all the mosses where these trees are found fossile. The roots of the fir kind are always found fixed in these ; and those of oaks, where they are found fossile in this manner, are usually found fixed in clay : so that each kind of tree is always found rooted in the places where they stand in their proper soil ; and there is no doubt but that they originally grew there. When we have thus found that ail fossile trees we meet with once grew in the places where they are now buried, it is plain that in these places there were once noble forests, which have been destroyed at some time ; and the question only remains how and by whom they were destroyed. This, we have reason

to believe, from the Roman coins found among them, was done by the people of that empire, when they were established in Britain. Caesar tells us that, when their armies pursued the wild Britons, these people always sheltered themselves in the miry woods and low watery forests; and Cassibelan and his Britons, after their de-feat, passed the Thames, and fled into such low morasses and woods, that there was no pursuing them. We find that the Silures secured themselves in the same manner when attacked by Ostorius and Agricola. The same thing is re-cordec1 of Venutius, king of the Brigantes, who fled, to secure himself, into the boggy forests in the midland part of this kingdom : and Herodian expressly says, that, while the Romans were pushing their conquests in these islands, it was the custom of the Britons to secure themselves in the thick forests which grew in their boggy and wet places ; and, when opportunity offered, to issue out thence and fall upon the Romans. The consequence of all this was the destroying of those forests; the Romans, finding themselves so harassed by parties of the natives issuing out upon them at times from these forests, gave orders for the cutting down and destroying all the forests in Britain which grew on boggy and wet grounds. These orders were punctually executed ; and to this it is owing, that we can now hardly believe that such forests ever grew in Britain as are now found buried in mosses. The Roman historians all agree, that, when Suetonius Paulinus conquered Anglesea, he ordered all the woods to be cut down there, after the manner of the Roman generals in England : and Galen tells us, that the Romans, after their conquest in Britain, kept their soldiers constantly employed in cutting down forests, draining marshes, and paving bogs. Not only the Ro-man soldiers were employed in this manner, but all the native Britons made captives in the wars were obliged to assist in it : and Dion Cassius says, that the emperor Severus lost no fewer than 50,000 men, in a few years, in cutting down the woods and draining the bogs of this island. It is not then to be wondered at, that such numbers executed the immense destruction which we find in these buried forests. One of the greatest subterranean treasures of wood is that near Hatfield ; and it is easy to prove that these people, to whom this havock is thus attributed, were

upon the spot where these trees now lie buried. The common road of the Romans, out of the south into the north, was formerly from Linduro (now Lincoln) to Segelochum (Little Burrow upon Trent), and thence to Danum (now Don-caster), where they kept a standing garrison of Crispinian horse. A little off on the east and north-east of this road, between the two last named towns, lay the borders of the greatest forest, which swarmed with wild Britons, who were

continually making their sallies out. and their retreats into it again, intercepting their provisions, taking and destroying their carriages, killing their allies and passengers, and disturbing their garrisons. This at length so exasperated the Romans that they were determined to destroy it ; and, to do this safely and effectually, they marched against it with a great army, and encamped on a great moor near Finningly, where the fortifications yet remain. There is a small town in the neighbourhood called Osterfield ; and as the termination field seems to have been given chiefly in remembrance of battles fought near the towns, whose names end with it, it is probable that a battle was fought here between the Britons who inhabited this forest and the Roman troops under Ostorius. The Romans slew many of the Britons, and drove the rest back into this forest, which at that time overspread all this low country. On this the conquerors, taking advantage of a strong south-west wind, set fire to the pitch trees, of which this forest was principally composed; and, when the greater part of the trees were thus destroyed, the Roman soldiers and captive Britons cut down the remainder, except a few large ones, which they left standing as memorials of the destruction of the rest. These single trees, however, could not stand long against the winds ; and these, falling into the rivers which ran through the country, interru ited their currents; and the water, then overspreading the level country made one great lake, and gave origin to the mosses or moory bogs which were afterward* formed there, by the workings of the waters, the precipitation of earthy matter from them, and the putrefaction of rotten boughs and branches of trees, and the vast increase of water-moss, and other such plants which grow in prodigious abundance in all these places. Thus were these burnt and felled trees buried under a new-formed spongy and watery earth, and afterwards found on the draining and digging through this earth again. Hence Roman weapons and Roman coins are found among these buried trees ; and hence among the buried trees some are found burnt, some chopped and hewn ; and hence it is that the bodies of the trees all lie by their proper roots, and with their tops lying north-east, that is, in that direction n. which a south-west wind would blow them down : hence, also, it is, that some of the trees are found with their roots lying flat, these being not cut or burnt down, but blown up by the roots afterwards when left single ; and it is not wonderful that such trees as these should have continued to grow even after their fall, and shoot up branches from their sides, which might easily grow into high trees. Upon this hypothesis it is also easily explained,

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wny the moor-soil in the country is in some places two or three yards thicker than in others, or higher than it was formerly, since the growing up of peat, earth, or bog-ground, is well known, and the soil added by overflowing of waters is not a little. As the Romans were the destroyers of this great and noble forest, so they were probably also of the several other ancient forests ; the ruins of which furnish us with the bog-wood of Staffordshire, Lancashire, Yorkshire, and other countries. But as the Romans were not much in Wales, in the Isle of Man, or in Ireland, it is not to be supposed that forests cut down by these people gave origin to the fossile wood found there ; but though they did not cut down these forests, others did ; and the origin of the bog-wood is the same with them and with us. Holingshed informs us, that Edward I. being not able to get at the Welsh, because of their hiding themselves in boggy woods, gave orders at length that they should all be destroyed by fire, and by the axe ; and doubtless the roots and bodies of trees found in Pembrokeshire under ground are the remains of the execution of this order. The fossile wood in the bogs of the Isle of Man is doubtless of the same origin, though we have not any accounts extant of the time'or occasion of the forests there being destroyed ; but, as to the fossile trees of the bogs of Ireland, we are expressly told, that, when Henry II. conquered that country, he ordered all the woods to be cut down that grew in the low parts of it, to secure his conquests, by destroying the places of resort of the rebels.

In the Philosophical Transactions we have an account of a moving moss near Churchtown ia Lancashire, which greatly alarmed the neighbourhood as miraculous. The moss was observed to rise to a surprising height, and soon after sunk as much below the level, and moved slowly towards the south. A very surprising instance of a moving moss is that of Solway in Scotland, which happened in 1771, after severe rains, which had produced terrible inundations of the rivers in many places. About 800 acres of arable ground were overflowed by moss, and the habitations of twenty-seven families destroyed. Tradition has preserved the memory of a similar inundation in Monteith in Scotland. A moss there altered its course in one night, and covered a great extent of ground.

Moss, a town of the south of Norway, in the bishopric of Christiania, on a large bay which allows ships of considerable size to come close to

the town. It has 3000 inhabitants, and a brisk export trade in deal. There are about thirty saw-mills at the mouth of an adjacent stream : also a large iron work and cannon foundry. Thirty-eight miles south of Christiania, and seventeen north of Frederickstadt.

Moss (Dr. Robert), dean of Ely, was born at Gillingham in Norfolk in 1666. He was bred at Bennet College, Cambridge, where he early acquired great reputation. He became preacher to the society of Gray's Inn, London, in 1698 ; and assistant to Dr. Wake at St. James's in 1699. He was chaplain to king William III., queen Anne, and king George I. ; and when queen Aine visited the university of Cambridge, April

5th, 1705, he was created D. D. In 1709 he was chosen lecturer by the parishioners of St. Lawrence Jewry, which he held till 1727. In 1712 he was nominated by the queen dean of Ely ; and in 1714 he was collated rector of Glis-ton by bishop Robinson. The gout deprived him of the use of his limbs for some of the last years of his life. He died in 1729, in his sixty-third year, and was buried in his own cathedral. Eight volumes of his sermons were published by Dr. Snape, and he is also said to have been the author of a pamphlet printed in 1717, entitled The Report Vindicated from Misreports ; being a defence of the bishops and clergy of the lower house of convocation, concerning their consultations about the bishop of Bangor's writings. He wrote also some Latin and English poems.

MOSS-TROOPERS, a rebellious sort of peo-ple in the north borders of England, who lived by robbery and rapine, not unlike the lories in Ireland, the huccaniers in Jamaica, or banditti of Italy. The counties of Northumberland and Cumberland were charged with a yearly sum, and a command of men, to be appointed by justices of the peace, to apprehend them.

MOSSOP, Henry; an eminent tragic actor, born in Ireland, 1729. He was the son of a clergyman who held a rectory in the province of Connaught, and was educated at Trinity college, Dublin, where he took a degree. He made his first appearance on the stage at Dub-lin. He afterwards removed to London, where, next to Garrick and Barry, he was esteemed the principal tragedian of his time. In 1761, he became manager of one of the Dublin theatres, in opposition to Barry and Woodward ; and the rivalry proved ruinous to all parties, and especially so to Mossop, whose vanity and intemperate conduct 'having at length excluded him from the exertion of his professional

abilities on the metropolitan stage, he was reduced to great distress, and died in absolute penury, at Chelsea, in November, 1773.

MOST, adj., adv., Sen. s.l Sax.maer-t; Swed.

MOST'LY, adv. J nitest ; Goth, mest,

MOST'WHAT, adv. \moust; Belg.meest;

Teut. meist or merest. Superlative of some, great, and much. See MORE. Greatest in quantity, size, or number ; as an adverb, in the greatest degree ; a particle denoting superlative-ness : as a substantive, the greatest number ; value ; degree of any kind ; the utmost. Mostly is for the greatest part. Mostwhat, an obsolete word for the most part.

A Spaniard will live in Irish ground a quarter of a year, or some months at the most. Bacon.

God's promises being the ground of hope, and those promises being but seldom absolute, mnstuhat conditionate, the Christian grace of hope must be proportioned and attemperate to the promise ; if it exceed that temper and proportion, it becomes a tympany of hope. Hammond.

It (an oath) is an invocation of God, as a most faithful witness concerning the truth of our words, or the sincerity of our meaning. Harrow.

He for whose only sake, Or most for his, such toils I undertake.

Dryden.

MOTACILLA.

A covetous man makes the most of what he has, anu can get, without regard to Providence or Na-ture. L'Ettrange.

Whilst comprehended under that consciousness, the little finger is as much a part of itself as what is mast so. Locke.

That which will most influence their carriage will be the company they converse with, and the fashion of those about them. Id.

Many of the apostles' immediate disciples sent or carried the books of the four evangelists to most of thechurcnes they had planted. Addison.

Garden fruits which have any acrimony in them, and most sorts of berries, will produce diarrhoeas.

Arbuthnot.

Gravitation, not being essential to matter, ought not to be reckoned among those laws which arise from the disposition of bodies, such as most of the laws of motion are. Cheyne.

The faculties of the supreme spirit most certainly may be enlarged without bounds. Id.

He thinks most sorts of learning flourished among them, and I, that only some sort of learning was kept alive by them. Pope.

The spring time of our years Is soon dishonoured and defiled in most By budding ills, that ask a prudent hand To check them. Cowper.

MOSTAR, an inland town of Bosnia, in the north-west of European Turkey, and the chief place of the district or rather province of Herzegovina. It has a remarkable old Roman bridge over the Narenta, and contains 9000 inhabitants, and a fine manufacture of arms.

MOSUL, a large town of the pachalic of Bagdad, Asiatic Turkey. It stands on the west bank of the Tigris, and the river, which is 300 feet wide, sometimes flows with great rapidity to the level of the houses. Its ornaments are a college, the tomb of sheik Abdul Kassin, and the remains of a beautiful mosque built by sultan Nouredclin of Damascus. The coffee-houses, baths, khans, and bazaars, are handsome: but the Kara Serai, or black palace, being in ruins, the pacha resides in a cluster of small buildings. The castle, occupying an artificial island in the Tigris, is now very much decayed ; but the city has still a stone wall and seven gates. The houses are built partly of brick and partly of stone; and, as tim-ber is scarce and dear, the ceilings of the apartments are all vaulted. The inhabitants are a mixture of Turks, Curds, Jews, Nestorians, Armenians, and Arabs. The place forms an independent government, under the command of a pacha of two tails. Population 35,000. To the north, on the opposite side of the river, is Nunia, supposed to occupy the site of the ancient Nineveh. Lat. 36►► 21' N.

MOTACILLA, in ornithology, the wagtail and warbler, a genus of birds of the order of passeres ; distinguished by a straight weak bill of a subulated figure, a tongue lacerated at the end, and very slender legs. There are about 200 species, besides varieties. The most remarkable are these : ###

1. M. alba, the white wagtail, frequents the sides of ponds and small streams, and feeds on insects and worms. The head, back, and upper and lower side of the neck, as fur as the breast, are black ; in some the chin is white, and the throat marked with a black crescent ; the breast

and belly are white; the quill-feathers are du##ky ; the coverts black, tipt and edged with while. The tail is very long, and always in motion. Mr. Willoughby observes that this species shifts its quarters in the winter, moving from the nortli to the south of England. In spring and autumn it is a constant attendant on the plough, for the sake of the worms thrown up by that instrument. These birds make their nest on the ground, composed of dry grass, fine fibres of roots, and moss, lined within with hair or feathers. The eggs are five in number, white, spotted with brown ; and for the most part there is only one brood in a year.

2. M. atricapilla, the black-cap, is smaller than the linnet, or even the pettychaps. The bill is brown ; the top of the head is black ; and the upper parts of the body are of a greenish ash-color; the sides of the head and under parts are gray, changing to very light gray, or almost white, towards the vent ; the quills and tail are cinereous brown, margined with the same color as the up-per parts ; the legs are lead-colored, and the daws black. This species is pretty common in England, and elsewhere in Europe,' as far as Italy ; in all which places it breeds, coming in spring and retiring in September. In Italy it builds twice in the year; with us only once. The nest, which is generally placed in some low bush near the ground, is composed of dried stalks, mixed with a little wool and green moss round the verge; the inside lined with the fibres of roots, thinly covered with black horsehair. The eggs are five in number; of a pale reddish brown, mottled with a deeper color, and sprinkled with a few dark spots. The male and the female sit by turns during incubation ; and the young very early leap out of the nest, especially if any one approaches it, and forsake it for ever. The food is chiefly insects; but in defect of these they eat the fruit of spurge laurel, service, and ivy ; and seem to be even fond of the last, as they much frequent trees overgrown with it. The song is

much esteemed, in many things al-most equalling the nightingale itself; scarcely deficient, except in the delightful variety of note. Hence it has been named the mock nightingale.

3. M. cyanea, the superb warbler, a most beautiful species, is five inches and a half long. The bill is black ; the feathers of the head are long, and stand erect like a full crest; from the forehead to the crown they are of a bright blue ; thence to the nape black like velvet ; through the eyes from the bill there runs a line of black; and beneath the eye springs a tuft of the same blue feathers ; beneath which, and on the chin, it is of a deep blue, almost black, and feeling like velvet: on the ears is another patch of blue, and across the back part of the head a band of the same; the whole giving the head a greater appearance of bulk than is natural: the hind part of the neck, and upper parts of the body and tail, are of a deep blue black; the under parts pure white ; the winjis are dusky , the shafts of the quills chestnut; the legs dusky brown; the claws black. Tins species inhabits Van Die-men's Land. The fuuale is entirely destitute o' all the fine blue colors, both pale and ciar*, W

which the male is adorned, except that there is a very narrow circle of azure round each eye, apparently on the skin only ; all the upper feathers consist of shades of brown, and the whole throat and belly is pure white. Except from the shape and size, the female would not be suspected to belong to the same species as the male : the epithet of superb therefore applies very ill to her.

4. M. ficedula, the epicurean warbler, is in length five inches : the upper parts are gray brown; the under parts grayish-white, with a tinge of brown on the breast ; and the legs are blackish. This species is much esteemed on the continent for the delicate flavor of its flesh. Their chief food is insects ; except in autumn, when they make great havock among the figs and grapes ; whence, it is supposed, their great delicacy arises. It is not found in England, but in most of the intermediate parts between Sweden and Greece; where, however, it is only a summer inhabitant, retiring still farther south at the approach of winter. In the isles of Cyprus and Candy they abound greatly, insomuch as to be an article of commerce. They transport them in vessels filled with vinegar and sweet herbs : the Isle of Cyprus alone collects 1000 or 1200 of these pots every year.

5. M. flava, the yellow wagtail, migrates in the north of England, but in Hampshire continues the whole year. The male is a bird of great beauty : the breast, belly, thighs, and vent feathers, being of a most vivid and lovely yellow: the throat is marked with some large black spots ; above the eye is a bright yellow line : beneath that, from the bill cross the eye, is another of a dusky hue ; and beneath the eye is a third of the same color : the head and upper part of the body are of an olive green, which brightens in the coverts of the tail ; the quill-feathers are dusky ; the coverts of the wings olive colored ; but the lower rows dusky, tipt with yellowish-white ; the two outmost feathers of the tail half white ; the others black. The colors of the female are far more obscure than those of the male : it wants also those black

spots on the throat. It makes its nest on the ground, in corn fields: the outside is composed of decayed stems of plants and small fibrous roots; the inside is lined with hair: it lays five eggs.

6. M. hippolais, the petty chaps, is somewhat less than a linnet. The bill is short ; the upper mandible black, the under bluish; above and below the eye there is a yellowish line; the head, neck, and upper parts, are of a greenish ash-color; the quills and tail are of a mouse color, with greenish edges and black shafts; and the under wing-coverts are yellow; the belly is of a silvery white; the breast darker and tinged with yellow; the legs are bluish, or lead-colored. Tins species is frequent in several parts of England, and makes a nest of an arched form, composed of dry twigs, with a little moss, and thickly lined with feathers : it is placed on the ground, under a tuft of grass or at the bottom of a bush. The eggs are five in number, white, sprinkled all over with small red spots, most so at the largest end. In Dorsetshire it is known ov the name of hav-bird. In Yorkshire it is

called the beam-bird, from its nestling under beams in out-buildings.

7. M. lucinia, the nightingale, exceeds in size the hedge sparrow. The bill is brown : the irides are hazel ; the head and back pale tawny, dashed with olive ; the tail of a deep tawney red ; the under parts are pale ash-color, growing white towards the vent; the quills cinereous brown, with the outer margins reddish-brown ; the legs cinereous brown. The male and female are very similar. This bird, the most famed of the feathered tribe for the variety, length, and sweetness of its notes, is migratory, and supposed to be an inhabitant of the Asiatic regions during such times as it is not to be found in Europe. It is met with in Siberia, Sweden, Germany, France, Italy, and Greece; but in all those places it is migratory, as in England. Has-selquist speaks of it as being in Palestine; and Fryer ascertains its being found about Chul minor in Persia ; it is also spoken of as a bird of China, Kamtschatka, and Japan ; at which last place they are much esteemed, and sell dear; as they are also at Aleppo, where they are ‘ in great abundance kept tame in houses, and let out at a small rate to such as choose it in the city, so that no entertainment is made in the spring without a concert of these birds.’ They are not found in America, though several of their birds improperly bear that name ; and it is uncertain whether they are found in Africa. These birds visit Britain in the beginning of April, and migrate in August; and during their continuance their range is confined to but a part of the island : they are not found in Scotland, Ireland, or North Wales, nor in any of the northern counties except

Yorkshire; and do not migrate so far to the west as Devonshire and Cornwall. They are solitary birds never uniting even into small flocks: and, in respect to the nests, it is very seldom that two are found near each other. The female builds in some low bush or quickset hedge well covered with foliage, for such only this bird frequents; and lays four or five eggs, of a greenish-brown. The nest is composed of dry leaves on the outside, mixed with grass and fibres, lined with hair or down within, though not always alike. The female alone sits on and hatches the eggs, while the male not far off regales her with his delightful song; but, as soon as the young are hatched, he commonly leaves off singing, and joins with the female in the task of providing for and feeding them. After the young can provide for themselves the old female provides for a second brood, and the song of the male recommences. They have been known to have three broods in a year, and in the hot countries even four. These birds are often brought up from the nest for the sake of their song. They are likewise caught at their first coming over; and, though old birds, yet by management can be made to bear confinement, and to sing equally with those brought up from the nest. 'None but the vilest epicure/ Mr. Latham remarks, 'would think of eating these charming songsters ; yet we are told that their flesh is equal to that of the ortolan, and they are fatted in Gascony for the table.' Every schoolboy must have read of Heliogabalus's eating nightingales' tongues ; and that famed dish

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coming in October, and departing northward in spring. The note of this bird would be thought pleasant, did it not re-mind us of the approach of winter ; beginning with the first frosts, and continuing .till a little time in spring. Its often repeating the words tit, tit, tit, has occasioned its being called tittling ; a name it is known by in many places.

9. M. oenanthe, the wheat-ear, is in length five inches and a half. The top of the head, hind part of the neck, and back, are of a bluish-gray ; and over the eye a streak of white ; the under parts of the body yellowish-white, changing to pure white at the vent ; the breast is tinged with red ; and the legs are black. This species is met with in most parts of Europe, even as far as Greenland; and specimens have also been received from the East Indies. It visits England annually in the middle of March, and leaves us in September. It chiefly frequents heaths. The nest is usually placed under the shelter of some turf, clod, stone, or the like, always on the ground, and often in some deserted rabbit-bur- row. It is composed of dry grass or moss, mixed with wool, rabbit's fur, &c., or lined with hair and feathers. The eggs are from five to eight in number, of a light blue, with a deeper blue circle at the large end. The young are hatched the middle of May. In some parts of England these birds are in vast plenty. In Sus-sex they are taken in snares made of horsehair, placed beneath a long turf: being very timid, the motion of a cloud, or the appearance of a hawk, will drive them for shelter into these traps. The numbers annually ensnared in that district alone amount to about 1840 dozen, which usually sell at 6d. per dozen. Quantities of these are eaten on the spot by the inhabitants ; others are sent up to the London poulterers ; and many are potted, being almost as much esteemed in England as the ortolan on the continent. They feed on insects only.

10. M. phoenicurus, the redstart, is somewhat less than the redbreast: the forehead is white ; the crown of the head, hind part of the neck, and back, are deep blue gray ; the cheeks and throat black ; the breast, rump, and sides red, and the belly white ; the two middle tail-feathers are brown ; the rest red ; and the legs black. The female has the top of the head and back cinereous gray ; chin white. The same parts are red in this sex as in the male, but not so bright. The wings are brown in both sexes. This bird is migratory ; coming hither in spring, and departing about October. It is not so shy

as many birds in respect to itself; for it approaches habitations, and often makes its nest in some hole of a wall where numbers of people

pass by frequently, if no one meddles with the nest; but the least derangement of the eggs, or even looking at them, especially if the female is disturbed, causes her to forsake the nest altogether. It frequently builds also in some hole of a tree. The nest is composed chiefly of moss, lined with hair and feathers. The eggs are bluish, and four or five in number. This bird frequently wags its tail ; but does it sideways, like a dog when he is pleased, and not up and down like the wagtail. It is with difficulty that these birds are kept in a cage; nor will they submit to it by any means if caught old. Their song has no great strength ; yet it is agreeable ; and they will, if taught young, imitate the note of other birds, and sing by night frequently as well as in the day-time.

11. M. regulus, the gold-crested wren, is a native of Europe, and of the correspondent latitudes of Asia and America. It is the least of all the European birds, weighing only a single drachm. Its length is about four inches and a half; and the wings, when spread out, measure little more than six. On the top of its head is a beautiful orange-colored spot, called its crest ; the margins of the crest are yellow, and it ends in a pretty broad black line ; the sides of the neck are of a beautiful yellowish-green ; the eyes surrounded with a white circle; the neck and back of a dark green, mixed with yellow ; the breast of a dirty white; the tail composed of twelve feathers of a brown color, an inch and a half long, but not forked. In America it associates with the tit-mice, running up and down the bark of lofty oaks with them, and collecting its food in their company, as if they were all of one brood. It feeds on insects lodged in their winter dormitories in a torpid state. It sings very melodiously.

12. M. rubecula, the redbreast, is universally known : the upper parts are of a green ash-color; the forehead, throat, neck, and breast, a rufous orange ; the belly and vent whitish ; the bill. legs, and sides of the body dusky. It is a constant inhabitant of these kingdoms, as well as the whole European continent, from Sweden to Italy. It abounds in Burgundy and Lorraine, where numbers are taken for the table and esteemed excellent food. It builds near the ground, if in a bush ; though sometimes it fixes on an out-house, or retired part of some old building. The nest is composed of dried leaves, mixed with hair and moss, and lined with feathers. The eggs are of a dusky white, marked with irregular reddish spots, and from five to seven in number. The young, when full feathered, may be taken for a different bird, being spotted all over. The first rudiments of the red break forth on the breast about the end of August ; but it is the ei-d of September before they come to the full color. Insects are their general food ; but in defect of these they will eat many other things. No bird is so tame and

familiar as this; closely attending the heels or the gardener when he is using his spade, for the sake of worms ; and frequently in winter enter-N 2

ing houses where windows are open, when they will pick up the crumbs from the table while the family is at dinner. The people about Born-holm call it tommiliden ; in Norway peter ronsmad ; the Germans, thomas gierdet ; and we, robin redbreast.

13. M. rubetra, the. whin-chat, is somewhat bigger than the stone-chatter. The upper parts are blackish, edged with rufous ; from the bill arises a streak of white, which passes over the ye on each side, almost to the hind head ; beneath this the cheeks are blackish ; ti e chin is white; the rest of the under parts rufous white; on the wing, near the shoulder, is a transverse white mark, and another smaller near the bastard wing, on the outer edge; the legs are black. The female is much paler, and the spots on the wings, and the white trace over the eye, are far less* conspicuous. This is not uncommon in Britain, and is seen in summer along with the stone-chatter on the heaths, where it breeds, making the nest much after the manner of that bird. It lays five dirty white eggs, dotted with black. This species is common also in France, Italy, Germany, and the temperate parts of Russia; but it is less common than the stone-chatter there, as well as in England. Its food is chiefly insects.

14. M. rubicola, the stone-chatter, is about four inches and three quarters. The male has the upper parts of the body mixed blackish and pale rufous; on each side the neck there is a transverse streak of white ; the breast is of a reddish yellow ; the belly paler ; and the legs are black. In the female the colors are much less vivid. This species inhabits dry places, as heaths and commons; living on insects of, all kinds. It makes its nest early, at the foot of some low bush or under a stone ; and has five or six eggs of a bluish green, sparingly marked with faint rufous spots. It is so very crafty as not to betray the place of the nest, never alight-ing but at some distance, and creeping on the ground to it by the greatest stealth. It is a restless bird, incessantly

flying from bush to bush ; and seems to have received its English name from its note, resembling the clicking of two stones together.

15. M. salicaria, the sedge bird, is about the size of the black-cap, but more slender. The head is brown, marked with dusky streaks ; the cheeks are brown, with a white line over each eye, and a black one above it; the upper parts of the neck and back are of a reddish brown, and the wing-coverts and quills dusky ; the under parts are white ; but the breast and belly have a yellow tinge ; the tail is brown and much rounded ; and the legs are dusky. This species is common in England, and frequents places where reeds and sedges grow, among which it is said to make its nest, though it sometimes forms it on the lowest branches of trees. Tbe nest is composed of straw and dried fibres of plants, lined with hair; and the eggs, five in number, of a dirty white, marbled with brown. It imitates the notes of the swallow, sky-lark, house-sparrow, and other birds, in a pleasing but hurrying manner, and sings all night.

16. M. sialis, tfie blue bird, is a native of

most parts of North America, and is about the bigness of a sparrow. The eyes are large, the head and upper part of the body, tail, and wings, are of a bright blue, excepting that the ends of the feathers are brown. The throat and breast are of a dirty red. The belly is white. It flies swiftly, having very long wings ; so that the hawk generally pursues it in vain. It makes its nest in holes of trees ; resembles our robin redbreast in its disposition, and feeds only on insects.

17. M. sutoria, the tailor-bird, is a native of the East Indies. It is remarkable for the art with which it makes its nest, to secure itself and its young in the most perfect manner possible against all danger from voracious animals. It picks up a dead leaf, and sews it to the side of a living one ; its slender bill is the needle, and its thread is formed of some fine fibres ; the lining is composed of feathers, gossamer, and down. The color of the bird is light yellow ; its length three inches; and its weight only three-six- teenths of an ounce; so that the materials of the nest, and its own size, are not likely to draw down a habitation depending on so slight a tenure.

18. M. troglodytes, the wren, is a very small species, in length only three inches and three quarters, though some have measured four inches. The bill is very slender and of a dusky brown color; the head, neck, and back, are of a reddish-brown ; and over each eye a pale

reddish-white streak; the under parts, as far as the breast, are of this last color ; the rest more inclined to brown, crossed with brown lines ; the legs are pale brown. It generally carries the tail erect. The nest is almost oval, and has only one small entrance ; it is chiefly composed of moss, well lined with feathers. In this the female lays from ten to sixteen or eighteen eggs, which are almost white, with reddish markings at the large end. She builds twice a-year, in April and June. The nest is often found in some corner of an out-house, stack of wood, hole in a wall, or such like, if near habitations ; but in the woods, often in a bush on or near the ground, or in a stump of a tree. This minute bird is found throughout Europe ; and in England it defies the severest winters. Its song is much esteemed, being, though short, a pleasing warble, and much louder than could be expected from its size ; it continues throughout the year.

MOTAPA, or MONOPOTAPA (though Mono is here only a general name for kingdom), a country of Eastern Africa, called also Benomotapa and Mocaranga. Its limits nominally include all the country in the interior from Mosambique southward nearly to the Cape of Good Hope. This territory, however, is divided into a great num-ber of independent states. In the interior it has Chicova,Manica,and Chicanga; but is altogether but little known. The capital is Zimbaoa, near the head of the river of Sofala. The Portuguese have made repeated attempts to penetrate this country, to possess themselves of the gold mines which lie in the interior. In the sixteenth century Nunez Bareto undertook a grand expedition, when the native Quiteve, abandoning his capital, merely carried on a harassing warfare ;

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and Barreto penetrated to the gold mines, but was unable to form any establishment there. A treaty was at last concluded, and the Quiteve agreed, in consideration of a tribute of 200 pieces of cloth, to allow the Portuguese free passage through his dominions. They have been obliged, however, to content themselves with a single chain of posts to the mines on the Zambaza. MOTE, n. s. Sax. mot ; Swed. mot ; Italian miot. A small particle of any kind; any thing proverbially little.

But what seest thou a little mote in the yghe of thi brother, and seest not a beem in thin owne yghe.

Wiclif. Mat. 7.

For now the grete charitee and prayeres Of limitours and other holy freres, That serchen every land and every streme, As thikke as motet in the sonne beme, This makith that ther ben no Faeries.

Chaucer. Cant. Tales.

You found his mote, the king your mote did see ; But I a beam do find in each of three. Shakspeare.

The lictle motes in the sun do ever stir, though there be no wind. Bacon’s Natural History.

MOTE for might, or must. Sax. mot; Belgic tnoet. Obsolete.

Most ugly shapes,

Such as dame Nature self mote fear to see, Or shame, that ever should so foul defects From her most cunning hand escaped be.

Faerie Queene.

MOTH, n. s. > Sax. mo* : Teut. motte ;

MOTHY, adj. \ Swed. matt, A small winged insect : full of moths.

He as a rotten thing consumeth as a garment that is moth eaten. Job xiii. 28.

Thise wormes, ne thise mothes, ne thise mites, Upon my pareille frett

him moer a del ; And wost thy why ? for they were used wel.

Chaucer. Cant. Tales.

All the yarn Penelope spun in Ulysses's absence, did but fill Ithaca full of moths. Shakspeare.

Every soldier in the wars should do as every sick man in his bed, wash every moth out of his conscience. Shakspeare.

His horse hipped with an old mothy saddle, the stirrups of no kindred. Id.

Let moths through pages eat their way,

Your wars, your loves, your praises be forgot,

And make of all an universal blot.

Dry den's Juvenal. So man, the moth, is not afraid, it seems,

To span Omnipotence, and measure might,

That knows no measure. Cowper.

MOTH, in zoology. See PHALSNA.

MOTHE GUYON (Joanna Mary Bouriers de la), a French lady, memorable for her writings and sufferings in the cause of Quietism. She was descended from a noble family, and born at Montargis in 1648. She tried to take the veil before she was of age ; but her parents obliged her to marry a gentleman to whom they had promised her. She was a widow at twenty-eight ; when, distinguishing herself as a Quietist, she was confined for eight months. She was discharged ; but in 1695 was involved in the persecution of the archbishop of Cambray, and thrown into the bastile ; but, nothing being made out against her, she once more obtained her liberty in 1700; when she retired to Blois, and lived in a manner which showed her persecutions were unmerited. She wrote 1 . Can-

tiques Spirituels, ou Emblemes sur I'Amour divin ; 5 vols. 2. Reflexions sur la Vie Inter-ieure. 3. Discourses Chretiennes ; 2 vols. 4. Her own Life ; 3 vols. 5. Opuscles. 6. Letters, &c. She died June 9th, 1717.

MOTHE LE VAYER (Francis de la), counsellor of state, was born at Paris in 1588. He became so distinguished by his writings that he was considered as one of the first members of the French Academy, into which he was admitted in 1639. He was esteemed by cardinals Richelieu and Mazarine, who bestowed splendid titles and honorable posts upon him. He was appointed preceptor to the duke of Anjou. He was extremely afflicted at the loss of his only son, who died when about thirty-five years of age. He married again, although then above seventy-five years old, and died in 1672, aged eighty-four. His works, collected by his son, were dedicated to cardinal Mazarine in 1653; but the best edition of them was that of Paris, 1669, dedicated to Louis XIV., and consisting of 15 vols. in 12mo. His treatises concerning the education of the dauphin, and of pagan philosophy, are most esteemed.

MOTH'ER, n.s., adj., & v. n.~\ Sax. moSeri ;

MOTH'ERHOOD, f Goth., Danish,

MOTH'ERLESS, adj. ××and Swed. ruo—

MOTH'ERLY, adj. & adv. J der ; Belgic, moeder ; Teut. mutter ; Ital. and Span, madre ; Fr. mere ; Lat. mater ; Gr. foirqp, We add, to show the great similarity of this word in all the considerable languages of the earth, Pers. madur ; Sans, mata, matri; Hind, mnttura. A woman who has borne a child : hence that which has produced or preceded any thing ; a familiar term of address to a woman; a religious term of address; also hysterical passion, as supposed to be peculiar to women : as an adjective, it signifies native ; had at the birth. Motherhood is the office or character of a mother. Motherless, destitute of a mother. Motherly, maternal; belonging to, or becoming a mother; matronly ; in the manner of a mother.

Therfore whanne Jhesus hadde seien his moder and the disciple stondynge whom he louyde, he seith to his modir, womman lo thi sonne, afterward he seith to the disciple, lo thi modir, and fro that our the disciple took hir into his modir.

Wiclif. Jon 19.

I am come to set at variance the daughter-in-law against the wotAer-in-law. Matt. x. 35.

His mortal blade

In ivory sheath, ycarv'd with curious slights,

Whose hil*. was burnished gold, and handle strong

Of mother-pearl. faerie Queent.

They can owe no less than child-like obadience to her that hath more than motherly power. Hooker.

For whatsoever mother wit or art Could work, he put in proof.

Hubbard'i Tale.

Let thy mother rather feel thy pride, than fear Thy dangerous stoutness. Shakspeare. Coriolanus.

I had not so much of man in me But all my mother came into mine eyes, And gave me up to tears.

Shakspeare. Henry V. Alas, poor country I It cannot Be called our mother, but our grave.

Shakupeore.

Where did you study all this eoodly speech It is extempore, from my mother wit.

la.

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A sling for a mother, a bow for a boy, A whip for a carter. Tutser's Husbandry,

They termed her the great mother, for her motherly care in cherishing her brethren whilst young.

Rakigh.

Thou shall see the blessed mother-maid Exalted more for being good, Than for her interest of motherhood. Donne.

The air doth not motherly sit on the earth, To hatch her seasons, and give all things birth.

Id.

They were of onyx, sometimes of muther of pearl.

Hakewill. Within her breast though calm, within her breast

though pure,

Motherly cares and fears got head, and raised Some troubled thoughts.

Milton's Paradise Regained. This stopping of the stomach might be the mother ; forasmuch as many were troubled with mother fits, although few returned to have died of them.

Graunt's Bills.

I might shew you my children, whom the ri-gour of your justice would make complete orphans, b-ing already mother lets.

Waller'* Speech to the House of Commons. Boccace lived in the same age with Chaucer, had the same genius, and followed the same studies ; both writ novels, and each of them cultivated his mother tongue. Dryden.

The strongest branch leave for a standard, cutting off the rest close to the body of the matter plant.

Mortimer's Husbandry.

When I see the motherly airs of my little daughters, when playing with their little puppets, I cannot but flatter myself that their husbands and children will be happy in the possession of such wives and mothers.

Addison's Spectator.

The good of mother church, as well as that of civil society, renders a judicial practice necessary.

Ayliffe's Parergon.

The resemblance of the constitution and diet of the inhabitants to those of their mother country, occasions a great affinity in the popular diseases.

Arbuthnot on Air.

My concern for the three poor motherless children obliges me to give you this advice. Arbuthnot.

Though she was a truly good woman, and had a sincere motherly love for her son John, yet there wanted not those who endeavoured to create a misunderstanding between them. Id.

How gladly would the man recall to life The boy's neglected sire ! a mother too, That softer friend, perhaps more gladly still, Might he demand them at the gates of death.

Cowper.

These might have been her destiny, but no, Our hearts deny it : and so young, so fair, Good without effort, great without a foe, But now a bride and mother. Byron.

MOTHER, v. n. & n. ►►. Belg. moeder, mud. Lees ; concretion ; to gather concretion.

If the body be liquid, and not apt to putrefy totally, it will cast up a mother, as the mothers of distilled waters. Bacon.

Potted fowl, and fish come in so fast, That ere the first is out the second stinks. And mouldy mother gathers on the brinks.

Dryden. They oint their naked limbs with mothered oil.

Id.

MOTION, n. s. \ Fr. motion ; Ital. mozioni ; MO’TIONLESS. } Lat. motto. The act of mov-ing ; movement made ; change of place, or pos-

ture ; agitation ; intestine action ; military march ††† applied metaphorically to movements of tii: mind, and hence to proposals made, or measures propounded; in obsolete language, a puppet-show. Motionless, devoid of motion.

What would you with me 1

††† Your father and my uncle have made motions ; if it be my luck, so ; if not, happy man be his dole.

Shakspeare.

If our queen and this young prince agree, I’ll join my younger daughter, and my joy, To him forthwith, in holy wedlock bands. ††† Yes, I agree, and thank you for your motion. Id.

He compassed a motion of the prodigal son, and married a tinker’s wife, within a mile where my land lies. Id.

Whether that motion, vitality and operation, were by incubation, or how else, the manner is only known to God. Raleigh.

Carnality within raises all the combustion without : this is the “great wheel to which the clock owes its motion. Decay of Piety.

A Christian’s motion, after he is regenerate, is made natural to Godwaid ; and therefore, the nearer he comes to heaven, the more zealous he is.

Bp. Hall.

Immediate are the acts of God, more swift Than time or motion. Millon.

Speaking or mute, all comeliness and grace Attend thee, and each word, each motion form.

Id. By quick instinctive motion up I sprung. Id.

See the guards

By me encamped on yonder hill, expect Their motion. Id.

We cannot free the lady that sits here, In stony fetters fixed, and motionless.]/'.

Virtue too, as well as vice, is clad In flesh and blood so well, that Plato had Beheld, what his high fancy once embraced, Virtue with colours, speech and motion graced.

Waller.

Love awakes the sleepy vigour of the soul, And, brushing o'er, adds motion to the pool.

Dryden.

Ha ! Do I dream 1 Is this my hoped success 1 I grow a statue, stiff and motionles . Id.

Let a good man obey every good motion rising in his heart, knowing that every such motion proceeds from God. South.

The soul

O’er ministerial members does preside, To all their various provinces divide, Each member move, and every motion guide.

Blackmore.

Should our globe have had a greater share Of this strong force, by which the parts cohere ; Things had been bound by such a powerful chain, That all would fixed and motionless remain. Id.

Cease, cease, thou foaming ocean, For what’s thy troubled motion

To that within my breast 1 Gay.

In general I must take notice that the nature of our constitution seems to be very much mistaken by the gentlemen who have spoken in favour of this motion. Sir R. Walpole.

Virtue seems to be nothing more than a motio consonant to the system of things ; were a planet tc fly from its orbit, it would represent a vicious man.

Shenstone.

All that have motion, life, and breath Proclaim your Maker blest ! Walts

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MOTION, ANIMAL, that which is performed by animals at the command of the mind or will. Though all the motions of animals, whether voluntary or involuntary, are performed by means of the muscles and nerves, yet neither these nor the subtle fluid which resides in them are to be accounted the ultimate sources of animal motion. They depend entirely upon . the will for those motions which are properly to be accounted ani-mal. All the involuntary motions, such as those of the blood, the heart, muscles, organs subservient to

respiration and digestion, &c., are to be classed with those of vegetables : for, though no vegetables have them in such perfection as animals, there are yet traces of them to be found evidently among vegetables, and that so remarkably that some have imagined the animal and vegetable kingdoms to approach each other so nearly that they could scarcely be distinguished by a philosophic eye. Though all animals are endowed with a power of voluntary motion, yet there is a very great variety in the degrees of that power; to determine which no certain rules can be assigned ; neither can we, from the situation and manner of life of animals, derive any probable reason why the motion of one should differ so much from that of another. This difference does not arise from their size, their ferocity, their timidity, nor any other property that we can imagine. The elephant, though the strongest land animal, is by no means the slowest in its motions; the horse is much swifter than the bull, though there is not much difference in their size ; a greyhound is much swifter than a wild cat, though the former is much larger, and though both live in the same manner, *viz.* by hunting. Among insects the same unaccountable diversity is observable. This very remarkable circumstance seerns not even to depend on the range which animals are obliged to take in order to procure food for themselves. Of all animals the shell-fish move the slowest, insomuch that some have supposed them to be entirely destitute of locomotive powers; and muscles particularly are denied to have any faculty of this kind. Everyone knows that these animals can open and shut their shells at pleasure ; and it cannot escape observation, that in every muscle there is a fleshy protuberance of a much redder color than the rest. This has been thought to be a tongue or proboscis, by which the animal takes in its food ; but is in reality the instrument of its motion from place to place. This protuberance is divided into two lobes, which perform the office of feet. When the river mus-cle is inclined to remove from its station, it opens its shell, thrusts out this protuberance, and digs a furrow in the sand : and into this furrow, by the action of the same protuberance, the shell is made to fall in a vertical position. It is recovered out of this into the former horizontal one, by pushing back the sand with the same tentacula, lengthens the furrow, and thus the animal continues its journey by a continual turning topsy turvy. Marine muscles perform their motions in the same manner, and by similar instruments. In general they are firmly attached to rocks or small stones by threads, about two inches lone, which are spun from a glutinous substance in the protuberance already mentioned. Other animals which dwell in bivalved shells perform their motions by a kind of leg or foot; uhich, however, they can alter into almost any figure they please. By means of this leg they can not only sink into the

mud, or rise out of it at pleasure, but can even leap from the place where they are ; and this can be done by the limpet, which people are apt to imagine one of the most sluggish animals in na-ture. When this creature is about to make a spring, it sets its shell on edge, as if to diminish friction; then, stretching out the leg as far as possible, it makes it embrace a portion of the shell, and by a sudden movement, similar to that of a spring let loose, it strikes the earth with its leg, and leaps to a considerable distance. The spout, or razor fish, is said to be incapable of moving forward horizontally on the surface; but it digs a hole sometimes two feet deep in the sand, iu which it can ascend or descend at pleasure. The leg, by which it performs all its movements, is fleshy, cylindrical, and pretty long ; and the animal can at pleasure make it assume the form of a ball. When lying on the surface of the sand, and about to sink into it, the leg is extended from the inferior end of the shell, and makes the extremity of it take on the form of a shovel, sharp on each side, and terminating in a point. With this instrument the animal makes a hole in the sand; after which it advances the leg still farther into it, makes it assume the form of a hook, and with this, as a fulcrum, it obliges the shell to descend into the hole. This operation is continued until the whole shell is covered ; and, when the animal wishes to regain the surface, it makes the extremity of the leg to assume the form of a ball, and makes an effort to extend it. The ball, however, prevents any farther descent, and the reaction of the muscular effort raises up the whole shell, which operation is continued until it reaches the surface ; and it is surprising with what facility these motions are accomplished by an animal seemingly so little qualified to move at all. Another particularity in this fish is, that, though it lives among salt water, it abhors salt so much that when a link-is thrown into its hole it instantly leaves it. But it is still more remarkable, that if you once take hold of the spout-fish, and then allow it to retire into its hole, it cannot then be driven out by salt ; though, unless it be taken hold of by the hand, the application of salt will make it come to the surface as often as you please. See So-LEN. All other shell-fish, even those apparently the most sluggish and destitute of any apparatus for motion, are found to be furnished with such instruments as enable them to perform all those movements for which they have any occasion. Thus the scallop, a well known animal, inhabiting a bivalved shell, can both swim upon the surface of water and move upon land. When it happens to be deserted by the tide, it opens its shell to the full extent, and, shutting it again with a sudden jerk, the reaction of the ground gives such an impulse to the whole, that it sometimes springs five or six inches from the ground ; and, by a continued repetition of this action, it gradually tumbles forward until it regains the

water. Its method of sailing is still more curious. Having attained the surface of the water, by means unknown to us, it opens the shell, and puts one half above water, the other with the body of the animal in it remaining below. Great numbers of them are thus frequently seen sailing in company, with their shells sticking up above water, when the weather is fine, and the wind acting upon them as sails; but on the least alarm they instantly shut their shells, and'all sink to the bottom together. See PECTEN. The oyster has generally been supposed one of the most sluggish animals in nature, and totally incapable of voluntary motion ; but, from the researches of the abbe" Dicquemarre, this opinion seems to be erroneous. The oyster, like many other bivalved shell-fish, has a power of squirting water out from its body ; and this property may easily be observed by putting some of them into a plate with as much sea-water as will cover them. The water is ejected with so much force as not only to repel the approach of ordinary enemies, but to move the whole animal backwards or sideways in a direction contrary to that in which the water was ejected. It has been also supposed that oysters are destitute of sensation; but M. Dicquemarre has shown, that they not only possess sensation, but that they are capable of deriving knowledge from experience. When removed from such places as are entirely covered with the sea, when destitute of experience, they open their shells and die in a few days ; but if they happen to escape this danger, and the water covers them again, they will not open their shells again, but keep them shut, as if warned by experience to avoid a danger similar to what they formerly underwent. See OSTREA. The motions of the sea-urchin are perhaps more curious and complicated than those of any other animal. It inhabits a beautiful multivalved shell, divided into triangular compartments, and covered with great numbers of priokles ; from which last circumstance it receives the name of sea-urchin, or sea hedge-hog. The triangles are separated from one another by regular belts, perforated by a great number of holes, from every one of which issues a fleshy horn similar to that of a snail, and capable of moving in a similar manner. The principal use of these horns seems to be to fix the animal to rocks or stones, though it likewise makes use of them in

progressive motion. By means of these horns and prickles it is enabled to walk, either on its back or its belly ; but it most commonly makes use of those which are near the mouth. Occasionally it has a progressive motion by turning round like a wheel. ‘ Thus,’ says Mr. Smellie, in his Philosophy of Natural History, ‘ the sea-urchin furnishes an example of an animal employing many thousand limbs in its various movements. The reader may try to conceive the number of muscles, fibres, and other apparatus which are requisite to the progressive motion of this little animal. Some animals move backwards, apparently with the same facility that they do forwards, and that by means of the same instruments which move them forward. The common house fly exhibits an instance of this, and frequently employs this retrograde motion in its ordinary courses ;

though we cannot know the reason or its employing such an extraordinary method. Another remarkable instance is given by Mr. Smellie in the mason-bee.

MOTION, PERPETUAL, in mechanics, a motion which is supplied and renewed from itself, without the intervention of any external cause ; or an uninterrupted communication of the same degree of motion from one part of matter to another, in a circle or other curve returning into itself, so that the same momentum still returns undiminished upon the first mover. The celebrated problem of a perpetual motion consists in the inventing a machine which has the principle of its motion within itself. To find a perpetual motion, or to construct an engine, &c., which shall have such a motion, is a famous problem that has employed the mathematicians for 2000 years.

MOTION, VEGETABLE. Though vegetables have not the power of moving from one place to another like animals, they are nevertheless capable of moving their different parts in such a manner as would lead us to suspect that they are actuated by a sort of instinct. Hence many have been induced to suppose that the animal and vegetable kingdoms are in a manner indistinguishable from one another ; and that the highest degree of vegetable life can hardly be known from the lowest degree of animal life. The essential and insuperable distinction, however, between the two is the faculty of sensation, and locomotion in consequence of it. Were it not, indeed, for the manifestation of sense by moving from one place to another, we should not be able to tell whether vegetables were possessed of sensation or not ; but, whatever motions they may be possessed of, it is certain that no vegetable has the faculty of moving from one place to another. Some

have endeavoured to distinguish the two kingdoms by the digestion of food ; alleging that plants have no proper organs, such as a stomach, &c., for taking in and digestIng their aliment. But to this it has been replied, that the whole body of a vegetable is a stomach, and absorbs its food at every pore. This, however, seems not to be a sufficient answer. All animals take in their food at intervals ; and there is not a single instance of one which eats perpetually. The food is also taken into the body of the animal, and application of the parts made by means of the internal organisation of the viscus; but in vegetables, their whole bodies are immersed in their food, and absorb it by the surface, as animal bodies will sometimes absorb liquids when put into them. The roots of a tree, indeed, will change their direction when they meet with a stone, and will turn from barren into fertile ground ; but this is evidently mere mechanism, without any proof of will or sensation; for the nourishment of the root comes not from the stone, but from the earth around it ; and the increase in size is not owing to any expansion of the matter which the root already contains, but to the opposition of new matter ; whence the increase of size must always take place in the direction whence the nourishment proceeds. On this principle also may we explain the reason why the roots of a

tree, after having arrived at the edge of a ditch, instead of shooting out into the air, will creep down one side, along the bottom and up the other. In their movements, vegetables discover nothing like sensation or design. They will, indeed, uniformly bend toward light or toward water ; but in the one case we must attribute the phenomenon to the action of the light and air upon them ; and, in the latter, the property seems to be the same with what in other cases we call attraction. Thus, if a root be uncovered, and a wet sponge placed near it in a direction different from that in which the root was proceeding, it will soon alter its position, and turn towards the sponge ; and thus we may vary the direction of the root as often as we please. The efforts of a plant to turn from darkness or shade into sunshine are very remarkable; as, to accomplish this, not only the leaves will be inclined, but even the stems and branches twisted. When a wet sponge

is held under the leaves of a tree, they bend down in order to touch it. If a vessel of water be put within six inches of a growing cucumber, in less than twenty-four hours the latter will alter its direction : the branches will bend towards the water, and never alter their course until they come in contact with it. The most remarkable instance of this kind of motion, however, is, that when a pole is brought near a vine, the latter will turn towards it, and never cease extending its branches till it lays hold of the support. The motions of the sensitive plant, and others of the same kind, have been considered as very wonderful ; but it is doubtful if any of them be really more so than that of the vine. None of those show any kind of propensity to move without an actual touch. A very slight one, indeed, makes the sensitive plant contract, and the whole branch, together with the leaves, bend down towards the earth. See MIMOSA. This is so similar to some phenomena of electricity, that few will hesitate to ascribe both to the same cause. Even the motions of the hedysarum gyrans, which at first sight seem so much more surprising than those of the sensitive plant, may be explained upon the same principle. See HEDYSARUM. There is a specimen of this plant in the botanic garden at Edinburgh. It is a native of the East Indies, and its motions are occasioned by the sun-beams. The leaves are the only moveable parts. They are supported by long foot-stalks ; and, when the sun shines upon them, they move briskly in every direction. Their most usual motion is upward and downward ; but often they turn almost quite round, and then the foot-stalks are evidently twisted. These motions continue only while the light and heat of the sun continue, ceasing at night, or when the weather becomes cloudy and cold. The American plant called Dionaca muscipula, or Venus's fly-trap, is another example of very wonderful mechanism in vegetables, though even this does not argue any degree of sensation in this plant more than in others. The leaves of the dionsea are jointeil, and furnished with two rows of prickles. A number of small glands upon the surface secrete a sweet juice, which entices flies to come and settle upon it; but, the moment these insects

touch the fatal spot, the leaves fold up, and squeeze them to death between the prickles. The leaves fold up in the same manner when the plant is touched with a straw or pin. See DIONJEA. The folding up of the leaves of certain plants in the absence of the sun's light, called their sleep, affords another very curious instance of vegetable motion. Almost all vegetables, indeed, undergo such a remarkable change in the night, that it is difficult to know exactly how many kinds do really sleep. They fold up their leaves in many different ways; but all agree in disposing of them in such a manner as to afford the best protection

to the young stems, flower-buds or fruit. The leaves of the tamarind tree contract round the young fruit, to protect it from nocturnal cold ; and those of senna, glycina, and many other papilionaceous plants, dispose of their leaves in the same manner. The leaves of the chickweed, asclepias, atriplex, &c., are disposed in opposite pairs. In the night-time they rise perpendicularly, and join so close at the top that the flowers are concealed by them. In like manner do the leaves protect the flowers of the sida, or althaea theophrasti, the ayenia, and cenothera, the solanum, and the Egyptian vetch. All these are erected during the night; but those of the white lupine, in time of sleep, hang down. The flowers of plants also have motions peculiar to themselves. Many of them during the night are enclosed in their calyxes. Some, particularly those of the Ger-man spurge, geranium striatum, and common Whitlow grass, when asleep, bend towards the earth ; by which means the noxious effects of rain or dew are prevented. All these motions have been commonly ascribed to the sun's rays ; and Mr. Smellie informs us that, in some of the examples above mentioned, the effects were evidently to be ascribed to heat ; but plants kept in a hot-house, where the temperature of the day and night are alike, contract their leaves, and sleep in the same manner as if they were exposed to the open air : ' whence it appears,' says he, ' that the sleep of plants is owing rather to a peculiar law, than to a quicker or slower motion of the juices.' He suspects, therefore, that as the sleep of plants is not owing to the mere absence of heat, it may be occasioned by the want of light ; and to ascertain this he proposes an experiment of throwing upon them a strong artificial light. On this, however, we must remark, that the throwing of artificial light upon plants cannot be attended with the same effects as that of the light of the sun, unless the former were as strong as the latter, which is impossible ; and, even though we could procure an artificial light as strong as that of the sun, a difference might be occasioned by the different direction of the rays, those of the sun being very nearly parallel, while the rays of all artificial light diverge very greatly. If, therefore, we are to make an experiment of this kind, the rays should be rendered parallel by means of a burning mirror. Here again we should be involved in a difficulty ; for the rays of the sun proceed all in one direction ; but as of necessity we must employ different mirrors in our experiment, the light must fall upon the plant in different three-
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tions, so that vr e could not reasonably expect the same result as when the p.ants are directly exposed to the rays of the sun, The motion ot plants not being deducible from sensation, as in animals, must be ascribed to that property called irritability ; and this property is possessed insensibly by the parts of animals in a greater degree than even by the most irritable vegetable. The muscular fibres will contract on the application of any stimulating substance, even after they are detatched from the body to which they belonged. The heart of a frog will continue to beat when pricked with a pin for several hours after it is taken out of the body. The heart of a viper or of a turtle beats distinctly from twenty to thirty hours after the death of these animals. When the intestines of a dog, or any other quadruped, are suddenly cut into different portions, all of them crawl about like worms, and contract upon the slightest touch. The heart, intestines, and diaphragm, are the most irritable parts of animal bodies; and, to discover whether this quality resides in all plants, experiments should be made chiefly on leaves, flowers, buds, and the tender fibres of the roots. The motions of plants are universally ascribed by our author to irritability. The term, however, requires an explanation; and to give this in an intelligible manner, requires some attention.

MOTIVE, adj. & n. s. Lat. motivus ; Fr. motif; Ital. motive. Causing motion; having the quality or capacity of motion : hence that which determines the mind, or excites to action ; a mover. See the instances from Shakspeare.

Shall every motive argument used in such kind of conferences be made a rule tor others stiil to conclude the like by, concerning all things of like nature, when as piobable inducements may lead them to the contrary”! Hooker.

Hereof we have no commandment, either in nature or scripture, which doth exact them at our hands ; yet those motives there are in both, which draw most effectually our minds unto them. Id.

Why in that rawness left you wife and children, Those precious motives, those strong knots of love, Without leave-taking “? Sltakspeare. Macbeth.

Heaven brought me up to be my daughter’s

dower ;

As it hath fated her to be my motive And helper to a husband. Shakspeare.

Her wanton spirits look out At every joint and motive of her body. Id.

The nerves serve for the conveyance of the motive faculty from the brain ; the ligatures for the strengthening of them, that they may not flag in motion.

Wilkins.

The motive for continuing in the same state is only the present satisfaction in it ; the motive to change is always some uneasiness. Locke.

What can be a stronger motive to a firm trust in our Maker, than the giving us his Son to suffer for us ? Addison.

We ask you whence does motive vigour flow 1

Blackmore.

That fancy is easily disproved from the motive po.ver of souls embodied, and the gradual increase of men and animals. Bentley.

Prudent men lock up their motives; letting familiars have a key to their heart as to their garden.

Shenstone.

Let passion do what nobler motive should ; Let love and emulation rise in aid To reason, and persuade thee to be ××× blessed.

Young.

MOTLEY, adj. By some writers supposed to be corrupted from medley ; or, perhaps, says Johnson, from mothlike, colored, spotted, or variegated like a moth. Mingled ; of various colors.

They that come to see a fellow In a long motley coat, guarded with yellow, Will be deceived. Shakspeare. Henry VIII.

Expence and after-thought, and idle care, And doubts of motley hue,

and dark despair.

Dry den.

An author might as well think of weaving the adventures of tineas and Hudibras into one poem, as of writing such a motley piece of mirth and sorrow.

Addison.

Traulus, of amphibious breed, Motley fruit of mungrel seed ; By the dam from lordlings sprung, By the sire exhaled from dung. Swift.

MOTOR, n. s. Fr. moteur ; Lat. moveo. A mover : a word altogether redundant.

Those bodies being of a congenerous nature, do readily receive the impressions of their motor ; and, if not fettered by their gravity, conform themselves to situations, wherein they best unite unto their ani-mator. Browne's Vulgar Errourt.

The bones, were they dry, could not, without great difficulty, yield to the plucks and attractions of the motory muscles. Ray on the Creation.

MOTRIL, a town of the south of Spain, in Granada, with a harbour on the Mediterranean. It has 4500 inhabitants, who trade in wine, linen, and chestnuts. The environs produce sugar ; but the cultivation is of late much limited. Four miles east of Malaga.

MOTTE (Anthony Houdart de la), an ingenious Frenchman, greatly distinguished by his writings in prose and verse, and by his literary contests with many eminent persons, was born at Paris in 1672. His literary paradoxes, his singular systems, in all branches of polite learning, and above all his judgment upon the ancients, raised him up formidable adversaries. Ra-cine, Boileau, Rousseau, Madam Dacier, &c., avenged antiquity on an author who, with more wit than learning, assumed a dictatorial authority in the belles lettres. He became blind in the latter years of his life, and died in 1731. He was beloved for the urbanity of his temper. Once in a crowd he chanced to tread on the foot of a young man, who immediately struck him. f Sir,' said he, ' you will be sorry for what you have done ??? I am blind.' He wrote many poems, tragedies, comedies, pastorals, and fables; besides a ast variety of discourses, critical and academical, in prose. A complete edition of all his works was published in 11 vols. 8vo., in

1754.

MOTTE ISLE, an island in lake Champlain, at the entrance of Richlieu River, near the tongue of land which forms Missiqui Bay. It is about eight miles in length and two in breadth, and is distant two miles west of North Hero Island. It constitutes a township of its own name in Franklin county, Vermont.

MOTTE (St. Jean de la), a town in the central

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part of France, department 01 the Sarthe, with 1800 inhabitants.

MOTTO, n. s. Ital. motto, Fr. mot. A. sentence or word added to an heraldic device, or prefixed to any thing written.

Men in a party have liberty only for their motto ; in reality they are greater slaves than any body else would care to make them. Saville.

It may be said to be the motto of human nature, rather to suffer than to die. L' Estrange.

We ought to be meek-spirited, till we are assured of the honesty of our ancestors ; for covetousness and circumvention make no good motto for a coat.

Collier.

It was the motto of a bishop eminent for his piety and good works, in king Charles the second's reign, Inservi Deo et laetare, Serve God and be chearful. Addison's Freeholder.

MOTTO, in heraldry, a short sentence or phrase, carried in a scroll, generally under, but sometimes over the arms ; sometimes alluding to the bearing, sometimes to the name of the bearer, and sometimes containing whatever pleases the fancy of the deviser. See HERALDRY.

MOUDON, or MILDEN, a town in the canton of Vaud, Switzerland, on the river Broye. Part of it is level : but the rest stands on the declivity of a steep hill, from which a rivulet descends through the lower town under arches, and flows with great rapidity into the Broye. The town contains 2400 inhabitants, and is of great antiquity, being mentioned under the name of Moledunum by Antonine. It is thought to have 'been one of the towns which the Helvetii burned in the time of Caesar. Thirteen miles N.N. E. of Lausanne. *

MOVE, v. a. & n.s. ~} Fr. mouvoir ; Lat.

MOVE'ABLE, adj. & n.s. MOVE'ABLY, adv. MOVE'LESS, adj. MOVE'MENT, n.s. MO'VENT, adj. & n. x. MOV'ER, n. s. MOV'IXG, part. adj. MOV'IXGLY, adv.

moveo. To put in motion ; impel ; lead on ; drive; excite to ‘turbulence or commotion ; conduct in-to orderly motion : hence (meta.) to give J mental impulse to; propose; recommend; persuade; prevail on or over ; affect the passions or feelings ; touch pathetically ; make angry : as a neuter verb, to be in motion ; proceed from place to place ; change posture ; have vital action ; walk : as a substantive, the act of moving; motion made, as at chess. Moveable is unfixed ; capable of being moved ; that which may be moved. Moveably, so as it may be moved. Moveless, incapable of motion ; unmoved. Movement, motion made ; manner of moving. Movent, as an adjective, causing motion : movent and mover, that which moves another thing or person ; mover is also he, or that, which moves ; and he who proposes any thing. Moving, affecting ; pathetic ; influential on the passions. Movingly, pathetically ; passionately. And whanne gret flood was maad, the flood was hurlid to that hous : and it myghte not move it, for it was foundid on a sad stoon. Wiclif. Luk. 6.

Every moving thing that liveth shall be meat for you- ‘ Genesis.

When they were come to Bethlehem, all the city wasmotvd about them. Ruth. i. 19.

Sinai itself wa* moved at the presence of God.

Psalm Ixviii.

In him we live, move, and have our being.

Act* xvii. 28

So she departed full of grief and sdaine, Which only did to great impatience move her.

Spenser’s Faerie Queene.

In the vast wilderness, when the people of God had no settled habitation, yet a moeeable tabernacle they were commanded of God to make. Hooker.

The choice and flower of all things profitable in other books, the Psalms do both more briefly and more movingly express, by reason of that poetical form wherewith they are writteu. Id.

Grittus offered the Transylvanians money ; but minds desirous of revenge were not mooed with gold.

A thousand knees,

Ten thousand years together, naked, fasting, Upon a barren mountain, and still Winter In storm perpetual, could not move the gods To look that way thou wert. Shakspeare.

If he see aught in you that makes him like, That any thing he sees, which moves his liking, I can with ease translate it to my will. Id.

From those bloody hands

Throw your distempered weapons to the ground, And hear the sentence of your moved prince. Id.

Within this three mile may you see it coming ; I say a moving grove. Id. Macbeth.

Let him that moved you hither, Remove you hence ; I knew you at the first, You were a moveable. ††† Why, what's a moveable? ††† A joined stool. Id. Taming of the Shrew.

We seize

The plate, coin, revenues, and movables, Whereof our uncle Gaunt did stand possessed.

Shalii])eare .

0 thou eternal Mover of the heavens, Look with a gentle eye upon this wretch. Id.

I would have had them write more mocinglu. Id.

When he made his prayer, he found the boat lie was in moveable and unbound, the rest remained still fast. Bacon.

They find a great inconvenience in moving their suits by an interpreter. Davies on Ireland.

Could any power of sense the Roman move To burn his own right hand ? Davies.

They are to be blamed alike, who move and \vlio decline war upon particular respects.

Hay ward's Edward VI.

Sometimes the possibility of preferment prevailing with the credulous, expectation of less expence with the covetous, opinion of ease with the fond, and assurance of remoteness with the unkind parents, have moved them without discretion to engage their children in adventures of learning, by whose return they have received but small contentment. Wattoit.

Needs must they come whom God brings ; his hand is in all the motions of his meanest creatures. Not only we, but they move in him. Bp. Hall.

If the first consultation be not sufficient, the will may move a review, and require the understanding to inform itself better. Bp. Bramhall against Hobbet.

1 saw two angels play'd the mate ; With man aJ*s no otherwise it proves, An unseen hand makes all their moves.

Cou-ley.

The strength of a spring were better assisted by the labour of some intelligent mover, as the heavenly orbs are supposed to be turned. Wilkin*.

The pretext of piety is but like the hand of a clock, sot indeed more conspicuously, but directed wholly by the secret moving* of carnality within.

Decay ?f Piety.

Then feed on thoughts, that voluntary move Harmonious numbers. Milton

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They, as they move

Their starry dance in numbers that compute Days, months, and years, towards his all-cheering

lamp, Turn swi.“t their various motions. Id.

The sun

Had first his precept so to move, so shine, As might affect the earth with cold and heat.

id.

The senses represent the earth as immoveable ; for though it do move in itself, it rests to us who are carried with it. Glaneille.

That there is a motion which makes the vicissitudes of day and night, sense may assure us ; but whether the sun or earth be the common movent can-not be determined but by a further appeal.

Id. Scepsis.

You as the soul, as the first mover you, Vigour and life on every part bestow. Waller. The lungs, though untouched, will remain moveless as to any expansion or contraction of their substance.

Boyle.

The lunar month is natural and periodical, by which the moveable festivals of the Christian church are regulated. Holder.

To Indamora you my suit must move. Dryden.

When she saw her reasons idly spent. And could not move him from his fixed intent, She flew to rage. Id. Mn&iA.

Should a shipwrecked sailor sing his woe, Would’st thou be moved to pity, or bestow An alms? Id. Persius.

See great Marcellus ! how inured in toils He moves with manly grace, how rich with regal

spoils. Id. JEneid.

Through various hazards and events we move To Latium. Id.

Surveys rich moveables with curious eye, J’eats down the price, and threatens still to buy.

Dryden.

So orbs from the first Mover motion take, Yet each their proper

revolutions make. Id.

The will being the power of directing our operative faculties to some action, for some end, cannot at any time be mmed towards what is judged at that time inattainable. Locke.

This saying, that God is the place of spirits, being literal, makes us conceive that spirits move up and dow , and have their distances and intervals in God, as bodies have in space. Id.

His back-piece is composed of eighteen plates, maveably joined together by as many intermediate skins. Grew.

If it be in some part movent, and in some part quiescent, it must needs be a curve line, and so no radius. Id. Cosmologia.

That which moves a man to do any thing, must be the apprehension and expectation of some good from the thing which he is about to do. South.

Any one who sees the Teverone must conclude it to be one of the most moveable rivers in the world, that it is so often shifted out of one channel into another. Addison on Italy.

His air, his voice, his looks, his honest soul, Speak all so movingly in his behalf, I dare not trust myself to hear him talk. Addison.

F.very pert young fellow that has a moving fancy, and the least jingle of verse in his head, sets up for a writer of songs, and resolves to immortalize his bottle or his mistress. Steele.

Any heat whatsoever promotes the ascent of mineral matter, which is subtile, and is consequently mciealile more easily. Woodward's Natural History.

Images are very sparingly to be introduced : their proper place is in poems and orations, and their use

is to move pity or terror, compassion and resentment.

Feltmi on the Clastic /u. O let thy sister, daughter, handmaid move, Or all those tender names in one, thy love.

Pope.

The goddess moves

To visit Paphos, and her blooming groves. Id. The Grecian phalanx, moveless as a tower, On all sides battered, yet resists his power. Id. What farther relieves descriptions of battles is the art of introducing pathetic circumstances about the heroes, which raise a different movement in the mind, compassion and pity. Id. Essays.

Under workmen are expert enough at making a single wheel in a clock, but are utterly ignorant how to adjust the several parts, or regulate the movement.

Swift.

The jest is to be a thing unexpected : therefore your undesigning manner is a beauty in expressions of mirth ; and, when you are to talk on a set subject, the more you are moved yourself the more you will move others. Id.

Time, with all its celerity, moves slowly on to him whose whole employment is to watch its Bight.

Johnson.

Thus dream they, and contrive to save a God The incumbrance of his own concerns, and spare The great Artificer of all that moves The stress of a continual act, the pain Of unremitted vigilance and care, As too laborious and severe a task. Cowper.

MOVEMENT of a clock or watch, in its popular use among us, signifies all the inner works of a watch, clock, or other engine, which move, and, by that mot-ion, carry on the design of the machine. The movement of a clock or watch is the inside, or that part which measures the time, strikes, &c., exclusive of the frame, case, dial-plate, &c. The parts common to both these movements are, the main-spring, with its appur-tenances, lying on the spring-box, and in the middle thereof lapping about the spring-arbor, to which one end of it is fastened. On the top of the spring-arbor is the endless screw and its wheel ; but in spring clocks this is a racket-wheel with its click that stops it. That which the main spring draws, and round which the chain or string is wrapped, is called the fusee ; this is ordinarily taper; in large works going with weights it is cylindrical, and called the barrel. The small teeth at the bottom of the fusee or barrel, which stop it in winding up, is called the ratchet ; and that which stops it when wound up, and is for that end driven up by the spring, the garde-gut.

The wheels are various: the parts of a wheel are, the hoop or rim, the teeth, the cross, and the collet or piece of brass soldered on the arbor or spindle whereon .the wheel is rivetted. The little wheels playing in the teeth of the larger are called pinions ; and their teeth, which are four, five, six, eight, &c., are called leves ; the ends of the spindle are called pivots; and the guttered wheel, with iron spikes at bot-tom, wherein the line of ordinary clocks runs, the pulley. See CLOCK.

MOUFET (Thomas), M. D., a celebrated English physician, born in London in the sixteenth century. He practised medicine with great reputation at Ipswich, but spent the latter part of his life near Wilton, and died about 1600. He published a work at London in 1634,

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folio, entitled Theatrum Insectorum. A translation of it was published in London in 1658, folio. Martin Lister gives a very unfavorable opinion of this book, and censures him for quoting Aldrovandus without naming him ; but Ray vindicates Moufet, and maintains that he has rendered an essential service to the republic of letters. Moufet was the first who introduced chemical medicines into England.

MOUG-DEN, or Chen-yang, a city of Chinese Tartary, and capital of the country of the Mantchews, or Eastern Tartars. It is ornamented with several public edifices, and provided with magazines of arms and storehouses. They consider it as the principal place of their nation ; and, since China has been under their dominion, they have established the same tribunals here as at Peking, excepting that called Lii-pou ; these tribunals are composed of Tartars only ; their determination is final ; and in all their acts they use the Tartar characters and language. The city is built on an eminence : a number of rivers add much to the fertility of the surrounding country. It may be considered as a double city, of which one is enclosed within the other : the interior contains the emperor's palace, hotels of the principal mandarins, sovereign courts, and the different tribunals ; the exterior is inhabited by the common people, tradesmen, and all those who, by their employments, are not obliged to lodge in the interior. The latter is almost a league in circumference ; and the walls which enclose both are more than three leagues round : these walls were rebuilt in 1631, and repaired several times in the reign of Khang-hi. Near the gates are two magnificent tombs of the first emperors of the reigning family, built in the Chinese manner, and surrounded by a thick wall furnished with battlements ; the care of them is entrusted to several Mantchew mandarins, who at stated times perform certain ceremonies; a duty of which they acquit themselves with the same marks of veneration as if their masters were still living.

MOUJGHUR, a town of Hindostan, in Aj-meer, is surrounded on all sides by sand, which frequently has the appearance of a fine lake of water, on which the shrubs and turfs of grass are reflected, and form a perfect mirage. The town, which is surrounded by a high wall and towers, contains some handsome mosques and tombs, and several good wells and reservoirs of rain water. It belongs to a Mahometan chief, whose capital, Bahawulpore, is situated on the bank of the Gharra, or Hyphasis River, and who is tributary to Afghaunistaun. The

inhabitants are Hindoos and Mahometans. This place was visited by Mr. Elphinstone, in 1808, on his embassy to Cabul, and he was hospitably entertained. Long. 72►► 20’ E., lat. 28►► 57’ N.

MOULD, 7i. s. & u.a.-\ Span, molde ; Lat. MOUL’DABLE, f modulus. The matrix

MOULD’ER, n. s. ►►in which any thing is

MOULD’ING. J cast, or receives its

form ; the cast or form received ; to form ; mo-del ; shape. Mouldable is capable of being formed or transformed ; shapeable. A moulder, he who uses moulds, or forms any thing into shape. Moulding, an architectural ornament of regular shape.

If the liturgies of all the ancient churches br compared, it may be perceived they had all one original mould. Hooker. My wife comes foremost ; then the honoured

mould

Wherein this trunk was framed. Shaktpta-t.

Of what coarse metal ye are moulded. Id.

New honours come upon him, Like our strange garments cleave not to their mould, But with the end of use. Id. Macbeth.

You may have fruit in more accurate figures, according as you make the mouldt. Bacon.

The differences of figurable and not figurable, mouldabte and not mouldable, are plebeian notions.

Id. Natural History.

The king had taken such liking of his person that he resolved to make him a masterpiece, and to mould him platonically to his own idea. Wotton.

Nor virtue, wit, nor beauty, could Preserve from death's hand this their heavenly

mould. Carew.

And now that they have mollified the stiffness of his prejudice, and with much tempering fitted him for their mould, he is a task meet for one of their best workmen. Bp. Hall.

William earl of Pembroke was a man of another mould and making, being the most universally beloved of any man of that age ; and, having a great office, he made the court itself better esteemed, and more reverenced in the country. Clarendon.

Learn

What creatures there inhabit, of what mould, Or substance, how endued, and what their power, And where their weakness. Milton's Paradise Lwt.

Did I request thee, Maker ! from my clay To mould me man 1 Id.

He forgeth and mouldeth metals, and builds houses.

Hale.

So must the writer, whose productions should Take with the vulgar, be of vulgar mould. Waller.

From their main-top joyful news they hear Of ships, which by their mould bring new supplies.

Dryden.

Sure our souls were near allied, and thine Cast in the same poetick mould with mine. Id. Hollow moulding! are required in the work.

iloxon.

We may hope for new heavens and a new earth, more pure and perfect than the former ; as if this was a refiner's fire, to purge out the dross and coarse parts, and then cast the mass again into a new and better mould. Burnet.

Hans Carvel, impotent and old, Married a lass of London mould. Prior. Here in fit moulds to Indian nations known, Are cast the several kinds of precious stone.

Blackmore.

By education we may mould the minds and manners of youth into what shape we please, and give them the impressions of such habits as shall ever afterwards remain. Atterbury.

Then rose the seed of chaos and of night, Of dull and venal, a new world to mould, And bring Saturnian days of lead and gold.

Dunciad.

A faction in England, under the name of puritan, moulded up their

new schemes of religion with republican principles in government. Swift.

For you alone he stole The fire that forms a manly soul ; Then, to compleat it ev’ry way, He moulded it with female clay.

Id. ifixellaniei

Fabellus would never learn any moral lessons till they were moulded into the form of some fiction or fable like those of .lisop. Wattt.

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A heart at ease would have been charmed with my sentiments and reasonings ; but as to myself, I was like Judas Iscariot preaching the gospel ; he might melt and mould the hearts of those around him, but his own kept its native incorrigibility.

Bunts.

MOULD, n. s., v.n., & v. a. j Sax. mal ; Goth.

MOULD'INESS, >and Swed. mal;

MOULD'Y, adj. J Goth, malo, rust

or smut. Concretion ; fustiness ; foulness arising on various substances kept damp : to gather such concretion ; to cover with, or corrupt by mould. Mouldiness i<* the state of being mouldy.

In woods, in waves, in wars she wants to dwell, And will be found with peril and with pain ;

Ne can the man that moulds an idle cell Unto her happy mansion attain. Faerie Queene.

Very coarse, hoary, moulded bread the soldiers thrust upon their spears, railing against Ferdinand, who made no better provision. Knolles.

Is thy name mouldy ? ××× Yea.

××× 'Tis the more time thou wert used. ××× Ha, ha, ha ! Most excellent. Things that are mouldy lack use. Well said, Sir John. Shaksjieare.

All moulds are inceptions of putrefaction, as the moulds of pies and flesh, which moulds turn into worms. Bacon.

Moss is a kind of mould of the earth and trees, but may be better sorted as a rudiment of germination.

Id.

There be some houses wherein sweet meats will relent, and baked

meats will mould, more than in others. Id.

Flesh, fish, and plants, after a mouldiness, rotten-ness, or corrupting, will fall to breed worms.

Id. Natural History.

The malt made in summer is apt to contract mould. Mortimer.

The marble looks white, as being exposed to the winds and salt sea-vapours, that by continually fretting it continually preserves it from that mouldy colour which others contract. Addison.

A hermit, who has been shut up in his cell in a college, has contracted a sort of mould and rust upon his soul, and all his airs have aukwardness in them.

Watts.

MOULD, n. s.) Sax. molb ; Swed. mould ;

MOULD'ER, v. a. $ Goth. mold. Earth ; soil ; site of growth ; matter of which a thing is made: to moulder is to turn to dust; crumble away.

Though worms devour me, though I turn to mould, Yet in my flesh I shall his face behold. Sandys. Above the reach of loathful sinful lust,

Whose base effect through cowardly distrust

Of his own wings, dare not to heaven flic,

But like a mouldwarp in the earth doth lie.

Spenser.

If he had sat still, the enemy's army would have mouldered to nothing, and been exposed to any advantage he would take. Clarendon, When the world began,

One common mass composed the mould of man.

Dry den. Nature formed me of her softest mould,

Enfeebled all my soul with tender passions,

And sunk me even below my weak sex.

Addison.

Finding his congregation moulder every Sunday, and hearing what was the occasion of it, he resolved to give his parish a little Latin in his turn.

Id. Spectator.

The natural histories of Switzerland talk of the fall of those rocks when their foundations have been mouldered with age, or rent by an earthquake.

Id. on Italy.

Whatsoever moulders, or is wasted away, is carried into the lower grounds, and nothing brought back again. Burnet.

To them by smiling Jove ‘twas given,

Great William’s glories to recall,

When statues moulder, and when arches fall.

Prim .

The black earth every where obvious on the surface of the ground, we call mould. Woodward.

Those formed stones despoiled of their shells, and exposed upon the surface of the ground, in time de-cay, wear, and moulder away, and are frequently found defaced and broken to pieces.

Id. Natural History.

With nodding arches, broken temples spread, The very tombs now vanished like their dead ; Some felt the silent stroke of mouldering age, Some, hostile fury. Pope.

Are these the forms that mouldered in the dust 1 Oh, the transcendant glory of the just ! Young.

Those moulds that are of a bright chestnut or hazelly colour are accounted the best ; next to that the dark grey and russet moulds are accounted best ; the light and dark ash-colour are reckoned the worst, such as are usually found on common or heathy ground ; the clear

tawny is by no means to be approved, but that of a yellowish colour is reckoned the worst of all ; this is commonly found in wild and waste parts of the country, and for the most part produces nothing but goss, furs, and fern. All good lands after rain, or breaking up by the spade, will emit a strong smell ; that being always the best that is neither too unctuous nor too lean, but such as will easily dissolve ;of a just consistence between sand and clay. Miller.

MOULD, or MOLD, in the mechanic arts, &c., a cavity artfully cut, with design to give its form or impression to some softer matter applied therein. Moulds are implements of great use in sculpture, foundry, &c. The workmen employed in melting the mineral or metallic glebe dug out of mines, have each their several moulds to receive the melted metal as it comes out of the furnace ; but these are different, according to the diversity of metals and works. In gold mines they have moulds for ingots; in silver mines for bars; in copper or lead mines, for pigs or salmons ; in tin mines for pigs and ingots ; and in iron mines for sows, chimney-backs, anvils, caldrons, pots, and other large utensils and merchandises of iron ; which are here cast as it were at first hand.

MOULD, among gold-beaters, a certain number of leaves of vellum or pieces of gut cut square, of a certain size, and laid over one another, between which they put the leaves of gold and sil-ver which they beat on the marble with the hammei-See GOLD LEAF. They have four kinds of moulds, two whereof are of vellum, and two of gut : the smallest of those of vellum consists of forty or fifty leaves ; the largest contains 1 00 : for the others, each contains 500 leaves The moulds have all their several cases, consisting of two pieces of parchment, serving to keep the leaves of the mould in their place, and orevent their being disordered in beating.

MOULD, in ship-building, a thin flexible piece of timber, used by shipwrights as a pattern

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whereby to form the different curves of the timbers, and other compassing pieces in a ship's frame. There are two sorts of these, *viz.* the bend mould and hollow mould ; the former of these determines the convexity of the timbers, and the latter their concavity on the outside, where they approach the heel, particularly towards the extremities of the vessel. The figure given to the timbers by this pattern is called their bevelling.

MOULDS of founders of large works, as statues, bells, guns, and Other brazen works, are of wax, supported withinside by what we call a core, and covered without-side with a cape or case. It is in the space which the wax took up, which is afterwards melted away to leave it free, that the liquid metal runs, and the work is formed ; being carried thither by a great number of little canals, which cover the whole mould. See FOUNDRY.

MOULDS for leaden bullets are little iron pincers, each of whose branches terminates in a hemispherical concave, which, when shut, forms an entire sphere. In the lips or sides where the branches meet is a little jet or hole, through which the melted lead is conveyed.

MOULDS of letter-founders are partly of steel and partly of wood. The wood, properly speaking, serves only to cover the real mould which is within, and to prevent the workman, who holds it in his hand, from being incommoded by the heat of the melted metal. Only one letter or type can be formed at once in each mould.

MOULDS, in the manufacture of paper, are lit-tle frames composed of several brass or iron wires, fastened together by another wire still finer. Each mould is of the bigness of the sheet of paper to be made, and has a rim or ledge of wood to which the wires are fastened. These moulds are more usually called frames or forms. See PAPER-MAKING.

MOULDS of moneyers are frames full of sand, wherein the plates of metal are cast that are to serve for the striking of gold and silver coin. See COINAGE. A sort of concave moulds made of clay, having within them the figures and inscriptions of ancient Roman coins, are found in many parts of England, and supposed to have been used for the casting of money. Mr. Baker saw some of these moulds that were found in Shropshire, bearing the same types and inscriptions with some of the Roman coins, and gave an account of them to the Royal

Society. They were found among sand at Ryton in Shropshire, a mile from the great Watling Street Road. They are all of the size of the Roman denarius, and of little more than the thickness of a halfpenny. They are made of smooth pot or brick clay. There were many of them found together, and some of them are often found in Yorkshire; but they do not seem to have been met with in any other kingdom, except some that were once found at Lyons. They have been sometimes found joined together side by side, on one flat piece of clay, as if intended for casting a great number of coins at once ; and all that have been found have been of the emperor Severus. They are sometimes found impressed on both sides, with the head of Severus on one side, and some

well known reverse of his on the other. They seem plainly to have been intended for the coinage of money, though it is not easy to say in what manner they can have been employed to that purpose, especially those which have impressions on both sides, unless it may be supposed that they coined two pieces at the same time by the help of three moulds, of which this was to be the middle one. If, by disposing these into some sorts of iron frame or case, as our letter-founders do the brass moulds for casting their types, the melted metal could easily be poured into them, it would certainly be a very easy method of coining, as such moulds require little time or expense to make, and therefore might be supplied with new ones as often as they break. These moulds seem to have been burnt or baked sufficiently to make them hard ; but not so as to render them porous, whereby they would have lost their smooth surface, which in these is so close that whatever metal should be formed in them would have no appearance like the sand-holes by which counterfeit coins and medals are usually detected.

MOULIN (Charles Du), a celebrated civilian, and one of the most learned men of the sixteenth century, was born of a considerable family in Paris in \ 500, and acquired great reputation by his skill in the law. He published many works, which have been collected and printed in 5 vols. folio; and are considered as the most excellent works France has produced on the subject of civil law. He died at Paris in 1566.

MOULIN (Peter Du), a protestant divine, of the same family with the former, born in 1568. He taught philosophy at Leyden; and afterwards became chaplain to the princess of Navarre. At the desire of king James 1 . he came over to England in 1615, and prepared a plan for

the union of the Protestant churches. He presided at the synod held by the Calvinists at Alais in 1620. Some time after he retired to Se-dan, where the duke of Bouillon made him professor of divinity, and minister. He was employed by the Calvinists in the most important affairs; and died at Sedan in 1658. His principal works are, 1. The Anatomy of Arminianism; 2. A Treatise on Repentance, and the Keys of the Church ; 3. The Capuchine ; 4. A Defence of the Reformed Churches; 5. The Judge of Controversies and Traditions ; 6. The Anatomy of the Mass ; 7. The Novelty of Popery.

MOULIN (Peter Du), eldest son of the preceding, was chaplain to Charles II., and prebendary of Canterbury, where he died in 1684, aged eighty-four. He wrote, 1. The Peace of the Soul, in French ; 2. Clamor Regii Sanguinis; which Milton, by mistake, attributed to Alexander Morus; 3. A Defence of the Protestant Religion.

MOULIN (Gabriel Du), a French historian and ecclesiastic, who wrote, 1. Histoire Generate de Normandie sous les Dues; Rouen, 1631, fol.; 2. Histoire des Conquetes des Normans dans lei royaumes de Naples et Sicilie, fol.

MOULINET, in mechanics, a roller, which, being crossed with two levers, is usually applied to cranes, capstans, and other sorts of engines of the like nature, to draw ropes, and heave up stones, &c.

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MOULINET is also a kind of turnstile, or wooden cross, which turns horizontally upon a stake fixed in the ground : usually placed in passages to keep out cattle, and to oblige passengers to go and come one by one. Those moulinets are often set near the outworks of fortified places at the sides of the barriers, through which people pass on foot.

MOULINS, a large and handsome post town, and the chief place of a prefecture or arrondissement in the department of the Allier, France, having an inferior court of justice, a board of tradeand manufactures, societies of rural economy and the arts, a royal court at Riom, a royal college, and a public drawing school, with 13,800 inhabitants. This IOWH stands very pleasantly, in a fertile plain, on the right bank of the Allier, over which there is a noble bridge built of freestone ; the streets are clean and airy, adorned with fountains and houses regularly built, mostly of brick. The public squares are planted with fine trees, and have delightful walks within them; the neighbourhood presents beautiful country promenades, formed by fine avenues of poplars. At the gates there is a spring of warm mineral water.

The manufactures of the place consist of cutlery, that is in high repute, silk and cotton caps, table and other linen, woollen and cotton yarn ; and a trade is carried on in grain, wine, iron, wood, oxen, pigs, &c. The most remarkable public buildings and institutions are the library and cabinet of natural history, the museum, the tomb of the constable Montmorency, the barracks for cavalry, the departmental nursery, and the bridge over the Allier, consisting often arches, and level footpaths through its whole length, and from which the view embraces a fine road, in a direct line, for more than three miles. This town is forty-three miles south of Nevers, ninety-one W.S.W. of Chalons-sur-Saone, 139 north-west of Lyons, and 217 southeast of Paris, in long. 1►► E., lat. 46►► 34’ N.

MOULT, t>. n. ˆ Formerly written mout.

MOULT’ING, adj. $ Belg. muyten, from MEW, which see. To shed or change feathers : hence to lose feathers.

Some birds upon moulting turn colour, as robin-red-breasts, after their moulting, grow to be red again by degrees. Bacon.

Time shall moult away his wings, Ere he shall discover

In the whole wide world again Such a constant lover. Suckling.

The widowed turtle hangs her moulting wings, And to the woods in mournful murmur sings.

Garth.

MOUNCH, or MAUNCH, v.a. Mouch, to eat much. ❖❖❖ Ainsworth. ‘This word,’ says Macbean, ‘ is retained in Scotland, and denotes the action of toothless gums on a hard crust, or any thing eatable : it seems to be a corruption of the French word manger.’

A sailor’s wife had chesnuts in her lap,

And mouncht, and mouncht, and mouncht.

Shakspeare.

MOUND, 7i. s. & v. a. Sax, muni>ian, to defend; Goth, tnund, a defence. Any thing raised to fortify or defend ; a bank of earth or stone : to fortify with a mound.

His broad branches laden with rich fee, Did stretch themselves without the utmost bound Of this great garden, compassed with a mound.

Faerie Queene.

The sea is a thief, whose liquid surge resolves The mounds into salt tears. Shakspeare.

God had thrown That mountain as his garden mound, high raised.

Milton.

Nor cold shall hinder me with horns and hounds To thrid the thickets, or to leap the mounds.

Dryden.

Such as broke through all mounds of law, such as laughed at the sword of vengeance which divine justice brandished in their faces. South’s Sermons.

The state of Milan is like a vast garden surrounded by a noble mound-work of rocks and mountains. Addison.

And Lara sleeps not where his fathers sleep, But where he died his grave was dug as deep ; Nor is his mortal slumber less profound, Though priest nor blest, nor marble decked the mound. Byron.

MOUND, in heraldry, from mundus, the world, a globe encircled, and having a cross on the top, as ‘ He beareth, or, a mound, sable, environed with a circle, and ensigned with a cross avellane, gules; by the name of Chaw-las.’

MOUNT, n.s.t v. n., & v. o.ˆj

MOUN’TAIN, n.s. & adj.

MOUNTAIMEER’, n. s.

MOUNTAINET’,

MOUN’TAINOUS, adj.

MOUN’TAINOUSNESS, n. s.

MOUN’TAIN-PA RSLEY,

MOUN’TA IN-ROSE,

Mo UN TANT, adj.

MOUN’TER, n. s.

MOUN’TY. sure.

Fr. mont, mon-ter, montagne ; Ital., Span., and Portug. monte ; Lat. mons, mon- ˆ□□□tanus. A hill, natural or artificial ; an eminence ; heap : hence an accumulated trea—

See the extract from Bacon. Mr. Thomson thinks the vulgar expression ‘ a mint,’ may be a corruption of ‘ a mount of money.’ To mount is to rise comparatively high ; to tower : hence to get on horseback ; also, as an active verb, to raise aloft ; lift up ; place on an elevation, and particularly on horseback ; embellish. A mountain is a large hill or elevation of the earth : hence any thing exremely large : as an adjective, it means growing on or pertaining to such elevations. A

mountaineer is an inhabitant of a mountainous or hilly country : hence a rustic, or barbarian. Mountainet, a diminutive of mountain. ‘ Elegant,’ says Dr. Johnson, ‘ but not in use.’ Mountainous means abounding in or characterised by mountains ; bulky ; huge ; inhabiting mountains. Mountainousness, quality or state of being mountainous. Mountain-parsley and rose, are plants. See ATHAMANTA and ROSA. Mountant is rising high ; aspiring. A mounter, one who mounts or rises. The mounty, is the rise of a hawk.

Jacob offered sacrifice upon the mount.

Gen. xxxi. 54.

Doth the eagle mount up at thy command, and make her nest on high ? Job iii. 27.

Though his excellency mount up to the heavens, and his head reach unto the clouds, yet he shall pe-rish. Id. xx. o.

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Her breasts sweetly rose up like two fair moun-ainets in the pleasant vale of Tempe. Sidney.

Without mounting by degrees a man cannot attain unto high things. Id.

The sport which Basilius would shew to Zelmane was the mounty at a heron, which getting up on his waggling wings with pain, as though the air next to the earth were not fit to fly through, now diminished the sight of himself. Id.

He might see what mounts they had in short time cast, and what a number there was of warlike soldiers. Knolles.

Armenia is so called from the mountainousiiest of it. Brereioood.

Mounting his eyes, He did discharge a horrible oath.

Shakspeare. Henry VIII.

He cryed, oh ! and mounted. Id. Cymbeline. Now for our mountain sports up to yond hill, Your legs are young. Id.

Yield, rustic mountaineer. Id.

A base ignoble mind, That mounts no higher than a bird can soar.

Shakspeare.

The fire that mounts the liquor till it runs o'er, Seeming to augment, wastes it. Id.

I had been drowned ; a death that I abhor : for the water swells a man, and what should I have been when I had been swelled 1 I should have been a mountain of mummy. Id.

You may as well forbid the mountain pines To wag their high tops, and to make a noise, When they are fretted with the gusts of heaven.

Id.

What custom wills in all things, should we do't, Mountainous error

would be too highly heapt For truth to o'erpeer. Id.

Hold up, you sluts,

Your aprons mountant; your'e not oathable, Although, I know, you'll swear. Id.

The air is so thin, that a bird therein has no feeling of her wings, or any resistance of air to mount herself by. Raleigh.

And by his false worship such power he did gain, As kept him o' th' mountain, and us on the plain.

Id.

These examples confirmed me in a resolution to spend my time wholly in writing ; and to put forth that poor talent God hath given me, not to particular exchanges, but to banks or mounts of perpetuity, which will not break. Bacon.

In destructions by deluge and earthquake, the remnant which hap to be reserved are ignorant and mountainous people, that can give no account of the time past. Id. Essays.

Though they to the earth were thrown, Yet quickly they regained their own, Such nimbleness was never shown ; They were two gallant mounters.

Dray tort's Nymphiad.

The fire of trees and houses mounts on high, And meets half-way new fires that shower from sky.

Cowley.

If the liturgy should be offered to them, it would kindle jealousy, and as the first range of that ladder, which should serve to mount over all their customs.

Clarendon.

The ark no more now floats, but seems on ground, Fast on the top of some high mountain fixed.

Milton.

No savage, fierce bandit, or mountaineer, Will dare to soil her virgin

purity. Id.

Three hundred horses, in high stables fed, Of these he chose the fairest and the best, To mount the Trojan troop. Vrvden's SEneid.

VOL XV.

Ambitious meteors set themselves upon the wing, taking ever}' occasion of drawing upward to the sun : not considering that they have no more time allowed them in their mounting than the single revolution of a day ; and that, when the light goes from them, they are of necessity to fall. Dryden.

From Acman's hands a rolling stone there came, So large, it half deserved a mountain's name ! Id.

Amiternian troops of mighty fame, And mountaineer*, that from Severus came. Id,

Behold yon mountain'* hoary height, Made higher with new mounts of snow. Id. Clear reason, acting in conjunction with a well-disciplined, but strong and vigorous fancy, seldom fail t6 attain their end ; fancy, without reason, is like a horse without a rider ; and reason without fancy is not well mounted. Crew's Cosmologia.

The ascent of the land from the sea to the foot of the mountains, and the height of the mountains from the bottom to the top, are to be computed, when you measure the height of a mountain, or of a mountainous land, in respect of the sea. Burnet.

On earth, in air, amidst the seas and skies, .Mountainous heaps of wonders rise ; Whose tow'ring strength will ne'er submit To reason's batteries, or the mines of wit. Prior.

In vain thy hungry mountaineers Come forth in all their warlike jeers, The shield, the pistol, dirk, and dagger, In which they daily wont to swagger. Tichell. A few mountaineers may escape, to continue human race ; and yet illiterate rusticks, as mountaineer t al-ways are. Bentley.

Bring then these blessings to a strict account, Make fair deductions, see to what they mount.

Pope. Few bankers will to heaven be mounters. Sitift.

If man can’t mount He will descend. Young.

Here rivers in the sea were lost ; There mountains to the skies were tost : Here tumbling billows marked the coast,

With surging foam ; There distant shone Art’s lofty boast,

The lordly dome. Buna.

Mountains interposed Make enemies of nations who had else Like kindred drops been mingled into one.

COU’/H r.

The land appeared a high and rocky coast, And higher drew the mountains as fhey drew, Set by a current towards it. Byron.

Morn dawns ; and with it stern Albania’s hills, Dark Sulis” rocks and Pindus’ inland peak,

Robed half in mist, bedewed with snowy rills. Arrayed in many a dun and purple streak, Arise ; and, as the clouds along them break,

Disclose the dwelling of the mountaineer. Id.

MOUNT DESERT, an island and town on the coast of Maine, in Hancock county, forty miles east of Castine, 295 north-east of Boston. The island is fifteen miles long, and twelve broad. It is situated between Frenchman’s and Bluehill bays.

MOUNT HOLLEY, a post town, the capital of Burlington county, New Jersey, near Ancocus Creek, twenty-three miles E. N. E. of Philadelphia. It is a flourishing town, and contains a court-house, jail, market-house, bank, two houses of public worship, one for Episcopalians, and one for Friends, and various valuable mills.

.MorNT PLKASANT, a considerable post-town

of West Chester county, New York, on the east side of the Hudson, thirty-six miles north of New York. Population 3119. This town possesses considerable wealth and trade.

MOUNT PLEASANT, a post town of Jefferson county, Ohio ; ten miles north-east of Clars-ville, twenty south-west of Steubenville, west 292. It is a flourishing town, and contains a market-house, a bank, and a Friends' meeting-house. In the vicinity there are a woollen manufactory, a paper mill, and other valuable mills.

MOUNT VERNON, a post town of Kennebeck county of Maine, eighteen miles north-west of Augusta, 170 N. N.E. of Boston.

MOUNTS OF PIETY, certain funds or establishments in Italy, where money is lent out on some small security. There were also mounts of piety in England, raised by contribution for the benefit of people ruined by the extortions of the Jews.

A MOUNTAIN is a considerable eminence of land, elevated above every thing adjoining to it, and commanding all the surrounding places: it is commonly full of inequalities, cavities more or less exposed, and strata half laid open. This name abbreviated is likewise given to a chain of mountains; as Mount Atlas, Mount Caucasus, &c. Those who have surveyed the earth in general, and studied nature on a grand scale, have constantly been struck with admiration and astonishment at the sight of such majestic eminences which, extending in different ways, seem to rule over the rest of the globe, and which present to the beholder a spectacle equally magnificent and interesting.

According to the Newtonian system, an attractive power is not only exerted between those large masses of matter which constitute the sun and planets, but likewise between all comparatively smaller bodies,

and even between the smallest particles of which they are composed. Agreeably to this hypothesis, a heavy body, which ought to gravitate or tend towards the centre of the earth, in a direction perpendicular to its surface, supposing the said surface to be perfectly even and spherical, ought likewise, though in a less degree, to be attracted and tend towards a mountain placed on the earth's surface ; so that a plumb-line, for instance, of a quadrant, hanging in the neighbourhood of such a mountain, ought to be drawn from a perpendicular situation, in consequence of the attractive power of the quantity of matter of which it is composed acting in a direction different from that exerted by the whole mass of matter in the earth, and with a proportionably inferior degree of force. Though Sir Isaac Newton had long ago hinted at an experiment of this kind, and had remarked that a mountain of an hemispherical figure, three miles high and six broad, would not by, its attraction draw the plumb-line 2' (or rather 1′ 18″) out of the perpendicular: yet no attempt to ascertain this matter by actual experiment was mnde till about 1738; when the French academicians, particularly Messrs. Bouguer and Condamine, who were sent to Peru to measure a degree under the equator, attempted to discover

the attractive power of Chimboraˆo, in Quito According to their observations, Chimboraˆo exerted an attraction equal to 8". Though this experiment was not perhaps sufficient to prove satisfactorily even the reality of an attraction, much less the precise quantity of it ; yet it does not appear that any steps had been since taken to repeat it. Through the munificence of his Britannic majesty, the Royal Society were enabled to undertake the execution of this delicate and important experiment; the astronomer royal was chosen to conduct it. After various enquiries, the mountain Schehallien, situated nearly in the centre of Scotland, was pitched upon as the most proper for the purpose that could be found in this island. The observations were made by taking the meridian zenith distances of different fixed stars, near the zenith, by means of a zenith sector of ten feet radius ; first on the south, and afterwards on the nortli side of the hill, the greatest length of which extended in an east and west direction. It is evident that, if the mass of matter in the hill exerted any sensible attraction, it would cause the plumb-line of the sector through which an observer viewed a star in the meridian, to deviate from its perpendicular situation, and would attract it contrarywise at the two stations, thereby doubling the effect. On the south side the plummet would be drawn to the northward, by the attractive power of the hill placed to the northward of it : and, on the north side, a contrary and equal deflection of the plumb-line would take place, in consequence of the

attraction of the hill, now to the south of it. The apparent zenith distances of the stars would be affected contrarywise; those being increased at the one station which were diminished at the other ; and the correspondent quantities of the deflection of the plumb-line would give the observer the sum of the contrary attractions of the hill, acting on the plummet at the two stations ; the half of which will of course indicate the attractive power of the hill. The operations requisite for this experiment lasted about four months ; and from them it appears that the sum of the two contrary attractions of the mountain Schehallien, in the two temporary observations, which were successively fixed half way up the hill (where the effect of its attraction would be greatest), was equal to 11′ 6″. From a rough computation, founded on the known law of gravitation and on an assumption that the density of the hill is equal to the mean density of the earth, it appears that the attraction of the hill should amount to about the double of this quantity. Thence it was inferred, that the density of the hill is only about half the mean density of the earth. It does not appear, however, that the mountain Schehallien has ever been a volcano, or is hollow ; as it is extremely solid and dense, and seemingly composed of an entire rock. The inferences drawn from these experiments maybe reduced to the following: 1. That the mountain Schehallien exerts a sensible attraction ; therefore, from the rules of philosophising, we are to conclude that every mountain, and indeed every particle of the earth, is endued with the same

property, in proportion to its quantity of matter. 2. The law of the variation of this force, in the inverse ratio of the squares of the distances, as laid down by Sir Isaac Newton, is also confirmed by this experiment. For if the force of attraction of the hill had been only to that of the earth as the matter in the hill to that of the earth, and had not been greatly increased by the near approach to its centre, the attraction thereof must have been wholly insensible. But now, by only supposing the mean density of the earth to be double to that of the hill, which seems very probable from other considerations, the attraction of the hill will be reconciled to the general law of the

variation of attraction in the inverse duplicate ratio of the distances, as deduced by Sir Isaac Newton from the comparison of the motion of the heavenly bodies with the force of gravity at the surface of the earth ; and the analogy of nature will be preserved. 3. We may now, therefore, be allowed to admit this law, and to acknowledge that the mean density of the ††arth is at least double of that at the surface ; and consequently that the density of the internal parts of the earth is much greater than near the surface. Hence also, the whole^ quantity of matter in the earth will be at least as great again as if it had been all composed of matter of the same density with that at the surface : or about four or five times as great as if it were all composed of water. This conclusion, Maskelyne adds, is totally contrary to the hypothesis of some naturalists, who suppose the earth to be only a great hollow shell of matter ; supporting itself from the property of an arch, with an immense vacuity in the midst of it. But, were that the case, the attraction of mountains, and even smaller inequalities in the earth's surface, would be very great, contrary to experiment, and would affect the measures of the degrees of the meridian much more than we find they do ; and the variation of gravity, in different latitudes, in going from the equator to the poles, as found by pendulums, would not be near so regular as it has been found by experiment to be. 4. As mountains are by these experiments found capable of producing sensible deflections of the plumb-lines of astronomical instruments, it is of great importance in the mensuration of degrees in the meridian, either to choose places where the irregular attractions of the elevated parts may be small ; or where, by their situation, they may compensate or counteract the effects of each other.

MOUNTAINS, MARBLE. ††† Of these there are great numbers in Egypt, from which, though immense quantities have been carried off for the multitude of great works erected by the ancient Egyptians, yet in the opinion of Mr. Bruce, who passed them in his journey to Abyssinia, there is such an abundant mess, that it would be sufficient to build Rome, Athens, Corinth, Syracuse, Memphis, Alexandria, and half a dozen more such cities. The first mountain of this kind mentioned by him is one opposite to Tcrfowey, consisting partly of green marble, partly of granite, with a red blush upon a gray ground, and square oblong spots. Here he saw a monstrous obelisk of marble, very nearly square, broken at the end, and nearly thirty feet long, and nineteen

feet in the face. Throughout the plain there were scattered small pieces of jasper, with green, white, and red spots, called in Italy

diaspro sanguineo; and all the mountains upon that side seem to consist of the same materials. Mere also were quantities of small pieces of granite of various kinds, as well as porphyry, which had been carried down by a torrent, probably from the ancient quarries. These pieces were white mixed with black spots, and red with green veins and black spots. All the other mountains on the right hand were of red marble, but no great beauty ; those on the opposite side being green marble, probably of the serpentine kind. This, he says, was one of the most extraordinary sights he ever saw. The former mountains were of a considerable height, without a tree, shrub, or blade of grass upon them ; and this looked exactly as if it had been covered over with Havan-nah and Brasil snuff. Proceeding farther on, he entered another defile, with mountains of green marble on every side. The highest he saw appeared to be composed of serpentine marble, having a large vein of green jasper spotted with red running through about one-third of its thickness. It was extremely hard ; so that it did not yield to the blows of a hammer, though it was evident that it had formerly been qua'rried ; and there were channels for bringing water, which terminated in this quarry of jasper ; ' a proof,' says Mr. Bruce, ' that water was one of the means used in cutting those hard stones.' On these mountains ' the porphyry shows itself by a fine purple sand without any gloss upon it. It is mixed with the white sand and fixed marble of the plains. Green and unvariegated marble is also found in the same mountain with the porphyry. The marble is brittle for some inches where the two veins meet ; but the porphyry is as hard as in other places.' There is likewise a kind of red marble with white veins, which our author has seen at Rome and in Britain. The common green, called serpentine, looks as if it were covered with Brasil snuff. Along with this green he saw two samples of the beautiful kind called Isabella ; one of them wi'h the yellowish cast of Quaker color, the other of that bluish cast called dove color ; and these two seemed to divide the mountains with the serpentine. Here also he saw the vein of jasper. The marble of greatest value, however, is that called verde antico, which is of a dark green color with white spots. It is found, like the jasper, in the mountains of the plain green serpentine, and is not discoverable by the dust or any particular color upon it. Mountains of marble and porphyry are not peculiar to Egypt. They are likewise met with in the north of Scotland ; in the Western Isles there are such quantities of these materials as, in the opinion of Mr. Williams, would be sufficient to serve all Europe.

MOUNTAINS OF THE LIONS, mountains of Africa, which divide Nigritia from Guinea, and extend as far as Ethiopia, were styled by the ancients the mountains of God, on account of their being greatly

subject to thunder and lightning.

MOUNTAINS OF THE MOON, a chain of mountains in Africa, between Abyssinia and Mono—

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motapa, and receiving the above denomination from their great height.

MOUNTAINS, WHITE, a range of mountains in New Hampshire, reckoned the highest in New England. They are visible on land eighty miles distant, and are the first observed at sea. Their Indian name is Agiochochook. The number of summits is unknown, but seven are visible at once. Of these the highest is called Mount Washington. The whole circuit of them is not less than fifty miles. Their height above an adjacent meadow is reckoned to be about 5500 feet, and the meadow is 3500 feet above the level of the sea. The snow and ice cover them nine or ten months in the year ; during which time they exhibit that bright apperarance from which they are denominated white. From this summit in clear weather is exhibited a noble view, extending sixty or seventy miles in every direction. Although they are more than seventy miles within land, they are seen many leagues off at sea, and appear like an exceedingly bright cloud in the horizon. These immense heights, being copiously replenished with water, afford a variety of beautiful cascades. Three of the largest rivers in New England receive a great part of their waters from them. The Amanoosuck and Israel, two principal branches of Connecticut, fall from their west side. The Peabody, a branch of the Amariscogen, falls from the north-east side; and almost the whole of the Saco descends from the south side. The highest summit of these mountains is about lat. 44►► N.

MOUNTAINS, WRITTEN, Mountains of Inscriptions, or Jibbel el Mokatteb, are a mountain or chain of mountains in the wilderness of Sinai ; on which, for a great extent of space, the marble is said to be inscribed with innumerable characters, reaching from the ground sometimes to the height of twelve or fourteen feet. These were mentibned by a Greek author in the third century, and some of them have been copied by Pococke, Montague, and other travellers; notwithstanding which, there is still a very great uncertainty even of their existence. The vast number of these inscriptions, the desert place in which they are found, and the length of time requisite for executing the task, once induced a notion that they are the work of the Israelites during their forty years wandering in the wilderness. Others are of opinion that they consist merely of the names of travellers and the dates of their journeys. M. Niebuhr, who visited this country in

September 1762, made every attempt in his power, though without success, to obtain a sight of this celebrated mountain. After much vain enquiry, he was at last conducted to some rocks upon which there were inscriptions in unknown characters. They are most numerous in a narrow pass between two mountains named Om-er-ridstein ; and, says M. Niebuhr, ‘ the pretended Jibbel el Mokatteb may possibly be in its neighbourhood.’ Some of these inscriptions were copied by our author; but he does not look upon them to be of any consequence. When Niebuhr arrived at last at the mountain to which the sheik had promised to conduct him, he found no inscription, but, on climbing up to tlic top, lie found an Egyptian cemetery, the

stones of which were covered with hieroglyphics. The tomb-stones were from five to seven feet long, some standing on end and others lying flat ; and ‘ the more carefully they are examined,’ says he, (the more certainly do they appear to be sepulchral stones, having epitaphs inscribed on them.’ The translator of Volney’s Travels ascribes these inscriptions to the pilgrims who visit Mount Sinai ; but they ought surely to have been written in a language which somebody could understand ; but, from the copies that have been taken of them by Dr. Pococke and others, it does not appear that they could be explained by any person. When Dr. Clayton, bishop of Clogher, visited this part of the world about 1723, he expressed the greatest desire to have the matter concerning these written mountains ascertained, and even made an offer of ––500 sterling to any literary person who would undertake the journey, and endeavour to decypher the inscriptions ; but no such person appeared.

For mountains, as to their geological character, see GEOLOGY. Particular mountains and mountain chains are described in their alphabetical place.

MO’UNTENANCE,n. s. Amount of a thing in space. Obsolete.

Of all the remenant of min other care Ne set I not the mountance of a tare, So that I coud don ought to your plesance.

Chaucer. Cant. Tales.

This said, they both a furlong’s mountenance Retired, their steeds to runne an even race.

Spenser.

MOUNTEBANK, n. s. Fr. montabanc ; Ital. montare in banco. A quack th'at was commonly seen to mount a bench in markets in former times, and boast his infallible drugs and cures ; any juggler or boaster : to mountebank is to cheat ; delude by false pretences.

As nimble jugglers that deceive the eye, Disguised cheaters, prating mountebanks, And many such like libertines of sin.

Shakspeare.

I'll mountebank their loves, Cog their hearts from them. Id. Coriolanus. But these two every honest Papist will confess, with voluntary shame and grief; and grant that it may grow a disputable question, whether mountebanks or priests are the greatest cozeners. Bp. Hull.

She, like a mountebank, did wound And stab herself with doubts profound, Only to show with how small pain The sores of faith are cured again. Hudibras. But ˆEchylus, says Horace in some page, Was the first mountebank that trod the stage.

Dryden. There are mountebank* and smatterers in state.

L' Estrange.

Nothing so impossible in nature but mountebanks will undertake. Arbuthnot's Hittorij of John Bull. It looks like a mountebank to boast infallible cures.

Baker.

MOUNT-SORREL, a town in Leicestershire, so named from a high mount or solid rock adjoining to the town, of a dusky, red, or sorrel-colored stone, extremely hard. Of rough stones hewn out of this rock the town is built. It has a market on Monday. It was noted formerly for its castle, and is seated on the Stour, over

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province of Alentejo, on the Guadiana. It a strong castle, and its public buildings are

wliich is a bridge It is twenty miles southeast by south of Derby, and 105 north-west by north of London.

MOURA, an old town of_ Portugal, in the

has two

parish churches, some convents, and an hospital. Inhabitants 4000. Thirty-seven miles S.S. E. of Evora, and ninety-eight E.S. E. of Lisbon.

MOU RAO, a fortified town in the south of Portugal, in the province of Alentejo, near the Guadiana. It stands on a hill, in a rugged fertile district. Inhabitants 2200. It is eighteen miles N.N. E. of Moura, ninety-six east by south of Lisbon, and thirty-two east of Evora.

MOURN, v. n.&cv. a.ˆ\ Sax.munnan; Mas.

MOURN'ER.W.*. I Goth, mournan; Teut.

MOURN'FUL, adj. [niornen; FT. morne ;

MOURN'FULLY, adv. f Lat. maror (Greek

MOURN'FULNESS, n.s. | jtoptov, /topoc- ••• Min—

MOURN'ING. J sheu). To griere; be

sorrowful; wear a funeral or sorrowful habit; bewail ; lament ; utter sorrow : mournful means sorrowful ; expressive of mourning : mourning is used for the utterance and the garb or dress of sorrow : the other derivations are varied by the subfixes in the usual manner.

Abraham came to mount for Sarah, and to weep.

Genesis.

Feign thyself to be a mourner, and put on mourning apparel. 2 Sum. xiv. 2. My vineyard, being desolate, mourneth unto me.

Jer. xii.

Wo is me, who will deliver me in those days 1 the beginning of sorrows and great mournings.

2 Esdr. xvi. 18.

We mourn in black ; why mourn we not in blood ?

Shakspeare.

Publish it that she is dead ; Maintain a mourning ostentation, Hang

mournful epitaphs.

Id. Much Ado about Nothing. The kindred of the queen must die at Pomfret. ††† Indeed I am no mourner for that news, Because they have been still my adversaries.

Shakspeare.

No funeral rites, nor man in mournful weeds, Nor mournful bell shall ring her burial. Id.

Upon his tomb

Shall be engraved the sack of Orleans ; The treacherous manner of his mournful death.

Id. Beat the drum, that it speak mournfully. Id.

The king spoke of him admiringly and mourningly.

Id.

They rejoice at the presence of the sun, and mourn at the absence thereof. Bacon's Natural History.

Lo, joy, and comfort, is the end of mourners ; and mourning and weeping is the end of mirth and laughter. Bp. Hall.

A flood thee also drowned, And sunk thee as thy sons ; till gently reared By the' angel, on thy feet thou stoodst at last, Though comfortless, as when a father mourns His children, all in view destroyed at once.

Milten.

The love-lorn nightingale

Nightly to thee her sad song mourneth well. Id. The muse that mourns him now his happy triumph sung. Dryden.

He lives to be chief mourner for his son ; Before his face his wife and brother burn. Id.

The mourner eugh and builder oak were there. Id. The winds within the quivering branches played. And dancing trees a mournful musick made. Id. They through the master street the corpse conveyed, The houses to their tops with black were spread, And even the pavements were with mourmny hid.

/,/.

A woman that had two daughters buried one, and mourners were provided to attend the funeral.

L' Eft range. Scythia mourni

Our guilty wars, and earth's remotest regions Lie half unpeopled by the feuds of Rome. Additon.

To cure thy woe, she shews thy fame ; Lest the great mourner should forget

That all the race whence Orange came Made virtue triumph over fate. Prior.

The mournful fair, Oft as the rolling years return,

With fragrant wreaths and flowing hair, Shall visit her distinguished urn. //.

Friends in sable weeds appear, Grieve for an hour, perhaps, then mount a year ; And bear about the mockery of woe To midnight dances, and the puppet-show. Id.

But, oh ! against himself his labour turned ; The more he comforted the more she mourned : Compassion swells our grief; words, soft and kind, But sooth our weakness, and dissolve the mind.

Young.

From noise and riot he devoutly kept, Sighed with the sick, and with the mourner wept.

Harte.

When an emperor dies in China, the whole expense of the solemnities is defrayed from the royal coffers. When the great die here, mandarins are ready enough to order mourning ; but I do not see that they are so ready to pay for it. What, order me to wear mourning before they know whether 1 can buy it or no! Goldtmith. Citizen of the World.

Sir Roger de Coverley, because it happened to be a cold day in which he made his will, ordered his servants great-coats for mourning ; so, because I have been this week plagued with an indigestion, I have sent you by the carrier a fine old ewe-milk cheese.

Burnt And see his lordly fellow-worm

The poor petition spurn, Unmindful, though a weeping wife

And helpless offspring mourn. Id.

Then, anxious to be longer spared, Man mourns his fleeting breath :
All evils then seem light compared

With the approach of death. Cotcper.

MOURNE, n. s. Fr. morne. The round end of a staff; that part of a lance to which the steel part is fixed, or whence it is taken off.

He carried his lances, which, though strong to give a laneely blow indeed, yet so were they colored with hooks near the mourne, that they prettily represented sheep hooks. Sidney.

MOURNING FOR THE DEAD, amongst the ancient Jews, on the death of their relations or intimate friends, was expressed by weeping, tearing their clothes, smiting their breasts, or tearing them with their nails, pulling or cutting off their hair and beards, walking barefoot, lying upon the ground, fasting, or eating upon the ground. They kept themselves closely shut up in their houses, covered their faces, and abstained from all work, even reading the law, and saying their usual prayers. They neither dressed themselves, nor made their beds, nor cut their nails, nor

went into the hath, nor saluted any body. The time of mourning was generally seven days; more or less, according to circumstances, but never exceeding thirty days. The different periods of the time of mourning required different degrees of grief and different tokens of it. The Greeks, on the death of their friends, showed their sorrow by secluding themselves from all gaiety, entertainments, games, public solemnities, wine, and music. They sat in gloomy and solitary places, stripped themselves of all external ornaments, put on a coarse black stuff by way of mourning, tore their hair, shaved their heads, rolled themselves in the dust and mire, sprinkled ashes on their heads, smote

their breasts with their palms, tore their faces, and frequently cried out with a lamentable voice, reiterating the interjection t, e, ►►. e ; hence funeral lamentations were called EXt-yoi ; whence our word elegy. If they appeared in public, during the time of mourning, they had veils over their faces and heads. During the funeral procession, certain persons called tlopxot Sp►►jvwv marched before, and sung melancholy strains called oyoˆi'o/ioi, laXf/ioi, Atvot, and AiXivot. These vocal mourners sung thrice during the procession round the pile and round the grave. Flutes were also used to heighten the solemnity. The ancients had a remarkable way of mourning for soldiers slain in battle. The whole army attended the funeral solemnities, with their arms reversed, it being customary for mourners, in most of their actions, to behave themselves in a manner contrary to what was usual at other times. In those places where it was the fashion to wear long hair mourners were shaved ; and, where others shaved, mourners wore long hair. The conjecture of those, therefore, is frivolous, who imagine that the soldiers turned the heads of their shields downwards, lest the gods, whose images were engraved upon them, should be polluted with the sight of a corpse ; since not the gods only, but any other figures, were frequently represented on shields ; nor did the few only near the corpse, but the whole company held their shields in the same position : not to mention that other arms were also pointed downwards. Potter, Archaeol. Graec. torn. ii. The tokens of private grief among the Romans were the same as those among the Greeks. Black or dark brown were the colors of the mourning habits worn by the men ; they were also common to the women. The mourning of the emperors at first was black. In the time of Augustus, the women wore white veils, and the rest of their dress black. From the time of Domitian they tvore nothing but white habits, without any ornaments of gold, jewels, or pearls. The men let their hair and beards grow, and wore no wreaths of flowers on their heads while the days of mourning continued. The longest time of mourning was ten months : this regulation was established by Numa, and included his whole year. For a widow to marry during this time was accounted infamous. Mourning was not used for children who died under three years of age. From this age to ten they mourned as many months as the child was years old. A remarkable victory, or other happy event, occasioned the shortening of the time of mourning. The birth of a child, or the attainment of any remarkable honor in the family, certain feasts in honor of the gods, or the consecration of a tem-ple, had the same effect. After the defeat at Cannae, the senate decreed that mourning should not be worn for more than thirty days, that the loss might be forgotten as soon as possible. When public magistrates died, or persons of great ncte, and when any remarkable calamity happened,

all public meetings were intermitted, the schools of exercise, baths, shops, temples, and all places of concourse, were shut up, and the whole city put on a face of sorrow ; the senators laid aside the laticlave, and the consuls sat in a seat lower than ordinary. This was the custom at Athens also, and was observed upon the death of Socrates, not long after he had been sentenced to death by their judges. Praeficae, or mourning women (by the Greeks called 3p►►jva>j> iKap%oi\ went about the streets : this was customary among the Jews, as well as the Greeks and Romans. Jerem. ix. 17.

The modes of mourning in modern times are various in various countries ; as well as the colors used for that end. In Europe the ordinary color for mourning is black; in China it is white ; in Turkey blue or violet ; in Egypt yel-low; in Ethiopia brown. White obtained formerly in Castile on the death of their princes. Herrera observes, that the last time it was used was in 1498, at the death of prince John. Each people assign their reasons for the particular color of their mourning : white is supposed to denote purity ; yellow, that death is the end of human hopes, in regard that leaves when they fall, and flowers when they fade, become yellow : brown denotes the earth, whither the dead re-turn : black, the privation of life, as being the privation of light ; blue expresses the happiness which it is hoped the deceased does enjoy ; and purple or violet, sorrow on the one side, and hope on the other, as being a mixture of black and blue.

MOURZOUK, a city of Central Africa, the capital of Fezzan. It is one of the greatest seats of the inland commerce of the desert : and the rendezvous of the intercourse between its northern and eastern regions. This trade is carried on by caravans, the frequent arrival of which, between October and February, render Mourzouk a scene of great business. From Egypt, and Tripoli, Bournou and Cassina, there arrives an annual caravan. That of Cassina is accompanied by a number of merchants, who penetrate across the Niger, often even to Ashantee. The arrival of a caravan produces a species of jubilee : placed in a chair of state, the sultan receives it without the walls ; and each traveller, in passing, kisses his hand. The duties levied on the caravan forming a large part of the revenue of the sovereign. The wall of the city appears to have been anciently built of stone, and it retains the appellation of a Christian town ; but presents to the eye a grotesque medley of vast ruins of ancient buildings, and humble cottages of earth and sand. A small river passes it, and it is well supplied with spring water Long. 15►► 35’ E., lat. 27►► 28’ N.

MOU

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MOUSE, n . s. & v. n.ˆ\ Sax. muj- ; Teut. mans ; MOUSE’EAR, I Belg. muys ; Swed. and

MOUSE’HUNT, | Lat.mtu ; Gr. ˆvc (/*****,

MOUSE’HOLE, V > to conceal). The oriental

MOUS’ER, I languages also have Pers.

MOUSE’TAIL, mush ; Sans, mushi, moo—

MOUSE’TRAP. J sa. *** Thomson. A small

- quadruped, of which there are numerous species. Sse Mus. To mouse is to catch mice: mouse-ear and mouse-tail are plants : mouse-hunt and mouser both mean one that catches mice : mouse-hole, the hole made by this little animal; hence any small hole : mouse-trap, the trap or snare by which mice are taken.

The eagle England being in prey, To her unguarded nest the weazel Scot Comes sneaking, and so sucks her princely eggs ; Playing the mouse in absence of the cat.

Shakspeare.

A falcon towering, in his pride of place, Was by a mousing owl hawked at and killed. Id.

You have been a mouse-hunt in your time, But I will watch you. Id. Romeo and Juliet. Many analogical motions in animals, I have reason to conclude, in their principle are not simply mechanical, although a mouse-trap, or Architas dove, moved mechanically. Hale.

He can creep in at a motue-hole, but he soon grows too big e**er to get out again. *** Stillingfleei.

Where mice and rats devoured poetick bread, And with heroic verse luxuriously were fed.

Dryden.

He puts the prophets in a mouse-hole : the last man ever speaks the

best reason.

Dryden and Lee's (Edipus.

A whole assembly of mousing saints, under the mask of zeal and good nature, lay many kingdoms in blood. L'Estrange.

Puss, a madam, will be a mouser still. Id.

Madam's own hand the mouse-trap baited.

Prior.

This structure of hair I have observed in the hair of cats, rats, and mice. Der ham's Physico-Theology.

When you have fowl in the larder, leave the door open, in pity to the cat, if she be a good mouser.

Swift.

A poet's cat, sedate and grave As poet well could wish to have, Was much addicted to enquire For nooks to which she might retire, And where, secure as mouse in chink, She might repose, or sit and think. Cou-per.

MOUSE, in naval affairs, is the name of a sort of knob, usually in the shape of a pear, wrought on the outside of a rope, by means of spun yarn, parsling, &c., and used to confine some other securely to the former, and prevent it from sliding along its surface. These mouses are particularly used on the stays of the lower mast, to prevent the eye from slipping up to the mast. There is also a smaller one round messengers, formed by intertwisting a small rope round the strands.

MOUSUL, or MOSUL. See MOSUL.

MOUSQUETAIRES, under the old French regime, were a body of horse soldiers originally raised by Louis XIII. in 1622 out of the cara-bineers. This corps consisted of two companies selected from the young men of noble extraction, each of 244 officers and privates. The horses of

the first company, or mousquetaires gris, were white or dapple-gray ; of the second, or raous-quetaires noirs, black. The arms were, instead of the musket, a carbine, two pistols in the saddle-bow, and a sword, calculated for infantry and cavalry duty. The standard of the first

company was a bomb falling upon a besieged town, with the motto, Quo ruit ad lethum : that of the second company was a bunch of arrows, with these words underneath, Alterius Jovis altera tela. The mousquetaires never served on horseback except when the king travelled. Several princes, and almost all the general officers and marshals of France, were indebted to this establishment for the first elements of military science. The corps was indeed considered as a military school for the French nobility. The English Roman Catholic noblemen who wished to ente-the mousquetaires were obliged to prove certain degrees of nobility before they were admitted ; but this was not the case in the Irish brigade.

MOUTH, 7►►. s., v. 7i. & v. a.~\ Sax. mu* ; Gr.

MOUTHED', adj. I p►►0oc,speech.►►►

MOUTH-FRIEND, n. s. VMinsheu; Maes.

MOUTH-HONOR, I Goth, munth ;

MOUTH'LESS, adj. J Gothic tnun,

month ; Swed. mun ; Teut. and Belg. mund, mond ; Scot, mou; Fr. moue. The central aperture of the head ; hence any instrument of speaking, or the utterance of sound ; any opening or entrance ; and, in familiar language, a speaker, or principal orator ; cry or voice ; distortion of the mouth : to be ' down in the mouth,' is to be dejected, ' chop-fallen.' To mouth is to vociferate; boast, speak big or with a loud voice ; speak affectedly ; to chew ; eat ; seize or force with the mouth : mouthed is furnished with a mouth ; and this adjective is used expressively in composition ; as in foul-mouthed ; mealy-mouthed (or bashful) ; hard-mouthed, &c. A mouth-friend is one distinguished for ' blessing his friends' only ' with a loud voice :' a mouthful, what the mouth can contain at once ; hence any small quantity : mouth-honor, hollow, insincere civility or respect : mouthless, destitute of a mouth or entrance.

The dove came in ; and lo, in her mouth was an olive leaf. Gen. viii. 1 1 .

Call the damsel, and enquire at her mouth.

Id. xxiv. 57.

Corne carried let such as be poore go and glean, And after thy cattel to mouth it up clean. Tuner.

He came and lay at the mouth of the haven, daring them to fight. Kiwtles.

Riotous madness,

To be entangled with those mouth-made vows,

Which break themselves in swearing.

Sfmktpeare.

Either our history shall with full mouth Speak freely of our acts ; or else our grave, Like Turkish mute, shall have a tongueless mouth, Not worshipped with a waxen epitaph. Id.

Coward dogs Most spend their mouths when what they seem to

threaten Runs far before them. Id. Henry V.

Nay, an thou'lt mouth,

I'll rant as well as thou. Id. Hamltt.

Persevere, counterfeit sad looks,

Make months upon me when I turn my back.

Shakspeart.

MOU

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Speak the speech as I pronounced it, trippingly on the tongue : but, if you mouth it, 1 had as lieve the town crier had spoke my lines. Id.

Death lines his dead chaps with steel, The swords of soldiers are his teeth, his phangs ; And now he feasts mouthing the flesh of men. Id.

He keeps them, like an apple, in the corner of his jaw ; first mouthed to be last swallowed.

Id. Hamlet.

May you a better feast never behold, You knot of mouth-friend* : smoke and lukewarm

water

Is your perfection. Shakspeare.

Honour, love, obedience, troops of friends,

I must not look to have ; but, in their stead,

Curses not loud but deep, mouth honour, breath.

Id.

Set a candle lighted in the bottom of a bason of water, and turn the mouth of a glass over the can-dle, and it will make the water rise.

Bacon’s Natural History.

In regard the cub comes forth involved in the chorion, a thick membrane obscuring the formation, and which the dam doth after tear asunder ; the beholder at first sight imputes the ensuing form to the mouthing of the dam. Browne.

The boar

Deals glancing wounds ; the fearful dogs divide, All spend their mouth aloft, but not abide. Dryden. When Progne's or Thyestes' feast they write,

And for the mouthing actors verse indite ;

Thou neither like a bellows swellest thy face,

Nor can'st thou strain thy throat. Id. Perrius.

Lucilius never feared the times ; Mutius and Lupus both by name he brought, He mouthed them, and betwixt his grinders caught.

Dryden.

You to your own Aquinum shall repair, To take a mouthful of sweet country air. Id.

Every body's mouth will lie full on it for the first four days, and in four more the story will talk itself asleep. L'F.strange.

But, upon bringing the net ashore, it proved to be only one great stone, and a few little fishes ; upon this disappointment they were down in the mouth.

Id.

A goat going out for a mouthful of fresh grass, charged her kid not to open the door till she came back. Id.

There can be no reason given, why a visage somewhat longer, or a wider mouth, could not have consisted with a soul. Locke.

Having frequently in our mouths the name eternity, we think we have a positive idea of it. Id.

There is a certain sentence got into every man's mouth, that God accepts the will for the deed.

South's Sermons.

The mouth is low and narrow; but, after having entered pretty far in, the grotto opens itself in an oval figure. Addison.

Every coffee-house has some particular statesman belonging to it, who is the mnuth of the street where he lives. Id.

You don't now thunder in the capitol,

With all the mouths of Rome to second thee. Id.

Why tliey should keep running asses at Coleshill, or how making mouths turns to account in Warwickshire more than any other parts of England, I can-not comprehend. Id.

I'll bellow out for Rome, and for my country, And mouth at Csesar till I shake the senate. Id.

The navigation of the Arabic gulph being more dangerous toward the bottom than the mouth, Ptolemy built Berenice at the entry of the gulf.

Id. on Coins.

One tragick sentence if I dare deride, Which Betterton's grave action dignified, Or well mouthed Booth with emphasis proclaims.

Pope.

A dissolution of all bonds ensued ; The curbs invented for the mulish mouth Of head-strong youth were broken ; bars and bolts Grew rusty by disuse. Cotoper.

'Tis sweet to hear the watch-dog's bark,

Bay deep-mouthed welcome as we draw near home ; 'Tis sweet to know there is an eye will mark

Our coming, and look brighter when we come.

Byron.

MOUTH, in anatomy, a part of the face, consisting of the lips, the gums, the insides of the cheeks, the palate, the salival glands, the os hyoides, the uvula, and the tonsils. See ANATOMY. The mouth in the several species of animals is nicely adapted to the several uses of speech, the gathering and receiving of food, the catching of prey, &c. In some creatures it is wide and large, in others little and narrow ; in some it is formed with a deep incisure into the head, for the better

catching and holding of prey, and more easy comminution of hard, large, and troublesome food ; and in others with a shorter incisure, for the gathering and holding of herbaceous food. In birds it is neatly shaped for piercing the air; hard and horny, to supply the want of teeth ; hooked, in the rapacious kind, to catch and hold their prey ; long and slender in those that have their food to grope for in moorish places; and broad and long in those that search for it in the mud. Nor is the mouth less remarkable in insects ; in some it is forcipated, to catch, hold, and tear the prey ; in others aculealed, to pierce and wound animals, and suck their blood ; in others strongly rigid, with jaws and teeth, to gnaw and scrape out their food, carry burdens, perforate the earth, nay the hardest wood, and even stones themselves, for houses and nests for their young.

MOUVANS (Paul Richard), surnamed the brave, a Protestant officer, born at Castellane in Provence, who made a considerable figure in the civil wars of France, during the sixteenth century. His brother, who was likewise a Protestant, having been killed in a popular tumult excited by the Romish priests at Draguignan, he took up arms to avenge his death ; and, having assembled 2000 men, committed great devastations in Provence. Being pursued by count Tende, at the head of 6000 men, he took post in a convent strongly fortified by nature, resolved to defend himself to the last extremity. The count proposed an interview, to which Mouvans agreed, on condition that his brother's murderers should be punished, and that those who had taken up arms with him should not be molested. These terms being accepted, he dismissed his troops, reserving only a guard of fifty men. The parliament of Aix had received orders from the court to punish him capitally for being concerned in the conspiracy of Amboise. Baron de la Garde made an attempt to apprehend him; but he was repulsed with considerable loss. Mouvans at length retired to Geneva, where he lived for some time in tranquillity, nobly rejecting the splendid offers made him by the duke of Guise if he would join the Catholic party. He

MOW

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rick, or heap : to mowburn is to heat or take

fire in the mow : a mower, he who mows or cuts

down.

It was the latter growth after the king's mowings.

Amos.

Learn skilfullie how Each grain for to laie by itself on a mow.

Tusser. Set mowers a mowing, where meadow is grown.

Id.

Of all the seed that in my youth was sowne, Was nought but brakes and brambles to be mown.

Spenser.

The care you have

To mow down thorns that would annoy our foot, Is worthy praise. Shakspeare. Henry VI.

What valiant foemen, like to autumn's corn, Have we mowed down. Id.

The strawy Greeks, ripe for his edge, Fall down before him like the mower's swath.

Shakspeare. All else cut off

As Tarquin did the poppy-heads, or moners A field of thistles. Ben Jonson's Catiline.

Whatever

The scythe of time mows down, devour unspared.

Milton.

Gold, though the heaviest metal, hither swims : Ours is the harvest where the Indians mow, We plough the deep, and reap what others sow.

Waller.

Mowers and reapers, who spend the most part of the hot Summer days exposed to the sun, have the skin of their hands of a darker colour than before.

Boyle.

Thou and I, marching before our troops, May taste fate to ‘em ; mow ‘em out a passage, Begin the noble harvest of the field. Dryden Stands o’er the prostrate wretch, and as he lay, Vain tales inventing, and prepared to pray, Mows off his head. id. JEneid.

Beans when moist give in the mow.

Mortimer.

House it not green, lest it mowburn. Id. Beat, roll and mow carpet-walks and cammomile.

Evelyn.

Where’er I gad, I Blouzelind shall view, Woods, dairy, barn, and mows our passion knew.

Gay. In simmer when the hay was mawn,

And corn waved green in ilka field, While claver blooms white o’er the lea,

And roses blaw in ilka bield. Burnt.

Mow, n. s. & v. n. Corrupted from Fr. moot, mouth. Wry mouth ; distorted face. This word is still retained in Scotland.

The very abjects came together against me un-awares, making mows at me.

Psalm xxxv. 15. Common Prayer. Some Smithfield ruffian takes up some new mowing with the mouth, some wrenching with the shoulder, some fresh, new oath, that will run round in the mouth. Auham.

Apes and monkeys,

‘Twixt two such she’s, would chatter this way, and Contemn with mows the other. Shakspeare.

Those that would make mows at him while ray father lived, give twenty ducats a piece for his picture in little. Id.

For every trifle are they set upon me ; Sometimes like apes that mow and chatter at me, And after bite me. Id. Tempest.

Mow is a name given to several towns in Hindostan, the principal of which is in the district of Ferukabad, and called Mow Shemshe-reabad. It was formerly inhabited by the Bungush tribe of Afghauns. Long. 79►► 18’E., lat. 27►► 34’ N.

Mow, a town of Hindostan, province of Alla-habad, situated on the west bank of the Soorjew River, and celebrated for its manufacture of cot-ton and shirt cloth. Long. 83►► 37’ E., lat. 25►► 57►► N.

MOWEE, one of the Sandwich Islands discovered by captain Cook, is 162 miles in circumference. A low isthmus divides it into circular peninsulas, of which the east is double the size of the west. The mountains in both rise to an exceeding great height, and may be seen at the distance of more than thirty leagues. The north shores, like those of Owyhee, afford no soundings, and the country presents the same appearance of verdure and fertility. Near the west point of the smaller peninsula is a spacious bay, with a sandy beach shaded with cocoa nut-trees. The country behind has a most romantic appearance, the lulls rising almost perpendicularly in a great variety of peaked forms ; and their steep sides and deep chasms between them are cover

ed with trees. The tops of these hills are entirely hare, and of a reddish-brown color. The num-l>er of inhabitants is about 65,000. Long. 204►► 4’ E., lat., 20►► 50’ N.

MOWING. See RURAL ECONOMY-. MOXA, a celebrated eastern specific for the gout, which is burned on the part effected. It is a soft lanuginous substance, prepared in Ja-pan from the young leaves of a species of arte-misia, by beating them together when thoroughly dried, and rubbing them betwixt the hands till only the fine fibres are left. The down on the leaves of mullein, cotton, hemp, &c., will answer as well. A little cone of the moxa is laid upon the part, previously moistened, and set on fife at the top ; it burns down with a temperate glowing heat, and produces a dark colored spot, the exulceration of which is promoted by applying a little garlic ; the ulcer is left to discharge, or is healed, according to the intention in using the moxa. See ARTEMISIA.

MOXOS, an extensive province of Peru, extending on each side of the Mamore, bounded by the government of Matto Grosso on the east, Cuzco and the Peruvian provinces on the west, and Chiquitos and Santa Cruz on the south. It is chiefly inhabited by warlike tribes of Indians, and contains the large oval lake Rogagualo, formed by an arm of the Rio Beni, which rises near La Paz, on the west side of the Andes, in 18►► S. lat., and flowing north enters the Ucayale, their united streams afterwards joining the Apu-rimac. The banks of the Beni have many missionary settlements. This lake empties it-self into the Mamore by a channel called De la Exaltacion. From Lake Rogagualo three other rivers take their rise, and flow into the Amazons on the north ; *viz.* the Jutay, the Juruay, and the Puros. The temperature here is moist, and unhealthy, owing to the inundations of the rivers and lakes with which the country is covered, and epidemic fevers are frequent.

MOYLE, n. s. Or MULE, which see. An animal generated between the horse and the ass.

Ordinary husbandmen should quit breeding of horses, and betake

themselves to moylet ; a beast which will fare hardly, live very long, draw indifferently well, carry great burthens, and hath also a pace swift and easy enough. Came.

‘Twould tempt a moyle to fury. May.

MOYLE (Walter), a learned English writer in the eighteenth century, born in Cornwall in 1672. He was sent to Oxford, and thence removed to the Temple ; where he studied the law, and the constitution of the English government. He soon became acquainted with the wits of the day, and joined some of them in translating Lucian. He undertook to furnish versions of four of that author’s pieces, and executed them with spirit and accuracy. He was warmly attached to the principles of liberty, and in 1697 appeared as the coadjutor of Mr. Trenchard in writing a pamphlet entitled An Argument showing that a Standing Army is inconsistent with a Free Government, and absolutely destructive to the Constitution of the English Monarchy. He also translated Xe-noplum’s Discourse upon Improving the State of Athens. He was for some time member of parliament for Saltash, and afterwards retired to his

seat at Bake in Cornwall, and died in 1721. In 1726 his works were printed at London, in 2 vols. 8vo.

MOZART (John Chrysostom Wolfgang Theo-philus), the celebrated German musician, was born at Saltzburg in 1756. He was taught music by his father, who was master of the chapel at Saltzburg. When but three years of age, young Mozart, attending to the lessons which his sister was receiving at the harpsichord, be-came captivated with the music ; and when she had left the instrument would place himself at it, find the thirds, sound them with the liveliest joy, and employ whole hours at the exercise. His father, urged by such early and striking indications of genius, immediately began to teach him some little airs ; and soon perceived that his pupil improved even beyond the hopes he had formed of him. Half an hour was generally sufficient for his acquiring a minuet or a little song, which, when once learned, he would of himself perform with taste and expression.

At the age of six years he had made such a progress as to be able to compose short pieces for the harpsichord, which his father was obliged to commit to paper for him. From that time nothing made any impression upon him but music ; and infantine amusements lost all their attractions unless music had a share in them. He advanced from

day to day, not by ordinary and insensible degrees, but with a rapidity which hourly excited new surprise in his parents ††† the happy witnesses of his progress. In 1762 he went with his father and sister to Munich, where he performed a concerto before the elector, which excited the admiration of the whole court; nor was he less applauded at Vienna, where the emperor called him the little sorcerer. His father gave him lessons only on the harpsichord ; but he privately taught himself the violin ; and his command of the instrument afforded the elder Mozart the utmost surprise, when he one day at a concert took a second violin, and acquitted himself with great address. His constant success in whatever he attempted produced an unbounded confidence in his own powers ; and he had the laudable hardihood to undertake to qualify himself for the first violin, and did not long remain short of the necessary proficiency.

He had an ear so correct, that he felt the most minute discordancy ; and such a fondness for study, that it was frequently necessary to take him by force from the instrument. This love of application never diminished. He every day passed a considerable time at his harpsichord, and generally practised till a late hour at night.

His father, returning home one day with a stranger, found little Mozart with a pen in his hand. ‘What are you writing?’ said he. ‘A concerto for the harpsichord,’ replied the child. ‘ Let us see it (rejoined the father) ; it is a marvellous concerto without doubt.’ He then took the paper, and saw nothing at first but a mass of notes mingled with blots of ink by the mal-ad- dress of the young composer, who, unskilled in the management of the pen, had dipped it too freely in the ink ; and, having blotted and smeared his paper, had endeavoured to make out his ideas with his fingers ; but, on a closer examina

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lion, his father was lost in wonder ; and his eyes delighted and flowing with tears, became rivetted to the notes. ‘ See (exclaimed he to the stranger) how just and regular it all is ! but it is impossible to play it; it is too difficult.’ ‘ It is a concerto (said the child), and must be practised till one can play it.’ In 1763 he went with his father to Paris, and thence to London, where he performed before his majesty, and published six sonatas for the harpsichord. In 1766 they returned to Saltzburg, and in 1769 young Mozart went to Italy, where the pope conferred on him the order of the Golden Spur, and the Philo-Harmonic So’ciety of Bologna admitted him a member. At Rome he assisted at the Miserere in the Sixtine chapel ; which performance is justly considered as the ne plus ultra of vocal music. He was prohibited from taking a copy of this Miserere, and therefore piqued himself on retaining it in his memory. Having heard it with attention, he went home, made out a MS. score from recollection, returned the next day to the chapel, heard the piece a second time, corrected the rough draught, and produced a transcript, which surprised all Rome. In 1781 he settled at Vienna, where he composed his principal works, and was much honored by the emperor Joseph II.

His first opera at Vienna was Die Entfichrung aus dern Serail, or the Rape of the Seraglio, in 1782, to German words. The second, Le Nozze di Figaro, in four acts. The third, the Schauspiel Director, or the Manager at the Play-house, in 1786. II Don Giovanni, in 1787. La Clemenza di Tito, a serious opera. Cori Fantutti, comic. Die Zauber Flute, or Flauto Magico. Idomeneo, a serious opera, &c.

It was not till the year 1782, that he began to compose at Vienna for the national theatre ; at first chiefly instrumental music ; but, on its being discovered how well he could write for the voice, he was engaged by the nobility and gentry first to compose comic operas, sometimes to German words, and sometimes Italian. His serious operas, we believe, were all originally composed to Italian words. He died in 1791.

After his decease, when Haydn was asked by Broderip, whether Mozart had left any MS. compositions behind him that were worth purchasing, as his widow had offered his unedited papers at a high price to the principal publishers of music throughout Europe ; Haydn eagerly said, ‘ Purchase them by all means* He was truly a great

musician. I have been often flattered by my friends with having some genius ; but he was much my superior.'

MOZDOK, a town and district of the government of Caucasus, on the left bank of the Terek, built in 1763. It terminates the military line of defence formed along this river. Vines are raised here, and manufactures of leather, brandy, and silk are considerable : some silk-worms also are bred ; but the principal commerce is with the mountaineers of Caucasus. Population estimated at 3000 persons chiefly Armenians, Georgians, and baptised Circassians. Eight miles east of Ekaterinograd.

MSTA, a navigable river of Northern European Russia, in the government of Novgorod, runs

into the lake llinen, near Lipinskoi. A canal, dug in the reign of Peter I., joined it to the Ti-vertza; and a second canal, finished in 1804, connects it with the Volchov.

MST1SLAVL, a town of Russian Lithuania, government of Mohilev, on the V'achra. It has a Jesuit's college, a monastery, six Greek churches, and a synagogue of Jews. It was formerly the capital of a palatinate. Inhabitants 4000. Sixty miles north-east of Mohilev.

MTZENSK, a well-built town of European Russia, in the government of Orel. It has 5600 inhabitants, and the environs are productive in hemp and corn, which give rise to a considerable traffic. Thirty-two miles N.N. E. of Orel.

MUCH, adj.,adv.Sin.$.'\ Sax. mycell, my—

MUCH'WH AT, adv. > cle ; Goth, mik ; Scot.

MUCU'EL, adj. j m►►c/c/e;Span.Tn►►cAo;

Teut. mkh.; Swed. mik. The Gothic auk, eyk, says Mr. Thomson, signifying increase, augmentation, to which ma, more, may have been prefixed. Great or large in number or quantity ; long in time ; opposed both to few and little : as an adverb it means in a great degree; by far; and exaggerates the comparative degree of adjectives; to a certain degree ; nearly; often; long: as a substantive, a great number or multitude ; a great quantity; more than enough; a comparative or assignable quantity ; an extraordinary occurrence or thing : ' much at one' is nearly at one: 'to make much of,' to treat with marked

respecter kindness : muchwhat, a deservedly obsolete word for nearly : much is also used in composition with participles active and passive: when passively, as in ‘much loved, much enjoyed,’ it seems to be an adverb ; when actively, as ‘ much enduring,’ it may be more properly considered as a noun : muchel is the old mode of writing much.

Joye ye in that day, and be ye glad ; for lo youro mede is miiche in hevene. H’iclif. Luk. 6.

Isaac, thou art much mightier than we.

(if n. xxvi. 16.

The waters covered the chariots and horsemen ; there remained not so much as one. fold. xiv. 28.

They gathered against Moses and Aaron, and said, Ye take too much upon you. A urn. xvi. 3.

Thou shall carry miu-h seed out, and shah gather but little in ; for the locust shall consume it.

l)fut. xxiv. 38.

He charged them that they should tell no man ; but the more he charged them, so much the more a great deal they published it. Mark vii. 36.

\Ve have had fathers of our flesh, which corrected us, and we gave them reverence ; shall we not much rather be in subjection unto the Father of spirits, and jjve i Hebrew x’n. 9.

Though he knew his discourse was to entertain him from a more streight parley, yet he durst not but kiss his rod, and gladly make mtich of that entertainment which she allotted unto him. Sidney. He had in arras abroad won muchtl fame,

And filled far lands with glory of his might.

faerie Queene. Let us know

If ‘twill tie up thy discontented sword, And carry hack to Sicily much tall youth, That else must perish here.

Sluikt}>e>ire. Anwni ,ind Cleopatra. Thou thinkest it much to tread tin-ooze

Of the salt deep.

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When thou earnest first, Thou stroaked’st, and madest much of me ; and

would’st give me Water with berries in’t. Id,

It was much that one that was so great a lover of peace should be happy in war. Bacons Henry VII.

Full of doubt I stand, Whether I shall repent me now of sin By me done or occasioned, or rejoice Mitch more, that much more good thereof shall spring.

Milton.

There is, said Michael, if thou well observe, The rule of not too much, by temperance taught.

Id.

Henceforth I fly not death, nor would prolong Life much, bent rather how I may be quit Fairest and easiest of this cumbrous charge. Id. So spake, so wished, mwc/i-humbled Eve, but fate Subscribed not. Id.

The motion being conveyed from the brain of man to the fancy of another, it is there received ; and the same kind of strings being moved, and muchwhat after the same manner as in the first imaginant.

GlanvilHe’s Scepsis.

The bigness of her body and bill, as likewise the form of them, is muchwhat as follows. More.

It is much, if men were from eternity, that they should not find out the way of writing all that long duration which had past before that time.

Tillotson.

All left the world much as they found it, ever unquiet, subject to changes and revolutions. Temple.

Somewhat awed, I shook with holy fear, Yet not so much but that I noted well Who did the most in song and dance excel.

Dry den.

To thee thy much-afflicted mother flies, And on thy succour and thy faith relies. Id.

Your much-loved fleet shall soon Besiege the petty m anarchs of the land. Id.

You pine, you languish, love to be alone, Think much, speak little, and in speaking sigh. Id.

Nor grudge I thee the much the Grecians give, Nor murmuring take the little I receive. Id.

The fate of love is such, That still it sees too little or too much. Id. Then prayers are vain as curses, much at one In a slave's mouth, against a monarch's power. Id.

I am well served, to take so much pains for one resolved to make away with himself. L'Estrange. If we will disbelieve every thing, because we can-rot know all things, we shall do muchwhat as wisely as he who would not use his legs because he had no wings to fly. Locke.

The matter of the universe was created before the flood ; and, if any more was created, then there must be as much annihilated to make room for it.

Burnet's Theory.

Who is there of whom we can with any rational assurance, or perhaps so much as likelihood, affirm, here is a man whose nature is renewed, whose heart is changed. South.

Unless he can prove caelibatum a man or a woman, this Latin will be muchwhat the same with a solecism.

Atterbury.

Homer shall last, like Alexander, long, As much recorded, and as often sung. Granville. Sad from my natal hour my days have ran, A. much afflicted, much enduring man. Pope.

You are pressed for the sea-service, and got off with ituch ado. Swift's

Rules to Servants.

If his rules of reason be not better than his rules for health, he is not like to be much followed.

Baker on Learning.

MUCIC ACID, in chemistry was formerly known by the name of saccholactic acid, because first obtained from sugar of milk ; but as all the gums appear to afford it, and the principal acid to be obtained from sugar of milk is the oxalic, chemists in general now distinguish it by the name of mucic acid.

It was discovered by Scheele. Having pour-ed twelve ounces of dilute nitric acid on four ounces of powdered sugar of milk, in a glass re-tort on a sand-bath, the mixture became gradually hot and at length effervesced violently, and continued to do so for a considerable time after the retort was taken from the fire. It is necessary therefore to use a large retort, and not to lute the receiver too tight. The effervescence having nearly subsided, the retort was again placed in the sand-bath, and the nitric acid distilled off, till the mass had acquired a yellowish color. This exhibiting no crystals, eight ounces more of the same acid were added, and the distillation repeated, till the yellow color of the fluid disappeared. As the fluid was inspissated by cooling, it was redissolved in eight ounces of water, and filtered. The filtered liquor held oxalic acid in solution, and seven drachms and a half of white powder remained on the filter. This powder was the mucic acid.

If one part of gum be heated gently with two of nitric acid, till a small quantity of nitrous gas and of carbonic acid is disengaged, the dissolved mass will deposit on cooling the mucic acid. According to Fourcroy and Vauquelin, different gums yield from ˆths to ˆjths of this acid.

This pulverulent acid is soluble in about sixty parts of hot water, and by cooling a fourth part separates in small shining scales, that grow white in the air. It decomposes the muriate of barytes, and both the nitrate and muriate of lime. It acts very little on the metals, but forms with their oxides salts scarcely soluble. It precipitates the nitrates of silver, lead, and mercury. With potash it forms a salt soluble in eight parts of boiling water, and crystallisable by cooling. That of soda requires but five parts of water, and is equally crystallisable. Both these salts are still more soluble when the acid is in excess. That of

ammonia isdeprived ofitsbase by heat. The salts of barytes, lime, and magnesia, are nearly insoluble. This acid has been analysed recently with much care : it is composed of according to Hydrogen. Carbon. Oxygen.

Lussac 3-62 + 33‘69 + 62-69 = 100 According to,

Berzelius 5-105 + 33-430 + 61-465 ××× 100

From saclactate oflead, Berzelius has inferred the prime equivalent of the acid to be 13-1.

MU’CID, adj. ~\ Lat. mueidus; Fr. mu—

MU’CIDNESS, n. s. fere, mucilage. Slimy;

MU’CILAGE, (mouldy: sliminess or

MUCILAG’INOUS,^’.) mouldiness : the first two words are of rare occurrence : mucilage signifies the viscous part of plants ; any thing slimy, viscous, or tenacious : the adjective corresponding.

Dissolution of gum tragacanth, and oil of sweet almonds, do commingle, the oil remaining on the top till they be stirred, and make the mucilage somewhat more liquid. Bacon.

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Mucius SCAVOLA (properly Calut Mucius Cordus) ; the subject of a celebrated Roman tale. If we may believe the story, when Porsenna, king of Etruria, had besieged Rome to reinstate Tarquin in his rights, Mucius determined to deliver his country from so dangerous an enemy. He disguised himself in the habit of a Tuscan, and, as he could speak their language fluently, he gained an easy introduction into the camp, and, soon, into the royal tent. Porsenna sat alone with his secretary when Mucius entered. The Roman immediately rushed upon the secretary, and stabbed him to the heart, mistaking him for his royal master. Mucius, unable to escape, was seized. He gave no answers to the inquiries of the courtiers, and only told them that he was a Roman, and to give them a proof of his fortitude, he [laid his right hand on an altar of burning coals, sternly looking at the king, and without uttering a groan, boldly told him that three hundred young Romans like himself had conspired against .his life, and determined either to destroy him, or to perish in the attempt. This extraordinary confession astonished Porsenna, who made peace with the Romans, and retired from their city. Mucius obtained the surname of ××× Scavola (the Left-handed), because he lost the use of his right hand by burning it in the presence of the Etrurian king.

MUCK, n. s. & v. a.~\ Sax. moec. meox; MUCK’ER, v. n. I Gothic myk ; Danish

MUCK’EREII, n. s. f moeg ; Swedish mok. MUCK’SWEAT, (Perhaps the Gothic

MUCK’WORM, V eyk ; Swedish ok (an

MUCK’Y, adj. ‘ J ox), and mow, a heap,

i. e., of dung. See Ox. Dung ; filth ; any thing low and mean ; to manure with dung. Mucker, from muck, means in Chaucer to heap up, and hence, in some other of our old writers, to scramble for, or hoard money. A muckerer is an admirable old word for a miser ; a mean, dirty saver of money. A muck-sweat is a profuse perspiration ; one that moistens the whole body. Muckworm, originally a dung-worm, metaphorically, a miser ; a curmudgeon. Mucky is nasty; filthy; besmeared with dirt.

Reward of worldly muck doth foully blend, And low abase the high

heroick spirit That joys for crowns. Faerie Qneene.

The swine may see the pearl, which yet he values but with the ordinary muck. Gtanville's Apology. Frontless and satire-proof he scowers the streets, And runs an Indian muck at all he meets. Dryden.

There are, who

Rich foreign mold, on their ill-natured land Induce laborious, and with fatt'ning mu k Besmear the roots. Philips.

Morning insects, that in muck begun, Shine, buzz, and fly-blow in the setting sun.

Pope.

Worms suit all conditions ; Misers are muckworms, silk-worms beaus, And death-watches physicians.

Swift' i Miscellanies.

MUCK, or RUNNING A MUCK, a practice that formerly prevailed in Batavia. To run a muck, in the original sense of the word, was to

get intoxicated with opium, and then rush into the street with a drawn weapon, and kill every one that came in the way, till the party himself was either killed or taken prisoner. If the officer took one of these amocks or mohawks (as they have been called by an easy corruption) alive, he received a considerable reward ; but such was the fury of their desperation that this sel-dom happened. See AMUCK.

MUCILAGE, in pharmacy, is in general any viscid or glutinous liquor.

MUCK'ENDER, n. t. Span, mocadero ; low Lat. muccinium. A handkerchief.

For thy dull fancy a muckender is fit, To wipe the slabbenngs of thy snotty wit.

Dortet.

MUCKUNDRA, a town of Hindostan, iu Malwah, belonging to the Mahrattas. It is ro-mantically situated in a circular valley, surrounded by steep hills, and accessible only by narrow passes on the north and south. These are well defended by batteries : this being the only pass

within many miles, through a long range of mountains, which divide Malwah from Harowty. atChundkairy, fourteen miles from this place, is held a large fair for horses and cattle. Long. 76►► 12’ E., lat. 24►► 48’ N.

MUCKWANY, a mountainous district of Northern Hindostan, situated between 26►► and 27* of N. lat., and bounded on the south by Bahar. It’is subject to Nepaul.

MUCOR, in botany, a genus of the order of fungi, and cryptogamia class of plants. This fungus has vesicular heads supported by foot-stalks. SEED naked and coherent. There are twelve species ; the most remarkable are,

1. M. crustaceus, the fingered mould, is frequent upon corrupted food of various kinds. It is of a white aqueous color; the stalks single, each supporting at the top four or five lace-like radii, diverging from the same point or centre.

2. M. glaucus, the gray cluster-headed mould, is found on rotten apples, melons, and other fruits; also upon decayed wood, and the stalks of wheat. These are of a pellucid gray color; the stalks generally single, supporting a spherical(ball, which, when magnified, appears to be compounded of numerous fine, moniliform, lace-like radii.

3. M. lichenoides, the little black pin-headed mucor. This species grows in groups near to each other, in chasms of the batks of old trees, and upon old park-pales. The stalks are black, about two lines in height; bearing each a single head, sometimes a double or treble one, of the size of mustard or poppy seeds, of a roundish figure at first, but, when burst, often flattish or truncated, and of a black color. The internal powdered down is black, with a tinge of green.

4. M. mucedo, the common gray mould, grows on bread, fruits, plants, and other substances in a putrid state. It prows in clusters ; the stalks a quarter of an inch high, pellucid, hollow, and cylindrical ; supporting each a single globular head, at first transparent, afterwards dark cray ; which bursts with elastic force, and pjects%mall round seeds discoverable by the microscope.

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5. M. septicus, the yellow frothy mucor, is found on the leaves of plants, such as ivy and beech, &c. ; sometimes upon dry sticks, and frequently upon the tan or bark in hot-houses. It

s of no certain size or figure, but of a fine yellow lor, and a substance resembling at first cream beat up into froth. In twenty-four hours it acquires a thin filmy coat, becomes dry, and full of a sooty powder adhering to downy threads. The seeds under the microscope appear to be globular. Haller ranks it under a new genus, which he terms fuligo ; the characters of which are, that the plants contained in it are soft, and like butter at first, but soon change into a black sooty pow-der.

6. M. sphaerocephalus, the gray round-headed mucor, growing upon rotten wood, and sometimes upon decayed plants and mosses. The stalks are generally black, about a line in height ; bearing each at the top a spherical ball about the size of a pin's head ; its coat or rind is covered with a gray powder, and contains within a black or fuscous spongy down. The coat bursts into a ragged irregular margin.

MU'COUS, adj. > Latin mucosus. Slimy ;

Mucus, n. s. $ viscous ; tenacious. Mucus is more properly used, according to Quincy, for that which flows from the papillary processes through the os cribriforme into the nostrils; but also used for any slimy liquor or moisture, as that which daubs over and guards the bowels and all the chief passages in the body : it :s separated by the mucilaginous glands.

The salamander being cold in the fourth, and moist in the third degree, and having also a mucout humidity above and under the skin, may awhile en-dure the flame. Browne.

In the action of chewing, the mucus niixeth with the aliment : the mucus is an humour different from the spittle, and the great quantity of air which it contains, helps to dissolve the aliment.

Arbuthnot on Aliments.

About these the nerves and other vessels make a fine web, covered over with a mucous substance, to moisten these papillae pyramidales. Cheyne.

Mucus, a mucilaginous liquor secreted by certain glands, and serving to lubricate many of the internal cavities of the body. In its natural state it is generally limpid and colorless ; but, from certain causes, will often assume a thick consistence and whitish color like pus.

Mucus is glutinous, thready, and of a salt sa-vor; it reddens paper of turnsole, contains a ˆreat deal of water, muriate of potassa ar.d soda, lactate of lime, of soda, and phosphate of lime. According to Fourcroy and Vauquelin, the mu-cus is the same in all the mucous membranes. On the contrary, Berzelius thinks it variable according to the points from which it is extracted.

The mucus forms a layer of greater or less thickness at the surface of the mucous membranes, and it is renewed with more or less rapidity ; the water it contains evaporates, under the name of mucous exhalation ; it also protects these membranes against the action of the air, of the aliment, the different glandular fluids, &c. ; it is, in fact, to these membranes nearly what the epidermis is to the skin. Independently of this general use, it has others that vary according to the parts of mucous membranes. Thus the mu-

cus of the nose is favorable to the smell, that of the mouth gives facility to the taste, that of the stomach and the intestines assists in the digestion, that of the genital and urinary ducts serves in the generation and the secretion of the urine, &c.

A great part of the mucus is absorbed again by the membranes which secrete it ; another part is carried outwards, either alone, as in blowing the nose, or spitting, or mixed with the pulmonary transpiration, or else mixed with the excremental matter, or the urine, &c.

Animal mucus differs from that obtained from the vegetable kingdom, in not being soluble in water, swimming on its surface, nor capable of mixing oil with water, and being soluble in mineral acids, which vegetable mucus is not.

Mucus was considered by Dr. Birtock to be merely a modification of gelatin, but they are perfectly distinct fluids. The subacetate of lead does not affect gelatin ; on the other hand tannin, which is a delicate test of gelatin, does not affect mucus. Both these reagents, however, precipitate albumen ; but the oxymuriate of mercury, which will indicate the presence t>f albumen, dissolved in 2000 parts of water,

precipitates neither mucus nor gelatin. Thus we have three distinct and delicate tests for these three different principles.

Gum appears lo resemble mucus in its properties. One grain of gum-arabic, dissolved in 200 of water, was not affected by oxymuriate of mercury, or by tannin, but was immediately precipitated by subacetate of lead.

MU'CRO, n. s.) Lat. mucro. A point.

MUCRONA'TED, adj. \ Mucronated is pointed.

The mucro or point of the heart inclineth unto the left, by this position it giving way unto the ascension of the midriff. Browne's Vulgar Errours.

Gems are here shot into cubes consisting of six sides, and mucronated or terminating in a point.

Woodward.

MUD, n. s. & v.a. "] Belg. moder, modder ; MUD'DILY, adv. Goth, and Swed. mod,

MUD'DINESS, n. s. \modd; Teut. moden ; MUD'DLE, v. a. (Lat. madeo ; Gr. pv—

MUD'DY, adj. & v. a. \8aa>. Slime or dirt de-MUD'SUCKER, n. s. posited by water ; earth MUD'WALL, and water mixed ; to

MUD'WALLED, adj. J cover or bury in mud ; make turbid or filthy. Muddily is turbidly. To muddle, to make foul ; turbid ; confused : hence to stupify ; to make half drunk. Muddy has a similar verbal signification : as an adjective, it follows the senses of mud. Mudsucker is a kind of sea-fowl. A mud wall, one compounded principally of dried mud.

Who can a pure and crystal current bring, From such a muddy and polluted spring ?

Samdyt,

The purest spring is not so free from mud, As I am clear from treason.

Shakspeare. Henry VI. I wish

Myself were mudded in that oozy bed, Where my son lies. Id.

Tempest.

A woman moved is like a fountain troubled, Muddy, ill-seeming, thirk, bereft of beauty.

MUD

There’s not the smallest orb which thou bcholdest, Hut in his motion like an angel sings, Still quiring to the young eyed cherubim j Such harmony is in immortal sounds ; Hut, whilst this muddy vesture of decay Doth grossly close us in, we cannot hear it. Id.

Do’st think I am so muddy, so unsettled, To appoint myself in this vexation.

Id. Winter’s Tale. The people muddied

Thick and unwholesome in their thoughts and whispers. Shakspeare. Water in mud doth putrefy, as not able to preserve itself. Bacon.

If you choose, for the composition of such ointment, such ingredients as do make the spirits a lit-tle more gross or muddy, thereby the imagination will fix the better. Id.

I shall not stir in the waters which have been already madded by so many contentious enquiries.

Glanville’s Scepsis.

I strove in vain the’ infected blood to cure ; Streams will run muddy where the spring’s impure.

lioscommon.

Lucilius writ not only loosely and muddilu, with little art, and much less care, but also in a time which was not yet sufficiently purged from barbarism.

Dryden.

Till, by the fury of the storm full blown, The muddy bottom o’er the clouds is thrown. Id.

His passengers

Exposed in muddy weeds, upon the miry shore.

-d.

The neighbourhood told him, he did ill to muddle the water and spoil the drink. L'Eitrange.

The channel was dried up, and the fish left dead and stinking in the mud. Id.

Excess, either with an apoplexy, knocks a man on the head ; or with a fever, like fire in a strong-water- shop, burns him down to the ground, or if it flames not out, charks him to a coal ; muddies the best wit, and makes it only to flutter and froth high.

Grew's Cosmologia.

If conscience contract rust or soil, a man may as well expect to see his face in a mudwall as that such a conscience should give him a true report of his condition. South.

Our next stage brought us to the mouth of the Tiber ; the season of the year, the muddiness of the stream, with the many green trees hanging over it,

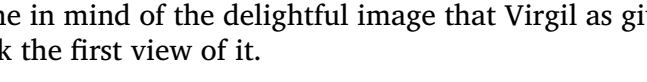
ut me in mind of the delightful image that Virgil as given, when ˆEneas took the first view of it.

Addison on Italy. A fountain in a darksome wood, Nor stained with falling leaves nor rising mud.

Addison.

Yet let the goddess smile or frown, Bread we shall eat, or white or brown ; And in a cottage, or a court, Drink fine champagne, or muddled port.

Prior.

As folks from mudwalled tenement Hring landlords pepper-corn for rent ; Present a turkey or a hen, To those might better spare them ten. Id. The force of the fluid will separate the smallest particles, so as to leave vacant interstices, which will 1 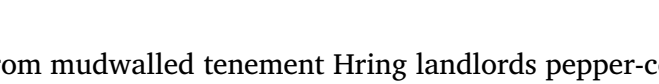 again filled up by particles carried on by the succeeding fluid, as a bank by the mud of the

current, which must be reduced to that figure which gives L'ast resistance to the current. Arbuthnot.

1 was for five years often drunk, always muddled ; they carried me from tavern to tavern.

Id. //iVi-ri/ of JK/IW BuU.

MUF

In all water-fowl, their legs and feet correspond to that way of life ; and in mudsucktrs, two of the toes are somewhat joined, that they may not easily S1D►►'. Derham*

Epicurus seems to have had his brains so muddled and confounded, that he scarce ever kept in the right way, though the main maxim of his philosophy was to trust to his senses, and follow his nose.

lientley't Sermont. The black

A more inferior station seeks, Leaving the fiery red behind, And mingles in her muddu cheeks.

Swift't Mitcellaniu.

f urn the bottle upside down ; by this means you will not lose one drop, and the froth will conceal the muddiness. Swift.

MUDDIE, a fortified town of Hindostao, in Gujerat, near the morass called the Run. The soil is good here ; but the country is nearly desolate, on account of the robbers who infest it Long. 69►► 22' E., lat. 22►► 5' N.

MUDO (Hernandez), an eminent Spanish painter under Philip II. He was a disciple of Titian ; and made such progress, that, though born deaf and dumb, he was employed by Philip many years in the palace of the Escurial, where his performances procured him great honor and emolument.

MUE, v. a. Fr. mucr. To MOULT, which see.

MUEZZIN, or MUEDDIN, in Mohammedan countries ; the crier who announces the hours of prayer from the minaret. Five prayers are repeated daily, ►►► one before sunrise, one at dawn, one at noon, one at four in the afternoon, and one at sunset. As bells are not in use among the Mohammedans, the muezzin proclaims the time, and reminds the faithful of their duty. He tells them at day-break that prayer is better than sleep, and, at dinner-time, that prayer is better than food.

MUF'FIN, n. s. Perhaps from muff. A soft and fine kind of bread.

Muffins, rolls, or bread, if stale, may be made to taste new, by dipping in cold water, and toasting or heating in an oven, till the outside be crisp.

Domeitic Cookery.

MUF’FLE, v. a. & ►►. n.) Fr. moufle ; Teut.

MUF’FLER, n. s. \ muff] maitlc ; Goth.

mangle, the mouth. To cover or shield from the weather, probably from covering the mouth ; hence to conceal, involve, blindfold : as a neuter verb, to speak inwardly or indistinctly : a muffler is, a cover for the face.

The Lord will take away your tinkling ornaments, chains, bracelets, and muffler*. Isaiah iii. 19.

No muffling clouds, nor shades infernal, can From his inquiry hide offending man.

We’ve caught the woodcock, and will keep him muffle 1. Shaktpeare. All’s Well that Kndt ►►’,-!!.

Alas that love, whose view is muffled still.

Should without eyes see pathways to his ill.

Sliaktpeare,

Fortune is painted with a muffler before her eyes, to signify to you that Fortune is blind.

Id. JUury V.

Tliis is one of the strongest examples of a personation that ever was: although the kinp’s manner of slu wing things by pieces, and by dark hirhts, hath

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so muffled it, that it hath left it almost as a mystery.

Bacon's Henry VII.

And what marvel, when that which is acted in the streets, but once, by a few muffled penitents, is pretended to be done in cells and closets, as in a set course of discipline, by the most of their strict votaries? Bp. Hall.

His muffled feature speaks him a recluse, His ruins prove him a religious house.

Cleaveland.

Our understandings lie grovelling in this lower region, muffled up in mists and darkness. Glanmlle.

The freedom or apertness and vigour of pronouncing, as in the Bocca Romana, and giving somewhat more of aspiration ; and the closeness and muffling, and laziness of speaking, render the sound of speech different. Holder.

Bright Lucifer

That night his heavenly form obscured with tears ; And since he was forbid to leave the skies, He muffled with a cloud his mournful eyes.

Dryden.

You must be muffled up like ladies. Id. One muffled up in the infallibility of his sect, will not enter into debate with a person that will question any of those things which to him are sacred.

Locke.

Loss of sight is the misery of life, and usually the forerunner of death : when the malefactor comes once to be muffled, and the fatal cloth drawn over his eyes, we know that he is not far from his execution.

South. The face lies muffled up within the garment.

Addiion.

They were in former ages muffled up in darkness and superstition. Arbuthnot't History of John Bull.

Mr. Hales has found out the best expedient for preventing immediate suffocation from the tainted air, by breathing through mufflers, which imbibe these vapours. Id. On Air.

New plots and foul conspiracies awake, And muffling up their horrors from the moon, Havoc and devastation they prepare, And kingdoms tottering in the field of blood.

Young.

MUFFLE, in chemistry, a vessel much used in some metallurgic operations. In figure it represents an oblong arch or vault, the hinder part of which is closed by a semicircular plane, and the lower part or floor of which is a rectangular plane. It is a little oven, placed horizontally in assay and enamelling furnaces, so that its open side corresponds with the door of the fire-place of the furnace. Under this arched oven small cupels or crucibles are placed ; and the substances contained are thus exposed to heat without contact of fuel, smoke, or ashes. The muffle must have holes, that the assayer may look in ; and the fore part of it must be always quite open, that the air may act better in conjunction with the fire, and be incessantly renewed ; the

apertures in the muffle serve also for the regimen of the fire, for the cold air, rushing into the large opening before, cools the bodies in the vessel ; but if some coals are put in it, and its aperture before be then shut, with a door fitted to it, the fire will be increased to the highest degree,much more quickly than it can be by the breathing holes of the furnace. See ASSAYING.

MUFTI, or MUPHTI, the chief of the ecclesiastical order, or primate of the mussulman religion. The authority of the mufti is very great

in the Ottoman empire ; for even the sultan himself, if he would preserve any appearance of religion, cannot, without hearing his opinion, put any person to death. In all actions, especially criminal ones, his opinion is required, by giving him a writing in which the case is stated under feigned names; which he subscribes with the words, he shall, or shall not be punished. Such outward honor is paid to the mufti, that the grand signior himself rises up to him, and advances seven steps toward* him when he comes into his presence. He alone has the honor of kissing the sultan's left shoulder, whilst the prime vizier kisses only the hem of his garment. When the grand signior addresses any writing to the mufti, he styles him the esad, the wisest of the wise, instructed in all knowledge, the most excellent of excellents, the spring of virtue, and of true science, with many similar titles. The election of the mufti is solely in the grand signior, who presents him with a vest of rich sables, &c. If convicted of treason, or any great crime, he was formerly put into a mortar kept for that purpose in the Seven Towers at Constantinople, and pounded to death. The mufti is the sovereign interpreter of the Alcoran, and decides all questions of the law : his decisions are called fetfas. He takes place of the bashaws ; and his authority is often terrible to the grand signior himself. It is he who girds on the sword to the grand signior's side on his accession lo the throne, which ceremony answers to the coronation of our kings ; reminding him at the same time of the obligation of defending the religion of the prophet, and of propagating his creed. This eminent place might serve, without doubt, as a counterpoise to the almost absolute and unlimited authority of the sovereign, had not the sultan the power of appointing the mufti, of deposing him, of banishing him, and even of putting him to death. His fetfas are, therefore, forced from him by the wish of preserving his place, and by the fear of death ; nevertheless, more than once, religious zeal and probity have induced some to present themselves to the sultan, and to make to him observations and remonstrances ; some even, more fanatic and more courageous, braving every danger, have refused to

condescend to his wishes. History affords various examples of sultans and viziers killed or deposed through the great influence of the muftis on public opinion ; but it likewise presents more muftis who have been victims of their zeal for religion, and of their attachment to the interests of the people. The mufti is much respected by the sultan, and also by the people, who submit blindly to his fetfas.

MUG’, n. ►►. | Belg. mussic, a measure. Skin-MUG’HOUSE. } ner says, from Welsh mwgl, warm. A drinking cup : mughouse, a low ale-house.

Ah Bowzabee, why didst thou stay so long 1 The mugs-were large, the drink was wond’rous strong.

Gay.

Our sex has dared the mughouse chiefs to meet, And purchased fame in many a well fought street.

Ticket.

MUG’GY, adj. Isl. mugga. Dr. Johnson

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thinks corrupted from mucky. Moist ; damp ; mouldy. A low word.

Cover with muggy straw to keep ––t moist.

Mortimer.

MUGGLETONIANS, a sect which arose in England about 1657 ; so named from their leader Muggleton, who, with his associate Reeves, set up for prophets, pretending to have an absolute power of saving and condemning whom-they pleased ; and giving out that they were the two last witnesses of God that should appear before the end of the world.

MU'GIENT,ud?. Lat. mugiens. Bellowing. That a bittern maketh that mugient noise or bump-ing, by putting its bill into a reed, or by putting the same in water or mud, and after a while retaining the air, but suddenly excluding it again, is not easily made out. Browne.

MUGIL, the mullet, in ichthyology, a genus of fishes belonging to the order of abdominales. The lips are membranaceous, the inferior being carinated inwards; they have no teeth; the branchiostege membrane has seven crooked rays ; the opercula are smooth and round ; and the body is of a whitish color. There are five species, distinguished by the number of rays in the back fin. The mullet is justly ranked by Aristotle among the pisces littorales, or those that prefer the shores to the full sea ; it is found in great plenty on several of the sandy coasts of our island, and haunts small bays that have influxes of fresh water. They come in great shoals, and keep rooting in the sand or mud, leaving their traces in form of large round holes. They are very cunning; and, when surrounded with a net, often escape by leaping over it ; and, if one does so, the others are sure to follow. This was observed by Oppian ; who adds, that if they fail to get over at the first leap, they never attempt a second, but lie without motion as if resigned to their fate. They sometimes swarm on the coasts of the Mediterranean. Near Martigues, in France, great numbers of mullets are taken in weirs made of reeds placed in the shallows. Of the milts of the males, which are there called alletants, and of .the roes of females, called botar, is made bo-targo. The materials are taken out entire, covered with salt for four or five hours, then pressed between two boards or stones, washed, and at last dried in the sun for thirteen or fourteen days. This fish was sometimes made the instrument of a horrible punishment for

adulterers. It was used both at Athens and Rome ; but it is doubtful whether it was a legal punishment or not.

MUG'WORT, n. s. Sax. mujj>yrit. The ARTEMISIA, which see.

The flowers and fruit of the mugwort are very like those of the wormwood, but grow erect upon the branches. Miller.

Some of the most common simples with us in Kng-land are comfry, bugle, Paul's-betony, and mitg-uort. Wiseman.

MUGWORT, in botany. See ARTEMISIA. An infusion of this plant in white wine, or a bath made of it, has always been esteemed an emmenagogue, and useful in difficult parturition. The leaves, when young and tender, are used by the Highlanders as a pot herb. The country peo-VOL. XV.

pie in Sweden drink a decoction of them for the ague.

MUHL, KREIS or VIERTEL, j. e. the circle or quarter of the Muhl, one of the four divisions of Upper Austria, comprising all that country which lies between the Danube and Bohemia, and taking its name from the two rivers Upper and Lower Muhl. It contains 1670 square miles, and 160,000 inhabitants. In the south and east it is productive in corn ; but in the north, which is mountainous, the common occupation is the culture and manufacture of flax and hemp. Fruit is abundant in all parts.

MUHL, a river of Austria which, rising on the confines of Bohemia, flows southward, and falls into the Danube. It consists of two streams, the Upper and Lower Muhl, which unite near Haslach.

MUHLENBACH, or Szasz Sebes, a town and district of Transylvania, on the Muhlbach. The chief employment here is brewing for the adjacent country. Inhabitants of the town 4OOO. Twelve miles south of Alba Julia, and forty-eight west of Hermannstadt. The area of the districts, which grows both corn and wine, is 115 square miles, and contains 15,000 inhabitants.

MUHLHAUSEN, a large old town of Saxony, now belonging to Prussia, but long a free town of the empire, is surrounded by high walls, flanked with a tower, and has four churches, four hospitals, breweries, distilleries, and linen arid woollen manufactures of considerable extent. Here are also several dye-works, fulling-mills; leather, starch,

and oil, are also made here ; and in the environs are copper and iron mines. This was one of the oldest free towns of Germany, and retained its democratic institutions till 1802, when the town and territory were ceded to Prussia, and in 1814 definitively confirmed to that power. I nhabitants 9500. It stands at the confluence of the Unstrutt and Schwemotte. Twenty-nine miles north-west of Erfurt, and forty-three E. S. E. of Cassel.

MULATTO, n. s. Span, mulatto ; Fr. mulat, from Lat. mulus. One whose parents are a white and a black.

Mulatto is a name given in the Indies to those who are begotten by a N'egro man on an Indian woman ; or an Indian man on a Negro woman. The word is originally Spanish, mulata, formed of mula, a mule, as being begotten of two different species.

Dr. A. Rers.

MUL'BERRY, n. s. { Sax. monbenij ; I-at. MVL'BERRT-TREE. S morus. A well known fruit tree. See MORUS.

Morton, archbishop of Canterbury, was content to use Tnor upon a tun ; and sometimes a mulberry tree, called morus in Latin, out of a tun. I'amdrn.

The ripest mulberry. That will not hold the handling.

Shaksjtfare. Cvriolanu*.

In the very silk-worm I have observed, that the small and scarce sensible seed, which it casts, comes not to life and disclosure, until the mulberry, which is the slowest of all trees, yields her leaf for its necessary preservation. -*? aaˆ \ body black, round, with small grain like tube* cles on the surface ; not very unlike * mu/Vrry.

JfWiruni'j Fouut P

The same prolific season gives The sustenance by which he lives, The mulberry leaf, a simple store, That serves him ††† till he needs no more !

Cowper.

MULBERRY, in botany. See MORI'S. From the nourishment which this tree affords to the silk-worm, that valuable insect to which we are indebted for the materials of our finest stuffs, the method of cultivating the mulberry tree must be peculiarly interesting wherever its culture can be undertaken with success. In the south of France, and in Italy, vast plantations of these trees are made solely for their leaves to feed these little animals, which amply reward the possessors with the supply of silk which they spin from their bowels. Plantations of mulberry trees have, at different times, been recommended in this country for the same purpose ; though nothing has yet been done in that way to any extent, and even the expediency of such an attempt has been doubted by others, upon the ground of its interfering with other branches of rural economics more productive and more congenial to our climate. In the European silk countries, many varieties of mulberry trees are distinguished, arising from difference of climate, soil, method of culture, and other accidental causes. Among the wild mulberries, we meet with some whose leaves are roundish, and resembling those of a rose : hence they have been called the rose-leaved mulberries. Mulberry trees were first cultivated in France, in the reign of Charles IX. It has been found by experience that these trees are not so peculiar to warm countries, but that they may also thrive very well in other countries, and even in Germany, where they afford good nourishment for silk-worms. They grow in all kinds of soil, but thrive best in strong and wet lands ; but it K alleged that their leaves then constitute too coarse food, prejudicial to the worms, and unfavorable to the quality of the silk. A good light land is the best soil for raising them. White mulberry trees grow in sandy soils where heath would scarcely vegetate ; but their leaves are too dry, and afford not sufficient nourishment for the silk-worms. Mulberry trees may be propagated either from shoots which have taken root, or by seed, layers, and slips. The best seed is commonly procured from Piedmont, Languedoc, &c. M. Duhamel says, that seed should be preferred which is gathered in countries where the cold is sometimes pretty severe; because, in that case, the trees are better able to resist the attacks of the frost. In severe winters, M. Bourgeois observes, the stalks of the young mulberry trees, especially during the first winter, are often destroyed by the frost; but, when they are cut close to the earth, they send forth as beautiful and vigorous stalks as the former. Good seed is large, * heavy, and light colored, and producesa great

deal of oil when it is pressed, and crackles when thrown on a red hot shovel. In the autumn of the second year, all those trees must be pulled up nliic.h have small leaves of a very deep green, rough, and deeply indented, for they would produce no leaves proper for the silk worms. In the third year, when the mulberry tree is about the thickness of the finger, it must be taken up and

put in the nursery. According to Bourgeois mulberries ought to be transplanted in the spring of the second year, which makes them thrive better, and sooner attain their growth. Without this transplantation they would put forth only one root like a pivot, and most of them would be in danger of perishing when taken up to be put where they are intended to remain. Some cultivators say, that all the young; trees, whether large or small, straight or crooked, ought to be cut close to the ground in the third year, that they may put forth a greater number of roots. Others never employ this method but with regard to those which are crooked, or in a languishing state. White mulberries may be raised for the food of silk-worms, either in the form of a copse, or planted in a regular order, by letting them grow to their natural size. Ingrafting is one of the surest methods of procuring fine leaves from mulberries. Mulberries ingrafted on wild stocks chosen from a good kind, such as those which are produced from the seed of the Italian mulberry, commonly called the rose mulberry, or of the Spanish mulberry, produce much more beautiful leaves, and of a much better quality for silk-worms, than those which are ingrafted on the common or prickly small-leaved wild stock. Ingrafted mulberries produce a greater number of leaves, and more nourishing for silk-worms than wild mulberries. The latter, however, may exist for two centuries ; whereas the extension of leaves produced by ingrafting occasions a premature dissipation of the sap of the tree, and thereby accelerates its decay. In a memoir inserted in a treatise on the culture of white mulberries by M. Pomier, it is recommended to ingraft white mulberries upon black ones ; and there is reason to think that by following this plan the trees would exist much longer ; for the white mulberry commonly decays first in the root, whereas the black mulberry is not subject to any malady. It is very prejudicial to young mulberry trees to strip them of their leaves, because these are the organs of perspiration, and contribute to nutrition by absorbing the moisture of the atmosphere. Mulberry trees are so plentifully stored with sap, that they renew their leaves sometimes twice or thrice. When the winter is mild, they put forth their leaves very early ; but it is always dangerous to accelerate the hatching of the worms in expectation of this; for no leaves can be depended upon till the

beginning of May, those produced prior to this period being in danger of being destroyed by the frosts. In Tuscany, especially near Florence, M. Nollet tells us, that though the inhabitants do not cultivate half so many mulberries as the Piedmontese, they rear and feed double the quantity of silk-worms. For this purpose they hatch the worms only at two different seasons. The first worms which are hatched are fed on the first produce of the mulberry trees ; and, when these have produced their silk, other worms are hatched, which are nourished on the second crop of the same trees. Mr. Bourgeois says, that several kinds of white mulberries are now cultivated near Bienne in Switzerland, and that the prickly mulberry is the least esteemed of all the white wild mulberries. Its branches are rough with

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prickles ; its leaves are of a small size and few in number; and the reaping of them is difficult and expensive. The common wild mulberry produces indented leaves, oblong, and very slender; but ‘t thrives very well when planted in a hedge, and n a favorable exposure. It is also earlier in the spring than the other species. The wild mulberry, which is produced from the rose or Italian ingrafted mulberry, bears a great number of leaves, of a roundish shape and middling size, inclining to a light yellow, and of an excellent quality. Of the white ingrafted mulberry trees, the rose, or Italian ingrafted, which is now the species most cultivated in France, Italy, and Piedmont, produces great abundance of large thick and smooth leaves. The mulberry called Roman leaf is distinguished from every other species by its very large leaves, some of which are often found equal in size to those of a gourd. The Spanish mulberry greatly resembles the wild rose mulberry, except that its leaves are larger and more pointed. It can resist the strongest frosts and the severest winters in cold climates. The leaves of the mulberry, called the small queen, are oblong, moderately large, and exceedingly smooth : this species is of an excellent quality, and much esteemed.

MULBERRY CYDER, a name given by the peo-ple of Devonshire, and some other parts of England, to a sort of cyder rendered very palatable by an admixture of mulberry juice in the making ; they choose for this purpose the ripest and blackest mulberries, and pressing out their juice, and mixing it with a full-bodied cyder at the time of the grinding and pressing, give just so much of it as adds a perceptible flavor. The color of this liquor resembles that of the brightest red wine, and the flavor of the mulberry never goes off.

MULCT, n.s. &v.a. Lat. mulcta. A fine; penalty : commonly used of a pecuniary penalty : to fine.

Because this is a great part, and Eusebius hath said nothing, we will, by way of mulct or pain, lay it upon him. Bacon.

Doe you then Argive Hellena, with all her treasure

here,

Restore to us, and pay the mulct, that by your vows is due. Chapman.

MULDA, two rivers in the interior of Sax-ony : the Freyberg IMulda rises near Neustadt, among the Sudetic Mountains, and passes through part of the circle of the Erzgebirge, joining the Schneeberg Mulda near Colditz. The Schneeberg Mulda rises also in the Sudetic chain, to the south of the former, and runs through part of the Vogtland, the circle of Leipsic, and the government of Mersburg, joining the Elbe between Dessau and Zerbst.

MULE, n. s. ~\ Fr. mule, mulet ; Lat. and

MULETEER', >Span.►►m/a. An animal gene—

MI/LISH, adj. grated between an ass and a mare; a driver of mules: mulish is obstinate; perverse; of the supposed temper of mules.

JVIuLE, in manufactures; a machine, invented by Crompton, in 1779, for producing finer yarn than was spun by the machines previously in use, and which has now nearly superseded the jenny. For producing threads of the finest

kind, a process is necessary which is called stretching, and which is analagous to that which is performed with carded cotton upon a common spinning wheel. In this opeiation, portions of yarn several yards long are forcibly stretched in the directon of their length, with a view to elon-gate and reduce those places in the yarn which have a greater diameter and are lˆss twisted than the other parts, so that the size and twist of the thread may become uniform throughout. To effect the process of stretching, the spindles are mounted upon a carriage, which is moved back and forwards across the floor, receding when the threads are to be stretched, and returning when they are to be wound up. The yarn produced by mule-spinning is more perfect than any other, and is employed in the fabrication of the finest articles. The sewing-thread spun by mules is a combination of two, four, or six constituent threads or plies. Threads have been produced of such fineness, that a pound of cotton has been calculated to reach 167 miles.

MULE, in zoology, is a term applied to every kind of animal produced by a mixture of two different species, but more particularly with re-gard to the horse and ass. There are two kinds of mules ; one from the he-ass and maie, the other from the horse and the she-ass. We call them indifferently mules, but the Romans distinguished them by proper appellations. The first kind are the best and most esteemed ; as

being larger, stronger, and having least of the ass in their disposition. The largest and stoutest asses, and the fairest and finest mares, are chosen in those countries where these creatures are most used ; as in Spain, Italy, and Flanders. But fewer mules are now bred in the Low Countries than formerly. These creatures are stronger, surer footed, go easier, are more cheaply maintained, and last longer than horses. They are commonly of a black, or black brown, with a shining list along the back and across the shoulders, which distinguishes asses. They were formerly much more common in this country than at present ; being often brought over in the days of Popery by the Italian prelates. They continued longest in the service of millers ; and are yet in use among them in some places, on account of the great loads they are able to carry. As they ar►► capable of being trained for riding, bearing burdens, and for draught, there is no doubt that they might be usefully employed in many different services. It has been asserted, that animals produced by the mixture of two heterogeneous species are incapable of generating, and thus perpetuating the monstrous breed ; but this, says count Buffon, is a mistake. Aristotle, says he, tells us, that the mule engender* with the mare, and that the junction produces an animal which the Greeks call hinnus, or ginnus. He likewise remarks, that the she-mule easily conceives, but seldom brines the fu;tus to perfection. But the most remarkable and well attested instance of this fact is mentioned in a letter read by M. d'Alembert before the Academy of Sciences, which informed them that a she-mule in the island of St. Domingo had brought forth a foal. The fact was attested by peisons of the most unquestionable veracity ; and other

instances, though not so well authenticated, are adduced by our author. We may, therefore, continues M. Buffon, consider it as an established fact, that the he-mule can generate and the she-mule produce. Like other animals they have a seminal liquor, and all the organs necessary to generation. But mongrel animals are always less

fertile, and more tardy than those of a pure species. Besides, mules have never produced in cold climates, seldom in warm regions, and still more seldom in temperate countries. Hence their barrenness, without being absolute, may be regarded as positive; since their productions are so rare, that only a few examples can be collected. The translator of Buffbn's works, in a note on the passage above quoted, has given a remarkable and well authenticated instance of the prolific powers of a she-mule in the north of Scotland, belonging to Mr. David Tullo, farmer in Auchtertyre, in the parish of Newtyle, Forfarshire.

MULES, or hybrid plants, among gardeners, are a sort of vegetable monsters, produced by putting the farina fcecundans of one species of plant into the pistil or utricle of another. See BOTANY. The carnation and sweet-william being somewhat alike in their parts, particularly their flowers, the farina of the one will impregnate the other, and the seed so enlivened will produce a plant differing from both. This furnishes a hint for altering the properties and taste of any fruit, by impregnating one tree with the farina of another of the same class; *e.g.* a codlin with a pear-main, which will occasion the codlin so impregnated to last a longer time than usual, and to be of a sharper taste. If the win-ter fruits be fecundated with the dust of the summer kinds, they will ripen before their usual time. From this accidental coupling of the farina of one with another, it arises that in an orchard where there is variety of apples, even the fruits gathered from the same tree differ in their flavor, and in the season of maturity. It is also from the same accidental coupling that the numberless varieties of fruits and flowers raised every day from seed proceed

MULHAUSEN, a pretty post town of the department of the Upper Rhine, France, and the chief place of the canton of Altkirch, having a board of trade and manufactures, and 9000 inhabitants. It is agreeably situated in a fertile courrtry, in the midst of an island formed by the river 111, and the canal that connects the Rhone and the Rhine. It is well built, and embellished with fine edifices, among which may be particularly noticed the town-hall and the reformed church. Before the revolution, Mul-hausen was the capital of a little republic in alliance with the Swiss, which consisted of this town and the communes of Ilzac and Moden-lieim. It was united to France on the 2nd of March, 1798, and is now the principal town of the department for its commerce and manufactures. The manufactures consist of printed silks and linens, which are celebrated for the fastness and brilliancy of their colors, and the 1 t-'auty of their patterns, surpassing those of India and of England; cloth, hats, gold and silver lace, straw hats, &c. There are also

woollen and cotton spinning factories, dye-houses, brass-foundries, and manufactories of morocco leather. The inhabitants carry on a trade in corn, wine, brandy, grocery, woollen cloth, iron and ironmongery goods. It is twelve miles N. N. E. of Altkirch, and thirty north-west of Bale.

MULHEIM, a town of the Prussian province of Cleves and Berg, and government of Cleves, on the Ruhr or Roer, which here becomes navigable. It contains 3100 inhabitants, and manufactures of cotton and paper. In the neighbourhood is a coal mine. Fifteen miles N.N. E. of Dusseldorf.

MCLHEIM, another town of the Prussian states, in the duchy of Berg, at the influx of the Stronderbach into the Rhine, across which there is a flying bridge here. The place is indebted for its chief prosperity to the Protestants who were driven from Cologne on account of their religion, and until lately the Protestants of Cologne were accustomed to come here for divine service. The manufactures are woollen stuffs, velvet, silk, leather, soap, and tobacco, and carry on an active inland trade. Here likewise are made excellent earthen ovens. Three miles north of Cologne. Inhabitants 3200.

MULIER, in English law, signifies the lawful issue born in wedlock, though begotten before. Some derive the word from the Latin melior, or French meilleur, better ; in regard the condition of a son born thus is better than that of an elder brother born before wedlock. Though, according to Glanvil, the lawful issue is rather called mulier than melior, because begotten on mulieres and not on concubinae ; for he calls such issue filios mulieratos; opposing them to bastards. Briton has frere muliere, i. e. the brother begotten of the wife ; in opposition to frere bastard. The mulier is preferred to an elder brother born out of matrimony; for instance, if a man has a son by a woman before marriage, which issue is a bastard, and afterwards marries the mother of the bastard, and they have another son, this second son is mulier and lawful, and shall be heir of the father ; but the other can be heir to no person. See BASTARD. By the civil law, where a man has issue by a woman, if after that he marries her, the issue is mulier.

MULL, v. a. Lat. mollio, mollitus. To soften ; dispirit; as wine is when burnt and sweetened.

Peace is a very apoplexy, lethargy Mulled, deaf, sleepy, insensible. Shakspeare*

Dnnk new cydsr mulled, with ginger warm.

Gay.

MULL, anciently called Dreolin, a large island of the Hebrides, included within the county of Argyle, from the main land of which it is separated by a narrow channel, called the Sound of Mull. On the west and south it is washed by numerous bays formed by the Atlantic Ocean, every where interspersed with small islands, of which the celebrated Icolm-kil is the most remarkable. This island measures from east to west, in some places, twenty-five miles, and from, north to south about the same, and comprehends three parochial districts; Kilfinichen, Kilninien, and Torosay. Its superficial con-

tents, however, are by no means equa. to a square of that magnitude, owing to the many indenta-tions of the sea, particularly on its western side, which however form excellent harbours. In this island agriculture is not carried on to any considerable extent, but some of the mountains form excellent sheep walks, and to this purpose they are accordingly applied. Most other parts of the island, not covered with wood or swampy morasses, are devoted to the feeding of cattle, chiefly, if not entirely, of the black native species, of which great numbers are annually reared and exported ; and the sale of which constitutes the principal mode whereby the tenants procure money for the payment of their rents. The number of black cattle may be about 8000, and the sheep about 18,000. The only kinds of corn sown here are oats and bar-ley; the former affording very indifferent crops, and the latter much more luxuriant ones. The oats are generally ground into meal ; but the greatest part of the barley is distilled into whiskey. Sea-ware and shell-sand are much used as manure, and are carried to the fields on the backs of horses in baskets. All the implements of husbandry are extremely rude ; for, as there are no regular plough or harrow-makers in the island, each farmer constructs his own, after the manner of his forefathers. It is calculated that about 600 tons of kelp are made yearly in Mull, which are sold for ––6000. But the price of this commodity is very uncertain, being dependent on a state of peace

or war. There is no other manufacture of consequence for export from the island.

Of the villages in Mull, the only one worthy of notice is Tober-Moray, or Moire, standing close to the shore, near the northern extremity of the Sound. This village was built by the British Society for the Encouragement of the Fisheries, in 1788, and might be improved into one of the chief sea-ports on the western coast of Scotland. At present, however, it does not contain above thirty houses built of stone and lime ; and perhaps double that number of thatched huts. The inhabitants principally either hold situations in the post-office or custom-house, or are employed in some capacity connected with the herring fisheries. There are two stated ferries across the Sound of Mull, one from Aros to Morven, and the other from Auchnacraig to the island of Kerrera, thence to Oban. Upon a bold headland, projecting into the sea, is situate the old castle Duart, orDowart, formerly the seat of the M'Leans, now in ruins. The climate is humid ; a great quantity of rain fills here ; and on the whole the island is considered the most boisterous of the Hebrides. Winter is proportionally milder than on the neighbouring mainland ; frost is of short continuance, and the whole surface is seldom covered witli snow. Several lakes are contained in this island, from which brooks everywhere intersecting it descend. The island is for (lie most part rugged and mountainous; and Ben-more, the highest mountain, is supposed to be elevated 3000 feet above the level of the sea.

The mineralogy of this island is in many respects worthy of attention : a great part ot' it

lies on a mass of whin-stone ; in many places the rocks are basaltic, and often assume a regular columnar form. Near Aros there are some rocks of white lava, a rare mineral. Limestone abounds, and some seams of coal have been found in different parts. In one place there is a stratum of coal under basaltes, and in another basaltes incumbent on that mineral. At Bal-phetiish is the famous ringing-stone ; it is of a dull gray color, spotted with stars of black mica, and is so hard that it is impossible, with a com-mon hammer, to break off the smallest bit. When struck with a stone or hammer, it yields a sound like brass or cast-iron. Caverns of stupendous dimensions abound in various parts of the island.

Mull has in ancient times been the scene of some severe conflicts, but, for the most part, of too little general importance to find a place in the

page of English or Scottish history. Bloody-bay, according to tradition, is so called from a sea-fight between a M'Donald of the isles, and his son. The lather was supported in this contest by the brave Hector Obhar M'Lean, who afterwards died in the field of Flodden, covering his monarch, James IV., from the arrows of the English archers. In 1588, the Florida, one of Philip's invincible Armada, was blown up by the desperate resolution of a Scotchman, as some assert, in Tober-Moire bay, after the dispersion of the fleet ; and in the same bay did the unfortunate earl of Argyle effect his first landing, attended only by a few friends, when he invaded Scotland, with the view of supporting the cause of the duke of Monmouth.

Ml'L'LER, n. a. 1'r. moulrur ; Teut. mnhltr. A stone held in the hand, with which any pow-der is ground. It is often improperly called mullet.

The best grinder is the porphyry, white or green marble, with a muller or upper stone of the same, cut very even without flaws or holes ; you may make a muller also of a flat pebble, by grinding it smooth at a grindstone. Pencltam.

MIT.LER is also an instrument used by glass-grinders ; being a piece of wood, to one end of which is cemented the glass to be ground, whether convex in a basin, or concave in a sphere or bowl. It is ordinarily about six indies long, turned round ; the cement they use is composed of ashes and pitch. See Ui ASS-MAKING.

MVI.I.EH, or RFGIOMONTANCS (John), A celebrated astronomerof the fifteenth century, born at Koningshoven, in Franeonia, in H3l>. H►►►► acquired great reputation by publishing an abridgment of Ptolemy's Almagest, which had been begun by Purback. He went to Rome to perfect himself in the Greek language, and to see cardinal Bassarion ; but, finding some fault with the Latin Translations of (Jeorge de Trebizond, that translator's son assassinated him, in a second journey he made to Rome in 1476, where Pope Six-us' IV. had provided for him the archbishopric of Ratisbon, and had sent for him t.> reform the calendar. Others say that he died of the plague.

Mrnn; (John\ a celebrated engraver, wno flourished about 1600, and had been bred under

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Henry Goltzius, whose style he closely imitated. His engravings are excellent and very scarce.

MUL'LET,n.s. Fr.mutet; Lul.mullus. Gr. *tvXXi*c-A sea fish.

Of carps and mullets why prefer the great,

Yet for small turbots such esteem profess 1 Pope.

MULLET, in ichthyology. See MUGIL.

MULLET, in heraldry (in French moulette), the rowel of a spur, consisting of five points only, by which it is distinguished from a star, as in the annexed figure. 'He beareth argent, on a bend cottised, sable, three mullets of the first, Andrews, of Harsfield, in Gloucestershire.'

MULLINGAR, a post & Market town, and manor of Ireland, in West Meath ; and the county town. It has a barrack for two troops of horse. A few miles from it are the ruins of a church, and a castle. It is situated on the Feyle. It holds a great wool fair, and is a place of good trade. In 1227 the priory of St. Mary, formerly known by the name of The House of God of Mullingar, was founded here by Ralph de Petyt, bishop of Meath, for regular canons of St. Augustin's order. A Dominican friary was also founded here in 1237 by the family of Nugent ; some ruins of which still remain. It has fairs on the 6th of April, 4th and 5th of July, the 29th of August, and llth of November ; and lies thirty-eight miles from Dublin.

MUL'LOCK, n. s. Teut muM. Rubbish.❓❓❓ Ainsworth.

The mullock on an hepe ysweped was, And on the fiore yeast a canevas, And all this mullock in a sieve ythrowe, And sifted, and ypicked many a throwe.

Chaucer. Cant. Tales.

MULLROSE, CANAL OF, or Frederick William's Graben, a fine canal of Prussia, in the province of Brandenburg. It commences at Newbruck, on the Spree, and terminates at the lake of Brieson on the Oder. It is about fourteen miles long, has ten sluices, and forms part of the chain of inland communication which extends from Warsaw to Hamburgh. It

is consequently of great importance to the trade of Germany.

MULLUS, the surmullet, m ichthyology, a genus of fishes belonging to the order of tho-racici. This fish was highly esteemed by the Romans, and bore an exceedingly high price. The capricious epicures of Rome in Horace's days valued it in proportion to its size ; not that the larger were more delicious, but that they were more difficult to be obtained. The price given for one in the time of Juvenal and Pliny is a striking evidence of the luxury and extravagance of the age :

The lavish slave

Six thousand pieces for a mullet gave, A sesterce for each pound ; Dryden.

or ►►48 8s. 9d. But Asinius Celer, a man of consular dignity, gave 8000 nummi, or ►►64 11*. Sd. for a larˆe mullet ; though, according to Horace, a mullus trilibris, or one weighing three pounds, was a great rarity. But Seneca says, that it was not worth a farthing except it died in

the very hand of the guest; that such was the luxury of the times, that there were stews even in the eating-rooms, so that the fish could at once be brought from under the table, and placed on it; and that they put the mullets in transparent vases, that they might be entertained witn the various changes of its rich colors while it lay expiring. Apicius first hit upon the me-thod of suffocating them in an exquisite Carthaginian pickle, and afterwards procured a rich sauce from their livers. ►►► This is the man whom Pliny styles Nepotum omnium altissirnus gurges. The body of this fish is very thick, and covered witli large scales; beneath them the color is a most beautiful rosy red, the changes of which under the thin scales gave that entertainment to the Roman epicures above mentioned. The scales on the back and sides are of a dirty orange ; those on the nose a bright yellow ; the tail a reddish yellow.

MULLUVIA, a river of Africa, in the Atlas, forming the boundary between Algiers and Morocco. Its course from south to north is about 200 miles ; but it is only navigable for small vessels. It falls into the Mediterranean. Long. 2►► 6’ W., lat. 34►► 55’ N.

MULTAN’GULAR, adj. { Lat. multus and MULTAN GULARLY, adv. S angulus. Polygonal; polygonally; with many corners.

Granates are multangularly round.

Crew’s Cosmologia.

MULTIFA’RIOUS, adj.f Lat. multifarms.

MULTIFA’RIOUSLY, adv. > Having diversity of

MULTIFA’RIOUSNESS, n. s.) relations ; having

different respects ; or great diversity in any way.

His science is not moved by the gusts of fancy and humour which blow up and down the multifarioxt opinionists. Glanville to Albius.

There is a multifarious artifice in the structure of the meanest animal. More's Divine Dialogues.

We could not think of a more comprehensive expedient, whereby to assist the frail and torpent memory through so 'multifarious and numerous an employment. Evelyn's Kalendar.

According to the mitltifariousness of this imitabi-lity, so are the possibilities of being. Norris.

If only twenty-four parts may be so multifariously placed, as to make many millions of millions of different rows : in the supposition of a thousand parts, how immense must that capacity of variation be ?

Bentley's Sermons. Hair, wax, rouge, honey, teeth, you buy,

A multifarious store ! A mask at once would all supply,

Nor would it cost you more. Cowper.

MULTIF'IDOUS, adj. Lat. multifidus. Hav-ing many partitions ; variously cleft.

These animals are only excluded without sight which are multiparous and multijidous, which have many at a litter, and have feet divided into many portions. Browne.

MULTIFORM, adj. Lat. multiformis. Hav-ing various shapes or forms.

Ye that in quaternion run Perpetual circle, multiform. Milton.

The best way to convince is proving, by ocular demonstration, the multiform and amazing operation* of the air-pump and the loadstone. Watts.

Father of all that is or shall arise ! Father of this immeasurable mass

MUL

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Of matter multiform, or dense or rare, Opaque or lurid, rapid or at rest, Minute, or passing bound ‘. in each extreme Of like amaze and mystery to man. Young. MULTIFAROUS, adj. Latin multiparus. Bringing many at a birth.

Double formations do often happen to multiparou* generations, more especially that of serpents, whose conceptions being numerous, and their eggs in chains, they may unite into various shapes, and come out in mixed formations. Browne.

Animals feeble and timorous are generally multi-

Amphisbsna is not an animal of one denomination ; tor that animal is not one, but multipliciotu , or many, which hath a duplicity or germination of principal parU. rjd

You equal Donne in the variety, multiplicity, and choice of thoughts.

Dn/den’i Dedication to Juvenal.

We see the infinitely fruitful and productive power of this way of sinning ; how it can increase and multiply beyond all bounds and measures of ac-tual commission. South’* Sermoru.

MULTIPLE, in arithmetic, is a number winch

parous: or if they bring forth but few at once, as COntams another number a {certain number of pigeons, they compensate that by their often breed-times. Thus eighteen is a multiple of six, or of

ing.

MULTIPLE, adj. MULTIPH’ABLE, MULTIPLI’ABLENESS, n. s. MUL’TIPLICABLE, adj. MULTIPLICAND’, n. s.

MULTIPLI'CATE, adj.

MULTIPLICATION, n. s. MULTIPLICA'TOR, MULTIPLICITY, n. s. MULTIPLIC'IOUS, adj. MULTIPLIER, n.s.

Ray on the Creation. three, or of nine, &c. Common Multiple of two

"| Lat. multiplex, or more numDers is that which contains those

multiplico, multi-numbers a certain number of times. Thus thirty—

plicandus, multi-six is a common multiple of four and nine, being

plicatio; French equa' to nine times the first and four times the

multiplicable, second. To find the least common multiple of

multiplication, several numbers : reduce them all to their prime

multipliciteur,' factors, then the product of the greatest powers

multipliciti mul- ►►^ t'1086 prime factors is the least common multiplier. Mani-l'P'e required. Let it be proposed 'to find the

fold ; quality of 'east common multiple of twelve, twenty-five,

containing ano-and thirty-five, or the least number that will

ther number re-divide by each of them without a remainder. Here 12n = 3x22; 25 = 52, and 35 = 5 X 7 ; therefore

MUL'TIPLY, v. a. & v.

duplicated : multipliable is capable of being

multiplied: multiplicand, the number multi-3 X 22 + 58 + 7 = 2 10, the least common multiple

plied : multiplication, that by which it is multi-required.

plied : multiplicate is, consisting of more than MULTIPLYING GLASS, in optics ; one wherein

one; manifold : multiplication, the art or rule of objects appear

increased in number. It is other—

multiplyincr or increasing by addition or further wise called a polyhedron, being ground into

production ; a rule of arithmetic ; multiplicity, several planes that make angles with each other,

numerousness, state of being many: multipli-through which the rays of light, issuing from the

cious, an unnecessary synonyme of multiple same Point > undergo different refractions, so as

and multiplicate: multiplier, the person or num-to enter the eye Irorn every surface in a different

ber by which any thing is multiplied : to multi-direction.

ply is to increase numerically whether by addition, accumulation, or production of more of the same kind ; to perform the arithmetical rule of multiplication ; to grow in number; increase.

He shall not multiply horses. Dent. xvii. 16.

He clappeth his hands amongst us, and multiplieth his words against God. Job. xxxiv. 37.

The multiplying brood of the ungodly shall not thrive. Wisd. iv. 3.

The multiplying villanies of nature

Do swarm upon him. Shakspeure. flfucbeth.

Broils and quarrels are alone the great accumula-tors and multipliers of injuries. Decay of Piety.

His birth to our just fear gave no small cause ;

MULTIPLICATION, in algebra. See ALGEBRA.

MULTIPLICATION. See ARITHMETIC.

MULTIP'OTENT, adj. Lat. multus and po-tens. Having manifold power; having power to do many things.

By Jove multipotent,

Thou should'st not bear from me a Greekish member. Shakspeare. Trnilu►► and Cretsida.

MULTIPRES'ENCE.n.s. Lat. multus and prasentia. The power or act of being present at one time in more places than one.

This sleeveless tale of transubstantiation was surely brought into the world, and upon the stage, by that

But his growth now to youth's full flower displaying other fable of the multipresence of Christ's body.

All virtue, grace, and wisdom, to atchieve Things highest, greatest, multiplies my fears.

Milton.

Multiplication hath the multiplicand, or number to be multiplied; the multiplier, or number given, by

llaU.

MULTITUDE,*, s.) Fr. multitude ; Lat. MUI.TITU’DINOUS, adj. 1 multitudo. A collective number ; a great number ; a crowd ; throng ;

DC multiplied.: tne multiplier, or numoer given, uy ‘ ,. j. :r>M . l….;n<* ka

winch the multiplicand is to be multiplied, and the pro-the vulgar : multitudinous, man I

duct, or number produced by the other two.

Cocker’s Arithmetic.

effects or appearance of a multitude.

And a ret multitude suede him, for thei sighen

from one stock of seven hundred years, multiply-tjie looi;enes that he dide on them that weren syke.

ing still by twenty, we shall find the product to be one thousand three hundred forty seven millions three

\‘iclif. Jon. vi.

Will all great Neptune’s ocean wash this blood

i i i . . i i f i 11 I ill ill. Kreal I^CUI MW ^ *”

hundred sixty-eight thousand four hundred and from mv hand ? No, this my hand will rather

fn.int.- RwM►►f►►A* > I itlirur r.WfMTS. ‘ . *i*

twentv.

T> i t-i r . . v lean nuui “►►y u*►►►► * ~~j

*”%►►’ ; ‘ ‘;&r S!5L The multitudinous sea incarnardine,

Although they had divers stiles for G od, yet under “ > * ►►►►►► ►►’ ” ►►► ►►►- ;~ ˆed . Makyearc. Macbeth. nrn.y appellations they acknowledged one divin-ty; , ..r.roncolvli)iv

-ather conceiving thereby the evidence or acts of He turned water ,n to good wme he

his power in several ways than a multiplication of so improved a few loaves

essence, or real distinctions of unity in any one. and satisfy mulutud,*, leaving IT

Brou-ne. at first.

MUM

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It is impossible that any multitude can be actually infinite, or so great that there cannot be a greater.

Hale.

He the vast hissing multitude admires. Addison. It is a fault in a multitude of preachers, that they utterly neglect method in their harangues. Watts.

It is equally impossible that what is delivered to a multitude of hearers should alike suit all their tastes, as that a single dish, though prepared with ever so much art and exactness, should equally please a great variety of appetites. Mason.

Thus is a multitude, though large, Supported at a trivial charge ; A single doit would overpay The' expenditure of every day, And who can grudge so small a grace To suppliants, natives of the place 1 Cowper.

MULTNOMAH RIVER, a considerable river of North America, which falls into the Columbia from the south, about 100 miles from the Pacific Ocean. The Multnomah is 500 yards wide near its mouth, Captain Clarke, who surveyed it, could not find the bottom with a five fathom cord. Its regular current, the depth, and uniformity with which it rolls, prove that its supplies are regular and constant; its course, however, is but imperfectly known. It appears to be the same which the party sent by captain Vancouver under lieutenant Broughton, to explore the shores of the Columbia, call Baning's River ; and the stream being divided by an island into two channels, before its junction with the Columbia, Broughton places the western point of junction in long. 237►► 41 E., lat. 45►► 28' N.

MULTOC'ULAR, adj. Lat. multus and ocu-lus. Having more eyes than two.

Flies are multocular, having as many eyes as there are perforations in their cornea. Derham.

MULTURE, in Scots law, a certain stipulated quantity of meal given as payment to the proprietor or tacksman of a mill for grinding the corn ; and all corn ground on faring thirled to the mill is obliged to pay

multure, whether the corn be ground at that mill or elsewhere. Multures, thirlages, and services, are relics of ancient barbarism universally complained of, as great bars to improvement, but as yet have been only partially abolished or com muted.

MUM, interj -\ Belg. mom, mumme ; Dan.

M UMM, v. a. ˆ mumme ; Fr. momerie. Hush !

MUM'MER,W. s. i silence! To mumm is to

MCM'MERY. 'mask; to frolic disguised: a mummer, a masker: mummery, frolic in masks ; romping ; foolery ; mockery.

But to his speech he aunswered nowhit, But stood still mute, as if he had beene dum,

Ne signe of sence did shew, ne common wit, As one with griefe and anguishe ove-cum, And unto every thing did aunsvrere mum. Spenser. The thriftless games

With mumming and with masking all around.

Hubbard.

Mum then, and no more proceed. Shakspeare.

Well said, master mum! and gaze yout fill. Id.

The citizens are mum, say not a word. Id.

It you chance to be pinched with the cholick, you make faces like mummers. Id. Coriolanus.

Tins open daylight doth not shew the masques and mummeries, and triumphs of the world, half so stately as candle-light. Bacons Natural History.

Here mirth's but mummery, And sorrows only real be. Wotton.

Jugglers and dancers, anticks, mummers. Milton.

Intrust it under solemn vows Of mum, and silence, and the rose.

Hudibrat.

I began to smoke that they were a parcel of mummers. Addison.

Your fathers Disdained the mummery of foreign strollers.

Fenton. Peeled, patched, and pyebald, linsey-woolsey

brothers ; Grave mummert ! Pope's Dunciad.

1 pity them greatly, but I must be mum, For how could we do without sugar and rum 1 Especially sugar, so needful we see ? What, give up our desserts, our coffee and tea !

Copper.

The temple and its holy rites profaned By mummeries, he that dwelt in it disdained ; Uplifted hands, that at convenient times Could act extortion and the worst of crimes Washed with a neatness scrupulously nice, And free from every taint but that of vice.

Id.

MUM, n. *. Dan. and Teut. mumme; Fr. mum; Belg. min. Wheat ale.

In Shenibank, upon the river Elbe, is a storehouse for the wheat of which mum is made at Brunswick.

Mortimer.

Sedulous and stout

With bowls of fatt’ning mum. Philips. The clam’rous crowd is hushed with mugs of mum, Till all tuned equal send a general hum. Pope.

MUM is a kind of malt liquor much drunk in Germany, ana chiefly brought from Brunswick. The process of brewing mum, as recorded in the town-house of that city, is as follows : ††† Take sixty-three gallons of water that has been boiled till one third part is consumed, and brew it with seven bushels of wheaten malt, one bushel of oatmeal, and one bushel of ground beans. When it is turned, the hogshead must not be filled too full at first ; as soon as it begins to work, put into it 3 Ibs. of the inner rind of fir, 1 Ib. of the tops of fir and beech, three handfuls of carduus benedictus, a handful or two of the flower of rosa solis : add burnet, betony, mar-joram, avens, pennyroyal, and wild thyme, of each a handful and a half; of elder flowers, two handfuls or more ; seeds of cardamum bruised 30 oz. barberries bruised, 1 oz. ; when the liquor has worked a while, put the herbs and seeds into the vessel : and after they are added, let it work over as little as possible ; then fill it up ; lastly, when it is stopped, put into the hogshead ten new laid eggs unbroken : stop it up close, and use it at two years’ end. The English brewers, instead of the inner rind of fir, use cardamum, ginger, and sassafras ; and also add elecampane, madder, and red sanders.

MUM’BLE, 77. n. & v. a. ~) Belg. mompelen ;

MUM’BLER, n. s. i or from mum. To

MUM’BLINGLY, adv. J speak inwardly or indistinctly; mutter ; grumble : a mumbler is % grumbler or mutterer ; a dissatisfied person

As one then in a dream, whose drier brain Is tossed with troubled sights, and fancies weake, He mumbled soft, but would not all his silence break

Spenser

MUMMY.

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Some carry tale, some pleaseman, some slight zany, Some mumble-news ; told our intents before.

Shakspeare.

Here stood he in the dark, Humbling of wicked charms ; conjuring the moon To stand ‘s auspicious mistress. Id.

A wrinkled hag, with age grown double, Picking dry sticks, and mumbling to herself.

Otway.

The man, who laughed but once to see an ass Mumbling to make the gross-grained thistles pass, Might laugh again to see a jury chaw The prickles of unpalatable law. Dryden.

He with mumbled prayers atones the deity.

Id. Juvenal.

The raising of my rabble is an exploit of consequence ; and not to be mumbled up in silence for all her pertness. Dryden.

Spaniels civilly delight In mumbling of the game they dare not bite.

Pope.

The clown, the child of nature, without guile, Blest with an infant’s ignorance of all But his own simple pleasures, ••• Is ballotted, and trembles at the news: Sheepish he doffs his hat, and mumbling swears A bible oath to be whate’er they please, To do he knows not what. Cowper.

MUMMIUS (Lucius), a Roman consul, sent against the Achaeans, whom he conquered A. U. C. 147. He destroyed Corinth, Thebes, and Chalcis, by order of the senate, and obtained the surname of Achaicus from his victories. He did not enrich himself with the spoils of the enemy, but returned home without any increase of fortune. He was so ignorant of the value of the paintings and works of the most celebrated artists of Greece, which weie found in the plunder of Corinth, that he said to those who conveyed them to Rome, that if they lost them or injured them, they should make others in their stead.

MUM'MY, n. *. Fr. momie ; Lat. mumia, derived by Salmasius from amomum, by Bochart from the Arabic momiya. A dead body preserved by the art of embalming ; also a sort of wax used by gardeners.

The silk

Was dyed in mummy, which the skilful Conserved of maidens' hearts.

Shaktpeare. Othello.

It is strange how long carcases have continued uncorrupt, as appeareth in the mammies of Egypt, having lasted some of them three thousand years.

Bacon's Natural History. Saved by spice, like mummies, many a year,

Old bodies of philosophy appear. Dunciad.

We have two substances for medicinal use under the name of mummy ; one is the dried flesh of human bodies embalmed with myrrh and spice ; the other is the liquor running from such mummies when newly prepared, or when affected by great heat, or by damps ; this is sometimes of a liquid, sometimes of a solid form, as it is preserved in vials, or suffered to dry. Hill's Materia Medica.

MUMMY, in antiquity, is a name applied to the ancient embalmed bodies generally, but more particularly to those of ancient Egypt. Nor are human bodies exclusively entitled to this appellation, but it inclu'les also those of the ibis and crocodile, and other of the animals esteemed sacred by the ancient Egyptians. The plain of

Saccara or Sakkara, in the environs of the ancient Memphis, is the place whence the greatest quantity of mummies have been taken, but very few have been brought away unbroken or entire ; the cause of this is the avarice of the Turks and Arabians, who will scarcely ever deliver them to travellers before they have broken them open, to see for jewels or other valuables they suspect may be enclosed therein. The outer case of the mummy is generally of some common wood, sometimes of oriental cypress or sometimes of sycamore. At the upper part is generally a mask drawn on the face, and sometimes under the chin is a lock of hair in the form of a bunch. Authors are not decided as to the meaning of this bunch, some taking it for a beard, and others for the leaf of the plant persea, which is consecrated to Isis. In the female mummies, and in general in the female figures of Egyptian workmanship, this mark is not to be found, which gives some weight to the opinion of those who take it for a beard. On the coverings of their coffins are also found the representation of a face, from which

some have supposed them to be portraits of the deceased ; but they have in general such a perfect resemblance one to the other that they cannot long be conceived to be any thing else than ornamental. Some have conjectured, and with much appearance of truth, that the figure of Osiris was represented on the mummies of men, and Isis on those of females. On the examination of a mummy that was in the possession of the university of Gottingen it was remarked that a face was painted on the bands that enveloped the body, and it had under the soles of its feet several folds of linen. In some mummies the nails of the feet and hands have been found to be yellow. In the interior of many have been found small images, amulets, beads, nilometers, &c., many of which, taken from mummies, are to be seen in the eighth room under the head of Egyptian Antiquities of the British Museum, where are also two of the finest mummies, and in the best state of preservation now in Europe; one of which was with its coffin sent to England by Edward Wortley Montague, and presented to the Museum by his present Majesty; and the other, which was found in one of the catacombs, at the before-mentioned Sakkara, about four leagues from Cairo, was sent to England by colonel William Lethieullier, who, on his death, bequeathed it to the Museum.

A mummy that was opened by M. Blumenbach, had artificial eyes made of cotton cloth prepared with resin. The Imperial Library at Paris has a mummy which was formerly in the church of St. Genevieve, but which is mucli broken and otherwise damaged, and the coffin of one extremely well preserved. It is ornamented like the others with hieroglyphic paintings, which are also sometimes found delineated on the bands of cloth with which the body is enveloped. They have aNo a heap of linen, which they conjecture to have been taken from a mummy, on which is represented the ceremony of embalming. In the same plain of Sakkara before-mentioned, ami in the same catacombs where the human mummies are found, are also

a great number of the mummies of sacred animals. M. Denon, in his voyage into Upper and Lower Egypt, visited these sepulchres, in one of which he found more than 500 mummies of the Ibis. The pots and vases which contained them, and served for sarcophagi, were made of com-mon red earth, from fourteen to eighteen inches in height : one would almost be inclined to doubt their antiquity, so well are they preserved. In the ninety-ninth plate of the quarto French edition of Denon's Travels are engraved several representations of these mummies. The British Museum has, in the same room with their valuable mummies, many of these vases, the lids of which are severally adorned with a head of Isis, a hawk, a wolf, or a baboon, several fragments of statues; of sistrums, amulets, and a great variety of other monuments of art, which serve to illustrate the religious worship of the ancient Egyptians. The same traveller (Denon) has also published a very curious account (page 281 of the quarto Paris edition of his Travels) of the opening and developing of one or two of these mummies that were given him ; to which work we refer for more detailed particulars.

In general these mummies of the Ibis are enveloped with bands of cloth, wrapped and inter-laced with much care. The head and feet are hidden under the wings, and the whole compressed into a conical form. All of them are not enclosed in vases or urns ; some have been found that are swathed with much care, excepting the head and beak, which are left uncovered ; these are but few, and their arrangement is the same as the human mummies, and are placed standing upright. ††† Chret-Aus;. Langguth has published an engraving of one, that accompanies his dissertation entitled Ue Mumiis Avium in Labyrintho apud Saccarum repertis, &c. Vi-lebergae, 1803, 4to. This description tallies exactly with the mummy of an ibis they have at present in the Imperial Library at Paris. This bird, which was much adored and revered in ancient Egypt, is the same which still inhabits those countries. This is ably demonstrated by a French naturalist, in the dissection and anatomy of the mummy of an ancient ibis, and that of a modern one, compared together ; both the skeletons are kept in the Museum of Natural History at Paris for the gratification of the curious. The following description is given by M. Belzoni of some mummy pits which he visited in the neighbourhood of Thebes : ††† ' The passage where the bodies are is roughly cut in the rocks, and the falling of the sand from the ceiling of the passage causes it to be

nearly filled up. In some places there is not more than a foot left, which you must pass through, creeping like a snail on pointed stones that cut like glass. After getting through these passages, some of them 200 or 300 yards long, you generally find a more commodious place, perhaps high enough to sit. But what a place of rest ! surrounded by bodies, by heaps of mummies in all directions, which impressed me with horror. The blackness of the wall, the faint light given by the candles and torches for want of air, the different objects that surrounded me seeming to converse with each other, and the Arabs with the candles or

torches in their hands, naked, and covered witn dust, themselves resembling living mummies, formed a scene that cannot be described. After the exertion of entering into such a place, through a passage of 80, 100, 300, or perhaps 600 yards, nearly overcome, I sought a resting-place, I found one, and contrived to sit ; but, when my weight bore on the body of an Egyptian, it crushed it like a bandbox. I instantly had recourse to my hands to sustain my weight, but they found no better support, so that I sunk altogether among the broken mummies with a crash of bones, rags, and wooden cases, which raised such a dust as kept me motionless for a quarter of an hour waiting till it subsided again. I could not remove from the place, however, without increasing it, and every step I took I crushed a mummy in some part or other. Once I was conducted through a passage no wider than that of the body, and choked with mummies, and I could not pass without putting my face in contact with some decaying Egyptian; but, as the passage inclined downwards, my own weight helped me on ; however, I could not avoid being covered with bones, legs, arms, and heads rolling from above. Thus I proceeded from one cave to another, all full of mummies, piled up in various ways, some standing, some lying, and some on their heads.' There are found in Poland a kind of natural mummies, or human bodies preserved without art. These lie in considerable number in some of the vast caverns in that country. They are dried with the flesh and skin shrunk up almost close to the bones, and are of a blackish color. In the wars which several years ago laid waste that country, it was common for parties of the weaker side to retire into these caves, where their enemies, if they found them out, suffocated them by burning straw, &c., at the mouth of the cavern, and then left the bodies ; which, being out of the way of injuries from common accidents, have lain there ever since. Carcases dried by the heat of the sun, and thus preserved from putrefaction, are often found in the sands of Libya. Some imagine that these are the bodies of deceased peo-ple buried there on purpose to keep them entire without

embalming; others think they are the carcases of travellers who have been overwhelmed by the clouds of sand raised by the hurricanes frequent in those deserts.

MUMP, v. a. Belg. momp den. To nibble; bite quick.

Let him not pry nor listen,

Nor frisk about the house

Like a tame mumping squirrel with a bell on.

Ottcay.

MUNCH, v. a. Fr. manger, from Lat. mando. See MOUNCH. To chew by great mouthfuls.

Say, sweet love, what thou desirest to eat ? ??? Truly, a peck of provender; I could munch you good dry oats.

Sh<iks])eare. Midsummer Night's Dream.

It is the son of a mare that's broken loose, and munching upon the melons.

Dryden's Don Sebastian.

MUND, n. s. Sax. munˆ, mun'sian, to de-fend. Peace; protection; safety.

Mund is peace, from which our lawyers call a breach of the peace, mundltrech : so Eadmund is

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happy peace ; /Ethelmund, noble peace ; -.-Elmund, all peace ; with which these are much of the same import : Irenseus, Hesychius, Lenis, Pacatus, Seda-tus, 1 ranquillus, &c. Gibson t Camden.

MUN DA, an ancient city of Hispania Bce-tica, in Granada, on the declivity of a hill, at the bottom of which runs a river. This city was famous for a victory gained by Caesar over the sons of Pompey, who had collected an army in Spain, after the defeat of their father at Pharsalia. See ROME. The Pompeys posted their army advantageously on arising ground, whereof one side was defended by Munda, and the other by a small river and a marsh. Caesar also drew up his troops with great art, and made as if he intended to fortify himself in that post: which induced young Pompey to advance into the plain, and attack the enemy before they could secure themselves with any works. Pompey's army was most numerous ; for it consisted of thirteen legions, 6000 horse, and an incredible number of auxiliaries, among whom were all the forces of Bocchus king of Mauritania, commanded by his two sons, youths of great valor. Caesar had eighty cohorts, three legions, and a body of 8000 horse. As the enemy drew near, Caesar seemed very anxious, knowing he was to engage men equal in valor and experience with himself, and commanded by officers who had given many proofs of their bravery. Cneius Pompeius was an able commander; and Labienus, who had revolted, esteemed scarcely inferior. Caesar, however, desirous to put an end to the civil war, either by his own death or that of his rivals, gave the signal for the battle, and fell upon the enemy with his usual vigor and resolution. At the first onset, which was dreadful, the auxiliaries on both sides fled. Then the legionaries engaged with a fury hardly to be expressed ; Caesar's men being encouraged by the hopes of putting an end to all their labors by this battle, and those of the Pompeys exerting themselves out of despair, expecting no quarter, most of them having been formerly pardoned. Never was victory more obstinately disputed. Caesar's men, who had been always used to conquer, found themselves so vigorously charged by the enemy's legionaries, that they began to give ground ; and, though they did not turn their backs, yet it was plain that shame alone kept them in their posts. All authors agree that Ctesar had never been in so great danger ; and he himself, when he came back to his camp, told his friends, that he had often fought for victory, but this was the first time he had ever fought for life. The battle had lasted from the rising to the setting of the sun,

with alternate temporary success on each side, but without any considerable advantage on either ; when at last a mere accident decided the dispute in favor of the dictator. Bogud, a petty king of Mauritania, had joined Caesar soon after his arrival in Spain, with some squadrons of Numidian horse ; but, in the very beginning of the battle, he had abandoned his post, and retired with his troops to a rising; ground near the enemy's camp, where he continued the whole day an idle spectator of the battle in the plain. But in the evening he made an attack upon Pompey's camp with all

his forces. Labienus hastened after him to da-fend the camp; which Cesar observing, cried out, Courage, fellow soldiers ! the victory at length is ours; Lahienus flies! Cesar's men, believing that Labienus had really fled, charged the wing he commanded so briskly, that, after a most obstinate dispute, they put them to flight. Though the left wing was thus defeated, the right wing, under the elder Pompey, still kept their ground. Pompey, dismounting from his horse, fought on foot, till, most of his legionaries being killed, he was forced to save himself by flight. Part of his troops fled back to their camp, and part took shelter in Munda. The camp was immediately attacked and taken; and Caesar, without loss of time, drew a line of cir-cumvallatiou round the city. This victory was gained on the 16th of the kalends of April (our 17th of March), when the liberalia were celebrated at Rome ; the very day, Plutarch observes, in which Pompey the Great, four years before, had set out for the war. In this action the Pompeys lost 30,000 men; among whom were Labienus, Attius, Varus, and 3000 Roman knights : seventeen officers were taken, and all the enemy's eagles and ensigns, with , Pompey's fasces. On Caesar's side only 1000 men were killed, and 500 wounded.

MUN'DANE, adj. Lat. mundanus. Belonging to the world.

The platonical hypothesis of a mundane soul wil' relieve us. Glani'ille'f Scepsis

The atoms which now constitute heaven and earth, being once separate in the mundane space, could never without God, by their mechanical after lions, have convened into this present frame of things. Bentley's Sermon*.

MUNDESSOR,a large district of Ilindostan, in Mulwah, situated principally between 24►► and 25►► lat. N., and intersected by the Chumbul. It is possessed by several cniefs, tributary to the Mahrattas.

The principal towns are Soonel, Bampoor, and Parkundy.

MUNUEN, a town of Hanover, at the confluence of the Werra and the Fulda, whose united streams take here the name of the \Veser. It has a Calvinist and two Lutheran churches, an hospital, a school, and a brisk carrying trade, particularly by water. The annual number of barges or lighters arriving by the Weser is about 300; by the Werra and Fulda above 100 each. The value of the linen annually sold is computed at ►►100,000. This town sends to Bremen corn, dye-stuffs, stone-ware, millstones, potash, timber, &c. ; receiving in return colonial produce, and French wines. The manufactures are tobacco, soap, leather, and stone-ware. This place was plundered by count Tilly in 1626, and occupied by the French in the war of 1756, and again in 1805. It is nine miles north-east of Cassol, an-1 fifteen W. S. W. of Gottiusien.

MUN'DICK, n. *. Welsh mivndig (mien, a mine). A kind of marcasite or semimetal abounding in tin mines.

\Yhen any metals are in considerable quantity, these bodies lose the name of marcasites, and are called ores : in Cornwall and the West they call them mundick. Woodwork.

Besides stones, all the sorts of mundick are naturally figured. Grru-'t Cotmotog*.

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MUNDIFICATION,n.s.} Lat. mundus,

MUNDIF'ICATIVE, adj. > and fucio, to make

MUN'DIFY, v. a. 3 clean. The act

or art of cleansing, as from dross or accretions : to mundify is, to clean ; make clean.

Gall is very mundificative, and was a proper medicine to clear the eyes of Tobit. Browne.

Simple wounds, such as are mundified and kept clean, do not need any other hand but that of nature.

Id.

The ingredients actuate the spirits, absorb the intestinal superfluities, and mundify the blood.

Harvey.

We incarned with an addition to the fore-men- tioned mundifictitiic. Wiseman I Surgery.

MUNDINUS, a celebrated anatomist of the fourteenth century, born in Florence. He was the first modern anatomist who restored the art, and introduced dissection of human bodies. He wrote a Treatise on Anatomy, in 1315, which was printed at Paris in 1748.

MUNDUN'GUS, n. s. Stinking tobacco. A cant word.

Exhale mundungus ill perfuming scent.

Philips.

MUNDUS PATENS, i. e. the open world, in Roman antiquity, a solemnity performed in a small temple, of a round form like the world, dedicated to Dis and the rest of the infernal gods. This temple was opened thrice a year, *viz.* on the 24th August, 4th October, and 7th November. During these days the Romans believed hell was open ; on these days, therefore, they never offered battle, listed soldiers, put

to sea, or married.

MUN'GREL, n. s. & adj. Also written MONGREL, which see. Any thing of mixed breed : base-born ; degenerate.

Mastiff, greyhound, mungrel grim, Hound or spaniel, brache or hym, Or bob-tail tike, or trundle tail. Shaktpeare.

Thou art the composition of a knave, beggar, coward, pander, and the son and heir of a mungrel bitch. Id.

My people are grown half wild, they would .not precipitate themselves else into such a mixt mungrel war. Howel.

A foreign son is sought and a mixed mungrel brood. Dryden.

Mungrel curs bawl, snarl and snap, where the fox flies before them, and clap their tails between the legs when an adversary makes head against them.

L'Estrange,

MUNICH, the capital of the kingdom of Bavaria, and now an archiepiscopal see, is situated on the west bank of the Iser, in a plain, and is surrounded by a rampart. At least three-fourths of the buildings are within this circuit; the remainder constitute the suburbs. The streets are in general ill-paved, but broad and straight; the houses high, and of good appearance ; and the public edifices are numerous and respectable. It is divided into four quarters, by two streets, which cross in the principal square, which is surrounded by arcades. The royal palace is a larjje plain edifice, magnificent in its interior. The kaiser-saal, or imperial ball, is one of the first in Germany ; the staircase leading to it is of marble, and reckoned the finest out of Italy. The treasury contains a noble collection of diamonds, rubies, and other precious stones : the

royal chapel has also very costly deposits, and the cabinet is remarkable for its beautiful miniatures. The old electoral palace, and the one inhabited by Eugene Beaunarnois, son-in- law of the king of Bavaria, are also fine buildings. We may next notice the landhaus or state-house, the council-house, the arsenal, and the new opera. The Notre Dame church contains thirty altars and a monument of the emperor Louis IV.; that of the Theatins.was built on the model of the Vatican ; the church belonging formerly to the Jesuits ; and the

churches of the Augustines, the knights of Malta and* St. Peter, are also worth remark. The college occupied by the Jesuits before their expulsion was one of their richest establishments in Europe, and its treasury contained a large collection of philosophical instruments. The total number of churches is twenty-two. The other buildings that deserve notice are the Maximilian palace, the barracks, hospital, workhouse, and the new mint.

Although Bavaria in general is an illiterate and backward country, Munich has many scientific and literary establishments. The national library has been enriched of late years by the addition of collections from the monasteries, and contains a very large rather than valuable stock of books. The academy of sciences was erected in 1759, and has an extensive collection of specimens of natural history and models. The history of Bavaria is a great object of its attention. The schools of a higher class are the military academy, lyceum, gymnasium, veterinary and surgical schools, and the seminary for training teachers. Other scientific establishments are the-antiquarian observatory, cabinet of medals, picture gallery (which occupies seven rooms), the collection of prints, and the botanical garden. The court theatre is in the palace ; and is a miniature of the Odeon at Paris.

On the 1st January 1790 count Rumford procured the arrest of all the beggars in this capital. His establishment for preparing and distributing soup still remains; together with four orphan-houses, and two pawn banks. There are also two hospitals for the sick, Magdalen hospital, house of correction, and lying-in hospital.

The environs of Munich are adorned with gardens, plantations, and a variety of public places. The court garden is behind the palace, and is called, we understand, the English garden. The Iser flows through it, and has here a neat bridge which leads to the extensive shrubbery. A mile from hence is a distinct royal seat, with another display of fine gardens. The roads from Munich to Paesing, and the garden at Oster-walde, are extremely pleasant.

The general beverage here is malt liquor. The population does not exceed 50,000, of whom nearly 11,000 live in the suburbs. The trade of Munich is very limited : it is to the court and national establishments, and to the residence of a number of landed proprietors, that the inhabitants chiefly owe their support. The Iser is not navigable, and the roads east and west are but indifferent. The manufactures of Munich, though diversified, are of small extent; they comprise furniture, tapestry, gold, wine, pianofortes, mathematical and surgical instruments, caids,

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pencils, snuff, &c., almost all for consumption. The art of lithography is said to have owed its origin to Munich.

In 1632 this city surrendered to the Swedes under Gustavus Adolphus; in 1704 it fell into the hands of the Austrians after the battle of Blenheim, and shared the vicissitudes of the war of 1741, when the elector laid a claim to the imperial crown. After this period it was unmolested until, in 1796, the French army under Moreau obliged the elector to make a treaty with the republic. In 1800 Moreau again occupied Bavaria, and from that time to 1813 the elector remained in alliance with France. See BAVARIA. 220 miles west of Vienna, and 116 E. S. E. of Stutgard. Long. 11►► 35’ 15’ E., lat. 48►► 8’ 19’ N.

MUNICH (Burchard Christopher), count, a celebrated field-marshal in the Russian service, born at Oldenburg in 1685. He was the favorite of the empress Ann, and was concerned in all the events of her reign. Being appointed general of her armies, he gained great advantages over the Crim Tartars, overcame the Turks, A. D. 1739, in an engagement near Choezim, and took that city with Jassy the capital of Moldavia. He was afterwards prime minister to Ivan VI., but was soon after accused of employing his power to gratify his own ambition and resentment. The empress Elizabeth brought him to trial, and he was condemned to lose his life, A. D. 1742. This sentence was mitigated to banishment into Siberia, whither many of the victims of his power had been exiled. He was recalled by Peter III. A. D. 1762, and declared field-marshal. Upon the death of this prince Catharine II. appointed him director-general of the ports of the Baltic. He died on the 8th October, 1767, aged eighty-four.

MUNICIPAL, adj. Fr. municipal; Lat. municipalis, rnunicipium. Belonging to a corporation.

A counsellor, bred up in the knowledge of the municipal, and statute laws, may honestly inform a just prince how far his prerogative extends. Dryden.

MUNICIPIUM, in Roman antiquity, a corporation, borough, or enfranchised city or town, where the inhabitants enjoyed their own laws and customs, and at the same time were honored with the privileges of Roman citizens ; but then this privilege reached no farther than the bare title. Some indeed, by particular merit, obtained

the liberty of votes, which occasioned that distinction of municipium sine suffragio, and muni-cipiuni cum suffragio. The inhabitants of the municipium sine suffragio were called barely Romani ; but those of the municipium cum suffragio were called cives Romani. The proper citizens of Rome were, 1. Registered in the census ; 2. Had the right of suffrage and of bearing honors ; 3. Were assessed in the poll-tax ; 4. Served in the legions; 5. Used the Ro-man laws and religion ; 6. Were Quirites and populus Romanus ; whereas the municipes enjoyed the first three of these privileges, but were denied the last three.

MUNIFICENCE, n. s.} Fr. munificence ;

MUNIF'ICENT, adj. > Lat. munificent ia,

MUNIF'ICENTLY, adv. j munijicus. Bounty ;

liberality ; generosity, the adjective and adverb follow these senses.

Who can recount the number, or set out the value of those instances, wherein God's goodness is expressed towards such as loved him ? ××× of his kind acceptance, and munificent recompensing their endeavours to please him ? Barrow.

A state of poverty obscures all the virtues of liberality and munificence. Addium't Spectator.

Is he not our most munificent benefactor, our wisest counsellor and most potent protector ?

Atterbury.

T were wild profusion all, and bootless waste, Power misemployed, munificence misplaced, Had not its author dignified the plan, And crowned it with the majesty of man. Covper.

MUNIFICENCE, n. s. Lat. munitiones and fa-cere. Fortification ; strength. We find no other writer who uses the word in this sense.

Their importune sway, This land invaded with like violence. Until that Locrine for his realms defence, Did head against them make, and strong munificence.

Spenter.

MU'NIMENT, n. s.) Lat. munimentum,

MUNITE’, v. a. ◆◆munio,munitio. Forti—

MUNIT’ION, n. s.) fication ; strong-hold ; also support, defence : to munite is an obsolete word for, to fortify or strengthen : munition is synonymous with muniment, and is used also by our older writers for ammunition.

It is a city, strong and well stored with munition.

Satidyi. The arm our soldier,

Our steed the leg, the tongue our trumpeter ;

With other munimentt and petty helps

In this our fabrick. Shaksptare. Coriolanus.

What penny hath Rome borne, What men provided, what munition sent, To underprop this action? Id. King John.

Heat doth attenuate, and the more fjross and tangible parts contract, both to avoid vacuum, and to munite themselves against the force of the fire.

Bacon’s Natural History.

Men, in the procuring or muniting of religious unity, must not dissolve the laws of charity and human society. Bacon.

The king of Tripolie in every hold

Shut up his men, munition, and’ his treasure.

Fairfax.

It was his treasure and munition wherein he prides himself to these men of Babylon ; the men of Babylon shall carry away his treasure and munition.

Df>. Taylor.

Victors under-pin their acquests jure belli, that they might not be lost by the continuation of external forces of standing armies, castles, garrisons, muni-tions. llal*.

MUNITION SHIPS are those that have stores on board to supply a fleet of men of war at sea. In an engagement all the munition ships and

victuallers attending the fleet take their station, in the rear of all the rest : they are not to en-gage in the fight, but to attend to such directions as are sent them by the admiral.

MUNKACS, a town of Hungary, on the La-torcza, the see of a Greek bishop. It contains 5000 inhabitants, of Magyar and Russian descent, and has Catholic, (Jreek, and Calvinist churches ; stocking manufactures, iron works, and one of the largest saltpetre works in the Austrian dominions. On a rock about a rrile

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from the town are three decayed forts. This was the strong-hold of the celebrated chief of the seventeenth century Tekeli. Sixty-seven miles east by south of Caschau.

MUN'NION, n. s. Goth, mynd, the face. The facings of a sash.

The upright posts, that divide the several /ights in a window frame, are called munniont. Muxon.

MUNRO (Donald), an eminent writer of the sixteenth century, contemporary with George Buchanan, and a descendant of the family of Coul. He was first archdeacon of the Isles, afterwards superintendant of Ross, and minister of Kiltearn. He wrote a Description of the Isles, which he gave to Buchanan, who acknowledges it in his History of Scotland.

MUNROE, or Southfield, a post-town of Orange county, New York, fifty miles north of New York. Population 2570. Iron ore is found in this town, and iron is extensively manufactured here.

MUNSTER, a government of Westphalia, in the Prussian states, containing the north-west portion of that province. Its area is 2820 square miles ; the population 328,000. It is divided into the ten circles or districts of Munster Pro-per, Tecklenburg, Wahrendorf, Beckum, Lu-dinghausen, Koesfeld, Recklinghausen, Borken, Ahaus, and Steinfurt. The soil is not rich in corn; but flax and hemp are well cultivated. Linen is the chief manufacture: many of the lower classes emigrate to Holland in summer, and return in winter to their homes, where they engage themselves in weaving. The chief rivers are the Lippe, which forms the greater part of the southern boundary, and the Ems, which flows to the north-east. A canal of considerable length reaches from Munster to the Vechta. This government consists, for the greater part, of the ancient bishopric of the same name, founded in 802 by Charlemagne. The chapter generally chose the archbishop of Cologne : but, after the death of the last primate, they chose a prince of the house of Austria : on the seculari-sation of church property in 1802 the duke of Oldenburg had 1000 square miles of this territory given to him, with 60,000 inhabitants. Prussia herself had the capital, with 1485 square miles of territory, and the rest was divided among different princes, subject to Prussia in 1815.

MUKSTER, a city of north-west Germany, the capital of a government of the same name, is situ - ated in a plain stretching on both sides of the river Aa, about six miles from the Ems. It had a citadel, and was, until 1765, surrounded with a double mound and moat, but the water was then drained off, and the mounds laid out in public walks. The citadel was also demolished. The houses of the town are well built and lofty, with painted roofs : those in the main streets have small piazzas, or colonnades. There are eleven churches, of which the most remarkable are the cathedral and St. Lambert's. The former has a remarkable chapel, and several curious and ancient monuments. On the tower of the church of St. Lambert are to be seen the three iron baskets in which were suspended the remains of John of Leyden and his two chief companions. The bishop's palace is neat, and the gardens attached are extensive and well laid out. The university at Munster is suppressed, that of Bonn, established in 1818, being the resort of the youth of this neighbourhood. There are here, however, three gymnasia for earlier education, some establishments for weaving coarse linen, and a traffic in linen, woollen, and wine. But neither the trade nor manufactures are considerable. The French, in 1806, stripped the churches of their pvate. This city has been rendered famous, 1. By the peace concluded here in 1648, which put an end to a war of thirty years, occasioned by the persecuting spirit of bigotted papists, who chose rather to plunge their country into all the calamities of war, than allow liberty of conscience to the Protestants. By this peace, however, they consented, much against their inclination, to grant them a toleration. 2. By the disorders and disturbances occasioned here in 1553 by a band of enthusiasts, headed by a tailor called John of Leyden from the place of his birth, who turned out the magistrates, and took possession of the city, where they perpetrated the most horrid villanies and cruelties : see our article ANABAPTISTS. It lies sixty miles N. N. E. of Dusseldorf, and ninety-two W. S. W. of Hanover.

MUNSTER, in Latin Monomia, in Irish Monn, the most southerly province of Ireland, hounded on the north by Leinster and Connaught, and on the east, west, and south by the ocean. It contains the counties of Cork, Clare, Kerry, Limerick, Tipperary, and Waterford ; 740 parishes, sixty-three baronies, and twenty-six boroughs. It is about 135 miles long, and 120 broad. Its ancient name was Murnhan ; and in latter ages it was divided into Desmond, or south Munster; Ormond, or east Munster ; and Thomond, or north Munster. It contains some of the finest harbours in the world, and three great towns and sea-ports, Cork (the capital), Limerick, and Waterford. Its rivers are the Lee, the Suir, the Audlyffe, the Banda, the Leane, and the Ca-shon. Here is one

of the finest coal-fields of Ireland, i. e. for non-flaming or stone coal. It is chiefly under the direction of Mr. Leader of Drornagh (see our article Ireland), and employs between 1000 and 1500 hands. Copper mines, and a slate quarry, are also at work in the county of Cork. See CORK. Potteries have been also established in this neighbourhood with considerable success.

MUNSTER (Sebastian), a learned German mathematician and linguist, born at Ingleheim in 1480. He became a Cordelier, but having embraced Luther's sentiments he quitted that order in 1529, and retired to Heidelberg, and afterwards to Basil, where he became professor of Hebrew, and taught with reputation. He was a man of great candor, void of ambition, and so well skilled in geography, mathematics, and the Hebrew language, that he was called the Esdras and Strabo of Germany. His Latin translation of the Bible is esteemed. He was the first who wrote a Chaldee grammar and lexicon : he also published a Treatise on Cosmography, and several other works. He died of the plague at Basil in 1552, aged sixty -three.

MUNYCHIA, or MUNYCHIUS PORTUS, in

ancient geography, a village and port of Athens, nearer to the city, and fortified in the same manner with the Piraeus, east of which it lay, between it and the promontory Sunium, at the mouth of the Ilissus. Strabo says it was an eminence in form of a peninsula, at the foot of ###which stood three harbours,anciently encompassed with a wall, taking within its extent the Piraeus and other harbours, full of docks, with the tem-ple of Diana Munychia; taking its name from Munychus, the founder of the temple.

MUNYCHIA, an anniversary solemnly observed at Athens in honor of Diana, on the 16th of the month Munychion. Cakes were offered on the occasion called afjKj>i<pi>tvTtg.

MUNYCHION, the tenth month of the Athenian year, containing twenty-nine days, and answering to the latter part of our March and

beginning of April. It was so called from the festival munychia, which was observed in this month.

MUONIO, a river of Lapland, which, issuing from a lake among the mountains, in lat. 69►► N., flows S. S. E. and south, till it joins the Tornea. By the treaty of 1809 it forms the boundary between Russia and Swedish Lapland. It has a number of rapids, but is navigable for boats throughout a great part of its course.

MUR/ENA, the eel, in icthyology, a genus of fishes, belonging to the order of apodes. The head is smooth ; there are ten rays in the membrane of the gills ; the eyes are covered with a common skin ; and the body is cylindrical and slimy. There are nine species, distinguished by their fins, tails, &c. The most remarkable are these : ►►►

1. M. anguilla, the common eel, is very frequent in all our fresh waters, ponds, ditches, and rivers; according to Mr. Pennant it is the most universal of fish ; yet is scarce ever found in the Danube, though very common in the lakes and rivers of Upper Austria. In some respects it borders on the reptile tribe. It quits its element, and during night wanders along the meadows, not only in order to change its habitation, but also for the sake of prey, feeding on snails as it passes along. In winter it beds itself deep in the mud, and continues in a state like the serpent kind. It is very impatient of cold, and will eagerly take shelter in a vrisp of straw flung into a pond in severe weather, which has sometimes been practised as a method of taking them. Albertus affirms, that he has known eels take shelter in a hay-rick, yet perish through excess of cold. In a river of Cambridgeshire called the Nene there is a variety of small eel, with a less head and narrower mouth than the common kind, found in clusters in the bottom of the river, and called the bed-eel ; these are sometimes roused up by the violent floods, and are never found at that time with meat in their stomachs. Eels are extremely voracious, and destructive to the fry of others. No fish lives so long out of water as the eel ; it is so extremely tenacious of life, that its parts will move a considerable time after they are flayed and cut in pieces. Eels vary much in their colors, from a sooty hue to a light olive green ; and those which are called silver eels have their

bellies white, and a remarkable clearness throughout. There is a variety in the Thames called grigs, and about Oxford grigs or gluts. These are scarce ever seen about Oxford in the winter, but appear in spring, and bite readily at the hook, which common eels in the

neighbourhood will not. They have a larger head, a blunter nose, thicker skin, and are less fat, than the common sort ; they are less esteemed, and seldom exceed 3 or 4 Ibs. in weight. Common eels grow to a large size, sometimes weighing 15 or 20 Ibs., but such are extremely rare. Mr. Dale in the Philosophical Transactions, and some others, bring instances of eels much exceeding that size ; but Mr. Pennant suspects them to have been congers, as these enormous fish were all taken at the mouths of the Thames or Medway. The Ro-mans held eels very cheap, but the luxurious Sybarites were so fond of them as to exempt from tribute those who sold them. There is scarce any animal the generation of which has puzzled the learned more than this. Aristotle first broached an opinion that eels were of no sex, nor propagated their species like other animals, but were equivocally gendered of the mud ; and, absurd as this hypothesis is, there have not been wanting many who have adopted it. But there is now no room to doubt that all animals are produced by the copulation of parents like themselves ; and the finding of eels in new ponds is easily accounted for, from the above mentioned circumstance of their nocturnal migrations. Dr. Plot, and many others, have given accounts of whole droves of them leaving one ditch or pond to go to another. Though naturalists now generally allow that eels are produced like other animals, by parents of their own kind, yet there remain many doubts about the manner in which the generation is performed. Some allow the eels to be, like the generality of other animals, of different sexes in the different individuals; and others affirm that they are all hermaphrodites, each having the parts of both sexes. Rondeletius affirms that they are of both sexes ; and Mr. Allan, who hai given a very curious paper concerning them in the Philosophical Transactions, is of the same opinion. Both say, that the parts of the sexes may be discovered on a careful inspection ; and some are found to be males and others females ; but these parts are, in both sexes they say, buried in a large quantity of fat ; and hence, they think, proceeded the mistake of Aristotle and his followers, who, not being able to find those parts, concluded that they did not exist. Among those who allow the eel to be produced, like other animals, from parents which have the sexes, some are of opinion that they are viviparous, and others that they are oviparous : but Mr. Chartwynd seems to have determined this controversy, by observing, that if the aperture under the belly of the eel, which looks red in May, be cut open at that time, the young eels will be seen to come forth alive after the operation. Eels have sometimes been met with in recent ponds, made at such a distance from any other water that we cannot reasonably suppose them to have migrated thither over land. But in these cases it is probable that the ponds have

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bf►►u supplied with them by aquatic fowls of prey, as vegetation is spread by many land birds, either by being dropped as they carry them to feed their young, or by passing quick through their bodies, as is the case with herons.

2. M. conger, the conger e►►l, grows to a vast size. Dr. Borlase informs us, that they are sometimes taken near Mount's Bay, of 100 Ibs. weight ; and some have been taken near Scarborough, that were ten feet and a half long, and eighteen inches in circumference in the thickest part. They differ from the common eel in the following particulars : ►►► 1. Their color in general is more dark. 2. Their eyes much larger in proportion. 3. The irides of a bright silvery color. 4. The lower jaw is rather shorter than the upper. 5. The inside line is broad, whitish, and marked with a row of small spots. 6. The edges of the dorsal and anal fins are black. 7. They have more bones than the common eel, especially along the back quite to the head. 8. They grow to a much larger size. Congers are extremely voracious, preying on other fish, and on crabs at the time they have lost their shell and are in a soft state. They and eels in general are also fond of carcases of any kind, being frequently found lodged in such as are accidentally taken up. The conger eels probably generate like the fresh-water species. Innumerable quantities of what are supposed to be their fry come up the Severn about April, preceding the shads, which it is conjectured migrate into that river to feed on them; they are called elvers. They swarm during their season, and are taken in a kind of sieve made of hair-cloth fixed to a Ions; pole ; the fisherman, standing on the edge of the water during the tide, puts in his net as fur as he can reach, and, drawing it out again, takes multitudes at every sweep, and will take as many during one tide as will fill a bushel. They are dressed and reckoned very delicate. They are an article of commerce in Cornwall; numbers taken on that coast are exported to .Spain and Portugal, particularly to Barcelona. Some are taken by a single hook and line ; but, as that method is tedious, they are chiefly caueht by bulters. The fishermen are much afraid of a large conger, lest it should endanger their legs by clinging round them; they therefore kill them quickly by striking them on the vent. They are afterwards cured in this manner : ►►► They are slit and hung on a frame till they dry, having a considerable quantity of fat, which it is necessary should exude before they are fit for use. A conger of 1 cwt. will be reduced by drying to 24 Ibs. The smallest are therefore preferred, because they

are soonest cured. The Portuguese and Spaniards use those dried con-Eers after they have been ground into a powder, to tiiicken and give a relish to their soups. They are sold for about 40s. the quintal, which weighs 126 Ibs.

ML” RAGE, n. s.) Lat. murua, a wall.

MU’RAL, adj. S Money paid for keeping vails in repair: of or belonging to a wall; mure is used by Shakspeare for a wall. See

And repaired Her mural breach, returning whence it rowl’d. Milton

hi the nectarine and the like delicaie mural fruit, tl►►e later your pruning the better.

Evelyn’t Kalendai .

A soldier would venture his life fora mural crown.

Addixon.

MURAKOS, a populous though small district of Hungary, the property of a single noble family ; much subdivided, so that it is said no one holds more than four acres of land. The whole is about thirty miles in length by twelve broad, but contains a population of 46,000.

MURAL ARCH, a wall or walled arch, placed exactly in the plane of the meridian, i. e. upon the meridian line, for fixing a large quadrant, sextant, or other instrument, to observe the meridian altitudes, &c., of the heavenly bodies. Tycho Brahe was the first who used a mural quadrant in his observations ; after him Hevelius, Mr. Flamstead, De la Hire, &c., used it. See ASTRONOMY.

MURANO, a town of Italy, subject to Austria, and situated on the Isle of Lagunes, east of Venice. Here the celebrated Venetian glasses and mirrors are manufactured. Population 4300.

MURANT(Emanuel), a much admired landscape painter, born at Amsterdam in 1622. He was a disciple of Philip Wouverman, from whom he acquired that warmth and brilliancy of coloring, which rendered him eminent. His subjects were views in Holland, villages, towns, cities, ruins, and decayed castles, sketched after nature, and so

exquisitely finished that every minute part of a building was perfectly discernible, and even every particular stone or brick might be counted. But this demanded so much time that it was impossible for him to paint many pictures ; on which account they are exceedingly scarce, and sold for enormous prices. He died in 1700.

MURANUM, in ancient geography, a town of Italy, on the confines of Lucania, in Calabria Citra, at the springs of the Sybaris, midway between the Sinus Tarentinus on the east, and the Tuscan Sea on the west ; now called Morano. It is supposed to have arisen from the ruins of Sypaasum.

MURAT (Joachim), late king of Naples, was born 2.5th of March, 1771, at la Bastide, near Cahors, in the department of Lot, France, where his father kept a tavern. Being patronised by an ancient and respectable family of Perigord, he obtained a scholarship in the college of Cahors, and finished his studies for the priesthood at Toulouse. But his adventurous and rather wild disposition induced him to enter the army. Dismissed from his regiment, as insubordinate, he returned home till the formation of the national guard, in which he entered, and was sent to Paris. He afterwards became sub-lieu- tenant in a regiment of chasseurs ; and, displaying his zeal for revolutionary principles, was soon advanced to the rank of lieutenant-colonel, and chief of brigade. In 1796 he accompanied Buonaparte as his aid-de-camp, to Italy. He was employed in negociations by that chief at Turin and Genoa; and in 1798 commanded the army sent to effect the subordination of the Valteline. He followed his patron to Egypt,

and there distinguished himself at the battle of Mount Tabor. On his return he afforded Buonaparte assistance in his progress to the supreme power; was made commander of the consular guard ; and soon after married to the sister of the first consul. At the battle of Marengo he commanded the cavalry; and in 1802 governed the Cisalpine republic, with the title of general. In January 1804 he was governor of Paris, with the title of general-in-chief ; and, when Buonaparte was proclaimed emperor, directed the whole military force. Soon after he was made a marshal of France, and repeatedly distinguished himself in the campaign of 1806. Being invested with the grand duchy of Berg, he assumed the state of a sovereign prince in two campaigns, particularly at the battle of Jena. At Eylau and at Friedland he commanded the cavalry ; and shawed himself on every occasion the de-Toted agent of his imperial relative. In 1808 Ae was sent into Spain, and effected the temporary submission of that country ; but on the 1 st of August the same year was proclaimed king of the two Sicilies, and had reigned peaceably and with considerable popularity at Naples four years, when he was called upon to join the Russian expedition of Buonaparte. He commanded the French cavalry ; and after the de-feat of Smolensko imitated the example of his leader, and fled for Naples. In 1813 he joined the French ; but, after the loss of the battle of Leipsic, endeavoured to make terms with their enemies by entering into separate negociations with England and with Austria. His vacillating conduct proved at length his ruin, and by a well constructed conspiracy he was hurled from his throne and obliged to reside some time at Plaisance, near Toulon. After the battle of Waterloo he at first took refuge in Corsica ; whence with a few followers he sailed to Italy in the summer of that year, in the hope of recovering his crown ; but was made prisoner soon after his landing, and conducted to the castle of Pizzo, where he was shot October 13th 1815.

MURATORI (Lewis Anthony), F. R. S., a celebrated Italian writer, born at Vignoles, in Bologna, in 1672. He early discovered a fondness for the languages and sciences. Having completed his studies, he became an ecclesiastic; but devoted his time to literature, philosophy, theology, civil law, antiquities, &c. In 1694 he was made librarian of the Ambrosian library at Milan; and in 1700 the duke of Modena made him his librarian, keeper of the Archives, and provost of Santa Maria del Pomposa. He acquired the esteem of the learned throughout Europe, and became an associate of the academies of the Arcades of Rome, Delia Crusca, and Colomberia, of Florence, of Etrusca at Cor-

tona, of the Imperial Academy of Olmutz, and F. R. S. of London. He died in 1750. lie wrote, 1. Anecdota; or A Collection of Pieces from the Ambrosian Library ; 2 vols. 4to., with notes. 2. A Treatise on the Italian Poetry, 2 vols. 4to. 3. Anecdota Graca, 3 vols. 4to. 4. A Genealogical History of the House of Mod ena, 2 vols. folio. 5. A Collection of the writers of Italian History, 27 vols. folio, with learned notes. 6. Antiquitates Italicae. 7. A Collection of Ancient VOL. XV.

Inscriptions, entitled Novus Thesaurus, 6 voli. folio. 8. The Annals of Italy, 12 vols. 4to.| in Italian, &c. 9. Letters, Dissertations, Italian Poems, 8cc.

MURCIA, in ancient mythology, the goddess of idleness. The name is taken from rourcue or murcidus, an obsolete word, signifying a dull, slothful, or lazy person. The statutes of this goddess were always covered with dust and moss to express her idleness and negligence. She had a temple in Rome, at the fool of the Aventine mount.

MUIICIA, an important province of Spain, situated between Valencia on the east, Andalusia on the west, and the Mediterranean on the south. It is ninety miles long and above sixty broad ; having an area of 8000 square miles, and a population of 384,000. Its aspect is in general mountainous; its climate is very fine, the sky being seldom clouded, and mists wholly unknown : several months often elapse without the falling of a shower.

The mountains in this province are chiefly branches of the great Roman chain Monies Orospedani ; the most remarkable are the Sierras de Penas, de Chinchilla, d'Orihuela, d'Almanza, and de Carascoy. The province is watered by ihe Segura, Guadalentin, Benamor, and Guarda-var. The soil is in general fertile, and the climate beautifully clear, mild, and salubrious, particularly in the Huerta, or track watered by the Segura ; in the parts called Campos it is of equal fertility, but not so well watered. The products are wheat, barley, vines, olives, mulberries, saffron, hemp, and rice : also in good quantity citrons, pomegranates, and almonds. Several of the mountains have good pasturage ; but it is neglected, and the boars are not expelled from the thinly peopled parts of this province. The mineral products are lead, copper, sulphur, nitre, alum, crystal, and marble ; but the inhabitants turn them to little account. The only manufactures are a few coarse cloths and silk stuffs, made in the town of Murcia ; earthenware, soap, and cutlery. The extent of coast here is considerable, and Murcia contains Carthagena one of the best harbours in the world ; but the roads of the interior are wretched, and the commerce comparatively unimportant. The exports are cutlery, hemp, silk, ribands, wine, corn, soda, saffron, and bassweed, all in small quantities. The inland trade is chiefly promoted by three great fairs held in September, at Murcia in the centre, at Lorca in the south, and Albacete in the north of the province. The chief towns are Carthagena, Murcia, Lorca, Chinchilla, Albacete, Villena, and

Almanza. At Carthagena the majority of the inhabitants are of French, English, or Italian de. scent.

MURCIA, a considerable town of Spain, the capital of the foregoing province, stands on the north bank of the Segura, in the rnidst of a large and beautiful valley. It is surrounded by mulberry trees, but bounded at the distance of nearly four miles to the east by lofty, naked, mountains. The town was formerly walled. Il is now divided into the Old and New towns, and a suburb on the south side of the river. It is ill built throughout; and there are but three or four

streets in which two carriages can pass ; nor are these lighted during night. The only good square is the one where bull-fights are exhibited ; this is spacious, and surrounded by tolerably neat houses. Murcia has eleven churches, ten monasteries, nine convents, a tribunal of the inquisition, three colleges for the secular clergy, and three hospitals. There are also two public libraries, devoted chiefly to old scholastic theology. The bishopric of Carthagena was transferred hither in 1291. The diocese comprehends the greater part of the province, and the bishop's revenue is said to exceed ––20,000 sterling a year. The cathedral stands in the same square as the episcopal palace, and is a very large edifice : it is chiefly noted for a large dome, beyond which there are three aisles separated by enormous pillars formed of groups of slender columns clumped together ; almost all the ornaments are in a bad taste. The churches of Santa Olalla and San Juan are on the same plan, but in better taste: those of La Caridad and St. Peter, and the Franciscan and Dominican convents, are all richly decorated and endowed.

The population of the town is nearly 35,000 ; that of its Huerta or dependency about 42,000 more. The working of bassweed employs a number of hands and furnishes a quantity of mats for export : here is also a refinery of saltpetre, and, at the distance of four miles from the town, several powder mills, worked for the government. The establishment for twisting silk is extensive, machinery being now employed for that purpose ; still the trade and manufactures of the

town are alike inconsiderable.

The public walks in and about Murcia are fine, and comprise the arsenal, a spot of ground gained from the river by an embankment ; the botanical garden ; the Alameyda, or public walk properly so called; and the Malecon, a large quay thrown up to prevent the encroachments of the Segura. The families of nobility and gentry are numerous, and pretend to be the most illustrious of Spain. The Murcian seldom leaves, it is said, his native city, and is hardly ever to be found either at the court, in the army, or in the professions. He passes his time in eating, drinking, sleeping, smoking his cigar, counting his beads, and dragging his limbs to some place where he may sit down in Asiatic idleness. Though the sky is clear, and rain falls rarely, the number of canals produces a degree of humidity in the air, which, joined to want of exercise, engenders liver diseases here. In summer the heat is excessive, the thermometer being often at or above 100►►.

Murcia is first mentioned in history in the year 713, when it was taken by the Moors. In 1236 it became the capital of a separate kingdom. It was taken by Alphonso X. of Castile in 1265, who fortified it and peopled it with Catalans, Arragonese, and emigrants from Trance. In the beginning of the eighteenth century it declared for the Bourbons ; and its bishop, Belluga, armed the citizens and peasantry, cut the canals and reservoirs, and altered the course of the Segura, which produced such an inundation that the troops of the archduke could cot advance. Orihuela, and even Carthagena,

soon after fell into the hands of this prelate. It is 106 miles S. S. W. of Valencia, and 140 east by north of Jaen.

MUR’DER, n.s., v. a., & intetj.ˆ Saxon MUR’DERER, n. s. I mon&oji,

MUR’DERESS, \ moreen ;

MUR’DERMENT, i Gothic,

M u R’DEROUS, adj. J Swed ., and

Teut. mord, death ; morder, mordare ; Belgic, moorder; Ital. martair ; Fr. meurtre; Lat. mor►► ; Gr. /jopof, death. Malicious or unlawful homicide ; to kill a man unlawfully ; to destroy : as an interjection it is used for a cry of alarm in mortal danger: a murderer is one who sheds human blood unlawfully, and is used of both sexes who commit the

crime : murderess, a woman who commits murder : murderment is an unnecessary and obsolete synonyme of mur-der : murderous, guilty of, or addicted to mur-der ; bloody ; cruel.

Thou dost kill me with thy falsehood, and it grieves me not to die ; but it grieves me that thou art the murderer. Sidney.

Blood hath been shed ere now, i' th' olden time, Ere human statute purged the general weal ; Ay, and since too, murders have been performed Too terrible for the ear. Shakspeare. Macbeth.

Can'st thou quake and change thy color, Murder thy breath in middle of a word, And then again begin, and stop again "

Shakspeare.

Let the mutinous winds Strike the proud cedars to the fiery sun. Murdering impossibility, to make What cannot be, slight work.

Id. Coriolanus. Kill men i' the dark ! where be these bloody

thieves 1 Ho, murder! murder! Id. Othello.

I am his host,

Who shall against his murderer shut the door, Not bear the knife myself. Id. Macbeth.

Eyes, that are the frailst and softest things, Who shut their, coward gates on atomies, Should be called tyrants, butchers, murderers.

Shakspeare.

Oh, murderous coxcomb ! what should such a fool Do with so good a wife 1 Id. Othello.

To her came message of the murderment.

Fairfax.

The very horrour of the fact had stupified all curiosity, and so dispersed the multitude, that even the murderer himself might have escaped.

Wotton.

When by thy scorn, O murderess ! I am dead, Then shall my ghost

come to thy bed, And thee feigned vestal in worse arms shall see.

Milton.

Enforced to fly

Thence into Egypt, till the murderous king Were dead, who sought his life ; and missing, filled With infant blood the streets of Bethlehem. Id.

Slaughter grows murder when it goes too far, And makes a massacre what was a war. Dryden.

Like some rich or mighty murderer, Too great for prison, which he breaks with gold

Who fresher for new mischiefs does appear. And dares the world to tax him with the old.

Id.

Diana's vengeance on the victor shown, The murderess mother, and consuming son. Id.

MURDER.

22?

Art thou the murderer then of wretched Laius 1

Id.

See my royal master murdered, His crown usurped, a distaff in the throne. Id. The killing of their children had, in the account of God, the guilt of murder, as the offering them to idols had the guilt of idolatry. Locke.

This stranger having had a brother killed by the conspirator, and having sought in vain for an opportunity of revenge, chanced to meet the murderer in the temple. Addison.

If she has deformed this earthly life With murderous rapine and seditious strife ; In everlasting darkness must she lie. Prior. With equal terrors, not with equal guilt, The murderer dreams of all the blood he spilt.

Swift.

He was inclined to show an usurper and a murderer not only odious, but despicable ; he therefore added drunkenness to his other qualities, knowing that kings love wine like other men, and that wine exerts its natural power over kings. Johnson.

From the earliest dawnings of policy to this day, the invention of men has been sharpening and improving the mystery of murder, from the first rude essay of stones, to the present perfection of gunnery, cannoneering, bombarding, mining. Burke.

Him, Tubal named, the Vulcan of old times, The sword and faulchion their inventor claim ; And the first smith was the first murderer's son.

Cowper.

MURDER. Under the articles HOMICIDE and MANSLAUGHTER we have stated the law in relation to the instances in which the killing of a human being is held to be either excusable or justifiable ; and also where, though not justifiable, it does not amount to the crime of murder. We have now to treat of homicide in its last and most atrocious character.

Of the general nature of the crime. ××× Murder, according to Sir Edward Coke, is committed when a person of sound memory and discretion unlawfully killeth any reasonable creature, in being, and under the king's peace, with malice aforethought, either express or implied.

It must be committed by a person of sound memory and discretion. Lunatics or infants are incapable of committing any crime, unless they show a consciousness of doing wrong and a discretion or discernment between good and evil. If an infant under twelve years of ag×× acts so that it may be presumed he knows what he does, and lie kill another, it may be adjudged felony and murder; though it is not probable that the sentence would be executed. An infant's hiding the body is a circumstance from which to presume a capacity to distinguish right from wrong.

It is essential to a conviction for murder that the killing should be unlawful : that is without warrant or excuse.

And the offence is not complete unless the party die within a year and a day after the injury received or the cause of death administered ; in the computation of which the whole day upon which the hurt was

done shall be reckoned the first. It is no excuse for the accused that the person hurt might have recovered if he had not neglected to take care of himself. Nor where a man has some disease which possibly would terminate his life in half a year, but whose death is hastened by the wounds

he receives. But if the wound or hurt be not mor-tal, and the party dies owing to ill application* of medicine, and it appear that the medicine, and not the wound, was the cause of death, it seems it is not homicide.

As a general rule all homicide is ‘ malicious,’ and amounts to murder, unless where justified by the command or permission of the law, excused on account of accident or self-preservation, or alleviated into manslaughter by being either the involuntary consequence of some act, not strictly lawful, or (if voluntary) occasioned by some sudden and sufficiently violent provocation. All these circumstances of justification, excuse, or alleviation, it is incumbent upon the prisoner to make out to the satisfaction of the court and jury ; the latter of whom are to decide whether the circumstances alleged are proved to have actually existed ; the former, how far they ex-tend to take away or mitigate the guilt. For all homicide is presumed to be malicious until the contrary appears upon evidence.

Of the different kinds of murder. ××× As there are as many ways of killing as there are modes by which one may die, Moriendi mille figure, it is laid down in general, that not only he, who, by a wound or blow, or by poisoning, strangling, famishing, or other means, directly causes the death of another; but also, in many cases, ho who by wilfully and deliberately doing a thing, which apparently endangers another’s life, thereby occasions his death, shall be adjudged to kill him.

Thus if a man does such an act of which the probable consequeace may be, and eventually is, death ; such killing may be murder, although no blow be struck by himself, and no killing may be primarily intended. Such was the case of the unnatural son, who exposed his sick father to the cold air against his will, by reason whereof he died. So of the woman who laid her child under leaves in an orchard where a kite struck and killed it. And also of the parish officers who shifted a child from parish to parish till it died for want of care and sustenance. So also any one having the care of another and refusing necessary sustenance, or inflicting severities, though not

calculated to produce immediate death, yet if death clearly ensue in consequence of the ill-treatment it is murder.

Murder is committed when the death of a prisoner is occasioned by confinement in a noisome place, or in the same room with another prisoner known to be affected with an epidemic distemper, or by loading him with improper fetters. Hence, when any person dies in gaol, the coroner should enquire into the manner of his death. It was also held to be murder not only in the person accusing another who was innocent, and who on hisevidence was condemned and executed, but also in compelling any one by duress to do so. But there is no modern instance in which it has been held to be murder or punished as such. The reason of which probably is that if it were so adjudged it would deter witnesses from giving evidence on capital prosecutions, lest their own lives might be endangered. If a person who is infected with the plague goes abroad with the intention of infecting another, and another is thereby infected, and dies ; this,

it seems, is murder. So if two or more persons come together to do an unlawful act against the king's peace, of which the probable consequence might be bloodshed ; as to beat a man, to com-mit a riot, or to rob a park, and one of them kills a man, it is murder in them all, because of the unlawful act, or evil intended before hand.

So too, if a man has a beast that is used to do mischief, and he knowing it suffers it to go abroad and it kills a man ××× this is manslaughter in the owner; but if he had purposely turned it loose, though barely to frighten people and make what is called sport, it is as much murder as if he had incited a bear or dog to worry them.

But if a physician or surgeon gives his patient a potion or plaster to cure him, which, contrary to expectation, kills him, this is neither murder nor manslaughter, but misadventure; and he shall not be punished criminally, however liable he may be to a civil action for

neglect or ignorance.

Of the persons mwdered, ††† The person killed must be a reasonable creature in being, at the time of the killing. To kill a child in its mo-ther's womb is now no murder, but a great misprision. However if the child be born alive, and dies by reason of the potion or bruises it received in the womb, it seems, by the better opinion, to be murder in such as administered or gave them.

In the case of the murder of illegitimate children, it is enacted by 21 James I. c. 27, if any woman be delivered of a child, which if born alive should by law be a bastard, and endeavours privately to conceal its death, by burying the child, or the like ; the mother so offending shall suffer death as in the case of murder, unless she can prove by one witness at least that the child was actually born dead.

It has, however, for many years been usual, upon trials for this offence, to require some sort of presumptive evidence that the child was born alive, before the other constrained presumption that the child whose death is concealed was therefore killed by its parent is admitted to convict the prisoner.

And according to the 43d Geo. III. c. 58, administering drugs, or using any other contrivance to destroy a living infant unborn, is fe-lony, both in the perpetrators and abettors. If the mother is not quick with child, still an attempt to procure an abortion is punishable with fine, imprisonment, whipping, or transportation, for any period less than fourteen years.

By the same statute, women concealing the birth of an illegitimate child are liable to two years' imprisonment.

As the law was formerly laid down the person killed must be under the king's peace ; but the better opinion is that the malicious killing of any person, of whatsoever nation or religion he may be, or of whatsoever crime attainted, is murder. Thus if a man kill an alien enemy within this kingdom, it is felony, unless it be in the heat of war and in the actual exercise thereof. And a person outlawed of felony, or attainted of prae-munire is equally protected; for the execution of a sentence must be by a lawful officer, lawfully appointed ; and therefore if a person be con-

demned to be hanged, and the sheriff behead him, it is said this is murder, and the wife is entitled to an appeal.

Of murder, where the malice is prepense. ††† The killing must be committed with malice aforethought to make it the crime of murder. This is the grand criterion which now distinguishes murder from other killing. And this malice prepense is not so properly spite or malevolence to the deceased in particular, as any evil design in general ; the dictate of a wicked, depraved, and malignant heart ; and it may be either express or implied in law.

Express malice is when one, with a sedate deliberate mind and formed design, doth kill another. This formed design is evidenced by external circumstances discovering that inward intention; as lying in wait, antecedent menaces, former grudges, and concerted schemes to do him some bodily harm.

Such is the case of deliberate duelling, where both parties meet avowedly with an intent to murder, and therefore the law has justly fixed the crime and punishment of murder on them, and also on their seconds ; and the crime is the same although committed under provocation of charges, however grievous, against the character. The mere incitement to fight, though under such provocation, is a high misdemeanor. Even upon a sudden provocation, if one beats another in a cruel and unusual manner, so that he dies, though he did not intend his death, yet he is guilty of murder by express malice ††† that is by an express evil design. Neither shall he be guilty of a less crime who kills another in consequence of such a wilful act as shows him to be a wilful enemy to all mankind : as going deliberately and with an intent to do mischief upon a horse used to strike, or coolly discharging a gun among a multitude of people. So if a man resolves to kill the next man he meets, and does kill him, it is murder, although he knew him not ; for this is universal malice.

A man is esteemed to fight in cool blood, when he meets in the morning on an appointment over night ; or in the afternoon on an appointment in the morning ; or, as some say, if he fell into other discourse after the quarrel, and talked calmly upon it; or, if he have so much consideration as to observe that it is not proper or safe to fight at present, for such and such reasons, which show him to be master of his temper.

Of murder, where the malice is implied. ††† In many cases where no malice is expressed, the law will imply it ††† as where a man wilfully poisons another, in such a deliberate act the law presumes malice, though no particular enmity can be proved.

If a man kills another suddenly, without any, or without a

considerable provocation, the law implies malice ; for no person, unless of an abandoned heart, would be guilty of such an act upon a slight or no apparent cause. No affront by words or gestures only is a sufficient provocation, so as to excuse or extenuate such acts of violence as manifestly endanger the life of another. But if the person so provoked had unfortunately killed the other, by beating him

in such a manner as showed only an intent to chastise and not to kill him, the law so far considers the provocation of contumelious behaviour, as to adjudge it only manslaughter, and not murder. In like manner, if one kills an officer of justice, either civil or criminal, in the execution of his duty, or any of his assistants endeavouring to conserve the peace, or any private person endeavouring to suppress an affray, or apprehend a felon, knowing his authority, or the intention with which he interposes, the law will imply malice, and the killer shall be guilty of murder. So if a person, intending to commit a felony, undesignedly kills a man, this also is murder. Thus if one shoots at A, and misses him, but kills B, this is murder, because of the previous felonious intent, which the law transferred from one to the other. The same is the case where one lays poison for A ; and B (against whom the accused had no malicious intent) takes it, and it kills him, this is likewise murder. So also, if one gives a woman with child a medicine to procure abortion, and it operates so violently as to kill the woman, this is murder in the person who gave it. But sometimes the plain sense and feelings of a jury will revolt at these legal and tortuous rules. As in a case that occurred a few years since, in which a man, meaning to shoot a paramour of his wife's, by accident, on a dark evening, shot his own son. The indictment being laid that, with malice aforethought, &c., he shot his son, the jury, notwithstanding the judge's directions to the contrary, acquitted him.

Of the place where the murder is committed. 1. Out of the realm. ††† It seems that the killing of one who is both wounded and dies out of the realm, or wounded out of the realm and dies here, cannot be determined at common law, because it cannot be tried by a jury of

the neighbourhood where the fact was done. But it is agreed that the death of one who is both wounded and dies beyond sea, and it is said by some that the death of him who dies here of a wound given him there, maybe heard and determined before the constable and the marshal, according to the civil law, if the kin? please to appoint a constable. And it seems also to be clear that such a fact, being examined by the privy council, may, by force of 33 Henry VIII. c. 23, be tried before commissioners appointed by the king in any county of England. It has been decided indeed that this act extends to all murders committed out of the realm.

A murder at sea was anciently cognisable only by the civil law; but now by the statutes 27 Henry VIII. c. 4, and 28 Henry VIII. c. 15, it may be tried and determined before the king's commissioners in any county of England, according to the course of the common law. The commissicT;ers to be appointed under these statutes are the admiral or his deputy, and three or four more, among whom two common law judges are constantly appointed, who in effect try the prisoners. This is now the only method of trying marine felonies in the court of admiralty. The judge of the admiralty presiding there, as the lord mayor presides at the sessions in London.

2. In different countitt.⁂lt has been said that the death of one who died in one county of a wound received in another is not indictable at all at common law, because the offence was not complete in either county. The act called lord Ellenborough's act would of course remove this difficulty; but, independently of this statute, it has been held that if the corpse were carried into the county where the wound was given the whole might be enquired of by a jury of the same county. And it is agreed that an appeal might be brought in either county, and the fact tried by a jury returned jointly from each. It is now however clear that by 2 and 3 Edw. VI. c. 24, the whole is triable by a jury of the county wherein the death shall happen.

3. In Wales.⁂ By the statute of Henry VIII. c. 6, a murder in Wales may be enquired of in an adjoining English county.

Of the indictment. ⁂ If a person be indicted for one species of killing, as by poisoning, he cannot be convicted by evidence of a totally different species of death, as by shooting with a pistol or starving. But where they only differ in circumstance, as if a wound be alleged to be given with a sword and it proves to have arisen with a staff, an axe, or a hatchet, this difference is immaterial.

Of the punishment. ••• Murder is punished al-most universally throughout the world with death. The general precept, as Blackstone terms it, which was given to Noah (Gen. ix. 6), that ‘ whoso sheddeth man’s blood, by man shall his blood be shed,’ has been contended to import rather a prophetic warning of the general fate of a murderer than an express injunction judicially to put him to death. The words of the Mosaical law, however, are very emphatical in prohibiting the pardon of murderers, or the remission of the capital punishment : ‘ moreover ye shall take no satisfaction for the life of a murderer, who is guilty of death, but he shall surely be put to death ; for the land cannot be cleansed of the blood that is shed therein, but by the blood of him that shed it.’ Numb. xxxv. 31.

The punishment of murder and that of manslaughter were formerly the same ; both having the benefit of clergy. But now, by several statutes, the benefit of clergy is taken away from murderers, through malice prepense, their abettors, procurers, and counsellors. By 25 Gco. II. c. 37 it is enacted that the judge, before whom any person shall be found guilty of wilful mur-der, shall pronounce sentence immediately after conviction, unless lie sees cause to postpone it ; and shall, in passing sentence, direct him to be executed on the next day hut one (unless the same shall be Sunday, and then on the Monday following), and that his body be delivered to the surgeons to be dissected and anatomised ; and that the judge may direct his body to be afterwards hung in chains but in no wise to lx> buried without dissection. And, during the short but awful interval between sentence and execution, the prisoner shall be kept alone, and sustained with only bread ami water, a power is allowed to the judˆc, upon good and sufficient cause, to respite the execution, aud re-lax the other restraints of this act.

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Of petit treason. ††† This is an aggravated degree of murder, and may happen (according to the 25 Edw. III. c. 27), in three ways: ††† 1. By a servant killing his master. 2. A wife her husband. 3. An ecclesiastical person, either secular or regular, his superior, to whom he owes faith and obedience.

A servant who kills his master whom he has left, upon a grudge conceived against him during his service, is guilty of petit treason ; for the traitorous intention was hatched while the relation subsisted between them, and this is only an execution of that intention.

So if a wife be divorced, a mensS. et thoro, still the vinculum matrimonii subsists, and, if she kill such divorced husband, she is a traitoress.

A clergyman is understood to owe canonical obedience to ‘the bishop who ordained him, to him in whose diocese he is beneficed, and also to the metropolitan of such suffragan or diocesan bishop; and therefore to kill any of these is petit treason. As to the rest, whatever respects wilful murder, is also applicable to the crime of petit treason, which is no other than murder in its most odious degree; except that the trial shall be as in cases of high treason before the improvements therein made by the statutes of William III. But a person indicted of petit treason may be acquitted thereof and found guilty of manslaughter or murder ; and in such case it shall seem that two witnesses are not necessary as they are in the case of petit treason.

The punishment of petit treason is to be drawn and hanged. Persons guilty of petit treason were first debarred the benefit of clergy, by stat. 12 Henry VII. c. 7, which has been since extended to their aiders, abettors, and counsellors, by stat. 23 Henry VIII. c. 1, and 4 and 5 Philip and Mary, c. 4.

Of stabbing and cutting. ††† By 43 Geo. III. c. 58 (usually called lord Ellenboroagh’s Act), persons who stab or cut, with intent to murder, maim, or disfigure another, or to prevent the arrest of culprits, are declared guilty of felony without benefit of clergy. Those who are guilty of malicious shooting at another, in any dwelling house, or other place, are also punishable, under the same statute, in the same degree.

MURDERER’S BAY, a bay on the west coast of Staten Land, or New Zealand; so named by Tasman from some of his crew being murdered here by the natives, in December 1642. It lies between Cape Farewell and Rocky Point. Lat. 40►► 49’ S.

MURDERERS, or MURDERING PIECES, in a ship, are small pieces of ordnance, either of brass or iron, which have chambers put in at their breeches. They are used at the bulk-heads of the forecastle, half-deck, or steerage, in order to clear the deck, when the ship is boarded by an enemy.

MURE, n. s. & v. a. Fr. mur ; Lat. mums. A wall. Not in use. As a verb, to shut up, or inclose within walls.

All the gates of the city were mured up, except such as were reserved to sally out at. Knolles.

The incessant care and labour of his mind Hath wrought the mure, that should confine it in, So thin, that life looks through and will break out.

Shokrpcare.

MURENGERS are two officers of great antiquity in the city of Chester, annually chosen out of the aldermen, to see that the walls are kept in repair, and to receive a certain toll and custom for the maintenance thereof.

MURET, or MURETUS (Mark Anthony Francis), was born at Muret, near Limoges, in 1526. He acquired a perfect knowledge of the Greek and Latin tongues, and became one of the most learned men of his time. After having taught some time in Provence, he was made a professor at Paris, along with Turnebus and Buchanan. In 1544 he went into Italy; and in 1563 was professor of law, philosophy, and history, in Rome, where he died in 1585. His principal works are, 1. Notes on Terence, Horace, Catullus, Tacitus, Cicero, Sallust, Aristotle, Xenophon, &c. 2. Orationes. 3. Variae Lectiones, Poemata, Hymni Sacri. 4. Disputationes in Lib I. Pandectorum de Origine Juris, &c. 5. Epistolae, Juvenilia Carmina, &c. Most of his works have been printed in the Venice edition of 1737, in 5 vols. 8vo.

MUREX, in zoology, a genus of the order of vermes testacea. This animal is of the snail kind : the shell consists of one spiral valve, rough, with membranaceous furrows, and the aperture terminates in

an entire canal, either straight, or somewhat ascending. There are sixty species, particularly distinguished by peculiarities in their shells, &c. From a species of murex was obtained the famous Tyrian dye, so much valued by the ancients. This, however, has long been superseded by the use of the cochineal. One of the shells producing the dye was a kind of buccinum ; but the finest, or Tyrian purple, was procured from the murex. These species of shells are found in various parts of the Mediterranean. Immense heaps of them are to be seen about Tarentum, evincing one place where this precious liquor was extracted. They are also found on the coasts of Guayaquil and Guatimala in Peru. The shells adhere to the rocks that are washed by the sea ; and are of the size of a large walnut. The liquor may be extracted two ways : some kill the animal after they have drawn it out of the shell ; then press it with a knife from head to tail ; separate from the body the part where the liquor is collected, and throw away the rest. When this operation, after being repeated on several snails, has afforded a certain quantity of fluid, the thread intended to be dyed is dipped in it, and the process is finished. The color which is at first of the whiteness of milk, becomes afterwards green, and is not purple till the thread is dry. Others draw the fish partly out of the shell, and, squeezing it, make it yjeld a fluid which serves for dyeing : they repeat this operation four times, at different intervals, but always with less success. If they continue it, the fish dies. No color, at present known, says the abbe" Raynal, can be compared to this, either as to lustre, liveliness, or duration. It succeeds better on cotton than wool, linen, or silk.

MUREX, a caltrop or iron instrument, with sharp points projecting in every direction, used by the Romans as a defence against the enemy's horse. It was so called, probably, because the

points bore some resemblance to the spines and tubercles with which the shell of the murex is surrounded.

MURFREES BOROUGH, a post town of Rutherford county, Tennessee ; thirty-two miles southeast of Nashville, 160 west of Knoxville.

Population, in 1818, about 1100. It is the seat of the state government, and is pleasantly situated on an eminence, which descends in every direction, and contains a court-house, jail, market-house, a branch of the Nashville bank, an academy, a printing office from which is issued a weekly newspaper, a meeting-house, &c. The public buildings are handsomely built of brick, and the dwelling houses are mostly brick, or framed, two stories high. An elegant brick Presbyterian church has been lately erected. Murfreesborough was established only about six years ago, and was made the seat of the state government in 1817. It is one of the most considerable and flourishing towns in the state, has a very healthy situation, is watered by excellent springs, and there are within two miles and a half two mineral springs, whose waters are useful in several complaints. In the vicinity of the town, on the branches of Stone's River, there are valuable mills. The district of country, in which this town is situated, is one of the richest in the state, abounding in corn, wheat, cotton, tobacco, timothy, and various other kinds of grass. The land is very fertile, and level ; there is no hill of any considerable elevation within ten miles. New Orleans is the market for the merchandise of this place. The road is excellent to Nashville, where commences a steam boat navigation.

MURG, a river in the south-west of Germany, rising near Oppenau, and which after a course of 100 miles to the north-west, falls into the Rhine near Rastadt. It is of much use in floating timber from the Black Forest.

MURG, one of the ten districts of the grand duchy of Baden, lying along the river Murg. It contains 85,000 inhabitants, and is divided into eight bailiwics. Rastadt is the chief town.

MURGHELAN, a large city of Tartary, subject to the khan of Koukan. It stands on a fine river, and the environs are delightful and well supplied with water.

MURIATIC, adj. Lat. muria, brine. Partaking of the taste or nature of brine.

If the scurvy be entirely muriatick, proceeding from a diet of salt flesh or fish, antiscorbutick vegetables may be given with success, but tempered with acids. Arbuthnot.

MURIATIC ACID, or hydrochloric acid, in chemistry, is a combination of chlorine with hydrogen which may be procured by various methods. Let six parts of pure and well dried sea salt (muriate of soda)

be put into a p:Iass re-tort over a lamp ; to the beak of the retort lute in a horizontal direction a long glass tube artificially refrigerated and containing a quantity of dy-muriate of lime. Upon the salt pour at intervals five parts of concentrated sulphuric acid through a syphon funnel fixed air tight in the tubulareof the retort. The free end of the long tube being recurved, so as to dip into the mercury of a pneumatic trough, a gas will issue, which on coming in contact with the air will form a visible

cloud, or haze, presenting, when viewed in a vi-vid light, prismatic colors.

This gas is muriatic acid gas, and when combined with water forms the muriatic acid of commerce.

In the ancient method, common salt was previously decrepitated, then ground with dried clay, and kneaded with water into balls of the size of a pigeon's egg : which, after having been well dried, were put into a retort, so as to fill the vessel two-thirds full ; distillation being then proceeded upon, the muriatic acid came over when the heat was raised to ignition. In this process eight or ten parts of clay to one of salt are to be used. The retort must be of stone-ware well coated, and the furnace must be reverberatory.

Sir H. Davy first gave the just explanation of this decomposition. Common salt is a compound of sodium and chlorine. The sodium may be conceived to combine with the oxygen of the water in the earth, and with the earth itself to form a vitreous compound ; and the chlorine to unite with the hydrogen of the water, forming muriatic acid gas. * It is also easy,' adds he, ' according to these new ideas, to explain the decomposition of salt by moistened litharge, the theory of which has so much perplexed the most acute chemists. It may be conceived to be an instance of compound affinity ; the chlorine is attracted by the lead, and the sodium combines with the oxygen of the litharge, and with water, to form hydrate of soda, which gradually attracts carbonic acid from the air. When common salt is decomposed by oil of vitriol it was usual to explain the phenomenon by saying, that the acid by its superior affinity, aided by heat, expelled the gas, and united to the soda. But, as neither muriatic acid nor soda exists in common salt, we must now modify the explanation, by saying that the water of the oil of vitriol is first decomposed, its oxygen unites to the sodium to form soda, which is seized on by the sulphuric acid, while the chlorine combines with the hydrogen of the water, and exhales in

the form of muriatic acid gas.'

The English manufacturers use iron stills for the distillation of muriatic acid with earthen heads : the philosophical chemist, in making the acid of commerce, will prefer glass. Five parts by weight of strong sulphuric acid are to be add-ed to six of decrepitated sea salt, in a retort, the upper part of which is furnished with a tube or neck, through which the acid is to be poured upon the salt. The aperture of this lube must be closed with a ground stopper immediately af-ter the pouring. The sulphuric acid immediately combines with the alkali, and expels the muriatic acid in the form of a peculiar air, which is rapidly absorbed by water. As this combination and disengagement take place without the application of heat, and the aerial fluid escapes very rapidly, it is necessary to arrange and lute the vessels together before the sulphuric acid is added, and not to make any fire in the funuu.- until the disengagement begins to slacken ; ;u which time it must be very gradually raised. Before the modern improvements in chemistry were made, a great part of the arid escaped fur

want of water to combine with ; but, by the use of Woolfe's apparatus, ihe acid gas is made to pass through water, in which it is nearly condensed, and forms muriatic acid of double the weight of the water, though the bulk of this fluid is increased one-half only. The acid condensed in the first receiver, which contains no water, is of a yellow coloi1, arising from the impurities of the salt.

The marine acid of commerce has a straw co-lor : but this is owing to accidental impurity; for it is not found in the acid produced by the impregnation of water with the aeriform acid.

When this aeriform acid, commonly called muriatic acid gas, is received m glass jars over mercury it is invisible and possesses all the mechanical properties of atmospheric air.

Its odor is pungent and peculiar ; its taste acid and corrosive. Its specific gravity, according to Sir Humphry Davy, is such, that 100

cubic inches weigh thirty-nine grains, while by estimation, he says, they ought only to be 38-4. By the latter number the specific gravity, compared to air, becomes 1-2590, by the former number 1-2800. M. Gay Lussac states the specific gravity at 1-2780. Sir II. ‘s second number makes the prime equivalent of chlorine 4-43, which comes near to Berzelius’s latest result ; while his first number makes it 4‘48. See CHLORINE. As the attraction of muriatic acid gas for hygrometric water is very strong, it is very probable that 38-4 grains may be the more exact weight of 100 cubic inches, regarding the same bulk of air as = 30-5. See the Table of Gases. If an inflamed taper be immersed in it, it is instantly extinguished. It is destructive of animal life; but the irritation produced by it on the epiglottis scarcely permits its descent into the lungs. It is merely changed in bulk by alterations of temperature ; it experiences no change of state. When potas-sium, tin, or zinc, is heated in contact with this gas over mercury, one-half of the volume disappears, and the remainder is pure hydrogen. On examining the solid residue, it is found to be a metallic chloride. By passing muriatic acid gas over litharge, muriate of lead is formed, and a quantity of water produced. The same takes place when oxide of silver is similarly employed, the water being equal to about one-fourth the weight of the gas.

Conceiving, from these facts, that muriatic acid .gas was a compound of three-fourths of the real acid with one-fourth of water, the French chemists made some experiments with-a view to obtain the acid free from water. For this purpose they applied the vitreous superphosphate of lime, and afterwards the vitreous boracic acid, to the dry muriates ; but, although exposed to a high temperature, no muriatic acid could be disengaged. If, however, a few drops of water were added, the muriatic acid instantly separated

in the form of gas. Hence they found, that muriatic acid could not be separated from its compounds without the presence of water. Their next object was to attempt to separate the oxy-gen from the oxymuriatic acid, and by that means get the muriatic acid free from water, as they had reason to believe that the former did not contain water. This object, however, they found of no less difficulty than the last. Metallic substances were ineffectual for this purpose, in consequence of their combination with the acid they wished to obtain. When they employed sulphur they obtained a peculiar compound of the acid with the sulphur which had before been discovered by Dr. Thomson, under the name of the sulphureted muriatic acid. Phosphorus also combined with the acid, forming a peculiar

substance. Their next experiment was to pass oxymuriatic acid gas over red-hot carbon : at first some muriatic acid was formed, but they ultimately found that carbon had no effect upon orymuriatic acid when no moisture was present. They further found that when the ojrymuriatic acid was brought in contact with sulphurous acid gas, with nitric oxide, or with carbonic oxide, no decomposition took place, except with the presence of water or hydrogen. Hence muriatic acid gas consists of chlorine and hydrogen, united in equal volumes. This view of its nature was originally given by Scheele, though obscured by terms derived from the vague and visionary hypothesis of phlogiston. The Lavoiserian school afterwards introduced the belief that muriatic acid gas was a compound of an unknown radical and water; and that chlorine cons'sted of this radical and oxygen. Sir II. Davy has the distinguished glory of refuting this hypothesis, and of proving, by decisive experiments, that in the present state of our knowledge chlorine must be regarded as a simple substance ; and the muriatic acid gas as a compound of it with hydrogen. This gaseous acid unites rapidly, and in large quantity, with water. At the temperature of 40►► Fahrenheit, water absorbs about 480 times its bulk of gas, and forms solution of muriatic acid gas in water, the specific gravity of which is 1-2109. The heat produced in the condensation of the gas is so great, that it melts ice almost as rapidly as the steam of boiling water. Hence also, in passing the gas from the beak of a retort into a Woolfe's apparatus containing water to be impregnated, it is necessary to surround the bottles with cold water or ice, if we wish a considerable condensation to take place.

The following table of the specific gravity and consequent strength of the various combinations of this acid gas with water, to form the acid of commerce, is given by Dr. Ure in his excellent Dictionary of Chemistry.

Acid ofl-20 in 100

Specific Gravity

Chlorine.

Muriatic Gas

Acid of 1-20 in 100.

Specific Gravity

Chlorine.

Muriatic Gas.

Acid ofl-20 in 100.

Specific Gravity

Chlorine.

Muriatic Gas.

100

1-2000

39-675

40-777

66

1-1328

26-186

26-913

32

1-0637

12-697

13-049

99

1-1982

39-278

40-369

65

1-1308

25-789

26-505

31

1-0617

12-300

12‘641

98

1-1964

38-882

39-961

64

1-1287

25-392

26-098

30

1-0597

11-903

12-233

97

1-1946

38-485

39-554

63

1-1267

24-996

25-690

29

1-0577

11-506

11-82.1

96

1-1928

38-089

39-146

62

1-1247

24-599

25-282

28

1-0557

11-109

H‘418

95

T1910

37-692

38-738

61

1-1226

24-202

24-874

27

1-0537

10-712

11-010

94

1-1893

37-296

38-330

60

1-1206

23-805

24-466

26

1-0517

10316

10-602

93

1-1875

36-900

37-923

59

1-1185

23-408

24‘058

25

0497

9-919

10-194

92

1-1857

36-503

37-516

58

1-1164

23-012

23-650

24

0477

9-522

9-786

91

T1846

36-107

37-108

57

1-1143

22-615

23-242

23

0457

9-126

9-379

90

1-1822

35-707

36-700

56

1-1123

22-218

22-834

22

###0437

8-729

8-971

89

T1802

3i 310

36-292

55

###1102

21-822

22-426

21

###0417

8-332

8-563

88

1-1782

34-91.3

35-884

54

###1082

21-425

22-019

20

###0397

7-935

8-155

87

T1762

34-517

35-476

53

21-611

19

0377

7-538

7-747

86

1-1741

34-121

35-068

52

1041

20-632

21-203

18

1-0357

7-141

7-340

85

t‘1721

33-724

34-660

51

1020

20-235

20-796

17

1-0337

6-745

6-932

84

1-1701

33-328

34-252

50

1-1000

19-837

20-388

16

1-0318

6-348

6-524

83

1‘1681

32-931

33-845

49

1-0980

19-440

19-980

15

1-0298

5-951

6-116

82

1-1661

32-535

33-437

48

1-0960

19-044

19-572

14

1-0279

5-554

5-709

81

1-1641

32-136

33-029

47

1-0939

18-647

19-165

13

1-0259

5-158

5-301

80

1-1620

31-746

32-621

46

1-0919

18-250

18-757

12

1-0239

4-762

4-893

79

1-1599

31-343

32-213

45

1-0899

17-854

18-349

11

1-0220

4-365

4-486

78

t-1578

30-946

31-805

44

1-0879

17-457

17-941

10

1-0200

3-968

4-078

77

1-1557

30-550

31-398

43

1-0859

17-060

17-534

9

1-0180

3-571

3-670

76

1-1536

30-153

30-990

42

1-0838

16-664

17-126

8

1-0160

3-174

3-262

75

1-1515

29-757

30-582

41

1‘0818

16-267

16*718

7

1-0140

2-778

2-854

74

1-1494

29-361

30-174

40

1-0798

15-870

6‘310

6

1-0120

2-381

2-447

73

1-1473

28-964

29-767

39

V0778

15-474

15-902

5

1-0100

1-984

2-039

72

◆◆◆1452

28-567

29-359

38

1-0758

15-077

15-494

4

1-0080

1-588

1-631

71

28-171

28-951

37

‘0738

14-680

15-087

3

1-0060

1-191

1-224

70

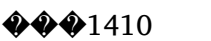 1410

27-772

28-544

36

0718

4-284

14-679

2

1-0040

0-795

0-816

69

1389

27-376

28-136

35

‘0697

13-887

14-271

1

1-0020

0397

0-408

68

###1369

6-979

27-728

34

###0677

3-490

13-863

67

###1349

6-583

27-321

1-0657

13-094

3-456

The muriatic acid is one of those longest known, and some of its compounds are among those salts with which we are most familiar. The muriates, when in a state of dryness, are actually chlorides, consisting of chlorine and the metal ; yet they may be conveniently treated of under the title muriates.

The muriate of barytes crystallises in tables bevelled at the edges, or in octahedral pyramids applied base to base. It is soluble in five parts of water at 60□□, in still less at a boiling heat, and also in alcohol. It is not altered by the air, and but partly decomposed by heat. The sulphuric acid separates its base; and the alkaline carbonates and sulphates decompose it by double affinity. It is best prepared by dissolving carbonate of barytes in dilute muriatic acid ; and if contaminated with iron or lead, which occasionally happens, these may be separated by the addition of a small quantity of liquid ammonia, or by boiling and stirring the solution with a little barytes. Mr. Goettling recommends to prepare it from the sulphate of barytes; eight parts of which in fine powder are to be mixed with two of muriate of soda, and one of charcoal powder. This is to be pressed hard into a Hessian crucible, and exposed for an hour and a half to a red heat in a wind furnace. The cold mass, being powdered, is to be boiled a minute

or two in sixteen parts of water, and then filtered. To this liquor muriatic acid is to be added by little and little, till sulphureted hydrogen ceases to be evolved ; it is then to be filtered, a little hot water to be poured on the residuum, the liquor evaporated to a pellicle, filtered again, and then set to crystallise. As the muriate of soda is much more soluble than the muriate of barytes, and does not separate by cooling, the muriate of barytes will crystallise into a perfectly white salt, and leave the muriate of soda in the mother water, which may be evaporated repeatedly till no more muriate of barytes is obtained. This salt was first employed in medicine by Dr. Crawford, chiefly in scrofulous complaints and cancer, beginning with

doses of a few drops of the saturated solution twice a-day, and increasing it gradually, as far as forty or fifty drops in some instances. In large doses it excites nausea, and has deleterious effects, l-‘ourcroy says it has been found very successful in scrofula in France. It has likewise been recommended as a vermifuge ; and it has been given with much apparent advantage even to very young children, where the usual symptoms of worms occurred, though none were ascertained to be present. As a test of sulphuric acid it is of great use.

The muriatt < >f i* >t<ish, formerly known by the

names of febrifuge salt of Sylvius, digestive salt, and regenerated sea-salt, crystallises in regular cubes, or in rectangular parallelopipedons ; decrepitating on the fire, without loosing much of their acid, and acquiring a little moisture from damp air, and giving it out again in dry. Their taste is saline and bitter. They are soluble in thrice their weight of cold water, and in but lit-tle less of boiling water, so as to require spontaneous evaporation for crystallising. Fourcroy recommends to cover the vessel with gauze, and suspend hairs in it, for the purpose of obtaining regular crystals.

It is decomposable by the sulphuric and nitric acids. Barytes decomposes it, though not completely. And both silex and alumina decomposed it partially in the dry way. It decomposes the earthy nitrates, so that it might be used in saltpetre manufactories to decompose the nitrate of lime.

Muriate of soda, or common salt, is of considerable use in the arts, as well as a necessary ingredient in our food. It crystallises in cubes, which are sometimes grouped together in various ways, and not unfrequently form hollow quadrangular pyramids. In the fire it decrepitates, melts, and is at length volatilised. When pure it is not deliquescent. One part is soluble in two and a half of cold water, and in little less of hot, so that it cannot be crystallised but by evaporation. According to M. Chenevix, it is soluble in alcohol also, particularly when it is mixed with the chlorate.

Common salt is found in large masses, or in rocks under the earth, in England and elsewhere. In the solid form it is called sal gem, or rock salt. If it be pure and transparent, it may be immediately used in the state in which it is found ; but, if it contain any impure earthy particles, it should be previously freed from them. In some countries it is found in incredible quantities, and dug up like metals from the bowels of the earth. In this manner has this salt been dug out of the celebrated salt mines near Bochnia and Wieliczka, in Poland, ever since the middle of the thirteenth century, consequently above these 500 years, in such amazing quantities, that sometimes there have been 20,000 tons ready for sale. In these mines, which are said to reach to the depth of several hundred fathoms, 500 men are constantly era-ployed. The pure and transparent salt needs no other preparation than to be beaten to small pieces, or ground in a mill. But that which is more impure must be elutriated, purified, and boiled. That which is quite impure/ and full of small stones, is sold under the name of rock salt, and is applied to ordinary uses ; it may likewise be used for strengthening weak and poor brine-springs.

Though the salt-mines of Wieliczka, near Cracow in Poland, have long astonished the philosopher and traveller, yet it deserves to be remarked, that the quantity of rock salt obtained from the mines of Northwich is greatly superior to that obtained at Cracow. The bishop of Llandnff affirms, that a single pit, into which he descended, yielded at a medium 4000 tons of salt in a year, which alone is about two-thirds of

that raised in the Polish mines. This rock salt is never used on our tables in its crude state, as the Polish rock salt is; and, though the pure transparent salt might be used with our food without any danger, yet it is prohibited under a penalty of forty shillings for every pound of rock salt so applied. It is partly purified in water, and a great part of it is sent to Liverpool, and other places, where it is used either for strengthening brine-springs or sea water.

Beside the salt mines here mentioned, where the common salt is found in a concrete state, under the name of rock salt, there is at Cordova, in the province of Catalonia in Spain, a remarkable solid mountain of rock salt: this mountain is between 400 and 500 feet in height, and a league in circuit; its depth below the surface of the earth is not known. This mountain contains the rock salt without the least admixture of any other matter.

The waters of the ocean every where abound with common salt, though in different proportions. The water of the Baltic Sea is said to contain one sixty-fourth of its weight of salt; that of the sea between England and Flanders contains one thirty-second part; that on the coast of Spain one-sixteenth part ; and between the tropics it is said, erroneously, to contain from an eleventh to an eighth part.

The water of the sea contains, besides the com-mon salt, a considerable proportion of muriate of magnesia, and some sulphate of lime, of soda, and potash. The former is the chief ingredient of the remaining liquid which is left after the extraction of the common salt, and is called the mother water. Sea water, if taken up near the surface, contains also the putrid remains of ani-mal substances, which render it nauseous, and in a long continued calm cause the sea to stink.

The whole art of extracting suit from waters which contain it consists in evaporating the water in the cheapest and most convenient man-ner. In England, a brine composed of sea water, with the addition of rock salt, is evaporated in large shallow iron boilers; and the crystals of salt are taken out in baskets. In Russia, and probably in other northern countries, the sea water is exposed to freeze ; ami the ice, which is almost entirely fresh, being taken out, the remaining brine is much stronger, and is evaporated by boiling. In the southern parts of Europe the salt-makers take advantage of spontaneous evaporation. A flat piece of ground near the sea is chosen, and banked round, to prevent its being overflowed at high water. The space within the banks is divided by low walls into several compartments, which successively communicate with each other. At flood tide, the first of these is filled with sea water ; which, by remaining a certain time, deposits its impurities, and loses part of its aqueous fluid. The residue is then suffered to run into the next compartment ; and the former is again filled as before. From the second compartment, after a due time, the. water is transferred into a third, which is lined with clay well rammed and levelled. At this period-the evaporation is usually brought to that degree, that a crust of salt is formed on the surface of the water, which the

workmen break, and it immediately falls to the bottom. They continue to do tins until the quantity is sufficient to be raked out, and dried in heaps. This is called bay salt.

In some parts of France, and also on the coast of China, they wash the dried sands of the sea with a small proportion of water, and evaporate this brine in leaden boilers.

There is no difference between this salt and the lake salt extracted from different lakes, excepting such as may be occasioned by the casual intervention of some substances. In this respect the Jel tonic salt water lake, in the Russian dominions, near Saratow and Dmitrewsk, deserves our attention. In the year 1748, when the Russians first fetched salt thence, the lake was almost solid with salt; and that to such a degree, that they drove their heavy waggons over it, as over a frozen river, and broke up the salt. But since the year 1757 the water has increased so much, that, at this time it is nothing more than a lake very strongly impregnated with salt. The Jeltonic lake salt contains at the same time alum and sulphate of magnesia.

At several places in Germany, and at Mont-marot in France, the waters of salt springs are pumped up to a large reservoir at the top of a building or shed ; from which it drops or trickles through small apertures upon boards covered with brush-wood. The large surface of the water thus exposed to the air causes a very considerable evaporation ; and the brine is afterwards conveyed to the boilers for the perfect separation of the salt.

To free common salt from those mixtures that render it deliquescent, and less fit for the purposes to which it is applied, it may be put into a conical vessel with a small aperture at the point, and a saturated solution of the muriate of soda boiling hot be poured on it. This solution will dissolve and carry off any other salts mixed with the soda, and leave it quite pure, by repeating the process three or four times.

From this salt, as already observed, the muriatic acid is extracted ; and of late years to obtain its base separate, in the most economical mode, for the purposes of the arts, has been an object of research. The process of Scheele, which consists in mixing the muriate of soda with red oxide of lead, making this into a soft paste with water, and allowing it to stand thus for some time, moistening it with water as it gets dry, and then separating the soda from the muriate of lead by

lixiviation, has been resorted to in this country. Mr. Turner some years ago had a pa-tent for it ; converting the muriate of lead into a pigment, which was termed mineral or patent yellow, by heating it to fusion. The oxide of lead should be at least twice the weight of the salt. This would have answered extremely vvell,had there been an adequate and regular demand for the pigment. At present, we understand, the greater part of the carbonate of soda in the market is furnished by decomposing the sulphate of soda left, after the muriatic acid is expelled in the usual way of manufacturing it from common salt. Various processes for this purpose were tried in France, and made public by the French government, all depending on the principle of

decomposing the acid of the sulphate by charcoal, and at the same time adding gome other material to prevent the soda from forming a sulphuret. What they consider as the best is to mix the sulphate of soda with an equal weight of chalk, and rather more than half its weight of charcoal powder, and to expose the mixture in a reverberatory furnace to a heat sufficient to bring them to a state of imperfect liquefaction. Much of the sulphur formed will be expelled in vapor and burned, the mixture being frequently stirred to promote this ; and this is continued till the mass on cooling assumes a fine grain. It is then left exposed to a humid atmosphere, and the carbonate of soda may be extracted by lixiviation, the sulphur not consumed having united with the lime. Tinmen's shreds, or old iron, may be employed instead of chalk, in the proportion of sixty-five parts to 200 of sulphate of soda, and sixty-two of charcoal ; or chalk and iron may be used at the same time in different proportions. The muriate of soda might be decomposed in the first instance by the sulphate of iron, instead of the sulphuric acid. The carbonate of soda thus prepared, however, is not free from sulphur; and Dize recommends the abstraction of it by adding litharge to the lixivium in a state of ebullition, which will render the alkali pure. Oxide of manganese was substituted in the same way with equal success; and this may be used repeatedly, merely by calcining it after each time, to expel the sulphur. Mr. Accum gives the following method, as having answered extremely well in a soda manufactory in which he was employed : ××× 500 Ibs. of sulphate of soda, procured from the bleachers, who make a large quantity in preparing their muriatic acid from common salt, were put into an iron boiler with a sufficient quantity of soft water. Into another boiler were put 5GO Ibs. of good American potassa, or 570 if the potassa was indifferent, dissolved in about thirty pails of water, or as little as possible. When both were brought to boil, the solution of potassa was ladled into that of

sulphate of soda, agitating the mixture, and raising the fire as quickly as possible. When the whole boiled, it was ladled into a wooden gutter, that conveyed it to a wooden cistern lined with lead nearly half an inch thick, in a cool place. Sticks were placed across the cistern, from which slips of sheet lead, two or three inches wide, hung down into the fluid about four inches disUnt from each other. When the whole was cold, which in winter was in about three days, the fluid was drawn off, the crystallised salt was detached from the slips of lead, and the rock of salt fixed to the bottom was separated by a chisel and mallet. The salt being washed iu the same cistern, to free it from impurities, was then returned to the boiler, dissolved in clear water, and evaporated till a strong pellicle formed. Letting it cool .tiJl the hand could be dipped in, it was kept at this temperature as long as pellicles would form over the whole surface, and fall to the bottom. When no more pellicles appeared without blowing on the surface, the fire was pnt out, and the solution returned into the cistern to crystallise. If the solution be suffered to cool pretty low, verylitf.e

sulphate of potassa will be found mixed with the soda ; but the rocky masses met with in the market generally contain a pretty large quantity. In the process above described, the produce of the mixed salt from 100 Ibs. of sulphate of soda was in general from 136 to 139 Ibs.

Beside its use in seasoning our food, and preserving meat both for domestic consumption and during the longest voyages, and in furnishing us with the muriatic acid and soda, salt forms a glaze for coarse pottery, by being thrown into the oven where it is baked ; it improves the whiteness and clearness of glass ; it gives greater hardness to soap ; in melting metals it preserves their surface from calcination, by defending them from the air, and is employed with advantage in some assays ; it is used as a mordant, and for improving certain colors, and enters more or less into many other processes of the arts.

The muriate of strontian has not long been known. Dr. Hope first distinguished it from muriate of barytes. It crystallises in very slender

hexagonal prisms, has a cool pungent taste, without the austerity of the muriate of barytes, or the bitterness of the muriate of lime ; is soluble in 0-75 of water at 60□□, and to almost any amount in boiling water ; is likewise soluble in alcohol, and gives a blood-red color to its flame.

It has never been found in nature, but may be prepared in the same way as the muriate of barytes.

The muriate of lime has been known by the names of marine selenite, calcareous marine salt, muria, and fixed sal ammoniac. It crystallises in hexahedral prisms terminated by acute pyramids ; but if the solution be greatly concentrated, and exposed to a low temperature, it is condensed in confused bundles of needly crystals. Its taste is acrid, bitter, and very disagreeable. It is soluble in half its weight of cold water, and by heat in its own water of crystallisation. It is one of the most deliquescent salts known ; and when deliquesced has been called oil of lime. It exists in nature, but neither very abundantly nor very pure. It is formed in chemical laboratories, in the decomposition of muriate of ammonia ; and Homberg found, that if it was urged by a violent heat till it condensed, on cooling, into a vitreous mass, it emitted a phosphoric light upon being struck by any hard body, in which state it was called Homberg's phosphorus. Hitherto it has been little used except for frigorific mixtures ; and with snow it produces a very great degree of cold. Fourcroy, indeed, says he has found it of great utility in obstructions of the lymphatics, and in scrofulous affections.

The muriate of ammonia has long been known by the name of sal ammonia, or ammoniac. It is found native in the neighbourhood of volcanoes, where it is sublimed sometimes nearly pure, and in different parts of Asia and Africa. A great deal is carried annually to Russia and Siberia from Bucharian Tartary ; and we formerly imported large quantities from Egypt, 1 ut now manufacture it at home. See AMMONIA. This salt is usually in the form of cakes, with a convex surface on one side, and concave on the other, from being sublimed into large globular

vessels ; but by solution it may be obtained in regular quadrangular crystals. It is remarkable for possessing a certain degree of ductility, so that it is not easily pulverisable. It is soluble in three parts and a half of water at 60□□, and in little more than its own weight of boiling water. Its taste is cool, acrid, and bitterish. Its specific gravity is 1-42.

It attracts moisture from the air but very slightly.

Muriate of ammonia has been more employed in medicine than it is at present. It is sometimes useful as an auxiliary to the bark in intermittents ; in gargles it is beneficial, and externally it is a good discutient. In dyeing it improves or heightens different colors. In tinning and soldering it is employed to preserve the surface of the metals from oxidation. In assaying it discovers iron, and separates it from some of its combinations.

The muriate of magnesia is extremely deliquescent, soluble in an equal weight of water, and difficultly crystallisable. It dissolves also in five parts of alcohol. It is decomposable by heat, which expels its acid. Its taste is intensely bit-ter. With ammonia this muriate forms a triple salt, crystallisable in little polyhedrons, which separate quickly from the water, but are not very regularly formed. Its taste partake? of that of both the preceding salts. The best mode of preparing it is by mixing a solution of twenty-seven parts of muriate of ammonia with a solution of seventy-three of muriate of magnesia ; but it may be formed by a semi-decomposition of either of these muriates by the base of the other. It is decomposable by heat, and requires six or seven times its weight of water to dissolve it.

Of the muriate of glucine we know but little. It appears to crystallise in very small crystals; to be decomposable by heat ; and, dissolved in alcohol and diluted with water, to form a pleasant saccharine liquor.

Muriate of alumina is scarcely crystallisable, as on evaporation it assumes the state of a thick jelly. It has an acid, styptic, acrid taste. It is extremely soluble in water, and deliquescent. “Fire decomposes it. It may be prepared by directly combining the muriatic acid with alumina, but the acid always remains in excess.

The muriate of zircon crystallises in small needles, which are very soluble, attract moisture, and lose their transparency in the air. It has an austere taste, with somewhat of acrimony. It is decomposable by heat. The gallic acid precipitates from its solution, if it be free from iron, a white powder. Carbonate of ammonia, if added in excess, redissolves the precipitate it had be-fore thrown down.

Muriate of yttria does not crystallise when evaporated, but forms a jelly; it dries with difficulty, and deliquesces.

Fourcroy observes, that when siliceous stones, previously fused with potassa, are treated with muriatic acid, a limpid solution is formed,

which may be reduced to a transparent jelly by slow evaporation. But a boiling heat decomposes the siliceous muriate, and the earth is deposited. The solution is always acid. See SALT, CHEMISTRY, and CHLORINE.

MUR

237

MURIATIC ACID OXYGENATED. See CHLORINE.

MURILLO (Bartholemew-Stephen,) a celebrated painter, born at Pilas near Seville, in 1613. He was instructed by his uncle John del Castillo, an artist of some note ; but his principal knowledge of the art was derived from Ve-lasquez. Some say that he studied at Rome ; but Velasco, a Spanish author, affirms that he never was in Italy, but arrived at excellence by copying the works of Titian, Rubens, and Vandyck, in Madrid and the Escurial. He was employed by the king of Spain to execute several historical pictures, which being afterwards sent to Rome, as a present to the pope, the Italians were so much pleased, that they styled him a se-cond Paul Veronese. He designed and finished several grand altar-pieces, for the churches at Madrid, Seville, Cordova, Cadiz, Granada, and Flanders. His favorite subjects were beggar boys, as large as life. His original pictures have great merit, and are admitted into the most capital collections. He died in 1685.

MURK, n.s. > Dan. morck, dark. Dark—

MURKY, adj. 5 ness; want of light.

Ere twice in murk, and occidental damp, Moist Hesperus hath quenched his sleepy lamp.

Shakspeare. The murkiest den,

The most opportune place, the strongest suggestion, Shall never melt mine honour into lust. Id.

So scented the grim feature, and upturned His nostrils wide into the murky air, Sagacious of his quarry.

Milton’s Paradise Lost.

A murky storm deep lowering o’er our heads Hung imminent, that with impervious gloom Opposed itself to Cynthia’s silver ray. Addison. Nature gladdening and adorning ; Such to me my lovely maid. When absent frae my fair, The murky shades o’ care With starless gloom o’ercast my sullen sky.

Burns. Her hair was dripping, and the very balls

Of her black eyes seemed turned to tears and murk. The sharp rocks looked below each drop they caught. Which froze to marble as it fell, she thought.

Byron.

MUR’MUR,n. s.&v.n. } Fr.mwrmm:;Lat. MUR’MURER. n. s. \ murmur. Alowsup—

pressed tone of the voice; a half-uttered complaint : to utter such sound or complaint.

The murmuring surge,

That on the’ unnumbered idle pebbles chafes, Can scarce be heard so high.

Shakspeare. King Lear. Heaven’s peace with him !

That’s Christian care enough ; for living murmurers There’s places of rebuke. Id. Henry VI II.

Flame, as it moveth within itself, or is blown by a bellows, giveth a murmur or interior sound.

Bacon’s Natural History.

Some discontents there are ; some idle murmurs ; ××× How idle murmurs !

××× The doors are all shut up ; the wealthier sort, With arms across, and hats upon their eyes, Walk to and fio before their silent shops. Drvden.

The busy bees, with a soft murmuring strain, Invite to gentle sleep the labouring swain. <×××

The ˆood we have enjoyed from heaven’s free will ; And shall we-murmur to endure the ill ? Id.

The murmurer is turned off to the company of tho××e doleful creatures which were to inhabit the ruins of Babylon. Government ef the Tongue.

Still might the discontented murmurer cry, Ah, hapless fate of man ! Ah wretch, doomed once

to die ‘ Bluckmore on the. Cnatio*.

Murmur not at your sickness, for thereby you will sin against God’s providence. Wake.

When the winged colonies first tempt the sky, Or, setting, seize the sweets the blossoms yield, Then a low murmur runs along the field. Pope.

Amid an isle around whose rocky shore . The forests murmur, and the surges roar,

A goddess guards in her enchanted dome. Id. The good consequences of this scheme, which will execute itself without murmuring against the government, are very visible. Strict. Flow gently, sweet Afton, among thy green braes, Flow gently, I’ll sing thee a song in thy praise ; My Mary’s asleep by thy murmuring’ stream, Flow gently, sweet Afton, disturb not her dream.

Burnt.

MUROM, a town in the government of Vladimir, in the central part of European Russia. It stands at the confluence of the Muromka and Oka, and has a brisk trade. It is built of wood ; and in 1805 eighty houses were destroyed by fire. Inhabitants 6500. Sixty-two miles E.S. E. of Vladimir.

MURPHY (Arthur), an ingenious miscellaneous writer, was born at Clooniquin, in the county of Roscommon, in 1727. He lost his father early in life ; but his mother gave him a good education at St. Omer’s, from whence he returned in 1744, and was placed in the counting-house of an uncle at Cork, which he soon quitted; and, in 1751, came to London, and began The Gray’s Inn Journal. He also made an attempt on the stage, but failed ; afieK which he turned his attention to the law, and, though refused admittance in the Temple, was called to the bar at Lincoln’s Inn, in 1762. His chief dependance, however, was upon his literary exertions. His Grecian Daughter, a tragedy ; All in the Wrong; and The Way to keep Him, comedies; with the smaller pieces of The Citizen, The Old Maid, and Three Weeks after Marriage, still hold their place among acting plays. Mr. Murphy was likewise a political writer, and author of The Test, and the Auditor, papers in favor of lord Bute against Wilkes. lie also wrote an Essay on the Life of Fielding, for an edition of that author’s works. In 17(J2 he published

An Essay on the Life and Genius of Dr. Johnson ; and the ynai following his Translation of Tacitus, in 4 vols., 4to. fn 1798 he printed a dramatic poem, entitled Arminius; and a Life of Garrick. Lord Loughborougli appointed him a commissioner of bankrupts; and he also obtained a pension from the crown. He died in 1805 ; after his death was pubh>hed his translation of Sallust.

MUR'RAIN, n.s. Sax. monruna. Thine also a Fr. marram, a pining melancholy. Low Lat muriano. Skinner derives it from mort, ►►o die. The plague in cattle.

MURRAIN, or gargle, is a contagious diseas incident to cattle. The symptoms are, a hanging down and swelling of the head, abundance of eum in the eyes, a rattling in the throat, a short breath, palpitation at the heart, staggering, a hot

breath, and a shining tongue. To prevent this disease, the cattle should stand cool in summer, and have plenty of good water. All carrion should be speedily buried ; and as the feeding of cattle in wet places, on rotten grass and hay, often occasions this disease, dry and sweet fodder should be given them.

MURRAY, a county of Australia, in New South Wales, bounded on the north-east by Boro Creek from its junction with the Shoalhaven river to its source in the lull of Wolowolar : by the range thence to Alianoyonyiga Mountain, between Lake George and Lake Bathurst, and by a watercourse descending from that mountain to Lake George ; by Lake George to the hollow in the bight, near the middle of its western shore; and thence by a natural line, extending towards the Pie of Pabral : on the west by the mountains of Warragong; on the south by a range extending eastward from Mount Murray by the Twins, and a line east these Pies to the Shoalhaven river. On the east by the Shoalhaven river to the junction of Boro Creek, men-ti'ned before.

MURRAY (James, earl of), a natural son of king James V., by a daughter of the earl of Mar, was born in 1529. He was created earl of

Murray by queen Mary, to whom he made not the most grateful return. In 1567 he was appointed regent of Scotland, in the minority of king James VI. ; but was shot in Linlithgow by one Hamilton, in 1571. See SCOTLAND.

MURRAY (William), earl of Mansfield, the fourth son of David, earl of Stormont, was born at Perth, in 1705. He was educated at Westminster, and studied at Christ Church, Oxford, where he took his degrees. He afterwards travelled, and on his return entered at Lincoln's Inn, and in due course was called to the bar, where he soon distinguished himself by his abilities as an advocate. On the 20th November, 1 738, he married lady Elizabeth Finch, daughter of lord Winchelsea. In 1742 he was appointed solicitor-general, and elected M. P. for Borough-Bridge. In 1754 he was appointed attorney, general, and in 1756 lord chief justice of the King's Bench, in the practice of which court he made many improvements. He was soon after created baron Mansfield. In 1757 he was appointed chancellor of the exchequer. In 1776 he was created earl of Mansfield. In 1780, when London was a scene of anarchy, his lordship's house in Bloomsbury Square was burnt by a lawless mob ; his valuable library and MSS. annihilated, and even his person endangered. See ENGLAND. A resolution of the house of commons was passed to make him a compensation for his loss ; but he generously refused to accept of any. Indeed, no pecuniary recompense could make up for the loss of so great a man's MSS., either to him or to the republic of letters. In June 1788 he was obliged by the infirmities of age to resign his office ; on which occasion he received a most respectful address from the gentlemen of the bar, transmitted to him in their name by the honorable Thomas Erskine. He died March 20th, 1793, aged eighty-nine, and his remains lie interred in Westminster Abbey, between those of the earl of

Chatham and lord Robert ˆManners. As he died without issue, his titles and fortune descended to his nephew, the earl of Stormont.

MURRAY (Richard), D. D., provost of Trinity College, Dublin, was born in 1726. After the usual course of study, he became a fellow of Trinity College about 1748, and was afterwards appointed professor of mathematics ; in which office he displayed uncommon abilities as a teacher. There was a simplicity, precision, and clearness in his method, by which he conveyed his ideas, even on the difficult and abstract science of analytics, with the greatest ease and accuracy ; while the comprehensive view which be exhibited, of every branch of

mathematics, proved him to possess a most vigorous understanding. He was afterwards promoted to the provostship, by earl Fitzwilliam, with the approbation of the whole University. From his abilities and length of standing, as well as from his offices, he was considered as the father of the University ; in which he always preserved the most perfect concord, which his predecessors had failed to do. He published an Epitome of Logic, which is much esteemed. He was so constantly devoted to study, that he never married. Though his income exceeded his expenses by at least ––500 a-year, and during the last four years had ––3000 a-year, yet his private charities were so numerous, that he did not leave above ––4000 at his death. He died at Dublin of a spasmodic affection in his stomach, on Tuesday, June 20, 1799, aged seventy-three.

MURRAY (Alexander), D. D., professor of He-brew in the university of Edinburgh, was born in Kirkcudbright, October 1775. Of a feeble bodily constitution, and in a residence far from the parochial school, he enjoyed the benefit of a teacher not more than two years ; but an early maturity of genius, joined to ardent application and unwearied perseverance, overcame every obstacle, and raised him to a very high rank in the literary world. Even in his juvenile days, while actively employed in the pastoral life, young Murray gave proofs of a poetical genius, and gained an intimate acquaintance with many of the best English authors. He had made great progress, during this period, in the acquisition of languages ; insomuch, that at the age of seventeen he was able to translate, with accuracy and without premeditation, the Hebrew language, before he ever heard a word of it pronounced. ––– On account of his humble station, and the early death of his father, Mr. Murray had little prospect of advancement; but Mr. Maitland, who knew his worth and watched his progress, patronised him, and stimulated his exertions. He sent him, in 1793, to the university of Edinburgh, and recommended him strongly to Dr. Baird, the principal of that university ; who, astonished at the richness of his genius, and the extent of his acquirements, with a generosity worthy of himself, took the young student under his particular care, and continued to the end of his life his warm, zealous, and steady friend. In Mr. Murray’s course through the various literary classes, and by his theological exercises, he greatly distinguished himself; and the variety of his information and the splendor of his talents pro-MURRAY.

cured him an acquaintance extensive, learned, and respectable. During his attendance at the university, he supported himself in a respectable manner by teaching Latin, Greek, and some of the eastern languages. He was employed for a considerable time as corrector of a press ; and by Mr. Constable as editor of the Scots Magazine, in which were inserted some of his own original essays and poetical pieces. In both these engagements he acquitted himself to the complete satisfaction of his employers. His knowledge of languages, and his talents as a critic, being now conspicuous, he was again employed by Mr. Constable in editing the travels, and writing a life of the celebrated Mr. Bruce. Mr. Murray, having been licensed by the presbytery of Edinburgh, accepted a presentation, and was ordained minister of Urr, in 1806; and in 1808 married a young lady whom he had long known and loved, who brought him a son and daughter, and to whom the government, after his death, granted a liberal annuity. Having obtained a slight knowledge of the Ethiopic alphabet in his youth, and prosecuting the study at college by the help of Ludolph's dictionary and the Polyglot Bible, Mr. Murray acquired a complete acquaintance with that ancient language. In con-consequence of this, which his edition of Bruce's Travels made manifest, he was requested to translate a letter in the Ethiopic tongue from the king of Abyssinia to our government. The accuracy and despatch with which he executed the commrssion added to his reputation, and laid the foundation of his future advancement; for on the death of the Rev. D. Moodie, in the following year, 1812, all eyes were turned upon Dr. Mur-ray ; and, although there was a strong contest between his friends and those of a respectable competitor, yet he was instituted professor of He-brew and oriental languages in the university of Edinburgh. In the autumn following his appointment he prepared lectures for his class, and a syllabus, entitled Outlines of Oriental Philosophy, which was published in December following. He commenced his course with great brilliancy ; and his introductory lectures, which were highly appropriate and ingenious, were received with much applause by a class consisting not only of theological students, but of many gentlemen whose attendance was commanded by the character and talents of the teacher. But his great exertions overpowered him ; his spirits sunk at the prospect of having more to do than his feeble frame and impaired health were able to accomplish. An hereditary asthmatic affection, which severe study increased, now rose to an alarming height, and finally hurried turn from the scene of his labors on the 15th of April 1813, at the early age of thirty-seven. The talents of Dr. Murray entitled him to an elevated rank among literary characters. His knowledge of philology was most extensive and profound ; and all his works show great ingenuity, strong judgment, and deep

penetration. His principal work, The History of European Languages, though a posthumous publication, for erudition, originality, and accuracy, will entitle its author to the unqualified praise of the present day, and will procure him the respect and gratitude of future ages. Besides his essays in the Scots magazine, already mentioned, Dr. Murray wrou-several ingenious and learned articles in the Edinburgh Review, with some poems on important subjects.

MURRAY (Lindley), an ingenious grammarian and didactic writer, was born in 1745, at Swetara, in Pennsylvania, North America. His father, a member of the society of Friends, was the proprietor of a flour-mill there ; but, becoming in 1753 a merchant at New York, it was his earnest wish to bring up his son to his own pursuits ; but after receiving a good education he was allowed to study the law, and was admitted a member of the American bar. He soon after married: and, though his practice as a lawyer was at first considerable, it received an interruption from a visit which he paid to England : but on his return to New York, in 1771, he resumed itwith success. On the commencement of the disputes with the mother country, Mr. Murray, whose religion prevented his taking an active part in the struggle, retired to Islip, in Long Island, where he employed the leisure which he possessed in an unsuccessful attempt to manufacture salt. The bar holding out, at this period, but little prospect, he became, like his father, a general merchant, and, about the period of the establishment of American independence, found himself enabled to retire from business with a competency. But his health had received a severe shock, and, the air of Yorkshire being especially recommended to him, he was induced to take a second voyage to England. At Holdgate, a village of that county, he found a small estate which exactly suited his wishes, and continued to reside upon it till his death. For many years all exercise, with the exception of airings in.his carriage, was too severe for his shattered frame ; his mind, however, continued in full vigor, and his protracted confinement was much alleviated by the composition of various instructive works. The first was a tract entitled The Power of Religion on the Mind, of which he printed and distributed gratuitously 500 copies, till the popularity which it obtained induced him to make a present of the copyright to Messrs. Longmans' the booksellers, under whose auspices it ran through no fewer than seventeen editions. His next work, and that by which he is best known, was his English Grammar, published in a small form, 179.5, and succeeded by his English Exercises, and Key, calculated to correspond with, and illustrate the Grammar, an abridgment of which treatises was, in 1797, published in conjunction His other works are, The English Reader, with an Introduction and Sequel, subsequently

composed ; two compilations, on the same plan, in the French language, Le Lecteur Francois, and Introduction au ˆLecteur Francois ; The English Spelling Book ; a Selection from Home's Commentary on the Psalms ; and The Duty and Benefit of Reading the Scriptures. Mr. Murray was seiz-ed with paralyticafiection 10th of January, 1JV26, which terminated his mortal career on the 10th of February following.

MURRAY'S ISLANDS, three islands of the Eastern Seas, in Torres Straits, between New Guinea and New Holland. The largest is :>nly two

miles long, by something more than one in breadth, and lies high. The two smaller isles seem to be single hills. Captain Flinders saw several Indians here, and thought the islands might contain altogether 700 inhabitants. The natives are of a dark chocolate color, active and muscular men, about the middle size, and of expressive countenances. They go quite naked, with the exception of some ornaments of shell work. These islands were discovered by Edwards, in the Pandora, in the year 1790, who spoke of them as four in number. Long, of the largest, 144►► 2' E., lat. 9►► 54' S.

MURRAY'S ISLANDS, some small islands on the south-west coast of the county of Kirkcudbright, Scotland, at the mouth of Fleet Bay, eleven or twelve miles N. N. E of Burrow Head.

MURRAYSHIRE, MORAYSHIRE, or ELGIN-SHIRE, a county in Scotland. It formerly included part of Inverness, Banff, and Nairn, besides the present county ; but the name is now confined to this district, situated between 57►► 12' and 57►► 43' N. lat., and between 3►► 2' and 3►► 58' W. long., extending about forty miles from north-east to south-west, and in breadth from eight to fourteen miles in the interior, but upon the coast from seventeen to twenty-three miles. It contains, including; its lakes, 480 square miles, or 307,200 English acres, of which only about a third is productive. The county of Moray has the frith of that name on the north, Banffshire on the east, Inverness-shire on the south, and Nairnshire on the west. The

river Spey, which, with a few exceptions, separates it from Banffshire, is commonly considered its eastern boundary. On the south it is intersected by a part of Inverness-shire, by which two parishes, Abernethy and Duthil, partly in this county, are detached from the body of it. It is divided into fifteen entire parishes, and contains part of nine parishes more, the rest of which are situated in the counties adjacent.

The low grounds along the coast vary in breadth, southward, from five to twelve miles; and the mountains which occupy the interior are diversified by considerable tracts of low land, particularly on the branches of the Spey and Findhorn. The climate, soil, and productiveness of these two divisions of the county are very different. On the coast the climate is supposed to be as good as that of any part of Scotland, in regard both to heat and dryness ; and, the prevailing soil being a sandy loam, it in many parts affords plentiful and early crops. The wind blows from westerly points for almost three-fourths of the year. Easterly winds, however, prevail in the spring months, to the injury of vegetation.

Among the mountains the winters are severe; more rain falls than on the coast ; and the labors of the harvest are often not brought to a close

till the crops are covered with snow. Limestone, sandstone, aud slate, with marl, abound here. The rivers are the Spey, the Lossie, and the Findhorn. The Spey has a course of thirty miles before it enters Morayshire, at Aviemore, from which it flows in a deep channel, and with a considerable fall, till it empties itself, after describing a line of about ninety-six miles in all into the sea a< J^eymouth Bay. It is only navigable near its mouth, for small vessels ; but it affords the means of bringing down to the sea the forests on its banks ; and the rents of its sal-mon fisheries have exceeded ►►7000 per annum. The Lossie flows parallel to the Spey, about ten miles distant, and after a course of twenty-four miles, during which it works a number of mills, falls into the sea at Lossiemouth, about six miles to the north of Elgin. The Findhorn flows from south to north, and enters the Frith of Moray at the village that bears its name, having traversed Inverness-shire (where it has its source), Nairnshire, and this county, for a distance of sixty miles. There is a valuable salmon fishery on this river. The principal lakes are Loughnaboe, which covers about sixty acres ; Lough Spynie, which formerly spread over more than 2000 acres, but has been since almost drained ; Inch-stellie, Lochloy, and

Loughnadurb, containing an island on which there are the remains of an ancient fortress. Chalybeate springs are found in every quarter.

The farms on the coast do not often exceed 400 acres in extent, and the greater number are below 150. The larger farms are generally held on leases for nineteen years, but many of the smaller tenants have no lease. This part of the county produces all the species of corn grown in Scotland, turnips, potatoes, and clover. In the higher district, barley and oats, with potatoes, are almost the only crops. The native cattle here have been improved, by crossing them with the West Highland race ; and the sheep, originally similar to those of Shetland, have in many parts given way to the Linton, or black-faced race, and other breeds. On the small farms, in the mountain district, the horses are very diminutive.

Murrayshire has few manufactures. There are tanneries at Forres and Elgin ; and, at the latter place, a tawing work of some consideration. The chief exports are cattle, corn, and salmon. The value of the salmon has been stated at about ––25,000,and that of all the other exports at ––30,000 yearly. The towns and villages are, Elgin (the county town), Forres, Garmouth, Urquhart, Los-semouth, Bishopmill, Findhorn, Itothes, and Balnatom. The first two are burghs ; Elgin is joined with Cullen, Banff, Inverary, and Kin-tore ; and Forres with Inverness, Nairn, and Fortrose, in the election of members of parliament.

MUR

241

1800.

Houses.

Persons.

Occupations.

Inhabited.

By how many families occupied.

Uninhabited.

Males.

Females.

Persons chiefly employed in Agriculture.

Persons chiefly employed in ‘I raile, Manufactures, or Handi—

All other Persons not comprised in the two preceding classes.

Total of Persons.

craft.

5992

6354

134

11,763

14,942

8131

4410

14,164

26,705

1811.

Houses.

Persons.

Occupations.

inhabited.

By how many Families occupied.

ˆinhabited.

Males.

Females.

Familes chiefly employed in Agriculture.

Families chiefly employed in Trade, Manufactures,

All other Families not comprised in the two preceding

Total of Persons.

P

or Handi—

classes.

craft.

6268

6854

197

12,401

15,707

2635

1886

2333

28,108

MURRE, n. s. Wei. mowran. A kind of bird. The sea crow.

Among the first sort we reckon coots, meawes, murres, creysers, and curlews. Carew.

MURREY, adj. ft. moree ; Ital. morello, from moro, a moor. Darkly red.

Leaves of some trees turn a little murrey or reddish.

Bacon.

Painted glass of a sanguine red, will not ascend in powder above a murrey. Browne's Vulgar Errours.

They employ it in certain proportions, to tinge their glass both with red colour, or with a purplish or murrey. Boifie.

Cornelius jumps out, a stocking upon his head, and a waistcoat of murrei/-colored sattin upon his body. Arbuthnot.

MURRHINA VASA, or MURRHINE VESSELS, Moppiva, in antiquity, a delicate sort of cups and vases brought from the east, which added not a little to the splendor of the Roman banquets. Critics are divided concerning the nature of the pocula or vasa murrhina, or murrhaea. Some will have them to have been the same with our porcelain or china-ware. The generality hold them to hare been made of some precious stone, found chiefly, as Pliny says, in Parthia and Caramania. Arrian tells us, that there was a great quantity of them made at Diospolis in Egypt. This he calls another sort of murrhina work ; and it is evident, from all accounts, that the murrhina of Diospolis was a sort of glass ware, made in imitation of the porcelain or murrha of India. Pliny says, the murrhina vasa would not bear hot liquors ; but Martial tells us that they bore hot liquors very well. Some suppose them to have been of agate, others of onyx, others of coral. Baronius took them to be made of myrrh, congealed and hardened. Some suppose these ves-VOL. XV.

sels to have been made of crystal ; but this is contrary to the account of all the ancients. The Greeks had the words cpti?aXXo for crystal, and ypvpvr) for myrrh ; and therefore, if these vessels had been made of either of these substances, they would have called them Smyrna or crystallina. On the contrary, the most correct among them call them murrhina, myrrhina, or morrina. The cups made of crystal, which were also used at those times, were called crystallina, and these murrhina or murrha;a, by way of distinction ; and Martial says that the stone they were made of was spotted or variegated, calling them pocula maculosffi murrae. Statius mentions the crystalline and murrhine cups in the same sentence, but as different things. Arrian mentions also the XiOoc /<oppia ; which his interpreters censure as an error of the copies, and would alter into myrrha, the name of gum myrrh. Pompey was the first who brought these vessels out of the east which he exhibited in his triumph, and dedicated to Jupiter Capitolinus. But private persons were not long without th□□m. So fond aid the Romans grow of them, that a cup which held three sextaries was sold for seventy talents. T. Petronius, before his death, to vex Nero, broke a basin, trulla murrhina, valued at 300 talents, on which that emperor had set his heart.

MUR'RION, n. $. Written also morion. Ju-nius derives it from Lat. murus. A helmet; a casque; armour for the head. See MORION.

Their beef they often in their murrimt stewed, And in their basket-hilts their beverage brcw►►d._

King.

MURVIEDRO, or MORVIEDRO, the ancient Saguntum, a walled tow:: of Spain, in the province of Valencia, situated at the foil ►►.f a mountain of black marble, about a league from the

sea. It is long, but narrow. The walls are flanked by round towers, and the interior is gloomy and disagreeable. The houses are of mean appearance, and the streets very narrow ; but the suburbs are more agreeable. Here are brandy distilleries ; but the chief trade is in oil, wine, wheat, and silk. This town has various remains of antiquity. Celtiberian and Roman inscriptions are frequently discovered ; but of the numerous statues of Saguntum only two fragments are to be seen. On the other hand the Roman theatre and circus are in good preservation. On the mountain above the town is the castle erected by the Moors. Population 5100. Thirteen miles north-east of Valencia.

MUS, in zoology, a numerous genus of quadrupeds, belonging to the order of glires, called murine quadrupeds by Mr. Kerr. The characters are these : the upper fore teeth are wedge-shaped; there are three grinders, sometimes though rarely only two, on each side of the jaws ; and the clavicles or collar bones are complete.

1. M. agrarius, the rustic mouse, is about three inches long, and scarcely weighs half an ounce ; the tail is only about half the length of the body and head : the upper part of the body is yellowish, with a dark line along the back ; the belly and the legs are white ; the head is ob-long, with a sharp nose, and small ears lined with fur ; the hind legs have each a dusky circle above the foot. They inhabit Russia and Silesia, but are rare in Germany ; they are migratory, and wander about in vast multitudes, doing immense injury to the corn. They burrow in the ground, forming a long gallery just below the surface, and a little elevated, leading to a larger chamber, in which

considerable quantities of grain and seeds are stored up for winter.

2. M. alliarius, the garlic mouse, has a short tail, the ears rather large and somewhat hairy ; the body ash-colored on its upper parts, and whitish underneath. The head and body measure somewhat more than four inches, the tail scarcely an inch and a half. This species inhabits Siberia, about the rivers Jenisei, Kan, Lena, and Angara ; and feeds on the roots of garlic, laying up large stores in subterraneous burrows.

3. M. Americanus, the American rat, has a long, naked, and scaly tail : the head is long-shaped, with a narrow pointed nose, the upper jaw being much longer than the lower ; the ears are large and naked. It is larger than the black, and smaller than the brown rat ; its color is a deep brown, inclining to ash on the belly, and the fur is coarse and harsh. This species is said (Kalm's Travels, ii. 48) to live among the stones and clefts of rocks in the Blue Mountains of Virginia, at a distance from the peopled part of the country. They come out only at night, and make a terrible noise.

4. M. ampliibius, the water rat, with a long tail ; the upper parts of the body are covered with black hair mixed with yellowish, and the under parts ash-colored ; the ears scarcely ap-pear above the fur; the feet have three toes each, and the rudiments of a fourth. This species, of which there are several varieties, differing in the toes and in the color, inhabit all Europe, the

north part of Asia as far as the Icy Sea, and North America. They dwell chiefly near waters, forming burrows in their steep banks; about ponds and ditches; likewise in marshy places, meadows, and gardens; feeding on roots, herˆs, and shrubs ; and on frogs, craw-fish, insects, small fish, and the fry of larger ones. They swim and dive with great facility, and live much in the water. They are very fierce, and bite severely. Their flesh is reckoned very delicate by the savage inhabitants of Russia ; and is eaten by the French along with that of the otter, in Lent. The female is smaller than the male, and is yellower; she has eight teats, four of which are placed on the breast, and four on the belly. They procreate about the end of winter, when they smell strongly of musk, and produce eight young ones in April.

5. M. arvalis, the meadow mouse, is from three to six inches long, the female being much longer than the male, and the tail is little more than an inch : the head is large, with a blunt nose, short ears almost hid in the fur, and prominent eyes ; the upper parts of the body are of

a mixed ferruginous and black color; the belly is deep ash, and the legs and feet dusky ; the tail is terminated by a small tuft of hair. There is a variety which is almost black. This species inhabits all Europe, Siberia, Hyrcania, and Newfoundland ; dwelling in bushy places, corn fields, meadows, and gardens, chiefly near waters : living on grain, nuts, acorns, and walnuts, which they collect into subterraneous burrows; but prefer corn to every other food. When the grain is ripe they assemble from all quarters, and often do great damage by cutting the stalks of corn to get at the ears. They follow the reapers and eat up all the fallen grain. When the gleanings are devoured they flock to the new sown fields, and eat up the seed. In winter most of them retire into the woods, where they feed upon filberts, acorns, and seeds of trees. In some years they appear in numbers so immense that they would destroy every thing if they continued long ; but they always kill and eat one another during a scarcity. They are also devoured by the long-tailed field mice, by foxes, wild cats, and weasels. They are often carried home in sheaves of corn, and 100 of them have been found in housing a rick. In such cases it has been observed that the dogs devoured all the mice of this sort they could find, rejecting the common kind ; while cats would touch none but the last. The female produces several times a year, and brings from eight to twelve young at a birth : it has a strong affection for them ; one that was seduced into a -wire trap by placing its brood in it, was so intent on fostering them that it appeared quite regardless of its captivity. In Newfoundland these mice are very destructive to gardens; but seldom do much damage in Britain.

6. M. betulinus, the beech mouse, has a considerable resemblance to the wandering mouse, but is somewhat smaller. The upper parts of the body are tawny, with a black line along the back, the under parts whitish, or pale ash-color; the nose is sharp, with a red tip ; the ears are small oval, plaited, brown, and bristly at the ends ; the limbs are very slender, with long and

very separable toes ; the tail is slender, and much though rarely, they

are entirely white or yellow—

longer than the body. Tins species inhabit the birch ish, or white with black spots on the back ❖❖❖ ❖❖❖

woods in the desert plains of Ischim and Baraba, *:* u- - - ❖❖❖ ‘

and between the Oby and Jenisei. They live chiefly in the hollows of decayed trees. They run

times the snout is white, and the forehead ash-colored, or the lower jaw of a white color. This species inhabits Siberia, the south of Russia, Poland, Sclavonia, Hungary, Silesia, Bohemia) and Germany beyond the Rhine, especially in Thuringia. Each individual forms a subterraneous burrow, consisting of several chambers, with two holes leading from the surface; one of these is perpendicular, and the other, for their excrements, is oblique ; the holes of the females have several perpendicular openings, and each young one is lodged in a separate chamber. These chambers are lined with straw or gˆass ; the rest are larger, and filled with grain, beans, peas, They swim remarkably well, and infest houses, linseed, vetches, and other seeds, each in a sepa-

up

trees readily, and fasten on their branches by the tail ; and by their slender fingers can fasten even to a very smooth surface. They are very delicate, soon growing torpid in cold weather, and their voice is very weak.

7. M. caraco, has a naked tail, long, scaly, and somewhat blunt ; the body is of a brown gray color, and the hind feet are very slightly webbed. They inhabit the east parts of Siberia, Chinese Tartary, and the north provinces of China ; burrowing like rabbits near the banks of rivers.

The body and head are six inches long, and the tail four and a half.

8. M. cricetus acredula, the Siberian hamster,

rate cell. The chambers of the elder animals are dug several feet deep, while those of the younger seldom exceed a foot under the surface. The

has large oblong oval furrowed ears : the upper hamster sleeps during winter ; when in a'torpid

parts of the body are of a yellowish and brown ash-color, the under parts hoary. The head and body measure four inches, and the tail near one. This species inhabit the district of Orenburg in Siberia, near the Yaik or Ural. They live in burrows, which they quit only in the night for food. The Cossacks say they migrate out of the deserts in vast multitudes ; but Dr. Pallas suspects this to be a mistake.

9. M. cricetus arenarius, the sand hamster, has the upper parts of the body hoary ; the sides, belly, limbs, and tail, pure white. It inhabits the sandy deserts of Baraba, on the Irtish, in Siberia. The head is large, with a longish snout and sharp nose, having very long whiskers, very large pouches, and great oval brownish ears ; the body is short and thick, about four inches long, and the tail rather more than one; the

fur is very soft ; the fore feet have only four toes each, the hind feet five, all the claws being white. These animals are very fierce and untameable ; form burrows, are chiefly active at night, and feed mostly upon leguminous plants.

10. M. cricetus furunculus, the Baraba hamster, has the upper parts of the body of a cinereous yellow, with a black streak on the back ; the under parts dirty white. It is about three inches long, and the tail near one. This species inhabits Dauria, Siberia in the desert of Baraba, towards the Ob, between the Onon and Argum, and in the Chinese empire near Lake Dalai ; living chiefly on the seeds of the astragalus and atriplex; their manners are unknown.

11. M. cricetus Germanicus,tlie German hamster, is the most destructive of the whole rut tribe. The bodies of the males are about ten inches long, and the tail about three, but the females are scarcely more than half so large : the former weigh from twelve to sixteen ounces, the latter seldom from above four to six. The head is thick, with a blunt nose, and numerous whi>- kers, large full black eyes, and large rounded open ears; the head and back of a reddish-brown color, with red cheeks; the sides paler, with three white spots ; the breast, upper part of the fore legs, and belly, are black ; the feet larue anJ white with four toes, and a claw on the fore feet, and five toes on-each hind foot. Sometimes,

state, no respiration nor feeling can be perceived. The heart, however, beats fifteen times in a mi-nute. The blood continues fluid, but the intestines are not irritable; even an electrical shock does not awake him ; but in the open air he never becomes torpid. When dug up in his state of torpidity, the hamster is found with his head bent under his belly between the two fore legs. The eyes are shut; and, when the eye-lids are forced open, they instantly close again. The members are stiff, like those of a dead animal, and the whole body feels as cold as ice. When dissected during this state, he seems to feel very little ; sometimes, indeed, he opens his mouth as if he wanted to respire ; but his lethargy is too strong to admit of his awakening entirely. This has been ascribed to a certain degree of cold. But experience sho%vs, that, to render the hamster torpid, he must also be excluded from all communication with the external air; for when he is shut up in a cage filled with earth and straw, and exposed in winter to a degree of cold sufficient to freeze the water, he never becomes torpid : but when the cage is sunk three or four feet urider ground, and well secured against the access of the air, at the end of eight or ten days he is as torpid as if

in his own burrow. If the cage is brought up to the surface, the hamster will awake in a few hours, and resume his tor-pid state when put below the earth. The experiment may be repeated as long as the frost continues. The hamster, in passing from a torpid to an active state, first loses the nuidity of his members, and then makes a profound respiration, but at long intervals. His legs begin to move, he opens his mouth, and utters disagreeable and rattling sounds. After some time, he opens his eyes, and endeavours to raise himself on his legs. But all these movements are still reeling and unsteady, like those of a man intoxicated. He, however, reiterates his efforts till he is able to stand on his legs, and gradually becins to walk, eat, and act in his usual manner. This passive from a torpid to an active state requires more <r less time, according to the temperature i>t the air. When exposed m a fold air, he sonu times requires more than tw > hours to awake; but in 1 ur hi will awake in less than o!U II 2

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The hamster is very mischievous, and so exceedingly fierce that he seems to have no other passion but rage. He attacks every other animal that comes in his way, without regarding the superior size and strength of his antagonist; and even allows himself to be beaten to pieces with a stick rather than yield. If he seizes a man's hand, he must be killed before lie quits his hold. When the hamster perceives a dog at a distance, he begins with emptying his cheek pouches, if Billed with grain, which are so capacious as to hold a quarter of a pint English. Pie then blows them up so prodigiously, that the size of the head and neck exceeds that of the body. He then raises himself on his hind legs, and in this attitude darts on his enemy. If he catches hold he never quits it but with life. But the dog generally seizes him behind, and strangles him. This ferocious temper leads him even to destroy his own species, not excepting the females. When two hamsters meet they fight, and the stronger always devours the weaker. A combat between a male and a female lasts longer than between two males. They begin by pursuing and biting each other ; then each retires to take breath ; a little after, they renew the combat, and continue to fly and fight till one of them falls. The hamsters copulate about the end of April ; when the males enter the apartments of the females, where they remain only a few days. If two males meet in the same hole, a furious combat ensues, which terminates in the death of the weakest. The conqueror takes possession of the female; and both,

though at every other period they kill each other, lay aside their natural ferocity during the few days their amours continue. They even mutually defend each other against aggressors ; and, if a hole is opened about this time, the fe-male defends her mate with the utmost fury. The females bring forth twice or thrice a year. Their litter is from six to eighteen. Their growth is very rapid. At the age of fifteen days they begin to dig the earth ; and soon after, the mother banishes them from her habitation : so that at the age of about three weeks they are abandoned to their own management. The mother disco-rers little affection for her offspring; and, when her hole is opened, flies in the most dastardly manner, leaving her young ones to perish. Her only solicitude is to provide for her own defence, by digging deeper into the earth, which she performs with amazing quickness. The young would willingly follow her; but she is deaf to their cries, and even shuts the hole. The hamsters feed upon all kinds of herbs, roots, and grains, and eat the flesh of such animals as they can conquer. They are fond of liquorice, and feed much on its seeds. Their pace is very slow, and they do not climb ; but they dig with vast quickness, and will gnaw through a piece of wood an inch and a half thick in a very short time. As they are not formed for long journeys, their magazines are first stocked with the provisions nearest their abode. When the harvest is reaped, they go to a greater distance in quest of provisions, and carry every article they can find to tbfir primaries. To facilitate the transportation of their loot!, they have two pouches in the inside of each cheek. On the outside these

pouches are membranous, smooth, and shining ; and in the inside there are many glands, whic i secrete a certain fluid, to preserve the flexibility of the parts, and to enable them to resist any accidents, which may be occasioned by tb.3 roughness or sharpness of particular grains. Each of these receptacles is capable of containing an ounce and a half of grain, which, on his return to his lodgings, the animal empties, by pressing his two fore feet against his cheeks. A hamster, having his cheeks filled with provisions, is easily seized with the hand, without the risk of being bitten, as in this condition he has not the free motion of his jaws. But in a little time he empties his pouches, and stands upon his defence. The quantity of provisions found in the holes depends on the age and sex of the inhabitant. The old hamsters often amass 100 Ibs. of grain. Their object in laying up provisions, is not to nourish them during winter, which they pass in sleep, and without eating ; but to support them previous to their falling into that

state, which resembles a profound sleep, and after they awake in spring. At the approach of winter the hamsters retire into their subterraneous abodes, the entrance to which they carefully shut up. Here they repose upon a bed of straw, and in this state are commonly dug up. They are prey-ed on by polecats, weasels, cats, dogs, foxes, and birds of prey ; and are proscribed by man. In winter the peasants generally go a hamster-nest- ing, as they call it : the retreat is known by a small eminence of earth raised near the oblique passage above described. The peasants dig down till they discover the hoard, and are generally well paid for their trouble; as they often find two bushels of corn, besides the skins of the animals, which are valuable furs; and the hair sticks so fast to the skin that it cannot be plucked off without great difficulty. In some seasons the hamsters are so numerous, that they occasion a dearth of corn. In one year about 11,000 skins, in a second 54,000, and in a third 80,000, were brought to the town-house of Gotha, to receive a reward for their destruction. They are likewise destroyed by a paste, formed of honey and. flour, boiled up with arsenic or powdered hellebore.

13. M. cricetus phaeus, the rice hamster, or za-rizyn rat of Pennant, has the upper parts of the body ash-color, with long dusky hairs along the back ; the sides whitish ; the circumference of the mouth, breast, belly, and extremities of the limbs, pure white. It is about three inches and a half long, and the tail scarcely one inch. This species inhabit about Zarizyn in the deserts of Siberia, and in the mountains of the north of Persia ; where they do vast mischief in the rice fields. They are often caught in traps during winter, near stables and other out-houses, and never become torpid.

1 3. M. cricetus songarus, the songar hamster, has the upper parts of the body of a gray ash-color, marked with a black line along the back ; the sides of t'he head and body are varied with large white and dark brown spots ; the feet and belly are white. It is about three inches long, with a very short, thick, blunt, and hairy tail, little more 'han one-third of an inch long. They inhabit

the desert of Baraba, near the Irtish, in Siberia ; where they dig chambers for provisions. They are not, however, so fierce as some other species, but may I e tamed when caught young, and grow very familiar.

14. M. cyanus, the blue mouse, resembles the field mouse, except in color; the upper parts are blue, and the under whitish, the ears are rounded. They inhabit Chili, form large burrows divided into chambers, in which they collect great stores of bulbous roots ; for which the Chinese search for them.

15. M. decumanus, the brown rat, has a long, naked, scaly tail ; the upper parts of the body are of a light brown, mixed with tawny and ash-color, the lower parts dirty white. The head and body measure about nine inches ; and the length of the tail, which consists of 200 rings, is seven and a half. The whiskers are larger than the head ; and the eyes are large, black, and prominent. The fore feet have four toes, with a small claw or thumb. They inhabit India and Persia, but were not known in Europe till the eighteenth century. They dwell in burrows on the banks of rivers ; and frequent towns, aqueducts, drains, necessaries, stables, barns, gardens, fields, and houses. They swim and dive with great dexterity ; feed on vegetables, grain, fruits, and poultry; and are hunted eagerly by cats, dogs, and ferrets. They lay up stores of acorns, beech-mast, and other provisions, in their holes; in which the males remain during winter, except in fine weather, without hybernating; but the females and their young live mostly in barns and out-houses in that season. They often emigrate in great companies. The female produces three times in the year, from twelve to nineteen at a .itter. Their bite is not only severe but dangerous, the wound being immediately attended with great swelling, and slow in healing. These animals are so bold as to turn upon those who pursue them, and fasten on the stick or hand of such as oifer to strike them. This species is supposed to be the mus Caspicus of jElian, which he says was nearly as large as the ichneumon, and made periodical visits in vast multitudes to the countries which border on the Caspian, swimming boldly over the rivers, holding by each others tails.

16. M. lagurus, the rambling mouse, has hardly any tail ; the ears are shorter than the fur ; the fore feet have each three toes, and the rudiments of a fourth ; the upper parts of the body are ash-colored mixed with dusky, and have a black line along the back. The head is long, with rough and swelling lips ; the limbs are short and slender ; and the length of the body and head is between three and four inches. This species inhabits the deserts near the rivers Ural, Irtish, and

Jenisei. Each individual forms a round nest of dried grass in a burrow, having an oblique and a perpendicular entrance. They feed chiefly on the dwarf iris; but eat all kinds of grain, and devour other species of this genus, as well as one another. They sleep very much, in a rolled up form, and are very slow in their motions, like the marmot ; but do not become torpid in winter. The males are very salacious, and tight for the females ; the conqueror generally devours tne

vanquished. The females smell of musk, when in season, produce several times in the year, and bring five or six young ones at a birth. They migrate in great troops ; whence the name given them by the Tartars, which signifies rambling.

17. M. laniger, the woolly mouse, with woolly fur of an ash-color, inhabits Peru and the north parts of Chili. They burrow in the earth, are very docile and cleanly, and easily tamed ; they live on bulbous rooU, especially onions; the females breed twice a year, and bring five or six young ones at each litter. They are about six inches long, with a short nose, and small sharp-pointed ears ; the fur is very long and exceedingly fine, almost like the threads of a spider's web, and was formerly employed as the very finest species of wool by the Peruvians.

18. M. lemmus, the lemming, has a very short tail: the head is pointed, having very long whiskers, six of the hairs on each side being longer and stronger than the rest, the mouth is small, having two very long foreteeth in each jaw, and the upper lip is divided ; the eyes are small and black ; the ears are shorter than the fur, rounded, and reclined backwards ; the fore legs are very short, having four slender hairy toes on each, and a long sharp claw like a cock's spur in place of the fifth ; the hind feet have five toes ; the skin is very thin, and the upper parts of the body are black and tawny, disposed in irregular blotches ; the belly is white tinged with yellow. The length from nose to tail is about five inches; of the tail half an inch. These singular animals inhabit the mountains of Norway and Lapland. They feed on gi□□s□□, □□□he catkins of the dwarf birch, the lichen rangiferinus, and other vegetables ; in summer they form shallow bnr-rows under the turf, and in winter they make similar long passages under the snow in quest of food ; for as they do not lay up magazines, and do not hybernate, they are obliged to search for provisions in the rigorous winter of these northern climes. When they foresee, by some wonderful instinct, the approach of a very severe winter, they leave their northern haunts in autumn, and emigrate in immense multitudes into the lower parts of Norway and Sweden, keeping a straight line in

spite of every obstacle, moving mostly in the night time, and making prodigious havock of every vegetable they are able to reach. In this journey, which takes place at uncertain intervals, though generally once every ten years, they are destroyed by eagles, hawks, foxes, and other animals of prey, and numbers are drowned in passing rivers or lakes, which never interrupt their course, even proceeding on into the sea: from all these concurring causes very few live to return to their na'ire mountains, and thus a check is put to their ravages, as it takes years to repair their numbers sufficiently for another migration. They are bold and fierce, so as even to attack men and beasts, if they meet them in their course ; and bite so hard as to allow themselves to be carried a considerable way, hanging by their teeth to a stick, before they will quit their hold.

They never come into a house, or meddle with any thing that we f-nt ; if they chance in come to a house in their way, there they stop

li?.l they die ; but, if they come to a stack of hay or corn, they eat their way through.

When they march over a meadow, they do it great damage, by eating the roots of the grass ; but, if they encamp there, they wholly destroy the produce ; the land looks like a place where there had been a fire, and the whole surface looks as if strewed with ashes.

The Laplanders are always glad to see these creatures on their march ; for it always foretels plenty of more valuable creatures among them : the same cold that sends these out, sending also a number of fowl, squirrels, foxes, and other animals the same way. Wormius has written a complete treatise on this animal, calling it Mus Norwegius ; this is reprinted at large in his mu-seum.

The female breeds several times in the year, producing five or six young at a birth : sometimes they bring forth during their migration, when they carry their young in their mouths or on their backs.

19. M. lemmus Sibiricus, the Siberian lemming, is a variety of a smaller size, and more uniform tawny color, than the above. It inhabits the north parts of the Uralian Mountains, and on the Oby. It differs greatly in manners from the former : for it lays up in its burrows large stores of provisions to serve during winter; whence it is probable that it does not migrate.

20. M. messorius, the harvest mouse, or less long tailed field mouse, is a very small species, and inhabits Hampshire, where it is very numerous, particularly in harvest. They form their nests above the ground, between the straws of the standing corn, and sometimes in thistles ; they are of a round shape, and composed of the blades of corn. They bring about eight young ones at a time. They never enter houses ; but are often carried, in the sheaves of corn, into ricks : and 100 of them have often been found in a single rick on pulling it down to be housed. Those that are not thus carried away in the sheaves, shelter themselves in winter under ground, and burrow deep, forming a warm bed of dead grass. They are the smallest of the British quadrupeds ; the length from nose to tail is only two inches and a half; the tail two inches, and the weight one-sixth of an ounce. They are more slender than die other long-tailed field mice ; and their back of a fuller red, inclining to the color of a dormouse.

21 . M.minutus, the minute-mouse, has the upper parts of the body of a deep tawny or ferruginous color, and the under parts whitish. It is about half the size of the common mouse, the tail being scarcely two inches long; the female is smaller than the male, and less elegant in her colors ; the nose is somewhat sharp; the face is dusky, with some whiteness at the corners of the mouth; the ears are small, and almost hid in die fur ; the feet are gray. This species inhabits Russia; where they are found in corn fields, barns, and birch woods, wandering about without any fixed places for nests, and much greater numbers of males are found than of females.

22. M. musculus, the common mouse, has a very long, scaly, and almost naked tail ; the fore feet have each four toes ; the hind feet five, the fifth

or thumb having no claw : the head and body measure three inches and a half in length ; the upper parts are tawny, and the lower whitish or ash-colored. This little animal, which inhabits all parts of the world, lives almost entirely in houses, and follows mankind for the sake oe their provisions. It feeds on grain, bread, cheese, butter, oil,

and every kind of food used by mankind, and drinks little: it is of mild and gentle manners, exceedingly timid, and very quick in all its motions. The mouse never issues from his hole but in quest of food, and runs in again upon the least alarm. It goes not, like the rat, from house to house, unless forced, and is not nearly so destructive. It is also capable of being tamed to a certain degree, though not so perfectly as other animals. It has many enemies, from whom it can escape only by its agility and minuteness. Owls, birds of prey, cats, weasels, hedge-hogs, and even rats, make war upon the mice, so that they are destroyed by millions ; yet the species still subsists by its amazing fecundity. They bring forth at all seasons, and several times in the year; the litter generally consists of five or six ; and in less than fifteen days the young disperse, and are able to provide for themselves. Aristotle tells us, that having shut up a pregnant mouse in a vessel, with plenty of grain, he found in a short time after 120 mice, all sprung from the same mother. Several varieties of mice as to color are found, some altogether black, some yellowish, others spotted with white ; some of a white color with ash-colored spots ; but the most beautiful of all, and the least common, are entirely white, with red eyes. As all these agree in every other circumstance, it is unnecessary to describe them more particularly.

23. M. myocastor coypus, the webbed beaver rat, has a thick hairy tail of a moderate length, and the hind feet webbed. It inhabits Chili, where it frequents the water. It has a strong resemblance, both in color and shape, to the otter ; but is allied to the murine tribe by the number and arrangement of its teeth.

24. M. myotalpa aspalax, the Daurian mole-rat, is of a dirty yellow ash color on the upper parts, and whitish ash on the lower: has a very short tail, and no external ears ; the eyes are very small, and deep seated ; the feet have each five toes, the claws of the fore feet being very long. This species inhabits Dauria, and Siberia beyond the Irtish, between the Alei and Tscharysch rivers. They dig very long burrows in the black turfy soil or firm land, throwing up numerous hillocks, which extend over a considerable surface ; working both with feet and nose, and sometimes with their teeth. They feed chiefly on the roots of bulbous plants. This species varies in size, those of Dauria being nearly nine inches long, while those farther east are scarcely six.

25. M. myotalpa Capensis, the Cape mole-rat, is of a dark brown color tinged yellowish, with the fore part of the face, orbits, and regions of die ears, white. It has a very short tail, and no external ears ; and is about five inches and a half long. They inhabit the Cape of Good llopo, and infest gardens.

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26. M.myotalpa maritima, the African mole rat, is of a pale brownish ash-color, mixed with yellowish on the upper parts, the sides and under parts paler ; the tail is very short; and there are no external ears. They inhabit the sand hills adjacent to the sea at the Cape of Good Hope ; measuring twelve or thirteen inches in length. They form burrows in the sand like those of rabbits; and dig with surprising celerity. They run slowly ; but are very fierce, and bite severely. They feed chiefly on the roots of ixiae, antlio VZSE, gladioli, and irides ; and are reckoned good eating.

27. M. myotalpa talpina, the Russian mole-rat, is of a dusky color ; has a very short tail, scarcely anpearing beyond the fur ; and no external ears ; the fore teeth are long, extended from the mouth, and wedge-shaped ; the eyes are very small, and hid in the fur ; the feet have five toes ; the fore feet are very strong, flat, and formed for digging. It is about four inches long, and in the general form resembles the water rat. As to color, the head, back, and sides are dusky, and the belly and limbs white. This species inhabits the plains of Russia and Western Siberia, scarcely extending beyond the Irtish, and never beyond the Oby. They are fond of a turfy soil, avoiding sandy or muddy places; and dig holes like the hamster, which they line with soft grass, and fill with bulbous roots, throwing up hillocks of earth all along the tracks ; each individual has its separate burrow ; works only in the night, and seldom comes out except in the season of love. Their sight is very weak in the day-time. They feed chiefly on the roots of tulips, tuberose lathyrus, and tuberose phlomis. They procreate about the beginning of April, when they smell strongly of musk; and the females produce three or four young at a litter.

28. M. myotalpa typhlus, the blind mole rat, is of a reddish ash-coloi ; and has no tail, external ears, or apparent eyes ; the feet have each five toes; and the fore teeth are broad. The body and head measure between seven and eight inches; the mouth is continually gaping, with short wrinkled foreteeth above, and very long ones below, likewise wrinkled, none of them being hid by the lips ; the body is covered

with short, soft, and close set fur, of a dusky color at the bottom, with the ends of a rusty brown mixed with ash-color; the legs are very short, having five toes on each foot, armed with short claws, and slightly connected by a short membrane at their bases. This species inhabits the south parts of Russia, from Poland to the Volga. Each individual forms burrows under the turfy soil of very considerable extent, with many lateral passages, and throws out the earth at different distances, in large hillocks sometimes two yards in circumference, and proportionally high. It works with its snout, feet, rump, and teeth, and digs with great celerity ; when frightened, it digs directly downwards. When irritated, they snort, crnash their teeth, raise their head in a menacing posture, and bite with great severity. They feed on roots, especially those of the bulbous chtrrophyllmn. They are entirely blind, though they have the rudiments of very small eyes, which are covered over with a continuation ot the skin; but they possess the sense* of touching and hearing in a very eminent degree. They breed in spring and summer ; and the fe-male, which has two teats, brings from two to four young ones at a birth.

29. M. ceconomus, the economic mouse, in its general form resembles the arvalis, but the oody is rather naked and the belly larger. The ears are longer and hid in the fur; the color is tawny, and the fore feet have each three toes with the rudiments of a fourth. The head and body measures four inches and a quarter; the tail somewhat more than an inch. This species inhabits Siberia from the Irtish eastwards, in Kamtschatka, and under the arctic circles. They are called by Dr. Pallas mures oeconomi, from their curious way of living. They dwell mostly in damp soils, forming burrows, with many chambers, and numerous entrances, immediately under the turf. In these they lay up magazines of various vegetable food, chiefly bulbous roots ; which they spread out in sunny days to dry, and’ never touch them but in winter, living all sum-mer on berries and other vegetables. The Kamtschatkans hold these animals in great regard, and never destroy their hoards; they take away only part, and leave some caviare or other substance to support them in its stead. This species sometimes emigrate in vast multitudes, keeping a straight course, like the lemmus, even over rivers; and are much infested on their march by birds, fish, wild hogs, foxes, and other wild animals. They begin their march from about the river Pengin in spring, and about the middle of July reach Ochotska and Judoma, at a vast distance ; and return in October. The Kamtschatkans are alarmed at their migrations, which, they say, portend rainy weather and a bad chace; and, when they find them lying weak and spent with fatigue after crossing a river, give them every assistance in their power. The Tschutski are not so much

attached to them, but use both their winter stores and their carcases as food.

30. M. pumilio, the dwarf mouse, is of a brownish ash color, with the fore head and nape of the neck black, and having four black lines along the back meeting at the tail. It is scarcely two inches Ion?, the tail is about two-thirds of the length of the body, and the whole animal, even when steeped many months in spirits, hardly weighs four scruples. The body is somewhat flattened ; the regions of the eyes, the ears, and the nose, are of a paler color than the rest of the body ; all the feet have five toes, the thumb or inner toe of the fore feet being very small, but dist-nctly furnished with a claw ; the legs and feet are strongly made; the tail is almost naked, and of a pole ash color. This species, which was first described by Dr. Sparrman, inhabits the forests of Sitsi-camma near Ilangen River, 200 hours' journey from the Cape of Good Hope.

31. M. rattus. the black or common rat, has an almost naked scaly tail, which is very small, ha* 250 distinct rings, and is eight inches long. The head and body measure seven inches in length ; the upper parts are deep black-gray, anil the under parts ash colored. There are four tot s, and a small claw, on each fore foot, and five on the hind feet. This species inhabits India, Per-

sia, and Europe, except its most northern parts ; hence it has been carried to Africa and America; and is common in Otaheite, but less so in the other islands of the South Sea. Of late, it has greatly diminished in Europe, and is even in many places extirpated, by the brown species, which destroy the black rats; though little is gained by the exchange, the brown having the same dispositions, with greater strength and abilities for doing mischief. The rat is the most pernicious of any of our smaller quadrupeds. Meat, corn, paper, cloaths, furniture, and every convenience of life, are a prey to these destructive creatures. They make equal havock among poultry, rabbits, and young game ; and have even been known to gnaw the extremities of infants when asleep. They reside much in houses, barns,

and granaries ; and have fore teeth of such strength as to force their way through the hardest wood and oldest mortar. They make lodges for their residence, and nests for their young, near chimneys ; and increase the warmth by forming magazines of wool, bits of cloth, hay, or straw. They lodge also in ceilings, and in the void spaces between the wall and the wainscotting. The female has ten teats, and brings forth several times a year, but always in summer. The litter generally is five or six ; and in spite of poison, traps, and cats, they multiply in such a degree as often to do a great deal of damage. In houses where grain is kept, they often increase so prodigiously that the possessors are sometimes obliged to remove, unless the rats destroy each other. When a famine happens, by too many being crowded into one place, the strong kill the weak, open their heads, and first eat the brain and then the rest of the body. Next the war is renewed, and continues in the same manner till most of them are destroyed ; which is the reason why these animals, after being extremely troublesome for some time, disappear all of a sudden, and do not return for a long time. When their young begin to issue from the hole, the mother watches, defends, and even fights with the cats, to save them. A large rat is more mischievous than a young cat, and nearly as strong ; the rat uses his fore teeth ; the cat makes most use of her claws ; so that the latter requires both to be vigorous, and accustomed to fight, to destroy her adversary. The weasel, though smaller, is a much more dangerous and formidable enemy, because he can follow the rat into its retreat. Their strength being nearly equal, the combat often continues long, but the method of using their arms is very different. The rat wounds only by reiterated strokes with his fore teeth, which are better formed for gnawing than biting ; and being situated at the extremity of the lever, or jaw, they have not much force. But the weazel bites cruelly with the whole jaw; and, instead of letting go its hold, sucks the blood from the wounded part, so that the rat is always killed. The rat was first introduced into America by the Europeans in 1544, and is now the pest of that continent

32. M. rutilus, the red mouse, has a short tail ; the ears are longer than the fur, which is tawny red on the back, light gray and yellow on the sides, and whitish on the belly. The head and body measure about four inches, and the tail one.

This species inhabits Siberia, from the Oby t►►- Kamtschatka, and within the Arctic circle. Tlu’v live in holes and hollows of trees ; feeding on gniir. and sometimes on animals of the same genus. They come often into houses and barns, eating almost of every thing, but

are particularly fond of flesh. They are very lively, and run about on the snow the whole winter.

33. M.saxatilis, the rock mouse, is about four inches long, and weighs nearly nine drachms ; the tail is hairy, an inch and a half long, of a brown color above, and white beneath ; the head is oblong, with a longish nose, and oval downy ears, brown at the edges ; the limbs are strong ; and the tail is thinly covered with hair ; the upper parts of the body are brown, slightly mixed with yellowish or gray; the sides are rather inclined to gray ; the belly is of a light ash or whitish ; the feet and legs are blackish ; the snout is dusky ; and surrounded with a slender white ring. This species inhabit the eastern parts of Siberia beyond lake Baikal, and the deserts of Mongul Tartary. They burrow in the fissures of rocks, forming a winding oblique passage, which afterwards branches out into several others pointing downwards, and ending in a chamber in which is a bed of soft herbs. They feed chiefly on the seeds of the astragalus.

34. M. socialis, the social mouse, with a short slender tail, and naked, rounded, and very short ears ; the fore feet have each threetoesand the rudiments of a fourth ; the upper parts of the body are light gray; the sides, shoulders, and belly white. The head and body are above three inches long, the tail half an inch. They inhabit the sandy deserts between the Volga and Ural, near the Caspian Sea, and in the mountains of Hyrcania. They live in families, consisting of a male and a female with their young ones ; and of these families vast numbers live together, the whole country being covered with hillocks of earth thrown out of their burrows. They feed mostly on tulip roots ; and are preyed on by weasels, polecats, crows, and otters. They swarm chiefly in spring, rarely in autumn, when they migrate, or take shelter among the bushes.

35. M. sylvaticus, the long-tailed field mouse, is larger than the common mouse, measuring from the end of the nose to the setting on of the tail four inches and a half; the tail four inches ; the upper parts of the body are of a yellowish-brown ; the breast is yellow, and the belly white ; the tail is covered with short hair. The fore feet have four toes each; the hind feet five. These animals are found in fields, gardens, and shrubberies. In some place they are called bean mice, from the havock they make among beans when first sown. They feed also on nuts, acorns, and grain, of which they amass quantities, not proportioned to their wants, but to the capacity of the place where it is deposited, insomuch that a single animal will collect more than a bushel. Thus they provide for other animals as well as themselves : the hog comes in for a share ; and the great damage done to the fields by

these creatures, in rooting up the ground, is chiefly owing to their search after the concealed hoards of the field mice. M. Buffon says, he has often seen great damage done to the plantations by them. They carry off the new sown acorns; by

following the furrow of the plough, they dig up one after another, not leaving a single seed. This happens chiefly in those seasons when the acorns are scarce : not finding a sufficient quantity in the woods, they come in quest of them to the cultivated fields, and often carry off such quantities that they corrupt in their magazines. They do more mischief in a nursery of trees than all the other animals put together. The only way to prevent this damage is to lay traps at ten paces asunder, through the extent of the sown field. No other apparatus is necessary than a roasted walnut placed under a flat stone, supported by a stick. The animals come to eat the walnut, which they prefer to acorns ; and, as it is fixed to the stick, whenever they touch it the stone falls dowu and crushes them to death. The same expedient M. Buffon made use of with success against the short-tailed field mouse, which also destroys acorns. In this way upwards of 100 were taken each day, from a piece of ground consisting only of about forty French arpents. From the 15th of November to the 8th of December above 2000 were killed in this man-ner. Their numbers gradually diminished till the frost became severe, which is the time they retire into their holes to feed on their provisions. In autumn they are most numerous: if provisions fail in winter, they devour one another. The long-tailed mice eat also the short-tailed species, and thrushes, blackbirds, 8cc., which they find entangled in snares. M. Buffon once kept a dozen of these mice in a cage, and furnished them with food every morning at eight o'clock. One day they were neglected for about a quarter of an hour, when one of their number was eaten up by the rest; next day another suffered the same fate, and in a few days only one remained ; all the others had been killed, and partly devoured, and even the survivor had his feet and tail mutilated. They are very prolific, producing more than once a year, and bringing nine or ten at a birth. They generally make the nest for their young very near the surface, and often in a thick tuft of grass. In winter they frequent barns, stables, and out-houses.

36. M. torquatus, the collared or ringed mouse, has a very short tail,

with a tuft of hard bristles at the end, which is blunt; the ears are shorter than the fur; the feet have each five toes; the fur is ferruginous, varied with gray, yellow, and dusky, having a whitish collar round the neck, and a dark line along the back. The head and body are above three inches long, the tail scarcely one inch. They inhabit the north parts of the Uralian Mountains, and the marshes near the Frozen Ocean ; feeding chiefly on the lichen lan-guiferus, lichen nivalis, and polygonum vivipa-rum ; these plants they store up in burrows, having numerous passages, dug under the turfy soil. This species is migratory, and resembles the lemmus in its manners.

37. M. vagus, the wandering mouse, is between two and three inches long; the upper parts of the body are a pale ash color, waved with black, and having a black line along the middle of the back ; the ears are large, oval, naked, and plaited. The legs are very slender, and the feet whitish, having four toes with a conical excre-

scence before, and five behind, all armed witn long claws ; the tail is longer than the body very slender, prehensile at the end, of an ash-color above, and whitish below; the head is oblong, with a blunt nose, reddish at the tip, hav-ing yellow foreteeth, and only two grinders on each side in the upper jaw. The female has eight teats. This species inhabit the deserts of Tartary and Siberia, as high as the Ural, Irtish, Oby, and Jenisei; are frequent in birch woods, and live in fissures of rocks, under stones, and in hollows of trees ; feeding chiefly on seeds, and on small animals of the same genus. They wan-der about in great flocks, migrating in the night ; hybernate in the winter, and are of a very chilly nature, so as to become torpid and fall asleep, in a round form, in cold nights.

38. M. Virginianus, the Virginian mouse, has a very hairy long tail, very thick at the base, but tapering gradually. The nose is pointed and black, ears pointed, limbs very slender, the color universally white.

MUSA (Antonius), an eminent Greek physician, who cured the emperor Augustus of a dangerous illness by bathing. He was the first who prescribed the use of the cold bath. The Romans erected a statue to his honor. He wrote two treatises, which are both extant; 1. De llerbft Botanica; and, 2. De Tuenda Valetudine.

MUSA, in botany, the plantain tree, a genus of the monoecia order and polyandria class of plants; natural order eighth, scitaminese. MALE CAL. a spatha, or sheath : COR. dipetalous ; the one petal erect and

quinquedentate ; the other nec-tariferous, concave, and shorter ; there are six filaments, five of which are perfect; one style; the germ inferior and abortive. Female hermaphrodite has the CAL. COR. filaments, and pistil of the male hermaphrodite, with only one filament perfect : the BERRY is oblong, and three-angled below. The most remarkable species are :

M. paradisaica, cultivated in all the islands of the West Indies, where the fruit serves the Indians for bread ; and some of the white people-also prefer it to most other things, especially to the yams and cassada bread. The plant rises with a soft stalk fifteen or twenty feet high; the lower part of the stalk is often as large as a man's thigh, diminishing gradually to the top, where the leaves come out on every side. These are often eight feet long, and from two to three broad, with a strong fleshy midrib and a great number of transverse veins running from the midrib to the borders. The leaves are thin and tender, so vhat where they are exposed to the open air they are generally torn by the wind ; for, as they are large, the wind has great power against them. These leaves come out from the centre of the stalk, and are rolled up at their first appearance ; but, when they are advanced above the stalk, they expand and turn backward. As these leaves come up rolled in this manner, their advance upwards is so quick that their growth may almost be discovered by the naked eye; and if a fine line is drawn across, level with the top of the leaf, in an hour the leaf will be nearly an inch above it. When the plant is grown to its full height, the spikes of flowers appear in the centre, which is often nearly four

feet long; and nods on one side. The flowers come out in bunches ; those in the lower part of the spike being the largest ; the others diminish in their size upward. Each of these bunches is covered with a sheath of a fine purple color, which drops off when the flowers open. The upper part of the spike is made up of male flowers, which are not succeeded by fruit, but fall off with their covers. The fruit, or plantain, is about a foot long, and an inch and a half or two inches diameter. It is at first green; but when ripe pale yellow. The skin is tough, and

within is a soft pulp of a luscious sweet flavor. The spikes of the fruit are often so large as to weigh upwards of forty pounds. The fruit of this sort is generally cut before it is ripe. The green skin is pulled off, and the heart is roasted in a clear fire for a few minutes, and frequently turned; it is then scraped, and served up as bread. Boiled plantains are not so palatable. This tree is cultivated on a very extensive scale in Jamaica. Plantains also fatten horses, cattle, swine, dogs, fowls, and other domestic animals. The leaves, being smooth and soft, are employed as dressings after blisters. The water from the soft trunk is astringent, and employed by some to check diarrhoeas. Every other part of the tree is useful in different parts of rural economy. The leaves are used for napkins and table-cloths, and are food for hogs.

MUSA SAPIENTUM, the banana-tree. This species differs from the preceding in having its stalks marked with dark purple stripes and spots. The fruit is shorter, straighter, and rounder ; the pulp is softer, and of a more luscious taste. It is never eaten green ; but when ripe it is very agreeable, either eaten raw, or fried in slices as fritters ; and is relished by all ranks of people in the West Indies. Both these plants were carried to the West Indies from the Canary Islands ; whither, it is believed, they had been brought from Guinea, where they grow naturally. They are also cultivated in Egypt, and in most other hot countries, where they grow to perfection in about ten months from their first planting to the ripening of their fruit. When their stalks are cut down, several guckers come up from the root, which, in six or eight months, produce fruit ; so that, by cutting down the stalks at different times, there is a constant succession of fruit all the year. In Europe some of these plants are raised by gentlemen, who have hot-houses capacious enough for their reception, in many of which they have ripened their fruit very well ; but, as they grow very tall, and their leaves are large, they require more room in the stove than most people are willing to allow them. They are propagated by suckers, which come from the roots of those plants which have fruited ; and many times the younger plants, when stinted in growth, also put out suckers. The fruit of this tree is four or five inches long, of the size and shape of a middling cucumber, and of a high, grateful flavor ; the leaves are two yards long, and a foot broad in the middle; they join to the top of the body of the tree, and often contain in their cavities a great quantity of water, which runs out, upon a small incision being made into the tree, at the junction of the

leaves. Bananas grow in great bunches, that weigh twelve pounds and

upwards. The body of the tree is so porous as not to merit the name of wood ; the tree is only perennial by its roots, and dies down to the ground every autumn. ‘ When the natives of the West Indies,’ says Labat, ‘ undertake a voyage, they make provision of a paste of banana, which, in case of need, serves them for nourishment and drink; for this purpose they take ripe bananas, and, having squeezed them through a fine sieve, form the solid fruit into small loaves, which are dried in the sun or in hot ashes, after being previously wrapped up in the leaves of Indian flowering reed. When they would use this paste, they dissolve it in water, which is easily done; and the liquor, thereby rendered thick, has an agreeable acid taste, which makes it both refreshingand nourishing. The banana is greatly esteemed, and even venerated, by the natives of Madeira, who term it the forbidden fruit, and reckon it a crime al-most inexpiable to cut it with a knife ; because, after dissection, it exhibits, as they pretend, a similitude of our Saviour’s crucifixion; and to cut the fruit open with a knife, is, in their apprehension, to wound his sacred image. Some authors suppose that the banana tree was that of the leaves of which our first parents made their aprons in Paradise.

MUSEUM, a hill near the citadel of Athens, so called, according to Pausanias, from Musseus, who used to retire thither to meditate and compose his religious hymns; at which place he was afterwards buried.

MUS./EUS, an ancient Greek poet, who was, according to Plato and Diodorus Siculus, an Athenian, the son of Orpheus, and chief of the Eleusinian mysteries instituted at Athens in honor of Ceres. According to others he was only the disciple of Orpheus ; but, from the great resemblance between his talents and those of his master, he was called his son. Musasus is one of the first poets who versified the oracles. He is placed in the Arundelian marbles, epoch 15, 1426, B. C., at which time his hymns are there said to have been received in the celebration of the Eleusinian mysteries. Laertius says that Musaeus not only composed a theogony, but formed a sphere for the use of his companions ; yet, as this honor is generally given to Chiron, Sir Isaac Newton supposes that he enlarged it with the addition of several constellations after the conquest of the golden fleece. The sphere itself shows that it was delineated after the Ar-gonautic expedition, which is described in the asterisms, together widi several other more ancient histories of the Greeks, and without any thing later; for the Argo was the first long ves-sel which they had built. Hitherto they had used round ships of burden, and kept within sight of the shore ; but now the princes of that country sailed rapidly through the deep, and guided their ships by the stars. Mussus is celebrated by Virgil in the

character of hierophant, or priest of Ceres, at the head of the most illustrious mortals who merited a place in Elysium. Here he is made the conductor of Ericas to the recess where he meets the shade of his father Anchises. The works which went undei

his name, like those of Orpheus, were by many attributed to Onomacritus. Nothing remains of them now, nor were any of his writings extant in the time of Pausanias, except a hymn to Ceres, which he made for the Lycomides. And as his hymns were likewise set to music, and sung in the mysteries by Musaeus himself in the character of priest, he thence, perhaps, acquired from after times the title of musician ; the performance of sacred music being probably at first confined to the priesthood in these celebrations, as it had been before in Egypt, whence they originated. However, he is not enumerated among ancient musicians by Plutarch.

MUSAGETES, a title of Hercules.

MUSCA, the fly, in zoology, a genus of insects belonging to the order of diptera. The mouth is furnished with a fleshy proboscis, and two lateral lips; but it has no palpi. This ne-nus is divided into two different sections: 1. Those with simple antennae. 2. Those which are furnished with a lateral hair or feather. Those have downy bodies, though scarcely perceptibly so ; and have either a lateral plume or feather on the antennas, or a simple hair on the side of the antennae. The pilosa; have a few hairs scattered upon their bodies, principally upon the thorax ; they have either a lateral feather or a lateral hair. Under these divisions are comprehended about 400 different species, as enumerated in Gmelin's edition of the Systema Naturae. See ENTOMOLOGY. Flies are lascivious troublesome insects, that put up with every kind of food. They multiply most in hot moist climates ; and so great was formerly their numbers in Spain that there were fly-hunters commissioned to kill them. The vapor of sulphur, or arsenic, destroys them ; and their numbers may be reduced by taking them in phials of honeyed water, or between boards done over with honey.' There are 129 species, principally distinguished by the pecularities in

their feelers.

MUSCA, a name given to such persons among the Romans as officiously thrust themselves into the company of their superiors and those who despised them, by finding means of getting admittance to entertainments without invitation, and without a welcome : so that musca? were the same as parasites, who were frequently by the Greeks termed Mviat. See PAKASITE.

MUS'CADEL, adj. \ Fr. muscat, muscadcl,

MUS'CADINE. \muscadin; Jtal. mosca—

tello, either from the fragrance resembling the nutmeg, nux tnoschata, or from nuisca, a tiy ; rlies being fond of these grapes. ††† Johnson. A kind of sweet grape, sweet wine, and sweet pear. He quafft off the muscartel,

And threw the sops all in the sexton's face.

Shaksj > etire,

MrscAtHNE, or MTSPADEL, a rich wine of the growth of Provence, Languedoc, Cividacl, &c. The method of making muscadine at Fronticnac is as follows : ††† they let the muscadine grapes grow half dry on the vine; as soon as they are gathered, they tread and press them immediately, and tun up the liquor, without letting it stand and work in the fat ; the lee occasioning its goodness.

MUSCHENBROECK (Peter do), a distin-

guished natural philosopher and mathematician, born at Utrecht about 1700. He was first professor of these sciences in his native university, and afterwards invited to the chair at Leyden, where he died full of honors in 1761. He was a member of several academies; particularly that of Sciences at Paris. He wrote several works in Latin, all of which show the greatest penetration. He was also very consummate in the knowledge of law. His course of natural philosophy was translated into English in 2 vols. 8vo.

MUSCI, mosses, one of the seven families or classes into which all vegetables are divided by Limn': in the Philosophia Botanica. The ancients took the moss of trees to be the effect of a disorder or discomposure of the texture on the bark ; or at most a kind of little

filaments arising from the bark : but the moderns find, by several observations, that mosses are all real and distinct plants, whose seed, being extremely small, is inclosed inlittlecapsulae ; which bursting of themselves, the seed is carried off by the winds; till, falling into the inequalities of the bark of trees, it is there stopped, takes root, and feeds at the expense of the tree, aj mouldiness does on bread, &c. What botanical writers strictly understand by the word moss is a class of plants appearing of an inferior rank to the common vegetables ; the less perfect genera of which have been supposed to be wholly destitute of flowers or seeds, or any thing analogous to either, and to consist of simple, similar, and uniform parts ; the genera a little above these have some diversity of parts, resembling those which serve other plants for fructification. The more perfect genera of the mosses not only consist of different parts, but have also their appropriated organs, containing a pulpy matter, which Incomes dry, and assumes the form of a fine pow-der, composed of granules, each of which is either a seed or granule of farina, serving for the propagation of the species. The imperfect mosses are distinguished from the others by their appearance to the naked eye; they are either in form of a fine lanucjo or down covering the surface of different bodies; or of slender tilaments, or foliaceous bodies, floating about in the water; or are filaments of a tougher texture, hanging down from the branches of old trees ; or little shrubs, or single horns, growing erect on the parched earth of mountains and heathy places ; or as broad and foliaceous bodies, spreading themselves over the dry bark of trees or rocks, without any pedicle or other support. The perfect kinds of mosses are found in the shape of small but regular plants, divided into several branches, and clothed with leaves : these are of various forms and structures ; some broad and thin, c>thers slender as hairs; some pellucid, others opaque ; some smooth, others hairy. From the ala' of these leaves in some kinds, and from the summit of the stalks in others, there arise htads of various figure and structure, but all unicajisular; some of these are naked, others covered with a calyptni or hood ; some stand on lon'T pedicles, and others are placed close to the stalks. These heads are called capsula-, and contain their seeds or farina, and their pedicles seta, in the mnia, hypna, In a. and polytricha,

&c. These capsules in some are covered with a calyptra; in others they are naked.

This tribe of piants, as well as the mushrooms, ferns, and sea-weeds, are still imperfectly known. Dillenius, professor of botany at Oxford, was the first who attempted an arrangement of them. In his Catalogus Plantarum circa Gissam, published at Frankfort in 1719, and afterwards in his Historia Muscorum, published at Oxford 1741, he divides the mosses into sixteen genera. This arrangement, however, includes the lichens, some of the fuci, and other plants which belong to very different families. The work, however, is valuable, in having introduced the knowledge of upwards of 200 plants, which were unknown before Dillenius : it is also of all his works the best executed, both for the descriptions and figures, and may serve as a model to such authors as intend to publish in detail the history of any particular family of plants. Micheli, in his Nova Plantarum Genera, published at Florence in folio, in 1629, divides the mosses into two sections, from the figure and situation of their flowers. These sections comprehend together sixteen genera, amongst which are improperly arranged several of the lichens and other sea-weeds. The discovery of the seeds of the mosses, though made by Dillenius in 1719, is claimed by Linne, who did not begin to write till 1‘735. In Ray’s method the mosses formed the third class ; in Tournefort’s they constitute a single genus, by the name of muscus, in the first section of the seventeenth class, which comprehends the mosses, mushrooms, and some of the algae or sea-weed, and is distinguished by the name of aspermae, or plants without seed ; the seeds of the mosses not having been detected by Tournefort. In the Linnaean they constitute the second order of the class cryptogamia, which contain all those plants in which the parts of the flower and fruit are either wanting, or not conspicuous. The characteristics are, 1. Antherae or tops without filaments or threads. 2. The male flower, constituted by the presence of the tops, placed apart from the female, either on the same or distinct roots. 3. The female flowers distinct and without any pistillum. 4. The seeds devoid of both lobes, or cotyledones, and proper coverings; so that they exhibit the naked embryo. This order is subdivided into eleven genera, from the presence or absence of the calyx, which on these plants is a veil or cover like a monk’s cowl, that is placed over the male organs or tops of the stamina, and is denominated calyptra, from the sexes of the plants, which bear male and female flowers, sometimes on the same, sometimes on distinct roots ; and from the manner of growth of the female flowers, which are sometimes produced singly, sometimes in bunches or cones. These distinctions are mostly borrowed from

Dillenius, whose merit in developing this part of the vegetable kingdom Linne acknowledges. The manner of seeding of mosses in general may be more clearly understood, from the description of that genus of them which has been traced through all its stages, and to which most of the others, though every genus has its distinct fructification in some respects, bear a very great general analogy. This genus is the hypnum. Th e species of this are very numerous and common ; but that particular one which was the subject of these observations is the short branched silky kin 1, common on old walls ; and called by that author in his history hypnum vulgare, sericum, recur-vum, capsulis erectis cuspidatis. The head of this “moss appears to the naked eye a small, smooth, brownish-yellow, oblong body, about a ninth of an inch long ; this is covered at its upper end with a membranaceous calyptra or hood, in shape resembling an extinguisher, or a funnel inverted. When this calyptra is taken off, and the head viewed with a microscope, the surface of it is seen to be ridged with longitudinal strite. The basis of the head is of a deep orange color, and more opaque than the rest ; and the top is bounded by an orange colored ring, swelling ou* something beyond the surface of the contiguous parts of the head. Good glasses show that in this head there are not wanting the parts essential to the fructification of what are usually called the more perfect plants. This ring is truly a monophyllous undulated calyx, within which arise sixteen pyramidal fimbriated stamina; these are of a pale greenish color, and are loaded with a whitish oval farina. The stamina all bend towards each other from their bases, and almost meet in a point at the tops. This is their appearance when the head is nearly ripe; and immediately under the arch formed by these stamina is a cylindric hollow pistillum, through which the farina makes its way, and is dispersed among the seeds in the head ; the fruit is a large capsule, filling every part of the membrane, which shows itself on the outside of the head, and in most places is contiguous to it; this capsule is filled with perfect and very beautiful seeds ; they are round, transparent when unripe, but afterwards opaque, and of a very beautiful green, which color they retain even when dried. When this head is first produced from the plant, the stamina are very slender, and stand erect ; the head is scarce any thicker than the stalk, and the calyptra covers it all over to shield the tender substance of the farina from external injuries. As the farina afterwards swells in the stamina, the seeds in the head increase also in bulk, and by their increase the head is more extended in thickness ; and the stamina are by these means separated farther and farther from each other at their bases, but bend inwards toward their points, so as to form a kind of arched covering over the stigma of the pistillum which is single ; and from hence the farina falls as it ripens

into the head, and impregnates the seeds. See BOTANY.

Musci is likewise the name of the fifty-sixth order in Linnaeus's Fragments of a Natural Me-thod. See BOTANY.

MUSCICAPA, the fly-catcher, a genus of birds belonging to the order of passeres. The bill is flatted at the base, almost triangular, notched at the upper mandible, and beset with bristles ; the toes generally divided as far as their origin. The species are very numerous. Dr. Gmelin enumerates ninety-two, Latham ninety-seven. Of these we shall only describe seven, *viz.* ••• '

1 . M. carolinensis, or caribonensis, the cat-bird, is somewhat bigger than a lark : length eight inches' ; bill black ; the upper parts of the body and wings of a deep brown; the under ash-colored : the crown of the head is black ; the tail blackish ; the legs are brown. This species is found in Virginia in the summer sea-son ; where they frequent shrubs rather than tall trees, and feed on insects: their cry resembles that of a cat, whenje the English name given by Catesby.

2. M. crinita, the crested fly-catcher, is about the size of a lark ; the head is crested, and of a dull green ; the hind part of the neck and back are of the same color ; the under parts from the chin to the breast of an ash-color, and thence to the vent yellow ; the legs are black. These inhabit Carolina and Virginia in summer ; build there, and depart in autumn.

3. M. flabellifera, the fan-tailed fly-catcher, is in length six inches and a half; the head is black, which color descends on the back part lower than the nape, whence it passes forward in a narrow collar to the throat ; the chin, throat, and sides of the neck, except where this collar passes, are white ; and over the eye is a white streak like an eyebrow : the upper parts of the body are olive-brown ; the under parts yellowish rust, growing whitish towards the vent ; the tail is longer than the body ; the two middle feathers black ; the others are white ; the legs are dusky. This species inhabit the south isle of New

Zealand, where they are seen constantly hunting after insects. They fly always with their tails in shape of a fan. They are easily tamed, and will then sit on any person's shoulder, and pick off the flies. They have a chirping kind of note, and are called by the natives diggo-wagh-wagh.

4. M. grisola, the spotted fly-catcher, is about five inches three quarters long. The head is large, of a brownish hue, spotted obscurely with black ; the back is of a mouse-color; the wings and tail are dusky ; the breast and belly white ; the throat and sides under the wings dashed with red ; the legs and feet are short and black. It is a bird of passage ; appears here in spring ; breeds with us, and departs in September. It builds its nest against any part of a tree that will support it, often in the hollow caused by the decay of some large limb, hole in a wall, &c., also in old posts and beams of barns, and returns to the same place season after season. It lays four or five pale eggs marked with reddish. It feeds on insects, and collects them on the wing. When the young can fly, the old ones retire with them into thick woods, where they fro-lic among the top branches ; dropping from the boughs often quite perpendicular on the flies that sport beneath, and rising again in the same direction. They will also stand on the top of some stake or post, whence they spring forth on their prey, returning still to the same stand for many times together. They feed also on cherries.

5. M. Pondiceriana, the Pondicherry or Coromandel fly-catcher, is rather bigger than a sparrow. The general color of the upper parts is a cinereous grey ; the throat, breast, and belly, white ; the legs black. It inhabits the coast of Coromandel, where, fcom the sweetness of its song, it is cilled the Indian niq-litingale.

C. M. rubra, the summer red bird of Catesby, is u most beautiful species, somewhat bigger than a sparrow : the bill is yellowish, the eyes are black, the legs dusky, the male is wholly of a scarlet color, except the tips of the quill-fea- thers, which are of a dusky red ; the color of the female is brown tinged with yellow. They inhabit Carolina and Virginia in summer.

7. M. rubricollus, purple-throated fly-catcher, is about the size of a blackbird. The whole plumage is black, except the chin, throat, and fore part of the neck, on which is a large bed of beautiful crimson, inclining to purple ; the legs are black. These birds inhabit Cayenne and other parts of South America, where they are found in flocks, and precede, in general, the toucans in their movements. They feed on

fruits and insects, are lively and always in action. They for the most part frequent the woods, like the toucans ; and where the first are found the others are seldom far off.

MUS’CLE, n. s. -\ Fr. muscle; Ital. rmu—

MUS’CULAR, adj. f CM/O ; Lat. mtuadus . A

Mus’cuLARiTY,n.i. ˆfleshy fibre, or bundle

MUS’CCLOUS, adj. J of fibres, enclosed by a

common membrane : muscular means relating

to or performed by the muscles : musculous,

abounding in muscles or muscular strength :

muscularity, the state of having muscles, or being

strong in the muscles.

The uvea has a musculous power, and can dilate and contract that round hole, called the pupil of the eye, for the better moderating the transmission of light. More.

The guts of a sturgeon, taken out anil cut to pieces, will still move, which may depend upon theii great thickness and muicularity. Grt\c.

By the mutcular motion and perpetual flux of thfc liquids, a great part of the liquids are thrown out of the body. Arbvthnot.

The instruments of motion are the muscles, the fibres whereof, contracting themselves, move the several parts of the body. Lotke.

With eye askance

I view the mutcular proportioned limb Transformed to a lean shank. CWprr.

MVS'CLE, n. s. Fr. mouth ; Lat. musndut. A bivalve shell-fish.

Of shell-fish, there are wrinklers, limpets, cockles, and muscles. Carew'i Surwv cf Cornwall.

It is the observation of Aristotle, that oysters and muscles grow fuller in the waxing of the moon.

Haketrill.

Two pair of small muscle shells were found in a limestone quarry.

MI:SCLE, in zoology. See MYTILUS.

MUSCLE, in anatomy. See ANATOMY. The motion of the muscles of animals has been thought a matter of such importance that an annual lecture upon it was founded by Dr. Croone, one of the original members o Koval Society of London. The investigation of the" subject has accordingly exercised the pens many very learned and ingenious men ; notwithstanding which it still remains involved in much obscurity. Dr. Plane of the Royal Society con-s.ders as muscles, not only those large masses < flesh which compose so great a part of t of the body, but likewise all the minuter orˆ-.r subservient to circulation, nutrition, and secre-

tion ; since, not only the heart itself, but the whole vascular system and the intestines, owe their action to certain powers of irritability and contractility peculiar to muscular fibres. The first and most obvious considerations with respect to the muscles is the regular organisation of their fibres in a parallel direction. In this they are distinguished from every other matter of a fibrous structure, whether

vegetable or mineral, by a certain degree of moisture, tenacity, and elasticity, entirely peculiar to themselves. The fibres of the muscles visible to the naked eye are composed of others discoverable by glasses, and these of others of fibres still smaller; neither has any person been able to discover the ultimately fine fibres of a muscle, which are not composed of others. Some have indeed imagined that they have been able to do this, but their observations have been found fallacious ; and it is now universally allowed that the fibres are divisible beyond what the best assisted sight can trace, and are to all appearance uniform. In this regular and fibrous organisation they resemble the crystals of salts, many of which are found composed of fibres more and more fine, and which, like those of the muscles, can never be ultimately traced. It is evident that the cause of muscular motion cannot be referred to mechanism, which is itself only a secondary principle. Some have had recourse to a fluid conveyed into the fibres of muscles, by which they were swelled, and thereby shortened. One of the most plausible of these hypotheses supposes this fluid to be the blood ; but this is plainly a petitio prin-cipii, for in order to set the blood in motion muscular motion is necessary. Other fluids have been supposed to have this effect ; but even the existence of these has not been proved, and in-deed the most solid objections might be brought against all the theories that have hitherto been invented.

Dr. Blane considers muscular motion as referrible to an original law of animated matter, whereby its particles are endowed with an attractive power, for which no cause can be assigned, any more than for gravitation, cohesion, or chemical affinity. If the shortening of a muscular fibre, said he, depend on this increased power of attraction between its particles, the effect will be to add to the power of cohesion in the fibre; and to determine this he made the following experiment : ••• Having taken the flexor muscle of the thumb of a man newly dead, while yet warm and flexible, he appended a weight to it, continually augmenting it until the muscle broke ; and this he found was done when 26 Ibs. had been ad-ded : yet a living man of the same apparent strength and age could with ease lift a weight of 38 Ibs. by the exertions of the same muscle. ‘ It is farther in proof of this fact,’ he adds, ‘ that in the case of a violent strain, from muscular contraction in the living body, it is the tendon that gives way ; whereas we have seen that in the dead body the muscle is the weaker of the two. It is also well known that, in cases of over exertion, the muscular fibres themselves do not pive way, though the strongest tendons, such as trie tendo Achillis, and even bones, such as the knep-nan: are broke by their living force, which,

in such instances, must be many time? greater than the strength of the dead fibres. There is a case related in the Philosophical Transactions by Mr. Amyand, wherein the os humeri was broken by an exertion of the muscles. Every one has heard of fractures happening from vary slight accidents. These occur most probably from a jerk of the muscles concurring with the external violence. The sensible increase of hardness in a muscle, when in a state of contraction, may also be considered as a proof of an increased attraction of its particulars to each other at that time.'

1 Contraction of a muscle produces no change in its density, and animal life differs from inanimate matter in this respect, as well as in most of its other properties and laws. One purpose in nature for muscles always preserving the same density may be, that, as some of them act in confined cavities, inconveniences might arise from their occupying more space at one time than at another. In the extremities of crustaceous animals, for instance, which are filled with muscles, a change of density would be apt to burst them. Another circumstance, in which the contractions of muscles differ frcai simple elasticity is, that the former, howe\er frequent and violent, does not produce any heat, as collision and tension are known to do. This may admit of some cavil with regard to animals of warm blood ; for one of the theories with regard to animal heat is, that it arises from the perpetual vibration of muscular fibres, particularly those of the vascular system ; but this is not the case with respect to animals of cold blood, in which the actions of life are equally vigorous. The principal phenomena, therefore, of muscular motion are, the shortening of the fibres, the lateral swell, the increase of cohesion and hardness, and the unchanged density and temperature. As there is no alteration in the density of a muscle, in passing from relaxation to contraction, this change cannot consist in the approximation of the integrant parts of the fibres, but must depend on some other circumstances in the intimate dispositions of the particles. In attempting to conceive in what this consists, the following explanation may be offered. It is probable that the regular structure of solid bodies depends on the polarity and shape of their integrant parts. Now all bodies, except such as are spherical, must have a long and a short axis ; and let us imagine the fibres of muscles to be composed of spheroidal particles, we may then conceive relaxation to consist in their being disposed with their long axis in the line of their fibres, and contraction to consist in their short axis being disposed more or less in that direction. This will not only account for the decurtation and uniform density, but for the lateral swell, and also for the increased hardness and

cohesion; for though the particles do not approach or recede, as in bodies simply elastic, yet their power of attraction will be increased by their centres being brought nearer, and by being applied to each other by more oblate surfaces. This hypothesis accords with what has been before proved concerning the unchangeable density; for what is lost in one dimension is gained in anotVr ; ruid

he cause for there being no increase in temperature depends probably on the same circumstance by which the density is preserved unaltered.' But it; the prosecution of this subject we are involved in the universal difficulty. This is the action of stimuli, by which the muscles are exerted to contraction, and upon which all the phenomena of life depend.

The Dr. concludes his subject with considering the muscles as mechanical powers. ' As they constitute the strength of animals, it may be proper to consider the relation of their strength to their bulk, and the relation of the bulk and strength of the body to the density and cohesion of its own materials; and to the bulk, density, and cohesion of the external inanimate bodies with which it is conversant. It has been demonstrated by Galileo that in similar unequal bodies of a cylindrical or prismatic shape, such as the limbs of animals nearly are, the ratio of their efforts to break by their own weight is in the quadruplicate ratio of their lengths; but that the resistance they make to the same force is only in the triplicate ratio of their lengths. It follows from this that, in order to endow the limbs of animals with the same relative force, it is not only necessary that the bones should possess an increased proportion of thickness in order to give an adequate increase of what may be called the dead strength ; but a similar increase of living strength is necessary by a suitable addition of muscular power in order to keep pace with the increased size of the bones. Now we observe, in fact, that in the large sized animals, such as the bull and the elephant, the thickness both of their bones and muscles becomes greater in proportion to the length of their limbs than in the smaller animals, and they are therefore of a less elegant

form. But nature has not carried this so far as to compensate for the disadvantage arising from the increase of size ; for the greater animals have not the same proportional strength, in relation to their bulk, that the smaller animals have. It has been computed that a flea can draw from seventy to eighty times its own weight, whereas a horse cannot with case draw more than three times his own weight. This disproportion between size and strength is very observable in different individuals of the human species ; for tall men are not muscular, even in the simple proportion of their stature.' Considering the manner in which the muscles act upon the bones into which they are inserted, and considering the bones as levers, the muscles seem to act upon them at a very great disadvantage, being always inserted much nearer the fulcrum than the weight to be raised. Thus the two muscles of the arm, named biceps and brachia;us internus, in order to support in the hand a weight of one pound, with the fore arm at right angles to the humerus, must exert a power equal to ten pounds. Another circumstance which tends to waste the power is the obliquity with which they are inserted into their bones ; so that the greater part of the force is expended in pressing one bone against another at the articulation, and only a small part of it in making the flexures and extensions. These disadvantages, however, are compensated by a number of conveniences.

which could not have been obtained on any other plan. We must distinguish between those actions which consist ir. pressure and those which depend on percussion ; for, as the momentum of this last depends on velocity, it is evident that there must be a great advantage from the insertion of the tendon being near the centre of mo-tion, as greater velocity with less expense of contraction will thus be communicated to the extremity. The muscles, for instance, which are attached to the olecranon, in performing those actions with the hand which require rubbing, act with a disadvantage exactly proportional to the inequality of the distance from their insertion to the joint of the elbow, and that from the same joint to the hand. This is an act of pressure. But in the case of percussion, as in the act of using a hammer, there is an evident advantage resulting from the velocity communicated to the extremity ; for in order to have produced the same velocity, with the insertion at a greater distance from the centre of motion, a much greater degree of contraction would have been necessary, and our author shows that fatigue principally depends on a contraction of the muscles. ' If any one,' he says, ' will take the trouble of comparing the fatigue of the biceps muscle, in bearing a weight in the hand with the elbow joint bent to a riˆht angle, with that of

bearing the same weight for the same length of time with the joint at an acute angle, he will be sensible how much the degree of fatigue depends on the extent of contraction ; and, by attending to the relative situation of muscular fibres, it will ap-pear that Nature, in distributing the fibres of muscles obliquely, lias had it in view not only to increase their number, but to save contraction.' In considering the actions of the various muscles in producing the different actions of the body, we find scarcely one produced that can be called direct. In some instances we find two muscles, or two sets of muscles, co-operating, so that the motion effected by them shall be in the diagonal of their direction. This is the case of the oblique muscles of the abdomen in some of their actions, and of the intercostal muscles in all theirs. Sometimes different portions of the same muscle combine in like manner to produce a similar effect ; and in all the long muscles, however simple their origin and insertion may be, there is an internal obliquity of their fibres with regard to one another; for these do not run from end to end, but there are pr.rts of the tendon running into the belly of the muscle, so as to divide it into penniform and rhomboidal portions. This distribution of the fibres takes off from the length ; but, as it takes place in those cases where the oiigin and insertion arc at a considerable distance, this can be afforded; and this, as well as the waste of power in consequence of oblique action, is more than compensated by the increased strength from the fibres being multiplied; for, in consequence of this structure, there is an extent of tendon afforded sufficient for the insertion of a greater number of fleshy fibres. The Dr. illustrates this principle in the mechanism of muscular action from the example of fish ; a species of animals which exert greater muscular powers than any

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other. ‘ The muscles of most fish,’ says he, ‘ consist of regular series of oblique short fibres, forming those strata which every one must have observed in their muscular substance. Their motions are more simple and limited than those of land animals, but much more vigorous ; for a fish in the sea has to make its way through a medium about 1000 times more dense than air, and with more rapidity than those which inhabit the land. Nature, therefore, instead of giving them muscles whose fibres would run straight from one end of their body to the other, has multiplied their numbers by distributing them into short and oblique portions. I have seen the sword of a swordfish sticking in a plank which it had penetrated from side to side ; and when it is considered that the animal was then moving through so dense a medium, and in the same direction with the ship, we must form a high conception of its muscular power.’

For tables of the various muscles of the human body, with their various uses, see our article ANATOMY.

MUSCLE SHOALS, an expansion of the river Tennessee, about 250 miles from the mouth of the river, and about the same distance from the whirl, or suck, where the river branches through the Great Ridge, or Cumberland Mountain. The expansion extends about twenty-five miles, is two or three miles wide, and receives its name from the number of soft shell turtles and fresh water clams found here.

MUSCULUS (Andrew), a Lutheran divine, who was professor of divinity at Francfort on the Oder, in the sixteenth century, and wrote several books on theology. He died in 1580.

MUSCULUS (Wolfgang), a learned protestant divine, born at Dieuze in Lorraine, in 1497. He joined the Benedictines, and was esteemed a good preacher ; but, having embraced Luther’s doctrines, was obliged to fly to Strasburg, where he married. After this he suffered great hardships, and was obliged to work for his bread ; but at length was made ministering deacon of the chief church in Strasburg; whence he removed, in 1527, to Augsburg, where he prevailed on the magistrates to abolish the popish worship. When Augsburg was taken by Charles V. he retired to Berne, where he was appointed professor of divinity, and died in 1563. He was a man of deep erudition, and translated several works of the Greek fathers into Latin. He also published

comments on the Scriptures.

MUSCULUS, a military machine, made use of f>y the Romans to cover and protect the soldiers while they approached and undermined the walls of besieged places, or filled the ditches. It seems to have resembled the testudo in form, but was smaller in size. See TESTUDO.

MUSE, n. s. & v. n. \ Fr. muse, muser; Belg.

MUSE'FUL, n. s. } muse, muysen; Teut. wins ; Span., Ital., Port, and Lat. musa; Gr. fiHaa. Anciently a goddess, of whom there were nine, supposed to preside over poetry and the fine arts (see below) : hence the power or genius or poetry ; deep thought or attention : to muse is, to ponder; think deeply; be engrossed or absent in mind ; to be lost in wonder : museful, thoughtful ; wrapt in silent thought.

Farisees harden the puple musynge of hym these thingis, and the princis and farisees senten ministres. to take him. Wiclif. J<m. 7.

My mouth shall speak of wisdom ; and my heart muse of understanding. Psalm xlix. 3.

All men mused in their hearts of John, whether he were the Christ or not. Luke iii. 15.

Her face upon a sudden glittered, so that I was afraid of her, and muted what it might be.

2 Esdras x. 25.

If he spake courteously, he angled the people's hearts ; if he were silent, he mused upon some dangerous plot. Sidney.

The tidings strange did him abashed make, That still he sat long time astonished As in great muse, ne word to creature spake.

Faerie Queene.

St. Augustine, speaking of devout men, noteth, how they daily frequented the church, how attentive ear they give unto the chapters read, how careful they were to remember the same, and to muse thereupon by themselves. Hooker.

Caesar's father oft,

When he hath mused of taking kingdoms in, Bestowed his lips on that unworthy place, As it rained kisses. ithakspeare.

Why hast thou lost the fresh blood in thy cheeks ; And given my treasures and my rights of thee, To thick-eyed musing and cursed melancholy ? Id.

Do not muse at me, I have a strange infirmity. Id. Macbeth.

The sad king

Feels sudden terror and cold shivering, Lists not to eat, still muses, sleeps unsound.

Daniel. Begin, my muse. Cowtey.

He was filled

With admiration and deep muse, to hear Of things so high and strange. Milton.

The muse-inspired train Triumph, and raise their drooping heads again.

Waller. On these he muied within his thoughtful mind,

Dry den.

We muse so much on the one, that we are apt to overlook and forget the other. Atterbury't Sermnu.

Lodona's fate, in long oblivion cast, The muse shall sing, and what she sings shall last.

Pope.

Man superiour walks Amid the glad creation, musing praise, And looking lively gratitude.

Thomson's Spring.

But Nith maun be my muse's well, My muse maun be thy bonnie sel ; On Corsincon I'll glowr and spell,

And write how dear I love thee. Burn. Now waving grain, wide o'er the plain,

Delights the weary fanner ; And the moon shines bright, when I rove at night To muse upon my charmer. Id.

I again perceive

The soothing influence of the wafted strains, And settle in soft musings as I tread The walk, still verdant, under oaks and elms, Whose outspread branches overarch the glade.

Cowpe* ###

Me now, of these

Deep musing, high ambitious thoughts inflame Greatly to serve my country, distant land, And build me virtuous fame : nor shall the dust Of these fallen piles with show of sad decay Avert the good resolve. fiyroji.

MUSEUM.

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MUSEIA, Grecian festivals in honor of the muses, celebrated with games every fifth year, particularly by the Thespians. The Macedonians also observed a festival of the same name in honor of Jupiter and the Muses, which lasted nine days, and was celebrated with stage plays, songs, and poetical compositions.

MUSES, deities among the Pagans, supposed to preside over the arts and sciences. Hence it was usual for the poets, at the beginning of a poem, to invoke the aid of these goddesses. The Muses are said to have been originally only singers and musicians in the service of Osiris, or the great Egyptian Bacchus, under his son Orus ; but in succeeding times they were deified, and called the daughters of Jupiter and Mnemosyne, or Memory. Diodorus Siculus says that Alcman of Messene, a lyric poet, who flourished in the twenty-seventh Olympiad, 670 years B.C., makes them the daughters of Uranus and Terra. It has been asserted by some ancient writers, that at first they were only three in number; and that their names were Melete (meditation), Mneme (memory), and Aoede (song or music) ; but Homer, Hesiod, and other mythologists, admit of nine; and Hesiod, in his Theogony, names them all. Each of them presides over some art or

science, as music, poetry, dancing, astronomy, 8tc. By some they are called virgins, because the virtues of education appear unalterable ; they are called Muses, Minrat, from /*a►►, to enquire or explain mysteries, because they taught things the most curious and important.

In a relievo, on a sarcophagus in the Capito-line Gallery at Rome, the nine Muses are represented in the following order : ►►►

Clio is first, and distinguished by the roll or book in her hand, or with the longer bolder pipe (Hor. i. od. 12, v. 2). Her office was to celebrate the actions of departed heroes, though Statius makes her descend to lower functions, from the old notion that every thing penned in hexameters was an epic poem. Stat. 1. Sylv. 2. v. 10. Thalia was the muse of comedy and pastorals (Virgil, Eclogue 6, v. 2), and is distinguished by the comic mask in her hand, and her pastoral crook. Terpsichore has nothing to distinguish her. Ausonius gives her the cithara. On the medals of the Pomponian family, three muses have stringed instruments in their hands, but we do not know them from one another ; and are besides used to call the cithara, barbiton, and testudo by the common name of lyres. These three muses are, in the relievo, the third, or Terpsichore, and the fifth and seventh, which appear to be Erato and Polyhymnia; though that cannot be determined till the names and shapes of the stringed instruments come to be better known.

Euterpe presided over music, and played on two pipes (tibiae) at once, as in the remarks before Terence's plays. By these pipes she is distinguished, though sometimes she holds the fistula or calami, in her hands, and is so described by Ausonius. Hor. i. od. 1, v. 33. Erato, who presided over the amorous kinds of poetry, is neatly attired and looks pretty though thoughtful. She isrepresented at times pensive, VOL. XV.

but in other instances full of gaiety, as she appears on gems; both which characters, though directly opposite, suit with the ever-varying moods of lovers, and consequently are proper to their patroness. Ovid invokes Erato pleasantly enough in his Art of Love, and likewise in his Fasti for April, which among the Romans was considered as more peculiarly the lover's month. But Virgil appears to invoke her, in his JEneid, before a field of battle, with less propriety, unless indeed it was because the war was occasioned by a woman.

Calliope is called by Ovid the chief of the muses ; and by Horace Regina, as skilful on all instruments. The tables in her hand mark her

distinguishing character, which was to note down the worthy actions of the living. The books in ancient times somewhat resembled the rolls in the offices for old records ; and the form now in use for books was then only used for tablets (pugillares) or pocket-books, called by Catullus pugillaria, and by Ausonius pugillar bipatens. Polyhymnia is specified by some stringed .instrument in her hand, perhaps what the Romans called the barbiton, for which we have no name. Urania presided over astronomy, and is distinguished by the celestial globe at her feet and the radius in her hand. In statues the globe is sometimes in her hand, and sometimes placed on a column before her. Melpomene was the muse of tragedy, and was held, in fact, to preside over melancholy subjects of all kinds. She is distinguished by the mask on her head, which has occasionally been placed so far backward that it has been mistaken for a second face, as may be seen in Montfaucon 1. pi. 59.

The palm-tree, the laurel, together with all the fountains of Pindus, Helicon, Parnassus, Sec., were sacred to the muses. Sometimes they were depicted as dancing in a chorus, probably to intimate the near and indissoluble connexion existing between the liberal arts and sciences.

MUSE'UM, n. s. Gr. /►►8(mov. First applied to a temple of the Muses at Alexandria ; a repository of learned curiosities.

It is not unfrequent with us to speak of cabinets of animals, cabinets of birds, of fishes, reptiles, and other similar articles, as a mode of expressing such an assemblage of natural history as may not be of sufficient importance to deserve the epithet of a museum, ˆr-
►►►"►►► ""*►►►

MUSEUM originally signified a part of the palace of Alexandria, which took up at least one-fourth of the city. This quarter was so called on account of its being set apart for the muses and the study of the sciences. Here were lodged and entertained the men of learning ; who were divided into companies or colleges, according to the sciences of which they were the professors; and to each of these houses or colleges was allotted a handsome revenue. The foundation of this establishment is attributed to Ptolemy Philadelphus, who here placed his library. Hence museum is now applied to any place' set apart as a repository for things that have an immediate relation to the sciences.

MUS.ELM ASHMOITAN, a noble building at Oxford, erected at the expense of the university, at the west end of the theatre, on which side it

has a magnificent portal, sustained by pillars of the Corinthian order. The front, which is to the street, extends about sixty feet, where there is this inscription over the entrance in gilt characters, Museum Ashmoleanum, schola naturalis historiae, officina chymica. It was begun in 1679, and finished in 1683, when a valuable collection of curiosities was presented to the university by Elias Ashmole, esq., which were the same day deposited there ; several accessions have been since made to it ; among which are hieroglyphics and other Egyptian antiquities, an entire mummy, Roman antiquities, altars, medals, lamps, &c., and a variety of natural curiosities.

MUSEUM, BRITISH. The British Museum, as the only open literary establishment in London, deserves our particular notice. To the disgraceful cupidity which marks the conduct of the age, our literary and even religious temples, like those of Jerusalem, are occupied by ‘ money changers,’ who watch the gate like Cerberus, and like him are only to be passed by a bribe : not so this great national establishment, where persons cf all ranks in society are freely admitted on merely giving their names ; and, although upwards of two thousand visitors have been received in the course of five or six hours, yet no comparative injury has resulted to any of the curiosities it contains.

The building in which our national collections are deposited is situated in Great Russel Street, Bloomsbury, and was formerly called Montagu House, on account of its having been the residence of the dukes of Montagu. It was built by Ralph, the first duke of that title, in the reign of Louis XIV., under the direction of Peter Puget, a celebrated French architect, who came from Paris for the purpose. The principal building, which is on the north side of a spacious quadrangle concealed from the street by a lofty brick wall, is 216 feet in length, and fifty-seven feet high. The two wings are appropriated to the residence of the officers of the establishment. In th.i new building, now in progress, one of the wings will be devoted to the use of the

library bequeathed by George III., which is very extensive. In the old edifice the exterior is of no positive order of architecture ; but, in the interior, the hall is spacious, the staircase ample, and the rooms not only lofty, but the ceilings of several of them are painted by Rousseau and Charles de la Fosse. The great staircase, the decorations of which have been recently restored, was painted by these two artists. The ceiling, which represents Phaeton petitioning Apollo for leare to drive his chariot, was painted by de la Fosse, who was eminent for the beauty and chasteness of his coloring; the landscapes and architectural decorations were by Rousseau, whose skill in perspective is perpetuated in many buildings in Paris, as well as in this staircase.

The British Museum is rich in MSS., printed books, sculpture, and the curiosities of nature and art ; the collection of manuscripts is said to be the most numerous and most valuable of any in Europe. It was commenced by Henry VIII. who was anxious to found a royal library, and on the suppression of the religious houses purchased

such manuscripts as Leland and others had rescued from the spoils of the monasteries ; this library, which was considerably increased by his successors, continued to be kept in one of the royal palaces until the reign of George II., who presented it to the British Museum.

The Harleian MSS. are a collection formed by Harley, lord Oxford, and increased by his son ; they are bound up in 7639 volumes, and include, besides distinct treatises, nearly 40,000 original rolls, letters patent, signs manual, charters with their confirmations, warrants, deeds, and other instruments connected with the history or topography of the country. Among these there is a finely illuminated copy of Hardyng's Chronicle, much more perfect than Grafton's edition. In this copy, Hardyng, who served Hotspur, and was with him in all his battles, has inserted the letter of defiance sent to king Henry IV. by the earl of Northumberland, his son Henry Hotspur, and his brother the earl of Worcester, previous to the battle of Shrewsbury. The library also contains a very old copy of William of Malmsbury's elaborate treatise de Gestis Re-gum Anglorum, which was formerly preserved with the most religious care at Rochester; several copies of the Dunstable Chronicle, one of which is beautifully illuminated, and another adorned with the blazon of the arms of several emperors and kings. The library is rich in heraldic collections, and includes genealogies and memoirs of most of the British monarchs, a large collection of royal letters and mandates, and a curious volume which formerly belonged to lord treasurer Burleigh. It contains a register of

the grants, &c., which passed the privy seal, signet, or sign manual during the reigns of Edward V. and Richard III., including 2378 distinct documents. There are also in this collection several volumes formerly belonging to Sir Simond d'Ewes, the Suffolk antiquary, Stow the historian of London, Mr. Charles the Lancaster herald, and the MSS. of Fox the martyrologist. This valuable collection of MSS. was purchased by government for the sum of ––10,000, and it is much to be regretted that the printed books belonging to the Harley library were not purchased at the same time. They were sold to Osborne the bookseller for ––l 3,000, which was ––5000 less than the binding had cost the earl of Oxford.

The Cottonian collection of MSS. is the next in number and value, founded by Sir Robert Cotton, the friend of Camden, Lam bard, and other learned antiquarians of that period ; such was the avidity with which he collected books, and the attachment he felt for them, that when he fell out of favor with Charles I., in consequence of his amanuensis having copied a tract which was in his library, written by Sir Robert Dudley, duke of Northumberland, at Florence, in 1613, he was shut from his books, he declared 'that they had broken his heart who had locked up his library from him ;' and a short time before his death he addressed a memorial to the privy council, stating that it was the cause of his mor-tal malady. The obnoxious tract was entitled Propositions for his Majesty's service to bridle the impertinency of Parliaments; but it was cir-MUSEUM.

culated under the new title of A Project how a Prince may make himself an absolute Tyrant

The library, which originally consisted of 958 volumes, was, by a fire, in 1731, reduced to 861, of which 105 were damaged bundles in cases ; the number of articles, however, are upwards of 26,000. The fire took place when the library was deposited in a house in little Dean's-yard. The books which were removed to the British Mu-seum, in 1753, are arranged in fourteen presses, over which are placed the busts of the twelve Csesars, with Cleopatra and Faustina. In this collection there is the original Magna Charta, which king John signed at Ruunymede, together with the original copy of the articles preparatory to the signing of the great charter, with the seal perfect ;

the latter was presented to the Museum in 1769 by earl Stanhope.

The Lansdown MSS., purchased pursuant to a vote of parliament of the marquis of Lansdown, in 1807, for the sum of ––4325, contain the Burghley Papers, in 122 volumes, including one of Charters and other documents of an early date; and the Caesar and Rennet papers, formerly belonging to Sir Julius Caesar, judge of the admiralty to queen Elizabeth, and to Dr. White Kennet, bishop of Peterborough. They are bound up in 1245 volumes, and are rich in original letters, and historical, biographical, and heraldical documents.

The collections of Sir Hans Sloane and Dr. Birch are also large ; that of the former, containing 4100 volumes, principally on physic, natural history, and natural philosophy, with several journals of voyages, and some oriental MSS. Those of Dr. Birch, many of which are copies of valuable papers in private collections, are, in number, 337, chiefly on history, biography, divinity, and literature.

The Hargrave MSS., purchased in 1813, consist of 499 volumes, which are almost exclusively devoted to law. The MSS. of Dr. Burney, which, together with his library and printed books, were purchased for ––13,500, contain the most complete and valuable copies of Homer's Iliad, a series of the Greek orators, the Greek Gospels of the tenth and twelfth centuries, and many other classical works.

These are the principal collections of MSS. ; they are, however, far from iucluding all that are deposited in the Museum, as many have been added by gift, bequest, or purchase, among which are twenty-four volumes of MSS., principally oriental, belonging to Brassey Halhed, esq. M. P. A collection of MSS. and ––– rolls, consisting of sixty-two articles, relating to Kent, purchased of Mr. Hasted, the historian of the county. Fifty-seven volumes of public acts, &c., relating to the history and government of England from the year 1103 to 1608, collected by Thomas Rymer, but not printed in his Foedera. Sixty-four volumes of rolls of parliament, which, together with Rymer's papers, were presented by the house of lords. Forty-three volumes of Icelandic MSS., presented by Sir Joseph Banks. Forty-one volumes, containing the decisions of the commissioners for settling the city estates after the fire of London, presented by Thomas Cowper, esq. A collection of forty-seven volumes, relating to the history of Ireland, presented by the Rev. Jeremiah Milles, dean of Exeter. Sir William Musgrave's MSS., forty-four volumes, thirty-two of which consist of an obituary, the rest being a collection of biographical adversaria, autographs, original warrants, catalogues of portraits, &c., which were bequeathed by the baronet.

The MSS. of the Rev. William Cole, M.A. This gentleman, although a clergyman of the established church, was a rank and intolerant Catholic ; his MSS., which are principally topographical, are interlarded with so many coarse and pointed personalities, that, in bequeathing them to the museum, he ordered they should be sealed up, and not opened until thirty years tfier his death. Mr. Cole had originally written only on one side of his MSS., but economy afterwards prompted him to fill up the other, so that the volumes contain the most singular admixture of subjects ; thus, on the cartulary of some monastery, we frequently find a receipt for making good soup, an entry respecting a servant, a tirade against Wilkes and liberty, the price of hay and corn at Cambridge market, or the number of the last lottery ticket he had purchased. Thirty-eight volumes of MSS., and nine of drawings, relating to the history and topography of Sussex, by Sir William Burrel, to which John Fuller, esq., of Rose Hill, has added several collections on the same subject, made by the Rev. William Hayley, of Brightling. Twenty-seven volumes of music, by the old composers, presented by James Mathias, esq.; and twenty-four volumes on the history of this delightful science, which, with a large collection of printed books, were bequeathed by Sir John Hawkins : there are also several other MSS. presented by Mr. Cracherode, Dr. Askew, and others.

The library of printed books, though by no means complete, is very extensive, and is, perhaps, the richest in the world, not only in early ty-pography, but in curious works of a more recent date. His majesty, George III., presented a most valuable collection of pamphlets, relating to the civil wars, which had been commenced by Charles I., and prosecuted by him, even when compelled to quit London, and seek refuge, when he could no longer resist the power which so long threatened him, in the country. The library of printed books, belonging to Dr. Bur-ney, is particularly valuable ; it contains a collection of newspapers, from the year 1603, until the time of his death, in 1817. This collection, which is by no means complete, extends to several thousand volumes. The collection of materials for a history of the stage, by the same learned gentleman, amounting to between 300 and 400 volumes, is valuable. The collection of prints is large, and includes the finest specimens of ancient arts.

In sculpture, the British Museum is particularly rich. The Townley collection, which was formed by Charles Townley, esq., during a residence of many years at Rome, consists of numerous splendid terracottas and marbles. Several line pieces of ancient sculpture, formerly belonging to Sir Hans Sloane, Mr. Burke, and other collectors, have been added. There is a

fine has relief, representing the Apotheosis, or deification of Homer, which for many years adorned the Colonna palace at Rome ; a colossal head of Hercules, dug up at the foot of Mount Vesuvius, where it had been buried by the lava. Independent of the Egyptian marbles, and the Elgin collection, there are in the museum, forty-six terracottas, forty-five Roman sepulchral antiquities, and 225 Greek and Roman sculptures. Among the Egyptian antiquities are two very fine mummies, and fifty-six sculptures, most of which had been collected by the French, during Buonaparte's campaign in Egypt, and came into the possession of the English army, in consequence of the capitulation of Alexandria. Among these are a large Egyptian sarcophagus, used by the Turks, at Grand Cairo, as a cistern, and called the ' Lover's fountain ;' and the Rosetta stone with three inscriptions, recording the services which Ptolemy V. had rendered his country. To this collection several valuable articles have been contributed by modern travellers, particularly the head and upper part of the body of a colossal statue, brought from the ruins of the Memnonium, and presented by Mr. Salt, and the late Louis Burckhardt.

Twenty-three has reliefs, representing the battles of the Centaurs and Lapithae, and the com-bat between the Greeks and the Amazons, also enrich this gallery. They were found in the ruins of the temple of Apollo Epicurius, which was built by Ictinus, a contemporary of Pericles; but the most valuable collection is that formerly belonging to the earl of Elgin, formed during his embassy to the Ottoman Porte, and purchased by government for ►►35,000. These sculptures consist of fifteen of the metopes, and the exterior frieze of the cella of the Parthenon, with numerous other relics of antiquity from that celebrated temple, as well as from that of Erectheus. They are generally believed to have been executed from the designs of Phidias, the celebrated Athenian sculptor. Lord Elgin has been very harshly treated, for having despoiled Athens of these matchless productions of ancient art. The muse of Byron, most powerful in its hate, has perpetuated his abhorrence of the spoliation, in a poem, called The Curse of Minerva ; and some of our travellers have recorded their sentiments on the ruins of the tem-ple itself at Athens; the plaster wall, on the west side of the temple of Minerva Pollias, bearing the

following inscription, cut in very deep characters : ◆◆◆

Quod non fecerunt Goti

Hoc fecerunt Scoti.

The British Museum contains a most extensive collection of minerals, systematically arranged, with numerous specimens of native iron, and frag— ments of the most celebrated aerolites that have fallen at various periods, either in England or abroad. In one room a British Oryctognostic collection has been commenced, and when complete must be a very valuable contribution to science. The minerals of the counties of England are distinctly classified, so that it may be iscertained at one view, if any, and which of the four classes of earths, metals, inflammable substances, and salts, are to be met with in any part of Great Britain. Tbe counties are ar-

ranged alphabetically, though, if space could be obtained, it would be better that they should be classed geographically, when the approximation of the different substances in adjoining counties would more easily be traced.

The collections in zoology, conchology, and ornithology, are not only very complete, but that of entomology contains about 90,000 specimens. The collection of medals and coins, the basis of which was formed by the cabinets of Sir Hans Sloane, and Sir Robert Cotton, has received so many additions, that it is now the most complete of any in Europe.

In another room there is a curious collection of Penates, paterae, necklaces, earrings, Hindu, Chinese, and Japanese idols, specimens of ancient armour, and other antiquities, which formerly belonged to Sir William Hamilton, together with the celebrated Barberini, or Portland vase, the most ancient and the most beautiful specimen of sculpture in glass that is known to exist. These are a few of the curiosities of this great national depository, the whole of which are open to the public, with the exception of the library ; to which, however, access for the purposes of study is not difficult.

MUSGRAVE (Dr. William), a learned physician and antiquary, born at Charlton-Musgrave, in Somersetshire, about 1657. He studied at New College, Oxford. Having distinguished himself by his skill in medicine and natural philosophy, he was elected F. R. S. ; and being made secretary, in 1684, he continued the Philosophical Transactions from No. 167 to No. 178 inclusive. He took his degree of M. D. in 1689 ;

and, being admitted a member of the college of physicians, settled at Exeter, where he practised physic with great success. Being a man of extensive learning, he wrote several valuable works; as,l. De ArthritideAnomalasive Internˆ Dissertatio. 2. De Arthritide Symptomaticˆ Dissertatio. 3. Julii Vitalis Epitaphium, cum commentario. 4. De Legionibus Epistola. 5. De aquilis Romanis Epistola. 6. Inscriptio Terra-conensis.cum commentario. 7. Geta Britannicus, &c. 8. Belgium Britannicum. He died in 1721.

MUSGRAVE (Sir Richard), an Irish baronet and author, born about 1758. Having married a lady of the Cavendish family, he obtained, through her connexions, the place of collector of the excise for Dublin, a seat in the Irish parliament, and a baronetcy. He died in 1818.

MUSH'ROOM, n. s. l Fr. mousseron; old

MUSH'ROOMSTONE. i Fr. muscheron. A species of AGARICUS or BOLETUS (which see), growing often on dunghills and* uncultivated ground. It has become a metaphorical term of reproach for an upstart or low-bred man : mushroom-stone is, a kind of fossil. See LYNCURIUM.

Mushroom* come up in a night, and yet they are unsown ; and therefore such as are upstarts in state, they call in reproach mushroomt.

Bacon's "Natural History.

While he is rotting in this gaol, his young son Jehoiachim starts up in his throne ; like to a mushroom, that rises up in a night and withers in a day.

Bp. Hall. Tully, the humble mushroom scarcely known,

The lowly native of a country town. Dryden. Fifteen mugliroomstones ot the same shape.

Woodward.

MU'SIC, n.t. MU'SICAL, adj. MU'SICALLY, adv. \

MUSIC.

-\ Fr. nmsique ; Italian And as the ipot where they appear he nean, / and Lat. musica ; Greek Surprised at these unwonted signs of idling, > uneven, harmony or me- “e hears ••• alas ! no music of the snher**’

music of the spheres,

MU’SICALNESS, n. s. I lody. The science of But ** unhallowed, earthly sound of fiddling ! J

MUSIC’IAN. J melody and harmony;

harmonious or melodious instruments, or where such entertainments prevail. The oilier derivatives follow these senses.

When she spake, Sweet words, like dropping honey, she did shed ;

And ‘twixt the pearls and rubies softly brake ••• _, •••

A silver sound, that heavenly mtuick seemed to make, of sound, which are employed in the construc—

Faerie Queene. tion of some of the ancient melodies, give plea-

INTRODUCTION. Music is the art of combining sounds in a man-ner agreeable to the ear. This combination may be either simultaneous or successive; in the first case it constitutes harmony, in the last me-lody. But though the same sounds, or intervals

The merry birds Chanted above their cheerful harmony,

And made amongst themselves a sweet consort, That quickened the dull spirit with musical comfort.

Id.

The man that hath no musick in himself, Nor is not moved with concord of sweet sounds, Is fit for treasons. Shakspeare. Merchant of Venice.

Though the musicians that should play to you, Stand in the air a thousand leagues from hence ; Yet strait they shall be here. Id. Henry IV.

A painter may make a better face than ever was ; suits from the coalescence of simultaneous sounds but he must do it by a kind of felicity, as a musician produced by vibrations in the proportions of that maketh an excellent air in mtuick, and not by minor thirds, perfect fifths, and octaves, or their

D .. r replicates. By imperfect harmony is to be under-

sure when heard in succession, they will not always produce the same effect when accompanied with harmony ; yet the principles which constitute perfect and imperfect harmony are mostly, if not entirely, the same with those of modern melody. By perfect harmony we do not here mean that plenitude, those complex modifications of harmonic sound, which are admired in practice ; but that harmony which is called perfect by theoricians and artists ; that which re-

rule. Bacon’s Essays.

Such mutick Before was never made But when of old the sons of morning sung.

Milton.

Sweet bird that shun’st the noise of folly, Most musical, most melancholy, Thee chauntress, oft the wood among, I woo to hear thy even song. Id.

Now look into the musicfc-master’s gains, Where noble youth at vast expence is taught, But eloquence not valued at a groat. Dryden. Neither is it enough to give his author’s sense, in poetical expressions and musical in numbers. Id. The praise of Bacchus then the sweet musician

sung; Of Bacchus ever fair and ever young. Id.

stood all dissonances requiring resolution into perfect harmony. When we would investigate the principles from which these happy modifications of sound result, and by which they are determined ; or when we would explore the sensations, whether mental or corporeal, with which they affect us, they are found to constitute a science, which is not only extensive but profound. 1 1 has been observed that the ancient definitions of music were not proportioned in their extent to our present ideas of that art ; but Rousseau betrays a temerity inconsistent with the philosophical character, when he thence infers that their ideas were vague and undetermined. Nor can we adopt his Egyptian etymology of the word music. The established derivation from musa

Any continual sound, as the music of birds, or a fall of waters, awakens every moment to the mind could only be questioned by a paradoxical genius, of the beholder, and makes him more attentive to the That music had been practised in Egypt before

several beauties of the place that lie before him

Addison.

Several musical instruments are to be seen in the hands of Apollo's muses, which might give great light to the dispute between the ancient and modern

tHUJiC/S. Id.

Valentine, musically coy,

Shunned Phaedra's arms. Id.

We have dancing-masters and m⬜⬜⬜⬜icA-masters.

Arbultinot and Pope.

By mu.ˆick minds an equal temper know, Nor swell too high, nor sink too low ; Warriours she fires with animated sounds, Pours balm into the bleeding lover's wounds.

Pope. What musick, and dancing, and diversions, and

it was known as an art in Greece is indeed a fact which cannot be questioned ; but it does not thence follow that the Greeks had borrowed the name as well as the art from Egypt. If the art of music be so natural to man that vocal melody is practised wherever articulate sounds are used, there can be no reason for deducing the idea of music from the whistling of winds through the reeds that grew on the Nile. And, indeed, when we reflect with how easy a transition we may pass from the accents of speaking to diatonic sounds ; when we observe now early children adapt the language of their amusements to measure and melody, however rude ; when we observe that they even apply a kind of natural

songs, are to many in the world, that prayers, and me,O(] to the legsons they are taught to read ;

dpvnfrlnn* anil ncnmtc nrp tn vmi f.nm. ^ ,

when we consider how early and universally these practices take place, there is no avoiding the conclusion, that the idea of music is connatural to man, and implied in the original princi

devotions, and psalms are to you. Law.

And who on the globe can be found, Save your generation and ours,

That can be delighted by sound, Or boast any musical powers '! Cowptr.

pies of his constitution. The principles on which it is founded, and the

rules by which it is conducted, constitute a science. The same maxims when applied to practice form an art.

Music may be divided into the mechanical and the expressive. The first is limited to the mere mechanism of sounds, and reaches no farther than the external senses, without carrying its impressions to the heart, and can produce nothing but corporeal sensations more or less agreeable. The second by lively and accentuated inflections, and by sounds which may be said to speak, expresses all the passions, paints every possible picture, reflects every object, subjects the whole of nature to its skilful imitations, and impresses even on the heart and soul of man sentiments proper to affect them in the most sensible manner. ‘ This,’ says Rousseau, ‘ is the genuine lyric and theatrical music, and was that which gave double charms and energy to ancient poetry ; this is what, in our days, we exert ourselves in applying to the drama, and what our singers endeavour to execute on the stage. It is in this music alone, and not in harmonics or the resonance of nature, that we must expect to find accounts of those prodigious effects which it formerly produced.

‘ But, in fact, all music which is not in some degree characterised by these pathetic and imitative powers, deserves no better name than that of a musical jargon, and can only be effectuated by such a complication and intricacy of harmony as may confound, but cannot entertain, the audience. This character, therefore, ought to be added as essential to the definition of music.’ Whilst moral effects are sought in the natural effects of sound alone, the scrutiny will be vain, and disputes will be maintained without being understood ; but sounds, as representatives of objects, whether by nature or association, introduce new scenes to the fancy, and new feelings to the heart; not from their mechanical powers, but from the connexion established by the Author of our frame between sounds and the objects which, either by natural resemblance, or unavoidable association, they are made to represent.

It would seem that music was one of those arts which were first discovered ; and that vocal was prior to instrumental music ; for it is probable that music was originally formed to be the vehicle of poetry. We are told by ancient authors that all the laws, maxims, and exhortations to virtue, the characters and actions of gods and heroes, the lives and achievements of illustrious men, were written in verse, and sung publicly by a choir to the sound of instruments ; and it appears from the Scriptures that such was often Uie custom among the Israelites.

The English, from the invasion of the Saxons to that era in which they

imbibed the art and copied the manner of the Italians, had a music which neither pleased the soul nor charmed the ear. The primitive music of the French deserves no higher panegyric. Of all the barbarous nations, the Scots and Irish seem to have possessed the only kind of music calculated to interest the feelings of future generations. The first, from its varied expression, enables us to understand in a measure the extraordinary virtues ascribed by the different writers of antiquity

to the Grecian modes. The other, composed upon the principles of modern composition, is of a less varied description.

The primitive music of the Scots may be divided into the martial, the pastoral, and the festive. The first consists either in marches, which were played before the chieftains, in imitation of the battles which they fought, or in lamentations for the catastrophes of war and the extinction of families. These wild effusions of natural melody preserve several of the rules prescribed for composition. The strains, though rude and untutored, are frequently terrible or mournful in a very high degree. The port or march is sometimes in common, sometimes in triple time ; regular in its measures, and exact in the distance between its returning cadences ; most frequently, though not always, loud and brisk. The pibroch, or imitation of battles, is wild and abrupt in its transitions, from interval to interval, and from key to key : various and desultory in its movements ; frequently irregular in the return of its cadences; and, in short, through the whole, seems inspired with such fury and enthusiasm, that the hearer is irresistibly infected with all the rage of precipitate courage, notwithstanding the rudeness of the accents by which it is kindled. That species of Scottish music which we have styled festive, seems now limited to reels and country dances. These may be either in common or triple time. They most frequently consist of two strains ; each of these contain eight or twelve measures. They are truly rhythmical, and possess a manoeuvre and expression peculiar to themselves. To these the pastoral forms a striking contrast. Its accents are plaintive, yet soothing ; its modulations natural and agreable; its rhythmus simple and regular ; its transitions, at least, for the most part, from one concinnous interval to another ; its movements slow, and may be either in common or triple time. It scarcely admits of any other harmony than that of a simple bass. A greater number of parts would cover the air and destroy the melody.

Dr. Franklin, writing to lord Kaimes on this subject, says, ‘ Give me leave, on this occasion, to extend a little the sense of your position, ‘

That melody and harmony are separately agreeable, and in union delightful ;' and to give it as my opinion, that the reason why the Scotch tunes have lived so long, and will probably live for ever (if they escape being stifled in modern affected ornament), is merely this, that they are really compositions of melody and harmony united, or rather that their melody is harmony ; I mean, the simple tunes sung by a single voice. As this will appear paradoxical, I must explain my meaning. In common acceptation, indeed, only an agreeable succession of sounds is called melody ; and only the coexistence of agreeable sounds, harmony. But since the memory is capable of retaining for some moments a perfect idea of the pitch of a past sound, so as to compare it with the pitch of a succeeding sound, and judge truly of their agreement or disagreement, there may and does arise from thence a sense of harmony between the present and past sounds, equally pleasing with that between two present sounds. Now. the construction of the old Scotch

tunes is this, that almost every succeeding emphatical note is a third, a fifth, an octave, or come note that is in concord with the preceding note. Thirds are chiefly used, which arc very pleasing concords.

' That we have a most perfect idea of a sound just past, I might appeal to all acquainted with music, who know how easy it is to repeat a sound in the same pitch with one just heard. In tuning an instrument, a good ear can as easily determine that two strings are in unison by sounding them separately as by sounding them together; their disagreement is also as easily, I believe I may say more easily, and better distinguished when sounded separately ; for when sounded together, though you know by the beating that one is higher than the other, you cannot tell which it is. I have ascribed to memory the ability of comparing the pitch of a present tone with that of one past.

' Farther, when we consider by whom these ancient tunes were composed, and how they wero first performed, we shall see that such harmonical successions of sounds were natural and even necessary in their construction. They were composed by the minstrels of those

days, to be played on the harp, accompanied by the voice. The harp was strung with wire, which gives a sound of long continuance; and had no contrivance like that of the modern harpsichord, by which the sound of the preceding note can be stopt the moment a succeeding note begins. To avoid actual discord, it was therefore necessary that the succeeding emphatic note should accord with the preceding, as their sounds must exist at the same time. Hence arose that beauty in those tunes that have so long pleased, and will please for ever, though men scarcely know why.'

These observations are for the most part true as well as ingenious. But the transition in Scottish music, by consonant intervals, does not, as Dr. Franklin imagines, arise from the nature of the instruments upon which they played. Besides it is more than probable thai the ancient British harp was not strung with wire, but with the same materials as the Welsh harps at present; and these strings have not the same permanency of tone as metal ; so that the sound of a preceding emphatic note must have expired before the subsequent accented note could be introduced. Those who are acquainted with the manoauvre of the Irish harp, know well that there is a mettiod of discontinuing sounds no less easy and effectual than upon the harpsichord. When the performer finds it proper to interrupt a note, he has no more to do but return his finger gently upon the string immediately struck, which effectually stops its vibration.

The principles upon which the melodies of Scotland are constructed are coeval with the first systems of sounds invented by the earliest musicians upon record.

PART I. HISTORY OF MUSIC.

The ancient history of music, even among the most cultivated nations, is now entirely lost, or

so unhappily obscured that we can make but few certain or satisfactory discoveries in it. And, as no annals could be transmitted to posterity of that music which prevailed among such people as are called barbarous, our accounts of it must be still less authentic and satisfactory than those of the former. Even at periods which are more recent, and may therefore be thought more with-in the sphere of our investigation, we are at a loss both for the eras and the authors of some essential improvements in music. Yet those parts of its history which are either already known, or may be discovered, if related at

full length with proper illustrations, would produce a work little inferior in size to the whole extent of that Encyclopaedia, of which it is only to constitute a part. All, therefore, which can be expected, is to give a short and cursory detail of its primary state, and its most important revolutions so far as history enables us.

With respect to the origin and discovery, or as some have called it the invention of music, we read in St, Thomas Aquinas, that the first man possessed every science by means of images placed in him by the author of the universe, and that they were not acquired by his experience. Lucretius ascribes it to the whistling of th►► winds in the hollow reeds. Franckinus to the various sounds produced by the hammers of Tubal Cain. Cameleon Pontique and others have been ridiculed for ascribing it to the singing of birds, as Zarlino to the sound of water. Diocles, too, has been cited as the discoverer of music, having accidentally struck different sixed vases in a pottery, and observed sounds of different degrees of acuteness and gravity to issue from them. Authors have, however, agreed in ascribing to Jubal the son of Lamech the discovery of musical sounds, and the theory of their portions to Pythagoras.

The origin of instrumental music, says a late writer, appears to have been at a period much prior to the date of authentic history ; and, when we look for its epoch or its discoverer, we are carried at once into the wild regions of fable and mythology. The god Mercury, or Hermes, is said to have been the inventor of the lyre, by distending strings of different tensions and diameters upoo the shell of a tortoise which he found upon the shore. The Srst exhibition of the fistula, or shepherd's pipe, u ascribed to Fan. But of these persons and their actions little or nothing can be ascertained with proper evidence. The Chinese maintain the prior right to the invention of instrumental music, and attribute it to the act of blowing the pith out of the bamboo.

But whatever credit may be given to these most probably vague opinions, we only know that observation and reflection, in the earliest ages must have proceeded in proportion as the activity of the mind was excited by interesting objects. The notes, though not always appreciable, of the nightingale, cuckoo, thrush, sky-lark, and blackbird, would, independently of the instinctive powers originally implanted in man, to sing as to speak, rejoice, and laugh, sufficiently teach him the difference between grave and acute sounds, and excite him to imitate and prolong such sounds, though as yet he was unacquainted

with the principles of the diatonic scale, thus constituting in the earliest ages the first principles of singing.

But music, like other sciences, has its foundation in nature; its principles are the gift of God implanted in our constitution ; we neither learned it from the singing of birds nor the chiming of hammers. Its rules are strictly the result of mathematical observation, and the fruit of reflection bestowed upon the subject, by musicians of every age and every climate, whether as it regards melody or harmony. This art, therefore, forms a body of science which it has taken ages to construct As we are ignorant of the i:ame of the inventor of the first specimen of harmony, so are we also of the first composer of melody : the imperfection of the rules established or proposed by the first observers of sounds being forgotten in the more perfect ones of succeeding generations.

Confining ourselves to observations principally of a practical nature, we will merely remark that the ancient Greeks, from whom we, through the Romans, derive our music, had two distinct species of it : one corresponding to the various inflections of the human voice, called by us melody of speech, and the other precisely agreeing with our notions of singing; the former consisting of mathematical divisions of sound into quarter tones on certain parts of our scale, called by the ancients genus spissum ; and the latter, to which we claim the reader's attention, into half-tones, and whole tones, called diatonic.

It is obvious that a system either of eight or four sounds, varying in their intervals, must have been adopted, of which one formed the principal one ; also, that some given sound, natural or artificial, must have been used in the earliest ages, with a view of regulating the pitch of the voice. The lyre served for this purpose, both in singing and haranguing the multitude ; it was tuned according to the nature of the voice, or of the piece to be sung or recited.

A species of monochord, termed the lyre of one string, served, like the pitch-pipe of the moderns, to ensure a given sound, or as we term it a

key-note, to which all the other sounds bear a certain relation. It was formed, according to several authors of reputation, after the following manner, or, as they express it, after the model of Diana's bow, as in fig. 1 ; also as seen upon

Fig. 1.

Fig. 2.

various ancient marbles as in fig. 2, with a weight attached to the string to secure a certain tension. Instead cf a weight Blanchini gives a bell, and not, perhaps improperly; since, in the earliest ages of counterpoint, we find a bell was used for the same purpose. Hence the expression tone, or tones, of the ancients, i. e. key-notes of their different modes.

The dichord, called by Athenaeus, the pectis, or lyre of two strings, is represented as in fig. 3,

Fig. 3.

Fig, 4.

or as in fig. 4., and was tuned with the double view of regulating the Voice, and of marking the key-note with its fourth and fifth ; all the intermediate sounds being left to be intonated by the singer.

The trichord, as is shown in plate IV. Music, fig. 1, taken from a medal in the possession of the late duke of Brandenburg, we are expressly told was tuned to the sounds E, F, G, upon the bass-staff, forming three key-notes of as many different modes. The strings of these lyres, about a foot and a half in length, were made of thread, till the discovery of the entrails of animals for that purpose by Linus.

The lyre of four strings, which is called by many authors, the lyre of Mercury, and appears to have been variously tuned, *viz.* E F G A, also C F G C ; the first arrangement expressing a system of four sounds, composed of one half-tone and two tones, forming a diatonic tetrachord, and the latter the perfect consonances of the fourth, the fifth, and the octave, which being the most natural combination of sounds, and therefore the least difficult to express by signs, was doubtless the original. Boethius was of this opinion. As to the first disposition of the strings of this lyre, history informs us that the sounds E F C A upon the bass staff not being sufficient to express every essential sound, three others were added below, D C B thus forming together two conjoined tetrachords, hereafter to be explained.

The lyre, or what is termed by various learned writers the heptachord of Orpheus, was of mucli earlier date ; it was tuned to the following ascending intervals, *viz.* E F G A C D E forming a diatonic tetrachord, a perfect fourth from the E below, and a perfect fifth from the E above. Of the disposition of the strings of this lyre, we read that Olympus passing over the Lichanos, and preluding upon the strings C, A, F, constituting

minor and major thirds, originally termed para-note placed upon the unaccented part of th mese, mese, and parhypate, thus : musical measure is peculiar to Pol►►, air*, fe

example :

f S

(for the string called trite, by Pythagoras, was not at that time admitted into the system, and which, when introduced, altered the position of the above terms,) he observed the beauty of the effect, and forming a system of sounds by the then novel method of transposing this paramese and mese, and adding a major third below, formed the following scale of notes, thus :

Or thus :

e^*i

consisting of conjoined tetrachords, combining the thirds peculiar to the lyre of Orpheus, and a species of tetrachord, termed by him enharmonic, not a system of sounds proceeding by quarter tones, unknown to the earliest Greeks, but implying sweetly melodious, composed of a major third and a half tone, thus :

Or thus :

partaking, consequently, of neither of the ancient genera, or systems of sounds described in the scale of Pythagoras, which consisted of diatonic tetrachords, thus: BCDE, EFOA, A B b C D | chromatic tetrachords, thus : B (‘ C*E, EFF*A, ABb B ^ D, and enharmonic tetrachords, thus : B B x C E, E E x FA|AAxBbD.

Now every one conversant with the nature of Scottish music will perceive that the following arrangements of sounds, immediately derived from the lyre of Orpheus, and systems of Olympus, are as peculiar to Scottish, as the emphatic

Dr. Burney misrepresents the system of Olympus altogether, not only by placing the lyre ID a wrong position, and describing the system by a scale not in existence, but by giving, instead of a major, the melody of a minor triad, thu►► :

calling it the old Scottish scale in a minor key, but which, on reference to the various collections of Scottish melodies, is, decidedly not the case ; that system being only what may be termed a mutilated descending minor scale, characteristic no more of Scottish than of other melodies in minor modes. But what is remarkable, by changing this system into a major one, effected only by inverting the order of sounds, or placing the longest strings of the lyre nearest rather than farthest from the performer, thus :

i. e. ascending instead of descending precisely by the same degrees, then descending by minor thirds, and a tone, thus :

which are the natural consequences of the as cendini: passages, we obtain the fundamental princi|i'esupon which a great number of Scottuh melodic s are constructed, as for example :

As 1 cuine o'er the banks ol bannoch. which, from their having no fourth nor seventh intervals, in modern modes, and playing in the key of F sharp major, may be performed jpon the short levers only of the pianoforte clavier, thus :

' Ye Banks and Braes of Bonny doon,' ' Auld Lang Syne,' &c. See Preston's edition of Thomson's, also of Bremner's Scottish melodies.

Campbell, though well aware of the peculiar style of some of the melodies of his nation, was not sufficiently acquainted with the history and theory of music to account for the whole of them upon fundamental principles. He was, however, the first to observe the powers of the short levers to express many of the melodies of Scotland, as also to express a minor, as well as a major scale, which he terms primary major and minor scales, thus : major F*G:8&A3fcC:jgD: $:F8&, minor D*F⬜⬜G⬜⬜;A⬜⬜:C⬜⬜:D⬜⬜:; taking, as usual, the relative minor a third below, or a sixth above the major mode. But, to show more immediately the derivation of these remarkable scales of sound, we will follow the principle of Rousseau, and place them in the tetracnordial order of tones and minor thirds, thus : F 3fc D % C % \

. The tunes ‘John of Badengone/ and 4 Saw ye my Peggie,’ &c., are composed upon the latter mode.

These systems of different sounds happening to correspond with the scale of an ancient Sticcado, formerly in the possession of the late Monsieur Arnaud of the French academy, i. e. without the admixture of half-tones, it has been supposed that the Chinese admitted of no intervals less than a tone into their musical system ; and that, therefore, the species of Scottish music we have been describing was either derived from the Chinese, or that the Chinese must have composed their music entirely after the manner of the earliest Scottish music. This is erroneous ; for it is well known that this singular race of people had divided the octave into twelve semitones, termed lu. from time immemorial. Indeed every thing tends to prove that the Chinese had cultivated and brought to considerable perfection the principles of music long before the Egyptians, from whom the Greeks as well as the Romans derived theirs ; a circumstance sufficiently attested from the drawing of the dichord, see plate IV. fig. 2, taken from an obelisk constructed in the time of Sesostris, now among the ruins of Rome, also of various drawings of harps discovered by Bruce, Denon, and Belzoni in Upper Egypt.

Having explained the manner in which musical intervals were first supposed to have been discovered, and of their consequent formation into the earliest systems of sound upon record, it now remains to treat of others not less remarkable.

But as all music, in this early stage of history, partook in part of the

nature of that adopted in the present day, i. e. of tones and half-tones, major and minor thirds, fourths and fifths, &c. the principles of the modern diatonic scale will be here best explained, that the nature of the modes or systems of sound, so often alluded to by ancient writers, and preserved by St. Ambrose may be properly understood.

It may appear somewhat paradoxical, but many of the learned in matters of the earliest antiquity are by no means agreed upon the absolute nature of acuteness and gravity of musical sounds ; for, whilst some insist that acute ones were produced proceeding to the right, others with equal pertinacity maintain that they were produced to the left of the piano forte clavier, thus, apparently, involving into nonexistence no less than one or other of the modern modes, till the scale of Pythagoras was formed and explaine'd, whence philosophers not musicians, and musicians not philosophers, determined that all Greek music was written in minor modes, and that the Greeks knew nothing upon the subject of major modes. In proof of this assertion a quotation from Dr. Gregory's edition of Euclid will suffice. ' As the ideas of acuteness and gravity have, in nature no necessary connexion, it has happened accordingly that the most ancient of the Greek writers looked upon grave sounds as high, and acute ones as low ; and that this connexion was afterwards changed to the contrary by the less ancient Greeks,, and has since prevailed universally. Probably the latter connexion took its rise from the formation of the voice in singing, which Aristides Quintilianus thus describes : yii'trai Se i) ptv /3apoc icaraStv ava (pfpopivH ra TTVST^iarof, jj 5'o►►vr►►jf iirnra \ri►► wpo- [j.tva. Gravity takes place if the breath is carried upwards from the lowest part of the throat, but acuteness if it rushes forth from the higher part.' Beattie, too, upon this subject, very pertinently remarks, that ' to express the local elevation of objects by what we call high notes, and their depression by low or deep notes, has no more propriety in it than any other pun. We call notes high or low with respect to their situation in the written scale. There would be no absurdity in expressing the highest notes by characters placed at the bottom of the musical staff, and the lowest notes by characters placed at the top of it, if custom or accident had to determine. And there is reason to believe that something like this actually obtained in the musical scale of the ancients. At least it is probable that the deepest or gravest

sound was called summa by the Romans, and shriller or acutcst ima ; which might be owing to the construction of their instruments ; the string that sounded the former being perhaps highest iu place, and that which sounded the latter lowest. Yet some people would think a song faulty if the word heaven was set to what we call a low note, or the word hell to what we call a high one.' As it will hereafter appear, the explanation given by Pythagoras to the minor system was considered sufficient for that of the major one. This circumstance, together with others immediately connected with it, will tend to show that the ancient Greeks not only admitted of minor and major modes, but of ten others, besides those already described.

It will be recollected that the disposition of the strings, as given to the lyre of Mercury by Boethius, represents the perfect consonances of the fourth, the fifth, and the octave, and that the intermediate sounds D, E, and A, B, were left to the singer intuitively to intonate. These notes correspond to our major diatonic scale, thus : C D E F G A B C, composed of two disjoined tetrachords, differing only from the scale ascribed to Pythagoras, inasmuch as the notes of the disjoined tetrachords ascend by the same degrees the conjoined tetrachords descend, *viz.* by two tones and one half-tone, thus :

F D P R wnˆcn system, including the note

A below (see page 271), corresponds with our descending minor scale, called by the ancients aeolian, hereafter to be explained.

Our system also admits of conjoined tetrachords from the frequent occurrence of the following passages, the ground work of modern, as well as in a measure of ancient harmony, thus:

the key note, C, as the sun in the planetary sys-tem, forms the centre of gravity, upon which all

other sounds revolve; a system, or rather a language, at once the most natural to be conceived, and easily impressed upon the mind of every human being possessing a natural talent ; or what is more generally termed an ear for music. To these arrangements of sounds, of which

one forms the antecedent, and the other the consequent of a phrase, may be traced those daily melodic productions of amateurs totally ignorant of the principles of composition, the first parts of which prove often, on trial, more interesting than those of experienced musicians.

Viewing, as we do, the principles of melody, solely through the medium of two harmonic combinations of sound, we perceive that the places the half tones occupy in the scale is not a matter of caprice, but established by the Author of nature, which is likewise the case with every other note forming the diatonic major scale; were it otherwise, no two persons, accompanying themselves with the harmony of that scale, could sing the same intervals alike, nor would it be possible for harmony to exist as a science. We therefore recognise the intervals between the third and fourth, and seventh and eighth, as the places only for the half tones of the major, and, reckoning from acute to grave, between the third and fourth, and sixth and seventh intervals of the minor scale, making, in all cases, a series of sounds, rising or falling from any given pitch to its octave, by the diatonic degrees of five tones and two half tones, as in the examples 20 and 56. But such are our narrow notions upon the subject of music that we entertain no ideas of melody independently of harmonic rules ; and, in the event of our meeting with these half tones in different situations than those prescribed by the major and minor scales, which is often the case in ancient melodies, we are taught to consider them as merely of an artificial description, or as constituting the art of composition. The ancient Greeks thought differently. Their views upon this, as indeed upon every other subject, were of a more enlarged and sublime description ; and as, in all their works, they copied nature, they discovered, from her unerring principles, twelve species of the octave, naming each after different nations, the supposed inventors of them, *viz.*

DORIAN.

PHRYGIAN, derived from the ˆ Orphean lyre. I

LYDIAN.

MIXT-LYDIAN,

derived from the union of the as-scending and descending sys-rJ terns already explained.

HYPO-MIXT- LYDIAN.

MUSIC.

HYPO-!OLIAN

IONIAN.

HYPO-IONIAN.

In support of the authenticity of these modes, and, at the same time, for the better understanding of their peculiar melodic powers, as affects the passions of men, we will again avail ourselves of the melodies of Scotland, which, from their Decided similarity with the modes in question, must have been written by musicians intimately acquainted with the earliest history of the Greeks, and of the principles of their extraordinary modes. Indeed, such is the nature of these melodies, one would almost be induced to believe that they were known by the Greeks themselves.

It is an axiom, in the composition of modern music, that all melodies should end with the

key-note of their harmonic treatment, *i.e.* if the piece be in D, the ultimate of the melody should also be in D. This is not the case with the generality of Scottish music, for the tune ‘ Scots wha hae,’ as will be seen on reference to its printed editions, ends with the fifth above the harmonic treatment given to it. The notes composing the octave of that fifth being employed in the construction of that song, the half-tones falling between the third and fourth, and sixth and seventh notes, and the melody commencing and ending with its own key-note, instead of the one given to it by its various harmonisers, the melody is written in the mixt-Lydian-mode of the ancient Greeks, thus :

e proof of its authenticity and pe-difference between this and the modern or Ionian ; ; powers not to be expressed in-mode, we will insert our national tune, * God

: n indubitable

<. uliar powers ;

variably ending with the key note of a minor or save the King, thus :

a major scale. But, to show more effectually the

which, if the reader will compare with that of ‘Scots wha hae,’ and the Grecian scales it will immediately be perceived, that, inasmuch as the ear and mind become satisfied with the key notes of each tune, the unity of each rrode is strictly preserved, and their respective powers firmly established.

Every genuine Scottish melody, ending upon a different note to that of its harmonic treatment, will be found of Grecian origin, as the following extracts and analyses will clearly demonstrate. But it must be understood that although in the singing of glees, or pieces of music for four voices, it often happens that one of the singers, with the utmost delight and satisfaction to himself, will sustain the ultimate note as loner as his lungs will permit, a third above instead of the key-note of the major or minor mode, it is deemed vulgar and incorrect, and must not be considered a process whereby the piece thus disfigured is turned into a Grecian mode ; nor must it be understood that all melodies should be confined within the limits prescribed by each octave ; on ifoe contrary, some of them often exceed, whilst

others do not reach that extent, partaking, consequently, of the intervals of principal and subordinate, or, to use the technicalities employed by the church of Rome, of authentic and plagal. Hence these modes have been termed perfect, imperfect, and mixed, a circumstance accounting for the occasional appearance of notes below, as well as above the octave, both in Scottish melodies and in subjects of plain chants. The note most frequently sounded determines the nature of the mode or class to which the melody belongs.

The specimen we have next to adduce, will, in a remarkable degree, tend to illustrate the wide difference between the ancient and modern ways of thinking, upon the subject of musical keys, as we shall quote, in support of this hypothesis, no less than Haydn himself. On reference to page 101 of Preston’s edition of Thomson’s Scottish Songs, vol. iii., it will be seen that that great composer, from the harmonic nature of the specimen given him, as for example Brimner’s collection, and to which he was doubtlessly led to conform, considered himself

not only obliged to begin the song ‘ On Ettrick Hanks’ in one key, but to end it in another of an opposite description; to -give, however, something like unity to such incongruity of materials, he splices a symphony to answer the final note of the harmonic treatment ! A cure for any doubts we may entertain upon the subject of the existence of Grecian modes, as well as for our prede-lection in favor of the immutability of the major and minor scales. The tune in question will be found, on reference to the foregoing scales, to be written principally in the Phrygian

mode ; a mode as remarkable for the singularity and beauty of its intervals, as for rejecting, when employed in the construction bf melody, all harmonic support,* the half tones falling between the first and second, and fifth and sixth notes ; the lower ones (probably spurious) partaking of the Hypo or subordinate Phrygian, acting as replicates of the Phrygian mode (indicated by slurs), the last three measures occupying the whole extent of the Phrygian mode ; indubitable proofs of the original design of the composer not to write in a major or a minor mode, thus :

and Hypo-.3Eolian modes, transposed an octave higher, may express the above sounds, but no idea of a key note could be formed under such nomenclature. The accompaniment given by Haydn to this air begins in B minor and ends in D major. Now the necessity of such anomalous treatment, for neither the major nor minor scale is alone sufficient to express, eilher melodically or harmonically, the intervals of the above song, proves, beyond all possibility of doubt that such melodies were never intended to be accompanied. Of this description are the following ‘ O how can my poor heart,’ begun in B b, and ended in E. ‘ Tibbie Fowler,’ begun in D major and ended in D minor.’ ‘ Farewell ye Dungeons’ begun in A and ended in E. ‘ O poortith cauld* (Kozeluch), begun in E b and ended in C minor.

But, if merely to show how far human industry may succeed in giving these airs an accompaniment, it should be founded upon the principles observed in the composition of plain

chant (sotto il soggetto) of the Romish church ; i. e. partaking only of the intervals peculiar to the modes to which the airs belong. To adduce another instance, in proof of the difference of opinion as to the proper mode of accompanying these airs, we notice that Weber in his arrangement of ‘ O poortith cauld’ has begun as well as ended it in C minor, which, inasmuch as it corresponds in a measure with the TEolian mode, is judicious. Kozeluch, however, thought, or was advised to act differently.

The ett’ect of the accompaniment given by Haydn to the third measure of the air ‘ () saw ye bonnie lassie’ resembles an unexpected shock from a galvanic battery ; an effect arising from the violent contortion of two dissimilar modern keys, within the pale of one only mode, which, in this instance is not in F major, with the absolute key of E b introduced and even established in the third measure, a modulation known by every musician to be wrong, but simply in the Dorian mode, thus :

Now this singular melody cannot be in the key of ►► Let any composer harmonise the following pas-

G, because there is no F sharp, nor can it be in sage> vu<

C any more than in A minor ; the whole of the

notes employed in its construction existing in

the Dorian scale, and the melody beginning and

ending with its own melodic key note. That the

reader may judge for himself, as to the propriety and we predict, that, however ingenious the a

of the accompaniment given by Haydn, and of paniment. it will be rejected as an alloy by no m

the attempt to express its first four measures in satisfactorily amalgamating will

two major modes bearing no affinity to each melody.

other, the air existing in one ‘mode, we would recommend a reference to the original music. It were needless to remark upon the utter use-
𝍐𝍐𝍐
essness of succeeding efforts to accompany these and other similar airs, since, if nature had intended them to receive harmonic support, Haydn could not have failed in his endeavours to give them that uniformity and brilliancy of treatment which characterises all those Scottish melodies of his arrangement, which are proper to receive the principles of harmonic combination.

If we consider the eminently beautiful melody ‘ Here’s a health to those far away,’ in no other light than in C major, we must deem the key-note, together with its mode, of trifling importance ; but a few moments reflection will show how artfully the composer leads, by his choice of intervals, the ear to anticipate the one and to dwell with pathos upon the other, which is also the mixt-Lydian, the favorite mode, perhaps, of the Scots. Kozeluch was well aware of the beauty of this melody ; his treatment of the key-note resembles the purity of a twelfth produced by a generating string : a treatment far different from the enormous mass of accompaniment given to it by some of its pretended admirers. The powers of the mixt-Lydian mode, to express the intervals of the above song, can be doubted by no one. ‘ The little gems,’ (Och pretty Kate,’ ‘A highland lad,’ ‘Saw ye Johnnie coming,’ if we may use the expression, are too Grecian not to be noticed. The following airs will also be found to have been constructed independently of harmonic rules, the final note of each indicating its own key-note, and that without the necessity of any formal introduction of the fourth of the key to establish, as in modern composition, its final cadence, *viz.* ‘ Our good king,’ There’s my thumb,’ ‘ And O for one and twenty,’ &c.

The intelligent musician, in his search for other specimens, will not fail, in his comparison of the melodies with the modes, to observe, occasionally, various spurious notes, introduced either by lovers of ornament ignorant of the principles of the modes, or by the first arrangers of them, or from a desire to accommodate them as much as possible to the rules of modern composition ; as, for example, introducing the major seventh into the ˆ.olian mode, instead of the

minor seventh, the characteristic of that mode.

We have been thus particular in our description of the Grecian modes, feeling assured that in no work, ancient or modern, have they been noticed as fundamental principles in the formation of intelligible melody. Indeed, except for their employment in the chanting of the service by the primitive Christians, and as mere scales for the construction of counterpoint, no notice has been taken of them since the introduction of Christianity. Their celebrity previous to that time is known to every one.

The melodic powers of the Ionian and TEolian modes are, for the present, sufficiently explained. Their further discussion, involving the whole

science of harmony, must be deferred till we arrive at that period of history in which we are informed of the introduction of Counterpoint. We will, however, merely observe, that as ten out of the twelve modes evidently require ro accompaniment, and that as the intervals only of the mixt-Lydian-mode, and such as are employed in the tunes ‘ A highland lad,’ and ‘ Saw ye Johnnie,’ can alone be brought to amalgamate with the principles of modern harmony, it can no longer be a matter of surprise that so much should have been said by the ancient Greek and Roman writers upon the subject of melody, and so little upon that of harmony, according to our acceptation of that word. Nor can it appear extraordinary that, amongst the writings of the ancients, passages should have been thought applicable both to melody and harmony. For what are intervals employed in melody, requiring no accompaniment to support, but entirely dependent upon the key-note ? And in what do they differ when employed in simultaneous combination? But whether the Greeks, who so wisely discriminated the melodic value and distinct powers of so many modes, as independently of the diminished fifth, to have rejected the following arrangement of the octave, *viz.* B C D E FGAB from the number of their authentic modes, could really know nothing of the harmonic powers of the JRolian and Ionian modes, together with the ascending major seventh, given by us to the former, he must be a first rate classic as well as a thorough musician to prove. I* would, however, be desirable, that all interested in the science of music should reperuse the ancient writers upon the subject, keeping in view the distinct powers of the modes, separating, at the same time, the fundamental, or rather musical principles of declamation, as practised by the ancients; an art which, as it was totally of a different nature

from the Dithyrambic species, formed the rock upon which the majority of writers have split.

Such is the scantiness of the materials afforded the musical historian, that with the exception of some extraordinary tales upon the powers and effects of the different modes, and of the adoption of other divisions of sound than those already described, principally to define the various inflections of the human voice in speaking, and to bring, as much as possible, to perfection the rules of declamation, we have but little of importance, or rather of an intelligible nature, to notice till the time of Euclid and Pythagoras, when, for the first time, all musica. sounds were explained by mathematical demonstration.

In the following description of the celebrated octachord of Pythagoras, so often alluded to in the writings of the ancients, the reader will not fail to recognise the old Phrygian mode, derived from the ancient lyre of Orpheus, and therefore doubtlessly sung ages before the time of Pythagoras. It is, however, remarkable as showing the adoption of a new term to express the string originally designated Paramese, thus :

Pythagoras had established certain rules to find out the mathematical proportions of the consonances, when accidentally observing , as he passed a blacksmith's shop, that four hammers striking upon an anvil produced consonant sounds, as tuning forks would do if of proper sizes, he had them slung, and as they produced, when struck, precisely the same sound they emitted when in contact with the anvil, he had them weighed, when finding the smallest was ###six, the next eight, the third nine, and the largest twelve pounds, corresponding to the proportions he had previously adjudged between the consonances, he concluded that the octave should be divided into twelve semitones. Pythagoras also, we relate the events as they are told us, perceiving that the extreme sounds of two conjoined tetrachords produced a dissonance, *viz.* .

added a note below, calling it J .

proslambano menos, implying T/- ††† an added string, *i.e.* A, the first ††† ††† space upon the bass staff, thus :

As all sounds beyond the octave, in modern harmony, are replicates of the primary one, the lyre, simple as it appears, was capable of expressing every essential sound. No wonder, then, that it should have been held, by the ancient Greeks, in such esteem. But, as it did not reach the whole extent of the human voice another octave was added. This circumstance gave rise to the term flat, as the alteration of the diatonic into the chromatic tetrachord introduced that of sharp, thus : E F F * A, consisting of a half-tone, a minor semitone, and a minor third ; the term flat arose from the necessity of making a half-tone from the mese A, the fifth line bass staff, thus : A B |? C D, to form a diatonic tetrachord, and a perfect fourth from the F below, thus : F B \f . The system of conjoining tetrachords, of which the fourth was always a perfect one, formed, together with the new enharmonic or quarter-tone division of sound, the sum and substance of the Greek immutable system, the double octave from A, the first space bass-staff to A, the second of the treble staff; thus, as divided into five hexachords by Forkell, riz.

The Diatonic, Chromatic, Enharmonic Scale of the ancients.

C28 Nete hyperbolaeon (second space treble staff) … (

J’ 27 Paranete hyperbolaeon diatonos ….

26 Paranete hyperbolaeon chromatice

125 Paranete hyperbolaeon enharmonios

24 Trite hyperbolaeon …..

23 “j Nete diezeugmenon …..

22 j Paranete diezeugmenon diatonos

21 I Paranete diezeugmenon chromatice

20 j Paranete diezeugmenon enharmonios

19 | Trite diezeugmenon …..

18 J Paramese (space above the bass staff)

T17 Nete synemmenon (space below the treble staff) .

j 16 Paranete synemmenon diatonos

J 15 Paranete synemmenon chromatice

J 14 Paranete synemmenon enharmonios

j 13 Trite synemmenon

112ˆ) Mese …

11 Lichanos meson diatonos

10 (ˆ Lichanos meson chromatice

9 { Lichanos meson enharmonies ….

g

g flat or F sharp.

u.

e X enharm. F

d

d flat c sharp

c

b x enharm. C u.

b natural.

d

c flat b natural.

b flat.

a X enharm. b flat.

8 j Parhypale meson -

7j Hypate meson

6 Lichanos hypaton diatonos

5 Lichanos hypaton chromatice

4 Lichanos hypaton enharmonios

j 3 Parhypale hypaton

I. 2 Hypate hypaton

1 Proslambanomenos (first space bass staff)

“sharp.

e X enharm. f flat;

e

d

d flat c sharp.

c

b X enharm. c flat

b natural.

Excluding from this extraordinary system the we obtain the celtbrated system of Aristoxenus, enharmonic or quarter tone division, and re-
thus : taining the, to us, more intelligible portion of it,

The inversion of this order of sounds produces the modern major system, thus :

T

3

m

Aristoxenus, considering the ear the sole arbiter of musical intervals, was opposed to Pythagoras, who, on the contrary, thought the ear no more capable of deciding upon their nature than the eye of forming a circle without compasses. Ptolemy, endeavouring to steer a middle course, did but little service to the cause he espoused. There were other chiefs of sects, as Epigonus, Da-mon, &c. : the former was the inventor of an instrument called after him the Epigonium, mounted ××vith forty strings.

Such was the state of the fundamental scale of music up to the time of Guido Aretinus, who flourished -in the eleventh century, when the principles of music underwent a thorough reformation. Of the most celebrated writers of the ancients, Aristoxenus, Euclid, Nichomacus, Alypius, Martianus, Capella, Guadentius, Bacchius the elder, Aristides, and Ptolemy, are the principal ; editions of whose works have been given to the public with notes by Meibomius and Dr. Wallis.

Of the various specimens of ancient Greek music, mentioned by different writers, but four, in their supposed original notation, have been transmitted to us. For their elucidation we are chiefly indebted to the exertions of Monsieur Burette. Three of them are hymns addressed to Calliope, Apollo, and Nemesis; they were found among the papers of the celebrated archbishop Usher, in Ireland. As the musical note, generally speaking, is set to each syllable of the poetry, they are termed Syllabic compositions : not melismatic, a species of music said, though incorrectly, to have been unknown to the ancient Greeks. The fourth specimen was found in a monastery near Messina by Kircher, the words consisting of the first eight verses of the first Pythic Ode by Pin-

dar ; the musical characters corresponding to those attributed by Alypius to the Lydian mode, which Plato tells us was so peculiarly adapted to inspire tender affections, that he forbad the use of it in his republic.

As a specimen of the intervals with which the ancient melodies are said to have been composed, the musical reader may select Dr. Burney’s version of Burette’s translation of the hymn to Calliope. We are aware, however, that although originally written in the Lydian

mode, the tender affections of the reader will be the last to be awakened in its performance. No two notes, with the exception of the seventh line, connecting so as to form even the shadow of a musical idea throughout the piece, a circumstance quite sufficient to disprove its genuineness.

The intervals chosen for the translation of this hymn being of Phrygian instead of the Lydian import, it may well have been cited in disproof or ridicule of the boasted virtues of Grecian music, as also of its utter impracticability of receiving harmonic support.

Following, however, the majority of opinions expressed upon the subject of the intervals as they constitute the different Grecian modes, and viewing their varied powers through the medium of nature rather than of speculations of authors determined to make all Greek music of an unintelligible nature, we are enabled to present our readers with a translation of this once celebrated hymn in a shape both genuine and satisfactory. The Lydian powers maintaining still their influence over mankind, all the quotations and hypotheses, entertained by a variety of writers, in proof that Grecian music was of a nature totally opposite from that of the present day, are overturned.

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The HYMN to CALLIOPE, translated from the original Greek characters and harm .-.ised

by J. F. DANNELY.

B.CZZ00 0 C C ††† * f M M ZZZZN

noreoc.MS.C Z Z 0 0 * C C †† I * M M ZZZEZ

$ /iff KI ra p\>t Av pi| Ciauv ae

PM* C *PM* ** †††

PM* C CPM PC* p

/*[illegible] era pot <ˆi Xi;

aX cf uv i./i a c

* N C C C C C

* N C C C C *

Aa T►► yovt AJJ X u irata v Whilst many critics, supported by various authors of reputation, will be disposed to doubt the genuineness of this specimen, together with its harmonic treatment, there will not be found wanting advocates backed by Doni, Zarlino, Tevo, Eximenes, Stillingfleet, and a host of other equally celebrated authors, to support it. Besides these authorities, we may cite in support of this translation the admissions of Padre Martine ; Burette and Kircher, who, though foremost to deny to the ancient Greeks the perfect knowledge of harmony, have, together, condescend-ingly admitted, that they did employ occasionally the consonances of the fourth, the fifth, the third, and the octave. To remove any doubt arising in the mind of the reader, as to the musical im-port of the characters, were easily effected by VOL. XV.

Evp i vug ira pt at poi analoay. For instance, an antiquary, succeed in<; so far in his attempt to decypher the hieroglyphic* of Cleopatra's needle as to make 0"t a sentiment at once beautiful and complete in all its parts, thinks himself justified in using the sam►►- means for the translation of the remainder, and no doubt arises in the mind of any one as to the genuineness of the effects produced, or of the fitness of the means employed, if they enable the antiquary to oecypher the whole of those hieroglyphics with equal consistency and truth. Paley's description of the stone found upon the desert aptly serves to illustrate the justness 01 this conclusion.

That instinct which teaches us to intonate thi-intervals of our diatonic major scale with justness, without the help of mathematical theorem*

must have been known to the ancient Greeks from the perfection of their organs, and happier disposition, as compared with ours to receive the principles of music. Why then deny them that which teaches individuals, ignorant of the rudiments of harmony, but possessing a good ear, to sing a third above, or a sixth below a given subject, sung or performed by instruments ? A chorus of forty voices, singing in octaves, accompanied by instruments playing in unison with the voices, could not always have been considered grateful or satisfactory either to the mind or ear. Fugues, a species of artful music, considered by some the perfection of modern music, and other compositions of the present day, which, rather than as the efforts of men inspired by genius to invent melodic phrases, one would be induced to believe, from their similarity, were cast in one common mould, would have been rejected by the ancient Greeks, because, in all their works, they copied nature. As their compositions were characterised by a moderate use of dissonances, we may conclude that all subordinate parts were intended intimately to support the principal design or melody. The voices employed in the chorusses of the ancients were tempered one with another, forming that happy assemblage of sweet sounds at all times insuring perfect expression. Inconcinnous intervals or dissonances, being an embellishment of nature whereby she gives beauty to the concinnous ones, or consonances, they must always have been employed, since, without such means, in the composition of melody or harmony, no continuity of design could have been produced. The Greeks therefore employing such intervals as seventh and fourth considered them as dissonances, requiring, as in modern theory, ultimately to ascend or descend one degree, to complete the melody or harmony, without knowing the cause, or troubling themselves with reasonings upon such progressions of sounds by mathematical deductions,, which, in musical matters, are not exactly to be depended upon.

It will undoubtedly appear extraordinary that, during the number ‘of centuries the Greeks flourished, they should not have discovered a more simple method of notation than the one explained in the description of their musical chords. These names, being found too troublesome for general use, were succeeded by letters of the alphabet, some turning upwards, and others sideways, some cut in halves, &c., thus :

Vocal. Instrumental.

7 H

T r

R L

* F

C C

P O

M i-j

I <

e v

As all analogy in the modes, we are told, was out of the question, these signs were augmented
ॠr the number of 1860, a circumstance full warranting Plato’s observation that it required three

Vocal.

Instrumental.

Z

J

r

N

0

Z

E

\

-◆◆.

1

-Q.

n

Jl

>

M

n

years hard study to know the musical characters and to play a tolerable accompaniment upon the lyre. The Romans followed this plan up to the time of Boethius, who made a great reduction, employing instead, fifteen Latin letters. Pope St. Gregory in his turn reduced them to eight, *viz.* ABCDEFGH, the letter H expressing, as at present in Germany, the sound B natural, as B that of B flat.

The music of the ancients being governed entirely by the rhythmical structure of their words, or of the long and short syllables composing them, thus : - u. The Greeks were perhaps unacquainted with the art of using signs to express both variety and duration of sound. To suit, therefore, the precise nature of these long and short syllables, we are obliged, in our translations of the ancient specimens of music, to change the time alternately into Binary and Ternary measure. Nevertheless the hymn to Calliope is susceptible of being expressed according to the rules of modern rhythm. It is one of the most beautiful compositions in the school for which it was composed, and might with advantage be studied by the pupil in the present day.

The more extended phraseology, in certain parts of this arrangement, reminds us strongly of the nature of some of Beethoven's movements in three-eight time. But, associating the sounds with the word, it must be confessed that the system of changing the time, to suit the rhythmical structure of the word, adds to, rather than lessens, the beauty of the hymn. Indeed the oftener it is heard in the original form, the more it will be found to resist the attention of the hearer. The sevenths, marked thus f, are worthy the genius of Mozart ; the asterisks denote the caesuras.

Much was expected, upon this and various other subjects, from the manuscript of Philode-mus presented to his majesty George IV. by the king of Naples, discovered among the ashes of Herculaneum and Pompeii, but unfortunately destroyed in the process of unrolling. From the contents, however, of a few fragments preserved, it is considered to have been merely a dissertation upon music after the manner of Boethius. Whether future excavations will bring to light other manuscripts of the ancients, buried for the last 1 900 years, is a matter

of great importance to the science we treat upon, since, without them, or others from different sources, little can be known for certain as to the degree of perfection to which the Greeks and Romans brought their music.

But if the Greeks were deficient in the art of notation, more particularly of instrumental music, it must be allowed that their melopocia comprised every thing that could be desired with respect to the invention of melody in its application to poetry. Of the extraordinary effects upon the minds and passions of men unaccustomed to sounds produced from musical instruments, particularly when accompanying sentiments of the noblest description, and sung by the wisest philosophers, poets, and musicians of the first order, some of them may be too easily imagined to be doubted.

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Music, in the time of Aristides Quintilianus, education, since it was divided into th►►j following must have formed a considerable branch of branches, viz,

‘Contemplative

C Natural

ˆArtificial

C Physica t Arithmetical

Music -

LActiv

Practica’

t Harmonical < Rhythmical 4 Metrical

f Melopaeia ˆ Rhythmical v Poetical

C Sounds 1 Intervals System* ˆ Species 1 Modes 1 Mutations ˆMelopaeia

f Organ icai Enunciativeˆ Odical

(. Hypocritical

The music of the ancient Romans being con-the mode required, with his foot, playing wito

fined principally to declamation and dancing, or rather saltation, they added nothing to the principles of Grecian music, but merely translated the Greek authors upon the subject; and, as the

principles of their declamation were expressed ˆ *. .-ˆv.ˆ, .,u,. .,,Vic

by accentuation, accents were adopted for its sonorous from their forms, see plate IV. figs, notation. Thus, when words were set to music, 5, 6, the latter being taken from a Sarcophagus, the Romans as well as the Greeks had only to now in the British Museum.

the fingers of his left hand, and with a plectrum in the right. The plectrum was made of metal or other hard substances, as a dog’s tooth, a jaw bone, or the horn of a troat. To these lyres succeeded others of the same secies, but

more

)nly

conform to the quantity, and to place an accent upon each syllable. These accents, therefore, determined the degree of acuteness as well as that of the duration of sounds employed in the singing or recitation of their verses. Nevertheless the actor had the privilege of declaiming more or less slowly ; since Cicero, writing to Atticus, observes that, relaxing in the time of his declamation, he obliged the person who accompanied him to relax also in the time of the sounds of his flute. Kircher pretends to have preserved many compositions of Horace and Sappho, and to have given a key to the translation of them, but neither the one nor the other are much to be relied upon. Of the genuineness ot the melody, ‘ Jam satis terris,’ however, we are

The chelys, \liicH may be considered as the origin of the guitar, is represented at fig. 7.

The ancient lyre preserved in the British Mu-seum clearly indicates, by its windlass, the manner in which the strings of this ancient instrument were tightened and slackened ; the lyre, fig. 8, shows that short as well as long strings were used to ensure more effectually the various degrees of the octave. The levers attached to the lyre with a plectrum could have been used for no other purpose than to wind the strings round the windlass. ˆ

These instruments were played with the points of the fingers, the word psallere signifying to touch with the extremity of the nnuers ; hence the psalterion, an instrument of thirty strings

assured by many learned writers in matters of tuned in octaves, resembling the natural voices

polite literature and antiquity.

The most ancient instrument upon record is the Chinese hiscen, or

hinen, in form of an egg pierced with five holes, without reckoning the embouchure : three at the bottom and two at the top. Vere Amiot traces this instrument 3000 years before the Christian era, i. e. before the reign of Koang-ty. Other ancient instruments are, the testudo, having the base mnde of the shell of ;\ tortoise, and the sides occasionally of bull's horns, the origin of the lute, see plate IV. fig. 3. The ncbel, an ancient Hebrew instrument strung with gut, supposed by Luther to be the psalter of twelve or more strings, plate IV.

of men and boys blended together, termed maga-dizing. The kinner, upon which David played before Saul, in the shape cf the Greek delta, is accurately exhibited by Kircher after a specimen in the Vatican.

To these succeeded others provided with scrolls and necks, as the Egyptian dichord to tighten or slacken the strings. The violin, supposed of modern invention, appears to have been common even in the time of Caligula, and was played with a bow, mounted with horse hair. The neghinoth of the Hebrews, mounted with three strings only, has abo been supposed of the same species. The form of the violin ap-

'CIVC UI lllUlt; BlIlUKˆf IMclIC 1 \ . - wjr*.*.

fig. 4 ; the Hebrew harp, and the triangular pears upon some medals of Nero, and in Ar-lyre taken from a monument in the city of golis's account of the ancient games of the circus.

Medicis.

The tripnd or Pythagorean lyre, representing the sounds of the three modes in which the Greek nome called trimeres was sunff, contained

mounted with four strings and a bridge to elevate them for the bow. In the paintings of Plulos-tratus, Orpheus is represented holding a how in the right hand, and a violin in the left. The ap-

the complete scales, *viz.* the Dorian, the Phrygian, pearance of this

instrument upon ancient marNes and the Lydian. The performer played” upon is of rare occurrence, probably from its le.- his instrument seated, turning it, according to picturesque form as compared with th

Although the little figure of Apollo playing upon a kind of violin with something like a bow, and supposed by Addison and others to be an antique, may have been disproved by Winkel-raan, it does not follow that the violin should have been unknown to the ancients; on the contrary the nature of the hurdy-gurdy, the sambuca or barbiton of the ancient Greeks, sufficiently attests the previous adoption of the violin or some such instrument : the bow was drawn by the hand across the string long before the friction of a wheel was fixed upon for that purpose. The ancient violin differed from the modern one only in the neck, which was much shorter.

The flute, by having been ascribed to Apollo, Pallas, Mercury, and Pan, sufficiently vindicates its own antiquity. Hyagnis, 1500 years before Christ, is named as the first performer of celebrity. Athenaeus gives to Numidias the invention of the flute of one tube ; to Silenus that of several tubes; to Marsyas the flute with a reed. Phrygian flutes, as the monaulos of Egypt, were curved and intonated with a reed, as the modern hautboy, see fig. 9, plate IV. The ancients kept their reeds in boxes called glosso-comeia, reed or tongue boxes. There is another species of Egyptian flute, taken from a dancing figure found at Eschmin. The avena, made of an oaten straw, was blown at the top. The aolamus pastoralis was composed of reeds united together; to this a horn was sometimes attached, as in fig. 10, in the shape .of a lituus. The fistula Panis was usually composed of reeds tied together. Foster, in his voyage round the world, found an instrument of this kind in the Friendly Islands. The Chinese have a similar one called the Ching. See CHING. Various ancient flutes may be seen in Dr. Bumey’s great work on music. Fragments of flutes formed of bones have been also discovered in the ashes of Herculaneum, and preserved in the Vatican.

When the process of forming artificial tubes was known, flutes were

made of box-wood, ivory, copper, and even gold. The most ancient flute of the Hebrews was the agada, the form shown in plate V., fig. 1. This instrument, being used at ceremonies of a different nature from that in which the lyre was employed, was made also with a view of imitating the various compasses of the human voice, varying in size as shrill or deep sounds were required. Wind instruments possessing deep tones, increasing in size towards the bottom, were termed horns, as the seven mentioned in Joshua, made of a bull or a ram's horn. A species of lituus made of metal is shown plate V. fig. 2, another of the monaulos, derived probably from the Chinese busciend, shown fig. 3, plate V. The cornu ve-nutorium, the origin of the serpent, made of metal, was of nearly the modern form, see plate \ ❓❓❓ h'<c. 4. A curious specimen of a horn with two mouth-pieces, as if to be blown by two persons, is seen fig. 5. Bass flutes, or kinds of bassoons, the two latter with one key each, were sometimes employed by the ancients. The sin-cular instrument fig. 6 is supposed to have been a flute. Dr. Burney considers the instrument fig. 7 to have been the clangor tubarum.

used by Alexander the Great. This as well as some other specimens was dug from the ruins of Herculaneum, and is made of ivory, similar in appearance to an organ pipe. The projections or keys, originally termed bombykas, upon these tubes, were movable, to alter their diapason or extent, and by this arrangement their compass was very considerably increased.

From instruments having no such projections, different degrees of sound were produced by the motion of the mouth, as from the trumpet. The suckbut, of the trumpet species, was also found among the ruins of Herculaneum or Pompeii, the lower part made of bronze, the upper part and mouth-piece of solid gold. In quality of tone it has not been equalled by any of modern manufacture. This instrument is in the possession of his present majesty. A lituus or octave trumpet was in the possession of Sir Joseph Banks.

At the Olympic games the trumpet-players expressed an excess of joy when they found their exertions had neither rent their cheeks nor burst their blood-vessels : some idea may hence be formed of the noisy and vociferous style of music which then pleased.

On the precise nature of the ancient double flutes, derived from the Egyptians, and of which various specimens are still in the possession of the curious, authors are by no means agreed. The symphony, a

concert resulting from two equal flutes, was composed of unisons, when the fingers of each hand stopped the same holes. From expressions annexed to the titles of some of Terence's comedies, we learn that they were represented to the sound of equal and unequal flutes, right and left. The Andria was accompanied with equal flutes right and left ; the Self-tormentor with unequal flutes. The performer played upon two flutes at the same time, and placed round his mouth a bandage, that the cheeks might not protrude, and for the better management of the breath. The right flute with two bores produced low sounds, the left had several bores and produced high sounds. Double flutes, the tubes of which were of different lengths, as seen in figs. 7,8, if intonated together, would produce sounds of different pitch. Some authors consider the larger tube to act as the drone of a bagpipe, others that both tubes were used to represent together the sounds of two different modes ., EFGABCDE , . , thus : prjVFPARr Pr►►ducmg harmonic

combinations of thirds. But, as the subject of the piece performed often required a change of mode, others consider that these tubes were sounded alternately, and that they were joined together, because that was the most expeditious way of accompanying the actor or singer.

The traverse or German flute was known to the ancients. The flute used by Ismenias, a celebrated Theban musician, cost at Corinth three talents, or ►►581. 5*. The ancients were not less extravagant in gratifying the ministers of their pleasures than ourselves. Amcebaeus, a harper, was paid an attic talent, or ►►193. 15s. per day for his performances. Roscius had 500 sestertia, or ►►4036. 9s. 2d. sterling a-year. The beautiful Lamia, who was taken captive by Demetrius, when he vanquished Ptolemy Soter, and

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who captivated her conqueror, with many other female musicians, are recorded by ancient authors in terms of admiration. The philosophers of Greece were not inattentive to the theory of music. This science became the source of various sects, and of much diversity of opinion. The founders of the most distinguished sects were Pythagorus and Aristoxenus. Clonas is named as the first composer of celebrity for the flute, and his compositions for that instrument were considered superior to those of every other composer of the period.

Other species of instruments, common to the ancients, were of a rhythmical nature, being used to mark the cadence and rhythmical divisions of their dances, verses, and of airs accompanying them; as the tabret, the origin of the tambourine; the sistrum, plate V., figs. 9 and 10; the ludere catenas, the cymbals, the drum, tambour, &c. From the enormous size of the ancient theatres, Vitruvius informs us that vases, corresponding to the degrees of the octave, were placed in different parts of them, to assist the performers, and to which the voice of the singer was occasionally directed for assistance in the distribution of its tones. This accounts for the necessity of adopting, on certain occasions, double flutes, such as shown in fig. 11, instead of single ones, also of the performers' wearing bandages ; quantity, not quality, of tone, being the principal object of their care. History informs us of several individuals who have died in their efforts to display their powers on their respective instruments.

The walls of Herculaneum and Pompeii abound with beautiful forms of organs, and we often meet with descriptions of them in the writings of the ancients, as the clepsydra, &c. They were, however, reserved for the cabinets ot the curious, and not generally introduced into churches till the beginning of the ninth century, when they were of the form of fig. 12, the bellows resembling those used in blowing fires. In the Anthologia, ascribed to the emperor Julian, who flourished in the year 364, is seen the following account of an organ : ××× ' I see reeds of

a new species, the growth of another, a brazen soil, such as are not agitated by the wind, but by a blast from below their roots, whilst a robust mortal, running with swift fingers over the con-cordant levers, makes them, as they swiftly dance, emit melodious sounds.' In the gardens of Mathei, in Rome, a figure in bas-relief is seen of a cabinet organ, of which the bellows are, in appearance, like those before described, blown by a man behind the cabinet, and the clavier played by a woman. In the epistle of Dardanus, ascribed to Ilieronymus, an organ is represented with twelve pairs of bellows, the wind-chest formed of the skins of two elephants, the noise from which might be heard at the distance of 1000 paces; Mersennes considers it a species of bagpipe, and to be the origin of the organ. It does not appear, however, that any of the ancient organs comprised more than one set of pipes. Fig. 13 is an ancient species of triangle ; in which the tones were produced, by balls and rods, as well as the triangular bars.

By comparing the accounts of Diodorus Sicj-lui and of Plato, says tl.e ingenious Mr. Morison, there is reason to suppose, that in very ancient times the study of music in Egypt was confiaea to the priesthood, who used it only on religious and solemn occasions ; that, as well as sculpture, it was circumscribed by law ; that it was esteemed sacred, and forbidden to he employed on light or common occasions ; and that innovation in it was prohibited: but what the style ot relative excellence of this very ancient music was, there are no traces by which we can form an accurate judgment. After the reigns of the Pharaohs, the Egyptians fell by turns under the dominion of the Ethiopians, the Persians, the Greeks, and the Romans. By such revolutions, the manners and amusements of the people, as well as their form of government, must have been changed.' In the age of the Ptolemies the musical Barnes and contests instituted by those monarchs were of Greek origin, and the musicians who performed were chiefly Greeks.

' The curious relict of antiquity called the Dichord deserves to be described because it affords better evidence than, on the subject of ancient music, is usually to be met with, that the Egyptians, at so very early a period of their history, had advanced to a considerable degree of excellence in the cultivation of the arts. By means of its neck, this instrument was capable, with only two strings, of producing a great number of notes. These two strings, if tuned fourths to each other, would furnish that series of sounds called by the ancients heptachords, which consists of a conjunct tetrachord as B, C, D, E : E, F, G, A ; if tuned fifths, they would produce an octave, or two disjunct

tetrachords. The calascione is tuned in this last manner. The annals of no other nation than Egypt, for many ages after the period of the obelisk at Ileliopolis, exhibit the vestige of any contrivance to shorten strings during the performance by a neck or finger-board. Father Montfaucon observes, that after examining 500 ancient lyres, harps, and citharas, he could discover no such thing.'

4 The Hermes of the Egyptians,' continues Mr. Morison, ' surnamed Trismegistus, or thrice illustrious, who was, according to Sir Isaac "Newton, the secretary of Osiris, is celebrated as the inventor of music. No one person ought strictly to be called the inventor of an art which seems to be natural to, and coeval with, the human species ; but the Egyptian Mercury is without doubt entitled to the praise of having made striking improvements in music, as well as of having advanced in various respects the civilisation of the people, whose government was chiefly committed to his charge.'

< The monaulos, or single flute, called by the Egyptians photinx, was probably one of the most ancient instruments used either by them or any other nation. From various remains of ancient sculpture, it appears to hare been shaped like a bull's horn, and was at first, it may be supposed, no other than the horn itself. Before the invention of flutes, as no other instruments except those of percussion were known, music must ha\e been little more than metrical. When the art of re-tinrvr and lengthening sounds was discovered

the power of music over mankind, from the agreeable surprise occasioned by soft and extended notes, was probably irresistible. At a time when all the rest of the world was involved in savage ignorance, the Egyptians were possessed of musical instruments capable of much variety and expression. Of this the astonishing remains of the city of Thebes, still subsisting, af-ford ample evidence. In a letter from Mr. Bruce, iugrossed in Dr. Burney's History of Music, there is a particular description of the Theban harp, an instrument of extensive compass, accompanied with a drawing taken from the ruins of an ancient sepulchre at Thebes, supposed by Mr. Bruce to be that of the father of

Sesostris.

4 On the subject of this harp, Mr. Bruce makes the following striking observation : ‘ It overturns all the accounts of the earliest state of ancient music and instruments in Egypt, and is altogether, in its form, ornaments, and compass, an incontestable proof, stronger than a thousand Greek quotations, that geometry, drawing, mechanics, and music, were at the greatest perfection when this harp was made.’

‘ It cannot be doubted, according to Mr. Bruce, that during the reigns of the Ptolemies music must have been much cultivated. The father of Cleopatra, the last of that race, derived his title of auletes, or fluteplayer, from his excessive attachment to the flute. Like Nero, he used to array himself in the dress of a tibicen, and exhibit his performance in the public musical contests.

‘The Scriptures afford almost the only materials from which any knowledge of Hebrew music can be drawn. Moses, who led the Israelites out of Egypt, was educated by Pharaoh’s daughter in all the literature and elegant arts of that country. The taste and style of Egyytian music would therefore be infused into that of the Hebrews. Music appears to have been interwoven through the whole tissue of religious ceremony in Palestine. The priesthood seem to have been musicians hereditarily and by office. The prophets accompanied their inspired effusions with music ; and every prophet seems to have been accompanied by a musical instrument. Music, vocal and instrumental, constituted a great part of the funeral ceremonies of the Jews. The number of fluteplayers in the processions amounted sometimes to several hundreds, and the attendance of the guests continued frequently for thirty days.’ Josephus, 1. 3, c. 9

The Hebrew language abounds with consonants, and has so few vowels that in the original alphabet they had no characters. Their instruments of music were chiefly those of percussion; so that, both on account of the language and the instruments, the music must have been coarse and noisy. The vast numbers of performers, too, whom they collected together, could, with such language and such instruments, produce nothing but clamor and jargon. Josephus says, there were 200,000 musicians at the dedication of Solomon’s temple

Cadmus, with the Phoenician colony which he led into Greece, imported at the same time various arts into that country. That chief dis-

covered gold in Thrace and copper at Thebes, where it is still termed cadmia. Of these materials, and of iron, they formed instruments of war. These they struck against each other during their dances at sacrifices, by which they first obtained the idea, of instrumental music. Such is the origin of that species of music in Greece, produced by instruments of percussion. The invention of wind instruments is attributed to Minerva ; and to the Grecian Mercury is assigned the honor of many discoveries probably due to the Egyptian Hermes, particularly the invention of stringed instruments.

It has been imagined that the occupation of the first poets and musicians of Greece resembled that of the Celtic and German Bards, and the Scalds of Iceland and Scandinavia. They sung their poems in the streets of cities and palaces of princes. They were treated with high respect, and regarded as inspired. Such was the employment of Homer. His poems exhibit the most authentic picture of the times of which he wrote, and in which he lived. Music is always named throughout the Iliad and Odyssey with rapture. The instruments most frequently named are the lyre, the flute, and the syrinx. The trumpet appears not to have been known at the siege of Troy. From the time of Homer till that of Sappho only a few fragments remain of the works of those poets and musicians who flourished between those periods. During the century which elapsed between Sappho and Anacreon, no literary productions are preserved entire. From Anacreon to Pindar there is another chasm of nearly a century. Subsequent to this time, the works still extant of /Eschylus, Sophocles, Euripides, Plato, Aristotle, Anstoxe-nus, Euclid, Theocritus, Cullimachus, Polybius, &c., produced all within less than 300 years, distinguished this illustrious period, as that in which the whole powers of genius seem to have been exerted to illuminate mankind. Then eloquence, poetry, music, architecture, history, painting, sculpture, like the spontaneous blossoms of nature, flourished without the appearance of labor or of art. The poets, epic, lyric, and elegiac, were all likewise musicians, so strictly connected were music and poetry for many ages.

The invention of notation and musical characters marked a distinguished era in the progress of music. Terpander is the celebrated poet and musician to whose genius music is indebted for this. He flourished about the twenty-seventh olympiad, or A. A.C. 671. Before that valuable discovery, music, being entirely traditional, must have depended much on the memory and taste of the performer.

The Romans, from their first origin, were possessed of a peculiar species of music. It was rude and coarse ; but, as soon as they opened a communication with the Greeks, they borrowed their music and

musical instruments. The excessive vanity of Nero, with respect to music, displayed in his public contentions with the most celebrated professors of the art in Greece and Rome, is well known. See NERO. The solicitude with which that detestable tyrant attended to his voice, throws some light OP the practices

of singers in ancient times. He lay on his back, with a thin plate of lead on his stomach. He took frequent emetics and cathartics, abstained from all fruit, and such meats as were held prejudicial to singing. lie desisted from haranguing the soldiery and the senate; and established an officer (Phonascus) to regulate his tones in speaking.

Most nations have introduced music intothejr religious ceremonies. That the art was early admitted into the rites of the Egyptians and Hebrews, and constituted a considerable part of the Grecian and Roman religious service, appears from many ancient authors. It soon obtained an introduction into the Christian church, as the Acts of the Apostles discover in many passages.

Saint Ambrose, in order to establish certain principles upon the subject of plain chant, then falling into great disrepute, selected out of the welve Grecian modes, four of them, *viz.* the Dorian, the Phrygian, the Lydian, and the Mixt-Lydian mode (see page 267). Upon these modes the psalms and other parts of the divine service were chanted or sung, and the melodies of the Victima Paschals, Plange Lingua, the inno or sacred song, and the dies irae composed ; compositions then of established reputation. The music of the primitive Christians, it is generally understood, consisted only of me-lody, and, as no other rhythm was observed by them than that of discourse, it was purely sylla-bic, partaking of recitative, till the time of St. Ambrose and St. Augustin, who first introduced the system of singing two or more notes upon one syllable, thus : with Meibomus's translation.

vocal M

OCTX n

Te de urn lau

da

This ancient composition, though composed so early as the year 350, is still performed in the Roman church, but, unfortunately for the cause of music, we have not been able as yet to ascertain the precise nature of the instrument that was used to accompany the sinking of it. But, of whatsoever nature this instrument partook, we are positively informed that species of interludes and finales, or instrumental conclusions of chants, were adopted in the time of St. Ambrose from the following remarkable passage taken from his works, ‘ that not being able to find words worthy of pleasing God, we ought to address him with confused notes of jubilation ; for to whom belongs such jubilation without words, if not to the ineffable Beins ? and how should we celebrate the ineffable Being, when we neither can be silent, or find how to express our transports, unless it be in inarticulate sounds ?’*

* It has been asserted that harmony must have been unknown to the ancients, because each of their musical characters, vocal or instrumental, was the sign only of one sound. May it not also be said, and indeed with much more propriety, in after ages,

But, as the limits of the foregoing males were found of too confined a nature, pope St. Gregory, the restorer of ecclesiastical music in the Weitj extended these means, and, for that purpose! availing himself, as it is fabulously recorded, oi divine inspiration, revealed to him by a dov□□□□, or rather of the observations of Boetluus, who wrote a treatise upon music, employed all the intervals of the ancient Greek double octave (sec page 267),and thereby restored the four subordinate modes termed Hypo-Dorian, Hypo-Phry- gian, Hypo-Lydian, and Hypo-Mixt-Lydianfsee page 267); the Proslambanomenos of which was fixed upon the lowest clear and firm note of the voice, or instrument, that was supposed to be the deepest settled pitch in nature, adopted freely to express it.

Modes were now by way of distinction termed authentic and plagal, i. e. principal and subordinate; the former being harmonically divided, that is, by a fifth from the lowest, and a fourth from the highest, thus :

AD DA

Authentic fifths E B authentic fourths B E FC C F

G D DC

And the latter arithmetically divided, *i.e.* by a fourth from the lowest and a fifth from the highest note, thus :

AD DA

Plagal fourths B E Plagal fifths E B

CF FC

DC GD

Hence the eight celebrated ecclesiastical modes, distributed throughout Christendom, as the foundation of church-music, the sounds of which were expressed generally in notes of equal value, varying only as the words accompanying them required a long or short syllable. The fourth and fifth intervals of these modes were made perfect by the application, occasionally, of a flat, or a sharp, or by transposition. The following is a representation of their key notes divided into authentic and plagal, *viz.*

‘ ❓❓❓ | j-Authentic

*

Plagal,

or, classed into equal or unequal, thus :

1

3

5

7

Authentic. Plagal.

2

4

6

8

that harmony was unknown to us : from our adoption of the word chord, to express a union of sounds of different pitch, as, for example, the chord of the fourth implying the union of the fourth, the fifth, and octave. \c. ? St. Ambrose introduced music into the church to attract the Gentiles, and to induce the Christians more willingly to assist in the celebration of divine service. Antiphonics were introduced by St. Ignatius, bi*hop of Antioch. St. AthanuMUS interdicted the use of music in the cliurclies of his diocese, admitting that more attention was paid to the music than to the word of liexl ; but it was however found, soon afterwards, to accord with Jevotioral focline.

It must be understood that the sounds of these modes, as performed according to the principles of modern” temperament, are not exactly such as were adopted by the primitive Christians, since, we are told, that, whatever the ancient Greeks may have done, they positively tuned their intervals by perfect fifths, and that without the least temperament, the greatest proof that can be given of their ignorance of harmony : combinations of thirds upon this principle being insufferable to the ear, for which reason they have been treated by some writers as dissonances. It must also be understood that the early Christians, in their application of the principles of Greek music to iheir sacred writings in prose, instead of poetry, sacrificed its rhythm, and metre : the force and energy of Grecian, also of modern music.*

With these extended means pope St. Gregory composed and added to the chants of the mass, and Hallelujah by Galasius, the Introitus, Kyrie Eleison, the Antienne, Offertory, Litanies, and other pieces. He also framed a code of laws, and, for their strict observance, established, in various parts of Europe, musical schools, where all choral hooks were corrected, and the pupils, consisting only of orphans, taught accompanied with an instrument. To the singers particular dresses were assigned, together with funds for their support ; this happened in the year 590, when, as the manner in which part of the divine service was performed partook absolutely neither of singing nor speaking, it is inferred that it was read after the manner of the ecclesiastical accentuation, or of the reading of the gospel and epistles observed in cathedrals, called psalmo-dizing, thus:

Quis infirmatur, &c,

upon the principles of which St. Ambrose, nowever, wrote in his work upon Rhythmus in the year 390.

From the time of St. Ambrose to that of St. Gregory, a period of 200 years, nothing is known relative to the cause of music, excepting that popes Sylvester and Hillary instituted public schools for singing and that about this time music was reckoned amongst the number of fine arts ; the fathers of the church cultivating it as capable of elevating the soul and devotional feeling. But, for the honor of music, it has been observed that it was the first of the arts, having preceded the rest

in order of time ; and that it is much more so that it will exist when they can no longer be of any use, and survive when all others shall be forgotten. The musicians assembled in the form of a semicircle round the altar, sang with sweetness and devotion, in chorus, in which popes, and other dignitaries of the cruirch, deemed it an honor to join ; the singing master stooil in front, or in the middle, holding a stick, a sign of authority given him by the pope, in His

* This spocies of prosaic music prevailed, in a measure, till the year 1700, Pergolen being the first to introduce into his compositions the principles of jhythm, as observed in the classical works of the

} 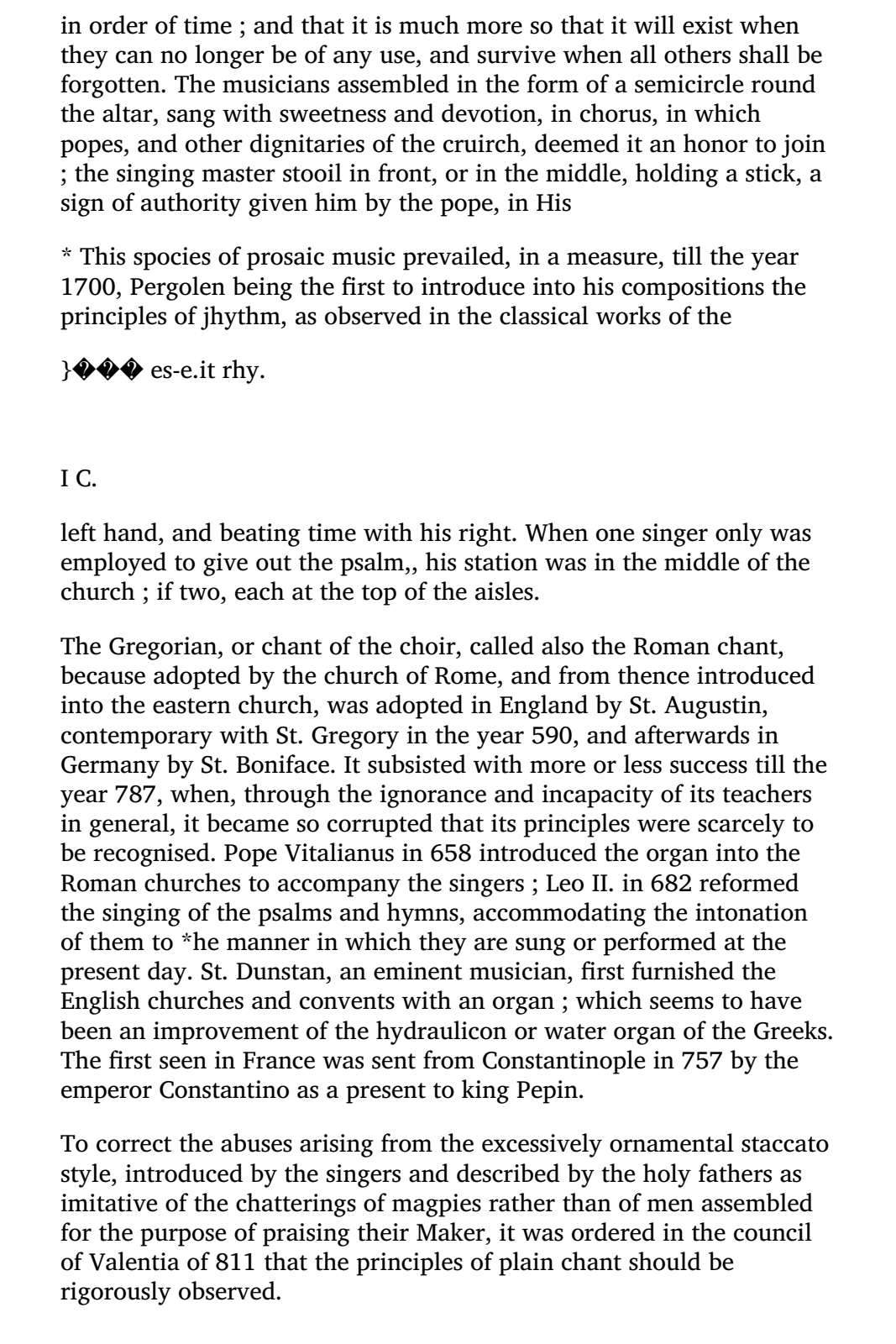 es-e.it rhy.

I C.

left hand, and beating time with his right. When one singer only was employed to give out the psalm,, his station was in the middle of the church ; if two, each at the top of the aisles.

The Gregorian, or chant of the choir, called also the Roman chant, because adopted by the church of Rome, and from thence introduced into the eastern church, was adopted in England by St. Augustin, contemporary with St. Gregory in the year 590, and afterwards in Germany by St. Boniface. It subsisted with more or less success till the year 787, when, through the ignorance and incapacity of its teachers in general, it became so corrupted that its principles were scarcely to be recognised. Pope Vitalianus in 658 introduced the organ into the Roman churches to accompany the singers ; Leo II. in 682 reformed the singing of the psalms and hymns, accommodating the intonation of them to *he manner in which they are sung or performed at the present day. St. Dunstan, an eminent musician, first furnished the English churches and convents with an organ ; which seems to have been an improvement of the hydraulicon or water organ of the Greeks. The first seen in France was sent from Constantinople in 757 by the emperor Constantino as a present to king Pepin.

To correct the abuses arising from the excessively ornamental staccato style, introduced by the singers and described by the holy fathers as imitative of the chatterings of magpies rather than of men assembled for the purpose of praising their Maker, it was ordered in the council of Valentia of 811 that the principles of plain chant should be rigorously observed.

Notkerus was upbraided by his master for singing two notes upon one syllable. In the year 850, under the pontificate of pope St. John XXII., an easier method of reading music by means of a staff of two lines was adopted, the different degrees of the octave being expressed l►►y breves in the following manner, thus :

such was the desire to cultivate the principles of music in England, that, in 885, king Alfred the Great, established a musical professorship at Ox-ford, and, following the example of other sovereigns, sent to Rome for music masters to teach his subjects the principles of plain chant, which, from the choice of its teachers being made with more discrimination, nourished till the time of Guido Aretinus in the eleventh century, when the principles of music underwent a thorough reformation. It must, however, be remarked that something more than the mere acquirement of a few crotchets and quavers was necessary in these times to make a musical professor.

During the dark ages, no work of genius or taste in any science was produced in Europe ; and except in Italy, music was equally neglected. In the middle ages, when the most fertile provinces of Europe were occupied by the Goths, Huns, Vandals, and other barbarous tribes, whose language was as harsh as their manners were savage, no improvement of music is to be looked for.

Franco is the first upon record who entertained the idea of counterpoint, an art which has since

experienced gradual and imperceptible improvements, far exceeding the powers of any one individual. The term counterpoint, or contra punc-tum, denotes its etymology and import. Musical notation was at one time performed by small points ; and the present mode is only an improvement of that practice. Counterpoint, therefore, denotes the notation of harmony ui music in parts, hy points opposite to each other. The improvements of this acquisition kept pace at first with

those of the organ ; and both were employed chiefly in sacred music, till the thirteenth century, when secular music began to be cultivated.

From the general introduction of organs into the church it is natural to conclude that some ideas of harmony, according to our acceptation of that word, should have been entertained by their admirers and inventors ; and it is somewhat remarkable, after what has been said upon the subject of the Orphean lyre, that the first union of sounds adopted as most grateful to the ear, should also have been minor thirds ; they were however but sparingly, used, and only in the conclusions of chants, thus :

le lu jah.

called organising. Several methods producing harmony were also adopted, such as placing a holding note a fourth below, or a fifth above, the vocal part, or both, which was termed doubly organising. This method was afterwards adopted for voices only, hence the expressions seen in ancient compositions, discant double treble, quadruple discant, de medius, &c. These and other unions of different sounds, as the harmony of, or belonging to, the major sixth, &c., ascribed to Franco of Cologne, or Paris, also to Guido Aretinus ir the year 1066, gave birth to modern harmony and temperament. Franco introduced notes of different lengths, as the semibreve long, and maxima, thereby giving a proportionate value to the breve introduced by St. John Damascenus. Guido Aretinus improved the musical staff of two lines already mentioned, as also of another of eight lines which was found in a manuscript in the library of St. Saviour, in Messina, with the names of the lines placed at the head of it, thus :

. i sal ve regi na

also as described by Gerbert, thus :

tris sempiternus

pa /

/fi

es li

Tu / tris sempiternus

/us

pa /

/fi

fi

Tu/

/us

in the formation of one of four lines, and maki-g use of the interstices, thus :

HYMN OP ST. JOHN.

L’t queant laxis Itesonarehlms Alira gestorum

Fa muli tuorum sol ve pollutis La bi is re-

-J >

a-fum Sancte lo-aa- nes.

the letters (sometimes points) representing the music to which Sappho and Horace are said to have set many of their odes. Another method expressing the sounds F and C by a red and a green line, thus :

red

green _

when it was deemed unnecessary to mark the intermediate lines or spaces. To express the nature of higher or lower sounds than the staff provided for, the red line was placed below the green one. The necessity of that occasional transposition of colored lines caused the introduction of the F, C, and G clerTs, providing the means of expressing the compass of bass, tenor, and treble, voices upon one staff only ; these cleffs were originally of the following forms, partaking somewhat of those of the letters, or sound, they represent, thus :

the F cleff was also expressed in the following manner, *viz.* A the last figure representing the shape (j of an ancient key. The

placing of CJ X these cleffs upon any line of the staff ‘ O gave it a name, and thereby determined the acuteness and

gravity of the ‘ rest. Hence the term

cleff, or key, to unlock or unfold.

For the purpose of ascertaining with precision the nature of the half-tones in the octave, forming the major diatonic scab, a difficulty felt at tlie present day in singing music at sight, Guido Aretinus changed the eight letters into six syllables, *viz.* ut-re-mi-fa-sol-la, and turned the ancient Greek tetrachords into hexachords, i.t. into systems of six sounds instead of four ; thus, by an ingenious method, copied from the Greeks, marking by their divisions into cantus naiurahs, cantus B durum, and cantus B molle, the characteristic half-tones of the major diatonic scale, by the syllables mi and fa only, thus :

ut re mi

fa sol la

called the cantus naturalis, because the syllables correspond to the letters they represent; the cantus B durum is thus expressed, *viz.*

ut re mi fa sol la and the cantus B molle, thus :

ut re mi fa sol la These syllables as they ascend mark the first

word of each line composing the hymn of St. John, which was sung by the disciples of Guido Aretinus, as an exercise to establish in the inind the various degrees of the hexachord, thus :

Ut-queant laxis

Re-sonare fibris

Mi-ra gestorum

Famuli tuorum

Sol-ve pollutis

La-biis natum. SANCTE JOHANNES. But, as will easily be perceived, Guido Aretinus, for the accommodation of this system called mutation of syllables, deemed it necessary to add a note below the proslambanomenos, and five others above the double octave of the Greeks ; thus :

p ###v^*-

calling the first or lowest note by the Greek letter gamma, thus : r, implying G also ut : hence the expression gamut, or gamma-ut, formed of seven hexachords, as shown in the following scheme, *viz.*

E

la

19

D

la

sol

18

C

sol

fa

17

H

17

B

fa

mi

16

A

la

mi

re

15

G

sol

re

ut

14

F

fa

ut

7

13

E

la

mi

6

12

D

la

sol

re

11

C

sol

fa

ut

10

H

mi

5

10

B

fa

9

A

la

mi

re

8

C

sol

re

ut

7

F

fa

ut

4

6

E

la

mi

3

5

D

sol

re

4

C

fa

ut

3

BH

mi

2

2

A

re

1

G

ut

which, says Guido Aretinus, in his Letters on his Micrologus, not only taught the principles of singing in one month, but, amongst other wonderful things, to modulate the subject into systems neither heard nor seen,* and by which the student in one, or at most two years, will become a greater adept in the science of music than by any other method in ten. The utility of this work, however, did not fail to create many invidious rivals, whose malevolent representations alienated the friendship of his patron, the abbot of Pomposa, and he was banished as an exile from that monastery. This method of solmisation, the groundwork of all classical compositions, was adopted with great success by one whose name will ever be dear to Englishmen, and whose works, from the number as well as merit of them, will at all times be reckoned amongst the brightest ornaments of the British school. We allude to the late Samuel Webbe. This scheme, it will be observed, not only teaches the precise value of intervals, but the first principles also of modulation, showing, by its various hexachords, the origin of our terms the tonic, dominant, and subdominant, a plan essential to all who would sing with discrimination. The Italians still adopt these principles of solmisation, and, in the designation of the keys into which their compositions are effected, they invariably use the expressions A la mi, C sol fa ut, &c., which, in no way satisfactorily can be explained, than by reference to the foregoing table. These principles were also explained by the different joints of the left hand, which were marked with figures.

The figures and points representing the sounds explained in the preceding scheme.

At this epoch of musical history may be dated the decline of the Grecian modes in general.

The harpsichord is supposed to have been invented before the time of Guido Aretinus, since without some such instrument neither he nor] Franco could have put into practice their notions : upon the principles of harmony. Soon after this period the compass of instruments in general use was extended from C below gamma to C above E la of Guido Aretinus's scale, forming a compass

* The intelligent musician will not fail to' understand the drift of this remarkable sentenceˆ

of four complete octaves ; and this arrangement of sound constituted, for many ages, the whole extent of instruments in general use, such as the clarichord, clavictherum, virginal, and monochord, all of which came under the denomination of spinets ; a word derived from spina, a thorn, or little quill, or piece of metal with which the strings of these instruments were made to sound. Ornamental methods of playing are said by Rees to have originated from the shortness of the sounds produced from these instruments, being introduced to occupy, by reiteration of the same notes, the space of time required by long ones, that the ear might not lose their connexion. In nunneries the strings of the clarichord were occasionally covered with cloth, that the sounds might not disturb the dormitory. Organs were afterwards contrived to produce the same number of notes, when the tympanon, epigonium, and other instruments, began to decline, as spinets, in their turn, have yielded to the modern pianoforte and organ. The former comprising a diapason of six octaves and a half. But the extremes of acuteness and gravity, which the ear has been found susceptible of appreciating, exceed nine octaves, *viz.* from C the third octave below the second space C bass-staff, to C the fourth above the third space, C, of the treble staff. The first making thirty-two vibrations in a second, and the last 16384. The pianoforte, or as originally termed the hammer harpsichord, was invented in the year 1711 by B. Christofalti, a harpsichord maker in Venice, but was not generally introduced till the year 1790, when its strings consisted entirely of brass.

Plain chant, expressed upon a staff of four lines, and two clefs, was the only species of music thought worthy of the speculations of the learned, and no mention was made of musical rhythm, with the exception of St. Ambrose, till the time of Franco, though it was constantly observed in the tongues of the vulgar. The metrical feet introduced by Franco were d stinguished into five modes, or elements of rhythm, but, from want of examples, they are in no way satisfactorily to be explained.

In the time of the crusades, music, as all other arts, was neglected, little being known than that Walter Odington, a monk of Evesham, in 1240, and Handlo Marchetti, in 1283, had improved its theory, from

their frequent employ merit of the following harmonic combinations, thus :

consisting of the admixture of dissonances and consonances. These interesting specimens of harmony taken from a manuscript dedicated to Charles, king of Sicily, in 1283, and preserved iu the Vatican, the earliest perhaps in which the characters of flat and sharp are introduced, chromatic counterpoint, major and minor semitones, and dissonances, enable us to form some idea of the first efforts of genius in the art of harmony, when every thing depended upon instinct, guided solely by the ear ; when it was essential that

genius should create at every step, and when the least of its inventions was more meritorious than the greatest efforts of the present day, produced by reminiscences. Marcheiti also wrote upon the subject of measured music. Intervals of thirds and sixths, about the end of the thirteenth century, were deemed more harmonious and better suited for church mus;c than fourths or fifths or faubourdons of psalmody, consisting ef simple counterpoint in four parts, but which had its charms nevertheless, in these gothic times, and subsisted for several centuries. Pope St. John XXII., in 1316, issued a bull denouncing the use of harmonic combinations of thirds and sixths, together with the abuse of crowding the majesty and simplicity of the Roman chant with too many parts, excepting only upon certain parts of divine service, when the addition of a few melodiously harmonious passages of thirds, and sixths, and octaves, should accompany the subject of plain chant; and that the instruments should perform strictly in unison with the different voices, i. e. alia capella. But these and other improvements, though rejected by the church, were eagerly adopted by the votaries of profane music.

One of the principal causes of the advancement of the art of music was the introduction of Italian lyric poetry. When prince Conrad marched against Charles I., king of Sicily, in 1268, a chorus of women sung in the streets, accompanied with cymbals, tambourines, flutes,, violins, and other instruments. All Italy was now filled with fiddlers, singers, mimics, and buffoons, called guillare, and gioccollare, also of minstrels and poets of considerable repute, but to whom Dante was so far considered superior, that he was styled the creator of Italian verse, which, like the strains of Tasso, were recited by heart, by the common people. Nevertheless the melodies to which Italian verse was generally

sung partook of the principles of plain chant, till the time of Scocchetti, the contemporary and friend of Dante, who was a good poet as well as an excellent musician. This is ascertained from a title of a species of ballad cited by Crescein-bini, in which we read the words by Dante, ar.d the music by Scocchetti, Parole di Dante PSUOIU di Scocchetti. Casella, the meeting of whom is described in the purgatory with so much feeling, was also an excellent musician and friend of Dante. All verses now sung, were defined by poets, fictitious oration set Jo music. The must ancient melodies of Italy, composed to Italian words, are to be seen in a manuscript collection of sacred songs preserved at Florence, entitled Laudi Spirituali ; they are a species of canticles in praise of God, and" of the virgin, saints and martyrs. One of these is remarkable not only as showing the first dawnings of modern rhythm, keeping, or, in other words, connexion of melodic design of Italy, but as containing a note hitherto never described ; for the principles of composition were so strictly confined within the limits prescribed by Guido Aretinus, that, even in profane music, all other intervals of half-tones were considered as licenses.

The natural love of measured melody, which time and experience produce, says the mgcnit.os _

Mr. Webbe, throws the voice into song, the gesture into dance, the speech into numbers. Thus music becomes a language, and, as such, it has its orthography, its punctuation, its prosody, its grammar and poetry, caesural pauses, hemistichs, and periods, a certain number of which constitutes an air, as a paragraph is composed of various sentences. We may read, recite, and declaim in music as in all languages of convention. United with poetry, as in the songs of the trou-badours, minstrels, druids, and bards, it assists in a sensible manner all poetical description. These songs were accompanied, as a matter of course, with musical instruments, as the harp, viol, bagpipe, and psalterion, which are but imitations of the human voice produced by frequent trial and experiment. But unfortunately for the history of music, the religion of the bards did not permit the principles of their arts and sciences to be written, and the moment the arts and sciences began to flourish the reign of the bards was destroyed.

As the lyre was the favorite instrument in Grecian poetry, so the harp

held the same place in the estimation of the poets who flourished in this period. A poet of the fourteenth century, Machau, wrote a poem on the harp alone ; in which he assigns to each of its twenty-five strings an allegorical name ; calling one liberality, another wealth, &c. The instrument which frequently accompanied, and indeed disputed the preeminence with the harp, was the viol. Till the sixteenth century this instrument was furnished with frets ; after that period it was reduced to four strings : and still under the name of violin holds the first place among treble instruments. The viol was played with a bow, and differed entirely from the vielle, the tones of ###which were produced by the friction of a wheel ; the wheel performed the part of a bow.

British harpers were famous long before the conquest. The bounty of William I. to his jocu-lator or bard is recorded in Doomsday book. The harp was the favorite instrument for many ages, under the British, Saxon, Danish, and Nor-man kings. The fiddle, however, is mentioned so early as 1200 in the legendary life of St. Christopher. The ancient privileges of the minstrels at the fairs of Chester are well known. The extirpation of the bards of Wales by Edward I. is likewise a familiar incident. But his persecuting spirit seems to have been limited to that principality ; for, at the ceremony of knighting his son, a multitude of minstrels attended. In 1315, under Edward II., such extensive privileges were claimed by the minstrels, and so many dissolute persons assumed that character, that it became necessary to restrain them by express laws. The father of genuine English poetry, who in the fourteenth century enlarged our vocabulary, polished our numbers, and augmented our store of knowledge (Chaucer), entitles one of his poems The History of St. Cecilia, the celebrated patroness of music. Neither in Chaucer, however, nor in any legendary account of this saint, does any thing appear to authorise the veneration paid to her by the votaries of music. Spelman says, the degree of doctor was not granted to graduates in England before the teign

of k'.ng John, about 1207; but, in Wood's History of Oxford, that degree is said to have been conferred in music, in the reign of Henry 11. The title was created on the continent in the twelfth century.

With the exception of the melodies of Scotland, we have no traces of profane music, in past ages, so interesting as those used at the coronation of Petrarch; when he marched to the capitol preceded by twelve maidens of families of distinction, singing verses of his own composition. On this occasion were introduced two choirs of music,

vocal and instrumental, playing and singing in sweetest harmony. In the De-cameron of Boccacio honorable testimony is borne to instrumental music as terminating the amusements of the day, when, as at present, two styles of music were observed ; one composed of plain and popular melodies, easily understood and executed, such as ballads noticed in the ninth day ; the other more elaborate and artificial, performed by musicians of experience. As Dante boasted a Casella, so did Petrarch of Bombasia, and Boccaccio of the famous Min-nuccio D'Arezzo, who sang and played upon the viol. These airs, undoubtedly resembling the songs of the Troubadours, were composed independently of the monotonous principles of plain chant which were felt as revolting to those expectations of genius which excite the invention of melodic phrases. But as the principles of plain chant were too firmly established to sacrifice to the caprice of the day, they were retained exclusively for the church, and music became regularly divided into sacred and profane.

In the year 1353 the principles of rhythm, as established by Franco, were abandoned, and notes of shorter duration, as the crotchet, quaver, and demisemiquaver, were introduced by Jean de Muris, to whom we are indebted for some of the rules regarding movement of parts observed at the present day, but which stood in need of revision.

The notes of the long, breve, maxima, and semibreve, having reference to metrical feet, preceded the use of bars to divide measure into equal portions, each having a relative value, i. e. depending upon the nature of the mode, of time, and of prolation ; a species of time as strictly observed and beaten as at the present day. By the mode was determined the relation of the maxima to the long, or of the long to the breve ; by time was determined the relation of the breve to the semibreve, and the semibreve to the minim, a sign but of late invention. It is obvious that the terms mode, time, and prolation, signified only certain ways of fixing the relative value of notes by a general sign placed at the head of the musical staff, thus : O or C pointed or not pointed, followed by a figure of a 2, or 3, differently combined, or, divided in the centre, thus : 01 to which were afterwards added dif-fi* ferent perpendicular lines, varying in number and length, according as the mode was perfect or imperfect ; thus

when bars covering three spaces, with reference to the Trinity, denoted that the time was perfect, and the maxima of the value of three longs, and the bars covering two spaces only ‘denoted that the loag was of the value of three breves. The modes which Sxed the relative value of notes were major or minor, as well as perfect and imperfect. The major perfect mode was expressed by bars covering three spaces, when the maxima was considered perfect, and the measure of three times, thus ###

and minor perfect prolation, thun###

lir

The imperfect major mode was thus expressed, when the maxima was equal to two longs, and the measure of two times, thus ⬛⬛⬛

the minor perfect mode was expressed by one bar, occupying three spaces, when the measure was of three times, and the long of the value of three breves, thus ⬛⬛⬛

nan

The imperfect minor mode gave to the long the value of two breves, when the measure was of two tin.es only, thus ###

n a

What has been said upon the subject of the mode may be applied t-> time and prolation, using only notes of shorter duration, in the same proportion when, instead of a bar, a circle, or semicircle, as regards perfect, and imperfect time, and a circle pointed or not pointed, was used to express prolation, perfect or imperfect, thus ###

Major imperfect prolation thus###

i. e. a measure of two times only ; and minor imperfect prolation was thus expressed, viz

denoting a measure also of two times. The following figures have also been used to express these varieties of mode, time, and prolation, v z.

As every musician coeoived himself entitled to introduce any sign his aprice might dictate, it is natural to conclude that the compositions of ilu se times should be somewhat difficult to decyplitr ; one of the greatest is the precise signification of the points, of which some were placed to the left and others to the right of notes, and designated points of perfection, of division, of alteration, of translation, and of augmentation.

The point placed after a note, the signature of which gave it the value of three times, was called the point of perfection, thus ###

The point placed between two notes, marking two different measures, was called the point of division, thus ###

f^\ ~T the point intended to double the value of certain

^^^ ^ ^ ## notes was called that of alteration, thus ###

denoting perfect time, i. e. the breve of the va-lue of three semibreves, and the measure of three times. The imperfect time is thus expressed, *viz.*

g Lastly, when the point was placed after a note

/ ••• of which the sign was not marked, this note was

O O augmented one half, and therefore called the point of augmentation. The ligatures employed

when the breve was equal to two times, or semi-by our forefathers were curious, and deserve to

breves only ; major perfect prolation, thus •••

be noticed; as showing a short way of writing and the origin of the slur, thus•••

the abbreviation of the following passage, *viz.*

as the following ligatures, thus •••

are abbreviations of the notes, *viz.*

These ligatures had also their rules, varying as their stems ascended or descended. The value of notes was diminished by blackening or coloring the white ones. This enigmatical manner of writing, it would

seem, was adopted, as if the beauty of music could be felt only in proportion to the difficulty of comprehending it, but which, nevertheless, continued till the time of Orlando Lasso.

In the fifteenth century the musical system of Josquin, and the Lexicon of Tinctor, served to explain both the principles and terms employed in the science of music. The fundamental principles of the manuscript lately discovered by the latter author are fully explained in George Dowland's translation of Ornithoparchus.

By instruments comprising a clavier of four complete octaves, as already explained, the multiplicity of parts was facilitated ; and every tone being divided, as in the time of Pythagoras, into half-tones, serving as flat and sharp required, a much greater facility was afforded to diminish and augment certain intervals, than was attained in the earliest ages of counterpoint. The long levers of the clavier were called pallets, and the short ones, acting as pedals upon the harp, were designated by the generic term feintes.

So much having been said upon the subject of plain chant, a question naturally arises as to when and by whom were composed the melodies of Scotland, the characteristics of which are perfection of rhythm and unity of melodic design in all the Grecian modes. Tassoni, in his Pensieri, speaking of the abilities of Theo-philus the emperor, as a most successful composer, mentions Jacopo (James) king of Scotland, who not only composed in canto, but invented a new style of music, lamentavole e mesta, plaintive and affecting, of a nature totally opposite to all other compositions, and that this style was imitated by Carlo Gesualdo, prince of Venoza, an admission, as coming from an Italian, affording the singular anomaly of Scotland giving laws upon the subject of music to Italy.

But Campbell, who seems to have dived more into the subject of Scottish music than any other writer, observes that the favorite idea that James either invented, or 'in any considerible degree improved the genuine Scottish melodies, is by no means established on any authentic evidence. Pinkerton is of opinion that

none of the songs (words) are older than the fourteenth century, and that the origin of Scottish music must be sought for in that of Scandinavia and Iceland.*

As subsequent to the Christian era, but little has been said upon the

principles of rhythm, and as no traces can be found in Italy of any music of a rhythmical nature previous to the production entitled ‘ Alia Trinita, a composition, as compared with the worst of Scottish melodies, totally of an inferior description, it is evident that they never were derived nor received the least improvement from Italy. But as they have been traced long before the reign of James I., and as the principles of rhythm from time immemorial were constantly observed in the songs of the common people, it is by no means impossible, that, if not of Iceland, they are of Grecian origin, and that they were transmitted to us by the Romans, the Druids, minstrels, shepherds and highland pipers, preserved by the monks of Montrose, and, probably, by James I., who was too excellent a poet and musician not to feel and appreciate the value of them. Had they been composed since the invention of printing, it is scarcely possible that the names of their composers should not have been regularly canonised. These inestimable gems were doubtless sung unaccompanied, or at most in unison, when the voice, left freely to vibrate upon the ear, the more readily conveyed them to the heart. In-deed had they not in a most powerful manner affected the passions of mankind they would have been forgotten ages ago.

Before the reformation, as there was but one religion, there was but one kind of sacred music in Europe, plain chant, and the descant built upon it. That music likewise was applied to one language only, the Latin. Hence the compositions “of Italy, France, Spain, Germany Flanders, and England, kept pace with each other in style and excellence. All the arts seem to have been the companions of successful com merce, and during the sixteenth century became general in every part of Europe.

In the sixteenth century music was an indispensable part of polite education. There is a collection preserved in MS. called Queen Elizabeth’s Virginal Book. Tallis, profound in musical composition, and Bird his admirable scholar, were two of the authors of this famous collection. In queen Elizabeth’s reign, the genius and learning of the British musicians were not inferior to any on the continent.

Of the various methods of composing music, a singular custom prevailed to which the singers and composers were obliged to conform, *viz.* of taking a well known melody for a subject, and, whilst the air was heard in one or other of the parts, remaining voices prolonged or shortened the notes of the subject, strictly, however, pre-

* At a time when the whole of Europe was involved in ignorance, Iceland abounded in learning. Its first discoverer upon record was

Naddod, a pirate, in 861, and the Roman Catholic religion was introduced among its inhabitants in 974. They had various musical instruments, one of which, called the long spiel was found there by Sir Joseph Banks.

serving the respective degrees of acuteness and gravity of its intervals, producing imitations, canons, and fugues. This custom subsisted till the time of Zarlino > and Glareanus informs us that, in his time, but little was composed but upon the foundation of some well known melody, and that such compositions as were not composed upon this principle were termed inissa sine nomine. Of the melodies used as a foundation for counterpoint, the most celebrated was the song entitled L'Homme Arm6, a provincial canzonet composed in the early part of the sixteenth century. Another method, not less remarkable, was also observed, consisting of singing certain parts of the divine service in four parts impromptu upon a given subject, written principally for the tenor called ' chant sur le lure.' But these compositions, however ingenious, afforded more an object of intellectual amusement than of spiritual devotion ; the sense of the words was quite out of the question. These abuses were corrected under the pontificate of Marcellus in 1555.

Every means being now em ployed that science and application could suggest, to bring to perfection the natural powers of harmony, the melody arising from the Ionian and ./Eolian modes was found to be susceptible not only of greater perfection than that hitherto employed in psalmody, but even of grace, elegance, and of every embellishment that art and genius could furnish. This discovery soon introduced music into good company, and from taverns, and other haunts of the vulgar, it ascended to form the delight of polished society, as also, for the first time, of the speculations of the learned. But unfortunately for the cause of that species of melody which, in the early part of this history, had been proved to be totally independent of harmonic rules, the powers of the other Grecian modes were considered of too feeble a nature to be attended to, and their divisions into plagal and authentic

were entirely superseded by the major and minor modes. These modes, adopted solely by those in whom the principles of taste for melody combined with harmony, had developed themselves, are determined by their respective mediants.

Under the pontificate of Marcellus, and, at a time when music, from its degraded state as a science, was upon the eve of being entirely excluded from the celebration of divine service, Palestrina at the age of twenty-six presented to his holiness a mass upon an entire new principle, the success of which procured for him the situation of composer to the church of Rome. His observations upon the principles of harmony produced a complete revolution in the science, not only in Italy but in every part of Europe. He was a pupil of Goudimil of Besanyon, a celebrated composer of the French school, which, says Choron, having emanated from the Flemish, and the first that flourished after the arts had fallen, ought to be considered the mother of modern schools.

Palestrina, also, in compliance with custom, produced amass upon the subject of L'Homme Armo. It was so complicated that Zacconni wrote a commentary upon it, occupying thirteen

folio pages of close printing, to explain the and to resolve the canons; but even with this assistance few musicians are competent to adjust the parts in score. In 1570 Palestrina renounced this pedantic style of writing ; and such was the excellence of his compositions thatCifra, Tharen-zio, composers of the first order, and De Porta, considered them as models of perfection. Soriano was an imitator of Paleslrina, and a composer of 1 10 canons upon the subject of Ave Maria Stella. Valentina, however, surpassed Soriano in the composition of a canon called Solomon's Knot, consisting of ninety-six parts: a description of this canon may be seen in Dannely's Portable Encyclopaedia of music, a work, which, inasmuch as it combines the whole of the theoretical observations of Catel Choron, and Reicha, together with the principal articles in Koch's German Lexicon, is highly useful to the musical student.

Monteverde, also an imitator of Palestrina, deserves honorable testimony; for, having acquired the excellence of the system of counterpoint adopted by that eminent composer, he ventured to introduce double dissonances as the diminished fifth and minor seventh, for which, although they please the ear and are productive of the finest effects, he had the mortification of being designated an

impostor and corrupter of the art.

The most eminent musical theorists of Italy, who flourished in the sixteenth century, besides these already named, were Franchinus Gasieritis of Lode, Peter Aaron of Florence, Lewis Fo-gliano, John Spatatro, John Maria da Terentio, Lanfranco, Stephen Uanneo, Anth. Doni, the most general, voluminous, and celebrated theorists of that period ; V7incent Galilei, a Florentine nobleman, and father of the great Galileo Galilei ; Maria Artusi of Bologna, Oraseo Te-grini, Peter Pontio, Lewis Zacconi, and Andrew Rota, an admirable contrabandist. The principal Roman authors were, John Amnuccia, RugieroGiovanelli, Lucas Marenzio, who brought to perfection madrigals, the most cheerful species of secular music. Of the Venetians, Adrian Willaeri is allowed to be at the head. At the head of the Neapolitans is deservedly placed Rocco Rodio. At Naples, too, the illustrious dilettante, Charles Gesualdo prince of Venosa, is highly celebrated. Lombardy could also furnish an ample list of eminent musicians during the sixteenth century. The chief of them were Constance Porta, Gastoldi, Biffi, Cima, and Yocchi. Francis Corteccia, a celebrated organist and composer, and Alexander Strigglio, a luta-nist and voluminous composer, were the most eminent Florentines.

Up to the year 1700 the principles of musical rhythm were but imperfectly understood ; much less so, perhaps, than by the ancient Greeks and Romans. For by the continual application of Ion;: notes to short syllables, and long syllables to short notes, by Hasse, Handel, &c., as for example□□□

Aneels tfvgr brT?M Sid fair

\Vaft her at:;;r!s thr5’i<rh the &U□□□□.

the c-vsunil p.tu.-cs J the poetry were often ccn-

founded with those of the music. Peigolese, in the improvement of these defects, deserves to be noticed in history. But though it must be

confessed that the melody of the moderns, by neglecting the ancient rules of the Melopceia, has acquired a richness and variety, as compared with the few specimens of ancient music handed down to us, it cannot be dissembled that this variety is often maintained in defiance of the general rules of prosody, when the voice is not only made to apply a short note to a long syllable, but even to dwell and run into divisions upon the insignificant particles of language, whilst the most emphatical words are nearly imperceptibly glided over to the entire subversion of the poet's meaning. Music then, instead of aiding poetry, becomes the instrument of rendering it ridiculous, and making sense nonsense.

As early as 1440 an opera, in imitation of Greek tragedy, called the conversion of St. Paul, was publicly performed in'Rome. Five years afterwards La Verita Raminga; and in 1574 operas were upon the scale of modern times. The performance of Daphne and Eurydice, by Peri and Arienne, astonished the whole of Europe. The first operas were performed in a cart, with a moveable stage, like the one used by Thespis at Athens, and they attracted the multitude from street to street

Having, as far as our limits permit, described the nature of musical instruments, and their employment in the formation of the ancient and modern systems of sounds, the leading features of musical history, we pass over events of minor importance, and cursorily notice the introduction in the seventeenth century of the bar to divide musical sentences into equal portions ; the addition of the fifth line to the musical staff; and Ludovico Viadona's harmonised scale of the octave, the merits of which will be shown in our principles of harmony and composition. Among the various treatises that have been published on this enchanting science, by the most eminent authors, in the course of the eighteenth century, none has obtained higher or more just applause for method, perspicuity, conciseness, and elegance, than that of M. D'Alembert's translation of Rameau's principles of harmony.

The first theories of music were perhaps as ancient as the age of Pythagoras ; nor does history leave us any room to doubt, that, from the period when that philosopher taught, the ancients cultivated music, both as an art and as a science, with great assiduity. But there remains to us much uncertainty concerning the degree of perfection to which they brought it. We shall, therefore, content ourselves with considering the present state of music, and limit our endeavours to the explication of those accessions which have accrued to the theory of music in these later times.

The first compositions upon the laws of harmony which we know are of no higher antiquity than two ages prior to our own ; and they were followed by many others. But as none of these essays were capable of satisfying the mind concerning its principles ; as they were confined almost entirely to the collecting of rules, without endeavouring to account for them ; and nei-

ther their analogies one with another, nor their common source, had been perceived : an unen-lightened experience was the only compass by which the artist could direct his course. M. Rameau was the first who began to transfuse light and order through this chaos. In the different tones produced by the same sonorous body, he found the most probable origin of harmony, and the cause of that pleasure which we receive from it. His principle he unfolded, and showed how the different phenomena of music were produced by it : he reduced all the consonances to a small number of simple and fundamental ones, of which the others are only combinations or arrangements He, in short, discovered, and rendered sensible to others, the mutual dependence between melody and harmony. Tartini presented us in 1754 with a treatise of harmony, founded on a principle different from that of M. Rameau. This principle is the result of a most beautiful experiment. If at once two different sounds are produced from two instruments of the same kind, these two sounds generate a third, different from both the others.

But from the great encouragement given by the various conservatories upon the continent, since the publication of these treatises, however excellent and ingenious, they have been superseded by others more efficient for the explanation of musical theory in general ; and the theoretical works of Choron, Catel, Momigny, and Beicha, possessing every observation that science and experience could suggest upon the subject of music, little or nothing is left to later theorists but to study and translate them.

PART II. THEORY OF MUSIC.

From the twelve degrees of the octave, tuned according to that mode of temperament which gives to each note its natural sound, thus :

nfMˆrrrˆ

&

together with others thus

MUSIC.

and as represented upon the following portion only of the modern pianoforte clavier, thus

LL

mm

we obtain the twelve major and minor scales, the thirteen harmonic combinations of sounds, every major and minor semitone, and augmented, diminished, perfect, and enharmonic interval ; which, as colors to the painter, are the materials for musical compositions: all other sounds, high or low, being considered, and treated, as replicates of the above notes, and as varieties of the diatonic scales, major or minor, whether as regards me-lody or harmony; the former consisting of a succession of notes capable of being sung by a single voice, or played upon the pianoforte, thus ###

the latter of a combination of notes, sung by two voices, thus ###

by three voices, in tne following manner, thus ###

J J J Jl J

or by four voices, thus ⬩⬩⬩

m

In the foregoing specimens of harmony, in two parts, the lowest of the first forms the highest of the second specimen ; this transposition of sounds is employed to produce variety, and is called inversion of intervals, a process by which major intervals become minor ones ; minor intervals become major ; augmented intervals become diminished, and diminished intervals become augmented. All intervals are

Intervals of seconds, of which there are three species, produce by inversion, sevenths, thus :

1. The minor second, as C natural, and D flat, next above, composed of one chromatic degree produces, by inversion, the major seventh, as C natural, and D flat, next below, which is composed of eleven chromatic degrees (see table of intervals, p. 290).

The number of degrees of any interval diatonic or chromatic, wanted to complete the oc-tave, is called the complement of the octave, which must either make up the number 9, or that of 12: the former by diatonic degrees, when the first note, or root, is called unison, and is reckoned as one ; and the latter by chromatic degrees, when intervals are reckoned according to the absolute degrees of which they are composed.

2. The major second, as C, D, next above, composed of two chromatic degrees (see table, p. 290), produces, by inversion, the minor se-ven1 h, as C, D, next below, which is composed of ten chromatic degrees, thus ###

1 23 456 7 8 9 10

*

The intervals, therefore, comprising the major second and minor seventh, reckoned together, make up the number nine diatonically, and that of twelve chromatically.

3. The augmented second, as C natural, D sharp, next above, composed of three chromatic degrees, produces, by inversion, the diminished seventh, as C natural and D sharp, next below, which is the complement of the octave, and composed of nine chromatic degrees.

Intervals of thirds, of which there are four species, produce by inversion sixths of the same number and species, thus ⬆⬆⬆

1. The diminished third, as C sharp, and E flat, the use of which is strictly forbidden excepting upon enharmonic occasions, is composed of two chromatic degrees, and produces, by inversion, the augmented sixth, which is composed of ten chromatic degrees, and used instead of the diminished third ;

2. The minor third, as C natural, and E flat, composed of three chromatic degrees, produces by inversion the major sixth, as C and E flat next below, which is composed of nine chromatic degrees ;

3. The major third, as C natural, and E natural, next abo/e, composed of four chromatic degrees, produces by inversion the minor sixth, which is composed of eight chromatic degrees, as C natural, and E natural, next below ;

4. The augmented third, as C natural, and E sharp, composed of five chromatic degrees, produces by inversion the diminished sixth, as C natural, and E sharp, next below, which is composed of seven chromatic degrees.

Intervals of fourths, of which there are three species, produce by inversion fifths of the same number and species, thus: ⬆⬆⬆

1. The diminished fourth, as C natural, F flat,

known by the number of degrees composing them; and every interval is susceptible of in-composed of four chromatic degrees pro -. version. by inversion, the augmented fifth, as

flat, next below, which is composed of eight chromatic degrees ;

2. The perfect fourth, as C natural, F natural, composed of five chromatic degrees, produces, by inversion, the perfect fifth, as C, and F, next below, which is composed of seven chromatic degrees ;

3. The augmented fourth, as C natural, F sharp, next above, composed of six chromatic degrees, produces, by inversion, the diminished fifth, which is also composed of six chromatic degrees.

Intervals of fifths, of which there are three species, produce, hy inversion, fourths of the same number and species; thus ⬩⬩⬩

1. The diminished fifth, as C natural, G flat, next above, composed of six chromatic degrees, produces, by inversion, the augmented fourth, as C natural, and G flat, next below, which, as be-fore stated, is composed of six chromatic degrees ;

2. The perfect fifth, as C natural, G natural, next above, composed of seven chromatic degrees, produces, by inversion, the perfect fourth, as C natural, G natural, next below, which is composed of five chromatic degrees ;

3. The augmented fifth, as C natural, G sharp, next above, composed of eight chromatic degrees, produces, by inversion, the diminished fourth, as C natural, and G sharp, next below, which is composed of four chromatic degrees.

Intervals of sixths, of which there are four species, produce, by inversion, thirds of the same number and species, thus ⬩⬩⬩

1. The diminished sixth, as C sharp, A flat next above, composed of seven chromatic degrees, produces, by inversion, the augmented third, as C sharp, A flat, next below, which is composed of five chromatic degrees :

2. The minor sixth, as C natural, A flat, next above, composed of eight chromatic degrees, produces, by inversion, the major third, as C natural, A flat next below, which is composed of four chromatic degrees :

3. The major sixth, as C natural, A natural, next above, composed of nine chromatic degrees, produces, by inversion, the minor third, as C natural, A natural, next below, which is composed o{ three chromatic degrees.

4. The augmented sixth, as C natural, A sharp, composed often chromatic degrees, produces, by inversion, the forbidden interval of the diminished third, as C natural, A sharp, next below, which is composed of two chromatic degrees.

Intervals of sevenths, of which there are three species, produce, by inversion, seconds, thus ###

1. The diminished seventh, as C sharp, B flat, next above, composed of nine chromatic degrees, produces, by inversion, the augmented second, as C sharp, and B flat, next below, which is composed of three chromatic degrees;

2. The minor seventh, as C natural, B flat, next above, produces, by inversion, the major second, as C natural, B flat next below, which is composed of two chromatic degrees.

3. The major seventh, as C natural, B natural, composed of eleven chromatic degrees, produces, by inversion, the minor second, which is composed oi one chromatic degree.

Unisons, as CC, become, by inversion, octaves, as C, C, next above.

The following is a general table of the intervals explained in the foregoing pages.

C minor 2. major 2. augmen. 2.

Seconds ftO J , J I J iJ-R""

produce, J ##' ^F ### ^fP n* -#####~ by inver- "j major 7. minor 7. dimin. 7

sion, se-I ### Q , ,

venths. I XL P

dimin. 3. minor 3. major 3. augm. 3.

Thirds I ZIZ

ifetel

dimin. 4. perfect 4. augmen. 4.

Fourths produce, ..

by inver- ˆ dimin. 5. perfect 5. ˆimin. 5 sion, fifths.

dimin. 5. perfect 5. augmen. 5

Fifths produce,

by inver- “* augmen. 4. perfect 4. dimin. 4. sion,

fourths.

(‘ dimin. 6. minor 6. major 6. aug. 6.

Sixths

produce, } ►►- by inver-i augmen. 3. major 3. minor 3. dimin. 3. sion,

dimin. 7. major 7. major 7.

Sevenths produce, by inverO augmen-2- maJ►►r 2-ral”o: 2 <

son, seconds.

= nr►►p^j = ^

Intervals, of which the notes serve to show the number of degrees composing them are consonant and dissonant.

Minor and major th’rds and sixths, in the composition of melody or harmony, being of themselves either way satisfactory to the ear, which is the umpire of all musical sounds, are distinguished by the appellation of imperfect consonances; fourths, fifths, and rˆtaves, are denominated perfect consonances, because, by the alteration of either of them by a sharp or flat, they are immediately rendered unsatisfactory to the ear. These and all other chromatic intervals are dissonant, as is the case with seconds and sevenths; and the fourth of the diatonic scale when forming an integral part of the dominant harmony of the seventh ; and the sixth, when forming that of the dominant ninth, are also regarded as dissonances requiring to be regularly resolved into the perfect harmony of the Tonic, thus ###

Upon these simple combinations of different sounds, the first of which must be considered the cause, and the last the effect of that cause, the whole science of harmony depends : the powers of the first providing, by the application of a flat, or a sharp, taken in totality, or in part, for every species of harmonic combination used in the present day ; as the matetials of the latter provide, by the occasional application of a flat to its third note, every sound proper for the resolution of the dissonances arising, directly, or indi- ‘ rectly, from the harmony of the dominant ninth. Thus the lowest note of the foregoing example of the harmony of the dominant ninth, called the dominant root, accompanied only by the major third, and fifth, thus### G BD, affords the modes of the tonic major, perfect harmony C E G ; but although the materials of which these intervals are composed be absolutely the same, their effects as employed in succession are of a widely different nature, the first governing entirely the key note of the second which is C, the key note of the passage, thus ###

It follows therefore of consequence that every note composing the dominant harmony of the ninth must be considered and treated as a dissonance, excepting the root G : the A cadencing or falling upon G, the F upon E, the D uponC, the B cadencing or rising to C, i. e. from necessity, or according to the principles as established by nature : the G, which is common to both harmonies, forms the link by which they are united. From this simple process, of which the tonic, or key note, C, may be said to be the centre of gravity, upon which all other

sounds resolve, we ob-tain the model and origin of the twelve major diatonic scales ; all other major scales being only transpositions of this natural, or primary order of sounds, *viz.*

The diatonic major scale, also the Ionian scale of the ancient Greeks,

the intervals of which are inverted, both by notes and figures, in the following manner, *viz.*

12345678 37654321

consisting of five tones and two half tones, the latter falling between the third and fourth, and seventh and eighth intervals. We postpone other considerations of this diatonic scale till we have developed the whole of the harmonic powers of the dominant ninth.

The application of the sign of a flat to the third of the dominant root, thus ♭♭♭ forms the model of the perfect minor harmony ; and the same union of different sounds, varied by the addition of another flat, constitutes the softest of all discords, which is the harmony of the minor third and diminished fifth; the acute, as well as the middle, sound forming a dissonance, both of which must be regularly resolved, and in the following manner, *viz.*

Varying this third dominant combination of sounds, i. t. by placing the sign of a sharp to the highest sound, and onitting the two flats, we have the harmony of the major third and augmented fifth, when the fifth forms the principal diiso-nance, requiring, together with the third, resolution into perfect harmony, thus . From the harmony of the dominant ninth we have therefore derived four species of combinations of thirds and fifths. From the same source we also derivf four species of the harmony of, or belonging t”. the seventh *viz.*

I.’ 2

The dominant seventh, composed of the union of the major third, perfect fifth, and minor seventh, all of which, being dissonances, resolve thus ###

the application of aflat to the third of the preceding harmony produces the seventh of the second species, composed of the minor third, perfect fifth, and minor seventh, thus ###

each of which requires, sooner or later, resolution into perfect harmony ; the same observations extend to the third species of seventh, which is effected by the application of another flat to the fifth, thus###

which is composed of the minor third, imperfect fifth, and minor seventh.

The fourth and last species of seventh is produced by raising the seventh interval one half tone, and omitting the flats to the third, and fifth, thus ###

called the harmony of the major seventh, composed of the major third, perfect fifth, and major seventh, which is the harshest of all discords.

Proceeding still by the system of thirds, we obtain the dominant major ninth composed of the major third, perfect fifth, minor seventh, and major ninth, all of which are dissonant, as be-fore explained (see page 291.) By the application of a flat to the ninth interval of this harmonic combination, we have the harmony of the dominant minor ninth, composed of the major third, present fifth, minor seventh, and minor ninth, the whole of which sounds are also dissonant, and resolve in

the following manner, *viz.* ###

From the harmony of the dominant minor ninth are derived two other combinations of sounds ; the first is composed of the harmony of the major third, augmented fourth, and augmented sixth, which is effected by lowering the perfect fifth one-half tone, and omitting the note constituting the minor ninth, when the two gravest notes, us dissonances, descend one degree each,

and the highest note ascends as usual, thus### Gis the root of the discord stilljthough D flat is termed the bass, because sung by the deepest voice, or played by a bass instrument; the second combination consists of the harmony of the major third, perfect fifth, and augmented sixth, when all intervals are dissonant, resolving sooner or later into perfect harmony, thus ### i. e. one after another, for reasons hereafter to be explained. It will be seen that this combination of dissonant sounds is the same as the dominant minor ninth, with the exception of having the perfect fifth one degree, and omitting the root. The last harmonic combination of sounds, making the thirteenth, is expressed in the following manner, consisting of the union of the major third, minor seventh, and augmented fifth, and resolving thus ### It must be observed that the resolutions of the various dissonant harmonies, arising from the dominant ninth, may be immediately effected in minor as well as major perfect harmonies, with the exception of Nos. 4, 8, and 13. The dissonances, therefore, of No. 1 1 , may also resolve in the following manner, *viz.* ###

when the key-note of the passage is denominated C minor.

The fundamental principles of every possible variety of harmonic combination, constituting natural harmony, and as affects the major scale, being fully developed, the following table will suffice for the description of those appertaining to the scale of the relative minor, *viz.* ###

Remarks upon the respective powers of the foregoing dissonant and consonant harmonies, and of the situations they occupy in the diatonic major and minor scales.

It has undoubtedly been remarked that the notes composing the several tonic harmonies, introduced for the proper resolution of the dis-

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sonances, occupy different situations upon the staff, and that without changing their names, they produce variety of effect, thus

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J*5 II

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The figure 5 is an abbreviation of the 3d, 5th, and 8th ; the 6th an abbreviation of the 3d, 6th,

and 8th ; and the &. that of the 4th, 6th, and 8th.

The perfect major harmony is placed upon the tonic, the subdominant or fourth, and the dominant or 5th, of the major mode ; also upon the 5th and 6th of the minor mode, thus ►►►

Minor.

Major.

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The minor perfect harmony, composed of the minor third, and perfect fifth, is also capable of two inversions, *viz.* the harmony of the major

third and major sixth, and the harmony of the perfect fourth, and minor sixth, thus : ###

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upon ; and major

The perfect minoi harmony is placed the tonic and fourth of the minor mode upon the second, third, and sixth of the mode, thus ###

Minor Major

i. e. according to the positions of the dissonances preceding them. These different situations of perfect harmonies are called inversions, which is also the case with the dissonant or imperfect ones, when the notes of the sixth, the octave, and seventh, alternately form the acute or melodic part, and the lowest, consisting of harmonic roots, form the bass. Harmonic combinations of intervals, therefore, are susceptible of inversion as well as intervals, thus :

The major perfect harmony, composed of the same materials as explained No. 1, i. e. of the major third and perfect fifth, is capable of two inversions, *viz.* the harmony of the minor third and minor sixth ; and the harmony of the perfect fourth and major sixth, thus ⬦⬦⬦

The harmony of the diminished fifth, composed of the same materials as No. 3, is capable also of two inversions; producing the harmony of the minor third and major sixth, and the harmony of augmented fourth and major sixth, thus ⬦⬦⬦

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The imperfect harmony of the diminished fifth requires no preparation, and is placed upon the seventh of the major, and the second of the minor mode, thus: ⬩⬩⬩ For the resolutions of these dissonances, see example 1, Mu-sic, plate I. Harmonies of sevenths, consisting of four notes, necessarily produce three inversions ; thus the harmony of the dominant seventh, composed of the major third, perfect fifth, and minor seventh, produces the harmony of the minor third, diminished fifth, and minor sixth; the harmony of the minor third, perfect fourth, and major sixth; and the harmony of the major second, augmented fourth, or triton, and the major sixth ; thus showing at the same time the situations they occupy in the scale, *viz.*

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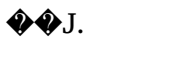

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the resolutions of these different harmonies are explained in examples 4, 5, 6, and 7, plate I. The harmony of the seventh of the second species (No. 6), with the exception of the minor third, is the same as the foregoing combination of different sounds, and is susceptible of the same

number of inversions ; it is placed upon the se-cond degree of the major mode ; the seventh interval must be prepared, and the whole of the component parts must regularly resolve upon the perfect harmony of the fifth below, or upon the dominant seventh of that fifth, thus

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The harmony of the seventh of the third species (No. 7) is called that of the seventh of the sensible of the major mode, and composed of the minor third, diminished fifth, and minor seventh ; it is placed upon the seventh of the major, and second of the minor mode, and produces three inversions, *viz.* the harmony of the minor third, perfect fifth, and major sixth; the harmony of the major third, augmented fourth, and major sixth ; and the harmony of the major second, perfect fourth, and minor sixth, thus ⬜⬜⬜

For the resolution of these harmonic combinations, see example 8, plate I. When the bass of the third specimen rises one degree for the preparation of a perfect cadence.

The harmony of the fourth species (No 7), composed of the harmony of the major third, perfect fifth, and major seventh, produces also three inversions, *viz.* the harmony of the minor third, perfect fifth, and minor sixth ; the harmony of the major sixth, major third, and perfect fourth ; and the harmony of the perfect fourth, minor sixth, and major second, thus ⬜⬜⬜

This harmony, of which the whole of its inversions are practicable, is employed upon the sixth of the major, also upon the fourth of the minor scale : the seventh must be prepared : see example 9, plate I. ; but, that its extreme asperity may be qualified, an immediate succession of the other three species of sevenths is required, as in example 10, plate I.

The harmony of the diminished seventh is composed entirely of minor thirds, and is also denominated the seventh of the sensible of the minor mode. It is composed of the minor third, imperfect fifth, and diminished seventh, and produces three inversions, *viz.* the harmony

of the minor third, diminished fifth, and major sixth ; the harmony of the minor third, augmented fourth, and major sixth, called the harmony of the triton; and the harmony of the augmented second, augmented fourth, and major sixth. The whole of these intervals resolve upon the harmony of the tonic, and they are treated in every respect the same with those of the dominant seventh, thus ◆◆◆

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The harmony of the dominant major ninth (No. 9) comprises the whole of the notes constituting the dominant seventh, and is composed of the major third, perfect fifth, minor seventh, and major ninth. Being composed of five notes it is capable of four inversions, *viz.* the harmony of the minor third, diminished fifth, minor sixth, and minor seventh ; the harmony of the minor third, perfect fourth, perfect fifth, and major sixth ; the harmony of the major second, minor third, augmented fourth, and major sixth ; and the harmony of the major second, perfect fourth, minor sixth, and minor seventh, thus ###

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This fundamental harmony, of which the fifth is omitted for the sake of a more grateful resolution, resolves, together with its three inversions, upon the harmony of the tonic ; and, in the employment of this combination of sounds, the root of which is generally dispensed with, care must be taken to place its component parts at a considerable distance from each other ; the last inversion only must be prepared, see example 12, plate I.

The harmony of the dominant minor ninth, composed of the major third, perfect fifth, minor seventh, and minor ninth, is also generally employed without its root, when it consists simply of the materials of the diminished seventh ; the harmony of the dominant ninth has three inversions, thus 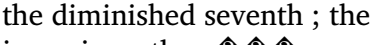

MUSIC.

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See example 13, plate 1.

The harmony of the major third, and augmented fifth, is placed upon the dominant of each of the modes ; it has two inversions, *viz.*

The harmony of the augmented fifth, with the minor seventh, produces only one inversion, thus :

the second, on account of the forbidden interval of the diminished third, being nowise practicable.

The harmony of the augmented sixth, major third, and perfect fifth, the eleventh of the classification, is employed in the formation of perfect cadences, but always upon the sixth degree of the scale. See example 15.

The harmony of the augmented fourth, and augmented sixth, and major third (No. 12), requires preparation as in example 16.

It has undoubtedly been observed that, as intervals are of themselves consonant and dissonant, harmony, which consists of the union of these intervals, must also be consonant or dissonant; that all dissonances which are essential, as producing variety, activity, and strength of character, must resolve, sooner or later, into consonances, minor or major, that the ear may be relieved from the harsh effects of dissonances; also that the different sounds and combinations of sounds we have been endeavouring to describe in the foregoing pages are capable of being reduced to nine notes. These may be again reduced to seven primary ones. As, therefore, in painting, we may blend the original colors as much as we please towards the production of another color ; all the possible variety of tints being only different combinations of the seven primary colors as they are separated by a prism ; so all the variety of ‘ melting sounds ‘ which enchant us, must consist in a different succeosion,

or in a different union, of some of these seven natural notes, or their replications or varieties ❓❓❓ such are the boundaries of these applications of sight and hearing.

APPLICATION OF THE FOREGOING OBSERVATIONS,

AS APPLIED TO THE DlATONIC MAJOR SCALE.

As the major diatonic scale is composed of tones and half tones, it follows that the same figures, if placed upon its different degrees, would produce different species of harmonic combinations ; thus by the application of the figures 3, 5, 8, upon those degrees, we obtain three major perfect harmonies, three minor perfect harmonies, and one imperfect harmony, corresponding to Nos. 1, 2, and 3; the first accompanying the tonic, dominant, and subdominant ; the second accompanying the second, third, and sixth of the mode; and the last accompanying the major seventh of the scale (see example 17) : the figures 3, 5, 7, produce one dominant seventh ; three harmonies of sevenths of the second species ; one of the third species of seventh ; and two of the fourth species of seventh, corresponding to Nos. 4, 5, (6, and 7 (see example 18). The creation of this mode is explained page 289. The accompaniment given to it by Viedana will serve to show the different movements of parts required in the construction of counterpoint, as also the laws whereby two or more perfect harmonies are made to succeed each other with propriety and effect. In counterpoint or harmony, no two fifths, nor two octaves, are allowed to succeed each other ; the former because exceedingly offensive to cultivated ears, and the latter not only offensive but productive of no result. These are avoided by the occasional doubling of some intervals, and of rejecting others ; also in the observance of the rules appertaining to the four different species of movements of parts : *viz.* direct movement, when each part ascends or descends together ; oblique movement, when one part ascends or descends during the time another remains stationary; contrary movement, which is the best, each part moving contrarywise ; and parallel movement, each part remaining upon the same degree See example 19.

From these premises, in the accompaniment of the scale in four parts, as figured by Ludovico Viadana, the contrary movement must be taken in passing from the first to the second degree of the scale, thus ❓❓❓

i. e. to avoid two following fifths, and octaves in the outer parts

producing greater strength of character than the following treatment possesses, *viz.* ###

which is strictly forbidden on account of the octaves.

The passage from the second to the third is effected by direct movement in the outer parts, in the following manner, *viz.* ###

i. e. by omitting the octave and doubling the sixth to avoid two inner octaves thus ###

which is highly objectionable, and offensive to the ear, independently of the improper treatment of the minor third; which, in reality, being a minor dominant seventh, descends one degree. Thus the harmony of the sixth accompanying the second of the scale, does not take its root from the third, but the fifth below.

The passage from the third to the fourth of the scale must be effected obliquely, thus ###

when the sixth prepares the fifth in the acute part, and the sixth of the mean part cadences to the sixth of the next degree D ; the octave E, to avoid direct inner octaves, ris-es a fourth to A.

The passage from the fourth to the fifth of the scale is made by contrary movement, thus ###

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in order not only to avoid following fifths, as in thp next example, *viz.* ◆◆◆

but to give the proper resolution of the C, which, together with its harmony, is an example of the seventh of the second species, the seventh descending one degree.

The passage from the fifth to the sixth, for obvious reasons, requires the following treatment, thus ◆◆◆

From the sixth to the seventh we proceed thus-

and from the seventh to the octave thus ◆◆◆

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As the major sixth was introduced upon the descending third interval of Viadana's harmoniz-ed scale, the diminished fifth may with equal propriety be introduced upon the ascend ing third degree of that scale. See examples 21 and 22. These contrivances aptly display the means whereby we modulate from the key of C into others of immediate affinity. For example, the diminished fifth, accompanying the third of the scale, may be invariably considered and treated as a dominant seventh, for the purpose of establishing the subdorninantof the mode as a new key instead of the original one, as the major sixth, accompanying the descending third interval of the scale, may be similarly employed to bring about the dominant of the mode, as a new key. See examples 23 and 24.

MUSI C.

For about a century and a half previous to the publication of the celebrated Treatises of Choron, Catel, Momogny, and Reicha, Viadana's harmonised scale formed the foundation of all musical theories, excepting those by llameau and Tartini. Of late, by men celebrated at once as composers and theorists of the first order, this scale has however been found, not only inefficient for the explanation of many points relative to the science, but as placing restrictions of an unnecessary description upon the inventions of genius : the study of the powers of the dominant, together with their different operations upon the tonic, being alone sufficient to guide the student in his description of the various harmonic combinations of sounds, as derived from the unerring principles of nature. Indeed Reicha declares the scale of no importance whatever, but as showing the positions upon which the different harmonies are placed.

But although, in general practice, consecutive fifths and octaves are forbidden, instances of their successful employment may be found in works of classical reputation; these, principally of a melodic description, are explained in the 25th and following examples.

Thus the hidden fifths and octaves, in examples 25 and 26, are correct specimens of writing : the upper note of the former example ascending or descending, one degree, and the bass of the lat-ter descending a fifth. In a melodic view the treatment of the F, in example 27, holds good, when the bass descends a fourth, and the melodic note descends a minor third. A perfect fifth may be followed by a diminished fifth, but on no account must a diminished fifth be followed by a perfect one. The octaves in example 28 are disallowed, but the consecutive fifths in the following one are frequently met with in the works of Haydn, Mozart, and Handel. These same observations extend to the employment of the fifths and octaves in examples 30 and 31 : the fifth of each being considered as melodic notes, or appog-giature. The example 33 is a correction of the one numbered 32.

Most airs are capable of a melodic, a dominant, and a model accompaniment ; they are also susceptible of a variety of basses. To be understood upon this subject, we will select the two first measures only of the simple tune of Robin Adair, the familiarity of which will, perhaps, enable us more effectually to display the whole force of

harmonic accompaniment than any composition we could devise for that purpose. The example 34 is one of melodic harmonisation, that of 35 iS of a modal description, and that of 36 of a dominant one. As we describe only the elements of music and not those of genius, to decide upon the preference of either of these arrangements were, nere, uncalled for. Suffice it, however, to say that the second is an artful, and the last a natural arrangement. The cadencing of the F of the first measure upwards being contrary to nature, the example 37 is inferior to the one marked 34. The example 38 is also contrary to nature, the first C in the melody of the second measure not belonging to the subdominant of the scale. To produce variety of expression, airs are occasionally accompanied a third above the notes composing them, as in example 38, where the thirds proceeding throughout the passage, show, to a demonstration, that the C of the example 37 belongs to the tonic harmony only. This observation w doubly verified in example 39, i. e. according to the principles of nature, where the bass note, continuing throughout the two measures constitutes a dominant pedal bass, as the example 35 constitutes a tonic pedal bass. The example 40 comprises the whole of the materials of musical science, consequently of all the notes of which an air may be ornamented or colored; these notes, which are situated between those of the dominant and tonic description, come under the denomination of melodic, or passing notes, also of essential and unessential notes ; and they are capable, by prolongations, &c , of being varied ad infinitum. See example 43.

After what has been said upon the necessity of regularly resolving all dissonances, it may be asked why do the ninth, the seventh, and the fourth occasionally take different directions to those allotted them in theory, as also the following progressions of sounds, most grateful to the ear, yet in direct opposition to all the principles laid down by the most eminent theorists of the past and the present age ?

Such is the imperfection of all human endeavours that, in our efforts to describe these several combinations of sound, and of their operations upon each other, all our scientific rules, and our boasted principles of philosophy, at once desert us ; and, as in many other sciences derived from nature, there are certain points beyond our comprehension, we can only confess, however humiliating, that inasmuch as these deviations from established rules are of themselves of the most grateful description to the ear, which, after all our speculations is the sole test of musical science, they must be admitted into practice.

Besides these instances of deviations from established rules we cite, from the works of Haydn, Bach, Handel, Mozart, Beethoven, and Hum-mel, the most satisfactory examples of dissonances ascending one degree previous to their dissolution into perfect harmony ; they are however, easily understood, and highly interest the feelings ; of these the diminished fifth, minor seventh, augmented sixth, and diminished seventh form the principal features, vii. ###

The method of writing contained in the last of these specimens is. becoming obsolete; the interval of the diminished seventh being used, in all late works of established excellence, to express the nature and qualities of the augmented sixth, when placed in the highest part, as in the fourth of the foregoing specimens. But care must be taken not to confou nd the princi pies of this optional mode of writing with those appertaining to intervals, or, more properly speaking, transitions of an enharmonic nUure, which, as will be presently shown, are totally of an opposite description.

An enharmonic transition consists of a succession of two notes of the same sound to the ear, but which, in order to bring about other means than can possibly be effected by the adoption of the augmented sixth, or diminished seventh alone, are placed upon two different degrees of the staff, thus ; cadencing into the key of A flat,

perior, or inferior, as C D, or D C, i. e. from the first to the second degree of the scale ; from the fourth to the fifth degree, or vice vers&, as F G, G F ; and also from the fifth to the sixth, or from the sixth to the fifth degree, as G A, or A to G, accompanied with the third and fifth, the whole of which must be effected by contrary movement. But these last three cases must be considered ra-ther as exceptions and therefore the less frequently to be employed. Fundamental basses proceeding a third superior, or, which is the same thing, a sixth inferior, appear to blend less freely than other successions, but they cannot be entirely excluded from practice. To render them agreeable,

care must be taken that the perfect harmony, as applied to the third of the scale, be followed by the perfect harmony of the fifth below, as in examples 41 and 42.

Upon the subject of the accompaniment, and even of the formation of the minor scale, much variety of opinion still exists. Rameau, from the difficulty of accounting for its origin (see SOUND), and of the proper mode of accompanying it, declares that the scale has no foundation in nature, and that the whole system, together with the minor third, is a production only of hu-man industry. Momigny ingeniously describes the minor and major systems by the following tetrachords, *viz.* ###

Major. Minor.

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whereas the augmented sixth, as also the diminished seventh, which are the means by which enharmonic transitions are effected, ascending a minor semitone, effect a cadence into the key of B-flat. See examples 49 and 50. The example 51 is a specimen from Catel ; the bottom line shows the roots of the different harmonies.

Great doubt has existed in the minds of many theorists of reputation as to the proper progression of perfect harmonies, without the admixture of governing or imperfect ones. Reicha, to whom we are indebted for much valuable information, has set this point at rest in his work Cours complet d'Harmonie et Composition, from which we extract the following golden rules upon the subject.

Bass notes, accompanied with the major third and fifth, as C, may descend a fifth to F, major or minor, but, for obvious reasons, the perfect minor harmony of C cannot be followed by the major perfect harmony of F; bass notes may also descend, which is technically termed inferior movement, a fourth as C, G, below, accompanied as perfect harmonies ; they may also proceed by thirds inferior as C, A, below ; also by fourths above, termed superior movement as C, F, next above, accompanied by the third and fifth ; progressions of sixths superioras G E, are allowable : also those of fifths superior as C G. In a piece of music of which the key has been well established, as for example C, two perfect harmonies in. four parts may follow each other by seconds, su-

a principle, it must be confessed, never to be disproved. Some will maintain that the notes constituting the minor sixth and major seventh should be heard ascending as well as descending the minor scale, and, notwithstanding the anomaly of three half tones in the octave and the ascent of the minor sixth to the major seventh by an interval of a tone and a half, such are the arguments in support of it, that the system must not be suffered to be passed over unnoticed. But, according to the principles of harmony hitherto established, the minor sixth descends a diminished seventh to amalgamate with the harmony of the dominant, as in example 51. This, together with the fact that the harmony of the ascending major sixth tends to establish the key note of the minor mode, shows that the example 52 must be considered as the generally received harmonised minor scale.

Upon the subject of the modern modes, and of the variety of opinions expressed as to the construction of the minor mode, we may derive, as in many other sciences, a salutary lesson from the ancient Greeks, who, being doubtless acquainted with the peculiar powers of the major sixth and minor sixth, as applied to the minor scale, adopted different modes to express them in a proper manner. See page 267 of our history. Pythagoras, it should seem, gave his whole attention to the formation of the minor scale, considering the major one as sufficiently explaining itself.

The principles constituting natural harmony being fully developed, a few observations will

suffice for the explanation of those constituting artificial harmony, which consists of prolongations, anticipations, syncopations, &c., and maybe simple or compound, thus ⬝⬝⬝

Natural.

Syncopations are in general retardations of sounds, and are always placed upon the unaccented parts of the measure, the last note of which must correspond with the rest preceding the first note of the syncopated passage, which may be of long or short duration. See example 48. Anticipations differ from prolongations, the P sharp and D sharp, in the second measure of the last example, anticipating the dissonant accompaniment given to the C in the following measure. These examples require no further explanation. Pedal notes, accompanying various combinations of sounds, alternately forming integral parts of them, come under the denomination of artificial harmony (see example 45), when the C forms a central dominant pedal. Dissonances may be transformed into consonances throughout a succession of measures. In example the seventh, B flat (46) becomes tran<- formed into a major third to resolve D C instead of A; as the major seventh, the natural progression of which is upwards, becomes transformed into a minor seventh, resolving upon A, example

47.

Our remarks upon the powers of the flat and sharp, as applied to the accompaniment of the major scale of C, page 295, have tended to show the principles by which dominant and subdominant modulations are effected. By a similar process, i. e. of raising the sixth one-half tone in the accompaniment of the descending second of the scale, a change is effected into the relatio-mi- nor of C, *viz.* A minor. See example 63. When, as in the case of the dominant and subdominant modulation, the alteration of the minor sixth into a major one constitutes the major third of the dominant or governing harmony. All modulations are effected by these means. It must, however, be understood, that although these dominant harmonies do govern, they are not of themselves sufficient to establish the mode of a piece of music ; this is left to the powers of the fourth of the scale to effect, as in the examples already cited. The established formation of the perfect cadence ; *viz.* by means of the harmony of the dominant and unprepared fourth of the scale, is considered so far effected, that, should the composer feel disposed to lengthen the period, he has only the option of interrupting the cadence by superseding the major resolution by a relative minor one, or by giving an inversion of the major resolution, as in examples 55, 56,

57, and 58. These are the modulations oy which Haydn, Mozart, and afl cne Italian masters up to the time of Cimarosa, have immortalised themselves. Thus in music, as in works of a literary nature, the best composer is the one who effects the most upon the least materials. The youthful composer will do well to keep this in mind, as also, that, in proportion to the want of genius to invent natural melody and pure harmony, the greater are always the efforts to modulate into the most extraneous keys, and to string together the crudest combinations, as ii music should rather be seen through the medium of art than of nature. We do not, however, pretend to confine the subject of modulation within the pale of the dominant, subdominant, and relative minor of the primitive key of a piece of music. Haydn, in the commencement of the second parts of many of his works, the place allotted for the display of musical science, lias produced through the medium of lengthened sounds, and intervening harmonies, the most extraordinary yet pleasing modulations. The general rule adopted by Strebelt, Hammel, Dussek, and other sonata writers (capriccios and fantazias are out of the question), seems to consist of two keys on each side of the tonic, or their relative minors, making a range of sounds of five keys to work upon. For example, a sonata commences with the tonic or primitive kpy ; the intervals of the key of D are employed to brin? about the dominant of the primitive key, for the establishment of the demi-cadence, at the end of the first part, which is G ; the ending of the second part being, in all cases, a transposition of the firsl part, the intervals belonging to the keys of B flat and F natural are expressed for the re-establishment of the primitive key, as also for the formation of a perfect cadence.

Any key may follow a perfect cadence, provided the tonic of the established key form an integral part of the dominant harmony immediately governing the new key. Whether this connecting harmony be or be not expressed is perfectly immaterial, an ellipsis in all similar cases being understood and felt, as in the following popular example ◆◆◆

The flats tending to neutralise the powers of the sharp in the example 42, no transition is effected from the key. All false relations, as in example 59, must be avoided. See FUGUE, CA-NON, and COUNTERPOINT.

The study of the works of Haydn will, perhaps, best explain the manner in which musical composition should be conducted.

In addition to the names already mentioned, we insert a list of other composers not K-ss di > tn -

guished, whose works will ever be considered as models of taste and expression.

Albrechtsberger.

Astorga.

Bach, Sebastian.

Bach.

Boccherini.

Bassani

Bishop.

Cramer.

Clementi.

Corelli.

Cimarosa.

Caldara

Clari

Durante.

Dussek. .

Gluck.

Gretry.

Haydn.

lliinmel.

Hummel.

Handel.

Haessler.

Hasse.

Jomelli.

Jackson.

Hozeluck.

Knecht.

Leo.

Lotti.

Mozart.

Marcello.

Neefe.

Paradies.

Pleyel Ignace.

Palestrina.

Purcell.

Perez.

Pergolese.

Porpora.

Romberg.

Righini.

Scarlati.

Steibelt.

Sola.

Rink.

Sterkel.

Winter.

Weigle.

Woeia.

Viotti.

Zingarelli.

OF TEMPERAMENT. ††† The alterations which we have observed in the intervals between particular sounds of the diatonic scale, naturally lead us to speak of temperament. To give a clear idea of this, and to render the necessity of it palpable, let us suppose that we have before us an instrument with keys, a pianoforte, for instance, consisting of several octaves or scales, of which each includes its twelve semitones. Let us choose in that pianoforte one of the strings which will sound the note C, and let us tune the string G, to a perfect fifth with UT in ascending; let us afterwards tune to a perfect fifth with this G the D which is above it ; we shall evidently perceive that this R E will be in the scale above that from which we set out ; but it is also evident that this D must have in the scale a D which corresponds with it, and which must be tuned a true octave below D ;

and between this and G there should be the interval of a fifth; so that the D in the first scale will be a true fourth below the G of the same scale. We may afterwards tune the note E A of the first scale to a just fifth with this last D ; then the note E in the highest scale to a true fifth with this new A, and of consequence the E in the first scale to a true fourth beneath this same A : having finished this operation, it will be found that the last E,

thus tuned, will by no means form a just third major from the sound G ; that is to say, that it is impossible for R to constitute at the same time the third major of C and the true fifth of A ; or, what is the same thing, the true fourth of A in descending.

What is still more, if, after having successively and alternately tuned the strings C, G, D, A, E, in perfect fifths and fourths one from the other, we continue to tune successively by true fifths and fourths the strings E,B,F3fc,C►►, G*, D *, E &, B ►► ; weshall find, that, though G*, being a semitone higher than the natural note, should be equivalent to C natural, it will by no means form a just octave to the first C in the scale, but be considerably higher ; yet this B Jfc upon the harpsichord ought not to be different from the octave above U T ; for every B 3fc and every C is the same sound, since the octave or the scale only consists of twelve semitones.

From thence it necessarily follows, 1. That it is impossible that all the octaves and all the fifths should be just at the same time, particularly in instruments which have keys, where no intervals less than a semitone are admitted. 2. That, of consequence, if the fifths are justly tuned, some alteration must be made in the octaves ; now the sympathy or sound which subsists between any note and its octave does not permit us to make such an alteration ; this perfect coalescence of sound is the cause why the octave should serve as limits to the other intervals, and that all the notes which rise above or fall below the ordinary, scale are no more than replications, i. e. repetitions, of all that have gone before them. For this reason, if the octave were altered, there could be no longer any fixed point either in harmony or melody. It is then absolutely necessary to tune the C or B *in a just octave with the first : whence it follows that, in the progression of fifths, or, what is the same thing, in the alternate series of fifths and fourths, C, G,re, A,E,BFX,C* , G►►, D►►,A8S, E*, B * it is necessary that all the fifths should be altered, this will be effected by flattening the successive fifths, beginning with C, which has previously been made in unison with the tuning fork, and taking G D A E B F sharp, C

sharp, G sharp, D sharp, A sharp, and E sharp, as flattened fifths, care being taken that this flatness be equally divided among them. One may satisfy himself that this is correctly done if the C coincides with the B sharp without alteration as a fifth to E sharp. In the tuning of organ pipes, on account of their beatings when too flat or too sharp, a partial system of temperament must be observed. The less frequent their beats the more perfect their tune.

MUSIS (Augustine tie), a noted engraver, better known by the name of Agostino Vene-ziano, or Augustin the Venetian, was a native of Venice, and scholor of Raimondi. His first dated print appeared in 1509. After the death of Raphael, in 1520, Agostino, and Marc de Ravenna, his fellow disciple, separated and worked upon theii own account. Agostino's latest prints are dated 1536; whence it is supposed he did not long survive that period. He imitated the style of his master, and was the most successful of all his scholars ; though in taste and in correctness of outline he fell short of him.

MUSK, n. s. ") Pers. mushk ; Arab, mooshk ;

MUSK-CAT, > Fr. muse ; Ital. musco ; Lat.

MUSK'Y, adj. J muscus. An oriental perfume. See below. The musk-cat is an animal which yields it.

Some putrefactions and excrements yield excellent odours ; as civet and mu►►k. Bacan.

Musk is a dry, light, and friable substance of a dark blackish colour, with some tinge of a purplish or blood colour in it, feeling somewhat smooth or unctuous : its smell is highly perfumed, and too strong to be agreeable in any large quantity : its taste is bitterish : it is brought from the East Indies, mostly from the kingdom of Bantam, some from Tonquin and Cochin China : the animal which produces it is of a very singular kind, not agreeing with any established genus : it is of the size of a common goat, but taller : the bag which contains the musk is

three inches long and two wide, and situated in the lower part of the creature's belly. Hill.

In May and June come roses of all kinds, except the miuk, which comes later. Bacon.

There eternal summer dwells, And west winds, with musky wing, About the cedar'd allies fling Nard and Cassia's balmy smells. Miltim.

MUSK. See MOSCHUS. According to Tavernier, the best and greatest quantities of musk come from the kingdom of Boutan, whence it is carried for sale to Patna, the capital of Bengal. After killing the animal the peasants cut off the bag, which is about the size of an egg, and is situated nearer the organs of generation than the navel. They next take out the musk, which has then the appearance of clotted blood. When they want to adulterate it, they put a mass of the animal's blood and liver into the place of the musk they had extracted. Others, after extracting a portion of the musk, put in small pieces of lead to augment the weight. But the deceit is still worse to discover, when, of the skin taken from the belly of a young animal, they make little bags, which they sew so dexterously with threads of the same skin, that they resemble genuine bags. These they fill with what they take out of the genuine bags, and some fraudulent mixture, which it is extremely difficult for the merchants to detect. When the bags are sewed immediately on their being cut, without allowing any part of the odor to dissipate in the air, after they have abstracted as much of the musk as they think proper, if a person applies one of these bags to his nose, blood will be drawn by the mere force of the odor, which must necessarily be weakened or diluted to render it agreeable without injuring the brain. Our author brought one of the animals with him to Paris, the odor of

which was so strong that it was impossible for him ti keep it in his chamber. It made every head in the house giddy ; and he was obliged to put it into a barn, where the servants at last cut away the bag: the skin, notwithstanding, always retained a portion of the odor. The largest musk-bag seldom exceeds the size of a hen's egg, and cannot furnish above half an ounce of musk ; three or four of them are sometimes necessary to afford a single ounce. In one of his voyages to Patna, Tavernier purchased 1663 bags, which weighed 1557$ oz. ; and the musk, when taken out of the bags, weighed 452 oz. Musk affords the strongest of all known odors ; a small quantity of it perfumes a large quantity of matter. The odor of a small particle

extends through a considerable space. It is likewise so fixed and permanent, that at the end of several years it seems to have lost no part of its activity. When it comes to us it is dry, with a kind of unctuosity of a dark reddish-brown, or rusty blackish color, in small round grains, with very few hard clots, and perfectly free from any sandy or other visible foreign matter. If chewed and rubbed with a knife on paper it looks smooth, bright, yellowish, and free from bitterness. Laid on a red hot iron, it catches flame, and burns almost entirely away, leaving qnly an exceedingly small quantity of light grayish ashes : if any earthy substances have been mixed with the musk, the quantity of the residuum will readily discover them. Musk has a bitterish subacrid taste : a fragrant smell, agreeable at a distance, but, when smelt near to, so strong as to be disagreeable unless weakened by the admixture of other substances. If a small quantity be infused in spirit of wine in the cold for a few days, it imparts a deep, but not a red tincture : this, though it discovers no great smell of the musk, is nevertheless strongly impregnated with its virtues ; a single drop of it communicates to a whole quart of wine a rich musky flavor. The degree of fla-vor which a tincture drawn from a known quantity of musk communicates to vinous liquors is perhaps one of the best criteria for judging of the goodness of this commodity. Neumann informs us that spirit of wine dissolves ten parts out of thirty of musk, and that water takes up twelve ; that water elevates its smell in distillation, whilst pure spnit brings over nothing. Musk is a medicine of great esteem in the eastern countries; among us it has been for some time entirely neglected as a perfume. The medicinal and chemical properties of musk and castor are very similar; the virtues of the former are generally believed to be more powerful, and hence musk is preferred in cases of imminent danger. It is prescribed as a powerful antispasmodic, in doses of three grains or upwards, even to half a drachm, in the greater number of spasmodic diseases, especially in hysteria and singultus, and also in diseases of debility. In typhus it is employed to remove subsultus tendtnum, and other symptoms of a spasmodic nature. In cholera it frequently stops vomiting; and, combined with ammonia, it is given to arrest the progress of gangrene. It is best given in the form of bolus. To childien it is given in the form of enema, and is an efficacious remedy in the lonvulsious

arising from dentition. It is also given in hydro-phobia, and in some forms of mania.

MUS’KET, n. s.~\ Span, and Port. TWOS-MUSKETEER’, tquete; Fr. mowquet ; Ital. MUSKETOON’, ►► moschetto ; qu. Lat. myxa, a MUS’KETRY. s match? A hand gun ; also a small kind of male hawk, from which Dr. Johnson and others suppose the gun to he named : a musketeer is one who uses a musket: musketoon, an old name for the blunderbuss : musketry, a modern collective name for a number of muskets, or musketeers.

Thou

Wast shot at with fair eyes, to be the mark Of smoky muskets.

tfiahspeare. All's Well 3Ttat Ends Well. We practise to make swifter motions than any you have O'.'t of your muskets. Bacon.

Here comes little Robin.

❖❖❖ How now my eyas musket, what news with you 1

Shakspeare.

When they came near the gate of the town-house, they within poured out a volley of musfcet-shot upon them, by which the dean of the church and two or three of the magistrates of the town were killed.

Clarendon.

He perceived a body of their horse within musket shot of "him, and advancing upon him. Id.

Notwithstanding they had lined some hedges with musketeers, they pursued them till they were dispersed.

Id.

They charge their muskets, and, with hot desire Of full revenge, renew the fight with fire. Waller.

The musket and the coystrel were too weak, Too fierce the falcon ; but, above the rest, The noble buzzard ever pleased me best. Dryden. One was brought to us, shot with a musAet-ball on the right side of his head. Wiseman's Surgery.

MUSKET, or MUSQUET, is properly a fire-arm borne on the shoulder, and used in war; formerly fired by the application of a lighted match but at present with a flint. The length of the barrel is fixed to three feet eight inches from the muzzle to the touch pan : its bore is such as may receive a bullet of fourteen in a pound, and its diameter differs not above one-fiftieth part from that of a bullet. The common musket is of the calibre of twenty-two balls to the pound ; and receives balls from twenty -two to twenty-four. Muskets were anciently borne in the field by the infantry, and were used in England so lately as the beginning of the civil wars. At present they are little used, except in the defence of places ; fusees or fire-locks having taken their place and

name.

Muskets were first used at the siege of Rhegen 1521. The Spaniards were the first who armed part of their foot with these weapons. At first they were very heavy, and could not be used without a rest. They had match-locks and did execution at a great distance. On their march the soldiers carried only the rests and ammunition, having boys to bear their muskets after them. They were very slow in loading, not only by reason of the unwieldiness of their pieces, and because they carried the powder and ball separate, but from the time it took to prepare and adjust the match, so that their fire was not neai so brisk as ours is now. Afterwards a lighter match-lock musket came in use ; and they carried their ammunition in bandeliers, to which

were hung several little cases of wood covered with leather, each containing a charge of powder. The muskets with rests were used as late as the beginning of the civil wars in the time of Charles I. The lighter kind succeeded them, and continued till the beginning of the eighteenth century, when they also were disused, and the troops throughout Europe armed with fire-locks. These are usually made of hammered iron. For the dimensions, construction, and practice of various species of guns, muskets, &c., see ARTILLERY, CANNON, GUN, MORTAR, and PROJECTILES.

Garrard, Art of Warre, observes, that the musket differed from the arquebuse in carrying a double bullet. The inconsiderable execution done by pieces of small calibre probably occasioned the introduction of the musket, or mousquet, which originated in Spain in the sixteenth century. The fame of the Spanish infantry having extended itself over all civilised Europe, the English were not long before they adopted this new weapon from their enemies. It consequently dispossessed the harquebuss. Little short wooden arrows, called sprites, were shot from them with great success. Grose says, that in 1621 the barrel was to be four feet long, capable of receiving bullets ten or twelve to the pound. Coryatt mentions the muskets of the the French king’s guards as being inlaid with ivory and bone, a very common fashion with old fire-arms. They were suspended by belts at least as early as the time of Charles I. Dr. Meyrick on Armour, ii. 41. Branstone says that it was the duke of Alva who first brought the musket into use, when he went to take upon him the government of the Low Countries in the year 1569, and that Strozzi, colonel-general in the French infantry, under Charles IX., introduced it into France. He also tells us, that the best arquebuses were made at Milan. Ibid. Grose says, that muskets were .made as

early as the time of Francis I. but were not in common use till 1567 or thereabouts. Andrews supposes them to have been used at the battle of Bicoigne in 1521, which Henry (x. 285) applies to the mus-ket on a stock, and discharged from the shoulder, but agrees in the period, adding, that it was probably soon after adopted in England.

It was the length and weight of the first mus-ket which rendered it necessary to place it, when fired, on the fork called a rest. It came from the mounted harquebusiers in the reign of Charles V. Meyrick iii. 41. According to De Bellay (adds Dr. M.) rests had been provisionally used for the harquebus, but I have met with no representation of the rest before the time of Elizabeth, and conceive that he must allude to those for the cavalry, on the principle of the lance rests, fastened by a hinge to the breast-plate. Ibid. It was of various lengths, according to the height of the men, and shod with sharp iron fe-rules for sticking into the ground. When on the march, and the musket was shouldered, the rests were carried in the right hand, or hung upon it by a string or loop tied under the head. Sometimes these rests were armed with a kind of sword-blade, or tuck, called a swine's feather, which, being placed before the musketeer wheu loading, served to keep off cavalry. The origin

of the swine's feather is thus explained. In the latter part of the reign of James I.,' says Dr. Meyrick, ' some attempls were made to convert the rest into a defence against cavalry. Martels-de-fer and small pole-axes had a tuck enclosed in them, which, by touching: a spring, opened a small valve and sprung out. The rest, instead of having a wooden shaft, was now made of a thin tube of iron, like those pole-axes which were covered with leather, and armed with a tuck in the same manner. Rests thus armed were said to contain Swedish, or swine's feathers ; perhaps from sweyn, German, a wild hoar, i. e. a boar's bristle. During the Protectorate rests were disused. The first muskets were match-locks. The origin of the bayonet, has, however, a connexion with the swine's feather. The duke of Albemarle, in the time of Charles II., recommended arming the musketeers and dragoons

with muskets having swine's feathers with the heads of rests fastened to them. The swine's feather was to be in a sheath, so as to serve like a tuck in walking sticks, but capable of being; drawn out and fixed in the muzzle of a gun. Turner, however, who wrote in 1670, observes, that this and the other apparatus were only awkward contrivances to protect the musketeer against cavalry after he had fired, and before he had re-loaded. The swine's feather rest being thus laid aside, and the swine's feather itself being awkward to manage, such soldiers as were armed with daggers were induced to stick them into the muzzles of their pieces. This gave origin to the bayonets, which were first made at Bayonne. They were called by the French bayonets a nianclie, and introduced into their army in 1671. They were formed with tight handles, to fit well into the muzzles, and rather enlarging towards the base, to prevent their entering too far into the piece. A Military Dictionary of 1694 calls the bayonet a dagger stuck into the piece by men who covered the musketeers when they were to lire. In order to allow the piece to be fired, and preserve the use of the dagger, it was next fastened by two rings to the barrel ; lastly, by a socket, as now. It superseded the pike.

The principal part of these instruments is the barrel, which ought to have the following properties: 1. Lightness, that it may incommode the person who carries it as little as possible. 2. Sufficient strength and other properties requisite to prevent its bursting by a discharge. 3. It ought to be constructed in such a manner as not to recoil with violence. And, 4. It ought to be of sufficient length to carry the shot to as great a distance as the force of the powder employed is capable of doing. The force of gunpowder is manifestly augmented in close vessels, by being compressed together; but this arises from ano ther cause, namely, that a greater quantity of flame is compressed in the same space, than when the powder is not rammed ; and this compression of the flame is in proportion to the compression of the powder in the piece. But the quantity enclosed in a small space may probably make up for the quality. In firing muskets with small shot, a curious circumstance sometimes oc-curs, *viz.* that the grains, instead of being equally distributed over the space they strike are thrown

in clusters of ten, twelve, fifteen or more ; whilst several considerable spaces are left without ►► grain in them. Sometimes one-third or one-half of the charge will be collected into a cluster of this kind ; nay, sometimes, though much more rarely, the whole charge will be collected into one mass, so as to pierce a board nearly an inch thick at the distance of forty or forty-five paces. Small barrels are said to be

more liable to this clustering than large ones; and M. de Marolles informs us, that this is especially the case when the barrels are new, and likewise when they are fresh washed ; though he acknowledges that it did not always happen with the barrels he employed even after they were washed. It is probable, therefore, that the closeness of the shot depends on some circumstance relative to the wadding rather than to the mechanism of the batrel

The niamifiicture of fire-arms is now carried to such a degree of perfection by different ‘European nations, that it may perhaps justly be doubted whether any farther impiovˆmeut in the requisites just mentioned can be made. For the materials the softest iron that can be procured is to be made use of. The best in this country are formed of stubs, as they are called, or old horse-nails; which are procured by gunsmiths from farriers, and from poor people who subsist by picking them up on the great roads leading to London. These are sold at about 10*. per cwt. and 28 Ibs. are requisite to form a single musket barrel.

The method of manufacturing musket barrels is as follows: ††† A hoop of about an inch broad, and six or seven inches diameter, is placed in a perpendicular situation, and the stubs, previously well cleaned, piled up in it with their heads outermost on each side, till the hoop is quite filled and wedged tight with them. The whole then resembles a rough circular cake of iron ; which being heated to a white heat, and then strongly hammered, coalesces into one solid lump. The hoop is now removed, and the heat-ings and hammerings repeated till the iron is rendered very tough and close in the grain ; when it is drawn out into pieces of about twenty-four inches in length, half an inch or more in breadth, and half an inch in thickness. JFour of these pieces are employed for one barrel ; but in the ordinary way a single bar of the best soft iron is employed. The workmen begin with hammering out this into the form of a flat ruler, having its length and breadth proportioned to the dimensions of the intended barrel. By repeated heating and hammering, this plate is turned round a tempered iron rod called a mandril, the diameter of which is considerably smaller than the intended bore of the barrel. One of the edges of the plate being laid over the other about half an inch, the whole is heated and welded by two or three inches at a time, hammering it briskly, but with moderate strokes, upon an an-vil which has a number of semicircular furrows in it, adapted to barrels of different sizes. Every time the barrel is withdrawn from the fire, the workman strikes it gently against the anvil once or twice in an horizontal direction. By this operation tho partirle* of the metal are more perfectly

consolidated, and every appearance of a seam in the barrel is obliterated. The mandril being again introduced into the cavity of the barrel, the latter is very strongly hammered upon it in one of the semicircular hollows of the anvil, by small portions at a time ; the hfeatings and hammerings being repeated until the whole barrel has undergone the operation, and its parts rendered as perfectly continuous as if they had been formed out of a solid piece. To effect this completely, three welding heats are necessary when the very best iron is made use of, and a greater number for the coarser kinds. The next operation in forming the barrels is boring them, which is done thus : ††† Two beams of oak, each about six inches in diameter, and six or seven feet long, are placed horizontally and parallel to one another ; having each of their extremities mortised upon a strong upright piece about three feet high, and firmly fixed. A space of three or four inches is left between the horizontal pieces, in which a piece of wood is made to slide, by having at either end a tenon let into a groove, which runs on the inside of each beam throughout its whole length. Through this sliding piece a strong pin or bolt of iron is driven or screwed in a perpendicular direction, having at its upper end a round hole large enough to admit the breech of the barrel, which is secured in it by a piece of iron that serves as a wedge, and a vertical screw passing through the upper part of the hole. A chain is fastened to a staple in one side of the sliding piece which runs between the two horizontal beams ; and, passing over a pulley at one end of the machine, has a weight hooked on it. An upright piece of timber is fixed above this pulley and between the ends of the beams, having its up-per end perforated by the axis of an iron crank furnished with a square socket ; the other axis be-ing supported by the wall, or by a strong post, and loaded with a heavy wheel of cast iron to give it force. The axes of this crank are in a line with the hole in the bolt. The borer, being then fixed into the socket of the crank, has its other end, previously well oiled, introduced into the barrel, whose breech part is made fast in the hole of the bolt ; the chain is then carried over the pulley, and the weight hooked on ; the crank be-ing then turned with the hand, the barrel advances as the borer cuts its way, till it has

passed through the whole length. The boring bit consists of an iron rod somewhat longer than the barrel, one end of which fits the socket of the crank ; the other is adapted to a cylindrical piece of tempered steel about an inch and a half in length, having its surface cut like a perpetual screw, with five or six threads, the obliquity of which is very small. The breadth of the furrows is the same with that of the threads, and their depth sufficient to let the metal cut by the threads pass through them easily. Thus the bit gets a very strong hold of the metal ; and the threads, being sharp at the edges, scoop out and remove all the inequalities and roughness from the inside of the barrel, and render the cavity smooth and equal throughout. A number of bits, each a little larger than the former, are afterwards successively passed through the barrel in the same way, until the bore has acquired the magnitude

intended. By this operation the barrel is very much heated, especially the first time the borer is passed through it, and is apt to warp. To prevent this, in some measure, the barrel is covered with a cloth kept constantly wetted, which not only preserves the barrel from an excess of heat, but likewise preserves the temper of the bit from being destroyed. The borer itself must also be withdrawn from time to time ; both to clean it from the shavings of the metal and to oil it, or repair any damages it may have sustained. Every time a fresh bit has been passed through the barrel, the latter must be carefully examined, to see if it has warped ; and likewise if there are any spots, by the workmen called blacks, on its inside. When warped, it must be straightened on the anvil ; for which a few slight strokes on the convex part will be sufficient ; and this is termed setting up the barrel. When black spots are perceived, the corresponding part on the outside must be marked, and driven in by gentle strokes with the hammer, when they will be completely removed by passing the borer another time through the piece. The equality of the bore is of the utmost consequence to the perfection of a barrel ; insomuch that the greatest possible accuracy in every other respect will not make amends for any deficiency in this respect. The method used by gunsmiths to ascertain this is by a cylindrical plug of tempered steel highly polished, about an inch in length, and fitting the bore exactly. This is screwed upon the end < f an iron rod, and introduced into the cavity of the barrel, where it is moved backwards and forwards ; and, the places where it passes with difficulty being marked, the borer bit is repeatedly passed until it moves with equ;J ease through every part. Any person who wishes to know the merit of his piece in this respect, may do it with tolerable accuracy by means of a plug of lead cast on a rod of iron ; or

even by a mus-ket-ball filed exactly to the bore, and pushed through the barrel by a ramrod ; taking care, however, not to use much force lest the ball be flattened, and its passage thus rendered difficult. The last step towards the perfection of the inside of the barrel is termed fine-boring ; by which is meant the smoothing it in such a manner as to remove all marks and inequalities left by the borer. The fine borer resembles the other in its general construction ; but, instead of the piece of steel cut in form of a screw which belongs to that, it is furnished with a square broach ten or twelve inches long, highly polished, and very sharp, by which means it cuts the metal very smoothly. It answerˆ the purpose best when only two of its edges are allowed to work ; the other two are covered with slips of oiled paper, one or more additional slips being put on each time that the instrument is passed through the barrel. The fine borer is frequently passed through, from the muzzle to the breech, and from the breech to the muzzle, until the whole inside presents a perfectly equal and polished surface, the barrel being likewise examined and set up, if requisite, after each time. It is absolutely necessary that this instrument should be perfectly true, and not in the least cast or warped in the tempering.

Besides the operations above described, another, called polishing, is usually performed on gun barrels, though it is doubtful whether this last be attended with any good effect or not. It is performed by a cylinder of lead, five or six inches long, cast upon a rod of iron, and filed exactly to the bore. The lead, being then covered with veiy fine emery and oil, is wrought backwards and forwards through the whole length of the barrel, until the inside has acquired the requisite degree of polish. The disadvantages of this operation are, that it is scarce possible to perform it without pressing more upon one part than another, and thus producing some degree of inequality on the inside, which is of the very worst consequence to fire-arms. The polish thus given is likewise very perishable ; so that the fine-boring may justly be considered as the last operation necessary for the inside of a barrel ; and it is then proper to give the external form and proportions by a

file. For this purpose four faces are first formed upon it, then eight, then sixteen; and so on till it be quite round, excepting the part next the breech, called the reinforced part, which is always left of an octagonal form. It being absolutely necessary that the barrel should be equally thick on every side, gunsmiths employ, for accomplishing this purpose, a particular tool named a compass. This consists of an iron rod bent in such a manner as to form two parallel branches about an inch from one another. One of these is introduced into the barrel, and kept closely applied to the side by one or more springs with which it is furnished ; the other descends parallel to this on the outside, and has several screws passing through it with their points directed to the barrel. By screwing these until (heir points touch the surface of the oarrel, and then turning the instrument round within the bore, we perceive where the metal is too thick, and how much it must be reduced, in order to render every part perfectly equal throughout its circumference. It may be made long enough to reach the whole length of the barrel, though it will be more convenient to have it only half as much, and to introduce it first at one end and then at the other. Instead of rounding the barrel by means of a file and compass, however, some people do so by turning it in a lathe : which is no doubt more expeditious, though neither so certain nor exact. A spindle as long as a gun-barrel cannot, without great difficulty, be prevented from springing considerably under the tool employed to reduce or smooth it in turning ; whence it is found, that by this operation barrels are more frequently warped than by all the borings they undergo ; and there is now this farther inconvenience, that they cannot be set up as formerly, without danger of destroying them entirely. The barrels being thus bored and formed externally, it is customary with the gunsmiths in France to solder on the loops and aim before they breech the barrel. The English, however, do not restrict themselves in this manner ; for, as soft solder is sufficient for fastening on these, they never use any other; while the French, who use hard solder, must of consequence employ a great heat. Thus the inside is toughened sometimes so considerably, that it is VOL. XV.

necessary to repeat the fine-boring; which cannot be done without injuring the threads of the screw formed for the breach, if the barrel were prepared for the latter without soldering on the former. The first tool used in forming the breech-screw is a pluˆ of tempered steel, somewhat conical, with the threads of a male screw upon its surface, and by the workmen termed a screw-tap. This being introduced into the barrel, and worked from left to right and back again, until it has marked out the four first threads of the screw, another less conical tap

is introduced ; and, when this has carried the impression of the screw as far as it is intended to go, a third one, nearly cylindrical, is made use of, scarcely differing from the plug of the breech intended to fill the screw thus formed in the barrel. The plug itself has its screw formed by a screw-plate of tempered steel, with several female screws, corresponding with the taps employed for forming that in the barrel ; seven or eight threads are a sufficient length for a plug : they ought to be neat and sharp, so as completely to fill the turns made in the barrel by the tap. The breech plug is then to be case-hardened, or to have its surface converted into steel, by covering it with shavings of horn, or the parings of the hoofs of horses, and keeping it for some time red hot ; after which it is plunged in cold water. The only thing now requisite for completing the barrels is to give them a proper color ; as a preparation for which their outside is first to be neatly polished with oil and emery. This being done, it was formerly the custom to give such a degree of heat as would make them blue throughout ; but as this cannot be effected without a partial calcination of the surface, which of consequence affects the inside also, the blue color has been for some time disused, and a brown one substituted in its place. To give this color, the pieces are first rubbed over with aquafortis or spirit of salt diluted with water ; after which they are laid by till u complete coat of rust is formed upon them ; a little oil is then applied ; and the surface, being rubbed dry, is polished by a hard brush and bees' wax. Thus the common musket-barrels for the purposes especially of sportsmanship are made; but there are some other methods of manufacture, by which the barrels are made to differ in some respects from those just described, and are thought to be considerably improved. One kind of these are called twisted barrels ; and by the English workmen are formed out of the plates made of stubs. Four of these are requisite to make one barrel. One of them, heated red hot for five or six inches, is turned like a cork-screw by the hammer and anvil; the remaining parts being treated successively until the whole is turned into a spiral, forming a tube, the diameter of which corresponds with the bore of the intended barrel. Four are genrrally sufficient to form a barrel of the ordinary length, i. e. from thirty-two to thirty-eight inches ; and the two which form the breech or strongest part, called the reinforced part, are considerably thicker than those which form the muzrle or fore purl of the barrel. One of these tubes is then welded to a part of an old barrel to serve as a handle; after which the

turns of the spiral are united by heating the tube two or three inches at a time to a bright white heat, t nd striking the end of it several times against the anvil, in a horizontal direction, with considerable strength, which is called jumping the bairel ; and the Keats given for this purpose Are called jumping heats. The next step is to mtroduce a mandril into the cavity, and to ham-mer the heated portion lightly, in order to flatten the ridges or burs raised by the jumping at the place where the spirals are joined. As soon as one piece is jumped throughout its whole length, another is welded to it, and treated in the same manner, until the four pieces are united, when the part of the old barrel is cut off, as being no longer of any use. The welding is repeated three times at least, and is performed exactly in the same manner as for plain barrels ; and the piece may afterwards be finished according to the directions already given.

The operation for the twisted barrels is very different from that just mentioned, and much more exceptionable. It consists in heating the barrel by a few inches at a time to a strong red heat ; one end is then screwed into a vice, and a square piece of iron with a handle like an auger is introduced into the other. By these the fibres of the heated portion are twisted into a spiral direction, which is supposed to resist the effort of the inflamed powder better than the other. To render this operation complete, however, it must be observed, that when once the several portions of the barrel have been twisted, the subsequent heats ought not to be very great, or the grain of the metal will regain its former state, and the barrel be 110 better for the twisting than before. To twist a barrel in this manner, also, it will be necessary to forge it at least half a foot longer than it is intended to be, that a sufficient length may be kept cold at each end to give a sufficient purchase to the vice and twisting instrument ; and these portions must afterwards be cut off before the barrel is bored, or two pieces of an old barrel may be welded to the muzzle and breech of that which is to be twisted, and cut off when the operation is over. These pieces may also be made stronger than usual to resist the force of the vice and twisting instrument ; and, to give the latter a firmer hold, the cavity of the muzzle may be made of a square form. The English workmen are unanimously of opinion that this method of twisting is really injurious to the barrel, by straining the fibres of the metal. At any rate, from the injudicious methods followed by the French artists, the greatest part of

their barrels, said to be twisted, are not so in reality ; there being at least six or seven inches at the muzzle, and seven or eight at the breech, which are not affected by the operation. The French ribbon barrels have a great resemblance to the English twisted ones ; but the process for making them is much more operose, though it seems not to possess any real advantage. A plate of iron, about the twelfth] art of an inch in thickness, is turned round a mandril, and welded its whole length like a plain barrel. Upon this slight barrel, which is called the lining, a plate of iron about an inch in breadth, and bevelled off at the edges, is by

means of successive h?ats rolled in a spiral d rection ; after which it is termed the ribbon, and must have a thickness corresponding with that part of the barrel which it is to form. As it would, however, be difficult to form a ribbon of sufficient length for the whole barrel, it is made in several pieces ; and, when one piece is rolled on, another is welded to its end, and the operation continued until the lining be entirely covered. The edges are so much bevelled that the one folds over the other about a quarter of an inch. After the ribbon is all rolled on, the barrel must be heated by two or three inches at a time, and the turns of the spiral united to each other and to the lining, by being welded in the same man-ner as the twisted barrel ; though it is plain that the operation of jumping cannot be admitted. The barrel is afterwards bored in such a manner that almost the whole of the lining is cut out, and scarcely any thing left but the ribbon with which the lining was covered. Tbe superiority of twisted and ribbon barrels over the plain kind gave occasion to a third sort, named wired barrels. These were invented by an ingenious workman at Paris, named Barrois ; whose method was as follows: ••• Upon a thin barrel, filed and dressed as usual, he rolled, as closely as possible, and in a spiral direction, a tempered iron wire about the thickness of a crow quill, the first layer covering only the reinforced part. The turns of the wire were soldered to each other, and to the barrel, with a composition which he kept a secret. The wired part was then filed smooth and bright, but not so much as to weaken it ; a second layer of wire was applied over the first, extending two-thirds of the length of the barrel ; and this being smoothed and brightened like the first, a third layer was applied, which covered the two former, and reached quite to the muzzle. The barrels made after this manner are supposed to be superior to others, but it is certain that wire is not preferable to other iron as a material for gun-barrels; and the solder used by M. Barrois, in a quantity nearly equal to the wire itself, must be accounted a defect; for no metal is equal to iron for strength : so that

by the use of solder in the composition of the barrel, it must be undoubtedly weaker than if it had been all made of iron.

Spanish barrels have long been held in great estimation, both on account of their being formed of better iron than those of other countries, and likewise from an opinion of their being more perfectly forged and bored. Those made at Madrid are the best, and even of these such as have been made by former gunsmiths are in the greatest estimation. The most celebrated Spanish gunsmith was Nicolos Biz, who lived in the beginning of the last century, and died in 1724; and the barrels fabricated by him in the former part of his life are held in ‘great estimation. Those of his contemporaries, John Belan and John Fernandez, are no less valued ; all of their barrels selling in France at 1000 livres or ►►45 15s. sterling. Almost all the Madrid barrels are composed of the old shoes of horses and mules, and manufactured first by welding longitudinally, and then being joined together in four or five pieces like the English barrels. In this opeia-MUSKET

tion an immense waste of the iron takes place; hut that of the Spanish iron is by far the greatest, a mass of forty or forty-five pounds being required to make one barrel, which, when rough from the forge, weighs only six or seven pounds; so that from thirty to thirty-eight pounds are lost in the hammerings. It may be doubted whether the iron be really purified by this waste ; for it is certain that by long continued working in the fire it may be rendered totally useless. The Spanish artists likewise value themselves on giving the inside of their barrels a very high polish ; but, in the opinion of good judges, it is better to take a barrel immediately after it has undergone the operation of fine-boring, than to give it any higher polish. M. de Marolles, an author of great reputation, says, he has seen a barrel, rough from the borer, throw a charge of shot deeper into a quire of paper, than one which was highly polished within, though the length, bore, and charge, were the same in both. As the Spanish iron is universally allowed to be excellent, it is probable that the superiority of the Spanish barrels is owing more to the goodness of the materials than to the skill of the workmen. Instead of making the plates overlap a little, in the place where they join, they give one of them a complete turn; so that every Spanish barrel may be said to be double throughout its whole length. The different portions of the iron are

likewise so forged, that the grain of the iron is disposed in a spiral manner; whence it has the same effect with a ribbon or twisted barrel. The outside is finished by turning them in a lathe; whence they are less elegantly wrought than the French and English pieces. Formerly they were made from three feet to three feet and a half long; their bore being such as to admit a bullet from twenty-two to twenty-four in the pound ; and their weight from three pounds to three pounds and a half. The reinforced part extends two-fifths of the length ; and at ten or twelve inches from the breech is placed a sight, such as is usually put upon “the rirle-banels, or those intended only for hall. According to Fspinas, arquebuss-bearer to Philip IV., the weight of a Spanish barrel ought to be four pounds and a half when their length is forty-two inches : but both weight and length are now much reduced. Next to the barrels made at Madrid, the most esteemed are those of Bu►►tindui, and St. Oiabe at Placentia in Biscay; and of John and Clement Padwestevo, Eudal Pous, and Martin Marechal, at Barcelona; the usual price being about ►►3 lO.v. sterling. The principal modern improvement in the manufacture of muskets is the percussion lock, for which see PI.RC TSSION.

Having described the method of forging barrels, we proceed to give an account of those imperfections to which they are sometimes liable, and which render them ant to burst or recoil with violence. The principal of these are the chink, crack, and tlaw. Tin-lirst is a small rent in the direction of the length of the barrel : the second across it ; and the third is a kind of scale or small plate adhering to the barrel bv a narrow base, from which it spreads out like the head of a nail from its shank, and, when separated, leaves a pit or hollow in the metal. The chink and

flaw are of much worse consequence than the crack in fire-arms, the force of the powder being exerted more upon the circumference than the length of the barrel. The Haw is much more frequent than the chink, the latter scarcely ever occurring but in plain barrels formed out of a single plate of iron, and then only when the metal is deficient in quality. When flaws hap-pen on the outside, they are of little consequence; but in the inside they are apt to lodge moisture and foulness^ which corrode the iron, and thus the cavity enlarges continually till the piece bursts. This accident, however, may arise from many other causes besides the defect of the barrel. The best pieces will burst when the ball is not sufficiently rammed home, so that a space is left between it and the powder. A very small windage or passage from the inflamed powder between the sidss of the barrel

and the ball, will he sufficient to prevent the accident ; but if the ball has been forcibly driven down with an iron ramrod, so as to fill up the cavity of the barrel very exactly, the piece will almost certainly burst, if only a very small space he left between it and the powder ; and the greater the space is, the more certainly does the event take place. Of this Mr. Robins gives a remarkable instance, accounting at the same time for the phenomenon : ‘ A moderate charge of powder,’ says he, ‘ when it has extended itself through the vacant space, and reaches the ball, will, by the velocity each part has acquired, accumulate it-self behind the ball, and will thereby be condensed prodigiously ; whence, if the barrel be not of an extraordinary strength in that part, it must infallibly burst. The-truth of this I have experienced in a very good Tower musket forged of very tough iron ; for, charging it with twelve pennyweights of powder, and placing the ball loosely sixteen inches from the breech, on the firing of it, the part of the barrel just behind the bullet was swelled out to double its diameter, like a blown bladder, and two large pieces, of two inches in length, were burst out of it.’ A piece will frequently hurst from having its mouth stopped up with earth or snow; which sometimes happens to sportsmen, when, in leaping a ditch, they have assisted them > elves with their fowling-piece, putting the mouth of it to the ground. And a musket will certainly burst, if ;t he fired with the muzzle immersed only a very little way in water. It will also hurst from an overcharge; but, when it bursts in other circumstances, i; is t⬚ he attributed to a defect in the workmanship, 01 in the iron. These defects are principally an imperfection in the welding, a deep flaw having taken place, or ;m inequality in the bore: which last is the most common of any, especially in low-priced barrels. The reason cf a barrel’s bursting from an inequality in the bore is, thru the clastic fluid, set loose by the inflammation ⬚.f the powder, and endeavouring to expand itx-lf in every direction, being repelled by the stronger parts, acts with additional force against the wenker, and hursts through them, which it would not have done had the sides been equally thick throughout. With regard to defects arising from the-bad quality of the iron, as the choice of the iraterials depends entirely on the gunsmith, the

only way to be assured of having a barrel made of proper metal is to purchase it from an ar-tist of reputation, and to give a liberal price. The recoil of a piece becomes an object of importance only when it is very great ; for every piece recoils in some degree when it is discharged. The most frequent cause of an excessive recoil is an inequality in the bore of the barrel ; and by this it will be occasioned even when the inequality is too small to be perceived by the eye. The ex-

it be increased to twice its usual length, when it will be near eight feet long, the velocity of the bullet will not hereby be augmented more than one-eighth part. The greater the length of the barrel is in proportion to the diameter of the bullet, and the smaller the quantity of po%vder, the more inconsiderable will these alterations oi velocity he.' The advantages, therefore, gained by long barrels are by no means equivalent to the disadvantages arising from the weight and en-

planation of this upon mechanical principles incumbrance of them ; and from many experideed is not easy : for, as it is an invariable law ments it is now proved, that one may choose any

that action and reaction are equal, we should length he pleases, without any sensible detn—

suppose that every time a piece is discharged it ment to the range of his piece. The most ap-

should recoil with the whole difference between the velocity of the bullet and that of the inflamed powder. The cause to which too great a recoil

proved lengths are from thirty-two to thirty-eight inches. An opinion has prevailed among sportsmen, that by some unknown manoeuvre the gun-

in muskets has been usually attributed, is the smith is able to make a piece, loaded with small

placing of the touch-hole at some distance from shot, throw the contents so close together, that

the breech plug ; so that the powder is fired even at the distance of forty or fifty paces the

about the middle, or towards its fore part, rather whole will be confined within the breadth of a

than at its base. To avoid this, some artists form hat. From such experiments as have been made

a groove or channel in the breech plug as deep on this subject, however, it appears, that the close

as the second or third turn of the screw : the touch-hole opening into this channel, and thus firing the powder at its very lowest part. It appears, however, from a number of experiments made upon this subject by M. le Clerc, gunsmith to the late king of France, that it made very little difference with regard to the recoil, whether the touch-hole was close to the breech or an inch distant from it. The only circumstance to be at-

ness or wideness with which a piece throws its shot is liable to innumerable variations, from causes which no skill in the gunsmith can possibly reach. So variable are these, that there is no possibility of making the same piece throw its shot equally close twice successively. In general, however, the closer the wadding is, the better disposed the shot seems to be to fall within a small compass. The closeness of the

ended to with respect to its situation therefore shot therefore would seem to depend on pres, that it be not quite close to the breech-plug; venting the flame of the powder from insinuating

as in such a case it is found to be more apt to be itself among its particles : whence those who

choked up than when placed about a quarter of shoot for a wager at a mark with small shot, put

an inch from it.

The only other circumstance to be determined

in the shot by small quantities at a time, ramming down a little tow or thin paper over each ;

with regard to musket-barrels is their proper so as to fill the interstices of the grains, and thus

length. Formerly it was supposed that the longer they were made, the greater would be the distance to which they carried the shot, and that without any limitation. This opinion continued to prevail till about sixty years ago, when it was first proposed as a doubt whether long barrels carried farther than short ones. With regard to cannon, indeed, it had long before this time been known that they might be made too long. Bal-thazar Killar, a celebrated cannon-founder under Louis XIV., when asked by *Mons.* Suriry de St. llemy, why the culverin of Nancy, which is

prevent the flame from getting in amongst the grains and scattering them.

Some pieces are composed of two or more barrels joined together; in which case the thickness of each of the barrels is somewhat less than in single barrelled pieces. After being properly dressed, each of them is filed flat on the side where they are to join each other, so that they fit more closely together. Two corresponding notches are then made at the muzzle and breech of each barrel ; and into these are fitted two small pieces of iron to hold them more

twenty-two feet long, did not carry a ball equally strongly together.

Being then united by tinning

far with a shorter piece ? he replied, that ‘ the powder, when inflamed, ought to quit the cavity of the piece in a certain time, in order to exert its whole force upon the bullet: by a longer stay, part of the force is lost ; and the same cause may produce an inequality in the shots, by giv-ing a variation to the bullet, so as to destroy its rectilineal force, and throw it to one side or other

the contiguous parts, a triangular piece of iron called the rib is fastened on in like manner, running the whole length on the upper side ; which serves to hold them more strongly together. Af-ter this they are to be polished and colored in the manner described for single barrels : great care should be taken, that the barrels joined in this manner should be quite equal in strength

of the mark.’ Mr. Robins, whose skill in gun-and quite upright, or of an equal thickness nery is well known, says, ‘ If a musket barrel, of throughout. If any inequality takes place in the the common length and bore, be fired with a strength of the barrels, the weaker will be warp-leaden bullet and half its weight of powder, and if ed by the action of the stronger ; and the warp-the same barrel be afterwards shortened one-half ing from this cause has sometimes been so con-and fired with the same charge, the velocity of siderable as to render one of the barrels useless, the bullet in this shortened barrel will be about To bring every part of the circumference of each one-sixth less than it was when the barrel was barrel to as equal strength as possible, so that no entire : and if, instead of ‘shortening the barrel, part may be strained by the explosion, that sid⬚⬚

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where they touch must be so reduced, that the partition between the two calibres may be no thicker than either barrel was at the same place before it was filed to join in this manner. Formerly the double-barrelled pieces were made with one barrel lying over the other, each barrel hav-ing a separate pan, hammer and hammer-spring, but only one cock for both. The barrels were therefore made to turn round at the place where the breeches joined with the stock ; so that as soon as one was firad off, the other could be brought into its place by pressing a spring mov-ed by the guard with the right hand, while with the left the barrels were turned upon their com-mon axis ; and as soon as the charged barrel was thus brought into its proper situation, the spring descended into a notch and kept it firm. But this method was found to be too complicated, though upon the same plan three and four barrels were sometimes mounted upon one stock ; but these pieces were intolerably heavy, and have no real superiority over the double-barrelled pieces which do not turn round, and which of consequence are now only made use of. In forging barrels of all kinds, it is of importance to have them made at first as near as possible to the weight intended, so that very little be taken away by the boring and filing : for as the outer surface, by having undergone the action of the hammer, is rendered the most compact and pure, we should remove as little of it as possible ; and the same holds with the inside.

A MUSKETOON is a kind of short thick musket, whose bore is the thirty-eighth part of its length; it carries five ounces of iron, or seven and a half of lead, with an equal quantity of powder. This is the shortest kind of blunderbusses. It is of the same length with the carabine.

MUSKMEL’ON, n. *. Musk and melon. A fragrant melon.

The way of maturation of tobacco must be from the heat of the earth or sun ; we see some leading of this in miiskmelons, which are sown upon a hot bed dunged below, upon a bank turned upon the south sun. Racon.

MUSK-RAT. See CASTOR, and Mus.

MU’SKROSE, n. s. Musk and rose. A rose so called from its peculiar fragrance.

Thyrsis, whose artful strains have oft delayed The huddling brook to hear his madrigal, And sweetened every muskwse of the dale. Milton.

The mushrose will, if a lusty plant, bear flowers in Autumn without cutting. Boyle.

MUS'LIN, n. s. Fr. mousselin ; Sp. musolino-Because first imported from Mousol. A fine stuff made of cotton.

By the use cf certain attire, made of cambrick or miflin, upon her head, she attained to such an evil art in the motion of her eyes. Taller.

In half-whipt muslin needles useless lie,

And shuttle-cocks across the counter fly. Gay.

MUSLIN bears a downy knot on its surface. There are several sorts of muslins brought from the East Indies, and more particularly from Bengal ; such as doreas, betelles, mulmuls, tan-jeebs, &c. Muslin is now manufactured in Britain, and brought to very great perfection. See COTTON, AND WEAVING.

MUSONIUS (Cains. Rufus), a Stoic philosopher o(the second c►►v'ury, who was banished

into the island of Gyare, under the reign of Nero, for criticising the manners of that prince; but was recalled by Vespasian. He was the friend of Apollonius Tyanaeus ; and the letters that passed between them are still extant.

MUSS, n.s. A cant word for a, scramble. When I cried hoa!

Like boys unto a muss, kings would start forth,

And cry, Your will?

Shakspeare. Antony and Cleopatra.

MUSSAFURPORE, orMujAFApoRE,a town of Hindostan, in the province of Bahar, and district of Hajypore, is situated on the south bank of the Little Gunduck River, and was formerly the residence of the East India Company's commercial agents. Near this place a battle was fought in the year 1760, between Cossim Aly Khan's forces and the British, in which the lat-ter were successful. Long. 85►► 25' E., lat. 26►► 10' N.

MUSSELBURGH, a sea-port town of Scotland, in Mid Lothian, in the parish of Inveresk, at the mouth of the Esk, which separates i' from Fisher-row ; but the towns are connected by a bridge, as well as by their government. It is an ancient burgh royal, having a charter dated December llth, 1562 ; but it had one so early as 1 340, granted by the earl of Marr, for the attention of the inhabitants to the great Randolph earl of Murray, who died in it, in 1322. It anciently belonged to the abbacy of Dunfermline, but was granted by James VI. to the duke of Lauderdale, and purchased from this family, in 1709, by the duchess of Buccleugh. It is governed by two bailies and a treasurer, elected annually, and fifteen councillors; of whom ten are elected from Musselburgh, and eight from Fisher-row. Two councillors go out, and two new ones are chosen annually. It has seven incorporations. Its last charter is dated 1670. Its revenue is above ►►1500 a year. It has a market on Friday, and a fair the second Tuesday in August. It lies four miles north of Dalkeith, and six tast of Edinburgh.

MUSSENDON, a cape of Arabia, one of the boundaries of the Persian Gulf. It is the termination of a series of mountains inhabited by a tribe descended from the Arabs and Portuguese A number of small rocks or islands, named the Quoins, lie about ten miles to the north of the Cape.

MUS'SULMAN, n. s. Arab, mosleman, of Arab, is/am, salvation. A Mahometan believer.

Thus says the prophet of the Turk, Good inusiulmaii, abstain from pork , There is a part in every swine No friend or follower of mine May taste, whate'er his inclination, On pain of excommunication.

MUSSULMAN, is a title by which the Mahometans distinguish themselves; signifying, in the. Turkish language, ' true believer, or orthodox. See MAHOMETASISM. In Arabic the word is written Moslem, or Mosleman. The appellation was first given to the Saracens, as is observed by 1 eunclavius.►►► There are two sects of Mussulmans very averse to each other; the oˆ called Sonnltes, and the other Shiites.►►► The Scanites follow the interpretation of the Alcoran gimi by

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Omar ; the Shiites are the followers of Ali. The subjects of the king of Persia are Shiites, and those of the grand signior, Sonnites. See AL-CORAN, and SONNA. Some authors say, that the word Mussulman signifies saved, that is, predestinated ; and that the Mahometans give themselves the appellation, as believing they are all predestinated to salvation. ††† Martinius is more particular as to the origin of the name ; which he derives from the Arabic DˆDO, musalem, ‘ saved, snatched out of danger ;’ the Mahometans, he observes, establishing their religion by fire and sword, massacred all those who would not embrace it, and granted life to all that did, calling them Mussulmans, q. d. erepti e periculo; whence the word, in course of time, became the distinguishing title of all those of that sect, who have affixed to it the signification of true believers.

MUST, v. imp. Sax. mopt; Belg. and Teut. mussen. To be obliged ; to be by compulsion or necessity.

Must I needs bring thy son unto the land from whence thou earnest? ††† Gen. xxiv. 5.

Do you confess the bond ? †††I do.

††† Then must the Jew be merciful. ††† On what compulsion must I ? tell me that.

, Sliakspeare.

Fade, flowers, fade, nature will have it so, Tis but what we must in our Autumn do.

Waller.

Because the same self-existent being necessarily is what he is, ‘tis evident that what he may be, or hath the power of being, he must be. Grew.

Every father and brother of the convent has a voice n the election, which must be confirmed by the pope.

Addison.

What say you ††† a pasty, it shall, and it must ; And my wife, little

Kitty, is famous for crust.

Goldsmith. Full many a pang, and many a throe,

Keen recollection’s direful train, Must ring my soul, ere Phoebus, low,

Shall kiss the distant, western main. Burns. My sister, and my sister’s child,

Myself, and children three, Will fill the chaise ; so you must ride

On horseback after we. Cowper.

MUST, v. a. Sc v. n.”\ Belg. mos ; Wei. mws MLS’TINESS, n. s. Mmould); Fr.7►►orstr;Ital. MUS’TY, adj. j mucido ; Lat. mucidut.

To make or grow mouldy : mustiness is, mouldings; foulness arising from damp: musty, spoiled by damp ; fetid ; vapid with fetidness ; hence, dull ; heavy.

Was’t thou fain, poor father, To hovel thee with swine and rogues forlorn, In short and musty straw.

Shakspeare. King Lear.

Pistachoes, so they be good and not musty, made into a milk, are an excellent nourishment. Bacon.

Let those that go by water to Gravesend prefer lying upon the boards, than on musty infectious straw. Harvey.

Keep them dry and free from mustiness.

Evelyn’s Kalendar.

Others are made of stone and lime, but they are subject to give and be moist, which will must corn.

Mortimer.

Xantippe, being married to a bookish man who lias no knowledge of the world, is forced to take his

affairs into her own hands, and to spirit him up now and then, that he may not grow musty and unfit for conversation. Addison s Spectator.

Let not, like Naevius, every error pass ; The musty wine, foul cloth, or greasy glass.

Pope.

MUST, n. s. Sax. mvpr; Fr. mout, nwust ; Lat. iniiati/iii. New wine ; new wort.

If in the must of wine, or wort of beer, before it be tunned, the burrage stay a small time, and be often changed, it makes a sovereign drink for melancholy. Bacon's Natural tlistoni.

As a swarm of flies in vintage time, About the wine-press where sweet must is poured, Beat off, returns as oft with humming sound.

Milton. The wine itself was suiting to the rest,

Still working in the ––i––s(, and lately pressed

Dry den. A frugal man that with sufficient must

His casks replenished yearly ; he no more

Desired, nor wanted. Philips.

Liquors, in the act of fermentation, as must and new ale, produce spasms in the stomach.

Arbuthnot on Aliments.

MUST is a liquid of a sweet taste expressed from grapes fully ripe : or the liquor pressed from the fruit before it has worked or fermented. See WINE. Dr. Thompson says, it is composed of five ingredients, *viz.* water, sugar, jelly, extract, and tartareous acid, partly saturated with potass. The quantity of sugar is very considerable ; it may be obtained in crystals by evaporating must to the consistence of syrup, separating the tartar which precipitates during the evaporation, and the setting the must aside for some months. The crystals of sugar are gradually formed.

MUST OF RHENISH WINE. This is a liquor that is found extremely to affect the brain ; for not having passed the natural effervescence, which it would have been subject to in the making of wine, its salts are locked up, till, the heat of the stomach setting them to work, they raise their effervescence there, and send up abundance of subtle vapors to the brain. The Rhenish must is of two kinds, being made

either with or without boiling. That made without boiling is only put up so close in the vessel that it cannot work ; this is called stumm wine. That by boiling is thus prepared : they take strong vessels not quite filled, and, putting them into a cellar, they make a fire, mild at first, but increased by degrees, and afterwards they gradually lessen it again, that the boiling may cease of itself. This operation is finished in thirty-six or forty hours, according to the size of the vessel ; and the wine-boilers, instead of common candles, which would melt by the heat, use thin pieces of split beech-wood. These also serve for a double purpose, not only lighting them, but giving them notice of the boiling being enough ; before that time, the quantity of vapors thrown up make them burn dim ; but, as soon as it is finished, the vapors as-cend in less quantity, and the light burns brisk and clear. About seven or eight days after this boiling, the must begins to work, and after this working H is called wine. They have also another kind of Rhenish must, which is thus prepared . they boil the liquor to half the quantity,

and put into it the medicinal ingredients they The powder of mustard seed may be made into

are most fond of; such as orange-peel, elecam-the consistence of a loch with warm water in

pane root, and juniper berries, or the like ; being which a little sea-salt has been dissolved. *Of

thus medicated, the whole works much more this a common spoonful, sometimes two diluted slowly than it otherwise would. If the boiled must, by too violent effervescence, cast out its

lees, it will become vapid and dead, unless proves an excellent remedy in most nervous disˆ

this separation is stopped by some fatty sub-orders. Med. Ess. Edinb. vol. ii. art. 19 n.

with tepid water, are given on an empty stomach ; it operates as well as an emetic, and

stance, such as fresh butter or the like : they put this in upon a vine leaf, or else apply it hard to the mouth of the vessel.

MUSTA'CHES, or

MUSTA'CHOES, n.s hair on the upper lip.

This was the manner of the Spaniards, to cut off their beards, save only their mustaches, which they wear long. Spenser.

MUSTAPHABAD, a considerable town of

303, note.

MUSTELA, a genus of quadrupeds of the order of ferae. There are six cutting teeth in

> Fr. mustaches; Span, each jaw; those of the upper jaw erect, sharp-J rnustacho. Whiskers; pointed, and distinct ; of the lower jaw, blunter, huddled together, and two placed within the line of the rest : the tongue is smooth. ' In many circumstances (says Mr. Kerr), the otters and weasels agree ; the body is very long, and of an equal thickness ; the legs are short, with smooth

Hindostan, in the province of Delhi. It is sur-shlning hair; the claws are not retractile; they

rounded by a mud wall, with towers and aditch, dl•• burrows, in which they reside; and they go

and is subject to the British. Long. 70•• 47' E., about in search of Prey in ll)e night: but the

lat. 30•• 20' N. N. B. Mustafa, one of the names otters llve almost

constantly in the water, swim-

of Mahomet, is also that of a great number of places in the east.

MUSTAPHANAGUR. See CONDAPILLY.

MUSTARD, n.s. Welsh mwstard; Fr. mous-tard; Ital. mostardo, as some suggest, from Lat. mustum ardens. A plant. See SINAPIS.

The pancakes were naught, and the mustard was good. Shakspeare.

Sauce like himself offensive to its foes,

The roguish mustard, dangerous to the nose.

Mustard, in great quantities, would quickly bring the blood into an alkaline state, and destroy the ani-mal. Arbuthnot.

Tis your's to shake the soul, With thunder rumbling from the mustard bowl.

Pope.

Stick your candle in a bottle, a coffee cup, or a mustard pot. Swift.

MUSTARD, MITHHIDATE. See THLAPSI.

MUSTARD SEED is one of the strongest of the pungent, stimulating, diuretic medicines, that operate without exciting much heat. It is sometimes taken unbruised,to the quantity of a spoon-fill at a time, in paralytic, cachectic, and serous disorders. It is applied also as an external sti-mulant, to benumbed and paralytic limbs : to parts affected with fixed rheumatic pain ; and to the soles of the feet, in the low stage of acute diseases, for raising the pulse : in this intention, a mixture of equal parts of the powdered seeds and crumbs of bread, with the addition sometimes of a little bruised garlic, is made into a cataplasm, with a sufficient quantity of vinegar. Mustard seed yields, upon expression, a considerable quantity of oil, which is by some recommended externally against rheumatisms and palsies, though it has nothing of that quality by which the seeds themselves prove useful in those disorders ; the oil being mild and insipid as that of olives, and the pungency of the seed remaining entire in the cake left after expression ; nor is any

mmg on the surface and below it, and subsist chiefly on fish ; they do not climb trees, neither do they leap with a crooked body and stretched out tail like the weasels ; the head is larger and

they have five grinders on each side of each jaw ; the weasels have four or five above, and five or six below on each side. From all these circumstances, and the peculiar conformation of their feet, it were proper to separate them into distinct genera ; but as they are placed in the same genus by Linne, they are here only divided into two subordinate sections:' *viz.* ' lutrae, otters, having the toes of the feet webbed ; and mustelae, weasels, having the toes unconnected.' There are many species.

M. afra, the vansire, or Madagascar weasel of Pennant, is brown above, pale yellow below, and the tip of the tail is blackish ; it is fourteen inches long from nose to rump, the tail ten ; in the upper jaw are twelve grinders and ten in the lower. They inhabit Madagascar, and the interior parts of Africa.

M. barbara, the tayra, or Guiana weasel of Pennant, is black, with a three lobed spot on the neck; is the size of a martin, and has a strong scent of musk ; the female has four teats. They inhabit Guiana and Bras>l.

M. Canadensis, the .pikan, in form resembles the pine martin ; the body is lawny or bay, with a white spot on the breast ; is nearly two feel long ; the tail above ten inches, and black as well as the legs. It has Ions and strong whiskers, and inhabits North America.

M. erniinea, the ermine, has the tail tipt with black This species inhabits the north of Eu-rope, Asia, and America, and as far as the north parts of Persia and China ; living in heaps of stones on the banks of rivers, in the hollows of trees, and in forests, especially of beech, preying on squirrels and lemmings. In manners and food thev resemble the common weasel, but do not

considerable part of the pungent matter extract'- frequent houses, haunting chiefly woods and

ed by rectified spirit. The bruised seeds givo out readily to water

nearly the whole of their active matter: added to boiled milk they curdle it, and communicate their pungency to the whey.

hedges, especially such as border on brooks and rivulets.1 In general appearance they come very near the martin, but are shorter in the body, bein? scarcely ten inches long from nose to rump,

and the tail about five inches and a half; the hair is likewise shorter and less shining. In the northern regions, the fur of the ermine becomes entirely white during winter, except the outer half of the tail, which remains black. The skins sell ;n Siberia from ►►2 to ►►3 sterling per 100 ; but were anciently in much greater request than now. In summer, the upper part of the body is of a pale tawny brown color ; the edges of the ears and ends of the toes are yellowish-white ; the throat, breast, and belly are white; in winter, in the temperate regions, it is sometimes mottled with brown and white; but in severe winters becomes entirely white ; the farther north, and the more rigorous the climate, the purer white ; those of Britain generally retain a yellowish tinge. In Persia and other southern parts it is brown the whole year. In Siberia they burrow in the fields, and are taken in traps baited with flesh. In Norway they are either shot with blunt arrows, or taken in traps made of two flat stones, one being propped up with a stick, to which is fastened a baited string, which when the animals nibble, the stone falls down and crushes them to death. The Laplanders take them in the same manner, only, instead of stones, they use two logs of wood.

M. foina, the common martin, is of a blackish chestnut color, with the throat and breast white : the head and body measure eighteen inches, the tail ten. Martins inhabit Britain, Germany, France, and most parts of the south of Europe, and even the warmer parts of Russia. They live in woods, and go about during the night in quest of prey. They are most elegant lively animals. Their movements are all exceedingly nimble; they rather bound and leap than walk. They climb rough walls

with ease and alacrity ; enter pigeon or hen houses, eat the eggs, fowls, &c., and the females often kill great numbers, and transport them to their young. They likewise seize mice, rats, moles, and birds in their nests. Count Buffon kept one of these animals for a considerable time, having tamed him to a certain degree, but he never formed any attachment, and continued always so wild that it was necessary to chain him. He made war against the rats, and attacked the poultry whenever they came in his way. He often got loose, though chained by the middle of the body. At first he went to no great distance, and returned in a few hours ; but without discovering any symptoms of joy or affection to any particular person. He, however, called for victuals like a cat or a dog. Afterwards he made longer excursions; and at last walked off altogether. He was then about a year and a half old. He ate every thing presented to him, except herbs; was fond of honey, and preferred hemp-seed to every other grain. He drank very often ; sometimes slept two days successively, and at other times none for two or three days. Before sleeping, he folded himself in a round form, and covered his head with his tail. While awake, his motions were so violent, so perpetual, and so incommodious, that it was necessary to chain him, to prevent him from breaking every thing. The count adds that he has had in his possession several martins of a more advanced age, which had been taken in

nets ; but they continued to be totally savage, bit all who attempted to touch them, and would eat nothing but raw flesh. The character of this ani-mal is differently given by Mr. Pennant ; who says, ‘ it is very good natured, sportive, and capable of being tamed.’ The younger females bring three or four at a birth ; when older they produce six or seven. They breed in hollows of trees ; and are often in winter found in magpies’ nests. The skin and excrements have a musky smell.

M. furo, the ferret, has red and fiery eyes ; the color of the whole body is a very pale yellow ; the length from nose to tail is about fourteen inches, the tail five. In their wild state they inhabit Africa ; whence they were brought into Spain, to free that country from rabbits with which it was over mn ; and from Spain the rest of Europe has been supplied. They cannot bear cold, nor subsist even in France unless in a domestic state. They have not the same capacity of finding subsistence as other wild animals, but must be nourished within doors, and cannot exist in the fields; for those which are lost in the burrows of rabbits perish during winter. Like other domestic animals, they vary in color. The female ferret is less than the male, and, when in season, is so extremely ardent that she dies if her desires are not gratified. Ferrets

are brought up in casks or boxes, where they are furnished with beds of hemp or flax. They sleep very much. When they awake they search eagerly for food ; and brawn, bread, milk, &c., are commonly given them. They produce twice a-year ; and the female goes six weeks with young. Some of them devour their young as they are brought forth, instantly come again in season, and have three litters, which generally consist of five or six, and sometimes of seven, eight, or nine. They are used for hunting rabbits; and, as in this country they are apt to degenerate, warreners cross the breed, by an intercourse between a female ferret and a male polecat, by leaving the former, when in season, near the haunts of the latter. The produce is of a much darker color than the ferret, having a great resemblance to the polecat. This animal is naturally a mortal enemy to the rabbit. When a dead rabbit is for the first time presented to a young ferret, he flies upon it, and bites it with fury ; but if it be alive, he seizes it by the throat or the nose, and sucks its blood. When let into the burrows of rabbits, he is muzzled, that he may not kill them in their holes, but only oblige them to come out, to be caught in the nets. If the ferret is let in without a muzzle, he is in danger of being lost; for, after sucking the blood of the rabbit, he falls asleep ; and even smoking the hole is not a certain method of recalling him ; because the holes have often several entries which communicate with each other, and the ferret retires into one of these when incommoded by the smoke. Ferrets are also used for catching birds in the holes of walls or old trees. The ferret, though easily tamed, and rendered docile, is exceedingly irascible ; his odor is al-ways disagreeable ; but, when irritated, it becomes more offensive. His eyes are lively, and his as-pect is inflammatory ; all his movements are

nimble ; and he is at the same time so vigorous inches ; the body and the limbs are black, except

that he can easily master a rabbit, though four the fore part of the head, which is white or gray ;

times larger than himself. the largest individual weighs from 70 to 80

Ibs. ;

M. galera, the tayra of Buffon, or Guinea the fur is very thick, long, black, and glossy,

weas►►l of Pennant, is of an uniform dusky co-sometimes varying to silvery, with a soft down

lor, the fur very rough. It is about the size of a ‘ rabbit, and is shaped like a rat.

beneath. The sea otter inhabits the north-west coasts of America, and Eastern Asia, and the intermediate islands. It lives mostly in the sea, and swims with great facility; frequenting shallows which abound in sea-weeds, and feeding on lobsters, fish, sepiae or cuttle-fish, and shell-fish. It is a harmless animal ; very affectionate to its young, insomuch that it will pine to death at the loss of them, and die on the very spot where they white forehead, and a long narrow stripe along have been taken from it. Before the young can

It inhabits

Guinea ; where it burrows in the ground by means of its fore feet, which are strong, and formed for digging. It is very common about the negro villages, and is exceedingly fierce and destructive to poultry.

M. Guianensis, the Guiana, or South American martin, is of a dark brown color, with a

the side of the neck. The body and head are swim, the dams carry them in their paws, lying

nearly two feet long, and the tail is only about in the water on their backs : they swim often on

five inches. It inhabits Guiana. their back, their sides, and even in a perpendi—

M. lutra Brasiliensis, the Brasilian otter, is cular posture; are very sportive; embrace, and

black, with a yellow spot below the chin ; the tail is flat, naked, and reaches only to the feet. It is about the size of a middling dog, but weighs from 40 Ibs. to 100 Ibs ; the head and teeth resemble those of a cat ; the eyes are small, round, and black ; the feet have five toes oach, with sharp claws. They inhabit Brasil, Guiana, and the rivers of South America ; live in societies on fish, crabs, Sec., and are very fierce, but may be tamed when young.

M. lutra Guianensis, the small Guiana otter,

kiss each other : they breed but once a-year, and have but one young at a time, suckle it for a year, and bring it on shore. They are dull-sighted, but quick scented ; and run very swiftly on land. They are hunted for their skins, which are of great value ; being sold to the Chinese for seventy or eighty rubles a-piece : each skin weighs 3J Ibs. The young are reckoned very delicate meat, scarcely to be distinguished from a sucking lamb. Their cry is nearly similar to that of a young dog, sometimes interrupted by

with the hind feet webbed, the toes of the fore another cry similar to that of thesaki, or fox-tail- feet unconnected, and a long taper naked nail, ed monkey. They may be nourished with the inhabits Cayenne, and probably other parts of flour of manioc diluted in water.

South America. It is only about seven inches long from the nose to the rump ; the tail is near seven ; the upper parts of the head and body are

M. lutra piscatoria, the common otter, has naked feet, and the tail is about half the length of the body. It is in general about two feet

marked with large brownish-black spots, exactly long, from the tip of the nose to the base of the corresponding on both sides, and the intervals tail. The fur is of a deep brown color, with are of a yellowish-gray color ; all the under parts two small white spots on each side of the nose, of the body and head, and the fore parts of the and one beneath the chin. This animal inhabits fore legs, are white ; there is a white spot over Europe, North America, and Asia as far as Per-each eye ; the ears are large and round ; and sia. It frequents rivers, lakes, and fish ponds ; the mouth is garnished with long whiskers, and preys on fish, frogs, and fresh water crustace-Buffon says, there are three varieties of otters in ous animals, being exceedingly destructive to fish Cayenne; 1st, Black, which weighs from 40 to ponds. They procreate in February, and thefe-50 Ibs. French. 2d, Yellowish, weighing 20 or male brings forth three or four young ones in 25 Ibs. 3d, The small grayish kind above des-May; the male calls the female by a soft mur-cribed, which only weighs 3 or 4 Ibs. The other muring noise. The otter shows great sagacity two are not described, but they appear in nu-in forming its habitation : it burrows under merous troops, are very fierce and dangerous, ground on the banks of a river or lake ; it al-and defend themselves against dogs, biting very ways makes the entrance of its hole underwater; cruelly : they litter in holes which they dig on working upwards to the surface of the earth, and the banks of rivers ; and are often tamed and forming, before it reaches the top, several holes, brought up in houses. that, in case of high floods, it may have a retreat:

M. lutra lutieola, the lesser otter, has very for, though amphibious, no

animal loves more

broad hairy feet, and a white month ; and sel-to lie dry : it makes a minute orifice for tl

<lom exceeds a foot in length. The body is of a mission of air ; and, the more effectually to cor

tawny and dusky color mixed together; the fur ceal its retreat, makes even this air-hole

having two series of hairs, of which the short are thick bush. The otter is capable of bem

yellowish and the long black. These animals he will follow his master like a dog, and

inhabit Poland, Finland, Russia, and Siberia; fish for him, and return with his prey,

frequent marshy places, and prey on fish and lie docs not cast his ha.r, his skin is browner, an

frogs. They are caught with dogs and traps, sells dearer in winter than in summer, a

and are excessively fetid ; but the fur is very va- .nakes a very fine fur. Hii fli

luable. being esteemed next in beauty to that of agreeable fishy taste,

the sable. noxious odor from the rema.ns of putrid n

M. lutris, the sea otter, bavin-hairy feet and his own body has a bad smell,

and a hairy tail. From nose to tail it is about ck.ce the otter spontaneously, ai

tiiree feet Kma, and the Uiil is about thirteen Irm when at a distance fron

his hole. But, when seized, he defends himself, bitps the dogs cruelly, sometimes with such force as to break their leg-bones, and never quits his hold but with life. The beavers, however, pur-sue the otters, and will not allow them to live on the same banks.

M. martes, the pine martin, has the body of a dark or blackish chestnut color, the breast and throat yellow. They inhabit the north of Eu-rope, Asia, and America; are more rarely found in Britain, France, Germany, and Hungary; and as far as Tonquin in China. They live in large woods and forests, keeping in the day time the hollows of trees, occupying squirrels' nests, especially for their yourg, and go about only by night. They prey on squirrels, mice, rats, and small birds; eat berries, ripe fruit, and honey; and in winter go in quest of pigeons and poultry. They procreate in February ; and the female, after nine months, brings forth seven or eight young ones. The head of this species is shorter, and the legs are somewhat longer, than those of the common martin ; but the fur is far superior in fineness, and is a great article in commerce : those about Mount Caucasus, with an orange throat, are esteemed by furriers.

M. melina, the yellow weasel, has the back and belly of a pale cinereous yellow ; the face, crown, legs, and tail black. It is eighteen inches long from nose to rump ; the tail is also eighteen inches and has long hair ; the head is flat, ears rounded, nose blunt, eyes dusky colored, cheeks and chin white, and the throat a rich yellow.

M. putoria, the polecat, is of a dirty-yellow color, with white muzzle and ears. He inhabits most parts of Europe, and the temperate climates of Asiatic Russia; and has a great resemblance to the martin in temperament, manners, disposition and figure. He approaches houses, mounts the roofs, takes up his abode in hay-lofts, barns, and unfrequented places, from which he issues at night only in quest of prey. He burrows under ground, forming a shallow retreat about two yards long, terminating under the roots of some large tree. He makes greater havoc among fowls than the martin, cutting off their heads, and carrying them off one by one to his magazine. If he cannot carry them off entire, on account of the smallness of the entry to his hole, he eats the brains and takes only the heads along with him. He is likewise very fond of honey, attacks the hives in winter, and forces the bees to abandon them. The females come in season in the spring, and bring forth three, four, or five. In the deserts of Asiatic Russia,

polecats are sometimes found, especially in winter, of a white color ; they are also found beyond lake Baikal with white or yellowish rumps, bounded with black. They are exceedingly fetid, like the martin and sable, giving out from the anus a most offensive vapor when frightened. The male is mostly of a yellowish tinge, having a whitish muzzle, while that of the female is a yellowish dirty white.

M. Sarmatica, the Sarmatian weasel, is of a brownish-black color, spotted and striped irregularly with obscure yellow, and is about fourteen inches long, exclusive of the tail, which is six

inches. It resembles the polecat, but has a narrower head, a more lengthened body, a longer tail, and shorter hair, except on the feet and tail. They inhabit Poland, especially Vol-bynia ; the deserts of Russia between the Volga and Tanais ; the mountains of Caucasus, Georgia, arid Bukharia. They are very voracious, and prey on marmots, rats, mice, jerboas, birds, and other small animals. They procreate in spring, and after eight weeks the female, which has eight teats, brings forth from four to eight young ones. They live in holes, mostly in those which have been made by other animals, and are exceedingly fetid.

M. Sibirica, the Siberian weasel, called kolo-nok by the Russians, is of a deep yellow ; has the soles of the feet very hairy ; is twelve inches long, and the tail six ; the face is black, and the fur long and loose. They reside in Siberia, in forests, between the Altaic Mountains, and the Amur and lake Baikal.

M. vulgaris, the common weasel, fulimart, fitchet, or whitret, has the upper parts of the body of a pale reddish-brown, the lower white. This species inhabits the temperate and northern parts of Europe, Asia, and America, and as far to the southward as the northern provinces of Persia, and are found even in Barbary. In the northern parts of Russia and Sweden, particularly in West Bothnia, they become white in winter like the ermine; but are easily distinguishable, being a great deal smaller; the body and head not exceeding seven inches long, and the tail two and a half. They are very destructive to birds, poultry, and young rabits ; and are great devourers of eggs. They do not eat their prey on the place, but, after killing it by one bite near the head, carry it off to their young. They prey also on moles, and are sometimes caught in mole traps. They are remarkably active, and run up the side of walls with such ease, that scarce any place is secure from them, the body being so small, that almost any hole is pervious to it. This

species frequent out-houses, barns, and granaries, which they clear from mice and rats, being much greater enemies to them than even cats. But in summer they retire from houses, especially into low grounds, about mills, along rivulets, concealing themselves among brush-wood, to surprise birds ; and often take up their abode in old willows, where the female brings forth her young. She prepares for them a bed of straw, leaves, and other herbage, and litters in spring, bringing from six to eight or more at a time. The young are born blind, but soon acquire sight and strength. Their motion consists of unequal and precipitant leaps ; and, when they want to mount a tree or seize a bird, they make a sudden bound, by which they .ire at once elevated several feet high. They have a disagreeable odor, which is stronger in summer than in winter; and, when pursued or irritated, their smell is felt at a considerable distance. They move always with caution and silence, and never cry but when hurt. Their cry is sharp, rough, and very expressive of resentment. As their own odor is offensive, they seem not to be sensible of a bad smell in other bodies. M. BufTon informs us, that a peasant in his neigh-MUS

hourhood took three new-littered weasels out of the carcase of a wolf that had been hung up on a tree by the hind feet. The wolf was almost entirely putrefied, and the female weasel had made a nest of leaves and herbage for her young in the thorax of this putrid carcase. The weasel may be perfectly tamed, and rendered as caress-ing and frolicsome as a dog or squirrel. The method of taming them is to stroke them often and gently over the back ; and to threaten and even to beat them when they bite. In the domestic state their odor is never offensive but when irritated. They are fed with milk, boiled flesh, and water.

M. zibellina, the sable, has a great resemblance to the martin, from which it differs in having a longer head, longer ears, surrounded by a yellow margin, longer and more elegant fur, the feet more thickly clothed with hair, and the tail shorter than the hind legs when extended, while that of the martin is much longer. The color of the hair is cinereous at the bottom, and black at the tips; the chin is cinereous, sometimes white, yellowish, or spotted ; the mouth is garnished with long whiskers ; and the feet are large with white claws. It inhabits the north parts of Asia and America, Siberia, Kamtschatka, and the Kurile Islands, and formerly in Lapland ; being found in Asia as low as 68►►, and in America even to 40►► N. lat. The sables frequent the banks of rivers and the thickest parts of the woods ; avoiding the rays of the sun, which soon change the color of their hair. They live in holes of the earth, or beneath the roots of trees ; sometimes they form nests in the trees, and skip with gieat agility from one to the other ; they are very lively, and very active and restless during the night. Dr. Gmelin tells us that, after eating, they generally sleep half an hour or an hour, %vhen they may be pushed, shaken, and even pricked, without awaking. A tame one kept by him rose upon its hind legs on the sight of a cat, to prepare for combat. In the woods they are much infested by wild cats. In summer they prey on ermines, weasels, and squirrels, but especially on hares ; in winter on birds; in autumn on whortleberries, cranberries, and the berries of the service tree; but their skins are then at the worst ; that diet causing their skins to itch, and to rub off their fur against the trees. They bring forth in March or April ; and have from three to five at a time, which they suckle for four or five weeks. In spring, after shedding the coat, the fur is sometimes of a tawny cast, and sometimes of a snowy whiteness. The blackest are reputed the best ;

and sometimes sell, even in Siberia, from ––l to ––10 sterling each. See SABLE.

M. zibellina nigra, the black sable, has the back, belly, legs, and tail black; the sides brown, and the tail very bushy. It is four feet two inches long from nose to rump; the tail is seventeen inches ; the feet very broad and hairy all over. It has six small fore teeth in eacli jaw; six large tusks ; four grinders on each side in the upper jaw, and six on each side on the lower. It inhabits New York and Pennsyl-

MUSTER,––. ––., v. a. & n. ––.-\ Teut. mutter;

Mus'TEn-nooK,n.s. f Belg.moui/ercn;

MUS'TER-M ASTER, 4 Span, mostrar ;

MUS'TER-ROLL. 3 Lat. momtrare.

To assemble in array, or military show; to bring together ; form an army : a muster is a collection of registered forces ; or a review of such forces : ' to pass muster,' to be allowed to be borne upon the muster-roll of a regiment : musterbook and muster-roll are records or registers of military forces: mustermaster, one who superintends the muster, its equipments, &c.

The principal scribe of the host muttered the peo-ple- 2 Kingi.

The captain, half of whose soldiers are dead, and the other quarter never muttered nor seen, demands payment of his whole account. Sptnter.

Ye publish the musters of your own bands, and proclaim them to amount to thousands. Hooker.

A noble gentleman, then mustermaster, was appointed ambassador unto the Turkish emperor.

Knoltes's History,

Why does my blood thus muster to my heart, So dispossessing all my other parts Of necessary fitness 1 Shalup. Measure for Measure. Had we no quarrel to Rome, but that

Thou art thence banished, we would muster all

From twelve to seventy. Shalespeare. Coriolanus.

Shadow will serve for Summer : prick him : for we have a number of shadows to fill up the musterbook.

Id. Henry IV.

Uustermasters carry the ablest men in their pockets.

Raleigh. All the names

Of thy confederates too, be no less great

In hell than here : that when we would repeat

Our strength in muster, we may name you all.

Ben Jonsoii.

How many insignificant combatants are there in the Christian camp, that only lend their names to fill up the muster-roll, but never dream of going upon service ? Decay of Piety.

God is represented to us as the general of an army, drawing forth and ordering his creatures as a general summoneth to a rendezvous, musteretk and embattletli his troops. Barrow.

All the wise sayings and advices, which philosophers could muster up to this purpose, have proved ineffectual to the common people. T'Motton.

Old Anchises

Reviewed his mustered race, and took the tale.

Drydtn.

A daw tricked himself up with all the gay feathers he could muster. L' Estrange.

Double dealers may pass muster for a while : but all parties wash theii hands of them in the conclusion.

A man might have 'three hundred and eighteen men in his family, without being heir to Adam, and might muster them up, and lead them out against the Indians. Ltvkt.

Deception takes wrong measures, and makes false musten, which sounds a retreat instead of a r'urjru, and a charge instead of a retreat.

Such excuses will not pnss muster with (ioil, \v!i> will allow no man's idleness to be the ine.is'Mc <>f possible or impossible.

Having muttered up all the fonvs he co-:M think of, the clouds above, and the deeps below : tin-.-*. says he. are all the stores we have for water: ami Moses directs us to no othi-r for the cau-.ˆs r.i tLe

delude. JF.'.x/.Vd../" \,i!i:r.,i It ,.

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They reacri the destined place,

And muster there, and round the centre swarm,

And draw together. Blachmore’s Creation.

One tragick sentence, if I dare deride, Which Betterton’s grave action dignified ; Or well-mouthed Booth with emphasis proclaims, Though but perhaps a muster-roll of names. Pope. ˆ ˆ

The army of the sciences hath been of late, with a dumb wjthout voice : a mute’ is, one speech-

- _1 .1 ►►f wv.n*4 > Cnl ilicsˆinli no rfl rOvirfl intA itC f’lnCA * i ►►► t . ►► 1 I ►►► . 1

Of things of the most accidental and mutable na-ture, accidental in their production, and mutable in their continuance, yet God’s prescience is as certain in him as the memory is or can be in us.

South’ ‘$ Sermons.

MUTE, adj. & n. $. > Fr. muet ; Lat. mutus ;

MUTELY. J Greek, /zvdoc-Silent ;

world of martial discipline, drawn into its close order, so that a view or a muster may be taken of it with abundance of expedition. For this great blessing we are wholly indebted to systems and abstracts, in which the modern fathers of learning, like prudent usurers, spent their sweat for the ease of us theirchild-ren

less ; a letter which cannot be sounded without a vowel ; a kind of funeral page : mutely or silently, without speech or noise.

Say she be mute, and will not speak a word, Then I’ll commend her

volubility. Shakspeare. Either our history shall with full mouth Speak freely of our acts ; or else our grave, Like Turkish mute, shall have a tongueless mouth.

Id.

All sat mute Pondering the danger with deep thoughts.

Milton.

All the heavenly choir stood mute, And silence was in heaven. Id. Paradise Lost.

Driving dumb Silence from the portal door, Where he had mutely sat two hours before.

Milton.

He that never hears a word spoken, no wonder if he remains speechless ; as one must do, who from

lant,

Swift. Ye mustering thunders from above,

Your willing victim see ! But spare, and pardon my fause love,

His wrangs to heaven and me ! Burns. MUSTER is a review of troops under arms to see if they be complete and in good order ; to take an account of their numbers, the condition they are in, viewing their arms and accoutre-ments, &c.

MUSTYGANNIM, a town of the province ot Tlemsan, in eastern Algiers, occupying in part the site of the ancient Cartiennae. The name is

said by Dr. Shaw to be derived from the good an infant should be bred up amongst mutes, and have quality of the mutton in the neighbourhood. It no teaching. Holder.

ranks second to Tlemsan, and is defended by Grammarians note the easy pronunciation of a three castles, two of which guard the harbour ; mute ˆfore a liquid, which doth not therefore neces-but the strongest

is built on one of a number of sanlyjj,ake,t,he. Precedin? vowel lofg- eminences behind the city, and forms its secu- ˆy^^yXKKˆ?t rity against the Arabs. Long. 0►► 30’ E., lat. 36►► 6’ N.

MUTABLE, adj. ~\ Fr. mutabilite; Lat.

MUTABIL’ITY, n. s. tmutabilis. Changea—

MU’TABLENESS, n. s. ►►bleness ; inconstancy;

MUTA’TION. J fickleness: mutableness

is synonymous with mutability : mutation is,

change ; alteration.

Whan Luna full of mutabytyte As Emperes the dyademe hath worne Of our pole artyke, smylynge halfe in ascorne At our foly, and our vnstedfastnesse The time whan Mars to warre hym dyd dres.

Skelton.

The mutability of that end, for which they are made, maketh them also changeable. Hooker.

Ambitions, covetings, change of prides, disdain, Nice longings, slanders, mutability. Shakspeare.

For the mutable rank-scented many, Let them regard me, as I do not flatter.

Id. Coriolanus. His honour

Was nothing but mutation, ay, and that From one bad thing to worse. ►►► Shaktpeare. The vicissitude or mutations in the superior globe are no fit matter for this present argument.

Bacon’ > Essays.

To make plants grow out of the sun or open air is a great mutation in nature, and may induce a change in the seed. Bacon.

My fancy was the air, most free, And full of mutability, Big with chimeras. Suckling.

I saw thee mutabile

Id.

And speech, the’ effect of reason ?

My speech is lost ; my reason to the brute.

Dry den.

Mute solemn sorrow, free from female noise, Such as the majesty of grief destroys. Id.

The whole perplexed ignoble crowd, Mute to my questions, in my praises loud, Echoed the word. Prior.

O ! be it lawful now

To tread the hallowed circle of your courts, And with mute wonder and delighted awe Approach your burning confines.

Barbauld on the Solar System. To MUTE, v. n. Fr. nmtir. To dung as birds.

Mine eyes being open, the sparrows muted warm dung into mine eyes. Tab. ii. 10.

1 could not fright the crows, Or the least bird from muting on my head.

Ben Jonton.

The bird not able to digest the fruit, from her in-converted muting ariseth this plant. Browne.

MUTE, STANDING. A prisoner is said to stand mute when, being arraigned for treason or felony, he either 1, makes no answer at all: or 2, answers foreign to the purpose, or with such mat-ter as is not allowable, and will not answer otherwise : or 3, upon having pleaded not guilty, refuses to put himself upon the country. If he says nothing, the court ought to impannel a jury to try whether he stands obstinately mute, or whether he be dumb ex visitatione Dei. If the

latter appear to be the case, the judges of the court (who are to be of counsel for the prisoner,

Of fancy, feared lest one day thou would’st leave me. and to/ee ‘hat he hatj > law and Justice/ sha!J.

Wilton proceed to the trial, and examine all points as it

I’lato confesses that the heavens and the frame of he pleaded not guilty. But whether judgment

ti.e world are corporeal, and therefore subject to of death can be given against such a prisoner,

inutitliliiv. Stillinpflcct . who hath never pleaded, and can say nothing in

MUT

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MUT

arrest of judgment, is a point yet undetermined, part of the last reign. The sentence howerer J”: ⬚⬚n.e C~fA?LC_a_SeS rte-Standin? ⬚⬚⬚ equi-had not in recent t.mes been earned’ into exe

exe-was

valent to conviction. It appears that for “the cution. By the 12 Geo III c 20 i

highest, as well as the lowest crime known to the enacted that every person arraigned for felony

law, the prisoner received the same judgment or piracy, and standing mute, or not answer—

and execution when obstinately mute, as if he ing directly to the offence, should be’

were tried and convicted, namely, in high trea-victed of the same; and the same judgment and

son on the one hand, and in petit larceny and all execution (with all their consequences in every

misdemeanors on the other. In another class, respect) was thereupon awarded, as if the oerson

the punishment of peme forte et dure was in-had been convicted by verdict or confess!,,,

flirted. The reason for this distinction in the of the crime. Two instances occurred since the

practice of arraignment on different felonies does passing this statute of persons who refused

not appear, further than it may be conjectured to plead, and who were in consequence con

that in petty offences the punishment did not demned and executed, one at the Old Bailey for

affect the life of the prisoner, and in high trea-murder, in 1778, the other for burglary at the

son the government chose to adopt the most summer assizes at Wells in 1792. summary means of avenging its wrongs. Be But now, by the 7 and 8 Geo.fv. c. 28 if the

this, however, as it may, it seems that, upon ap-accused refuse to plead, or stand mute, the' court

peals or indictments for other felonies than petit may direct the proper officer to enter a plea of

larceny, the prisoner was not by the ancient law not guilty on his behalf, which has the same

looked upon as convicted, so as to receive judg-effect as if he had actually pleaded. Thus

ment for felony, but for his obstinacy received at length, the law accords with the principles of

the terrible sentence of penance, or peine (proba-reason and humanity.

bly a corrupted abbreviation of pnsone) forte et dure.

As a sample of the judicial tortures which were inflicted upon accused persons in times, happily, long past, we may quote the particulars of this barbarous species of judgment. It was ordered, if the prisoner stood mute, that he should be remanded to the prison from whence he came, and put into a low dark chamber, and there be laid on his back, on the bare floor, naked, unless where decency forbids; that there be placed upon his body as great a weight of iron as he could bear, and more ; that he have no sustenance, save only on the first day three morsels of the worst bread ; and on the second day three draughts of standing water, that should be nearest to the prison door; and in this situation this should be alternately his daily diet, till he died. It appears that the prisoner might possibly subsist for forty days under this lingering punishment, and the practice of loading him with weights, or, as it was usually called, pressing him to death, was

gradually introduced, being intended as a species of mercy to the delinquent, by delivering him the sooner from torment.

It appears, from some of the ancient authorities on this subject, that in the execution of the sentence, the prisoner was ordered to lie without any litter or other thing under him, and that one arm should be drawn to one quarter of the room with a cord, and the other to another, and that his feet should be used in the same manner. And it seems also that a hole was made for the head, so that it should not touch the earth. The water given him was to be the worst next the prison.

Before this sentence was pronounced, the prisoner had not only Irina admonitio, but also a respite of a few hours, and the sentence was distinctly read to him that he might know his danger ; and after all, if he continued obstinate, and his oflence was clergyable, he had the benefit of his clergy allowed, even though he was too stubborn to pray it. Such was the barbarous state of the law on this subject until the early

humanity.

To advise a prisoner to stand mute is a high misprision, a contempt of the king's court, and punishable by fine and imprisonment.

MUTILATE, v. a.) Fr. mutiltr ; Lat. mu—

MUIILA'TION, n. s. \ tilo. To maim; deprive of some essential part or limb.

The subject hath been oppressed by fines, imprisonments, mutilations, pillories, and banishments.

Clarendon.

Such fearing to concede a monstrosity, or mutilate the integrity of Adam, preventively conceive the creation of thirteen ribs. Brotcne.

Mutilations are not transmitted from father to son, the blind begetting such as can see : cripples, muii-lute in their own persons, do come out perfect in their generations. Id.

Sylburgius justly complains that the place is mu. tilated.
Stillin►►Jttet.

Among the mutilated poets of antiquity there is none whose fragments are so beautiful as those of Sappho. Addiion.

Aristotle's works were corrupted, from Strabo's account of their having been mutilated and consumed with moisture. Baker.

MUTILLA, in zoology, a genus of insects belonging to the order hymenoptera. The most remarkable species is,

M. occidentalis, the velvet ant, an inhabitant of North America. It has six legs, with short crooked antennaj ; the abdomen large, with a black list crossing the lower part of it, and another black spot at the joining of the thorax; excepting which the whole body and head resemble crimson velvet. The trunk or shell of the body is of such a strong and hard contexture, that though trod upon by men and cattle they receive no harm. They have a long sting in their tails, which causes inflammation and great pain for half an hour to those who are stung by them ; which usually happens to negroes and others that go barefooted. They are mostly seen running very nimbly on sandy roads in the hottest summer weather, and always single. See ENTOMOLOGY.

ML TINA, in ancient geography, a noble city of Gallin C'ispadana, made a Roman colony in the same year with I'arma, situated between the

rivers Gabellus and Scultenna, on the Via TEmi-lia. Here D. Brutus, being besieged by Antony, was relieved by the consuls Hirtius and Pansa. The Greeks called it Mutine; except Polybius, in whom it is Motine ; and in Ptolemy Mutina. It is now called Modena.

MUTINE, n. s. ˆ Fr. mutin, of

MUTINEER', Lat. mutio. A

MU'TINOUS, adj. < ! ringleaderofin—

MU'TINOUSLY, adv. [surrection (ob—

MU'TINOUSNESS, n. s. & v. n. \ solete): a muti-MUTI'NY, n. s. J neer is the modern word : mutinous is, seditious ; turbulent ; moving to insurrection: mutiny, sedition; insurrection : to mutiny, to rise against lawful authority ; make or join in insurrection.

The spirit of my father begins to mutiny against this servitude. Shakspeare. At You Like It.

I' th' war,

Their mutinies and revolts, wherein they shewed Most valour, spoke not for them. Id. Coriolanus. A woman, a young woman, a fair woman, was to govern a people in nature mutinously proud and always before used to hard governours. Sidney.

The king fled to a strong castle, where he was gathering forces to suppress this mutiny. Id.

In my heart there was a kind of fighting, That would not let me sleep ; methought I lay Worse than the mutines in the bilboes.

Shakfpeare. It tauntingly replied

To the discontented members, the mutinout parts, That envied his receipt. Id. Coriolanus.

The war of the duke of Urbin, head of the Spanish mutineers, was unjust. Bacon.

The laws of England should be administered, and the mutinous severely suppressed. Hayward.

What do these mutineers say 1 Oh that we had died by the hand of the Lord ! Bp. Hall.

Less than if this frame Of heaven were falling, and these elements In mutiny had from her axle torn The stedfast earth. Hfilton's Paradise Lost. Lend me your guards, that, if persuasion fail, Force may against the mutinous prevail. Waller.

The people mutiny, the fort is mine, And all the soldiers to my will incline. Id. Soldiers grow pernicious to their master who becomes their servant, and is in danger of their mutinies, as much as any government of seditious.

Temple.

Set wide the mufti's garden-gate, For there our mutineers appoint to meet. Dryden.

My ears are deaf with this impatient crowd ; Their wants are now grown mutinous and loud.

Id.

Men imprudently often, seditiously and mutinously sometimes, employ their zeal for persons.

Sprat's Sermon ⬜⬜.

When Caesar's army mutinied, and grew troublesome, no argument could appease them. Sovth.

They have cashiered several of their followers as wnthieera, who have contradicted them in political conversations. Addison.

MUTINY. Any officer or soldier who shall presume to use traiterous or disrespectful words asainst the sacred person of his majesty, or any of the royal family, is guilty of mutiny. Any officer or soldier who shall behave himself with i omempt or disrespect tovvaros the general or other commander in chief of our forces, or shall speak

words tending to their hurt or dishonor, is guilty of mutiny. Any officer or soldier who shal. begin, excite, cause, or join in any mutiny

o-sedition, in the troop, company, or regiment ta which he belongs, or in any other troop or company in our service, or ou any party, post, de tachment, or guard, on any pretence whatsoever is guilty of mutiny. Any officer or soldier who being present at any mutiny or sedition, does no' use his utmost endeavours to suppress the same, or coming to the knowledge of any mutiny, or intended mutiny, does not without delay give information to his commanding officer, is guilty of mutiny. Any officer or soldier who shall strike his superior officer, or draw, or offer to draw, or shall lift up any weapon, or offer any violence against him, being in the execution of his office, on any pretence whatsoever, or shall disobey any lawful command of his superior officer, is guilty of mutiny.

MUTIUS (Caius), surnamed Coclrus, and afterwards Scaevola, was one of the illustrious Roman family of the Mutii, and rendered his name famous in the war between Porsenna king of Tuscany, and the Romans. That prince, resolving to restore the family of Tarquin II., went to besiege Rome A. A. C. 507. Mutius resolved to sacrifice himself for the safety of his country ; and, boldly entering the enemy's camp, killed Porsenna's secretary, whom he took for Porsenna himself. Beinˆ seized, and brought before Porsenna, he told him boldly that 300 young men like himself had sworn to kill him; but since this hand has missed thee, continued he, it must be punished ; then, putting his right hand on the burning coals, he let it burn with such a constancy as astonished the beholders. The king, amazed at the intrepidity of this young Roman, ordered that he should have his freedom and return to Rome, and soon after concluded a peace with the Romans. From this action Mutius obtained the surname of Scsevola, or left-handed, which was continued in his family.

MUTIUS SCˆEVOLA (Quintus), surnamed the Augur, was an excellent civilian, and instructed Cicero in the laws. He was made praetor in Asia ; was afterwards consul, and performed very important services for the republic.

MUTIUS SCJEVOLA (Quintus), another excellen* civilian who was praetor in Asia, tribune of the people, and at length consul, A. A. C. 95. He governed Asia with such prudence and equity that his example was proposed to the governors who were sent into the provinces. Cicero says that he was the most eloquent orator of all the civilians, and the most able civilian of all the orators. lie was assassinated in _the temple of Vesta during the wars of Marius' and Sylla, A. A. C. 82.

MOTTEOUDU, a town of the Mysore, south of India. The vicinity abounds with soda ; and the town is celebrated for the manufacture of

glass bracelets, which are worn by females all over India. Long. 76►► 25’ E., lat. 13►► 30’ N.

MUTTER, v. ►►., v. a. & n. s. > Lat. mutio,

MUT’TERER. } of mutus; Gr.

ftvStog. To murmur; grumble; complain inarticulately ; to utter with imperfect articulation : it is used as a substantive by Milton for the

murmur or obscure sounds made : a mutterer is,

MUTTON, n. s. > Fr. mouton.

S of sheep : mutton-fist, a

ˆ Fr. mutuel; Lat. mu- > tualis. Acting in turn or

MUTTON, n. s. } Fr. mouton. The flesh

MUT'TON-FIST. large and red fist.

MUTUAL, adj.

MTJ'TUALLY, adv.

MU'TUALITY, n. s.) in correspondence ; reciprocal : mutuality is reciprocation.

MUTUAL INSTRUCTION is the namegiven to that arrangement of schools, by which the more able scholars in every class assist and superintend their fellow pupils. This name, which originated in France, is not appropriate, as mutual instruction does not, in fact, take place, but some of the most distinguished scholars occupy the place of the master, while the less able do not in turn instruct them. The origin of this system may be traced to India, where the traveller Delia Valle found it established as early as the sixteenth century. The object of this system is to carry on schools chiefly by means of the scholars themselves, and to instruct an uncommon num-ber of pupils at once (Lancaster had 880 together, and says that he could teach 1000), with comparatively few masters and little expense. The pupils are divided into small classes, each instructed by one of the more advanced scholars, in reading, writing, arithmetic, &c., as far as the little teacher has been taught previously by the master. Such little teachers are called monitors, and have a class of about ten on a bench, or as Bell prefers, standing in a semicircle. The old-est and most trustworthy pupils have the superintendence as general monitors. Other assistants take care of the lower departments of service, or the police of the

school ; one notes down the absent, one rules the writing-books, attends to the distribution of slates, &c. The strictest discipline ana order being observed, the whole appears like a great piece of clock-work, which moves without the interference of one part with another. The school resembles an army, which a single man is enabled to command by means of order and discipline, and because every one knows precisely his duty. All are instructed, and teachers are formed at the same time. Cheapness is always kept in view. The pupils commence learning writing, by making figures on tables covered with sand ; then old paper, written or printed on one side, is taken. In England, where this system was first introduced from India, 500,000 (in London alone, 8,000, in 43 schools), in Ireland, 30,000 children, are educated according to this method, which has been greatly improved of late years. Lancaster was engaged, in 1824, in establishing similar schools, under the protection of Bolivar, in the South American republic Columbia. In the

and Parma (the latter since 1822) havj permitted their establishment. In Napl□□□□ □□□□Hl in Spain, where similar schools were estaonshed under the cortes of 1821 and 1822, in the principal towns, they were prohibited in 1823. France had, in 1821, as many as 1197 schools for children, and 166 regimental schools, according to this system. The latter were compelled, under the Bourbons, to renounce this method entirely, and the constant opposition of the ecclesiastics and the ministry lessened the number of the former, it being considered dangerous, and savoring of liberalism, to keep on foot such an institution for the improvement of the nation, in a country, where, amongst 24,000,000 of adults, only 9,000,000 could write and read, and of 6,000,000 of children, only 1,600,000 enjoyed the benefit of school education. From a similar cause, this system was prohibited in the Austrian army and throughout Austria ; and, in Russia, the zeal with which it was at first received soon abated, so that only attempts on a very small scale were allowed. The Danish government, on the contrary, began, in 1819, with great zeal and success, to introduce these schools in Denmark, Ilolstein and Sleswick. The plan, though not the same in all particulars, resembles, in its chief traits, that of Bell and Lancaster. The number of schools in that country has rapidly increased, and, according to a late report, amounted, in 1829, to 2646. Professor Schuhmacher, rector of the cathedral school at Sleswick, in a report on the system of mutual instruction, observes, that it is excellent, as long as it limits itself to matters of mechanical skill or of mere memory. It saves time for the teacher and pupil; it saves expense in the business of education, and is highly beneficial for all elementary schools containing a large numbei nf pupils, differing so much in knowledge and intelligence, that one teacher cannot instruct them all at the same time, but is obliged to divide them into many classes. This method, however, is superfluous in schools in which the number of pupils is so small that the teacher can superintend and instruct them conveniently, particularly where all the members of one class have made nearly equal progress. And even in com-mon schools, it would be injurious to strive to bring every thing into this form, as it would put a stop to the highest kind of instruction ; and in the institutions for a more advanced staire of education, where a scientific spirit, independent thought, the formation of the judgment and taste, are the objects, it is more peculiarly inapplicable. Much information respecting this me-thod in Denmark is contained in the Proyres de rEnscii/ncnicnt Mutuel en Dunemark, extrait il'iin

Rapport an Iwi, pur M. d'Abnimson, Ma-British East Indies, a society at Calcutta has jar, Sec. (Copenhagen, 1825). The proper field

established 88 schools on his plan, which has been also adopted at Malta, the Cape of Good Hope, on the Senegal, in Sierra Leone, and other English colonies. The Greeks also have made use of this means for the establishment of elementary schools (iu which they were entirely deficient), on a cheap plan, at Athens, Argos, and on the islands. From France, an interest for them was excited in Italy, where Tuscany

of this system is, undoubtedly, elementary instruction. It will hardly be denied that it is of great assistance in teaching the rudiments of knowledge, reading, writing, and ciphering, besides accustoming the pupils to habits of order. It \ill also be admitted, at least by all who live in popular governments, 'hat evtry individual ou-ht to 1 c tau.;lit reading, and writing, without winch, in the present stale of the world, he K

excluded from half the benefits of existence. Where, therefore, a large population is imperfectly supplied with the means of instruction, schools of this character will be of great benefit. Besides all primary instruction mus tbe addressed chiefly to the memory, notwithstanding learning by rote is so much decried in our day ; and teachers, we imagine, might often accelerate the progress of their pupils in “the branches taught in early childhood, by a more extensive application of the system of mutual instruction. The late king of Portugal established, in 1824, a central school on these principles, at Lisbon, through the instrumentality of professor Lecocq ; but it has probably long since been destroyed by the violent convulsions of that, unhappy country.

MUTUALES, or METUALES, an independent sect of Suranite Mahometans, in Syria. They are governed by their own sheiks and emirs, and have rendered themselves formidable to the Turks by their cavalry. Balbec is situated in the country they occupy between Libanus and Antilibanus.

MUZUFIRABAD (the Place of Victory), a district and town of Afghaunistaun. The district is mountainous, but tolerably well watered by the Jhylum, and other streams ; but there are said to be no bridges over -the river, except those of boats and inflated sheep-skins. The town is the residence of a Mahometan chief.

MUZZLE, n. *., v. a., & v. n. Arm. muezzl; Belg. moesel ; Pr. tnuseau ; Ital. mussok. ‘ Quasi mouth-seal,’ says Minsheu: but unluckily for the etymology it means also an unsealed mouth. The mouth of any thing or person ; used contemptuously of man ; a fastening or lock for the mouth : to muzzle is to fondle with the mouth ; fasten or bind up the mouth ; and hence to restrain ; also, to bring the mouth near.

MY, pronoun possessive. Belonging to me, See MINE. My is used before a substantive, and mine, properly, before a vowel. My is used when the substantive follows, and mine when it goes before : as, this is my book ; this book is mine.

Her feet she on my neck doth place. Spetuer.

I conclude my reply with the words of a Christian poet. BramhaU.

MYA, in zoology, the gaper, a genus belonging to the order of vermes testacea, the characters of which are these : it has a bivalve shell gaping at one end ; the hinge, for the most part, furnished with a thick, strong, and broad tooth, not inserted into the opposite valve. Its animal is an ascidia. The most remarkable species are these : ###

1. M. declivis, the sloping mya, has a brittle half-transparent shell, with a hinge slightly prominent near the opening, and sloping downwards. It inhabits the rivers of Europe. It is frequently about the Hebrides; the fish are eaten there by the gentry.

2. M. margaritifera, the pearl muscle, has a very thick, coarse, opaque shell, often much de-corticated ; oblong, bending inward on one side, or arcuated ; black on the outside ; usual length from five to six inches, breadth two and a quarter. It inhabits great rivers, especially those which water

the mountainous parts of Great Britain. This shell is noted for producing quantities of pearl. There have been regular fisheries for this precious article in several of our rivers. Sixteen have been found within one shell. They an* the disease of the fish, analogous to the stone in the human body. On being squeezed they will eject the pearl, and often cast it spontaneously in the sand. The Conway was noted for them in the days of Camden. It is said that Sir Richard Wynne of Gwyder, chamberlain to Catharine, queen to Charles II., presented her majesty with a pearl found in a muscle in this river, which is still in the regal crown. They are called by the Welsh cregin diluw, or deluge shells, as if left there by the flood. The Irt of Cumberland also produced them. The famous cir-cumnavigator Sir John Hawkins had a patent for fishing in that river. He had observed pearls plentiful in the Straits of Magellan, and flattered himself with being enriched by procuring them within his own island. In the seventeenth century several of great size were got in the rivers of Tyrone and Donegal in Ireland. One that weighed thirty-six carats was valued at ––40, though, being foul, its value was much diminished. Other single pearls were sold from ––4 10s. to ––10. The last was sold a second time to lady Glenlealy, who put it into a necklace, and refused ––80 for it from the duchess of Ormond. Suetonius reports that Caesar was induced to undertake his British expedition for the sake of our pearls ; and that they were so large that it was necessary to use the hand to try the weight of a single one. Pennant supposes that the crystalline balls called mineral pearl were taken for them. Cresar, we are told, brought home a buckler made with British pearl, which he dedicated to, and hung up in, the temple of Venus Genitrix ; a proper offering to the goddess of beauty, who was believed to have sprung from the sea. Pliny says that a red small kind was found about the Thracian Bosphorus in a shell called mya ; but does not give it any mark to ascertain the species. This fish will bear removal remarkably well; and it is said that in some places they form reservoirs for the purpose of keeping it, and taking out the pearl, which, in a certain period of time, will be again renewed. From observations on the growth of these shells, and the number of their annular laminae or scales, it is supposed the fish will attain a very great age ; fifty or sixty years are imagined to be a moderate computation. See PEARL.

3. M. pictorum has an oval brittle shell, with a single longitudinal tooth like a lamina in one shell, and two in the other; the length is a little above two inches, the breadth one. It inhabits rivers. The shells are used to put water-colors in ; whence the name. Otters feed on this

and the other fresh-water shell-fish.

MYAGRUM, gold of pleasure, in botany, a genus of the siliculosa order, and tetradynamia class of plants ; natural order thirty-ninth, sili quosae : silicula terminated by an oblong style ; the cell generally monospermous. There are five species ; but the only remarkable one is,

M. sativum, which grows naturally in corn fields in the south of France and Italy, and in

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some parts of Britain. It is an annual plant, with an upright stalk a foot and a half high, sending two or four side branches, which grow erect; the flowers grow in loose spikes at the end of the branches, standing upon short foot-stalks an inch long; these are succeeded by oval capsules, which are bordered and crowned at the top with the style of the flower, having two cells filled with red seeds. This is cultivated in Germany for the sake of the expressed oil of the seeds, which the inhabitants use for medicinal, culinary, and economical purposes. The seeds are a favorite food with geese. Horses, goats, sheep, and cows, eat the plant.

MYCALE, a promontory of Asia, opposite Samos, celebrated for a battle which was fought there between the Greeks and Persians about the year of Rome 275. The Persians were about 100,000 men, who had just returned from the unsuccessful expedition of Xerxes in Greece. They had drawn their ships to the shore, and fortified themselves strongly, as if determined to support a siege. They suffered the Greeks to disembark from their fleet without molestation, and were soon obliged to give way before the cool and resolute intrepidity of an inferior num-ber of men. The Greeks, under Leotychides, king of Sparta, obtained a complete victory, slaughtered some thousands of the enemy, burned their camp, and sailed back to Samos with an immense booty, in which were seventy chests of money.

MYCEN/E, in ancient geography, a town of Argolis, in Peloponnesus. The kingdom of the Argiveswas divided into two portions by Acri-sius and his brother Proetus. Argos and Mycenae were their capitals. These, as belonging to the same family, and distant only about fifty stadia, or six miles and a quarter, from each other, had one tutelary deity, Juno, and were jointly proprietors of her temple, the Ilerseum, which was near Mycenae. It was here that Agamemnon reigned. He enlarged his dominions by his valor ; and possessed, besides My-oeniB, the region about Corinth and Sicyon, and that called afterwards Achaea. On his return from Troy he was slain with his companions, at a banquet, by his adulterous wife Clytemnestra, and her paramour JEgisthus. Mycenae then declined ; and under the Heraclidte was made subject to Argos. The Mycenaeans, sending eighty men, partook with the Lacedaemonians in the glory acquired at Thermopylae. The jealousy of the Argives produced the destruction of their city, which was abandoned after a siege, and laid waste in the first year of the

seventy-eighth Olympiad, or 466 years before Christ. Some part of the wall remained in the second century, with a gate, on which were lions, a fountain, the subterraneous edifices where Atreus and his sons had deposited their treasures; and, among other sepulchral monuments, one of Agamemnon, and one of his fellow-soldiers and sufferers. For the modern state of the ruins of the acropolis, &c., see GREF.CF., vol. X. p. 628.

MYCITHUS, regent of llhegium. On the

death of Anaxilaus he was entrusted with the

care of his children and the government of the

kingdom, which he conducted with great popu—

larity and fidelity ; and restored the kingdom to the princes when they grew up.

MYCONOS, or MYCONUS, in ancient geography, one of the Cyclades, near Delos, under which the giants and Centaurs slain by Hercules are feigned to lie buried. Hence the proverb, Omnia sub Myconum congerere, i. e. every thing lies under Myconus, applied to an injudicious or unnatural farrago. Ihe island was poor.aud the inhabitants very avaricious ; whence Archilochus reproached Pericles, that he came to a feast like a Myconian ; that is, without previous invitation. It is now called Mycone.

MYCTERIA, the jabiru, in ornithology, a genus of birds belonging to the order of grallac. The bill is long, bending upwards, and acute ; the nostrils are small and linear ; there is no tongue ; and the feet have four toes. There are two species : ###

1. M. Americana, the American jabiru, is about the size of a turkey. The bill is long, stout, and of a black color : the whole plumage is white, except the head, and about two-thirds of the neck, which are bare of feathers, and of a blackish color ; the remainder is also bare, and of a fine red ; on the hind head are a few grayish feathers ; the legs are strong, of a great length, and covered with black scales ; wings and tail even at the end. This species is found in all the savannas of Cayenne, Guiana, and other parts of South America. They are migratory and gregarious. The female makes its nest in great trees,

which grow on the borders ; lays two eggs, and brings up the young in the nest till they can descend to the ground. The color of the young bird is gray; in the second year it changes to rose color ; and in the third to pure white. They are very wild and voracious, and devour fish in great quantities. The flesh of the young birds is said to be good, but that of the old is hard and oily.

2. M. Asiatica, the Indian jabiru, is of a large size. The bill is dusky, almost straight above, and gibbous near the forehead ; the under mandible swelled beneath ; and from the base of the bill there passes through and beyond the eye a black streak. The general color of the plumage is white; the lower half of the back, the prime quills, and the tail, are black ; the legs a pale red. This species inhabits the East Indies, and feeds on snails.

MYIAGRUS DEUS, in heathen mythology, a name given sometimes to Jupiter, and sometimes to Hercules, for driving away the vast numbers of flies which infested the sacrifices on certain public occasions. The word is usually spelt Myagrus ; but this must be an error, as this word does not express the fly-destroyer, but the mouse destroyer; and we have it sufficiently testified by the ancients that flies were the only creatures against whom this deity was invoked. Pliny calls this deity Myiodes, and says that the flies which used to pester the Olympic rites went away in whole clouds on sacrificing a bull to this god. We find in Athens-us also that this sacrificing to the god of flies at the Olympic games was a constant custom. Some distinguish these two deities, and tell us that Myiodes used to visit the nations in vengeance, with a vast

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multitude of flies ; arid that, on paying him the ►►lue honors of a sacrifice, they all went away again. At the Olympic games Jupiter was worshipped under the name of Apomyos, or Myia-grus Deus. This happened o/ily once in many years; but the Elians worshipped him continually under this name, to deprecate the vengeance of heaven, which usually sent an army of flies and other insects about the end of summer, that infested the country with pestilence.

MYLASA, or MYLASSA, in ancient geography, a noble city of Caria in Asia Minor, situated about nine miles from the Sinus Ceramicus. It was the capital of Hecatomnus, king of Caria, the father of Mausolus. Pliny speaks of Menander, king of Caria, and says that the Rhodians preserved, with the greatest care, his portrait, painted by Apelles ; but it was not in honor of this Menander that a Corinthian pillar was erected at Mylasa, which still exists, and on which is to be seen the following inscription : ‘ The people erected this pillar in honor of Menander, the son of Uliades, and grandson of Euthydemus, the benefactor of his country, and whose ancestors rendered it great services also.’ Euthydemus, the grandfather of this Menander, lived in the time of Julius Caesar and Augustus. Caria was taken by Mithridates, and afterwards by Labienus, whose father had been one of Cae-sar’s generals. Hybrias, whose eloquence and valor deservedly entitled him to a distinguished rank among his countrymen, in vain encouraged them to defend it when it was besieged by the latter. He himself was obliged to yield to necessity, and to take refuge at Rhodes : but scarcely had the conqueror quitted the city when Hybrias returned, and restored liberty to his country. He also destroyed the power of an ambitious citizen, whose riches and talents had rendered him a necessary evil. Euthydemus, often banished, and as often recalled, always too powerful in a state, the independence of which he threatened, saw his ambition checked by the zeal and activity of Hybrias. The Romans left to Mylasa that liberty of which it rendered itself so worthy by the great efforts it made to preserve it. Pliny calls it Mylasa libera. Strabo informs us that it was one of the most magnificent cities of antiquity, and one of those the temples, porticoes, and other public monuments of which were highly admired. A quarry of white marble in the neighbourhood furnished it with abundance of materials for erecting these edifices. The Mylasians had two temples dedicated to Jupiter, one situated in the city, which was named Osogo, and another on a mountain, sixty leagues distant. The

latter was dedicated to Jupiter Stratius, Jupiter the warrior. His statue, which was very ancient, inspired great veneration : people came from all quarters to implore his protection ; and for the greater accommodation of his votaries a paved way was constructed, which readied from Mylasa to this venerable fabric. Round the town are now seen ranges of broken columns, the remnants of porticoes, now with rubbish bounding the vineyards. A large portion of the plain is covered with scattered tragmen????, and with piers of ordinary aqueducts ; besides inscriotions, mostly ruined and illegible,

some altars, dedicated to Hecatomnus, have been discovered. Of all the ancient temples which formerly ornamented this city one only escaped the power of time, the blind zeal of the early Christians, and the barbarous superstition of the Mahometans. This monument was dedicated to Augustus and the divinity of Rome. When Pococke visited the place it was perfect and entire ; but at present no traces of it remain except a few fragments, which have been employed to construct a Turkish mosque.

MYLNE (Robert), the builder of Blackfriars bridge, London, was the son of an architect, who was a magistrate of Edinburgh, where he was born in 1743. After receiving an excellent education he was sent to Rome, and while in that capital gained the first prize in the architectural class, and was chosen a member of the academy of St. Luke, and of the academies of Florence and Bologna. Returning home, he established himself in London, and among other undertakings commenced Blackfriars bridge in 1760, and completed it in ten years in a higMy creditable manner. It was the first work of this kind in Britain, in which elliptical arches were substituted for semicircles. Mylne also obtained the appointment of surveyor of St. Paul's cathedral. His death took place in 1811.

MYMUNSING, a large district of Bengal, situated principally between 24?? and 25?? of N. lat., and intersected by the river Brahmapootra, into which flow on both sides innumerable streams. It is frequently inundated during the rainy season, and produces immense crops of coarse rice. Some parts of the district are overrun with wood. The population consists of nearly equal numbers of Hindoos and Mahometans. The chief town is Bygonbary.

MYNSICHT (Hadrian), physician to the duke of Mecklenburg and several other German princes, was distinguished for his knowledge of chemistry, at the beginning of the seventeenth century. He published a

work, entitled Armen-tarium Medico-Chymicum, which has undergone various editions ; but his description of several medicines and their virtues is not always to be depended upon. He discovered the sal de duo-bus, or Arcanum.

MYOL'OGY, n. s. Fr. myologie. The description and doctrine of the muscles.

To instance in all the particulars, were to write a whole system of myology.

Cheynes Philosophical Principles. '

MYOMANCY, a kind of divination, or me-thod of foretelling future events by means of mice. Some authors hold myomancy to be one of the most ancient kinds of divination ; and think it is on this account that Isaiah, Ixvi. 17, reckons mice among the abominable things of the idolaters. But, besides that it is not certain that the Hebrew word 133V> used by the prophet, signifies a mouse, it is evident it is not the divination by that animal, be it what it will, that is spoken of, but the eating it.

MYOSOTIS, scorpion-grass, a genus of the monogynia order, and pentandria class of plants; natural order forty-first, asperifolise : COR. salver shaped, quinquefid, and emarginated; the

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throat shut up by small arches ; the most remarkable species is,

M. scorpioides, the mouse-ear. This is a na-tive of Britain, growing naturally in dry fields, and on the margins of springs and rills. It has naked seeds, and the points of the leaves callous. It varies considerably in different situations. In dry places the plant and flowers are smaller; in moist ones both are larger, and sometimes hairy. The blossoms vary from a full blue to a very pale one, and sometimes a yellow; and appear in along spirally twisted spike. When it grows in the water, and its taste and smell is thereby rendered less observable, sheep will sometimes eat it ; but it is generally fatal to them. Cows, horses, swine, and goats, refuse it.

MYOSURUS, mouse-tail, in botany, a genus of the polygynia order, and pentandria class of plants; and in the natural method ranking under the twenty-sixth order, multisiliquae : CAL. pentaphyllous, the leaves cohering at the base ; there are five subulated nectaria resembling pe-tals : SEEDS numerous.

MYOXUS, the dormouse, in zoology, a genus of quadrupeds belonging to the order of glires; formerly included by Linnaeus under the genus Mus. There are two fore teeth in each jaw; the upper ones cuneated, the under compressed : the wh skers are long; the tail is hairy and round, growing thicker towards the extremity ; the fore and hind legs are of equal length, and the fore feet have four toes. There are four species : ###

1. M. dryas, the wood dormouse, is of a reddish-brown or tawny gray color on the upper, and a dirty white on the under parts of the body; having a black line from ear to ear across the eyes. It differs from the garden dormouse only in color, and in having a shorter and more bushy tail, and in wanting the black spots near the ears. Dr. Gmelin, however, ranks them as distinct species.

2. M. glis, the hoary dormouse, is of a pale ash color on the upper parts of the body, and whitish on the under ; and is about the size of the common squirrel, but thicker in the body. It inhabits France, the south of Europe, and the south-west of Russia about the Volga. This animal, which is the tXtioc of Aristotle, /jvo##oc of Oppian, and glis of Pliny, was held in great esteem among the Romans, as a luxurious delicacy : they were fed in places called gliriaria, constructed for the

purpose ; and they are still eaten by the modern Italians. It forms a nest in the hollow of some tree, in which it sleeps all day : feeds in the night on nuts, walnuts, the seeds of apples, &c., and grows very fat in au-tumn. About October they gather in troops; and, retiring into subterraneous burrows, remain torpid till near the end of May. The female has ten teats, six of which are situated on the breast, and four on the belly; and she brings forth from nine to twelve young ones at a litter.

3. M. muscardinus, the common dormouse, is about the size of the domestic mouse, but of a plumper appearance ; the nose is more blunt ; the head, sides, belly, and tail, are of a tawny red color, the throat white. Dormice inhabit woods, or very thick hedges ; forming their nests

in the hollow of some low tree, or near tlie bot-tom of a close shrub : they form magazines of nut►►, and eat in an upright posture like the squirrel. The consumption of their hoard, however, during the rigor of the season, is but small ; for they sleep most of the time, retiring into their holes : at the approach of winter they roll themselves up, and become torpid. Sometimes they experience a short revival in a warm sunny day, when they take a little food, and relapse into their former state. These animals seldom appear far from their retreats, or in any open place ; whence they seem less common in Britain than they really are. They make their nests of moss, grass, and dead leaves ; and bring three or four young at a time.

4. M. nitela, the garden dormouse, is of a tawny color on the upper parts of the l>ody, and whitish ash tinged with yellow on the under ; has a black circle round each eye, and a black spot behind each ear ; ►►nd is five inches long, besides the tail, which measures four. They inhabit the south parts of Europe and Russia, and live chiefly in gardens, though sometimes found in houses. They are very destructive to fruit, particularly peaches, which they prefer to every other kind. They also eat peas, apricots, and plums ; and, when soft fruits are not to be had, they will eat almonds, filberts, nuts, and even leguminous plants. Of these they carry off great quantities into their retreats, which they dig in the earth, and particularly in well cultivated eardens ; for in old orchards they are often found in hollow trees, where they make beds of herbs, moss, anil leaves; eight or ten of them are often found in the same place, benumbed, and rolled up in the midst of their provision of fruit and nuts. They copulate in spring, and bring forth in summer, five or six youn?, who grow very quickly, but

are not fertile till the next year. Their flesh is not eatable, having the same disagreeable odor with the domestic rat.

MYREPSUS (Nicolas), was a physician of Alexandria, who collected into a kind of phar-macopeia all the compound medicines mentioned in the works of the Greek and Arabian writers. His work was completed before the beginning of the fourteenth century; and, though written in barbarous Greek, continued for a long time to be the rule of pharmaceutical preparations in Europe. A translation of it into Latin by Leonard Fusch is entitled Opus Medi-camentorum,in Sectionesxlviii. digestum. There are many editions ; the best is that of Herman Beverus, Nuremberg, 1658, 8vo.

MYRIAD, n. s. Gr. pvpaf. Ten thousand : any great number.

Assemble thou,

Of all those mr/riaiii, which we lead, the chief.

Milton.

Are there legions of devils who aie continually designing and working our ruin f there are also muriuils of pood angels who are more cheerful and officious to do us good. Tillotso*.

Safe sits the goddess in her dark retreat ; Around her, myriads of ideas wait, And endless shape*. Pru>-

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With helmet heads and dragon-scales adorned, The mighty myriads, now securely scorned, Would mock the majesty of man's high birth, Despise his bulwarks, and unpeople earth. Cowper.

True, thou art brave ! ††† o'er all the busy land, In patriot ranks embattled myriads stand ; Thy foes behold with impotent amaze, And drop the lifted weapon as they gaze !

Canning.

MYRICA, gale, or sweet willow, in botany, a genu-s of the tetrandria order, and dioecia class of plants : natural order fifth, amentaceae. The scale of both the male and female catkin is in the form of a

crescent: COR. none; but two styles, and a monospermous berry. There are several species : ###

M. cerifera, wax-bearing myrica, or candleberry myrtle, a native of North America. It is a small tree about ten or twelve feet high, with crooked stems branching forth near the ground irregularly. The leaves grow irregularly on them all round ; sometimes by pairs, sometimes alternately, but generally at unequal distances. They are of a lanceolated figure ; and some are serrated at the top, while others have their edges wholly entire. They stand on very short foot-stalks; having their upper surface smooth, and of a shining green color, and the under of a more dusky hue. The branches of the old plant shed their leaves in autumn ; but the young plants raised from seeds retain them the greatest part of the winter. There are both male and female trees of this species; the flowers are small, of a whitish color, and make no figure ; neither does the fruit, which is a small, dry, blue berry, though produced in clusters, make any show : it is from the leaves this tree receives its beauty and value ; for these being bruised, with the bark of the young shoots, emit the most refreshing and delightful fragrance, exceeded by no myrtle, or any other aromatic shrub. There is a variety of this species : *viz.* M. cerifera Carolinensis. It is of lower growth, with shorter but broader leaves, and of equal fragrance ; and grows in Carolina, where the inhabitants collect fron its berries a wax of which they make candles ; whence it is called candleberry tree. It delights in a moist soil. ### The wax is procured in the following manner: ### In November and December, when the berries are ripe, a man with his family will remove from home to some island or sand-bank near the sea, where these trees most abound, taking with them kettles to boil the berries in. He builds a hut with palmeto leaves for the shelter of himself and family during his residence there, which is commonly four or five weeks. The man cuts down the trees, while the children strip off the berries into a pot ; and, having put water to them, they boil them till the oil floats, which is then skimmed off into another vessel. This is repeated till no more oil appears. When cold, this hardens to the consistence of wax, and is of a dirty green color. Then they boil it again, and clarify it in brass kettles ; which gives it a transparent greenness. These candles burn a long time, and yield a grateful smell. They usually add a fourth part of tallow, which makes them burn clearer.

M. communis, the gale, Dutch myrtle, or sweet willow, grows naturally upon bogs in many places both of Scotland and England. It rises about four feet high, with many shrubby stalks, which divide into several branches, garnished with stiff spear-shaped leaves of a light yellowish green, smooth, and a little sawed at their points. The female flowers or catkins are produced from the sides of the branches, growing upon separate plants from the male, which are succeeded by clusters of small berries, each having a single seed. It flowers in July, and ripens in autumn. When transplanted into shrubberies, the moistest parts must be assigned to it. The leaves, flowers, and seeds, of this plant, have a strong fragrant smell, and a bitter taste. They are used for destroying moths and cutaneous insects; internally, in infusions, as a stomachic and vermifuge ; and as a substitute to hops for preserving malt liquors, which they render more inebriating ; it is said that this quality is destroyed by boiling. Both these species may be propagated by seeds or layers. 1. The seeds of the candleberry myrtle we receive from abroad; those of the sweet gale from the bogs where they grow in England or Scotland. The best way is to sow them in boxes of earth from a rich pasture, well broken and fine. They should be sown about half an inch deep ; and, when the hot weather comes on, set in the shade. They often remain until the second year before they come up, especially those seeds that come from abroad. If the boxes are set in the shade, and the plants come up, they will require no other trouble the first summer than keeping clean from weeds ; in winter they should be removed to a warm hedge or wall, where they may enjoy the benefit of the sun. In the following spring they will come up in plenty. In the beginning of May they should resume their shady situation ; and in summer they will require no other trouble than weeding and watering in dry weather. In winter they should be removed into a well-sheltered place ; and this may be repeated two years ; when in spring they should be taken out of the boxes, and planted in the nursery at about a foot asunder. 2. They may be also easily propagated by layers ; for this operation, being performed on the young wood in the autumn, will occasion them to shoot good roots by the autumn following; many of which will be good plants, fit for any place. 3. These plants may likewise be increased by suckers, which many of them often throw out in vast plenty; so that these being taken out the strongest and best rooted may be finally set out; whilst the weaker and those with less root may be planted in the nursery.

M. trifoliata, the trifoliate myrica, with ternate leaves, toothed on the edges ; is a native of the Cape of Good Hope.

MYRIOPHYLLUM, in botany, water mil-foil, a genus of the polyandria order, in the moncecia class of plants ; natural order fifteenth, inundatae : MALE CAL. tetraphyllous : COR. none; the stamina eight : FEMALE CAL. tetraphyllous ; the pistils four ; and four naked SEEDS.

MYRISTICA, the nutmeg tree, in botany, a genus of plants belonging to the class dioecia,

and order syngenesia : MALE CAL. monophyllous, strong, and parted into three lacinii of an oval shape, and ending in a point: COR. none. In the middle of the receptacle rises a column of the height of the calyx; to the upper part of which the antherae are attached. They vary in number from three to twelve or thirteen : i EMALE CAL. and COR. as in the male, on a distinct tree. The germen of an oval shape; the style short, with a bifid stigma, the lacinii of which are oval and spreading. ??? The fruit is of that sort called drupa. It is fleshy, roundish, sometimes xmilocular, sometimes bivalved, and bursts when ripe at the side. The seed is enveloped with a fleshy and fatty membraneous substance, which divides the filaments : this, in one of the species, is the mace of the shops. The seed or nutmeg is round or oval shaped, unilocular, and contains a small kernel, variegated on the surface by the fibres running in the form of a screw.

M. fatua, the wild nutmeg : this grows in To-bago, and rises to the height of an apple-tree ; lias oblong, lanceolated, downy leaves, and hairy fruit: the nutmeg of which is aromatic, but when given inwardly is narcotic, and occasions drunkenness, delirium, and madness, for a time.

M. moschata, the nutmeg-tree, attains the height of thirty feet, producing numerous branches which rise together in stories, and are covered with bark, which on the trunk is a reddish brown, but that on the young branches is of a bright green color : the leaves are nearly

elliptical, pointed, undulated, obliquely nerved, on the upper side of a bright green, on the under whitish, and stand alternately upon foot-stalks : the flowers are small, and hang upon slender peduncles, proceeding from the axillae of the leaves : they are both male and female upon separate trees. The nutmeg has been supposed to be the comacum of Theophrastus, but there seems little foundation for this opinion, nor can it with more probability be thought to be the chrysobalanos of Galen. Our first knowledge of it was evidently derived from the Arabians; by Avicenna it was culled jiausiban, or jausiband, which signifies nut of Banda. lium-phius both figured and described this tree ; but the figure given by him is so imperfect, and the description so confused, that Linnaeus, who gave it the generic name myristica, was unable to as-sign its proper characters. Sonnerat's account of the muscadier is still more erroneous ; and the younger Linnaeus, misled by this author, places the myristica in the class polyundria, and describes the corolla as consisting of five petals. Thunberg, who examined the flower of the nut-meg, places it in the class moncecia ; and according to his description, the male flower has but one filament, surrounded at the upper part by the antherae; and as the filaments are short and slender, and the antherae united, this mistake might easily arise. M. de la Marck informs us, that he received several branches of the myristica both in flowers and fruit, from the Isle of France, where a nutmeg tree, which was introduced by M. Poivre in 1770, is now very large, and continually producing flowers and Jruit. From these brandies, which were sent

from M. Cere, director of the king's garden in that island, M. de la Marck has described and figured this arid other species of the myristica with tolerable accuracy. The kernels, called nutmegs, are well known, and have been long used both for culinary and medical purposes Distilled with water, they yield a large quantity of essential oil, resembling in flavor the spice itself; after the distillation, an insipid sebaceous matter is found swimming on the water ; the decoction inspissated-gives an extract of an unctuous, very lightly bitterish taste, and with little or no astringency. Rectified spirit extracts the whole virtue of nutmegs by infusion, and elevates very little of it in distillation ; hence the spirituous extract possesses the flavor of the spice in an eminent degree. Nutmegs, when heated, yield to the press a considerable quantity of limpid yellow oil, which on cooling concretes into a sebaceous consistence. In the shops we meet with three sorts of unctuous substances, call-ed oil of mace, though really expressed from the nutmeg. The best is brought from the East Indies in stone jars ; this is of a thick consistence, of the color of mace,

and has an agreeable fragrant smell : the second sort which is paler colored and much inferior in quality, comes from Holland in solid masses, generally flat, and of a square figure : the third, which is the worst of all, and usually called common oil of mace, is an artificial composition of sevum, palm oil, and the like, flavored with a little genuine oil of nutmeg. When the fruit is ripe, the natives ascend the trees, and gather it by pulling the branches to them with long hooks. Some are employed in opening them immediately, and in taking off the green shell or first rind, which is laid together in a heap in the woods, where in time it putrefies. As soon as the putrefaction has taken place, there spring up a kind of mushrooms, called bo-leti moschatyni, of a blackish color, and much valued by the natives, who consider them as delicate eating. When the nuts are stripped of their first rind they are carried home, and the maee is carefully taken off with a small knife. The mace, which is of a beautiful red, but afterwards assumes a darkish or reddish color, is laid to dry in the sun for the space of a day, and is then removed to a place less exposed to his rays, where it remains for eight days, that it may soften a little. They afterwards moisten it with sea-water, to prevent it from drying too much, or from losing its oil. They are careful, however, not to employ too much water, lest it should be-come putrid, and be devoured by the worms. It is last of all put into small bags and squeezed very close. The nuts, which are still covered wit,h their ligneous shell, are for three days exposed to the sun, and afterwards dried before a fire till they emit a sound when shaken ; they then beat them with small sticks to remove their shell, which flies off in pieces. Tht-se nuis are distributed into three parcels ; the firˆt contains the largest and most beautiful, which are destined to be brought to Europe ; the second contains such as are reserved for the use of the inhabitants; and the third contains the smallest which are not quite ripe. These are burnt ; and part of the rest is employed for procuring oil by

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pressure. A ponnd of them commonly Drives 3 oz. of oil, which has the consistence of tallow, and has entirely the taste of nutmeg. Both the nut and mace, when distilled, afford an essential, transparent, and volatile oil, of an excellent fla-vor. The nutmegs which have been thus selected would soon corrupt if they were not pickled with lime water made from calcined shell-fish, which they dilute with salt water till it attain the consistence of fluid pap. Into this mixture they plunge the nutmegs, contained in small baskets, two or three times, till they are completely covered over with the liquor. They are afterwards laid in a heap, where they heat, and lose their superfluous moisture by evaporation. When they have sweated sufficiently, they are then properly prepared, and fit for a sea voyage. In the island of Banda the fruit of the nutmeg tree is preserved entire in the following manner : when it is almost ripe, but previous to its opening, it is boiled in water and pierced with a needle. They next lay it in water to soak for ten days, till it has lost its sonr and sharp taste. They then boil it gently in a syrup of sugar, to which, if they wish it to be hard, a little lime is added. This operation is repeated for eight days, and each time the syrup is renewed. The fruit when thus preserved is put for the last time into a pretty thick syrup, and is kept in earthen pots closely shut. These nuts are likewise pickled with brine or vinegar; and, when they intend to eat them, they first steep them in fresh water, and afterwards boil them in syrup of sugar. Nutmegs preserved entire are presented as deserts, and the inhabitants of India sometimes eat them when they drink tea. Some use nothing but the pulp ; others chew the mace ; but they generally throw away the kernel, which is really the nutmeg. Many who perform sea-voyages to the north chew this fruit every morning. The medicinal qualities of nutmeg are esteemed aromatic, anodyne, stomachic, and restringent ; and it has been much used in diarrhoeas and dysenteries. To many people the aromatic flavor of nutmeg is very agreeable; they however should be cautious not to use it in large quantities, as it is apt to affect the head, and even to manifest a nypnotic power, in such a degree as to prove dangerous. The officinal preparations of nutmeg are a spirit and essential oil, and the nutmeg in substance roasted, to render it more astringent. Both the spice itself and its essential oil enter several compositions, as the confectio aromatica, spiritus ammonias comp., 8cc. Mace possesses qualities similar to those of the nutmeg, but is less astringent, and its oil is supposed to be more volatile and acrid. Nutmeg trees grow in several islands in the Eastern Ocean. The wood-pigeon of the

Moluccas is a great planter of these trees. The Dutch long monopolised the trade.

M. sebifera (the virola sebifera of Aublet), a tree frequent in Guiana, rising to forty or even to sixty feet high ; on wounding the trunk of which a thick, acrid, red juice runs out. Aublet says nothing of the nutmeg's being aromatic; he only observes, that a yellow fat is obtained from them, which serves many economical and medical purposes, an/1 that the natives make candles

MYRMECOPHAGA, the ant-bear, in zoology ; a genus of quadrupeds, belonging to the order of bruta : there are no teeth in the mouth; the tongue is long and cylindrical ; the head terminates in a long snout or muzzle ; and the body is covered with pretty long hair. There are six species, *viz.*

M. Capensis,the Cape ant-bear, has four claws on the fore paws'; a long snout, large pendent ears ; and a tail which is shorter than the body, and taper at the point. It inhabits the country at the Cape of Good Hope. This species is much larger than any other species ; Kolbein compares it to the size of a hog, and asserts that it v/eighs 100 Ibs. It burrows in the ground, sleeps during the day, and only goes abroad at night.

M. didactyla, the little ant-bear, has a conic nose bending a little down; ears small, and hid in the fur ; two hooked claws on the fore feet, the exterior being much the largest ; four on the hind feet ; the head, body, limbs, and upper part and sides of the tail, covered with long soft silky hair, or rather wool, of a yellowish-brown color ; from the nose to the tail it measures seven inches and a half, the tail eight and a half, the last four inches of which on the under side are naked. It is thick at the base, and tapers to a point. It inhabits Guinea, climbs trees in quest of a species of ants which build their nests among the branches, and has a prehensile power with its tail.

M. jubata, the great ant-bear, has a long slender nose, small black eyes ; short round ears ; a slender tongue, two feet and a half long, which lies double in the mouth; the legs slender: four toes on the fore feet, five on the hind ; the two middle claws on the fore feet very large, strong, and hooked ; the hair on the upper part of the body is half a foot long, black mixed with gray ; the fore legs are whitish, marked above the feet with a black spot ; the tail is clothed with very coarse black hair a foot long : the length from the nose to the tail about four

feet ; the tail two feet and a half. This animal inhabits South America, and the kingdom of Congo in Africa. It covers itself with its tail when asleep and to guard against rain. Its flesh is eaten by the natives of America. At a distance it has the appearance of a fox, and therefore some travellers have called it the American fox. He has strength sufficient to defend himself from a large dog, or even from the jaquor or Brasilian cat. When attacked, he at first fights on end, and, like the bear, annoys his enemy with the claws of his fore feet, which are very terrible weapons. He then lies down on his back, and uses all the four feet, in which situation he is almost invincible; and continues the combat to the last extremity. Even when he kills his enemy, he quits him not for a long time after.

M. jubata sima is a variety which has a shorter muzzle and shorter legs than the above, and less distance between the eye and ear. The hair on the sides of the body is two inches and a half long, and as hard as that of a wild boar ; the color a mixed deep brown and dirty white. The length of the body and head is three feet eleven inches. It inhabits Guinea.

M. pentadactyla, the five-toed ant-eater, has five toes on the fore paws, and a long flat hairy

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tail. The head is thick, the upper jaw and snout very long ; the hair long, tawny, and striped with black or dusky; the body is thirteen inches long, and ten high; the tail seven.

M. tetradactyla, the middle ant-bear, has four Joes on the fore feet, and five on the hind, with a tail naked at the extremity ; the length from the nose to the tail is one foot seven inches, and the tail ten inches. It inhabits South America.

M. tridactyla, the tarnandu guaca, or tama-noir, has three toes on the fore feet, five on the hind feet, and long hair on the tail. This animal is about four feet long, and the head and snout about fifteen inches : it is a native of the East Indies, and feeds on ants, &c., in the same man-ner as the didactyla. All these species have many properties in common with each other, both in their structure and manner. They all feed upon ants, and plunge their tongues into honey and other liquid or viscid substances. They readily pick up crumbs of bread, or small morsels of flesh. They are easily tamed, and can subsist for a long time without food. They run so slowly that a man may easily overtake them in an open field. Their flesh, though its taste be very disagreeable, is eaten by the savages.

MYRMELEO, the antlion, in zoology, a genus of insects of the neuroptera order. There are numerous species, of which the most remarkable is,

M. formicarius, the ant-eater. The perfect in-sect is oblong, and of a brown color. Its head is broad, with two large eyes on the sides, and two antenna? beneath. The neck is rather long, cylindrical, and narrower than the head. The thorax seems composed of two parts; one anterior, whence arise the upper wings ; and the other posterior Vhich gives birth to the under ones. The abdomen is of an oblong form, and consists of eiˆht segments ; the wings are dia-phanous, adorned with a net work of black fibres, charged with several blackish-brown spots. This insect, in its larva state, is very fond of ants, which it hunts after, whence its name. The larvae proceed from the eggs, which the perfect insect had deposited in very fine dry sand, in a place sheltered from rain, either within a cleft of a wall or of the ground, or at the foot of a wall generally exposed to the south sun. There they are hatched, and make their usual abode. Their color is gray, and their body, which is

covered with small protuberances, is of an oval form. The posterior extremity terminates in a point, and is of use to sink down into the sand ; for it only walks retrogress! vely, though furnished with six feet. Before the head is placed a dentated forceps, sharp and hollow within, with which the creature catches and sucks flies and other insects, but ‘especially ants. This forceps servo? as a mouth or rostrum, as well as for an offensive weapon. The animal’s retrograde march not allowing it to run after the insects on which it is to feed, it uses a stratagem. It dives down into the sand, and, turning about it iu a cl-rle, hollows out concentric furrows, gradually deeper and deeper, casting at a distance with its horns the sand it takes from that place. Thus it digs a hole in shape like a funnel, at the bottom of which it takes its station, concealed in the sand,

nothing but the open extended forceps appearing above it. Mischief overtakes every insect that happens to fall into that hole. The myrmeleo, who is apprized of it by the grains of sand rolling down to the bottom, overwhelms him with a shower of dust, which it ejects with its horns, then drags the insect to the bottom of the hole, where it seizes him with its forceps, and sucks its vitals. It does not even spare other myrmeleons, who in their motions to and fro chance to fall into it. When the larva is come to its full growth, it digs no more holes ; it moves backwards and forwards, tracing irregular furrows on the sand, and at length spins itself a cod, shaped like a ball, the outer part of which is formed of the sand in which it lived, and the inward is lined with fine white silk. Within this cod it turns to a chry-salis, which is curved into a semicircle, and wherein may be distinguished all the parts of the perfect insect that is to issue from it. It is more oblong than the larva, but much shorter than the perfect insect. After a certain period the chry-salis casts off its slough, turns to a winged insect, and breaks through the cod in order to take its flight. The perfect insect is very scarce, but is sometimes met with in sandy places, and near rivulets. See ENTOMOLOGY.

MYR’MIDON, n. s. Or. ˆp/iijJwv. A soldier ; any rude ruffian ; so named from the soldiers of Achilles.

The mass of the people will not endure to be governed by Clodius and Curio, at the head of their myrmidons, though these be ever so numerous, and composed of their own representatives.

Swift.

MYRMIDONES, or MYRMIDONS, in antiquity, a people on the south borders of Thessaly who accompanied Achilles to the Trojan war. They received their name from Myrmidon, a son of Jupiter and Eurymedusa, who married one of the daughters of /Eulus, son of Helen. His son Actor married JEgina the daughter of Asopus. He gave his name to his subjects, who dwelt near the river Peneus in Thessaly. According to some, the Myrmidons received their name from their having arisen from ants or pismires, upon a prayer put up for that purpose by king .;Eacus to Jupiter, after his kingdom had been dispeopled by a severe pestilence. According to Strabo, they received it from their industry, because they imitated the diligence of the ants, and like them were indefatigable, and were continually employed in cultivating the earth.

MYRMILLONES, a species of gladiators at Rome, who fought against the Hetiarii. Their arms were a sword, head-piece, and shield. On the top of the head-piece they wore a fish em-* bossed, called Mop/ ii►►poc, whence f'eir mme i< supposed to be derived. The Retiarii, in their engagements, made use of a net, in which they endeavoured to entangle their adversaries, and sun,' during the fight, Non te peto, pisrem peto; quid me fugis, Galle ? I aim not at thee, but I aim at thy fish ; why dost thou shun me, (. Gaul? The Myrmillones were called Galli, because they wore Gallic armour. They were also named Secutores. They were suppressed bv Caligula.

MYROB'ALAN, n. s. Lat. myrobalanus. A fruit.

The myrobalan hath parts of contrary natures ; for it is sweet, and yet astringent. Bacon.

The myrobalans are a dried fruit, of which we have five kinds : they are fleshy, generally with a stone and kernel, having the pulpy part more or less of an austere acrid taste : they are the production of five different trees growing in the East Indies, where they are eaten preserved. Hill.

MYROBALANS, from pvpov, ointment, and /SaXavoc, an acorn, are a kind of medicinal fruit brought from the Indies, of which there are five kinds. 1. The citrine of a yellowish-red color, hard, oblong, and the size of an olive. 2. The black, or Indian myrobalan, of the bigness of an acorn, wrinkled, and without a stone. 3. Che-bulic myrobalans, which are of the size of a date, pointed at the end, and of a yellowish-brown. 4. Emblic, which are round, rough, the size of a gall, and of a dark brown. 5. Balleric, which are hard, round, of the size of an ordinary prune, less angular than the rest, and yellow. They are all slightly purgative and astringent.

MYROXYLON, in botany, a genus of the monogynia order, and decandria class of plants: CAL. campanulated ; superior petal larger than the rest; germ is longer than the corolla; legum. mopospermous. There is but one species, *viz.*

M. Peruiferum, a native of Peru, and the warmer parts of America. This shrub yields the balsam of Peru, which is* extracted from it by coction in water. This balsam, as brought to us, is nearly of the consistence of thin honey, of a reddish-brown color, inclining to black, an agreeable aromatic smell, and very hot biting taste. Distilled with water, it yields a small quantity of a fragrant essential oil of a reddish color, and in a strong' fire, without addition, a yellowish red oil. Balsam of Peru is a very warm aromatic medicine, considerably hotter and more acrid than copaiva. Its principal effects are to warm the habit, to strengthen the nervous system, and attenuate viscid humors. Hence its use in some kinds of asthmas, gonorr-hoeas, dysenteries, suppressions of the uterine discharges, and other disorders proceeding from a debility of the solids, or a sluggishness and inactivity of the juices. It is also employed externally, for cleansing and healing

wounds and ulcers, and sometimes against palsies and rheumatic pains. There is another sort of balsam of Peru of a white color, and considerably more fragrant than the former. This is very rarely brought to us. It is said to be the produce of the same plant which yields the common or black balsam, and to exude from incisions ††made in the trunk, while the former is obtained by boiling. There is also a third kind, commonly called the red or dry. This is supposed to obtain a different state from the white, merely in consequence of the treatment to which it is subjected after it is got from the tree. It is almost as fragrant as the balsam of Gilead, held in so high esteem among the eastern nations. It is very rarely used in Britain, and seldom or never to be met with in our shops.

MYRRH, n. s. Arab, moor; Fr. mi/rrhc ; I ‘it. nn/irha. A Ulim.

The myrrhe sweet bleeding in the bitter wound.

Spenser.

I dropt in a little honey of roses, with a few drop* of tincture of myrrh. Wiseman’t Surgery.

Myrrh is a* vegetable product of the gum resin kind, sent to us in loose granules from the size of a pepper-corn to that of a walnut, of a reddish-brown colour with more or l††ss of an admixture of yellow : its taste is bitter and acrid with a peculiar aromatick flavour, but very nauseous : its smell is strong, bui not disagreeable ; it is brought from Ethiopia, but the tree which produces it is wholly unknown. Our myrrh is the very drug known by the ancients under the same name. Hill.

MYRRH is a gummy, resinous, concrete juice, obtained from an oriental tree. It comes to us in globes or drops, of various colors and magnitudes. The best sort is somewhat transparent, friable, in some degree unctuous to the touch ; its reddish yellow color is often streaked internally with whitish semicircular or irregular veins. There are sometimes found among it hard shining pieces, of a pale yellowish color, resembling gum-arabic, of no taste or smell ; sometimes masses of bdellium, darker colored, more opaque, internally softer than the myrrh, and differing from it both in smell and taste ; sometimes an unctuous gummy resin, of a moderately strong somewhat ungrateful smell, and a bitterish very durable taste, obviously different both from those of bdellium and myrrh ; sometime* likewise, as Cartheuser

observes, hard compact dark-colored tears, less unctuous than myrrh, of an offensive smell, and a most ungrateful bitterness, so as, when kept for some time in the mouth, to provoke retching, though so resinous that little of them is dissolved by the saliva. Great care is therefore requisite in the choice of this drug. The ancients obtained their myrrli from Ethiopia or Abyssinia. They aromatised their most delicious wines with it ; and it was presented as a very valuable perfume to our Lord while he lay in the manger. It was this gum also which was mingled with the wine given him to drink at his passion, to deaden his pains, and produce a stupor. See Mark xv. 23. The gall mentioned on the same occasion by St. Matthew is probably the same with myrrh ; for any thing bitter was usually distinguished by the name of gall. The Hebrews were accustomed to give those that were executed some stupefying draught. But our Lord refused it in this instance, being resolved to meet death with a.1, its natural horrors. The difficulty which arises from the seeming difference betwixt the two evangelists, by some is solved by saying, that St. Matthew, writing in Syriac, made use of the word “TO, which signifies myrrh, bitterness, or gall ; but the Greek translator has taken it for “11JD> gall. Others will have it that our Saviour’s drink was mingled with myrrh, as a stupefying drug; but suppose that the soldiers, out of wanton cruelty, infused gall ; which was the reason why, when he had tasted, he refused to drink. The ancients reckoned two kinds of myrrh; the one liquid, which they called stacte or starte ; the other was solid, and went by the name of troglodyte myrrh. The medical effects of this aromatic, bitter are to warm and strengthen the viscera ; it frequently occasions a mild diapho-M Y R T U S.

resis, and promotes the fluid secretions in general. Hence it proves serviceable in languid cases, diseases arising from simple inactivity, those female disorders which proceed from a cold, mucous, sluggish indisposition of the hu-mors, suppressions of the uterine discharges, cachectic disorders, and where the lungs and thorax are oppressed by viscid phlegm. Myrrh is likewise supposed in a peculiar manner to resist putrefaction in all parts of the body ; and in this light stands recommended in malignant, putrid, and pestilential fevers, and in the small pox ; in which last it is said to accelerate the eruption. In the present practice myrrh is less employed than formerly. Rectified spirit extracts the fine aromatic flavor and bitterness of this drug, and does

not elevate any thing of either in evaporation ; the gummy substance left by this menstruum has a disagreeable taste, with scarcely any of the peculiar flavor of the myrrh ; this part dissolves in water, except some impurities which remain. In distillation with water, a considerable quantity of a ponderous essential oil arises, resembling in flavor the original drug. Myrrh is the basis of an officinal tincture. It enters the pilulae ex aloe et myrrha, the pilulaj e gummi, and pilulae stomachics, and some other formulae. But, for obtaining its full effects, it must be given in doses of half a drachm or upwards ; and it is thought to be advantageously united with a proportion of nitre, cream of tartar, or some other refrigerant salt.

MYRRH, STACTE, was procured by incision, and was received in vessels closely shut. Large pieces sometimes present externally, or contain a kind of oily juice, to which likewise the moderns give the name of stacte. To prevent this juice from hardening, or at most in a very small degree, it is sufficient to exclude it from the contact of the air immediately after its issuing from the tree; and by these means its aromatic nature is much better preserved.

MYRRH, TROGLODITE, was obtained from a region of Ethiopia, called by the ancient Greeks Troglodytria ; and reckoned superior to every species of Arabian myrrh, although it was not all of the same quality. Many uncertain and erroneous conjectures and speculations have been formed by Pliny, Theophrastus, Dioscorides, and other ancient writers, respecting this myrrh ; as well as by Bruce and other modern authors. But the most probable opinion seems to be, that it was the produce of Abyssinia, and that its different qualities depended on the asje and sound-ness of the trees, the season of the year, and the temperature of the air, when the incisions were made in it.

MYR’RIIINE, adj. Lat. myrrhinus. Made of the myrrhine stone.

How they quaff in gold,

Crystal and myrrhine cups imbossed with gems

And studs of pearl. Milton’s Paradise Regained.

MYRRHINE, or MURRINE. See MCRRHINA.

MYRSINE, in botany, African box-tree, a genus of the monogynia order, and pentandria class of plants : COR. semiquinquefid and con-nivent; germ filling the corolla: IH.RU.Y qum-quelocular and pentaspermous. Species two; both African plants.

MYRTHER, or MYRTHER-TEDVEL. See MERTHYR TYDVILL.

MYRTIS, a Greek woman who distinguished herself by her poetical talents. She flourished about 500 years before the Christian era, and instructed the celebrated Corinna in the rules of versification. Pindar himself, as some report, was also one of her pupils.

MYRTLE, n. ►►. Gr. /*wproc ; Fr. myrte ; Lat. myrtta. A fragrant tree sacred to Venus.

There will I make thee beds of roses. With a thousand fragrant posies ; A cap of flowers, and a girdle Imbroidered all with leaves of myrtle.

Sliaktpeart.

I was of late as petty to his ends. As is the morn dew on the myrtle leaf To his grand sea. Id. Antony ami Cleopatra.

Democritus would have Concord like a fair virgin, holding in one hand a pomegranate, in the other a bundle of myrtle ; for such is the nature of these trees, that if they be planted, though a pood space one from the other, they will meet, and with twining one embrace the other. Peacham.

Nor can the muse the gallant Sidney pass

The plume of war ! with early laurels crowned.

The lover's myrtle and the poet's bay. Thomson.

The flower of the myrtle consists of several leaves disposed in a circular order, which expand in form of a rose ; upon the top of the foot-stalk is the ovary, which has a short starlike cup. divided at the top into five parts, and expanded ; the ovary becomes an oblong umbilicated fruit, divided into three cells, which are full of kidney-shaped seeds. MiUer.

It is not to be considered as the effusion of real passion ; for passion runs not after remote allusions and obscure opinions. Passion plucks no berries from the myrtle and ivy. Johtuan.

MYRTLE, in botany. See MYRTUS.

MYRTOOM MARS, a part of the ;Y.gean Sea, lying between Eubcea, Peloponnesus, and At-tica. It received this name from Myrto, a wo-

man, or from the island Myrtos, or from Myr-tilus, the son of Mercury, who was drowned there, &c. Strabo extends the Mare Myrtoum between Crete, Argia, and Attica. Pausanias, beginning it at Eubcea, joins it at Helena, a desert island, with the /Egean Sea. Ptolemy carries it to the coast of Caria. Pliny says, that the Cyclades and Sporades are bounded on the west by the Myrtoan coast of Attica.

MYRTUS, in botany, the myrtle, a genus of the monogynia order, and icosandria class of plants ; natural order nineteenth, hesperideae : CAL. quinquefid, superior; there are five petals : BERRY dispermous or trispermous. There are many species ; the most remarkable are these : ††† 1. M. communis, the common myrtle-tree, rises with a shrubby, upright, firm stem, branching numerously all around into a close full head, rising eight or ten feet high ; very closely garnished with oval, lanceolate, entire, mostly opposite leaves, from half an inch to an inch and a half long, and one broad, on short foot-stalks; and numerous, small, pale flowers from the axillas, singly on each foot-stalk, having diphyllous involucrums; each flower succeeded by a small, oval, dark purple berry. The most material varieties are broad-leaved Roman myrtle, with oval, shining, green leaves, an inch and a half long and one broad; ami which is remarkably

floriferous. Gold striped broad-leaved Roman myrtle. Broad-leaved Dutch myrtle, with spear-shaped, sharp pointed, dark green leaves, an inch long, and about three-fourths broad. Double flowered Dutch myrtle. Broad-leaved Jews myrtle, having the leaves placed by threes at each joint ; by which particular circumstance this species is in universal estimation among the Jews in their religious ceremonies, particularly in decorating their tabernacles. Orange-leaved Spanish myrtle, with oval spear-shaped leaves, an inch and a half long or more, and one broad, in clusters round the branches, and resemble the shape and color of orange tree leaves. Gold-striped leaved orange myrtle. Common upright Italian myrtle, with its branches and leaves growing more erect, the leaves oval, lanceolate-shaped, acute pointed, and nearly an inch long and half an inch broad. Silver-striped upright

Italian myrtle. White-berried upright Italian myrtle. Portugal acute-leaved myrtle, with spear-shaped, oval, acute-pointed leaves, about an inch long. Box-leaved myrtle, with weak branches, small, oval, obtuse, lucid green, closely placed leaves. Striped box-leaved myrtle. Rosemary-leaved myrtle, having erect branches, small, narrow, lanceolate, acute-pointed, shining, green, very fragrant leaves. Silver-striped rosemary-leaved myrtle. Thyme-leaved myrtle, with very small closely-placed leaves. Nutmeg-myrtle, with erect branches and leaves; the leaves oval, acute-pointed, and finely scented like a nutmeg. Broad-leaved nutmeg myrtle. Silver-striped leaved ditto. Cristated or cock's-comb myrtle, frequently called bird's nest myrtle, having narrow sharp-pointed leaves, cristated at intervals. These are all beautiful evergreen shrubs of extraordinary fragrance ; exotics originally of the southern parts of Europe, and of Asia and Africa, and consequently in this country requiring shelter of a green-house in winter; all of which, though rather of the small-leaved kind, have their foliage closely placed, remain all "the year, and are very floriferous in summer; and, when there is a collection of the different sorts, they afford an agreeable source of variety with each other. They therefore claim universal esteem as principal green-house plants, especially as they are all so easily raised from cuttings, and of such easy culture as to be attainable in every garden where there is any sort of green-house, or garden-frames furnished with glasses for protecting them in winter from frost; but some of the broad-leaved sorts are so hardy as to succeed in the full ground, against a south wall and other warm exposures, all the year, by only allowing them shelter of mats occasionally in severe frosty weather ; so that a few of these may also be exhibited in a warm situation in the shrubbery. All the varieties of the myrtus communis flower here in July and August ; the broad-leaved Roman kind in particular is often covered with flowers, which in some are succeeded here by berries ripening in winter. The flowers of most of the sorts are small, but numerous ; and are all formed each of five oval petals and many stamina. As all these plants require protection in this country, they mu-t be kept always in pots,

for moving to the proper places of shelter, according to their nature; the myrtns communis and varieties to the green-house in winter ; the other delicate kinds to the stove, to remain all the year; therefore let all the sorts be potted in light rich earth ; and, as they advance in growth, shift them into larger pots, managing the myrtles as other green-house shrubs, and the stove kinds as other woody exotics of the stove. The leaves and flowers of the common upright myrtle have an astringent quality, and are used for cleansing the skin, fixing the teeth

when loosened by the scurvy, and strengthening the fibres. From the flowers and young tops is drawn a distilled water that is detersive, astringent, cosmetic, and used in gargles. A decoction of the flowers and leaves is applied in fomentations. The berries have a binding detersive quality ; and the chemical oil obtained from them is excellent for the hair, and used in pomatums and most other external beautifiers of the face and skin. As an internal medicine these berries have little or no merit.

2. M. pimenta, pimento, Jamaica pepper, or all-spice tree, grows above thirty feet in height and two in circumference ; the branches near the top are much divided and thickly beset with leaves, which by their continual verdure always give the tree a beautiful appearance ; the bark is very smooth externally, and of a gray color; the leaves vary in shape and in size, but are commonly about four inches long, veined, pointed, elliptical, and of a deep shining green color ; the flowers are produced in bunches or panicles, and stand upon subdividing or trichotomous stalks, which usually terminate the branches; the calyx is cut into four roundish segments ; the petals are also four, white, small, reflex, oval, and placed opposite to each other between the segments of the calyx ; the filaments are numerous, longer than the petals, spreading, of a greenish-white color, and rise from the calyx and upper part of the germen ; the antherse are roundish, and of a pale yellow color; the style is smooth, simple, and erect; the stigma is ob-tuse; the germen becomes a round succulent berry, containing two kidney-shaped flattish seeds. This tree is a native of New Spain and the West India Islands. In Jamaica it grows very plentifully; and in June, July, and August, puts forth its flowers, which, with every part of the tree, breathe an aromatic fragrance. The berries, when ripe, are of a dark purple color, and full of a sweet pulp, which the birds devour greedily, and, muting the seeds, afterwards propagate these trees in all parts of the woods. It is [thought that the seeds passing through them in this manner undergo some fermentation, which fits them better for vegetating than those gathered immediately from the tree. The pimento is a most beautiful odoriferous evergreen, and exhibits a fine variety in the stove at all seasons. It flowers with great beauty and luxuriance. It should be potted in rich light earth, and remain always in the stove. It was first introduced and cultivated in this country by Mr. Philip Miller in 1739. Pimento berries were chiefly imported into Britain from Jamaica ; whence the name Jamaica pepper. It is also

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called all-spice, from its taste and flavor being supposed to resemble those of many different spices mixed. When the berries arrive at their full growth, but before they begin to ripen, they are picked from the branches, and exposed to the sun for several days, till they are sufficiently dried ; this operation is to be conducted with great care, observing that on the first and second day's exposure they require to be turned very often, and always to be preserved from rain and erening dews. After this process is completed, which is known by the color and rattling of the seeds in the berries, they are put up in bags or hogsheads for the market. This spice, which was at first brought over for dietetic uses, has been long employed in the shops as a succeda-neum to the more costly oriental aromatics ; it is moderately warm, of an agreeable flavor, somewhat resembling that of a mixture of cloves, cinnamon, and nutmegs. Distilled with water it yields an elegant essential oil, so ponderous as to sink in the water, in taste moderately pungent, in smell and flavor approaching to oil of cloves, or rather a mixture of cloves and nutmegs. To rectified spirit it imparts, by maceration or digestion, the whole of its virtue; in distillation it gives over very little to this menstruum, nearly all its active matter remaining concentrated in the inspissated extract. Pimento can scarcely be considered as a medicine; it is, however, an agreeable aromatic, and on this account is not unfrequeritly employed with different drugs, requiring such a grateful adjunct. Both the phar-macopoeias direct an aqueous and spirituous distillation to be made from these berries, and the Edinburgh College orders also the oleum essen-tiale piperis Jamaicensis. See PIMENTO.

MYSELF', n. s. My and self. An emphatical reflective word added to I ; as I myself do it, that is, 'not I by proxy.

As his host,

I should against his murtherer shut the door, Not bear the knife myself. Shakspeare. Macbeth.

Myself shall mount the rostrum in his favour, And try to gain his pardon. Additon.

They have missed another pain, against which I should have been at a loss to defend myself.

Swift's Examiner. But just as he began to tell, The auld kirk-hammer strak the bell Some wee short hour ayont the twal,

Which raised us baith : I took the way that pleased mysel,

And sae did Death.

Burns.

MYSIA, a country of Asia Minor, generally divided into Major and Minor.

MYSIA MAJOR-had ,'Eolia on the south, the JEgean Sea on the west, and Phrygia on the north and east. Its chief cities were Cyzicum, Lampsacus, &c.

MYSIA MINOR was bounded on the north and west by the Propontis and Bithynia, and Phrygia on the north and south borders.

MYSIANS, the inhabitants of Mysia. They were once very warlike, but they greatly degenerated, and the words Mysorum ultimas were emphatically used to signify a person of no merit. The ancients generally hired them to attend their

funerals as mourners. They were once governed by monarchs, and were supposed to be descended from the

MYSIANS of Europe, a nation who inhabited that part of Thrace which was situated between Mount HtcmiH and the Danube.

MYSLENICE, a district of Western or Austrian Poland bounded by Cracow on the north, Silesia on the west, and Hungary south. It contains 1230 square miles, aud about 160,000 inhabitants. Besides the Vistula, it is watered by the less rivers Sola, Skawa, and Ilaba. The soil is very fertile, but by no means well cultivated.

MYSOL, one of the first of the Papua Islands west of New Guinea, and in part dependent on the Moluccas. It is also called Mixoal, and is fifteen leagues east of Ceram, and fourteen leagues long east and west ; it has the good harbour of Ef be, formed by a little island on the south. Pulo Popo and Geby are islands of some size north-west of Mysol, and in the Gillolo passage. Birds of paradise frequent this island, and are caught by the Mahometan settlers on the coast with bird lime. The black loory, a scarce oriental bird, is also found here.

MYSON, a native of Sparta, one of the seven wise men of Greece. When Anacharsis consulted the oracle of Apollo, to know which was the wisest man in Greece, he received for answer, he who is now ploughing his fields. This was Myson.

MYSORE, or MAISOOR, is a large province of the south of India, situated chiefly between 11►► and 15►► N. lat., and now surrounded by the British territories, of the Madras presidency : while the existing rajah is also dependent on British protection. This province consists of high table land generally 3000 feet al.uve t!iu level of the sea, from which rise a number of hills, containing the sources cf the Cavcry, Toombuddra, Vedewati, Bhadri, Penar, &c. The climate is temperate and healthy ; and the rainy season more moderate, while much longer, tliuii on either of the sea coasts : during other seasons of the year the province is frequently refreshed by showers. Its soil is rich in all tne grains, and vegetables of India, and many of the .fruits of Europe flourish here ; the cultivation being much aided by judicious irrigation. Hie inhabitants are Hindoos. The animal produce consists in horses, cattle, sheep, and swine, -all of them of small size. The Mysore is divided into the three districts of Patna, Nagara, and Chatra-kal ; each managed by an amildar, or officer of justice, police, and revenue.

The ancestor of the present restored family is said to have been a principal herdsman, who emigrated with his followers and their flocks from the province of Gujerat. The first person kno'.vit in history to have distinguished himself was named Vijeya. He married the heiress of the \Vadiar, or chief of the town of Caroogully and its dependencies, and succeeded his father-in-law. His successors for a period of soir.e length are not known; but in the year !507 Cham Kaj I. took possession of the government, acknowledg-ing himself a subject of the Maha Hajah of An-na-oondv, a docenfJanl of tin-wcic:i < Hindoo

monarchs of Bijanagur. Tim Raj succeeded in 1548, and annexed other districts to his government His successor from 1571 to 1576 was

Heere Cham Raj, who was succeeded by his cousin Raj Wadeyar. This chief annexed to his own province that of the rajah of Chickraipatam, and took in 1610 possession of the city and fortress of Seringapatam. This event is considered as the era of the Mysore sovereignty.

He afterwards subdued several neighbouring Wadeyars, and imprisoned them at Seringapatam. He was succeeded in 1617 by his grandson Cham Raj II., who added considerably to the My-sore territory, and died in 1637. In 1659 reigned Canty Revy Larsa Raj, the first prince who established a mint, and coined the fanams and pagodas which still go by his name. His successors were Dud Deo Raj who died in 1672, and Chick Deo Raj who died in 1704, having completed the subjugation of the landholders, and made a number of prudent regulations which still exist. Among other accessions he acquired by purchase the town and fortress of Bangalore, and sent an embassy to the Mogul emperor Aurungzebe, who granted him permission to sit on an ivory throne, still in existence and used on the late installation of Tippoo Saib's successor. Canty Raj, son of the last sovereign, though born deaf and dumb, mounted the throne in 1704. It was in this reign that the great influence of the Dulwoy or prime minister commenced, which rendered the rajah ever afterwards a mere pageant. After a nominal reign often years this rajah was succeeded by Dud Kishen Raj, who died, after an inglorious reign, in 1731. He was succeeded by Cham Raj III., who was deposed and imprisoned in the year 1734. On this event, the ministers of Mysore chose a boy of five years old, of another branch of the royal family, nam-ed Chick Kishen Raj, to be their nominal chief. The public business was entirely managed in the offices of, 1st, The Dulwoy or commander-in- chief ; 2dly, the Serv Adikar, or comptroller of the revenue ; and 3dly, the Purdhan or privy counsellor. Under the command of Nunjeraje Dulwoy, a large Mysorean army marched to the assistance of the British, and their ally the Na-nob Mohammed Aly, in 1753 ; but as the bribe held out for his assistance (the cession of the fortress of Trichinopoly) was not complied with, he soon became our enemy, and for nearly two years laid siege to Trichinopoly. Mysore was now invaded by the Mahrattas, and from this period may be dated the decline of the old power of Mysore, or rather the downfall of the Hindoo dynasty, and the rise of Hyder Aly and his successor.

The great-grandfather and grandfather of this prince were religious persons, who emigrated from the Punjab and settled in the vicinity of the tomb of Geeso Doraz, a famous saint. His fa-ther was named Futteli Aly, and, having entered the army as a private soldier, he rose by degrees to the rank of Naick, or commander of a regiment, lie was

killed in an engagement about the year 1 729. The widow, accompanied by her two sons Shabaz Saheb, and Hyder, boys, took refuse with her brother Ibrahim, who commanded a small body of peons or infantry, in the ser-

vice of the Bangalore government; and, the elder brother Shabaz having attained a sufficient age, his uncle procured for him a recommendation to an officer of rank in Seringapatam. Here he gradually rose to the command of 200 cavalry and 1000 infantry. Hyder, profiting by the good fortune of his brother, does not however appear to have distinguished himself till the year 1749, when, during the siege of Deonhally, he attracted the attention of the Dulwoy Nunjeraje; and was promoted on the capitulation of the place to the command of its garrison. Permission was also granted him to augment the number of troops. During a war between the Nizam Nasi Jung, and Muzuffir Jung, in the year 1750, Hyder commanded part of the Mysore troops ; he was again employed at the siege of Trichinopoly ; and during the battle of the 17th of Au-gust 1754, between the British and French, with their allies, Hyder attacked and seized a large part of the baggage of the British.

In 1758 a mutiny having broken out amongst the troops of his sovereign at Seringapatam, Hy-der Aly was ordered to march thither; and, hav-ing succeeded in quelling the revolt and disband-ing the army, the fortress and adjoining district of Bangalore were given him as a personal estate. In the following year he was invested with the command of all the troops employed against the Mahrattas, and returned in triumph to Seringapatam. His reception at court by the young rajah and his ministers was most gracious ; and he was distinguished by the title of Behauder (the champion), which he ever after retained. In the month of May, 1760, Hyder was induced by the intrigues of the French to detach to their assistance almost the whole of the regular army then at Seringapatam ; and now whilst he continued to reside at a short distance from the city, with a guard of only 100 horse, and a battalion of infantry, the mother of the rajah, a woman of considerable talent, weary of his tyranny, entered into a secret treaty with the Mahrattas to depose him from his command. The force of the chief she selected for her confidence was encamped on the frontiers, and he agreed to send, on an appointed day, 6000 chosen horse to her assistance ; but owing to an unforeseen procrastination, and a precipitate attack from the foot, on the canton-ment of Hyder, he effected his escape with his cavalry to Bangalore. This was in August 1760. Immediately he sent off to recal the army

from the Carnatic, under the command of his brother-in-law Mukhdum Sahib ; and despatched orders to other detachments of his troops to join him without loss of time. What was of greater consequence, he was soon also joined by 200 French European cavalry, and 100 infantry, with some light artillery. With these forces he defeated the Mysore troops in several engagements, and in May 1761 obtained possession of the person of the rajah. Possessing now all the real power of a sovereign, Hyder by means of presents and intrigue procured from the Nizam of the Dekhan a grant of the zernindary of Mysore, with a pa-tent constituting him a heft hazary, or commander of 7000 horse in the imperial service, and the title of Nabob Hyder Aly Khan Behauder. In 1763 he conquered Bednoor, Soonda,

and Canara ; and in the three succeeding years Calicut and Malabar. In 1766 the rajah died ; and though his son was advanced nominally to the throne, as well asAis son, from whom the existing rajah is descended, Hyder in reality exercised from this period the whole sovereignty of Mysore, and conducted that series of able efforts against the British, and his other enemies, already detailed in our article INOIA.

MYSORE, or MAISOOR, a considerable town of the south of India, capital of the province bearing this name, is situated about nine miles from Seringapatam, on the top of a high hill. It was formerly called Pooragurry ; but, in the middle of the sixteenth century, was much improved by ene of the rujahs, and its name changed to Ma-hesh Ajaoor, shortened to Maisoor. In 1593 it was taken by the sovereign of Bejapore and held for a short period. Soon after this the seat of government was transferred to Seringapatam; but the fortress here was still kept in repair. In 1759 the expelled Dulwoy Nunjeraje got pos-

session of Mysore, and retained it for three months, in despite of the

efforts of Hyder Aly. In 1787 Tippoo Sultan ordered the fort and town to be levelled with the ground, and the materials to be used in erecting another fortress on a neighbouring height. The town was in consequence destroyed, and the inhabitants compelled to emigrate ; but the new situation called Nuzerbar having been found destitute of water, and the events of the war of 1799 having caused a new revolution, the materials which had been removed were brought back, and employed in rebuilding the palace of the young rajah. The town, now the seat of government, is about a mile in length, and continues to increase yearly. It is well supplied with water and provisions, and is considered a comparatively healthy place. Long. 76►► 52' E., lat. 12►► 16' N.

MYSTAGOGUE, n. $. Gr. fivTaywyfc; Lat. mystagogus. One who interprets divine mysteries; or one who keeps and exhibits church relics.

MYSTERIES.

MYSTERY,n.s. ˆ Fr. mˆsiere; Lat. MYSTE' RIANT, \mysterium ; Greek

MYSTE'RIOUS, adj. [pwzripiov, a secret.

MYSTE'RIOUSLY, adv. f Strictly, that which MYSTE'RIOUSNESS, n. s. \ is partly revealed MYS'TERIZE, v. a. J and partly secret; something profound beyond comprehension ; an enigma; any thing artfully made difficult; a trade or calling, so called, as Warburton thinks, from Fr. mestier : a mysteriant was one who presided over the ancient mysteries : to mysterise is, to explain mysteries or enigmas ; the other words follow the senses of mystery.

And that which is the noblest mysterie, Brings to reproach and common infamy.

Spenser.

They can judge as fitly of his worth, As I can of those mysteries which heaven Will not have earth U> know.

Shakspeare. Coriolanm.

To thy great comfort in this mystery of ill opinions, here's the twin

brother of thy letter.

Id. Merry Wives of Windsor. Instructions, manners, mysteries, and trades, Degrees, observances, customs, and laws, Decline to your confounding contraries.

Shakspeare.

Holy mysteries [must be studied] with this caution, that the mind for its module be dilated to the amplitude of the mysteries, and not the mysteries be straitened and girt into the narrow compass of the mind. Bacon.

Upon holy days, let the matter of your meditations be according to the myitery of the day ; and, to your ordinary devotions of every day, add the prayer which is fitted to the mystery. Taylor.

Our duty of preparation contained in this one word, try or examine, being after the manner of mysteries, mysteriously and secretly described, there is" reason to believe that there is in it very much duty. Id. Worthy Communicant.

My purpose is, to gather together into an union all those several portions of truth, and differing apprehensions of myiteriousness.

Then the true Son of knowledge first appeared, And the old dark mysterious clouds were cleared.

Denham. God at last

To Satan, first in sin, his doom applied, Though in myiterious terms.

Milton's Paradise Lutt. Each stair mysteriously was meant.

MUton.

Mysterizing their ensigns, they make the particular ones of the twelve tribes accommodable unto the twelve signs of the zodiack.

Brou-ne's Vulgar Errouri.

There often fall out so many things to be done on the sudden, that some of them must of necessity be neglected for that whole year, which is the greatest detriment to this whole mystery.

Evelyn’s Kalendar.

Important truths still let your fables hold,

And moral mysteries with art unfold. Granville.

Th’ose princes who were distinguished for myste. rious skill in government, fouhd, by the event, that they had ill consulted their own quiet, or the happiness of their people. _ Su-tft.

If God should please to reveal unto us this great mystery of the Trinity, or some other mysteriei in our holy religion, we should not be able to understand them, unless he would bestow on us some new faculties of the mind. M.

A proper secresy is the only mystery of able men ; mystery i? the only secresy of weak and cunning ones. ” ChttttrJuU.

MYSTERY is derived from the Greek /it> <rijptov, and in its modern acceptation imports something above human intelligence, something awfully obscure and enigmatical; any thing artfully made difficult ; the secret of any business or profession. The word is often used by the founder of the Christian religion, and more frequently by his apostles, especially St. Paul. In these cases it generally signifies those doctrines of Christianity which the Jews, prhr to the advent of the Messiah, either could not or did not un-

derstand. The Trinity in Unity, and the Unity in Trinity ; the incarnation of the Son of God ; the union of two natures in one and the same person, &c., we generally call mysteries, because they are above human comprehension. But our intention in this article is to lay before our readers an account of those Woppjjra, or secret rites of the pagan superstition, which were carefully concealed from the knowledge of the vul-gar, and which are universally denominated mysteries.

The word Mv?qpu>v is evidently deduced from Mvrijp ; but the origin of this last term is not altogether so obvious. The etymologies of it exhibited by the learned are various ; some of them absurd. The mysteries were imported into Greece from the East. In those regions, then, we ought to look for the etymology of the word Mistar, or mistur (Heb. inD,) signifies any place or thing hidden or concealed. Mistur is therefore, probably, the root of the word Mvrijp, myster.

The avarice and ambition of the pagan priests doubtless gave birth to the institution of mysteries. The ministers of that superstition alleged that some articles of their ritual were too profound to be understood by the vulgar; others too sacred to be communicated to men in a situation subordinate or contemptible. Things sacred and venerable, they alleged, would contract a taint and pollution by an intercourse with untutored souls. These were the ostensible motives for making that odious distinction between the popular religion, and that contained in the sacred and mysterious ritual. Of all the legislat<5rs of antiquity, the Cretan alone was prudent enough to see the absurdity of this, and to adopt a more liberal plan. Diodorus the Sicilian informs us, that the mysteries of Eleusis, Samothracia, &c., which were elsewhere buried in profound darkness, were among the Cretans taught publicly, and communicated to all the people. Minos, however, was a successful legislator, and his pretended intercourse with Jupiter Idaeus extended his influence and established his authority. He was therefore not under the necessity of calling in the mysteries to his assistance.

Mysteries were the offspring of Egyptian priestcraft. They were instituted with a view to aggrandise that order of men, to extend their influence, and to enlarge their revenues. To accomplish these objects they applied every en-gine to besot the multitude with superstition

and enthusiasm. They taught that themselves were the distinguished favorites of heaven, and that celestial doctrines had been revealed to them, too holy to be communicated to the profane vul-gar, and too sublime to be comprehended by them. After the mysteries were instituted, and had acquired a high reputation, legislators, magistrates, judges, and monarchs, joined in the imposture, with the same views. Priests and princes were actuated by the same spirit. The combination was equally advantageous to both.

The celebrated Mosheim is of opinion, that the mysteries were entirely commemorative ; that they were instituted to preserve the remembrance of heroes and great men, who had been deified

in consideration of their martial exploits, useful inventions, public virtues, and the benefits conferred on their contemporaries. In opposition to this singular opinion, it may be urged, that the method of preserving the memory of great and illustrious men, generally adopted, was the establishing festivals, celebrating games, offering sacrifices, singing hymns, dancing, &c. We can discover no secret mysteries instituted for that purpose, at least in their original intention. The mysteries were performed in secret ; they were intended to be communicated only to a few ; of course, had they been instituted to immortalise the memory of heroes and great men, the authors would have acted the most foolish and inconsistent part imaginable. Instead of transmitting the fame of their heroes with eclat to posterity, they would thus have consigned it to eternal oblivion.

The mysteries were therefore the offspring of bigotry and priestcraft ; they originated in Egypt, the native land of idolatry. In that country the priesthood ruled predominant. The kings were engrafted into their body before they could ascend the throne. * They were possessed,' says Diodorus, ' of a third part of all the land of Egypt. All the orientals, but especially the Egyptians, delighted in mysterious and allegorical doctrines. Every maxim of morality, everv tenet of theology, every dogma of philosophy was wrapt up in a veil of allegory and mysticism. This propensity conspired with avarice and ambition to dispose them to a dark and mysterious system of religion.' ' The Egyptians,' says Plutarch, ' were a gloomy race of men; they delighted in darkness and solitude. Their sacred rites were generally celebrated with melancholy airs, weeping, and lamentation. This gloomy bias must have stimulated them to a congenial mode of worship.'

The rites of Osiris were performed with loud shrieks and lamentations when he was put into the coffin ; and with the most extravagant mirth when he was raised from the dead, or supposed to be found again. Their hymns were always composed in melancholy affecting strains : and consisted of lamentations for the loss of Osiris, the mystic flight of Bacchus, the wandering of Isis, and the sufferings of the gods. The Canaanites, who were a kindred tribe of the Mizraira or Egyptians, imitated them in their sacred rites. At Byblus, Berytus, Sidon, and Tyre, they used mournful dirges for the death of Adonis or Tammuz, who was the same with the Egyptian Osiris, i. e. the sun. The Egyptians then instituted a mode of worship congenial with their natural gloomy disposition. The re-cess of the sun towards the southern hemisphere was the death of Osiris ; the wanderings of Isis, in search of her husband and brother, allegorically imported the longings of the earth for the return of the fructifying influences of the solar heat. When that luminary returned towards the summer solstice, and grain, trees, fruits, herbs, and flowers, adorned the face of nature, another festival was celebrated of a different complexion. All Egypt was dissolved in the most extravagant mirth and jollity. During the celebration of those festivals, the priests formed allegorical ie~

presentations of the sun and the earth. They personified both, and allegorised their motions, aspects, relations, accesses, recesses, &c., into adventures, peregrinations, sufferings, contests, battles, victories, defeats, &c. These, in time, were held as real occurrences, and became essential articles of the popular creed. From this source were derived the conquests of Dionysias or Bacchus, so beautifully exhibited by Nonnius in his Dionysiacs ; the wanderings of lo, afterwards adorned by ./Eschylus, &c.

Whether the Egyptians deified mortal men in the earliest ages has been much controverted. Jablonski endeavours to prove the negative. Plutarch tells us that Isis, Osiris, llorus, Anu-bis, and Typhon, were once mortal persons, who were exalted into demons after their death. Diodorus, in his history of Isis and Osiris, Pan, Hermes, &c., represents

them as human personages ; and says that the Egyptians imagined that after their decease they transmigrated into stars. From these authorities we may believe that the Egyptians deified those who had distinguished themselves by prowess, wisdom, arts, and inventions. This was a constant practice among the Greeks. The exploits of those heroes had been disguised by allegorical traditions. They had been magnified beyond all dimensions, to astonish and intimidate the vulgar, and to gratify their propensity towards the marvellous. All these secrets were developed in the mysteries. The catechumens were informed of every particular relating to the birth, the life, the exploits, the adventures, misfortunes, and decease, of those heroic personages. The magicians of Egypt were abundantly qualified for exhibiting angels in machines. The souls of virtuous men, who had not been eminent enough to merit the honor of deification, were shown in all the perfection of Elysian felicity; and the souls of tyrants, and of the children of Typhon (the evil spirit of the Egyptians), were shown in Tartarus, suffering all the extremes of infernal punishment. From these exhibitions the mystagogues took occasion to read their pu-pils suitable lectures on the happy tendency of a virtuous conduct, and the misery consequent upon a contrary course. They set before them immortal renown, deification, and elysium, on the one hand, and eternal infamy and misery on the other. This may be deemed the chief advantage accruing from this institution.

The catechumens were also taught many secrets of physiology. This Pharnutus every where affirms, especially in his last book De Nat. Deor., towards the end. Plutarch, too, says that most of the Egyptian fables were allegorical details of physical operations. Eusebius acquaints us that the physiology, not only of the Greeks, but likewise that of the barbarians, was nothing but a science of nature, a concealed and dark theology, involved in fable, whose hidden mysteries were so veiled over with allegories, that the ignorant million were as little capable of comprehending what was said, as what was suppressed in silence. Dionysius of Halicarnassus says that the fables of the Greeks detail the operations of nature by allegories. Proclus makes the same observation. The Egyptians, says he, taught the latent operations of nature by fables. These physiological

secrets were expounded to the initiated; and that the Egyptian priests were deeply skilled in physiological science cannot be disputed. But the vulgar were excluded from all those secrets which were reserved for the nobility and sacerdotal tribes.

The original subjects of these institutions were the articles specified above : but, in process of time, numerous new rites, ceremonies, usages, and even doctrines, were superinduced, which were utterly unknown to the original hierophants. Their subjects were at first simple and easy to be comprehended ; in time they became complex, intricate, and unintelligible. To celebrate those mysteries with the greater secrecy, their temples were so constructed as to favor the artifice of the priests. The fanes, in which they performed their rites and ceremonies, were subterraneous apartments, constructed in such a manner that every thing that appeared in them breathed an air of solemn secrecy. Their walls were covered with hieroglyphic paintings and sculpture, and the altar was situated in the centre of the apartment. Modern travellers have discovered vestiges of them ; and Shaw, Pococke, Uelzoni, and others, describe those dark abodes. In those subterraneous mansions, which the priests had planned with the most consummate skill, the kings, princes, and great men of the state, encountered the dangers and hardships contrived to prove their prudence, fortitude, patience, abstinence, &c. These were appointed to try their merit ; and by these the hierophants decided whether they were duly qualified. Upon such occasions those magical tricks were exhibited, for which the magicians of Egypt were so much celebrated. The strange and terrifying sights, the alternate successions of light and darkness, the hideous spectres, the frightful howlings reechoed by these infernal domes, the scenes of Tartarus and Elysium, exhibited alternately and in quick succession, must hare made a deep and lasting impression on the mind of the affrighted votary.

From the scenes exhibited in the Egyptian mysteries, especially those of Isis and Osiris, the Greeks seem to have copied their ideas of the infernal regions, and the subterraneous mansions of departed souls. Many colonies of Egyptians settled in Greece. From these the aotSot, or early bards of Greece, learned them imperfectly. Of course we find Homer's account of the infernal regions, and of the state of departed souls, lame and incoherent. Succeeding bards obtained more distinct information. Euripides, Aristophanes, Plato, &c., paved the way for Virgil, who borrowed his ideas from all of them. These, under his hand, in the sixth ,'Eneid, grew into a system beautiful, regular, uniform, and consistent. The materials were created to his hand ; he had only to collect, polish, arrange, ,and connect them.

Every god and goddess of Egypt respectively had their mysteries; but, as those of his and Osiris were the most celebrated, they became principal objects of pursuit, as well as of imitation, to the neighbouring nations. These were carried into Persia by Zoroastrcs, or Zerdusht, and consecrated to Mithras. Orpheus imported

them into Thrace; Cadmus brought them into Boeotia, where they were sacred to Bacchus. Inachus established them at Argos in honor of Juno; Cyniras in Cyprus, where they were dedicated to Venus. In Phrygia they were sacred to Cybele, the mother of the gods. This progress of the mysteries is rendered the more probable, when we consider that a great part of Greece was planted with colonies from Egypt, Phoenicia, Palestine, &c. Orpheus, if not an Egyptian, was at least of oriental extraction. Inachus, Cadmus, and Melampus, are universally allowed to have been Egyptians. Erechtheus, in whose reign the Eleusinian mysteries were established, was an Egyptian by birth, or sprung from Egyptian ancestors. The Egyptians, then, in those early ages, did not view the Greeks in the light of aliens, but as a people nearly related, either to themselves, or their brethren the Phoenicians. Although every particular deity had his own peculiar mysterious sacred rites, yet Mithras, Osiris, and Ceres, were deemed the most august, and were universally worshipped.

Mithras, or, according to the Persian, Mihr, ###was one of the great gods of the Asiatics. His worship was for many ages confined to ‘Persia. Afterwards it was propagated so far and wide, that some have imagined they have discovered vestiges of it even in Gaul. Mihr, according to Dr. Hyde, signifies love, and likewise the sun. It is by others reckoned a cognate of the Hebrew word muthir, excellence. Mithras was the sun among the Persians ; and in honor of that luminary this institution was established. Mithras, according to Plutarch, was the middle god between Oromaz and Ahriman, the two supreme divinities of Persia. But the fact is, that the solar planet was the visible emblem of Oromaz, the good genius of the Persian tribes, and the same with the Osiris of the Egyptians. The grand festival of Mithras was celebrated six days, in the middle of the month Mihr, which began September 30lh, and ended October 30th.

Zoroaster worshipped Mithras, or the sun, in a certain natural cave, which he formed into a temple, where Mithras was represented as presiding over the lower world with all the pomp of royal

magnificence. In it were the symbols of Mithras and of the world, philosophically and mathematically exhibited. Mithras was sometimes represented as mounted on a bull, which he kills with a sword. On some bass reliefs still existing, he appears as a young man with his tiara turned upward, clothed with a short tunic and breeches, after the Persian fashion, or with a small cloak. Over the cave were seen the chariots of the sun and moon, and divers constellations. In one of those caves the ceremonies of initiation were performed ; but, before the candidate could be admitted, he was forced to undergo a course of probationary exercises, so numerous, and so rigorous, that few had courage and fortitude to go through them. He was obliged to live a life of virtue and abstinence for seven years previous to his initiation. Some months before it, he was obliged to submit to an austere fast of fifty days. He was to retire several days to a deep and dark dungeon, where he was successively exposed to all the extremes of

heat and cold. Meantime he frequently under went the bastinado, which the priests applied without mercy. Some say this fustigation continued two whole days, and was repeated no fewer than fifteen times. In the course of these probationary exercises the candidate was generally reduced to a skeleton; and some actually perished in the attempt.

Upon the eve of the initiation, the aspirant braced on his armour, to encounter giants and savage monsters. In those spacious subterraneous mansions a mock hunting was exhibited. The priests, and all the subordinate officers, transformed into lions, tygers, leopards, bears, wolves, &c., assailed bim with loud howlings, roaring, and yelling, and every instance of ferine fury. In these mock combats the hero was often in danger of being really worried, and always came off with bruises and wounds. Lampridius informs us that, when the emperor Commodus was initiated, he killed one of the priests who attacked him in the form of a wild beast. The Persians worshipped Mithras by a perpetual fire : hence the votary was obliged to undergo a fiery trial, by passing seven times through the sacred fire, and each time plunging himself in cold water. Some have made these probationary penances amount to eighty; others only to eight. The candidate, having undergone all these torturing trials with fortitude, was declared a proper subject for initiation. But, before his admission, he was to bind himself by the most horrible oaths and imprecations, never to divulge an article of all that should be communicated to him.

What aTroppjjra or ineffable secrets were imparted to the initiated it

is impossible to discover. But we may rest assured, that the traditions concerning the origin of the universe; the nature, attributes, perfections, and operations, of Oro-mazdes; the baleful influences of Ahriman; and the benign effects of the government of Mithras, were unfolded and inculcated. The phenomena of nature, discovered by the magi, were also exhibited ; and the application of their effects, to astonish and delude the vulgar, were taught. Virtue was warmly recommended, and vice represented in the most frightful colors. These initiations are mentioned by Lampridius, Justin, and Tertullian. The last of these speaks of a kind of baptism, which washed from the souls of the initiated all the stains they had previously contracted ; and mentions a particular mark which was imprinted upon them. There was presented to the initiated a crown suspended on the point of a sword ; but they were taught to say, Mithras is my crown ; to intimate that they looked upon the service of that deity as their chief honor.

After the Teletae, or rites which confer perfection, were finished, the pupil was brought out of the cave or temple, and with great solemnity proclaimed a Lion of Mithras ; a title which imported strength and intrepid courage in the service of the deity. They were now consecrated to the god, and were supposed to be under his immediate protection ; which animated them to the most daring enterprises. The worship of Mithras was introduced into the Roman empire towards the end of the republic, where it made

very rapid progress. When Christianity began to make a figure in the empire, the champions for paganism proposed the worship of this power of benevolence, to counterbalance that worship which the Christians paid to Jesus Christ, the true Sun of righteousness. But this mode was soon abolished, together with the other rites of paganism. The Persian grandees affected names compounded with Mithras: hence Mithridates, Mithrobarzanes, &c. Hence, too, the precious stone called Mithridat, which by the reflection of the sun sparkled with a variety of colors. (Solinus, c. x.) There is likewise a certain pearl, of many different colors, which they call Mithras. It is found among the

mountains near the Red Sea ; and, when exposed to the sun, it sparkles with a variety of dyes. We likewise find a king of Egypt of that name who reigned at Helio-polis ; who, in consequence of a dream, erected an immense obelisk to the Sun, near that city. The votaries of Mithras pretended that he was sprung from a rock, and that therefore the place where the mysterious ceremonies were communicated to the initiated was always a cave. Many reasons have been assigned for the origin of this rockborn deity. Dr. Doig of Stirling supposes that, as ††† a rock is the symbol of strength and stability, the dominion of Mithras, in the opinion of his votaries, was firm as a rock, and stable as the everlasting hills.' Mr. Bryant, in his Analysis of Mythology, discusses this point with deep research.

D'Anquetil briefly delineates the functions of this deity. ' The peculiar functions of Mithras are to fight continually against Ahriman and the impure army of evil genii, whose constant employment is to scatter terror and desolation over the universe ; to protect the frame of nature from the demons and their productions. For this purpose he is furnished with 1000 ears and 1000 eyes, and traverses the space between heaven and earth, his hands armed with a club or mace. Mithras gives to the earth light; to men, corn, pastures, and children ; maintains harmony upon earth, watches over the law,' &c.

The original Dionysius or Bacchus was the Osiris of the Egyptians, or the Sun. The Greek name of that deity is plainly oriental, being compounded of Si, bright ; and nasia or nasa, in the J††,o\ic dialect vvoa, a prince. Herodotus tells us, that Osiris is Dionysius in the Greek language : Martianus Capellus expresses the same idea. The rame Osiris has much embarrassed critics and etymologists. The learned Jablonski has taken much pains to investigate the etymology of it. If it is granted that the Hebrew and Egyptian tongues are cognate dialects, it is the Chosher or Oshir of the former, which imports, to make rich. The term Osiris was applied both to the suti and to the Nile ; both which by their influence contributed respectively to enrich and fertilise the land of Egypt. Job, or lo, was the name of the moon.

In the earliest periods of the Egyptian monarchy there appeared two illustrious personages. Osiris and Isis, the children of Cronus; and they were married, according to the custom of the Egyptians. As the brother and husband had assumed the nnme of the Sun ; so the sister

and consort took that of Isis, that is, the woman, a name whirh the

Egyptians applied both to the moon and to the earth. Osiris having left his regent, with Hermes as her prime' minister, and Hercules as general of her armies, quitted Egypt with a numerous body of troops, attended by companies of fauns, satyrs (men and women in these habits), singing women, musicians, &c., and traversed all Asia to the eastern ocean. He then returned homeward through the upper Asia, Thrace, Pontus, Asia Minor, Syria, and Palestine. Wherever he marched, he conferred numberless benefits on the savage inhabitants. He taught them husbandry, gardening, botany, Sec.; instructed them in the culture of the vine ; and, where vines could not be produced, he taught them to produce fermented liquor from barley. He built many cities, planted numerous colonies, instituted wholesome laws, established religious rites, and left priests to teach the observance of them. In short, he left every where lasting monuments of his generosity and beneficence. Where he found the people docile and submissive, he treated them with kindness and humanity : if any showed themselves obstinate, he compelled them to submit to his institutions bv force of arms.

Most persons have considered this expedition as fabulous. At the end of three years he returned to Egypt, where his brother Typhon had been forming a conspiracy against his life. He invited Osiris, with some other persons, to an entertainment. When the repast was finished he produced a beautiful coffer, highly finished, and adorned with studs of gold ; promising to bestow it on the person whom it should fit best. Osiris made the experiment. The conspirators nailed down the cover upon him. and threw the coffer into the river. This coffer, now the coffin of Osiris, was wafted by the winds and waves to the neighbourhood of Byblus, a city of Phoenicia, where it was cast on shore, at the foot ot a tamarind tree. Isis, in the mean time, disconsolate, attended by Anubis, ransacked every quarter in search of Osiris. At length, being informed that his body was lodged near Byblus, she repaired to that city, was introduced to the queen, and after various adventures recovered the corpse of her husband, which she carried back to Egypt : but Typhon found her on the banks of the Nile ; and, having robbed her of her charge, cut the body into fourteen parts, and scattered them up and down. Once more, Isis set out in quest of those parts, all of which, one excepted, she found, and interred each in the place where she found them; and hence the many tombs of Osiris in that country. These tombs were denominated taposins by the natives Many other fabulous adventures were ascribeu to these two personages. See Diod. Sic. Bryant's Analysis of Ancient Mythology, and M. Cour de (lebelin.

To commemorate these adventures, the mysteries of Isis and Osiris

were instituted ; and from them those of Bacchus and Ceres, among the Greeks, were derived. Of the Egyptian solemnity, we have an exact epitome in one of the fathers of the church. ‘They deplore annually, with deep lamentations and shaved heads, tie

catastrophe of Osiris, over a buried statue of that monarch. They beat their breasts, mangle their arms, tear open the scars of their former wounds; that by annual lamentations the catastrophe of his miserable death may be revived in their minds. After a certain number of days, they pretend that they have found the remains of his mangled body ; their sorrows are lulled asleep, and they break out into immoderate joy.’ Osiris and Isis were probably sovereigns of Egypt at a very early period ; they had conferred many benefits on their subjects, who, from gratitude, paid them divine honors after their decease ; in time they were confounded with the sun and the moon ; and their adventures magnified beyond all credibility, interlarded with fables, and allegorised in the mysteries.

The same mode of worship was established at Byblus, and in after ages at Tyre. The Mizraim and Chanaanim were nearly connected by blood, and their religious ceremonies were derived from the same source. Among the Phoenicians this deity obtained the names of Adonis and Bacchus. The former is rather an epithet, signifying my lord, than a name : the latter, from bahah, to weep, is evidently an allusion to the weeping with which the rites were performed. We now proceed to the mysteries of Osiris, as they were celebrated among the Greeks and Thracians, under the name of the Orgia of Dionysius or Bacchus.

Orpheus, the celebrated Thracian philosopher, had travelled into Egypt in quest of knowledge ; and from that country, he imported the Bacchanalian rites. Some affirm that those rites were imported from Egypt or Phoenicia by Cadmus himself, a native of the former country, who spent some time in the latter, before he emigrated to Boeotia. Semele, the daughter of Cadmus, and the mother of the Grecian Bacchus, was struck with lightning at the very instant of his birth. The

child was denominated Bacchus from the sorrow this accident occasioned in the family. Cadmus sent his infant grandson to his relations in Phoenicia or Egypt. There he was instructed in the mysteries of Isis and Osiris, and in all the magical tricks of the Egyptian priests. Thus accomplished, he returned to Thebes with the traditional retinue of the original deity, and claimed divine honors. This claim was not admitted without opposition ; Pentheus, another grandson of Cadmus, was torn to pieces by the frantic Bacchanalians upon Mount Citheron, because he attempted to interrupt them in celebrating the orgia.

The Greeks attributed all the actions of the Egyptian hero to their new Bacchus. To him they ascribed all the adventures and exploits of the oriental archetype. Consequently in the orgia every tiling was collected that had been imported relating to Osiris ; and to that farrago was joined all that the Grecian rhapsodists thought fit to invent. Hence the religious ceremonies of the Greeks became a medley of inconsistencies. The adventures of the Theban pretender were grafted upon those of the Egyptian archetype, and out of this combination was formed a tissue of adventures disgraceful to human nature, absurd, and inconsistent. Indeed

the Theban Bacchus was a monster of debauchery ; whereas the Egyptian is represented as a person of an opposite character. Of course the mysteries of the former were attended with the most shocking abominations. These mysteries were first celebrated at Thebes the capital of Boeotia, under the auspices of the family of Cadmus. From this country they made their way into Greece, and all the neighbouring parts of Europe.

When the day appointed for the celebration of the orgia approached, the priests issued a proclamation, enjoining all the initiated to equip themselves according to the ritual. The votaries were to dress themselves in coats of deer skins, to loose the fillets of their hair, to cover their legs with the same stuff with their coats, arid to arm themselves with thyrsi. The Bacchanalians, especially the Thracians, used often to quarrel and commit murder in their drunken revels. A law was therefore enacted, that the votaries, instead of real spears, should arm themselves with wooden weapons. The statue of the deity, which was covered with vine or ivy-leaves, was elevated on the shoulders of the priests. The cavalcade then proceeded in the following order: ††† First, hymns were chanted in honor of Bacchus. Ho-race, in his dithyrambic odes, has pointed out the

subjects of these Bacchanalian songs. In the hymns attributed to Orpheus we find several addressed to this deity, under different titles. The first division of the votaries preceded, carrying a pitcher of wine, with a bunch of the vine. Then followed the he-goat; an animal odious to Bacchus, because he ravages the vines. The chanting hymns, the sacrificing the he-goat, and the revels, games, and diversions, gave birth to the dramatic poetry of the Greeks; as the persons habited as fauns, sylvans, and satyrs, furnished the name of another species of poetry. Then appeared the mysterious coffer, containing the secret symbols of the deity. These were the phallus, some grains of sesama, heads of poppies, pomegranates, dry stems, cakes baked of the meal of different kinds of corn, salt, carded wool, rolls of honey, and cheese; a child, a serpent, and a fan. Clemens Alexandrinus mentions also the dye, the ball, the top, the wheel, the apples, the looking-glass, and the fleece. The articles first mentioned were of Egyptian original; the last were superinduced by the Greeks, in allusion to his being murdered and torn in pieces when he was a child by the machinations of Juno, who prevailed with the Titans to commit the horrid deed. These last were memorials of his boyish play-things ; for, says Maternus, ‘ the Cretans, in celebrating the rites of the child Bacchus, acted every thing that the dying boy either said, or did, or suffered.’ ‘ They likewise,’ says he, ‘ tore a live bull in pieces with their teeth to commemorate the dismembering of the boy.’ But Porphyry says, ‘ that in the island ;of Chios they sacrificed a man to Bacchus, and mangled and tore him limb from limb.’

On the day set apart for this solemnity, men and women, crowned with ivy, their hair di-shevelled, and their bodies almost naked, ran about the streets, roaring aloud Evohe Bacche !

intoxicated with wine and enthusiasm, dressed like Satyrs, Fauns, and Silenuses, in postures and attitudes the most disgustingly indecent. Next followed a company mounted upon asses, attended by Fauns, Bacchanals, Thyades, Mi-mallomdes, Naiads, Tityri, &c., who made the adjacent places echo to their frantic howlings. After this

tumultuous herd were carried the statues of victory, and altars in form of vine-sets crowned with ivy, smoking with incense. Then appeared several chariots loaded with thyrsi, arms, garlands, casks, pitchers, vases, tripods, &c. The chariots were followed by young virgins of rank, who carried the baskets and little boxes which contained the mysterious articles. These, from their office, were called cistophorae. The phallophori followed with a chorus of itophallophori habited like Fauns, counterfeiting drunkeif persons, and singing in honor of Bacchus. The procession was closed by a troop of Bacchanalians crowned with ivy, interwoven with branches of yew, and with serpents. Sometimes at these scandalous festivals, naked women whipped themselves, and tore their skins in a barbarous manner. The procession terminated on Mount Citheron, when it set out from Thebes ; and in oilier places, in some distant unfrequented desert, where the votaries practised every species of debauchery with secresy arid impunity. Orpheus saw the degeneracy of these ceremonies; and in endeavouring to reform them lost his life. Pentheus suffered in the like attempt, being torn in pieces by the Bacchanalians, among whom were his own mother and aunts. For further information on this subject, we refer the reader to Diod. Sic. Apollod. Bibl Euripid. Bacchae. Aristophanis Ranse. Nonn. Dionys. Ban. My-thol. Voss. de orig. Idol. Fourmont, Reflexions sur 1'origine des anciens peuples. Bryant's Analys., andCour de Gebelin, Calendriers.

We proceed to the Eleusinian mysteries, which, among the ancient Greeks and Romans, were treated with a superior degree of awe and veneration. These were instituted in honor of Ceres, the goddess of corn ; who, according to the most authentic accounts, was the Isis of the Egyptians. The mysteries of Osiris and Isis were originally instituted in honor of the sun and moon, and afterwards consecrated to an Egyptian prince and princess, who had been deified by that people. We know of no more exact and brilliant description of the ceremonies of that goddess, in the most polished ages of the Egyptian superstition, than what we meet with in the witty and florid Apuleius (lib. xi.), to which we refer our curious readers. By what means, and upon what occasion, those mysteries were introduced into Attica, and established at Eleusis, Diodorus Siculus illustrates : ' Erectheus,' says he, ' a prince of Egyptian extraction, once reigned at Athens. A scorching drought, during his reign, prevailed over all the world, except Egypt; which, from the humidity of its soil, was not aflected by that calamity. The fruits of the earth were burnt up ; and multitudes of people perished ; Erectheus imported a vast quantity of grain from Egypt to Athens. The people, relieved by his munificence, unanimously elected him king, and he taught them the mysteries of

Ceres at Eleusis. In those times the goddess is said to have appeared at Athens, three times ; because coin was thrice imported into Attica.' Here then we have the whole mystery of the arrival of Ceres in Attica, and the institution of her mysteries at Eleusis unveiled. The whole is evidently an allegory.

Triptolemus, another Egyptian, was appointed by Erectheus to export this superfluous store. That hero, according to Pherecydes, was the sou of Oceanus and Tellus, or the sea and the earth ; because his parents were not known, and because he came to Eleusis by sea. The ship in which he sailed was decorated with the figure of a winged dragon ; therefore, he was said to be wafted through the air in a chariot drawn by dragons. Wherever TriptoJemus disposed of his corn, thither were extended the wanderings of Ceres. Together with the grain imported from Egypt, Erecthei s, or Triptolemus, or both, transported into Attica a uumber of priests and priestesses ; who spread their rites over almost all Asia and great part of Europe. The Greek and Roman idolatry originated from them. Th►►- worship of Isis was introduced into every country where Triptolemus sold his grain. Hence the wanderings of Ceres in search of her daughter Proserpine. The disappearing of the fruiK of the earth, of which Proserpine is the emblem, is the allegorical rape of that goddess, by Pluto, sovereign of the infernal regions. The wanderings of Isis in search of Osiris furnished in-model for the perigrinations of Ceres.

Ceres, the Roman name of the goddess ot corn, was unknown to the Greeks. They always denominated her Aˆijrep, Demeter (whence Demetrius), or Damater, which is rather an epithet than a proper name ; formed of the C'haldaic particle da, the, and mater, mother. Cecrops I., king of Attica, had established the worship of the Saitic Athena, or Minerva, in that region, and consecrated his capital to that deity. Erectheus introduced the worship of Isis or Damater. The subjects of Cecrops were a colony of Saites, and readily embraced the worship of Minerva ; but the Aborigines, being accustomed to a maritime life, were more inclined to consecrate their city to Neptune. Cecrops by a stratagem secured the preference to Minerva. Erectheus, to give equal importance to his patroness, instituted the Eleusinian mysteries.

The arch priestess, who "personated the newly imported deity, was entertained by one Celeus, king or viceroy of the district of Eleusis. Upon her arrival, a farce was acted not very suitable to the character of a goddess. The indecencies attending the first appearance of the goddess, or the Egyptian dame who assumed her character, were copied from similar unhallowed modes of behaviour, practised in the

solemn processions of her -native country. These coarse jokes had an allegorical signification in Egypt; and among the most ancient Greeks the same spirit was diffused by the oriental colonists; but afterwards they abandoned the allegorical style, and lost every idea of their religious, moral, or physical

interpretation; while the shameful rencontre between Ceres and Banbo, or Jambe, was retained in the mysteries. See Appollodorus and Clemens Alexandrinus. At the time that Ceres arrived in Attica, Bacchus likewise made his appearance in that country. He was entertained by one Icarus ; whom, as a reward for his hospitality, he instructed in the art of cultivating the vine, and making wine. Thus both agriculture and the art of managing the vintage were introduced into Athens about the same time. Ceres was a priestess of Isis ; Bacchus was a priest of Osiris. The arrival of these two personages from Egypt, with a number of inferior priests in their train, produced a revolution in Athens, with respect to life, manners, and religion. The sacred rites of Isis, or the Eleusinian mysteries, date their institution from this period. When this company arrived at Eleusisthey were entertained by the most respectable persons in that district. Their names, according to Clem. Alexand., were Banbo, Dysaulis, Triptolemus, Eumolpus, and Eubulus. From Eumolpus descended a race of priests called Eumolpi-dae, who figured at Athens many ages after. Triptolemus was an ox-herd, Eumolpus a shepherd, and Eubulus a swine-herd. These were the first apostles of the Eleusinian mysteries. Erectheus, or Pandion, countenanced the seminary, and built a small temple for its accommodation in Eleusis, a city of Attica, a few miles west of Athens, and capital of one of the twelve districts into which that territory was divided. This was the scene of those renowned mysteries, which for nearly 2000 years were the pride of Athens.

The mysteries were divided into the greater and lesser. The latter were celebrated at Agree, a small town on the Ilyssus ; the former were celebrated in the month Boedromion ; the latter in tliat of

Anthesterion. All the lesser ceremonies, described under the article ELEUSINIA, being duly performed, the candidate was carried into the hall appointed for initiation. There he was taught the first elements of those arcana which were afterwards more fully revealed in the more august mysteries of Eleusis. The pupils at Agrsewere called Mystae, or probationers; those of Eleusis were denominated Epoptae, importing that they saw as they were seen. The lesser mysteries were divided into several stages, and candidates were admitted to them according to their quality and capacity respectively. Those who were initiated in the lowest were obliged to wait five years before they were admitted to the greater. Those who had partaken of the second kind underwent a noviciate of three years; those who had been admitted to the third, only of two years ; and those who had gone through the fourth were admitted to the greater at the end of one year ; which was the shortest period of probation a candidate could legally undergo. As to the greater mysteries, originally none but the natives of Attica were admitted to them. In time, however, the pale was extended so far and wide as to comprehend all who spoke the Greek language ; but all foreigners were debarred. Mercuies, Bacchus, Castor, Pollux, ./ Esculapius, and lii ppocrates were initiated in an extraordinary manner, from a regard to their high character. All barbarians, too, were excluded ; yet Anacharsis the Scythian was indulged that privilege, in consequence of his reputation for science. All persons guilty of manslaughter, all magicians, enchanters, all impious and profane persons, were expressly prohibited the benefit of this pagan sacrament. At last, however, the gate became wider, and people of all nations, provided their character was fair, were admitted. The Athenians at last initiated even their infants, that they might be under the protection of the goddess.

On the evening of the 15th day of Boedromion the initiations commenced ; for all the most solemn rites of paganism were performed during the night ; they were indeed generally works of darkness. On this day there was a solemn cavalcade of Athenian matrons from Athens to Eleusis, in carriages drawn by oxen. In this procession the ladies used to rally one another in pretty loose terms, in imitation of the Isiac procession described by Herodotus. The most remarkable object in this procession was the Mundus Cereris, contained in a small coffer or basket. This was carried by Athenian matrons. In this coffer were lodged the comb of Ceres, her mirror, a serpentine figure, some wheat and barley, the pudenda of the two sexes, &c. The procession ended at the temple, where this sacred charge was deposited with the greatest solemnity. We have no complete description of the temple of Eleusis. That of its ruins, by Dr.

Chandler, is inserted under ELEUSIS. Strabo informs us that the mystic sanctuary was as large as a theatre. In the porch of this tem-ple the candidates were crowned with garlands of flowers, which they called liymera, or the desirable. They were dressed in new garments, which they continued to wear tiil they were quite worn out. They washed their hands in a laver filled with holy water, as a symbol of purity. Before the doors were locked, one of the officers of the temple proclaimed with a loud voice a stern mandate, enjoining all the uninitiated to keep at a distance from the temple, and denouncing the most terrible menaces if any should dare to pry into the holy mysteries. Any person who ventured into the sanctuary, even through ignorance, was put to death without mercy.

The chief minister of these far-famed mysteries was the hierophant. He was styled king, enjoyed that dignity during life, was always an Athenian, and presided in the solemnity. This personage, says Eusebius, represented the Demiurgus, or Creator. ‘ Now in the mysteries of Eleusis,’ says he, ‘ the hierophant is dressed out in the figure of the demiurgus. The demiurgus,’ adds he, ‘ whom the Egyptians call Cneph, is figured as a man of an azure color, shaded with black, holding in his right hand a sceptre, and in his left a gird e, and having on his head a royal wing or feather wreathed round.’ The next minister was the daduchus, or torch-bearer ; who, according to Eusebius, was. attired like the sun, the visible type of the supreme demiurgus. The third was the person who officiated at the altar. He was habited like the moon. His

office was to implore the favor of the gods for all the initiated. The sacred herald was another principal actor. His province was to recite every thing that was to be communicated to the novices. lie probably represented Thoth or Mercury, the interpreter of the gods. There were also five epimeletae or curators, of whom the king was one, who jointly directed the whole ceremonial ; and ten priests to offer the sacrifices. We return to the mystae, or candidates for initiation. Eusebius, Clemens Alexandrinus, and Justin, mention a hymn

composed by Orpheus, which was sung by the mystagogue upon that occasion. That some sacred hymn was chanted is highly probable; but that it was composed by Orpheus appears problematical. Before the ceremony opened, a book was produced, which contained every thing relating to the teletce. This was read over to the mystic ; who were ordered to write out copies of it. It was kept at Eleusis in a sacred repository, called petroma, between two large stones.

The initiations began with a representation of the wanderings of Ceres, and her lamentations for her daughter. One of the company having kindled a firebrand at the altar, and sprung to a place in the temple, waving the torch furiously, a second snatched it from him, roaring and waving it in the same frantic manner; then a third, a fourth, &c., in the most rapid succession. This was an imitation of Ceres, who perlustrated the earth with a flaming pine in her hand, which she had lighted at mount Etna. When the pageant of the goddess was supposed to arrive at Eleusis, a solemn pause ensued, and a few trifling questions were put to the mystic. The mundus Cereris was then displayed before the mystae, and the mystagogue read a lecture on the allegorical import of these symbols, which was heard with the most solemn silence. Many traditions were then communicated to the mystae concerning the origin of the universe, &c., as we learn from Clemens Alexandrinus and Cicero. This cosmogony was that of the most ancient Egyptians, and of the orientals in general. It is beautifully exhibited in Plato's Timaeus, and by Ovid in his Metamorphoses, lib. 1, fab. 1 ††† 3. The next scene consisted of the exploits of the gods, demigods, and heroes, who had been advanced to divine honors. These were displayed as passing before the mystae in pageants fabricated on purpose. But, though thus ' there were gods many and lords many,' yet, according to Eusebius, the unity of the Supreme Being was maintained and inculcated. This was the original doctrine of the hierophants of Egypt. It was maintained by Thales and all the Ionian school. It was the doctrine of Pythagoras, who probably gleaned it up in Egypt, along with many other dogmas which he claimed us his own.

But however the unity, and some of the most obvious attributes of the Supreme Being, might be inculcated, the tribute of homage was duly paid to the subordinate divinities. The initiated were taught to look to the dii majorum gentium with awe and veneration, as beings endowed with ineffable power, wisdom, purity, goodness, &c. These they were exhorted to adore ; to offer

sacrifices, prayers, Stc. They were instructed to look up to hero-gods and demigods, as beings exalted to the high rank of governors of different parts of nature, as the immediate guardians of the human race ; in short, as gods near at hand, ready upon all occasions to confer blessings upon the virtuous. As the two chief ends of these initiations were the exercise of heroic virtues in men, and the practice of uniform piety by the candidates for immortal happiness, the hierophants had adopted a plan well accommodated to these purposes. The virtuous conduct and he-roic exploits of the demigods were magnified by the most pompous eulogiums, and enforced with suitable exhortations. The heroes and demigods themselves were displayed in pageants, or vehicles of celestial light. Their honors, offices, and other appendages, were exhibited with all the splendor that the sacerdotal college were able to devise. The sudden glare of mimic light, the melting music stealing upon the air, the artificial thunders reverberated from the roof and walls of the temple, the appearance of fire and ethereal radiance, the vehicles of flames, the effigies of heroes and demons adorned with crowns of lau-rel, the fragrant odors and aromatic gales which breathed from every quarter, all dexterously counterfeited by sacerdotal mechanism, in the dead of night, amidst a dismal gloom, whence the most bright effulgence instantaneously burst upon the sight, must have filled the imagination of the astonished votaries with pictures at once tremendous and transporting.

But, as all the candidates for initiation might not aspire to the rank of heroes and demigods, a more easy and more attainable mode of conduct, to arrive at the place of happiness, required to be opened. Private virtues were inculcated, and these, too, were to meet a proper reward. The conductors of the mysteries urged the doctrine of a future state of rewards and punishments. The immortality of the soul was elucidated and inculcatpd. This doctrine was likewise imported from Egypt; for Herodotus says (Lib. ii.) ‘ that the Egyptians were the first people who maintained the immortality of the human soul.’ The Egyptian immortality, however, according to him, was only the metempsychosis. This was not the system of the ancient Egyptians, nor indeed of the telctse. In these a metempsychosis was admitted ; but it was carried forward to a very distant period, to wit, to the cjand Egyptian period of 36,000 years. As the mystaeiogiies well knew that men are more powerfully affected by objects presented to the eyes, than by the most encaging instructions conveyed by the ear, tlity made the emblems of Elysium and Tartarus pass in review before the eyes of their novices. Thus the Elysian scenes, so nobly described by the lion. an poet, appeared in mimic splendor; while the gloom of

Tartarus, the three-headed dog of hell, the furies with tresses of snakes, the tribunals of Minos, vEacus, and Khadamanthus, &c., were displayed, in all their terrific state. Tantalus, Ixion, Sisy-phus, the daughters of Danaus, &c., wore represented in pageants before their eyes. These exhibitions were accompanied with most horrible

cries and bowlings, thunders, lightning, and other objects of terror. The worship of the gods was strictly enjoined. The three laws ascribed to Triptolemus were strictly inculcated. J . To honor their parents ; 2. To honor the gods with the first fruit of the earth ; 3. Not to treat brutes with cruelty. Cicero makes the civilisation of mankind one of the most beneficial effects of the Eleusinian institutions.

The initiated then bound themselves by dreadful oaths to observe and practise every precept tendered to them in the course of the teletac ; and never to divulge one article of all that had been heard or seen by them. In this they were so exceedingly jealous, that ˆLschylus the tragedian was in danger of capital punishment, for having only alluded to one of the Eleusinian arcana in a tragedy : and one of the articles of indictment against Diagoras the Melian was, his having spoken disrespectfully of the mysteries, and dissuaded people from partaking of them. To impress these maxims the more deeply upon the minds of the novices, ‘ towards the end of the celebration,’ says Stoboeus, ‘ the whole scene becomes terrible; all is trembling, shuddering, and astonishment. Many horrible spectres are seen, and strange cries and bowlings uttered. Light succeeds darkness ; and again the blackest darkness the most glaring light. Now appear open plains, flowery meads, and waving groves ; where are seen dances and choruses ; and various holy phantasies enchant the sight. Melodious notes are heard from afar, with all the sublime symphony of the sacred hymns. The pupil, now completely perfect, is initiated, becomes free, released, and walks about with a crown on his head, and is admitted to bear a part in the sacred rites.’ Pletho, in the oracles of Zoroastres, informs us, ‘ that frightful and shocking apparitions, in a variety of forms, used to be displayed to the mystae

in the course of their initiation :' and ' that thunder, lightning, and fire, and every thing terrible which might be held symbolical of the divine presence, were introduced.' Claudian, in his poem De Rapta Pro-serpina, gives an elegant, though brief, description of these scenes. The sight of those appearances was called Autopsia, or actual seeing : hence those rites were called epoptica. The epoptae were actually initiated, and were admitted into the sanctum sanctorum, and bore a part in the ceremonial ; whereas the mystaa were obliged to take their station in the porch of the temple. The candidates for initiation bathed themselves in holy water, and put on new clothes of linen, which they continued to wear till they were quite torn, and then they were consecrated to Ceres and Proserpine. From the ceremony of bathing they were called hydrani; and this was a kind of baptismal absolution.

The epoptae having sustained all those fiery trials, heard and seen every thing requisite, taken upon them the vows and engagements of Ceres and Proserpine, were now declared perfect men. They were crowned with laurel, and dismissed with two barbarous words, Kov$ o/ura?, konx ompax, of which perhaps the hierophants themselves did not comprehend the import. Thoy had Ucu introduced by the first Egyptian

missionaries, and retained after their signification was lost. This was a common practice among the Greeks. In the administration of their religious ceremonies, they retained many names of persons, places, things, customs, &c., which had been introduced by the Phoenicians and Egyptians, from whom they borrowed their system of idolatry. Those terms constituted the language of the gods, so often mentioned by Homer. The above words appear to be Syriac, and to signify, be vigilant, be innocent. Numerous and important were the advantages supposed to redound to the initiated, from their being admitted to partake of the mysteries, both in this life und that which is to come. Euripides, in his Baccha?, act. I., &c., introduces the chorus extolling the happiness of those who had been acquainted with God, by participating in the holy mysteries, and whose minds had been enlightened by the mystical rites. The happy influences of the teletaj were supposed to administer consolation to the epoptse in the hour of dissolution. Isocrates confirms this ; and Aristides (de Myst. Eleus.) tells us, ' that the initiated were not only often rescued from many hardships in their life time, but at death entertained hopes that they should be raised to a more happy condition.' After death, they were, in the Elysian fields, to enjoy superior degrees of felicity, to bask in eternal sunshine, to quaff nectar, and feast upon ambrosia, &c.

The priests made their disciples believe that the souls of the uninitiated, when they arrived in the infernal regions, should roll in mire and dirt, and with very great difficulty arrive at their destined mansion. Hence Plato introduces Socrates observing, ‘ that the sages who instituted the teletae had positively affirmed, that whatever sou_ shouldarrive in the infernal mansions unhouselled and unannealed, should lie there immersed in mire and filth.’ And as to a future state, says Aristides, ‘ the initiated shall not roll in mire and grope in darkness ; a fate which awaits the unholy and uninitiated.’ When the Athenians advised Diogenes to get himself initiated, and enforced their arguments with the above considerations, ‘ It will be pretty enough,’ replied the philosopher,’ ‘ to see Agesilaus and Epami-nondas wallowing in the mire, while the most contemptible rascals who have been initiated are strutting in the islands of bliss.’ When Antisthenes was to be initiated in the Orphic mysteries, and the priest was boasting of the many astonishing benefits which the initiated should enjoy in a future state, ‘ Why/ says Antisthenes, it is strange your reverence don’t e’en hang yourself, to come at them the sooner.’ After the Macedonian conquests, the hierophants abated much of their original strictness. In the age of Cicero, Eleusis was a temple to which all nations resorted. Almost all the great men of Rome were initiated. The hierophants, however, refused to admit Nero on account of the profligacy of his character. Few others were refused that honor.

This institution gradually degenerated, but how much, and in what points, it is difficult to investigate. The fathers of the church are not always to be trusted when they arr.vgn the insti-

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tutions of Paganism. Melanthius, Menander, Sotades, &c., wrote purposely on the subject, but their works are long since lost. Among modern authors Meursius and Warburton have labored most successfully in this field. The former, in his Liber Singularis, has collected every thing that can be gleaned from antiquity relating to these institutions, without, however, pointing out their original, or elucidating the end and import of their establishment. The latter has drawn them into the vortex of a system which has in many instances led him to ascribe to them a higher merit than they deserve.

These mysteries continued in high reputation to the age of St. Jerome. The emperor Valentinian intended to have suppressed them; but Zozimus says, he was diverted from his design by the proconsul of Greece. At length Theodosius I. prohibited the celebration of these and all the other sacra of Paganism. They had maintained their ground nearly 2000 years ; during which space the celebration of them never had been interrupted but once. When Alexander the

Great massacred the Thebans, and razed their city, the Athenians were so much affected with this melancholy event, that they neglected the delebration of that festival.

There were many other mysterious institution.* among the ancient Pagans, but the above wert the most celebrated. The Samothracian mysteries, instituted in honor of the Cabiri, were likewise of considerable celebrity, and were supposed to confer the same blessings with the Eleusinian, but were not of equal celebrity. The Cabiri were Phoenician and likewise Egyptian deities. Bochart has explained their origin, num-ber, names, and some parts of their worship. The Orphic mysteries were likewise famous among the Thracians. Orpheus learned them in Egypt and they were nearly the same with the Bacchanalia of the Greeks. There were likewise the mysteries of Jupiter Idaeus in great request among the Cretans, and those of Cybele celebrated ir. Phrygia. To enumerate and detail all these woulr. require volumes.

MYSTERY is primarily used in speaking of certain truths revealed in

Scripture, into the full understanding whereof human reason cannot penetrate. Such are the doctrines of the Trinity, the Incarnation, &c. We have an epitome of the mysteries of faith, or the mysteries of Christianity, in the symbols or creeds compiled by the apostles, the council of Nice, and St. Athanasius. See CREED.

MYSTERY, in English antiquity, is a term formerly applied to our dramatic exhibitions. It is well known, says Mr. Percy, in his Reliques of Ancient English Poetry, that dramatic poetry in this and most other nations of Europe owes its origin, or at least its revival, to those religious shews which in the dark ages were usually exhibited on the more solemn festivals. At those times they were wont to represent, in the churches, the lives and miracles of the saints, or some of the more important histories of Scripture. And as the most mysterious subjects were frequently chosen, such as the incarnation, passion, and resurrection of Christ, &c., these exhibitions acquired the name of mysteries. At first they were probably a kind of dumb shows, intermingled with a few short speeches: at length they grew into a regular s►►ries of connected dialogues, formally divided into acts and scenes. Specimens of these, in their most improved state, may be seen in Dodsley's Old Plays, and in Osborne's Harleian Miscellany. As the old mysteries frequently required the representation of some allegorical personage, such as death, sin, charity, faith, and the like, by degrees the rude poets of those unlettered ages, towards the ft teenth century, began to form complete dramatic pieces, consisting entirely of such personifica-tions. These they entitled moral plays, or moralities. The mysteries were very inartificial, representing the scripture stories singly, according to the letter. But the moralities are not devoid of invention ; they exhibit the outlines of the dramatic art, containing something of a fable or plot, and even attempting to delineate character:' and manners.

MYSTICAL, n. s. } Lat. mysiicus. Ob-MYS'TICALLY, adv. >scure; emblematical: MYS'TICALNESS, n. s. J involving some secret or occult meaning.

Let God himself that made me, let not man tha knows not himself, be my instructor, concerning the mystical way to heaven. Hooker.

These two in thy sacred bosom hold, Till mystically joined but one they be. Donne. It is Christ's body in the sacrament and out of it ; but in the sacrament not the natural truth, but the spiritual and mystical.

Taylor' *Worthy Communicant, Ye five other wandering fires ! that move In mystic* dance not without song, resound His praise, who out of darkness called up light.

Hilton.

It is surely another spiritual Zion, or mystical rock, which is prophesied of. Barrow.

Lest new fears disturb the happy state, Know, I have searched the my stick rolls of fate.

Dryden.

It is plain from the Apocalypse, that myitical Babylon is to be consumed by fire. Burnet.

Thence mystic knots mak great abuse, On young guidman, fond, keen, an' crouse ; When the best wark-lume i' the house,

By cantrip wit, Is instant made no worth a louse,

Just at the bit. Burns. The purple midnight veiled that mystic meeting With her most starry canopy, and seating Thyself by thine adorer, what befell ?

MYSTICAL implies something mysterious or allegorical. Some commentators on the sacred writings, besides a literal find also a mystical meaning The sense of Scripture, say they, i►► either that immediately signified by the words and expressions in the common use of language; or it is mediate, sublime, typical, and mystical. The literal sense they again divide into proper literal, which is contained in the words taken simply and properly ; and metaphorical literal, where the words are to be taken in a figurative and metaphorical sense. And sometimes they , ,'►►► the same word in Scripture m all the four

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senses; the word Jerusalem literally signifies the capital of Judea; allegorically, the church militant ; tropologically, a believer ; and anago-gically heaven.

MYSTICI, or MYSTICS, a kind of religious sect, distinguished by their professing pure, sublime, and perfect devotion, with an entire disinterested love of God, free from all selfish considerations. The mystics, to excuse their fanatic ecstacies and amorous extravagancies, allege that passage of St. Paul, ‘ The spirit maketh intercession for us with groanings which cannot be uttered.’ Rom. viii. 26. Passive contemplation is that state of perfection to which the mystics all aspire. This mystic science sprung up towards the close of the third century. The authors are not known; but the principle proceeded from the known doctrine of the Platonic school, which was also adopted by Origen and his disciples, that the divine nature was diffused through all human souls, or that the faculty of reason, from which proceed the health and vigor of the mind, was an emanation from God into the soul, and comprehended in it the principles and elements of all truth, human and divine. The mystics de-nied that men could by study excite this celestial flame in their breasts; and therefore they disapproved highly of the attempts of those, who, by definitions, abstract theorems, and profound speculations, endeavoured to form distinct notions of truth. They maintained that silence, tianquillity, repose, and solitude, accompanied with such acts as tend to extenuate and exhaust the body, were the means by which the hidden and internal word was excited to produce its latent virtues, and to instruct them in the knowledge of divine things. Those, say they, who behold with a noble contempt all human affairs, who turnˆway their eyes from terrestrial vanities, and shut all the avenues of the outward senses against the contagious influences of a material world, must necessarily return to God, when the spirit is thus disengaged from the impediments that prevented that happy union. And in this blessed frame they not only enjoy inexpressible raptures from their communion with the Supreme Being, but also are invested with the inestimable privilege of contemplating truth undisguised and uncor-i upted in its native purity, while others behold it iti a vitiated and delusive form. The number of the mystics increased in the fourth century, under the influence of the Grecian fanatic, who gave himself out for Dionysius the Areopagite, and by pretending to higher degrees of perfection than ether Christians, and practising greater austerity, their cause gained ground,

especially in the eastern provinces, in the fifth century. A copy of the pretended works of Dionysius was sent by Halbus to Louis the Meek in 824, which kindled the flame of mysticism in the western provinces, and rilled the Latins with the most enthusiastic admiration of this new religion. In the twelfth century, the mystics, by searching for mysteries and hidden meanings in the plainest expressions, forced the word of God into a conformity with their visionary doctrines, their enthusiastic feelings, and the system of discipline which they had drawn from the excursions of their irregular fancies. In the thirteenth century they v.tit1 the must formidable antagonists of the

schoolmen ; and towards the end of the fourteenth many of them resided and propagated their tenets in almost every part of Europe. They had in the fifteenth century many persons of distinguished merit in their number; and in the sixteenth, previous to the Reformation, if any sparks of real piety subsisted under the prevailing superstition, they were only to be found among the mystics. The principles of this sect were adopted by the QUIETISTS in the seventeenth century, and, under different modifications, by the QUAKERS and METHODISTS. See these articles.

MYSTRUM, a liquid measure among the ancients, containing a fourth part of the Cyathusy and weighing two drachms and a half of oil, or two drachms two scruples of water or wine.

MYTENS (Daniel), a native of the Hague, was an admired painter in the reigns of king James I. and Charles I. He had certainly, Mr. Walpole says, studied the works of Rubens be-fore his coming over. His landscapes in the back grounds of his portraits are evidently in the style of that school; and some of his works have been taken for Vandyck's. At Hampton Court are several whole lengths of princes and princesses of the house of Brunswick, and the portrait of Charles Howard, earl of Nottingham ; at Kensington is Mytens's own head. At Knowle, at Drayton, and at St. James's, are various portraits by Mytens. The picture of Mary, queen of Scots, at St. James's, is a copy by Mytens. He remained in great reputation till the arrival of Vandyck, who being appointed the king's principal painter, Mytens asked the king's leave to retire to his own country ; but the king, learning the cause of his dissatisfaction, treated him with much kindness, and told him that he could find sufficient employment both for him and Vandyck. Mytens consented to stay, and even grew intimate with his jrival, who painted his head ; but we find none of his works here after 1630. Yet he lived many years afterwards.

Houbraken quotes a register at the Hague, dated 1656, which says Mytens painted part of the ceiling of the town-hall there ; the subject is, Truth writing History on the back of Fame.

MYTENS (Martin), a portrait and historical painter, was born at Stockholm in 1695. When he had practised for some years he went to Holland, and thence to London, where he practised miniature and enamel painting, and by his performances in that way gained a sufficient maintenance. In 1717 he visited Paris, where he painted portraits of the duke of Orleans, Louis XV., and the czar Peter. In 1721 he arrived at Vienna, and having painted the portraits of the emperor, the empress, and the most illustrious persons at that court, he proceeded to Italy in 1723. Having visited Venice, and spent two years at Rome, he went to Florence, where the grand duke Gascon I., having engaged him for some time in his service, made him considerable presents, and placed his portrait among the heads of illustrious artists in his gallery. The king and queen of Sweden presented him with a chain of gold and a medal each, after his return from, Italy. At last he settled at Vienna, where he obtained large appointments from the court. He died in 1755.

MYTHOLOGY.

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MYTHOLOG ICAL, adj. ff□□v3oc, a fable, and

MYTHOL’OGIST, n. s. (Xoyof. A system of

MYTHOL’OGIZE, v. a.) fabulous divinity or History : used particularly of the various false religions of the ancient world : mythological is relating to a system or scheme of fabulous religion or history : a mythologist, he who relates or expounds such a system: to mythologize, to re-late or expound it.

Even in the very first world were giants, as Moses tells us, which, as

our mythologists add, did ‘ bid battle to heaven.’ Bp. Hall.

The grammarians and mythologitts seem to be altogether unacquainted with his writings. Creech.

The original of the conceit was probably hieroglyphical, which after became mythological, and by tradition stole into a total verity, which was but partially true in its covert sense and morality.

Browne’s Vulgar Errours.

It was a celebrated problem among the ancient mythologisti, What was the strongest thing, what the wisest, and what the greatest ? Karris.

The modesty of mythology deserves to be commended ; the scenes there are laid at a distance : it is once upon a time, in the days of yore, and in the land of U topia. Benttey.

MYTHOLOGY, in its original import, signifies any kind of fabulous doctrine ; in its more appropriated sense, it means those fabulous details concerning the objects of worship, which were invented and propagated by men who lived in the early ages of the world, and by them transmitted to succeeding generations, either by written records or by oral tradition. The theology and mythology of the ancients are therefore almost the same.

With respect to fable, it is a creature of the human imagination, and derives its birth from that love of novelty, which is congenial to the soul of man. The appearances of nature which every day occur, objects, actions, and events, which succeed each other, seem too familiar and uninteresting to gratify curiosity, or to excite admiration. But when the most common phenomena in nature or life are new modelled by a warm imagination ; when they are diversified, compounded, embellished, or arranged into forms which seldom or never occur in the ordinary course of things; novelty generates admiration, and thus proves a source of fiction and fable.

Many circumstances contributed to extend and establish the empire of fable. The legislator laid hold on this bias of human nature, and employed fable and fiction as the most effectual means to civilise a rude world. Philosophers, theologists, poets, musicians, made use of this vehicle to con-vey their instructions to the savage tribes. They knew that truth, simple and unadorned, is not possessed of charms powerful enough to captivate the heart of m;m in his degenerate state. This consideration naturally led them to employ fiction and allegory.

Though almost every nation on the globe lias fabricated its own system of mythology, the

orientals have distinguished themselves by the boldness, the inconsistency, and the extravagance of their mythology. The genial warmth ct those happy climes, the fertility of the soil, which afforded every necessary, and often every luxury of life, without great laborious exertions ; the face of nature perpetually blooming around them, the skies smiling with uninterrupted serenity ; all contributed to inspire them with a glow of fancy and vigor of imagination rarely met with in less happy regions. Hence every object was swelled beyond its natural dimensions. Nothing was great or little in moderation, but every sentiment was heightened with incredible hyperbole. The magnificent, the sublime, the vast, the enormous, the marvellous, first sprung up, and were brought to maturity in those native regions of fable ; and were thence transplanted into the western countries.

As the allegorical taste of the eastern nations had sprung from their propensity to fable, so allegory in process of time contributed to multiply fables and fiction almost infinitely. The latent import of the allegorical doctrines being in a few ages lost, what was originally a moral or theological tenet, assumed the air of a personal adventure. The propensity towards personification, almost universal among the orientals, was another fruitful source of fable and allegory. That the people of the east were strongly inclined to per-sonify inanimate objects and abstract ideas, will be readily granted, when it is considered , that in the formation of language they have generally annexed sexes of names. Hence the distinction of grammatical genders, which originated in the eastern parts of the world.

The general use of hieroglyphics in the east also contributed largely to extend the empire of mythology. As the import of the figures employed was arbitrary, mistakes must have been often committed in ascertaining what they were intended to represent. When the development of these arbitrary signs was attended with uncommon difficulty, the expounders were obliged to have recourse to conjecture. The wise men of the east delighted in obscure enigmatical sentences. Their dark sayings often occur in the most ancient records. The sages of antiquity used to vie with each other for the prire of superior wisdom, by propounding riddles and mysterious questions, as subjects of investigation. As the import of those enigmatical propositions was often lost, nothing remained but fancy and conjecture, which always verged towards fable This was another source of mythology.

The pagan priests, especially in Egypt, were probably the first who reduced mythology to a system. The sacerdotal tribe, among that people, were the grand depositaries of learning and religion. They monopolised all the arts and sciences ; and precluded the laity from all intellectual improvement. This was done to keep me laity in subjection, and to enhance their own importance. The language of Ethiopia became their

sacred dialect, and hieroglyphics their sacred character. Egypt, of course, became a kind of fairy land, where all was jugglery, magic, and enchantment. The initiated alone were admitted to the knowledge of the occult mystical exhibitions, which constituted the essence of their religion. The Egyptians, and indeed all the ancients, deemed the mysteries of religion too sacred to be communicated to the herd of mankind, naked and unreserved. Egypt was the land of graven images ; allegory and mythology were the veils which concealed religion from the vul-gar.

In the earliest stage of society we cannot suppose fable to have existed among men. Fables are always tales of other times ; but at this period other times did not reach far enough backward to afford those fruits of the imagination time to arrive at maturity. Fable requires a considerable space of time to acquire credibility, and to rise into reputation. The Chinese and Egyptians, the two most ancient nations whose annals have reached our times, were unacquainted with fabulous details in the most early periods of their monarchies. It has been shown almost to a demonstration, by a variety of learned men, that both these people, during some centuries after the general deluge, retained and practised the primitive Noachic religion, in which fable could find no place ; all was genuine unsophisticated truth.

As soon as the authentic tradition concerning the creation was either lost or adulterated, fiction began to prevail. The Egyptian Thoth, Thyoth, or Mercurius Trismegistus, and Mochus the Phoenician, undertook to account for the formation and arrangement of the universe, upon principles purely mechanical. Here fable began to

usurp the place of historical truth. Accordingly ###.ill the historians of antiquity, who have given a general detail of the affairs of the world, have ushered in their narration with a fabulous cosmogony. Here imagination ranged unconfined over the boundless extent of the primary chaos. To be convinced of this, we need only look into Sanchoniathon's Cosmogony, Euseb. Praep. Evang 1. 1, and Diodorus Sic. 1. 1. From this it follows that the first fables owed their birth to the erroneous opinions of the formation of the universe.

The Chinese, according to their own fabulous annals, which we have already examined in our article CHINA, were the first of the nations. Their records reach upwards many myriads of years before the creation. Fohi is said to have laid the foundation of the empire about 4000 years ago. This emperor, according to the Chinese, was conceived in a miraculous manner. He was half a man and half a serpent. His intellectual powers were truly hyperbolical. In one day he discovered fifty different species of poisonous herbs. He taught his countrymen the art of agriculture. He invented boats and nets for fishing, the art of fabricating porcelain, the management of silk-worms, the manufacturing of silk, &c. He composed that incomparable body of laws which are still the wonder of the Chinese. This whole detail is fabulous; but the Chinese, in ascribing the invention of all the

useful arts to Fohi, resemble the other nations of antiquity. The Indians ascribe every invention to Budha, Vishnou, or Foe : the Persians to Zoroaster ; the Chaldeans to Cannes ; the Egyptians to Thoth ; the Phoenicians to Melicerta ; the Greeks to the family of the Titans; and the Scandinavians to Odin, &c.

About A. A. C. 551 appeared the famous Chinese philosopher Con-fu-tse, or Confucius. Concerning the birth of this prince of philosophers, the Chinese have the following legend : ### His mother, walking in a solitary place, was impregnated by the vivifying influence of the heavens. The babe, thus produced, spake and reasoned as soon as he was born. Confucius, however, wrought no miracles, performed no romantic exploits, but lived an austere ascetic life, inculcated morality, and died, remarkable only for superior wisdom, religious, moral, and political.

About A. D. 601 flourished the sectary Lao-Kiun. His mother carried him thirty years in her womb, and was at last delivered of him under a plum-tree. This philosopher was the Epicurus of the Chinese. His disciples, who were denominated Tao-tse, i. e. heavenly doctors, were

the first who corrupted the religion of the Chinese. Their doctrine was embraced by many of the emperors. One of these, called Youti, had lost a favorite mistress, whom he loved with the most extravagant passion. By the magical skill of one of these doctors lie obtained an interview with his deceased mistress ; a circumstance which rivetted the whole order in the affection of the deluded prince. This fable is a counterpart of that of Orpheus and Eurydice.

The worship of the idol Foe was transplanted from India into China about A. D. 65. The doctrine and worship of Foe made a most rapid progress all over China, Japan, Siam, &c. The priests of Foe are called among the Siamese talapoins ; by the Tartars lamas ; by the Chinese ho-chang ; and by the people of Japan bonzes. An incredible number of fables were invented and propagated by the disciples of Foe, concerning their master. If the earlier ages of the Chinese history are barren of mythological incidents, the later periods, after the introduction of the worship of Foe, furnish an inexhaustible store of miracles, monsters, fables, intrigues, exploits, and adventures, of the most villanous complexion. Indeed, most of them are so absurd, ridiculous, impious, and profane, that our readers will easily dispense with a detail, from which they could reap neither entertainment nor instruction.

The Hindoos, like the other nations of the east, for a long time retained the worship of the true God. At length, however, idolatry broke in, and, like an impetuous torrent, overwhelmed the country. The genuine history of the origin of the universe was either utterly lost, or disguised under a variety of fictions. We axe told that Bramha, the supreme divinity of the Hindoos, created four persons, whom he appointed to rule over all the inferior creatures. Afterwards he joined his efficient power with Bishon and Rul-der ; and by their united exertons they produced ten

men, whose general appellation is Munies, that is, the inspired. According to another mythology, Brahma produced four other persons, one from his breast, one from his back, one from his lip, and

one from his heart. Another tradition respecting the origin of the four great tribes is mentioned under the article GENTOOS; and accounts for the four castes or septs into which the Hindoo nation has from time immemorial been divided.

The Hindoos have likewise some mythological opinions which seem to relate to the general de-luge. They tell us, that desiring the preservation of herds and of brahmans, of genii and of virtuous men, of vedas of law, and of precious things, the Lord of the universe assumes many bodily shapes ; but though ho pervades, like the air, a variety of beings, yet he is himself unvaried, since he has no quality in him subject to change. At the close of the last calpa there was a general destruction, occasioned by the sleep of Brahma, whence his creatures in different worlds were drowned in a vast ocean, Brahma being inclined to slumber after so many ages, the strong demon Hayagri-va stole the vedas which flowed from his lips. When Heri, the preserver of the universe, discovered this deed of the prince of Dainavas, he took the shape of a minute fish called Sap-hari. After various transformations, and an enormous increase of size in each of them, the Lord of the universe loving the righteous man called Mana, or Stratgavrata, who had still adhered to him under all these various shapes ; and, intending to preserve him from the sea of destruction caused by the depravity of the age, thus told him how he was to act: ••• 'In seven days from the present time, O thou tamer of enemies! the three worlds will be plunged in an ocean of death; but in the midst of the destroying waves a large vessel, sent by me for thy use, shall stand before thee.' The remaining part of the mythology so nearly resembles the Mosaic history of Noah and the general deluge, that it appears to have been borrowed from it. To dry up the waters of the deluge, the power of the Deity descends in the form of a boar, the symbol of strength, to draw up and support on his tusks the whole earth, which had been sunk beneath the ocean. The same power is represented as a tortoise sustaining the globe, which had been convulsed by the violent assaults of demons, while the gods churned the sea with the mountain Mandar, and forced it to disgorge the sacred things and animals, together with the water of life which it had swallowed. All these stories relate to the same event, shadowed by a moral, a metaphysical, and an astronomical allegory ; and all seem connected with the hieroglyphical sculptures of the ancient Egyptians.

The Hindoos divide the duration of the world into four yugs, or jogues, each consisting of a prodigious number of years. See GENTOOS and JOGUES. According to the mythology of the Hindoos, the system of the world is subject to various dissolutions and resuscitations. At the conclusion of the Collee Jogue, say they, a grand

revolution will take place, when the solar system will be consumed by fire, and all the elements reduced to their ominnl constitu-

ent atoms. Upon the back of these revolutions Brahma is sometimes represented as anew-born infant, with his toe in his mouth, floating on a camala, or water-flower, sometimes only on a leaf of that plant, on the surface of the vast abyss. At other times he is figured as coming forth of a winding-shell ; and again as blowing up the mundane foam with a pipe at his mouth.

The vulgar religion of the ancient Hindoos opens a large field of mythological adventures. The Fo or Foe of the Chinese was imported from India. His followers relate, that he wan born in a kingdom of India near the line, and that his father was of that country. His mother brought him forth by the left side, and expired, soon after her delivery. At the time of her conception, she dreamed that she had swallowed a white elephant, a circumstance which has given birth to the veneration which the monarch* of India have always shown for a white elephant As soon as he was born he stood erect without assistance. He walked abroad at seven, and pointing with one hand to the heavens, and with the other to the earth, he cried out, ‘ In the heavens, and on the earth, there is no one but I who deserves to be honored.’ At the age of tiiirty he felt himself filled with the divinity ; and now he was metamorphosed into Fo or Pagod. He now began to propagate his doctrine, and prove his divine mission by miracles. The number of his disciples was immense ; and they soon spread his dogmas over all India, and even to the extremities of Asia.

One of the principal doctrines which Fo and his disciples propagated was the metempsychosis or transmigration of souls ; which has given rise to the multitude of idols reverenced in every country where the worship of Fo is established. Quadrupeds, birds, reptiles, and the vilest animals, had temples erected for them ; because, say they, the soul of the god, in his numerous transmigrations, may have at one time or othn inhabited their bodies. Both transmigration and the worship of animals seem, however, to have been imported from Kgypt into India. The former was early established among the Egyptians. It was, indeed, the only idea they had of the soul’s immortality. The worship of animals seems to have been still more ancient. That colonies of Egyptians did actually penetrate into India and settle there, many centuries before the nativity, is an undoubted fact. From the hieroglyphical representations of the Egyptian deities seem to have originated those monstrous idols, which from time immemorial havp

been worshipped in India, China, Japan, Siam, and the remotest parts of Asiatic Tartary. See POLYTHEISM.

Foe is often called Budha, Budda, and Vis) nou. Vast numbers of fables were propagated by his disciples concerning him after his death. They pretended that he was still alive; that he had been already born 8000 times, and that he had successively appeared under the figure of an ape, a lion, a dragon, an elephant, a boar, &c. These were called the incarnations of Vishnou. At length he was confounded with the supreme God f and all the titles, attributes, operations, perfections, and cnsi0'ii > of the Most Higl-

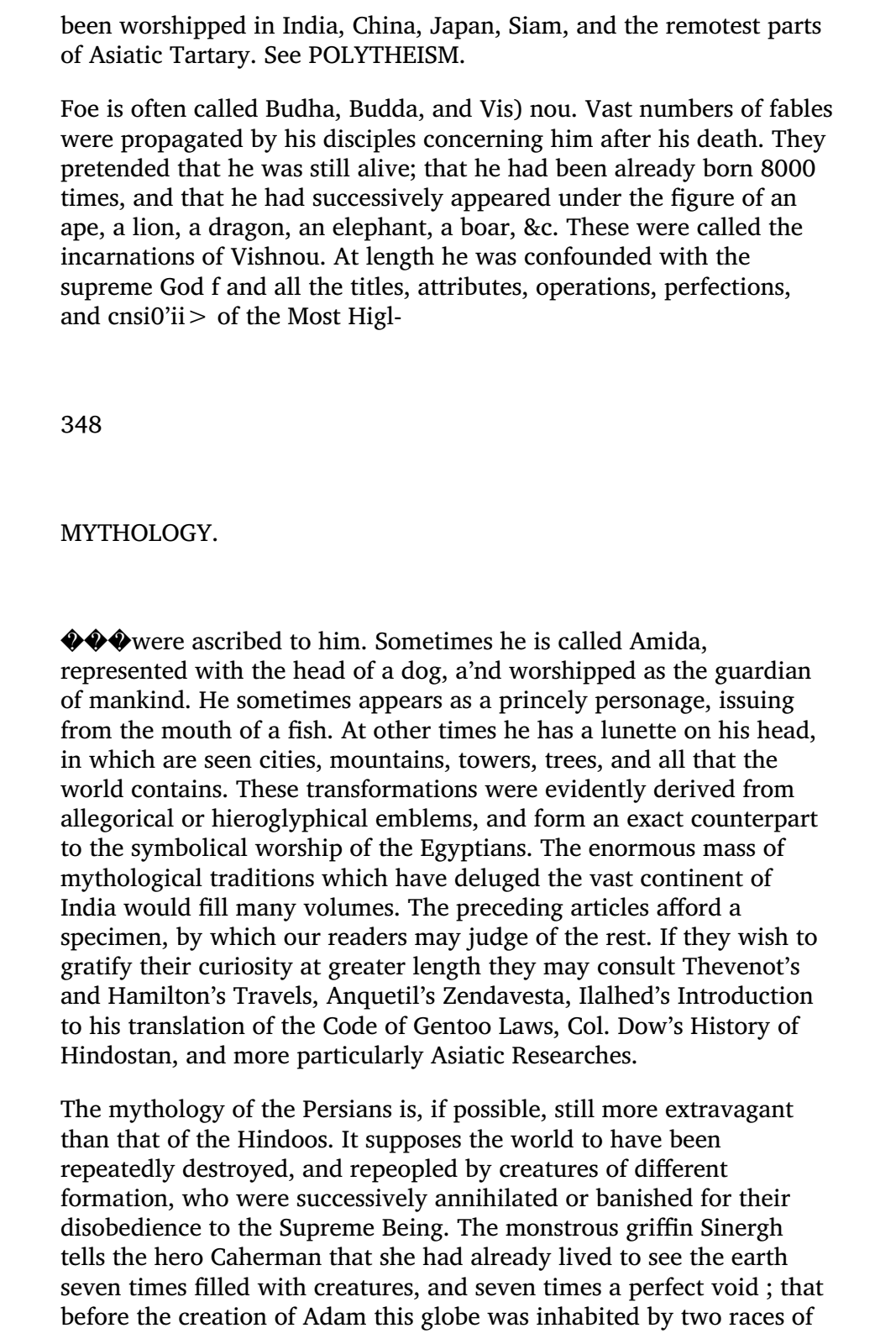

were ascribed to him. Sometimes he is called Amida, represented with the head of a dog, a'nd worshipped as the guardian of mankind. He sometimes appears as a princely personage, issuing from the mouth of a fish. At other times he has a lunette on his head, in which are seen cities, mountains, towers, trees, and all that the world contains. These transformations were evidently derived from allegorical or hieroglyphical emblems, and form an exact counterpart to the symbolical worship of the Egyptians. The enormous mass of mythological traditions which have deluged the vast continent of India would fill many volumes. The preceding articles afford a specimen, by which our readers may judge of the rest. If they wish to gratify their curiosity at greater length they may consult Thevenot's and Hamilton's Travels, Anquetil's Zendavesta, Ilalhed's Introduction to his translation of the Code of Gentoo Laws, Col. Dow's History of Hindostan, and more particularly Asiatic Researches.

The mythology of the Persians is, if possible, still more extravagant than that of the Hindoos. It supposes the world to have been repeatedly destroyed, and repeopled by creatures of different formation, who were successively annihilated or banished for their disobedience to the Supreme Being. The monstrous griffin Sinergh tells the hero Caherman that she had already lived to see the earth seven times filled with creatures, and seven times a perfect void ; that before the creation of Adam this globe was inhabited by two races of

beings, called Peri and Dives, whose characters formed a perfect contrast. The Peri are described as beautiful and benevolent ; the Dives as deformed, malevolent, and mischievous, differing from infernal demons only in this, that they are not yet confined to hell. They are ever ranging over the world to scatter discord and misery among men. The Peri resemble the fairies of Europe; and the Dives the giants and magicians of the middle ages. The Peri and Dives wage incessant wars ; and, when the Dives make any of the Peri prisoners, they shut them up in iron cages, and hang them on the highest trees, to expose then to the fury of every chilling blast. When the Peri are in danger of being overpowered by their foes they solicit the assistance of some mortal hero ; which produces a series of mythological adventures, highly ornamental to the strains of the Persian bards, and furnishing an inexhaustible fund of the most di-versifiad machinery.

One of the most celebrated adventures in the mythology of Persia is Tahmuras, one of their most ancient vnonarchs. This prince performs a variety of exploits while he endeavours to recover the fairy Merjan. He attacks the Dive Dem-rush in his own cave ; where, having vanquished the demon, he finds vast piles of hoarded wealth, which he carries off with the fair captive. The battles, labor?, and adventures of Rostan, another Persian worthy, are celebrated by the Persian liards with the same extravagance of hyperbole with which the labors of Hercules have been sung bv the poets of Greece and Rome. The adventures of the 1'ersian heroes breathe all the wildness of achievement recorded of the knights

of Gothic romance. The enchantments, transfornv ations, &c., exhibited in both, are characteristic symptoms of one common original. Perhaps the tales of the wars of the Peri and Dives originated from a vague tradition concerning good and bad angels ; and probably the fable of the wars between the gods and giants, so famous in the mythology of Greece and Rome, was imported into the for-mer country from the same quarter. For a more particular account of the Persian mythology our readers may consult Dr. Hyde De Relig. vet. Pers. Medor. &c., Dr. Herbelot's Bibl. Orient. &c., &c.

The mythology of the Chaldeans commences at a period myriads of years prior to the era of the Mosaic creation. Their cosmogony, exhibited by Berosus, priest of Belus, deeply versed in the antiquities of his country, is a most extravagant piece of mythology. It has been copied by Eusebius (Chron. 1. i. p. 5), as well as by Syn-cellus, from Alexander Polyhistor. According to this historian there were at

Babylon written records, preserved with the greatest care, comprehending a period of fifteen myriads of years. Those writings likewise contained a history of the heavens, earth, and sea, and of the origin of mankind. ‘ In the beginning,’ says Berosus, copying from Oannes, ‘ there was nothing but darkness and an abyss of water, wherein resided most hideous beings produced from a twofold principle. Men appeared with two wings; some with two and some with four faces. They had one body but two heads ; the one of a man, the other of a woman. Other human figures were furnished with the legs and horns of goats. Some had the feet of horses behind, but before were fashioned like men, resembling hippocentaurs.’ The remaining part of this mythology is much of the same complexion ; indeed so extravagant that we suppose our readers will dispense with the sequel. ‘ Of all these,’ says the author, ‘ were preserved delineations in the temple of Belus at Babylon. The person who was supposed to preside over them was called Omorea. This word, in the Chaldean language, is Thalath, which the Greeks call QaXacraa, but it properly imports the moon.- Matters being in this situation, their god, says Eusebius, came and cut the woman asunder ; and out of one half of her he formed the earth, and out of the other the heavens ; and he destroyed the monsters of the abyss.’ This whole mythology is an allegorical history copied from hieroglyphical representations, the real purport of which could not be deciphered by the author. Such, in general, were the consequences of the hieroglyphical style of writing.

Oannes, the great civiliser and legislator of the Chaldeans, according to Apollodorus, who copied from Berosus, was an amphibious animal of a heterogeneous appearance. He was endowed with reason, and a very uncommon acuteness of parts. His body resembled a fish. Under the head of a fish he had also another head, and fe/t below similar to those of a man, subjoined to the tail of the fish. His voice and language were articulate, and perfectly intelligible, and there was a figure of him extant in the days of Berosus. He made his appearance in the Red Sea

where it borders upon Babylonia. This monstrous being conversed with men by day ; but at night he plunged into the sea, and remained in the water till next morning. He instructed the Babylonians in the use of letters, and the knowledge of all the arts and sciences. He taught them to build houses, temples, and other edifices. He gave them laws and religion, and taught them mathematics, geometry, astronomy, &c. Helladius is of opinion that this strange personage was represented under the figure of a fish because he was clothed with the skin of a seal. The idea of the monster compounded of the man and the fish has originated from some hieroglyphic of that form; or, perhaps, from Oannes having invented fishing or navigation. Mr. Bryant thinks that Oannes was actually Noah ; who settled in Shinar or Chaldea after the deluge, and who, in consequence of his connexion with that event, might be properly represented under the emblem of the man of the sea. See DELUGE.

The nativity of Venus, the goddess of beauty and love, is another piece of mythology famous among the Babylonians and Assyrians. An egg, say they, of a prodigious size, dropt from heaven into the Euphrates. Some doves settled upon this egg after the fishes had rolled it to the bank. In a short time this egg produced Venus, who was afterwards called Dea Syria, the Syrian goddess. From this tradition, says Hyginus, pigeons and fishes became sacred to this goddess among the Syrians, who always abstained from eating them. Of this imaginary being we have a very exact and entertaining history in the treatise De Dea Syria, ascribed to Lucian. In this mythological tradition there seems an allusion to the celebrated Mundane egg ; and a connexion between the sea and the moon. This same deity was the Atergatis of Ascalon, described by Diodorus the Sicilian ; the one half of her body a woman, and the other a fish. See ATEUOATIS. This was a hieroglyphic figure of the moon, importing the influence of that planet upon the sea and the sex. The oriental name of this deity evidently points to the moon ; for it is compounded of two Hebrew words, *viz.* Adar, magnificent, and Gad, a troop ; which im-port the queen of the host of heaven.

The fable of Semiramis is nearly connected with the preceding. Diodorus Siculus has preserved the mythological history of this deity, which he and all the writers of antiquity have confounded with the Babylonian princess of that name. That historian informs vis that Semiramis, in the Syrian dialect, signifies a wild pigeon ; but we apprehend that this term was a name of the moon, as it is compounded of two words of an import applicable to that planet, *viz.* Sem, a sign, and ramah, high. It was a general practice among the orientals to denominate their sa-cred animals from that deity to which

they were cousecratrr!. Hence the moon being called Semiramis, ana the pigeon being sacred to her divinity, the latter was called by the name of the former. We refer our readers for farther information on this subject to Diod. Sic. 1. ii. ; Hy-jlinus Poet. Astron. lib. 197; Pharmutus de Nat. Deor. Ovid. Metam. 1. iv. ; Athen. in Apol. Tzet7.es Chil ix. cap. 275 ; Seld. de Diis Syr. ii. p. 183.

We shall now proceed to the mythology of the Arabians ; but the greatest part of it is buried in the abyss of ages. The Arabs have always been enthusiastically addicted to poetry, of which fable is the essence. In the Koran we meet with frequent allusions to traditionary fables. These have been transmitted from generation to generation by the bards and rhapsodists for the entertainment of the people. In Arabia, from the earliest ages, it has always been one of their favorite amusements, to assemble in the serene evenings round their tents, or on the platforms upon their houses, to amuse themselves with traditionary narrations of the actions of their remote ancestors. Oriental imagery embellished their romantic details. The glow of fancy, the love of the marvellous, the propensity towards the hyperbolical, which constitute the essence of oriental description, must ever have drawn the relation aside into the regions of fiction. The religion of Mahomet beat down the original fabric of idolatry and mythology. The Arabian fables, current in modern times, are borrowed or imitated from Persian compositions ; Persia being still the grand nursery of romance in the east.

In Egypt we find idolatry, theology, and mythology, almost inseparably blended. The inhabitants of this region and its vicinity adhered for several centuries to the worship of the true God. At last, however, from an affected sense of their own ignorance, impurity, imperfection, and unfitness to approach an infinitely perfect Being, they began to look for some beings more perfect than themselves, by whose mediation they might offer their prayers to the supreme Majesty of heaven. The celestial luminaries, which they imagined were animated bodies, were thought to partake of the divine nature : they were revered as the representatives of the Lord of the universe; they were visible, they were beneficent; they dwelt nearer to the gods. These were, of course, employed as mediators between the supreme Divinity and his humble subjects ; and a subordinate share of worship was assigned them. In time, however, that worship which was originally addressed to the supreme Creator, by the mediation of the heavenly bodies, ultimately terminated on those illustrious creatures. To this circumstance we may ascribe the origin of that species of

idolatry called Zabiism, or the worship of the host of heaven, which overspread the world early and almost universally. In Egypt this mode of worship was adopted in all its most absurd forms ; and the most heterogeneous mythology appeared in its train. The mythology ot* the ancient Egyptians was so various and multiform, so complicated and so mysterious, that it would require many volumes even to give a superficial account of its origin and progress. We shall, therefore, only mention some of the most interesting articles of this complicated system.

The Egyptians confounded the revolutions of the heavenly bodies with the reigns of their most early monarchs. Hence the incredible number of years in the reigns of their eiˆht superior gods, who, according to them, filled the Egyptian throne successively in the most early

periods of time. To these, according to their system, succeeded twelve demigods, who likewise reigned an amazing number of years. These imaginary reigns were merely the periodical revolutions of the heavenly bodies. Hence the fabulous antiquity of that kingdom. The imaginary exploits and adventures of these gods and demigods furnished an inexhaustible fund of mythological romances. To the demigods succeeded the kings of the cynic cycle, personages equally chimerical with the former. After these princes came another race, denominated Nekyes, a title implying royal, splendid, glorious. These cycles figure high in the mythological annals of Egypt, and have furnished materials for a variety of learned disquisitions. The wars and adventures of Osiris, Orus, Typhon, and other allegorical personages ; the wanderings of Jsis ; the transformations of the gods into various animals ; their birth, education, peregrinations, and exploits ; ††† compose a body of mythological fictions, so complicated, so ridiculous, and often so absurd, that aH attempts to explain them have hitherto proved unsuccessful. All those extravagant fables are the offspring of hreroglyphical or allegorical emblems, devised by the priests and sages of that nation, to conceal the mysteries of their religion from the inferior ranks. See MYSTERIES.

The worship of brutes and of certain vegetables, universal among the Egyptians, was another exuberant source of mythological adventures. The Egyptian priests, many of whom were profound philosophers, observed a kind of analogy between the qualities of certain animals and vegetables, and those of some of their subordinate divinities. These they consecrated to the deities to whom they were supposed to bear this analogy, and in time they considered them as the visible emblems of those divinities. By these the vulgar addressed their archetypes ; and in time, forgetting the emblematical character of those brutes and vegetables, addressed their devotion immediately to them. After these animals were consecrated as the visible symbols of the deities, they began to use their figures to represent those deities. Hence Jupiter Ammon was represented under the figure of a ram. Apis under that of a cow, Osiris of a bull, Pan of a goat, Thoth of an ibis, Bubastis or Diana of a cat, Sec. It was likewise a common practice to dignify those objects by the names of those deities which they represented. Thus the veneration of the people was enhanced, and the ardor of their devotion inflamed. From these sources are derived the fabulous transformations of the gods, so generally celebrated in the Egyptian mythology, and from Egypt imported into Greece and Italy.

Their Thoth, or Mercurius Trismegistus, was the inventor of this unhappy system. He was esteemed the original author of letters, geometry, astronomy, music, architecture ; of all the elegant and useful arts, and of all the branches of science and philosophy. He first discovered the analogy between the divine affections, influences, appearances, operations, and the corresponding properties, qualities, and instincts of certain animals, and the propriety of dedicating particular

vegetables to particular deities. The priests, whose province it was to e.xpound the mysteries of that allegorical hieroglyphical religion, gradually lost all knowledge of the primary import of the symbolical characters. To supply this defect, and to veil their own ignorance, they had recourse to fable and fiction. They heaped fable upon fable, till their religion became an accumulated chaos of mythological absurdities.

Two of the most learned and acute of the ancient philosophers attempted an explication of the Egyptian mythology, but both have failed ; nor have modern critics who have made similar attempts had much better success. Instead, therefore, of prosecuting this inexplicable subject, we refer those who wish for further information

to Herodotus, lib. ii. ; Diodorus Siculus, lib. i. Plut. Isis and Osiris ; Jamblichus de Myst. Egypt. Horapollo Hieroglyp. Egyyt. Macrob. Sat. cap. 23. Kircher's Oedip. Voss. de Orig. et Prog. Idol. Bryant's Analysis of anc. Mythol. M. Gebelin Monde prim. ; and to the learned Jablonsk's Panth. Egvptiorum.

The elements of Phoenician-mythology have been preserved by Eusebius in his Prsep. Evang. In the large extract, which that learned father has copied from Philo-Biblius's translation of Sanchoniatho's History of Phoenicia, are several articles of mythology, which throw consider-ble light on several passages of the sacred history; and all of them are strictly connected with the mythology of the Greeks and Romans. They contain a brief but entertaining detail of the fabulous adventures of Uranus, Cronus, Da-gon, Thyoth, Muth or Pluto, ˆEphcestus or Vul-can, ˆEsculapius, Nereus, Poscedon or Neptune, &c. Astarte, or Venus Urania, makes a conspicuous figure in the catalogues of Phoenician deities; Pallas is planted on the territory of Attica ; in a word, all the branches of the fa-mily of the Titans, who in after ages figured in the rubric of the Greeks, are brought upon the stage, and their exploits briefly detailed.

By comparing 'this fragment with the mythology of the Atlantidae, and that of the Cretans preserved by Diodorus the Sicilian (lib. v.) there is reason to conclude that the family of the Ti-tans, the several branches of which seem to have been both the authors and objects of a great part of the Grecian idolatry, originally emigrated from Phoenicia. Almost all their names, in the fabulous records of Greece, may be easily traced up to a Phoenician original. We agree with Herodotus, that a considerable part of the idolatry of Greece may have been borrowed from the Egyptians; but it is highly probable that the idolatry of the Egyptians and that of the Phoenicians were, in their original constitution, nearly the same. Both systems were Sabiism, or the worship of the host of heaven.

The adventures of Jupiter, Juno, Mercury, Apollo, Diane, Mars, Minerva, Venus, Bacchus, Ceres, Proserpine, Pluto, Neptune, and the other descendants of the ambitious family of the Titans, furnish the greatest part of the mythology of Greece. They left Phoenicia about the age of Moses ; they settled in Crete, whence they made their way into Greece, which WHS then inhabited by savages. The arts and iu

ventions which they communicated lo the natives; the mysteries of religion which they inculcated ; the laws, customs, polity, and good order, which they established ; in short, the blessings of humanity and civilisation, which they every where disseminated, in process of time inspired the unpolished inhabitants with a kind of religious admiration. Those ambitious mortals improved this admiration into divine homage. The greater part of that worship, which had been formerly addressed to the luminaries of heaven, was now transferred to those illustrious personages. They claimed and obtained divine honors from Ue deluded rabble of enthusiastic Greeks. Hence sprung an inexhaustible fund of the most inconsistent fictions.

The foibles and frailties of the deified mortals were transmitted to posterity, incorporated with the pompous attributes of divinity. Hence the heterogeneous mixture of the mighty and the mean which chequers the characters of the gods and heroes of the Iliad and Odyssey. The Greeks adopted the oriental fables ; the import of which they did not understand. These they accommodated to heroes and illustrious personages, who had figured in their own country in the earliest periods. The labors of Hercules originated in Egypt, and relate to the annual progress of the sun in the zodiac ; but the vain-glorious Greeks accommodated them to a hero of their own, the reputed son of Jupiter and Atcmena. The expedition of Osiris they borrowed from the Egyptians, and transferred to their Bacchus, the son of Jupiter and Semele, th►► daughter of Cadmus. The transformation and wanderings of lo seem evidently transcribed from the Egyptian romance of the travels of Isis in quest of the body of Osiris, or of the Phoenician Astarte, drawn from Sauchoniathon. lo or loh is in reality the Egyptian name of the moon, and Astarte was the name of the same planet among the Phoenicians. See ASHTAROTH. Both these fables are allegorical representations of the anomalies of that planet. The fable of the conflagration occasioned by Phaeton is clearly of oriental extraction, and alludes to an excessive drought, which anciently scorched Ethiopia and the adjacent countries. The adventures of Perseus are said to have happened in the same regions, and are allegorical representations of the influence of the solar luminary; for the original Perseus was the sun. The rape of Proserpine and the wanderings of Ceres; the Eleusinian mysteries ; the orgia of Bacchus ; the rites and worship of the Cabiri, were imported from Egypt and

Phoenicia ; but strangely garbled and disfigured by the hierophants of Greece. The gigantomachia, or war between the gods and the giants, and all the fabulous events of that war, form a counterpart to the battles of the Peri and Dives, celebrated in the romantic annals of Persia.

A considerable part of the mythology of the Greeks sprung from their ignorance of the oriental languages. They disdained to study the languages spoken by people whom, in their pride, they styled barbarians. This aversion to every foreign dialect was highly detrimental to their progress in the sciences. The same neg-

lect or aversion has proved an irreparable injury to the republic of letters in all ages. The Aoids, or strolling bards, laid hold on these oriental legends, which they sophisticated with their own additions, to accommodate them to the popular taste. These wonderful tales figured in their rhapsodical compositions, and were greedil) swallowed by the credulous vulgar. Those fictions were constantly augmented with fresh materials, till in time their original import was either forgotten or buried in impenetrable darkness. A multitude of these llesiod has collected into his Theogonia, or Generation of the gods, which unhappily became the religious creed of the illiterate part of the Greeks.

The far-famed oracle of Dodona was copied from that of Ammon of Thebes in Egypt : the oracle of Apollo at Delphos was an emanation from the same source. The celebrated Apollo Pythius of the Greeks was no other than Ob ot Aub of the Egyptians, who denominated the ba-silisk or royal snake Or Cai, because it was held sacred to the sun. Ob or Aub is still retained in the Coptic dialect, and is one of the many names or epithets of that luminary. In short, the groundwork of the Grecian mythology is to be traced in the east. Only a small part of it was fabricated in the country ; and what was imported pure and genuine was miserably sophisticated by the hands through which it passed, to accommodate it to the Grecian taste.

The Roman mythology was borrowed from the Greeks. That people had addicted themselves for many centuries to war and civil polity. Science and philosophy were either neglected or unknown. At last they conquered Greece, the native land of science, and then ‘ Gracia capta ferum victorem cepil arte, et intulit agresti Latio.’ This being the case, their mythology was, upon the whole, a transcript from that of Greece. They had indeed previously gleaned a few fables from the

Pelasgi and Hetruscans.

The mythology of the Celtic nations is in a great measure lost. There may still remain some vestiges of the Druidical superstitions in the remotest parts of the Highlands and islands of Scotland ; and in the uncivilised places of Ireland. These, we presume, would afford little entertainment, and less instruction.

The mythology of the Norwegians, Danes, Swedes, Icelanders, &c., are uncommonly curious and entertaining. The Edda and Voluspa contain a complete collection of fables, which have not the smallest affinity with those of the Greeks and Romans. The Edda was compiled in Iceland in the thirteenth century. It is a kind of system of the Scandinavian mythology ; and has been reckoned a commentary on the Voluspa, which was the bible of th►► Northern nations. Odin, Othin, Woden or Wodan, was the supreme divinity of those people. His exploits and adventures furnish the far greatest part of their mythological creed. That hero is supposed to have emigrated from the eaM ; but from what country or at what period is not known. His achievements are magnified beyond all credibility, lie is represented as the god of battles, and ns slaughtering thousands at a blow. His palace is called Valhalla ; it is situated in the city

of Midgard, where, according to the fable, the souls of heroes who had bravely fallen in battle enjoy supreme felicity. They spend the day in mimic hunting-matches, or imaginary combats. At night they assemble in the palace of Valhalla, where they feast on the most delicious viands, dressed and served up by the Valkyriae, virgins adorned with celestial charms, and flushed with the bloom of everlasting youth. They solace themselves with drinking mead out of the skulls of enemies whom they killed in their days of nature. Mead was the nectar of the Scandinavian heroes.

Sleipner, the eight-legged steed of Odin, is celebrated along with his master. Hela, the hell of the Scandinavians, affords a variety of fables equally shocking and heterogeneous. Lok, the evil genius or devil of

the northern people, nearly resembles the typhon of the Egyptians. Signa or Sinna is the consort of Lok ; from which name the English word sin is derived. The giants Weymur, Ferbanter, Belupher, and Hellunda, perform a variety of exploits, and are exhibited in the most frightful attitudes. They perform the counterpart of the giants of the Greek and .Roman mythologists. Without enlarging on these ridiculous and uninteresting fables, we shall give a brief account of the contents of Voluspa, which is indeed the text of the Scandinavian mythology.

The word Voluspa imports, the prophecy of Vola or Fola. This was perhaps a general name for the prophetic ladies of the north, as Sybil was appropriated to women endowed with the like faculty in the south. Certain it is, that the ancients generally connected madness with the prophetic faculty. Of this we have two celebrated examples; the one in Lycophron's Alexandria, and the other in the Sybil of the Roman poet. The word vola signifies mad or foolish ; whence the English words fool, foolish, folly. Spa signifies to prophecy, and is still current in Scotland in the word spae, which has the same signification. The voluspa consists of between 200 and 300 lines. The prophetess, having imposed silence on all intelligent beings, declares that she is about to reveal the works of the fa-ther of nature, the actions and operations of the gods, which no mortal ever knew before herself. She then begins with a description of the chaos; and then proceeds to the formation of the world, the creation of the different species of its inhabitants, giants, men, and dwarfs. She then explains the employments of the fairies or destinies, whom the northern people call nornies ; the functions of the deities, their most memorable adventures, their disputes with Lok, and the vengeance that ensued. She at last concludes with a long and animated description of the final state of the universe, and its dissolution by a general conflagration.

In this catastrophe, Odin, and all the rabble of the pagan divinities, are to be confounded in the general ruin, no more to appear on the stage

of the universe. Out of the ruins of the former world, according to the Voluspa, a new one shall spring up, arrayed in all the bloom of celestial beauty. Such is the doctrine exhibited in the fabulous Voluspa.

In America the only mythological countries were Mexico and Peru. The other parts of that large continent were originally inhabited by

savages, most of them as remote from religion as from civilisation. The two vast empires of Mexico and Peru had existed about 400 years only before the Spanish invasion. In neither of them was the use of letters understood ; and of course the ancient opinions of the natives relating to the origin of the universe, the changes which succeeded, and every other monument of antiquity, were obliterated and lost. Clavigero has indeed enumerated a vast canaille of sanguinary gods worshipped by the Mexicans ; but produces nothing either entertaining or interesting with respect to their mythology. The information to be derived from any other quarter is little to be depended upon. It passes through the hands of bigoted missionaries or other ecclesiastics who were so deeply tinctured with fanaticism, that they viewed every action, every sentiment, every custom, every religious opinion and ceremony of those half-civilised people, through a false medium. They often imagined they discovered resemblances and analogies between the rites of those savages and the dogmas of Christianity, which no where existed but in their own heated imagination.

The only remarkable piece of mythology, in the annals of the Peruvians, is the pretended extraction of Manco Capac, the first inca of Peru, and of Mama Ocolla his consort. These two illustrious personages appeared first on the banks of the lakeTitiaca. They were persons of a majestic stature, and clothed in decent garments They declared themselves to be the children of the sun, sent by their beneficent parent, who beheld with pity the miseries of the human race, to instruct and to reclaim them. Thus we find these two legislators availed themselves of a pretence which has often been employed in more civilised regions to the very same purposes. The idolatry of Peru was gentle and beneficent; that of Mexico gloomy and sanguinary. Hence we may see that every mode of superstition, where a divine revelation is not concerned, borrows its complexion from the characters of its professors.

In this article, for which we are greatly indebted to the late Dr. Doig of Stirling, we have not much enlarged upon the mythology of the Greeks and Romans ; that subject being so universally understood by the learned that a minute discussion of it would be superfluous; more especially as it is sufficiently noticed in this work, under the respective names of the numerous gods, demigods, and heroes, who were celebrated in the ancient Grecian and Roman mythology. See JUPITER, APOLLO, HERCULES, MARS, &c., in their alphabetical places.

MYTILENE or Lesbos, an island of the Grecian Archipelago, celebrated as the birth-place of Sappho and Theocritus, Arion, Terpander, &c. See LESBOS. We may add here thaf the chief town, named Metelin or Castro, is on the southeast, and stands on a peninsula forming two ports. The northernmost is sheltered by a pier to the north, and receives small vessels, the south is only fit for boats, and vessels of burden are obliged to anchor in the roads, entirely exposed to the north-east. The town is surrounded by a double wall flanked with towers, and has a citadel, formerly garrisoned with 500 Janissaries.

Port Yero, near the southeast point of the island, or the Port of Olives, is one of the most spacious and safe harbours of the Archipelago, and abounds with excellent oysters. Port Ca-loni, on the south-west, is also a large and safe road, but little frequented. Port Sigri (Antissa), at the west end, is an excellent harbour, sheltered by a little island (Neriope).

MYTILUS, the mussel, in ichthyology, a genus of animals, belonging to the order of ver-mes testacea. The animal is an ascidia ; the shell bivalve; often affixed to some substance by a beard ; the hinge without a tooth, marked by a longitudinal line. Of these animals there are sixty species, some of them inhabiting the seas, others the rivers and ponds. Several of them are remarkable for the beauty of their internal shell, and for the pearls which are sometimes found in them.

1. M. anatinus, the duck-mussel, has a shell more oblong and less convex than the swan-mussel, is very brittle, and semitransparent ; the space round the hinges like the swan ; the length about five inches, breadth two. It is found in Europe in fresh waters. Both it and the swan are devoured by swans and ducks ; whence their names; crows also feed on these mussels, as well as on different other shell-fish ; and, ⬛⬛⬛when the shell is too hard for their bills, they fly with it to a great height, drop the shell on a rock, and pick out the meat when the shell is fractured by the fall.

2. M. christagalli, the cock’s-comb mussel, has the shell folded OF plaited as it were, spiny, and both lips rugged. It makes its abode in the coral beds of the Indian Ocean.

3. M. cygneus, the swan-mussel, with a thin brittle shell, very broad and convex, marked with concentric striae; attenuated towards one end, dilated towards the other ; deeorticated about the hinge ; the color a dull green ; the length six inches, breadth three and a half. It is an inhabitant of the European rivers, frequenting chiefly their mouths. Fresh water mussels are not so good eating as the sea-mussel. The river mussel, according to M. Poupart, swims in the water, and sometimes appears to flutter on its surface. But we believe it more commonly creeps in the mud, where it remains almost always at rest. The pond-mussel is always larger than that which is found in rivers; and it is a more soli-dary animal. In its motion it makes tracks in the sand and mud, and it penetrates into it two or three inches, and sometimes more. Pearls of considerable beauty are found in several river-VOL XV.

mussels; of this kind are the Scotch mussels, those of Valognes in Lorrain, of St. Savinier of Bavaria, and of the marshes near Augsburgh.

4. M. edulis, the edible mussel, has a strong shell, slightly incurvated on one side, and angulated on the other. The end near the hinge is pointed, the other rounded. When the epidermis is taken off, it is of a deep blue color. It is found in immense beds, both in deep water and above low-water mark. The finest mussels in Britain are those called Hambleton hookers, from a village called Hambleton. They are taken out of the sea, and placed in the river Wier, within reach of the tide, where they grow very fat. This species inhabits the European and Indian seas. Between the tropics U is largest, and smallest within the polar circle. This species has, from its being for the most part fastened to the rocks, been supposed by many wholly incapable of progressive motion ; but this M. Reaumur has shown to be an erroneous opinion. It is a common practice in France, at such seasons of the year as do not af-ford sun enough to make salt, to throw the com-mon sea-mussels, which the fishermen catch about the coasts, into the brine pits, to render their flesh more tender and delicate, as the rain, which falls at these seasons, makes the water of the pits much less salt than the sea-water. The mussels are on this occasion thrown carelessly in, in several different parts of the pits ; yet, at whatever distances they have been thrown in, the fishermen, when they go to take them out, always find them in a cluster togethei ; and as there is no current of water in these places, nor any other power of motion which can have brought the mussels together, it is evident that they must voluntarily have marched from the places where they were at first, to have met thus together. This progressive motion is performed by means of what

we call the tongue of the mussel, from its shape ; but, from its use in this case, it appears ra-ther to merit the name of a leg, or an arm, as by laying hold of any distant substance, and then forcibly contracting itself again, it draws along the whole body of the animal. The same part, when it has moved the animal to a proper place, serves also to fix it there, being the organ by which it spins the threads which we call its beard, by which it is held to a rock, or to another mussel. The motion of the mussel, by means of this part, is just the same with that of a man laid flat on his belly, who would draw himself along by laying hold of any thing with one hand, and then drawing himself to it. Mussels not only open and shut their shells at pleasure, but they respire water like fishes ; ana some even, flutter about on its surface to inhale air. If they lie in shallow places, a small circular motion is seen above the heel of the shell ; and a few moment* after, they cast out the water by one single stroke at the other end of the shell. The mouth is situated near the sharp angle of the animal, and is furnished with four floating fringes in the shape of mustachios, which perhaps answer the purpose of lips. The barbs, which surround the edge of almost half the mussel, are a web of hollow fibres which serve as fins or organs of respiration, M vessels for the circulation of the fluids, and pro-2 A

bably, as wedges for opening their shells ; for we observe two large muscles or tendons for the purpose of shutting them ; but we in vain look for their antagonists, or those which are destined to open them. When the mussel wishes to open itself, it relaxes the two muscles or tendons, and swells the fringes, which act as wedges and separate the shells. The animal shuts up itself by the contraction of two thick fibrous muscles which are fixed internally to each end of the shells ; and these shells are lined all around with a membrane or epidermis, which unites them so closely together when they are soaked in water, that not the smallest drop can escape from the mussel. When mussels choose to move, they often contrive to raise themselves on the sharp edge of their shells, and drag themselves along in a kind of groove or furrow which they form in the sand or mud, and which supports the shell on both sides. In ponds, these furrows are very observable.

Mussels are well known to have a power of fastening themselves either to stones, or to one another's shells, in a very firm manner; but the method of doing this was not well understood till M. Reaumur explained it. From the root of the tongue above mentioned, or that part of it which is fastened to the body of the fish, there are produced a great number of threads, which, when fixed toany solid substance, hold the mussel firmly in its place : these threads are usually from an inch to two inches in length, and in thickness from that of a hair to that of a hog's bristle. They issue out of the shell in that part where it naturally opens, and fix themselves to any thing that lies in their way ; to stones, to fragments of shells, or, which is the most com-mon case, to the shells of other mussels ; whence it happens that there are usually such large quantities of mussels found together. These threads are expanded on every side, and are usually very numerous, 150 having been found issuing from one shell : they serve the office of so many ca-bles ; and, each pulling in its proper direction, they keep the mussel fixed against any force that can be offered from whatever part it come. The filaments are well known to all who eat mussels, who ever carefully separate them under the name of the beard ; and M. Reaumur has found, that while the animal is living in the sea, if they are all torn away by any accident, the creature has a power of substituting others in their room: he found, that if a quantity of mussels were detached from one another, and put into a vessel of any kind, and in that plunged into the sea, they in a little time fastened themselves both to the sides of the vessel and to one another's shells ; the extremity of each thread seemed in this case to serve in the manner of a hand to seize upon any thing that it would fix to, and the other part, which was slenderer and smaller, to do the office of conducting it. To know the manner of the mussels performing this operation, M. Reaumur put some mussels into a vessel in his chamber, and covered them with sea water ; he there saw that they soon began to open their shells, and each put forth its arm or u>n⬜⬜ue, at the root of which these threads grow; they extended and shortened this part several turns, and thru at it out every way, often giving

it not less than two inches in length, and trying before, behind, and on every side with it, what were the proper places to fix their threads at : at the end of these tri;Us they let it remain fixed for some time on the spot which they chose for that purpose, and then drawing it back into the shell with great quickness, it was easy to see that they were then fastened by one of these threads to the spot where it had before touahed and remained fixed for a few minutes ; and in repeating this workmanship the threads are increased in num-ber one at every time,

and, being fixed in different places, they sustain the fish at rest against any common force. The several threads were found to be very different from one another ; the new formed ones being ever whiter, more glossy, and more transparent than the others ; and it appeared on a close examination, that it was not the office of the tongue to convey the old threads one by one to the new places where they were now to be fixed, but that these in reality were now become useless; and that every thread we s►►e now formed, is a new one made at this time ; and in fine, that nature has given to some sea fishes, as well as to many land insects, a power of spinning those threads for their necessary uses; and that mussels and the like fish are un-der water, what caterpillars and spiders are on the land. To be well assured of this, M. Reaumur cut off the beard or old threads of a mussel as close as he could, without injuring the part; and he found that those, whose beards or old threads were cut off, fixed themselves as soon as those in which they were left, and spread their threads to as great a distance every way. When the mechanism of this manufacture was thus far understood, it became a natural desire to enquire into the nature of the part by which it was performed. This tongue, or arm of the fish, whenever it happens to be loosened, or fixed in a wrong place, serves the animal to drag its whole body, shell and all along, and to perform its several motions. It fixes itself to some solid body ; and then, strongly contracting its length, the whole fish must necessarily follow it, and be pulled toward the place where it is fixed. This is a use, however, that this part is rarely put to ; its chief employment being to spin the threads. Though this body is flat, like a tongue, for the greater part of its length, it is rounded or cylindric about the base or insertion, and is much smaller there than in any other part : there are several muscular ligaments fastened to it about the root or base, which hold it firmly against the middle of the back of the shell ; oif these ligaments there are four which are particularly observable, and which serve to move the body in any direction. There runs all along this body a slit or crack, which pierces very deeply into its substance, and divides it as it were into two longitudinal sections ; this is properly a canal, and along this is thrown the liquor which serves to form the threads ; and it is in this canal or slit that these threads are moulded into their form. Externally this appears only a small crack or slit, because the two fleshy sections of the parts almost meet and cover it ; but it is rounded and deep within, and is surrounded with circular fibres. This canal is carried regularly on from the tip of the

tongue to Us base, where itbecomescylindric; the cylinder in this part being no other than a close tube or pipe, in which this open canal terminates. The cylindric tube contains a round oblong body, of the nature of the threads, except that it is much larger ; and from the extremity of this all the threads are produced, this serving as a great ca-ble to which all the other little cordages dispersed towards different parts are fixed. The tube or pipe in which this large thread is lodged seems the reservoir of the liquor of which the other threads are formed ; all its internal surface being furnished with glands for its secretion. The mussel, like many other sea fishes, abounds in this liquor; and if at any time one touch with a finger the base of this spinning organ, one draws away with it a viscous liquor in form of several threads, like those of the caterpillar, spi-der, and the other spinning land animals. The threads fix themselves with equal ease to the most smooth and glossy, as to rougher bodies ; if the mussels are kept in glass jars of sea water, they as firmly fasten themselves to the glass as to any other body. Mussels, be they ever so young, have this property of spinning ; and by this they fasten themselves in vast numbers to any thing which they find in the sea. M. Reaumur has seen them, when as small as millet-seeds, spin plentifully, though their threads, proportioned to their own weight, are much finer and smaller than those of larger mussels. It is in the spring that mussels lay their eggs ; there being none found in them but in winter. M. Leuwenhoek, in several mussels which he dissected, discovered numbers of eggs, or embryo mussels, in the ovarium, appearing as plainly as if he had seen them by the naked eye, and all ly-ing with their sharp ends fastened to the string of vessels by which they receive nourishment. The minute eggs or embryos are by the parent placed in due order, and in a very close arrangement on the outside of the shell, where, by means of a gluey matter, they adhere very fast, and continually increase in size and strength, till, becoming perfect mussels, they fall off and shift for themselves, leaving the holes where they were placed behind them. This abundance the mussel shells very plainly show, when examined by the microscope, and sometimes the number is 2000 or 3000 in one shell ; but it is not certain that these have been all fixed there by the mus-sel within ; for these fish usually lying in great numbers near one another, the embryos of one are often affixed to the shell of another. The fringed edge of the mussel, which Leuwenhoek calls the beard, has in every the minutest part of it such variety of motions as is inconceivable ; for, being composed of longish fibres, each fibre has on both sides a vast number of moving particles. The mussel is infested by several enemies in its own element; according to Reaumur

it is in particular the prey of a small shell-fish of thetrochuskind. Thisanimal attaches itself to the shell of the mussel, pierces it with a round hole and introduces a sort of tube five or six inches long, which it turns in a spiral direction, and with which it sucks the substance of the mussel. Mussels are also subject to certain diseases, which have been supposed to be the cause of

those bad effects which sometimes happen from eatmg them. These are stated by Dr. Mujhring to be the moss and the scab. The roots of the moss being introduced into the shell, the water penetrates through the openings, and gradually dissolves the mussel. The scab is formed by a sort of tubercles which are produced by the dissolution of the shell. Certain small scabs, which are sometimes found in mussels, likewise tend to make them unwholesome. ❓❓❓ The eating of mussels has sometimes produced erysipelatous inflammations, cutaneous eruptions, insupportable itching all over the body, great restlessness and agitation ; and though these complaints are easily removed by oil, milk, and emetics, and have seldom or never proved mortal, yet they have an alarming aspect, and make the patient suffer grievously. Some authors pretend that these effects never take place but between the vernal and autumnal equinox ; and Dr. Beaunie, of Antwerp, in a memoir on this subject, seems inclined to adopt this opinion; for he recommends abstinence from mussels during May,June, July, and August. The cause of these noxious effects is, he says, altogether accidental. They are occasioned by a species of Stella marina, a little sea insect pretty common about the mouth of the Scheldt, which sometimes lodges itself in the mussel in quest of food ; and whose spawn is so caustic and inflammatory, that, even when applied outwardly to the skin, it produces itchings and swellings that are painful in a high degree. Others impute the disorder in question to an unperceived commencement of putrefaction in the mussel ; and there is no sort of putrefaction more noxious and offensive than that of fish. Upon the whole, the eatable mussel, though a rich food, is difficult of digestion. In its best state it is noxious to some constitution* ; and when affected by disease is in some degre j poisonous. Mussels are apt to do most harm when eaten raw. They ought always to be boiled with onions, well washed with vinegar, and seasoned with pepper; and, even thus qualified, they should not be eaten to excess, or too frequently.

M. lithophagus, the stone-eater, has the shell cylindric, the extremities both ways being rounded. It inhabits the Indian, European, and Mediterranean Seas, penetrating and eating away marbles, corals, &c.

The Indian shell is softer and nearly tough like leather, but the European is more brittle. It works its way into the chalk-stone, by a kind of saw at its head. It is defended from all enemies by prickly scales. In Italy it is prized as a great delicacy, the taste resembling an oyster, but with a far superior fla-vor. It is mentioned in Smith's Tour. The columns of the temple of Jupiter Serapis, at Puz-zoli, are perforated by this species. One of them was discovered in England in the centre of a chalk-stone, in August IftOl.

M. Margaritiferous, the pearl-bearing mussel, has the shell compressed and flat, nearly orbicu-lar, the base transverse, and imbricated with dentated coats. It dwells in the ocean of either India. This is the muier perlarumof Kumphms, or mother-of-pearl shell. On the inside it is exquisitely polished, and of the whiteness and water of pearl itself. It has also the same lustre

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on the outside after the external laminae have been taken off by aquafortis and the lapidary's mill. Mother-of-pearl is used in inlaid works, and in several toys, as snuff-boxes, &c.

M. modiolus, the great mussel, with a strong shell, blunted at the upper end, one side angulated near the middle, from thence dilating towards the end, which is rounded. It dwells in the Mediterranean, Indian, European, and American seas ; and its flesh, which is a deep orange color, is eatable. It is the greatest of the mussels known in Britain, being from six to seven inches in length ; it lies at great depths, often seizes the baits of ground lines, and is taken up with the hooks.

M. violacea, the violet mussel, has the shell longitudinally furrowed, the rim very obtuse, somewhat formed like the mytillus edulis, but considerably larger and more flattened, of a beautiful violet color. Inhabits the Southern Ocean.

MYTTOTON, a coarse kind of food, used by the laboring people among the Greeks, and sometimes among the Romans. It was made of garlic, onions, eggs, cheese, oil, and vinegar, and reckoned very wholesome.

MYUS, in ancient geography, one of the twelve

towns of Ionia; seated on the Moeander, at the distance of thirty stadia from the sea. In Strabo's time it was incorporated with the Milesians, on account of the paucity of its inhabitants, from its being formerly overwhelmed with water; for which reason the lonians consigned its suffrage and religious ceremonies to the people of Miletus. Artaxerxes allotted this town to Themisto-cles, to furnish his table with meat ; Magnesia was to support him in bread, and Lampsacus in wine The town now lies in ruins.

MYXINE, the hag, a genus of insects belonging to the order of vermes intestini. It has a slender body, carinated beneath ; mouth at the extremity cirrated ; the two jaws pinnated ; an adipose or rayless fin round the tail and under the belly. The only remarkable species is the

M. glutinosa, about eight inches long. It inhabits the ocean ; enters the mouths of fish when on the hooks of lines that remain a tide under water, and totally devours the whole, except skin and bones. The Scarborough fishermen often take it in the inside of the fish, on drawing up their lines. Linne attributes to it the property of turning water into glue.

N.

N, as a letter, is the fourteenth in the Hebrew, and the thirteenth in Greek, Latin, English, and other modern alphabets. It is the tenth consonant and the third liquid. N is a nasal consonant. The abbe" Dangeau observes, that in the French the n is frequently a. mere nasal vowel, without any thing of the consonant in it. He calls it the Sclavonic vowel. The Hebrews call it nun, which signifies child, as being supposed the offspring of m ; partly on account of the resemblance of sound, and partly of the figure. Hence the Latins frequently convert the Greek v, at the end of a word, into m, as (pappaicov, pharmacum, &c. See M. In composition the Latins change N before p, b, and m into m, and frequently into / and r; as in in-ludo, illudo; in-rigo, irrigo, &c. ; in which they agree with the Hebrews, who, in lieu of nun, frequently double the next consonant; and the Greeks do the same. The Greeks also, before K, x> y, v, changed the v into y, in which they were followed by the ancient Romans; who, for Angulus, wrote Aggulus ; for anceps, agceps, &c. The Latins retrench the n from Greek nouns ending in wv ; as Aetov, Leo ; Apaewv, Draco ; on the contrary, the Greeks add it to the Latin ones ending in o ; as, Ka-ruv, Nfpuv, Cato, Nero. As a numeral, N was used among the ancients for 900 ; according to Buronius,

N. quoque nongentos numero designat habendos. And when a line was struck over it (N), it implied 9000. As an abbreviation, N. L. was used among the ancient lawyers for non liquet, i. e. the cause is not clear enough to pass sentence upon.

NAA MAN. II eb. f►►J7j, i. e. fair. A brave Syrian general, of whose miraculous cure of a

leprosy, by washing in the Jordan, at the command of Elisha, a very interesting account is recorded in 2 Kings v. The rabbies have a

tradition, that it was Naaman who drew the bow at a venture, and killed Ahab. See 1 Kings xxii. 34.

NAARDA, NEARDA, NEERDA, or NEHARDEA, in ancient geography, a town situated on the confines of Mesopotamia and Babylonia ; populous, and with a rich and extensive territory, not easily to be attacked by an enemy, being surrounded on all sides by the Euphrates and strong walls. Josephus. Tn the lower age the Jews had a celebrated school there.

NAARDEN, or NAERDEN,a fortified sea-port of the Netherlands, on the Zuyder Zee. It is chiefly secure from the facility with which the neighbourhood may be inundated, and its situation renders it of importance in the defence of Amsterdam. Population 1800. Eleven miles E. S. E. of Amsterdam, and fourteen north of Utrecht.

NAAS, a borough and post town of Ireland in Kildare, Leinster. It is the county town, and alternately with Athy, the assizes town. It has five fairs, and was anciently the residence of the kings of Leinster; the name signifies the place of elders, for here the states of that province assembled during the sixth, seventh, and eighth centuries, after the Naastelghan of Carmen had been anathematised by the Christian clergy. On the arrival of the English it was fortified ; many castles were erected, the ruins of which are partly visible ; and parliaments were held there. At the foot of the mount or rath are the ruins of a house founded in 1484, for hermits of the order of St. Augustin. On the 24th of May 1798 this town was attacked by a large body of rebels,

NAB

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who were driven into a narrow lane, where they sustainel for a considerable time the tire of the Armagh militia and Sir W. W. Wynne's fen-cibles, before they were repulsed. They had 140 killed, besides many taken prisoners. The king's troops lost two officers and thirty men. It is fifteen miles south-west of Dublin.

NAB, v. a. Dan. naape; Swed nappa. To catch unexpectedly ; seize without warning. A word seldom used but in low language.

NAB, or NAAB, a river of Bavaria, formed of three streams of this name, the Bohemian Nab, rising on the borders of that country ; the Haul Nab, and the Wald Nab, which has its source in the Fichtelberg Mountains. The three streams unite at the town of Au, and fall into the Da-nube below Ratisbon. In the lower part it is navigable for boats.

NABAL, a town of Tunis, in the peninsula of Hamamet. At the distance of about a furlong are the ruins of the ancient Neapolis. They are marked by a number of inscriptions upon large stones. The modern town is celebrated for its pottery. Thirty-two miles S. S. E. of Tunis.

NABAL, Heb. ˆ33, i. e. a fool, a rich Israelite of Carmel, whose churlishness had nearly provoked David to extirpate his whole family, had not Abigail's prudence pacified him.

NABATENE, or REGIO NABATAEORUM, according to Jerome, comprised all the country lying between the Euphrates and the Red Sea, and thus contained Arabia Deserta, with a part of Petraea ; so called from Nabaioth, the first born of Ishmael. According to Diodorus, it was situated between Syria and Egypt.

NABIS, a tyrant of Sparta, who reigned about A. A. C. 204, and contrived an instrument of torture in the form of a statue of a beautiful woman, whose rich dress concealed a number of iron spikes in her bosom and arms. When any one therefore opposed his demands, he would say, ' If I have not talents enough to prevail with you, perhaps my Apega may persuade you.' The automaton statue then appeared ; which Nabis taking by the hand, led up to the person, who, being embraced by it, was thus tortured into compliance. To render his tyranny less unpopular, Nabis made an alliance with Flaminius the Roman general, and pursued with the most inveterate

enmity the war against the Achaeans. He besieged Gythium, and defeated Philopoemen in a naval battle. His triumph was short; Philopcemen soon repaired his losses, and Nabis was defeated, and killed as he attempted to fly, about A. A. C. 194.

NABO, or NEBO, in mythology, a deity of the Babylonians, who possessed the next rank to Bel. It is mentioned by Isaiah, ch. xlviii. Vossius supposes that Nabo was the moon, and Bel the sun ; but Grotius thinks that Nabo was some celebrated prophet of the country, the etymology of the name signifying, according to Jerome, ‘ one that presides over prophecy :’ the moon, however, was supposed by many ancient nations to have great influence on prophetical powers.

NABOB, properly NAVAB, the plural of Naib, a deputy. As used in Bengal, it is the s.ime as Nazim. It is a title also given to the wives and

daughters of princes, as well as to the princes themselves.

NABONASSAR, the first king of the Chaldeans or Babylonians ; memorable for the Jewish era which bears his name. See CHRONOLOGY. Th►►j Babylonians revolting from the Medes, who had overthrown the Assyrian monarchy, founded a dominion under Nabonassar, which was much increased under Nebuchadnezzar. It is probable that this Nabonassar is that Baladan, father of Merodach, who sent ambassadors to Hezekiah : 2 Kings xx. 12; 2 Chron. xxxii.

NABOPOLASSAR, king of Babylon; he joined with Astayges the Mede, to destroy the empire of Assyria; which having accomplished, they founded the two empires of the Medes, under Astayges, and the Chaldeans, under Nabopolassar, 627 B. C.

NABOTH, an Israelite, who, refusing to sell or exchange his patrimonial vineyard to Ahab, was, by the wicked device of his queen Jezebel, falsely accused of treason and blasphemy, condemned and executed ; and his property confiscated. This iniquity drew down the divine vengeance, in a most signal manner, on the whole royal house of Ahab. See AHAB.

NACHEGO, a large lake of the province of Mainas, Quito. It receives the rivers Sungoto and Manguy, and flows by a narrow channel into the Cahuapanas, in lat. 5►► 23’ S.

NACHITSCHEVAN, a well built town in the government of Ekaterinoslav, European Russia, situated on the Dou. It was built in

1780, with five villages in the neighbourhood, by a colony of Armenians from the Crimea, and is the see of one of their bishops. The town contains about 4000 inhabitants, and the whole colony 14,000. They manufacture silks and cottons, dress leather, and are active in commercial pursuits.

NACHO, or NACO, or Puerto de Cavallos, a settlement of Mexico, in the province of Honduras: 100 miles W. N. W. of Comayagua, and thirty north of Gracias a Dios. Long. 89►► 36' W., lat. 15►► N.

NACHOD, a small town of the north-east of Bohemia, on the Metau, twenty miles west of Glatz, in Silesia. Population 1400.

NACKSHIEVAN, or NUCKSHIEVAN, the ancient Artaxata, a place in Persian Armenia. It flourished till the reign of Abbas I., who removed the inhabitants into the interior. It is now reduced to ruins, containing not more than 400 people; but here the prince of Persia often pitches his camp in the military operations against the Russians : eighty-five miles southeast of Erivan.

NADENE, a district, town, and fortress of Hindostan, taken from the Hindoos by sultan Mahmoud of Ghizne, in 1014. The district is mountainous, and is at present governed by a Hindoo prince, tributary to the Seiks, and who, in the year 1806, was plundered by the rajah of Nepaul. The town stands in long. 75►► 47* E., lat. 31►► 49' N., on the eastern bank of the Bey ah River.

NA'PIU. n. s. Arab, antidir. The point under fool ilircctly opposite 'o the zenith.

As far as four bright signs comprize, The distant zenith from the nadir lies. Creech.

The baneful star, that had so long shed its blasting influence in ray zenith, for once made a revolution to the nadir; and a kind Providence placed me under the patronage of one of the noblest of men, the earl of Glencairn. Burns.

NAEFELS, a town of Switzerland, in the canton of Claris, on the Linth, defended by a castle. Here in 1388 400 brave Swiss repulsed a numerous body of Austrians, under duke Leopold. In memory of this action a chapel was erected on the spot, which was rebuilt in the year

1779: four miles north of Claris.

N./ENIA, the goddess of funerals at Rome. Her temple was without the gates of the city. The songs which were sung at funerals were also called naenia. They were generally filled with the praises of the deceased ; but so unmeaning that the word became proverbial to signify nonsense.

N./EVIUS, a famous augur in the reign of Tarquin, who, to convince the king and the Romans of his preternatural power, cut a flint with a razor, and turned the ridicule of the populace to admiration. Tarquin rewarded his merit by erecting him a statue in the comitium, which was extant in the age of Augustus. The razor and flint were buried near it under an altar, and it was usual among the Romans to make witnesses in civil causes swear near it. This miraculous event of cutting a flint with a razor, though believed by some writers, is treated as fabulous by Cicero, who himself had been an augur.

NJEVIUS (Cneius), a celebrated poet of Campania, who was bred a soldier ; but quitted arms for poetry, which he prosecuted with great diligence. He composed a history in verse, and a great number of comedies ; but it is said that his first performance of this kind so displeased Metellus, on account of the satyrical strokes it contained, that he procured his banishment from the city ; on which he retired to Utica, in Africa, where he died A. A. C. 202. Some fragments of his works are extant.

N/EVUS, a mole on the skin, generally called nsevus maternus, or mother's mark. All preternatural tumors on the skin, in the form of a wart or tubercle, are called excrescences ; by the Creeks they are called acrothymia ; and when they are born with a person they are called naevi materni, or marks from the mother. A large tumor depending from the skin is denominated sarcoma. These appear on any part of the body; some of them differ not in their color from the rest of the skin ; whilst others are red, black, &c.

NAFF, a river of Hindostan which separates Bengal from Arracan. The banks of it are covered with wood, interspersed with a few villages, whose inhabitants are chiefly occupied in hunting, or catching wild elephants. The river is of considerable width and depth ; but its course has never been surveyed.

NAG, n. e. Belg. rwgge ; Goth, negg ; Teut. irtr/c. A sm;ill horse; a horse in familiar language; and, in the same sort of language, a paramour.

Your ribauld img of Kgypt Hoists sails, and flies.

Shakspeare. Antony and Cleopatra. A man of quick and active wit For drudgery is more unfit, Compared to those of duller parts, Than running-nags to draw in carts.

Butltr.

A oungry lion would fain have been dealing with good horseflesh ; but the nag would be too fleet.

L' Estrange.

Thy nags the leanest things alive, So very hard thou lovest to drive. Prior.

NAGAMANCALAM, a fortress of the My-sore, India. It has a good citadel and two Hindoo temples, together with public granaries and store-rooms. It is said to have been erected 600 years ago, and was taken by the Mahrattas in the war of 1793. Long. 76►► 57' E., lat. 12►► 49' N.

NAGORE, a considerable sea-port of the south of India, in Tanjore. It carries on a good trade with the Americans, Ceylon, and other parts of Asia. Long. 79►► 55' E., lat. 10►► 49' N.

NAGORE, a district of Hindostan, in Ajmeer. It is inhabited chiefly by Hindoos, and tributary to the rajah of Jyenagur. It is celebrated for a fine breed of cattle.

NAGORE, the capital of the above mentioned district, and residence of its rajah, stands in long. 74►► 15' E., lat. 27►► N.

NAGORE, or NAGHORE, a town of Bengal, formerly the capital of Berbhoom, was plundered by the rajah of Orissa, in 1244. In the vicinity is a hot spring of medicinal qualities. Long. 87►► 20' E., lat. 23►► 56' N.

NAGPOOR, CHUTA, or Little, a district of Bahar, Hindostan, in the southern extremity of the province, situated principally between 22►► and 23►► N. lat. It is bounded north by Ram-gur and Palamow ; south by the independent district of Gangpoor; on the east

it has Ramgur and Singhboom ; and on the west Palamow and Jushpoor. The ancient Hindoo province of Gundwana also borders this district on the southern, eastern, and western, quarters ; a very great proportion of the inhabitants are indeed of the old Hindoo castes.

The surface of the country is hilly, and covered with jungle. Under the Moguls it was a frontier government, partially subdued and occupied by native zemindars, and still continues one of the wildest and least cultivated of the British company's districts. It has no available navigation, though, like other hilly districts, it contains the sources of many streams. The soil is in many parts impregnated with iron ; but it is not thought worth the working. The name Nagpoor indicates, according to Mr. Hamilton, that in the opinion of the natives the territory contains diamonds.

NAGPOOR, or NAGAPURA, the Town of Serpents, a large town in the province of Gundwana, the capital of the territories of the Nagpoor Mahrattas. Lat. 21 9' N., long. 79 45' E. It has been considered as the capital of Berar, but this is a mistake ; Berar is an adjoining province, the capital of which is Ellichpoor.

This is a city of modern creation, and, though extensive and populous, but meanly built : the

NAG

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streets are very narrow aim filthy. Ragojee the rajah ; but every thing else south of the In

Bhoonslan first fixed the seat of government here jardy Hills, and west of the Wurda to be ceded

by surrounding an insignificant village with a to the British and their allies. On any dispute

rampart; still it cannot be considered as a forti-arising the British engaged to mediate impar

fied town, for it is incapable of resisting an tially between the Nizam and the Rajah and the

enemy for a single day. It stands on a high latter agreed never to receive any European into

fertile plain, and bounded by hills of moderate his service without the consent of the British

height to the north-west and south on the rivulet government. During the war possession I

Nag Nuddy. The appearance of the country to been taken of the districts of Sumbhulpoor and

the north is that of a forest, with villages and Patna in the province of Gundwana fbut i

small towns scattered over it. Including the consequence of the amicable relations subsisting

suburbs the population has been taken at 80,000. between the states, they were restored in 1806 ###

The dominions of the rajah, who resides here, and, in 1809, the rajah again experienced the

comprehend great part of the ancient Hindoo benefit of the British alliance, by the powerful

province of Gundwana. In their entire dimen-assistance afforded him against Ameer Khan and

sions they border on Bengal, the Northern Cir-his horde of depredators.

cars, and the Nizam's territories lr. the Deccan ; NAGYAG, a town of Transylvania, in the but a large proportion of the country, never hav-mountainous county of Hunyad, near Deva, re-ing been subdued, pays no tribute, unless when markable for a mine of Tellurium, containing compelled by an enemy. The districts more numerous particles of gold and silver. It is immediately under his control are those in in a most romantic position, and has been the vicinity of this capital, i. e. Chooteesghur, wrought since 1740. The depth of the mine is Ruttunpoor, and Chandah; together with the about 160 fathoms. The atmosphere is thought

strong fortresses of Gawelghur and Narnallah, in Berar.

' The Mahratta Rajahs of Nagpoor being descended from the line of Sarajee,' says Mr. Hamilton, ' pretend to a superiority over the Poonah family, although the first sovereign was

very healthy.

NAGYAO, a river of Hungary, rising in the county of Marmarosch, on the borders of Po-land, and falling into the great river Theyss.

NAGY-BANYA, or NEUSTADT, a town of north-east Hungary, the capital of one of the

Ragojee Bhoonslah, a general in the service of four large mining districts. It has a mint where

the Peishwa, and despatched by him to effect gold, silver, and copper are coined, a gymna—

the conquest of this country about the year 1740.

He was succeeded by his son Janojee, who died

A.D. 1772. His successor, in 1774, after many

contests with the different members of his family,

was his nephew, Ragojee Bhoonslah, under the

regency of his father, Madhajee Bhoonslah.

The latter died many years ago, but the former

sium, and a court of justice for cases connected with mining. There are smelting works in the neighbourhood, and some rich mines of gold and silver ; but the chief part of the ore is refined at other places. The minerals annually produced at the different works in the district are calculated at 9000 or 10,000 Ibs. of silver, from

still continues on the throne. The policy of this 200 to 300 Ibs. of gold, 150 tons of copper, state has, in general, been to interfere as little as 500 or 600 tons of lead, and 200 tons of iron. possible with the contests of the neighbouring The workmen, in number from 10,000 to 12,000, potentates, and for many years its internal dis-and in general VVallachians. Population of the sensions furnished its sovereigns with sufficient town 4600 : ninety-four miles east by north of occupation. Their territories being of great ex-Debreczin.

tent, wild, and desolate, presented many obsta-NAGY-ENYED,orStrassburgh, the Anna Via cles, and few temptations to the cupidity of their of the Romans, a considerable town of Tran-neighbours; they consequently remained for sylvania, situated in a valFey near the river many years exempt from external warfare, un-Marosch, and the chief place of the county of til, in 1803, the Nagpoor Rajah was induced to Lower Weissenburg. It has a Cal T in ist college join Dowlet Row Sindia in a confederacy against and Calvinist, Lutheran, and Catholic churches. the British government. The signal defeats they The chief employment of the inhabitants is sustained from general Sir Arthur Wellesley, at agriculture, there being no manufacture except Assaye and Argaum, soon compelled the former of turners' and joiners' wares. The remains of a to sue most urgently for peace, which was Roman aqueduct are still to be seen

granted on the 17th of December, 1803, when a treaty of peace was concluded by general Wei-

ants 6000 : sixteen miles north of Carlsburg. NAGY-K AROLY, a large town of the north-has Catholic, Calvinist, and

lesley on the part of the British government, and east of Hungary, has Catholic, Calvinist, and

Jeswunt Row Ramchunder on the part of Ra?o-Greek churches ; also a gymnasium taught by

iee Bhoonslah ; by the conditions of which the Catholics, and some large annual fairs.

Cuttack includin longs chiefly to count Caroly a nobleman w h<

latter ceded the province of Cuttack, including

hills on which the forts of Gavvelghur and Ner-The -…. ….r.-.,~

nallah stand, with a contiguous district to the 12,000) is in the “eyards, tl

amount of four lacks of rupees, to remain with sale of WHH-, and

NAH

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NAHN, a mountainous district of Delhi, Hindostan, bounded on the east by the river Jumna, and situated between the thirtieth and thirty-second degrees of northern latitude. This country contains some extensive plains along the banks of the river ; but, being open to the inroads of the Seiks and Nepaulese, it is little cultivated. It is also ruled by several jealous independent chiefs.

NAHN, the capital of the district of this name, is a place of strength, being built of stone, and situated on the top of a mountain. Its chief pays tribute both to the Seiks and the rajah of Nepaul. Long. 77►► ”’ E., lat. 30►► 41’ N.

NAHOR, the son ?f Serug, and grandfather of Abraham, the ninth from Noah, was the shortest lived of the patriarchs before Abraham, having lived only 119 years.

NAHOR, the son of Terah, grandson of the preceding, and brother of Abraham. He resided at Haran called also Nahor, in Mesopotamia, and married Milcah, his niece, by whom he had eight sons : *viz.* 1. Huz or Uz, the progenitor of the Uzites or Ausites, who inhabit the land of Uz, on the west side of the Euphrates, where Job dwelt ; 2. Buz, the ancestor of the Buzites ; 3. Kemuel, the father of the Kemelites and of the Arameans or Syrians; 4. Chesed, the father of a tribe of Chaldeans ; 5. Hazo, the ancestor of the Huzeans, or Chosseans, in Chusistan, in Persia ; 6. Pildash, whom Dr. Hyde makes the ancestor of the Persians; 7. Jidlaph; and, 8. Bethuel, the father of Laban and Rebekah. Na-hor had also other four sons by his concubine Reumah. Gen. xi. ; xxii. 21 ►►► 24.

NAHUELHUAPI, nahuel a tiger, and hu-aupi an island, a lake of Chili, formed by the waters which descend from the Chilian Bor-dellas, and 100 miles in length. It encloses an island called the Island of Tigers, and there is a settlement on the north shore, in long. 70►► 40’ W., lat. 41►► 22’ 30’ S.

NAHUM, the seventh of the twelve minor prophets, was a native of Elkoshai, a little village of Galilee. The subject of his book is the destruction of Nineveh, which he describes in at once a grand and pathetic manner: his style is bold and figurative, and cannot be exceeded by the most perfect masters of oratory. This prophecy was verified at the siege of that city by Astyages, A.M. 3378, A.A.C. 622.

‘The fire, spirit, and sublimity of Nahum,’ says Dr. Grey, ‘ are unequalled. His scenes are painted with great variety and splendor. The exordium of his work, in which he describes the attributes of God, is august; and the preparations for the attack, as well as the destruction of Nineveh, are represented with singular effect. The art with which the immediate destruction of the Assyrians under Sennacherib is intermingled with the future ruin of the empire affords a very elegant specimen of the manner in which the prophets delight to introduce present and distant events under one point of view. The allegorical pictures in this book are remarkably beautiful.

‘Nahum is said to have been of the tribe of Simeon ; but, amidst a variety of opinions, it is difficult to determine what precise time should U-assigned for the period of his existence. Jo-

sephus asserts that he lived in the ––*m8 of Jotham, king of Judah : in which case he may be supposed to have prophesied against Nineveh when Tiglath-Pileser, king of Assyria, carried captive the natives of Galilee, and other parts, about A. M. 3264. The Jews place him so late as the reign of Manasseth. The most probable opinion is, that, though Nahum might have lived in the reigns of both these kings, yet he delivered these prophecies in Judea in the reign of Hezekiah ; for he appears to speak of the taking of No-Am- mon, a city of Egypt, and of the insolent messengers of Sennacherib, as of things past ; and he likewise describes the people of Judah as still in their own country, and desirous of celebrating their festivals. He cannot therefore be supposed to have prophesied before the fourteenth year of Hezekiah, since the expedition of Sennacherib against this prince was in the fourteenth year of Hezekiah ‘s reign; and therefore he probably prophesied between A. M. 3283, when Shalma-neser carried Israel captive into Assyria, and A. M. 3294, when Sennacherib was meditating the destruction of Jerusalem.

‘At this period of perplexity and distress,’ adds the above writer, ‘ when the fate of Samaria was present to the apprehensions of Judah; when her own cities had been taken by Sennacherib, and Hezekiah had drained his treasury, and even despoiled the temple, in the vain hope of averting the fury of Sennacherib ; then was Na-hum raised up in consolation to Judah, and to-proclaim destruction ‘ to him that imagined evil against the Lord.’ At this time Sennacherib still continued to send arrogant messages, and blasphemous letters ; threatening the destruction of Jerusalem, insulting Hezekiah, and deriding the confidence of his people, who trusted in the Lord.

Already had Isaiah been commissioned to send an assurance of protection to Jerusalem ; and Nahum conspired with him to promise deliverance to Hezekiah from the Assyrian yoke ; and to anticipate with prophetic exultation the appearance of welcome messengers, that should bring good tidings, and publish peace to Judah; who should celebrate her solemn feasts secure from invasion, as her enemy ‘ was utterly cut off.’

‘ Nahum afterwards, in his two last chapters, proceeds to foretel the future downfal of the Assyrian empire ; renewing those denunciations of wrath which about ninety years before Jonah had utterred against Nineveh, whose repentance was but of short duration ; and predicting, in the most descriptive manner, that final destruction which was effected probably by Nabopolasser and Cyaxares, A. M. 3362 ; but certainly by the Medes and Babylonians, whose confederate forces assaulted the Assyrians unexpectedly, ‘while they were folden together as thorns, and while they were drunken as drunkards ;’ when ‘ the gates of the river were opened, the palace dissolved,’ and an ‘ over-running flood’ assisted the conquerors in their devastation ; who took an endless store of spoil of silver and of gold, making an utter end of the place of Nineveh : of that vast and populous city, whose walls were 100 feet high, and capable of admitting three chariots abreast upon them, and fortified with 1500 towers, in walls of 200 feet high. So totally, in-NAILS.

deed, was this city destroyed, that, in the second century after Christ, not a vestige of it remained to ascertain the spot on which it stood. Its situation has long been a matter of uncertainty and dispute.’

NAIADES, in mythology, inferior deities who presided over rivers, springs, wells, and fountains. The Naiades generally inhabited the country, and resorted to the woods or meadows near the stream over which they presided. They are represented as young and beautiful virgins, often leaning upon an urn, from which flows a stream of water. jEgle was the fairest of the Naiades, according to Virgil. Their name is derived from vativ, to flow. They were held in great veneration among the ancients ; and sacrifices of goats and lambs were offered to them, with libations of wine, honey, and oil ; sometimes offerings of milk, fruit, and flowers. Their robes (if any, for

they are commonly naked) are of a greenish color, with lighter or darker shades, and so transparent as to show the fineness of their skin and shape. They have sometimes, on the ancient gems, flying veils over their heads, like the Aura; or sylphs.

NAIANT, in heraldry, a term used in blazon-ing fishes, when borne in a horizontal pdsture, as if swimming.

NAIAS, in botany, a genus of the monandria order, and dioecia class of plants. The male CAL. is cylindrical and bifid ; the COR. quad-rifid ; there is no filament, nor is there any female CAL. or con. ; there is one pistil, and the capsule is ovate and unilocular. Species one, common to the sea-coasts of Europe ; stem with triangular spines ; leaves narrow, with spinous teeth on each side; flowers axillary, solitary.

NAIL, n. s. Sax. naejl ; Goth, nagl ; Swed. Dan. and Teut. nagel. The horny substance which defends the human fingers and toes ; the talon or claw of a bird or beast : hence, a measure of length of two inches and a' quarter (the distance probably from the knuckle to the nail). ' On the nail,' Dr. Johnson says, readily ; immediately ; without delay. ' I once supposed it from a counter studded with nails, but have since found in an old record, solvere super uri-guem. It therefore means into the hand.'

My nails can reach unto thine eyes. Shakspeare.

The meanest sculptor in the' yEmilian square, Can imitate in brass the nails and hair ; Expert in trifles. Dryden.

The nails of our fingers give strength to those

parts in the various functions they are put to ; and

defend the numerous nerves and tendons that are

under them. Ray.

We want our money on the nail ;

The banker's ruined if he pays. Swift's Poems.

NAIL, n. s. &, v. a. Sax. nasˆl. Perhaps from the above. A pin or fastening, generally of metal ; a stud or box : to fasten or stud with nails.

And he s'eide to hem but I see in his hondis the fitchyng of the nailis,

and putte my fyngir into the place of the nailis, and put myn honii into liise side I schal not bileue. Wielif. Jon. 20.

As one nail by strength drives out another ;

So the remembrance of my former love

Is by a newer object soon forgotten. SHiuktjiexre.

For the body of ships, no nation doth equal England, nor for the oaken timber to build them ; and we need not borrow iron for spikes or naili, to fasten them together. Bacon.

The loadstone mines in the shore of India, are so placed in abundance and vigour, that it proves an adventure of hazard to pass those coasts in a ship with iron nailt. Broumt.

To the cross he nailt thy enemies, The law that is against thee, and the sins Of all mankind, with him are crucify ‘d.

Milton.

A beet-hen pail

Hung by the handle on a driven nail. Dryden. He clasped his hand upon the wounded part ; The second shaft came swift and unespyedˆ And pierced his hand and nailed it to his side.

Id. For not the desk with silver nail*,

Nor bureau of expence, Nor standish well japanned avails

To writing of good sense. Su-ifi.

A n equivocal word used for the nail of the hanj or foot, and for an iron nail to fasten any thing.

Watit.

An opera like a pillory may be said To nail our ears down, but expose our head.

Young. NAILS, in building, &c., are of several sorts.

1. Back and bottom nails, which are made with flat shanks to hold fast

and not open the wood.

2. Clamp-nails, for fastening the clamps in buildings, &c. 3. Clasp-nails, whose heads, clasping and sticking into the wood, render the work smooth, so as to admit a plane over it. 4. Clench-nails, used by boat and barge builders, and proper for any boarded buildings that are to be taken down, because they will drive without splitting the wood, and draw without breaking; of these there are many sorts. 5. Clout-nails, used for nailing on clouts to axle-trees. 6. Deck-nails, for fastening of decks in ships, doubling of shipping, and floors laid with planks.

7. Dog-nails, for fastening hinges on doors, &*.

8. Flat-points, much used in shipping, and are proper where there is occasion to draw and hold fast, and no conveniency of clenching. 9. Jo-bent-nails, for nailing thin plates of iron to wood, as small hinges on cupboard-doors, &c. 10. Lead nails, for nailing lead, leather, and canvas to hard wood. 11. Port-nails, for nailing hinges to the ports of ships. 12. Pound-nails, which are four-square, and are much used in Essex, Norfolk, and Suffolk, and scarcely any where else, except for paling. 13. Ribbing-nails, principally used in ship-building, for fastening the ribs of ships in their places. 14. Rose-nails, which are drawn four-square in the shank, and commonly in a round tool, as all common two-penny nails are ; in some countries all the larger sort of nails are made of this shape. 15. Ro-ther-nails, which have a full head, and are chiefly used in fastening rother-irons to ships. 16. Round-head nails, for fastening on hinges, or for any other use where a neat head is required ; these are of several sorts. 17. Scupper-nails, which have a broad head, and are used for fastening leather and canvas to wood. 18. Sharp-nails, these have sharp points and flat shanks, and are much used, especially in th►► \est Indies, for nailing soft wood. 19. Sheath-362

ing nails, for fastening sheathing-boards to ships. ►►►20. Square-nails, which are used for hard wood, and nailing up wall-fruit. 21. Tacks, the smallest of which serve to fasten papei to wood ; the middling for wool-cards, &c., and the larger for uphoisterers and pumps. Nails are said to be toughened, when too brittle, by heating

them in a nre-snovel, and putting some tallow or grease among them.

Such are some of the various descriptions of nails employed by mechanics in the different arts of life, and, as new arts and new inventions arise from human ingenuity, other kinds of uails will be formed, adapted to the several purposes for which there is a demand. Formerly the nail-maker's process was very tedious, every nail being made by the hand, and each begun and finished by the same individual; it was afterwards discovered in this manufacture, as in many others, that, by a division of labor, and by assigning to different persons the pointing, heading, &c., a greater quantity of work was done by the same number of hands ; of course the processes were much simplified and expedited, and the article could be sold on much lower terms.

Within the last five-and-twenty years ingenious mechanics have not only improved the method of manufacturing nails, but have thought it worth their while to secure to themselves the exclusive right of their inventions by obtaining the king's letters patent : of some of these we shall proceed to transcribe an account from the Circle of the Mechanical Arts : ###

In the year 1790 Mr. Thomas Clifford, of the city of Bristol, obtained two patents for the manufacture of nails of every kind. The principle on which his first invention is founded was that of making the nails in a die ; that is, by having a die or the impression of the nails to be cut into one or more pieces of iron, steel, or other metal ; and the iron of which the nails are to be formed is drawn or rolled into the proper form or thickness, and, by a force adapted to the purpose, pressed into a cavity or die, so as to form the nails, either complete or so nearly complete as that they can be finished with a very little labor. This operation may be done, in several ways, but the one particularly recommended by Mr. Clifford is by rollers of iron or steel, and worked either by water, steam, wind, horses, &c. The two rollers are to be made of iron and cased with steel, each of the same diameter, and the diameter proportioned to the length and size of the nail intended to be made. Each roller should have one or more cog-wheels, the cogs of one roller to work into those of the other, so that the rollers may both perform the same exact revolution. One half the impress of the nail is to be cut with one roller, the other half in the other, so that the two impressions form a cavity or die of the exact form of the nail, extending the lengthways of the nail on the circumference of the rollers; and as many impressions of the same kind may be cut in the rollers, one at the end of the other, as will complete their circumference, ami continue the cavity all round the rollers : '.lie

point of one nail joining the head of the next, or the two points and two heads joining each other. The rollers must in this, as in other

cases, be made to work very true, and close to each other.

The mode of operation is this: a rod of metal, iron for instance, rolled or drawn to a convenient size, is to be heated, and, while hot, the end of it is put between the rollers, into the cavity or die which forms the impression of the nail. The rollers, being now put in motion, will draw the iron through, pressed into the cavity or die which forms the impression of the nail, the one joined to the other, which must be afterwards separated by means of instruments acting as nippers, shears, chisels, &c. The rollers being made to work very close to each other, where the edge of the nail is formed, will prevent much of the metal from being pressed out on each side of the nail, and what is pressed out may be cut off by instruments adapted to the purpose. Several pairs of rollers may be made to work together, and each pair may have several rows of dies cut on them, so as to form the impression for several strings of nails ; and a rod of iron, being put into each of them, will roll out as many strings of nails with one revolution of the rollers. A pair of rollers may also have the greater part of their surface cut with dies, and a flat bar or piece of iron be made to pass between the rollers, so as to form sheet nails ; the whole of them connected to one another by thin plates of iron, of which they are composed, and this would require each nail to be cut out or separated from the sheet by proper instruments.

Mr. Clifford's second invention consists, 1. In drawing the iron, or other metal, into a tapering or wedge-like form, according to the length and thickness of the differe-it sizes of nails t►► be made. 2. The nails are to be cut out of those wedge-like or tapering plates by means of a punch, the face of which is made according to the size, taper, and form of the nail to be cut out; as also, having a hollow bolster, the hollow or aperture of which must also be made of the size and frtrm of the nail, and consequently to fit and receive the punch above-mentioned. The punch thus fitted to the bed, and sliding in the frame to keep it steady, will, by a blow or by pressure, cut or force a part of the taper plate into and through an aperture of the bed fitting to it, and by which the nail is formed. This operation is, by the manufacturers of buckles, buttons, &c., generally called cutting out. 3. To form the heads of horse-nails, called rose heads, and others of nearly a similar kind, after the operations of drawing and cutting out, the nail is to be put into a heading tool, which is also called a bed,

which bed receives the nail, excepting a small portion, at the thick end of which the head is formed by a punch or die. This die, by a blow or pressure, forms the head as required ; and when the nails are made of hard iron, after they are cut in the way described, the thick end is made hot before tl<*y are put into the bed or heading tool. Another method adopted in the manufacture of nails is by cutting them out of iron plates of equal thickness, and afterwards to pojnt them either by a hammer or other pressure. 5. In making nails that are of a triangular fbrm, the plate o’

strip of iron is pressed or stumped into a die, iiaving impressions cut to the form of such nails, after which they are cut out by a punch.

At about the same period in which the foregoing patents were obtained Mr. William Finch, of Woombourne, in Staffordshire, invented another method of making nails and spikes by machinery, to be worked by steam, &c., by which all manual labor was to be saved. In his speci-rication he describes his power as consisting of one main shaft, caused to revolve in either a horizontal or perpendicular direction by means of a water-wheel, or a steam-engine. Such main shaft will put in motion, by means of cogs and pinion-wheels, other counter-shafts or barrels, on which are fixed arms, &c., and on these are hammers that are worked in either a lift, or tilt manner. He also makes three divisions of hands in the manufacturing of headed-nails, namely, one man, woman, or child, to carry the heated rod to the man, woman, or child, stationed before the hammer, which person, by mere activity, will with one hand not only form the lareer size nail, but a far greater number in the same given time: when the third person will, with the same kind of hammer, head and finish a number of the same shanks together, leaving them truer made, and better for use, than the present mode. Also, by a division of hands, will make such nails as require no tool or frame to be headed in ; namely, the one to carry the iron from the fire, and the other stationed before the hammer to finish them. In enumerating the advantages and savings of this method, above the others then in use, Mr. Finch says that, by heating many rods in one fire, there will be a saving of coal : ††† by the more speedy motion of machine hammers, several nails will be made by once heating tfee rod, whereas, by the old me-thod, only one is made: ††† again, the motion being regular, independently of strength, a child will be able to make the largest nail or spike. A farther benefit, it is said, will arise to the manufacturer by this mode, *viz.* that he will have his business done at one place, or under one roof, whereas, by the old method, the workmen sometimes live many miles asunder, and cannot be overlooked. Likewise, by this method, the limbs of those employed in the manufactory will be preserved to the end of life, but, in the old method, it frequently happened that nail-makers were lamed in a few years, and became burdensome to the parish.

Another invention of this kind is that for which a patent was obtained,

in 1808, by Messrs. Willmore and Tonk, and which may be thus described : ††† They take a nail-rod of a size suitable to the size of the nail intended to be manufactured, and applying it to a common screw-press, mounted with proper cutters, cut off from the end of the rod two pieces at once, obliquely across the rod at one place, and directly across it in another. Two studs or stops are set up, which are attached to the press, and are moveable in the direction of the rod, for the purpose of ascertaining the length of the nail ; and both studs are adjustable in the cross direction of the rod, so that the obliquity of the cut, according to the kind of nail to be made, is thereby deter-

mined, as well as the length of the nail. This is called the first operation.

The second operation is to anneal the pieces so cut off, if the iron should not be sufficiently malleable, which is done in the usual and well-known manner. The third operation is that of heading, which, for clasp-head nails, consists of two parts, one for gathering, and the other for forming the head of the nail. The first part of this operation is performed by putting a piece cut off the rod of iron, as before described, into a pair of clams, leaving as much of the thick end projecting above the clams as is sufficient to form the head. These clams have steel bits let into them with sharp edges, which press only against the two opposite sides of the piece, and which have the effect of two chisels when the puncli of the press is brought down upon the piece with considerable force, and raise or gather up iron on each side towards forming the head. The second part of this operation is to put the piece thus prepared into another pair of clams, having bits formed to correspond to the under side of the head ; and the punch, having the impression of the upper side of the head engraved or sunk into it, is brought to press strongly upon the head in the clams, and thereby the clasp-head is properly formed.

‘ For nails intended to have rose-heads, or any other kind of heads, except clasp-heads, the first part of this operation is not absolutely necessary, but the bits, which for clasp-nails must have sharp edges, must for the other kind of nails have blunt edges, to prevent the under-cutting. For the second part of this operation, the piece is put either into a pair of clams, or into the tool commonly called a bore,

and then pressed with punches, properly engraved or sunk, according to the kind of head wanted. By the first operation, the piece cut off the rod of iron is formed something like a mortise-chisel ; the fourth operation is to point it, which is done by putting the piece into a bed of steel, in which is cut a nick or groove, having parallel sides, but the bottom rising towards the end where the point of the nail is to be formed. The punch is shown in the specification, and the end which presses upon the point of the nail is made to project farther than the other part, so as to meet the corresponding part of the bed when the punch is brought upon the nail. The groove or nick in the bed should be just wide enough to receive the piece easily, but prevent it from twisting when the impression is made. The piece is put twice into the nick ; once with the chisel, the end lying horizontal, and the next turned a quarter round, to press the chisel edge into a pointed form. If the nails, by the strong pressure which is necessary in this operation, should become too hard to clench, they anneal them in the ordinary way, which may be called the fifth operation. The third, fourth, and fifth operations above described are applied to nails, or pieces cut ofi' from sheet or rolled iron in the ordinary way ; but as they, in consequence of the fifth operation, which is necessary to give them the quality of clenching, are apt to be too soft to drive well, a sixth operation is applied, *viz.* quenching them, when red hot, in water or

other proper fluid, which gives them stiffness enough todrive without destroying the quality of clenching. The figures attached to the specification show, 1. A pair of clams, with bits or dies let into them, which can be renewed from time to time with more ease, and at less expense, than by the usual method. These bits are proper for the first part of the third operation. 2. A pair of bits, or dies, proper for making either rose-heads or flat-heads. 3. A pair of bits, or dies, proper for the second part of the third operation for clasp-head nails. 4. A view of the common screw-press, in which is shown the side-pin, or screw, by which the clams are firmly pressed together at the time the punch is pressed down upon the nail. This pin, or screw, is generally worked by the foot, by means of a lever connected with a treadle, while the hand applies its force to the handle of the fly ; but to the head of the main screw is fixed a portion of a pulley (or a whole one), to which is attached a rope, chain, belt, or other connecting pliable material, which flying round the edge of another pulley fixed to the frame of the press, and standing vertically descends, and is attached to the moveable end of the treadle ; and on this treadle is placed a weight, heavy enough to press the clams together with sufficient force. By means of the latter described machinery, which is the only part claimed by the patentees as their invention, the operation of pressing is performed by the action of the hand only, and is found very convenient.' We may mention, in connexion with this bject, an improvement in the manufacture of bagging for packing of nails, adopted by Mr. Benjamin Haden, of Sedgley, in Staffordshire. He takes for his warp, hurds or tow, prepared in the usual way, such as are in common use in the manufacture of nail-bagging, but for his wefts or woofs he takes old ropes, or junk, of any dimensions; and, after untwisting or dividing the threads or filaments, he winds it into bobbins or quills, and then they become fit for the shuttle, when he weaves them with the common warp in the common way. The materials just mentioned are said to be peculiarly adapted to give strength and durability to the article, and are therefore perfectly fit for the bagging of nails. The yarn, of which ropes are generally made, particularly king's ropes, is spun from the choicest hemp, and strongly impregnated with tar. The threads taken from the middle of such ropes, not having been exposed to the weather, or to friction, are as sound and as strong as when originally used. The tarry matter, with which-the threads are impregnated, renders them peculiarly advantageous in the manufacture of sacks that require great strength,

and substance, the weft being composed of these threads, finely spun, which are good and strong, tenacious, and not liable to rent or perish with the wet, nor to burst in carriage, to the great loss of those concerned.

The nail-makers of the United States have carried the invention of cutting nails by machinery to great perfection : greater, as some have thought, than has been exhibited in this country. The American secretary to the treasury, published in 1810 some letters on the manufactures of that country, by which it appears that they

then had machines which performed the cutting and heading at one operation, and with such a rapidity, that one machine furnished upwards of 100 nails per minute. 'The importance of nail machinery in Massachusetts,' he says, 'and of all that relates to rolling and slitting-mills, with which nail machinery is immediately connected, requires that a particular account should be given of them. In old countries nails are forged, here they are cut ; and it is curious to trace the progress of American genius through the various steps of this invention. Twenty years ago, some men, now unknown, and then in obscurity, began by cutting slices out of old hoops, and by a common vice, griping these pieces, headed them with several strokes of the hammer: by progressive improvements slitting-mills were built, and the shears and the heading-tools were perfected, yet much labor and expense were requisite to make nails. In a little time Jacob Perkins, Jonathan Ellis, and a few others, put into execution the thought of cutting and of heading nails by water, but, being more intent upon their machinery than upon their pecuniary affairs, they were unable to prosecute the business. At different times other men have spent fortunes in improvements ; and it may be said with truth, that more than 1,000,000 of dollars have been expended; but at length these joint efforts are crowned with complete success, and we are now able to manufacture at about one-third of the expense that wrought nails can be manufactured for, and nails which are superior to them, for at least three-fourths of the purposes to which nails are applied, and for most of those purposes, they are full as good. The machines made use of by Odiorne, those lately invented by Jonathan Ellis, and a few others, present very fine specimens of American genius. To northern carpenters it is well known, that in almost all instances it is unnecessary to bore a hole before driving a cut nail ; all that is requisite is, to place the cutting edge of the nail across the grain of the wood ; it is also true, that cut nails will hold better in the wood. These qualities are, in some rough building works, worth twenty per cent, of

the value of the article, which is equal to the whole expense of manufacturing. For sheathing and drawing, cut nails are full as good as wrought nails ; only in one respect are the best wrought nails a little superior to cut nails, and that is where it is necessary they should be clenched. The manufacture of cut nails was born in our country, and has within its bosom advanced through all the various stages of infancy to manhood; and, no doubt, we shall soon be able, by receiving proper encouragement, to render them superior to wrought nails in every particular. The principal business of rolling and slitting-mills is, rolling nail-plates ; they also serve to make nail rods, hoops' tires, sheet iron, and sheet copper; in this State we have not less then twelve.'

These mills could roll and slit 7000 tons of iron a-year : they now, it is presumed, roll and slit each year about 3500 tons, 2400 tons of which, probably, are cut up into nails and brads, of such a quality, that they are good substitutes for hammered nails ; and, in fact, have the pre

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ference will) most people for the following reasons, *viz.* on account of the sharp corner and true taper with which cut nails are formed ; they may be driven into harder wood, without bending or breaking, or hazard of splitting the wood, by which the labor of boring is saved, the nail, one way, being of the same breadth or thickness from head to point.

NAILS, in anatomy. See ANATOMY.

NAILS, in Hebrew antiquity, were made use of by the ancient Jews for cancelling bonds : and the ceremony was performed by striking them through the writing. This seems to be alluded to in Scripture, where God is said by our crucified Saviour to have ‘blotted out the hand-writing of ordinances that was against us, and to have taken it out of the way, nailing it to his cross.’ Col. ii. 14.

NAIN (Lewis Sebastian de), one of the most learned and judicious critics and historians France has produced. He was the son of a master of the requests, and born at Paris in 1637. At ten years old he went to school at Port Royal, and became one of the best writers of that institution. Sacy, his intimate friend, prevailed with him in 1676 to receive the priesthood ; which his humility would not suffer him to aspire to. Buzanval, bishop of Beauvois, wished to have him for his successor ; but Nain was regardless of dignities. He died in 1698, aged sixty-one. His principal works are, 1. Memoirs on the first Six Ages of the Church, 16 vols. 4to. 2. The History of the Emperors, 6 vols. 4to. These works are deduced from original sources, and composed with the utmost fidelity.

NAIN, an ancient city of the tribe of Issachar, in Galilee, at the foot of Mount Hermon, on the north. Near the gates of this city our Saviour restored to life the only son of a widow. At present Nain is only a hamlet, inhabited by Christians, Mahometans, and Jews.

NAIRN, one of the smaller counties of Scotland, formerly included in the province of Mo-ray, with the exception of the detached portion, Ferintosh, now completely surrounded by Ross-shire. It is bounded on the north by the Moray frith ; on the east and south by Morayshire ; and on the west by Inverness-shire. It is from sixteen to eighteen miles in length, and about ten in its greatest breadth. Along the coast, from one to six miles in breadth, and the valley of the river Nairn, is

extremely well cultivated and productive ; but the rest of the county is bleak and sterile. The river Nairn descends from the hills of Inverness-shire, and, proceeding north-east, falls into the frith at the county town. On its banks are several picturesque old castles, and various handsome modern seats. Amongst the former are the castles of Kilravock and Caw-dor, both being surrounded by extensive plantations. In the vicinity of Cavvdor is the most northern forest of oak, and containing some of the finest and largest trees in the kingdom. The river Findhorn intersects the southern part of the county. From the Nairn eastward, the soil is a light loam on a gravelly bottom. Westward it approaches to clay. In the hilly district, crossed by the Findhorn, there is but little

arable land, it being for the most part moors, well stored with grouse. The county is computed to contain 128,000 acres, of which there are in natural wood about 4000, and under plantations upwards of 6000. There are several small lakes; no minerals of any importance; but abundance of excellent freestone for building ; and a great extent of excellent marl. Nairnshire contains the royal burgh of Nairn, the county town ; and two villages, *viz.* Auld-earn and Calder, of inferior note ; but the former is memorable as the scene of the victory obtained by the celebrated marquis of Montrose in 1645. It is divided into four parishes, and sends a member to parliament alternately with Cromarty.

NAIRN, a royal borough and county town of Scotland, supposed to be the Tusesis of Ptolemy, situated at the mouth of the river. The harbour, which opened in the Murray Frith, is now choked up with sand ; and the commerce of the town is inconsiderable. It has a charter dated 1589, by James VI., renewing one granted by Alexander I., and confirmed by Charles II., vesting its government in a provost, three bailies, dean of guild, treasurer, and eleven councillors. It had a castle, which was taken by the Danes in the reign of Malcolm I., and the keepers cruelly used. Its ruins are now covered by the sea. It joins with Inverness, Forres, and Fortrose, in electing a member of parliament for these boroughs.

NAISSANT, in heraldry, is applied to any animal issuing out of the midst of some ordinary, and showing only his head, shoulders, fore-feet, and legs, with the tip of his tail ; the rest of his body being hid in the shield, or some charge upon it; in which it differs from issuant, which denotes a living creature arising out of the bottom of any ordinary or charge.

NA’KED, adj. \ Sax. naco►► ; Swed. nacot ;

NA’KEDLY, adv. > Belg. naukt ; Teut. nacket.

NA’KEDNESS, n. s. J Theˆ eastern languages have, according to Mr. Thomson, Turk, and Tart, nogu; Hind, nigut. Without clothes or covering; bare; hence, unarmed; defenceless; unprepared; and (metaphorically) plain ; evident; simple; wanting the usual or necessary additions : the adverb and substantive follow each of these senses;

Spies, to see the nakeaneu of the land are ye come.

Grnetit.

Not that God doth require nothing unto happiness at the hands of men, saving only a naked belief, for hope and charity we may not exclude ; but that without belief all other things are as nothing, and it is the ground of those other divine virtues.

Hooker.

Had I but served my God with half the zeal J served my king, he would not in mine age Have left me naked to mine enemies. Shahtpeart.

The truth appears so naked on my side, That any purblind eye may find it out. Id.

Why seekest thou to cover with excuse That which appears in proper nakedwu 1 Id. A philosopher being asked in what a wise man differed from a fool ? answered, send them both naked to those who know them not, and you shall perceive.

naron.

So blinds the sharpest counsels of the \vis►► This overshadowing Providence on high,

And dazzleth all their cleaiest-sighted eyes, That they see not how nakedly they lie. Daniel.

He pitying how they stood Before him, naked to the air, that now Must suffer change ; As father of his family, he clad Their nakedness with skins of beasts. Milton. Nor he their outward only, with the skins Of beasts ; but inward nakedness, much more Opprobrious ! with his robe of righteousness Arraying, covered from his Father's sight. Id. Though several single letters, nakedly considered, are found to be articulations only of spirit or breath, and not of breath vocalized ; yet there is that pro—

Erty in all letters of aptness to be conjoined in syl-ales. Holder.

Ungrateful men !

Behold my bosom naked to your swords, And let the man that's injured strike the blow.

Addison.

I entreat my gentle readers to sow on their tuckers again, and not to imitate the nakedness, but the innocence of their mother Eve. Id.

Thou to be strong must put off every dress, Thy only armour is thy nakedness. Prior.

NALDI (Sebastiano), a famous Italian buffo singer in London, in the early part of this century. This particular branch of singing was considered his forte. He met his death in Paris in 1819, by the explosion of a steam kitchen apparatus for cooking.

NALL, n. s. Perhaps from nail. An awl, snch as collarmakers or shoemakers use.

Whole bridle and saddle, whitleather and nail, With collars and harness. Tvsser.

NALOES, a half-civilised people of Western Africa, inhabiting the banks of the Rio Nunez. They have made considerable progress in agriculture, and cultivate rice, indigo, and cotton. They manufacture also a species of cotton cloth in much request in the interior.

NAME, n. s. & v. a.~\ Sax. nama; Goth.

NAME'LESS, adj. t nam ; Maes. Goth, namo ;

NAME'LY, adv. ►► Swedish namn ; Belgic

NAME'SAKE, n. s. J nam ; Teut. name. Appellation ; discriminative title or term of description ; hence, renown ; fame ; celebrity ; authority or power delegated ; imputation ; appearance ; person named : to name, to discriminate by some appellation or title ; specify ; entitle ; utter; mention : namely means, specifically ; particularly : namesake, one that has the same name with another.

Let my name be named on them.

Gen. xlviii. Bring me him up whom I shall name.

1 Sam.

His name was called Jesus, which was so named of the angel before he was conceived. Luke ii. 21

There is a friend which is only a friend in name.

Ecclus.

Accustom not thy mouth to swearing : neither use thyself to the naming of the Holy One. Id.

Thou hast had seven husbands ; neither wast thou ►►►named after any of them. Tab. iii. 8

It can be to nature no injury, that of her we say the same which diligent beholders of her works have observed ; namely, that she provideth for all living creatures nourishment which may suffice. Hooker.

What's in a name? That which we call a rose, Uy any other name would smell as sweet.

Shakspeare.

What men of name resort to him ? ►►► Sir Walter Herbert, a

renowned soldier; And Rice ap Thomas with a valiant crew, And many others of great name and worth.

Id

In the name of the people. And in the power of us the tribunes, we Banish him. Id. Coriolantm.

I mention here a son of the king's whom Florizel I now name to you ; and with speed so pace To speak of Perdita. Shakspeare.

Did my father's godson seek your life 1 He whom my father named 1 your Edgar. Id. Which of these sorrows is he subject to ? ††† To none of these, except it be the last ; Namely, some love that drew him oft from home.

, Id.

Visit eminent persons of great name abroad ; to tell how the life agreeth with the fame. Bacon.

The council making remonstrances unto queen Elizabeth of the continual conspiracies against her life ; and, namely, that a man was lately taken, who stood ready in a very suspicious manner to do the deed ; advised her to go less abroad weakly attended. But the queen answered, that she had rather be dead, than put in custody. Id.

On the cold earth lies the'unregarded king, A deadless carcass, and a nameless thing.

Denham.

The king's army was the last enemy the west had been acquainted with, and had left no good name behind. Clarendon.

Thus was the building left Ridiculous, and the work Confusion named.

Milton . Those whom the fables name of monstrous size.

Id.

And highly wicked surely must that practice be, whereby we grow namesakes to him, Bat-row.

Nor does the dog-fish at sea, much more make out the dog of land, than that his cognominal, or namesake in the heavens. Browne's Vulgar Errours.

The milky way,

Framed of many nameless stars. Waller. Thousands there were in darker fame that dwell, Whose names some nobler poem shall adorn.

Dry den.

They list with women each degenerate name, Who dares not hazard life for future fame. Id.

These shall be towns of mighty fame, Though now they lie obscure, and lands without a name. Id.

When Ulysses with fallacious arts, Had forged a treason in my patron's name, My kinsman fell. Id. JEneid.

If every particular idea that we take in should have a distinct name, names must be endless.

Locke.

Let any one name that proposition whose terms or ideas were either of them innate. Id.

For the excellency of the soul, namely, its power jf divining in dreams; that several such divinations have been made, none can question. Additon.

One author is a mole to another : it is impossible for them to discover beauties ; they have eyes only for blemishes : they can indeed see the light, as is said of their namesakes ; but immediately shut their eyes. Id.

Little credit is due to accusations of this kind when they come from suspected, that is, from nameless pens. Atterbury.

The husband

Bids her confess ; calls her ten thousand name* .. In vain she kneels. Granville.

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Thy reliques, Rowe, to this fair shrine we trust And sacred, place by Dryden's awful dust ; Beneath a rude and nameless stone he lies, To which thy tomb shall guide enquiring eyes.

Pope.

Like the watermen of Thames I row by, and call them names.

Swift's Miscellanies. Such imagery of greatness ill became A nameless dwelling, and an unknown name. Harte.

Bartolus is of great name ; whose authority is as much valued amongst the modern lawyers, as Papi-nian's was amongst the ancients. Baker.

By night, by day, a-field, at hame, The thoughts o' thee my breast inflame ; And aye I muse and sing thy name, I only live to love thee. Burns.

NAMES, PROPER, are those which represent

esteemed in the heroic ages. From the word polemos, which signifies war, have been formed Tlepolemus and Archeptolemus, the names of two heroes mentioned in the Iliad. The former signifies able to support, and the latter able to direct the labors of war. From thoes, swift, are derived, Alcathous, Panthous, Perithoes, &c. From nous, mind or intelligence, come Asty nous, Arsinoe, Autonoe, 8cc. From medes, counsel, Agamedes, Eumedes, Lycomedes, Thrasymedes ; and from clios, glory, Amphicles, Agacles, Iphicles, Patroclus, Cleobulus, 8tc. Hence Cam-den takes it for granted, that the names, in all nations

and languages, are significative, and not simple sounds for mere distinction sake. Thus among the Turks, Abdalla signifies God's servant; Soliman, peaceable ; Mahomet, glorified,

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some individual thing or person, so as to dis- &c.; and the savages of Hispaniola, and through-

tinguish it from all other things of the same species ; as Socrates, which reoresents a certain philosopher. Proper names are either called Christian, as being given at baptism ; or surnames : the first imposed for distinction of persons, answering to the Roman praEnomen ; the second for the distinction of families, answering to the nomen of the Romans, and the pa-tronymicum of the Greeks. Originally every person had but one name ; as among the Jews, Moses, Joshua, &c. ; among the Egyptians, Bu-siris; among the Chaldees, Ninus; the Medes, ###Astyages; *he Greeks, Diomedes ; the Romans, Romulus ; the Gauls, Brennus ; the Germans, Ariovistus ; the Britons, Cassibelan ; the Saxons, Hengist, &c. And thus of other nations, except the savages of Mount Atlas, whom Pliny and Marcellinus represent as anonvme or nameless ; though this is hardly credible. The Jews gave the namo at the circumcision, *viz.* eight days after birth ; the Romans, to females the same day, to males the ninth, at which time they held a feast, called nominalia. Since Christianity has obtained, most nations have followed the Jews, baptising ana giving the name on the eighth day after the birth ; except the ancient English, who baptised and gave the name on the birth-day. The first imposition of names was founded on different views, among different people ; the most common was to mark the good wishes of the parents, or to entitle the children to the good fortune a happy name seemed to promise. Hence, Victor, Castor, Faustus, Sta-torius, Probus, &c. Accordingly, we find such names, by Cicero called bona nomina, and by Tacitus fausta nomina, were first enrolled in the Roman musters ; first called to serve at the sacrifices, in the foundation of colonies, &c. ### And, on the contrary, Livy calls Atrius Umber, abominandi ominis nomen : and Plautus has a similar remark of a person named Lyco, i. e. greedy wolf: hence,/ Plato recommends it to men to be careful in 'giving happy names ; and the Pythagoreans taught that the minds, actions, and successes of men, were according to their names, genius, and fate. Thus Panormitan, ex bono nomine oritur bona prasumptio ; and the common proverb,

Bonum nomen bonum omen. Abbe Barthelimi says, that the greater part of names found in Homer are marks of distinction. They were given in honor of the qualities most

out America, who, in their languages, name their children Glistering Light, Sun Bright, Fine Gold, &c. ; and they of Congo, by the names of precious stones, flowers, &c. Porphyry notes that the barbarous names, as he calls them, were very emphatical, and very concise ; and accordingly it was esteemed a duty to be fnpwvvpoi, or sui nominis homines; as Severus, Probus, and Aurelius, are called sui nominis imperatores. It was usual at giving names to wish the children might discharge their names : thus when Gunthrum, king of France, named Clotharius at the font, he said, Crescat puer, et hujus sit nominis executor. The ancient Britons, Camden says, generally took their names from colors, because they painted themselves; which names are now lost, unless they remain among the Welsh. When they were subdued by the Romans, they took Roman names, some of which still remain corrupted : though the greatest part became extinct upon the admission of the Anglo-Saxons, who introduced the German names, as Cridd, Penda, Oswald, Edward, &c. ??? The Danes too, brought with them their names ; as Sweyne, Harold, Canute, &c. The Normans, at the conquest, brought in other German names, as originally using the German tongue ; such as Robert, William, Richard, Henry, Hugh, &c., as the Greek names, Aspasius, Boethius, Sym-machus, &c., were introduced into Italy upon the division of the empire. After the conquest, the English, who had ever been averse to foreign names, as deeming them unlucky, began to take Hebrew names; as Matthew, David, Sampson, &c. The various names anciently or at present obtaining among us, from what language or peo-ple soever borrowed, are explained by Camden in his Remains. The popes uniformly change their names at their exaltation to the pontificate; a custom first introduced by pope Sergius, whose name till then, says Platina, was Swinesnont. But Onuphrius refers it to John XII. or XIII. and gives us a reason for it, that it was done in imitation of St. Peter and St. Paul, who were first called Simon and Saul. Among the ancients, those deified by the heathen consecra-tions had new names given them ; as Romulus was called Quirinus ; Melicrrtes, Portumnus &c. New names were also pivcn in adoptions and sometimes by testament: thus I.. .‘V.milius, adopted by Scipio, took tne name of Scipi”

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Africanus ; and thus Augustus, who at first was called C. Octavius Thurinus, being adopted by Caius Julius Csesar, took the name of Caius Julius Ca?sar Octavianus. Names were also changed at enfranchisements into new cities. Thus Lucumo, at his first being made free of Rome, took the name of Lucius Tarquinius ; and slaves, when made free, usually assumed their masters' names. Those called to the eques- - trian order, if they had base names, were always new named, nomine ingenuorum veterumque Romanorum. And, among the primitive Christians, it was the practice to change the names of the catechumens ; thus the renegado Lucianus, till his baptism, was called Lucius. About the middle of the fifteenth century it was the fancy of the wits and learned men of the age, particularly in Italy, to change their baptismal names for classical ones. Among the rest Platina the historian at Rome, who, not without a solemn ceremonial, took the name of Callimachus instead of Philip. Pope Paul II., who reigned about that time, was suspicious and illiterate. He had no idea that persons could wish to alter their names unless they had some bad design, and actually scrupled not to employ imprisonment and other violent methods to discover the fancied mystery. Platina was most cruelly tortured on this frivolous account; he had nothing to confess ; so the pope, after endeavouring in vain to convict him of heresy, sedition, &c., released him after a long imprisonment.

NAMPTWICH, or NANTWICH, a market town of Cheshire, situated on the VVeever, fourteen miles southeast of Chester, and 164ˆ from London. It lies in the Vale Royal, and is one of the largest and best built towns in the county, the streets being very regular, and adorned with many gentlemen's houses. The inhabitants have three fairs, and a large market on Saturday for corn and cattle ; and, as it is a thoroughfare to Ireland, they have a good trade in cheese and fine white salt, which are made to the greatest perfection ; and in shoes sent to London. It is governed by constables, who are guardians of the salt springs. It is divided into equal parts by the Weever, which is not navigable farther than Winsford bridge. The Chester canal terminates in a handsome basin near this place. In this town were several religious foundations, now no more. The church is a handsome building in the form of a cross, with an octangular tower in the middle. This town appears to have been one of the chief salt works of the Romans, and is, by Ravenna, called Salinis. The salt springs are thirty miles from the sea, and lie mostly on the banks of the river

Weever. Large mines of rock salt were also discovered here in the beginning of the eighteenth century, which, with their pillars and crystal roof, extend over several acres, affording a very pleasing and picturesque appearance.

NAMUR, an important inland province of the Netherlands, bounded by the French frontier, and by the Belpic provinces of Ilainault, South Brabant, and Liege.. Its superficial extent is about 920 square miles, of which the surface is nilly, but not unfruitful, and the climate temperate. ,t is watered by the Maese, the Sambre,

the Lesse, and the Ilomme ; and stretches on the south into the forest of Ardennes. The agricultural productions are corn, potatoes, hops, tobacco, and fruit ; the minerals, iron, lead, some copper, coal, and a fine marble. These furnish manufactures of iron, copper, paper, leather, and woollens ; and the province sends two members to the states-general. It belongs to the sixth military division, under the jurisdiction o'f the high court of Liege. Before the French revolution, the greater part of the province, containing about 90,000 of the population, belonged to Austria, and the remainder to France ; but in 1794 the whole was overrun by the French, and then constituted for twenty years, witli the addition of part of Luxemburg, the department of the Sambre and Meuse. The part formerly belonging to Austria was, in 1814, incorporated with the kingdom of the Netherlands ; and next year, after the battle of Waterloo, and the farther cessions by France, the French portion was ad-ded to it. Population 115,000. It is divided into three districts.

NAMUR, a wett-built town of the Netherlands, the capital of the foregoing province, is situated between two eminences, at the conflux of the Sambre and Maese. Its population, said to have once approached to 30,000, does not at present much exceed half that number. The houses are in general of a blue stone, having red and black veins; and the streets wide and clean. The town is defended by a citadel, built on the summit of a high craggy rock, and once thought nearly impregnable. It contains a fine cathedral, and a church of the Jesuits ; the former being a specimen of superior modern, and the latter of ancient architecture. From the vicinity of metal and coal mines, large manufactures of fire-arms, swords, knives, and scissars, are conducted here; brass founding, &c. Leather, paper, thread, and tobacco, are also fabricated.

Namur has, often changed its masters. The castle and town were

besieged and taken by the French under the duke of Luxemburg, in 1692; bombarded and retaken in 1695 by king William III., in the sight of an army of 100,000 French, and though there were 60,000 men in garrison. Namur was ceded to the house of Austria in 1713, but taken by the French in 1746; and restored by the treaty of Aix-la-Chapelle. On the 2nd December, 1792, it was taken by the French republicans, under general Valence; but they were forced by the allies to evacuate it in 1793. On the 1 6th July 1794, however, general Beaulieu, finding it no longer tenable, left it with only 200 men, who surrendered it next day, with a great quantity of artillery and stores, to the French : and it was annexed to France until the general arrangements of 1814. In June 1815 it was the scene of an obstinate conflict between the Prussians and the French, under general Grouchy, on his retreat from the battle of Waterloo. Population about 18,000. Thirty miles south-west of Liege. Long. 4►► 51’ 7’ E., iat. 50►► 28’ 30’ N.

NANCOWRY, one of the Nicobar Islands of the bay of Bengal. It forms, with two other islands, a very capacious and secure bay The best entrance is on the east, the western oeing

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only 100 fathoms wide, and the current, in tide-time, setting through it with great force. The soil of the islands is fertile, and produces a great quantity of cocoa nuts. The inhabitants are a civil quiet race of Mahometans. They raise a number of poultry, which, with the fruits of the islands, they barter for cloth, cutlery, tobacco, &c. The Danes had once a small missionary settlement here ; but it has been for some time abandoned. Long. 93►► 43’ E., lat. 7►► 57’ N.

NANCY, a large, rich, and handsome town of France, the principal place of the prefecture of the same name, in the departmentof the Meurthe. A royal court is held here for the departments of the Meurthe, the Meuse, and the Vosges ; there are also a lower court of judicature, a board of trade and manufactures, a central agricultural society, an academy of sciences and belles lettres, a university academy, a royal forest school and college, a free drawing school, and a faculty of medicine, midwifery, and botany. It is a bishopric and a post-town with 30,000 inhabitants.

This town stands in a charming situation, at the foot of the Vosges Mountains, and on the borders of a fine plain about a mile and a half from the left bank of the Meurthe. It is generally well-built, and is divided into the Old and the New towns ; the latter is very magnificent, and most of it was erected by Stanislaus, the ex-king of Poland. The streets are broad and straight, with handsome houses ; the public edifices are grand, the squares large, and adorned ►►►with fine fountains, and the walks delightful. The Place Royal especially is very beautiful ; the Hotel de Ville, one of the fmest buildings in France, occupies one of its sides ; two of the others are intersected in the centre by two great streets, that terminate at opposite gates of the city, built in the form of triumphal arches. Near the walls is a mineral spring of some celebrity. Nancy was not built before the eleventh century; formerly it was fortified, and was taken in the year 1475 by Charles the Rash, duke of Burgundy, who was obliged to evacuate it the following year; but, a little time after, that prince besieged it again, and in 1477 lost his life under its walls. In 1633 Louis XIII. and cardinal Richelieu besieged and took it ; and Louis XIV. in 1661 demolished all its fortifications, with the exception of the citadel, which is still standing. Callot, the celebrated engraver; Palissot; Madame de Graffigny ; the poet Mollevaut ; St. Lambert, a distinguished poet and philosopher ; lieutenant general Drouot, and

Pixere”court, the dramatist, were born in this town.

The inhabitants carry on manufactures of embroidery of all sorts, cloths, woollen stuffs, hats, lace, paper-hangings, oils, candles, liqueurs, chemicals, iron and copper goods. There are also numerous cotton-spinning factories, dye-houses, tan-yards, and curriers’ shops. The trade consists in the above articles, together with corn, wine, brandy, &c. The public institutions and buildings are. the library, containing 23.000 volumes; the museum, with its valuable collections ; the cathedral ; the government-house ; the prefect’s palace ; the exchange ; the a.vsembly-rooiT) ; the church of Bousecours, which contains the tomb of Stanislaus in white marble; Voi,. XV.

the masterpiece of Girardon ; the old chateau of the princes of Lorraine; the barracks; the Bourbon race-ground; the departmental nursery; and the botanical garden, containing more than 4000 indigenous and exotic plants. This town is forty-three miles south of Metz, 111 west of Strasburg, and 253 east of Paris.

NANDAPRAYAGA, a place of pilgrimage in Northern Hindostan, the most northern of all the places of Hindoo worship, in the province of Serinagur, situated at the confluence of the Alacananda with the Nandacni, a small river which flows from the south 30►► E. Lat. 30►► 22 N., long. 79►► 22’ E. There was formerly a tem-ple on the spot ; but it has been suffered to go to decay ; and nothing but a heap of loose stones now invites the adoration of the pilgrims.

NANDERE, a small province of the Deccan, Hindostan, bounded on the north by Berar, on the south by Hyderabad and Boeder, on the east by Gundwana, and on the west by Aurun-gabad. The soil is fertile and well watered, capable of supporting a much greater population than it does at present; the whole number not exceeding half a million, of whom about one-tenth are Mahometans. The province has long been subject to the Nizam’s family. The principal towns are Nandere, Candhar, Balcundah, and Nirmuhl.

NANGASACKI, an important sea-port of Ja-pan, on the western extremity of the island of X imo. Here alone are Europeans permitted to trade with Japan, and under severe restrictions. They are confined to the island of Desima, only 600 feet long and 120 broad, immediately adjoining to the town ; and the Dutch are at present the favored power. At low water this island is separated from the rest of the town only by a ditch; but at high water it assumes the full insular

appearance. It has two gates, one of which, looking to the town, is always well guarded and locked at night ; the other, looking to the harbour, is open only when vessels are taking in, or discharging, their cargoes. The harbour is surrounded by mountainous shores, and is three miles broad by one in length, with depth for the largest ships over a muddy bot-tom ; the rise of tide is considerable. The town is entirely open, the streets winding, with canals to receive the waters that descend from the mountains that rise all round the city; eacli street has a gate at each end, which is shut at night, and is sixty fathoms long: the number of houses is about 1000. Dutch Town, on the island Desima, is built lengthways, and contains some large fire-proof stores-houses. The other houses are mean and have paper windows. There is a large house for the Japanese interpreters, and another for the Ottonas, an officer who reports all that passes here to the governor. The Dutch company pay fifteen per cent, and private traders seventy-five per cent, on all goods imported. No strangers are allowed to reside in Nangasacki. Near the shore are five large wooden houses, or rather sheds, in which the imperial junks, or men of war, are kept until ready to be launched. The goknia, or prison, is composed of 100 separate huts of different sizes and accommodations. The best buildings are the palaces of the

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two governors, and those of other princes and grandees; there are sixty-two temples built on eminences. Long. 130►► 12’ E., lat. 32►► 48’ N.

NANI (John Baptist), a noble Venetian historian, born in 1616. His father was procurator of St. Mark, and ambassador from Venice to Rome. Pope Urban VIII. noticed the talents of young Nani. He was admitted into the college of senators in 1641, and was soon after nominated ambassador in France. He procured considerable succours for the war of Candia against the Turks ; and became, after his return to Venice, superintendant of the war office and of finances. He was afterwards ambassador to the empire; in which station he rendered great services to his country. He was again sent into France in 1660 to solicit fresh succors for Candia; and on his return was appointed procurator of St. Mark. He died November 5th, 1678, aged sixty-three. The senate had appointed him to write the history of the republic ; which he executed to the satisfaction of the Venetians, although the work was less admired by foreigners. In writing his history of Venice he has given a general history of his times, especially with respect to the affaire of the French in Italy. This history, which is continued from 1613 to 1671, was printed in Venice, in 2 vols. 4to, in 1662 and 1679.
NANKA ISLANDS, three small islands of the Eastern Seas, on the west coast of the island of Banca, supposed to be of recent formation. Iron ore and blood stone are found here ; and they produce wood and excellent water, for which they are frequently visited. Bears, monkeys, and wild hogs are also found on them. Long. 105►► 41’ E., lat. 2►► 22’ S.

NANKANG, a cityof China, of the first rank, in Kiangsee. In the interior, however, it is very poor, and contains little beside shops for the common necessaries of life. But its former importance is clear from the ranges of pyloos or statues, richly sculptured, running along the streets ; a pagoda of seven stories in good repair ; and several halls of Confucius, distinguished by tablets bearing the names of departed worthies and idols. The city is situated on a branch of the Poyang Lake, bearing the same name. On a mountain near is a magnificent cascade. Long. 115►► 39’ E., lat. 29►► 33’ N.

NANKEEN, a well-known cotton stuff, deriving its name from the ancient capital of China. According to Van Braam, it is manufactured

in the southeast of the province of Kiang-nam upon the sea shore. The color of nankeen is natural, the cotton down of which it is made being of the same tinge with the cloth. The color, as well as superior quality of this cotton, seems to be derived from the soil; for it is said that the seeds of the nankeen cotton degenerate in both particulars when transplanted to another province, however little different in its climate. The com-mon opinion, that the color of the stuff is given by a dye, occasioned an order from Europe, some years ago, to dye the pieces of nankeen of a deeper color than they had at that period ; and the reason of their being then paler than formerly is as follows : ••• ‘ Shortly after the Americans began to trade with China, the demand increased to nearly double the quantity it was possible to

furnis’). To supply this deficiency, the manufacturers mixed common white cotton witn the brown ; this gave it a pale cast, which was immediately remarked ; and for this lighter kind no purchaser could be found till the other was exhausted. But the demand afterwards lessening the white cotton was no longer mixed with it, and the color returned to its former standard.

NANKING, a city of China, capital of the province of Kiang-nan, is said to have been formerly one of the most beautiful and flourishing cities in the world. When the Chinese speak of its extent, they say, if two horsemen should go out by the same gate, and ride round it on full speed, taking different directions, they would not meet before night. This account is evidently exaggerated ; but it is certain that Nanking surpasses in extent of ground all the other cities of China, and perhaps of the known world. The exterior wall encloses an irregular polygon, divided into two parts, the inhabited and uninhabited. From the outer gate to the inhabited part is a distance of about six miles, entirely covered with gardens and bamboo groves. In the most prosperous state of the city, this part contained numerous villas of the Mandarins and other great men ; but now it is chiefly occupied by peasants, cultivating garden grounds.

Nanking is situated three miles from the river Yang-tsekiang, the largest in China, and was formerly the imperial city : hence the name signifies the southern court ; but, since the six grand tribunals have been transferred to Peking, it is called Kiang-ning in all the public acts and Chinese records, and has lost much of its ancient splendor. According to the Chinese, it had formerly a magnificent palace, no vestige of which is now to be seen ; an observatory at present neglected, temples, tombs of the emperors, and other superb

monuments, of which nothing remains. A third of the city is deserted, but the rest is populous and busy, particularly in the manufacture of silk, which is the staple, and a species of cotton cloth, of which great quantities are imported into Europe under the name of Nankeen. The paper and printing of this city are still also superior; and it is the most literary of any of the Chinese cities. The streets are not so broad as those of Peking, but they are said to be very beautiful, well paved, and bordered witli rich shops. In this city resides one of the mandarins called Tsong-tou, who takes cognizance of all important affairs, not only of both the governments of the province, but also of those of the province of Kiang-si. The Tartars have a numerous garrison here, commanded by a general of their own ; and occupy a quarter of the city separated from the rest by a plain wall. The gates are beautiful ; and some temples, among which is the famous porcelain tower, 200 feet high, divided into nine stories. See our article CHINA, vol. V., p. 600. It appeared to Mr. Ellis, in his late visit here, to be composed of a white tile, bearing the appearance of porcelain. At the top is a large ball, which the Chinese assert to be of solid gold. The structure bears the date of A.D. 1411.

The breadth and depth of the Yang-tse-kiang formerly rendered the port of Nanking vei”

commodious ; but at present the larger barks, or Chinese junks, never enter it. In April and May a great number of excellent fish are caught near the city, which are sent to court, covered with ice, and transported in that manner by barks kept entirely on purpose. These boats are said to make such expedition, that they arrive at Pe-kin, a distance of 600 miles, in eight or nine days. This city, though the capital of the province, has under its particular jurisdiction only eight cities of the third class. It is said to contain 1,000,000 inhabitants.

NANTES, Condivicnum, an ancient, large, and handsome city and sea-port, and the chief place of a prefecture of the same name, in the department of the Lower Loire, France, a post-town and the see of a bishop, with 85,000 inhabitants. It has an inferior court of judicature

under the royal court of Rennes, a board of trade, a bank, an exchange, an hydrographical school of the first class, a maritime syndicate, a royal college, a medical school, lectures on mid-mifery, an agricultural society, a society for ma-rine insurance, a custom-house, and foreign consulates ; and is the principal post of the twelfth military division.

This city is finely situated on the right bank of the Loire, at the point where it receives the streams of the Edre and the Sbvre Nautaise, and is one of the most important and most commercial cities in the kingdom, being next to Bourdeaux, the second port on the coast. It is generally well-built, very airy, and remarkable for the uniformity of its public squares ; the isle of Feydeau, the square and neighbourhood of Graslin, and the royal square, may be compared with the finest parts of the capital. The quays especially are very grand, and the view of the Loire very striking, covered with vessels of every descrp-tion ; the smiling aspect of a fine and extensive country, rising in the form of an amphitheatre, the islands and meadows stretching along the banks of the river, and the bridges, at the end of which another town, as it were, is seen in perspective, will always be the admiration of strangers. The pleasantest part, however, is the quay or port of the Fosse, shaded along the bank of the river with beautiful elms, a mile and a half long, and bordered with noble houses adorned with balconies. No vessels above 200 tons burden can enter this port; larger ships stop at PaimbcEuf to discharge part of their cargo, as the tide does not rise above five feet. At the end of the course of St. Peter, on (lie banks of the Loire, rises the old castle of the dukes of Brittany, which contributes by its picturesque effect to embellish this spot. Here it was that Henry IV., in 1598, granted the famous edict of Nantes, the revocation of which, by Louis XIV. in 1685, was fatal to France, by occasioning the emigration of a great number of artists, and other useful men, who carried their industry and their riches into foreign lands.

The vicinity of the sea, which facilitates its intercourse with foreign parts, and the navigation of the river which favors the conveyance of goods as far as Paris, afford the greatest scope for the trade of Nantes. This is considerable ; and consist-: in corn, flour, biscuits, butter, dry vege-

tables, wool, leather (both common and morocco), building wood, agricultural instruments, Spanish and Portuguese wines, brandy, wine, sugar, fine liqueurs, &c. It is a general magazine for provisions for the

navy, supplying the ports of Brest, L'Orient, and llochefort, and carries on a great export trade with the whole of Europe and the East and West Indies. Its manufactures, besides the articles already mentioned, consist of stockings, linens, handkerchiefs, prints, flannels, chemical productions, corks, brushes, pasteboard, nails, iron-cables, fishing-nets, pipes, delf ware, wooden shoes, &c. There is a fine rope-manufactory; also cotton-spinning mills, glass-houses, brass-foundries, brandy distilleries, vinegar breweries, sugar refimng-houses, tan-yards, curriers' shops, and white leather factories ; cannon foundries, and dock-yards for large vessels, even to 1000 tons. Of all the large towns in France this is the cheapest to live in; there is abundance of all kinds of salt and fresh water fish.

The origin of Nantes may be traced to a very early date. Before the conquest of the Gauls it was the capital of the Namnetes, and a very powerful city in supporting those nations that dared to oppose the Romans. The inhabitants of this place were leagued with those of V'annes in a naval fight against Julius Caesar; they defended their country with the utmost courage, and were the last to submit to the yoke of the conqueror. In 445 it sustained a terrible siege by the Huns ; in 843 the Normans took it by assault, and massacred all the inhabitants ; Geof-froy, count of Rennes, took it in 992 ; it was besieged, but without success, by the English in 1 343 ; it was attacked by the earl of Buckingham in 1380, and delirered by Olivier de Clis-son ; in 1487 it was besieged again by the troops of Charles VIII. ; and after the death of Anne, the last duchess of Brittany, it was reunited to France about the year 1553. On the 29th of June, 1793, the whole of the Ven-dean army, amounting to more than 80,000 men, attempted to carry it by storm ; the patriotism of its citizens made up for the deficiency of their numbers, and, assisted only by a few battalions and squadrons of troops of the line, they obliged the invading army to retire. Since that time Nantes has been the theatre of the horrible executions ordered by Carrier and his bloody associates ; the Nantese, however, are a people renowned for their uprightness, candor, generosity, humanity, and politeness, towards strangers ; their manners are mild and less depraved than in ottier great towns of the kingdom. The town-hall, the prefect's palace, the exchange, surrounded with Ionic columns, and having one of its fronts adorned with the statues of several eminent French mariners ; the assembly room, and the cathedral are fine buildings. Besides these there are the public library, the museum of pictures and antiquities, the cabinet of natural history, several beautiful walks and scenery on the banks of the rivers, that remind the tnvcllrr of some parts of Switzerland and Italy. .Nantes is eighty-four miles south of Rennes, forty-eijU north of

Bourbon Vendee, and ‘286 smith-wot of Paris.

N VMTKIL (Robert the celebrated de-2 H -2

NAN

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signer and engraver to the cabinet of Louis XIV. was born at Rheims in 1630. His father, a shop-keeper, gave his son a liberal education ; who, having a taste for drawing, cultivated it with such success, that he became the admiration of the whole town : but marrying young, and not being able to maintain his family, he took a journey to Paris, where he made his talents known by a stratagem. Seeing several abbe's at the door of an eating-house, he asked the mistress for an ecclesiastic of Rheims, whose name he had forgot, but that she might easily know him by a picture of him, which he showed : the abbe's crowding round, were so charmed with it, that he offered to draw any of their pictures for a small sum. Customers came so fast, that he soon raised his price, and brought his family to Paris, where his reputation was quickly established. He took portraits in crayons, which he afterwards engraved for the academical theses; and in this way he took the portrait of the king, and afterwards engraved it as large as the life; a thing never before attempted. The king was so pleased with it, that he created the place of designer and engraver to the cabinet for him, with a pension of 1000 livres. He died in 1678. His prints amount to upwards of 240.

NANTUCKET, an island of the United States of North America in Massachusetts, is of a triangular form, about fifteen miles long, and eleven in extreme breadth, containing 29,380 acres. The soil is very productive in pasturage, though mostly sandy and lean. The cultivation is much neglected from the inhabitants being engaged in the whaling business. The island with several small ones near it forms a county, containing only the following town of the same name with the island. Eight leagues south of Cape Cod, and ten east of Martha's Vineyard.

NANTUCKET, formerly called Sherburne, a sea-port town on the island of this name, situated on the western side of a basin which lies in a bay on the north-west side of the island. The bay is formed by two projecting points ; the longest, extending from the east end in a north-west direction, is called Sandy Point, on which is erected a lighthouse of stone ; the other, forming the westerly side of a bay, is called Eel Point. At the entrance of the basin there are two points, three-quarters of a mile apart, which nearly land-lock the harbour, and render it safe from all winds. On Brant Point, at the right hand of the entrance, there is a lighthouse.

The town contains two banks, two insurance offices, a woollen manufactory, thirty spermaceti works employing a capital of 600,000 dollars, a reading room, and five houses of public worship, two for Friends, two forCongregationalists, and one for Methodists. The ground on which it is built rises gradually from the shore. The streets, except the main street, are narrow and irregular. The num-ber of dwelling houses is stated at 720, and are almost wholly of wood. Very little attention has been paid to exterior elegance, but much to interior convenience and comfort. A fire-proof banking-house was built in 1827 in an elegant style. There are upwards of fifty private schools. Education is well attended to, and the inhabitants are distinguished for intelligence, as well as for enterprise.

The whaling business has been the principal employment of the inhabitants of this town for more than a century, and they are accounted the most expert and enterprising whalemen in the world. They have now forty-five ships, which average upwards of 300 tons in this fishery. This town and port with its shipping suffered greatly during the late war with England.

NANTUCKET SHOAL, a bank above fifteen miles in length, and six in breadth, to the southeast from the island of its name.

NANTUCKET BAY, a bay of the United States, in New Jersey, on the east side of Delaware, and opposite Bombay Hook.

NAP, or -\ Sax. fnicej?}>;m; Teut.

N\PP,TZ. s.&v.a. f napzen, to sleep. Ashort

NAP'-TAKING,►►.S. {sleep: to sleep 'or slum—

NAP'PY, adj. Jber; to be drowsy: and hence to be carelessly secure : nap-taking is seizure on a sudden, or in such a state : nappy is sleeping, or tending to produce sleep.

And whiles the housbonde taried alle thei nnppiden and slepten. Wlclif, Matt. xxv.

Is ther no man for praiere ne for hire That wol awaken our felaw behind 1 A thefe him might ful lightly rob and bind : See how he nappeth, for cokes bones, As he wold fallen from his hors atoues.

Chaucer. Cant. Tales.

Mopsa sat swallowing of sleep with open mouth, making such a noise as no body could lay the stealing of a nap to her charge. Sidney.

Let your bounty take a nap, and I will awake it anon. Shakspeare.

Naptakings, assaults, spoilings, and firings, have in our forefathers' days, between us and France, been common. Carew.

The sun had long since, in the lap Of Thetis, taken out his nap. Hudibras.

They took him napping in his bed. Id.

So long as I'm at the forge you are still taking your nap. L'Estrange.

A wolf took a dog napping at his master's door.

Id.

When I my thresher heard, With nappy beer I to the barn repaired. Gay.

What is seriously related by Helmont, that foul linen, stopt in a vessel that hath wheat in it, will in twenty-one days time turn the wheat into mice ; without conjuring, one may guess to have been the philosophy and information of some housewife, who had not so carefully covered her wheat, but that the mice could come at it, and were there taken napping just when they had made an end of their good chear.

Bentley.

NAP, n. s. I Sax. ˆnojˆa; Swed. and

NAP'LESS,►►ˆ;. S Van.nopp,noppe. Qu. from the above word? Down; the down or grain of cloth raised by dressing; fleeciness; softness: napless, destitute of nap or down; bare. Amongst those leaves she made a butterfly

With excellent device and wondrous flight;

The velvet nap, which on his wings doth lie,

The silken down, with which his back is dight.

Spenser.

Were he to stand for consul, ne'er would he Appear in the' market

place, nor on him put The napless vesture of humility. Shakspeare.

Jack Cade the clothier means to dress the commonwealth, and set a new nap upon it. Sha/.speare.

Plants, though they have no prickles, have a kind of downy or velvet rind upon their leaves ; which

down or nap coraeth of a subtil spirit, in a soft or fat substance. Bacon.

Ah ! where must needy poet seek for aid, When dust and rain at once his coat invade ; His only coat ! where dust confused with rain Roughens the nap, and leaves a mingled stain ? Swift.

NAPflLA, in botany, a genus of the polyandria order, and polyadelphia class of plants ; natural order thirty-seventh, columniferae : CAL. singular and cylindric ; the arilli coalited and monospermous. There are two species both with perennial roots, composed of many thick fleshy fibres which strike deep into the ground, and are connected at the top into large heads : the stalks grow to seven or eight feet high, producing white flowers, tubulous at bottom, but spreading open at top, and dividing into five obtuse segments. Both these plants are natives of Virginia and other parts of N6rth America ; from the bark of some of the Indian kinds a sort of fine hemp might be procured, capable of being woven into very strong cloth. They are easily propagated by seed which will thrive in any situation.

NAPE, n. s. Sax. cnae)?, the top ; Swed. kn<ep; Goth. gnep. (Thus the Latins styled the same part summus.) The upper joint of the neck.

Turn your eyes towards the napes of your necks, and make but an interior survey of your good selves.

Shakspeare.

Domitian dreamed, the night before he was slain, that a golden head was growing out of the nape of his neck. Bacon.

Take de flea by the nape of the neck and put a bit of powder in his mouth and that will kill de flea.

Frenchman.

NA’PHTHA,n.s. Lai. naphtha. Strabo represents it as a liquation of bitumen. It swims on the top of the water of wells and springs. That

found about Babylon is in some springs whitish, though it be generally black, and differs little from petroleum.

Naphtha is a very pure, clear, and thin mineral fluid, of a very pale yellow, with a cast of brown in it. It is soft and oily to the touch, of a sharp and unpleasing taste, and of a brisk and penetrating smell of the bituminous kind. It is extremely ready to take fire. Hill's Materla Medica.

NAPHTHA is an inflammable substance of the bituminous kind. See CHEMISTRY. Large quantities are obtained from the city of Badku in Persia. The earth in the neighbourhood of this city is completely impregnated with naphtha. The inhabitants have no other fuel, or light but what they derive from this substance. For an account by captain II. Cox of certain similar grounds near Rangoon in the Burmhan empire, seeBuRMHAN EMPIRE.

Black petroleum is formed with sand into small cakes and used as fuel. Three of these balls are sufficient to heat an oven for baking bread, but the bread contracts a very disagreeable taste and odor. The lamps also are supplied with naphtha, and the fires of the lower classes. The Persians carry away great quantities in their vessels, but they are generally in such a bad condition, that the sea is often covered with naphtha to the distance of several leagues. In gloomy or stormy weather, the springs are in a state of the greatest ebullition, and the naphtha, which often takes fire spontaneously at the surface of the

earth, flows burning along the surface of the sea in quantities, and to a distance quite inconceivable. When the sky is clear, and the weather serene, the ebullition of the springs does not ex-ceed two or three feet.

In consequence of boiling, the petroleum acquires, by the evaporation of the more volatile naphtha, a degree of consistence that obstruct* by degrees the orifice of the spring, which then becomes surrounded with small heaps of maltha or earthy mineral pitch, a black substance, as hard and tenacious as pitch. When the resistance of this accumulation overcomes the force of the spring, the naphtha finds some other opening. Springs which have not been long opened, hare an embouchure from eight to ten feet in diameter. The naphtha flows from these springs into various reservoirs by means of small cuts. In the first reservoir are left the water and the grosser parts which accompany the naphtha from the spring. This coarser matter, which has a strong and penetrating odor, is used for fuel only by the poorest

classes of the Persians and other neighbouring nations. It is principally employed as a substitute for oil, or for making the fire-ball > already mentioned.

The whitest and the purest naphtha is obtained principally from the peninsula of Apcheron. It is more fluid and more volatile than any other kind, but it is obtained only in small quantities. The Russians drink it as a cordial ; and when taken internally it is thought to be useful in cases ot the stone, in pains in the head and chest, and in venereal affections and blennorhagia, maladies to which the Persians and Russians are very much subject.

Naphtha is also used externally for scorbutic spots, and in cases of gout, bruises, sprains of the tendons, and nervous spasms. It is also employed to remove spots of grease from woollen and othei stuffs, but it is difficult to destroy the disagreeable smell which it occasions.

According to Mongez, there are three kinds of naphtha, the white, reddish, and green or deep-colored ; and it is a true petrol or rock oil, of which the lightest and most inflammable is called naphtha. It is of an extremely fragrant and agreeable smell ; dissolves resins and balsams, but not gum-resins nor elastic gum. It dissolves in thees-sentialoils of thyme and lavender, but is insoluble in spirit of wine and ether. It is as inflammable as ether; and attracts gold from aqua regia. Naphtha, says Cronstedt, is collected from the surface of wells in Persia ; but Kirwan says, it issues out of white, yellow, or black clays, in Persia and Media. The finest is brought from a peninsula in the Caspian Sea, called by Kemp-fer okefra. It issues out through the earth into cisterns and wells purposely excavated for collecting it at Badku in Persia. Different kinds of it are also found in Italy, in Modena, and Mount Ciaro, twelve leagues from Plaisance. The formation of naphtha and petroleum is by most naturalists and chemists ascribed to the decomposition ot solid bitumens by the action of subterraneous fires ; naphtha being the lightest oil, which the fire disengages first; what follows gradually acquiring the color and consistence of pe-trol. The petrolca, united with some earthv

substance, or altered by acids, assume the appearance of mineral pitch, pissasplialtum, &c. This opinion is supported by the phenomena attending the distillation of amber ; where the first liquor that rises is a true naphtha; then a petroleum of a brown color; and lastly, a black substance like jet, which, being farther urged by the fire, leaves a dry friable matter, &c. All the different kinds of petrolea are often found near t'lesame spot; of which we have an instance of Mount Testin in Modena. It may be proper lo :idd that, as an article of commerce, the value ot r.aphtha has considerably diminished since the introduction of a nearly similar fluid, procured in the manufacture of coal gas. See PETROLEUM.

NAPHTUHIM, the fourth son of Mizraim, and grandson of Ham. Gen x. 13. Calmet thinks his posterity peopled that part of Ethiopia in Africa between Syene and Meroe, of which Nepata was the capital ; but the opinion of Bochart seems more f. robable, that they peopled Marmorica west of Egypt, and on the south coast of the Mediterranean, where a temple was built lo the god Aptuchus, a name nearly resembling Naphtuhim. Nor is it improbable that Naphtuhim may be the Neptune of the Greeks, who was originally a Libyan, and had his temples usually built on the sea coasts.

NAPIER, or NAPEIR (John), baron of Merchiston, inventor of the logarithms, was the eldest son of Sir Archibald Napier of Merchiston, and born in 1550. After going through the ordinary courses of philosophy at the university of St. Andrews, he made the tour of France, Italy, and Germany. Upon his return to his native country his talents soon rendered him conspicuous, and might have raised him to the highest offices in the state : but declining all ci-vil employments, and the bustle of the court, he retired to literary researches. He applied himself chiefly to the study of mathematics, and of the Apocalypse. The result of his theological labors was a treatise entitled A plaine Discovery of the whole Revelation of Sainte John set doune in two treatises; set foorth by John Napier L. of Marchestoun younger : whereunto are annexed certaine oracles of Sibylla agreeing with the Revelation and other portiones of Scripture, 1593. The work is dedicated 'to the right excellent high and mighty prince James V. king of Scottes ;' and the author exhorts him to be ready for the final judgments on the papal throne which he supposed were about to commence. In the course of his work he shows that as the last trumpet or vial began in 1541, and as it contains 245 years, it should extend to A. D. 1786. ••• ' Not that I mean,' says the noble author, ' that the world shall continue so long, because it is said that 'for the elect's sake those days shall be shortened,' but that if the world wer to endure, that seventh age should continew to the yeare of Christ 1786.' He also

fixed the day of judgment between 1688 and 1700 A. D. Surely this is a sufficient specimen of the value of logarithmic ta-lent and accuracy in interpreting prophecy. This work has however been printed abroad in several languages, particularly at Rochelle in 1693, 8vo., revised by himself. Nothing, says lord Buchan,

could be more agreeable to the Rochellers or to the Huguenots of France, at this time, than the author's annunciation of the pope as antichrist, which in this book he has set forth with much zeal and erudition. But what principally rendered his name famous was his great and fortunate discovery of the logarithms in trigonome-metry, by which the ease and expedition in calculation have so wonderfully assisted the science of astronomy and the arts of practical geometry and navigation. That he had begun about 1593 the train of enquiry which led him to that great achievement in arithmetic appears by a let-ter to Crugerus from Kepler in 1624; wherein, mentioning the Canon Mirificus, he writes thus : Nihil autem supra Neperianam rationem esse puto : etsi Scotus quidem literis ad Tychonem, anno 1504, scriptis jam spem fecit Canonis illius mirifici ; which allusion agrees with the story mentioned by Wood in his Athenae Oxon, and explains it in a way perfectly consonant to the rights of Napier as the inventor. When Napier had communicated to Mr. Henry Briggs, mathematical professor in Gresham College, his wonderful canon for the logarithms, that learned professor set himself to apply the rules in his Imitatio Napeirea ; and in a letter to archbishop Usher, in 1615, he writes thus: ††† 'Napier, baron of Merchiston, hath set my head and hands at work with his new and admirable logarithms. I hope to see him this summer, if it please God ; for I never saw a book which pleased me better, and made me more wonder.' Kepler dedicated his Ephemerides to Napier, in 1617; and it appears, from many passages in his letter, that he held Napier to be the greatest man of his age in the department to which he applied his abilities. The last literary exertion of this eminent person was the publication of his Rhab-dology and Promptuary in 1617, which he dedicated to the chancellor Seton ; and soon after died at Merchiston on the 3d of April, O. S., 1617, in his sixty-eighth year, and twenty-third of his happy invention. The titles of his published works are: ††† 1. A Plain Discovery of the Revelation of St. John. 2. Mirifici ipsius Canonis Constructio et Logarithmorum, ad Naturales ipsorum Numeros Habitudines. 3. Appendix de alia atque praestantiore Logarithmorum Specie Constituenda, in qua scilicet unitas Lo-garithmus est. 4. Rhabdologiae, seu Numerationes per Virgulas, libri duo. 5. Propositiones quaedam eminentissinr††††, ad Triangula Spherica

Mira Facultate resolvenda. 6. Letter to Anthony Bacon (the original of which is in the archbishop's library at Lambeth), entitled Secret Inventions Profitable and Necessary in these Days for the Defence of this Island, and withstanding Strangers Enemies to God's Truth and Religion ; which the earl of Buchan has published in the Appendix to his Account of Na-pier's Writings. This letter is dated June 2d, 1596, about which time it appears the author had set himself to explore his logarithmic canon. This eminent person was twice married. By his first wife, who was a daughter of Sir James Stirling of Kair, he had one son, who succeeded to the estate. By his second wife, a daughter of

rjir James Chisholm of Cromlix, he had a numerous issue.

NAPIER'S RODS, or BONES, an instrument invented by baron Napier, whereby the multiplication and division of large numbers is much facilitated. Suppose the common table of multiplication to be made upon a plate of me-tal, ivory, or pasteboard, and then conceive the several columns (standing downwards from the digits on the head) to be cut asunder ; these are called Napier's rods for multiplication. But then there must be a good number of each ; for as many times as any figure is in the multiplicand, so many rods of that species (i. e. with that figure on the top of it) must we have ; though six rods of each species will be sufficient for any example in common affairs : there must be also as many rods or cyphers. The figures on every rod are written in an order different from that in the table. Thus the little square space or division in which the several products of every column are written, is divided into two parts by a line across from the upper angle on the right to the lower on the left; and, if the product is a digit, it is set in the lower division ; if it has two places, the first is set in the lower, and the second in the upper division; but the spaces on the top are not divided ; also there is a rod 'of digits, not divided, which is called the index rod, and of this we need but one single rod. See plate MISCELLANIES.

1. First lay down the index rod; then on the right of it set a rod whose top is the figure in the highest place of the multiplicand : next to this again, set the rod whose top is the next figure ef the multiplicand; and so on in order to the first figure. Then is your multiplicand tabulated for all the nine digits; for in the same line of squares standing against

every figure of the in-dex-rod, you have the product of that figure ; and therefore you have no more to do but to transfer the products and sum them. But in taking out these products from the rods, the order in which the figures stand obliges you to a very easy and small addition; thus, begin to take out the figure of the lower part, or unit's place, of the square of the first rod on the right ; add the figure in the upper part of this rod to that in the lower part of the next, and so on ; which may be done as fast as you can look on them. To make this practice as clear as possible take the following example : ××× To multiply 4768 by 385. Having set the rods together for the number 4768, as in fig. 2, against 5 in the index I find this number, by

37o

238-K.

38144 14304

adding, according to the rule . Against 8, this number Against 3, this number .

Total product . . 1835680

To make the use of the rods more regular and easy, they are kept in a flat square box, whose breadth is that of ten rods, and the length that of one rod, as thick as to hold six (or as many as you please), the capacity of the box being divided into ten cells, for the different species of rods. When the rods are put up in the box (each species in its own cell, distinguished by the first figure of the rod set before it on the face of the box near the top), as much of every rod stands without the box as shows the first figure of that rod : also upon one of the flat sides without and near the edge, upon the left hand, the index-rod is fixed ; and along the foot there is a small ledge ; so that the rods when applied are laid upon this side, and supported by the ledge, which makes the practice very easy ; but, in case the multiplicand should have more than nine places, that upper face of the box may be made broader. Some make the rods with four different faces, and figures on each for different purposes. These are also sometimes used in division.

NAP'KIN, n.s. As Dr. Johnson says, from nap; which etymology is oddly favored by Vir-gil, ' Tonsisque ferunt mantilia villis:' but Min-shcu, with more probability, ' From Fr. nappe (dimin.) *i.e.* mappa,

quasi parva mappa, a little table cloth.' A cloth used at table for wiping the hands or mouth. Bishop Hall finely illustrates the word.

I am glad I have found this napkin ;

This was her first remembrance from the Moor.

Shaks}>tare.

Those men are not more injurious to themselves, than to the divine beneficence, who, in an opinion of greater sanctity, abridge themselves of a moderate participation of those comfortable helps God hath allowed them; and sit sullenly at a liberal board with their hat pulled over their eyes ; not so much as removing their napkin from their trencher ; unjustly scrupling; their conscience with 'Touch not, taste not.1 % ""

The same matter was woven into a napkin at Louvain, which was cleansed by being burnt in the fire.

tt'ilkint.

By art were weaved napkin*, shirts, and coats, in-consumptible by fire. Bnwne'i Vulgar Errmiri.

Napkins Heliogabalus had of cloth of gold, but thev were most commonly of linen, or soft wool. J Arbuthwt.

NAPLES.

NAPLES, the continental division of the kingdom of the Two Sicilies, includes the ancient Apulia, Campania, Magna Graecia, and Samnium. Regarding Italy under the figure of a boot, it forms the foot and lower part of the leg, or comprises the whole southern part of that peninsula, extending from E. long. 13 16' to 18 59', and N. lat. 37 46' to 42 53', and is bounded on the north-west by the states of the Church ; north-east by the Adriatic, and on the

south and south-west by the Mediterranean. From the papal territories to the southern extremity of Calabria it is computed to measure about 360 miles, and its greatest breadth is 120. In the adjacent seas it

possesses the important and the smaller Xentolia, , and

Dino”m” the Mediterranean’; in the Ionian Sea, Calypso, Monte Sardo, St. Amlreo, and Sant.i

In the adjacent seas it possesses the impor dependent island of Sicily; and the sma isles and dependencies of Ponza, Xento Ischia, Procida, Nisida, Capri, Galli, I.icosa,

Pelagia ; and in the Adriatic, Tremeti and Pe-lasosa. Naples somewhat exceeds Scotland in extent, containing fully 30,000 square miles ; its population is above 5,000,000 by the returns of 1818, divided into the following provinces :

Provinces.

Principal towns

Inhabitants.

1. Napoli or Naples

Naples

330,000

2. Terra di Lavoro

Capua

7,200

3. Principato Citra

Salerno

10,000

4. Principato Ultra

Coriza

6,000

5. Abruzzo Ultra I.

Aquilae

13,600

6. Abruzzo Ultra II.

Terrano

7. Abruzzo Citra

Chiti

12,300

8. Capitanta

Manfredonia

5,000

9. Molise

Bojano

10,000

10. Terra di Bari

Bari

18,000

11. Terra d’Otranto

Brindisi

6,000

12. Bascilicata

Acerenza

13. Calabria Citra

Cozenza

14,000

14. Calabria Ultra I.

Monte Leoni

8,000

15. Calabria Ultra II.

Reggio

16,000

Sicily contains in addition about 1,618,000 souls.

Like most other parts of Italy, Naples is remarkably mountainous, having many beautiful plains and extensive valleys, which its inimitable climate adorns with luxuriant vegetation. The Appenniries traverse its whole extent. One of their branches extends to the coast, and reaches the Adriatic in the promontory of Gargano. The main ridge also divides it into branches about the parallel of Mount Vesuvius, the one stretching towards the south-eastern peninsula, the other intersecting Calabria to the shores of the strait that separates it from Sicily. The most elevated summit of this chain is Grand Sasso, rising about 8800 feet above the level of the sea. Velino is nearly 8300, and Sila 5000 feet in height. Various groups and detached mountains rise in other parts of the country. The Volture, from which the wind Vulturnus had its name, is one of these, and the celebrated Vesuvius, standing on a space of nearly thirty miles in circumference. This is on the whole the most interesting object in this delightful country; yet its appearance at a distance is not striking, except during an eruption, as its height is only about 3600 feet. But, awoke in its volcanic wrath, ‘ the throes of the mountain, the subterranean thunders, the thickening smoke, the ruddy flames, the stony showers ejected to a prodigious height, amidst the coruscations of native lightning, with the eruption of the lava, descending in a horrid and copious stream of destruction, have exercised the powers of many writers,’ and have been well said ‘ to exceed the utmost energy of description.’ The southern part of this kingdom is sub ect to the destructive calamity of earthquakes, which have buried whole cities.

The rivers, from the narrowness of the peninsula and the height and position of the moun-teins, are all small. The principal are the Ga-ngliano, the Volturno, the Basiento, the Pescara,

the Sangro, and theOfanto, the ancient Auhdus. The chief lakes are Celano, the ancient Tricimus, Agnano, Averno, Licola, Fusaro, Patrea, Lesina, and Fondi. Marshes abound on various parts of the sea coast,

and render some of the mosv. fertile tracks unfit for human abodes.

In point of climate Naples presents every variety that seems congenial to Europeans. The Campagna Felix, stretching on each side of the capital, is constantly genial, with a serene sky, and here the treasures of the vegetable kingdom are poured forth in rich profusion. During the most sultry parts of the year, the air is cooled and refreshed by breezes from the sea and mountains. In the mountainous districts the winters are more severe, and snow falls abundantly, though it sel-dom rests in the plains. In the vicinity of the marshes, the miasmata become the parent of various diseases. Here, however, the fruits of the southern latitudes thrive, and the aloes and palm diversify the scenery. The weather is very various in different parts of Naples : the provinces between the Appennines and the Tyrrhenian Sea, are often drenched with rain, while those on the east of the same ridge do not experience a refreshing shower. Towards the Adriatic, indeed, many arid tracts are met with : but Calabria is on the whole very fruitful, except in the woods and marshes.

Agriculture, as may be expected, is in a very low state here : although the whole country presents a scene which would abundantly reward its efforts. But the scientific application of draining and manure, the division of labor, and the proper appropriation of the soil, are almost wholly unknown. Even the barbarous irrigation of the East has not been attended to on these shores. Vines, olives, and grain, are often grown on the same spot ; elms and poplars are planted in rows, for the support of the vines, and the intermediate places sown with grain or pulse : the grain is either separated from the straw by the treading of cattle, or by a large rough stone which is dragged over it, till the sheaves are broken, and the corn thrown out. Oxen are universally used for the business of agriculture. Indian corn, barley, and rye, are the most com-mon kinds of grain, and rice in the low grounds. Flax and hemp are generally seen ; and cotton and tobacco are grown in some of the southern tracts. Indigo was also introduced, and in the reign of Murat succeeded.

Chateauvieux's Letters on Italy contain the following description of the valley-farming of Naples, furnished by a Neapolitan metayer. ' The poorer metayers,' he said, ' occupy only so much land as they can cultivate by their own families, that is to say, four or five acres. Our condition is not a good one, since we get for our trouble only a third of the produce, two-thirds belonging to the owner, which we pay in kind into the hands of the steward. We have no ploughs, and the whole is cultivated by the spade. It is true that the soil, being mixed with ashes, is easily stirred; and even our children assist us in this

work. At times the mountain, hence named Vesuvius, pours forth showers of ashes, which spread over our fields and fertilise them. The trees,' he adds, ' which you see on .

the land, are not without their use ; they support ine vine, and give us fruit; we also carefully gather their leaves : it is the last autumnal crop, and serves to feed our cattle in the winter. We cultivate, in succession, melons, between the rows of elms, which we carry to the city to sell ; after which we sow wheat. When the wheat crop is taken off, we dig in the stubble, which is done by our families, to sow beans or purple clover. During six months our children go every morning to cut a quantity of it with the sickle, to feed the cows. We prefer the females of the buffaloe, as they give most milk. We have also goats, and sometimes an ass, or a small horse, to go to the city and carry our burdens ; but this advantage belongs only to the richer metayers. We plant the maize the following spring, after clover or beans. We manure the land at this time, because this plant is to support our families ; this crop, therefore, interests us more than all the others, and the day in which it is harvested is a day of festivity in our country. All the villagers assemble together, the young women dance, and the rest of us walk slowly, being laden with our tools : arrived at our dwellings, each family goes into its own ; but they are so near each other, that we can still converse together. We often gather seven ears from one stalk of maize, and many of them are three palms long. When the sun is high, the father of the family goes into the adjoining field to get some melons, while the children gather fruit from the surrounding figtrees. The fruit is brought under an elm-tree, round which the whole family sits ; after this repast the work begins again, and does not cease until the close of day. Each family then visits its neighbours, and tells of the rich crop the season has bestowed upon them. We have no sooner gotten in the maize than the earth is again dug, to be sown once more with wheat ; after this second crop we grow in the fields only vegetables of different kinds. Our lands thus produce wine and fruit, corn and vegetables, leaves and grass for the cattle. We have no reason to complain of their fertility ; but our conditions are hard,

little being left for our pains; and, if the season is not propitious, the metayer has much to complain of.'

The cotton plant, in the neighbourhood of Vesuvius, and in Sicily, is sown in March, in lines at three feet distance, and the plants two feet apart in the lines. The earth is stirred by a one-horse plough, or by hoes, and carefully weeded. As soon as the flowering season is over, about the middle of September, the ends of the shoots are nipped off, to determine the sap to the fruit. The capsules are collected as they ripen ; a tedious process, lasting two months : the cotton and the seeds are then separated ; an operation still more tedious. The most extensive cotton farmers are in the vale of Sorento. There the rotation, according to Mr. Loudon, is, 1. maize; 2. wheat, followed by beans, which ripen the next March; 3. cotton; 4. wheat, followed by clover; 5. melons, followed by French or common beans. Thus, in five years, are produced eight crops. In this district, wherever water can be commanded, it is distributed, as in Tuscany and Lombard y, among every kind of crop. The tomato, or love apple (solanum lycopersicum, L.), so extensively used in Italian cookery, forms also an article of field-culture near Pompeii, and especially in Sicily, whence they are sent to Naples, Rome, and several towns on the Mediterranean Sea. It is treated much in the same way as the cotton plant.

' The Neapolitan maremmes, near Salerno,' adds this writer, ' to the evils of those of Rome, add that of a wretched soil. They are pastured by a few herds of buffaloes and oxen ; the herds-men of which have no other shelter during the night than reed huts ; these desert tracts being without either houses or ruins.' The plough of this ancient Greek colony is thought to be the nearest to that of ancient Greece. The manna, a concrete juice of the ornus rotundifolia, forms an article of cultivation in Calabria.

Olives are ab'undant, while oranges, lemons, citrons, melons, almonds, dates, figs, pomegranates, and other tropical fruits abound in the south,

The domestic and wild animals are those of most other parts of Italy. Mules are employed chiefly in travelling, and the herds of buffaloes are found chiefly on the marshy plains in the north-west, while common cattle and sheep are bred in most others. The crested porcupine is peculiar to this part of Italy.

The mineral productions of Naples have never been fully explored. Rock salt, alum, vitriol, sulphur, crystal, aud marble, are those best known : of the first Calabria contains several hills; hut government,

having a monopoly of bay salt, does not permit them to be wrought. Near Tarento are two salt lakes, covered with water in winter, but dried up in summer ; when a quantity of fine white salt is deposited.

Among the natural curiosities of this country may be mentioned the Grotto del Cane, and the Solfatara : the first is a cave near Naples, from which a hot mephitic vapor constantly issues, and it derives its name from the following experiment, usually made with dogs: ††† The animal, when brought near the mouth, manifests his uneasiness by convulsive struggles, and soon becomes apparently lifeless ; but, being removed, he recovers after a few minutes, and appears uninjured. These experiments, however, can-not be often repeated with the same dog without proving fatal, and a similar effect is produced on the human frame. The Solfatara is thus described by Mr. Eustace: ††† 'The appellation of Solfatara is a corruption of Sulphutara, and given to an oval plain, extending on an eminence, but surrounded on all sides by an elevated border resembling a rampart. The shattered hills that form this rampart are impregnated with sulphur, and heated by a subterranean fire. They are destitute of all verdure, and of all appearance of vegetation. The plain below is a pale yellow surface of sulphureous marl, thrown like a vault over an abyss of fire. Its heat almost scorches the feet of those who pass over it, and the workings of the furnace beneath are heard distinctly through it. A stamp, or the rolling of a stone over it, rebellows in hollow murmurs, weakening as they descend, till th††-> lose themselves in the vastness of the abyss

below. Sulphureous exhalations arise from the crevices ; and from an orifice at one of the extremities a thick vapor by day, and a pale blue flame by night, bursts forth with a murmuring sound and great impetuosity.'

' In the sublimer phenomena of nature Na-ples is surpassed by no country. Here the earth frequently trembles, the volcano roars, the day is darkened with clouds of smoke, and the night is illuminated by vivid flames, while torrents of fiery lava roll in destruction over

regions clothed in all the charms of nature. Cities have been so engulfed by the flood, that all traces of their existence were for ages lost. Of this Herculaneum and Pompeii are examples ; and have become objects of the most interesting modern discoveries. The former is so deeply entombed indeed, and the substance with which it is covered is so complete a calx, as to cause the principal researches to be abandoned. But Pompeii being nearer the surface, and the matter more easily removed, great part of it, since the exertions of Marat, have been brought to the light of day. The following is one account of the work of disclosure, given by a gentleman who lately visited it : ••• ‘ The houses in general are very low, and the rooms are small, I should think not above ten feet high. Every house is provided with a well and cistern. Every thing seems to be in proportion ; the principal streets do not appear to exceed sixteen feet in width, witli side pavements of about three feet; some of the subordinate streets are from six to ten feet wide, with the side pavements in proportion ; these are occasionally high, and are reached by steps. The columns of the barracks are about fifteen feet in height, they are made of tuffa with stucco ; one-third of the shaft is smoothly plastered, the rest fluted to the capital. The walls of the houses are often painted red, and some of them have borders and antique ornaments, masks, and imitations of marble, but in general poorly executed. I have observed, on the walls of an eating room, various kinds of food and game tolerably represented ; one woman’s apartment was adorned with subjects relating to love; and a man’s with pictures of a martial character. Considering that the whole has been under ground upwards of seventeen centuries, it is certainly surprising that they should be as fresh as at the period of their burial. The whole extent of the city, not more than half of which is excavated, may be about four miles.’ ••• Williams. But see our article POMPEII.

The Neapolitans are not a manufacturing peo-ple. The staple article is silk ; but nearly half the quantity made is exported raw. To this may be added a few cottons, muslins, some embroidery ; fire-arms, and porcelain (made in the capital) ; and we have the whole catalogue of their industry in these respects. The commerce partakes of the general languor of the inhabitants. Its chief exports are oil, silk, wool, wine, cotton, corn, and fruits. About 4000 cwt. of silk are reckoned as export. The imports are sugar, coffee, and other groceries ; woollens, linens, cottons, of East India and of British manufacture ; hardware, lead, tin clocks, watches, household furniture, and large quantities of salt

fish. Of these, by far the largest proportion is imported in British vessels. A commercial treaty, concluded in February 1816, places British subjects on a similar footing as to privileges with the natives. But French, Genoese, Venetian, and Trieste vessels frequent the Neapolitan ports. The fishery along the coast is by no means inconsiderable. On or near the lake Facino oysters have been bred from the time of the Romans. On the margin of the lake a house is constructed for those who take care of the oysters, and who sell them to the dealers in Na-ples, or to those who come and eat them on the spot. ‘ Adjoining the house is a covered enclosure, where the oysters are kept till wanted ; and along the margin of the lake, and in most parts of it, are placed circles of reeds, with their summits above the water. The spawn of the oysters attaches itself to these reeds, and grows there till of an edible size : they are then removed to the reserve, and kept there till wanted. In removing them the reeds are pulled up one by one, examined, and the full-grown oysters removed and put in baskets, while the small-sized and spawn are suffered to remain, and the reed is replaced as it was. The baskets are then placed in the reserve and not emptied till sold. In two years from the spawn, Lasteyrie observes, the oyster is fully grown.’

The Neapolitans retain some peculiar traces of ancient, and not a few of oriental manners. Like the ancients, they pass the greater part of the day in the open air ; not indeed like them, to discuss the affairs of the forum, or the debates of the senate (of these they take no note), but from the mere want of emotion, from an intolerance of ennui, or to satisfy a vague and gaping curiosity. In the open air, they drink, they eat ; and, if they work at all, it is in the open air. For this reason it is that the city of Naples has al-ways the aspect of being over-peopled. The principal street (Toledo) has the appearance, especially towards the close of the day, of a popular rising. It would seem as if a Massaniello had convened his mob of noisy and factious citizens to overturn the state.

In feature, taste, and manner, the Neapolitans have obviously an affinity with oriental nations. But there are other characteristics which are exclusively their own. Mean and proud ; superstitious and irreligious ; indolent and avaricious ; phlegmatic and irritable ; the slaves of habit, but goaded with a feverish restlessness for any thing that is new ; eager for change, but made for obedience ; affecting independence, and yet idolaters and flatterers of wealth or greatness. At Naples (and only at Naples) is it customary to touch the garment of a grandee with veneration, and then to kiss the hand that has been honored with the contact. They are nationally proud, not like other nations, of their historical fame or actual greatness, but of the beauty

of their climate, the fertility of their soil, and the splendor of their capital. As to their government, they hardly understand the word. They seem never to have asked, whether it is monarchical or republican. Such, however, are the unceasing contrasts of their character, that, with an utter insensibility on political subjects, their

ears tingle at the word ‘ liberty ;’ for in their vocabulary, liberty means the right of doing as they please, and of giving unrestrained vent to their appetites. They are therefore always ready to join the first demagogue who cries out * liberty.’ But the political idol of one day will be meanly abandoned on the next. They foam and effervesce, and then lie down with their accustomed apathy, and forget all that has passed. To-day they may be incited to massacre their fellow-citizens; to-morrow the blood-fever will subside, and they will be as calm and indolent as before. Without this key to the Neapolitan character, the shortlived revolutions so frequent in their history would be an inexplicable problem.

Perhaps, however, sufficient justice has never been rendered to the lowest classes here. Their vices lying on the surface, we are too apt to overlook their good qualities. Not that they are a moral race of men : they scarcely know what is meant by morals. But they have a wild and untutored sense of right. They are by no means seriously quarrelsome, their disputes evaporating in noise and clamor. In an instant they change from intense anger to the calmest indifference. Whoever throws a superficial glance on the character of this people, would suppose them liable to every excess of popular delirium. But the Neapolitan, the slave oT every changing sensation, is perpetually varying from himself. Like his own Vesuvius, he seems to menace death and destruction. In an instant he is placid and se-rene, passing from hatred to love as rapidly, and almost as unconsciously, as the infant passes from tears to gladness. Hence it is that faction has ever found temporary aliment amongst this eccentric people, though the projects conceived in the moments of heat and frenzy are abandoned with an inconstancy far surpassing all that has ever been said or thought of the proverbial levity of the multitude. The middling classes are upon the whole the most respectable. The palietti, one of the most thriving professions in Naples, the professors at the university, the merchants, and some portion, we wish we could say the larger

portion, of the ecclesiastics, belong to this respectable division. Of the highest class, the manners are variously shaded. As if to show how extremes meet in national character, many of the nobility resemble in their moral features the despised race of the Lazaroni. In truth, they are equally indolent and superstitious, and in many respects equally ignorant. Educated for the most part in the cloister, or by incompetent preceptors, who hold in the family an inferior rank, and actually receive a less salary than the principal domestics, the Neapolitan noble arrives at mature years wholly unripe in understanding or judgment. Incompetent to the administration of his own affairs, and entirely absorbed in fetes and spectacles, he falls into the hands of some needy lawyer, who fattens at his expense, or surrenders himself to some insinuating abbe, who has stolen into his confidence. His noble sposa, transferred from the “loom of a convent to the glitter of public life, without education or accomplishments, is driven to intrigue as a mere refuge from vacuity. Happily there

are exceptions to this remark ; but all estimate* of popular character must be formed chiefly of its more marked and prominent features. Upon the whole, indolence is the master rice of Na-ples. But the Neapolitans hare in general much penetration; a lively and fertile fancy; a discourse sparkling with images. They catch al-most instinctively the peculiarities and humors of others. Irony is their prevailing figure of speech. The extravagant and hyperbolical flattery which they address to those with whom they converse is frequently so much dissembled satire and latent epigram.

The robbers throughout the Neapolitan territory are increased rather than diminished since the war. Of the desperadoes, to whose outrages the traveller through those parts is exposed, and who it appears carry men away for the sake of the ransom, as before observed, Mr. Matthews relates the following anecdote : ‘ Two men were lately kidnapped from this neighbourhood, and taken up into the mountains. The friends of the one sent up nearly the sum that was demanded the other had no friends to redeem him. The robbers sent the first man back without his ears ; detaining them as a set off against the deficiency of the ransom ; and the other poor fellow was returned in eight pieces!’ It seems that in the Italian governments justice has not an arm long and strong enough to reach and suppress

these horrible outiages. In the Neapolitan territory, throuch the whole line of road from Terracina to Capua, the danger from robbers is as great as in the Pon-tine Marshes, notwithstanding small parties of soldiers are encamped throughout the whole way at small intervals ; but the wonder ceases when we are informed that the soldiers themselves, after dark, lay aside their military dress and act as banditti. Happy Naples, to receive a national revolution, and a new polity from the hands of those faithful reformers! Our own reformers were at one time, perhaps, not a whit better ; but happily they were not in red coats. The whole way from Terracina to Naples, Mr. Matthews represents as very pleasing. The landscape is every where enriched and adorned with hedges of laurustinus ; while the olives and vines, the orange and lemon groves, covered with fruit, ××× the myrtle, the fig, and the palm tree give to the scene an effect, at once soft, mellow, and lustrous; and yet, in the midst of the bounties and blessings of Providence, we shall find that man has contrived to make his lot miserable, if we regard the wretched condition of the mass of the inhabitants. Of this the bad government must doubtless take the principal share of the blame ; but Mr. Matthews is quite right in attributing it in part to the very advantages themselves, which the country apparently enjoys ; in the midst of spontaneous increase, man languishes for want of stimulus to his industry, and is rarely great, respectable, or happy.

There is great truth, however, in the spirited remarks of lady Morgan on this subject. ×× It is a calumny against Providence, and a solecism in philosophy, to assert that there are nations so marked by physical tendencies to evil, so instinctively devoted to particular vices, that they re-main unredeemable by good laws, incorrigible

by wise institutes! Almost all civilised nations have assumed a different moral phasis, according to the direction gradually given to them by political institutes. The heroes of Thermopylae in one age, have, in another, been the slaves of barbarians ; and a monk now governs, where a Caesar trembled to assume the slightest insignia of

power ! The true instrument of man's degradation is his ignorance. Nature, which too frequently permits him to err, never teaches him to be vile ; and the history of all countries bears out the philosophical observation of Dante, that

Se '1 Mondo laggiu ponesse mente, Al fondamento che Natura pone, Segueudo lui, avria buona la gente.

Paradiso, canto ottavo.

' It has been the fashion to accuse the Neapolitan? of an inherent viciousness, over which external circumstances could hold no control ; but the prejudice has only obtained currency in European opinion since that country has been the slave of Spain ; for conquered nations are always subjects of slander to ttteir foreign masters, who seek to sanction their own injustice by assuming the worthlessness of their victims. The base and bigoted descendants of Charles V., having maddened or degraded the Neapolitans by a delegated and odious government, well suited to produce such an effect, assigned the results of their own despotism to the idiosyncrasy of the people. The Neapolitans, however, thus accused of cowardice and incapacity, in former ages had assisted the Romans to drive Hannibal out of Italy, and had preserved their independence at an epoch when the rest of Italy had lost it. The kingdom of Naples gave to ancient Rome, Ennius, Cicero, Horace, Ovid, and Statius ; and to modern Europe, Tasso, Sannazaro, and Salvator Rosa. Naples, in the lower ages, was the asylum of the little learning then left ; and the greater part of the classics which have reached posterity was preserved by the learned industry of the Benedictine monks of Mount Cassin and Otranto. The flame of science was rekindled in the schools of Salerno ; the pandects of Justinian (the code of legitimacy) were found at Amalfi ; and in the sixteenth century its society, according to Apostolo Zeno, was so literary, that the intellectual of all countries might have chosen for their residence the favorite retreat of Virgil, of Seneca, of Livy, and of Claudian. But, above all other European countries, it was the glory of Naples to have resisted the papal power from its first foundation, to have disputed the asserted prerogatives of the see in all ages, and to have refused, invariably and successfully, the admission of that worst and most powerful of all engines of terror and degradation, ††† the Inquisition !'

We may resume the literary history of this country ; but must here allow our fair guide to exhibit her views of the general manner of the people.

‘ That large proportion of the population of the kingdom of Naples,’ says this writer, ‘ called ‘ the people,’ presents itself more readily to the stranger’s observation, than the same class in any other civilised nation in the world. Their

poverty scarcely leaves them a home to sheltet in ; and their climate renders a domicile rather a luxury than a necessity. The roof that skreens them from the inclemency of the night is the only roof they seek or know. The Lazzaroni, the refuse of the people, require not even this; a bench, or a boat, pillows their slumbers, and the sky is their canopy, except in those transient and violent gusts of bad weather to which Naples is subject ; when the portico of a palace, or the colonnade of a church, affords them all the temporary shelter they require. The weather was occasionally very severe while we were at Naples; and it frequently happened that on returning late from the opera, or from assemblies, we found the filthy portico of our old palace strewed with Lazzaroni. Some lay upon the earth, others were flung over a cask, or gathered round a brasier of hot embers, just sufficiently bright to glare upon their marked and grotesque features. Nothing could be more courteous or cordial than their manner; they ail jumped up to make way for us, welcomed us home, wished us a good night’s rest ; and one or two of them, who had got up some English phrases, applied them at random, by way of being particularly polite. One of the phrases most current upon the Mola was, ‘ Want a boat, Sir.’

‘ The daylight, which, according to the philosophy of Comus, ‘ alone makes sin,’ is not shunned by the lower Neapolitans under any pretence. In the full glare of its lustre, in the full observance of the public eye, all the duties and all the offices of life are frankly and undisguisedly performed ; groups seated at the cor-ner of streets, at the thresholds of the poorer sort of houses, on the shores of the Scoglio or the Mare-chiano, on the Mola or the Largo, talking, laughing, menacing, or singing, are all domestically (though not often sentimentally) employed ; wants are supplied or satisfied ; trades carried on; Tasso read aloud; and heads cleaned, or beards shaven, all equally pro bono publico.* A pulchinello and a ‘ padre predica-tore’ (a preaching ‘friar), in close contact, call on the sympathies of the dissipated and the devout at the same moment ; and share between them the ever-laughing, moving, praying multitude; who seek sensations in proportion as they are denied ideas; and who, consigned unmolested to the influence of their vehement passions by the absence or feeble administration of the laws, are as destitute of moral

principles as they are removed from the causes out of which moral principles arise, property and education. The falsity and dishonesty attributed to the Neapolitans, and always exaggerated, are the inevitable results of their social position. Their dishonesty, which rarely rises to acts of violence, except during political commotion, and which is generally accompanied by ingenuity and urged by poverty, is the natural vice of a people left without one conscientious principle, by that government whose laws have always been the slaves of power and privilege, and whose religion has a ready absolution, with its stated price,

* In every street in Naples stana one or more public toilettes for the use of the lower orders.

for every sin. Honesty and probity come with property ; those who know the value of possession respect it in others on u selfish principle. To take what we want, is an instinct ; to resist the temptation of satisfying that want upon principle is the result of knowledge and reflexion, guarded by opinion, and by the conscious existence of just laws, equally protecting and benefiting every member of the social compact.

‘ The great mass of the population of the kingdom of Naples (including the Abruzzi and Calabria) are Arabs in their habits and principles, and Greeks in their subtilty and talents.

‘ When Massena had occasion to send a courier into Calabria, he was obliged to give, him an escort of 150 men. There are scarcely any public roads or inns, a strong proof of incivilisation. The better orders are hospitable and munificent, and live like Arab chiefs. The predatory bands of this district, which Ruffo found so available, are frequently 500 strong. Of their ferocity and notions of honor the following anecdote was related to us : ××× A party of these banditti, about a year before we heard the anecdote, kidnapped a young Neapolitan, the heir of a wealthy family ; and sent word to his father that they required 10,000 ducats for his ransom. The father sent them four, with

an expostulatory letter; they returned the money and made no answer. The terrified father sent the whole sum, after some delay ; but it was returned to him untouched, with the horrible intimation that his son was no more. A Neapolitan gentleman of eminent talent, who, for a considerable time, had a military command in Calabria under the French, assured us that the Calabrians were not only the finest race of people in Italy, but the most susceptible of civilisation and intellectual improvement ; the upper classes are purely Greek in their tastes and talents, and are distinguished for their domestic affections and boundless hospitality. A Calabrian never betrays a confidence placed in him. Roads opened, manufactories and schools established, would rapidly redeem this people from their wild and lawless existence; but the government, when it levies and extorts taxes for them, does nothing more ; and some of its banditti are said to he in its pay, and even to be looked upon as efficient allies in cases of emergency, to let loose against subjects who sigh for constitutions: their services under Ruffo are not forgotten.

‘ They (the Neapolitans) are devoted to a religion which insures them their feste popolari ; they are attached to a government which has licensed their violence and indolence, and not only sanctioned, but allied itself with their predatory bands. The banditti of Puglia, led on by the Vardarelli (two brother chiefs of predatory celebrity), made terms with the government, and were for a time received into its pay. These were the causes which rendered the revolution distasteful to the lower orders, and which, when they were forced to take a part in the contests between independence and despotism, inclined them towards the latter. All governments are in the abstract alike to the outlaw ; but the government which most favors disorder, moral and political, will best suit the professional

bandit of the Abruzzi, or the brutal Lazzarone of Naples.

‘ To the long enslaved, long debased, lower classes of the Neapolitan dominions, the motives presented were not adequate to the sacrifice demanded. In their apprehension, political independence is but a metaphysical term ! a pure abstraction !❓❓❓ they know nothing of its theory or its practice, of its benefits or its results. Accustomed for ages to misrule, they feel its force only in its more immediate causes; and they seize not the chain of inductions which unites the constitutional movement with their personal interest. Had they been given a Madonna to de-fend, or any sensible image to rally under, they might have been found more firm in the hour of danger; but they

were not prepared to fight for independence ††† a word of which the despotism of Spanish, Austrian, and Bourbon kings had left them in perfect ignorance.'

' The religion of the lower orders in Naples is scarcely Catholicism. It is not a creed ; it is a tradition ††† descended rather from their Greek ancestors than imbibed from the Roman church, to which thejj have always opposed themselves. Of all Christian sects, the church of Naples is perhaps the most idolatrous, and at the same time the least intolerant. It seeks not to scrutinise too closely religious professions, or to investigate the faith of those who maintain a decent exterior. Too secure for doubt, and too enjoying for activity, it will not hear of persecution ; and even its bishops teach, that the first Christians were but enlightened reformers, who endeavoured, in the worst times, to purify the corruption of society. The gross minds and ardent imaginations of the neglected and vivacious people know nothing of the abstract dogmas of religion : they require and possess a tangible creed ††† a something to see and touch, to complain of, and to adore. The wild Calabrian treats his tutelar saint according to his merits : he Is prodigal of praises to his honor and glory, or he flings him down the mountain, or knocks him off his shrine, as he finds him propitious or otherwise. We were assured that saint Gologaro (the patron of Calabria) had seldom his due complement of limbs and features ; but, when good harvests and fine weather brought him into favor, his pardon was asked, his nose glued on, his face fresh painted, and his sanctity replaced in all its honors. In the old part of Naples, where every thing remains as the Arragons and Anjous left it centuries back, the narrow gloomy lanes abound in idol-shops. Here are to be purchased offerinss for altars, such as the votarists of Flora and Pomona presented at their shrines, when Naples was a Greek colony ††† large bouquets of* flowers, made of tin, feathers, or paper ††† fruits in wax ††† strings of noses, ears, eyes, and fingers ††† ' Salvalori' of all sizes and ages, from the cradle to the sepulchre ††† ' Madri dolorose,' or ' del conforto' ††† and Magdalens in all their stages of penitence or beati-tude. In one of these shops we found a dirty boy carving a Madonna out of a block ; and an old man, his master, sticking glass eyes in the head of St. Januarius ; meantime an old woman stood ha-Ming with the Padrona, who was selling

saints as the mistresses of toy-shops sell dolls. The pious purchaser was long undecided, between a crucifix and a St. Sebastian struck through with arrows; at last, she fixed on the former, wrapped it up in her pocket handkerchief, and hobbled off to nail it up at her bedside, as an idol to receive all those invocations which fill up the time and satisfy the cupidity of a devotee.'

Our author very justly adds ' the ill-success of the late effort, so far from affording an argument favorable to the views and crimes of invading despotism, is an additional proof of the inhuman selfishness of the invader. What is to be said of a government which reduces the great majority of the people to a slavish insensibility to national degradation, ††† to a perfect indifference to national honor ††† a government which renders the subject too ignorant to comprehend the causes of his sufferings, and too listless to seek their removal ?'

The undent history of this country falls under the articles ROME and ITALY ; the present state of it, as well as the rest of Italy, had its basis in the conquests of Charlemagne. When he put an end to the kingdom of the Lombards, he obliged the dukes of Friuli, Spoleto, and Benevento, to acknowledge him as king of Italy ; but allowed ihem to exercise the same power and authority which they had enjoyed before his conquest. Of these three dukedoms Benevento was by far the most powerful and extensive : it comprehended almost all the present kingdom of Naples ; that part of Calabria Ultra beyond the Savuto and Peto, a few maritime cities in Calabria Citra, with the city of Acripoli and the promontory of Licosa; and, lastly, the dukedoms of Gaeta, Naples, and Amalsi, which were very inconsiderable, and extended along the shore only about 100 miles, interrupted by the Gastaldate, ††† or county of Capua. This flourishing and extensive dukedom was at this time governed by Arechis, who had married one of the daughters of Desiderius, the last king of the Lombards, and had submitted and taken the oath of allegiance to the emperor Charles. But a few years after he renounced his allegiance to the Franks, and declared himself an independent sovereign. To strengthen himself against Pepin king of Italy, who resided at Ravenna, he enlarged and fortified the city of Benevento, and built Salerno on the sea-coast, surrounding it with a very strong and high wall. He engaged in several wars with the Greeks, whom he sometimes obliged to give him hostages; but, having invaded the territories of the pope, Charlemagne returned to Italy. Arechis, unable to oppose such a formidable enemy,

sent his eldest son, Romuald, to Rome, with an offer of submission ; but, at the instigation of the pope, Charles refused the offer, arid detained his son prisoner ; after which he ravaged tht country, and made himself master of Capua. Other deputies, however, proved more successful ; and, in 787, a peace was concluded on these conditions : That Arechis and the Beneventans should renew their allegiance to the Franks ; that he should pay a yearly tribute to Pepin, deliver up all his treasure, and give his son Grimoakl and his daughter Adelgisa, with

twelve others, as hostages for his fidelity; however Adelgisa was restored to her father. Charles had no sooner left Italy than Arechis forgot all his engagements, and began to negociate with Irene, empress of Constantinople, for expelling the Franks out of Italy. For himself, he desired the honor of patriciate, and the dukedom of Naples ; and, in return, promised to acknowledge the Greek emperor as his sovereign. He required, however, to be supported by a Greek army ; and that his brother-in-law Adalgifus, son to king Desiderius, should be sent over into Italy to raise a party. These conditions were readily accepted, on condition that prince Romuald should be sent as a hostage ; but, before the completion of the terms, prince Romuald died, and soon after him his father.

After the death of Arechis, the Beneventans sent a most submissive embassy to Charlemagne; in consequence of which Grimoald, the late king's son, was allowed to assume the government, af-ter he had agreed to several conditions, of which two were, That he should oblige the Lombards to shave their beards ; and that he should cause the walls of Salerno, Acerenza, and Consia, to be demolished. ??? The new king for some time continued faithful to his engagements, excepting the last article. Yet having contracted an alliance with the Greek emperor, by marrying his niece Wanzia, in the fifth year of his reign a war broke out between him and Pepin, which continued for twelve years ; after which a truce was concluded. Grimoald survived this pacification three years, and was succeeded by his treasurer Grimoald II., who submitted to Charlemagne after the death of Pepin ; and from this time the Beneventans were looked upon as tributaries of the western emperors. As yet, however, Naples did not own allegiance to the dukes of Benevento, but was held by the eastern emperors ; and frequent wars, took place between the Beneventans and Neapolitans. This was the case when Grimoald II. ascended the throne. He conch ded a peace with them, but it was of short continuance ; for Theodore governor of Naples, having granted protection to Dauferius, a noble Beneventan, who had been concerned in a conspiracy against his

prince, Grimoald marched against Naples, and invested it by sea and land. Theodore still refused to deliver up the traitor, and a general engagement ensued by land and sea ; in which the Neapolitans were defeated with so great slaughter, that the sea was stained with their blood for above seven days. Theodore then consented to deliver up Dauferius, with 8000 crowns for the expenses of the war : and Grimoald not only pardoned Dauferius, but received him into favor; the traitor, however, was seized with remorse, and went on pilgrimage to the Holy Land, carrying a large stone in his mouth, by way of penance, which he never took out but at meals. In 821 Grimoald was murdered by Radelchis, count of Consia, and Sico, gastald of Acerenza, the latter of whom succeeded to the duchy of Benevento. Radelchis, being soon after seized with remorse, became a monk ; while Sico associated his son Sicardo with him in the government, and soon after attacked the Neapolitans, and invested the city by sea and

land. The walls were furiously battered, and, part of them being beat down, Sico prepared for a geueral assault. Stephen, then duke of Naples, pretended to submit ; but intreated Sico to put off his entry till the morning, and in the mean time sent his mother and his two children as hostages. Sico consented, but next morning found the breach built up, and the Neapolitans prepared for their defence. Exasperated at their perfidy, he renewed his attacks with vigor, but without success ; the besieged defending themselves with the utmost obstinacy. At last they consented to a peace, on condition that the Neapolitans should pay an annual tribute to the princes of Benevento, and consent to the transporting of the body of St. Januahus from his church without the walls of Naples to Benevento. These terms being ratified, Sico returned to Benevento ; but soon after renewed the war, under pretence that the Neapolitans had neglected to pay the stipulated sum ; and hostilities continued till his death, which happened in 833. Sico was succeeded in the government of Bene-rento by his son Sicardo, who had married the daughter of Dauferius ; and being influenced by Roffrid, his wife’s brother, oppressed his subjects to such a degree that they conspired against his life. He besieged

Naples with a powerful army, and took possession of Acerra and Atella. But Bonus, the Neapolitan duke, defended himself so vigorously, that the Beneventans were obliged to retire, and even to abandon Acerra and Atella. At last Sicardo agreed to a peace for five years, on the intercession of the emperor Lothaire, in 836, after the war had continued, with very little intermission, for sixteen years. Soon after this peace the Saracens landed at Brindisi : and, having taken it, ravaged all the neighbouring country. Sicardo marched against them with a numerous army ; but the Saracens having dug a great number of ditches, which they slightly covered over, drew the Beneventans in among them, whereby they were repulsed with great loss. However, Sicardo, having reinforced his army, inarched again to attack them ; but the Saracens pillaged and burnt Brindisi, and retired with their booty and many captives to Sicily. Sicardo then attacked Amalfi, levelled its walls, carried off its wealth, and the body of its tutelar saint, Triphomen, and transported many of its inhabitants to Saler.no. During these transactions, Sicardo had tyrannised over his subjects in such a manner, that he became intolerable. His nobles were at last provoked to conspire against him ; and, in 839, he was murdered in his tent.

On the death of Sicardo, lladelchis, his secretary or treasurer, was unanimously elected prince of Benevento; but Siconolphus, the last king's brother, having regained his liberty, formed a great party against the new prince. lladelchis opposed him with a formidable army ; and a most ruinous civil war ensued. Both parties by turns called in the Saracens, and these treacherous allies acted sometimes against the one and sometimes against the other ; or turned their arms against both, as seemed most suitable to their own interest. Thus the war continued with the utmost animosity for twelve years, during which

time the principality was almost entirely ruined; till at last the emperor Louis II. interposed, and obliged the competitors to agree to a partition of the principality. By this treaty Kadelchis promised to acknowledge Siconolphus and his successors as lawful princes of Salerno, which was declared to contain Tarento, Latmiano, Cassano, Cossenzo, Laino, Lucania, Consia, Montella, Rota, Salerno, Sarno, Ciraterium, Furculo, Capua, Feano, Sora, and the half of the gastaldate of Aeerenza, where it joins Latuno and Consia. The boundary betwixt Benevento and Capua was fixed at St. Angelo and Cerros ; Alii Peregri.nl was made the boundary betwixt Benevento and Salerno, and Stamlo betwixt Benevento and Consia. The monasteries of Moute

Cailino and St. Vincent were declared to be immediately under the protection of the emperor; both princes stipulated that no hostilities should be committed by either against the subjects of the other, and promised to join their forces to drive out the Saracens. Soon after this pacification, however, both lladelchis and Siconolphus died ; the former appointing his son Radeclare to succeed him, and the latter leaving an infant son, Sico, to the care of his godfather Peter. The war with the Saracens proved very unsuccessful ; neither the united efforts of the princes, nor of the emperor Louis himself, being able to expel the infidels ; and, in 854, Adelgise the second son of Itadelchis, who had now succeeded, on the death of his brother Radelcar, to the principality of Benevento, was obliged to pay them an an-nual subsidy. Two years after, Lando, count of Capua, revolted from the prince of Salerno, and could not be reduced. In the mean time, Sico, the lawful prince of Salerno, had been poisoned by count Lando, and the principality usurped by Ademarius, the son of Peter above mentioned ; but in P61 Ademarius was seized and imprisoned by Gauferms, the son of Dauferius formerly mentioned. This was occasioned by his cruelty and rapaciousness, which entirely alienated the hearts of his subjects from him, and encouraged Gauferius to become the head of the conspirators. The Saracens in the mean time committed terrible ravages throughout the Beneventan territories ; which at last obliged Adelgise to enter into an alliance with Gauferius, and both together sent an embassy to the emperor Louis, requesting him to take them under his protection. About the same time an embassy arrived from Constantinople, proposing ajunction of the forces of the Eastern and Western empires against the infidels ; upon which Louis gave orders for assemblins a formidable army. But in the mean time Adelgise made peace with the Saracens ; and even encouraged them in their incursions into the duchies of Capua and Naples, wlnVi they ravaged in a most barbarous manner. T!>P Neapolitans, in conjunction with the duke i►►: Spoleto and the count of Marsi, opposed them ; but, beirv* defeated, they continued their ravage* with redoubled fury, aiiJ retired to Bari, ttveir capital, with an immense booty. In 866 Loim arrived at Son with his army ; and, having murched to Capua, was there joined by I-andulp'i, the bishop and count, with a body of Capuans; but Landulph soon after persuading his countr,-

men to desert, Louis marcned against that city, which he took after a siege of three months, and almost totally destroyed. In the end of the year he was joined by Gauferius, with his troops, having ordered the eyes of Ademarius to be put out in his absence. Louis confirmed him in the principality, and marched with his army to Benevento, where Adelgise received him with great respect. Having reduced some places belonging to the Saracens, Louis invested Bari ; but as the Saracens received continual supplies from their countrymen in Sicily, and besides were protected by the Neapolitans, he could not re-duce the place till 871, though he had received considerable assistance from his brother Lotharius, and the Greek emperor had sent him a fleet of 200 sail. The expulsion of the Saracens was completed the same year by the taking of Tarento ; after which the emperor returned with great glory to Benevento, resolving next to carry his arms into Sicily, and expel the infidels from thence also. But his schemes of farther conquests were frustrated by a quarrel between him and Adelgise. The latter, pretending to have been insulted by the empress, and oppressed by the French, seized the emperor, and kept him prisoner for forty days. But a body of Saracens having arrived from Africa, and laid siege to Salerno with an army of 30,000 men, ravaging the neighbouring country with the utmost barbarity, Adelgise was so much alarmed that he set the emperor at liberty, after taking his oath that he would not revenge the insult, and that he would never return to Benevento. Louis, having then joined his forces to those of the prince of Salerno, obliged the Saracens to raise the siege of Salerno ; but, though they were prevented from taking that city, they entirely desolated Calabria. In 873 Louis went to Benevento, and was reconciled to Adelgise, but soon after died ; and the Saracens continued their ravages to such a degree that the inhabitants of Bari delivered up their city to the Greeks. At the same time the Salernitans, Neapolitans, Cajetans, and Amalsitans, having made peace with the Saracens, were compelled to aˆree to their proposal of invading the territories of the Roman pontiff. His holiness exerted himself to the utmost, both with spiritual and temporal weapons, to defend his right ; but was at last obliged to become tributary to the infidels. In the mean time all Italy was thrown into the greatest confusion by the death of Charles the Bald, who was poisoned at Pavia, as he was coming to the pope’s assistance. Sergius, duke of Naples, continued a firm friend to the infidels, notwithstanding the thunder of a papal excommunication; but happening to fall into the hands of his brother Athanasius, bishop of Naples, that prelate put out his eyes, and sent

him prisoner to Rome.

In 876 Adelgise was murdered by two of his nephews ; one of whom, by name Caideris, seized the principality. About the same time Landulph, bishop of Capua, dying, a civil war ensued among his children. The princes of Salerno and Benevento, the duke of Spoleto, and Gregory, the Greek governor of Bari and Otranto, took different sides in the quai-rel ; the new bishop was expelled, and his brother,

though a layman, chosen, and even consecrated by the pope, who wrote to Gauferius, forbidding him to attack Capua under pain of excommunication. But though Gaufetius was, in general, obedient to the pope's commands, he proved refractory in this particular, ar ' ^ siege to Ca-pua for two years succesc! j . 1'hus the Capuan territories were reduced to the most miserable situation ; being obliged to maintain at the same time the armies of the prince of Benevento and the duke of Spoleto. The Saracens in the mean time strengthened themselves in Italy ; and Athanasius entered into an alliance with them, and ravaged the territories of the pope, as well as those of Benevento and Spoleto, plundering all the churches, monasteries, towns, and villages, through which they passed. Meantime the prince of Salerno was obliged to grant them a settlement near his capital ; the duke of Gaeta invited them to his assistance, being oppressed by the count of Capua ; and even the pope was obliged to make peace with them, and to grant them a settlement on the north side of Carig-liano, where they fortified themselves, and continued for more than forty years. To put a stop to the confusion in Italy, the pope restored the bishop of Capua, but allow ed his brother to re-side in the city, and govern one half of the diocese ; but, notwithstanding this partition, the civil dissensions continued with the utmost violence, the nearest relations murdering or banishing each orher, according as the fortune of the one or the other prevailed. Athanasius, notwithstanding the pope's remonstrances, continued his alliance with the Saracens ; in conjunction with whom he ravaged the territory of Benevento, and fomented the divisions in Capua, in hopes of being able to conquer it. At last the pope excommunicated him, which attached him to the Saracens more than ever; insomuch that he invited Suchaim, king of the Saracens in Sicily, to come over and command a great body of his countrymen who had settled at the foot of Mount Vesuvius. Suchaim accepted the invitation, but immediately turned his arms against Athanasius; allowing his troops to live at discretion in the territory of Naples, where they ravished the wo-men and plundered the inhabitants. These calamities being, by the superstitious Neapolitans,

imagined to be consequences of the excommunication, they persuaded the prelate to renounce all connexion with the infidels. Athanasius accordingly concluded an alliance with Guimarius prince of Salerno, whereby the Saracens were obliged to quit the Neapolitan territories, and retire to Agropoli. Athanasius then directed his force against Capua, of which he made himself master in 882. The Saracens, however, still continued their incursions, and desolated several provinces. These confusions continued fora long time ; during which the Greeks made themselves masters of Benevento, in ××92, and had well nigh become masters also of Salerno ; but in 896 they were totally expelled by the bishop. In 915 the Saracens received a com plete overthrow at Cariˆliano. But a new body soon arrived from Africa, and invested the sea-coasts. A war also ensued between Landulph and the Greeks; which concluded disadvantage

ously for the former, who was obliged to submit in 943. In 961 Olho the Great, emperor of Germany, invaded Italy with a powerful army against Berengarius III., and, marching to Rome, received the imperial crown from the hands of the .pope. Tn 964 he erected Capua into aprinc:r ‘^^.and received homage from the other princft’ ×× .ˆftmbardy. After various hostilities a treaty was concluded, and the young princess Theophania married to Otho’s son, afterwards emperor. All this time the Saracens continued their incursions, and the Greeks had gained ground so much, that they were now in possession of two-thirds of the kingdom of Na-ples ; but in 1002 or 1003, the Normans be-gan to oe remarkable in Italy. They had, about a century before, embraced Christianity, and become very zealous in all the superstitions then practised. They were particularly zealous in visiting sacred places, especially Rome, and the holy sepulchre at Jerusalem ; and, being of a very martial disposition, they forced through great bodies of Greeks and Saracens who opposed their passage. About this time 100 of these Normans, returning from Jerusalem by sea, landed at Salerno, in the habit of pilgrims, where they were honorably received by Guimarius. During their residence at Salerno, a great body of Saracens landed, and invested the city. Guimarius, not being in a

condition to oppose the invaders by force, was preparing to pay them a large sum of money, when the Normans proposed to attack them ; and, having got arms and horses, they engaged the infidels with such bravery, that they entirely defeated them, and obliged them to fly to their ships. By this victory Guimarius was filled with such admiration of the valor of these strangers, that he entreated them to remain m his country ; offering them lands and the most honorable employments ; but not being able to prevail with them to stay in Italy, or even accept of his presents, at their departure he sent home ambassadors with them to Normandy, in vessels loaded with exquisite fruits, rich furniture for horses, &c., to allure others of the valiant Normans to Italy. This encouraged a Norman chief, named Osmond Drengot, to settle in Italy, about 1015. In the mean time the city of Bari had revolted from the Greeks, and chosen one Mello for their leader, whose wife and children happened soon after to fall into the hands of their enemies, and were sent prisoners to Constantinople. No sooner, therefore, did Mello hear of the arrival of these adventurers, than he engaged them to assist him ; and, having drawn together a considerable army, defeated the Greeks with great slaughter, and obliged them to abandon their camp. In this engagement the Normans distinguished themselves, and the news of their success soon brought from Normandy an innumerable multitude of their countrymen, with their wives and children. By this reinforcement, Mello gained two other victories, took many towns, and obliged the Greeks to abandon a larˆe territory; but, in 1019, they were utterly defeated, and every thing recovered by the Greeks. The Greek general Bajanus, continued to go on with such surprising success, that he almost entirely re-established the affairs VOL. XV.

of his countrymen in Italy, and made a distinct province of the western part of Puglia, which he called Capitanata. His great progress at last alarmed the emperor of Germany; and, in 1027, PanJulphus, prince of Capua, made himself master of Naples ; but was obliged to leave it in 1030, by the Normans, who built the city of Aversa, which was erected into a county. In consequence of this good fortune, great numbers of Norman adventurers migrated into Italy; among whom were William, Drogo, and Umbert, three sons of Tancred, duke of Hauteville; from whose posterity those princes were descended, who conquered the island of Sicily from the Saracens, and thus completed the present kingdom of Naples.

In 1040 the Greek emperor Michael Paleologus,to secure the affection of his fickle subjects, undertook the conquest of Italy from the

Saracens, and for that purpose sent a general named Michael Maniacus into Sicily. This commander, hearing of the great reputation of the Normans, sent to Guimarius, prince of Salerno, intrealing him to grant him some of those warriors. The prince, to encourage the Normans to engage in the expedition, promised them some additional rewards besides the emperor's pay. William, Drogo, and Umbert, accordingly marched from Salerno with 300 of their countrymen ; and, passing over into Sicily, distinguished themselves remarkably in the conquest of that island. Maniacus acknowledged that the recovery of Messina was chiefly owing to their valor ; and William, with his Normans, gained a complete victory over the Saracens before Syracuse, where he killed the governor in single combat. Maniacus made himself master of Syracuse, an 1 almost entirely reduced the whole island ; but, being accused of treason, was next year carrie i prisoner to Constantinople. His successor Doceanus quickly lost the whole island except Messina, and treated his Norman auxiliaries with the utmost contempt. He would not allow them any share of the booty ; and even caused one Ardoin, a noble Lombard, an associate and interpreter of the Normans, to be whipped round the camp, because he had refused to part with the horse of a Saractn whom he had slain in single combat. The consequences of this tyrannical behaviour were fatal to the Greeks. Ardoin soon after obtained leave to return to Italy, under pretence of a vow, and all the Normans embarked at night along with him ; but, instead of going to Rome, Ardoin went immediately to Aversa, where he persuaded count Rainulphus, sovereign of that province, to join with him in attacking the Greek provinces in Italy. Rainulphus approved of the scheme, and raised 300 soldiers, whom he sent under twelve officers, to join the other Normans under the sons of Tancred ; and made an agreement with Ardoin that the conquests should be equally divided among the chief leaders. Their first enterprise was the reduction of Melfis, one of the strongest cities in Puglia, which surrendered ; and they increased its fortifications so much, that it became impregnable. Soon after this tney took Venosa, Ascoli, and Lavello, with little opposition. Doceanus, alarmed at the rapidity of their conquests, im-2C

mediately left Sicily, and marched with his army into Puglia, where he attacked the invaders near the river Oliviento ; but, after a fierce engagement, he was obliged to retire with considerable loss. The Greeks were soon after defeated a second time at Cannae ; and in a third engagement, near Ofanto, the army of Doceanus was entirely routed, and himself obliged to fly to Bari. On this he was ordered to return to his command in Sicily, and another general was sent with an army into Puglia ; but he had no better success, for his army was defeated in an engagement with the Normans, and himself taken prisoner. Atenulphus, brother to one of the princes of Benevento, on whom the Normans had conferred the chief command, set at liberty the captive general without consulting them, on receiving from him a considerable sum of money. With this the Noimans were so much displeased that they deprived Atenulphus of his command, and bestowed it on Argyrus, son to the late Mello, who had escaped from Constantinople, and now assumed the title of duke and prince of Italy. Before this also, Maniacus had returned to Italy; and, to strike terror into the revolted cities, had executed a number of people of all ages and sexes with great inhumanity. Soon after this he openly rebelled against the Greek emperor Constantine XI., and prevailed upon his own army to proclaim him emperor, beginning hostilities immediately against the Greek cities. But Argyrus took Giovenazzo, and besieged Irani, ana soon after besieged Maniacus himself in Tarento, who, being afraid of falling into the hands of the Normans, fled to Otranto, and thence to Bulgaria, where, being defeated by one of the emperor's generals, he was taken prisoner and beheaded. The Normans, having now conquered the greatest part of Puglia, proceeded to make a division of their conquest, in which, after each commander had got his share, the city of Melfis was left common to all, and appropriated as a place for assembling to consult about the most important affairs of the nation. Argyrus alone was neglected in this division ; hut he, having gained the favor of the emperor by expelling Maniacus from Italy, was by him created duke of Bari, on purpose to check the power of the Normans, with the title of prince and duke of Puglia. The Normans, however, were too powerful, and behaved with great insolence to the neighbouring princes ; but as they could not be expelled by force, and were confirmed in their conquests by Henry II., emperor of Germany in 1047, the Greek emperor attempted to get rid of them, by sending Argyrus with large sums of money to bribe them to enter into his service against the Persians. But they replied, that they were resolved

not to leave Italy unless they were expelled; upon which Argyrus bribed the Puglians to assassinate these invaders. This brought on a massacre, in which greater numbers of Normans perished than had fallen in all the late wars. Argyrus attempted to take advantage of the confusion produced by it, but was defeated ; after which he had recourse to pope Leo, beseeching him to deliver Italy from these cruel tyrants ; but the pope himself was defeated and taken prisoner ; and, in consequence of the respec. showed him by the Normans, granted them all the conquests they had made or should make in Calabria and Sicily.

Soon after this the Norman power became extremely formidable ; the famous Robert Guis card ascended the throne in 1056. He made great progress in the conquest of Calabria, and reduced most of the cities which held for the Greeks in these parts. About the same time the counts of Capua were expelled from their territory ; and the abbot Desiderius mentions his having seen the children of Landulphus V., the last count, begging. The pope, alarmed by these conquests, excommunicated the Normans in a body, pretending that they had seized some of the territories belonging to the church ; but, by the submission of Robert, he not only was persuaded to take off the sentence of excommunication, but to invest him with the provinces of Apulia, Calabria, and Sicily. After this he continued the war against the Greeks with great success. In 1071, in conjunction with his brother Roger, he conquered Sicily, and gave the investiture of the island to him, with the title of count, reserving to himself only the half of Palermo, Messina, and the valley of Demona. The like success attended his arms against Salerno in 1074 ; and in 1080 he received a second time the investiture of all his dominions. In 1081 he undertook an expedition against the Greeks ; and, though the emperor was assisted by a Venetian fleet, Robert made himself master of Corfu, reduced Durazzo, and great part of Romania ; insomuch that by the success of his arms, and his near approach to Constantinople, he struck a universal terror among the Greeks. But, while Robert was thus extending his conquests, he was alarmed by the news of a formidable rebellion in Italy, and that the emperor Henry had taken Rome, and shut up the pope in the castle of St. Angelo. Robert therefore, leaving the command of the army to his son Boemund, returned to Italy, where he dispersed the rebels, and released the pope, while his son gained a considerable victory over the Greeks. After this Robert made great preparations for another expedition into Greece, to second his son Boemund. Alexius Comnenus, who was declared emperor by the Greek army, being assisted by the Venetian fleet, endeavoured to oppose his passage, but was defeated, with the

loss of many galleys. But a final stop was now put to his enterprises by his death, which happened in 1085. Though the power of the Normans was thus thoroughly established in Italy and Sicily, and though the prince of Benevento was in 1130 invested by the pope with the title of king of Sicily; yet, in consequence of the dissensions among themselves, they were obliged to submit to the emperor in 1195. By him the Sicilians were treated with so great cruelty, that the empress Constantia was induced to conspire against him in 1197, took him prisoner, and released him only on condition of his sending off his army immediately for the Holy Land. This was complied with; but the emperor did not long survive the reconciliation, being poisoned, as was supposed, by order of the empress. In 1254 the pope claimed the kingdom as a fief

Devolved on the church, in consequence of a sentence of deposition pronounced against king 1'rederic at the council of Lyons; and in 1263 the kingdom was, in consequence of this right, conferred on Charles count of Anjou. After much contention and bloodshed, the French thus became masters of Sicily and Naples. Their government was insupportably tyrannical; and at the same time the haughtiness of their king so provoked the pope, that he resolved to hum-ble him. Charles had resolved on an expedition against Constantinople, and for this purpose had fitted out a fleet of 100 galleys, thirty large ships, 200 transports, besides many other smaller vessels, on board of which he intended to embark 10,000 horse, and a numerous army of foot. This formidable armament greatly alarmed the emperor Michael Paleologus, for which reason he entered into a negociation with John Di Procida, a noble Salernitan, lord of the isle of Procida, in the bay of Naples, who had formed a scheme for a general revolt in the island of Sicily. John, though a nobleman, was also a physician, and had been counsellor to two former princes, and even to king Charles himself; but being stripped of his estate by the king under pretence of treason, and his wife be-ing debauched by the French, he retired to Constantia, queen of Arragon, where he was created a baron of the kingdom of Valencia by her husband king Peter, and lord of Luxen, Benizzano,

and Palma. As he was greatly exasperated against the French, he employed many spies both in Puglia and Sicily ; and, being informed that the Sicilians were totally disaffected to the French, he came to the island in disguise, and concerted a plan with the most powerful of the malcontents for a revolution in favor of Constantia, though she derived her right only as being the daughter of a former usurper named Manfred. Procida then set out for Constantinople, where, in some private conferences with the emperor, he persuaded him, that the most probable means of defeating Charles's scheme was by assisting the Spaniards and Sicilian malcontents. Paleologus accordingly granted him a large sum of money, and on his departure sent one of his secretaries along with him, who, landing in Sicily, had a conference with the chief conspirators. John, having received letters from them, disguised himself in the habit of a Franciscan, and went to Suriano near Rome. As he knew the enmity which subsisted between the pope and king Charles, he disclosed his de-sign to his holiness, who readily entered into his measures, wrote to Peter to hasten his armament, promising him the investiture of the island as soon as he had taken possession of it; and, by refusing the assistance he had promised to Charles, obliged him to delay his expedition. In the beginning of 1280 Procida returned to Arragon, and, by showing the letters from the pope and Sicilian barons, prevailed on Peter to embark in his design, by assuring him of the assistance of Paleologus. The king of Arragon accordingly prepared a formidable fleet under pretence of invading Africa, and received 20,000 ducats from Charles, to assist him in his preparations. But, while John went on thus successfully with his scheme, all his measures wer►► in danger of being broke by the death of pope Nicholas. Thenew pope, Martin IV., was entirely in the interest of Charles, on whom, in 1281, he conferred the senatorial dignity of Home. Procida, however, still resolved to prosecute his scheme ; and, leaving Italy, had another conference with the conspirators in Sicily ; after which he again went to Constantinople, and obtained from Paleologus 30,000 ounces of gold, with which he returned to Arragon. The death of Nicholas had damped the ardor of Peter ; but, being urged by John, he again renewed his preparations; which alarmed the pope and the king of France : who advised Charles to guard against an invasion : but he neglected their ad-vice, being wholly intent on his eastern expedition, and encouraged by a revolt which had happened in Greece. To facilitate his expedition, he prevailed on the pope to excommunicate the Greeks, on pretence that they had broken some of the articles of union concluded at the council of Lyons a few years before. Peter in the mean time continued his preparations with great diligence, intending to put to sea the following sum-mer. Procida had returned

to Palermo, to wait for a favorable opportunity of putting his design in execution, which was soon afforded him by the French. On Easter Monday, March 30th, 1282, the chief conspirators had assembled at Palermo; and, after dinner, both the Palermitans and French went in a grand procession to the church of Monreal, about three miles without the city. While they were sporting in the fields, a bride happened to pass by with her train, who being observed by one Drochet, a Frenchman, he ran to her, and began to use her rudely, under pretence of searching for arms. A young Sicilian, exasperated at this affront, stabbed him with his own sword ; and, a tumult ensuing, 200 French were immediately murdered. The enraged populace then ran to the city, crying out, ‘ Let the French die;’ and, without distinction of age or sex, slaughtered all of that nation they could find, even such as had fled to the churches. The conspirators then left Palermo, and excited the inhabitants to murder the French all over the island, excepting in Messina, which city at first refused to be concerned in the revolt. But, being invited by the Palermitans to throw off the French yoke, a few weeks after, the citizens in a tumultuous manner destroyed some of the French : and pulling down the arms of king Charles, and erecting those of the city, chose one Baldwin for their governor, who saved the remaining French from the fury of the populace, and allowed them to transport themselves, with their wives and children, to Italy. The number murdered on this occasion is said to have been

8000.

Immediately after this massacre, the Sicilians offered their allegiance to Peter, king of Arratron ; who accepted of the invitation, and landed with his forces at Trapani. Thence he went to Palermo, where he was crowned king of Sicily with great solemnity, and Charles left the island with precipitation. The day after he landed his army in Italy, the Arra□□onian fleet arrived, took twenty-nine of his galleys, and the next da/

burnt eighty transports in presence of his army. Soon after this Charles sent an embassy to Peter, accusing him of perfidy, in invading his dominions in time of peace; and, according to some, challenged him at the same time to decide the matter by single combat : but Peter determined to employ more effectual means in support of his pretensions ; and therefore pushed on his operations most vigorously, while his adversary trifled away his time : and thus he at last became master of the kingdom ; which, however, he did not long enjoy, dying about the end of

1285. By his will, Peter left Arragon to his eldest son Alphonsus, and Sicily to James his other son, who was also to succeed to the kingdom of Arragon in case Alphonsus should die without male issue. Accordingly, James was solemnly crowned at Palermo, the 2d of February,

1286. In 1295, however, he deserted them, and tamely resigned up his right to Charles, son to him above mentioned. On his resignation the Sicilians conferred the crown upon his brother Frederick : after which the war continued with great violence till 1303, when a peace was concluded, and the kingdoms of Naples and Sicily formally disjoined ; Frederick being allowed to keep the latter, under the name of Trinacria ; and Charles being confirmed in the possession of the former, which he quietly enjoyed till his death in 1309. Naples continued to be governed by its own kings till the beginning of the sixteenth century, when the kings of France and Spain contended for the sovereignty of it. Frederick, then king of Naples, resigned the sovereignty to Louis XII., on being created duke of Anjou, and receiving an annual pension of 30,000 ducats. But, in 1504, the French were defeated by the Spaniards, and obliged to evacuate the kingdom ; and Louis, in 1505, renounced all pretensions to the crown, which has since remained almost constantly in the hands of the Spaniards. The government of the Spaniards proved no less oppressive to the Neapolitans than that of others had been. The kings of Spain set no bounds to their exactions, and of consequence the people were loaded with numerous and heavy taxes ; the most indispensable necessaries of life not being exempted. In 1647 a new tax was laid on fruit; which the people looked upon as the most grievous oppression, the chief part of their subsistence, during the summer months, being fruit; which in Naples is very plentiful and delicious. The edict for collecting the new duty was no sooner published, than the people began to mur-mur in a tumultuous manner: and, when the viceroy came abroad, they surrounded his coach, bawling out to have their

grievances redressed. They were encouraged in their sedition by the news that the citizens of Palermo had revolted on account of the imposition of new duties. The viceroy, therefore, apprehensive of greater disorders, began to think of taking off the tax ; but, those who farmed the tax having bribed some of his favorites, he was persuaded not to abolish it. The indignation of the people was now greatly increased. The farmers of the revenue, and all those concerned in raising the taxes, had incurred the hatred and detestation of the people, particularly of Thomas Aniello, commonly called Massaniello, a native of Ainalsi, a fisherman, whose wife, having been discovered in smuggling a small quantity of meal, was imprisoned, and condemned to pay a fine of 100 ducats. Massaniello, a few years before, had come to Naples from Amalsi, where his father had been a fisherman. At this time he was about twenty-four years of age, and the father of four children. He was of a middling stature, and an agreeable aspect; was distinguished for his boldness, activity, and integrity; and had great influence with his companions, by whom he was beloved and esteemed. As he was obliged even to sell his furniture to pay the heavy fine, he had conceived an implacable hatred against the farmers of the taxes, and was also moved with compassion for the miserable state of the city and kingdom. He, therefore, formed a design, with some of his companions to raise a tumult in the market-place on the festival day of the Carmelites, usually celebratec about the middle of July, when between 50(and 600 youths entertain the people by a mock fight ; one half-of them, in the character of Turks, defending a wooden castle, which is attacked and stormed by the other half in the character of Christians. Massaniello being appointed captain of one of these parties, and one Pione, who was privy to his design, commanding the other, for several weeks before the festival they were very diligent in reviewing and training their followers, who were armed with sticks and reeds : but an unforeseen accident tempted them to begin their enterprise without waiting for the festival. On the 7th of July a dispute happening in the market place betwixt the tax-gatherers and some gardeners of Pozzuolo, who had brought some figs into the city, whether the buyer or seller should pay the duty ; after the tumult had continued several hours, Massaniello, who was present with his company, excited the mob to pillage the office built in the market frr receiving the duty, and to drive away the officers with stones. The elect of the people, who, by deciding against the gardeners, had increased the tumult, ran to the palace and informed the viceroy, who imprudently neglected all means of putting a stop to the commotion. Massaniello, in the mean time, being joined by great numbers of people, ordered his young troops to set fire to all the offices for the taxes through the city ; which command being executed

with despatch, he then conducted them directly to the palace, where the viceroy, instead of ordering his Spanish and Ger-man guards to disperse them, encouraged their insolence by timidly granting their demands. As they rushed into the palace in ? furious man-ner, he escaped by a private door, and endeavoured to save himself in Castel del Ovo ; but, being overtaken by the rioters in the streets, he was trampled upon by them, and pulled by the hair and whiskers. However, by throwing some handfuls of gold among them, he again escaped, and took sanctuary in a convent of Minims, where, being joined by the archtusliop of Naples, cardinal Filomarini, and several nobles, by thei. advice he signed a billet, by which he abolished all taxes upon provisions. He likewise desired the cardinal to offer Massaniello a pension of

2400 crowns, who generously rejected the bribe ; and declared, that, if the viceroy would keep his word, he would find them obedient subjects. It was now expected that the tumult would cease ; but Massaniello, upon his return to the market-place, being joined by several malcontents, among whom were Genuine and one Peronne, who had formerly been a captain of the Sbirri, he was advised by them to order the houses of those concerned in raising the tax to be burned : which were accordingly in a few days reduced to ashes, with all their rich furniture. Massaniello being now master of the city, and being joined by great numbers of peo-ple of desperate fortunes, he required the viceroy, who had retired to the Castel Nuovo, to abolish all the taxes, and to deliver up the writ of exemption granted by Charles V. This new demand greatly embarrassed the viceroy ; but, to appease the people, he drew \ip a false deed in letters of gold, and sent it to them by their favorite, the duke of Matalone, who had before been in confinement. The fraud, however, being discovered, the dnke was pulled from his horse and maltreated by the mob, and at length committed prisoner to Peronne. This accident, to the great joy of the viceroy, enraged the people against the nobility, several of whom they killed, burnt the houses of others, and threatened to extirpate them all. Massaniello, in the mean time, tattered and half

naked, commanded his followers, who were now well armed, and reckoned about 100,000 men, with a most absolute sway. He ate and slept little, gave his orders with great precision and judgment, appeared full of moderation, without ambition or interested views. But the duke of Mataloue having procured his liberty by bribing Peronne, the viceroy imitated his example, and secretly corrupted Genuino to betray his chief. A conspiracy was accordingly formed against Massaniello by Matalone and Peronne ; the duke, who was equally exasperated against the viceroy, proposing, that after his death his brother Joseph should head the rebels. Massaniello, in the mean time, by means of the cardinal archbishop, was negociating a general peace and accommodation ; but, while both parties were assembling in the convent of the Carmelites, the banditti hired by Matalone made an unsuccessful attempt upon Massaniello's life. His followers immediately killed 150 of them. Peronne and Joseph, being discovered to be concerned in the conspiracy, were likewise put to death, and the duke with great difficulty escaped. Massaniello by this conspiracy was rendered more suspicious and severe. He began to abuse his power by putting several persons to death upon slight pretences ; and, to force the viceroy to an accommodation, he cut off all communication with the castles, which were not supplied with provision and ammunition. The viceroy, likewise, being afraid lest the' French should take advantage of the commotion, earnestly desired to agree to a treaty; which was accordingly concluded on the 5th day of the insurrection, by the mediation of the archbishop. By the treaty it was stipulated, that all duties imposed since the time of Charles V. should be abolished ; that the writ of exempt►►on granted by that emperor should be delivered to the people ; that for the future no new taxes should be imposed ; that the rote of the elect of the people should be equal to the rote* of the nobility; that an act of oblivion should be granted for all that was past ; and that the people should continue in arms under Massaniello till the ratification of the treaty by the king. By this treaty, no fewer than 10,000 persons, who fattened upon the blood of the public, were ruined. The people, when it was solemnly published, manifested an extreme joy, believing they had now recovered all their ancient rights and privileges/ Massaniello, at the desire of the viceroy, went to the palace to visit him, accompanied by the archbishop, who was obliged to threaten him with excommunication, before he would consent to lay aside his rags and assume a magnificent dress. He was received by the duke with the greatest demonstrations of respect, while the duchess entertained his wife, and presented her with a robe of cloth of silver, and some jewels. The viceroy, to preserve some shadow of authority, appointed him captain-general; and at his departure made him a present of a

golden chain of great value, which with great difficulty he was prevailed upon to accept; but yielded at length to the intreaties of the cardinal. Next day, in consequence of the commission granted him by the viceroy, he began to exercise all the functions of sovereign authority : and having caused a scaffold to be erected in one of the streets, and several gibbets, he judged all crimes, whether civil or military, in the last resort ; and ordered the guilty to be immediately put to death, which was the punishment he assigned to all offences. Though he neglected all forms of law, and even frequently judged by physiognomy, yet he is said not to have overlooked any criminal, or punished any innocent person. His grandeur and prosperity was of very short continuance; for, his mind becoming distracted and delirious for two or three days, he committed many extravagant actions; and, on the 18th of July, he was assassinated with the consent of the viceroy.

The tumult did not end with the death of Massaniello ; on the contrary, the people now expelled the Spaniards from most of the cities throughout the kingdom ; and, this general insurrection being the subject of discourse at Rome, the duke of Guise, who happened then to be at the pope's court, took the opportunity, at the instigation of his holiness, to offer his service to the Neapolitans against the Spaniards. The duke was prompted by his ambition to engage in this enterprise, especially as he himself had some distant pretensions to the crown. The Spaniards in the mean time made a vigorous at-tack on the city ;' but were repulsed by the people, who now formally renounced their allegiance to them. In a short time however, thei r city being surprised by the new viceroy, the count of Oniate, and the duke of Guise himseli taken prisoner, the people returned to their allegiance ; and thus all the attempts of the French on Naples were frustrated. Since that time the Spaniards continued in peaceable possession ot the kingdom till 1707, when it was taken from

tnem by prince Eugene. It was formally ceded to the emperor by the treaty of Rastadt in 17'l3; but was recovered by the Spaniards in 1734,

and in July 173.5 Charles, the king of Spain's eldest son by his second queen, was made king of Na-ples and Sicily. See SJCILY, and SPAIN.

Charles III., by the death of his brother Ferdinand VI., on the 10th August 1759, became king of Spain ; and was succeeded in the throne of Naples by his third son, Ferdinand IV., the present sovereign. But, in January 1799, he and the royal family were obliged to fly from Naples, and take refuge in Sicily, upon the approach of the French republicans ; who, under generals Macdonald and Championet, took the city of Naples on the 24th January, overrun- ning the whole country, and proclaimed the kingdom a republic. In February it was divided into eleven departments, and the government new-modelled on the French plan ; but within a few weeks, admiral Nelson appearing upon the coast, the French capitulated, the democratic system was overturned, the old monarchy and government restored, and the king welcomed back to his throne. But the most dreadful cruelties were committed, particularly in Calabria, upon those unfortunate persons who had favored the French during the shortlived revolution.

The kingdom of Naples, was again, however, placed under French dominion by Buonaparte, and conferred on his brother Joseph as king : the legitimate king having again fled to Sicily, where he was long supported by a British force under Sir John Stewart. In the spring of 1808 Buonaparte removed his brother Joseph to Spain, and raised Joachim (Murat) Napoleon to the tributary and usurped throne of Naples, where he remained without having been able to annex Sicily to his usurpation, until, by a well-conducted conspiracy, he was in his turn hurled from the throne in 1815. Early in May of that year the capital was surrendered to a British squadron ; and, on the 17th of June, Ferdinand IV. re-entered it amid loud and apparently hearty acclamations.

It is but fair to add that the reign of Murat in Naples effected considerable changes for the better. All branches of the public administration were invigorated and improved ; society in the upper ranks was reconstructed upon the Parisian scale ; French literature was imported ; the French code superseded the cumbrous and vicious jurisprudence of ancient Naples ; and the nation, notwithstanding its subordination to the Imperial politics, and its participation in Napoleon's wars, was fast emerging from barbarism, and rising to take its place amidst European nations, when the fall of Napoleon again threw it back upon the institutes of the Anjous and the Arragons. The roads and public buildings retain indelible marks of the improvementˆ of ' the usurpation.'

The last revolutionary movements (of 1820) deserve some notice. It was in the month of July that this revolt, headed by general Pepe, droke out amongst the troops. The cry was for ;i constitution : and, many of them happening to recollect that Murat had promised them a constitution just before his departure, Murat's pro-

mised constitution was immediately proclaimed. Unfortunately this constitution was not to be found in any desk, or hole, or corner. In this exigency another cry was set up for another constitution. To appease these tumultuary demands for constitutions the king promised another in eight days ; not a very unreasonable delay for so momentous a measure, but much too long for Neapolitan impatience. In the mean while some persons seem suddenly to have recollected that the Spaniards had given themselves a constitution, and a cry was immediately raised for the constitution of the Cortes. Of this constitution there was not, it seems, a copy in Naples. No-body knew exactly what it was. Yet to this they conceived so miraculous an attachment, that during the sitting of their parliament, which was expressly summoned to modify and correct it, a large majority of members were indisposed to allow any alteration of it, and came to a decision that no amendment should be adopted but by a majority of two-thirds.

About this time was exhibited in Sicily an episode to the Neapolitan revolution. On the 15th of July, and the two following days, Paler mo was the theatre of a violent and sanguinar) insurrection. No sooner had the Palermitans heard what had been transacted at Naples, and that a parliament had been convoked there, than they determined to have a parliament and constitution of their own. Of their taste for liberty, as well as of their fitness for it, they gave an immediate specimen, by letting loose from prison nearly 1000 atrocious malefactors. They assailed the houses of the Neapolitan officers, ant! threw the Neapolitan soldiers into dungeons. It was necessary, therefore, to send a large force from Naples to put down the rebellion; but, when that force approached Palermo, a scene of slaughter and cruelty ensued in that unhappy city which cannot be adequately described. A militia, chiefly composed of criminals liberated from jail, were not to be expected to be very moderate in shedding blood, or plundering property. All who refused to join them were shamefully murdered, then cut into pieces, and their quivering limbs exposed on pikes and bayonets. In the mean while those who led the Neapolitan troops permitted Palermo to surrender on terms of capitulation.

While these things were going on in Sicily, at Naples they continued to amuse themselves with constitutions. They changed the nomenclature of the provinces, and, after the manner of the French school, adopted the names and divisions of antiquity. The Terra di Lavoro was named Campania; the three Abruzzi changed into Pletuteria, Marsia, and Frentania; the island and province of Tremiti into Daunia; Otranto into Salentum ; Calabria into Lucania, &c., &c. They adopted also the trial by jury. Of this institution far be it from us to deem irreverently ; but wise institutions are not capable of bemˆ transplanted at will : and every civil blessing will not flourish in every soil. The almost entire inaptitude of the trial by jury to any other community than that in which it is indigenous, may be a discouraging, but it is almost an undeiiia hie truth.

NAPLES.

In the mean time the allied powers took into their deliberation (we shall presently say a few words concerning their competence to entertain the question) the changes which popular force had thus worked iu the political system of the country ; and the king of the two Sicilies was, as is well known, invited to their congress. The residue of the revolutionary story is soon told. The Austrians crossed the Po on the 28th of January, and marched to Naples. The principal opposition to this march seems to have consisted in an empty vote of the representatives, never to make peace with an enemy whilst he occupied their territory. On the 28th Rieti was in the possession of the Austrians, and the Neapolitan army fell back upon Aquila. The Austrians appeared in sight; general Pepe was almost instantly deserted by his troops, and obliged to escape as well as he could. This dispersion was followed by that of the troops at Mignana, who fired on their officers, and then disbanded. The Austrians entered Naples on the morning of the 29th ; and thus endea the revolution of Naples.

Our remarks upon this much agitated subject shall be short. Perhaps the soundest reasoning is that which keeps at an equal distance from the extreme proposition on either side, neither denying altogether the right of external interference in any instance of popular revolution,

nor maintaining the right of interfering in all. In political cases there is an enldess gradation of shades and colors. In that before us it is a question of fact. If, as the emperor of Austria asserted in his manifesto, the Neapolitan revolution was brought about by obscure fanatics and rebel soldiers, and unnaturally forced upon the people, instead of being the object of their legitimate choice ; and if, as it further asserts, that revolution threatened by its contact the peace and independence of neighbouring states ; then the law of vicinage was in full vigor, and it be-came not only an undeniable right, but a sacred duty, to take measures for repressing the mischief. As an Italian prince by birth, as well as by inheritance, whose dominions had been nearly dismembered by similar commotions acting in the north of Italy in avowed sympathy with that of Naples, and generated by the sect of Carbonari, the prolific parent of modern revolutions, the emperor of Austria could not have hesitated as to the course which prudence, and policy, and justice, alike suggested.

As to the Carbonari, of whom so much is said, and so little known, it would be visionary perhaps to magnify their projects into that grand simultaneous insurrection, of which their appearance in the south of Italy was to be the sig-nal ; though this has been maintained by many sagacious and well informed writers. We ourselves are of opinion that these apprehensions were not wholly destitute of foundation ; and we are not sufficiently sceptical of the size and extent of the mischief to consider them merely as

Fears of the brave, and follies of the wise.

M. de Beauchamp, author of a History of the Revolution of Piedmont, considers the Carbonari as a branch of a ‘ gigantic anti-social ton-suiracy, of which P.iris was the centre the

dregs and faces of the French Revolution still lurking, both in France and Italy.’ He arraigns, we think unanswerably, the policy of the French government immediately after the restoration, which nursed, as it were, the dying embers of revolution, by heaping favors and condescen-sions on the remnant of the revolutionary faction. Thus cherished and protected, he adds, the grand democratic or Buonapartist sect extended their ramifications, under different names, to the Alps, the Pyrenees, and the Rhine, where the people, averse from a foreign yoke, and nurturing a secret but undefined hope of independence, lent a too willing ear to their delu-sions. Nor is there an absolute absence of evidence to show that the elements of this great

combustion had been actually prepared at Pans, long before it burst forth with so feeble a flam* in the southern extremities of Europe. But, though there may not be testimony sufficiently decisive to silence all doubt concerning the alleged extent of the conspiracy, it is certain that through the Neapolitan provinces, at the period of the late revolution, the Carbonari, a sect framed in imitation of the free-masons, and avowedly pursuing some plan of political innovation, comprised a considerable portion of the population. They do not, indeed, appear connected with the French party, of which M. de Beauchamp supposes them to have been a branch ; for it is well known that they were equally hostile to the French governments of Joseph Buonaparte, and of Murat. Their existence, however, has for several years been a matter perfectly notorious; and, although they affected great secresy, their proceedings were far from being concealed. But no sooner did the commotion of 1820 burst forth than they threw off the mask, and, intoxicated with the success of their projects, published their transactions, and even posted up their proclamations.

There is much real, and much affected, obscurity as to this sect, and their origin and purposes are in a great measure inexplicable. Yet it is abundantly manifest that these societies, whose principle is change, and whose compact is secrecy, are phenomena which baffle all reasonings derived from former experience, and essentially differ from every confederation which has heretofore exercised the vigilance, or excited the alarm, of governments. According to some writers, if they are not positively a numerical majority of the Neapolitan nation, they include amongst them that portion of if which has the most decisive influence in political action. In the two extremes of society, thehighc: nobility and the lowest of the populace, there are no Carbonari. It is in the middling classes that their strength resides. Amongst these are the possideuti, or small landed proprietors ; who, in an agricultural country like Naples, must have considerable weight in all projects to which they contribute their influence. But, in addition to these, the rapid changes of property, and transitions of government, during the last twen-tv-five years, had created a comparatively new class ; ‘ the middle men,’ as they are designated in Ireland,❓❓❓ men who, having been agents of the ejeat landed estates, have, by their own in-392

dustry, and knowledge of rural economy, so profited by the vicissitudes of the times, or the improvidence of their employers, as to have seated themselves in the actual possession of the domains which they once superintended. They bear the general designation of galantuomini, or gentlemen. It is from this class that official situations in the provinces are generally supplied ; and these persons, almost to a man, were enlisted amongst the Carbonari. What efficient precaution, then, could the Neapolitan government have taken against a sect which contained a large portion of public functionaries? whole districts and provinces being, in fact, completely in the hands of persons, discharging indeed their duties with exactness, but carrying on, at the same time, their occult and mysterious projects. A majority of Carbonari in the Decurionato, or public assembly of the village, would ensure the election of syndics, of the gabielleri, or ex-cisemen, and a variety of subordinate officers.

But in no class of the community had its principles taken deeper root than amongst the numerous bodies of provincial militia who are called legionari, civici, and militi : a class of men who had by no means an inconsiderable share in producing the revolution. As every individual of these troops must be assessed at least ten ducats to the land-tax, it is pla.n that, exclusively of the power of armed men, they must have great influence as proprietors of the soil. In Capitanata, one of the most extensive and populous of the Neapolitan provinces, 40,000 of these persons, each with forty cartridges in his pouch, and four ducats in his pocket, were for several months in complete readiness for action. It cannot, therefore, excite much surprise that the late revolution broke out. How its duration should have been so short, and that a more heroic and persevering resistance should not have been made to the Austrians, it is somewhat more difficult to explain.

We turn, with much greater satisfaction to the literary history of Naples. Here she is singularly and most creditably distinguished. Her claims were ably exhibited in the late British Review, to which we are indebted for the following sketch. The south of Italy is rich in historical learning. Its archives have, indeed, suffered considerably from invasions, and particularly from those of the Vandals ; but the greater portion, by a rare felicity, has escaped the ravages of time and barbarism. The monasteries of La Trinita della Cava and Monte Cassino contain inestimable treasures of original documents pertaining to the history of the kingdom. Foreigners, and more particularly the inhabitants of northern Italy, are apt to smile with incredulity when they are told of the number of Neapolitan historians. Giannone’s name is well known ; but the sources from which he derived his materials are little known out of the kingdom. The names of Summonte,

Costanzo, Pontano, Collenucio, Carracioli, and Capecelatro, are only a few of them. Besides these, various writers have compiled chronicles, from the provincial archives, which would form a rich collection, independently of tlip MS. registers of private families. The Libro del Uuca di Montelore is of the highest authority. It is a series of historical facts, from the time of Joan II., and exhibits most curious pictures of the manners and transactions of the two following reigns. Moreover, every province, and even the smallest provincial town, boasts of its history.

Of the remote antiquity of this country there are, of course, but scanty documents. The authors who flourished before the schools of Magna Graecia, and who could alone have guided us through the labyrinth, have not left so much as a name behind them. The Greek historians are too intent upon magnifying the importance of their own country, to deserve implicit faith when they treat of the people who were colonised and civilised by Greece. The loss of the early Ro-man historians is irreparable. Cato the censor had devoted one entire book of history to enquiries concerning the origin and peopling of the old towns of Italy. Corn. Nep. in vit. M. P. Cato. Diodorus the Sicilian, Dionysius, and Dio, who explored all the antiquities of Italy, have come down to us in a state deplorably imperfect ; and neither Plutarch, Sallust, nor Livy, has supplied the loss. But it is certain that the Greek republics of Italy rose rapidly to prosperity and power. The Brutians, in the fifth century of Rome, made the Greeks tremble for their own safety. Luxury and corruption, however, kept an equal pace with their prosperity. Cuma, Crotona, Tarentum, Rhegium, fell quickly un-der the Roman domination. In the time of Polybius, the very name of Magna Grsecia was disused.

Great names adorned those republics. Zaleu-cus (whose existence is questioned by Bentley), and Charondas, were the legislators of Locris and of Thurium ; but the name of Pythagoras is still greater : he was born at Samos ; and. having accidentally heard the philosopher Pherecydes discourse upon the immortality of the soul, he abjured the low occupation to which he had been educated, and became himself a philosopher. Having enlarged his mind by travel, and enriched it with all the learning of his time, he settled at Crotona, and established his celebrated sect, which he governed by a peculiar code of ethics. Exemplary abstemiousness, scrupulous ablutions, and daily exercise, were among its primary duties. At the close of every day, each disciple instituted a rigorous self-examination into the mode in which he had employed it. The silence enjoined upon this little community was probably an imitation of the reserve and mystery in which the priests of Egypt, in whose doctrines Pythagoras is supposed to have been

initiated, locked up theirknowledge. Whether the metempsychosis of this philosopher was borrowed from India, or was symbolical merely of the chanues and reproductions which prevail through animal and vegetable life ; whether it was a part of his religion to worship fire, as the purest emanation from the Supreme Being ; or this also was a mere external symbol of some occult doctrine ; are matters which must still remain in darkness. But the philosophy of Pythagoras was an era in the civilisation of man. The school which survived him continued the parent and nurse of that long successsion of philosophers who Hot!*

nshed in the south of Italy during the two following ages.

The eleatic sect arose soon after in this part of Italy. From this school emanated that false lo-gic which, under the name of dialectics, confounded right and wrong, ††† the weapon which was afterwards so dexterously wielded by the so-phisU who overran Athens and the other cities of Greece. From a passage in one of the epistles of Seneca, it should seem that Zeno, who was the leader of this sect, had adopted the hypothesis respecting the nonexistence of matter which is so fully developed by Berkeley. Zeno died the death of a patriot ; having made an ineffectual effort to recover the liberties of the little republic (Elia or Velia), which were destroyed by the tyrant Nearchus : Leucippus was the successor of Zeno. He invented the celebrated system of atoms, which Democritus and Epicurus adopted after him. Is it not to this philosopher, also, that Descartes is indebted for his vortices, and the great mechanical axiom of the centrifugal qualities of rotatory bodies?

Of this period the poetry has perished ; but the ancient historians have preserved a few fragments of it. Plato cites some of the verses of Parmenides ; and Athenaeus has preserved an entire poem (the Meleager) of Cleomenes of Rhegium. Tarentum produced three poets ††† Apollodorus, Leonidas, and Alexis, of whom Brunck, in his Analecta, has inserted some interesting remains. Alexis of Thurium was a celebrated writer of what is called the middle comedy.

According to Suidas, he was the uncle of Menander, and wrote upwards of 200 dramas. Athenaeus, Julius Pollux, and Aulus Gellius, have cited them occasionally; and several detached sentences of them are to be found in the valuable collection of Grotius.

In short, the south of Italy, in this remote pe-riod, might boast of a constellation of genius in philosophy and poetry. The cities of Magna Graecia had, for the most part, adopted a species of government which, though aristocratic, preserved enough of the popular form to nurture and encourage the competition of talent. But the glory of these little communities was destined to be extinguished in the overwhelming domination of Rome. They lost indeed their liberties ; but the Romans preserved to them their municipal forms and native institutions. The twelve divisions into which Italy was distributed by Augustus were afterwards changed by Adrian, by ###whom the whole peninsula was again partitioned into seventeen provinces. Of these, Campania, Samnium, Apulia, ana Lucania, comprise the territory which now constitutes the Neapolitan kingdom1; an arrangement fatal to the privileges of the free cities. Campania was governed by consuls, Apulia and Lucania by censors, and Samnium by prefects.

These provinces gave birth to Livius Andr nicus, Pacuvius, Nacvius, Ennius, and Lucilius ; but Rome was the theatre of their fame. The former of these may be considered the founder of the Roman stage. He supplanted the barbarous satires which were called Atellan, or Oscan, by something that approached the regular drama. Tvaevius, a name of Campania,

seems to have advanced the dramatic art still further. Cicero speaks in commendation of the purity of his s yle, and Vinol honored him by borrowing more than one of his verses. Macro-bins points at the beautiful passage in the first book of the .F.neid, where Venus complains to Jupiter of the storm that dispersed her beloved Trojans, as entirely taken from Naevius :###

O qui res hominumque de&mque *Kternis regis imperils, et fulmine teires Quid incus* Eneas, Cvc.

If, indeed, Virgil borrowed this noble passage from Naevius, and made use also of entire lines from Ennius, as is also asserted by Macrobius, it is to be lamented that the verges, which that exquisite poet thus polished into brightness, are lost to us. We can discern neither the

value of the obligation, nor the amount of the usury with which it was repaid. We have unfortunately too little of Ennius. But what remains of the Amphora makes us sigh, will) the old woma.i in Phaedrus, for what it once contained. It is worthy of remark, however, that the old bard has left us his own portrait, drawn by his own hand, in a fragment preserved by Aulus Gellius. Noct. Attic. 1. 12, c. 4, Edit. Vari, 1675. If poets can praise themselves honestly, the passage evinces a rough undissembling spirit, congenial to that antique freedom of manners which permitted men to speak of themselves, as of others, without restraint.

Ingenio quoi nolla malum sententia suadet, Ut faceret facinus, levis baud malus, doctu', fidelis Suavis homo, facundu', suo contentu', beatus, Sceitu', secuuda loquens in tempore, commodu',

verbura Paucum, molta tenecs antiqua, sepolta, vetosta, &C.

And here it ought to be remarked that, in the time of Ennius, the Latin language, was less rude and unpolished than the specimens remaining of that author appear to indicate. It should seem that he affected, like our own Spenser, an antiquated diction to improve the interest of hit composition, by removing it farther from ordinary life.

Arpinum, at present part of the province of Terra di Lavoro, produced the greatest orator and philosopher of the ancient world, Cicero ; and one of its greatest historians, Sallust. ††† Velleius Paterculus, and Vitruvius, are also names which dignify southern Italy. The last was born at Formiae. So carefully was he educated, and so diligently did he study, that he was considered as an epitome of all human learning. Julius Ctesar knew and loved him. He was munificently patronised by Augustus. His treatise on architecture is the only book upon that subject that has descended to us. It is obviously written with great inequality. The di.lactic parts of . are totally destitute of elegance or polish; b to each book there is a preface, written in a style of purity and elevat.on worthy of the Augustan atTC Horace, notwithstanding his own doubts as to the precise spot of his nativity, beloncsalso 10 these provinces: and the unhappy Ovid wa* born in the PeliKni, now the Abnmo ; the Italian translation of whose Metamorphoses, by

Anguillari, is perhaps the finest version of ancient poetry to be found in any language. , From the time of Ovid the reign of good taste and simplicity was no more. Words harmoniously balanced, antithesis, point, and an unsound floridness of diction, took their place. Statius was born at Naples, under Domitian, whom he flattered by the dedication of his two' heroic poems. He has been so long the agreeable companion of some of our lighter hours, and so little justice has, in our opinion, been rendered him by critics and scholars, that we cannot forbear claiming for him a distinguished place amongst the writers of antiquity. Ambition was the sin by which he fell ; as he could xnot reach tne ./Eneid, it would have been happy for him if he had not attempted it. Yet the faults of the Thebaid are more than redeemed by the exquisite poetry of the Silvae. Every piece of that miscellaneous collection attests the purity of his taste, and the gentleness of his character.

The subjoined lines addressed to his wife, inviting her to meet him at Naples, present so lovely a portraiture of that city, that we must be permitted to copy them. We wish that modern Naples corresponded to it alike in every feature.

Hie auspice condita Phcebo Tecta, Dicharchei portus, et littora mundo Hospita ; et hie magnae tractus imitantia Romas, Quas Capys advectis implevit moenia Teucris. Nostra quoque et propriis tenuis, nee rara colonis Parthenope ; cui mite solum trans aequora vectae Ipse Dionaea monstravit Apollo columba. Has ego te sedes (nam nee mihi barbara Thrace, Nee Libye natale solum) transferre laboro : Quas et mollis hyems, et frigida temperat aestas : Quas imbelle fretum torpentibus alluit undis. Pax secura locis, et desidis otia vitse, Et nunquam turbata quies, somnique peracti. Xulla foro rabies, aut strictae jurgia legis : Mores jura viris : solum, et sine fascibus, aequum.

The night which so long overshadowed the human mind was now come: yet, in the deepest gloom of the middle ages, some faint glimmerings are to be perceived. The reign of Theodoric is rendered memorable by Boethius and Cassiodorus, who inspired their ferocious master, not indeed with a taste for letters, but with a disposition to protect them. Cassiodorus found a refuge from the distractions and violence of the times in a monastery, which he him self founded in his native province of Calabria. There he dedicated the residue of a blameless life to the instruction of his fraternity, in sacred and profane learning. While he taught them to feel the beauties of the ancient writers, he employed them also in transcribing their works; a pious

labor to which we are indebted for many precious remains that would otherwise have perished in the general wreck of knowledge.

The iron sway of the Lombards was death to the whole mind of Italy. Yet, in these days of rapine and ignorance, the religious houses were uniformly hospitable to genius and letters. The Benedictines continued mindful of the precepts, and emulous of the example, of Cassiodorus ; although their monastery at Monte Cassino had been wholly destroyed by the Lombards. Charlemagne availed himself of the zeal and talents

of the learned churchmen of his age, when he restored the empire of the West ; and the eighth century boasts of writers who would not have disgraced the second. Muratori has collected some valuable historical monuments produced by the learned and industrious monks of Monte Cassino. The duchy of Benevento, which in the middle ages comprehended the greater part of the Neapolitan provinces, had still preserved its independence; and the princes who governed them were great protectors of learning. This tranquillity, however, was soon to have an end ; and, after the dismemberment of Beuevento, a period of tumultuous anarchy succeeded, which drew down upon that devoted country the Saracens of Sicily, and the arms both of the eastern and western empires. A handful of Norman adventurers took advantage of the feebleness and confusion incident to such a state of things, and laid the first foundations of a monarchy, which in later times powerfully influenced the destinies of Italy.

At Salerno, where Robert Guiscard had established his court, a celebrated school of medicine had already been instituted. In the eleventh century it arose to the summit of its reputation; and the Leonine verses, which registered the lucubrations of that period in the art of medicine, contain aphorisms which retain their authority in the present advanced state of the science. It has been strangely supposed that this work was dedicated to Charlemagne; but that prince had been dead nearly 300 years when this compilation first made its appearance. In fact, it was dedicated to a king of England, as it should seem from the first line of the poem. Tiraboschi supposes it to have been Robert, duke of Normandy, son of William the Conqueror, who had been entertained at Salerno, on his return from the first crusade, by Roger, then duke of Sicily.

The succeeding age was still more illustrated by the study and advancement of jurisprudence. We cannot enter into the much agitated question of the discovery of the Pandects at Amalfi. From this

accident, however, may be dated the most beneficial revolution in the science of law. The schools of Milan, Bologna, Padua, and Naples, produced, in rapid succession, the great jurists of the eleventh and twelfth centuries. Count Orloff has given an exact chronological nomenclature of the various historians who flourished at this period in the provinces of Naples. Monte Cassino had the honor of producing the greatest amongst them. In these learned retreats also flourished, not only the celebrated Albericus, the great theologian, who so ably defended his dogmas before two several councils to which he was cited by Gregory VII., but an ther ecclesiastic of the same name, one of whose visions, lately discovered among the archives of that monastery, is supposed, on very weak grounds, to have been the examplar from which Dante borrowed the idea of his Divina Comedia. But the south of Italy passed under the mild rule of the Suabian princes, and the Ian of literature began to teem with a new produce. Frederic II. laid the foundations of a university at Naples, revived the medical

school of Salerno, and himself cultivated the learning which he protected. His court was frequented by men of talent. It was under his patronage that the harp of Italy preluded its first sounds, and the Sicilian Muses contested the laurel with the Troubadours of Provence.

Thomas Aquinas was educated at Naples. The writings of this theologian, which are still extant, if what no one reads can be said to be extant, fill eighteen large folio volumes ; and the ordinary duration of man's life could hardly suffice for the study of them. Fashions pass away, and the study of the angelic doctor has ceased to be the business of the schools, or the occupation of the closet. Yet he was held in high reverence by the sect who adhered to the scholastic philosophy, and who were long known by the name of Thomists. Nor was this estimation unmerited ; his great Abridgment of Theology bespeaks a gigantic genius. To estimate such a writer, indeed, without reference to the time in which he lived, would be gross injustice; but it is a vulgar error to suppose that he was the blind and servile adherent

of Aristotle. In some respects he was his antagonist; for he attached himself to the Alexandrian school, and adopted the tenets of St. Augustin, Proclus, and the Arabian peripatecians. That he entangled himself in the formularies of the Stagyrite, or at least in those which the schools attributed to that philosopher, and that he should have occasionally lost himself in the obscure labyrinths of scholastic distinctions, was the fault, not of Aquinas, but of the age. Even now the sway of Aristotle in the schools is not wholly extinct. Let not Thomas Aquinas be contemned for submitting in the thirteenth century to a yoke from which the nineteenth does not seek to be absolutely free.

On the obscure question of the origin and formation of the Italian language we must be here allowed to touch. The use of a vulgar dialect, contradistinguished from the Latin, commenced sooner in France than in Italy, where the Latin not only continued to be the language of law and polity, but that of wit and gaiety. The Troubadours had, even as early as the twelfth century, amused, with their romances and fabliaux, princes at their courts, noblemen in their castles, and warriors on their crusades : but it v/as in the next age that the Italian idiom acquired shape and consistence It leaped as it were full grown from its birth, and, outstripping the tardy developments of time, attained, in the hands of Dante, to that copiousness and harmony which successive centuries have rather impaired than improved. Ginguene attributes (HistoireLitteraire de 1'ltalie, torn. i. p. 78), we think erroneously, this rapid perfection to the Proven9aux; and derivatively through them to the more distant sources of Arabian literature. But what similitudes of thought, or analogies of diction, can be traced between the grave and austere style of Dante, and the playful, and often unmeaning, levities of those amorous minstrels, Bernard de VTentadours, Peyrol, Peter Vidal, and the other professors of the science paie? In fact, the gay and brilliant court of Provence expired in the beginning of tlte thirteenth

century, to the latter part of which Dante belongs. The obscure sonneteers and canzonieri, who preceded the Father of Tuscan song in point of time, might have been tinctured with their style and manner ; nor can it be denied that the gongi of Provence, vapid as they may seem to our refined apprehensions, were the source whence the poetry of Europe, and particularly that of Spain, derived its habitual language. Dante, however, is of another order. To the speech which he reared to sudden perfection, not an approach was made before bis time. We repose upon Muratori's hypothesis. The Italian language was

neither borrowed from the Proven9aux, nor was it coeval as a lingua volgare with the ancient Roman, that strange paradox of Leonard Aretin, which was afterwards adopted by Bembo. It is, in short, the Latin, staggering under the blows given it by successive invasions of barbarous conquerors, but never supplanted by their idioms, receiving from time to time their inflexions and terminations, and gradually declining into a jargon assuming the form of a distinct language. Such was the state in which it waited only for a creative genius, like that of Homer, to impart to it the beautiful and harmonious symmetries which it has since retained ; and in this state Dante found and completed it. It is observable that each of these dialects, as it approaches the line of separation, partakes of the characteristics of the other, the Latin being full of Italian expressions, and the Italian abounding in Latiuisms, which gradually wear away as we descend to Petrarch and Boccacio. In truth, all the Italian dialects, as well as those of France and Spain, conspire to refute the common opinion respecting the influence of the Northern invasions upon the language of those countries by inoculating it with barbarous idioms.

Robert of Anjou was the friend and patron of learning in the fourteenth century. During his reign, poetry and the study of Greek were prevailing occupations at Naples. Barlaam, under whose tuition Petrarch made his slender proficiency in that language, was a native of Calabria. Leontius Pilatus also was his pupil. This eminent individual was invited by Boccacio to Florence ; and it was his example and his labors that made the cultivation of ancient letters general through Europe. Historical science indeed appears to have advanced hut little at this period in the South of Italy ; though Gravina's chronicle, which is inserted in Muratori's collection, is an exception. But, in the succeeding century, Italy had wholly shaken off the slumber into which, with the other nations of the West, she had so Ion? sunk ; and, under the house of Arragon, Naples became the seat of taste and literature. Antony Beccadilli, surnamed from the place of his birth Panormita, aided by Jovianus Pontanus, founded an academy in that city, which enrolled in its numbers the most accomplished scholars of the age. Amongst these was Sannaiarius, no ignoble name in poesy and polite learning.

Sannazarius arrived at high excellence both in Latin and Italian poetry. A sort of conflict was at this time going on between those Ian-

guages. That of Italy was by no means in general use among the learned; and cardinal Bem-bo attempted, even at a later period, to dissuade Ariosto from adopting it. But Sannazarius wrote with equal grace and facility in either. If his poem De Partu Virginis earned him the approbation of the pope, and the distinction of being called the Christian Virgil, his Arcadia -shows to great advantage the elegance, and softness, and melody, of the Italian diction. Sannazarius, as well as Statius, is the poet of Naples. He dwells with delight on its smiling landscapes and majestic scenery; and his religious poem closes with an exquisite painting of the spot to which his fancy clings with affection and rapture.

Hactenus, 6 Superi, partus tentasse verendos Sit satis : optatam poscit me dulcis ad umbram Pausilypus, poscunt Neptunia litora et udi Tritones, Nereusque senex, Panopenque Ephyranque, Et Melite ; quaeque in primis grata ministrat Otia, Musarumque cavas per saxa latebras, Mergellina ; novos fundunt ubi citria flores, Citria Medorum sacros referenda lucos ; Et mihi non soliti nectit de fronde coronam.

In his eclogues and elegies, also, Pausilypus, the adjacent islands of Nicida, Procida, and Ischia, are scenes in which he delights to revel. This enthusiasm is strictly Neapolitan. In Italian, the chef d'ceuvre of Sannazarius is indisputably his Arcadia. It is a series of eclogues in verse, and the scene is laid in Arcadia. Each of them is prefaced by an exordium, in prose ; an alteration which, being of regular recurrence, is too apt to fatigue. But, if the merit of human productions is measured by duration of esteem, the Arcadia stands high ; for it has been a favorite with the Italians for more than 300 years. We pass by many other cultivators of poetry and letters in this celebrated academy.

But poetry and polite literature were not its only subjects of glory. Galateo (Antony of Ferrara) was the friend of Pontanus and Sannazarius, and he excelled equally in natural philosophy, medicine, geography, and elegant letters. Jerome Tagliava, a Calabrian, disputed with Copernicus the discovery of the earth's revolution round the sun. The science of history began also to make considerable advances under the Arragon princes. Laurentius Valla was munificently patronised at the court of Alphonso. Campano, Carracioli, Albino,

Pomponius Laetus, adorned the academy towards the close of the fifteenth century. At this time archaeology was the universal passion ; and to such an excess was it carried, that every thing modern was in low esteem. Literary men even quarrelled with their own names, of modern, and therefore of barbarous sound, and assumed the classic and sonorous appellations of ancient history, such as Julius Pontanus, Callimachus Experiens, Pomponius Lsetus, &c. The national literature suffered from this enthusiasm ; and the Italian poetry and eloquence fell rapidly from the height to which Dante, and Petrarca, and Boccacio, had carried them. The poetry of Nottarno, and the homilies of Carracioli, are proofs of the declension of taste and simplicity.

A brighter and more ethereal day now dawned

upon Italy ; and literature, as if impatient of its protracted infancy, advanced in the sixteenth century to sudden maturity and vigor. It seem-ed to have sunk into repose, exhausted by its efforts at the period of Dante and his contemporaries. It was, however, a renovating interval. The mind of man was undergoing a revolution the most interesting which history records ; ??? a mighty change, which vibrated through Europe. Various causes contributed to it. The exhuma-tion of the great models of antiquity from the sepulchre of ages was not the least. They furnished new standards of ideal beauty in the arts, which at once exercised emulation and awakened genius. The age of Leo brought back that of Augustus, and Rome was once more the centre from which taste and learning radiated through the world. Talent of every kind was encouraged by that liberal pontiff. The Medicis at Florence, and the princes of the house D'Este at Ferrara, were also patrons of literature. But Naples lingered in this march of intellect. Her Spanish viceroys persecuted merit with as much zeal as the Suabian, Anjou, and Arragonese princes had cherished and protected it. They endeavoured, ineffectually in-deed, to plant the inquisition in the Neapolitan provinces, and shed the purest and best blood upon the scaffolds. The universities were deserted, and liberal and ingenious writers were punished by torture and exile

When the tide of knowledge, however, has be-gun to flow, it is not easily checked. Private munificence supplied the place of public patronage. The marquis de Pescara, the marquis del Vasto, and the illustrious Colonna, were the Moecenases of the age. It was a private individual, Fer-ranta, duke of Salerno, who protected the father of the celebrated TASSO. This ornament of the sixteenth century, to whom

Italian poesy owes its last polish and highest refinement, was born at Sorrento. He is too well known to require a more specific notice ; and, even if our space permitted us to enter into details concerning the great author of Jerusalem Delivered, the able summary and elegant criticism of Ginguene* would render it superflous. 1* may not be known, however, to all our readers, that Tasso was not only a poet, but a metaphysician and philosopher, and the author of several treatises, written with great ppecision, on morality and ethics. Nor is the full extent of his poetical labors familiar to all. His sonnets, of which there are an incredible number, have met with the same fate as those of Shakspeare. Like Shakspeare's, however, they are interesting portraits of the vicissitudes of his life.

Tansillo, a contemporary poet, exhibits neither the taste nor dignity of Tasso. His poems abound with the concetti and antithesis too frequent in the Neapolitan school. But the poem called the Nurse, which has been translated by Mr. Roscoe, a tender exhortation to mothers upon the nurture of their childen, is exempt from these vices. The obscene poem called II Vendemiatore, was expiated, before his death, by the Tears of St. Peter, a religious piece, which the French poet Malherbe plagiarised and deformed. For a catalogue of the jurists and

philosophers of the south of Italy, in the sixteenth century, we must refer our readers to the work of count Orloff.

The state of its literature at the beginning of the seventeenth century, was by no means auspicious. The Neapolitan kingdom was scourged at once by tyranny and famine. The ministers of Philip III. and Charles II., who governed it as viceroys, were intent only upon squeezing from that impoverished kingdom new supplies for their rapacious and needy masters. Commerce was fettered by exactions, industry disheartened, the arts and sciences discouraged. Rebellions were the natural fruit of this crooked pol-icy. Thomas Campanella headed an insurrection in Calabria; and the famous Masaniello was, for some time, master of the kingdom. But the zeal of private individuals, animated by the example of their predecessors in the preceding

century, effected much during these iron times. Manso, the friend of Milton, Tasso, and Marini, established a literary society, call the Otiosi. Other societies were framed, and learning was preserved from extinction. The Neapolitan jurists of this period are mentioned with respect in the excellent work of Francesco d'Andrea, Ra-gionamento a suoi Nepoti, himself the ornament of the bar, and called the Cicero of Naples. We need only mention Andrea (who died in 1698), Gravina, and his pupil Peter Metastasio. He was the first lawyer who called philosophy to the aid of jurisprudence. His interpretations of the Roman code, and of the fragments of the twelve tables, breathe a liberal and enlightened spirit; and hi$ masterly and comprehensive mind brings together the whole history of human legislation, the progressive growth of natural and positive laws, and all the analogies and discordancies in the codes of nations. It is remarkable that two writers, diametrically opposite in genius and character, have been much indebted to Gravina. The world probably owes the great work of Montesquieu to his writings, and Rousseau borrowed from them his theory of the Social Contract. Himself a poet, he fostered and protected the expanding powers of Metastasio, left him an ample inheritance, and expired in his arms.

Julius Cxsar Vanini was equally celebrated for his talents and misfortunes. He was born at Otranto, and studied at Naples. He travelled over Europe, and gave offence in every country which he visited, by the boldness of his opinions, and the freedom of his discourse. Constant to no theory, at one time a fervent Catholic, at another a licentious Latitudinarian, his life was passed in a storm of disputation. The doctors of the Sorbonne burned his work De Admiran-dis Naturae Reginae. At Thoulouse he was accused of atheism ; and condemned by the same parliament which afterwards passed sentence upon the unhappy Galas, to have his tongue cut out, and to be burned alive. This infamous judgment was executed on the 19th of February,1619,andinthethirty-fourthyearofhisaoe.

But in no country has archaeology been carried to a greater extent than in Naples. And what country, in spite of barbarous invasions, and the dreadful visitations of earthquakes and volcanoes, presents a wider field for antiquarian

research, or acounds more in those interesting remains which connect the ancient with the modern world? So prevalent was this science, that there is scarcely a province, a town, a church, or a monastery, which has not had its antiquary and its historian. Of these authors the

number is too considerable for distinct specification. Amongst the writers of general history we have already mentioned Summonte. It is, however, in literary history that Naples abounds, even to affluence. Manso bequeathed to posterity the Life of Tasso, whom he had befriended and consoled in the last years of his existence. Francesco Andrea compiled the biographies of the celebrated authors of his day : Chioccarelli, those of Neapolitan authors, from the earliest times to 1646 : Toppi, Nicodemi, and many others, illustrated the same department.

Poetry, however, and the sister art of rhetoric, degenerated into fustian and conceit. The austere and terrible graces of Dante; the harmonious, but vigorous versification of Petrarca, were succeeded by florid exaggeration, by tumid and gaudy imagery. Naples led the way in this departure from truth and nature. Tansillo, and even Tasso himself, not unfrequently committed these offences against taste; and their example, imitable only in its vices, engendered a tribe of poetasters, the founders of a new school, the school of Marini. But although Marini had the ambiguous honor of giving name to the sect, his genius was of a higher order. He was born at Naples, and nature had gifted him with an ardent imagination, perpetually excited, as he grew up, by the glories of a cloudless heaven, the varied beauties of the scenery, the rich magnificence of earth and ocean, with which he was surrounded. His first poetical attempts were remarkable for the brilliancy of their coloring. They were applauded, but in contradiction to the established decrees of good sense and correct taste. Simplicity and nature had already been exiled from poesy. A genius like that of Marini was alone sufficient to confirm the false direction which had be.en given it, and to sanction its vices. Literary honors were heaped upon him, and he was highly distinguished by the patron-aye of the great, both in Italy and France. His Slaughter of the Innocents, a poem, is the most finished of his numerous pieces. It was translated by Crashawe, and Pope has not disdained to borrow several passages from -the translation. A countless tribe of imitators arose. It is the infelicity of imitation to catch only the faults of its original. They did not inherit a remnant of Marim's genius.

Occasionally he reminds us of the conceits of Cowley ; but the resemblance is rare. One instance of such a resemblance is in our rtcollec-iion, and we are tempted to quote it. In the Testamento d' Amore a lover receives from his mistress a letter written with her blood. This circumstance gives birth to endless conceits and extravagancies. He wishes to be converted into ashes, that, by being pulverised, he might dry up the lines traced by her hand :

Cofci pur potess' io

Tra le nue tiamine inccncrire arder.do, Indi il cii.cif niio

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NAPLES.

Sparger, di polve in vece,

Su le tue belle, e sanguinose righe !

Che non si puo con altra ricompensa

Pagar dono di sangue

Che con cambio di inorte ;

and concludes by calling her a pelican of love, who tears out her heart to administer life to others : ###

Pelicano d'amore

Che per dar vita altrui ti squarci il core.

There were few satirical poets in Italy during the seventeenth century. Salvator Rosa, the painter, was the most distinguished amongst them. lie was a native of Naples ; his satires have the bitterness and sternness of Juvenal. He writes also with the flowing eloquence of that poet ; but he abuses his own fertility, and knows not how to stop. His great fault is say-ing too much.

In the drama, Porla arrived at great excellence ; his genius was indeed universal. His tragedies of II Georgio, and I'Ulisse, still maintain their reputation. But in the pastoral drama, a Neapolitan barber, Gian Battista Breggazano, shone nearly without a rival. The comedies of Porta also were deservedly admired in his dayv

In a language so easily wedded to music, the opera is almost of indigenous growth ; and, in the age on which we have been occupied, it rose to great perfection. Antonio Basso, Sorrentino, the author of Giro, and others, whose names alone would extend our article to an unreasonable length, prepared the way for Zeno and Metastasio, from whose hands the Italian opera received its last touches.

The eighteenth century was the age of the severe sciences, rather than of poetry. Count Orloff has only strung together a barren nomenclature of the Neapolitan poets of this period ; names too obscure for commemoration, and scarcely heard of beyond the limits of their own country. Nor is this silence a matter of condo-lence ; the times are gone when cities were built by the sound of a lyre, or armies inflamed by the strains of a Tyrtseus. The spirit of imitation has so long subsisted in Italy, that we may reasonably despair of seeing again the sublimity of Dante, the peˆcillings of Tasso, the opulence of Ariosto. On the other hand, sonnets, madrigals, elegies, canzoni,were every day starting into sickly existence, and then disappearing for ever.

Versus inopes rerum, nuga?que canorae.

It is in this age, nevertheless, that we contemplate the human faculties in their grander movements. A sounder logic, and more rational philosophy, were cultivated in Europe. The kingdom cf Naples had been transferred to Austria, but the policy of the Spanish administration was still continued. Financial disorders, vexatious imposts, harassed and afflicted this devoted country. But, in spite of her arbitrary and oppressive governments, Naples could boast of many establishments friendly to science and letters.

In Giannone, jurisprudence found one of its greatest ornaments, who was born in the province of Capitanata, and studied at Naples. He began

his celebrated Civil History of Naples at an early period of his life. He was a zealous, not to say virulent, opponent of the usurpations of Rome; a circumstance to which he owes much of his reputation, and almost all his misfortunes. His work, on which he had bestowed twenty years of unremitted labor, appeared in 1723. But the liberality of its tenets soon earned it the honor of a place in the index expurgatorius of Rome. He was, moreover, excommunicated by the archiepiscopal court of Naples, and exiled from his country.

John Baptista Vico was a man of universal talent. Philosophy, politics, poetry, the belles lettres in general, he cultivated with equal diligence. Left in a destitute condition, his genius was nursed in solitude, and quickened by misfortune. All his writings breathe an air of originality : his imagination was ardent and ac-tive, and derived its aliment from vast and profound reading. Plato and Bacon were a species of household divinities to this indefatigable student. The celebrated work of the Scienza Nuova dintorno Alia Commune Natura delle Nazioni, is a lasting monument of philosophical powers of generalisation, which have been rarely equalled. Its obscurity is apparent, rather than real. It requires, indeed, to be read diligently, and even laboriously; and the author himself deprecates the judgment of those who may presume to criticise it on a slight and careless perusal.

The reign of Charles III. was the proudest political era that Naples had yet witnessed. The judicious measures of Tannuci, his minister, and the actual presence of the monarch himself, inspired life and activity into the state, and the Neapolitan people might for the first time be called a nation. The discipline of the university was restored, the magnificent building which it now occupies appropriated for its reception, and the Farnese library consecrated to its use. To this

auspicious period belongs Antonio Genovesi, a proselyte from scholastic theology, the study to which he was originally destined, to the pursuits of a liberal and enlightened philosophy. We contemplate in him, perhaps, the most extraordinary man that ever arose in Italy. He was a disciple of Vico, whose doctrines he elucidated, by a commentary which completely cleared them of the perplexities in which his master had intentionally enveloped them. What Bacon was to Europe in general, Genovesi was to Italy. The spirit of philosophy, almost at his bidding, pervaded every science, and the principles of right reasoning diffused a steady light over the labors of succeeding students, for whom he had first opened a way disentangled from mysticism and error. He was in truth the founder of a school in philosophy, which had all that was great or eminent in Italy among its students. He combined the theories of Locke and Leibnitz, extracting from each that which was most consonant to the interests of man, and the improvement of his mind. If he wandered occasionally into the wilds of a boundless speculation, he was led astray by his unlimited confidence in the perfectibility of the human mind ; an error that bespeaks generous and enlarged, though not accurate habits of thinking. Genovesi filled the

moral chair at the university. His talents attracted a numerous class ; and truths, to which they had been heretofore indifferent or inattentive, came mended from his tongue. He was an unsuccessful candidate for the theological professorship ; but a munificent individual, Barto-lomeo Intieri, having founded a lectureship on political economy, upon the express condition that Genovesi should be the professor, it was in his lectures upon that branch of philosophy that he employed the vast resources of his genius, and displayed the great depth of his acquirements. But his greatest work is his Treatise upon Metaphysics: nor is it the least of its merits that it is divested of the learned nomenclature generally used in metaphysical dissertations, and completely adapted, by its elementary form, to popular use. Exhausted by his labors, this eminent man died in 1769, at the early age of fifty-five.

Emulous of his example, and disciplined by his precepts, several accomplished scholars followed in the same department. But our limits admonish us that, inasmuch as our mention of them would necessarily be confined to the barren enumeration of their names, it would be better to pass them by, and content ourselves with the select ion only of the most prominent and conspicuous merit that belongs to the period under our examination. We conclude, therefore, our slight view of Neapolitan literature during the reign of Charles III., by remarking, that, with the exception of poetry and eloquence, every branch of human knowledge made rapid advances.

The long and eventful reign of his son Ferdinand IV. brings us to our own times, and involves the actual state of knowledge and letters in this part of Italy, which partook, in due proportion, of the general amelioration of Eu-rope. In Naples, however, Genovesi left no equal. His plan of instruction was followed; his maxims paraphrased; but his disciples fell far short in knowledge and genius of their illustrious master. Naples, a city of lawyers, remained stationary in jurisprudence. The gothic and feudal edifice, with all its anomalies and errors, was still unshaken. Disorder, despotism, and anarchy, prevailed through that shapeless chaos, to which every dynasty and successive monarch had added something to augment its disproportions, and multiply its deformites. But, among the theoretic writers who labored to re-form the civil and criminal codes, Francisco Mario Pagano holds a conspicuous place, The bar was then the great theatre of talent. Pagano, a disciple of Genovesi, soon left, however, that stormy occupation for the peaceful retirements of philosophy and study. In 1783 he published his Saggi Politici, a treatise which ranks him with the first writers upon public law; and in his smaller work, entitled Considerazioni sul Processo Criminale, he unfolded the true principles of penal jurisprudence, and urged those mitigations and amendments of retributive law, which had indeed been already recommended by Beccaria in a style more diffuse, but less forcible and impressive. Pagano, having accepted an office from the French usurpation of 1 799, was sacrificed, on the restoration of Ferdinand.

to the vindictive policy of the times, and pub licly executed, with numerous otLcr victims of that calamitous period.

Filangieri may be styled the Montesquieu of Naples. From his early youth he addicted himself to the diligent study of the mathematics, philosophy, the ancient languages, and the principles of morality and policy. His book upon the Science of Legislation appeared in 1780,

when he was scarcely twenty-eight years of age. In glancing at this elaborate work, we are led to ask by what miracle a young roan of high birth and splendid connexions, and of whose life no inconsiderable portion must have been passed in the pleasures ot youUi and the frivolous pursuits of the Neapolitan nobility, should have amassed such a store of solid information, and acquired so severe and profound a logic? Filangieri attempted, in this work, what was never attempted before in the same department ††† to introduce into moral and political, the exactness and precision of demonstrative science. His plan seems to be as unbounded as his genius. Montesquieu exhibits, as in a mirror, all that had hitherto been done by systems of law and codes of jurisprudence ; but Filangieri was not content with mere historical induction. Reasoning from man's capacities and nature, he examines what still remains to be done, by civil institutions and political systems, for his moral amelioration and social happiness. Having laid down the general rules of legislative science, and unfolded the principles of law, civil, economical, and penal, he enters into clear and copious disquisitions concerning education, property, and the reciprocal rights and duties of the parental and hlia'. relations. A mind free from the perturbations and mists of vulgar prejudice, an ardent philanthropy, a style admirably suited by its simple gravity to the subject, are the qualities displayed by this young philosopher, whose early death will be long registered in the affectionate regrets of his country.

In political economy the Neapolitans have made considerable advances from the time of Genovesi, who first raised it from the mere skill of the merchant or tradesman, to a rank amongst the liberal sciencesr Galiani, so well known at Paris, in the circles of French literati, for the vivacity of his wit and the smartness of his repartee, was the author of various treatises in this branch of knowledge, in which he attacked, with great success, the principles of the French economists. On his return from the Neapolitan embassy at Paris, during his residence in which situation he had lived in familiar intercourse with the wits and belles-esprits of the court of Louis XV., and those of the first years of the reign of Louis XVI., he was placed in a financial office at Naples; and, amongst other projects, he had brought to maturity the restoration of the port of Baia>, a work which was abandoned at his death. We might enlarge our catalogue; but we have executed, imperfectly indeed, but to the utmost practicable extent allowed us, our picture of the ancient and present state of Neapolitan literature.

NAPLES, an important city of the south of Italy, the capital of the foregoing kingdom, it

situated Jii a bay of this name. The villas, gardens, and districts of the city cover the shelving coasts around ; the suburbs extending in a magnificent sweep from Portici to the promontory of Misenum, and filling a line of sixteen miles along the shore. In size, and number of inhabitants, Naples ranks as the third European capital, and from her situation and superb appearance has been justly termed the Queen of the Mediterranean. The bay presents an almost unrivalled number of picturesque and beautiful objects. On the west the delightful shores of Pozzuoli rise in a gentle swell from the surface of the water ; on the east Vesuvius, with its cultivated sides and smoking summit, bounds the prospect ; the centre contains the city, with its palaces, churches, and gardens, rising one above the other; while the sea view extends over the tranquil waters of the Mediterranean, and the verdant islands at the embouchure. Mr. Eustace safely lodged at the Albergo della gran Bretagna, on the sea shore close to the royal garden, thus describes this prospect.

‘ Few scenes surpass in beauty that which burst full upon me when I awoke next morning. In front and under my windows the bay of Naples spread its azure surface, smooth as glass, while a thousand boats glided in different directions over its shining bosom : on the right, the town extended along the semicircular shore, and Posilipo rose close behind it, with churches and villas, vineyards and pines scattered in confusion along its sides, and on its ridge, till, sloping as it advanced, the bold hill terminated in a craggy promontory. On the left, at the end of a walk that forms the quay and skirts the sea, the Castell dell’ Novo, standing on an insulated rock, caught the eye for a moment; while beyond it, over a vast expanse of water, a rugged line of mountains stretched forward, and, softening its features as it projected, presented towns, villages, and convents, lodged amidst its forests and precipices; and at length terminated in the Cape of Minerva, now of Surrentum. Opposite, and full in view, -ose the island of Caprea with its white cliffs and ridgy summit, placed as a barrier to check the tempest and protect the interior of the bay from its fury. This scene, illuminated by a sun that never shines so bright on the less

favored regions beyond the Alps, is justly considered as the most splendid and beautiful exhibition which nature perhaps presents to tlie human eye, and cannot but excite in the spectator, when beheld for the first time, emotions of deliqht and admiration that border on enthusiasm.'

The circumference of the city is computed at nine miles. Many of the streets of the interior are narrow, and are rendered gloomy by the height of the houses : others are large and splendid. The Strada di Toledo, extending more than half the length of the city, has the Piazza di Mercato at the one end, and the royal palace a spacious and handsome structure, at the other. This street is one of the finest in Europe. Nothing can exceed its liveliness and bustle from day-break till after sunset. It is constantly crowded with carriages, passengers, soldiers, lazzaroni, beggars, stalls, &c., &c. The street of Monte Olivetto,

and that from the gate of Capua to St. Elmo, extend diagonally to the Strada di Toledo, and are also broad and handsome. Most of the streets in the Neapolitan capital are paved with broad flags of lava, without any particular footpath. It has several spacious, but few handsome, squares ; many of which are decorated with obelisks and fountains. The principal are the Largo de Castello, Largo de Palazzo, and Piazza di Mercato. The houses in general six or seven stories high, are flat roofed, and covered with a kind of stucco, of Pozzolana sand, which becomes very hard by exposure to the atmosphere. Most of them have balconies in front, and the roofs are often covered with flowers, shrubs, and small trees, planted in boxes. These balconies, and still more the booths and stalls with which the streets are covered, make them appear narrower than they really are.

Several of the churches have been erected on the sites of ancient temples, and the cathedral is supported by more than 100 columns of granite that belonged to the temple of Apollo, which it succeeded. In the chapel, under the choir, is deposited the body of St. Januarius, whose supposed blood, preserved in a crystal vase, is esteemed by the inhabitants the pride of the cathedral and city. The Santi Apostoli, erected on the ruins of a temple of Mercury, is considered the most ancient church in Naples, having been first built by the emperor Constantine, but subsequently rebuilt. The spacious church of St. Paul is said to occupy the site of a temple of Castoi and Pollux : it is finely incrusted with, marble. That of St. Filippo Neri is remarkable for the number of ancient pillars that, support its triple row of aisles on both

sides of the nave. The Spirito Santo is of a more pure and simple architecture: the one called del Parto, founded and endowed by Sannazzaro, the well known poet, contains his tomb, adorned with statues and bas-reliefs. There are altogether upwards of 300 churches. The mansions of the nobility have little pretensions to fine architecture; and, though many are on a grand scale, they are in general over loaded with ornaments. The interior of the royal palace is splendid ; every apartment abounding with paintings and tapestry. The palace of Capo di Monte, another royal residence, is situated outside of the town, towards the north, on an eminence commanding a delightful prospect. It is still unfinished, but has a fine collection of paintings. The old palace of the kings of Naples is now occupied by courts of justice. The great theatre San Carlos is one of the most superb in Europe ; and there are besides six inferior theatres.

The university of Naples was founded in 1224 : its buildings, called the Palazzo degli Studii, are on a large scale. Its interior contains a collection of statues belonging formerly to the Roman Palazzo Farnese. It is divided into several compartments, each containing valuable literary collections : among them are 1. The library, with 90,000 volumes, a quantity of MSS., and specimens of the press of the fifteenth century ; 2. The cabinet of the MSS. of Herculaneum, with the various machines for unfolding them ; 3. The paintings; 4. The museum of sculpture; 5. A

collwtion of bronzes of Herculaneum and Pompeii; and, 6. A collection of Ktruscan vases. Naples has also a number of schools and conser-vatorii. Its royal military school, naval college, college for the instruction of young Chinese and Japanese, school for music and the arts, and its deaf and dumb school are also of note. Institutions of a higher class are the royal academy of arts and sciences; the society of agriculture, manufactures, and arts ; four public libraries ; the botanical garden ; and the observatory.

The charitable establishments comprise seven hospitals; above thirty schools for poor children of both sexes, who are boarded, educated,

and taught, in some a mechanical occupation, in others music ; five pawn banks for the industrious poor ; and various inferior charity schools. The two principal hospitals are the Degli Incu-rabili, and Delia Annunziata : the former is open to the sick of all descriptions ; the latter, which is well endowed, is destined to receive foundlings and penitent females.

Though its commercial transactions will not in point of size bear comparison with those of Northern Europe, Naples is an active port for this part of the world. Its exports are confined to the products of the country, i. e. corn, silk, wool, cotton, oil, wine, and fruit. Silk is exported to France, Spain, and England. The wool of Puglia is much esteemed by the cloth manufacturers of France and Germany. Timber also forms a small object of export, together with different essences and liqueurs. The imports of Naples consist both of articles of necessity and luxury, colonial produce, and manufactures : from Marseilles they consist of silk stockings, hats, gold and silver lace, jewellery, woollens ; linen, French wines, and tobacco ; from England, fine woollens and cotton stuffs, mercery, manufactures of leather, tin, lead, and salt fish : from Holland, spices, drugs, pepper, and linen : from Switzerland, linen, printed cotton and muslin : from Germany, copper, lead, Silesian linen, skins, tobacco, and wax : from Spain and Portugal, drugs, dye-stuffs, tobacco, cochineal, indigo, and cocoa: from the Baltic, salted provisions and skins. Much of this trade is carried on in foreign bottoms, and particularly by British merchants and owners. Naples has manufactures of silk fabrics, stockings, gloves, lawn, lace, diaper, and cotton stuffs. Those of fire arms, china, and glass, are also of importance. Violins and other musical instruments are also well made here, as well as mahogany furniture, carriages, and snuff boxes of tortoise-shell, and the lava of Vesuvius.

The population of Naples, amounting to 330,000, consists according to a recent estimate of 155,000 males, and 175,000 females. The Lazzaroni, without either dwellings or regular occupation, work only to supply the immediate wants of nature, and seldom think of the future till roused by the call of hunger. They may be said to spend their life in the streets, lying in the shade, or sauntering about in the day, and sleeping at night on the pavement or under a public portico. Their number was formerly between 30,000 and 40,000 ; but some of them lost their lives in the late conflicts, and more were com-VOL. XV.

pelled, under Murat, to take tenrice in the army and navy ; those who remain in Naples are employed as porters. Their number is Mill

considerable ; and beggars meet the eye in all directions. The want of cleanliness is also unfortunately as conspicuous here as at Rome; the rooms being infested with fleas and vermin. Sea-bathing, though so closely within reach, is very little resorted to.

Naples is surrounded by a wall defended by three large castles, i. e. the Castello Nuovo near the harbour, under which are extensive mines that connect it with the royal palace ; its donjon is said to be of the thirteenth century ; the Castel del Ovo, an oval fortress of some strength situated on a rock near the sea, and communicating by a mole with the public quay ; and St. Elmo, standing also near the sea, to the west of the city, with extensive subterranean works.

In the environs of Naples, one of the most beautiful picturesque views is along the new road laid out by Murat. It winds round the acclivities of the promontory of Posilipo, hanging above the bay, and which, looking down ou the fine masses of ancient palaces washed by the waves, reflects on the waters every form of the dilapidated architecture and romantic scenery. ‘ Here moulder the last traces of the Gothic pavilions of the famous Joan of Naples, whose beauty, genius, asserted crigies, and real misfortunes, form a counterpart to the fate and story of Mary of Scotland! Then come the shattered halls of Spanish viceroys, where many a sumptuous revel was held, furnished at the expense of a people’s privations ; and the less noted masses of tottering villas which skirt the Scoglio di Virgilio, unite the last modern casino of ;t tasteful English lady to the sites of the Mare-chiano, where stood the villa of Pollio, and the maritime retreat of Lucullus, which forms the extremity of the promontory of Posilipo, a savage rock, from among whose wild entangled shrubs springs the Indian fig.’ Beyond rises the hill, a promontory of Posilipo, where Virgil reposes. Here also is the Grotta di Posilipo.

We have noticed the Sofatara and Grotta del Cane. For HERCULANEUM, POMPEII, and VESU-VIUS, we must refer to their alphabetical places. We can only here advert to the interesting scenes of the little town of Portici, four miles east of Naples, and the private retreat of ‘ Ma-dama Murat,’ the ex queen : ###

4 The high road of Portici,’ says lady Morgan, ‘ runs through the old-fashioned paved court of its royal palace ### a heavy cumbrous fabric, commanding the bay. Though one of the most considerable and finely situated of the royal villas, it must have been a most gloomy and incommodious one, before the elegant improvements made in it by its late active, but transitory queen. The old custode, who showed us the apartments, had some difficulty in naming his late mistress by

the title of Madama Murat, instead of ‘ her majesty,’ and had evidently got up a new vocabulary for the new (or old) regime. On entering, he observed to us that the whole of the very elegant vestibule, in which we stood, the broad and double staircase, the spacious corridor, and the beautful little theatre, into which it open►►,

were all ‘ fatti da madama Murat,’ (made by madama Murat). Again, a gallery ornamented with superb candelabras, and accommodated with elegant ottomans, extorted the laconic *fatto da madama Murat.’ In a word, we found that endless suites of apartments, baths, cabinets, book-rooms, green-houses, orangeries, Sec., &c., were all either painted, decorated, and furnished, or planned and erected ‘da madama Murat.’ Some of the rooms exhibited a very extraordinary degree of taste in ‘ consulting the genius of the place.’ The walls were covered with paintings, copied from Pompeii, and the furniture was imitated from objects discovered there, and still preserved in the Museo at Naples. The raperies of the richest silk were all of the Neapolitan loom; for ‘ madame Murat’ made a complete clearing out of all the old and tawdry furniture of this palace : so that, on the return of the royal family, they knew it as little as many other objects of her reformation and improvement ; and expressed their surprise and admiration, with a naivete that still contributes the current coin of an anecdote to the circulating medium of ridicules in Naples.*

‘ The apartments of the ex-queen are models of elegance and feminine taste The bed-room, dressing-room, boudoir, and library, are eminently so ; and have been left precisely as she last occupied them. Her dressing-boxes are on the toilette ; a miniature of her nephew, the little Napoleon (hung by a riband), decorates the chimney-piece ; her dejeun6, on an English tray, stands in the centre of the room ; and some pretty e”trennes (worked and embroidered for her by her ladies a few days before her reverses) are scattered on a sofa. ‘ Niente cangiato,’ said the Cicerone, ‘ except this ! ‘ (and he approached her magnificent bed, and pointed to two large black crucifixes, and a pendent vase of holy water hung at its head) ►►► ‘ Non e”

quellauna moda Francese.' On the king and his wife sleeping one night at Portici, these sacred images were hung up for the occasion. In the dressing-room, all the necessaries of the toilette, in crystal and silver, still remain ; even some silver brushes lying where the femme-de-chambre of the late fair inhabitant had left them. It is said that madame Murat carried even to affectation her determination of not removing any thing that belonged to her royal state, and took only what she considered personal and private property. She is said to have left Naples with a considerable property in jewels. She, however, left all the palaces newly and superbly furnished with plate, linen, pictures, &c., &.C., &c. ; 200 horses in the stables, and 108 carriages. Portici was her favorite residence, and the numerous English and Irish nobility, whom she received there, can

* ' The king, on the restoration, sent the prince, his son, to look about him and bring him the news from Naples; for, having, like Falstaff, ' run away upon instinct,' he had an instinctive apprehension of returning, without first making enquiries as to the 1 king-traps and grass-snakes set there.' The prince retun ed in raptures with his improved and beautiful palaces and city, exclaiming in the presence of many courtiers, ' Oh ! papa mio ! if you had only staid away another ten years ! '

vouch for the courtesy and hospitality with which she did the honors of her palace. Mu-rat's apartments join his wife's : they w□□re equally luxurious, splendid, and commodious ; the hangings all silk and satin ; the carpets all English and Turkey. The toilette splendid and elegant, as that of the vainest petite maitresse, or royal beauty. Close to his superb sleeping-room is a simple little cabinet, with a small white dimity camp-bed, where his secretary slept. Here, in this little bed of the ex-secre- tary, sleeps the royal Bourbon □□□ the legitimate king of Naples, when he makes his visits to Portici. It is said that he walks about the pa-lace in endless amusement, admiring all the elegant finery of which he has become the mas-ter; but still adhering to the little dimity bed, and the secretary's closet, which resembles his own homely bed-room in his palace at Naples. He has added nothing but a large crucifix.'

The museum here, though now despoiled of its ancient bronzes, which are to be seen in the Muse"e Bourbon at Naples, contains several hundred paintings in fresco, taken from Herculaneum, Pompeii, and

Stabia. The colors of these paintings are wonderfully fresh. ‘ One,’ says our traveller just quoted, ‘ struck me particularly⁂ it was a Sappho ; her stylus pressed to her lip, and her tablets lying open before her. It probably decorated the cabinet of some learned lady of Pompeii.*

Mr. Matthews (Diary of an Invalid) found the museum at Portici, particularly interesting, as illustrative of the state of the art of painting among the Romans; though, as he adds, it would be ridiculous to take the paintings, on the walls of the houses of a provincial town, as the standard of their skill.

‘ It is fair to suppose,’ he says, ‘ that the taste of the ancients was as refined and fastidious in painting, as in the sister art of sculpture ; and that the praises, which they have lavished upon Zeuxis and Apelles, would have been supported by their works, if these works had come down to us. All traces of these great masters are lost ; but we know some of the most admired pieces of the latter were brought by Augustus to Rome ; and Pliny’s descriptions, which dc remain, seem to demonstrate, that they must have been executed in a much higher style of finishing, and with a technical knowledge, that will in vain be sought in the painted walls of Herculaneum and Pompeii. Many of these, however, are designed with great taste, grace, and feeling ; and, if we suppose that the works of Zeuxis and Apelles were as superior to these as the Last Judgment and the School of Athens are to the painted walls of a modern Italian room, we shall probably not form too high an estimate of the excellence of the great masters of ancient art. One of the most elegant figures in this museum, is the picture of a female, with a pencil and tablets in her hand, which they call Sappho. The story of the picture is often plain, as is that of Orestes, Pylades, and Iphigenia, in the temple of Diana. In another there is an old woman selling Cupids to a young female, behind whom stands a sort of Duenna, in the attitude of advice and caution. The old retailer of loves holds a fluttering Cupid by the wings, and has another in her cagt.

NAPOLEON.

‘ We hare also a specimen of their taste in caricature. A little delicate chariot, that might have been made by the fairies’ coach-maker, is drawn by a parrot, and driven by a grasshopper. This is said to be a satirical representation of Nero’s absurd pretensions as a singer and a driver; for, Suetonius tells us, he made his debut on the Neapolitan theatre. ‘ Et prodiit Neapoli primum : ibidem sxpius et per complures can-tivit dies.’ Here is also a curious picture of a schoolmaster’s room, with an unhappy culprit horsed on the back of one of his fellows ; precisely as the same discipline is administered in many parts of England at present.

‘ Many articles, even of food, are to be seen preserved in a charcoal state. There is a loaf of bread on which the baker’s name is still visible. It is easy to recognise the different fruits and vegetables, corn, rice, figs, almonds, walnuts, beans, lentils, &c. They show you also the remains of a woman found among the ashes, the skull of which is still perfect ; with the necklace and bracelets of gold, which she must have had on. Time has hardened the liquid shower which overwhelmed her, recording that she perished in the prime of youth, by the impression that remains of her beautiful bosom.’

This author makes some curious remarks on the practise of gaming, which he found universal at Naples. He ascribes it wholly to what he calls the taedium vitae. We connect it with the entire habits and manners of the people, and particularly with the pantomimic and debasing character of their religion. While the Neapolitans can endure the representation, by puppets of three feet high, of the ministry, persecution, crucifixion, and ascension of the Saviour, at a public theatre, or any thing in the same style, taste, or sentiment, we do not hesitate, with an intelligent modern writer, to pronounce them * incapable of any political arrangements for the maintenance of good government, sound liberty,

or any wise or liberal plan of public improvement. Mr. Matthews gives us an a< count of one of these exhibitions on the quay at Naples to an admiring and crowded audience; and io us it is decisive of the moral and intellectual character of the people.

So low is Naples sunk by its social and political vices in the scale of sentiment and intelligence, that the transition which our traveller makes from the noise of the quay, and the fooleries practised in the heart of the city to the Campo Santo, or place of public sepulture, did not strike us as at all abrupt. The Campo Santo is about a mile and a

half from the town-gate ; within its walls are 365 caverns, one of which is opened everyday for the reception of the dead, the great mass of whom, as soon as the rites of religion have been performed, are brought here for burial. ‘There were fifteen cast in,’ says Mr. Matthews, ‘ while we were there ; men, women, and children ??? without a rag to cover them ; ??? it was a shocking sight ; ??? a mass of blood and garbage, for many of the bodies had been opened at the hospitals. Cock-roaches, and other reptiles, were crawling about in all their glory.’ While Mr. Matthews and his companions were making their reflections on the scene before them, some women were saying ave ma-rias at the place for the souls of their friends ; who, as soon as they saw the traveller^, left their pious work, and began making their calculations upon some circumstances connected with the as the number of their carriage, &c., to dirert them in the selection of lucky numbers in the lotterv.

Within a mile of Portici stands Favorita, the villa of the late queen of Ferdinand, Caroline of Austria. For more of her character and exploits, see our articles NELSON and SICILY. Naples is 110 miles southeast of Rome; 380 S. S. E. of Milan ; and about 1000 southeast of Paris.

NAPOLEON.

NAPOLEON. This name stands like a magnificent parenthesis in the history of the French monarchy, between the comparatively insignificant ones of Louis the unfortunate and Louis the desired. The former was hurled from his throne by the fury of a revolution, which, in its commencement, promised to confer substantial liberty upon a nation which had long groaned under every species of despotism ; and the latter was restored to the dignity of his ancestors after that revolution had established and overthrown one of the mightiest tyrannies that licentiousness and anarchy ever consolidated to be the scourge and the curse of the human race. The soul and essence of this tyranny was Napoleon Buonaparte. From him it derived its splendor, its power, and its atrocity. He was at once its creator and its victim. Nursed in the cradle of revolution, and educated in its school, none of those principles which bind men in conscientious allegiance to what is right in religion, in morals,

or in politics, were permitted to take the slightes root in his mind. He was surrounded by impiety and blasphemy ; and what he saw of religion disgusted him by its superstition and intolerance. The only accredited principle which assumed the character of virtue was the monstrous birth of the new order of things, and was more formidable than all the vices. Civicism generated every crime at which humanity shudders, and threatened for a season the entire denaturalisation of the species.

Such a state of society produced Napoleon Buonaparte: it formed his character, and that character is perfectly developed in his rapid and wonderful career. Those who seconded his views, and united to consolidate his power, grew up under the same influence. How a revolution, which commenced in a generous love of freedom, and many of whose promoters were at first sincerely devoted to the best interests of their country, should have led to so disastrous an

issue, presents no difficulty to those at all acquainted with the character of the people of France at the period when they resolved to emancipate themselves from the galling thraldom they had so long endured. To be impatient of tyranny is one thing; to be prepared for the enjoyment of liberty is another. None but a virtuous and religious people can achieve for themselves such a deliverance from oppression as shall secure to them the blessings of an internal and permanent freedom. Revolution, to be successful and prosperous, against an ancient and deep-rooted tyranny, must be begun and conducted under the auspices of private and public virtue. Liberty never comes to any people by accident. It must spring out of the principles of knowledge, truth and righteousness, and be the deliberate will of the high minded and the good. The revolution of France failed through the want of the moral preparation for liberty, without which the blessing cannot be secured. She was not ripe for the good she sought. She was too corrupt for freedom. What could be expected from a struggle excited by that heartless scoffer the infidel Voltaire, and maintained by others who,

like him, had thrown off all the connexions which ennoble the mind? The being and the government of God, the patriot's trust and re-fuge in the otherwise unequal conflict between despotism and' freedom, and human immortality, that truth which is the seed of all greatness, were made by the apostles of French liberty the perpetual subjects of scorn and derision. In their philosophy man was a creature of chance, a compound of matter, an ephemeron, a worm, who was soon to rot, and perish for ever. What insanity was it to expect that such men were to work out the emancipation of their race ! that in such hands the hopes and dearest rights of humanity were secure! Liberty was tainted by their touch ; yet some there were who trusted that it was to rise in wealth and glory from their embrace

Napoleon appeared on the stage at the precise period that was most favorable to his military successes and subsequent elevation to supreme power. The Jacobins, by their innumerable massacres and murders, had become the dread and the execration of the French people. Their sanguinary leaders at length met the fate which their crimes deserved. Robespierre fell at once the victim of popular fury, of suicidal cowardice, and conventional denunciation. With the Jacobins, what was properly the republic perished ; and the convention did not long survive. The directory arose, and soon prepared the way for the master spirit, who, on their ruin, was to build the mightiest, and yet the weakest structure, that was ever reared by the hand of tyranny. Our limits forbid our taking even a rapid view of the origin, progress, and different phases, of the revolution in France. An account of them will be found under that article. We must content ourselves with a very brief sketch of the life of Napoleon. He was born in Ajaccio, on the 15th day of August, 1769, the son of Charles Buonaparte, a Corsican advocate, and Letitia Ramolini. Early intended for the profession of arms, he was, by the influence of count

Marbceuf, the French governor of Corsica, admitted to the Artillery and Engineer Royul School of Brienne. His family were remarkable for talents ; and his mother was one of the most extraordinary women of her age. Napoleon very early discovered his own superiority to them all, and to the most distinguished of his associates and contemporaries. With a high degree of mathematical proficiency, even when quite a boy, he displayed something of that peculiar spirit which characterised his life ††† a love at once for adventure, and for severe secluded mental effort ††† a desire of distinction, and a disregard of the popular habits which lead to its acquirement ††† a contempt of literature, with a passion for modelling himself on the

classic heroes. In 1783, at the age of fourteen, he was one of the scholars who, at the annual competition at Brienne, were selected to be sent to the military school at Paris to finish their education. This was at a period when he had not quite attained the requisite age. But he was indebted for his good fortune to the favor of M. Keralio, the inspector of the school, who, when remonstrated with on the subject, replied, ‘ I know what I am about ; and, if I am transgressing the rules, it is not on account of family influence. I know nothing of the friends of this youth. I am actuated only by my own opinion of his merit : I perceive in him a spark of genius which cannot be too early fostered.’ M. Keralio died before he could carry this resolution into effect; however, M. de Reg-naud, his successor, the next year fulfilled his intentions, and young Napoleon was sent to Paris.

He was scarcely eighteen years of age when the abbe Raynal, struck with the extent of his acquirements, appreciated them so highly as to invite him to his scientific dejeune”s. The celebrated Paoli was also accustomed to say, ‘ This young man is formed on the ancient model ; he is one of Plutarch’s men.’ About this period he was appointed second lieutenant in a regiment of artillery, the regiment de la Fere. In the leisure of garrison duty at Valence, he indulged himself in the fashionable employment of the aspiring young men of France. He wrote an essay on one of the questions of Raynal, touching the perfectibility of human government. As he was then, in theory at least, a republican, we may conclude that the essay was revolutionary. When emperor, he burned this specimen of opinions, yet uncorrected by the command of armies and the possession of a crown.

In the year 1792, having previously espoused the popular side, and joined himself with the most violent partizans of liberty, he was summoned to Paris from his native island to justify his conduct in quelling an insurrection which he was accused of having provoked for the purpose of rendering himself useful in repelling it. This was a remarkable period, which terminated, for a season, the dynasty of the Capets. On Ins re-turn to Corsica, after the memorable 10th of August in that year, he at length found an opportunity of exercising his military talents. France was proclaimed a republic. Though the regiment of Buonaparte was divided into royalists and republicans, and the spirit of party ran high,

he did not hesitate. He had commenced with liberty, and he determined to follow the revolutionists. The power of the Jacobins, and their stern daring inflexibility, he considered as an apology for their atrocities. He fought under their banners, and profited by their ruin. It was at the moment when republican France was attacked by all the powers of Europe, that the military talents of Buonaparte were called into action. He accompanied the fleet of admiral Triquet in a descent upon Sardinia. The expedition, it is said, was directed by him, and he seized upon the island and fort of St. Etienne, ns well as the Isle de la Madeleine. It was in ;his expedition that Buonaparte took the part of France against his native island, and that internal and consistent liberty which its inhabitants were all anxious to consolidate under the auspices of the veteran Paoli. Notwithstanding its early success, it finally failed, owing to the bravery of the inhabitants of Cagliari, who saluted their invaders with showers of red hot balls, and repulsed and utterly defeated them. The pro-scription of the conquered was the consequence. Buonaparte had signalised himself too much to be spared. A decree, excited and signed by Paoli, condemned him to perpetual banishment. With his family he was driven from his native shores to seek an asylum and subsistence in his adopted country, with no flattering prospect either of support for them, or honorable employment for himself. Their place of refuge was Marseilles, where madame Buonaparte, her three daughters, and Jerome, who was a mere child, are supposed to have undergone considerable distress, until the dawning prospects of Napoleon afforded him the means of assisting them. Napoleon never again revisited Corsica, nor does he appear to have regarded it with any feelings of affection. One small fountain at Ajaccio is pointed out as the only ornament which his bounty bestowed on his birth place.

Napoleon and his brother Louis, having lost every thing by the turn of affairs in Corsica, engaged themselves in the republican military service. The former returned into the artillery as a first lieutenant in the fourth regiment of that corps in which, a few months after, he was raised by seniority to the rank of captain. This was in the year 1793. When the measure of Jacobin iniquity was charged almost to the brim ––– when by shedding all the royal and noble blood which they could bring within the operation of their murderous instrument the guillotine, and filling prisons with promiscuous multitudes, that they might enjoy the savage delight of undistinguished massacre ––– these detestable demagogues had secured to themselves the supreme

power, under the appropriate designation of ††† the Reign of Terror.' It was at this time that the first instance of importance occurred which enabled Buonaparte to distinguish himself in the eyes of the French nation, and of the world at large. Several principal towns of France, inspired with a just dread and abhorrence of the proceedings of the Jacobins, and instigated also by the intrigues of the Girondists, were induced to take up armˆ against the convention: among these Toulon was the most considerable. It is

the arsenal of France, and contained at the time wheu it declared for the royal cause, and agaiim the Jacobins, immense naval stores, besides a fleet of seventeen sail of the line ready forsta, and thirteen or fourteen more which stood in need of refitting. The inhabitants and municipality had invited the support of the English and Spanish squadrons who were cruising upon the coast. Accordingly a disembarkation was made, and a miscellaneous force, partly collected of Spaniards, Sardinians, Neapolitans, and English, was thrown into the place. It was of course soon invested by the army of the republic; and that it was not defended by vigorous measures on the part of the allies, and held by them so as to have produced marked effects on the result of the war, must ever be contemplated by Englishmen with equal shame and regret The siege, however, was a glorious opportunity for displaying the talents of the youthful hero, and subsequent conqueror of the world, lie baffled the imbecile counsels of his superiors in command, animated the sinking courace of some who were for raising the siege, and decreed and executed a plan of operation as skilful as it was bold, and which decided the fate of the town. The appointment of Buonaparte to this arduous task was no doubt the result of his known principles as a Jacobin, and the high professional charactei which he had acquired in the military school, in the archives of which his genius is described as being of the first order. In this his first great achievement, as a military commander, he evinced remarkable self-possession and courage. To en-sure success, of which he became increasinuly confident when he found himself possessed of the complete concurrence of his general, he used the utmost vigilance and exertion, and exposed his person to every risk.

One of the dangers which he incurred was of a singular character. An artilleryman being shot at the gun which he was serving, while Napoleon was visiting a battery, he took up the dead man's rammer, and, to give encouragement to the soldiers, charged the gun repeatedly with his own hands. In consequence of using this implement he caught an infectious cutaneous complaint, which, being

injudiciously treated and thrown inward was of great prejudice to his health, until after his Italian campaigns when he was completely cured by Dr. Corvissart ; after which for the first time he showed that tendency to embonpoint, which marked the latter part of his life. As the siege advanced, lieutenant-general O'Hara hurried from Gibraltar with reinforcements to the besieged, and assumed the chief command. The capture of this brave and experienced officer disheartened the garrison, and precipitated the evacuation of Toulon. Buonaparte, in a conversation with Mr. Barry O'Meara, describes the event, in which he declares that he made general O'Hara prisoner with his own hand. ' I had constructed,' said he, ' a masked battery of eight twenty-four-pounders and four mortars, in order to open upon fort Malbosquet, which was in possession of the English. It was finished in the evening, and it was my intention to have opened upon them in the morning. While I was giving directions at another part of

the army, some of the deputies of the convention came down. In those days, they sometimes took upon them to direct the operations of the armies, and those imbeciles ordered the battery to commence, which was obeyed. As soon as I saw this premature fire, I immediately conceived that the English general would attack the battery, and most probably carry it, as matters had not been yet arranged to support it. In fact, O'Hara seeing that the fire from the battery would dis-lodge his troops from Malbosquet, from which last I would have taken the fort which commanded the harbour, determined upon attacking it. Accordingly in the morning he put himself at the head of his troops, sallied out, and actually carried the battery and the lines which I had formed to the left, and those to the right were taken by the Neapolitans. While he was busy in spiking the guns, I advanced with 300 or 400 grenadiers unperceived, through a boyau covered with olive trees, which communicated with the battery, and commenced a terrible fire upon his troops. The English, astonished, at first supposed that the Neapolitans, who had lines on the right, had mistaken them for French, and said, ' It is those canaelie of Neapolitans who are firing upon us.' O'Kara ran out of the battery, and advanced towards

us. In advancing, he was wounded by the fire of a Serjeant, and I, who stood at the mouth of the boyau, seized him by the coat, and threw him back amongst my own men, thinking he was a colonel, as he had two epaulettes on. While they were takinghim to the rear, he cried out that he was the commander-in-chief of the English. He thought they were going to massacre him, as there existed a horrible order at that time from the convention, to give no quarter to the English. I ran up and prevented the soldiers from ill treating him. He spoke very bad French, and, as I saw that he thought they intended to butcher him, I did every thing in my power to console him, and gave directions that his wound should be immediately dressed, and every attention paid to him. He afterwards begged of me to give him a statement of the manner of his capture, to show it to his government in his justification. Those blockheads of deputies,' continued Napoleon, ' wanted to attack and storm the town first; but I explained to them that it was very strong, and that we should lose many men ; that the best way would be to make ourselves masters of the forts first, which commanded the harbour, and then the English would either be taken, or be obliged to burn the greatest part of their fleet and escape. My advice was taken, and the English, perceiving what would be the result, set fire to the ships, and abandoned the town.'

The horrors of war were never more visible than in the concluding scene of this tragic siege. Such was the dread of the victors' cruelty that upwards of 1400 persons accepted the melancholy refuge afforded them in the numerous merchant ships and other craft which crowded the port, but which the vanquished allies were about to employ as the vehicles to convey them to places of safety. Amid this general confusion and distress, there was other work to do. The stern policy of war required that the resources of

the conquered force should not be available to the victors ; it was therefore resolved, that the arsenal and naval stores, with such of the French ships as were not ready for sea, should be destroyed, and they were set on fire accordingly. The rising conflagration, growing redderand red-der, seemed at length a great volcano, amid which were long distinctly seen the masts and yards of the burning vessels, and which rendered obscurely visible the advancing bodies of republican troops, who attempted on different points to push their way into the place. The Jacobins began to rise in the town upon the flying royalists;❀❀❀ horrid screams and yells of vengeance and revolutionary chorusses were heard to mingle with the cries and plaintive intreaties of the remaining fugitives, who had not yet found

means of embarkation. The guns from Malbosquet, now possessed by the French, and turned on the bulwarks of the town increased the uproar. At once a shock like that of an earthquake, oc casioned by the explosion of many hundred barrels of gunpowder silenced all noise save its own, and threw high into the midnight heaven a thousand blazing fragments, which descended threatening ruin wherever they fell. A second explosion took place, as the other magazine blew up, with the samp dreadful effects. It was upon this night of terror, conflagration, and blood, that the star of Napoleon first ascended.

So many of the citizens of Toulon concerned in the late resistance had escaped by the means provided by the English, that republican vengeance could not collect its victims in the usual numbers. Many, however, were shot; and it has been said that Buonaparte commanded the artillery by which they were exterminated ; and also that he wrote a letter to FreYon and the younger Robespierre, congratulating them and himself on the execution of these aristocrats, and signed, Brutus Buonaparte Sans culotte. If he actually commanded at this execution, he had the poor apology that he must do so, or himself perish ; but had the fact and the letter been genuine, there has been enough of time since his downfall, to prove the truth of the accusation, and certainly enough of writers disposed to give these proofs publicity. He himself positively denied the charge; and alleged that the creatures were shot by a detachment of what was called the revolutionary army, and not by troops of the line. Soon after the retaking of Toulon, Buonaparte accompanied general Dugommier, under whom he had achieved so much glory for himself and the army, to Marseilles, and was with him in company there, when some one, struck with his person, asked the general who that little bit of an officer was and where he hud picked him vpl ‘ That officer’s name,’ replied the general, ‘ is Buonaparte ; I picked him up at the siege of Toulon, to the successful termination of which he eminently contributed ; and you will probably see one day that this little bit of an officer is a greater man than any of us.’

It was to the frank generosity of this brave old man that the young officer of artillery was chiefly indebted for the next step which conducted to his elevation. The deputies from the convention to whom the conduct of the affair of Toulon was

entrusted, and who never appeared in the trendies till three hours after the storming of the port which led to the evacuation of the town, had the impudence to arrogate to themselves the entire glory of the exploit. They failed not to dwell with complacency on the wonderful feats of Ri-cord, Salieetti, and young Robespierre; they led the attack with sabre in hand, they showed the troops the road to victory ; on the other hand they ungraciously forget in these despatches to mention so much as the name of Buonaparte to whom the victory was entirely to be ascribed. Dugommier resolved to do the youthful hero that justice which was withheld from him by the jealousy and vanity of the redoubtable deputies. Buonaparte's name was placed in the list of those whom he recommended for promotion, with the pointed addition, that if neglected he would be sure to force his own way. He was accordingly confirmed in his provisional situation of chief of battalion, and appointed to hold that rank in the army of Italy. Before joining that army, the genius of Napoleon was employed in surveying and fortifying the sea coast of the Mediterranean. This was a troublesome appointment, and not only involved him in disputes with the local authority of small towns, villages, and even hamlets, but actually exposed him to great risk with the convention at home. In prosecuting his task he had proposed repairing an old state pri-son at Marseilles, called the fort of St. Nicholas, that it might serve as a powder magazine. The patriots of Marseilles charged the commandant with an intention to rebuild this fort to serve as a bastile in controlling the good citizens. Buonaparte was at this time in Italy, but the officer who was summoned to the bar of the convention, gave such an account of the origin and purpose of the undertaking as divested it of all share of suspicion, even in the suspicious eye of the committee of public safety. While Napoleon was improving the state and position of the army on the frontiers of Italy, and directing the means for attaining various important successes which were as ˆpreliminaries of the greatest importance to his subsequent triumphs in that chief field of his glory, the downfal of Robespierre, and the dissolution of the Jacobin faction (which happened on the 27th and 28th of July 1794; threatened him with the most disastrous consequences, and aimed a fatal blow at all his prospects. He was the recognised friend of the tyrant's brother, and was understood to have participated in fhe tone of exaggerated patriotism affected by his party. He was therefore superseded in his command, and for a time detained under arrest. This was removed by the interposition of his countryman Salicetti ; and he retired into the bosom of his family at Marseilles. In May 1795 he

came to Paris to solicit employment in his profession. He found himself unfriended and indigent in the city of which he was at no distant period to be the ruler. Some individuals, however, assisted him, and among others the celebrated performer Talma, who had known him while at the military school, and even then entertained high expectations of the part in life which was to be played by ‘ le Petit Buonaparte.’

On the other hand, as a favorer of the Jaco-

bins his solicitations for employment were resolutely opposed. His situation becoming daily more unpleasant, he solicited Barras and Fre > on, men who had preserved their credit in the convention, for occupation in almost any line of his profession, and even negociated for permission to go into the Turkish service to train the mussulmans to the use of artillery. He was offered a command in La Vendee, which he declined to accept, and was finally named to command a brigade of artillery in Holland; but he never filled up the appointment. Fortunately for Buonaparte the man who had been the great obstacle to his hopes and wishes was removed, and his office supplied by M. Pontevulant, who not onlj recommissioned the persecuted victim of his predecessor, but retained him in Paris to assist the labors of the military council, to whom Buonaparte submitted the stupendous plan of his Italian campaign in 1796; which he afterwards carried into execution. This plan might have been taken for a real report of operations actually performed, rather than an outline of such as had only been projected ; such was the precision with which every measure afterwards adopted had been previously foreseen.

The quarrel between the convention and the forty-eight sections of Paris, which eventually placed Buonaparte in a more distinguished situation than ever he had held before, originated in their passing the two obnoxious laws of the 5th and 13th of Fructidor, 22d and 30th of August, 1795. These decrees expressed, that two-thirds of the members composing the convention should be reelected for th►►- new legislature. The people, especially the Parisians, could not endure the idea of men reelecting themselves ; as, upon the principle they had acted for two years, they might continue for life, and thus establish a system infinitely more odious than absolute monarchy. Besides, the convention was justly represented as a body of tyrants and assassins, purged, indeed, of the most infamous monsters, such as Robespierre and others, yet still continuing the murderers of the 2d of September, the conspirators of the 31st of May, the applauders of the

assassination of the Gironde party, &tc.

This convention, on Sunday October 4th, declared their intentions of having recourse to arms by a proclamation, and, after the lapse of a few hours, Napoleon Buonaparte, by accepting an appointment as second in command under M. Barras, had pledged himself to support their measures of coercion. The plea set up in justification of this conduct, by Napoleon and his friends, rests upon the circumstance ‘ that the convention was successively torn by factions, which were never able to acquire any stability, but varied their principles almost every month. The interior of the republic was afflicted by a horrible system of reaction : the national domains could no longer find purchasers ; the assignats fell every day, the armies were without money, being till then only supplied by requisitions and the maximum; the magazines were also empty, and the soldier was no longer sure of bread. Kven the recruiting had ceased, though tlu-armies continued to gain great advantages

oecause they were more numerous than ever. The party cf the Bourbons was every day increasing. Pichegru, the first general of the republic, had been gained over. All parlies were tired of the convention, and it was tired of itself. It had promised the nation a constitution ; and it per-leived at length that the safety of that, and its iwn also, depended on the fulfilment of the expectations which had been raised. On the 25th of June, 1705, it adopted the constitution known under the title of that of the year III. The government was entrusted to five persons, under the name of the Directory; the legislature to two councils, called the Council of Five Hundred, and the Council of the Ancients.

The Parisians, dissatisfied and mutinous, with upwards of 40,000 men in their interest, were resolved to annihilate the government. Menou, the general of the convention, acted either with duplicity or cowardice; and was, after the first skirmish with one of the sections, which he permitted to triumph, deprived of his command. The government was at this crisis in the hands of Barras. Barras had been at the siege of Toulon, and remembered the energy of Buonaparte. Buonaparte had been a spectator of the assault of the Thuilleries on the 10th of August, and had been known to express his contempt equally of the defence and of the attack. It is not improbable that in the present crisis the professional soldier should have repeated his contempt, or that the habitual solicitor for employment should have offered his services. lie was sent for by Barras and invested with the command of 6000 troops, the last hope of the convention. He threw his little army into the Thuilleries, prepared for battle on the instant, and within a few hours received, at the mouth of his guns, the attack of 30,000 men. The action was brief; the army of the sections was staggered by finding that the first furious impulse of a inob was no longer to be victory, even in Paris. A few discharges of grape-shot scattered them like sheep from the front of the armed posts ; and from that day forth the reign of the rabble was undone. The convention, rescued from the guillotine, was grateful ; and, while Barras was placed at the head of the garrison of Paris, Buonaparte was appointed second in command. One of the many phases of the revolution was now passed. Barras and his colleague formed the directory ; and Buonaparte, vigorous and able, and publicly devoted to the ruling party, must have felt himself in the high road to fortune. Meantime circumstances introduced Buonaparte to an acquaintance which was

destined to have much influence on his future fate. A fine boy, of ten or twelve years old, presented himself at the levee of the general of the interior with a request of a nature unusually interesting. He stated his name to be Eugene Beauharnois, son of the ci-devant vicomte De Beauharnois, who, adhering to the-revolutionary party, had been a general in the republican service upon the Rhine ; and, falling under the causeless suspicion of the committee of public safety, was delivered to the revolutionary tribunal, and fell by its sentence just four days before the overthrow of Robespierre. Eugene was come to

request of Buonaparte, as general of the interior, that his father's sword might be restored to him. The prayer of the young suppliant was as interesting as his manners were engaging, and Napoleon felt so much interest in him that he was induced to cultivate the acquaintance of Eugene's mother, afterwards the empress Josephine. This lady was a Creolian, the daughter of a planter in St. Domingo. Her name at full length was Marie Joseph Rose Tascher de la Pagerie. She had suffered her revolutionary miseries. In her misfortunes she had formed an intimacy with a companion in distress, Madame Fontenac, afterwards Madame Tallien, from which she derived great advantages after her friend's marriage. They were both liberated from the same prison, where they had been confined as suspected persons, and became the most conspicuous ornaments of Parisian society. When Madame Beauharnois and general Buonaparte became intimate, the latter assures us, and we see no reason to doubt him, that although the lady was two or three years older than himself, yet, being still in the full bloom of beauty, and extremely agreeable in her manners, he was induced solely by her personal charms to make her an offer of his hand, heart, and fortune. His marrying Madame Beauharnois was a mean? of uniting his fortune with those of Barras and Tallien ; the first of whom governed France as one of the directors, and the last from family and politkal connexions had scarcely inferior influence. He had already deserved well of them for his conduct on the day of the sections; but he required their countenance to rise still higher ; and. without derogating from the bride's merit, we may suppose her influence in their society corresponded with the views of her lover. They were married 9th of March, 1796; and the dowry of the bride was the chief command of the Italian armies; a scene which opened a full career to the ambition of the youthful general. Buonaparte remained with his wife only three days after his marriage ; and, it is said, at a time when no hazard of the troops required his presence. This has been used as a proof that his union with Madame Beauharnois was a heartless compact of interest, and that he thus took

no pains to conceal the fact from the knowledge of the world. Imputations, too, have beep unsparingly thrown upon the reputation of the lady, which we think the whole tenor of hei afterlife sufficiently contradicts; and it is certain that, so far as Buonaparte was capable of loving, he regarded Josephine with unassembled affection.

Buonaparte's Italian birth, and consequent acquaintance with the language, the habits, and the impulses of Italy; his earliest campaign, which had been on its frontier ; the temptation to a conquest, alluring to France by the opulence and by the divisions of its sovereignties; the nature and acknowledged superiority of the French soldier over the indolent and effeminate men of the south ; all stimulated him to the attack of Italy. With the directory the motives were, if less personal, equally strong. The battle had, till now, been fought along the eastern and northern boundaries of France

Austria, often defeated, had still struggled boldly; and army after army had been lost in the attempt to plunge into the land of forests and mountains beyond the Rhine. The talents of the ablest generals, and the gallantry of the most enthusiastic troops of the republic, had been wasted against the solid fortresses, or the still more unconquerable morasses, denies, and torrents, of that vast region of wild nature and fierce soldiership. But Italy lay before the French armies an open campaign. The German was there stripped of the native defences that check the march of an invader more than the sword. He was, like the Frenchman, a stranger in a land of strangers ; and, if more known, was known but as the foreign master of a people feeling their chains enough to rejoice at the com-ing of a foreign deliverer, though without the honest energy to break them for themselves. The plan of crossing the Alps, and marching into Italy, suited in every respect the ambitious and self-confident character of the general to whom it was now entrusted. It gave him a separate and independent authority, and the power of acting on his own judgment and responsibility. His departure from Paris, to commence this celebrated campaign, took place on the 1st of March, 1796. He was the only person who was not

astonished at his good fortune. When a friend, who was congratulating him upon his appointment, testified some surprise at his youth, lie replied, ‘ I shall return old.’ His mind was made up to the alternative of conquest or ruin, as many judged from his words to another friend at taking leave of him, ‘ In three months,’ he said, ‘ I will be either at Milan or Paris;’ intimating at once his desperate resolution to succeed, and his sense that the disappointment of all his prospects must be the consequence of a failure.

Buonaparte found his army lying exposed on the mountains without tents, in rags, without pay, and full of murmurs at themselves and their government. But they amounted to more than 50,000 men ; active, and accustomed to the mountain hardships and warfare, eager for plunder and battle, and contemptuous of the enemy. Delay would have produced mutiny ; if his nature had not been the total reverse of tardiness. He led them instantly to the passage of the Alps by the lower range, where the mountains stoop to the Mediterranean. In accomplishing this he anticipated the difficulties which he skilfully obviated, and astonished the enemy, in whose presence it was done, by the fertility of his genius and the celerity of his movements. This enemy was the Austro-Sardinian army, cantoned on the hills under which he was marching towards Genoa, and who were united for the defence at once of Turin and the Milanese, under the command of Beaulieu. The ages of the opposing generals were as strongly contrasted as their fortunes. Buonaparte was twenty-six, Beaulieu seventy-five. The Austrians poured down in separate columns on the army moving below : the French resisted bravely, but on the whole were beaten until nightfall; but their general was now in the field made for the display of his subtle activity. While the Austrians, intending

to complete the victory, next morning halted on the ground, Buonaparte put his troops in mo-tion, manoeuvred round the Austrian centre dur-ing the night, and by day-break rushed to an attack, which broke the enemy with the loss of colors, guns, and some thousand prisoners. This first great victory of Buonaparte, in his memorable Italian campaign, was fought on the 10th of April, 1796. Oa the llth the Austrian general was obliged to extricate himself by a disastrous retreat. This battle, which has obtained the name of the battle of Monte None, exhibited all the peculiarities of the military tactics of the conqueror, as well as exposed the miserable system then adopted by the continental armies opposed to France. What these peculiarities were, one of the great captain’s biographers has finely described. ‘ As

war becomes a profession, and a subject of deep study, it is gradually discovered that the principles of tactics depend upon mathematical ana arithmetica. science ; and that the commander will be victorious who can assemble the greatest number of forces upon the same point at the same moment, notwithstanding an inferiority of numbers to the enemy when the general force is computed on both sides. No man ever posses►►>ed in a greater degree than Buonaparte the power of calculation and combination necessary for directing such decisive manoeuvres. It constituted, indeed, his secret, as it was for some time called, and that secret consisted in an imagination fertile in expedients which would never have occurred to others; clearness and precision in forming his plans; a mode of directing with certainty the separate moving columns which were to execute them, by arranging so that each division should arrive on the destined position at the exact time when their service was necessary ; and, above all, in the knowledge which enabled such a master spirit to choose the most fitting subordinate implements to attach them to his person, and, by explaining to them so much of his plan as it was necessary each should execute, to secure the exertion of their utmost ability in carrying it into effect. Thus not only were his manoeuvres, however darinp, executed with a precision which warlike operations had not attained before his time, but they were also performed with a celerity which gave them almost always the effect of surprise. Napoleon was like lightning in the eyes of his enemies ; and, when repeated experience had taught them to expect this portentous rapidity of movement, it sometimes induced his opponents to wait in a dubious and hesitating posture, for attacks, which, with less apprehension of their antagonist, they would have thought it more prudent to frustrate and to anticipate.' The battle of Monte Notte developed all these striking characteristics of the youthful general In the moment of the greatest peril, he eminently displayed that truth and mathematical certainty of combination which enabled him suddenly to concentrate his forces, and defeat his enemy by overpowering him on the very point where he thought himself strongest. He accumulated a superior force on the Austrian centre, which he destroyed ; while Colli on the right, and Beaulieu himself on the left, each at the head of

numerous forces, did not even hear of the action till it was fought and won.

The beaten army still strong, and still resisting, was again attacked by the indefatigable soldier. Incessant battle at length routed the Austrians ; they trembled for the Milanese. The Sardinians withdrew to the defence of their territory : the latter were pursued. Turin was the nearer prize. The king of Sardinia saw his fugitive army driven within two leagues of his capital. He had no alternative but unconditional submission ; and the terms exacted from him were such as conquerors usually dictate to the vanquished. It is curious to contrast the address of the conqueror to his army when they set out on this expedition, and when, at the close of the first month, they had prostrated all opposition, and opened the clear passage of. the Alps to the future invasion which France might meditate: ††† 4 Soldiers, you are naked, ill-fed ††† much is due to us ; there is nothing to pay us with. The patience and courage you have shown in the raidst of these rocks ure admirable; but they win you no glory. I come to lead you into the most fertile plains in the world ; rich provinces, great cities, will be in your power. There you will have wealth, honor, and glory. Soldiers of Italy! can your courage fail?' These words were addressed to his troops on the 29th of March. On the 8th of April he was within a day's mfcrch of Turin, and, having subdued the Sardinian government, could thus address his troops : ††† ' You have, in fifteen days, gained six victories, taken twenty-one stand of colors, fifty-five pieces of cannon, and conquered the richest part of Piedmont. Your services are equal to those of the army of Holland and of the Rhine. You were in want of every thing, but you have provided every thing. You have gained battles without cannon ; passed rivers without bridges ; made forced marches without shoes ; bivouacked without brandy, and often without bread. None but republican phalanxes could have done so. For this you have the thanks of your country.'

At Ceva, and from the heights of Monteze-moto, Napoleon enjoyed the splendid view of the fertile fields of Piedmont, stretching in boundless perspective beneath his feet, watered by the Po, the Tanaro, and a thousand other streams which descend from the Alps. Before the delighted eyes of the army of victors lay the rich expanse like a promised land ; behind them was the wilderness they had passed : not indeed a desert of barren sand similar to that in which the Israelites wandered, but a huge tract of rocks and inaccessible mountains, crested with ice and snow, seeming by nature designed as the barrier

and rampart of the blessed regions which stretched eastward beneath them. We can sympathise with the self-congratulation of the general who had surmounted such tremendous obstacles in a way so unusual. He said to the officers around him, as they gazed upon this magnificent scene, ‘ Hannibal took the Alps by storm : we have succeeded as well by turning their flank.’ To commemorate these brilliant successes, a medal of Buonaparte was struck in the character of the conqueror of the battle of Monte Notte. The face is extremely thin, with

dark hair, a striking contrast to the fleshy square countenance exhibited on his later coins : on the reverse Victory bearing a palm branch, a wreath of laurel, and a naked sword is seen fly-ing over the Alps. This medal was the first of the splendid series which records the victories and honors of Napoleon, and which was designed by Denon as a tribute to the genius of his patron.

The ardent disposition of Buonaparte did not long permit him to rest after the advantages which he had secured. He determined to give the republic of Venice, the grand duchy of Tuscany, and other states in Italy, no time to muster forces, and take a decided part, as they were likely to do, to oppose a French invasion. A speedy resolution was the more necessary, as Austria, alarmed for her Italian possessions, was about to make every effort for their defence. Orders had already been sent by the Aulic council of war to detach an army of 30,000 men, under Wurmser, from the army of the Rhine, to the frontiers of Italy. These were to be strengthened by other reinforcements from the interior, and by such forces as could be raised in the mountainous district of the Tyrol, which furnishes perhaps the most experienced and most formidable sharp shooters in the world. The whole was to be united to the fragments of Beaulieu’s defeated troops. To prevent this junction, and to beat the different forces in succession, required all the promptitude of Buonaparte, and the enthusiastic order of his troops. These were not wanting. But the general and army, much as they had achieved, considered nothing as won so long as the Austrians held Milan. The military genius of Buonaparte never appeared to greater advantage than in the skill with which he manoeuvred to out-general his veteran foe. But not only was skill necessary ; hard fighting was indispensable ; and the French performed prodigies of valor. By a succession of desperate battles they drew the Austrians over the Po, the Mincio, and the Adda. The daring attack of the bridge of Lodi laid Milan open on the 10th of May 1796. Of this memorable day Sir Walter Scott and Buonaparte have given a most interesting account :

Upon the 10th of May, attended by his best generals, and heading the choicest of his troops, Napoleon pressed forward towards Lodi. About a-league from Casale he encountered the Austrian rear-guard, who had been left, it would appear, at too great a distance from their main body. The French had no difficulty in driving these troops before them in the town of Lodi, which was but slightly defended by the few soldiers whom Beaulieu had left on the western or right side of the Adda. He had also neglected to destroy the bridge, although he ought rather to have supported a defence on the right bank of the river (for which the town afforded many facilities) till the purpose of destruction was completed, than have allowed it to exist. If his rear-guard had been actually stationed in Lodi, instead of being so far in the rear of the main body, they might, by a protracted resistance from the old walls and houses, have given time for this necessary act of demolition.

But, though the bridge was left standing, it

wa? swept by twenty or thirty Austrian pieces of artillery, whose thunders menaced death to any one who should attempt that pass of peril. The French, with great alertness, got as many guns in position on the left bank, and answered this tremendous fire with equal spirit. During this cannonade Buonaparte threw himself personally amongst the fire in order to station two guns, loaded with grape shot, in such a position as rendered it impossible for any one to approach for the purpose of undermining or destroying the bridge ; and then calmly proceeded to make arrangements for a desperate attempt. His cavalry was directed to cross, if possible, at a place where the Adda was said to be fordable ; a task which they accomplished with difficulty. Meantime Napoleon observed that the Austrian line of infantry was thrown considerably behind the batteries of artillery which they supported, in order that they might have the advantage of a bending slope of ground, which afforded them shelter from the French fire. He therefore drew up a close column of 3000 grenadiers, protected from

the artillery of the Austrians by the walls and houses of the town, and yet considerably nearer the enemy's line of guns on the opposite side of the Adda than were their own infantry, which ought to have protected them. The column of grenadiers, thus secured, waited in compaiative safety until the appearance of the French cavalry, who had crossed the ford, began to disquiet the flank of Austrians. This was the critical moment which Buonaparte expected. A single word of command wheeled the head of the column of grenadiers to the left, and placed it on the perilous bridge. The word was given to advance, and they rushed on with loud shouts of Vive la Republique ! But their appearance upon the bridge was a signal for a redoubled shower of grape shot, while, from the windows of the houses on the left side of the river, the soldiers who occupied them poured volley after volley of musketry on the thick column as it endeavoured to force its way over the long bridge. At one time the French grenadiers, unable to sustain this dreadful storm, appeared for an instant to hesitate. But Berthier, the chief of Buonaparte's staff, with Massena, D'Allemagne, and Cerveni, hurried to the head of the column, and, by their presence and gallantry, renewed the resolution of the soldiers, who now poured across the bridge. The Austrians had but one resource left, to rush on the French with the bayonet, and kill or drive back into the Adda those who had forced their passage, before they could deploy into line, or receive support from their comrades, who were still filing along the bridge. But the opportunity was neglected, either because the troops, who should have executed the manoeuvre, had been, as we have already noticed, withdrawn too far from the river; or because the soldiery, as happens when they repose too much confidence in a strong position, became panic struck when they saw it unexpectedly carried; or it may be that general Beaulieu, so old and so unfortunate, had somewhat lost that energy and presence of mind which the critical moment demanded. Whatever was the cause, the French rushed on

the artillerymen, from whose fire they had lately suffered so tremendously, and, unsupported as they were, had little difficulty in bayoneting them. The Austrian army now completely gave way, and lost in their retreat, annoyed as it was by the French cavalry, upwards of twenty guns, 1000 prisoners, and perhaps 2000 more wounded and slain.

Such was the famous passage of the bridge of Lodi ; achieved with such skill and gallantry as gave the victor the same character for fearless intrepidity and practical talent in actual battle, which the

former part of the campaign had gained him as a most able tactician.

‘ Of all the actions in which the troops under my command have been engaged,’ said Buonaparte, in his despatches to the Directory, ••• none has equalled the tremendous passage of the bridge of Lodi. If we have lost,’ continued he, ‘ but few soldiers, it has been owing merely to the promptitude of our attacks, and the sudden effect produced on the enemy by the formidable fire of our invincible array. Were I to name all the officers who distinguished themselves in this battle I should be obliged to enumerate every carabinier of the advanced guard, and almost every officer belonging to the staff. I must not, however, omit the intrepid Berthier, who acted on this eventful day as a bombardier, a cavalry officer, and a grenadier.’

The French cavalry pursued the retreating Austrians as far as Cremona, of which they took possession. Pizzighitone was obliged to capitulate, the garrison being cut offfrom all possibility of succour. About 500 prisoners surrendered in that fortress.

It was at this time that Buonaparte had some conversation with an old Hungarian officer, made prisoner in one of the actions, whom he met with at a bivouac by chance, and who did not know him. The veteran’s language was a curious commentary on the whole campaign ; nay, upon Buonaparte’s general system of warfare, which appeared so extraordinary to those who had long practised the art on more formal principles. ‘ Things are going on as ill and irregularly as possible,’ said the old martinet ; ‘ the French have got a young general who knows nothing of the regular rules of war ; he is sometimes in one point, sometimes on the flank, sometimes on the rear; there is no supporting such a gross violation of rules./ The court at Milan was thrown into consternation by the successes of the French at the bridge of Ixxli. The archduke Ferdinand, by whom Austrian Lombardy was governed, with his duchess, immediately quitted their capital, followed by a small retinue, and leaving only a moderate force in the citadel, which was not in a very defensil-le condition. The Milanese citizens, released from the restraint imposed on them by the presence -
>f their sovereign, and willing to propitiate their approaching conquerors, began, with real ur affected zeal for rt-puhlicanism, to prepare thenv-selves for the reception 6f the French. The three-colored cockade was at first timidly assumed; but, the example being shown, it seemed as if these emblems had fallen like snow into the laps and hats of the multitude. The imperial arms were removed from the public buildings,

and a placard was put on the palace of the government with an inscription, * This house to be let ; apply for the keys to the French commissioner Salicetti.' On the 14th of May Buonaparte made his public entry into Milan under a triumphal arch prepared for the occasion, which he traversed surrounded by his guards, and took up his residence in the archiepiscopal palace. The same evening a splendid entertainment was given, and the tree of liberty (of which the aristocrats observed, that it was a bare pole, without either leaves or fruit, roots or branches) was erected with great form in the principal square. All this affectation of popular joy did not disarm the purpose of the French general, to make Milan contribute to the relief of his army. He imposed upon the place a requisition of 20,000,000 of livres. Italy was now in the view of the conqueror ; and though no state in all the extent of that fair and rich domain could be exactly said to be at open war with the new republic, Buonaparte was determined that this should make no difference in his mode of treating them. The duchies of Parma and Modenawere obliged to purchase an armistice by heavy sacrifices ; and now began that species of spoliation, on the part of the French, which drew down upon the republican, consular, arid monarchical government, the deep execration of the civilised world. The duke of Modena, who was duke of Parma, was compelled to surrender twenty of his choicest pictures, to be selected at the choice of the French general and the persons of taste with whom he might advise. It was in vain that the first of these personages remonstrated against what he deemed a sacrilege upon religion and taste, that he offered to redeem one picture alone (the celebrated St. Jerome by Correggio), for 2,000,000 of livres. The money was refused, and the painting forwarded to Paris. Buonaparte announced its approach by the following sarcasm at the expense of the fallen shrines of piety in that corrupt and atheistical city : ??? ' I will send you as soon as possible the finest pictures of Correggio, amongst others a St. Jerome. I must own that the saint takes an unlucky time to visit Paris, but I hope you will grant him the honors of the museum.' The same system was followed at Milan, where several of the most valuable articles were taken from the Ambrosian collection.

But the triumph of the French arms was still to be purchased by a long and bloody warfare. Austria had hitherto defended Italy only with its old garrison. The strength of the empire had rolled to the German frontier; but now the stream was changed, and the military might of a population of 25,000,000 was to pour from the Tyrol upon the assailant who had dared to violate the ancient monarchy of the Caesars. But the talent and vivid daring of Buonaparte were born for the mastery over the slow and heavy courage of Austria. Thi'ee successive armies, under Wurmser, Alvinzi, and the archduke Charles, were pierced by the fiery charge of the French columns ; and Buonaparte at last climbed the Tyrolese hills to see the remnant of the archduke's army flying before him, scattering dismay through the immense countries at his

feet. One obstacle alone had remained to delay his march to consummate triumph ××× Mantua. This great fortress had been the central point of the Austrian operations. It was singularly strong by art and by position ; and while it contained a hostile garrison, no French army in Italy could feel itself secure. Advance was rendered difficult ; but casual repulse might become ruin, while the troops in Mantua waited only to fall upon the flanks and rear of the retreating army. But the siege was singularly hazardous. The fortress and city stand on an island formed by the overflowing of the Mincio, and the only access to which was by five causeways, one of them strongly fortified. See our article MILAN. The French, impatient of delay, were called out to be led to the storm; but some partial events soon convinced them that the walls of Mantua were to cost time and blood. But its position was obviously favorable to blockade. The neglected state of the Austrian fortresses rendered it probable, that a garrison of 12,000 men might be speedily starved into surrender. Four of the causeways were attacked, the Austrian communications with the country were cut off, and Serrurier was left at the head of a force inferior to the besieged to wait the work of famine.

No conqueror ever felt more deeply the maxim, that an invader must never pause. Disengaging the chief strength of his army from the siege of Mantua, and relieved for the present from the pursuit of the enemy in the field, he threw his force into the shape of moveable columns, and ranged at will through the north-east and west of the peninsula. He forced the Venetians to a reluctant aud dishonorable submission ; he seized the harbours of Tuscany; he invaded, plundered, and alienated the papal territories ; he put down insurrection ; he formed new governments ; and ceased from this sleepless round of success

only when the sound of the trumpets from the Alps told him that his work was not yet done, and that he was again to face and to overwhelm the gallant soldiership of the empire.

The battle of Rivoli, the bloodiest of his Italian successes, at length decided the fall of Mantua. Wurmser had resisted, with a firmness worthy of the importance of his trust, the assaults of the enemy, and the still mo.re formidable pressures of disease and famine. The relief of the fortress was now beyond hope. The Austrian armies had been scattered like dust before the feet of the invaders ; his garrison was reduced to extremity, and his aid-de-camp Klenau was sent to treat for a surrender. Buonaparte was present at the interview with the blockading general. But all things in France are theatrical, and Buonaparte stood wrapt from head to foot in a mantle ; the mysterious spirit of the conference, which he finished by casting off his disguise, and pronouncing those oracular phrases, in which every Frenchman delights, in which Buonaparte delighted more than all, and which he and his people had equally learned from the stage. But his conduct was not yet destitute of that courtesy which belongs to brave men, gaining honor from each other by the long

display of skill and intrepidity. Writing down the conditions of surrender, he left it at Wurmser's disposal to accept them on the spot, or at almost any interval required by his military honor. The letter to the directory on this occasion contained a testimony to the valor of the defeated general ; and the act of surrender itself was marked by the delicacy of his declining to be present when Wurmser gave up his sword at the head of his garrison. These traits of feeling were so soon obliterated from the character of Napoleon, that they deserve commemoration even for the sake of contrast.

Buonaparte was now free to seize upon the last honors of these extraordinary campaigns. He had cleared Italy of all native opposition, and levelled it into a magnificent parade for the troops of the republic. Mantua lay behind him ; a bulwark for his rear, and ready to thunder on the first gathering of insurrection. The return of -his columns,

which had gone like whirlwinds through the Italian provinces, subduing and wasting, gave him an army in the highest preparation for war ; numerous, opulent, elevated by continued victory, contemptuous of its enemy, passionate for conquest, and devoted to its general as to the living genius of battle ; who well knew the power of the mighty instrument in his hands. With the conquest of Vienna in view, he thus addressed his army : ###

‘ Soldiers ! the taking of Mantua has finished a campaign which has given you an everlasting claim upon the gratitude of your country. You have been victorious in fourteen pitched battles and in seventy combats ; you have taken more than 100,000 prisoners; you have taken from the enemy 500 field-pieces, 2000 pieces of large calibre, and the equipage of four bridges. The contributions imposed upon the conquered countries have fed, clothed, and paid the army during the whole of the campaign ; and, moreover, you have sent 30,000,000 to the public treasury. You have enriched the museum of Paris with more than 300 objects, chefs d’ceuvre of ancient and modern Italy. You have conquered for the republic the finest countries in Europe. The Lombard and Cispadane republics are indebted to you for their liberty ; their colors float for the first time upon the Adriatic. The kings of Sardinia and Naples, the pope, the duke of Parma, are detached from the coalition of our enemies, and have solicited our amity You have driven the English from Leghorn, from Genoa, and from Corsica. But you have not yet achieved every thing ### a grand destiny is still reserved for you ; in you the country has placed its dearest hopes ; continue to be worthy of them.

‘ Of the number of enemies that coalesced to stifle the republic in its birth, the emperor of Germany alone remains : he has degraded himself from the dignity of a great power, by accepting pay from the merchants of London. He nas neither politics, nor will separate from those perfidious islanders, wlio, strangers to the calamities of war, contemplate its ravages upon the continent with pleasure.

‘The executive directory has spared no pains to give peace to Europe. The moderation of its

propositions have borne no proportion with Ut## strength of its armies. It has not consulted your courage, but, listening to the voice of humanity, has endeavored to effect your return to th## bosoms of your families. Its voice has not been heard at Vienna. There is then no hope but in seeking peace in the heart of the hereditary states of the

house of Austria. You will there find a brave people weighed down by the war they have had with the Turks, and by the present war. The inhabitants of Vienna, and the states of Austria, groan under the blindness and arbitrary conduct of the government. There is not an individual who is not convinced that the gold of England has corrupted the ministers of the emperor. You will respect their religion and their manners, and protect their property. You carry liberty to the brave Hungarian nation.

‘ The house of Austria, which, in every war for three ages past, has lost a part of its power, and who, discontented with its subjects, has despoiled them of their privileges, will find itself reduced at the end of this war to accept the peace we shall grant it, and to descend in reality to the rank of a secondary power, in which it has already placed itself, by taking wages from, and putting itself at the disposal of England.

‘ BUONAPARTE.’

The archduke Charles, the last hope of imperial generalship, at the head of the last army of the empire, was attacked on the Tagliamento, and was forced from river to river, and from entrenchment to entrenchment. His troops were drawn up on the verge of the last barrier of the empire, when, to his astonishment, he received a proposal for peace. It was the policy of Buonaparte ††† a policy which he retained in all his future wars, to seize on the moment of some signal success, for the proposition of a treaty, and in that proposition to demand terms less advantageous than the conqueror might be entitled to expect. By this moderation he often surprised the dispirited enemy into a glad acquiescence. But his game was not yet closed. The final treaty often grew in severity of conditions, which were yet complied with from the difficulty of resuming a hostile attitude, the reluctance of sovereigns to appal their peo-ple with the news that the period of bloodshed must suddenly return, and the actual sacrifices already made; the abandonment of territory, population, and fortresses, as pledges for the negociation. But, if the treaty remained a losing one, he still had the remedy which he never failed to use ; he treasured up his wrath until he saw his antagonist disarmed. A pretext for at-tack was made, a French army was instantly flung upon the frontier, and in three months the French flag was seen flying from the turrets of the enemy’s capital. Buonaparte’s letter to the archduke is memorable, even as a record of his abrupt and ostentatious, yet subtle style :†††

‘ It is the part of a brave soldier to make war but to wish for peace. The present strife has lasted for six years. Have we not yet slam

enough of men, and sufficiently outraged h nity? Peace is demanded on all sides, at large has laid down the arms assumed against the French republic. Your nation remains alone

in hostility, and yet blood flows faster than ever. This sixth campaign has commenced under ominous circumstances. End how it will, some thousands of men more will be slain on either side ; and at length, after all, we must come to an agreement, for every thing must have an end at last••• -even the angry passions of men. The executive directory made known to the emperor their desire to put a period to the war which desolates both countries; but the intervention of the court of London opposed it. Are there no means of coming to an understanding, and must we continue to cut each others thrOats for the interests or passions of a nation, herself a stranger to the miseries of war ? You, the general in chief, who approach by birth so near the crown, and are above all those petty passions which agitate ministers and the members of government, will you resolve to be the benefactor of mankind, and the true saviour of Germany ? Do not suppose that I mean by that expression to intimate that it is impossible for you to defend yourself by force of arms ; but, under the supposition that fortune were to be-come favorable to you, Germany would be equally exposed to ravage.

‘ With respect to my own feelings, general, if this proposition should be the means of saving one single life, I should prefer a civic crown so merited to the melancholy glory attending military triumph.’

The archduke’s grave and simple answer was a striking contrast to this theatrical declamation. ‘ Unquestionably, sir, in making war and in following the road prescribed by honor and duty, I desire as much as you the attainment of peace for the happiness of the people, and for the sake of humanity. Considering, however, that in the situation I hold it is no part of my business to enquire into and determine the quarrel of the belligerent powers, and that I am not furnisiied on the part of the emperor with any plenipotentiary powers for treating, you will excuse me, general, if I do not enter into a negociation with you

touching a matter of the highest importance but which does not lie within my department. Whatever shall happen, either respecting the fu-ture chances of the war, or the prospect of peace, I request you to be equally convinced of my distinguished esteem.'

The negociation was broken off; the archduke made a lion-like retreat, fighting through the mountains, and turning fiercely on the French, who hung on his march step by step, until Upper Styria was evacuated, and Buonaparte, entering upon Lower Styria,saw before him the boundless plain of Austria, and, between his battalions and the walls of Vienna, nothing but a fugitive population, cities terrified and throwing open their gates, and a broken host carrying dismay far and wide.

He descended from the hills and advanced within a few marches of the capital, where the archduke had determined to fiˆht the final battle for liis country. But the spirit of the Germans was at last broken ; the fears of a great and luxurious city roused by the unusual clamors of war, and still more nearly touched by the sight of the wounded and wreck of its own volunteers, over-

whelmed the courage of the government. The court gave the fatal example of despair by sending its treasures into Hungary. The archduke alone raised his voice in the grand council for resistance to the last. The army, indignant at defeat and strongly devoted to this gallant soldier, were ready to perish with him before a French foot should pollute the mother city of the empire. He represented to the council that Buonaparte at every step in advance was leaving his resources behind, that he was plunging into a country where every man's hand would be raised against him, that the warlike dependencies of Austria were ready to pour down their thousands and tens of thousands on the rear of the French, and finally that peace now made would be only a truce leading to a bloodier and more conclusive war. On the 13th of April, 1797, the preliminaries of peace were signed at Leohen. Buonaparte had felt the hazard of his position in the midst of the hostile millions of Austria ; and he acknowledged it in his answer to the murmurs of the directory, at his giving a respite to the empire. ' If,' said he, in his despatch from Leoben, ' at the commencement of the Italian campaigns, I had made a point of going to Turin, I should never have passed the Po ; had I insisted prematurely on advancing to Rome, I should never have secured Milan ; and, now had I made an indispensable object of reaching Vienna, I might have destroyed the republic.'

In some of the battles and situations which marked the progress and character of the Italian campaigns, circumstances of a personal nature to Buonaparte occurred, which cannot be omitted in any notice of his life, however brief.

‘ It seems a singular custom was established in the army of Italy. After each battle, the oldest soldiers used to hold a council, and confer a new rank on their young general, who, when he made his appearance in the camp, was received by the veterans, and saluted by his new title. They made Buonaparte a corporal at Lodi, and a serjeant at Castiglione ; and hence the surname of petit caporal, which for a long time was applied to him by the soldiers.

* The right to command, which Buonaparte possessed in a very great degree, appeared so undeniable, that every one yielded to it, from the general down to the private. One day he had occasion to complain to Berthier that the measures prescribed for provisioning the army had not been followed, ‘ That,’ said Berthier, ‘ is astonishing ; however, I have given my orders for this purpose.’ ••• ‘ What do you call your orders ?’ replied Buonaparte, briskly. ‘ Here is only one man who has any right to give orders, and that is myself; it is the business of the rest to obey : and so to begin with you, sir, mount your horse, and see that my orders are obeyed.’

A body of 4000 or 5000 Austrians, partly composed of those who had been cut off at the battle of Lonado, partly of stragglers from Lunsdonowich, received information from the peasantry, that the French troops, having departed in every direction to improve their success, had only left a garrison of 1200 men in the town of Lonado, the commander of the division resolved instantly to take possession of the town, and thus

to open his march to the Mincio, to join Wurmser. Now it happened that Buonaparte himself, coming from Castiglione with only his staff for prelection, had just entered Lonado. He was surprised when an Austrian officer was brought before him blindfolded, as is the custom

on such ###occasions, who summoned the French commandant of Lonado to surrender to a superior force of Austrians, who, he stated, were already forming columns of attack to carry the place by irresistible force of numbers. Buonaparte, with admirable presence of mind, collected his numerous staff around him, caused the officer's eyes to oe unbandaged, that he might see in whose presence he stood, and upbraid him with the inso- .ence of which he had been guilty, in bringing a summons of surrender to the French commander-in-chief in the middle of his army. The credu- .ous officer, recognising the presence of Buonaparte, and believing it impossible that he could oe there without at least a strong division of ###his army, stammered out an apology, and re- .urned to persuade his dispirited commander to surrender himself and the 5000 men and upwards whom he commanded, to the comparatively small force which occupied Lonado. They grounded their arms accordingly to one-fourth of their number, and missed an inviting and easy opportunity of carrying Buonaparte prisoner <to Wurmser's head quarters.

###* The number of the dead near Bassano was ###considerable. Curious to ascertain the loss of the enemy, Buonaparte in the evening rode over the field with his staff, when their notice was attracted by the howlings of a dog, that seemed to increase in proportion as they approached the spot whence they proceeded. ' In the deep silence of a beautiful moonlight night,' said the emperor, ' a dog leaping suddenly from beneath the clothes of his dead master, rushed upon us, and then immediately returned to his hiding-place, howling piteousty. He alternately licked his master's hand, and Tan towards us, as if at once soliciting aid and seeking revenge. Whether owing to my own particular turn of mind at that moment, the time, the place, or the action itself, I know not, but certainly no incident on any field of battle ever produced so deep an impression on me. I involuntarily stopped to contemplate the scene. This man, thought I, has friends in the camp or in his company, and here he lies forsaken by all except his dog. What a lesson nature presents here, through the medium of an animal ! Whet a strange being is man ! and how mysterious are his impressions ! I had without emotion ordered battles which were to decide the fate of the army: I had beheld with tearless eye the execution of those operations by which numbers of my countrymen were sacrificed ; and here my feelings were roused by the mournful howlings of a dog ! Certainly at that moment I should have been easily moved by a suppliant enemy. I could very well imagine Achilles surrendering up the body of Hector at the sight of Priam's tears.'

Several anecdotes are related, of the danger to which Buonaparte was personally exposed dur-ing the three days' fighting at Arcole. Las

Cases, mentioning the bridge at Arcole, says. ‘ Here

Napoleon in person tried a last effort : he seized a standard, rushed towards the bridge, and fixed it there. The column he led had half cleared the bridge when the flank fire caused their attack to fail. The grenadiers of the head of the column, abandoned by the rear, hesitate and are induced to retire ; but they will not abandon their general : they seize him by his arms, his hair, and his clothes, and drag him along with them in their flight, amidst the dead, the dying, the fire and the smoke. The general-in-chief is thrown into a marsh, where he sinks up to the middle : he is in the midst of the enemy ; but the French perceive that their general is not amongst them. A cry is heard of ‘ Soldiers ! forward to rescue the general !’ These brave men instantly turn, and rush upon the enemy ; they drive them beyond the bridge, and Napoleon is saved.’

‘ Napoleon acknowledged, whilst at St. Helena, that he considered himself in the greatest danger at Arcole ; his horse was shot under him ; when, rendered furious by the wound, the animal seized the bit between his teeth, and galloped on towards the enemy. In the agonies of death he plunged into a morass, and expired, leaving his rider nearly up to his neck in the swamp, and in a situation from which, as he could not extricate himself, he thought the Austrians would have come and cut off his head, which appeared just above the surface. However the approach of the French troops in all probability prevented them.’

‘ After these three hard fought days of Arcole, Buonaparte surprised a sleeping sentinel. Napoleon, who offered up his own repose as a sacrifice for the more imperious calls of promptitude and glory, proceeded, alone, to visit the outskirts of the camp, and in this survey arrived at the spot where lay extended the sleeping sentinel, who could hardly be deemed guilty of a breach of duty, but the unwilling victim of extreme fatigue, that totally overpowered him. Buonaparte, unmindful of his dignity, and actuated only by noble motives, took up the soldier’s mus-ket, which lay beside him; when, placing it upon his own shoulder, he continued to mount guard for nearly an hour, in order to insure the safety of the camp. The grenadier at length awoke, and sought for his piece in vain, but, by the light of the moon, perceived the general, who had thus paid respect to his repose.

‘CM I am undone!’ vociferated the soldier, recognising Napoleon, whose lineaments are graven upon the heart of every warrior.

‘ No, my friend,’ replied the general with extreme affability, at the same time surrendering up his musket, ‘ the battle was obstinate and long enough contested to excuse your having thus yielded to the impulse of fatigue ; one moment of inattention, however, might endanger the safety of the camp ; I was awake, and have only to advise that you would be more upon your guard for the future !’

Among the officers who perished in the battle of Arcole, were Muiron, as before related, and Elliot, whose names have been consecrated by Buonaparte to immortality ; the former fell on the 15th, the latter on the 16th, and both near the

general-in-chief, whom they attended as aides-de- camp. The death of the former was attended with peculiar circumstances : as Buonaparte was advancing, the colonel, seeing him exposed to imminent danger, threw himself before him, covered him with his body, and received the wound intended for Napoleon. ‘ He fell,’ said lie, ‘ at my feet, and his blood spouted up in my face.’ In relating this he remarked that no soldiers ever showed more devotion than his, even when expiring : with the last drop of blood gushing out of their veins, they exclaimed, ‘ Vive 1’Empereur !’

In the death of Muiron, France lost an officer of the greatest promise. In writing to the directory, Buonaparte observed, ‘ Citizen Muiron had served in the artillery from the earliest pe-riod of the revolution, and distinguished himself at Toulon, where he was wounded in entering the embiasure of an English redoubt. His father, being a farmer-general, was arrested, but young Muiron, presenting himself to the National Convention covered with wounds, obtained the liberation of his parent. On the 13th Vendemaire he defended the convention, conducted himself as a brave man, and was very useful on that day in which liberty was preserved. Citizen Muiron has been my aide-de-camp ever since the commencement of the Italian campaign, and has on every occasion rendered essential services, and died gloriously on the field of battle at Arcole, leaving a young widow in the eighth month of her pregnancy. I demand, therefore, that the name of

Madame Berrault de Courville be erased from the list of emigrants, upon which it has been placed, though she never emigrated.' Buonaparte made the same demand for the brother-in-law of Muiron.

Buonaparte wrote the following letter to his widow : ••• ' Muiron died by my side at the battle of Areole. You have lost a husband that was dear to you ; and I have lost a friend to whom I have been long attached ; but the country has lost more than either of us. If I can serve you or his infant in any manner, I hope you will reckon entirely upon me.'

Buonaparte never forgot Muiron ; he named one of the vessels after him that went to Egypt. At St. Helena he wished to take the name of colonel Muiron ••• another proof of his esteem for his friend. The successor of Muiron, as his aide-de-camp, was the honorable but unfortunate La-va lette.

Elliot, who shared the fate of Muiron, was the nephew of Clarke, to whom Buonaparte wrote as follows : ••• ' Your nephew has been killed upon the field of battle at Arcole. This young man had familiarised himself with arms ; he had often marched at the head of columns ; he would have been an estimable officer. In combating the enemy his death was glorious. He did not suffer an instant. What reasonable man would not envy such a death ? Who, amidst the vicissitudes of this life, would not think himself happy in this manner to leave a world so frequently contemptible? Who, amongst us, has not a hundred times regretted the want of an opportunity to withdraw from the powerful effects of calumny, envy, and all those hateful passions,

which seem almost entirely to direct the conduct of men ?'

The treaty of Campo Formio, the basis of which was prepared at Leoben, ceded to France the Belgic provinces, a boundary on the Rhine, and the virtual possession of a large part of the north of Italy, as the protectress of the Cisalpine republic which had been formed under the auspices of Napoleon. Austria was compensated by the seizure of Venice, an act of deep criminality both in those who gave and those who profited by the sweeping plunder; yet almost to be looked on as the retributive vengeance of a superior will against the sullen tyranny and cure-less corruption of the Venetian oligarchy. Even the hypocritical speech of Buonaparte to the en-voys of the senate touches on topics that might have roused the indignation of

humanity and virtue. ‘ I will go myself,’ said the fierce moralist, ‘ I will go and destroy your dungeons on the bridge of tears ††† opinions shall be free : I will have no inquisition!’ He added, in his usual strain of ominous threat and artful exaggeration, ‘ I might have gone to Vienna if I had willed ††† I have made peace with the emperor ††† I have 80,000 men, twenty gun-boats ††† I will hear of no inquisition and no senate ††† I will dictate the law to you ††† I will be an Attila to Ve-nice††† if you cannot disarm your population I will do it in your stead ††† your government is antiquated, it must crumble to pieces.’ Thus with the fall of one republic, a thousand years old, and the establishment of another, the fatal humiliation of the mightiest and most ancient dynasty of Europe, and the elevation of France to a height from which her fiery strength might pour down with more consuming and resistless force upon the nations, the Italian campaigns closed.

The conqueror returned to Paris covered with glory, an object of admiration to the people, and of apprehensive dread to the government. When he was gaining those very triumphs which the directory lauded to the skies, they were resolved if possible to neutralize his power. But in this they were disappointed. Their efforts only discovered their jealousy and their weakness. They proposed to divide the army of Italy betwixt Buonaparte and Villeneuve, and at a moment too when the former was flushed with the victories which had laid Italy at his feet. Buonaparte felt the insult, which he resented by sending in his resignation. * One bad general,’ he said, ‘ was better than two good ones.’ The directory were forced to yield, and the general’s ascendancy became greater from this ineffectual check. This did not of course repress the apprehensions of the government, or remove their instinctive distrust of that waxing influence which was destined one day to overpower their own. They wished him any where but at Paris, where they felt his presence to be dangerous. But he conducted himself with consummate prudence. He avoided, as far as he decently could, drawing upon himself public attention. His companions were men of letters. Science and the arts engrossed his whole mind ; that, at least, was the impression which his conduct made upon superficial observers. Bu the was restless ; and inactivity was the bane of his existence. He felt too that he

was an object of suspicion to the directory, which, at variance with each other, unpopular \vith the nation, and despised by the armies, were, nevertheless, resolved to retain their power against every competitor. But Buonaparte entertained views of supplanting them he could not conceal from himself, and it was equally obvious to all who were acquainted with the lofty character of his ambition. But as the time was not come, or, to use his own metaphor, as ‘ the fruit was not ripe,’ it was necessary that he should open to himself another field of exertion, where he might reap the glorious harvest of conquest and renown. Visions of oriental dominion dazzled his imagination, the subjugation of Egypt, which was to reveal to science the buried treasures of the birth-place of all knowledge, and give to France a new colony, with all that had been torn from her by the British arms : the gate to India, and the secure citadel of the Mediterranean. This was the magnificent, and we may truly add the atrocious, project which he submitted to the directory, which they at once adopted, and which they appointed the conqueror of Italy to execute : whatever they thought of the undertaking itself their motives were undoubtedly those of freeing themselves from the invidious presence of a servant in whom they dreaded a master; and of chain-ing up, far from France, a body of troops fierce with victory, and sworn to the fortunes of their general. Be it remembered, at this period of meditated and unprovoked invasion, Egypt was a province of the grand signior, with whom France was in profound peace, and who according to the long established relations of Europe was her natural ally. On the 19th of May, 1798, the Egyptian armament sailed from Toulon. On the 29th of June the troops landed at Alexandria and pursued the armed Copts and Mamelukes through’the valley of the Nile into Upper Egypt. But the enemy that was yet to confront and pursue Napoleon through all his career, to grow with his growth and strengthen with his strength, and finally to strike him to the earth without hope, was now roused. On the 15th of August the British fleet, under Nelson, was seen steering down on the bay of Aboukir. The French fleet was instantly attacked. The long preparations for defence, the land batteries, the hazards of a difficult and untried shore, all gave way to Nelson. In an action, whose story is immortal, the French armament was destroyed, the French expedition sealed up in a foreign country, and England made the mistress of the Mediterranean.

The vague and wild hope entertained by Buonaparte of making an impression on the eastern world, which might place its destinies at his

command, and give him a throne more enviable than Europe could bestow, soon vanished from his view ; while his moral obliquities, his contempt of God and man, his mean hypocrisy and deep impiety, were seen at this early period of his career. The poisoning at Jafl'a we put out of the question : it is neither more nor less than a foul calumny. But the massacre at that place is universally known ; and it is a crime without palliation. That the victims had for-Y'oi.. XV.

feited their faith to a lawless conqueror, who had fought them in their native land for the purpose of spoliage and destruction, is no palliation of the wholesale murder which was perpetrated at Jaffa. 1200 prisoners, and probably more, who had surrendered themselves to Napoleon, and were apparently admitted to quarter, were two days after marched out of the fort, divided into small bodies, and then deliberately shot; and, in case the musket was not effectual, were des patched by bayonets. This was an outrage which cannot be sheltered by the laws am. usages of war, barbarous as they are. It was the deed of a bandit and a savage, and ought to be execrated by good men, who value and would preserve the mitigations which Christianity has infused into the conduct of national hostilities But in this, and in all the other passages of his public life, Buonaparte was not restrained by any sense of virtue or humanity : with him no means which promised success were thought the worse for their guilt. But crimes against humanity, in conquerors and usurpers, are too common to excite either much wonder or deep indignation, as society is at present constituted. Yet few men have gone to such length in impious extravagance as this man of destiny. It was not enough for him to boast of his triumph over the cross, or to profess Mahometanism. He claimed inspiration and a commission from God, and was anxious to join the character of prophet to that of hero. This was the beginning of the great weaknesses and errors into which he was betrayed by that spirit of self-exaggeration which, under the influence of past success, and of unbounded flattery, was already growing into a kind of insanity. In his own view'he was fit to be a compeer with Mahomet. His greatness in his own eyes made him blind to the folly of urging his supernatural claims on the Turk, who contemned even more than lie abhorred a Frank; and who would sooner have sold himself a slave to Christians than have acknowledged a rene-gade Christian as a shaier of the glories of Mahomet.

On the arrival of the fleet at Alexandria, Buonaparte issued a proclamation, from which we extract the following: ###

‘ The people whom we are going amongst, are Mahometans; the first article of their faith runs thus : ††† There is no other God but God, and Mahomet is his prophet. Do not contradict them; act with them as we have done with the Jews, and with the Italians ; pay respect to their muftis and their imans, the same as you have to rabbis and bishops ; show the same tolerance for their mosques, and all the ceremonies prescribed by their Alcoran, as you have already shown for convents and synagogues, for the religion of Moses, and for that of Jesus Christ.’

At length the French disembarked from the roads of the town, which they attacked, and which capitulated, after a dreadful carnage; the inhabitants however, were respected by their conquerors; their commander concluded a treaty with the Arabs, and, so far from opposing their religious customs, he spoke of Mahomet as an extraordinary personage, who was worthy of the homage of all nations. In his first proclamation

to U*e Alexandrians there is found this remarkable passage : †††

‘ Cadies, sheicks, imans, tehorbajas, tell your peoplo that we are the true Mussulmans. Was it not we that overthrew the power of the pope?’

The Arabs, who in the morning had attacked the advanced, guard, sent a deputation to the general-in-chief, with some French soldiers who had fallen into their hands. They declared that, as the French only came to fight the Mamelukes, they could not be their enemies. Buonaparte broke bread with them, as a symbol of the faith of treaties, and made them various presents. They warmly expressed their gratitude; they swore to be faithful to the alliance ! and returned, plundering all the French they encountered !

From Alexandria the army took the road to Cairo, and defeated the

Arabs and Mamelukes, who had gathered together to dispute with them the passage to Rhamania and Chabrane. The Mameluke cavalry sought in vain to cut down the French troops; they remained in an impenetrable line ; twenty times they were about to charge, but were restrained by fear ; at length they thought proper to make good their retreat.

In the morning of the 10th of July the army came in sight of the pyramids, and at night they were within six leagues of Cairo. They found twenty-three beys intrenched with all their force at Embabe ; Buonaparte caused them to be attacked in their intrenchments, by Generals Des-saix and Rampon ; and, notwithstanding their fine appearance and some sorties, victory declared in favor of the French. Almost all the Mamelukes were slain ; 2000 cavalry, and the greater number of the beys, fell on this day : their leader, Murad Bey, was wounded in the cheek. More than fifty pieces of cannon, and 400 loaded camels, became the spoil of the conquerors.

This brilliant victory was followed by the surrender of Cairo, on the 22d of July ; but, before Buonaparte entered that city, he addressed a proclamation to the inhabitants :

‘ People of Cairo, I am satisfied with your l-eliaviour; you did well not to oppose yourselves against me : I am come to destroy the race of the Mamelukes, and to protect the commerce of the natives. Be easy, you have nought to fear; let each individual return peaceably to his home, continue to exercise your usual ceremonies of religious worship, for it is my will they should be continued. Fear not for your wives, your houses, nor your properties ; dread not the disturbance of that religion which I sincerely venerate.’

On the 1st of August, 1798, the battle of Aboukir, so fatal to the French navy, took place : Buonaparte wrote to the directory on that eventful day as follows :

‘ It appeared to me that admiral Brueys would not go to Corfu till he was certain it was impossible for him to enter the port of Alexandria, and that the army, from which he had received no intelligence for a considerable time, should be in a position which would prevent their retreating. If, in this fatal instance, he has been in fault, he has expiated his error by a glorious death. In this circumstance destiny has been

uncontrollable, as in many otners, and it proves to us, that if it gives us the subjugation of the continent, it gives the empire of the seas to our rivals. But, however severe this rever <; of fortune, it can be attributed only to her ace ustomed fickleness : she has not yet abandoned .s, so far from it, she has favored us, during this operation, more than she ever did before.

‘ When I arrived before Alexandria, I learnt that the English had passed by with a powerful force a few days before. In spite of a terrible storm, at the risk of being shipwrecked, I disembarked. I recollected that, while preparations were making for their landing, the signal for battle was waving at a distance. It was justice to myself. ‘ O Fortune !’ I exclaimed, ‘ wilt

thou abandon me-? only five days, and -= .’ I

marched all night, I attacked Alexandria at early dawn, with 3000 men, worn out with fatigue, without cannon, without cartridges, and in five days I conquered Rosetta and Demanhour, so that I had already established myself in Egypt. In five days I knew the squadron would be safe from the attacks of the English, however formidable their numbers : so far, however, from that, it remained exposed to them all the rest of the month. It got a supply of rice for two months from Rosetta. The English were in sight, with a superior number of sail, for ten days, in this part of the sea : they gained the intelligence of our having taken possession of Egypt, and of our entry into Cairo. When Fortune saw that all her favors were useless, she abandoned our fleet to Fate.’

Ibrahim Bey fled towards Syria, where Buonaparte resolved to pursue him with vigor, knowing that he had concluded a treaty of peace between England and Turkey, and that he might expect to be attacked by these two powers, as well by land as by sea. All the ports of Egypt were blockaded, and he had received no intelligence from France since the affair at Aboukir. He therefore disposed his force, but he wished first to view the pyramids.

Being accompanied by many officers of his staff and others, he visited the grand pyramid of Cheops, attended by many muftis and imans. It was on this occasion that, beholding the as-pect of these imperishable masses, he cried out from the top of these pyramids, ‘ Forty ages be-hold us !’

The following conversation passed in the presence of his suite, with the mufti and imans, Solyman, Ibrahim, and Mohamed. This Napoleon

afterwards owned was ‘ quackery,’ but of a sublime order.

Buonaparte. ††† God is great and his works are marvellous. Behold a great work of men’s hands. What was the intention of him who built this great pyramid?

Solyman. ††† He was a powerful king of Egypt, whose name we believe was Cheops. He wished to hinder sacrilegious persons from violating the repose of his ashes.

Buonaparte. ††† The great Cyrus was buried in the open air, that his body might return to its elements : do you not think he acted wisest? Do you think so?

Solyman (bowing) ††† Glory to God, to whom all power is due!

Buonaparte. ††† Honor to Allah ! Who is the calif who caused this pyramid to be opened, and troubled the ashes of the dead ?

Mohamed. ††† It is believed that it was Maho-tnet, the commander of believers, who reigned many ages ago at Bagdat. Others imagine it was the renowned Aaron Raschild (God pardon dim !), who thought of finding hidden treasures. But when they had by his orders entered this apartment, tradition relates, they found nought but mummies, and this inscription on the wall : ‘ The wicked shall commit iniquity without fruit, but not without remorse.’

Buonaparte. ††† Bread obtained by the wicked by stealth shall fill his mouth with gravel. ††† Mahomed (bowing). ††† It is the essence of wis-dom.

Buonaparte. ††† Glory to Allah! there is no other God but God. Mahomet is his prophet, and I am one of his friends.

Solynian. ††† The blessings of peace and health to him, sent from God; and also to you, invincible general, favorite of Mahomet.

Buonaparte. ††† Mufti, I thank you : the divine Koran is the delight of my mind, and the attention of my eyes. I love the prophet, and I intend before long to go to see and honor his tomb in the sacred city ; but my mission is previously to exterminate thevMamelukes.

Ibrahim. ††† May the angels of victory sweep away the dust in your way, and cover you with their wings. The Mameluke has deserved death.

Buonaparte. ††† He has been struck and delivered up to the black angels, Moukir and Quaki. God, on whom all depend, has commanded his dominion to be destroyed.

Solyman. ††† He extended the hand of rapine over the lands, the harvests, and horses of Egypt.

Buonaparte. ††† And also over the most beautiful slaves, very holy mufti. Allah has dried up and withered his hand. If Egypt is his farm, let him show the deed that God has granted it to him; but God is just and merciful to his people.

Ibrahim. ††† O thou bravest man amongst the children of Issa (Jesus Christ), Allah will command the exterminating angel to follow you, to deliver the land of Egypt.

Biumapartt. ††† This land was delivered up to twenty-four oppressors, all rebels to the grand seignior, our ally (may God encompass him with glory !), and to 10,000 slaves assembled from Circassia and Georgia. Adriel, the angel of death, has breathed on them; we are come, and they have disappeared.

Mohamed. ††† Noble successor of Scandcr (Alexander) honor be to your invincible arms, and to the unexpected thunder, which issues from the midst of your warriors on horseback (the flying artillery).

Buonaparte. ††† Believest thou this thunder is the work of the children of men ? Dost thou believe it ? Allah has placed it in my hands by the genius of war.

Ibrahim. ††† We acknowledge, in your works, Allah who sends you. Would you be a conqueror if Allah had not permitted it? The Delta

and all the neighbouring countries resound with thy miracles.

Buonaparte. ††† A heavenly car (the balloon) shall ascend by my orders into the regions of the clouds, and lightning shall descend on the earth along a metal wire (the electric conductor) as soon as I shall command it.

Solyman.††† And the great serpent that issued out from the foot of Pompey's pillar on the day of your triumphal entry into Scandarich (Alexandria), and which remained dried up at the base of the pillar ; was not that another wonder performed by your hand ?

Buonaparte. ††† Lights of the age ! you are destined to see still greater wonders, for the days of regeneration are arrived.

Ibrahim. ††† The divine Unity regards you with an eye of love, adorer of Issa ; and makes you to be the support and prop of the children of the prophet.

Buonaparte. ††† Has not Mahomet said, ' Every man who adores God and performs good actions (whatever his religion may be) shall be saved ?'

Solyman, Mohamed, Ibrahim (bowing). ††† He has said it.

Buonaparte. ††† And if I have (by order from on high) humbled the pride of the vicar of Issa (the pope) by diminishing his terrestrial possessions, to heap on him heavenly ones; tell me, was it not to render glory to God, whose mercy is infinite?

Mohamed (with a timid air). ††† The mufti of Rome was rich and powerful, but we are very poor muftis.

Buonaparte. ††† I know it, fear not ; you have been weighed in the balance of Belshazzar, and you have been found light. Does not this pyramid then contain any treasure known to you ?

Solyman (his hands on his breast). ††† None, lord ; we swear it by the holy city of Mecca.

Buonaparte.††† Misfortune, and thrice misfortune, wait on those who seek after perishable riches, and who covet gold and silver like clay.

Solyman. ††† Thou hast spared the vicar of Issa, and treated him with clemency and kindness.

Buonaparte. ††† He was an old man I honored (may God fulfil his

wishes, when they are regulated by justice and truth !), but he was wrong in condemning to eternal flames all Mussulmen, and God forbids all intolerance.

Ibrahim. ††† Glory to Allah and his prophet, who has sent thee in the midst of us, to rekindle the faith of the weak, and open again to the faithful the gates of the seventh heaven.

Buonaparte. ††† You have said well, too zealous muftis ! Be faithful to Allah, the sovereign mas-ter of the seven wonderful heavens ; to Mahomet his vizier, who traverses through all these heavens in a night. Be the friends of France, and Allah, Mahomet, and the French will re-ward you.

Ibrahim. ††† May the prophet himself cause you to sit on his left hand, in the day of resurrection, after the third sound of the trumpet.

Buonaparte. ††† Let him who hath ears to understand, hear! The hour of political resurrection is come, for all the people who eroaned under oppression. Muftis, imans, mullaks, der-vises, calenders, instruct the people of Egypt;

encourage them to join themselves to us, to annihilate the beys and Mamelukes. Favor the commerce of France in your countries, and their enterprises to arrive from hence in the ancient country of Brama. Offer them a staple in your ports, and drive far from you the islanders of Albion, cursed amongst the children of Issa, such is the will of Mahomet. The treasures, industry, and friendship of the French, shall be your portion, until you ascend to the seventh heaven, and that seated by the sides of houris, with black eyes, always young, and always virgins, you repose under the shade of the laba, whose branches will spontaneously offer to true Mussulmen every thing they can possibly wish for.

Solyman (bowing). ††† You have spoken as the wisest of the mullaks : we place confidence and faith in thee and thy words; we will serve thy cause, and God hears us.

Buonaparte. ††† God is great, and his works are marvellous ; his peace be on you, most holy muftis.

As soon as convenient, after this interview, Buonaparte organised the government of Cairo, established there an institute, a library, and a laboratory for chemistry. Order and quiet reigned for a time throughout the city, when all on a sudden a terrible and unforeseen insurrection burst forth ; general Dupuy was killed, the house of Caffarelli was pillaged, his guards and his agents all strangled, and every Frenchman who came it) the way of the rebels experienced the same fate. The Arabs presented themselves at the gate of the city, the generale was beat, Ihe French were immediately in arms, and formed themselves in moving columns : they attacked ihe insurgents, made amongst them a horrible jlaughter, and gained a complete victory. Buonaparte then put a stop to the sanguinary conflict, and addressed the following proclamation to the inhabitants of Cairo :

‘ Those men, whom ye have suffered yourselves to be deluded by; those victims to their obstinacy, are no more. God commands us to be merciful, and I have been merciful towards you.

‘ I have only been wroth with you, because you rebelled against me. I deprived you of your divan : I this day restore it to you. Scherifs, imans, expounders of the law of Mahomet, let the people know that those who nourish en-mity in their hearts against me, shall have no peace in this world, nor in that to come. Is there any man blind enough not to see that all I undertake is predestinated ? Is there any one who is such an infidel as to conceive a doubt against that belief which teaches us that predestination governs this vast universe, and that all is subject to the empire of Fate? Let the people know, that, ever since the beginning of the world, it was written, that after having destroyed the enemies of Ismaelism, and broken in pieces the cross, I should arrive from the utmost part of the west to fulfil my appointed task? Open the Ko-ran, and prove to the multitude, by more than twenty passages in that sacred book, that what lias now happened, and what is yet to come to pass, by me, is there foretold.

‘ Let those who are only prevented from exe-

crating us by the terror of our arms, change their sentiments; for, in calling down the anger of heaven upon us, they are only pronouncing their own destruction. Let the true believers lift up their prayers, unceasingly, for the success of our arms. I can penetrate into the secret recesses of your hearts. Nothing is hid from me; I am acquainted with those thoughts to which utterance never was yet given. A day will come, when all the world will clearly see that I have been acting by the commands of heaven, and that all human efforts can avail nothing against me. Blessed are the faithful who will be the first to follow me !'

This proclamation produced such an effect that a hymn to the praise of the French general was sung in the principal mosque of Cairo. One of the strophes contains the following sentences :

' The warriors of the West are worshippers of the mighty Allah. They honor the laws of his prophet, they love and cherish the human race, and succour the oppressed. 'Therefore is the favored son of victory the chosen of the mighty Allah ! Therefore are the warriors of the West protected by the invincible shield of the mighty Allah!'

On the 26th of December, 1798, Buonaparte arrived at Suez ; the following day was spent in viewing the town and coast, and ordering such works and fortifications as he deemed necessary for their defence. On the 28th of December he passed the Red Sea at a ford near Suez, which is practicable at low water, and proceeded to the fountains of Moses, about three leagues and a half from Suez, in Asia ; these fountains are formed by five springs, which rise from the tops of low sand-hills ; the water is sweet, but a little brackish ; near them were the remains of a small modern aqueduct, which conveyed the water to cisterns near the sea-shore. Buonaparte returned the same evening to Suez, but, it being high water, he was obliged to ascend to the extremity of the Red Sea. This route was the more tedious, from the guide having lost his way in the marshes, where they were sometimes up to the middle in water. Thus, like a second Pharaoh, he narrowly escaped drowning. ' This,' said he, ' would have furnished all the preachers of Christianity with a splendid text against me.' On reaching the Arabian coast he received a deputation of the Cenobite monks of mount Sinai, who came to implore his protection, and to request him to inscribe his name on the ancient register of their charters, with which he complied.

About the 17th of March, 1799, Napoleon, after having defeated the Mamelukes, and taken possession of Alexandria and Cairo, led a detachment of 12,000 men into Palestine, with the intention, it has

been said, of taking possession of Jerusalem, and restoring the Jews. Acre is a small town on the sea-coast, thirty-seven miles north of Jerusalem. To this town, which was wretchedly fortified, and garrisoned only by a few Turks, he laid siege in form, and the governor would have surrendered at discretion, had he not been assisted by Sir Sidney Smith, and several ships of war, to make a vigorous resist-

ance. By the persevering valor of the British, and the brute force of their semi-barbarous allies, Buonaparte was detained before Acre sixty-nine days. Foiled in eleven different attempts to carry the place by assault, and losing upon an average sixty men a day, he was ultimately obliged to retreat.

At this siege a shell, thrown by Sir Sidney Smith, fell close at Buonaparte's feet. Two soldiers who were near him seized and closely embraced him before and behind, making a rampart of their bodies against the effects of the shell, which exploded and overwhelmed them all with sand. Neither of these soldiers were wounded, but they sunk into the hole occasioned by the explosion. He made them both officers.

On the 17th of May Napoleon addresssed the following historical proclamation to the French army :

'Soldiers'. You have traversed the desert which separates Africa from Asia with more rapidity than the army of the Arabs. The army which marched to invade Egypt is annihilated; its campaign equipage, its baggage, its stores, and its camels. You have taken all the strong places which defend the wells of the forest. You have scattered over the plains of Mount Tabor that cloud of men that came from every part of Asia, with the hope of plundering Egypt. The thirty sail which you have seen arrive before Acre, but twelve days ago, brought that army that was to lay siege to Alexandria. Compelled to retreat to Acre, they met the end which fate had assigned them. A part of the enemy's colors will grace your entry into Egypt. In short, after having with

only a handful of men carried on the war for three months in the very heart of Syria, takerr forty field pieces, fifty colors, made 6000 prisoners, razt 1 the fortifications of Gazah, Jaffa, Caiffa, and Acre, we are going to return to Egypt. It is now the time for me to go on shore.

‘ Yet a few days longer, and you may hope to seize the Pacha himself, in the midst of his palace ; but just now the taking of the castle of Acre is not worth the loss of our time : those brave men also who might chance to fall are now wanted to execute operations infinitely more essential.

‘Soldiers! We have a course to pursue re-plete with peril and fatigue. After we shall have reduced the East to a state incapable of acting against us in this campaign, we may perhaps find it necessary to push our conquests to a part of the West. You will there find fresh opportunities of acquiring glory ; and, if amongst so many battles, each day should be marked with the death of a hero, new warriors will spring up, and enrol themselves amongst those few who derive enthusiasm from danger, in the cause of freedom.’

The army having crossed the desert, by the rapidity of its movements had certainly disconcerted the plans of its Asiatic enemies. It had scattered on the plains of Edredon and Mount Tabor 85,000 horse and 10,000 foot. The vain-glorious hope of seizing Dgezzar Pacha in his palace at Acre did not impose upon Buonaparte.

While preparations were making for a return to Egypt, the army withstood several sorties of the enemy ; but at length, finding it requisite to raise the siege, the general-in-chief, according to what he wrote to the directory, erected a battery of twenty-four gun? and mortars, which kept up a constant fire for seventy hours, razed the houses of Dgezzar level with the ground, and destroyed the principal monuments : he added, that the whole town was a constant blaze of fire.

After experiencing fatigues almost incredible, he gave orders for the departure of the army, and on the 15th of June they arrived -at Cairo, in ‘ parade order.’

Sidney Smith, Buonaparte acknowledged, was a brave officer : he displayed considerable ability in the treaty of El Arish, for the evacuation of Egypt by the French. He took advantage of the discontent which prevailed among the French troops at being so long

away from France, and other circumstances. He also showed great honor in sending immediately to Rleber -the refusal of lord Keith to ratify the treaty, which saved the French army ; if he had concealed that fact seven or eight days longer, Cairo would have been given up to the Turks, and the French army necessarily obliged to surrender to the English. He also showed great humanity and honor in all his proceedings towards the French who fell into his hands. He landed at Havre on account of some foolish bet that he had made, according to some, to go to the theatre ; others said it was to obtain some information : however, he was arrested, and confined in the temple. Shortly after Buonaparte returned from Italy he wrote to him, requesting his intercession in his behalf: but, under the circumstances in which he was taken, Napoleon could do nothing for him. Buonaparte added, ‘ He is active, intelligent, intriguing, and indefatigable ; but I believe that he is mezzo pazzo.’

About the middle of August, after his return to Cairo, Buonaparte learned the disembarkation of the Turks at Aboukir, the surrender of the place, and the dangerous situation of Alexandria. Mustapha Pacha, and about 18,000 men, were intrenching themselves in the peninsula of Aboukir, where a great numberof cannon had already been disembarked. The obstinacy of the Turkish troops, in defending themselves, was beyond description ; and never was French valor put to so severe a test in that part of the world. At length the Turks, confounded and terror-struck, on finding their retreat cut off, beheld death on every side : the infantry charged them with the bayonet, the cavalry cut them down with the sabre; no alternative but the sea remained. 10,000 men committed themselves to the waves amidst showers of musquetry and grape-shot, and not one man was saved. Among the can-non taken, were two pieces presented to the grand seignior by the court of London.

On the landing of the Turks here, the French had fallen back to concentrate their forces. The pacha who commanded them was delighted : he mistook this movement for that of fear ; and, on perceiving Murad Bey, he exclaimed, ‘ So, these are your terrible French ! See how they fly before me!’ ??? ‘ Pacha,’ replied thv indignant

Murad Bey, ‘ render thanks to the prophet; if they should return you will disappear before them like dust before the wind !’ A prediction but too fatally verified.

Napoleon always shared the fatigues of the army; and their privations were sometimes so great that they were compelled to contend with eath other for the smallest comforts. Once, in the deserts, the soldiers would scarcely allow the general to dip his hands in a muddy stream ––f water. Passing the ruins of Pelusium, almost suffocated with the heat, a soldier gave up to him a fragment of an ancient door-way, beneath which he contrived to shade his head for a few minutes ; ‘ and this,’ said Napoleon, ‘ was no trifling favor.’

The discontent of the French troops in Egypt, which was at times rery high, was happily spent in jokes and sarcasms. This humor bears a Frenchman through a number of difficulties. General Caffarelli, supposed to have been one of the promoters of the expedition, was by no means liked. He had a wooden leg, having lost the other on the banks of the Rhine. Whenever the soldiers saw him hobbling along they would say, loud enough for him to hear, ‘ That fellow cares for nothing amongst us : he is certain, hap-pen what may, to have one leg in France.’

In reference to the six or seven acres of land that Buonaparte had promised his troops on his departure from France; when they afterwards found themselves in the midst of the desert, surrounded by the boundless ocean of sand, they pretended to cheer one another with a view of it; they said their general ‘ had been very moderate in promising so little; he might have made us a more unlimited offer; we should not abuse his good nature.’ On their first entering the desert, they called to one another to look at the six acres awarded to each of them by the government.

But, though the devotedness and attachment of the army of Egypt had evidently performed so much for their general-in-chief, we have his own authority for asserting, that no army was less fit for that quarter of the world. ‘ It would be difficult to describe the disgust, the discontent, the melancholy, the despair of that army, on its first arrival in Egypt. Buonaparte saw two dragoons rush out of the ranks, and throw themselves into the Nile. Bertrand had seen the most distinguished generals, such as Lannes and Murat, in momentary fits

of rage, throw their laced hats in the sand, and trample on them. ‘ This army,’ said Napoleon, ‘ had been satiated with wealth, rank, pleasure, and consideration ; they were not fit for the deserts and fatigues of Egypt.’ More than one conspiracy was formed to carry away the flags from Alexandria, and other things of the same sort. The influence, the character, and the glory of the general, could alone restrain the troops. One day, Napoleon, loosing his temper in his turn, rushed among a group of discontented generals, and, addressing himself to the tallest, said, ‘ You have held mutinous language; take care that I don’t fulfil my duty ; your five foot ten should not save you from being shot in a couple of hours.’

The remains of this army, ‘wo years after

Napoleon had left Egypt, notwithstanding climate, and the almost incessant combats in which they had been engaged, during the space of seven or eight and twenty months, were still so numerous, when they defiled as prisoners be-fore the British army, as to excite considerable surprise.

La Cases says, the French force, at its landing in Egypt, amounted to 30,000 men : it was augmented by the wrecks of the naval battle of the Nile, and some partial arrivals from France, and yet the total loss of the army amounted only to 8915; *viz.* ###

Killed in battle 3614

Died of their wounds … 854

Died through various accidents 290

Died from common disorders 2468

Died from the pestilential fever 1689

Total … 8915

Feeling no doubt the rashness of his eastern enterprise, his troops baffled, himself little better than a prisoner, and in danger of falling the vic-tim of the first ebullition of discontent, Buonaparte turned his eyes to Europe, and to France. He saw in the disturbances which shook the latter the natural field of his ambition ; and with his characteristic heartlessness he abandoned his soldiers ; but not without soothing them by the following hypocritical proclamation :

‘Soldiers! The affairs of Europe recall me to France. I leave the command of the army to general Kleber. The army shall soon have intelligence of me. It is painful to leave soldiers to whom I am so much attached ; but it shall not be for long. The general whom I have left with them possesses both my confidence and that of government.’

On the 23rd of August, 1799, accompanied by Berthier, Murat, Lannes, and Marmont, he embarked on board the frigates La Muiron and La Carere. An English cutter was in sight of the two frigates ; the officers who accompanied him drew the most dismal presages from this circumstance, and said it would be difficult to escape the vigilance of the enemy. ‘True !’ exclaimed Buonaparte, ‘ but we shall arrive Fortune has never abandoned us; we shall arrive in spite of the English.’ They set sail in the night ; and Gantheaume, perfect master of his manoeuvres, ranged along the coast of Africa, choosing a longer but more certain route of navigation.

On the 30th of September, 1799, the two frigates entered the Gulf of Ajaccio. Whilst lying to, for a boat they had sent in, a sudden squall obliged them to come to anchor in the gulf, in the native country of Buonaparte. He was thought to have been dead ; and, when chance thus brought him home, nothing could be more touching than the reception he experienced : the batteries saluted on all sides; the whole population rushed to the boats, and surrounded the French frigates; the public enthusiasm had even triumphed over the fear of infection, and the vessels were immediately boarded by crowds, crying out to Buonaparte, ‘ It is we that have the plague, and must owe our deliverance to you.’ Here Buonaparte learned ti at the fruits of all

his triumphant victories in Italy had been lost in two battles ; that the Russians were upon the French frontiers, and that confusion and dismay reigned in the interior.

On the 8th of October, being in sight of the coast of France, they

perceived an English fleet of from eight to ten sail. Admiral Gantheaurae was desirous to tack about immediately, and return to Corsica. ••• ‘ No, no,’ said Buonaparte, ‘ that manoeuvre would conduct us to England ; and my will is to arrive in France.’ On the 9th of October, 1799, Buonaparte disembarked near Frejus, in the South of France, after a surprising voyage of forty-one days, and upon a sea covered with the enemy’s ships. Here he landed without having performed the customary duty of quarantine, and arrived at Paris on the 16th of October. Nothing could have been more unexpected than this arrival. From the first moment it occurred, the news of it spread with the rapidity of lightning. Scarcely had the flag of a commander-in-chief been displayed, when the shore about Frejus was covered with people, who, in accents of the most intense desire, exclaimed, ‘ Buonaparte !’ France herself poured forth her thousands before him who was destined to restore her splendor, and already from her frontiers anticipated from him the revenge of Marengo.

On his return Buonaparte found the government enfeebled to the impotence of childhood ; the directors, contemptible in their personal characters, had alienated all parties ; the Russians had destroyed the elite of the French army in Italy, and France was in a state of mixed indignation and terror, ripe for any violence or any change. Now was the time for a generous and noble patriotism in the prince of the chief of armies, and the idol of the nation, to establish social order on the basis of rational liberty. Napoleon held in his simple grasp the destinies of his country ••• henceforth he is to be her benefactor or her scourge ••• her noble liberator or her remorseless oppressor. His previous character but too well argued the part he would act. He could not be a Washington ; and, if a tyrant, his tyranny would nartake of all the energy of his grasping and ambitious spirit. The story of his rise to supreme power is soon told. He took advantage of the state of hostility which existed between the two legislative bodies, the Council of Ancients and the council of Five Hundred. He intrigued with Sieyes, and flattered him by allowing him to prepare a new constitution which it never was his intention to adopt. Having secured the Council of Ancients, and many of the members of the Council of Five Hundred, of which his brother Lucien was president ; having induced by his agents both councils to change their usual place of meeting to St. Cloud, where they would be unawed and unmolested by the Parisians, often so formidable to the national assembly and convention ; and, above all, having obtained an edict from the council of ancients, delegating to general Buonaparte full power to see the measure of their removal carried into effect; and vesting him, for that purpose, with the military command of the department; Buonaparte

proceeded to take the decisive step ; which, had it failed, would have hurried him to

the guillotine, but which, proving successful, raised him to imperial greatness.

On the morning of the eventful day which commenced this sudden and perfect revolution ••• a revolution effected without murders or massacres, Buonaparte sallied forth on horseback at the head of a gallant cavalcade of officers. His first movement was to assume the command of the three regiments of cavalry already drawn up in the Champs Elysˆes and to lead them to the Thuilleries, where the council of ancients expected him. He entered their hall surrounded by his military staff, and by those other generals whose names carried the memory of so many victories. ‘ You are the wisdom of the nation,’ he said to the council, ‘ I come, surrounded by the generals of the republic, to promise you their support. I name Lefebvre my lieutenant. Let us not lose time looking for precedents : nothing in history ever resembled the end of the eighteenth century ••• nothing in the eighteenth century resembled this moment: your wisdom has devised the necessary measure ••• our arms shall put it into execution.’ He announced to the military the will of the council, and the command with which they had entrusted him, and it was received with loud shouts.

In the mean while the three directors Barras, Gohier, and Moulins, who were not in the secret of the morning, began too late to take the alarm. Moulins proposed to send a battalion to surround the house of Buonaparte, and make prisoner the general and whomsoever else they found there. But they had no longer the least influence over the soldierv, and had the mortification to see their own personal guard, when summoned by an aide-de-camp of Buonaparte, march away to join the forces which he commanded, and leave them defenceless. Barras sent his secretary Bottot to expostulate with Buonaparte ; the general received him with great haughtiness, and publicly, before a large group of officers and soldiers, upbraided him with the reverses of the country ; not in the tone of an ordinary citizen, possessing but his own individual interest in the fate of a great nation, but like a prince who, returning from a distant expedition, finds that in his absence his deputies have abused their trust, and misruled his dominions••• what have you done, he said, for that fine France which I left you in such a brilliant condition? I left you peace; I have found war. I left you the wealth of Italy ; I have found taxation and

misery ••• where are the 100,000 Frenchmen whom I have known, all of them my companions in glory ••• they are dead.' It was plain, that even now when his enterprise was but commenced, Buonaparte had already assumed that tone which seemed to account every one answerable to him for deficiencies in the public service, and he himself responsible to no one.

Barras overwhelmed and stunned, and afraid perhaps of impeachment for his alleged peculations, belied the courage which he was once supposed to possess, and submitted in -the most abject terms to the will of the victor. He sent in his resignation, in which he states ' that the weal of the republic, and his zeal for liberty alone, could have ever induced him to undertake

•••.he burden of a public office ; and that, seeing the destinies of the republic were now in the custody of her youthful and invincible general, he gladly resigned his authority.' He left Paris for his country seat, accompanied by a guard of cavalry, which Buonaparte ordered to attend him, as much, perhaps, to watch his motions, as to do him honor, though the last was the ostensible reason. His colleagues Gohier and Moulins also resigned their office; Sieyes and Ducos had already set the example ; and thus the whole constitutional executive council was dissolved, while the real power was vested in Buonaparte's single person. Cambaceres, minister of justice, and Pouches, minister of police, with all the rest of the administration, acknowledged his authority accordingly, and he was thus placed in full possession, as well of 'the civil as the military power. The council of Five Hundred or rather the republican majority of that body, showed a more stubborn temper ; ••• and if, instead of resigning, Barras, Gohier, and Moulins, had united themselves to its leaders, they might perhaps have given trouble to Buonaparte, successful as he had hitherto been. The hostile council only met at ten o'clock on that memorable day, when they received, to their surprise, the message intimating that the council of ancients had changed the place of meeting from Paris to St. Cloud, and thus removed their debates from

the neighbourhood of the populace, over whom the old Jaco-binical principles might have retained influence. The laws as they stood afforded the young council no means of evading compliance, and they accordingly adjourned to meet the next day at St. Cloud, with unabated resolution to maintain the democratical part of the constitution. They separated amid shouts of long live the republic and the constitution, which were echoed by the galleries. The tricoteuses and other more zealous attendants in their debates resolved to transfer .themselves to St. Cloud also, and appeared there in considerable numbers on the ensuing day, when it was evident the enterprise of Sieyes and of Buonaparte must be either perfected or abandoned. The contending parties held counsel all the evenintr, and deep into the night, to prepare for the final contest on the morrow. Sieyes advised that forty leaders of the opposition should be arrested, but Buonaparte esteemed himself strong enough to obtain a decisive victory without resorting to any such obnoxious violence : they adjusted their plan of operations in both councils, and agreed that the government to be established should be provisionally entrusted to three consuls, Buonaparte, Sieyes, and Ducos. Proper arrangements were -nade of the armed force at St. Cloud, and the command was confided to the zeal and fidelity of Murat. Buonaparte used some influence to prevent Bernadotte, Jourdan, and Angereau from attending at St. Cloud the next day, as he did not expect them to take his part in the approaching crisis. The last of these seemed nither hurt at the want of confidence which this caution implied, and said, What, general, dare you not trust your own little Angereau ? He went to St. Cloud accordingly.

Some preparations were necessary to put the

palace ef St. Cloud in order to receive the two councils ; the orangerie being assigned to the council of Five Hundred, the gallery of Mars to that of the ancients. In the council of ancients the mode”re”s, having the majority, were prepared to carry forward and complete their measures for a change of government and constitution. But the minority having rallied, after the surprise of the preceding day, were neither silent nor passive. The commission of inspectors, whose duty it was to convene the council, were inculpated severely for having omitted to give information to several leading members of the minority, of the extraordinary convocation which took place at such an unwonted hour on the morning preceding. The propriety, nay, the legality, of the transfer-ences of the legislative bodies to St. Cloud was also challenged : a sharp debate took place, which was terminated by

the appearance of Napoleon, who entered the hall and harangued the members, by permission of the president. ‘Citizens,’ said he, ‘you are placed upon a volcano. Let me tell you the truth with the frank-ness of a soldier ; citizens, I was remaining tranquil with my family, when the commands of the council of ancients called me to arms. I collected my brave military companions, and brought forward the arms of the country in obedience to you who are the head. We are rewarded with calumny; they compare me to Cromwell, to Caesar. Had I desired to usurp the supreme authority, I have had opportunities to do so before now. But I swear to you the country has not a more disinterested patriot. We are surrounded by dangers and by civil war. Let us not hazard the loss of those advantages for which we have made such sacrifices. Liberty and equality ;’ ‘ and the constitution,’ exclaimed Singlet, a democratic member, interrupting a speech which seemed to be designedly vague and inexplicit. ‘ The constitution !’ answered Buonaparte, giving way to a more natural expression of his feelings, and avowing his object more clearly than he had yet dared to do, ‘it was violated on the 18th Fructidor, violated on the 22d Floreal, violated on the 30th Prairial. All parties have invoked it, all have disregarded it in their turn. It can be no longer a means of safety to any one, since it obtains the respect of no one. Since we cannot preserve the constitution, let us at least save liberty and equality, the foundations on which it is erected.’ He went on in the same strain to assure them that, for the safety of the republic, he relied only on the wis-dom and power of the council of ancients, since in the council of Five Hundred were found those men who desired to bring back the convention, with its revolutionary committees, its scaffolds, its popular insurrections. ‘ But I,’ he said, ‘ will save you from such horrors ??? I and my brave comrades at arms, whose swords and caps I see at the door of the hall ; and, if any hired orator shall talk of outlawry, I will appeal to the valor of my comrades, with whom I have fought and conquered for liberty.’

The assembly invited the general to detail the particulars of the conspiracy to which he had alluded ; but he confined himself to a reference to the testimony of Sieyes and Ducos, and again

reiterating that the constitution could not save the country, and inviting the council of ancients to adopt some course which might enable them to do so, he left them amid cries of Vive Buonaparte, loudly echoed by the military in the court yard, to try the effect of his eloquence on the more unmanageable council of Five Hundred. The deputies of the younger council, having found the place designed for their meeting filled with workmen, were for some time in a situation which seemed to resemble the predicament of the national assembly at Versailles, when they took refuge in a tennis court. The recollection was of such a nature as inflamed and animated their resolution, and they entered the Orangerie, when at length admitted, in no good humor with the council of ancients or with Buonaparte. Proposals of accommodation had been circulated among them ineffectually. They would have admitted Buonaparte into the Directory, but refused to consent to any radical change in the constitution of the year three. The debate of the day, remarkable as the last in which the republican party enjoyed the full freedom of speech in France, was opened on the 19th Brumaire, at two o'clock, Lucien Buonaparte being president. Gaudier, a member of the moderate party, began by moving that a committee of seven members should be formed, to report upon the state of the republic; and that measures should be taken for opening a correspondence with the council of ancients. He was interrupted by exclamations and clamor on the part of the majority. The constitution ; the constitution, or death ! was echoed and reechoed on every side. ' Bayonets frighten us not,' said Debrel, ' we are free men.' ' Down with the dictatorship ; no dictators,' cried other members.

Lucien in vain endeavoured to restore order ; Gaudin was dragged from the tribune; the voice of other moderates was overpowered by clamor, never had the party of democracy shown itself fiercer or more tenacious than when about to receive the death blow. ' Let us swear to preserve the constitution of the year three,' exclaimed Debrel, and the applause which followed the proposition was so general that it silenced all resistance. Even the members of the moderate party, nay, even Lucien Buonaparte himself, were compelled to take the oath of fidelity to the constitution, which he and they were leagued to destroy. 'The oath you have just taken,' said Biggonet, ' will occupy a place in the annals of history, beside the celebrated vow taken in the tennis court. The one was the foundation of liberty, the other shall consolidate the structure.' In the midst of this fermentation the letter containing the resignation of Barras was read, and received with marks of contempt, as the act of a soldier deserting his post in the time of danger. The moderate party seemed silenced, overpowered,

and on the point of coalescing with the great majority of the council, when the clash of arms was heard at the entrance of the apartment. All eyes were turned to that quarter. Bayonets, drawn sabres, the plumed hats of general officers and aides-de-camp, and the caps of grenadiers, were visible without, while Napoleon entered the orangeiie, attended by

four grenadiers belonging to the constitutional guard of the councils. The soldiers remained at the bottom of the hall, while he advanced with a measured step and uncovered, about one-third up the room.

He was received with loud murmurs. ‘ What drawn weapons, armed men, soldiers in the sanctuary of the laws !’ exclaimed the members, whose courage seemed to rise against the display of force with which they were menaced. AH the deputies rose, some rushed on Buonaparte, and seized him by the collar, others called out ‘outlawry, outlawry ; let him be proclaimed a traitor.’ It is said that Are”na, a native of Corsica like himself, aimed a dagger at his breast, which was only averted by the interposition of one of the grenadiers. The fact seems extremely doubtful, though it is certain that Buonaparte was seized by two oV three members, while others exclaimed ‘ Was it for this you gained so many victories ?’ and loaded him with reproaches. At this crisis a party of grenadiers rushed into the hall, with drawn swords, and extricated Buonaparte from the deputies, bore him off in their arms breathless with the scuffle.

The council remained in the highest state of commotion, the general voice accusing Buonaparte of having usurped the supreme authority, calling for a sentence of outlawry, or demanding that he should be brought to the bar. Can you ask me to put the outlawry of my own brother to the vote? said Lucien. But this appeal to his personal situation and feelings made no impression upon the assembly, who continued clamorously to demand the question. At length Lucien flung on the desk his hat, scarf, and other parts of his official dress. ‘ Let me be rather heard as the advocate of him whom you falsely and rashly accuse.’ But his request only added to the tumult. At this moment a small body of grenadiers, sent by Napoleon to his brother’s assistance, marched into the hall. They were at first received with applause; for the council, accustomed to see the triumph of democratical opinions among the military, did not doubt that they were deserting their general to ranee themselves on the side cf the deputies. Their appearance was but momentary ; they instantly left the hall, carrying Lucien in the centre of the detachment. Matters were now come to

extremity on both sides. The council, thrown into the greatest disorder by these repeated military incursions, remained in violent agitation, furious against Buonaparte, but without the calmness necessary to adopt decisive measures. Meantime the sight of Napoleon, almost breathless, and bearing marks of personal violence, excited to the highest the indignation of the military. In broken words he told them that, when he wished to show them the road to lead the country to victory and fame, ‘ they had answered him with daggers.’

The cries of resentment of the soldiery were augmented, when the party sent to extricate the president brought him to the ranks as to a sanctuary. Lucien, who seconded his brother admirably , or rather who led the way in this perilous adventure, mounted on horseback instantly, and called out in a voice naturally deep

and sonorous, ‘ General, and you soldiers ! the president of the council of five hundred proclaims to you that factious men, with drawn daggers, have interrupted the deliberations of the assembly ; he authorises you to employ force against these disturbers; the assembly of five hundred is dissolved.’

Murat, deputed by Buonaparte to execute the commands of Lucien, entered the orangerie, with drums beating, at the head of a detachment with fixed bayonets. He summoned the deputies to disperse on their peril, while an officer of the constitutional guard called out he could be no longer answerable for their safety. Cries of fear became now mingled with vociferations of abhorrence, and shouts of ‘ Vive la Republique.’ An officer then mounted the president’s seat, and summoned the representatives to retire. ‘ The general,’ said he, ‘ has given orders.’ Some of the deputies and spectators began now to leave the hall ; the greater part continued firm, and sustained the shouts by which they reprobated this military intrusion. The drums at length struck up, and drowned further remonstrance. ‘ Forward, grenadiers,’ said the officer who commanded the party; they levelled their muskets and advanced, as if to the charge : the deputies seemed hitherto to have retained a lingering

hope that their persons would be regarded as inviolable. They now fled on all sides, most of them jumping from the windows of the orangerie, and leaving behind them their official caps, scarfs, and gowns. In a very few minutes the apartments were entirely clear, and thus, furnishing at its conclusion a striking parallel to the scene which ended the long parliament of Charles I's. time, closed the last democratical assembly of France.

Thus was the constitution, which had been so often violated that it existed but in name, superseded to give place to the consulate. This office was sustained by three individuals, at the head of which was Buonaparte. Sieyes, finding that he had been made the dupe of the usurper, retired ; the two other consuls were entirely subservient to the will of their master. It was in vain that those who were associated with him in subverting the government of the directory, essayed to lay restraints on the first consul. He indignantly repelled them. He held the sword; and with this not only intimidated the selfish, but awed and silenced the patriotic, who saw too plainly that it could only be wrested from him by renewing the horrors of the revolution. One of the first measures of Buonaparte for giving stability to his power was certainly a wise one, and was obviously dictated by his situation and character. Having seized the first dignity in the state by military force, and leaning on a devoted soldiery, he was under no necessity of binding himself to any of the parties which had distracted the country. Accordingly he adopted a system of comprehension and lenity, from which even the ˆmigrants were not excluded, and had the satisfaction of seeing almost the whole talent which the revolution had quickened, leagued in the execution of his plans.

The very difficulties in which France was involved, at the time of his elevation, were the

means which his subtle and vigorous genius employed for the consolidation of his power. Had he found the country at peace, domestic intrigue would have gathered round him; and, as one fluctuation of party had lifted him up, the next might have buried him. But he returned at the moment when his ability was most essential to the state, and his laurels, already fading by time and absence, might be revived in still thicker verdure. The Austrian and Russian arms had stripped Fiance of her Italian territories. Genoa, commanding the passes into the south of France, was on the point of surrender, and Provence must then be open to invasion. On the Rhine bloody, battles had only taught the armies on both sides to dread the

further conflict. The war languished ; but the languor of Austria, habitual to her councils, was almost a proof of her success. The languor of France, famous for wild energy, hold hazard, and restless assaults, was a total change of character, and must indicate her weakness.

Buonaparte determined to arouse the world by a thunderclap. With an army of 60,000 men, he crossed the Alps in three divisions, himself leading 30,000 over the Great St. Bernard, by a route deemed impassable. This was one of the boldest and most unrivalled marches of modern war. In ancient war it has but one rival, that of Hannibal. The enterprise was one -of fearful omen to Europe. It showed a power over the minds of his soldiers, the effects of which were not to be calculated ; and the conquest of St. Bernard by a French army became the boast of the nation.

The manoeuvre, in fact, was decisive of the war. Buonaparte was instantly upon the rear of the Austrians, exulting in the capture of Genoa, and anticipating the invasion of France. The sound of the French trumpets broke up all their dreams. To save their magazines they were compelled to hurry back into Italy. On the 14th of May, 1800, the battle of Marengo was fought, a memorable instance of the precariousness of military fortune. The French were beaten until late in the day. There were not 6000 men left standing to their arms in the whole line. Buonaparte was in retreat ; the Austrian general had retired to his tent in the full assurance of victory. Before nightfall the Austrians were in full flight, with ruinous slaughter. On the next morning a capitulation gave Buonaparte the keys of all the Austrian forces in Piedmont, Lombardy, and the Legations.

The battle of Marengo was celebrated at Paris by a fete, on the 14th of July, and a singularly interesting spectacle was then presented. This was the remains of the ‘wall of granite,’ the consular guard, who, just as the games were about to begin, marched into the field. The sight of these soldiers covered with the dust of their march, embrowned with the sun, and with the marks of warlike toil on their brow, formed a scene so affecting, that the people could not be restrained by the guards from violating the limits, to take a nearer view of these interesting heroes. While the parade lasted, tolerably good order was preserved ; but as they marched away, after their presentation to the first consul,

mothers, sisters, and friends, rushed forwards to embrace sons and brothers as they passed ; and amidst this joy of tears, and the loud acclamations of the spectators, the whole order of the ceremony was disturbed ; useless efforts were made to persuade the people to retire to their positions, and the intended games were wisely deferred. Napoleon's presence being necessary at Paris, he arrived there on the 2nd of July, in the middle of the night, and was received on the following day with every demonstration of joy.

It is a curious fact, that Napoleon most religiously preserved the drab great coat which he wore during his passage over Mount St. Gothard, previous to the memorable battle of Marengo. lie was so much attached to this surtout, that he frequently wore it previous to decisive battles ; and it is in this very habiliment that he is uniformly represented in the great pictures painted by his order, to immortalize his most celebrated triumphs.

Shortly after this battle, Napoleon says, Louis XVIII. wrote a letter to him, which was delivered by the abbe" Montesquieu, in which he complained of his long delay in restoring him to his throne ; that the happiness of France could never be complete without him ; neither could the glory of the country be complete without Buonaparte ; that one was as necessary to it as the other ; and concluded by desiring Napoleon to choose whatever he thought proper, provided he was restored to his throne. Napoleon sent him back a very handsome answer, in which he stated that he was extremely sorry for the misfortunes of himself and family ; that he was ready to do every tiling in his power to relieve them, and would interest himself in providing a suitable income for them ; but that he might abandon the thought of ever returning to France as a sovereign, as that could not be effected without marching over the bodies of 500,000 Frenchmen.

The overtures made to Napoleon by the count d'Artois possessed still more elegance and address. The bearer of these was the duchess de Guiche, a lady whose personal graces and fasci-nating manners were extremely prepossessing. She got access to madame Buonaparte, and breakfasted with her at Malmaison. Here the conversation turning on London, the emigrants, and the French princes, madame de Guiche mentioned her having been at the house of the count d'Artois, when

some person asked him what he intended to do for the first consul, in the event of his restoring the Bourbons ; and that the prince had replied, ‘I would immediately make him constable of the kingdom, and every thing else he might choose. But even that would not be enough: we would raise on the carrousel a lofty and magnificent column, surmounted with a statue of Buonaparte crowning the Bourbons.’ As soon as Napoleon entered the apartment, Josephine eagerly repeated what the duchess had said. ‘ And did not you reply,’ said her husband, ‘ that the corpse of the first consul would have been made the pedestal of the columns?’ The charming duchess was still present; the beauties of her countenance, her eyes,

her words, were, directed to the success of her mission. She observed also, that she was so much delighted, she did not know how she should ever be able sufficiently to acknowledge the favor which madame Buonaparte had procured her, of seeing and hearing so distinguished a man ••• so great a hero. All this was in vain : the duchess received orders that very night to quit Paris.

Relieved for a brief season from the fatigues and cares of war, the first consul, as an efficient means of spreading the toils of despotism around the people he was henceforth determined to govern, adopted and improved the detestable system of espionage, which, under the directory, had received a development worthy of those friends of freedom.

This system of espionage (we are proud that we have no English word for the infernal machine) had indeed been used under all tyrannies. But it wanted the craft of Fouche, and the energy of Buonaparte, to disclose all its powers. lu the language of Sir Walter Scott, < it spread through all the ramifications of society,’ that is, every man of the least importance in the community had the eye of a spy upon him. He was watched at home as well as abroad, in the boudoir and theatre, in the brothel and gaming house ; and these last haunts furnished not a few ministers of the Argus-eyed police. There was an ear open through all France to catch the whispers of discontent ; a power of evil, whicii aimed to rival, in omnipresence and invisible-ness, the benignant agency of the Deity. Of aL instruments of tyranny, this is the most detestable; for it chills the freedom anto warmth of social intercourse, locks up the heart, infects and darkens men’s minds with mutual jealousies and fears, and reduces to system a wary dissimulation subversive of force and manliness of character. We find, however, some consolation in learning that tyrants are the prey of distrust, as

well as the people over whom they set this cruel guard : that tyrants cannot confide in their own spies, but must keep watch over the machinery which we have described, lest it recoil upon themselves. Buonaparte at the head of an army is a dazzling spectacle ; but Buonaparte heading a horde of spies, compelled to doubt and fear these base instruments of his power, compelled to divide them into bands, and to receive daily reports from each, so that by balancing them against each other, and sifting their testimony, he might gather the truth ; Buonaparte, thus employed, is any thing but imposing.

Another means by which the first consul protected his power can excite no wonder. Free writing and despotism are such implacable foes, that we hardly think of blaming a tyrant for keeping no terms with the press. He cannot do it. He might as reasonably choose a volcano for the foundation of his throne. Necessity is laid upon him, unless he is in love with ruin, to check the bold and honest expression of thought. But the necessity is his own choice ; and let in-famy be that man's portion who seizes a power which he cannot sustain but by dooming tht mind, through a vast empire, to slavery, and bj turning the press, that great organ of truth, intu

an instrument of public delusion and debase-ment. Other means employed By Buonaparte for building up and establishing his power we shall mention in the order of their occurrence.

France was now paramount on the continent, and Buonaparte was the head of France. Negociations were slowly carried on between France and Austria, while the princes of the German confederation, finding themselves in a hopeless condition, sought an alliance with Buonaparte, and entered into separate treaties with him, without waiting the issue of the emperor's negociations at Luneville.

To weaken the confederation still more the first consul availed himself of an expedient calculated to detach Russia from the allies. The emperor Paul had for more than a year solicited the British cabinet to consent to the exchange of Russian prisoners in France for a similar

num-ber of French detained in England, the refusal of which had raised that sovereign's resentment to the highest degree. Buonaparte, availing himself of this circumstance, collected between 9000 and 10,000 Russian prisoners in the northern departments of France, clothed them in their own proper uniform, equipped and armed them, and sent them home without being exchanged. Paul, already seduced by the military reputation of Buonaparte, was quite brought over by this specious act of generosity, and which in the end produced an alliance between them that eventually occasioned the assassination of the unfortunate Paul.

Great, however, as was the power and influence of Buonaparte, and though millions were devoted to his will, there were rancorous enemies lurking round him in the emissaries of the ex-nobles under the old regime, and the partizans of the Bourbons. The return of the emigrants to France, as we have noticed, had been facilitated in various ways by the liberal policy of the first consul ; but, towards the close of the year 1 800, their conspiracies gave the most unfavorable bias to this indulgence : we here allude to the explosion of the infernal machine on the evening of the 24th of December.

It now appears, from the Journal of the private life of Napoleon, that two.infernal machines were constructed, and the contrivers of both discovered to Napoleon, but who, with his usual policy, kept the history of the first a profound secret. He did not like to divulge the numerous conspiracies of which he was the object.

. The construction of the first of these infernal machines the emperor imputed to 100 furious jacobins, the real authors of the scenes of September and the 10th of August. To accomplish their purpose of getting rid of him, they invented a fifteen or sixteen pound howitzer, which, on being thrown into the carriage, would explode by its own concussion. To make their object more sure, they proposed to lay caltrops along a part of the road, which would impede the carriage and prevent the horses from moving on. The man who was to be employed in laying down the caltrops, entertaining some suspicions of the job, communicated his ideas to the police. The conspirators were soon traced, and were apprehended, near the Jardin des Plantes, in the act of

trying the effects of a machine, which made :[illegible] terrible explosion. The first consul, for reasons aforesaid, did not give publicity to this event, but contented himself with imprisoning the criminals. He soon

relaxed his orders for keeping them closely confined, and thus they were allowed to mingle with some royalists in the same prison, who were there for having attempted to assassinate him by means of air guns. These two parties formed an alliance, and the royalists transmitted to their friends out of prison the idea of the last infernal machine, which actually exploded on the 24th of December.

The account that Napoleon gave of this event stated, in substance, that on that evening he was much pressed to go to the Opera. He had been greatly occupied with business all the day, and in the evening found himself sleepy and tired. He threw himself on a sofa in his wife's room, and fell asleep. Josephine came down some time after, awoke him, and insisted he should go to the theatre. She wished him to do every thing to ingratiate himself with the people. Against his inclination he got up, went into his carriage, accompanied by Lasnes and Bessieres, but was so drowsy that he fell asleep in his coach, and continued so till the explosion took place, when he recollected experiencing a sensation as if the vehicle had been raised up, and was passing through a great body of water. The contrivers were a man named St. Regent; Imo-lan, a religious man, who afterwards went to America and became a priest ; and some others. They procured a cart and a barrel, resembling that with which water is supplied in the streets of Paris, only with this exception, that the bar-rel was placed cross-ways. This, Imolan filled with gunpowder, and placed it and himself nearly in the turning of the street (St. Nicaise) through which the consul's carriage was to pass.

What saved Buonaparte was his wife's carriage being the same in appearance as his, and, as there was a guard of fifteen men to each, Imolan did not know which carriage Buonaparte was in, and was not certain he would be in either; to ascertain tliis he stepped forward to look into the carriage. One of the guards, a great tall strong fellow, impatient and angry at seeing a man stopping up the way and staring into the carriage, rode up and gave him a kick with his great boot, crying out, ' Get out of the way, pe-kin,' which knocked him down. Before he could get up the carriage had passed a little on, when Imolan, probably confused by his fall, not perceiving that the carriage had passed, exploded his machine between the two carriages. It killed the horse of one of the guards, wounded the rider, knocked down several houses, and killed and wounded about forty or fifty spectators, who were gazing to see the first consul pass. The police collected together all the remnants of the cart and the machine, and invited all the workmen in Paris to come and look at them. The pieces were recognised by several. One said, I made this, another that, and all agreed they had sold them to two men, who by their accent were Bas-

Bretons, natives of Lower Brittany ; but nothing more could be learned.

The sensation excited by the shock of this ex-

plosion, Napoleon afterwards acknowledged, awoke him from a dream that he was drowning in the Tagliamento, an event which must have left a very deep impression upon his mind. It was then some few years since he had passed the river Tagliamento in Italy, in his carriage, during the night. In the ardor of youth, and heedless of every obstacle, though he was attended by a hundred men, armed with poles and torches, his carriage was soon set on float. He for some time gave himself up for lost. So at the mo-ment when he awoke on his way to the opera, in the midst of a conflagration, the carriage was lifted up, and the passage of the Tagliamento came fresh upon his memory. The illusion, however, was but short ••• ‘ We are blown up ! ‘ exclaimed the first consul to Lasnes and Bessieres, who were in the carriage with him. They proposed to make arrests, but he advised them not to be too hasty. He arrived in safety at the opera, and appeared as if nothing had happened.

Napoleon being asked, whilst at St. Helena, who the persons were that employed the contrivers of the infernal machine, said they were employed by the count D *, and sent over by Pitt in English ships, and furnished with English money. ‘ Although,’ added he, ‘ your did not actually suborn them, they knew what they were going to execute, and furnished them with the means.’ He did not believe that Louis XVIII. was privy to it

This conspiracy enabled Buonaparte to overthrow the last remnant of Jacobins, to establish the law declaring an attempt on his life treason, thus assuming the rank of a king; and to appoint himself first consul for life.

Without a competitor on the land, he aspired to the dominion of the sea. But England was still irresistible in war. His subtle policy

conceived her destruction therefore by peace. The fall of Egypt before the gallantry of the British troops removed the last source of contention ; and on the 27th of March, 1802, after a five months' negociation, the shortlived peace of Amiens was signed ; England retaining none of her conquests but Ceylon and Trinidad. At the close of the year the expedition against the blacks of St. Domingo sailed from France. For this wanton aggression against the rights and liberties of a people who had achieved their own deliverance, and against a chief who had exhibited every great quality that ought to insure the respect and admiration of mankind, the first consul could never offer the shadow of a reason. We are not surprised that he should have felt his unavailing regrets in his exile: the measure he had meted to the unfortunate and unoffending 1'oussaint was measured to him again. The dangerous peace of Amiens, which if dexterously managed might have been fatal to England, the perfidy of the French ruler precipitately terminated. It was soon found that the system of Buonaparte was substantially aggression ††† conquest in peace, if he could accomplish it by the blackest perfidy ††† conquest in war, if he must use the sword. His first act was the seizure of Switzerland, and the assumption of its sovereignty, under the title of Grand Mediator of

the Helvetic republic ! This was a direct violation of the spirit of the treaty. The next was an insolent demand of the admission of French spies, as commercial agents, into the British ports. A multitude of minor violations at length put the unwilling cabinet on its guard. The cession of Malta was justly delayed, on the ground that the treaty had been already impaired. Buonaparte sent for the British ambassador lord Whit-worth, and poured out menaces against England. The ambassador still resisted the cession of Mal-ta without a sufficient security that it would not be seized by France. He left Paris, and on the 18th of May, 1803, that war was declared which was once more to change the face of Europe.

During this short interval of peace Buonaparte advanced several steps in the way of preparation to the throne. As grand pacificator, the French people, grateful for the repose they had received at his hands, invested him with the chief magistracy for life, with the power of presenting lus colleagues, and indeed of securing their election. It was also decreed that the first consul might name his successor, that he should have the power of pardoning in all cases, of making war and peace, and presenting to the senate the subjects on which they were permitted to deliberate, of suspending the functions of juries, of proclaiming departments out of the protection of the law, of determining what persons arrested in extraordinary cases were to be brought before the tribunals, and of dissolving the legislative body and the tribunate.

The first consul, further considering his authority incomplete whilst any power was left in the state that did not immediately emanate from himself, and ever anxious to aggrandise the army, now determined upon the formation of a military order of nobility, under the designation of the Legion of Honor. To this the legislature agreed, and that it should be composed of fifteen cohorts, and a council of administration. Each cohort was to consist of seven grand officers, twenty commandants, thirty subordinate officers, and 350 legionaries. The first consul was always to be chief of the legion, and of the council of administration, and the members were to be appointed for life. The pay of each grand officer was to be 5000 francs, and of each legionary 250. All military men who had received arms of honor were members, as well as those citizens who had rendered eminent services to the state in the late war, or who had caused the government to be respected. Joseph Buonaparte, the brother of the first consul, was elected grand master of this new order ; and, the more fully to rivet the interest of the government, the members of the grand council of the legion of honor were appointed members of the senate. In fact, to depress the authority of the legislative body, founded, though imperfectly, on the principle of representation ; and to exalt the senate, who depended chiefly on the choice and nomination of the first consul, were the principal objects of Napoleon, by which political liberty was in a great measure annihilated.

This acquisition of the consulship for life, and the terms obtained by the concordat with the pope, had filled the minds of the people at large

with sensations of pride and gratitude. A new pontiff had been invested with the purple as head of the Romish church, on the 13th of March, 1800: Chiaramonti, the pope elect, took the name of Pius VII., and owed his promotion in a great measure to the influence which the first consul had exercised in the conclave. It seemed that he was inclined to take the conduct of one of his predecessors, Benedict XIV., as the model for his own. He sent cardinal Gonsalvi into France, to negociate a concordat upon bases a little less ultramontaine than those of the famous concordat agreed to by Francis I. and pope Leo X.

On the 15th of July, 1801, a convention was signed by Joseph Buonaparte, brother of the consul, and the two representatives of the holy see, cardinal Gonsalvi and Monsignor Spina archbishop of Corinth. This treaty, which had been kept secret by both parties, caused the re-opening of the churches, and was made public in Paris at the same time as the treaty of Amiens, being solemnly promulgated on Easter day, by sound of trumpets and several discharges of artillery. The pomp of such a religious ceremony in a city where nothing of .the kind had been witnessed for many years, and the brilliant procession, in which the Pope's legate figured with the First Consul, collected innumerable spectators, who could not conceal the pleasure they felt in this partial restoration of the religion of their fathers.

Buonaparte considered the concordat thus extorted from the pope as a master stroke of policy. We confess we view it in a very different light. Our religious prejudices have no influence on our judgment of this measure : we view it now simply as a political device, and, in this character, it seems to us no proof of the sagacity of Buonaparte. It helps to confirm us in an impression which other parts of his history give us, that he did not understand the peculiar character of his age, and the peculiar and original policy which it demanded. He always used common-place means of power, although the unprecedented times in which he lived required a system which should combine untried resources, and touch new springs of action. Because old governments had found a convenient prop in religion, Napoleon imagined that it was a necessary appendage and support of his sway,

and resolved to restore it. But at this moment there were no foundations in France for a religious establishment, which could give strength and a character of sacredness to the supreme power. There was comparatively no faith, no devout feeling, and still more no superstition, to supply the place of these. The time for the reaction of the religious principle had not yet arrived ; and a more likely means of retarding it could hardly have been devised than the nursing care extended to the church by Buonaparte, the recent mussulman, the known despiser of the ancient faith, who had no worship at heart but the worship of himself.

v Had the Pope never existed before, he should liave been made for the occasion,' was the speech of this political charlatan : as if religious opinion and feeling were things to be manufactured

by a consular decree. He congratulated himself on the terms which he exacted from the pope, and which had never been conceded to the most powerful monarchs, forgetting that his apparent success was the defeat of his plans ; for just as far as he severed the church from the supreme pontiff, and placed himself conspicuously at its head, he destroyed the only connexion which could give it influence. Just so far as its power over opinion and conscience ceased it became a coarse instrument of state, contemned by the people, and serving only to demonstrate the aspiring views of its master. Accordingly the French bishops in general refused to hold their dignities under this new head, preferred exile to the sacrifice of the rights of the church, and left behind them a hearty abhorrence of the concordat among the more zealous members of their communion. Happy would it have been for Napoleon had he left the pope and the church to themselves. By occasionally recognising and employing, and then insulting and degrading the Roman pontiff, he exasperated a large part of Christendom, fastened on himself the brand of impiety, and awakened a religious hatred which contributed its full measure to his fall.

As another means employed by Buonaparte, for giving strength and honor to his government, we may name the grandeur of his public works, which he began in his consulate and continued after his accession to the imperial dignity. These dazzled France, and still impress travellers with admiration. Could we separate these from his history, and did no other indication of his character survive, we should undoubtedly honor him with the title of a beneficent sovereign ; but, connected as they are, they do little or nothing to change our conceptions of him as an all-grasping usurper. Paris was the chief

object of these la-bors ; and surely we cannot wonder that he who aimed at universal dominion should strive to improve and adorn the metropolis of his empire. It is the practice of despots to be lavish of expense on the royal residence and the seat of government. Buonaparte had a special motive too for conciliating the vanity of the great city; for Paris is France, as has often been observed. Previous to his ascending the imperial throne, to display the rancor of his hatred to England, he vapored about invasion. He therefore marched the whole of his disposable force to the western coast and constructed flotillas for their embarkation. If he was in earnest with this project he betrayed the weakness of an idiot ; and if he jested he paid dearly for his joke. Our people and our rulers were neither to be conquered nor alarmed.

Napoleon at the head of the government, and commanding in person the army of France, had now reached the moment when the crown hung within his grasp ; the fruit, to use his early phrase, was ripe, and he plucked it with a bold hand. But one crime more was to prepare the way for perfect despotism. It was of the blackest atrocity, unparalleled by even the tyrant's plea, and less like an act of human policy or passion than a gloomy pledge to that tempter that was yet to exact the full penalty of his bond. It was intended as a means of removing what he felt to

be obstructions to his power and ambition, ??? by striking terror into the hearts of kings, and especially of awing into complete submission the remaining branches of the house of Bourbon. We refer to the murder of the duke d'Knghien. There were times when Buonaparte disclaimed the origination of this atrocious crime. But it bears internal marks of its author; the boldness, decision, and overpowering rapidity of the horrible transaction, point unerringly to the soul where it was conceived. We believe that one great recommendation of this murder was, that it would strike amazement and terror into France, and Europe, and show that he was prepared to shed any blood and to sweep before him any obstructions in his way

to absolute power. Certain it is, that the open murder of the duke d'Enghien, and the justly suspected assassina-tions of Pichegru and Wright, did create a dread such as had not been felt before ; and while, on previous occasions, some faint breathings of liberty were to be heard in the legislative bodies, only one voice, that of Carnot, was raised against investing Buonaparte with the imperial crown, and laying France an unprotected victim at his feet. The circumstances of this foul blot on the page of humanity will be found in detail in our article D'ENGHIEN : they are briefly these : The duke d'Enghien, the last descendant of the line of Conde, was seized in the neutral territory of Baden, was dragged to Paris, brought before a military commission at midnight without counsel, witness, or friend, condemned on a fictitious charge of conspiracy, and at six in the morning shot, and thrown into a hole in the fosse of the castle of Vincennes which had been dug for him before his trial.

Napoleon's hands were now, as he termed it, washed in the blood of the Bourbons ; and they were but the fitter to grasp the sceptre that was to be dipped in the blood of universal Europe. On the 2nd of December he was crowned by pope Pius VII.,' himself laying the crown on his own brow and that of the empress, in haughty indication that its rights and maintenance existed in his own hands. On the llth of April, 1805, he was crowned king of Italy at Milan. The assassination of the emperor Paul of Russia annihilated for a time all his prospects of empire in the east. But he did not despair of winning over Alexander to his schemes. His temporary success we all remember. Alexander, however, opened his eyes at a critical juncture, and saved his own throne while he contributed his glorious share in ridding Europe of a universal enemy.

The system adopted by the French emperor, soon after his elevation, was felt to be a declaration of war against mankind. In 1Q,05 a coalition was formed by England, Austria, and Russia. They demanded of France the independence of Holland and Switzerland, the evacuation of Hanover and the north of Germany, the restoration of Piedmont to the king of Sardinia, and the withdrawing of the French armies from Italy. Those terms were haughtily answered by a decree calling out a conscription of 80,000 men, and the instant movement of the army from the camps of the Channel against Austria. The troops marched thirty miles a day,

while the enemy had calculated their advance at ten. The campaign was thus a surprise, the most decisive in the memory of man. The

Austrian van of 20,000 men was surrounded and forced to lay down its arms at Ulna. Vienna, the reward of the victory, was entered in triumph by Napoleon on the 1 3th of November. Austria concentrated her last force with the Russians on the plains of Moravia. The allies and the French were equal in number, each about 75,000 men. Nothing shows more clearly the utter surprize of the Austrian government, by the promptitude of Napoleon, than the fact that the whole native force in this combat for existence was but 25,000. He attacked the allies at Austerlitz on the 2d of December, the anniversary of his coronation, broke through their line which had rashly attempted to outflank him, slew or took prisoners 20,000 men, and laid Austria at his mercy. The treaty of Presburg deprived her of the Tyrol and Vorarlberg, which were given to Bavaria, and of Venice which was united to the kingdom of Italy. The electors of Wirtemberg and Bavaria were made kings. Such was the first evidence of the imperial sword of Napoleon. An empire prostrated in a six months campaign and by a single battle.

The following characteristic extracts are taken from the history of this period.

As Napoleon was passing through a crowd of prisoners, an Austrian colonel expressed his astonishment to see the emperor of the French wet, covered with dirt, and as much or more fatigued than the meanest drummer in his army. An aide-de-camp present having explained to him what the Austrian officer had said, the emperor ordered this answer to be made : ‘ Your master wished to make me recollect that I was a soldier: I hope he will allow that the throne and the imperial purple have not made me forget my first profession.’

The evening before the surrender of Ulm Napoleon addressed the following proclamation to his army : ###

‘ Soldiers ! a month ago we were encamped on the shore of the ocean opposite to England ; but an impious league compelled us to fly towards the Rhine. It is but a fortnight since we passed that river ; and the Alps of Wirtemberg, the Necker, the Danube, and the Lech, those celebrated barriers, have not retarded our march a day, an hour, or an instant. Indignation against a prince whom we have twice seated pn his throne, when it depended entirely on our pleasure to hurl him from it, supplied us with wings. The enemy’s army, deceived by our manreuvres, and the rapidity of our movements, is completely turned. It now fights only for its safety. It would gladly embrace an opportunity of escaping, and returning home ; but it is now too late : the fortifications erected at a great expense along the Iller, expecting

we should advance through the avenues of the Black Forest, are become useless, since we advanced by the plains of Bavaria. Soldiers ! but for the army which is now in front of you, we should have been in London ; we should have avenged ourselves for six centuries of insults, and restored the fre□□” dom of the seas. But bear in mind to-morrow

that you are fighting against the allies of England, that you have to avenge yourselves of a perjured prince, whose own letters breathed nothing but peace, at the moment he was marching his army against our ally, who thought us cowardly enough to suppose we should tamely witness his passing of the Inn, his entrance into Munich, and his aggression upon the elector of Bavaria. He thought we were occupied elsewhere ; let him for the third and last time learn, that we know how to be present in every place where the country has eneinies to combat. Soldiers! to-morrow will be a hundred times more celebrated than the day of Marengo. I have placed the enemy in the same position. It is necessary that not a man of the enemy’s army should escape ; that government which has violated all its engagements shall first learn its catastrophe by your arrival under the walls of Vienna, when its conscience may tell it that it has betrayed both its solemn promises of peace and the first of the duties bequeathed by its ancestors, with the power of forming the rampart of Europe against the irruptions of the Cossacks. Soldiers! you have been engaged in the affairs of Wertingen and Gunsburgh. I am satisfied with your conduct. Every corps in the army will emulate you ; and I shall be able to say to my people, ‘ Your emperor and your army have done their duty ; perform yours ; and the 200,000 conscripts whom I have summoned will hasten by forced marches to reinforce our second line. ‘ NAPOLEON, EMPEROR.’

On the night preceding the battle of Austerlitz Napoleon went on foot and incog, and visited all the posts, but was almost immediately recognised by the soldiers, who placed lighted straw upon long poles, and 80,000 men joined in saluting the emperor with acclamations; some to celebrate the anniversary of his coronation, others saying,

that the army would to-morrow offer its botiquette to the emperor. One of the oldest grenadiers went up to him, and said, ‘ Sire, you need not expose yourself: I promise you, in the name of the grenadiers, that you shall have only to fight with your eyes, and that we will bring you to-morrow the colors and artillery of the Russian army, to celebrate the anniversary of your coronation.’ The emperor said, on his return to his guard house, a miserable straw cabin without a roof, which the grenadiers had made for him ••• ‘ This is the finest evening of my life ; but 1 regret to think I shall lose a good number of these brave fellows. 1 feel, by the pain it tˆives me, that they are indeed my children, and I often reproached myself for this sentiment, for I fear it will terminate in rendering me unfit to carry on a war.’

On the return of a feverish peace, and when the sword was sheathed, Napoleon saw the fruit of victory, and felt that the true conquest was l>ey;un. No campaign, since that in which Caesar decided the mastery of the Roman world, was ever followed by results so wide. The confederation of the Rhine was formed, and the title of emperor of Germany finally extinguished.

In the pride of conquest Napoleon took upon himself almost the name of an earthly provi-

dence. By a stroke of his pen he alienated and distributed kingdoms. He rapidly developed his determination to bend all Europe to the supremacy of France, by surrounding her borders with a circle of dependent kingdoms. As the commencement of this system of imperial ramparts, Holland was given to his brother Louis. Other individuals of his blood were fixed in remoter sovereignties ; Naples was given to Joseph ; Lucca to his sister Eliza ; Guastella to his sister Pauline; the grand duchy of Berg to Murat, his sister Caroline’s husband ; his stepson Eugene Beauharnois was appointed viceroy of Italy, and married to the daughter of the king of Bavaria; Eugene’s sister was married to the hereditary prince of Baden.

Among all the extraordinary workings of Napoleon’s power, this sudden exaltation of nameless individuals to preeminence struck Europe with the strongest surprise. With this rage for king making, he aspired to resemble as nearly as possible the monarchs and courts around him. His policy in both may very justly be questioned. The true course for Napoleon seems to us to have been indicated, not only by the state of Europe, but by the means which France in the beginning of her revolution had found most effectual. He should have

identified himself with some great interests, opinions, or institution, by which he might have bound to himself a large party in every nation. He should have continued to make at least a specious cause against old establishments. To contrast himself most strikingly and advantageously with former governments, should have been the key of his policy. He should have placed himself at the head of a new order of things, which should have worn the face of an improvement of the social state. Nor did the subversion of republican forms prevent his adoption of this course, or of some other which would have secured to him the sympathy of multitudes. He might still have drawn some broad lines between his own administration, and that of other states, tending to throw the old dynasties into the shade. lie might have distinguished himself by the simplicity of his establishments, and exaggerated the relief which he gave to his people, by saving them the burdens of a wasteful and luxurious court. He chose, however, to be a king in all the vulgar pomp and parade of the title, without ancestry to render it venerable, without blood to render it legitimate ; and as to his conferring this dignity upon his relatives, and placing them over countries to which they were foreigners, the inconsistency was as great as the vanity was contemptible. He thus spread a jealousy of his power, whilst he rendered it insecure ; for as none of the princes of his creation, however well disposed, were allowed to identify themselves with their subjects, and to take root in the public heart, but were compelled to act openly and without disguise as satellites and prefects of the French emperor, they gained no hold on those subjects, and could bring no strength to their master in the hour of peril.

Two things are strikingly evident in the early stage of Napoleon's career : that he was resolved upon the attainment of universal empire, and that his sole dependence in securing his object

was brute force, applied by his own skill and dexterity. It is too palpable to be denied that he thought himself inore than a match for the moral instincts and sentiments of our nature; that he thought himself able to cover the most atrocious deeds by the splendor of his

name, and even to extort applause for crimes, by the brilliancy of his success.

To his favorite and insane projects he saw but one barrier opposed, and to the destruction of it he was resolved to bend all his energies. He had found the strength of England pressing against him as his war system extended, and acknowledged in words, and more expressive actions, that while she remained to rally the broken fortunes of Europe all his victories were in vain. But her ruin would be more than the removal of his most formidable enemy. England held the gate to the high;road of the western and eastern worlds. ‘ With my armies and your fleets we must decide the kingdom of the earth,’ was his language to the English government in peace. ‘ England and France cannot survive together,’ was his more sincere language on the declaration of hostilities. But he had found direct attack impossible. He had twice threatened England with invasion; and the threat had only recoiled in shame upon the utterer; to conquer her by peace became once more his policy, but to urge her to pacification she must be first stript of the hope of restoring Europe. Russia, the only untouched power of the continent, alone stood in the way, and her humiliation was resolved on. But Prussia, that lay like the fortress of the north of Germany in the flank of the march, must not be left behind to take advantage of the chances of this colossal warfare. It was attacked and overpowered in a single assault. The whole stately fabric of the science and fortunes of the great Frederick came to the ground in a moment under the fire of the French cannon ; and the battle of Jena on the 13th of Octoher, 1806, with a deeper vengeance than that of Austerlitz, drove the king to take refuge among strangers, and turned his kingdom into a garrison of Napoleon. With an adroitness peculiarly his own the French emperor contrived to throw the whole blame of the war upon his victim. The fable of the wolf and the lamb became in this instance a reality. The king of Prussia, well knowing the character of the man who was disturbing every government in Eu-rope, did all he could to conciliate the tyrant, concerning whose intentions he entertained reasonable apprehensions, while at the same time he prepared himself for hostilities should they be forced upon him. The latter necessity soon arrived, and Prussia, with more dignity than prudence, called upon the plunderer to renounce the kingdoms of Holland and Italy, and to withdraw his troops from Germany.

Napoleon, we are told, could not finish reading the document that conveyed these demands, but threw it down with contempt. Alluding to the king of Prussia, he exclaimed, ‘Does he think himself in Champagne? Does he want to give us a new edition of his manifesto?

What ! does he pretend to mark out a route for our mardi back? Really I pity Prussia. I feel for VOL. XV.

William. lie is not aware what rhapsodies lie is made to write. This is too ridiculous. Berthier, they wish to give us a rendezvous of honor for the 8th ; a beauteous queen will be witness to the combat. Come, let us march on, and show our courtesy. We will not halt till we enter Saxony.' Then, turning immediately to his secretary, he hastily dictated this proclamation : ###

' Soldiers ! The order for your return to France was issued. You were already within a few days' march of your homes : triumphal ffetes awaited you, and the preparations for your reception had commenced in the capital ; but, while we thus too confidently resigned ourselves to security, new plots were hatching, under the mask of friendship and alliance. Cries of war have been raised at Berlin, and for two months we have been provoked with a degree of audacity that calls for vengeance. The same faction, the same headlong spirit, which, under favor of our internal dissensions, led the Prussians fourteen years ago to the plains of Champagne, still prevails in their councils. If they no longer wish to burn and destroy Paris, they now boast their intention to plant their colors in Stuttgard, the capital of one of our allies. They would oblige .Saxony, by a disgraceful transaction, to renounce her independence, by ranking her in the list of their provinces. They seek, in fine, to tear your laurels from your brows. They expect us to evacuate Germany at the sight of their army. What madness ! Let them learn that it would be a thousand times easier to destroy the great capital, than to sully the honor of the great people and their allies. In their former attempt the plans of our enemies were frustrated. They found in the plains of Champagne only shame, defeat, and death; but the lessons of experience are forgotten, and there are men in whom the feelings of hatred and jealousy never become extinct. Soldiers ! there is not one of you who would wish to return to France by any other path than that of honor. We ought not to return except beneath triumphal arches. What! have we braved the inclemency of the seasons, the ocean, and the desert; have we subdued Europe, often united against us ; have we extended our glory from east to west, only to return now likn deserters ; and are we to abandon our allies, and then to be told, that the French eagle bas fled in dismay before the Prussians? But they have already arrived at our advanced posts : let us then march upon them, since forbearance will not check their infatuation. Let the Prussian army experience the fate it shared fourteen years ago. Let us teach them that if it be easy to obtain an

increase of territory and power, with the friendship of the great people, their enmity provoked by the neglect of prudence and reason, is more terrible than the storms of the ocean.'

The day after he entered the Prussian capital the conqueror addressed his soldiers in the following proclamation : ###

' Soldiers ! You have fulfilled my expectations, and justified the confidence of the French people. You hav##- rndured privation and fatigue, with courage equal to the intrepidity and presence of mind which you evinced on the field of battle.

'I F

You are the worthy defenders of the honor of my crown, and the glory of the French people. So long as you continue to be animated by the spirit which you now display, nothing can oppose you. I know not how to distinguish any particular corps. As the result of our campaign, one of the first powers in Europe, which lately proposed to us a dishonorable capitulation, has been overthrown. The forests and denies of Franconia, the rivers Saale and the Elbe, which our fathers would not have crossed in seven years, we have traversed in seven days ; in that short interval we have had four engagements and one great battle. Our entrance into Potsdam and Berlin had been preceded by the fame of our victories. We have made 60,000 prisoners, taken sixty-five standards, among which are the colors of the king of Prussia's guards, 600 pieces of cannon, and three fortresses. Among the prisoners there are upwards of twenty generals. But, notwithstanding all this, more than half our troops regret their not having fired a single shot. All the provinces of the Prussian monarchy, as far as the Oder, are in our power. Soldiers! the Russians boast of coming to meet us, but we will advance to meet them; we will save them half their march : they will meet another Austerlitz in the midst of Prussia. A nation who can so soon forget our generous treatment of her after that battle, in which the emperor, his court, and the wrecks of his army, owed their safety only to the capitulation we granted

them, is a nation that cannot successfully contend with us. We will not again be the dupes of a treacherous peace. We will not lay down our arms till we compel the English, those eternal enemies of France, to renounce their plan of disturbing the continent, and relinquish the tyranny which they maintain on the seas.'

The way was now cleared for the march of Napoleon to the north, and the declaration was now issued by which the ruin of England was proclaimed as the grand object of the war. The Berlin decrees commanded an abjuration of all intercourse with her by the continent ; the measure was impotent ; it was baffled by the vigorous commerce of the British empire; it was hated and evaded by all the commercial powers that were still undegraded by the actual presence of the French bm onets ; and it was violated even in the recesses of Napoleon's palace. But even its partial operation laid a load of misery to the account of his crimes against mankind.

The first Russian war began. Napoleon advanced into Poland. The Russians, under Ben-ningsen, retreated before his superiority offeree. The dreadful severities of a northern winter could not impede the fierce ambition that had sworn to separate Russia from Europe, and drive back the empire to its fountain head in the desert. Three desperate encounters, that of Pul-' tusk fought in November 1806, with partial discomfiture to the French ; Eylau, fought in February of the following year, a drawn battle ; and Friedland, fought in June, with great loss to the Russians, produced the treaty of Tilsit, which publicly stipulated for'the seizure of Finland, and privately for rhat of Constantinople. The

conditions claimed by France were, the reviva of the armed neutrality, the seizure of Spain, atld the shutting of the Russian ports against English commerce, an exclusion which was followed by Austria and Prussia. Napoleon might now be considered at the zenith of his glory. Apparently he had cemented a personal friendship with the emperor Alexander. They lived at Tilsit in habits of the closest intimacy ; and it is Napoleon who says, 'we were two young men of quality, who, in their common pleasures, had no secret from each other.' Could ambition have known when to pause, this was the time. The north and east of Europe were his own ; millions regarded him with admiration bordering on that awe which is felt when contemplating a being of superior nature ; his few enemies were ready to enter into terms of amity could they have been assured of his good faith and sincerity. And he was the idol of France, not only on account of his victories in

the field, but because his government and internal policy, though despotic, were of a kind to impress his subjects with a powerful conviction of his capacity to govern. The code Napoleon, which was given to France under his auspices, entitles him to an honorable renown. In this almost solitary instance he showed that he understood something of true glory, and we prize it the more on this account. We look on the conqueror, the usurper, the sporter of kingdoms, the insatiable despot, with disgust, and see iu all these characters an essential vulgarity of mind. But, when we regard him as a fountain of justice to a vast empire, we recognise in him a resemblance to the just and benignant deity, and cheerfully award to him the praise of bestowing on a nation one of the greatest gifts, and of the most important means of improvement and happiness which it is permitted to man to confer. It was, however, the misery of Buonaparte, a curse brought on him by his crimes, that he could touch nothing without leaving upon it the polluting mark of despotism. His usurpation took from him the power of legislating with magnanimity, where his own interest was concerned. He could provide for the administration of justice between man and man, but not between the citizen and the ruler. Political offences, the very class which ought to be submitted to a jury, were denied that mode of trial. Juries might decide on other criminal questions ; but they were not to be permitted to interpose between the despot and the illfated subjects who might fall under his suspicion. These were arraigned before special tribunals, invested with a half n: Hilary character, the ready ministers of nefarious prosecutions, and only intended to cloak by legal forms the murderous purpose of the tyrant.

The conscription was, however, amid all the ameliorating influences of the civil code, the most terrible engine of despotism ; and it was ultimately the destruction of the hand that wielded it. It comprehended nearly the whole population,[illegible] all capable of bearing arms, with the exception of the ecclesiastics. It enlisted the youths of the kingdom at the age of twenty and upwards. The rigor of its conditions was extreme. No distinction was made between the

married man, whose absence might be the ruin of his family, and the single member of a numerous lineage, who could be easily spared. The son of the widow, the child of the decrepid and helpless, had no right to claim an exemption. Three sons might be carried off in three successive years from the same desolated parents ; there was no allowance made for having already supplied a recruit. Those unable to serve were mulcted in a charge proportioned to the quota of taxes which they or their parents contributed to the state, and which might vary from fifty to 1200 francs. Substitutes might indeed be offered, but then it was both difficult and expensive to procure them, as the law required that such substitutes should not only have the usual personal qualifications for a military life, but should be domesticated within the same district as their principal, or come within the conscription of the year. Suitable persons were sure to know their own value, and had learned so well to profit by it that they were not to be bribed to serve without excessive bounties. The substitutes had also the practice of deserting upon the road, and thus cheating the principal, who remained answerable for them till they joined their colors. On the whole, the difficulty of obtaining exemption by substitution was so great, that very many young men, well educated, and of respectable families, were torn from all their more propitious prospects, to live the life, discharge the duties, and die the death of common soldiers in a marching regiment. But perhaps the most terrible part of the fate was, that it was determined for life. Whatever may be said in favor of such a system for the purpose of maintaining a war purely defensive, applied as it was by Buonaparte to the conduct of distant offensive uses, no otherwise necessary than for the satisfaction of his own ambition, it clearly involves the charge of having drained the very life-blood of the people for purposes in which they had no comparative interest.

With such mighty resources Napoleon was resolved to commence a new era in his violent and desolating career. He had proved the strength of France over the north and east of Europe with the consuming rapidity of a stream from a volcano ; but lie was now to encounter another species of resistance. He had warred with kings, ††† lie had now to war with the people.

Pursuing the cruel and illusory scheme of destroying England by the destruction of commerce, a measure which embitterred even the military slavery of the continent, he had succeeded to the extent of a public exclusion of British trade in the immense line of coast from the Baltic to the Bay of Biscay. But Spain and Portugal, connected with England by those old ties of habit which are stronger than treaties, and even by those necessities which neither king nor nation can

control, still carried on an intercourse too valuable to be broken up by a paper blockade. It was now, therefore, decreed that Spain and Portugal should become provinces of France.

As i►►. with the predestined design of showing to the world the baseness of which ambition might be made, the progress of Napoleon to this seizure was marked with the true character of

the man. Hitherto he nau conquered by ihe natural weapon of a soldier, or, if art had mixed with these, it was scarcely of a more degraded kind than that which belongs to the lax morality of war. But his art now sunk below stratagem, it was falsehood, meaness, systematic perfidy, and this baseness was if possible deepened by its want of all that could be termed necessity. The Spanish throne was filled by a man of weak intellect ; the Spanish cabinet by a compound of fools and traitors. Both would have been a voluntary prey. Neither could have required that serpentine winding, that long convolution of loathsome and abhorrent subtlety, by which they were entangled and undone. This was Napoleon himself. The project and the policy were exclusively his own. His habitual agents, shorn of their honors as they have been since by the common indignation of mankind, have yet exonerated themselves from all share in a transaction by which Napoleon established his title to the first rank of treachery.

It was in one of the actions of the Spanish war that the memorable event occurred which ought to have made him the execration of the army as well as of the world.

On the 29th of November Napoleon was at Bozeguillas; on the 30th, at day-break, the duke of Belluno, marshal Victor, arrived near the strong position of Somo Sierra, defended by 13,000 men under general San Juan. The Puerto, or narrow neck of land forming the pass, was intersected by a trench fortified with sixteen pieces of cannon. While a part of the French advanced on the direct road to this position, other columns gained the heights on the left. The Somo Sierra forms a part of the chain called Carpelanos, which traverses the great road from Castile. The enemy’s tirailleurs covered the heights on the right and left. Whilst the French infantry were making the most painful efforts to ascend these, sustaining with their wonted firmness the double fire of the Spanish musketry and artillery, Napoleon arrived at the head of the cavalry of his guard, which were preceded by the Polish lancers. The emperor stopped near the foot of the mountain, and attentively examined the enemy’s position, the fire

from which seemed to redouble; many balls fell near ××× him, or passed over his head. As the French infantry did not appear to make any sensible progress, the emperor confided to the Polish lancers the service of charging the enemy's battery upon the summit of the mountain. Conducted by their chief, count Krasinski, these brave men advanced four abreast, the narrow causeway not admitting more. For a moment the fire of the battery and that of the Spanish tirailleurs arrested their progress; but, rallied by count Krasinski and colonel Dautancourt, they soon returned with other squadrons, assisted by the French infantry, when, notwithstanding the fire upon their flanks, and the shower of grape shot, the defeat of the enemy was the work only of a few minutes : the artillery was seized, and the men sabred, dispersed, or taken. The regiment that had performed this brilliant charge was from that moment justly associated with the flower of the old French imperial sruard.

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The advantages of an action thus memorable were decisive. The Spanish corps were totally dispersed. They lost ten stands of colors, all their artillery and baggage, thirty caissons, the regimental chests, a great number killed, wounded, and prisoners, including several colonels, and other superior officers. The Polish lancers had fifty-seven men killed and wounded, besides several officers. From a subsequent account it appears that colonel Pir6, who was first sent upon this service with the Poles, having reconnoitred the position, countermanded the advance of the Poles, and sent an officer to inform the emperor that the undertaking was impossible. Upon this information Napoleon, irritated, striking the pommel of his saddle, exclaimed, ' Impossible ! Why, there is nothing impossible to my Poles.' General Wattier, who was present, endeavoured to calm him; but he still continued to articulate, ' Impossible ! I know of no such word. What! my guard checked by the Spaniards, by armed peasants ?' At this moment the balls began to whistle about him, when, by a natural instinct, several officers came forward to persuade him to

withdraw. Among these Napoleon observing major Philip Segur, he said, ‘ Go, Se-gur, take the Poles, and make them take the Spaniards, or let the Spaniards take them.’

Pir6 having informed the chef d’escadron Ko-zietulski of whatthe emperor had said, this officer replied, ‘ Come then along with me, and see if the devil himself, made of fire as he is, would undertake this business.’ He was right : 13,000 Spaniards were placed, as it were, in an amphitheatre, in such a way that no one battalion was masked by another ; they could only join in columns. From this point the Poles would have to sustain 40,000 discharges of musketry ; and as many of cannon, every minute. However, the order was positive. ‘ Commandant,’ said Segur, ‘ let us go; it is the emperor’s wish : the honor will be ours : Poles, advance. Vive 1’ empereur.’ The squadron then rushed forward ; when, out of upwards of eighty men, scarcely twenty remained unhurt. Four officers out of seven were killed on the spot ; the Polish commandant and two others were wounded. Major Segur, some paces in advance, was struck by several balls, and found himself standing alone with lieutenant Rudowski, a fine tall man, and of great promise. The bodies of the Polish lancers choked up the passage ; this squadron was annihilated.

As the means of showing him to the whole civilised world, in his undisguised and genuine character, the war with Spain was fraught with the most important and beneficial consequences. With a miserable consciousness of his guilt, he said in his exile, ‘That wretched war, it was my ruin. It divided my forces, it multiplied the necessity of my efforts, it injured my character for morality.’ It was in this injury that the retributive blow was dealt. It stamped him with indelible personal baseness before the world ; it showed the utter futility of looking for honor in his na-tnre, or relying on any pledge for his word but his chains. If he could have looked forward but a few years, he would have seen that in the very hour of his keenest triumph at Bayonne,

with the dynasty of Spain bound hand and foot before him, he was building his dungeon, and, in that dungeon, digging his grave. ❖❖❖ [His military discomfitures, in the early campaigns of the Spanish war, compelled him to another desperate struggle for Germany. The Austrian empire, mutilated and insulted, longed for revenge, and the opportunity was taken in the absence of Napoleon in the Peninsula. But his star was not yet to sink. With characteristic rapidity he flew to the hostile frontier, fought the great battles of Eckmuhl, Asparne, and

Wagram, and again took possession of the capital, reducing Austria to solicit the peace of Schoenbrun, in October 1809, by which they gave up 45,000 square miles of territory, and a population of nearly 4,000,000. A scarcely less remarkable event was the arrest of pope Pius VII., and the annexation of his states to France, by the entrance of the French into Rome, February 2d, and the decree of the 17th of May Two days, after the ratification of the treaty of Vienna Napoleon was in danger of assassination, during the review of the troops upon the parade of Schoenbrun. A young man of an interesting figure, and of a placid appearance, who had concealed himself among the spectators, suddenly rushed upon the emperor, attempting to strike him with a poniard. The prince of Neufchatel arrested his arm, and general Rapp immediately seized the assassin. Napoleon was sufficiently master of himself to preserve an unalterable countenance, and continued to order the evolutions, as if the incident that occurred had been of no importance. This young man was conducted to the guard-house and searched : nothing was found upon him but a common knife, four Frederics -d ‘or, and the portrait of a female. To all the questions put to him by general Savary, he only answered, that he would speak to the emperor. Informed of his obstinate silence, Napoleon sent for the culprit into his closet ‘ Whence came you,’ said he, ‘ and how long have you been at Vienna ?’ ‘ I am a native of Erfurt, and I have been at Vienna two months.’ ‘ What would you have of me ? You want a peace, and you say you can prove it is indispensable. Do you think I could listen to a man without a public character, on any mission ?’ ‘ If you had I should have stabbed you.’ ‘ What harm have I done you ?’ ‘ You have oppressed my country and the whole world ; and if you do not make peace your death will be necessary to the happiness of humanity : in killing you I should have performed the finest ac-tion that a man of honor could undertake. But I admire your talents, and as I reckoned upon your reason, I wished, before I struck the blow, to have convinced you.’ ‘ Have you been led to this determination by religion ?’ ‘ No ; my father, a Lutheran minister, is ignorant of my project, which I have not communicated to any one. I have consulted no person whatever. I am alone, and for two years past I have meditated your conversion, or your death.’ ‘ Were you at Erfurt when I was there last year?’ ‘ I saw you there three times.’ ‘ Why did you not kill me then?’ ‘You suffered my country to respire : I thought peace was certain, and es-NAPOLEON.

teemed you as a great man.' ††† ' Do you know Schneider or Schill?' ††† 'No.' ††† 'Are you an illumine", a free-mason?' ††† ' No.' ††† 'You know the history of Brutus?' ††† ' There weretwo Romans of this name ; the last died in the cause of liberty.' ††† ' Have you any knowledge of the conspiracy of Moraau and Pichegru ?' ††† '.I heard of it from the public papers.' ††† ' What do you think of those men?' ††† ' They labored for themselves, and were afraid to die.' ††† ' A portrait has been found upon you ; whom does it represent?'††† ' My best friend, the adopted daughter of my virtuous father.' ††† ' What ! have you a heart susceptible of these tender emotions, and are you not unwilling to afflict and ruin those you love in becoming an assassin?' ††† ' I have listened to a voice much stronger that that of my own tenderness.'-^' But in assassinating me in the midst of my army, could you think of escaping?'††† ' In reality, I am astonished that I continue to exist.' ††† ' If I pardon you, what use will you make of your liberty ?' ††† ' My project has failed, and you will now he upon your guard. I shall return peaceably to my family.' Napoleon then called M. Corvissart, his first physician, and asked him if-he did not perceive some signs of insanity in this young man ? After having carefully examined him, he replied, he could not discern any symptoms of unusual emotion in him.

This unfortunate man remained under the care of two gens d'armes two days ; he walked about quietly, and frequently kneeled down to pray. At his dinner time they brought him a table-knife. He took it ; but looking at it some time, a gendarme would have taken it from him. ' Don't be afraid,' said he ; ' I shall do myself no more harm than you would.' On the following day he heard the cannon fire, and asked the cause. ' It is peace,' said they.†††' Peace !' said he ; 'do not deceive me.' lie was assured nothing was more true. He then gave himself up to transports of joy, and tears fell from his eyes. He fell upon his knees, and prayed fervently ; and rising up he said, ' I shall die with more tranquillity.' When he was called upon to undergo the sentence, he said to the officer, ' Sir, I have only one favor to ask ; that is, not to be bound.' It was granted; he walked freely, and died with calmness. This attempt at assassination, upon which the French journals of the time observed a profound silence, has been variously related : the present details were communicated by an eye-witness ; but the attempt is said to have powerfully contributed to accelerate the peace with Austria, and hasten the re-turn of Napoleon to France.

Napoleon departed from Schoenbrun on the 27th of October ; on that

day he rose at five in the morning, and, sending for general Rapp, they walked out to the great road, to see the imperial guard pass along on its way to France. Napoleon again spoke of the young German who had attempted to assassinate him ; he thought it a thing unparalleled, and told the general to enquire how he died. It appears that the prisoner had been executed in the morning of the 27th; that tie had taken no food since the 24th, but constantly refused it, saying he had strength enough

to walk to the place of execution. He was informed that peace was concluded, and this seemed to excite some agitation in him. His last words were, ‘ Liberty for ever ! Germany for ever ! Death to the tyrant !’

Though Napoleon escaped the knife of the assassin, the time hastened which was to close his career of power and evil. His triumphs were already turning into his misfortunes. The successful seizure of the Spanish royal family had been followed by the most ruinous of his wars. His conquest of Austria was followed by an event which, while it gave a new dye to his personal baseness, probably gave the most fatal impulse to his fall. The giddy policy, pernaps the empty ambition, of a lofty alliance, prompted him to demand a daughter of Austria in marriage. His choice was fixed on Marie Louise, the eldest daughter of Francis II.

Very great obstacles seemed to oppose this union, especially as it was one of the conditions dictated by the conqueror ; it was repulsive to the conveniences, the opinion, and the hereditary pride of the house of Austria : however, the em- . peror of the French undertook to smooth the difficulties that existed on his side, and the Austrian monarch consented to the sacrifice demanded.

It was in vain that a legitimate union, sanctioned by time, and consecrated by the solemnity of a coronation, had associated the fate of Josephine with that of Napoleon. Neither the virtues of this lady, whom he had placed by his side, nor the gratitude that he owed to the first promoter of his fortune, could arrest the ambition of the French emperor. He pretended to be in want of an heir, though he had already proposed his brothers as his successors. A Se-natus Consulte of the 16th of December, 1809, declared the dissolution of his marriage with Josephine. The church also yielded in its turn. The nullity of the marriage, as to any spiritual obligation, was likewise pronounced by the officially of Paris. The victim too of this determination, whose

grief should have saved her from the humiliation of figuring in this business, could not be excused : she was compelled to come forward and declare, ‘ that having no more hope of giving children to her husband, which would be consistent with his politics, she resigned herself to the greatest sacrifice that she could possibly be called on to make.’

It is cheering to our common scorn of ingratitude, the basest of the vices, to trace its punishment. This marriage was among the immediate causes of Napoleon’s ruin. It deprived him of the counsel of an intelligent and disinterested friend, who had often restrained the violence of his impetuous nature. It disgusted all the principled classes of France ; it gave the agitators an easy opportunity of throwing suspicion on his policy, and quoting the old evils of an Austrian alliance ; it finally awoke the determination of Russia to resist at all hazards. The combination of France with Austiia menaced the czar with utter overthrow. ‘ The next step,’ said Alexander, on the announcemcn* of the marriage, ‘ will be to drive me back to my forests.’ A more solemn and fearful result of this con

tempt of human obligation may have been the work of that invisible justice which suffers the long course of guilt only to make its punishment more decisive. Napoleon now touched the limit of all his glories. The supremacy that looked down full orbed on the broken and prostrate nations of the continent was on the verge of eclipse; and within a period almost too brief for the contemplation of history, yet full of events that may be felt in every future age, it was finally overshadowed. One year of haughty and unshaken domination was still interposed between Napoleon and the first approach of his undoing. Determined on the subversion of the Russ an empire he summoned the vassal kings to Dresden, and gave Germany his parting menace against a breach of allegiance in a circle of crowned slaves. He could not restrain this ungenerous exultation : ‘ Come,’ he wrote to Tal-ma, ‘ at Dresden you shall play to a pit full of kings.’ The emperor of Austria, the king of Prussia, a crowd of electors and potentates,

surrounded the dispenser of thrones. Eleven sovereign princes attended his commands. All history offers no example of an assemblage so superb and so humiliated, so hopeless of restoration, yet so swiftly and nobly restored.

What but the arm of providence could have scattered, with the suddenness of the fall of a billow, the power of the French empire? Past and gone as it is, even its memory is appalling. Its actual limits were scarcely defined by a line drawn from the Baltic round the shores of the continent, along the Pyrennees, and from the Pyrennees round Italy, to the dominions of the pope; Naples alone excepted as uvider the nominal sovereignty of Murat. But the actual empire also comprehended Switzerland, the confederation of the Rhine, and a crowd of minor princedoms ; thus constituting a dominion of 800,000 square miles, and 85,000,000 of people ; the fifth of Europe in territory, the half in population, and in site, fertility, and military means, immeasurably overmatching all that remained. The actual population of France, and the provinces united to its territory, was 42,000,000 in the centre of Europe. As the origin of this stupendous dominion had been conquest, it was still ruled by the sword. The prime mover of the great machine was an army, unexampled in numbers, still more unexampled in equipment, discipline, and habits of war, and deriving yet higher distinction from the fame and talent of its leaders, and above all of him who was the master soul of all, Napoleon When he meditated his at-tack on Russia he had under his command the overwhelming multitude of 800,000 soldiers, in the highest state of preparation for war, and he declared himself forced to assume ‘ the dictatorship of the world.’ To Fouche”, who had ventured to remonstrate against the Russian war, Ms sullen answer was, ‘ My destiny is not yet accomplished, there must be one universal European code, one court of appeal, the same money, the same weights and measures, the same laws, must have currency through Europe. I must make one nation out of all the European states, and Paris must be the cnpital of the world.’ Truly a sterner strength than that of man was

now upon him. He must advance, and his next step is from a precipice.

Napoleon at the head of these armies amounting to 470,000 men assailed Russia on a frontier of 600 miles. The Russian troops, commanded by Barclay de Tally, were 260,000 : the narrative of this campaign is imperishable. It displays in the noblest light the gallantry

of the Russian troops and the patriotism of the emperor and his people. The burning of Moscow was a sacrifice to which history has no rival. But it was ordained that this capital in flames should be the funeral pile of Napoleon's empire. The retreat through the wilderness inflicted the last horrors upon the invading army : what the sword could not reach, the storm in its rage extinguished. ' The stars in their courses fougtit against Sisera ;' yet not by so direct and miraculous an interposition, as to justify the proud boast of the advocates of this great scourge of humanity, that he could be conquered by heaven alone. It was not the setting in of the frost earlier than usual tha* oaffled the calculation of Napoleon ; for it was later in its commencement than in several former years ; but it was his inexplicable delay in refusing to depart from the scene of desolation, his lingering at the Kremlin, vainly expecting overtures from Alexander, that was the proximate cause of the total annihilation of his fine army : add to which their attempt to carry away the cumbrous spoils of Moscow, and the multitude of stragglers that were attached to the march on this account, and which retarded the progress of the fugitives, till the sleet and the snow, and the cold of the desert, stiffened them on its plains. The detail is appalling beyond the power of the imagination to conceive. Napoleon once declared that the most impressive scene he had ever witnessed was when he saw 70,000 troops struggling in the conflict of death : what must have been the spectacle of as many thousands perishing in detail, ††† perishing before his eyes by a lingering maddening torture ! Napoleon's death blow was now given. The campaign of the following year was only a despairing,effort to recover Germany. The great battle in Leipsic, in 1813, crushed invasion for ever and drove the French behind the Rhine. The following extract detailing what occurred in an interview between Buonaparte and the abbe de Pradt at Warsaw, where he was a fugitive rapidly flying from the pursuing Russians, is extremely interesting.

When Napoleon arrived at Warsaw on the 10th of December, instead of proceeding to the palace, he put up at the hotel D'Angleterre, whence M. Caulincourt was despatched to sum-mon the appearance of the abbe de Pradt, the ambassador to Poland. Arrived at the house, the first question was, ' Where is the emperor ?' ††† ' At the hotel D'Angleterre : he expects you !' ††† ' Where are you going?' ††† ' To Paris !' ††† ' and where is the army ?' ††† ' It is gone,' said he, turning up his eyes to heaven. ††† *But what of the victory of the Berezina, and the six thousand prisoners we made ?* ††† ' That is all gone by * ††† Some hundreds of men had escaped. We had something else to do than to guard them.' Then taking him by the

arm, I said, ‘ It is time that all the faithful servants of the emperor should unite

in telling him the truth.’ ††† ‘Ah, what a failure said he ; ‘ but I have not to reproach myself with not having foretold it.’

‘ I hurried out, and arrived at the hotel about lalf past one o’clock. A few Polish gens d’armes guarded the gate ; the master of the hotel examined me ; hesitated a little, and then allowed me to pass. I saw a small carriage body placed on a sledge made of four pieces of fir ; it had stood some crashes, and was much damaged. Two open sledges there had served for the conveyance of general Lefebvre Desnouettes, another officer, the Mameluke lloustan, and a valet. This was all that remained of so much grandeur and magnificence. I thought I beheld the winding-sheet carried before the great Saladin. The door of a room oa the ground-floor was mysteriously opened. A short parley took place; the duke of Vicenza came, introduced me to the emperor, and left me with him. He was in a cold small lower apartment, and had the window-shut- ters half closed, the better to conceal his incog-nito. An awkward Polish servant continued blowing a fire of green wood which, resisting her efforts, diffused far more water over the stove than heat in the apartment. The emperor, according to his custom, was walking about, wrapped up in a superb pelisse lined with green, and with magnificent gold braudenburghs. He had on a kind of fur cap, and his boots were also surrounded with fur. ‘Ah, Monsieur the ambassador,’ said he, smiling ††† I approached, and addressed him thus : ‘ You look well : you have made me very uneasy ; but at length you are here : I am happy to see you.’ ††† ‘ How are you off in this country ?’ said he. I described to him the actual state of the duchy. I urged on the ground of prudence, the dignity of the emperor and the confederation, the quiet removal of the embassy and the council before the arrival of the enemy ; spoke to him of the distress of the duchy and the Poles He asked with vivacity, ‘ Who has ruined them ?’ I replied, ‘ What has been doing for these six years : the scarcity of last year, and the continental system deprive them of all commerce.’ At

these words his eyes were lighted up. He proceeded, ‘ Where are the Russians?’ I told him ››› ‘And the Austrians?’ ››› ‘ I have not heard of them for a fortnight.’ ››› ‘General Reynier?’ ››› ‘Nor of him neither.’ ››› I spoke to him of the Polish army. ‘ I have seen none of them,’ said he, ‘during the campaign.’ ››› I explained the reason of that, and why the dispersion of the Polish forces had at last rendered an army of 82,000 men invisible. ‘ What do the Poles want ?’ ››› ‘ To be Prussians, if they cannot be Poles.’ ››› ‘ And why not Russians? replied he, with an air of irritation. He said, ‘we must raise 10,000 Cossacks : a lance and a horse are sufficient for them ››› with that force the Russians may be stopped.’

‘Soon after he dismissed me, recommending to bring after dinner count Stanislaus Potocki and the minister of finance, two members possessing most credit in die council. This interview lasted about a quarter of an hour, during which, as usual, he walked about witli much agitation, and sometimes fell into a profound reverie. We met again at the hotel D’Ansrleterrc

at three o’clock; he lad just risen from table.

‘ How long have I been in Warsaw /›››Eight days››› No, only two hours;’ said he, smiling, without any preamble or preparation, ‘ from the sublime to the ridiculous there is but a step.’ ››› ‘ How do you do, Mr. Stanislaus, and you, Mr. Minister of the Finances ?’ ››› On these gentlemen repeatedly expressing their satisfaction on seeing him well after so many dangers, he replied, ‘ Dangers ! Not the least››› Agitation is life to me : the more trouble I have the better I am. None but sluggard kings fatten in their palaces. Horseback and camps lor me.’ From the sublime to the ridiculous there is only a step. Itwas plain then that he considered himself an object for the derision of all Europe, and this idea was to him the greatest of all punishments. He said, ‘ You are very much alarmed here.’ ››› ‘ It is because we only know what public rumor informs us.’ ››› ‘ Bali ! the army is superb. I have 120,000 men : I always beat the Russians. They are no longer the soldiers of Friedland and Eylau. I am going to raise 300,000 men. Success will render the Russians rash. I shall give them three or four battles in the Oder, and in six months I shall be again on the N it-men. I am more wanting on the throne than in my army. I leave it with regret. All that has happened is nothing ; it is a misfortune ; it is the effect of climate. The enemy is uood for nothing : I beat him every where. They wished to cut me off at the Berezina ››› I lau-lied at that fool of an admiral Tchitzchaˆoff.’

‘ He added a good deal on strong and feeble minds, and mostly all that was inserted in the 29th bulletin. He then proceeded ••• ‘ It used to be otherwise. At Marengo I was beaten till six in the evening : at Essling 1 was master of Austria: that archduke thought to stop me ; but I could not prevent the Danube from rising sixteen feet in one night. Ah ! if it had not been for that, the Austrian monarchy was ended ; but it was written in heaven, that I should marry an archduchess.••• [This was said with an air of great gaiety] ••• It has been the same with Russia : 1 could not prevent the frost : I was told every morning that I had lost 10,000 horses during the night. Well ! bon voyage. This was repeated five or six times. Our Norman horses are not so hardy as the Russian horses. It is the same with the men. Perhaps it will be said, I stopped too long at Moscow ; but it may be so ; the weather was good. I expected peace. I sent Lauriston with an overture. I thought of going to Petersburg!!. We will maintain ourselves at Wilna. I have left the king of Naples there ; ah ! ah ! what a grand political scheme. He who risks nothing gains nothing. From the sublime to the ridiculous there is but one step.’ ••• He then got into a rambling discourse, which continued for three hours ; the fire had gone out, and every one but the emperor felt the effects of the cold : he seemed to keep himself warm by his vehement utterance. At length, when the minister joined with the ambassador in addressing to him the most respectful and affectionate wishes for the preservation of his health and the prosperity of his journey, he replied, ‘ I never was better; if 1 carried the devil with me 1 should be all tl.e

better for that.’ These were his last words uttered at Warsaw; he then mounted the humble sledge which bore Caesar and his fortune, and disappeared. A violent shock which the vehicle received in passing out at the gate had nearly overturned it.

‘ Such,’ says this relater, ‘ was the famous conversation, in which Napoleon fully disclosed his bold and incoherent genius ; his cold insensibi-bility, and the fluctuation of his ideas among various diverging projects, his past schemes, and his approaching dangers.

In 1814 France at length felt the horrors of war. The vassal sovereigns threw off' their reluctant allegiance and joined the allies. A succession of sanguinary battles led the invaders to Paris; and Napoleon, dethroned and exiled, was the prize of the war. The emperor of Elba! (from the sublime to the ridiculous) the emperor of Elba, assisted equally by his income and his friends, was encouraged to make another effort to rise above his falling fortunes. The congress of Vienna, alarmed him for his safety; the restored Bourbons prepared his way by their absurd policy in awakening the fears of all France on the subject of the emigrants and the national property. The army by its intrigues opened a direct communication with their fallen master; and all things 'being propitious he returned within the year in triumph to his good city of Paris, and seated himself once more on the throne of Charlemagne.

His reign of 100 days was only a hollow pageant. He must have felt that, though restored, he had lost all the solidity of greatness. He saw the gathering storm and met it with the energy of despair. The battle of Waterloo quenched his glory for ever. He received his merited reward on the rock of St. Helena. He did not surrender himself to the generosity of the British government, ××× he fell into the power of England as a prisoner of war. He was dealt with accordingly. We wish, however, that in the treatment of him there had been greater magnanimity : we deem it not very creditable to those who had the charge of his person that they, in the language of Dr. Channing, tortured a sensitive captive by refusing him atitle which he had long worn. We think that not only religion and humanity, but self-respect, forbids us to inflict a single useless pang on a fallen foe. With regard to the scruples which not a few have expressed, as to the riijht of banishing him to St. Helena; we can only say that our consciences are not yet refined to such exquisite delicacy as to be at all sensitive on this particular. We admire nothing more in Buonaparte than the ert'ronh'ry with which he claimed protection from the laws of nations. That a man who had set these laws at defiance should fly to them for shelter ; that the oppressor of the world should claim its sympathy as an oppressed man, and that his claim should find advocates : these things are to be set down among the extraordinary events of this extraordinary age. Truly the human race is in a pitiable state : it may be trampled on, sported, loaded like a beast of bur-dc-ii, made the prey of rapacity, insolence, and tm> sword ; but it must not touch a hair, or disturb the pillow of one of its oppressors, unless it can find chapter and verse in the code of national law to authorize its rudeness towards the privileged offender. For ourselves we should rejoice to see every tyrant, whether a usurper or an hereditary prince, fastened to a

lonely rock in the ocean. Whoever gives clear undoubted proof that he is prepared, and sternly resolved, to make the earth a slaughter-house, and to crush every will adverse to his own, ought to be caged like a wild beast ; and to require mankind to proceed against him according to written laws and precedents, as if he was a private citizen in a quiet court of justice, is just as rational as to require a man, in imminent peril from an assassin, to wait and prosecute his murderer accord ing to the most protracted forms of law. There are great solemn rights of nature which precede laws, and on which law is founded. There are great exigencies in human affairs which speak for themselves, and need no precedent to reach the right path. There are awful periods in the history of our race which do not belong to its ordinary state, and which are not to be governed and judged by ordinary rules. Such a period was that when Buonaparte, by infraction of solemn engagements, had thrown himself into France and convulsed all Europe ; and they who confound this with the ordinary events of history, and see in Buonaparte but an ordinary foe to the peace and independence of nations, have certainly very different intellects from our own.'

On the 22dof June, 1815, Napoleon abdicated a dignity he could no longer retain. About noon on the 15th of October in the same year he arrived at St. Helena; and on the 21st of May, 1821, he expired of an hereditary disease, in the fifty-second year of his age. His remains rest in a beautiful valley under the pendant branches of several flourishing weeping willows near his favorite spring, and not far distant from Longwood, the place where he had resided.

One writer, speaking of the character of Napoleon, observes, ' Were I to be guided in forming my estimate of the late exile of St. Helena by the common principles of the world, by the principles which are equally maintained and acted upon by those that reverence and those that detest him ; above all were I to rest satisfied by comparing him with his heartless imbecile and vindictive contemporaries who wanted only his talents, his opportunities, and resources, to render them all that they affect to condemn in him, I should certainly pronounce him to have been a great man ; but judging of him by a totally different standard, and viewing him as separated from the bad things and the weak things around him ; taking his real and not his relative moral dimensions, I cannot award the character of greatness to one who never conceived a great and a magnificent idea that was not tarnished and diminished by the most undisguised selfishness, and who never formed a wish unconnected with the degradation and misery of his species. Napoleon Buonaparte was not in the Chiistian, in the noble, in the only sense of the phrase, a great man. His ca-reer was wonderful,

and it can never be forgotten that he lived ; but when the time shall come that men will estimate the distinguished of their spe-
NAPOLEON.

c\es, not by their talents but by their virtues ; and when superior philanthropy and goodness shall be the only passport to glory and renown ••• then will the names of Buonaparte, of Alexander, and of Caesar, be associated in one common infamy.

L)r. Channing of America, whose analysis of the character of Buonaparte we have liberally used in the preceding memoir, thus traces the great outline : ••• ‘ His intellect was distinguished ‘by rapidity of thought. He understood, by a glance, what most men, and superior men, could learn only by study. He darted to a conclusion rather by intuition than reasoning. In war, which was the only subject of which he was master, he seized in an instant on the great points of his own and his enemy’s positions : and combined at once the movements by which an overpowering force might be thrown with unexpected fury on a vulnerable part of the hostile line, and the fate of an army be decided in a day. He understood war as a science; but his mind was too bold, rapid, and irrepressible, to be enslaved by the technics of his profession. He found the old armies fighting by rule, and he discovered the true character of genius, which, without despising rules, knows when and how to break them. He understood thoroughly the immense moral power which is gained by originality and rapidity of operation. He astonished and paralysed his enemies by his unforeseen and impetuous assaults, by the suddenness with which the storm of battle burst upon them ; and, whilst giving to his soldiers the advantages of modern discipline, breathed into them, by his quick and decisive moTements, the enthusiasm of ruder ages. This power of disheartening the foe, and of spreading through his own ranks a confidence, and exhilarating courage, which made war a pastime, and seemed to make victory sure, distinguished Napoleon in an age of uncommon military talent, and was one main instrument of his future power.

The wonderful effects of that rapidity of thought by which Buonaparte was marked, the signal success of his new mode of warfare, and the almost incredible speed with which his fame was spread through

nations, had no small agency in fixing his character, and determining for a period the fate of empires. These stirring influences infused a new consciousness of his own might. They gave intensity and audacity to his ambition ; gave form and substance to his indefinite visions of glory ; and raised his fiery hopes to empire. The burst of admiration, which his early career called forth, must in particular have had an influence in imparting to his ambition that modification by which it was characterised, and which contributed alike to its success and to its fall. He began with astonishing the world; with producing a sudden and universal sensation, such as modern times had not witnessed. To astonish, as well as to sway, by his energies, became the great aim of hia life. Henceforth to rule was not enough for Buonaparte. He wanted to amaze, to dazzle, to overpower men's souls by striking, bold, magnificent, and unan-ticipated results. To govern ever so absolutely would not have satisfied him, if he must have governed silently. He wanted to reign through

wonder and awe, by the grandeur and terror of his name, by displays of power which would rivet on him every eye, and make him the theme of every tongue. Power was his supreme ob-ject, but a power which should be gazed at as well as felt, which should strike men as a prodigy, which should shake old thrones as an earthquake, and, by the suddenness of its new creations, should awaken something of the submissive wonder which miraculous agency inspires.

Such seems to us to have been the distinction, or characteristic modification, of his love of fame. It was a diseased passion for a kind of admiration, which, from the principles of our nature, cannot be enduring, and which demands for its support perpetual and more stimulating novelty. Mere esteem he would have scorned. Calm admiration, though universal and enduring, would have been insipid. He wanted to electrify and overwhelm. He lived for effect. The world was his theatre, and he cared little whaf part he played, if he might walk the sole hero on the stage, and call forth bursts of applause, which would silence all other fame. In war the triumphs which he coveted were those in which he seemed to sweep away his foes like a whirlwind ; and the immense and unparalleled sacrifice of his own soldiers, in the rapid marches and daring assaults to which he owed his victories, in no degree diminished their worth to the victor. In peace he delighted to hurry through his dominions ; to multiply himself by his rapid movements; to gather at a glance the capacities of improvement which every important place possessed ; to suggest plans which would startle by their originality ana vastness ; to project in an

instant works which a life could not accomplish, and to leave behind the impression of a superhuman energy.

Our sketch of Buonaparte would be imperfect indeed, if we did not add, that he was characterised by nothing more strongly than by the spirit of self-exaggeration. The singular energy of his intellect and will, through which he had mastered so many rivals and foes, and overcome what seemed insuperable obstacles, inspired a consciousness of being something more than man. His strong original tendencies to pride and self-exaltation, fed and pampered by strange success and unbounded applause, swelled into an almost insane conviction of superhuman greatness. In his own view he stood apart from other men. He was not to be measured by the standard of humanity. He was not to be retarded by difficulties to which all others yielded. He was not to be subjected to laws and obligations which all others were expected to obey. Nature and the human will were to bend to his power. He was Ihe child and favorite of fortune, and, if not the lord, the chief object of destiny. His history shows a spirit of self-exaggeration, unrivalled in enlightened ages, and which reminds us of an oriental king to whom incense had been burnt from his birth as to a deity. This was the chief source of his crimes. He wanted the sentiment of a common nature with his fellow beings. He had no sympathies with his race. That feeling of brotherhood which is developed in truly great souls with pe-442

culiar energy, and through which they give up themselves willing victims, joyful sacrifices, to the interests of mankind, was wholly unknown to him. His heart, amidst all its wild beatings, never had one throb of distinterested love. The ties which bind man to man he broke asunder. The proper happiness of a man, which consists in the victory of moral energy and social affection over the selfish passions, he cast away for the lonely joy of a despot. With powers which might have made him a glorious representative and minister of the beneficent Divinity, and with natural sensibilities which might have been exalted into sublime virtues, he chose to separate himself from his kind, to forego their love, esteem, and gratitude, that he might become their gaze, their fear, their wonder; and for this selfish, solitary good, parted with peace and imperishable renown.

This insolent exaltation of himself, above the race to which he belonged, broke out in the beginning of his career. His first success in Italy gave him the tone of a master, and he never laid it aside to his last hour. One can hardly help being struck with the natural manner with which he arrogates supremacy in his conversation and proclamations. We never feel as if he were putting on a lordly air, or borrowing an imperious tone. In his proudest claims he speaks from his own mind, and in native language. His style is swollen, but never strained, as if he were conscious of playing a part above his real claims. Even when he was foolish and impious enough to arrogate miraculous powers, and a mission from God, his language showed that he thought there was something in his character and exploits to give a color to his blasphemous pretensions. The empire of the world seemed to him to be in a measure his due, for nothing short of it corresponded with his conceptions of himself; and he did not use mere verbiage, but spoke a language to which he gave some credit, when he called his successive conquests ‘ the fulfilment of his destiny.’

This spirit of self-exaggeration wrought its own misery, and drew down upon him terrible punishments ; and this it did by vitiating and perverting his high powers. First, it diseased his fine intellect, gave imagination the ascendancy over judgment, turned the inventive-ness and fruitfuiness of his mind into rash, impatient, restless energies, and thus precipitated him into projects, which, as the wisdom of his counsellors pronounced, were fraught with ruin. To a man whose vanity took him out of the rank of human beings, no foundation for reasoning was left. All things seemed possible. His genius and his fortune were not to be bounded by the barriers which experience had assigned to human powers. Ordinary rules did not apply to him. His imagination, disordered by his egotism, and by unbounded flattery, leaped over appalling obstacles to the prize which inflamed his ambition. He even found excitement and motives in obstacles, before which other men would have wavered ; for these would enhance the glory of triumph, and give a new thrill to the admiration of the world. Accordingly he again and again plunged into the depths of an enemy’s country,

and staked his whole fortune and power on a single battle. To be rash was indeed the neceb sary result of his self-exalting and self-relying spirit ; for to dare what no other man would dare, to accomplish what no other man would attempt, was the very way to display himself as a superior being in his own and others’ eyes. To be impatient and restless was another necessary issue of the attributes we have

described. The calmness of wisdom was denied him. He who was next to omnipotent in his own eyes, and who delighted to strike and astonish by sudden and conspicuous operations, could not brook delay, or wait for the slow operations of time. A work which was to be gradually matured, by the joint agency of various causes, could not suit a man who wanted to be felt as the great, perhaps only, cause ; who wished to stamp his own agency in the most glaring characters on whatever he performed ; and who hoped to rival by a sudden energy the steady and progressive works of nature. Hence so many of his projects were never completed, or only announced. They swelled, however, the tide of flattery, which ascribed to him the completion of what was not yet begun ; whilst his restless spirit, rushing to new enterprises, forgot its pledges, and left the promised prodigies of his creative genius to exist only in the records of adulation. Thus the rapid and inventive intellect of Buonaparte was depraved, and failed to achieve a growing and durable greatness, through his self-exaggerating spirit. It reared indeed a vast and imposing structure, but disproportioned, disjointed, without strength, without foundations. One strong blast was enough to shake and shatter it; nor could his genius uphold it. Happy would it have been for his fame, had he been buried in its ruins.

One of the striking properties of Buonaparte's character was decision ; and this, as we have already seen, was perverted, by the spirit of self-exaggeration into an inflexible stubborness, which counsel could not enlighten, nor circumstances bend. Having taken the first step, he pressed onward. His purpose he wished others to regard as a law of nature, or a decree of destiny. It must be accomplished. Resistance but strengthened it ; and so often had resistance been overborne, that he felt as if his unconquerable will, joined to his matchless intellect, could vanquish all things. On such a mind the warnings of human wisdom and of Providence were spent in vain ; and the man of destiny lived to teach others, if not himself, the weakness and folly of that all-defying decision, which arrays the purposes of a mortal with the immutableness of the counsels of the Most High.

A still more fatal influence of the spirit of self-exaggeration which characterised Buonaparte remains to be named. It depraved to an extraordinary degree his moral sense. It did not obliterate altogether the ideas of duty, but, by a singular perversion, it impelled him to apply them exclusively to others. It never seemed to enter his thought that he was subject to the great obligations of morality, which all others are called to respect. He was an exempted being. Whatever stood in his way to empire

.ie was privileged to remove. Treaties only bound his enemies. No nation had rights but his own France. He claimed a monopoly in perfidy and violence. He was not naturally cruel ; but, when human life obstructed his progress, it was a lawful prey, and murder and assassination occasioned as little compunction as war. The most luminous exposition of his moral code was given in his counsels to the king of Holland : ‘ Never forget, that in the situation to which my political system and the interests of my empire have called you, your first duty is towards me, your second towards France. All your other duties, even those towards the people whom I have called you to govern, rank after these.’ To his own mind, he was the source and centre of duty. He was too peculiar and exalted to be touched by that vulgar stain, called guilt. Crimes ceased to be such when perpetrated by himself. Accordingly he always speaks of his transgressions as of indifferent acts. He never imagined that they tarnished his glory, or diminished his claim on the homage of the world. In St. Helena, though talking perpetually of himself, and’ often reviewing his guilty career, we are not aware that a single compunction escapes him. He speaks of his life as calmly as if it had been consecrated to duty and beneficence, whilst in the same breath he has the audacity to reproach unsparingly the faithlessness of almost every individual and nation with whom he had been connected. We doubt whether history furnishes so striking an example of the moral blindness and obduracy to which an unbounded egotism exposes and abandons the mind.

His spirit of self-exaggeration was seen in his openness to adulation. Policy indeed prompted him to put his praises into the mouths of the venal slaves who administered to his despotism. But flattery would not have been permitted to swell into exaggerations, now nauseous, now ludicrous, and now impious, if, in the bosom of the chief, there had not lodged a flatterer who sounded a louder note of praise than all around him. He was remarkably sensitive to opinion, and resented as a wrong the suppression of liis praises. The press of all countries was watched, and free states were called upon to curb it for daring to take liberties with his name. Even in books published in France, on general

topics, he expected a recognition of his authority. Works of talent were suppressed, when their authors refused to offer incense at the new shrine. He wished indeed to stamp his name on the literature, as on the legislation, policy, warfare of his ac;e, and to compel genius, whose pages survive statues, columns, and empires, to take a place among his tributaries.

We close our view of Buonaparte's character, by saying, that his original propensities, released from restraint, and pampered by indulgence, to a degree seldom allowed to mortals, grew up into a spirit of despotism as stem and absolute as ever usurped the human heart. The love of power and supremacy absorbed, consumed him. No other passion, no domestic attachment, no private friendship, no love of pleasure, no relish for letters or the arts, no human sympathy, no

human weakness, divided his mind with the passion for dominion and for dazzling manifestations of his power. Before this, duty, honor, love, humanity fell prostrate. Josephine, we &.re told, was dear to him ; but the devoted wife, who had stood firm and faithful in the day of his doubtful fortunes, was cast off in his prosperity, to make room for a stranger, who might be more subservient to his power. He was affectionate, we are told, to his brothers and mother; but his brothers, the moment they ceased to be his tools, were disgraced; and his mother, it is said, was not allowed to sit in the presence of her imperial son. He was sometimes softened, we are informed, by the sight of the field of battle strown with the wounded and dead. But, if the Moloch of his ambition claimed new heaps of slain to-morrow, it was never denied. With all his sensibility he gave millions to the sword, with as little compunction as he would have brushed away so many insects, which had infested his march. To him all human will, desire, and power, must bend. His superiority none might question. He insulted the fallen, who had contracted the guilt of opposing his progress ; and not even woman's loveliness, and the dignity of a queen, could give shelter from his contumely. His allies were his vassals, nor was their vassalage concealed. Too lofty to use the arts of conciliation, preferring command to persuasion, overbearing, and all-grasping, he spread distrust, exasperation, fear, and revenge through Europe; arid, when the day of retribution came, the old antipathies and mutual jealousies of nations were swallowed up in one burning purpose to prostrate the common tyrant, the universal foe. Such was Napoleon Buonaparte. But some will say, he was a great man. This we mean not to deny. But we would have it understood, that there are various kinds or orders of greatness, and that the highest did not

belong to Buonaparte. There are different orders of greatness. Among these, the first rank is unquestionably due to moral greatness or magnanimity ; to that sublime energy by which the soul, subdued by the love of virtue, binds itself indissolubly, for life and for death, to truth and duty ; espouses as its own the interests of human nature ; scorns all meanness and defies all peril ; hears in its own conscience a voice louder than threatenings or thunders ; withstands all the powers of the universe which would sever it from the cause of freedom, virtue, and religion ; reposes an unfaultering trust in God in the darkest hour, and is ever ready to be offered on the altar of its country or of mankind. Of this moral greatness, which throws all other forms of greatness into obscurity, we see not a trace or spark in Napoleon. Though clothed with the power of a God, the thought of consecrating himself to the introduction of a new and higher era, to the exaltation of the character and condition of his race, seems never to have dawned on his mind. The spirit of disinterestedness and self-sacrifice appeared not to have waged a moment's war with self-will and ambition. His ruling passions, indeed, were singularly at variance with magnanimity. Moral greatness has too much simplicity, is too unostentatious, too

self-subsistent, and enters into others' interests with too much heartiness, to live a day for what Napoleon always lived, to make itself the theme, and gaze, and wonder of a dazzled world. Next to moral, comes intellectual greatness, or genius in the highest sense of that word ; and by this we mean that sublime capacity of thought, through which the soul, smitten with the love of the true and the beautiful, essays to comprehend the universe, soars into the heavens, peftetrates the earth, penetrates itself, questions the past, anticipates the future, traces out the general and all-comprehending laws of nature, binds together, by innumerable affinities and relations, all the objects of its knowledge, and, not satisfied with what exists and with what is finite, frames to it-self ideal excellence, loveliness, and grandeur. This is the greatness which belongs to philosophers, inspired poets, and to the master spirits in the fine arts. Next comes

the greatness of action ; and by this we mean the sublime power of conceiving and executing bold and extensive plans ; of constructing and bringing to bear on a mighty object, a complicated machinery of means, energies, and arrangements, and of accomplishing great outward effects. To this head belongs the greatness of Buonaparte, and that he possessed it we need not prove, and none will be hardy enough to deny. A man who raised himself from obscurity to a throne, who changed the face of the world, who made himself felt through powerful and civilised nations, who sent the terror of his name across seas and oceans, whose will was pronounced and feared as destiny, whose donatives were crowns, whose antechamber was thronged by submissive princes, who broke down the awful barrier of the Alps and made them a highway, and whose fame was spread beyond the boundaries of civilisation to the steppes of the Cossack, and the deserts of the Arab; a man, who has left this record of himself in history, has taken out of our hands the question, whether he shall be called great. All must concede to him a sublime power of action, an energy equal to great effects.

We are not disposed, however, to consider him as preeminent even in this order of greatness. War was his chief sphere. He gained his ascendancy in Europe by the sword. But war is not the field for the highest active talent, and Napoleon, we suspect, was conscious of this truth. The glory of being the greatest general of his age would not have satisfied him. He would have scorned to take his place by the side of Marlborough or Turenne, It was as the founder of an empire, which threatened for a time to comprehend the world, and which demanded other talents besides that of war, that he chal-

lenged unrivalled fame. And here we question his claim. Here we cannot award him supremacy. The project of universal empire, however imposing, was not original. The revolutionary governments of France had adopted it before; nor can we consider it as a sure indication of greatness, when we remember that the weak and vain mind of Louis XIV. was large enough to cherish it. The question is, did Napoleon bring to this design the capacity of advancing it by bold and original conceptions, adapted to an age of civilisation, and of singular intellectual and moral excitement? Did he discover new foundations of power? Did he frame new bonds of union for subjugated nations? Did he discover, or originate, some common interests by which his empire might be held together? Did he breathe a spirit which should supplant the old national attachments, or did he invent any substitutes for those vulgar instruments of force and corruption, which any and every

usurper would have used ? Never in the record's of time did the world furnish such materials to work with, such means of modelling nations afresh, of building up a new power, of introducing a new era, as did Europe at the period of the French revolution. Never was the human mind so capable of new impulses. And did Napoleon prove himself equal to the condition of the world ? Do we detect one original conception in his means of universal empire ? Did he seize on the enthusiasm of his age, that powerful principle, more efficient than arms or policy, and bend it to his purpose ? What did he do but follow the beaten track ? but apply force and fraud in their very coarsest forms ? Napoleon showed a vulgar mind, when he assumed self-interest as the sole spring of human action. With the sword in one hand, and bribes in the other, he imagined himself absolute master of the human mind. The strength of moral, national, and domestic feeling, he could not comprehend. The finest, and, after all, the most powerful elements in human nature, hardly entered into his conceptions of it ; and how then could he have established a durable power over the human race? We want little more to show his want of originality and comprehensiveness as the founder of an empire than the simple fact, that he chose as his chief counsellors Talleyrand and Fouche", names, which speak for themselves. We may judge of the greatness of the master spirit, from the minds which he found most congenial with his own. In war Buonaparte was great ; for he was bold, original, and creative. Beyond the camp he in-deed showed talent, but not superior to that of other eminent men.

NAPOLEON, CODE DE. The existing law of France may be said to have its entire foundation in this celebrated code ; which, however, was not the sole production of the authorities of the empire, but was the result of alterations prescribed by the national assembly. This body, in 1791, ordered a code of civil laws to be drawn ––ip which should be common to the whole king-

dom. The Convention continued the project; and Cambaceres, the late arch-chancellor of France, had the courage to undertake the task.

The constitution of the year 3, restoring a de-gree of calm to the distracted state, Cambaceres had the courage to present a project, on the 24th Prairial, year 4 ; but on the ballot for renewing a part of the council of 500, the lot to retire hav-

ing fallen upon him among others, this plan fell to the ground, and the newly-projected legislation lay dormant for three years. The time, however, was now approaching when his labors and perseverance were to be crowned with success; on the 18th Brumaire, the extraordinary man, who was afterwards called to the empire, took the helm of France, and the new code of jurisprudence was instantly resumed.

Tronchet, Bigot, Preameneu, Maleville, and Portalis, were commissioned to draw up a plan, and discuss the basis of a civil legislation, following at the same time the order of the different projets presented by Cambaceres, for the purpose of its being laid before the nation. The commission was appointed on the 24th Thermidor, year 8 ; and on the 26th Ventose, year 9, the plan was printed. Before offering it for discussion to the council of state, it was submitted to the whole empire through the medium of the press, and by this means the general and individual observations of France were collected upon every head. The council of cassation was also particularly consulted. Sufficient time having been allowed for this purpose, the plans of the council of state were first discussed in its various sections, the section of legislation sitting upon the civil code. From this body it passed to the tribunate ; here it was soon found impossible to get through it if each article were the subject of general de-bate ; the tribunate therefore divided itself like the council of state, into sections or committees ; and, if objections occurred to any part as it came before them, a conference was had, before either Cambaceres himself or the consul de Brun, between the section of the tribunate and the section of the council of state, to which this branch of legislation had been committed. Having been approved by both these bodies, it was referred to the legislative in titles, each decreed separately, and afterwards separately promulgated.

Supplementary articles might be added, but no essential alteration was to take place until it had been ten years tried ; the advantages, the disadvantages, and the national opinions concerning it would then it

was thought be known ; in the mean time the tribunal of cassation rectified any material errors and wanderings of the inferior tribunals. Such is the short history of the code Napoleon. See FRANCE, vol. ix., p. 536. We shall only here add to the account the readerwill find in that article an abstract of the mode in which the trial by jury has been introduced into this code. It thus prescribes ###

1. Who may be jurors. ### No person can fill the office of a juror under the age of thirty years complete, and who does not enjoy political and civil lights, on pain of the nullily of the proceedings.

Jurors shall be nominated, 1. From among the members of the electoral colleges. 2. From among the three hundred most respectable private gentlemen in the department. 3. From the functionaries of the administrative order. 4. From the doctors and licentiates of one or more of the four faculties of law, physic, sciences, and belles lettres, the members and correspondents of the institute and other learned societies. 5. From among notaries, bankers, merchants, and shop-keepers of the two first classes.

No person can be a juror in the same cause wherein he has been an officer of police, a witness, an interpreter, or other party.

The functions of a juror are incompatible with those of minister, prefect, subprefect, judge, procurator-general and imperial, and all their substitutes. They are equally incompatible with the duties of the ministers of public worship.

Counsellors of state entrusted with part of the administration, imperial commissaries acting in the administrations, and persons seventy years of age, are also exempt from this service.

Members of the senate, not coming within the above exceptions, may be called on to fulfil the functions of jurors, if they do not object But they ought to be comprised only in the lists of jurors formed for the service of the courts of assize of Paris. The same applies to members of the council of state, and of the legislative body during their session.

Whosoever does not find himself in any of the classes above described, who is desirous of being admitted to the honor of filling the office of juror, may be comprised in the list, on requiring it of, and being approved by the prefect.

2. Of their nomination and convention. ### The prefects shall form,

subject to their responsibility, lists of jurors, as often as required by the presidents of the courts of assizes ; such requisition being made a fortnight at least before the opening of the session.

In every case the list shall consist of sixty persons; it shall be addressed immediately to the president of the court of assizes, who shall reduce them to thirty-six within twenty-four hours, and then return the list to the prefect, who shall summon the jurors as soon as possible.

Every prefect shall send the list thus reduced to the chief judge, minister of justice, or first l>r<'<i.l:n; of lite i'r.perul court. The \hole list shall also be sent to each ot the persons who compose it ; but the prefect shall send to each of them an extract thereof, statin? that his name is therein contained; which notification shall be delivered eight days at the least before that in which the list ought to serve.

Every juror in such list who shall have attended, shall not be included in the lists of four following sessions at least.

No citizen above thirty years of a►►►e shall be admitted to any administrative or judicial offices, unless he shall prove by a certificate from the officer of public administration, before the court of assize in the district where he resides, that he has attended and served as often as his name has been returned in the list of jurors; that the excuses made by him have been held valid, or that no requisition has ever be? n made to him.

3. Oj the formation of each jury. ►►► There shall be a new jury for every cause; thus, if in the same sitting the court is occupied in several different trials, there are to be drawn by lot as many times twelve jurors as there are causes to be tried ; and to this effect there are to be put back into the urn, for each drawing, the twelve jurors drawn in the preceding draft.

The number of twelve jurors is necessary to form a jury.

The list of jurors shall be notified to each

accused person, on the eve of the day before his trial ; and this notification shall be null, as well as all proceedings following on it, if made sooner or later.

In every case, if there shall be on the day appointed less than thirty jurors present, not excused, or not dispensed with, the number of thirty jurors shall be completed by the president of the court of assize. They shall be taken publicly, and by way of lot, from among the qualined citizens residing in the commune, for which purpose the prefect shall every year send to the court a complete list.

Every juror who shall not appear in bis place on being called, shall pay for the first neglect 500 francs ; for the second 1000 francs ; and for the third 1500 francs. And shall also, for a third neglect, be declared incapable of exercising in future the functions of a juror, which order shall be printed and stuck up at his expense.

Those shall be excepted who prove that it was impossible for them to attend on the day appointed. The court shall determine on the validity of the excuse. The fines, above specified, are also applicable to every juror, who having appeared in his place shall have retired before the breaking up of the court, without a valid excuse.

On the day appointed, and for every cause, the list of jurors shall be called over before the opening of the court, in presence of the accused, and of the procurator-general. The name of each juror, on answering to his name, shall then be deposited in an urn.

4. Of the challenge. ××× The accused first, and afterwards the procurator-general, shall challenge such jurors as they think proper, and without assigning any reason, as their names are drawn successively out of the urn.

The chief, or foreman of the jury, shall be the first juror drawn by the lot, or one appointed by the jurors. Thus, when the foreman designated by lot shall not think proper to sign or pronounce the verdict of the jury, they may nominate another foreman.

The challenges of the accused, and the procurator-general, shall stop when there remain in the urn only twelve jurors. The accused and the procurator-general may make an equal number of challenges ; but, if the jurors be of an unequal number, the accused may challenge one

more than the procurator-general.

If there be several accused, they may join in their challenges, or make them separately. In either case, they shall not exceed the number of challenges for a single accused.

If the accused do not agree hi their challenges, a lot shall determine between them the order in which they shall make them. In this case, the jurors challenged by a single one, and in that order, shall be for all, until the number of challenges be exhausted. The accused may join in making part of the challenges, the remainder being determined according to the order fixed by lot.

The trial of the accused shall commence immediately after the formation of the panel. If from any circumstance the trial of the accused, as to the offences or some of the offences, shall be put off to the session following, there shall be

another list, with fresh challenges, and a new panel shall be formed of twelve jurors.

5. Of the trial. ††† On the day fixed for opening the assizes, the court having taken their seats, the twelve jurors shall place themselves in the order determined by their lot, on seats separated from the public, the parties and witnesses, and opposite to the accused.

The accused shall appear without fetters, but attended by officers to prevent his escape. The president shall enquire his name, Christian name, age, profession, residence, and birth-place.

The president shall swear each of the jurors standing and uncovered, with the oath following :†††

‘ You swear and promise, before God and man, to examine with the most scrupulous attention the charges which shall be brought against N., neither to betray the interests of the accused, nor those of society by which he is accused ; to have no communication with any person until after your verdict ; not to be influenced either by hatred or malice, fear or affection ; to decide according to the evidence and defence ; according to your own conscience and complete conviction ; and with the impartiality and firmness which becomes a freeman.’

Each of the jurors, named individually by the president, shall answer, holding up his hand ††† this I swear.

The president shall then recite to the accused the contents of the act of accusation, or indictment, and say to him ••• ‘ You hear what you are accused of, and attend to the charges which will be produced against you.’

The procurator-general shall then explain the subject of the accusation ; he shall present the list of witnesses to be examined, whether at his request, or that of the private prosecutor, or on that of the accused, which list shall be read with an audible voice by the registrar. It shall only contain the witnesses whose names, professions, and residence have been notified twenty-four hours at least before their examination, to the accused by the procurator general or the private prosecutor, and to the procurator general by the accused.

The accused, and the procurator-general may, in consequence, oppose the addition of any witness who has not been notified, or not distinctly described in the previous notification.

The examinations, and the proceedings, once entered upon, shall be continued without interruption, until after the jury shall have delivered their verdict. The president cannot suspend them, but during the intervals absolutely necessary for the repose of the judges, jurors, witnesses, and accused.

6. Of the witnesses. ••• The president shall order the witnesses to retire to apartments destined for them, which they shall not quit, except to deliver their evidence. The president shall also take care, if necessary, to prevent the witnesses from conferring together.

The witnesses shall depose in court separately, one after the other, in the order established by the procurator general. Before their depositions, they shall take on the pain of nullity, an oath to speak without hatred and without fear;

to tell the whole truth, and nothing but the truth.

After each examination, the president shall ask the witness if it be of the present accused that he means to speak ; he shall afterwards ask the accused, if he wishes to answer what has been said against him. The witness shall not be interrupted. The accused, or his counsel, may cross examine him through the medium of the president after his deposition, and state every thing against him, or his testimony, which may operate in defence of the accused ; and the president may require, both from the witness and the accused, all the explanations necessary to arrive at the truth.

Every witness after his deposition shall remain in court, unless the president order otherwise, until the jurors have retired to give their verdict.

After hearing the witnesses produced by the procurator-general, and the private prosecutor, the accused may bring forward those notified by him, either in respect of the facts stated in the act of accusation, or to testify that he is a man of irreproachable conduct.

The following cannot be received as wit-Messes : ××× ×××

1. The father, mother, grandfather, grandmother, or other ascendant of the accused ; or of any of those jointly accused and subject to the same exception.

2. The son, daughter, grandson, grand-daughter, or other descendant.

3. Brothers and sisters.

4. Husband or wife even after divorce.

5. Informers or police-officers, whose information is recompensed pecuniarily by law.

But the examination of the persons above described shall not operate as a nullity when not opposed. Informers not recompensed pecuniarily by law may be examined as witnesses, but the jury shall be informed of their being informers.

The witnesses, by whatever party called, shall not be allowed to confer together. The accused may require, after they have deposed, that those he shall specify may quit the court, and that one or more of them shall be introduced and examined anew, either separately or in the presence of each other. The procurator-general shall have the same privilege. The president may also order it officially.

The president may before, during, or after the examination of a witness, order one or more of the accused to retire, and examine them separately on particular points ; but he shall take care to inform each of the accused of what has been said in his absence.

During the examination, the jurors, procurator-general, and judges, shall take notes of what appears to them important, either in the depositions of the witnesses, or the defence of the accused.

If after the examination the testimony of a witness shall appear false, the president may, on the requisition either of the procurator-general, the private prosector, or the accused, or even officially order the witness to .be taken into custody.

7. Conclusion, ××× After the depositions of the

witnesses, and the respective remarks which their evidence has occasioned, the private prosecutor, or his counsel, and the procurator-general, shall be heard in support of the prosecution. The accused and his counsel may answer. The private prosecutor, or procurator general, are permitted to reply, but the accused, or his counsel, shall always be entitled to speak last.

The president shall then recapitulate the proceedings to the jury, and narrate the principal evidence for or against the accused. lie shall admonish them in regard to the duties they have to fulfil, and put the following questions to them.

The question arising out of the act of accusation shall be conceived in these terms : ×××

Is the accused guilty of having committed such a murder, robbery, or other crime, with all the circumstances described in the indictment ?

If there arise during the proceedings one or more aggravating circumstance, not specified in the indictment, the president shall add the question following : ×××

Has the accused committed the crime under such or such circumstances ?

When the accused shall propose as a defence, a fact acknowledged as a justification by law, a question shall be put thus : ×××

Is such a fact established ?

If the accused be under sixteen years, the president shall put this question : ###

Did the accused act with discernment ?

The president, after having proposed these questions, shall hand the same in writing to the jury, through their foreman; he shall deliver, at the same time, the indictment, and all the documents beside the written declarations and oral testimonies. And he shall admonish the jurors, that if the accused is declared guilty of the principal fact only by a majority, the same must be mentioned at the head of their verdict.

8. Of the verdict of the jury. ### The jury shall then retire to their apartment to deliberate; but previously the foreman shall read to them the instruction following, which shall also be posted, in large characters, on the most conspicuous part of the room.

The code of criminal instruction, article 342, directs juries to be aware,

That the law does not require of them to explain how they are convinced, nor prescribe rules by which they ought particularly to weigh the quantity or sufficiency of any proof, but merely requires of them to examine their own minds and consciences, in regard to the impression that has been produced on their judgment by the evidence adduced against the accused, and in his defence; and that the law does not say, You shall deem that to be truth which you have heard attested by such or such a number of witnesses, or by such and such documents ; but it requires of you simply that which constitutes the entire sum of your duties, that you should yourselves be fully convinced. It is at the same time essential that you never forget, that all the deliberation of a jury is to be confined to the actual accusation ; and that on the facts connected with it, or depending upon it alone, you are solely to dt-cicle.

The jurors shall not quit their chamber until they have agreed in their verdict, and no person shall be permitted to enter during their deliberations on any account whatever.

The court may punish a juror for contravening this regulation by a fine of 500 francs, or more. All others opposing the order, or the person executing the same, shall be punished by imprisonment.

The jurors having deliberated on the principal fact, and afterwards on each of its circumstances, the foreman shall interrogate them as follows, and each juror shall answer accordingly : ###

1. If the juror think that the fact is not established, or that the accused is innocent of it, he will answer, The accused is not guilty.

2. If he think that the fact is established, he shall say, The accused is guilty of having committed the crime with all the circumstances.

3. If he think that the fact is established, and the accused guilty of it, but that proof is wanting of the criminal intention, he shall say, The accused is guilty of having committed the fact, but it is not established that he has done so with the criminal intention ascribed.

4. If he think that the fact is established, and that the accused is guilty of it, but that some of the circumstances are not proved, he shall say, The accused is guilty, but without some of the circumstances.

The decision of the jury shall be pronounced for or against the accused ; and, in case of an equal number of voices, the decision shall be held in favor of the accused.

The jurors shall then return into court and take their places. The president shall require the result of their deliberations. The foreman of the jury shall rise, and placing his hand on his heart, shall say, On my honor, and my conscience, before God and man, the verdict of the jury is ### Yes, the accused is, &c. Or, No, the accused is, &c.

The verdict of the jury shall be written and signed by the foreman, and delivered by him to the president, in presence of the jurors. The president shall sign the same, and cause it to be entered by the registrar.

The verdict of the jury shall not be subject to any other review.

But, if the accused be declared guilty by a majority only, the judges shall deliberate together on the same point : and if the opinion of the minority of the jurors be adopted by the majority of the judges, so that adding the number of voices, that number shall exceed that of the majority of the jurors and the minority of the judges, the decision shall be in favor of the accused.

If the judges be unanimously convinced that the jurors, while completely observing the forms, have been fundamentally mistaken in their verdict ; the court shall declare that there has been an error in judgment, and shall refer the question to the next session, to be tried by another jury, of which none of the former jurors shall form a part.

This measure can only be ordered by the court officially, and immediately after the verdict of the jury is publicly declared, and the accused is

found guilty, but never when he is declared n;5 guilty.

The court shall be obliged to pronounce immediately after the decision of the second jury, even though it should be conformable to the former.

The president shall then order the accused to be brought into court, and the registrar shall, in his presence, read the verdict of the jury.

When the accused is declared not guilty, the president shall pronounce him acquitted of the accusation, and order him to be set at liberty, unless he is detained on some other previous accusation.

The accused, being acquitted, shall receive satisfaction for his loss of time and character.

9. Of the judgment. ××× The accused being declared guilty, the procurator general shall require the court to pass the sentence of the law. The private prosecutor shall make his claim for restitution and damages.

The president shall ask the accused if he has any thing to state in his defence ?

The accused or his counsel cannot plead that the fact is false, but only that the offence is not forbidden, or is qualified by the law ; or that he does not deserve the punishment applied for by the procurator-general

; or that it does not carry damages for the benefit of the private prosecutor ; or, lastly, that the damages claimed are more than are due.

The court shall declare the accused absolved, if the fact of which he is declared guilty is not forbidden by a penal law. But, if the fact is forbidden, the court shall pronounce the punishment established by law. Only in cases of conviction for several crimes, can the most severe punishment be pronounced.

In like manner, in case of acquittal, the court shall decree on the damages claimed by the private prosecutor, or the accused*; shall liquidate them by the same decree, or refer it to one of the judges to hear the parties ; take cognisance of the documents, and make a report of the whole. The court shall also order that any effects seized shall be restored to the proprietor.

Before pronouncing sentence the president shall read the text of the law on which it is founded. The registrar shall read the decree : he shall also insert the text of the law applied, under pain of a fine of 100 francs. The minute of the decree shall be signed by the judges, under the penalty of a fine of 100 francs against the registrar.

NAPOLI DI MALVASIA, or MENGESCIIE, is a town of Greece, situated on the small peninsula, or rather island, of Minoa, in the Morea, which is connected with the main land by a bridge of twelve arches. It has a good harbour, and is built amid the ruins of the ancient Epidaurus, and stands on a rock, the summit of which is crowned by a citadel. Here are the remains of a temple of Esculapius, and some structures in the Cyclopean style, i. e. of large stones without cement. The port, though well sheltered by hills, is somewhat insecure, but it is well frequented, and likely to become permanently a place of trade. It is the see of a metropolitan bishop. Population 6000. Fifty-five miles south by east of Napoli di Romania.

NARCISSUS.

0►► NAPOLI DI ROMANIA, the ancient Nauplia, is also a town of

Greece, in the east of the Morea, on a gulf of this name. The harbour is capable of containing 150 ships of war. The town, situated on the south side of the port, is fortified, and stretches along the whole length of the promontory, and is a place of some activity in the corn, oil, wine, and cotton trade. It is the best built town of the Morea, but its situation is unhealthy, fevers being frequent. Population 6000.

NAPOLOUS, or NAPOLOSE, a city of Palestine, the ancient Sichem, afterwards called Neapolis, is the metropolis of an extensive and fertile country. The bread there is said to be superior to any in the Levant ; and its water melons have a delicious flavor. Dr. Clarke says there is nothing finer in the Holy Land than the view of Napolous from the heights. The chief manufacture is soap ; but other articles of common use are to be procured. It is frequented by caravans from Egypt and the neighbouring countries. Here are shown the tombs of Joshua and Joseph ; and Jacob's well is about three miles on the road to Jerusalem. This place is twenty-four miles north of Jerusalem.

NARAINGUNGE, a large town of the district of Daccl, Bengal. It is situated on the western bank of the Luckia, a branch of the Brahmapootra, and carries on an extensive commerce in grain, salt, tobacco, lime, and a fine muslin, made here. During the rainy season the adjoining country is inundated. It contains the remains of many fortresses, which were raised in the seventeenth century, to protect the country against the Mughs or Arracauners. On the opposite side of the river is Cuddumresoul, a place of Mahometan pilgrimage. Here is shown the impression of a foot on a stone, which his followers are taught to believe is that of the prophet. Naraingunge is about an equal distance from the ancient capitals of Sunergaum and Dacca. Population 15,000. Long. 90►► 35 E., lat. 23►► 37' N.

NARAINGUR, a town of Midnapore, Ben-gal, was formerly surrounded by a thick wood, defended by batteries, much of which has been cleared away. During the wars between the Afghauns, Moguls, and Mahrattas, these were found defences of great utility as a refuge for the peasants, with their families and cattle. The neighbourhood abaunds with game. Long. 87►► 35' E., lat. 22►► ll'N.

NARANJAL, or NARANJOS, are two islands of the Pacific, in the gulf of Panama. The largest is five leagues long from north to south, and is desert ; five leagues from the coast of Panama. There are several settlements of this name in South America, and a river in Peru, which enters the Pacific, near the mouth of the river Guayaquil, in the gulf of its name. Lat. 2►► 28' S.

NARBO, in ancient geography, a town of the Volca? Tectosages, called also Narbo Martins, from the Legio Martia, the colony led thither fifty-nine years before the consulate of Caesar (Velleius), increased with a colony of the Decu-mania, or tenth legion, by Cresar. An ancient trading town on the Atax, \vhirh runs into the iea through the Lacus Kubresus, or Rubrensis, VOL. XV.

capital of the Gallia Narbonensis, surnamed Colonia Julia Paterna, from Julius Caesar. Now called Narbonne.

NARBONNE, or NARBO, a large and very ancient post town, and the chief place of an arrondisseroent, in the department of the Aude, France, containing 10,258 inhabitants. It has an inferior court of judicature, a board of trade, an agricultural society, and a school of hydro-graphy of the fourth class. This town is situated in a hollow, on the canal or Roubine of Narbonne, which communicates with the ocean by means of the southern canal, and with the Mediterranean by the lake of Bages or of Sijean. It is for the most part badly built ; but its cathedral, museum, and public baths, are worthy of notice. It was a celebrated place three centuries before the Christian era, and at that time gave its name to the whole country from the Alps to the Pyrenees, particularly to that along the banks of the Rhone to those mountains, which was called Gallia Narbonensis by the Romans. Under their dominion it was adorned with a capitol, a circus, several temples, and public baths ; most of these, however, have been destroyed in the sieges which this town has had to sustain in different ages ; their ruins are yet to be discerned in the walls of the town, as well as in those of the public buildings and private houses, and still serve to show its ancient splendor. This place, in the reign of Antoninus Pius, was almost consumed in a dreadful fire. Brandy, spirits, verdigris, marine salt, earthenware, bricks, tiles, and plaster, are made here ; there are also silk-mills, tan-yards, and dye-houses. The trade consists in corn, dry vegetables, red and white wines, brandy, oil, wax, saltpetre, and excellent honey, which is procured in the country round Narbonne, and bears its name. It is forty-six miles east of Carcassone, forty-two north of Perpig-nan, and 660 south of Paris, by the way of Toulouse.

NARCIS’SUS, n. s. Latin narcissus; Greek vapeiffffoc ; Fr. ntircisse. A daffodil. Nor Narcitstti fair

As o’er the fabled fountain hanging still.

Thomson.

NAKCISSUS, in botany, a genus of the monogynia order, and hexandria class of plants : natural order ninth, spathacese. There are six petals : the nectarium is funnel-shaped and monophyllous ; the stamina are within the nectarium. The most remarkable species are these:

N. bicolor, the double-colored incomparable narcissus, has a large, oblong, bulbous root, crowned with long, narrow, dark-green leaves, twelve or fourteen inches long ; an upright flower-stalk, about fifteen inches high, terminated by i uniflorous spathe, protruding one large flower with white petals, and a bell-shaped, spreading, golden nectarium, waved on the margin, and equal ir. length with the corolla ; flowering in April. The varieties are common single-flowered ; semi-dou- ble-flowered, with the interior petals, some white and some yellow ; with sulphur-colored flowers.

N. bulbocodium, with a small bulbous root, crowned with several narrow, subulate, rush-like leaves, six or eight inches long; amidst tliem a slender, taper flower-stalk, six inches high, ter

minated by a uniflorous ipathe, protruding one yellow flower, having the nectarium much larger than the petals, and very broad and

K reading at the brim ; flowering in April, ???om the large spreading nectarium of this species, which is three or four times longer than the petals, narrow at bottom, and widening gradually to the brim, so as to resemble the shape of some old-fashioned hoop-petticoats, it obtained the name of hoop-petticoat narcissus.

N. calathinus, the multiflorous yellow narcissus, has a large bulbous root, crowned with long, narrow, plain leaves ; and amidst them an erect, robust flower-stalk, terminated by a multiflorous spathe, protruding many large, entire, yellow flowers, having a bell-shaped, slightly crenated nectarium, equal in length with the petals.

N. jonquila, the jonquil, sometimes called rush-leaved daffodil, has an oblong, bulbous, brown root, sending up several long, semi-taper, rush-like, bright green leaves ; amidst them an upright green flower-stalk, a foot or fifteen inches high ; terminated by a multiflorous spathe, protruding many yellow flowers, often expanded like a radius, each having a hemispherical, crenated nectarium, shorter than the petals ; flowering in April, and mostly of a fine fragrance. The varieties are jonquil minor with single flowers ; jonquil major with single flowers ; starry flowered ; yellow and white flowered ; white-flowered ; semi-double-flowered ; double-flowered ; and large double inodorous jonquil ; all multiflorous, the single in particular ; but sometimes the doubles produce only two or three flowers from a spathe, and the singles commonly six or eight. All the sorts have so fine a shape, so soft a color, and so sweet a scent, that they are some of the most agreeable spring flowers.

N. minor, the yellow winter daffodil, has a small bulbous root; plain leaves eight or ten inches long, and more than half an inch broad ; an erect flower-stalk, terminated by a uniflorous spatha, protruding one nodding yellow flower, with spear-shaped petals, having an oblong conic, six-parted, waved nectarium, equal to the length of the corolla ; flowering in winter, or very early in spring.

N. nothus, the bastard narcissus, or common yellow English daffodil, grows wild in great plenty in woods and coppices, and under hedges in several parts of England. In the counties round London prodigious quantities are brought m spring, when in bloom, root and all, and sold about the streets. Though common, yet considered as an early and elegant flower, of exceeding hardiness and easy culture, it merits a place in every garden.

N. odorus, the odoriferous, or sweet-scented starry yellow narcissus, has a bulbous root, nar-row leaves, erect flower-stalk, a foot or more high, terminated by a sub-multiflorous spathe, protruding sometimes but one, and sometimes several, entirely yellow flowers, having a campanulated, six-parted, smooth nectarium, half the length of the petals.

N. poeticus, the poetic daffodil, or common white narcissus, is well known. Of this there are varieties with purple-cupped flowers ; yel-low-cupped flowers ; double-flowered ; all of

them with entire white petals. It is the ancient celebrated narcissus of

the Greek and Roman poets, which they so greatly extol for its extreme beauty and fragrance.

N.serotinus, the late-flowering small autumnal narcissus, has a small bulbous root, crowned with a few narrow leaves; amidst them a jointed flower-stalk, eight or nine inches high, terminated by a uniflorous spathe, protruding one white flower, having a short, six-parted, yellow nectarium; flowering in autumn.

N. tazetta, the multiflorous daffodil, commonly called polyanthus narcissus, has a very large, roundish, bulbous root; long, narrow, plain leaves ; an upright flower-stalk, rising from ten or twelve inches to a foot and a half high ; terminated by a multiflorous spathe, protruding many large, spreading, white and yellow flowers, in a cluster, having bell-shaped nectariums shorter than the corolla; flowering in February, March, and April, and is very fragrant. The varieties of this are very numerous, consisting of about eight or nine principal sorts, each of which having many intermediate varieties, amounting in the whole greatly above 100 in the Dutch florists' catalogues, each variety distinguished by a name according to the fancy of the first raiser of it. They are all very pretty flowers, and make a charming appearance in the flower-borders, &c. ; they are also finely adapted for blowing in glasses of water, or in pots, to ornament rooms in winter.

N. trilobus, the trilobate yellow narcissus, with a bulbous root; narrow rush-like leaves; erect flower-stalks, terminated by a sub-multi- florous spatha, protruding sometimes but one or two, and sometimes several, yellow flowers, have a bell-shaped, three lobed nectarium, half the length of the petals. All these species are of the bulbous-rooted tribe, and all perennial in root, but annual in leaf and flower-stalk; all rising annually in spring immediately from the crown of the bulb, first the leaves, and in the midst of them the flower-stalk, one only from each root, entirely naked or leafless, each terminated by a spatha or sheath, which opens on one side to protrude the flowers, and then withers ; the flowers, as before observed, are all hexapetalous, each furnished with a nectarium in the centre, and are universally hermaphrodite ; they are large and conspicuous, appearing mostly in spring from March until June, succeeded by ripe seeds in July ; then the leaves and flower-stalks decay, and the roots desist from growing for some time ; at which period of rest is the only proper time to take up or transplant the roots from one place to another, or to separate the off-sets ; for they all multiply abundantly by off-set young bulbs from the main root, insomuch that a single bulb will in one or two years be increased into a large cluster of several bulbs, closely placed together, and which every second or third year should be taken up at the above

period in order to be separated ; and each off-set so separated commences a distinct plant ; which, being planted again in autumn, produces flowers the following summer, alike in every respect to those of their respective parent bulbs. All the species are so hardy that they prosper in any common soil of a garden ;

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only the finest sorts of the polyanthus narcissus require a warm dry situation ; all the others may be planted any where in the open dry borders and flower-beds.

NARCISSUS, in fabulous history, the son of the river god Cephisus and Liriope, the daughter of Oceanus, was a youth of great beauty. Tiresias foretold that he should live till he saw himself. He despised all the nymphs of the country; and by refusing to return her passion, made Echo languish till she became a mera sound ; but one day coming weary and fatigued from the chace, he stopped on the* bank of a fountain to quench his thirst, when, seeing his own form in the water, he became so in love with the shadowy image, that he languished till lie died. An excellent allegory on the folly of excessive self-love. On which the gods changed him into the flower which hears his name.

N ARGON DAM, an uninhabited woody island in the Bay of Bengal, twenty-seven leagues east of the Great Andaman. It is small, but its peak may be seen at a great distance, and serves as a good land mark. Long. 94►► 12’ E., lat. 13►► 25’ N.

NARCOTIC, idj. French narcotiquc; Gr. vapKota. Producing torpor or stupefaction.

For he had yeven drinke his gayler so Of a clarre made of a certain wine, Whith narcotikes and opie of Thebes fine, That all the night though that men wold him shake, The gailor slept, he might not awake.

Chaucer. Cant. Tales.

The ancients esteemed it narcotic* or stupefactive, and it is to be found in the list of poisons by Dioscorides. Browne.

Narcotick includes all that part of the materia inedica which any way produces sleep, whether called by this name, or hypnoticks, or opiates.

Quincy.

NARCOTICS, in medicine, are soporiferous drugs. Among these the most eminent are those usually prepared for medicinal uses from the

poppy : especially opium ; as also all those prepared from mandragoras, hyoscyamus, stramo-nium, and datura.

NARD, n. s. Lat. nardus; Gr. vopˆog; Heb. *HJ. Spikenard ; a kind of ointment.

Therefore Marye took a pound of oynement of trewe narde, preciouse, and anointide the feet of Jliesus, and wipte his feet with hir heeris.

Wiclif. Jon. 12. Smelt o' the bud o' the briar Or the Tiara in the fire. He now is come. Ben Jensen's Underwood.

Into the blissful field, through groves of myrrh, And flowering odours, cassia, nard, and balm.

Milton.

NARDI (Jacopo), an Italian historian of a noble family, was born at Florence in 1476. In 1527 he was sent ambassador to Venice ; and upon his return he distinguished himself by his opposition to the interests of the Medici, in consequence of which he was exiled, and he retired to Venice, where he passed the rest of his life. He wrote a party history of Florence from 1494 to 1531 ; it was not printed until 1582 : also a Life of Malespini, and acquired great reputation by his Translation of Livy. He composed moreover Canti Carnaschialeschi ; and L'Almi-cizia, a comedy in verse. He died about 1555.

NARDUS, in botany, spikenard, a genus of the monogynia order, and triandria class of plants ; natural order fourth, gramina : CAL. none : COR. biyalved. This plant was highly valued by the ancients, both as an article of lux-ury and medicine. The unguentum nardinum was used at baths and feasts as a favorite perfume. Its value is evident from that passage of Scripture where our Saviour's head was anointed with a box of it, with which Judas found fault. From a passage in Horace it appears that this ointment was so valuable among the Romans that as much as could be contained in a small box of precious stone was considered as an equivalent for a large vessel of wine, and a proper quota for a guest to contribute at an entertainment, according to an ancient custom. The plant had a great character among the ancients as a medicine, both internally and externally. It has a place in the list of all antidotes, from those of Hippocrates to the officinals which have kept their ground until lately, under the names of Mithridate and Venice treacle. Galen and Alexander Trallian recommend it in the dropsy and gravel; Celsus and Galen in pains of

the stomach and bowels, both internally and externally. Galen prescribed the oleum nardinum to the emperor Marcus Aurelius when afflicted with a cholera morbus. It was externally applied ‘ to the stomach on wool ; and the success was so great that he evei afterwards enjoyed the confidence of that emperor. In a work attributed to Galen, also, it is mentioned that a medicine composed of this and some other aromatics was found useful in long protracted fevers ; and the natives of India at present consider it as very efficacious in fevers. It has a pungency of taste superior to contrayerva, and little inferior toser-pentaria. But though the name of this plant, as well as its uses and virtues, have long been familiar to the writings of botanists and physicians, the genus and species have not been long ascertained.

NARE, 7i. s. Lat nar’u. A nostril ; not used except in ridicule.

There is a Machiavelian plot, Though every nare olfact it not. Hudibrcu.

NARES (Dr.), organist and composer to his majesty, and brother to judge Nares, was a studious and sound musician, who had distinguished himself at York as an organist and composer of anthems, before his advancement to the chapel royal in 1755, as successor to Travers. On the death of Bernard Gates, in 1757, he was appointed master of the choristers of his majesty’s cha-pel ; and his diligence in composing for the chapel, and instructing the children, acquired him great respect. Dr. Nares published, besides his choral compositions, several books of lessons for the harpsichord, a royal pastoral on his majesty’s nuptials, and a useful elementary treatise on singing. He died in 1783.

NAREW, a river in the north-east of Poland, rising in the government of Grodno. It flows westward to Novogorod, then turns to the south, and joins the Bug, after which their united streams flow westward, till, at Nowydwor, they meet the Vistula.

NARM, a town of the States of the Church,

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forty miles north of Rome, in the province of Spoleto. It is 9, bishop's see, and situated on a hill ; it has some good buildings but the streets are steep and winding. The Nera flows at a small distance, and is crossed by the remains of a magnificent bridge of uncemented stone, built in the reign of Augustus. The middle arch is about 100 feet in span. Population 5000.

NARNOUL, an independent district of Hindostan, in the province of Agra, situated between lat. 28►► and 29►► N. It belongs to several Hin-doo chiefs. The principal towns are Narnoul and Rewary.

NARO, a strong town of the Val di Maz Zara, Sicily, and contains a population of 12,000 inhabitants, partly employed as mechanics and manufacturers, and partly in agriculture. It is thought to be the Motyum of Diodorus, but is seldom visited. Eleven miles east of Girgenti.

NARRAGANSET BAY, a bay of the Atlantic, on the coast of the United States, intersects the state of Rhode Island. It is about twenty-eight miles long and ten broad, and contains Rhode Island, with various other smaller ones.

NARRAGUAGUS, a bay on the coast of Maine, joining Machias Bay. It receives a river of the same name.

NAR'RATE, v. a. -\ Fr. narrer, narra—

NARRA'TION, n. s. I tion, narratif; Ital.

NAR'RATIVE, adj. n. s.\ narratione ; Spanish

NAR'RATIVELY, adv. I narration ; Port, nar—

NARRA'TOR, n. s. J racio ; Lat. narro, narratio. To tell ; relate : a narration is an account, relation, or history : and narrative, as a noun-substantive, is of the same signification ; as an adjective it means relating ; of the nature of a narration or account ; apt to relate, or indulge in tales : narratively, by way of relation : narrator, a person who relates; a relater-or teller.

They that desire to look into the narrations of the story, or the variety

of the matter, we have been careful might have profit. 2 Mac, ii. 24.

He did doubt of the truth of that narration.

. Abbot.

Eloquence is only not discouraged, when she serves for a client of truth : mere narrations are allowed in this oratory ; not poems ; not excursions ; not glosses ; truth must strip herself and come in naked to his bar.

Bp. Hall.

Age, as Davenant says, is always narrative.

Dry den.

Cyntho was much taken with my narrative.

Taller.

In the instructions I give to others, concerning what they should do, take a narrative of what you have done. South.

To judicial acts credit ought to be given though the words be narrative. Ayliffe's Parergon.

The words of all judicial acts are written narratively, unless it be in sentences wherein dispositive and enacting terms are made use of. Id.

Homer introduces the best instructions, in the midst of the plainest narrations.

Browne on the Odyssey.

The poor, the rich, the valiant, and the sage, And boasting youth, and narrative old age. Pope.

Consider whether the narrator be honest and faithful, as well as skilful ; whether he hath no peculiar gain or profit by believing or reporting it.

Watts 's Logick.

This commandment, containing among othe: things a narration of the

creation of the world, is commonly read. Wliite.

In all the virtues of narration, particularly in thai of picturesque descriptive narration, several of the ancient historians eminently excel. Hence the

Sleasure that is found in reading Herodotus, Thucy-ides, Xenophon, Livy, Sallust, and Tacitus. They are all conspicuous for the art of narration. BJair.

Are we not continually informed that the author unravels the web of his intrigue, or breaks the thread of his narration ? Canning.

NAR'ROW, adj. & v. a.ˆ% Sax. nyn. (near), NAR'ROWLY, adv. > neanu. Small in

NAR'ROWNESS, n. s. j breadth ; contracted ; near ; used of time as well as space ; and metaphorically, covetous ; ungenerous ; ignorant ; close ; vigilant : to narrow is to make small or smaller in breadth ; to contract, confine, or limit : a horse is said to narrow when he does not take ground enough, and does not bear far enough out to the one hand or to the other (Farrier's Dictionary) : the adverb and substantive follow all the senses of the adjective.

The angel stood in a narrow place, where was no way to turn either to the right hand or to the left.

Number* ii. 26.

In the wall he made narrowed rests, that $>e beams should not be fastened in the walls of the house.

1 Kings vi. 6.

To narrow breasts he comes all wrapt in gain, To swelling hearts he shines in honour's fire.

Sidney.

Edward from Belgia, Hath passed in safety through the narrow sea.

Shakspeare.

My fellow-schoolmaster

Doth watch Bianca's steps so narrowly. Id.

Dazzled with the height of place,

While our hopes our wits beguile, No man marks the narrow space,

Between a prison and a smile. Bacon.

If it be narrowly considered, this colour will be reprehended or encountered, by imputing to all excellencies in compositions a kind of poverty. Id.

Cheap vulgar arts, whose narrowness affords No flight for thoughts, but poorly sticks at words.

Denham.

Though the Jews were but a small nation, and confined to a narrow compass in the world, yet the first rise of letters and languages is truly to be ascribed to them. Wilk'ms.

The orb he roamed

With narrow search : and with inspection deep Considered every creature, which of all Most opportune might serve his wiles. Milton. The most learned and ingenious society in Europe confess the narrowness of human attainments.

Glunville.

From this narrow time of gestation may ensue a smallness in the exclusion ; but this inferreth no informity. Browne.

A government, which by alienating the affections, losing the opinions, and crossing the interests of the people, leaves out of its compass the greatest part of their consent, may justly lie said, in the same degrees it loses ground, to narrow its bottom.

Temple.

Then Mnestheus to the head his arrow drove. But made a glancing shot and missed the dove ; Yet missed so narrow, that he cut the cord, Which fastened by the foot the flitting bird.

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The Latin, a severe and compendious language, often expresses that in one word, which either the barbarity or the narrowness of modern tongues cannot supply in more. Id.

For a considerable treasure hid in my vineyard search narrowly when I am gone. L' Estrange.

How hard it is to get the mind, narrowed by a scanty collection of common ideas, to enlarge itself to a more copious stock. Locke.

That prince who should be so wise and godlike, as by established laws of liberty to secure protection and encouragement to the honest industry of mankind, against the oppression of power, and narrow-nest of party, will quickly be too hard for his neighbours. Id.

In a narrow bottomed ditch cattle cannot turn.

Mortimer.

The greatest understanding is narrow. "-low much of God and nature is there whereof we never had any idea ? Grew.

Nothing more shakes any society than mean divisions between the several orders of its members, and their narrow-hearted repining at others' gain.

Sprat.

If God will fit thee for this passage, by taking off thy load, and emptying thy bags, and so suit the narrowness of thy fortune to the narrowness of the way thou art to pass, is there any thing but mercy in all this? South.

The hopes of good from those whom we gratify would produce a very narrow and stinted charity.

Smulridge.

Desuetude does contract and narrow our faculties, so that we can apprehend only those things in which we are conversant. Government of the Tongue.

A salamander grows familiar with a stranger at first sight, and is not so narrow-spirited as to observe whether the person she talks to be in breeches or in petticoats. Addison.

Many malicious spies are searching into the actions of a great man, who is not always the best prepared for so narrow an inspection. Id.

In our Gothic cathedrals, the narrowness of the arch makes it rise in height, or run out in length.

Id. on Italy.

By being too few, or of an improper figure and dimension, to do their duty in perfection, they become narrow and incapable of performing their native function. Blackmore.

Another disposition in men, which makes them improper for philosophical contemplations, is not so much from the narrowness of their spirit and understanding, as because they will not take time to ex-tend them. Burnet's Theory.

I most find fault with his narrowing too much his own bottom, and his unwary sapping the foundation on which he stands. Waterland.

Lo ! every finished son returns to thee ;

Bounded by nature, narrowed still by art,

A trifling head, and a contracted heart. Pope.

It is with namnfl-souled people as with narrow-necked bottles ; the less they have in them the more noise they make in pouring it out. Swift.

The church of England is not so narrowly calculated, that it cannot fall in with any regular species of government. Id.

By admitting too many things at once into one question, the mind is dazzled and bewildered ; whereas, by limiting and narrowing the question, you take a fuller survey of the whole. Watts.

They taught

That narrow views betray to misery : That wise it is to comprehend the whole.

Young.

For, in order to a true self-knowledge, t'.ie human

mind, with its various powers and operations, tniM be narrowly inspected ; all its secret bendings and doublings displayed ; otherwise our self-acquaintance will be but very partial and defective ; and the heart after all will deceive us. ilawn.

'1 he mind that broods o'er guilty woes

Is like the scorpion girt by fire,

In circle narrowing as it glows,

The flames around their captive close ;

Till inly searched by thousand throes, And maddening in her ire,

One sad and sole relief she knows. Byron.

NARROWS, THE, a channel between Long Island and Staten Island, United States, connecting New York Bay with the Atlantic, nine miles south of New York. It is 1905 yards wide, and well defended by forts and batteries.

NARSES, a celebrated eunuch under Justinian I. From the domestic service of the palace, and the administration of the private revenue, he rose to the head of an army. A feeble diminutive body concealed the soul of a statesman and a warrior, and the faculties of a vigorous and discerning mind. He studied in the palace to flatter, and, when he approached the emperor, Justinian listened with surprise to the manly counsels of his chamberlain. The talents of Narses were tried and improved in frequent embassies : he led an army into Italy, acquired a practical knowledge of the war and the country, and presumed to emulate Belisarius. Twelve years after his return the eunuch was appointed to achieve the conquest which had been left unfinished by the first of the Roman generals. Narses defeated the Goths, Franks, and Alemanni ; the Italian cities opened their gates to him, ht-entered

Rome in triumph, and, having established the seat of his government at Ravenna, continued fifteen years to govern Italy under the title of exarch. His ruling vice was avarice. He accumulated treasure by means oppressive and unpopular ; and the general di□□□content was expressed by the deputies of Rome, before Justinian. They boldly declared that their Gothic servitude had been more tolerable than the despotism of a Greek eunuch ; and that, unless their tyrant was instantly removed, they would choose another master. Thus was his disgrace the effect of the people's disaffection. He died about A. D. 567, aged ninety-fire.

NARVA, a small town of European Russia, in the government of St. Petersburg, on the Narova, near the gulf of Finland. It was built in 1224, and taken by the Muscovites from the Danes in 1558. In 1581 it was taken by the Swedes. Near it Charles XII., in 1700, in his nineteenth year, defeated the Russians, who lost 6000 men killed and drowned, besides many prisoners, and all their artillery : his force is said to have been but 9000, opposed to 32,000 of the enemy. But in 1705 it was retaken by Peter the Great, who, though he took it by storm, prevented his soldiers from pillaging it, and even killed two of them who would not de-sist from plunder It exports timber, hemp, flax, and corn ; and imports salt, wine, herrings, tobacco, and groceries. Population 3600. It is eighty-three miles south-west of Petersburg.

NARNVAR, or NARAVAHA, a town and district in the southern quarter of the Agra Pro-

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vince, situated principally between lat. 25►► and 26►► N. Its surface is hilly and woody, but the soil is rich in many parts, and, when well cultivated, extremely productive. The Sinde is the principal river. The town is situated on the southeast side of the Sinde, in lat. 25►► 41’ N., long. 78►► 12’ E.,and is of considerable antiquity, having been conquered by the Mahometans in 1251. It subsequently recovered its independence, and was taken from its Hindoo prince by Sultan Secunder-Lodi in 1509. At the late peace with the Mahrattas, the fort and district of Narwar were guaranteed by the British government to Rajah Umbajee Row ; at which period the revenue was about ten lacks of rupees. In 1810 the place was surrendered to Dowlet Row Sindia. Other towns of the district are Collarass and Shepoory.

NAR’WHALE, n. s. Goth. narwhal(nar being a snout.) A species of whale.

Those long horns, preserved as precious beauties, are but the teeth of narwhales.

Browne’s Vulgar Errnurs.

NAS. Corrupted from ne has, or has not. Obsolete.

For pitied is mishap that nas remedy, But scorned been deeds of fond foolery.

Spenser.

NA’SAL, adj. Lat. nasus. Belonging to the nose.

To pronounce the nasals, and some of the vowels, spiritally, the throat is brought to labour, and it makes a guttural pronunciation. Holder.

When the discharge lessens, pass a small probe through the nasal duct into the nose every time it is drest, in order to dilate it a little.

Sharpe’s Surgery. The nasal twang

Heard at conventicle, where worthy men, Misled by custom, strain celestial themes Through the orest nostril, spectacle-bestrid.

Cowper.

NASEBY, a village of Northamptonshire, memorable for the total defeat of the royal army under king Charles I., prince Rupert, lord Astley, and Sir Marmaduke Langdale, by that of the parliament under Cromwell, Ireton, Fairfax, and Skippon. This victory proved peculiarly fatal to the king, as a casket of his letters to the queen fell into the enemy's hands, some of which were printed by the parliament, as proofs of his insincerity with regard to the treaty of Uxbridge. See CROMWELL.

NASH (Richard), esq., often called king o Bath, a singular character, born at Swansea, in South Wales, 18th October 1674. His father ###was a gentleman, who was a partner in a glass-house ; his mother was niece to colonel Poyer, who was killed by Oliver Cromwell in defending Pembroke Castle. He was educated at Caer-marthen, and afterwards at Jesus College, Ox-ford ; but was dismissed on account of an intrigue. He then entered into the army as an ensign, but soon left it, and studied law at the Temple, where he conducted a pageant for the entertainment of king William III., the last of the kind that has been exhibited at the inns on the accession of any monarch. This was the (irst specimen he gave of his abilities to become tiic public arbiter elegantiarum, a character in

which he afterwards shone. King William was so well pleased that he offered him knighthood, which Nash declined. In 1704 he went to Bath, and soon after was appointed king, or master, of the ceremonies; an office for which he was admirably qualified by an elegant taste and uncommon vivacity ; and in which he gave such universal satisfaction that he drew the whole beau monde to Bath, and was regarded as the benefactor of the city. Meanwhile he gained large sums of money by gaming, as well as by the emoluments of his office ; but his benevolence and generosity were so unbounded that he never amassed wealth. Among innumerable instances of this disposition we shall only mention one: ### Having gained 100 guineas one day at the gaming table, a spectator remarked with what indifference Nash drew to him that large sum, which would make him happy for lift'. Nash, shoving the money to him, said, ' Go then and be happy.' During the severe winter of 1739 his charity was extensively beneficial ; but the most prominent monument of his benevolence is the public hospital at Bath, which was planned by him, and established by his exertions and those of Dr. Oliver. He died at Bath in 1761, aged eighty-seven; and was interred in the abbey church, with all the honors due to the

monarch of Bath.

NASH, or NASHE (Thomas), a satirical writer, was born at Lowestoft, in Suffolk, about 1564, and educated at St. John's College, Cambridge. He left the university after taking his first de-gree, and settled in London, where he became a writer for the stage, and engaged in several literary controversies, particularly against the Puritan Penry, the author of Martin Marprelate ; and Gabriel Harvey. He was also the author of Pierce Pennilesse his Supplication to the Divell 4to. ; Plairie Percevall, the Peace-maker of England, 4to. ; and other pieces; besides three plays. He died in London, 1601.

NASHANT, or NAHANT, a peninsula of Massachusetts, in the township of Lynn, five miles southeast of Lynn hotel, nine south of Salem, and fourteen north-east of Boston. It is connected with the main land by a narrow isthmus, consisting of a delightful beach more than a mile and a haff in length, and divided into Great Na-hant, Little Nahant, and Bass Neck. Great Nahant, the eastern and largest division, consists of 305 acres of fertile land under high cultivation. In the hottest weather of summer the sea breezes on this peninsula are cool and refreshing ; and it has long been a place of resort, in the warm season, for gay and fashionable people from Boston, Salem, and other neighbouring towns, as well as for invalids from the vicinity and interior country. The shores are bold and rocky, and, after a storm with easterly wind, the foaming and dashing of the waves of the agitated ocean against the high and precipitous rocks exhibit a most sublime spectacle. On the southern side of Great Nahant there is a curious grotto or cavern, called the Swallows' House ; the entrance of which is about ten feet wide, five high, and seventy long, increasing after a few steps to fourteen feet in breadth, and eighteen or twenty in height. Great numbers of swallows inhabit this

cave and hatch their young here ; and it is a common opinion that they repose here during winter in a torpid state.

NASHVILLE, a post town, the capital of Davidson county, Tennessee, on the south side of the Cumberland; 110 miles north of Huntsville, 190 west of Knoxville, 250 south-west of Lexing-ton, 430 north-east by north of Natchez. Population, in 1818, between 3000 and 4000. Long. 87►► 8' W., lat. 35►► 45' N. It is pleasantly situated, regularly laid out, and contains a court-house, a jail, a market-house, two banks, a young ladies' academy, a public library of 1200 volumes, a cotton and woollen manufactury, a rope-walk, two distilleries, and three houses of public worship, one for Presbyterians, one for Methodists, and one for Baptists. It is athriving and wealthy town, the largest in the state, and is situated in a fertile and populous country, and has a flourishing trade. Two newspapers are published here. There is a steam-boat navigation from Nashville to New Orleans. The Cumberland is navigable to this place for vessels of thirty or forty tons, nine months in the year, and at certain times for ships of 400 tons. The distance of Nashville from New Orleans, by land through Natchez, is 586 miles. A new road is now opening through Madisonville, distance 480 miles. ►►► Cumberland College was incorporated here in 1806.

NASICOR'NOUS, adj. Nasus and cornu. Having the horn on the nose.

Some unicorns are among insects ; as those four kinds of nasicornous beetles described by Moffetus.

Browne.

NASSAU, an independent duchy of the Germanic confederation, was formerly the name of several principalities of the empire. Its present boundaries are the Prussian territory on the Lower Rhine, and the states of the princes of Hesse. It lies between 49►► 55' and 50►► 49' of N. lat., and has an area of 2186 square miles. It is divided into the districts of Wisbaden, Weil-burg, and Dillenburg ; which are subdivided into bailiwics. The ducal residence is at Idstein. Population 303,000.

The surface of the duchy is hilly, and the climate temperate ; it contains nothing that can be strictly called a plain ; but along the

rivers there are low level tracts. Th►► mountain ranges are the Westerwald and the Taunus. To the west is the Rhine, the Maine to the south, and the Lahn in the interior. Some of the principal watering places in Germany belong to this little state, there being good mineral springs at Ems, Schlangenbad, Wisbaden, Lower Sellers, Upper Lahnstein, See. &c. Vast quantities of mineral water are exported. In the north the air is of-ten piercingly cold, and corn is not raised in sufficient quantity for the consumption. The culture of the vine and the rearing of cattle form the chief employments ; the best vines being raised on the banks of the Rhine. Ilock and bleichert are the well known kinds. The mountains abound in game and in minerals. There are mines of silver, lead, iron, and salt, the smelting and manufacturing of which is conducted on a large scale : other manufactures are paper, leather, tobacco, vinegar, and coarse linen.

The duke of Nassau ranks in the thirteenth place at the smaller assembly of the diet, and in the full assembly he has two votes. His duchy has a representative assembly, and justice is administered by a high court of appeal at Dietz, by another at Wisbaden, and by inferior courts in the country. The military is between 2000 and 3000 men; the revenue ►►180,000.

The inhabitants of this duchy are about equally divided between the Protestant and Catholic faith : in 1814 there were 120 Lutheran, ninety-seven Calvinist, and 152 Catholic churches. The prince ranked as a Calvinist, but the two parties nave long professed the greatest liberality ; and in August, 1817, they agreed to unite in one body under the title of Evangelical Christians.

In 1802 the house of Orange received in this quarter a domain, as an indemnity for the stadt-holdership ; and in 1806 an accession of territory was given to both branches of the house of Nassau, on the formation of the confederation of the Rhine. The family, after long being counts, were made princes of the empire in 1688 and 1737 : in 1806 they were declared dukes.

NASSAU, a small town of west Germany, on the Lahn, in the duchy of Nassau. Near it are the ruins of the castle of Nassau berg, which gave name to the family, and this is the only place that belongs in common to the king of the Netherlands and the duke of Nassau. Population 1500. Ten miles W. S. W. of Limburg.

NASSAU, a fort maintained by the Dutch of the gold county, Africa.

The NASSAU, or Two Poggy Islands, are islands on the west coast of Sumatra, separated by a narrow strait called Se Cockup, forming an excellent harbour. The islands are inhabited by an uncivilised people, who do not know the use of money, making no distinction between a metal button and a piece of gold or silver coin. They are divided into tribes, each inhabiting a distinct village on a river. Their houses, like those of the Sumatrans, are of bamboo raised on posts, and the space underneath serves as a place for pigs and poultry, which, together with sago, constitute their food, for they grow no rice ; the islands have red deer, but neither buffaloes nor goats. They abound in large timber, amongst which are poon trees, of sufficient dimensions for lower masts for a first rate ship of war.

NASTY, adj. ~\ Teut. nas ; Belg. nut, nas—

NAS'TILY, adv. S chylig. Filthy ; nauseous ;

NAS'TIKESS, n.s. } disgustingly unclean: the ad-verb corresponding : nastiness is filth ; dirt; gross-ness ; obscenity.

The most pernicious infection next the plague, is the smell of the jail, when prisoners have been long, and close, and nastily kept.

Baron't Natural Hittory.

This caused the seditious to remain within their station, which, by reason of the nastiness of the beastly multitude, might more fitly be termed a ken-nel than a camp. Haytcard.

A divine might have employed his pains to better purpose, than in the nastiness of Plutus and Aristophanes. Dryden.

Their nattiness, their dull obscene talk and ribaldry, cannot but be very nauseous and offensive to any who does not baulk his own reason, out of love to their vice. Sout□□..

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Haughty and huge, as High Dutch bride,

Sur.h nast'uiess and so Touch pride

Are oddly joined by i Ue. Pope.

Sir Thomas More, in his answer to Luther, has thrown out the greatest heap of natty language that perhaps ever was put together. Atterbury.

A nice man, is a man of nasty ideas. Swift.

NATAL, adj. Lat. natalis; Fr. natal. Na-tive ; relating to nativity.

Since the time of Henry III. princes' children took names from their natal places, as Edward of Carnarvon, Thomas of Brotherton. Camden.

Propitious star ! whose sacred power Presided o'er the monarch's natal hour, Thy radiant voyages for ever run. Prior.

NATAL, or NATAR, a Malay trading settlement on the south-west coast of Sumatra, some miles south of the river Tabuyong. Gold of fine quality is procured from the country, some of the mines being within ten miles of the factory ; and there is a considerable vent for imported goods. The anchorage is about two miles off the shore, in five fathoms water. The road is one of the worst on the coast of Sumatra, having numerous shoals and often a heavy sea. An English settlement was established in 1752. In the year 1760 the French destroyed it ; but it was re-establish- ed, and the possession secured, by the treaty of Paris in 1763. The East India Company's influence is predominant here ; but the town is governed by a Malay datoo, or chief magistrate. Long. 98►► 57' E., lat. 32►► N.

NATATION, n.s. Lat. natatio. The act of swimming.

In progressive motion the arms and legs move successively, but in natation both together. Browne.

NATCHEZ, a city, and port of entry, Adams county, Mississippi, on the east bank of the Mississippi, 322 miles according to Darby, 310 miles according to Schultz, above New Orleans, by the course of the river, 156 by land, 430 south-west by south of Nashville, west 1268. Long. 91►► 20' W., lat. 31►► 33' N. Population, in 1810, 1511 ; and, in

1818, about 3000. The greater part of the town stands on a bluff, elevated upwards of 150 feet above the surface of the river ; but the river cannot be seen from the town, on account of the greater elevation of an intervening hill. The city is regularly laid out, the streets intersecting each other at right angles, but the site on which it is built is very uneven. It contains a court-house; a jail ; a market-house; a bank ; an academy ; two printing offices, from each of which is issued a weekly newspaper; and two houses of public worship, one for Ro-man Catholics, and one for Presbyterians. Some of the houses are respectable, but they are mostly of wood, and of only one story. To enable the inhabitants to enjoy the evening air, almost every house has a piazza and balcony. The gardens are ornamented with orange trees, figs, plums, peaches, and grape vines. The town contains much wealth. It is well situated for a commercial depot, having a country fertile in cotton and well cultivated.

NATES CEREIIRI are two circular protuberances of the brain, situated on the back of the medulla oblongata, near the cerebellum.

-NATHAN, a faithful prophet and historian of

Israel, under David and Solomon ; supposed by some to have been the author of the second book of Samuel, and of the latter part of the first book : be that as it may, we are certain that he wrote the history of David and Solomon. See 1 Chron. xxix. 29 ; 2. Chron. ix. 29 Nathan's affecting parable of the ewe-lamb, his bold reproof of David for his crimes, his prohibition of his build ing the tern pie, and his seasonable advice whereby the usurpation of Adonijah was overthrown, are recorded in 2 Sam. vii. & xii. ; and 1 Kings i.

NATHAN, a son of David by Bathsheba, probably named after the prophet, the lineal ancestor of our Saviour by the maternal line.

NATHAN (Isaac, or Mordecai), a learned Jew-ish lexicographer; the first who compiled a He-brew Concordance. He began it in 1438,and finished it in 1458. It was first printed at Venice, in 1523. Calasio reprinted it at Rome in 1621, in four folio volumes, with such additions and improvements as to render it a complete dictionary. Eleven years after another edition appeared at Basil, corrected by Buxtorf ; and the Rev.W. Romaine, with the assistance of Mr. Edward Kowe Mores and a Portuguese rabbi, published in 1747 a new edition from that of Calasio, at London, in the same number of volumes.

NATH'LESS, conj. Goth, na, that is, Sax., not, the less. Nevertheless: formed thus, nathe-less, nath'less. Obsolete.

Nath'less, my brother, since we passed are

Unto this point, we will appease our jar.

Spenser.

The torrid clime

Smote on him sore besides, vaulted with fire. Nath'less he so endured, 'till on the beach Of that inflamed sea he stood, and called His legions. Milton's Paradise Lost.

NATH'MORE, adv. Na the more. Never the more. Obsolete.

Yet nathmore by his bold hearty speech, Could his blood-frozen heart emboldened be.

Spenser.

NATION, n.s. ˆ Fr. Ital. and Teut. NA'TIONAL, adj. 'nation; Lat. natio. A NA'TioNALLY,►►cfo. ˆ whole people; a peo-NA'TIONALNESS, n. s. * pie distinguished from others by their origin, situation, language, o government ; any great number of people : national, means pertaining to a nation; public; general; patriotic: the adverb and noun substantive corresponding.

If Edward III. had prospered in his French wars, and peopled with English the towns which he won, as he began at Calais driving out the French, his successors, holding the same course, would have filled all France with our nation. Raleigh.

They, in their earthly Canaan placed, Long time shall dwell and prosper: but when sins National interrupt their public peace. Milton.

About the same time thirty frigates were appointed to be built, as well to increase the fleet as to secure the trade of the nation by cruising. Ludlow.

A nation properly signifies a great number of families derived from the same blood, born in the same country, and living under the same government.

Temple.

The term adulterous chiefly relates to the Jews who, being nationally espoused to God, by covenant

NATIONAL DEBT.

every sin of theirs was in a peculiar manner spiritual adultery. South.

The astonishing victories our armies have been crowned with were in some measure the blessings returned upon that national charity which has been so conspicuous. Addison.

When after battle I the field have seen Spread o'er with ghastly shapes, which once were

men ;

A nation crusht ! a nation of the brave ! A realm of death ! and on this side the grave Are there, said I, who from this sad survey, This human chaos, carry smiles away 1 Young.

God, in the execution of his Judgments, never visits a people with public and general calamities, but where their sins are public and national too.

Rogeri.

He gives the word, and Mutiny soon roars In all her gates, and shakes her distant shores; The standards of all nations are unfurled ; She has one foe, and that one foe the World.

Cotuper.

NATIONAL DEBT. Although, in our article FUNDS, we have presented the reader with a general outline of our entire funding system, some historical details essentially connected with tins great feature of our national policy may here be supplied; particularly as the recent conversion, or more properly speaking, perhaps, the recently announced conversion, of lord Grenville from the errors of Mr. Pitt, is held up in some quarters as having given the death-blow to the favorite scheme of that once honored financier ??? the sinking fund.

We shall first endeavour to place before our readers the real efficacy of our finance sys-tem. During upwards of twenty anxious years, it is not to be denied that armies and navies were maintained by Great Britain, hardly less numerous and with far more expensive equipments than Imperial Rome could boast in the plenitude of her dominion. If

sometimes our hopes were disappointed, did this ever in any one instance happen because the sinews of war failed? Our force may have been misdirected or overpowered, but not for one moment in twenty-one eventful years was it ever paralysed by a failure of pecuniary strength. Has then this wondeful military exertion drunk up all the streams of civil prosperity? Has the plough stood still, or the loom been silent ? Have our roads become green, our cities depopulated ? Were parents dragged in fetters from their in-fant families, or sons from their widowed mothers, to fill the wasted ranks of armies perishing by disease ?

ˆ Nothing of all this, but quite the contrary! The mass of national wealth in habitations, furniture, manufactures prepared for future use, and above all in territorial improvements, and in numerous and costly establishments which facilitate production and improve commercial communication, are greatly and obviously increased. Our exports, for instance, during the years 1826 and 1827, consisting chiefly of home produce and manufactures, have exceeded those of any two previous years.

This is without doubt a remarkable anomaly in the history of nations ; and few things can be ??? politically more interesting than a view, if not

incorrect or wholly inadequate, of the sources of this power, and the mechanism by which our unexampled military and naval expenses have hitherto been defrayed, while, at the same time, the growth of our intrinsic national wealth, as before stated, has been astonishing.

The public opinion we believe is at present very unsettled and indistinct on this subject ; and, as erroneous ideas of the artificial causes of extraordinary circumstances in the history of mankind readily introduce false principles of policy, it is the more material that the real bases should be known of the power which the British empire now displays, and of the revenue by which it has been enabled to persevere in its exertions. This is indeed indispensably necessary to any thing like a correct political view of the progress of our national debt and the plans for redeeming it: and professor Hamilton has wisely limited his ‘ Enquiry* (the modern text book of our subject) almost entirely to an arithmetical examination of the subject; and to this extent has rendered a most important service. Most, if not all, of his inferences would be correct, if the practical financier must be fettered by strict calculations of direct profit and loss, and forbidden

to extend his views to considerations of political experience, or to compute the ultimate advantages, even in a pecuniary view, which may result from such an adaptation of his arrangements to times and opinions as will give them stability, and increase the general benefit.

But, however useful this simplicity of theory may be to establish sound principles, it has the natural effect of fixing the attention too exclusively on some one of the many co-operating or contending powers in the mechanism of society, and among many necessarily coexisting cause.s to consider one only as essential, and all the others as contingent and subordinate. Theoretic investigations of particular topics are an important division of labor in preparing philosophical instruments for the practical politician, and as such we very highly esteem them ; but if without estimating their respective powers, or considering the probable effects of their compound operation, the practical politician looks to the agency of one of them only, and forms his plans on so contracted a principle, the chances are that he will fail of success, or if he should succeed, it would not be art, but empiricism.

We mean to take a wider view of the subject, therefore, than the professor has done, and one which may enable us clearly to point out the reasons why we can by no means join in his general disapprobation of the plans which for many years past have been adopted or modified, in creating our funded debt, and attempting to redeem it. If we take a less popular view of the subject than that which this able writer has adopted, our readers, in an analysis of lord Grenville's pamphlet, shall be furnished with a fair view of the modern lights on the question.

We now, therefore, request their attention to the following important circumstances of comparison between the state of England after more than twenty years of uninterrupted war, and in 1714, when the peace of Utrecht terminated ►► contest which had lasted from 1689, with four years cessation.

1. From 1714 to 1824 the population of England and Wales somewhat more than doubled.

2. The increase of real wealth was certainly greater than that of the population.

3. The average increase of money prices was threefold.

When we have explained the chief causes of these very great changes in the state of this part of the British empire, we mean to apply them in examining the causes of the progress of the public debt of this country, and its successive proportions to the private revenue, by which, through the medium of government and by means of taxation, its interest is paid.

The causes of the great increase of population, have, without doubt, been chiefly various ameliorations in the state of the lower orders of the people, and more especially of late years. Much has been gained by medical improvements, but much more by the effect of the poor laws ; a system of which the present magnitude and internal principle of increase cannot be contemplated without alarm as to its ultimate consequences, but which, as now practically employed, certainly promotes early marriages, preserves helpless infancy, makes sickness less fatal, and prolongs old age. Add to this, that during the whole period hardly any of the extraordinary checks to the increase of mankind have existed in this country. It has suffered very little from civil war; not at all from pestilence; and, during many years, the influx of inhabitants has probably equalled, if not exceeded, the emigrations. The progress, in this respect, of the other parts of the united kingdoms, cannot be computed with equal precision; but there are very safe grounds for asserting, that if in Scotland it has been somewhat more slow, it has been far more rapid in Ireland, and that, on the whole, the total numbers have much more than doubled.

It is easy to show that this increase of numbers has been accompanied also by even a greater increase of intrinsic wealth and sources of private revenue. During the period included in these remarks, habitations, furniture, implements, &c., have been progressively provided for the additional families; all are, undoubtedly, in these respects, better provided than 100 years ago; and, therefore, this part of our intrinsic wealth has much more than doubled. As to territorial and other productions which require to be constantly replaced, in proportion to their constant consumption, the circumstances have been somewhat different. While the increase of provisions has been somewhat less than in proportion to the additional population, that of

all other territorial produce from mines, &c., has far exceeded it, and the produce of manufacturing labor not only creates an abundantly greater surplus beyond the consumption of a duplicate number, but, having been more and more aided by the invention and general use of artificial facilities of production, the means of augmenting the quantity are in the duplicate pioportion of the labor of the additional numbers, together with that of the augmented means by which their labor is assisted.

During the earlier part of this period, it ap-

pears from the returns of the parochial -.egisters, confirmed by abundant other proof, that the increase of inhabitants was chiefly agricultural, producing, till after the middle of the last century, an increasing surplus of provisions ; since that time the increase has been very much greater in towns and manufacturing districts. While, therefore, the surplus of the productions of all kinds of the latter proportion of the people, aid-ed by constantly increasing and improving facilities, has increased to a wonderful extent, the agricultural produce has become inadequate to the necessities of the nation ; and since this deficiency of the necessaries of life could only be supplied by an exchange with foreign nations of the surplus of manufactures, however great that surplus might become, and however adequate in value to supply what is wanted, yet the political inconvenience is manifest.

The profit of labor to the employer is the general cause of such fluctuations ; and here, in England, the peculiar cause of the change already stated has, without doubt, been this ??? that the facilities which obtain a greater produce from an equal quantity of human labor, increased more rapidly as applied to manufactures than to agriculture. At present, various causes which we cannot allow ourselves space to explain, are evidently co-operating to equalise the profit of agricultural and manufacturing labor; and we have good reason to hope that the political inconveniences before mentioned will gradually, though perhaps slowly, be removed. It will hereafter be shown how an increase of population and of profit to its employers operates very powerfully to increase the money price of all that is necessary for general consumption ; or, according to an equivalent expression, to diminish the value of money. A few words, however, may now be added on the peculiar nature and effects of that portion of national wealth which exists in the means of facilitating production ; that is, of obtaining a greater quantity by an equal employment of

human labor.

In the progress of civil society the labor of mankind has four distinct objects : to provide things of which the necessity or utility arises in their consumption ; as, for instance, food, and which must therefore be constantly reproduced : ††† to provide durable necessaries and conveniences; as, habitations, &c., which require a less proportion of annual labor to perpetuate than to create: ††† to provide the instruments, and various artificial means, by which either the two former may be obtained in greater abundance and bet-ter, or in equal and sufficient abundance with a less quantity of labor : ††† to provide for defence, which too often degenerates into aggression, but which becomes more systematic, and more distinctly a separate division of labor, whether employed for civil or military purposes, in proportion to the improved state of society, not only in the country itself, but in all others with which it is politically connected.

It is very obvious that, in proportion as fewer hands are wanted for the first-mentioned purposes, more will be disposable for the use of the government, as civil officers, as soldiers, and as manufacturers for military purposes. Wherefore, since the power of a nation depends on the quan-

tity of the means of defence or annoyance, as its force depends on the energy and skill with which those means are employed ; it follows that, in proportion as the labor of production is facilitated, the politically disposable numbers will be greater when compared with the whole popujation. This solves the problem, how a small nation without any diminution of its intrinsic wealth may be able to maintain equal armies with one far more numerous. If, for instance, in one nation two-thirds are usually want-ed to reproduce food and other primary objects of consumption, and in another half only are wanted for these purposes, then, all other circumstances being alike, this difference of one-sixth of the whole number may be added to the power of its government. Also if, by means of improved machinery in manufactures, two men can produce as much as three before, the

third, if not employed to increase the former quantity, may be added to the power of the government.

An application of these observations to the modern state of the British empire will clearly show, why it was for so long a time able to spare such an immense proportion of its population for military purposes, not only without being impoverished in point of intrinsic wealth by the loss of their profitable labor, but with a still remaining surplus of hands to employ very actively in augmenting its present, and still more its progressive, increase.

If also the private revenue of the nation has, from these and other causes, increased in more than a duplicate proportion, it so far follows that the part of it which may be spared for the use of the government will have equally increased in intrinsic value ; and, if the money value of that revenue is tripled, its nominal amount, as estimated in money, will be more than six times as great : that is, the population being now more than twice as great as in 1714, the intrinsic wealth and revenue being still more increased, and the money price of that wealth being tripled (if tripled?), it conclusively follows, that, one with another, private incomes would not now be so much diminished in real value by paying ––30,000,000 a year for the expenses of government (exclusive of the interest of public debt) as by paying ––5,000,000 a year only at the for-mer time. It will hereafter be shown that money paid by the subject for interest of public debt, only falls within the case of actual national expense, so far as that debt belongs to foreigners or others to whom its interest is transmitted.

With respect to the degree in which the mo-ney prices have increased since 1714 the general opinion, that on a medium they are three times as great as formerly, is probably very near the truth. Various causes have been assigned for this increase, of which the greater part have, undoubtedly, more or less contributed to it ; and, as the effects of any one of them have been more than of others laboriously traced by persons with powers of observation naturally or artificially contracted, to that cause which they happen more clearly to apprehend they usually attribute the combined effect of many causes co-operating. We hope not to fall into the same error when we state that the progressive increase of the popula-

tion, and, more especially, of that part which lives in towns, or is elsewhere employed otherwise than in reproducing the annual consum|>- tion of food, has been a very material cause of the

progressive increase of its price, and, by a chain of consequences, of the general cost of la-bor, and of what is commonly called the depreciation of the value of money. We understand, by the latter expression, the diminution of its power as an instrument in estimating, exchanging, and transferring other things of real or imaginary worth, without any direct reference to the commercial value of the material employed in its fabrication.

We believe it will be found historically true that, independent of the quantity of circulating metallic money, or of debts performing its functions, and also independent of the immediate effects of powerful causes, such as sudden abundance or scarcity, there exists a fluctuation of money prices, which is usually most visible with respect to things of most general and necessary consumption ; and which very materially depends on the advance or decline of population and, more generally, on the state of national prosperity. If, as seems probable, the average supply of the necessaries and comforts of life, during any period of sufficient length to decide the question, will be very nearly in an exact proportion to the consumption, where the population is stationary as to numbers, and the habits of life are little varied by moral or political changes : it is also a probable inference, that a constantly increasing population will anticipate the increase of produce for its own use, and the case will be inverted when, from any cause, its numbers are diminishing. We believe that the supply much more usually adjusts itself to the de-mand than the demand to the supply. We do not mean to say that this is always the case, because novelty will tempt purchasers, and unusual abundance will, to a limited extent, increase consumption ; but, where the regular effect of increasing or diminishing numbers is not controll-ed by other causes, we think it evident that the course will be such as we have stated. Where there was previously an exported superabundance, the earlier effects of an increasing demand may, for some time, be hardly visible ; or may even be counteracted, as to any particular commodity, by any circumstance which may act as a stimulus for producing it beyond the progressive consumption. This happened during the first half of the last century.

For several years, till after the bankruptcy of the South Sea Company, there was an extreme activity of circulation, and decreasing interest of debts, indicating that sort of plenty of money, or, more properly, facility of obtaining credit, which is commonly deemed a chief cause of increasing prices; yet they regularly declined, and continued to do so for nearly forty years. But, dur-ing that period, the trade and manufactures of the country were by no means remarkably prosperous, a sure proof that they were not remarkably profitable. The

increase of population was not inconsiderable, though far less than it has since been ; but the profit of manufactures did not as yet entice it by high w&gts trom agncul-

tural employments. With the sudden and great change in that respect, which took place in consequence of the political ascendency that we acquired during the latter part of the seven years' war, may be visibly connected a very rapid change from superabundance of agricultural produce to an actual deficiency. A public debt, which had increased fifty-fold between the revolution and the peace of Utrecht, had no visible effect on the value of money. A long peace, with very remarkable alternations of private cre-dit, between extreme activity and a general stagnation of pecuniary transactions, had no remarkable effect on money prices of necessaries. The succeeding war, from 1740 to 1748, disastrous to our commerce, impeding our manufactures, and materially increasing our national debt, did not visibly alter the value of money.

The causes of its diminished value, perhaps, began to operate several years before their effects were distinctly visible, but it was not till some time after the successful termination of the seven years' war that the change became remarkable. During the American war the money prices of most things of extensive use considerably diminished; during the late war they still more remarkably increased. We by no means infer that these circumstances may not have important and regular effects on the value of mo-ney, but only that other powerful causes may have produced these seeming anomalies ; and also that the great decrease in the value of money has been, to a considerable extent, occasioned by the concurrent increase of real wealth, and of the population employed in producing it. Soon after the middle of the last century a great change began in the proportion of agricultural produce and its home consumption.

In about twenty years, during which the population appears to have increased about 1,000,000, a great surplus of corn, which had previously been exported, was changed to an average deficiency,

which soon became constant, and has since greatly increased. It is, therefore, evident that a great change was then beginning between the comparative numbers of persons employed in producing corn, and of those by whom it was consumed. With that change be-gan one very efficient cause of the general depreciation of money. A deficiency of supply, which has never since overtaken the constantly increasing demand, has produced a progressive incre.tse of prices, requiring higher wages for subsistence, giving greater profits to the farmer, leading him to give higher rents, and thus ad-ding to the money price of lands, and, like all other movements, acting with increasing effect in proportion to its unimpeded duration. The advance of money price, however great, cannot restore the equilibrium, so long as it can be paid without difficulty by the great mass of con-sumers, which will continue while the profit of employing them in manufactures is great enough, nnd the sale of those manufactures extensive enough, to allow of paying adequately increasing wages. And the period during which this excess of profit, or one of its consequences, induces the employer to give adequate wages, is prolonged by the multiplied facilities of production which have, within a few years, been greatly improved, and many of them almost recently invented.

In these a very large addition to the national capital is now invested, of which, like all other capital, the revenue depends altogether on the productive use; and, on this account, the proprietors of this species of capital must continue to employ their workmen, or cease to derive any profit from it. So far as extends to internal consumption only, the demand for the produce of manufacturing industry can never be so excessive, but that, as long as room remains for increase or improvement of cultivation, a sufficient numbei of hands will remain to cultivate with adequate profit, and to an extent proportioned to the consumption. Nor could the diminution of the value of money, which results from an inadequate domestic supply of those things for which money is chiefly wanted, continue for any long space, were it not for such a profitable exportation of manufactures as entices too large a proportion of labor from its more useful employment in reproducing food.

So long as only a surplus of labor beyond what is wanted for domestic use is thus employed, the very irregular demands of foreign markets, however inconvenient, will probably not materially affect the average value of money ; but the case is materially different, when a constant deficiency of the necessaries of life, creating, as before stated, of itself alone a constantly increasing money price for them, can only be supplied by a precarious exchange for things of very inferior use ; of things subject to the caprice of fashion, and the control of adverse

policy. Those who must buy cannot meet on equal terms in the market with those who are subject to no such necessity ; and hence arises an obvious additional cause why the money prices of the food of a nation so situated must continue to increase so long as it has luxuries only, or things of which the purchase may be postponed, to give to foreigners in exchange for it. We are very far from intending to lessen the moral and political value of commerce, and of industry employed to furnish it with merchandise; but we have wished to explain an important cause of the modern change of money prices, which appears to us to have considerably resulted from an inconvenient disparity of profit between the cultivation of necessaries and the manufacture of superfluities. We are not aware that this cause of depreciation of money has been much considered, which must be our excuse if we appear to bestow on it a disproportionate degree of attention. We need not explain those causes of it which are more generally, though we believe imperfectly, known.

But if the population has doubled, if the real wealth has increased in more than a duplicate proportion, and if the money price of that real wealth, on an average, is three times greater than it was 100 years ago, it strictly follows, that ––1,000,000 a year of public revenue at that time, bore as large a proportion to the means of pay-ing it as more than ––6,000,000 now; probably ––7,000,000.

About the middle of king Wi'Jiatr's -eign,

Gregory King valued the whole private revenue of England and Wales, including labor, at ––43,500,000. His authority is very great, and we may rely on this calculation as a near approximation. The long wars which followed, and various other circumstances, had diminished the population about one-twenty-sixth, but there was no remarkable change in money prices from the revolution to the peace of Utrecht.

But, as ten to sixty-five, so is ––43,500,000 to ––282,750,000.

From the returns made in 1811, it is clear that the population of

England and Wales must now exceed 10,500,000; probably 10,700,000.

The earnings of the laboring classes of this population at the present wages are very moderately computed at ––130,000,000 a year.

The property income, as ascertained by the tax assessments for England and Wales, will be found this year to amount to more than ––140,000,000.

With due allowance, therefore, for various profits which escape assessment, the present annual revenue must certainly exceed 280,000,000, and is probably little less than ––300,000,000. And this remarkably agrees with the inference from the increase of population and of money-prices.

The addition of Scotland must also be allowed for, which contributed very little during the for-mer period ; that is, in the reigns of king William and queen Anne, until the peace of Utrecht. The population of Scotland is about a sixth, the extent about halt', the cultivated extent about a sixth of the same in England and Wales; the wages are lower ; but, all taken together, the revenue of Scotland cannot be less than a tenth of that of England, nor can both together be computed at less than between 310,000,000 and 330,000,000 a year.

By another statement, which differs very little from that adopted by professor Hamilton, it appears that the debt contracted during the reign of king William, by a war which lasted almost nine years, was … ––15,730,439

The debts contracted during the reign of queen Anne, by a war which lasted almost eleven years, was 37,750,661

––53,481,100

Comparing these debts with the money and means of the present times, by computing the increase of population as about twofold, the change of money prices about threefold, and the addition of Scotland about a ninth, it will be found that they were equivalent to the following sums in the present state of Great Britain: ––– Kins; William's debt multiplied by

6-45, and one-ninth added . .––112,385,247 Queen Anne's debt multiplied by

0-50, and one-ninth added . . 272,643,662

expenses never entirely ended, we have had very nearly tho same duration of war, and the increase of debt reduced to a five per cent, stock at par, in order to make it more nearly correspond with the debts of king William and queen Anne, which were even at a higher rate of interest, and, including the unfunded hills, has been nearly as follows : ###

The first war, including Imperial

loan, about ##195,600,000

The second war, including Irish

loan payable by Britain . . 117,927,890

The two united . . ##385,028,909

Since the beginning of 1793 to the 1st of August in the present year, and deducting the short interval of peace, during which the war

##313,527,890

Neither of the two latter sums is accurate, but they are near enough to show that, when considered with due attention to the difference of national means, the debts incurred in the second period of warfare are by no means so heavy as in the first.

We may apply these observations in comparing the public debts contracted during the two wars which preceded the peace of Utrecht, and which have been since the year 1792. The debt, when that peace was made, is stated by professor Hamilton to have amounted to ##55,282,978, of which all but about ##1,054,925 had been contracted in about twenty-five years, that is, after the revolution. This statement, if correct, probably included the floating debt unprovided fer, and afterwards paid out of the unappropriated revenue ; for it appears from an exchequer account presented to parliament, and dated March 14th, 1716, that the principal money borrowed had been ##47,268,883, of which ##665,782 had been

paid, and ––46,603,100 remained, at an annual charge of ––3,118,448. But this sum being a charge on less than half the present population, and taken from less than half the present real private revenue, and computed in money of three times its present value, was, therefore, in proportion to the means of paying it, quite as much as a debt incurred during the last twenty years would be, of more than ––320,000,000 borrowed, with more than ––20,000,000 a year for its interest and cost of management. The annual charge, however, for the increase of both funded and unfunded debt from 1792 to August 1st, 1813, was only about ––16,500,000, being considerably less in proportion to the real wealth of the country.

It cannot, however, be denied that our exertions have been much greater and more expensive than in these proportions of interest for debt contracted. Our armies and navies have been much more than double, the equipments are intrinsically more costly, and we cannot venture to say that the expenses have been managed with greater economy.

The debt has not increased in equal proportion, because in two ways the exertions have been very great, by which its increase has been retarded. By the war-taxes, and by the sinking fund. But, if the durable pressure has been lessened by them, the question which naturally follows is this : have the temporary burdens, and the subtraction of such immense numbers from productive employments, impoverished the na-

tion, or altogether stopped its improvement? Had it been so, we should soon have seen the effect in falling prices, in a suspension of public works by subscription, and by many other unequivocal proofs. The reasons why we are now able to make such unexampled exertions have now, we think, been explained. In fact, nearly the whole resolves itself into increased facilities of pioduction, into a substitution of inanimate for animated power, and, in a less degree, the substitution of the labor of cattle and horses for that of man.

Not to mention many well-known instances of inanimate movement, by fire or by water, of complicated machinery, one example of a recent improvement in rural economy may be produced which will fully explain the effect of this system. On a tillage farm of 300 acres a ‘hreshing machine, if only moved by horses, on a very moderate estimate, saves as much human labor as that of one man constantly employed, and far more if moved by water. The produce is the same, but the former saves so much expense in producing, and the nation gains one man by each of those machines, who may be employed as a soldier or sailor, or a military manufacturer, without any diminution of reproduction, and whose wages in his new and unproductive occupation are provided by the economy of expense in threshing corn ; for, in this view of the question, each private saving of expense is a national saving. Apply the same reasoning to the numberless similar improvements of modern times in this country, and it will be easily seen why we have not only more men to spare, but more means to pay them without becoming poorer. A further analysis of this most interesting question would lead us to remoter causes than the mere progress of mechanical inventions; to those causes on which the latter mainly depend for their introduction and improvement. They are, in fact, the creatures of high civilisation in the true meaning of that word ; of a state of society in which mental energies are excited, and industry is animated by a certainty that their movements will be unfettered by bad government, and in no danger of foreign or domestic spoliation.

Yet, although the means of supporting without impoverishment the immense public expenses of modern times in this country may be very distinctly traced to increasing national prosperity, resulting from the intellectual, moral, and political improvements which denote high civilisation, it may not be the less interesting to know by what mechanism of finance we have been able to raise our public debt to its present vast amount.

In every state of improved society it is much more profitable to the mass of the population that a part should be appointed to protect the whole, than that all should be called upon to quit, when wanted, the occupations where use and art have made their labor additionally productive, and contribute personally a part of their time to an object, whether civil or military, for which, by education and habit, they have not been adapted. Generally speaking:, if these services are paid for by those whose time and capi-

tal are devoted to productive employments out of their revenue, a much larger proportion of it will remain for their own use than if their personal service were required. The time saved will produce far more than the cost of the commutation in money. If no moral and political circumstances interrupted the nearly equable progress of social life, all the cost of civil and military protection might be paid by regular and equable contemporary contributions from the revenue obtained by the profit of capital, and of labor productively employed. But since, from various causes, the expenses of every government will be extremely unequal according to political circumstances, the grand question seems to be, by what mechanism of finance may the natural inconveniences of this irregularity be so obviated as to produce the least possible mischief? By what means, during periods of great national expense, may a government avail itself of the national surplus of population and produce, without materially impeding the progress of private industry?

The more ancient way of attempting to do this was by hoarding in money the surplus of a revenue which exceeded the ordinary expenses ; or sometimes by exacting contemporary contributions equal to the addition of them. The former sys-tem promises well on a cursory view of it, but is, of all that can be adopted, the most injurious to national prosperity. It diminishes the circulating medium when most wanted to employ during peace, a supernumerary population , at that time it increases the value of the remaining money, and consequently deadens industry by depressing prices, which are suddenly increased again by its dispersion during subsequent war. It is saved when dear, and spent when cheap. Hoarding money in a national treasury during peace diminishes the stimulus to industry when labor is most plentiful, to increase it when labor for productive purposes is most scarce.

But the system of raising money during war by taxes equal to the additional expense, if adopted when that expense is great, is little less mischievous, though its bad consequences are totally different. In the former case, money in circulation for productive uses is made more plentiful by xvar; the farmer, the manufacturer, all who have labor to sell, or its produce, obtain higher prices, and imagine themselves individually richer, if the treasure is not exported, and no evils of war are felt beyond the place of actual hostilities, and even there a lavish expense is often some compensation for its local injuries. But a war altogether supported by taxes equal to its cost will almost always become grievous and unpopular too soon to be carried on to a successful conclusion. The private revenues being materially diminished, the purchase of things not immediately necessary likewise diminishes, and this soon affects the general industry. We have

pursued this argument further in our article FUNDS.

Our own system has been a mixed one. ††† During the period in which our funded debt has so largely increased it is apparent that, at least, as large a proportion of productive capital lias been created within the same period. The real

means of paying the additional interest are the clear annual value of the produce of this capital ; the ability to pay therefore has apparently kept pace with the demand, through the medium of taxes. We have used the popular language of debt and interest, but we must contend that the real nature of the funding system is, perhaps, more easily explained by considering the transactions as a sate of annuities by the nation, and purchase of them by individuals through the intervening agency of the government.

So far as those individuals are inhabitants of this country, it only causes a transfer of revenue from one class of proprietors to another; but this transfer, being in some degree from the ac-tive to the inactive part of the nation, is supposed by some to be of importance in diminishing the means of employing it with due profit. It might be so if the intrinsic capital, and not a portion of the profit obtained by that capital, were transferred to persons unable or unwilling to use it. If a soldier, grown gray in camps, and worn out by hardships, were to have a grant for his future subsistence of a field cut off from a well managed farm, and hereafter to be made productive, if at all so, by his own exertions, the diminution of its crops would soon be apparent; but, if he should be paid by a contribution out of the produce of that farm managed as before, the increase or decrease of that produce, in consequence of that payment, would chiefly depend on the following circumstances : If, before his pension was charged on it, the occupier could make no annual saving or gain be-yond his total expenses, his means of obtaining produce must now diminish, and he must eventually be reduced to poverty. If he previously gained, on an average, jnst so much as he is now compelled to pay as a pension, it is true that he will not become poorer, but he can-not become richer,

nor can he make his farm increase its own produce by employing on it savings which no longer exist. But, if the pension thus charged on him is less than the annual gain or accumulation of real capital, all the difference remains to him, and may be employed in augmenting its future produce, and therefore his future gain.

Apply this to the national funding system. ••• - By that system there is no transfer of real capital, or capital in kind, but only of saleable annuities secured by ils produce: no field is cut off from the farm, but instead of it is transferred a portion of the annual profits. If the public necessities exact more revenue by taxes than the aggreˆte amount of the contemporary national gain, there must be not only a cessation of improvement, but an actual diminution of private revenue, which will obviously continue in a geometrical proportion. If they exact less revenue than the total national train, then so much of the remaining surplus as is employed in hiring more labor, or in any other facilities of production, will increase the total private revenue, and consequently the means of national accumulation. A portion, however, of those gains may be employed in obtaining things valuable but not productive, as precious stones and metals, as works of art, pictures-, statue?, &c. ; in \vhich case the increase

of capital would so far be in only an arithmetical, and not a geometrical proportion.

If the demands of government are commensurate with the private gains, the nation becomes neither richer nor poorer, and is in a state of indolent indifference, neither animated by a prospect of increasing riches, nor rendered despond-ing by a feeling of their diminution.

The case before stated from private life will also explain the reason why it is probable that the price paid to the government, by the purchasers of the annuities which are sold by it, is a part, and a part only, of the progressive increase of real capital. If not so, it must either be a part of unproductive accumulations of former gains, or it must be a subtraction from the active capital which was employed in replacing consumption or increasing the national wealth. Any material subtraction of the latter would soon be-come as visible in its effects as if the farmer were forced to sell a part of his working stock, or leave a field untilled for want of money to pay his usual number of laborers. And it is equally clear that it cannot in any great extent have been supplied by the unproductive accumulations of former gains ; no farther, certainly, than it may appear that those accumulations on the

whole have really diminished. In one respect this has happened, for a great proportion of metallic money has been exported ; but only so much of this can be placed to the public account as has been exported for public purposes, and by any probable calculation far the greater part of the money obtained by the funding system must have been furnished by recent increase of real wealth, and by a part only of that increase ; for, if amounting to the whole of it, by what means are buildings, canals, docks, enclosures, &c. &c., every where going on, and every where paid for 1 We must not entertain the absurd fancy that an increase of money prices is an increase of real capital, and thus furnishes the means of paying for all these additions to the stock of national wealth. The food of a laborer, if he is adequately paid, is the same, whether the money price of wheat is on a medium four shillings or twelve shillings a bushel ; the proportion of his pay to his subsistence depends on various causes, and is more likely to increase than otherwise with the increase of money prices, and even beyond a due proportion to them. In any view of the question a change of the scale by which things are measured and transferred cannot -be a change of the things themselves, nor in any respect alter their quantity, the aggregate amount of which is the real national capital.

Another important question which now arises is, by what means such immense sums are so easily collected, as are now advanced by individuals for the public use, by loans contracted under the funding system. We think it very doubtful if this could be done, were the whole or even the greater part of the payments made in metallic money, however plentiful it might be, when compared with the present mixed circulation. The mechanism by which it is now ००० lone is much more convenient, though probably contrived without any anticipation of its utility in this respect, and perhaps now producing its

effect without any general knowledge of the manner in which it acts.

In a highly improved state of civil economy there are four principal means by which property is transferred : ००० 1. By metallic coins,

which usually contain, in the materials of which they are made, nearly the same computed intrinsic value as that of the property transferred by them. 2. By transferable securities, or acknowledgments for debts not hearing interest, of which debts metallic coins are the known measures; securities, of which the materials have no value, but which are useful as instruments for paying and receiving, in proportion to the general confidence that the obligations contracted by them will be performed ; and are valued in proportion to that confidence. 3. By transferrible securities, or acknowledgments for debts bearing interest. These have the double use of money and of productive capital; metallic coins, as before, are the measures of their nominal value ; and, as instruments in paying and receiving, they are estimated by the degree of confidence which may exist that the obligations contracted by them will be duly performed, and also, as to this third kind, by regard to the profit obtained by them when compared with the general contemporary profit of lending money. 4. By the intervention, without any circulating security, of money agents or bankers, who place the money value to be transferred, as received from the one party and paid by the other, in their books of account; and by that act, with the concurrence of both parties, become substituted debtors and creditors, often transferring backward and forward for those who keep accounts with them to a very great amount, without need of any payments in money of any sort, until the whole transactions are ultimately balanced, and then only to the extent in which the obligations they have contracted to pay and to receive for any person with whom they have so contracted, are found, on the close of the account, to be unequal. Thus it may often happen that propeity to an immense value is transferred with little or no use of money as an instrument of paying for it. It will therefore readily be observed, how very much the extension of the private banking system adopted in this country has superseded the use of any sort of money in a great part of its local transactions.

Of these four means, by which property is transferred, the third is practised by our government to a very great extent, and is a most important step in the progress of our funding system ; one, indeed, without which the means of piocuring the capital periodically funded would be very deficient. A very large part of the expense of the nation is paid by exchequer and other bills, issued to obtain for that purpose other money of smaller numerical value. These bills, being readily circulated, have, in a great degree, the nature and use of money, with the advantage of being a productive capital while possessed. The two sorts of money first described, not having this advantage, do not create the same inducement to accumulate them. Metallic money,

indeed, possesses within itself tnc guarantee of its exchangeable or commercial

value ; but then it aftbrds no profit while hoarded, and consequently will only be collecte 1 and retained by those whose revenues equal their wants and wishes, without needing any productive employment of that portion of their wealth which they treasure up in coin ; or else by those who speculate, that by accumulating it for some future employment with profit, the present loss will be more than compensated by the subsequent gain. The same reason holds against any great accumulation of paper money not bearing interest.

Bui exchequer and other similar bills, which have for their security the moral and political guarantee of unbroken national faith, while they have the uses of money, have also the great advantage of being a profitable treasure, and are therefore willingly retained by opulent persons, who either would not or could not afford to forego the profit on the same proportion of their capital, which they must do if they hoarded it in unproductive paper money or in specie. It is evident, therefore, that by this management the means of obtaining money by the funding system are greatly facilitated. The nation in the practice of that system creates annuities, which it sells at a price agreed on with the persons contracting to purchase them. For a considerable part of the price of those annuities it receives in payment its own debts previously contracted, and, as they are called, unfunded, because no special assignment of revenue has been made to pay their interest and discharge them. A very large part of the remaining price received for the annuities created, though paid in money, is previously collected in similar securities given by the government for debts already contracted. The easy circulation of the unfunded debt, for which exchequer bills have been given, makes it convenient to hoard them till money is wanted to pay for the annuities that have been purchased ; when the periods of payment arrive money is very easily procured for them, and thus the capital is only for the shortest time possible unproductive. The success therefore of the funding system evidently depends very much on the previous creation of unfunded debt; and if no such debt existed, however plentiful money not bearing interest might be, yet its dispersion would be too great to carry on that system equably and permanently. No doubt patriotism and self-interest would furnish ample loans out of a dispersed moaey capital in times of great emergency ; but there could not be that confident dependence on such a resource, which is one of the peculiar and most important advantages of the present system. The provision of money for

extraordinary expenses, during war more especially, must never be confided to measures of uncertain efficacy ; and the failure of any one attempt to provide it, now that the success of war so greatly depends on pecuniary means, may be more dangerous, and in a nation far advanced in civil economy would create greater despondence, than the loss of an important battle.

We have been solicitous to make these remarks, at the present stage of the public opinion with regard to the work of professor Hamilton, be-

cause, although we adopt nearly all the principles he has laid down, and believe that his arithmetical calculations are generally correct, yet we differ very materially from him in the practical application of them to the extinction or diminution of our national debt. We are not yet convinced that the plan first adopted by Mr. Pitt for that purpose was not far more wisely constructed, with a view to its stability and to the general good consequences arising from it, than the system of which a preference is implied in the reasoning of professor Hamilton. We cannot deny that its mechanism is somewhat more costly, but we think the difference amply compensated by its more durable construction. We do not altogether approve some of the changes of the original plan, and still less some essential deviations from it ; but, with respect to other modifications of it which have been adopted, we have no doubt that they had in view the very same principles which the professor has so ably established, connected, however, with such practical arrangements as have greatly contributed to their adoption, and without which we are quite convinced that their adoption in any very useful extent would have been altogether impracticable.

The professor proposes, ‘ 1. To lay down some general principles, which if established would lead to general conclusions concerning our financial system, and in a great measure supersede the necessity of examining particular plans which have been proposed or adopted.

“2. To give a narration of the manner in which we have proceeded in conducting and accumulating our public debt, and a statement of its

present amount and annual charge, and an account of the plans which have been proposed or adopted for its discharge, and their operation. The necessary tables in illustration of these particulars will be subjoined in an appendix.

‘ 3. By means of these general principles to scrutinise the efficacy of the schemes to which we trust for the relief of our national burdens ; and examine the propriety of the methods we have adopted in conducting our financial operations.’

In conformity with this plan he begins the first part of the subsequent enquiry by stating a series of ‘ general principles of finance.’ Without meaning to be hypercritical, we would rather have called them propositions, as indeed the author himself does afterwards ; for instance, the unqualified statement, in the latter part of the second of them, that ‘ we are already far advanced to the utmost limit of taxation,’ is neither a general principle of finance nor an inference from any principle, but an assertion of a fact which requires distinct proof, and of which no proof is given. Connected as it is with the preceding part of the sentence, it means the utmost limit of the amount of revenue obtainable ny taxation, which, from his observations on the same subject a few pages after, we are sure the author cannot have intended, which allows nothing for the present rapid progress of population and intrinsic national wealth, and makes no distinction between the difficulty of multiplying taxes, or of increasing their rate ; nor he-VOL. XV.

tween indirect and direct taxation. We are quite convinced that the assertion is unfounded in that sense in which it is likely to be generally interpreted ; and, if unfounded, without any doubt inexpedient.

He gives as a reason for examining minutely the principles which he has stated, that although they are ‘ incontrovertible, or inferred by a very obvious train of reasoning, yet measures inconsistent with them have not only been advanced by men of acknowledged abilities, and expert in calculations, but have been acted on by successive administrations, and annually supported m parliament, and ostentatiously held forth in every ministerial publication.’ We readily allow that measures have been recommended upon principles, and by arguments, inconsistent with the truths which professor Hamilton has so ably established ; but we must think the latter part of these assertions a great deal too unqualified ; and we expect to prove that

Mr. Pitt and others who have succeeded to him have not adopted measures inconsistent with his principles, but have clearly comprehended them, and regulated in conformity with them the more important parts of their arrangements for the redemption of our public debt.

In his remarks on the principle of redeeming debt by appropriated sinking funds, increasing by compound interest, professor Hamilton has given a series of perspicuous arithmetical statements, which demonstrate the futility of some opinions on the subject, that we would rather call vulgar than popular ; because, as far as our observation has extended, few, if any, intelligent persons have ever been so much deceived by the magic of numbers, as to believe that the national debt can ever be diminished but by an average surplus of revenue beyond the average expenditure. The error has long since been refuted in various publications, and particularly by Sir F. D'lvernois.

The professor states that ' the point at issue is, whether, taxation and expenditure being the same, a sinking fund produces any beneficial effect?' Certainly not, if this is the only point at issue. If we are to limit our views solely by arithmetical calculations of direct profit and loss, we cannot discover that a sinking fund has any peculiar advantages in diminishing debt, o. retarding its increase; and it may be that the same money may be employed with equal efficacy by less expensive mechanism. But we have before stated that the mechanism of our sinking fund appears to us to have been originally fiamed, and since improved, with far more extensive views of political economy.

The second part of the professor's work contains a useful history of the present public debt of Great Britain, from its commencement; and to this we beg to refer the reader as a valuable moral. The first section of this part describes concisely the methods of borrowing the funded debt which have successively been adopted, and subjoins a clear arithmetical statement of its progress. The socond section is employed in describing the plans which have been adopted fur thr n-dufthn of the funded debt, and their openitioi> ; ;i:u! t!io third in stating the nature

2 II

and amount of the unfunded part of the public debt.

The third part of the work contains an examination of plans for the redemption of the national debt, and other financial operations, in four sections ; of which the first examines Dr. Price's views of finance ; the second reviews Mr. Pitt's sinking funds ; the third comments on the plan introduced by lord Henry Petty ; and the fourth contains an examination of the system of funding by increase of capital.

The object of the examination of Dr. Price's plans is to disprove the arithmetical principle on which he founded their efficacy. To us it has always appeared that the Dr. perplexed himself, and a large proportion of the public, by a distinction without a difference between his first and second methods of employing a sinking fund ; meaning, as we believe he must have done in both cases, a real fund, and not one existing in form only ; that is, an actual average surplus of public revenue beyond the average expenditure for all other purposes. Without doubt this only can be a real and efficient sinking fund ; but yet it appears to us that the form and mechanism of an uninterrupted sinking fund, alternately real and nominal, that is, acting during war as well as peace, though over-balanced in the former case by increasing debt for military expenses, and even itself causing some increase of expense, may, nevertheless, have peculiar efficacy in facilitating the creation of a surplus revenue.

The indistinct view which Dr. Price seems to have had of his own arguments, or his want of precision in explaining them, is, we think, evident, in an assertion quoted by professor Hamilton.

' A state may, without difficulty, redeem its debts by borrowing money at an equal or even a higher interest than the funds bear, and without providing any other funds than such small ones as are necessary to pay the interest of the sums borrowed. In private life such a measure would be justly deemed absurd; but in a state it would be the effect of the soundest policy. It is borrowing money at simple interest, in order to improve it at compound interest.' ××× p. 125.

The first part of this assertion is not untrue ; but yet is only a sort of arithmetical riddle, calculated to produce useless wonder, and fitter for the ladies' diary than for a practical essay on one of the most

important questions of political economy. If in the next part of the sentence he had said ‘ increase of revenue, &c.,’ instead of using funds in the double sense of capital and annual income, his real meaning would have been more correctly expressed. He goes on to make a distinction between the application of this proposition to private and public debts, which it is doubtful if he himself rightly comprehended. In truth, there is no arithmetical difference; but it may be in ‘extent of sum and duration of time,’ as professor Hamilton has clearly shown. In either case, and adopting any mechanism of finance, a continual deficiency must increase a previously existing debt; and a continual surplus, unless hoarded, may diminish it by the progress of compound interest, varying

in efficacy according to the contemporary profit of money. Yet we can conceive that such an alternately real and nominal sinking fund as we have described may, from collateral causes, be very fit to be adopted as a national measure, though little adapted to exonerate a private estate. If in either case, whether public or private, the system itself can be made efficiently instrumental in creating an increase of revenue, which might not otherwise have been obtained, that increase, in whatever manner applied to extinguish debt, whether contingently or by a strictly regulated appropriation, is substantially a sinking fund ; but in neither case is one step advanced towards extinction of debt, by borrowing with one hand to redeem with the other, unless at a lower rate of interest ; and then the difference saved, if so applied, is as truly a sinking fund as an equal increase of surplus income would be by an augmentation of the amount of it. If, however, the adoption of a permanent sinking fund may give to a nation means of augmenting its income, which cannot be adopted at all in private life, or can only be adopted in a very limited extent, in that case a difference arises which so far only may justify Dr. Price’s distinction. Where not instrumental in increasing the revenue, so far as is necessary to pay the interest of the sums borrowed, the measure in public or private affairs will be absurd ; but, if it may be made thus instrumental in the one case and not in the other, the distinction is so far defensible.

As to the latter part of Dr. Price’s assertion, ‘ that it is borrowing money at simple interest in order to improve it at compound interest,’ his meaning no doubt was that, if ‘ additional funds are provided to pay the interest of the sums borrowed,’ the new debt will not increase by compound interest, while the old debt will be diminished in that proportion ; and with this proviso the truth of his assertion is indisputable, although announced in a manner more adapted to

surprise the reader than to instruct him. True it is, that either the existing revenue must be made more productive, or new taxes must be levied to add to it; and it may be that these subtract as much from private incomes as they add to the public income ; but, whatever may be the pressure thus created, it would equally be felt by an equal increase of income applied to diminish debt, or retard its progress in any other manner. So far as respects the public purse the effect is the same as that of simple opposed to compound interest. We admit there is in this nothing peculiar to an appropriated and permanent sinking fund ; but we think there are other solid grounds on which it may be defended.

In justice to the memory of Mr. Pitt, we must say that we cannot discover any sufficient reason for imputing to him that, dazzled by the imaginary omnipotence of compound interest, he rather looked to that for the efficacy of his fund than to its utility as a powerful instrument in obtaining the consent of the nation to make its public revenue gradually more equal to its average expenditure. His system, as adapted to the case of a preponderating increase of debt, in 1792, included a concurrent increase of revenue, even

more than necessary to pay the interest of the money borrowed for the use of the sinking fund.

We are the more anxious to explain our opinions of this assertion, quoted by professor Hamilton from Dr. Price, because it appears to us that it involves the main grounds of their different views of the utility of permanently appropriated sinking funds. Both of them have viewed the question rather arithmetically than politically. We think it clear that Dr. Price is correct in his calculations of the arithmetical effects of borrowing to repay or redeem, when that system is accompanied by an increase of income in due proportion to the interest of the new debt. But we also think professor Hamilton perfectly correct in denying that this is at all peculiar to the system in question.

We, therefore, neither defend the system on Dr. Price’s arithmetical

principle of compound interest preponderating over simple interest in the opposite scale, nor do we think it follows that the system is erroneous because it cannot be defended on that ground, or even because, by an arithmetical calculation of direct profit and loss, it may appear that its mechanism creates a greater expense than would be incurred by other means of employing the same annual revenue to produce the same or equivalent effect. Here then is the point at which we differ from professor Hamilton. He undertakes to demonstrate arithmetically that, instead of diminishing our debt, we have increased it considerably, by unremittingly persevering in borrowing to redeem since 1792. And, indeed, in one respect this must be so far true, that the charges incurred by contracting new debts to pay off old ones can hardly be computed on an average at less than five per cent. ; and the more extensively this is done the greater will be the loss, unless compensated by adequate advantages. To us, however, it appears, that the system, as constructed in 1792, and usually followed since that time, has really caused a saving of expense very far exceeding this cost of it.

We believe the public in general are little aware of the efficacy of the system, in extinguishing that portion of the debt which is created on account of it. If the whole debt were only such that it might be redeemed in one year this would be obvious. Suppose a debt of ––10,000,000, borrowed from new creditors to pay off old creditors, at the same rate of five per cent, interest on a five per cent, capi tal. Of the previous national revenue, ––500,000 per annum was before appropriated on account of this debt, and by the transaction an obligation is incurred to add ––600,000 a year more, namely, ––100,000 to the fund, and ––500,000 for interest to the new creditors. Wherefore, the real sinking fund created by borrowing ––10,000,000 to redeem ––10,000,000 on this plan, is not merely ––100,000 but ––600,000 or the whole addition on account of it.

The substituted debt, therefore, will be redeemed by this fund in little more than twelve years and a half, if employed at five per cent. ; or than thirteen years, if employed at four per cent. ; or thirteen years and a half, if at three per cent. But the charges of the transaction may average about five per cent. Consider these

as to be first deducted from the annual produce of it, and even then the terms of complete extinction of the substituted debt will only be protracted about ten months, becoming thirteen years and a half, fourteen years, or fourteen years and a half, according to the rate of

compound interest. This is the true effect of the system, although its real efficacy is concealed from cursory observation by the indiscriminate manner in which the sinking fund has, in practice, been applied to the purchase of the debt.

We have no more respect than Professor Hamilton for the Stock Exchange arguments on this subject : but, if we consult the history of hu-man nature, we think it will furnish unanswerable reasons in favor of what we consider as the true principle of the system. We do not mean to defend every modification of it, nor its adoption in an unlimited extent ; for we can conceive nothing more mischievous than it would be if carried beyond convenient limits ; which, indeed, was the chief objection to the plan of lord Henry Petty. On this subject the professor himself admits that, ‘ In regard to the increase of taxes, we are of opinion that the sinking fund has had a real ef-fect in calling forth exertions, which, although they might have been made as well and as effectually, would not have been made unless to fol-low out the line which that system required. A loan is made, and the revenue is considered as charged, not only with the interest, but a certain proportion of the principal, annually. Taxes are imposed to meet the one as well as the other. If the sinking fund had not been in view, it is likely taxes would have been imposed for the interest only.’

W’e would here make a remark, which per-hapg more directly applies to a former part of his observation on Mr. Pitt’s plan, as adapted to a war system in 1792, namely, that when a loan is contracted for the twofold purpose of defraying an actual excess of expenditure beyond the revenue, and of redeeming a part of the debt already existing, according to the manner in which Mr. Pitt’s system has hitherto been carried into execution, the real appropriation for the extinction of that debt is not merely one per cent, on the new capital, but also a continuation of the whole interest of the money in this manner employed. With regard to the real increase of debt, that is, the excess of loan beyond the contemporary produce of the whole sinking fund, the appropriation, being only one per cent., operates in the manner and at the rate described in this work. If we could borrow at par in a five per cent, fund, the appropriation being six per cent, would, for the debt really contracted, be five per cent, to the lenders, and one per cent, to redeem the capital : but calculating the cost of the transaction at five per cent, this will be nearly, though not exactly, equal to the first five years of the one per cent, annuity. If that cost, being blended with the other national expenses, is nowhere distinctly stated, and paid in some other manner, this may alter the sums on both sides of the national account, but will not alter the balance. But with regard to the part of the loan borrowed to re-deem former debt, and so applied,

the augmentation of the fund is an annuity of about six per

cent, commencing its real operation after ten months only, instead of five years. If, in providing for our “annual loans, we only levied an increase of revenue equal to the interest and appropriation for the actual increase of debt, we apprehend this would be precisely the view which the professor has taken of the question. But if a large proportion of those loans is employed to pay off debt already existing, and the effect of the system has been to induce the public to agree to an augmentation of the revenue in due proportion to this part also of the new debt, the progress towards equalisation of income and expenditure is very greatly accelerated, and also the period is greatly shortened during which in peace the debt may be extinguished.

To us the system adopted by Mr. Pitt, in 1792, has always appeared to have been a very ingenious and efficient way of rapidly approximating the income and expenditure. We have too high an opinion of his perspicacity not to believe that he had this in view at that time, or to doubt the plan he would have proposed whenever they should really be equalised. His plan has the twofold advantage, that it creates an artificial necessity of increasing the revenue whenever such an increase may be politically expedient; and that it fixes apparent and definite limits to the systematic extent of that increase: it counteracts the reluctance to submit to new taxes by the former circumstance, and any fears for excessive augmentation and improper application of the public revenue by the latter.

Here we think there is a possible and even probable effect of the system, which could hardly have been obtained in any other manner, and which, though it may sometimes cost ten months value of the revenue appropriated, must amply recompense this expense by its general advantages.

To give some idea of the effects of the system of 1792, if exactly

followed, let us suppose, that at some period the real excess of expense beyond the revenue being only►►3,000,000,but►►9,000,000 of the revenue being appropriated, a loan of ►►12,000,000 would be wanted. This was nearly, though not exactly, the case when a new plan of finance, so severely censured by professor Hamilton, was proposed by lord Henry Petty. In a five per cent, stock at par, the requisite augmentation of the public revenue for such a loan would be ►►720,000, or it would be ►►800,000 if the capital created were a three per cent, stock, at ►►60. In either case, the real increase of debt Iwing only ►►3,000,000, the real appropriation for its interest would be only ►►150,000; but if so, then the remaining appropriation, whether ►►.570,000 or ►►650,000 is nineteen per cent, in the first case, or thirteen per cent, in the second case, of the real contemporary increase of debt. The augmentation of income in the second case, which is practically more familiar, if employed at a profit of five per cent., would redeem its corresponding debt, and pay the charges incurred by the loan in little more than five years, nor would the period be much extended at four or even three per cent. We therefore really make provision in this case for redeeming the contemporary debt in about live years ; and any duration of this addition to the fund beyond five years is employed in extinguishing antecedent debt.

If, after an equalisation of revenue and expenditure, the system might conveniently be allowed to operate according to Mr. Pitt's plan of 1792; in that case most obviously the whole appropriation would be to increase the means of redeeming old debts. But, as no new debt would be contracted beyond the amount of debt redeemed, the effect might be a very inconvenient increase of the revenue beyond the actual expenditure even in war. Experience and common sense in any such case would suggest how to regulate the operation of the fund, or, it may be, show the expedience of altogether suspending it. We shall hereafter advert more fully to this topic, but at present we need only observe, that the principle on which we justify the system established by Mr. Pitt is by no means shaken, because that system may reqjire limitation when it has already accomplished the most essential part of its duty ; and because it may be found expedient to regulate its progress according to political circumstances, and in due proportion to the work which may remain to be performed.

We must refer our readers to the third section of this part of professor Hamilton's work, and to the tables connected with it, for a very perspicuous analysis of the plan introduced by lord Henry Petty. The arrangements of this plan were so ingenious (as far as they were new) that they necessarily created a great prepossession in favor of it ; for a

time it was popular, and, as often happens in similar cases, the more prominent feature of it was admired while its defects were overlooked, or considered as of no important consequence. The great defects of this plan were, that, so far as it was really new, it pushed to an extreme the peculiar expense of the system of borrowing to redeem, while it abandoned the only important compensation for it; for in fact it evaded the proportionate contemporary augmentation of the revenue to the extent of its peculiar loans, by selling, though for a limited period, portions of the disposable revenue which already existed. Instead of adding six percent, to the revenue on account of those loans, it subtracted ten per cent, annually for their amount from the means already provided to carry on the war : and this at a time when its expenses were already very great, but when it appeared highly probable that by perseverance in the system already established, the public revenue and expenditure would soon have been equalised. If it is alleged that the unexpected war in the Spanish peninsula would have disappointed that hope, it is equally true that the same circumstance would have overwhelmed the mechanism of the substituted system.

The fourth section of this part of the professor's work is intended to demonstrate the wasteful imprudence of funding by increase of capital. Premising that, on many accounts, we must disapprove of the system of creating a greater funded capital than the amount of the money borrowed, we yet materially differ from him in many parts of this argument, which we think very much overstates the loss which may have

been incurred by that system since 1793; and which overlooks that in certain proportions of comparative prices it may be highly probable, that, in an arithmetical balance of loss and gain, a considerable present and ultimate saving may arise from borrowing at a reduced rate of interest by creating a greater amount of capital. This was evidently true on a comparison of three per cent, and four per cent, stocks for some time after the latter fund fvas created.

The only correct way to ascertain the comparative loss or gain which has resulted from the different systems of borrowing which have been adopted since 1792 is by a comparison of the market prices of the respective stocks and of exchequer bills when each loan was contracted ; and also by considering what might be the difference of depreciation consequent on funding a large sum rather than a small one in any particular stock, and for which the contractors would expect in some way or other to be indemnified. For these reasons we more than doubt the accuracy of professor Hamilton's inference, from the comparison he has instituted between the cost of raising money by loans, and by funding exchequer bills from February 1793 to February 1812. The method of comparison is inaccurate ; and, if accurate, the inference from it depends entirely on assuming that the whole debt might have been borrowed in a five per cent, stock, with DO greater loss by allowance for depreciation than small sums might produce. We by no means deny that, during this period, it has been sometimes more profitable to borrow by creating five per cents, than three per cents., and that probably this might have been done with advantage to a somewhat greater extent ; but we doubt whether the difference of cost would have been in any proportion so great as may be inferred from the statement we have referred to; and we must consider the question as depending very materially on contemporary circumstances as to pecuniary profit. We, however, attach no small importance to a reduction of the nominal magnitude of the funded capital, believing that, in spite of all dry calculations, a debt of ––500,000,000, though at three per cent, interest, sounds more formidable than one of only ––300,000,000 at five per cent. We therefore should gladly see realised the professor's idea of creating no more funded capital than the amount of the loan, and making up the difference by some other arrangement. We cannot think that this could be economically done by giving a long annuity in all cases, but probably the political benefit would amply compensate any small increase of expense. We will only add upon this subject that, for a considerable time, there has been an evident disposition on the part of those who have directed our finances to keep down as much as possible the nominal magnitude of the funded debt; and that, if borrowing by a five per cent, stock has not hitherto been adopted to the extent that might be wished, it has been because, in that ex-tent, it has usually been impracticable without great loss by depreciation.

To the account given by professor Hamilton of the progress and manner of conducting tin: funded debt, we wish here to add some circum-

stances which we believe are very little known, even to those who have a general acquaintance with the. history of our finances ; many of whom will perhaps be surprised to hear that the plan of providing one per cent., in addition to the interest or perpetual annuity for the redeemable capital of debt incurred, was actually adopted in the very first instance in which any such debt was created. It was not indeed persevered in, and appears to ha►►e been totally forgotten ; nor is there any reason to suppose that Mr. Pitt was aware of it in the year 1792 when he adopted precisely the same principle in his modification of iiis system for extinguishing the national debt, as applied to any future increase of it.

During many years after the revolution money was obtained for the public service, in addition to the revenue, by selling annuities for lives or for terms of years. Portions of the revenue were appropriated as funds for securing the regular payment of those annuities ; and hence the origin of the distinction between funded and unfunded public debt. Large sums also had been borrowed of the bank of England, and other trading companies, at stipulated rates of interest until redeemed ; but without any specific provision for their repayment.

The first instance of procuring money for the public use by creating what have since been called perpetual annuities was in the year 1711, when llarley, afterwards earl of Oxford, was chancellor of the exchequer. The legal interest of money at that time was six per cent. ; and in the preceding year ►►1,500,000 had been procured by giving for it annuities to continue thirty-two years, at the rate of nine per cent, during that period. Two acts were passed in the year 1711 (9 Anne) for borrowing money at six per cent, interest, and the principal to be re-paid. As in the former year the annuities created were only to last during thirty-two years, and consequently the burden on the public which was caused by them would then terminate, so in this year a provision for the debt and its interest was made, to continue only during an equal term of thirty-two years, beyond which period no fund or security was provided, either to discharge the interest or repay the principal money which had been borrowed.

Instead of this, however, so much public revenue was created and appropriated as would not only pay the annual interest, but give a surplus sufficient to repay the money borrowed during the period of its continuance and appropriation.

By the first of these acts ►►1,928,570 was borrowed, and the annual sum of ►►135,000 during thirty-two years was appropriated, being (with the excess of a very small fraction) six per cent, for interest, and

one per cent, to pay off the principal. But one per cent, annually employed to pay off portions of the principal debt at six per cent, interest, together with the redeemed interest in like manner employed, or, in other words, one per cent, per annum, improving at six per cent, compound interest, was not quite enough to extinguish the debt within the period limited, and the deficiency was made up by an adequate addition to the annual sum appropriated

by the second act of the same year. By that act ––2,602,200 was borrowed, and the annual sum of ––186,670 was appropriated. Six per cent, for interest, and one per cent, for a sinking or redeeming fund, as provided in the former instance, would only have required an appropriation of ––182,154 ; but––l a year, improving at tlie rate of six per cent, compound interest, would not amount to ––100 in less than almost thirty-three and a half instead of thirty-two years. It was therefore necessary either to prolong the term, or a little increase the annual appropriation, and the latter course was adopted. By adding ––4516 a year, on this occasion, a sufficient provision was made (if strictly employed) to pay off both the debts within the limited term.

Principal borrowed.

––

By the first act 1,500,000 By the second act 2,000,000

By both united ….

Debt Sinking

created. fund.

1,928,570 19,285

2,602,200 30,538

4,530,770 49,823

These united funds, improved at six per cent, compound interest, would, in thirty-two years, Amount to ⁂4,528,392 16s., or only ⁂2377 4s. less than the sum to be discharged ; but, as some of the duties imposed for this purpose were to take place at an earlier time than the commencement of the interest, this circumstance more than compensated the above-mentioned small deficiency.

It is evident, therefore, that, in the very first commencement of our funded debt, the principle, though not the name, of a sinking fund, was systematically adopted, and the appropriation to pay off each debt respectively was, in the first instance, at the rate of one per cent, of the debt to be redeemed, and afterwards, just so much more as (if duly employed) might pay it off in about thirty-two years.

We have been the more desirous to explain fully the principle and extent of the provision to pay off debt contracted as it was first introduced by Mr. Harley, on account of its remarkable agreement with the plan of Mr. Pitt in the year 1792, to provide for the separate redemption of every debt which might after that time be funded, by an annual appropriation of one per cent., in proportion to the capital created. In this first instance, the money borrowed was only, as already stated, ⁂1,500,000, but the appropriation was one per cent, on the debt funded.

Not long after the peace of Utrecht various plans were proposed for accelerating the repayment of the whole national debt; and the great reduction of the rate of interest at which money might be borrowed by private persons, naturally suggested that by a similar reduction of the interest paid by the public an important annual saving might be made, which might be advantageously employed in redeeming the principal money of the national debt. Sir Robert Wai-pole was at that

time chancellor of the exchequer, and as a preliminary step to such a reduc-

tion he had obtained an act for reducing the legal rate of interest on all private debts from six to five per cent. In March 1716-7, he introduced his plan in the house of commons, and fourteen resolutions were agreed to, which, if they had afterwards been adopted in their full extent, would have provided the means of paying off the whole debt, including the temporary annuities, within about thirty-five years. A part of his plan was to commute the temporary annuities for redeemable capital at five or four per cent, interest, whichever, according to the terms proposed, might be most agreeable to the present proprietors of them. But a change of ministers took place Hefore the bills, founded on his resolutions, were introduced, in consequence of which this important part of his plan was abandoned. On this occasion three acts were passed, by one of which several former funds, which had been created to pay the interest and principal of certain debts, were united into a general fund, and a provision was enacted to make good any deficiency of it in any quarter of a year in which it might happen, out of the first aids granted by parliament. The amount of this general fund was ►►724,839 6s. lOJd. The two other bills related to the reduction of interest paid to the bank and the South Sea Company.

As very considerable mistakes have been made respecting the produce of the sinking fundr established by these bills, we have referred to the journals of the house of commons, and the various acts which bear on the question, and we believe the following statements are very nearly correct.

The general fund was made up in the following manner : ►►►

Annual sums appropriated for interest and to repay the capital of debts contracted in 1711 and 1712, by lottery loans … ►►657,676 0 0

Average surplus of taxes imposed on account of those debts, which was now added to the previous appropriation ►►► … . 27,317 11 3

Annual sums which had been appropriated to pay bankers' annuities 39,855 15 7j

to ..... ►►476,717 17

And for the debts added-by authority of the act, in-eluding two large sums > 102,036 13 2 for deficiences and debentures

And by two subsequent acts 5,539 0

►►724,849 6 10J

In the first of these annual sums was included ►►104,806, originally appropriated beyond the interest of the capital debts created and added to repay them, and also ►►22,399 15s. which was the amount of interest of debt that had been paid off.

Various debts were charged on this general fund, for which no provision had been previously made, or the temporary taxes appropriated to them had expired. By the recital in the South Sea Act (6 Geo. I. 1719) it appears that the total charge for interest of the original debts, on account of which parts of this fund had been previously appropriated, amounted

army

⬜⬜584,293 11 1J

The author o the History of Debts and Taxes states this sum as only ⬜⬜520,000 a year ; and Rapin more nearly at ⬜⬜570,580.

The surplus, therefore, made applicable to pay off the debts charged on this fund was

⬜⬜140,555 15 8$

The difference saved by) the bank reduction was . \

And by the South Sea ? reductions … ⬜⬜⬜ . 3

130,332 9 \\

100,000 0 0

In all ⬜⬜370,888 5 8&

The surplus of the general fund was made subject to any deficiencies of the South Sea fund below the original appropriation of ⬜⬜608,000 ; and on the other hand might be increased be-yond the amount of ⬜⬜724,849 6s. 10ˆ., if the taxes should produce more than that sum, for it was provided that the whole surplus produce of those taxes, beyond the interest payable out of them, should be applied to pay the principal money, and that any deficiency below this sum in any year should be supplied out of the general revenue.

It is evident, therefore, that (subject to variation from these causes) the original sinking fund amounted to ⬜⬜370,888 5s. 8&d. We know not on what grounds Sir John Sinclair has stated its actual amount at ⬜⬜336,000 only, and professor Hamilton at only ⬜⬜323,439, for it appears by the recitals in the act 5 Geo. I. when part of the produce of the new sinking fund was applied to assist in paying off exchequer bills held by the bank, that during the preceding year its airount had been as follows : ⬜⬜⬜

General fund South Sea . Aggregate .

⁂320,436 15

19,577 10

196,444 18

⁂536,459 4

0

As the clause in the general fund act, by which these surplusses were appropriated, has been more than once incorrectly quoted, we give the words as they stand in it. The clause enacts, ‘ that all the monies to arise from time to time as well of or for the excess or surplus of an act made this session for redeeming the funds of the governor and company of the bank of England, and of or for the excess or surplus by virtue of one other act made likewise this session for redeeming the funds of the governor and company of merchants of Great Britain, trading to the South Seas and other parts of America, and for encouraging the fishery, as also of or for the excess or surplus of the duties and revenues by this act appropriated as aforesaid ; and the over-plus monies of the said general yearly fund, by

this act established, shall be appropriated, reserved, and employed to and for the discharging the principal and interest of such national debts and incumbrances as were contracted before the 25th day of December, 1716, and are declared to be national debts, and are provided for by act of parliament, in such manner and form as shall be directed and appointed by any future act or acts of parliament, to be discharged therewith or out of the same, and to or for none other use, intent, or purpose whatsoever.’

The next considerable reduction of the interest of the national debt was connected with the South Sea scheme, by means of which the part of Sir Robert Walpole's original plan that related to a commutation of the temporary annuities was carried into effect ; and at length, by the ultimate arrangement in settling the affairs of the company after their bankruptcy, there resulted, from this commutation and other circumstances, a reduction of the annual payment for interest and annuities which amounted to about ––377,000. The profit of money employed in private loans continuing to diminish, Mr. Pelham was enabled to make a third reduction of the interest of the national debt in 1749, by which an annual saving was made of about ––565,000. All these measures, if in each case the saving had been applied solely to pay off pre-existing debt, and ' for none other use, in-tent, or purpose whatsoever,' would have been very efficient.

If the original sinking fund had been strictly employed, according to its original intention, it would have redeemed the whole funded debt which then existed, and which amounted to about ––33,700,000, within thirty-six years ; and, although the subsequent reductions of interest would have diminished the profit derived from employing the fund and its gains, yet they would have at once increased its amount so much as to shorten considerably the period in which its object would have been accomplished. Nothing indeed can be clearer than the meaning of the act by which it was established ; but plausible reasons were given for the application of a portion of its revenue io pay the interest of new debts, and for other contingent purposes; and the consequence was, that little progress was made in redeeming the debt during peace, that in war it continued to accumulate, and, at last, any regular system for redeeming it was abandoned, and no progress at all was made but by the casual employment of any surplus of the whole revenue which might be saved during a peace.

It may be doubted, whether the unfortunate deviations from the original plan, which took place at an early period, would have .happened if there had been any thing alarming in the state of public credit. If at that time the transferable value of the stocks had been in a declining state from any causes, however foreign to the funding system, or the magnitude of the debt, a strict application of the whole sinking fund would have been necessary to quiet the fears of the public creditors: and periodical evidence would have been called for of the progress made in redeeming their depreciated property at its on-

ginal value. But at that time circumstances, wholly unconnected with our national debt, contributed to lower very much the profit which could be made by lending money to private persons ; and consequently, not only to increase the transferrible value of all irredeemable incomes, but also of any others of which the repayment would probably be distant. It cannot be expected that there would be any strong feeling of the propriety of an undeviating application of the sinking fund to its original purpose, ata time when the public creditors were necessarily more afraid of being called on to receive the money due to them, than that it neverwould be paid off at all. The state of the English public funds, for many years, was such that the stockholders received much less than the legal rate of interest for their capitals invested in them. The great cause of this was the very low profit of money in a neighbouring country, with which, at that time, we had most extensive commercial and pecuniary connexions. By a long period of great industry, economy, and commercial prosperity, Holland had acquired an immense superabundance of capital, beyond what it could continue to employ at home with any adequate advantage ; the commerce of that country having already passed its greatest extent. Contented with small annual returns, rather than to let their capitals re-main wholly unprofitable, the monied men of the republic continued therefore to invest large sums in our funds, notwithstanding the reduced rate of interest, because it still continued higher than in their native country. To them, shares of our national debt were a much more convenient property than debtsfrom private persons in a foreign country, and therefore they would be satisfied ###with smaller profit from them than the common rate of private interest ; and would oblige those among ourselves who might choose to purchase stock, to give as high a price as they were ready to do. At that time the very high credit, or rather marketable value of our stocks, was not so much a proof of our own prosperity as of the superabundance of capital in Holland ; and the annual interest paid to that country absorbed a considerable proportion of the produce of our industry. In such a state of things the successive reductions of the annual interest of the national debt were measures of obvious and unquestionable policy, and would have been exceedingly advantageous, if, instead of promoting an increasing indifference respecting the redemption of the debt, they had been accompanied by such regulations as would have preserved the original sinking fund in

full activity. As the reduction of interest on the capital to be afterwards redeemed or repaid would have diminished the rate of increase of the sinking fund l>y compound interest, and as the amount of that diminution was a question of easy calculation, so much therefore out of the saving effected b►►- ‘hese reductions might have been added to it as would have been a compensatipn for the diminution of its profit, and the remainder might Have been fairly applied to the general use of the nation. Instead of this, the whole system was neglected. We are the more desirous to impress tiiese observations, because we can anticipate

the recurrence of similar circumstances, and even to an extent which may make it difficult to carry on the progress of a sinking fund on any other than a very moderate scale ; and altogether impossible to carry it on with the increasing rapidity of compound interest. On the former occasion, the operation was suspended before the experiment could fairly be tried ; but it may hereafter be found, that the difficulty of employing the means of paying ofi►► a great national debt is at least equal to the difficulty of providing them ; equally attended with such private inconveniences as are sure to be exaggerated by the clamors of faction, and alike productive of many moral and political disadvantages. We do not mean these remarks, and others which we shall hereafter make on the same subject, as adverse to the principle of a sinking fund when properly regulated, but as cautionary against the very dangerous opinion that we may contrive to toil up hill as speedily as we have descended, and need take no concern for the magnitude of debt contracted relying on the omnipotence of compound interest for its easy redemption.

The two reductions of interest of the national debt, which have led to these remarks, can by no means be considered as having had <br their primary object the diminution of the capital of the national debt by increasing the means of repaying it, although that consequence might contingently have followed, but as intended to improve the revenue for general purposes. In fact, therefore, after the commutation of the temporary for perpetual annuities, which was a part of Sir Robert Walpole’s original plan, and was the foundation of the South Sea scheme, no attempt was made to augment the sinking fund originally established, nor any one measure adopted to enforce its due application.

We have thus at the hazard of some pro-lixity traced the history of this important fund to the state in which it was when Mr Pitt he-came

minister. A long and very expensive war had greatly increased the funded debt, and left an immense floating debt, at a ruinous discount, wholly unprovided for; the public, credit was very low, the value of lands and of their produce had fallen, consequently the value of the capital and income pledged for the payment of the interest and principal of the national debt seemed to be diminishing ; many works of great expense which had been undertaken still remained half finished ; and although there can be no doubt that some increase of the intrinsic wealth of the country had taken place, even during the war which led to these consequences, yet the pecuniary means of giving to it its usual commercial value were grown scarce. In this situation of things we do not so much extol the political courage of Mr. Pitt in proposing an efficient sinking fund (for some very strong measure to restore the opinion of the efficiency of the national resources was become necessary), as we feel the prudence with which he considered the defects of the mechanism of the plan adopted in the year 1717, and the good sense of the regulations by which he corrected them.

The most important defects in the mechanism of the plan adopted in 1717 were, that it did

not separate the fund from the general account in such a manner as to make it ever after a distinct object of political observation ; that it did not, by creating for it a separate administration, increase the ministerial difficulty of perverting it from its original purpose ; and did not contemplate that the progress of such a fund, at compound interest, might increase to an unnecessary and even inconvenient extent. When Mr. Pitt proposed his new sinking fund, in the year 1786, the reduction which had taken place in the original interest of the ancient national debt, and the plan, which had been adopted to a great extent, of borrowing money at a low rate of interest on a capital of far greater nominal amount than the sum borrowed, made it necessary to propose that, instead of attempting to repay the existing debt according to its nominal value, a plan should be adopted by

which it might be at all times redeemed according to its actual value, by employing fit agents to purchase stock at the market price for the public benefit. Well aware that the actual public revenue of Great Britain at that time was barely equal to the cost of a moderate peace establishment, and that without a real surplus of revenue any attempt to reduce the heavy load of national debt would be a mere illusion, he had the courage to propose an addition to the taxes great enough to allow of an annual payment of ––1,000,000 to commissioners appointed to act as managers for its employment in redeeming the debt, and as trustees for the portion of it which by these means might be transferred to them for the use of the nation.

Every precaution was adopted to provide that the new sinking fund should be so promptly and regularly employed as to derive the greatest practicable increase by the profit of compound interest, until it should have grown to such a magnitude as to make its future improvement no longer necessary, or even perhaps expedient. We are not aware of the reasons which induced Mr. Pitt to fix on the sum of ––4,000,000 a year as the highest amount of his fund ; but it is evident from this limitation that he did not adopt the profit of compound interest as a permanent and essential principle of his system, but only as a very convenient aid in augmenting his fund till it should become great enough to be afterwards employed in redeeming the remaining debt by equal annual payments. Though he readily and skilfully availed himself of every hope which his plan was calculated to excite, yet he had too strong a judgment to have adopted this restriction for no better reason than to display the remote prospect of a gradual and very slow diminution of the heavy burden of the debt, after twenty or thirty years of patient submission to an additional million a-year. Nothing so frivolous could be the motive which prompted Air. Pitt to introduce this very important restriction. Every precaution was also taken by him to make the progress of redemption by his sinking fund as regular and as public as possible. Its management by being laid open might be constantly scrutinised by numberless persons well qualified to detect any frauds or errors, and

all temptation to misconduct was countentted by the certainty that it must be discovered.

The progress of redemption might have been exactly the same, if, considering the stock purchased by the commissioners as cancelled, the periodical reports should only have stated the increase of the fund, omitting any statement of the capital redeemed ; but their conduct

would not in that case have been so distinctly laid open to public inspection, and the efficacy of the system would have been much less striking than by the method which has been adopted, because the sum redeemed so very much exceeds the sum employed, that the magnitude of the effect is far more impressive than the annual amount of the means by which it is produced. By these arrangements a security has been given to the new sinking fund which the former wanted. The whole benefit being often presented to public inspection in the most favorable point of view, the consequence has been that the principle of the system is now generally regarded as of too much importance to be ever abandoned, and many persons feel a sort of timid bigotry respecting the mere mechanism of the plan, which will allow no adaptation of it to times and cii-cumstances.

Six years after the establishment of this sinking fund, in the early part of 1792, when the revenue had become very productive, when the prices of the stocks had become very high, and while as yet few persons in this country anticipated the tremendous consequences of the French revolution, Mr. Pitt very fortunately, as we think, proposed a plan for the separate redemption of any future debt by appropriating one per cent, annually for that purpose until the whole should be paid, to be computed in proportion to the capital created, and not to the sum which mieht be borrowed. At the commencement of the funding system, while the interest of the debt was at the rate of six per cent, and a right to pay the whole or any part of it at any time was reserved ; one per cent, appropriated for that purpose, together with its accumulating profit, would, if duly applied, with certainty pay off the principal money of any corresponding debt in little more than thirty-three years. Money being in 1792 at a much lower rate of interest, the increase of one per cent, per annum, by the profit of its employment, should of course be computed at a lower rate ; and no other than a conjectural computation could be made of the time when the redemption might be completed, not only because the system of purchasing stock at the market price must make the actual profit uncertain, but also because the proportion of the sinking fund appropriated to the value of the capital created would depend on the stock in which the new debt might be funded. On this occasion Mr. Pitt assumed that any future debt might be redeemed within forty-five years, at the latest, by employing for that purpose one per cent, per annum, computed accord ing to the capital created, together with its prolit by compound interest.

Perhaps even at that time it was probable that the intended redemptions might be made in i\ much shorter space, but while the three per

cent, stocks were worth more than ninety per centum in money, it might not be very prudent to calculate such a progress as could not be realised but by a great diminution of their value. While at this time Mr. Pitt was providing for the extinction of any future debt, the very nourishing state of the revenue induced him to propose some addition to the sinking fund already established. He proposed to give to it ––400,000 out of the receipts for the current year, and to provide that ––200,000 should be annually granted to it afterwards by vote of parliament. The principle, therefore, was adopted, that such an addition would be expedient, but the application of it was left to the annual discretion of the legislature, guided by contingent circumstances.

In one point, which has since been of considerable importance, these plans of Mr. Pitt ap-pear to us to have been deficient, though we by no means impute any blame to him on that account, being well aware that often the most convenient way to accomplish all that may be wished is to begin with that part only as to which any prejudices and difficulties may be most easily surmounted. Without doubt all debt contracted by authority of parliament is alike national ; the national faith is equally pledged for all of it in whatever shape it may exist, without any difference between the funded and unfunded parts of it. This distinction, indeed, is rather technical than essential, for both cause annual charges on account of interest, which alike subtract from the contemporary revenue sums which might otherwise have been applicable to civil and military purposes. Temporary annuities include, in addition to common interest, a compensation, during the time which they last, in lieu of the capital originally paid for them, and therefore no sinking fund is wanted for them ; but all other national debts bearing interest, whether funded or unfunded, must continue to be chargeable till they are repaid or redeemed, and therefore the reason for appropriating a sinking fund extends alike to all of them, if not otherwise provided for. A part, indeed, of the unfunded debt may very properly be considered as only nominal, and merely existing in account, because it is balanced by sums due to the

government for revenue in arrear, and from public accountants, or is only an anticipation of sums which will in regular course become due, and by which any money advanced on their credit will be replaced. To this extent no sinking fund can be wanted, because the means of repayment already exist; and it is but justice to add, that in 1792 the unfunded debt did not so much exceed the means of regular repayment as to be an object of any considerable importance. Still it must be regretted that Mr. Pitt's plan in 1792 did not provide a sinking fund in due proportion to any sort of debt which might afterwards be contracted without some other appropriated provision for its repayment.

The unfunded debt in exchequer, navy and ordnance bills, which in January 1793 only amounted to ––14,802,375 had increased before the year 1801 to ––35,628,099. According to the system of finance hitherto followed, an unfunded debt does not require any specific appropria-

tion of revenue to pay the annual expense of interest, which is defrayed out of the expenses of the year, and included in the sum that must be annually borrowed ; whereas with respect to funded debt, if due provision is made, as it ought to be, by additional taxes, for payment of the interest of any addition to it, there is no subsequent increase of the debt on account of the charge of interest. Without doubt many advantages result from allowing a considerable increase of debt to remain unfunded during a war; but the temptation to suffer it to continue in this state rather than encounter the obloquy of proposing an adequate increase of taxes is very considerable ; and a debt in this state counteracts the principle of the sinking fund. Experience has shown that it may be very greatly increased without exciting much observation, and in this man-ner it is left to future ministers and future parliaments to provide, after a war, for the interest as well as the extinction of debts swelled to a great magnitude, of which, till then, the interest had only been paid by an equal increase of money annually borrowed, but on account of which, on the return of peace, either new taxes must be levied or war-taxes must be continued.

The true principle of British finance, as respecting all debt bearing interest, is that an an-nual revenue should be provided by taxes levied for that specific purpose, in full proportion to all the interest which must be paid ; and also that for all the debt which must continue until redeemed, similar means for extinguishing it should be provided. The

important deviation from this principle, as respecting the unfunded debt, probably commenced without much observation, while the excess of that debt beyond the actual means of repaying it was inconsiderable. In 1792 the national revenue probably needed no addition to it on account of the annual charge for the unfunded debt, and therefore no blame can be imputed on that account, nor do we mean to censure the omission of an addition to the sinking fund at that time, when the amount unprovided for by other means was immaterial ; but the heavy increase of debt which was incurred during the latter years of the war, and the heavy burden on the revenue which must long remain, in consequence of this deviation from that sound principle of finance, both as to borrowing and redeeming, is obviously alike applicable to every part of a real national debt.

In the year 1798 an important deviation took place from the plan of providing a sinking fund, which had been established in 1792, and which was also adopted in the two subsequent years. In the former year the ‘ aid and contribution tax’ was imposed, for which the ‘ income tax’ was afterwards substituted. The principle now adopted was, that after certain appropriations of the produce of these war-taxes, and particularly to pay the interest of any sums which were borrowed on their credit, the whole surplus (if any had arisen) should be transferred to the commissioners for redeeming the national debt, to be applied by them until the whole debt funded on this specific basis should be redeemed, instead of transferring to them one per cent, per annum according to the capital created. The tax was

to continue until the whole debt charged on it should be redeemed. Without doubt, when this measure was adopted, it was hoped that the tax might be continued without inconvenience, and that the surplus would greatly exceed one per cent., and therefore would supersede the propriety of adopting that rate of appropriation. After the peace of Amiens various reasons concurred to make it necessary to repeal the income tax ; and, therefore, to substitute new and permanent taxes to a great amount, to provide for the interest of the debts charged on it,

and also for the further sum which was then to be funded for the current charges of the year, amounting in all to ––86,796,375. If, therefore, an addition to those taxes had been provided at the rate of one per cent., established in 1792, it would have amounted to no less than ––867,963.

It is now, we believe, generally well known, that by the advice, and at the instance, of Mr. Pitt, recourse was had on this occasion to a plan which has in some respects a very close resemblance to that of Sir Robert Walpole in the year 1717. In both cases all the antecedent sinking funds which had been specially appropriated to redeem particular debts were consolidated, and their duration was on both occasions prolonged until the whole funded debt which then existed should be redeemed : not only those parts of it for which they had been specially provided, but also all those parts for which either no provision had been made, or where, as was the case with respect to the debt on the income tax, the intended provision had been repealed. So far the agreement extends between the two plans ; but in another respect there is this very important difference, that in the former case not only the taxes, till then granted for a limited time, were continued until the whole debt should be repaid, but also other additions were made to the means to be employed for redeeming the -iebt, in full proportion to those parts of it on account of which no previous appropriation for that purpose had been made. But, in the second instance, no other provision was made for redeeming the additional charges on the united ‘mds than by providing that they should continue until the whole debt should be redeemed.

Without presuming to know the motives to the plan adopted in 1802, and respecting which we have always regretted that it was not found convenient to follow Sir Robert Walpole’s example more closely, we may yet be permitted to conjecture that the necessity which was felt of allotting as large a proportion as possible of the taxes imposed in that year to an additional provision for the peace establishment, induced the government of that day to depart from the established rules of the funding system. Some also might expect that very soon another awful contest with a powerful and inveterate enemy would call for more expensive exertions ; and therefore, on the whole, might think it bet-ter to protract the redemption of the existing debt than to diminish the mean, ‘jf providing for loans which might soon be wanted.

We have already given an opinion of the plan of redemption which was introduced by lord Henry Petty in 1807. We may add another

remark respecting it, which is connected with the system of war taxes that had been previously adopted. There is considerable danger of ultimate inconvenience when debt is charged on any taxes of such a nature, that either they cannot properly be made permanent, or that if made permanent they may cease to be sufficiently productive. The repeal of the income tax, on the former occasion, had been a measure of obvious propriety ; but that repeal created the necessity of levying new taxes to a great amount instead of it, and also of contriving an expedient to prevent a much greater amount of them. Probably the great inconvenience which was felt on that occasion might be a principal motive for adopting a different principle from that which was acted upon in 1798, when afterwards a very great addition to the revenue was made by war taxes in 1803. In the former case the extraordinary revenue was originally levied for the twofold purposes of increasing the present means, and providing a basis for borrowing and redeeming to the extent in which the present means might be deficient; bul the war taxes of 1803 were provided for the single purpose of increasing the revenue so long only as the increase of expense should continue. Such taxes might very properly be adopted for this single purpose as would be altogether unfit for appropriation in a funding system of any kind. In the year 1807, therefore, there was not only an innovation against a salutary limitation ; but if thf new sys-tem had been followed till now, accompanied by such an expense as has been actually incurred, there would have been a necessity, not only of hy-ing on very heavy taxes to support the supplementary part of it during the war, but also of substituting others to a considerable amount, on the return of peace, in lieu of a part of the war taxes themselves. Only ––21,000,000 were borrowed according to the regulations of that plan, which would have been redeemed in fourteen years if an adequate profit could be made of the money taken for that purpose from the revenue previously destined to support the contemporary expense of the war. So much as by this measure that revenue has been annually diminished, so much more must have been annually borrowed ; wherefore, when the debt contracted in 1807 shall have been redeemed, an equal sum will have been, on that account, added to the unredeemed debt, together with all expenses of negociating the loan, and all charges of its redemption. In 1809 political circumstances, which need not now be explained, appear lo have induced Mr. Perceval to have recourse once more to the war taxes as a basis for funding, rather than impose additional taxes, to be appropriated for the new debt which was then to be created. He, in fact, adopted the form of the sinking fund of 1792, but even more

widely departed from its principle than lord Henry Petty had done; for in this case, no additional revenue having been created to meet the charges, all that is annually paid on account of that loan must be annually borrowed, and the debt will increase by compound interest so long as further loans may be required.

The next changes in the mechanism, rather

than the principle of the sinking fund, were introduced by Mr. Vansittart. We have alread) reviewed his plan in our article FUNDS, although ###with more brevity perhaps than was suitable to its importance; but our additional space must be devoted to the recent observations of lord Grenville on the entire subject.

His lordship's Essay on the Supposed Advantages of a Sinking Fund is confessedly an incomplete work ; ' the bare and unshadowed outline' of the view which he had taken of the subject : and the whole community, but especially ministers and the legislature, must regret that the declining health of the accomplished and experienced writer has prevented the completion (as we understand him) of the second part. An analysis of what he has contributed, however, to the further consideration and adjustment of this great question, cannot fail to be interesting to all who have looked into it. While we cannot, from what has yet appeared of them, adopt the new convictions of the writer, additional attention is perhaps to be given to them for the circumstance of his original personal connexion with the establishment of the sinking fund, and his known admiration (still retained) of Mr. Pitt.

His lordship avows (Introduction, p. 2) ' a total change of sentiment' on this subject and thus supplies the three ' general principles' on which it is founded. 'These are, 1st,' he says, "the entire dependence of every sinking fund on an actually existing surplus of revenue : 2dly, the consequent inutility of all borrowed sinking funds: and, 3dly, the no less evident impossibility of deriving benefit from a sinking fund operating in times of war, or of otherwise deficient revenue.'

i. In discussing the first of these principles he observes, ‘ Under no circumstances can any sinking fund be productive of real benefit, except where the ordinary income of the state has been carried to an amount permanently exceeding its current expenditure. To the neglect of this fundamental truth, a very large proportion of the errors which have prevailed in this branch of financial policy, is, as I think, mainly to be ascribed. Without such an exceeding, firmly established and invariably applied, a sinking fund may indeed exist in name, but it can have no solid operation. Even when the revenue of a state is most deficient, some portions of it may, as we know, both from our past and present experience, be nominally appropriated to the purposes of a sinking fund : but, by such appropriations, the public debts are in no degree diminished. The veriest prodigal may annually discharge a part of what he owes ; but if, on the whole, he expends within the year much more than he receives, he will find, at its close, his encumbrances not lessened, but considerably increased. To reduce debt is the only object of a sinking fund. To the efficacy, therefore, and consequently to the wisdom of such an institution, two conditions are indispensable: 1st, the continued existence of the surplus from which it is to be supplied ; and, 2dly, the uninterrupted appropriation of t5.at surplus to the reduction of debt. The very name of a sinking fund implies the recurrenceof fixed payments at regular and stated periods : the

casual application of occasional resources is a notion quite distinct from that of such a fund.

ii. He now passes to ‘ the inutility of borrowed sinking funds.’ ‘ This first principle,’ he continues, ‘simple and obvious as it is, dispels at once the greatest of all the misconceptions by which this subject has been but too long obscured. It proves beyond all power of dispute, what I do not hesitate to term the utter worthlessness, the total and hopeless inutility, of a borrowed sinking fund. A nation may often find it useful, sometimes absolutely necessary, to eke out a deficient revenue by loans raised for its current service. But to resort to any such expedient in the establishment or support of a sinking fund, created for the reduction of debt, is a policy self-contradic- tory, and for the most part deeply injurious to its own purposes.

‘ There is indeed one well-known case in which the repaymentof debt from borrowed money is advantageous to the debtor. A general fall in the rate of interest may enable him to compel his creditor, if such be the nature of their contract, either to consent to a similar reduction in

his own case, or to accept of the repayment of his capital, to be effected by money borrowed elsewhere at a cheaper rate. This course, we know, has often been successfully followed by our own legislature. But such a measure has nothing in common with that which we are here considering. It differs completely, both in principle and in effect, from the application of a borrowed sinking fund, to purchase stock at its market-price. In the first of these two cases it is an evident benefit to the community to release itself from a more burdensome contract by mo-ney borrowed on terms of less disadvantage. But to the second no such reasoning applies. Can it be profitable to any man to buy up in the open market his own engagements, with money raised at the same moment, and in the same mar-ket, by a corresponding issue of similar securities? Would not the mere fact of his resorting to such an operation be more likely to injure than to improve his credit, if for no other reason, at least from the total want which it would imply of all judgment and intelligence in the conduct of his affairs ? The exchange of two equal parcels of the same commodity, two yards of the-same cloth, or two ounces of the same ingot; woula at best be a mere loss of time and trouble. But the similar operation which takes place, when debt is redeemed by a fresh creation of debt, is much worse than nugatory : it is almost always prejudicial to the debtor. And this is most especially the case with respect to the pecuniary transactions of the state. The extent and urgency of the public necessities operate in these dealings strongly against the government. A considerable profit must accrue to the contractor, by the intervention of whose capital these large exchanges are effected. And, when the loans wanted for other public services are on Ihis account augmented, the whole must be raised on terms of proportionally increased disadvantage.

‘ I am well aware how entirely this unqualified condemnation of all borowed sinking funds is opposed to the practice, which has now for so long a course of years been followed by our

own country, and imitated by so many others. But I cannot with truth profess, even on that account, any distrust of the judgment which I

have here ventured so confidently to express. It is sanctioned, if I do not greatly deceive myself, by a very general change in the public opinion on this point. Here, as in almost every other branch of political science, a better philosophy has in these later days established far sounder principles, both of enquiry and ‘ of judgment. Nor is it at all surprising that the progress of knowledge, in all these cases, should have so much outrun its practical application. Great changes in government and legislation are scarcely ever expedient until there has arisen in the community, not merely a speculative preference of the better course, but an active and growing desire for its adoption. And. such a sentiment the public discussions now to be expected on this question, are, I trust, well calculated to produce. If, therefore, even in the present year (1827) money has again been borrowed by our government for upholding a deficient sinking fund, we may not the less reasonably hope that this will, at least in England, be the last instance ever to be exhibited of such a policy. It was, in this case, suggested only as a temporary expedient which might give room for the promised revision of the whole system ; and, on the result of that enquiry, who will now propose that we should again recur to schemes of borrowed sinking funds? To reduce debt by borrowing to the same amount on terms of equal or greater disadvantage, is a manifest fiction in finance ; ††† a fiction in that branch of government in which, above all others, fiction is most to be condemned. Its mischief is nothing less than this; it disguises from the country, and in some degree from the government, and from parliament itself, the real state of some of our most important interests ; throwing over them a false color of progressive improvement in the very moments when the pub-lic debt is most rapidly increasing, and when the public revenue has become most unequal to its charge. That the British parliament should at any time have lent itself, and under whatever misconception, to a measure capable of producing these groundless impressions, all men, I think, must now regret; and who more than those who once participated in that delusion? But when, at last, the fallacy has ceased to deceive ourselves, it would ill become us to impose it upon others. Never again may any just legislature, or any enlightened community, forget that the only surplus from which a nation can, with sincerity and truth, reduce its debt, is a surplus accruing, not from loans, but from revenue.

iii. The ‘ inefficiency of sinking funds operating in war,’ is thus briefly stated. ††† ‘ If the foregoing reasonings are correct, there necessarily follows from them another most important limitation of the whole question to be now submitted to parliament. No sinking fund, it is thus evident, can truly exist, except in periods of peace ;

and in reference therefore to those periods only c;in the revival or abandonment of such a system be reasonably made matter of debate. In war, no man expects that our income will ever equal our expenditure : how then can it afford an ex-

cess of millions' for the reduction of debt? Whatever surplus may have been created for that purpose in peace, a new war will at once absorb; and, in that moment, vanishes all possibility of benefit from the sinking fund. A visionary permanence may indeed even then be given to it by law; its useless forms maybe continued, in vain semblance of that which once was powerful and active ; but its vital spirit we cannot so preserve. When the dog-star has drunk up the stream, what provinces will its empty channel fertilise ?'

In a fourth section of his first chapter; his lordship examines the opposition of these principles to our present sinking fund, and as this comprises, as he contends, ' the whole substance of the decision now expected from parliament' we shall subjoin it entire.

' It must not however be disguised that the opinions thus stated, as fundamental to this whole subject, lead at once, and by inevitable conclusion, to no modification or change, but to the total abandonment of our present sinking fund. The laws of that institution, and its whole course and operation, are, not incidentally or partially, but essentially and universally opposed to all which has here been said. Though first established in peace, and founded in an assumed surplus of revenue, it has been nominally continued through long periods of war; and, daring the far greater part of the more than forty years of its existence, it has been either wholly or partially supported by loans heaped on loans. The failure of its original surplus was, in the very first moment of returning war, supplied by borrowing; and we have, ever since that time, to a greater or less amount, and in various, though sometimes not easily intelligible forms, borrowed again, with little intermission, throughout its whole continuance. This indeed was its natural and necessary course, and this the very principle of its existence. By no other means than these could its operations, such as they are prescribed by law, have been carried on during this long period of difficulty and pressure. The facts are here stated, therefore, without any the most distant purpose of censure or reproach on those under whose councils the system has been thus administered. Far otherwise. The course pursued was of the very essence of the measure to which it was applied. The avowed principles of that measure were, and still are, that the operations of the fund which it established shall

be continued in war, no less than in peace, and that its consequent deficiencies shall be made good by borrowing. Take from it this support, feeble as it is, and the whole fabric crumbles into the dust.

‘ More than a century ago, and in the very out-set of a sinking fund, its first authors adopted this expedient as an essential part of their system. And, at a later period, Dr. Price, whose sugges-tions so powerfully contributed to its revival, founded on the same basis all his hopes of its promised utility. Periods of public distress, he contended, would, by the depression of the funds, accelerate its operation : and he even brought himself to believe, that the rate of interest on which the state mishit thenceforth borrow money would thus become comparatively indifferent

‘ For the higher the interest,’ he says, ‘ the sooner would such a fund pay off the principal ;’ ??? the more violent the fever, the greater would be the power of the medicine to relieve it! This theory, self-evident as he imagined it, completely erroneous as it now appears, he urged with ceaseless vehemence, loading with reproach the government and legislature of his country, by whom these vain imaginations had been, after some experience of them, for nearly half a century utterly renounced. ‘The sinking fund,’ he says, ‘was established in 1716, and began its operations in 1719.’ It was at first strictly appropriated to the reduction of debt ; ‘ and so well, he adds, ‘did our ministers then understand the nature and importance of this fund, that rather than encroach upon it they frequently borrowed money lo defray the necessary expenses of government.’ In other words, they frequently supported their sinking fund by borrowed surpluses, and this not in war only, but in peace. They seem to have thought it no contradiction to increase debt in the very moments of professing to reduce it. But so great an inconsistency did not long escape the sagacity of Wai pole; a minister, who, in some other instances, no less than in this, seems not a little to have outrun the wisdom of his contemporaries. By measures which, notwithstanding all the clamor of his opponents, it would be very difficult to censure

on any just ground of reasoning, he diverted the sinking fund from these un-real and simulated operations, to fresh exigencies of the public service as they successively arose ; thereby saving to his country the imposition of new taxes, or the creation of new debt. For about forty years afterwards the same policy governed our councils, under some of our best and wisest statesmen. They judged it the most beneficial course, as it unquestionably was the most natural, to attempt the reduction of debt in those periods only when the revenue of the state exceeded its expenditure. Nor did they show much solicitude to increase the taxation of their country for the purpose of providing it with such a surplus. Their reductions of debt were principally, though not wholly, effected by the falling in of annuities, and by the diminutions successively made in the rate of interest on the public securities, by such tenders of repayment as I have above adverted to.

‘ But, in the days of Price, the principles of 1716 regained the public favor; and, in 1786, they were re-established by almost universal acclamation, as the main bulwark of our finance, and the unfailing sources of incalculable benefit. To this change the circumstances of the moment powerfully contributed. At the close of the American war, the loss of our long-cherished colonies, to our possession of which such false notions of advantage had been attached, the magnitude of the debt incurred in that fruitless contest, and the deficiency of the revenue created to defray its charge, had thrown over our financial prospects a cloud of distrust and apprehension, scarcely to be imagined but by those who witnessed it. Nor were wanting strong grounds for these impressions, exaggerated as they were. The real pressure of our burdens was, at that time, extremely severe : more grievous perhaps in

proportion to our wealth, than many succeeding period of our greatest difficulties. The nation gave way therefore to an almost universal panic on this subject. The ordinary course of our finance was thought no longer adequate to our necessities : resort must be had for safety, it was said, to some new, or, at least, to some long untried expedient. Under these circumstances it was, that the project of establishing a new sinking fund, which should accumulate, uninterrupt-edly, at compound interest, through every vicissitude of peace and war, and which, on that assumption, would be demonstrably capable of being carried, at least in figures, to any assignable amount, captivated all imaginations. The country grasped, almost without enquiry, at promises of relief so specious and so ample ; adopting, with

unbounded confidence, a remedy proclaimed on no light authority to be of efficacy nothing less than omnipotent.

‘It can be no reproach to any individual to have partaken largely in these feelings; ††† no reproach, I trust, to any public man to have co-operated with earnestness and zeal, both in preparing and in supporting a measure so consonant to the wishes of his country. And least of all can censure be attached on this account to that able and excellent statesman, who framed and carried through the act of 1786. Allowing for the impressions at that time so generally prevalent, there is, on the contrary, much of his conduct on that occasion, for which he is justly entitled to the highest praise. With an ardent and generous spirit, devoting all its energies to the national prosperity, he risked, and in no small degree surrendered, his highly valued popularity to the necessity of the large additional taxation which that measure compelled him to establish and to maintain. This was no light sacrifice, nor did he feel it such. But he anticipated in return, with unspeakable delight, the full tide of wealth which, in some distant but auspicious moment, the results of these disinterested exertions were to pour in upon his country. What he so ardently wished, he willingly believed. His persuasion of the great advantages of a sinking ftind to be continued in war, and to be upheld by borrowing in all periods of deficiency, was therefore deeply rooted, not in his judgment only, but also in his feelings. To these opinions he clung with unvaried fondness ; and his provisions for giving effect to them, although, on more than one occasion, widely departed from by his successors, still form, even in the present moment, the leading features of the system, in so far as it can still be said to exist at all.

‘ Yet shall we now, in deference to his great authority, seek to revive this nearly extinguished project, or to reconstruct on the same foundations any similar institutions ? If we have learnt, from the improved knowledge of the present age, that this structure, which he believed to be a main tower of our strength, rests on a basis unequal even to its own support, shall we not act as he would himself have acted under a similar conviction? Shall we not labor to devise some other less objectionable plan, under which his purpose may be executed ? or, if this be

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found impracticable, shall we not rather abandon the whole design, than adhere to hopes and projects which we now perceive to be, in their very essence, self-contradictory, and therefore manifestly delusive?*

On a subject that involves many present sacrifices and much of the future prosperity and comfort of the community, the reader now has a summary of the most able opinions before him If, in the further discussion of it in parliament, any thing new in principle, or important in its practical operations should arise, we shall not fail to advert to it in the article SINKING FUND.

NATIONAL INSTITUTES, or new academy of arts and sciences of Paris. See INSTITUTE.

NATIVE, adj. &n.s. ˆ Fr. natif, nativitc;

NATIV'ITY,►►. s. S Ital. Port, and Span.

native ; Lat. nativus. Natural, produced by na-ture, or at birth; belonging to, or by, birth; original : as a substantive, one born in any place; original inhabitant; offspring: nativity is, birth; hence time or place of birth; act of being born.

Thy birth and thy nativity is of Canaan. Ezck.

She more sweet than any bird on bough Would oftentimes amongst them bear a part,

And strive to pass, as she could well enough, Their native musick by her skilful art. Spenser.

If these men have defeated the law, and outrun native punishment ; though they can outstrip men, they have no wings to fly from God. Shakspeare. The' accusation,

All cause unborn, could never be tne native

Of our so frank donation. Id. Coriolanu*.

My husband, and my children both, And you the calenders of their nativity, Go to a gossip's feast. Id. Comedy of Errors.

They say there is divinity in odd numbers, either in nativity, chance, or death. Shakspeare.

Make no extirpation of the natives, under pretence of planting religion ; God surely will no way be pleased with such sacrifices.

Bacon's Advice to Villiers.

Concluding ever with a thanksgiving for the nativity of our Saviour, in whose birth the births of all are only blessed. Bacon.

This doctrine doth not enter by the ear,

But of itself is native in the breast. Davies.

But ours is a privilege ancient and native, Hangs not on an ordinance, or power legislative ; And first, 'tis to speak whatever we please.

Denham. Have I now seen death? is this the way

I must return to native dust 1 O sight

Of terror, foul, and ugly to behold. Milton.

These, in their dark nativity, the deep

Shall yield us, pregnant with infernal flame. Id.

fully, the humble mushroom scarcely known, The lowly native of a country town.

Dryden's Juvenal.

They looked upon those as the true days of their nativity, wherein they were freed from the pains and sorrows of a troublesome world. Nelson.

There stood a monument to Tacitus the historian, to the emperors Tacitus and Florianus, natives of the place. Addison.

Our natives have a fuller habit, squarer, and more extended chests, than the people that be beyond us to the south. Blackmore.

The members, retired to their homes, reassume the native sedateness of their temper. Steift.

Conversation is a traffic ; and, if you enter into it without some stock

of knowledge, to balance the ac-

count perpetually betwixt you ••• the trade drops at once, and this is the reason, however it may be boasted to the contrary, why travellers have so little (especially good) conversation with natives••• owing to their suspicion, or perhaps conviction, that there is nothing to be extracted from the conversation of young itinerants worth the trouble of their bad language, or the interruption of their visits. Sterne.

NATIVITY is also used for natal-day, the day of a person's birth; in speaking of the saints; as the nativity of St. John the Baptist, 8cc. But when we say the nativity, it is understood of that of Jesus Christ, or the feast of Christmas.

NATIVITY, in astrology, the theme or figure of the heavens, and particularly of the twelve houses, at the moment when a person was born ; called also the horoscope. Casting the queen's nativity, or by calculation seeking to know how long the queen should live, &c., was made felony, an. 23 Eliz. c. 2.

NATIVO HABENDO, in law, a writ directed to the sheriff, for a lord who claimed inheritance in any villain, when a villain was run away from him, for the apprehending and restoring him to the lord.

NATOLIA, the modern name of the Lesser Asia, the most westerly part of Turkey in Asia, and consisting of a large peninsula, which extends from the Euphrates as far as the Archipelago, the sea of Marmora, the straits of Gallipoli and of Constantinople, which separate it from Europe on the west. It is bounded on the north by the Black Sea, and on the south by the Mediterranean. It is 400 miles long from east to west, and thirty-five broad, and contains the ancient Bithynia, Paphlagonia, Galatia, Phrygia, Mysia, ˆEolia, Ionia, Lydia, Doris, Pisidia, Lycia, and Pamphylia. The soil is fertile, and commerce considerable. It is governed by a beglerbes, and several sangiacs. There are many Greek Christians, besides Armenians and Roman Catholics in it.

NATRIX, in botany, the name given by Ri-vinus to a genus of plants nearly allied to the anonis, and comprehended with it in one genus by Liune, under the name of Onouis. See ONONIS.

NATRIX, in zoology, the name of the common or water snake, called also torquata, from the ring about its neck. It is not a water-animal,

properly speaking, but a land one, which, being able to swim very well, often takes the water to hunt about for frogs, which are its principal food. It grows to be much longer and larger than the viper, and does not bring forth live young ones, but great numbers of eggs, which it lays in dunghills to be hatched by the warmth of the place, or by the heat of the sun.

NATRUM, or NATRON, the nitre of the ancients, in natural history, a genuine, pure, and native salt, extremely different from our nitre, and indeed from all the other native salts, it be-ing in fact an impure natural carbonate of soda, yet capable of a regular crystallisation. It is found on the surface of the earth, or at very small depths within it ; and is naturally formed into thin and flat cakes or crusts, which are of a spongy or cavernous substance, very light ana friable, and, when pure, of a pale brownish-

white; but, as its spongy texture renders it very subject to be fouled by earth received into its pores, it is X>ften met with of a deep dirty brown, and often reddish. All that we know of this mineral production in 1'^ypt, in Arabia, in Persia, in India, in Thibet, in China, in Siberia, in the plains of the Caspian and Black Seas, in Asia Minor, and at Mexico, evinces that every where it occurs with the same relations, and in the same circumstances ; every where it is found in the midst of sands mixed with marl and clay, and is accompanied with many other salts, of which the most constant is common salt. M. Beudant, chevalier of the Legion of Honor, and member of the Freyburg academy, visited the natron lakes of Hungary, between Debretzin and Nagy-varad, and the heaths in the neighbourhood of Kis-Maria. The whole ground about the lakes, says our author, is covered with salicornia, salsola, and many other maritime plants, which are also collected for the purpose of extracting the salt by burning. The soil in which these plants grow is a micaceous quartzy sand, of a whitish or grayish color, impregnated with saline matters. At the margin of the lakes there is found a clayey substance, of a gray color, becoming black when moistened, which is always more or less mixed with

gravel. It appears that it is this matter which forms the soil of the parts where the waters are more particularly collected. It effervesces with acids, even after the carbonate of soda has been removed by lixiviation, which is caused by the presence of a little carbonate of lime, in the proportion of six parts in 100. These lakes or marshes, which in general are very shallow, dry up almost entirely in summer; but, when M. Beudant visited them, they were filled with water in consequence of the rains which had taken place on the preceding days. These waters were turbid, of a grayish color, and presented a slight tinge of red, when, on settling for some time, they had deposited their mud.

Ruckert, who was for a long time employed in extracting the natron, and who had opportunities of examining the soil, asserts that the sand sometimes includes pisiform iron ore, that it is never more than four or five feet deep, and that it rests on a bed of blue clay. He informs us also that the greater number of the lakes are dried up at midsummer, and that the natron which effloresces at the surface is then collected. The efflorescence is renewed at the end of three or four clays, and it may then be collected anew; so that a great quantity may be collected in the course of a summer. But there are deeper parts where the water never dries up, but contains a great quantity of carbonate of soda (fifty or sixty in 100, according to Ruckert), which c-ystallises during the cold nights of autumn. This saturated water is conducted to the manufactories, and reserved for the labor of winter. It appeal's evident that the carbonate of soda is never pure, and that in Hungary, as in all the other places where it is found, it is always mixed with muriate of soda, in greater or less quantity.

It is a difficult problem to determine the origin of this immense quantity of natron which is

daily efflorescing at the surface of the earth, and which is found everywhere in the waters which cover the plains of Hungary ; the data which we possess will not permit us to say any thing with certainty on this subject, and we are limited to more or less probable conjectures, which, however, deserve a certain degree of attention, because they are deduced from facts, and rest upon no hypothesis. Ruckert was of opinion that tin-sub-carbonate of soda occurred already formed in the sand or clay, at a certain depth, along with the different salts with which it is mixed, and that the waters, by filtering through the mass of earth, in order to regain their level, laid hold of those substances, which they carried to the surface of the soil. But this opinion cannot

be supported by any positive observation, because no pits have been dug which might confirm it, in the different places where the natron appears at the surface of the soil ; and farther there is no analogy to give it countenance; for nowhere in the deposits of rock salt, whether of the more ancient or modern kind, is carbonate of sod a found ; and, lastly, the waters of our seas which deposit their salt upon the shores are equally destitute of any traces of it. Now we find, however, that in this latter case, natron also is formed, although in small quantity, efflorescing at the surface of the soil ; and here its origin cannot be attributed to any thing else than the decomposition of the muriate of soda. We know in fact that this decomposition may take place through the agen-cy of several means which differ from each other only in the quickness or facility with which they operate. Advantage has been taken of this in the manufacture of artificial subcarbonate of soda, in which several methods, more or less advantageous, have been successfully employed. It is therefore also in the natural decomposition of muriate of soda, that we are led to seek the origin of the natron which occurs in such abundance in the vast plains of our continents. It is thus that M. Berthollet has explained in a manner extremely probable, the formation of this salt in the valley of the natron lakes in Egypt. This learned chemist has endeavoured to prove that it is the reciprocal action of the muriate of soda and carbonate of lime, assisted by the efflorescence, which determines the successive separation of the carbonate of soda; and which, by this means, allows the decomposition to go on ad infinitum. The inspection of the places gives every probability to this explanation; for the lakes contain a great quantity of muriate of soda, and they occur in the midst of a calcareous formation, the rocks of which project here and there through the sand which covers them.

Natron, whether native or purified, dissolves in a very small quantity of water ; and this solution is, in many parts of Asia, used for washing; where it is also made into soap by mixing it with oil. Natron reduced to powder, and mixed with sand or flints, or with any other stone of which crystal is the basis, makes thorn readily run into glass. Gold heated red hot, and sprinkled with a small quantity of this salt, melts in the same manner ; as does also iron, copper, and the regulus of antimony ; which melt much more easily than they otherwise

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would do. Mercury cannot be mixed with it by any art, and indeed will not amalgamate with fcetals if only a little of this salt be added. It U found in great abundance in many parts of Asia, where the natives sweep it up from the surface of the ground, and call it soap earth. The earliest account we have of it is in the Scriptures, where we find that the salt called nitre in those times would ferment with vinegar, and had an abstersive quality, so that it was used in baths and in washing things. Solomon compares the singing of songs with a heavy heart to the contrariety of vinegar and nitre ; and Jeremiah says, that if the sinner wash himself with nitre, his sin is not cleansed off. These are properties that perfectly agree with this salt, but not at all with our saltpetre. In the storehouses at Rosetta there are two sorts, *viz.* the common and the ‘ sultanieY a word which corresponds to the epithet royal. This latter is whiter, better crystallised, and purer than the common sort ; it is consequently stronger, and when used a smaller quantity is sufficient. Its principal use is the bleaching of cloth and thread. The method pursued at Rosetta is as follows : ††† The skeins of thread are arranged in a large copper, set in mason-work ; above them is put a layer of natron ; and then a sufficient quantity of cold water is poured in to soak both the thread and the natron. The whole is left in this situation for three days, at the end of which the thread is taken out and hung upon sticks placed over the copper. When it has drained, a fire is lighted under the copper, and the water, in which the thread was snaked, with the natron, is made to boil, after bavins received an addition of some lime. The thread is steeped and stirred about in this hot lie, and washed in it several times, without being left there. It is immediately taken to the Nile, in which it is washed and beaten ; it is then spread out to dry. When the skeins are very dry, they are again washed in the whey which runs from cheeses, and which in Arabic is called ‘ mesch.’ This is a sort of stiffening that improves the cloth, and when the Egyptians handle a soft cloth they say that it wants ‘ mesch.’

NATURE, n.a. ~\ Fr.

NAT’URAI., adj. & n. s. iiutur

NAT’URALIST, n. s.

NATURALISA’TION,

NAT’URALISE, v. a.

NAT’URALLY, adv.

NA’TURALNESS, n. s.

NATU’RITY.

lectively ; physical science; native state; constitution ; original disposition or sensation ; regular or ordinary course of things ; settled habit; reality; sort; species; see the ample explanation below from Boyle : natural is, pertaining to, produced or effected by, nature, or mere nature (hence illegitimate) ; tender ˆaffectionate; unaffected; not forced or far-fetched: a natural is an idiot ; one by nature a fool ; a gift of nature; and, in an obsolete sense, a native or original inhabitant of a place : naturalist, a student of natural history: naturalisation, the art of investing aliens with the privileges of native or natural subjects ; the other derivatives VOL XV.

nature ; Teut. Ital., Span., Port., and Lat., na~ ˆ titra. A supposed ‘ goddess and governess of the material and animal world ; the) world considered col-

follow these senses : naturity we only find used by Browne for, state of being produced by nature.

Our sovereign good is desired naturally ; God, the author of that natural desire, hath appointed natural means whereby to fulfil it ; but man, having utterly disabled his nature unto these means, hath had other revealed, and hath received from heaven a law to teach him, how that which is desired naturally, must now supernaturally be attained. Hooker.

Thou, Nature, art my godilˆs ; to thy law My services are bound.

Shakspeare. King Lear. We’re not ourselves,

When nature, being opprest, commands the mind To suffer with the body. Id.

A credulous father, and a brother noble, Whose nature is so far from doing harms, That he suspects none ; on whose foolish honesty My

practices ride easy. ‘id.

My end Was wrought by nature, not by vile offence.

i/iafai/‘eair.

To leave his wife, to leave his babes. He wants the natural touch. Id. Macbeth. That a monster should be such a natural.

Sliakfpeare. That part

Was aptly fitted, and naturally performed. <. Oppression, in many places, wears the robes of justice, which domineering over the naturals may not spare strangers, and strangers will not endure it.

Raleigh’s h.isay.

The Spartans were nice in point of naturalisation ; whereby, while they kept their compass, they stood firm, but when they did spread they became a wind-fall. Bacon.

When it was said to Anaxagoras, the Athenians have condemned you to die ; he said, and nature them.

Id.

The lords informed the king, that the Irish might not be naturalised without damage to themselves or the crown. Davies.

These things so in my song, I naturally may

show ;

Now as the mountain high ; then as the valley low ; Here fruitful as the mead ; there, as the heath be

bare ; Then, as the gloomy wood, I may be rough, tho’

rare. Drauton.

The wretcheder are the contemners of all helps ; such as, presuming on their own naturals, deride diligence, and mock at terms when they understand not things. Ben Joitani.

1 will now deliver a few of the properest and tia-turallest considerations that belong to this piece.

tt’otlOH.

To consider them in their pure naturals, the eatl’s intellectual faculties were his stronger part, and thp duke, his practical. ‘.

The inhabitants and natural* of the place should be in a state of freedom.

Abbot’s Description of the World.

Wheresoever mere nature is, she is still improvident of future good, sensible of present evil, inconstant of good purposes. JB/>. Hall.

Although life lx> naturallii sweet, yet a little discontent makes us weary. 7ii.

Let the postilion nature mount, and let The coachman art be set. Coulfii.

Why leaped the hills, why did the mountain*

shake, What ttiled them their fixed IWII/-M to forsake.

u.

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When the Apostle says, we were by nature children of wrath, he means not that which is the usual signification of nature, for then it were not their fault, but the fault of him that made them such ; but it means an abiding and vile habit, a wicked and lasting custom. Jef. Taylor.

I deny not but all persons naturally are so that they cannot arrive at Heaven, but unless some other principle be put into them, or some great grace done for them, must for ever stand separate from seeing the face of God. Id.

I call that nntuml religion which men might know, and should be obliged unto, by the mere principles of reason, improved by consideration and experience, witbout the help of revelation.

WHUat.

The nature of brutes, besides what is common to them with plants, doth consist in having such faculties, whereby they are capable of apprehending external objects, and of receiving pain or pleasure from them. Id.

Between the animal and rational province, some animals have a dark resemblance of the influxes of reason : so between the corporeal and intellectual world there is man participating much of both natures. Hole’s Origin of Mankind.

If their dam may be judge, the young apes are the most beautiful things in nature. Glanville.

This cannot be allowed except we impute that unto the first cause which we impose not on the second ; or what we deny unto nature we impute unto nuturity.

Browne.

Admirable artifice ! wherewith Galen, though a mere naturalist, was so taken, that he could not but adjudge the honor of a hymn to the wise Creator.

More.

Profit or pleasure there is none in swearing, nor any thing in men's natural tempers to incite them to it. For, though some] men pour out oaths so freely as if they came naturally from them, yet surely no man is born of a swearing constitution.

Tillotson.

This would turn the vein of that we call natural, to that of legal propagation ; which has ever been encouraged as' the other has been disfavoured by all institutions. Temple.

Encouragement may be given to any merchants that shall come over and turn a certain stock of their own, as naturalization, and freedom from customs the two first years. Id.

The thoughts are to be measured only by their propriety, that is, as they flow more or less naturally from tlie persons and occasions. Dryden.

He must understand what is contained in the temperament of the eyes, in the naturalness of the eyebrows. Id.

A dispute of this nature caused mischief in abundance betwixt a king and an archbishop. Id.

Such unnatural connexions become, by custom, as imturul to the mind as sun and light : fire and warmth go together, and so seem to carry with them as natural an evidence as self-evident truths themselves. Locke.

Take the thoughts of one out of that narrow compass he has been all his life confined to, you will find him no more capable of reasoning than a perfect natural.

Id.

All men are naturally in a state of perfect freedom to order their actions, and dispose of their possessions and persons, as they think n(, within the bounds of the law of nuture. Id.

This answers fitly and naturally to the place of the tbyss before the deluge, inclosed within the earth.

Burnet.

He rises fresh to his hammer and anvil ; custom has naturalized his labour to him. South.

If sense be not ceitain, in the reports it makes of things to the mind, there can be itaturally no such thing as certainty of knowledge. Id.

The naturalness of a desire is the cause that the satisfaction of it is pleasure, and pleasure importunes the will ; and that which importunes the will puts a difficulty on the will refusing or forbearing it.

Id.

What can be more natural than the circumstances in the behaviour of those women who had lost their husbands on this fatal day 1 Addismi.

It is not credible that the naturalist could be deceived in his account of a place that lay in the neighbourhood of Rome. Id.

Only nature can please those tastes which are un-prejudiced and refined. Id.

These, with the pride of dogmatizing schools, Imposed on nature arbitrary rules ; Forced her their vain inventions to obey, And move as learned frenzy traced the way.

Blackmore.

To be ambitious of true honour, of the true glory and perfection of our natures, is the very principle and incentive of virtue. Sherlock.

Simple nature to his hope has given,

Beyond the cloud-topt hill an humbler heaven.

Pope.

Nature and Homer were, he found, the same.

Id.

Nature and nature’s laws lay hid in night, God said, let Newton be, and all was light. Id.

If there be any difference in natural parts, it should seem that the advantage lies on the side of children born from noble and wealthy parents.

Swift.

Enemies, by taking advantage of the general naturalization act invited over foreigners of all religions.

Id.

If solid piety, humility, and a sober sense of themselves, is much wanted in that sex, it is the plain and natural consequence of a vain and corrupt education. Law.

When you have once habituated your heart to a serious performance of holy intercession, you have done a great deal to render it incapable of spite and envy, and to make it naturally delight in the happiness of mankind. Id.

Man's rich with little, were his judgment true, Nature is frugal and her wants are few. Young.

The works, whether of poets, painters, moralists, or historians, which are built upon general nature, live for ever ; while those which depend for their existence on particular customs and habits, a partial view of nature, or the fluctuation of fashion, can only be coeval with that which first raised them from obscurity. Reynolds.

The levellers only change and pervert the natural order of things ; they load the edifice of society, by setting up in the air what the solidity of the structure requires to be on the gronnd. Burke. But nature works in every breast With force not easily suppressed;

And Dick felt some desires, That, after many an effort vain, Instructed him at length to gain

A pass between his wires. Cowper.

Nature is but a name for an effect

Whose cause is God. Id.

NATURE. Of this word which occurs so frequently, with significations so various and so difficultly defined, Boyle has given the following explication : ××× Nature is sometimes used for the

NATURAL HISTORY.

author of nature, Natura naturans ; as, Nature has made man partly corporeal and partly immaterial : for Nature, in this sense, may be used the word Creator. Naturesometimes means that on whose account a thing is what it is, and is called, as when we define the nature of an angle : for nature, in this sense, may be used for essence, or quality. Nature sometimes means what belongs to a living creature at its nativity, or accrues to it by its birth, as when we say a man is noble by nature, or a child is naturally froward : this may be expressed by saying, the man was born so, or the thing was generated such. Nature sometimes means an internal principle of local motion, as we say the stone falls, or the flame rises, by na-ture : for this we may say that the motion up or down is spontaneous, or produced by its proper cause. Nature sometimes signifies the established course of things corporeal, as nature makes the night succeed the day : this may be termed established order, or settled course. Nature means sometimes the aggregate of the powers belonging to a body, especially a living one ; as when physicians say that nature is strong, or na-ture, left to herself, will do the cure : for this may be used constitution, temperament, or structure of the body. Nature is put likewise for the system of the corporeal works of God ; as there is no phoenix or chimera in nature : for nature, thus applied, we may use the world, or the universe. Nature is sometimes, indeed commonly, t;iken for a kind of semi-deity : in this sense it is best not to use it at all. If I were to propose, continues he, a notion of nature less ambiguous than those already mentioned, and with regard to which many axioms relating to that word may be conveniently understood, I should first distinguish between the universal and the particular nature of things. Universal nature I would de-tine to be the aggregate of the bodies that make up the world in its present state, considered as a principle, by virtue whereof they act and suffer according to the laws of motion prescribed by the Author of all things. And this makes way for the other subordinate notion, since the particular nature of an individual consists in the general nature applied to a distinct portion of the universe; or, which is the same thing, it is a particular assemblage of the mechanical properties of matter, as figure, motion. Boyle's free Enquiry.

NATURAR, in heraldry, is used where animals, fruits, flowers, &c., are blazoned with the colors they naturally have, though different from

the common colors of heraldry; and this is to prevent their armories being accused of falsity, when blazoned with the names of colors unknown in heraldry.

NATURAL HISTORY is a generic term, once of considerable use, of which we are required perhaps to take some notice. Strictly taken, it would comprehend the development and classification of all the divisions and productions of nature: but this is a sense in which it has been rarely applied. It has been more commonly used for a systematic description of that part of nature which is immediately connected with man and human wants: as, for the history of the natural products of the earth and atmo-

sphere, whether mineral, vegetable, or animal; and as bearing the same relation to natural philosophy as physiology does to physics. Thus taken, it has a near approach to various studies; as, for instance, those of anatomy, botany, chemistry, husbandry, zoonomy, &c. ; and might correctly enough be contemplated as that peculiar genus of science of which these are only species.

Thus limited, natural history is a science both useful and entertaining: it is intimately connected with all the other sciences; and with all the arts, from the simplest and rudest to the most complicated and most elegant. We cannot well avoid becoming more or less acquainted with the manners of animals, the economy of vegetables, and the general appearance of nature. From an acquaintance with these many advantages have already accrued to man ; and, from a more intimate knowledge of them, many more will doubtless be derived. The husbandman ought to know the characters of the tame animals which he employs ; what advantages are to be derived from them ; whether there are others that would suit his purpose better; where they are to be found ; how they may be procured, and how supported ; the qualities of the soil which he cultivates, and the means of managing and of improving it ; the nature of the grains and grasses which he raises, and whether he might not, with advantage, substitute a different species for that in common use. Even the meanest mechanic should have a pretty accurate knowledge of many of the qualities of those natural objects with which his craft is connected. The fine arts, though usually considered as the peculiar province of imagination, depend greatly also upoi. natural history. Both in music and painting, the study of nature alone can ensure success ; and, in the writings of the poets, images are perpetually introduced from external nature. Many of the transformations celebrated by Ovid are founded on facts

in the natural history of animals and plants ; and Lucretius and Virgil are very minute in describing the habits of various animals, and many species of the vegetable kingdom. As modern poets have not the same machinery of gods and goddesses, nymphs, fawns, and satyrs, which were so serviceable to the heathen poets, they are compelled to be yet more industrious in studying the scenes of Nature. By attending to this principle, Thomson, while he led the way to others, has procured for himself a distinguished place among those whose names are immortal : and Cowper, looking still more intently .ind intelligently ‘ through creation to her God,’ lias been not inaptly termed the modern ‘ poet of Nature.’

From the vicissitudes of the seasons acting upon the senses ; from the presence of surrounding objects ; from the necessity of deriving from them food, clothing, and shelter; natural history must have been a.study of the first importance to man, and attended to from the earliest periods of society. Before the invention of letters, however, the observations and discoveries of individuals were neither likely to be communicated to those at a distance, nor recorded for the information of posterity. In a more polished state of society the case is different: and hence we find Alexander

the Great decreeing a collection of animals for the examination of Aristotle ; and wild beasts, from every quarter of the globe, produced and exhibited in the amphitheatres at Rome. Yet Aristotle is almost the only ancient writer on zoology that merits attention ; for even Pliny and ./Elian, with this great example before their eyes, offer us nothing but crude collections, discriminated with little taste or judgment, truth and falsehood being blended in one common mass: and for many succeeding years, from various causes, all Europe is well known to have been immersed in ignorance and credulity as to the most common facts of this study.

Natural history was not one of the favorite studies of the revivers of literature ; yet the scholars of that period displayed a degree of industry ###which may appear incredible. The voluminous labors of Gesner and Aldrovandus are instances. They are rude quarries from

which most valuable materials may be dug by such as will undergo the fatigue, and possess the judgment necessary to discriminate them.

Towards the end of the seventeenth century the sciences we have adverted to began to be generally cultivated. Among our countrymen, Kay, Woodward, Collinson, and Edwards, prosecuted the study of natural history with singular success, and they have been followed in the same track by many others, scarcely inferior in industry or abilities ; none of whom however are more entitled to praise than the indefatigable Pennant. But to the celebrated Linnaeus is justly attributed the honor of having first formed natural history into a system : and he may hence perhaps be reckoned its greatest benefactor. Buffon, it is true, by uniting extensive knowledge, ingenuity, and elegance, has contributed, in a signal manner, to diffuse among the various ranks of society an ardent desire to obtain a more intimate acquaintance \vith the same study: and his attempts have been ably seconded by those of Wildenow, Pul-teney, Shaw, and Smith.

Books on natural history have been very pro-peily and extensively put, of late years, into the hands of the young. The slightest attention on the part of their authors will render such books interesting, and they cannot fail of being eminently useful. It is under this impression that iu the present work we have allotted the utmost extent we have been able t►►* a description of the various objects of this study : and have selected for our descriptions those species whose forms or haliits are most striking and worthy of notice, lie who studies nature with a careless eye only appears to distinguish the animal from the vegetable, and the vegetable from the mineral kingdom : he notices not the nice gradations by which these different orders of beings run, as it were, into one another; he marks only the more prominent features, and the more glaring colors: the more remarkable differences force themselves upon his observation; but he passes on too rapidly to discern, or even examine, whether these are seeming or real, whether they are divided by a firm and insuperable barrier, or connected by intermediate links; and would think it incredible that the philosopher should declare himself at a loss to give such a definition of any

one of these divisions as might absolutely exclude the others. Yet philosophers have felt this difficulty, and continue to feel it. Let us glance at their difficulties in arranging the different objects even of this lower part of the creation, and we shall see the extent and importance of the study of natural history.

When they find animals fixed to a particular spot, extremely imperfect in their powers of sensation, and displaying scarcely any instinct or sensorial power, they can hardly consider them as endowed with any principle superior in its nature to vegetative life. Again, when they observe plants unfolding to the rays of the sun their leaves or flowers, which shrink together at the fall of night; receding, as if afraid of injury from objects that approach them; and, in whatever situation the seed be sown, or the shoot planted, constantly growing in that direction in which they can best enjoy the influence of light and air ; it appears at first sight almost unfair t& deny this class of beings sensations, desires, and even design. The sensibility of the mimosa, the art of the dionaea muscipula, the affectionate care with which the leaves of the tamarind tree contract and wrap themselves round the tender fruit, to protect it from the nocturnal cold, are so many instances in which vegetables make an approach towards some of the most eminent characteristics of animals. The oyster and other shell fishes, and almost all zoophytes, though ranked in. the animal kingdom, seem, again, to possess few of the privileges of animal life.

The analogies between animals and vegetables, which have been traced by philosophical observation, occasion other difficulties in the attempt to fix the boundary between these two kingdoms. The bodies, as well of plants as of animals, consist of fluids and solids; they have both vessels designed to contain the fluids, and glands to secrete different juices: while the blood circulates through the bodies of animals, the sap of vegetables ascends and descends, so as to produce the same effects on the vegetable, which the mo-tion of the blood, by the force of the heart and the arteries, produces on the animal system. These are but a few of the resemblances which have been observed between the species of the animal and those of the vegetable kingdom. Almost every one of the parts common to animal bodies has been represented by one naturalist or another as matched by some correspondent part in vegetable bodies. Such analogies are sometimes plain and striking, and sometimes scarcely perceptible, or merely imaginary. They afford, however, an agreeable subject of speculation ; and it cannot be denied that they increase the difficulty of ascertaining the limits by which these two departments of nature are divided. But, however numerous and strong the analogies between animals and vegetables, however difficult it may be to discern the precise line which separates the one kingdom from the other, yet the leading characteristics are sufficiently distinct. The privileges which animals enjoy above the other parts of the creation are in most instances highly conspicuous.

One of the most eminent of these is their power of loco’tnotion. Klein,

with sufficient

propriety, assumes this as the great characteristic by which animals may be distinguished from the other orders of beings. It does not hold indeed in every instance, for there are some plants of a nature almost as wandering aa the most migratory of the animal tribes; such as the fragaria, or strawberry, as a land-plant, and the valisneria as an aquatic: but these anomalies are not common, and vegetables may in general be regarded as destitute of locomotion. They seem to enjoy a species of life, and display on many occasions a degree of sensibility, or something very like it; but they are fixed, each to a peculiar spot, where they spring up, expand into full growth, and at length wither and decay. Animals, without suffering any external impulse, readily move fron place to place, by virtue of an inward principle, superior in its nature to vegetative life. Some enjoy this power or property in a more eminent degree than others; some are more disposed than the rest of their fellows to exert it; and some, again, possess the power in a very inferior de-gree, and discover but a faint inclination to avail themselves of it. We admire the rapid flight of the eagle, and the swiftness of the horse and the greyhound; we observe many of the swiftest and most vigorous animals sink into lethargic indolence, till roused by some peculiarly powerful motive ; the snail, the sloth, but more particularly the oyster, the limpet, and other shell-fishes, both in their powers of self-motion, and in their dispositions to exert them, rise but very little above those vegetables which are more remarkable for sensibility.

Sensation is usually regarded as another characteristic of animals : it is intimately connected with their powers of locomotion, and even necessary to prompt them to the exertion, of those powers. Did we not feel, we should never be roused to action. Yet several vegetables, among which the mimosa or sensitive-plant is one of the most remarkable instances, appear to possess something like sensibility. It is scarcely possible to determine upon what principle in their nature the emotions which these kinds of plants display on certain occasions may

depend. Is it owing to something peculiar in the structure of their parts, or in the matter of which they are formed ? or are they actually informed by a sentient principle ? This is perhaps one of those intricate cases in which truth is removed from our view, even beyond the reach of experiment. Yet, if we may fairly venture on this occasion to reason from general analosy, we must conclude that these plants are equally destitute of a conscious sentient principle with the other kind of the vegetable kingdom. The structure of their parts is not that of an animal, but of a-vegetable body ; they are, like other vegetables, fixed to a particular spot : in all their other characters too they resemble not animals but vecHabh's; and even those phenomena in which it may be imagined that they display indic-.itions of sensibility are of such a nature, that no decisive inference can be deduced from them. Animals are endowed with various organs and powers of sensation, which serve to make them acquainted with the different properties of surrounding objects. Most of them see hear, taste, touch, and

smell. They all possess these, or a part of these powers of sensation, in an unequivocal manner. The senses are not indeed equally perfect in all; and some species appear to enjoy only a part of them. In some animals th<; sight, the hearing, the touch, the taste, or the smell, is remarkably dull ; and in others exquisitely delicate and acute. The eye of the mole receives but a faint glimmer of light; the ear of the ass is insensible to the harmony or melody of sounds; the sight of the ounce, on the contrary, is wonderfully acute; and the touch of the spider exquisitely delicate. Possibly the same feelings may not communicate to all animals the same images and sentiments : what is sweet to one animal may perhaps be bit-ter to another ; what is beautiful to one specie* may appear to another ugly or disagreeable ; an odor which to this animal is sweet-smelling may be a stench in the nostrils of that. All sensations, however, communicate to the animal some useful knowledge of the qualities of sur- . rounding objects; some knowledge suitable to his character and his circumstances.

But sensibility requires the beings to whom it belongs to possess some superior powers. Organs of sensation serve merely to carry on an intercourse between some internal principle in the animal possessed of them, and external nature. This internal principle exalts animals highly above every other arrangement of beings ; and is, besides, so much diversified in different kinds and species of animals, and in different individuals, as to create the most remarkable distinctions among them. Perception must be common to all animals; without it

organs of sensation would be useless. Perception is indeed scarcely any thing else but another word for sensibility. McHHiri/ appears to be no less necessary to animals than perception ; to receive impressions from external nature would be but a trifling privilege, were those impressions of so evanescent a nature as to be effaced the next moment after they were communicated. Animals, without this power, could perform no voluntary functions. To render them equal to such functions, it seems indispensably necessary that they be able to connect the past with the present. Accordingly, every animal whose manners and economy have been observed with any considerable degree of attention appears to be more or less capable of remembrance. The docility of the domestic animals is a sufficient proof that they are endowed with this faculty : the cunning, and even the ferocity of beasts of prey, prove the same fact with respect to themselves : the complex and wonderful economy of the bee, the beaver, the crow, the birds of passage in general, and various others of the inferior animals, whose manners have been often contemplated with admiration, shows that their retentive powers are remarkably tenacious of the impressions made upon them. The human species possess the faculty of memory in a very eminent degree ; and the arts by which they have learned to improve and assist it render it a more important feature in their character, than in that of any of the other species in the animal creai:on.

lUit we cannot conceive a being to possess the powers of perception and memory, and yet no*

be conscious of its existence : this consciousness must therefore be allowed to be another of the internal powers of animals. With the powers of perception, remembrance, and consciousness, animals are observed to be also endowed with certain affections, and to be susceptible of certain emotions. Joy, grief, love, hatred, gratitude, resentment, fear, courage, witK a number of other similar principles, reside in the human breast, and are to man the great springs of action. The inferior animals appear to be susceptible of the same emotions,

and capable of many both of the selfish and the social affections which distinguish the human character. But neither do all the species or individuals of any one kind possess all these affections and passions in the very same degree ; nor are the dispositions and affections of the different kinds in any respect the same. One kind or species is ferocious and cunning; in another courage appears united with generosity : one is remarkable for sloth and inactivity ; another is restlessly active : one is grateful, submissive, and affectionate ; another of a froward, untameable spirit, insensible to kindness, and incapable of attachment : one is docile and intelligent; another dull and stupid. Besides these emotions, affections, and passions of a more generous and refined nature, animals are likewise subject to certain appetites and feelings of a different sort: such are the appetites for food, and for the procreation of the species ; the sense of bodily pleasure and of bodily pain. These are more uniformly common to animals in general than the former : to receive the requisite supplies of food, and to reproduce the species, are properties still more essential to the animal character than the more refined sentiments and affections.

The internal qualities which have been enumerated are generally allowed to be common to all the more perfect animals, although diversified in different species and different individuals. But even these, ††† the power of self-motion, or-gans of sensation, perception, consciousness, memory, appetites, affections, and passions, ††† are not sufficient to complete the character: they need some other powers to call forth, to regulate, and to restrain their energy ; something on which they may act, and which may connect them, as it were, with one another. Animals are actually endowed witli other internal powers than those yet mentioned : they compare objects presented to them ; they judge between the true and false ; between nearness and distance: they distinguish between beauty and deformity; they can discern order from confusion. Their other powers furnish, as it were, the materials; these combine and separate, and arrange them. The operation of these several faculties is succeeded by the determination of the will ; a power which is necessary to complete the character of a thinking, animated being. No circumstances in the situation of animals, no particulars in their form, or bodily powers, or mental dispositions, give rise to more remarkable disparities among them, than those which depend on their powers of comparing, and of judging between different objects. These hold so important a rank among the other powers, that, wherever thev are in the smallest

degree diversified, they produce the most remarkable diversities of character. By his superiority in these respects man is eminently distinguished above the rest of the animal kingdom ; so eminently, indeed, that he is the lord of all other beings, and the rest are his slaves, or his unequal enemies. The same law prevails throughout all animated nature. The more perfect the powers of comparing and judging in any particular order or kind, so much the more powerful, respectable, and happy is that division. Superior address often renders a smaller and more timid animal an overmatch for one that is larger, stronger, and even more ferocious.

But the inferior animals are so remarkably deficient in the reasoning and thinking powers, when compared with man, that human pride has been tempted to deny them entirely the possession of such powers. Though we find them such useful assistants, and at times such formidable enemies, we would willingly degrade them to a rank in the order of creation still lower than that which nature has assigned them. We delight to represent them as destitute of judgment, and guided only by what we call instinct. We observe that even the most sagacious among them are incapable of that variety of minute distinctions which our reasoning faculties enable us to make : they cannot take so full a review of the past, nor look forward with so penetrating an eye towards the future : they do not accumulate observation upon observation, or add to the experience of one generation that of another : their manners do not vary, nor their customs fluctuate like ours: their arts remain always the same, and are not liable either to degenerate or to be improved : the crow always builds its nest in the same way ; every hen treats her young with the same measure of affection ; even the dog, the horse, and the sagacious elephant, seem to act rather by association than with design. From such hasty observations as these it was inferred by Descartes that brutes are directed in their actions by some mysterious influence, which im-pels them to employ their powers mechanically and unintentionally in performing actions beneficial to themselves, and suitable to their nature and circumstances.

There are opposite opinions, however, that have been carried to as wide an extreme. One of the greatest philosophers among the ancients, Pythagoras, was so fully convinced that the brutes possess the same powers of intelligence as men, that he represented them to his disciples as animated by souls which had previously acted a part in human bodies, and, for that reason, enjoined them to treat those their humbler brethren with gentleness and humanity, and to beware of ever shedding their blood. The same opinion still prevails through the east : and has such an influence on the manners of the Gentoos, that

they will perish of hunger rather than shed the blood or eat the flesh of an animal. This opinion, as well as that which degrades the brutes to the low character of pieces of mere mechanism, have equally originated from prejudice or careless observation. Since natural history has be-gun to be more diligently cultivated innumerable observations made on the manners and

economy of the inferior animals, prove that, if they he guided by instinct, that instinct is by no means a mechanical principle of action, but, in its nature and susceptibility of improvement, approaching nearly, in many cases, to the character of human reason. The manners of no one species among the brutes are uniformly the same in all the individuals belonging to it. Even in performing those actions in which they are said to be guided by unvarying instinct, different individuals display different modes of conduct. It is probable that, if we were to examine their manners and economy with the same minute and careful attention with which we observe the conduct of our own species, we should find those of their actions which we call instinctive much more diversified than we imagine : the general resemblance,••• the family likeness, would no doubt still hold ; but we should sureiy discover the character of the individual to be distinctly mark-ed, as well as that of the species. The laws of analogical reasoning do not justify the idea that the brutes act, on any occasion, absolutely without design. In many instances they undeniably act with design : the dog obeys his master ; he traces his footsteps in order to overtake him : he even attempts to make returns of gratitude for the kindness with which he is treated. Others of the inferior animals behave in a similar man-ner. It seems therefore more probable that such animals, even in those instances in which we can-not distinguish the motives which actuate them, or the causes by which they are instigated, act not altogether without design, and extend their views, if not a great way, yet at least a certain length forward, ••• than that they can be, upon any occasion, influenced by anomalous feeling, or over-ruled by some mysterious influence, un-der which they are nothing but insensible instruments.

The facts from which this induction is drawn have of late forced themselves on observation, in such a manner as to give rise to a very false theory of a kind still different: in which it lias been thought better to degrade mankind nearer to the same level with the brutes, than to elevate the brutes to the rank usually assigned to mankind. The human mind has been represented as a bundle of instincts, only a little larger than those bundles of the same materials which have been bestowed on the brute creation. Observing that the inferior animals seem, on many occasions, to act upon the same principles with mankind, and unwilling to allow that the former can ever act with design ; the author of this theory has contrived to explain the phenomena by denying design to his own species. But we will not tamely surrender our rights : we will share them with other animals, raiiier than be entirely deprived of them. We are conscious of comparing ideas and of forming designs. If tiles? operations be called instincts, ??? be it so; this i.s not to advance a new doctrine, but to propose the use of it in a new sense. Let mankind still be allowed to reason, and to act with design, even though it must be granted that the brutes too reason, but not so skilfully, and form designs, but designs much less extensive than those ot' mankind.

We not only accomplish such purp

propose to ourselves, by the use of such means as prudence suggests ; but we are also subject to laws, by the influence of which our conduct, whatever it be, naturally produces certain effects on our character and circumstances, which we neither previously desired nor foresaw. The drunkard, for instance, sits down only to swallow a liquor of which he is fond, or to join in that noisy mirth which reigns among his fellows; but he insensibly acquires a habit which he did not think of, and by indulging in that habit unintentionally produces very unhappy changes in his health and circumstances. The benevolent man, in the same manner, when he interferes to relieve his brother in distress, does not probably attend to all the effects which his conduct in this instance is likely to produce, either to himself, or to the person whom he relieves: and of human actions in general it may be observed, that their consequences always extend much farther than the design or foresight of the agent. Beings of superior intelligence might regard mankind a? incapable of design, with just as much reason as we have to deny the brutes any guiding principle superior to blind and simple instinct. We, however, are conscious of design ; though our designs are commonly narrow, ami our views limited : why, then, consign the inferior animals, in every instance, to the guidance of an unmeaning

impulse? Were it proper to enter more minutely at present into a discussion of this point, it might be easy to prove, by an induction of particulars, that brutes actually compare ideas and deduce inferences; and when we consider their docility, and mark the variety of their manners, it appears almost absurd to deny that they form designs, and look backward on the past, and forward towards the future, as well as ourselves. We may conclude then, with respect to inferior animals, that they possess, in general, the powers of perception, memory, consciousness; with various affections, passions, and internal feelings, and even, though perhaps in a meaner degree, those powers of comparing and judging which are necessary to enable an animated being to form designs, and to direct its actions to certain ends. Their prospects towards the future are evidently very confined : they cannot review the past with such a steady eye as man ; imagination is not with them so vigorous and active as with us; it is limited within a much narrower range. But still they are not absolutely confined to present sensations; they connect some part of the past and of the future with the present. When we contemplate their manners, we behold not social intercourse regulated among them by the same forms as among men : their characters and circumstances differ so considerably from ours, that thout'h the great outline of right and wrong may, wherever perceived, remain the same to them as to us ; yet the application of that outline to particular cases must be very different among them from what it is with ourselves. Thus philosophers have fancied imaginary states of hum.;1) society, in which the present laws of distributive and commutative justice could not be obˆrved : but, even it) such states of society, the fundamental principles of justice would contin.e o'>i;.;atory, an*.! \< ul 1 (inly be varied in their appi. cation.

Brutes appear, in short, to possess, but in a more imperfect decree, many of the same sensitive faculties as mankind. Instinct must always be a simple principle, an original feeling ; the only business of which is to rouse to action, ??? to call the reasoning or comparing powers to exert themselves. To talk of instinctive principles that admit of

improvement, and accommodate themselves to circumstances, is merely to introduce new terms into the language of philosophy. No such improvement or accommodation to circumstances can ever take place without a comparison of ideas, and a deduction of inferences. When we consider with how much difficulty that acquaintance with the manners and customs of mankind, which we call knowledge of the world, is obtained, we cannot be surprised that even philosophers should be so imperfectly acquainted with the more minute particulars in the manners and economy of the brutes. To man their manners are much less interesting than those of his own species ; and there are, besides, many difficulties to prevent us from becoming intimately acquainted with them, however earnestly we may turn our attention to this object* If to those powers by which animals are so eminently distinguished above the species of the vegetable and the mineral kingdom, we add the peculiarities of their form, of the structure of the interior parts, and of their exterior covering, ††† the happy adaptation of all their organs to the purposes for which they seem intended by nature, ††† and the wise provision by which they are enabled to continue their kind ; we cannot but consider them as constituting by far the most eminent order among the works of creation. They alone are capable of happiness. The rest of the universe seems to be intended for their accommodation. The enjoyments which they are formed to receive, the duties which they are destined to fulfil, and the laws by which the duty and the happiness of all animals are so closely connected, afford the most eminent proofs of the perfection of the divine nature, that the works of creation exhibit. The inferior parts of nature are beautiful, or grand, or regular, only in proportion as they are formed to excite certain sentiments in the minds of animated, thinking beings ; at least, were they not calculated to contribute to the happiness of such beings, by communicating to them agreeable sentiments, their order, magnificence, and beauty, would be lost, or incapable of serving any visible end. Yet all this has no possible connexion with the possession of an accountable and immortal principle. Matter and spirit are equally the works of the Creator, and perhaps equally created out of nothing ††† for we have no more reason beyond what our own pride would suggest to us to conceive that spirit is an emanation or extension of the essence of the Creator than that matter is. Each of them, therefore, as the works of an omnipotent and benevolent Creator, is entitled to reverence. Brutes are not immortal, for they have no principle that is designed to be so : but till it be demonstrated that the plastic substance of matter, admitted to be capable of instinct, is necessarily and absolutely incapable of consciousness, memory, reflexion, and judgment, the experienced train of facts daily and hourly-starting around us should

reasonably induce us to believe them possessed of these internal senses in conjunction with mankind, though in a far subordinate and less perfect degree.

Natural history, then, comprises in its general scope the history of minerals, plants, and animals : the first of which differ from the two last by being produced fortuitously, growing by external accretion, or the mere juxtaposition of new matter alone ; and being only capable of destruction by mechanical or chemical force ; while the other two, on the contrary, are produced by generation, grow by nutrition, and are destroyed by death ; are actuated by an internal power, and possessed of parts mutually dependent, and contributory to each others' functions. But, while animals and vegetables thus agree in their general characters, they also possess features of distinction, which it is never difficult to lay hold of, excepting in the few anomalous cases to which we have already adverted. While both agree in an origin by generation, growth by nutrition, and a termination by death ; in an organised structure, and an internal livirjg principle, they differ in the power with which the living principle is endowed, and the effects it is capable of exerting. In the plant it is limited, so far as we are capable of tracing it, to the properties of mere irritability and contractility ; in the animal it superadds to these properties those of muscularity, sensation, and voluntary motion. Animals differ from animals in the greater or less perfection with which the faculties connected with sensation are allotted to them. Man differs from, and is raised above the whole, by the possession of a rational and immortal spirit.

The various classifications under which these departments are usually considered are best discussed under the separate articles of the departments themselves. We have therefore already noticed plants under BOTANY, metals and minerals under MINERALOGY, and reserve the classification of animals for ZOOLOGY : the present article may be regarded as a kind of introduction to the whole.

The Lmnaan system of natural history, which we have followed with some modifications, is divided into the five branches of class, order, genus, species, and varieties, with their names and characters. Of the three grand divisions, *viz.* the animal, vegetable, and mineral kingdoms, the animal of course ranks highest in the comparative estimation of this great naturalist; the next is the vegetable, and the lowest is the mineral kingdom. The animal kingdom is divided into six classes, formed from their internal structure, and is thus exhibited :

Classes

1. Mammalia *“Heart, with two \ viviparous. V auricles and* two ventri- ,.

I cles ; blood i v warm & red. J i

2. Birds V. warm & red. } oviparous,

3. Amphibia /-Heart, with one -\ lung voluntary.

4. Fishes

\ auricle and i

< one ventri- >

I cle ; blood i

v cold and red.)

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5-Insects fHeart, with one-\ have antennae.

auricle and/

no ventricle ; V

san ies cold i 6. Vermes v. and white. J tentacula.

The above six classes are divided into orders, and the orders into genera, and the genera into species and varieties.

Class I. MAMMALIA.

Names of the Number of genera in

orders. the several orders.

Primates … 4

Bruta …. 9 Ferae …. 10 Glires …. 10 Pecora … 8

Belluae …. 4 Cete 4

Class II. AVES. Accipitres Pic-* Anseres Grallae . Gallinae Passeres .

Class III. AMPHIBIA. Reptilia …. Serpentes

Class IV. PISCES. Apodes . Jugulares Thoracici Abdominales Branch iostegi . Chondropterigi

Class V. INSECTS. Coleoptera Hemiptera Lepidoptera Neuroptera Hymenoptera . Diptera Aptera

Class Vf. VEUMES. Intestina Mollusca Testacea Zoophyta Infusoria

49

4 26 13 20 10 17

90

12

6

21

16

10

7

72

55

14

3

7

25 12 15

131

21 31 36 15 15

118

Such is the tabular view of the animal kingdom, according to the Linnacan system ; but new species in the several genera are continually discovered, and not unfrequently new genera likewise are added to the orders. See the several orders and genera in the alphabetical arrangement of this work.

NATURAL ORDERS in botany. See BOTAXY. index.

NATURALISATION, in law. No aliens can be naturalised unless they have received the sacrament within one month before the bringing in of the bill, and taken the oaths of allegiance and supremacy in the presence of parliament. A person who is naturalised may have lands by descent as heir at law, as well as obtain them by purchase ; but he is disabled from being a mem-ber of the privy council or parliament, or from holding offices; 7 Jac. I. c. 2; 12 Will. III. c. 2. All children born out of the king's dominions, whose fathers were or are subjects of this kingdom at the time of their birth, are adjudged to be natural born subjects of this realm, except children of parents attainted of treason, or that are in the actual service of a foreign prince at enmity with us: 4 Geo. II. c. 21. Every foreign seaman who in time of war serves two years on board an English ship is ipso facto naturalised : 13 Geo. II. c. 3. And all foreign protestants and Jews, upon their residing seven years in any of the British colonies, without be-ing absent above two months at a time, or serving two years in a military capacity there, are, upon taking the oaths, naturalised to all intents, and purposes, as if they had been born in this kingdom; and are therefore admissible to all such privileges, and no other, as protestants or Jews born in this kingdom are entitled to. See ALIEN and DENIZEN. In France, l>efore the revolution, naturalisation was the king's prerogative; in England it is only conferred by act of parliament. In the former of those places, before their government was overturned, Swiss, Savo-yards, and Scots did not require naturalisation, being reputed natives.

NA'VAL. See NAVIGATION.

NAVAL ARCHITECTURE. See SHIP-BUILDING. NAVAL CAMP, in antiquity, a fortification consisting of a ditch and parapet on the land side, or a wall built in the form of a semicircle, and extended from one point of the sea to another. This was sometimes defended with towers ami beautified with gates, through which they issued forth to attack their enemies. Homer has left 'is a remarkable description of the Grecian fortifications of this s'jrt, in the Trojan war. Towards the sea,

or within it, they fixed great pales of wood, like these in their artificial harbours; before these the vessels of burden were placed in such order as that they might be instead of a wall, and give protection to those within ; in which manner Nicias is reported by Thucydides to have encamped himself; but this seems only to have been practised when the enemy was thought superior in strength, and raised great apprehensions of danger in them. When their fortifications were thought strong enough to de-fend them from the assaults <-f t nemu-s, it was customary to dr;ig their shi;ˆ, to sltoie, which the

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Greeks called ivu\xtiv, the Romans subducere. Around the ships the soldiers disposed their tents, as appears every where in Homer: but this seems only to have been practised in winter, when their enemy's fleet was laid up and could not assault them ; or in long sieges, and when they lay in no danger from their enemies by sea ; as in the Trojan war, where the defenders of Troy never once attempted to encounter the Grecians in a sea-fight.

NAVAL CROWN, among the ancient Romans, a crown adorned with figures of prows of ships, conferred on persons who in sea-engagements first boarded the enemy's vessel.

NAVAL STORES comprehended all those particulars made use of, not only in the royal navy, but in every other kind of navigation ; as timber and iron for shipping, pitch, tar, hemp, cordage, sail-cloth, gunpowder, ordnance, and fire-arms of every sort, ship-chandlery, wares, &c.

NAVAL AND MILITARY BIBLE SOCIETY. See SOCIETY.

NAVAL TACTICS. See TACTICS, MILITARY AND NAVAL.

NAVAN, a Market and post town of Ireland, in the county of Meath, about twenty-three miles north-west of Dublin, on the Boyne. It consists of two chief streets, which intersect each other at right angles. The Tholsel, or town-house, is a handsome stone building. This place was formerly in great repute, and walled in by Hugh de Lacy. An abbey for regular canons, dedicated to the Virgin Mary, was erected here ; and either founded or re-edified by Joceline de An-gulo or Nangle, about the end of the twelfth century. In the burial ground are the remains of many ancient tombs, with figures in alto relievo ; and a barrack for one troop of horse is built on the site of the abbey. Athlumny Castle, a noble building now in ruins, was burnt on the approach of Cromwell in 1649. This town is finely situated, but badly built; its manufacture of sacking employs nearly 300 looms, and there are likewise very extensive flour, cotton, and paper mills, a brewery, a distillery, with other manufactures incident to the trade and situation of the place. It has four fairs, which are well atteniled.

.\AVARETE (Juan Fernandez), surnamed El Mudo, a Spanish painter, was born deaf and dumb at Logranno in 1562. He travelled into Italy

for improvement, and on his return to Madrid, in 1568, was appointed painter to the king. His best pieces are preserved in the Escurial : and a Holy Family in particular, which is his masterpiece: it contains the strange accessaries of a dog, a cat, and a partridge. His mode of coloring was fine, and acquired him the name of the Spanish Titian. He died in

1.-.79.

NAVARIN, NAVAIUNO, or Avarin, a town of Greece, on the south-west coast of the Morea, north of Modon. It is a place of considerable trade, from the excellence of its port, which is the largest in the Morea, and is said to be capable of containing 2000 sail. A range of high mountains protect:; it north and north-east. The houses ne;ir the harbour are well built ; but the streets are narrow and dirty, steep and uneven.

Here, in the decline of 1827, was fought the celebrated battle of Navarino, in which the English, French, and Russians, unitedly attacked and destroyed a powerful Turkish and Egyptian force, in virtue of the treaty of London, signed in July of that year. The fortifications of Navarino consist of four bastions and a citadel. The only ruins of interest are a large aqueduct, a fountain, and the marble pillars which support the facade of the mosque. Old Navarin lies at the north end of the bay, and is supposed to occupy the site of the ancient Pylos. The adjacent country is fertile. It is seventy-two miles south-west of Argos, and eighty-eight south-west of Corinth. Long. 21►► 25’ E., lat. 37►► 5’ N.

NAVARRE, an ancient kingdom of Europe, established soon after the invasion of the Moors. It was bounded on the north-east by the Pyrenees, east and south by Arragon, and west by Old Castile and Biscay, and was about eighty miles long from north to south, by seventy-five broad. The name is a contraction of Nava Errea, which, in the language of its ancient inhabitants, signifies a land of valleys. In 470 or 472* Pampeluna arid the surrounding district were seized by Euric, or Evaric, king of the Goths. That people were Arians, while the natives of Navarre were Catholics, and each party endeavoured for a time to maintain their religion by force of arms ; but, the former being unsuccessful, many of them left the country, and settled on the banks of the Garonne, where their descendants acquired the name of

Gascons. Some time after the Goths were expelled by the Moors; but in 806 the latter were in their turn driven out by Louis of Aquitaine, a son of Charlemagne. Half a century after a count of Bi-gorre established in Navarre a sovereignty, which lasted in his family 500 years. This kingdom was dismembered in 1512; the reigning prince having been excommunicated by the pope ; and Ferdinand V. of Spain assumed the execution of the ban. He then seized all the part lying on the Spanish side of the Pyrenees ; while what has been called French Navarre preserved its independence, and continued a separate state till added to the dominions of France by the accession of Henry IV. to the throne. It is now part of the department of the Lower Pyrenees. See PYRENEES, DEPARTMENTS OF. This has also been called Lower Navarre.

NAVARRE, UPPER, is a province of Spain, containing the greater part of the above kingdom ; and is fifty-four miles long from north-east to south-west, and forty-five broad from north-west to southeast. It abounds in sheep and cattle ; game of all kinds, as boars, stags, and roe-bucks ; and in wild fowls, horses, and honey ; yielding also some grain, wine, oil, and a variety of minerals, medicinal waters, and hot baths. Some of the ancient chiefs of this country were called Sobrarbores, from the customs which prevailed among the inhabitants of choosing and swearing their princes under some particular tree. Pampeluna is the capital.

NAVARRE, NEW, a former province of Mexico. bounded on the north by an unknown tract belonging to native tribes; east by New Mexico Froper, and New Biscay ; south by Culican ;

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and west by the gulf of California. It is now subdivided into various modern intendancies.

NAVARRE (Martin Azpilcucta), successively professor of jurisprudence at Toulouse, Salamanca, and Coimbra, was born at Verasoa, near Pampeluna, in Navarre, whence his assumed name, in 1494. Pius V. appointed him assessor to cardinal Francis Alciat; and Gregory XIII. was very familiar with him. He was universally esteemed, not only for his knowledge, but also for his probity and virtue. His temperance preserved to him a vigorous constitution ; and, at a very advanced age, his mind was equal to the severest study. At the age of eighty he set out for Rome to defend his friend Bartholomew Ca-rewza, archbishop of Toledo, who had been charged with heresy by the inquisition at Rome. His economy enabled him to give liberal assistance to the poor. His charities, indeed, were so constant, that his mule, it is said, would stop as soon as she perceived a beggar. He died in Rome in 1586, aged ninety-two. His works were collected and printed in 6 vols. folio, at Lyons, in 1597; and at Venice in 1602.

NAVARRE (Peter), an officer of eminence in the sixteenth century, particularly celebrated for his dexterity in directing and springing mines. He was born at Biscay, of parents in rather a low station in life, and was first a sailor, but afterwards went to Italy, where he became footman to the cardinal of Arragon. He afterwards inlisted as a soldier in the Houstine army ; and, having served there for some time, went to sea again, and distinguished himself by his courage. General Gonsalvo de Cordone employed him in the war against Naples, and made him a captain. Having contributed greatly to the taking of that city, by springing a mine, the emperor rewarded him with the earldom of Alveto in that kingdom, and gave him the title of count of Navarre. Having the command of a naval expedition against the Moors, in Africa, he was at first very successful, and took Oran, Tripoli, and some other places ; but being afterwards shipwrecked on the island of Gerbes, the great heats and the Moorish cavalry destroyed a part of his army. He was equally unfortunate in Italy ; he was taken prisoner at the battle of Ravenna in 1512, and languished in France for two years. Finding that the king of Spain, who had been prejudiced against him, would do nothing for his ransom, he went into the service of Francis I., who gave him the command of twenty companies of infantry. He distinguished himself in several successful expeditions until 1522,

when, having been sent to the relief of the Genoese, he was taken by the Imperialists. They conducted him to Naples, where he remained a prisoner for three years in the castle of CKuf. He was released by the treaty of Madrid, and fought at the siege of Naples under Laulric in 1528: but, being again made prisoner in the retreat from A versa, he was sent a second time to the castle of (Kuf. Here he died a natural death; but some pretend that he was strangled in his bed, having arrived at a very advanced age.

NAUCLERUS (John), a gentleman, descended of a noble family of Suabia, provost of the church of Thuringia, and professor of law in the

university of that city. His original name was Vergeau, which, in German, signifies a sailor; and which he changed into Naucleros, a word of the same signification in Greek. He wrote a Latin Chronicle, commencing with the creation, and continued down to A. D. 1500, which was continued by Basilius and Surius to 1564. It was printed at Cologne, in folio, in 1564 and

1579.

NAUCRARI, among the ancient Athenians, were the chief magistrates of the AIJ/JOI, boroughs, or townships, called Navepapiat ; because each was obliged, besides two horsemen, to furnish one ship for the public service.

NAUCRATIS,a city of Egypt, on the left side of the Canopic mouth of the Nile. It was celebrated for its commerce, and no ship was permitted to land at any other place, but was obliged to sail directly to the city, there to deposit its cargo. It gave birth to Athenaeus.

NAUCRATITES NOMOS, in ancient geography, was, according to Pliny, a division of the Delta, so called from the above town ; but Ptolemy comprises it under the Nomos Saites.

NAUDE (Gabriel), a celebrated physician, was born in Paris in 1600. His parents sent him, at an early age, to a religious community to learn grammar and the principles of Christianity. Thence he was removed to the university, where, having acquired classical learning and philosophy, he was created M. A. while yet very young. He then studied physic, and Henri de Mesmes, president a morti'er, hearing his character, made him keeper of his library, and took him into his

family; which furnished him both with means and leisure to improve himself as he could wish. In 1C26 he went to Padua, but the death of his father called him hack to Paris be-fore the end of the year. In 1628 the faculty of physic appointed him to deliver the customary discourse on the reception of licentiates; which he accomplished with great applause. In 1631 cardinal Bagni made him his librarian and Latin secretary, and carried him with him to Rome, where he continued till the cardinal's death, July 24th, 1641 ; and in the interim made an excursion to Padua, to take his degree of M. D. Louis XIII. made him his physician on March 25th, 1C33. He was, however, detained in Italy by advantageous offers made to him by cardinal Barberini. But, when cardinal Richelieu sent for him to be his librarian, he immediately returned to Paris in March 1642; but, Richelieu dying in December following, he succeeded to the like post under Mazarine, for whom he formed u most complete library, which he raised in seven years to the number of 40,000 volumes. The cardinal, however, only gav3 him two small benefices; *viz.* a canonry of Verdun, and the priory of Artige in the Limosm : not worth al>ove .1200 livres a year ; but he met with a sti'.l greater disappointment in seeing this library, winch he had collected with so much pains, totally disperse'!. Upon the disgrace of Mazarine it was sold ; nnd Piitin, in a letter of March nth, 1651, says, that Naude bought all the books in physic for 3500 livres. Christiana, queen of Sweden, next made him her librarian : but he soon became disgusted \ith his residence in Sweden; the manners cf

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the people did not please him ; and lie quitted Stockholm laden with presents from the queen and several persons of distinction. The fatigue of the journey, however, threw him into a fever, which ob'iged him to stop at Abbeville ; where he died July 29th, 1653. He was very regular in his conduct, never drinking any thing but water. Study was so much his principal occupation that he was styled a Hellno librorum, or a gormandiser of books. He wrote a great number of books, a catalogue of which may be seen in Niceron's Memoires, torn. ix. ; but Voltaire says that his Apologie des grands Hommes Accuses de Magie is almost the only one which continues to be read.

NAVE, n. s. Sax. nap ; Belg. nave ; Dan. naver. The middle part or boss of a wheel.

Out, out, thou strumpet fortune ! all you gods In general synod take away her power ; Break all the spokes and fellies from her wheel, And bowl the round nave down the hill of heaven, As low as to the fiends. Shakspeare. Hamlet.

In the wheels of waggons the hollows of the naves, by their swift rotations on the ends of the axle-trees, produce a heat sometimes so intense as to set them on fire. Ray—

NAVE, or) Ital. nave; Fr. nef; Qu. Lat.

NEF, n. s. \ navis? (Resembling the bottom of a ship.) The middle roof, and hence middle aisle of a church; the body of a church.

It comprehends the nave or body of the church, together with the chancel. Ay life's Parergon.

The church of St. Justina, by Palladio,-is the most handsome, luminous, disencumbered building in Italy. The Jong nef consists of a row of five cupolas, the cross one has on each side a single cupola deeper than the others. Addison.

Or hardened from some earth-absorbing fire, While yet the globe reeked from its funeral pyre ; The fretted pinnacle, the aisle, the nave, Were there, all scooped by Darkness from her cave.

Byron,

NAVE, in architecture, is the body of a church, where the people are disposed, reaching from the rail of the door to the chief choir. Some derive the word from the Greek vaoc, a temple ; and others from vavc, a ship, as the roof of a church bears some resemblance to a ship.

NA'VEL, n. s. ~\ Sax. napela ; Belg. navel; NA'VEL-GAM., f Swed. nafle ; from nave, a NA'VELSTRING, (boss. The boss or central NA'VEI.-WORT.) point of the abdomen: navel-pall is a complaint or wound in horses, described below : navelstring, the membrane which connects the infant with its mother : navel-wort, a plant.

Being prest to the war, Fven when the navel of the state was touched, They would not thread the gates. Shakspeare As children, while within the womb they live, Feed by the navel : here they feed not so. Davies.

Imbrasictas addrest

His iaveline at him, and so ript his navill that the wound,

As endlessly it shut his eyes, so opened on th□□

ground, It powred his entrailes. Ctiapman.

Me from the womb the midwife muse did take, She cut my navel. Cotvley.

Within the navel of this hideous wood,

Immured in cypress shades, a sorrerer dwells.

Milton.

The use of the navel is to continue the infant unto the mother, and by the vessels thereof to convey its aliments. Browne.

There is a superintending Providence : that some animals will hunt for the teat before they are quite gotten out of the secundines and parted from the navelstring. Derham.

Navelgall is a bruise on the top of the chine of the back, behind the saddle, right against the navel, occasioned either by the saddle being split behind, or the stuffing being wanting, or by the crupper buckle sitting down in that place, or some hard weight or knobs lying directly behind the saddle. Anon.

NAVEL, in anatomy, the centre of the lower part of the abdomen ; being that part where the umbilical vessels pass out of the placenta of the' mother. See ANATOMY.

NAVEL WORT, in botany. See COTYLEDON.

NAVEW, in botany. See BRASSICA.

NAUGHT, Sax. najjt, nappi)jt, ne aught, not any thing. Bad; corrupt; worthless: seldom used but in banter.

It is naught, it is naught, saith the buyer.

Proverbs.

With them that are able to put a difference be- , tween things naught and things indifferent in the church of Rome, we are yet at controversy about tlie manner of removing that which is naught. Hooker.

Thy sister's naught : Oh, Regan ! she hath tied Sharp-toothed unkindness like a vulture here.

Shakspeare.

NAUGHT, n.s. Nothing. Commonly, though improperly, written nought. See AUGHT and OUGHT. This seems the same word as above.

Be you contented

To have a son set your decrees at naught, To pluck down justice from your awful bench.

Shakspeare.

NAUGHTY, adj. 1 From naught, bad. NAUGHTINESS, n.s. $ Wicked; corrupt; faulty: often used ludicrously.

A prince of great courage and beauty, but fostered up in blood by his naughty father. Sidney.

No remembrance of naughtiness delights but mine own ; and methinks the accusing his traps might in some manner excuse my fault, which certainly I loth to do. Id.

These naughty times

Put bars between the owners and their rights.

Shakspeare.

How far that little candle throws his beams ! So shines a good deed in a naughty world. Id.

The naughtiness of infidelity will appear by considering its effects and consequences. Barrow.

If gentle slumbers on thy temples creep, But, naughty man, thou dost not mean to sleep, Betake thee to thv bed. Dryden.

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NAVIGATION.

Lat. navis, a ship;

Gr. vaoi, vtd>, to swim;

{^ Sans. navi. Capable

fof floating ships or

I boats : to navigate is

J to pass by water or

NAVIGABLE, adj.

N AV'IGATE, v. n. & v. a.

NAVIGA'TION, n.s.

NAV'IGATOR,

NA'VY, n.s.

NA'VAL, adj.

by sea vessels: navigation, the act, art, or practice of passing by water or by ships; also the vessels used on water : a navigator is a seaman, sailor, or voyager : navy, an assembly or fleet of ships: naval, consisting of, or belonging to ships, or to the navy of a particular country.

By the sounding of navigators, that sea is not three hundred and sixty foot deep. Brerewood.

Tho' you untie the winds, and let them fight Against the churches, tho' the yesty waves Confound and swallow navigation up. Shakspeare.

On the western coast rideth a puissant navy.

Id. Richard III.

The first-peopled cities were all founded upon these navigable rivers or their branches, by which the one might give succour to the other. Raleigh.

Our shipping, for number, strength, mariners, and all things that appertain to navigation, is as great as ever. Bacon.

Many have motioned to the council of Spain, the cutting of a navigable channel through this small isthmus, so to shorten their common voyages to China and the Moluccoes. Heylyn.

The contrivance may seem difficult, because the submarine navigators will want winds, tides, and the sight of the heavens. Wilkins's Mathematical Magic.

Levy money, and return the same to the treasurer of the navy for his majesty's ijse. Clarendon.

The rules of navigators must often fail. Browne.

Encamping on the main, Our naval army had besieged Spain ; They, that the whole world's monarchy designed, Are to their ports by our bold fleet confined.

Waller.

The loadstone is that great help to navigation.

More.

Masters of such numbers of strong and valiant men, as well as of all the naval stores that furnish the world. Temple.

This terrestrial globe, which before was only a globe in speculation, has since been surrounded by the boldness of many navigators. Id.

The narrow seas can scarce their navy bear, Or crowded vessels can their soldiers hold.

Dry den.

Almighty Jove surveys Earth, air, and shores, and navigable seas. Id.

Rude as their ships was navigation then, No useful compass or meridian known ; Coasting, they kept the land within their ken, And knew no north but when the polestar shone.

Id. As our high vessels pass their watry way,

Let all the naval world due homage pay. Prior.

The Phoenicians navigated to the extremities of the western ocean. Arbutltnot on Coins.

When Pliny names the Pceni, as inventors of naii—

fation, it must be understood of the Phoenicians, rom whom the Carthaginians are descended. <.

The Cape of Good Hope was doubled in those early times ; and the Portuguese were not the first discoverers of that naiiˆitiun. Id.

They trust in naviet, and their nodes fail ###

God’s curse can cast away ten thousand sail !

They trust in armies, and their courage dies ;

In wisdom, wealth, in fortune, and in lies.

Cotrper. These therefore I can pity, placed remote

From all that science traces, art invents,

Or inspiration teaches ; and enclosed

ID boundless oceans never to be passed

By navigatort uninformed as they,

Or ploughed perhaps by British bark again. Id.

The ministers were wisely moved, by a liberal and prospective policy, to endeavour to consolidate as much as possible the strength of the empire, by opening to Catholic officers in the army and nari/ the same road to honour and emolument winch had always been open to Protestants. Dp. Watson.

HISTORY OF NAVIGATION.

The early history of navigation, like that of all other useful arts, is lost in obscurity. But the possibility of making use of water, as a means of passing from one place to another, must soon have suggested itself to those who lived in the neighbourhood of lakes and rivers. And, before the first voyage to sea in search of wealth and commerce was undertaken, there can be little doubt that considerable knowledge of the principles of floating bodies had been attained, and considerable advances made in the art of building vessels that might be guided on the water as well as swim, and carry in it.

The Phoenicians are the earliest navigators of whom any account has comedown to us. Their poverty, and the scantiness of their territory, had probably combined to induce them to seek their bread upon the waters; and, possessing three good sea ports, the spirit of enterprize

and turn for traffic, by which they were distinguished, soon led them to perceive that the road to advantage for them was the bosom of the ocean. Lebanon, and the other neighbouring mountains, furnished them with excellent wood for ship-building, and in a short time they possessed a numerous fleet, with which they were constantly hazarding new navigations, and establishing and extending-their commercial relations, so that they quickly became so wealthy and populous as to be in a condition to send out colonies, the principal of which was that of Carthage ; a colony which, inheriting the commercial spirit of the mother country, in time became not only the ri-val of Tyre itself, but greatly surpassed it ; sending its merchant fleets through the pillars of Hercules, now the straits of Gibraltar, along the western coasts of Africa and Europe, and as some authors conjecture to America.

Tyre, whose riches and power are celebrated botli by sacred and profane authors, being destroyed by Alexander the great, its navigation and commerce were transferred by the conqueror to Alexandria, a new city, admirably situated for these purpose-;, and the proposed capital of the empire of Asia, which Alexander then meditated. T'uis arose the navigation of the Egyptians,

which was afterwards so cultivated by the Ptolemies, that Tyre and Carthage were forgotten.

Egypt being red.uced to a Roman province, after the battle of Actium, its trade and navigation fell into the hands of Augustus, in whose time Alexandria was inferior only to Rome ; and the magazines of the capital of the world were wholly supplied from the capital of Egypt.

At length Alexandria itself underwent the fate of Tyre and Carthage ; being surprised by the Saracens, who had'overspread the northern coasts of Africa, &c. ; and its commerce has ever since been in a languishing state, though it still has a considerable share of the trade which the Christian merchants carry on in the Levant.

The ancient Britons had inherited from their earliest ancestors many of the ruder arts of navigation. Their ships were large open boats, fram-ed of light timbers, ribbed or wattled with hurdles and lined with hides, and furnished with masts and sails, the latter being formed of hides and the tackle of thongs. Among the Veneti they were of hides as late as the days of Caesar ; they were never furled, but bound to the mast. These slight sea-boats were, however, soon dismissed for the more substantial vessels and artificial sails of the Romans.

The fall of Rome and its empire involved the temporary ruin of all the arts of peace, the barbarians, into whose hands it fell, contenting themselves for some time with the spoils of the industry of their predecessors. But the more brave and active of these savage conquerors, the Turks in Gaul, the Goths in Spain, and the Lombards in Italy, soon perceived the advantages of navigation and commerce ; and, learning the methods of practising them from the people whom they had subdued, they were speedily able to give new lessons on the subject, and set on toot new institutions for their promotion.

It is doubtful which of the European nations first again betook themselves to commerce, after the dissolution of the Roman empire; but on the whole the Italians, and particularly the Venetians and Genoese, seem best entitled to the glory of this restoration. Their situation for navigation was singularly advantageous. In the bottom of the Adriatic were a great number of marshy islands, separated by narrow channels, well screened, and almost inaccessible, the residence of some fishermen, who supported themselves by a little trade in fish and salt, the latter of which they found in some of the islands. Thither the Veneti, a people inhabiting that part of Italy along the shores of the gulf, retired, when Alaric king of the Goths, and afterwards Attila king of the Huns, ravaged Italy.

These new islanders, little imagining that this was to be their fixed residence, did not think of composing any body politic ; but each of the seventy-two islands of the little Archipelago continued a longtime under its separate master, and each made a disti’nct commonwealth. When their commerce was become considerable enough to give jealousy to their neighbours, they began to think of uniting into a body. And it was this union, first begun in the sixth century, but not completed till the eighth, that laid the sure foundation of the future grandeur of the state of

Venice. From the time of this union, their fleets of merchantmen were

sent to all parts of the Mediterranean; and at last to those of Egypt, particularly Cairo, a new city, built by the Saracens on the east banks of the Nile, where they traded for the spices and other products of the Indies. Thus they flourished, increased their commerce, their navigation, and their conquests on the terra firma, till the league of Cambray in 1508, when a number of jealous princes conspired to their ruin ; which was the more easily effected by the diminution of their East India commerce, of which the Portuguese had got one part, and the French another. Genoa, which had applied to navigation at the same time with Venice, and with equal success, was a long time its dangerous rival, disputed with it the empire of the sea, and shared with it the trade of Egypt and other parts both of the east and west.

Jealousy soon began to break out ; and, the two republics coming to blows, there was almost continual war for three centuries ere the superiority was ascertained; when, towards the end of the fourteenth century, the battle of Chioza end-ed the strife ; the Genoese, who till then had usually the advantage, having now lost all, and the Venetians, almost become desperate, at one happy blow, beyond all expectation, secured to themselves the empire of the sea, and superiority in commerce.

About the same time that navigation was revived in the southern parts of Europe, a new society of merchants was formed in the north, which not only carried commerce to the greatest perfection it was capable of, till the discovery of the East and West Indies, but also formed a new scheme of laws for the regulation thereof, which still obtain under the names of Uses and Customs of the Sea. This society is that famous league of the Hanse towns, commonly supposed to have begun about 1164. See HANSE TOWNS. For the modern state of navigation in England, Holland, France, Spain, Portugal, &c. See COMPANY, TRADE, &c.

In examining the reasons why commerce has passed successively from the Venetians, Genoese, and Hanse towns, to the Portuguese and Spaniards, and from these again to the English and Dutch, it may be established as a maxim, that the relation or union between commerce and navigation is so intimate, that the fall of the one in evitably draws after it that of the other; and that they will always either flourish or dwindle together.

The art of navigation has been greatly improved in modern times, both with respect to the form of the vessels and the method of working them. The use of rowers is now entirely superseded by the improvements made in the sails, rigging, &c., by which means they

not only sail much faster than formerly, but can tack in any direction with the greatest facility. Ancient navigation indeed consisted of little more than coasting along shore. But the invention of the compass enabled the mariner to leave the land, and launch into the wide ocean with perfect confidence that he would find his way to his desired port; and it1 is to the date of this invention that the rise of navigation as a science must be referred.

Some ascribe the invention of the mariner's compass to Flavio Gioia, of Amalfi in Campania, in the fourteenth century ; while others affirm that it came from the east, and that it was earlier known in Europe. It is certain, however, that it was not in common use in navigation till about 1410, when, under the auspices of Henry duke of Visco, brother of the king of Portugal, considerable improvements were made in this art. In 1485 Iloderic and Joseph physicians to king John II. of Portugal, aided by one Martin of Bohemia, a Portuguese native of the island of Fayal, a pupil of Regiomontanus calculated ta-bles of the sun's declination for the use of sailors, and recommended the astrolabe for taking observations at sea. Columbus is said to have benefited by the instructions of Martin, and to have been himself useful in improving the knowledge of the Spaniards in the art. Charles V. of Spain, afterwards founded a lecture at Seville, whose object was to diffuse a knowledge of navigation. See MAGNETISM.

The variation of the compass could not long remain a secret. Columbus, as his son Ferdinand asserts, observed it on the 14th of September, 1492. Sebastian Cabot is said also to have observed it. It was found by Gonzales d'Oveida that there was no variation at the Azores ; but it is now known that the variation alters in time, and at the Azores at the time we write it is about 20►► westerly. The use of the cross staff began now to be introduced among seamen. This ancient instrument is described by John Werner of Nuremberg in his notes on the first book of Ptolemy's Geography, printed in 1514. He recommends it for measuring the angular distance between the moon and some stars for the purpose of determining the longitude. The

recommendation of such an instrument for such a purpose is curious, as marking the state of practical science at that period, and the indefinite conception of the difficulties attending the longitude problem which its first proposer Werner entertained.

Much as had been done in navigation, it must still be admitted that at this period it was still in a rude state. Even the construction of charts was not at all understood, the only ones in use being plane charts, which in places distant from the equator must often have greatly misled those who confided in them. At length there were published two Spanish treatises on this art, in 1545, one by Peter de Medina, the other by Mar-tin Cortes, which contained a system of navigation as it was then understood. These two authors appear to have valued themselves very highly on their performances, and they were no doubt of use in their time. Medina defended the plane chart, but Cortes pointed out very clearly its errors. He speculated too on the variation of the compass, and endeavoured to account for it, by supposing the needle to be influenced by a magnetic pole, different from that of the world ; an hypothesis which has lately been revived, with the additional supposition that the magnetic pole moves from east to west round the pole, in, or nearly in, the same parallel of latitude. Whether this hypothesis may ultimately be found to be the true one or not, it certainly accounts both

for the variation itself and the changes which it has been observed to undergo. (See Barlow on Magnetic Attractions).

Medina's being the earliest book on the subject was soon translated into Italian, French, and Flemish, and long served as a guide to th►► mariners of those countries. But both with respect to science and practice it was vastly inferior to the work of Cortes who was long the favorite of our English seamen. It was translated into English in 1561, and about twenty years after Medina's was also translated, but it never attained any popularity.

A system of navigation at that time consisted of the following and similar subjects. ►►► An account of the Ptolemaic hypothesis and the circles of the sphere ; of the roundness of the earth, longitudes, latitudes, climates, &c.; ►►► the eclipses of the sun and moon ; a calendar ; the method of finding the prime epact, moon's age, and tides ; a description of the compass, and an account of its variation, for discovering which Cortes said an instrument might easily be contrived ; tables of the sun's declination for four years, to find the

latitude by his meridian altitude; directions for finding the latitude by certain stars ; of the course of the sun and moon; the length of the days; of time and its divisions ; the method of finding the hour of the day and night; and lastly, a description of the sea chart, on which, to discover a ship's place, they raadeuse of asmall table which showed, upon an alteration of 1►► of lat., how many leagues they were to run on each rhumb ; and their departure from the meridian. This table in its form and use was precisely the same as the common and useful table of difference of latitudes and departures still given in works of navigation. Some instruments were described, particularly by Cortes, such as one to find the declination of the sun, with the age and place of the moon ; certain dials, the astrolabe and cross staff; and a complex machine to discover both the hour and latitude at once.

As Werner had proposed to find the longitude by observations on the moon, so Gemma Frisius in 1530 advised the keeping of time for the same purpose by means of small clocks, or watches, then as he says newly invented. Thus the two leading practical methods of finding the longitude at sea which have only been perfected in our own days were clearly enough understood 300 years ago, though it has required all the science and mechanical skill that the enlighten-ment of modern times has called into action to bring these ancient schemes to any practical bearing. Frisius also contrived a new sort of cross-staff, and an instrument called the nautical quadrant which was much praised by William Cunningham in his Astronomical Class, printed in 1559.

In 1537 Peter Nunez, or Nonius, published a book in the Portuguese language, to explain a difficulty in navigation that had been proposed to him by the commander Don Martin Alphonso de Susa. He there exposes the errors of the plane chart, and gives the solution of some curious astronomicaf problems, amongst which is that of determining the latitude from two altitudes of the sun and the intermediate chanp.e uf

azimuth, lie observes that though the rhumbs are spiral lines, yet the direct course of a ship is always on the arch of a great circle, whence

the angle with the meridian will continually change; all that the steersman can do, for keeping the ship on a rhumb line, being to correct those deviations when they appear sensible. But the ship will thus describe a sort of polygon without the rhumb line ; and the computations for the latitude, &c., founded on the supposition that the ship has sailed on a rhumb line, will in consequence be in some measure erroneous. No-nius also invented the method of subdividing the divisions on circular instruments by means of a moveable concentric circle, on which the divisions hare a given difference in value from those on the circle on which it moves. This admirable contrivance is still sometimes called a nonius from the name of its inventor, and on nautical instruments is still in universal use, though on large fixed instruments it has been superseded. The method of Nonius, however, was much improved by Dr. Halley.

In 1577 Mr. William Bourne published a treatise, in which, by considering the irregularities in the moon's motion, he shows the errors of the sailor in finding her age by the epact, and also in determining the hour from observing on what point of the compass the sun and moon appeared. He advises, in sailing towards the high latitudes, to keep the reckoning by the globe, as there the plane chart is most erroneous. He despairs of our ever being able to find the longitude, unless the variation of the compass should be occasioned by some such attractive power as Cortes had imagined ; of which, however, he doubts : but, as he had shown how to find the variation at all times, he advises to keep an account of the observations, as useful for finding the place of the ship; which advice was prosecuted at large by Simon Stevin, in a treatise published atLeyden in 1599; the subject of which was the same year printed at London in English by Mr. Edward Wright, entitled the Haven-finding Art.

In this ancient tract also is described the way by which our sailors estimate the rate of a ship in her course, by the log. This was so named from the piece of wood or log that floats in the water, while the time is reckoned, during which the line that is fastened to it is veering out. The author of this contrivance is not known ; neither was it taken notice of till 1607, in an East India voyage published by Purchas ; but from this time it became famous, and was much taken no-tice of by almost all writers on navigation in every country ; and it still continues to be used as at first, 'hough many attempts have been made to improve it, and contrivances proposed to supply its place; many of which have succeeded in quiet water, but proved useless in a stormy sea.

In 1581 Michael Coignet, a native of Antwerp, published a treatise in

which he animadverted on Medina. In this he showed that as the rhumbs are spirals, making endless revolutions about the poles, numerous errors must arise from their being represented by straight lines on the sea-charts ; but, though he hoped to find a re-medy for these errors, he was of opinion that the

proposals of Nonius were scarcely practicable and therefore in a great measure useless. In treating of the sun's declination, he took notice of the gradual decrease in the obliquity of the ecliptic ; he also described the cross-staff with three transverse pieces, and which he owned to have been then in common use among the sailors. He likewise gave some instruments of his own invention; but all of them are now laid aside. He constructed a sea-table to be used by such as sailed beyond 60►► of lat. ; and at the end of the book is delivered a method of sailing on a parallel of latitude by means of a ring dial and a twenty-four hour-glass.

The same year the discovery of the dipping needle was made by Mr. Robert Norman. In his publication on that art he maintains, in opposition to Cortes, that the variation of the compass was caused by some point on the surface of the earth, and not in the heavens ; he also made considerable improvements in the construction of compasses themselves ; showing especially the danger of not fixing, on account of the variation, the wire directly under the fleur-de-lis; as compasses made in different countries have placed it differently. To this performance of Forman's is prefixed a discourse on the variation of the magnetical needle, by Mr. William Burrough, in which he shows how to determine the variation in many different ways. ' He also points out many errors in the practice of navigation at that time, and speaks in very severe terms concerning those who had written upon it.

All this time the Spaniards had continued to publish treatises on the art. In 1585 an excellent compendium was published by Roderick Zamorano ; which contributed greatly towards the improvement of the art, paiticularly in the sea charts. Globes of an improved kind, and of a much larger size than those formerly used, were now constructed, and many improvements were made in other instruments ; however the plane chart continued still to be followed, though its errors were frequently complained of.

Methods of removing these errors had indeed been sought after ; and Gerard Mercator seems to have been the first who found the true method of doing this so as to answer the purposes of sea-men. His

method was to represent the parallels both of latitude and longitude by parallel straight lines, but gradually to augment the former as they approached the pole. Thus the rhumbs, which otherwise ought to have been curves, were now also extended into straight lines ; and thus a straight line drawn between any two places marked upon the chart would make an angle with the meridians, expressing the rhumb leading from the one to the other. But though, in 1569, Mercator published a universal map constructed in this manner, it does not appear that he was acquainted with the principles on which this proceeded ; and it is now generally believed, that the true principles on which the construction of what is called Mercator's chart depends were first discovered by an Englishman, Mr. Edward Wright.

Mr. Wright supposes, but, according to the general opinion, without sufficient grounds, that this enlargement of the degrees of latitude was

Known and mentioned by Ptolemy, ano that the same thing had also been spoken of by Cortes. The expressions of Ptolemy, alluded to, relate indeed to the proportion between the distances of the parallels and meridians ; but instead of proposing any gradual enlargement of the parallels of latitude, in a general chart, he speaks only of particular maps; and advises not to confine a system of such maps to one and the same scale, but to plan them out by a different measure, as occasion might require : only with this precaution, that the degrees of longitude in each should bear some proportion to those of latitude; and this proportion is to be deduced from that which the magnitude of the respective parallels bears to a great circle of the sphere. He adds, that in particular maps, if this proportion be observed with regard to the middle parallel, the inconvenience will not be great, though the meridians should be straight parallels to each other. Here he is said only to mean, that the maps should in some measure represent the figures of the countries for which they are drawn. In this sense Mercator, who drew maps for Ptolemy's tables, understood him ; thinking it, however, an improvement not to regulate the meridians by one parallel, but by two; one distant from the northern, the other from

the southern extremity of the map, by a fourth part of the whole depth ; by which means, in his maps, though the meridians are straight lines, yet they are generally drawn inclining to each other towards the poles. With regard to Cortes, he speaks only of the number of degrees of latitude, and not of the ex-tent of them ; nay, he gives express directions that they should all be laid down by equal measurement on a scale of leagues adapted to the map.

For some time after the appearance of Mercator's map, it was not rightly understood, and it was even thought to be entirely useless, if not detrimental. However about 1592 its utility began to be . perceived ; and seven years after Mr. Wright printed his famous treatise, entitled The Correction of certain Errors in Navigation ; where he fully explained the reason of extending the length of the parallels of latitude, and the uses of it to navigators. In 1610 a second edition of Mr. W right's book was published with improvements. An excellent method was proposed of determining the masjnitude of the earth ; at the same time it was judiciously proposed to make our common measures in some proportion to a degree on its surface, that they mi<;ht not depend on the uncertain length of a barley corn. Some of his other improvements were, ' The table of latitudes for dividing tiie meridian computed to minutes ;' whereas it had only been divided to every tenth minute. He also published a description of an instrument which ho calls the searings ; and by which the variation of the compass, altitude of the sun, and time of the day, may be determined readily at once in any place, provided the latitude is known, llo showed also how to correct the errors arising from the eccentricity of the eye in observing by the cross-staff, lie made a total amendment in the tables of the declinations and places of the sur. and stars from bis own observations, made VOL. XV.

with a six foot quadrant, in the years 1594 1597. A sea-quad raat to take altitudes by a foreward or backward obsenation ; and likewise with a contrivance for readily finding the latitude by the height of the polestar, when not upon the meridian. To this edition was subjoined a translation of Zemorano's Compendium above mentioned ; in which he corrected some mistakes in the original, adding a large table of the variation of the compass observed in very different parts of the world, to show that it was not occasioned by any magnetical pole

These improvements soon became known abroad. In 1608 a treatise, entitled Hypon;ne-mata Mathematica, was published by Simon Ste-

vin, for the use of prince Maurice. In that part relating to navigation the author having treated of sailing on a great circle, and shown how to draw the rhumbs on a globe mechanically, sets down Wright's two tables of latitude and rhumbs, in order to describe these lines more accurately, pretending even to have discovered an error in Wright's table. But all these objections were fully answered by the author himself, who showed that they arose from the gross way ot calculating made use of by S'.evin.

In 1624 the learned Wellebrord Snell, professor of mathematics at Leyden, published a treatise of navigation on Wright's .plan, but somewhat obscurely; and, as he did not particularly mention all the discoveries of Wright, th-: latter was thought by some to have taken tin-hint of bis discoveries from Snellius. But thi-supposition was long ago "efuted ; and Wright enjoys the honor of those discoveries, which is justly his due.

Mr. Wright having shown how to find the place of the ship on his chart, observed that the same might be performed more accurately by circulation ; but considering, as he says, that tin-latitudes, and especially the courses at sea, coulii not be determined so precisely, he forebore setting down particular examples; as the marirr. may be allowed to save himself this trouble, a:vi only mark out upon his chart the ship's w,r. after the manner then usually practised. Mow ever, in 161'4, Mr. Raphe Handson, among h. nautical questions subjoined to a translation o. I'itiscus's Trigonometry, solved very distinctly every case of navigation, by applying arithmetical calculations to Wright's table of latitudes, or of meridional parts, as it has since been called.

Though the method discovered by Wright for finding the change of longitude by a ship sailing on a rhumb is the proper way of performing it, Handson proposes t\vo ways of approximation to it without the assistance of Wright's division of the meridian line. The first was computed by the arithmetical mean between the cosines of both latitudes ; the other by the same mean between the secants, as an alternate, when WrightV book was not at hand ; though this latter is farther from the truth than the first. By the san;e calculations, also, he showed how much each of these compendiums deviates from the truth, and also how widely the computations OD the erroneous principles of the plane chart differ from them all. The method, however, uenerally used bv oi;r sailors is commonly called ti

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middle latitude ; which, though it errs more than that by the arithmetical mean between the two cosines, is preferred, on account of its being less-operose; yet in high latitudes it is more eligible to use that of the arithmetical mean between the logarithmic cosines, equivalent to the geometrical mean between the cosines themselves ; a method since proposed by Mr. John Bassat. The computation by the middle latitude will always fall short of the true change of longitude ; that by the geometrical mean will always exceed ; but that by the arithmetical mean falls short in latitudes above 45□□, and exceeds in les-ser latitudes. However, none of these methods will differ much from the truth when the change of latitude is small.

About this time logarithms were invented by John Napier, baron of Merchiston in Scotland, and proved of the utmost service to the art of navigation. They were first applied by Mr. Edward Gunter in 1620. He constructed a table of artificial sines and tangents to every minute of the quadrant. These were applied according to Wright's table of meridional parts, and have been found extremely useful in other branches of the mathematics. He contrived, also, a most excellent ruler, commonly called Gunter's scale, on which were inscribed the logarithmic lines for numbers, and the sines and tangents of arches. He also greatly improved the sector for the same purposes. He showed also how to take a back observation by the cross-staff1, whereby the error arising from the eccentricity of the eye is avoided. He described, likewise, another instrument of his own invention, called the cross-bow, for taking altitudes of the sun or stars, with some contrivances for more readily deducing the latitude from the observation. The discoveries concerning the logarithms were carried to France in 1624 by Mr. Edmund Wingate, who published two small tracts in that year at Paris. In one of these he taught the use of Gunter's scale; and in the other of the tables of artificial sines and tangents, as modelled according to Napier's last form, erroneously attributed by Wingate to Briggs.

Gunter's ruler was projected into a circular arch by the Rev. William Oughtred in 1633, and its uses fully shown in a pamphlet entitled The Circles of Proportion ; where, in an appendix, several important points

in navigation are ably discussed. It has also been made in the form of a sliding ruler.

The logarithmic tables were first applied to the different cases of sailing by Mr. Thomas Addison, in his treatise entitled Arithmetical Navigation, printed in 1625. He also gives two traverse tables, with their uses; the one to quarter points of the compass, the other to degrees. Mr. Henry Gellibrand published his discovery of the changes of the variation of the compass in a small quarto pamphlet, entitled A Discourse Mathematical on the Variations of the Magnetical Needle, printed in 1635. This extraordinary phenomenon he found out by comparing the observations made at different times near the same place by Mr. Burrough, Mr. Gunter, and himself, all persons of great skill and experience in these matters. This discovery was likewise

soon known abroad; for F. Athanasius Kircher, in his treatise entitled Magnes, first printed at Rome in 1641, informs us, that he had been told it by Mr. John Greaves ; and then gives a letter of the famous Marinus Mersennus, containing a very distinct account of the same.

As altitudes of the sun are taken on shipboard by observing his elevation above the visible horizon, to collect thence the sun's true altitude with correctness, Wright observes it to be necessary that the dip of the horizon below the observer's eye should be brought into the account, which cannot be calculated without knowing the magnitude of the earth. Hence he was induced to propose the different methods for finding this ; but complains that the most effectual was out of his power to execute ; and therefore contented himself with a rude attempt, in some measure sufficient for his purpose ; and the dimensions of the earth deduced by him corresponded so well with the usual divisions of the log-line, that as he wrote not an express treatise on navigation, but only for the correcting such errors as prevailed in general practice, the log-line did not fall under his notice.

Mr. Richard Norwood, however, put in execution the method recommended by Mr. Wright as the most perfect for measuring the dimensions of the earth, with the true length of the degrees of a great circle upon it ; and, in 1635, he actually measured the distance between London and York; whence, and the summer solstitial altitudes of the sun observed on the meridian at both places, he found a degree on a great circle of the earth to contain 367,196 English feet, equal to 57,300 French fathoms or toises ; which is very exact, as appears from many measures that have been made since that time. Of

all this Mr. Norwood gave a full account, in his treatise called the Seaman's Practice, published in 1637. He there shows the reason why Snell had failed in his attempt; he points out also various uses of his discovery, particularly for correcting the gross errors hitherto committed in the divisions of the log-line. These necessary amendments, however, were little attended to by the sailors, whose obstinacy in adhering to established errors has been complained of by the best writers on navigation ; but at length they found their way into practice, and no navigator of any skill now uses the old measure of forty-two feet to a knot. In that treatise also Mr. Norwood describes his own excellent method of setting down and perfecting a sea-reckoning, by using a traverse table ; which method he had followed and taught for many years. He shows also how to rectify the course by the variation of the compass being considered ; also how to discover currents, and to make proper allowance on their account. This treatise, and another on trigonometry, were continually reprinted, as the principal books for learning scientifically the art of navigation. What he had delivered, especially in the latter concerning the subject, was contracted as a m* nual for sailors, in a very small piece called his Epitome ; a useful performance, which has gone through a great number of editions.

No alterations were ever made in the Seaman's Practice till the twelfth edition in 1676, when

the following paragraph was inserted in a smaller character: 'About 1672 M. Picart published an account in French, concerning the measure of the earth, a breviate whereof may be seen in the Philosophical Transactions, No. cxii. ; wherein he concludes 1►► to contain 365,184 English feet, nearly agreeing with Mr. Norwood's experiment ;' and this advertisement is continued in the subsequent editions as late as 1732. About 1645 Mr. Bond published, in Norwood's Epitome, a very great improvement in Wright's method ; it was deduced from the theorem, that these divisions are analogous to the excesses of the logarithmic tangents of half the respective

latitudes, augmented by 45►► above the logarithm of the radius. This he afterwards explained more fully in the edition of Gunter's works, printed in 1653 ; where, after observing that the logarithmic tangents from 45►► upwards increase in the same manner that the secants added together do ; if every half degree be accounted as a whole degree of Mercator's meridional line ; his rule for computing the meridional parts belonging to any two latitudes, supposed on the same side of the equator, is to the following effect : ' Take the logarithmic tangent, rejecting the radius, of half each latitude, augmented by 45►►; divide the difference of those numbers by the logarithmic tangent of 45►► 30', the radius being likewise rejected ►►► and the quotient will be the meridional parts required, expressed in degrees.' This rule is the immediate consequence from the general theorem, that the degrees of latitude bear to 1►► (or 60', which in Wright's table stand for the meridional parts of 1►►) the same proportion as the logarithmic tangent of half any latitude augmented by 45►► and the radius neglected, to the like tangent of half a degree augmented by 45►►, with the radius likewise rejected.

But still there was wanting the demonstration of this general theorem, and it was at length supplied by Mr. James Gregory of Aberdeen, in his Exercitationes Geometricae, printed at London in 1668; and it was afterwards more concisely demonstrated, together with a scientific determination of the divisor, by Dr. Halley in the Philosophical Transactions for 1695, No. ccxix., from the consideration of the spirals into which the rhumbs are transformed, in the stereographic projection ,of the sphere upon the plane of the equinoctial ; and which is rendered still more simple by Mr. Roger Cotes, in his Losometria, first published in the Philosophical Transactions for 1714, No. ccclxxxviii. It is added in Gunter's book, that if one-twentieth of this division, which does not sensibly differ from the logarithmic tangent of 45►► 1' 30' (with the radius subtracted from it), be used, the quotient will exhibit the meridional parts expressed in leagues ; and this is the divisor used in Norwood's Epitome. After the same manner the meridional parts will be found in minutes, if the like logarithmic tangent of 45►► 1' 30', diminished by the radius, betaken; that is, the number used by others being 12,633, when the logarithmic tables con►►\Jt of eight places of figures besides the index.

In an edition of the Seaman's Calendar, Mr. Bond declared that he had discovered the longi-

tude by having found out the true theory of th* magnetic variation ;

and, to gain credit to his assertion, he foretold that at London, in 1657, there would be no variation of the compass, and from that time it would gradually increase the other way; which happened accordingly. Again, in the Philosophical Transactions for 1668, No. xl., he published a table of the variation for forty-nine years to come. Thus he acquired such reputation, that his treatise, entitled The Longitude Found, was, in 1676, published by the special command of Charles II., and approved by many celebrated mathematicians.

It was not long, however, before it met with opposition ; and, in 1673, another treatise, entitled The Longitude not Found, made its appearance ; and, as Mr. Bond's hypothesis did not in any manner answer its author's sanguine expectations, the affair was undertaken by Dr. Hul-ley, who, in 1700, published a general map, with curve lines expressing the paths where the magnetic needle had the same variation; which was received with universal applause. But, as the positions of these curves vary from time to time, they should frequently be corrected by skilful persons; as was done in 1744 and 1756 by Mr. William Mountaine, and Mr. James Dodsor, F. R.S. In the Philosophical Transactions for 1690 Dr. Halley also gave a dissertation on ttu> monsoons ; containing many very useful observations for such as sail to places subject to thes*; winds.

After the true principles of the art were settle i by Wright, Bond, and Norwood, the authors 0:1 navigation became so numerous that it would be impossible to enumerate them ; and every thing relative to it was settled with an accuracy not only unknown to former aijes, but which would have been reckoned utterly impossible. The earth being found to be a spheroid, and not a perfect sphere, with the shortest diameter passing through the poles, Dr. Murdoch published a tract, in 1742, in which he accommodated Wright's sailing to such a figure ; and, in the same year, the celebrated Maclaurin gave a rule for determining the meridional parts on a spheroid; and he extended his speculations on the subject farther in his work on Fluxions.

This theoretical refinement bus not however in any instance been reduced to practice, as the data for determining the plan of a ship at sea can never be; o: Gained with such precision as would justify u practical man in introducing it as a matter of con-eciion.

Among the latter improvements in the science of navigation the methods of finding the longitude by lunar observations and time-keepers are the principal. To such perfection are these methods now brought, that it lias been observed bv a gentleman of distinguished nautical skill, whose situation imposes on him the duty of examining

the logs of all ships belonging to one of the first trading companies in the world, that the longitudes of ships are often determined more exactly than their latitudes.

We may notice also an important improvement in thi' method of finding the latitude by two altitudes, nnd the elapsed time, p;iven by Mr. Rid-dle in his Treatise on Navigation, au improvement

which has tended to bring that useful problem into more general use among practical seamen. The method of deducing the longitude from occultations has also been greatly simplified. See LONGITUDE.

For the perfection which the lunar method has attained we are chiefly indebted to the late Dr. Maskelyne ; and the highest credit is due to the British parliament for the encouragement which they have given to all who have usefully labored in supporting any department of this important branch of knowledge.

At present it may be safely affirmed that no great improvements in the science are to be looked for. The tables of the planetary motions appear nearly adequate to all the wants, and certainly to all the reasonable wishes, of the navigator ; though we are happy to understand that professor Airy of Cambridge is engaged in still farther improving them. As an art, navigation may be considered to have nearly reached its limit of perfection ; for further refinements in the theory of astronomy will by no means insure a corresponding increase of accuracy in its practical application ; for there exists a limit in the size of the instruments which can be managed on shipboard, and in the imperfections of every thing which is to be accomplished by a being of powers so limited as man.

The motion of a ship in the water depends on the action of the wind on its sails, and is regulated by the direction of the helm. There is always a great resistance on the fore part of the ship when in motion, and, when this resistance becomes sufficient to balance the force of the wind on the sails, the motion of the ship is no longer accelerated, but becomes uniform. This maximum velocity depends on the strength of the wind ; but as the resistance increases with the velocity, whatever may be the force of the wind, there is a limit to the velocity of the ship ; for the sails and ropes can bear but a certain force ; and, when the resistance of the water becomes equal to their strength, the velocity cannot be increased, and the tackle gives way.

The direction of a ship’s motion depends on the situation of her sails with regard to the wind. The most natural position is when she runs directly before it ; but this cannot often be done, from the variable nature of the winds, and the situations of the places to which the ship may be bound. When the wind therefore is unfavorable the sails and

rudder must be so placed that the ship's way may make an angle with the direction of the wind.

The ship moves forward under such circumstances because the water resists the side more than the forepart as much as the length of the s > fnp exceeds the breadth ; and this proportion is so considerable that the ship moves in the direction in which the resistance is least, and sometimes very swiftly. But if the angle made by the keel, with the direction of the wind, be too acute, the ship cannot be kept in that position ; and a barge cannot be kept nearer the direction of the wind than within about 67 30', though small sloops may sometimes lie and sail within about 50. But in such circumstances the velocity of the vessel is greatly retarded, both on

account of the obliquity of her motion, and of what is called ner leeway. This is occasioned by the yielding of the water on the leeside of the ship, in consequence of which the vessel moves in a sort of diagonal direction, between the direction of the wind, and that in which it is wished that she should go.

It would be a matter of extreme difficulty to determine from theoretical principles what the leeway in any given case would amount to ; as it depends on the strength of the wind, the roughness of the sea, the velocity, the shape, and the trim of the vessel.

When the wind is light the resistance on the lee side bears a great proportion to the strength of the wind, and it therefore yields very little. But the water having once begun to yield will continue to do so for some time, and the leeway will increase till the resistance on the lee side balances the force of the wind on the other, when it will become uniform. The leeway will be less as the velocity of the ship is greater; and in a strong gale, when the ship makes little head-way, the leeway will be greatest of all.

When there is a rough sea, the whole water of the ocean, to a considerable depth, acquires a motion in a particular direction. The rolling waves carry the ship out of her course, and the deviation is in proportion to their velocity and magnitude. From all these causes it arises that there is very great difficulty in determining the actual course of a ship at sea ; and it becomes in consequence a matter of the utmost importance to determine her place as often as possible by celestial observations.

In many places of the ocean there are currents which run with considerable velocity. They occasion errors of the same nature as leeway, only that they affect the distance as well as the course. Whenever a current is perceived, its velocity and direction ought to be determined and allowed for. Another source of embarrassment to the mariner is the continually changing variation of his compass. In few situations the points of that invaluable instrument correspond with what they ought to indicate on the horizon, and even in the same place the variation itself is in a state of variation. The astronomical methods of determining the variation are however both numerous and simple.

But it has recently been discovered that the whole mass of iron in a ship acts on the needle of the compass as one great magnet placed in its vicinity. As the centre of this mass is always in the forepart of the vessel, an ingenious philosopher, Mr. Barlow of Woolwich, conceived that its effect might be counteracted by placing a small mass behind the compass, so near it, and so situated with respect to it, that it might act as a counterbalance, by its great influence, to the general effect of the mass. This happy idea has been put to the test, and found to answer completely the anticipations which were entertained respecting it.

It is of importance to navigators in long voyages to reach their port by the shortest practicable route. The shortest distance between two points on the surface of a sphere is along a great circle intercepted between them. But it is no ,

NAVIGATION.

eaiy matter to keep a ship on a great circle, as the only means of guiding her in any particular direction at sea is the compass, by which she is kept on a rhumb line, which, unless the ship is sailing exactly north or south, or, on the equator, exactly east or west, does not coincide with a great circle.

But a small portion of a rhumb line may be conceived to be identical in direction with a great circle ; and, if the distance be divided into small portions, the course at each point may readily be computed by spherical trigonometry, and the ship kept, though not exactly on the arc of the great circle on which it is desirable that she should sail, yet sufficiently near it for all practical purposes.

PRINCIPLES OF NAVIGATION.

The earth is nearly a globe of 7916 English miles in diameter, and it revolves on an imaginary line called its axis, from west to east in twenty-four hours; and it is this rotation that causes the apparent diurnal motion of the heavenly bodies from east to west.

That the art of navigation may be successfully practised, it is necessary that the mariner should be furnished with accurate maps of the seas through which he sails, and of the coasts and harbours which he may have occasion to visit ; and be well acquainted both with the use of all instruments necessary for determining the ship's place from celestial observations, and the methods of deducing the desired conclusions from observations when taken.

Great circles passing through the poles of the earth are called meridians, and that great circle which is equidistant from both poles is called the equator, the equinoctial, or the line ; and less circles, parallel to the equator, are called parallels of latitude. The meridian passing over any place is called the meridian of that place, and the

portion of a meridian between any place and the equator is called the latitude of that place, and it is called north or south latitude, according as the place is north or south of the equator.

The difference of latitude between two places is an arc of the meridian intercepted between their parallels of latitude. Hence, when the latitudes of two places are both north or both south, their difference is the difference of latitude ; but when one is north and the other south their sum is the difference of latitude.

It is customary to call the meridian of some remarkable place or observatory the first meridian ; and the angle included between that first meridian, and the meridian of any other place is called the longitude of that place, or of any place under the same meridian. These polar angles are measured by the arcs which they intercept on the equator ; and hence in navigation the longitude of a place may also be said to be, or to be measured by, the arc of the equator intercepted between the first meridian and the meridian of that place ; and it is considered as east or west, according as the place is eastward or westward of the first meridian. Englishmen refer to the meridian of Greenwich observatory as the first meridian ; French to that of the

observatory at Paris ; Spaniards to that of Ca. diz ; but the Danes to that of Greenwich.

The difference of longitude between two places is the angle at the pole contained by the meridians of those places, in the arcs of the equator which they intercept ; and hence when the longitudes are of the same denomination, their difference, but ,when of contrary denominations their sum is the difference of longitude. A curve on the globe which cuts every meridian which it meets on the same angle is called a loxodromic or rhumb line ; a ship at sea being guided by the compass is steered upon a curve of this kind. The angle which a rhumb line makes with the meridian is called the course between any two places through which that rhumb passes ; and the arc of a rhumb line between two places is called their nautical distance, to distinguish it from the least distance, which is the arc of a great circle passing through both places.

If a ship be steered ˆdue north or due south her distance and difference of latitude are the same.

Meridional distance is an arc of the parallel of latitude arrived at,

intercepted between the meridian left, and that arrived at ; and departure is the sum of all the intermediate meridional distances, computed on the supposition that the distance is divided into indefinitely small equal parts.

If a ship sail due east or west she will eithe sail on the equator or on some parallel of latitude, and her meridian distance, departure, and distance sailed, will all be the same.

The bearing between two places, or the bearing from one place to another, on the same parallel of latitude is east or west, on the same meridian north or south, and in all other situations on an oblique rhumb line, continually approaching the pole.

OF PLANE SAILING.

Proposition 1. ††† In sailing on a rhumb line the differences of latitude are exactly proportional to the distances sailed.

For in Plate I. fig. 1, if PK, PL, PM, PN, and PO, be meridians, AE a rhumb line passing through A and E, and cutting every meridian which it meets at the same angle, F E and A I parallels of latitude ; and if AB, BC, CD, &c., portions of the rhumb line, be considered to be equal, indefinitely small, and their number indefinitely great, the triangles A B b, B C e, &c., may be considered as indefinitely small identical plane triangles; whence AE wiH be the same multiple of A B that the sum of A 6, Be, Cd, &c., is of Bfr. But the sura of At, B r, &c., is equal to the whole difference of latitude A F or E I. Again, by reasoning in a similar way, we find that A E is the same multiple of A B that the sum of B c, C c, &c., is of B b ; and the sum of B b. C c, &c., is what has been denominated the definition.

Hence, as AB6 is a right-angled plane triangle, a straight line equal to the curve A E, and one equal to the arc of the meridian AF, will form the base and perpendicular of a right-angled plane triangle as P Q II, fig. 2, in which PQ will represent AE; P H, AF and 11 Q,

the departure or the sura of B b, C c, &c., ar.d the angle P will represent the angle E A F, the course. While the course remains the same it is evident the departure is greater than the meridional distance F E (see fig. 1) and less than A I, but nearly equal to RS, the meridional distance in the middle latitude, between the latitude sailed from, and the latitude arrived at. When the places are near the equator, or when their parallels are not very distant from each other, the nautical conclusions drawn from a supposition that the departure is equal to the meridian distance in the middle latitude, are very nearly correct ; but in high latitudes, or in a long run, when the course is not near some of the cardinal points, this principle gives results deviating more from the truth than is desirable. If a ship sail on several courses she makes a less departure near the pole, and a greater one near the equator, than if she sail on a direct course ; but in such small distances as a day's run, the difference is almost insensible.

In problems solved on the principles of this proposition the conclusions are the same as if the earth were a plane, and all the meridians parallel to each other ; and it is hence that it is called plane sailing, whose principles are therefore correct as far as difference of latitude, course, distance, and departure are concerned.

Example. ††† 1. If a ship sail from Oporto N. W. i W. 315 miles, required her departure, and the latitude which she has arrived at?

By construction. ††† Draw the vertical line of A B fig. 3, to represent the meridian of Oporto ; with the centre A, and chord of 60††, describe the arc D E, on which from the line of rhumbs longitude of DE ††† 4†† points, the given course. Draw AC, and make it equal to 315 from any convenient scale of equal parts. From C draw C B perpendicular toAB; then AB and BC will represent the difference of latitude and departure, and, if measured on the scale from which AC was taken, it will be found that AB ††† 21T6 and BC †††=. 233-4 miles, and the departure is westerly as the course is westerly.

By Gunter's scale. ††† Extend on the line of sine rhumbs from 8 points to 4††, and that extent applied from 315 on the line of numbers will reach towards the left to 233-4, the departure. Again, extend on the line of sine rhumbs from 8 points to 3jJ-points, the complement of the course ; and that extent will reach on the line of numbers from the distapce 315, to the difference of latitude 211-6

]iy inspection in a table of difference of latitudes and departures. ††† Seek the given course in the table, and opposite the distance

will be found the difference of latitude and departure. If the distance is beyond the limits of the table, seek the difference of latitude and departure corresponding to ilie several parts of it, and their sums will be the whole difference of latitude and departure.

In the present example, with course 4J points and dist. 300, we have diff. lat. 201-5, dep. 2‘2-2-3; with course 4 ˆ points and dist. 15, we have diff. lat. 10-l,anddep. llpt ; hence the whole dill. lat. is ‘21 1-6, and dep. 233-4, as before.

By computation. ††† As rad. ; dist. AC, 315 ”. cos. A, the course 4J points : A B the diff. lat. — ††† > [{††††(††††,.

As rad. : dist. AC ; : sin. course ; BC, the dep. 211-6.

2. A ship from lat. 36†† 12’ N. sails south-west- ward till she arrives in lat. 35†† 1’ N., having made seventy-six miles of departure; required her course and distance?

Lat. left 36†† 12’ N. Lat. in 35†† 1’ N.

Diff. lat. 1 11 ††† 71 miles S.

By construction. ††† Draw A B and B C, fig. 4, at right angles to each other. Make A B ††† 71, the difference of latitude, and B C zi 76, the departure, then A C measured on the same scale will be found = 104, the required distance ; and the angle A measured either by a protra-tor, or with the aid of a line of chords, will be found nearly 47††, the required course.

By Gunters scale. ††† Extend on the line o numbers from 71 to 76, that extent will reach on the line of tangents from radius, or tan. 45†† to 47††, the course. Extend from the complement of this course to radius on the line of sines, and the extent will reach from the diff. lat. 71, towards the right to the distance 104 on the line of numbers.

By inspection. ††† Seek in a table of difference of latitude and departure till 76 dep. and 71 diff. lat. correspond in their proper columns, and the corresponding course and distance \ ill be found as above.

By calculation.

As diff. lat 71 1-851258

I depart. 76 1-880814

rad. 10-000000

True course 46 57’ 10-029556

As rad. lO’OOOOOO

diff. lat. 1-851258

sect, course 46 57’ 10-165811

dist. 104 2-017069

3. If a ship sail from the Lizard lat. 49 58’ N., S.S. W. | W. till she is in lat. 48 13’ r> ., required her distance and departure? Lat. left 49 58’ N. Lat. in 48 13’

Diff. lat. 1 45 = 105. By construction. Make A B = 105, fig. 5, and with centre A, the chord of 60, describe the arc D E, on which lay off the chord of 2f points, the given course, from the line of rhumbs; draw A E, and at A B erect the perpendicular B C ; then A E will be the required distance, and BC the departure ; which will be found to be 122-5 and 63 respectively. By calculation.

As rad. 10-000000

;AB105 2-021189

: 1 sect, course 2| points 10-066650

; Diff. AC 122-5 As rad.

: AB

I ; Tnie course ; Dep.TJC, 63

2-087839

10-000000 2-021189 9-777700

ON TRAVERSE SAILING.

When a ship, either from contrary winds or any other cause, is obliged to sail on different courses, the crooked line which she describes is called a traverse ; and the method of finding a single course and distance which would have brought the ship to the same place is called resolving a traverse.

A traverse is resolved by finding the difference of latitude and departure corresponding to each separate course and distance, and entering them in a table of which the form will be found below ; putting the difference of latitude in the column marked S when the ship steers southward, but in the column marked N when she steers northward. And, when the course is easterly or westerly, the departure is entered on the column headed E or W accordingly.

For example, if the course is S. \V. J W., the difference of latitude is entered under S, and the departure under W ; if the course is N. N. W., the difference of latitude is entered under N, and the departure under W ; if the course is E. ►► N., the difference of latitude is entered under N and the departure under E. Then the difference between the sum of the numbers under N and the sum of those under S is the whole difference of latitude, and of the same name with the greater sum ; and the difference between the sum of the numbers under E and the sum of those under W is the whole departure, and of the same denomination as the greater.

Having thus got the whole difference of latitude and departure which the ship has made, her latitude in is at once known ; and her course and distance may be found, as in the second of the preceding examples.

Example 1. ►►► If a ship sail from Halifax, lat. 44►►44’N., E. S. E. 18, S. S. E. 24, S. by W.I 7, S. E. | E. 23, N. E. by N. 12, N. N. E. ►►

E. 16, and N. W. ►► W. 28 miles, required her latitude in, and course and distance made good ?

TRAVERSE TABLE.

Diff. Lat.

Departure.

Courses.

Dist.

N.

S.

E.

W.

E. S. E.

18

6-9

16-6

S.S.E.

24

22-2

9-2

S.byW.

17

16-7

3-3

S. E. | E.

23

13-7

18-5

N. E.byN.

12

10-0

6-7

N.N.E. JE.

16

14-5

6-8

N. W. i W.

28

17-8

21-6

42-3

59-5

57-8

24-9

49.0

24-Q

Difl

‘.Lat.S.

t ~ O

~ 1 u

172

32-9 Dep.E.

Lat. left, 44►► 44’ N. Diff. lat. . 17 S.

Lat. in . 44►► IT N.

To find the course and distance by calcula tion : ►►►

As diff. lat. 17-2 . : Departure, 32-9 . : : Rad.

1-235528

1-517196

10-000000

: True course, 62►► 24’ E . . 10-281668

As nul. : Diff. lat. : : Sect, course

Distance, 37-12 miles

10-000000

1-235528

10-334141

1-569669

By inspection. ††† WT;lh 32‘9 in column departure, and 17-2 in column different latitude, in a table of different latitude and departure, the corresponding course is about 62ˆ†† and the distance

37.

By Gunters scale. ††† Extend from 17-2 to 32-9 on the line of numbers, and the extent will reach from radius or 45††, on the tangent line to 62J†† the course. Extend from the complement of this course to radius on the line of sines, and the ex-tent will reach from the difference of latitude 17-2 on the line of numbers towards the right, to 37, the distance.

By construction. ††† Let A be the place sailed from, and draw the vertical line N A S B (fig. 6) to represent the meridian. About A as a centre, with the chord of 60††, describe a circle cutting A B in N and S ; then N and S will represent the north and south points of the compass.

Draw A D, making an angle of six points with the meridian, from the south towards the east, and make A D††† 18 from a scale of equal parts. Having laid off two points from S towards the east, through D draw the line D E parallel to the line joining that point of the arc to the centre, and make D E ~ 24 from the same scale of equal parts. Then E will be the place of the ship at the end of the second course. Proceed in the same manner with each of the subsequent courses, drawing E F, F G, &c., parallel respectively to the lines drawn from it, which indicate the respective courses. From C drop C B, a perpendicular on A B, then AC will be the distance, A B the difference of latitude, B C the departure, and the angle ABC the course. These lines being measured on the same scale from which the distances are laid off we shall have A C 37, A B 17, and B C 33 ; and the angle B A C, measured by the arc S e will be found to be about 62 J††.

terample 2. ††† If a ship sail from Oporto N. N. W. J.W3G, N.by E* E. 22, W.by S.14, W.N. W. i W. 40, and’N. N. E. 18 miles, required her

latitude in, and course and distance made good *

TRAVERSE TABLE.

Courses.

Disi.

D ff. Lat.

Departure.

N.

S.

E.

W.

N.N.W.JW. N.by E. iE. W. bv S. W.N.VV. JW.

N. N. E.

Diff. li

36 22 14 40 18

it. N.

31-8 21-3

11-6 16-6

2-7

5-3 6-9

17-0

13-7

38-3

81-3 2-7

12‘2

Dp.\

69-0 12-2

78-6

ˆ.56-8

Lat. left, 41►► 9’N, Diff.lat. 1►►19N.

Lat. in 42►► 28’ N.

To find the course and distance by inspection. ►►► With 78‘6 in latitude column, and 56-8 in departure column, we find the course to be nearly N. 36►► W., and the distance about ninety-seven miles.

By calculation ►►►

As diff. lat. 78-6 … 1-895423

: Dep. . 56-8 … 1‘754348

‘I Rad. . 10-000000

-.True course 35►► 51’

As rad. .

: Diff. lat. . ; : Sect, course

: Dist. 96►► 97’

►►► 9-858925

. 10-000000 . 1-895423 . 10-091219

1-986642

ON CURRENT SAILING.

Under this head we shall copy the article on the subject given by Mr. Riddle, in his Treatise on Navigation, and illustrate the principles by an example or two : ►►►

If a ship at B (fig. 7), sailing in the direction B A, were in a current which would carry her from B to C in the same that she would sail from B to A in still water, then by the joint action of ihe current and the wind, she would in the same describe the diagonal B D of the parallelogram A B C D. For her being carried by the current in a direction parallel to B C, would not alter the force of the wind, or the position of the sails with respect to it; the wind, therefore, would continue to propel the ship in the same manner as if the current had no existence. Hence, as she would be swept to the line C D by the independent action of the current in the same time that she would be carried to A D by the action of the wind on her sails, she would be found at D, the point in which those lines intersect.

Now, from the ordinary way in which the distance is determined at sea, no intimation of a current can be obtained, as both the ship, and the log from which the distance is measured, are carried on by the current, the line withdrawn

from the reel baing (he measure of only what tha ship sails from the

log. But currents in general do not reach to a great depth ; and a boat may be kept almost as steady as if it were at anchor, by sinking a heavy body, with a line attached to it, to a considerable depth ; and then the log heaved from the boat will show both the setting and drift of the current.

If a ship sail in the direction of the current, the whole effect of the current is to increase the distance; but, if she sail against the current, the difference beween her rate of sailing is shown by the log, and the drift of the current will be tne distance which she actually goes

With respect to the oblique action of a current on a ship, the chief problems of any practical importance, are illustrated in the three following examples : ###

Example . ### If a ship sail W. 8‘5 per hour in a current setting S. W. by W., four miles per hour ; required her true course and hourly rate of sailing?

In fig. 8, let A B= 8-5 be on the west rhumb, and B C, 4, on the S. W. by W. rhumb, then the angle A B C is thirteen points; from whence, by trigonometry, we have the angle B A C = 10## 39*; which allowed to the left of W, shows the true course to be S. 79## 21’ W. And the side A C is readily found to be 12-04, which is the ship’s hourly rate of sailing.

Example 2. ### A ship’s course to her port is W. N. W., and she is running by the log eight miles an houi ; but meeting with a current, running W. J S. four miles an hour, what course must she steer in the current, so as to enable her to reach her port ?

Let A (fi<j. 9) be the ship, P the port, A P ly-ing W. N. W., on A B, the W. i S. rhumb ; make A C = 4, and with centre C and distance 8, cross A P in D ; draw A E parallel toC D, meeting D E, drawn through D, parallel to A C ; then A E will be the direction in which the ship must be steered, and A D will be the distance which she will be carried in an hour. Now the angle E D A = the angle D A C = 2J points ; and AE: ED;: sin. ADE: sin. EAD= 13## 39’, which allowed to the right of W.N. W., gives N. 53## 51’ W. for the course on which the ship must be steered.

Example 3. ### From a ship in a current a rock was seen bearing S. W. J S. twenty miles ; after sailing in the dark, W. S. W. thirty miles as was supposed, the ship was lost on the rock; required the setting and drift of the current ?

Let A S (fig. 10) be the meridian, A the place of the ship when the rock R was seen, and B the supposed place of the ship when she was lost upon the rock. Then A B = 30, A R = 20, and B A R = 2►► points ; whence the angleˆA B 11 is 37►► 20’, as is deduced from the following computation : ►►►

A B + A II, 50

A B ►►► A R, 10 Tan. B + R,

75►► 56’

1-698970 1-000000

10-601081

Lon. B ►►► R,

38►► 36’ tan. 9-90211 1

A B R

37 20’

This angle allowed to the right of E. N. E., the opposite point to that steered by the ship, shows that the setting of the current is S. 75 10’ E. With respect to its drift, we have sin. A B R 37 20’ : sin. B A R 2$ points : : A R : B R = 15-55, the drift in five hours ; whence the hourly drift is 3-11 miles.

ON PLYING TO WINDWARD.

When the wind is adverse, a ship can only proceed towards her port by tacking ; and it then becomes a question how far she ought to steer on each tack. Questions of this kind are exceedingly simple ; for, if the ship is meant to reach her port in two boards, she must steer upon one tack till the bearing of the port is the same as the course on the other tack. The computation is made by the following proportion, *viz.* As the sine of the angle included between the two courses is to the distance to be sailed, so is the sine of the angle included between the bearing of the port, and the course on either tack, to the distance to be sailed on the other tack.

It may be observed that, whatever number of boards a ship may make, the sum of the distances on each tack will be the same as if the port had been reached on two boards only.

Example. A ship can lie within five points of the wind, and is bound to a port lying S. JE. eighteen miles ; the wind being at southeast ; required her course and distance on each tack, to reach her port close hauled in two boards ?

Five points to the right of southeast is south by west, the course on the larboard tack ; and five points to the left of southeast is east by north,

the course on the starboard tack. The angle included between these two courses is ten points, the angle between the bearing of the port and the course on the larboard tack is one point and a half, and that included between the bearing of the port and the course on the starboard tack is eight points and half. Hence ###

Sine 10 points : 18 miles ….

10-718097

: Dist. on starboard tack 5-656 0-752482

Sine 10 points … 9-965615

: 18 miles …. 1-255273

: : sin. 8## points … 9-997904

11-253177

: Dist. on larboard tack, 19-39 1-287562

ON PARALLEL SAILING.

If P A, P B (fig. 11) be two meridians, A B their difference of longitude, or the arc of the equator, which they intercept ; P C the radius, which is the common section of the two meridians ; AC B the plane of the equator; and D II E, F IG, the planes of any two parallels of latitude of which the points, corresponding to the difference' of longitude A B, are D E and F G respectively. Then the angles F I G, D II E,

and ABC, being equal, G F, D E, and A B. are like parts of the circles to which they belong.

Hence DE: BB;:DH: AC. But D H is the sine of D or the cosine of A D, the latitudes of the parallel ED; hence the cosine of any latitude is to radius as any portion of a parallel in that latitude is to the corresponding arc of the equator.

Now in a plane right angled triangle, the base is to the hypothenuse as

the cosine of the acute angle at the base is to radius ; therefore if the angle at the base of a right angled plane triangle be made equal to any latitude, and the base equal to any position of the parallel in that latitude, the hypothenuse will be equal to the difference of longitude corresponding to the given arc of the parallel.

Similarly we have D II : F I : : D E : F G ; that is similar arcs of different parallels are to each other as the cosines of their latitudes. Therefore if two right angled plane triangles have for a common hypothenuse the difference of longitude between two meridians, and the angles at the bases of the triangles be equal to any given latitudes ; their bases will represent the arcs of the parallels which respectively correspond in those latitudes to the difference of longitude.

Example 1. ††† A ship in lat. 36†† 56’ N. long. 20†† 1 7’ W. is bound to St. Mary’s, in the same latitude, and in long. 25†† 5’, what distance must she run to reach the island ?

Long, ship, 20†† 17’ W.

Long. St. Mary’s, 26 5 W.

Diff. long.

4 48 †††288 miles W.

By construction. ††† Draw the base line AB, fig. 12 and make the angle A††† 36†† 56’, the given latitude ; make AC rz 28’ the diff. of long, and from C drop CB a perpendicular on AB, then AB, measured on the scale from what AC is laid off, will be 230, the required distance.

By inspection. ††† Take the latitude, which is nearly 37††, as a course, and AC 288 as a distance on a traverse table, and in the column of latitude will be found AB 230.

By calculation.

As radius 10-000000

: AB 288 2-459392

: : cos. lat. 36►► 56 9-902729

: dist. 230-2 2-362121

Example 2.►►► If a ship sail W. from Cape Finisterre, lat. 42►► 54’ N., long. 9►► 16’ W., 196 miles, required her longitude?

By conitruction. ►►► Make the angle A = 42►► 54’, fig. 13, and ABzrl96; let the perpendicular B C meet A E in C, then A C will be found to be 268, the difference of longitude.

By inspection.►►► To the angle A, nearly 43►►, as a course in the traverse table, and AB 196 in the lat. column, AC 268 corresponds in the dist. column.

By Gtititers scale. ►►► Extend from 47►► 6’, the complement of the latitude, to radius on the line of sines, and that extent will reach from 1 96 the meridian distance, or the line of numbers, towards the right, to 268, the difference of longitude.

By tabulation. Rad.

: sect. lat. 42►► 54’ ::AB

10-000000

10-135402 2-292256

AC 267-7 2-427658

Long. Cape Finisterre 9►► 16’ W. Diff. long. 268 4 28 W.

Long, in 13 44 W.

Example 3.□□□ If a ship sail E. 126 miles from the North Cape in Lapland, and then due N. till she arrives in lat. 73□□ 26’ N., how far must she sail VV . to reach the meridian of the North Cape ?

By construction. □□□ Make AB □□□ 126, fig. 14, the given distance sailed E. from the North Cape, and the angle B AC = 71□□ 10’, the latitude of the North Cape ; and draw B C perpendicular to AB ; then AC will be the diff. long. On AC describe a semicircle, and from A draw AD, making the angle CAD = 73□□ 26’, the latitude in which the ship sailed W., meeting the semicircular arc in D, then A D will be the required distance, and it will be found to be 111.

By inspection. □□□ In a traverse table with the angle BAG, nearly 71□□, as a course, and AB 126 in the lat. column, AC the diff. long., will be found □□□ 387, nearly on the distance column. Then, with the angle CAD, nearly 73ˆ□□ as a course, and 387 in the dist. column, DA, the required distance, will be found nearly rz 111.

Note. □□□ In using a traverse table, for this or any other purpose, if the given numbers, representing the lines, are too great to be found in their respective columns, any convenient parts of those numbers may be taken, and the results from the table multiplied by the corresponding numbers.

By Gunter’s scale. □□□ Extend from 15□□ 50*, the complement of the latitude of the North Cape, to 16□□ 34’, the complement of the other given latitude on the line of sines, and that extent will reach in the same direction from 126 to 111, the -equired distance on the line of numbers.

By calculation.

As cos. BAC 71□□ 10’ 9-508956 : cos. DAC 73 26 9-455044 ::AB 126 2-100370

11-555414

: AD, req. dist. 111□□ 3’ 2-046458 ON MIDDLE LATITUDE SAILING. To explain the principles of middle latitude sailing we shall refer to the figure which has been given to illustrate the elementary principles of plane sailing. In that figure the equal elementary parts of the departure B 6, C c, D d, &c., are severally less than the corresponding

parts of the parallel AT, but greater than those which correspond to them on the parallel FE.

Lat. of Start 50►► 13’ N.

Lat. of St. Michael’s 37 49 N.

But, if RS be the arc of the middle parallel between F E and A I, the elementary parts of the departure on one side of it will exceed the con-responding parts of that line, by nearly as much as the elementary part of the departure on the other side of RS are less than the corresponding parts of that line. Hence the meridian distance in the middle latitude is nearly equal to the departure as computed by plane sailing.

Therefore, if the angle at the base of a plane triangle be taken equal to the middle latitude, and the base equal to the departure, the hypothenuse will represent the difference of longitude nearly, not exactly; for though in places near the equator, and in an ordinary day’s run in any situation, except in very high latitudes, the meridian distance in the middle latitude will not differ much from the departure, they are never exactly equal. To exemplify, in a practical way, these theoretical considerations, let AE, in the figure last referred to, be represented by D B in fig. 15, AF in that figure by DC in this, then the angle BCD will be a right angle, and BC the departure will be correctly equal to the sum of B6, Cc, &c., and nearly equal to RS, the meridian distance in the middle latitude. If, therefore, in the right angled triangle B C A, the angle CBA be made equal to the middle latitude, or to the latitude of the parallel R S, then A B the hypothenuse will be nearly equal to the difference of longitude. If, therefore, in these two connected right angled triangles, D C be the difference of latitude, BD the nautical distance, and CBA the middle latitude; then CDB will be the course, CB the departure, or the meridian distance in the middle latitude nearly, and AB will be nearly equal to the difference of longitude.

The solution of the different problems in navigation are thus in middle latitude reduced to the computation of the different parts of two right angled plane triangles, as DCB, BCA, having the meridian distance in the middle latitude for a common side, and forming together one triangle, as ADB; the different parts of those triangles may be derived from each other, either trigonometrically or otherwise. But it will be convenient to deduce one or two useful practical relations among the

parts of those triangles.

1st. In the triangle ABD; sin. A: BD:: sin. D : AB ; or cos. ABC : BD :: sin. D : AB; that is, cos. mid. lat. : dist. :: sin. course : diff. long.

2d. DC-tan. BDC = BA-cos. CBA; being each = C B ††† R. Hence DC: BA:: cos. CBA : tan. BDC; that is, diff. lat. : diff. long. ; ; cos. mid. lat. : tan. course. Two propositions which may be varied according to the data that are given.

Example 1. ††† What is the course and distance from the east end of St. Michael's, Azores, to the Start?

Long. 3†† 38', W. 25 11, W.

Diff. lat.

Mid. lat.

12 24 = 744 miles. Diff. long. 21 33 =: 1293 miles. 2) 88 2 sum of lats.

44 1

NAVIGATION.

507

By conttruction. ††† Draw the meridian line AD, fig. 16, and at the point A make the angle BAG equal to 45†† 59', the complement of the middle latitude. From A on AB lay off 1293 miles, the diff. long; and from B let fall the perpendicular B C on AD; then B C will be the meridian distance, or the departure nearly. Produce AC, till C D =

744 miles, the diff. lat, and join B D, which will be the distance, and the angle D will be the course. Hence D B, measured on a line of equal parts, will be found = 1179, and the angle D the course = 51►►; or the true course is N. 51►► E. dist. 1)79 miles.

By inspection. ►►► With the mid. lat. 44►► as a course, and diff. long. 1293 miles as a distance, the dep. is found in the lat. column = 930 miles. Then with diff. lat. 744 miles, and dep. 930 miles, in their proper columns, the course is found to be about N. 5 1 i►►E., and dist. 11 95 miles.

By Gunters Scale. ►►► Extend on the line of sines from radius to 46►►, the co-middle latitude, and the extent will reach from the difference of longitude 1293 miles, to the dep. of 930 miles on the line of numbers. Extend from this dep. to the difference of latitude 744 miles on the line of numbers, and that extent will reach from radius, or 45►► to the course 51 J, on the line of tangents. Extend again from radius to the complement of the course, on the line of sines, and the extent will reach from the difference of latitude 744, to the distance 1195 on the line of sines.

Ity calculation.

As diff. lat. 744 …. 2-871573 : diff. long. 1293 … 3-111598 1 1 cos. mid. lat. 44►► 1’ . . 9-856812

12-968410

: true course N. 51►► 20’ E. 10-096837

As rad lO’OOOOOO

;diff. lat. 744 …. 2-871573

I*, sect, course 51►► 20’ 10-204267

: dist. 1191 miles … 3-075840 Example 2. If a ship sail from Cape Race S.S. E. |E. 216 miles; required her latitude and longitude?

By inspection. ►►► With course 2| points, and distance 2l 6, the difference of latitude is found to be 185-3 and dep. Ill miles. Hence 3►► 5’ subtracted from 46►► 40’ the latitude of Cape Race, leaves

43►► 35’ N. for the latitude in ; the middle latitude between which and that of Cape Race is 45►► 7’. Then with 45►► the middle latitude as a course, and dep. Ill, in latitude column, the difference of longitude is found in the distance column = 157 miles = 2►► 37’, which, subtracted from 53►► 3’, the longitude of Cape Race, leaves 50►► 26’, W., for the longitude in. By calculation.

As rad 10-000000

: dist. 216 …. 2-334454 I : cos. course 2| points 9‘933350

: diff. lat. 185 ►►► 3 miles 2-267804

Lat. left . Diff. lat.

46►► 40” N. 3 5 S.

Lat. in . . 43 35 N.

2) 90 15 sum lats.

45 7 mid. lat.

As cos. mid. lat. 45►► 7’ 9-848599 : sin. course 2 J points 9-711050 I’, dist 2 16 …. 2-334454

12-045504

Diff. long. 157-4 miles 2-196905

Long, left Diff. long.

Long, in

53►► 3* W. 2 37 E.

50 26 W.

ON MERCATOR'S SAILING.

Mercator's sailing is the art of applying, 01 a plane surface, the distance which a ship goes from a given place on a given course so that her place shall be determined truly both in latitude and longitude. In this method the globe is conceived to be so projected on a plane that the meridians are parallel lines, and the elementary parts of the meridians and parallels bear h all latitudes the same proportion to each other that they do on the globe.

Now as the meridians are all great circles, and the parallels less circles of the globˆ it is evident that, except at the equator, no giver portion of a meridian can be equal to a like portion of its parallel ; the parts of the parallels diminishing as they approach the poles.

In Mercator's projection the meridians being parallel to each other their distance in all p.rallels is the same as their difference of longitude. Therefore as the parallels, which are leis than the equator, are in this projection made ejual to it, they are all in the projection increased ieyond their magnitudes on the globe.

We have already seen, from the princples of parallel sailing, that / being any latitude p any portion of a parallel in that latitude, ani e the corresponding portion of the equator,

cos. / : rad. or rad. sect. / : : p : e Now p and c being equal in Mercator's projection, we have rad. : sect. lat. : : an elenentary portion of the meridian ; the length of hat elementary portion in Mercator's projectun. Or taking radius as unity, and considering 1' as the elementary part of the meridian, we ha\e 1 : sect. lat. : : 1' ; the length of 1' in the projection.

Whence to radius unity, the length of 1* in Mercator's projection of the globe in any latitude is equal to the natural secani of that latitude.

Therefore in lat. V, 1' of the meridian ►►► sect. 1' in the projection.

In lat. ‘2’, 1’ of the meridian ††† sect. 2’ in the projection. In lat. 3’, 1’ of the meridian ††† sect. 3’ in the projection, &c.

And consequently sect. 1’ + sect. 2’ + sect. 3’ ††† the distance in the projection of the third minute of the meridian from the equator; and this sum arranged in a table for every degree and minute is called a table of meridional parts; and it is in this manner that the table was originally computed. Of course, the smaller the portion of the meridian that is taken as the elementary portion the more exactly will the lengths of the parts in the projection be determined. But the results of the computations having 1’ and 1* respectively for their bases, would not, in the latitude of 70††, differ much more than half a minute in the length of the whole projected arc.

We shall, however, add two other methods of computing a table of meridional parts.

First method. ††† It is well known that a being any arc, radius unity, the secant of that arc wil be

a†† . 5 a* . 61 a9 277 a* . 50621 a†††

c\ I n A 1 ˆc%/\ ~l

&C.

720 ‘ 8064. 3628800

This being multiplied by a, and the fluent taken, we have the sum of the secants contained in a equal to

o►► ,►►, 61 a7 277 a9 50521 a” ˆ “6 + 24 + 5040 + 72576 + 3991680 Example. ►►► Let it be required to find the meridional parts corresponding to 5►► the length of an ire of one minute to radius unity, being ►►►OOC290888208665, &c. First, 5►► x 60 X -000290888208665 ►►► -087266462599, &c., z: a, the length of the arc of 5►►.

a►►► + -087266462599

►►► ►►► ‘ 110762019

24

61 a7

5040

61 a>

5040

210875

466

+ -57 + ZZZ= -087377435959

a’ a3

“~lT”h~24

This result, divided by the above stated length of an a-c of one minute, gives 300-381498, for the me-idional parts of 5►►, which is correct to the last place of decimals. In the same way the meridioial parts of

any other arc may be computed.

Secord method. ††† Let P, fig. 17, be the pole, EQ a lortion of the equator, QVthe latitude, OV its sine, and OE††† VW its cosine, and EV the -adius of the sphere. Let x= the angular measure of Q V, or its length on the globe, m its length on the Mercator's chart, or the meridional larts of x; y = O V or E W the sine of x, and r = E V the radius of the sphere. Then EO †††

and N/ r2††† y : r :: x : ††*,from the principle of the projection,

hence m =

- f

T V

thenfore x ⬩⬩⬩ ⬩⬩⬩ ˆ

But

if

‘ 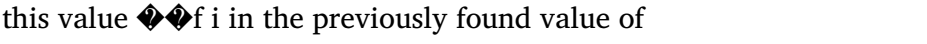
y*-r::j Substituting

this value ⁇f i in the previously found value of

7* y m, we nave tn - - a, an expression whose

fluent giv3s m r x 2‘302585, &c., x log.

f_+ y , t,

-.+ thj correction.

But in the plane triangle VVVS we have V W : rad. : : WS : cotan.WSV, or V7 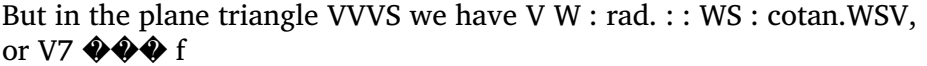 f

:r :: r + y : r\f - 2, the cotangent of

WSV, measured by half the arc PV, the complement of the latitude. Hence we have m 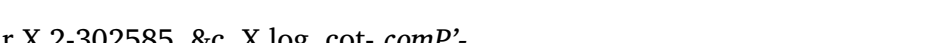

r X 2-302585, &c, X log. cot- *comP’*- .

-f-the correction. And as when m = O, the cotangent of half the complement of the latitude = r, the correction is nothing ; therefore m =

r x 2-2032585, &c., X log. cot-i

= 2-302585, &o, log.

‘

But,

tan. ►► comp. lat. ‘ the tables of meridional parts being expressed in geographical miles, the radius of the sphere must also be expressed in geographical miles, of which it is equal to 3437-74677. Therefore we have

m = 7915-7044679 X log. -.

tan. ►► comp. lat.

an expression in which tan. | comp. lat. is to be taken as belonging to a table computed to radius r.

Example. ►►► Let it be required to find the meridional parts of 5►►.

Half the complement of 5►► is 42►► 30’. Log. rad. ►►► 10-Tan. 42►► 30’ ►►► 9‘9620524617

►►►0379475383

This multiplied by 7915-7044679 gives 300-381498, agreeing with the result already obtained by another method.

As in this projection the meridians are parallel straight lines, the rhumb lines, which cut the meridians at equal angles on the globe, will be straight lines cutting the projected meridians at the same angles in the projection ; and the distance between any two places on the globe will be to the projected distance as the difference of latitude of the places on the globe is to the projected or meridional difference of latitude; and the difference of latitude on the globe will be to the departure as the projected or meridional difference of latitude is to the difference of longitude.

For let fig. 18 be the Mercator’s projection of that explanatory of the principles of plane sailing, fig. 1. plate I., the letters in this corresponding with the same letters in the other, without dashes. Then all the elementary triangles AftB, BcC, &c., in that figure are respectively identical, and by the nature of the projection they are

also similar to the corresponding' triangles A' b' B', B'c'C', &c., in this figure, and as the angles and sides of the elementary triangles A b B, B c C, &c., may be collectively represented by the angles and sides of a similar right angled plane triangle, whose perpendicular is equal to AF, hypothenuse to A E, and base to b B -f-C c, &c. ; therefore the sides and angles of the similar projected triangles A' i' B', B'c'C', &c., may also be collectively represented by a right angled plane triangle; having A'F', the projected difference of latitude, for iU > perpendicular, F' E' or B' b' -J-C' c', &c.,the difference of longitude, for its base, A' E', the projected distance, for its hypothenuse, and tin angle F'A'E' equal to the course.

If therefore, in the annexed figure, ABC and AD E be two right angled plane triangles, and AD be the difference of latitude, the common angle A the course, and AD the meridional difference of latitude, then B C will be the departure, or the sum of the elementary meridional distances, A C the nautical distance, and D E the difference of longitude, all exactly. Hence from such parts of these triangles as may be given, the others may in any case be determined, either by computation, inspection, or otherwise.

The following obvious proportions will be found useful:††† 1st. AB : BC : : AD : DE; 2d. A D : D E : : rad. : tan. A. That is, diff. lat. : dep. : : mer. diff. lat. : diff. long. ; and mer. diff. lat. : diff. long. :: rad. : tan. course.

Example. ††† 1. Required the course and distance from lat. 28†† 30' N., long. 30†† 15' W., to Cape Clear in Ireland, lat. 51†† 25' N., long. 9†† 29' W. ?

Lat. Cape Clear … 51††25'N. Lat. in 28 30 N.

Diff. lat. 1375 N. = 22 55

Mer. parts Mer. parts .

Mer. diff. lat.

Long. … 30►► Long. … 9

15’ 29

3609 1785

1824

Diff. long… 20 46 r= 1246, E.

By construction. ►►► Draw the meridian A D, fig. 20, and make’D E perpendicular to A ; make AD ►►► 1824, the meridional difference of latitude, DE ►►► 1246 the difference of longitude, and ABrr 1375 the difference of latitude. Join AE and draw C B parallel to D E, then A C the distance will be found ►►► 1665, and angle A the course N. 34|►► E.

By inspection. ►►► With 1824 in latitude column, and 1246 in dep. column, the angle A, the course, will be found 34 J►► ; with this course and 1375 in latitude column, AC will be found in the distance column►►► 1665 miles.

By Gunter’s scale. ►►► Extend on the line of numbers from 1824 to 1246, and that extent will reach from radius to 34|►►, the course on the line of tangents. Extend again from radius to 1665, the complement of the course on the line of sines, and the extent applied to the line of numbers will reach from 1375, the difference of latitude, to the distance.

By calculation.

As mer. diff. lat. AD, Ib24 3-261025

: diff. long. D E, 1246 . 3-095518

:: rad. . 10-000000

: Tan. lat. the course 34►► 20’ 9-834493

As rad. …… 10-000000

: diff. lat. A B, 1375 . . 3-138303 :: sect, course 34►► 20’ . 10-083141

AC, the distance, 1665

3 221444

Example 2. ►►► If a ship sail from the Cape of Good Hope, lat. 34►► 29’ S., long. 18►► 23, E.,

S.W. by W. J W. 197 miles; required her latitude and longitude in ?

By construction. ►►► Draw the meridian AD, and draw AC making the angle A ►►► 5J points, the given course, and make AC ►►► the distance 197. From C let fall the perpendicular CB on AD; then AB will be the difference of latitude, and BC the departure ; and AB, being measured, will be found ~ 101 = 1►► 41’, which, added to 34►► 29’, the latitude left, gives 36►► 10’ S. the latitude in. Then take the difference of the meridional parts of these two latitudes, and lay it off from A to D, and draw D E parallel to BC, and D E will be the difference of longitude, ►►► 205 W. =. 3►► 25’, which subtracted from 18►► 23’, the east longitude left, leaves 14►► 58’ E., for the longitude arrived at.

By inspection. ►►► With the given course and distance the difference of latitude is found = 101-4, and the latitude in as above. And with the same course and the meridional difference of latitude 123 in the latitude column, the differenco of longitude ED is found in the departure column ►►► 205, whence the longitude in is obtained also as above.

By Gunter’s scale. ►►► Extend from radius to 2| points, the complement of the course, on the line of sines, and the extent applied to the line of numbers will reach from the distance 197, to the

difference of latitude 101. Again, extend from radius to 5J points, the course on the line of tangents, and the extent will reach from 123. the meridional difference of latitude to 205, the difference of longitude on the line of numbers.

By calculation.

As rad 10-000000

: dist. 197 2-294466

: : cosin. course 5[illegible] points 9 711050

: diff. lat. 101-3 . ,

As rad

: tan. course 5J points :: mer. diff. lat. 123

Diff. long. 205-2

2-005516

10-000000

10-222300

2-08<>905

2-312205

Lat. left 34►► 29’ S.

Diff. lat. . 1 41 S.

Lat. in.

36 10 S.

Mer. parts 2207

Mer. parts 2330

Mer. diff. lat.

Long, left . Diff. long.

Long, in

. . 123

18►► 23’ E. 3 25 W.

14 58 E.

In Mercator’s sailing, though the principles are perfectly correct, they do not apply to the case in which two places are in the same para.- lel of latitude; in that case the principles of pn-rallcl sailing must be resorted to. And in all cases when the difference of latitude is small, and the course large, a trifling error in the difference of latitude may produce a very important error

in the difference of longitude. In such cases recourse had better be had to middle latitude sailing, and we shall here give a method, devised by Mr. Workman, by which the results of that approximate method may by the aid of a table of meridional parts be rendered correct. Let L ►►► the difference of longitude, I the dif—

ference of latitude, ro the meridional difference of latitude, D the distance on Mercator's chart, d the true nautical distance, T the tangent of the course, S the cosecant of the course, C the cosine of the parallel in which the meridional distance is correctly equal to the departure, and R = radius.

Then m : L : : R : = T; by tne principles of Mercator's sailing

C L

Then I : L : : C : ††† ~ ˆ T, by the principles of middle latitude sailing.

††T L K> vy Li ._ , n ~ Jv / Hence = ††† -. ††† , or R I ††† m C, or C .

CL

Again by mid. lat. sailing R : C : : L : -rr-, the

H

C L C S L

departure. But R : ??? rr- : : S ; ??? ˆ ??? = d =

ILS mil’

We have

R ‘ R⬚⬚

R I by substituting for C.

hence the means of finding the latitude of the parallel in which the departure is equal to the meridional distance ; and the principles of mid-dle latitude sailing may, therefore, be made to afford results perfectly correct. We shall solve the first of the two preceding examples by this method. Here / r = 1375, L m 1246, and m i = R ⬚⬚⬚ /

1824 ; whence = 9‘877278 ⬚⬚⬚ cos. 41⬚⬚ 5’,

m

CL

and -j- =. T = 9‘834493, tangent course 34□□

If

20’, as before. The subjoined Table will facilitate the appli-

cation of this method. It is used in the following manner: ††† Take half the sum of the latitudes for the mean middle latitude, and take also the difference of the latitudes. Then enter the table with the nearest degree of mean middle latitude at the side, and the nearest degree of difference of latitude at the top, and in the angle of meeting is the correction to be added to the mean middle latitude, to obtain what in this case may be called the true middle latitude.

Example. ††† What is the true middle latitude between 40†† 17’ N. and 55†† 51’ N.?

55

40

51 N. 17 N.

55

40

51 17

15 34

2)96 8

Correction

4 mean mid. lat.

33

48 37 true mid. lat.

TABLE of CORRECTIONS to be added to the MEAN MIDDLE LATITUDE to find the TRUE MIDDLE

LATITUDE.

Mean Mid. Lat.

DIFFERENCE OF LATITUDE.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

o

15

0

1

2

3

4

6

9

12

15

19

23

27

31

35

##40

##45

##51

##58

1## 6

1##11

17

0

1

2

3

4

6

8

11

14

17

21

25

28

32

37

42

48

54

1 1

1 8

19

0

1

2

3

4

6

7

10

13

16

19

23

26

30

34

40

45

50

56

1 3

21

0

1

2

3

4

6

7

9

12

15

18

21

25

29

33

37

42

47

53

58

23

0

1

2

3

4

6

7

9

12

15

17

20

24

28

32

36

40

45

50

55

25

0

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4

6

7

9

11

14

16

19

23

27

31

35

39

43

47

52

27

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1

2

3

4

5

7

8

11

14

16

19

22

26

30

33

38

42

46

51

31

0

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18

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32

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41

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50

35

0

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2

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4

5

6

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10

13

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18

21

24

27

31

35

40

44

49

39

0

1

2

3

4

5

6

8

10

13

15

18

21

25

28

32

36

41

45

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0

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2

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34

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0

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7

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23

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4

5

7

9

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14

16

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23

27

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35

40

44

49

54

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0

1

2

3

4

5

7

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11

14

17

21

24

28

32

36

41

45

51

57

51

0

1

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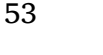 2

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3

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10

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16

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1 3

57

0

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2

3

4

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8

11

14

17

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28

32

37

42

48

54

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1 6

59

0

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2

3

4

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9

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44

51

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1 5

1 12

1 21

65

0

1

2

4

6

8

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13

17

21

25

30

35

41

48

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1 2

1 9

1 17

1 27

67

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1

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4

6

8

11

15

18

23

27

33

38

45

53

1 0

1 7

1 16

1 25

1 35

69

0

1

2

5

6

9

12

16

20

25

30

36

44

50

58

1 5

1 13

1 23 1 34

1 44

71

1

2

4

6

7

9

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18

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1 3

1 12

1 22

1 32il 44

1 56

1 1

NAVIGATION.

511

Method of finding the difference of longitude when a ship sails on a traverse.

Rule. ††† Resolve the traverse by means of the traverse table, as shown in traverse sailing, and find the latitude in the middle latitude between that left and that arrived at, and the meridional difference of latitude between the same two latitudes. Then with the middle latitude as a course, and the departure made on the traverse, in the latitude column of a traverse table, the difference of longitude will be found in the distance column. Or, with the difference of latitude and departure made good on the traverse, find the course and distance ; and with the same course, and the meridional difference of latitude in the latitude co-lumn, the difference of longitude will be found in the departure column. Or, by computation,

rad. : dep. ; ; sect. mid. lat. ; diff. long, diff. lat. : dep. : ; mer. diff. lat. ; diff. long.

The difference of longitude, being always of the same denomination as the departure, must be added to, or subtracted from, the longitude left, according as they are of the same or different names, to obtain the longitude in.

If the traverse is performed in a very high latitude, it will be advisable to compute the difference of longitude separately on each course and distance, which may easily be done thus : ††† Find the latitude in at the end of each course, and the middle latitude between it, and that at the end of each preceding course, and the meridional difference of

latitude between each pair of successive latitudes. Then with the middle latitude for each course, and the departure made on that course, find, as above, the difference of longitude ; or with the meridional difference of latitude on each course, and the course made good, find, as above, th'e difference of longitude.

Enter the different longitudes thus found in two columns, headed E. and W., according as the course has been easterly or westerly ; then the difference between the sum of the numbers in these columns will be the whole difference of longitude made on the traverse, and of the same denomination with the greater sum.

Note. ††† When the course is north or south, no difference of longitude will be made ; and, when it is east or west, the difference of longitude must be found by parallel sailing. In practice, the difference of longitude will generally be determined with sufficient exactness by inspection ; and it may be a useful precaution generally to compare it both by middle latitude and Mercator's sailing. If however the course is small, and any little discordance should appear in the results by the two methods, that by Mercator's ought to be preferred ; and the contrary when the course is large.

Example. ††† If a ship sail from Cape Farewell, in Greenland, lat. 59†† 42' N., long. 45†† 16' W., S. E. by E. 38, E. J N. 26, S. by W. 1 W. 40, N.E. by N. 33, S.E. 16, and S. W. j W. 20 miles, required her latitude and longitude in ; ††nd course and distance to the Butt of Lewis, .at. 58†† 29' N., long. 6†† 12' W.?

TRAVERSE TABT.E.

Diff. Lat.

Departure.

Courses.

Dist.

N.

S.

E.

W.

S. E. by E.

38

21-1

31-6

E. i N. .

26

2-5

2.V9

S.by W.►►W.

40

38-3

11-6

N. E. by N.

33

27-4

18-3

1

S. E…

16

11-3

11-3

S. W. J VV.

20

12-7

15-5

S. 48*[illegible] E.

80-5

29-9

83-4

87-1

27-1

29-9

27-1

Diff.

lat. S.

Dep.E.j

53-5

60-0

Lat. left . . 59►► 42’ N.

Diff. lat… 0 53 S.

Lat. in

. 58 49

2) 118 31

59

15 Mer. mid. lat.

0 Correction.

Mer. parts Mer. parts

. 4492 . 4388

Long. .45►► 10 W. Diff. long. 1 57 E.

Mer. diff. lat. 104 Long, in 43 19 W.

With the difference of latitude 53►► 5’ S., and departure 60‘0 E. the course is found S. 48►► 30’ E., and distance 85 ; and with this course and meridional difference of latitude 104 in latitude column, the difference of longitude is found 117 E. ►►► 1►► 57’ E. in departure column.

Or, with middle latitude 59►► 15’ as a course, and departure 6J in latitude column, the difference of longitude is found 115 in distance column.

We shall now find the difference of longitvle on each separate course.

I. ►►► By MIDDLE LATITUDE SAILING.

Diff. Long.

Course.

N.

Mid.

T if

Dep.

ljo.1.

E.

N.

o /

0 i

Lat. left

59 42

Lat. at the

end of 1st

59 21

59 31

31-GE.

62-2

2d

59 24

59 22

25-9E.

50-6

3d

58 46

59 5

11 -6 W.

22-5

4th|59 13

58 59

18-3E.

35-5

5th 59 2

59 7

1 1 3 K.

22-0

6th

58 49

58 55

15-5W.

30-0

170-3

52-5

52-5

Dill’, long.

117-8 E.

512

NAVIGATION.

Long, left . 45►► 16’ W. Diff. long. . 1 58 E.

Long, in . 43 18 W. II. ►►► By MERCATOR’S SAILING.

Courses.

Successive LaMer. Parts.

Mer. Diff.

T at

Diff. Long.

E.

W.

O /

59 42

4492

S. E. by E.

59 21

4450

42

62-8

E. i N. .

59 24

4456

6

50-6

S.byW.jW.

58 46

4382

74

22-5

N. E. by N.

59 13

4434

52

34-7

S. E…

59 2

4413

21

21-0

S. W. i W.

58 49

4388

25

30-5

169-1

53-0

53-0

Diff. long. ‘

116-1

E.

The second course being so nearly east, the difference of longitude is found by parallel sailing; as by Mercator’s sailing an error of half a mile in the meridional difference of latitude would produce an error of five miles in the difference of longitude.

To find the course and distance to the Butt of Lewis.

Lat. in … 58►► 49’ N.

Lat. Butt Lewis 58 29 N.

Diff. lat.

Correction

Long. . Long. .

20 S.

58 39 mean mid. lat.

0

43

6

18’ W. 12 W.

Diff. long. .37 6 = 22 26’ E.

Here as the difference of latitude is so small when compared with the difference of longitude, we shall compute by middle latitude sailing.

Asdiff. lat… 20 1-301030

I Diff. long. . 22 26’ 3-347525 ‘.: Cos. mid. lat. 58 39’ 9-716224

13-063749

: True course S. 89 1’E. 11-762719

As sin. course …. 9-999938 I Diff. long. 22 26’ . . 3-347525 “. Cosin. mid. lat. 58 39’ 9-716224

; Dist. 1 157 miles

13-063749 3-063811

Method of measuring the distance sailed. ??? To determine the velocity with which a vessel

sails, a piece of wood cut out in the form of the sector of a circle is cast into the sea, and it is then considered as a fixed point, the distance from which is measured by meaus of a string attached to the log, and unwound from a reel, as the vessel moves through the water.

The curved part of the log is loaded with lead so as to sink the whole just below the surface of the water, and at the same time keep it upright. One string is securely fixed to the central point of the log, and a second is attached, by means of a peg, to the middle of the curve. These two strings, at a short distance, are united in one ; and when stretched keep the broad side of the log towards the ship, thereby causing it to oppose the most powerful resistance to motion in that direction.

Thus prepared the log is cast into the sea, and about ten fathoms of the line, called stray line, is suffered to run off the reel, for the purpose of stretching it, and to allow the log to get out of the wake of the vessel. Afterwards the line run off in a certain number of seconds is measured, whence the rate of sailing at the time is deduced.

The person who heaves the log knows when the stray line is run off, by a particular mark on the line, and the length afterwards run out by means of knots which are at distances from each other bearing the same proportion to a nautical mile that the time run by the sand-glass used in marking the time does to an hour. If one of these knots pass in the interval, the ship’s rate of sailing is one mile per hour; if two knots pass, the rate of sailing is two miles per hour ; and so on.

In the navy a sand-glass running twenty-eight seconds is generally used, and the length of a knot is forty-seven feet three inches ; which bears the same proportion to 6075-5 feet, the length of a mean nautical mile, that twenty-eight seconds does to an hour. In the merchant service, however, the sand-glass generally runs thirty seconds, and the knots are about fifty-one feet apart: rather more than the just proportion, but the excess is allowed as a compensation for

the dragging of the log by the weight of the line and the friction of the reel.

In the navy the knot is generally subdivided into eight parts, denominated fathoms ; in East Indiamen, and the better class of merchantmen in general, the knot is subdivided into ten parts, also called fathoms; and this mode of subdivision is decidedly the most convenient. In ships in which little nicety is pretended to in the navigation the knots are subdivided into four parts, and sometimes they are simply halved.

The number of seconds run by the glass, and the length of the knots on the log-line should be frequently examined, and, if necessary, altered. Or, what would answer better than shifting the marks on the log-line so frequently as would thus be required, the error of the several knots might be determined at least once a-day immediately after heaving the log, and a correction applied to the distances from a table constructed for the purpose.

If the knots have a uniform error, and the glass is also erroneous, the true distance may be obtained by the following

NAVIGATION.

Rule.□□□’ Multiply the distance given by the erroneous log-line and glass by six times the measured length of a knot, and divide the product by ten times the seconds run by the glass, and the quotient will be the true distance.

Example. □□□ A ship appears to have run 159 miles by a glass running twenty-seven seconds, the knots of the log-line measuring fifty-two feet each ; required the true distance ?

159 X 52 X 6

~ 184 miles. Answer.

10 X 27

Method of keeping a ship on any given course- □□□ A slup is kept on any given course at sea, by means of au instrument called the mariner’s com- |M-iN, which is merely a circular card suspended lioriz nuiliy on a point, and having a magnetised bar of steel, called the needle, for one of its diameters.

The circumference of the card is generally divided into thirty-two equal parts, called points, and each division is subdivided into four parts, called quarter points. A point is therefore equal to 11□□ 15’; but in some compasses the rim of the card is divided also into degrees.

From the manner in which the card is suspended, the polarity of the needle causes its plane, in every situation, to assume a particular position, the point of the card which coincides with the north pole of the needle is marked north, and the opposite point south. The compass, placed in a box and secured by a glass cover from the wind and sea, is placed on the binnacle near the steersman, who is said to steer on any particular point of the compass, when he brings the fore and aft line of the ship in the same direction with the line on the card

which indicates that point.

The middle points between the north and south are called east and west, and the other points are named according to their skuation with reference to the cardinal points, north, south, east, and west, as in Plate II. fig. 1.

There are few situations in which the needle points due north and south, and even in the same situation its direction undergoes a slow and gradual alteration. At present, at London, it deviates from the meridian about 24►► 30’ towards the left or the west; but at the North Cape it points only about 1►► towards the west, while in some parts of Davis’s Straits it points upwards of six points and a half towards the west, and near Cape Horn it points about 22►► towards the east. In the year 1580 the needle pointed about 11►► or 12►► towards the east, though now, as has just been stated, it points about 24►► 30’ towards the west. But in the West Indies the deviation has scarcely undergone any perceptible alteration for a very long period.

This deviation is called the variation of the compass, and the method of finding it by celestial observations will be given in a subsequent part of this article. It is denominated easterly or westerly variation, according as the needle points to the east or west of the true north.

Having computed the true course from one

place to another by the appropriate rules, winch

have already been given, it is necessary, hel’ore

that course can be steered bv the compos, to

make a proper allowance for the variation ; that is, to find what point of the card corresponds with the course determined by calculation.

To explain the manner of doing this, we shall first suppose that the ship lies on the true computed course, and that the needle has no variation; in this case it is evident that no correction would be required. When the ship and compass are thus situated, let the north point of the needle be turned a little towards the west ; then every point of the card will be carried to the left of its former place, and the course of the ship, though in reality the same, will appear by the

compass to be the right of what it was before, or is the right of the true course. If we conceive the needle to deviate towards the east, a contrary effect will be produced, the apparent course by the compass appearing to the left of the true course.

Hence in finding the compass course when the true course is known westerly variation is allowed to the right, and easterly to the left of the true course ; and, in finding the true course from a given course by the compass, the variation if west is allowed to the left, and if right to the east of the course, as shown by the compass.

The following considerations will aid the student in recollecting the points of the compass. The middle point between

N. and E. is N. E.

N. and W. isN.W.

S. and E. is S. E.

S. and W. is S. W.

The names being got simply by putting together the letters of the cardinal points between which they lie, and from which they are distant four points. The middle point between N. andN.E. is N N.E. E. and N.E. is E.N.E. S. and S.W. nS.S.W.,&c. So that the second set of middle points are also pot by putting together the letters of the points already determined, and from which they are distant two points. The remaining points, which may be considered as the third set of middle points, receive their names from the side on which they lie of the first middle point. Thus the point to the right of N. is called N. by E., and that to the left N. by W. ; the point to the right of S.W. is called S.W. by W., and that to the left S.W. by S.

ON LEEWAY.

The action of the wind on the sails, rigging, and sides of a ship, when it lies near the point fiom which the wind blows, not only tends to impel her in the direction of a fore and aft line, 1 ut it also presses her sideways, and thus, upon the whole, the real track made in the sea is to leeward of the apparent line on which the ship is steered, and makes an angle with it, which angle is called the leeway.

When the wind is on the right hand side of a ship, she is said to be on the starboard tack ; ami when on the left hand side she is said to be on the larboard tack ; and when she sails as near the wind as she will lie,

she is said to be close hauled. Larire vessels will seldom lie within

less than six points of the wind, but small ones will often lie within less than five points. To determine the point towards which the ship actually moves under such circumstances, it is evident that the leeway must be allowed from the wind, or towards the right of her apparent course; when she is on the larboard tack, but towards the left when she is on the starboard tack.

The leeway made by a ship at sea may be estimated by drawing a small arc of a circle at the stern, and marking on it the points of the compass. The angle between the fore and aft line of the ship and the track left by the ship on the sea, or the wake, is the required leeway. This angle may also be observed by a mariner's compass placed at the stem.

In estimating the leeway mariners are often guided by certain general rules, which we here subjoin, as they may be useful in the dark, when the leeway cannot be known from observation. These rules, however, must be considered as affording only a rough approximation.

General rules for estimating the leeway, when a ship is close hauled.

1. When the water is smooth, all sails set, and the wind moderate, allow no leeway; but if there be a strong breeze the leeway may amount to a point.

2. When the top-gallant sails are handed, the leeway may be from one point to one point and a half.

3. Under close reefed top-sails, the allowance may be from two to three points.

4. With top-sails handed, from three to four points.

5. Under courses, from four to six points, according to circumstances.

6. Under reefed courses, possibly six points.

7. Under storm stay-sails, possibly seven points.

8. Under bare poles, from seven to eight points.

Much in any case must be left to the judgment of the mariner, and he must take into account a variety of circumstances, in making allowance for leeway, before he will venture to affirm that his estimate is entitled to entire confidence.

The leeway and variation being supposed known, we have now to show how the allowances are made for them in actual practice.

Rule. ††† Put down the variation, and mark it R or L, according as it is east or west ; and underneath put the leeway and mark it R or L according as the ship is on the larboard or starboard tack, take the sum when they are alike, and the difference when they are unlike, and work it with the name of the greater. Then if the re-sult is marked R, allow it to the right, if L, to the left of the compass course, and you have the true course.

Example 1. Compass course N. W. \ W., variation three points west, leeway two points, ship on the starboard tack; required the true course?

Here variation three points L, and leeway two points L, therefore the total correction is five points towards the left; whence the true course is W. by S. \ S.

Example 2. ††† Compass course S. E. by E. on the starboard tack, with three points leewav. and

four points easterly variation, what is the true course?

Here leeway three points L, and variation four points R; hence the correction is one point R, and the true course is consequently southeast.

ON KEEPING A SEA JOURNAL.

\ sea journal contains an account of every tning of importance that occurs on ship board, and in particular a minute detail of every thing

connected with the navigation of the ship ; to enable the mariners at any time to find her true situation.

On commencing a voyage, the true course to the place it is first intended to reach is either taken from a chart or computed, and thence by allowing for the variation the corresponding course by the compass is known ; and, if circumstances admit, the ship is kept upon that course. When a ship leaves the land the bearing of some known place is taken by the compass, and its distance in general estimated by the eye ; and that distance is considered as the first distance sailed, with the opposite bearing as a course. But the distance may be accurately computed if the bearing of the object be taken twice, and the ship's course and distance in the interval be accurately noted. For let a ship sail from B to C (fig. 2), and note at these points the bearing of the object A, then the angle A is the change in the object's bearing, the angle B the angle included between the bearing of A at that place, and the ship's course, and the angle C, the angle included between the bearing of A at C, and the opposite point to the course. Now sin. A : sin. B ; ; BC ; AC, and sin. A : sin. C : : C B : A B ; that is, as the sine of the change in the object's bearing is to the sine of the angle included between the bearing of the object at the first observation, so is the distance run in the interval to the distance of the object from the second place of observation.

The other courses and distances made during the day being determined by the compass and the log, they are written in chalk on a black board, called the log board, of which we shall shortly show the general form, and afterwards copied into a book ruled in the same manner, called the log book. The courses are either corrected for leeway before they are entered on the board, or the leeway is also entered with the course in a column appropriated for the purpose. The setting and draft of currents, the estimated effect of the swell of the sea, &c., are also entered in the column of remarks, a column which contains a record of every circumstance of importance whether connected or not with the navigation of the ship.

The setting of the current is considered as a course, and its drift as a distance, and the opposite point to that in which a swell of the sea comes is considered as a course, and what the ship is presumed to drift by it as a distance. If the course is changed during the hour, an estimated course for the whole hour is commonly entered on the log book.

In lying to, the middle course between the points on which the ship comes up and falls off is taken as the compass course.

The courses in the log-book being corrected for leeway and variation, and the distance on each course summed up and entered in a traverse table, including among the courses' and distances the effects of currents and the swell of the sea ; the place of the ship is determined by the methods already given under the different heads of navigation ; but the computations are generally performed, and they may be exactly enough performed, by inspection.

The finding of the ship's place, from the courses and distances marked on the log-board, is called working a day's work. An abstract of the whole, containing the course and distance made daring the day, the difference of latitude and departure, the latitude and longitude obtained from the reckoning, and those deduced from observations, and the bearing and distance of the port, or of the nearest land that may lie in the ship's way.

Jf the variation is given in degrees it will be found convenient not to correct each course separately for it, but to find the resultant in course and distance for the whole day's work, allowinˆ only for leeway; and then with this distance", and the resulting course corrected for variation, find the true difference of latitude and departure.

The day is divided, according to the civil mode, into two intervals of twelve hours each, the first marked A.M., the latter P.M. It is supposed to begin at midnight, though the reckoning is worked up from noon to noon, and the place of the ship settled each day at that time.

We shall now exemplify what has been said on the method of keeping a journal, by two days' work, in which a ship is supposed to take her departure from Cape Finisterre, and bound for Madeira. The course being found each day to Porto Sancto. Ten fathoms are accounted to the knot.

JOURNAL of a VOYAGE from CAPE FINISTERRE towards MADEIRA, in the Sheldrake, Captain FOREST, kept by F. JONES, Mate.

H.

K.

F.

Courses.

Winds.

Leeway Points.

Remarks, Feb. 9th, 1813.

1

7

S.W. 1 W.

N.N.W.i W.

P. M. At noon took departure

2

6

3

from Cape Finisterre, bearing

3

5

4

N. N. E. fifteen miles. Moderate

4

6

2

S. E. | S.

S.S.W. f W.

and fine, all sail set.

5

6

8

At three down studding rl. and

6

5

3

mid stay sails, and tacked.

7

7

1

*

At seven fresh breezes and fine

8

7

8

weather, in rl., down flying jib, and

9

6

9

W. f N.

Ditto.

i

T.G. stay sail, and in 2d reef T.S.

10

6

4

At eight tacked, fresh breezes.

11

7

7

Midnight, still fresh. Tacked

12

6

8

again.

H.

K.

F.

Courses.

Winds,

Leeway Points.

Remarks, Feb. 10th, 1818.

A.M. Fresh breezes and cloudy.

1

6

8

S. S. E.

S.W.

4

At 4 strong breezes. In T. G.

2

5

6

sails, and third reef. To sails ;

3

7

2

down outer, and set inner jib ;

4

7

3

W. by N.

S. W. by S

H

reefed spanker, down royal and

5

5

4

T. G. yards, and struck T masts.

0

6

3

At five tacked.

7

7

1

At ten strong breezes ; down

8

6

8

inner jib, and up F. T. mast stay

9

6

5

sail.

10

7

3

A swell from six till noon

11

6

4

from N.N. W., drift bv estima-

12

6

5

tion nine miles. Variation one

and three quarters. W.

Course.

Dist.

Uiff. Lat.

Dep.

Difi”. Long.

Long, in

Bearing and Dist. Porto Sancto.

2 L “2

H.

K.

F.

Courses.

Winds.

Leeway Points.

Remarks, Feb. 10th, 1818.

1

6

6

S. E. by E.

S. byW.

li

Pier. Strong breezes with a

2

5

3

heavy head sea.

3

6

8

Tacked at four, weather as

4

6

4

before. At five got T. G. masts

5

5

9

W.S.W. i W.

S. i W.

on deck and flying jib boom in.

6

5

4

2

At six in fourth reef T. sails

7

5

3

and reefed courses ; down spank-

8

5

6

E. by S.

S. by E.

er and set trysail. At eight tack-

9

6

2

ed again.

10

6

1

Midnight, strong breezes,

11

6

3

tacked.

12

5

8

H.

K.

F.

Courses.

Winds.

Leeway Points.

Remarks, Feb. llth.

1

6

4

W.

S.S.W.

2

2

5

2

f

A. M. Strong breezes, at four

3

5

B

4

tacked.

4

4

4

At six in mizen T. sail, and

5

4

3

S.E.byS.

S.W. by S.

set mizen stay sail.

6

5

7

At eight wore ship and in F.T.

7

5

6

5

sail.

8

5

3

At nine a brig in the S.W.

9

4

8

W.N. W.

S.W.

quarter, running N. W.

10

4

5

Noon strong breezes. Varia-

11

4

0

tion If W.

12

4

3

1

Course.

Dist.

Diff. Lat.

Dep.

Diff. Long.

Long, in

Bearing and Dist. Porto Sancto.

As Cape Finisterre on taking the departure bears N.N.E., the compass course from it is S. S. W., and one point three-quarters west variation

being allowed to the left makes the true course S. J W., and the distance is fifteen miles. The second course S. W. \ W. corrected in like manner for variation is S. S. W. \ W., and the distance as summed up on that course is 18-7 miles. The third course S. E. f S. corrected for variation is S. E. by E., distance till six, 18-3 miles. At six the ship begins to make leeway, to the extent of half a point; and, as she is on the starboard tack, both leeway and variation are to be allowed to the left. The sum of them one point three-quarters and half a point is two points one-quarter, which allowed to the left of S. E. f S., the course which the ship was steering, gives S. E. by E. ►► E. for the true course, and the distance till eight, 14-9 miles. From eight till nine, and so on till midnight, the ship ran W. f W. on the larboard tack, making half a point leeway. Ih'nce we have variation one point three-quarters east, and leeway half a point east; difference t > lie allowed to the left one point and a quarter; .irul this allowed to the left of W. J N. gives W. \ S. for the true course, and the distance is

27-8.

On Feb. 10th A. M. the first course is S. S. E. on the starboard tack, with variation 1 f L, and leeway \ L ; sum 2►► left, and true course S. E. \ E. distance till five, 32'3 miles; the second course is W. by N. on the larboard tack, 1J leeway R. whence If L ►►► IjRziˆ point, left, the correction ; and the true course is W. ►► N. and dis tance 46'.9. The swell coming from N. N. W. will drive the ship S. S. E., on which course If variation being allowed to the left, the true course S. E. \ S. distance nine miles.

The first course on Feb. 10th, P. M. is S. E. by E. on the starboard tack, with \ points lee-way. Hence 1JL+ If L = three points L the correction of the course which hence is E. and the distance till four, 25-1 miles. The second course is W. S. W. \ W. on the larboard tack with \ points leeway; therefore If L. ►►► 1| R. *J point left; whence the true course is W.S.W. and distance thirty-nine miles, the leeway being different the next hour. The correction of the next course is 2 R. ►►► If L.* i R. which allowed on W.S. W. $ W. gives W. S. W. f W. for the true course, distance from five till eight, 16-3 miles. The last course P.M. Feb. 10th is E. by S. on the starboard tack with two points leeway. Hence the correction IB

2 L. + 1 f L. ~ 3 J L. ; whence the true course is N. E. by E. $ E. distance from eight till midnight 24-4 miles.

The first course Feb. llth, A. M. is west, on the larboard tack, two points leeway : hence 2 R. ††† If L. ††† i R. and the course is therefore W. i N. and the distance till two, when the leeway changes, is 11-6 miles; at two the course steered is the same, but the correction is 4 R. ††† If L. ††† 2 J R. which allowed to the right of W. gives N. W. by W. J W. for the true course, and the distance in that with four points leeway ; hence the correction is 4 L. + If L. ††† 5| left, distance till six 10 miles. At six with the same course, and on the same tack there are five points leeway, whence the correction is 6†† L.and the true course E. by N. J N. and the distance till eight 16‘6 miles. At eight the course is W. N.W. on the larboard tack with five points leeway, whence the correction is 5 R. ††† If L. rz 3J R., and consequently the true course is N. N. W. J W. and the distance till noon 17‘6 miles.

Note. ††† The distances marked opposite any hour are those given from the hour preceding till that opposite which they are entered.

Collecting now the courses our distances from noon of Feb. 9th, till noon Feb. 10th, into a traverse table, we have it as under.

Diff. Lat.

Dep.

Courses.

Dist.

N.

S.

E.

W.

0-70

Si \XT ××× ^J ××T .

15

15-00

S.S.W.4W. S.E.byE. S.E.byE.iE. W. J S.

18-7 18-3 19-9 27-8

16-49 10-17 9-38 2-73

15-22 17-55

8-81 27-77

S.E. ××E.

32-3

21-69

23-93

W. IN. S.EJS.

46-9 9

4‘59

6-67

6-04

46-68

S. 15[illegible]17’W.

80-49

4-59

82-13

62-74

83-96

Diff.

lat. S.

4-59

D.W.

62-74 21-22

77-64

Lat. Cape Finisterre)iff. lat. seventy-eight miles

Lat in

42►► 54’ N. 1 18 S.

41 36 N.

Mid. lat.

Mer. parts Mer. narts

2855 2750

Mer. diff. lat. 105

2) 84 30 42 15

Long. 9►► 16’ W. Diff. long. 29 W.

Long, in 9 45 W.

With the diff. lat. 77-64 S. in its column, and dep. 21-22 W. in its column, the course and distance will he found in a table of diff. lat and dep. to be S. 15►► i W. 80-5. With this courso and mer. diff. lat. 105 in lat. column, the diff. long, will be found in the dist. column to be 28-7, or with mid. lat. 42i►► as a course, and dep. 21-22 in lat. column, the diff. long, will be found 28-7 in the dist. column.

By computation. ►►► As diff. lat. 77*64: dep. 21 -22

; ; rad. ; tan. 15►► 17*, the course. As rad. : diff. lat. : : sect, course : 80-49, the distance. As diff. lat. : dep. : : mer. diff. lat. 105 : 28-7,

the diff. long. Or rad. : dep. : : sect. mid. lat. 42►► 15’ : 28-7.

the diff. long.

To find the course and dist. to Porto Sancto. Lat. in 41►► 36’ N.

Lat. P. Sancto 33 3 N.

Diff. lat. 8 33 = 5138.

Mid. lat. Correction

2)74 39

37 19

+ 8

True mid. lat. 37 27 Mer. parts 2750

Mer. parts 2103

Mer. diff. lat. 647 S. Long, in 9►► 45’ W.

Long. P. Sancto 16 17 W.

Diff. long 6 32 = 392 W.

With mer. diff. lat. 647 S. in lat. column, and diff. long. 392 W. in dep. column, the course is S. 31►► i W. ; with this course and proper diff. lat. 513 in lat. column, the distance is found 600 miles.

Or with mid. lat. 37J as course, and diff. long. 392 as dist. the dep. is found zr 311, in lat. column. Then with diff. lat. 513, and dep. so found, 311, in their proper columns, the course is found S. 31 ►► W.

and distance 600 miles.

By calculation, by Mercator's sailing. As mer. diff. lat. 647 : diff. long. 392 : : rad. :

tan. 31►► 13', the course. As rad. : diff. lat. 513 : : sect, course 31►► 13' :

600, the dist.

By middle latitude sailing As diff. lat. 513 : diff. long. 392 : : cos. mid. l►►t.

37►► 27': tan. 31►► 14' the course. As rad. : diff. lat. 513 :: sect, course 31►► 14':

dist. 600 miles.

The corrected courses from noon of Feb. 10th till noon of Feb. llth, being with their proper distances collected in like manner, we have the following traverse table : ►►►

TRAVERSE TABLE.

Diff. Lat.

Dep.

Conrses.

Dist.

N.

S.

E.

W.

E.

25-1

25-10

W. S. W.

5-9

2-26

5-45

W. S. W. J W.

16-3

3-96

15-81

N. E. by E. i E.

24-4

12-54

20-93

W. JN.

11-6

57

N. W. by W. f W.

10-2

4-36

11-59

E. f N.

10-0

1-47

9-22

E. by N. i N.

16-6

4-03

9-89

N. N. W. J W.

17-6

15-10

16-10

9-05

N. 33►► E.

38 miles

38-07

6-22

72-02

51-12

6-22

51-12

Diff. lat. 31-85 N.

Dep.20-90 E.

Lat. at noon, Feb. 10th 41►► 36’ N. Diff. lat. 31-8 or 32 N.

Mer. parts Mer. parts

Lat. in

Mid lat.

2750 2792

Mer. diff. lat. 42

42 8

2)83 44 41 52

Long. 9►► 45’ W. Diff. long. 28 E.

Long, in 9 17W.

With diff. lat. 31-85 N. and dep. 20-9 E. the course is N. 33►► E. and distance 38 ; with the same course and mer. diff. lat. 42, in the lat. column, the diff. long, is found 27-5, E. in the dep. column. Or with mid. lat. nearly 42►►, as a course, and departure 20‘9 in the lat. column, the diff. long, is found 28 in the dist. column.

To find the bearing and distance of Porto Sancto by inspection, on the principles of Mercator’s sailing.

Lat. in Lat. P.

42►► 8’ N. 33 3 N.

Diff. lat. S. 9 5 ►►► 545

Mer. parts Mer. parts

2792 2103

Mer. diff. lat. 689 S.

Lonˆ. in 9►► 17’ W.

Long. P. Sancto 16 17 W.

Uiff. long.

7 0 ►►► 420 W.

\Vitli mer. diff. lat. 689 in lat. column, and ilitt’. long. 420 in dep. column, the course is found S. 31►► \ W. ; with this course and the (I ill’, lat. 545 in the lat column, the dist. is found ►►► 038, in the dist. column ; so that owing to adverse winds the ship is thirty-eight miles further from Porto Sancto than she was at the beginning of the day.

ON SEA CHARTS.

The charts which are used by seamen are either plain charts, having the degrees of latitude and longitude equal, or charts constructed on the principles of Mercator’s sailing, in which, though the degrees of longitude are made equal, the degrees of latitude vary according to the proportion which the degrees of the meridian do to those of the parallels passing through them.

Plane charts are used for mapping harbours, and other small portions of the earth’s surface, and the distances of places may be found by them as well as the course nearly enough for steering a ship ; but the principle of construction cannot be extended to the delineation of any considerable space, as the degrees of the parallels and those of the

meridian differ greatly from each other as the latitude* increase.

To construct a plane chart. ††† Form on a sheet of paper a rectangle of size sufficient for the proposed extent of the chart; on the horizontal lines lay off the degrees of longitude, and on the vertical ones the degrees of latitude which it is intended the chart should comprehend, and subdivide the degrees as minutely as their size will admit, and join the corresponding degrees of latitude on the sides, and those of longitude at the top and bottom with straight lines, and write the proper degree at each division. Insert on this paper the different places according to their latitude and longitude as taken from another chart, or as determined by observation ; trace the coast by a fine line, and insert every thing requisite to make the chart a complete map of the place it is intended to represent, and the whole will be a plane chart.

To construct a Mercators chart. ††† Draw a line in pencil along the bottom of the paper, and a perpendicular to it up the edge. And draw two lines parallel to these, and a little way within them. From the degrees of longitude intended to be contained in the chart estimate the space that your room will permit you to allot to one of them. Lay this space off carefully on the bottom line for a degree of longitude, repeating it till you have the number of degrees which you intend the chart to contain. At the extremity of

the base draw a perpendicular, which of course will be a parallel to that drawn by the other edge of the paper. Number the degrees of longitude properly and subdivide them into halves, quarters, sixths or tenths, as their size will admit.

Next take the meridional parts corresponding to the extreme degrees of latitude which you intend the chart to contain, and dividing the meridional difference of latitude by sixty, to obtain the corresponding space in degrees and minutes on the longitude scale ; take it from the bottom line, and lay it on each of the vertical ones, and join the extreme points of those lines, and you have then the boundary of the

chart. In a similar way take from the longitude line the meridional difference of latitude between the lowest latitude, or that at the bottom of the chart, and every degree of latitude upwards to the extremity of the chart, and lay them upon each of the vertical lines, and you will have the points at which the degrees of latitude must be marked on the vertical lines.

Subdivide the degrees of latitude in the same manner as the degrees of longitude are subdivided ; and, as the degrees of latitude differ in length, this subdivision must be made for each separately.

Next proceed to lay down the principal places on the chart according to their latitudes and longitudes, thus: ††† Place the edge of apaiallel ruler on the parallel of latitude of the place which it is proposed to lay down, and draw a fine line in pencil through that part of the chart which contains the given longitude. Again place the edge of a parallel ruler on a meridian near the given longitude, and move it parallel to itself to the given longitude, and draw another fine pencil line across the former, and the point of section will be the required point on the chart.

In the same way determine the positions of all the principal points on the chart, and then sketch in the coast by the eye, in a fine, free, distinct line, and shade it slightly on the land side. If necessary, mark by the shading whether the coast is rocky or sandy; and note in their proper places all rocky shoals, sand banks, depth of water, nature of bottom, and places for anchoring. Lastly, in one or more convenient places draw a compass at the intersection of a meridian and parallel.

In charts constructed in this manner, the relative situations of places are properly represented, and the course from one place to another is correctly represented by the angle which a straight line drawn through both places makes with the meridian. The distance may in any case be correctly obtained from the chart from the application of the following principles.

The difference of longitude is to the departure as the enlarged distance on the Mercator's chart is to the true distance ; and radius is to the cosine of the middle latitude as the difference of longitude is to the departure. Hence as radius is to cosine of the true middle latitude, so is the enlarged distance to the true distance. If therefore from the top of the chart on any meridian there be laid a scale of natural cosines, from 0††, onwards to 90†† ; the distance may be found thus : take the distance on the chart between the proposed places in your compasses, and lay it on the gi-aduated parallel, at the top of the chart

ex-

actly from the end of the meridian on which the graduated line of cosines is laid down, and draw a line diagonally from the point determined by the compasses to 90►► on the line of cosines. On the line of cosines find the true middle latitude, and through it draw a parallel of latitude cutting the diagonal line ; the distance between the graduated meridian and the diagonal in this middle latitude, measured on the graduated parallel at the top or bottom of the chart, is the degrees and minutes of the true distance.

The method of finding the true middle latitude has been already shown, but if the diff. lat. do not exceed two or three degrees the mean middle latitude may be used instead of it.

NAUTICAL ASTRONOMY.

If the course of a ship and the distance sailed could always be correctly ascertained, the principles of navigation which we have already explained would be sufficient for conducting a ship to any part of the world. But there are many circumstances which often render the real course and distance very uncertain, and it becomes therefore of the utmost importance to be able to find the place of the ship from time to time by observation on the heavenly bodies. This application of the principles of astronomy is called nautical astronomy.

The earth is a spherical body which revolves on an imaginary line called its axis from west to east in twenty-four hours ; and in consequence of this rotation the heavenly bodies appear to revolve from east to west in the same time. While the earth is thus daily performing its rotation on its axis, it is carried round the sun from west to east in a year, the axis of rotation continuing during the whole year parallel to itself; and in consequence of the comparative smallness of the orbit which it describes, when compared with the distance of the fixed stars, the axis appears to be always directed towards the same points in the heavens ; and these points are called the poles of the celestial sphere.

The moon accompanies the earth in its annual revolution round the sun, and it also revolves round the earth once in a month, moving apparently among the stars, towards those that are eastward of her, and from those that are westward of her.

There are ten planets besides the earth, which like it revolve round the sun, and several of these are accompanied by smaller ones called satellites, which revolve round them as the moon the earth's satellite revolves round it. All these planets shine only by reflecting the light of the sun.. Those which are further from the earth than the sun are called superior, and those which are nearer to the earth than the sun are called inferior planets. For a full explanation of the celestial motions see the article ASTRONOMY.

But it is only the apparent motions of the heavenly bodies that are the objects of consideration in nautical astronomy ; and these motions would be the same as they are, if the earth were stationary and the sun revolved annually among-the fixed stars in the plane of the earth's orbit ; the planets at the same time performing their apparent evolu lions round him on the iinmeasu-

rably distant concavity of the celestial sphere, while that sphere, with the sun, stars, and planets, revolved daily round the earth from east to west.

The plane of the earth's orbit produced to the heavens, or that circle in the heavens in which the sun appears to move among the stars, is called the ecliptic, and circles perpendicular to it are called circles of celestial latitude. The terrestrial equator produced to the heavens is called the celestial equator; the meridians produced in like manner are called celestial meridians, and the parallels of latitude produced in the same way are called parallels of declination.

The ecliptic intersects the equator in two points called equinoctial points ; that at which the sun passes from the south to the north side of the equator is called the first point of Aries ; that being the first of the twelve equal parts into which astronomers divide the ecliptic. The ecliptic and equator are inclined to each other in an angle which at present is about 23°, 28', and the point in which they intersect has a progressive motion from west to east. See ASTRONOMY, PRECESSION.

The inclination of the equator to the ecliptic is called the obliquity of the ecliptic. The latitude of a celestial object is its distance from the ecliptic measured on a perpendicular to that circle, and the longitude of a celestial object is the arc of the ecliptic between the first point of Aries and the perpendicular to the ecliptic passing over the object ; or it is the angle at the pole of the ecliptic, intercepted by two great circles, one passing through the first point of Aries, and the other over the object.

The declination of a celestial object is its distance from the equator measured on the meridian passing over the object, and the right ascension of a celestial object is the arc of the equator between the first point of Aries and the meridian passing over the object ; or it is the angle at the pole of the equator intercepted between the meridian passing through the first point of Aries, and that passing over the object.

The sensible horizon is a plane touching the earth at the point at which the observer is situated, and the rational horizon is a plane passing through the centre of the earth parallel to the sensible one.

The pole of the horizon over the head of the observer is called the zenith, and the opposite point the nadir.

Great circles passing through the zenith, and of course cutting the horizon perpendicularly, are called vertical circles, azimuth circles, or altitude circles. The angle which any vertical circle makes with the meridian is called the azimuth of that circle or of any object over which it passes. The vertical circle perpendicular to the meridian, or that which cuts the horizon in the east and west points, is called the prime vertical.

The amplitude of an object is its distance from the east or west at rising or setting; or the angle which the vertical circle passing over it at those times makes with the prime vertical.

Circles parallel to the horizon are called parallels of altitude, and that which is 18►► below the horizon is called the twilight circle, because in a mean state of the atmosphere twilight begins

in the morning and ends in the evening when the sun is on that circle.

The polar distance of an object is its distance from the celestial pole nearest the observer.

A sidereal day is the interval between the two successive times in which a fixed star attains the same situation ; and a solar day is the interval between the two successive times in which the sun arrives at the same meridian.

The sidereal day at any place commences when the first point of Aries is on the meridian of that place, and the solar or apparent day when the sun is on the meridian of the place.

Mean time is that which would be shown by the sun if it revolved on the plane of the equator with a uniform angular motion equal to the mean motion of the sun in the ecliptic.

The sidereal time of day is the angle at the pole betweeen the meridian of the place and the meridian passing over the first point of Aries, and the apparent time of day is the angle at the pole included between the meridian of the place, and the meridian passing over the true place of the sun ; and the mean time of day is the angle included between the meridian of the place and the mean place of the sun reckoned on the equator : the angles in each case being reckoned from

the meridian towards the west, or in the direction of the apparent daily revolution of the heavenly bodies.

The angle included between the meridian of any place, and the meridian passing over any celestial object, is called the meridian distance of that object.

A mean solar day is longer than a siderial one ; for the sun daily advances in the ecliptic eastward so far that the mean interval between his transits is about 3’. 55-9’ greater than the interval between the transits of a star.

The apparent altitude of a celestial object is its distance from the sensible horizon measured on a vertical circle, and the true altitude of a celestial object is its distance from the rational horizon measured also upon a vertical circle The true and apparent zenith distances are the complements of the true and apparent altitudes, and, when an object is on the meridian of the place of observation, its altitude and zenith distance are termed its meridian altitude and meridian zenith distance.

When the altitude of an object is spoken of, the altitude of its centre is generally understood. But altitudes observed on or above the surface of the earth require several corrections before the true altitude is obtained. First for semidiameter. The semidiameter of a celestial object is the angle which the radius of its apparent circular disk subtends at the eye of the observer. If the altitude of the lower edge (or lower limb as it is called) is observed, the semidiameter is added ; but, if the upper limb is observed, the semidiameter is subtracted from the observed altitude to obtain the apparent altitude of the centre.

If A B (fig. 3. plate II.) be the horizon, C the centre of the object, D its lower and E its upper limb, and A the place of the observer, then DAB is the altitude of the lower limb, E A B that of the upper limb, and CAD or C A E the semidiameter.

Second, the parallax. The angle which the radius of the earth on which the observer is situated subtends at the centre of the object is called its parallax. If the object is in the hori-ton it is called the horizontal parallax ; if above the horizon it is called the parallax in altitude. The sines of the horizontal parallaxes of different objects are inversely as their distances from the centre of the earth. For fig. 4, plate II., A D B is the horizontal parallax of D, and AC B the horizontal parallax of C ; and A C : A D : : sin. ADC: sin. A C B. Further with respect to the same object, rad. : sin. hor. par. : : cos. app. alt. : sin. par. in alt. For fig. 5, plate II., C is the horizontal parallax, and D the parallax in altitude; and, A C and A D being equal, we have AC : AB : : AD : AB; but A C : A B : : rad. : cos. C ; and A D : A B : : sin. A B D n cos. C B D : sin. D ; whence rad. : sin. AC B : : cos. C B D : cos. D.

The angle D B C is the apparent, and the angle D A. F = DEC the true altitude. But DEC=DBE + D; hence the parallax must be added to the apparent altitude to obtain the true altitude.

Third, the dip. We have hitherto considered the observations as made on the surface of the earth, but it will seldom, especially at sea, be possible so to make the observations. The allowance that must be made for the apparent depression of the horizon arising from the elevation of the eye above the surface of the earth is called ihe dip. Let A C, fig. 6, plate II., be the height of the eye, A B the section of a plane parallel to the horizon, A D a line touching the earth at D, and AS a line in the plane of A B and AD drawn to the centre of the object ; then B A D is the dip of the horizon, SAD the observed altitude, and SAB (the difference) the true altitude. But, in what is called a back observation, the depression of the point opposite to the sun is measured and in this case the dip is added to

the observed depression, to obtain the true depression, which is the same as the true altitude.

For (fig. 7, plate II.) if S be the celestial object, and S the point diametrically opposite to it below the horizon ; then SAB, the altitude, is equal to S' A B' the depression ; and B* A D' the dip, added to S' A D' the depression below the visible horizon at D*, is equal to the altitude.

The dip is computed from the following formula, where D = dip, h = height of the eye, and a = the earth's diameter.

Cot ??? = r^/ ??? - ??? . But from D so computed one-twelfth of itself is generally deducted for the effect of horizontal refraction.

The following TABLE of DIP was so computed???

Height of eye Dip. in feet.

Height of eye Dip.

in feet.

Height of eye Dip. in feet.

1 0*59’

15 3’ 49*

29 5’ 18’

2 1 24

16 3 56

30 5 24

3 1 42

17 4 4

31 5 29

4 1 58

18 4 11

32 5 34

5 2 12

19 4 17

33 5 39

6 2 25

20 4 24

34 5 44

7 2 36

21 4 31

35 5 49

8 2 47

22 4 37

36 5 54

9 2 57

23 4 43

37 5 59

10 37

24 4 49

38 6 4

11 3 16

25 4 55

39 6 8

12 3 25

26 5 1

40 6 14

13 3 33

27 5 7

41 6 18

14 3 41

28 5 13

42 6 22

The horizontal parallax of the sun being al-ways nearly 9”, its parallax in altitude may conveniently be entered in a table.

Altitude

in degrees

0

12

15 30 33

42

51

60

69

75

81

90.

in seconds

9’

9’

8’ 8′ 7″

6’

5”

4’

3”

2”

I”

0”

The parallax of the moon being exceedingly variable, tables of her parallax in altitude corresponding to all the variations in her horizontal parallax must necessarily be extensive. Such tables, however, are given in many practical works on navigation. ††† See Inman’s, Norie’s, Ria’s and Riddle’s Nautical Tables. It may, however, be readily computed thus : ††† Add the secant of the apparent altitude to the proportional logarithm of the horizontal parallax, and the sum will be the proportional logarithm of the parallax in altitude. The refraction is the last correction of apparent altitudes; and, whether the altitudes are observed by a back or a fore observation, this correction is subtractive. See an extensive table of refractions under the article ASTRONOMY.

From what has been said it may be inferred that, when a star is on the meridian of any place, the sidereal time at that place is equal to the star’s right ascension; and that, when a star is east of the meridian, its

meridian distance sub-

tracted from its right ascension, will leave the sidereal time ; and, when west of the meridian, its meridian distance added to its right ascension, will give the sidereal time. Further, it appears, that the sun's right ascension, subtracted from the sidereal time, leaves the apparent time ; and conversely that the sun's right ascension, added to the apparent time, gives the sidereal time.

The difference between mean and apparent time is called the equation of time.

In the Nautical Almanac, the sun's longitude, right ascension, declination, and the equation of time, are given for the instant at which the sun is on the meridian of Greenwich every day, and the moon's longitude, latitude, right ascension, declination, horizontal parallax, and semidiameter, for noon and midnight, apparent time at Greenwich, for every day.

As 360°° of longitude correspond to one revolution of the earth, which is measured by twenty-four hours of time, 15°° of longitude correspond

to an hour of time, 1°° of longitude to four minutes of time, 1' of longitude to four seconds of time, &c.

The equation of time as given in the Nautical Almanac is intended to be applied to apparent to obtain mean time : when mean time is given, and apparent time required, the equation of time must be applied with a sign contrary to that given in the almanac.

It is evident that the difference between the times at Greenwich, whether mean, sidereal, or apparent, and the corresponding times at any other meridian is the longitude of that meridian from Greenwich west, when the Greenwich time is the greater, or more forward, and east when the Greenwich time is the less or behind. See LONGITUDE.

Chronometers for finding the longitude at sea, as well as clocks and

watches for use in civil life, are regulated by mean time; but observatory clocks by sidereal time, for the convenience of determining the right ascensions of celestial objects by the times of their passing the meridian.

On land, when nautical instruments are used for taking altitudes, the distance of the object from its image, as reflected from a fluid or polished horizontal surface, is taken, and its half is the measure of the altitude.

The difference between the parallax of any ob-ject and the refraction corresponding to its altitude, is called the correction of altitude ; and, the correction for semidiameter and dip being first applied, this correction is additive in the case of the moon, but subtractive with respect to all other celestial objects, as the moon's parallax is greater than the refraction at any altitude ; but the parallax of any other object is less than the refraction. The fixed stars have no sensible parallax.

The astronomical day commences at the noon of the civil day, and the hours are reckoned straight forward to twenty-four. Therefore in the afternoon of the civil day the hours of the astronomical and civil day are the same, but in the forenoon of the civil day they differ twelve hours. Thus April 4th at 6 h. 8 m. 5 s. civil time, is also April 4th 6h. 2m. astronomical time ; but April 5th, 6 h. 2 m. A. M. civil time, is April 4th, 18 h. 2 m. astronomical time.

INTRODUCTORY PRACTICAL PROBLEMS.

PROB. I. ††† To convert longitude into time. ††† Multiply the longitude by 4, divide the degrees of the product by 60, and the quotient will be the hours, the remainder the minutes, and the other parts of the product the seconds, &c., in the required time.

Example. ††† Required the time corresponding to 83†† 12′ 9″ of longitude?

83†† 12' 9'

4

60) 33-2 48 36

Hours 5-32 48 36 Ans.

PROB. II. ††† To convert time into longitude.

Reduce the hours into minutes, and divide the whole by 4, and the quotient will be the degrees, minutes, &c., of the corresponding longitude.

Example. ††† What longitude corresponds t<? 8h. 12m. 19s. of time ?

8h. 12m. 19s.

60

4) 492 0 19

123†† 4′ 45″ Ans.

PROB. III. ††† Given the time at any place, and the longitude of that place, to find the correspondit.g Greenwich time.

Reduce the longitude into time, and add it to the time at the place if west, but subtract it if east, and the sum in the remainder will be the Greenwich time.

If in adding, the sum should exceed twenty-four hours, the excess will be the Greenwich time past noon on the following day; and, if in subtracting, the longitude in time should exceed the astronomical time at the place, increase the given time by 24 hours, before subtracting the longitude in time, and the remainder then will be the time at Greenwich past noon of the preceding day.

Example 1. ††† In longitude 18†† 4’ E. September 3, 8h. 5m. 10s., A. M., what is the astronomical time at Greenwich ?

Astronom. time, Sept. 2d 20h. 5m. 10s. Long, in time E…11216

18 52 54 Ans.

Example 2.††† In long. 59†† 15’ W. at lOh. 39m 18s. A. M.,

October 8th, required the astronomical time at Greenwich ?

Astronom. time, Oct. 7th 22h. 39m. 18s. Long, in time W… 3 57 0

October 7th

October 8th

26 24

36 18

2 36 18

PROB. IV. ??? To take the right ascension, declination, 4-c., of the sun and moon, from the Nautical Almanac, for any time.

Find the Greenwich time corresponding to the time at the place, and its longitude. Then, if the object be the sun, take from the Nautical Almanac the required number for the noon preceding the instant for which it is wanted, and the change of the number in twenty-four hours. Then say, As twenty-four hours is to this daily change, so is the Greenwich time to the correction to be added to, or subtracted from, the number at the preceding noon, according as it is increasing or decreasing, to obtain its value at the required instant.

If the object be the moon, take the required number for the noon or midnight, which next precedes the given instant of Greenwich time, with its change in twelve hours. Then say, As twelve hours is to this change, so is the Greenwich time past noon or midnight to the correction to be added to, or subtracted from, the value of the required number at the preceding noon or midnight, to obtain its value at the given instant

Exampie. ††† What are the right ascension and declination of the sun, the equation of time, the right ascension, declination, horizontal parallax, and semidiameter of the moon, March 3d, 1828, at 9h 48m. 20s. P. M. in long. 65†† W. ?

Time, March 3d Longitude in time

9h. 48m. 20s.

4 20 0

0R.A.

22h. 57m. 7‘4s. + 3m. 43’ls. 6

C’or. 2 11-3 Cor.

Greenwich time . 14 8 20

Per Nautical Almanac, March 3d, 1828 : ††† Daily var. 0 Declin. S. Daily var. Eq. time added

Cor.

42’ 21* ††† 23′ 3″

13 34

12′ 9-7″ 7-9

Daily var.

13-4”

22 59 18-7 6 28 47 12 1-8

As the Greenwich time is 14h. 8m. 20s. past noon, it is 2h. 8m. 20s. past midnight. Therefore we take out the numbers for the moon for midnight of March 3d, and then change from that time till the following noon.

Per Nautical Almanac, March 3d, 1828, midnight.

> R. A. Vai.inl2h. > Declin. S. Var.inl2h. > Hor. par. Var.inl2h. > Sera. Var.l2h-187►► 42′ 4″+6►► 8′ 58″ 5►► 1′ 0″ -f 6►► 59′ 23″ 56′ 7″ + 15” 15′ 18″ + 4”

Cor. 1 5 44 21 14 3 1

15 19

Correction of 0’s R. A. ►►‘s declin Equa. of time.

> ‘s R. A.

> ‘s declin.

) ‘s hor. par.) ‘s scniid.

Required the true altitude of the moon’s centre when that of her upper limb is 56►► 17′ 30″, her semidiameter being 16′ 15″, and horizontal parallax 59′ 37″, height of the eye thirteen feet ?

187 47 48

5 22

14

56 10

Hence we have 24h.

3′ 43-1″

14h.

8m. 20s.

2m. ll-3s.

24

23′ 3″

14

8 20

13′ 34″

24

13-4”

14

8 20

7-9”

And 12

6⬜⬜ 8′ 58″

2

8 20

1⬜⬜ 5′ 44″

12

1⬜⬜ 59’ 23’

2

8 20

21′ 14″

12

15”

2

8 20

3”

12

4”

2

8 20

l”

PROB. V. ††† To find the true altitude of a celestial object from its observed altitude.

From the observed altitude subtract the dip ; and, if the lower limb is observed, add the semidiameter; if the upper, subtract it. Then take the difference between the refraction and the parallax in altitude, and add it if the object be the moon ; but subtract it if the object be the sun or a star, and the result will be the true altitude.

Example. ††† What is the true altitude of a fixed star, whose observed altitude is 28†† 19’, the height of the eye being sixteen feet ?

Here there is no parallax and no semidiameter to allow for,

17′ 30″ 3 33

56 13 57 16 15

Observed altitude Dip

28 =

19’ 0’ 3 56

Observed altitude > 56C Dip

Semidiameter

Cor. of altitude

True altitude . 56 28 45

Paral. 59’ 37’ Prop. long. Sect.

55

57 42 31 3

4799 2753

Refrac.

28

15 4 1 46

Par. in alt. Refraction

31′ 38″ Prop. long. 7552

35

True altitude

28 13 18

Required the true altitude of the sun, the observed altitude of his 0 being 40 10′ 56″, October 7th, 1827, height of the eye eighteen feet.

Observed altitude 0 Dip

40C

10′ 56″ 4 11

40 6 45

Semid. per Naut. Aim. 16 3

40 22 48

Refr. 1′ 7″ par. 7”= 1 0

True altitude

40 21 48

Cor. of alt. 31 3

PROB. VI. ††† Tojind the sun’s declination when he is on a given meridian.

Take the declination for the noon of the given day from the Nautical Almanac, and its daily change, noting whether it is increasing or decreasing. Then say, as 360†† : the daily change : : the longitude of the given meridian : the correction to be added, if the declination is increasing, and the longitude west, or if the declination is decreasing, and the longitude east ; otherwise to be subtracted from the declination at noon, before taken out.

Exumple. ††† Required the sun’s declination, when on the meridian of 40†† W., March 4th, 1828?

Per Nautical Almanac :

0 Declin., March 4th . 6†† 19′ 18″ S.††† 23′ 9″ 360†† : 23′ 9″ : : 40†† : 2′ 34″ j 3 34

the correction

6 15 44 S. Ans.

The correction here is subtractive, as the longitude is west and the declination decreasing. See article ASTRONOMY for a table of the sun's declination with a table to adapt it to subsequent years.

To find tlte latitude at sea by meridian altitude.

Take the true altitude from 90►►, and the remainder will be the zenith distance, to be called north when the object is south, and south when the object is north of the zenith. Reduce the declination to the time of observation. Then, if the declination and zenith distance are both north or both south, their sum is the latitude ; but, if one is north and the other south, their difference is the latitude ; and it is always of the same denomination as the greater.

To explain this rule, let A C (plate II. fig. 8) be the line of intersection of the planes of the meridian and rational horizon; and F D the intersection of the planes of the meridian and equator ; let Z be the zenith, P the north, and E the south pole ; and let S be the true place of a celestial object on the meridian ; then S A is its meridian altitude, SZ its meridian zenith distance, and S F its north declination. If S' be the place of the object, then S' A is its meridian altitude, S' Z its zenith distance, and S' F its south declination. If S" be the place of the object, then S" C is its meridian altitude, S" Z its zenith distance, and S" F its north declination. Now Z F, the latitude = ZS + SF = ZS' ►►► S' F = F S" ►►► Z S"; which is the rule.

Example . ►►► If the meridian altitude of the sun's lower limb be 50►► 12′ 40″ S. on May 5th, 1828, in long. 23►► W., height of the eye seventeen feet ; required the latitude ?

Per Nautical Almanac :

0 Declin., May 5th, 16►► 19' 27' N -f 16' 55* 360►► : 16′ 55″ : : 23►► : 1′ 4″, cor. of declin.

Sun’s declin. at time I of observation $ Observed altitude 0 Dip . . T

Semidiameter

16

30 31

. 50□□

50

12′ 40″ S.

4 4

8 36 15 52

50 24 28

Refraction 48” □□□ paral. 5” cor. 43

True altitude

Zenith distance Declination

50 24 45 S.

90

39 35 15 N.

15 30 31 N.

Latitude … . 56 5 46 N. In observations for the latitude at sea it is customary to consider the sun’s semidiameter as always 16’, and to take all the corrections to the nearest minute. When it is not stated that the altitude is taken by a back observation, a fore observation is always understood. 0 indicates the sun’s lower, and 0 his upper limb ;) the moon’s lower, and) her upper limb .

r-indicates that the number to which it is affixed is increasing, and
that it is decreasing.

Example 2.
If on February 5th, 1828, at 2h. 49m. apparent time, as deduced from a chronometer, regulated for Greenwich time, the meridian altitude of > be observed to be 49
35’ S., height of the eye twelve feet ; required the latitude?

In this example the Greenwich time is 2h. 49m. past midnight of February 4th. Now by the Nautical Almanac, the moon’s declination, semidiame- ter, and parallax, at midnight of that day, with their variations in the succeeding twelve hours, stand as under:

> ‘s declin. S. 2
3′ 57″ S. + 2
2’ 15 Cor. 28 40

> ‘s semidiameter.

15′ 9″ + 4” 1

> ‘s hor. paral.

55′ 35″ + 15” 4

2 32 37

Observed altitude > Dip …

Semidiameter

Apparent altitude centre Correction

True altitude .

Zenith distance Declination

15 10

49 35′ 0″ S.

3 25

55 39 proper, log. 5098

49 21 35 15 10

49 16 25 35 30

49 51 55 S.

90

40 8 5 N. 2 32 37 S.

Sect

1854

Par. in alt. 36′ 19″ Prop, log 6952 Refraction 49

35 30 Cor. of altitude.

Latitude

37 35 28 N.

The moon’s semidiameter as given in the Nautical Almanac, is that which she would appear to have if seen from the centre of the earth ; if she be seen upon the horizon she will of course be nearer to tne zenith of the observer, and will

therefore appear under a greater angle. Tin’s augmentation of her semidiameter may be taken with sufficient exactness for practical purposes at sea from the following table :

Moon’s apparent altitude.

0

3 6 12 15

18 21

27 30

36 39

45

48

54

60

72

90

Augmentation of > ‘s semidiameter.

0”

1” 2” 3” 4”

5” 6”

7” 8”

9” 10”

11”

12”

13”

14”

15”

16”

To altitude 49 we find from this table that the augmentation of the moon’s semidiameter is 11”; hence, in the above example, the semidiameter ought to have been 15′ 21″; but it is only in finding the longitude by lunar observation, that such nicety respecting the moon’s semidiameter becomes of any practical importance in the business of navigation.

Example 3. If the meridian altitude of Aldebaran be 28 5′ 10″ N. on February 18th, 1828, height of the eye fourteen feet; required the latitude ?

Observed alt. 28 5′ 10″ N. Dip 3 41

Refraction True altitude

Zenith dist. Declination

Latitude

28 1 29 1 47

27 30

59 42 N.

62 16

18 S. 15 N.

45 51 3 S.

To find the latitude by the meridian altitude of an object below the pole.

To the altitude add the complement of the declination, and the sum will be the latitude, of the same name with the declination.

For (fig. 8, plate II.) F P and Z C are equal, being quadrants, and, if the common part Z P be omitted from each, there remains Z F the latitude rz P C. Now if S’” be the object below the pole, then S ’” C is its altitude, S ’” D its declination, and S ’” P the complement of its declination ; and S‘“C + S‘“P = P C’ the latitude.

In taking the sun’s declination, it must be noticed that he is on the meridian twelve hours after noon.

Example 1. ††† If the altitude of 0 on the meridian below the pole be 10†† 50’ on May 20th, 1828, in long. 14†† E., the height of the eye sixteen feet ; required the latitude ?

Time of observation

Long, in time E

Greenwich time of observ.

24h.:12 16”:: lib. 4 : 5′ 39″ 0’s declin., May 20th,

noon, Greenw. time Correction 5

12h. Om.

56

71 ˆ4

20⬜⬜ 2′ 4″ +12 16”

39

Declination

Co-declination

20 7 43 90

69 52 17

Observed altitude 10►► 50* 0” Dip . 3 56

10 46 4

Semidiameter 15 50

11 1 54

Refr.4′47″►►► par. 9” 4 38

True altitude . 10 57 16

Co-declination , 69 52 17

Latitude

80

49 33 N.

Example 2. If the altitude of Capella, below the pole, be 4 14′ 10″, on August 10th, 1828, height of the eye thirteen feet ; required the latitude?

Observed alt. 4 14’ 10’ Dip . 3 33

Refraction

10 37

11 29

Co-declination 45

59’ 8 48 32

Latitude 49 47 40 N.

- To find the latitude from the observed altitude of a celestial object, near the meridian, the time of observation being known.

If the object is the sun, the apparent time is the meridian distance ; for any other object, to the apparent time add the sun’s right ascension, and from the sum subtract the right ascension of the object, and the remainder is its meridian distance. If the meridian distance is more than twelve hours, subtract it from twenty-four hours. Then add together the cosine of the meridian distance, and the tangent of the polar distance and the sum, rejecting the tens from the index, will be the tangent of arc first, which will be obtuse or acute according as the polar distance is ob-tuse or acute. Again, add together the secant of the polar distance, the sine of the altitude, and the cosine of arc first, and the sum, rejecting the tens from the index, will be the cosine of arc se-cond. The sum or the difference of arcs first and second will be the colatitude ; and that latitude must be taken which agrees most nearly with the latitude by account, which will always be known nearly enough to determine which of the imputed latitudes is the true one.

Let PA (fig. 9, plate II.) be the meridian on which the first point of Aries is, P S that on which the sun is, P x that on which the star is, at the moment of observation. Then if PM be the meridian of the place of observation, S P M is the apparent time, APS the same right as-

cension, AP x the stars, and x P M the star's meridian distance. Now APS + SPM••• AP x = or P M, which is the rule for finding the meridian distance of a star; and the apparent line S PM is evidently the meridian distance of the sun.

Next, let A B(fig. 10 plate II.) be the object's altitude, A Z its zenith distance, A P its polar distance, P Z the colatitude, and on P Z, or P Z produced, let fall from A the perpendicular A C.

Then rad. cos. P =: cot. A P-tan. PC; or ••• rad. cos. P tan.AP-cos.P
,

cot.AP = -R whence'

P is the object's meridian distance, and P C is arc I in the rule. Again cos A P : cos A Z(= sin.

A t>\ n r> or/ cos. PC-sin. A B

A B) : : cos. P C : cos. C Z =

cos. P C-sin. A B-sect. A P,

cos. A P , where C Z is arc

rad. 2.

II in the rule. And when Z and P are on the same side of C the difference is Z P, otherwise their sine is Z P the colatitude.

Example 1.••• If the altitude of 0 be 35•• 2', at Oh. 48m, 12s. P. M. October 7th, 1828, in lat. by account 47•• 50' N., long. 20•• W., height of the eye fifteen feet, required the latitude ? h. m. s.

Time of observation 0 48 12 Long, in time W. 1 20

Greenwich time by ace. 2 8 12

24h. : 22’ 58’ : : 2h. 8m. : 2′ 3″ corr. of declin.

48►► 12’ = 12►► 3’, meridian dist. 0’s declin. Oct. 7th. 5►► 35’ ,39’S x 22′ 58″ Correction. 2 3

5 37 42 90

95 37 42 Polar dist. Obsd. alt. 35►► 2’ 0’ Dip. 3 49

Semid.

34 58 11 16 3

35 14 14

Refr. 1′ 21″►►► par. 7” 1 14

True alt. 35 13 C Mer. dist. 12►► 3’ cos. 9-990324 Pol. dist. 9538 tan. 11-005955 sect. 11-008057

46’ arc. I. tan. 10-996279 cos I. 9-002069

Time of observation Long, by ace. W.

h. in. s.

7 3 10 2 20

Alt. 35►► 13’ sin. 9*760927

5349

Co-lat. 4157

90

Arc II. cos. 9-771053 diff. arcs I and II

483 latitude N.

Example 2. ►►► If the altitude of Aldebaran be 53►► 12’ at 7h. 6m. 10s. apparent time, March 9th, 1824, in long, by account 35►► W., lat. 44►► N., height of the eye thirteen feet, required the latitude’?

Greenw. time by ace. 9 23 10

h. m. s. 0 R. A. March 9th, 23 19 20 + 3 40

0’s R. A.

24h. : 3ra. 40s. : : 9h. 23m. : 1m. 26s, corr. of 0’s R. A. ; #‘s R.A. 4h. 26m. 5s. #‘s pol. dist. 73►► 50’ 46’.

h. m. s.

App. time 7 3 10 0’s R.A. 23 20 46

6 23 56 4 26 5

*‘sR.A.

* ‘s mer. dist. 1 57 51 = 29►► 27’ 45’

Obsd. alt. Dip.

53

53►► 12′ 0″

3 33

Refr.

True alt.

8 27 43

53 7 44

Mer. dist. 29►►27′ 45″ cos. 9-939857 Pol. dist. 73 50 46 tan. 10-538120

sect. 10-555614

71►► 35′ 56″. Arc I tan. 9-477977 cos. 9-499230 Alt. 53►► 7′ 44″ sin. 9-903083

24►► 49’ 1 Arc II. cos. 9‘957927

Co-lat. 46 46 55 Diff. arcs I and II.

90

43 13 5

Latitude N.

Given tfie time of observation and the altitude, of the pole star to find the latitude.

Find the meridian distance of the star as in the preceding method of finding the latitude. If the meridian distance is less than 90°° consider it as a course, if it is between 90°° and 270°° consider the difference between it and 180°° as a course ; if it is more than 270°° consider the difference between it and 360°° as a course. Then with this course, and the polar distance of the star in minutes, enter a traverse table, and the difference of latitude will be the correction to be applied to the true altitude to obtain the latitude ; additive when the meridian distance is more than 90°° and less than 270°°, otherwise subtractive.

For, let P (fig. 11 plate II.) represent the pole, M N A the horizon, at B C D, the circle in which the pole star moves round the pole, a circle which from its smallness may without any important error in navigation be considered as a plane one.

Then P N is the latitude, and, when the star is at O, its polar distance OP taken from its altitude O N leaves P N the latitude. When it is at 180, it is directly below, as at O it was above the pole, and the polar distance 180 P added to its altitude 180 N gives P N the latitude. When

the star is at 90 or 270 its altitude is the same as that of the pole. When it is at A or D, E P or HP taken from the altitudes A M or D Q leaves P N the latitude ; when at B or C, P F or PG added to B M or CQ gives PN the latitude. Now A O is the star's meridian distance at A, O A B, O B C, and O B C D, its meridian distance at B, C, and D, respectively. The difference between O B and 1 80►► is B 180, the measure of the angle B P G and similarly APE, G P C, and D P H, are the angles which taken as a course with A P, B P, C P, or D P, as a distance, give the corrections P E, P F, P G, and P H ; the corrections to be applied to ►►he altitudes AM, B M, C Q, and D Q, respectively to obtain the latitude P N.

Example. ►►► The altitude of Polaris was 52►► 27′ 35″; at 7h. 24m. apparent time February 2d, 1828, the sun's right ascension at the time being 21h. 2m., height of the eye fifteen feet; required the latitude ?

App. time ►►'sR.A.

Sum #'sR.A.

h. m.

7 24

21 2

4 26 0 59

sfc 's mer. dist. 3 27 = 52►► nearly.

Obs. alt. 52►► 27′ 35″ Dip 3 49

Refr.

52 23 ‘46 41

52 23

With 52►► as a course and 99’, %. ‘s polar dist. the corr. is 61’ . = 1

Latitude 51 22 5

To find the latitude, from two altitudes of the sun observed on the same day with the time elapsed between the observations.

We take the following direct rule for solving this important problem from Mr. Kiddle’s Treatise on Navigation and Nautical Astronomy.

Take the sun’s declination for the Greenwich time which corresponds to the middle time between the two observations, and if it is of the same name with the latitude subtract it from 90►►, if of a different name add it to 90►►, and the sum or the remainder will be the sun’s polar distance. De-duct the true altitudes from the observed ones, and, if the ship has been sailing in the interval between the observations, the first altitude must be reduced to what it would have been if taken at the same place with the second. This correction may be obtained by the following proportion. As radius is to the distance sailed, so is the co-sine of the angle included between the course in the interval and the bearing of the sun at the first observation to the correction of the first altitude ; to be added to it if the ship sails within less than eight points of the sun’s bearing, but subtracted from it if the course is more than eight points from the sun’s bearing. Or the correction may be more readily made from a traverse table,

thus. Take the angle intended between the ship’s course and the sun’s bearing at the first observation as a course, and with it and the distance run on the interval as a distance the correction of the first altitude for the ship’s change of place will be found in the column of latitude;

Having now got the polar distance, the true altitudes, both for the place at which the second was observed, take half the interval between the two times of observation, and, reducing it into degrees, call it the half elapsed time, and proceed to compute the latitude at the place of the second observation by the following rule : ###

1. Add the sine of the half elapsed time to the sine of the polar distance, and the sum, rejecting ten from the index, will be the sine of arc first.

2. Add the secant of arc first to the cosine of the polar distance, and the sum, rejecting ten from the index, will be the cosine of arc second, which will be acute or obtuse, like the polar distance.

3. Add together the cosecant of arc first, the cosine of half the sum of the true altitudes, and the sine of half their difference, and the sum, rejecting the tens from the index, will be the sine of arc third.

4. Add together the secant of arc first, the sine of half the sum of the true altitudes, the co-sine of half their difference, and the secant of arc third, and the sum, rejecting the tens from the index, will be the cosine of arc fourth.

5. The differences between arc second and arc fourth is arc fifth when the zenith and the elevated pole are on the same side of the great circle passing through the apparent places of the sun at the two times of observation, otherwise their sum is arc fifth ; but arc fifth can never exceed 90##.

6. Add the cosine of arc third to thex cosine of arc fifth, and the sum rejecting ten from the index will be the sine of the latitude.

Note 1. ### When there is any doubt whether the zenith and elevated pole are on the same or different sides of the great circle passing through the places of the sun, the latitude may be computed on both suppositions, that being considered as the true latitude which agrees most nearly with the latitude by account, which will always be known nearly enough for that purpose. This additional computation will give very little trouble, as it is only arc fifth and its cosine that will require alteration.

Note 2. ### By this method the latitude may be found from two altitudes of the same fixed star ; but, if the interval be in solar, it must be reduced into sidereal time, which may be done with sufficient exactness by adding to the elapsed time ten seconds for every hour or one second for every six minutes.

Note 3. ❖❖❖ It will expedite the calculation if all the logarithms that occur at the same opening of the book are taken out at the same time, and any little mistake in the observations will produce the less error in the result, the nearer the greater altitude is to the meridian.

Note 4. ❖❖❖ It is a curious circumstance in the history of this problem that almost all who have written upon it have introduced a correction in the wrong angle for the change of longitude be-

tween the observations ; a correction which can have no existence if the times are marked as they are presumed to be by the same watch, and the altitudes are reduced to what they would have been if taken at the same place. This error is found in Mackay's Navigation, and in his Treatise on the Longitude, and it was in the earlier editions of Norie's Navigation, but has been omitted since 1821. It is found in the article Navigation in the Encyclopaedia Britannica; and even in the Encyclopaedia Metropolitana, a work now in the course of publication. It has probably been owing to this remarkable circumstance that sea-men have been so little disposed to rely on the results of double altitudes.

Demonstration of the rule.

Let Q, represent the sun at the place of the ship at the first observation, N A S the meridian, and B the place of the ship at the second observation. On A Q drop the perpendicular B C ; then the ship in running from A to B has advanced A C directly towards the point on which the sun bore when the ship was at A ; therefore A C added to the altitude observed at A will give what that altitude would have been if observed at B. Now N A Q is the bearing of the sun and N A B the ship's course, and B A C the

difference of those angles ; and rad. : A B : : cos, B A C : A C, the correction of the first altitude. If the ship run from A to B',from the

sun, then AC' computed in the same way is the correction of the first altitude, subtract! ve, to reduce it to what it would have been if taken at the same place as the second.

Having now obtained the altitudes, both at the place of the second observation, let Z (fig. 13 plate II.) be the zenith; P the pole ; A and B the places of the sun at the two times of observation ; A C, B D, the altitudes , A Z, B Z, the zenith distances; A P, BP, the equal polar distances ; Z P A, and Z P B, the times of observation, or the meridian distances of the sun at the times of observation. Then A P B is the elapsed time, and, if P E be a perpendicular on A B, then A B and A P B will both be bisected by it ; whence A P E or E P B will be the half elapsed time. Join E Z, and from Z on E P draw the perpendicular Z F. Then A E is arc first, E P arc second, Z F arc third, E Fare fourth, and E P arc fifth ; which as the figure is drawn is the difference of arcs second and fourth ; but, if Z and P had been on different sides of A B, F P would have been the sum of E P and E F.

Now rad. sin. A E = sin. A P ××× sin A P E ; or sin. B E =

sin. AP-sin.APE

cos. A E ××× cos. E P, or cos. E P = cos. A Z ××× cos. A E ××× cos. E Z

R. cos. A P sect. A E ××× cos. A P

II

; rad. cos. A P =

sin. A E ††† sin. E Z

cos. AE R

sin. AC ††† cos. A E ††† cos. E Z sin. A E ††† sin. E Z

; cos. A E Z = sir.. Z E F =

, cos. Z E B = ††† cos. A E Z = †††

sin.Z EF =

cos. BZ ††† cos.BE-cos.EZ sin. BD ††† cosAE ††† cos.E Z

these two equations : *viz.*

sin. B E ††† sin. E Z

sin. A E *sin. E Z’

Hence we have

sin. A E ⬩⬩⬩ sin. E Z ⬩⬩⬩ sin. F E Z = sin. AC ⬩⬩⬩ cos. A E ⬩⬩⬩ cos. E Z And ⬩⬩⬩ sin. A E ⬩⬩⬩ sin. E Z ⬩⬩⬩ sin. F E Z = sin. B D ⬩⬩⬩ cos. A E ⬩⬩⬩ cos. E Z Or sin. A C = cos. A E ⬩⬩⬩ cos. E Z + sin. A E ⬩⬩⬩ sin. E Z ⬩⬩⬩ sin. FEZ

sin. BD = cos. AE -cos. E Z ⬩⬩⬩ sin. AE -sin. EZ-sin. FEZ

Whence sin. AC ⬩⬩⬩ sin.BD = Zcos.

AC

AC ~ B D

=Zsin.AE-E Z' sin.FRZ

- - > cos. - _ — = 2 cos.

= 2 sin. A E ❓❓❓ sin. Z F and sin. A C + sin. B D = 5 sin. AE-cos. C2 = 2 cos. AE-cos. EF'cos. FZ.

From the first of these two latter equations we have

AC + BD AC ❓❓❓ BD AC + BD AC ❓❓❓ BD

cos. - , sin. - cos. - , sin. - - - , cosect. A h.

Z.-, 2 2 22

* =z - : - 5~7: - = - j❓❓❓^ — ' sin. B E rad. 2

and, from the second, cos. E F ❓❓❓

AC + BD AC ❓❓❓ BD AC + BD AC ❓❓❓ B D

sin. ❓❓❓ ❓❓❓ , cos. - - sin. - , cos. - - - ❓❓❓ . sect. A E ❓❓❓ sect. FZ.

cos. A E ❓❓❓ cos. F Z

rad. 3.

Lastly, rad. cos. Z P, or rad. sin. .at. ❓❓❓ cos. Z F ❓❓❓ cos. F P,

whence

cos. Z F, cos. F P rad.

= sin lat.

Example 1.••• On April 4th, 1828, in lat. 35•• N., long. 28•• W., by account, at 8h. 10m. 40s. A. M-the alt. of 0 was 38•• 12’ +, bearing by compass E. S. E; and at llh. 22m. 14s. A.M., the alt. of 0 was 60•• 18’ +, the ship having run in the interval S. W. by S. four miles per hour, height of

the eye sixteen feet, required the latitude ?

Here the ship is running from the sun, within seven points of that opposite to his bearing ; and the distance run between the observations is about thirteen miles; whence the correction of the first altitude is about 3’.

fa First alt. Second alt. Astron. times, April 3d.

38•• 12’ O 60•• 18’ 0 20 10 40

Dip 3 58 3 56 23 22 14

“ - ” ••• ••• j•• -_ jˆ rn ••• s*

38 8 4 60 14 4 Eta psed time, 3 11 34; 1 3547= 23 57H ET

Refr. par. 16 29 •••

2)43 32 54 60 13 35

16 0 Mid time 21 46 27 Lon-r. W. 1 52

38 22 58 60 29 35

33 19 58 23 38 27 Mid time at Greeuvr.

Half sum 49 24 46

True alt. 38 1958 Sum alt. 98 4933 Halfdiff. 11 448 Diff. 22 9 37

►►‘s dec. April 3d 5►► 24′ 50″ N + 22′ 53″. 24h. :21m. 53s. : : 23h. 38m. (mid time) : M 32” Con.

22 32

5 47 22 decl. in mid time

90

84 12 38 polar dist.

II E T 23►► 57* sin. 9‘608461

Pol.dist.84 13 sin. 9‘997784 cos. 9-900318

Arc. I. 23►► 49* sin. 9‘606245 sect. 1. 10-038654

83►► 41’ II. arc. cos. 9-938972 cosect. arc I 10-393821

10-038654 sect. arc.

9-880505 sin. 49►► 25’ cos. 9‘813283

9-991823 cos. 11 5 sin. 9-283836

10-021876 sect. 18 4 arc III. sin. 9-490940

31 3 arc IV. cos. 9-932858 cos. arc III. 9-978124

52 38 arc V. cos. 9-783127

Latitude 35►► 15’ sin. 9-761251

Example 2.►►► On March 2d, 1828, in lat. 46►►i N., long. 150►► E. by estimation, at lOh. 45m. i3s. A. M., the alt. of 0 was 33►► 26’ + 2 bearing per compass S Ej E, and at Ih. 43m. 27s. P. M. the alt. of ˆ was 30b 4’ ►►► , course in the interval E J S, seven miles per hour, height of the eye fourteen feet ; required the latitude ?

The ship in this example is running nearer the sun, within three points of his bearing at the first observation. With this the distance and run between the observations (abouttwenty-one miles) the correction of the first altitude is about 17* 5” = or, 17′ 30″ additive. The middle time corrected for longitude, is at about 14h. 14m. of March 1st, for which instant the sun’s declination is 7►► 14′ 37″ S., and consequently the polar distance is 97►► 14′ 37″.

First alt.

Second

alt.

33[illegible]

26’

0”

30[illegible]

4’

0’

Diff.

3

41

3

41

33

22

19

30

0

19

Refr. par.

1

19

1

30

33

21

0

29

58

43

Semid.

16

10

16

10

33

37

10

30

14

59

Corr. for ship’s run,

17

30

33

51

40

33

54

40 Sum alt.

64

9

39

Diff.

3

39

41

Times March 1st.

ll. 111. S.

22 45 13 25 43 27

Elapsed time, 2 58 14, H ET Ih. 29m. 7s. r = 22 \f

- h. m. s.

Sum times, 48 28 40 mid time, 24 14 20 Long, in time E. 10

Mid time at Greenw. 14 14 20 0's declin. March 1st.

7 28′ 10″ S. 22'

half sum half diff.

32 4′ 49″

1 49 50

Polar dist. 97 14 37

II ET Polar dist.

Arcl

22►► 17’ sin. 9-578853 97 15 sin. 9-996514

22 6 sin. 9‘575367

97►► 50’ arc II. cos

cos. 9-101056 sect, arc I. 10-033141

9-134197

cosect. 10-424533

10-033141 sect, arc I 9-725219 sin. 32►► 5’ 9-990778 cos. 1 50

cos. sin.

9-928025 8-505045

10-001131 sect. 4 8 arc III. sin. 8-857603 54 55 arc IV. cos. 9-759269

42 55 arc V.

cos. arc III. 9-998869 cos. 9-864716

Latitude 46 55’

sin. 9-863585

To find the latitude from the altitude of two cnown fixed stars. Let Z (fig. 14, plate II.) be the zenith, P the pole, B and C two stars whose altitudes B Dana C E are measured, but not at the same time, that of B being measured first.

Let B be at B’ when-the altitude of C is measured, and let P A be the meridian passing over the first point of Aries. Then A P B is the right ascension of B’, A P C’ the right ascension of C’ ; and B’PB the elapsed sidereal time; which, being added to A P B’, gives the right ascension of the point B ; and we may then consider B and C as two stars whose altitudes are taken at the same instant.

Now in the triangle B P C are given the two

poiar distances of the stars B P and P C, and the angle B P C the difference of their right ascension to find B C and the angle P B C’. To compute these, drop C F a perpendicular from C on P B ; then rad. : tan. PC:: cos. B P C : tan. P F. The difference of P F and P B is F B ; and cos. B F : cos. F B : : cos. P C : cos. B C ; also sin. P F : sin. F B : : cos. B P C : cot. P B C. Then in the triangle Z B C we have Z B and Z C the two zenith distances of the stars, deduced from their altitudes; and B C before computed, to find the angle Z B C, which may be found from

ZBC

this expression : cos. ??? ??? ???

*~ ZB + BC + ZC . /ZB + BC + ZC ._\

sin. ??? ! sin. f ‘ ??? ZC ˆcosect. ZB, cosect. BC.

2

rad. 2

The difference between ZBC and P B C is Z B P. Then in the triangle Z B P are now given Z B the zenith distance, and P B the polar distance of B, and the contained angle Z B P to find Z P the colatitude. To make the computation drop Z G, a perpendicular from Z or P B, then rad. : tan. Z B : : cos. Z B P : tan. B G. The difference of B P and B G is P G and cos.

B G : cos. P G : : cos. B Z : cos. Z P, or sine of the latitude.

Example. ??? On January 26th, 1828, in lat. 51 1?? N., long. 20?? W. by account, at 8h. 31m. 46s., the altitude of Sirius was 18?? 15′ 48″, and at 8h. 35m. 24s. that of Regulus was 18?? 41′ 48″, height of the eye sixteen feet, required the latitude?

NAVIGATION.

531

A P B’ R. A. Sirius B’ P B, elapsed time

. m. s.

37 36 3 38

41 14 59 14

P B, polar rlis>. Sirius 106►► 29′ 29″ PC, R►►.‘iihis 77 11 58

L A P C, R. A. Regulus 9

/ BPC 3 18 0 = 49►► 30’

Obs. alt. Dip

Refr.

True alt.

Sirius. Regulu-i.

18►► 15′ 48″ 18►► 41 48”

3 56

3 56

18 11 52 2 52

18 90

9 0

18 37 52

2 48

18 35 4 90

Zenith dis. 71 51 OZB, 71 24 56 Z C.

Rad.

: tan. P C 77 11’ 58’

: : cos. P 49 38’

10-000000

10-643582 9-812544

PF PB

FB

70 43 4 tan.

106 29 29

10-456126

35 46 25

CZ 76►► 24′ 56″ BZ 71 51 0 BC 57 1 10

2)200 17 16

lialfsum, 100 8 33 half sum CZ 23 43 37

ZBC

39 36 31

cos. PF 70 43′ 4″ cos. F B 35 46 25 cos. PC 77 11 58

BC 57 1 10

9-518805 9-909199 9-345487

9-254686

cos. 9-735881

sin. P F 70 43′ 4″ 9-974928 sin. F B 35 46 25 9‘76G847 cot. P 49 38 9-931499

19-698346

PBC 62 7 23 cot. 9-723418

rad.

cosect. 10-022165 : tan. BZ 71 51′ 0″

cosect. 10-076313 ::cos.ZBP 17 5 39

10-000000

10*484369

9-980380

sin. sin.

9-993159 9-631816

2) 19-773453

cos. 9-886726

BG BP GP

71 411 tan. 10-464749

106 29 29

35 25 18

ZBC 79 13 2 PBC 62 7 23

ZBP 17 5 39

As, cos. BG 71►► 4’ ll” : cos. GP 35 25 18

: . :os. BZ 71 51 0

Latitude

If one of the altitudes he increasing, and the other decreasing, the zenith, Z, will fall between B P and C P.

To find the time at sea from the altitude of a known celestial object, at a place whose true latitude and longitude by account are known.

Add together the altitude of the object, the latitude of the place, and the polar distance of the object, and take the difference between half the sum and the object's altitude. Then add together the secant of the latitude, the cosecant of the polar distance, the cosine of the half sum,

9-511104 9-911109

9-493466 19-404575

ZP

38 30 43 cos. 9-893471

90

51 29 17

and the sine of the remainder; reject twenty from the index of the sum, and half the remainder will be the logarithm sine of half the object's meridian distance ; which being multiplied by eight will give the whole meridian distance in time.

If the object is the sun and the altitude decreasing, the meridian distance is the apparent time ; if the altitude is increasing the meridian distance subtracted from twenty-four hours leaves the apparent time.

Tor any other celestial object, if the object is

2 M 2

NAVIGATION.

east of the meridian, or if its altitude is in-ascension of the meridian ; from which subtract

creasing, subtract the meridian distance from ob-the sun's right ascension, and the remainder will

ject's right ascension ; if it is west of the meri-be the apparent time.

dian, or if its altitude is decreasing, add the To the apparent time apply the equation of

meridian distance to its right ascension, and the time, and the result will be the mean time. result will be the sidereal time, or the right

Investigation of the method of computing the meridian distance. In fig. 15, plate II., call Z P the colatitude, t, the latitude /, A B, the altitude a, and A Z its complement a', and call A P the polar

a 4-I' ⬚⬚⬚ p p ⬚⬚⬚ f -4-a

, . ,P -sin.- — - ⬚⬚⬚ . sin. ⬚⬚ - - - cosect. I' cosect. p. distance p. Then sin.8 ⬚⬚⬚ ⬚⬚⬚ 2 2 _ ' ⬚⬚⬚

rad. 2

90 ⬚⬚⬚ a + 90 ⬚⬚⬚ 1 + p . p ⬚⬚⬚ 90 + 1 + 90⬚⬚⬚ a sin.- ⬚⬚⬚ . sin. - - - - . sect. /. cosect. p,

2 2 ^^

rad. 2 t ⬚⬚⬚ ⬚⬚⬚ - - - ⬚⬚⬚

. sin. (- - ⬚⬚⬚ a). sect. . *cosect. p. Whence sin.* ⬚⬚⬚ ⬚⬚⬚ \ *2* 2

rad. 2

a + I + p /a + I + p \~~

cos. - -. sin. (- - - 5 ⬚⬚⬚ 01. sect. /. cosect. p.

At >⬚⬚⬚ <6 X

rad. 2

Example 1.⬚⬚⬚ If on April 19th, 1828, in lat. 43⬚⬚ 27' N., long, by account 38⬚⬚ W. at 9 h. 4 m. 10s. A. M., the altitude of 0 be 39⬚⬚ 56' +, height of the eye ten feet, what is the true mean time?

h. m. s. 0,1 , , Sub.

App. time, April 18th 21 410 Q's dechn. 1055 1 N. + 20 47 Eq. time 0 44 + 13 Long, in time W... 2 32 0 Cor. for given time 20 25 13

Greenwich time by acct. 23 36 10 True declin. . 11 15 26 0 57true<-qiu

78 44 34 polar dist

Alt…

40[illegible]

r

48

Lat…

43

27

0

sect. . -139078

Obs. alt. 0 39

56’

0’

Polar dist.

78

44

34

cosect. -003437

Dip . .

3

7

2)

162

19

22

39

52

53

Refr. par.

1

1

81

g

41

cos. . 9-186538

41

1

53

sin. . 9-817216

39

51

52

Q ◆◆◆ 1* _ -*-.

1 C

K.A

2)19-151269

otrllllCliciniCier

13

Trim oU Af\

T

AQ

22►► 6’ 39’ sin. . 9‘575634

2 56 53 12 mer. dist.

24

21 3 7 app. time. 57 equa. sub.

21 2 10 mean time. 21 4 10 time by watch.

2 0 watch fast.

Example 2. ►►► If on August 15th, 1828, in lat. 20►► 10’ S. long, by acct. 6►► E., at 10 h. 27 m. 13s. P.M. per watch, the altitude of Antores be 38►► 14, height of the eye 17 feet; required the true mean time?

Time per watch . . lOh. 27m. 13s Long, by acct. in time E. 24

Greenwich time by acct. 10 3 13

I or this time, per Nautical Almanac, the sun’s R. A. is 9h. 41m. 13s., tne equation of time ►►►i HI. .r>s, add.; the polar distance of Antores 63►► 57′ 33″, and its right ascension 16 h. 18m. 56s.

Obs. alt. Dip

Refr. .

True alt.

38 14’ 0’

4 4

38

9 56 1 13

Alt… Lat. Polar dist.

38 8 43

38 8’ 43

20 10 0

63 57 33

2)122 16 16

61 8 8

22 59 25

sect. . cosect

cos. sin.

Mer. dist. *‘sR.A. .

Sidl. time

App. time Equa. time .

Mean time . Time by watch

28

13’

2’ 8

. 3

. 16

45

18

44 56

16

. 20 9

4 41

40 13

add

. 10

23

4

27 5

. 10 . 10

27

27

32 13

. 10-027476 . 10-046492

. 9-683713 . 9-591704

2) 19-349385 9-674692

Watch slow . . 19

The nearer the object is to the east or west, when the altitude of it is taken for time, the better

To find the error and rate of a chronometer from equal altitudes of the sun observed in the fore and afternoon of two successive days.

Deduct the time by the chronometer for the altitude of the first forenoon from the time by the chronometer for the altitude of the second forenoon increased by twenty-four hours ; the remainder will be the interval between the two observations. Do the same with the times of the altitudes of the two afternoons, in order to have the interval of time between them.

The difference between half the sum of those intervals and forty-eight hours will be the rate of the chronometer, or its daily gain or loss ; gaining if the half sum exceeds, but losing if it is less than forty-eight hours.

Take the difference between the two intervals already found, and likewise the interval between the times of the first two observations of equal altitudes. Add together the logarithms of these two intervals, in seconds, and 4-46143, and the sum, rejecting the tens from the index, will be the logarithm of a correction to be added to, or subtracted from, half the interval between the first two observations, according as the interval between the observations on the forenoons is greater or less than the interval between those on the afternoons. The sum or remainder added to the time of the first forenoon will give the time of true noon by the chronometer on the first day of observation.

Hence by applying the equation of time the error of the chronometer for mean time may be found.

The following is the investigation of the rule, which was first published by .T. de Mendoza Rios, but without demonstration, in his Nautical Tables.

Let n zz the complete days between the ob-

servations, then n + 1 zr the days between the corresponding forenoon or afternoon observations. Put m ⬀ the seconds in twenty-four hours, A zz the apparent time of the first observation, B that of the second, and A ⬀ D zz that of the third ; then B +. D will differ from the time of the fourth by a quantity too minute to be worth attention.

Hence (⬀ + 1 . m + A ⬀ D) ⬀ A ⬀ n + 1 . m ⬀ D zz the first interval ; and (n + 1 . ro + B+D)⬀ Bzz n + 1 . m if D q: the second interval. The sum of these intervals is 2 . n -f-1 . m, whence the difference between the sum of the intervals as measured by the chronometer, and 2 . n + 1 . ⬀i, is the gain of the chronometer in 2 . n + 1 days. If n zz ⬀, or the observations are made on two successive days, then half the difference between the sum of the intervals and 2 in will be the rate or the gain or loss per day.

Again, (n + 1 . m ►► D) c►► (n + 1 . m rp D) zz ►► 2 D ; and if we put i zz the interval in seconds in 24 h. + B ►►► A, the time between the first and second observations, and e zz the change in the hour angle resulting from the change of declination in the interval t, we have

Di c

.

2n + 1 . m l

the correction to be applied to the half interval, or to the middle time between this observation, to obtain the time of true noon.

If n rz o, then -zz - ••• , or log. -••• z= log.

2 D -(- log. i + (10 ••• log. 4m) ••• lug. 2 D -f log. i + 4-40143.

V.rtintple. ••• If on May 7th and 8th, 1828, at Portsmouth, to four sets of equal altituo.es of the sun's lower limb I fiud the times as under, required the eitor and rate of the chronometer ?

May 7th . May 8th .

Intervals .

Difference Half difference

Times in the Forenoon.

h. m. s.

. 8 35 48

8 38 19

Times in the Afternoon. h. m. s.

2 31 35 2 28 12

24 2 31

23 56 37

47 59 8 48

23 56 37

52

26 rate losing.

Difference of intervals

Interval between observations on 7th 5

5 55

54 ††† 354s.

47 = 21347

log. 2-54900 log. 4-32933

4-4613

Half interval … ††† 2 57 53-5

Correction …. 21-9

Time of first observation . . 8 35 48

True time of noon 5th . . 1 1 34 3‘4 Equation of time with contrary

sign ….. 3 41

Mean noon per chronometer . 11 37 44-4

Chronometer slow … 22 15‘6

Ipg. 1-3397

To find the longitude by a chronometer.

Take an altitude of a celestial object, or rather a series of altitudes at short intervals of time, noting the time of each altitude.

Take the mean of the times and the mean of the altitudes. To the mean of the times apply the last known error of the chronometer, adding if it was slow, and subtracting if it was fast. Multiply the rate by the number of days elapsed since the first error was determined, and add the product to the above corrected time if the chronometer is losing, but subtract it from it if gaining. To the result add the longitude of the place for which the error is found if west, but

subtract it if east, and the sum or remainder will be the mean time at Greenwich. For that instant take the equation of time, and apply it with a contrary sign, and the result will be the apparent time at Greenwich.

Then, with the mean corrected altitude, the latitude of the place, and the polar distance of the object, find its meridian distance, and thence the apparent time at the place of observation ; and the difference between that time and the apparent time found at Greenwich, found as above, will be the longitude of the place in time, west if the Greenwich time is greater or before, bat east if the Greenwich time is less or be-hind the time at the place of observation.

Example 1. ××× On June 5th, 1828, my chronometer was 5m. 37s. slow, and on June 15th, 4 m. 27s. slow, for mean time at Greenwich. On July 3d, in lat. 30×× 25’ N. at 6 h. 49 m. 43 s-P. M., by the chronometer the altitude of 0 was 26×× 48’ ××× , height of the eye fifteen feet ; required the longitude?

From June 1.5th to July 3d is eighteen days.

Chron. slow, June 5th 15th

Gain in ten days

70

m.

5

4

s.

37 27

1 10 ××× 70s.

××× ××× 7s. rate gaining.

Time by chronometer, July 3d Chronometer slow, June 15th .

m.

49

4

s.

43

27

s. m. s.

18 =: 126 =z 2 6, gain from rate. At 6h. 48 m. July 3d, the sun’s declination is “22 56’ 36’ N. whence his polar distance is 67 3’ 24’.

Obs. alt. 0 . 26 48′ 0″ Dip … 3 49

Gain from rate

6 54 10

2 6

Mean time at Greenwich … 6 52 4 Equation of time with contrary sign 3 50

Apparent time at Greenwich

6 48 14

llefr. par.

Semid. True alt.

26 44 11

1 45

26 42 26

15 46

26 58 12

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Alt… Lit . . Polar di.►►t.

26►►

30 67

58-25 3

12’ 0 24

sect. . cosect.

cosin. sin. ###

2)

###064308 ###035792

9-668434 9-761303

2)124

26

36

Mer. dist. .

H

62 35

35

13 15

29

18 6

13

8

19-529837

sin. . 9-764918

apparent time at place of observation, ditto Greenwich.

❓❓❓ 31❓❓ 5’ W.

4 6

43 48

53 14

44

Long, in time

2

4

W.

Example 2. ††† If on May 10th, 1828, at Cape Town, long. 18†† 23’ E., I find my chronometer 1 h. 30 m. 26 s. slow, and on June 3d, at James Town, St. Helena, long. 5†† 43’ W. 5 m. 28 s. fast ; and on July 12th, in lat. 20†† 3’ N., on my voyage homeward to England, the altitude of 0 be 29†† 25’††† , at 7h. 1 m. 26s. by the chronometer, height of the eye twenty feet, required the longitude ?

The longitude of Cape Town, in time, being 1 h. 13m. 32 s. east, if the chronometer were right for Greenwich time it would be 1 h. 13m. 32s. slow for time at Cape Town. But it is 1 h. 30m. 26 s. slow for time at that place, whence it is 16 m. 54 s. slow for Greenwich time on May 10th. In the same manner if the chronometer were right for Greenwich time it ought to be 22 m. 52 s. fast for time at James Town, whereas it is only 5 m. 28 s. fast for time at that place Consequently, on June 3d, it is 17m. 24s. slow for Greenwich time.

Chron. slow for Greenwich time, May 10th Ditto June 3d

Loss in 34 days

16m. 54s.

17 24

30 rate -9s. losing.

From June 3d till July 12th is 39, and 39 x ‘9 ††† 35s. loss from the rate.

h. m. s. 3

Time by chronometer, July 12th Chronometer slow, June 3d

Loss from rate since June 3d

Mean time at Greenwich Equation of time with contrary sign

Apparent time at Greenwich

At 7h. 16m. P. M. July 12th, the sun’s polar distance 68►► 4′ 36″.

Alt. … 29►► 34′ 49″

Lat. … 20 3 0 sect. . -O2715Z

Polar dist. ,68 4 36 cosect. -032599

7

1 17

25 24

Obs. alt. 0 . Dip …

Refr. par…

Semid… True alt…

29

25 4

0 24

7

18

49 35

29

20

1

36 33

7

19 5

24 15

29

19 15

3 46

7

14

9

29

34

49

2) 117 42 25

58 51 12 29 16 23

32 35 47 3

Apparent time at place of observation 4 20 46 16 Ditto Greenwich . 7 14 9

cosin. . 9-713685 sine 9-689284

2) 19-462720 , 9-731360

Longitude in time

2 53 23 W. ††† 43†† 20′ 45″ W.

To find the longitude by lunar observation, that is by the distance of the moon from the sun or a star, with the altitudes of both objects ; the latitude of the place of observation being known, as well as the time and longitude by account.

With the time and the longitude by account, find the Greenwich time by account, and for that time take the moon's semidiameter and horizontal parallax from the Nautical Almanac, and to the semidiameter apply the augmentation corresponding to the altitude.

Correct the altitudes for semidiameter and dip, and call the results the apparent altitudes. Correct them further for the parallax and refraction, and the results will be the true altitudes.

If the sun is one of the objects observed, the distance observed will be that of the nearest limb; therefore, if the sum of the semidiameters be added to it, the apparent distance of the centres, as seen at the surface of the earth, will be obtained. If the observed distance is that of a star from the moon's nearest limb, add the moon's semidiameter to the observed distance ; if it is from the farther or most remote limb, subtract the moon's semidiameter from the observed distance, for the distance of the star from the moon's centre as seen at the surface of the earth.

From the altitudes and apparent central distance of the objects compute what the distance would have been if the observer had been at the centre. There are many methods by which this computation may be made. We give the following from the formula of Banda. See LONGITUDE in this Encyclopaedia.

Place under each other, in order, the apparent distance, and the apparent altitudes of the objects, half the sum of the three arcs, and the difference between the half sum and the apparent distance. Below place the true altitudes and half their sum.

Then add together the secants of the apparent altitudes, the cosine of half the sum of the apparent altitudes, and apparent distance, the cosine of the difference between that half sum and the apparent distance, and the cosines of the true altitudes, and from the sum of these six logarithms (rejecting twenty from the index), subtract twice the cosine of half the sum of the true altitudes, and half the remainder will be the sine of an arc. And the cosine of that arc added to the cosine of half the sum of the true altitudes (rejecting ten from the index of the sum) will be the sine of half the true distance, or that which the objects would have had if the observer had been at the centre of the earth.

With this distance enter the Nautical Almanac, pp. 8, 9, 10, or 11, of the month, and take the two distances of the moon from the object between which the true distance falls, and write them under the true distance in the order in which they stand in the Almanac. Take the difference between the middle one of these three distances and each of the others, and subtract the proportional logarithm of the greater difference from that of the less, and the remainder will be the proportional logarithm of a portion of time, which, added to the time corresponding to the first distance taken from the Almanac, will be the Greenwich time. If the true distance be found in the Nautical Almanac, the apparent time at Greenwich will be found above it.

Having now found the Greenwich time, find the time at the place of observation from the altitude of one of the objects in the latitude of the place ; the polar distance and right ascension of the object ; and the difference between that time and the Greenwich time found from the distance will be the longitude of the place in time, west when the Greenwich time is before, but east when it is behind, that at the place of observation.

Example 1.□□□ On March 27th, 1828, in latitude_35□□ 10’ N., longitude by account 31□□ 30’ W., at 10 h. 2 m. 12 s. P. M. per watch, the altitude of > was 60□□ 46’ □□□ , of Spica 25□□ 45′ 30″ -+- ; distance of 5)e from > ‘s farthest limb 54□□ 7′ 40″, height

of the eye sixteen feet ; required the longitude ?

Time by watch Longitude by acct.

h. m. s.

.10 2 12 . 2 6

>‘ssemid. 14 57)‘shor. par. 54 45 Aug… 13

Greenwich time by acct. 12 8 12

15 10

Obsd. alt. > 60►► 46′ 0″ * ‘s obsd. alt. 25►► 45′ 30″ hor. par.
prop. log. -5169

Semid.

Dip. .

15 10 Dep. .

> ‘s true alt. 60 53 22

3 56 > ‘s app. alt. sat.

60 30 50 App. alt. 3 56 Refr. .

> ‘s app. alt. 60 26 54 True alt. Cor. … 26 28

25 41 34 27* 0” prop. log. -8239 1 58 32 refr.

25 39 36 26 28 cor. > ‘s alt

Obsd. dist.) ‘s f. 1.) !s semid… .

54 7′ 40″

15 10

Apparent central dist. 53 52 30

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) ‘s app. alt.

. . 60 26’ 54

sect. 10-306969 sect. 10-045211

cos. 9-533885 cos. 9-982552 cos. 9-687086 cos. 9-954918

cos. 9862187 cos. 9-794818

sfe’s ditto . .

. . 25 41 34

App. dist. Half sura .

… 53 52 30

2) 140 0 58

… 70 0 29

Half sum ††† app. > ‘s true alt. . s(e ‘s ditto . .

dist. .16 7 59

… 60 53 22 … 25 39 26

2) 86 32 48

39-510615

2 cos. 19-724374

… 43 16 24

51†† 25′ 47″

True distance . .

True dist… . 53†† 59’ IX 55 22 Per Naut. Aim. dist. at midnight 53 51

Time past IX hours Greenwich time . .

2) 19-786241

sin. 9-893120

26►► 59′ 49″

2

sin. 9-657005

Prop. log. 3358 ditto . 2955

ditto . 403

. 53 59 38

38”

43 Diff. 1 23 5

34 1 31 9

h. in. s.

. . 2 44 2 9

. . 11 44 2

For this time the sun’s right ascension is Oh. 26 m. 29s., the star’s right ascension 13li. 16 ra-ils., and polar distance 100►► 15′ 49″.

* ‘s true altitude . . 25 39’ 36

Latitude . . ??? . . 35 10 0 * ‘s polar distance 100 15 49

sect. 10-087023 cosect. 10-007005

2) 161 5 25

80 32 55 43

42 6

cosm. sine.

24

14

20

8

>|c’s mer. dist…

3

13

55

*‘sR. A

13

16

11

Sidl. time ….

10

2

16

0’s R. A

0

26

29

App. time at place . Greenwich time . .

9 11

35

44

47

2

9.215565 9-917127

2) 19-226720 9-613360

Long in time W.

8 15 = 32►► 3′ 45″

Example 2.►►► On August 5th, 1828, in latitude 20►► 3’ N., longitude by account 20►► E., at 7h. Om. 20s. A. M. by watch, the altitude of (7)_was 19►► 20’ + of > , 77►► 37’ -f , distance of nearest limbs 59►► 23′ 41″, height of the eye eighteen feet; required the true longitude?

h. in. s. , ►►►

19 0 20 By watch, August 4th. >‘ssemid. . 15 0 par… 55 0 1 20 0 Long, by acct. E. Aug. … 15

17 40 20 Greenwich time by acct.

15 15

48

538

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Obsd. alt. ►► 19►► 20′ 0″ Dip… 4 11

77⁇ 37′ 0″ Obsd. dist. n. 1’s. 59⁇ 27 41” 4 11 Q’s semid… 15 48

19

15 49

77 32 49

9 s semia.

15 15

Semid…

15 48

15 15

App. cent. dist. 59 54 44

g’sapp. alt. 19 >r. …

31 37 2 32

> ‘s app. alt.

77 48 4 11 25

> ‘s par. prop. log.

> ‘s app. alt. sect.

to s true alt. 19

2Q *i

> ‘s true alt.

77 59 29

11′ 38″ prop. log. 1-1899 Refr. 13

⁇‘s app. alt.

19⁇ 31 37”

> ‘s ditto 77 48 4

App. dist 59 54 44

2) 157 14 25

11 25 cor. >‘s alt.

sect. 10-025725 sect. 10-675088

. 78

37

12

cos.

9-295161

Half sum cfl app. dist. ►►‘s true alt… > ‘s ditto … .

. 18 . 19 . 77

42 29

59

28 5 29

COS. COS. COS.

9-976427 9-974388 9-318187

2)97

28

34

39-264976

Half sum true alt. .

. 48

44

17 2

COS.

19-638434

COS. 9-819217

40

34 55”

2)

sin. 30

19-626542 9-813271

3′ 24″ 2

cos. 9‘88049 sin. 9-609713

True dist.

XV …

Per Naut. Aim. dist. at XVIII.

60 6 48 true dist 60 6′ 48″ 61 21 47 Diff. 1 14’ 59* Prop. log. 3803

59 57 37

24 10 ditto ditto

h. m. s.

2 40 21 15

App. time at Greenwich 17 40 21

The sun’s polar distance at this time is 72►► 59′ 15″. Q’s true altitude . . 19 29 5

Latitude 20 3 0 sect. 10-027152

►►‘s polar distance .72 59 15 cosect. 10-019433

3301 502

2)112 31

20

56 15

40

cosin.

9-744613

36 46

35

sin.

9-777202

2) 19-568400

37[illegible] 28′ 28″

8

9-784200

<T)‘s mer. dist.

Long, in time E.

4 24

59 48

19 012 app. time at place of observation. 17 40 21 ditto [illegible] at Greenwich.

1 19 51 r[illegible] 19[illegible] 57’ 45*.

NAVIGATION.

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It may frequently happen that the objects are too near the meridian to deduce the true time at the place of observation from either of the altitudes with required exactness; or, though the altitudes may be exact enough to use in clearing the distance, they may not be sufficiently so for deducing the time from them. In either case the error of the watch must be found from some other observation, and this error, being applied to the time at which the lunar distance is taken, will give the time at the meridian at which the observation for the error of the watch was taken, arid the longitude thence deduced will be the longitude not of the place at which the distance is observed, but of that for and at which the error of the watch was found. In this manner may the results of a great many lunar observations be all referred to one place, and the situation of the ship at that time determined with a certainty to which the result of one observation can have no claim. The situation of the ship being thus determined by lunars, her longitude may be kept by the chronometer, till another opportunity is afforded to determine her place with precision by another series of lunars.

The latitude used in computing the time is understood to be obtained from the course and distance run since the last observation for the latitude. An error of a few degrees in the longitude by account, or of half an hour in the time by account can be of very little importance, as the Greenwich time by account, which they are used in finding, is only employed in taking out the semidiameter and horizontal parallax of the moon from the Nautical Almanac, and these vary in general but a few seconds in twelve hours ; the parallax sometimes twenty-four seconds; and this is about its maximum variation in twelve hours.

If the time is not computed from either of the altitudes taken with the distances, the time of observation by a watch must be carefully noted, and the error of that watch found from some other observation ; but, if the time is computed from one of the altitudes used in the lunar, no great care is required in noting the time.

When speaking of altitudes and distances, it must always be understood that the means of several altitudes and distances are meant, when it is possible to obtain them.

An observer may himself take both the altitudes and distances, first taking an altitude of each ob-ject, then a series of distances, and again the altitude of each object, carefully noting the times, and then finding by proportion what the altitudes must have been at the time of the mean distance.

It may however frequently happen that the distances may be observed when from darkness or fog the horizon cannot be seen, and consequently the altitudes cannot be obtained. The altitudes must then be computed, and the method of computing them is shown in the following problem.

The latitude of a place and the time being known, and the longitude by account, to compute the altitude of any known celestial object.

If the object be the sun, the apparent time is the meridian distance, if less than twelve hours, but if it is more than twelve hours its compliment to twenty-four hour* is the meridian distance.

For any other celestial object, to the apparent time add the sun's right ascension, reduced to the given instant of Greenwich time, and from the sum subtract the object's right ascension, and the remainder will be the meridian distance of the object. If it exceed twelve hours take its complement to twenty-four hours as the meridian distance.

With the latitude of the place, the polar distance of the object, and its meridian distance in degrees, proceed to compute the altitude as follows : ###

Add together the cosine of the meridian distance and the cotangent of the latitude, and the sum rejecting ten from the index will be the tangent of arc first.

If the meridian distance is greater than 90## take the sum of arc first and the polar distance, otherwise their difference, for arc second.

Add together the secant of arc first, the cosine of arc second, and the sine of the latitude, and the sum rejecting the tens from the index will be the sine of the true altitude.

If the apparent altitude is required, take the correction corresponding to the true altitude, and apply it with a contrary sign to the true latitude, and the result will be the approximate apparent altitude. From this approximate apparent altitude take out the correction, and, applying it with a contrary sign to the computed true altitude, the corrected apparent altitude will be obtained.

In fig. 9, plate II., if A, S, and r, represent the places of the first point of Aries the sun and the star respectively, P the pole, and M the meridian of the plane; then LLM the apparent time is the sun's

meridian distance, if it exceed twenty-four hours, the time deducted from twenty-four hours leaves the meridian distance on the other side of P M. In the case of a star the sun's right ascension APS, added to the apparent time S P M, gives A P M the siderial time; and from APM, the star's right ascension APj being taken, the remainder jrPM is the star's meridian distance. Let xPM, in fig. 8, plate II., be represented by APz, fig. 15, plato II., z being the zenith, AB the altitude, and AP the polar distance of the object A. Now

tan. P 2 ††† cos. P' cot. lat. cos. P tan. PCrz- ††† = ††† †††r- †††

rad. it

whence PC is arc first. When P is acute the difference of P C and PA is CA arc second, otherwise their sura is CA; and cos. PC: cos. AC :: or fz (or sin. lat.; cos. As), or sin. A B the altitude ; whence sin. A B rr

cos. AC ††† sin. lat. sect. PC ††† cos. AC sin. lat.

cos. PC

rad. 2.

Example 1. ††† What are the true and apparent ;iltitudes of the sun October 3d, 1828, at 3h. 4m. 12s. mean time, in lat. 40†† 12' N., long, by account 18†† W.

h. 'm. s.

Mean time at place . 3 412 Equa. time with contrary sign +11 4

h. m. s.

Equa. time ‘ 11 1 sub -f-18s.

Correc. for given time 3

App. time at place Long, in time W.

3 15 16 zz 48⬚⬚ 49’ True equa. .

1 12 0

⬚⬚‘s declin.

4 27 16 Correction

11 4

4⬚⬚ 3′ 7″ S. + ‘23′ 13″

4 18

Mer. dist. Lat.

Arc I. Polar dist.

Arc II.

94 7 25

48►► 49’ cos. 9-818536 40 12 cot. 10-073110 sin. 9-809868

37 55 tan. 9‘891646 sect. 10-102975

24 7

56 12

cos 9-745306

True alt. 27►► 4’ 0’ sin. 9-658149 Correction with contrary sign +1 43

App. alt. 27 5 43

Example 2.►►► On March 9th, 1828, in lat. 36►► 27’ N., long. 35►► W., at 7h. 2m. 10s. P.M., mean lime, required the true and apparent altitudes of Procyon ?

h. m. s.

The sun’s R. A. at 9h. llm. 32s. is 23h. 21’ 7s., the #‘s R. A. 7h.

Mean time at place. . 7 2 10

Equa. time with contrary sign 10 38

App. time at place . . 6 51 32

Long, in time, W… 2 20 0

App. time at Greenwich . 9 11 32 h. m. s.

6 51 32 app. time

23 21 7 Q’s R. A.

6 12 39

7 30 19 #‘s R.A.

30m 19s. and polar dist. 84►► 21’.

* mer. dist. 1 17 40 ►►► 19►► 25’ cos. 9-974570

Lat. . 36 27 cot. 10-131584 sin. 9-773875

Arc I.

Arc II.

True alt. Refr. .

51►► 56’

84 21

32 25

tan. 10-106154 sect. 10-210012 cos. 9-926431

App. alt

In computing altitudes it is absolutely necessary that the apparent time for the meridian of the place of observation should be known ; therefore, when the error of the watch is found for some other meridian, the difference of longitude made from that meridian to that

of the place of observation must be applied to the time shown by the watch, adding it if east, but subtracting it if west, to obtain the time at the place of observation. Let t ►►► the time shown by the watch, c its error as found by observation, I' the difference of longitude made subsequently, and T the true time. Then T ►►► t ►► e ►► f, I' being reduced to time, and e + when the watch is slow and ►►► when fast, and /' -J-when the difference of longitude is east, and ►►► when west.

54►► 25′ 0″

41

41

sin. 9-910318

54 25

Example. ►►► On May 4th, at 3 P. M., by observation I found my watch 3m. 10s. fast, after sailing westerly, and making thirty-five miles difference of longitude, I wanted at 9h. 6m. 10s. by the watch to compute the altitude of a star, what was the true time at the place of observation ?

h. m. s.

Time by watch … . 9 6 10 Error fast at 3 P. M. . 5p 310

Time at the meridian where error

was found … . 930 Long, made since, W… 2 20

Time at place of calculation . 9 0 40

Tf the error was in mean time, this must be when on the meridian, which being 1J point reduced to apparent t'me by applying the equa- to the left of N., the variation is 1} point east.

ion of time with a contrary sign.

The variation of the compass may also be

Tofiiul the variation of the compass. ••• If the found by the amplitudes of celestial objects, bearing of any object by the compass be com-But, as from the effect of refraction they appear

pared with its known bearing, the variation or deviation of the points of the compass from their corresponding points in the horizon becomes of course immediately known; the difference of the true and observed bearing being the variation.

Now when an object is on the meridian its *rue bearing is either due north or due south ; hence the deviation of an object from the meridian as observed by the compass, when the ob-ject is known to be on the meridian, is the variation of the compass ; west when the object bears to the right ; and east when it bears to the left of the meridian.

Again, the middle time between equal altitudes of a celestial object being the time of its being on the meridian, the middle point between those on which it bears when it has equal altitudes is its bearing when on the meridian ; hence if this middle point be to the right of the meridian the variation is west ; if to the left the variation is east.

Example 1. ••• The sun at noon was observed to bear S. by W. J

VV'., what was the variation ?

S. by W. J W. is 1J point to the right of S. therefore the variation is 1J point VV.

Example 2. ††† The sun, when lie had equal altitudes on the same day, bore N.N. E. and N.W. by VV. ; what was the variation ?

The middle point between N. N. E. and N.W. by VV. is N. by W. J W., the bearing of the sun

Example. If on Oct. llth, 1828, in lat. 50†† 46' N., long*. 17†† VV., the sun rise E. 20†† S. by compass at 6h. 32m. A. M., required the variation ?

h. m.

Time Oct. llth 18 32 Q's declination at this time 7†† 3' S. sin. 9-088970

1 8 Lat. 5046 sect. 10-198953

Fine amp. E. 11 1 1 S. †††††††

Greenw. time 19 40 Obs. do. E. 20 0 S. sin. 9-287923

in the horizon when they are about 33' below it, the centre of the sun, or a star, ought to be about 33' + VV. dip above the horizon, when their amplitude is observed to compare with their true computed amplitude to find the variation. Or the lower limb of the sun ought to be about 17' -|- the dip above the horizon.

To compute the true amplitude, add together the secant of the latitude, and the sine of the object's declination, and the sum rejecting ten from the index will be the sum of the true amplitude, east when the object is rising, and west when setting ; north when the declination is north, and south when it is south. Then if the true and observed amplitude, be both north or both south, their difference, otherwise their sum, is the variation ; westerly when the true amplitude is to the left of the observed, and easterly when the true altitude is to the right of the observed.

Let P, fig. 16, plate II., be the pole, A the east or west points of the horizon, C B or C' B, the declination of the object at rising or setting,

then A C or A C’ is the amplitude, B C or B’C the declination, and BAG or B’AC’ the colatitude ; and rad. sin. B C := sin. A C ××× sin. B A C,

rsin. BC r . sin. BC whence sm. A C =

sect. lat. sin. rleclin rad.

sin. B A C cos. lat.

Long.

variation

To compute the true azimuth oj any celestial object from its altitude, polar distance, and the latitude of the place of observation.

Add together the altitude, latitude, and polar distance, and take the difference between half the sum and the polar distance. Then add together the secant of the altitude, the secant of the latitude, rejecting ten from the index of each, the cosine of the half sum, and the cosine of the remainder, and half the sum of these four loga-

8 49, VV. the true bearing being to the left of the observed.

rithms will be the sine of half the azimuth, to be reckoned from the north in south latitude, and from the south in north latitude, eastward when the latitude is increasing, and westward when it is decreasing.

Then, when the true and observed azimuths are both east or both west, their difference is the variation, otherwise their sum is the variation, westward when the true is to the left, and east_ ward when it is to the right of the observed.

For, adopting the notation employed in investigating the rule for computing the meridian distance of a celestial object, we have (fig. 10, plate II.)

a +

A2P

cos. ??? - ~~ sin.

2

AZC

2 AZC’

2

“❖❖❖ 2

rud. 2

a -- 1 + p u + / + p

p * ❖❖cct / ‘ sect. ft.

❖❖❖❖❖ 2 :os-o

or sin.

rad. 2

Example. On Feb. 16th, 1828, in lat. 30❖❖ 14’ N., long, by account 31❖❖ VV. at 4h. 30m. P.M. the alt. of ❖❖ was 12❖❖ 36’ ❖❖❖ , bearing S. VV. } VV. per compass, height of the eye fifteen feet, required

the variation ?

542

NAVIGATION.

h. m.

Ship time 4 30 Long 2 4 W.

Greerm. time 6 34

Obser. alt. 0. 12►► 36’ Dip 3 56

0 dedin. 12►► 28’ S., polar direct. 102►► 28’

Alt. 12►► 44’ sect. -010814

Lat. 30 14 sect. -063495

Polar dist. 102 28

2)145 26

Correction

12 32 4

72 43 cos. 9-472898 29 45 cos. 9-938619

12 28 0

Semidiameter 16 13

2)1 9-48.58-26

True altitude 12 44 13

33►► 35’ sin. 9-742013

2

Trueaug S. 67 10 W.

Obs. do. S. W. J W. ►►► S. 50 37 W.

Variation

From the observed altitudes and the distance of the sun and moon, and the compass bearing of ei-ther object, to find the latitude, longitude, and variation of the compass.

With the observed distance enter the Nautical Almanac for the time of the month in which the observation is made, and take by inspection the day and hour of Greenwich time, corresponding most nearly with that distance. To that time take the moon's semidiameter and horizontal parallax, and, clearing the distance, find the Greenwich time from it. If this time differ much from that before taken out by inspection, take out the moon's semidiameter and parallax again, and, again clearing the distance, find from it the true Greenwich time. For this time take the polar distance of both objects, arid proceed with the computation thus : ###

Let M (fig. 17, plate II) be the true place of the moon ; S that of the sun ; M P, S P, their po-lar distances; and M Z, S Z, their true zenith distances; and M S their true distance. Then in the triangles P M S, Z M S, all the sides in each

Obs. alt. > Aug. semid.

Dip 1 's app. alt.

> 's irue alt.

h. m. s. 58 40 0 >

15 12 Semid.

16 33 W. or nearly 1 J W.

are given to find the angles P M S, Z M S, and thp difference of those angles is the angle Z M P ; and in the triangle Z M P are given Z M, M P, and the included angle Z M P, to find Z P, the colatitude. Hence the time at the place of observation, and the true azimuth of either object,

may be found ; and the time compared with the Greenwich time, previously found from the distance, will give the longitude; and the true azimuth compared with the observed one will give the variation of the compass.

Example. ††† On September 2d, in the morning, the altitude of 0'was 15†† 45' + of > 58†† 40' ††† , distance of their nearest limbs 77†† 0′ 40″, lat. by account 48†† N., height of the eye twelve feet, bearing of the sun S. E. †† E., required the latitude, longitude, and variation of the compass ?

By inspection in the Nautical Almanac it is readily seen that the Greenwich time of this observation must have been about 19h. of September 1st. To this time the moon's semidiameter is 15′ 0″, and hor. par. 55' 2*

h. m. s.

15 45 0 > app. alt. sect. . -2865

15 53 Hor. par. prop. log. . '5146

58 55 12

3 25 Dip

58 51 47 0 app. alt.

27 53

16 0 53 Prop. log.

3 25 28' 27'

34 refr.

15 57 28

3 10 27 53 corr.

h. m. s. 59 19 40 0 true alt. . 15 54 18 Obs. dist. n. Is. 77 0 40 ,

Zenith dist. MZ 30 40 20 Zenith dist. S Z 74 5 42

Semidiameters .

App. centl. dist. 77 31 45

> ‘s app. aU… 58 51’ 47’ sect. -286438 ‘s ditto … 15 57 28 sect. -017067 App. dist… 77 31 45

2) 152 21 0

Ha’.f sum … 76 10 30 cos. 9-37832C

Half sura c app. dist. 1 21 15 cos. 9‘999878

> s true alt… 59 19 40 cos. 9-707677 ‘s ditto . . 15 54 18 cos. 9-983047

2)75 13 58 39-372427

37 36 59,2 cos. 19-797578 cos. 9-898789

2)19-574849

37 48 11 sin. 9-787424 cos. 9-897964

38►►44‘45i’ sin. 9-796483

2

True dist. 77 30 31

True dist 77►► 30’ 31’

Per Naut. Aim. dist. at XVIII. 78 1 10 Jiff. 0►► 30’ 39’ prop. log. -7688

XXI. . 76 37 18 1 23 52 3317

li. m. s. ►►► ►►►

1 5 48 prop. log. -4371

18 0 0

App. time at Greenwich 19 5 48

For this Greenwich time the moon’s polar To find the angle ZMS.

distance PM is 71►► 28′ 31″, and the sun’s S P = ZM 30►► 40’ 20’ cosect -292323

82►► 4’ 18’. Then to find the angle P M S. MS 77 30 31 cosect -010404

PM 71►► 28’ 31’ cosect -023106 ZS 74 5 42

MS 77 30 31 cosect 010404

PS 82 4 18 2) 182 16 33

2)231 3 20 91 8 16 sin. 9-999915

17 2 34 sin. 9‘466996 115 31 40 sin. 9-955388

33 27 22 sin. 9-741386 2)19-769636

2) 19-730284 39 54 40 cos. 9-884818

42 51 22 cos. 9-865142

2 ZMS 79 49 20

►►► PMS85 42 44

PMS 85 42 44

ZMP 5 53 24

Then in the triangle ZMP we have ZM = 30►► 40’ 20’, MP 71►► 28’ 31’, and angle ZMP 5►► 53’ 24% to find Z P. From Z on M P let P X be a perpendicular

Had 10-000000 cos. MX 30►► 32’ 21’ 9-935145

: tan. MZ 30►► 40′ 20″ 9-773127 : cos. P X 40 56 10 9-878201

:: cos. ZMP 5 53 24 9-997701 : : cos. M Z 30 40 20 9-934549

: MX . 30 32 21 tan. 9770828 19-812750

MP . . 71 23 31

PM 41 1 35 cos-9-877605 PX . . 40 56 10 90

Lat. 48 58 25

To find ‘.he time at the place of observation.

0’s altitude . 15►► 54’ 18

Lat… . 48 58 25 sect.

0\s polar dist. .82 4 18 cosect

2) 146 57 1

73 28 30 cos.

57 34 12 sin.

►►►182827 ►►►004172

9-453982 9-926367

2) 19-567348

37 25 18 sin. 9-783674

8

0 mer. dist.

. 4h. 59m. 22s.

24

App. time at place 19 Do. at Greenwich 19

38 48

Long, in time, W. 5 10 = 1►► 17*’ W.

To find the sun’s true azimuth.

0’s alt. . 15►► 54’ 18* sect. -016953

Lat… 48 58 25 sect. -182827

0 polar dist. 82 418

2)146 57 1

73 28 30 cos. 9-453981

8 35 48 cos. 9-995093

2) 19-648854

41 52 17 sin. 9-824427

2

0’s true azimuth . S. 83 44 34 E. Obsd. az. S. E. f E., or S. 53 26 15 E

Variation

30 18 19 W., or nearly 2| points W.

ON NAUTICAL INSTRUMENTS FOR CELESTIAL OBSERVATIONS.

The instruments used by seamen for celestial observations are, the quadrant, the sectant, and the reflecting circle, which are all essentially the same instrument, and depend on the following general principles, *viz.* if an object be seen by reflection from two mirrors, the angular distance of the object from its reflected image is double the inclination of the mirrors.

For let A B, C D (fig. 18, plate II.), be two mirrors, whose planes produced meet in I. Let S F be a ray of light from an object S, reflected from the mirror A B, in F G, to the mirror C D, and again from C D, in D E, meeting S F produced in E. Then to an eye at E the angle S E G, or S E S', would be the angular distance of S from its image S', as seen in the direction E G S', after reflection from the two mirrors. Now from the principles of optics, the angles SKA and G F B are equal ; and by geometry S F A and B F E are equal ; hence F I bisects the anele G F E. Again F G being produced to H, by the principles of optics, the angles FG C and E G 1 are equal, and by geometry F G C and II G I are equal ; hence H G E, the outward angle of the triangle G F E, is bisected by G I,

and consequently by geometry the angle I i half the angle E.

It evidently follows, from what has just been demonstrated, that the plane of a distant object, as seen by reflection from two parallel mirrors, will be the same as that of the object itself; and consequently, if the image of a distant object as seen by reflection from two mirrors coincide with the object, we are certain that the mirrors are parallel to each other.

If C D' be a mirror perpendicular to C D, then an eye at S' would see the image of S in th►► direction of S' G E, in which case the supplement of the distance of the object from its image would be double the inclination of the mirrors ; and consequently a distant

object and its image as seen by reflection from two mirrors perpendicular to each other would appear 180►► apart, or diametrically opposite to each other.

Fig. 1, plate III., is a representation of the quadrant as it is commonly fitted up. P O is the graduated arc or limb of the instrument, A B a mirror perpendicular to the plane of the instrument, attached to the flat bar K, which revolves with it round the centre, and carries at its extremity a vernier scale for subdividing the divisions on the limb. E is a mirror also perpen-

dicular to the plane of the instrument, and having mirrors will be parallel to each other. Incline its lower part silvered, but its upper partlranspa-the instrument to the horizon with the graduated

rent ; and it is parallel to A B when the zeros of the vernier and limb coincide. G is another mirror which is perpendicular to A B, when the zeros of the vernier and limb coincide ; it has a the middle

side of the limb upwards ; and, looking as before through the right vane and horizon glass, observe whether the object and its image continue still in the same straight line : if they do, the

narrow transparent slit in the middle being the horizon glass is perpendicular to the plane of silvered both above and below the slit. II and the instrument. If the reflected image appears I are two sight vanes, which are sometimes furnished with a moveable dark glass to admit of the instrument being used in taking the sun's altitude by an artificial horizon. A B is called the index glass, E the fore horizon glass, and G the back horizon glass. I and I' are radii of the instrument, and M,N, braces or frames. R is a small pencil to write down the observations when taken. D is a series of dark glasses or

skreens which can be used singly or combined ; they are interposed between A B and E ; and when the mirror G is used the skreens are inserted in a hole made to receive them at ,r.

To make A B perpendicular to the plane of the instrument, set the index forward towards the middle of the limb as at Q ; then, looking obliquely into A B, observe whether the ima►►e of P Q, as seen by reflection in the mirror, is in the same plane with P Q itself, as seen directly by the eye. For example, in fig. 19, plate II., A B reoresents the mirror, E the eye, and P' D seen in the mirror the reflected image of P D seen by the eye ; then, if P' D and P D appear one continued plane, the mirror is perpendicular to the plane of the instrument, otherwise it is not ; if the reflected image appears the lower, the mirror is inclined backward ; if the higher it inclines forward. If it inclines backward, tighten the adjusting screw in the plane C by which the mirror is fastened to .ne index ; but, if it inclines forward, slacken that screw till the image of the limb appears accurately in the same plane with the limb itself.

Next make the zero of the index accurately coincide with the zero of the limb, and the ob-ject then is to make the horizon glass E perpendicular to the plane of the instrument-and parallel to the index glass A B. The horizon glass E can be moved round by a lever attached to an axis fastened to the frame in which E is set. The axis passes through the frame of the instrument, and the lever is attached to it on the other side. Unscrew the fastening screw of the lever, and looking through the sight vane H, and the horizon glass E, at the horizon of the sea or any other distant object, see if its image as seen by the double reflection in the silvered part of the horizon glass is in the same line with the object as seen directly through the unsilvered part. Let QO, fig. 4, plate III., represent the silvered part of the horizon glass, Q P its unsilvered part, and BA the horizon seen through the unsilvered part, and A C its image as seen by reflection in the silvered part ; then, if B A and A C are in a straight line, the horizon and index glasses are parallel. But if the image of the object in the silvered part of the glass appear above or below BA, as a! r', or ac, the index glass must be moved round by means of the lever at the back of the instrument till a' c or ac correspond in direction with A C or B A produced, when the VOL. XV.

image appears

as in Ac', fig. 5 plate III., the horizon glass inclines forwards ; if as in Ac it inclines backwards. When it inclines forward slacken the screw ? j, fig. 1 plate III., before the horizon glass, and tighten m behind it correspondently till A c' corresponds with AC or B A produced. If the mirror inclines backwards slacken m and tighten n till the object and its image appear in a straight line, in whatever way the instrument may be inclined. Sometimes, instead of making the parallel adjustment of the horizon glass, the index is moved forward or backward till the object and its image appear to coincide, when, the perpendicular adjustment of the horizon glass being made, the distance of the zero of the index from the zero of the limb is called the index error of the instrument, to be added to all angles measured by and read from the instrument when the index stands to the right, and subtracted when it stands to the left of the zero of the limb.

The quadrant is commonly graduated to 20', and subdivided by means of the vernier to single minutes. The graduations are generally continued a few degrees to the right of zero, and the prolongation of the arc is called the arc of excess

To adjust the lack horizon glass G, or to make it perpendicular to A B, u-hcn tin1 zeros of the index and limb coincide, and also perpendicular to the plane of t lie instrument.

Place the zero of the index as much to till-right of zero on the limb as double the dip; then, with an open horizon on both sides, look through the back sight vane I., through the slit in the middle of G, turn the glass by means of the lever belonging to it at the limb of the instrument till the horizon seen directly appears to coincide with the opposite horizon as seen by reflection, and, inclining the instrument, adjust the glass in the samp manner as the fore horizon glass is adjusted till the horizon seen directly, and the reflected image of the opposite horizon, ap-pear to coincide, when the glass will be adjusted. In some instruments the adjusting levers are moved by means of a screw, and in the better constructed instruments the small movements of the index are also effected by a serew, called a tangent screw attached at Q ; but, before this screw will act, the index must be clamped to the limb, see fig. 2, plate III. when Q is the head of the tangent screw, and P that of the screw which clamps the index to the limb.

Fig. 2. plate III., is a representation of the sextant, in which the

graduations are carried to 120□□. The essential parts of this instrument are the same as those of the quadrant, and the me thods of adjusting its index and horizon glasses are effected in the same manner, though sometimes by different and more delicate mechanical processes. See LONGITUDE. F is a set of dark glasses to be occasionally used before the hori-

zon glass, in taking the index error of the instrument by observations on the sun, and in taking the sun's altitude from an artifical horizon. H I is a telescope screwed into a collar at G, and this collar is attached to a stem x, which, by means of a screw going perpendicularly through the plane of the instrument, can elevate or depress the telescope, and point it more or less towards the silvered or unsilvered part of the horizon glass, according as the object seen directly, or that by reflection, may be required to be more or less bright : k is the eye-piece of the telescope which is to be drawn out till distinct vision is obtained. N is a microscope revolving on a pin at M on the index, for more accurately reading the graduations on the limb, and T is the handle by which the instrument is held.

The telescope must be parallel to the plane of the instrument, and it is so placed by the following process. In the focus of the eye-piece there are four cross wires, so placed as to form a square on the centre of the field of view. Let D E, fig. 20, plate II., be the plane of the instrument, BB the telescope screwed into the collar A A, # the stem of the collar passing by means of a screw by which it can be raised or depressed through the plane of the instrument. Turn the eye-piece of the telescope till two of the wires in its focus, as a b, c d, appear parallel to D E, when the other two ef, g h, will of course be perpendicular to it. When the sun and moon are at a considerable distance from each other, bring the moon and the sun's image exactly in contact on ab, and immediately bringing them to c d, if they still appear in contact,

the telescope is adjusted; if they appear to separate at cd, tighten the screw n, and slacken m ; if they overlap at e d, slacken n and tighten m, till the contact appears perfect at both wires, when the telescope will be parallel to the plane of the instrument. Fig. 3, plate III., is a representation of Troughton's reflecting circle : C, C', C," are three indexes attached to each other, and placed as nearly as they conveniently can be placed, at equal distances on the arc C, carrying the tangent screws Q, Q', and the clamp P is used for reading the degrees, minutes, and seconds, by the others C' and C", only the minutes and seconds are read ; C' is called the leading index, A B is the index reflector, T the horizon glass, R and S the skreens as in the sextant. H is the handle by which the instrument is held when the instrument is in the position represented in the figure, H* that by which it is held when in observing the face is reversed, H'" is the handle by which it is held when the places of the indexes on the limb are read, the graduations being on the opposite face of the limb. M', M", &c., are the microscopes for more accurately reading the subdivisions on the vernier. H is the head of a screw attached to the collar into which the telescope is screwed, and it is used for raising or depressing the telescope to place it opposite that part of the horizon glass tkat may best suit for observing; 1' I" I'" is a bent handle terminating in II, having the bend sufficiently open to admit the apparatus Q P Q' passing between I' and I'".

To take the altitude, of tlie sun by the quadrant. ??? Hold the instrument vertically, and turning

down one or more of the dark glasses before the index mirror, the zeros of the index and limb being brought together, look through the right vane and horizon glass towards the sun, and a colored image of it will be seen in the silvered part of the reflector. Move the index forward till the colored image of the sun appears nearly in contact with the horizon. Then vibrate the instrument a little on each side of the vertical in a direction perpendicular to its own plane, and the image of the sun will appear to describe a circular arch as A' A" A'" fig. 6, plate III. ; move the index till the lower edge just touches the horizon, when at the lowest part of the arc, as at C ; and the place of the index on the limb will show the altitude of the lower limb of the sun.

If the altitude of the upper limb is required, it may be taken in the same way, making the image of the upper limb to coincide with the horizon, when at the lowest point of the arc which it appears to

describe, as the instrument is vibrated from right to left. The sight vane generally has two holes, one at the same distance from the plane of the instrument as the upper edge of the silvered part of the horizon glass, the other opposite the middle of the unsilvered part ; and, as the eye and the image of the ob-ject observed was presumed in the use of the instrument to be at the same distance from its plane, if the observer look through the lower hole, the image ought to be kept on QR, fig. ^*, plate III! if through the upper, midway between M P and Q R, through the whole arc of apparent vibration A' A" A"', fig. 6.

In taking the meridian altitude, the image of the sun is brought, as above, in accurate contact with the horizon, a little before 'the object attains its greatest altitude, and kept by successively and slowly advancing the index in contact as long as the altitude increases; after which, or as soon as the image appears to dip within the horizon, the instrument is read for the meridian altitude.

The sextant is used in the same manner, either when a plain open tube, or a direct telescope, is applied in place of the astronomical or inverting telescope, which is generally used with that instrument in observing.

In taking the distance of any two celestial objects, by means of the sextant, look through the telescope towards the dimmer object, and, holding the plane of the instrument in the plane passing through the two objects and the eye of the observer, move forward the index till the image of the other object appears nearly in contact with the object seen directly by the telescope through the transparent part of the horizon glass. Then tighten the clamp screw of the index, P, fig. 2 plate III., move the index slowly by means of the screw Q, till the objects are in accurate contact. The object seen directly ought to be kept steadily in the centre of the field of view, and, by a slight motion of the wrist of that hand by which the instrument is held, the image of the object seen by reflection may be made to pass and repass the other object, till in passing they are in exact contact, when the place of the index on the limb will show the distance of the object.

'❓❓❓-/ Tt: in .

If one of the objects is the sun, and the other the moon, it will generally be necessary to put down one of the dark glasses, D. And, with the moon and a star, it will often be necessary to put down one of the lighter of the screens D, to reduce the glare of the moon's light, that the star may be distinctly enough seen when in contact with the moon's image.

The nearest limbs of the sun and moon are always brought in contact, and the enlightened or round limb of the moon is always brought in contact with a star, and, by applying the known semidiameters, the central distance of the ob-ject is obtained.

It is much more easy to observe with the face of the instrument upwards than downwards, though this latter position, in the method of observing detailed above (that which is almost universally practised), must necessarily be assumed when the dimmer object is to the right. But the writer of this article in such circumstances frequently puts one or more of the dark glasses, F, before the horizon glass, and, removing those at D from before the index glass, looks directly at the brighter object, and takes the dimmer one by reflection. In this case, however, it is necessary to bring the telescope near the plane of the instrument by means of the screw attached to X, the stem of the collar G, that a considerable portion of the object glass of the telescope may be opposite the silvered part of the horizon glass.

In taking distances with the reflecting circle, hold the instrument by the handle H, fig. 3, plate III ; and looking through the telescope and the horizon glass T at the dimmer object, move forward the index Q P Q' till the image of the brighter one, as seen by reflection from A B, the index glass, appear in contact with the dimmer one seen directly, and, clamping the screw Z, make the contact perfect by means of either of the screws Q, Q'. Then, taking the instrument by the handle H'", turn the graduated side of the instrument upwards, and read the

degrees, minutes, &c., at the vernier attached to the index QP Q', but the minutes, &c., only at the vernier's attached to C', C". Next take the instrument by the handle H*, and, reversing it, point the telescope again towards the dimmer object, and moving forward the leading index Q P Q', make the contact perfect, and read the verniers as before. Then the sixth part of the sum of the readings will be the distance independent of index error, which, when the instrument is used in this manner, has no existence, as each of the indexes passes over twice the arch to be measured, the leading one to the right and left of zero, and the others in equal quantity on different parts of the arch.

The microscopes M', M", &c., are brought in reading round to the verniers of the indexes to which they are attached.

In taking altitudes with a sextant or circle, by an artificial horizon, the telescope is pointed to the image of the object as reflected from the surface of a fluid, or a polished plane set horizontally by means of levels ; and the image of the object as reflected from the index glass to the horizon glass, and hence to the eye through the telescope, is brought in apparent contact with the image of the object as seen by reflection from the horizontal plane ; and the distance of these two images is double the altitude of the object.

In all cases it is recommended to use the inverting or astronomical telescope. The direct telescope is in general simply an opera glass, without means of ascertaining the position of its line of collimation ; and its field of view is necessarily small, as that of all telescopes constructed on such principles must be. A very little practice will render the use of the inverting telescope easy.

We have now only to describe the method of adjusting the back horizon glass of the quadrant G, fig. 1, plate III. To do this, place the zero of the index to the right of zero, on the limb, a quantity equal to twice the dip; then looking through the sight vane I, and the slit in the middle of G at the horizon, move the glass G by means of the lever at the back of the instrument till the opposite horizon, or that behind the observer, appear in a line with that seen directly through the transparent slit. Incline the instrument to the horizon, and, if the horizon seen directly and by reflection do not then coincide, adjust by the screws before and behind the glass, as in adjusting K, till they appear to coincide in all positions of the instrument ; then the back-horizon glass G will be perpendicular to A B when the index is at zero,

and also perpendicular to the plane of the instrument.

To take an altitude by a back observation, look through the right vane F, fig. 1 plate III., and the transparent slit in the middle of the back horizon glass G, at that part of the horizon opposite to the sun ; and, moving the index KQ, the image of the sun will appear to ascend ; make the contact perfect in the same way as in the f`re observation. The apparent upper limb of the object is its real lower limb.

The distance of any two celestial objects may be measured with a quadrant, though not with the same nicety as it may be done with a sextant; if, however, the distance is more than 90►►, it must with the quadrant be measured by a back observation, -which is done by looking at the dimmer object, and moving the index till the reflected image of the other appears to coincide with it ; when the supplement of the angle shown by the index on the limb of the instrument will be the required distance of the objects.

NAVIGATION, INLAND. See INLAND NAVIGATION.

NAVIGATION LAW. See MARITIME LAW.

NAVIGATOR'S ISLANDS, a cluster often lofty an uncertain lat. southward. The easternmost of islands in the South Pacific Ocean; some of the cluster seem to have been discovered by Rog-

which are well-peopled and remarkable for their extent and fertility. They are situated between

169►► and 172►► 30' W. long., and from 13►► 25' to the two westernmost, which are the most

2 X 2

gewein and Bauman in 1722; another of magnitude was added by Bougainville in 1768, and

siderable, were first seen by Perouse in 1787. Each of the last is more than forty miles in length. They all were visited by Edwards in 1791. Perouse mentions three more of which he heard to the southward, named Sheka, Qs-samo, and Ooera. He speaks of the inhabitants of these islands as stout and well-made men, their ordinary height being five feet nine, ten, or eleven inches. Their bodies are painted or tatooed : round their loins they wear a girdle of sea-weed, which reaches to their knees. Their hair is very long, and frequently turned up all round the head, so as to heighten, say the sim-ple navigators, the ferocity, or, as we might say, the dandyism, i. e. (so do extremes meet) the Bond Street refinement of their countenances ; ‘ which always express astonishment,’ we are told, ‘ or choler P The least dispute between them is followed by violence : and often costs the combatants their lives; they are most universally, therefore, covered with scars, the consequences of these quarrels. The manners of both male and female are disgustingly profligate. They disdained the iron tools which were offered them in exchange for produce, and use hatchets shaped like adzes, made of a very fine basaltes. The chief food is roots, hogs, and poultry : and they manufacture a good sail-cloth for their canoes ; which are also well-built and ornamented.

NAVY is ussd for the fleet or shipping of a prince or state. See MARINE. The management of the British royal navy, under the lord high admiral of Great Britain, is often entrusted to principal officers and commissioners, who hold their places by patent. The royal navy of Great Britain is now in a very flourishing state, having been diligently kept up in late reigns, as the natural strength of the kingdom. When it is complete, it is divided into three squadrons, distinguished by the colors of the flags carried by the lespective admirals belonging to the same, *viz.* red, white, and blue ; the principal commander of which bears the title of admiral : and each has under him a vice-admiral and a rear-admiral, who are likewise flag-officers.

NAVY. In our statistics of GREAT BRITAIN we have given an account of the rise and progress of this important source of our national strength and greatness. Our article SHIP-BUILD- ING will enter fully into what the French call the materiel of this part of the service. We may here notice

1. 77ie present rating of the navy. ††† To remedy the inconveniences resulting from the different scales formerly adopted in the measurement of ships, the lords of the admiralty suggested, by their memorial to the prince re-gent, the present rating, which, by his order in council, of the 25th November 1816, was ordered to be carried into effect, *i.e.* that the ships of the navy should for the future be rated as under: ††† The first rate to include all three-deckers, inasmuch as all sea going ships of that description carry 100 guns and upwards ; the second rate to include all ships of eighty guns and upwards, on two decks; the third rate to include all ships of seventy guns and upwards, and less than eighty uuns: the fourth rate to include all ships of fifty uuns ;md upwards, but less than seventy guns : tiie fifth rate to include all ships from thirty-six

to fifty guns : the sixth rate to include all ships from twenty-four to thirty-six guns : and that the complements of men be established as under:

1st Rate, 900 ††† 850 or 800 men

2nd do. 700 or 650

3d do. 650 or 600

4th do. 450 or 350

5th do. 300 or 280

6th do. 175 ††† 145 or 125.

Of sloops the complements establishpd according to their size, to consist of 135, 125, 95, or 75 men. Brigs (not sloops), cutters, schooners, and bombs, with 60 or 50 men. Thus stands tlu-rating and manning of the navy at present ; but another war, or a new administration of the affairs of the navy, will, in all human probability, make new regulations.

2. The personel of the navy, properly so called. ††† This consists of the commissioned officers; i. e. the flag-officers, post-captains, commanders, and lieutenants; the warrant-officers, petty officers, and seamen.

Flag-officers are divided into those of the three squadrons, red, white, and blue, each of which has three ranks of flag-officers ; as admiral of

the red, white, or blue; vice-admiral of the red, white, or blue ; rear-admiral of the red, white, or blue ; the admiral wearing his color at the main, the vice-admiral at the fore, and the rear-admiral at the mizen-mast-head. There is also an admiral of the fleet, who, if in command, would carry the union flag at the main. There are besides superannuated rear-admirals, enjoying the rank and pay of a rear-admiral, but incapable of rising to. a higher rank. There is also in the navy the temporary rank of commodore, generally an old post-captain, and distinguished by wearing a broad pendant. He ranks next to the junior rear-admiral, and above all post-cap- tains, except where the captain of the fleet shall be a post-captain, who, in that situation, takes rank next to the junior rear-admiral.

The warrant officers are the master, second master, gunner, boatswain, carpenter. There are other warrant officers, who, though non-combatants, constitute a part of the establishment of the larger classes of ships of war. These are, the chaplain, surgeon, surgeon's assistant, purser. To which may be added, as part of the staff of a fleet or squadron, secretary to the admiral or commander-in-chief, and physician of the fleet. The petty officers are very numerous, the principal of whom are master's mates and midshipmen. Their names or ratings will be seen in the following table of the establishment of the ratings and pay in the different classes of ships of war.

The officers of the navy thus rank with those of the army : ###

JJavy. Army.

Admiral of the fleet, Field-marshal. Admiral, General.

Vice-admiral, Lieutenant-general.

Rear-admiral, Major-general.

Commodore, Brigadier-general. t

Post-captain of 3 years, Colonel. Post-captain under do., Lieutenant-colonel. Commander, Major.

Lieutenant,

Officers of the same rank command according to the priority of their commissions, or, having commissions of the same date, according to the order in which they stand on the list of the officers of the navy, except in the case of lieutenants of flag-ships, who take precedence according as the flag-officer shall think fit to appoint them.

Midshipmen are required to serve six years on board some of his majesty's ships, two of which years they must have been rated as midshipmen, to render them eligible to the rank and situation of lieutenant; or, if educated at the Royal Naval College, four years' service at sea qualify for a commission as lieutenant. No lieutenant can be promoted to the rank of commander, until he has been on the list of lieutenants for two years ; and no commander to the rank of post-captain until be has been on the list for one year. Post-captains become admirals in succession, according to their seniority on the list ; but, if a post-captain should not have served in the course of the preceding war, when his turn arrives he is passed over, and placed on the list of superannuated and retired captains ; as are those captains likewise who have accepted of commis-sionerships or other civil employments, provided they retain those employments when they come within the limits of a promotion to the rank of rear-admiral.

No person can be appointed to serve as master of one of his majesty's ships who shall not have served as second master ; and no person can be appointed as second master, until he has passed such examination as may from time to time be directed. No person can be appointed gunner or boatswain, unless he shall have served one year as a petty officer on board one or more of his majesty's ships, and produce certificates of his good conduct, and undergo the necessary examination. No person can be appointed carpenter, unless he shall have served an apprenticeship to a shipwright, and been six months a carpenter's mate on board one or more of his majesty's ships. No person can be appointed purser, unless he shall have been rated and discharged the duties of a captain's clerk for two complete years, one year as captain's clerk, and been employed in the office of the secretary to a flag-officer for one other year, produce good certificates, and find such security for the honest and faithful discharge of his duty as shall bo required. No person can be appointed chaplain to one of his majesty's ships, until he has received priest's orders; but may be appointed to act while in deacon's orders. No person can be appointed surgeon to one of his majesty's ships, until, by long and meritorious

services, he has discharged the duties of assistant surgeon ; and all persons applying for the situation of assistant surgeon must undergo an examination touching their qualifications before the medical members of the victualling board.

All flag-officers, commanders-in-chiej', are considered as responsible for the conduct of the fleet or squadron under their command ; to keep them in perfect condition for service ; to exercise them frequently in forming orders of sailing and lines of battle, and in performing all such evolutions as may occur in the presence of an enemy; to di-

rect the commanders of squadrons and divisions; to inspect into the state of each ship under their command; to see that the established rules for good order, discipline, and cleanliness, be observed ; and occasionally to enquire into these and other matters themselves. They are to correspond with the secretary of the admiralty, and report to him all their proceedings for the information of the board. If a commander-in-chief should be killed in battle, his flag is to be continued flying; intelligence to be conveyed by signal, or otherwise, to the next in command, who is immediately to repair on board, leaving his own flag (if a flag-officer) flying, and direct the operations of the fleet until the battle be ended, or the enemy out of sight.

Every flag-officer serving in a fleet, but not commanding it, is to superintend all the ships of the squadron or division placed undei his orders ; to see that their crews are properly disciplined ; that all orders are punctually attended to ; that the stores, provisions, and water, are kept as complete as circumstances will admit; that the seamen and marines are frequently exercised ; and that every precaution is taken for preserving the health of their crews ; for all which he is responsible to the commander-in-chief. When at sea, he is to take care that every ship in his division preserve her station, in whatever line or order of sailing the fleet may be formed ; and in battle he is to observe attentively the conduct of every ship near him, whether of the squadron or division under his immediate command or not ; and at the end of the battle he is to report it to the commander-iu-chief, in order that commendation or censure may be passed as the case may appear to merit ; and he is empowered to send an officer to supersede any captain who may misbehave in battle, or whose ship is evidently avoiding the engagement. If any flag-officer be killed in battle, his flag is to be kept flying, and signals to be repeated, in the same manner as if he were still alive, until the battle shall be ended ; but the death of a

flag-officer, or his being rendered incapable of attending to his duty, is to be conveyed as expeditiously as possible to the commander-in-chief.

\Yhen a captain is appointed to command a ship of war, he commissions the ship by hoisting his pendant; and if fresh out of the dock, and from the hands of the dock-yard officers, he proceeds immediately to prepare her for sea, by demanding her stores, provisions, guns, and ammunition, from the respective departments, according to her establishment. He enters suclr men as may volunteer, and be fit for the service (in time of peace), or which may be sent to him from some rendezvous for raising men, in time of war ; and he gives them the several ratings of petty officers, able-seamen, ordinary, or landsmen, as their apparent qualifications may entitle them to. If he should be appointed to succeed the 'captain of a ship already in commission, he passes a receipt to the said captain for the ship's books, papers, and stores, and becomes responsible and accountable for the whole of the remaining stores and provisions; and, to enable him to keep the ship's accounts, he is allowed a clerk of his own appointing. The duty of the

captain, with regard to the several ship's books and accounts, pay-books, entry, musters, discharges, &c., is regulated by various acts of parliament ; but the state of the internal discipline, the order, regularity, cleanliness, and the health ot tne crews, will depend mainly on himself and his officers. In all these respects, the general printed instructions for his guidance are particularly precise and minute. And, for the information of the ship's company, he is directed to cause the articles of war, and abstracts of all acts of parliament for the encouragement of seamen, and all such orders and regulations for discipline as may be established, to be hung up in some public part of the ship, to which the men may at all times have access ; he is also to direct that they be read to the ship's company, all the officers being present, once at least in every month. He is not authorised to inflict any corporal punishment on any commissioned or warrant officer, but

he may place them under arrest, and suspend any officer who shall misbehave, until an opportunity shall offer of trying such officer by a court-martial. He is enjoined to be very careful not to suffer the inferior officers, or men, to be treated with cruelty or oppression by their superiors. He alone is to order punishment to be inflicted, which he is never to do without sufficient cause, nor ever with greater severity than the offence may really deserve ; and all the officers and the whole ship's company are to be present at every punishment ; which must be inserted in the log book, and an abstract at the end of every quarter made out and sent to the admiralty.

The lieutenants by turns take the watch, and are in the absence of the captain entrusted with the command of the ship ; but this officer is to inform the captain of all occurrences that take place during his watch, as strange sails that may be in sight, signals from other ships in company, change of wind, &c. He is to see that the ship be properly steered, the log hove, and the course and distance entered on the log-board ; and, in short, he is to see that the whole of the duties of the ship are carried on with the same punctuality as if the captain himself were present; in whose absence the senior lieutenant is responsible fir every thing done on board.

The master receives orders from the captain, or lieutenants. His more immediate duties are those of stowing the ship's hold, and of attending to her sailing qualities ; of receiving and placing the provisions in the ship, so as most conveniently to come at those which may be wanted. He is to take care that the cables are properly coiled in the tiers. The keys of the spirit-room are in his custody, and he is directed to entrust them only to the master's mates. He has the charue of the store-rooms of the warrant officers, which he is ordered frequently to visit ; in short, the whole of the ship's provisions, water, fuel, and stores of every description, are under the superintendence of the master; and he is also entrusted, under the command of the captain, with the charge of navigating the ship, bringing her to anchor, ascertaining the latitude and longitude of her place at sea, surveying harbours, and making such nautical remarks and observations as may be useful and interesting to navigation in general.

The warrant officers are to receive on board from the dock-yards the various stores of their respective departments, and keep an account of the expenditure of each of them.

The gunner has in charge the ship's guns and the powder magazine : he is to see that the locks and carriages are preserved in good order, and that the powder is free from damp ; he is to examine the

musquetry and small arms, and to see that they are kept clean, and fit for service ; and in preparing for, and during battle, it is his duty to take care that all the quarters are supplied with every thing necessary for the service of the guns. He is frequently to exercise the men at the guns and to see that they perform this part of their duty with correctness, explaining and enforcing the necessity of their pointing the guns before they fire them, of sponging them well, and of close-stopping the touch-hole immediately after firing. The armorer and his mates are un-der the immediate orders of the gunner, in every thing that relates to the great guns and small arms.

The boatswain receives and examines all ropes and other parts of the rigging, the latter of which he is ordered to inspect daily, in order that any part of it, chafed or likely to give way, may be repaired without loss of time. He is always required to be on deck at such times as all hands are employed ; he is to see that the men, when called, move quickly upon deck, and when there that they perform their duty with alacrity, and without noise or confusion. The sail maker and the rope-maker are under his immediate orders.

The carpenter inspects the state of the masts and yards, and, whether in the dock-yard or on board the ship, sees that they are perfectly sound and in good order. He is to examine every part of the ship's hull, magazine, store-rooms, and cabins. Every day when at sea he is carefully to examine into the state of the masts and yards, and to report to the officer of the watch if any appear to be sprung, or in any way defective, lie is to see that the ports are secure and properly lined, and that the pumps be kept in good order, as are also the boats, ladders, and gratings. The caulker is placed under his immediate or-ders.

The purser has charge of the ship's provisions and the serving them out. Accordingly he must not only produce good certificates of his conduct while serving in the capacity of clerk, but must also find two sureties for the due discharge of his trust, who are required to give bond in a penal sum, according to the rate or class of ship to which he may be appointed. The regulations and instructions for his guidance are minutely detailed in the general printed instructions, with all the various forms established for the keeping of his accounts with the Victualling Board, to which he is immediately responsible. To assist him in the performance of his duties, he is allowed to employ the clerk, who, though engaged by the captain, who is responsible for the strict performance of the duties of all the officers un-der his orders, is, as it were, a check on the purser in many parts of his duty, as regards the slop-NAVY.

nooks, musterbooks, Sec. He has a steward also under his orders.

The midshipmen are principal petty officers, who have no specific duties assigned to them. In smaller vessels the senior ones are entrusted with the watch ; they attend parties of men sent on shore ; pass the word of command on board, and see that the orders of their superiors are carried into effect; and, in short, are exercised in all the duties of their profession, so as, after six years' service, to qualify them to be-come lieutenants.

The duties of the clerical and medical officers are too obvious to need explanation.

Every ship, according to her class, has a certain number of marines serving on board as part of her complement, which are commanded by a captain, or brevet-major, from first to fourth rates inclusive, with three or two subalterns un-der them, and an established number of non-commissioned officers ; but the party on board fifth rates, and under, is commanded by a subaltern, and in small vessels by a serjeant or corporal.

The crew of a ship of war consists of able and ordinary seamen, landsmen, boys, and marines. The landsmen, boys, and marines, are entered voluntarily ; the latter in the same manner as soldiers, by enlisting into the corps : the two former at some rendezvous, or on board particular ships. A supply of boys for the navy is also regularly sent from the asylum at Greenwich and the Ma-rine Society. Able and ordinary seamen also very commonly volunteer to serve during the war, and always in time of peace ; but the high wages given by the merchant ships in time of war hold out that encouragement which induces them to give the preference to that service.

3. The discipline, or practical government, of his majesty's navy is regulated by the act of 22 Geo. II., or what are called the Articles of War. By this act the lord high admiral or lords commissioners of the admiralty are empowered to order courts-martial for all offences mentioned therein, and committed by any person in and belonging to the fleet and in full pay ; and also to delegate the same power to the admiral commanding in chief on foreign stations, which power also may devolve on his successor in case of death or recal, provided that

no commander in chief of any fleet or squadron, or detachment thereof consisting of more than five ships, shall preside at any court-martial in foreign parts, the officer next in command being ordered to preside there-at. No court-martial can consist of more than thirteen or of fewer than five persons, to be composed of such flag-officers, captains, or commanders, then and there present, as are next in seniority to the officer who presides at the court-martial. And, when there are but three officers of the rank of post-captains, the president is to call in as many commanders under that rank as will make up five in the whole.

The code of laws consists of thirty-six articles, of which nine award the punishment of death, and eleven death or such other punishment as the court-martial shall deem the offence to deserve. Those which incur the former are, the holding illegal correspondence with an enemy ###

cowardice or neglect of duty in time of action ### not pursuing the enemy ### desertion to the ene-my### making mutinous assemblies ### striking a superior officer ### burning magazines, vessels, 8cc. not belonging to an enemy ### murder ### sodomy. The penalty of death for cowardice, or other neglect of duty in time of action (Art. 12), and of not pursuing the enemy (Art. 13), was by the 19 Geo. III. so far mitigated as to authorise the court-martial ‘ to pronounce sentence of death, or to inflict such other punishment as the nature and degree of the offence shall be found to deserve.’ The other eleven articles, which leave the punishment to the discretion of the court, are, not preparing for fight, and encouraging the men in time of action ### suppression of any letter or message sent from an enemy ### spies delivering letters, Sec., from an enemy ### relieving an ene-my### disobedience of orders in time of action ### discouraging the men on various pretences ### not taking care of and defending ships under con-voy### quarrelling with and disobeying a superior officer in the execution of his office ### wilfully neglecting the steering of ships ### sleeping on watch, and forsaking his station ### robbery. The remaining sixteen articles incur the penalty of dismissal from the service, or from the ship, degradation of rank, or such other punishment as the court may judge the nature and degree of the offence to deserve.

4. As to the mode of supplying the navy with men, the power of impressing seamen, though the most invidious, has hitherto been

found the most certain means. It has been a matter of some dispute, and submitted to not without a national reluctance ; it is now however established by the law of the land beyond question, and, from the spirit of the Constitution, the exercise of it resides in the crown. But besides this method of impressing, (which, after all, is only defensible from absolute public necessity, to which all private considerations must give way,) other ways have from time to time been adopted, and many -of them still continue to be, that tend to the increase of seamen and manning the royal navy. Among these is the provision that every foreign seaman who during a war shall serve two years in any man-of-war, merchant-man, or privateer, is naturalised, ipso facto ; slat. 12 Geo. II. c. 3 ; and, serving three years, may be employed as a British mariner, stat. 34 Geo. III. c. 68; and, by various statutes, seamen, having served the king for a limited time, are free to use any trade or profession in any town in the kingdom without exception.

For the furnishing of mariners for the fleet an act of parliament, stat. 7 and 8 W. III. c. 21, was passed, by which it was enacted that all seamen, watermen, &c., above the age of eighteen years, and under fifty, capable of sea-service, who should register themselves voluntarily for the king's service in the royal navy, to the num-ber of 30,000, should have paid to them the yearly sum or bounty of forty shillings, besides their pay for actual service, and that whether they were in service or not : and none but such mariners, &c., as were registered, should be capable of preferment to any commission, or be warrant officers in the navy : aud such registered

persons were exempted from serving on juries, parish offices, &c. ; also from service abroad af-ter the age of fifty-five years, unless they went voluntarily : and when by age, wounds, or other accidents, they were disabled for future service at sea, they were to be admitted into Greenwich Hospital, and there provided for during life: and the widows of such seamen as should be slain or drowned, not of ability to provide for themselves, should be likewise admitted into the hospital, and their children educated, &c. But if any registered seaman

should withdraw himself from the king's service, in his ships or navy ; or if any such mariner relinquished the service, without consent of the commissioners of the admiralty, lie was for ever to lose the benefit of the act, and be compelled to serve in his majesty's fleet six months without pay. This registry, however, being by experience proved to be ineffectual, as well as oppressive, was abolished ; and the above statute repealed, by stat. 9 Anne, c. 21, sect. 64. The 4 Anne, c. 19, sact. 18, provides that watermen plying on the Thames between Gravesend and Windsor, on notice given by the commissioners of the admiralty to the company of watermen, are to appear before the said company, to be sent to his majesty's fleet, or, on refusal, they shall suffer one month's imprisonment, and be disabled working on the Thames for two years. The stat. 2 and 3 Anne, c. 6, that poor boys, whose parents are chargeable to the parish, may, by churchwardens and overseers of the poor, with consent of two justices of peace, be placed out apprentices to the sea-service until the age of twenty-one years, they being thirteen years old at the time of their placing forth : these apprentices shall be protected from being impressed for the first three years (if they are not more than eighteen years old, 4 Anne, c. 19, sect. 17), and if they are impressed afterwards the master shall be allowed their wages. And all masters and owners of ships, from thirty to fifty tons burden, are required to take one such apprentice, one more for the next fifty tons, and one more for every 100 tons above the first 100, under the penalty of ––10. Masters of apprentices placed out by the parish may, with the consent of two justices, turn over such apprentices to masters of ships.

Of the more modern statutes the following; deserve notice : ––– By stats. 35 Geo. III. c. 5, c. 9, c. 19, and c. 20; and 36 Geo. III. c. 115; a num-ber of men were raised for the navy according to a certain proportion imposed on every county and port in Great Britain. The execution of this act was entrusted to the justices of peace and magistrates of corporations, and the expense defrayed by rates made upon every parish, out of which bounties were paid to volunteers entering. To further the urgent demand for sailors the stat. 35 Geo. III. c. 34 was passed to enable magistrates to levy for his majesty's navy, in their several jurisdictions, ' all able-bodied, idle, and disorderly persons, who could not on examination prove themselves to exercise and industriously follow some lawful trade or employment, or to have some substance sufficient for their maintenance.' The execution of this act was, by a clause therein, allowed to be suspended and revived according to necessity, by his majesty's proclamation or notice from the admiralty. It is to be feared, however, that it was never enforced to the extent it ought to have been. By various acts private militia-

men, having served in the navy, were allowed to be discharged from the militia in order to re-enter into the navy, to a certain extent.

To encourage the seamen in the exercise of their duty, to ensure them their wages, to protect their persons, to provide for their families, and to secure them from impositions in relation to their prize-money and other advantages, several acts of parliament have from time to time been passed. By the first of these now in force, stat.

31 Geo. II. c. 10, encouragement is given to seamen to enter into his majesty's service voluntarily ; volunteers entering their names with any commissioned officer of the fleet, and forthwith proceeding towards their ships, on certificate thereof shall be entitled to wages from the date of the certificate, and be allowed the usual conduct money, and also be paid an advance of two months' wages, &c. And, if any volunteer is turned over to another ship, he shall receive, over and above his wages due, the like advance of two months' pay, and not serve in a lower degree than he did before. Persons entered on board ships of war are not to be taken thereout by any process of law, unless it be for a criminal mat-ter; or where the debt amounts to ––20. When seamen die on board, the commander of the ship shall, as soon as may be, make out tickets for their pay, which shall be paid to their executors, &c., without tarrying for the ship's return : and seamen's pay shall not be bargained and sold ; but tickets may. Governors and consuls in foreign parts are to provide for shipwrecked mariners at 6d. per diem each (increased by stat.

32 Geo. III. c. 33 to 9rf., and extended indefinitely, under direction of the admiralty, by 53 Geo. III. c. 85), and put them on board the first ships of war, &c., and, on sending bills and dis-bursements with vouchers to the commissioners of the navy, they shall be paid. And see also stat. 54 Geo. III. c. 126 ; 58 Geo. III. c. 38.

From 1758, the time of passing the said act, 31 Geo. II. c. 10, when Mr. Grenville so ably filled the office of first lord of the admiralty, down to Mr. Dundas's time, scarcely any parliamentary regulation appears to have been applied' to dis-bursements on account of the navy ; and these, increasing with the expense of our marine, to an amount beyond all former example, had opened a wide door to imposition on the seamen.

By the 26 Geo. III. c. 63, however, modes were prescribed for executing all wills and instruments of delegated authority ; which, by making the superior officers of our ships (and other persons above the reach of corruption), necessary witnesses to all such deeds, struck at

the root of forgery. Every sort of guard was meant to be provided by it (as far as human nature in the character of a British seaman can be guarded), to protect the thoughtless and ignorant; oral least to insure that the act of the s-.nior, thus legalised, was not done under the influence of fear, false pretences, or intoxication.

M Dundas's attention was in the next pi. ice

directed to the protection of that property which devolved upon widows and other representatives of seamen dying in the service, and leaving arrears of wages due to them. This portion of the sailor's reward seldom reached the door of his disconsolate widow and helpless children. The same class of people who had hitherto defrauded him, being no longer able from the operations of the above-mentioned act to interfere with his property while he continued in the service, now turned their designs upon intercepting that part of it which he should leave behind him in the event of his death. This was principally effected by means of wills made in their own favor, and which, under false pretences, they easily procured from the unsuspicious sailor ; and there is reason to believe that no less than one-half of the arrears due at the end of the war before mentioned was obtained by such impositions, or by entire forgeries of wills, which were not at that time directed to be attested and executed under sufficient regulations. It is true, indeed, that many of those sharpers forfeited their lives for their crimes : but many more, and particularly the most artful of them, escaped even without a prosecution.

Against these infamous practices an act of parliament was passed (32 Geo. III. c. 34), which Mr. Dundas framed with great ingenuity and promptitude. And, in a letter dated 1st August, 1792, he caused a general abstract of the several acts respecting the payment of seamen's wages to be forwarded to the respective ministers of every parish in Great Britain, and explained the general purport of the regulations contained in the last, pointing out in a particular manner that the representatives of seamen had only to address to the treasurer of the navy a plain letter, stating the ground of their pretensions ; that, upon

being found to be just, the necessary papers should immediately be sent to them from his office to be executed ; and that the money should afterwards be paid to them by the revenue officer living nearest to the place of their residence. By the above and another acl, which Mr. Dundas introduced, all those protections and privileges which had hitherto been enjoyed exclusively by the seamen were extended also to the marines, and, in the same session, the benefits arising from them were also extended to persons residing in Ireland ; to whom also the benefit of 3 Geo. III. c. 16, as to our pensioners of Greenwich Hospital, was extended. By slat. 5.”> Geo. III. c. 60 the acts 26 Geo. III. c. 63 ; and 32 Geo. III. c. 34, and also so much of any other acts in force as related to letters of attorney, and wills of petty-officers, seamen, and marines, are repealed, and new provisions enacted respecting the same, upon the like principles; but with such more effectual powers as experience had shown to be necessary : And see further on 56 Geo. III. c.

101.

It was reserved for Mr. Dundas likewise to establish a system of remittance and supply, so extensive as to convey relief into every corner of the kingdom to the scattered families of our brave defenders. Provisions were made by an act of parliament, which lie procured to be passed in 1795, 35 Geo. III. c. ‘28 (explained and en-

forced by 37 Geo. III. c. 53 ; 46 Geo. III. c. 127; 49 Geo. III. c. 108; 53 Geo. III. c. 60; 57 Geo. III. c. 20), for a regular monthly supply to be paid to the wife and each child, or to the pareut of every seaman, who was willing, upon a representation being made to him, to allow a portion of his pay to be appropriated to the support and comfort of his family during his absence. The advantages of this act, 35 Geo. III. c. 28, were, by another of a similar nature, extended to non-commissioned officers and their families. See 35 Geo. III. c. 95.

The higher classes of the service, as well as the lower, have felt the good effects of Mr. Dun-das’s measures. In the session of 1795 he obtained an act, 35 Geo. III. c.94 (amended by 57 Geo. III. c. 20), by which naval officers, who may not be in affluent circumstances, are enabled to accept commands, or to undertake other services, without pecuniary embarrassment. For this purpose the arrears which may be due to an officer from his half-pay, and three months of his full pay,

are paid him in advance, as soon as his appointment takes place. A fund is also provided for those who may wish to receive a part of their pay whilst employed upon foreign service ; and the principle of remittance is extended to every one who shall be desirous to avail himself of its advantages. In whatever part of the world an officer on service happens to be, he may now, at the expiration of three months, draw bills of exchange for his present support, or for that of his family at home; and instead of applying to his agent for advances, ruinous from the accumulation of interest, agency, and other charges (amounting to at least 16 per cent.), he may, without such intervention, receive directly into his own pocket the reward of his merit. Following him also into his retreat in the time of peace, the benefit of these regulations still attends him. There is no residence, however remote, in which either officers on half-pay, or the relations of such as have fallen in battle, or the disabled from wounds and infirmity, may choose to settle, but where they may be supported at their own doors. Such ease and security in receiving their money greatly enhances the value of the several rewards which their country bestows upon them. The half-pay of officers, all pensions from Greenwich Hospital, and all oilier naval allowances (excepting the pensions of officers* widows, which are not paid by the treasurer of the navy), are thus paid free of expen>e by the revenue officer living nearest to the place of residence of the party entitled to receive them. By 37 Gto. III. c. 53 the pay and allowances to petty officers, seamen, and marines, was increased ; and they are declared entitled, when wounded, to receive the full amount of their wages till their wounds are healed, or they are provided for in Greenwich Hospital, &c. See GREENWICH HOSPITAL. In pursuance of the same plan, for the comfort and relief of the defenders of their country, it has been provided by several acts, the last 46 Geo. III. c. 52, that letters to and from non-commissioned officers, seamen, and privates, in any departments of the army, navy, or militia, be subject only to !</.

u-iae. !iee also stats. 47 Geo. III. st. 1 c. 52 ;

51 Geo. III. c. 105, for establishing and supporting the royal naval asylum for the education of orphans of officers and men of the navy and marines. Acts are usually passed during war for regulating the payment of prize money. See 54 Geo. III. c. 93 ; 55 Geo. III. c. 160.

The pay and wages of one man in 100, of every ship of war, and value of his victuals, are applied for relieving poor widows of officers of the navy, stat. 6 Geo. II. c. 25. Able seamen, who voluntarily enter on board ships of war, shall receive ––5 besides their wages, and ordinary seamen ––3. And if any seaman, under a commission or warrant officer, who enters into the service, be killed or drowned, his widow, on certificate to the commissioners of the navy that she is such, is to have, by way of bounty, one year's wages, according to the pay for which he served. ––– Stat. 14 Geo. II. c. 38.

The observations of M. Dupin on the ' Force Navale' of England, while sufficiently imbued with the spirit of national rivalry, are yet so able and comprehensive as a whole that a pretty am-ple analysis of them (for which we are mainly indebted to the Quarterly Review), will not be uninteresting in this place.

M. Dupin, in investigating the cause of that vast superiority of the British over the French navy, in all its departments, civil and military, endeavours to account for it from the general popularity of the service, and the high encouragement given to those who enter into it. These, he thinks, may be ranked among the first of moral causes, which, operating upon others of a local or physical nature, have contributed to raise the navy of England to that high pitch of power and glory which it attained in the late revolutionary war. The local circumstances which naturally create an attachment to the seafaring life are thus described : ––– ' The metropolis of the British empire includes, within its walls, the most frequented port in the universe. It is the commerce of the sea which alone has made London the most populous and the most wealthy of the capitals of Europe ; vessels from 100 different countries wave their flags upon the Thames, in the very bosom of this immense city ; nevertheless there the British flags alone surpass in number those of so many other nations. The citizen of London is justly proud at the sight of so many fleets of merchant-ships, which daily arrive from the sea, or descend the river : these to export the products of the national industry, those to import foreign produce or treasure. He cannot contemplate this immense bustle without being convinced that the commerce and the sovereignty of the sea have created the wealth and the grandeur of his native city.'

But these results of a mercantile navy are not confined to London

alone. ††† ††† Edinburgh,' he continues, ' on the shore of the most beautiful gulf of Scotland ; Dublin, opposite to England, and on the spot most convenient for a rapid communication between London and Ireland ; Quebec, on the banks of the river St. Lawrence, the Thames of Canada ; Calcutta, on the borders of the Ganges; Halifax, on the northern coast of America ; and the city of the Cape on the

southern extremity of Africa, on that point of storms which must be doubled in order to communicate between India and Europe ††† in a word, in all parts of the world the central points of the British power participate in the benefits of the commerce of the sea; and by these benefits contribute to the splendor, the wealth, and the power of the people and of the government. In England, in Scotland, in Ireland, not only the capitals, but a multitude of cities of the first rank are also built on the sea-coasts, or on the borders of large navigable rivers ††† Bristol, Hull, and Liverpool; Dundee, Aberdeen, and Glasgow ; Belfast, Cork, and Waterford, are united by commerce with all the cities, with all the manufactories of the interior; and the interests of the maritime cities are, at the same time, the interests of the whole country. No country in the world is so well intersected with roads and canals, upon which goods and people are conveyed with extreme rapidity, from one extremity to the other of every county; there is no. one point within the three kingdoms whence one may not, in four-and-twenty hours, arrive at one or other of the seas whicn surround them.' ††† torn. ii. p. 2, 3.

To these facilities and conveniences, accustoming young people to voyages by water, M. Dupin adds the universal fashion of visiting the sea-coasts in the bathing season, by that class of society which in France, he says, is destined to retire at that period to their estates in the country. These visits to the coast give rise to numerous parties of pleasure, which venture out upon the sea ; these, with the fleets of shipping passing and repassing, all contribute to create a prejudice in favor of navigation, and to excite that passion for sea voyages which kindles in a thousand hearts ; ' elle livre a la navigatior. militaire, ou marchande, ou savante, une foulc de volontaires, qui reviennent dans leur patrie, avec des troph6es, des tresors, ou des connois-sances nouvelles : dignes conquetes de la mer !'

From these and other causes M. Dupin observes that, ' In the eyes of the people of England, the marine is the natural element of the British power, and ships are the moveable ramparts of the territory of Albion. It is not merely in the figurative language of poetry, but in the most

familiar language of conversation, that Englishmen, in speaking of their ships of war, emphatically call them ‘ our bulwarks, our wooden walls.’ ‘ ††† torn. ii. p. 4.

M. Dupin assigns another and a solid reason for the preference shown by our countrymen to the navy over the army ††† it is, that the former never can endanger the liberties of the people, while a standing army places them in jeopardy : add to this that, the promotion in the navy being gratuitous, talent and valor are sure of succeeding in that service. Another consideration is the liberal shares of prize-money to which the superior officers are entitled, and which can-not fail to inspire a well-grounded hope of the acquisition of an independent fortune. ‘ In short,’ he concludes, ‘ while admirals and post-captains enjoy all the favors of the court, fill a multitude of honorable situations near the person of the sovereign, arrive in considerable numbers at the

peerage, and represent, for several boroughs and counties, the people in the house of commons, we find only a small number of general officers and colonels who have received such marks of favor and confidence, whether from the prince or from the people.’

Here, however, M. Dupin is, as to the present time, mistaken. In the list of the house of commons there were lately thirteen admirals and captains representing the navy, while there are no fewer than five-and-forty generals and colonels of the army ; and, if M. Dupin had talcen the trouble to consult the Red Book at the period of his own work’s appearing, he would have found about a dozen general officers as lords and grooms of the bedchamber, to one solitary admiral and a post-captain of the navy ! He is more correct in quoting the honors bestowed on Howe, St. Vincent, Duncan, and Nelson, as proofs of the value set on naval exploits by the government ; and as a testimony of the national gratitude to our officers, seamen, and marines, the public thanks given to them by the representatives of the people in parliament: but we lay no great stress on a circumstance, which he thinks remarkable, that, after the great naval victories obtained by the

four officers above mentioned, medals should have been given to the admirals and captains only, while, after the battle of Waterloo, all the individuals of the army, engaged on that day, were permitted to wear that distinguished mark of approbation from the officers of the highest rank down to the lowest soldier. Medals, in our service, seem never to have been systematically adopted ; but have occasionally been distributed, incidentally or capriciously, and not on any known principle ; and on this account have never created any jealousy between the two services. We admit, however, that there is something in the following observations, which, to a foreigner, could not fail to place the superior popularity of the navy in a striking point of view. ‘ I have traversed the greater number of the most considerable cities of Great Britain, and every where, even in places the most secluded, on the wildest borders of the north of Caledonia, I have seen durable monuments erected by the gratitude of the natives to the memory of Nelson. Let us now compare these innumerable monuments with those which that victory, the most important ever gained by the British army, has produced. Trafalgar had not completed the downfall of the French empire, and Waterloo crushed this imperial fabric, restored from its ruins as if by enchantment ††† Waterloo delivers England and Europe from the terrors which they had so long felt, and made them tremble at the sight of the French eagles ††† Waterloo places (at least for some years) the British power at the head of the coalition of the continental governments. Notwithstanding these things, in traversing the three kingdoms, one locks in vain for frequent monuments in celebration of this memorable triumph. The names given to a certain number of streets and squares, a few inscriptions, here and there a statue, the name of a bridge, built for u special purpose before the campaign of the Hundred Days had

commenced, ††† these are all that remain in England to perpetuate the memory of a victory obtained, by sacrifices, the burden of which still weighs heavily on a people restored to their sober senses (cU-senivre). ††† torn. ii. p. 12.

‘ All the arts and sciences connected with the navy and navigation in general, have experienced in England,’ as a writer in the Quarterly, No. 41, observes, ‘the public patronage. From the days of Newton the parliament of Great Britain has not ceased to offer the most splendid rewards fo1-discoveries in geography, and improvements in navigation. Thus the sum of ††10,000 was granted to Mr. Harrison, for the invention of a time-piece ; to the widow of Mayer ††3000 for the Tables of the Moon, published by that excellent astronomer; and

►►300 to Euler, for some theorems on th,e same subject. About the same time a reward of ►►20,000 was offered for the discovery of a north-west passage, and since renewed with certain modifications, which enabled that able and intelligent navigator, Captain Parry, to obtain a portion of it amounting to ►►5000. As a further proof of the extraordinary encouragement held out by us for whatever may be turned to the improvement of the navy, M. Dupin mentions the splendid sum of 400,000 francs, besides all expenses, granted to that ingenious artist, Brunell, as a reward for his invention of the block machinery; and 100,000 francs, with a considerable pension for life, to Sir Ro-bert Seppings, for his most important improvements in naval architecture.'

M. Dupin admits, and laments, that these matters are managed very differently in France. Louis XIV., he observes, has deservedly been praised for his munificence towards learned men ; but his largesses, unlike those of the parliament of England, never extended to the offer of ►►500,000 to the man of science or the artist who should successfully resolve one single problem really useful ; and with regard to the liberality of Buonaparte, ►►► a single example, he thinks, will suffice to show what kind of encouragement was held out, by this patron of the arts and sciences, to the French navy. ' When the engineer Hubert had constructed at Rochefort the beautiful mill which serves at the same time for cleansing the basin or inner harbour, the rolling and turning of metals, the mixing of colors, Sec., the minister, Decrcs, caused a remuneration to be made to him of 600 francs! (►►'25 !) ; and this is the only instance of a reward being decreed, under the imperial government, to officers of ge-nius. Those even which the law prescribed to be given on the launching of each ship of war, were not bestowed, trifling as they were. Thanks to this parsimony, during the whole period of which we are speaking, the sciences and the arts connected with the French navy remained stationary !'

' Every one knows,' says M. Dupin, 'what disorder prevailed in all the branches of the naval administration dining the first years of the French republic. On the one hand, anarchy, insubordination, plunder ; on the other, presumption, prejudice, ignorance, destroyed all the good which a small number of officers were able to produce, who alone had any idea of the true

principles of a well organised navy. ‘ But,’ he adds, ‘ order appeared to be restored under the consulate, and under the empire ; though it was an order that was directed more towards the preservation of the materiel than the amelioration of the personel. Disaster after disaster occurred; but the tribune was dumb, and the public journals were gagged, and nothing was permitted to be said or published respecting the navy without the formal sanction of the minister.’ As new defeats added to their shame, an official article, ‘ drawn up,’ as he tells us ‘ by the hand of impudence,’ appeared in the Moniteur, for the purpose of proving to Frenchmen that the loss of their colonies was advantageous to their navy. In the prince regent’s speech to parliament, in 1811, it is observed that ‘the conquest of the isles of Bourbon and Amboyna has further diminished the number of the enemies’ colonies ;’ upon which the Moniteur has the following commentary : ††† * Under existing circumstances, Mar-tinique, Guadaloupe, the Isle of Reunion, and the Isle of France, contributed nothing to the mother-country, and cost her more than the sum of 20,000,000 every year. With 20,000,000 we can build ten ships of war in the year ; it follows then that in the course of five or six years, which the present war may continue, we may have fifty sail of the line. The colonies occupied by the English will be restored to the mo-ther-country, either at the conclusion of peace or when the empire shall have 120 ships of the line, with 200 frigates and smaller vessels. This period, which is foreseen and calculated, is not very far from us !’

After stating at some length what, in his opinion, ought to be observed with regard to the nature and the number of ships of war to be kept up by France, our author gives, as a contrast, a true picture of Napoleon’s navy. ‘ To dazzle the eyes of the vulgar by the parade of numbers, they seemed to estimate our naval force by the enumeration of our masts and sails. The rapid increase of the materiel of our fleet was pompously announced to all Europe. But what was the actual condition of that fleet ? Constructed in a great degree with materials of the very worst quality, it was manoeuvred by crews composed of recruits, the greater part strangers to the sea service, and moreover strangers to our national interests. Germans, Italians, Illyrians, and Greeks, were mingled with French seamen. These foreign subjects of the great empire, ill paid, ill fed, ill treated, served France with rage and hatred in their hearts ; full of cunning and of courage to desert a

service which they abhorred, they were cowards in defending the honor of a flag, the symbol of their slavery ††† these were the support and the companions which were given to our inexperienced seamen. Moral power was equally wanting with physical strength to tins mass of involuntary navigators. The finest men and the best seamen were called away to serve in the train of the troops of the line, or rather in the train of the Imperial guard ; and the refuse of seafaring people was reserved for the navy. In order to fill up the skeletons which were weakened every hour, they enrolled, without selection, and without distinction, the weak,

the impotent, the ricketty ; they kept on board the maimed, the convalescent, and the incurable, in order to present to the emperor, to the em-pire, and to Europe, the state of a personel, imposing by its numerical force, and contemptible by its real weakness.' ††† torn. ii. p. 85.

Over such a navy it is no great compliment to assert an immeasurable superiority on the part of Great Britain. But, when that of France was in its most healthy state, the English navy is admitted to have been preeminently superior ; a fact which M. Dupin mainly ascribes to the perfect state of discipline which prevails in every branch of the service, and the rigid adherence to promotion by seniority in the upper classes, and to rank and command in all. The power which is given to the flag-officers commanding squadrons, under the admiral commanding-in- chief, to inspect and examine into the good or-der, the cleanliness and discipline of each individual ship placed under their respective commands, characterises and constitutes, in his opinion, one of the great excellencies of the British navy. ' But in France,' he observes, ' the lowest captain of a ship of war believes himself the king, or ra-ther the despot, of his quarterdeck. He cannot conceive that an admiral should have the right of coming on board to enquire with his own eyes into the manner in which the details of the service are carried on ; and it is as much as can be expected if, in the performance of evolutions, this same captain will condescend to abstain from a disobedience of the signals which may point out to him the conduct to be observed by his ship.' ' This fatal spirit,' he adds, ' of in-subordination, greater before than since the Revolution, must be rooted out of the French navy before it can hope to obtain success to any great extent.'

The cool, quiet, and determined manner in which the officers give their orders, the readiness and regularity with which they are

executed, and the imposing silence of the crew, on board an English ship of war, when actually engaged in battle, also strike our author. ‘ C’est le calme de la force, c’est le recueillement de la sagesse.’ ‘In the midst,’ says M. Dupin, ‘of the most complicated operations, and even in the heat and hurry of battle, the words of command only are heard, pronounced and repeated distinctly and coolly from rank to rank ••• no intemperate councils, no murmurs, no clamor, no tumult. The officers think in silence, and the crew act without speech or thought.’ This perfection of subordination, however, he ascribes, in a certain degree, to the phlegmatic character and the natural taciturnity of the English ; at the same time he is of opinion that similar results might be obtained even from the vivacious Frenchmen of the south ; ‘ for,’ says he (an inference which we do not clearly comprehend), ‘the inhabitants of Great Britain are naturally less active than the French, and especially than the inhabitants of the south of France !’ But, if the administration of the British navy exacts from inferiors an en-tire obedience to the orders of their superiors, it also exacts from these, as M. Dupin justly observes, an example of all the military virtues, and more especially of daring enterprise and unques

tionable courage. ‘ The English,’ he adds, ‘ like the Carthaginians, punish with death the admiral who, engaging with a force nearly equal, does not gain the victory.’

The mode in which the great Napoleon managed matters of this kind is thus stated by M. Dupin. ••• ‘ Captains,’ he says, ‘ evidently culpa-ble, were delivered ever by him to the maritime courts : they were acquitted by the judges, who were delighted to establish the point in naval jurisprudence that a man might be imbecile or pusillanimous in battle, without incurring the punishment due to that incapacity which compromises the public interest, or that cowardice which dishonors the national flag. Sometimes Napoleon deposed the members of these courts, and wished to retry that which the law permitted to be tried only once. This was only acting the despot without remedying the evil. He had done better by consulting public

opinion ; by endeavouring to know beforehand those men so lenient towards crimes against honor ; never to have trusted them with commands, but to have placed them without delay on the retired list.' ††† torn. ii. p. 18. We have a further specimen of his imperial majesty's ideas of justice, and of the encouragement which he gave to the navy, in an official communication in the Moniteur of November, 1811 : 'The minister of the marine shall cause the laws of the empire to be executed. The commander of theClorinde shall be brought before the tribunals for having taken so small a share in the battle * for having preferred life to honor,' * 'Thus,' observes M. Dupin, ' the sovereign authoritatively decides on the in-famy of an officer whom he is about to try !'

In naval tactics, as well as discipline, M. Du-pin candidly avows the English are far superior to the French ; and he thinks it would be very desirable that some one of the French officers who, in the course of the last war, had the misfortune to serve on board an enemy's ship, would give his countrymen a faithful description of the principal manoeuvres, and of the order in which they are executed on board an English ship of war. ' One might then,' he continues, ' compare the means of action of our rivals with those in use with us, and give the preference to the best.' Strictly speaking, however, it is not the manoeuvring a single ship, or the state of discipline on board that ship ††† it is the management of a fleet, with regard to its order of sailing and forming the line, to the principles of attack and defence, which may properly be called naval tactics. In the early part of our history, when artillery was unknown, these principles were disregarded, because the value of them could not be perceived. The ships were small, and their armament simple and rude; they engaged stem to stem, or broadside to broadside; and the men fought hand to hand, and foot to foot. The main object was, then, the destruction of life. When Edward III. attacked the French fleet collected at Sluys to oppose his landing, the English, after pouring in a volley of arrows, boarded the enemy's ships and gained the victory, with the loss of 4000. Of the French more than 30,000 perished, the greater part of whom were driven overboard and drowned : whereas the

victory of the Nile was obtained at the expense of 218 men killed, and 677 wounded; anrt the glorious and decisive day of Trafalgar, at somewhat less than 420 killed, and 1112 wounded.

The practice adopted by the French of retiiing in good order, with little or no damage, caused, M. Dupin says, ' not only our rivals, but

other nations, to adopt the disgraceful opinion, that a French fleet could not face an English fleet of equal force.' But the real fact, he tells us, was that their admirals had orders to keep the sea for the longest possible time, without coming to an action, in which the resul* might be the loss of ships too expensive to be replaced ; and, if forced to engage, to avoid, with the greatest care, compromising the fate of their fleet by a conflict too decisive. Such an order, he says, obliged them to fight retreating, by which they acquired the disastrous habit of yielding the field of battle as soon as an enemy, though inferior, appeared disposed to dispute it with courage. 'Thus, then,' he adds, ' to maintain, at a great expense, a naval armament ; to forbid it from making the best use of its effective power; to send it in searcn of an enemy ; to retreat shamefully from its presence ; to receive battle instead of offering it ; to commence an action only to finish it by the phantom of a defeat ; to lose the moral for the sake of sparing the physical force ††† formed the principle which, from the declining energies of the reign of Louis XIV. to the mistakes of Napoleon (with a few brief exceptions), has guided the administration of the French marine,' ††† ' the consequences are well known !'

This author ridicules, not unsuccessfully, ' what he terms the pious respect of his countrymen for the sacred order of the line of battle' to which the combined fleets were sacrificed at Trafalgar. While Nelson advanced in two close columns to overwhelm the centre of this ' sacred line,' the two wings remained immovable ; they were 'in line,' he says, and that was enough; and in this position they looked on ' avec une effrayante impassibility,' until the centre was destroyed ††† then, and not till then, forgetting all respect for the sacred order of the line, they thought, not of seeking to remedy any part of the evil, but of making their escape. The fact is, the commander-in-chief was thrown into confusion by a mode of attack so unusual, and which might have been followed by a different result had the combined fleets, instead of remaining in that state of impassibility while the destruction of the centre was going on, hauled their wind in one or two lines, which would have obliged Nelson to change his order of sailing in two columns into a line of battle. It was neither from any premeditated plan of attack on the part of Nelson, nor from any particular predilection for the advance of two columns ; but, as we are officially informed by lord Collingwood, to avoid the inconvenience and delay in forming a line of battle in the usual manner, that he was induced to bear down upon the enemy in the order of sailing; and, as the combined fleets kept their positions, Nelson, with a happy and instinctive promptitude, saw instantly that the most decisive result would ensue from pressing with his whole

force upon their centre.

* If,' M. Dupin says, ' we would appreciate the real force of a ship of war, we must not say, a ship is a floating battery, with which one can scarcely, in battle, kill or wound more than a fourth, or a fifth, or a tenth of the seamen of another ship of equal force. We should say, a modern ship of war is a floating battery, which can only be compelled to yield to batteries of the same description. It is a fortress which is able to resist the sea, in all seasons, in the midst of every tempest. It is a fortress which transports itself with a rapidity infinitely superior to that of the lightest troops of a land-army, in such a way as to run over a fourth part of the great circle of the globe in less time than a continental army can pass from Spain into Poland, or from France into Russia. Now, when such immense marches are undertaken, the naval army experiences neither fatigues, nor privations, nor wants, nor those epidemics which destroy so many land armies. Without accident to her crew, a ship of war passes the winter in the midst of the polar ice, in a degree of cold exceeding that which caused the destruction of the finest army that modern times have seen. In short, a naval force not only transports itself, exempt from suffering and fatigue; it transports th□□ land army, and communicates to it its own movements. By means of it those powers who have only a small number of soldiers are enablc-d to multiply them by sudden and unexpected disembarkations on all the vulnerable points of an enemy's coast.' □□□ torn. ii. p. 72.

In fine, the victories of Howe, Nelson, St. Vincent, Duncan, which annihilated the navies of the maritime powers of Europe, were accomplished with a waste of human life incomparably small when measured with the result of a single land-campaign : yet how superior the consequences ! Let our author himself sum up the splendid account : □□□ ' Towards the end of the seventeenth century the maritime wars were confined, on the part of England, to the fighting of a few battles with one or two fleets ; to the making a few cruises, a few detached blockades, or some particular enterprise ; and these

were sufficient for the labors of a campaign. But in the naval war, of which the nineteenth century has witnessed the commencement and the termination, England conceived the idea of attacking, nearly at the same moment, the fleets of France, of Spain, of Holland, of Denmark, of Italy, and even of America ; she opposed herself to all the maritime powers. She not only blockaded all the military ports which could give refuge to some squadron or some flotilla, she blockaded every commercial port; and this spectacle we have seen, of which, till then, no maritime power had afforded an example ××× the inhabitants of an island, moderate enough in its extent, became enabled to form, with their ships of war alone, a continued line of observation along all the coasts of F.urope, of Asia, of Africa, and of America. All the continents of the two worlds were simultaneously besieged, their islands taken by main force, the commerce of the world usurped. In short, after twenty years of fighting, this naval power, which had begun the struggle with 30,000,000 of subjects, finished it bv consolidating her empire over 80,000,000 of the con ××× queied and conquering. And, moreover, let us recollect that Great Britain has never reckoned, during this period, more than 145,000 seamen and marines, employed in producing these prodigies.'××× torn. i. p. 238.

The attention paid in the British navy to the health of the seamen is justly applauded by our author. He says (what is perfectly true) that, when lord St. Vincent commanded the fleet which blockaded Brest from the 27th May to the 26th September, 1800, not a single day passed without his reconnoitring the entrance of the harbour; and that, although the seamen had only the ordinary ship's provisions, and consisting at the least of 16,000 men, there were only sent, during the whole of this time, sixteen to the hospital. In fact, by the wise and humane regulations now established in the British navy ; by the excellence of the provisions ; by the purity of the water since the introduction of iron tanks ; and by the pains bestowed to keep the ships dry, well aired, and cleanly between decks, the most dangerous diseases, such as the scurvy and ty-phus fever, which used to be the scourge of the navy, have been totally eradicated from our ships of war: those that remain, as is justly remarked by our author, are of an inflammatory nature, arising from an excess of strength rather than debility. Of the extraordinary improvements which have taken place in British ships of war for the preservation of the lives of seamen some curious facts are on record. The total number of seamen raised during the American war was 175,990, of whom 18,545 died a natural death, and 1243 were killed, making in the whole 19,788 death in the last five years of the war; but the average number employed was about 70,000, which, for every 100,000 seamen employed, would give an

annual loss of 5911 men. M. Dupin calculates that in the same number our land army lost, in the course of the last war, 5930 men. The following table gives at one view the progressive diminution of sickness and death in the naval service, calculated on 100,000 men:

Year.	Sick sent to Hospital.	Deaths.	Deserted.
1779	40,815	2,654	1,424
1782	31,617	2,222	993
1794	25,027	1,164	662
1804	11,978	1,606	

214

1813

9,336

698

10

By this table it would appear that the diminution of sick and of deaths was in the proportion of four to one nearly between the years 1779 and 1813. The diminution of desertions from the hospitals in the same period is not the less remarkable, and affords the strongest proof of the progressive amelioration of the condition of seamen on board our ships of war. ‘ Man,’ says M. Dupin, ‘ employs all the means within his reach to fly from a kind of life which presents only the hideous picture of privations while afloat, or sickness, suffering, and death in a hos-

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pital. But when every cause of discontent, of disgust, and of alarm is diminished and made almost to disappear, the sailor holds very cheap the fatigues and the dangers of the sea and of battle, and no longer thinks of deserting.’

M. Dupin has given a statement of the actual loss of men sustained by the British fleet in each year, commencing with 1810, when every captain was ordered to transmit a list, made up to the 1st January, of all the deaths that had taken place under his command in the preceding year. The result was as under : ###

Years.

Number employed.

Deaths by disease, accident, or in battle.

1810

138,581

5,183

1811

i 36,758

4,265

1812

138,324

4,211

About one-half of the above numbers died of disease, the other half in fight, oy accidents in landing, boats upsetting, shipwrecks, &c. It follows then that, in the three years above-men- tioned, the proportion of deaths in 100,000 men employed afloat was 3ˆ02 ; and if to these we add the number of seamen who, in the following year, died in the hospitals, namely 698, the total loss of life in that year, out of somewhat more than 100,000 men, may be estimated 4000 men. ‘ Thus,’ says M. Dupin, ‘ in the latter years of the war against the French empire, the English navy lost only about a twenty-fifth part of its whole force :’ and he adds, on what authority we know not, that the loss in the British army, about the same period, on an average of six years, was 12,356 in every 100,000 men, that is to say, about one-eighth part of the whole ; and the unavoidable conclusion is, that there is at least three times more risk of life to serve in the army than in the navy of Great Britain. Taking the number of seamen that died of disease alone, afloat and in the hospitals, we have 2349 in 100,000 men, that is to say, a forty-second part of the whole.

NAULUM, a piece of money put into the mouth of a person deceased among the Romans, to enable him to pay Charon the ferryman for his passage. It was to be of the current coin of the reigning ernperor ; and from this money, therefore, the time of the person’s death may be known. The sum for poor men was a farthing, but the rich in general were very liberal in their naula, as appears from the number of coins often found in the neighbourhood of Rome on opening the graves of great men. Charon was looked upon as a very morose and obstinate old fellow, who would not carry over any man without his fare ; and hence the proverbial use of that verse in Juvenal,

Furor est post omnia perdcre naulum. A similar custom took place among the Greeks; with whom the money put into the mouth of the deceased was called Aavaio;.

NAUMACHIA, in antiquity, a show or spectacle among the ancient Romans, representintj a sea-fight. These mock sea-fights are supposed

to have originated at the time of the first Punic war, when the Romans first instructed their men in the knowledge of naval affairs. Afterwards they were intended to entertain the populace, as well as to improve the seamen. They were often like other shows, exhibited at the expense of individuals, to increase their popularity. In these spectacles

they sometimes strove to excel each other in swiftness, and sometimes engaged in a warlike manner. The Naumachise of Claudius were a most savage diversion. The combatants used to destroy each other to amuse a tyrant and a cruel mob. As they passed before him they used this melancholy greeting, 'Ave Imperator, morituri te ˆ salutant.' The emperor replied, ' Avete vos.' This they understood as an an-swer of kindness, and a grant of their lives ††† but they soon discovered that it proceeded from wanton cruelty, and barbarous insensibility. In the time of Domitian, such a vast number of vessels engaged as %vould have nearly formed two regular fleets for a real fight, and the channel of water was equal in magnitude to a natural river. Heliogabalus is reported to have filled the channel where the vessels were to ride with wine instead of water. Tritons and sea monsters were frequently exhibited during the engagement. Suetonius and Dio Cassius informs us that, at one of these sea fights of Domitian, a violent shower fell ; the emperor, however, continued till the end of the engagement, often changing his clothes, nor would he suffer any one to de-part ; and, as the rain continued for several hours, many were seized with distempers, of which some died. Suet. cap. 4, Dio. lib. Ixvii.

NAUMACHIA were also places fitted up for these shows, with seats and porticos, &c. There were several of them at Rome; three built by Augustus, one by Claudius, another by Domitian, and another by Nero, which served for the reverse of his medals. Claudius used the lake Fucinus as a Naumachia.

NAUMBURG, a well-built city and bishop's see of Saxony. The bishopric was formed by Otho I. in 968. It has a citadel, three churches, and a town-school. The suburb contains severs! hospitals and an infirmary. The inhabitants, nearly 12,000, carry on manufactures of stockings, gloves, caps, &c. (which they send to Russia, Italy, and Spain) ; leather for which they have adopted the English mode of tanning; soap, starch, and gunpowder. Shoemaking is also carried on here on a large scale. Wine is produced in the environs: and Naumburg has two yearly fairs. Eighteen miles S. S. W. of Merseburg, and twenty-eight W. S. VV. of Leipsic.

NAUPACTUS, or NATPACTUM, in ancient geography, a city of TEtolia, at the mouth of the Evenus. The name is derived from vm>c and irtiyw/ju, because it was there that the Hera-clidre built the first ship which carried them to Peloponnesus. It first belonged to the Locri Ozolae, and afterwards fell into the hands of the Athenians, who gave it to the Messenians, who had been driven from Peloponnesus by the Lace-demonians. It became the property of the La-cedemonians after

the battle of vEgospotamos, and it was restored to the Locri. Philio II. of

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Macedonia afterwards took it, and gave it to the /Etolians ; from which circumstance it has generally been called one of the chief cities of their country. There was on the shore a temple of Neptune, and near it a cave filled with offerings, dedicated to Venus, where widows resorted to request new husbands of the goddess. Pausan. lib. 10, p 898.

NAUPLIA, in ancient geography, a maritime city of Peloponnesus. It was a naval station of the Argives. The fountain Canathos was near it.

NAUPLIUS, in fabulous history, a son of Neptune and Araymone, a native of Argos, who went to Colchis in the Argo with Jason. He was remarkable for his knowledge of navigation and astronomy. He built the town of Nauplia, and sold Auge daughter of Aleus to king Teuthras, to screen her from her father's resentment.

NAUPLIUS was also the name of a king of Eubnea, the son of Clitonas, and grandson of Nauplius the Argonaut. He was the father of the famous Palamedes, who was so unjustly sacrificed to the artifice and resentment of Ulysses by the Greeks at the Trojan war. To revenge the injustice of the Grecian princes, Nauplius endeavoured to debauch their wives, and ruin their characters. When the Greeks returned from the Trojan war, Nauplius, seeing them distressed in a storm on the coasts of Euboea, to make their disaster still more universal, lighted fires on sucli places as were surrounded with the most dangerous rocks, that the fleet might be shipwrecked upon the coast. This had the desired effect; but Nauplius was so disappointed, when he saw Ulysses and Diomedes escape from the general ruin, that he threw himself into the sea. Some mythologists confound these two.

NAUPORTUM, or NAUPORTUS, a town on a coo;nominal river towards its source, in Pannonia Superior. The reason of the name, according to Pliny, is, that the ship Argo, after coming up the Danube, the Save, and the Laubach, was thence carried on men's shoulders over the Alps into the Adriatic. It was built by a colony of the Taurisci, a people on the confines of Noricum ; now called Laubach.

NAU'SEATE, v.n. & v. a.-\ Lat. nausea.

NAU'SEOUS, adj. (To become dis—

NAU’SEOUSLY, adv. i gusted ; ††† turn

NAU’SEOUSNESS, n. s. x away with disrelish or disgust : as an active verb, to loathe; re-ject with disgust; strike with disgust: the adjective signifies disgustful ; loathsome : and the adverb and substantive follow these senses. Those trifles wherein children take delight

Grow nauseous to the young man’s appetite :

And, from those gaieties our youth requires

To exercise their minds, our age retires.

Denham.

Pride fills a man with vanity, and an affectation of seeming wise in an especial manner above others, thereby disposing him to maintain paradoxes, and to nauseate common truths received and believed by the generality of mankind. Barrow.

While we single out several dishes, and reject others tne selection seems arbitrary ; for many are cried up m one age, which are decried and nauseated in another Browne.

Old age, with silent pace, comes creeping on, Nauseates the praise which in her youth she won. And hates the muse by which she was undone.

DrwbK,

This, though cunningly concealed, as well knowing how nauseously that drug would go down in a lawful monarchy which was prescribed for a rebellious commonwealth, yet they always kept in reserve.

Id.

The nauseoumeis of such company disgusts a reasonable man, when he sees he can hardly approach greatness but as a moated castle ; he must first pass through the mud and filth with which it is encompassed. Id. Aurenyzebe.

Pood of a wholesome juice is pleasant to the taste and agreeable to the stomach, ‘till hunger and thirst be well appeased, and then it begins to be less pleasant, and at last even nauseous and loathsome.

Their satire's praise ;

So nauseously and so unlike they paint. Garth. The patient nauseates and loathes wholesome foods.

Black.

Those heads, as stomachs, are not sure the best, W hich nauseate all, and nothing can digest. 1'tye.

He let go his hold and turned from her, as if he were nauseated, then gave her a lash with his tail.

Su-ift.

Old thread-bare phrases will often make you go out of your way to find and apply them, and are nuuseotis to rational hearers. Id.

Don't over-fatigue the spirits, lest the mind be seized with a lassitude, and nauseate, and grow tired of a particular subject before you have finished it. Watts on tfte Mind.

But, when the breath of age commits the fault, 'Tis nauseous as the vapour of a vault. Cotvper.

NAUTICAL, adj. I Lat. nauticus. Per—

NAU'TIC. \ taining to sailors.

He elegantly shewed by whom he was drawn, which depainted the nautical compass with aut magnes aut magna. Camueu.

NAUTILUS, n. s. Fr. nautlle ; Lat. nuir tilus. A shell fish furnished with something analogous to oars and a sail.

Learn of the little nautilus to sail, Spread the thin oar and catch the driving gale.

Pope.

The little nautilus, with purple pride Expands his sails, and dances o'er the waves.

Grainger

This animal is also supposed to have a power of sailing, though in a less perfect manner than tlie argonaut, or paper nautilus. Shaw.

NAUTILUS, in zoology, a genus belonging to the order of vermes testacea. The shell consists of one spiral valve, divided into several apartments by partitions. There are seventeen species, chiefly distinguished by particularities in their shells. Bonani observes, that this genus of shell fish is very well named from the (jreek vawnXof, which signifies both a ship and a sai-lor ; for the shells of all the nautili carry the appearance of a ship with a very high poop. Different authors, both ancient and modern, have called the nautilus by the names of pompilus, nauplius, ovum polypi, polypus testaceus : and the French call it le voilier. The chief division of the nautili is into the thin and thick-shelled kinds.

1. N. concha margaritifera, the thitk-slielled nautilus, has a very thick shell, and never qt.its

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*hat habitation. This shell is divided into forty or more partitions, which grow smaller as they approach the extremity or centre of the shell ; between every one of these cells and the adjoining ones there is a communication by a hole in the centre of the partitions-, through which runs a pipe. It is supposed by many, that by this pipe the fish occasionally passes from one cell to another; but this seems improbable, as the fish would be crushed to death by passing through it. It is much more likely that it always occupies the largest chamber in its shell ; that is, that it lives in the cavity between the mouth and the first partition, and that it never removes out of this ; but that all the apparatus of cells, and the pipe of communication, serve only to admit occasionally air or water into the shell, in such proportion as may serve the creature for swimming. Authors call this shell concha margaritifera, on account of the fine color on its inside, which is more beautiful than any other mother-of-pearl ; but it has not been observed that this species of fish ever produced pearls. The cornu ammonis, so frequently found fossile, must not be confounded with the thick-shelled nautilus, though the concamerations and general structure of the shell are alike in both; for there are great and essential differences between all these genera.

N. papyraceus, the paper-shelled nautilus. The shell of this species is no thicker than a piece of paper when out of the water. This animal is not at all fastened to its shell. There is an opinion, as old as the days of Pliny, that it creeps out of its shell, and goes on shore to feed. When it is to sail it expands two of its arms on high, and between these supports a membrane, which it throws out, and which serves for its sail; while the two other arms serve occasionally either as oars or as a steerage ; but this last office is generally performed-by the tail. When the sea is calm, it is common to see numbers of these creatures diverting themselves in this manner : but as soon as a storm rises, or any thing gives them disturbance, they draw in their legs, and take in as much water as makes them specifically heavier than that in which they float; and they then sink to the bottom. When they rise again, they void this water by a number of holes, of which their legs are full;' This species must not be confounded with the polypus, notwithstanding the great resemblance in the arms and body of the enclosed fish.

NAXERA, a town giving title to a duchy, in the north-east of Spain, in

the province of Bur-gos, near the Ebro. It has three churches, three convents, and 3000 inhabitants. In 1365 a battle was fought here by Peter, king of Castile, assisted by the prince of Wales, the Black Prince, and Henry, brother of Peter, assisted by the French, in which the former obtained the victory. Forty-four miles east by north of Bur-gos.

NAXIE, anciently NAXOS, the largest of the Cyclades, in the southern part of the Grecian archipelago, lying between Paros on the west, and Amorgo on the east, the meridian of 23►► E., and the parallel of 37►► N., intersecting each other nearly over the centre of the island. At the foot of a lofty mountain is still VOL. XV.

to be seen the grotto of white marble where the priestesses of Bacchus used to culebtate their mysteries ; and almost all the ancient monuments that are found here have relation to the god of wine. He is mostly represented as a bearded old man, crowned with vine leaves. Clusters of grapes, as large as the damascenes of our country, fine harvests, savory fruits, forests of olive trees, aromatic plants that perfume the hills on every side, and abundance of game still distinguish this island ; its olives yield a fine transparent oil ; the lemons are of an enormous size, and weigh sometimes several pounds; the land is watered by plentiful springs; the pastures are full of fat flocks, and in fine the surrounding rocks shelter it from all inclemency of the weather. The hollows of the rocks are filled with wild honey, and its quarries of emery supply all the ports of the Levant.

The Naxians defended their paternal soil for some time against the Persians, and, when at last they yielded to the superior forces of the enemy, they only waited a favorable moment to throw off the yoke. With their liberty the Naxians lost the energy of their minds, and seemed to abandon themselves to the softness and effeminacy inspired by the climate. At the beginning of the thirteenth century, when the French, setting out on their crusade against the infidels, seized on the Christian provinces of the Greek empire, and created for themselves independent sovereignties ; the Venetians, following their example, sent their adventurers in search of Greek lands and lordships. One of these, named Marc Sanudo, made choice of Naxos, and the emperor of Germany, assuming a right which he did not possess, erected it into a duchy. The Sanudos and the Crispos ruled the island for three centuries, but were tributaries to Turkey; and at length their race so much degenerated that the Naxians, being no longer able, to respect a court plunged in debauchery, sent a deputation to Constantinople,

requesting deliverance from the Crispos. The Porte, however, with that contempt which it has always manifested for the Greeks, bestowed the sovereignty on a Jew, who was still more obnoxious to the islanders than a Crispo; the latter went to bury themselves in obscurity at Venice, and Miches, the Jew, more attached to the revenues than the honors of the government, deputed a Spaniard named Coronello to manage the public affairs. He had the address to make the islanders forget the disgrace they had suffered, and intermarried his family with the race of the dukes which is still in existence. After his death Naxos had no more independent lords, but from about 1COO has depended directly on the Porte, still preserving something of a republican regime, in which the ancient Venetian nobles, who were in possession of the finest lands, figured as a kind of aristocracy. The islanders were governed by their own laws, named their own judges and mayors, and were no longer harassed by a Turkish collector, who had ceased to reside in the island since the piracies so often committed had put his lite and property in jeopardy. The nobility, proud of their descent, and like tin-European adventurers in America, as miserable

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as they were proud, had not sense enough to ameliorate their condition, either by agriculture or commerce, and almost the only intercourse they had with the native Greeks was to be observed in the frequent quarrels between them. On the side of the bay of Panormo the country presents a very wild appearance, and we meet only a few wandering shepherds clothed in woollen stuff garments, with red caps, and shod with buskins of goats' leather, with the hair turned outwards. These shepherds live mostly with their flocks in the open air, and have no other shelter than the bushes. They appear to be dependent on no head, and to have no women among them. An English traveller, who conversed with them in modern Greek, conjectures that this troop of nomades is recruited from the Albanian vagrants. There is good anchorage at Patonides, Panormo, Doriagatha, and Agraffo ; but there is not a single port fit for vessels to enter in the whole island. Notwithstanding this disadvantage, it would wear a most flourishing aspect, if the industry of man did but second the rich bounty of nature. It is divided into one town on the southern coast, and from forty to fifty villages, containing about 10,000 inhabitants. It is about twenty-eight miles long from north to south, and twenty broad from west to east. In the interior are some ruins of ancient cities ; one in particular, built on a hill, was formerly defended by a Venetian citadel, which the Turks destroyed ; it was supplied with water by means of a subterraneous aqueduct. Another aqueduct conveyed the water to the temple of Bacchus, erected upon a rock in the sea, united to the main land by a bridge. Part of the front is still standing, and the foundations are still discoverable, constructed as it appears of the marble of the island.

The Catholic religion was introduced into Naxos by the Venetians, and it has become the chief place in the archipelago for that worship. There is an archbishopric and a chapter, with a seminary for Catholic priests of the Greek isles. There are also two convents and one nunnery ; these have excellent vineyards which sometimes produce most abundantly. It is a custom here to plunge new-born infants into a large tub of wine as the ancient Spartans did. The women are beautiful and have more/liberty than in any of the other islands. The eldest daughter bears the title of koura or kaira. A daughter's dowry commonly consists of a town or country house, and an -olive plantation in the midst of which is a tower. These towers, which are of very ancient origin, and some little chapels, have a very picturesque

effect in the country parts and on the sea-coast. The widows of this island are accustomed to mourn for their husbands most immoderately : they fill the air with their cries, refusing to change their garments, and arraigning the decrees of Providence. The cliiuite is favorable to longevity; Spon mentions two Venetian nobles, one of whom had reached the age of 105, and the other was 115 years old.

NAXOS, or NAXUS, in ancient geography, an island in the TEgean Sea, now called Naxie, formerly Strongyle, Uia, Uionysias, Callipolis, and

Sicilia Minor. It was called Strongyle from a Greek word signifying round, though in reality it is rather square than round. The names of Dia or Divine, and Dionysias, were given it as being consecrated in a peculiar manner to Dionysius or Bacchus. That of Callipolis Pliny and Solinus derive from the metropolis of the island, formerly a most beautiful city, which is the import of the name Callipolis. The great fertility of the country gave rise to the name of Sicilia Minor, Naxus being the most fertile of all the Cyclades, as Agathemerus informs us, and no less so than Sicily itself. The name Naxus, some assert, was borrowed from one Naxus, under whose guidance the Carians possessed themselves of the island ; others say from Naxus, the son of Endymion. Stephanus, Sui-das, and Phavorinus, derive it from va►►ai, to sacrifice, from the many sacrifices offered here to Bacchus. Bochart agrees as to the sacrifices in honor of Bacchus, but will have the word to be a corruption of the Phoenician nacsa, or nicsa, a sacrifice or offering. Naxos has Paros on the west, Myconos and Delos on the north, and los on the south. It was always famed for its excellent wines. Archilochus, as quoted by Athenaeus, compares them to the nectar of the gods ; and Asclepiades, cited by Stephanus, says, that Bacchus himself taught the inhabitants to cultivate their vines. It abounded also with all sorts of delicious fruits, and mulberry and figtrees; was famous for quarries of that sort of marble which the Greeks call ophites, from its being green, and speckled with white spots like the skin of a serpent. Diodorus relates, that the island was first peopled by the Thracians. These were subdued by a body of Thessalians, who, having possessed the island for above 200 .years, were compelled to abandon it by a famine. After the Trojan war the Carians settled here, and called the island Naxos, from their king, who was the son of Polemon. He was succeeded by his son Leucippus, and Leucippus by his son Smardius, in whose reign Theseus, coming out of Crete, landed here with Ariadne, whom he was, in his sleep, commanded by Bacchus to leave in this island. A colony of Cnidians and Rhodians afterwards settled here under Hippothous and Xuthus,

the last of all the lonians who possessed the whole island ; whence the Naxians are, by Herodotus, called lonians, and ranked among the Athenian colonies.

NAY, adv. } Sax. na; Goth, ne; Dan.

NAYWORD, n. s. J ne i ; Lat. and Fr. ne ; Ital. na. In the oriental languages this negative particle is also similar, as in the Pers. ne ; Sans. na. No ; not so ; not only so : nayword is an ob solete expression for the saying nay ; a bye word, or watch-word.

They have beaten us openly uncondemned, being Romans, and have cast us into prison ; and now do they tlirust us out privily 1 nay, verily ; but let them come themselves and fetch us out. Acts xvi. 37.

My lord, quod she, I wote and wist alway, How that betwixen your magnificence And my poveite no wight ne can ne may Maken comparison ; it is no nay. Chaucer.

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Vou would believe my saying, However you lean to the nayword.

Shaktfieare. Winter's Tale.

If I do not gull him into a tutyword, and make him a common recreation, do not think I have wit enough to lie straight in my bed. Shaitspeare.

A good man always profits by his endeavour, yea, when he is absent ; nay, when dead, by his example and memory ; so good authors in their stile.

Bfn Jonson'i Discovery.

He catechised the children in his chamber, giving liberty, nay invitation, to as many as would, to come and hear. Fell.

Disputes in wrangling spend the day, Whilst one says only yea, and t'other nay.

Denham.

He that will not when he may, When he would he shall have nay. Prov.

This is then the alloy of Ovid's writings, which is sufficiently recompensed by his other excellencies ; nay, this very fault is not without its beauties ; for the most severe censor cannot but be pleased.

Dry den.

The fox made several excuses, but the stork would not be said ray ; so that at last he promised him to come. L' Estrange.

If a son should strike his father, not only the criminal but his whole family would be rooted out, nay, the inhabitants of the place were he lived would be put to the sword, nay, the place itself would be razed.

Addiion's Spectator.

Nay, some there may be, perhaps, who will dispute his claim to the

title of an epic poet, and will endeavour to degrade him even to the rank of a ballad-monger. Canning.

NAYLOR, or NAYLER (James), a noted English enthusiast, born about 1616, in the parish of Ardesley, near Wakefield in Yorkshire. His father, though proprietor of an estate, gave his son but a mean education, though his talents were very considerable. He married young, and settled in Wakefield parish. In 1641 he was a soldier under lord Fairfax, being then a presbyterian, but became an independent, and was made quarter-master under general Lambert. In 1651-2 he was converted by George Fox, and commenced a preacher and prophet among the Quaker people. He went to London in 1655, and, having strange fancies of celestial illumina-tions, considered himself as a favorite of heaven. In 1656 he went into the west of England ; but his extravagancies were so great, and his opinions so blasphemous, that even in those days of fanatical delusion they were heard with horror, and he was imprisoned a month in Exeter gaol. Resolving to return to London, he made his entrance into Bristol, in imitation of the manner our Saviour entered into Jerusalem, the people calling out ‘ Holy, holy, holy, Lord God of Sa-baoth,’ &c., for which mad conduct he was apprehended, with six of his associates, sent to London, imprisoned, and condemned to be whipped and put to hard labor. The sentence was executed, and he recovered his senses, expressed his repentance, and was again received by the quakers, who had disowned him. In 1659 he was freed from prison; and, in 1660, set off to see his wife and children ; but, being robbed and left bound by the way, lie was carried to a friend’s house at Hippon, where he died in November 1660. Naylor is said to have uttered, on his death bed,

some affecting sentiments of calm resignation, which exhibit an intensity of feeling, and a beauty of expression, that show him to have possessed no common mind, and add greatly to the curiosity of his character. He was the author of several works ; but his eccentricities, rather than his writings, have preserved his memory.

NAZAREAN, NAZARF..NE, or NAZARITE, has various significations. It originally denoted a man who had taken upon him the vow of a Nazarite to allow his hair to grow, to abstain from wine, &c. See Numbers, cap. vi. It also denoted an inhabitant of the town of Nazareth, which bore a bad character; and the epithet Na►►apaioc was therefore often applied to our Lord and to his followers as a term of reproach. The name Nazarene was given because of his having lived the greatest part of his life at Nazareth; the prophets also had foretold

that he should be called a Nazarene. S►►e Matt. ii. 23. We find no particular place in the prophets in which it is said that the Messiah should be called a Nazarene ; and St. Matthew only quotes the prophets in general. Perhaps he would insinuate that the consecration of the Nazantes, and the great purity of which they made profession, was a type and a sort of prophecy of those of our Saviour. St. Jerome was of opinion that St. Matthew here alludes to that passage of Isaiah xi. 1, and Ix. 21, 'And there shall come forth a rod out of the stem of Jesse, and a branch (Heb. Nezer) shall grow out of his roots.' This branch or Nezer, and this rod, are certainly intended to denote Jesus Christ, by the general consent of all the fathers and interpreters. Nazarite, when used to signify a person under the ancief.t law, denotes a man or woman engaged by a vow to abstain from wine and all intoxicating liquors, to let their hair grow without cutting or shaving, not to enter into any house that was polluted by having a dead corpse in it, nor to be present at any funeral. When any one died in their presence, they began again the whole ceremony of their consecration and Nazanteship. This ceremony generally lasted eight days, sometimes a month, and sometimes their whole lives. When the time of their Nazariteship was accomplished, the priest brought the person to the door of the temple, who there offered a he lamb for a burnt-offering, a she lamb for an expiatory sacrifice, and a ram for a peace-offering. They offered likewise loaves and cakes, will) wine for the libations. After all this the priest or some other shaved the head of the Nazarite at the door of the tabernacle, and burnt his hair, throwing it upon the fire of the altar. Then the priest put into the hand of the Nazarite the shoulder of the ram roasted, with a loaf and a cake, which the Nazarite returning into the hands of the priest, he offered them to the Lord, lifting them up in the presence of the Nazarite. And from this time he might again drink wine, his Nazariteship being accomplished. As to those who were perpetual Nazarites, as were Samson and John the Baptist, it appears that they were consecrated to their Nazariteship by their parents, and continued all their lives in this state, without drinking wine or cutting their hair. Those who made a vow of Nazariteship out of Palestine, and

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could not come to the temple when their vow was expired, contented themselves with observing the abstinence required by the law, and after that cutting their hair in the place where they were. As to the offerings and sacrifices prescribed by Moses, which were to be offered at the temple by themselves, or by others for them, they deferred this till they could have a convenient opportunity. Hence St. Paul, being at Corinth, and having made the vow of a Nazarite, he had his hair cut off at Cenchrea, and put off fulfilling jhe rest of his vow till he should arrive at Jerusalem. Acts xviii. 18. When a person found that he was not in a condition to make a vow of Nazariteship, or had not leisure to perform the ceremonies belonging to it, he contented himself with contributing to the expense of the sacrifice and offerings of those who had made and fulfilled this vow. When St. Paul came to Jerusalem, A. D. 58, the apostle St. James the Less, with the other brethren, said to him, Acts xxi. 23, 24, that, to quiet the minds of the converted Jews, who had been informed that he every where preached up the entire abolition of the law of Moses, he ought to join himself to four of the faithful who had a vow of Nazariteship upon them, and contribute to the charge of the ceremony at the shaving of their heads ; by which the new converts would perceive that he continued to keep the law. ††† The Hebrew word Nazir, or Nazarite, made use of to express a man exalted to great dignity, as it is said of the patriarch Joseph, Gen. xlix. 26, and Deut. xxxiii. 16, 'that he was separate from his brethren,' as it is in our translation ; or, as the Vulgate and others understand the Hebrew, ' that he was as a Nazarite among his brethren,' is variously understood. Some think that the Hebrew word TTJ, Nazir, in these places, signifies one who is crowned, chosen, separated, or distinguished : as the word "VU, Nazir, signifies a crown. The LXX translate this word a chief, or him that is honored. Cal-met thinks that this was a term of dignity in the courts of eastern princes ; and that at this day in the court of Persia the word Nazir signifies the superintendant general of the king's household, the chief officer of the crown, the high steward of his family, treasures, and revenues ; and that in this sense Joseph was the Nazir of the court of Pharaoh. Le Clerc translates Nazir a prince, and calls Joseph ' the prince of his brethren/ in the two places already quoted. . See Josephus, Chardin, Chrysostom, St. Jerom, &c.

NAZARETH, a little city of Judea, in the tribe of Zebulun, in Lower Galilee, west of Tabor, and east of Ptolemais. Eusebius says it is fifteen

miles from Legion towards the east. This city is much celebrated in the Scriptures, for having been the usual place of the residence of Jesus Christ for thirty years of his life, Luke ii. 51, whence he was called a Nazarene. He preached there sometimes in the synagogue, Luke iv. 16: but because his countrymen had no faith in him, and were offended at the meanness of his origin, he did not perform many miracles there, Matt. xiii. .r > 4, 58. Nazareth was situated upon an eminence; and on one side there was a precipice whence the Nazarenes one day had a

design of throwing down our Saviour, because he upbraided them with their incredulity, Luke iv. 29. St. Epiphanius says that in his time Nazareth was only a village, and that to the reign of Constantine it was inhabited by Jews alone, exclusive of all Christians. Adamnanus, a writer of the seventh age, says that in his time there were two great churches at Nazareth, one in the midst of the city, built upon two arches, in the place where our Saviour's house had stood. Under the two arches was a very fine fountain, which furnished water to the whole city. The other church was built where the house stood wherein the angel Gabriel announced to the vir-gin Mary our Lord's incarnation ; and we are told that this church, which is supported by two arches, is still in existence. The chamber where she received the angel's salutation was about 500 years ago removed from Nazareth by angels to Loretto. See LORETTO. Calmet's opinion upon the different translations of this famous house of Loretto is, that they were only so many different buildings made upon the model of the church of Nazareth. In the east part of the city stands the church dedicated to the Blessed Vir-gin ; which the zeal of the Coenobites raised from the ruins of that which had been destroyed by the Saracens. It is a very handsome building, and consists of three naves ; in the middle of which is the principal altar; to which there is an ascent by two magnificent stairs, much admired for their iron balustrades, the work of an ingenious monk of the convent. The descent to the grotto or annunciation chapel below is by steps of beautiful marble, cut with great taste. Two beautiful columns of oriental granite strike the eye at entrance. They have been constructed both for support and ornament. The altar of this subterranean chapel is extremely elegant ; and the different kinds of marble with which it is ornamented receive an additional lustre from the combined light of several silver lamps presented by Christian princes. On solemn festivals the walls and the pilasters are ornamented with various pieces of tapestry, representing the mysteries of the Virgin ; a superb present from the house of Austria. In the west part of the city stands a Christian church, built, as is said, on the site of the ancient synagogue where Jesus showed the

Jews the accomplishment of the prophecies in his person. At some distance is a large stone of a round form, called Christ's Table. Nazareth formerly held the third rank under the patriarch of Jerusalem. At present it is part of the domains of the chief of Acre. The ancient city, after the ravages of fanaticism, was reduced to a miserable hamlet, containing only a few Arab huts. Under Daher Omar, however, it recovered very considerably, and is now of far more importance.

NE, adv. Sax. ne; Goth, and Lat. ne. A particle formerly of frequent use, both singly and by contraction, as, nill for ne will or will not ; nas for ne has or has not ; nis for ne is or is not. Neither ; and not.

His warlike shield all covered closely was Ne might of mortal eye be ever seen, Not made of steel, nor of enduring brass.

Svense<:

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NEAF, ►►. $. islandic nefi. A fist. It is retained in Scotland ; and in the plural neaves.

Give me thy neaf, Monsieur Mustardseed.

Shakspeare.

NEAL, v. a. & v. n. Sax. onaelan, to kindle. To temper by heat; to be tempered in this way.

Reduction is chiefly effected by fire, wherein, if they stand and neal, the imperfect metals vapour away. Bacon.

The workmen let it cool by degrees in such relent-ings of fire, as they call their waling heats ; lest it should shiver by a violent succeeding of air in the room of fire. Digty.

This did happen for want of the glasses being gradually cooled or nealed. Boyle.

If you file, engrave, or punch upon your steel, nral it first, because it will make it softer, and consequently work easier. The common way is to give it a blood red heat in the fire, then let it cool of itself. Moxon's Mechanical Exercises.

NEAL (Daniel), an English historian and di-vine, born in London in 1678, and educated in Merchant Tailors' school. He afterwards went to Utrecht and Leyden. In 1706 he was elected pastor of a congregation of Independents in Aldersgate Street. He wrote a History of New England in 2 vols. 8vo., and a History of the Puritans in 4 vols. 4to., with some other works. He wrote also A Narrative of the Method and Success of Inoculating for the Small-Pox in New England, which led to an interview with the

frince and princess of Wales, afterwards George I. and queen Caroline. His History of the Puritans is of considerable authority, and very honorable to the talents of the author. It called forth a Vindication of the Doctrine, Discipline, and Worship of the Church of England, as established in the Reign of Queen Elizabeth, from the injurious Reflections of Mr. Neal's First Volume, 8vo., from Dr. Madox, bishop of St. Asaph ; to which he published a reply, which he calls A Review

of the principal Facts objected to, &c. His remaining volumes were reviewed in a similar spirit by Dr. Zachary Grey, to which Neal never replied, but an answer appeared, in a new edition of Neal, so late as 1797, 5 vols. 8vo., by Dr. Toulmin. Mr. Neal died in 1743.

NEALING. See ANNEALING.

NEANDER (Michael), a protestant divine, born at Sofa, in Silesia, in 1513. He was educated at Sofa, and afterwards at Wittemburg, under Melancthon. He taught with much applause at Nordhausen in 1549 ; and afterwards, for forty years, in the academy of Ilfeldt and Pfortzheim. He published several useful works, and died at Pfortzheim, April 26th, 1595.

NEAP, adj. & n. s. Sax. nepplol). Low; decrescent. Used only of the tide.

The mother of waters, the great deep, hath lost nothing of her ancient bounds. Her motion of ebb-ing and flowing, of high springs and dead neaps, are as constant as the changes of the moon.

Haheuill on Providence.

How doth the sea constantly observe its ebbs and flows, its springs and n►►zp-tides, and still retain its saltness, so convenient for the maintenance of its inhabitants. Kay.

The lowest as well as the highest water is at the lime of the spring tides , the neap tides neither rise so high nor fall so low Voting .

NEAP, or NEEP TIDES, are those tides which happen when the moon is in the middle of the second and fourth quarters. They are low tides, in respect of their opposites the spring-tides. As the highest of the spring-tides is three days after the full or change, so the lowest of the neap is four days before the full or change. On which occasion the seamen say that it is deep neap.

NEAPED, part. adj. When a ship wanU water, so that she cannot get out of the harbour, off the ground, or out of the dock, the seamen say she is neaped, or beneaped.

NEAPOLIS, in ancient geography, a city of Italy, in Campania, on the Sebethus, called also Parthenopa, originally a colony from Cumae (Pliny, Strabo), accounted a Greek city. Its hot baths were not inferior

to those of Baiat, according to Strabo ; two miles from it stands the monument of Virgil. It is now Naples. See NAPLES.

NEAPOLIS was also the name of twelve other ancient cities: *viz.* 1. A city of Egypt, in the Nomos Panopolitanus, between Thebae to the south and Panopolis to the north, on the east side of the Nile ; otherwise called Caene. 2. In Babylonia, near the Euphrates, on the south side. 3. In Caria, near the Meander. ††† Ptolemy. 4. In Cyrenaica, between Ptolemais and Arsinoe. ††† Id. 5. Neapolis or Caenopolis, on the east border of the same province. ††† Id. 6. In Ionia (Strabo) ; which belonged first to the Ephesians, but afterwards to the Samians, who exchanged Marathesium, a more distant city, for it. 7. In Macedonia Adjecta, twelve miles east of Philippi. ††† Antonine. 8. In Pisidia, on the borders of Galatia, between Amblada and Pappa. ††† Ptolemy. 9. In Samaria, the ancient SICHEM, which see ; called Neapolis upon its restoration by the Ro-mans.††† Pliny, Josephus. 10. In Sardinia, on the south-west side of the island, thirty miles north of Metalla ; now called Neapoli. 11. In Regio Syrtica, called also Leptis. 12. In Zeu-gitana on the Mediterranean, east of Clypea, and south of the Promontorium Mercurii.

NEAR, prep. adv. 5c adj. } Sax. nen ; Belg.

NEAR'LY, adv. >Goth. and Svved.

NEAR'NESS, n. s. j nar. Nigh; close

to ; applied both to time and space : as an ad-verb, almost; within a little, in which sense it is used for nearly : as an adjective it means close ; closely related; advanced; direct; and (metaphor.) intimate; familiar; dear; parsimonious: nearly is, at no great distance; closely; pressingly ; niggardly : nearness, closeness of place, time, or approach ; alliance ; parsimony.

This city is near to flee unto. Gen. xix. 20.

If one shall approach to any that is near of kin to him. Lev. xviii. 6.

Thou art near in their mouth, and far from their reins. Jer. xn. 2.

Unless they add somewhat else to define more certainly what ceremonies shall stand for best, in suck sort that all churches in the world should know them to be the best, and so know them that there may not remain any question about this point ; we are not a whit the nearer for that they have hitherto said. Hfoker.

God, bv reason of nearness, forbad them to be like the Canaanhes or Egyptians. Id.

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I have heard thee say, No grief did ever come so near thy heart, As when thy lady and thy true love died.

Thou thought'st to help me, and such thanks I

give,

As one near death to those that wish him live. Id. Every minute of his being thrusts

Against my nearest of life. Id. Macbeth.

W nether there be any secret passages of sympathy between persons of near blood ; as, parents, children, brothers and sisters. There be many reports in history, that, upon the death of persons of such nearness, men have had an inward feeling of it. Bacon.

It shows in the king a nearness, but yet with a kind of justness. So these little grains of gold and sil-ver helped not a little to make up the great heap.

Id. Henry VII.

Whose fame by every tongue is for her minerals

hurled,

Near from the mid-day's point throughout the western world. Dray ton.

Delicate sculptures be helped with nearness, and gross with distance ; which was well seen in the controversy between Phidias and Alcmenes about the statue of Venus. Wotton.

Those blessed spirits that are in such a nearness to God, may well be all fire and love, but you at such a distance cannot find the effects of it.

Duppa.

Self-pleasing and humorous minds are so sensible of every restraint, as they will go near to think their girdles and garters to be bonds and shackles.

Bacon's Essays.

The entering near hand into the manner of performance of that which is under deliberation hath overturned the opinion of the possibility or impossibility. Id. Holy War.

Accidents which, however dreadful at a distance, at a nearer view lost much of their terrour.

Fell.

To measure life, learn then betimes, and know Toward solid good what leads the nearest way.

Milton. Nearly it now concerns us, to be sure

Of our omnipotence. Id. Paradise Lost.

To the warlike steed thy studies bend,

Near Pisa's flood the rapid wheels to guide.

Dry den. He served great Hector, and was ever near,'

Not with his trumpet only, but his spear. Id.

Hannibal Caro's, in the Italian, is the nearest, the most poetical, and the most sonorous of any translation of the jEneid. Yet, though he takes the advantage of blank verse, he commonly allows two lines for one in Virgil, and does not always hit his sense. Id.

This eagle shall go near, one time or other, to take you for a hare. L'Estrange.

He that paid a bushel of wheat per acre, would pay now about five-and-twenty pounds per annum ; which would be near about the yearly value of the land. Locke.

The will, free from the determination of such desires, is left to the pursuit of nearer satisfactions.

Id.

He could never judge that it was better to be deceived than not, in a matter of so great and near concernment. Id.

The Castilian would rather have died in slavery than paid such a sum as he found would go near to ruin him. Addison.

Many are the enemies of the priesthood : they are diligent to observe whatever may nearly Or remotely blemish it. Atterbunt.

NBA

The best rule is to be guided by the nearnets or distance at which the repetitions are placed in the original. Pope.

It concerneth them nearly, to preserve that government which they had trusted with their money.

Swift.

Whether they,n►►ar►►r lived to the blest times, When man's Redeemer bled for human crimes ; Whether the hermits of the desart fraught With living practice, by example taught.

Harte.

Anacreon, Horace, played in Greece and Rome, This bedlam part ; and others nearer home.

Cowper,

Near ►►► and nearer ►►► nearer still, As the earthquake saps the hill, First with trembling hollow motion, Like a scarce awakened ocean ; Then with stronger shock and louder, Till the rocks are crushed to powder. Jh/ro►►. NEAT', n. s. > Sax. pear ; Goth, and Scot. NEAT'HERD, \naut; Swed. nut. An ox; oxen : it is used both as a singular and plural word : a neatherd is one who has the care of oxen.

Who both by his calf and his lamb will be known, May well kill a neat and a sheep of his own.

Tusser.

There neatherd with cur and his horn, Be a fence to the meadow and corn. H.

His droves of asses, camels, herds of neat, And flocks of sheep, grew shortly twice as great.

Sandyt.

The steer, the heifer, and the calf, Are all called neat. Shakspeare. Winter's Tale. Go and get me some repast. ►►► What .say you to a neat's foot ? ►►► Tis passing good ; I prythee let me have it.

Shakspeare.

Smoke preserveth flesh ; as we see in bacon, neat'i tongues, and martlemass beef.

Bacon's Natural History. What care of neat or sheep is to be had I sing, Mecaenas. May's Virgil.

As great a drover, and as great

A critick too, in hog or neat. Hvdibras.

The swains and tardy neatherds came, and last

Menalcas, wet with beating winter mast. Dryden.

Set it in rich mould, with neat's dung and lime.

Mortimer.

NEAT, adj. fr.net; Ital. netto ; Lat. nitidus. Pure; clean; unmixed.

Tuns of sweet old wines, along the wall ; Neat and divine drink. Chapman's Odyssey.

When the best of Greece besides, mixe ever, at

our cheere, My good old ardent wine, with small ; and our inferiour mates Drinke even that mixt wine measured too, thou

drinkst without those crates

Our old wine, neate. Chapman.

NEAT, adj. “^ Fr. net; Teut. netta ;

NEATLY, adv. > Goth, nated. Clean ; chaste ; NEATNESS, n. s. J elegrant, but without dignity : the adverb and noun-substantive corresponding.

Pelagius carped at the curious neatness of men’s apparel . Hooker.

\ will never trust a man again for keeping his sword clean ; nor believe he can have every thing in him, by wearing his apparel neatly. Shakspeare.

Herbs and other country messes, Which the neat-handed Phillts dresses. Milton.

NEB

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NEC

To love an altar built

Of twelve vast French romances neatly gilt. Pope. If you were to see her, you would wonder what poor body it was, that was so surprisingly neat and clean. Law.

NEATH, a large, ancient, and populous town of South Wales, in Glamorganshire, seated on a river of the same name, over which it has a bridge, with a good harbour. The ruins of its ancient castle and monastery are still to be seen. The house belonging to the latter is kept in re-pair. The town is governed by a portreeve, aldermen, &c. It has markets on Wednesday and Saturday ; and exports annually from 60,000 to 70,000 chaldrons of coals, to Somerset, De-von, Cornwall, &c. It has two extensive copper-works, and several iron works. A navigable canal, twelve miles long, has been lately cut to Breconshire; and it has a constant trade with London and Bristol. It is seated near the Bristol Channel, nine miles north-east of Swansea.and 200 west by north of London, it contributes with Swansea in returning one member to Parliament.

NEB, n. s. Saxon nebbe. Nose; beak; mouth. Only retained in the north.

How she holds up the neb ! the bill to him, And arras her with the boldness of a wife.

Siiakspeare.

Take a glass with a belly and a long neb. Bacon. NEBUCHADNEZZAR, or NEBUCHODONO-ZOR, the second king of Babylonia, son of Nabopolassar, and styled the Great, was associated by his father in the empire, A. A. C. 607, and the following year he took Jehoiakim, king of Judah, prisoner, and proposed to carry him and his subjects in captivity into Babylon ; but upon his submission, and promising to hold his kingdom under Nebuchadnezzar, he was permitted to re-main at Jerusalem. In 603 Jehoiakim attempted to shake off the Babylonian yoke, but without success ; and this revolt brought on the general captivity. Nebuchadnezzar also subdued the Ethiopians, Arabians, Idumaeans, Philistines, Syrians, Persians, Medes, Assyrians, and almost all Asia. Being puffed up with pride, he caused a golden statue to be set up, and commanded all to worship it ; which Daniel's companions refusing to do, they were cast into the fiery furnace. But, as he was admiring his own magnificence, by divine sentence he was driven from men, and is said to have eaten grass as oxen, i. e. he was

seized with a disease called by the Greeks lycon-thropy, which is a kind of madness that causes persons to run into the fields and street in the night, and sometimes to suppose themselves to have the head of oxen, &c. At the end of seven years his reason returned to him, and he was restored to his throne and glory. lie died A. A. C. 562, in the forty-third year of his reign ; in the fifth of which happened that eclipse of the sun mentioned by Ptolemy, which is the surest foundation of the chronology of his reign.

NEBULE, in heraldry, from Latin nebula, a cloud, one of the partition lines of a shield ; when the outlines of an ordinary or partition line runs arched in and out, after the manner of a cloud, as in the annexed figure.

NEBUZAR-ADAN, captain of the guard to Nebuchadnezzar, and the commander of his army in the final siege and destruction of Jerusalem. See 2 Kings xxv. 8□□□ 21.

NEC'ESSARY, adj. NEC'ESSARILY, adv. NEC'ESSARIKESS, n. s. NECESSITATE, v. a. NECESSITA'TION, n. s. NECES'SITIED, adj. NECESSITOUS, NECES'SITOUSKESS, n. s. NECES'SITUDE, NECES'SITY.

Fr. necetsaire,

nca.nsitcr ; Italian, Span., and Port. necessario ; Lat. nt- , ceaarius ; neceuitat. ' Needful ; indispensable ; decisive ; conclusive : unavoidable ; fatal : the J adjective and noun-

substantives follow these senses : to necessitate is, to make necessary or unavoidable ; not to leave free : necessity is, the state of being necessary ; indispeusableness ; cogency; compulsion; also want ; need ; or a want, or thing needed : the other compounds explain themselves.

I would know by some special instance, what one article of Christian faith, or what duty required necessarily unto all men's salvation there is, which the very reading of the word of God is not apt to notify.

Hooker.

The necessities of man had at the first no other helps and supplies than domestical ; such as that which the prophet implieth, saying, Can a mother forget her child ? Id.

Death, a necessary end,

Will come when it will come. Shakspeare. This ring was mine, and, when I gave it Helen, I bad her, if her fortunes ever stood Necessitied to help, that by this token I would relieve her. Id. All's Well that Ends Well. Urge the necesrity and state of times.

Shakspeare.

These should be hours for necessities, Not for delights ; times to repair our nature With comforting repose, and not for us To waste these times. Id. Henry VIII.

There never was a man of solid understanding, whose apprehensions are sober, and by a pensive inspection advised, but that he hath found by an irresistible necessity, one true God and everlasting being.

Raleigh's History. Never shall

Our heads get out ; if once within we be, But stay compelled by strong necessitie.

Chapman.

There is nothing more troublesome in human society than the disappoint of trust, and failing of friends -. for, besides the disorder that it works in our own affairs, it commonly is attended with a necessary deficiency of our performances to others. Bp. Halt. The supernatural necessaries are, the preventing, assisting, and renewing grace of God, which we suppose God ready to annex to the revelation of his will in the hearts of all that with obedient bumble spirits receive and sincerely embrace it.

Hammond.

We are to ask of God such necessaries of life as are needful to us, while we live here.

Duty of Man.

Hast thou proudly ascribed the good thou hast done to thy own

strength, or imputed thy sins and follies to the necessitating and inevitable decrees of God!

Duppa's Rules /<T Devotion.

This necessity, grounded upon the neftssitation of a man's will without his will, is so far from lessening those difficulties which flow from the fatal destiny of the Stoicks that it increaseth them.

NECESSITY.

The necessity of grace does not suppose that our nature is originally corrupted ; for beyond Adam's mere nature something else was necessary, and so it is to us. Jer. Taylor.

Notwithstanding all these provocations of his wrath, and abusings of his patience which thus necessitated God to execute his vengeance ; yet, even during the execution thereof, he did retain thoughts of favour, and intentions of doing good, even toward this ungrateful people. Barroic.

Every thing is endowed with such a natural principle, whereby it is necessarily inclined to promote its own preservation and well being. \Vilkin►►.

Though there be no natural necessity that such things must be so, and that they cannot possibly be otherwise, without implying a contradiction ; yet may they be so certain as not to admit of any reasonable doubt concerning them. Id.

The marquis of Newcastle, being pressed on both sides, was necessitated to draw all his army into York.

Clarendon.

They who were envied found no satisfaction in what they were envied for, being poor and necessitous.

Id.

The cause of all the distractions in his court or army proceeded from the extreme poverty and necessity his majesty was in. Id.

Necessity and chance Approach not me : and what I will is fate.

Milton.

Man seduced,

And flattered out of all, believing lies Against his Maker : no decree of mine Concurring to necessitate his fall. Id.

Our voluntary service he requires, Not our necessitated. Id. Paradise Lost.

The mutual necessitudes of human nature necessarily maintain mutual offices between them.

Male's Origin of Mankind.

Neither the Divine Providence, or his determinations, persuasions, or inflexions of the understanding or will of rational creatures, doth deceive the understanding, or pervert the will, or necessitate or incline either to any moral evil. Hale.

The church is not of such a nature as would necessarily, once begun, preserve itself for ever.

Pearson.

Seeing it is impossible we should have the same sanctity which is in God, it will be necessary to declare what is this holiness which maketh men be accounted holy ones, and called saints. Id.

A certain kind of temper is necessary to the pleasure and quiet of our minds, consequently to our happiness ; and that is holiness and goodness.

Tillotson.

In legal seisures, and righting himself on those who, though not perfectly insolvent, are yet very ###necessitous, a good man will not be hasty in going to extremities. Kettlewell.

Good-nature, or beneficence and candour, is the product of right reason ; which of necessity will give allowance to the failings of others. Dryden.

All greatness is in virtue understood ; 'Tis only necessary to be good.

Id. Aurengzebe.

The Eternal, when he did the world create And other agents did necessitate ; So what he ordered they by nature do ; ‘I hus light things mount, and heavy downward go, IVlan only boasts an arbitrary state. Dryden.

We are first to consult our own necessities, but then the necessities of our neighbours have a chris-t:.ni right to a oait of what we have to spare.

L’Fsfrang”.

The right a son nas, to be maintained and provideJ with the necessities and conveniences of life out of his father’s stock, gives him a right to succeed to his father’s property for his own good. Locke.

The denomination of money concerns trade, and the alteration of that necessarily brings disturbance to it. Id.

They resolve us not, what they understand by the commandment of the word ; whether a literal and formal commandment, or a commandment inferred by any necessary inference. White.

Universal peace is demonstration of universal plenty, for where there is want and necessitousuens there will be quarrelling. Burnet.

We see the necessity of an augmentation, to bring the enemy to reason. Addisun.

They subjected God to the fatal chain of causes, whereas they should have resolved the necessity of all inferior events into the free determination of God himself ; who executes necessarily that which he first proposed freely. South.

The politician never thought that he might fall dangerously sick, and that sickness necessitate his removal from the court. Id.

The perfections of any person may create oui veneration ; his power our fear ; and his authority, arising thence, a servile and necessitated obedience , but love can be produced only by kindness.

Rogers.

There are multitudes of necessitous heirs and penurious parents, persons in pinching circumstances, with numerous families of

children. Arbuthnot.

This declination of atoms in their descent was itself either necessary or voluntary. Bentleu.

The Dutch would go on to challenge the military government and the revenues, and reckon them among what shall be thought necessary for their barrier. Swift.

It is to be admired how any deceiver can be so weak to foretel things near at hand, when a very few months must of neceisity discover the imposture.

1,1.

Great part of the world are free from the necessities of labour and employment, and have their time and fortunes in their own disposal. t.aw.

People have a custom of excusing the enormities of their conduct by talking of their passions, and as if they were under the control of a blind necessity, and sinned because they could not help it.

Cumberland.

In England we want not a fundamental revolution, but we certainly want a reform both in the civil and ecclesiastical part of our constitution : men’s minds, however, I think, are not yet geneially prepared for admitting its necessity. -B/>. Watson.

The office which has placed me in relation with that body is one of which, as you justly observe, the functions are necessarily of a somewhat invidious character. Canning.

NECESSITY, ˆin law, as it implies a defect of will, excuses from the guilt of crimes. See CRIME. Compulsion and inevitable necessity are a constraint upon the will, whereby a man is urged to do that which his judgment disapproves, and which it is to be presumed his will (if left to itself) would reject. As punishments are therefore only inflicted for the abuse of that free will which God has given to man, it is highly just, that a man should be excused for those acts which are done through unavoidable compulsion. 1. Of this nature, in the first place,

is the obligation of civil subjection, whereby the inferior is constrained by the superior to act conlraiy to

tvhat his own reason and inclination would suggest; as when a legislator establishes iniquity by law, and commands the subject to do an act contrary to religion or sound morality. How far this excuse will be admitted in foro conscien-tiae, or whether the inferior in this case is not bound to obey the divine rather than the human law, it is not our business to decide; though, among casuists, the question will hardly bear a doubt. But obedience to the laws in being is undoubtedly a sufficient extenuation of civil guilt before the municipal tribunal. The sheriff who burnt Latimer and Ridley, in the bigotted days of queen Mary I., was not liable to punishment from Elizabeth for executing so horrid an office ; being justified by the command of that magistracy which endeavoured to restore superstition, under the holy auspices of its merciless sister, Persecution. As to persons in private relations, the principal case where constraint of a superior is allowed as an excuse for criminal misconduct is with regard to the matrimonial subjection of the wife to her husband ; for neither a son nor a servant are excused for the commission of any crime, whether capital or otherwise, by the command or coercion of the parent or master ; though in some cases the command or authority of the husband, either expressed or implied, will privilege the wife from punishment, even for capital offences. And, therefore, if a woman commit theft, burglary, or other civil offences, by the coercion of her husband, or even in his company, which the law construes a coercion, she is not guilty of any crime, being considered as acting by compulsion ; which doctrine is at least 1000 years old in this kingdom, being to be found among the laws of Ina the West Saxonr And, among the northern nations on the continent, this privilege extended to any woman transgressing in concert with a man, and to any servant that committed a joint offence with a freeman ; the male or freeman only was punished, the female or slave dismissed. But (besides that, in the English law, which is a stranger to slavery, no impunity is given to servants, who are as free

agents as their masters), even with re-gard to wives, this rule admits of an exception in crimes that are mala in se, and prohibited by the law of nature, as murder and the like ; not only because they are of a deeper dye, but also, since in a state of nature no one is in subjection to another, it would be unreasonable to screen an offender from the punishment due to natural crimes, by the refinements and subordinations of civil society. In treason also (the highest crime which a member of society can, as such, be guilty of), no plea in coverture shall excuse the wife, no presumption of the husband's coercion shall extenuate her guilt ; as well because of the odiousness and dangerous consequences of the crime itself, as because the husband, having broken through the most sacred tie of social community by rebellion against the state, has no right to that obedience from a wife whJch he himself as a subject has forgotten to pay. In inferior misdemeanors, also, a wife maybe indicted and set in the pillory with her husband, for keeping a brothel: for this is an offence touching tne domestic economy or government of the

house, in which the wife has a principal share ; and is also such an offence as the law presumes to be generally conducted by the intrigues of the fe-male sex. And in all cases where the wife offends alone, without the company or coercion of her husband, she is responsible for her offence as much as any femme sole. 2. Another species of compulsion or necessity is what the law calls duress per minas; or threats and menaces, which induce a fear of death or other bodily harm, and which take away for that reason the guilt of many crimes and misdemeanors, at least before the human tribunal. But then that fear which compels a man to do an unwarrantable action ought to be just and well grounded ; such, ' qui cadere possit in virum constantem, non timidum et meticulosum,' as Bracton expresses it, in the words of the civil law. Therefore, in time of war or rebellion, a man may be justified in doing many treasonable acts by compulsion of the enemy or rebels, which would admit of no ex-cuse in the time of peace. This, however, seems only, or principally, to hold as to positive crimes, so created by the laws of society, and which therefore society may excuse ; but not as to natural offences, so declared by the law of God, wherein human magistrates are only the executioners of divine punishment. And therefore, though a man be violently assaulted, and hath no other possible means of escaping death but by killing an innocent person, this fear and force shall not acquit him of murder; for he ought ra-ther to die himself than escape by the murder or an innocent. But in such a case he is permitted to kill the assailant; for there the law of nature, and self-defence, its primary canon, have

made him his own protector. 3. There is a third species of necessity, which may be distinguished from the actual compulsion of external force or fear, being the result of reason and reflection, which act upon and constrain a man's will, and oblige him to do an action which without such obligation would be criminal ; and that is, when a man has a choice of two evils set before him, and, being under a necessity of choosing one, he chooses the least pernicious of the two. Here the will cannot be said freely to exert itself, being rather passive than active ; or, if active, it is ra-ther in rejecting the greater evil than in choosing the less. Of this sort is that necessity where a man, by the commandment of the law, is bound to arrest another for any capital offence, or to disperse a riot, and resistance is made to his authority ; it is here justifiable, and even necessary, to beat, to wound, or perhaps to kill, the offenders, rather than permit the murderer to escape, or the riot to continue ; for the preservation of the peace of the kingdom, and the apprehending of notorious malefactors, are of the utmost consequence to the public, and therefore excuse the felony, which the killing would otherwise amount to. 4. There is yet another case of necessity, which has occasioned great speculation among the writers upon general law, *viz.* whether a man in extreme want of food or clothing may justify stealing either, to relieve his present necessities. And this both Grotius and Puffendorf, with many other foreign jurists, hold in the affirmative; maintaining, by many ingenious, humane

and plausible reasons, that in such cases the community of goods, by a kind of tacit confession of society, is revived. And even some English lawyers have held the same ; though it seems to be an unwarranted doctrine, borrowed from the notions of some civilians; at least the law of England admits no such excuse at present. And this its doctrine is agreeable, not only to the sentiments of many of the wises ancients, particularly Cicero, who holds that * suum cuique incommodum ferendum est, po-tius, quam de alterius commodis detrahendum ; ' but also to the Jewish law, as certified by Solomon himself: ††† ' If a thief steal to satisfy his soul when he is hungry, he shall restore seven-fold, and shall give all the substance of his house ;' which was the

ordinary punishment for theft in that kingdom. And this is founded upon the highest reason ; for men's properties would be under a strange insecurity, if liable to be invaded according to the wants of others ; of which wants no man can possibly be an ad equate judge, but the party himself who pleads them. In England especially there would be a peculiar impropriety in admitting so odious an excuse ; for by the laws such sufficient provision is made for the poor by the power of the civil magistrate, that it is impossible that the most needy stranger should ever be reduced to the necessity of thieving to support nature. The case of a stranger is, by the way, the strongest instance put by baron Puffendorf ; and whereon he builds his principal arguments; which, however they may hold upon the continent, where the parsimonious industry of the natives orders every one to work or starve, yet must lose all their weight and efficacy in England, where charity is reduced to a system, and interwoven in our very constitution. Therefore the English laws ought by no means to be taxed with being unmerciful, for denying this privilege to the necessitous ; especially when we consider that the king, on the representation of his ministers of justice, hath a power to soften the law, and to extend mercy in cases of peculiar hardship; an advantage which is wanting in many states, particularly those which are democratical; and these have in its stead introduced and adopted, in the body of the law itself, a multitude of circumstances tending to alleviate its rigor. But the founders of our constitution thought it better to vest in the crown the power of pardoning particular objects of compassion, than to countenance and establish theft by one general undistinguishing law. See PARDON.

NECESSITY, in metaphysics, implies whatever is done by a cause or power that is irresistible ; in which sense it is opposed to liberty. Man is a necessary agent, if all his actions be so determined by the causes preceding each that not one past action could possibly not have come to pass, or have been otherwise than it hath been ; nor one future action can possibly not come to pass, or be otherwise than it shall be. But he is a free agent, if he be able at any time, under the circumstances and causes he then is, to do different things ; or, in other words, if he be not unavoidably determined in every point of time, by the circninstances he is in, and the causes he is un-der, to do that one thing he does, and not possi-

bly to do any other thing. Whether man is a necessary or a free agent is a question which has been debated with much ingenuity by writers of the first eminence, from Hobbes and Clarke to Priestley and

Gregory. See METAPHYSICS and PREDESTINATION.

Upon this most difficult, perhaps, of all subjects that engage a philosophical attention, it is at least instructive, by way of warning, to observe how extreme opinions meet. Jonathan Edwards, a distinguished and rather ultra-Cal- vinist ; and Dr. Priestley, the champion of the libertine faith of Socinus (meeting, therefore, from the opposite poles of religious opinion) were philosophical necessitarians ; and held that what has been called the liberty of indifference, with regard to the performance or non-performance of an action, is not only unnecessary to virtue, but utterly inconsistent with it. ‘ Our habits and inclinations, whether vicious or virtuous, are inconsistent with the Arminian notions of liberty and moral necessity,’ says the former. ‘ The sense of self-reproach and shame,’ rejoins the latter, ‘ is excited by our finding that we have a disposi-sition of mind leading to vice, over which motives to virtue have had, in particular instances, no influence.’ Yet Dr. Priestley stoutly denied the doctrines both of hereditary and total depravity. With him, as we have seen (article METAPHYSICS), the proper foundation, or rather the ultimate object of virtue is general utility ; since it consists of such conduct as tends to make intelligent creatures the most truly happy in the whole of their existence ; though, with respect to the agent, no action is denominated virtuous that is not voluntary, or that does not proceed from some good motive. [But what is a voluntary action, according to this system ?] This reasoning our author here applies to the Deity, who, he says, ‘ pursues the happiness of his creatures by such means as are best calculated to secure that end, and which are sanctified by it ;’ ‘and,’ he adds, ‘ that the Deity may adopt some things, which he would not have chosen on their own account, but for the sake of other things with which they were necessarily connected.’ According to this, then, there is a necessity that controls Him!

On the practical influence of the different speculative opinions that have been maintained on this subject, Dr. Reid has the following excellent remarks: ‘‘‘ ‘ In the present state we see some who zealously maintain the doctrine of necessity ; others who as zealously maintain that of liberty. One would be apt to think, that a practical be-lief of these contrary systems should produce very different conduct in them that hold them ; yet we see no such difference in the affairs of common life. The fatalist deliberates, and resolves, and slights his faith. He lays down a plan of conduct, and prosecutes it with vigor and industry. He exhorts and commands, and holds those to be answerable for their conduct to whom he hath committed any charge. He blames those that are false or unfaithful to him, as other men do. He perceives dignity and worth in some characters and

actions, and in others demerit and turpitude. He resents injuries, and is grateful for good offices. If any

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man should plead the doctrine tf necessity to exculpate murder, theft, or robbery, or even wil-ful negligence in the discharge of his duty, his judge, though a fatalist, if he had common sense, would laugh at such a plea, and would not allow it even to alleviate the crime. In all such cases, he sees that it would be absurd not to act and judge as those ought to do who believe themselves and other men to be free agents ; just as the sceptic, to avoid absurdity, must, when he goes into the world, act and judge like other men who are not sceptics. If the fatalist be as little influenced by the opinion of necessity in his moral and religious concerns, and in his expectations concerning another world, as he is in the common affairs of life, his speculative opinions will probably do him but little hurt. But if he trusts so far to the doctrine of necessity as to indulge sloth and inactivity in his duty, and hopes to exculpate himself to his Maker by that doctrine, let him consider whether he sustains this excuse from his servants and dependents, when they are negligent or unfaithful in what is committed to their charge.'

As we freely examined the metaphysical claims of Dr. Reid in another part of this work, let us insert here another useful suggestion from his writings on this topic. With a view of showing that it is not impossible that the future free actions of men may be certainly foreknown, and how difficult the application of ail our reasoning upon this subject is to the divine actions and character ; he begins with observing, ' That as man does not possess this kind of knowledge, we find it difficult to conceive how it can belong to any other being. The prescience of the Deity must be different, not only in degree, but in kind, from any knowledge we can attain of futurity. But, though we can have no conception how the fu-ture free actions of men may be known by the Deity, this is not a sufficient reason for concluding that they cannot be 'known. Of the knowledge and operations of the Deity in other respects we must be content to confess our ignorance. Can we conceive how we ourselves have certain knowledge by those faculties with which God has endowed us? The analogy that subsists between the prescience of future contingents and the memory of past contingents deserves attention. The last we possess in some degree, and therefore do not hesitate to acknowledge that it may be perfect in the Deity ; but the first we have in no degree, and therefore we are apt to think it impossible. In both, the object of knowledge is neither what presently exists, nor has any necessary connexion with what presently

exists. Every argument brought to prove the impossibility of prescience, proves with equal force the impossibility of memory. If it be true, that nothing can be known to arise from what does exist, not what necessarily arises from it, it must be equally true, that nothing can be known to have gone before what does exist, but what must necessarily have gone before it. If it be true that nothing future can be known, un-less its necessary cause exist at present, it must be equally true that nothing past can be known, unless something consequent, with which it is necessarily connected, exist at present. If the

fatalist should say, that past events are indeed necessarily connected with the present, he will not surely venture to say that it is by tracing this necessary connexion that we remember the past. Why then should we think prescience impossible in the Almighty, when he has given us a faculty which bears a strong analogy to it, and which is no less unaccountable to the human understanding than prescience is. It is more reasonable, as well as more agreeable to the sa-cred writings, to conclude with a pious father of the church : ‘ Quo circa nullo modo cogimur, aut retenta praescientii Dei tollere voluntatis arbitrium, aut retento voluntatis arbitrio, Deum, quod nefas est, negare prscscium futurorum ; sed utrumque ampleotimur, utrumque fideliter et veraciter confitemur ; illud ut bene credamus ; hoc ut bene vivamus.’ ‘

NECESSITY, in mythology, a power supposed to be superior to all other powers, and equally irresistible by gods and by men. Herodotus, Hesiod, and Homer, teach that the gods were generated by Necessity, of Night and Chaos. This power, though always represented as blind and unintelligent, was, however, worshipped as a goddess, bearing in her hand large iron nails, wedges, anchors, and melted lead, as emblems of the inflexible severity of her nature. ‘ In the city of Corinth she had a temple, in which the goddess Violence likewise resided, and into which no person was ever permitted to enter but the priest who officiated in sacris. See PARC*.

NECHO II. reigned A. A. C. 616, and is celebrated in history for attempting, though in vain, to cut a canal from the Nile to the Arabian Gulf. See EGYPT. He carried his arms as far as the Euphrates, and conquered the city of Carchemish. This prince is known by the name of Necho, in profane history, as well as in Scripture. He raised great land armies, and fitted out vast fleets, as well upon the Mediterranean as upon the Red Sea ; he gave battle to the Syrians near the city of Migdol ; routed them, and made himself master of the city of Cadytis.

The learned, however, are not agreed about Cadytis. Some will have it to be Cades in Arabia Petrsea ; others Jerusalem; and others say it is the city of Cedes, or Kedesh, in Galilee, in the tribe of Naphtali. The Scriptures acquaint us with the whole expedition of Necho in all its particulars. It happened A. M. 3394. See 2 Kings xxiii. 29, &c., and 2 Chron. xxxv. 20, 21, &c. Jeremiah informs us (chap. xlvi. 2) that Carchemish was taken from Necho by Nebuchadnezzar ; and Josephus adds that this last monarch reduced the whole country between Euyptandthe Euphrates. NECK, n.s.]]]} Sax. |>neca; Goth, necka; NECK'BEEF, | Belg. neck ; Swed. and Dan. NECK'CLOTH, [necke ; It. necka. That part NECK'ATEE, /"which unites the head to the NECK'ERCUIEF, j body; hence any thing of NFCK'IACE. J its long narrow shape; and ' in the neck,' immediately on, or after another thing : neckbeef is the beef of this part of oxen : neckcloth, neckatee, and neckerchief, are names for a cloth or gorget for the neck : necklace, an ornamental string of beads worn on this part.

With wiltle thonder dint and firy leven. Mote thv \velked nekke be to brote. Chauctr

The second way to aggregate sin is by addition of sin to sin, and that is done sundry ways ; first by committing one sin on the neckof another ; as David sinned, when he added murther to adultery.

Perkint. He'll beat Aundius' head below his knee,

And tread upon his neck.

Shakspeare. Conolanus. He deposed the king, And, on the neck of that, tasked the whole state.

Shakspeare.

The access of the town was only by a neck of land, between the sea on the one part, and the harbour water on the other. Bacon.

Instantly on the neck of this came news, that Ferdinando and Isabella had concluded a peace. Id.

The length of the face twice exceedeth that of the neck. Browne,

She clapped her leathern wing against your

towers,

And thrust out her long neck, even to your doors.

Dry den.

Thou walkest as on a narrow mountain's neck, A dreadful height, with scanty room to tread. Id.

I look on the tucker to be the ornament and defence of the female neck. Addison.

Will she with huswife's hand provide thy meat, And every Sunday morn thy neckcloth plait ? Gay.

Ladies, as well then as now, wore estates in their ears. Both men and women wore torques, chains, or necklaces of silver and gold set with precious stones. Arbuthnoton Coins.

Or lose her heart, or necklace, at a ball. Pope. They'll sell (as cheap as neckbeef) for counters.

Swift. Her bony and unkerchiefed neck defies,

The rude inclemency of. wint'ry skies. Cowper.

NECK. See ANATOMY. The parts which form the neck are divided into external and internal. The external parts are the common integuments; several various muscles ; eight pairs of cervical nerves ; the great intercostal nerve ; the two ca-rotid arteries; the two external jugular veins, and the two internal ; and the glands of the neck. The internal parts are the fauces, pharynx, oeso-phagus, larynx, and trachea. The bones are the seven cervical vertebrae.

NECKAR, a considerable river of West Germany, rising in the Black Forest, not far from the sources of the Danube and traversing Wirtemberg and the north part of Baden it falls into the llhine at Manheim. Heidelberg, Heilbron, Lud-wigsburgh, Tubingen, and Rottweil, stand on its banks ; and it is navigable for large lighters to Heilbron, and for boats to Cronstadt; but here t'ie stream is very

shallow.

NECKAR, a circle of the grand duchy of Ba-den, comprehends that part of the lower palatinate which lies to the east of the Rhine. It is divided into the jurisdictions of Manheim and Heidelberg, and into nine bailiwics ; the capital is Manheim. Population 100,000. This is also the name of an extensive circle or district of the kingdom of Wirtemberg. It comprehends the west part of the kingdom. See WIRTEMBERG.

NECKAR, LOWER, one of the twelve departments of the kingdom of Wirtemberg, to the north of Ilothenberg, and adjacent to Baden. Its area is 540 square miles, divided into the bailiwics of Backnang, Brackenheim, Heilbron, Neckarsulm, and Weinsberg. The capital is Heilbron. This department is distinct from the above

circle of the Neckar, and a much larger division. Population 114,000.

NECKAR, MIDDLE, another of the twelve departments of the kingdom of Wirtwnberg, on the Neckar, and divided into two parts by the north-west corner of the principality of Hohenzollern. It consists of the bailiwics of Herren-berg, Horb, Rottenburg, Sulz, and Tubingen. The last is the chief town.

NECKAR, UPPER, one of the twelve departments of the kingdom of Wirtemberg, nearly surrounded by Baden and Hohenzollern. Its area is 580 square miles; divided into the bailiwics of Balingen, Oberndorf, Rottweil, Spaich-ingen, and Tuttlingen. The chief town is Rottweil. Population 103,000.

NECKER (James), a celebrated statesman and financier, who acted a very distinguished part during the early part of the French revolution. He was born at Geneva in the year 1732, where his father was professor of the civil law in the college. He received a good education ; and when in his fifteenth year was sent to Paris, where he was employed, first in the banking-house of Vernet, and then in that of Thelluson. His reputation for financial knowledge caused him, in 1776, when the French finances were in a disordered state, to be appointed director, and soon after comptroller-general of that department of state. Economy and regularity were the leading points of this gentleman’s financial government. He suppressed many useless offices, established provincial assemblies, and restored public credit, though his enemies asserted that his reforms, or rather pretended

reforms, were made at ihe expense of improvident loans, which left a great additional burden on the state. Whether his measures were really wise and solid, or merely specious, may perhaps be mat-ter of dispute ; but it cannot be denied that his intentions were pure, and his conduct disinterested. He refused all emolument for his services, and advanced a large sum to government from his private property, which he never drew from the public funds. His administration was generally popular; but, in proportion to the re-gard and attachment of the people, his enemies at court increased ; and, after having filled the office of minister of finance for five years, he resigned. Previously to this he had published his Compte Rendu, which was a statement of what he had done in the financial department, and what were his views of this important branch of public policy. This was followed by a work entitled De 1'Administration des Finances, which treated the subject more at large, and which was read and circulated with great avidity, and it had, unquestionably, a powerful influence in exciting the popular attention to matters of government. When M. Calonne was appointed to the office which Necker resigned, he made an attack, before the assembly of notables, upon the veracity of Necker's statements. The latter drew up a reply, which he transmitted to the king, who intimated, that, if he would forbear making it public, he should shortly be restored to his place. This he refused, and appealed to the nation by publishing his defence ; which wa►► so displeasing to the court that he was exiled to

his country seat at St. Ouen, at the distance of 120 miles from the capital. During his retreat from the busy world he wrote his work, entitled De I'lmportance des Opinions Religieuses, in which he speaks of religion like one who was fully convinced of its importance both to individuals and society. When the boasted exertions of Calonne had only augmented the deficiencies of the revenue, and the incapacity of another minister, Brienne, had become notorious, nothing was left to the court but to recal Necker, whose dismission and banishment had rendered him more popular, and whose virtues had confirmed the confidence which his talents had inspired. It was in August 1788 that

this gentleman was reinstated in his former post, to the apparent satisfaction of the court, as well as to the real joy of the people. At this time the nation groaned under a debt of more than 200,000,000 sterling. The acclamations which welcomed M. Necker to the capital could not banish from his mind the difficulties with which he had to struggle. He was aware that De Calonne and the archbishop of Sens had both sunk under the public distress, and the impracticability of raising the necessary supplies; and he well knew that the evil was not diminished, and, unless some expedient could be hit on to re-establish public credit, he foresaw his own fate must be similar to that of his predecessors. His first intentions were to recal the banished members of the parliament of Paris, and to restore that body to its functions; to replenish the treasury, which he found almost empty; and to relieve the scarcity of corn under which the kingdom, and the capital in particular, then labored. His next plan was the convocation of the states-general, which had been already promised by the king, and which, in fact, proved the immediate forerunner of the revolution. Necker was particularly blamed by his adversaries, who were watching for an opportunity of reproaching his conduct, for having consented that the number of members of the Tiers Etat should be equal to that of the nobles and clergy united. It was soon foreseen, by those who considered with attention the situation of the two parties, that the nobility and clergy would, to preserve their influence, urge their claim to vote by orders, while the representatives of the great mass of the people would be equally strenuous, that every question should be decided by a plurality of voices. At the opening of the states Necker delivered an elaborate speech, in which it was his misfortune to be desirous of pleasing both parties, and he consequently obtained the permanent confidence of neither ; the acclamations of the multitude still attended him, but several of the deputies of the Tiers Etat, as the representatives of the people were denominated, regarded already with suspicion the minister who represented the meeting of the states-general merely as the effect of royal grace, instead of a constitutional right. In the course of events, the king was persuaded to resist the unceasing claims of the popular party, and he determined upon the assembling of troops round the cities of Paris and Versailles; this was the signal for the dismission of Necker, who had raised his voice

in the most resolute tone against these measures. On the llth of July, 1789, a sudden order was brought him, while sitting at table, that he should quit the kingdom within twenty-four hours. The manner in which he submitted to this de-cree fully acquits him of any wish to

raise a commotion on his own account. Pretending u sudden indisposition he retired from company after dinner, took a post-chaise, and with Ins. wife drove first to his country seal, and thence to Brussels with all possible expedition. As soon as his dismission was known the whole city was in a flame. The destruction of that fortress of despotism, the bastile, soon followed, and such symptoms of popular fury appeared that the king was glad to send an express urging his return, with even greater celerity than he had caused his banishment. This overtook him at Basil, where he had been first apprised of the revolutionary events at Paris. He determined upon compliance with the invitation, and his return was a scene of triumph, similar, it was said, to that of Cicero from his banishment. On his approach to the capital he was hailed by the enthusiastic shouts of the people, and his entrance into Paris was regarded as a day of public rejoicing. An immense concourse of people pressed to meet him ; a numerous guard conducted him with military honors through the city ; the air resounded with acclamations. The plaudits of the multitude are never of very long duration, and the popularity of Necker had reached its summit, and it was doomed now to decline. As minister of finance he was obliged to propose expedients which of necessity were galling to the people, and his sentiments, with respect to the principles of government, were far behind those which now began to be avowed by the popular leaders, and he soon became, in the eyes of the revolutionists, an aristocrat, and, as violence predominated, his personal safety was endangered. Mortified, and perhaps alarmed, at the loss of his influence, and at the symptoms of discontent which began to manifest themselves strongly against his measures, he desired to re-sign, offering to leave, as pledges for his integrity, the money which he had advanced to government, viz., about 80,000 sterling, and his house and furniture. His resignation was accepted with much sang froid, and he left Paris with the poignant reflections of a man, certainly unequal to the duties which he had undertaken, and who had seen that popularity fade away which h.ad supported him in his former trials. He now recalled the native energies of his mind, and had recourse to his favorite occupation of writing, and several works of different kinds were the product of his solitary hours. His principal pieces are entitled ‘ Sur 1’Administration de M. Necker, par lui mfeme; Reflections, &c., which were intended to benefit the king during his captivity and trial : De Pouvoir Exe-cutif, being an essay that contained his own ideas on the executive part of government : Dernicres Vues de Politiques, et de Finance, of which the chief object was to discuss what was the best form of government France was capable of receiving. Besides these, he published a Course of Religious Morality, and a novel, writ-574

ten at the suggestion of his daughter, entitled The Fatal Consequences of a single Fault. He died at Copet, near Geneva, 19th of April, 1804.

NECKHAM (Alexander), an eminent English writer in the twelfth and thirteenth centuries, born at St. Alban's in Hertfordshire. About 1180, he taught philosophy w ith reputation at Paris. He was a good poet and a man of science for his age. In 1215 he was made abbot of Exeter, and died in 1.227. He wrote several works, which were never published ; btit they are to be found in MS. in the libraries of England and other countries.

NECKLACE, an ornamented string of gold beads, or precious stones, worn round the neck. The Egyptians were early habituated to the use of the necklace, as is proved from the greater number of their ancient statues, even those of men : sometimes these necklaces are found encrusted in silver upon statues of bronze. The Greek and Roman ladies loved to appear thus ornamented, particularly in feasts and dances. The Spaniards wore collars of iron. The Roman generals were wont to distribute necklaces solemnly amongst such soldiers as were distinguished by their valor and good conduct, and who were hence called milites torquati. These torques were frequently made of gold or of silver. The Gauls wore collars or necklaces of precious metal in their armies. Manlius received his well-known surname, Torquatus, from having despoiled a Gaul of one of these ornaments whom he had killed in single combat.

NECOPHORON, in botany, a name used by Pliny and other authors for the smilax aspera, or rough bind-weed.

NECROLIUM, a word used by some of the alchemical writers to express a remedy almost always capable of averting death, and continuing life to its utmost period.

NECROLOGY, necrologium from Gr. vtepoc, dead, and Xoyoc, enumeration, a book anciently kept in churches and monasteries, wherein were registered the benefactors of the same, the time of their deaths, and the days of their commemoration ; as also the deaths of the priors, abbots, religious canons, See. This was otherwise called calendar and obituary.

NEC'ROMANCER, n. s.) Fr. necromance ;

NEC'ROMANCY. \ Gr. vacpoc, dead,

and /xavrtc, a soothsayer. One who pretends to converse with the dead ; a conjuror : necromancy is his pretended art.

This palace standeth in the air, By necromancy placed there, That it no tempests needs to fear. Drayton.

He did it partly by necromancy, wherein he was much skilled. Abbot's Description of the World.

Do ye think this doctor will begin first with the infallibility of their great master ; and persuade him that a necromancer, a heretic, an atheist, cannot err in Peter's chair ? Bp. Hall.

The resurrection of Samuel is nothing but delusion in the practice of necromancy and popular conception of ghosts. Brmone.

I am employed like the general who was forced to kill his enemies twice over, whom a necromancer had raised to life Swift's Miscellanies.

NECROMANCY appears to have had its origin at a very early period in Egypt, and to have been thence propagated in every nation with the

manners of which history has made us acquainted. The conquests of Sesostris might introduce it into India; the Israelites would naturally borrow it from the people among whom they sojourned 400 years ; and it would easily find its way into Phoenicia, from the vicinity of that country to the land of its nativity. From the Egyptians and Phoenicians it was adopted, with the other rites of paganism, by the Greeks; and it was imported into Rome with Grecian literature and manners. It spread itself through all the modern nations of Europe, and took such deep root as to be long retained, even after those nations were converted to the Christian faith. Of its early antiquity we have complete evidence in the writings of Moses (Deut. xviii. 11, 12), where it is severely condemned as an abomination to the Lord. Profane authors not only affirm Egypt to have been the birth-place of necromancy, but in some degree account for the origin of so impious a delusion. From Diodorus Siculus \ve learn that the Grecian fables of Charon (the ferryman of hell), of Styx, Cocytus, the Ely-siaa fields, Tartarus, the judgment of Minos and Rhadamanthus, &c., with the

whole scenery of the infernal regions, were imported from Egypt into Greece. The ancient Egyptians, and indeed all the people of the east, made use of caves for burying places, which were well suited to the solemn sadness of the surviving friends, and pro-per receptacles for those who were never more to behold the light. In Egypt many of those subterraneous catacombs, dug out of the natural rock, still remain; and near to the pyramids in particular there are some apartments, which though they extend in length 4400 feet, and are about thirty feet in depth, appear to have been, if not entirely dug, at least reduced to form, by the chisel or pick-axe. From the practice of burying in such caverns sprung the opinion that the infernal mansions were situated somewhere near the centre of the e?rth, which by the Egyptians was believed to be not very distant from its surface. In these dreary mansions it was easy for the priests of Egypt to fabricate Erebus, Tartarus, the Elysian fields, and all those scenes which were displayed before the initiated (see MYSTERIES), and by them described to the peo-ple. That the Israelites, notwithstanding the di-vine prohibition, continued to practise the rites of necromancy, is apparent from Saul's transaction with the witch of Endor. From the same transaction it is likewise apparent that the witches of Israel, and in all probability the necromancers of Egypt, pretended to raise the ghosts of ihe dead by a demon or familiar spirit, which they had at their command to employ upon every emergency. This demon was called Ob ; and therefore Saul desires his servants to find him a woman who was mistress of an Ob. But though the Egyptian priests were undoubtedly the inventors of necromancy, and though it was from them imported into Greece by the Selli or priests of Dodona, it does not appear that the Grecian necromancers pretended to be masters of obi or familiar spirits. Mopsus, Orpheus, Linus, Eumolpus. &c., who either travelled into Egypt in quest of knowledge, or were actually natives of that country, instructed the early Greeks in this

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occult science : but, whatever might be the practice of these apostles themselves, their disciples professed to do all the feats of magic by performing certain rites, by offering certain sacrifices, by muttering a certain form of words, by charms, spells, and exorcisms. By these they pretended to evocate the dead as certainly as the Egyptians and Jews did by their familiar spirits. The popular story of Orpheus and Eurydice was founded on one of these necromantic deceptions exhibited in a cave near Dodona, where the priests had a hades or infernal mansion, in imitation of those with which the first of them were well acquainted in Egypt. Virgil makes one of his shepherds, by means of certain herbs, poisons, and senseless charms, raise up ghosts from the bottom of their graves ; and Lucan (Lib. vi. ver. 570), before the battle of Pharsalia, makes young Pompey travel by night to a Thessalian sorceress, and anxiously enquire of her the issue of the war. This female necromancer, by a tedious process of charms and incantations, conjures up the ghost of a soldier who had been lately slain. The phantom, after a long preamble, denounces a prediction much of the same kind with that which Saul received from Samuel at Endor. Not many years ago some of the Highlanders relied implicitly upon certain oracular responses, called in their language taghairm. This word seems to be compounded of ta, which in some parts of the Highlands is still used to denote a spirit or ghost, and ghairm, which signifies calling upon or invoking. Taghairm, therefore, in its original import, is necromancy in the most proper sense of that word. There were different kinds of taghairm, of which one was very lately practised in Sky. The diviner covered himself with a cow's hide, and repaired at night to some deep-sounding cave, whither the person who consulted him followed soon after without any attendants. At the mouth of the cave he proposed aloud the questions of which he wanted solutions ; and the man within pronounced the responses in a tone of voice similar to that with which the obi, or pretended demons of antiquity, gave from beneath the ground their oracular answers. Another species, called taghairm an uisge, or taghairm by water, was also last practised in the Isle of Sky, by a man of the name of M'Cuidhean, whose ancestors had long been fa-mous for the art. He lived near a beautiful cascade on a small river ; and, when consulted on any matter of consequence, he covered his whole body with a cow's hide, and placed himself between the water of the cascade and the rock over which it flowed. Then another man with a heavy pole gave repeated strokes to the water, and the diviner behind it crying

out now and then in Gaelic, ‘Is this a stock of am?’ This operation was continued till M’Cuidhean was perceived to be frantic or furious, when he was considered as in a condition to answer the most important questions. He was frequently consulted about futurity ; and though he couli inl, in the proper sense of the word, be called a necromancer, his responses were .listened to as proceeding from something more than human. A degree of frenzy, either real or affected, seems to have accompanied the predictions of certain

kinds of diviners in all ages ; and we cannot help remarking the similarity between the madness of M’Cuidhean and that of the Sybil in the ./Eneid. That all these pretences, whether ancient or modern, to the power of divination by means of familiar spirits, or by the art of necromancy, were groundless as well as impious, it is needless to offer anv proof.

NECROPOLIS,“a suburb of Alexandria in Egypt. The name signifies the City of the Dead; and contained temples, gardens, and superb mausoleums. Here Cleopatra applied the aspic to her breast, to prevent her being led in triumph by Augustus.

NECROSIS, in surgery, from Gr. v►►poo>, to destroy, mortification of the bones. See SURGERY.

NECTANEBUS II.. king of Egypt, made an alliance with Agesilaus king of Sparta, and with his assistance quelled a rebellion of his subjects. Some time after he was joined by the Sidouians, Phoenicians, and inhabitants of Cyprus, who had revolted from the king of Persia. This powerful confederacy was soon attacked by Darius king of Persia. Nectanebus, to defend his frontiers, levied 20,000 mercenary soldiers in Greece, as many in Libya, and 60,000 in Egypt. This numerous body was not equal to the Persian forces, and Nectanebus, defeated in a battle, gave up all hopes of resistance, and fled into Ethiopia, where he found a safe asylum. Egypt became from that time tributary to the king of Persia.

NECTAR, n.s ~\ Lat. nectar; Gr.

NEC’TARED, adj. f vterap. The sup—

NECTA’REOUS, I posed drink of the

NEC’TARINE, adj. & n. s. J gods. See below. Nectared is tinged with, or sweet as nectar : nectareous is resembling nectar : nectarine,

synonymous, as an adjective, with nectared ; and, as a substantive, a fruit of the plum kind.

How charming is divine philosophy ! Not harsh and crabbed, as dull fools suppose, But musical as is Apollo's lute, And a perpetual feast of nectared sweets, Where no crude surfeit reigns. Milton.

To their supper-fruits they fell ; Nectarine fruits. Id.

The only nectarine* are the murry and the French ; of the last there are two sorts, one, which is the best, very round, and the other something long ; of the murry there are several sorts. Temple.

He with the Nais wont to dwell, Leaving the nectared feasts of Jove. Teuton. Annual for me, the grape, the rose renew, The juice nectareous and the balmy dew. Pope.

Rejoice for ever, nature cries ; rejoice, And drinks to man in her nectareov* cup. Mixed up of delicacies for every sense ; To the great founder of the bounteous feast, Drinks, glory, gratitude, eternal praise. Young.

Love tuned his song ; For fair Theana was his only theme,

And for whom he oft.

Had climbed the bending cocoa's airy height, To rob it of its nectar ; which the maid, \Yhen he presented, more nectareous deemed.

Graingrr.

NKCTAR, was fabled to be the drink of the gods in contradistinction from their solid food, culled ambrosia.

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NECTARINE, in botany. See AMYGDALUS, and PERSICA.

NECTARIUM, from nectar, an appendage of the flowers of many plants, containing a sweet liquor, sucked by bees, Sec. See BOTANY. All flowers are not provided with it, neither is it essential to fructification. Linne is censured by some botanists for terming the nectarium a part of the corolla. He might (it is said), with equal propriety, have termed it part of the stamina, calyx, or pointal, as it is confined to no particular part of the flower, but is as various in point of situation as of form. The term nectarium is indeed exceedingly vague; and, if any determinate meaning can be affixed to it, is expressive of all the singularities which are observed in the different parts of flowers. The tube, or lower part of flowers with one petal, Linne considers as a true nectarium, because it is generally found to contain the sweet liquor. This liquor Ponte-dera compares to that called amnios in pregnant animals, which enters the fertile or impregnated seeds : but that this is not its sole use is evident from this circumstance, that it is found in flowers where there are either no seeds, or those which, from the want of male organs, cannot be impregnated. Thus die male flowers of nettle and wil-low, the female flowers of sea-side laurel and black bryony, the male and female flowers of clutia, all abound with this honey or nectar. Vaillant was of opinion that the nectarium was an essential part of the corolla: for which reason he distinguished the singular appearances in fen-nel-flower and columbine by the name of petals: the colored leaves now termed petals he denominated flower-cups. That the nectarium, however, is often distinct from the petals is evident, both from these examples, and from the flowers of monkshood, hellebore, isopyrum, fennel-flower of Crete, barren wort, grass of Parnassus, chocolate-nut, cherleria, and sauvagesia.

NECUIA, a name given by the ancient Greeks to a species of mullein. The Greeks and Ro-mans both used the stalks of a peculiar kind of mullein, called thryallis by Nicander. For the making of wicks of lamps we have a kind of mullein called lychnites, and candle-wick mullein, from the \v%virijc of Dioscorides; but it is not certain that ours is the same plant. The ancients used the stalks of many different plants for the wicks of their candles and lamps. The rush, stripped of its bark, was as commonly in use with them as with us for this purpose; and they also used the nettle, this mullein, and many other

plants, whose stalks were composed of tough filaments, for the same purpose ; beating them out like hemp, and when dry dipping them in melted rosin, and other such inflammable substances. When thus prepared, they are readily inflammable ; and this mullein, having stalks more long and large, and more firm than all the others, was used to make those lights with which they set fire to the funeral pile for consuming the bodies of their dead friends.

NECYDALTS, in zoology, a genus of insects belonging to the order of coleoptera. The feelers are setaceous ; the elytra are shorter and narrower than the wings ; the tail is simple. There are several species, chiefly distinguished by the

size and figure of their elytra. ‘ Their head it black, eyes are large and prominent, jaws are of a dark brown. The antenna? placed on the top of the head between the eyes have their first articulation long and raised upright, the rest bent and turned aside. The antennre vary as to length and color. In individuals whose thorax is yel-low they are brown, and equal only to two-thirds of the body in length. On the contrary, in those whose thorax is black, they are likewise black, and somewhat longer than the body. The thorax is margined ; in some it is yellow and longer in others it is black, shorter, and edged only with a little yellow. The elytra are blackish, somewhat clearer in the middle, and terminating in a lemon-colored spot. The wings are rather black, something longer than the body ; exceed the elytra by one-third, and are crossed one over the other. In those which have their thorax yellow the legs and under part of the belly are so likewise. In individuals with a black thorax the legs are black as well as the belly, which has only a little yellow on the sides. See ENTOMOLOGY.

NEDSJED, an extensive province of Arabia, including nearly all the central parts, and having on the west Hedsjas and Yemen, on the south Hadramaut, on the east Lahsa and Ommon. It is composed of vast mountains and deserts ; many parts of which, however, are habitable, and covered with hordes of that nomadic race which characterises this part of the East. The tract bordering on Syria is flat ; but to the south rises a very extensive and lofty range of mountains, covered with extensive forests, and maintaining a numerous population. To the south, on the borders of Hadramaut and Ommon, the country again becomes desert. The track, indeed, is al-most a Terra Incognita, the existence of which has been chiefly felt by the swarms which have issued from it, to conquer and lay waste neighbouring countries. The Wahabis in modern times are a

conspicuous instance. They have occupied the holy cities of Mecca and Medina and made incursions into Syria and Palestine, and threatened Egypt. Their capital is Derreia. This tract, isdivided into many petty sovereignties.

NEED, n.s.,v. a.&v. n.ˆ\ NEED’ER, n. s. NEED’FUL, adj.

NEED’FULNESS, n. s. NEED’ILY, adv. NEED’INESS, n.s. NEED’LESS,ˆ. NEED’LESSLY, adv. NEED’LESSNESS, n.s. NEED’MENT, n. s. NEEDS, adv. NEED’Y, adj.

Sax. neoˆ; Goth. naud ; Belg. nood ; Swed. nod. Want; exigence ; extreme poverty or difficulty : to need is ˆ to want or lack : and, as a neuter verb, to have necessity; be wan ted; be necessary : needful is necessary ; indispensable :

needy, poor ; necessitous ; in distress from poverty : needily, neediness, follow this sense : needless is unnecessary ; useless, (obsolete): a needment, something needed : needs, necessarily ; indispensably ; the other derivations take their meaning from these.

The poor and needy praise thy name. Psalms.

The whole need not a physician, but the sick.

Matthew.

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(jive us all things that be needful, both for our souls and bodies. Common Prayer.

Defer not to give to him that is in need. Ecclus.

Behind His scrip did hang, in which his needments he did

bind. Spenter.

Their gates to all were open evermore, And one sat waiting ever them before, To call in comers by, that needy were and poor.

Id.

More ample spirit than hitherto was wont, Here need* me whiles the famous ancestors, Of my most dreadful sovereign I recount. Id. Their exception against easiness, as if that did nourish ignorance, proceedeth altogether of a need-leu jealousy. Hooker.

God must needi have done the thing which they imagine was to be done. Id.

The very stream of his life, and the business he hath helmed, must, upon a warranted need, give him a better proclamation. Shaktpeare.

Famine is in thy cheeks ; Neea and oppression stare within thine eyes, Contempt and beggary hang upon thy back. Id. God grant we may never have need of you. Id.

For his weeping in the needless stream, Poor dear, quoth he, thou makest a testament, As wordlings do, giving thy sum of more To that which had too much. Id.

This sudden stab of rancour I misdoubt ; Pray God, I say, I prove a needless coward. Id.

Basest beggars

Are in the poorest things superfluous ; Allow not nature more than nature needs, Man's life is cheap as beasts. Id.

In his needy shop a tortoise hung, An alligator stuffed, and other skins Of ill-shaped fishes. Id. Romeo and Juliet.

If the time thrust forth A cause for thy repeal, we shall not send O'er the vast world, to seek a single man ; And lose advantage, which doth ever cool In the absence of the needer. Id.

Do you consent we shall acquaint him with it, As needful in our loves, fitting our duty 1 Id.

Whereas men have many reasons to persuade ; to use them all at once, weakeneth them. For it argueth a nfediness in every of the reasons, as if one did not trust to any of them, but fled from one to another.

Bacon.

Another being elected and his ambassadors returned, he would needs know the cause of his repulse.

Davies. They who

Dare for these poems, yet both ask and read, And like them too ; must needfully, though few, Be of the best. Ben Jonson.

Needt must they come whom God brings.

Bp. Hall.

Thou thy regal sceptre shall lay by, For regal sceptre then no more shall need.

Milton.

That spirit that first rushed on thee, In the camp of Dan, Be efficacious in thee now at need. Id.

I perceive

Thy mortal sight to fail : objects divine Must needs impair, and weary human sense. Id. To say the principles of nature must needs be such as philosophy makes them, is to set bounds to omnipotence. Glanville.

Nuptials of form, of interesl, or of stale, Those seeds of pride are fruitful in debate : Lei happy men for generous love declare, And chuse the needy virgin, chaste and fair. Id. Voi. XV.

We rendei languages more difficult to be learnt, and needletsly advance orthography into a troublesome art. Holder. A trial at law must needs be innocent in itself, when nothing else corrupts it ; because it is a tning ###which we cannot but want, and there is no living in this world without it Kettletoell.

Being put to right himself upon the needn, he will look upon it as a call from God to charity. Id.

We bring into the world a poor needy uncertain life, short at the longest, and unquiet at the best.

Temple.

In thy native innocence proceed, And summon all thy reason at thy nee'l.

Dry den.

I have affairs below.

Which I musl needs dispatch before I go. Id. All things needful for defence abound, Mnestheus, and brave Sereslhus walk the round.

Id.

To ask whether the will has freedom ? is to ask , whether one power has another ? A question too ab-surd to need an answer. Locke.

To explain St. Paul's epistles, after so great a train of expositors, might seem censurable for its needlets-ness, did nol daily examples of pious and learned men justify it. Id.

When we have done it, we have done all that is in our power, and all

that needs. Id.

He thai would discourse of ihings, as they agree in the complex idea of extension and solidity, neeiiea but use the word body. Id.

To my present purpose it is not needful to use ar-gumenls, lo evince the world to be infinite. Id.

God sometimes calls upon thee to relieve the needi of thy brother, sometimes the necessities of thy country, and sometimes the urgent wants of thy prince. South.

A lonely desart and an empty land, Shall scarce afford, for needful hours of rest, A single house to their benighted guest.

Add'uon.

To relieve the needy, and comfort the afflicted, are duties thai fall in our way every day. Id.

Would nol ihese be greal and needless abatements of their happiness, if it were confined within the compass of this life only? Atterhurii.

Money we either lock up in chests, or waste it in needless and ridiculous expences upon ourselves, whilst the poor and the distressed want it for necessary uses. Law.

God who sees all things intuitively, neither stands in need of logick, nor uses it. Baker.

The largest and the longest kind

Possess the foremost page, A sort most needed by the blind,

Or nearly such, from age. Cowper.

If stormy winds

Rise not, the waters of the deep shall rise, And, needing none assistance of the storm, Shall roll themselves ashore, and reach him there.

Id.

H►► does not delain his reader by any needless cir-cumloculion. Canning.

NEEDHAM (John Tuberville), was born at London, 10th of September 1713. His parents were descended from ancient and noble families. His father, who had once a considerable patri-mony at Hilston in Monmouthshire, was of the younger and Catholic branch of the Needham family : the head of the elder and Protestant branch was lord Kilmory, created viscount in 1C25. The father of Mr. Needham died young, and left but a small fortune to his four children.

His eldest son, John, prosecuted his studies in the English college of Douay, where he took or-ders, taught rhetoric for several years, gave eminent proofs of genius, and surpassed all the other professors in experimental philosophy. In 1740 he was engaged in the English mission, and was entrusted with the direction of the school atTwy-ford, for the education of Roman Catholic youth. In 1744 he was appointed professor of philosophy in the English college at Lisbon, where, on account of ill health, he remained only fifteen months. After this he spent several years at London and Paris, principally in microscopical observations and other branches of experimental philosophy. The results of his experiments were published in the Philosophical Transactions in 1749, and in a volume in 12mo. at Paris in 1750. An account of them was also given by M. de Buffon, in his Natural History. This illustrious French naturalist and Mr. Need-harn made their experiments and observations together : though the results and systems which they deduced from the same objects and obser-rations were totally different. Mr. Needham was admitted F. R. S. of London in 1747, and F. A. S. some time after. From 1751 to 1767 he was chiefly employed in attending several English and Irish noblemen, as tutor, in their travels through France, Italy, and other countries. He then retired to the English seminary at Paris, and in 1768 was chosen by the Royal Academy of Sciences in that city a corresponding member. When the regency of the late Austrian Netherlands formed the project of an imperial academy, Mr. Needham was invited to Brussels by count Cobentzel and the president Neny, and was appointed chief director. He held this place, with some ecclesiastical preferments in the Low Countries, until his death, December 30th, 1781.

NEEDHAM (Marchmont), an English satirical writer, born at Burford, Oxon, about August 1620. He was sent at the age of fourteen to All Souls College, Oxford, where he was made one of the choristers, and continued till 1637, when he took the degree of A. B. and went to

London. About the beginning of the civil wars he became clerk to an attorney at Gray's Inn. In August, 1643, he began a weekly paper entitled Mercurius Britannicus, on the side of the parliament. It commenced in August 1643, in one sheet, and continued till the end of 1646. It procured him popularity, and he was distinguished by the title of captain Needham of Gray's Inn. About this time he studied physic, and in 1645 began to practise; by which, and his political writings, he supported a genteel establishment. But on account of some affront he left his party, turned royalist, was introduced to the king at Hampton-court in 1647, and, asking pardon, readily obtained it: after this he wrote another paper, entitled Mercurius Pragmaticus ; which being equally witty with the former, as satirical against the Presbyterians, made him admired by the wits of the royal party side. However, be-ing narrowly sought after, he left London, and for a time lay concealed at the house of Dr. Peter Ileylin, at Minster-Lovel, near Burford, till being discovered, he was imprisoned in Newgate, and in danger of his life. Lenthal the speaker of the

House of Commons, who knew his relations, and Bradshaw president of the high court of justiciary, treated him favorably, and not only procured his pardon, but, with promise of rewards, persuaded him to change his side once more for the Independents, who then were the uppermost party. ††† In this temper he published a third weekly paper called Mercurius Politicus, which came out every Wednesday, in two sheets 4to., commencing with the 9th of June 1649, and ending with the 6th of June 1650, which being Thursday, he began again with No. 1. This paper, which contained many discourses against monarchy, and in behalf of a free state, was carried on without any interruption till about the middle of April 1660, when it was prohibited by an order of the council of state. Upon the re-turn of Charles II. our author lay hid, till he obtained his pardon; after which he practised physic among the Dissenters, which brought him in a considerable emolument till his death, in 1678. Had he been constant to his principles, he would have been beloved and admired by all ; but being mercenary, and preferring his interest to his conscience, he was much hated by the royal party to the last.

NEE'DLE, n. s. \ Sax. nat>l ; Belg. naeld ;

NEE'DLE-FISH, / Teut. nadle. A sewing inNEED'LER, V strument, used by the hand ;

NEE'DLEMAKER, i the steel bar of a compass :

NEE’DLEWORK. J needle-fish, a sea-fish : needier and needlemaker are names for the manufacturers of needles : needlework, the work performed by means of that instrument.

In needleworks and embroideries it is more pleasing to have a lively work upon a lightsome ground, than a dark and melancholy work upon a lightsome ground. Bacon.

A ship of merchants that fetches her wares from far is the good housewife of the commonwealth ; and, if she were so in those blind voyages of antiquity which never saw needle or card, how much more thrifty must she needs be in so many helps both of nature and art. Bp. Hall.

Go bid the needle its dear north forsake, To which with trembling reverence it doth bend.

Cowley.

The most curious works of art, the sharpest finest needle, doth appear as a blunt rough bar of iron coming from the furnace of the forge. Wilhins.

For him you waste in tears your widowed hours, For him your curious needle paints the flowers.

Dryden.

The use of the loadstone and the mariner’s needle was not then known. Burnet’s TJieory.

In a curious brede of needlework, one colour falls away by such just degrees, and another rises so insensibly, that we see the variety without being able to distinguish the total vanishing of the one from the first appearance of the other. Addison.

One rhomboidal bony scale of the needle-Jish.

Woodward.

Thy needles, once a shining store, For my sake restless heretofore, Now rust disused, and shine no more,

My Mary. Cowper.

NEEDLE. Needles make a very considerable article in commerce, though there is scarcely any commodity cheaper; the consumption of

them being almost incredible. ††† The sizes are from

No 1. the largest, to No. 25, the smallest. In the manufacture of needles, German and Hungarian steel are of most repute. Besides sewing-needles there are, under the denomination of needle, the netting and the knitting-needle ; the glovers' needle, with a triangular point; the tambour needle, which is made like a hook, and fixed in a handle, the hook being thrust through the cloth, the thread is caught under the hook, and the needle is drawn back taking the thread with it.

In the making of them, the first thing is to pass the steel through a coal fire, and, under a hammer, to bring it out of its square figure into a cylindrical one. This done, it is drawn through a large hole of a wire-drawing iron, and returned into the fire, and drawn through a second hole of the iron smaller than the first ; and thus successively, from hole to hole, till it has acquired the degree of fineness required for that species of needles ; observing every time it is to be drawn that it be greased over with lard, to render it more manageable. The steel thus reduced to a fine wire, is cut in pieces of the length of the needles intended. These pieces, are flattened at one end on the anvil, in order to form the head and eye ; they are then put into the fire to soften them further, and thence taken out and pierced at each extreme of the flat part on the anvil, by force of a puncheon of well-tempered steel, and laid on a leaden block to bring out, with another puncheon, the little piece of steel remaining in the eye. The corners are then filed off the square of the heads, and a little cavity filed on each side of the flat of the head ; this done, the point is formed with a file, and the whole filed over : they are then laid to heat red-hot on a long narrow iron, crooked at one end, in a charcoal fire; and, when taken out thence, are thrown into a basin of cold water to harden. On this operation a good deal depends ; too much heat burns them, and too little leaves them soft; the medium is learned by experience. When they are thus hardened they are laid in an iron shovel on a fire more or less brisk in proportion to the thickness of the needles; taking care to move them

from time to time. This serves to temper them, and to take off their brittleness : great care here too must be taken of the degree of heat. They are then straightened one after another with the hammer, the coldness of the water used in hardening them having twisted the greatest part of them.

The next process is the polishing them. To do this they take 12,000 or 15,000 needles, and range them in little heaps against each other on a piece of new buckram sprinkled with emery-dust. The needles thus disposed, emery dust is thrown over them, which is again sprinkled with oil of olives ; at last the whole is made up into a roll, well bound at both ends. This roll is then laid on a polishing table, and over it a thick plank loaded with stones, which two men .work backwards and forwards a day and a half, or two days, successively, by which means the roll thus continually agitated by the weight and motion of the plank over it, the needles withinside being rubbed against each other with oil and emery, are insensibly polished. After polishing they

are taken out, and the filth washed off them with hot water and soap : they are then wiped in hot bran a little moistened, placed with the needles in a round box, suspended in the air by a cord, which is kept stirring till the bran and needles be dry. The needles, thus wiped in two or three different brans, are taken out and put into wooden vessels to have the good separated from those whose points or eyes have been broken either in polishing or wiping : the points are then all turned the same way, and smoothed with an emery stone turned with a wheel. This operation finishes them, and there remains nothing but to make them into packets of from twenty-five to 100 each.

Such was the former method of the manufacture of needles ; we shall now give a rather more detailed description of the modern, and improved plan : ††† The wire when drawn to a pro-per size, which is ascertained by gages, is made up into coils for package : these coils of wire are heated to a dull red-heat in a furnace, and suffered to cool gradually, to soften and anneal it, with a view of facilitating the working of the steel ; this commences by cutting the wire into lengths, which is done by a pair of sheers. The workman, being seated before a bench, takes, perhaps 100 pieces of wire for fine needles, and introduces their ends between the blades, which he opens with his right hand, and pressing the ends of the wire against a gage, which renders them all of one length, he cuts them off, and they drop down into a tin pan placed on a small shelf in front of the bench ; the ends of the wire are now pressed against the gage and cut off again. In this

way the wires are cut into the lengths of the required needles. The second operation is flatting the end for the eye of the needle, which is done by a workman taking three or four pieces of the wire between his finger and thumb, placing them on a small anvil., and striking one blow upon each expands the end sufficiently to receive the point of the punch which pierces the eye. This the same person does, before he lays them down, with a small instrument fixed on the same block as that to which the anvil is fixed. The end of the needle is placed in a small notch in the bed of the instrument, and is put exactly beneath the punch, and a slight stroke of the hammer punches the eye, and at the same time forms the semicircular groove near the eye of the needle to bury the thread. The notch which receives the needle is made in a piece of steel which fits into a dovetail notch in the bed of the instrument, so that it can be changed for a larger or smaller, correspondent to the size of the needles to be pierced. Tlie workman holds the needles in the same manner as he did for flatting ; and, placing them one by one successively in the notch in the bed-piece, pierces them by striking a single blow of his hammer on the end of a slider ; the slider is immediately returned by a spring. He now places the next needle under the punch, and, when they are all pierced in the same manner, he rolls them over by moving his thumb, so as to turn them all half round, and brir.►► them upwards the opposite side to that which was pierced ; this being done, he repeats the punch

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ing on the other side with a view to finish, and clear the eye, and to form the groove which there is in all needles. They are now rounded at the eye-end to take off the roughness, which is done >ri an instant by applying them to a grindstone.

The next process is hardening and tempering : the first is done by placing a great number together upon a piece of iron bent up at the ends and sides that they may not roll off, and, introducing them into a small furnace : when they become of a red heat they are taken out, and suddenly plunged into a vessel of cold water; this renders them

very hard. Some manufacturers make use of oil, or tallow, or other ingredients instead of water, which substances are supposed to improve the process. The needles thus hardened are returned to the furnace with the oil upon them, and remain there till the oil inflames, when they are withdrawn, and again cooled in cold water. This second process tempers them : at first they were quite hard, and so brittle as to break with the slightest touch ; the tempering takes off the brittleness, but leaves them hard enough to take a good point. When they are hardened in water, according to the old method, the heat for tempering them can only be guessed at, or estimated by experience, but the flaming of the oil is a much more certain me-thod. The needles are now examined, and many of them will be found crooked by hardening, which are discovered by rolling them over as they lie in rows on a board, and such are selected and made straight by a blow in the notch in the anvil. Being thus straightened they require to be pointed, which is done by a large grindstone turned by a mill, either of water or steam. In this operation the workman, sitting astride before the stone on a block shaped like a saddle, takes up twenty or thirty needles, laid side by side across a small wooden roller, covered with soft leather; another similar ruler being laid over the needles to confine them. The workman holds the rulers in his hands, and thus, presenting the ends of the needles to the grindstone, points them with great dexterity. After pointing they are to be polished in the manner already described. The points are next finished and rendered perfectly sharp, by grinding them upon a wooden wheel covered with emery, being held in the same manner as for the first grinding. They are then cleaned and packed up in certain numbers according to their sizes. A great num-ber of the small packets are made into larger parcels, wrapped in several thicknesses of paper and coverings of bladder and packing-cloth, in which state they are sent to market.

Surgeons' needles are generally made crooked, and their points triangular ; however, they are of different forms and sizes, and bear different names, according to the purposes they are used for. The largest are needles for amputation ; tiie next needles for wounds ; the finest needles for sutures. They have others very short and flat for tendons ; others still shorter, and the eye placed in the middle, for tying together of vessels, &c. Needles for couching cataracts are of various kinds ; all of which have a small, broad, and sharp point or tongue, and some with a sulcus at the point. Surgeons have sometimes used

two needles in this operation ; one with a sharp point for perforating

the coats of the eye, and another with a more obtuse point for depressing or couching the opaque crystalline lens ; but care should be taken in the use of any of these, that they be first well polished with cloth or leather before they are applied to the eye.

Mr. Warner observes that the blade of the couching needle should be at least a third part larger than those generally used upon this occasion, as great advantages will be found in the depressing of the cataract by the increased breadth of the blade of that instrument. The handle, also, if made somewhat shorter than usual, will enable the operator to perform with greater steadiness than he can do with a large-handled instrument. It is to be observed that needles of silver pierce more easily in stitching arteries after an amputation than those made of steel.

We shall close this short article with an account of a patent invention for the manufacture of needles of all sorts by Mr. William Bell of Walsal, which we shall give in his own words. ‘ The method by which I make needles, bodkins, fish-hooks, knitting-pins, netting-needles, and sail-needles, is by casting them with steel or common fusible iron, called pig or cast iron, into moulds or flasks made with fine sand. Or, otherwise, I make stocks or moulds of iron or steel, or any other composition capable of being made into moulds, on which stocks or moulds I sink, engrave, or stamp, impressions of the said articles. Into these I pour my melted iron or steel (I prefer for my purpose sand casting), and prepare my iron or steel as follows : I melt it in a pot or crucible, in small quantities about the weight of twelve pounds (and upwards to twenty pounds), the more conveniently to divest it of its heterogeneous particles, and to purify it from its earthy or sulphureous qualities. When the iron has attained a proper heat, I take charcoal-dust mixed with lime or common salt, which I throw into the pot of melted iron ; and, by frequently stirring it with an iron rod, I bring to the surface of the iron a scoria which I frequently skim off, and thus bring my iron into a refined state. I then pour it into the mould before described. The articles being thus formed are capable of being softened, hardened, or tempered in the usual way by which needles, bodkins, fish-hooks, knitting-needles, netting-needles, and sail-needles have heretofore been manufactured : therefore the principal merit of my invention is in casting them instead of making them in the usual way.’

Needles are said to have been first made in England by a native of India in 1545, but the art was lost at his death ; it was, however, recovered by Christopher Greening in 1560, who was settled with his three children, Elizabeth, John, and Thomas, by Mr. Damar, ancestor

of the present lord Milton, at Long Crendon in Bucks, where the manufactory has been carried on from that time to the present period.

NEEDLE, DIPPING. See DIPPING NEEDLE, COMPASS, ELECTRO-MAGNETISM, &c.

NEEDLE-FISH. See SYNGNATHUS.

NEEDLES, sharp pointed rocks, north of the

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Isle of Wight. They are situated at the west end of the island, which is an acute point of high land, from which they have been disjoined by the washing of the sea. There were of these “ofty white rocks formerly three, but about fourteen years ago the tallest of them, called Lot’s Wife, which rose 120 above low water mark, and in its shape resembled a needle, being undermined by the constant efforts of the waves, totally disappeared.

NEEDLE’S EYE, a subterranean passage on the coast of Banffshire, 150 yards long from sea to sea, but through which a man can with difficulty creep. At the north end of it is a cave twenty feet high, thirty broad, and 150 long, containing a space of 90,000 cubic feet. The whole is supported by immense columns of rock, is exceedingly grand, and has a surprising effect on the spectator, after creeping through the narrow passage.

NEELGUR, a town of the province of Orissa, Hindostan, in the district of Cuttoch. It gives name to a range of hills which extend west from Midnapore.

NEEIE, Henry ; an ingenious English poet and novel writer, who died, by his own hand, February 9, 1828, in a fit of insanity, supposed to have originated from too intense application to study. He was the son of an engraver, and educated for the profession of a solicitor, which he practised with reputation in London, till his death. He was a man of amiable disposition. Among his publications are Poems ; Dramatic Scenes; and the Romance of Ilisiory, a series of tales relating to persons and events mentioned in English annals. His literary remains have been published since his death.

NE EXEAT REGNO, in law, is a writ to restrain a person from going out of the kingdom without the king’s license. It may be directed to the sheriff to make the party find surety that he will not depart the realm, and on refusal, to commit him to prison ; or it may be directed to the party himself, and if he then goes he may be fined. And this writ is granted on a suit being commenced against a man in the chancery, when the plaintiff fears the defendant will fly to some other country, and thereby avoid the justice and equity of the court; which has been sometimes practised ; and, when thus granted, the party must give bonds to the master of the rolls, in the penalty of ––1000,

or some other large sum, for yielding obedience to it ; or satisfy the court, by answer, affidavit, or otherwise, that he has no design of leaving the kingdom, and give security.

NEFA'RIOUS, adj. Lat. nefarius. Wicked; abominable.

NEFASTI DIES, in Roman antiquity, an appellation given to those days wherein it was not allowed to administer justice or hold courts. They were so called, because, non fari licebat, the prastor was not allowed to pronounce the three solemn words or formulas of the law, do, dico, addico, I give, I appoint, I adjudge. These days were distinguished in the calendar by the letter N. for nefastus; or N. P. nefastus primo, when the day was only nefastus in the forenoon, or first part. The days of a mixed kind were called intercisi

NEGAPATAM, a town and citadel of Tanjore, once the capital of the Dutch possessions on the Coromandel coast. It stands at the mouth of a river, capable of receiving vessels which draw little water ; but there is a bar over which the surf breaks with great violence in bad weather. Southeast of the town, at the distance of five miles, there is a shoal above five miles in length, having from three to six fathoms water in it. The anchoring place is opposite the town, about three miles from shore, where there is very little current. Negapatam was a small village, first fortified and improved by the Portuguese. It was taken from them by the Dutch in 1660, who strengthened its fortifications, and established a mint here. By degrees its trade increased, and the town was resorted to by merchants from all parts of the world. In 1781 it was captured by the British ; and, at the ratification of the peace in 1783, was formally ceded ; since which the fortifications have been neglected, and much of the trade transferred to other places. North of the town stands a large pagoda, or Hindoo temple, on which is erected a. flag-staff, which in clear weather may be seen at six or seven leagues distance. Long. 79►► 55' E., lat. 10►► 43' N.

NEGARA, a town of the island of Borneo, and capital of the kingdom of Banjar Massim, situated on the east side of a large river which runs into the sea : 100 miles from the sea, and sixty north from the town of Banjor Massim.

NEGATION, n.s. } Fr. negation ; Lat.

NEG'ATIVE, adj. & n. s. > negatio. Denial ; de—

NEG'ATIVELY, adv. j scription or argument by denial, absence,

exclusion, or exception : negative is denying; not positive; having the power to deny or withhold ; a proposition or particle of denial : negatively follows the senses of the adjective.

The fathers draw arguments from the Scriptures negatively, in reproof of that which is evil ; Scriptures teach it not, avoid it therefore. Hooker.

Denying me any power of a negative voice as king, they are not ashamed to seek to deprive me of the liberty of using my reason with a good conscience.

King Charles.

A purer substance is defined, But by an heap of negative! combined ; Ask what a spirit is, you'll hear them cry, It hath no matter, no mortality. Clemvlami.

It may be proved in the way of negation, that they came not from Europe, as having no remainder of the arts, learning and civilities of it. Heylyn.

To this I shall suggest something by way of answer both negatively and positively. Wilkins.

When 1 asked him whether he had not drank at all ? he answered negatively. Boyle.

Consider the necessary connection that is between the negative and positive part of our duty.

Tillotson.

Of negatives we have far the least certainty ; they arc usually hardest, and many times impossible to be proved. Id.

The former beins as the root and stock, the latter as the fruits and flowers of the duty : unto which may be reduced the correspondent negation*, or absence of bad judgments, affections, and deportments, in respect to the same objects. Barrow.

There is another way of denying Christ with our mouths which is negative, when we do not acknow ledge and confess him. South

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I shall show what this image of God in man is, xegatirelu. by showing wherein it does not consist ; and positively, by showing wherein it does. Id.

Our assertions and negation* should be yea and nay, for whatsoever is more than these is sin.

Roger*.

Chance signifies, that all events called casual, among inanimate bodies, are mechanically and naturally produced according to the determinate figures, textures, and motions of those bodies, with this only ntgaticm, that those inanimate bodies are not conscious of their own operations. Bentley.

Negation is the absence of that which does not naturally belong to the thing we are speaking of, or which has no right, obligation, or necessity to be present with it ; as when we say a stone is inanimate, or blind, or deaf. Watts' t Logick.

NEGATIVE SIGK, in algebra. See ALGEBRA. The use of the negative sign is attended with several consequences that at first sight are admitted with difficulty, and has sometimes given occasion to notions that seem to have no real foundation. This sign implies that the real value of the quantity represented by the letter to which it is prefixed is to be subtracted ; and it serves, with the positive sign, to keep in view what elements or parts enter into the composition of quantities, and in what manner, whether as increments or decrements (that is, whether by addition or subtraction), which is of the greatest use in this art. Tn consequence of this it serves to express a quantity of an opposite quality to the positive, as a line in a contrary position ; a motion with an opposite direction ; or a centrifugal force in opposition to gravity ; and thus often saves the trouble of distinguishing, and demonstrating separately, the various cases of proportions, and preserves their analogy in view. But as the proportions of lines depend on their magnitude only, without regard to their position, and motions and forces are said to be equal, or unequal, in any given ratio, without regard to their directions; and in general the proportion of quantity relates to their magnitude only, without determining whether they are to be considered as increments or decrements; so there is no i. round to imagine any other proportion of ††† b and -f-a (or of ††† 1

and + 1) than of the real magnitudes of the quantities represented by b and 3, whether these quantities are, in any particular case, to be added or subtracted. It is the same thing to subtract a decrement, as to add an equal increment, or to subtract ††† 6 from a ††† b, as to add + 6 to it ; and, because multiply ing a quantity by a negative number implies only a repeated subtraction of it, the multiplying ††† b by ††† n, is subtracting ††† b as often as there are units in n ; and is therefore equivalent to adding -- b so many times, or the same as adding -- n b. But if we infer from this that 1 i? to ††† n as ††† 6 to n b, according to the rule that unit is to one of the factors as the other factor is to the product, there is no ground to imagine that there is any mystery in this, or any other meaning than that the real magnitude represented by 1, n, b, and n b are proportional. For that rule relates only to the magnitude of the factors and product, without determining whether any factor, or the product, is to be added cr subtracted. But this likewise must be determined in algebraic computations : and this is the proper use of the rules concerning the signs, without which the operation could not proceed. Because a quantity to be subtracted is never produced in composition by any repeated addition of a positive, or repeated subtraction of a negative, a negative square number is never produced by composition from the root. Hence ,J ††† 1, or the square root of a negative, implies an imaginary quantity ; and, in resolution, is a mark or character of the impossible cases of a problem, unless it is compensated by another imaginary symbol or supposition, when the whole expression may have a real signification. Thus 1 + -J ††† 1, and 1 ††† */ ††† 1 taken separately, are imaginary, but their sum is 2 ; as the conditions that separately would render the solution of a problem impossible, in some cases, destroy each others effect when conjoined. In the pursuit of general conclusions, and of simple forms representing them, expressions of this kind must sometimes arise where the imaginary sym-bol is compensated in a manner that is not always so obvious. By proper substitutions, however, the expression may be transformed into another, wherein each particular term may have a real signification as well as the whole expression. The theorems that are sometimes briefly discovered by the use of this symbol may be demonstrated without it by the inverse operation, or some other way ; and, though such symbols are of some use in the computations by the method of fluxions, its evidence cannot be said to depend upon arts of this kind. See ALGEBRA.

NEGELSTADT, a small town of Prussian Saxony, in Thuringia, ten miles southeast of Muhlhausen. Population 800.

NEGINOTH, a terra prefixed to some of the Psalms, as Psalm Ixvii. It

signifies stringed instruments of music, to be played on by the singers, or women musicians ; and the titles of those psalms where this word is found may be thus translated :□□□ A psaloi of David to the master of music, who presides over the stringed instruments.

NEGLECT, □□. a. &□□.□□.”

NEGLECT’FUL, adj.

Latin negtectus. To omit carelessly; treat with heedless scorn ; delay ; postpone : as a

substantive it means treatment of this kind, or an in-

NECLECT’FCLLY, adv.

NEGLECT’ION, n. *.

NEGLECT’IVE, adj.

NEG’LIGEXCE, n. s.

NEC’LIGENT, adj.

NEG’LIGESTLY, adv. stance of such treatment ; the adjective and adverb corresponding : neglection is the state of being negligent : neglective, inattentive to : negligence, habit of carelessness or neglect ; also an instance of such conduct : negligent, careless ; heedless; scornful; sometimes taking of before the object

My sons, be not now negligent ; for the Lord hath chosen you to stand before him.

2 Chron. xxix. 11.

If he neglect to hear them, tell it unto the church.

Matthew.

We have been negligent in not hearing his voice.

Bar. i. 9.

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I have been long a sleeper ; but I trust My absence doth neglect no great design, Which by my presence might have been concluded.

I have perceived a most faint neglect of late, which I have rather blamed as my own jealous curiosity, than as a very pretence or purpose of unkindness.

Id. King Lear.

Sleeping neglectitn doth betray to loss The conquests of our scarce cold conqueror.

ShaJupean.

She let it drop by negligence, And, to th' advantage, I being here, took't up.

Id.

Insects have voluntary motion, and therefore imagination ; and whereas some of the ancients have said that their motion is indeterminate, and their imagination indefinite, it is negligently observed : for ants go right forwards to their hills, and bees know the way to their hives.

Bacon'* Natural History.

I wanted not probabilities sufficient to raise jealousies in any king's heart, not wholly stupid, and neslectice of the public peace. King Charles.

It is a vain tempting of God to cast ourselves upoc an immediate provision, with nejlect of common means. Bp. Hall.

Age breeds neglect in all, and actions Remote in time, like objects remote in place, Are not beheld at half their greatness. Denham. This my long suffering and my day of grace Those who negiect and scorn shall never taste.

JfiffM.

Of all our elder plays, This and Philaster have the loudest fame ; Great are their faults, and glorious is their flame. In both our English genius is eiprest, Lofty and bold, but negligently drest. Waller.

Rescue my poor remains from vile neglect, With virgin honors let my herse be deck't, And decent emblem. Prior.

In comely figures ranged my jewels shone,

Or negligently placed for thee alone. Id.

If the father caress them when they do well, and

show a cold and neglectful countenance to them upon

doing ill, it will make them sensible of the difference.

Locke on Education.

Though the Romans had no great genius for trade, yet they were not entirely neglectful of it.

Arbuthnot on Coins. Let stubborn pride possess thee long, And be thou negligent of fame ;

With every muse to grace thy song, May'st thou despise a poet's name.

Swift's Mucellanifs.

Her daughters see her great zeal for religion ; but then they see an equal earnestness for all sorts of finery. They see she is not negligent of her devotion ; but then they see her more careful to preserve her complexion. Late.

Despondency has never so far prevailed as to depress me to neglect.

Johnson. Preface to Dictionary. There are certain forms and etiquettes in life. which, though the neglect of them does not amount to the commission of a crime, or the violation of a duty, are yet so established by custom, as to pss into statutes, equally acknowledged and almost equally binding to individuals, with the laws of the land, or the precepts of morality. Canning.

NEGOMRO, a large town on the west coast of Ceylon, and well situated for inland trade, particularly with Columbo. by a branch of the Mullivaddy River. It has "a fort, and three

ranges of buildings for cinnamon storehou*u and barracks. Many Dutch families rvsid* in the town; its other inhabitants are persons from different parts of the east. The women, though dark, are said to be very handsome. The vicinity produces cinnamon and rice in abundance ; and the gardens are well stocked with vegetables. It was taken by the British in 1796. Long. 79►► 49/ E., lat. 7►► 19* N.

NEGOTIATE, v. a. } Fr. ntgocier, of Lat. NEGOCIA'TIOX, n.s. > negotiant. To have NEGO'CIATOR. j amicable intercourse

respecting public or private business : a negociation is a parley or treaty relating to such business : negociator he who conducts it.

Have you any commission from your lord to ntgo-ciate with my face ? Shakrpeare.

Oil is slow, smooth, and solid ; so are Spaniards observed to be in their motion : Though it be a question yet unresolved, whether their affected gravity and slowness in their negotiation! have tended more to their prejudice or advantage ? Howard.

It is a common error in negotiating ; whereas men have many reasons to persuade, they strive to use them all at once, which weakeneth them. Bacon.

A steward to embezzle those goods he undertakes to manage ; an embassador to betray his prince for whom he should negotiate : are crimes that double their malignity from the quality of the actors.

Dfta'j of Pietv.

They that receive the talents to negotiate wuh, did all of them except one make profit of them.

Hammond.

They ceased not from all worldly labor and negotiation. White.

I can discover none of those intercourses and negotiation*, unless that Luther negotiated with a black boar. Atterburv.

Those who have defended the proceedings of our negotiators at Gertruydenburg, dwell much upon their real in endeavouring to work the French up to their demands; but say nothing to justify those

demands. Sicift.

As soon as this correspondence was concluded, the rupture of the nroociation was made known la England by a declaration, which, while any sense of honor remains in the English nation, may always be recollected with pride and satisfaction. Canning.

NEGRAIS ISLE, an island of the Birman empire, with an excellent harbour, situated at the western mouth of the Irrawaddy River. The western point is called Cape Negrais, and is known by a temple of Boodh erected on it. This island was occupied by the British so early as the year 1697, and it was supposed that it would command the whole of the Pegue trade, and form a secure harbour for ships during the monsoons ; but, the former idea proving fallacious, the settlement was '.vithdrawn. In 1757, Alompra, the Birman emperor, formally ceded the island to the English, who, in consequence took possession of it in August of that year ; but in October 1759 the place was suddenly attacked, and all the British who could not effect their escape were put to death. Since that period the B r-mans will not permit any ships to pass up the Bassein branch of the river. Cape Neˆrais, the south-west point of this island, is in long. 94►► 14' F.., lat. 16►►!' N.

NF/GRO. M.S. Span, and Ital. negro; Fr. ntgre of Lat. nigcr, black. A Mack man

NEGRO.

A negro has a soul an' please your honor, said the corporal doubtingly. Sterne.

I mean the African slave trade, -the enormous increase of which if the whole island of Trinidad should be to be brought into cultivation by imported negros, must be such as to appal any man who looks at it, and such as must shock this house when it considers its own recorded opinions upon that subject. Canning.

NEGRO, Homo pelli nigr&, is a name given to a variety of the human

species, who are entirely black, and are found in the Torrid zone, especially in that part of Africa which lies within the tropics. In the complexion of negroes we meet with many various shades; but they likewise differ far from other men in all their features. Round cheeks, high cheek bones, a forehead somewhat elevated, a short, broad, flat nose, thick lips, small ears, ugliness, and irregularity of shape, characterise their external appearance. The negro women have the loins greatly depressed, and very large buttocks, which gives the back the shape of a saddle. Vices the most notorious that can disgrace human nature have been ascribed to this unhappy race. But by whom has this picture been drawn ? By those persons chiefly who have been interested in representing them, because they treated them as worse than brutes.

The origin of the negroes, and the cause of their remarkable difference from the rest of the human species, has much perplexed naturalists. Mr. Boyle has observed that it cannot be produced by the heat of the climate : for, though the heat of the sun may darken the color of the skin, yet experience does not show that it is sufficient to produce a new blackness like that of the negroes. In Africa itself many nations of Ethiopia are not black ; nor were there any blacks originally in the West Indies. In many parts of Asia, under the same parallel with the African region inhabited by the blacks, the people are but tawny. He adds that there are negroes in Africa beyond the southern tropic ; and that a river sometimes parts nations, one of which is black, and the other only tawny. Lord Kames has contended that no physical cause is sufficient to change the color, and what we call the regular features of white men, to the dark hue and deformity of the woolly-headed negro. His arguments have been examined with much acuteness and ingenuity by Dr. Stanhope Smith of New Jersey, Dr. Hunter, and professor Zimmer-man, who have made it in a high degree probable, that the action of the sun is the original and chief cause of the black color, as well as distorted features, of the negro. See AMERICANS and COMPLEXION.

True negroes are certainly not found in any quarter of the globe where the heat of the climate is not very great. They exist no where but in the torrid zone, and only in three regions situated in that zone, to wit, in Senegal, in Guinea, and on the western shores of Africa, in Nubia, and the Papous land, or what is called New Guinea. In all these regions the atmosphere is scorching, and the heat excessive. The inhabitants of the north are whitest ; and as we advance southwards

towards the line, and those countries on which the sun's rays fall more perpendicularly, the complexion gradually assumes a darker shade. And the same men, whose color has been rendered black by the powerful action of the sun, if they remove to the north, gradually become whiter (at least their posterity), and lose their burnt color. Whites, when transported into the burning regions of the torrid zone, are at first subject to fever; the skin of the face, hands, and feet, becomes burnt, hardens, and falls off in scales. Hitherto the color of negroes appear to be only local, extrinsic, and accidental, and their short frizzled hair resembles fine wool. The varieties in the color of negroes, who always go naked, are also owing to the different temperature of their climates. During eight months of the year they have a continued drought, a sky constantly clear, no rain or storm of any kind, excessive heat, and a plentiful fall of dew after sunset. Their food and the exhalations from the surface of the earth may likewise contribute to the production of this phenomenon. It is evident, then, that the races of black and white men are not two different species, because the fruit of their connection has the faculty of reproducing beings like themselves, excepting the color. The young negroes at birth, and even negro foetuses, have a considerable resemblance to whites, excepting only that the scrotum and glans penis are black, and that they have a black or brown thread or circle on the extremity of the nails. These marks are a certain sign that the infant will be black ; and negro fathers, who suspect the fidelity of their wives, consider the want of them as a sufficient reason for abandoning the offspring. Among the Indians the scrotum is gray, and in mulattoes of a pale red. The bodies of young negroes are whitish for the first eight days, but their natural color, though weak, is easily discernible ; the skin begins to grow brown, then assumes a color inclining to that of bistre, and last of all becomes black. Some modern anatomists of great celebrity, who have enquired into the cause of this blackness, have found that the reticulum in negroes is really as black as ink, and that this mucous color shines through the whitish epidermis, which is thin and transparent. See Mem. de de 1' Acad. des Sciences, part 30, art. 13. anno 1702. See also Traite de la couleur de la Peau Humaine, by M. le Cat. For the opinions of Blumenbach, and other able modern writers on this subject, see ALBINO.

The following is a table of the mixtures which produce a degradation of the black and white colors in the human species. 1. A white man with a negro woman, or a negro man with a wnite woman, produce a mulatto, half white and half black, or of a yellow-blackish color, with black, short, frizzled hair. 2. A white man with a mulatto woman, or a negro with a mulatto woman, produce a quarteron, three-fourths

white and one-fourth black, or three-fourths black and one-fourth white, or of a lighter yellow than the former. In America they give the name of cabres to those who are descended from a black man and a mulatto woman, or a mulatto man and a black woman, who are three-fourths black

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and one-fourth white, and who are not so black as a negro, but blacker than a mulatto. 3. A white man with a quarteron woman, or a negro man with a quarteron woman, produce a mestizo, seven-eighths white and one-eighth black, or seven-eighths black and one-eighth white. 4. A white man with a mestizo woman, or a negro with a mestizo woman, produce, the one almost a perfect white, the other almost a perfect black. In following generations, if a constant intermixture has taken place, and the white has been married in Europe, the black in Senegal, the complexion will gradually become fairer or darker, till the offspring is either entirely black or entirely white. Such is the progress of physical effects and causes in the degradation 01 the color of the human species. Crossing the breed for four generations is sufficient to render a ne-gro white, and the same will make a white black. It is evident that the mixtures, a mulatto man with a quarteron or mestizo woman will produce other colors approaching to white or black, in proportion to the progression above stated. We have observed, under former articles, that the preservation and continuation of the particular species appears to proceed from that parent, who, in the act of procreation, has discovered most strength and vigor ; and this is commonly the father. A young negro woman in Virginia, after having brought forth for the first time a black child, was delivered a second time of twins ; one of them, a boy, was black, and the other, who was a girl, was a mulatto. As the boy grew up he retained his short hair, which was naturally frizzled, and had a resemblance to wool ; other marks plainly showed that he was a true negro, and in every respect like the black father who had begotten him. The girl, on the other hand, was tolerably white ; she had blue eyes, long black hair, without any natural curl ; in short, she had a great resemblance to the overseer of the plantation, whom the negro husband suspected of cohabiting with his wife. Becoming pregnant a third time, she was delivered of three children, two of them mulattoes, and the other a perfect neoro. Shall we ascribe this to the effect of imagination ? Such an explanation is rejected by the philosopher as absurd, and contrary to every law of nature.

NEGRO SLAVERY. See SLAVERY and the SLAVE TRADE.

NEGHO, Rio, a large river of South America, rising in the eastern declivity of the Andes, in New Granada ; and after a long course, during which it collects the tribute of numerous inferior streams,

falling into the Amazons, in lat. 3►► 16’ S. The fact of the communication of this river with the Cassiquiari, a tributary of the Orinoco, after being long doubted, was at length established by Humboldt, who, ascending the Orinoco, made his way into the Cassiquiari, and thence into the Rio Negro.

NEGRO, Rio, a large river of South America, which has its rise in the eastern declivity of the Chilian Andes, and running across the continent in a south-eastern direction, falls into the Atlantic Ocean, in lat. 41” S. 2. A river of the province of Buenos Ayres, which runs south-west and joins the Uruguay. 3. A river of New Granada,

in the province of Tunja, which enters the Mag-dalena. There is also another of the same name which enters the Lebrija. 4. A river of New Granada, in the province of Ubaque, which rises near Santa Fe, and enters the Meta, after a course of seventy-five miles. 5. A river of Terra Firma, in Veragua, which enters the Pacific Ocean. 6. A river of Buenos Ayres, in the province of Tu-cuman, which runs east and enters the Vermejo. 7. A river of the province of Maracaibo, which enters the lake of that name. 8. A river of Peru, in the province of Chachypoyas, which enters the Mayobamba. 9. A small river of Paraguay, which enters the Parana.

NEGRO LAKE, BANDEL D’ AGOA, or NEGRO BAY, a bay on the east coast of Africa, in about lat. 10►► N., is limited on the south by Morro Cobir Point (serpent’s head), to which succeeds Cape Delgado, so high as to be seen twelve leagues. Hence to Cape d’Orfui the coast forms a great open bay.

NEGROES, ISLAND OF NEGROES, or BUGLAS, is one of the Philippine Islands, about 240 miles in circumference, abounding in rice : it supplies Seba, and other adjacent parts. It derives its name from the blacks who occupy the mountains. Their intestine wars are frequent and fatal, as they use poisoned arrows, headed with iron, flint, bone, or wood hardened in the fire. The mouths of the river are occupied by another tribe who seem to have no intercourse with the others. When the island is invaded by pirates, they de-fend it by their arms, and having accomplished this service, which they perform as the old lords of the island, they retire. The Bisays, who live on the plain and are most numerous on the west side, supply these blacks with rice, as an acknowledgment for permission to settle there. The island contains about 3000 persons, who pay tribute, and are governed by a corregidore and military commander. The cacao was first brought to

the Philippines from New Spain : the rice is produced in the mountains without cultivation. N. lat. 10 10', E. long. 122 30'.

NEGROES, WHITE. See ALBINO.

NEGROLAND, or NIGRITIA, is a name that has been given to an immense extent of country in the interior part of Africa, comprehending many large and populous kingdoms, and extending from W. long. 7 to E. long. 27 and from 10 to 25 N. lat.; bounded on the north by Sahara and mountains that separate it from Barbary, on the east by Nubia and Abyssinia, on the south by Guinea and unknown countries, and on the west by Guinea. The Arabs call this country Soudan, and the natives Aasnou, both words denoting ' the land of the blacks ;' some restrict these appellations to the empire of Cash-na, north of the Niger ; others extend it to the Negro states on the south of the river. Some parts, especially near the Niger, are represented as very fertile, others are no less sandy and desert, but the interior of this part of Africa is little known.

NEGROPONTE, or Egribos, the ancient Eubaea, a narrow island of Greece, with several good harbours lying on the east coast of Livadia, from which it is separated by a narrow channel, called the strait of Euripus, remarkable for it*

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irregular tides. But here is a bridge connecting it with the continent : and the island is one of the largest in Greece, containing a population of 60,000 souls. Its surface is mountainous, and in general barren, the tops of the ranges being covered with snow during a part of the year ; but the valleys and plains are fertile in corn, wine, fruit, and oil. The pasturage has been in repute for ages. The chief mineral productions are marble and copper. Long. 23►► 10’ to 24►► 44’ E., lat 38►► to 39►► 10’ N.

NEGROPONTE, the ancient Chalcis, the capital of the island of this name, is a place of considerable size, on the west coast, and connected with the continent by the bridge above mentioned, the strait at this place being about 200 feet wide. Hence the name Euripoponte, pronounced Evri-ponte, and corrupted into Negroponte It has a drawbridge which can be opened for the passage of vessels. The town is fortified, and has on the south side a port, the ancient Aulis, and capable of containing several hundred vessels in perfect safety. The suburbs are separated from the town by a deep ditch. The inhabitants amount to about 16,000. The town was taken by the Turks by assault, in 1462, and besieged without success, by the Venetians, in 1688. The Capudan Pacha, to whose government the island lately belonged, had here a palace. Twenty-eight miles north of Athens. Long. 23►► 33’ E., lat. 38►► 31’ N.

NEHEMIAH, from Heb. rOJ, he rested, and Pl% the Lord, i. e. the Lord’s rest, son of Hachaliah, was born at Babylon during the captivity (Neh. i. 1, 2, &c.) He was, according to some, of the race of the priests, but, others think, of the tribe of Judah and the royal family. The former support their opinion by a passage in Ezra (x. 10), where he is called a priest ; but the latter argue, 1st, that Nehemiah having governed the republic of the Jews for a considerable time, there is great probability he was of that tribe of which the kings always were : 2dly, that the office of cup-bearer to the king of Persia, to which Nehemiah was promoted, is a proof that he was of an illustrious family ; and 3dly, that hence Sanballat accused him of aiming at the royalty (Neh. vi. 6, 7). Scripture (Ezra ii. 62, Neh. vii. 65) calls him Knsnfi tirshatha, or cup-bearer ; as he had this employment at the court of Artaxerxes Longimanus. He had a great affection for the country of his fathers, though he had never seen it ; and fasted, and prayed that the Lord would favor the design he had of asking the

king's permission to rebuild Jerusalem. The course of his attendance at court being come, he presented the cup to the king according to cus-tom, but with a dejected countenance; which the king observing, Nehemiah told him the occasion of his disquiet, and Artaxerxes gave him leave to go to Jerusalem and repair it, ordered the governors beyond the Euphrates to furnish wood, and appointed him governor of Judea, A.M. 3550. His execution of this commission; his rebuilding the walls, towers, and gates of Jerusalem ; the invidious attempts of Sanballat and Tobiah to discourage him, and obstruct the work ; his solemn dedication of the walls, towers, &c., when completed, with the sacrifices and festivals

accompanying it ; and his complete reformation of various abuses which had taken place amono-the Jews, are particularly recorded in the book which bears his name. This important reformation was accomplished A. M. 3554. In the second book of Maccabees (i. 19, 20, 21, &c.) it is said that Nehemiah sent to search for the holy fire, which before the captivity of Babylon the priests had hid in a dry and deep pit; but not finding any fire there, but instead thereof a thick and muddy water, he sprinkled this upon the altar, whereupon the wood which had been sprinkled with it took fire as soon as the sun began to ap-pear ; which miracle coming to the knowledge of the king of Persia, he caused the place to be encompassed with walls where the fire had been hid, and granted great favors and privileges to the priests. It is also said, 2 Mac. ii, 13, 14, that Nehemiah erected a library, wherein he placed whatever he could find of the books of the prophets, of David, and of such princes as had made presents to the temple. Lastly, he returned to Babylon (id. v. 14, and xiii. 6), according to the promise he had made to king Artaxerxes, about the thirty-second year of this prince, in the year 3563. From thence he returned again to Jerusalem, where he died in peace, about A. M. 3580, having governed the people of Judah about thirty years. It is doubted whether this Nehemiah be the same that is mentioned in Ezra (ii. 2, and Neh. vii. 7) among those who returned from the Babylonish captivity under Zerubbabel ; since, from the first year of Cyrus to the twentieth of Artaxerxes Longimanus, there are no less than ninety-two years intervening ; so that Nehemiah must at this time have been a very old man, upon the lowest computation 100, consequently incapable of being the king's cup-bearer, of taking a journey from Shushan to Jerusalem, and of behaving there with all the courage and activity recorded of him. Upon this presumption, therefore, we may conclude that this was a different person, though of the same name, and that Tirshatha (the other name by which he is called, Ezra ii. 63,

and Neh. vij. 65) denotes the title of his office, and both in the Persian and Chaldean tongues was the general name given to the king's deputies and governors.

NEHEMIAH, a canonical book of the Old Testament, which records the above transactions, and is supposed to have been chiefly written by Nehemiah. This book, which in the English and Hebrew bibles, has the name of Nehemiah, in the Latin bible is called the book of Esdras. There are some things in it, however, which could not have been written by Nehemiah himself; for example, memorials are quoted (ch. xii. 22, 23) wherein were registered the names of the priests in the time of Jonathan, or Johanan, the son of Eliashib, and even to the times of the high priest Jaddua, who met Alexander the Great. See JEWS. These therefore must have been added afterwards.

NEHRWALLA, called also Pattan, or the City, an ancient town of Hindostan, formerly the capital of Gujerat. It has two fortresses, one of stone, the other of brick ; but both in ruins. There is not a tradition of the period

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when this place was founded ; but it was long the residence of a dynasty of Rajpoot princes, and taken and plundered in the year 1025, by the celebrated Mahmoud of Ghizne. In the fourteenth century Gujerat became an independent kingdom, the founder of which was a convert to Mahometanism, and in 1409 Ahmed Shah, founding the city of Ahmedabad, transferred the seat of government thither. It at present belongs to the Mahrattas.

NEIF, n. s. Isl. nefi ; Scott, neef, fist. It is, likewise written neef.

Sweet knight I kiss thy neif, Shakspeare. NEIGH, n. t.Stv.n. Sax. hnaejan; Belg. negen; Lat. hinnio. The voice or noise of a horse or mare : to utter such sound. They were as fed horses, every one neighed.

Jer. T. 8.

Note a wild and wanton herd, Oi race of youthful and unhandled colts, Fetching mad bounds, bellowing and neighing loud.

Shakspeare.

It is the prince of palfreys ; his neigh is like the bidding of monarchs, and his countenance enforces homage. Id.

Run up the ridges of the rocks amain ; And with shrill neighings fill the neigbouring plain.

Dryden.

The generous horse, that nobly wild, Neighs on the hills, and dares the angry lion.

Smith.

NEIGH'BOUR, n. s. & v. a. } Sax. nejebuji ; NEIGHBOURHOOD, n. s. ►► Goth, nabur ; NEIGHBOURLY, adj.&t adv. *Teut. nuchbur ; of NIGH, and Goth, bua, to dwell. (Thomson.) One who lives near another ; a familiar acquaintance, intimate, or confidant ; any thing next or near another : to neighbour is to adjoin or abut upon ; to acquaint with or make approach to : neighbourhood, place or places adjoining or within communication ; state of being near : neighbourly

is befitting, or as a neighbour ; kind ; civil ; social. He willinge to justifie himsilf seide to Jhesus, and who is my neighbore 1 Wiclif. Luh. x.

These grow on the leisurely ascending hills that neighbour the shore. Sandys's Journey.

Sins against men are injuries : hurts, losses, and damages, whereby our neighbour is in his dignity, life, chastity, wealth, good name, or any way justly offended, or by us hindred. Perkins.

Masters, my good friends, mine honest neighbours, Will you undo yourselves ? Shakspeare. Macbeth.

This man shall set me packing ; I'll lug the guts into the neighbour room.

Shakspeare.

The deep revolving witty Buckingham No more shall be the neighbour to my counsels.

Id.

Wholesome berries thrive and ripen best, Neighboured by fruit of baser quality. Id.

That being of so young days brought up with him, And since so neigboured to his youth and 'haviour.

Id.

The Scottish lord hath a neighbourly charity in him ; for he borrowed a box of the ear of the Englishman, and swore he would pay when he was able.

Id. Merchant of Venice.

The Woodberry so nigh, and neighbourly doth live, V* ith .Abberley his friend. Drayton.

He sent such an addition of foot as he could draw out of Oxford, and the neighbouring garrisons.

Clarendon.

One in the neighbourhood mortally sick of the small-pox, desiring the doctor to come to him.

FeU.

The gospel allows no such term as a stranger ; makes every man my neighbour. Sprat's Sermon*.

I could not bear

To leave thee in the neighbourhood of death, But flew in all the haste of love to find thee.

Addison.

Things nigh equivalent and neighbouring value, By lot are parted. Prior.

He steals my customers ; twelve he has under bonds never to return : judge if this be neighbourly dealing. Arbuthnot.

Consider several states in a neighbourhood; in order to preserve peace between these states, it is necessary they should be formed into a balance.

Swift.

You should always change and alter your intercessions, according as the needs and necessities of your neighbours or acquaintance seem to require.

Law.

A kid sometimes for festivals he slew, The choicer part was his sick neighbour’s due.

How ill mean neighbourhood your genius suits, To live like Adam midst an herd of brutes ! Id.

When chapman bullies leave the street And drouthy neebors, neebori meet, As market-days are wearing late, An' folk begin to tak the gate. Burnt.

NEIRA, one of the Banda islands, lying north of Great Banda, and separated from Gonong Apy on the west, by a narrow channel. This island is two and a quarter miles in length, and about three-quarters of a mile in extreme breadth. It is defended by the forts Narson and Belgica, the former a square, the latter a pentagon commanding it, and entered by a ladder to reach a door in one of the curtains. At the south extremity of the island rs a town consisting of very neat houses of one story, on account of the earthquakes, which are frequent. The south-west extremity is inhabited by Chinese and other fishermen. Long. 130►► E., lat. 4►► 31' S.

NEISSE, a principality of Prussian Silesia, long governed by the bishop of Breslau. Part of it is in Austrian Silesia, and has lately lost the name of Neisse, being incorporated into the circle of Troppau. The Prussian part is included in the government of Oppeln. Its area is 550 square miles; its population 73,000. Neisse, the chief place of the principality, is one of the chief fortresses of Prussia, and possesses the means of laying its environs under water. It is a clean well-built town, containing a splendid episcopal mansion, a collegiate church, four other churches, with a monastery and convent belonging to the Catholics, and a Lutheran church and school. The king and bishop have separate officers for the collection of the revenue, and separate courts of justice. The chief em ployments are brewing, weaving, woollen, linen, ribands, and stockings, and a brisk traffic in yarn. In the neighbourhood are quarries of excellent stone. Neisse was taken by the Prussians under Frederick II. in 1741. Population 8000 Forty-six miles south bv east of Breslau, and thirty west of Oppeln.

NEISSE, a river of East Germany, which rises in Bohemia, in the circle of Bunzlau, enters Lusatia above Zittau, becomes navigable at Guben, and afterwards falls into the Oder. It is joined in its course by the Black Neisse, a smaller stream. This is also the name of a rapid stream in Prussian Silesia, which rises on Mount Schomberg, in the Sudetic chain, near Glatz, and falls into the Oder.

NEITHER, con;. & pro. Sax. naSen. Not either : a negative particle with which nor corresponds; used at the beginning, middle, and end of sentences, as below.

Ye shall not eat of it, neither shall ye touch it.

Gen. iii. 3.

Fight neither with small nor great, save only with the king. 1 Kings xxii. 31.

Which of them shall I take Both, one, or neither? neither can be enjoyed If both remain alive. Shakspeare. King Lear.

If it be thought that it is the greatness of distance, whereby the sound cannot be heard ; we see that lightnings and corruscations, near at hand, yield no sound neither. Bacon.

The balance, by a propensity to either side, inclined to neither. Fell.

Men lived at home, neither intent upon any foreign merchandise, nor inquisitive after the lives and fortunes of their neighbours. Heylyn.

This commandment standeth not for a cypher, neither is it read and expounded in vain among Christians. White.

Suffice it that he’s dead ; all wrongs die with

him:

Thus I absolve myself, and excuse him Who saved my life and honour, but praise neither.

Dryden.

Experience makes us sensible of both, though our narrow understandings can comprehend neither.

Locke.

They lived with the friendship and equality of brethren, neither lord, neither slave to his brother; but independent of each other. Id.

Men come not to the knowledge of ideas which are thought innate ‘till they come to the use of rea-son, nor then neither. Id. Though few the numbers ××× theirs the strife,

That neither spares nor speaks for life ! Hyron.

NELEUS, in fabulous history, king of Pylos, the son of Neptune by Tyro, and the twin brother of Pelias. See PELIAS. He joined his brother in usurping the kingdom of lolchos, but, after a short conjunct reign, Neleus was expelled, and fled to Aphareus, king of Messina, who received him kindly, and allowed him to build the city of Pylos. Neleus married Chloris, the daughter of Amphion, by whom he had a daughter named Pero, and twelve sons, who were all killed by Hercules, except Nestor. Neleus promised his daughter in marriage to the hero who should bring him the bulls of Iphiclus. Melampus accomplished this for his brother Bias. See MF.LAMPVS.

NELSON (Robert), F.R.S., the son of a Turkey merchant, was born in London in June, 1656. He was educated at St. Paul’s, and Trinity College, Cambridge. In 1680 he was chosen F. R. S., and set out with his friend and school-fellow, Dr. Edmund Halley, on his travels, in December, 1680. At Rome he became acquainted with lady Theophila Lucy, widow of

Sir Kingsmill Lucy of Broxburne, bart., and second daughter of George earl of Berkely, whom he married after his arrival in England in 1682. He was ignorant that she had adopted the Roman Catholic religion; and, when he discovered it, he used every measure in his power to induce her return to the Protestant faith without effect. Tillotson laments her case on that account, and even was afraid of the influence she might have upon her husband. But Mr. Nelson’s religion was too much the result of his reason to be shaken by his love, which was equally steady. Her change of religion made no change in his affection for her ; and, when her ill health obliged her to go to the waters of Aix, he attended her thither in 1688 : and took a second trip to Italy, with her, her son and daughter. He returned through Germany to the Hague, where he staid some time with lord Dursley, who was married to his wife’s sister. He arrived in England in the end of 1691, where,

being averse to the Revolution, he declared himself a nonjuror. Upon the death of archbishop Tillotson, who expired in his arms in 1694, Mr. Nelson was very instrumental in procuring his widow's pension from the crown to be increased from ––400 to ––600 per annum. Among his new nonjurant connexions was Mr. Kettlewell, who had resigned his living at Coleshill in Warwickshire, on account of the oaths, and resided in London. By his advice Mr. Nelson published many works of piety, which are deservedly esteemed ; while Mr. Nelson encouraged Kettlewell to prosecute some works which otherwise would not have seen the light. At the same time he engaged zealously in every public scheme for promoting the honor and interest, as well as the faith and practice, of true Christianity, at home and abroad ; besides schemes for building, repairing, and endowing churches and charity schools. Upon the death of Dr. William Lloyd, the deprived bishop of Norwich, in the "end of 1709, he, by the advice of Dr. Kenn, returned to the communion of the church of England. Mr. Nelson's tutor, Dr. George Bull, bishop of St. David's, dying this year, he was prevailed upon by that prelate's son to draw up an account of his father's life and writings. It was published in 1713; and, as our author had long before labored under an asthma and dropsy in the breast, the distemper grew to such a height, that, for the benefit of the air, he retired at length to Kensington, where he expired on the 16th of January, 1715, aged fifty-nine. He published several works of piety, and left his whole estate to pious uses, particularly to charity schools.

NELSON (Horatio), lord viscount, was born in 1758 at Burnham Thorpe in Norfolk, of which parish his father Edmund was rector. He was educated at the school of North Walsham ; but we know nothing particular of his boyish years, nor have we any detail of the nature and progress of his studies. He left school at the early age of twelve; and, having displayed a strong disposition for the sea service, he was rated a midshipman on board the Raisonnable of sixty-four guns, commanded by his maternal uncle, captain Maurice Suckling. In April, 1773, in

consequence of an application by the Royal Society to the earl of Sandwich, a voyage of discovery to the north pole was ordered, under the honorable Constantine John Phipps, afterwards lord Mulgrare. By the instructions issued on this occasion boys were strictly prohibited from being received on board. But the enterprising mind and earnest entreaty of young Nelson enabled him to surmount this difficulty, and he was actually appointed cockswain to captain Lutwidge—

In October, Wiien the ship returned, a squadron was fitting out for the East Indies. Nelson used every effort to be appointed to one of the ships, and again succeeded. He was stationed in the foretop to keep watch on board the Sea-horse of twenty guns, captain Farmer, by whom he was soon after removed to the quarterdeck. He was passed lieutenant on the 8th of April,

1777, and on the 9th had a commission as second lieutenant of the Lowestoffe of thirty-two guns, captain Locker, in which situation he readied Jamaica. Here, feeling his professional efforts circumscribed, he entreated the command of a schooner which attended the Lowestoffe as a tender. He obtained his request, and availed himself of it to acquire a practical knowledge of all the intricate passages through the islands lying to the north of Hispaniola. When Sir Peter Parker arrived on the Jamaica station, in

1778, he appointed Nelson to be third lieutenant of his own ship the Bristol, in which ship he rose to be first lieutenant, and in which he terminated his services in that subordinate rank. On the llth of June, 1779, he was made post-captain, and was soon after appointed to the command of the Hinchinbroke ; and, in expectation of an attack on Jamaica, the command of the batteries of Port-Royal was entrusted to him. In January, 1780, it was determined to reduce fort Julia, on the river St. John, in the gulf of Mexico. To captain Nelson was entrusted the command of the naval department, and to major Poison that of the military, in this arduous and interesting undertaking. Nelson on this occasion displayed his usual sagacity and intrepidity. He quitted his ship, and directed and superintended the transporting of the troops, in boats, for the space of 300 miles up a river which none but Spaniards had ever ventured to navigate since the time of the Buccaneers ; and to his gallantry, skill, and conduct, the success of the expedition is chiefly to be attributed. He was afterwards appointed to the Janus, on the Jamaica station. He was obliged to return to England on account of bad health, and was appointed to the command of the Albemarle in August 1781 ; which being stationed, in the following winter, in the North seas, was a severe trial to his feeble constitution. In October, 1782, he joined the fleet under Sir Siunuel Hood, and was actively and

honorably employed in the West Indies till the end of the war. In the autumn following he went to France, where he continued till the spring of 1784; at which time he was appointed to the command of the Boreas frigate, of twenty-eight guns, on the Leeward Islands station. Here he continued

ill June 1787. In the month of March that

year he married the widow of Dr. Nesbit, of the island of Nevis, with whom (on his ship being paid off in November) he retired to his father's parsonage in Norfolk. In 1793 he got the command of the Agamemnon, of sixty-four guns, stationed in the Mediterranean, under lord Hood/ who reposed the most unlimited confidence, as well in his talents as in his courage. Whatever difficult enterprise lord Hood thought necessary, the conduct of it wag entrusted to Nelson. At Toulon, Bastia, and Calvi, he increased his well-earned reputation ; and lord Hood did not fail to record the striking progress of his increasing fame. At the siege of Calvi Nelson lost the sight of his right eye, a quantity of sand having been driven with violence against his face by a shot from the enemy striking the battery which he commanded. He equally enjoyed the confidence and esteem of admiral Hotham, who succeeded lord Hood, and eminently distinguished himself in the actions which took place with the French fleet on the 13th and 14th of March, on the 13th of July 1795, and in co-operating with general De Vins on the coast of Genoa. When admiral Hotham was superseded by Sir John Jervis, Nelson received the well-merited honorof a pendant of distinction, and quitted the Agamemnon for the Captain of seventy-four guns, with the title of commodore. He was for several months continually employed in the very active and arduous service of the blockade of Leghorn, the taking of Porto Ferajo, with the island of Caprea, and, finally, in the evacuation of Bastia ; and though it does not appear that his services acquired the reputation in his own country which they merited, and which he expected, it is now certain that he did more at this very period to illustrate the British character, and extend the British influence in Italy, than any other individual at that active and difficult period. In December 1796 he hoisted his pendant on board La Minerva frigate, and was despatched along with La Blanche to Porto Ferrajo, to bring the naval stores left there to Gibraltar. In the course of this service he took a large Spanish frigate of forty guns, after a long and severe action. He contributed essentially to the great and important victory gained, with a very inferior force, over the Spanish fleet by Sir John Jervis, on the 14th of February 1797; and in April that year he was raised to the rank of rear

admiral of the blue. In May he shifted his flag from the Captain to the Theseus, and was appointed to command the inner squadron in the blockade of Cadiz. In the attack on the Spanish gun-beats in July, he was boarded in his barge (having only ten men and the coxswain) by an enemy's boat with thirty men and officers. The conflict was long, terrible, and doubtful, eighteen of the Spaniards were killed ; and the remainder, almost all wounded, at length yielded to a force still numerically inferior. On the 15th of July, in the same year, he made an unsuccessful attack on Santa Cruz inTeneriffe; but such were his conduct and intrepidity, that, though he lost his arm by a cannon shot, he succeeded, where most others would have failed, in compelling the Spaniards to allow him tore-embark without molestation. He was detached by lord St. Vincent, in 1798, with twe'.re sail of the line and one ship

of fifty guns, in pursuit of the French, to the coast of Egypt, whose fleet consisted of thirteen sail of the line, four frigates, and several gun-boats, besides being protected by land batteries. This fleet he attacked at sun-set on the 1st of August, took nine sail of the line, and destroyed two; two only escaped, and they were afterwards taken. He was wounded in the head, as he thought himself mortally, and displayed uncommon calmness and fortitude in that conviction whilst it lasted, making his last arrangements with equal decision and tranquillity. To the great joy of the fleet the wound was found not to be mortal. He had received the honor of the red riband in consequence of his conduct in the action off Cape St. Vincent. He was raised to the honor of the peerage in consequence of this at Aboukir, by the style and title of baron Nel-son of the Nile and Aboukir, and of Burnham Thorpe, in the county of Norfolk. He was also created duke of Bronte in Sicily by the king of Naples, with an estate of ––3000 sterling a year. He had also conferred upon him an order of knighthood by the king of Naples, by the grand seignior, and by the emperor of Russia. On the 2d of April, 1802, he conducted the attack upon Copenhagen, where in circumstances of peculiar difficulty, and without having the chief command, he effectually destroyed that

formidable northern confederacy which threatened the ruin of this country. In this transaction he not only displayed his usual gallantry and naval skill, but that profound sagacity, that intimate knowledge of human nature, and of the political relations and interests of his country, with that accurate calculation of the impression of events on the human mind, which we should scarcely have anticipated in a man so wholly devoted to professional pursuits. In consequence of this victory he was raised to the rank of viscount in the British peerage. His next service was the restoration of the king of Naples, which, impartiality compels us to state, was accompanied with circumstances of cruelty very discreditable to his character, and which may be attributed to the pernicious influence of lady Hamilton, the wife of the English ambassador, over his mind. His attachment for this lady whom he took as his mistress, after the death of her husband, occasioned his separation from lady Nelson on his return to England.

One of the most important services which lord Nelson performed to his country, though unat-tended by any thing brilliant, was his pursuit of the combined fleets of France and Spain to the West Indies, which engaged him for four months, which defeated, by the very terror of his name, the object of the combined squadron, and led to the victory gained by Sir Robert Calder in 1805. On the 21st of October, this same year, his last action was fought, and his most active and useful life closed, with a brilliancy which has never been surpassed. The moment he saw the combined fleet, superior in point of number to his own by six ships, and much superior in point of men and guns even to what that proportion at first indicated, he made his arrangements with his usual skill, and his calculation of success with that decision of mind, by which, in his naval

combinations, he seems to have surpassed alike nis predecessors and his contemporaries. His last signal (which doubtless produced an indescribable vibration in every breast, and which was so admirably fulfilled), will, we trust, never be forgotten by his grateful country, ‘ ENGLAND EXPECTS EVERY MAN TO DO HIS DUTY.’ Twenty-one ships of the line were taken or destroyed, and every circumstance combined to confer on this astonishing victory the utmost possible importance. Yet we believe the sensation was universal throughout the country that it was too dearly purchased ; and even the enemy felt some consolation under his disaster, in reflecting, that he to whom it was due had fallen in the glorious enterprise. He lived three hours after his fatal wound; and, though he suffered very severely, his heroism continued to the last, and he gave directions respecting the

management of the fleet and prizes till within a few instants of his dissolution. He had, previous to this, ––3000 sterling a-year voted by parliament for his own life, and that of his two next heirs ; a present from the East India Company of ––10,000 sterling; a diamond aigrette from the grand seignior worth ––4000 sterling ; a diamond box from the emperor of Russia worth ––2500 sterling ; presents from the king of Naples, besides the estate of Bronte, worth ––5000 sterling; furnishing many effectual proofs that his character was justly esteemed in every part of Europe as well as in his own country. After the battle of Trafalgar his body was brought home in the Victory, which bore his flag, and in which he fell. He was buried at the public expense, and in the most splendid manner, under the dome of St. Paul's cathedral in Lon-don, where a monument was ordered to be erected to his memory. His heir was raised to the rank of an earl in the peerage ; and, with a bounty becoming a great and grateful country, parliament voted a sum of money for the purchase of an estate for his heirs ; and splendid monuments, proofs of the public feeling, have been erected throughout the empire, by voluntary contribution, to perpetuate his memory, which will never die, and his country's gratitude, which will never be forgotten, while that country (so long and so justly dear to every great and liberal mind) shall deserve to exist.

Dr. Southey having ably reviewed the published biography of Nelson, in the Quarterly, gave to the world in 1813 an interesting, and on the whole candid and creditable, ' Life' of our hero, which he aimed, as he says, to make ' clear and concise enough to become a manual for the young sailor, which he may carry about with him till he has treasured up the example in his memory and in his heart.' ' In attempting such a work,' continues the author, ' I shall write the eulogy of our great naval hero : for the best eulogy of Nelson is the faithful history of his actions ; the best history that which shall relate them most perspicuously.' (Preface, p. i.)

A few anecdotes, in the able manner of our biographer, will not, we are well assured, be uninteresting to our readers.

We are told that one day in his mere childhood, when he had lost himself on an excursion to plunderbirds'-nests, he was, after a long search,

discovered alone, sitting composedly by the side of a brook, which he could not get over. ‘ I wonder,’ said his grandmother, ‘that hunger and fear did not drive you home.’ ‘Fear! grand-mamma,’ said he, ‘ I never saw fear ; what is it ?’ There is something very touching, and that may be really useful to young men entering upon any arduous state in life, in the following picture of the difficulties attending the hero’s first step into his profession : ###

‘ Early on a cold and dark spring morning Mr. Nelson’s servant arrived at this school at North Walsbam with the expected summons for Horatio to join his ship. The parting from his brother William, who had been for so many years his playmate and bed-fellow, was a painful effort, and was the beginning of those privations which are the sailor’s lot through life. He accompanied his father to London. The Raisonnable was lying in the Medway. He was put into the Chatham stage, and on its arrival was set down with the rest of the passengers, and left to find his way on board as he could. After wandering about in the cold, without being able to reach the ship, an officer observed the forlorn appearance of the boy, questioned him, and, happening to be acquainted with his uncle, took him home, and gave him some refreshments. When he got on board, captain Suckling was not in the ship, nor had any person been apprised of the boy’s com-ing. He paced the deck the whole remainder of the day, without being noticed by any one ; and it was not till the second day that somebody, as he expressed it, ‘ took compassion on him.’ The pain which is felt when we are first transplanted from our native soil ### when the living branch is cut from the parent tree ### is one of the most poignant which we have to endure through life. There are after-griefs which wound more deeply, which leave behind them scars never to be effaced, which bruise the spirit, and sometimes break the heart : but never, never, do we feel so keenly the want of love, the necessity of being loved, and the sense of utter desertion, as when we first leave the haven of home, and are, as it were, pushed off upon the stream of life. Added to these feelings, the sea-boy has to endure physical hardships, and the privation of every comfort, even of sleep. Nelson had a feeble body and an affectionate heart, and he remembered through life his first days of wretchedness in the service ‘

Our readers must laugh outright, however, when they peruse the

following recipe prescribed by the historian of Methodism, as the tonic by which the ‘ glow of patriotism’ is to he for ever kept alive in the bosoms of our naval commanders. He reports the young Nelson to have thus spoken of himself: ••• ‘ After a long and gloomy reverie, in which I almost wished myself overboard, a sudden glow of patriotism was kindled within me, and presented my king and country as my patron. Well then, I exclaimed, I will be a hero! and, confiding in Providence, I will brave every danger.’ Long afterwards, says Dr. Southey, Nelson loved to speak of the feeling of that moment; and from that time he often said a radiant orb was suspended in his mind’seve,whichurgedhim onward to renown; •••

and, again, he declares that Nelson always seemed willing to believe that the sunshine which succeeded bore with it a prophetic glory ; and that the light which led him on was light from heaven. Now we must frankly declare that we do not believe that lord Nelson ever seriously intended to refer the origin of his actions to principles of mysticism so extremely absurd, ridiculous, and enthusiastic. And we know not which most to admire, Dr. Southey’s simplicity in contrasting their rationality with the reveries he is pleased to impute to ‘ the mystics,’ or his deficiency of judgment in supposing that the contrast would afford matter for the edification of ‘ the young sailor.’ Our biographer, in fact, should have recollected that there are passages, lamentable passages, in the Life of Lord Nelson, which require in a faithful historian of his younger days (particularly in one who writes for the benefit o. youth) a more than ordinary caution in investigating the deficiencies of his early principles. The following picture of his person and manners as they existed in 1782 is interesting ;••• as connecting him with his present majesty, who is said to have ever after considered him as an intimate friend.

‘His professional merit was already well known : and lord Hood, on introducing him to Prince William Henry, as the duke of Clarence was then called, told the prince, if he wished to ask any questions respecting naval tactics, captain Nelson could give him as much information as any officer in the fleet. The duke, who, to his own honor, became from that time the firm friend of Nelson, describes him as appearing the merest boy of a captain he had ever seen, dressed in a full laced uniform, and old fashioned waistcoat with long flaps, and his lank unpowdered hair tied in a stiff Hessian tail of extraordinary length ; making, altogether, so remarkable a figure, ‘ that,* says the duke, ‘I had never seen any thing like it before; nor could I imagine who he was, nor what he came about. But his address and

conversation were irresistibly pleasing; and, when he spoke on professional subjects, it was with an enthusiasm that showed he was no common being.' It was expected that the French would attempt some of the passages between the Bahamas : and lord Hood, thinking of this, said to Nelson, ' I suppose, Sir, from the length of time you were cruising among the Bahama Keys, you must be a good pilot there.' He replied, with that constant readiness to render justice to every man which was so conspicuous in all his conduct through life, that he was well acquainted with them himself, but that in that respect his second lieutenant was far his superior.' (p. 46).

Of his first great wound in the unsuccessful attack upon Teneriffe we hare the following account : ××× ' In the act of stepping out of the boat, Nelson received a shot through the rieht elbow, and fell ; but, as he fell, he caught the sword, which he had just drawn, in his left hand, determined never to part with it while he lived ; for it had belonged to his uncle, captain Suckline, and he valued it like a relic. Nisbet, who was close to him, placed him at the bottom of the boat, and laid his hat over the shattered arm, lest the sight of the blood, which gushed out in

great abundance, should increase his faintness. He then examined the wound ; and, taking some silk handkerchiefs from his neck, bound them round tight above the lacerated vessels. Had it not been for this presence of mind in his son-in- law, Nelson must have perished. One of his bargemen, by name Lovell, tore his sMrt into shreds, and made a sling with them for the broken limb. They then collected five other seamen, by whose assistance they succeeded, at length, in getting the boat afloat ; for it grounded with the falling tide. Nisbet took one of the oars, and ordered the steersman to go close under the guns of the battery, that they might be safe from its tremendous fire. Hearing his voice, Nelson roused himself, and desired to be lifted up in the boat, that he might look about him. Nisbet raised him up ; but nothing could be seen, except the firing of the guns on shore, and what could be discerned by their flashes upon the stormy sea. In a few minutes, a

general shriek was heard from the crew of the Fox, which had received a shot underwater, and went down. Ninety-seven men were lost in her; eighty-three were saved, many by Nelson himself, whose exertions on this occasion greatly increased the pain and danger of his wound. The first ship which the boat could reach happened to be the Sea-horse ; but nothing could induce him to go on board, though he was assured that, if they attempted to row to another ship, it might be at the risk of his life. ‘ I had rather suffer death,’ he replied, ‘ than alarm Mrs. Freemantle, by letting her see me in this state, when I can give her no tidings whatever of her husband.’ They pushed on for the Theseus. When they came along-side, he peremptorily refused all assistance in getting on board, so impatient was he that the boat should return, in hopes that it might save a few more from the Fox. He desired to have only a single rope thrown over the side, which he twisted round his left hand, say-ing, ‘ Let me alone : I have yet my legs left, and one arm. Tell the surgeon to make haste and get his instruments. I know I must lose my right arm; so the sooner it is off the better.’ The spirit which he displayed in jumping up the ship’s side astonished every body.’ (p. 188).

In justice to our historian we must add his sentiments on the only public stain in Nelson’s conduct. After the brilliant victory of the Nile, the French having taken possession of Naples, and established a republic on the ruins of the former monarchy, the dormant spirit of loyalty began to revive, and measures were taken for a counter revolution. ‘ In these lord Nelson concurred with an enthusiastic zeal, and sent captain Trowbridge to cruise in the bay of Naples, and reduce the islands by which it is surrounded. On the 24th of June, 1799, his lordship himself arrived in the bay, when the republicans had just entered into an armistice with the Neapolitan general Ruffo, signed by commodore Foote and tne Turkish and Russian commanders, for the castles, which alone remained in their possession. But the king of Naples, in this prosperous state or his affairs, was induced to disavow the authority of the cardinal to treat with subjects in rebellion and lord Nelson immediately put an

end to the truce. The fortresses were afterwards obliged to capitulate, and a bloody execution, in spite of the treaty, took place of a number of the Neapolitan republicans, under the eye of the British admiral. For this part of lord Nelson’s conduct much has been said by his panegyrists; but it is not, and cannot be, justified. He submitted to be subservient to the passions of the court, and this, perhaps, the more readily, as his own prejudices and passions were all on the same side.

That we have not spoken too strongly on this subject is evident from the vindication of commodore Foote, who shall speak for himself: ••• ‘ Nothing,’ says this much injured and insulted officer, ‘ can be more evident than the fact that a solemn capitulation had been agreed upon, formally signed by the chief commander of the forces of the king of Naples, by the Russian commander, and by myself, all duly authorised to sign any capitulation in the absence of superior powers. This was not a treaty of peace, subject to ratification: it was not liable to be broken; it was a serious agreement for surrender, upon terms which involved the lives and properties of men, who might have chosen to forfeit those lives and properties, had they not relied principally upon the faith of a British officer. Parts of the agreement were performed, and actual advantage was afterwards taken of those parts of the capitulation that had been thus executed, to seize the unhappy men who, having been thus deceived by a sacred pledge, were sacrificed in a cruel and despotic manner. * These facts,’ says Dr. Southey, ‘are certain, and undeniable. They cannot be defeuded ; they cannot be excused ; they cannot by any sophistry be palliated. A faithful historian has no alternative but to relate them with shame and sorrow.’

We will not pursue the baneful influence of the witchery which now began to be practised upon the affections of this great commander in the person of lady Hamilton ; ••• an influence which led to the degradation of his moral character; and which attacked his fame and honor where alone they were assailable : we confine the rest of our sketch to the circumstances connected with the battle of Copenhagen, and the attack on Boulogne. The following are Original Letters on the subject of the former, which have only appeared in a discontinued periodical. They were addressed at the period of their respective dates to a person of official rank in England.

(Original, Letter I.)

St. George, April 4tb, 1301,

Copenhagen Roads. My DEAR SIR,

‘ It was by your own desire that I trouble you with a letter, after having tried the contest afloat with Denmark, I shall not trouble you with a history of battles : suffice it to say, as far as we could, we have, by the blessing of God, been completely victorious. Circumstances threw me in the way of communicating with the prince regent of Denmark, and it has led to some messages passing between the shore and Sir Hyde Parker. I own I do not build much hopes on the success

of negociation, as it appears

clearly to me, that Denmark would at this mo-ment renounce all her alliances to be friends with us, if fear was not the preponderating consideration. Sir Hyde Parker thought that probably some good might arise if I went on shore to converse with his royal highness ; I therefore went yesterday at noon, dined in the palace, and after dinner had a conversation of two hours alone with the prince ; that is, no minister was present; only his adjutant-general Lindholm was in the room. His royal highness began the conversation by saying how happy he was to see me, and thanked me for my humanity to the wounded Danes. I then said, ‘ It was to me, and would be the greatest affliction to every man in England, from the king to the lowest person, to think that Denmark fired on the British flag, and became leagued with her enemies.’ His royal highness stopped me by saying that Admiral Parker had declared war against Denmark : this I denied, and requested his royal highness to send for the papers, and he would find the direct contrary ; and that it was the furthest from the thoughts of the British admiral. I then asked if his royal highness would permit me to speak my mind freely on the present situation of Denmark ? In which he having acquiesced, I stated to him the sensation which was caused in England by such an unnatural alliance with the furious enemies of England. His answer was, ‘ that when he made the alii ance it was for the protection of their trade ; that Denmark would never be the enemy of England, and that the emperor of Russia was not the enemy of England when this treaty was formed : that he never would join Russia against England ; and his declaration to that effect was the cause of the emperor’s (I think he said) sending away his minister; that Denmark was a trading nation, and had only to look to the protection of its lawful commerce.’ His royal highness then enlarged on the impossibility of Danish ships under convoy having on board any contraband trade; but to be subjected to be stopped, even a Danish fleet, by a pitiful privateer, and that she should search all the ships, and take out of the fleet any vessels she might please, was what Denmark could not permit. To this my answer was simply, ‘ what

occasion for convoy to fair trade?' To which he answered, ' that no commander could tell what contraband goods might be in his convoy.' I then said, ' suppose that England (which she never will), were to consent to this freedom of navigation, I will tell your royal highness what the result would be ??? ruin to Denmark; for her present commerce with the warring powers is half the neutral carrying trade ; and any merchant in Copenhagen would tell your royal highness that if all this freedom were allowed, Denmark would not have more than the sixth part : for that the state of Pappenburgh was as cood as Denmark in that case, and would soon say ??? We will not be stopped in the sound, our flag is our protection : and Denmark would then lose a great source of her present revenue, and the Baltic would scon change its name to the Russian Sea.' He said this was a delicate subject ; to which I re-voi, XV.

plied, that his royal highness had permitted me to speak out.

' He then said, ' Pray answer me a question; for what is the British fleet come into the Bal-tic?' My answer, 'to meet a most formidable and unprovoked coalition against Great Britain.' He then went on to say, ' that his uncle had been deceived; that it was a misunderstanding; and that nothing should ever make him take part against Great Britain ; for that it could not be his interest to see us crushed, nor, he trusted, ours to see him crushed.' To this I acquiesced. I then said ' there could not be a doubt of the hostility of Denmark; for, if her fleet had been joined with Russia and Sweden, they would assuredly have gone into the North Sea, menaced the coast of England, and probably have joined the French if they had been able.' His royai highness said, his ships never should join any power against England; but it required not much argument to satisfy him he could not help it. Speaking of the pretended union of the northern powers, I could not help saying, ' that his royal highness must be sensible that it was nonsense to talk of a mutual protection of trade with a power who had none ; and that he must be sensible that the Emperor of Russia would never have thought of offering to protect the trade of Denmark, if he had not had hostility against Great Britain.' He said repeatedly, ' I have offered to-day, and do offer, my mediation between Great Britain and Russia.' ??? My an-swer was, ' A mediator must be at peace with both parties ; you must settle your matter with Great Britain at present ; you are leagued with our enemies, and are considered naturally as a part of the effective force to fight us.' Talking much on this subject, his royal highness said, ' What must I do to make myself equal?" ??? A. ' Sign an alliance

with Great Britain, and join your fleet to ours.' ••• H. R. H. ' Then Russia will go to war with us, and my desire, as a commercial nation, is to be at peace with all the world.' I told him, ' he knew the offer of Great Britain, either to join us or disarm.' ' Pray, lord Nelson, what do you call disarming?' My answer was, ' that I was not authorised to give an opinion on the subject, but I considered it as not having on foot any force beyond the customary establishment.' ' Do you consider the guardships in the Sound as beyond that common establishment?' ' I do not.' ' We have always had five sail of the line in the Cattegat and coast of Norway.' ' I am not authorised to define what is exactly disarming ; but I do not think such a force will be allowed.' ••• II. R. II. ' When all Europe is in such a dreadful state of confusion, it is absolutely necessary that states should be on their guard.' ••• ' Your royal highness knows the offer of England, to keep twenty sail of the line in the Baltic.' lie then said, ' I am sure my intentions are very much misunderstood.* To which I replied, < that Sir Hyde Parker had authorised me to say, t!iat upon certain conditions his royal highness might have an opportunity of explaining his sentiments at the court of London. I am not authorised to say on what conditions exactly.' ' But what do you think T

' First, a free entry of the British fleet into Copenhagen, and the free use of every thing we may want from it ••• ' before I could get on he replied quick ••• ' That you shall have with pleasure.' ' The next is, whilst this explanation is going on, a total suspension of your treaties with Russia. These I believe are the foundations on which Sir Hyde Parker only can build other articles for his justification in suspending his orders, which are plain and positive.' His royal highness then desired me to repeat what I had said, which having done, he thanked me for iny open conversation, and having made an apology if I had said any thing which he might think too strong, his royal highness very handsomely did the same, and we parted ; he saying, ' that he hoped we would cease from hostilities to-morrow : on

such an important occasion he must call a council.' My reception was such as I have always found it, far beyond

►►iy deserts. I saw Count Bernstoff for

a moment, and could not help saying he had acted a very wrong part, in my opinion, in involving the two countries in the present melancholy situation, for that our countries ought never to quarrel. I had not time to say more, as the prince sent for me, and count Bernstoff was called the moment I came out of the room. The king's brother and his son desired I might be presented to them, which I was, and then returned on board. Yesterday evening I received from general-adjutant Lindholm the English papers to March 24th, with a hope that what I had said to the prince would make peace. I find all the country hate both the Russians and Swedes. Again begging your pardon for this long letter, I will only add that I am ever your most obliged, NELSON and BRONTE.'

(Original, Letter II).

St. George, April 9th, 1801. ' MY DEAR SIR,

' Negociation is certainly out of my line ; but, being thrown into it, I have endeavoured to ac-quit myself as well as I was able. I trust you will take into consideration all the circumstances which have presented themselves to my view. 1. We have beat the Danes. 2. We wish to make them feel that we are their real friends ; therefore have spared their town, which we can always set on fire : and I do not think if we burnt Copenhagen it would have the effect of attaching them to us ; on the contrary, they would hate us. 3. They understand perfectly that we are at war with them for their treaty of armed neutrality made last year. 4. We have made them suspend the operations of that treaty. 5. It has given our fleet free scope to act against Russia and Sweden, which we never should have done although Copenhagen had been burned ; for Sir Hyde Parker was determined not to leave Denmark hostile in his rear. 6. Our passage over the ground might have been very seriously interrupted by the batteries near Draco. 7. Every reinforcement, even a cutter, can join us without molestation; and also provisions, stores, &c. 8. Great Britain is left with the stake of all the Danish property in her hands, tier colonies, &c. if she refuses peace. 9. The

hands of Denmark are tied, ours are free to act against her confederate

allies. 10. Although we might have burnt the city, I have my doubts whether we could their ships. All these considerations weighed deeply in my mind, added to which, we have shown them that it was not because we feared fighting them that we negociated, but for the cause of humanity towards Denmark, and the wish to conciliate their affections. All these matters have affected my mind, nor shall I have a moment's rest till I know at least that I am not thought to have done mischief. After we had forced the expression of the suspension of the treaty of armed neutrality, a point very difficult for fear of Russia, I said to the prince ••• ' Now, Sir, this is settled, suppose we write peace instead of armistice ?' To which he replied••• ' That he should be happy to have a peace, but he must bring it about slowly, so as not to make new wars.' He asked, ' whether some method could not be thought of to prevent the mortifications to which ships of war with convoy were liable by being stopped ?' To which I answered ' I thought there might very easily.' I did not enter further on the subject with him, although I did to his adjutant-general of the fleet, Lindholm, who seems much in his confidence.

' My idea is, that no convoys shall be granted to any vessels bound to ports at war with us; and that, if any such convoy is granted, it shall be considered as an act of hostility. And that, if any vessel under convoy proceeds to an enemy of England's port, the owner shall lose the value of his ship and cargo, and the master be severely punished. On these foundations I would build a prevention against future disputes. But all these matters I leave to wiser heads ; and shall only assure you that I am truly, with the greatest respect, your most faithful and obedient servant, NELSON and BRONTE.

' I have the pleasure to tell you that count Bernstoff was too ill to make me a visit yesterday ; I had sent him a message to leave off his ministerial duplicity, and to recollect he had now British admirals to deal with, who came with their hearts in their hands. I hate the fellow.

' Colonel Stewart, a very fine gallant man, will give you every information.'

(Original, Letter III.)

St. George, May 5th, 1801. ' MY DEAR SIR,

' I feel very much flattered by your truly kind letter, and also for the kind expressions you were so good as to send me by colonel Stewart. I am sorry that the armistice is only approved under all considerations.

I own myself of opinion that every part of the all was to the advantage of our king and country. I stated many of my reasons for thinking it advantageous. We knew not of the death of Paul, or change of sentiment in the court of Prussia, if her sentiments are changed : my object was to get at Revel before the frost broke up at Cronstadt, that the twelve sail of the line might be destroyed. I shall now go there as a friend, but the two fleets shall not

rbrn. a junction, if not already accomplished, unless my orders permit it. My health is gone, and although I should be happy to try and hold out a month or six weeks longer, yet death is no respecter of persons. I own at present I should not wish to die a natural death ; but to the last believe me, dear Sir,

Ydurs, &c.,

NELSON and BRONTE.'

Nelson was indefatigable in placing the circumstance of the flag of truce in its true light.

' Many,' says he, ' thought it was a ruse de guerre, and not quite justifiable; my enemies, I believe, attributed it to a desire to hare no more fighting, and few, very few, to the cause that I felt, and which I trust in God I shall retain till the last moment, humanity. When my flag of truce went on shore, the crown batteries and the batteries on Amak were firing at us, one half of their shot necessarily striking their own ships which had surrendered, and our own fire did the same and worse ; for the surrendered ships had four of them got close together ††† it was a massacre. This caused my note. It was a sight which no real man could have enjoyed. I felt when the Danes became my prisoners I became their protector, &c. As to the armistice, I looked upon the northern league to be like a tree, of which Paul is the trunk, and Sweden and Denmark the branches. If I can get at the trunk and hew it down, the branches will fall of course : but I may lop the branches, and yet not be able to fell the tree ; and my power must be weaker when its greatest strength is required. If we could have cut up the Russian fleet, that was my object. Denmark and Sweden deserved whipping††† but Paul deserved exemplary punishment. I own I consider the armistice as a wise measure ; and I wish my reputation to stand upon its merits.' ††† MS. letter. In the cover enclosing these reasons he writes ††† ' If you and some other friends approve, I care not : I have dispersed the reasons to several hands, for I feel hurt. Trusting that God Almighty will allow me to present myself at your door, I am, &c.' ††† MS. letter.

The unsuccessful attempt upon the flotilla at Boulogne was the next service performed by lord Nelson. The following letter, written dur-ing a bombardment a few days before the principal attempt, contains his

opinion of the formidable flotilla.

(Original, Letter IV.) Medusa, off Boulogne, August 4th, 1801. ‘ MY DEAR SIR,

‘ I think I may venture to assure you that the French army will not embark at Boulogne for the invasion of England. They are suffering this morning from allowing a collection of craft to be assembled in their port. Five vessels of different descriptions are sunk on the outside the pier by our shells. They were all filled with heavy guns, and full of men : what damage has taken place inside the pier cannot be ascertained ; but judging from the outside we may suppose it considerable.

Ever, my dear Sir, yours, &c.,

NELSON and BRONTE.’

‘ The people of England,’ as Dr. Southey eloquently remarks, ‘ grieved that funeral ceremonies, public monuments, and posthumous rewards were all which they could bestow on him whom the king, the legislature, and the nation would alike have delighted to honor; whom every tongue would have blessed ; whose presence in every village, through which he might have passed, would have wakened the church bells, have given schoolboys a holiday, have drawn children from their sports to gaze upon him, and old men from their chimney comer to look upon Nelson ere they died.’

NEMEA, in ancient geography, a village, town, or district, situated between Cleonae and Philus in Argolis, where a grove stood in which the Argives celebrated the Nemean games, and where all the fabulous circumstances of the Ne-mean lion were believed to have happened. The district Nemea is called Bembinadia by Pliny ; a village, Bembina, standing near Nemea (Strabo). Stephanus places Nemea not in Elis, but on its borders ; Pliny, erroneously, in Arcadia. In the adjoining mountain is still shown the den of the lion, fifteen stadia from the place Nemea (Pausania’s); in which stands a considerable temple of Jupiter Nemaeus and Cleonaeus, so named from the vicinity of these two places. This place gave name to the Nemaean games.

NEMEAN GAMES, so called from Nemea, wrjere they were celebrated every third year. The exercises were chariot races, and all the parts of the pentathlon. These games were instituted in memory of Opheltes or Archemorus, the son of Lycurgus and Creusa, who was nursed by

Hypsipyle ; who leaving him in a meadow while she went to show the besiegers of Thebes a fountain, at her return found him dead, and a serpent twined about his neck ; whence the fountain, before called Langia, was named Archemorus; and the captains, to comfort Hypsipyle, instituted these games. Others ascribe the institution to Hercules, after his victory over the Nemean lion. Others allow that they were instituted first in honor of Archemorus ; but intermitted, and revived again by Hercules. The victors were crowned with parsley, a herb used at funerals, and feigned to have sprung from Archemorus's blood. The Argives presided at these games.

NEMESIANUS (Aurelius Olympius), a Latin poet, born at Carthage, and flourished about A. D. 281, under the emperors Carus, Carinus, and Numerian : the last of whom was so fond of poetry that he contested the glory with Nemeˆ sianus, who had written a poem upon fishing and maritime affairs. There are still extant a poem of our author called Cynegeticon, and four eclogues : they were published by Paulus Manutius in 1538; by Barthelet in 1613; at Ley den in 1653, with the notes of Janus Vlitias. Giraldi has preserved a fragment of Nemesianus, which was communicated to him by Sannazarius. Although this poem has acquired some reputation, it is greatly inferior to those of Oppian and Gratian upon the* same subject; yet Nemesian's style is natural, and has some degree of elegance. His poem in the eighth century was so much esteemed, that it was read among the classics in

Xhe public schools, particularly in the time of Charlemagne, as appears from a letter of the celebrated Hincmar bishop of Rheims to his nephew Hincmar of Laon.

NEMESIS, in Pagan mythology, the daughter of Jupiter and Necessity, or, according to others, of Oceanus and Nox, who had the care of avenging the crimes which human justice left unpunished. She was also called Adrastaea, because Adrastus king of Argos first raised an altar to her; and Rhamnusia, from her having a magnificent temple at Rhamnus in Attica. ??? She had likewise a temple at Rome in the capitol. She is represented with a stern countenance, holding a whip

in one hand and a pair of scales in the other.

NEMESIUS, a Greek philosopher who embraced Christianity, and was made bishop of Emesa in Phoenicia, where he was born ; he flourished in the beginning of the fifth century. We have a piece by him, entitled De Natura Homi-nis, in which he refutes the fatality of the Stoics and the errors of the Manichees, the Apollina-rists, and the Eunomians ; but he espouses the opinion of Origen concerning the pre-existence of souls. This treatise was translated by Valla, and printed in 1535. Another version was made of it by Ellebodius, and printed in 1665 ; it is also inserted in the Bibliotheca Patrum, in Greek and Latin. A third edition was published at Oxford in 1671, folio, with a learned preface, wherein the editor endeavours to prove from a passage in this book that the circulation of the blood was known to Nemesius.

NEMINE CONTRADICENTE [Lat.] i. e. none contradicting it; a term chiefly used in parliament when any thing is carried without opposition; usually contracted into nem. con.

NEMOURS (Mary), of Orleans, an eminent French lady, daughter of the duke of Longueville, born in 1625. She wrote a spirited work, entitled Memoirs of the war of the Fronde ; usually printed with Joli's works. She died in 1707.

NEN, or NINE, the chief river of Northamptonshire, which rises in the west part of it, is made navigable at Northampton, leaves the county at Peterborough, and, crossing the isle of Ely, forms part of the west boundary of Norfolk, and falls into the German Ocean, ten miles north of Wisbeach.

NENAGH, a post town of Ireland, in Tipperary, seventy-five miles from Dublin ; situated on a branch of the Shannon which runs into Lough Derg. Here stand the ruins of an old castle, called Nenaghround. Also those of an hospital founded in 1200 for canons of St. Augustine. In the reign of Henry III. a rich friary for conventual Franciscans was founded here. Here is a barrack for two troops of horse. This town was burnt on St. Stephen's day 1348, by the ˆrish. It has four fairs, and lies nineteen miles north-east of Limerick, and twenty-three north of Cashel.

NENIA, or N.ENIA, in ancient poetry, a kind of funeral song, sung to the music of flutes at the obsequies of the dead. Authors represent them as sorry compositions, sung by hired women-mourners called Praeficje. The first rise of these Nenia is ascribed to the physicians. The goddess of tears and funerals was called

whom some suppose to have given that name to the funeral song, and others to have been named from it.

NENNIUS, an ancient British historian of the ninth century, who wrote a History of Britain in Latin. A MS. of this work is among the Cottonian MSS. in the British Museum.

NEOC7ESARIA, a town of Pontus on the south or left side of the Lycus. (Pliny.) About A. D. 342, when Leontius and Sallustius were consuls, it was entirely ruined by a dreadful earthquake, no edifice having withstood the violence of the shock,ˆ except the church and the bishop's habitation.

NEOGRAD, or NOGRAD-VARMEGYE, a county of north-west Hungary, between those of Hont and Heves. It is watered by the Ipoly, and borders on its south extremity on the Danube. Its area is 1647 square miles ; population 164,000. The north part contains the cold mountain range of Karaut, and is comparatively unproductive. The south is level, mild, and fertile, abounding in corn, hemp, fruit (particularly me-lons), and wine ; great numbers of cattle are also reared. The diets of this country assemble at Balassa-Gyarmath.

NEOMAGUS, according to Ptolemy, or No-VIOMAGUS, of Antonine's pillar ; a town of the Regni in Britain, : now thought to be Guildford in Surry, by Lhuyd ; or Croydon, by Talbot. But Camden takes it to be Woodcote, two miles south of Croydon, where traces of an ancient town are still to be seen.

NEOMENIA, or NOUMENIA, a festival of the ancient Greeks, at the beginning of every lunar month, which, as the name imports, was observed upon the day of the new moon, in honor of all the gods, but especially Apollo, who was called Neomenios, because the sun is the fountain of light ; and whatever distinction of times and seasons may be taken from other planets, yet they are all owing to him as the original of those borrowed rays by which they shine. ††† The games and public entertainments at these festivals were made by the rich, to whose tables the poor flocked in great numbers. The Athenians at these times offered solemn prayers and sacrifices for the prosperity of their country during the ensuing month. See GAMES.

NEOPHYTES, i. e. new plants, a name given by the ancient Christians to those heathens who had newly embraced the faith ; such persons be-ing considered as regenerated, or born a-new by baptism. The term

has been also used for new priests, or those just admitted into orders, and sometimes for the novices in monasteries. It is still applied to the converts made by the missionaries among the infidels.

NEOPTOLEMUS, king of the Molossi, father of Olympias, and grandfather of Alexander the Great.

NEOPTOLEMUS, king of Epirus, uncle of the celebrated Pyrrhus, whom he attempted to poi-son, for which he was put to death.

NEOPTOLEMUS, one of Alexander's general-; and relations ; the first who climbed the walls o" Gaza, when it was taken. After Alexander'-, death he was governor of Armenia ; but was killed by Eumenes, A. A. C. 321.

NEOTER’ICK, adj. Lat. neoterkut. Mo-dern ; novel ; late.

We are not to be guided either by the misreports of some ancients, or the capricio’s of one or two

ntotericki. Grew.

NEPA, in zoology, a genus of insects belonging to the order of hemiptera. See ENTOMOLOGY. The rostrum is inflected ; the antennae are shorter than the thorax ; and the hind feet are hairy, and fitted for swimming. There are several species. The four wings are folded together cross-wise, with the anterior part coriaceous. The two fore feet are cheliform, or resemble the claws of a crab ; the other four are formed for walking. There are three of these species found in water, where they dwell, as do their larvae and chrysa-b’ds. It is likewise in the water that we find the eggs of the water scorpion. Those eggs, of an oblong shape, have at one of their extremities two or more bristles or hairs. The insect sinks its egg into the stalk of a bull-rush or some other water plant, so that the egg lies concealed, und only the hairs or bristles stick out, and are to be seen. One may easily preserve in water those stalks loaded with eggs, and see the young ····water scorpions hatched under one’s own roof, or at least their larvae. These insects are voracious, and feed on other aquatic animals, which they pierce and tear with their sharp rostrum, while they hold them with the forceps of their fore-feet.···· They fly well, especially in the evening and night, and they convey themselves from one pool to another, especially when that they are in begins to dry up. Mr. Geoffrey asserts, that the pedes cheliformes, or fore feet of the nepa, are the antennae of the insect, which he says has but four feet.

NEPAL, or NEPAUL, a kingdom of Northern Hindostan, bounded on the north by the Him-malaya range of mountains, on the south by the provinces of Bahar, Oude, and Delhi, on the east by Bootan, and Si

Kim; and, previous to the late war with the British, extending west to the banks of the Suttelege. The kingdom was then divided into the provinces of Gorcah, Kyrat, Morung, Muckwany, Mockwanpore, Lemjung, twenty-four rajahs, Kemaon, and Al-mora. Nepaul Proper, whence the kingdom takes its name, is nearly of an oval figure ; its greatest length from north to south being twelve miles, by nine in greatest breadth. On the north and south it is bounded by lofty mountains, but to the east and west it is more open. This tract contains the capital Catamandoo, and is filled beside with populous villages. It enjoys almost a European climate, the mountains being covered with snow the whole year, and the valley much elevated. In some places it yields two crops in the year. The mountains contain copper and iron ; and Nepaul sends to Bengal timber, ivory, wax, honey, rezin, bastard cinnamon, car- (lamums, walnuts, &;c. ; and receives muslins and silks of Bengal, carpets, spices, tobacco, and European goods.

The rajah is considered the proprietor of the soil, and his government is entirely despotic. The natives are in general a hardy race ; and during-a late war with the British displayed considerable courage. The prevailing religion is the

Hindoo, but many of the inhabitants are reckoned as impure descendants of the Tartars. The tribe called Newars admit of poliandry, or rather the women are at liberty to divorce their husbands and take others when they choose. The Brahmins are numerous here, and well skilled in Sanscrit ‘learning. One of their libraries is said to contain 15,000 volumes. Five vernacular languages are spoken, but the llmdostany is generally understood.

The valley of Nepaul is said to have been formerly a lake, which was drained by one of their divinities ; and they have a long list of native princes. In the beginning of the fourteenth century, it is knpwn that Hur Sing Deo, of the posterity of the Hindoo princes of Oude, entered Nepaul with a large army, and subdued it, and that the crown continued in his family till 1768, when Purthi Narain, rajah of Goorca, united Ne-paul to Goorca. He died in 1771, and was succeeded for four years by his son Ik-had ur Sah, who much extended his dominions. He was succeeded by a brother, Pertaub Sing; and the latter by his son rajah Run Behadur. During these reigns no less than forty-six petty chiefs are said to have been reduced to obedience by the Nepaulese ; and the year 1790 they had the boldness to send an army into Thibet, and to plunder Teshoo Loomboo, the residence of

the Lama, of the Tartars. In revenge the emperor of China sent, in 1792,70,000 men to invade Nepaul, who advanced to within twenty-six miles of Catamandoo, and compelled the rajah to be-come tributary to the emperor. In this war the Chinese, we are told, brought with them cannon made of pasteboard, which, although they probably burst on the first discharge, certainly frightened the Nepaulese ; while, on the other hand, many of the Nepaul sepoys being dressed in red, and having European muskets, were believed by the Chinese to be British troops ; a remonstrance was therefore sent to lord Cornwallis, then governor-general, on the subject.

In October, 1801, a treaty was concluded between the Nepaulese and the Bengal government, by which a tribute of elephants, which had been long paid by the former as a quit-rent for the district of Muckinacinpore, was relinquished. In 1808 Bicrama Sah, when only nine years old, succeeded to the throne ; all the power being placed in the hands of the regent, Bheem Sing Tappa.

Six years after a dispute arose respecting a slip of land from twenty to thirty miles in breadth called the Turrayna, and some villages in the Northern part of Bahar of which the Nepaulese took forcible possession. The eoverner-general, lord Hastings, ordered the British troops to take the field, in the end of the year; but, as the enemy's territory was mountainous, the army was formed into four divisions, for the purpose of making four simultaneous attacks, and preventing the enemy from concentrating their forces. The right division advanced by the direct road towards the capital Catamandoo, the right centre by another route westward ; the left division was directed to enter from the hanks of the Suttelege ; and the left centre to advance through the district of Doun, and secure the eastern bank of the

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Ganges. To these was subsequently added a fifth division, to invade the province of Kemaon. The two right divisions found the country so strong that they w►►re not able to proceed : but the left centre entered the mountains, and attacked the fortress of Kalogna ; but were severely repulsed. The fifth division entered Kemaon without opposition ; and shortly after defeated one of the Nepaul armies, and, after a siege of some days, took the fortress of Almora : in about ten days of hard fighting it reduced the whole province. The western division, under the command of general Ochterlony, also captured the whole of the enemy's army opposed to it ; when the rajah sent deputies to the British camp, to solicit peace on any terms. A treaty was accordingly framed, by which the whole of the Terryana or disputed ground, with the exception of part of Morang, was ceded to the British, together with the province of Kemaon : the COUD-tries westward of that province were to be restored to the rajah of Serinagur, and other dispossessed chieftains Previous to the treaty being ratified, however, the rajah died, and, his successor being a boy of three years old, the regency refused to confirm it. The war therefore was renewed in 1816; and the army under general Ochterlony, having advanced through Muckwanpore, having defeated the enemy in a pitched battle arrived within thirty miles of Catamandoo. The regent now in his turn, terrified by the approach of the troops, sent deputies to the British camp, to implore a truce ; when the governor-general was satisfied with the terms of the former treaty, ex-cept taking under their protection some petty chiefs, who had assisted him during the war, and stipulating that a British envoy should constantly reside at Cattamandoo. By this treaty Nepaul is limited on the west to the river Serjew, or Gogra.

NEPENTHE, n. s. Gr. vrt and 7rev0oe, grief. A drug that drives away all pains.

There where no passion, pride, or shame transport, Lulled with the sweet nepenthe of a court ; There where no father's, brother's, friend's disgrace, Once break their rest, nor stir them from their place.

Pope.

NEPENTHES, in botany, a genus of the tetrandria order, and gynandria class of plants : CAL. quadripartite : COR. none : CAPS,

quadrilo-cular.

NEPETA, or NEP, catmint, in botany, a genus of the gymnospermia order, and didynamia class of plants; natural order forty-second, verticillatae: COR. under lip having a small middle segment crenated ; the margin of the throat is reflexed ; the stamina approach one another. There are fourteen species ; the most remarkable is,

N. cataria, common nep or catmint. This is a native of many parts of Britain, growing about hedges and in waste places. The stalk is a yard high, and branched; the leaves are hoary; the flowers flesh colored, growing verticillate in spikes at the tops of the branches : the middle segment of the lower lip is spotted with red. The plant has a bitter taste, and strong smell, not un-like pennyroyal. An infusion of this plant is reckoned a good cephalic and emm►►nagogue;

being found very efficacious in chlorotic cases. Two ounces of the expressed juice may be given for a dose. It is called catmint because cats are very fond of it, especially when it is withered : for they will roll themselves on it, and tear it to pieces, chewing itin their mouths with great pleasure. Mr. Ray mentions his having transplanted some of the plants from the fields into ms garden, which were soon destroyed~by the cats; but they did not meddle with the plants which came up from seeds in his garden ; according to an old proverb, *viz.* ‘ If you set it, the cats will eat it ; if you sow it, the cats will not know it.’ Mr. Withering is of opinion that, where there is a quantity of plants growing together, the cats will not meddle with them : but Mr. Miller affirms that he has frequently transplanted one of these plants from another part of the garden, within two feet of which some came up from seeds, in which case the latter have remaine unhurt, when the former have been torn to piece and destroyed : ,he acknowledges, however, that where there is a large quantity of the herb growing together, they will not meddle with it. This plant is very hardy, and easily propagated by seeds. If sown upon a poor dry soil, the plants will not grow too rank, but will continue longer, and appear much handsomer, than in rich ground, where they grow too luxuriant, and have not so strong a scent.

NEPH’EW, n. s. Sax. newa; Fr. nereu ; Belg. nee/*; Lat. nepos. The son of a brother or sister.

All the sons of these five brethren reigned By due success, and all their nejiheics late, Even thrice eleven descents the crown retained.

Spenser.

With what intent they were first published, those words of the nephew of Jesus do plainly signify, after that my grandfather Jesus had given himself to the reading of the law and the prophets, and other books of our fathers, and had gotten therein sufficient judgment, he proposed also to write something pertaining to learning and wisdom. Hooker.
Her sire at length is kind,

Prepares his empire for his daughter's ease,

And for his hatching nephews smooths the sea .

Dry den. Immortal offspring of my brother Jove :

My brightest nephew and whom best I love. Id.

I ask whether, in the inheriting of this paternal power, the grandson by a daughter hath a right be-fore a nephew by a brother 1 Locke.

NEPHRITIC, adj. Gr. vtfptrtKoc ; Fr. nephretique. Belonging to the organs of urine; hence troubled with the stone ; remedial of the stone.

The nephritic stone is commonly of an uniform dusky green ; but some samples I have seen of it that are variegated with white, black, and sometimes yellow. Woodward.

The diet of nephritic persons ought to be opposite to the alkalescent nature of the salts in their blood.

Arbuthnot,

NEPHRITIS. See MEDICINE.

NEPISINGUI, a lake of Upper Canada, bounded by rocks, and forming part of the route through which the traders for fur make their way annually into the interior. It is twelve leagues long by five wide, and connected with lake Huron bv French River.

NEPOS (Cornelius), a celebrated Latin biographer, who flourished in the time of Julius Caesar, and lived, according to St. Jerome, to the sixth year of Augustus. He was an Italian, if we may credit Catullus, and born at Ilostil a, a small town of Verona, in Cisalpine Gaul.

Ausonius, however, will have it that he was born in Gaul : and they may be both in the right, as that part of Italy was in Gallia Cisalpina, or Gallia Togata. Leander Alberti thinks Nepos was born in Verona, or its neighbourhood. Cicero and Atticus were friends of our author ; who wrote the lives of the Greek historians, as he himself attests in that of Dion, speaking of Philistus. He wrote some other excellent works which are lost. What remains is his Excellentium Impe-ratorum Vitae, which were long ascribed to ftLmi-lius Probus, who published them, as it is said, under his own name, to insinuate himself into the favor of the emperor Theodosius ; but, in the course of time, the fraud has been discovered, although several learned persons have confounded the two authors. This piece was translated into French by Claveret in 1663 ; and by M. le Gras, at Paris, 1729, 12mo.

NEP'OTISM, n. s. Fr. nepotisme ; Lat. nepos. Fondness for nephews.

To this humour of nepotism Rome owes its present splendor : for it would have been impossible to have furnished out so many glorious palaces, with such a profusion of pictures and statues, had not the riches of the people fallen into different families.

Addison.

NEPOTIANUS (Flavius Popilius), a short lived emperor of Rome, was nephew of Constantine the Great, by his sister Eutropia, and, on the death of his cousin Constans, was proclaimed emperor ; but was murdered by Anicetus after one month's reign.

NEPTUNALIA, feasts held among the ancients, in honor of Neptune. The Neptunalia differed from the consualia, in that the latter were feasts of Neptune, considered particularly as presiding over horses, and the manege. Whereas the Neptunalia were feasts of Neptune in general, and not considered under any particular quality. They were celebrated on the 10th of the calends of August. ►►.<

NEPTUNE, in Pagan mythology, the god of the sea, was the son of Saturn and Vesta, or Ops, and the brother of Jupiter and Pluto. He assisted Jupiter in his expeditions; on which that god, when he arrived at the supreme power, assigned him the sea and the islands for his empire. He was, however, expelled from heaven with Apollo for conspiring against Jupiter, when they were both employed by Laome-don, king of Phrygia, in building the walls of Troy; but that prince dismissing Neptune without a reward, he sent a sea monster to lay waste the country, on which he was obliged to expose his daughter Hesione. He is said to have been the first inventor of horsemanship

and chariot racing ; on which account Mithridates king of Pontus threw chariots drawn by four horses into the sea in honor of this god ; and the Romans instituted horse races in the circus at this festival, during which all other horses left working, and the mules were adorned with wreaths of flowers.

In a contest with Minerva ne produced a horse by striking the earth with his trident ; and on another occasion, in a trial of skill with Minerva and Vulcan, produced a bull, whence that ani-mal was sacrificed to him. His favorite wife was Amphytrite, whom he long courted in vain, till, sending the dolphin to intercede for him, he met with success ; on which he rewarded the dolphin by placing him among the stars. He had also two other wives, one of whom was called Salacia from the salt water; the other Venilia from the ebbing and flowing of the tides. He had likewise many concubines, by whom he had a great number of children. To enjoy the company of the goddess Ceres, who had assumed the form of a mare to avoid his importunities, he metamorphosed himself into a horse, and in this form begat the miraculous horse Arion. See ARION. To enjoy Theophane, whom he had previously changed into a sheep, to conceal her from her numerous admirers, he assumed the form of a ram, and conveyed her to the island Crumissa, where he had by her the celebrated ram with the golden fleece, which afterwards occasioned the famous voyage of the Argonauts to Colchis. To gain the confidence of Tyro, the daughter of Salmo-neus, he took the form of the river god, Enipeus, and by her had Pelius and Neleus. He was also the father of the Cyclop Polyphemus, and of Phorcys, the father of the Gorgons, by Thoosa; of Nycetus, Lycus, and Euphemus, by Celeno; of Agenor and Bellerophon, by Eury-nome, the daughter of Nysus; of the giants Othus and Ephialtes (the latter of whom grew nine inches every month), by Iphimedia, the daughter of the giant Aloeus, whence the twins were called Aloeides; and many others too tedious to enumerate. He is represented with black hair, with a garment of an azure or sea-green, holding his trident in his hand, and seated in a large shell drawn by sea-horses, attended by the sea-gods, Palemon, Glaucus, and Phorcys, and the sea-goddesses Tethys, Thetis, Melita, and Panopaea, and a long train of Tritons and sea-nymphs. In Egypt he was called Ca-nobus, or Canopus, and was worshipped as the numen aquarum, or spirit of the Nile. His emblem was the figure of certain vases or pitchers, with which the Egyptians filtrated the water of their sacred river, in order to purify it and render it fit for use. From the mouth of each of these vases, which were charged with hieroglyphics, arose the head and sometimes the head and hands of a man or woman. Such are the emblems which still remain of the Egyptian Neptune or Canopus ; and it was by this emblem that the tutular god of Egypt vanquished the t-od of Chaldea in the ridiculous manner mentioned by Ruffinus in his ecclesiastical history. See CANOPL'S. The worship of Neptune was established in almost every part of the Pagan world. The Libyans in

particular held him in high veneration. He was esteemed not only god of the ocean, but of all rivers and fountains; and it was believed that he could also cause earthquakes at his pleasure, and raise islands from the bottom of the sea with a single stroke of his trident.

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NERA, a river of Italy in the ecclesiastical states, which near Terni has a large waterfall. It rises in the Marca d'Ancona, and falls into the Tiber, opposite to Otta.

NERBUDDAH, called also the Reva, a noble river of Hindostan, which has its source in Omercuntuc, in the province of Gundwaneh; two other large rivers, one running to the east (the Soane), and the other to the south (the Mahanhuddy), having their sources in the same mountain. The Nerbuddah is 750 miles in length, and is one of the straightest in its course in the whole world. After passing through Gundwaneh, it takes a westerly direction through Khandesh, Malwah, and Gujerat, and, passing the city of Broach, falls into the gulf of Cambay. It is navigable by boats for a considerable distance : and its waters are said to have a peculiar bleaching quality. It was once the boundary between Hindostan Proper and the Deccan.

NEREIDES, NEREIDS, in the Pagan theology, sea-nymphs, daughters of Nereus and Doris. The Nereids were esteemed very handsome ; insomuch that Cassiope, the wife of Cepheus king of Ethiopia, having triumphed over all the beauties of the age, and daring 10 vie with the Nereids, they were so enraged that they sent a prodigious sea-monster into the country ; and, to appease them, she was commanded by the oracle to expose her daughter Andromeda, bound to a rock, to be devoured by the monster. See ANDROMEDA and PERSEUS. In ancient monuments the Nereides are represented riding upon sea-horses ; sometimes with an entire human form, and at other times with the tail of a fish. Most mythologists enumerate fifty of them. Homer mentions thirty ; Apollodorus forty-five. Thetis the mother of Achilles was one of them.

NEREIS, in zoology, a genus of animals belonging to the order of vermes mollusca. The body is oblong, linear, and fitted for creeping ; it is furnished with lateral pencilled tentacula. The most remarkable species are the five following:

1. N. caerulea, the blue nereis, inhabits the ocean; where it destroys the serpulse and tere-dines.

2. N. cirrosa, the waving nereis. The body is red, lumbriciform, with sixty-five notches, furnished on both sides with two rows of bristles. At each side of the head ten filaments, at the sides of the mouth many,

twice as long as the former. It dwells in Norway, on rocks at the bottom of the sea. It vomits a red liquor, with which it tinges the water.

3. N. gigantaea, the giant nereis, is a peculiar species of those large worms that make their way into decayed piles driven down into the sea, which they bore through and feed upon, whence they are called sea-worms. From head to tail they are beset on either side with small tufts terminating in three points; which are like the fine hair pencils used by painters, and composed of shining bristles of various colors. The upper part of the body in this worm is all over covered with small hairs. The rings of which it is *”” ”” ””

seasons, but especially in summer before stormy weather, when they are more agitated and more luminous. Their numbers and wonderful agility, added to their pellucid and shining quality, do not a little contribute to their illuminating the sea, for myriads of these animalculse may be contained in the portion of a small cup of sea-water. Innumerable quantities of them lodge in the cavities of the scales of fishes, and to them probably do the fishes owe their noctilucous quality. ‘ I have observed with great attention,’ says Barbot, ‘ a fish just caught out of the sea, whose body was almost covered with them, and have examined them in the dark; they twist and curl themselves with amazing agility, but soon retire out of our contracted sight ; probably their glittering numbers dazzling the eye, and their extreme minuteness eluding our researches. It is to be observed that, when the unctuous moisture which covers the scales of fishes is exhausted by the air, these animals are not to be seen ; nor are the fishes then noctilucous, that matter being perhaps their nourishment when living, as they themselves afford food to many marine animals. They do not shine in the day-time, because the solar rays are too powerful for their light, however aggregate or immense their number.’ Their appearance is particularly brilliant when the wind is in the east and southeast points, and in the wirier nights preceded by a warm day. If wate containing these animal-NER

cuies be kept warm, they retain their light two whole days after they are dead ; but in cold water lose it in eight hours : motion and warmth, which increase their vivacity and strength, increase their light also.

NEREUS, in mythology, a marine deity, the son of Oceanus and Tethys. He settled in the ./Egean Sea, was considered as a prophet, and had (he power of assuming what form he pleased. He married his sister Doris, by whom he had fifty daughters called Nereids, who constantly attended on Neptune, and when he went abroad surrounded his chariot.

NERI (St. Philip de), founder of the congregation of the Oratory in Italy, was born of a noble family at Florence, on the 25th of July, 1515. Educated in the principles of piety and learning, he soon became distinguistied for his knowledge and virtue. At the age of nineteen lie went to Rime, where he assisted the sick. Being raised to the priesthood, at the age of jhirty-six, he instituted in 1550 a fellowship in the church of St. Saviour del Campo, for the relief of poor foreigners, pilgrims, and conval-ascents, who had no place whither they could retire. This society was the cradle of the congregation of the Oratory. Having gained over Salviati, brother to the cardinal, Tarugio, afterwards cardinal, the celebrated Baronius, and others, they began to form a society in 1564. The spiritual exercises had been transferred in 1558 to the church of St. Jerome de la Charite, which Philip did not leave till 1574, when he went to stay at St. John of the Florentines. Pope Gregory XIII. gave his approbation of the congregation in 1575. The order soon spread throughout Italy. No vow is taken ; charity is the only bond of connexion. The general continues only three years in office, and his orders are not despotic. The founder died in Rome on the 26th of May, 1595, aged eighty. He had resigned the generalship in 1592, in favor of Baronius. The constitutions which he left were not printed till 1612. Philip was canonised in 1622, by Gregory XV.

NERI (Anthony), an early Florentine chemist, who wrote on the art of glass-making. He was born in Florence in the middle of the sixteenth century ; and though he adopted the ecclesiastical profession, refused to accept of any benefice, that he might be at leisure to pursue his favorite sciences. He resided for a long time at Antwerp, and visited

several parts of Europe ; the period of his death is unknown. His principal treatise, Arte Vetraria Distinta in Libra Sette, has been often translated and printed.

NERIS-LES-BAINS, a large borough in the department of the Allier, about four miles southeast of Montlu9On, with 1100 inhabitants, famous for its baths. It is pleasantly situated at the head of the canal of the Cher, on the great road from Moulins to Limoges. Of the ancient city of Neris, which was patronised by the Roman emperors and embellished with monuments of every kind, sacked under Constantius 11., restored by Julian and his successors, plundered again by Clovis, and finally by the Normans, some ruins yet remain, presenting objects of the greatest interest to artists and antiquaries.

The geographic! situation of this place, and the beneficial effects of its hot springs, attract to it a great concourse of visitors. The water falls with considerable force and in great abundance into an immense basin of an oval form, divided into three parts and containing the produce of four springs. There is no grand bath, but in all the inns there are bathing rooms, which contain eight or niue convenient baths.

The waters of Neris are very clear, oily, without taste or smell; they have both tonic and soothing properties. They are very serviceable in. chronic disorders, cutaneous eruptions, nervous affections, glandular and rheumatic complaints, and are used either by bathing, washing, or drinking. The temperature varies from 16►► to 24►► of Reaumur's thermometer.- The season for these waters is from the 25th of May to the 10th of October. Among the antiquities may be mentioned the remains of an amphitheatre and a Roman camp to the west of the town. There is a hospital for the gratuitous reception of 130 sick persons. In the vicinity are some pleasant walks.

NERIUM, in botany, oleander or rose bay, a genus of the monogynia order and pentandria class of plants; natural order thirtieth, contorts. It is called nerium from vtjpoc, humid, because the plants grow in moist places. There are two erect follicles; the seeds plumy; the tube of the corolla terminated by a lacerated crown. Its peculiar characters are these : the empalement of the flower is permanent, and cut into five acute segments ; the flower has one funnel-shaped petal, cut into five broad obtuse segments, which are oblique ; it has a nectarium, terminating the tube, which is torn into hairy segments; it has five short awl-shaped stamina within the table ; it has an oblong germen, which is bifid, with scarce any style, crowned by single stigmas; the

germen afterwards turns to two long, taper, acute-pointed pods, filled with ob-long seeds lying over each other like the scales of a fish, and crowned with down. There are seven species, all natives of warm climates. The most remarkable are these : ###

1. N. antidysintericum, a native of Ceylon. The bark is an article in the materia medica, under the name of conessi.

2. N. oleander, South Sea rose, a beautiful shrub, cultivated in gardens on account of its flowers, which are of a fine purple, and in clusters. The whole plant is poisonous, and especially the bark of the roots. Oleanders are generally propagated by layers in this country ; for, although they will take root from cuttings, yet that being an uncertain method, the other is generally preferred ; and, as the plants are very apt to produce suckers or shoots from their roots, these are best adapted for laying; for the old branches will not put out roots ; when these are laid down, they should be slit at a joint, in the same manner as is practised in laying carnations. There are few plants which are equal to them either to the sight or smell, for their scent is very like that of the flowers of the white thorr. ; and the bunches of flowers will be very large if the plants are strong. The nerium oleander in qualities resembles th*5 apocynuin. Hut when

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nandled and examined, in a close chamber, it causes a gradual numbness, with a pain in the head ; which shows that something poisonous belongs even to the smell, though there is no danger, if it be received in the open air.

N. tinctorum, a species with beautiful blue flowers, discovered by Dr. Roxburgh at Madras. A decoction of the leaves, with an addition of lime-water, makes an indigo of fine quality.

NERO (Claudius Domitius C*sar), the sixth emperor of Rome, and the last of the family of the Caesars, was the son of Caius Domitius Ahenobarbus and Agrippina, the daughter of Germanicus. He was adopted by the emperor Claudius, A. D. 50, and, four years after, succeeded him. In the beginning of his reign he assumed the appearance of the greatest kindness, condescension, affability, complaisance, and humanity. The object of his administration seemed to be the good of his people ; and, when he was desired to sign his name to a list of malefactors that were to be executed, he exclaimed, ‘ Would to heaven I had never learned to write !’ When the senate had liberally commended the wisdom of his government, he desired them to keep their praises till he deserved them. These apparent virtues, however, proved to be evanescent and artificial : Nero soon displayed the real propensities of his nature. He delivered himself from the sway of his mother, and at last ordered her to be murdered. Many of his courtiers shared her unhappy fate ; and Nero sacrificed to his fury or caprice all who obstructed his pleasure or inclination. In the night he generally went from his palace to visit the meanest taverns, and all the scenes of debauchery which Rome contained. In these nocturnal riots he insulted the people in the streets ; and his attempts to offer violence to the wife of a Roman senator nearly cost him his life. He also turned actor, and appeared publicly on the Roman stage. To excel in music, and to conquer the disadvantages of a hoarse disagreeable voice, he moderated his meals, and often passed the day without eating. He next went into Greece, and presented himself a candidate at the Olympic games. He was defeated in wrestling; but the flattery of the spectators adjudged him the victory, and he returned to Rome with all the pomp and splendor of an eastern conqueror, drawn in the chariot of Augustus, and attended by a band of musicians, actors, and stage-dancers. These amusements, however, were comparatively innocent ; but his conduct soon became abominable. He disguised himself in the

habit of a woman, and was publicly married to one of his eunuchs. This violence to nature and decency was soon exchanged for another : Nero resumed his sex, and celebrated his nuptials with one of his meanest catamites : and on this occasion a Roman wit observed, that the world would have been happy if Nero's father had had such a wife. His cruelty was now displayed in a still higher degree ; for he sacrificed his wire Octavia Poppoea, and the celebrated writers Seneca, Lucan, Petronius, &c. He had read of the burning of Troy, and to represent that dismal scene he caused Rome to be set on fire in different places. The conflagration became soon universal, and during nine successive days, the fire continued. All was desolation : nothing was heard but the lamentations of mothers whose children had perished in the flames, the groans of the dying, and the continual fall of palaces and buildings. Nero was the only one who enjoyed the general consternation. He placed himself on the top of a high tower, and played on his lyre, while he sung the destruction of Troy; a dreadful scene which his barbarity had realised before his eyes. He attempted to avert the public odium from his head by a pretended commiseration of the miseries of his subjects, and by throwing the blame of the fire on the Christians ; which gave rise to the first dreadful persecution, wherein St. Peter and St. Paul are said to have suffered. Nero began to repair the streets and the public buildings at his own expense. He built a celebrated palace, which he called his golden house. It was liberally adorned with gold, with precious stones, and with every thing rare and exquisite. It contained spacious fields, artificial lakes, woods, gardens, orchards, whatever exhibited a beautiful scene. The entrance of this edifice admitted a large colossus of the emperor, 120 feet high, which Pliny says was afterwards destroyed by lightning : the galleries were each a mile long, and the whole was covered with gold. The roofs of the dining halls represented the firmament, in motion as well as in figure ; and continually turned round night and day, showering down all sorts of perfumes and sweet waters. This grand edifice, according to Pliny, extended all round the city. When he went a fishing his nets were of gold and silk. He never appeared twice in the same garment ; and when he took a voyage there were thousands of servants to take care of his wardrobe. This continuation of debauchery, extravagance, and cruelty at last roused the people. Many conspiracies were formed against him ; but they were generally discovered, and the conspirators suffered the severest punishments. The most dangerous one was that of Piso, from which Nero was saved by the confession of a slave. The conspiracy of Galba proved more successful, who, when he learned that his plot was known to Nero, declared himself emperor. The unpopularity of Nero favored his cause ; he was acknowledged by all

the Roman empire ; and the senate condemned the tyrant to be dragged naked through the streets of Rome, whipped to death, and afterwards to be thrown down from the Tarpeian rock like the meanest malefactor. This, however, Nero prevented by killing himself, A. D. 68, in the thirty-second year of his age, after a reign of thirteen years and eight months. Rome was filled with acclamations ; and the citizens, more strongly to indicate their joy, wore caps, such as were generally used by slaves who had received their freedom. See ROME. The name of Nero has been ever since used emphatically to express a barbarous and bloody tyrant.

NERVA (Cocceius), an excellent Roman emperor, who succeeded Domitian, the last of the twelve Csesars. He was a native of Narnia in Umbria ; but his family was originally of Crete. Dio Cassius says he was born on the 17th of March, in the eighteenth year of Tiberius, A. D. 32. Nero, in the twelfth year of his reign, made

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him praetor, and erected a statue for him in the palace on account of his poems (for he was one of the best poets of his age), some of which were inscribed to him. He was consul in 71 with Vespasian, and in 90 with Domitian. Authors uniformly celebrate him as a prince of a most mild and humane temper, of great moderation and generosity, who looked on his office as emperor, not as if it was for his own advantage, but for that of his people ; and whilst he reigned he made the happiness of his subjects his only pursuit. He narrowly escaped death under Domitian. The Romans unanimously chose him emperor ; and they had no cause to repent of their choice. An instance of his great lenity appears in his pardoning Calpurnius Crassus, who conspired against him. In short he omitted nothing that might contribute to the restoring of the empire to its former lustre ; recalling those who had been banished for religion, and redressing all grievances. Finding his strength failing, he conferred an additional benefit on the Romans by adopting Trajan. He died A. D. 98. He was the first Roman emperor of foreign extraction

NERVE, n.s. -\ Fr. nerf; Lat. itervus. NERVELESS, adj. { A peculiar filament of the NERVOUS, i body of animals. See ANA—

NERVY. JTOMY, Index. Nerveless is,

destitute of nerves ; weak ; wanting strength : nervous and nervy, strong; vigorous; relating to the nerves ; also (by way of banter) having weak or disordered nerves; hypochondriac. The latter word is seldom used.

What man dare, I dare : Approach thou like the rugged Russian bear ; Take any shape but that, and my firm nerves Shall never tremble. Shakspeare. Macbeth.

Death, that dark spirit, in his nervy arm doth lie, Which, being advanced, declines, and then men die.

Shaktpeare. If equal powers

Thou wouldst inflame, amids my nerves, as then I could encounter with three hundred men.

Chapman.

The nervet do ordinarily accompany the arteries through all the body ; they have also blood vessels, as the other parts of the body. Wherever any nerve sends out a branch, or receives one from another, or where two nerves join together, there is generally a ganglio or plexus. Quiiiry.

Poor, weak, nervous creatures. Cheyne.

Strong Tharysmed discharged a speeding blow Full on his neck, and cut the nerves in two. Pope.

There sunk Thalia, nerveless, faint and dead, Had not her sister Satire held her head. Id.

What nervous arms he boasts, how firm his tread, His limbs how turned ! Pope's Odyisey.

The venal torrent, murm'ring from afar, Whispered no peace to calm this nervous war ; And Philomel, the siren of the plain, Sung soporific unisons in vain. Harte.

When the second Charles assumed the sway, And arts revived beneath a softer day, Then, like a bow long forced into a curve, The mind, released from too constrain'd a nerve, Flew to its first position with a spring, That made the vaulted roofs of 1'leasure ring.

Cawper.

For he who hath in turn run through All that was beautiful and new,

Hath nought to hope, and nought to leave ,

And, save the future (which is viewed

Not quite as men are base or good,

But as their nervet may be endued).

With nought perhaps to grieve. Byron.

NERVOUS SYSTEM. See ANATOMY, MUSCLES, and PHYSIOLOGY.

NESBIT (Thomas), an eminent Scottish antiquarian, born at Edinburgh in 1672. He was the son of lord president Nesbit, and wrote a book on Heraldry, and a Vindication of Scottish Antiquities, which is still in

MS. in the Advocates Library at Edinburgh. He died in 1725.

NESBIT (Alexander), a Scottish antiquary, son of lord president Nesbit, was born at Edinburgh in 1672, and educated for the bar. He however practised his profession very little, but dedicated himself almost exclusively to the study of antiquities. Of these he wrote an able Vindication, still preserved in MS. in the advocates' library, Edinburgh. His other works are, An Essay on the use of Armories ; an excellent Treatise on Heraldry, in 2 vols. folio; and an Heraldical Essay on Addition of Figures of Cadency. He died in 1725 at the family seat of Dirlton.

NESCHIN, a considerable town of European Russia, on the Oster, in the government of Czernigov. It is considered one of the best built towns in this part of the empire, and, standing on the great road between its north and south division, conducts an extensive home trade. A great number of Greek merchants and dealers reside here. There are fifteen churches in the town, and about 16,000 inhabitants. Neschin has three annual fairs, and is forty-nine miles S. S. E. of Czernigov.

NES'CIENCE, n. s. Lat.nescto. Ignorance; the state of not knowing.

Many of the most accomplished wits of all ages have resolved their knowledge into Socrates his sura total, and after all their pains in quest of science, have sat down in a professed nescience. Glanville.

NESSUS, in fabulous history, a celebrated centaur, son of Ixion and the Cloud. He offered violence to Dejanira, whom Hercules had entrusted to his care, with orders to ––arry her across the river Evenus. Hercules saw the distress of his wife from the opposite shore, and immediately let fly one of his poisonous arrows, which struck the centaur to the heart. Nessus, as he expired, gave the tunic he then wore to Dejanira, assuring her that, from the blood which had flowed from his wounds, it had received the power of recalling a husband from unlawful love. Dejanira received it with pleasure, and this mournful present caused the death of Hercules.

NEST, n. *. & v. n. -\ Sax. nej-t; Teut.

NESTEGG, n. s. [nest; Swed. nitste.

NEST'LE, v. n. & v. a. i The bed or abode-of

NEST'LING, n. s. Ja bird; any warm

close place, or habitation ; hence a place of concealment or security ; in which sense it is applied both to a ‘ den of thieves’ or rogues (see below) and to any set of little boxes or drawers: as a verb to build nests : the nest egg is one left in a nest to secure the visits of the hen : to nestle is to sit close and snug; or settle as a bird in its nest : and, as an active verb, to house or cherish ; nestling is a bird just taken from the nest.

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If a bird's nest chance to be before thee in the way, thou shalt not take the dam with the young.

Hi n/ . xxii. 6.

Some of our ministers, having livings offered unto them, will neither for zeal of religion nor winning souls to God, be drawn forth from their warm nests.

Spenser.

Come from that nest Of death, contagion, and unnatural sleep.

Shakspeare.

Their purpose was to fortify in some strong place of the wild country, and there nestle 'till succours came. Bacon.

This Ithacus, so highly is endeared To this Minerva, that her hand is ever in his deeds ; She, like his mother, nestles him. Chapman's Iliad.

Poor heart ! That labourest yet to nestle thee,

Thou thinkst by hovering here to get a part, In a forbidden or forbiddfng tree. Donne.

The example of the heavenly lark, Thy fellow poet, Cowley, mark, Above the skies let thy proud musick sound, Thy humble nest build on the ground. Cowky.

Books and money laid for shew, Like nesteggs, to make clients lay. Hudibras. The cedar stretched his branches as far as the mountains of the moon, and the king of birds nested within his leaves. Howel.

Fluttering there they nestle near the throne, And lodge in habitations not their own.

Dryden.

A cock got into a stable was nestling in the straw among the horses. L'Ettrange.

The king's fisher wonts commonly by the water-side, and nestles in hollow banks. Id.

The floor is strewed with several plants, amongst which the snails nestle all the winter. Addison.

Cupid found a downy bed, And nestled in his little head. Prior.

Redi found that all kinds of putrefaction did only afford a nest and aliment for the eggs and young of those insects he admitted. Bentley.

Mark where the shy directors creep, Nor to the shore approach too nigh ;

The monsters nestle in the deep, To seize you in your passing by.

Swift's Miscellanies.

NESTOR, in fabulous history, a son of Neleus and Chloris, nephew to Pelias, and grandson to Neptune. He had eleven brothers, who were all killed by Hercules. His tender age detained him at home, and was trje cause of his preservation. The conqueror spared his life, and placed him upon the throne of Pylos. He married Eurydice the daughter of Clymenus ; or, according to others, Anaxibia, the daughter of Atreus. He soon distinguished himself in battle ; and was present at the nuptials of Pirithous, when a bloody engagement took place between the Lapithae and Centaurs. As king of Pylos and Messenia he led his subjects to the Trojan war, where he distinguished himself by eloquence, address, wisdom, justice, and uncommon prudence. Homer displays his character as the most perfect of all his heroes ; and Agamemnon exclaims that if he had twenty generals like Nestor he should soon see Troy reduced to ashes. After the Trojan war Nestor retired to Greece, where he enjoyed in his family peace and tranquillity. The ancients all asree that he lived three generations

of men ; which is supposed to be 300 years, but more probably only ninety years, allowing thirty years for each generation. He had two daughters, Pisidice and Polycaste ; and seven sons, Perseus, Straticus, Aretus, Echephron, Pisistratus, Antilochus, and Thrasimedes. Nestor was one of the Argonauts, according to Valerius Flaccus.

NESTOR, or NESTOROVA, a native of Russia, the earliest historian of the north, was born in 1056 at Vielozero: and, in his nineteenth year, assumed the monastic habit in the convent of Petcherski at Kiof. He is

said to have lived to an advanced age, and to have died about A. D. 1115. His great work is his Chronicle, to which he has prefixed an introduction, which after a short sketch of the early state of the world, from the Byzantine writers, contains a geographical description of Russia and the adjacent regions; an account of the Sclavonian nations, their manners, their emigrations from the banks of the Da-nube, their dispersion, and settlement in the several countries wherein their descendants are now established. He then enters upon a chronological series of the Russian annals from A.D 858 to about 1113.

NESTORIANS, a sect of ancient Christians, still subsisting in some parts of the Levant; whose distinguishing tenet, in opposition to the Jesuits, &c., is that Mary, though styled in Scripture the mother of Jesus, is not, and cannot be, the mother of God. They take their name from Nestorius, bishop of Constantinople, whose doctrines were spread with much zeal through Syria, Egypt, and Persia. One of the chief promoters of the Nestonan cause was Barsumus, bishop of Nisibis, A. D. 435. By him Pherozes, the Persian monarch, was persuaded to expel those Christians who adopted the opinions of the Greeks, and to admit the Nestorians in their place, putting them in possession of the principal seat of ecclesiastical authority in Persia, the see of Seleucia. Barsumus also erected a school at Nisibis, from which proceeded those Nestorian doctors who, in the fifth and sixth centuries, spread their tenets through Egypt, Syria, Arabia, India, Tartary, and China. In the tenth century the Nestorians in Chaldea, whence they are sometimes called Chaldeans, extended their spiritual conquests beyond mount Imaus, and introduced the Christian religion into Tartary, properly so called, and especially into that country called Karit, bordering on the north part of China. The prince of that country, whom the Nestorians converted to the Christian faith, assumed, according to the vulgar tradition, the name of John after his baptism, to which he added the surname of Presbyter ; whence it is said his successors were styled Prester John until the time of Jenghiz Khan. But Mosheim observes that the famous Prester John did not begin to reign in that part of Asia before the conclusion of the twelfth century. The Nestorians formed so considerable a body of Christians that the missionaries of Rome were industrious in their endeavours to reduce them under the papal yoke. Innocent IV. in 1246, and Nicolas IV. in 1278, used the utmost of their power in this point, but without success. Till the time of pope Julius III. the Nestorians ac-knosvledged but one patriarch, who resided first

at Bagdad, and afterwards at Mousul ; but a division arising among them, in 1551, the patriarchate became divided, at least for a time, and a new patriarch was consecrated by that pope, whose successors fixed their residence in the city of Ormus, in the mountainous part of Persia ; and so far down as the seventeenth century these patriarchs persevered in their communion with the church of Rome. The great Nestorian pontiffs who form the opposite party, and look with a hostile eye on this little patriarchate, have since 1559 been distinguished by the general denomination of Elias, and reside constantly in Mousul. Their spiritual dominion is very extensive, takes in a great part of Asia, and comprehends also within its circuit the Arabian Nestorians, and the Christians of St. Thomas, who dwell along the coast of Malabar. It is to the lasting honor of the Nestorians that, of all the Christian societies established in the east, they have been the most careful and successful in avoiding a multitude of superstitious opinions and practices that have infected the Greek and Latin churches. About the middle of the seventeenth century the Romish missionaries gained over to their communion a small number of Nestorians, whom they formed into a church ; the bishops of which reside in the city of Amida, or Diarbekir, and all assume the name of Joseph. Nevertheless the Nestorians in general persevered in their refusal to enter into the communion of the Romish church, notwithstanding the earnest entreaties and alluring offers made by the pope's legate to conquer their inflexible constancy.

NESTORIUS, from whom the sect of Nestorians derive their name, was born in Germanica, a city of Syria, and educated and baptised at Antioch ; and soon after his baptism he withdrew to a monastery in the suburbs of that city. Upon his being admitted priest, he soon acquired so great reputation, by his eloquence and the regularity of his life, that the emperor Theodosius deemed him a fit person to fill the second see in the Christian church, and he was accordingly consecrated bishop of Constantinople in 429. He became a violent persecutor of heretics, but, contending for the doctrine that ' the Virgin Mary cannot with propriety be called the mother of God,' he was deprived of his see by the counsel of Ephesus. lie then retired to his ancient monastery at Antioch, whence he was taken by the emperor's order, and banished in 435 to Tarsus. That city being destroyed by the barbarians, he was removed to Panopolis, a city of Thebais ; where he was not suffered to remain long, but was

compelled to go from place to place, till, being in one of his journeys mortally bruised by a fall, death removed him from the fury of his persecutors. He rejected the errors of Ebion, Panlua Samosatenus, and Photinus. He maintained, in express terms, that the divine word was united to the human nature in Jesus Christ in the most strict and intimate sense possible; that these two natures, in this state of union, make but one Christ and one person ; that the properties of the divine and human natures may both be attributed to this person ; and that Jesus Christ may be said to have been born of a virgin, to have suffered and died.

005 NET

NET, n. t. \ Sax. net, nctte; Goth, and NETT'ING, V Dan. net ; Swed. rut t ; Belg. NET'-WORK,) nelte. A knotted and woven texture ; applied particularly to a snare of this kind used in taking various animals : netting and network mean a piece of work of this description.

He made nets of chequered work for the chapiters, upon the top of the pillars. 1 Kings vii. 17.

Nor any skilled in workmanship embossed ;

Nor any skilled in loops of fingering fine ;

Might in their diverse cunning ever dare,

With this so curious network to compare.

Spenter.

Poor bird ! thou did'st never fear the net, nor lime. The pitfall nor the gin. Shafapeare. Macbeth.

Impatience entangles us like the fluttering of a bird in a net, but cannot at all ease our trouble.

Taylor.

A large cavity in the sinciput was filled with ribbons, lace, and embroidery, wrought together in a curious piece of network. Additon.

Whoever contemplates with becoming attention this curious and wonderful netwdrh of veins, must be transported with admiration.

Blackmore.

The reason why so few marriages are happy is because young ladies spend their time in making net*, not in making cages. Svift**

The vegetative tribes,

Wrapt in a filmy net, and clad with leaves.

Thomson.

A NET is chiefly used for catching fish or fowls. See BIRD CATCHING and FISHERY. The taking fowls by nets is the readiest and most advantageous of all others, where numbers are to be taken. The making the nets is very easy, and what every true sportsman ought to be able to do for himself. All the necessary tools are wooden needles, of which there should be several of different sizes, some round and others flat; a pair of round pointed and flat scissars ; and a wheel to wind off the thread. The packthread is of different strength and thickness, according to the sort of birds to be taken ; and the general size of the meshes, if not for very small birds, is two inches from point to point The nets should neither be made too deep nor too long, for they are then difficult to manage; and they must be verged on each side with twisted thread. The natural color of the thread is too bright and pale, and is therefore in many cases to be altered. The most usual color is the russet ; which is to be obtained by plunging the net, after it is made, into a tanner's pit, and letting it lie there till it is sufficiently tinged : this is of a double service to the net, since it preserves the thread as well as alters the color. The green color is given by chopping some green wheat and boiling it in water, and then soaking the net in this green tincture. The yellow color is given in the same manner with the decoction of celandine ; which gives a pale straw-color, which is the color of stubble in harvest. The brown nets are to be used on ploughed lands, the green on grass grounds, and the yellow on stubble lands.

NET, DAY, among fowlers, a net generally used for taking such small birds as play in the air, and will stoop either to prey, gig, or the like ; as larks, linnets, buntings, &c. The time of the year for using this net is from August to November; the best time is rery early in the

NET

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morning : the milder the air, and the brighter the sun is, the better will be the sport, and of longer continuance. The place where this net should be laid ought to be plain champaign, either on short stubble, green ley, or flat meadows, near corn-fields, and somewhat remote from towns and villages : let the net lie close to the ground, that the birds creep not out and es-cape. The net is made of fine pacnthread with a small mesh, not exceeding half an inch square ; it must be three fathoms long, and one broad: verged about with a small but strong cord; and the two ends extended upon two small long poles, suitable to the breadth of the net, with four stalks, tail-strings, and drawing lines. This net is composed of two nets exactly alike; laid opposite to one another, so even and close that when they are drawn and pulled over the sides must meet and touch each other. Stake this net down with strong stakes, very stiff on their lines, so that you may with a niriible touch cast them to and fro at pleasure; then fasten your drawing cords or handlines (of which there must be a dozen at least, and each two yards long) to the upper end of the foremost staves : and so extend them of such a straitness that with a slight pull they may rise up in the nets, and cast them over. The net being thus laid place the gigs or playing wantons about twenty or thirty paces beyond, and as much on this side the nets : the gigs must be fastened to the tops of long poles, and turned into the wind, so as they may play to make a noise therein. These gigs are a sort of toys made of long goose feathers, like shuttle-cocks, and with small tunnels of wood running in broad and flat swan-quills, made round like a small hoop ; which, with longer strings fastened to a pole, will, with any small wind or air, move after such a manner that birds will come in great flocks to play about them. When the gigs are placed, then place the s'ale; which is a small stake of wood, to prick down into the earth, having in it a mortice hole, in which a small and slender piece of wood, about two feet long, is fastened, so as to move up and down at pleasure ; and fasten to this longer stick a small line, which, running through a hole in the stick above mentioned, and so coming up to the place where you are to sit, you may, by drawing the line up and down with your right hand, raise up the longer stick as you see occasion. Fasten a live lark, or such like bird, to this longer stick, which, with the line making it to stir up and down by pulling, will entice the birds to come to your net. There is another stale, or entice-ment, to draw on these birds, called a looking-glass; which is a round stake of wood, as big as a man's arm, made very sharp at the end, to thrust it into the ground :

very hollow in the upper part ; above five fingers deep ; into which hollow they place a three-square piece of wood about a foot long, and two inches broad, lying upon the top of the stake, and going with a foot into the hollowness ; which foot must have a great knob at the top, and another at the bottom, with a deep slenderness between ; to which fasten a small packthread, which, running through a hole in the side of the stake, must come up to the place where you sit. The three-square piece

of wood, which lies on the top of the stake, must be of such a poise and evenness, and the foot of the socket so smooth and round, that it may whirl and turn round upon the least touch; winding the packthread so many times about it, as being suddenly drawn, and as suddenly let go, will keep the engine in a constant rotary motion : then fasten with glue on the uppermost flat squares of the three-square piece, about twenty small pieces of looking glass, and paint all the square wood between them of a light and lively red ; which, in the continual motion, will give such a reflection, that the birds will play about until they are taken. Both this and the other stale are to be placed in the middle between the two nets, about two or three feet from each other ; so that, in the falling of the nets, the cords may not touch or annoy them : neither must they stand one before or after another ; the glass being kept in a continual motion, and the bird very often fluttering. Having placed the nets in this manner, with the gigs and stales, go to the further end of the long drawing-lines and stale lines ; and lay the main drawing-line across your thigh, and, with your left, pull the stale-lines to show the birds; and, when you perceive them to play near and about your nets and stales, then pull the net over with both hands, with a quick but not too hasty motion ; for otherwise your sport will be spoiled.

NET, or NEAT, in commerce, something pure, and unadulterated with any foreign mixture. Thus wines are said to be net when not falsified or balderdashed : and coffee, rice, pepper, &c., are net when the filth and ordures are separated from them. See NEAT. A diamond is said to be net when it has no stains or flaws ; a crystal when transparent throughout.

NET is also used for what remains after the tare has been taken out of the weight of any merchandise ; i. e. when it is weighed clear of all package. See TARE. Thus we say a barrel of cochineal weighs 450 pounds ; the tare is fifty pounds, and there remains net 400.

NET’HER, adj. \ Saxon n o*ejt; Gothic

NETHERMOST. J nedir ; Belg. and Swed. nedir. The comparative of the obsolete adjective neath. Lower; hence infernal, belonging to the lower regions : nethermost is the superlative; lowest.

No man shall take the nether or the upper millstone to pledge ; for he taketh a man’s life to pledge.

Deut. xxiv. 6.

Great is thy mercy towards me, and thou hast delivered my soul from the nethermost hell. Psalms.

This shews you are above, You justices, that these our nether crimes, So speedily can venge.

Shakxpeare. King Lear.

In his picture are two principal errors, the one in the complexion and hair, the other in the mouth, which commonly they draw with a full and nether great lip. Peacham.

Numberless were those bad angels, seen

Hovering on wing under the cope of hell,

Twixt upper, nether, and surrounding fires.

Milton.

No less desire

To found this nether empire, which might nse, In emulation, opposite to heaven. Id.

N E T II E R L A N D S.

Undaunted to meet there whatever power. Or spirit, of the nethermost abyss Might in that noise reside. Id. Paradise Lost.

The upper part whereof was whey, The nether, orange mixed with gray. Hudibra*. A beauteous maid above, but magic arts, With barking dogs, deformed her nether parts.

Koscvmmon.

All that can be said of a liar lodged in the very nethermost hell is this, that if the vengeance of God could prepare any place worse than hell for sinners, hell itself would be too good for him. South.

Heraclitus tells us that the eclipse of the sun was after the manner of a boat, when the concave as to our sight, appears uppermost, and the convex nethermost. Keil against Burnet.

NETHERLANDS. The kingdom of this name was erected in Europe in 1814, comprising seven Dutch and ten Belgic provinces, together with the grand duchy of Luxemburg. It extends from 49►► 30’ to 53►► 34’ of N. lat., and from 2►► 30’ to 6►► 58’ of E. long., and is bounded on the west and north by the German Ocean, on the south by France, and on the east by Hanover and the Prussian territories of the Lower Rhine. It is now, therefore, composed of the following provinces : ►►► 1 . The seven Northern or Protestant provinces, being the former republic of Holland.

2. The ten Southern, Catholic, or Belgic provinces, that constituted the Austrian Netherlands.

3. The former principality or bishopric of Liege.

4. The grand duchy of Luxemburg, which was obtained as an indemnity for the German possessions of the house of Orange Nassau

ceded to Prussia. By the second general pacification of Paris, November 20th, 1815, the French also ceded some frontier districts, and two fortresses to the Netherlands. They are now divided into the following provinces ; the population and chief towns are also given as below : ###

I. ### NORTHERN OR DUTCH PROVINCES.

Provinces.

Popula—

Chief Towns.

Population.

tion.

Groningen

136,000

Groningen

25,000

Friesland

170,000

L’euwarden

15,000

Drenthe

47,000

Meppel

4,700

Overyssel

148,000

Zwolle

13,000

Guelderland

244,000

Arnheim

10,000

Utrecht

108,000

Utrecht

32,000

Holland

750,000

Amsterdam

200.000

Zealand

112,000

Middleburg

15,000

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II. ××× SOUTHERN OR BELGIC PROVINCES.

North Brabant

252,000

Bois-le-duc

15,000

Li m burg

293,000

Maestricht

18,500

Antwerp

250,000

Antwerp

62,000

East Flanders

602,000

Ghent

60,000

West Flanders

521,000

Bruges

45,000

llainault

431,000

Mons

18,000

South Brabant

366,000

Brussels

80,000

Liege

355,000

Liege

50,000

Namur

157,000

Namur

15,000

Luxemburg

226,000

Luxemburg

10,000

Adding the military, which the above enumeration does not include, we shall have the following estimate of the population of the three great divisions of this kingdom : ???

Divisions.

?xtent Popula—

ln,Sq-lion, miles.

Dutch Provinces Belgic Provinces Grand Duchy of Luxemburg

Total

11,0002,000,000

li, 300 3,000,000

2,100, 226,000

24,4005,226,0001

1 I

The northern and western districts of this kingdom form a vast marshy plain, intersected by dykes and canals, and varied only by the rich pasturage, clusters of willows and other trees, the grazing cattle, towns and villages. Wherever from some erection of art, as a tower or steeple, an extensive view can be obtained, this is uniformly the kind of landscape presented to the eye : the southern and southeast provinces are more varied. There can be little doubt of the northern provinces having once formed part of the bed of the sea ; but of this there is no positive datum. The earliest accounts on the contrary represent the land as more extensive than at present. The river Yssel, it appear*, ran in former times into an inland lake called Hero, from which a river issued and had a course of fifty miles to the sea ; but the site of this lake, and the surrounding country, are now, and have for many centuries been covered by the Zuyder Zee: the only remains of the old track of -continent seem the islands of Texel, Vlieland, Schelling, and Ameland.

In the tenth century the mouths of the ‘ lazy Scheldt’ are known to have expanded, and to have formed the islands of Beveland, Walcheren, and Schowen ; while so lately as the fifteenth century a great lake was formed suddenly on the southeast of Dort, overwhelming no fewer than seventy-two villages and 100,000 inhabitants Since this period the Dutch have fenced their coasts with high mounds of earth, sloping on each side, and broad enough at top to admit the passage of two carriages; all the great rivers are fenced with similar dykes, the expense of keeping which in repair is very considerable. Goldsmith has admirably depicted the entire scene.

Onward methinks. and diligently slow, The firm connected rampart

seems to grow ; Spreads its long arms amid the watery roar, Scoops out an empire and usurps the shore : While the pent ocean, rising o'er the pile, Sees an amphibious world beneath him smile ; The slow canal, the yellow-bosomed vale, The willow-tufted bank, the gliding sail, The crowded mast, the cultivated plain, A new creation rescued from his reign.

No rivers of any magnitude take their rise in this country ; but it is the outlet of various noble streams; the chief are the Rhine, the Meuse, and the Scheldt. Thr first, however, when it enters the Netherlands, through the centre ot

which it flows from E. to W. is but a sluggish stream, and soon after divides into two branches, having none of the picturesque scenery of the German Rhine on their borders. One of these forms the Waal. Before reaching Arnheim it meets with another impediment that divides the stream ; one branch assuming a northern direction, under the name of the Yssel, and flowing into the Zuyder-Zee. It soon afterwards divides a third time ; the main arm forming the Leek and joining the Waal above Rotterdam ; while that which retains the original name becomes reduced to an insignificant stream, passing Utrecht and Leyden in its course to the sea.

The Meuse enters the southern part of Namur from the French frontier. Its direction at first is nearly north and south ; but, having intersected this province, it winds to the north-east, flows through Liege and Limburg, and then sweeping round to the west, encircles the northern border of North Brabant and opens a wide estuary into the sea in South Holland. The scenery on its banks between Namur and Maestricht is perhaps the most pleasing of any in the Netherlands. It has several tributaries, and passes various large towns in its extended course.

The Scheldt enters the Netherlands to the west of the Meuse and passes Ghent in its course towards Antwerp. Soon after leaving that town, it has regular tides, and divides into the east and west Scheldt,

which form the island of Zealand. The inferior rivers and canals, particularly the latter, have long been the glory of this part of Europe; they are so numerous in the northern provinces that to enumerate them would be an endless task. The country is so level that scarcely a lock is necessary : they facilitate internal commerce, and connect, by means of the rivers, Germany and France.

The lakes of the Netherlands much resemble the meres of our fen countries, and bear occasionally this name. Haarlem Mere is the principal of them, situated in the province of Holland, between the Zuyder Zee and the ocean. It is about twenty miles in length, and from twelve to fifteen in breadth, and communicates with the south-western extremity of the Zuyder Zee ; it is navigable for small vessels. Another lake of this kind, whose formation we have noticed, is formed by the waters of the Meuse and Rhine, near Dort, at the southern extremity of the same province, and is connected with the sea by the estuary of the former river. Several meres are also found in Friesland, Groningen, and the other provinces. We should not omit to notice the general character of the navigation of this singular coast, which is often rendered dangerous by the numerous sand-banks. Its best ports are Flushing, Helvoetsluys, and Rotterdam. Amsterdam is one of the best harbours, when entered, in Europe ; but the Pam-pus sand-bank at its mouth is very dangerous, and has often been fatal to large vessels, The Texel is also a good roadstead ; and Middleburg a tolerable artificial harbour.

The climate of the northern districts is cold and humid ; a dense fog covering the whole face of nature longer than in most other parts of Europe, and the rivers, lakes, and harbours

being often frozen, when those on this side the channel are open. In the south-eastern parts the air is more pure, and its summers are often warmer, although its winters are colder than in the south of England.

The general observer finds the soil of the Netherlands composed, with few exceptions, of a sandy loam in the southern, and of a dark marshy nature in the northern, provinces. In the latter, as in our fen countries, it is fruitful in pasturage ; but in many parts of the former every variety of soil adapted for the pursuits of agriculture is found. Patches of clay, however, occur in the Belgic provinces ; and portions of Namur, Luxemburg, and Liege, are stony: some districts in Brabant, Overyssel, and Dretithe, are entirely covered with heaths, forests, and marshes ; a great part of Groningen is occupied by the barren heath of

Bourtang. On the whole, however, through the great attention that has been paid to agriculture, this has long been one of the most productive part? of Europe ; and its agricultural improvements and implements are only inferior to those of the most enlightened and favored parts of England.

The vegetable productions are very similar to those of this country ; but in some of the northern provinces there is a strong predilection for the cultivation of madder and tobacco; and in the southern, hemp and flax are a more common crop than with us. Considerable attention has been paid in Holland to the cultivation of flower roots and seeds; and the gardens of various parts of Europe receive many of their most beautiful bulbs and seeds hence. Near Haarlem more than twenty acres are dedicated to the culture of hyacinths alone, and a large portion of ground to that of tulips. The weekly amount of the sales of these flowers at Amsterdam has sometimes been 15,000 florins.

According to Harte, about the beginning of the seventeenth century, the Flemings dealt more in the practice of husbandry than in publishing books upon the subject: ‘so that, questionless, their intention was to carry on a private lucrative trade without instructing their neighbours ; and hence it happened that whoever wanted to copy their agriculture was obliged to travel into their country, and make his own remarks ; as Plattes, Hartlib, and Sir R.Weston actual ly did.’ To make a farm resemble a garden as nearly as possible was at this time their principal idea of husbandry. Such a principle, at first setting out, led them of course to undertake the culture of small estates only, which they kept free from weeds, continually turning the ground, and manuring it plentifully and judiciously. Having thus brought the soil to a just degree of cleanliness, heallh, and sweetness, they ventured chiefly upon the culture of the more delicate grasses, as the surest means of acquiring wealth in husbandry, upon a small scale, without the expense of keeping many draught horses or servants. After a few years they soon found’ that ten acres of the best vegetables for feeding cattle, properly cultivated, would maintain a larger stock of grazing animals lhan forty acres of common farm-grass : and the vegetables they chiefly cultivated for this puiMose were lucerne, saintfoin, trefoils

of most denominations, sweet fenugreek (trigo-nella), buck and cow wheat (melampyrum pra-tense), field turnips, and spurry (spergula), by them called marian-grass. The political secret of their husbandry was, the letting farms on improvement. Add to this, they discovered eight or ten new sorts of manures. They were the first among the moderns, who ploughed in living crops for the sake of fertilising the earth, and confined their sheep at night in large sheds built on purpose, whose floor was covered with sand, or earth, &c., which the shepherd carted away every morning to the compost-dunghill. Such was the chief mystery of the Flemish husbandry. * The present state of agriculture in the Netherlands,' says Mr. Loudon, ' corresponds entirely with the outline given by Harte, and it has probably been in this state for nearly 1000 years.'

The country has lately been visited with a view to its rural economy by Sir John Sinclair, and minutely examined and depicted by the Rev. Thomas Radcliff. To such British farmers as wish to receive a most valuable lecture on the importance of a proper frugality and economy in farming as well as judicious modes of culture, the writer just quoted recommends the latter W9rk ; we copy here the fading features of Remish farming, as selected by him.

The climate of Flanders may be considered as the same as that of Holland, and not materially different from that of the low parts of the opposite coast of England. The surface of the country is every where flat, or very gently elevated, and some extensive tracts have been recovered from the sea. The soil is for the most part poor, generally sandy ; but in various parts of a loamy or clayey nature. ' Flanders,' Mr. Radcliff observes, ' was in general believed to be a soil of extreme natural richness; whereas, with the exception of some few districts, it is precisely the reverse.' He found the strongest and best soil near Ostend ; and between Bruges and Ghent some of the worst, being little better than a pure sand. From confounding the Dutch with the Flemish Netherlands, a good deal of confusion has resulted. On arriving in Flanders, he was informed that, ' with respect to culture, not only the English, but the French, confounded under the general name of Brabant or Flanders all the provinces of the Low Countries, however different might be their modes of cultivation ; but that in Flanders itself might best be seen with what skill the farmer cultivates a bad soil (un sol in-grat), which he forces to return to him, with usury, a produce that the richest and strongest lands of the neighbouring

provinces of Holland refuse to yield.' The districts described as East and West Flanders are bounded on the east by, Brabant and Hainault ; on the west by the Ger-man Ocean ; on the north by the seas of Zealand, and the west Scheldt; and -on the south by Picardy, or French Flanders. It is about ninety miles long, and sixty broad, and abounds with towns and villages.

The landed property here is not in large estates : very few amount to 2000 acres. It is generally freehold, or the property of religious or civil corporations. When the proprietor does not cultivate his own lands, which, however, is most VOL. XV.

frequently the case, he lets it on leases ; generally of seven, fourteen, or twenty-one years endurance, at a fixed money rent, and sometimes a corn and money rent combined. The occupier is bouirl to live on the premises, pay taxes, effect repairs, preserve timber, not to sublet without a written agreement, and to give the usual accommodations to an incoming tenant at the end of the lease. Leases of fourteen or twenty-one years are most common : there are scarcely any lands held from year to year, or on the metayer sys-tem. Estates are every where enclosed with hedges, and the fields generally small. Farmeries are convenient, and generally more ample in proportion to the extent of the farm than in England. On the larger farms a distillery, oil-mill, and sometimes a flour mill, are added to the usual accommodations. The buildings on a farm of 150 acres of strong soil, enumerated by Radcliff, are, 1. The farm-house, with an arched cellar used as dairy, an apartment for churning, with an adjoining one for a horse wheel to turn the churning machinery. 2. A small building for the use of extra laborers, with a fire place for cooking. 3. The grange or great barn, 130 feet long, by thirty-five feet wide. The ground floor of this structure, besides accommodating by its divisions all the horses and cows of the farm in comfortable stables, and furnishing two threshing floors for the flail, is sufficient also for a considerable depot of corn in the sheaf, in two extensive compartments to the height of twelve feet, at which elevation an open floor of joists, supported by wooden pillars, is extended over the entire area of the barn, and is repeated at every five feet in height, to the top. Each floor is braced from the pillars, and not only forms a connexion of strength throughout the whole, but separates at the same time, without much loss of space, the different layers of corn, securing them from da-mage, by taking off the pressure of the great mass. 4. A house for farming implements, with 'granary over, and piggery behind. In the cen-tre is the dunghill ; the bottom of which is rendered impervious to moisture.

Of the Flemish mode of cultivating some particular crops we shall give a few examples. ‘ The drill husbandry has never been generally introduced in the Low Countries. It has been tried in the neighbourhood of Ostend, forty acres of beans against forty acres of drilled crop, and the result was considered to be in favor of the system . But the row culture, as distinguished from the raised drill manner, has been long known in the case of tobacco, cabbages, and some other crops. Wheat is not often diseased in Flanders. Most farmers change their seed, and others in several places steep it in salt water or urine, and copperas or verdigris. The proportion of verdigris is half a pound to every six bushels of seed ; and the time in which the latter remains in the mixture is three hours, or one hour if cows’ urine be used, because of its ammonia, which is considered injurious. The ripest and plumpest seed is always preferred for seed. Rye is grown both as a bread corn, and for the distillery. In Flanders frequently, and in Brabant very generally, the farmer, upon the scale of from 100 to 200 acres of light soil, is also a distiller, purely for

the improvement of the land by the manure of the beasts, which he can feed upon the straw of the rye, and the grains of the distillery. Buck-wheat enters into the rotations on the poorest soils, and is sown on lands not got ready in time for other grain. The chief application of buck-wheat is to the feeding of swine and poultry, for which it is preeminent; it is also used in flour; as a constituent in the liquid nourishment prepared for cattle and horses ; and bears no inconsiderable share in the diet of the peasant. Formed into a cake, without yeast, it is a very wholesome, and not a disagreeable species of bread; but it is necessary to use it while fresh, as, if kept, it would turn sour sooner than bread made of barley, rye, or wheaten flour. Its blossom is considered to afford the best food for bees. If cut green it yields good forage, and if ploughed in when in flower, it is thought one of the best vegetable manures in use. It is also said to be used in distillation; but this is not generally admitted to be the case. Rape,

colza, colsat, or cole seed, the B. campestris of Decandolle, and which he thinks a distinct species from the bras-sica napus of Linnaeus, is considered an important article of Flemish agriculture. It is sometimes sown broad-cast, but the general and approved method is, by transplanting, which they allege, and apparently with great justice, to have many advantages : one is, that the seed-bed occupies but a small space, whilst the land which is to carry the general crop is bearing corn. By having the plants growing, they have time to harvest their corn, to plough and manure the stubble intended for the rape, which they put in with a dibble, or the plough, from the lat-ter end of September to the second week of November, without apprehending any miscarriage.

The seed is sold for crushing; or, as is frequently the case, crushed by the fanner himself; an oil mill being a very common appendage to a farmery.

The oilette or poppy (papaver somniferum), is cultivated in some parts, and yields a very fine oil; in many instances of so good a quality as to be used for salad oil. The seed requires a rich and well manured soil. The crop is generally taken after rape, for which the ground has been plentifully manured; and for the oilettes it receives a dressing not less abundant. The seed is sown at the rate of one gallon to the English acre, and is lightly covered by shovelling the furrows. The average produce is about thirty Winchester bushels to the English acre. The seed is not so productive as rape, in point of quantity, but exceeds it in price, both as grain and as oil, by at least one-sixth. The measure of oil produced from rape is as one to four of the seed ; that produced from the seed of the oilettes is as one to five. Red clover is also an important and frequent article in the Flemish rotations. The quantity of seed sown does not exceed six pounds one quarter to the English acre. The soil is ploughed deep and well prepared, and the crop kept very clear of weeds.

The turnip is not generally cultivated as a main crop, but generally after rye or rape, or some crop early removed, It is sown broad-cast, thinned, and hoed with great care ; but it

affords a very scanty crop of green food, generally eat off with sheep in September or later. The Swedish turnip is unknown ; and indeed the turnip husbandry, as practised in Britain, cannot be considered as known in Flanders. The potatoe was introduced early in the seventeenth century, but attracted little notice till the beginning of the

eighteenth. It is cultivated with great care. The ground is trenched to the depth of nearly two feet ; and small square holes having been formed, at about eighteen inches from each other, the set is deposited therein, the hole nearly filled with dung, and the earth thrown back over all. As the stalks rise they are earthed up from the intervals, and manured with liquid manure ; and, as they continue to rise, they receive a second earthing round each distinct plant, which, with a suitable weeding, terminates the labor. Notwithstanding the distance between the plants, the whole surface is closely covered by the luxuriance of the stems, and the return is abundant. Potatoes are prized in Flanders, as being both wholesome and economical, and are considered so essential to the subsistence of a dense population that at one time it was in serious contemplation to erect a statue, or some other monument of the country's gratitude, to the person who first introduced them. They are also very much used in feeding cattle and swine. On a sandy loam, the carrot is much valued, and flax is here cultivated with the greatest care. 'The field intended for this crop, after two or three ploughings and harrowings, is again ploughed, commencing in the centre, and ploughed round and round to the circumference, so as to leave it without any furrow. The heavy roller is drawn across the ploughing by three horses ; the liquid manure is then spread equally over the entire surface, and, when well harrowed in by eight or nine strokes of the harrow, the seed is sown, which is also harrowed in by a light harrow, with wooden pins of less than three inches ; and the surface, to conclude the operation, is again carefully rolled. Nothing can exceed the smoothness and cultivated appearance of fields thus accurately prepared. The manure universally used for the flax crop demands particular notice. It is termed liquid manure, and consists of the urine of cattle, in which rape-cake has been dissolved, and in which the vidanges conveyed from the privies of the adjoining towns and villages have also been blended. This manure is gradually collected in subterraneous vaults of brick-work, at the verge of the farm next to the main road. These receptacles are generally forty feet long, by fourteen wide, and seven or eight feet deep, and in some cases are contrived with the crown of the arch so much below the surface of the ground as to admit the plough to work over it. An aperture is left in the side, through which the manure is received from the cart by means of a shoot or trough, and at one end an opening is left to bring it up again, by means of a temporary pump, which delivers it either into carts or tonneaus. The liquid is carried to the field in sheets or barrels, according to the distance. Where the cart plies the manure is carried in a great sheet called a voile, closed at the corners by running-strings, and secured to the four uprights

of the carts ; two men, standing on each side of the cart, scatter it with hollow shovels upon the rolled ground ; or, where the tonneaus are made use of, each is carried by two men with poles, and set down at equal intervals across the field in the line of the rolling. There are two sets of vessels, which enable the men who deposit the loaded ones to bring back the others empty. One man to each vessel, with a scoop, or rather a kind of bowl with a long handle, spreads the manure, so as to cover a certain space ; and thus, by preserving the intervals correctly, they can precisely gauge the quantity for a given extent of surface. For the flax crop they are profuse ; and of this liquid mixture, in this part of the country, they usually allow at the rate of 2480 gallons, beer measure, to the English acre.'

The hop is here cultivated on good soils after wheat The plants are put in in the month of May, and are set, when the land has been four times ploughed, in rows, with intervals of six feet, and at six feet distance. In the month of October they raise the earth round each plant, in little mounds about two feet and a half high, for the purpose of encouraging a number of shoots, and of preserving them from frost. When all harsh weather has disappeared, about the beginning of April in the second year, they level these heaps, and take away all superfluous shoots at the root, leaving but four or five of the strongest. They then spread manure over the entire surface, at the rate of twelve carts of 1500 Ibs. each, by the English acre, of cows' or swines' dung ; and in the month of July give them a dressing of urine at the rate of 1000 gallons per acre. In August the crop has arrived at its perfection. Madder, woad, and asparagus, are also favorite objects of culture.

The domestic economy of the Flemish farmer and his servants are thus depicted by Radcliff: ••• ' Nothing,' he says, ' tends more to the uniform advancement of good farming, than a certain degree of ease and comfort in those who occupy the soil, and in the laboring classes whom they employ. Without it, an irregular, speculative, and anticipating extraction of produce, always followed by eventual loss, is resorted to, in order to meet the emergencies and difficulties of the

moment ; whereas, under different circumstances, the successive returns of a well-regulated course, become the farmer's object, rather than the forced profit of a single year; whilst he himself is thus intrinsically served, his landlord secured, and his ground ameliorated. The laborious industry of the Flemish farmer is recruited by intervals of decent and comfortable refreshment ; and the farm-servants are treated with kindness and respect. They uniformly dine with the farmer and his family, at a clean table-cloth, well supplied with spoons, with four-pronged forks, and every thing necessary for their convenience. In Flanders, the gentlemen are all farmers, but the farmers do not aspire to be gentlemen ; and their servants feel the benefit. They partake with them of a plentiful and orderly meal, which va-ries according to circumstances. One standing dish, however, is universal, a soup, composed of buttermilk, boiled and thickened with flour, or rye-bread, potatoes, salt pork, salt fish, various

vegetables, and eggs ; fresh meat and fresh fish occur occasionally, though not for daily consumption ; add to these a plentiful supply of butter, or rendered lard, which is sometimes substituted ; and, when it is recollected that those articles of provision are always made palatable by very tolerable cookery, it will be allowed that the far-mer's table is comfortably supplied. The potatoes are always peeled, and are generally stewed in milk ; a particular kind of kidneybean, as mentioned before, the feve haricot, sliced and stewed in milk also, is a frequent dish. No far-mer is without a well-cultivated garden, full of the best vegetables, which all appear at his own table; and apples are also introduced into their cookery. The great fruit and vegetable markets of the towns are supplied by gardeners, who make that their subsistence ; but the gardens of the farmers, unless in case of redundance, are cultivated wholly for their own consumption.'

In Holland the soil in the low districts may bt regarded as a rich deep sandy mud ; sometimes alluvial, but more frequently siliceous, mixed with rotten shells. In a few places there are beds of decayed trees ;' but rough gravel or rocks, it is said, no where. Of the inland provinces the soil is in general a brown or black sand, naturally poor. Here as in Flanders the landed property is in moderate or rather small divisions; in the richer parts the farms are of from twenty to 150 or 200 acres farmed by the proprietor: in the interior both estates and farms are larger ; and instances occur of farms of 500 or 700 acres.

The agriculture is here chiefly a system of pasturage and dairy management for the production of butter and cheese ; the latter well

known in every part of the world. Almost the only objects of tillage, according to Mr. Loudon, are some madder, tobacco, and herbage plants and root* for stall-feed ing the cattle. The pastures, and especially the lower meadows, produce a coarse grass, but in great abundance. The cows arc allowed to graze at least a part of the day throughout the greater part of the year, but are generally fed in sheds once a day or oftener, with rape-cake, grains, and a great variety of other preparations. Their manure is preserved wiih the greatest care, and the animals themselves are kept perfectly clean. The breed is large, smal. legged, generally red and white, with long but small horns ; they are very well known in England as the Dutch breed. The fuel used in Amsterdam and most of the towns is peat, and the ashes are collected and sold at high prices, chiefly to the Flemings, but also to other nations. A considerable quantity has been imported to England ; they are found excellent as a top dressing forrlovers and other green crops, and are strongly recommended by Sir John Sinclair and other writers. The cow-houses in Flanders and Holland are kept remarkably clean and warm ; a gentleman ‘spoke,’ to Radcliff ‘of having drank coffee with a cowkeeper in the general stable in winter, without the annovance of cold, of dirt, or any offensive smell.’ The Dutch were particularly averse to unfolding their dairy secrets, notwithstanding the pointed queries of Sir John Sinclair.’ Other parts of the Dutch culture and economy correspond with those of the Netherlands.

The horses as well as cattle are large, and in some parts the sheep are good, but this branch of rural economy seems not to have been sufficiently attended to in many districts. The wild animals afford few materials for description. The common kinds of game are found in most districts, and the stork, with a few other rare birds unknown in England, visit the coasts.

Sir John Sinclair visited this country in 1815 with the purpose of ‘ ascertaining whether it was not iu our power to put an end to that ex-t raordinary difference between the prices of grain in Britain and

Flanders, or at any rate to bring it nearer its former standard.' He concludes that there is every reason to hope this may be ; ccomplished ' provided proper attention is paid 10 the various particulars enumerated in the pre-c< ding pages, and more especially to the following : ††† to a change of seed from the continent ; the importation of Dutch aslies for our clover and other crops ; the use of salt for agricultural purposes ; a diminution of fallows ; more attention to weeding and to manures; a more general culture of flax and rape ; and, above all, to the means by which the diseases of wheat, and the mildew in particular, can be most effectually prevented.' ††† Tract on Flemish Agriculture, p. 85. We fear Sir John is abundantly sanguine in this hope, but the improvements he suggests are \orth attention.

The southern provinces alone are favored with minerals. Namur affords iron. Limburg has mines of calamine and zinc ; and valuable beds of coal have been discovered in the district that stretches from Maestricht to Charleroi. Several kinds of stone and marble are also obtained in some of the hilly tracts that accompany the course of the Meuse. The only mineral waters of note in this kingdom are those of Spa, in the eastern part of the county of Liege, and about twenty-five miles south of Aix-la-Chapelle. They were discovered in the early part of the fourteenth century, and issue from five separate springs ; but their celebrity is much eclipsed by that of Aix-la-Chapelle.

The Netherlands have long taken the lead of all the neighbouring states in trade and manufactures. The Dutch linen, the lace of Brussels, the silks of Amsterdam and Antwerp, the leather of Liege, and the woollens of Leyden and Utrecht, have been well known throughout Europe for ages. When, in the sixteenth century, the northern provinces withdrew from the Spanish government, an impulse was given to the trade of Holland, which civil and religious liberty has ever since greatly maintained. It became a re-fuge to persecuted Protestants ; and the succeeding civil wars of France and Germany brought a number of valuable settlers into the country, who established staples at Mentz, Spires, Cologne, and other places, and supplied the west of Germany with fish, colonial produce, and manufactures. The principal article received in return was timber, which is still floated down the Rhine in immense rafts. Their carrying trade extended to almost all parts of Europe : even m several other countries, as in Ireland, Dutch merchantmen sailed from port to port, and performed the coasting trade, while the inhabitants seldom ventured on the sea. From the south of

Europe Holland received wine, brandy, fruit, and wool; and, from the north, corn, hemp, flax, iron, and timber, to supply the wants of the south. Articles were thus obtained generally as cheap, and almost in more convenient portions in Holland, than in the countries of their growth. In her fisheries, particularly the herring fishery, the number of vessels employed by Holland is said to have exceeded that of all the rest of the world. Their direct colonial trade was of later growth. That to the West Indies, though partly in the hands of a company, was under little restriction: their East India Company was formed in 1621, and was a similar one to the great association of the present age in Britain. The transactions of the Dutch with America, and the coast of Eastern Africa, were likewise extensive. Holland was thus, in the seventeenth century, very similar to England in the eighteenth : but her wealth, though great, was reputed to be greater than it really was: her territorial riches were never great, and her decline, is represented by able writers, as rather relative than absolute, the Holland of the present age being not much poorer than the Holland of a century ago. The wars into which the Dutch were compelled with Spain, France, and England, first caused an enormous increase of public debt : thence an enhancement of labor, and a reduction of their manufactures and navigation took place ; but, above all, the tyranny of Buonaparte, after 1810, concurred to bring this once flourishing country to the brink of ruin. From this it was rescued by the events of 1814, and since then the commerce of the Netherlands has been again free, and comparatively flourishing. Their colonial establishments in different parts of the world are at present, in Asia, the island of Java, with the governments of Amboyna, Banda, Ternate, Malacca, and Macassar, as well as the factories on the coast of Coromandel and Persia. In Africa they have thirteen small forts on the coast of Guinea. In the West Indies they possess the islands of Curacao, St. Eustatius, and St. Martin, with the colony of Surinam, on the mainland of South America, and the right of sending stores and receiving produce from Demerara, Es-sequibo, and Berbice.

The following is a table of the number of vessels that arrived from various ports at Amsterdam, Antwerp, and Flushing, in 1817: ???

AMSTERDAM.

From Archangel Bremen . .

Ships.

70 74

From Konigsberg Lieban ►► .

Ships

. 196 . 16

Copenhagen . Dantzic . . Dramme . .

16 144

72

Lisbon Leghorn London

. 23 . 99 . 87

12

Lubeck

. 25

Elbina;en . .

80

Memel

. 85

Embden . .

33

New York

. . 1”

Frederickstadt Glnckstadt

10 12

Petersburg!! Pillau

. 16ˆ

. 69

Hamburg . . Havre …

143

16

Riga . . Rostock

. 323 . 30

Hull …

30

Stettin

. 18

Husum . ,

16

Surinam

. 21

Itzehoe Kiel . .

80 56

Swenburg . \Visnnr

. 59 . 12

NETHERLANDS.

613

The whole number that arrived during the year, including those not in the above list, was 3077. The number that entered the port of Antwerp was 999, and of Flushing 844, more than one-fourth of which were British.

We are indebted for the above table to Mr. Myers's able Geography, which adds, ' The money of the Netherlands is of two kinds, the one national, the other private. By the laws of the Netherlands the decimal system is in force throughout the kingdom. By this law the money of the state consists of legal coins of gold, silver, and copper, and of coins for the use of commerce, which are of gold and silver. The unit of money is the florin. The gold piece often florins, with the subdivisions of the florin in silver, and the copper money, can only be coined for government ; the other money, mentioned below, may be coined on

the account of private persons. The money formerly in use, both in the northern and southern provinces, still continues to circulate, as before their union into one kingdom. ††† The value of these monies is either currency or banco. Commercial transactions are carried on in currency ; while the banking business and the exchanges are transacted in banco, which is from four to five per cent better than currency.' See our article COINS.

The government of the Netherlands is now a limited monarchy, in which the executive power is solely vested in the king; whose person is sacred, and his ministers only are responsible, as in England : the existence also of a cabinet and privy council, and of two houses of parliament, are further resemblances to our constitution. In the provincial states, or parliaments, to whom the administration of various local affairs is entrusted, the federative system that was previously established in the northern provinces is retained. The members of the upper house of the national parliament are nominated by the king for life. Their age must exceed forty; and their number must be between forty and sixty. In the article on this subject is the following clause : ††† ' The members of the first chamber receive, for the whole indemnity of their travelling expenses and their abode, the sum of 3000 guilders per annum.' The lower house is elected by the provincial states ; and one-third of the members are renewed annually. Their number is 110, and each receives a yearly salary of 2500 guilders, or about ††220. Though the population of the two parts of the kingdom is very different, each sends the same number of representatives to the states general, which for the several provinces are,

Dutch Provinces.	No. of Representatives.
North Brabant	7
Guelderland	6
Holland	22
Zealand	3
Utrecht	3

Friesland 5

Overyssel 4

Groningen 4

Drenthe … . 1

55

Belgic Provinces. , No> of

.representatives

South Brabant 8

Limburg 4

Liege 6

East Flanders 10

West Flanders 8

Hainault 8

Namur 2

Antwerp 5

Luxemburg 4

55

All bills for ne.w laws require the sanction of the crown before they can be introduced into the legislative assembly. The provincial states are appointed for each province, and ‘ are charged with the execution of the laws relative to its exterior exercise; also those relative to public instruction ; to the administration of charitable institutions ; to the encouragement of agriculture, of commerce, and manufactures.’ They

also superintend generally the internal economy of the province. The liberty of the press is nearly the same in the Netherlands as in Britain ; and religious liberty is complete here ; not even test laws of any kind being tolerated.

The administration of justice is regulated by a variety of local customs and statutes, the ordinances of the slates general, and the Roman law. To complete this confusion the French code was introduced when the country became a part of that empire, and is partially retained. The judges are appointed by the king on the recommendation either of the states general or of the provincial states, and hold their situations for life. The inferior courts are numerous, and from these there are courts of appeal ; the superiors of which are at the Hague, Brussels, and Liege. All sit in public.

The standing urmy, durin? peace, amounts to about 50,000 men, many of whom are either Swiss or Germans ; the navy is reduced to twelve sail of the line, and about twenty-five frigate* The annual revenue of the kingdom is about ––7,000,000, or nearly equal to the current expenditure. The navy requires ––500,000, the army ––2,500,000, and the church establishment about ––270,000. The national debt is about ––140,000,000, at the interest of only two, or two and a half per cent.

The Belgic provinces are still Catholic, and the Dutch, including the reigning family, have long been Calvinistic Protestants. In their religious system free toleration has always been a distinguishing feature; but it is only of late that it has been introduced into Belgium, and it is far from being agreeable either to the people or priests. By the concordat concluded between Buonaparte and the pope the Belgic provinces comprise two archbishoprics, and nine bishoprics. The archbishop of Mechlin is the metropolitan.

Education and literature are creditably promoted in this kingdom. Parish schools are established under the protection of government; while those of a superior description, both public and private, are found in every province. No person can undertake the instruction of youth

without first being examined by a proper commission. The subject of education is divided by this commune into four gradations, according to the branches to be taught, and no person who has only passed his examination for a lower grade can assume the duties of a higher. In the large towns there are royal schools, resembling the lyce”es of France, in which the languages and sciences are taught by approved masters. The number of universities is six, *viz.* Leyden, Utrecht, Groningen, Louvain, Ghent, and Liege. There are also institutions called Athens, established at Amsterdam, Brussels, Middleburg, Franeker, Harderwyk, Deventer, and Breda, which only differ from the universities in not having the power of conferring degrees. There is likewise a military school at Dort, and a naval academy at Helvoetsluys, with various separate provincial institutions for law and medicine. French is generally spoken in the south, where it has superseded the native tongue.

Among the Dutch literati of past days, Erasmus and Grotius, Graevius and Burman, are entitled to hold a high rank ; Huygens, Boerhaave, Von Swieten, Leuenhoeck and Swammer-dam are also names of just weight in the exact and liberal sciences; their only tragic poet of eminence is Vondel, who flourished in the seventeenth century. The celebrated Flemish painters we cannot here enumerate; their fame is well known throughout every part of the civilised world, and is the great and cherished pride of the country.

The Dutch are proverbially phlegmatic, patient, and penurious. The infatuation of loving money, not as a mean, but as an end, is said to be paramount in the mind of almost every Dutchman, whatever be his other dispositions and qualities ; the addiction to it is fervent, inveterate, invincible, and universal. The Belgians are of less uniform character : the most conspicuous feature here perhaps is a Spanish love of religious ceremony, and superstition. The dress of all but the sailors and lower classes in Holland resembles the English, though generally made of coarser materials. In a few instances the large small-clothes of the men, with the jerkins, mob caps, enormous hat►►, and short petticoats, of the females are retained. Mrs. Radcliff thus describes the dress of a rustic group : ►►► ‘ Several women were collected about their baskets of herbs, and their dress had some of the novelty for which we were looking; they had hats of the size of a small Chinese umbrella, and almost as g’.mdily lined within ; close white jackets, with long flaps ; short, colored, petticoats, in the shape of a diving-bell ; yellow slippers, without quarters at the heel; and caps that exactly fitted the head, and concealed the hair, but which

were ornamented at the temples by gold filagree clasps, twirling like vine tendrils over the cheeks of the wearer.' All travellers speak of the cleanliness everywhere apparent. As to their amusements, a little of athletic exercise fatigues or disturbs them ; but the theatres are well supported; und the pipe and the bottle, either in the little summer-house, where they look at the canal, or by the fire in winter, is a perpetual and never-fsiling source of amusement. Cards, drafts,

chess, backgammon, are all in use. Tea-gardens are much frequented on Sundays and holidays ; and the Musicos on a Sunday evening. The domestic virtue of the females is, finally, a great topic of praise, and the great body of them are said to be deserving of it.

The Netherlands were attached to the Roman empire, at least all the southern and central part, under the name of Belgia, until its decline in the fifth century. Barbarians from the right bank of the Rhine then established themselves here, and they were for a length of time a portion of the kingdom of Austrasia. In the twelfth and following century we find them governed by their own counts and earls, similarly with HOLLAND, see that article. They were then incorporated with the possessions of the dukes of Burgundy, and passed to Maximilian of Austria, father of Charles V. The latter united the seventeen provinces into one state, and published in 1 549, a law, enacting that they should in future be all governed by the same sovereign. This he presumptuously styled an ' irrevocable and perpetual ' statute for their future government : but like other Medo-Persian laws the tyranny that promulgated was itself destined to destroy its resolves. The bigotry of the bloody Philip II. produced the memorable revolt of the Dutch provinces, and was the cause of great dissension in all the others. Until the middle of the seventeenth century, however, they continued attached to the Spanish crown, when the activity of Conde, and the tactics of Turenne, were exerted to add them to France. In this project Louis XIV. was succeeding rapidly, when a temporary stop was put to it in 1668, by the quadruple alliance concluded at the Hague by Sir W. Tem-ple ; in the long wars from 1672 to 1679, and from 1689 to 1697, the Netherlands were the great prize contended for. At last, in 1702, Louis obtained by diplomatic tricks what he had so long sought in vain by arms; but the talents of our great Marlborough redeemed the errors of the court of Spain ; and by the battle of Ramil-lies, in 1706, the Netherlands were placed at the disposal of the allies, and by the peace of Utrecht assigned to Austria. Thus they remained until the war of 1741, when the French under marshal Saxe recovered what the last

generation had lost : Bergen-op-Zoom fell : Maestricht was about to follow, and the Dutch frontier was likely to be invaded, when the naval successes and persevering spirit of England procured the peace of Aix-la-Chapelle, and the restoration of the Netherlands to the emperor. In 1756 Austria having secretly agreed to cede the Netherlands to France, though the design was frustrated, England became convinced that Austria wa►► not the power to be finally entrusted with this deposit ; yet it was not until the wars of the French revolution that they were wrested from her. But at its commencement, indeed in the first campaign of 1792, Austria lost the Netherlands, and, though they were recovered in 1793, they passed again to France in 1794, and were held by an apparently firm tenure until the distructionofthe French army in Russia, in 1812. During the first reverses of France, Germany occupied all the attention of the allies; but in

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1814 the Netherlands were detached by the restoration of the Bourbons.

While we now write (October 1830) a new and important revolution has taken place in this country. The Belgians, discontented with the dynasty of Orange Nassau on account of the oppressive taxation and the attempts of the king to control the education of the catholic clergy, suddenly had recourse to arms, and by the 28th of September had acquired the full command in Brussels. The prince of Orange was commissioned by the king to enquire into the grievances of the people, who insisted on the immediate abolition of the obnoxious taxes and the legislative separation of their country from Holland, though they had no objection to be governed by the house of Orange. The king then referred the question to an extraordinary sittingof the states general, who, before they would at all enter into the matter, required the Brussellois to lay down their arms. Prince Frederick marched on to Brussels to enforce the mandate of the states, and was repulsed with great loss. A provisional government is now established, who propose a federative union with Holland, the result of which will be their entire liberation from the arbitrary control of that country, see BELGIUM.

NETSCHER (Gaspard), an eminent painter born at Prague in 1639. His mother was obliged, on account of her religion, to leave Prague with her three sons. When she had proceeded three leagues, she stopped at a castle ; which being soon after besieged, two of her sons were starved to death ; but she escaped out of the fortress by night, and saved her only remaining child. Carrying him in her arms, she reached Arnheim in Guelderland, where she supported herself, and brought up her son. At length a physician took young Netscherunder his patronage, with the view of giving him an education proper for a physician : but, Netscher's genius leading him to painting, he could not forbear scrawling out designs upon the paper on which he wrote his themes ; whereupon he was sent to a glazier, who was the only person in the town that understood drawing, and afterwards to Deventer, to a painter named Terburg, who was an able artist ; and, having acquired under him a great command of his pencil, went to Holland, where he worked a long time for the dealers in pictures, at very low prices. He then resolved to go to Rome ; and for that purpose embarked on board a vessel bound for Bourdeaux. But his marrying in

that city prevented his travelling into Italy : and therefore, returning into Holland, he settled at the Hague; where he applied to portrait-painting, and acquired such reputation that he was much employed, and his portraits are still to be seen all over Europe. He died at the Hague in 1684.

NETTINGS, in a ship, are a sort of grates made of small ropes, spliced together with rope-yarn or twine, and fixed on the quarters and in the tops ; they are sometimes stretched upon the ledges from the waste trees to the roof-trees, from the top of the forecastle to the poop, and sometimes are laid in the waste of a slvp to serve instead of gratings.

NETTLE, n. s. & v. a. Sax. netel. A well

known stinging herb : to nettle is, to sting ; to ir ritate.

The strawberry grows underneath the nettle.

Shakspeare.

And now, when he hears the fame of a king born, whom a star from heaven signifies and attends, he it nettled with the news. Bp. Hall.

Some so like to thorns and ntttles live, That none for them can, when they perish, grieve.

Waller.

The princes were so nettled at the scandal of this affront that every man took it to himself.

L' Estrange.

Although at every part of the Apostle's discourse some of them might be uneasy and nettled, yet a moderate silence and attention was still observed.

Bent ley.

NETTLE, in botany, see URTICA.

NEVA, a river of Russia, which issues from the great lake Ladoga; and, after a course of about thirty-five miles to the westward, empties itself, by three mouths, into the Gulf of Finland, below St. Petersburgh. It is from 300 to 400 yards wide, and from ten to fifteen

feet deep, consequently navigable for vessels of considerable size. It is the Thames of St. Petersburgh, the water being used for drinking, cooking, and drainage, throughout that city. The Neva is generally frozen from the end of October till April.

NEVADA, or SIERRA NEVADA, i. e. the Snowy Range, a chain of mountains in the south of Spain, forming the most elevated range in the peninsula. In the vicinity of the Sierra de Fila-bres, it branches off from the great Iberian chain, runs through Granada and Andalusia from east to west, and terminates on the shores of the Mediterranean, in several promontories, of which Gibraltar is the most remarkable. The loftiest peak is the Cumbre de Mulhacen, said to rise 10 13,600 feet.

NEUBURGH or NEWBURCH (William of), Gulielmus Neubrigensis, a monk of the abbey of Newborough, born at Bridlington in Yorkshire, in 1136, is also called Parvus, or the Little, but whether this be a surname or appellative is doubtful. He wrote a chronicle, published with Picard's notes at Paris in 1610, 8vo., then by Gale, and lastly by Hearne, 3 vols. 8vo. 1719. He attacks Geoffery of Monmouth in good but bitter language attributed to his disappointment at not succeeding to the bishopric of St. Asaph : he is also sufficiently credulous as an historian.

NEUBURG, called also the Younger Palatinate, a late duchy of the German empire, belonging to Bavaria, was divided into two parts, the western, lying on both sides of the Danube, between Sua-bia and Franconia ; the eastern, called also the Nordgau, stretching along the frontier of the Upper Palatinate. The extent of the whole was 1080 square miles ; and the population 102,000. In 1808 the whole was included in the Bavarian circles of the Upper Danube and the Regen. This territory is fertile and well cultivated. It contains some iron works ; but the principal manufactures are hemp and flax. The duchy long belonged to a branch of the hous►► of Bavaria ; which succeeded to the electorate in

1742.

NEUBUKG, a well built town of Germany on

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the Danube, stands on a pleasant eminence. There is a good bridge over the river, and near it is the old ducal palace, a respectable building. The council-house stands in a square, surrounded with trees. Here is also a collegiate church, college, hospital, and an orphan-house. The town is also the seat of a court of appeal. It was formerly fortified, and repeatedly besieged ; but was dismantled in the early part of the eighteenth century. Population 4000. Eleven miles west of Ingolstadt.

NEVE (Timothy), an English divine, born in Shropshire, and educated at Cambridge. He was prebendary of Lincoln, archdeacon of Huntingdon, and rector of Alwalton, where he diedˆ in 1740. He wrote an Essay on the Invention of Printing, and the earliest English printers.

NEVER, adv.) Sax. naeprte ; not ever ;

NEVERTHELESS, cow;. $ at no time; in no de-gree ; much used in composition. Dr. Johnson says, ‘ It is used in a form of speech handed down by the best writers, but lately accused, I think with justice, of solecism : as, he is mistaken though never so wise. It is now maintained, that propriety requires it to be expressed thus, he is mistaken though ever so wise; that is, he is mistaken how wise soever he be. The common mode can only be defended by supplying a very harsh and unprecedented ellipsis ; he is mistaken though so wise, as never was any ; such however is the common use of the word among the best authors.’

Peter seith to him, thou shall nevere waische my feet. Wiclif. Jon. 13.

Ask me never so much dowry and gift, and I will give according as ye shall say. Genesis.

He answered him to never a word, insomuch that the governor marvelled. Matthev) xxiv. 17.

Ones have the windes the trees dispoyled clene, And ones again begin their cmelnesse,

Sins I have hid under my biest the harme, That never shall recouer healthfulnesse. Surrey. Description of the restless state of a Loiter.

Be it never so true which we teach the world to believe, yet, if once their affections begin to be alienated, a small thing persuadeth them to change.

Hooker.

They plead that even such ceremonies of the church of Rome as contain in them nothing which is not of itself agreeable to the word of God, ought nevertheless to be abolished. Id.

They destroyed all, were it never so pleasant, within a mile of the town. Knolles.

Nature assureth us by fieuer-failing experience, and reason by infallible demonstration, that our times upon the earth have neither certainty nor durability. Raleiyh.

In a living creature, though never so great, the sense and the effects of any one part of the body instantly make a transcursion throughout the whole body. Bacon.

Many of our men were gone to land, and our ships ready to depart ; nevertheless the admiral, with such ships only as could suddenly be put in readiness, made forth towards them. Id.

But a smooth and stedfast mind, Gentle thoughts and calm desires,

Hearts with equal love combined, Kindle Hfrer-dying fires. Carew.

Death may be sudden to him, though it comes by ever so slow degrees. Duty of Man.

Never, alas, the dreadful name That fuels the infernal flame. Cowley.

Ye myrtles brown, with ivy never sear, I come to pluck your berries harsh and crude.

Milttn

Our heroes of the former days, Deserved and gained their wuer-fading bays.

Roscommon.

So corn in fields and in the garden flowers, Revive and raise themselves with moderate showers , But, overcharged with never ceasing rain, Become too moist. Waller.

Your necer-failing sword made war to cease, And now you heal us with the acts of peace. Id. Not Thracian Orpheus should transcend ray lays, Nor Linus crowned with nerer-fading bays.

Dryden.

Leucippus with his necer-erring dart. Id.

Farewell, ye neeer-opening gates. Id.

Whosoever has a friend to guide him may carry his eyes in another man's head, and yet see never the worse. South.

Creation must needs infer providence ; and God's making the world irrefragably proves that he governs it too ; or that a being of a dependent nature remains nevertheless independent upon him in that respect.

Id.

By its own force destroyed, fruition ceased And, always wearied, I was never pleased.

Prior

He to quench his draught so much inclined, May snowy fields and nitrous pastures find ; Meet stores of cold so greedily pursued, And be refreshed with never-wasting food.

Blackmore.

He that shuts his eyes against a small light,

would not be brought to see that which he had no

mind to see, let it be placed in never so clear a light

and never so near him. Atterbury.

Never was any thing so unbred as that odious man.

Congreve. Death still draws nearer, never seeming near.

Pope.

Norton hung down his necer-blushing head, And all was hushed, as Folly's self lay dead. Id.

What the weak head, with strongest bias, rules Is pride, the ××fw-failing vice of fools. Id.

That prince whom you espouse, although never so vigorously, is the principal in war, you but a second.

Swift.

Thy busy neoer-meaning face, Thy screwed up front, thy state grimace. Id. And I'm the sovereign of Scotland,

And mony a traitor there ; Yet here I lie in foreign bands,

And never-ending care. Burns.

Never hold any one by the button or the hand in order to be heard out ; for, if people are unwilling to hear you, you had better hold your tongue than them.

Chesterfield. Men from England bought and sold me,

Paid my price in paltry gold : But, though slave they have enrolled

me,

Minds are never to be sold. Cowper.

NEVERS, NOVIDIORUM, a large and ancient post town in France, the chief place of the prefecture of the department of the Nievre, in the arron-dissemeut of the same name, containing 14,500 inhabitants. It has an inferior court of judicature, a board of trade and manufactures, a central agricultural society, a society of arts and sciences, and a communal college ; and is under the royal court of Bourges. This town stands in a fine situation, on the right bank of the Loire, at tlie confluence of the Nievre. It is built in the form of an amphi-

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theatre, upon the declivity of a hill, and presents a very picturesque aspect. The interior has nothing remarkable ; the streets are narrow, crooked, and for the most part steep : in the centre stands the ancient castle of the dukes of Nevers, in a very large square. The public walk, called the Park, is very pleasant.

Manufactures are carried on here of coarse cloths, metal buttons, strings for violins, candles, klass, earthenware, brass-founding:, leather, &c. There is a royal cannon-foundry. The trade consists in wood, iron, steel, coal, and charcoal, bright ironmongery, china, excellent delf, enamel, water-casks for the navy, wine, salt, and leather. The public library contains 6500 volumes; the bridge built over the Loire, the barracks, the arsenal, and the tower of the cathedral, are also worthy of notice. This is the native place of the poet Adam Billaut, called also Master Adam, and of the physician Chaumette, who was beheaded at Paris in 1793, at the age of thirty-one years. Nevers is eighty-eight miles south of Auxeme, forty-three north of Moulins, forty-eight W. S.W. ofBourges, and 174 southeast of Paris, in E. long, from that city 0►► 49', and N. lat. 47►►.

NEUFCHATEL, a canton of West Switzerland, bounded by Bern, the lake of Neufchatel, the Pays de Vaud, and a part of France. Its surface, in superficial extent about 340 square miles, is intersected by several branches of the Jura chain of mountains, &c. Here the climate is of course cold, the winter continuing during seven or eight months. Vines, however, are cultivated in the lower and sheltered parts, bordering on the Neufchatel Lake. The Val de Ruz, and the Val de Travers produce a little corn ; but the higher part of the canton, bordering on France, is occupied in pasturage and plantations. During the last century this became a manufacturing district of consequence, in cotton, linen, and woollen fabrics, as well as in those of lace and stockings ; watches and other metallic works.

The inhabitants, who amount to about 50,000, are, with the exception of about 2000, Protestants. Their language is French ; and there ex-ists among them a great degree of comfort and civilisation. The country was originally, with the adjacent principality of Valengin, a small free state ; the prince being obliged before his accession, to take an oath that he would preserve its integrity, and secure to his subjects their ancient rights. In 1707, on the extinction of the reigning family, the

state transferred its sovereignty to the king of Prussia. This government continued till 1807, when, by the Treaty of Tilsit, Neufchatel was ceded to France, and given by Buonaparte to marshal Berthier. The year 1814, liowever, relieved it from this irksome subjection, after which the congress of Vienna acknowledged it a Swiss canton, under the nominal sovereignty of Prussia.

NEUFCHATEL, the capital of the above canton, is situated on the rivulet Seyon, near where it falls into the lake of Neufchatel. It stands partly on an eminence, and is surrounded by vineyards and gardens. It is in general well built, and consists of four principal streets, the houses having frequently an air even of elegance. Tiie old castle, town-huuse, the principal church,

and the hospital, are public buildings worth no-tice. The town-house was constructed at the expense of an individual citizen, who had acquired a large fortune, and who on his death, in 1786, bequeathed the whole for public purposes. The manufactures consist of printed cottons and linens. Population 5000. Fifty miles north-east of Lausanne, and twenty-five west of Bern. Long. 7►► 0’ E., lat. 47►► 5’ N.

NEUFCHATEL, LAKE OF, a beautiful and extensive lake in the north-west of Switzerland, separating the canton of that name from Friburg. It is about twenty miles long from south-west to north-east, and four broad ; its greatest depth being about 400 feet, and it lies 1 320 feet above the level of the sea. The rivers that fall into it are the Orb, Ruz, Seyon, and Broie. It abounds in fish, and affords the means of a considerable navigation, the waters flowing through the small lake of Bienne into the Aar, and eventually into the Rhine. It is subject to frequent squalls of wind.

NEUFCHATEL, a town in the department of the Lower Seine, France, on the small river Bethune. It is a manufacturing place, with a population of 2900. The environs are remarkable for their rich pastures. Twenty-six miles north-east of Rouen.

NEUHAUS, or GINDRZICHU HRADICZ, a well built town of Bohemia. It contains a gymnasium formerly belonging to the Jesuits, a fine castle, and extensive woollen manufactures. In 1801 there was a dreadful fire here. Inhabitants 5200. Sixty-eight miles S. S. E. of Prague.

NEVIN, NEFYN, or NEWIN, a town of North Wales in Caernarvonshire, with a market on Saturday. In this town Edward I., in 1284, held his triumphal festival on the conquest of Wales ; and, to conciliate his new subjects, held, in imitation of king Arthur, a round table, with dances and tournaments ; at which were present the chief nobility of England, and many foreign lords, and a vast concourse of people. Nevin is six miles west of Pulhely, and 249 north-west of London.

NEVIS, an island of the West Indies, said to have received this name from Columbus, is separated from the southeast end of St. Kitts by a strait, called the Narrows, three miles broad. It is one great mountain, eight miles long and nve broad, with a border of low land a mile and a half in breadth, well watered and fertile. In the cen-tre of the summit of the mountain is an ancient crater, and sulphur is frequently found in the fissures of the soil.

The island forms five parishes ; the only town is Charlotte, at the south-west end, but it has two other shipping places at India Castle and New Castle. The population was ###

Whites. Free people of col. Slaves.

1787 . . 1,514 . . 140 . . 8,420 1805 . . 1,300 . . 150 . . 8,000

The import were ###

is to England, and exports thence,

Imports. Exports.

1809 . . ## 89,062 … ##20,500

1810 . . 126,443 … 11,764

The principal imports from the island were-

Coffee. cwl.

1809 . ⬛⬛⬛

1810 . 18

Sugar. Rum. Cotton.

not. gall*. Ibt.

68,720 . 52,478 . 17,463

87,392 . 67,010 . 11,160

On an average it is reckoned to produce one hogshead of sugar to an acre. The island has no European regular troops, but the white inhabitants form a militia. An English colony from St. Christopher's first settled here in the year 1628, under Sir Thomas Warner. His successor, governor Lake, was considered as the Solon of this colony, in which he arranged every thing with such prudence, wisdom, and justice, as procured him a high reputation with the French as well as English. In the Dutch war they met with some disturbance from the French; but, by being covered by an English squadron, the enemy were obliged to retreat, after a smart engagement in sight of the island. Sir William Stapleton sometimes resided here, and Sir Nathaniel Johnson constantly. The population was then computed at 30,000. In the war after the Revolution they exerted themselves gallantly, and had two regiments of 300 men each. In that of queen Anne they behaved equally well, though they were less fortunate ; for the French landing with a superior force, in 1706, and hav-ing inveigled most of their slaves, they were forced to capitulate. About 4000 of these slaves the French earned away and sold to the Spaniards, to work in their mines. The parliament, aftermaking enquiry into the losses they had sustained, voted them about a third

part of the sum which they had lost. These losses by war, an epidemic disease, and repeated hurricanes, exceedingly diminished the number of the people. In 1783 this island was restored to Great Britain, and we have ever since retained it. Long. 62►► 35' W., lat. 17►► 14' N.

NEUMANN (Caspar), a celebrated German chemist of the eighteenth century, was originally an apothecary at Berlin, where his chemical and professional skill attracted the notice of Frederick III. of Prussia, who supplied him with the means of pursuing his studies at Halle, where he took the degree of M. D. He afterwards travelled into France, England, and Italy; and, on his return to Berlin, became Royal professor of chemistry. He was also honored by the king with the title of aulic counsellor. He died in 1737. Neumann contributed much to the progress of chemistry by his writings, which are still valuable, though more recent discoveries have overturned his theories. His chemical works were translated into English in 1759, 4to.; and, in 1773, 2 vols. 8vo.

NEUMARKT, a town on the Sulz, in the up-per palatinate, Bavaria. It is on the road between Nuremberg and Ratisbon ; and its breweries are of importance. Nearthetown also are mineral waters, with appropriate buildings. It was here, on the 23d August, 1796, that the French, under Jourdan, met with the first of those defeats which led to their retreat across the Rhine. Population 2400. Nineteen miles southeast of Nuremberg.

NEURADA, in botany, a genus of the di-gynia order, and decandria class of plants ; natural order thirteenth, succulents : CAL. quinque-

partite: petals five: CAPS, inferior, deceralocular, decaspermous, and aculeated. There is only one species, *viz.* N. procumbens. The whole plant is white and woolly : it sends off numerous stalks in every direction, which lie flat on the ground : the leaves stand on short foot stalks ; they are of an oval shape, and plaited like those of the lady's mantle. It is a native of the warm climates, and found on dry parched grounds.

NEUSATZ, or NEO-PLANTA, or UJ-VIDEK, a considerable and well-built walled town of South Hungary, in the palatinate of Bacs, separated from Peter-Waradein by the Danube. It was long considered a suburb of that town ; but its population has at length exceeded that of the parent settlement. It is, besides, totally distinct in a civil point of yiew, having received the privileges of a free city in 1751. Favored

by the navigation of the Danube, its trade is very considerable, particularly with Turkey. The inhabitants are chiefly of the Greek church, that sect having here a bishop and five churches, while the Catholics have but one. Population 14,000. Long. 19°° 52' 11' E., lat. 45°° 16' 0' N.

NEUSIEDLER-SEE, or Fertoe, a lake in the west of Hungary, lying between the counties of Oedenburg and Wieselburg, extends from north to south about thirty miles, but the southern extremity makes a considerable curve towards the east. Its breadth, where greatest, is about ten miles. It is too shallow for navigation, but its shores westward are covered with vineyards and forests; on the east they are marshy, and overrun with reeds. The water becomes very turbid when agitated by wind, and is liable to considerable variations in height; but generally it is clear, and very salt. In 1777 and 1780 a dike or mound was erected to confine the southeast waters of this lake ; but beyond it is a large marsh called the Hansag.

NEUSOHL, or Besztercze-Banya, a well-built town of north-west Hungary, on the rivers Gran and Bistricz, the chief place of the palatinate of Sohl. It was founded in 1222 by a Saxon colony, sent hither by the Hungarian government to work the neighbouring copper mines. It has an old castle, a Catholic and Lutheran church, and a hospital. A Catholic bishopric was founded here in 1766; and there are also a Catholic and Lutheran seminary and high school. The town has a good manufacture of sword blades. Population 10,000.

NEUSS, a manufacturing town of Prussia, in the government of Dusseldorf, on the ErfTt, about a mile from its influx into the Rhine. This is" the Novesium of the Romans; and Drajawrin found, on digging the Canal du Nord, several urns and coins of Vespasian. It has a public square, with a statue in bronze of Frederick III. The inhabitants, about 5400, manufacture cotton stuffs and ribands, and carry on some trade in corn, oil, and wood. Three miles south-west of Dusseldorf.

NEUSTADT, a circle of Saxony, ceded to Prussia, in 1815, by the treaty of Vienna. The greater part was subsequently made over to the grand duke of Saxe-Weimar ; while the remainder, with the detached parts of the Vogtland, lying among the possessions of the dukes of the

house of Saxe, still forms a circle in the Prussian territory, bearing the name of Neustadt.

NEUSTADT-EBERSWALD, a fortified town of Brandenburg, at the confluence of the Finow and the Schwarz, consists of two parts, Neustadt and Eberswald. A colony of Swiss Protestants settled here in 1693, and employed themselves chiefly in agriculture. In 1743 and 1748 another colony from Saxony settled here; these are chiefly hardware manufacturers. Inhabitants 3000. Thirty miles north-east of Berlin.

NEUSTADT, MAEHRISCH or MORAVIAN, a walled town of Moravia, has a variety of manufactures on a small scale, *viz.* woollens, needles, saltpetre, gunpowder, and glass. Population 3000. Thirteen miles north of Olmutz.

NEUSTADT WIENERISCH, a well-built town of Lower Austria, on theFischa and Steinfeld. The streets are wide and straight; and it contains, without the garrison and military school, 7000 inhabitants. These add from 2000 to 3000 more. The school was founded in 1752, and occupies a large building, formerly a palace of the archdukes of Austria : it contains thirty-six professors, and 440 pupils. There is also in the town a riding-school and gymnasium. This place is one of the chief entrepots for the intercourse between Italy and Hungary, and has a brisk trade ; also manufactures of silk stuffs, woollens, pins, brass wire, and stone-ware. A canal connects it with Vienna, from which it is distant twenty-eight miles south.

NEUTER, adj. & n. s.~\ Fr. neutre, neutral;

NEU’TRAL, adj. & n. s. f Lat. neuter. Indif—

NEUTRAL’ITY, n.s. fferent; of neither

NEU’TRALLY, adj. J side or sex : a thing or person indifferent; unengaged, unpledged ; or of neither sex : neutral as a substantive and adjective is used exactly as a synonyme of neu-ter: neutrality is a state of indifference; neutrally, indifferently, on either part.

Who can be wise, amazed, temperate, and furious, Loyal and neutral in a moment 1 No man.

Shakspeare.

He no sooner heard that' king Henry was settled by his victory, but forthwith he sent ambassadors unto him to pray that he would stand neutral.

Bacon's Henry I'll.

The treacherous who have misled others, and the neutrals and the false-hearted friends and followers, who have started aside like a broken bow, are to be noted. Bacon.

Some things good, and some things ill do seem, And neutral some, in her fantastick eye. Davits.

There is no health : physicians say, that we At best enjoy but a neutrality. Donne.

The adjectives are neuter, and animal must be understood to make it grammar. Dryden.

The king, late griefs revolving in his mind, These reasons for neutrality assigned. Garth's Oiid.

The general division of the British nation is into whigs and lories ; there being very few, if any, who stand neuter in the dispute, without ranging themselves under one of these denominations.

Addison's Freeholder.

The learned heathens may lie looked upon as neuters in the matter, when all these prophecies were new to them, and their education had left the interpretation of them indifferent. Addison.

The allies may be supplied for money, from Denmark and other neutral states. Addison on Wiir.

Men who possess a state of neutrality in times of publick danger, desert the interest of their fellow subjects. Additon.

A verb neuter is that which signifies neither action nor passion, but sone state or condition of being ; as, sedeo, I sit. Clark. ‘

Salts which are neither acid or alkaline, are called neutral. Arbuthnot.

All pretences to neutrality are justly exploded only intending the safety and ease of a few individuals, while the publick is embroiled. This was the opinion and practice of the latter Cato. Swift.

When upon a trial a man calls witnesses to his character, and those witnesses only say that they never heard, nor do not know any thing ill of him ; it intimates at best a neutral and insignificant, though innocent character. Chetterjield.

An armament had already been proposed to meet the exigencies of the neutral war, and to bring it to a successful termination, and that armament effectually and gloriously put an end to it. Canning.

NEUTER NOUNS, those which are neither masculine nor feminine. See GENDER. In English, and other modern tongues, there are no neuter nouns. See NOUN.

NEUTER VERBS, by some grammarians called intransitive verbs, are those which govern nothing, and that are neither active nor passive. See VERB. When the action expressed by the verb has no object to fall upon, but the verb alone supplies the whole idea of the action, the verb is said to be neuter : as I sleep, thou yawnest, he sneezes, we walk, ye run, they stand still.

NEUTRA, or NYITRA, a palatinate of ‘,North-west Hungary, bordering on Moravia, and situated between the palatinates of Presburg and Trentsin. It is divided into two parts by the Waag, and is partly mountainous. It produces both corn and vines ; the mountainous part abounds in mineral waters. The area is 2570 square miles, and the population 320,000, of Sclavonian and German descent.

NEUTRA, or NYITRA, a town of the north-west of Hungary, on a river of this same name, and the capital of the palatinate, is finely situated on two elevations, on one of which stands a bishop’s palace and cathedral, on the other a public school. Behind the town is a range of

hills covered with trees. There is here a large state-house, where the diet meets; and the inhabitants, mostly Slowacs, amount to 3900. It is forty-four miles east by north of Presburg.

NEUTRAL SALTS, among chemists, those compounded of an acid with any other substance capable of uniting with it and destroying its acidity. Those in which the acid is saturated with an earth or a metal are called imperfect, but those in which a pure alkali is employed are called perfect neutrals. See CHEMISTRY.

NEUWIED, a neat town of the province of the Lower Rhine, Prussia, in the government of Coblentz. It was once the chief town of a principality, which enjoyed its independence until 1806: the prince, being a Calvinist, and surrounded by bigotted governments, opened his capital to all who were restrained in the exercise of their worship, and the effect has been admirable: here are churches for Catholics, Protestants, Baptists, Ilernlmltcrs, and Jews; the whole population being in general industrious,

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and carrying on a variety of manufactures, *viz.* of cotton and wool, hardware, linen, soap, watches,, and cabinet-making. From its vicinity to the Rhine, Neuwied has a good traffic in corn, wine, timber, and potash; the whole displaying an aspect of activity seldom met with. The prince's palace, containing a good library, is surrounded with extensive gardens. Seven miles N.N. W. of Coblentz, and forty-two S.S. E. of Cologne.

NEW, adj. & adv. ~\ Sax. iieojj ; Teut. NEWFANG'LED, and Swed. neu;

NEWFANG'LEDNESS, n. s. Belg. nieuw ; Goth. NEW'LY, adv. [ny. Novel ; mo—

NEW'NESS, n. s. [dern ; fresh ; lately

NEWS, produced, procured,

NEWS'MONGER, made, or had; reNEW-YEAR'S-GIFT, J novated: as an ad-verb it is principally used in composition, see numerous instances below : newfangled is, made with a foolish love of novelty : newfangledness is the taste or passion for novelty of this description : newly and newness follow the sense of the adjective new. News (always written in this plural form) signifies, a fresh account of things; something not before known ; papers containing such an account : a newsmonger is a dealer in news; a gossip, male or female: new-year's-gift, a present made on the opening of a new year.

Stedfastly purposing to lead a new life.

Common Prayer.

His device was to come without any device, all in white like a new knight, but so new as his newness shamed most of the others long exercise. Sidney.

A s he was ready to be greatly advanced, for some noble pieces of services which he did, he heard news of me. Id.

As soon as she had written them, a new swarm of thoughts stinging her mind, she was ready with her foot to give the new-born letters

both to death and burial. <.

So to newfangledness both of manner, apparel, and each thing else, by the custom of self-guilty evil, glad to change though often for a worse. Sidney.

So dreadfully he towards him did pass, Forelifting up aloft his speckled breast, And often bounding on the bruised grass, As for great joyance of his new-come guest.

Spenser.

Such is the power of that sweet passion, That it all sordid baseness doth repel, And the refined mind doth newly fashion Into a fairer form. Id. Hymn on Love.

Such assemblies, though had for religion's sake, may serve the turn of hereticks, and such as privily will instil their poison into new minds. Hooker.

God hath not then left this to chuse that, neither would reject that to chuse this, were it not for some new-grown occasion, making that which hath been better worse. Id.

Yet he them in newfangledness did pass.

Hubberd.

What's the newest grief! ××× That of an hour's age doth hiss the speaker ; Each minute teems a new one.

Shakspeare. Macbeth. Your master's lines

Are full of neu'-found oaths ; which he will break As easily as I do tear this paper. Shakspeare.

Will you with those infirmities she owes, Unfriendlv, new-adopted to our hate.

Dowered with our curse, and strangered with oui

oath, Take her or leave her? Id. King Lear.

Now hath my soul brought forth her prodigy, And I a gasping, neu>-delivered mother, Have woe to woe, sorrow to sorrow, joined.

Shakspeare.

At Christmas I do more desire a rose, Than wish a snow in May's newfangled shows ; But like of each thing, that in season grows, id. Her breath indeed those hands have newly stopped.

Id.

Away, my friends new flight ; And happy newness that intends old right. Id.

Many tales devised,

Which oft the ear of greatness needs must hear, By smiling pick-thanks and base newsmongers.

Id.

If I be served such a trick, I'll have my brains taken out and buttered, and give them to a dog for a new-year's-gift. Id.

Their stories, if they had been preserved, and what else was performed in that newness of the world, there could nothing of more delight have been left to posterity. Raleigh.

When Rhea heard these news, she fled from her husband to her brother Saturp. Id.

Men, after long emaciating diets, wax plump, fat, and almost new. Bacon's Natural History.

They newly learned, by the king's example, that attainders do not interrupt the conveying of title to the crown. Bacon.

Words borrowed of antiquity to lend majesty to stile, they have the authority of years, and out of their intermission do win to themselves a kind of grace like newness. Ben Jonson.

The women would be loth to come behind the fashion in newfangledness of the manner, if not in costliness of the matter. Carew.

Her lips were red, and one was thin, Compared to that was next her chin ; Some bee had stung it newly. Suckling.

I've seen the morning's lovely ray Hover o'er the urn-bora day ; With rosy wings so richly bright, As if she scorned to think of night.

Crashaw. He therefore, which if he had known the offence would have sent up prayers and tears to God, now sends spies for a further discovery of Ai : they return, with news of the weakness of their adversaries.

Bp. Hall.

In these disturbances, And newness of a wav'ring government, T' avenge them of their former grievances.

Daniel.

All clad in liveliest colours, fresh and fair As the bright flowers that crowned their brighter

hair ;

All in that new-blown age which does inspire Warmth in themselves, in their beholders fire.

Cowley. We talk in ladies' chambers love and news. Id.

Now the books, and now the bells, And now our acts the preacher tells,

To edifv the people ; All our divinity is news, And we have made of equal use

The pulpit and the steeple. Denham.

Some tree, whose broad smooth leaves together

sewed,

And girded on our loins, may cover round Those middle parts ; that this new-comer shame, There sit not, and reproach us as unclean. Milton.

The neui-created world, which fame in heaven Long had foretold. Id. Paradise Lost.

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Evil nfws rides fast, while good news baits.

Milton.

With such amazement as weak mothers use, And frantic gesture, he receives the news.

Waller.

When he sat on the throne distributing new-year' t-gifls he had his altar of incense by him, that before they received gifts they might cast a little incense into the fire ; which all good Christians refused to do. Stillingfieet.

Whoever converses much among old books, will be something hard to please among new. Temple.

Let this be nature's frailty, or her fate, Or Isgrim's counsel, her new-chosen make.

Dry den. When springing forth from Jove's new-closing

wound, She struck the warlike spear into the ground. Id.

A bird neto-made, about the banks she plies, Not far from shore, and short excursions tries.

Id.

When pleading Matho, borne abroad for air, With his fat paunch fills his new-fashioned chair.

Id.

A netc-formed faction does your power oppose, The fight's confused, and all who meet were foes.

Id.

If thou ken'st from far Among the Pleiads a new-kindled star ; If any sparkles from the rest more bright, Tis she that shines in that propitious light. Id. Seized with wonder and delight, Gazed all around

me, new to the transporting sight.

Id.

Nor dare we trust so soft a messenger, New from her sickness to that northern air. Id. He rubbed it o'er with newly gathered mint. Id. There are some newnesses of English, translated from the beauties of modern tongues, as well as from the elegancies of the Latin ; and here and there some old words are sprinkled, which, for their significance and sound, deserve not to be antiquated.

Id.

The amazing neus of Charles at once was spread, At once the general voice declared Our gracious prince was dead. Id.

It is no news for the weak and poor to be a prey to the strong and rich. L'Estrange.

If we consider new-born children, we shall have Tittle reason to think that they bring many ideas into the world with them. Locke.

If it could, yet that it should always run them into such a machine as is already extant, and not often into some new-fashioned one, such as: was never seen before, no reason can be assigned or imagined.

Ray on the Creation.

They have neu;*-gatherers and intelligencers distributed into their several walks, who bring in their respective quotas, and make them acquainted with the discourse of the whole kingdom. Spectator.

A superior capacity for business, and a more extensive knowledge, are steps by which a new man often mounts to favor, and outshines the rest of his contemporaries. Addison.

Their papers, filled with a different party spirit, di-vide the people into different sentiments, who generally consider rather the principles than the truth of the 7ieu > s-writer. Id.

Do not all men complain how little we know, and how much is still unknown 1 And can we ever know more, unless something new be discovered 1

Burnet.

This English edition is not so properly a translation as a new composition, there being several additional chapters in it, and several new-moulded.

Burned Theory.

A'eu—found lands accrue to the prince whose subject makes the first discovery. Id.

Newnest inˆgreat matters, was a worthy entertainment for a mind ; it was an high taste, fit for the relish. South.

The proctor exhibits his proxy from the dean and chapter, and presents the newelected bishop to the vicar-general. Aytiffe.

Drummers with vellum-thunder shake the pile, To greet the neu)-made bride. Gay't Trivia.

Ah Blouzelind ! 1 love thee more by half, Than does their fawns, or cows the new-fallen calf.

Gay.

Those charities are not newfangled devices of yesterday, but are most of them as old as the reformation. Atterbury.

This was come as a judgment upon him for laying aside his father's will, and turning stockjobber, newsmonger, and busy-body, meddling with other people'* affairs. Arbuthnut.

Their names inscribed unnumbered ages past, From time's first birth, with time itself shall last ; These ever new, nor subject to decays, Spread and grow brighter with the length of days.

Pope.

Twelve mules a strong laborious race, New to the plough, unpractised in the trace.

Id.

The new-fallen young here bleating for their dams. The larger here, and there the lesser lambs. Id.

Learn all the xei/ -fashion words and oaths. Id.

Advertise both in every newspaper ; and let it not be your fault or

mine, rf our countrymen will not take warning. Id.

The new state in which I found the proceedings upon my return to England required the most serious consideration. Canning.

I regret it only as it has prevented me from anticipating with you the announcement in a newspaper of an event in which 1 know your kind partiality will induce you to feel a lively interest. Suift.

NEW ABERDEEN. See ABERDEEN, NEW.

NEWARK, or NEWARK UPON TRENT, a borough, market town, and parish of Nottinghamshire, a great thoroughfare on the York road, 120| miles from London. It has bridges over the Trent, which forms an island here, by dividing itself into two streams, two miles above the town, which meet again two miles below it. A magnificent castle was built here in the reign of king Stephen, which held out in the barons' wars for king John, who died here, October 19th, 1216. On the 21st of March, 1544, the royalists under prince Rupert were defeated near this place by the parliament's army under Sir John Meldrum. The town, however, stood out for king Charles I. to the last; but, after he had delivered himself into the hands of the Scots army then before it, the governor by his order surrendered it, after which the castle was demolished. ??? It was situated near the river ; the walls of the towers are very thick, and of a very great height; and were formerly of great importance. In the court before these ruins is a fine bowling green, and near it a manufactory of sacking. The town being subject to inundations from the Trent, and thus often rendered impassable, a turnpike road was con-NEW

structed by Mr. Smeaton, at the expense of 12,000, so high as to be passed with safety in the greatest floods, arches of brick being made in several places to carry off the water. Near the town there is a bridge constructed for the same purpose, mostly upon dry land, consisting of nine arches. The market-place is handsome, though not spacious. Its church, which is reckoned one of the finest in the kingdom, was built by Henry VI., and has a high and lofty spire, with a peal of eight bells. The town hall is a magnificent stone edifice, erected in 1776, in the square, in which are elegant court and assembly rooms, and rooms for the corporation business, built from the produce of estates that were left by will for the improvement of the town, and cost upwards of ––10,000. The town was incorporated by king Charles II. under a mayor and twelve aldermen. The same king, for its loyalty to his father, gave it the privilege of sending members to parliament. It has a large trade in corn, malt, cattle, wool, &c. ; and has a charity-school for thirty-six boys. Its market is on Wednesday. It had formerly an abbey of Augustine friars. A free-school was founded here, endowed with the lordship of Everton in this county ; and the vicar of Newark, and the brethren of the Trinity-guild, were made perpetual trustees. Many Roman urns and other antiquities have been found about this town. Limestone is dug in large quantities on an eminence called Beacon Hill, and gypsum for stucco is also burnt here. It is seventeen miles north-east by east of Nottingham.

NEWARK, a town of the United States, the capital of Essex county, New Jersey. It stands on the west side of the Passaic river, about three miles from its mouth, five miles from Elizabeth-town, and nine west of New York.

NEWARK, a township of Newcastle county, Delaware, United States.

NEWARK, a town of the United States, the capital of Licking county, Ohio, on Licking River. It contains a court-house. Twenty-six miles W.N.W. of Zanesville.

NEWARK, a town of Upper Canada, at the entrance of the river Niagara from Lake Ontario, and fronting Fort Niagara on the American side. It was begun in 1692, and had increased to about 200 neat and well-built houses, with a church, court-house, and one or two other public buildings, when they were all destroyed in the year 1814,

on the evacuation of Fort George. Seven miles from Queenstown.

NEWARK BAY, a bay on the coast of America, at the mouths of the Passaic and Hackinsack, between the main land and New Jersey. It divides into two branches; one running to the east, between the continent and north coast of Staten Island, joins the Hudson ; the other runs southerly between the continent and west coast of Staten Island.

NEWBERN, a well-built market town and port of entry of the United States, the capital of Craven county, North Carolina, situated on the south-west bank of the Neuse, at the junction of the Trent. It contains a court-house, jail, theatre, academy, and three churches, one for Episcopalians, one for Baptists, and one for Methodists. It is a flourishing town, and has consider-

able commerce ; the exports consisting chiefly of grain, pork, lumber, and naval stores. The shipping in 1816 amounted to 4975 tons. Steam-boats connected with tbe stages from Charleston, South Carolina, and with the stages and steam-boats to the northward, ply between Newbern and Elizabeth city. By this line the route from Norfolk to Charleston (800 miles) is performed in seven days. Population, in 1800, 2467; in 1818 about 6000. 100 miles north-east by north of Wilmington.

NEWBERRY, a township of the United States, in Lycoming county, Pennsylvania, on the west side of the Lycoming, at its entrance into the Susquehannah. Also the name of two other small townships, one in Burlington, New Jersey, the other in Christian county, Kentucky.

NEWBOROUGH, or NEWBURGH, a market town of North Wales, in the Isle of Anglesey, 257 miles from London, situated over against Caernarvon, about fifteen miles south-west of Beaumaris. It is governed by a mayor, two bailiffs, and a recorder. Its Welsh name is Rhos-sir or Rhosvair, and was the residence of the princes of Anglesea. It was made a corporation by Edward I., whence it was called New Borough. It contains 196 houses, and 756 inhabitants, and is noted for its manufacture of mats and ropes of sea-weed. Its markets are on Tuesday; and its fairs on the 22d of June, August 10th and 21st, September 25th, and November llth. Long. 4►► 27’ W., lat. 53►► 10’ N.

NEW BRANDENBURCH, a well-built town of the north of Germany, in

the grand duchy of Mecklenburgh-Strelitz, containing 5000 inhabitants. It is the seat of a church superintendency, and has manufactures of tobacco, cottons, woollens, and glass. Ten miles south of Trep-tow, and fifty-three west of Stettin.

NEWBURY, a market and post town ot Berks, sixteen miles west ot Reading, and fifty-three from London. It is as old almost as the Conquest. In the reign of Henry VIII. John Winscomb, commonly called Jack of Newbury, a great clothier, kept 100 looms in his house ; and in the expedition to Flodden-field, against the Scots, marched with 100 of his own men, all armed and clothed at his own expense ; and he built all the west part of the church. Mr. Kenric, the son of a clothier here, afterwards a merchant in London, left ––4000 to the town, and ––7500 to Reading, to encourage the woollen manufactory. It still makes a great quantity of shalloons and druggets, but not so much broad cloth as formerly ; yet it is a flourishing town, with spacious streets and a large market-place, in which is the guild-hall. The church is of stone, built about 1640. It has seven sets of alms-houses. In the neighbourhood, on the banks of the Rennet, there is a stratum of petrified wood dug out for firing, where they frequently find trunks of large oaks undecayed, with petrified hazel-nuts, fir-cones, &c., with the bones and horns of stags, antelopes, &c. The Kennet, which abounds with excellent trout, eels, and cray-fish, runs through the town. It was made a corporation by queen Elizabeth, and is governed by a mayor, high steward, aldermen, &c. It sends a great quantity of malt to Lon-NEWCASTLE UPON TYNE.

don, has good inns, and has a charity school for forty boys. Its market is on Thursday.

NEWBURY PORT, a port of entry in Essex county, Massachusetts, United States, on the south side of the Merrimack, three miles from the sea. It contains a court-house, jail, alms-house, and seven churches, for Congregationalists, Presbyterians, Episcopalians, and Baptists. This is the third town in Massachusetts with re-gard to commerce and general consideration. Its trade with the West Indies is considerable, and it has a number of vessels employed in foreign trade. The bank fishery is also now carried on here to a great extent. The Labrador fishery, formerly a lucrative business, has been

discontinued. The town is also well situated for ship-building, and several large vessels have accordingly been built here. The harbour is large, safe, and commodious, but of difficult entrance. The shipping belonging to the port, in 1816, amounted to 24,691 tons. On the south side of the harbour, on Plum Island, are two lights. This island is a place of much resort in the summer season. Newbury Port suffered very severely by fire in 1811, and has yet hardly recovered. Population 7634. Twenty-four miles north of Salem, and thirty-two N. N.E. of Boston.

NEWCASTLE (duke of), in biography. See CAVENDISH.

NEWCASTLE, a handsome town of Ireland, in Limerick, on the road to Kerry, 114 miles from Dublin. Here was a religious house possessed by the knights templars. It is said they used some barbarous customs, which greatly disgusted the Irish, who, watching a favorable opportunity, attacked a number of the knights riding out together, and put them to death : the place is still shown where their remains were interred. Newcastle consists of a large square, where markets and fairs are held ; on the north side stands a market-house, with an assembly room ; on the south side is a church, which is the neatest in the county, finished at the sole expense of lord Courtenay. It stands close to the walls and fortifications of the knights templars, of which one of the castles is fitted up for lord Courtenay's agent.

NEWCASTLE UNDER LINE, a market and borough town of Staffordshire, on a branch of the Trent, fifteen miles north of Stafford, thirty-three S.S. E. of Warrington, and 150 N. N/W. of London. It had a castle, now in ruins ; and is so called from an older castle which formerly stood two miles off, at Chesterton-under-Line. It was incorporated by Henry I., and again by queen Elizabeth and Charles II., and is governed by a mayor, two justices, two bailiffs, and twenty-four common councillors. The cloth trade flourishes here ; but its chief manufactory is hats. The streets are broad and well paved, but most of the buildings low and thatched. The market is on Monday ; fairs on Easter Monday, Whit Monday, July 6th, first Monday in September, and November 6th, for cattle. It has also a ?reat market for beasts every other Monday. The corporation has a court, which holds pleas for actions under ––40. Its castle, of which there is little to be seen now, was built

in the reign of Henry III. It had formerly four churches, now reduced to one, the town having suffered much in the barons' wars. There are

frequent horse-races in the neighbourhood, though it is surrounded with coal-pits, particularly one at Hamley-Green. It is softer than the cannel-coal, and is cut out in slices, but consumes so fast that it is only fit for forges.

NEWCASTLE UPON TYNE, the Roman Gabro-Gentum, the capital of the county of Northumberland, fourteen miles north-west of Durham, ninety-four north of York, sixty east of Carlisle, and 274 north by east of London. It is seated at the end of the Picts wall, on the north side of theTyne, over which it has a stately bridge into the bishopric of Durham, in which its suburb called Gateside is situated ; for the liberties of Newcastle extend no further than the great iron gate upon the bridge, which has the arms of the bishop of Durham carved on the east side, and those of Newcastle on the west.

It is admitted to have been a Roman station, though no evidence of this appears, except at Pandon-gate, whose superstructure is of different workmanship and model from any others of the town. The carppnter's tower is also of Roman original. In the Saxons' time it was called Mou-caster, from the monks here, who all fled when it was depopulated by the Danes ; and afterwards Newcastle, from a castle built here by William the Conqueror's son Robert, in 1080, to defend the country against the Scots, whose kings had this town before the Norman conquest, and somet mes resided in it. Several monasteries and houses were built soon after the castle ; and it was greatly enlarged and enriched by a good trade to the coasts of Germany, and by the sale of its coal to other parts of England ; for which, and other merchandise, it is the great emporium of the north of England, being the largest town in this part, next to York. In the reign of Edward I. it was burnt by the Scots; but a very rich burgher, who was taken prisoner, soon ransomed himself for a sum of money, and began the first fortifications of the place, which he extended from Sandgate to Pampedon, and thence to the Austin friars gate; which the townsmen finished, and encompassed with stout walls, two miles in extent, seven gates, and several casements, bomb-proof. Two other gates were added in modern times, *viz.* Bridgegate and Sandgate. It is a borough at least as ancient as king Richard II., who granted that a sword should be carried before the mayor ; and king Henry VI. made it a town and county incorporate of itself, independent of Northumberland. Henry VII. built a monastery here for the Franciscans ; besides which it had several other religious foundations, which have been converted into companies' halls. In the reign of Henry VIII. this city is said to have exceeded, in the strength and magnificence of its works, all the cities of England, and most places in Europe. It had six monasteries, *viz.* St. Bartholomew's, the Franciscans,

the Domus Fratrum Predicatorum, the St. Austin's, the Domus Fratrum dc Penitentia, and the Domus Fratrum Carmeli Monte.

St. Bartholomew's was founded by Henry I.

for Benedictine nuns ; it was situated in Newgate Street. A back gate leading to it retains the name, together with a garden, which is in a square valley, extending to a place called High-friar-chair. Besides other possessions, not now certainly known, they owned the pleasant village of Stellar, on the southern bank of the Tyne, in the bishopric of Durham ; and it is believed that they had a very large property in Newcastle, consisting in houses and wastes. A plot of ground adjoining to the moor belonged to them, and is still called the Nun moor. The monastery and chapel in Gateshead is said to have been a cell to these nuns, and paid an annual rent of two shillings. St. Mary's hospital in Westgate Street was also dependent upon them. Their annual revenues at the suppression amounted to ––36 10s. The monastery of the Franciscans, Gray Friars, or Friars Minors, was founded in the reign of Henry III. by the Carliols, then wealthy merchants in Newcastle. It was situated near the lane called High-friar-chair, opposite to the Ficket-tower. At its dissolution in the year 1539 it consisted of a warden, eight friars, and two novices. The Domus Fratrum Predicatorum, or the monastery of the preaching or Dominican friars, was founded in honor of St. Dominic by Sir Peter and Sir Nicholas Scot, merchants in Newcastle, on a piece of ground given by three sisters. It appears from its remains to have been a very handsome structure. It consisted of a prior, and twelve brethren, dependent upon Teignmouth ; and their revenue, at the general suppression, was valued at ––2 19$. Qd. It was granted to the corporation of Newcastle, in consideration of their paying ––53 7s. 6d. The priory is still preserved from dilapidations by several companies, who have their halls in it. The monastery of St. Austin was founded by William lord Ross, baron of Wark-upon-Tweed . It was situated in the Manour-chase, formerly called Cowgate. It was a handsome edifice, adorned with cloisters, and had a curious chapel. It was sometimes the residence of the kings of England in the

expeditions against the Scots. After the suppression of religious houses it was for some time made use of by government for a magazine and a storehouse, and was called by the townsmen the artillery-yard. King James I. gave it to a Scotchman, who uncovered it, and sold the lead ; but it was lost at sea before it reached the market : he also sold some of the stones to Sir Peter Riddel, with which he built the south end of his house. Out of the ruins of this structure has since arisen a workhouse for the poor ; a house of correction ; a charity-school for the parish of All-saints, and a dwelling for the mas-ter, erected in the year 1723. Part of the garden that belonged to it is now occupied by the surgeons' hall and two of the town hospitals. The Domus Fratrum de Penitentift Jesu Christi, or the monastery of the brethren of the penance of Jesus Christ, was situated near West Gate by White-friar tower. King Henry III., at the request of Robert Bruce, gave it a piece of ground called Stablegarth. Domus Fratrum Carmeli Monte, or the monastery of white friars, was founded by king Edward I. in honor of the

Virgin Mary, for a prior, seven brethren, and two noviciates ; and on the suppression was valued at ⬜⬜9 lls. 4d. per annum. The Carmelites, or white friars, had also another monastery in this town, situated on the Wall-knowl, and founded, either by Laurentius de Acton, or Roger de Thornton ; the latter, if not the founder, was certainly a great benefactor to it. From its being dedicated to St. Michael, and situated on an eminence, it was called St. Michael's Mount. It was dissolved by Henry VIIL, and its lands vested in the corporation of Newcastle, in whose possession they still remain.

Newcastle had at this time four hospitals, *viz.* that-of St. Mary Magdalen, the Virgin Mary, the Holy Trinity, and the Maison Dieu, or St. Catherine.

The hospital of St. Mary Magdalen was founded by king Henry I. for a master, brethren, and sisters, to receive leprous persons, but alter that distemper had declined it became an asy-lum for the poor of the town, in the time of pestilence. Fourteen persons within the house were each allowed a room, 8s. a month, and coals. Fifteen without the house had a different allowance ; some 8s., some 5s., and some 2s. 6d. a month. In the reign of Edward III. Laurentius de Acton had the first fruits of it, amounting annually to 200 marks. John Bland, who was then master, paid him forty marks for his own right. Bland was a very considerable patron to this hospital ; he built the consistory, and ornamented the chapel, where he was afterwards buried. It stood en the summit of a

hill without Pilgrim Street, and was dissolved by Henry VIII., and incorporated with St. Thomas's. The hospital of the Virgin Mary is supposed to have been founded during the reign of Henry II. by a gentleman of the name of Aselack of Killingworth, who gave, by charter, the ground on which it was built, with other endowments, for the maintenance of two friars and a chaplain, to serve God and the poor; here also the helpless stranger and indigent traveller found refreshment and repose. The inhabitants of Newcastle made an addition to this hospital, for supporting a master and a chaplain, to say divine service to six bede folk in the alms-house, for lodging poor and wayfaring people, and to give sepulture to such as died there ; nine chaldrons of coals were likewise distributed among them. It was abolished by Henry VIII. ; but in the ninth year of the reign of James I. the corporation of Newcastle obtained a charter for it, and converted it into a grammar-school. It is situated in Westgate Street. The hospital of the Holy Trinity was founded by William de Acton, mayor of Newcastle. It stood on the Wall-knowl, and was surrendered to Henry VIIL, but the annual revenues are not mentioned. The hospital of St. Catherine, or the Maison Dieu, was founded by Roger de Thornton, in the reign of Henry IV. It was situated on the south side of the sand hill ; and the chaplain who presided over it had the care of nine poor men and four poor women. In the thirty-fourth ye ir of the reign of Henry VI. the corporation obtained from the founder the use of the hall and kitchen, for the purpose of giving wedding entertain-NEWCASTLE UPON TYNE.

rr.ents to new married people, and where they received the offering and gilts of their friends.

It is governed by a mayor, twelve aldermen, a recorder, sheriff, town-clerk, a clerk of the chambers, two coroners, eight chamberlains, a sword-bearer, a water-bailiff, and seven serjeants. Its situation towards the river is very uneven, being built upon the declivity of a steep hill; but great improvements have of late been made in this part of the town. The castle overlooks the town. That part built by Robert was of great strength, and surrounded by two walls: the square was sixty-two feet by fifty-four, and the walls thirteen feet thick, within which was a chapel. The fortifications are now defaced, and their site crowded with buildings. The Moot Hall is a large ancient structure, probably

coeval with the castle, and situated on the east side of the castle yard ; but it presents nothing to attract particular notice. Its original intention was to assemble the lords and barons of the northern districts, upon any particular emergency in feu-dal times. Here John Baliol, king of Scotland, did homage to king Edward I., 1292; as did Edward Baliol in 1334 to king Edward III.

In 1770 the old bridge was carried away in a flood, and the present was erected about 1775, of nine noble elliptic arches. With the old bridge twenty-two houses were thrown down, and six lives lost. It was originally built of wood ; but having been burnt, in 1248, was rebuilt of stone, of twelve arches, three of which on the north side were closed up, and served for cellars. It was rebuilt about 1450, and crowded with wooden buildings; but near the middle was a tower with an iron gate, used as a prison. A strong building crossed the bridge, which was used as a magazine. On the south front was a statue of king Charles II. The water which destroyed this bridge on November llth, 1771, was upwards of twelve feet above high water mark in spring tides. On destroying the piers of the old bridge to erect the present, from medals found, part of it appears to have existed from the time of the Romans.

About two miles and a half to the east of Newcastle is Carville-house, formerly called Cousin's-house, where the Roman wall terminated in a station, the ruins of which are yet very visible. ' This, no doubt,' says Gough, ' is ihe wall's end, though the village which at present bears that name is half a mile or more off. Mr. Camden takes it for granted that this is the Vindebala of the Notitia, and Vindimora of the Itinerary, supposing these two to be one and the same place, though they are certainly different. But the ancient name of this station was Seged-unum, the first of the stations per lineam valli, where the fourth cohort of the Largi was quartered. The ramparts and ditch may be distinctly traced. There are evident remains of two turrets at the west and east entrance, and a third at the south-west corner. The west entrance has been close to the wall, and the east opposite to it. The fort has been 140 yards, or six chains square, and contained about three half acres. The site of the station of the town is called Well lawes, quasi Wall lawes, and two distinct tumuli remain near the Bee-houses, and VOL. XV.

in the south-west corner of the Wall Close is a heap of ruins, as of buildings or temples. In a wall at Cousin's-house are six inscriptions, with part of an altar and pedestal. Between the station at the end of

the wall of St. Nicholas's church, Newcastle, are three castella visible, the next is lost in the town. Wall's End is a well built village, with a school, and two gentlemen's seats. Mr. Pennant mentions a broken inscription lately found here.'

Newcastle has long had celebrated glass-works (particularly for the finer sorts of glass), superior broad cloth manufactories, and excellent hardware and wrought iron works. That of earthenware is greatly increased, several of the potteries having upwards of 100 persons constantly employed. Ship-building is also carried on to a great extent. Here is also a grindstone manufactory, and chemical works, for white lead, minium, vitriol, and soap.- In the coal trade it is the first port in the world, and exports, to foreign parts and coastwise, upwards of 700,000 chaldrons in a year. Its chief exports, besides coals and lead, are glass, earthenware, grindstones, salt butter, tallow, and salmon. The total number of ships belonging to the port is from 850 to 900, burden about 200,000 tons, and the seamen employed are about 9000. The number of coasters cleared out in 1821 were nearly 10,000, and of foreigners upwards of 1000. Newcastle is a county within itself, and has sent two members to parliament ever since the reign of Edward I., being one of the first boroughs summoned to send representatives. The number of voters is about 3500, and the returning officer is the sheriff. The mayor has a handsome mansion-house, erected in 1692, at the expense of ––6000, in which he resides while in office, and is besides accommodated with a state-coach, a state-barge, and an allowance of ––2000 per annum. Market on Tuesday and Saturday. Fairs, August 12th, which continues till the 22d ; and on the 29th of October, till the 6th of November. St. Nicholas is a vicarage, value ––50 ; patron, the bishop of Carlisle : the other three churches are curacies under the mother church.

The more recent streets in the north and up-per part of the town are of stone, and are level, spacious, and pleasant. The butchers' market is laid out in a very convenient manner. The town contains four churches ; that of St. Nicholas, the mother church, is a large fabric, adorned with nine lofty and highly ornamented spires. To this church there is a valuable library. All-Saints' church is nearly circular, having a high and elegant spire, and the interior very beautifully fitted up. St. Andrew's and St. John's are also neat. St. Anne's chapel, erected in 1768, is an elegant structure. Here are sixteen meeting-houses for dissenters : two Roman Catholic chapels, and one for Quakers. The charitable institutions are numerous and excellent. The most distinguished are the infirmary, lunatic asylum, an hospital for lying-in women, dispensary, fever hospital; and the keelmen's hospital, supported by the keelmen, or coal-workers. The establishments for the

education of children are very numerous ; the most considerable are

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the free grammar-school, national school, and Lancasterian school. Here are also literary, philosophical, medical, and antiquarian societies of great merit. Outside of the Westgate are commodious hot, warm, and vapor baths.

A ?et of elegant assembly rooms have been built by subscription, as well as a neat theatre and riding-house. The Trinity House was erected in 1805; and here are four commercial banks. The new county courts form an elegant oblong, or double square, 144 feet long, and seventy-two feet wide, having two beautiful fronts, and contain two spacious and commodious courts, with rooms for the grand and other juries, &c. In 1822 an act was passed for erecting a common gaol, house of correction, and sessions-house, for the county. The exchange and town-court, erected in 1658, is a noble building, from which the wall of the town runs parallel with the river, leaving an ample piece of ground before it, which forms as spacious and commodious a quay as any in England, to which ships of 300 or 400 tons come up with the tide ; whilst those of greater burden take iu and discharge their cargoes at Shields.

NEWC.OME (William), D.D., late archbishop of Armagh, was a native of Barton-le- Clay, Bedfordshire, and born in 1729. His father, enjoying the vicarage of Abingdon, placed his son at the grammar-school in that town, and afterwards procured him a scholarship at Pembroke College, Oxford. Hence he removed on a fellowship to Hertford College, and, becoming tutor there, ranked among his pupils the late Mr. Fox. He graduated as doctor of divinity in 1 765, when he went to Ireland as chaplain to the lord-lieutenant, the earl of Hertford ; and became successively bishop of Dromore, Ossory, and Waterford, in which latter diocese he presided sixteen years. In 1795 earl Fitzwilliam translated him to the primacy. Archbishop New-come wrote many theological tracts, the principal of which are, A Revision of the English Translation of the New Testament, 8vo. 2 vols. An Attempt towards an improved Version of the Book of Ezekiel ; a similar attempt with respect to the Twelve Minor Prophets ; On the Harmony of the Gospels ; An Historical View of the English Translations of the Bible, 8vo. ; On our Lord's Conduct as a Divine Teacher ; A Review of the chief Difficulties in the Gospel Account of the Resurrection of our Lord ; and on the Duration of our Lord's Ministry, in a letter to Dr. Priestley, printed in 8vo. His death took

place in Dublin in 1800.

NEWEL, n.s. Qu. Sax.}>nol? the top. The compass or space round which a staircase is carried.

Let the stairs to the upper rooms be upon a fair open newel, and finely railed in. Bacon.

NEWEL, in architecture, is the upright post which a pair of winding stairs turn about : this is properly a cylinder of stone, which bears on the ground, and is formed by the end of the steps of the winding stairs.

NEW ENGLAND. See ENGLAND, NEW.

NEW FOREST, an extensive forest of Hampshire, many miles in compass, which had many populous towns and villages, and thirty-six

churches, till it was destroyed and turned into a forest by William the Conqueror. It is remarkable that William II., the son of this tyrant, was killed in this forest at a hunting match. As this large tract lay many ages open and exposed to invasion from foreigners, Henry VIII. built some castles in it ; and it has now several pretty towns and villages. It is situated in that part of Hampshire which is bounded on the east by the Southampton, and on the south by the British Channel. It is advantageously situated with respect to water carriage and nearness to the dock-yards, beyond every other forest, having several ports and places of shelter near it, for shipping timber, particularly Lymington, only two miles distant, Bewley about half a mile, and Redbridge three or four miles ; and the navigation to Portsmouth, the most considerable dock-yard in England, is only thirty miles from the nearest of these places. This is the only forest belonging to the crown of which the origin is known. Domesday book contains the most distinct account of its afforestation by William I., the contents of every field, farm, or estate afforested, in hides, carrucates, or vjrgates, by which the extent of land was then computed ; together with the names of the hundreds and villages, and of the former proprietors, who were for the most part Saxons, the rent or yearly value of each possession, and the tax which had been paid for it to the crown during the reign of Ed-ward the Confessor, before the inhabitants were expelled, and that part of the country laid waste, are all to be found in that most curious and venerable record. The names of many of the places having been changed since that time, it is difficult to ascertain with precision

what were then the limits of the forest. The oldest perambulation is among the pleas of the forest, in the eighth year of Edward I., preserved in the chapter-house at Westminster. The boundaries there described include all the country from Southampton on the east to the Avon on the west following the sea-coast as far as the south boundary between those rivers, and extending north as far as North Chadeford, on the west, and to Wade and Orebrugg, or Owerbridge, on the east ; and the greatest part, if not the whole, of that extensive district, is mentioned in Domesday book to be the forest belonging to the crown. Another peramb'ulation was however made in the twenty-ninth of the same king, which leaves out a great part of country contained within the former. This perambulation, which is preserved in the Tower of London, confines the forest to limits which appear to have been followed in the twenty-second of Charles II., when the forest was again perambulated. By the charta de foresta, all lands not belonging to the crown, which had been afforested by Henry II., Richard I., or king John, were to be disforested. The perambulation of Charles II. in 1583, is the last on record : it contains the legal bounds of the forest, and was given to the surveyors as their guide, in taking the plan which they made. From that plan, with the approbation of the lords commissioners of his majesty's treasury, an engraving was made. The whole, however, is not forest land, or now the property of the crown : there

are several manors, and oilier considerable free-nold estates, within the perambulation, belonging to individuals. To perpetuate the spot where William Rufus was killed, a triangular stone was erected in 1745. King George III. visited Uiis spot in 1789. In August 1782 a curious ancient golden cross was found here by a laboring man digging turf. It weighed above an ounce of gold, and had on one side an engraving of our Saviour, and on the other the ladder, spear, nails, and other emblems of his sufferings.

NEWFOUNDLAND, an important island of the gulf of St. Lawrence, separated from Labrador on the north by the strait of Belle Isle, six

leagues wide. Newfoundland is eighty leagues long, and upwards of sixty broad; it is hilly, but not mountainous, and has some considerable rivers. The island throughout is rocky and barren, naturally producing only small firs, birch, and other plants, that thrive in cold and barren countries. The winters are besides so long, not breaking up till May, that oats is the only corn that ripens. The climate is also extremely disagreeable, from constant fogs and storms of sloet und snow. The interior of the island has never been explored, but from the accounts of the natives it is mountainous and covered with wood. The coasts are indented by a vast number of excellent bays and harbours, very few of which are ever visited even by the fishermen. The sole utility of this island to Great Britain is its serving as a rendezvous for the vessels employed in the fishery on the neighbouring banks. The whole number of stationary European inhabitants of the island does not exceed 1000 families : but a few miserable Esquimaux families also visit the island from the neighbouring coast of Labrador, and remain on it for a part of the year.

They are not without horned cattle ; but they are preserved with great difficulty; the inhabitants have also kitchen gardens for summer herbs; but all other species of provisions, as fi'>ur, salt meat, &c., are supplied from England and America. Most of the goods of other kinds are also brought from England.

The value of exports from Great Britain to Newfoundland is between ––300,000 and ––400,000 a-year, entirely in provisions, clothing, fishing tackle, and salt. In the spring a squadron, composed of a fifty gun ship, a frigate, and one or two sloops, is sent from England to protect the fishery ; and the admiral commanding the squadron is governor of the island for the time being. The lieutenant-governor's office is permanent.

St. John's, the chief place of the island, is on the east side, and on the shore of a fine basin, whose entrance is only 500 yards wide, between high rocky shores, and strongly fortified. The town is a poor place, the houses being mean and the streets narrow and filthy. Fort Townsend, on an elevation, contains the government house, magazines, and barracks. The other places of the island worthy of notice are, on the east coast, from north to south, the bay of Exploits, or New Perlican, a capacious harbour. Ragged Harbour, in Catalonia Bay, named from the craggy islands in it. Trinity Bay, a gulf, with many harbours and coves fit for the largest fleets. South of St.

John's is the bay of Bulls. Cape Race is the southeast point of the island.

On the south coast are Trepassy Bay, a deep and secure harbour. St. Mary's Bay has some good fishing banks within it. Placentia Bay, twenty leagues deep and sixteen wide, is a great gulf, with several harbours. That of Placentia, on the east shore, is one of the chief drying places of the fishermen, and has a fixed establishment, defended by a fort. Between Placentia and cape Raye, the south-west point of the island, are the bays of Fortune and Despair, little frequented.

The banks of Newfoundland consist of one great and some smaller ones, extending from the latitude 40►► to 45►►. The depth is very irregxilar, from fifteen to sixty fathoms. The bank is entirely of sand, its edges perpendicular, and on the east is a great gulf, or concavity, called the ditch. The winds are generally moderate, and the water smooth on the bank, however hard it may blow beyond its limits ; but the atmosphere is obscured by an almost perpetual fog, both of which circumstances seem to arise from the same cause, the strong evaporation over the bank, which, while it produces a fog, also cools the atmosphere beyond that over the open sea, and consequently the air from the latter is not attracted towards the former. The quantum of evaporation being in proportion to the extent of surface and depth of the evaporating mass, it follows that this quantum will be greater over banks than over the deep sea, and the atmosphere consequently colder; and this last consequence is proved by the repeated observation that the coming from the deep sea into soundings, or on a bank, is denoted by a sudden fall of the thermometer of from 3►► to 5►►. Mr. Pennant, in his Arctic Zoology, says, there is always a great swell on the banks The fact is, however, that on the edges of the bank there is usually a hollow sea, caused by the polar current on the north, and the gulf stream on the south, striking with velocity against the perpendicular edges of the bank. At a smalt distance within these edges, on the contrary, the water is so smooth that it is usual for vessels on the bank fishing to enquire of those from sea what kind of weather it is abroad, that is, before their arrival on the bank.

These banks are the grand rendezvous of the great cod (padus morhua) which arrive in the month of July in vast shoals. In August they become scarce, in consequence of the departure of the herrings and capelings, on which they feed ; and also from the arrival of the sharks, which drive all other fish away. In September the cod re-appear, and continue till the middle of October, when the fishing season terminates. The fish are either cured wet or preen, or dry. In

the first case they are salted on board the vessels as they are taken, and brought to Europe without touching at Newfoundland. The vessels intended to bring home dried fish go into some port of the island, where stages are erected on the shore, on which the fish are placed to dry, after cutting off the head, emptying them, taking out the back bone, and strongly salting them. The livers of the cod afford a large quantity of train oil, which is procured by sir:p!y exposing

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elegant Congregational churches of brick, and a gothic episcopal church. The public square, and many of the streets, are finely ornamented with rows of trees, which give the town a rural appearance. The city also contains Methodist meeting-houses, an alms-house, jail, museum, two insurance-offices, two banks, an academy, a public library, and brass-foundry, and has manufactures of cotton, paper, &c. In the town of Hamden, just out of the limits of New-Haven, there is an extensive gun manufactory. The burying-ground is here laid out in squares, and prettily ornamented with tows of trees. On the whole this is one of

the most pleasant and agreable towns in the United States. The streets are sandy, but kept clean : the houses mostly of wood, and have a remarkable appearance of neatness ; and the harbour, though inferior to that of New London, has good anchorage ; and the want of sufficient depth of water has been in a measure remedied by the construction of a noble wharf. The trade is principally with New York and the West Indies. Four weekly newspapers are published in this city. About three miles west within the township there is another parish called West-Haven, with a Congregational meeting-house, and an episcopal church. The college established here, one of the most flourishing of the United States, was founded in 1 700, at Killingworth, and afterwards removed to New-Haven.

NEW HOLLAND. See HOLLAND, NEW.

NEW JERSEY. See JERSEY, NEW.

NEW MARK, the former name of that part of the margraviate of Brandenburg that lay to the east of the Oder, containing an area of 4370 square miles, with 310,000 inhabitants. In 1815, on the new arrangement of the Prussian states, the chief part of it was included in the government of Frankfort on the Oder, and a smaller part annexed to that of Coeslin, Pomerauia.

NEWMARKET, a town of England, in Cambridgeshire, fourteen miles east of Cambridge, thirteen from St. Edmondsbury, and sixty-one north-east of London ; with one long street, the north side in Suffolk, the south side in Cambridgeshire. It is a healthy place, and a great thoroughfare in the road from London to Norfolk; but is principally eminent for the horse-races every year in April and October, the finest course in England being that of Newmarket, on which there is a house for the king when he comes to the races, which was built by Charles

II. The king gives a plate or two every year, besides those given by the nobility. It has a chapel of ease to the mother church at Ditton; and another in the Suffolk side which is parochial. The town was burnt in 1683, but soon rebuilt. It has two charity schools, one for twenty boys, another for twenty girls, supported by ––50 a year, first settled by queen Anne. It has markets on Tuesday.

NEWMARKET, a township of the United States, in Rockingham county, New Hampshire. ––– 2. A township of Dorchester county, Maryland. ––– 3. Of Frederick county, Maryland. ––– 4. A township of Shenandoah county. ––– 5. Of King and Queen county. ––– 6. Of Spotsylvania county. ––– 7. Of Prince William county. ––– 8. Of Amherst county, Virginia. ––– 9. A township of Bertie county, North Carolina. ––– 10. Of Highland county, Ohio. ––– 11. Of Geauga county, Ohio.

NEWPORT, a town of Cornwall, north of Launceston, with which it was formerly joined, and 214 miles west by south of London. It was a borough, but disfranchised in 1832.

NEWPORT, a large borough of Hampshire, in the isle of Wight, governed by a mayor and burgesses, who send two members to parliament. It has markets on Wednesday and Saturday. In 1648 a treaty was entered into at this town between king Charles I. and the

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commissioners from the parliament. The town Delaware. ††† 8. A township of Charles county, is well built; the market-house, above which is Maryland. ††† 9. A township of Wood county, a town-hall, is an ancient building ; and there is Virginia, on the Ohio. ††† 10. A township of

a neat theatre. This town consists of three parallel streets, which are crossed by three others, thus forming three large squares, which contain the cattle, corn, and poultry markets. It is

Washington county, Ohio. ††† 11. A township and capital of Cocke county, Tennessee.††† 12. A township of Liberty county, Georgia. NEWPORT, a township of the United States,

seated on the Cowes, which is navigable for the capital of Campbell county, Kentucky, on

small vessels ; six miles south of Cowes, seven-the Ohio, opposite Cincinnati, just above the

teen of Southampton, and ninety-one south-west entrance of the Licking. It is situated on an

of London. elevated plain, and contains a court-house, a

NEWPORT, a market town of Monmouthshire, jail, a market-house, &c.

on the Usk, over which it has a handsome bridge, NEWPORT, a river of the United States, in four miles above its mouth ; with a good harbour, North Carolina, which runs into the Atlantic, and a market on Saturday. Over the river a Long. 77†† W., lat. 34†† 43’ N. fine stone bridge of five arches was built by Mr. NEWPORT PAGNEL, a market-town of Bucks. David Edwards, son of the architect wjio built An hospital was founded here by Anne, queen the far-famed bridge of Pont-y-Prydd. Its trade of James I., for three men aud three women, of

has been much benefited by the canal, which which the vicar of the town is master. The Pres-conveys to this town, for exportation, coal, and byterians and Baptists have places of worship bar, and cast-iron, the produce of the foundries here. The town is surrounded with excellent in the western mountains. The canal consists of corn and pasture land. The manufacture of two branches, the one called the Crumlin, and thread lace, and that of paper, form the chief the other Pont-y-Pool branch, from the places branches of employment here. In the neigh-where they commence : they both unite in the bourhood of this town lived Cowper, the poet, plain of Malpas, one mile distant from the town, who died in April, 1800. Market on Saturday Near the bridge stands the shell of the castle, a for corn and provisions, and a lace-market on small but massive structure, supposed to have Wednesday : the latter not so considerable as it been erected by an earl of Gloucester and Here-used to be. Famous for its manufactures of ford, in the reign of Henry I. It is nineteen laces : fourteen miles E. N. E. of Buckingham, miles south-west of Monmouth, and 152 west by fifteen S.S.E. of Northampton, and fifty-one

north of London.

N.N.W. of London.

NEWPORT, a market and sea-port town of NEW RIVER, a fine artificial river of London, South Wales in Pembrokeshire, at the foot of a brought from two springs at Chadwell and Am-hill, near the coast; with a handsome church, an well, near Ware, in Herts, to supply the metro-ancient castle, and a market on Saturday. It is polis with water. See AMWELL. It was corn-governed by a mayor, twelve aldermen, a pleted in 1613, bv Sir Hugh Middleton, who recorder, &c. It is pleasantly seated at the foot spent his fortune on this patriotic work. See of a hill, but is an ill-built place, with a hand-MIDDLETON. This river, with its various wind-some church, and the ruins of a castle. The ings, is thirty-eight miles three-quarters, and six-Nevern, a fine navigable river, runs by the end teen poles long. It is under the management of of the town, and empties itself into the Bristol a corporation called the New River Company, channel; near it are a number of Druidical which is one of the most flourishing in London, altars; one of which is upwards of nine feet in See ISLINGTON. Where

the New River passes diameter, and of the shape of a mushroom ; and the deep slope or bank of Amwell hill, and seems within two miles of town the road passes close to an ample pool of water, there is a little isle, on

the remains of several others.

which Mr. Mylne has reared a monument to

NEWPORT, a sea-port of Newport county, the virtues of Sir Hugh Middleton. Rhode Island, United States, on the south-west NEWRY, a considerable sea-port town of

end of Rhode Island. It lies north and south, Ireland, in Down county, on the side of a hill,

upon a gradual ascent east from the water, and at the foot of which runs the Newry; over which

looks beautifully from the harbour and the it has two stone bridges, and a third over a navi—

neighbouring hills. Here is a state-house, jail, gable canal, by which it communicates with

public library, and eleven churches for the dif-Lough Neagh, and Carlingford Bay. In 1689 it

ferent sects. The harbour, which is defended by was burnt by the duke of Berwick. It is of late

three forts, spreads westward before the town, much improved. It is thirty-three miles S.S.W.

and is one of the finest and safest in the world, of Belfast, and forty-nine north of Dublin, and

The shipping owned here in 1816 amounted to sends one member to Parliament. 11,383 tons. Population 10,000. Fifty-five NEWSPAPERS, periodical journals of general

miles east by north from New London, and occurrence, first published in England by the

thirty south by east of Providence. celebrated Sir Roger L'Estrange in 1663. This

NEWPORT, a township of the United States, in paper he styled the Public Intelligencer, but Cheshire county, New Hampshire. ††† 2. A town-gave it up on the publication of the first London ship of Kennebeck county, Maine. ††† 3. A town-Gazette. Newspapers and pamphlets were pro-ship of Herkimer county, New York. ††† 4. A hibited by royal proclamation in 1680. Though township of Cumberland county, New Jersey. ††† at the revolution prohibitions of this kind wen* 5. A township of Luzerne county, Pennsylva-done away, and the press set at liberty, yet news-nia. ††† 6. A township of Indiana county, Penn-papers were afterwards made objects of taxation, sylvania. ††† 7. A township of Newcastle county, and for this cause were first stamped in 1713.

NEWT, n. s. Sax. epete. Supposed by Skinner to be contracted from an evet. An eft ; a small lizard: appropriated some to the land, and some to water.

O thou ! whose self same mettle, Whereof thy proud child, arrogant man, is puft, Engenders the black toad, and adder blue, The gilded newt, and eyeless vcnomed worm.

ShaJupeare. Newts and blind worms do no wrong ;

Come not near our fairy queen. Id.

Such humidity is observed in newts and water-lizards, especially if their ski us be perforated or pricked. Browne.

NEWTON (Sir Isaac), one of the greatest philosophers and mathematicians the world has ever produced, was the only child of

Mr. John Newton of Colesworth, near Giantham in Lincolnshire, who had an estate of about ––120 a year, where Isaac was born on Christmas day 1642. His father dying when he was young, his mother's brother, a clergyman, Mr. Ayscough, who lived near her, and directed her affairs, put her son to school at Grantham. When he had finished his school education, his mother took him home, intending that he should occupy his own estate. But his uncle happening to find him in a hay-loft at Grantham working a mathematical problem, and having otherwise observed the boy's mind to be uncommonly bent upon learning, he prevailed upon her to send him to Trinity College, Cambridge, where he himself had many friends. Here he was soon taken notice of by Dr. Isaac Barrow, who, observing his genius, contracted a great friendship for him. Fontenelle tells us, ' That in learning mathematics he did not study Euclid, who seemed to him too plain and simple, and unworthy of taking up his time. He understood him almost before he read him ; and a cast of his eye upon the contents of his theorems was sufficient to make him master of them. He advanced at once to the geometry of Descartes, Kepler's Optics, Sec. It is certain that he had made his great discoveries in geometry, and laid the foundation of his two famous works, the Principia and the Optics, by the time he was twenty-four years of age.' In 1664 he took the degree of A. B., and in 1668 that of A.M., being elected the year before, fellow. He had before this time discovered the method of fluxions ; and in 1669 he was chosen professor of mathematics in the university of Cambridge, upon the resignation of Dr. Barrow. In 1669 ––– 1671 he read a course of optical lectures in Latin in the public schools of the university ; an English translation of which was printed in London in 1728, in Svo., as was the Latin original, in 1729, in 4to. From 1671 to-1679 he held a correspondence with Mr. Henry Oldenburg, secretary of the royal society, and Mr. John Collins, F. R. S. These letters contain a variety of curious observations. Respecting the origin of his discoveries, we are told, that as he sat alone in a garden, the falling of some apples from a tree led him into a speculation on the power of gravity ; that, as this power is not diminished at the remotest distance from the centre of the earth to which we can rise, it appeared to him reasonable to conclude th.it it must extend much farther than

was usually thought; and pursuing this speculation, by comparing the periods of the several planets with their distances from the sun, he found, that, if any power like gravity held them in their courses, its strength must decrease in the duplicate proportion of the increase of distance. This enquiry gave rise to his writing the treatise which he

published in 1687, under the name of Mathematical Principles of Natural Philosophy; and this year the university of Cambridge being attacked by king James II., Mr. Newton was one of its most zealous defenders, and was nominated one of the delegates of that university to the high commission court; in 1 688 he was chosen one of their members for the convention parliament, in which he sat till it was dissolved. In 1696 Mr. Montague, then chancellor of the exchequer, and afterwards earl of Halifax, obtained for him of king William the office of warden of the mint ; in which employment he was of signal service when the money was called in to be recoined. Three years after he was apppointed master of the mint ; a place of considerable profit, which he held till his death. In 1699 he was elected a member of the royal academy of sciences at Paris. In 1701 he was a second time chosen M. P. for the university of Cambridge. In 1704 he published his Optics; which maybe considered as a science for which the world is entirely indebted to our author. In 1705 he was knighted by queen Anne. In 1707 he published his Arithmetica Universalis. In 1711 his Analysis per Quantitatum Series, Fluxiones et Differentias, &c., was published by William Jones, esq. In 1712 several of his letters were published in the Commercium Epistolicum. In the reign of George I. he was better known at court than before. The princess of Wales (afterwards queer Caroline), often proposed questions to him, and declared that she thought herself happy to live at the same time with him, and have the pleasure of his conversation. He had written a treatise on ancient chronology, which he did not think of publishing ; but the princess desired an abstract, which she would never part with. However a copy of it stole abroad, and was carried into France; where it was translated and printed,, with some observations which were afterwards answered by Sir Isaac. But in 1728 the Chronology itself was published at London in 4to., and was attacked by several persons, and as zealously defended by Sir Isaac's friends. The main design of it was to discover, from some tracts of the ancient Greek astronomy, what was the position of the colures with respect to the fixed stais, in the time of Chiron the centaur. As it is now known that these stars have a motion in longitude of one degree in seventy-two years, if it is once known through what fixed stars the colure passed in Chiron's time, by taking the distance of these stars from those through which it now passes, we might determine what number of years has elapsed since Chiron's time : Chiron being one of the Argonauts, this would fix the time of that famous expedition, and consequently that of the Trojan war; the two great events upon which all the ancient Grecian chronology depends. Sir Isaac places them 500 years nearer

the Wrth of Christ than other chronologers usually do. This great man had all along enjoyed a settled and equal state of health to the age of eighty, when he began to be afflicted with an incontinence of urine. However, for the five following years he had great intervals of ease, which he procured by the observance of a strict regimen. It was then believed that he had the stone ; and, when the paroxysms were so violent that large drops of sweat ran down his face, he is said never to have expressed the smallest degree of impatience ; but, as soon as he had a moment's ease, would smile and talk with his usual cheerfulness. Till then he always read and wrote several hours a day. He had the perfect use of his senses and understanding till the day before he died, which was on the 20th of March 1726-7, in the eighty-fifth year of his age. He lay in stale in the Jerusalem chamber at Westminster, and on the 28th of March his body was conveyed into Westminster Abbey : the pall being supported by the lord chancellor, the dukes of Montrose and Roxburg, and the earls of Pembroke, Sussex, and Macclesfield. The bishop of Rochester read the funeral service. The corpse was interred at the entrance into the choir, where a noble monument is erected to his memory. Sir Isaac was of a middling stature, and, in the latter part of his life, somewhat inclined to corpulence. His countenance was pleasing, yet venerable. He never used spectacles, and lost but one tooth during his whole life. His temper was so equal and mild that no accident could disturb it. It is related that having had a favorite little dog called Diamond, Sir Isaac being one day called out of his study, Diamond was left behind. When he returned he found that, Diamond having thrown down a lighted candle among some papers, the labor of many years was in flames. This loss, as Sir Isaac was then far advanced in years, was irretrievable ; yet he only said, ' Oh ! Diamond ! Diamond ! thou little knowest the mischief thou hast done !' When he had any mathematical problems in hand he could not be induced to quit them until solved. Dinner has been often three hours ready for him before he could be brought to table : and his man said that, when he has been getting up in a morning, he has sometimes begun to dress, and remained for hours abstracted before he got all his clothes on. When some objections, hastily made, to his discoveries concerning light and colors, induced him to lay aside his design of publishing his optic

lectures, he blamed his own imprudence for parting with so real a blessing as quiet to run after a shadow, and resolved not to publish any more about lhat theorytill he had put it above the reach of controversy. In the same temper, after he had sent the MS. of his Principia to the Royal Society, with his consent to the printing of it by them, upon Mr. Hook's injuriously insisting that he had demonstrated Kepler's problem before our author, he determined, rather than be involved again in a controversy, to suppress the third book, and was very hardly prevailed upon to alter that resolution. The amiable quality of modesty stands foremost in the character of this great man. It was in reality greater than can be easily imagined ; yet it always continued without alteration, though the whole world, says Fontenelle, conspired against it; and though he was thereby robbed of his invention of fluxions. Nicholas Mercator, publishing his Logarithmotechnia in 1668, gave the quadrature of the hyperbola by an infinite series, which was the first appearance in the learned world of a series of this sort drawn from the particular nature of the curve, and that in a manner very new and abstracted ; but Dr. Barrow, then at Cambridge with Newton (at that time about twenty-six years of age), recollected that he had met with the same thing in his writings, not confined to the hyperbola only, but extended, by general forms, to all sorts of curves ; to their quadratures, their rectifications, and their centres of gravity ; to the solids formed by their relations, and to the superficies of those solids ; so that, when their determinations were possible, the series stopped at a certain point, or at least their sums were given by stated rules : and, if the absolute determinations were impossible, they could yet be infinitely approximated. To be master of so fruitful and general a theory was a mine of gold to a geometrician; but it was a greater glory to have been the discoverer of so ingenious a system. Newton, however, finding by Mercator's books that he was in the way to it, and that others might follow in his track, instead of asserting his original claim to the discovery, contented himself with the treasure he had found, without regarding the glory. His MS. upon iunnite series was communicated to none but Mr. John Collins and lord Brounker ; and even that had not been complied with but for the pressing applications of Dr. Barrow. In a word he talked little either of himself or others, nor ever behaved in such a manner as to give the most malicious censurers the least occasion to suspect him of vanity. He was candid and affable ; always put himself upon a level with his company, and never thought either his merit or his reputation sufficient to excuse him from any of the common offices of social life. Though firmly attached to the church of England, he was averse to the persecution of the nonconformists. In his opinion the true schismatics were the vicious and the wicked. He was thoroughly persuaded of the

truth of revelation ; and studied the Bible with the greatest application. As instances of his bounty and generosity we may mention his voluntary allowance to Mr. M'Laurin, professor of mathematics at Edinburgh, of ––20 a year; and the settlement of ––100 a year on his niece Barton. When decency upon any occasion required expense and show, he was magnificent with a good grace : at all other times appearances were studiously retrenched. He never married : it has been reported that he once made love to a young lady, daughter of a neighbouring gentleman ; but when the marriage day was fixed, and the company convened, Sir Isaac, being deeply immersed in study, forgot the appointment, and the lady would never more hear of him. He left ––32,000 at his death ; but made no will. It became therefore the property of his legal heirs, the descendants of his sister, Mrs. Conduit. Hume says, ' In Newton this island may boast of having produced the greatest and

rarest genius that ever arose for the ornament and instruction of the species in philosophical, astronomical, and mathematical knowledge ; cautious in admitting no principles but such as were founded on experiment, but resolute to adopt every such principle, however new or unusual ; from modesty ignorant of his superiority above the rest of mankind, and thence less careful to accommodate his reasonings to common apprehensions ; more anxious to merit than acquire fame. He was, from these causes, long unknown to the world ; but his reputation at last broke out with a lustre which scarcely any writer before his time ever attained. While Newton seemed to draw off the veil from the mysteries of nature, he showed at the same time the imperfections of the mechanical philosophy, and thereby restored her ultimate secrets from that obscurity in which they had before lain, and in –––which, without his assistance, they would probably ever have remained.' Sir Isaac left a mass of MSS. philosophical, mathematical, and theological, which, after his death, were examined by a committee of the Royal Society ; but none were printed except his Observations upon the Prophecies of Daniel and the Apocalypse, which appeared in 1733, 4to. ' It is astonishing,' observes Dr. Charles

Hutton, ‘ what care and industry Newton employed about the papers relating to chronology, church history, &c., as on examining them it appears that many are copies over and over again, often with little or no variation ; the whole number being upwards of 4000 sheets in folio, or eight reams of foolscap paper, besides the bound books, of which the number of sheets is not mentioned.’ The most accurate edition of his Principia is that of fathers le Seur and Jacquier, 4 vols. 4to., 1739 ; his Opuscula Mathematica, Philosophica, et Philolo-gica, were published by Castillion, Laus. 1744, 3 vols. 4to. ; and his Arithmetica Universalis, with a commentary by the same editor, Amsterdam, 1761, 2 vols. 4to. His works were republished by Dr. S. Horsley, London, 1779, 5 vols. 4to. ; an English translation of the Principia is extant, by Motte.

NEWTON (John), D. D.,an eminent divine and mathematician, born at Oundle, in Northamptonshire, in 1622. From school he was sent to Ox-ford in 1637, and took his degree of B. A. in 1641 ; of M. A. in 1642 ; and of D. D. in 1661, when he was appointed a king’s chaplain, and rector of Ross, in Herefordshire, where he died, December 25th, 1678. He wrote many useful works, particularly 1. Astronomia Britannica, 1656, 4to. 2. Help to Calculation, 1657, 4to. 3. Trigonometria Britannica, in two books, one translated from Gellibrand, the other his own ; 1658, folio. 4. Chiliades centum Logarithmorum, 1659, and 1667. 5. Geometrical Trigonometry, 1659. 6. Mathematical Elements, 1660, 4to. 7. A Perpetual Diary, 1662. 8. Use of the Carpenter’s Rule, 1667. 9. Ephemerides, 1667. 10. Rule of Interest, 1668. 11. Practical Gauging, &c., 1669. 12 ►►► 15. Introductions to Rhetoric, Arithmetic, Astronomy, and Geography; 8vo. 1671, 1678. 16. Cosmography,

1678.

NEWTON (Richard), D. D., the founder of

Hertford College, an eminent clergyman, of whose origin no satisfactory account is recorded. By one writer he is said to have been a Northamptonshire gentleman ; by another we are told that his father enjoyed, at Lavendon Grang►►, in Bucks, a moderate estate, which is still in the fa-mily, though he lived in a house of lord Northampton’s, in Yardley-Chase, where, in 1765, our doctor was born. Richard was educated in Westminster school, and from that foundation elected to a

studentship of Christ-church, Ox-ford. In the list of graduates he is thus distinguished : ‘ Newton (Richard), Christ church, M. A. April 12th 1701 ; B. D. March 18th 1707; Hart-hall, D. D. December 7th 1710.’ He was appointed a tutor in Christ-church, and discharged the duties of that important office with honor to nimself and advantage to the society of which he was a member. From Oxford he was called into lord Pelham’s family to superintend the education of the duke of Newcastle and his brother Mr. Pelham ; and by both these illustrious persons he was ever remembered with the most affectionate regard. In 1710 he was, by Dr. Aldrich, inducted principal of Hart-hall, which was then an appendage to Exeter College. From this state of dependence Dr. Newton wrested it against much opposition, especially from the learned Dr. Conybeare, afterwards bishop of Bristol. In no contest were ever two men more equally matched ; and the papers that passed between them, like Junius’s letters, deserve to be collected for the energetic beauty of their style, and the ingenuity of their arguments. Dr. New-ton, however, proved successful; and in 1740 obtained a charter, converting Hart-hall into Hertford College : of which, at a considerable expense to himself, and with great aid from his numerous friends, he was thus the founder and first head. Though this excellent man was Mr. Pelham’s tutor, he never received the smallest preferment from his pupil when first minister. But Dr. Compton, bishop of London, who had a just sense of his merits, had, at an early period of his life, collated him to the rectory of Sudbo-rough, in Northamptonshire, which he held together with the headship of Hart-hall. He resided for some years on that living, and discharged all the parts of his office with exemplary care and fidelity. k Being an enemy to pluralities, he requested leave of Dr. Gibson, bishop of London, to resign his rectory in favor of his curate. But, the bishop being under an engagement to confer the living on another, Dr. Newton retained it, but bestowed all the emoluments upon works of charity, and on his curates who faithfully discharged their duty. Dr. Sherlock, who succeeded Gibson, granted Dr. Newton’s request, by accepting his resignation, and collating to the rectory Mr. Saunders, who was the last of his curates. Newton was afterwards promoted to a canonry of Christ-church, but did not long enjoy it; for he died in April 1753, in the seventy-eighth year of his age. Of his works his Theophrastus was published after his death ; and his Pluralities Indefensible ; but he published several other pieces during his life, and left a volume of sermons prepared for the press.

NEWTON (Thomas), D.D., bishon of Bristol,

was born January 1st, 1704. His father, John Newton, was a considerable brandy and cyder merchant, who, by industry and integrity, having acquired a competent fortune, left off trade several years before he died. He received the first part of his education in the free-school of Litchfield, whence he was removed to Westminster school, in 1717, under the care of Dr. Freind and Dr. Nicoll. While he was at Westminster he became acquainted with William Murray, afterwards earl of Mansfield, with whom he lived on terms of the closest friendship till the last. He continued six years at Westminster school, and afterwards went to Trinity College, Cambridge, where he resided eight months yearly, till he had taken his degree of A. B. Being chosen fellow, he came afterwards to settle in London, and was ordained deacon in December 1729, and priest in February 1730, by bishop Gibson. He was first curate at St. George's, Hanover Square ; and continued for several years assistant to Dr. Trebeck. His first preferment was that of reader and preacher at Gros-venor Chapel, in South Audley Street. This introduced him to the family of lord Tyrconnel, to whose son he became tutor. He continued in this situation for many years, on terms of great intimacy and friendship with lord and lady Tyrconnel. In spring 1744 he was, through the interest of the earl of Bath, his great friend and patron, presented to the rectory of St. Mary-le- bow. At the commencement of 1745 he took his degree of D. D. In spring 1747 he was chosen lecturer of St. George's, Hanover Square. In August 1747 he married the eldest daughter of Dr. Trebeck, with whom he lived very happily for about seven years. In 1749 he published his edition of Milton's Paradise Lost, with notes, which, in 1775, had gone through eight editions. In 1754 he lost his father, at the age of eighty-three ; and within a few days his wife, at the age of thirty-eight. At that time he was, fortunately, engaged in writing his Dissertations on the Prophecies; for in any affliction he never found a more effectual remedy than plunging deep into study, and fixing his thoughts intensely upon other subjects. The first volume was published the following winter; but the other did not ap-pear till three years afterwards ; and as a reward for his past, and an incitement to future labors, he was appointed to preach Boyle's lecture : 1250 copies of the Dissertation were taken at the first impression, and 1000 at every other edition: and, after having

gone through six editions in English, they were translated into the German and Danish languages : and received the warmest encomiums from persons of learning and eminence. In spring 1757 he was made prebendary of Westminster and dean of Salisbury ; and in October subalmoner to his majesty. He married in September 1761 the widow of the Rev. Mr. Hand, and daughter of John lord viscount Lisburn. In the same month he was appointed bishop of

Bristol. In winter 1764 Dr. Stone, the primate of Ireland, dying, Mr. Gran ville sent for Newton, and offered him the primacy, but he declined it. In 1768 he was made dean of St. Paul's. From this time till his death his health declined. On Saturday, the 9th of February, 1782, he found his breath much affected by the frost; and on Thursday the 14th he died without a sigh. Of his numerous works his Dissertations on the Prophecies are by much the most valuable. His learning was very considerable, and he was the first dignitary of the church of England who avowed his belief of the final restitution of all things to harmony and happiness.

NEWTON (Rev. John), a late exemplary divine, born in London in 1725, was bred to the sea under his father, who was master of a merchant-man. Afterwards he sailed in the Guinea trade, and led an irregular life for some years ; but at last grew both serious and studious. Quitting his connexion with the African coast in disgust, he became a tide waiter at Liverpool ; preached occasionally amongst the Dissenters ; and for some time endeavoured to procure a pastoral settlement among them. At length however, having by great diligence attained a knowledge of the Latin and Greek languages, he was, in 1764, ordained on the curacy of Olney, in Buckinghamshire, where he became acquainted with the poet Cowper, and Mr. Thornton the banker; the latter of whom presented him, in 1779, to the living of St. Mary Woolnoth, Lombard Street. He died in 1807. His works are, 1. A Narrative of his own Life, 12mo. 2. A Review of Ecclesiastical History, 8vo. 3. Olney Hymns, in which are some by his friend Cowper. 4. Omicron's Letters on Religious Subjects. 5. Cardiphonia, or the Utterance of the Heart, 2 vols. 6. The Messiah, a Series of Sermons, 2 vols.

NEWTON, a township of the United States, Middlesex county, Massachusetts, on the river Charles, nine miles west of Boston. Population 1709. ††† 2. A township of Delaware county, Pennsylvania. ††† 3. A township of Cumberland county, Pennsylvania. ††† 4. A township of Licking county, Ohio. ††† 5.

A township of Miami county, Ohio. ††† 6. A township of Muskingum county, Ohio. ††† 7. A township of Ttumbull county, Ohio.

NEWTON UPON AYR, a sea-port town, and burgh of barony, on the Ayr. It has a harbour for vessels under 140 tons, and a lighthouse. Ship-building is carried on with spirit and success ; as well as a rope-walk and salmon-fishing. But the chief trade is the exportation of coals ; above 300 vessels annually sail to Dublin, Belfast, &c., loaded with that article. Newton has two charters from James VI., dated 1595 and 1600; in which it is styled Nova Villa super Ayr. It is governed by two baillies, a treasurer, and six counsellors. The freemen have considerable privileges.

NEWTONIAN PHILOSOPHY

SECT. I. ††† DEFINITIONS AND HISTORY.

The NEWTONIAN PHILOSOPHY as the true doctrine of the universe, and particularly of the heavenly bodies, their laws, affections, &c., deserves distinct notice in every compendium of general science.

The term Newtonian philosophy is applied very differently ; and various confused notions have hence arisen. Some authors under this term include all the corpuscular philosophy, considered as it now stands corrected and reformed by the discoveries and improvements made by Sir Isaac Newton. In this sense Gravesande calls his elements of physics Introductioad Philosophiam Newtonianam. And in this sense the Newtonian is the same with the new philosophy ; and stands contradistinguished from the Cartesian, the Peripatetic, and the ancient Corpuscular. Others, by the Newtonian philosophy, mean the method or order which Sir Isaac New-ton observes in philosophising ; *viz.* the reasoning and the conclusions drawn directly from phenomena, exclusive of all previous hypotheses; the beginning from simple principles ; deducing the first powers and laws of nature from a few select phenomena, and then applying those laws, &c., to account for other things. And in this sense the Newtonian philosophy is the same with the experimental philosophy, and stands opposed to the ancient corpuscular. Others, by the Newtonian philosophy, intend that wherein physical bodies are considered mathematically, and where geometry and mechanics are applied to the solution of the appearances of nature. In this sense the Newtonian is the same with the mechanical and mathematical philosophy. Others, again, understand by it that part of physical knowledge which Sir Isaac Newton has handled, improved, and demonstrated, in his Principia; while, lastly, others mean by this phrase the new principles which Sir Isaac Newton has brought into philosophy, the new system founded thereon, and the new solutions of phenomena thence deduced ; or that which characterises and distinguishes his philosophy from all others. This is the sense wherein we shall chiefly consider it.

The origin and history of this system of philosophy has been given under the article NEW-TON. It was first made public in 1687 by its author, then a fellow pf Trinity College, Cambridge ; and in 1713 republished with considerable improvements. Several authors have since attempted to make it plainer, by setting aside many of the more

sublime mathematical researches, and substituting either more obvious reasonings or experiments in lieu thereof; particularly Whiston in his Preelect. Phys. Mathemat. ; Gravesande in Element, et Instit. ; and Dr. Pemberton in his View.

SECT. II. ††† DEFINITIONS ON WHICH THE NEWTONIAN PHILOSOPHY is FOUNDED.

The whole ot the Newtonian philosophy, as delivered by the author, is contained in his Principia, or Mathematical Principles of Natural

Philosophy. He founds his system on the following definitions : ††† 1. The quantity of mutter is the measure of the same, arising from its density and bulk conjunctly. Thus air of a double density, in a double space, is quadruple in quantity ; in a triple space, sextuple in quantity, &c. 2. The quantity of motion is the measure of the same, arising from the velocity and quantity of matter conjunctly. This is evident, because the motion of the whole is the motion of all its parts ; and therefore in a body double in quantity, with equal velocity, the motion is double, &c. 3. The vis insita, or innate force of matter, is a power of resistance, by which every body, as much as in it lies, endeavours to persevere in its present state, whether it be of rest, 01 moving uniformly forward in a right line. This definition is proved to be just, only by the difficulty we find in moving any thing out of its place ; and this difficulty is by some reckoned to proceed only from gravity. They contend that, in those cases where we can prevent the force of gravity from acting upon bodies, this power ot resisting becomes insensible, and the greatest quantities of matter may be put in motion by the very least force. Thus there have beei. balances formed so exact that, when loaded with 200 weight in each scale, they would turn by the addition of a single drachm. In this case 400 pounds of matter was put in motion by a single drachm, i. e. by sˆth part of its own quantity ; and even this small weight, they say, is only necessary on account of the inaccuracy of the machine; so that we have no reason to supp -e that, if the friction could be entirely removed, it would take more force to move a ton weight than a grain of sand. This objection, however, is not taken notice of by Sir Isaac ; and he bestows on the resisting power above mentioned the name of vis inerliae ; a phrase which is perhaps not well chosen, and with which inferior writers have endeavoured to make their readers smile at the expense of Newton. A force of inactivity, it has been said, is a forceless force ; and analogous to a black white, a cold heat, and a tempestuous calm.

But objections of more importance have been made to the whole of this doctrine than those which merely respect the term vis inertia?. ‘ An endeavour to remain at rest,’ says Young, in his Examination of the third and fourth Definition of the first book of the Principia, ‘ is unnecessary, whilst nothing attempts to disturb the rest. It is likewise impossible to be conceived, as it implies a contradiction. A man, by opposing force to force, may endeavour not to be moved ; but this opposition is an endeavour to move, not with a design to move, but by counteracting another force to prevent being moved. An endeavour not to move, therefore, cannot exist in bodies, because it is absurd ; and if we appeal to fact, we shall find every body in an actual and constant endeavour to move.’ It has been likewise observed, and we think justly, that ‘ if bodies could cor-tiiiue to move by any innate force, they imuht

also begin to move by that force ; for the same cause which can move a body with a given velocity at one time, could do it if present at any other time; and therefore, if the force by which bodies continue in motion were innate and essential to them, they would begin to move of themselves, which is not true.” Newton in-deed says, that this innate force is the cause of motion under certain circumstances only, or when the body is acted upon by a force impressed ab extra. But if this impressed force do not continue as well as begin the motion ; if it cease the instant that the impression is over, and the body continue to move by its vis inertiae, why is the body ever stopped ? ‘ If, in the beginning of the motion, the body, by its innate force, overcomes a certain resistance of friction and air; in any following times, the force being uudiminished, it will overcome the same resistance for ever. These resistances, therefore, could never change the state of a moving body, because they cannot change the quantity of its motive force. But this is contrary to universal experience.’ For these reasons we are inclined to think that bodies are wholly passive ; that they endeavour nothing ; and that they continue in motion, not by any innate force or vis insita, but by that force, whatever it be, which begins the motion, and which, whilst it remains with the moving body, is gradually diminished, and at last overcome by opposite forces, when the body of course ceases to move.

4. An impressed force is an action exerted upon a body, in order to

change its state, either of rest, or of moving uniformly forward in a right line. This force consists in the action only, and remains no longer in the body when the action is over. For a body maintains every new state it acquires by its vis inertiae only. It is here implied, and indeed fully expressed, that motion is not continued by the same power that produced it. Now there are two grounds on which the truth of this doctrine may be supposed to rest. 1. On a direct proof that the impressed force does not remain in the body, either by showing the nature of the force to be transitory, and incapable of more than its first action,; or that it acts only on the surface, and that the body escapes from it ; or that the force is somewhere else, and not remaining in the body. But none of these direct proofs are offered . 2. It may rest on an indirect proof, that there is in the nature of body a sufficient cause for the continuance of every new state acquired ; and that therefore any adventitious force to continue motion, though necessary for its production, is superfluous and inadmissible. As this is the very ground on which the supposition stands, it ought to have been indubitably certain that the innate force of the body is sufficient to perpetuate the motion it has once acquired, before the other agent, by which the motion was communicated had been dismissed from the office. But the innate force of body has been shown not to be that which continues its motion ; and therefore the proof, that the impressed force does not remain in the body, fails. Nor indeed is it in this case desirable to support the proof, because we should then be left without any reason for the continuance of motion.' When we mention an

impressed force, we mean such a force as is communicated either at the surface of the body or by being diffused through the mass.

5. A centripetal force is that by which bodies are drawn, impelled, or any way tend towards a point, or to a centre. The quantity of any centripetal force may be considered as of three kinds, absolute, arcelerative, and motive.

6. The absolute quantity of a centrifugal force is the measure of the same, proportional to the efficacy of the cause that propagates it from the centre, through the spaces round about.

7. The accelerative quantity of a centripetal force is the measure of the same, proportional to the velocity which it generates in a given time.

8. The motive quantity of a centripetal force is a measure of the same,

proportional to the mo-tion which it generates in a given time. ??? This is always known by the quantity of a force equal and contrary to it, that is just sufficient to hinder the descent of the body.

SECT. III.??? OF TIME, SPACE, PLACE, AND MoTIOS.

Scholium I. Absolute, true, and mathematical time, of itself, and from its own nature, flows equably, without regard to any thing external, and, by another name, is called duration. Relative, apparent, and common time, is some sensible and external measure of duration, whether accurate or not, which is commonly used instead of true time ; such as an hour, a day, a month, a year, &c.

II. Absolute space, in its own nature, without regard to any thing external, remains always similar and immoveable. Relative space is some moveable dimension or measure of the absolute spaces ; and which is vulgarly taken for immoveable space. Such is the dimension of a subterraneous, an aerial, or celestial space, determined by its position to bodies, and which is vulgarly taken for immoveahle space ; as the distance of a subterraneous, and aerial, or celestial space, determined by its position in respect of the earth. Absolute and relative space are the same in fi-gure and magnitude ; but they do not remain always numerically the same. For if the earth, for instance, moves, a space of our air, which relatively and in respect of the earth remains al-ways the same, will at one time be one part of the absolute space into which the earth passes ; at another time it will be another part of the same ; and so, absolutely understood, it will be perpetuably mutable.

III. Place is a part of space which a body takes up : and is, according to the space, either absolute or relative. Our author says it is part of space ; not the situation, nor the external surface of the body. For the places of equal so-lids are always equal ; but their superficies, by reason of their dissimilar figures, are often unequal. Positions properly have no quantity, nor are they so much the places themselves as the properties of places. The motion of the whole is the same thing with the sum of the motions of the parts ; that is, the translation of the whole out of its place is the same thing with the sum of the translations of the parts out of their places : and therefore the place of the whole U the same thins: with the sum of the places of the putts ; and

for that reason it is internal, and in the whole body.

IV. Absolute motion is the translation of a body from one absolute place into another, and relative motion the translation from one relative place into another. Thus, in a ship under sail, the relative place of a body is that part of the ship which the body possesses, or that part of its ca-vity which the body fills, and which therefore moves together with the ship ; and relative rest is the continuance of the body in the same part of the ship, or of its cavity. But real absolute rest is the continuance of the body in the same part of that immoveable space in which the ship itself, its cavity, and all that it contains, is mov-ed. Wherefore, if the earth is really at rest, the body which relatively rests in the ship, will really and absolutely move with the same velocity which the ship has on the earth. But, if the earth also moves, the true and absolute motion of the body will arise, partly from the true mo-tion of the earth in immoveable space, partly from the relative motion of the ship on the earth : and if the body moves also relatively in the ship, its true motion will arise partly from the true motion of the earth in immoveable space, and partly from the relative motions as well of the ship on the enrth as of the body in the ship ; and from these relative motions will arise the relative motion of the body on the earth. As if that part of the earth where the ship is was truly moved towards the east, with a velocity of 10,010 parts ; while the ship itself with a fresh gale is carried towards the west, with a velocity expressed by ten of these parts ; but a sailor walks in the ship towards the east with one part of the said velocity : then the sailor will be moved truly and absolutely in immoveable space towards the east with a velocity of 1001 parts ; and relatively on the earth, towards the west, with a velocity of nine of those parts.

Absolute time, in astronomy, is distinguished from relative, by the equation or correction of the vulgar time. For the natural days are truly unequal, though they are commonly considered as equal, and used for a measure of time : astronomers correct this inequality for the more accurate deducing of the celestial motions. It may be that there is no such thing as an equable motion whereby time may be accurately measured. All motions may be accelerated or retarded ; but the true or equable progress of absolute time is liable to no change. The duration or perseverance of the existence of things remains the

same, whether the motions are swift or slow, or none at all ; and therefore ought to be distinguished from what are only sensible measures thereof, and out of which we collect it by means of the astronomical equation. The necessity of which equation for determining the times of a phenomenon is evinced, as well from the experiments of the pendulum clock as by eclipses of the satellites of Jupiter.

As the order of the parts of time is immutable, so also is the order of the parts of space. Suppose those parts to be moved out of their places, and they will be moved (if we may be allowed the expression) out of themselves. For times and spaces are, as it were, the places of them-

selves as of all other things. All things are placed in time as to order of succession ; and in space as to order of situation. It is from their essence or nature that they are places ; and that the primary places of things should be moveable is absurd. These are therefore the absolute places ; and translations out of those places are the only absolute motions. But because the parts of space cannot be seen, or distinguished from one another by the senses, therefore in their stead we use sensible measures of them. For, from the positions and distances of things from any body, considered as immoveable, we define all places ; and then, with respect to such places, we estimate all motions, considering bodies as transferred from some of those places into others. And so, instead of absolute places and motions, we use relative ones ; and that without any inconvenience in common affairs : but in philosophical disquisitions we ought to abstract from our senses, and consider things themselves distinct from what are only sensible measures of them. For it may be that there is no body really at rest, to which the places and motions of others may be referred.

But we may distinguish rest and motion, absolute and relative, one from the other, by their properties, causes and effects. It is a property of rest, that bodies really at rest do rest in respect of each other. And therefore, as it is possible that in the remote regions of the fixed stars, or perhaps far beyond them, there may be some body absolutely at rest, though it be impossible to know from the position of bodies to one another in our regions whether any of these do keep the same position to that remote body ; it follows that absolute rest cannot be determined from the position of bodies in our regions. It is a property of motion, that the parts which retain given positions to their wholes do partake of the motion of their wholes. For all parts of revolving

bodies endeavour to recede from the axis of motion ; and the impetus of bodies moving forwards arises from the joint impetus of all the parts. Therefore, if surrounding bodies are moved, those that are relatively at rest within them will partake of their motion. Upon which account the true and absolute motion of a body cannot be determined by the translation of it from those only which seem to rest ; for the external bodies ought not only to appear at rest, but to be really at rest. For otherwise all included bodies, beside their translation from near the surrounding ones, partake likewise of their true motions ; and, though that translation was not made, they would not really be at rest, but only seem to be so. For the surrounding bodies stand in the like relation to the surrounded as the exterior part of a whole does to the interior, or as the shell does to the kernel ; but, if the shell moves, the kernel will also move, as being part of the whole, without any removal from near the shell.

A property near akin to the proceeding is, that if a place is moved, whatever is placed therein moves along with it ; and therefore a body which is moved from a place in motion partakes also of the motion of its place. Upon which account all motions from places in motion are no other

than parts of entire and absolute motions ; and every entire motion is composed of the motion of the body out of its first place, and the motion of this place out of its place ; and so on, until we come to some immoveable place, as in the above-mentioned example of the sailor. Wherefore entire and absolute motions can be no otherwise determined than by immoveable places. Now no other places are iramoveable but those that from infinity to infinity do all retain the same given positions one to another; and upon this account must ever remain unmoved, and do thereby constitute what we call immovtable space.

The causes by which true and relative motions are distinguished one from the other are the forces impressed upon bodies to generate motion. True motion is neither generated nor altered, but by some

force impressed upon the body moved : but relative motion may be generated or altered without any force impressed upon the body. For it is sufficient only to impress some force on other bodies with which the former is compared, that, by their giving way, that relation may be changed, in which the relative rest or motion of the other body did consist. Again, true motion suffers always some change from any force impressed upon the moving body ; but relative motion does not necessarily undergo any changes by such force. For if the same forces are likewise impressed on those other bodies with which the comparison is made, that the relative position may be preserved ; then that condition will be preserved in which the relative motion consists. And therefore any relative mo-tion may l>e changed when the true motion remains unaltered, and the relative may be preserved when the true motion suffers some change. Upon which account true motion does by no means consist in such relations.

SECT. IV. ❓❓❓ OF THE DIFFERENCE BETWEEN ABSOLUTE AND RELATIVE MOTION.

The effects which distinguish absolute from relative mo'tion are the forces of receding from the axis of circular motion. For there are no such forces in a circular motion purely relative ; but, in a true and absolute circular motion, they are greater or less according to the quantity of the motion. If a vessel, hung by a long cord, is so often turned about that the cord is strongly twisted, then filled with water, and let go, it will be whirled about the contrary way ; and, while the cord is untwisting itself, the surface of the water will at first be plain, as before the vessel began to move ; but the vessel, by gradually communicating its motion to the water, will make it begin sensibly to revolve, and recede by little and little from the middle, and ascend to the sides of the vessel, forming itself into a concave figure ; and the swifter the motion becomes, the higher will the water rise, till at last, performing its revolutions in the same times with the vessel, it becomes relatively at rest in it. This ascent of the water shows its endeavour to recede from the axis of its motion ; and the true and absolute circular motion of the water, which is here directly contrary to the relative, discovers itself, and may be measured by this endeavour. At first, when

the relative motion in the water was greatest, it produced no endeavour to recede from the axia ; the water showed no tendency to the circumference, nor any ascent towards the sides of the ves-sel, but remained of a plain surface ; and therefore its true circular motion had

not yet begun But afterwards, when the relative motion of the water had decreased, the ascent thereof towards the sides of the vessel proved its endeavour to recede from the axis ; and this endeavour show-ed the real circular motion of the water perpetually increasing, till it had acquired its greatest quantity, when the water rested relatively in the vessel. And therefore this endeavour does not depend upon any translation of the water in respect of the ambient bodies ; nor can true circular motion be defined by such translations. There is only one real circular motion of any one revolving body, correspond ing to only one power of endeavouring to recede from its axis of motion, as its proper and adequate effect : but relative motions in one and the same body are innumerable, according to the various relations it bears to external bodies; and, like other relations, are altogether destitute of any real effect, otherwise than they may perhaps participate of that only true motion. And therefore, in the system which supposes that our heavens, revolving below the sphere of the fixed stars, carry the planets along with them, the several parts of those heavens and the planets, which are indeed relatively at rest in their heavens, do yet really move. For they change their position one to another, which never happens to bodies truly at rest ; and, being carried together with the heavens, participate of their motions, and, as parts of revolving wholes, endeavour to recede from the axis of their motion. Wherefore relative quantities are not the quantities themselves whose names they bear, but those sensible measures of them, either accurate or inaccurate, which are commonly used instead of the measured quantities themselves. And then, if the meaning of words is to be determined by their use, by the names time, space, place, and motion, their measures are properly to be understood ; and the expression will be unusual, and purely mathematical, if the measured quantities themselves are meant.

It is indeed a matter of great difficulty to discover, and effectually to distinguish, the true motions of particular bodies from those that are only apparent : because the parts of that immoveable space in which these motions are performed do by no means come under the observation of our senses. Yet ws have some things to direct us in this intricate affair; and these arise partly from the apparent motions, partly from the forces which are the causes and effects of the true motions. For instance, if two globes, kept at a given distance one from the other by a cord that connects them, were revolved about their common centre of gravity ; we might, from the tension of the cord, discover the endeavour of the globes to recede from the axis of motion, and thence we might compute the quantity of their circular motions. And then, if any equal forces should be impressed at once on

the alternate faces of the globes to augment or diminish their circular motions, from the increase or de-638

crease of the tension of the cord, we might infer the increment or decrement of their motions ; and thence would be found on what faces those forces ought to be impressed, that the motions of the globes might be most augmented; that is, we might discover their hindermost faces, or those which follow in the circular motion. But the faces which follow being known, and consequently the opposite ones that precede, we should likewise know the determination of their motions. And thus we might find both the quantity and determination of this circular motion, even in an immense vacuum, where there was nothing external or sensible, with which the globes might be compared. But now, if in that space some remote bodies were placed that kept always a given position one to another, as the fixed stars do in our regions; we could not indeed determine from the relative translation of the globes among those bodies, whether the motion did be-long to the globes or to the bodies. But if we observed the cord, and found that its tension was that very tension which the motions of the globes required, we might conclude the motion to be in the globes, and the bodies to be at rest; and then, lastly, from the translation of the globes among the bodies, we should find the determination of their motions.

SECT. V. ††† OF THE LAWS OF MOTION.

Having thus explained himself Sir Isaac New-ton proposes to show how we are to collect the true motions from their causes, effects, and apparent differences ; and vice versa, how, from the motions, either true or apparent, we may come to the knowledge of their causes and effects. In order to this, he lays down the following axioms or laws of motion.

1 . Every body perseveres in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed upon it. ††† Sir Isaac’s proof of this axiom is as follows : ††† ‘ Projectiles persevere in their motions, so far as they are not retarded by the resistance of the air, or impelled downwards by the force of gravity. A top, whose parts, by their cohesion, are perpetually

drawn aside from rectilinear motions, does not cease its rotation otherwise than as it is retarded by the air. The greater bodies of the planets and comets, meeting with less resistance in more free spaces, preserve their motions, both progressive and circular, for a much longer time.' Notwithstanding this demonstration, however, the axiom has been violently disputed. It has been argued, that bodies continue in their state of motion because they are subjected to the continual impulse of an invisible and subtile fluid, which always pours in from behind, and of which all places are full. It has been affirmed that motion is as natural to this fluid as rest is to all other matter; that it is impossible we can know in what manner a body would be influenced by moving forces if it were entirely destitute of gravity. According to what we can observe, the mometum of a body, or its tendency to move, depends very much on its gravity. A heavy cannon ball will fly to a much greater distance than a light one, though both are actuated by an equal force. It is by no

means clear, therefore, that a body totally destitute of gravity would have any proper momentum of its own ; and, if it had no momentum, it could not continue its motion for the smallest space of time after the moving power was withdrawn. Some have imagined that matter was capable of beginning motion of itself, and consequently that the axiom was false ; because we see plainly that matter in some cases has a tendency to change from a state of motion to a state of rest, and from a state of rest to a state of mo-tion. A paper appeared on this subject in the first volume of the Edinburgh Physical and Literary Essays ; but the hypothesis never gained any ground.

2. The alteration of motion is ever proportional to the motive force impressed; and is made in the direction of the right line in which that force is impressed. ••• Thus, if any force generates a certain quantity of motion, a double force will generate a double quantity, whether that force be impressed all at once, or in successive moments. To this law no objection of consequence has ever been made. It is founded on this self-evident truth that every effect must be proportional to its cause. Mr. Young, who seems fond of detecting the errors of Newton, finds fault indeed with the expressions in which the law is stated ; but he owns, that if thus expressed, The alteration of motion is proportional to the actions or resistances which produce it, and is in the direction in which the actions or resistances are made, it would be unexceptionable.

3. To every action tliere always is opposed an equal reaction ; or the

mutual action of two bodies upon each other are always equal, and directed to contrary parts. ††† This axiom is also disputed by many. In the above-mentioned paper in the Physical Essays the author endeavours to make a distinction between reaction and resistance ; and the same attempt has been made by Mr. Young. ‘ \hen an action generates no motion,’ says he, ‘ it is certain that its effects have been destroyed by a contrary and equal action. When an action generates two contrary and equal mˆ- tions it is also evident that mutual actions were exerted, equal and contrary to each other. All cases where one of these conditions is not found are exceptions to the truth of the law. If a finger presses against a stone, the stone, if it does not yield to the pressure, presses as much upon the finger; but, if the stone yields, it re-acts less than the finger acts ; and if it should yield with all the momentum that the force of the pressure ought to generate, which it would do if it were not impeded by friction, or a me-dium, it would not re-act at all. So if the stone drawn by a horse follows after the horse it does not re-act so much as the horse acts ; but only so much as the velocity of the stone is diminished by friction, and it is the reaction of friction only, not of the stone. The stone does not re-act because it does not act ; it resists, but resistance is not action. In the loss of motion from a striking body, equal to the gain in the body struck, there is a plain solution without requiring any reaction. The motion lost is identically that which is found in the other body ; this supposition accounts for the whole phenomenon in

the most simple manner. If it be not admitted, bat the solution by reaction is insisted upon, it will be incumbent on the party to account for the whole effect of communication of motion ; otherwise he will lie under the imputation of rejecting a solution which is simple, obvious, and perfect; for one complex, unnatural, and incomplete. However this may be determined, it will be allowed that the circumstances mentioned afford no ground for the inference, that action and reaction are equal, since appearances may be explained in another way.’

Thus, if there be a perfect reciprocity betwixt an impinging body and a body at rest sustaining its impulse, may we not at our pleasure consider either body as the agent, and the other as the resistent ? Let a moving body, A, pass from north to south, an equal body B at rest, which receives the stroke of A, act upon A from south to north, and A resist in a contrary direction, both inelastic : let the motion reciprocally communicated be called six. Then B at rest communicates to A six degrees of motion towards the north, and receives six degrees towards the south. B, having no other motion than the six degrees it communicated, will, by its equal and contrary loss and gain, remain in equilibrio. Let the original motion of A have been twelve, then A received a contrary action equal to six, six degrees of its motion will he destroyed or in equilibrio ; consequently, a motive force as six will remain to A towards the south, and B will be in equilibrio, or at rest. A will then endeavour to move with six degrees, or half its original motion, and B will remain at rest as before. A and B being equal masses, by the laws of communication three degree of motion will be communicated to B, or A with its six degrees will act with three, and B will re-act also with three, B then will act on A from south to north equal to three, while it is acted upon or resisted by A from north to south, equal also to three, and B will remain at rest as before ; A will also have its six degrees of motion reduced to one half by the contrary action of B, and only three degrees of motion will remain to A, with which it will yet endeavour to move ; and, finding B still at rest, the same process will be repeated till the whole motion of A is reduced to an infinitely small quantity, B all the while remaining at rest, and there will be no communication of motion from A to B, which is contrary to experience.

Let a body, A, whose mass is twelve, at rest, be impinged upon first by B, having a mass as twelve, and a velocity as four, making a momentum of forty-eight ; and 2dly, by C, whose mass is six, and velocity eight, making a momentum of forty-eight equal to B, the three bodies being inelastic. In the first case, A will become possessed of a momentum of twenty-four, and twenty-four will remain to B ; and, in the 2d case, A will become possessed of a momentum of thirty-two, and sixteen will remain to C, both bodies moving with equal velocities after the shock, in both cases, by the laws of percussion. It is required to know, if in both cases A resists equally, and if B and C act equally? If the actions and resistances are equal, how does A in the one case destroy twenty-four parts of B's

motion, and in the other case thirty-two parts of C's motion, by an

equal resistance? Aud how does B communicate in one case twenty-fuur degrees of motion, and C thirty-two, by equal actions? If the actions and resistances are un equal, it is asked how the same mass can resist differently to bodies impinging upon it with equal momenta, and how bodies possessed of equal momenta can exert different actions, it being admitted that bodies resist proportional to their masses, and that their power of overcoming resistance is proportional to their momenta?❖❖❖ It is incumbent on those who maintain the doctrine of universal reaction to free it from these difficulties and apparent contradictions.

Others grant that Sir Isaac's axiom is very true with respect to terrestrial substances ; but they affirm, that, in these, both action and reaction are the effects of gravity. Substances void of gravity would have no momentum ; and without this they could not act ; they would be moved by the least force, and therefore could not resist or re-act. If, therefore, there is any fluid which is the cause of gravity, though such fluid could act upon terrestrial substances, yet these could not re-act upon it, because they have no force o their own, but depend entirely upon it for their momentum. In this manner, say they, we may conceive that the planets circulate, and all the operations of nature are carried on by means of a subtile fluid ; which being perfectly active, and the rest of matter altogether passive, there is neither resistance nor loss of motion.

From the preceding axiom Sir Isaac draws the following corollaries : ❖❖❖ 1. A body by two forces conjoined will describe the diagonal of a parallelogram in the same time that it would describe the sides by those forces apart. 2. Hence we may explain the composition of any one uirect force out of any two oblique ones, *viz.* by making the two oblique forces the sides of a parallelogram, and the direct one the diagonal. 3. The quantity of motion which is collected by taking the sum of the motions directed towards the same parts, and the difference of those that are directed to contrary parts, suffers no change from the action of bodies among themselves; because the motion which one body loses is communicated to another; and, if we suppose friction and the resistance of the air to be absent, the motion of a number of bodies which mutually impelled one another would be perpetual, and its quantity always equal. 4. The common centre of gravity of two or more bodies does not alter its state of motion or rest by the actions of the bodies among themselves; and therefore the common centre of gravity of all bodies act-ing upon each other (excluding outward actions and impediments) is either at rest, or moves uniformly in a right line. 5. The motions of bodies included in a given space are the same among themselves, whether that space is at

rest, or moves uniformly forward in a right line without any circular motion. The truth of this is evidently shown by the experiment of a ship, where all motions happen after the same manner, whether the ship is at rest, or proceeds uniformly forward in a straight line. 6. If bodies, any how moved among themselves, are urged in the

direction of parallel lines by equal accelerative forces, they will all continue to move among themselves, after the same manner as if they had been urged by no such forces.

The whole of the matliematical part of the Newtonian philosophy depends on the following lemmas ; of which the first is the principal.

Lem. I. Quantities, and the ratios of quantities, which in any finite time converge continually to equality, and before that time approach nearer the one to the other than by any given difference, become ultimately equal. If you deny it; suppose them to be ultimately uuequal, and let D be their ultimate difference. Therefore they cannot approach nearer to equality than by that given difference D ; which is against the supposition.

Concerning the meaning of tins lemma philosophers are not agreed ; and unhappily it is the very fundamental position on which the whole of the system rests. Many objections have been raised to it by people who supposed themselves capable of understanding it. They say that it is impossible we can come to an end of any infinite series, and therefore that the word ultimate can in this case have no meaning. la some cases the lemma is evidently false. Thus, suppose there are two quantities of matter, A and B, the one containing half a pound, and the other a third part of one. Let both be continually divided by two ; and though their ratio, or the proportion of the one to the other, does not vary, yet the difference between them perpetually becomes less, as well as the quantities themselves, until both the difference and quantities themselves become less than any assignable quantity ; yet the difference will never totally vanish, nor the quantities become equal, as is evident from the two following series : ???

,&c.

11111111 1 1

2 4 8 16 32 64 128 2Te 512 1024: J}ˆ111JˆJ_J L►►&c.

3 6 12 24 48 96 192 384 768 1536*

Diff - - - - 1 .1 -1 *L* L _L &c

6 12 24 48 96 192 384768 1536 3072*

Thus we see that though the difference is continually diminishing, and that in a very large proportion, there is no hope of its vanishing, or the quantities becoming equal. In like manner, let us take the proportions or ratios of quantities, and we shall be equally unsuccessful. Suppose two quantities of matter, one containing eight and the other ten pounds : these quantities already have to each other the ratio of eight to ten, or of four to five ; but let us add two continually to each of them, and, though the ratios continually come nearer to that of equality, it is in vain to hope for a perfect coincidence. Thus,

8 10 12 14 16 18 20 22 24, &c. 10 12 14 16 18 20 22 24 26, &c.

r?nt;ˆ 4 5 6 7 8 9 10 11 12 B

itatio _ _ ►►► ►►► ►►► ►►► &,c.

.‘0 7 8 9 10 11 12 13

For this and his other lemmas Sir Isaac makes the following apology: ‘These lemmas are premised, to avoid the tediousness of deducing perplexed demonstrations ad absurdum, according to the method of ancient geometers. For demonstrations arc more contracted by the method of indivisibles ; but because the hypothesis of indivisibles seems somewhat harsh, and therefore that method is reckoned less geometrical, I chose rather to reduce the demonstrations of the following propositions to the first and last sums and ratios of nascent and evanescent quantities, that is, to the limits of those sums and ratios ; and so to premise, as short as I could, the demonstrations of those limits. For hereby the same thing is performed as by the method of indivisibles ; and now, those principles being demonstrated, we may use them with more safety. Therefore, if hereafter I should happen to consider quantities as made up of particles, or should use little curve lines for right ones, I would not be understood to mean indivisibles, but evanescent divisible quantities; not the sums and ratios of determinate parts, but always the limits of sums and ratios ; and that the force of such demonstrations always depends on the method laid down in the foregoing lemmas.

‘Perhaps it may be objected that there is no ultimate proportion of evanescent quantities, because the proportion before the quantities have vanished, is not the ultimate, and, when they are vanished, is none. But by the same argument it may be alleged that a body arriving at a certain place, and there stopping, has no ultimate velocity ; because the velocity before the body comes to the place is not its ultimate velocity, when it is arrived it has none. But the answer is easy ; for by the ultimate velocity is meant that with which the body is moved, neither be-fore it arrives at its place and the motion ceases, nor after, but at the very instant it arrives ; that is, that velocity with which the body an ves at its last place, and with which the motion ceases. And in like manner, by the ultimate ratio of evanescent quantities is to be understood the ratio of the quantities, not before they vanish, nor afterwards, but with which they vanish. In like manner, the first ratio of nascent quantities is that with which they begin to be. And the first or last sum is that with which they begin and cease to be (or to be augmented and diminished). There is a limit which the velocity at the end of the motion may attain, but not exceed ; and this is the ultimate velocity. And there is the like limit in all quantities and proportions that begin and cease to be. And, since such limits are certain and definite, to determine the same is a problem strictly geometrical. But whatever is geometrical we may be

allowed to make use of in determining and demonstrating any other thing that is likewise geometrical.

‘ It may also be objected, that, if the ultimate ratios of evanescent quantities are given, their ultimate magnitudes will be also given ; and so all quantities will consist of indivisibles, which is contrary to what Euclid has demonstrated concerning incommensu rabies, in the tenth book of his elements. But this objection is founded on a false supposition. For those ultimate ratios with which quantities vanish are not truly the ratios of ultimate quantities, but limits towards which the ratios of quantities decreasing continually approach.’

NEWTONIAN PHILOSOPHY.

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Lem. II. If in the figure Aac E, terminated by the right line A a, A E, and the curve a c E, there be inscribed any number of parallelograms A 6,B c, C d, &c., comprehended under equal bases A B, B C, C D, 5cc., and the sides ?- Bi, C c, D d, &c., parallel to one side A a of the figure ; and the parallelograms a K b I, t>Lcm,c M d n, &c. are

completed. Then if the ‘; c FB A

breadth of these parallelograms be supposed to be diminished, and their number augmented in infinitum, the ultimate ratios which the inscribed figure AK bLc M d D, the circumscribed figure AalbmcndoE, and curvilinear figure A.abc d E, will have to one another, are ratios of equality. ††† For the difference of the inscribed and circumscribed figures is the sum of the parallelograms K/, L††††, M n, Do; that is (from the equality of all their bases), the rectangle under one of their bases K b, and the sum of their altitudes A a, that is, the rectangle A B la. But this rectangle, because its breadth A B is supposed diminished in infinitum, becomes less than any given space. And therefore, by lem. I., the figures inscribed and circumscribed become ultimately equal the one to the other ; and much more will the intermediate curvilinear figure be ultimately equal to either.

Lem. III. The same ultimate ratios are also ratios of equality, when the breadths A B, BC, C D, &c., of the parallelograms are unequal, and are all diminished in infinitum. ††† The demonstration of this differs but little from that of the former.

In his succeeding lemmas, Sir Isaac goes on to prove, in a manner similar to the above, that the ultimate ratios of the sine, chord, and tangent of arcs infinitely diminished, are ratios of equality ; and, therefore, that in all our reasonings about these we may safely use the one for the other :††† that the ultimate form of evanescent triangles made by the arc, chord, and tangent, is that of similitude, and their ultimate ratio is that of equality ; and hence, in reasonings about ultimate ratios, we may safely use these triangles for each other, whether made with the sine, the arc, or the tangent. ††† He then shows some properties of the ordinates of curvilinear figures ; and

proves that the spaces which a body describes by any finite force urging it, whether that force is determined and immutable, or is continually augmented or continuallly diminished, are, in the very beginning of the motion, one to the other in the duplicate ratio of the powers. And, lastly, having added some demonstrations concerning the evanescence o angles of contact, he proceeds to lay down the mathematical part of his system, and which depends on the following theorems : ###

Theor. 1. The areas which revolving bodies describe, by radii drawn to an immoveable cen-tre of force, lie in the same immoveable planes, and are proportion”! to the times in which they VOL. XV

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are described. ### For, suppose the time to be divided into equal parts, and in the first part of that time let the body by its innate force describe the right line AB, in the following diagram- ###

In the second part of that time, the same would, by law 1, if not hindered, proceed directly to c along the line Be ### A B : so that by the radii AS, B S, c S, drawn to the centre, the equal areas A S B, BSr, would be described. But, when the body is arrived at B, suppose the centripetal force acts at once with a great impulse, and, turning aside the body from the right lint Be, compels it afterwards to continue its motion along the right ImeBC. Draw r C parallel to B S, meeting BC in C ; and at the end of the second part of the time, the body, by cor. 1, of the laws, will be found in C, in the same plane with the triangle A S B. Join SC ; and, because S B and c C are parallel, the triangle SBC will be equal to the triangle S C*D, and therefore also to the triangle SAB. By the like argument, if the centripetal force acts successively in C, D, E, &c., and makes the body in each single particle of time to describe the right lines C I>, D E, E F, &c., they will all lie in the same plane, and the triangle SC D will be equal to the triangle S B C, and S D E to S C D, and S E F to S D E. And, therefore, in equal times, equal areas are described in one in:noveable plane ; and, by composition, any sums S A DS, S AF S, of those areas are, one to the other, as the times in which they are described. Now, let the num-ber of those triangles be augmented, and their size diminished in

infinitum ; and then, by the preceding lemmas, their ultimate perimeter AD F will be a curve line : and therefore the centripetal force by which the body is perpetually drawn back from the tangent of this curve will act continually ; and any described areas S A D S, S A F S, which are always proportional to the times of description, will in this case also be proportional to those times. Q. E. D.

Cor. 1. The velocity of a body attracted towards :\v. immoveable centre, in spaces void of resistances, is reciprocally as the perpendicular let fall fiom that centre on the right line which touches the orbit, lor the velocities in these

places A, B, C, D, E, are as the bases AB, BC, D E, EF, of equal triangles ; and these bases are reciprocally as the perpendiculars let fall upon them.

Cor. 2. If the chords AB, BC, of two arcs successively described in equal times by the same body, in spaces void of resistance, are completed into a parallelogram ABCV, and the diagonal B V of this parallelogram, in the position which it ultimately acquires when those arcs are diminished in infinitum, is produced both ways, it will pass through the centre of force.

Cor. 3. If the chords A B, BC, and DE, EF, of arcs described in equal times, in spaces void of resistance, are completed into the parallelograms ABCV, DEFZ, the forces in B and E are one to the other in the ultimate ratio of the diagonals BV, EZ, when those arcs are diminished in infinitum. For the motions BC and E F of the body (by cor. 1 of the laws), are compounded of the motions Be, BV, and E/, EZ; but BV and EZ, which are equal to Cc and F/, in the demonstration of this proposition, were generated by the impulses of the centripetal force in B and E, and are therefore proportional to those impulses.

Cor. 4. The forces by which bodies, in spaces void of resistance, are drawn back from rectilinear motions, and turned into curvilinear orbits, are one to another as the versed sines of arcs described in equal times; which versed sines tend to the centre of force, and bisect the chords when these arcs are diminished to infinity. For such versed sines are the halves of the diagonals mentioned in cor. 3.

Cor. 5. And therefore those forces are to the force of gravity as the said versed sines to the versed sines perpendicular to the horizon of those parabolic arcs which projectiles describe in the same time.

Cor. 6. And the same things do all hold good (by cor. 5 of the laws) when the planes in which the bodies are moved, together with the centres of force, which are placed in those planes, are not at rest, but move uniformly forward in right lines.

Theor. II. Every body that moves in any curve line described in a plane, and, by a radius drawn to a point either immoveable or moving forward with a uniform rectilinear motion, describes about that point areas proportional to the times, is urged by the centripetal force directed to that point.

Case I. For every body that moves in a curve line is (by law 1) turned aside from its rectilinear course by the action of some force that impels it; and that force by which the body is turned off from its rectilinear course, and made to describe in equal times the least equal triangles, S A B, SBC, S C D, Sec., about the immoveable point S (by Prop. XL. E. 1, and law 2), acts in the place B according to the direction of a line parallel to C ; that is, in the direction of the line BS; and in the place C according to the direction of a line parallel to d D, that is, in the direction of the line C S, &c. ; and therefore acts always in the direction of lines tending to the immoveable point S. Q. E. D.

Case II. And (by cor. 5 of the laws) it is in-

different whether the superficies in which a body describes a curvilinear figure be quiescent, or move together with the body, the figure described, and its point S, uniformly forward in right lines.

Cor. 1. In non-resisting spaces of mediums, if the areas are not proportional to the times, the forces are not directed to the point in which the radii meet ; but deviate therefrom in consequentia, or towards the parts to which the motion is directed, if the description of the areas is accelerated; but in antecedentia if retarded.

Cor. 2. And even in resisting mediums, if the description of the areas is accelerated, the directions of the forces deviate from the point in which the radii meet, towards the parts to which the motion tends.

Scholium. A body may be urged by a centripetal force compounded of several forces. In which case the meaning of the proposition is, that the force which results out of all tends to the point S. But if any force acts perpetually in the direction of lines perpendicular to the described surface, this force will make the body to deviate from the plane of its motion, but will neither augment nor diminish the

quantity of the described surface ; and is therefore not to be neglected in the composition of forces.

Theor. III. Every body that, by a radius drawn to the centre of another body, howsoever moved, describes areas about that centre proportional to the times, is urged by a force compounded of the centripetal forces tending to that other body, and of all the accelerative force by which the other body is impelled. ††† The demonstration of this is a natural consequence of the theorem immediately preceding.

Hence, if the one body L, by a radius drawn to the other body T, describes areas proportional to the times, and from the whole force by which the first body L is urged (whether that force is simple, or, according to cor. 2 of the laws, compounded of several forces) we subduct that whole accelerative force by which the other body is urged ; the whole remaining force by which the first body is urged will tend to the other body T, as its centre. And, vice versa, if the remaining force tends nearly, to the other body T, those areas will be nearly proportional to the times.

If the body L, by a radius drawn to the other body T, describes areas which compared with the times are very unequal, and that other body T be either at rest or moves uniformly forward in a right line, the action of the centripetal force tending to that other body T is either none at all, or it is mixed and combined with very powerful actions of other forces : and the whole force compounded of them all, if they are many, is directed to another (immoveable or moveable) centre. The same thing obtains when the other body is actuated by any other motion whatever ; provided that centripetal force is taken which remains after subducting that whole force acting upon that other body T.

Scholium. Because the equable description of areas indicate that a centre is respected by that force with which the body is most affected, and by which it is drawn back from its rectilinear motion, and retained in its orbit, we may always

be allowed to use the equable description of areas as an indication of a centre about which all circular motion is performed in free spaces.

Theor. IV. The centripetal forces of bodies, which by equable motions describe different circles, tend to the centres of the same circles ; and are one to the other as the squares of the arcs described in equal times applied to the radii of circles. ††† For these forces tend to the centres of the circles (by theor. II. and cor. 2 theor. I.), and are to one another as the versed sines of the least arcs described in equal times (by cor. 4 theor. I.), that is, as the squares of the same arcs applied to the diameters of the circles by one of the lemmas : and therefore since those arcs are as arcs described in any equal times, and the diameters are as the radii, the forces will be as the squares of any arcs described in the same time, applied to the radii of the circles. Q. E. D.

Cor. 1. Therefore, since those arcs are as the velocities of the bodies, the centripetal forces are in a ratio compounded of the duplicate ratio of the velocities directly, and of the simple ratio of the radii inversely.

Cor. 2. And since the periodic times are in a ratio compounded of the ratio of the radii directly, and the ratio of the velocities inversely; the centripetal forces are in a ratio compounded of the ratio of the radii directly, and the duplicate ratio of the periodic times inversely.

Cor. 3. Whence, if the periodic times are equal, and the velocities therefore as the radii, the centripetal forces will be also as the radii ; and the contrary.

Cor. 4. If the periodic times and the velocities are both in the subduplicate ratio of the radii, the centripetal forces will be equal among themselves ; and the contrary.

Cor. 5. If the periodic times are as the radii, and therefore the velocities equal, the centripetal forces will be reciprocally as the radii ; and the contrary.

Cor. 6. If the periodic times are in the sesquiplicate ratio of the radii, and therefore the velocities reciprocally in the subduplicate ratio of the radii, the centripetal forces will be in the duplicate ratio of the radii inverse; and the contrary.

Cor. 7. And universally, if the periodic time is as any power Rn of the radius R, and therefore the velocity reciprocally as the power Rn ††† 1 of the radius, the centripetal force will be reciprocally as the

power R2n ††† 2 of the radius; and the contrary.

Cor. 8. The same things all hold concerning the times, the velocities, and forces, by which bodies describe the similar parts of any similar figures, that have their centres in a similar position within those figures, as appears by applying the demonstrations of the preceding cases to those. And the application is easy, by only substituting the equable description of areas in the place of equable motion, and using the distances of the bodies from the centres instead of the radii.

Cor. 9. From the same demonstration it likewise follows, that the arc which a body, uniformly revolving in a circle by means of a given

centripetal force, describes in any time, is a mean proportional between the diameter of the circle and the space which the same body, falling by the same given force, would descend through in the same given time.

‘ By means of the preceding proposition and its corollaries,’ says Sir Isaac, ‘we may discover the proportion of a centripetal force to any other known force, such as that of gravity. For, if a body by means of its gravity revolves in a circle concentric to the earth, this gravity is the centripetal force of that body. But, from the descent of heavy bodies, the time of one entire revolution, as well as the arc described in any given time, is given (by cor. 9 of this theorem). And by such propositions Mr. Huygens, in his excellent book De Horologio Oscillatorio, has compared the force of gravity with the centrifugal forces of revolving bodies.’

The preceding proposition may also be demonstrated in the following manner: ††† In any circle suppose a polygon to be inscribed of any num-ber of sides. And if a body, moved with a given velocity along the sides of the polygon, is reflected from the circle at the several angular points; the force with which, at every reflection, it strikes the circle, will be as its velocity : and therefore the sum of the forces, in a given time, will be as that velocity and the number of reflections conjunctly ; that is (if the species of the polygon be given), as the length described in that given time, and increased or diminished in the ratio of the same length to the radius of the circle ; that is, as the square of that length applied to the radius; and therefore, if the polygon, by having its sides diminished in infinitum, coincides with the circle, as the square of the arc described in a given time applied to the radius. This is the centrifugal force, with which the body impels

the circle; and to which the contrary force, wherewith the circle continually repels the body towards the centre, is equal.

On these principles hangs the whole of ?AT Isaac Newton's mathematical philosophy. He now shows how to find the centre to which the forces impelling any body are directed, having the velocity of the body given : and finds the centrifugal force to be always as the versed sine of the nascent arc directly, and as the square of the time inversely ; or directly as the square of the velocity, and inversely as the chord of the nascent arc. From these premises he deduces the method of finding the centripetal force directed to any given point when the body revolves in a circle ; and this whether the central point is near or at an immense distance ; so that all the lines drawn from it may be taken for parallels. The same thing he shows with regard to bodies revolving in spirals, ellipses, hyperbolas, or pa-rabolas.❓❓❓ Having the figures of the orbits given, he shows also how to find the velocities and moving powers ; and, in short, solves all the most difficult problems relating to the celestial bodies with an astonishing degree of mathematical skill. These problems and demonstrations are all contained in the first book of the I'rincipia ; to which we must refer those who wish for farther information.

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SECT. VI. ††† RULES FOR PHILOSOPHICAL REASONING.

In his second book Sir Isaac Newton treats of the properties of fluids, and their powers of resistance ; and lays down such principles as entirely overthrow the doctrine of Des Cartes's vortices, which was the fashionable system in his time. In the third book he begins particularly to treat of the natural phenomena, and apply them to the mathematical principles formerly demonstrated ; and, as a necessary preliminary to this part, he lays down the following rules for reasoning in natural philosophy : ††† 1. We are to admit no more causes of natural things than such as are both true and sufficient to explain their natural appearances. 2. Therefore to the same natural effects we must always assign, as far as possible, the same causes. 3. The qualities of bodies which admit neither intension nor remission of degrees, and which are found to belong to all bodies within the reach of our experiments, are to be esteemed the universal qualities of all bodies whatsoever. 4. In experimental philosophy, we are to look upon propositions collected by general induction from phenomena as accurately or very nearly true, notwithstanding any contrary hypotheses that may be imagined, till such time as other phenomena occur, by which they may either be made more accurate, or liable to exceptions.

The phenomena first considered are, 1. That the satellites of Jupiter, by radii drawn to the centre of their primary, describe areas proportional to the times of the description ; and that their periodic times, the fixed stars being at rest, are in the sesquiplicate ratio of their distances from its centre. 2. The same thing is likewise observed of the phenomena of Saturn. 3. The five primary planets, Mercury, Venus, Mars, Jupiter, and Saturn, with their several orbits, encompass the sun. 4. The fixed stars being supposed at rest, the periodic times of the five primary planets, and of the earth about the sun, are in the sesquiplicate proportion of their mean distances from the sun. 5. The primary planets, by radii drawn to the earth, describe areas no ways proportionable to the times : but the areas whicli they describe by radii drawn to the sun are proportional to the times of description. 6. The moon, by a radius drawn to the centre of the earth, describes an area proportional to the time of description. All these phenomena are undeniable from astronomical observations, and are explained at large under the article ASTRONOMY. The mathematical demonstrations are

next applied by Sir Isaac Newton in the following propositions : ###

Prop. I. The forces by whicli the satellites of Jupiter are continually drawn off from rectilinear motions, and retained in their proper orbits, tend to the centre of that planet ; and are reciprocally as the squares of the distances of those satellites from that centre. The former part of this proposition appears from theor. II. or III. and the latter from cor. 6, of theor. V., and the same thing we are to understand of the satellites of Saturn.

Prop. II. The forces by which the primary planets are continually drawn off from rectilinear

motions, and retained in their proper orbits, tend to the sun ; and are reciprocally as the squares of the distances from the sun's centre. The former part of this proposition is manifest from phenomenon 5, just mentioned, and from theor. II. ; the latter from the phenomenon 4. and cor. 6, of theor. IV. But this part of the proposition is with great accuracy deducible from the quiescence of the aphelion points. For a very small aberration from the reciprocal duplicate proportion would produce a motion of the apsides, sensible in every single revolution, and in many of them enormously great.

Prop. III. The force by which the moon is retained in its orbit tends towards the earth, and is reciprocally as the square of the distance of its place from the centre of the earth. The former part of this proposition is evident from phenomenon 5, and theor. II. ; the latter from phenomenon 6, and theor. II. or III. It is also evident from the very slow motion of the moon's apogee ; which, in every single revolution, amounting but to 3## 3' in consequentia, may be neglected : and this more fully appears from the next proposition.

Prop. IV. The moon gravitates towards the earth, and by the force of gravity is continually drawn off from a rectilinear motion, and retained in its orbit. ### The mean distance of the moon from the earth in the syzigies in semidiameters of the latter is about 60 J . Let us assume the mean distance of 60 semidiameters in the syzigies ; and suppose one revolution of the moon in respect of the fixed stars to be completed in 27 d. 7h. 43 m., as astronomers have determined ; and the circumference of the earth to amount to 123,249,600 Paris feet. Now, if we imagine the moon, deprived of all her motion, to be let go, so as to descend towards the earth with the impulse of all that force by which it is retained in its orbit, it will, in the space of one minute

of time, describe in its fall 15►► Paris feet. For the versed sine of that arc which the moon, in the space of one minute of time, describes by its mean mo-tion at the distance of 60 semidiameters of the earth, is nearly 15ˆ Paris feet; or, more accurately, 15 feet 1 inch and 1 line j. Wherefore, since that force, in approaching to the earth, increases in the reciprocal duplicate proportion of the distance; and, upon that accourft, at the surface of the earth is 60 X 60 times greater than at the moon ; a body in our regions, falling with that force, ought, in the space of one minute of time, to describe 60 x 60 X 15ˆ Paris feet; and, in the space of one second of time, to describe 15ˆ of those feet; or, more accurately, 15 feet 1 inch 1 line J. And with this very force we actually find that bodies here on earth do really descend. ►►► For a pendulum oscillating seconds in the latitude of Paris, will be 3 Paris feet and 8.} lines in length, as Mr. Huygens has observed. And the space which a heavy body describes, by falling one second of time, is to half the length of the pendulum in the duplicate ratio of the circumference of the circle toils diameter ; and is therefore 15 Paris feet 1 inch 1 line I. And therefore the force by which the moon is retained in its orbit, becomes, at the very surface of the earth, equal to the force of

gravity which we observe in heavy bodies there. And therefore (by rules 1 and 2) the force by which the moon is retained in its orbit is that very same force which we commonly call gravity. For, were gravity another force different from that, then bodies descending to the earth with the joint impulse of both forces would fall with a double velocity, and, in the space of one second of time, would describe 30$ Paris feet ; altogether against experience.

The demonstration of this proposition may be more diffusely explained after the following man-ner:►►► -Suppose several moons to revolve about the earth, as in the system of Jupiter or Saturn, the periodic times of those moons would (by the argument of induction) observe the same law which Kepler found to obtain among the planets ; and therefore their centripetal forces would be reciprocally as the

squares of the distances from the centre of the earth, by prop. I. Now, if the lowest of these were very small, and were so near the earth as almost to touch the tops of the highest mountains, the centripetal force thereof, retaining it in its orbit, would fee very nearly equal to the weights of any terrestrial bodies that should be found upon the tops of these mountains ; as may be known from the foregoing calculation. Therefore, if the same little moon should be deserted by its centrifugal force that carries it through its orbit, it would descend to the earth ; and that with the same velocity as heavy bodies do actually descend with upon the tops of those very mountains, because of the equality of forces that obliges them both to descend. And if the > force by which that lowest moon would descend were different from that of gravity, and if that moon were to gravitate towards the earth, as we hnd terrestrial bodies do on the tops of mountains, it would then descend with twice the velocity, as being impelled by both these forces conspiring together. Therefore, since both these forces, that is, the gravity of heavy bodies, and the centripetal forces of the moons, respect the centre of the earth, and are similar and equal between themselves, they will (by rules 1 and 2) have the same cause. And therefore the force which retains the moon in its orbit is that very force which we commonly call gravity ; because, otherwise, this little moon at the top of a mountain must either be without gravity, or fall twice as swiftly as heavy bodies use to do.

Having thus demonstrated that the moon is Detained in its orbit by its gravitation towards the earth, it is easy to apply the same demonstration to the motions of the other secondary planets, and of the primary planets round the sun, and thus to show that gravitation prevails throughout the whole creation. After which Sir Isaac proceeds to show from the same principles, that the heavenly bodies gravitate towards each other, and contain different quantities of matter, or have different densities in proportion to their bulks.

Prop. V. All bodies gravitate towards every planet; and the weight of bodies towards the same planet, at equal distances from its centre, are proportional to the quantities of matter they contain.

It has been confirmed by ir.any experiments,

that all sorts of heavy bodies (allowance being made for the inequality of retardation by some small resistance of the air) descend to the earth from equal heights in equal times ; and that equality of times we may distinguish to a great accuracy by the help of pendulums. Sir Isaac

New-ton tried the thing in gold, silver, lead, glass, sand, common salt, wood, water, and wheat. He provided two wooden boxes, round and equal, filled tlie one with wood, and suspended an equal weight of gold in the centre of oscillation of the other. The boxes hanging by equal threads of eleven feet, made a coupleof pendulums, perfectly equal in weight and figure, and equally receiving the resistance of the air. And, placing the one by the other, he observed them to play together forwards and backwards, for a long time, with equal vibrations. And therefore the quantity of matter in the gold was to the quantity of matter in the wood, as the action of the motive force (or vis motrix) upon all the gold to the action of the same upon all the wood ; that is, as the weight of the one to the weight of the other. And the like happened in the other bodies.

By these experiments, in bodies of the same weight, he could manifestly have discovered a difference of matter less than the thousandth part of the whole, had any such been. But, without all doubt, the nature of gravity towards the planets, is the same as towards the earth. For, should we imagine our terrestrial bodies removed to the orb of the moon, and there, together with the moon, deprived of all motion, to be let go, so as to fall together towards the earth ; it is certain, from what we have demonstrated before, that, in equal times, they would describe equal spaces with the moon, and of consequence are to the moon, in quantity of matter, as their weights to its weight. Since the satellites of Jupiter perform their revolutions in times which observe the sesquiplicate proportion of their distances from Jupiter's centre, their accelerative gravities towards Jupiter will be reciprocally as the squares of their distances from Jupiter's centre ; that is, equal at equal distances. And therefore, these satellites, if supposed to fall towards Jupiter from equal heights, would describe equal spaces in equal times, in like manner as heavy bodies do on our earth. Arid by the same argument, if the circumsolar planets were supposed to be let fall at equal distances from the sun, they would, in their descent towards the sun, describe equal spaces iu equal times. But forces, which equally accelerate unequal bodies, must be as those bodies : that is to say, the weights of the planets towards the sun must be as their quantities of matter.

Further, that the weights of Jupiter and of his satellites towards the sun are proportional to the several quantities of their mutter, appears from the exceedingly regular motions of the satellites. For, if some of those bodies were more strongly attracted to the sun in proportion to their quantity of matter than others, the motions of the satellites would be disturbed by that inequality of attraction. If at equal distances from the sun, anv satellite, in proportion to the quantity of

its matter, did eravitate towards the sun with a force greater than Jupiter in proportion to his

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according to any given proportion, suppose of d to e ; then the distance between the centres of the sun and the1 satellite's orbit would be always greater than the distance between the centres of the sun and of Jupiter nearly in the subduplicate of that proportion. And, if the satellite gravitated towards the sun with a force less in the proportion of e to d, the distance of the centre of the satellite's orb from the sun would be less than the distance of the centre of Jupiter's from the sun in the subduplicate of the same proportion. Therefore, if at equal distances from the sun the accelerative gravity of any satellite towards the sun were greater or less than the accelerating gravity of Jupiter towards the sun but by TDLj part of the whole gravity, the distance of the centre of the satellite's orbit from the sun would be greater or less than the distance of Jupiter from the sun by .ˆth part of the whole distance ; that is, by a fifth part of the distance of the ut-most satellite from the centre of Jupiter ; an eccentricity of the orbit which would be very sensible. But the orbits of the satellites are concentric to Jupiter; therefore the accelerative gravities of Jupiter, and of all satellites, towards the sun, are equal among themselves. And, by the same argument, the weight of Saturn and of his satellites towards the sun, at equal distances from the sun, are as their several quantities of matter ; and the weights of the moon and of the earth towards the sun are either none, or accurately proportional to the masses of matter which they contain. But further, the weights of all the parts of every planet towards any other planet are one to another as the matter in the several parts. For if some parts gravitated more, others less, than in proportion to the quantity of their matter ; then the whole planet, according to the sort of parts with which it most abounds, would gravitate more or less than in proportion to the quantity of matter in the whole. Nor is it of any moment whether these parts are external or internal. For if, as an instance, we should imagine the terrestrial bodies with us to be raised up to the orb of the moon, to be there compared with its body; if the weights of such bodies were to the weights of the external parts of the moon as the quantities of matter in the one and in the other respectively, but to the weights of the internal parts in a greater or less proportion ; then likewise the weights of those bodies would be to the weight of the whole moon in a greater or less proportion ; against what we have showed above.

Cor. 1. Hence the weights of bodies do not depend upon their forms

and textures. For, if the weights could be altered with the forms, they would be greater or less, according to the variety of forms in equal matter ; altogether against experience.

Cor. 2. Universally all bodies about the earth gravitate towards the earth ; and the weights of all, at equal distances from the earth's centre, are as the quantities of matter which they severally contain. This is the quality of all bodies within the reach of our experiments; and, therefore (by rule 3), to be affirmed of all bodies whatsoever. Tf ether, or any other body, were either altogether void of gravity, or were to gravitate less in proportion to its quantity of matter; then, because

(according to Aristotle, Des Cartes, and others) there is no difference betwixt that and othei bodies, but in mere form of matter, by a successive change from form to form, it might be changed at last into a body of the same condition with those which gravitate most in proportion to their quantity of matter ; and, on the other hand, the heaviest bodies, acquiring the first form of that body, might by degrees quite lose their gravity. And therefore the weights would depend upon the forms of bodies, and with those forms might be changed, contrary to what was proved in the preceding corollary.

Cor. 3. All spaces are not equally full. For, if all spaces were equally full, then the specific gravity of the fluid which fills the region of the air, on account of the extreme density of the matter, would fall nothing short of the specific gravity of quicksilver or gold, or any other the most dense body; and, therefore, neither gold, nor any other body, could descend in air. For bodies do not descend in fluids, unbss they are specifically heavier than the fluids. And, if the quantity of matter in a given space can by any rarefaction be diminished, what should hinder a diminution to infinity?

Cor. 4. If all the solid particles of all bodies are of the same density, nor can be rarefied without pores, a void space or vacuum must be granted. (By, bodies of the same density, our author means those whose vires inertiae are in the proportion of their bulks.)

Prop. VI. That there is a power of gravity tending to all bodies, proportional to the several quantities of matter which they contain. That all the planets mutually gravitate one towards another, we have prove ˆ before ; as well as that the force of gravity towards every one of them, considered apart, is reciprocally as the square of the distance

of places from the centre of the planet. And thence it follows that the gravity tending towards all the planets is proportional to the matter which they contain. Moreover, since all the parts of any planet A gravitate towards any other planet B, and the gravity of every part is to the gravity of the whole as the matter of the part to the matter of the whole ; and (by law 3) to every action corresponds an equal reaction : therefore the planet B will, on the other hand, gravitate towards all the parts of the planet A ; and its gravity towards any one part will be to the gravity towards the whole as the matter of the part to the matter of the whole. Q. E. D.

Cor. 1. Therefore the force of gravity towards any whole planet arises from, and is compounded of, the forces of gravity towards all its parts. Magnetic and electric attractions afford us examples of this. F< r all aitractir-is towards the whole arise from the attractions towards the several parts. The thing msy he easily understood in gravity, if we consider a greater planet as formed of a number of lesser planets, meeting together in one globe. For hence it would appear that the force of the whole must arise from the forces of the component parts. If it be objected that, according to this law, all bodies with us must mutually gravitate one towards another, whereas no such gravitation any where appears ; it is answered that, since the gravitation towards these

oooies is to the gravitation towards the whole earth as these bodies are to the whole earth, the gravitation towards them must be far less than to fall under the observation of our senses. (The experiments with regard to the attraction of mountains, however, have now further elucidated this point.)

Cor. 2. The force of gravity towards the several equal particles of any body is reciprocally as the square of the distance of places from the particles.

Prop. VII. In two spheres mutually gravita'- ing each towards the other, if the matter, in places on all sides round about and equidistant

from the centres, is similar, the weight of either sphere towards the other will be reciprocally as the square of the distance between their centres. For the demonstration of this, see the Principia, book i. prop. 75 and 76.

Cor. 1. Hence we may find and compare together the weights of bodies towards different planets. For the weights of bodies revolving in circles about planets are as the diameters of the circles directly, and the squares of their periodic times reciprocally ; and their weights at the surfaces of the planets, or at any other distances from their centres, are (by this prop.) greater or less, in the reciprocal duplicate proportion of the distances. Thus, from the periodic times of Venus, revolving about the sun in ‘224 d. 16|h. ; of the utmost circumjovial satellite revolving about Jupiter in 16 d. IG/jh. ; of. the Huygenian satellite about Saturn in 15 d. 22fh. ; and of the moon about the earth in 27 d. 7h. 43m.; compared with the mean distance of Venus from the sun, and with the greatest heliocentric elongations of the utmost circumjovial satellite from Jupiter’s centre, 3′ 16″; of the Hnygenian satellite from the centre of Saturn 5′ 4″ ; and of the moon from the earth, 10′ 33″: by computation our author found that the weight of equal bodies at equal distances from the centres of the sun, of Jupiter, of Saturn, and of the earth, towards the sun, Jupiter, Saturn, and the earth, were one to another as TOT?’ 3sn> and -^^ respectively. Then, because as the distances are increased or diminished the weights are diminished or increased in a duplicate ratio ; the weights of equal bodies towards the sun, Jupiter, Saturn, and the earth, at the distances 10,000, 997, 791, and 109, from their centres, that is, at their very superficies, will be as 10,000, 943, 529, and 435, respectively.

Cor. 2. Hence likewise we discover the quantity of matter in the several planets. For their quantities of matter are as the forces of gravity at equal distances from their centres, that is, in the sun, Jupiter, Saturn, and the earth, as 1,1337, 3^!, and ^35 respectively. If the parallax of the sun be taken greater cr less than 10” 30’”, the quantity of matter in tHe earth must be augmented or diminished in the triplicate of that proportion.

Cor. 3. Hence also we find the densities of the planets. For (by prop. LXXIL, book i.) the weights of equal and similar bodies towards similar spheres, are, at the surfaces of those spheres as the diameters of the soheres. And

therefore the densities of dissimilar spheres are as those weights

applied to the diameters of the spheres. But the true diameters of the sun, Jupiter, Saturn, and the earth, were one to another as 10,000, 997, 791, and 109; and the weights towards the same, as 10,000, 943, 529, and 435, respectively ; and therefore their densities are as 100, 94 J, 67, and 400. The density of the earth, which comes out by this computation, does not depend upon the parallax of the sun, but is determined by the parallax of the moon, and therefore is here truly defined. The sun, therefore, is a little denser than Jupiter, and Jupiter than Sa-turn, and the earth four times denser than the sun ; for the sun, by its great heat, is kept in a sort of a rarefied state. The moon also is denser than the earth.

Cor. 4. The smaller the planets are, esteris paribus, of so much the greater density. For so the powers of gravity on their several surfaces come nearer to equality. They are, likewise, cae-teris paribus, of the greater density as they are nearer to the sun. SO Jupiter is more dense than Saturn, and the earth than Jupiter. For the planets were to be placed at different distances from the sun, that, according to their degrees of density, they might enjoy a greater or less proportion of the sun's heat. Our water, if it were removed as far as the orb of Saturn, would be converted into ice ; and in the orb of Mercury, would quickly fly away in vapor. For the light of the sun, to which its heat is proportional, is seven times denser in the orb of Mercury than witli us ; and by the thermometer Sir Isaac found that a seven-fold heat of our summer sun will make water boil. Nor are we to doubt that the matter of Mercury is adapted to its heat, and is therefore more dense than the matter of our earth ; since, in a denser matter, the operations of nature require a stronger heat.

It is shown in the scholium of prop. XXII. book ii. of the Principia, that, at the height of 200 miles above the earth, the air is more rare than it is at the superficies of the earth, in the ratio of 30 to 0-0000000000003998, or as 75000000000000 to 1 nearly. And hence the planet Jupiter, revolving in a medium of the same density with that superior air, would not lose by the resistances of the medium the 1,000,000th part of its motion in 1,000,000 years. In the spaces near the earth the resistance is produced only by the air, exhalations, and vapors. When these are carefully exhausted by the air-pump from under the receiver, heavy bodies fall within the receiver with perfect freedom, and without the least sensible resistance ; gold itself, and the lighUst down, let fall together, will descend with equal velocity ; and though they fall through a space of four, six, and eight feet, they will come to the bottom at the same time ; as appears from experiments that have often been made. And therefore, the celestial regions being perfectly void of air and exhalations, the planets and comets, meeting

no sensible resistance in those spaces, will continue their motions through them for an immense space of time.

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NEW YEAR'S GIFTS. Nt nius Marcellus refers the origin of new year's gifts among the Romans to Titus Tatius, king of the Sabines, who reigned Ht Rome conjointly with Romulus, and who having considered as a good omen a present of some branches cut in a Wood consecrated to Strenia, the goddess of strength, which he received on the first day of the new year, authorised this custom afterwards, and gave to these presents the name of strenas. The Ro-mans on that day celebrated a festival in honor of Janus, and sent presents to one another of rigs, dates, honey, &c., to show their friends that they wished them a happy and agreeable life. Clients, or those who were under the protection of the great, carried presents of this kind to their patrons, adding to them a small piece of silver. Under Augustus, the senate, the knights, and the people, presented such gifts to him, and in his absence deposited them in the capitol. Of the succeeding princes some adopted this custom and others abolished it ; but it always continued among the people. The early Christians condemned it, because it appeared to be a relique of Paganism, and a species of superstition ; but, when it became nothing more than a mark of esteem, the church ceased to disapprove of it.

NEXT, in Roman antiquity, persons free-born, who for debt were reduced to a state of slavery. By the laws of the XII. tables it was ordained, that insolvent debtors should be given up to their creditors to be bound in fetters and cords, whence they were called Nexi; and, though they did not entirely lose the rights of freemen, yet they were often treated more harshly than the slaves themselves.

NEXT, adj. & adv. Sax. next, nefjpc; the superlatives of ne}? or nyjj, Goth, and Dan. n < est ; Tent, nechst. Nighest or nearest, in time, place, or degree; at the time or term immediately preceding.

Want supplieth itself of what is next, and many times the next way. Bacon.

If the king himself had staid at London, or, which had been the next best, kept his court at York, and sent the army on their proper errand, his enemies had been speedily subdued. Clarendon.

The queen already sat High on a golden bed ; her princely guest Was next her side, in order sat the rest.

Dry den.

O fortunate young man I at least your lays, Are next to his, and claim the second praise. Id.

Finite and infinite, being by the mind looked t > n as modifications of expansion and duration, the next thing to be considered is, how the mind comes by them. Locke.

That’s a difficulty next to impossible. Rowe.

The unwary nymph

Desired of Jove, when next he sought her bed, To grant a certain gift. Add'uon't Ovid.

The pood man warned us from his text That nfcne could tell whose turn should be the next.

Can. There, blest with health, with business unperplext, Tins life we relish, and ensure the next. Young.

M liY, MARSHAL, a celebrated general and peer o! Trance, under the Imperial government. lie

was born at Sarre Louis in 1769, and entered as a private into a regiment of hussars. At the beginning of the revolution he was made a captain, and served with distinction at Nerwinde and Valenciennes. His address and bravery first attracted the notice of Kleber, under whom he became an adjutant-general, lie was next made general of a division, and commanded the French cavalry during the invasion of Switzerland in 1798, when he is said to have behaved with considerable humanity to the unfortunate inhabitants of that country. The following year he distinguished himself under Massena ; and shared, in 1800, in the victories of Moreau at Moeskircli and Hobenliuden. In 1804 he received the baton of marshal; and the following year gained the battle to which lie owed the title of duke of Elchingen. He was next employed against the Prussians and Russians, in Friedland, and the British in the peninsula, where he showed skill in retreating before our distinguished Commander from Portugal. In 1812 he was present in Russia at the terrible battle of Mojaisk, where he commanded the centre of the French army, and obtained the further title of prince of Moskwa. Having afterwards lost the battle of Dennewitz, in Germany, he retired to Paris in disgrace ; but was soon again employed. He had justly earned the character of a brave leader, whatever were his principles, and afterwards contributed to induce the emperor to resign, and to retire to Elba. He was one of the first of the imperial generals who submitted to the Bourbons, and thus preserved his titles and pensions. In 1815, when Buonaparte escaped from Elba, Ney was at his estate in the country, and received orders to repair to his government of Bescancon. He went to Paris, making strong protestations of loyalty to the king, and promised it is said to bring back the disturber of Europe in an iron cage. He then proceeded

towards Lyons; but instead of attacking the invader he joined his standard. His subsequent career was as unfortunate as this conduct was unprincipled. He followed his old master to Waterloo, and being afterwards arrested was tried by a commission as a traitor to Louis XVIIL, and shot.

NIAGARA, a river of North America, issuing from the north-east end of lake Erie, and flowing into lake Ontario. It forms the boundary between the United States and Upper Canada, and its course, which is nearly north, is thirty-six miles in length, and varies in breadth from half a mile to a league. For the first few miles from lake Erie its breadth is 300 yards, and it is deep enough for vessels drawing nine or ten feet water ; but the current is extremely irregular and rapid, and the channel so intricate and rocky that it is only navigable for boats. In proceeding downwards the river widens, the rocks disappear, and the waters glide smoothly along as far as fort Chippeway, which is about three miles above the falls. Here the bed of the river again becomes rocky, and the waters are violently agitated by those successive rapids which compel all boats to stop at Chippeway; indeed, were any boat by chance to be carried but a little way further, nothing could save it from being dashed

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to pieces long before it came to the celebrated tails of this name. These we have already described in our article AMERICA, NORTH. See Index. We need only say here that with such impetuosity do the waves break on the rocks, in these rapids, that the sight of them from the lop of the banks makes the spectator shudder. In the middle of the river the stream is less troubled, and boats may pass down, if dexterously managed, to the island which divides the river at the fatls ; but it runs here with uncommon rapidity : the least error from the true course either to the right or the left, therefore, must result in inevitable destruction. The noise of the falls is heard, in a clear day and fair wind, at the distance of forty miles, and the cloud of vapor is said to be observable seventy miles. Five miles from the great falls is another scarcely less tremendous, called the Whirlpool ; it is occasioned by the stream, as it passes from the cataract, sweeping with impetuous violence round a natural basin enclosed between some rocky promontories, where it forms a vortex of inevitable destruction to whatever comes within its attraction ; but thus diverging from its onward direction, and being as it were for a time embayed, the velocity of the current is subdued to a more tranquil course. ‘ The astonishment,’ observes Mr. Weld, ‘ excited in the mind of the spectator by the vastness of the different objects which he contemplates from hence [i. e. at the Great Fall] is great indeed ; and few persons, on coming here for the first time, can for some minutes collect themselves sufficiently to be able to form any tolerable conception of the stupendous scene be-fore them. It is impossible for the eye to em-orace the whole of it at once ; it must gradually make itself acquainted, in the first place, with the component parts of the scene, each one of which is in itself an object of wonder ; and such a length of time does this operation require, that many of those who have had an opportunity of contemplating the scene at their leisure, for years together, have thought that every time they have beheld it, each part has appeared more wonderful and more sublime, and that it has only been at the time of their last visit that they have “been able to discover all the grandeur of the cataract.” Mr. Heriot says, ‘ the lofty banks and immense woods which environ this wonderful scene, the irresistible force, the rapidity of motion displayed by the rolling clouds of foam, the uncommon brilliancy and variety of colors and of shades, the ceaseless intumescence and swift agitation of the dashing waves below, the solemn and tremendous noise, with volumes of vapor darting upwards into the air, which the simultaneous report and

smoke of 1000 cannon could scarcely equal, irresistibly tend to impress the imagination with such a train of sublime sensations as few other combinations of natural objects are capable of producing.'

NIAGARA, a county of New York, United States, about fifty-three miles in length, and thirty-one in its greatest breadth, and including an area of 899,200 acres. It is bounded north by lake Ontario, east by Genesee county, south by Catanuigus, and west by lake Erie and Niagara River. Chief town Buffalo.

NIAS, n. $. Fr. niais. Simple, silly, foolish.

A niat hawk is one taken newly frem the nest, aod not able to help itself; and hence nisey, a silly per-son. Baiky.

NIAS, or NBAS ISLE, an island lying off Ta-panooly Bay, on the west coast of Sumatra, from which it is separated by a strait sixty miles wide. This island may be estimated at fifty miles in length by twenty in average breadth, and is divided into about fifty small districts, under independent chiefs or rajahs, who are at perpetual variance. Their prisoners they sell for slaves, as well as all others not immediately connected with them, whom they can seize : a plan encouraged by the resort of native traders from Padang, Natal, and Achin, to purchase cargoes of slaves. Even in this small island 450 of these unhappy men are said to be annually kidnapped or taken. See SUMATRA.

NIB, n. ►►. -\ Sax. neb (the face) ;

NIBBED', adj. f _ Belgic nebbe ; Danish

NIB'BLE, v. a. & v. n. ►►nal>. The point or

NIB'BLEK, n. s.) beak of a bird's face ;

hence any sharp or taper point, as of a pen : nibbed is having such a point : to nibble, to peck or bite at; to eat or cut away slowly; to carp at.

Thy turfy mountains, where live nibbling sheep. And flat meads thatched with stover them to keep.

Shaktpeare.

As pigeons bill, so wedlock would be nibbling.

Id.

It is the rose that bleeds, when he Nibbles his nice phlebotomy. Cleavtlind.

Instead of returning a full answer to my book, he manifestly falls a nibbling at one single passage in it.

TUlotioH. They gape at rich revenues which you hold,

And fain would nibble at your grandaiue gold.

Dry den.

If you would be nibbling, here is a hand to stay your stomach. Id. Don Sebastian.

Had not he better have borne Wat's nibbling of his plants and roots now, than the huntsman's eating of him out of house and home. L'Ettrange.

This fish plunging himself in mud, and then lifting up his head a little, casts out the string ; whicli the little fishes taking for a worm, and nibbling at it, he immediately plucks them both in together.

Crew's Museum. The roving trout

Greedily sucks in the twining bait,

And tugs and nibbles the fallacious meat. Cay.

A tree called the bejuco, which twines about other trees, with its end hanging downwards, travellers cut the Tii6 off it, and presently a spout of water runs out from it as clear as crystal. Derham.

Many there are who nibble without leave ; But none, who are not born to taste, survive.

Granvtilt.

Sheep grazed the field ; some with soft bosom

pressed

The herb as soft, while nibbling strayed the rest ; Nor noise was heard but of the hasty brook, Struggling, detained in many a petty nook. Cotcper.

No solemn, antique gentleman of rhyme, Who having angled all his life for fame,

And getting but a nibble at a time,

Still fussily keeps fishing on. Byron.

NIC7F.A, in ancient geography, the metropolis of Bithynia ; situated on the lake Ascanius, in a large and fertile plain ; in compass sixteen sta-dia ; first built by Antigonus, the son of Philip,

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and thence called Antigonea; afterwards completed by Lysimachus, who called it Nicaea, after his consort the daughter of Anti pater. According to Stephanus, it was originally a colony of the Bottiaei, a people of Thrace, and called Ancore; and afterwards called Nicaea, and Nice, in Asia Minor ; famous for the first general council.

NIC.SA, is also the name of other five ancient towns: *viz.* 1. In Corsica. ††† Diodorus Siculus. 2. In the Hither India ††† Arrian ; situated on the west side of the Hydaspes, opposite to Bucephale, on the east side. 3. A town of Liguria, at the Maritime Alps, on the east side of the Paulon near its mouth which runs between the Varus and Nicaea.††† Mela. 4. A colony of the Massilians ††† Stephanus ; the last town of Italy to the west ; now Nice on the Mediterranean. 5. In Locris ††† Strabo, near Thermopylae ; one of the keys of that pass. It stood on the Sinus Maliacus.

NICAISE (Claude), a celebrated antiquary in the seventeenth century, descended from a respectable family at Dijon, where his brother was proctor-general of the chamber of accounts. He became an ecclesiastic, and was made a canon in the holy chapel at Dijon ; but devoted himself to the study of antique monuments. In 1656 he resigned his canonry, and went to Rome, where he resided many years ; and, after his return to France, he held a correspondence with almost all the learned men of Europe. This took up a great part of his time, and hindered him from enriching the public with any large works. He published a Latin dissertation De Nummo Pantheo ; An Explanation of an Antique Monument found at Guienue, in the diocese of Aach; and A Discourse upon the form and figure of the Syrens, in which, following the opinion of Huet, bishop of Avranches, he undertook to prove that they were in reality birds, and not fishes or sea-monsters. He translated into French, from the Italian, a piece of Bellori, containing a description of the pictures in the Vatican, to which he added a Dissertation upon the Schools of Athens and Parnassus, two of Raphael's pictures. He wrote also a small tract upon the ancient music ; but while he was laboring to explain that antique inscription, Minerva? Arpatiae, which was found in the village of Velley, he died there in October, 1701, aged seventy-eight.

NICANDER, a native of Colophon, a celebrated grammarian, poet, and physician, who lived about the 160th Olympiad A. A. C. 140, in the

reign of Attalus king of Pergamus, who overcame the Gallo-Greeks. He lived many years in TEtolia, of which country he wrote a history. He wrote also many other works, of ###which only two are extant, *viz.* 1. Theriaca, describing in verse the many accidents attending wounds made by venomous beasts, with the proper remedies. 2. Alexipharmaca, wherein he treats poetically of poisons and their antidotes.

NICANDRA, in botany, a genus of the monogynia order and decandria class of plants ; natural order thirtieth, contortse : CAL. monophyllous and quadripartite : COR. monopetalous, tubulated, and parted into ten laciniae; the fruit

is an oval berry, which is grooved longitudinally, and contains many small angular seeds. There is only one species,

N. amara, a native of Guiana. The leaves and stalks are bitter, and used by the natives as an emetic and purge.

NICARAGUA, a woody province of the former kingdom of Guatimala, in Spanish America, bounded on the north by Honduras, on the east by the Carribbean Sea, on the west by Guatimala and the Pacific, and on the south by Costa Rica. It is about fifty miles square from east to west, and from north to south. The summers, though hot, are not unhealthy; and the winter has abundance of rain and storms. It is but occasionally diversified with meadows, but they are extremely fertile, and sustain large breeds of cattle, swine, goats, mules and horses. The other products are flax, hemp, long pepper, balsams, cotton, sugar, and turpentine. It also abounds in deer, birds, animals of the chase, and noxious insects. Here are likewise several silver mines, and the sands of the rivers furnish gold, in working which the natives excel. The capital is of the same name and contains about 1200 houses, with many convents, and four churches. It is the see of a bishop. Its port, Realexo, on the river Realexo. Long. 85## 4 W., lat. 11## 16’ N.

NICARAGUA, a lake of fresh water in the foregoing province, 120 miles in length, and forty-one in breadth. It has several islands, is navigable for large vessels, and of immense depth. It enters the sea by the east, through the river San Juan, which is sixty-four miles long, and on which a considerable trade is carried. The passage is guarded by the castle of Conception.

NICAUSIS, a name given by some authors to the queen of Sheba, or

Saba, or Ethiopia, who visited Solomon ; called Balkis by others, and Makeda by Mr. Bruce ; who gives a long history of her descendants from David I. her son, by Solomon, to the time when he visited Abyssinia, where the reigning princes still boast their descent from her. See ETHIOPIA. Josephus says she reigned over Egypt and Ethiopia; but Mr. Bruce restricts her dominion to Saba.

NICE, adj. & adv.~\ Saxon nepe ; Belgic

NICE'LY, adv. t nese; Dan. naje. Soft;

NICE'NESS, n. s. Blender; delicate; and

NI'CETY. J hence accurate ; cautious ;

fastidious ; squeamish ; requiring exactness : ' to make nice' is used by Shakspeare for to be scrupulous : nicely and niceness follow these senses : nicety is also used for minute accuracy; fastidious or squeamish delicacy ; minute observance or discrimination; a delicate viand.

Such a man was Argalus, as hardly the nicest eye can find a spot in. Id.

A strange niceness were it in me to refrain that from the ears of a person representing so much worthiness, which I am glad even to rocks and woods to utter.

Id.

He them with speeches meet Does fair intreat ; no courting nicety, But simple true, and eke unfeigned sweet.

Spenter.

The letter was not nice, but full of charge Of dear import. Shakspeare. Romeo and Juliet

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When my hours

Were nice and lucky, men did ransom lives Of me for jests. Id. Antony and Cleopatra.

He that stands upon a slippery place. Makes nice of no vile hold to stay him up.

Shakspeare.

Knaves in this plainness I larbour more craft, and more corrupter ends, Than twenty silky ducking observants That stretch their duties nicely. Id. King Lear. Only some little boats, from Gaul that did her

feed

With trifles, which she took for niceness more than need. Drayton.

Dear love ! continue nice and chaste ; For if you yield you do me wrong ;

Let duller wits to love's end haste, I have enough to woo thee long. Donne.

What mean those ladies which, as tho' They were to take a clock to pieces, go So nicety about the bride 1 Id.

A nice and subtle happiness I see Thou to thyself proposest, in the choice Of thy associates, Adam ; and wilt taste No pleasure, though in pleasure solitary.

Milton.

With how much ease is a young muse betrayed ! How nice the reputation of the maid ! Roscommon.

Nor be so nice in taste myself to know, If what I swallow be a thrush or no. Dryden. Unlike the niceness of our modern dames, Affected nymphs with new affected names. '.

Nor place them where "Roast crabs offend the nice-new of their nose.

Id.

Supposing an injury done, it is a nice point to proportion the reparation to the degree of the indignity.

L'Ettrange.

He ought to study the grammar of his own tongud that he may understand his own country-speech nicely, and speak it properly. Locke.

If reputation attend these conquests, which de-pend on the fineness and niceties of words, it is no wonder if the wit of men so employed should perplex and subtilise the signification of sounds.

Id.

Indulge me but in love, my other passions Shall rise and fall by

virtue’s nicest rules.

Additon.

As for the workmanship of the old Roman pillars, the ancients have not kept to the nicety of proportion and the rules of art so much as the moderns.

Id. on Italy.

Nor was this nicgty of his judgment confined only to literature, but was the same in all other parts of art. Prior.

My progress in making this nice and troublesome experiment, I have set down more at large.

Newton.

His conclusions are not built upon any niceties, or solitary and uncommon appearances, but on the most simple and obvious circumstances of these terrestrial todies. Woodward.

The inconveniences attending the best of governments, we quickly feel, and are nicely sensible of the share we bear in them. Atterbury.

The next thing of which the doses ought to bo nicely determined, are opiates. Arbvthnot on Coins.

Thus criticks, of less judgment than caprice, Curious, not knowing, not exact, but nice, Form short ideas, and offend in arts, As most in manners, by a love to parts. Pope.

\l nicely earring show thy wit ; But ne’er presume to eat a bit.

Swift’s MitcelUttiet. Love such a nicety requires, One blast will put out all his fires.

Id. Poems.

She is so nice and critical in her judgment, so sensible of the smallest error, that the maid is often forced to undress her daughters three or four times a day. Lav.

Having been compiled by Gratian, in an ignorant age, we ought not to be too nice in examining it.

Baker. Of honor men at first, like women nice,

Raise maiden scruples at unpractised vice.

E. Halifax.

After long drought, when rains abundant fall, He hears the herbs and flowers rejoicing all : Knows what the freshness of their hue implies, How glad they catch the largess of the sxiea j But, with precision nicer still, the mind He scans of every locomotive kind. Cowper.

NICE, an ancient town of Asia, in Natolia, now called Isnik, with a Greek archbishop's see. It is famous for the general council assembled here in 325, which endeavoured to suppress the doctrines of Arius. It was formerly a large, populous, and well-built place, and is still considerable. See ISNIK.

NICE, an ancient, handsome, and considerable city of the Sardinian states, the capital of the province of the same name, and a bishop's see, stands at the mouth of the river Paglion, on the Mediterranean, at the foot of a noble amphitheatre of hills, covered to the top with villas, gardens, and groves of fruit-trees. The Alps terminate the prospect on one side, and the Mediterranean on the other ; while from the back part of the basin in which the town stands rises a high rock, once surmounted by a castle, which adds considerably to the effect of the whole. Nice is still surrounded with a rampart, and is divided into the Old and New town ; the streets of the former are narrow, but those of the latter are tolerably wide and regular. The houses, particularly in the suburb called the Marble Cross, are neat, and painted in fresco, which gives them a clean and cheerful appearance : they are in general surrounded with gardens planted with orange and lemon trees. There are two public squares, one of which, surrounded with porticos, may rival any of the squares of the capitals of Europe. The other is bordered by a terrace, which serves both as a public walk and as a mound against the sea. The cathedral is the chief public building worth notice ; but here are also a theatre, baths, coffee-houses, a library, and delightful walks for the residents. These, added to the salubrity of the climate in consumptive complaints (arising, it is said, from the sheltered position), render Nice a favorite place of resort on the part of foreigners, particularly our own countrymen. The harbour, protected by a mole, is capable of admitting vessels of 300 tons. The trade consists chiefly in the export of oil, wine, silk, liqueurs, essences, and perfumery. Here are also manufactures of paper, silk, leather, soap, and tobacco. Population 18,500: ninety-two miles south-west of Genoa, and ninety-two south by west of Turin

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Nice has often been taken by the French, particularly in 1744, but restored after the treaty of Aix-la-Chapelle. The castle above named, much esteemed for its position, was destroyed in 1706 by Mareschal Berwick, the garrison being too small to defend the works. The city was again taken by ihe French under general Anselm and admiral Truguet, on September 19th, 1792, the Piedmontese garrison evacuating it on their approach, and long continued a part of the French empire.

NICE, a mountainous province or country oi the Sardinian states, bounded by Genoa, Mona-co, the Maritime Alps, the French department of the Var, and the Mediterranean. Though commonly considered in Piedmont, it is separated from it by the Alps : its superficial extent is 1230 square miles; its population 91,000. In the northern part the surface is chiefly occupied with pasturage; but in the south the culture of olives, wine, and fruit succeeds. The quantity of corn grown is small, but bees are reared with success, and honey is made in a large quantity. Several parts produce also valuable timber. Its manufactures are on a small scale, and consist of coarse woollens, netting, and soap made of olive oil. It is divided into the districts of Nice and Sospello, and has two towns and ninetv-nine villages.

The NICENE CREED was composed and established, as a proper summary of the Christian faith, by the council at Nice in 325, against the Arians. It is also called the Constantinopolitan Creed, because it was confirmed, with some few alterations, by the council of Constantinople in

381.

NICEPHORUS I., emperor of the East, was chancellor of the empire under the empress Irene, whom he dethroned and banished to Mitylene. He was killed in battle by the Bulgarians, A. D. 811.

NICEPHORUS II., from his popularity, was raised to the imperial throne in 963 ; and married the widow of his predecessor, Romanus. He drove the Saracens out of a great part of Asia, but proved a tyrant to his subjects ; and was assassinated by John Zimisces and other conspirators in 969.

NICEPHORUS III. was made emperor by the army which he commanded in 1077 ; but was dethroned by his general Alexius Comnenus, in 1080, and sent to a convent, where he died soon after.

NICEPHORUS (Calistus), a Greek historian, who flourished in the fourteenth century under the emperor Andronicus II., wrote an ecclesiastical history, in twenty-three books, eighteen of which are still extant, containing the transactions of the church from the birth of Christ to the death of Phocas in 610. We have nothing but the arguments of the other five books, from the commencement of the reigu of Herachtus to the end of that of Leo the philosopher, who died in 911. Nicephorus dedicated his history to Andronicus II. It was translated into Latin by John Langius, and has gone through several editions, the best of which is that of Paris, 1630.

NICEPHORUS (Gregory), a Greek historian, who was born about the close of the thirteenth

century, and flourished in the fourteenth, mide* the emperors Andronicus II. and III. John Palaeologus, and John Cantacuzenus. He was a great favorite of Andronicus II., who made lam librarian of the church of Constantinople, and sent him ambassador to the prince of Servia. lie accompanied this emperor till his death ; after which he repaired to the court of Andronicus III. where he was well received ; and by his influence the Greeks refused to enter into any conference with the legates of pope John XXII. But in the dispute which arose between Barlaam and Palamos, taking the part of the former, he maintained it zealously in the council held at Constantinople in 1351, for which he was cast into prison, and continued there till the return of John Palaeologus, who released him; after which he held a disputation with Palamos before that emperor. He compiled a history, which in eleven books contain all that passed from 1204, when Constantinople was taken by the Fra; ks, to the death of Andronicus III. in 1341. The best edition is that of the Louvre, in Greek and Latin, in 1702.

NICEPHORUS BLEMMIDAS, a priest and monk of Mount Athos, who flourished in the thirteenth century. He refused the patriarchate of Constantinople, being favorable to the Latin church, and much inclined to peace. In this spirit he composed two treatises concern ing the Procession of the Holy Ghost; one addressed to James patriarch of Bulgaria, and the other to the emperor Theodore Lascaris. These two tracts are printed in Greek and Latin by Allatius, who has also given

us a letter written by Blemmidas on his expelling from the church of her convent Marchesinos, mistress of the emperor John Ducas. There are several others of his pieces in the Vatican library.

NICERON (John Francis), was born at Paris in 1613. Having finished his academical studies with success, he took the habit of the Minims in 1632, his paternal uncle being a Minim. His taste for optics and the mathematics appeared early ; and he devoted thereto all the time he could spare, after he had completed his studies in theology. He tells usj'inthe preface to his Thaumaturgus Qpticus, that he went twice to Rome ; and that, on his return home, he was appointed teachei of theology. He afterwards accompanied F. De la Noue, vicar-general of the order, in his visitation of the convents throughout all France. He died at Aix in Provence, Sept. 22d, 1646, aged thirty-three. He was intimate with Des Cartes. His other writings are, L' Interpretation des Chiffres; and La Perspectif Curieuse.

NICERON (John Peter), so much celebrated on account of his Memoirs of Men illustrious in the Republic of Letters, was born at Paris, March llth, 1685. He was of an ancient and noble family, who were in very high repute about 1540. He studied with success in the Mazarine college at Paris, and afterwards at the college Du Plessis. Resolving to forsake the world, he consulted one of his uncles, who belonged to the order of Bar-nabite Jesuits, and introduced him as a probationer to that society at Paris. He was received in 1702, took the habit in 1703, and his vows in

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1704, at the age of nineteen. After this he was sent to M enlarges, to study philosophy and theology ; thence to Lcrches in Touraine, to teach those sciences. He received the priesthood at Poitiers in 1708. Not being of age to assume this order, a dispensation was obtained in his favor. The college of Montarges having recalled him, he was their professor of rhetoric two years, and of philosophy four. In spite of all these avocations, he preached often in most of the churches in the province, as well as in those of Paris. In 1716jjis superiors invited him to that city. He died after a short illness, July 8th, 1738, at the age of fifty-three. His works are, 1. Le Grand Febrifuge; or a dissertation to prove that common water is the best remedy in fevers, and even in the plague ; translated from the English of John Hancock, minister of St. Margaret's, London, in 12mo. 1720. It went through three editions; the last came out in 1730, in 2 vols. 12mo., entitled A Treatise on Common Water, Paris. 2. The Voyages of John Ouving-ton to Surat, and divers parts of Asia and Africa, containing the history of the revolution in the kingdom of Golconda, and some observations upon silk worms, Paris, 1725, 2 vols. 12mo. 3.' The Conversion of England to Christianity, compared with its pretended Reformation, Paris, 1729, 8vo. 4. The Natural History of the Earth, translated from the English of Mr. Woodward, by Ur. Nogues, with an answer to the objections of Dr. Camerarius : containing also several letters written on the same subject, and a methodical distribution of fossils, translated from the English by Niceron, Paris, 1730, 4to. 5. Memoirs of Men illustrious in the Republic of Letters, with a critical account of their works, Paris, 12mo. The first volume of this great work appeared in 1727 ; the others were ejiven to the public in succession, as far as the thirty-ninth, which appeared in 1738. The fortieth volume was published after the death of the au-thor, in 1739.

NICETAS (David), a Greek historian, a native of Paphlagonia, who lived about the end of the ninth century. He wrote the Life of St. Ignatius, patriarch of Constantinople, which was translated into Latin by Frederic Mutins, bishop of Ter-moli ; also several panegyrics on the apostles and saints, inserted in the continuation of the Bibliotheca Patrum by Combesis.

NICETA? ARHOMINATES, a Greek historian of the thirteenth century, called also Coniates, being born at Chone, or Colossus, in Phrygia. He was employed in several considerable affairs at the court of

Constantinople ; and when that city was taken by the French, in 1204, he withdrew with a young girl taken from the enemy, to Nice in Bithynia, where he married his captive, and died in 1206. He wrote a History, or Annals, from the doath of Alexius Coinnenus in 1118, to that of Baldwin I. in 1205; of which work we have a Latin translation by Jerome \VoUius, printed at Basil in 1557 ; and in the body of the Byzantine Historians, printed in France at the Louvre.

NICHE, 71. s. Fr. niche; \s.nuchio; Span. nicho. A hollow in which a statue, bed, &c., may be placed.

Niches, containing figures of white stone or marble, should not be colored in their concavity too black.

Wotlon.

They not from temples, nor from gods refrain, But the poor lares from the niches seize, If they be little images that please. Drydm.

On the south a long majestick race Of ˆEgypt's priests, the gilded nichet grace. Pope.

The heirs to titles and large estates are well enough qualified to read pamphlets against religion and high flying ; whereby they fill their niches, and carry themselves through the world with that dignitj which best becomes a senator and a squire.

Sicift'i Miscellanies. God gives to every man The virtue, temper, understanding, taste, That lifts him into life, and lets him fall Just in the niche he was ordained to fill.

Coicper.

NICHOLAS, CAPE ST., the north-west cape of the island of St. Domingo, is two leagues west of the town of this name, nine or ten leagues east of Cape Mayzi, at the east end of the island of Cuba, and forty-six leagues north-east by north of Cape Dame Marie, and, with this last cape, forms the enlrance into the Bight of Leogane. In July, 1811, a smart shock of an earthquake was felt here.

NICHOLAS ISLAND, a small isle in the West Indies, on the north coast of the island of Cuba. Long. 79►► 40' W., lat. 23►► 15' N.

NfCHOLLS (Dr. Frank), an eminent physician, born in London in 1699.

His father was a barrister at law ; and both his parents were of good families in Cornwall. After being educated at a private school in the country, Frank was removed to Westminster, and thence to Oxford, where he was admitted a commoner at Exeter college, under the tuition of Mr. John Ilaviland, on March 4th 1714. There he made rapid progress in all the usual academical studies, particularly in natural philosophy, anatomy, and dissections. Being chosen reader of anatomy, in that university, he employed his utmost attention to elevate and illustrate a science which had there been long depressed and neglected. About this time he visited the continent, and acquainted himself with the opinions of foreign naturalists on this his favorite study. On his return to London he repeated his physiological lectures, which were much frequented. Soon after, his new and successful treatment of the military fever, then very prevalent in the south of England, added much to his reputation. In the beginning of 1728 he was chosen F. R.S., and in 1729 took the degree of M. I), at Oxford. Dr. Nicholls was chosen a fellow of the college of physicians, London, June' 26th, 1732; and two years after, being chosen Gulstonian reader of Pathology, he made the structure of the heart, and the circulation of the Mood, the subjects of his lectures. In 1736, at the request of the president, he again read the (!'ilstonian lecture, on those parts of the human body which serve for the secretion and discharge of the urine ; and the causes, symptoms, and cure of the diseases occasioned by the stone. In 1731 > lie delivered the anniversaiy Harveiau oration. In 1743 he married Elizabeth, youngest daughter of the celt-NIC

brated Dr. Mead, by whom he had five children, of whom two sons and a daughter survived him. In 1748 he undertook the office of surgical lecturer, beginning with a learned and elegant dissertation on the Anima Medica. About this time, on the death of Dr. John Cunningham, one of the elects, Dr. Abraham Hall was chosen to succeed him, in preference to our author, who was his senior, without any apparent reason. He immediately resigned the office of chirurgical lecturer, and never afterwards attended the meetings, except when business of the utmost importance was in agitation. In 1751 he took some farther revenge in an anonymous pamphlet, entitled the Petition of the Unborn Babes to the Censors of the Royal College of Physicians of London. In 1753, on the death of Sir Hans Sloane, bart. in his ninety-fourth year, Dr. Nicholls was appointed to succeed him as one of the king's physicians, and held that office till the death of his royal master in 1760, when this most skilful physician was superseded with the offer of a pension, which he rejected. The causes, &c., of the uncommon disorder of which the late king died, *viz.* a rupture of the right ventricle of the heart, our author explained in a letter to the earl of Macclesfield, F. R. S., published in the Philosophical Transactions, vol. I. In 1772 to a second edition of his treatise De Anima Medica, he added a dissertation De motu cordis et sanjniinis in homine nato et non nato, inscribed to his learned friend and coadjutor the late Dr. Lawrence. Tired at length of London, and desirous of superintending the education of his son, he removed to Oxford. But afterwards returned to London, where he passed the remainder of his life in a literary retirement. He died in 1778, in the eightieth yeajr of his age.

NICHOLS (William), an English divine, son of John Nichols of Doddington, in Bucks, born in 1664. In 1679 he became a commoner of Magdalen Hall, Oxford, whence he removed to Wadham College, and took the degree of A. B. November 27th, 1683. In Oct. 1684 he was admitted fellow of Merton College. In 1688 he took the degree of M. A. ; and about the same time, being admitted into orders, he became chaplain to Ralph earl of Montagu, and was in September 1791 made rector of Selsey, near Chichester, in Sussex. He was admitted B. D. July 2d, 1692; and D. D. November 29th, 1695. His time was wholly devoted to study, and he published in Latin and in English no fewer than nineteen works in defence of Christianity, and of the church of England. He died in 1712. Of his numerous publications, those which are most generally known are, A Conference

with aTheist, an excellent work in five parts, and A Comment on the Book of Common Prayer and Administration of the Sacraments, &c. A volume of Letters in Latin between him and Joblonski, Ostervald, and Wetstein, &c., was presented October 28th, 1712, by his wi-dow to the archbishop of Canterbury ; and is preserved among the valuable MSS. at Lambeth.

NICHOLS (John), F. S.A., of London, Edinburgh and Perth, and nearly half a century editor of the Gentleman's Magazine, was born at Islington, February 1744, and became at an early

age an apprentice to Mr. Bowyer, the celebrated printer. ††† Being well educated and intelligent he was admitted into partnership with his master, on whose death he succeeded to the entire management of the typographical establishment; and in 1778 became coadjutor with Mr. David Henry, in the Gentleman's Magazine. On the decease of the latter the duties of editor devolved on Mr. Nichols, who inserted in almost every num-ber some of his own productions relating to British topography or antiquities. He was a member of the common council of the city of London from 1784 to 1801 ; and in 1804 was chosen master of the Stationers' Company. In 1808 his office and a great number of valuable works were destroyed by fire. Among his numerous publications were, Anecdotes, literary and biographical, of William Bowyer, 1778, 8vo. which formed the basis of his Literary Anecdotes of the Eighteenth Century, 9 vols. 8vo. ; illustrations of the Literature of the Eighteenth Century, 3 vols., 8vo., supplementary to the preceding work; and The History and Antiquities of Leicestershire, folio. This ornament to his profession ditd November 26th, 1826.

NICHOLSON (William), an ingenious miscellaneous writer, was born in London in 1758, and went to India in the maritime service when young. In 1776 he was an agent on the continent for Wedgewood's Staffordshire-ware ; and afterwards settled in London as a mathematical teacher. An academical establishment which he had formed proved unsuccessful; but he took out patents for various inventions, and published a Journal of Natural Philosophy, Chemistry, and the Arts. This, however, proved of little emolument to him. He was at one time engineer to the Portsea Water-works Company. He died, we regret to add, in poverty in 1815. His works are compilations, being executed with judgment, and many of them useful. The best are, An Introduction to Natural Philosophy, 1782,3, vols. 8vo.; The First Principles of Chemistry, 8vo. ; and a Dictionary of Chemistry, 2 vols. 4to. The Encyclopaedia published under his name is

understood to have been the work of Mr. Joyce.

NICIAS, a celebrated Athenian general, contemporary with Alcibiades, who was his rival. Being sent against Sicily, and not properly supported with supplies, he was obliged to surrender to the Sicilians, who put him to death, A. A. C

413.

NICIAS, a celebrated painter of Athens, who flourished about A. A. C. 322, and was universally extolled for the great variety and noble choice of his subjects, the force and relievo of his figures, his skill in the distribution of the lights and shades, and his dexterity in representing all sorts of four-footed animals, beyond any master of his time. His most celebrated piece was that of Tartarus or Hell, as described by Homer, for which king Ptolemy I. offered him sixty talents, or ––11,250, which he refused, and generously presented it to his own country. He was much esteemed likewise by all his contemporaries for his excellent talent in sculpture.

NICK, n. s. & v. a. Dan. and Swed. nik nick ; Teut. nicke, a twinkling of the eye, of LaL

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nutatw. A crisis or exact point of time ; hence a hit ; a trick ; something done accurately and cleverly : to hit; to touch luckily or at the right moment ; to fit or suit ; cheat or cozen.

Why should he follow you ? The itch of his affection should not then Have nicked his captainship, at such a point.

Shakspeare.

Words nicking and resembling one another, are applicable to different significations. Camden,

What in our watches that in us is found, So to the height and nick we up be wound, No matter by what hand or trick. Suckling.

That great instrument of state suffered the fatal thread to be spun out to that length for some politick respects, and then to cut it off in the very nick. Howel's Vocal Forest. That trick,

Had it come in the nick, Had touched us to the quick. Denham. When that, which in itself is not ordinary, nor could well be expected, doth fall out happily in the nick of an exigency, for the relief of innocence, or the encouragement of goodness ; this is a shrewd indication, that God's hand is then concerned.

Barrow.

Though dame fortune seem to smile, And leer upon him for a while ; She'll after show him in the nick Of all his glories a dog trick. Hudibras.

And some with symbols, signs, and tricks, Engraved in planetary nicks, With their own influences will fetch them Down from their orbs arrest and catch them. Id. This nick of time is the critical occasion for the gaining of a point. L'Ettntnge.

The just season of doing things must be nicked, and all accidents improved. Id.

Take away passion while it is predominant and afloat, and just in the critical height of it, nick it with some lucky or unlucky word, and you may certainly over-rule it. South.

Come, seven's the main, Cries Ganymede ; the usual trick Seven, slur a six, eleven a nick. Prior. NICK, n. $., v. a. & v. n. Dim. of nock. A notch ; and hence a score or reckoning often kept on notched sticks ; to cut or be cut in nicks or notches.

Launce his man told me, he loved her art of all nick. Shakspeare.

His beard they have singed off with brands of

fire ;

And ever as it blazed they threw on him Great pails of puddled mire to quench the hair, My master preaches patience, and the while His man with scissars nicks him like a fool. Id.

Breaks watchmen's heads, and chairmen's glasses, And thence proceeds to nicking sashes. Prior.

NICKEL, in chemistry, metallurgy, and mineralogy, a metal formerly classed among the semimetals. Several eminent chemists were long of opinion that it was a compound ; and even Bergman himself conjectured that it was a modification of iron ; but it is now universally ranked as a distinct metal. See CHEMISTRY, Index. ' It had its name,' says Sir T. Bergman, ' from this circumstance, that, though it has the appearance of containing copper, not the smallest particle of that metal can be extracted from it, even by fire.' It was first mentioned by N. Iliema, in 1094, in a book written in the Swedish language, concern-

ing the discovery of ores and other mineral substances. It was supposed by Henckel to be a species of arsenic alloyed with copper. Cramer classed it with the arsenical or cupreous ores ; though both they and all other chemists confess that they were never able to extract one particle of copper from it. Mr. Cronstedt, in 1751 and 1754, showed by many accurate experiments that it contained a new semimetal. The solutions of nickel in all the acids are green. Citric acid seeins not to act at all upon nickel. All the acids are deeply tinged by dissolving nickel. Ammonia dissolves it, and the solution is of a blue color; the fixed alkali dissolves it very sparingly, and forms a yellow solution. Nickel becomes the more difficult of fusion in proportion to its purity, so that at last it requires nearly as great a heat for this purpose as malleable iron. It is easily melted with other metals, but its great scarcity has prevented this matter from being thoroughly investigated. When well freed from cobalt, it easily unites

in equal proportions with silver, without any remarkable diminution of the whiteness or ductility of the latter. This mixture, fused with borax, tinges it of an hyacinthine color. Copper unites more slowly with depu-rated nickel, yielding a red and ductile metallic mass, which tinges borax of a reddish hyacinthine color. It produces only a brittle mass with tin; in which respect it differs from cobalt. It could not be amalgamated with mercury by tri-turation. Nickel is constantly attracted by the magnet, and that not at all in proportion to the quantity of iron it contains ; for the more it is purified from this metal, the more magnetical it becomes. M. Chenevix observed, that a very small portion of arsenic prevents nickel from being affected by the magnet. Richter found the same. When it is not attractible, therefore, we may be pretty certain that this is present. To separate the arsenic, M. Chenevix boiled the compound in nitric acid, till the nickel was converted into an arseniate ; decomposed this by nitrate of lead, and evaporated the liquor, not quite to dryness. He then poured in alcohol, which dissolved only the nitrate of nickel. The alcohol being decanted and evaporated, he redissolved the nitrate in water, and precipitated by potassa. The precipitate, well washed and dried, he reduced in a Hessian crucible lined with lampblack, and found it to be perfectly magnetic; but this property was destroyed again, by alloying the metal with a small portion of arsenic. Alloying it with copper weakens this property.

There are two oxides of nickel ; the dark ash-gray, and the black. If potassa be added to the solution of the nitrate or sulphate, and the precipitate dried, we obtain the protoxide. It may be regarded as a compound of about 100 metal with twenty-eight of oxygen ; and the prime equivalent of the metal will become 3‘6, while that of the protoxide will be 4‘6. The peroxide was formed by Thenard, by passing chlorine through the protoxide diffused in water. A black insoluble peroxide remains at the bottom.

Little is known of the chloride, iodide, sulphuret, or phosphuret of this metal. A compound, resembling meteoric iron, ha* been made

by fusing together about five or ten parts of nickel with ninety-five or ninety of iron. The meteoric iron from Baffin's Bay contains three per cent, of nickel, the Siberian contains ten percent, by Mr. Children's accurate analysis.

NICKNAME, n. s. Fr. nom-de-nique,a. name given by way of trick, joke, or in derision.

You nickname virtue vice ; For virtue's office never breaks men's troth.

Shakspeare.

My mortal enemy hath not only falsely surmised me to be a feigned person, giving me nicknames, but also hath offered large sums of money to corrupt the princes with whom I have been retained.

Bacon's Henry VII.

The time was when men were had in price for learning ; now letters only make men vile. He is upbraid-ingly called a poet, as if it were a contemptible nickname. Ben Jomon. Less seem these facts which treasons nickname

force, Than such a feared ability for more. Denham.

So long as her tongue was at liberty, there was not a word got from her, but the same nickname in derision. L'Ettrange.

NICOBAR ISLANDS. The Nicobar Islands are a group of islands twenty in number, forming a chain between the Andamans and Sumatra, in the bay of Bengal : about nine of them are of some size, and hence they are named in Malay the Sambilang, or Nine Islands. They are in general mountainous, and covered with impenetrable forests, in which are found the baringtonia, tournefortia, and borassus. The valleys are fertile, but receive no other cultivation from the natives than slightly turning up the soil, and planting the cocoa and areca, palms, yams, and sweet potatoes. The spontaneous fruits are the plantain, papa, pine apple, tamarind, mellori, orange, lemon, &c. The wild animals are the hog, hog deer (babeeroussa of the Malays), monkeys, squirrels, and rats. The natives breed a great number of hogs, which, being fed entirely on cocoa-nuts, are excellent ; they have also plenty of poultry. Among the birds are pheasants, pigeons, and doves, and the salangane, which builds its nest in the crevices of the rocks. The bays abound in fish ; and ambergris is sometimes found on the shores, which are also frequented by the green turtle.

All the larger Nicobars are inhabited by a race differing both from the natives of Hindostan and from the Malays, but approaching nearest to the latter. Their color is a deep copper, the lips thick and mouth wide ; the heads of new-born infants are flattened by pressing on the occiput, which has the effect of causing the teeth when they grow to project outward; their hair is long and black, they have little beard, and shave the eyebrows. Their clothing is a strip of cloth of the bark of a tree round the middle. Their huts resemble bee-hives, raised off the ground ten feet, and entered by a trap-door be-low, through which the ladder that serves to as-cend by is drawn up ; they are thatched with the leaves of the cocoa palm. Ten or twelve of these huts form a village, and they are only met with on the shores, the interior being covered with impenetrable wood and uninhabited. The men we indolent, obliging the women to cultivate

.he ground, and row in the canoes, while they amuse themselves with fishing, in which a harpoon or spear alone is used, for they have neither nets nor hooks and lines ; the fishing time is the night, when they light fires in their canoes, to attract the fish.

Marriages amongst these people are by mu-tual consent, but the man can put away his wife and take another at his pleasure. Adultery is punished with death when the female is of higher rank than her lover, but among men of the same class it is common to lend each other their wives for a leaf of tobacco ; barrenness is a great stain, and the odium is only got rid of on the birth of the third child. They are subject to few diseases, and when ill take no internal medicines, but rub the body with oil, while the priest, who is also the physician, repeats an incantation. Theit language is a dialect of the Maray ; their amusements are dancing and monotonous and melancholy vocal music ; for they have no instruments except the gong. They have no other religion than a superstitious belief in evil spirits. They bury the dead close to the huts, after the relations have howled over the corpse for several hours, and in the grave are deposited areca, cocoa-nuts, and other victuals. The names of the dead are never repeated, but an annual ceremony is performed at the graves, which consists in the women taking out the skull, washing it in cocoa-nut liquor and an infusion of saffron, and replacing it in the grave ; the following day several hogs are sacrificed, with whose blood the men smear their bodies, devour the meat, and wash it down with fermented toddy till quite drunk, when they sometimes fall out and fight, but as their only weapons are sticks, lives are seldom lost: for the rest, they are said to be hospitable, honest, and strict to their word. Some Danish

missionaries, who remained a considerable time at Katchall, had no success in bringing them to Christianity. The objects the islands afford for commerce are cocoa-nuts (which are esteemed the best in India) and cowries, but they are only taken off by occasional vessels passing to other places.

Carnicobar, the northern island, is six miles long and five broad, low and level ; it is well peopled, having many villages on the shores, of fifteen to twenty huts, each containing twenty persons or upwards. Batty Malve, or Bali-malu, also called the Quoin, from its shape, is not above four miles in circuit, and is composed of rock covered with a thin layer of soil, producing only shrubs and stunted trees ; it has neither inhabitants nor fresh water. Chowry is a singular lit-tle island, not above two miles in circuit, and scarcely raised above the level of the sea, except at one end, where is a perpendicular rock, towering above the cocoa-nut and other fruit trees that cover the low land : the islanders breed abundance of hogs.

Teressa is four leagues long and one and a half broad, elevated at each end and low in the middle; it is inhabited. Off its southeast end is Bompoka, a little mountain island, whose wo-men are remarkable for being much fairer than the other Nicobarians. Tillanchong is about four leagues long and one broad, forming a high rug-

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gecl mountain, and only inhabited by criminals Jriven from the oilier islands.

Camorta is five leagues long and one broad ; it is composed of two peninsulas, formed by a lagoon on the west. Among the trees with whicli it is covered is me poon, used in India for masts. It has some very fruitful spots, but is thinly inhabited ; and water, which is procured from wells, is scarce in the dry season.

Trincutte is a low leval island, close to the east side of Camorta ; it is entirely covered with he cocoa and areca palm. Nancowry island, off the south end of Camorta, four miles in circuit, rugged and uneven, bounding in limestone, thickly wooded, and with few inhabitants. The channel between this island and Camorta forms the harbour of Nancowry, capable of sheltering a large fleet from all winds. The Danes hoist a flag ‘here, but three or four Moravian missionaries are the only Europeans ; and, as we have before noticed, their mission is by no means successful.

Katchall, or Tillanchool Island, is nine leagues in circuit, moderately elevated, and covered with wood. Meroe, or Passage Island, is small and low, three leagues north-west of the Little Nicobar. The two southernmost islands are called the Little and Great Nicobars or Sambilangs. The Little Nicobar is four leagues long and two broad, moderately elevated ; its inhabitants are more shy than the other islanders, seldom visiting passing ships. The strait between the Little and Great Nicobar is named St. George’s Channel, and is three miles broad, but the bottom is foul, and the current sets strong through it ; whence ships prefer the Sombrero channel, between Nancowry and Meroe.

Great Nicobar, the southernmost island, is the largest, being ten leagues long and four to five broad, and so elevated as to be seen twelve leagues; it is less known than the other island, being out of the usual track of ships to or from the strait of Malacca.

NICODEMUS, a disciple of Jesus Christ, a Jew by nation, a member of the sanhedrim, and by sect a Pharisee. The scripture calls him a ruler of the Jews, and our Saviour gives him the title of a master of Israel. His private visit to our Lord by night ; his interesting conversation with him upon regeneration ; his judicious re-mark to the Jewish

Sanhedrim, that the law condemns no man unheard ; and his boldness at last in openly avowing himself a disciple of Jesus, when almost all the rest had forsaken him, and joining with Joseph of Arimathea in paying the last duties of respect to his body, are recorded in John iii. 1 21 ; viii. 50 ; and xix. 39, 40. It is said that Nicodemus received baptism from the disciples of Christ; and that the Jews, hearing of this, deposed him from his dignity of senator, excommunicated him, and banished him from Jerusalem : but that Gamaliel, who was his cousin-german, took him to his country house, and maintained him till his death, when he had him buried honorably near St. Stephen. There is extant an apocryphal gospel under the name of Nicodemus, which in some MSS. bears the title of the Acts of Pilate.

NICOLAI (Christooher Frederick), a learned VOL. XV.

German writer, was born at Berlin in 1735, Ins father being an eminent bookseller. After having been educated at Halle, he was sent to Frankfort on the Oder, to acquire a knowledge of his father's business, to whoso establishment he returned in 1752; but devoted much of his attention to literature. Being acquainted with Lessing and Mendelsohn, he engaged with them in the Library of the Belles ˆLettres, continued from 1757 to 1760, and forming 24 vols. 8vo. With Abbt he afterwards published Letters on Modern Literature, 24 vols. 8vo. ; succeeded by the General German Library, which he edited from 1765 to 1792, in 107 vols. After an interruption of some years the undertaking was resumed, under the title of the New General German Library, 1800 1805. Nicolai died January 8th, 1811, having, besides his periodical productions, published the Life and Opinions of Sebaldus Nothanker, a novel, which has been translated into English ; An Account of a Tour in Germany and Switzerland in 1781 ; Characteristic Anecdotes of Frederick II. ; and various other works.

NICOLAITANS, in church history, Christian heretics, who are said to have assumed this name from Nicolas of Antioch ; whose zeal and devotion recommended him to the church of Jerusalem, to be chosen one of the first deacons. Their infamous practices were expressly condemned by the Spirit of God himself, Rev. ii. 6. They allowed a community of wives, and made no distinction between ordinary meats and those offered to idols. According to Etisebius they subsisted but a short time ; but Tertullian says that they only changed their name, and that their heresies passed into the sect of the Cainites.

NICOLAS, one of the first seven deacons in the Christian church, a native of Antioch, a proselyte to the Jewish religion, and a convert to Christianity. He is generally supposed to have been the founder of the heretical sect of the Ni-colaitans; but many of the primitive writers are of opinion that he was rather, by some imprudence, the occasion, than the author, of that immoral heresy. Some even say that the founder of that sect was quite a different person.

NICOLE (Peter), one of the finest writers of his age, was born at Chartres in 1625. He adhered to the Jansenists, and joined in the composition of several works with Mr. Arnauld, whose faithful companion he was during the ten or twelve years of his retirement. He gave a Latin translation of Pascal's Provincials, and added a commentary to them. One of his finest works is his Essais de Morale. He wrote very subtlely against tl.e Protestants. His Treatise on the Unity of the Church is esteemed a masterly piece. He died in Paris in 1695, a few days after the publication of his treatise concerning the Quietists. He was well skilled in polite literature. To him is ascribed a collection of Latin epigrams, and of Greek, Spanish, and Italian sentences, which has a learned preface, and has gone through several editions.

Nicoi.V. (Francis), a celebrated French mathematician, born at Paris, 23d December, 16B3. Showine early signs of a piedilection for mathematics, M. Montmort undertook to educule him,

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and soon instructed him in the higher geometry. He first -attracted the public attention by detecting the falsehood of a boasted quadrature of the circle. One M. Mathulon thought himself so certain that he had discovered the quadrature, that he deposited in the hand of a notary public at Lyons 3000 livres, to be paid to any man who should prove the falsity of his solution; ××× the question to be decided by the academy of sciences. Nicole accepted the challenge, exposed the paralogism, and the academy decided that Nicole had clearly proved that the rectilineal figure, which Mathulon had given as equal to the circle, was not only unequal to it, but that it was even greater than the polygon of thirty-two sides circumscribed about the circle. Nicole gave the 3000 livres to the public hospital at Lyons. The academy appointed him eleve mechanician 12th March 1707 ; adjunct in 1716 ; associate in 1718 ; and pensioner in 1724, which he enjoyed till he died, on the 18th January 1758, in his seventy-fifth year. He was author of twenty-six valuable papers, inserted in the memoirs of the academy, between 1707 and 1747; which are particularly enumerated in Dr. Hutton's Mathematical Dictionary.

NICOLSON (William), D. D., a learned English prelate, born at Orten, in Cumberland, in 1655, and educated at Oxford. He became fellow in 1679-archdeacon of Carlisle in 1681 ; D. D. in 1702; and bishop of Londonderry in 1717. In 1727 he was appointed archbishop of Cashell, but died at Derry before he could take possession of this dignity. He was a learned antiquary, and published several works, particularly the English Historical Library in 1714, folio.

NICOMEDES, a geometrician, famous on account of his invention of the curve called conchoid. See CONCHOID. It appears that he lived soon after Eratosthenes, for he rallied that philosopher on the mechanism of his mesolabe. Geminus, who lived in the second century before Jesus Christ, has written on the conchoid, though Nicomedes was always esteemed the inventor.

NICOMEDES I., king of Bithynia, had no sooner taken possession of his father's throne, A. A. C. 270, than he caused two of his brothers to be put to death. The youngest, Ziboeas, having saved himself by timely flight, seized on the coast of Bithynia, then known by the names of Thracia, Thyniccia, and Thracia Asiatica, and there maintained a long war with his brother. Nicomedes being informed

that Antiochus Soter, king of Syria, was preparing to attack him at the same time, called in the Gauls to his assistance ; and on this occasion that people first passed into Asia. Nicomedes, having with their assistance repulsed Antiochus, conquered his brother, and acquired the possession of all his father's dominions, bestowed upon them that part of Asia Minor which from them was called Gallo-Grecia and Galatia. He enlarged and adorned the city of Astacus, which he called Tsicomedia. lie had two wives, and by one of them was persuaded to leave his kingdom to her son in preference to his elder brothers.

NICOMEDES III., surnamed by antiphrasis

Philopater, because he had murdered his fathe* to get possession of his crown. Having entered into alliance with Mithvidates the Great, king of Pontus, he invaded Paphlagonia.; and, having seized on that country, he tried likewise to make himself master of Cappadocia. This country, howev er, was then subject to his powerful ally ; who, thereupon marching into Bithynia at the head of an army, drove Nicomedes from the throne, and raised his brother Socrates to it. The dethroned prince had recourse to the Romans, who restored him to his hereditary dominions. For this favor they pressed him, and at length prevailed upon him, contrary to his own inclination and the opinion of his friends, to make inroads into the territories of Mithridates, with whom Rome wanted a subject of dispute. The king of Pontus bore for some time the devastations committed by Nicomedts with great patience, that he might not seem to be the aggressor ; but at last he routed his army on the banks of the Amnius, drove him a second time from his dominions, and obliged him to seek for shelter in Paphlagonia, where he led a private life till the time of Sylla, who replaced him on the throne

NICOPOLIS, or NIKOPOLI, a large town of Bulgaria, situated on a hill on the left bank of the Danube, has an ancient castle, and several handsome mosques and baths. It is a place of considerable trade on the Danube, the see of a Greek archbishop, and the residence of a Turkish sangiac. It is, however, ill built, and partakes of all the miserable political degradation of the country around. It is said to have been founded by Trajan, and is remarkable as the scene of a battle gained in 1396 by the Turks over the Christians. 164 miles north-west of Adrianople, and 276 north-west of Constantinople. Population 20,000. Long. 24►► 8' E., lat. 43►► 45' N.

NICOSIA, a town of Sicily, in the Val di Demona, chiefly remarkable

for its churches and convents. It has few manufactures, and a small export trade in corn and cattle. It is supposed to be the ancient Herbita, celebrated for its successful opposition to the arms of Dionysius, the tyrant of Syracuse, and is a strong military position. Inhabitants 13,000. Forty miles W. N. W. of Catania, and sixty E. S.E. of Palermo.

NICOSIA, the capital of Cyprus, stands in a fine plain, at the foot of a range of lofty mountains, and makes, with its numerous spires and minarets rising through the trees, a very picturesque appearance. Its ruined fortifications are conceived by Dr. Clarke still to exceed in magnificence those of almost every other city. The moat is half a mile wide : it is dry, or at most swampy, and grain is raised both in it and on the ramparts. Its appearance reminded Mr. Kinneir of Shiraz ; but the extent and solidity of the walls and bastions gave it an air of incomparable grandeur. The mutesellim, or covernor, inhabits the ancient palace of the Lusignan monarchs: but the finest edifice here is the Golhic church of St. Sophia, said to have been erected by Justinian. That of St. Nicholas is converted into a bezestein, and three others into mosques. There are also six Greek chapels, and * C'atho-NIC

lie convent. The chief pan of the town consists of brick and mud huts, erected on the ruins of ancient edifices ; and the bazaar, though well supplied, is only roofed with reeds and mats, which admit the rain. Here are manufactures of Turkey leather, small carpets, and printed cottons. The red leather is remarkable for its brilliant color. The carpets, though barely large enough to cover an English hearth, are of excellent workmanship. The cotton cloths are also well dyed, and a great traffic is carried on in medals and other antiquities. The city contains 2000 Mahometan and 1000 Greek families, with a few Armenians and Maronites. Long. 33►► 26’ 30’ E., lat. 35►► 13′ 14″ N. Under the Lusignan kings, Nicosia was of very great ex-tent, being nine miles, we are told, in circumference, and containing 300 churches, besides monasteries. The Venetians, on obtaining possession of it, reduced it, but surrounded it with very strong fortifications. In 1570 Selim II. took it by assault, and it has ever since remained under the dominion of the Turks.

NICOT (John), lord Villemain, and master of requests of the French king’s household, was born at Nismes, and was sent ambassador to Portugal in 1559; whence he brought the tobacco plant, which, from his name, was at first called Nicotiana. He died at Paris in 1603. He wrote a French and Latin Dictionary, in folio; A Treatise on Navigation ; and other works.

NICOTERA, a maritime town of Naples, in Calabria Ultra, is the see of a bishop, and contains a population of 6300. It was partly destroyed by the earthquake of 1783, and is thirty-two miles north by east of Reggio, and fifty S. S. E. of Cosenza.

NICOTIANA, tobacco, in botany, a genus of the monogynia order, and pentandria class of plants ; natural order twenty-eighth, luridae : COR. funnel-shaped, with a plaited limb; the stamina inclined : CAPS, bivalved and bilocular. There are seven species, of which the most remarkable is, ►►►

N. tabacum, the common tobacco plant. This plant was first discovered in America by the Spaniards about 1560, and by them imported into Europe. It had been used by the inhabitants of America long before ; and was called by the inhabitants of the islands yoli, and paetun by those of the continent. It was sent into Spain from Tabaco,

a province of Yucatan where it was first discovered, and whence it took its name. Sir Walter Raleigh is said to have been the first who introduced it into England, about 1585, and taught his countrymen to smoke it. Dr. Cotton Mather, however, (in his Christian Philosopher), says, that in 1585 one Mr. Lane carried over some of it from Virginia, which was the first that had ever been seen in Europe. Tobacco is commonly used among the oriental nations, though it is uncertain by whom it was introduced among them. Considerable quantities of it are cultivated in the Levant, on the coasts of Greece, and the Archipelago, in Italy, ai d the island of Malta. There are two varieties of this species, distinguished by the names of Oronokoe and sweet-scented tobacco. They differ onlv in the fieure of their leaves ; those of

the former being longer and narrower than the latter. They are tall herbaceous plants, growing erect, with fine foliage, and rising with a strong stem from six to nine feet high. The stalk near the root is upwards of an inch in diameter, and surrounded with a kind of hairy or velvet clammy substance, of a yellowish-green color. The leaves are rather of a deeper green, and grow alternately two or three inches from each other. They are oblong, and of a spear-shaped oval, and simple; the largest about twenty inches long, but decreasing in size as they ascend, till they are only ten inches long, and about half as broad. The face of the leaves is much corrugated like those of spinach when full ripe. When they are about five or six inches long the leaves are generally of a full green, and rather smooth ; but as they increase in size they become rougher, and acquire a yellowish cast. The stem and branches are terminated by large bunches of flowers collected into clusters, of a delicate red ; the edges, when full blown, inclining to a pale purple. They continue in succession till the end of summer, when they are succeeded by seeds of a brown color, and kidney-shaped. These are very small, each capsule containing about 1000; and the whole produce of a single plant is reckoned at about 350,000. The seeds ripen in September. Mr. Carver informs us that the Oronokoe, or long Virginian tobacco, is the kind best suited for bearing the rigor of a northern climate ; the strength, as well as the scent of the leaves, being greater than that of the other. The sweet-scented sort flourishes most in a sandy soil, and in a warm climate, where it greatly exceeds the former in the celerity of its growth, and is likewise much more mild and pleasant. Tobacco thrives best in a warm, kindly, rich soil, that is not subject to be overrun by weeds. In Virginia the soil in which it thrives best is warm, light, and inclining to be sandy ; and therefore, to be cultivated in Britain, it ought to be planted in a soil as nearly of the same kind as possible. See TOBACCO.

NICTATE, v. a. Lat. nicto. To wink. There are several parts peculiar to brutes which are wanting in man ; as the seventh or suspensory muscle of the eye, the nictating membrane, and the strong aponeuroses on the sides of the neck.

Ray.

NICTATING, or NICTITATING MEMBRANE, a thin membrane chiefly found in birds and fish, which covers the eyes of these animals, sheltering them from dust, or too much light; yet is so thin and pellucid that they can see pretty well through it.

NIDDUI, in the Jewish customs, is usfd to signify separated or excommunicated. This, according to some, was to be understood of the lesser excommunication used among the Hebrews. He that had incurred it was to withdraw himself from his relations, at least to the distance of four cubits : it commonly continued a month. If it was not taken off in that time, it might be prolonged for sixty, or even ninety days ; but if, within this term, the excommunicated person did not give satisfaction, he fell into the cherem, which was a second sort of excommunication ; and thence into the third sir., called shammau

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or shemmata, the most terrible of all. But Sel-den proves that there were only two kinds of excommunications, *viz.* the greater and less ; and that these three terms were often used indifferently.

NIDG'ET, 7i. s. I Sax. nrt>. The opprobri—

NID'ING, adj. \ ous term with which a man was anciently branded who refused to come to the royal standard. A coward ; a dastard.

NID1FICATION, n. s. Lat. nidificatio, m-dular. The act of building nests : time of remaining in nests.

NID'OROUS, adj.) French nidoreux from

NIDOROS'ITY, n.s. $nidor. Resembling the smell or taste of roasted fat : such a taste arising in eructation.

NIEBHUR,BertholdGeorge, a celebrated historian of Rome, was born at Copenhagen, 27th August, 1776, but before he had attained his second year, was carried by his father into Germany. He early evinced a predilection for classical learning, and adopted as friends and models of imitation, Voss, Klopstock, and Busch. From 1793 to 1794, he was engaged in the study of the law ; he visited the College of Edinburgh at the age of nineteen, and subsequently made a sort of scientific or literary tour through England. Upon his return to his native country he was made private secretary to the Danish Minister, and Director of the Bank. In 1806, he was taken into the Prussian service, and made a privy-counsellor; and in 1811 delivered his first lecture upon Roman History, at the University of Berlin, by which his classical fame was permanently established. During his residence in Rome, he became acquainted with Angelo Maio, and at Verona discovered the institution of Caius : he assisted Maio in his publication of the fragments of Cicero. Here he wrote several Latin treatises in the Atti del' Academia di Archeologia, and a Ger-man essay on the age of Curtius and Petronius. In Switzerland he found out the poem of Mero-bandes, the latest perhaps of the Roman poets ; and on his return, delivered lectures in the university of Rome. After a life of universal activity in the discovery of truth, and illustration of dark parts of history, Niebhur died January 2, 1831, at a period of life when much still of an useful character might have been expected from him.

NIEBLA,a considerable town of the province of Seville, Spain, on the river Tinto. It is surrounded with a wall, and confers the title of count on the eldest son of the house of Medina Celi. In the neighbourhood is a considerable copper mine. Population 9000. Eleven miles N.N.W. of Moguer. Long. 6►► 28' W., lat. 37►► 29' N.

NIELD (James), a philanthropist of the Howard school, was born at Knutsford in Cheshire, May 24th, 1744, and was in the first instance designed for agriculture. In his sixteenth year, however, he became apprentice to a gold-smith in London, and afterwards commenced business in St. James's Street, where he realised a fortune. He now devoted himself to the employment of his well-earned leisure ; explored all the prisons of the country with a view to their amelioration. It wa►►. his constant practice to

wait upon the magistrates in the cities and boroughs, and represent to them what he saw amiss in the jails, or what his experience suggested as improvements. In this way he occupied nearly thirty years, and by his example and communications to the magazines, particularly the Gentleman's, excited beneficence in others, lie was also the chief founder of the society for the relief1 and discharge of prisoners confined for small debts, formed in 1773. Mr. Nield died greatly lamented, February 16th, 1814.

NIEVRE, DEPARTMENT OF THE, is formed out of the former province of Nivernois,and takes its name from the river Nievre, which waters it from north to south. The chief place of this prefecture is Nevers, and it consists of four arrondissements or subprefectures; Nevers, containing 76,831 inhabitants, Chateau Chinon 53,964, Clamecy 65,375, and Cosne 61,820; being a total population of 257,990 souls, on an area of 2988 square miles, yielding a territorial revenue of 12,050,000 francs. It is subdivided into twenty-five cantons, and 330 communes, is in the twenty-first military division, having a royal court at Bourges and a bishopric at Autun, and consisting of two electoral arrondissements, which send four members to the chamber of deputies. This department is bounded on the north by that of the Yonne; on the east by those of the Cote-d'or and the Saone-et-Loire, on the south by that of the Allier, and on the west by that of the Cher.

The eastern part of the country is covered with high mountains, and vast sandy plains between them, which are, however, tolerably fruitful. There are some forests which supply Paris with great quantities of wood and charcoal ; vineyards of excellent quality,

andifine pastures for cattle and horses. It is intersected in every direction by rivers and rivulets, which work many forges and manufactories, and facilitate the transport of wood from its vast forests, which would otherwise be very difficult on account of the impassable state of the roads for some part of the year. The climate is temperate, but rather cold than hot, and more moist than dry, the face of the country being so much varied with plains and mountains. The soil, which is gravelly, is cultivated with oxen and horses, and yields more than a sufficient supply for its inhabitants. It consists of 188,000 hectares of forest land (chiefly oak, hornbeam and beech), and 12,000 hectares of vineyards, yielding a mean produce of sixteen francs eighty-five centimes per hectare of arable land.

This country produces all sorts of grain, vegetable, fruit, truffles, wines of a tolerably good quality, &c. It has mines abounding in iron, lead, and coal, and quarries of marble, granite, gray whetstones, yellow ochre, and quartz sand. There are mineral springs at Pouges, and a hotwell at St. Ilonore; also a royal depot of standard measures at Corbigny. The inhabitants manufacture coarse cloths, woollen stuffs, candles, violin strings, enamelled works, metal buttons, nails, anchors, bullets, bright ironmongery, cutlery, and porcelain. They have forges, blast-furnaces, delf-factories, glass-houses, brass-foundries, tan-yards, and a royal

foundry for anchors for the navy. The trade consists in all the above articles, together with copper, iron-plates, timber for staves, vine props, millstones, &c. The principal rivers that water this department are the Nievre, the Allier, the Yonne, the Nohain, the Beauvron, the Aron, and the Alaigne, and it is crossed by the great roads of Moulins, Bourges, and Paris.

NIEMECZ, NIMIEC, or NEMES, a fortified town of Moldavia, situated on a mountain, at the foot of which runs the river Niemecz, which afterwards joins the Moldava. Seventy-six miles W. N. W. of Jassi, and 280 north-east of Belgrade.

NIEMEN, a river of Lithuania, which rises a few miles south of Minsk, and passes by Grod-no and Kowno, where it joins the Wilna. It soon after enters East Prussia, changing its name to Memel.

NIEUWLAND (Peter), late professor of mathematics and natural philosophy in the university of Leyden, was born at Diermermeer, a village near Amsterdam, November 5th, 1764. His father was a carpenter, and being fond of books, and acquainted with mathematics, instructed his son till he was in his eleventh year. Bernard and Jerome De Bosch, two of the wealthiest men in Amsterdam, then took him under their patronage. The former took him into his house in his eleventh year, and the latter instructed him for four years in Latin, Greek &c. He studied philosophy and mathematics under Wyttenbach. From September 1784 to 1785 he studied at Leyden; and afterwards at Amsterdam, under professor Van Swinden. He soon made himself master of the great Lavoisier's theory of Chemistry. But his attention was chiefly directed to three branches of science seldom pursued by the same person, *viz.* poetry, mathematics, and natural philosophy. In 1786 he was appointed a member of the commission chosen by the admiralty at Amsterdam, for determining the longitude and improving marine charts. In this labor he was employed eight years ; and prepared also a Nautical Almanac, with tables, &c. In 1787 he was invited to Amsterdam by the magistrates to give lectures on Mathematics, Astronomy, and Navigation. In this situation he wrote his useful Treatise on Navigation, published at Amsterdam 1793. In 1789 he was chosen a member of a learned society, whose chief objects were chemistry and philosophy. For this society he wrote Recherches Physico-chymiques, in four parts ; published in 1792 ××× 1794. He also wrote fo" it other ten papers ; 1 . On the Newest Discoveries in Astronomy ; 1788: 2. On the Figure of the Earth; 1739: 3. On the Cause of Comets; 1790: 4. On Mathematics: 5. On the Light of certain Fixed Stars; 1790: 6. On Spherical Trigonometry; 1791: 7. On the Value of the Sciences; 1791 : 8. On the System of Lavoisier; 1792; 9. On the Selenotopographiaof Schroeder; 1793 : 10. On Instruction ; 1793. In July 1793 he was invited to be professor at Leyden, which he accepted ; but died of a fever and inflammation of the throat on November 13th, 1794. His father was a Lutheran, and his mother a Baptist; but he himself wus a Calvinist. NIGER. The name by which a river of Central Africa has been long designated ; while its real sources, actual course, and place, as well as manner of termination, seem almost unknown alike to modern as to ancient geography : the name of such a river, Niger, is indeed wholly unknown in Africa. We may there hear of the Nil, or Nel (which seems only to signify running water) ; Neel el Abeed (or river of slaves) ;

Neel Kibbeer; Joliba (or Great Water) ; and Guin er Jinn ; not to add those of Quolla or Quarra, the Yeou, &c. ; ??? as a large central stream (if these names all belong to the same stream) running from east to west. The Moors are said to call it Neel, or Nil Abeede, the Nile of Negroes ; identifying it, without hesitation, as the same with the Egyptian Nile.

The existence of such a river was known to the ancients. Herodotus mentions an expedition into the heart of Africa, undertaken by ‘ Nasa-monians,’ who, being taken prisoners, were carried to a city inhabited by negroes, and situated on the banks of a river flowing to the east. This he infers (with the intelligent Quarterly Reviewer of our own day, see No. 58) to be probably a remote head of the Nile. Strabo, Mela, and Pliny, represent the same stream as rising in the western extremity of Mauritania; then as passing through unknown regions of great ex-tent, and, according to some accounts, for a great space under ground, when it re-appears in Upper Ethiopia. Ptolemy, however, rejected altogether, with a large class of modern geographers, the idea of a communication between the Niger and the Nile. He describes in detail the course of what he calls the former, and represents it as terminating on the west in mount Mandrus (qu. Mandingo ?) whence it gives rise to several extensive lakes.

The latest light upon this singular geographical problem (i. e. that furnished by the discoveries of major Denham and captain Clapperton), compared with recent scattered accounts from other sources, seems to throw the subject into greater confusion than ever: but we shall endeavour to bring before our readers the information that is most to be relied upon, not pledging ourselves, with major D., to decide which is ‘ the true Niger water.’

The Arabian geographers, to resume the progressive geography of the stream, uniformly represent the Niger as flowing from east to ivest into the sea, or a large lake : some of them identifying it with the Nile, or as rising from the same source, but forsaking it altogether very early in its course westward. Leo Africanus retains the delineation of the Niger flowing from east to west, and falling into the ocean ; but, instead of deriving it from the same source as the Nile, he makes it flow from the lake of Bor-nou, situated deep in the interior of Africa; and his system was followed in all the European maps of the sixteenth and seventeenth centuries, in which the Senegal, the Gambia, and i!te Rio Grande, are all made the estuaries of this ureat central river. In the eighteenth century Dclislc and D’Anville became fully satisfied that tins delineation was erroneous, and constructed maps in which the Niger was represented as flowin;: to the eastward : but, instead of

a single stream traversing the whole breadth of Africa, D'Anville

distinguishes ••• 1. The Senegal, flo\in;j westward, and falling into the Atlantic ; 2. The Ni-ger, flowing eastward, and terminating in the lake Reghcbil, in Wangara ; 3. Another river, yet further to the east, flowing in the opposite direction. A lake called Maberia was divided by his map into two parts, one of which became the source of the Senegal, which is represented as having its course westward, and the other of the Niger, which is said to flow eastward. All therefore of what Park saw of the latter river in Bambarra is in fact the Senegal of D'Auville, and is made to flow westward.

At length, however, the enterprising traveller we have named was destined to throw great light 011 a portion of its actual course. After penetrating various kingdoms of Western and Interior Africa, and being long captive among the Moors, Mr. Park came at last to Sego, the capital of Bambarra, where he beheld what he calls ' the long sought majestic Niger, glittering to the morning sun, as broad as the Thames at Westminster, and flowing slowly to the eastward.' See our article AFRICA. He then traced its course downwards to Silla, and upwards to Bammakoo, where it first, he says, becomes navigable, an extent of about 300 miles. Here k was reported to rise at no great distance, near Sankari, in Manding.

After the discoveries of Park, the opinion which became generally established was that of major Rennell, by which this great stream, after issuing from the lake Dibbie, was supposed to flow eastward through the countries of Houssa and Cassina, till it was lost in the lakes or marshes of Wangara, or absorbed by evaporation. An inferior stream it was supposed, however, might flow still farther east, arid exhaust itself in the lake of Fittre, on the southern frontier of Bornou, the Cauga of the Arabian geographers. But Mr. Jackson, the intelligent traveller in Morocco, and Hornemann, both state the universal conviction there to be, that the Niger flows eastward, and joins the Nile. The Moors are said by the former to express their astonishment when they hear Europeans doubting the identity of these streams; and

Hornemann observes that, in Fez-zan, he never met with any one who gave a different opinion.- Mr. Jackson also states the positive assurance he received from a Moorish merchant of Jenne, that he, with some companions, had embarked at that place, sailed down the Niger and the Nile, and arrived by water at Cairo. The Niger of this merchant, however, was found by him, in many places, to be very low, and sometimes so entirely dried up, that it was necessary to take up their boats and carry them over land. Ilornemann was also informed that the communication between the Niger and the Nile was very small, unless in the rainy sea-son. Such details, we confess, invalidate with us the whole accounts so furnished: and Browne approached, in Darfur, very near to the track by which the Niger must have flowed, in order to reach the Nile. He moreover gives an account of the sources of this last river, as situated in the mountains of Donga; while all the other great rivers of that part of Africa are represented by lain as (lowing to the westward. Another hypothesis, by which the Niger is supposed, after a long course through Central and Southern Africa, to pour itself into the Atlantic by the Congo, was originally suggested to Mr. Park by captain Maxwell, a retired slave-trader, and gave rise to the unfortunate expedition under captain Tuckey, the results of which we have noticed in our general article AFRICA. Major Peddie, who commanded one branch of it, fell a sacrifice to the climate before he had even approached the Niger; and captain Tuckey did not penetrate above 300 or 400 miles up the Congo, so that he could observe nothing material as to its derivation. We have also noticed in that article the account given by Sidi Hamet, a native merchant, to Riley. He described himself to have followed the course of the Niger till it took a southeast, and finally a south direction, which it continued to follow at the interior city of Wassanah; and that it finally took this direction to the sea. Bowditch, another victim to our ardor for African discovery, obtained, during his residence at Ashantee, some information that has of late been partially corroborated. The Niger, according to these accounts, after passing through the lake Dibbie, separates near Timbuctoo into three branches. One, called the Gambaroo, flows E. N. E. through the countries of Houssa and Cassina, till it terminates in the great lake of Caudee or Chadee. Another, bearing the name of Joliba, flows northward to a country called Yahoodee, which carries on a great trade with Tombuctoo. The third, or main stream, under the name of Quolla, flows E.S.E. through Gauw, Zamfarra, Noofee, Bous-sa, and other countries, till, after a long course, it also separates. One branch rolls eastward, and, turning to the north, forms the Egyptian Nile ; the other, flowing southward, and again separating, pours itself into the Southern Atlantic Ocean by several channels, of which the Congo is

the chief.

We may now remind the reader of the researches of major Laing in Soolima, and his confident opinion that he was pointed to the sources of the Niger in the Loma hill, not far from those of the Rokelle. After all he could only lay down those sources, according to the information he received, of an important stream which runs eastward, rising there (he did not visit them), i. e. in lat. 9 25' N., and long. 9 45' W. At its source, he says it is called Tembie ; that he was told it runs iue north to Kang Keng ; where it takes an easterly course, and exchanges the name of Tembie for Ba Ba and Joli-Ba, which it retains to Sego, Jenne, and Timbuctoo. See AFRICA.

Such is a statement of the principal facts and opinions relating to this intricate subject, before the expedition of Messrs. Denham and Clapperton, in 1821. The writer in the Quarterly Review enabled us, in the article just referred to above, to anticipate the published account of the discoveries these enterprising travellers have effected ; but his own opinions, No. 62., on the subject of there being in fact two streams that have been called the Niger, are so important, that we must here extract them.

He notices the difficulty of reconciling the notion, that the Joliba (the Niger of Park) and

the Quolli or Quorra, are the same river, and continues ' lu the present charts we perceive the Joliba, on leaving the lake Debbi, parted by the island of Jinbala into two streams, which are made to reunite a little before they reach the meridian of Timbuctoo. We know of no positive information that this is the case. Mr. Dupuis learned from a Mahommedan sheik, who had formerly been a great trader and traveller, that the Joliba was a river quite distinct from Quorra, both of them issuing out of a sea or lake, which he sometimes called Bahr Gimbala, and at others Bahr Deby, or Zeby ; but he does not mention their reunion. It is, however, to the eastward of the meridian of Timbuctoo that we have certain information of the two streams, somewhere about Nyfte, where a great lake, named in some charts the Bahr el Soudan, is placed, on the eastern side of which the two branches appear to issue. The authorities for the two streams are as

follow : In one of the several routes which Mr. Dupuis collected from Mussulmen at Comassie, and which he prints in the Arabic language, the traveller, in going from that city, first reaches the river Ghulbi, and, proceeding northerly for six days, says, ‘ There is a great sea or river (for bahr signifies either) the like of which is no where to be found ; it is called Kourra (Quorra) ; and in one day from hence you will reach the city of Youri, which is a very great city’ ××× which Youri, we know, is situated upon, and gives the name to, the Yeou. Now this agrees in a very remarkable manner with the account given by Abou Bouker (the native of Cashna, who was to have accompanied Belzoni to Timbuctoo), of his journey with some Coola merchants, from his native city to the Bight of Benin. He first crosses the Quorra (the Yeou), running towards the rising sun ; five days afterwards, proceeding to the south, he arrives at the Ghulbi, a larger river running in the same direction, which he understood passed through Nyffe, and joined the for-mer river tomewhere towards Bornou. The man, who called himself a son of Hornemann, told major Denham that the Quorra of Nyffe went off to the southward, ran between two chains of mountains, passed Loggun, where it was called the Shary, and fell into the Lake Tsad ; every part of which, with the exception of the first, has been confirmed. The young Fighi stated, that at Kabra the name of the river was Quolla, and that one of its branches passed Nyffe, and ran to the ‘outhward between mountains. And lastly, \ve observe in the route of a Jennie Moor, who had travelled into Egypt (procured at Comassie by Mr. Hutchinson), that after leaving Youri and Bouse, on the Quolla, he branches off to the south, and in that route the names of Nofee, (Nyffe) Atagara, Shary river, and Chadee lake (Tsad) come in succession.

‘ We know from our travellers,’ adds this writer, ‘ that at the city of Youri, in Haoussa, the Quorra first changes its name to Yeou ; and that on or near the banks of this river are situated, in succession, the cities or towns of Sockatoo, Cano, Murmur, Katagum, Old Birnie, Larec, and many others, not one of which occurs in the southern route of the Jennie traveller. We know also that the branch called the Yeou fulls into

the Tsad at its northern, as the Shary does at its southern, extremity. The intelligent Burck-harclt was well aware of the Yeou which Hornemann called Tsad, but he strongly questioned its identity with the Joliba, which he supposed to take a more southerly direction. Dupuis understood that, as far as the city of Youri, the name of the river is Quorra ; but that the name of Joliba never occurs in this line.

On the whole, we are of opinion, that two rivers, or two branches of the same river, cross northern Africa from west to east ; that the upper branch is distinguished by the names of Quolla and Yeou, and the lower by those of Ghulbi and Shary ; and that the name Joliba (which is neither more nor less than the Great River) ceases at an early part of its course. Major Denham, who was once incredulous that the Yeou could be the Niger, on account of its diminutive size, (which, in point of fact, is no objection), is now so satisfied that it is at least a branch of that river, that he sends a bottle of its water to his friend the consul of Tripoli, as a specimen of the true Niger water. He adds, ‘ I have a negro friend here, who has seen the river nearly the whole of its course.’ ‘

We shall venture further to transcribe his less established speculation as to the juncture of the Niger and the Nile. Having thus got the waters of the western side of Africa into the great lake of Bornou, into which they all flow in consequence of the general inclination or dip of the country from west to east, the next and most difficult question is, how to dispose of them ; or, in other words, to ascertain whether this easterly inclination of the surface continues beyond the Tsad ; for, from this point we have, as yet, no information, except that the Bahr el Abiad (whose source is unknown) flows gently from the westward into the Nile, which is of itself a strong fact in favor of the continuance of the general easterly slope of the country. That the waters do not stop in the Tsad is now as certain as that they are there collected ; to suppose the contrary would involve an anomaly in nature, if not a physical impossibility. We are perfectly ready to grant that evaporation, from the extensive surface of the Tsad, might carry off all the water which is brought down into it by the two rivers above mentioned, and other tributary streams formed during the rainy season ; but then we are also prepared to contend that, after a constant succession of evaporations for many thousand years, and a constant influx of the wash-ings of a saline soil, the water at this day would necessarily be salt ; as is the case with regard to several lakes between Mourzouk and Bornou, the salt of whose margins exhibits the appearance of snow, and whose waters ►►►. re not less saline and bitter than those of the lake Asphal-tites, or Dead Sea ; but it is now beyond all question that the water of the Tsad is perfectly fresh ; that is to say, as fresh as that of any of the rivers which fall into it. This lake must, therefore, necessarily, as we think, have an outlet.

‘ .Major Denham learnt from several intelligent Shun Arabs that a river runs from \Vady to the southeast, and continues to flow in that direction till it joins the Bahr el Abiad : this is undoubt-

edly the Misselad, which Browne understood to run to the north-west, ••• the Arabs, as well as more intelligent people, reckoning the direction of the current of a river according to its bearing from the place from which they happen to look towards it at the time. No such river, nor any river running in that direction, was ever seen or heard of, yet, had it existed,.it must have crossed various routes of caravans leading to Fezzan. The same Arabs assured the major that the Bahr el Abiad flows out of the Tsad, which they described as having, in the first part of its course, terrific eddies and whirlpools, drawing the waters among rocks, and into subterraneous caverns, from whence, after a course of many miles, it rushes between two hills, and pursues its way eastward. This is certainly the common belief among the people of Bornou and its vicinity. When we couple these notices with the information received by the lamented Burckhardt, that the river to the eastward of the lake of Bornou, which passed to the southward of Darfoor, was named the Shary, we think that very litlle doubt can be entertained that the Joliba, the Quolla, the Shary, the Yeou, or, if we are so pleased to call it, the Niger of Africa, unite their waters in the great lake of Bornou, and finally terminate in the Abiad, which is in fact the Nile of Egypt, or at least its main branch, and without which that river would be dry for half the year. M. Linant saw the Azrek above the Abiad, when not ankle deep, and he too understood that the latter came from the westward out of a large lake. Another Frenchman also, of the name of Hey, it seems, has been 180 miles up this stream in a westerly direction, but no account of his journey has yet appeared.

‘Two points only are now wanting, in default of actual inspection, to determine the probability of the aforesaid conclusion ••• the height of the Tsad, and the height of the point of junction of the Bahr el Abiad with the Nile, above the level of the sea. The former, indeed, would be sufficient ••• and it has been stated, but without data, in one of Dr. Oudney’s letters, to be about 12OO feet; that of the latter seems to have escaped the notice, or rather exceeded the means, of any traveller, Bruce excepted, who certainly has stated boldly the

height of the ⁂plains of Sennaar ; but on this subject he would Letter have consulted his character for science by being silent. We have seen nothing in the re-cent accounts of the fall of the Nile, which mi-litates against the assumption of 1200 feet being sufficient to carry off the waters of the Tsad, and convey them to the Mediterranean ; for if we suppose the distance from the eastern side of the lake to the mouth of the Abiad to be 1100 miles, and from ihence to the mouth of the Nile about the same, we have 2200 miles with a fall of 1200 feet, or about seven inches per mile, which will be found ns much as is necessary to produce that lazy current of the Abiad, which induced .Mruce to call it a dead-flowing river. The Ama- /ons is, very far from being a dead-flowing river, and yet, according to M. de la Condamine, its descent is somewhat less than seven inches per mile; and major Honnel has staled, from ex-perinn nt, that the Changes has a descent across

the plains of Hindostan (1300 miles in extent from the feet of the mountains) of nine inches per mile, in a direct line ; but that the slope of its channel, taken along its windings, is not more than four inches per mile ; yet this descent, small as it is, gives to the river in the dry season, a current of three miles an hour. These facts may satisfy the most sceptical that, however they may dispute the probability, they have no grounds to deny the possibility, of the identity of the Niger and the Nile.'

The publication of the papers of Messrs. Den-ham and Clapperton so far disturbs the scheme of our author, that we are now furnished from the unquestionable testimony of captain Clapperton, with a second Yeou, rising south of Kano, the capital of a province of this name in Soudan ; and situate in 12⁂ 19' N. lat., and 9⁂ 20' E. long. This flows east into the Tsad lake, while the old river, which we have been accustomed to call the Niger, turns short at Timbuctoo, flows southeast to Nyffe, or to about 10⁂ S. lat.; and, as Sultan Bello of Sackatoo informed our traveller, afterwards takes a southern course to the sea, which it reaches somewhere about the Bight of Benin. This is, therefore, a third Niger in the western part of Africa.

Captain Clapperton having greatly conciliated the good graces of the sultan of the Felatahs, at Sackatoo, and obtained his engagement that a new expedition from the Western coasts should be forwarded to the utmost of his power in its pursuits ; this gentleman, we regret to add, was sent on a second exploratory journey into these regions, and died, according to the account of his servant Lander, at Sackatoo, of

dysentery, 13th of April, 1827. Sultan Bello on this occasion seems to have been less courteous than before, and alleged the existence of a war between himself and the sheikh of Bornou as a reason for being unable to forward the expedition, or indeed to suffer it to proceed into that country. Our traveller, therefore, at the period of his death was - waiting for permission to proceed to Timbuctoo. Thither, in the interim, government had despatched major Laing, by way of Tripoli, and he was afterwards massacred by the natives. His servant, Richard Lander, has since published an account of his travels. See SACKATOO, SOUDAN, and TIMBUCTOO.

NIG'GARD, n. s.. adj., & v, u.~\ Goth, and NIG'GARDISH, adj. I Swed. nirc—

NIG'GARDLY, adj. & adv. > gur ; Isl.

NIG'GARDLJNESS, n. $. \ niugˆr ;

NIG'GARDKESS. } Sans, nigm:

A mean fellow; a miser; a curmudgeon : sordid ; avaricious : to niggard is to stint ; supply meanly or sparingly : niggardish is having a disposition to meanness or avarice : the other words follow these senses.

Then let thy bed be turned from fine gravel to weeds or mud. Let some unjust niggard* make weres to spoil thy beauty. Sidney.

I know your mind, and I will satisfy it ; neithei will I do it like a niggardly answerer, going no farther than the bounds of the question. Id.

All preparations, both for food and lodging, such

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as would make one detest niggardness, it is so sluttish a vice. Id.

Most free of question, but to our demands Niggard in his reply. Shakspeare. Hamlet,

The deep of night is crept upon our talk, And nature must obey necessity : Which we will niggard with a little rest.

Shahspeare.

I have long loved her, followed her, ingrossed opportunities to meet her ; fee'd every slight occasion that could but niggardly give me sight of her.

Id. Merry Wive* of Windsor. Speaking much is a sign of vanity ; for he that is lavish in his words, is a niggard in deed. Raleigh.

Thrifty and niggardly collations are not for princes. Bp. Hall.

Where the owner of the house will be bountiful, it is not for the steward to be niggardly. Id.

Serve him as a grudging master, As a penurious niggard of his wealth. Milton.

One she found

With all the gifts of bounteous nature crowned, Of gentle blood ; but one whose niggard fate Had set him far below her high estate. Dryden.

Love, a penurious god, very niggardly of his opportunities, must be watched like a hard-hearted treasurer. Id.

Why are we so niggardly to stop at one-fifth? Wrhy do we not raise it one full moiety, and double our money ? Locke.

Niggardliness is not good husbandry, nor generosity profusion. Addison's Spectator.

Tiberias was noted for his niggardly temper ; he used only to give to his attendants their diet.

Arbuthnot on Coins. Providence not niggardly but wise, Here lavishly bestows, anil there denies, That by each others virtue we may rise.

Granville.

Be niggards of advice on no pretence ; For the worst avarice is that of sense. Pope. NIGH, adj., adv., prep., & v. n. ~\ Sax.nyh; NI'GHLY, adv. >Teut. nah ;

NI'GHNESS, n. s. j Goth, and

Swed. na. Near in time, place, or relation, of any kind ; at no great distance from ; to a place near; almost: to nigh is to approach ; advance; draw near : nighly, nearly, within a little : nigh-ness, nearness ; proximity ; contiguity.

And the pask of the Jcwis was nyghe, and manye of the cuntrey wenten up to Jerusalem, hifore the pask, to halowe hemself. Wiclif. Jon. 11.

His uncle or uncle's son, or any that is nigh of kin unto him of his family, may redeem him.

Lev. xxv. 49.

Mordecai sent letters both nigh and far. Esther. The figtree putteth out leaves, summer is nigh.

Matthew.

lie was sick nigh unto death. Philip ii. 27.

He committed the protection of his son Asanes to two of his nigh kinsmen and assured friends.

K nolle*. Now day is done, aad night is nighing fast.

Hubbard. They shone Stars distant, but nigh hand seemed other worlds.

Milton.

TIˆ drew nigh and to me held Kvcii td my mouth, of that same fruit held part, Which lie had plucked. H. Paradise Liˆt.

I will defer that anxious thought, Aud death, by fear shall not be niglier brought.

Dryden.

A man born blind, now adult, was tajˆlit l,y hi* touch to distinguish between a cube and a'sphcie of the same metal, and nighty of the same bigness.

Locke.

The loud tumult shows the battle nigh. Prior. Nigh this recess with terror they survey, Where death maintains his dread tyrannic sway.

Garth.

NIGHT, ►►. *.

NICHT'-BRAWLER,

NIGHT-CAP,

NIGHT-CROW,

NIGHT'-DEW,

NIGHT'-DOG,

NIGHT'-DRESS,

NIGHT'ED, adj.

NIGHT’-FARIKG, ;j. s.

NIGHT’-FIRE,

NIGHT’FI.Y,

NIGHT’-FOUNDERED,

NIGHT’-GOWN,

NIGHT’-HAG,

NIGHT’INGALE,

NIGHTLY, adv. & adj.

NIGHT’MAN, ►►. *.

NIGHT’MARE,

NIGHT’-PIECE,

NIGHT’-RAIL,

NIGHT-RAVEN,

NIGHT’-ROBBER,

NIGHT’-RULE.

NIGHT’-SHADE,

NIGHT’-SHINING, adj.

NIGHT’-SHRIEK, n.s.

NIGHT’-TRIPPING, adj.

NIGHT’-WALK, n.s.

NIGHT-WALKER,

NIGUT’-WARBLING, adj.

NIGHT’-WARD,

NIGHT-WATCH, n. s.

night and Sax. mapa, a nymph or sprite) a mor-bid oppression in sleep attributed formerly to a night, sprite or goddess who tormented sleep : night-piece a picture drawn so as to be viewed by night, or by artificial as distinct from natural light : night-rail (night and Sax. jtajle, an upper garment) a loose upper night-dress : night-rule, a tumult in the night. Such is the explanation of all these compounds that appear at all obscure in their meaning, or that are of unusual occurrence.

If any man wandre in the day, he hirteth not, for he seeth the light of this world. But, if he wandre in the nyght, he stumblith, for liffht is not in him. ll'iclif. Jim. ii.

In the morning he shall devour the prey, and at night divide the spoil. Gen. xlix. 27.

There came men in hither to-night of the children of Israel, to search out the country. Jathna.

I remember thee upon my bed, and meditate on thee in the night-tcatches. Ptalm Ixiii. 6.

In the twilight, in the evening, in the black and dark night. Pror. vii. 9.

Men that hunt so, be privy stealers, or itight-icalkert. Ascham.

The ill-fac't owl, death's dreadful messenger, The hoarse night-raven, trump of doleful drere.

S}*nser.

Highways should be fenced on both sides, whereby thieves and night-robbers might be more easily pursued anil encountered.]],;.

Sax. mht; Goth. naht ; Teut. nacht ; Dan. not ; Fr. nuit; Ital. nolle ; Spanish noche; Port, noyle ; The natural time of darkness; time from sun-set to sunrise ; hence end of life; death; time of obscurity or darkness of any kind ; ignorance ; unintelligi-bility; trouble: to-night is i sed adver-bially for this night : ' a nightbrawler is one who makes disturbance in the night : nigh ted is darkened, overtaken by night: nightfaringjtravelling in the night : night-fire an ignis fatuus or Will-a-wisp : nightfoundered, lost 01 distressed in the night: nighthag, a witch : night-man, one who carries away ordure by night : nightmare

(from

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The duke of Cornwall, and Regan his dutchess, ﬁﬁﬁﬁill be here this night. Shahspeare. King Lear.

You unlace your reputation, And spend your rich opinion for the name Of a nightbrawler. Id. Othello.

The rabblement hooted, and clapt their chopt hands, and threw up their sweaty night-caps.

Shakspeare.

The owl shrieked at thy birth, an evil sign The night-crow cried, a boding luckless time. Id. When night-dogs run, all sorts of deer are chaced.

Id.

It was great ignorance, Gloster's eyes being out, To let him live : Edmund, I think, is gone, In pity of his misery, to dispatch His nighted life. Id. King Lear.

Why rather, sleep, liest thou in smoaky cribs, And hushed with buzzing night-Jiies to thy slumber ; Than in the perfumed chambers of the great, And lulled with sounds of sweetest melody 1

Shakspeare.

Since his majesty went into the field, have seen her rise from her bed, throw Her nig!ii-gown upon her. Id. Macbeth.

Let all things suffer,

Ere we will eat our meal in fear, and sleep In the affliction of those terrible dreams That shake us nightly. Id.

Saint Withold footed thrice the would, He met the nightmare, and her name he told ; Bid her alight, and her troth plight. Shakspeare.

I pray his bad voice bode no mischief : I had as lief have heard the night-raven, Come what plague would have come after it. Id.

How now, mad sprite,

What night-rule now about this haunted grove 1

Id.

I have almost forgot the taste of fears : The time has been my senses would have cooled To hear a night-shriek ; and my fell of hair Would at a dismal treatise rouse and stir, As life were in't. Id. Maobeth.

Could it be proved,

That some night-tripping fairy had exchanged In cradle cloths, our children where they lay, Than would I have his Harry, and he mine.

Shakspeare.

Great mountains have a perception of the disposition of the air to tempests sooner than the valleys below ; and therefore they say in Wales, when certain hills have their night-caps on, they mean mischief. Bacon's Natural History.

Quiet night, that brings Rest to the labourer, is the outlaw's day, In which he rises early to do wrong, And, when his work is ended, dares not sleep.

Mafsinger.

Foolish night-fires, women's and children's wishes, Chases in arras, gilded emptiness : These are the pleasures here. Herbert.

Let them sleep, let them sleep on, Till this stormy night be gone. And the eternal morrow dawn ; Then the curtains will be drawn ; And they awaken with that light, ˆ hose days shall never sleep in night. Crashaio. I perceive my night hastening on apace : my sun draws low : the shadows lengthen : vapours rise ; and the air begins to darken. Bp. Hall.

None of these noctiluca, or night-shining bodies, have been observed in any of the antient sepulchres.

Wilkins's DcBdalus.

If in his night-walk he met with irregular scholars, he took their names, and a promise to appear, unsent for, next morning. Walton'* Life of Sanders.

Thee, Sion ! and the flowery brooks beneath, That wash thy hallowed feet, and warbling flow, Nightly I visit. Milton's Par adit e Lost.

Either some one like us nightfoundered here, Or else some neighbour woodman, or, at worst Some roving robber calling to his fellows.

JffifM.

Nor uglier follows the nighthag, when called In secret, riding through the air, she comes Lured with the smell of infant-blood, to dance With Lapland witches. Id. Paradise Lost.

Now is the pleasant time, The cool, the silent, save where silence yields To the night-warbling bird. Id.

Their night-ward studies, wherewith they close the day's work. Id. on Education.

Dire Tisiphone there keeps the ward, Girt in her sanguine gown by night and day, Observant of the souls that pass the downward way.

Dry den.

She closed her eyes in everlasting night. Id. May the stars and shining moon attend Your nightly sports, as you vouchsafe to tell ••• What nymphs they were who mortal forms excel.

Id.

All things are hushed, as nature's self lay dead, The mountains seem to nod their drowsy head ; The little birds in dreams their songs repeat, And sleeping flowers beneath the night-dew sweat ; Even lust and envy sleep. Id. Indian Emperor.

Soon as the evening shades prevail The moon takes up the wondrous tale And nightly to the list'ning earth, Repeats the story of her birth.

Addison's Spectator.

They have put me in a silk night-gown, and a gaudy fool's cap. Id. Guardian.

He hung a great part of the wall with night-pieces, that seemed to show themselves by the candles which were lighted up ; and were so inflamed by the sunshine which fell upon them, that I could scarce forbear crying out fire. Addison.

An antiquary will scorn to mention a pinner or night-rail ; but will talk as gravely as a father of the church on the vitta and peplus. Id. on Medals.

Will-a-Wisp misleads nightfaring clowns, O'er hills, and sinking bogs, and pathless downs.

Gay.

The forerunners of an apoplexy are, dulness, drowsiness, vertigoes, tremblings, oppressions in sleep, and night-maret. Arbvthnot.

Nature and Nature's works lay hid in night.

Pope.

The fair ones feel such maladies as these, When each new night-dress gives a new disease

Id.

To meagre muse-rid mope, adust and thin, In a dun night-gown of his own loose skin. Id. Soon as the flocks shook off the nightly dews, Two swains, whom love kept wakeful and the muse, Poured o'er the whit'ning vale their fleecy care.

Id.

How did the humbled swain detest His prickly beard, and hairy breast ! His night-cap, bordered round with lace, Could give no softness to his face. Swifi.

Life is but a day at most, Sprung from night, in darkness lost ; Hope not sunshine every hour, Fear not clouds will always lower. Burn*. But this is sure ??? the hand of Night,

That kindles up the skies, Gives him a modicum of light

Proportioned to his size. Cowper.

1SIG

bG7

NIG

I passed the bound

Which God doth set to light and life and love, Where darkness meets with day, where order meets Disorder, dreadful waste, and wild ; and down The dark eternal, uncreated night Ventured alone. Pollok, Course of Time.

NIGHT is that part of the natural day during which the sun is below the horizon. Night was originally divided by the Hebrews and other eastern nations into three parts or watches. The Romans, and after them the Jews, divided the night into four watches ; the first began at sun-set, and lasted till nine, according to our reckoning ; the second lasted till midnight; the third till three A. M. ; and the fourth ended at sunrise. The ancient Gauls, Anglo-Saxons, and Germans, divided their tine, not by days, but by nights ; and the people of Iceland and the Arabs still do the same. The length and shortness of night is according to the season of the year and position of the place ; and the causes of this variety are now well known. See ASTRONOMY. NIGHT ANGLING, a method of catching large and shy fish in the night time. Trouts and many other fish are naturally shy and fearful ; they therefore prey in the night as the securest time. The method of taking them on this plan is as follows : ††† The tackle must be strong, and need not be so fine as for day-fishing, when every thing is seen ; the hook must be baited with a large earth-worm, or a black snail, and thrown into the river ; there must be no lead to the line, so that the bait may not sink, but be kept drawling along, upon or near the surface. Whatever trout is near the place will be brought thither by the motion of the water, and will seize the worm or snail. The angler will be alarmed by the noise which the fish makes in rising, and must give him line, and time to swallow the hook ; then a slight touch secures him. The best and largest trouts bite thus in the night; and they mostly rise in the still and clear deeps. Sometimes, though there are fish about the place, they will not rise at the bait : in this case the angler must put on some lead to his line, and sink it to the bottom. NIGHT'INGALE, n.s. From NIGHT, and Sax. jalan, to sing. A bird remarkable for its beautiful night-song; also a term of endear-ment.

He coude songs make and wel credile, Juste and eke dance, and wel pourtraie and write ; Schote he loved, that by nightergale He slep no more than doth the nightingale.

Chaucer. Cant. Tales. I think,

The nightingale, if she should sing by day, When every goose is

cackling, would be thought No better a musician than the wren. Shaksjteare.

My nightingale!

We'll beat them to their beds. Id.

Although the wezon, throtle, and tongue, be the instruments of voice , and by their agitations concur in those delightful modulations, yet cannot we assign the cause unto any particular formation ; and I perceive the nightingale hath some disadvantage in the tongue. Browne.

Thus the wise nightingale that leaves her home, Pursuing constantly the chearful spring, To foreign groves docs her old musick bring.

Waller.

A nightingale that all day long k

Had cheered the village with his ao-.ig, Nor yet at eve his note suspended, Nor yet when eventide was ended, Began to feel, as well he might, The keen demands of appetite. Cowper.

NIGHTINGALE, in ornithology, a species of motacilla. See MOTACILLA. Its eyes are remarkably large and piercing ; and, though it is about equal in size to the redstart, it is longer in body, and more elegantly made. Mr. Hun-ter found by dissection that the muscles of the larynx are stronger in the nightingale than in any other bird of the same size. In England they frequent thick hedges and low coppices; and generally keep in the middle of the bush, so that they are very rarely seen. When the young ones first come abroad the old birds make a plaintive and jarring noise, with a sort of snapping as if in menace, pursuing the passengers along the hedge. They begin their song in the evening, and continue it the whole night. These vigils did not pass unnoticed by the ancients : the slumbers of these birds were proverbial. If the nightingale is kept in a cage it often begins to sing about the end of November, and continues its song more or less till June. Young canary birds, linnets, or sky-larks, are said to learn best the note of a nightingale.

NIGHTINGALE, VIRGINIAN, iu ornithology, the common, but improper name of a bird of the gross-beaked kind, called by some authors cocco-thraustes Indica cristata. It is a little smaller than our

blackbird ; it has a black ring surrounding the eyes and nostrils ; the beak is very large and thick, but not altogether so large as in the common gross-beak ; and its head is ornamented with a very high and beautiful crest, which it moves about very frequently ; it is all over of a very fine and lively red, but paler on the head and tail than elsewhere ; it is brought from Virginia, and is much valued in England for its beauty and delicate singing; it is very fond of almonds.

NIGHTSHADE. See SOLAN UM. NIGHTSHADE, DEADLY. See BELLADONA. NIGHT-WALKERS, in law, are such persons as sleep by day and walk by night, being oftentimes pilferers, or disturbers of the public peace. Constables are authorised by the common law to arrest night-walkers and suspicious persons, &c. One may be bound to good behaviour for being a night-walker; and common night-walkers, or haunters of bawdy-houses, are to be indicted before justices of peace, &c. But it is not held lawful for a constable, &c., to take up any woman as a night-walker on bare suspicion only of being of ill-fame, unless she be guilty of a breach of the peace, or some unlawful act, and found misdoing.

NIGHT-WALKERS, in medicine. See MEDICINE. NIGIDIUS (Figulus Publius), one of the most learned men of ancient Rome, flourished at the same time with Cicero. He wrote on various subjects ; but his pieces appeared so refined and difficult that they were not regarded. He assisted Cicero, with great prudence, in defeating Catiline's conspiracy, and did him manv services in the time of his adversity. He ad-

hered to Pompey in opposition to Caesar, which occasioned hjs exile, and lie died in banishment. Cicero, who had always entertained the highest esteem for him, wrote a beautiful consolatory letter to him (the 13th of lib. 4, ad Familiares).

NIHIL'ITY, n. s. Fr. nihiliti; Lat. nihilum. Nothingness ; the state of being nothing.

Not being is considered as excluding all substance, and then all modes are also necessarily excluded ; and this we call pure rihility, or mere nothing.

Watts.

NILE, the ‘river of Egypt/ equally celebrated in ancient and modern history, as the chief source of the fertility of that country, is still imperfectly known in its earlier course. It seems to be formed by the union of three rivers : 1. the Tacazza, which descends from the northern side of the mountains of Abyssinia : 2. the Blue Ri-ver (Bahr el Azrek), which from the same mountains descends into the plains of Sennaar, and is the river whose source was visited by Bruce, in about 8a N. The third is called the White River (Bahr el Abiad), which seems to have its rise in the Mountains of the Moon, in the kingdom of Dar-fur, and is probably the true Nile, to which the other two are only tributary. We have noticed the hypothesis of this branch being in fact a continuation of the NIGER under that article, which see. The most authentic information on this subject seems to be that collected by Mr. Browne at Darfur. The Bahr el Abiad was there described as formed by the conflux of numerous small streams descending from a lofty range of mountains called Donga, which appea’r to be the same that were called anciently the Mountains of the Moon. These sources are about 6►► of N. lat., and from 25►► to 27►► of E. long. The general stream flows at first towards the east along the northern base of the mountains, but soon winds gradually to the north till that becomes its final direction. After passing the fifteenth parallel, this stream is joined by the Bahr el Azrek from Abyssinia. Bruce himself, who witnessed the junction of these streams, says the Abiad brings three times the quantity of water to the union that its rival stream conveys, and that its channel is always full, which is true only of the other river after the rains.

The Nile waters Kordofad and Sennaar. About 2►► N. of the junction with the Azrek, it is joined by the Tacazze, and, after this, it forces its way through the Great Nubian desert. Here the banks are so high as to prevent any inundation, and the water that fertilises the country for a short distance, on each side, is raised from the stream by rude mechanical contrivances. Be-fore it reaches the plains of Egypt, it forms two noted cataracts. These are occasioned by ledges of rock rising in the bed of the river, but in neither of them is the fall great. Mr. Legh (see our .irticle EGYPT) lately visited the one, and Mr. Burckhurdt the other ; the grandeur of the effect appears to be chiefly produced by the disorder of the rocks, the desolate character of the general scene, and the absence of all cultivation.

On the above view of this river its course is about -2000 miles. The cataract at its entrance into Egypt, near Syene, is generally not above live or six fcut fall ; below this the greatest

breadth of the river is a mile, and its greatest velocity three miles an hour ; in its ordinary state it is navigable for vessels of sixty tons to the cataract of Syene.

The river begins to rise at Cairo (see the article EGYPT) in June; and, it being observed that the heliacal rising of Sirius preceded a few mornings the rise of the Nile, this star thence received the popular appellation of the Dogstar, in allusion to the fidelity of the dog, who warns his master to remove his property from impending danger. It is at its height in October, the greatest rise being twenty-four feet. The waters begin to subside in the same month ; and in December, being again returned to their bed, the fertile mud they have left on the low grounds is sown with grain. Where the stream expands into the Delta it was anciently also overflowed, and hence many of the towns are built on arv ficial elevations, but at present the soil is so much raised as to be generally above the inundations.

The Nile abounds in fish, particularly a species of salmon and eels (murcena Romana), and is celebrated for its crocodiles and hippopotami, which, however, are not met with below Assiut. Amongst the variety of water-fowl that frequent it is the turkey-goose (anas nilotica), whose flesh is esteemed. The Nile anciently emptied itself by seven mouths, of which six were navigable. The western, or Canopic branch, which passes by Aboukir, is now dry the greatest part of the year. The second, or Bolbitic branch, empties itself at Rosetta. It is two miles wide, but is crossed by a bar, on which is a very dangerous surf in strong north or west winds, leaving only a few shifting channels for the passage of the country vessels, named Germs or Scherms, from ten to sixty tons, and many of them are wrecked every year : the bar is besides dry in March and April. The depth, at ordinary times, is from four to six feet, but in the inundation, with the winds from the north, there are at times forty-one feet in the Boghaz, or channel. The third, or Sebenetic branch, empties itself into Lake Bourlos. The fourth, or Phatnitic branch, is that of Damietta : it is, like that of Rosetta, crossed by a bar, that admits only small vessels. The fifth, or Mendesian branch, is lost in Lake Menzaleh, but its opening is at Dibeh. The sixth, or Tanitic, is the present Om-Faredje. The seventh, or Pelusiac branch, is now entirely filled up, but its ancient course is thought to be visible, and is named El-Farame.

The ancients placed the overflowing of the Nile among the inexplicable wonders of nature. The people of those times were unacquainted with any other river that afforded a parallel, and exhausted their ingenuity in conjectures to explain the cause. It is, however, now fully ascertained to be the rains that fall so copiously from June to September in the northern part of the tropical regions. From these tracts the Nile is exclusively fed, and, the supplies being prodigiously increased at that period, the inundation of the low countries is a necessary consequence.

NILEUS, the second son of Codrus, the patriotic king of Attica, who, after the abolition of monarchy at Athens, led a coltny of lonians

to Asia, where he built Ephesus, Miletus, Prien, Colophon, Myus, Teos, Lebedos, Clazomenae, &c. Paus. vii. c. 2.

NILL, v. a. From Sax. nillan, ne will. Not to will ; to refuse ; reject.

Certes, said he, I nill thine offered grace,

Ne to be made so happy do intend, Another bliss before mine eyes I place,

Another happiness, another end. Spenser.

In all affections she concurreth still ;

If now, with man and wife to will and nill

The self-same things, a note of concord be,

I know no couple better can agree. Ben Jonson.

NILOMETER, or NILOSCOPE, an instrument used among the ancients to measure the height of the water of the Nile in its overflowings; anciently called Mikeas, or rather Mykeas, from Mvicaoi, to roar, or make a hollow sound, alluding to the noise of the waters. The word Nilometer comes from NtiXoc, Nile (and that from vta iXrc, new mud, or, as others have it, from v►►w, I flow, and iXvc, mud), and / wrpov, measure. The Greeks more ordinarily call it WiiXoaKoiriov. The nilometer is said, by several Arabian writers, to have been first set up for this purpose by Joseph, during his regency in Egypt: the measure of it was sixteen cubits, this being the height of the increase of the Nile, which was necessary to the fruitfulness of Egypt. In the late French king's library is an Arabic treatise on the nilo-raeters, entitled Neil fi alnal al Nal ; wherein are described all the overflowings of the Nile, from the first year of the Hegira to the

875th. Herodotus mentions a column erected in a point of the Delta, to serve as a nilometer; and there is still one of the same kind in a mosque of the same place. As all the riches of Egypt arise from the inundations of the Nile, the inhabitants used to supplicate them of Serapis ; and committed the most execrable crimes, as actions of religion, to obtain his favor. This occasioned Constantine expressly to prohibit these sacrifices, &c., and to order the nilometer to be removed into the church ; whereas, till that time, it had been in the temple of Serapis. Julian the apes-tate had it replaced in the temple, where it continued till the time of Theodosius the Great. On the night of St. John, when, by the falling ot ihe dew, they perceive the rain-water from Ethiopia mixed with the Nile at Cairo, they be-gin to announce the elevation of the river, having then five pecks of water marked on the nilometer, and two unmarked for the sludge, of which they take no notice. Their first proclamation, supposing the Nile to have risen twelve digits, is twelve from six, or wants twelve digits to be six pecks. When it has risen three more, it is nine from six; and so on till the whole eighteen be filled, when all the land of Egypt is fit for cultivation. Several canals are then opened, which convey the water into the desert, and hinder an) farther stagnation on the fields. There is indeed a great deal more water to come from Ethiopia; but, were the inundation suffered to go on, it would not drain soon enough to fit the land for tillage: and, to guard against tins mischief, is the principal use of the nilometer, though the Turkish government makes it an engine of luxation. From time immemorial the Egyptians paid, as

tribute to the king, a certain proportion of the fruit of the ground ; and this was anciently ascertained by the elevation of the water on the nilometer, and by the mensuration of the land actually overflowed. But the Saracen government, and afterwards the Turkish, taxed the people by the elevation alone of the water, without attending to its course over the country, or the extent of the land actually overflowed ; and this tax is sometimes cruelly oppressive.

NIM, v. a. Teut. nemen ; Belg. numen, to take. In cant language, to steal.

They'll question Mars, and by his look

Detect who 'twas that nimmed a cloak. Hudibrai.

They could not keep themselves honest of their fingers, but would be nimming something or other for the love of thieving. L'Estrange.

NIM’BLE, adj. -\ Sax. numil, numan, NIM’BLENESS, n. s. f ready, tractable. NIM’BLEWITTED, adj. ►► Quick ; speedy ; active; N i M’BLV, adv. J lively: nimble-wilted,

ready in mind ; apt or eager to speak : the ad-verb and noun substantive follow these senses.

The hounds were straight uncoupled, and ere long the stag thought it better to trust to the nimblenest of his feet, than to the slender fortification of his lodging. Sidney.

Himself shewing at one instant both steadiness and nimbleness. Sidney.

All things are therefore partakers of God ; they are his offspring, his influence is in them, and the personal wisdom of God is for that very cause said to excel in nimbleness or agility, to pierce into all intellectual, pure and subtile spirits, to go through all, and to reach unto every thing. Hooker.

They being nim&ter-jointed than the rest, And more industrious, gathered more store.

Spenter.

You nimble lightnings, dart your blinding flames Into her scornful eyes. Id . King Lear.

You have dancing shoes With nimble soles. Id. Romeo and Juliet.

We, lying still, Are full of rest, defence and nimblenest.

Sltukspeare.

He capers nimbly in a lady’s chamber, To the lascivious playing of a lute. Id.

The air

Nimbly and sweetly recommends itself. Id.

Sir Nicholas Bacon, when a certain nimblewitted counsellor at the bar, who was forward to speak, did interrupt him often, said unto him, There is a great difference betwixt you and me ; a pain to me to speak, and a pain to you to hold your peace, i&icon. Most legs can nimbly run, though some be lame.

J)aviet.

His offring soon propitious fire from heaven Consumed with nimble glance and grateful steam ; The others not, for his was not sincere. Milton.

The liquor we poured from the crystals, and set it in a digesting furnace to evaporate more nimbly.

Boyle.

Ovid ranged over all Parnassus with preat nimtite-nefs and agility ; but, as he did not much care for the toil requisite to climb the upper part of the hill, he was generally roving about the bottom.

jiddi&on'* (jii-inlian.

Through the mid seas the nimble pinnace sails, Aloof from Crete before the northern gules. ‘,***.

The chameleon, who is said to feed upon nothing but air, has of all animals the nimblest tongue.

Swift.

NIMBUS, in antiquity, a circle observed on certain medals, around the

heads of some emperors ; answering to the circles of light drawn round the images of saints.

NIMEGUEN, or NIMUEGEN, an old town of Guelderland, situated on the Waal. It is fortified and not ill built, but has an irregular aspect from the river, the windows of one range of houses overlooking the chimneys of another, and the elevation from this spot being very abrupt. Among the public buildings worth attention are an old edifice, said to have been raised by the Romans, now forming a part of the fortifications; the old castle of Valkenof, built by Charlemagne ; the town-house, and several of the churches; as well as the flying-bridge across the Waal. The Belvidere is a beautiful shady promenade, much resorted to on account of the extensive view which it commands. The town is celebrated for its pale ale, which is sent to almost every part of the Netherlands. In history it is known from the treaty concluded here in 1678. It was taken by the French in September 1794, after a severe action with the allies. Population 13,300. Fifty miles southeast of Amsterdam. Long. 5►► 50’ 51* E., lat. 51►► 51’ 20’ N.

NIMES, or NISMES, Nemausus, a large and very ancient city, the chief place of the prefecture of the department of the Gard, having a royal court for that department, together with those of the Lozere and Vaucluse, an inferior court, a chamber of commerce, an agricultural society, an academy, a royal college, schools for drawing and chemistry, a medical society, and a bishop’s see. It is a post-town, with 38,000 inhabitants. This city is situated in a delightful plain, at the foot of several hills, which command a fertile country, covered with the rich productions of agriculture, and surrounded with eminences crowned with fruit trees, vines, and olives. It is in general badly built, and the streets confined ; but the suburbs present some straight and long streets; the boulevards are continually embellished with new buildings, and that part which reaches from the end of the canal of the Fountain to the Esplanade is very beautiful.

As a modern city Nlmes contains nothing very remarkable ; but, when we consider its antiquity, many remains of which are still extant, it is highly worthy of attention. Next to Rome, it lias been said to offer to the antiquary more Ro-man monuments than any other city in the world ; the square house, the amphitheatre, the cathedral, an ancient temple consecrated to Augustus, the fountain, the temple of Diana, and the Magnus tower, give us the noblest ideas of the state of the arts at the time of the erection of these monuments, while at the same time they excite our admiration of those who planned and directed them. Nimes was founded by the Phoceans of Ionia, who occupied it for nearly four centuries; it then passed into the hands of the Romans,

and formed part of their empire for 500 years. In the fifth century of the Christian era it became by turns the prey of the Goths and the Vandals ; in the sixth the Visigoths seized on it, and in the eighth it was ravaged by the Saracens. Afterwards the kings of Arragon,

becoming masters of it, surrendered it to St. Louis in 1258. Under the reign of Charles VI., in 1417, it fell into the possession of the English. Most of its inhabitants embraced Calvinism; but, after the revocation of the edict of Nantes, Louis XIV. caused their church to be demolished, and built a citadel on the ruins. For a long time after this it was the theatre of dreadful struggles on account of religion, and, in 1791 and 1815, of some bloody reactions; so that for fourteen centuries it was subject to the most dreadful scourges that can afflict a rich and populous city.

This was the native place of Jean Nicot, who, in 1559, introduced tobacco into France; of Jean Fabre, who piously devoted himself to the punishment of the galleys, in the room of his father, who had been surprised, while secretly worshipping God according to the reformed religion ; of the naturalist Dorthey and Rabaud ; St. Etienne, a learned man, and a deputy of the national convention, who was beheaded at Paris on the 5th of December 1793, aged fifty years. Manufactures are carried on here of cotton stockings, silk stockings and hats, coarse silk and fancy works, Madras shawls, silk and cotton goods, velvets, coarse cloths, printed cottons, furniture stuffs, pasteboards, brandy, and vinegar. There are also dye-houses, and tan-yards for chamois and other leathers. A considerable trade is carried on in these articles, as well as grocery, drugs, grain, essences, &c. It is the principal mart in the kingdom for silks. All parts of Europe are supplied from this place with medicinal plants, through the medium of rich mercantile houses, which purchase them of the peasant cultivators, and forward them to Amsterdam, Hamburgh, and Lubec.

Among the modern public buildings may be mentioned the library, containing 10,000 volumes; the museum of natural history ; the assize court, remarkable for its pillars supporting the front, and the rich vestibule dividing the halls of audience ; the new assembly room ; and the college church. The cathedral contains the tombs of Flechier and cardinal Bernis. The square-house, an ancient temple, erected by the emperor Adrian, was restored, by order of Louis XIV., in 1689, arid again repaired in 1820. It is a rectangular building, seventy feet long by thirty-six broad, and of a height equal to its breadth, adorned with thirty fluted Corinthian columns, the chapiters of which are the

admiration of all connoisseurs. The amphitheatre is a majestic circus of the Doric order, of an elliptic form, 404 feet diameter in the outer circumference, and 317 in the inner. This fine work is constructed on 120 arcades of smooth stone, wrought with admirable art ; thirty-two rows of seats rise one above the other in the interior, which it is supposed were capable of accommodating 17,000 spectators. The entrance is by four principal gates, facing the four points of the compass. The fountain and temple of Diana are fine remnants of antiquity, as also is the Magnus tower, an imposing ruin of a pyramidal form, 245 feet in circumference, with seven sides below and eight above, the destination of which is altogether uncertain ; its ornaments are chiefly of the Doric

NIN

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order. Nimesis 106 miles south of Privas, forty-which lead, with every prospect of success, to the

five west of Avignon, eighty-seven north-west of happiness of the people. A few yeirs previous

Marseilles, forty north-east of Montpelier, and to his death his talents began to be fully appre—

542 S. S. E. of Paris. ciated in England, and his advice was adopted

NIMIQU AS, a nation of South Africa, divided in the railway, canal, and some improvements

into two tribes, called by Vaillant the Greater that have since been completed in the vicinity of

and Less Nimiquas. The former inhabited a Liverpool and Manchester. Nimmo was not a

country extending from long. 15►► 25’ to 18►► 25” practical man only, he possessed an extensive

E. of London, and between lat. 25►► and 28►► S. ; knowledge of modern languages, and to his pro—

the latter a district nearly in the same longitude found mathematical attainments added an unli—

with the above, but lying between lat. 28►► 12’ mited knowledge of elegant literature. Besides

and 29►► 36’ S. They are now mixed with the his contributions to various periodicals, he wrote

other native tribes at the Cape, and own no d is-Inland Navigation for Brewster’s Cyclopzdia ;

tinct territory. See CAPE and HOTTENTOTS. the article on bridges for the same work, in con—

NIMROD, the sixth son of Cush. The sacred junction with his friend

Telford, and that on car—

historian tells us, that ‘ Nimrod began to be a pentry, with Nicholson. He died in 1832.

mighty one in the earth ;’ that he was ►► a mighty NI’NCOMPOOP, n. s. A corruption of the

hunter before the Lord,’ even to a proverb ; and Latin non compos. A fool : a trifler.

j.1. _ . .. .*1 !*__►►► *r l I* ►►► *1 . M l 1* - . , . ..*

that ►►► the beginning of his kingdom was Babel, and Erech, and Accad, and Calneh, in the land of Shinar.’ Authors have taken a great deal of pains to find Nimrod in profane history. Some have imagined him to be the same with Belus, the founder of the Babylonish empire; others with Ninus, the first Assyrian monarch : some think he was Evechous, the first Chaldean king ; and others perceive a great resembance between him and Bacchus. Some Mahometan writers suppose him to have been Zohak, a Persian king of the first dynasty ; others Cay Cans, the second king of the second race ; and some of the Jews say he is the same with AmraphH, the

NINE, adj. NINE’ FOLD, adj.

NlNE’p►►NCE,n.S.

NINE’PINS, NINE’SCORE, adj

Sax.

mgan ; Goth. Teut. ncune ;

mun, Ital.

niu ; Fr. neuf; Span, neuve ; Lat. novem, a novus, according to Minsheu and Ains-

worth, *i.e.* ullimus, because it is the last single figure for a number.

NINE'TEEN,

NIKE'TEENTH,

NINETIETH,

NINE'TY.

NINE is the last of the radical numbers or characters, from the combination of which any definite number, however large, may be produced. ' It is observed by arithmeticians,' says Hume, ' that the products of 9 compose always

king of Shinar, mentioned by Moses. Some of either 9 or some smaller products of 9, if you the rabbins pretend he was slain by Esau, whom add together all the characters of which any of they absurdly make his contemporary. There is the former products is composed: thus of 18, a tradition that he was killed by the fall of the 27, 36, which are products of 9, you make 9, by tower of Babel : others say that, as he led an adding I to 8, 2 to 7, 3 to 6. Thus 369 is also army against Abraham, God sent a squadron of a product of 9; and if you add 3, 6, and 9, you gnats, which destroyed most of them, and parti-make 18, a less product of 9.' cularly Nimrod, whose brain was pierced by one NINEVEH, in ancient geography, the capital of those insects. of Assyria, founded by Asshur, the son of Shem

NIMMO, Alexander, an eminent civil en- (Gen. x. 11). It was one of the most ancient, gineer, was born at Kircaldy, in Scotland, in famous, and potent cities of the world. It is 1783. He received the rudiments of his educa-difficult exactly to fix the time of its foundation ; tion at the College of St. Andrew's, and after-but it could not be long after the building of wards at that of Edinburgh, and was appointed Babel. It was situated upon the banks of the tutor of Inverness school at the early age of nine-Tigris; and in the time of the prophet Jonah, teen years-. His powerful mind coind not find who was sent thither under Jeroboam II. king of sufficient difficulties to encounter in the mere Israel, and, as Calmet thinks, under the reign of communication of

rudimental literature, and Pul, father of Sardanapalus, king of Assyria, being recommended by Mr. Telford to fix the Nineveh was a very great city, its circuit being county boundaries, for the survey of Scotland, he three days' journey (Jonah iii. 3.). Dtodorus presented a report on the subject, which at once Siculus, who has given us the dimensions of it, established that clearness of mind for which he says it was 480 stadia in circumference, or forty-was afterwards conspicuous. His survey of part seven miles; and that it was surrounded with of the bogs of Ireland is a masterpiece in its lofty walls and towers; the former being 200 kind ; and the pier of Dunmore, at Watert'ord, feet in height, and so very broad that three cha-will not lose in a comparison with the break-riots might drive on them abreast ; and the latter water at Plymouth. (See Dunmore.) On the 200 feet in height, and 1500 in number. Strabo coasts of Ireland 100 piers have been erected, allows it to have been much greater than Baby-after his designs, by the Fishery Board, and the Ion. At the time of Jonah's mission it was so ballast office employed, him to make a chart of populous that it was reckoned to contain more the Irish coast. Ireland is much indebted to this than 120,000 persons who could not distinguish able and honourable man. In Connaught par-their right hand from their left (Jonah iv. 11), ticularly he opened districts, that may be called un-which is generally explained of youim children ; explored counties, by the construction of juili-so that it is computed that the inhabitants of ciotis lines of road; and in fine,helaid thefoundation Nineveh were then above 600,000 persons. Ni-of the statistical notion* of improvementwhich now neveh was taken by Arbaces and Belesis, A. M prevail in that country, and the execution of H'257, in the reign of Sardanapalus, in the time

NIN

672

of Alaz king of JudaVand about the time of the foundation of Rome. It was taken a second time by Astyages and Nabopolassar, from Chynalydan king of Assyria, in 3378. After this time Nineveh no more recovered its former splendor. It was so entirely ruined in the time of Lucianus Samosatensis, who lived under the emperor Adrian, that no traces of it could be found, nor so much as the place where it stood. However it was rebuilt under the Persians, and destroyed again by the Saracens about the seventh century. Profane historians tell us that Ninus first founded Nineveh ; but the Scripture assures us that it was Asshur (Gen. x. 11). The sacred authors make frequent mention of this city ; and Nahum and Zephaniah foretold its ruin in a very particular and pathetic manner. It was several times besieged. The first attempt was made byPhra-ortes, the second king of the Medes ; but it failed, and he perished in it, in his twenty-second year (See MEDIA). His son, Cyaxares I., though he also failed in vwo attempts, was more successful in a third, and, by the assistance of Nebuchadnezzar, took and demolished it. Modern travellers say that the ruins of ancient Nineveh may still be seen on the east banks of the Tigris, opposite to Mousul (See MOUSUL). This assertion, however, is far from probable ; for every trace of it seems to have so totally disappeared, even so early as A. D. 627, that the vacant space afforded a spacious field for the celebrated battle between the emperor Heraclius and the Persians. There are few things in ancient history which have more puzzled the learned world than to determine the spot where this city stood. Mr. Ives says, that some imagine it stood near what is called Jonah's tomb : others, however, place it some hours' journey up the Tigris. These different opinions, however, seem perfectly recon-cileable ; for ancient Nineveh comprehended the whole ground which lies between these two ruined places. Mr. Ives adds, that ' what confirms this conjecture is, that much of this ground is now hilly, owing to the rubbish of the ancient buildings. There is one mount of 200 or 300 yards square, which stands some yards north-east of Jonah's tomb, whereon it appears a fortification once stood.'

NINGPO, a sea-port and city of the first rank in the province of Tchekiang, China. By the early Portuguese writers it is called Liampoo, and situated in a fertile plain, watered by numerous canals. The streets are narrow, and contracted by the penthouses over the shops, and the city, though five miles in circumference, does not contain any edifice of much importance. It lies at the mouth of a small

river, which forms a good harbour, though there is a bar, which renders the entrance difficult. The place is much resorted to by the merchants of Fokien, as well as by the Chinese settled in Siam and Batavia, who come for the purpose of buying the silks. Its trade with Japan is also considerable.

NINIAN, or NINIA, a saint among the ancient Britons. He resided at or near a place called by Ptolemy Leucopibia, and by Bede Candida Rosa; but the English and Scots call it Whit-horne. lie is said to have been the first who converted the Scots and Picts to the Christian

faith, during the reign of Theodosius II. Bede says, he built a church dedicated to St. Martin, in a style unknown to the Britons of that time; and adds that during his time the Saxons held this province (Gallovidia, now Galloway); and that as, in consequence of the labors of this saint, the converts to Christianity increased, an episcopal see was established there. Dr. Henry says, 4 he was a Briton of noble birth and excellent genius. After he had received as good an education at home as his own country could afford, he travelled for improvement, and spent several years at Rome, then the chief seat of learning, as well as of empire. Thence he returned into Britain, and spent his life in preaching the gospel in the most uncultivated parts of it, with equal zeal and success.' Buchanan says that in the reign of king Dongard, about A. D. 452, the Scottish clergy being infected with Pelagianism, St. Ninian was sent into Scotland by Palladius to oppose it, and became highly distinguished by his learning and zeal. ††† Buck. lib. v. Stat. Ace. xviii. 385.

NINNY, n. s. Span, ninno, a baby ; Gr. vtov, a novice. A simpleton; a childish person.

What a pied ninny'* this 1 Shahspeare. Tempett.

Have you no more manners than to rail at Hocus, that has saved that clod-pated, numskulled, ninny - hammer of yours from ruin, and all his family ?

Arbuthnot's John Bull.

The dean was so shabby, and looked like a ninny, That the captain supposed he was curate. Swift.

NINUS, the second king of Assyria, the son ot Belus, or Asshur. He enlarged Nineveh and Babylon ; conquered Zoroaster king of the Bac-

trians ; married Semiramis of Ascalon ; subdued almost all Asia; aud died, after a glorious reign of fifty-two years, about 1150 B.C. See ASSYRIA.

NINYAS, the son of Ninus and Semiramis, and successor of the latter in the kingdom of Assyria, whom he is said to have put to death for her incestuous attachment to him. Little is recorded of his reign, but that he entrusted the care of his government to his favorites, and began that inglorious course of luxury and effeminacy, which, being pursued by his successors with increasing folly and extravagance, ended in the ruin of the empire under Sardanapalus.

NIO, anciently los, a small hilly island in the Greek Archipelago, west of Namphio. It has u population of 4000 Greeks, who raise wine and cotton. Their principal property, however, consists in cattle. Nio, the chief place, is said to contain 3000 inhabitants. Tradition asserts that Homer died in this island, and there was formerly erected to him a monument here. Long. 5►► 24’ E., lat. 36►► 46’ N.

NIOBE, in fabulous history, the daughter of Tantalus, and wife of Amphion king of Thebes, by whom she had seven sons and seven daughters. Having become so proud of her children and high birth as to prefer herself before Latona, and to slight the sacrifices offered up by the Theban matrons to that goddess, Apollo and Diana, the children of Latona, resented this contempt. The former slew the male children, and the latter the female; upon which Niobe was struck dumb wiih grief, and remained without s n-;\tion. Ci-

NIP

6/3

cp.ro is of opinion that on this account the poets feigned her to be turned into stone. The story of Niobe is beautifully related in Ovid's Metamorphoses, lib. vi. fab. 5. Among the relics of ancient statuary is preserved a beautiful statue of Niobe. With her right hand she clasps one of her little daughters, who throws herself into her bosom ; which attitude equally expresses the ardent affection of the mother, and that natural confidence which children have in the protection of a parent. This is reckoned by Pliny one of the most beautiful works of antiquity ; but he doubts to which of the Grecian artists he ought to ascribe it, whether to Scopas or Praxiteles. We have no certain information at what period this celebrated work was transported from Greece to Rome, nor where it was first erected. Flaminius Vacca says, that all these statues were found in his time, near the gate of St. John, and that they were afterwards placed by the grand duke Ferdinand in the gardens of the Villa de Medici, near Rome.

NIORT, a large and ancient post town, and principal place of a prefecture, in the arrondissement of the same name, department of the Two Sevres, France, containing 17,000 inhabitants, and having an inferior court, under the royal court of Poictiers ; a chamber of arts and manufactures, an agricultural society, an athenaeum of arts and sciences, a communal college, and a free drawing school. This town stands pleasantly, on the sides of two hills, at the foot of which flows the Sevre, navigable in this part of its course. It is well built, and the streets airy ; in the neighbourhood are some very fine scenes and delightful walks, much improved by art. From a little esplanade, constructed in the most elevated part of the town, there is a most beautiful prospect of the charming country watered by the Sevre, the smiling meadows along its banks, and the numerous houses scattered over this fine and fertile valley.

Niort was taken by the English, who kept possession of it for eighteen years ; it was protected by an ancient castle, formed of two large towers united by massive masonry. This castle was for a long time the residence of the governors of the town, and now serves for a prison. It is the native place of Fontanes, a distinguished literary man, and one of the purest writers of our day. There are here manufactures of chamois leather, doe-skin gloves, braces, sailors' shoes, saddle-bows, horn and wood combs, woollen stuffs, and paper. There" are also woollen yarn factories, and considerable tan-yards. A considerable

trade is carried on in Bourdeaux wines, grain, corn, measures, preserved angelica, vinegar, wool, hair, leather, and gloves. Here is a public library, containing 15,000 volumes, also a botanical garden and departmental nursery, a public garden, a town hall, the baths, the fine fountain of Viviers, Sec. Niort is fifty-seven miles south-west of Poictiers, 150 north of Bourdeaux, and 324 south-west of Paris.

NIP, v. n. & n. s. “) Belg. nippen ; Teut.

Nip’pER,n.s. ˆkneipcn; Golh.niupa. To

NIP’PERS, plu. 3 pinch; injure by pinching in any way, as by the nails, teeth, frost, &.C.; VOL. XV.

hence to blast or destroy prematurely ; to vex ; irritate; taunt: a nipper is an obsolete word for a satirist : nippers are small pincers.

I am sharply taunted, yea, sometimes with pinches, lips, and bobs. Atcham’t Schoolmatter.

Ready backbiters, sore nippers, and spiteful re-porters privily of good men. Atefum.

Quick wits commonly be in desire new fangled ; in purpose unconstant ; bold with any person ; busy in every matter ; soothing such as be present, nipping any that is absent. Id. S:hoolnuuter.►►

And sharp remorse his heart did prick and nip. That drops of blood thence like a well did play.

Spenter. But the right gentle mind would bite his lip

To hear the javel so good men to nip. Hubberd

This is the state -of man : to-day he puts forth The tender leaves of hope, to-morrow blossoms, And bears his blushing honours thick upon him : The third day comes a frost, a killing frost ; And when he thinks, good easy man, full surely His greatness is a-ripening, nip* his root ; And then he falls, as I do.

Sluihpeare. Henry VIII. The air bites shrewdly, it is very cold,

►►► It is a nipping and an eager air. Id. Hamlet.

What ? this a sleeve? ‘tis like a demi-cannon ; What, up and down,

calved like an apple-tart? Here's snip, and nip, and cut, and slish, and slash, Like to a censer in a barber's shop. Shakspeare.

In oranges and lemons, the nipping of their rind giveth out their smell more.

Bacon't Natural History. A flower doth spread and dye, Thou would'st extend me to some good, Before 1 were by frost's extremity nipt in the bud.

Herbert. His delivery now proves

Abortive, as the first-born bloom of spring,

ffipt with the lagging rear of winter's frost.

Milton.

The small shoots that extract the sap of the most leading branches must be nipt off. Mortimer.

So hasty fruits and too ambitious flowers, Scorning the midwifery of rip'ning showers, In spite of frosts, spring from the unwilling earth, But find a nip untimely as their birth. Stepney.

Had he not been nipped in the bud, he might have made a formidable figure in his own works among posterity. Addison.

From such encouragement it is easy to guess to what perfection I might have brought this work, had it not been nipt in the bud.

A rhnthnot't John Bull.

NIPHON, a large island in the east of Asia, forming the greater part of the empire of Japan. It is 300 leagues long, but of very unequal breadth, i. e. from seventy to thirty leagues. Jeddo, the metropolis, is on the east side, and is said to be so extensive as to require twenty-one hours to walk round it ; and the palace of the emperor, we are assured, is surrounded by a wall of stone, five leagues in circuit, with ditches ;tnd drawbridges. The houses are of wood, two stones, the ground floor towards the street being shops. The gulf, in which the city is situated, is so shallow that vessels cannot approach the town. See JAPAN.

Nl f'TLK, n. s. Snx. nypcle; Fr. from NIP. The teal, or du? ; that which the sucking young taki-r ' - ~nd nip with their mouihs.

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The babe that milks me : I would, while it was smiling in my face, Have plucked my nipple from his boneless gums.

Sluihspeare.

As his foe, went then suffised away, Thoas /Etolius threw a dart, that did his pile convey Above his niftple, through his lungs. Chapman.

In creatures that nourish their young with milk, are adapted the nipples of the breast to the mouth and organs of suction. Ray on the Creation.

In most other birds there is only one gland, in which are divers little cells ending in two or three larger cells, lying under the nipple of the oil bag. Derham's Physico-Theoloyy.

NIPPLE-WORT, in botany. See LAPSANA.

NISAN, a month of the Hebrew kalendar, answering to our March, and which sometimes takes from February to April, according to the course of the moon. It was the first month of the sacred year, after the Exodus from Egypt (Exod. xii. 2), and the seventh of the civil year. By Moses it is called Abib. The name Nisan was used only from the time of Ezra, and the re-turn from the captivity of Babylon. On the 1st of this month the Jews fasted for the death of Aaron's sons. (Lev. x. 1, 2, 3). On the 10th was a fast for Miriam the sister of Moses ; and every one provided himself with a lamb for the passover. On this day the Israelites passed over Jordan under the conduct of Joshua (iv. 19). On the 14th, in the evening, they sacrificed the paschal lamb; and on the 15th was held the so-lemn passover. (Exod. xii. 18, &c.) On the 1 6th they offered the sheaf of the ears of barley as the first-fruits of the harvest. (Levit. xxiii. 9, &c.) The 21st was the octave of the passover, which was solemnised with particular ceremonies. The 26th was a fast in memory of the death of Joshua. On this day they began their prayers to obtain the rains of the spring. On the 29th they commemorated the fall of the walls of Jericho.

NISCHNEI-NOVGOROD, or NISHECOROD, an extensive government of European Russia, situated in the centre of the empire, to the east of that of Vladimir. It lies between 41►► 45' and 46►► 15' E. long., and 54►► and 57►► N. lat., and has an area of 20,400 square

miles. Its surface is diversified only by slight undulations, and it has a productive soil, and temperate climate. Corn, hemp, and cattle, are the great agricultural objects ; fishing in the rivers and lakes, and the manufactures, employ great numbers of the population. Leather, soap, tallow, and canvas, are not neglected. This province is traversed by the Vetluga, the Sura, the Wolga, and the Oka ; the two last affording a direct communication by wa-ter, both with Moscow and St. Petersburg. This government is divided into eleven circles, and contains 1,000,000 inhabitants.

NISCHNEI-NOVGOROD, i. e. Lower-Novgorod, a large commercial town of European Russia, the see of an archbishop, and the capital of the government of this name, is situated at the confluence of the Oka and Wolga. The position at the junction of two large navigable rivers has caused its trade to be cultivated by a greater portion of the inhabitants than any other town of Russia, sr> that it has been called the inland harbour of the empire. The chief branch of traffic is that which it carries on with St. Petersburg in

Siberian wares ; but it has also an extensive commerce in salt, corn, and provisions. Here is a great depot of salt-works ; both of this and of the adjoining province of Perm. The dwelling-houses are generally of wood, but the shops and warehouses are more substantial. This town has a seminary and high school ; manufactures of thread and ropes, with breweries and distilleries. Since 1816 the large fair of Makariev has been held here. Population 10,000. 250 miles E. N. E. of Moscow, and 540 E. S. E. of Petersburg.

NISHAPOUR, an ancient, and once celebrated city of Persia, in Korassan, known in the times of Alexander the Great, whose statue stood here until it was overthrown by the Arabs. It disputed with Meru Shah Jehan the character of being the capital of the Seljukian dynasty, during its reign over Persia; and, about the middle of the twelfth century, was taken by the Tartars, and so completely ruined, that, when the inhabitants returned, they could not distinguish their own houses. Hakani, the Persian poet of that period, has aflectingly described the lamentable condition to which this unhappy place was reduced. It never recovered from this blow, but now contains above 15,000 inhabitants. Its ruins are said to cover a circuit of twenty-five miles. The most delicious fruits are produced in the neighbourhood. Thirty miles south of Mesched, and 230 north-east of Herat.

NISI PRIUS, n. $. In law, a judicial writ, which lieth in case where the

inquest is panelled and returned before the justices of the bank ; the one party or the other making petition to have this writ for the ease of the country. It is directed to the sheriff, commanding that he cause the men impanelled to come before the justices in the same county, for the determining of the cause there, except it be so difficult that it need great deliberation : in which case it is sent again to the bank. It is so called from the first words of the writ nisi apud talem locum prius venerint; whereby it appeareth that justices of assizes and justices of nisi prius differ. So that justices of nisi prius must be one of them before whom the cause is depending in the bench, with some other good men of the county associated to him. ††† Cowell.

NISIBIS, in ancient geography, a very ancient, noble, and strong city of Mesopotamia, in Mygdonia towards the Tigris, from which it is distant two days' journey. Some ascribe its ori-gin to Nimrod, and suppose it to be the Achad of Moses. It was built by a colony of Macedonians, who call it Antiochia of Mygdonia. ††† Plutarch. Strabo says it was situated at the foot of Mount Masius. It was the Roman bulwark against the Parthians and Persians. It sustained three memorable sieges against the power of Sapor, A. D. 338, 346, and 350 ; but the emperor Jovianus, by an ignominious peace, delivered it up to the Persians, A. D. 363.

NISROCH, a god of the Assyrians. Sennacherib was killed by two of his sons, while pay-ing his adoration to this god. (2 Kings xix. 37.) The septuaejint calls him Mesrach ; Josephus calls him Araskes. The Hebrew of Tobit, published by Munster, calls him Da:,on. Some

think the word signifies a dove ; others understand by it an eagle, which has given occasion to an opinion, that Jupiter Belus, from whom the Assyrian kings pretended to he derived, was worshipped by them under the form of an eagle, and called Nisroch.

NISSOLIA, in botany, a genus of the decan-driu order, and diadelphia class of plants ; natural order thirty-second, papilionaceae : CAL. quinquedentate : CAPS, monospermous, and terminated hy a ligulated

wing.

NISUS, the son of Hyrtacus, a young Trojan, who accompanied ./ Eneas to Italy. He was united in the closest friendship with Euryalus. They signalised themselves in the war with the Rutulians; went into their camp in the night and committed great slaughter ; but, returning victorious, were perceived and killed by the Rutulians. Their friendship became proverbial.

NISUS, in fabulous history, a king of Megara, son of Mars, or of Pandion, whose life and success depended on a yellow lock of his hair not being cut. Minos, king of Crete, besieged Me-gara. Scylla the daughter of Nisus, being in love with Minos, cut off the fatal lock while her father was asleep. Megara was taken ; Minos despised the parricide, who threw herself in despair into the sea, and was changed into a lark, while Nisus was metamorphosed into a hawk. Hence the poets traced the antipathy of these birds.

NIT, n. g. -\ Sax. |>nitu. The egg of

NITTY, adj. > a louse, or small animal : nitty,

NITTILY, adv. J abounding in nits.

One Bell was put to death at Tyburn for moving a new rebellion ; he was a man nittily needy, and therefore adventurous. ffayward.

The whame, or burrel-fly, is vexatious to horses in summer, not by stinging them, hut only by their bombylious noise, or tickling them in sticking their nits, or eggs, on the hair. Derham.

NITENCY, n. s. Lat. nitentia, or nitor. Lustre ; brightness : also endeavour to spring or to expand, as light does.

The atoms of fire accelerate the motion of these particles ; from which acceleration their sprirg, or endeavour outward, will be augmented : that is, those zones will have a strong nitency to fly wider open. Boyle.

We restore old pieces of dirty gold to a clean and nitid yellow, by putting them into fire and aqua fortis, which take off the adventitious filth.

Boyle on Colours.

NITHISDALE, NJTHSDALE, or NIODISDALE, a large mountainous division of Dumfrieshire, lying west of Annandale, so named from the

Nith. This country was formerly shaded with noble forests, which are now destroyed. At present nothing can be more naked, wild, and savage ; yet it yields lead and silver. The mountains are covered with sheep and black cattle.

NITOCRIS, the wife of Evil-Merodach, and mother of Belshazzar, king of Babylon, was a woman of extraordinary abilities. After the death of Evil-Merodach she took the burden of all public affairs upon herself; and, while her son followed his pleasures, did all that could be done by human prudence to sustain the tottering empire. She perfected the works which Nebuchadnezzar had begun for the defence of Babylon ;

raised strong fortifications on the side of the river, and caused a vault to be made under it, leading from the old palace to the new, twelve feet high, and fifteen wide. She likewise built a bridge across the Euphrates, and accomplished several other works, which were afterwards ascribed to Nebuchadnezzar. Philostratus, in describing this bridge, tells us, that it was built by a queen, who was a native of Media ; whence we may conclude Nitocris to have been by birth a Mede.

NITRARIA, in botany, a genus of the monogynia order, and dodecandria class of plants: COR. pentapetalous, with the petals arched at the top: CAL. quinquefid; the stamina fifteen; the fruit a monospermous plum.

NITRE, -I Fr. nitre ; Lat. nitrum. The

NITROUS, adj. > vulgar name of the nitrate of

NITRY. y potash. See NITRIC ACID.

Nitrous and nitry signify impregnated with, or

consisting of, nitre.

Earth and water, mingled by the heat of the sun, gather nitrous fatness more than either of them hue severally. Bacon.

Some tumultuous cloud,

Instinct with fire and nitre, hurried him. Milton. Some steep their seed, and some in cauldrons boil. With vigorous nitre and with lees of oil. Uruilfii.

He to quench his draught so much inclined, May snowy fields and nitrous pastures find, Meet stores of cold so greedily pursued, And be refreshed with never-wasting food.

Blackmore.

Winter my theme confines ; whose wifry wind Shall crust the slabby mire, and kennels bind. Gay. NITRE. See CHEMISTRY and NITRIC ACID. NITRIA, a famous desert of Eirypt, thirty-seven miles long, bounded on the north by the Mediterranean, east by the Nile, south by the desert of Seta, and west by St. Hilarion. It had formerly a great number of monasteries ; now reduced to four. Its name is derived from a salt lake, from which is obtained the Natron of the ancients.

NITRIC ACID, in chemistry, one of the most powerful acids known, is formed by a combination of the two constituent elements of the atmospheric air, *viz.* nitrogen and oxygen, in a peculiar proportion to each other. If these gasos l> <: mixed, in the proportion of 70‘5 oxygen to 29-5 nitrogen, in a glass tube about a line in diameter, and a series of electric shocks be passed through them for some hours, nitric acid will be formed; or, if a solution of potash be present with them, nitrate of potash will be obtained. For practical purposes it is, however, best obtained from the nitrate of potash, by means of sulphuric acid.

Three parts of pure nitre, coarsely powdered, are to be put into a glass retort, and two paits of strong sulphuric acid cautiously added. Join to the retort a tubulated receiver of large capacity, with an adopter interposed, and lute the junctures with glazier’s putty. In the tubulnro fix a glass tube, terminating in another very larjje receiver, in which is a small quantity of water. Apply heat to the retort by means of a sand bath. The first product that passes into the receiver is generally red and fuming; but the appearances gradually diminish, till the acid comes

over pale, and even colorless, if the materials used were clean. After this it again he-comes more and more red and fuming, till the end of the operation ; and the whole mingled together will be of a yellow or orange color.

Empty the receiver, and again replace it. Then introduce by a small funnel, very cautiously, one part of boiling water in a slender stream, and continue the distillation. A small quantity of a weaker acid will thus be obtained, which can be kept apart. The first will have a specific gravity of about 1-500, if the heat have been properly regulated, and if the receiver was refrigerated by cold water or ice. Acid of that density, amounting to two-thirds of the weight of the nitre, may thus be procured. But commonly the heat is raised too high, whence more or less of the acid is decomposed, and its proportion of water, uniting to the remainder, reduces its strength. It is not profitable to use a smaller proportion of sulphuric acid, when a concentrated nitric is required. But when only a dilute acid, called in commerce aquafortis, is required, then less sulphuric acid will suffice, provided a portion of water be added. 100 parts of good nitre, sixty of strong sulphuric acid, and twenty of water, form economical proportions.

In the large way, and for the purposes of the arts, extremely thick cast-iron or earthen retorts are employed, to which an earthen head is adapted, and connected with a range of proper condensers. The strength of the acid too is va-ried, by putting more or less water in the receivers. The nitric acid thus made generally contains sulphuric acid, and also muriatic, from the impurity of the nitrate employed. If the former a solution of nitrate of barytes will occasion a white precipitate ; if the latter, nitrate of silver will render it milky. The sulphuric acid may be separated by a second distillation from very pure nitre, equal in weight to an eighth of that originally employed ; or by precipitating with nitrate of barytes, decanting the clear liquid, and distilling it. The muriatic acid may be separated by proceeding in the same way with nitrate of silver, or with litharge, decanting the clear liquid, and redistilling it, leaving an eighth or tenth part in the retort.

The vessels should be made to fit tight by grinding, as any lute is liable to contaminate the product.

As this acid still holds in solution more or less nitrous gas, it is not in fact nitric acid, but a kind of nitrous; it is therefore necessary to put it into a retort, to which a receiver is added, the two vessels not being luted, and to apply a very eentle heat for several hours, changing the receiver as soon as it is filled with red vapors. The nitrous gas will

thus be expelled, and the nitric acid will remain in the retort as limpid and colorless as water. It should be kept in a bottle secluded from the light, otherwise it will lose part of its oxygen.

What remains in the retort is a bisulphate of potash, from which the superfluous acid may be expelled by a pretty strong heat, and the residuum, being dissolved and crystallised, will be Sulphate of potash.

As nitric acid in a fluid state is always mixed with water, different attempts have been nr.a.ie

to ascertain its strength, or the quantity of rea. acid contained in it. Mr. Kirwan supposed that the nitrate of soda contained the pure acid undiluted with water, and thus calculated its strength from the quantity requisite to saturate a given portion of soda. Sir H. Davy more recently took the acid in the form of gas as the standard, and found how much of this is contained in an acid of a given specific gravity in the liquid state. See CHEMISTRY, Index.

The following is a Table of Nitric Acid, given in Dr. Ure's valuable Dictionary of Chemistry, as the result of his own experiments : ◆◆◆

Specific Gravity.

Liq. Acid in

100.

Dry acio in 100.

Specific Gravity.

Liq. Acid in

100.

Dry ac'u in 100.

1-5000

100

79-700

1-2947

50

39-850

1-4980

99

78-903

1-2887

49

39-053

1-4960

98

78-106

1-2826

48

38-256

1-4940

97

77-309

1-2765

47

37-459

1-4910

96

76-512

1-2705

46

36-662

1-4880

95

75-715

1-2644

45

35-865

1-4850

94

74-918

1-2583

44

35-068

1-4820

93

74-121

1-2523

43

34-271

1-4790

92

73-324

1-2462

42

33-474

1-4760

91

72-527

1-2402

41

32-677

1-4730

90

71-730

1 2341

40

31-880

1-4700

89

70-933

1-2277

39

31-083

1-4670

88

70-136

1-2212

38

30-286

1-4640

87

69-339

1-2148

37

29-489

1-4600

86

68-542

1-2084

36

28-692

1-4570

85

67-745

1-2019

35

27-895

1-4530

84

66-948

1-1958

34

27-098

1-4500

83

66-155

1-1895

33

26-301

1-4460

82

65-354

1-1833

32

25-504

1-4424

81

64-557

1-1770

31

24-707

1-4385

80

63-760

1-1709

30

23-900

1-4346

79

62-963

1-1648

29

23-113

1-4306

78

62-166

1-1587

28

22-316

1-4269

77

61-369

1-1526

27

21-519

1-4228

76

60-572

1-1465

26

20;722

1-4189

75

59-775

1-1403

25

19-925

,1-4147

74

58-978

1-1345

24

19-128

1-4107

73

58-181

1-1286

23

18-331

1-4065

72

57-384

1-1227

22

17-534

1-4023

71

56-587

1-1168

21

16-737

1-3978

70

55-790

1-1109

20

15-940

1-3945

69

54-993

1-1051

19

15-143

1-3882

68

54-196

1-0993

18

14346

1-3833

67

53-399

1-0935

17

13-549

1-3783

66

52-602

1-0878

16

12-752

1-3732

65

51-805

1-0821

15

11 955

1-3681

64

51-068

1-0764

14

11-158

1-3630

63

50-211

1-0708

13

10-361

1-3579

62

49-414

1-0651

12

9-564

1-3529

61

48-617

1-0595

11

8767

1-3477

60

47-820

1-0540

10

7-970

1-3427

59

47-023

1-0485

9

7-173

1-3376

58

46-226

1-0430

8

6-376

1-3323

57

45-429

1-0375

7

5-579

1-3270

56

44-632

1-0320

6

4-782

1-3216

55

43-835

1-0267

5

3-985

1-3163

54

43-038

1-0212

4

3-188

1-3110

53

42-241

1-0159

3

2-391

1-3056

52

41-444

1-0106

2

1-594

1-3001

51

40-647

1-0053

1

0-797

NITRIC ACID.

677

This acid is eminently corrosive, sour, and ncrid, whence its old name of aquafortis, now commonly applied to the yellow fuming nitrous acid. If introduced into the stomach it proves a deadly poison, and destroys the skin when in a concentrated state. It is often contaminated, through negligence or fraud in the manufacturer, with sulphuric and muriatic acids. Nitrate of lead detects hoth, or nitrate of barytes may be employed to determine the quantity of sulphuric acid, and nitrate of silver that of the muriatic. The latter proceeds from the crude nitre usually containing a quantity of common salt.

When it is passed through a red-hot porcelain tube, it is resolved into oxygen and nitrogen, in the proportion above stated. It retains its oxygen with little force, so that it is decomposed by all combustible

bodies. Brought into contact with hydrogen gas at a high temperature a violent detonation ensues ; so that this must not be done without great caution. It inflames essential oils, as those of turpentine and cloves, when suddenly poured on them ; but, to perform this experiment with safety, the acid must be poured out of a bottle tied to the end of a long stick, otherwise the operator's face and eyes will be greatly endangered. If it be poured on perfectly dry charcoal powder, it excites combustion, with the emission of copious fumes. By boiling it with sulphur it is decomposed, and its oxygen, uniting with the sulphur, forms sulphuric acid. Chemists in general agree that it acts very powerfully on almost all the metals ; but Baum6 has asserted, that it will not dissolve tin, and Dr. Woodhouse of Pennsylvania affirms, that in a highly concentrated and pure state it acts not at all on the silver, copper, or tin, though, with the addition of a little water, its action on them is very powerful.

The nitric acid is of considerable use in the arts. It is employed for etching on copper ; as a solvent of tin to form with that metal a mordant for some of the finest dyes ; in metallurgy and assaying ; in various chemical processes, on account of the facility with which it parts with oxygen and dissolves metals ; in medicine as a tonic, and as a substitute for mercurial preparations in syphylis and affections of the liver, as also in form of vapor to destroy contagion. For the purposes of the arts it is commonly used in a diluted state, and contaminated with the sulphuric and muriatic acids, by the name of aquafortis. This is generally prepared by mixing common nitre with an equal weight of sulphate of iron, and half its weight of the same sulphate calcined, and distilling the mixture ; or by mixing nitre ###with twice its weight of dry powdered clay, and distilling in a reverberatory furnace. Two kinds are found in the shops, one called double aquafortis, which is about half the strength of nitric acid ; the other simply aquafortis which is half the strength of the double.

A compound made by mixing two parts of the nitric acid with one of muriatic, known formerly by the name of aqua retjia, and now by that of nitro-muriatic acid, has the property of dissolving gold and platina. On mixing the two acids heat is given out, an effervescence takes place, and the mixture acouires an orange color. This

is likewise made by adding gradually to an ounce of powdered muriate of ammonia four ounces of double aquafortis, and keeping the mixture in a sand heat till the salt is dissolved ; taking care to avoid the fumes, as the vessel must be left open ; or by distilling nitric acid

with an equal weight, or rather more, of common salt.

On this subject we are indebted to Sir H. Davy for some excellent observations, published by him in the first volume of the Journal of Science. If strong nitrous acid, saturated with nitrous gas, be mixed with a saturated solution of muriatic acid gas, no other effect is produced than might be expected from the action of nitrous acid of the same strength on an equal quantity of water ; and the mixed acid so formed has no power of action on gold or platina. Again, if muriatic acid gas, and nitrous gas, in equal volumes, be mixed together over mercury, and halr a volume of oxygen be added, the immediate condensation will be no more than might be expected from the formation of nitrous acid gas. And when this is decomposed, or absorbed by the mercury, the muriatic acid gas is found unaltered, mixed with a certain portion of nitrous gas.

It appears then that nitrous acid, and muriatic acid gas, have no chemical action on each other. If colorless nitric acid and muriatic acid of commerce be mixed together, the mixture immediately becomes yellow, and gains the power of dissolving gold and platinum. If it be gently heated, pure chlorine arises from it, and the co-lor becomes deeper. If the heat be longer continued, chlorine still rises, but mixed with nitrous acid gas. When the process has been very long continued till the color becomes very deep, no more chlorine can be procured, and it loses its power of acting upon platinum and gold. It is now nitrous and muriatic acids. It appears then from these observations, which have been very often repeated, that nitro-muriatic acid owes its peculiar properties to a mutual decomposition of the nitric and muriatic acids ; and that water, chlorine, and nitrous acid gas, are the results. Though nitrous gas and chlorine have no action on each other when perfectly dry, yet if water be present there is an immediate decomposition, and nitrous acid and muriatic acid are formed. 118 parts of strong liquid nitric acid being decomposed in this case, yield sixty-seven of chlorine. Aqua regia does not oxidise gold and platina. It merely causes their combination with chlorine.

A bath made of nitro-muriatic acid, diluted so much as to taste no sourer than vinegar, or of such a strength as to prick the skin a little, after being exposed to it for twenty minutes or half an hour, has been introduced by Dr. Scott of Bombay as a remedy in chronic syphylis, a variety of ulcers and diseases of the skin, chronic hepatitis, bilious dispositions, general debility, and languor. He considers every trial as quite inconclusive where a ptyalism, some affection of the gums, or some very evident constitutional ef-fect, has not arisen from it. The internal use of the same acid has been recommended to be cou joined

with that of the partial or general bath.

With the different bases the nitric acid fc-rmi nitrates.

The nitrate of barytes, when perfectly pure, is in regular octahedral crystals, though it is sometimes obtained in small shining scales. It may be prepared by uniting barytes directly with ni-tric acid, or by decomposing the carbonate or sulphuret of barytes with this acid. Exposed to heat it decrepitates, and at length gives out its acid, which is decomposed ; but, if the heat be urged too far, the barytes is apt to vitrify with the earth of the crucible. It is soluble in twelve parts of cold, and three or four of boiling water. It is said to exist in some mineral waters. It consists of 6-75 acid + 9‘75 base.

The nitrate of potash is the salt well known by the name of nitre or saltpetre. It is found ready formed in the East Indies, in Spain, in the kingdom of Naples, and elsewhere, in considerable quantities ; but nitrate of lime is still more abundant. Far the greater part of the nitrate made use of is produced by a combination of circumstances which tend to compose and condense nitric acid. This acid appears to be produced in all situations where animal matters are completely decomposed with access of air, and of proper substances with which it can readily combine. Grounds frequently trodden by cattle, and impregnated with their excrements, or the walls of inhabited places, where putrid animal vapors abound, such as slaughter-houses, drains, or the like, afford nitre by long exposure to the air. Artificial nitre beds are made by an attention to the circumstances in which this salt is produced by nature. Dry ditches are dug, and covered with sheds, open at the sides, to keep off the rain : these are filled with animal substances -such as dung, or other excrements, with the remains of vegetables, and old mortar, or other loose calcareous earth ; this substance being found to be the best and most convenient receptacle for the acid to combine with. Occasional watering, and turning up from time to time, are necessary to accelerate the process, and increase the surfaces to which the air may apply ; but too much moisture is hurtful. When a certain portion of nitrate is formed, the

process appears to go on more quickly ; but a certain quantity stops it altogether, and after this cessation the materials will go on to furnish more, if what is form-ed be extracted by lixiviation. After a succession of many months, more or less, according to the management of the operation, in which the action of a regular current of fresh air is of the greatest importance, nitre is found in the mass. If the beds contained much vegetable matter, a considerable portion of the nitrous salt will be com-mon saltpetre; but if otherwise, the acid will, for the most part, be combined with the calcareous earth. It consists of 6-75 acid - f-6 potash.

To extract the saltpetre from the mass of earthy matter, a number of large casks are prepared, with a cock at the bottom of each, and a quantity of straw within, to prevent its being stopped up. Into these the matter is put, together with wood-ashes, either strewed at top, or added during the filling. Boiling water is then poured on, and suffered to stand for some time ; after which it “is drawn off, and other water added in the same manner, as long as any saline ‘natter can be thus extracted. The weak brine

is heated, and passed through other tubs, until it becomes of considerable strength. It is then carried to the boiler, and contains nitre and other salts; the chief of which is common culinary-salt, and sometimes muriate of magnesia. It i’s the property of nitre to be much more soluble in hot than cold water; but common salt is very nearly as soluble in cold as in hot water. Whenever, therefore, the evaporation is carried by boiling to a certain point, much of the common salt will fall to the bottom, for want of water to hold it in solution, though the nitre will remain suspended by virtue of the heat. The common salt thus separated is taken out with a perforated ladle, and a small quantity of the fluid is cooled, from time to time, that its concentration may be known by the nitre which crystallises in it. When the fluid is sufficiently evaporated, it is taken out and cooled, and great part of the nitre separates in crystals ; while the remaining com-mon salt continues dissolved, because equally soluble in cold and in hot water. Subsequent evaporation of the residue will separate more nitre in the same manner. By the suggestion of Lavoisier, a much simpler plan was adopted; reducing the crude nitre to powder, and washing it twice with water.

This nitre, which is called nitre of the first boiling, contains some common salt ; from which it may be purified by solution in a small quantity of water, and subsequent evaporation ; for the crystals thus

obtained are much less contaminated with common salt than before; because the proportion of water is so much larger, with respect to the small quantity contained by the nitre, that very little of it will crystallise. For nice purposes, the solution and crystallisation of nitre are repeated four times. The crystals of nitre are usually of the form of six-sided flattened prisms, with dihedral summits. Its taste is penetrating; but the cold produced by placing the salt to dissolve in the mouth is such as to predominate over the real taste at first. Seven parts of water dissolve two of nitre, at the temperature of 60°; but boiling water dissolves its own weight. 100 parts of alcohol, at a heat of 176°, dissolve only 2-9.

On being exposed to a gentle heat, nitre fuses; and in this state being poured into moulds, so as to form little round cakes, or balls, it is called sal prunella, or crystal mineral. This at least is the way in which this salt is now usually prepared, conformably to the directions of Boerhaave; though in most dispensatories a twenty-fourth part of sulphur was directed to be deflagrated on the nitre before it was poured out. This salt should not be left on the fire after it has entered into fusion, otherwise it will be converted into a nitrate of potash. If the heat be increased to redness, the acid itself is decomposed, and a considerable quantity of tolerably pure oxygen gas is evolved, succeeded by nitrogen.

This salt powerfully promotes the combustion of inflammable substances. Two or three parts mixed with one of charcoal, and set on fire, burn rapidly ; azote and carbonic acid gas are given out, and a small portion of the latter is retained by the alkaline residuum, which was formerly called clyssus of nitre. Three parts of nitre, two

of subcarbonate of potash, and one of sulphur, mixed together in a warm mortar, form the fulminating powder ; a small quantity of which, laid on a fire-shovel, and held over the fire till it begins to melt, explodes with a loud sharp noise. Mixed with sulphur and charcoal it forms gunpowder. See GUNPOWDER.

Three parts of nitre, one of sulphur, and one of fine saw-dust, well mixed, constitute what is called the powder of fusion. If a bit of base copper be folded up and covered with this pow-der in a walnut-shell,

and the powder be set on fire with a lighted paper, it will detonate rapidly, and fuse the metal into a globule of sulphuret without burning the shell.

If nitrate of potash be heated in a retort with half its weight of solid phosphoric or boracic acid, as soon as this acid begins to enter into fusion it combines with the potash, and the nitric acid is expelled, accompanied with a small portion of oxygen gas and n itric oxide.

Silex, alumina, and barytes, decompose this salt in a high temperature by uniting with its base. The alumina will effect this even after it has been made into pottery.

The uses of nitre are various. Beside those already indicated, it enters into the composition of fluxes, and is extensively employed in metallurgy ; it serves to promote the combustion of sulphur in fabricating its acid ; it is used in the art of dyeing ; it is added to common salt for preserving meat, to which it gives a red hue ; it is an ingredient in some frigorific mixtures ; and it is prescribed in medicine, as cooling, febrifuge, and diuretic; and some have recommended it mixed with vinegar as a very powerful remedy for the sea scurvy.

Nitrate of soda, formerly called cubic or quadrangular nitre, approaches in its properties to the nitrate of potash ; but differs from it in being somewhat more soluble in cold water, though less in hot, which takes up little more than its own weight; in being inclined to attract moisture from the atmosphere ; and in crystallising in rhombs, or rhomboidal prisms. It may be prepared by saturating soda with the nitric acid; by precipitating nitric solutions of the metals, or of the earths, except barytes, by soda; by lixiviating and crystallising the residuum of common salt distilled with three-fourths its weight of nitric acid ; or by saturating the mother waters of nitre with soda instead of potash.

This salt has been considered as useless ; but professor Proust says that five parts of it, with one of charcoal and one of sulphur, will burn three times as long as common powder, so as to form an economical composition for fire-works. It consists of 6‘75 acid + 4’ soda.

Nitrate of strontian may be obtained in the same manner as that of barytes, with which it agrees in the shape of its crystals, and most of its properties. It is much more soluble, however, requiring but four or five parts of water according to Vauquelin, and only an equal weight according to Mr. Henry. Boiling water dissolves nearly t%vice as much

as cold. Applied to the wick of a candle, or added to burning alcohol, it gives a deep red color to the flame. On this account it IP- -f ‘►►e useful, perhaps, in the art of py-

It consists of 6-75 acid -f-6-5 stron-

rotechny. tites.

Nitrate of lime, the calcareous nitre of older writers, abounds in the mortar of old buildings, particularly those that have been much exposed to animal effluvia, or processes in which azote is set free. Hence it abounds in nitre beds, as was observed when treating of the nitrate of potash. It may also be prepared artificially, by pouring dilute nitric acid on carbonate of lime. If the solution be boiled down to a syrupy consistence, and exposed in a cool place, it crystallises in long prisms, resembling bundles of needles diverging from a centre. These are soluble, according to Henry, in an equal weight of boiling water, and twice their weight of cold ; soon deliquesce on exposure to the air, and are decomposed at a red heat. Fourcroy says that cold water dissolves four times its weight, and that its own water of crystallisation is sufficient to dissolve it at a boiling heat. It is likewise soluble in less than its weight of alcohol. By evaporating the aqueous solution to dryness, continuing the heat till the nitrate fuses, keeping it in this state five or ten minutes, and then pouring it into an iron pot previously healed, we obtain Baldwin’s phosphorus. This, which is perhaps more properly nitrate of lime, being broken to pieces, and kept in a phial closely stopped, will emit a beautiful white light in the dark, after having been exposed some time to the rays of the sun. At present no use is made of this salt, except for drying some of the gases by attracting their moisture; but it might be employed, instead of the nitrate of potash, for manufacturing aquafortis.

The nitrate of ammonia possesses the property of exploding, and being totally decomposed, at the temperature of 600►►; whence it acquired the name of nitrum flammans. The readiest mode of preparing it is by adding carbonate of ammonia to dilute nitric acid till saturation takes place. If this solution be evaporated in a heat between 70►► and 100►►, and the evaporation not carried too far,

it crystallises in hexane-dral prisms, terminating in very acute pyramids: if the heat rise to 212►►, it will afford, on cooling, long fibrous silky crystals : if the evaporation be carried so far as for the salt to concrete immediately on a glass rod by cooling, it will form a compact mass. According to Sir II. Davy, these differ but little from each other, except in the water they contain, their component parts being as follows : ►►►

Prismatic! con-C 69-5 C 18-4 C 12.1

Fibrous > tains \ 72-5 *“? { 19-3 water 1 8-2 Compact 5 of acid t 74-5* l 1 19‘8 C 57

All these are completely deliquescent, but they differ a little in solubility. Alcohol at 176►► dissolves nearly 90*9 of its own weight.

When dried as much as possible without decomposition, it consists of 6-75 acid + 2*125 ammonia + 1‘125 water.

The chief use of this salt is for affording nitrous oxide on being decomposed by heat. See NITROGEN, OXIOEOF.

Nitrate of magnesia, magnesian nitre, crystallises in four-sided rhomboidal prisms with oblique or truncated summits, anu sometimes in

bundles of small needles. Its taste is bitter, and very similar to that of nitrate of lime, but less pungent. It is fusible, and decomposable by heat, giving out first a little oxygen gas, then nitrous oxide, and lastly nitric acid. It deliquesces slowly. It is soluble in an equal weight of cold water, and in but little more hot, so that it is scarcely crystallisable but by spontaneous evaporation.

The two preceding species are capable of combining into a triple salt, an ammoniaco-luagnesian nitrate, either by uniting the two in solution, or by a partial decomposition of either by means of the base

of the other. This is slightly inflammable when suddenly heated ; and by a lower heat is decomposed, giving out oxygen, azote, more water than it contained, nitrous oxide, and nitric acid. The residuum is pure magnesia. It is disposed to attract moisture from the air, but is much less deliquescent than either of the salts that compose it, and requires eleven parts of water at 60►► to dissolve it. Boiling water takes up more, so that it will crystallise by cooling. It consists of seventy-eight parts of nitrate of magnesia, and twenty-two of nitrate of ammonia.

From the activity of the nitric acid as a solvent of earths in analysation, the nitrate of glucine is better known than any other of the salts of this new earth. Its form is either pulverulent, or a tenacious or ductile mass. Its taste is at first saccharine, and afterward astringent. It grows soft by exposure to heat, soon melts, its acid is decomposed into oxygen and azote, and its base alone is left behind. It is very soluble and very deliquescent.

Nitrate, or rather supernitrate, of alumina crystallises, though with difficulty, in thin, soft, pliable flakes. It is of an austere and acid taste, and reddens blue vegetable colors. It may be formed by dissolving in diluted nitric acid, with the assistance of heat, fresh precipitated alumina, well washed but not dried. It is deliquescent, and soluble in a very small portion of water. Alcohol dissolves its own weight. It is easily decomposed by heat.

Nitrate of zircone was first discovered by Klaproth, and has since been examined by Guy-ton-Morveau and Vauquelin. Its crystals are small, capillary, silky needles. Its taste is astringent. It is easily decomposed by fire, very soluble in water, and deliquescent. It may be prepared by dissolving zircone in strong nitric acid ; but, like the preceding species, the acid is always in excess.

Nitrate of yttria may be prepared in a similar manner. Its taste is sweetish and astringent. It is scarcely to be obtained in crystals; and if it be evaporated by too strong a heat, the salt becomes soft like honey, and on cooling concretes into a stony mass. See CHEMISTRY.

Citrous acid. ►►► It was formerly called fuming nitrous acid. It appears to form a distinct genus of salts, that may be termed nitrites. But these cannot be made by a direct union of their component parts, being obtainable only by ex-prxsin'.; a nitrate to a high temperature, which expels a portion of its oxygen in the state of pas, and leaves the remainder in the state of a

nitrite, it' the heat be not urged so far, or continued so long, as to effect a complete decomposition of the salt. In this way the nitrites of potash and soda may be obtained, and perhaps those of barytes, strontian, lime, and magnesia. The nitrites are particularly characterised by being decomposable by all the acids, except the carbonic, even by the nitric acid itself, all of which expel them from nitrous acid. We are little acquainted with any one except that of potash, which attracts moisture from the air, changes blue vegetable colors to green, is somewhat acrid to the taste, and when powdered emits a smell of nitric oxide.

The acid itself is best obtained by exposing nitrate of lead to heat in a glass retort. Pure nitrous acid comes over in the form of an orange colored liquid. It is so volatile as to boil at the temperature of 82►►. Its specific gravity is 1-450. When mixed with water it is decomposed, and nitrous gas is disengaged, occasioning effervescence. It is composed of one volume of oxygen united with two of nitrous gas. It therefore consists ultimately, by weight, of 1-75 nitrogen -j-four oxygen ; by measure, of two oxygen -f-one nitrogen. The various colored acids of nitre are not nitrous acids, but nitric acid impregnated with nitrous gas, the deutoxide of nitrogen or azote.

NITRIC ACID, OXYGENISED, was first formed by M. Thenard. When the peroxide of barium, prepared by saturating barytes with oxygen, is moistened, it falls to powder, without much increase of temperature. If in this state it be mixed with seven or eight times its weight of water, and dilute nitric acid be gradually poured upon it, it dissolves gradually by agitation, without the evolution of any gas. The solution is neutral, or has no action on turnsole or tur-meric. When we add to this solution the requisite quantity of sulphuric acid, a copious precipitate of sulphate of barytes falls, and the filtered liquor is merely water, holding in solution oxygenised nitrid acid. This acid is liquid and colorless; it strongly reddens turnsole, and resembles in all its properties nitric acid.

When healed it immediately begins to discharge oxygen ; but its decomposition is never complete, unless it be kept boiling for some time. The only method which M. Thenard found successful for concentrating it was to place it in a capsule, under the receiver of an air-pump, along with another capsule full of lime, and to exhaust the receiver. By this means he obtained an acid sufficiently concentrated to give out eleven times its bulk of oxygen gas.

This acid combines very well with barytes, potash, soda, ammonia, and neutralises them. When crystallisation commences in the liquid,

by even a spontaneous evaporation, these salts are instantly decomposed. The exhausted receiver also decomposes them. The oxygenised nitrates, when changed into common nitrates, do not change the state of their neutralisation. Strong solution of potash poured into their solutions decomposes them.

Oxygenised nitric acid does not act on gold ; but it dissolves all the metals which the common acid acts on, and when it is not too concentrated,

it dissolves them without effervescence. Deutoxide or peroxide of barium, contains just double the proportion of oxygen that its protoxide does. But M. Thenard says that the barytes obtained from the nitrate by ignition contains always a little of the peroxide. When oxygenised nitric acid is poured upon oxide of silver a strong effervessence takes place, owing to the disengagement of oxygen. One portion of the oxide of silver is dissolved, the other is reduced at first, and then dissolves likewise, provided the quantity of acid be sufficient. The solution be-ing completed, if we add potash to it, by little and little, a new effervescence takes place, and a dark violet precipitate falls; at least this is al-ways the color of the first deposit. It is insoluble in ammonia, and, according to all appearance, is a protoxide of silver.

As soon as we plunge a tube containing oxide of silver into a solution of oxygenised nitrate of potash, a violent effervescence takes place, the oxide is reduced, the silver precipitates, the whole oxygen of the oxygenised nitrate is disengaged at the same time with that of the oxide; and the solution, which contains merely common nitrate of potash, remains neutral, if it was so at first. But the most unaccountable phenomenon is the following: ××× If silver, in a state of extreme division (fine filings), be put into the oxygenised nitrate or oxygenised muriate of potash, the whole oxygen is immediately disengaged. The silver it-self is not attacked and the salt remains neutral as before.

NITROGEN, or AZOTE, in chemistry, an important elementary or undecomposed principle. As it constitutes four-fifths of the volume of atmospheric air, the readiest mode of procuring azote is to abstract its oxygenous associate, by the combustion of phosphorus or hydrogen. It may also be obtained from animal matters, subjected in a glass retort to the action of nitric acid, diluted with eight or ten times its weight of water.

Nitrogen possesses all the physical properties of air. It extinguishes flame and animal life. It is absorbable by about 100 volumes of water. Its specific gravity is 0-9722. 100 cubic inches weigh 29-G.5 grains. It has neither taste nor smell. It unites with oxygen in four proportions, forming four important compounds. These are, 1. Protoxide of nitrogen, or nitrous oxide. 2. Deutoxide of nitrogen, nitrous gas, or nitric oxide. 3. Nitrous acid. 4. Nitric acid.

1. Nitrous oxide or protoxide of azote was discovered by Dr. Priestley in 1772, but was first accurately investigated by Sir H. Davy in 1799. The best mode of procuring it is to ex-pose the salt called nitrate of ammonia to the flame of an Argand lamp, in a glass retort. When the temperature reaches 400►► F. a whitish cloud will begin to project itself into the neck of the retort accompanied by the copious evolution of gas, which must be collected over mercury for accurate researches, but for common experiments may be received over water. It has all the physical properties of air. It has a sweet taste, a faint agreeable odor, and is condensible by about its own volume of water, previously deprived of its atmospheric air. This property enables us to determine the purity of nitrous

oxide. A taper plunged into this -fas burns with great brilliancy; the flame being surrounded with a bluish halo. But phosphorus may be melted and sublimed in it without taking fire. When this combustible is introduced into it, in a state of vivid combustion, the brilliancy of the flame is greatly increased. Sulphur and most other combustible bodies require a higher degree of heat for their combustion in it than in either oxygen or common air. This maj be attributed to the counteracting affinity of the intimately combined nitrogen. Its specific gravity is 1*5277 : 100 cubic inches weigh 46-6 gr. It is respirable, but not fitted to support life. Sir 11. Davy first showed, that by breathing a few quarts of it, contained in a silk bag, for two or three minutes, effects analogous to those occasioned by drinking fermented liquors were produced. See AIR and CHEMISTRY, Index. The following very remarkable cases of the effects of nitrous oxide

occurred among Professor Silliman's students at Yale College, New Haven. A gentleman about nineteen years of age, of a sanguine temperament and cheerful temper, and in the most perfect health, inhaled the gas, which was prepared and administered in the usual dose and manner. Immediately his feelings were uncommonly elevated, so that, as he expressed it, he could not refrain from dancing and shouting. To such a de-gree was he excited that he was thrown into a frightful delirium, and his exertions became so violent that he sunk to the earth exhausted ; and, having there remained till he in some degree recovered his strength, he again rose only to renew the most convulsive muscular efforts, and the most piercing screams and cries, until, overpowered by the intensity of the paroxysms, he again fell to the ground apparently senseless, and panting vehemently. For the space of two hours these symptoms continued ; he was perfectly unconscious of what he was doing, and was in every respect like a maniac : he states, however, that his feelings vibrated between perfect happiness and the most consummate misery. After the first violent effects had subsided he was obliged to lie down two or three times, from excessive fatigue, although he was immediately aroused upon any one's entering the room. The effects remained in a degree for two or three days, accompanied by a hoarseness, which he attributed to the exertions made while under the influence of the gas.

The other case was that of a man of mature age, and of a grave character. For nearly two years previously to his taking the gas, his health had been very delicate, and his mind so gloomy and depressed that he was obliged almost entirely to discontinue his studies. In this state of debility, he inhaled three quarts of the nitrous oxide. The consequences were an astonishing invigoration of his whole system, and the most exquisite perception of delight. These were manifested by an uncommon disposition for mirth and pleasantry, and by extraordinary muscular power. The effects of the gas were felt, without diminution, for at least thirty hours, and, in a greater or less degree, for more than a week ; but the most remarkable effect was upon the organs of taste. Before taking the pis, he felt

no peculiar choice in the articles of food, but, immediately after that event, he manifested a taste for such tilings only as were sweet, and for several days ate nothing but sweet cake. Indeed, this singular taste was carried to such excess, that he used sugar and molasses, not only upon his bread and butter, and lighter food, but upon his meat and vegetables ; and this lie continued to d:> all the eight days after he had inhaled the gas. He became quite regular in liis mind, and habitually cheerful, while before he was habitually grave, and even to a degree gloomy.

2. Deutoxide of nitrogen, or nitric oxide, was first described by Dr. Priestley in 1772. Into a glass retort, containing copper turnings, pour nitric acid diluted with six or eight times its quantity of water, and apply a gentle heat. A gas comes over, which may be collected over water ; but, for exact experiments, it should be received over mercury. Its specific gravity is 1-0416. 100 cubic inches weigh 36-77 grains. Water condenses only about one-twentieth of its volume of nitric oxide. But a solution of pro-tosulphate or protomuriate of iron absorbs it very copiously, forming a dark colored liquid, which is used for condensing oxygen, in the eudiometer of Sir H. Davy. When ajar of nitric oxide is opened in the atmosphere red fumes appear in consequence of the absorption of oxygen, and formation of nitrous acid. When an animal is made to inhale this gas it is instantly destroyed by the formation of this acid, and condensation of the oxygen in its lungs. When a burning taper is immersed in this gas it is extinguished ; as well as the flame of sulphur. But inflamed phosphorus burns in it with great splendor. A mixture of hydrogen gas and nitric oxide burns with a lambent green flame, but does not explode by the electric spark ; though Fourcroy says that it detonates on being passed through an ignited porcelain tube. The pyrophorus of Homberg spontaneously burns in it.

Nitrogen combines with chlorine and iodine to form two very formidable compounds : ###

1. Thj chloride of nitrogen was discovered about the beginning of 1812, by M. Dulong ; but its nature was first investigated and ascertained by Sir H. Davy.

Put into an evaporating porcelain basin a solution of one part of nitrate or muriate of ammonia in ten of water, heated to about 100##, and invert into it a wide-mouthed bottle filled with chlorine. As the liquid ascends by the condensation of the gas, oily-looking drops are seen floating on its surface, which collect together, and fall to the bottom in large globules. This is chloride of nitrogen or azote.

By putting a thin stratum of common salt into the bottom of the basin, we prevent the decomposition of the chloride, by the ammoniacal salt. It should be formed only in very small quantities. The chloride of nitrogen thus obtained is an oily-looking liquid, of a yellow color, and a very pungent intolerable odor, similar to that of chlorocar-bonous acid. Its specific gravity is 1-653. When tepid water is poured into a glass containing it, it expands into a volume of elastic fluid, of an orange color, which diminishes as it passes tli rough the water.

‘ I attempted,’ says Sir H. Davy, ‘ to collect the products of the explosion of the new substance, by applying the heat of a spirit-lamp to a globule of it, confined in a curved glass tube over water : a little gas was at first extricated ; but, long before the water had attained the temperature of ebullition, a violent flash of light was perceived, with a sharp report; the tube and glass were broken into small fragments, and I received a severe wound in the transparent cornea of the eye, which has produced a considerable inflammation of the eye, and obliges me to make this communication by an amanuensis. This experiment proves what extreme caution is necessary in operating on this substance ; for the quantity I used was scarcely as large as a grain of mustard seed.’ Philosophical Transactions, 1813, part I. It evaporates pretty rapidly in the air ; and in vacuo it expands into a vapor, which still possesses the power of exploding by heat. When it is cooled artificially in water, or the ammoniacal solution, to 40►► Fahrenheit, the surrounding fluid congeals ; but when alone it may be surrounded with a mixture of ice and muriate of lime, without freezing. It gradually disappears in water, producing azote ; while the water becomes acid, acquiring the taste and smell of a weak solution of nitro-muriatic acid. With muriatic and nitric acids, it yields azote : and with dilute sulphuric acid, a mixture of azote and oxygen. In strong solutions of ammonia it detonates; with weak ones it affords nitrogen. When it was exposed to pure mercury, out of the contact of water, a white powder (calomel) and nitrogen were the results. ‘ The action of mercury on the compound,’ says Sir II., ‘ appeared to offer a more correct and less dangerous mode of attempting its analysis ; but on introducing two grains under a glass tube filled with mercury, and inverted, a violent detonation occurred, by which I was slightly wounded in the head and hands, and should have been severely wounded had not my eyes and face been defended by a plate of glass, attached to a proper cap ; a precaution very necessary in all investigations of this body.’ Philosophical Transactions, 1813, part II. In using smaller quantities, and recently distilled mercury, he obtained the results of the experiments, without any violence of action.

From his admirable experiments on the analysis of this formidable substance, by mercury, by muriatic acid, and from the discoloration of sulphate of indigo, we may infer i's composition to be ###

4 vol. of chlorine zz 10-4 primes 18-0.

1 of azote zz 0-9722 1 1*75.

or very nearly 10 by weight of chlorine to 1 of nitrogen.

A small globule of it, thrown into a glass of olive oil, produced a most violent explosion ; and the glass, though strong, was broken into fragments. Similar effects were produced by its action on oil of turpentine and naphtha. When it was thrown intoˆether, or alcohol, there was a very slight action. When a particle of it was touched under water by a particle of phosphorus a brilliant light was perceived under the

water, and permanent gas was disengaged having the characters of azote or nitrogen.

When quantities larger than a grain of mustard-seed were used for the contact with phosphorus, the explosion was always so violent as to break the vessel in which the experiment was made. On tinfoil and zinc it exerted no action ; nor on sulphur and resin.' But it detonated most violently when thrown into a solution of phosphorus in ether or alcohol. The mechanical force of this compound, in detonation, seems superior to that of any other known, not even excepting the ammoniacal fulminating silver. The velocity of its action appears to be likewise greater. ' I touched,' says Dr. Ure, 'a minute globule of it, in a platina spoon resting on a table, with a fragment of phosphorus at the point of a pen-knife. The blade was instantly shivered into fragments by the explosion.

Messrs. Porrett, Wilson, and Rupert Kirk, brought 125 different substances in contact with it. The following were the only ones which

caused it to explode : ⁂

Supersulphareted hydrogen.

Phosphorus.

Phosphuret of lime.

Phosphureted camphor.

Camphureted oil.

Phosphureted hydrogen gas.

Caoutchouc.

Myrrh.

Palm oil.

Ambergris.

Whale oil.

Linseed oil.

Olive oil.

Sulphurated oil.

Oil of turpentine. Oil of tar. Oil of amber. Oil of peiroleum. Oil of orange peel. Naphtha. Soap of silver. Soap of mercury. Soap of copper. Soap of lead. Soap of manganese. Fused potash. Aqueous ammonia. Nitrous gas.

Iodide of nitrogen. Azote does not combine directly with iodine. We obtain the combination only by means of ammonia. It was discovered by M. Courtois, and carefully examined by M. Colin. When ammoniacal gas is passed over iodine a viscid shining liquid is immediately formed, of a brownish-black color, which, in proportion as it is saturated with ammonia, loses its lustre and viscosity.

No gas is disengaged during the formation of this liquid, which may be called iodide of ammonia. It is not fulminating. When dissolved in water a part of the ammonia is decomposed; its hydrogen forms hydriodic acid, and its nitrogen combines with a portion of the iodine, and forms the fulminating powder. We may obtain the iodide of azote directly, by putting pulverulent iodine into common water of ammonia. This indeed is the best way of preparing it; for the water is not decomposed, and seems to concur in the production of this iodide, only by determining the formation of hydriodate of ammonia. The iodide of nitrogen is pulverulent, and of a brownish-black color. It detonates from the smallest shock, and from heat, with a feeble violet vapor. When properly prepared, it often detonates spontaneously. Hence after the black powder is formed, and the liquid ammonia decanted off, we must leave the capsule containing it in perfect repose. When this iodide is put into

potash water nitrogen is disengaged, and the same products are obtained as when iodine is dissolved in that alkaline lixivium. The hydriodate of ammonia, which has the property of dissolving a great deal of iodine, gradually decomposes the fulminating powder, while azote is set at liberty. Water itself has thi* property, though in a much lower degree. As the elements of iodide of nitrogen are so feebly united, it ought to be prepared with great precautions, and should not be preserved. The strongest arguments for the compound nature of nitrogen are derived from its slight tendency to combination, and from its being found abundantly in the organs of animals who feed on substances that do not contain it. See CHEMISTRY, Index, and the article AIR.

NITilO-MURIATIC ACID. See CHEMISTRY.

NIVELLES, a town of the Netherlands, in South Brabant, the chief place of an extensive district, stands on the river Thienne. It has three suburbs, and a population of 6600; manufactures of cambric and lace, oil, and paper : and the environs produce flax, hemp, and hops. Fifteen miles south of Brussels, and seventy-five N. N. W. of Namur. Long. 5►► 15’ E., lat. 50►► 35’ N.

NIVEOUS, adj. Lat. niveus. Snowy ; resembling snow.

Cinabar becomes red by the acid exhalation of sulphur, which otherwise presents a pure and niveout white. ttroitne.

NIVERNOIS, the former name of a province to the west of Burgundy, in the interior of France. It is about sixty miles long, and fifty broad, containing a ‘population of upwards of 220,000. Its climate is very pleasant and agreeable. The greater part of it is now comprehended in the department of the Nievre.

NIZOLIUS (Marius), an Italian grammarian, who, by his erudition, contributed much to the promotion of literature in the sixteenth century. In 1553 he published, De Veris Principiis et Vera Ratione Philosophandi contra Pseudo-philosophos ; wherein he attacks the schoolmen and followers of Aristotle for their absurd opinions and barbarisms, with great shrewdness and vivacity. Leibnitz was so pleased with it that he republished it, with critical notes of his own, in 4to., 1607. Nizolius also published, Thesaurus Ciceronianus, sive Apparatus Linguae Latinx e Scriptis Tullii Ciceronis collectus ; fol.

NI’ZY, n. s. From Fr. niait. A dunce; a simpleton. A low word.

True critics langh, and bid the trifling ni*y

Go read Quintilian. Anon.

NO, adv. & adj. Sax. na, no ; Goth, nea ; Swed. nei; Teut. ni; Fr. and Lat. rum; Ital. no. Nay ; the word used in simply denying or refusing ; it confirms a foregoing negative : as an adjective, it means not any ; none.

Let there be HO strife between thee and me.

Genefis.

ˆ‘hen we saw that they were no where, we came to Samuel. 1 Samuel x. 14.

Our courteous Antony,

Whom ne’er the word of no woman heard speak, Being barbered ten times o’er, goes to the feast.

Sfuiktpeure.

NOA

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Henceforth my wooing mind shall be exprest,

In russet yeas and honest kersy noes. Id.

My name’s Macbeth.

❖❖❖ The Devil himself could not pronounce a title

More hateful to mine ear.

❖❖❖ No, nor more fearful. Id.

I think it would not sort amiss, to handle the question, whether a war for the propagation of the Christian faith, without another cause of hostility, be lawful or no, and in what cases ! Bacon.

No not the bow which so adorns the skies, So glorious is, or boasts so many dyes. Walter. Never more

This hand shall combat on the crooked shore :

No ; let the Grecian powers, opprest in fight,

Unpityed perish in their tyrant’s sight.

Dryden’s Homer. In vain I reach my feeble hands to join

In sweet embraces ; ah ! no longer thine.

Dry den.

No one who doeth good to those only from whom he expects to receive good, can ever be fully satisfied of his own sincerity. Smatridge.

If you will not consider these things now, the time will shortly come when you shall consider them whether you will or no. Calamy’s Sermons.

Woman and fool are two hard things to hit, For true no meaning puzzles more than wit. Pope. No wit to flatter left of all his store,

No fool to laugh at, which he valued more. Id.

Some dire misfortune to portend, No enemy can match a friend. Swift.

Poor Edwin was no vulgar boy. Beattie.

Discourse may want an animated ??? No,

To brush the surface, and to make it flow ;

But still remember, if you mean to please,

To press your point with modesty and ease.

Cowper.

No, in ancient geography, or No-Ammon, a considerable city of Egypt, mentioned, by Jeremiah, Ezekiel, and Nahum, thought to be named from an idol analogous to Jupiter Ammon. The Septuajint translate the name in Ezekiel, Diospolis, the city of Jupiter. Bochart takes it to be Thebes of Egypt ; which, according to Strabo and Ptolemy, was called Diaspolis. Jerome, after the Chaldee paraphrast Jonathan, supposes it to be Alexandria, named by way of anticipation; or an ancient city of that name is supposed to have stood on the spot where Alexandria was built.

NOACHID/E, a name given by the rabbins to all mankind who are not of the chosen race of Abraham. The rabbins pretend that God gave Noah and his sons certain general precepts, which contain the natural rights common to all men, and the observation of which alone will be sufficient to save them. After the law of Moses, the Hebrews would not suffer any stranger to dwell in their country, unless he would conform to the precepts of the Noachida. These precepts are seven : ??? The 1st enjoins obedience to judges, magistrates, and princes. The 2d prohibits idolatry, superstition, and sacrilege. The 3d forbids cursing, blasphemy, and perjury. The 4th prohibits all incestuous and unlawful conjunctions, as sodomy, bestiality, and crimes against nature. The 5th forbids murder, wounds, and mutilations. The 6th prohibits theft, cheating, lying, &c. The 7th forbids to eat the parts of an animal still alive, as was practised by some pagans. To those the rabbins have added some

others ; but as no mention is made of these precepts in Scripture, or in the writings of Josephus or Philo, and as none of the ancient fathers knew any thing of them, they appear to be spurious.

NOACOTE, a district of Nepaul, in about 28►► of N. lat. in the mountains, and so perfectly sheltered from the north winds as to be much warmer than the other parts of Nepaul. It produces a great quantity of sugar, and the fruits of the more southern provinces. The villages are encompassed with stone walls.

NOACOTE, the capital of the above-mentioned district, though not of great extent, contains some of the largest and best looking houses in Nepaul, and a celebrated Hindoo temple, dedicated to Bhavany. Its situation commands the only entrance in this quarter from Thibet. Long. 85►► 30' E., lat. 27►► 43' N.

NOAIi, or NOE, the son of Lamech, and the tenth from Adam, was born A. M. 1056. Amidst the general corruption into which all mankind were fallen at this time, Noah alone, with his fa-mily, were found worthy of being preserved from total destruction by the deluge : A. M. 1656. See ARK and DELUGE ; also Gen. vi. ►►► viii. He cursed Canaan, probably because he was a partner in his father Ham's crime of disrespect, and the Canaanites his descendants were after this to be rooted out by the Israelites. The rabbins indeed have a tradition that it was Canaan who first saw his father in the disgraceful state mentioned, and ran and informed his father Ham. Noah added, Let the Lord, the God of Shem, be blessed, and let Canaan be the servant of Shem. And he was so in effect, in the Canaanites subdued by the Hebrews. Lastly, Noah said, Let God extend the possession of Japheth ; let Japheth dwell in the tents of Shem, and let Canaan be his servant. This prophecy had its accomplishment when the Grecians, and afterwards the Romans, descendants of Japheth, made a conquest of Asia, which was the portion of Shem. Noah lived after the deluge 350 yesrs ; and, the whole time of his life having been 950 years, he died, A. M. 2006. According to the common opinion, he divided the whole world among his three sons, in order to repeople it. To Shem he gave Asia, to Ham Africa, and to Japheth Europe. Some say that he had several others. The spurious Berosus gives him thirty, called Titanj, from their mother Titaea. They pretend that the Teutons, or Germans are derived from a son of Noah called Tuiscon. Methodius also mentions Jonithus or lonicus, a pretended son of Noah. St. Peter calls Noah a preacher of righteousness (2 Ep. ii. 5), because before the deluge he was incessantly preaching and declaring to men, not only by his discourses, but by his unblameable life, and by the building of the ark, in which he was employed 120 years, that the wrath of God was ready to pour upon them. But his preaching had no effect (Matt. xxiv. 37). Several learned men have observed that the heathens confounded Saturn, Deucalion, Ogyges, Ccelus orOuranus, Janus, Proteus, Prometheus, &c., with Noah. The wife of Noah is called

Noriah by the Gnostics ; and the fable of Deucalion and his wife Pyrrha is manifestly invented

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from the history of Noah. And Bryant has shown, in his System of Mythology, strong traces of the history of Noali and the general deluge to exist in the fabulous history of most ancient nations.

NOAILLES (Louis Antoine de), a French prelate of the last century, was the second son of Anne, due de Noailles, from whom he innerited the dukedom of St. Cloud, with the signory of Aubrach. A devotional turn of mind, and a passion for literature, induced him to enter the church at an early age, and in his twenty-fifth year he had become a doctor of the Sorbonne. At length he became archbishop of Paris, and primate of France. In 1700 he was promoted to the purple. lie strongly opposed the famous bull Unigenitus, respecting Quesnel's work on the New Testament, so that not only did his popularity decline, but a sentence of banishment was issued against him, through the influence of Tellier and the Jesuitical party. His disgrace, however, was but of short duration. His death took place at Paris, May 4th, 1729. He was noted for his strict impartiality between the contending church factions of his day, and for his close attention to the lives and manners of the French clergy, which he much improved.

NOANAGUR, a stony district of Hindostan. province of Gujerat, on the south side of the Gulf of Cutch. It produces sugar-cane, and good crops of grain and cotton. The inhabitants are Hindoos, and their chief retains the title of Jam. The capital of this name, situated on the river Nagne, is defended by a stone wall, with round towers and a ditch. The inhabitants manufacture very beautiful cloths, for the dyeing of which the Nagne is supposed by the natives to possess some peculiarly favorable qualities. The chief is independent, and coins, in his own name, a small silver coin called corec, equal in value to one-third of the Surat rupee. In 1808 he entered into a treaty with the British, by which he chiefly engaged that his subjects should refrain from piracy.

NOB, a sacerdotal city of the tribe of Benjamin or Ephraim. St. Jerome says that in his time it was entirely destroyer1, and that the ruins of it might be seen near Diospolis. The destruction of this city, and the barbarous massacre of its inhabitants, by Saul's order, are recorded in 1 Sam. xxi. xxii. See also ABIMELECH and DOEO.

NOBILI (Robert de), an Italian Jesuit, and one of the Indian missionaries, who, in the beginning of the seventeenth century, to

secure success to his mission, assumed the title and appearance of a Bramin and at length persuaded the credulous people that he was in realty a member of that order. He forged a deed in the ancient Indian characters, showing that the Bramins of Rome were older than those of India, and that the Jesuits of Rome descended in a direct line from the god Brama. lie farther declared on oath that he derived his origin from this Indian deity. By this imposture he proselyted twelve eminent Bramins, whose influence proved very favorable to his mission. After his death, the Portuguese Jesuits carried on the imposture with very considerable success. These missions, however, were suspended and abandoned, in consequence of a papal mandate issued in 1744, by Benedict XIV., who declared his disapprobation of the artifices that had been used in the conversion of the Indians.

NOBIL'ITATE, v. a. ˆ Lat nobiltio, nobi-NOBIL'ITY, n.t. \litat. To make of

NO'BLE, adj. & n. s. \ higher superior rank : NO'BLEMAN, '^ nobility is high rank;

NO'BLENESS, I dignity; grandeur;

NO'BLESS, j aristocracy ; in Eng—

NO'BLY, adv. J land it includes the

five ranks of duke, marquis, earl, viscount, baron : noble is high in rank or character ; illustrious ; great ; worthy ; generous ; frank : it is also sometimes used for principal or capital: a noble or nobleman is one of high rank : the former also signifies a coin, once common in England, worth 6s. Qd. : nobleness and nobility follow the senses of noble: nobless is a foolish and obsolete Gallicism (Fr.not/f-sse), used as synonymous with nobility and nobleness.

Upon the nobtet of the children of Israel he laid not his hand. Efodut.

Thus this man died, leaving his death for an example of a noble courage, and a memorial of virtue.

2 Mar. vi. 31.

But ah, my muse, I would thou had'st facility To work my goddess so hy thy invention,

On me to cast thine eyes where shine nobility.

Sidn-y.

Fair branch of nobleis, flower of chivalry, That which your worth the world amazed make.

Spensfr.

Many fair promotions Are daily given to ennoble those That scarce, some two days since, were worth a noble.

Shakspeare.

How many noblei then should hold their places, That must strike sail to spirits of vile sort ! Id.

Did he not straight the two delinquents tear. That were the slaves of drink and thralls of sleep ? Was not that nobly done ? Id. Macbeth.

If I blush, It is to see a nobleman want manners. Shakspeare.

True nobleness would Learn him forbearance from so foul a wrong. Id.

It is a purposed thing, To curb the will of the nobility.

Id. Coriotanvi.

Base men, being in love, have then a nobility in their natures more than is native to them.

Siakspfare.

Let us haste to hear it,

And call the nobles to the audience. Id.

He coined nobles, of noble, fair, and fine gold.

Cumdsn.

Upon every writ procured for debt or damage, amounting to forty pounds or more, a noble, that is six shillings and eight-pence, is, and usually hath been, paid to fine. Bacon.

What the noblet once said in parliament, Nolumus leges Angliae mutari, is imprinted in the hearts of all the people. . ‘^*

Thou whose noblenets keeps one stature still. And one true posture,

though besieged with ill.

Ben Jonson.

In the court of our Henry the Eighth, a certain great peer could say, it was enough for noblemen s sons to wind their horn, and carry their hawk fair ; that study was for the children of a meaner rank.

Bp. Hall.

He that does as well in private between God and his own soul, as in public, hath given himself a tes-

timony that his purposes are full of honesty, nobleness, and integrity. Taylor.

This fate he could have scaped, but would not lose Honour for life ; but rather nobly ciiose Death from their fears, than safety from his own.

Denham.

The nobles amongst the Romans took care in their last wills, that they might have a lamp in their monuments. Wilkins.

To vice industrious, but to nobler deeds Tim'rous. Milton.

A noble stroke he lifted high, Which hung not, but with tempest fell. Id.

Greatness of mind, and nobleness their seat Build in her loveliest. Id. Paradise Lint.

There is not only a congruity herein between the nobleness of the faculty and the object, but also the faculty is enriched and advanced by the worth of the object. Hale.

The lessons teaching it (content) may as well suit the rich and noble as the poor and the peasant

Barrow.

From virtue first began

The difFrence that distinguished man from man : He claimed no title from descent of blood, But that which made him noble, made him good.

iJryden.

Only a second laurel did adorn His colleague Catulus, though nobly born : He shared the pride of the triumphal bay, But Marius won the glory of the day. Id.

i know no reason that we should give that advantage to the commonalty of England to be foremost in brave actions which the nobless of France would never suffer in their peasants. Id.

You have not only been careful of my fortune, which was the effect of your nobleness, but you have been solicitous of my reputation, which is that of your kindness. Id.

The nobleman is he whose noble mind Is filled with inborn worth. Id. H ife of Bath.

Long galleries of ancestors Challenge, nor wonder, or esteem from me, ‘ Virtue alone is trie nobility.’ Id.

Those two great things that so engross the desires and designs of both the nobler and ignobler sort of mankind, are to be found in religion ; namely, wis-dom and pleasure. South.

There could not have been a more magnificent design than that of Trajan’s pillar. Where could an emperor’s a►►hes have been so nobly lodged as in the midst of his metropolis, and on the top of so exalted a monument 1 Addison on Italy.

Estates are now almost as frequently made over by whist and hazard as by deeds and settlements : and the chariots of many of our nobility may be said (like Basset’s in the play) to roll upon the four aces.

Connoisseur.

See all our noblet begging to be slaves, See all our fools aspiring to be knaves. Pope. The second natural division of power is of such men who have acquired large possessions, and consequently dependencies ; or descend from ancestors who have left them great inheritances,

together with an hereditary authority : these easily unite in thoughts and opinions. Thus commences a great council or senate of nobles, for the weighty affairs of the nation. Swift.

Men should press forward in Fame's glorious

cliace,

Kulles look backward, and so lose the race. Young. A correspondence fixed wi' Heaven

Is sure a noble anchor ! Burns.

Strew the deck With lavender, and sprinkle liquid swe^'s.

That no rude savour maritime invade the nose Of nice nobility ! Couyxr.

The nobility and gentry were taught theoretically as well as practically to bruise the bodies, and (to use a technical term) darken the daylights of each other, with the vigour of a Hercules tempered with <.he grace of an Apollo. Canning.

NOBILITY, in the common acceptation of the word, means that quality or dignity which raises a man above the rank of a peasant or a commoner. It is an opinion not uncommon, and at least plausible, that the nobility of a well regulated state is the best security against monarchal despotism or lawless usurpation on the one hand, and the confusion of democratic insolence on the other. Self-interest is the most powerful principle in the human breast; and it is obviously the interest of such men to preserve that balance of power in society upon which the very existence of their order depends.

The. origin of nobility in Europe is by some referred to the Goths ; who, after they had seiz-ed a part of Europe, rewarded their captains with titles of honor, to distinguish them from the common people. We shall only in this place consider the manner in which in our own country they may be created, and the incidents attending them. 1. The right of peerage seems to have been originally territorial ; that is, annexed to lands, honors, castles, manors, and the like ; the proprietors and possessors of which were (in right of those estates) allowed to be peers of the realm, and were summoned to parliament to do suit and service to their sovereign : and, when the land was alienated, the dignity passed with it as appendant. Thus, in England,

the bishops still sit in the house of lords in right of succession to certain ancient baronies annexed, or supposed to be annexed, to their episcopal lands ; and thus in 11 Henry VI. the possession of the castle of Arundel was adjudged to confer an earldom on its possessor. But afterwards, when alienations grew to be frequent, the dignity of peerage was confined to the lineage of the party ennobled, and, instead of territorial, became personal. Ac-tual proof of a tenure by barony became no lon-ger necessary to constitute a lord of parliament ; but the record of the writ of summons to him or his ancestors was admitted as a sufficient evidence of the tenure. Peers of Great Britain (says Blackstone) are now created either by writ or by patent : for those who claim by prescription must suppose either a writ or patent made to their ancestors ; though by length of time it is lost. The creation by writ, or the king's letter, is a summons to attend the house of peers, by the style and title of that barony which the kins s pleased to confer : that by patent is a royal giant to a subject of any dignity and degree of peerage. The creation by writ is the more ancient v.ay; but a man is not ennobled thereby, unless he actually take his seat in the house of lords ; and some are of opinion that there must be at least two writs of summons, and sitting in two distinct parliaments, to evidence an hereditary barony: and therefore the most usual, because the surest way, is to grant the dignity by patent, which endures to a man and his heirs according to the limitations thereof, though he neverhimselfmakes

use of it. Yet it is frequent to call up the eldest son of a peer to the house of lords by writ of summons, in the name of his father's barony : because in that case there is no danger of his child rens' losing the nobility in case he never take his seat ; for they will succeed to their grandfather. Creation by writ has also one advantage over that by patent ; for a person created by writ holds the dignity to him and his heirs, without any words to that purpose in the writ ; but in letters patent there must be words to direct the inheritance, else the dignity endures only to the grantee for life. For a man or woman may be created noble for their own lives, and the dignity not descend to their

heirs at all, or descend only to some particular heirs : as where a peerage is limited to a man and the heirs male of his body by Elizabeth his present lady, and not to such heirs by any former or future wife. 2. Let us next take a view of a few of the principal incidents attending the nobility, ××× exclusive of their capacity as members of parliament, and as hereditary counsellors of the crown, for both which we refer to the article PARLIAMENT. And first we must observe, that in criminal cases a nobleman shall be tried by his peers. The great are always obnoxious to popular envy : were they to be judged by the people they might be in danger from the prejudice of their judges; and would moreover be deprived of the privilege of the meanest subjects, that of being tried by their equals, which is secured to all the realm by magna charta, c. 29. It is said that this does not extend to bishops; who though they are lords of parliament, and sit there by virtue of their baronies which hcJd jure ecclesiae, yet are not ennobled by blood, and consequently not peers with the nobility. As to peeresses, no provision was made for their trial when accused of treason or felony, till after Eleanor duchess of Gloucester, wife to the lord protector, had been accused of treason, and found guilty of witchcraft, in an ecclesiastical synod, through the intrigues of cardinal Beaufort. This very extraordinary trial gave occasion to a special statute, 20 Hen. VI. cap. 9, which enacts that peeresses, either in their own right or by marriage, shall be tried before the same judicature as peers of the realm. If a woman, noble in her own right, marries a commoner, she still remains noble, and shall be tried by her peers : but, if she be only noble by marriage, then by a second marriage with a commoner she loses her dignity ; for as by marriage it is gained, by marriage it is also lost. Yet if a duchess-dowager marries a baron, she continues a duchess still ; for all the nobility are pares, and therefore it is no degradation. A peer or peeress (either in her own right or by marriage) cannot be arrested in civil cases : and they have also many peculiar privileges annexed to their peerage in the course of judicial proceedings. A peer sitting in judgment gives not his verdict upon oath, like an ordinary juryman, but upon his honor ; he answers also to bills in chancery upon his honor, and not upon his oath : but when he is examined as a witness, either in civil or criminal cases, he must be sworn ; for the respect which the law shows to the honor of a peer does not extend so far as to overturn a settled maxim

that in judicio non credilur nisi juratus. The honor of peers is however so highly tendered by the law that it is much more penal to spread false reports of them, and certain other great officers of the realm, than of other men ; scandal against them being called by the peculiar

name of scandalum magnatum, and subjected to a peculiar punishment by divers ancient statutes. A peer cannot lose his nobility but by death or attainder ; though there was an instance, in the reign of Edward I V., of the degradation of George Neville duke of Bedford by act of parliament, on account of his poverty, which rendered him un-able to support his dignity. But this is a singular instance, which serves at the same time, by having happened, to show the power of parliament ; and, by having happened but once, to show how tender the parliament hath been in exerting so high a power. It hath been said in-deed, that if a baron wastes his estate, so that he is not able to support the degree, the king may degrade him : but it is expressly held by later authorities that a peer cannot be degraded but by act of parliament.

NOBILITY, SCOTTISH. The earl of Buchan, in his Introduction to the Life of Fletcher, speaks in very strong terms of the power of the ancient Scottish nobility. 'The king and the slaves,' says he, 'were, in fact, the only people, and the nobility was the prince. The king therefore, with the slaves, assumed the station of the peo-ple, and crushed more or less in different ages the prince, combined and composed of the great proprietors of the soil.' ??? 'The nobility of Scotland were the earls and lords of regality. Scotland never knew such an order of men as lords of parliament. The earls had no right to sit in the parliament, but by their lands ; but being chief magistrates and judges in their counties, with regal powers, these, with their territorial advantages springing from the feudal system, rendered them truly formidable both to the king and to the commonwealth. James I. saw the advantages reaped in England by the crown, in consequence of the formation of a peers' house of parliament and the power of calling up great commoners by writ of summons to that house of parliament, and wished to adopt so crafty an example. On the trial of Murdock, duke of Albany, he established a precedent for what were called barons of Baron-rent to be called lords and nobles, and to sit with precedence in the parliament by royal charter of lands, erecting estates into earldoms or baronies, unconnected with the ancient earldoms or county palatines of the kingdom ; and then by the election of certain members of parliament for preparing the laws or acts, who were called lords of the articles, chosen from the earls, barons of baron-rent, and the great officers of the state, he contrived to quasi, or prevent motions that were adverse to the interest of the crown.'

A NOBLE is a person who has a privilege which raises him above a commoner, or peasant, either by birth, by office, or by patent from his prince. The original word nobilis is formed of the ancient noscibilis,

distinguishable, or remarkable. In England the word noble r►► of a narrower import than in other countries , being

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confined to persons above the degree of knights-; whereas abroad, it comprehends not only knights, hut gentlemen. The nobles of England are also called pares regni, as being nobilitate pares, though gradu impares. Nobles, among the ancient Greeks, were called EvTrarpicat, as descended from those heroic ancestors so famous in history. Such were the Praxiergidae, Etrobuti-dae, Alcmaonidae, &c., all of whom had many privileges annexed to their quality ; amongst which this was one, that they wore grasshoppers in their hair as a badge of nobility. Nobles, among the ancient Romans, were such as had the jus imaginum, or the right of using the pictures or statues of their ancestors ; a right which was allowed only to those whose ancestors had borne some curule office, that is, had been curule, sedile, censor, pnetor, or consul. For a long time none but the Patricii were the nobles, because no person but of that superior rank could bear any curule office ; hence in Livy, Sallust, &c., nobilitas is used to signify the Patrician'or-der, and so opposed to plebs. To make the true meaning of nobilis still more clear, let it be observed that the Roman people were divided into nobiles, novi, and ignobiles. Nobilcs were they who had the pictures, &c., of their ancestors ; novi were such as had only their own; ignobiles were such as had neither. See Jus. The Ro-man nobility, lay way of distinction, wore a half moon upon their shoes, especially those of Patrician rank.

The NOBLE was anciently 'a coin struck in the reign of Edward III. and then called the penny of gold ; but afterwards a rose noble, from its being stamped with a rose.

NCXBODY, n.s. No and body. No one; not any one.

This is the tune of our catch played by the picture of nobody. Sftakspeare. Tempest.

It fell to Coke's turn, for whom nobody cared, to be made the sacrifice ; for he was out of his office.

Clarendon.

If in company you offer something for a jest, and nobody seconds you on your own laughter, you may condemn their taste, and appeal to better judgments ; but in the mean time you make a very indifferent figure. Swift's Miscellanies.

NO’CENT, adj. Lat. nocens. Guilty; criminal. Not used.

The earl of Devonshire being interested in the blood of York, that was rather feared than nocent ; yet, as one that might be the object of others plots, remained prisoner in the tower during the king’s life.

Bacon’s Henry VII. His head, well-stored with subtle wile : Nor yet in horrid shade, or dismal den, Nor nocent yet ; but on the grassy herb, Fearless unfeared he slept. Milton’t Paradise Lott.

The warm limbeck draws Salubrious waters from the nocent brood.

Philipt.

They meditate whether the virtues of the one will exalt or diminish the force of the other, or correct any of its nocent qualities. Watts on the Mind.

NOCERA BELLA PAGANI, an old town of Naples, in the Principato Citra, on the Sarno. After its destruction by Roger of Normandy, in the eleventh century, the inhabitants occupied the surrounding villages, which they gradually

extended and embellished : hence the present town, instead of being surrounded with ramparts, presents to the eye scattered groups of houses, intermingled with trees. It is the see of a bishop, and gave birth to the celebrated painter Soli-mena. Population about 6800. Twenty miles E. S. E. of Naples.

NOCK, n. s. & v. a. Teut. noche ; Swed. nok ; Ital. nocchia. A notch, nick, or slit; a notch : the anus ; to place on a notch.

Then tooke he up his bow And nocked his shaft, the ground whence all their

future griefe did grow. Chapman.

When the date of nock was out,

Off dropt the sympathetick snout. Hudibras.

NOCTAM’BULO, n. s. *) Lat. nox and NOCTID’IAL, adj. \ ambulo ; noctis and

NOCTIF’EROUS. ! dies ; Fr. nocturn ;

NOC’TUARY,►►. s. [Lat. nocturnus.

NOC’TURN, One who walks by

NOCTUR’NAL, adj. & n.s. J night or in sleep : noctidial is comprising a day and a night : noc-tiferous, bringing night : noctuary, an account of transactions or occurrences in the night : nocturn, a nightly office of devotion : nocturnal, nightly ; and an instrument whereby nightly observations are made.

The noctidial day, the lunar periodic month, and the solar year, are natural and universal ; but incommensurate each to another, and difficult to be reconciled. Holder.

The reliques being conveniently placed before the church door, the vigils are to be celebrated that night before them, and the nocturn and the mattins for the honour of the saints whose the reliques are.

Stilling/bet From gilded roofs depending lamps display

Nocturnal beams, that emulate the day. Dryden.

I beg leave to make you a present of a dream, which may serve to lull your readers till such time as you yourself shall gratify the public with any of your nocturnal discoveries. Addison.

I have got a parcel of visions and other miscellanies in my noctuary, which I shall send to enrich your paper. Id.

Respiration being carried on in sleep, is no argument against its being voluntary. What shall we say of noctamtwlos J There are voluntary motions carried on without thought, to avoid pain.

Arlntthnot.

That projection of the stars which includes all the stars of our horizon, and therefore reaches to the thirty-eighth degree and a half of southern latitude, though its centre is the north pole, gives us a better view of the heavenly bodies as they appear every night to us ; and it may serve for a nocturnal, and shew the true hour of the night. Watts.

NOCTAMBULOS, NoCTAMBTJL], SoMNAMBULI,

or night-walkers. Schenkins, Horastius, Clau-derus, and Hildanus, who have written on sleep, give us various unhappy histories of noctambuli. When the disease is moderate the persons affected with it

only repeat the actions of the day on getting out of bed, arrd go quietly to the places they frequented at other times ; but those who have it in the most violent degree go up to dangerous places, and perform actions that would terrify them to think of when they are awake. These are by some called lunatic night-walkers, because fits are observed to return with the most

frequency and violence at the changes of the moon. See MEDICINE.

The NOCTURNAL, or NOCTURLABIUM, in astronomy, the name of an instrument chiefly used at sea, to take the altitude or depression of some stars about the pole, in order to find the latitude and hour of the night. Some nocturnals are hemispheres, or planispheres, on the plane of the equinoctial. Those commonly used among sea-men are two ; the one adapted to the polar star, and the first of the guards of the Little Bear; the other to the polestar, and the pointers of the Great Bear. This instrument consists of two circular plates, applied to each other. The greater, which has a handle to hold the instrument, is about two inches and a half diameter, and is divided into twelve parts, agreeing to the twelve months; and each month divided into every fifth day ; so as that the middle of the handle corresponds to that day of the year wherein the star here regarded has the same right ascension with the sun. If the instrument be fitted for two stars, the handle is made moveable. The upper left circle is divided into twenty-four equal parts for the twenty-four hours of the day, and each hour subdivided into quarters. These twenty-four hours are noted by twenty-four teeth to be told in the night. Those at the hour twelve are distinguished by their length. In the centre of the two circular plates is adjusted a long index, moveable upon the upper plate ; and the three pieces, *viz.* the two circles and index, are joined by a rivet which is pierced through the centre with a hole, through which the star is to be observed. To use the nocturnal, turn the upper plate till twelve be against the day of the month on the under plate ; then, bringing the instrument near the eye, suspend it by the handle with the plane nearly parallel to the equinoctial, and, viewing the pole star through the hole of the centre, turn the index about, till, by the edge coming from the centre, you see the bright star or guard of the Little Bear (if the instrument be fitted to that star) ; then that tooth of the upper circle, under the edge of tne index, is at the hour of the night on the edge of the hour circle : which may be known without a light, by counting the teeth from the longest, which is for the hour twelve.

NOD, v. n. & n. s.-\ Sax. pnol, the head;

NOD’DER, n. s. f Lat. nuto ; Gr. vtvu. To

NOD’DLE, ––bend or lower the head

NOD’DY. J slightly and quickly; make

a slight bow; hence, to be drowsy : noddle is used contemptuously for the head : a noddy (Fr. naudin) is a simpleton ; a silly-head.

Let every feeble rumour shake your hearts ; Your enemies, with nodding of their plumes, Fan you into despair. Shaktpeare. Coriolanut.

Cassius must bend his body.

If Caesar carelessly but nod on him. Shakspeare.

Like a drunken sailor on a mast, Ready with every nod to tumble down Into the fatal bowels of the deep. Id.

Her care shall be To comb your noddle with a three-legged stool. Id.

let your wines without mixture, or stain, be all

fine, Or *’*ll up the master and break his dull noddle.

Ben Jonxon. VOL. XV.

My head’s not made of brass. As friar Bacon’s noddle was. Hudibra*.

He would not have it said before the people that images are to be worshipped with Latria, but rather the contrary, because the distinctions necessary to defend it are too subtle for their noddles.

StiUingfleet.

On the faith of Jove rely, When nodding to thy suit he bows the sky.

Dry den.

When a pine is hewn on the plains, And the last mortal stroke alone remains, Lab’ring in pangs of death, and threat’ning all, This way and that she nods, considering where to

fall. U.

Every drowsy nod shakes their doctrine who teach that the soul is

always thinking. Locke.

Come, master, I have a project in my noddle, that shall bring my mistress to you back again, with as good will as ever she went from you. L' Estrange.

The whole race of bawling, fluttering noddies, by what title so ever dignified, are a-kin to the ass in this fable. Id.

Your two predecessors were famous for their dreams and visions, and, contrary to all other authors, never pleased their readers more than when they were noil-ding. Addison. Why shouldst thou try to hide thyself in youth 1 Impartial Proserpine beholds the truth ; And, laughing at so fond and vain a task, Will strip thy hoary noddle of its mask. Id.

A mighty king I am, an earthly God ; Nations obey my word, and wait my nod : And life or death depend on my decree. Prior. Thou that art ever half the city's grace, And add'st to solemn noddles solemn pace. Fenton.

A set of noddert, winkers, and whisperers, whose business is to strangle all other offspring of wit in their birth. Pope.

He climbs the mountain rocks, Fired by the nodding verdure of its brow.

Thomson. Not as of old,

Extended in her hand the cap and rod, Whose slave-enlarging touch gave double life, But her bright temples bound with British oak, . And naval honours nodded on his brow. Id.

NOD, or the land of Nod, the country to which Cain withdrew after his fratricide. Gen. iv. 16. The Septuagint, as well as Josephus, read Naid, instead of Nod, and have taken it for the name of a place. It is not known what country this was, unless it was Nyse or Nysea, towards Hyrcania. St. Jerome and the Chaldee interpreters have taken the word Nod in the sense of an appellative for vagabond or fugitive ; ' He dwelt a fugitive in the land.' But the Hebrew reads, 'He dwelt in the land of Nod. Gen. iv. 16.

NODAB, a country bordering upon Iturea and Idumaea, but now unknown. We read in the Chronicles that the tribe of Reuben, assisted by those of Gad and Manasseh, made a war against the Hagarites, the Jeturites, and the people of Nephish and of Nodab, in which the

Israelites had the advantage, 1 Chron. v. 19. But the time and the other particulars of this war are unknown.

NODE, or NODUS, in dialling, a certain point or pole in the gnomon of a dial, by the sha-dow or light whereof either the hour of the day in dials without furniture, or the parallels

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of the sun's declination, and his place in the ecliptic, &c., in dials with furniture, are shown.

NODES, in astronomy, are the two points where the orbit of a planet intersects the ecliptic. See ASTRONOMY.

NO'DOUS,od/'. ►► Lat. nodosus, nodulus.

No' DOSITY, n.s. > Knotty : nodosity is knotti—

NO'RULE. 3 ness ; complication : nodule,

a small knot or lump.

These the midwife cutteth off, contriving them into a knot close unto the body of the infant ; from whence ensueth that tortuosity, or complicated nodosity, we call the navel. Browne's Vtilgar Errours.

This is seldom affected with the gout, and, when that becometh nodoiu, men continue not long after.

Browne.

All these variations are finished in nineteen years, nearly agreeing with the course of the nodes, i. e. the points in the ecliptic where the moon crosseth that circle as she passeth to her northern or southern latitude ; which nodes are called the head and tail of the dragon. Holder.

Those minerals in the strata are either found in grains, or else they are amassed into balls, lumps, or nodules : which nodules are either of an irregular figure, or of a figure somewhat more regular.

Woodward's Natural History.

If nodes be the cause of the pain, foment with spirit of wine wherein opium and saffron have been dissolved. Wiseman.

NOEHDEN (George Henry), LL.D., a learned German, domiciled in England, and a librarian in the British Museum, was born January 23d, 1770, at Gottingen, and received his education there. At the university he applied himself to the study of Greek and Roman

antiquities, under Heyne, whom lie assisted in his edition of Homer; and being in 1791 recommended to an English gentleman, at that time residing in Gottingen, he became tutor to his children, and domesticated in his family, and by means of that connexion he was introduced in the year 1793 to Sir William Milner, whose son, the present baronet, he attended at Eton, where he obtained the friendship of Jacob Bryant, Herschel, &c. After this he accompanied a younger son of the family to Gottingen, where he wrote a dissertation De Porphyrii Scholiis in Homerum. In 1800 Noehden published in England his German and English grammar, which has since gone through five editions, and is thought the best extant. He continued to reside in the Milner family till the death of Sir William in 1811, some time after which his character and acquirements procured him to be elected one of the librarians of the museum. The year following (1821) he translated Goethe's observations on the Last Supper of Leonardo da Vinci, with a prefatory essay and notes ; and soon after succeeded to the super-intendanceof the Numismatology of the museum. His work on Northwick coins which now appeared he had intended to comprise in twelve numbers, but his death in March 1826, prevented its extension beyond the fourth number. Among his papers were found incomplete translations of VVinckelman's History of Art, and of Lessing's Laocoon; memoranda of his travels; and An Introduction to Numismatology.

NOF.T. /Alexanderˆ, an indefatigable writer of

the seventeenth century, born at Roan in Normandy, 1639. After finishing his studies at Roan he entered into the order of Dominican friars, and was professed there in 1655. Soon after he went to Paris, to study philosophy and divinity in the great convent, where he so distinguished himself that he was appointed to teach philosophy there, which he did for twelve years. Colbert showed him many marks of his esteem ; and being determined to omit nothing to perfect the education of his son, afterwards archbishop of Roan, he formed an assembly of the most learned persons, whose conferences upon ecclesiastical history might be of advantage to him. Noel was invited to this assembly, where he exerted himself with so much genius and ability that he gained the particular friendship of young Colbert, who showed him the utmost regard as long as he lived. These conferences gave rise to his design of writing an ecclesiastical history ; for, being desired to reduce what was material in these conferences to writing, he did it with so much accuracy that the learned men who composed this assembly advised him to undertake a complete body of church

history. This he executed with great assiduity, collecting and digesting the materials himself, and writing even the tables with his own hand. He at last completed his work in 1686. Towards the latter part of his life he was afflicted with the loss of his sight. He died in 1724, aged eighty.

NOETIANS, in church history, Christian heretics in the third century, whose heresy consisted in affirming that there was but one person in the Godhead; and that the Word and the Holy Spirit were but external denominations given to God in consequeipe of different operations, that, as Creator, he is called Father; as incarnate, Son; and, as descending on the apostles, Holy Ghost.

NOGAT, a river and island of Prussia. The former branches off from the Vistula, passes by Marienburg, and joins the Frische liaf about six miles north of Elbing. The island thus formed by the two branches of the Vistula and the Baltic with its bays, is fertile, and of considerable extent.

NOGENT-LE-ROTROU, a post town and chief place of a subprefecture in the department of Eure-et-Loire, France, containing 6500 inhabitants, and having an inferior court of judicature, a board of trade, and a communal college. This town is pleasantly situated in a delightful valley, watered by the river Huisne, at the foot of a steep hill, on the side of which rises a Gothic castle, once the residence of the virtuous Sully. It is generally well-built, very long and airy. At the entrance of the town is seen a waterfall, formed by the waters of the little river Arcise, which turns three mills with astonishing rapidity. In the midst of the town is a fine square mea-dow, surrounded with houses, and bordered with a beautiful and shady gravelly walk. There are manufactures here of druggets, serges, bolting cloths, linens, &c., likewise cotton spinning factories, and dye-houses. The inhabitants trade in hemp, grain, fodder, &c. This town is thirty-nine miles W.S.W. of Chartres, forty-eight north-east of Mans, and 105 south-west of Paris.

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NOGENT-SUR-SEINE, a pretty little post-town, and chief place of a subprefecture in the department of the Aube, containing 3200 inhabitants, and having an inferior court of justice. It is delightfully situated on the left bank of the Seine, which is navigable here, and at the extremity of some immense meadows that border each side of this river. It is generally a well-built, neat, and airy town. In the month of March, 1814, a bloody battle was fought here between the French and the allied armies, dur- ‘ng which the bridge over the Seine, the town-hall, and several houses, were set on fire; the ruins of part of these edifices still remain.

Here are manufactories of caps, and rope-grounds, and quantities of wood are floated along the river from this place to Paris. A trade is also carried on in grain, flour, wine, vinegar, wood and charcoal, slates, salt, hemp, wool, &c. A passage boat starts hence every Wednesday for Paris. There are some beautiful walks on the banks of the Seine, which command a fine prospect of the country and of the navigation. A handsome flour-mill stands on the Seine.

NOG’GEN, adj. Goth, knauke, labor. Hard; rough ; harsh.

He put on a hard, coarse, noggen shirt of Pendrel’s. Escape of King Charles.

NOG’GIN, n.s. Germ, nossel; Irish, neiggen. A small mug or can.

Frog laughed in his sleeve, gave the squire the other noggin of brandy, and clapped him on the back.

Arbuthnot.

NOI’ANCE, n. s.~\ Fr.nuire; Lat. nocere.

NOIE, v. a. (injury; mischief; iocon—

NOI’ER, M.S. ˆvenience: to noie is to inNoi’ous, adj. ‘jure; disturb; annoy: a noier, one who annoys : noious, mischievous ; troublesome. All these words are out of use.

To borrow to-day, and to-morrow to mis, For lender and borrower noiance it is. Tusser.

Let servant be ready with mattock in hand. To stub out the bushes that noieth the land. Id. The north is a noier to grass of all suits,

The east a destroyer to herbs and all fruits. Id.

Being bred in a hot country, they found much hair on their faces to be noious unto them. Spenser. The false Duessa, leaving noious night,

Returned to stately palace of dame Pride. Id. But neither darkness foul, nor filthy bands,

Nor noious smell his purpose could withhold. Id. The single aud peculiar life is bound,

With all the strength and armour of the mind,

To keep itself from noiance. Shahsj tare. Hamlet.

NOIR, CAPE, a cape on the west coast of Terra del Fuego, is formed by a steep rock of considerable height, and the south-west point of a large island that seems to lie about a league or a league and a half from the main land. At the point are two rocks, the one peaked like a sugar-loaf, the other not so high and less peaked. Long. 73►► 33 W., lat. 54►► 30' S.

NOIRMOUTIERS, ISLE OF, situated in the Atlantic Ocean, on the coast of France, at the entrance of the bay of Bourgneuf, which it bounds on the south-west. This island forms part of the department of La Vendee, and the arrondissement of Sables d'Olonne, and is about thirty-six square miles in superficial extent. The

soil is excellent and always productive ; the inhabitants find very rich manure in the marine plants that cover the coast. Here are many salt marshes ; but they are very productive and fine pastures for cattle : there are also vineyards that yield tolerably good wine. Besides the town of Noirmoutiers there are the villages of Barbatre and Epine, including together a population of about 7500. The inhabitants have made very considerable embankments, by which they have preserved the most productive part of the island, which is twelve feet below the level of the ocean. NOISE,' n. ►►., v. n.t & v. a. -\ Fr. noitc ; NOISE FUL, adj. I Arm. noat.

NOISE'LESS, V Sound ; and,

NOISE’-MAKER, n. t. i emphatically,

Nois’y, adj. J loud sound ;

clamor ; outcry ; disturbance ; fame : to noise is to sound loudly : also to spread by rumor or re-port : noiseful and noisy mean loud ; clamorous ; viragorious : noiseless, silent ; quiet ; without sound : noisemaker? a clamorer.

Therfore Jhesus eft makyng noise in himsilf, cam to the graue and ther was a denne, and a stoone was ieid theronne. Wiclif. Jon 1 1 .

All these sayings were noised abroad throughout all the hill country. ///.’.. i. 65.

Whether it were a whistling sound, or a melodious noise of birds among the spreading branches, these things made them swoon. Wisdom xvii. 18.

On our quickest decrees,

The’ inaudible and noiseless foot of time

Steals, ere we can effect them. Shahrpeare.

Great motions in nature pass without sound, c noise. The heavens turn about in a most rapid mo tion, without noise to us perceived ; though in some dreams they have been said to make an excellent musick. Bacon’s Natural History.

I shall not need to relate the affluence of young nobles from hence into Spain; after the voice of our prince’s being there had been quickly noised.

Wotton. Harm

Those terrors, which thou speakest of, did me none ; Tho’ noising loud and threatening nigh. Milton.

Fear

Shakes your hearts, while thro' the isle they hear A lasting noise, as horrid and as loud As thunder makes, before it breaks the cloud.

Waller. O leave the noisy town, O come and see

Our country cotts, and live content with me !

Dryden.

That eunuch, guardian of rich Holland's trade, Whose noittful valour does no foe invade, And weak assistance will his friends destroy.

So noiseless would I live, such death to find, Like timely fruit, not shaken by the wind. But ripely dropping from the sapless bough.

The issue of all this noise is, the making of the noisemakers still more ridiculous. L'Ettrattgt.

To noisy fools a grave attention lend. Smith.

Socrates lived in Athens during the great plague which has made so much noise through all ages, and never caught the least infection. Addison's Spectator.

They might buz and whisper it one to another ; and, tacitly withdrawing from the presence of the apostle, they then lift up their voices and noiied it about the city. Bentlev.

Although he employs his talents wholly in his closet, he is sure to raise the hatred of the unity crowd. Sui/'-

2 Y 2

Id.

Id.

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Convinced that noiseles* piety might dwell In secular retreats, and flourish well. Harte. What noise have we had about transplantation of diseases, and transfusion of blood ‘ Baker.

NOI’SOME, adj.) From the obsolete NOI’SOMELV, adv. SNoious, wnich see; or NOI’SOMENESS, n. s. J Ital. noieso. Hurtful ; offensive; unwholesome; noxious: the adverb and noun substantive corresponding.

The filthiness of his smell was noisome to all his army. 2 Maccabeet is.. 9.

The brake and the cockle are noisome too much.

Tusser.

In case it may be proved that, among the number of rites and orders common unto both, there are particulars, the use whereof is utterly unlawful in regard of some special bad and noisome quality ; there is no doubt but we ought to relinquish such rites and orders, what freedom soever we have to retain the other still. Hooker.

The seeing these effects, will be Both noisome and infectious.

Shakspeare. Cymbeline.

Foul words are but foul wind, and foul wind is but foul breath, and foul breath is noisome.

Id. Much Ado about Nothing. All my plants I save from nightly ill Of noisome winds, and blasting vapours chill.

Milton.

When Antiochus was marching furiously to accomplish his threat of turning Jerusalem into a ehar-nel, a noiiome disease did intercept his progress.

Barrow.

Gravisca noisome from the neighbouring fen, And his own Caere sent three hundred men.

Dry den.

An error in the judgment is like an imposthume in the head, which is always noisome, and frequently mortal. South.

If he must needs be seen, with all his filth and noisomeness about him, he promises himself, however, that it will be some allay to his reproach to be but one of many to march in a troop. South.

The noisome pestilence, that in open war Terrible, marches through the mid-day air, And scatters death. Prior.

Thither flow,

As to a common and most noisome sewer, The dregs and feculence of every land.

Cowper.

NOIZ, LAKE, a lake of Louisiana, United States, about fifty miles in circumference. It discharges itself into the Bayou Rigula de Bon-dieu, which joins Red River, three miles above Natchitoches. All the salt used by the inhabitants of the Red River settlements is made here, and the water is so impregnated with salt as to require very little boiling. The outlet is navigable for boats most of the year. Ten miles above Natchitoches.

NOLA, a town of Naples, in the Terra di La-voro is the see of a bishop, has an episcopal seminary, and is of considerable antiquity. It is the place where the emperor Augustus died. It is also said to have been the place of the invention and first use of bells. Under the Ro-mans it was a flourishing colony, and numbers of Etruscan vases are still found in it : but its modern town is gloomy and ill built. Silk is raised in the neighbourhood. Sixteen miles east by north of Naples.

NOLANA, in botany, a genus of the mono-

gynia order, belonging to the pentandria class of plants : and iit the natural method ranking under the forty-first order, asperifoliae. The corolla is campanulated ; the style situated betwixt the germens ; the seeds are bilocular, and resemble berries.

NOLDIUS (Christian), a Danish divine, born in 1626. He was rector of the college at Land-scroon, and afterwards professor of divinity at

Copenhagen; where he died in 1673 He wrote an excellent work, entitled Concordantiae Par-licularum Hebraeo-Chaldaicarum.

NOLI ME TANGERE, Lat. i. e. touch me not, in botany. See IMPATIENS, and MOMORDICA.

NOLITION, n. *. Lat. nolitio. Unwilling-ness : opposed to volition.

We may too certainly conclude that much more than a single act of contrition, and a moral revocation, that is, a sorrow and a nolition of the past sins; may be done upon our death-bed without effect.

Jer. Taylor.

Proper acts of the wiH are, volition, nolition, choice, resolution, and command, in relation to subordinate faculties. Hale.

NOLL, n. s. Sax. pnol. A head ; a noddle.

An ass's noil I fixed on his head. Shakspeare.

NOLLEKINS (Joseph), a modern sculptor of unquestionable genius and talent, was born in London in 1737, his father being a painter distinguished by his close imitation of Watteau. This son was placed under Scheemakers, and in 1759 and 1760 gained premiums from the society of Arts. He then repaired to Rome where he obtained the instructions of the sculptor Ca-vaceppi, under whom he studied so successfully that he soon had the honor of receiving a gold medal from the Roman academy of painting and sculpture. He materially improved at this time his fortune by becoming a dealer in antiques, and in the productions of Italian art generally. At Rome he executed the busts of many Englishmen ; and returning, in 1 770, married soon after the youngest daughter of Mr. Justice Welch, with a handsome fortune, and took the lead in his profession. Nollekins was chiefly distinguished by his careful and accurate imitation of nature, and by the absence of all peculiarity but hers. His Venus with the Sandal is esteemed his principal production in the beau ideal ; but his busts are much admired. He was a great favorite with George III., eccentric in many points of his character, and a strange mixture of avarice in small matters with great occasional generosity. Nollekins died April 23d, 1823-, in the eighty-sixth year of his age, and in the possession it is said of ––200,000.

NOLLE PROSEQUI, in law, is where a plaintiff in an action does not declare in a reasonable time ; in which case it is usual for the defendant's attorney to enter a rule for the plaintiff to declare, after

which a non pros, may be entered. A nolle prosequi is esteemed a voluntary confession that the plaintiff has no cause of action ; and therefore, if a plaintiff enters his nolle prosequi, he shall be amerced ; and, if an informer cause the same to be entered, the defendant shall have costs.

NOLLET (John Anthony), F. R. S., an eminent French philosopher, horn at Pimbre, in tha

<liocpse of Noyon, on the 17th of November, 1 700, of respectable but not wealthy parent*. They sent him to the college of Clermont in Beauvoisis ; afterwards to Beauvais, and at last to Paris; where he studied scholastic divinity ; dur-ing his probation in 172 8, he was made a deacon, and obtained a licence to preach. His time was now divided between theology and the sciences. The latter, however, prevailed, and he entered into the study of physics with ardor, and was received into the society of arts. In 1730 he was engaged in a work conjointly with Reaumur and Du Fay of the academy of sciences. In 1734 he went to London in company with Messrs. Du Fay, Du Hamel, and Jussieu. His merit procured him a place in the royal society without solicitation. Two years after he went to Holland, where he formed an intimate connexion with Desaguliers, Gravesande, and Muschen-broek. On his return to Paris he resumed the course of experimental physics which he had begun in 1 735, and which he continued till 1 760. These courses of physics suggested the idea of particular courses in chemistry, anatomy, natural history, &c. In 1708 the count deMaurepas prevailed on cardinal Fleury to establish a pub-lic class for experimental physics : and the abbe Nollet was appointed the first professor. In 1739 he was admitted a member of the royal academy of sciences ; and in April following the king of Sardinia, intending to establish a professorship of physics at Turin, invited him into his dominions. Thence he travelled into Italy. In 1744 he was invited to Versailles, to instruct the dauphin in experimental philosophy ; the king and royal family were often present at his lectures. The qualities of his heart as well as of his understanding gained him the esteem of his pupil. In April 1749 he again made a tour into Italy, being sent thither for the purpose of making observations. In 1753 the king instituted a class of experimental philosophy in the royal college of Navarre, and appointed abbe Nollet professor. In 1757 he appointed him preceptor in physics and natural history to the princes, and professor of experimental philosophy in the school of Artillery at Fere. In November following he was admitted as a pension-ary of the royal academy of sciences ; and in 1761 professor of experimental philosophy at Meziers. He died in Paris on the 25th of April 1770, aged seventy. His works are, 1. Several papers inserted in the memoirs of the academy of sciences ; among which one on the Hearing of Fishes is particularly valuable. 2. Lecons de Physique experimentale, 6. vols. 12mo., 1753. 3. Recueil des Leltres sur 1'Electricite, 3 vols. 12mo 1753. 4. Essai sur 1'Electricite, des corps, 1 vol. 12mo. 5. Recherches sur les causes par-ticulieres des phenomenes Electriques, 1 vol. 12mo. 6. L' Andes Experiences, 3 vols. 12mo. with

figures, 1770.

NOMADES, a name given, in antiquity, to several nations whose whole occupation was to feed and tend their flocks; and who had no fixed place of abode, but were constantly shifting according to ihe convenience of pasturage. The word comes from the Greek vtˆo), to feed. The ###nost celebrated Nomades were those of Africa.

They are al►►o called Numidx, or Numidiacs. Sallust says they were a colony of Pers.a&►► brought into Africa with Hercules. The Nomades of Asia inhabited the coasts of the Caspian Sea. The Nomades of Scythia were the inhabitants of Little Tartary; who still retain their ancient manner of living.

NO-MAN'S-LAND, a space between the after part of the belfrey and the fore part of a ship's boat, when the said boat is stowed upon the booms, as in a deep waisted vessel. These booms are laid from the forecastle nearly to the quarterdeck, where their after ends are usually sustained by a frame called the gallows, which consists of two strong posts, about six feet high, with a cross piece reaching from one to the other, athwart ships, and serving to support the ends of those booms, masts, and yards, which lie in reserve to supply the place of others carried away, 8cc. The place called No-man's-land is used to contain any blocks, ropes, tackles, &c., which may be necessary on the forecastle. It probably derives this name from its situation, as being neither on the starboard nor larboard side of the ship, nor on the waist or forecastle ; but, being situated in the middle, partakes equally of all those places.

NOMARCHA, in antiquity, the governor or commander of a nome, or nomos. Egypt was anciently divided into several regions or quarters, called nomes, from the Geeek vo/ioc, taken in the sense of a division ; and the officer who had the administration of each nome or nomos, from the king, was called nomarcha, from vo/joc and ap\n, command.

NOMBRIL POINT, in heraldry, is the next below the fess point, or the very centre of the escutcheon. Supposing the escutcheon divided into two equal parts below the fess, the first of these divisions is the nombril, and the lower the base.

NOME, or NAME, in algebra, denotes any quantity with a sign prefixed or added to it, whereby it is connected with some other quantity, upon which the whole becomes a binomial, tri-nomial, or the like. See ALGEBRA.

NOMENCLATOR, n. s. (Lat. notnencla—

NOMENCLA'TURE. > tor ; Fr. nomenclature. One who calls things or persons by their proper names : nomenclature, the act of naming, or vocabulary of names ; a dictionary.

To say, where notions cannot fitly be reconciled, that there wanteth a term or nomenclature for it, is but a shift of ignorance. Bacon't Natural History.

The watery plantations fall not under that nomenclature of Adam, which unto terrestrious animals assigned a name appropriate unto their natures.

Brotcne.

There were a set of men in old Rome called m>- menc latori ; men who could call every man by his name. Additon.

Are envy, pride, avarice, and ambition, such ill nomenclators that they cannot furnish appellations for their owners "! Svift.

NOMF.XCLATOR, in Roman antiquity, was a slave who usually attended upon persons that stood candidates for offices, and prompted or suggested to them the names of all the citizens they met, that they might address them by their

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names, which among that people was the highest piece of civility.

NOMENTUM, an ancient town of Italy, be-ionging to the Sabines, famous for the total defeat of the Veientes and Fidenates, by the Romans, under the dictator Q. Servilius Priscus, A. U. C. 312. It is now called Lamentana.

NOM'INAL, adj. ~\ Lat. nominates, nomino;

NOMINALLY, adv. I Fr. nomination. Relating

NOM'INATE, v. a. >to names or titles; not

NOMINA'TION, n. s. i real : to nominate is to

NOM'INATIVE. n. s. J name; call upon; entitle; set down or appoint by name: nomination, the act or right of doing so : nominative, the case in grammar that designates the names of things.

Aread, old father, why of late

Didst thou bekight me born of English blood,

Whom all a fairy's son doen nominate ? Spenser. Suddenly to nominate them all,

It is impossible. Shakspeare. Henry VI.

If you repay me not on such a day, let the forfeit Be nominated for an equal pound Of your fair flesh to be cut off. Shakspeare.

One lady, I may civilly spare to nominate, for her sex's sake, whom he termed the spider of the court.

Wotton.

The forty-one immediate electors of the duke, must be all of several families, and of them twenty -five at least concur to this nomination. Wotton.

The nomination of persons to places, being so principal and inseparable a flower of his crown, he would reserve to himself.

Clarendon.

Profound in all the nominal, And real ways beyond them all.
Hudibras.

The nominal definition or derivation of the word is not sufficient to describe the nature of it. Pearson.

Hammond was named to be of the assembly of divines ; his invincible loyalty to his prince, and obedience to his mother, the church, not being so valid arguments against his nomination as the repute of his learning and virtue were on the other part, to have some title to him. Fell.

The nominal essence of gold is that complex idea the word gold stands for ; as a body yellow, of a certain weight, malleable, fusible, and fixed. But the real essence is the constitution of the insensible parts of that body on which those qualities depend.

Locke.

Never having intended, never designed any heir n that sense, we cannot expect he should nominate or appoint any person to it. Id.

Were these people as anxious for the doctrines essential to the church of England, as they are for the ‘tominal distinction of adhering to its interests ?

Addison.

In England the king has the nomination of an arch-nishop ; and after nomination he sends a cong6 d’elire to the dean and chapter, to elect the person elected by him. Ayliffe.

And betwixt the nominative case, which your lordship knows should govern theverb, he suspended his voice in the epilogue a dozen times, three seconds and three-fifths, by a stop-watch, my lord, each time. Sterne.

I can truly say that, with respect to any nomina-iiims in your service of whatever description abroad or at home, I have never exercised any sort of interference. Canning.

NOMINAI.S, or NOMINALISTS, a sect of school philosophers, the disciples and followers of Oc-cam or Ocham, an English cordelier in the fourteenth century. They were vulgarly denominat-

ed Word-sellers ; but had the denomination of Nominalists, because, in opposition to the Realists, they maintained that words, and not things, were the object of dialectics. This sect had its first rise towards the end of the eleventh century and pretended to follow Porphyry and Aristotle ; but it was not till Ocham's time that they obtained the above name. The chief of this sect, in the eleventh century, was one John, who, on account of his logical subtlety, was called the sophist ; and his principal disciples were Robert of Paris, Roscelin of Compiegne, and Arnoul of Laon. At the beginning the Nominalists had the upper hand ; but the Realists, though greatly divided among themselves, were supported by men of great abilities ; such as Albertus Magnus, T. Aquinas, and Duns Scotus. The Nominal sect fell hereby into disrepute, till William Oc-cam, in the fourteenth century, again revived it, and filled France and Germany with disputation. Having joined the party of the Franciscan monks, who strenuously opposed John XXII., that pope and his successors left no means untried to extirpate the philosophy of the Nominalists, which was deemed highly prejudicial to the interests of the church : and hence, in 1339, the university of Paris, by a public edict, solemnly condemned and prohibited the philosophy of Occam. The consequence was, that the Nominalists flourished more than ever. In the fifteenth century the controversy was continued with more vigor and animosity than before ; but in most places the Realists maintained a manifest superiority over the Nominalists. While the famous Gerson, and the most eminent of his disciples, were living, the Nominalists were in high esteem and credit in the university of Paris; but, upon the deaths of these patrons, the face of things was much changed. In 1473 Louis XL, by the instigation of his confessor, the bishop of Avranches, issued out a severe edict against the Nominalists, and ordered all their writings to be seized and secured, that they might not be read by the people; but in 1474 he mitigated this edict, and permitted some of the books of that sect to be restored. In 1481 he not only granted a full liberty to the Nominalists, but also restored that sect to its former authority in the university. The Nominalists were the founders of the university of Leipsic : and there are many yet abroad who pique themselves on being Nominalists. The Nominalists, with the Stoics, admit the formal conceptions or ideas of things, as the subject and foundation of universality ; but to this they add names which represent and signify, after the same univocal manner, and without any distinction, a great variety of single things alike in genus and species. Hence they are called Nominals; as pretending that, to become learned, it is not enough to have just ideas of things, but it is likewise required to know

the proper names of the genera and species of things, and to be able to express them clearly and precisely, without confusion or ambiguity.

The NOMINATIVE is the first case of nouns which are declinable. The simple position of a noun or name, nomen, is called the nominative case ; yet it is not so properly a case as the mat-ter or ground whence the other cases are to be

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formed, by the several changes and inflections given to this first termination. Its chief use is to be placed before all verbs, as the subject of the proposition or affirmation.

NON, adv. Lat. rum. Not. It is never used separately, but frequently prefixed to words with a negative power.

Since you to non-regardance cast my faith, Live you the marble-breasted tyrant still. Shahspeare.

Behold also there a lay nonresidency of the rich, which in times of peace, too much neglecting their habitations, may seem to have provoked God to neglect them. Holyday.

The third sort of agreement or disagreement in our ideas, which the perception of the mind is employed about, is coexistence, or nonexistence in the same subject. Locke.

For an account at large of bishop Sanderson's last judgment, concerning God's concurrence, or non-concurrence with the actions of men, and the positive entity of sins of commission, I refer you to his letters.

Pierce.

A mere inclination to matters of duty, men reckon a willing of that thing ; when they are justly charged with an actual non-performance of what the law requires. South.

It is not a non-act, which introduces a custom, a custom being a common usage. Aylijfe's Parergon.

In the imperial chamber this answer is not admitted, *viz.* I do not believe it as the matter is al-ledged. And the reason of this non-admission is, its great uncertainty. Ayliffe.

An apparitor came to the church, and informed the parson, that he must pay the tenths to such a man ; and the bishop certified the ecclesiastical court under his seal, on the non-payment of them, that he refused to pay them. Id.

This may be accounted for by the turbulence of passions upon the

various and surprising turns of good and evil fortune, in a long evening at play ; the mind being wholly taken up, and the consequence of non-attention so fatal. Id.

The non-appearance of persons to support the united sense of both houses of parliament, can never be construed as a general diffidence of being able to support the charge against the patent and patentee.

Id.

NON' AGE, n. s. Non and age. Minority ; time of life before legal maturity.

In him there is a hope of government ; Which in his nonage, counsel under him, And in his full and ripened years, himself Shall govern well. Shakspeare. Richard III.

Be love but there, let poor six years Be posed with the maturest fears Man trembles at, we straight shall find Love knows no nonage, nor the mind. Craihaw. Tis necessary that men should first be out of theii nonage, before they can attain to an actual use of this ' principle ; and withal, that they should be ready to exert and exercise their faculties. Wiltons.

Those charters were not avoidable for the king's nonage ; and, if there could have been any such pretence, that alone would not avoid them. Hale.

We have a mistaken apprehension of antiquity, calling that so which in truth is the world's nonage.

Glanviltf.

After Chaucer there was a Spenser, a Harrington, a Fairfax, before Waller and Denham were in be-ing ; and our numbers were in their nonage 'till these last appeared. Dryden.

In their tender nonage, while they spread Their springing leaves, and lift their infant head, Indulge their childhood, and the nursling spare. Id.

called also the mid-heaven, is the ninetieth de-gree or highest point of the ecliptic, reckoned from its intersection with the horizon at any time ; and its altitude is equal to the angle that the ecliptic makes with

the horizon at their intersection, or equal to the distance of the zenith from the pole of the ecliptic. It is much used in the calculation of solar eclipses. See ASTRONOMY, Index.

NONAGON, a figure having nine sides and an-gles. In a regular nonagon, or that whose angles and sides are all equal, if each side be 1, its area will be 6-1818242 = 1 of the tangent of 70►►, to the radius 1.

NONCE, n.t. Dr. Johnson says, ‘ the original of this word is uncertain; Skinner imagines it to come from own or once ; or from Germ, nutz, need or use : Junius derives it less probably from noiance, to do for the nonce ; being, according to him, to do it merely for mischief. But the Goth, nonna, Dan. nenne, to attempt, is the more probable etymology of Thomson Purpose; intent; design. Not now in use.

I saw a wolf

Nursing two whelps ; I saw her little ones In wanton dalliance the teat to crave, While she her neck wreathed from them for the

nonce. Spenser.

When in your motion you are hot, And that he calls for drink, I'll have prepared him A chalice for the nonce. Shakspeare. Hamlet.

Such a light and metalled dance Saw you never ;

And they lead men for the nonce, That turn round like grindle-stones.

Ben Jonton.

They used at first to fume the fish in a house built for the nonce. Careio.

A voider for the nonce, I wrong the devil should I pick their bones.

Cleaveland.

Coming ten times for the none*. I never yet could see it flow but once. Cotton.

NONCONFORMITY, n. 5.) Non and

NONCONFORMIST.] conformity.

Non-compliance; refusal of compliance; dis-sentership from the established church of England : a nonconformist is a dissenter.

Since the liturgy, rites, and ceremonies of our church, are so much struck at, and all upon a plea of conscience, it will concern us to examine the force of this plea, which our adversaries are still setting up as the grand pillar and buttress of non-con- formity. South.

The lady will plead the toleration which allows her nonconformity in this particular.

Addiion't Spectator.

On his death-bed he declared himself a nrm-con- formist, and had a fanatick preacher to be his spiritual guide. Swift.

The will of our Maker, whether discovered by rea-son or revelation, carries the highest authority with it ; a conformity or non-con/ortm'f y to it determines their actions to be morally good or evil.

U'atts't Logich.

And happy will be that reader whose mind is disposed by his verses or his prose, to imitate him in all but his nun-conformity. Johnson.

NONCONFORMISTS, in English law, is considered by Mr. Justice Blarkstone, as the cognate

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legal term with Dissenters ; for all who absent themselves, for whatever reasons, from the worship of the established church. In the article DISSENTERS, as more commonly used to de-cribe the Protestants dissidents from the establishment, will be found a full account of their legal situation at the period of the commencement of our work : the article ROMAN CATHOLICS will be found to contain a similar account of the legal situation of the Catholic Dissenters.

We intimated at the close of the former article that the Protestant Dissenters were ‘ hopeful of ;he abrogation of all exclusive statutes on the subject of religion ;’ and are now happy to re-cord that the patience with which they have ??? waited for the final determination of the government and the country, as to the period of award-ing their rights,’ has not been unrewarded. The great barriers to their admission to civil office, the corporation and test acts, have been repealed ; and a declaration substituted, to be taken by all persons entering upon office, which they esteem almost unobjectionable. The exact form in which this important measure finally passed, and a brief history of TEST LAW in this country, will be found under that article.

NONE, adj. Sax. ne ane, neone ; Goth, ne, ein, nein. Not one ; not any ; none being formerly used before a vowel, and no before a consonant. It is now used plurally also : and often in relation to a substantive going before ; as ‘ water we have none.’

And noon of hem that saten at the mete, wiste wherte he seide to him. Wiclif. Jon. 13.

This is none other but the house of God, and the gate of heaven. Genesis xxviii. 17.

Six days shall ye gather it, but on the sabbath there shall be none. Exodus xvi. 26.

Ye shall flee when none pursueth you. Leviticus. Thy life shall hang in doubt, and thou shalt have none assurance of this life. Deuteronomy xxviii.

My people would not hearken to my voice, and Israel would none of me. Psalm Ixxxi. 11.

That killing power is none of thine, I gave it to thy voice and eyes :

Thy sweets, thy graces, all are mine ; Thou art my star, shinest in my skies. Carew. In crosses, universally, let this be thy rule : make thyself none ; escape some , bear the rest ; sweeten all. Bp. Hall.

That fowl, which is none of the lightest, can easily move itself up and down in the air without stirring its wings. Wilkins.

Terms of peace were none Vouchsafed. Milton.

Nor think though men were none That heaven would want spectators, God want

praise. Id.

Before the deluge, the air was calm ; none of those tumultuary motions of vapours which the mountains and winds cause in ours. Eurnet's Theory.

Another, which is none of the least advantages of hope is, its great efficacy in preserving us from setting too high a value on present enjoyments.

Addison's Spectator.

The most glaring and notorious passages, are none of the finest. Felton on the Classicks.

Ah self deceived ! Could I prophetic say Who next, is fated, and who next to fall, The rest might then seem privileged to play ; But, naming none, the voice now speaks to all.

Cowper.

And so they seemed to roll, with furious speed, As if none meant to be behind the first.

Ptllok. Course of Time.

NONES, NCN.K, in the Roman kalendar, the fifth day of the months January, February, April, June, August, September, November, and December; and the seventh of March, May, July, and October. March, May, July, and October, had six days in their nones; because these alone, in the ancient constitution of the year by Numa, had thirty-one

days each, the rest having only twenty-nine, and February thirty ; but when Caesar reformed the year, and made other months contain thirty -one days, he did not allot them six days of nones.

NONENTITY, n.s. Non and entity. Nonexistence ; the negation of being.

There was no such thing as rendering evil for evil, when evil was truly a nonentity, and no where to be found. South.

We have heard, and think it pity that your inquisitive genius should not be better employed, than in looking after that theological nonentity.

Arbuthnot and Pope.

When they say nothing from nothing, they must understand it as excluding all causes. In which sense it is most evidently true ; being equivalent to this proposition, that nothing can make itself, or, nothing cannot bring its no-self out of nonentity into something. Bentley.

NONEXIS'TENCE, n. s. Non and existence. Inexistence; the state of not being; a thing not existing.

A method of many writers, which depreciates the esteem of miracles, is, to salve not only real verities, but also nonexistences.

Browne's Vulgar Errours.

NONJU'RING, adj. Non and Lat. juro. Particularly applied in English history to those who would not swear allegiance to the Hanoverian family.

This objection was offered me by a very pious, learned, and worthy gentleman of the nonjuring party. Swift.

NONJTJRORS, those who refused to take the oaths to government, and who were in consequence under certain incapacities, and liable to certain severe penalties. The members of the episcopal church in Scotland were long denominated nonjurors ; but upon the death of prince Charles Stuart, in 1788, their bishops, and the great majority of the people, avowed their attachment to the present royal family, and resolved to pray for his majesty king George III.

NONIUS (Marcellus), a grammarian and peripatetic philosopher, born

at Tivoli, who wrote a treatise, entitled De Proprietate Sermo-num. This author is valuable for giving fragments of ancient authors nowhere else to be found. His treatise was printed at Paris, in 1614, with notes.

NONIUS (Peter), in Spanish Nunez, a learned Portuguese, and one of the ablest mathematicians of the sixteenth century, was born at Alcacer. He was preceptor to prince Henry, king Emmanuel's son, and taught the mathematics in the university of Coimbra. He published the following works, by which he gained great reputation : ††† 1. De Arte Naviˆandi. '2. Annotationes in Theorias Planetarum Purbachn.

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3. A Treatise de Crepusculig. 4. A Treatise on Algebra. It is observed in Furetiere's Diction-

NONRESISTANCE, n.t. Non and resiatance. The principle of not opposing some su—

ary, that Peter Nonius, in 1530, first invented perior or established power: applied particularly the angles of 45►► made in every meridian, and :- r ►►► 1:-L *-‘ —— that he called them rhumbs, and calculated them by spherical triangles, aged eighty.

NONNATOJRALS.n.j.

Nonius died in 1577,

Lat. 72071 naturalia.

Physicians reckon these to be six ; *viz.* air, meat and drink, sleep and watching, motion and rest, retention and excretion, and the passions of the mind.

These six nonnaturali are such as neither naturally constitutive, not merely destructive, do preserve or destroy according unto circumstances. Browne.

NONNIUS, or NONIUS (Lewis), a learned physician of Antwerp, in the seventeenth century, who wrote several works which are esteemed ; the principal are, 1. An excellent treatise entitled Ichthyophagia, sive de Piscium esu. 2. Hispania; useful for understanding the ancient geography of Spain. 3. A Commentary on the Medals of Greece, and those of Julius Cresar, Augustus, and Tiberius, in folio; it contains Goltzius's Two Words on the same subject. 4. A Commentary on Goltzius's Account of Greece, the islands, &c. 5. Poems, &c.

NONPAREIL', n. s. Non and French pareil Excellence unequalled.

My lord and master loves you : O such love Could be but recompensed, though you were crowned The nonpareil of beauty. Shakspeare. Tieeljth Night.

NON’PLUS, n. s. &. v. a. Non and Lat. plus, more. Inability to do or say more ; state of puzzle or perplexity ; to confound, puzzle, or put to stand.

His parts were so accomplish!, That Tight or wrong he ne’er was nonplust.

Hudibras.

Nor is the composition of our own bodies the only wonder ; we are as much nonplust by the most contemptible worm and plant. Gtanville’i Scepsis.

What, you are confounded, and stand mute ? Somewhat nonplust to hear you deny your name.

Dryden.

One or two rules, on which their conclusions de-pend, in most men have governed all their thoughts ; take these from them and they are at a loss, and their understanding is perfectly at a nonplus. Locke.

Tom has been eloquent for half an hour together, when he has been nonplust by Mr. Dry’s desiring him to tell what it was that he endeavoured to prove.

Spectator.

That sin that is a pitch beyond all those, must needs be such an one as must nonplus the devil himself to proceed farther. South.

Such an artist did not begin the matter at a venture, and, when put to a nonplus, pause and hesitate which way lie should proceed ; but he had first in his comprehensive intellect a compleat idea of the whole organical body. Eentley.

NONRES’IDENCE,7j.s. } Non and resi—

NONRES’IDENT. J Hence. Failure of

residence : he who so fails or neglects to reside at his proper place.

If the character of persons chosen into the church had been regarded,

there would be fewer complaints of nonresidence. Su-ift.

As to nonresitlenre, there are not ten clergymen in the kingdom who can be termed nonresidents. hi.

in English history to the principle of not opposing the arbitrary measures of the Stuarts. NON'SENSE, n.t. > Non and sense. Un-NONSEN'SICAL, adj. $ meaning, or ungrammatical language.

'Till understood, all tales. Like nontense, are not true or false. Hudibras. Many copies dispersed gathering new faults, I saw more nontense than I conld have crammed into ll' Dryden.

They had produced many other inept combinations, or aggregate forms of particular things, and nonsensical systems of the whole.

Ray on the Creation.

This nontense got into all the following editions by a mistake of the stage editors.

Pope on Shaktpean. What's the world to him ? Tis nonsense all. Thomson.

NONSOLUTION, n. s. Non and solution. Failure of solution.

Athenaeus instances enigmatical propositions, and the forfeitures and rewards upon their solution and nonsolution. Broomt.

NONSPA'RING, adj. Non and sparing. Merciless; all destroying.

Is't I expose

Those tender limbs of thine to the event Of the nonsparing war ? Shalupeare.

To NONSUIT, v. a. Non and suit. To deprive of the benefit of a legal process for some failure in the management.

The addresses of both houses of parliament, the council, and the declarations of most counties and corporations, are laid aside as of no weight, and the whole kingdom of Ireland nonsuited, in default of appearance. Swift.

NOODT (Gerard), an eminent civilian, born at Nimeguen in 1647,

where he was chosen professor of law in 1671. He was afterwards appointed professor at Franeker; and ar Utrecht in 1684; but in 1686 became rector of the university of Leyden. He published a collection of his works on law, in 1713, 4to. and died in 1725.

NOOK, n. s. Teut. een hoeck ; or Belg. ein hoek. A corner ; a covert made by an angle or intersection.

Buy a foggy and a dirty farm In that nook shotten isle of Albion.

Shakipeare. Safely in harbour

I* the king's ship, in the deep nook, where once Thou calledst me up. Id. Tempest.

The savages were driven out of their great Ards, into a little nook of land near the river of Strang-ford ; where they now possess a little territory.

Daiies.

Meander, who is said so intricate to be, Hath not so many turns, nor cranklmg nooks as she.

Drayton

Thus entered she the light excluding cave, And through it sought some inmost mx > * to save The gold. Chapman.

Ithuriel ind Zephon, Search through this garden, leave unsearched no HO. *.

N O O T K A.

A third formed within the ground A various mold ; and from the boiling cells, By strange conveyance, filled each hollow nook.

‘Id.

Unsphere

The spirit of Plato to unfold What worlds or what vast regions hold The immortal mind that hath forsook Her mansion in this fleshy nook. Id. Poems. Thee I account still happy, and the chief Among the nations, seeing thou ait free : My native nook of earth ! Cowper

Stung with the loss, into a thoughtful cast He throws his face, and rubs his vexed brow ; Searches each nook and corner of his soul With frequent care ; reflects, and re-reflects, And tries to touch relations that may start The fugitive again. Pollok.

NOON, n. $. & adj. ~) Sax. non ; Goth. NOONDAY, n. s. > non ; Wei. nawn, sup—

NOONTIDE, n. s. & adj. j posed to be derived from Lat. none, the ninth hour, at which the c <zna, or chief meal, was eaten ; whence the other nations called the time of their dinner, or chiei meal, though earlier in the day, by the same name. ??? Dr. Johnson. A particular hour of church service was also called nona hora by the Christian Goths, and thence the Goth, non was derived.??? Thomson. The middle hour of the day ; the time when the sun is in the meridian ; mid-day ; twelve o'clock in the day. Midnight has been poetically called the noon of night : noonday and noontide alike signify the middle of the day : the time of noon.

Fetch forth the stocks, there shall he sit till noon, 'Till noon ! till night, my lord. Shakspeare.

Sorrow breaks seasons and reposing hours, Makes the night morning, and the noontide night.

Id.

The bird of night did sit, Even at noonday, upon the market-place, Hooting and shrieking. Id. Julius Ctziar.

All things in best order to invite Noontide repast, or afternoon's repose. Milton. The dimness of our intellectual eyes, Aristotle fitly compares to those of an owl at noonday. Boyle.

The day already half his race had run, And summoned him to due repast at noon.

Dry den.

Full before him at the noon of night He saw a quire of ladies. Id.

If I turn my eyes at noon towards the sun, I can-not avoid the ideas which the light or sun produces in me. . Locke.

The scorching sun was mounted high, In all its lustre to the noonday sky.

Addison't Ovid.

We expect the morning red in vain ; 'Tis hid in vapours, or obscured in rain. The noontide yellow we in vain require ; 'Tis black in storm, or red in lightning fire.

Prior.

How oft the noon, how oft the midnight bell, That iron tongue of death ! with solemn knell, On folly's errands, as we vainly roam, Knocks at our hearts, and finds our thoughts from

home ! Young.

In days of poverty his heart was light : He sung his hymns at morning, noon, and night.

Harte.

But now at noon

Upon the southern side of the slant hills, And where the woods fence off the northern blast, .Ami has the warmth of IMay. Cowper.

NOORABAD, a town of the province of Agra, Hindostan, pleasantly situated on the south bank of the Sank. Adjoining this place is a large garden, planned out by the emperor Aurungzebe, within which is the tomb of his favorite wife, Ghoona Begum, celebrated for her poetical compositions. The inscription on the tomb is Alas ! alas ! Ghoona Begum ! The country in the vicinity has many small forts. Long. 78►► 6’ E., lat.26►► 25’ N.

NOOSE, n. s. Swed. knusse ; Lat. nodus. A running knot, which the more it is drawn binds the closer.

Can’st thou with a weak angle strike the whale ? Catch with a hook, or with a noose inthral ?

Sandys.

The sin is woven with threads of different sizes, the least of them strong enough to name and entrap us. Government of tlie Tongue.

They run their necks iuto a nonte, They’d break ‘em after, to break loose.

Hniitbras.

Falsely be falls into some dangerous notu<-. And then as meanly labours to get loose.

Dry den. A rope and noose are no jesting matters.

Arbuthnot’s John Bull.

NOOTKA, the country on the north-west coast of North America, round Nootka Sound, Upon the coast the land is tolerably high and level; but within the sound it rises into steep hills, which have a uniform appearance. The climate is remarkably mild. Captain Cook found that the thermometer never fell lower even in the night than 42►►, while in the day time it often rose to 60►►. The trees of which the woods are composed are the Canadian pine, white cypress, and some other sorts of pine. The trees grow here with great vigor,

and are of a large size. About the rocks and borders of the woods are strawberry plants ; and raspberry, currant, and gooseberry bushes. The principal animals are racoons, martens, and squirrels. Birds are not numerous, and are remarkably shy, owing to their being continually harassed by the natives for the sake of their feathers as well as for food. The quebrantahuessos, shags, and gulls, were seen off the coast ; and the last two were also frequent in the sound. The principal sorts of fish are herrings and breams, one species silver-colored, and another brown. Captain Cook and Dr. King consider it as an excellent shelter for ships. The natives are in general robust and well proportioned ; their faces large and full, their cheeks high and prominent, with small black eyes; their noses broad and flat, their lips thick, and they have generally very fine teeth, and of the most brilliant whiteness. The manner in which the children are treated, when young, is not more extraordinary from its strange and total inutility, than from its agreement with the customs of the Chinese and Tartars. The bead of the infant is bound by the mother with a/kind of fillet of several folds, as low down as the ⍰⍰yes, in order to give it a certain form; yet wo never observed that any of the infants, in such a state of preparation for sugar-loaf heads, suffered any visible pain or inconvenience : and though the custom of compressing the head in this manner gives

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them an unpleasant appearance, by drawing up the eyebrows, and sometimes producing squint-ing, as well as flattening the nose and distending the nostrils, they are by no means an ill-looking race of people. They have also the custom, which prevails in many Indian nations, of plucking out the beard by the roots. Some of them, however, when they become old and in-firm, suffer their beards to grow without interruption. But, notwithstanding they have so great an aversion to the hair of their chin, that of the head is an object of their attentive vanity ; it is strong, black, and glossy, grows to a considerable length, and is either tied in a kind of knot on the top of their heads, or suffered to hang down their backs in flowing negligence. In their exterior form they have not the symmetry found in many other Indian nations. Their limbs, though stout and athletic, are crooked and ill-shaped ; their skin is white ; and we have seen some of the women, when in a state of cleanliness, who not only possessed the fair complexion of Europe, but features that would have attracted notice, for their delicacy and beauty. But these examples of beauty are not numerous. Their hair and eyes are black ; they are reserved and chaste ; and examples of loose and immodest conduct were very rare among them. There were women in St. George's Sound whom no offers could tempt to meretri-cious submissions. All accounts agree in characterising the inhabitants as a very inoffensive race ; yet cannibalism prevails among them ; for, together witii many other articles which they exposed for sale to captain Cook's ships, they brought human skulls and hands (part of the flesh still remaining on them), which they acknowledged they had been feeding on ; and some of them had evident marks of the fire. As there are but two villages of Nootka inhabited, the number of people cannot be great ; perhaps about 2000 in all. The employment of the men is chiefly fishing, &C., whilst the women manufacture their garments. Their ingenuity in this and in the mechanic arts is far from being inconsiderable ; and in the imitative arts their skill is very great. Captain Cook says, ' Little knowledge we can be supposed to have acquired of the political and religious institutions established among these people. We discovered, however, that there are such men as chiefs, distinguished by the title of acweek, to whom the others are, in some degree, subordinate. But the authority of each of these great men seems to extend no farther than to his uwn family, who acknowledge him as their head. Nothing that we saw could give us any insight into their notions of religion, except the figures called Klumma. These, perhaps, were idols; but, as

the word acweek was frequently mentioned when they spoke of them, they may be images of sonne of their ancestors, whose memories they venerate. Their language is neither harsh nor disagreeable, farther than proceeds from their pronouncing the k and h with less softness than we do. The affinity it may bear to other languages we have not been able to trace, not having proper specimens to compare it with ; but, from the few Mexican words we have procured, there is an obvious agreement in the frequent termination of the words in f, ti, or j. The word wakash was frequently in the mouths of the people of Nootka. It seemed to express approbation, applause, and friendship.' A small association of British merchants resident in the East Indies, had, early in 1786, formed the project of opening a trade hither, for supplying the Chinese market with furs. The principal point towards which these expeditions were directed was Nootka; and the adventurers, being satisfied with their traffic, took measures, in 1788, to secure a permanent settlement; at the same time that the shipping employed in this expedition was generally two, and never exceeded four small vessels. But the Spaniards, jealous of the intrusion of the English into a part of the world which they had long regarded as their exclusive property, sent a frigate of twenty-six guns, under Don Martinez, from Mexico, to put an end to this commerce. The frigate arrived in May, 1789, and captured two English vessels in July following, ai the same time taking possession of the settlement formed on the coast. This had almost involved us in an expensive war. Happily, however, for both countries, the matter was at length, after great altercation, amicably settled by a convention in 1790, by which the British were allowed a free navigation and commerce with the people of Nootka.

NOPAL, raquette, or Indian fig, a plant so named by the Indians, from which the cochineal is collected in Mexico. These plants bear fruits which resemble our figs ; tinge the urine of those who eat them ; and probably communicate to the cochineal the property which makes it useful to the dyer. The Indians of Mexico cultivate the nopal tree near their habitations. They make small nests of moss or fine herbs ; put twelve or fourteen cochineals into each nest; place three or four of these nests on each leaf of the nopal ; and fasten them there by the prickles of the plant. In the course of a few days thousands of insects issue out, and fix themselves upon the parts of the leaf which are best sheltered and afford the most nourishment. The cochineals are collected several times in the course of the year ; and are deprived of life by scalding them, or by putting them into an oven. Se* Coccus.

NOR, conjunct. Ne or. A particle of negation marking the second or subsequent branch of a negative proposition ; correlative to neither or

not. Two negatives are sometimes joined, but not according to the propriety of our present language, though rightly in the Saxon : and neither is sometimes included in nor, but not elegantly.

I neither love, nor fear thee. Shaktpeart. Mine eyes,

Which I have darted at thee, hurt thee not ;

AW, I am sure there is no force in eyes

That can do hurt. Id. As Ytm Like It.

Before her gates, hill wolves and lions lay ; Which with her virtuous drugs so tame she made, That wolf, nor lion, would one man invade.

Chapman.

Idle nymph, I pray thee, be ˆ

Modest, and not follow me, 1 nor love myself, nor thee. fifn J onion. >

Power, disgrace, nor death could ought divert Thy glorious tongue' thus to reveal thy heart.

Daniel.

Nor did they not perceive their evil plight, Or the fierce pains not feel. Milton.

Neither love wul twine, nor hay. Marvel.

Simois nor Xanthus shall be wanting there ; A new Achilles shall in arms appear. Dryden.

But how perplext, alas ! is human fate ; I whom nor avarice, nor pleasures move ; Yet must myself be made a slave to love.

Walth.

But happier far, who comfort those that wait To hear plain truth at Judah's hallowed gate : Their language simple, as their manners meek, No shining ornaments have they to seek ; NOT labour they, nor time, nor talents waste, In sorting flowers to suit a fickle taste. Cowper.

NORBERG (George), a Swedish historian, was born at Stockholm in 1677, and having studied at Upsal, entered into the church, and in 1703 became almoner to the army. In 1707 he was made almoner and chaplain to the king, with whom he was at the battle of Pultowa. Having been sent to Russia, with count Piper, he was not liberated till 1715, when he joined his royal master in Pomerania. Soon after he was appointed minister of a church at Stockholm, where he died in 1744. Norberg was a celebrated pulpit orator, and published many funeral discourses, but his history of Charles XII. is his chief work. The materials which he used were partly furnished by the Swedish government, and the manuscript was corrected by queen Ulrica Eleonora, the sister of that monarch. It was published at Stockholm, 1740, 2 vols. folio; and a French translation appeared at the Hague in 1742,3 vols. 4to.

NORCIA, a town in the states of the church, and delegation of Spoleto, on the Freddara. In 1730 it suffered severely by an earthquake. Population 4000. Seventy miles N. N. E. of Rome.

NORD, DEPARTMENT uu, France, is formed of the former province of French Flanders, of French Hainault and Cambray, and takes its name from its topographical situation, being in the northern part of the kingdom. The principal place of this prefecture is Lille, and it consists of seven arrondissements or subprefectures, Lille containing 261,949 inhabitants ; Avesnes 115,867; Cambray 133,821; Douay 105,493; Dunkirk 90,435; Hazebrouck 100,901, and Valenciennes 87,278; being a total population of 895,744 souls, on an area of 2502 square miles, and yielding a territorial revenue of 44,206,000 francs. It is subdivided into sixty cantons, and 660 communes, and is the sixteenth military division, having a royal court at Douay, and a bishopric at Cambray. It contains eight electoral arrondissements, which send twelve members to the chamber of deputies. This department is bounded on the north by the sea, which separates it from England ; on the east by the kingdom of the Netherlands ; on the south by the department of the Aisne, and on the west by that of the Pas-de-Calais.

The surface of the country presents, through all its extent, vast and fruitful plains, covered with tlie richest productions of agriculture.

Every variety of corn, vegetables, fodder for cattle, and

oleaginous plants, are cultivated with the greates* success. Populous towns, some of them strongly fortified ; numerous boroughs and villages ; and many different manufactures, also overspread this department; which, although it is one of the finest and best cultivated in France, yet scarcely produces sufficient for its swarming population. The pastures are very superior, and feed numbers of horned cattle and sheep, and noble horses. The vine is not cultivated at all here ; there is scarcely wood enough for the consumption ; but the inexhaustible mines of coal, which are worked in several parts, supply this deficiency. The collieries of Anzin are the most considerable in France ; there are others also, the produce of which is very considerable, and it is said that not less than 6,000,000 quintals are furnished annually by all the mines of this department, which is bounded on the sea-coast by downs, the barrenness of which is singularly contrasted with the fertility of the other parts.

Without incessant draining the waters would still cover much of the land. Several large canals serve to draw them off from the fields, and at the same time facilitate the communication between the different towns. The cultivation is chiefly by horses. Of forest (chiefly oak, elm, and white wood) there are 57,051 hectares, and the average produce is about 69 frs. 56 cts. per hectare of arable land. Besides the productions already mentioned, various sorts of flax are cultivated, also much hemp, the best tobacco in France, endive, hops, wood, beans, and asparagus. There is a great abundance of small game, fresh and salt-water fish, merino sheep and pigs, but few bees, numerous nurseries of fruit, forest and exotic trees, mines of iron and coal, and quarries of marble, freestone, gray paving stone, potters' clay, and turf. Manufactures are carried on here of bleached and unbleached linen, table linen, cambrics, lawns, camblets, flannels, lace, cloths, woollen stuffs, calicoes, printed cottons, handkerchiefs, mattress cloth, sewing thread, and thread for face, combed wool, cards for wool and flax, white lead, drawing pencils, toys, and works in marble. There are also numerous distilleries of brandy, sugar and salt refining houses, large brass foundries, bleaching grounds, dye-houses, oil mills, cotton and linen yarn factories, forges, blast furnaces, nail manufactories, glass-houses, paper mills, delf and china factories, tile and brick kilns, marble sawing mills, rope grounds, tan yards, and curriers' shops; besides royal establishments for the manufacture of tobacco, the refining of saltpetre, the casting of cannon, and the making of arms. A considerable trade is carried on in all the above articles ; there is also

much done in the whale and cod fishery, as well as in that of herrings and different sorts of fresh fish, and in the coasting business.

This department is intersected by the Escaut or Scheldt, the Lys, the Scarpe, the Sambre, the Aa, the Colme, the Lawe, the Boure, and the Hayne, navigable here ; and by the canals of St. Omer, Bourbourg, Dunkirk, St. Quentin, Ber-gues, Prˆavin, the Bourre, the Nieppe, the Sen-see, the Hayne, and the Upper and Lower Deule. Besides these, a great number of smaller

streams water and fertilise this rich territory. It is traversed by the great roads of Brussels, Arras, Boulogne, and Dunkirk.

NORDEN, a town of East Friesland, Hanover, about two miles from the North Sea. It has a small but good harbour, and is the oldest town of the province. Inhabitants 3100. Fifteen miles north of Embden.

NORDEN (Frederic Lewis), F. R. S., an ingenious traveller and naval officer in the Danish service, born at Gluckstadt in Holstein in 1708. He was well skilled in mathematics, ship-build- ing, and architecture; and in 1732 obtained a pension to travel for the purpose of studying the construction of ships, particularly the galleys and other rowing vessels used in the Mediterranean. He spent near three years in Italy ; and Christian VI. being desirous of obtaining a circumstantial account of Egypt, Mr. Norden at Florence received an order to extend his travels to that country ; which he executed so much to that monarch's satisfaction that he made him a captain and commissioner in the navy. His Travels into Egypt and Nubia were printed at Copenhagen in folio, 1756, and soon after translated into English by Dr. Peter Templeman. In the war between England and Spain, captain Norden attended count Ulric Adolphus, a sea captain, to England ; and they went out as volunteers under Sir John Norris, and afterwards under Sir Chaloner Ogle. During his stay in London, Mr. Norden was made F. R. S. and published drawings of some ruins and colossal statues at Thebes in Egypt, with an account of them in a letter to the Royal Society, in 1741. Taking a tour to France, he died in Paris in 1742.

NORDHAUSEN, a town of Prussian Saxony, on the north side of the Hartz Mountains, in the government of Erfurt, on the river Zorge. It is fortified with a wall and towers, and built in the style of the middle ages, containing one Catholic and seven Lutheran churches, an orphan house, and three hospitals. The chief occupation is the distillation and sale of spirits : 200 stills are said to consume annually 300,000 bushels of corn, and the value of the spirits sent out of the town for sale is about ––60,000 exclusive of duty; whilenearly 1000 head of cattle, and 10,000 swine, are fed on the refuse. Here are also oil-mills, which prepare oil to an annual value of ––30,000 or ––40,000 ; tanneries ; and, on a smaller scale, manufactures of woollen, linen, hardware, and soap. The marble from the adjacent district of Hohenstein is made into a number of different articles. Population 9000. Thirty-seven miles east of Gottingen.

NORDPOKING, NORKOPING, or NORD-KIOPING, a town of East Gothland, Sweden, on the river Motala. It stands after Stockholm on the greatest extent of ground of any town in the kingdom. Its population, however, is only about 9000. Well situated for trade, and having a commodious quay, the manufacturing establishments are various, *viz.* for iron and brass-ware, h' re-arms, and leather ; also for woollens, tobacco, and paper. There is in the river a good salmon fishery. The public buildings are respectable, and the town not ill built. Seventy-six miles south-west of Stockholm.

NORDLINGEN, an old manufacturing town of Germany, annexed to the Bavarian dominions in 1802. Leather and woollen are its chief factories; but corn and feathers, from the neighbourhood, are large articles of commerce. Thirty-six miles N. N. W. of Augsburg, and thirty-six N. N. E. of Ulm. Long. 10–– 28' 30' ––., lat ,48–– 51' N.

NORES (Jason de), a scholar, poet, and philosopher, born at Nicosia in Cyprus. He lost his fortune when the Turks took that island in 1570. He retired to Padua, where he acquired great reputation by teaching moral philosophy ; but his character had a cast of severity. Nores attacked the Pastor Fido of Guarini, who confuted him in a piece printed at Ferrara in 1588. Nores made a reply in 1590; and the poet was preparing an answer still more severe, when Nores died of grief for the banishment of his only son, for having killed a Venetian in a duel. He left behind him many works. The chief of his Italian works are, 1. The Poetics, Padua, 1588, 4to. 2. A Treatise on Republics, 1578, 4to. 3. A Treatise on the World and its Parts, Venice, 1571, 8vo.

4. Introduction to three books of Aristotle's Rhetoric, Venice, 1584, 8vo. His Latin works are, 1. Institutio in Philosophiam Ciceronis, Padua, 1576, 8vo. 2. Brevis et distincta summa praceptorum de arte discendi, ex libris Ciceronis collecta, Ve-nice, 1553, 8vo. 3. De Constitutione partium human;v et civilis philosophic, 4to. 4. Interpretatio in artem poeticam Horatii, &c.

NORFOLK. This county, anterior to the Roman invasion, formed part of the district inhabited by the warlike Iceni, who, with queen Boadicea at their head, made such dreadful havock among the invading troops. The sequel is well known. The Danes made several barbarous incursions into Norfolk, in one of which Sweyn king of Denmark burnt the cities of Norwich and Thetford. Its name is of Saxon origin, it having formed the northern district of East Anglia. It was therefore denominated Nord-folke, the residence of the northern folk, l:y ctn-traction become Norfolk.

Norfolk is a maritime county, bounded on the north and east by the German Ocean, on the south by Suffolk, and on the west by Cambridgeshire. Mr. Kent makes the greatest length from east to west fifty-nine miles, and its greatest breadth from north to south thirty-eight ; containing, according to Mr. Young, 1830 square miles. It is divided into thirty-three hundreds, containing one city, four sea-ports (two large, and two small), twenty-five other market-towns, and, as it is said, 756 parishes. Of the climate, Mr Young remarks, that there are several points o the compass from which the north and north-east winds blow more directly on this county than on any other. A later writer, the Rev. J In Evans, observes that from the situation of a county, parts of it being exposed to the ocean and others to a large extent of marshland, the air is extremely cold in winter and at the early part of spring. The contiguity to the sea and th* marshes, with the vapors brought from Holland, accounts for the frequent rains during the summer months. In Marshland, and in the other fenny

parts of the county, the air is not only cold but exceedingly damp, and the inhabitants are subject to intermitting fevers. The country to the

north and north-west of Thetford, forming the greater part of Norfolk, consisting of a sandy or gravelly soil, is peculiarly salubrious and pleasant. Mr. Young's map of the soils of Norfolk thus delineates them : ••• the largest portion, containing 576,000 acres, extending from the borders of Suffolk on the south almost across the county north, and from Necton, in Wayland hundred, west, to a few miles beyond the city of Norwich east, as also a patch between Stoke and Lynn Regis, consists of 'various loams.' A district consisting of ' good sand' extends along nearly the whole of the northern border of the county, and, branching into the interior a little beyond Castle Acre, contains altogether 268,800 acres. Light sand principally obtains on the south and south-west extremities of the county, occupying about 140,800 acres. Rich loam is found in a small district on the eastern border, containing about 94,720 acres. Peat is found in a small patch, containing 52,480 acres, on the east and southeast border ; and a still less patch, and also more easterly, consists of marshland clay, being about 38,400 acres. Norfolk ranks very high as a farming county : this may in part be owing to the comparative poverty of its soil, which has called forth all the skill and industry of its cultivators. The soil in general is more I'dapted to the growth of barley than of wheat, yet the hundreds of Blofield and Flegg, on the east side of the county, and some few other districts, yield an excellent sample of the latter. The turnip crop is considered to be the basis of good husbandry ; to consume which, immense droves of black-cattle are constantly coming from the Highlands of Scotland, for which there is a weekly market at Norwich, and one every fortnight at Setch. The wools grown in this county are chiefly consumed in Yorkshire in the manufacture of inferior cloths, while those of Lincolnshire and Leicestershire are used in the Norwich manufactory of camlets and other thin stuffs.

The principal rivers of Norfolk are the Great Ouse, the Little Ouse, the Waveney, the Bure, the Wensum, the Yare, and the Nar. The Great Ouse rises near Brackley in Northamptonshire, and after passing through several counties it divides Cambridgeshire from Norfolk, and falls into the sea at Lynn Regis. The Little Ouse, or Brandon River, rises near Lopham, divides Suffolk from this county, and empties itself into the Greater Ouse. The Waveney, which separates Norfolk and Suffolk on the eastern side, also rises at Lopham, after which it joins the Yare, forming the water called Bradan, near Yarmouth, where it falls into the sea. The Bure rises in the north of the county, becomes navigable at Ayl-sham, and joins the Yare in Bradan. The Wen-sum rises at West Rudham, runs through Norwich, and falls into the Yare a little below that city. The Yare rises near Attleborough, becomes navigable at Norwich, and falls into the sea at Yarmouth. The Nar

rises at Nitcham, is navigable to Narborough, and falls into the Great Ouse. Inland navigation, except by means of these navigable rivers, is not either much encouraged or much wanted. Tli< >re is, however, a canal

from Wisbeach in Cambridgeshire, to Out* ►►11 Creek and Sailer's Load in this county, an extern of about six miles. There is a medicinal spnngat Thetford.

This county produces cows 'approaching to the Alderney,' but larger ; fine short-woolled sheep in great abundance ; pigs of a prolific breed ; poultry of all kinds, and of a very superior quality, particularly Turkeys, of which many tons weight are annually, at Christmas, sent to London; rabbits in large quantities ; and game of almost every description, particularly pheasants. Here is also found the otis tarda, or great bustard, as also the strix otus curtatus, or short-eared long-winged owl. Hooded crows and land-pipers, called ruffs and rees, as they are male or female, are also occasionally found in Norfolk. This county is well supplied with fresh and salt-water fish of various kinds, particularly perch in the rivers, and mackerel and herring on the coast of the North Sea, which also furnish plenty of crabs and lobsters. There are but very few mineral or fossil productions in this county. The chalk-pits yield abundance of material for the manufacture of gun-flints, and the red sand stone makes its appearance at the north-west.

The principal manufactures of Norfolk consist of woven goods. Worsted, a name originally derived from the village of that name, dormics, camerics, and calecuts, were formerly manufactured in this country. They were followed by druggets, serges, crapes, shalloons, duffields, &c. These again, the latter excepted, have been superseded by camlets, camlettees, callimancoes, moreens, bombazeens, poplins, plain and flowered damasks, shawls, and a great variety of fancy articles, most of which are manufactured from wool, mohair, and silk, by different intermixtures and curious combinations. Norwich takes the lead in this trade ; and of late the weaving of cotton articles is carried on there to some extent. Stockings are knitted at Diss, Wymondham, and Hingham. Till within about twenty years, it was estimated that 1000 guineas were weekly carried out of Norwich to pay for spinning-work done within the county of Norfolk by the poor villagers, who were perhaps the only persons in England who still retained the ancient mode of spinning with the distaff. The high perfection to which machinery has been carried has now almost

totally supplanted the spinning by hand ; and the Norwich manufactures are supplied with yarns from the mills of Yorkshire, Lancashire, and Durham. Norfolk supplies the central parts of the kingdom with coals, wine, timber, groceries, &c. The chief part of the commercial concerns of the county are transacted at Lynn and Yarmouth.

This county sends twelve members to parliament : *viz.* four for the county, t%vo for the city of Norwich, two for Yarmouth, two for Thetford, and two for King's Lynn.

Norfolk is prolific in biographical materials. The following list will convey a tolerably correct proof of the justness of this observation. A bare list of names is all that the limits of this work can afford. Alan, of Lynn, a theological writer of the fifteenth century. ††† J. Aylmer, di-vine.††† Wm. Ames, Puritan divine. ††† J. Bacon-thorpe, a learned monk. ††† Wm. Bateman, called

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William de Norwico, a learned prelate. ††† Beaupre Bell, antiquary. ††† Robert Brady, M.D. ††† Edward Browne, M. D. ††† The learned and ingenious Ur. Samuel Clarke, polemical divine. ††† Sir Edward Coke, judge. ††† Wm. Cunningham, M. D. ††† John Cosin, a learned divine. ††† Ralph de Diceto, dean of St. Paul's, Temp. Hen. II.††† Walter of Diss, a learned friar. ††† Sir John Fastolf, a famous general. ††† Sir John Fenn, antiquary. ††† Sir Andrew Fountaine, of Narborough, antiquary. ††† Thomas Harmer, a learned dissenting divine and biblical critic. ††† Henry Headley, an ingenious poet. ††† The learned prelate Dr. Thomas Herring. ††† J. Ives, antiquary. ††† John Kaye, or Cains, physician. ††† Edward King, a learned writer and antiquary. ††† Thomas Legge, antiquary and dramatic writer. ††† Sir Roger L'Estrange, a political writer and translator. ††† Dr. Roger Long, divine and astronomer.††† Thomas Martin, F. A.S., antiquary and topographer.††† The immortal Horatio viscount Nel-son.††† Sir Wm.Neve, antiquary, herald, &c. ††† Matthew Parker, archbishop of Canterbury. ††† Thomas Paine, the infidel political writer. ††† The late learned and critical Greek scholar, professor Richard Person. ††† Sir Thomas Richardson, chief justice of the court of common pleas. ††† The ingenious and amiable Robert Robinson, divine. ††† Rev. Dr. Thomas Soames, a distinguished royalist.††† Thomas Shadwell, poet laureat, dramatic writer, and historiographer. ††† Sir Henry Spelman, historian and antiquary. ††† Benjamin Stillingfleet, son of Bishop Stillingfleet, naturalist and poet. ††† Henry Swindon, antiquary and topographer. ††† Thos. Skelton, comic poet of Diss. ††† Robert Walpole, earl of Oxford, statesman and political writer. ††† Henry Wharton, divine and historian. ††† Arthur Wilson, historian and dramatic writer. ††† The late Right Hon.William Windham, statesman. NORFOLK, a county of Massachusetts, United States, bounded north-west and west by Middlesex county, east by Boston Harbour, south by Plymouth and Bristol counties, and west by Rhode Island and Worcester county. Chief town Dedham.

NORFOLK, a county of the southeast part of Virginia, United States, bounded north by Hampton Road and Chesapeake Bay, east by princess Anne county, south by North Carolina, and west by Nansemond county. Chief towns, Norfolk and Portsmouth.

NORFOLK, a borough and port of entry of the United States, in the above county, Virginia, on thenorth-east bank of Elizabeth River, eight miles above its entrance into Hampton Road. It contains a court-house, jail, market-house, theatre, academy, orphan asylum, Lancasterian school, athenaeum, and six churches for Episcopalians, Presbyterians, Baptists, Roman Catholics, and Methodists. The ground on which it is built is level, low, and marshy, and many of the streets are irregular and crooked : the principal ones, nowever, are paved, kept clean, and well lighted. Two or three of the churches are neat, but none of them have steeple?. The Farmers' Bank is a large and respectable structure. The orphan asylum supports about twenty children, and is an elegant brick building. This town is said to afford much agreeable society, and the inhabitants are distinguished for hospitality. It has

more foreign core nerce than any other town in the state. The harbour is nearly a mile wide, and is safe and commodious. It is defended bv three forts. About a mile from Norfolk, or Washington point, between the east and west branches of the river, there is a marine hospital Population 9193. 112 miles by water below City point, and 112 E. S. E. of Richmond.

NORFOLK BAY is a deep bay, which runs U. the eastward from North Bay, on the east coast of Van Piemen's Land.

NORFOLK ISLAND, an island of the South Sea, lying in lat. 29►► 12' 30' S., and long. 168►► 16' E. A colony was once settled on it ; and the following account of it is given in Governor Philips's Voyage to Botany Bay :►►► ►► Norfolk Island is about seven leagues in circumference ; and, if not originally formed by the eruption of volcanic matter, must have contained a volcano. This conclusion is formed from the vast quantity of pumice-stone scattered in all parts of it, and mixed with the soil. The crater, or some traces of it, will be found at the summit of a mountain, near the middle of the island, which the commandant has named Mount Pitt. The island is well watered. At or near Mount Pitt rises a strong and copious stream, which, flowing through a very fine valley, divides into several branches, each of which may be used in turning mills ; and in various parts of the island springs have been discovered. The climate is pure, salubrious, and delightful, preserved from oppressive heats by constant breezes from the sea, and of so mild a temperature throughout the winter that vegetation continues without interruption, one crop succeeding another. Refreshing showers from time to time

maintain perpetual verdure ; not of grass, for none crows in the island, but of trees, shrubs, &c. On the leaves of these the sheep, hogs, and goats, thrive and fatten vfry much. To the salubrity of the air every individual can bear ample testimony, from the uninterrupted state of good health which has been enjoyed. When our settlers landed, there was not a single acre clear of wood in the inland ; and the trees were so bound together by that kind of creeping shrub called supple-jack, interwoven in all directions, as to render it very difficult to penetrate far among them. The commandant, by indefatigable activity, soon caused a space to be cleared sufficient for the requisite accommodations, and for the production of esculent vegetables of all kinds in abundance. The people were soon settled in commodious houses; and, according to the declarations of Mr. King himself, in his letters to governor Philip, this colony would be in a situation to support itself entirely without assistance in less than four years. Fish are caught in great plenty, and very fine turtle. The woods are inhabited by innumerable tribes of birds, many of them very gay in plumage. The most useful are pigeons, which are very numerous ; and a bird not unlike the Guinea fowl, except in color (being chiefly white) ; both of which were at first so tame as to suffer themselves to be taken by the hand. Of plants that afford vegetables for the table, the chief are the cabbage-palm, the wild plantain, the fern tree, a kind of wild spinach, and a tree

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which produces a diminutive fruit, bearing some resemblance to a currant. But the productions which five the greatest importance to Norfolk Island are the pines and the flax plant ; the for-mer rising to a size and perfection unknown in other places, and promising the most valuable supply of masts and spars for our navy in the East Indies ; the latter not less estimable for making sail-cloth, cordage, and even the finest manufactures, growing in great plenty, and with such luxuriance as to attain the height of eight feet. The pines measure frequently 160 or 180 feet in height, and are sometimes nine or ten feet in diameter at the bottom of the trunk. They rise to about eighty feet without a branch : the wood is said to be of the best quality, almost as light as that of the best Norway masts ; and the turpentine obtained from it is remarkable for purity and whiteness. The fern tree is found also of a great height, measuring from seventy to eighty feet, and atfords excellent food for sheep and other small cattle. A plant producing pepper, and supposed to be the true oriental pepper, has been discovered in the island, growing in great plenty; and specimens have been sent to England, to ascertain this important point.'

The settlers here are chiefly composed of soldiers, to each of whom an allotment of thirty acres of land was originally granted, and to a non-commissioned officer fifty ; and of the bet-ter behaved convicts whose term of servitude is expired, and who receive twenty-five acres. Part of the crew of the Sirius, shipwrecked on the island, preferring to become settlers on it, also received each an allotment of land. Several marines who went out upon the first establishment had the same indulgence. Many of the smaller plantations are fenced round with sugar-canes. The policy of the government at one time was chiefly directed to promote the cultivation of this plant ; and a cow, equivalent in this part of the world to ––30, was promised to the first settler who should produce 500 Ibs. of sugar from the native cane. This island, moreover, produces an article which is much wanted at Port Jackson, i. e. limestone. From Port Jackson the vessels not unfrequently return thither with this as their ballast. But a great obstacle to the colonisation of this island is the difficulty of approaching it, owing to the heavy mountainous sea which constantly beats on its shores. It has not unfrequently happened that ships from Port Jackson have been beating off and on, unable to advance, and unwilling to return, upwards of a month. The want of any harbour or roadstead 'S much against it ; and in consequence of this

disadvantage, and the inefficacy of all attempts o remedy it, its inhabitants expect to be called on to abandon the island. This resolution was :n fact partly carried into effect in 1805, the convicts and the greater part of the military be-ing removed to Port Dalrympl'e, or the river Derwent. The population never exceeded 1000.

NORHAM, a town of Durham, insulated in Northumberland, on the Tweed, near the mouth of the Till. The castle was anciently erected on a steep rock, moated round for security against the incursions of the Scots. It is of great antiquity, having been built in 830 by Egfrid,

bishop of Lindisfarn, and called Ubbanford. In 1121 it was rebuilt by Hugh Pewsey, bishop of Durham. In 1213 it was besieged by Alexander II. king of Scots. In 1290 Edward I. held the convention in it, to settle the dispute between Bruce and Baliol. In 1322 it was taken by the Scots, but retaken by Edward in ten days. In 1327 it was again taken by the Scots, by storm, and great part of the town and castle destroyed. It was repaired by bishop Fox, but attacked by the Scots before the battle of Flodden, and partly destroyed. The castle has been a formidable structure ; a great part of it is in ruins ; the site, with its demesnes, consisted of 1030 acres. It is six miles south-west of Berwick, and 330 north of London.

NORIA, an hydraulic machine much used in Spain. It consists of a vertical wheel of twenty feet diameter, on the circumference of which are fixed a number of little boxes or square buckets, for raising the water out of the well, communicating with the canal below, and emptying it into a reservoir above, placed by the side of the wheel. The buckets have a lateral orifice to receive and to discharge the water. The axis of this wheel is embraced by four small beams, crossing each other at right angles, tapering at the extremities, and forming eight little arms. This wheel is near the centre of the horse walk, contiguous to the vertical axis, into the top of which the horse-beam is fixed ; but near the bottom it is embraced by four little beams forming eight arms similar to those above described, on the axis of the water-wheel. As the mule which they use goes round, these horizontal arms, supplying the place of cogs, take hold, each in succession, of those arms which are fixed on the axis of the water-wheel, and keep it in rotation. From the reservoir the water is conveyed by channels to every part of the gar-den ; these have divisions and subdivisions, or beds, some large, others very small, separated from each other by little channels, into which a boy with his shovel or hoe directs the

water, first into the most distant trenches, and successively to all the rest, till all the beds and trenches have been either covered or filled with water.

NORICI, an ancient nation of Illyricum, who inhabited Noricum, and were governed by kings who made many incursions upon the Romans ; but at last in the reign of Augustus, joining the Panuonii, were conquered by Tiberius. ††† Dio Paterculus.

NORICUM, a Roman province, described by Ptolemy and Tacitus, situated between the Da-nube on the north, and thus separated from ancient Germany ; the Alpes Noricse on the south ; the river Enus, on the west, separates it from Vindelica; and Mons Cetius, on the east, divides it from Pannonia. It was anciently a kingdom under its own kings. ††† Caesar, Velleius, Suetonius. Tacitus reckons it among those provinces which were governed by procurators ; officers, sent by the emperors to receive and dispose of the public revenue. It was divided into two provinces about the time of Dioclesian and Constantine. How far each of these extended in breadth does not appear; all the account we have being from Sextus Rufns,

and the Nolitia Imperil Occidental. This country was anciently famous for its iron and steel (Horace), as that part of it now called Sti-ria still is.

NORIS (Henry), cardinal, a celebrated Augustine monk, born at Verona in 1631. His father instructed him in grammar, and procured an able professor of Verona, called Massoleim, to be his preceptor. At fifteen he was admitted in the Jesuit's college at Rimini, where he studied philosophy ; after which he applied himself to the writings of St. Augustine : and, taking the habit in the convent of Rimini, he soon distinguished himself by his erudition; insomuch that, as soon as he was out of his noviciate, the general of the order sent for him to Rome to give him an opportunity of improving himself. He spent whole days and nights in the library of the Angeliques of St. Augustine ; and regularly studied fourteen hours a-day till he became a cardinal. Thus

he became qualified to instruct others; and on this errand he was sent first to Pezaro, and thence to Perousa, where he took his degree of D. D. ; after which, proceeding to Padua, he applied himself to finish his History of Pelagianism. He had begun it at Rome in 1657, and the book was printed at Florence in 1673. In 1674 the great duke of Tuscany invited him to that city, made him his chaplain, and professor of ecclesiastical history in the university of Pisa. In his history he defended the condemnation pronounced, in the eighth general council, against Origen and Mopsuesta, the first authors of the Pelagian errors : he also added an Account of the Schism of Acquileia, and a Vindication of the books written by St. Augustine against the Pelagians and Semi-Pelagians. The work had procured him a great reputation, but met with several antagonists, to whom he published answers : the dispute grew warm, and was

curried before the inquisition. There the history was examined with the utmost rigor, and the author dismissed without censure. It was reprinted twice afterwards, and the author honored by pope Clement X. with the title of qualificator of the holy orhce. Notwithsxanding this, the Pelagian history was accused afresh before the inquisition in 1776 ; but it cume out again with the same success. Mr. Noris was now suffered to remain in peace for sixteen years, and taught ecclesiastical history at Pisa, till he was called to Rome by Innocent XII., who made him under-librarian of the Vatican in 17Q2. This post being a step to a cardinal's hat, his accusers published several new pieces against him. The pope appointed some learned divines, who had taken neither side, to re-examine Noris's books, and make their report; which was so advantageous to the author that the pope made him counsellor of the inquisition. Yet one of his adversaries attacked him afresh under the title of a Scrupulous Doctor of the Sorbonne. Noris, in a work which appeared in 1695, under the title of An Historical Dissertation concerning one of the Trinity that suffered in the Flesh, answered all accusation* so much to the satisfaction of the pope that he lionored him with the purple in 1695. After this he was employed in the most important affairs, and, on the death of cardinal Cassanati, was made chief library-keeper of the Vatican in 1700; and in 1702 nominated, among others, to reform the calendar ; but he died in Rome in 1704 of a dropsy. He was one of the most learned men in the seventeenth century, and was a member of the academy ; whence he assumed the name of Eucrates Ago-retico. His works are numerous, and were published at Verona in 1729 and 1730, in 5 vols. folio.

NORMANDY, in Latin Normania, called by the French La Normandie, a late extensive and ancient duchy of France, which on account of its intimate connexion with English history, and the great influence it has had on the affairs of this country, cannot fail, it is presumed, to be of deep interest to the English reader. This celebrated district is also well deserving our attention as being the most picturesque, most fertile, and most commercial in France: it is from Normandy that the government derives the greatest portion of its revenue, and of late years its contributions have been incredibly large. Of great men, the principal glory of a nation, it has been unusually prolific; few other countries can boast of having produced so illustrious a phalanx, no less renowned in arts than in arms. Its towns and ports are numerous and important, and its antiquities, to the natives of this country in particular, with which Normandy was formerly so closely connected, highly interesting. It gave kings to England above seven centuries and a half ago, and the descendants of the conqueror may even now be said to occupy the British throne ; an VOL. XV.

evident proof that the means adopted to retain possession of the dominions he had acquired by the sword, and to transmit them securely to his posterity, were characterised by no small degree of political wisdom. After Normandy had once again become united to France, in 1204, it gave the title of duke to the eldest son of the Frencli monarchs, but in 1349 prince Charles, son of John, duke of Normandy, and grandson of Philip de Valois, having become possessed of Dau-phiny, acquired the title of Dauphin, which the heir to the crown has ever since continued to bear.

Its ancient designations and boundaries may be thus exhibited : ••• When Caesar had finally reduced Gaul to the condition of a Roman province, in the year 55 B. C., he divided it into three parts, naming them after the three principal nations by whom they were inhabited, *viz.* Gal-lia Belgica, Aquitania, and Gallia Propria or Celtica. A new division was made by Augustus, B. C. 27, which extended the northern boundary of Aquitania to the river Loire. Ptolemy, who flourished a century and a half later than Augus—

tus, divides it into four parts, *viz.* Gallia Belgica, Narbonensis, Aquitania, and Gallia Lugdunensis, the last being so named from Lugdunum, its capital; this division was also sometirr.es called Celtica, from Celtae, the general appellation of its inhabitants. The Gauls were denominated Galli, Celtiberi, and Celtoscythoe : by the Greeks, who named their country Galatia, they were called Galatae. They styled themselves Celtae, which term appears to have been applied more particularly to the natives of Gallia Lugdu nensis. This division was bounded on the east by the Rhone, west by the ocean, north by Gallia Belgica, and south by Aquitania ; it was subdivided into prima, secunda, tertia, quarta. In Lugdunensis Secunda was comprised the principal part of the tract of country subsequently called Normandy, which, after the conquest of Gaul by the Franks, formed part of the ancient kingdom of Neustria, under the Merovin-gian and Carlovingian kings. When the dominions of Louis le Debonnaire were divided among his children, it fell to the lot of Charles le Chauve, king of western France, and in the reign of Charles le Simple, his grandson, was conquered by the Normans.

From the commencement of the ninth century this part of France, in common with most of its other provinces (especially such as bordered on the sea, or were intersected by large rivers), was continually devastated by the ancient Scandinavians, who inhabited those countries in which are now comprised the kingdoms of Denmark, Sweden, and Norway, and the adjacent country of Lapland. They were known by the significant appellation of Northmen or Normans, the word Normann or Nordlander signifying in German a man of the north : by the early Anglo-Saxon chroniclers, they are generally termed Danes, but the flattering title of heathen or robber is sometimes freely applied. These devastations, which were extended to almost the whole of Europe, continued to afflict France until the commencement of the tenth century, at which period a band of these formidable conquerors had not only overrun and taken possession of

the fairest and most valuable part of Neustria, but even menaced with subjugation the whole kingdom. In this extremity Charles IV., surnamed the Simple, tenth king of France of the Carlovingian race, by the advice of his most prudent counsellors, determined on sacrificing part of his dominions in order to preserve the rest. He commissioned Francon, archbishop of Rouen, to negociate with duke Hrolfr or Rollo, their leader ; and a treaty was shortly afterwards concluded, anno 912, in which it was stipulated that the largest portion of Neustria should be ceded to him. This, it is true, was to be held as a fief dependent on the crown of France, but it was dependent only by an empty and useless form of homage, and the country, thus acquired by the arms of the victorious Normans, received from its conquerors the name of Normandy, which it preserved until the French Revolution (and may be said to have retained to this day) when France was divided into departments. But it is under i►►.s late appellation that it must be spoken of; and, by treating of it as one grand

whole, its component parts will be described without entering too much into detail.

Its late boundaries, thus understood, were, on the east, Picardy and the Isle of France ; west, the sea and Brittany; on the north, the channel; and south, Perche, Maine, and part of Brittany. It was divided into Upper and Lower; Rouen being the capital of the former, which touched on Picardy; Caen of the latter, which was bounded by Brittany. These divisions, of very unequal dimensions, were separated by the Seine ; Upper Normandy, which was seated on its right bank, not being more than one-third of the extent of Lower Normandy, so that the latter comprehended about three-fourths of the duchy. It extended from east to west, from Gisors to Cherbourg, about sixty leagues ; from north to south, from Verneuil-sur 1'Aure to the cities of Eu and Tre"port, about thirty-two leagues, and was about 240 in circumference, one-half being sea-coast ; the district called Le Cotentin, in particular, projecting into the sea in the form of a peninsula. The cliffs are somewhat higher than those of the opposite English coast ; on the shores of Upper Normandy, they vary from 150 to upwards of 700 feet, rising to the greatest height in the neighbourhood of Fecamp. They present an almost unbroken barrier of pure white, being only intersected when necessary to afford an outlet to some river. This province contained seven duchies, Alencon, Aumale, Darnville, Elbeuf, Etouteville, Ilarcourt, and Longueville.

The duchy of Normandy is now divided into five departments, the late province of Perche being included. 1. Seine-inferieure, which derives its name from the river Seine, comprises the greatest part of Upper Normandy, a small part of it being included in the department of the Eure. Its superficies is about 699,895 hectares, or about 1,369,790 square acres, 174,848 acres of which are forest lands. Its length thirty-five leagues; breadth twenty. It is divided into five circles or communal districts, Rouen chief town, Le Havre, Neufchatel-en-Brai, Yvetot, Dieppe ; fifty cantons, and 917 communes. Population about 656,000. Returns ten members to the Chamber of Deputies. Territorial revenue 44,523,000 francs. Is in the fifteenth military division. 2. L'Eure, which derives its name from the river Eure, in Latin Ebura; it is south of the Seine-inferieure, and comprises 1,221,206 square acres, 192,531 acres being forest lands. Its length thirty leagues; breadth twenty-seven. It is divided into five circles : Evreux, chief town, Bernay, Les Andelys, Louviers, Pont-Audumer; thirty-five cantons, and 813 communes. Population about 416,000. Returns seven members to the Chamber of Deputies. Territorial revenue 29,741,000 francs. 3. La Manche, or the channel to the west, contains 675,713 hectares, or 1,323,932 square acres, of which 48,400 acres are in forest land. Its length thirty-five leagues ; breadth fourteen. It is divided into six circles : St. Lo, Avranches, Cherbourg, Coutances, Mortain, Valognes; forty-eight cantons, and ►►69 communes. Population about 594,000. Returns seven members to the Chamber of Deputies. Territorial revenue 31 ,81 3,000 francs. Fourteenth military division. 4. Calvados, east of LaManche;

this department derives its name from a ridge of rocks to the north of Bayeux, four or five leagues in extent ; so called in consequence of the Spanish vessel, the Calvados, having been stranded on them. Its superficies is about 570,427 hectares, or 1,1 17, 643 square acres, of which 72,470 acres are forest land. Its length thirty-two leagues; breadth thirty-two. It is divided into six circles, Caen chief town, Bayeux, Falaise, Lisieux, Pont-1'Eveque, Vire ; thirty-seven cantons, and 897 communes. Population about 493,000. Returns seven

members to the chamber of deputies. Territorial revenue 35,503,000 francs. 5. L'Orne, south of Calvados, so called after the river Orne, in Latin Olina; it contains 1,264,255 square acres, of which 134,923 are forest land. Its length thirty-two leagues, breadth fifteen. It is divided into four circles, Alencon, chief town, Argentan, Domfront, Mortagne ; thirty-five cantons, and 627 communes. Population about 423,000. Returns seven members to the chamber of deputies. Territorial revenue 22,096,000 francs.

It will be perceived, from the above statement, that ancient Normandy (including in the calculation the late province of Perche) comprised about 6,296,826 square acres, or 3,000,000 of hectares, the forests covering about 623,172 acres ; and that the departments formed therefrom contain a population of about 2,500,000 souls. The perch, by which the measure of the acre is determined in France, varies in different districts; but the arpent of woodland is invariably the same, the perch being twenty-two feet in length. This arpent comprises 48,400 French square feet, equal to 6108 English square yards, or to one acre, one rood, one perch. A hectare contains two acres, one rood, 35-4 perches.

The general aspect of Normandy is very similar to some of the finest parts of England, and, although much more destitute of enclosures than the latter country, is much less open than most other districts in France, particularly in the Pays-de-Caux. It is for the most part undulated, but the hills, though sometimes lofty, are seldom of sufficient altitude to impede the operations of agriculture. Lower Normandy, however, contains some large tracts of level land, especially the department of the Calvados; Caen, its chief town, being seated in the midst of a vast plain. The soil is in general rich, though often calcareous. The Pays-de-Caux is considered the most enchanting district in this ancient province : but, notwithstanding the brilliancy of its verdure, it occasionally suffers greatly from drought, so much so that, in the western part, it is necessary at times to irrigate the land by artificial means. The gardens of the small farm-houses and cottages are sometimes surrounded with hedges of quickset or elm, but more commonly with banks planted with rows of trees, seldom or never exceeding two in depth ; and occasionally whole villages-are thus encompassed : these enclosures are principally confined to this district. Few countries possess more natural beauties than Normandy ; but artificial beauties, such as parks, plantations, and seats, are much less numerous than in England.

The climate of this province may be accounted

temperate, though inclined both to coldness and humidity. Although not so subject to rain as England, more falls here than in any other pait of France, Picardy and Artois excepted. The winters are often intensely cold.

The roads are wide and straight, and generally pretty level ××× for, where the land is low, they are usually raised by artificial means; but so badly repaired, that in winter they are in some places scarcely passable ; at least would not be deemed so by the English traveller. They are in fact, in common with all those that were made by order of Louis XIV'., or on the same model, about twice as wide as requisite, and their straightness renders travelling exceedingly tedious : the roads also throughout Normandy are almost invariably bordered with apple irees, which add greatly to the monotony of the scene. A new road has been begun from Rouen to Havre-de-Grace, which is constructed on a much better principle than the old ones, and, as its width is much less, it is with greater ease kept in repair. It skirts the Seine a great part of the way, consequently, is by no means so straight, and traverses one of the most superb tracts of country in Europe, passing by Dueler, Caudebec, Lillebonne, and Bolbec, at which last town it falls into the old road, not having as yet been carried further. Although the roads throughout France are seldom good, un-less where the soil is naturally hard, or materials for repairing them are easily to be obtained, the nation has little right to complain, as the expense for keeping the roads throughout the whole kingdom in repair (the extent of which has been estimated at 30,000 miles) is extremely moderate. They are under the management of the government, and tolls or turnpikes are unknown.

On its extensive coast there are several bays and ports; the most important in Upper Normandy are Havre-de-Grace, Dieppe, Fecamp, Treport, Saint-Valery, &c. ; in Lower Normandy, those of Cherbourg, Granville, Honfleur, La Hogue, Portbail, &c.; and Rouen, Caudebec, and Quillebceuf on the Seine. Napoleon made great improvements at Havre-de-Grace, and still greater at Cherbourg ; and these would have been extended to other ports if his brilliant reign had not been so abruptly terminated ; at Caen, in particular, important alterations were projected. The entrance to some of the harbours in the channel, in consequence of the prevalence of north-westerly winds, is very liable to be choked up ; but since the peace great care has been taken to keep them clear, by removing the shingle that is so constantly driven in. At Havre, now become the most important port in France, in consequence of the extensive commerce carried on with the United

States of America, these efforts have been tolerably successful, but Dieppe is still entered with difficulty.

The duchy contained six episcopal cities under the see of Rouen: Avranches, Bayeux, Coutances, Evreux, Lisieux, and Sies ; but they are now reduced to four, Avranches and Lisieux being merged in the more important bishoprics of Bayeux and Coutances, so that the five departments have each a see. In these seven dioceses there were eighty abbeys and 4289 parishes.

The see of Rouen comprehended the Pays-de- Caux, de Brai, du Vexin, and du Roumois. Upper Normandy contained four bailiwics ; those of Rouen, Caux, Evreux, and Gisors : Lower Normandy contained three, Alenfon, Caen, and Coutentin ; the two divisions comprised about fifty cities and 150 large towns. Among the former were those of Alencon, Argentan, Carentan, Caudebec, Cherbourg, Dieppe, Eu, Fecamp, Falaise, Gisors, Harfleur, Havre-de Grace, Honfleur, Lillebonne, Lire, Pont-de- 1'Arche, Quillebceuf, Vernon, Vire, &c. ; among the latter may be enumerated, 1'Aigle, Andelys, Bernay, Domfront, Gournay, Louviers, Monti-villiers, Mortain, Neufchatel-en-Brai, Perriers, Pont-Audemer, Pont-1'Eveque, Valognes, Verneuil, Yvetot, &c. &c.

Normandy gives rise to, and is traversed and enriched by several rivers ; the most considerable are, 1'Ante, 1'Aure, la Bresle, la Carentone, la Dive, la Drome, I'Epte, 1'Eure, le Lesson, 1'Orne, 1'Ouve, la Rille, la Seine, la Touque, la Vire. Of these, the most important is the Seine, known to the Romans as the Sequana ; it takes its rise in the forest of Saint-Seine, department of the Cote d'or, not far from Chanceaux, and about six leagues to the north of Dijon, formerly the capital of the duchy of Burgundy; and, after having traversed part of Champagne, traverses Paris from east to west. It runs seventy leagues, and receives the Aube, the Yonne, and the Marne, before it enters the capital. Its inundations are not frequent; for since the year 822 only fifty-three are recorded. Its greatest elevation was in 1711,

when it rose to twenty-four feet nine inches. Its name has been conferred on three departments, 1. That of the Seine-inferieure in Upper Normandy ; 2. Seine et Marne ; 3. Seine et Oise. It is navigable as high up as Mery in Champagne ; at Rouen it attains great breadth, and, after flowing by that ancient city, this noble river rolls on towards Quillebceuf and Tancarville, its right bank being crowned with lofty and well covered hills, which extend, with little intermission, throughout Upper Normandy. Hav-ing passed those promontories it widens considerably, and between Honfleur and Le Havre (which latter port stands at the extreme point on the right bank of the river), where it enters the channel, is no less than nine miles across. It there forms the beautiful bay of Honfleur ; the hills both of Upper and Lower Normandy, which encompass it, being clothed with wood to the wa-ter's edge ; and the trees, notwithstanding their proximity to the sea, far from being stunted and blighted, as vegetation so situated is usually found in England, especially on the eastern, and great part even of the southern coast, appear to thrive with unusual luxuriance. The tide runs up about six leagues higher than Rouen : from Paris to the coast this river flows over a space of eighty-five leagues ; from its source to the channel it runs no less tiian 15.5 leagues.

The navigation of the Seine is attended with little difficulty until it approaches the ocean, when it becomes exceedingly dangerous, not only on account of the numerous sand-banks dispersed about its mouth, but by reason also of their position perpetually shifting ; so mucl: so

that changes sometimes take place every tide; pilots are therefore constantly employed in sounding. The sand occasionally forms bars; a very dangerous one exists at Quillebceuf. In conse quence of the stoppage which it occasions t> the flow of the tide, the current is very lapid, forming eddies and whirlpools, in which vessels, un-less conducted by an experienced and skillful pilot, are speedily ingulphed. The boats frequenting the river are so constructed that they can take the ground without danger ; they are frequently left dry on the sand-banks at low wa-ter, but on the return of the tide are soon set afloat.

This country contains numerous and extensive forests, abounding in game, and yield ng a great quantity of fine timber; this may be less valuable here than in some other provinces, from which wood for fuel is sent to the capital ; but, as the Seine runs from Paris to Normandy, it is not of course possible to float the timber, and the expense of

conveying it by land-carriage would be too great. The most considerable are the forests deFAigle, d'Ailles, d'Argentan, d'Arques, de Beaumont, de Brai, de Breteuil, de Briquebec, de Brotoime, de Cerisy, de Conches, d'Eu, d'Evreux, de Hiesmes, de la Lande-Pourrie, de Lions, de Molineaux, de Neubourg, du Pont-del'Arche, consisting principally of oak, beech, and birch, now mostly young trees, covering an extensive tract of country ; the forests de Romare, de Singlais, de Touque, &c.

Mines and mineral waters. Normandy has several iron mines and some of copper. In the parish of La-Chapelle-en-juge there is a mine of red-lead, in which a great many marcasites are found, and occasionally a little silver. At Bas-seroy there are coal mines. In Mont-Cerisy, near the abbey of Belle-Etoile, in the diocese of Bayeux, there is one of silver, but of no great value. Diamonds are found at Alencon, which are now held in little esteem, and granite in the territory dependent on it. Near that city there is a large quarry of cannel coal ; this hard inflammable substance, called also black earth, is of great use to carpenters and modellers ; will take a very high polish, and is applied to various uses. Different sorts of earth admirably adapted for the manufacture of porcelain : several quarries of slate at Barbery, Tury, &c. The most celebrated mineral waters are those of St. Paul, near Rouen, de St. Santain, de Baignolles, de Bourberouge, des Forges, de Menitone, de Mont-Bosq, de Pont-Normand, &c. &c.

Natural curiosities. The most remarkable of these are, 1. A fountain in the county of Eu, which throws up, in three violent gushes, water sufficient to feed a moderate sized river, and, what is the more extraordinary, this fountain issues out of a rock so near the sea that it is covered twice a day by the tide, notwithstanding which the water is perfectly fresh. 2. At Tre"- port, in a house near the harbour, is a well in which the water sinks as the sea rises, and rises as it retires. 3. In a forest in the county of Eu, on the declivity of a mountain, opposite to which stand the villages of Bouvaincourt and Beauchamps ; whenever a storm takes place dur-ing t!ie summer, attended by rain, there arise* ia

three or four different places, at a short distance from each other, a considerable quantity of thick smoke, similar to that which issues from a lime-kiln. Near the town of Eu there is a mountain which abounds in all sorts of petritactions ; fossil-shells, teeth of fishes, sea-nettles, mushrooms, &c.

Normandy possesses many attractions for the botanist. Among its various productions may be enumerated the caucalia grantliflnra, or hedge parsley, growing luxuriantly on scarcely more than the bare chalk. Its stem is about a foot high ; its leaves of a pale green and a little hairy ; the flowers white. This plant is found i:i the neighbourhood of Dieppe. The asperula cynan-chica, squinancy wort, or small woodroof, also met with in England, growing on warm banks ; these, in common with other plants peculiar to a calcareous soil, are found in abundance. The astragalus glycyphyllos, or liquorice vetch. The rare erodium moschatum, or musky stork's-bill ; its leaves, which are larger than those of some plants of the same species,are whitish on both sides ; it is frequently cultivated in gardens for the sake of its strong musky scent. This plant is found also in the Levant, and grows wild in the mountainous pastures of Yorkshire and Westmorland. The eryngium campastre, a species of the sea-holly or eryngo, a vegetable very common in the north of France, though rarely found in England; its flowers are of a greenish-white, with narrow involucral leaves and undivided scales. The melissa nepeta, of the balm, or rather thyme tribe : flourishing on chalky banks and in the borders of fields ; very common throughout the south of Europe, in Greece, and in the islands of the Archipelago ; it flowers in August. The papaver hybridum, or mongrel poppy, found in the southern and temperate parts of Europe, growing in fields on a light soil ; it is extremely rare in England. The environs of Rouen, and particularly the chalky hills which tower above the city, produce the curious satyrium hircinum, originally a native of the Cape of Good Hope, in great profusion. Its flowers are of a whitish-red, and of the form of a long ear ; the smell is disagreeable, greatly resembling that of the goat. Beneath the hill of St. Adrian, at some few miles distance on the same ridge, is to be found on the bare chalk the viola liothomagensis, or violet of Rouen, tinging, as it were, its pure bed, with P beautiful glow of blue. This rare specimen of the violet tribe grows also on the hillocks by the side of the high road leading from Rouen to Paris, and is again found on a chalky hill near the small village of Port St. Oue'n, at some little distance from the first named city ; also in the environs of Mans, capital of the department of the Sarthe, and on the downs about Dunkirk, but it is not known to exist elsewhere. It is cultivated in the garden of plants at Paris. The

andromeda polifolia, wild rosemary, or poley mountain, an elegant little shrub, is found near Jumieges ; it rises from about half a foot to a foot in height ; the flowers are fleshy and nodding; it is also found in America, and on turf bogs in the northern countries of Europe. It flowers in June. AtGraville, not farfrom Havre-de-Grace, the siachys Germanica, or downy wound wort,

rarely found in England, grows luxuriantly by the roadside ; it is also met with in Germany, Siberia, and Greece. The flowers are numerous, silky and silvery on the outside ; purple and white in front.

The Normans have for many centuries paid the greatest attention to agriculture. About the period of the conquest of this country, which took place l.r,0 years after their firit settlement in the duchy, they had attained to so great a perfection in this important art as to have left little room for subsequent improvements. This assertion is not made on slight grounds, for we have indubitable proofs, in the remains of ancient sculpture and tapestry, that their implements were at that time nearly similar to those now in use, although less perfectly constructed. The plough, of which they had two or three sorts, differed somewhat from that of the present day, but their scythes, sickles, and flails, were nearly the same ; the cart and the harrow of the ancient and the modern Normans differ but little. Their agricultural operations were also carried on much in the same manner as they are at present ; there was little difference in the.r mowing and reaping, in their threshing and winnowing. Marl was their favorite manure. They had abundance of mills, some turned by water and some by horses, which latter were used ;n districts destitute of water; with these their armies, when employed abroad, were abundantly supplied. The same streams that turned their mills in ages past serve at the present day to turn a much greater number, in consequence of the establishment of large manufactories in those towns in which, probably, nothing but corn-mills and tan-pits formerly existed. At Bolbec, a flourishing town five leagues east of Le Havre, this is particularly the case ; the banks of the stream which flows through it being now covered with manufactories. It is not unworthy of remark that bee is a very usual termination to the names of places in Normandy, seated on running streams ; for besides Bolbec, just mentioned, there is Caudebec, also in Upper Normandy ; Orbec on the TOUOUP, near Bernay, in Lower Normandy : and Briquebec in the Cotentin : there is also the town of Le Bee, formerly celebrated for its large and splendid abbey, in the district of Bernay, and in the immediate vicinity of the confluence of the rivers Bee and Rille. Bee,

in the Celtic language, signified a stream or brook, and had the same meaning in the Go-thic and most northern tongues. The same termination anciently prevailed in this country, as in the river Wensbeck in Northumberland, Pur-beck, a rough and heathy tract in the southeast of Dorsetshire, to the south of Poole Bay, &c. Many of the Norman barons were well skilled in agriculture, and appear to have considered it no degradation to devote great part of their time to so useful a pursuit. In this they were rivalled if not excelled by the clergy and the monks, who, retaining great part of their lands in iheir own hands, especially such as were contiguous to their monasteries, cultivated them with the greatest care, introducing many useful improvements. The agriculture of Normandy would not perhaps stand a comparison with that of England as at present conducted ; important advances

have of late been made in this country, and it has become customary for men of large landed property to devote themselves to this pursuit, as the Norman gentry continue to do. The cultivation of his own land is an employment especially permitted to a decayed noble, although he is not allowed to till the lands of another: but, generally speaking, a distaste for rural pursuits prevails throughout France. Half a century ago, indeed, agriculture came more into vogue in that country, in consequence of its having occupied the attention of the French Academy. Du Ha-mel du Monceau, one of its most able members, philosophically investigated its principles ; his example was soon imitated, and a taste for this science was more generally diffused, the beneficial effects of which are still felt. The Norman nobility however, like those of all the other provinces, prefer the capital to their chateaus, when their means permit them to indulge their taste; and, when circumstances prevent them from fix-ing their residence in Paris, they congregate in large towns : Dijon the ancient capital of the late duchy of Burgundy, and St. Omer in the late county of Artois, were, before the revolution, al-most exclusively inhabited by them. On the whole, if the agriculture of Normandy, when compared with that of England, should be found somewhat backward, it is chiefly owing to

the want of large capitalists being engaged in it. Norm andy possesses not this great advantage, or possesses it only on a very limited scale. It should be recollected however, notwithstanding modern improvements, that we are greatly indebted to the Normans for the changes they introduced centuries ago-: ††† shortly after the conquest vast numbers of husbandmen flocked hither, bringing with them their implements, their experience, and their industry, by whom a most beneficial revolution was speedily effected.

The land in Normandy produces in abundance almost all sorts of grain ; the crops of wheat are particularly fine. Round Caen the country, which is extremely level, is entirely devoted to the cultivation of corn ; vast plains, on which nothing else is raised, extending in all directions as far as the eye can discern, and unbroken by a single enclosure. A large proportion of this is the polygonum fagopyrum or buck-wheat, which does not bear the least resemblance to common wheat. Its stem is from a foot and a half to a yard high, smooth, upright, and branchy ; clusters of handsome flowers, approaching to white, terminate the branches ; they are succeeded by large angular seeds. It is sometimes cultivated for fodder, in which case it is cut while the stalks are young and green; but more frequently for its grain, with which swine and poultry are fed. The grain is black, but yields a white flour; it is used as food by the lower classes, who make it into a cake which they find very palateable, and consider both wholesome and nourishing. This plant possesses one great advantage, that it will thrive even better on a poor than on a rich soil ; for on the latter it will often run too much to straw. The French call it sarrazin, which term has led many to imagine that it was introduced into France by the Arabs ; but for this supposition there appears to be but little foundation, as it is neither to be found in Arabia its††:f nor in those countries in which the Arabs principally settled after having subdued them, such as Spain, Sicily, &c. Others have with more probability supposed that it was first introduced into Europe about the beginning of the sixteenth century, from Greece or the north of Asia, where the Siberian buck-wheat, another species of this plant, is well known. It was brought from Tartary to St. Petersburg about the beginning of the last century, and thence gradually dispersed throughout Europe. The Bretons call this species had-razin, and, as they are the immediate neighbours of the Low Normans, it is very possible that the latter may have borrowed the term from them, which in process of time has been changed into sarrazin. It was cultivated in England towards the close of the sixteenth century. In some parts of Normandy several different sorts of grain and vegetables are frequently raised on three or four acres. This is termed by the French

la petite culture ; and the land, in consequence of being thus minutely divided, presents a very singular appearance. It is well ascertained that if, within a given space, the seed of only one species of grass be sown, and, within an area of the same dimensions, an equal quantity of several different sorts, the roots proceeding from the mixed will be much more numerous than those springing from the unmixed ; and it is possible that the knowledge of this fact may have suggested to the French agriculturist the possibility of increasing the produce of his land by raising, within a limited space, a variety of herbs and plants : but the cases are not parallel, for while the grass-seed, in consequence of being so intimately mixed, may derive all possible advantage from the soil, each distinct species fastening and flourishing on the sort of earth best adapted for its nourishment; the vegetables or grain being kept distinct, though planted side by side in narrow strips or patches, cannot derive that advantage.

A vast quantity of melons are raised in the environs of Lisieux, where they flourish in the open air, without requiring any artificial protection. The fruits of Normandy, indeed, are generally of excellent quality. Both the apple and pear are remarkable for their beauty and luxuriance, and present a strong contrast to their dwarfish and deformed brethren of England : for the former this province has long been famous ; the roads, as already mentioned, are almost invariably lined with apple-trees, and they are constantly to be seen, planted singly or in groups, in land destined to the cultivation of grain, orchards being almost unknown. The pear is in less repute. But the Norman cyder, though much esteemed in France, is, notwithstanding the excellence of the apple, very inferior to that which is made in England. The greatest quantity is made in the western part of the province, where the poorer classes seldom drink any thing else; but even here it is crude, vapid, and unpalatable. It has been presumed on good grounds that cyder was unknown to the inhabitants of Neustria before the arrival of the Normans, who it is supposed had acquired the art of making it from the Bis-cayans, as this latter people had done from the

nations inhabiting the northern coast of Africa, with whom they were at one period in habits of intercourse. The vine is now rarely seen, unless towards the southern extremity of the province, but it is certain that it was cultivated in remote ages, even in the northern districts. In the vicinity of Caen and Lisieux, in particular, we have proof that vineyards formerly existed, and one was to be seen at Argence, within four miles of the former town, about the close of the last century. The monastery of Jumieges had also a vineyard, mentioned by many monkish historians ; pretty good authority, it must be admitted, in all matters relating to the kitchen and cellar. It is moreover a well authenticated fact that, in the year 1500, there was one remaining in the hamlet of Conihoult, in the immediate neighbourhood of the convent, the wine which was the produce of it being enumerated among the articles of its charitable donations, and as late as 1561 about twenty acres belonging to it were still used as a vineyard. At the present day the vineyards farthest north are those situated between Louviers and Gaillon ; the vines are all of the species producing the small black cluster grape, which yield a very inferior wine.

The vine was first planted in Britain by the Romans ; and we may be allowed perhaps to add, while speaking of the vine, that Doomsday-book frequently speaks of wine as made in England, previous to and about the period of the conquest : vineyards are therein mentioned no less than eight-and-thirty times. Not long after that event, several new plantations of vines were made at Westminster, Chenetone, in Middlesex ; Ware, in Hertfordshire ; and at Hanten, in Worcestershire. The bishop of Ely received three or four tuns annually as tythes, from the produce of the vineyards in his diocese and those of Holburne; and he appears to have made frequent reservations in his leases of a certain quantity of wine for rent. In the twelfth century, the wines of Gloucestershire were but little inferior in quality to those of France. The vineyards of that county are particularly mentioned by William of Malmsbury as excelling those of all the rest of the kingdom in the quality of their grapes ; he also states that it contained more of them than any other county. A vineyard existed at Croydon, in Surrey, at the commencement of the fourteenth century ; and, less than two centuries ago, one was still remaining at Deepden, near Dorking, in Surrey.

The linum usitatissimum or flax, and the can-nabis saliva or hemp-plant, are much cultivated in Normandy. Between Havre and Fecamp a great quantity of the former is raised ; it appears to thrive in that neighbourhood, as the land is principally devoted to it. The ground in which 11 is planted should be rich, neither very dry nor very moist; perfectly level, and as fine as garden mould, the stones being carefully

removed. The plants, in consequence of being a great deal trimmed, are unsightly, but when viewed from a distance, as this is less perceived, they are by no means unplcasing to the eye. They have a slender hollow stem, and are usually about two feet high ; the bark consisting of fibres very similar to those of hemp. The hemp-plant, a

native of Asia, is annual here ; it rises rapidly as a tall slender shrub, with five or six leaves a little serrated, sprouting from the same pedicle, which emit a powerful odor. Its value consists in its external filaments, and its seeds abound ing in oil. The male and female flowers are well distinguished. A great deal of flax and hemp is raised by the peasantry, who manufacture it into coarse linen. Plants used for dyeing are also raised in this province. The reseda luteola, would or dyers weld, which grows spontaneously in the south of Europe and in the Le-vant, is a great deal cultivated in the neighbourhood of Port St. Oue'n ; it ripens in June and July. This plant is not so much esteemed in dyeing yellow, since it was discovered that the quercitron bark possesses very superior qualities, yielding about ten times as much color as the best weld. The isatis tinctoria, or true woad, is biennial. The lower leaves are of a bright green color, of an oval shape, terminating in obtuse roundish points. The stalk, about four feet high, is divided into several branches, bearing arrow-shaped leaves which sit close to the stalk, each branch being terminated by small yellow flowers. The crop is gathered as soon as the leaves are fully grown, and while they are still quite green ; for when they begin to change, their value is in a great measure gone; and the leaf is the only part of the plant of any value. In good land, and with great care, it will yield four gatherings ; the first two, however, are by far the most important, being worth at least four times as much as the last two. Woad, besides yielding a substantial and durable blue in dye-ing, has the property of fixing many other co-lors; it is frequently used in conjunction with indigo. During the last war this plant became an object of great attention, as it was hoped that it might prove an effectual substitute for indigo, of which France was then almost deprived ; but since the peace it has again fallen into comparative neglect. It was first introduced into England in 1582.

The rubia tinctorum, or madder, a native of the south of Europe, is also cultivated in Normandy. The stalk, which is annual, has rough narrow leaves at the joints, set in the form of a star. The long and slender root is the only part made use of. It is of a red color both within and without, with the exception of a pale pith, which extends along the middle. The color is extracted by water and rectified spirit ;

and, in order to increase the beauty of the dye, it is sometimes used in conjunction with cochineal or Brasilwood. In the environs of Port St. Oue'n, the dipsacus fullonum, or fullers' teasle, used in the manufacture of cloth, is cultivated. It is biennial, and attains the height of from four to six feet, the stem and leaves being rough and prickly.

Among the exotics which flourish here in profusion may be enumerated roses and jessamines of various kinds; myrtles, pomegranates, oleanders, egg-plants, orange and lemon trees, and the canna Indica, or Indian flowering reed, a native of Asia, Africa, and America. The stem of this plant is upright and three or four feet high ; the flowers red : in Cayenne the leaves arc used to form a covering for the houses. To

these we may add the clerodendrum fragrans, or fortunate tree; a native of India. The clethra alnifolia, or alder-leafed clethra, a native of Virginia and Carolina, with stems from eight to ten feet high ; and the datura ceratocolla, a species of the thorn-apple. The dianthus carthusiano-rum, a species of the pink and carnation genus, found also in Italy, Switzerland and Germany. Its flowers are red, with hairy petals ; it flourishes on banks and about the borders of fields, in dry chalky soils, or on lime rubbish. The gladiolus cardinalis, so named from gladius, a sword, which its leaves are very like in form, and from the circumstance of its blossoms, which are scarlet, resembling in color a cardinal's robes. Sco-poli, a profound naturalist, who flourished in the last century, and fell a victim to domestic chagrin and public persecution, carried his religious scruples to such a length that he censured the application as profane, and substituted the adjective rubra for cardinalis. The stem is from two to three feet high, and branched ; its blossoms, of the richest scarlet, are distinguished by three white spots ; its green has a glaucous cast. To make it flower in all its native beauty the bulbs should be taken up yearly. This priestly glaive, for so it may be fairly rendered, is a na-tive of the Cape, and, like all its tribe, delights in a warm situation and uninterrupted

sunshine. The lilium superbum, or superb Martagon lily, a native of North America. The bulb is of a pure white ; and its stem is perfectly smooth and even, two or three feet high, and branched. Its flowers, of red or yellow, with dark spots, attain a great size and are very splendid, each branch is terminated by one ; their smell is unpleasant. When growing wild they seldom bear above three or four flowers, but, when carefully cultivated, sometimes produce twelve or fifteen. The lilium tigrinum, which is still more magnificent, and perhaps the most brilliant species of this tribe. It is a native of China, and flowers in August. The rosa moschata, musk or cluster rose; a beautiful species of the rose tribe, which here flourishes in the open air. It is a native of Barbary, at least grows wild in the hedges of that country. At Tunis this elegant flower is cultivated with great care, and, by means of distillation, a very fragrant oil is obtained from its petals, of the same nature as that which is distinguished by the Arabic term attar, signifying odor. Its stems are long and lax ; the leaves of a light glaucous green ; the flowers white and very numerous, but rather small.

The pasturage of this country is very rich, and in the neighbourhood of rivers, or in low and moist ground, is as brilliant as that of England. About Croissanville, a village not far from Caen, the country is one vast tract of meadow land ; and from this neighbourhood Paris is principally supplied with its beef. Lower Normandy contains besides a great deal of grass land, the left bank of the Seine being almost exclusively devoted to it.

The Norman horse has long been celebrated, not for its strength alone, but also for its beauty. Normandy contains the best breed in France with the exception of that of the Limousin ; but al-i nough the horses bred in the latter district are ,,wifter, and consequently better adapted for

hunting, they are, as chargers, inferior lo tl□□□□ Norman horse. The draught-horse is only excelled (if it can be said to be excelled), by that of England or Flanders ; its strength is not more remarkable than its symmetry. Lower Normandy, and especially the district of Le Cotentin, possesses a fine breed of carriage horses, which are not only lighter, but capable of enduring more fatigue than the Flemish horses. The government has several important establishments for the purpose of preserving the breed of the Norman horse.

The cattle about Caen are small, but finely formed : their heads not

unlike that of the deer ; their faces, as well as their legs, usually black. Those about Croissanville, at no great distance from Caen, are, on the contrary, generally red, of a large size, and always horned. Large flocks of sheep are fed in the neighbourhood of the coast ; as the land is unenclosed they are usually attended by a shepherd and sheep dog, of remarkable sagacity, and of very peculiar appearance and character : about the head it bears a strong resemblance to the wolf. The care of tending the flock is often left to those faithful animals, and a boy, a woman, or a girl; for here, as in most other parts of France, the two sexes perform pretty indiscriminately all the duties of life. No great attention appears to have been paid in Normandy, until lately, to the breed of sheep ; they are usually large and coarse, with red spotted faces and red legs ; but, with a view to improve it, several flocks of Merinos sheep have been imported.

The poultry are abundant, and of excellent quality ; the country is also well stocked with game, which are not so shy as they commonly are in England.

The fisheries, which afford employment to an immense number of hands, yield an abundant supply ; a considerable quantity of fish, from Dieppe in particular, being sent to Paris. On approaching the coast the appearance of boats is very striking, the costume and persons of the fishermen presenting a strong contrast to that of the same class in England. They usually wear an elastic vest of scarlet, purple, or light blue, and very large breeches of coarse linen cloth ; and are generally tall athletic men ; with expressive, though sometimes ferocious, countenances. The Dieppe boats were once in the habit of frequenting the coast of Newfoundland, where a great quantity of cod fish was taken. But the herring fishery was of still more importance, and before the Revolution the boats belonging to Dieppe alone took no less on the average than 8000 lasts annually, which realised above ––100,000 sterling. The mackarel fishery was almost of equal value.

Rouen, in Latin Ilothomagus, the etymology of which antiquaries have vainly labored to dis cover, was formerly the capital of Upper Normandy, and an archiepiscopal see. It is still one of the largest, richest, and most populous cities in France, containing, together with its six large suburbs, nearly 100,000 inhabitants. Standing on the right bank of the Seine, at an easy distance from the sea, and only twelve leagues from Dieppe, and eighteen from the important port of Havre-de-grace, it carries on an exten

sive foreign “commerce, and is besides a depot tor foreign merchandise of various descriptions. But, as the capital of a ‘by-gone’ province, it is perhaps, of more importance to advert to its pretensions as an object of antiquarian and historical research, than to enter at any great length into the particulars of its present state.

In 1262 Louis IX. granted the Aubette and Robec to this city, through which they are now conveyed in artificial beds, while, for above two leagues in the environs, they turn numerous mills. The most interesting of its public places or squares is the Place de la Pucelle, named in honor of Joan of Arc, who, it is said, was burned on the very spot now covered by the monument erected to her memory. On the staircase of the exchange, called la bourse a couvert (for the merchants in fine weather assembled outside beneath the trees), is the following interesting inscription : Mes amis,

Soyez moy bons sujets

Et je vous serai bon roy,

Et le meilleur roy

Que vous ayez eu !

Henri IV. aux Echevins de Rouen. Le 16 Octobre

1595.

The good Henry, who was very partial to Rouen, did not make a vain promise : he was indeed a good king. ‘ Should it please God,’ said that truly great man, ‘ to prolong my life, there shall not be a peasant in my dominions without a fowl in his pot on the Sunday.’ This, it is probable, has often excited the smile of individuals destitute of feeling, and who (unlike Henry IV.) have been always beyond the reach of want : it was certainly a singular speech for a king to make, but, homely as it may be, it is worth all the regal absurdities that were ever uttered.

The cathedral is a vast and sumptuous edifice. The grand western front, 170 feet in width, consists of a most splendid centre and two towers, each 230 feet high, but dissimilar in form and style. On one of them stood a lofty spire, originally of stone, which was struck by lightning in 1117, and replaced by another of wood, destroyed in the same manner at the commencement of the sixteenth century : a third, constructed also of wood, was struck in 1824, and entirely consumed ; its height was 395 French feet. Shortly after the destruction of the latter an idea was entertained of erecting another still more lofty of very light iron work. The basement of the building is occupied by three wide portals ; the middle one, by far the most magnificent, being profusely adorned with gorgeous open stone-work. A minute account of this splendid structure cannot here be attempted, and indeed a large volume would be barely sufficient to describe it at any length ; it is besides the work of so many different eras that a detailed description would in itself form a history of pointed architecture. It contains 133 windows, and twenty-five chapels ; in one of these, on the south side, is the tomb of duke Hollo; in the one opposite that of his son, William I. The length of the interior is 408 French feet ; of the nave 210 ; of the choir 110 ; of the transept 164.

Before the Revolution the chapter contained no less than fifty canons and ten dignitaries, the deai), the chanter, the treasurer, six archdeacons,

and a chancellor, besides eight minor canons and a great number of beneficiaries and chaplains. To> these may be added the thirty female prebends of St. Romain, who were required to be unmarried or widows; other qualifications were very possibly requisite, although they have not been recorded. The archdeacons had under them thirty rural deaneries, containing 1388 parishes, thirty of which were within the city, and five in the suburbs: these latter are now reduced to thirteen. There were twenty-nine abbeys within the see, including tho-i- of St. Ouen and St. Amand in Rouen : the city and suburbs also contained twenty-four religious houses for men, and twenty for women. The large independent income enjoyed by the church in 1 ranee was, at the Revolution, most properly applied to national purposes, and its ministers are now paid by the government. An archbishop receives ––625 sterling per annum ; a bishop ––416 13*. 4d. ; a canon ––41 13s. 4d.; the departments allowing them about the same sum. It is true that, even before the revolution, if a comparison had been instituted between the revenues of the French and the English clergy, little objection could have been made to the incomes of the for-mer. The archbishop of Rouen, one of the richest, enjoyed a revenue of 100,000 livres, rather better than ––4000 sterling, while the bishopric of Durham has been known to produce ––50,000, and that of Winchester ––40,000 per annum, nearly equalling together the property formerly possessed by the whole church ot France, which never exceeded in value ––100,000 sterling per annum. The archbishop of Rouen formerly styled himself primate of Normandy.

Next in beauty to the cathedral, is the magnificent church of St. Ouc'n, perhaps the finest specimen of the pointed style remaining in France. The foundation of this elegant structure was laid in 1318, by Jean Rousel, abbot of St. Oui;n, who finished it as far as the transept ; but it was not advanced to its present state until the commencement of the sixteenth century; for it has never been completed, the west front being still imperfect. The imposing boldness of this superb pile cannot be described; it is difficult to imagine how so much solidity and elegant lightness could have been combined ; this appearance of lightness is in a great degree caused by the extraordinary space occupied by the windows. The south porch is a masterpiece of art ; and nothing can well be more impressive than the perspective of the interior, the arches being of fine proportions. The length of the church is 416 French feet, of the nave 234, of the choir 103, of the transept 130 ; the height of the tower is 240 feet, and of the roof 100 feet. Its abbots formerly enjoyed great privileges; among others, they took

precedence of all other mitred abbots in the parliament of Normandy, and had temporal, as well as spiritual jurisdiction, over the parish of St. Ouc'n.

The church of St. Godard, it has been imagined, was the original cathedral ; it still retains two of its fine painted windows, which are more worthy of notice than the architecture. St. Gervais and St. Paul, both without the walls, and of great antiquity, are the only specimens still existing of early ecclesiastical architecture.

The first castle built at Rouen was the work of duke Hollo, shortly after the conquest of Neustria; when it fell to decay its site was occupied by other buildings which have long since shared the same fate. About fifty years after the first was completed another was commenced by duke Richard I., which became the residence of the reigning family, and was long occupied by them. It acquired the name of la Vieille Tour, from a tower which formed part of it, and was not demolished till 1204; this building has also disappeared, although its name has been preserved. Its site is now covered by the Halles, esteemed the finest in France. The hall of the mercers is 272 feet in length, and fifty in breadth ; that of the drapers and wool-dealers, 200 feet in length ; and the corn-hall no less than 300 feet. Its military antiquities have long since disappeared, and Rouen is now completely unfortified ; having neither walls nor castles.

The hall of the Palais de Justice is a magnificent Gothic structure, erected early in the sixteenth century, in the Close or Jewry, a spot inhabited by the Jews before their expulsion from Normandy in 1181 ; it occupies three sides of a quadrangle. The three estates of the duchy formerly assembled in this building ; and, until the time of cardinal Richelieu, by whom the liberties of France were finally destroyed, they often formed an effectual counterpoise to the influence of the crown. The court of exchequer was also held here; about the year 1300 Philip the Fair rendered it stationary, commanding that its sittings should only be held afc*Rouen ××× it had till then been ambulatory. This court was remo-delled by Louis XII. ; and in 1515 it

was enacted by Francis I. that it should be styled the ‘ parliament of Normandy.’ The court of assize is now held within it, and h.ere the electors of the department assemble, for the purpose of nominating their deputies.

Opposite to the Rue du Grand Pont, which descends from the Place de la Cathe”drale to the quay, is the famous bridge of boats, extending across the Seine, generally considered an extraordinary work; although paved, it rises and falls with the tide. It is supported by nineteen large barges, and is so constructed that as many of them can be removed as necessary, in a very short notice, in order to allow vessels to pass ; indeed it can be removed altogether with little difficulty in five or six hours, a precaution it is sometimes necessary to adopt during heavy floods. The expense of keeping it in repair amounts to about 10,000 francs, or ––400 sterling annually. On the place de laCathedrale, which may be termed the flower as well as fruit-market of the town, curious and beautiful flowers are exposed for sale. It formerly contained a fine college, an admiralty, and other establishments, which disappeared during the revolution.

Caen, in Latin Cadomum, formerly the capital of Lower Normandy, is also a large and handsome city, seated on the confluence of the Orne and the Odon, the united stream of which rivers separates it from the fauxbourg of Vaucelle, a communication being established by means of the bridges of St. Peter and St. James. Many men of profound learning have occupied them-

selves in endeavouring to discover its origin. William le Breton, who was perhaps near the truth, imagined that it was founded by Caius, steward of the household to king Arthur or Artus ; but, be this as it may, as a city it is not very ancient, and has only become considerable since the thirteenth century. Caen was in the diocese of Bayeux, and had formerly an episcopal court under the jurisdiction of the bishop; an admiralty, a bailiwic, salt-granary, a chamber ot finance and treasurers, and a mint, established by Henry II. It was also the seat of an intendency, election, forest-district ; of the provost ol the marshalsea, and of a provincial jurisdiction. The city, and its two large suburbs, contained two royal abbeys, one collegiate and twelve pa-rish churches, fourteen convents, a Jesuits’ college, a general hospital, and one for incurables. It is now the chief town of the department of the Calvados and of its prefecture. Viewed at a distance, it appears to cover as much ground as Rouen, but in reality is not above half the size. The castle, which stands on a rocky eminence, is the most

extensive in France ; it was formerly well fortified, and served as a defence to the Upper Town; some idea may be formed of its dimensions, when it is stated that 6000 men could be drawn up in battle-array with the greatest ease in the outer ballium.

The celebrated engineer, M. de Vauban, was of opinion that the mouth of the Orne might here be converted into an important naval station. Napoleon entertained the same idea, and ordered a basin to be excavated, intending also to deepen the bed of the river.

The university, founded in 1431, is now the third in France, those of Paris and Strasbourg being alone entitled to rank before it. The legal students have acquired an extensive and well-deserved reputation. The abbeys of St. Stephen and the Holy Trinity stand at opposite extremities of the town ; these noble edifices, a lasting memorial of the ability of the architect who designed them, were both constructed at the same time, and from the same cause. William II., seventh duke of Normandy, the conqueror of England, being desperately enamoured of his kinswoman Matilda, daughter of Baldwin, count of Flanders, who was within the degrees of con-sanguinity then proscribed by the church, married her in spite of the remonstrances of the clergy. But pope Nicholas II., notwithstanding their clamor, sent a dispensation to William, authorising the marriage. ‘ Had he,’ says lord Lyttleton, ‘ kept his oath to his people, as well as he did his marriage vow, he would have been the best of kings.’ As popes, however, after the manner of other great men, seldom grant a favor without soliciting one in return, he stipulated -that William and Matilda should each found a religious house for persons of their own sex. This was in the year 1059.

The church of the abbey of the Holy Trinity is a splendid building, its western front being perhaps the finest specimen extant, of the solid grandeur of Norman architecture, while some of the ornamental parts are of peculiar lightness. The towers were formerly surmounted by very lofty spires ; the central tower is supported by

four arches of magnificent proportions. The grand western front of St.

Stephen will not stand a comparison with the corresponding part of the church of the Holy Trinity ; still, it is striking, as well as the east end ; for even this part of the building is magnificent, in consequence of the grand scale on which it is constructed. St. Stephen, viewed as a whole, is of very imposing appearance ; but it will not, like its rival abbey, bear to be examined in detail. The front is divided by flat buttresses into three compartments ; the lateral divisions rise into lofty towers, crowned with octagon spires. The upper divisions of the towers, which are profusely ornamented, are surrounded by three tiers of semicircular arches, each spire being surrounded by twelve pinnacles full of arches. The central tower is short, and surmounted by a conical roof. The stones with which this noble pile are constructed are all small, none exceeding a foot in length. The interior is lofty and truly splendid. Lanfranc, prior of Bee, afterwards archbishop of Canterbury, was the first abbe". King William, its founder, was interred here in 1017. Some buildings are still remaining within the precincts of the abbey, which are supposed to have been erected by the Conqueror, and are called his palace. The barons' hall and the guard-chamber are noble rooms, the latter 1 90 feet in length and ninety in breadth. Upon the outer wall of a chapel that was attached to the palace some ancient fresco paintings were formerly to be seen of William and Matilda, and of their sons, Robert and William Rufus. It was presumed, and not without reason, that they were coeval with those personages.

The church of St. Nicholas, converted into a stable, was founded by William the Conqueror, about the year 1060. It still remains entire; the interior is remarkable for its uniformity and the symmetry of its proportions. St. Peter is chiefly remarkable for its spire, which is not less than 400 feet in height ; both that and the tower, from which it rises, were erected in 1308, but the church itself was the work of different periods. An airy lightness pervades the whole structure.

The church of St. Etienne le Vieil is spacious ; its architecture a mixture of bad Gothic and bad Roman ; its large pointed windows, adorned with fanciful mouldings and scroll-work, have an air of great richness. Its tower possesses some claims to beauty. St. John agrees, in most of its features, with the church of St. Peter ; the towers are almost alike, but that of St. John is destitute of a spire. The interior is not highly ornamented. The style of the church of St. Michael, in the suburb of Vaucelle, is curious ; some parts of it are, without doubt, early Norman.

Caen took a leading part in the civil wars that raged at the end of the sixteenth century, and in 1562 was occupied by the Huguenots, who

abolished the exercise of the Catholic religion. Some time after the king's forces obtained possession of it ; but the inhabitants, who were almost all Protestants, soon afterwards attacked the castle. Gasparde de Coligni, admiral of France, hastened to the assistance of the townsmen, and the castle was speedily taken. Charles de Bourgueville, Seigneur de Bras, and Huet,

bishop of Avranches, both natives of Caen, have illustrated its history and antiquities with extraordinary ability.

Havre-de-Grace, Portus Gratiae, or Francisco-polis, a strongly fortified port, the most important perhaps in France, is i.i the Pays de Caux, Upper Normandy, and was founded by Louis XII. in 1509, before which its site was occupied by a small chapel and a few wretched hovels. The chapel was dedicated to Notre dame de Grace, and the place is thence supposed to have derived its name. It was fortified and greatly extended, as we have noticed, by Francis I., who was extremely partial to it, and very desirous that it should be called after himself Francois-ville, but he was never able to succeed in changing the name by which it was already known. Louis XIII. also augmented the fortifications, and embellished the town. The harbour is of sufficient extent to contain 300 vessels, and thirty line of battle ships could ride together in the basin, which was formerly appropriated entirely to vessels of war. Cardinal Richelieu, who was for a long time governor of the town, greatly improved the basin, and built the citadel at his own expense, as a defence to the docks and arsenal, which is now demolished. The amiable Louis XVI., who, besides being an excellent geographer, paid great attention to maritime affairs, effected considerable improvements ; and Napoleon, whose observation nothing escaped, however vast or however minute, completed all that had been left undone. It formerly composed a government of itself, and is now the residence of a subprefect. The large and handsome town-house was erected by cardinal Richelieu. Notre Dame, the principal church, which stands in the High Street, is of great extent, but not remarkable for its beauty, being a bad imitation of Roman architecture. Most of the houses are ancient, and seldom less than six or seven stories high.

Havre, of late become the first commercial port in France, was of great importance before the late war, at which period it monopolised the trade to St. Domingo, employing therein more than eighty vessels of above 300 tons burden; it had also an extensive intercourse with Marti-nique and Guadaloupe, and a lucrative commerce was carried

on with the coast of Africa, especially with Guinea. At present the manufactories of France are principally supplied with cotton by the merchants of this town, who receive immense consignments from the United States of America, Brasils, and India. A great deal is taken by the manufactories of Bolbec and of Rouen. In the environs of the latter town, numerous cotton manufactories have been established, especially in the direction of Malaunay, on the road to Dieppe, about three leagues and a half from Rouen: the villages are thickly studded with them, and at Malaunay itself some of these factories are very splendid buildings ; many of them the property of the Baron Le Yavasseur, an opulent and extensive manufacturer. It is chiefly from Havre, also, that Alsace is supplied with cotton as well as Paris, Lyons, Lisle, St. Quentin, &c. The most important branch of its foreign commerce is that carried on

with the United States of America, to which an immense quantity of manufactured goods is exported, such as jewellery, fancy millinery, paper lor decorating rooms, &c. A great traffic is also carried on with South America, especially with the Brasils, from which they receive coffee and sugar ; and a commercial intercourse has recently been established with Mexico.

Since the termination of the late war the commercial and manufacturing prosperity of France has been gradually increasing, and of this the town of Havre-de-Grace affords a signal instance. In the eleventh year of the republic the contributions of the department of the Seine-inferieure amounted to 9,104,417 francs; in the year 1826 the receipts of the customs at this port alone, amounted to the comparatively enormous sum of 24,000,000 francs, and in 1827 to 22,000,000. England, however, thus far, appears fully to have maintained her superiority, as will appear from the following statement : ††† Liverpool, the first port in England, after that of

London, paid duties in 1826 . ††3,074,637,

France contains about

And in 1827 ––3,297,980,

Ilavre-de-Grace, the first port in France, paid

duties in the year 1826 …. ––960,00(, And in 1827 ––880,000.

The receipts of the customs at the port of Lon-don, which amounted in 1826 to ––10,291,877, and in 1827 to ––10,402,859, it would not be fair to contrast with the contributions of the city of Paris ; the latter having no foreign trade, unless, indeed, the exportation of some few articles of luxury can be considered in that light ; but Liverpool and Havre-de-Grace may be fairly contrasted ; and it appears from the returns of their respective custom-houses (supposing the duties imposed to be nearly of the same nature), that during the last year the commercial operations of the latter town amounted to only about one fourth of those of Liverpool.

The following is a rough comparative view of the present population of the French and British capitals ; of that of the two principal manufacturing towns, and of the principal ports in each country.

Inhabitants

31,000,000

The British Isles -. 23,000,000

London 1,275,000

Paris 890,000

Glasgow, the first manufacturing town of Great Britain 147,000

Lyons, the chief manufacturing town of France . 146,000

Manchester the second ditto of Great Britain . .134,000

Rouen, the second ditto in France … 100,000

Liverpool, the first port in England, London excepted 119,000 ….. 9

Havre-de-Grace, the first port in France . . 35,000 ….. 4

the daily papers and periodical pamphlets amount to . 490

….. 483 ….. 97 ….. 176 ….. 14 … . .13 ….. 12 ….. 8

It should be recollected that London may now be said to comprise several different places, whereas Paris contains no addition ex-cept the village of Chaillot, which became an integral part of it when the city walls were extended.

The situation of Havre is not only highly advantageous and important, both as commanding the mouth of the river by which the capital is approached, and as one of not only the first commercial towns in the kingdom, but as one of its principal naval stations. The environs are particularly fine ; nothing can exceed in beauty the cote of Ingouville, about a mile from the town, the sides of which are almost covered

with handsome seats and beautiful villas, most of them in excellent taste. The view which it commands is truly magnificent. The town of Havre, beautiful from its regularity and extensive fortifications, and the handsome suburbs of Ingouville lie beneath ; the noble Seine, nine miles in breadth, forming the splendid bay of Harfleur, rolls on in front to the channel ; on the opposite side of the river lie stretched the fertile and well-wooded plains of Lower Normandy, extending as fur as the eye can discern, and forming a vast bay, which cannot be less than twenty leagues in extent; to the right is the ocean.

Dieppe, Dieppa, is a large and handsome town of Upper Normandy, in the Paysde Caux, at the mouth of the Arques. It is a place of great antiquity, and was originally called Bertheville; l►►ut, being one of the first places occupied by the Normans, it was by them named Dyppe, or

Dieppe, which, it has been asserted, signified in their language a good anchorage. Of the correctness of this assertion it is now perhaps hardly possible to judge; Diopen or Dyppen certainly signified, in the ancient Gothic or Teutonic, to stick, or to inflict a puncture, and might, therefore, also have meant to anchor. Bullet, a profound Celtic scholar, deduces it from Celt, deu, two, and pal, a rock, the u being changed into p, before another p, making Deppal or Deppa ; which, according to him, signified a town situated between two rocky mountains. But, with all due deference to so high an authority, if a Celtic origin is to be ascribed to this town, the word Dieppil, which in that language signified sterile or barren, seems a more probable derivation ; for, although the country around Dieppe is by no means so barren as that of the opposite English coast, it is much less fertile than many other parts of the French coast, especially to the west, where the vegetation is exceedingly luxuriant. It is probable that, before it had experienced the fostering care of the Normans, the land presented but a naked appearance, especially to the east, great part of it being occupied by a Roman encampment, which is in existence at the present day. Dieppe is seen to great advantage from the sea, but the harbour can only be entered by merchant vessels, ships of war not venturing nearer than the outer road. It possessed a town-house and was governed by a mayor at the commencement of the thirteenth century. There were formerly a college, two hospitals, ten monasteries, and two churches.

The church of St. Jacques, the finest specimen of ecclesiastical architecture the town now contains, is of the style that has been termed ‘ decorated English,’ or ‘ florid Norman Gothic,’ and was commenced about the year 1260. The church dedicated to St. Remi is of the seventeenth century. From the tower of the first mentioned there is a very extensive view, but a still finer one is obtained from the castle which stands on a steep hill and has a most venerable and imposing appearance; its lofty and extensive walls are flankea with towers and bastions. The sailors of Dieppe are undoubtedly the finest in !⁂’ ranee, of which they have afforded innumerable proofs. Three-fourths of the inhabitants of the suburb Polet are fishermen; and are called Poltese. Both in their costume and speech they present a striking contrast to the citizens of Dieppe; they neither speak, nor do they perfectly understand, the French language.

On the western pier stands a small house, which cannot be viewed without pleasurable feelings ; it was constructed by order of Louis XVI. for the residence of a sailor who had preserved the lives of several shipwrecked mariners, and whose meritorious conduct had reached the ears of his sovereign. It bears the following inscription : ⁂

A JN. An. BOUZARD, POUR SES SERVICES MARITIMES.

As it has been well observed by a judicious writer, ‘ the French are wiser than we are in erecting these public memorials for public virtues; they better understand the art of producing an effect, and they know that such gratifications bestowed upon the living are seldom thrown away. \Ve rarely give them but to the dead. Captain Manby, to whom above 130 shipwrecked mariners are even now (1819) indebted for their existence, and whose invention will -probably be the means of preservation to thousands, is allowed to live in comparative obscurity ; while, in France, a mere pilot, for having saved the lives of only eight individuals, had a residence built for him at the public expense, received an immediate gratification of 1000 francs, enjoyed a pension during his life, and, with his name and his exploits, now occupies a conspicuous place in the history of the duchy.’

After the death of Henry III., his successor, Henry IV., retired to Dieppe in 1589, shortly after which, he defeated the duke de Mayenne at the battle of Arques, almost under the walls of the town. It was afterwards taken by the army of the league, but submitted to the king in 1594. In 1694, as we have already seen, it was taken by the English, and partly destroyed. Being nearer to Paris than any other port, it is much frequented for sea-bathing.

The general antiquities of Normandy can only be briefly enumerated. Among the most remarkable is the abbey of Fecamp, founded in 664 or 666, by Waning, count or governor of the pays de Caux, for a community of nuns. The Normans, under Hasten or Hastings, destroyed it in 841 ; but, after they had obtained possession of the country, it was rebuilt by duke Richard I. in 988, who established here a

chapter of regular canons. This magnificent church is 370 feet long, and seventy in height ; the transept 120 feet long, the tower 200 feet high. Here were the tombs of dukes Richard I. and II. It formerly contained a large library, enriched with numerous manuscripts, and containing several original deeds and charters of William the Conqueror and his successors. The exterior of St. Etienne, one of the ten parochial churches of Fe.camp before the revolution, is very imposing. The palace and fortifications have long since disappeared. The church of St. Georges de Bocherville, at the village of the same name, about two leagues from Rouen, was built by Ralph de Tancarville, the preceptor to the conquer'or, and afterwards his chamberlain. The charter was granted a few years previous to the conquest. The building is still in good preservation, and is not only the most magnificent, but the most genuine specimen of the circular style at present existing in Upper Nor-man ly.

The ancient cathedral of Lisieux is a noble specimen of early pointed architecture ; its western front, seen to great advantage from a spacious square, is of solid simple grandeur. It is now the parish church of St. Peter. The cathedral of Bayeux is a medley of various ages; the two Norman towers of the western front are bold and massy, with semicircular arches in the highest stories. The spires, as well as the surrounding pinnacles, are Gothic. The bishop of Bayeux has always been considered the first among the suffragan bishops of the Norman church, and, in the absence of the archbishop of Rouen, presides at the ecclesiastical councils. The abbey of Bernay, founded at the commencement of the eleventh century, by Judith, the wife of

Richard II., was once very celebrated, but is now, like Judith herself, rapidly crumbling to dust. The cathedral of Evreux is a medley of many different styles and ages ; the interior is handsome, some fine specimens of painted glass are still remaining in the windows. The west front of the church of St. Giles, which has been converted into a stable, is highly interesting; some other churches in Evreux that were not destroyed during the revolution were in the same manner converted to other uses. The abbey of Jumieges, near Dueler, though simple, is striking; the lofty towers are seen from a great distance. The western front, which consists of three distinct parts, still remains almost perfect. The stone with which this edifice was constructed is particularly white. Gournay has a collegiate church dedicated to St. Hildebert, founded at the end of the eleventh century, but not completed until two centt ries afterwards. The windows in the western front are all painted. The records of Gournay are very ancient, beginning as far back as tlie reign of Hollo, who gave the town, together with the Norman portion of the pays de Brai, to F.udes, a Danish or Norwegian nobleman, to be held as a fief on the usual conditions.

The abbey church of Monlivilliers, not fa', from Havre-de-Grace, is the \oik of different eras, but on the whole is handsome; the towtr,

a noble specimen of the Norman architecture of the eleventh century, is still standing. Harfleur, although once a place of great importance, is now chiefly remarkable for its church, the style of which is extremely rich ; the tower and spire are very elegant, and connected by flying buttresses of extraordinary beauty. This town, formerly a port, has been gradually deserted by the Seine, from which it is now at some little distance, and that which was the harbour is now a beautiful meadow. The names of many ports in Normandy have precisely the same termina-sion, as Barfleur, Fiefleur, Honfleur, Vitefleur, &c. ; but they originally terminated in flot, Barfleur being anciently called Barbeflot ; Harfleur Hareflot; Honfleur Huneflot, &c. Flot signifies a wave or the tide, and also the flux and reflux, and

appears to have been bestowed upon places beyond which the tide flowed up. liarfleur and Honfleur, indeed, are close to the mouth of the Seine.

Normandy contains several other magnificent abbeys and churches, which can here only be named ; as the abbey of Ardennes, the church of Arques, the magnificent abbey of Bee, founded in 1071, Bernieres, Bonport, Bretteville, 1'Orgu-eilleuse, Broglie, Cormeilles, Creully, Dueler, Ecouis, Gisors, Le"ry, Louviers, Moulineaux, Pavilly, Pont-Audemer, Pont-de-1'Arche, Preaux, St. Evroul, St. Germain de Blancherbe, St. Gervais, and the Holy Trinity at Falaise, St. Jacques at Lisieux, Vernon, Yainville, &c. &c. A great number were destroyed during the revolution, and the relics which they contained given to the winds. For the gratification of true believers and the curious, we may observe, that they consisted of several cart-loads of bones of distinguished saints, forty-five teeth and three ears of the Blessed Virgin, and two heads of the Holy Baptist, both undoubted originals ! There were also several important castles and fortresses. The castle of Arques, near Dieppe, stands at the extremity of a ridge of chalk hills ; of its ancient power and importance some idea may be formed from the extent of the moat, which is little less than half a mile in circumference ; the outline of the walls is an irregular oval. That of Gisors which was erected by Robert de Belleme, in 1097, by command of William Rufus, consists of a double ballium ; the inner one occupies the fop of a high artificial mound, in the centre of which stands the keep. The outer walls were of great extent, and the whole fortress of the most solid masonry. The castle of Falaise is a noble ruin, possessing an impressive character of strength, which is much increased by the fresh appearance which the stone has retained. The castles of Bayeux, Brionne, Creully, Montfort, Neufmarche, &c., are also highly interesting; as well as the fortresses of Anet, Chateau-sur-1'Epte, Ivry, Nonancourt, Tillieres, Verneuil, &c. About two miles to the east of Dieppe there is a Roman encampment on the brink of the cliff called Cassar's camp, still in excellent preservation The remains of a Roman amphitheatre are to be seen near Lisieux, and at Lillebonne there are very curious Roman antiquities.

manufactories. Rouen and its vicinity have manufactures of cotton, linen, and woollen cloths, cotton velvet, druggets, and lace; it has also manufactories of china, several sugar-houses, and has long been renowned for its sweetmeats, in which it has an extensive trade. The art of painting on glass has for many centuries been practised there, and has been carried to the highest state of perfection. In the environs there are a great many cotton mills. The manufactures of Darnetal, near Rouen, consist principally of coarse cloths and flannels Caen has numerous factories of superfine cloth, on the excellence of which it would be superfluous to expatiate, the great superiority of the French cloths, both in beauty and durability, having been long acknowledged. Its other manufactures consist of serges, dimities, lace, hosiery of all descriptions, hats, &c. A considerable quantity of cloth is also made at Elbeuf, Sedan, Louviers, &c., which is highly esteemed, and at Lisieux and Bernay ordinary woollen and cot-ton cloths are made, as well as linen and flannels. Havre-de-Grace has manufactories of tobacco, vitriol, cordage, china, paper, pasteboard, lace, &c., it has also some sugar-houses. The construction of vessels, and the repairs required by those frequenting the port, affords employment to great numbers. The inhabitants of Dieppe are very skillful workers in ivory, an art in which they are perhaps unrivalled ; large consignments of ivory were made to that town, from the settlement which its mariners had formed on the coast of Senegal, as early as the fourteenth century, at which period its citizens first embarked in this useful and lucrative occupation. Dieppe is also famous for its watch-springs, and for its lace and toys. Bolbec has extensive cotton manufactories, besides some of cloth, cotton-velvet, and lace, several tan-yards, and manufactures a great deal of cutlery. Falaise produces hosiery and lace. The manufacture of the latter article, which employs a great number of hands, is chiefly carried on at Alen- ►►on, Bayeux, Caen, and Honfleur. Normandy has also several glass-houses. The fisheries, which are very lucrative, afford employment to immense numbers. In the Avranchin, the Bessin, and the Cotentin, a great quantity of white salt is made. The Pays de Brai produces excellent butter ; that of Gournay, one of its principal towns, is particularly renowned ; and Neufchatel is no less famous for its cheese. Cider, the universal beverage of the lower classes, is produced in great abundance, particularly in the western districts ; that of Avranches is the most highly esteemed.

The lofty stature and fair complexion of the Normans sufficiently attest their northern origin : they are scarcely darker than the inhabitants of the southern coast of England, and are the fairest people in France, with the exception of the inhabitants of Picardy, Artois, and perhaps of Britanny. They are a hard and athletic race; taller and stouter than the English, the Northumbrians excepted, who were also of Norman blood. Their countenances are in general handsome, and those of the women very expressive. Although simple in their dress, they are very

cleanly. The costume of the female peasantry may be also styled simple, but it is striking and pleasing: their dresses and aprons are usually of scarlet or blue; when the dress is of the first, the apron is always of the last mentioned color. Their head-dresses are very peculiar : in the Pays de Caux they are of great height; and those worn on Sundays and fete days, being composed of expensive lace and decorated in front with sil-ver, are preserved with great care, and frequently transmitted down through two or three generations. Their ears are adorned with very long gold earrings. The nicety of their linen is remarkable; clean linen, indeed, is a luxury pretty freely indulged in by all classes throughout France, and in large towns frequent use is made of the bath. The females of the middle and lower classes at Dieppe wear very high caps, the lappets of which conceal their hair ; black, blue, or scarlet corsets, and very full petticoats of the lat-ter color; black stockings and white aprons. On fete-days their necks are usually adorned with gold or silver crosses. But the most remarkable costume is that of the inhabitants of the suburb Polet, in Dieppe, who have preserved the costume of the sixteenth century. Over their trow-sers they wear short wide petticoats ; their waistcoats are of woollen, confined in front with ribands ; a surtout, longer than the petticoat, completes their dress, the color of which is always red or blue, the seams being faced with white silk about an inch in width ; they always wear caps of colored cloth or velvet.

The Normans are industrious, economical, and temperate ; lively,

ingenious, courteous, and brave : they are also keen, far from credulous, and of sound judgment. The nobility and gen-try live well, and usually much within their in-come ; not being infected with the contemptible ambition of vying with each other in splendor and expense, after the manner of the corresponding classes in England : fortunately for France, this happy disposition is not confined to Normandy. But, notwithstanding their economical habits, the French have always been remarkable for their hospitality. The merchants of Havre and Rouen live somewhat more expensively; one of the usual, and perhaps unavoidable, consequences of successful commerce. The lower classes are content with very plain fare, voluntarily submitting to what would be deemed in this country, by people of their rank of life, se-vere privations: they seldom drink any thing but cider, and that of very indifferent quality. The peasantry live for the most part in villages; detached cottages are indeed rarely seen.

The Normans in all ages have been devoted to literature, in which they have greatly excelled. As defenders of their country, they have also been preeminent ; and to Normandy, especially the town of Dieppe, the French marine is indebted for its most valuable recruits. The fa-mous admiral Abraham du Quesne, the successful rival of de Kuyter, was a native of that town ; and the first expeditions to Florida were undertaken by its sailors, by whom also (as it has been contended, and with great appearance of truth) Canada was first discovered: it is at least certain tiiat they established a colony in that country

for commercial purposes; they were also the first Europeans who made a settlement on the coast of Senegal, as early as the fourteenth century. The lower classes, as in all other parts of France, are very free in their manners towards their superiors, and impatient of contradiction and control; but they are honest, faithful, and sober. In the towns the inhabitants have not much peculiarity in their accent; but the peasantry nave a singular drawl, and a singing tone of speech. The Normans have always been accused, and probably not without reason, of being extremely litigious : it is very certain that, before the laws were revised and simplified, law-suits were more frequent; but, since they have been digested into the present admirable code, the necessity for them has been almost removed, and a French citizen cannot now be ruined either by costs or vexatious delays. In the worst of times, however, a lawyer, comparatively speaking, was a rare sight in France : this happy island appears to be the elysium of the legal tribe, and probably contains more of them than the whole continent of

Europe.

The Scandinavian tribes, on their first settlement here, were idolaters. Shortly after this event duke Rollo was persuaded to embrace Christianity, and entered the bosom of the Ro-mish church : since that period the Catholic religion has principally prevailed in Normandy ; but the Protestants of the Calvinistic church are very numerous, and highly and deservedly respected. Many of them derive their descent from noble and ancient houses, which were ruined during the persecutions of Louis XIV.; for, in some few instances, their members were not driven into exile. But France, which then, and by subsequent emigrations, lost, in consequence of the folly and bigotry of her sovereign, 500,000 virtuous and valuable citizens, who were forced to take refuge in Holland, Germany, and England, now sets the world a brilliant example of liberality. Great exertions have, it is true, been made since the re-establishment of the house of Bourbon, to restore the ancient order of things, or, in other words, to cause the nation to retrograde to the state of slavery under which it groaned during the reign of Louis XIV.; to extinguish the light and intelligence so universally diffused, and to replace them by darkness and ignorance. But the ages of priestcraft and tyranny are rapidly rolling by; und the endeavours that are making, and doubtless will yet be made, to arrest their passage, are likely to prove as futile as the efforts of the magician of former ages to arrest the passing storm. It is however but justice to the Catholic clergy to state that some among them are far from newing in a favorable lijiht the injudicious measures adopted in their behalf; they are fully impressed with a sense of the danper to which they are thus exposed, and as fully convinced of the propriety of their exclusion from all secular power and influence. Many of them are men of unquestionable learning, virtue, and integrity; and when it is considered with what indefatigable zeal most of them perform duties, infinitely more laborious th in those required from the clenry of the established church of England, and that too for one-720

tenth, and sometimes one-twentieth, part of the stipend of the latter, it is impossible not to feel convinced that they must have entered on their office from conscientious motives. Indeed, whatever the Catholic church may once have been, it is certainly no longer available in France as a means of pensioning off on the public the idle and

dissolute youth of the higher and middle classes. Religion no longer forms part and par-cel of the political machine in France ; the law does not recognise any of the acts of the clergy, nor will the judicial authorities receive in evidence any document signed by them: and if their acts happen to be of an illegal nature they are now tried with as little ceremony as their lay brethren. At the revolution the registers throughout France were taken out of the hands of the clergy, and transferred to the civil magistrate; they are now deposited at the municipalities; and the form in which they are drawn out is admirable, and well worthy of imitation, especially in England, where they are said to be kept much worse than in any other country. Every French citizen is required, within three days of the event, to give notice of the birth of a child to the mayor of the district in which it lias taken place; marriage must be contracted before the same magistrate, the parties repairing to the municipality, where the marriage is enregistered : if a priest should presume to perform that ceremony before the civil contract has been made, which is all that the law requires, he would be punished by a long imprisonment and a heavy fine. Of the ceremonies of baptism, the sacrament of marriage, or the interment, the law takes no notice, wisely permitting the citizens who live under its influence to have them performed in the manner most agreeable to their consciences. How far an equal degree of regard should he shown to the feelings of dissenters in protestant England, one of our poets would seem to decide : ⬩⬩⬩

True freedom is where no restraint is known, That Scripture, justice, and good sense disown, Where only vice and injury are tied, And all from shore to shore is free beside. Cowper.

Normandy has given birth to so many illustrious men that the natives of that country might be pardoned if they carried their national pride to a great length : the Normans, however, with more just ground* for pride than most other nations, are usually unpresuming, liberal in their opinions of others, and ready to do am-ple justice to the merits of foreigners. Rouen had the honor of giving birth to Peter Corneille, the father of the French drama, called by his countrymen the Shakspeare of France. He was born June 6th, 1606; his father had been ennobled for his services by Louis XIII. In 1637 came forth the Cid, a tragedy, which gained him a vast reputation. This he supported by many other admirable performances, which, as Bayle observes, ‘ carried the French theatre to the highest pitch of glory, and assuredly much higher than the ancient one at Athens.’ He was of a melancholy cast, and spoke little in company, even upon subjects which he perfectly understood ; was of exemplary conduct, and by no means dexterous in making his court to the

great, which was, perhaps, the principal cause wjiy lie never derived any considerable advantage from his productions. But he gained an immortal name. He was the author of nine comedies and twenty-two tragedies; but his comic humor was inferior to his tragic powers. He died in 1684, in his seventy-ninth year. His portrait is painted on the curtain of the theatre of his native town, on which is also inscribed P. Corneille, natif de Rouen, and on the ceiling is painted his apotheosis. His bust adorns the entrance of the house in which he was born in the Rue da la Pie; an inscription to his honor has also been placed there, and a tablet erected to his memory. The same tribute of respect has been paid to the memory of his nephew, author of the Plurality of Worlds, who was born in the lluedes bons Enfans. SeeCoRNEiLLE (Thomas). The illus'.rious Fontenelle was also born at lloae'n, and the learned Samuel Bochart, author of Sacred Geography, and of the Hierozoicon ; Basnage, who wrote the History of the Bible ; Sanadon, the translator of Horace; Pradon, satirised by Boileau; du Moustier, author of the Neustria Pia ; and father Daniel, the famous historian ; Jouvenet, one of the most celebrated painters of the French school, and others of great reputation ; Deshays, Houel, Leger, Le Monnier, Le Tellier, Restout, Saquespee, &c. It was besides the birth place of Peter Bardin, Noel Alex-andre, Nicholas LeTourneux, Nicholas Lemery, &c. &c. Caen has been hardly less fertile : among its illustrious sons may be enumerated Francis Malherbe, Tanneguile Le F.evre, James Dalechamps, a celebrated physician, author of the Historia Plantarum ; the laborious lexicographer C on stan tin ; Stephen LeMoine; John and Clement Marot; the poets ; John Renaud de Segrais ; thfe celebrated Peter Varignon ; the famous Daniel Hue't, bishop of Avranches ; father Fournier, &c. I. F. Sarrasin and G. A. de la Roque came from its immediate neighbourhood. Havre-de-Grace, although its first foundations were laid little more than three centuries ago, has produced a host of learned men : J. A. P. Amelot, author of Louis IX., &c. ; P. N. Beau-valit, a famous sculptor; James Henry Bernardin de St. Pierre, his principal works are Etudes de la Nature, Paul et Virginie, La Chaumiere Indienne, a fine and masterly satire on the clergy ; he also wrote many other works of great merit; J. P. A Blanche, author of Latin poems ; Bonvoisin, a famous portrait-painter ; G. T. Clemence, author of several theological works; Nicholas Cordier, who died in 1728, he wrote some works on nautical affairs ; J. B. R. R. d'Apres, a celebrated geographer and hydrographer ; his talents and acquisitions were extraordinary : J. F. C. Delavigne, a celebrated dramatic writer, still living ; Du Boccage de Ble-ville, a merchant and very learned man ; the abbe Diequemare, an excellent naturalist and good painter ; G. Le

Hautoir, a painter and engraver, famous for his perspectives ; L'Aignot, Larry, Le Sueur, J. B. Levee, author of the biography of the celebrated men of Havre, of u translation of the works of Cicero, &c. &c. ; G. I. L. deMasseille, the baron Rouilh, mare~chal de Camp, Michel D. B. Ivon, a distinguished

soldier, who fought in all the campaigns from 1793 to 1806; he was promoted to the rank of adjutant-major, and was always addressed by the flattering title of the brave Ivon. He was killed at the bridge of Kolozornbin, being the first who attempted to force a passage.

Dieppe gave birth to Richard Simon, Bruzen de la Martiniere, Pecquet, Dom. Le Nourry, the fathers Crasset and Gouye, &.c. Poussin, the great master of the French school, was born at Les Andelys in 1594, of poor, but noble parents. Notwithstanding his state of destitution his talents and perseverance at length bore down all obstacles. The learned Adrien Turnebe was born at the same place. Simon Vigor was born at Evreux; the abbe' de Valmont and \Villiam Dagoumer at Pont-Audemer ; the celebrated sculptors the Anguier, at Eu.

The origin of the ancient Scandinavians, 01" Normans, has never been very satisfactorily ascertained. Their early histor), indeed, is involved in so much obscurity, and is so mixed with fable and fiction, that it is impossible to rely with any degree of confidence on the narratives extant. Disposed, however, to consider these relations as the offspring of ignorance and superstition, rather than of wilful misrepresentation, we must endeavour to separate that which may be true from that which is evidently false ; we must examine and attentively consider probabilities, while we reject without hesitation miracles and impossibilities. The Scandinavians appear to have been one of the most important of the Gothic tribe (the Getas of the ancients) who, at a period antecedent to all authentic history, emigrated from Asia, and settled in the north of Europe. It is probable that they were originally of die same race as the Celts; but that people differed so materially from the Goths that great doubts have been entertained on this head, and the assertion has been hazarded that they never could have been

derived from one common source. It has been asserted by some authors, who have maintained their opinion with great force of reasoning, that this quarter of the globe was originally peopled by two distinct races of men, the Celts and the Sarmatians ; the latter being the ancestors of all the Sclavonian tribes, *viz.* the Russians, Poles, Bulgarians, Wallachians, Bohemians, Carinthians, &c., who to this day continue distinct and separate from the nations of Celtic race ; different in their characters, language, manners, institutions, and frequently in religion : while from the former are descended all the other European nations. It has been contended by others that the Celtic and Gothic, or Teutonic nations, have been thus most improperly confounded; as the latter peo-ple could neither have been derived from, nor did they constitute part of the former, but were, ab initio, a perfectly distinct nation. Many circumstances, it must be confessed, conspire to lead us to this conclusion; nothing could he more opposite than their manners and customs ; their laws also were different, and a freedom pervaded the institutions of the Goths that was unknown to the Celts ; neither did their religions bear any resemblance. The Druids, so reverenced amone the nations of Celtic race, were VOL. XV.

unknown to the G.oths, who respected only their scalds; the former worshipped, or at least greatly reverenced, the oak ; the latter the ash ; the former highly prized the mistletoe ; the latter regarded it as a noxious weed. To the Celtic nations letters were unknown ; the Gothic tribes were in possession of them, and not only reverenced the inventors, but the letters themselves, although it is probable that this acquisition was confined to their scalds or bards ; but, be this as it may, Runic inscriptions in the north of Eu-rope are not by any means uncommon.

A consideration of still greater importance is the language of these two nations, than which nothing could well be moie unlike. That they differed very essentially in this point, as well as in those already mentioned, we have the express testimony of Cxsar and Tacitus. The accuracy of the former few will doubt; he had resided a long time in Gaul, had traversed it from one extremity to the other, and had observed its inhabitants with the closest attention. He informs us that the Celts or Gauls differed in language, customs, and laws, both from the Belgae, who were of Gothic origin, and from the Aquitani, who it is possible were originally an Iberian people : ••• ‘ Gallia est omnis divisa in partes tres : quarum unam incoluat Bel••ae, aliam Aquitani, tertiam qui ipsorum linguu Celts, nostra Galli appellantur.

Hi omnes ‘linguA, institutis, legibus, inter se differunt.’ From Tacitus we learn that the Celts or Gauls differed in thˆir persons from most of their neighbours ; that they strongly resembled the Britons, as the Germans resembled the Caledonians, and the Silures

the Spaniards : ❓❓❓ ‘ Habitus corporum varii :

rutilaCaledoniam habitantium cornaynagni artus, Germanic-am orginem adseverant. Silurum colorati vultus, et torti plerumque cnnes, et posiu contra Hispania, Iberos veteres trajecisse.easque sedes occup&sse fidem faciunt: proximi Gallis, et similes snnt.’ Whether Spain was originally peopled by the Celts is much to be doubted, and cannot now be ascertained ; but it is at least certain that it was partially colonised by them. That they differed from the Germans in most important points we may easily satisfy ourselves by a further reference to Caesar. It was not only in remote a< >es that the Celtic and Gothic tongues differed, the same difference continues to exist in the languages spoken by the descendants of those two nations at this very day ; for while the languages of the Welsh and the Britons, notwithstanding that they have been disunited above twelve centuries, has been so little altered that the natives of those countries can, without much difficulty, understand each other, the Welsh and the English, although living in the same island, under the same laws, and become as it were the same people, still continue to speak languages perfectly dissimilar. On the other hand, although the English have been separated above thirteen centuries from the Saxons (their ancestors), their language is radically the same, and bears a close affinity to that of the Belgians, the Swiss, the Danes, and the Swedes.

Proof of this sort is irrefragable, and cannot fail, we submit, to convince us that from the Celts were derived the origin.il inhabitants of

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Gaul and Britain, and the present inhabitants of Britanny, Wales,

Cornwall, parts of Ireland, the Highlands of Scotland, and perhaps of Bis-cay in Spain ; while from the Goths were derived the ancient Germans and Scandinavians, and the present inhabitants of Germany, England, Belgium, Helvetia, Denmark, Sweden, and Norway. It is true, however, that on submitting the Celtic and Gothic languages to a comparison with the Hebrew, so many words will be discovered in both, which must have been derived from that language (unless they were received into those three tongues from some other ancient language), that one is almost led to infer that the Celts and the Goths must have proceeded originally, though at a period antecedent to the existence of any historical records, from one common stock. Some powerful causes must, however, have existed for the extraordinary change which, during a long course of ages, took place, not only in the language, but in the persons of those Celtic tribes, known to the ancients under the general name of Goths, if these latter really were of Celtic race. The different regions which they peopled and inhabited might have been a leading, though by no means a sufficient cause, for the strong contrast which they presented, and which the descendants from those two stocks still continue to present; but as no satisfactory evidence on this subject is now likely to be obtained, and their history being of more importance than their origin, a brief sketch of the Scandinavians, the most northern of the Gothic nations, is here submitted.

The Ases, a Scythian people, who appear to have inhabited the country situated between the Black Sea and the Caspian, had for their chief Sigge, who assumed the name of Odin or Woden, the supreme deity of the Scythians; possibly, in order to seduce his followers into the belief that he was himself a divinity, or because he filled the offico of chief priest. Having assembled around his standard the flower of his own and of the adjoining nations, he marched to the west, and entered Europe, subduing, as we are informed, the countries through which he passed, and erecting them into kingdoms for his sons. He then turned his thoughts to the north, and, directing his thoughts towards Scandinavia, entered the Cimbric-Chersonesus, which now comprises Holstein, Sleswig, and Jutland. That region being but thinly peopled, its inhabitants were incapable of making any effectual resistance, and passing thence into Funen, of which he as easily took possession, he founded, it is said, the city of Odensee. Having overrun the remainder of the Danish provinces, and penetrated into Sweden, which as speedily submitted, he ruled with unlimited authority, introducing the laws and customs of Scythia. But, notwithstanding their extent, his conquests do not appear to have been commensurate with his desires ; and, having turned his arms against Norway, his

usual success attended him. Odin, full of glory and renown, withdrew to Sweden, and, perceiving symptoms of his approaching dissolution, scorned to wait until that life, which had been so constantly exposed to danger, should be terminated by slow and tedious disease. He assembled his wat ‘l.e

adherents around him, and inflicted on hia per-son several wounds with his sword and lance, and, just before he expired, informed them that he was about to retire to Scythia, to enter into the society of the gods. His body was carried to Sigtuna, and, in conformity with a custom of which he was the author, it was burnt with much ceremony. It has been imagined by some that the rancorous hatred which this extraordinary-man bore to the Romans was the principal incentive to all his actions. Forced by those lordly republicans to abandon his country, his hatred knew no bounds ; for the Scythians conceived themselves imperatively called on to avenge all affronts offered to their name and nation. This hatred he communicated to all the people of the north, by whom it was cherished from generation to generation, till, falling in concert on that once powerful empire, after repeated attacks they finally accomplished its overthrow.

To the Roman historians we are indebted for our information respecting the first attack made upon the republic by the northern nations in the year of Rome 644, and 109th before the Christian era. Her liberties were already endangered by internal disputes and factious intrigues, when information was suddenly received of the approach of a vast body of barbarians (as the Romans were accustomed to term all without the pale of their empire) amounting to above 300,000 men. This mighty army consisted principally of the Cimbri, or inhabitants of the Cimbric-Chersone- sus, the most southerly of the Scandinavian tribes, who had allied themselves with the Teutones, the Tigurians, and the Ambrones. The Gauls had been unable to arrest their progress, and, as it was supposed that this host was preparing to pass into Italy, dismay was imprinted on every countenance. This was during the consulship of Caecilius Metellus and Papirius Carbo, the latter of whom was instantly despatched with a powerful army to occupy the passes of the Alps ; but the Cimbri took a different direction, and halted on the banks of the Danube. The Ro-mans, somewhat recovered from their just alarm, seemed now resolved to carry matters, as usual, with a high hand, and sent to desire them not in any way to molest the Norics, their allies. To this message the Cimbri sent a respectful answer, professing their readiness to turn their course elsewhere, and their desire to avoid

incurring the displeasure of the republic. The consul, satisfied witn this appearance of moderation, offered no opposition to their departure, and they retired into Dalmatia, whither the Romans followed them. Watching a favorable opportunity, Carbo attacked them by night ; but the Cimbri, indignant at this treacherous act, seized their arms, beat back the Romans, and put them to flight. This repulse was attended with disastrous consequences ; for all the nations that were desirous of throwing off the Roman yoke immediately ranged themselves under the banners of the Cimbri. Thus reinforced, they again burst into Gaul, and endeavoured to pass into Spain, but were repulsed by the Celtiherians, a people of Celtic race who had settled near the Iberus, and added the name of the river to that of their na-tion. Frustrated in this attempt, they despatches

nn ambassador to the Romans to propose terms of peace, which having been rejected, they attacked the array under the command of M. Junius Silanus with the greatest fury, and entirely destroyed it. Cassius Longinus was shortly afterwards defeated by the Ambrones ; another Roman army, more numerous than the former, soon after shared the same fate, above 80,000 of the Romans and their allies perishing on the field, and, to complete their misfortunes, a fourth array, under the command of the consul Manlius and the proconsul Servilius Caepio, was completely defeated.

Every eye was now turned towards Marius, who alone seemed able to avert the impending ruin. Catulus Luctatius, whose military abilities were scarcely inferior, was associated with him in the command. Marius, well aware of the errors of his predecessors, determined to pursue a very different course. He resolved not to give the enemy battle until their ardor had become somewhat cooled, and, with this view, encamped in an advantageous position on the banks of the Rhone ; but this prudence being mistaken for pusillanimity, the enemy, having first endeavoured to force his entrenchments, in which attempt they were unsuccessful, resolved to pass into Italy. Ma-rius allowed them to file off unmolested during six days, when, quitting his

position, he followed them as far as Aix, in Provence, where he attacked and partially defeated them, slaying great numbers ; he then retired to his camp, ordering strict watch to be kept. Shortly afterwards his army, being advantageously posted on an eminence, was attacked by the Teutones ; the fortune of Rome this day prevailed; her armies were once again triumphant. If we may rely with confidence on the relations of her historians, above 20,000 of the enemy were slain, and 90,000 made prisoners. This was in the year of Rome 653.

But the Cimbri still menaced the safety of the republic ; arrived on the banks of the Adige, Catulus Luctatius was unable to arrest their passage, and they crossed that river. They halted near the Po, in the hope of being joined by the Teutones, of whose late defeat they were ignorant. Marius, at the head of a new army raised in haste, advanced to meet them, and they came to an engagement on the plain of Yerct-il. The infantry of the Cimbri was formed into a lanre dense square ; their cavalry, superbly mounted, was above 15,000 strong.' The Romans were drawn up in two wings, with the sun at their backs, a circumstance very advantageous to them. The Cimbri, exhausted by the intense heat of the weather, against which they were less able to contend than the Romans, became dispirited, and were soon defeated ; the dust had prevented them from perceiving the inferior forces of the Romans, as these latter, from the same cause, were ignorant of the \ast number of their adversaries. An expedient which they had adopted, in order to prevent their ranks from being broken, now served to render their overthrow the more complete ; the soldiers of the foremost lines had been linked together with chains, and thus, becoming entangled, were the more easily cut down by the Romans Upwards of 140,000

of the Cimbri are said to have fallen on that fatal day ; but few escaped to tell the dreadful tale ; and, if we except them and the small num-ber who had remained at home, their whole na-tion may be said to have perished at a blow. This was in the year of Rome 652, and the 101st before the Christian era. Little mention was afterwards made of them by the Roman authors, whose accounts of the Cimbrian war must be received with due caution ; for, as the Cimbri had no historians of their own to record their actions, the Romans, fearless of contradiction, had it in their power to give whateve coloring they pleased to events in which they were engaged, although they appear to have recounted their own defeats with great impartiality. Strabo records that they endeavoured to cultivate the friendship of Augustus ;

and Tacitus briefly informs us that they, had preserved nothing but their distinguished name, and a renown no less ancient than extensive ••• ‘ Parva nunc civitas, sed gloria ingens, veterisque famae late vestigia ma-nent.’

Formidable as were the ancient Scandinavians by land to most of the nations of Europe, their naval expeditions excited still greater terror, and were far more destructive. In the infancy of society, when manual arts are unknown, and agriculture but little attended to, the inhabitants of a maritime country generally embrace a pira-tical life; this was the case with the Greeks in very remote age^, as we are informed by Thucydides. The northern nations, however, did not adopt this course of life till very late; Sidonius Apollinaris, a learned Gaul, who was born at Lyons of an illustrious family, in the early part of the fifth century, is the first author who touches on the piracy of the Saxons. In the sixth epistle of his eighth book he thus notices them : ••• ‘ Est Saxonibus piratis cum discrimimbuspelagi non notitia solum sed familiaritas ••• Hostis omni hoste truculentior ; improvisus aggreditur, pra-visus elabitur, spernit objectos, sternit incautos.*

Agriculture indeed, in consequence of the barrenness of the northern regions, could not afford employment to many; but fishing gave occupation to vast numbers, although in the end it conducted them to piracy. For, as the people of one district traversed the ocean, they often met with those of another, whom lliey regarded as rivals and the desire of obtaining undivided possession of some particular bay or creek would often give rise to disputes. At length open attacks were made, which generally ended in the capture of some of the vessels. The success which attended the first attempts of the Normans gradually incited them to greater enterprises ; they ventured farther from their coasts, and explored unknown seas, so that during the eight!), ninth, and tenth centuries, the ocean literally swarmed with their vessels, and from one extremity of Europe to the other the maritime provinces were continually exposed to theirattacks. It is hardly to be doubted, however, that their naval forces, in consequence of the peculiar manner in uliich they carried on their operations, ap| >eared much more considerable than they really were ; and this was also the case with respect to the amount of their population. For, as their vessels were

lightly constructed, and drew but little water, they were not only enabled to disembark at almost any point of the coast at pleasure, but could penetrate with ease up every river. Haul-ing them ashore, and leaving them sufficiently guarded, they commenced by putting the whole neighbourhood under contribution, and, when they did not find sufficient booty, advanced in quest of more into the interior of the country ; then, safely embarking their spoils, hastily disappeared. But, the moment their treasures were landed on their own shores, they either returned to the scene of their late devastations, or tried their fortune in some other quarter not far remote, so that the people of one particular district might be repeatedly pillaged by the same hands. It sometimes happened that ample preparations had been made to receive them, in which case the Normans, whose only object was plunder, speedily retreated, but as quickly showed themselves elsewhere ; whence again, if they perceived themselves likely to be foiled in their attempts, they would as hastily decamp. Thus the inhabitants of the countries exposed to their attacks, seeing them every moment in so many different quarters, naturally conceived very exaggerated notions of their number. England, during two centuries, was almost incessantly devastated by them and sometimes subdued ; Ireland and Scotland were also subject to their incursions.

Before the reign of Charlemagne they were greatly feared ; they had penetrated into every sea which bordered on his dominions ; but that great prince, to prevent them from entering the rivers of his empire, stationed fleets at the mouths of them ; the admirals were styled ‘ comites, ad custodiendam oram maritimam, deputati ; ‘ on his death, however, in 814, they became still more formidable. They spread like a devastat-ing tempest over Lower Saxony, Friesland, Holland, Flanders, and ravaged the coasts of Courland, Livonia, and Pomerania. France was overrun by them, and at length utterly ruined. So great was the fear which the continental nations entertained of this people, that a supplica-tion to be delivered from so dreadful a visitation was introduced into the litany, ‘ a furore Nor-mannorum libera nos, Domine ! ‘ They even carried their arms into Spain, Italy, and Greece ; so that after having gained the north-western extremities of Europe by land, they at length attained its south-eastern extremities by sea ; thus,

once again approaching the deserts of their ancestors. Robert Wace, Vace, or Vaice, or, as he calls himself, maistre Wace, a native of the island of Jersey, who had studied at Caen, wrote, at the request of Henry II., king of England, and duke of Normandy, the Roman de Rou (Rollo) et des Dues de Normandie ; in which performance he does not give by any means a favorable character of his forefathers : ###

La gent de Danemarche fu toz terns orgueillose, Toz terns fu sorkuidee (presomptueuse), e mult fu

convoitose ;

Fiere fu, preisant (arrogante) gaie e luxuriose. Nuz horns ne se teneit a une fame expose ; De plusors fames orent a merveilles enfanz, IVlult i out de petir, e mult i out de granz Mult i out filz, e filles e fames e serjan (domes-tiques) ;

Ne poout sa gent paistre tres tout li plus mananz.

(riches) ;

Ne poout pas sufire quanque il gagnoient, A paistre li enfez, ki trop multiplioient. Por 90 avintsovent kepar sort, kil gatoient (jetaient) Des forz e des meillors, la terre delivroient : Fust par terre, fust par mer, du pai'y les cachoient

(chassaient) ; Cil feseient grant mal kel part ke il aloient.

The first descent which the Normans made in England was in the year 787, when a small body landed, from three ships in Wessex, in order to reconnoitre the country. The reve, or magistrate of the place, summoned them to appear before the king, in order to account for the object of their visit, on which they slew him, and, retreating to their ships, departed. Six years afterwaids they landed in Northumberland, and returning the next year plundered Wearmouth abbey ; but some of their leaders being slain, and their ships much damaged by a storm, the whole of them were either drowned or put to the sword by the inhabitants. In 832 they pillaged the isle of Sheppey, and the next year disembarked at Charmouth, in Dorsetshire, where they were attacked by king Egbert: a desperate engagement ensued, in which, although the Normans had the advantage, they lost so many men that it was deemed advisable to retreat to their ships. In 835 a large body of them landed in West Wales, or Cornwall, and, being joined by the Britons, advanced into Devonshire, but were defeated by king Egbert

at Hengesdown. Two years afterwards, having attacked Southampton, they were repulsed by Wulfherd, alderman or gOTernor of the county ; the same year they were attacked in the isle of Portland by Ethelhelm, the alderman, who at first gained ground, but eventually was defeated and slain. They also engaged the English in East Anglia and Kent, and defeated king Ethelwulf at Charmouth.

It was about the year 808 that the coasts of France began to be grievously harassed by their attacks. A few years afterwards they sailed up the Seine, and endeavoured to penetrate into the interior of Neustria, but were repulsed. In 841 they again ascended the Seine, and pillaged all the places seated on its banks : four years afterwards, under the command of Regner Lotroc, or Lodbrog, king of Denmark, they advanced as far as Paris in 120 boats, and the city being abandoned on their approach, they acquired immense booty : the clergy and the monks, as usual, were the first to take flight, carrying with them their relics, and, that which they valued still more, their treasures. But, some years after this event, the Normans had the satisfaction of capturing this important corps de reserve. In the year 849 a large army under the command of Eric, who assumed the title of king of Denmark, landed from 600 vessels at Hamburgh, plundered the city and penetrated a great way into Germany. In 856 they again pillaged Paris, and burnt almost all the churches, a few only being spared, for which they received large ransoms Two years after this, Hasten or Hading, better known as Hastings, their famous admiral, passed the straits of Gibraltar. He had previously sailed up the Somme, ravaged the adjacent

country, and set fiie to the towns, plundering the monasteries and churches, and drowning the bishop and clergy of St. Quentin; thus, for once, giving them their fill of water instead of wine. He then proceeded to Neustria. The magnificent abbey of Fe”camp was one of the first objects of his attack ; the nuns, it is said, disfigured their faces in order to escape the violence of the Normans ; but, if they preserved their chastity by these means, they lost their lives, for the northmen

brutally put them to the sword, and destroyed the convent. The abbey of Jumieges shared the same fate ; but the lazy monks, amounting to 900, escaped with their relics. At length, not satisfied with the immense booty which had been acquired in France, Hastings resolved to visit Rome, of the riches of which he had heard exaggerated rumors. He accordingly put to sea, and, when arrived within the straits of Gibraltar, the work of devastation commenced : he plundered the coasts on the north and south, sacked several maritime towns of Spain and Africa, and, landing on the coast of Tuscany, assailed Luna, near Genoa, which he mistook for Rome, probably owing to some little similarity in the sound of Luna and Roma. The strength of the fortifications for some time baffled all his efforts, but, having at length entered its walls by stratagem, Hastings himself commenced operations by splitting the skull of the bishop at a blow ; thus, as Maistre Wace exclaims, full of indignation, ###

‘ colpa la teste,

Com se ce fust une vil beste.’

‘ Treating a bishop like a brute beast.’

The followers of Hastings first despatched the clergy, and then massacred the count or governor and his barons, the city being abandoned to pillage and slaughter. On his return home from Italy, where he had wasted his strength to no adequate end, he boasted of having destroyed the mistress of the world. About Easter, in 861, the Normans re-appeared at Paris, which they plundered and burnt, as well as the monastery ot St. Germain-des-Pres, in which they had the pleasure of surprising the monks, ‘catching at last the hogs in the sty,’ on whom, as they entertained no very favorable predilection towards them, they always wreaked their vengeance in preference to the laity, deeming ‘ the watchful dog to be much better than the lazy hog ;’ then, sailing up the river, they committed further depredations. Orleans, Poictiers, and Le Mans in Brittany, were taken and burnt ; at the attack on the latter Robert Le Fort, duke of Paris, the ancestor of Hugh Capet, was slain.

In 851 they again harassed England, and, although worsted both on land and at sea, they ventured to take up their winter quarters in the isle of Thanet, and there remained unmolested until they removed a year or two afterwards to the neighbouring isle of Sheppey. In 866 Ethelred succeeded his brother Etitelbert : his whole reign was one continued scene of trouble, owing to the irruptions of the Normans. .A fter many desecrate conflicts, fought with various success, he was

defeated by them at Basing, and shortly afterwards at Marden. At this critical juncture

Ethelred died of a wound lie had received, so that the cares of government devolved on his brother Alfred, then twenty-two years of age, who was no sooner seated on the throne than he found himself compelled to take the field. No fewer than nine battles were fought that year to the south of the Thames, besides innumerable skirmishes. The intrepid Alfred continued for some years to make head against his formidably enemy ; but, strong reinforcements continually arriving, the northmen were enabled to keep the field. Another large body having landed and surprised Chippenham, Alfred could no longer bear up against the torrent that deluged the kingdom. At the expiration of a twelvemonth he received intelligence that the enemy had been partially repulsed, when, quitting his retreat, he stormed their camp at night, being well acquainted with it, and put the whole of their army to flight. Those who escaped the slaughter took refuge in a fortified camp, which Alfred immediately reduced to great straits. By this decisive stroke he pro- ††† cured for himself and his subjects several years of repose, until his improvements and projects were cut short by death, in 901.

The Normans, thus discomfited in England, let loose all their fury against the continental states: and France, in particular, was now doomed to feel this scourge with additional horrors. Hastings once more repaired to that unfortunate country, his forces having been augmented by all those who had felt averse to accept Alfred's offer of settling peaceably in England, and he continued these ravage? until it was no longer in a condition to subsist his army : smiling provinces were converted into gloomy deserts, and covered with the smoking ruins of towns and villages. France had scarcely begun to recover from these devastations when another Norman chief appeared at the head of a powerful army. This was the celebrated Rollo. No historical event is more interesting, nor were the consequences of any of more importance than this inroad of the Normans into Neustria ; for the descendant of their successful leader was destined to subdue England, and not only to change its laws and customs, but the manners, and in some degree the language, of the country, ††† events which even now excite our astonishment. Duke Rollo had a few years before (about 870) incurred the displeasure of Harold, surnamed Harfagre, king of Denmark and Norway, in consequence of having disobeyed a proclamation issued by that monarch, shortly after he had completed the conquest of the latter country. Being desirous of procuring repose

for his subjects, who inhabited the coasts, Harold prohibited all chieftains, under the severest penalties, from exercising any hostilities against their own country, notwithstanding which Rollo made a descent on the province of Viken, and carried off a zreat quantity of cattle. The king, happening to be in the neighbourhood, was greatly incensed at this, and instantly condemned him to perpetual banishment. Hut the decrees of sovereigns are sometimes more easily promulgated than executed, ami thus it provid in this case. Deaf to the remonstrances of his honeM ;m<l faithful rounstllors, who

represented to him the impolicy of driving from his country so powerful a man (for Hollo was the son of Rognevald or Roguald, the king's faVorite iarl, a dignity similar to that of a feudal baron), and the danger of such a measure on account of the misfortunes he might occasion should he become desperate, ??? Harold remained inflexible. Hollo, after a long contest with that monarch, having been expelled his hereditary dominions, and entertaining but faint hopes of regaining possession of them, began to look towards the more genial and inviting countries of the south, as offering him a permanent if not a superior settlement. With this view he set about collecting a large body of troops, composed of Danes, Norwegians, Swedes, and other northern tribes, who had been induced by his reputation to join his standard ; and, their numbers being augmented by several of his old subjects, he found himself at the head of a powerful army. He first sailed to the Hebrides, whither the flower of the Norwegian nobility had retired in disgust after Harold had obtained possession of their country; they immediately joined him, on which he directed his course towards England, against ???which long harassed country his first attempts were directed. But the wise and prudent chief soon perceived that in this enterprize he had but a poor prospect of success ; Alfred had now for some years been seated on the throne ; he had introduced into his dominions an order until then unknown, had rendered his subjects firmly attached to his government, and was fully prepared to repel any invader. Rollo, convinced that fewer obstacles would present themselves in that quarter, now therefore directed his

operations against France; at this time under the feeble sway of Charles the Simple. Disembarking at Walcheren; he defeated the count of Hainault, and some other nobles, compelling the countess to pay an immense sum for her husband's ran-som, lie then bent his course towards Neustria, and sailing up the Seine took possession of Rouen. Pleased with its situation, he repaired the fortifications, and thus secured an important station, whence he could march upon any part of France. The whole kingdom was thrown into consternation. Hastings remained at Chartres, and the French king, conceiving that from his knowledge of the invaders he would be the best adapted for an envoy, requested him to ascertain from Rollo what object he had in view. He received for answer that the Normans were resolved to push their conquests as far as possible. Preparation for a vigorous defence was thereupon made, but resistance proved vain ; the French were repeatedly defeated ; Evreux, Bayeux, Nantes, and other considerable towns were taken, the whole of the western districts laid waste, and Paris itself was besieged. Not to enter at length into the events of this war, it may suffice to observe that the entire cession of the greatest part of Neustria followed, and that Charles, 'being unable to make head against so warlike and politic a chieftain, thought it advisable to relinquish to him part of his dominions rather than be dispossessed of the whole. The Normans, having thus obtained possession of the most fertile and valuable portion of the kingdom, retired, it

is said, into Brittany, until their newly acquired dominions were reduced to a state of cultivation ; for, in consequence of their own repeated devastations, Neustria had been reduced to an uninhabitable desert.

Charles had an only daughter, Giselle or Gi-sela, whom he offered in marriage to Rollo; and, independently of the territory which he was compelled to surrender by treaty, ceded to him as a marriage portion a considerable tract; but when it was intimated to the Norman duke, that it was requisite he should prostrate himself at the feet of the French monarch, and acknowledge him as his supreme lord, according to the feudal rites, he peremptorily refused to submit to such a ceremony, and it was a task of great difficulty to prevail on him to allow it to be performed by deputy. Rollo was soon after persuaded to embrace Christianity, and was baptised with much ceremony by the archbishop of Rouen, in the cathedral of that city, by the name of Robert, after the duke of Paris, who stood sponsor to him : a week after that event he received the hand of the princess Giselle. Many of his chiefs and followers submitted to baptism at the same time. Thus it

was that Normandy became a separate and independent state ; and Brittany, once a kingdom, sunk into an arriere fief. This was the origin of that renowned duchy, and of its ancient dukes, whose blood, mingled with, that of the royal house of Frauce, afterwards gave monarchs to England, and from among whose subjects, Sicily received her kings !

The conquests of Rollo were slowly but securely made. Upwards of five-and-thirty years had elapsed from his first arrival, until the final cession of Neustria, during the whole of which pe-riod he was occupied in consolidating his government, and in conciliating the affections of the Normans and the original inhabitants of the country. To the latter he allowed the free exercise of their religion, and his liberality in this respect was equalled by the refined policy which he evinced in other matters. Good legislators are the only true conquerors : his regulations for the security and administration of his new dominions would have done honor to the most experienced prince of a more polished age. To defend his states against the attacks of his enemies, he erected several strong forts and filled them with veteran troops : and, his long military experience having fully convinced him of the advantages of civilised warfare, he accustomed his followers to submit to regular discipline. On his countrymen he conferred lands and seignorial rights, while the taxes which he imposed on the conquered were far from severe. He conceded to both more extensive privileges than were at that time enjoyed in any other part of France ; which encouraged the inhabitants of the neighbouring provinces to settle in Normandy. The government, after all, which Rollo established was however a sort of military aristocracy, the great body of the people having little or no authority either in framing or in ratifying laws ; but, so long as the Norman dukes remained in Ine country, they were ruled with the greatest equity ; although, after their accession to the Englisn throne, the feudal barons, having no superior at

hand to watch their conduct, committed many excesses. To repair the devastations of preceding years he paid the greatest attention to

agriculture ; and such was the extraordinary fertility of the soil, and the skill and industry of its new proprietors, that Normandy in a few years became one of the finest provinces of Eu-rope. He founded more churches and monasteries than he had destroyed ; but he limited the privileges of the clergy, rendering them dependent on him as their temporal head. The sys-tem of internal administration which he established was rigorous, and he evinced great but necessary severity in his judicial capacity. Theft was punished with peculiar rigor, the punishment being proportioned to the offence : the culprit was condemned to lose a hand, a foot, his eyes, or even his life, according to the nature of his crime, and so great was the dread inspired by the examples which he made of some notorious offenders in this way, that the crime became almost unknown. We are informed by Wace that the peasantry were in the habit of leaving their agricultural implements in the fields at night, and that if any of these were stolen, and the thief remained undiscovered, the duke always made them good. Hollo, now far advanced in years, became desirous of repose, and began to think of withdrawing from the cares and toils of government. He determined to abdicate in favor of his son William, and applied himself with zeal and diligence to the final settlement of his dominions : having had the satisfaction of establishing perfect order throughout the state, and of securing a prompt and impartial administration of justice, he resigned the government in the year 917, and died in 922, universally and deservedly regretted. He was buried in the cathedral of Rouen, where his tomb is still to be seen.

William I., second duke of Normandy, surnamed Longa-spatha or Longue-epee, assumed the reins of government on his father's abdication. Rollo having resigned the duchy to his son, with the consent of his subjects, this young prince promised to maintain the laws by which they had been always governed, as well as the statutes of his father : he in consequence did ho-mage to Raoul, regent of France, who had usurped the royal authority. All historians agree in representing him as one of the most amiable and accomplished princes of his time, notwithstanding which he fell a victim to the treachery of Ar-noul, count of Flanders, at whose instigation he was assassinated at Pequigny on the 17th of December 942. He was also interred in the cathedral of Rouen, in the chapel opposite to that which contained the remains of his father.

Richard I., surnamed the Old and the Hardy, succeeded his father while yet in infancy ; for at the time of his death he was only ten years of age. Bernard the Dane, his guardian during his minority, and he himself after he had attained his majority, were incessantly occupied in counteracting' the efforts of Louis IV. king of France, surnamed

Transmarine, and the no less vigorous attempts of Lothaire, his successor, to recover possession of Normandy. During the twenty-rive years that the late duke had reigned the

Normans had become thoroughly incorporated with the French, and had acquired their language and manners. Great advances were made in civilisation ; and the state of society must hare improved rapidly, for on his assassination his son, although a child, tranquilly succeeded him. Duke Richard, being hard pressed by Lothaire, was under the necessity of calling to his aid an army of northmen ; but his allies, not satisfied with laying waste the dominions of the French monarch, continued their devastations in Normandy, and were with difficulty prevailed on, even by the payment of large sums, to return home, and allow the two princes to come to amicable terms; for, as they truly observed, 'that was not what they came for.' Richard I. died in 996, after a long and glorious reign of fifty-four years, and was interred in the abbey church of Fecamp. He was succeeded by Richard, his eldest son.

Richard II., surnamed the Good and the Intrepid, fourth duke of Normandy, enjoyed less tranquilljty than his father, treason and intrigue t>eing during his reign often at work. Lothaire, who reigned in France when Richard succeeded, affected to consider this prince only as his lieutenant, whose duty it was to guard the frontiers of the kingdom, and therefore addressed him by the title of marquess. In consequence of this, some nobles, whom the former dukes had invested with fiefs of great dignity, thought themselves entitled to refuse doing homage for them to Richard. The count of Hiesmes, his natural brother, was of the number, and was richly punished for his temerity. Notwithstanding the singular specimen which his father had received of the friendship of the .northmen, Richard II. was also under the necessity of summoning them to his assistance. He maintained himself with difficulty against the formidable attacks of Ro-bert, king of France; and being at length in danger of losing the territory so gloriously acquired by duke Rollo, his great-grandfather, invited over the Danes from England. King Ethelred, although by no means sorry to be thus rid of them, was struck with the important effects that might attend an alliance with that warlike nation ; for, although the Normans of France and England had been separated for nearly a century, they appeared to be ever ready to uphold the interests of those whom they still considered their countrymen. He was now a widower, and turned his thoughts towards Emma, one of the daughters of Richard I. and sister of the reigning duke, who was of

exquisite beauty. He sent to demand her hand in marriage, which having been granted, she repaired to England in the year 1002, where her nuptials were celebrated. Ethelred being subsequently dispossessed of his kingdom, by Swein king of Denmark, was compelled to take refuge, with his queen and children, at the court of Normandy, where he was most hospitably received ; but on the sudden death of the Danish monarch at Gainsborough, on the 3d of February 1014, the English, desirous of emancipating themselves from a foreign yoke, invited him to return home. The king, on his arrival, acting with uncommon promptitude and vigor, shortly obliged the J)anes to quit the

kingdom ; but they soon returned again under Canute or Knute, overran great part of the country, and committed great excesses. At this unfortunate crisis Ethelred expired, on the 23d of April 1016, leaving his family and kingdom in the most dreadful circumstances. Prince Edmund, his eldest son, vigorously asserted his right to the crown, and had succeeded in obtaining possession of great part of the kingdom, when he was murdered at Oxford : the English now made no further opposition, quietly submitting to the government of Canute. The duke of Normandy, however, evinced a determination to espouse the cause of his nephews, Alfred and Edward, who were both at his court. He first sent ambassadors to Canute, to request him to cede to the two princes some part of the possessions of their ancestors. But the embassy arrived at a moment when the Danish monarch was so firmly seated on the throne that he at once and altogether refused the request. This so incensed Richard that he fitted out a large fleet, resolved to compel him, if possible, to do justice to these prince?, and embarked for England with a numerous and powerful army. He was doomed however to witness the destruction of the greatest part of his fleet during a violent tempest, a loss which he could not easily repair. Canute in the meantime, feeling convinced that the Norman duke intended to attempt the restoration of his nephews, and aware of the danger to which he was exposed from the enmity of so warlike a people as the Normans, proposed to relinquish in favor of the former,

part of the kingdom of Wessex, and made an offer of marriage to queen Emma, the widow of Ethelred, stipulating that the English crown shonld descend to the children of this marriage. These offers having been accepted, Emma once more repaired to England where she was married to Canute in 1017. .Richard II. died in 1026, after a reign of thirty years, and was buried near his father in the ab-bey church of Fecamp. He was succeeded by his eldest son.

Richard III., fifth duke, was no less exposed to the machinations of the seditious than his father; but the grief which his brother Robert caused him in taking possession of the county of Hiesmes and using every endeavour to supplant him (although his intrigues proved unsuccessful), shortened his days, and he died in 1028, having reigned only two years : some have said by poi-son, but this was never satisfactorily proved.

Robert II., surnamed by hissubjects the Liberal and the Magnificent, and by his enemies Robert the Devil, succeeded to the ducal throne. He had now attained the object of his wishes. Although his conduct towards his brother cannot but be severely condemned, his character as a sovereign commands our respect, for he proved himself a wise and just one. He acquired and preserved the affection of his subjects, and his valour caused him to be feared and respected by his enemies. It was owing to his powerful aid, that Henry I. of France took possession of the throne, notwithstanding the opposition of his younger brother Robert, who was supported by a powerful party. The French monarch repaired to Rouen to request bis assistance, when Robert first

sent to his aid 500 spearmen, and soon followed himself at the head of a large body of troops, and with them he placed Henry without opposition on the throne, and left his younger brother in possession of Burgundy. The king, grateful for so signal a service, protested that he would be always mindful of it, and immediately resigned to the duke of Normandy the cities of Chaumont and Pontoise. His protestations, however, appear to have been pretty soon forgotten. Robert’s reign offers nothing further worthy of notice, if we except the custom which his vassals had adopted of making him presents when they did homage, and the address with which he caused the principal nobles of his duchy to acknowledge his natural son, William, as their sovereign, before his departure on a pilgrimage to the Holy Land, on his return from which he died, July 2d 1035.

William II., seventh duke of Normandy, and first king of England of the Norman line, over which he reigned by the title of William I., was born in 1024, and on the death of his father was only in the eleventh year of his age. His mother, Arlotta, was the daughter of William, Rollo, or Fulbert de Croy, generally reputed a tanner at Falaise, although it is more probable that he was a private gentleman of Normandy; it is at least very singular, if such was his profession, that he should have borne the illustrious name of de Croy. His father having induced the states to swear fealty to him before his departure for Jerusalem, carried him into France to do homage to the French king for the duchy, and left him under the care of that monarch. The moment that Robert's death became known several powerful nobles, descended from the ducal family, claimed the succession, which, in the common course of things, would have devolved on the count of Arques, half-brother by the father's side of the late duke; but the states declared they would not violate the oath they had taken, and that they were determined to acknowledge William. Ambassadors were thereupon despatched to the king of France to demand the young prince. On his arrival at Rouen, Raoul de Gace, constable of Normandy, was appointed his governor, while the discontented barons, his kinsmen, broke out into open rebellion. The first claimant that appeared, was Roger de Tresney or Toeni, standard-bearer of Normandy, descended from Malahulcius, an uncle of duke Rollo : he was soon defeated and slain by Roger de Beaumont, who commanded the duke's forces. The next claimant was his uncle, William, count of Arques, and in fact the rightful heir to the crown. William put himself at the head of his army, and quickly obliged him to retreat to Arques, which he immediately invested : the king of France endeavoured to raise the siege, but was twice repulsed. After some time the count surrendered, and was sent into exile. Guy or Guido of Burgundy, count of Vernon, a son of Adelis or Alix, one of the daughters of duke Richard II., now preferred his claim, and his competitor appeared so formidable that William applied to the king of France for aid, and that monarch, either feeling compunction for having attacked a young prince already sui

rounded with enemies, to whose father he was indebted for his own crown, or for some other reasons, granted him the required assistance. Guy, being taken prisoner, was, with a generosity that reflects honor on his conqueror, pardoned and set at liberty. William, count of Montagne, and William, count of Eu, son of a natural brother of Richard II., also attempted to set themselves on the throne, but were defeated and banished. William subsequently exiled almost all his relatives by his father's side, on account of the trouble they had caused him, and, confiscating '.heir estates, bestowed them ou his mother's relations.

The Danes, although their power in England may be said to have been crushed by Alfred, still continued to infest the kingdom, until they once again obtained entire possession of it under Canute. On the marriage of that prince with Emma, it had been settled that the English crown should descend to their children ; on his death, however, Harold, surnamed Harefoot, his son by a former wife, seized upon it ; but llarthacanute or liardiknute obtained the crown of Denmark, and, on the death of his half brother Harold, succeeded to that of England. Alfred and Edward, the sons of Emma by king Ethelred, remained during the life time of their Father-in-law at the court of Normandy, but on his decease repaired to England. Alfred was treacherously way-laid near Guildford, at the instigation of Harold, and, being taken prisoner, his eyes were put out, and he was confined in the monastery of Ely, where he died. Emma, in consequence of this event, fled into Flanders, and Edward, her only surviving son by Ethelred, returned to Normandy ; she remained abroad until Harold's decease in 1039, when, on the accession of Hardiknute, she once more returned, and prince Edward quitted Normandy a second time for England, to return no more. When he ascended the English throne he followed the customs of that duchy, and introduced many of them into this country : the French language was spoken by most of the nobility, and the Norman forms were made use of in legal proceedings. Titles, bishoprics, and lands, were conferred upon several Normans ; the court became filled with them, and at last, by their influence, earl Godwin and his sons were driven out of England. But they were too powerful to be thus annihilated, and soon returning, at the head of a considerable force, obliged the king to dismiss those foreigners ; among the rest, Robeit, archbishop of Canterbury, who died in exile. Edward's afiections,however. remained unchanged. The duke of Normandy had paid him a visit during the absence of earl Godwin, and these two princes, who had always maintained the strictest friendship, ever after kept up a close correspondence. It was during this visit that the king, who had no

children (for he had abstained from all commerce with Edilha, his wife, the daughter of earl Godwin, the hatred which he bore the father having, apparently, descended to the child), secretly promised to appoint William his successor to the English crown.

But Harold, the son of Godwin, ascended the

thron* on his death. He had formerly been driven by a storm on the territories of the count of Ponthieu, who detained him, in the hope of receiving a large ransom ; having complained of this treatment to the duke of Normandy, the count was compelled to release him. William, considering this a favorable occasion to confide to Harold king Edward's intentions respecting the succession, forced him to swear that he would give every assistance in carrying them into effect ; but his guest did not consider himself bound to observe an oath so unjustifiably extorted. When William received the intelligence that Harold had mounted the throne, he was filled with indignation, and instantly despatched an ambassador to upbraid him with his perfidy.

The military renown of the Normans had, at this time, been carried to the highest pitch ; their daring enterprises had been almost universally crowned with success, and a spirit of military adventure had become very generally diffused : the great reputation that William enjoyed made every one eager to serve under his banners, and so strong was the influence which his transcendant genius had acquired over the Normans, that, when he determined to invade England, they offered of their own accord to furnish him all the aid he required. He was thus enabled to assemble in a few months a fleet of 300 vessels, and sailing from the harbour of St. Vallon, on the 28th of September, 1066, landed without opposition at Pevensey, in Sussex. Harold, who was then at York, put himself at the head of his army, and hastened to meet the invader : a sanguinary action was fought near Hastings, in which he lost his life and the Normans proved victorious. William thereupon advanced to Lon-don, which soon opened its gates, and on Christmas-day, 1066, was crowned in Westminster Abbey king of England, by the archbishop of York. He died at the abbey of St. Gervais, near Rouen, September 9th, 1087, in the sixty-third year of his age. in the fifty-second of his reign over Normandy and the twenty-first of his reign in England, and was interred in the abbey of St. Stephen of Caen, of which he was the founder. To his eldest son, Robert, he bequeathed Normandy and Maine ; to his second son, William, he left the crown of England; and to Henry, his third son, the property of his mother.

Robert III., surnamed Gambaron of Courte-Heuze, eighth iluke, succeeded on his father's death to the ducal throne: this prince was too much carried awav by bis passion fo-militai) glory to pay much attention to the general government of his dominions. lie desired to distinguish himself in the crusades to the Holy I-\nd, and, having ahsfiiU'd himsrlf on one "f those expeditions, his brothel William had the administration of Normandy After the dtalh of William Ilufus, violent dissensions arose brlween Robert and his brother Henry, which eiulul in the defeat and capture of duke Robert. \ho, after a long imprisonment, died in confuivinent.

Henry I. king of England, surnamed, in consequence of his great literary attainments, Cle-ricus or Beau-clerc, ninth duke, succetxled to UK-government of Normandy, on the death of his

brother Robert, so that England and Normandy were once again united.

Stephen of Boulogne, king of England, was the tenth duke. After the death of Henry, his uncle, Stephen, a son of Adela, one of the late king's sisters, who had married Stephen, count of Blois, took possession of the thrones of England and Normandy, to the exclusion of Matilda, his cousin, only surviving child of king Henry I.

Geoffrey Planta-Genistae or Plantagenet, count of Anjou, the second husband of Matilda, was the eleventh duke; but Eustace, son of Stephen, king of England, disputed the duchy to his death, and both competitors did homage for it to the king of France. On their decease both England and Normandy devolved on Henry II. the son of Geoffrey and Matilda.

Henry Plantagenet, second of the name in Normandy and England, twelfth duke, ascended the throne in 1151. He was the author of several important statutes ; a patron of learned men ; and it was at his request that Wace wrote his important work, entitled Roman de Rou et des Dues de Normandie, for which he was rewarded with the

appointment of canon in the cathedral of Bayeux ; but, like a true monk, he appears never to have been satisfied with what he possessed. At the end of the poem he states that it was undertaken by command of the king, who, he says, had promised him more than he had performed,

Li reis jadis maint bien me fist, Mult me duna, plus me pramist.

It might probably have been some consolation to him if he could have foreseen how many poets, possessing more merit than himself, were doomed to be neglected by their sovereigns and to live upon promises.

Richard Plantagenet, surnamed Caeur de Lion, fourth of the name who sat on the throne of Normandy, and first of the name that reigned in England, was the thirteenth duke. He did ho-mage for Normandy to Philip Augustus, king of France, at the commencement of his reign. He was also author of several important statutes.

John Plantagenet, surnamed 'Sans-terre, and who ought to have been surnamed the vile and the contemptible, first of the name in Normandy and England, succeeded his brother in all his dominions in 1199; and was the fourteenth and last sovereign duke. He unjustly deprived his nephew Arthur of his possessions in Brittany, and confined him in the castle of Rouen, where, it is supposed, he was put to death, though some have asserted that he was drowned in the ditch, into which he fell as he leaped from the walls when attempting to escape. Complaints having .been laid before Philip Augustus, king of France, he was condemned for the mur-der, and his dominions in France confiscated. They were overrun and taken possession of by Philip in an incredibly short space of time. Thus was the important duchy of Normandy finally lost to the crown of England in the year 1204, and once more incorporated in the French monarchy, from which it had been severed about three centuries.

Ldward III. made un attempt to recover it,

nnd in 1346 landed in Lower Normandy, and destroyed several towns ; he then advanced upon Paris, but, being hard pressed by the French monarch, was compelled to retreat to the northern provinces. This useless campaign, fraught with so many dangers and anxieties, was terminated by the brilliant victory of Cressy. Henry V., in 1418, renewed the attempt with more success, and obtained possession of the whole of the duchy, which was formally ceded to England in

1420. But, after having retained possession of it during thirty years, it was lost under Henry VI. in 1449.

After Normandy was reannexed to the crown of France, it gave the title of duke to the un-dermentioned French princes : ###

1332. John of France, afterwards king.

1355. Charles of France, afterwards king, by the title of Charles V.r surnamed the Wise.

1464. Charles of France, son of king Charles VII. and brother of Louis XI.

The title of duke of Normandy was also borne by the unfortunate Louis XVII. second son of the still more unfortunate Louis XVI. and Marie Antoinette of Austria, but on the death of his elder brother it became merged in that of dauphin, to which he succeeded.

We may notice in conclusion the singular circumstance of Normandy giving from the rank of her gentry a race of kings to Sicily.

In the reign of duke Robert II. Tancred de Hauteville, a gentleman of Lower Normandy, of small fortune, who had twelve sons to establish in the world, sent ten of them into Italy to seek their fortunes, and advance themselves, like true Normans, by the sword. In consequence of their merit, most of them attained the dignity of chiefs. William, the eldest, surnamed Brachia di Ferro or Iron Arm ; Robert, surnamed Guiscard (which signified in the Norman language craft or prudence), the seventh son, and Roger, were the most famous of them. Some years before that period the Normans had acquired great consideration in that country : in 1038 George Maniares, or Maniaces, was sent by the Greek emperor with a large army, to recover the territory which the eastern empire had lost in Sicily ; he was joined by a small body of Norman adventurers, and, chiefly by their aid, defeated the Saracens. Maniares, by his conduct, disgusted the Normans, but, having been recalled, Doceanos was invested with the command, and he, through his folly and rapacity, entirely alienated their affections. Being now furnished with a pretext, they attacked the imperial dominions in Italy, and Robert and Roger, after a contest of ten years, reduced Sicily, which was ceded to the latter, who assumed the title of great count of Sicily. His reign was glorious, and he displayed great wisdom in the administration of his dominions. He was succeeded by his eldest son Simon, who died soon after, and his second son Roger then mounted the throne. In 1127 he inherited the

whole of the dominions of his uncle, Robert Guiscard, and assumed the title of king. He was succeeded by his son William I. in 1154, whose reign was one continued scene of \var and trouble : his daughter Constance, having married the emperor Henry VI., carried this rich inneˆi tance to her husband.

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Robert overran and conquered Calabria, with which he was invested by pope Nicholas II., as well as all the territories in Italy and Sicily which he could wrest from Saracen or Greek. He assumed the title of duke of Calabria and Apulia; reduced most of the maritime cities in the possession of the Greeks, and finally became possessed of almost the whole tract of country which at this day constitutes the kingdom of Naples. In, 1081 he invaded the eastern empire, and afterwards the coasts and islands of Greece, but he was suddenly carried off by an epidemic

disorder, in the island of Cephalonia, in July 1085. He possessed extraordinary talents, both civil and military ; was brave and politic ; affable this brother soldiers, courteous to all, and simple in his dress and manners. But he was on the other hand rapacious, though liberal in bestowing the wealth he acquired, and his great ambition caused him to be little scrupulous as to the means with which he compassed his views. Notwithstanding his faults, he occupies, however, and very justly, a conspicuous place in history.

NORRLAND, or NORDLAND, a province of Norway, between Drontheim and Finmark, or Norwegian Lapland. It extends from 66►► to 70►► of N. lat., and has the North Sea on the west, and Swedish Lapland on the east. Its extent, including an adjacent island, is 46,000 square miles. The soil being poor, corn is cultivated but to a small extent, and the breed of cattle is small, but good; butter and cheese are exported. The majority of the inhabitants are fishermen. See NORWAY.

NORRLAND, or NORDLAND, a mountainous northern division of Sweden, comprising the provinces of Gestricia, Helsingland, Herjedalen, Medelpad, Jamptland, Angermunnland, and West Bothnia. It is generally reported as extending from 60►► to 65►► of lat., and is bounded by Lapland to the north, Middle Sweden on the south, by Norway on the west, and by the gulf of Bothnia east. A more extensive application of this name includes Swedish Lapland, making the country comprised in it extend to 68►► of N. lat., a length in all of 500 miles. By a late re-partition this province is divided into the three

governments of Umea, Hernosand,and Gefleborg, the whole containing 90,000 square miles, and 170,000 inhabitants. The mountains form, with those of Norway, the most extensive part of the Scandinavian chain. Some are entirely barren, while others are covered with thick forests of fir: they reach from 2000 to 3000 feet in altitude. The chief rivers are the Indal, Anger, Luleo, Piteo, and Calix, which have courses of from 200 to 300 miles, and often overflow, but are not all navigable. The climate is here very severe, and the corn raised insufficient for the thin population ; but a good stock of cattle is kept up, and the butter and cheese, together witli the salmon of the lakes and rivers, the skins of the animals killed in the woods, the timber they yield, and the flax, hemp, and linen manufactured, form considerable articles of export. Here are also some productive iron mines, but the difficulty of transport prevents their being wrought to much advantage. There are several towns along the coast; the principal of which is Gefle.

NORRLAND WEST. See HERNOSAND.

NOURTELGE, a sea-port of Middle Swe-den, on the Baltic, in the province of Upland, containing a manufacture of five-arms. Its inhabitants, about 1000, are also employed in the fishing and coasting trade. Thirty miles north-east of Stockholm.

NORRISTON, a town of the United States, the capital of Montgomery county, Pennsylvania,

on the north side of the Schuylkill. It contains a court-house and an academy. Serenteen miles north-west of Philadelphia.

NORTE, Rio BRAVO DEL, a considerable ri-ver of Mexico, which takes its rise in the Rodky Mountains, near the source of the Arkansaw, in lat. 40►► N., and long. 107►► 35’ W. It runs S. S. E. and falls into the Gulf of Mexico, in long. 96►► 40’ W., lat. 26►► N., after a course of 2000 miles. The sand bars in the flat country, and the mountains in the upper part, interrupt its course so that it cannot in any part be considered navigable, except for boats and canoes.

NORTH (Dudley), lord, the fourth baron of that title, was made knight of the bath in 1616, at the creation of Charles prince of Wales; and sat in many parliaments, till excluded by the republican party. From that period lord North lived privately in the country, and towards the end of his life entertained himself with books; he wrote a little tract on

economy, called Observations and Advices (Economical, 12mo. His other works are, Passages Relating to the Long Parliament , The History of the Life of Lord Edward North, the first baron of the family, addressed to his eldest son ; and a volume of Es-says.

NORTH (Francis), lord Guildford, lord keeper of the great seal in the reigns of Charles II. and James II., was a third son of the second Dudley lord North, baron of Kertling ; and studied at St. John's College in Cambridge, whence he removed to the Middle Temple. He acquired French, Italian, Spanish, and Dutch ; and not only became a good lawyer, but was well vers-ed in history, mathematics, philosophy, and music. He was afterwards made the king's solicitor-ge- neral, and was chosen to represent the borough of Lynn in parliament. He succeeded Sir He-neage Finch in the post of attorney-general ; and lord chief justice Vaughan in that of lord chief justice of the common pleas. He was afterwards made keeper of the great seal ; and in 1083 was created a baron, by the title of lord Guildford. He died at his house at VVroxton in 1685. He wrote a philosophical Essay on Music ; a Paper on the Gravitation of Fluids, in the bladders of fishes, &c.

NORTH (Frederick), earl of Guildford, lord North, &c., was born in 1732, and succeeded his father in 1790. His lordship succeeded the celebrated Mr. Charles Townshend as chancellor of the exchequer ; and in 1770, on the resignation of the duke of Grafton, was made first lord of the treasury ; in which office ho continue*!

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until the close of the American war, or rather until the formation of the Rockingham ministry, which began tiie business of peace with the colonies. He was a man of strong mental faculties, and a powerful orator; but taking the helm at a time when the king's party were unpopular, and when it was supposed that the earl of Bute was the great machine by which the cabinet was moved, he continued in that state of unpopularity until he resigned the seals. During the whole of his premiership he studiously avoided imposing any taxes that should materially affect the lower class of people. As a financier he stood high, even in the opinion of opposition : but he was fatally wedded to the destructive plan of subduing the republican spirit of the Americans. He died on the 5th of August 1792. His recollection he retained to his last moments. Perhaps no man was ever more generally beloved by all who had access to him than the earl of Guildford.

NORTH (George), F. A. S., a learned divine and antiquarian, born in London, in 1707, and educated at St. Paul's school ; whence he went to Benet-College, Cambridge, where he became A. M. In 1731 he published An Answer to a scandalous libel, entitled The Impertinence and Imposture of Modern Antiquaries displayed. This recommended him to the Society of Antiquaries, who admitted him a member, and he was soon after appointed vicar of Codicote, in Hertfordshire, where he died June 27th, 1772, aged sixty-five. He published A Table of English Silver Coins from the Conquest to the Commonwealth, with remarks.

NORTH (John), D. D., the fourth son of the second Dudley lord North, and brother to lord Francis, was born September 4th, 1645. He studied grammar at St. Edmund's Bury, and was admitted of Jesus College, Cambridge, in 1661 ; where he became conspicuous for his learning in the Greek and Hebrew languages. Having taken his degrees of A. M. and D. D., and been admitted fellow of his college, he took orders, and preached his first public sermon before king Charles II. at Newmarket, which was printed at Cambridge in 1671. In 1672 he Was chosen professor of Greek at Cambridge. He was made clerk of the closet to the king, and installed a prebendary at Westminster; and on Dr Barrow's death succeeded him as Master of Trinity College, lie died in 1683, aged thirty-eight.

NORTH, n.s. &adj. ~} Saxon, noj\□□;

NORTH-EAST, I Dan., Swed.,

NORTHERLY, adj. Teut., and Fr.

NORTHERN, adj. nord. The point

NORTH-STAR, n.s. ˆopposite to the

NORTHWARD, or I sun in the meri—

NORTHWARDS, adj. & adv. dian : north-east

NORTH-WEST, H. s. &►►(//'. | is the point be—

NORTHWIND, n. s. J tween the north

and east : north-west, between the north and

west : northerly is towards the north : northern,

in the north: north-star, the polar or lodestar:

northward, towards the north : northwind, the

wind blowing from that quarter.

This shall be your north border from the great sea ro Alount llor. Numbers xxxiv. 7.

The northern wind his wings did broad display At his command, and reared him up to light.

Faerie Queene.

More unconstant than the wind ; who wooes Even now the frozen bosom of the north ; And being angered puffs away from thence, Turning his face to the dew dropping south.

Shakspeare.

If her breath were as terrible as her terminations, there were no living near her, she would infect to the northttar. Id.

Mislike me not for my complexion,

The shadowed livery of the burnished sun.

Bring me the fairest creature northward born,

Where Phoebus' fire scarce thaws the icicles,

And prove whose blood is reddest. Id.

Proud northern lord, Clifford of Cumberland. Id.

Going northward aloof, as long as they had any doubt of being pursued, at last they crossed the ocean to Spain. Bacon.

John Cabot, a Venetian, the father of Sebastian Cabot, in behalf of Henry the Seventh of England, discovered all the north-east coasts hereof, from the Cape of Florida in the south, to Newfoundland and Terra di Laborador in the north. Heylin.

The clouds wrre fled, Driven by a keen northwind. Milton.

If we erect a red-hot wire until it cool, and hang it up with wax and untwisted silk, where the lower end which cooled next the earth doth rest, that is the northern point. Biowne.

The bathing places, that they may remain under the sun until evening, he exposeth unto the summer setting, that is north-icest . Id.

Fierce Boreas issues forth

To’ invade the frozen waggon of the north.

Dryden.

Northward beyond the mountains we will go, Where rocks lie covered with eternal snow. Id.

A close prisoner in a room, twenty foot square, being at the north side of his chamber, is at liberty to walk twenty foot southward, not walk twenty foot northward. l.ocke.

The inferiour sea towards the southeast, the Ionian towards the south, and the Adriatic on the north-east side, were commanded by three different nations. Arbuthnot.

The northerly and southerly winds, commonly esteemed the causes of cold and warm weather, are really the effects of the cold or warmth of the atmosphere. Derham.

When the fierce northwind, with his fiery forces Rears up the Baltick to a foaming fury. Watts

On every nerve

The deadly winter seizes, shuts up sense, And o'er his inmost vitals creeping cold, Lays him along the snows a stiffened corse Stretched out, and bleaching in the northern blast.

Thomson.

Ausonia soon received her wondering guest, And equal wonder in her turn confessed, To see her fervours rivalled by the pole, Her lustre beaming from a northern soul. Young.

NORTH, CAPE, the most northern point of the island of Mageroe, and of Europe, on the coast of Norway. It is not remarkable in any way except for being the utmost limit of Europe in this direction, though situated in an island. It is, however, four degrees to the south of the north point of Nova Zembla. Long. 25►► 0′ 45″ E., lat. 71►► 11' 30' N.

NORTH HEMPSTEAD, a post town, the capital ot Queen's county, New York, on Long Island Sound ; nine miles east of Jamaica, and twenty

two east of New York. The township is indented by three large bays, and between two of them, en a headland, called Cow Neck, there is a lighthouse. Population 2750.

NORTH ISLAND, an island in the Atlantic, at the mouth of the Great Pedee River, near the coast of South Carolina. Long. 79►► 3' W.. lat. 33►► 20' N.

NORTH MOUNTAIN, a ridge of mountains which extends north-east through Franklin and Cumberland counties, Pennsylvania.

NORTH RIVER, a rivei of North Carolina, which runs into Albemarle Sound, long. 76►► 10' W., lat. 36►► 6' N.►►► 2. A river of Massachusetts which runs east into the sea, soutli of Scituate. ►►►

3. See HUDSON RIVER.

NORTH RIVER, a branch of Fluvanna River, in Virginia.

NORTH-WEST TERRITORY, a territory of the United States of North America, bounded north by Upper Canada and Lake Superior, east by St. Mary's River and lake Michigan, south by Indiana and Illinois, west and south-west by the Mississippi, which separates it from Louisiana. Long. 84►► to 96►► W., lat. 41►► 45' to 49►► 37' N. ; about 360 miles from north to south, and 450 from east to west; coutaining about 147,000 square miles.

But few settlements have as yet been made in this country, and the United States have not above 300 troops stationed here. The Menomonies and the Winnebagoes, and parts of some other Indian tribes, inhabit this territory. ►►► The chief rivers are the Mississippi, Ouisconsin, Fox, Monomonie, Chippeway, Coppermine, Rocky, Montreal, St. Croix, and St. Louis.

This country has a considerable variety of soil and surface. There are, on many of the rivers, alluvial bottoms of a rich soil. The uplands south of the parallel of St. Anthony's Falls are generally good, interspersed, however, with tracts of wet land, rocky prairies, and extensive districts of-a light sandy soil. The tract of country whence rise the sources of the rivers Mississippi, St. Lawrence, and Red River of lake Winnipeg, is wet and swampy. Between the Ouisconsin and Rocky Rivers are lead mines, which are said to be as extensive as those in the Missouri territory. Copper mines are also found in this territory.

NORTH YARMOUTH, a post town of Cumberland county, Maine, on Casco Bay ; twelve miles N. N. E. of Portland, 127 N.N.E. of Boston. Population 3295. It is a large township, and contains five houses of public worship, three for Congregational ists, one for Baptists, and one for Methodists : an academy ; a social library ; a paper mill ; and has some trade in the fisheries.

NORTHAMPTON, a borough and market-town of England, the county-town of Northamptonshire, is situate on an eminence near the river Nen, or Nine, fifteen miles southeast from Newport-Pagnell, and sixty-five and a half north-west from London, and is a great northern and western thoroughfare. It formerly contained seven churches within the walls, and two without, but almost the whole town was burnt to the ground in 1675, and it now contains only four

parishes. The principal church, All Sainly, stands nearly in the centre of the town, at the meeting of four spacious streets. It has a portico of eight Ionic columns, with a statue of king Charles II. on the balustrade, erected in commemoration of his gift of 1000 tons of timber, and seven years chimney-money towards repairing and beautifying the church : the in-side is well finished, and it has a good organ and set of chimes. The church of St. Sepulchre, supposed to have been built by the knights templars, from a model of that erected over the holy temple in Jerusalem, is of a circular form, having a cupola in the middle, supported by eight Norman pillars. Here are also places of worship for Baptists, Quakers, Presbyterians, Independents, and Method ists. The streets are regular, and chiefly built of a kind of freestone, and slated. The sessions-house is a handsome building of the Corinthian order. At the east end of the town, near St. Giles's church, is a general infirmary, which has of late years been rebuilt, and much extended. It is 220 feet long, and forty-five broad. The street called the Drapery, though not the longest, is the hand-somest in the town. At the east end is the Woodhill, an open square of about 600 feet, around which are neat private houses and handsome shops. It has one of the finest market-places in Europe. The stalls and shambles are temporary. The horse market held here is deemed the finest in the kingdom for saddle and harness horses. Northampton was anciently surrounded by a strong wall, and had a castle, which was held for the parliament in Cromwell's time. The outer walls, at the bottom of Gold Street, are standing. At the north end of the town stood a priory of Cluniacs ; in the west suburb an abbey of black canons; and near the south gate a priory of Augustmes, besides several other religious houses. The county gaol was finished in 1793, on the principles of Mr. Howard. Here is also a town gaol, an elegant shire-hall, a theatre, and many charitable foundations. Barracks were erected here in 1796. The town has sent two members to parliament since the reign of Edward I. It is governed by a mayor, two bailiffs, four aldermen, twelve magistrates, a recorder, town-clerk, common council, and forty-eight burgesses. The mayor is the returning officer. In 1796 the altered, or, as it is commonly called, new charter, was obtained. According to a provincial newspaper, it was brought from London by the mayor, who was conducted from the bridge through the town ' with great ceremony, amidst the congratulations of the townsmen, on the re-establishment of their ancient privileges, and the security and protection afforded to the poor.' The mayor, recorder, or his deputy, and one justice, are necessary to form a sessions ; they have power to try offenders in criminal cases; but tnry -eldotn exercise

this beyond trying petty larceny. Northampton gives tiie title of earl to the family of Compton. Within one mile an 1 a half of the town on the London road is one of queen Eleanor's crosses.

The historv of this town contains various in-

teresting events. It is decidedly of Saxon origin, and was frequently burnt by the Dants. In 1064 the North jmbrians, under earl Morcar, took possession of it, and, in the genuine spirit of warriors, murdered the inhabitants, burnt the houses, ' carried away thousands of cattle and multitudes of prisoners :' in the reign of the Confessor here were sixty burgesses in the king's lordship, and sixty houses: at the time of the conquest fourteen were waste ; but at the time of the survey there were forty burgesses in the new borough.

Simon St. Liz, a noble Norman, founded the castle here, ' the town of Northampton, and the whole hundred of Falkely (Fawsley), then valued at ►►40 a year, being given to him to provide shoes for his horses.' From this period it became considerable, was frequently the seat of parliaments, and on various occasions has been honored with the royal presence. In 1106 the Saxon chronicle states that Robert, duke of Normandy had an interview here with his brother king Henry I., to accommodate the difference then subsisting between them. In his twenty-third year that monarch arid his court kept the festival of Easter at Northampton, with all the pomp and state peculiar to lhat age ; and, in the thirty-first year of the same reign, a parliament was held in this town, when the nobles swore fealty to the empress Maud.

In 1138 king Stephen, in order to attach the clergy to his interest, summoned a council to meet him at Northampton, at which all the bishops, abbots, and barons of the realm attended, for the purpose of making promotions in the church. In 1144 Stephen again held his court here.

When the celebrated statutes of Clarendon were established in the 10th of Henry II., and archbishop Becket refused his assent to them,

another council of the states was convened at Northampton, before whom the archbishop was summoned to appear, and answer to the charges of contumacy, perjury, 8cc., which should then be exhibited against him. In the twenty-sixth year of this , monarch's reign a convention of the barons and prelates was assembled here to amend, confirm, and enforce the constitutions of Clarendon. By this council the kingdom was divided into six circuits, and justices itinerant were assigned to each ; from the formation of this convention, and the advice of the knights and burgesses being required, as well as that of the nobles and prelates, it has been considered as the model by which parliaments have been constituted in succeeding times : the king of Scotland, with the bishops and abbots of that kingdom, attended this council. In the contests between John and his barons it was stoutly defended on the part of the king against Robert Fitzwalter, fanatically styled ' Marshal of the army of God and the holy church,' who, for wan* of military engines, was obliged to raise the siege. This post was deemed of such importance that, after the charter of liberty was extorted from John, the constable for the time being was sworn (by the twenty-five barons appointed as a committee to enforce its execution) to govern the castle according to their

pleasure: as soon, however, as the perjured prince obtained the ascendancy, he appointed Fulk de Breans, a valiant but base-born Norman, to the command. In the tenth year of his reign, having been displeased with the citizens of London, John commanded the exchequer to be removed to Northampton ; and, in his thirteenth year, in a council of nobles convened here, the king met the pope's nuncios, Pandulf and Durand, in order to adjust those differences which had long subsisted between him and the holy see.

Henry III., during his reign, frequently made Northampton his residence, and honored it with particular marks of his favor ; and, in the war between that king and the barons, it was alternately besieged and possessed by each of the contending parties. About this time a shortlived university existed in this town, which arose from the following occurrence : ❖❖❖ The pope's legate, in 1238, happened to visit the university of Oxford, and took his residence at the neighbouring convent of Osney. He was one day respectfully waited on by the students, who were insolently refused admittance by his porter. At length, after intolerable provocation from the clerk of the kitchen, a Welsh student drew his bow, and shot him dead. The resentment of government, and the fear of punishment, caused the first secession of the students to Northampton and other places. In

succeeding years fresh riots arose, and occasioned farther migrations. At length these migrations were made under the royal sanction, who imagined that the disturbances arose from the too great concourse of scholars at one place. It is said that some thousand students settled at this period in this town. Either from resentment of former proceedings against them, or from the Usual dislike youth have to governing powers, they took the part of the barons ; upon which they formed themselves into companies ; had their distinguishing banner, and, when Henry III. made his attack on Northampton, proved by far his most vigorous opponents. After the king had made himself master of the place, he determined to hang every student ; but, being at length appeased, he permitted them to return to Oxford, under the conduct of Simon Montfort, and abolished the university of Northampton. A similar emigration took place from the university of Cambridge; but was soon superseded.

In the year 1279, on Good Friday, the Jews residing in this town crucified, as we are told, a Christian boy; but he fortunately survived their cruelty ; and for this alleged atrocity fifty of them were drawn at horses' tails, and hanged. In the preceding year 300 had been executed for clipping the coin.

Edward I. frequently resided here in great splendor, and on his death a parliament was held once more at Northampton to settle the ceremonial of his burial, and the marriage and coronation of his successor. In the reign of Edward III. several parliaments were likewise held at Northampton, and, in the eleventh year of that monarch's reign, the mayor, bailiffs, and burgesses, obtained the royal license to hold au annual fair for twenty-eight days. In 1160

Henry VI made Northampton the place of ren-NORTHAMPTON, a county on the east side of dezvous of his forces. The strength of his army Pennsylvania, hounded north by Wayne county encouraged his spirited queen to offer battle to oaQt K-4k~ rk~1 ###* ## ##' ### ######.*##

his young antagonist, the earl of March, then at the head of a potent army. A conference was demanded by the earl, and rejected by the royal party, who marched out of the town, and encamped in the meadows between it and Har-dingstone. The battle was fierce and bloody ; but by the treachery of Edmund, lord Grey of Iluthven, who deserted his unhappy master, victory declared in favor of the house of York. Thousands were slain or drowned in the Nen ; among them the duke of Buckingham, earl of Shrewsbury, John, viscount Beaumont, and lord Egremont. The duke was interred in the church of the Gray-friars, others of the men of rank in the adjacent abbey of De la Pre ; and others in the hospital of St. John in the town.

Northampton was visited by queen Elizabeth in 1563, and by king Charles I. in 1604 ; it was ravaged by the plague in 1637 ; and in 1642 it was seized by the parliamentary forces, by whom it was fortified ; the south and west bridges being converted into draw bridges, and additional works thrown up in the defenceless places. A foss and bastion of the north-east works yet remain. The markets are on Wednesday, Fri-day, and Saturday ; the latter is the most considerable. Fairs, July 20th, April 15th, May 4th, August 5th and 26th, September 19th, November 28th, and December 19th.

NORTHAMPTON, a post town, the capital of Hampshire, Massachusetts, on the west bank of Connecticut River, opposite Hadley, with which it is connected by a bridge, 1060 feet long ; eighteen miles north of Springfield, twenty-one south of Greenfield, forty east of Pittsfield, forty-two north of Hartford, ninety-five west of Bos-ton. Population 2631. The compact part of the town is delightfully situated, and contains a very elegant brick court-house, a stone jail, a very handsome and spacious meeting-house (100 feet by seventy-six), a bank, an insurance office, a valuable cabinet of minerals and natural curiosities, a printing office, from which is issued a weekly newspaper, and seventeen trading stores. A fine rivulet passes near the centre of the town, on which are erected numerous mills and manufactories, among which are a paper-mill, two tanneries, one of which has been accounted inferior to none in the country, and two woollen manufactories, at one of which are finished twenty, and at the other forty-two yards of cloth daily.

Northampton is one of the most pleasant and agreeable towns in the state; many of its houses are elegant ; the situation of a number of them is much admired, and the surrounding scenery is romantic and beautiful. In the vicinity of the town are Mount Tom and Mount

Holyoke. It is an excellent, agricultural town, and has fertile meadows of several thousand acres, which are annually enriched by tlie spring floods.

NORTHAMPTON, a post town of Montgomery county, New York, eighteen miles north-west of Ballaston-Spa, fifty north-west of Albany. ††† 2. A town of Burlington county. New Jersey ; seven miles southeast of Burlington. Population 4171.

east by the Delaware, E. S. E. by Bucks county, south-west by Berks county, and north-west by Lucerne county. It is watered by the Delaware and Lehigh. Population 38,145. Chief town Easton.

NORTHAMPTON, a county on the east side of Virginia, bounded on the north by Accomack county, on the east by the Atlantic, on the south by the entrance into Chesapeake Bay, and on the west by Chesapeake Bay, west 257 miles. Population 7474. Slaves 3350.††† Also a county in the north part of North Carolina. Population 13,087. Slaves, 7258.

NORTHAMPTONSHIRE. The inhabitants of this county in the time of the Romans wen; a part of the Coritani. During the time of the Saxon Heptarchy Northamptonshire belonged to the kingdom of Mercia. It takes its name from Northampton ; so called in contradistinction to Southampton. This is an inland county, situated between 52†† and 53†† N. lat., and between the meridian of London and 1†† 20’ W. long. It is bounded on the north by Leicestershire, Rutlandshire, and Lincolnshire ; on the east by Cambridgeshire, Huntingdonshire, and Bedfordshire ; on the south by Buckinghamshire and Oxfordshire ; and on the west by Warwickshire. The form is oblong ; and its greatest length from the south-west at Aynho (not far from Brack ley) to the north-east part of Peterborough Fen is sixty-five or sixty-six miles in a straight line ; and the breadth across the county from the east of Yardley Chase to the entrance of Leicestershire, near Welford, about twenty-four miles. It is divided into twenty hundreds, 316 parishes, one city, and eleven market towns. It is included in the midland circuit, in the diocese of Peterborough and province of Canterbury.

The climate of this county is esteemed equal to any in the kingdom ; to which has been ascribed the large number of seats of the nobility and gentry found in it. The soil is fruitful both in tillage and pasturage. A large portion of this county is upon a calcareous or limestone substratum, in many places pure enough for burning into

lime ; in others much incrusted and intermixed with argillaceous and other extraneous matter; and often abounding in a great variety of marine substances. The soil of the natural meadows, and of the fen land north of Peterborough, is a dark colored sediment, often very rich and productive, but in many places much injured by stagnant water, also liable to damage by floods in the grass seasons. But the greatest proportion of the land of this county is if a strong heavy staple, applied to the culture of beans and wheat before enclosure ; and when enclosed eenerally laid down in permanent pasture. Of the surface of this county Mr. Pitt observes, that the general aspect comprehends great beauty and variety, there being very few instances of dead extensive flats. The greater part is agreeably varied by waving hills and gradual declivities, with intervening vales, and rivulets murmuring down towards tlie rivers, forming an interesting scene of vale and upland

and presenting to the agriculturalist not an inch of impracticable land, but what is or may be rendered useful ; the hedges and trees growing with luxuriance.

The county is well watered by its brooks and rivers, interspersed with woods and seats. According to the above writer, five rivers take their rise in this county ; the Nen or Nine, Welland, Ouse, Learn, and Charwell ; and what is very remarkable, considering the different courses which they take, the sources of the former and of the two latter are said to spring out of one hill, near Catesby and Hellidon, in the hundred of Fawsley. The Charwell, after running for several miles along the western boundary of this county, enters Oxfordshire and joins the Thames at the city of Oxford. The Learn joins the Lesser Avon near Warwick, and afterwards the Severn, falling into the western Ocean. The Nen is the most considerable of these rivers : after taking its rise as above mentioned it is quickly joined by a number of other small streams and brooks in the vicinity of Daventry, and continues its course from thence to Northampton, where it becomes navigable, and forms a considerable river ; extending its course along

the east side of the county, it passes Wellingborough, Thrapston, Oundle, and Peterborough, and from thence, by the cut called Morton's Learn, to Wisbeach, below which it discharges itself into the German Ocean. The Ouse, which is one of the principal rivers in the kingdom, takes its rise from a spring called Ouse Well, near Brackley in the hundred of Sutton. It quickly leaves the county ; and, after taking a circuitous course through part of Buckinghamshire, touches again upon it at Stony Stratford ; whence it passes to Newport Pagnell and to Bedford ; from which last place it is navigable to the sea at Lynn. Inland navigation has not been much attended to here. The Oxford Canal passes through the parishes of Aynlio, Boddington, Braunston, and Barby, all on the western verge of Northamptonshire. At Craunston it joins the Grand Junction, which crosses the western side of this county. The Union Canal commences at, and joins the river Soar navigation, on the west side of Leicester ; and for nearly three miles, that is, to Ayleston, runs with a few deviations in the course of that nver ; from Ayleston, running a southerly courSv,, it passes Glen Parva, Wigston, Newton Har-cnurt, Wistow, and Saddington, where is a tunnel of forty chains ; from this tunnel, making an elbow, it passes Foxton, where is another tunnel of forty-eight chains, passing which is the branch to Market Harborough.

The Leicestershire and Northampton canal was intended to pass by East Farndon and Oxen-don Magua, through a small tunnel of thirteen chains at the latter place ; and thence to a short distance from Kel marsh, through another tunnel of forty-five chains, passing by Maidwell, Lam-port, Hanging Houghton, Brixworth ; and, parallel %vith that branch of the river Nen called ihe Northern River, and so to Spratton, Pisford, Chapel, Brampton, Kingsthorp, Dallington; and on the west side of Northampton to join tlie river Nen navigation, and the branch of the (???land Junction Canal; completing a course of

forty-three miles and three quarters, from Leicester to Northampton. The vegetable produce of this county has no peculiar character. The mineral productions may be classed as follow : 1. com-mon clay, brick clay (argill communis) ; 2. lime stone (calx lapis) in great plenty almost all over the county ; 3. marl (marga friabilis) ; 4. freestone for building; and, 5, slate, schistus.

Within the county are several large crown forests and two chaces, over which the king lias particular rights. 1. The largest is the forest of Rockingham, in the northern part of the county ; extending over 1 1 ,000 acres. Here the land belongs in many instances to individuals ;

but the royal deer have the range of the whole. 2. Whittle-wood Forest contains about 5000 acres; and is stocked with about 1000 deer; a proportion of which, according to ancient prescription, are killed annually for the royal household and the great officers of the government. The timber here is reserved for the use of the navy; but, from the reports of the commissioners, appears to have been very negligently preserved. 3. Salcey Forest, about 1850 acres, is a tract formerly covered with most valuable timber, but it has lately furnished but a very small proportion. The crown enjoys only the right of pasture and timber trees in these districts, and the mixture of opposite interests diminishes the productiveness of the property to all the parties. The underwood does not belong to the crown, nor the entire pasturage The individuals who own it cut the former down every twenty-one years, and during the following nine years it is enclosed ; for the remaining twelve it is said to be open for the deer to feed on. The ranejership of these forests is hereditary in the dukes of Grafton.

Of Roman antiquities here are the Wall ing and Ermine Street Roads, the Arbury boroughs, and Rainsbury camps ; and tesselated pavements at Cotterstock, at Stanwick, and in Woodford Field. There were more than sixty monasteries and other religious houses in this county at the period of the Reformation ; whose traces may now be seen.

This county sends eight members to parliament r *viz.* 4 for the shire ; 2 for the county-town of Northampton ; 2 for the city of Peterborough ; Brackley and HighamFerrars were disfranchised in 1 832. It has had the honor of giving birth to the following distinguished characters : ††† Vincent Alsop, nonconformist minister. Died 1703. ††† Dr. Caleb Ashworth, a dissenting minister. Born 1709. Died 1774. ††† Lewis Atterbury, a divine. Born at Milton, 1631. Died 1693.††† Edward Bernard, astronomer and critic. Born 1638. Died 1718. ††† Thomas Britton, the well-known musical small-coal man. Died 1714. ††† Esther Cha-pone, an elegant poet and moral writer. Born 1726. Died 1801.††† Henry Chichely, archbishop, founder of All Souls College, Oxford. Died 1443. ††† -The celebrated poet John Dryden. Born 1631. Died 1700. ††† John Fletcher. Born 1576. Died 1625.††† Samuel Foster. Bom 1600. Died 1652.††† John Friend. Born 1675. Died 1728.††† Thomas Fuller. Born 1608. Died 1661. ††† Francis Gastrel. Born 1662. Died 1725. ††† Dr. John Gill. Born 1697. Died 1771.††† Dr.

NORTHUMBERLAND.

Francis Godwin. Born 1561. Died 1633. ††† James Harrington. Born 1611. Died 1677. ††† James Hervey. Born 1714. Died 1758. ††† Sir John Hill. Born 1716. Died 1/75.††† Dr. William Paley. Born 1743. Died 1805.††† Thomas Randolph. Bom 1605. Died 1634.††† Daniel Whitby. Bom 1638. Died 1725-6.††† Leonard Welsted. Born 1689. Died 1749.††† Dr. John Wilkins. Born 1614. Died 1672.††† Sir Ralph Winwood. Born 1565. Died 1617.

The manufactures are shoes, lace (principally at Northampton and Wellingborough), and woollen stuffs, particularly tammies and calimancoes ; horse-whips are also made in considerable quantities at Daventry.

NORTIIERN LIGHTS, the same with AURORA BOREALIS, which see.

NORTHUMBERLAND. The Saxons denominated this district Nbrthan-Humber-land, evidently from its situation north of the Humber. It was anciently far more extensive than at present, including Yorkshire, Durham, Lancashire, Westmoreland, and Cumberland ; and formed a distinct kingdom during the Heptarchy. Anterior to the Roman invasion it was inhabited by the ‘)stadini. After the Romans had taken possession of the island it was included in the province of Maxima Caesariensis.

Northumberland is situated between 54†† 51’ and 55†† 48* N., and 2†† 27’ W., from London. It is bounded on the east by the German Ocean, on the west by Roxboroughshire and Cumberland, on the north by Berwickshire, and on the south by Durham. Its form approaches to an irregular triangle, and its length from north to south is sixty-four miles, and breadth forty-eight miles, containing 1980 square miles, or a circumference of 225 miles. It is divided into six wards; three of which are situated in the western part of the county, and include the whole of the mountainous district, with a considerable portion of enclosed cultivated country : the other three adjoin the sea coast. Norhamshire and Islandshire are situated at the northern extremity of the county. Bed-lingtonshire is situated at the southeast corner of Castle-ward, bounded on the east by the German Ocean, on the north and south by the rivers Wansbeck and Blyth, and contains about thirty square miles. This county is included in the northern

circuit, in the province of York, and in the diocese of Durham. In the six wards there are three boroughs and nine market-towns. Of the 1,267,200 acres it is said to contain, about two-thirds are said to be capable of cultivation. The rental in 1809 was ––916,587.

The climate is said to be, in regard to temperature, subject to great variation. Upon the mountains snow will often continue for several months (may frequently be seen there of a considerable depth) when there is none in the lower districts. The weather is very inconstant, but mostly runs in extremes. In the spring months the cold, piercing, easterly winds are most prevalent. Rain is of very little use while these winds continue, from the great cold which always attends them. The mild western and southern breezes rarely take place before June; they are certain harbingers of rain and vigorous vegetation, and are the most prevailing winds through the sum-VOL. XV.

mer and autumn. In the latter season they often blow with tempestuous fury, and are particularly injurious to the com. The greatest falls of snow or raiu are from the south or southeast; and, ––––whenever there is a very high west wind, it is a certain sign that a great quantity of rain is falling to the westward, in Cumberland and Roxburgh-shire.

The soil and surface are described as consisting of a strong, fertile, clayey loam, which occupies the level part of the country along the coast, and reaches as far up in general as the great post-road. Sandy, gravelly, and iry loam, or what in this county is generally Tailed turnip-soil, on the banks of the Tyne, from Newburn to Haltwhistle, on the Coquet, about and abo––e Rothbury, on the Aln, from its mouth to Aln-wick, and down Tweedside; but the greatest quantity of this kind of soil is found in the Vales of Bresmish, Till, and. Beaumont. The hills surrounding the Cheviot mountains are mostly a dry, sharp-pointed, gravelly loam. Moist loams, on a wet, cold, clayey bottom, occupy a laree portion of this county. This soil prevails most in the middle and southeast parts of the county. Black peat earth is the prevailing soil in most of the mountainous districts, and is found in many places through the lower parts of the county. The surface of Northumberland is marked with great variety. Along the sea-coast it is nearly level ; towards the middle the surface is more diversified, and thrown into large swelling ridges, formed by the principal rivers. The western part, except a few intervening vales, is an extensive scene of open mountainous district. Of the mountainous districts those around Cheviot are the most valuable, being in general fine green hills,

thrown into a numberless variety of forms, enclosing and sheltering many deep, narrow, se-questered glens. They extend from the head of Coquet Down to Allenton, thence northward to Prendwick, Branton, Ildeston, Wooler, Kirknew-ton, and Mindrim, and occupy at least an area of 90,000 acres. The other mountainous districts lie chiefly on the western part of the county, some of which adjoin the county of Durham ; but the largest portion extends from the Roman Wall to the river Coquet (with a few intervening vales), and to the moors north of Rothbury. They are not marked by any striking irregularities of surface, being in general extensive, open, solitary wastes, growing little else but heath. The whole county is regarded as a superior school of agriculture, and gentlemen's sons* are frequently sent hitherto be instructed in fanning. Almost all the branches of rural economy, for one or more of which other districts are celebrated, being often to be found here combined, and conducted upon the same farms. The Leicester sheep, for instance, and the short-horned cattle of Durham and Yorkshire, are both in great perfection; and the turnips of Norfolk are cultivated upon the drill system of Scotland ; while a regular alternation of tillage and grazing is followed ; and every scientific improvement in farming regularly investigated and adopted. At ChilliiiL'ham, nearBelford, is said to be the only herd of wild cattle remaining in this country. T'ie principal rivers are the T\ ne, the Ulyth,

the Wansb□□sck, the Coquet, the Aln, and the Tweed. The innumerable streams which lose their names in the above spread in every direction through the county. The Tyne branches into nearly two equal streams a little above Hex-ham, which are distinguished by the names of North Tyne and South Tyne. The main branch of North Tyne is the Reed, and of South Tyne the Aln. The principal streams which empty themselves into the Tyne, east of Hexham, are the Devil's Water and the Derwent; and the river Till is the only stream of any note which empties itself into the Tweed in this county. The South

Tyne rises between Cross-Fell. The North Tyne commences on the borders of Scotland, and receives the Reed below Bellingham. The Tweed rises in Tweedale in Scotland, at a place called Tweed's Cross. The Aln rises in the hills west of ' Alnham Towne.' The Coquet rises among the Cheviot Hills ; and near Allenton church it is joined by the Allen, which issues out of Kid-land. The Wans rises near Sweethope, above Kirkwhelpington. At Mitford it meets the Fort, and passing through the fine meadows of the valley of Newminster, and the old woods of Bothal, it enters the sea at Cambois. Akenside, says Mr. Hodgson, wrote the first copy of his Pleasures of Imagination at Morpeth ; and in the edition of that poem, in 1770, compliments this river with the following apostrophe : ###

O ye Northumbrian shades, which overlook The rocky pavement and the mossy falls Of solitary Wansbeck, limpid stream ; How gladly I recall your well-known seats, Beloved of old, and that delightful time When all alone, for many a summer's day, I wandered through your calm recesses, led In silence by some powerful hand unseen.

Northumberland, if not wholly destitute, is extremely barren of the conveniences of inland navigation by means of canals ; yet the mineral productions of this county are very valuable. In the mountains on the south-west, lead ore, and the ore of zinc, abound, particularly towards Allendale. Iron ore is found in many parts; stone marl near Tweedside, shell marl in Glendale Ward, and sandstone and freestone are found in almost every quarter. Excellent grindstones are exported : but coal may be said to be the staple of the county. It is found through the greatest part of it in very large quantities, particularly in the lower district. Mr. Hodgson says that in eight years (from January 1, 1802, to December 30, 1 809) it a ppeared that 4,71 3,476 Newcastle chaldrons, or 12,490,707 tons of coals were exported from the Tyne, and probably as much more has been sent from Sunderland and consumed in Northumberland and Durham, the same coal field extending across the Tyne. This is all of the kind called ' caking coal,' of the best quality, which melts and runs together in the fire. Of the coal at Bamborough, Islandshire, and Glendale Ward, the seams are in general thin, and the quality inferior. It is chiefly used for home consumption, and for burning limestone. Calculations, or rather conjectures, have been made as to the extent of the coal tract, and the period of its probable exhaustion ; but there is a gi-e.it difference of opinion on this last point,

soue estimating that the supplies must cease in 500 years, some not in

less than 1000, and some holding that it is inexhaustible.

Northumberland returns 9 members: for the county 4, Newcastle-upon-Tyne 2, Berwick-on- Tweed 2, andTynemouth 1.

The following eminent characters owed their birth to this county: ††† Mark Akenside, poet and physician. Born at Newcastle-upon-Tyne, 1721. Died 1770. ††† Lord Collingwood, naval commander. Born at Newcastle. Died 1805. ††† Mary Astell, theological writer. Born at Newcastle, 1668. Died 1731. ††† John Bate, an eminent Greek scholar and author. Died 1429. ††† Rev. John Brand, an eminent antiquary, author of the History of his native town ; also of that curious work entitled Antiquitates Vulgares, &c. Died 1806. ††† William Elstob, an eminent and learned divine. Born in Newcastle, 1673. Died 1714. ††† John Horsley, a learned antiquary. Died 1731 . ††† Joseph Richardson, a lawyer and poet. Born at Hexham, 1774. Died 1803.††† John Rushworth, author of Historical Collections. Born about 1607. Died 1690.††† Rev. George Walker, F.R.S. a political, theological, and mathematical writer of distinguished merit. Born about 1735. Died 1807.

The commerce of this county is derived principally from the coal trade. Berwick exports com, flour, oatmeal, shelled barley, potatoes, fish, eggs, wool, &c. There is no staple manufacture. The chief are those connected with the coal trade and mines, as ship-building, roperies, forge?, foundries, copperas, coal tar, soda or marine al-kali, white lead, potteries, glass-works, &c. Hex-ham has a large glove manufactory, and there is some cotton.

NORTHTJMBERLAXD, a post-town of Saratoga county, New York, on the Hudson ; eleven miles north-east of Ballston Spa, forty-four north of Albany. Population 2041.

NORTHUMBERLAND, a county in the central part of Pennsylvania, bounded north by Lycoming county, east by Luzerne county, sontli by Berks, Dauphine, and Mifflin counties, and west by Centre county. It is watered by both branches of the Susquehanna. Population 36,327. Chief town Sunbury. 2. A county of Virginia, west of Chesapeake Bay.

NORTH-WEST PASSAGE, a supposed passage to the Pacific Ocean through Hudson’s Bay or Davis’s Straits, the discovery of which has been frequently attempted without success ; but to-ward which some considerable advances have of late been made. See POLAR SEAS.

NORTH WICH, or NORTHWICK, a small town of Cheshire, long

celebrated for its rock-salt and brine pits. The stratum of salt lies about forty yards deep ; and some of them are hollowed into the form of a temple. The descent is through a dome, the roof supported by rows of pillars about two yards thick, and several in height: and, when illuminated with a sufficient number of candles, they makes a most magnificent appearance. Above the salt is a bed of whitish clay (argilla caerula-cinerea), used in making the Liverpool earthenware ; and in the same place is also dug a good deal of gypsum, or plaster-stone. The fossil salt is generally yellow, and semipellucid, sometimes debased

with dull greenish earth ; and is often found, but in small quantities, quite clear and colorless. The town is situated near the Dane, and is tolerably handsome : it has a market on Friday. It is ten miles north-east of Chester, and 174 north-west of London.

NOR WALK, a post-town of Fairfield county, Connecticut, near the mouth of a small river of the same name, on Long Island Sound ; it is thirty-one miles W. S. W. of Newhaven, forty-five north-east of New York. Population 2983. It is a pleasant town, and has an academy, iron works, and some trade to New York and the West Indies.

NORWALK ISLANDS, a cluster of small islands in Long Island Sound, near the coast of Connecticut. Long. 72►► 22’ W., lat. 41►► 4’ N.

NORWAY (Dan. Norge ; Swed. Norrige, or country of the North), is an extensive maritime kingdom of Europe, at present united to Sweden ; having been transferred to that power from Denmark by the interference of the allied powers in 1815.

From its southern extremity, Cape Lindesnes, or Lime Cape, called by English sailors the Naze, to the North Cape, its northern extremity, it extends through upwards of 13►► of lat. ; the former being in lat. 57►► 58′ 48″, and the latter in 71►► 11′ 30″. The broadest part is in the south, from lat. 58►► to near lat. 63►►, and forming an oblong of nearly 350 miles by 250; northward of this, all the way to the high latitude of the North Cape, the Norwegian territory is a long narrow tract, having the Northern Ocean on the west, and Swedish Lapland on the east.

All along the lengthened west coast of Norway the eye rests on a vast chain of mountains, in the variety of whose shapes nature seems to have exhausted all her forms. Many of them are vast insulated masses of rock lining the coast, whose summits may be seen twenty leagues, and serve as landmarks to the seamen. The vars or low islands are preferred by the sea mews (gulls), whose eggs form a valuable part of the provisions of the Norwegians, and hence the possession of an egg-var is considered of as much consequence as a field of wheat in more fertile countries. The puffins prefer the elevated and solitary rocky rslands.

! The fundamental formation of all these islands and mountains is gneiss regularly stratified and dipping considerably to the east. This regularity seems to authorise the supposition of their having received their present formation by some grand and sudden perpendicular convulsion, which either projected these vast masses upwards, or sunk the intermediate grounds which occupied .he spaces now forming sounds and fiords. In some new spots near the coast are found tracts of morass, under whose peat surface is a stratum of sand, broken sea-shells, and marine plants, thirty feet above the present level of the sea, by which it is probable these lands were covered posterior to the grand formation of the mountains and islands. Some of the mountains have glaciers, from which great masses occasionally break off, and in their descent, dislodging vast Llocks of rock, carry desolation into the valleys. In 1756 on0 of these masses precipitated itself

into the Langefiord, which is twelve ir.iles lotitj and two broad, and sixty fathoms deep, the efiect of which was so great that the waters of the fiord rose suddenly and swept away houses 200 paces from the shore.

The islands even towards the south of Norway are entirely bare of trees, from the influence of the sea air. Towards the north on th►► main land, beyond 65►►, fruit trees are no longer found, and berry-bearing bushes are alone met with ; and 67►► is the limit of the Norwegian spruce fir, beyond which the only trees are the Scotch fir and birch. It is also observed that the western fiord in 65►► is the northern limit of oysters. Within these islands the main is deeply penetrated by inlets named fiords, some of which run fifteen to twenty leagues into the land, and have depths of 300 to 400 fathoms, ten leagues from their entrance. In these fiords ships find shelter from all winds ; and towards the south, where there is a constant internal navigation to and from Bergen, when the depth in the fiord is too

great for anchorage, iron rings are fixed into the rocks two fathoms above water for the vessels to make fast to. Even at the northern extremity of Finmark these fiords never freeze, which is doubtless owing to the constant motion of the waters by the strong currents. One of these which sets out of the Baltic, uniting with that of the British Sea, strikes against the south coast of Norway, and runs round Cape Lindesnes, and along the coast to the north, even to the North Cape. This current is extremely strong among the islands, flowing through the channels with the velocity of the most rapid river, and, when it meets the ebb tide in long and narrow inlets, the opposite forces produce a perfect cataract, or whirlpool, of which the Maelstrom, on the coast of Nordland, is the most celebrated, its vortex carrying down and dashing to pieces against the bottom whatever comes within its influence. It is most furious when strong north-west winds blow during the ebb tide, and then its noise equals that of the greatest cataracts. In summer, when these winds are infrequent and moderate, the Maelstrom is little dreaded, and at every turn of the tide it is tranquil for about half an hour, and may be crossed without danger in a boat. The Saltenstrom, at the entrance of Salten fiord, is a similar whirlpool, and is even considerc i by the natives more dangerous than the Maelstrom.

The vicinity of the mountains to the sea prevents the rivers here from having any length of course. The most considerable on the west coast of Norway are the Namsen, which falls into the Namsen fiord in about 64►► 30', and by which quantities of fir timber are brought down for exportation. The Guul and the Orkedal are next in consequence, and both fall into the long fiord of Drontheim.

The most remarkable islands and mountains regarding the coast from north to south are, the northern Fuglo? or rock Iluygens of the English, a solitary rock distant from any other island, and rising abruptly to the height of 2000 feet. Arena: and Yanoc are still more elevated, the two }<aks of the latter exceeding 3000 feet. Rmgvadsce is a large and lofty island . The Storhorn, south ct

Tromsce, rises frightfully steep and rocky, surpassing in terrible grandeur every thing that surrounds it. Senjen, a large island, separated from the main by Grysound, shoots up on its north side to Alpine peaks. Faxfieldt, on the main, is an enormous isolated mountain, and one of the highest beyond the polar circle, rising almost perpendicular from the base to the summit, which has upwards of 4000 feet elevation.

The Loffodden islands are a long mountainous chain, separated from the main by the great sound named West Fiord, celebrated for its grand cod-fishery. Except the West Fiord, there is scarcely any point of the coast of Norway, it is said, which the cod have not deserted at different times. This gulf has on the contrary retained its celebrity uninterrupted since the reign of Harold Haarfager, in the ninth century ; an advantage probably owing to its repose, whence the fish, who at spawning time require tranquillity, prefer it at this time, when alone they visit it. They collect in millions on two or three banks, between January and March, and the fishing season is over by April, the fish then returning to the ocean. Formerly the Nordlanders used lines only on this fishery, but of late years nets have become general. Hindoe is the largest of this chain, and Vaagoe is the central rendezvous of the fishing-boats. Stegen rises in three enormous peaks, 2000 feet high, and united by a natural wall of rock. The southern Fugloe and Landegode tower above their neighbours like two gigantic teeth, and down the sides of Fuglce two cataracts are precipitated from a height of 1000 feet. Nearly opposite these, on the main, is the Kun-nen, a vast projecting mass of mountain, ascending almost perpendicularly from the sea to the height of 1000 feet, and, except in a very few spots, without even a footpath at the base. It increases its elevation as it goes inland, until at the distance of four miles from the sea, its greatest height is 4000 feet. From one of its cliffs a glacier descends to an immediate contact with the sea.

A few miles beyond the polav circle Rodoe presents its high rocks like a vast Gothic ruin rising from a green surface, and is a very striking object. Trance, cut by the polar circle, has four enormous peaks. Lovunnen, one of the outer islands, is a singular solitary rocky cliff, the resort of innumerable puffins, which are taken for their feathers. Dunnoe rises in two naked horns; Vegoe has also two singularly abrupt tops 2000 feet high, and Alsten has seven peaks, called the Seven Sisters, elevated far above the line of perpetual snow, their height being more than 4000 feet. Torgehotten is a vast insular pyramid 2000 feet high, and Oyskavalenfeldt, on the main, rises to

3200 feet.

The first place worthy of notice on this coast, after passing the North Cape, is Hammerfest on Qualce or Hvalce (whale) Island, one of the three places of the north erected into towns in 1787. Its progress, however, has been slow : it contained, in 1815, but nine houses and forty inhabitants ; and though it enjoyed the privilege of exporting the produce of the fishery direct to foreign ports, it had riot yet taken advantage of it. Alten, at the mouth of the river of the same

name, is a neat village of twenty houses, amongst green fields and lofty firs. The river has a good salmon fishery, which commences at midsummer. Tromso3, on a small island, erected into a town in 1787, is more considerable than Hammerfest; but, like it, it has not hitherto taken advantage of its privileges. Hundholm, though without these privileges, has the prospect of surpassing it, from its more southerly situation, and the greater facility of its harbour. Narvoen, on a dreary island, has only a few storehouses to receive the merchandises brought to an annual fair in July. Vardelsore is celebrated for its gloves. Levanger resembles a small town, fifty families having settled here in consequence of an annual fair in March ; and Stordalshalsen has a considerable, and almost the only manufacture of earthenware in Norway.

Droutheim, the third city of Norway, is at the mouth of the river Nid, and has a handsome appearance, though the buildings, both public and private, are generally of wood. Its cathedral, founded by St. Oluff, was of marble, and exceeded in size, as well as in magnificence, every thing of the kind in the North. Besides fir timber, Drontheim exports the copper of the mines of Rceras. Its trade employs about 500 vessels annually.

Chnstiansund is a small town in 63►► 10’, as is Molde farther south ; both export the produce of the fishery.

Bergen, which long was the capital of Nor-way, and still claims that honor, is situated semicircularly on the shore of a small valley, over-topped towards the land by high mountains, and well fortified towards the sea. It is well-built, all the public buildings and many of the dwelling houses being of stone. Bergen is the grand depot of all the produce of the fisheries of Finmark and of the Nordlands; 126 Nordland yachts, each manned with ten or twelve men, being seen at one time in its port.

Stavanger exports fish and some timber, and contains about 2500 inhabitants.

The south coast of Norway, commences at the Lindesnes or Naze. It is the extremity of a . rocky peninsula, joined to the main by a narrow isthmus. Its projection into the sea exposes it to the continual fury of the waves, which cover it with a salt vapor, that prevents any other vegetation than some creeping plants thinly scattered among the crevices of the rocks. This frightful solitude is, nevertheless, inhabited by fishermen and pilots, who derive from the scathe means of procuring the comforts of life, and are remarkable for their vigor and longevity. On the Cape are two lighthouses, which can be no where more necessary, as it is surrounded by rocks, of which those named the Bishop and Clerks, five miles south of the point, are the most to be dreaded. From the Naze to the east the shore continues to present a rampart of elevated barren and dreary rocks. Its rivers are, in general, impeded by cataracts; the most consider-ble is the Glommem, the largest river wf Norway, which issues from a small lake in the Alpine ridge of Dovrefieldt, and after a course of 100 leagues falls into the gulf of Swinesund. In many parts it is from 100 to 500 yards wide; it-

waters are beautifully clear, and it has several falls, of which that called Sarpen, near its mouth, is the most considerable, being sixty feet perpendicular. The Laugen, the Louen", the Drammen, the Mandal, and the Nid, also empty themselves into the Scagerack and Categat. None of them are navigable, and they are all subject to inundations, but they turn many mills and fertilise the country.

Proceeding to the east from the Naze, at the distance of five miles, we meet with Mandal at the mouth of the river, which exports a considerable quantity of salted and smoked salmon, esteemed the best of Norway. Three leagues farther isChristiansand, the fourth town of Norway. It is well built, and has agood road, besides a convenient place for ships to winter in in the mouth of the River Torvedal, a little to the east of the town. In 1799 it exported 150 cargoes, orabove 7000 lasts of timber, besides salt fish and iron. The receipts of the sea custom-house amount to 14,000 rix dollars per annum. To Christiansand succeed Fleckerce Island, the sound between which and

the main forms the most capacious and secure harbour of Norway; Arendal, built in a marshy situation, on piles, and intersected by canals ; Risoer, Kragerce, and Skeen, a small thriving town.

Stavaern or Fredericks-vaern is a small town, protected by a fortress on an island ; its port is capable of receiving large ships, and it has a building-place for gun-vessels.

Laurwig, containing 3000 inhabitants, is finely situated on the river Louen : it exports a great deal of iron from the foundries in its neighbourhood. Some leagues east of Laurwig is the Gulf of Christiania, which penetrates twenty leagues, and has several branches, some spreading into lakes and bays, while others resemble winding rivers, or artificial canals, cut through rocky defiles. The shores present a picturesque variety of rocks, wooded eminences, valleys, meadows, &c. The entrance of the gulf is pointed out by Faerdar Island, on which is a light.

Christiania, at the head of the gulf, twenty leagues from the sea, is the capital of Norway, the residence of the viceroy, and the metropolitan see. It is situated on a fine bay, in a fertile and well cultivated country, and is divided into three parts. 1. The city proper, which was founded in 1624, by Christian IV., when Apsloe the ancient capital was consumed by fire, and it has three suburbs; 2. The fortress of Aggers-huus ; and, 3 The ancient city of Apsloe, or Anslce, in which is the episcopal palace. The city is well built ; the streets being at right angles, each forty feet wide. The castle of Ag-gershuus is built on an eminence to the west of the city ; it is an ancient work, having been besieged by the Swedes in 1310 ; but its fortifications have been successively augmented, and it has accommodation for a garrison of 1000 men. The port of Christiania is fit for the largest vessels, having thirty to forty feet depth close to the quay. The channels up the gulf, though they require a pilot, are not difficult or dangerous. The exports are very considerable in fir planks and rafters, pitch, tar, soap, iron, copper, and alum.

In 1799 it exported 179 cargoes, or 15,396 lasts of timber, valued at ––82,500 ; iron for ––12,000 ; alum for ––2750 ; and copper for ––1000. It has 136 saw-mills, which cut 20,000,000 of planks annually, each twelve feel long, and two inches and a half thick. Its manufactures are glass and coarse woollens, and linens; and it builds a considerable number of merchant-vessels for sale. On the Gulf of Christiania are several little towns or villages, where vessels load tim-

ber; such are on the west shore Toensberg, Holmstrand, the three towns of Tangen, Stromsce and Bregnaes, situated on the river Dram, whence they have received the general name of Drammen. On the east shore of the gulf is Frederickstad, at the mouth of the Glommen, a small, but the most regular fortress of Norway. Its ramparts have a circuit of three-quarters of a mile, and it contains 1500 inhabitants. Near Frederickstad is the fortress of Kongstein, on a very elevated rock, with a garrison of thirty men. Moss, above Frederickstad, is finely situated ; it has 1200 inhabitants, and exports large quantities of iron from its extensive foundries. Above Moss, on the same side of the gulf, is Drobak.

East of the gulf of Christiania is a deep inlet, named Swinesund, separating Norway and Swe-den. It commences by an outer basin, communicating with an internal one by a strait, in some part so narrow that ships' yard-arms almost touch the high rocky shores. On this inlet, and at the mouth of the Tistendal, is Frederickshall, where Charles XII. lost his life. The falls in the river render it unnavigable, but its mouth forms a small port, where gun-vessels are built. The town enjoys the privilege of depot, no duty being paid on transit merchandise. Its proper commerce consists chiefly in the export of planks, which are sawed by thirty-six mills on the river.

Nature has filled all the numerous pi:lfs anJ bays of the Norwegian seas with abundance offish ; but these do not seem to content the inhabitants, who (see our article KRAKEN) deal in wonderful tales respecting sea-monsters, serpents, mermaids, &c. Abstracting what is exaggerated from these accounts, as captain Tuckey lias justly observed, we should most probably find the kraken an overgrown whale; the sea-snake an enormous polypus : and the mermaid some variety of the seal tribe.

The generally rocky and unproductive soil, and the severity of the climate of Norway, allow it but few resources \nagriculture; but this want is in some measure compensated by its mines of iron and copper, among the richest of Europe, and by its pine forests which afford timber, masts, pitch, tar, and potash, while a still more inexhaustible source of wealth is found in its fisheries. The exports of these objects, and of some tallow, butter, horses, horned cattle, silver, of its mines, Prussian blue, &c., more than compensate the imports, of which corn is the most considerable and most indispensable, and which it receives from Denmark, Prussia, Courland, and Livonia.

The great cod, herring, mackarel, hallibut, and arctic shark, are the chief objects of export, as fish. The great cod fis'.iery is carried on

alonˆ

742

the coast, from Skude naes to the North Cape, but particularly in the west fiord, within the Loffodden Islands, where it employs between 3000 and 4000 boats, beside 300 Norway yachts and large vessels, and 20,000 persons. The grand rendezvous is at Vaagoe, in February ; the produce is estimated at 16,000,000 of fish, worth 600,000 dollars, though the fishermen are generally peasants, and ignorant of the best man-ner of fishing, as well as deficient in capital, to elevate this branch of national industry to the height it is susceptible of. The fishery commences in February and ends in April. The fish is prepared in various manners ; that called flak fish is dried on poles in the open air, after cutting off the head and splitting it down the back. The round or stock fish is also dried in the air, but is not split. The klip fish is the species of cod called torsk, salted and afterwards dried on the rocks. Wet fish is the salted cod of our markets packed in barrels. The livers of the cod afford a good oil ; 400 livers giving a tun of oil, and 200 fish a ton of roes, which are salted.

The herring fishery of the Nordlands, south of the Kunnen, occupies some thousands of persons, between August and the close of the year ; but the principal herring fishery is on the south coast of Norway, during the spring and summer. Mackarel, though abundant, is only salted in small quantities ; and the hallibut is almost entirely consumed in the country, either fresh, or cut in pieces, slightly salted, and dried in the air. The arctic shark is taken for the skin and liver ; which latter affords a large quantity of oil. Whales frequently follow the shoals of herrings and other fish into the gulfs ; but it is forbidden to molest them, as it is thought they drive the fish towards the shores.

The Norway lobster fishery is very productive, particularly near Stavanger and Mandal, from spring to midsummer. The English and Dutch took off these fish in well boats, in which they were kept alive, to London and Amsterdam. The English to the amount of 20,000 to ‘30,000 annually. The rivers of Norway abound in salmon, which, salted and smoked, affords a considerable object of export. The pine timber exported from Norway consists of planks, rafters, beams, masts, laths, &c. The Norway planks are more esteemed than those of America or other northern countries ; for, the pine trees growing in a rocky soil, the wood is more firm and compact, and less liable to rot than that of trees which grow on a fat or sandy soil. The red pine (Scotch fir), and the white pine (Norway spruce), are the two species

that afford planks. A great part of the trees are cut in the interior, and, being stripped of their branches, are abandoned to the rivers, which convey them to the fiords, where they are sawed into planks by water mills. More than three-fourths of the export of pine wood is made from the Gulf of Christiania, and principally from the town of Christiania, and the three towns on the Dram, which have but one custom-house.

Internally Norway is divided into four governments or dioceses, *viz.* Aggerhuus, by much the largest; Chrigtiansami, Bergen, and Drontheim, a long track, extending to the north. The last is

succeeded by Norrland, also a ong narrow pro vince; and the whole is terminated byFinmaik, or Norwegian Lapland, forming the northern extremity of Europe. The extent and population of these provinces are : ???

Divisions.

Extent in English square miles.

Population.

Bailiwics.

Aggerhuus . Christiansand Bergen . . Drontheim . Norrland and Finmark .

Total .

37,327 14,877 14,356 22,858

71,582

390,000 140,000 150,000 170,000

80,000

7 3 2

1*

161,000

930,000

17

A return giving somewhat more than ten inhabitants for the square mile in the three southern provinces, between seven and eight in that of Drontheim, and little more than one in the inhospitable regions to the north. The towns are uniformly small and thinly scattered. We have mentioned the principal ones, which are naturally on the coasts.

No country in Europe presents grander scenery than this. From the great central chain oi mountains which divides it from Sweden various branches diverge east and west. About the sixty-third degree of latitude this range divides into two branches. One enters Sweden, stretches towards the southeast, and gives a mountainous character to that part of the country. The other runs obliquely from the point of separation, towards the southern extremity of Norway. North of this division the whole chain preserves a position nearly parallel to the western coast. The appellation of Lang-fieldt, or long mountain, has been given to the southern part of the Norwegian chain ; Dovrefieldt to the central part ; and Kiolen to that which skirts the borders of Norwegian Lapland. Many of the highest summits have also obtained particular names. The highest points in this range, as in many others, are near the middle, from which they decline towards each extremity. The loftiest sum-mit is in the sixty-second degree of latitude, and forms a kind of central point, from which the ramifications proceed. It is here, in the principal chain of the Dovrefieldt, that the pyramidal Sneeh'attan rises to more than 8000 feet above the sea : very few of the other summits are more than 6000 feet, and some do not exceed half that altitude. Dr. Clarke says, ' It is the peculiar character of the Norwegian mountains to combine the grandeur of Alpine scenery with the dark solemnity of the groves of Sweden, and the luxuriant softness of the vales of Italy.'

We are tempted to subjoin a description of one of the sublime and almost romantic scenes of this country from the pen of a Norwegian clergyman, as it appeared in the Edinburgh Philosophical Journal for October, 1823. It depicts his endeavour to reach a farm in his parish which no preceding pastor of the district had ever visited.

‘ On Sunday the 12th of June, 1818, after divine service, I set out from my manse in Aar-dalannex, in company with a number of people who had been at church, to Aardal’s Water. This lake is about three-quarters of a mile long (more than four English miles), and at the broadest half a quarter (about three-quarters of an English mile), enclosed on both sides by lofty mountains, which, from their steep and sometimes perpendicular hanging sides, forbid all approach by land. The lake is thus the only and the common communication between those who live above it and the other parts of the district of Aardal. There were many boats of us in company, the most of which strove with great exertion to row past one another. They are excellent rowers ; and this passage to and from church never takes place without this sort of contest, the only object of which is the honor of winning. We pushed on, and were run on the beautiful Farnses, where the river Utledal, which, by a course of six miles from where it rises in the mountains of Guldbrandsdal, runs through Utledal, Vettie’s Giel, Svalemsdal, and Farnaes, and empties itself by seven mouths.

‘ It was already evening, and pretty dark ; I therefore took up my night’s quarters at the farm-house of Vee, a pretty large farm, which has an interesting situation on the south side of the river Utledal, not far from Farnses. There my appointed guide was already waiting for me, a houseman (a sort of subtenant in Norway), who was well acquainted with the family at Vettie. We set out on our road early in the morning, and, as this was at first over fine even plains, we mounted on horseback. In the neighbourhood of Vee we passed a mighty waterfall, which, from a side dale called Rosdale, rushes down in one fall of 150 fathoms. Farther east is Val-dersdal, so called, because in a stretch of four miles (about twenty-seven English), it goes up lo the mountains of Valders. Through this dale runs the river Thya, coming from the lake Thya, which here descends in a large fall, forming three cascades. Over its mouth is carried a bridge. A little farther on in the vale, on the other side of Utledal River, the course of which we follo%v the whole way, you see a rocky mountain called Moekamp, lying east and west, as if it were sunk between the far

higher mountains on each side. Round the foot of this lie a cou-ple of farm-houses, and several housemen's places. From the River Thya you come on a very high sand-hill, under which lies the farm of Moe. When you have toiled up this difficult, and very steep hill, you come to Sualem-hill, a little mountain ridge lying east and west, and consisting of entirely naked slippery rocks, on which it is both difficult and dangerous to ride. You now come to the fine plain land of Sualem, which, of considerable extent, stretches on to the farm of Jelde. You have here got about half a mile from Farnses, and you begin to perceive that the Giel is near. ###

' Nature now assumes a severe character; her smile totally vanishes ; the dale contracts itself closer together ; the black mountain masses tower higher up on both sides, casting abroad their melancholy shadows. Before you come to

the farm-house of Jelde, you pass a hridge over the River Jelde, which, coming frorr *. very high pasture-glen belonging to the farm, gushes down in a fall of about 200 fathoms. Every thing is gigantic and threatening. It is nature's grand style. Small objects disappear, and the heart beats with the anticipation of approaching dan-ger. At Jelde, you do well to dismiss your horse, and trust to your own legs. It will now too be of importance to provide yourself with an additional guide. At a short distance from the dwelling house of Jelde farm this frightful way begins. The entrance to the Giel is altogether worthy of it. You climb up over the hill of Jelde. This is a projecting out-corner of the mountain, consisting of granite, which, with an inward bend, hangs over the river which washes its foot. It is thus impossible to find a lower road, as this precipice forms the bank of the river. It is a severe exertion to climb this steep and difficult path at such a height, and constantly on the brink of precipices. It is probably this hill which has fixed the height of the path in the Giel itself; for, otherwise, you see no reason why it should have been cut out, at such a height, on the side of this frightful wall of rock, that the person who falls over it must be dashed to pieces, before he reaches the surface of the water. When you have reached the top of this hill, you turn round to the right hand, and enter into the Giel itself, by a bridge of pliant trunks of trees, laid over with birch-bark, and turf and gravel, that all swing under your feet. The mountain here hangs a little over the passenger's head, and you willingly incline to it as to a friendly support, to avoid seeing, and, if possible, to avoid thinking of the abyss you are swinging over, but of wlikih the gravel thrown down by the motion of the bridge is all the way putting you in mind. You are now in the Giel.

Traveller, God be with you !

‘ The path here is not broader than that a per-son can just stand on it with both feet beside each other. Sometimes you have only room for one foot ; nay, at times, from the quantity of loose earth and small stones which you may well suppose are frequently tumbling down here, and covering the whole path, you find no place at all to stand on, but must, with your foot, in a man-ner scrape out such a place in these loose materials, which here lie over the surface of the whole precipice, the upper part of which forms a very sharp angle with your body, while the part below approaches frightfully near to a perpendicular line. About half a quarter of a mile on in the Giel, on the north side of the river, high up towards the summit of a mountain, there opens on you a cross valley, the remarkable Afdal. Tile houses on a farm which is here stand on so steep a slope, that, while the under-beams rest with one end on the ground, to have a horizontal position, they must be supported on the opposite side, by a wall of four ells in height (eight feet English). The fields, too, lie so steep, and so near the fearful precipice, that no perse., unaccustomed to it would venture to set a foot on them. And when, from the Giel, you si ◆◆◆ < > their urass fields, which hang, rather than lie over the deep below, and which are ever)’ yeai

mowed with a kind of scythe, wrought by one hand, you can scarcely conceive the desperate courage which coolly plies its task where an abyss seems open to swallow the fool-hardy man. Through a dale above the houses runs the river Afdal, which rises from the summits of the mountains called the Young Harlots. It runs past the farm at a distance of about thirty ells ; and, at about 150 ells from it, with a noise like thunder, tumbles over the precipice in a tremendous fall. The violence of this, and the agitation produced by its rushing over, is such, especially in summer, that the house continually shakes ; and every fluid which stands in an open vessel exhibits a constant tremulous motion. The walls, and the windows which are next the river, are always wet, from the vapor ascending from the fall. They

told me that this fall was 200 fathoms high, and when you look down to the abyss below, and then raise your eye to where the river issues from this lofty vale, you can scarcely call it in question.

4 Beside the fall in the hard granite precipice which it washes, they have mined a rut, I can-not call it a way, though it serves for one, broad enough for one man ; or, at most, a little well-trained horse, but not beside one another, to go upon it. This rut, the roof of which is just so high that a grown up person can stand upright in it, is the only way to the farm-house till you get up to a considerable height. It reaches not, however, the whole way. There is a gap, which is filled up by pieces of timber, joined together, of six or seven ells in length, one end of which rests on this rut, the other on a projection of the mountain, which likewise serves as a support to a bridge which goes over the fall. In these pieces of timber are cut notches, which serve for steps ; and in going up these notches while you see through the timbers the foaming cataract under you, and are involved in its mists, he must be a native of Leirdal who does not then feel that his life hangs on a few inches of slender tree. It is a matter of course, that neither this wooden path, nor the bridge itself, nor the rut in the side of the rock, are provided with any kind of rail or defence. A Leirdaller knows not the name, has not the conception of giddiness. He falls as other people do, although he stands where they would fall : he is dashed to pieces like them, but this comes from his inconceivable rashness, and from his not having wings. Of the ten years I have now been here, not one has passed without instances of persons being killed by falling over precipices. It is so much one of the common modes in which people die that it awakens no particular sensation. They believe, however, that the spirits of these persons go about after death, and they have a particular name by which they distinguish them from other ghosts. When the farmer in Afdal brings any thing to his house, when he comes to the river he must take it off the horse, and, letting him go loose before, he and his servants must carry every thing upon their backs.

‘ The farther we advanced in Vettie’s Giel our road became more frightful. At one time you were stopped by snow that had tumbled down, and where it was only by passing quickly over

the loose heaps you could avoid sliding down the steep, at once to be dashed against the rocks and to be drowned : ††† next you stood horrified at the sight of a wall of ice, the remainder of a fro-zen current, by which all farther advance seemed to be rendered

impossible. But for this Civind had prepared himself. With his axe he cut in the clear solid ice a notch, in which he set one foot, then another in which he set his other foot, and in this manner continued to cut and go forward till he had reached the other side. The rest of us followed in the steps which he had thus cut. You must put on resolution; there is nothing else for it. With the utmost caution, your eye fixed steadily on the point where you are to tread, you set forward foot by foot, without stopping to draw your suppressed breath. For more than half a mile (more than three English miles), we went forward on the brink of a perfect abyss, in this manner, sometimes passing masses of snow not yet melted, sometimes those huge frozen mirrors which hung almost perpendicularly from the summit of the mountain to the gulf below, and orer which the axe only, by steps scarcely a hand breadth, could form for us a dangerous path. A slip, au unsteady step, or giddiness it-self, which always threatens to overwhelm the unaccustomed traveller, and in a moment the torrent becomes the grave of your mangled carcase. But such is your whole course through Vettie's Giel, on a path where it is not often you can set down both feet beside each other. When overcome by the violence of the exertions I had to make, I stopped a moment. This rest, so far from being refreshing to me, was full of horror. It was better to go on, however exhausted. In doing so your thoughts were so occupied with the place where you might find some footing, that you had but little time to observe the grimaces with which death seemed every where to gape around you. But set yourself down, you cannot avoid seeing yourself sitting on the brink of an abyss ; above you the high mountain ridge hanging over your head, below the more frightful steep sinking perpendicularly from your feet : on the opposite side of the Giel, the wildest torrents tumbling down hundreds of fathoms ; whilst at the bottom the river, foaming and roaring with a deafening sound, rushed on with the rapidity of an arrow, and the road you had to go bent still far upon the sides of the precipice which hung over it : in short, you saw nothing but nature in her terrors : I involuntarily shut my eyes ; my heart beat, and, that I might not be overpowered by these sensations, I stood up, to expose myself to new dangers. I asked my guides if any body had ever come to mischief on this way. They recollected only one person, who, with a knapsack of birch-bark on his back, by a false step had tumbled over from about the very spot where we were standing. From an irresistible apprehension that I might be the second,! pushed forward immediately from such a place, but yet I found no safer way.

‘ It began now to rain, and as the part of the path on which we were was considered as dangerous, from stones that tumble down, we made

all the speed we could. The bottom of the Giel began at last to widen a little ; and at Holifos.

about half a quarter of a mile from Vettie (three quarters English), it becomes about 150 paces broad. In other places it is never above thirty ells broad, and in some places not more than six or seven. Here my gmd*e Civind left me, and went back alone with his axe, of which he had made such good use, telling me that now all the difficulties of the way were past ; and they were so in comparison of those we had come through. Hbliefoss is a fall in Utledal River of no great height, but of a force which you scarcely find in any other fall, and accompanied with a noise which deafens the ear. A mountain rock has here set itself fast in the bottom of the Giel : the river has been forced to dig itself a narrow passage between tins rock and the high mountain precipice, between which it rushes forward with such irresistible violence, that stones thrown into it, or tumbling from the side of the mountain, are carried down on its surface.

‘ It rained now so hard that the water ran across our path : I quickened my pace to reach the end of this fatiguing and dangerous excursion. With all my haste, however, I could not escape being thoroughly wet. The path now descended gradually towards the river. The mountain, to the side of which, as to a wall, we had been, as it were, fastened the whole way, now turned a little off from us, leaving a broader though an irregular way. On a sudden it goes off entirely to the right, opening a new side valley, and, be-fore I knew where I was, I stood on the fields of Vettie, only a little above the surface of the river. Heavy with my wet clothes, dropping with sweat, and exhausted by violent exertions, I was glad to reach the houseman’s dwelling which lay nearest us, there to repose a little, under cover, before I should atempt to mount the long and high hill on which stood the farm-house.’

Here he passed the night, and adds, ‘ I had learned from the goodwife how they carry their children from this place to church. I was curious to learn of her husband how they got the dead carried from it to the

church-yard. It is impossible that two people could go beside one another in the Giel ; and I could not conceive that a coffin could be placed on horseback. He gave me the following account : ††† The dead body, wrapt in linen, is laid on a plank, in which are bored holes at both ends, to which are fastened handles of cord. To this plank the body is lashed, and is thus carried by two men, one be-fore and another behind, through the Giel, till they come to the farm-house of Selde, where it is laid in a coffin, and carried in the common way to the church-yard. If any one die in win-ter, at a time when the bottom of the Giel is not passable, or in the spring or harvest, they endeavour to preserve the body in a frozen state, which is seldom difficult, till it can be carried off in the manner I have just mentioned. Still more singular was the method which the eood man told me was employed several years ago to convey a dead body to the grave, from a houseman's place in Vortnelien. This place lies in Utledale, which borders with the fields of Vettie. It has a most frightful situation deep in the Giel, by the side of the river ; and, like Vettie, has no other road

but a small steep path, on the side of the most dreadful precipices. As the inhabitants of this place had been often changed there had been no deaths here. It happened at last, for the first time, that a young man of seventeen years of age died. It never occurred to them to think how they should get him carried to the grave, and a coffin is prepared for him in the house. The body is laid in it and carried out ; and now, for the first time, they perceive with amazement that it is impossible in this way to get on with it. What is to be done ? Good counsel is here precious. They leave the coffin as a memento mori at home, and set the dead body astride on a horse : the legs are tied under the horse's belly, ††† a bag of hay is well fastened on the horse's shoulders, to which the body leans forward, and is made fast ; and in this manner rode the dead man over the mountains to his resting place in Forthuus Church, in Lyster, ††† a fearful horseman !'

Near the southern extremity of Norway is the lake Mioss, or Miosen, which exceeds fifty miles in length, but is very narrow, except in the central part, where it may be twenty miles broad. It contains an island about ten miles in circuit, which is fertile in pasture, wood, and grain. The long and narrow Ran-sion is situated north-west of Mioss. It is nearly fifty miles long, but not more than three in medial breadth. This lake, which is situated on the Norwegian Alps, through which the whole current of the Ljusdal flows, is considered by Dr. Clarke as one of the most magnificent in Europe, and as exceeding all others in its combination of rural scenery with the sublime objects of nature. '

Mountains,' he observes, ' islands, bays, promontories, broken shores, towering forests, hanging woods, sloping fields, cottages and farm-houses, with all the flood of waters, light and life about it, make it, perhaps, the grandest and most perfect association of the kind existing.' Tyri is also a beautiful sheet of water, situated between Ran-Sion and Christiania. It forms an expanse nearly fifteen miles each way. Its borders are cultivated and pleasant, and backed with high mountains. Further north, and near the confines of Sweden, is Foemond, exceeding thirty miles in length, by about eight at its greatest breadth. This lake is embosomed in mountains, and situated nearly 3000 feet above the level of the sea. Many other lakes exist among the northern mountains of Nor-way, but they are too little known to be correctly described.

The climate of this country is not so severe as that of some others in the same latitude ; and the air is generally clear and healthy. On the coast the atmosphere is often less cold than in the interior of Germany: but fogs, wind, and rain are of frequent occurrence here. In sum-mer the length of day greatly counterbalances the shortness of the season, and the corn ripens rapidly. In Norrland and Finmark the sun remains above the horizon for sev ral weeks together, and is of course invisible in winter for a corresponding period : but the dreariness of this scene is, however, greatly lessened by the brightness of the snow, reflected from the mountains, the brilliant aurora borcalis, Jkc. Tornea.

situated at the extremity of the Bothnian Gulf, and nearly in 66►► of lat, has a much milder climate than many other places in a lower latitude. On this subject, M. Von Buch, who was here in the autumn of 1807, says ' The greatest part of September was now past. I was hourly expecting the snow, yet wishing to flee from it before the earth was permanently covered. Like many others, however, I had rated the climate of Tor-nea too low ; for they were still living here in a pleasant autumn. The air was calm, clear, and still. It froze a little in the night, but the rays of the forenoon sun soon dissipated the ice. The

sun afforded a gentle heat at mid-day, and with pleasure I went about the country in this temperature. The thermometer rose to 50►► of Fahrenheit, and sunk in the afternoon very slowly. The trees were yet in full glory, and no where had they lost any of their leaves. A firm snow track was not expected here till the end of October, and it is seldom earlier. September is at Toinea what October is in the north of Geimany ; and the polar region does not vindicate her violated sovereignty till the end of November. At Enontekis, in Lapland, situated on the west bank ot the river Tornea, more than 200 miles north-west of the extremity of the Bothnian Gulf, and approaching the Norwegian Alps, a register was carefully kept for several years by the Rev. Eric Grape, and the results communicated to the Stockholm Academy of Sciences, by Dr. Wah-lenberg. The latitude of the place of observation was 68►► 30', and the results are singular. The mean of the year is 26►►. 85, and that of February 0►►. 55, yet the mean temperature of July was 59►►. 63. In consequence of this high state of the thermometer, during the summer months, the country is not only capable of producing several kinds of trees, but even pot-herbs. On the eastern side of the Norwegian Alps the tempera ture depends chiefly upon the height of the place, and its distance from the sea ; but, on the opposite side of these mountains, the change of latitude has the greatest effect. In many parts of Norwegian Lapland the annual temperature is almost equal to that at Upsal, about 8►► farther south ; and hence many plants of more southern climes flourish there. Towards the northern extremity of the peninsula, however, the summers are too cold for any plants to vegetate. The following table of the mean monthly temperature of Mageroe, near the North Cape, is drawn up from the observations of M. Von Buch, who spent some time here in 1807.

Mean height of Fahrenheit's tliermometer.

January .

February .

March

April

May

June

The winters here, however, according to this writer, are less dreaded for the cold than for the tremendous winds they bring.

The soil of Norway we may suppose to l⬜⬜e comparatively barren : but the inhabitants are at least proportionably hardy ; and contentedly mingle

22-08 23-16 24-71 30-02 34-07 40-14

July . August . September October November December

. 46-42 . 43-70 . 37-62 . 32-00 . 25-75 . 25-74

in some seasons pine bark with their homely bread. In the vicinity of Bergen, however, there are some fertile tracts ; and our common garden fruits are here cultivated with success. Flax and hemp are also raised in many parts, in others barley and oats; but not more than 100th part of the kingdom is supposed to be under tillage, and there is an annual importation of above 200,000 quarters of grain to this place. In pasturage this country is more fortunate. As soon as the snow disappears on the sides of the mountains, the grass is seen rising to the height of eight or nine inches. Cattle are consequently reared in numbers and exported.

The forges of Norway are said to yield from 5000 to 6000 tons annually of bar iron : and in cannon, stoves, and other homely hardware, from 2000 to 3000 tons; the whole forming an annual value of from ⬜⬜100,000 to ⬜⬜200,000 sterling. The copper of this country is of very superior quality; the chief mines are at Roraas, an inland town, about eighty miles east of Drontheim. The only silver mine worked at present is that of Kongsberg ; but neither it nor the gold mine at Etzwold are productive. The same remark applies to the lead mines ; and its marble quarries are little wrought. Stone for building, and slate, are in great abundance ; and the loadstone, or natural magnet, is also frequently found and exported. Of salt the only

large work is at Walloe, near the town of Tonsberg. It yields about 20,000 tons annually.

The animals are common to many other parts of Europe, and are hardy, but diminutive. This is particularly the case with the horses and cattle. The latter fatten, however, readily in the isles which border the coast, as well as in the valleys of the interior. Goats are more common than sheep, and there are very few swine. In Norwegian Lapland the reindeer forms the sole wealth, as we have seen. Attempts are at present making to rear this animal in the southern provinces. Game abounds throughout; and in the mountains and forests are numbers of wolves, bears, lynxes, and foxes. The first are numerous, and sometimes make great havoc. Birds are also abundant, and several of the species are rare. Aquatic fowl are in such numbers that bird-catching, even among the stupendous cliffs, has become a regular and very considerable employment.

The human race is, however, far from diminutive here : in general being above the middle size. There is a great diversity of races and appearances, and it is said to be one of the most interesting engagements of every stranger who visits Norway to observe this variety at Christiania and other considerable places of resort. Dr. Clarke comparing the Norwegians with their neighbours, the Swedes, characterises the former as the less virtuous, but more lively people, and allows them to possess many amiable and valuable qualifications. ‘ Hospitality is not rendered oppressive, as is often the case in Sweden ; but, among the higher order of Norwegians, it is most liberally bestowed : there cannot be found upon earth, he says, a more generous or disinterested race of men.’ We are therefore rather puzzled to find the spring of their peculiar vices. The peasantry of the interior lead a secluded life.

unable to change one description of commodities for another, and are obliged to devise homely substitutes, making their own cloth, shoes, caps, and even their knives and hatchets. The inhabitants of the towns act differently, and import various articles, such as woollens, cottons,

silks, groceries, wine, spirituous liquors, and corn. These are paid for by their timber, iron, copper, and, in a less degree, by glass, potash, fish, and oil ; also by cattle, hides, and tallow.

⬛⬛⬛They live,' says Von Buch, ' in earthen huts, which, being covered over with grass, bear a resemblance to small hillocks ; dwellings like those of the Tungusians, or like the Gammes of the Finns. The interior, however, looks more like a house. When we squeeze ourselves through the three feet high door, which is made to shut of itself, we go through a dark passage to the various compartments of the hut ; a similar door opens into the dwelling-room ; and this apartment differs iu nothing from the usual dwelling-place of the peasants at Bergen. It is constructed of logs, quadrangular up to the roof, which is a quadrangular pyramid, with a square opening in the middle, that at night is closed with a blown-up fish bladder, and through which the light en-ters, and the smoke issues during the day. The furniture consists of a table, and a bench behind it ; the bed of the master of the house, and a cupboard or press, and chests, are ranged round. The children and servants sleep on the outside of the room, or beside the cow. The kitchen is a large chimney in the corner of the room. This is actually the most convenient manner of laying out a house in climates like these, where not a twig for firing is grown. The thick earthen wall makes a cellar of the hut, in which the temperature does not come in contact with the external temperature for weeks. Whether it storms or snows without, whether it is winter or summer, cannot be felt in one of these earthen huts ; but in a common northern log-house every external change is felt in a few hours in the inside. The air penetrates through doors and windows, and finds its way over the whole house. It is singu-lai that the richer class, the Storkarle (great fellows), as they are called by the Laplanders, or the lords, as they are called in the canton of Schweitz, or the people of condition as they call themselves, do not adopt this mode of constructing houses of earth, and pass the summer in the large log-house, and the winter between earthen walls. For nothing prevents them from ornamenting the inside as well and comfortably as the taste of the inhabitants can wish ; and though in such a dwelling there is little light, and almost no prospect, during four mouths of continual night, little of eiiher can be expected.' ⬛⬛⬛ Von Buch's Travels. It is with England, Holland, and Denmark, that the intercourse of Norway is greatest. With the last, however, it is less, since the separation of the two kingdoms. Kelp (from burned sea-weed) is here, as in the west of Scotland, .111 article of importance.

Internally Norway may be considered as enjoying great practical freedom. The peasantry are strangers to the servitude which has

existed till lately in Jutland and Russia, and are all free born, though it is remarkable that they have no

family names. Education is in the imperfect state that may be anticipated in a country ac thinly inhabited. At Bergen there is a university on a small scale ; there are also two other public seminaries founded by government ; one in 1811 at Kongsberg, the other in 1812 at Christiania. The latter has also a military academy. The public schools of a second class are more numerous. The elementary or parish schools are supplied chiefly by teachers educated at a separate preparatory seminary in Sweden or Germany. Christiania has a public library, and topographical society. Drontheim has also an academy of sciences, with a library and collection of objects of natural history. This society has published several memoirs on the natural history and antiquities of the north.

Norway has a separate assembly or diet, but no royal establishment, being governed as a province of Sweden, exactly as it was formerly in regard to Denmark. Justice is administered, in eacli province, by a high court, subject only to the supreme court at Stockholm ; but the subdivisions of the provinces have each a separate inferior court. The yearly revenue is below ––400,000 sterling; and the public expense is nearly equal to that sum. The imposts are in the nature of a land-tax, derived from the produce of agriculture and the mines. The military force is 10,000 to 12,000 regulars, and a larger number of militia. Attached to them is a small body, who wear on their feet long boards, or snow shoes, to act on the snow and ice. The navy of Norway is on a very small scale, comprising only twenty-five lieutenants, and six superior officers. The clergy consist of five bishops, *viz.* one for each of the governments, and one for Norrland, forty-nine deans, and 329 pastors

Until the ninth century Norway was divided into several petty principalities. It was then little known to the rest of Europe, except by pi-ratical excursions; but, towards the end of the fourteenth century, the ambitious Margaret of Denmark prevailed on the nobleman next entitled to an important part of the succession, to abdicate in her favor. Norway thus be-came incorporated with Denmark in 1397 ; and, though its independence was recognised, it was governed as a province. Still the national spirit was flattered by the kings of Denmark always distinguishing it as a separate kingdom in diplomatic treaties and state transactions; and Norway thus participated, during more than four centuries, in the political circumstances of its

neighbour, and enjoyed a fair portion of the commercial advantages arising from the pacific policy of Denmark. The first severe blow to this state of peaceful rule was given to Norway by the war with England in 1807; and this state of hostility continued when, in 1812, the threatening expedition of Buonaparte against Russia induced that power and Great Britain to exert themselves to secure the alliance of Sweden. To Bernadotte a substantial consideration became necessary; and, as Russia was determined not to restore Finland, the two courts resorted to the strange plan of stipulating for Sweden the conquest and possession of Norway. Alter the catastrophe of the French in Russia, Denmark made pacific

overtures to our court, but failed : and no sooner had the battle of Leipsic (18th October, 1813) decided the fate of the French in Germany, than Bernadotte directed a strong body of Swedish and other troops against Holstein, and obliged the Danish court to sign, on 14th January 1814, the treaty of Kiel, sacrificing Norway for the poor return of Swedish Pomerania and the Island of Rugen. Indignant at this, the Norwegians took up arms, and elected Christian Frederick, prince of Denmark, to the throne of Norway. The force he raised was considerable for the country, but wholly unable to resist the arms of Sweden, and, we regret to add, of England. After a spirited resistance, he consented to a treaty, agreeing to resign his crown into thb hands of the diet; and, “on 20th October 1814, that assembly came to the resolution that Nor-way should be permanently governed by the same king as Sweden, but as an integral state, and by its own constitution and laws.

NORWICH, a city in Humbleyard hundred, Norfolk, twenty-nine miles north-east from Thetford, and 108 north-east from London. It contains forty-one parishes, having thirty-two churches within and four without the city walls, besides several respectable places of worship for the dissenters. The inhabitants are chiefly e’mployed in trade and manufactures, principally those of woollen stuffs ; which were first introduced by the Flemings so early as the reign of Henry I., at a place

called Worsted, in this county.

In 1365 Norwich invited a number of the persecuted manufacturers of the Low Countries ‘ to set up the making of bayes, sayes, arras,’ &c., and various works mingled with silk and linen yarn ; and, in 1575, they first made bombazines. Damasks, camlets, and crapes, have of late years been made here, but its trade has declined since the great increase of the cotton manufactures, ;he introduction of the cotton-thread lace business, and the Suffolk hempen linen. The chief goods now manufactured are bombazeens, camlets for the Indian and Chinese markets, and shawls of various and elegant kinds, principally for English consumption. This last article, introduced when the demand for stuffs from Spain ceased, has been highly beneficial to the city and its neighbourhood; particularly since the introduction of machinery has destroyed the habit of spinning, which a few years ago universally prevailed among all the female peasantry.

This is the principal city in the east part of the kingdom, and is situated on the river Yare, over which there are six bridges. Norwich is first mentioned in authentic history in the Saxon Chronicle, in the year 1004, when Sueno the Dane destroyed it; after which it lay in ruins for seven years. It flourished and had twenty-five churches in the time of king Edward the Confessor. To prove that it was a place of note in the early time of the Saxons, Mr. Bloornfield, in his Essay on the History of Norfolk, has enumerated various coins, with the name of this city inscribed on them : one of Athelstan, one of Edred, with this inscription : ###

‘ EADRED REX HANNI MO NORTHWIC.’

And another of Etheldred II., in whose miserable reign Sueno, the Danish monarch, inflicted such dire vengeance on this city. It regained its eminence, however, soon after; for, in the Confessor’s time, it had ‘ 1320 burgesses, and paid ##20 to the king, and ##10 to the earl, also 20s., and four prebendaries, and six sextaries of honey, and a bear, and six dogs to bait him.’ Its ancient castle is said to have been built about the year 575, by the Saxon king Offa, and afterwards rebuilt by Alfred. In 1325 the sessions were directed to be’ held here, and in 1399 it was made the county gaol. It stands’ in the heart of the city, having a deep moat round it, now dry and converted into gardens, over which is a bridge of one arch. Mr. Bloornfield is of opinion that the present structure was erected by Roger Bigod, in the time of William Rufus, and that it occupies the site of a brick building

raised by Canute. The workmen, in sinking a well within the walls of the castle, a few years since, when they came to the level of the ground, without the ditches, found a beaten and regular footpath, used before the hill was thrown up. The principal entrance to the castle was by Bar or Bere Street and the Barbican gate, which was flanked by two towers, and connected with the external vallum by a wall. The walls, says Grose, were commonly flanked with towers, and had an embattled parapet crenellated or garreted ; for the mounting of it there were flights of steps at convenient distances, and the parapet often had the merlons pierced with long chinks, ending in round holes, called ttuillets. The walls of the castle have long been destroyed : the outer and the inner valla levelled, and the fossa filled up for building and other purposes. Over each fosse were two bridges, one of which only remains. The arch of this bridge is much admired for its size and structure. At the inner extremity of the bridge are the foundations of two circular towers, of fourteen feet in diameter, one of which was appropriated for condemned criminals until 1793, when the new buildings were erected. This bridge is nearly 150 feet in extent, and rises, from the inner to the upper ballium, sixteen feet. It has been much altered at different times, and is at present faced with square flint. Near the south-west angle of the inner ballium is the square keep-tower, the antiquity and architecture of which, says the author of the Beauties of England and Wales, has afforded a very fertile theme for disputation. On each side of the keep is a projecting tower of fine Norman architecture, called ‘ Bigod’s Tower.’ The interior of the keep is now an unroofed area, but was formerly divided by floors, covered in at top, and separated into several spacious apartments. Within the castle is a royal free chapel of exempt jurisdiction, which is now only used for the prisoners. The streets are upon the whole gloomy and ill planned : but considerable improvements have been made in the more mo-dern parts, and they are often pleasantly interspersed with gardens.

The cathedral was erected in 1096, by Herbert de Losing, but being damaged by fire, in 1171, it was repaired by John, bishop of Oxford. Bishop Percy built the present spire in 1361

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which exceeds all in England, Salisbury exempted, being 105 yards, two feet, from the point to the floor, including the tower. The present nave, with its beautiful stone roof, adorned with historical pieces from the Bible, was the work of bishop Lyherst, 1463 ; and his successor, Dr. Goldwell, put a similar roof on the choir ; the transepts being injured by fire, in 1509, were repaired and roofed in the same style by bishop Nix. The church is 400 feet from east to west, and the transepts from north to south 1 80.

St. Mary's chapel, at the east end, was seventy feet by thirty ; being in a ruined state, it was pulled down between 1573 and 1589, by dean Gardiner, who committed great dilapidations ou the other buildings. The choir has been refitted in a Gothic style, under the direction of Dr. Lloyd, die dean, whose accomplished lady painted the east window, with the subject of the Transfigura-tion, from a beautiful design by Raphael; this work, so honorable to this lady's talents, her taste, and her judgment, she completed, after much labor, attention, and fatigue, in 1781. The architecture of this noble pile is chiefly Norman, where the semicircular arch and large short column are the leading features. The west front of the cathedral displays a large central compartment, fronting and corresponding with the width and height, also two lateral divisions corresponding with the side aisles. In the cathedral lies entombed the illustrious founder, bishop Herbert de Losinga. He was removed from the see of Thetford (which was then abolished) to Norwich ; he was abbot of Ramsey, and lord chancellor, and died in 1119. His tomb was destroyed during the civil wars, but a new altar monument was erected to his memory, by the dean and chapter, in 1682; it stands in the central part of the choir, enclosed with an iron palisade; there are also monuments in the cathedral to the memory of bishops Scambler and Overall. On the choir floor is a monument in memory of Sir William Boleyn, great grandfather to queen Elizabeth.

Among the ancient religious houses, which abounded in this city, we must notice that of the Austin or Augustin Friars, founded before the 18th of Edward I. It had a fine church, which is now destroyed. John de Hustingford, in 1226, founded a house for the Gray Friars, since pulled down. In 1256 Philip Cougate, a merchant of this city, founded the White Friars, or Carmelites' monastery, the hall and kitchen of which now form a Baptist meeting. St. Mary's College in the fields, founded before 1250, for ten prebends, is now a private house. The Priory, built by bishop Herbert, about 1101, for sixty monks of the Benedictine order, stood in what at present is called the Lower Close. On pulling down the workhouse, in 1804, to improve the entrance to

the deanery, some ruins were discovered, supposed to have been remains of the refectory and dormitory. This priory had a miraculous imaje of Henry VI. Henry, earl of Surrey, built a house on its site.

St. Julian's church, founded before the conquest, was given by king Stephen to the nunnery of Carhow, alias Carrow. The church of St. Peter Mancroft is a large regular building,

finished and consecrated in 1455, and greatly distinguished for its superiority to the other churches. It stands on an elevated spot, at the south-west corner of the market-place, and consists of a square tower, 100 feet in height, and a body composed of a nave, choir, and chancel, measuring 212 feet in length by seventy in width. On the north and south side are entrance porches : the altar is ornamented with a painting, representing the deliverance of St. Peter from Prison, by Cation, a native of Norwich : it was given by alderman Starling in 1768. Sir Thomas Browne, M. D., the author of Religio Medici, lies interred here. The church of St. Lawrence is a regularand handsome building, erected in 1742, at the expense of the monastery of St. Edmund's Bury. The tower is a square building, 112 feet in height. Previous to the civil wars it was highly decorated, and the windows ornamented with painted glass: but, in 1643, the communion rails were broken down, the floor of the chancel taken up, and the stained glass defaced. Mr. Blomfield extracts from the parish register this entry : ××× ' Laid out to Goodman Perfett, for the putting out of the superstitious inscriptions in the church windows, and the pulling down of crucifixes, Is. 8d.' Opposite St. Lawrence's steps is a conduit, called Gybson's Well, with a long ancient inscription.

Here are also two churches for the descendants of the Flemings, who are very numerous, and have particular privileges. Besides the cathedral, churches, and castle, other public buildings worth notice are, the county ××aol, erected in 1793 on the castle-hill; the town hall; St. Andrew's hall; the assembly-room; theatre; house of correction; shire-hall, where the assizes are held ; a lofty market cross, with a piazza, and the bishop's palace.

St. Andrew's hall is a noble building, and was formerly a church belonging to a monastery of Black Friars. It was first bepun in 141.5, by Sir Thomas Erpingham ; and had a handsome steeple, which, through decay, fell down in 1712. At the dissolution of the monasteries it was given to the mayor and citizens, for a hall to repair unto as a common assembly. In 1544 the first mayor's feast was held

in this haU, now denominated St. Andrew's. In 1774 it underwent alterations, and received some additions ; in the year 1796 the hall was opened as a corn exchange, for which purpose it is used every Saturday. It was new painted, and the pictures cleaned and varnished, in 1003. There are numerous paintings embellishing this hall, amonij which are those of queen Anne and prince George of Denmark. In the centre is an admirable likeness of lord Nelson of the Nile, painted by Sir William Beechey. The assizes for the city were formerly held in this hall.

To the king's school, first endowed by Edward VI., the boys are nominated by the mayor and aldermen ; the city being governed by a mayor, recorder, steward, two sheriffs, twenty-four aldermen, sixty common-council, town-clerk, and inferior officers. The mayor is chosen on May-day by the freemen. Here are also four well-endowed hospitals, and a great number of charity schools. The Norfolk and Norwich Hospital

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is a most superb building. The Norwich dis-pensary affords advice and medicine gratis to the poor. The Nonvich public library was instituted in 1784, and consists of about 5000 volumes. A society has also been established here for the encouragement of the fine arts. About one mile north-east of the city was a hospital for lepers, and on a hill near Thorpe-wood a small priory, both founded by bishop Herbert, which at the dissolution was granted to the duke of Norfolk.

In 1348 58,000 persons were carried off here by the plague, and in 1505 it was almost consumed by fire. The city sends two members to parliament, who are elected by the freeholders and freemen, whose number is about 3000. It gives the title of earl to the duke of Gordon. There are eight wardens of the weavers chosen annually, and sworn to take care that there be no frauds committed in spinning, weaving, or dyeing stuffs. The city is rckoned six miles in compass. The markets are said to be the greatest in England, and furnished with a great variety of goods and provisions. We may here observe, that what are called the keels and wherries are in a great measure peculiar to the navigation between Norwich and Yarmouth, and are supposed to be superior to any small craft upon any other stream in England, for carrying a large burden at a small expense. They have but one mast, which lets down by a windlass placed at the head, carry one large square sail, are covered close by hatches, and have a cabin superior to many coasting vessels, in which it is not unusual for the keelman and his family to live. They are never navigated by more than two men, and often by a man and his wife, or a man and a boy. The usual passage for a loaded keel is from twelve to sixteen hours ; when light they perform it in five hours. The river is sufficiently broad in all places to permit two loaded keels to pass each other, and in some parts is twice that breadth. In the whole distance of thirty-two miles to Yarmouth there is no obstruction by a lock or bridge. This kind of craft carry grain of every sort grown in the county, flour, &c., besides the goods manufactured at Yarmouth for foreign markets. In return, from Yarmouth, they bring coals, grocery, ironmongery, timber, wine, spirits, &c. The freight for grocery, and other goods imported, does not exceed Is. 6d. per ton ; and smaller articles pay about 4 \d. the hundred weight. The wherries are from fifteen to twenty-five tons burden ; keels from forty to sixty. The mast of the wherries is placed at the head ; that of the keels in the middle. The passage depends upon the wind ; when favorable, these vessels sail very quickly ; when

they go against the wind, they are pushed by long poles, called quants, which reach to the bottom ; this is a slow and laborious process. The markets are on Wednesday, Friday, and Saturday. Fairs, Monday, Thursday, and Saturday, before and after Whit-Sunday. In 1823 an act was passed for building an additional county gaol, house of correction, and shire-house.

NORWICH, a city of New London county, Connecticut, on the Thames, at the head of a navigation ; it is fourteen inilos north of NPW Lon-

don, thirty-eight southeast of Hartford, and forty-five W. S. W. of Providence. Population 3528. It contain? a court-house, a jail, a bank, two insurance offices, and five houses of public worship, two for Congregationalists, one for Episcopalians, one for Baptists, and one for Methodists. It consists of three parts, the town, Chelsea Landing, and Bean Hill : in the last there is an academy, and in the town there is an endowed school. Norwich is a pleasant town, considerable both for trade and manufactures. The county courts are held here and at new London alternately. Also a town of Windsor county, Vermont.

NOSE, n. s., v. a., & v. n.~\ Saxon, nopa ;

NOSE-BLEED, n. s. * Goth, naus ; Isl.

NOSELESS, ad;. jCrws; Teut. nose;

NOSLE, n. s. J Dan. na&e ; Swed.

nos; Lat. nasus. ‘ From this root,’ observes Mr. Thomson, ‘ came nosle, snaffle, snarl, snort, snast, sneeze, sneer, snipe, sniffle, snivel, snore, snot, snout, snuff, and snuffle.’ The organ of scent ; hence any prominence, or end of a thing; and hence, scent, sagacity : to nose is to scent or smell : also to bluster ; to look big ; thrust one’s nose forward : and the last is a phrase for a medling disposition : to ‘ put one’s nose out of joint’ is to put one out of favor, or out of the affection of another. Nose-bleed is a kind of herb : nose-less, deprived of, or wanting a nose : nosle, the extremity of a thing.

Nose of Turks and Tartars’ lips. Sliakspeare

Our decrees,

Dead to infliction, to themselves are dead ; And liberty plucks justice by the nose. Id.

Tho' authority be a stubborn bear, Yet he is oft led by the nose with gold. Id.

Mangled Myrmidons, Noseless and handless, hackt and chipt, come to him.

Id. Nose him as you go up the stairs. Id.

Adulterous Antony Gives his potent regiment to a trull That noses it against us. Id.

In suits which a man doth not understand it is good to refer them to some friend, but let him chuse well his referendaries, else he may be led by the nose.

Bacon.

That some occult design doth lie, In bloody cynarctomachy, Is plain enough to him that knows How saints lead brothers by the nose. Hudibras. The lungs are as bellows, the aspera arteria is the nose of the bellows. Holder's Elements of Speech.

This is the method of all popular shams, when the multitude are to be led by the noses into a fool's paradise. L'Estraiige.

There can be no reason given why a visage somewhat longer, or a nose flatter, could not have consisted with such a soul. Locke.

We are not offended with a dog for a better nose than his master. Collier on Envy.

Poetry takes ine up so entirely, that I scarce see what passes under my nose. Pope's Letters.

In behalf of the nose it will quickly appear,

And your lordship, he said, will undoubtedlv

find,

That the nose has had spectacles always in wear, Which amounts to possession time out of mind.

Coicper

A kind of sleeping Venus seemed Dudu, Yet verv fit to ‘ murder sleep’ in those

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Who gazed upon her cheeks transcendant hue, Her Attic forehead and her Phidian nose.

Byron.

NOSE. See ANATOMY, Index. NOSE'GAY, n. s. Nose and gay. A band of flowers.

She hath four-and-twenty nosegays for the shearers.

Shukspeare.

Get you gone in the country, to dress up nosegays for% holy -day.

Arbuthnot's History of John Bull. Ariel sought

The close recesses of the virgin's thought ; As on the nosegay in her breast reclined, He watched the ideas rising in her mind. Pope.

NOSOLOGY. See MEDICINE.

NOSOPOETICK, adj. Gr. voVoc, disease, and voKu, to produce. Producing diseases.

The qualities of the air are nosopoetick ; that is, have a power of producing diseases. Arbuthnot.

NOSS, one of the most fertile of the Shetland Isles, southeast of Bressay. Near it there is a rock, or holm, about 150 feet high, and perpendicular on all sides. The opposite rock on the island is nearly of equal height, and distant about 240 feet. The holm, which is quite level on the top, produces excellent grass. Although it seemed inaccessible on all sides, the richness of the grass, and the vast numbers of sea fowls which breed on it, induced the proprietor, many years ago, to try some means of passing from the island to it. Accordingly a daring islander attempted to climb up and succeeded. He fixed posts in the ground, about two feet and a half from each other, corresponding posts being fixed on the opposite side. Ropes were stretched across from the one side to the other, upon which a wooden cradle slides along, and affords a safe conveyance between the island and the holm. But the man who first ascended the rocks would not take the benefit of the cradle, but, attempting to return the

way he went up, fell and was killed. Sheep are now annually put on the holm in spring, and taken back in autumn.

NOSTOCH, in natural history, shot stars; Iremella nostoc (Lin. Spec. Plant. Dillenius de Muscis, tab. 10, fig. 14. Flor. Danica, tab. 885, fig. 1) ; tremella intestinalis vel mesenterica, (Lin. Spec. Plant. Dillen de Muse. tab. 10, g. 16. Flor. Danic. tab. 885, fig. 2.) This substance is not unfrequent in England, nor in other parts of Euiope, after rains, both in spring and autumn. Very large spots of it are seen in gravelly soils, and particularly on the tops of hills, and on open downs, and often it is found on gravel walks. It is met with in some of the old authors, under the name of nostoch, as in Paracelsus and others ; and the alchemists fancied there was something wonderful in it, and that it would afford a menstruum for gold. It \v:is believed to fall from the sky with the meteors that we often see, and call filling stars. Hence the country people in Sweden have called it sky-fall ; and in England it is known by the name of witches butter, in common with some of the gelatinous liverworts. Paracelsus, Van Helmont, and others, ranked it with the terniabin, or manna, and thought it dropped, as that did, from heaven. It is described, and the chemical analysis thereof given, by M. Geoffrey, in the

Paris Memoirs for 1708, and is there said to yield, besides an acrid phlegm, a portion of concrete volatile salt, and some fixed salt. Since the days of Paracelsus it has been considered as a vegetable prod action; but the botanists have had difficulty to assign its place or genus in their several systems. Now, however, it is generally thought that these substances are the result of animal putrefaction, and more particularly of the bowels of frogs which have been voided by birds
NOSTRADAMUS (Michael), an able physician and a celebrated astrologer, was a Prov'en-cial of a noble family, and born 1503, at St. Remy, in the diocese of Avignon, By his grandfather he was initiated in the mathematics. He afterwards completed his courses of humanity and philosophy at Avignon ; and, going to Montpelier, he applied himself to physic, till being driven away by the plague, in 1525, he removed to Thoulouse, and afterwards to Bourdeaux. This course he held five years, during which he practised physic. After this he returned to Montpelier, and was created M. D. in 1529, and then revisited the same places. At Agen he contracted an acquaintance with Scaliger, and married ; but his wife dying, and two children she had brought him, he quitted Agen, after a residence of about four years. He returned into Provence, and fixed himself at Marseilles ; but afterwards settled at Salon, in 1544. In 1546, Aix being afflicted with

the plague, he went thither at the request of the inhabitants, and was of great service, so that the town in gratitude gave him a pension for several years after the contagion ceased. Returning afterwards to Salon, he became a recluse, and applied himself to his studies. He now began to think himself inspired, and miraculously illuminated with a prospect into futurity. In 1555 he published a volume of his prophecies, containing seven centuries of quatrains; and in 1558 he published a complete milliade. In that superstitious age these productions procured him admirers even among crowned heads; and, one of his obscure passages being interpreted into a prediction of the death of Henry II., after the event Charles IX. presented him with 200 crowns, and constituted him his physician in ordinary. But our prophet enjoyed these honors only sixteen months; for he died July 2d, 1566, at Salon. Besides his Censuries, he published, 1. A Treatise de Fardemens et de Senteurs, 1552 ; 2. A book of singular receipts, Entretenir la Sante du Corps, 1556; 3. A Piece des Confi-tures, 1557; A French Translation of the Latin of Galen's Paraphrase, exhorting Menedolus to Study, especially to that of Physic, 1552 ; 5. A small instruction for husbandmen, entitled, The Almanac of Nostradamus. After his death catre out The Eleventh and Twelfth Centuries of his Quatrains, added to the former ten, which had been printed three times in two separa', ? purU.

NOSTRE (Andrew le), comptroller of the buildings of the French kins, and designer of his gardens, distinguished himself by carrying the art of laying out gardens to great perfection. He was born at Paris in 1631 ; and was nearly forty years of age when M. Fouquet, superintendant of the finances, gave him an opportunity of becoming known by the fine garilci.s of Vaux le

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Vicomte. He was afterwards employed by Louis XIV. at Versailles, Trianon, St. Germains, &c., and discovered an admirable taste in all his works. In 1678 he went to Rome to improve his taste, but found nothing there comparable to what he himself had done. Le Nostre had also a talent for painting. He preserved his vivacity of mind to the last, and died at Paris in 1700, aged eighty-seven.

NOSTRIL, n. $. Nose and Sax. fcynl, a hole. The cavity of the nose.

Turn then my freshest reputation to

A favour that may strike the dullest nostril.

Slutkspeare.

links which the nostrils straight abhor are not the most pernicious. Bacon's Natural Hittory.

We can tell of those cheap-dieted men that live about the head of the Ganges, without meat, without mouths, feeding only upon air at their nostrils.

Bp. Hall.

He formed thee, Adam, and in thy nostrils breathed The breath of life. Milton.

The secondary action subsisteth in concomi-tancy with the other ; so the nostrils are useful both for respiration and smelling, but the principal use is smelling. Browne.

These ripe fruits recreate the nostrils with their aromatic scent. More's Divine Dialogues.

With broadened nostril to the sky upturned The conscious heifer snufis the stormy gale.

Thomson. In his eye

And nostril beautiful disdain and might, And majesty, flash their full lightnings by, Developing in that one glance the Deity. Byron.

NOSTRUM, n. s. Lat. nostrum. A medicine not yet made public.

Very extraordinary, and one of his nostrums, let it be writ upon his monument, Hie jacet auctor hujus argument! ; for no body ever used it before.

Stillingfleet.

What drop or nostrum can this plague remove ?

Pope.

NOT, adv. Sax. nat, nate ; Goth, and Belg. neit. A particle of negation ; refusal ; prohibition or exception; on no terms; in nowise; no more.

The man held his peace, to wit, whether the Lord had made his journey prosperous or not. Genesis.

I will for this afflict the seed of David, but n►►t for ever. Kings.

Thine eyes are upon me, and I am not.

Job. vii.

I was not in safety, neither had I rest. Id. Stand in awe, and sin no*. Psalms. Forsake me wot, O Lord ; O my God, be not far from me. Id.

Not for price nor reward. Isaiah. If thou be the world's great parent, How falls it then that with thy furious fervour Thou dost afflict as well the not deserver, As him that doth thy lovely hests despise ?

Spenser. His countenance likes me not.

Shakspeare. King Lear.

The question is, may I do it, or may I not do it?

Sanderson.

He is invulnerable, I not. Milton.

Let eacl) man do as to his fancy seems ; I wait, not I, 'till you have better dreams.

Driiden.

Then let the greedy mercliant fear

For his ill-gotten gain ; And pray to gods that will not hear, While the debating winds and billows bear

His wealth into the main. Id. Horace.

Grammar being to teach men not to speak, but to speak correctly . where rhetoric is not necessary, grammar may be spared. Locke on Education.

This day, be bread and peace my lot ; All else beneath the sun

Thou knowest if best bestowed or not, And let thy will be done.

Pope's Universal Prayer.

NOTABLE, adj. } Fr. notable ; Lat. no-NOT'ABLENESS, n. s. ftabilis. Remarkable ; NOT'ABLV, adv. j memorable ; singular ; hence busy ; bustling.

Two young men appeared notable in strength, excellent in beauty, and comely in apparel. 2 Mac.

The success of those wars was too notable to be unknown to your ears ; which, it seems, all worthy fame had glory to come unto. Sidney.

Herein dotn the endless mercy of God notably appear, that he vouchsafeth to accept of our repentance, when we repent, though not in particular as we ought to do. Perkins.

1'he same is notified in the notablest places of the diocess. Whitegifte.

This we see notably proved, in that the oft polling of hedges conduces much to their lasting.

Bacon's Natural History.

At Kilkenny many notable laws were enacted, which shew, for the law doth best discover enormities, how much the English colonies were corrupted.

Davies.

It is a rare soul that hath not some notable disease ; only crosses are thy remedies. Bp. Hall.

Both armies lay still, without any notable action, for the space of ten days. Clarendon.

It is impossible but a man must have first passed this notable stage, and got his conscience thoroughly debauched and hardened, before he can arrive to the height of sin. South.

Varro's aviary is still so famous that it is reckoned for one of those notables which foreign nations re-cord. Addison.

Mention Spain or Poland, and he talks very notably ; but, if you go out of the gazette, you drop him.

u.

This absolute monarch was as notable a guardian of the fortunes, as of the lives of his subjects. When any man grew rich, to keep him from being dangerous to the state, he sent for all his goods.

Id. Freeholder.

NOT./E, signs used in writing, which have the force of many letters. This contrivance for expedition is of great antiquity. It was known to the Greeks, and from them derived to the Ro-mans. By whom the invention was brought into Rome is not precisely ascertained ; but the most general opinion is, that in matters of importance Tully first made use of notes or short-hand writing, when Cato made an oration in order to op-pose Julius Caesar, relative to the conspiracy of Catiline. Cicero, who was at that time consul, placed notarii, or expert short-hand writers, in different parts of the senate-house, to take down the speech; and this was the first public occasion which we find recorded of employing short-hand writers among the Romans. Hence was derived the term notary still in use. There were three kinds of notes for short-hand writing used

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by the ancients, either for despatch or secrecy. The first and most ancient was that of hieroglyphics, which are rather images or representations of things than of words. See HIEROGLYPHICS. The Chinese characters are of this kind, and may with greater propriety be called notae than literae. The second species of notes were called singulariae, from their expressing words by single letters. Sertorius Ursatus has compiled a very copious collection of such abbreviations, of which work there are several editions. The third kind of notes were called notae Tironianae, from Tiro, the freedman of Cicero, who was excellently skilled in this art ; and to him we are indebted for the preservation of Cicero's letters, of which a great part still remain, and one entire book of them written to Tiro himself. We have but few books remaining that are written in short-hand ; but this is not surprising, when such was the unhappy situation of early ages that either superstition condemned them to the flames as the works of impious magicians or necromancers, or they were left to be devoured by vermin, through ignorance. In 1747 the learned and ingenious M. Carpentier engraved and published at Pans a capitulary and fifty-four charters of Louis the Pious, emperor and king of France, written in these notae Tironianae. To this work the learned editor hath prefixed an Alphabetum Tironianum, together with a great number of notes for the different parts of speech, and rules for acquiring the art of writing in these kinds of notes. Valerius Probus, in his book De Literis Antiquis, explains many of the characters used by the short-hand writers; and there is a dictionary of them set forth by Janus Gruterus. See STEN-OGRAPHY.

NOTARII, persons employed by the ancient Romans to take, by notae, trials and pleadings in their courts of judicature, or to write as amanuenses from the mouth of an author. Under the reign of Justinian they were formed into a college or corporate body. Notarii were also appointed to attend the prefects, to transcribe for them. There were likewise notani domestic!, who were employed in keeping the accounts of the Roman nobility ; and, when the empire be-came Christian, there were notaries for ecclesiastical affairs, who attested the acts of archbishops, bishops, and other spiritual dignitaries. We find ecclesiastical notaries at Rome under Pope Julius IV. and in the church of Antioch about A. D. 370. From these notaries are derived the office of chancellor to the bishops. Afterwards almost every advocate was admitted a notary. NOTA'RIAL, adj.~\ Fr. notaire ; Lat.

nota-NO’TARY, n.s. >r►►tu. Taken by a no-NOTA’TION. 3 tary, who is an officer

qualified or appointed to make notes or record of any thing important to the public : notation is the act or practice of recording things by notes or figures.

There is a declaration made to have that very book, and no other set abroad, wherein their present authorised notaries do write those things fully and only, which being written, and there read, are by their own open testimony acknowledged to be their own. ‘ Hooter.

Go with me to a notary, seal me there Your bond. Shalupeare. Men-hunt of Venice. VOL. XV.

A NOTARY is usually a scrivener who frames short draughts of contracts, obligations, charter-parties, or other writings. We call him a notary public who publicly attests deeds or writings, in order to make them authentic in another nation ; but he is principally employed in business concerning merchants ; as making protests of bills of exchange, &c. And noting a bill is where he goes to take note of a merchant’s refusal to accept or pay the same. Slat. 41 G. 3. (U. K.) c. 79, was passed for regulating public notaries in England. By this act no person shall act as a notary unless duly admitted, nor shall he] be admitted as a notary unless he shall have served seven years’ apprenticeship to a notary on penalty of ►►50. Notaries shall not permit unqualified persons to act in their names.

NOTATION, in arithmetic, is the method of expressing, by means of certain signs, any proposed number or quantity. In the modern analysis, notation implies a method of representing any operation belonging to this science ; and the judicious and ingenious selection ot proper symbols forms not the least important part of it. The success of a great mathematical operation depends much upon this point, and the science itself has sometimes made a new advance by the invention of new and moic manageable symbols. In the common scale of notation, every number is expressed by the ten characters 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, the nine first of which represent different numbers of units, and denote various values, according to the place which they occupy, and according to the following scheme:

-o ^

m uO

r> -►► “►►

C S ►► S

n, = o>

H” >ˆ< r .

<5 1►►►1 f

so that, beginning at the right, a characier standing in the first place signifies units; in the second tens ; and so on ; so that each character signifies ten times moie, according as it stands a place farther to the left. If 7 stands in the place of the units, it signifies 7 units ; if it stands in the place of the ten-thousands, it signifies 7 times ten thousand. To determine the place of a character, zeros are made to the right of it : thus, to express seventy thousand, we write 70,000, which shows that 7 stands in the fifth place, which is that of the ten-thousands. The system proceeds still farther : if we have to express seventy thousand one hundred and thirty-four, we do not write 70,000, and 100, and 30, and 4, but 70,134. Place the above numbers one under the other, and the reason is obvious :

70,000

too

30 4

It appears that it is unnecessary to retain three of the zeros to the right of 70,000, the two zeros to the right of 100, and the zero to the right of 30, because, if we leave them out, thus,

70 1 3

4

and write the remaining figures ail in one line, thus, 70,134, each character will have the same place as it had when each number was written out full, and therefore will have it►► due value. In order to give a number its proper position, a zero is written wherever no number is to be expressed in one of the other places, as in the above case, the zero to the right of 7, without which the 7 would have denoted seven thousands, not seventy thousands. This is the system of notation of whole numbers, and the mode of expressing fractions differs only in this, that they are numbered from left to right.

. Thousan

. Hundrec

00

C

‘3

-5

S

H

1

c s

. Thousan

(See Decimal Fractions.) The decimal system, so simple and perfect, is one of the most striking of human inventions, and few things have had a greater influence upon the progress of science and civilization. Little do we dream of the enormous difficulty of calculations with the Roman and Greek notation, and the obstacles which it must have thrown in the way of every art, science, or occupation, requiring arithmetical operations. The commerce or the navigation of the present day could hardly have been carried on under such systems ; and the general habit of keeping regular accounts, which so greatly facilitates the business of life, and tends so much to preserve the good order and peace of society, could hardly have grown up. The origin of this invention, as of many which have exerted the greatest influence on society, is veiled in obscurity. (For a few historical remarks on the introduction of ciphers, see the article Ciphers.) As in our decimal system every possible number is expressed by ten characters, so we can imagine a dyadic or binarian system, of which two is the fundamental number, and which, to express analogously every possible number, would require but two characters (say 1 and 0), one being represented by 1, two by 10, three by 11, four by 100, five by 101, six by 110, seven by 111, eight by 1000, nine by 1001, and so on. Leibnitz first developed such a system in his Dyadics-In the same way we can compose systems of three, four, or any given number of characters ; and as 12 is a more convenient number for division and subdivision, we knew a German professor of mathematics, who, having invented for himself two more characters for 11 and 12, and given them names, made a dodecadic system, by which he performed the most rapid calculations:

12 was the basis of his system, as 10 is of ours, and each character signified 12 times more than its neighbour to the right, and 12 times less than its neighbour to the left : thus, suppose he used for 10, the character X, and for 11 T, then his series would be thus :

1****1

13****11

2****2

14****12

3****3

15****13

4****4

16****14

5****5

17****15

6****6

18****16

7****7

19 **** 17

8****8

20****18

9****9

21****19

10-X

2**** IX

11**** T

23**** IT

12****10

24****20

so that 100 expresses, in this system, what we should represent byt 144. We have dwelt on this point, because it seems to us that the practice of making experiments of this sort would serve to show pupils, more clearly, the nature and character of our system of numeration, the great and sole advantage of which lies in the system, not in the number which serves as its basis. Several tribes have not

advanced beyond the rude system of adding successively one to one, and giving a new and arbitrary name to each new number; but for this reason they can-not count far, and, after going beyond a certain number, they generally say many. The Romans, though they had the decimal numeral system, nevertheless had not the decimal notation. In their notation, they took five units together, and wrote them thus V ; then they brought two such fives together, from which originated][or X ; five tens they wrote L ; one hundred was written C, the initial of centum; five hundreds were expressed by the sign D; two five-hundreds, or one thousand, by M. (See M.) A cipher written to the left of another of higher value, in this system, takes so much from its amount, as XL is 40, and XC is 90 ; accordingly 1847 is written MDCCCXLVII. Here no sign has a value according to its position (except in some degree, X ; but it is not the value of X which is changed, but merely its character; it becomes negative by standing to the left of L), and pronouncing such a number is making an addition. It is utterly impossible for us to imagine the difficulty of their calculations, because, if we take a case of simple addition, as,

M

DV

CCIX

it would be comparatively difficult for us to perform it, although the numbers form themselves in our mind, not according to these signs, but according to our decimal representation, and thus we can perform the operation much easier, than they could. They, therefore, were obliged to have recourse to their abacus, (q. v.) We may

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add, that 500 was represented by ID, as well as notice; observation ; reproach; mark of a sound

by D, and that for every 3 added, this number in music ; tune: to note, is to observe; remark ###

became increased ten-fold; 1000 was also ex-heed; also to set down; hence to cliar.-e will!

pressed by CIO, as well as by M ; and for every crime; to prick musical signs: the derivatives

CO added, one at each end, the number was in-seem plain in their meaning.

creased ten-fold. A horizontal line drawn over any figure, increases it a thousand -fold.

Notation of the Greeks. These people had three distinct notations, the most simple of which was, the making the letters of their alphabet the representatives of numbers : a, 1 ; *3, 2 ; y, 3 ; and so on. Another method was by means of six capital letters, thus, I (ia for f##a), 1 ; II (irivre), 5; A (foca), 10; H (trarov), 100; X (xiXia), 1000; M (*ivpiac), 10,000; and when the letter n enclosed any of these, except I, it indicated the enclosed letter to be five times its proper value, as stated above ; thus,

represented 50 ; HJ500; jxl 5,000;

In the body’s prison so she lies, As through the body’s windows she must look,

Her divers powers of sense to exercise. By gathering note* out of the world’s great book. _. Dunn.

Divers men of note have been brought into En- &land’, Ablˆt.

Some things may in pa##sing be fitly noted.

Hammond.

The wakeful bird tunes her nocturnal note .

NOTH'ING, n. s.) No and thing. Scotch NOTH'INGNESS. \ntithing Not any thing ; nonexistence ; universal negation ; ro particular thing; no quantity or degree; no importance or

and so on. This notation was only used to re-valueJ a trifle: it has a very general adverlii;il

present dates and similar cases: for arithmetical purposes they had a more organized system, in which 36 characters were employed ; and by these, any number not exceeding 100,000,000, might be expressed, though, in the first instance, it appears that 10,000, or a myriad, was the ex-tent of their arithmetic.

Our digits, 1, 2, 3, 4, 5, 6, 7, 8, 9,

they expressed by a, /3, y, 8, t, c, ►►, n, 0, For our tens, as, 10, 20, 30, 40, 50, 60, 70, &c. they employed t, K, A, p, v, ►►, o, &c. for hundreds p, a, r, v, 0, x►► *^> ^cc—

for thousands a, /3, y, S, t, c, ►►, &c.

that is, they had recourse again to the characters of the simple units, which were distingushed by a small iota or dash placed below them ; and, with these characters, a number under 10,000

ignification : nothingness is nihility ; state of being nothing.

►►► His art did express A quintessence even from nothingness, From dull privations, and lean emptiness.

Donne.

Narcissus is the glory of his race ; For who does nothing with a better grace ?

YOVIXJ.

He who hath bent him o'er the dead. Ere the first day of death is fled ; The first dark day of nothingnen, The last of danger and distress ; Before Decay's effacing fingers Have swept the lines where beauty lingers. Byron. NOTICE, n. s. Fr. notice; I.at. imtitin. Remark ; observation ; note ; information ; intelligence.

1'he thing to be regarded in taking notice of a

was readily expressed ; and this, as we have child's miscarriage is, what root it springs from, observed above, was for some time the limit of their arithmetic. Afterwards 10,000, or a my-riad, was represented by M, and any number of myriads by M placed under the number of them. Thus, a /3 y

M. M. M. represented 10,000 20,000 30,000, Sec.

Locke.

How ready is envy to mingle with the notice* which we take of other persons ! \Vatts.

NOTIFICATION,) Fr. notification; Fr.

NO'TIFY, v. a. S notifier ; Lat. notified.

To notify is to make memorable ; hence to make known ; declare ; publish : notification, the act

The Notation of the Hebrews resembled, in a of representing or making known by marks or

great measure, that of the Greeks above described, only substitutin Hebrew letters for

This sense of all things notifying the Mrssias seems to be the only particular which in general the:

Greek, as far as thousands ; and, for representing 8 u A v, v, A Jews did not, or would not, see and acknowledge.

thousands, they had again recourse to their sim-ple units, distinguishing them only by two dots, or acute accents ; thus, N, or i<, expressed 1,000; H, 2,000; v, 10,000; and so on. (For the Egyptian system of notation, see Hieroglyphics.)

NOTCH, n. s. & v. a. Ital nocchia ; Swed. nocha. See NICK. A nick or hollow cut ; to cut in nicks or nitches.

NOTCH, THE, a picturesque pass of the United States, ‘in the western part of the White Mountains, New Hampshire. The narrowest part is between two perpendicular rocks, and is only twenty-two feet wide. The road from Lancaster to Portland passes through this notch.

NOTE, n. s. & v. a.y Fr. note; Lat. nota.

NOTE’ BOOK, n s. ‘ A token ; mark; sign;

NO’TED, adj. ►► symbol; memorandum;

NO’TF.U, n. s. 3 account ; short letter ;

This solar month is by civil sanction notijinl in authentic calendars the chief measure of the year ; a kind of standard by which we measure lime.

Holder.

I Fr. notion; Lat.no/io.

Thought; idea; innge

, mental representation

‘ conception ; opinion

ideal ; intellectual ; and

visionary : notionality,

NOTION, n. *.

NO’TIONAI., adj. I NOTION AL’ITY, n.s. NO’TIONAI.I.Y, adv. sense : notional hence merely ideal

emptiness; unfounded opinion, notionally follows all the senses of notional.

The general and indefinite contemplation ami notions, of the elements and their conjugations, of the influences of heaven, are to be set aside, being but notional and illimited ; and definite axioms are to lx drawn out of measured instances.

3 C 2

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God hath bid dwell far off all anxious cares, And not molest us ; unless we ourselves Seek them with wandering thoughts and notions vain.

Milton.

So told, as earthly notion can receive. Id.

The most forward notional dictators sit down in a contented ignorance. Glanville's Scepsis.

I aimed at the advance of science, by discrediting empty and talkative nationality. Glanville.

Seeing we are at this time to speak of the proper notion of the church, therefore I shall not look upon it as comprehending any more than the sons of men.

Pearson.

The fiction of some beings which are not in nature, second notions, as the logicians call them, has been founded on the conjunction of two natures, which have a real separate being. Dryden.

The whole rational nature of man consists of two faculties, understanding and will, whether really or nationally distinct, I shall not dispute.

Norris's Mitcellany.

Many actions are punished by law, that are acts of ingratitude ; but this is merely accidental to them, as they are such acts ; for if they were punished properly under that notion, and upon that account, the punishment would equally reach all actions of the same kind. South.

It would be incredible to a man who has never been in France, should one relate the extravagant notion they entertain of themselves, and the mean opinion they have of their neighbours. Addison. Happiness object of that waking dream

Which we call life, mistaking : fugitive theme

Of my pursuing verse, ideal shade,

Notional good, by fancy only made. Prior.

What hath been generally agreed on, I content myself to assume under the notion of principles, in order to what I have farther to write. Newton.

Sensual wits they were, who, it is probable, took pleasure in ridiculing the notion of a life to come.

Atterburv.

We must be wary, lest we ascribe any real subsistence or personality to this nature or chance ; for it is merely a notional and imaginary thing ; an abstract universal, which is properly nothing ; a conception of our own making, occasioned by our reflecting upon the settled course of things ; denoting only thus much, that all those bodies move and act according to their essential properties, without any consciousness or intention of so doing. Bentley.

There is nothing made a more common subject of discourse than nature and its laws ; and yet few agree in their notions about these words.

Cheyne's Philosophical Principles.

That notion of hunger, cold, sound, colour, thought, wish, or fear, which is in the mind, is called the idea of hunger, cold, sound, wish, &c.

Watts's Logich.

Let us not amuse ourselves with vain notions, that our greatness and our happiness, as a nation, are capable of being separated. It is no such thing.

Canning.

NOTO, a considerable town in the Val Di Noto, Sicily, is delightfully situated on an eminence, and of considerable antiquily : but the site of the present town is some miles from that of the ancient Noto, which was destroyed in 1698 by an earthquake. Several of its numerous churches and convents are in the Grecian style, and elegantly built. The other public buildings are an hospital, a seminary for education, and a Monte di Pieta, or pawn bank. The traveller, however, will be most engaged with the museum of Greco-Siculo medallions, the total number

of which, including a collection of Grecian, Roman, and Saracenic coins, is about 6000. The trade of Noto is in wine, oil, and corn, the produce of the adjacent fertile country. Fifteen miles south-west of Syracuse, and forty south of Catania.

NOTO, VAL DI, one of the three provinces of Sicily, forming the southeast portion of that island. Its length from east to west is seventy miles ; its breadth about fifty. It forms in ex-tent about a third of the island, and comprises the portion first peopled and most celebrated in ancient history : its surface is diversified by a range of mountains extending from north-west to southeast, and terminated in the latter by a shorter range, from north-east to south-west. Even these elevated tracts afford fine pasturage : the other products are olives, wine, honey, wax, almonds, and fruits. The fisheries on the coast ar►► large, and the climate remarkably salubrious. Catania is the largest town, and stands at the north-ea►►t angle of the province ; the others are Syracuse, Augusta, Modica, Calatagirone, Lentini, Carlentini, and Noto.. Population 460,000.

NOTONECTA, the boat-fly, a genus of insects belonging to the order of hemiptera. The rostrum is inflected ; the antennae are shorter than the thorax ; the four wings, which are coriaceous from their base to their middle, are folded together cross wise ; the hind feet are hairy, and formed for swimming. To which may be added that the tarsi are composed of two articulations, and all the six feet are equally formed for swimming. The abdomen terminated by four little horns or appendices. There are many species, of which nine are common in Europe.

N. glauca is thus described by Barbnt : ‘ This insect has a head somewhat round, of which the eyes seem to take up the greatest part. Those eyes are brown, and very large, the rest of the head being yellow. In the fore part it has a sharp trunk that projects, and is inflected between the fore feet. On the sides are seen the antennae, very small, yellowish, and that spring from under the head. The thorax, which is broad, short, and smooth, is yellow on the fore, and black on the back part. The escutcheon is large, of a rough black, and covered with a short nap. The elytra, rather large, and crossed over each other, are a mixture of brown and yellow, not unlike the color of rust, which makes it look cloudy. The under part of the body is brown ; and at the extremity of the abdomen are to be seen a few hairs. The feet, six in number, are of a light brown, the two hindermost having on the leg and tarsus hairs that give them the shape of fins ; nor are

they terminated by nails. The four anterior ones are somewhat flat, and serve the animal to swim with ; but at their extremity they have nails and no hairs. This insect is seen in stagnant waters, where it swims on its back, and presents its abdomen upwards ; for which reason it has been called by the Greek name of notonecta. The hinder feet, longer than the rest, serves it as paddles. It is very nimble, and dives down when you go to take hold of it; after which it rises again to the surface of the water. It must be cautiouslv hand!?:.-1, if one

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vrould avoid being pricked by it ; for the point of its rostrum is exceedingly sharp. The larva very much resembles the perfect insect. Its legs are long ; when taken out of the water it hops : it is very common in ponds. It is of a very particular form, being flattish at the belly, and rising to a ridge on the middle of the back ; so that when it swims its body has much the resemblance of a boat in figure, whence its vulgar name. It is eight lines long, two broad, and two and a half thick. The belly is jointed, stri-ated, and hairy. Nature has provided it with an offensive weapon resembling a sting, which it thrusts out when hurt from a large opening at the tail. The head is large and hard. The eyes are of nearly a triangular form. The nose is a long, green, hollow proboscis, ending in a hard and sharp point, which, in its natural posture, remains under the belly, and reaches to the mid-dle pair of legs. The outer pair of its wings are of a pale flesh-color, with spots of a dead white ; these are long, narrow, and somewhat transparent : they terminate in a roundish point, and perfectly cover the whole body. The triangular piece which stands between the top of the wings is hard, and perfectly black ; the inner wings are broader and shorter than the outer; they are thin and perfectly transparent, and are of a pale pearl color. The hinder pair being much longer than all the rest, they serve as oars ; and nature has tufted them with hair at the end for that purpose. This creature mostly lives in the water, where it preys on small insects, killing them and sucking their juices with its proboscis in the manner of the water scorpion and many other aquatic insects ; and it seizes its prey violently, and darts with incredible swiftness to a considerable distance after it. Though it generally lives in the water, it sometimes crawls out” in good weather; and drying its wings, by expanding them in the sun, takes flight, and becomes an inhabitant of the air, not to be known for the same creature unless to those who had accurately observed it before ; when tired of flying, or pursued by an enemy, it immediately plunges into the water.

NOTORI’ETY, n.s. ~\ Fr. notoriete, noto—

NOTO’RIOCS, adj. (ric; Latin notorious.

NOTO’RIOUSLY, adv. {Fame; public notice

NOTO’RIOUSNESS, n. s. J or knowledge ; experience ; generally used

in a low or bad sense, as of things disadvantageously known. The derivatives follow this meaning.

What need you make such ado in cloaking a matter too notorious ? Whitgifte.

The goodness of your intercepted packets You writ to the pope against the king ; your goodness, Since you provoke me, shall be most notorious.

Shakspeare.

I shall have law in Ephesus, To your notorious shame. ”’

In the time of king Edward III., the impediments of the conquest of Ireland are notorious. Dimes.

This presbyterian man of war congratulates a certain notorious murther, committed by a zealot of his own devotion. White.

Tnese things, i say, are all either notorious and evident, or expressly affirmed in Scripture.

Jer. Taylor.

The exposing himself notoriously, did tometiiMi change the fortune of the day. Clarendon.

This is notoriously discoverable in some differences of brake or fern. Braune’s Vulgar Lrnmrs.

We think not fit to condemn the most notoritmt malefactor before he hath had licence to propose his plea. feU.

What notorious vice is there that doth not blemish a man’s reputation ‘. Tillotum.

Ovid tells us, that the cause was notoriously known at Rome, though it be left so obscure to after-ages.

Drydtm.

We see what a multitude of pagan testimonies may be produced for all those remarkable passages ; and indeed of several, that more than answer your expectation, as they were not subjects in their own

nature so exposed to public notoriety. Addittm.

The inhabitants of Naples have been always very notorious for leading a life of laziness and pleasure, which arises partly out of the temper of their country, and partly out of the temper of their climate.

lit. on Italy.

The bishops have procured some small advancement of rents ; although it be notorious that they do not receive the third penny of the real value.

Su-ift'i Miscellanies.

Should the genius of a nation be more fixed in government, than in morals, learning, and complexion ; which do all notoriously vary in every age. Swift.

A man guilty of breaking these, though he cannot be transported for a felon, or indicted for treasonable practices, is yet, in the high court of custom, branded as a flagrant offender against decorum, as notorious for an unprecedented infringement on propriety. Canning.

NOTT (John), M. D., a late polite writer, was born at Worcester, December 24th, 1751. Having studied surgery, under Sir Caesar Hawkins, he visited Paris in order to complete his medical education, and subsequently went to China, as surgeon to an East Indiaman. Here he acquired an extensive acquaintance with the Persian language ; his proficiency in which he evinced on his return to Europe by his elegant translation of the Odes of Hatiz. In 1788 he took his diploma, and soon after attended the duchess of Devonshire to the continent. In 1793 he settled at Bristol, where he continued to reside till his death in 1826, being afflicted, during the last eight years of his life, with paralysis. His writings are, Alonzo, a Poetic Tale, 4to. 1772 ; a translation of the Basia of Johan-nes Serundus, 8vo., 1775; Leonora, an Elegy, 4to., 1775 ; Poems from the Italian of Petrarch, 8vo.,l 777 ; Original Pieces and Translations, Rvo., 1780; Heroic Epistle from Monsieur Vestris in London to Madame Heinel in France, 4to., 1 781 ; the Cynthia of Propertius, 8vo., 1791 ; Chemical Dissertation on the Springs of Pisa and Asciano, 8vo., 1793; On the Hotwells of Bristol, 8vo., 1793; an edition of Catullus, with the Latin text rendered into English verse, and classical notes, 2 vols. 8vo., 1794 ; a translation of the Kisses of Bonefonius of Auvergne, with the Latin text annexed, 8vo., 1797; another of The First Book of Lucretius, with the Latin text, 8vo., 1799; The Odes of Horace, with the Latin text revised, 8vo., 2

vols., 1803 ; Sappho, after a Greek Romance, 12mo., 1803; On the Inftuen/.a which prevailed at Bristol in 1803, 8vo . 1803; a hi-758

tlier Selection from Petrarch, with notes, 8vo., 1 808 ; select poems from the Hesperides of Herrick, 8vo., 1810; A Nosological Companion to the London Pharmacopoeia, 12mo., 1811 ; and an edition of Decker's Gull's Horn Book, with notes and illustrations, 4to., 1812 ; besides several MS. works, among which is an incomplete translation of Silius Italicus.

NOTTINGHAM, a market and borough town of England, the county town of Nottinghamshire, stands in a delightful situation, and in what is considered a healthy neighbourhood, on the steep ascent of a hill or rock, overlooking a fine range of meadows ; a little rivulet running on the north side of them, almost close to the town ; and the noble river Trent, parallel with both, on the south side of the meadows. Over the Trent is a stately stone bridge of nineteen arches, the river here being sixty-six yards wide, having received the waters of the Dove, (he Derwent, the Er-wash, and the Soar.

The rock on which the town stands is of a sandy kind, and so soft that it is hewed into vaults and cellars, sometimes in tiers of two or three stories ; the stairs which lead to them being also cut out of the rock to the extent of eighty or 100 steps. From these caves and cellars being famous as a retreat, the town is said to have first taken its name, Snottengsham ; the British word, as Camden observes, was Tui-ogo-bauc, which also signifies a house of dens or secret caves.

The town, which though partaking of the irregular character of its site has several broad and well paved streets, is divided into three parishes, St. Mary's, St. Peter's, and St. Nicholas's; of these the first is the largest, including much the greater part of it ; but each has a handsome Go-thic church. St. Mary's is of a cathedral structure, hut the uniformity of the building has been spoiled by taking down the west front, and substituting a new one of the Doric order : the organ of this church is exceedingly fine, supported by four columns of the Ionic order, and in the tower is a peal of ten good bells. The altar-piece of St. Peter's is finely adorned with paintings, and at the west end is a lofty spire with eight bells. St. Nicholas's, although small, is

an exceedingly neat structure, being built of brick faced with stone. St. James's church was erected, in 1808, for the accommodation, it is said, of the Calvinistic party in the church : tile three first presentations being in the subscribers. On Standard Hill four new streets have also been recently built.

The town-hall is a noble edifice, supported by pillars of the Tuscan order; of the former building it is recorded that, in the reign of George I., Powis, one of the justices of the king's bench, being here on the assizes, was delivering his charge to the grand jury in the crown room, when one of the beams supporting the room gave way, and all the people ran in confusion out of the court, leaving Mr. justice Powis upon the bench, calling out after them ••• ' Is there nobody \vill Utke care of the judge?' for he was so aged and infirm that he could hardly walk. Finding himself neglected, he made shift to descend from the butch, and hobble out at the door, and as soon as he found himself in safety ordered the

town to be fined in a considerable sum for not keeping the hall in proper repair. From this circumstance, and an absolute rule from th king's bench which followed, the inhabitants were under the necessity of erecting the present structure.

South-west of the town there is a steep rock, the south face of which, under which runs the river Lerne, is an inaccessible precipice. On this part of the rock stood a castle or tower which the Danes obstinately defended against king Alfred and his brother Ethelred. This castle was rebuilt by William the Conqueror, or, as other accounts state, by his natural son William Peverel, to keep the English in awe, and was so strong by nature and by art as to bid defiance to any force which at that time could be brought against it. It was afterwards greatly enlarged and strengthened by Edward IV. His perfidious brother, who, after murdering his nephew, placed himself on the throne by the style and title of Richard III., made round windows of timber, above those of stone, and finished all the rest. In the civil war that followed it was once in vain besieged by Henry of Anjou, at which time the garrison burnt down the adjoining houses ; and it was once taken by surprise in the barons' wars, by Robert, earl of Ferrers, who also plundered the town or city. But this castle was never taken by storm. It became a garrison for the parliament in Charles I.'s time, who, at the end of the war, gave orders to pull it down.

After the restoration Villiers, second duke of Buckingham, claimed the

castle, in right of his mother, and then sold it to William Cavendish, marquis and afterwards duke of Newcastle ; who, notwithstanding he was eighty-two years old, cleared away, in the year 1674, the foundation of the old castle, and lived to see the present fabric raised above ground. It was finished in 1679, at the cost, it is said, of ––14,002 17s. lid. The building is on a rustic basement, which supports in front a Corinthian order, with a double staircase landing at the grand apartment. Over the door of the north-east front is placed an equestrian statue of the founder, with the face to the north, carved out of one single block of stone brought from Donnington in Leicestershire. The whole building is surrounded by a handsome terrace, which commands a fine prospect along the Trent, and has long been a favorite promenade. The apartments were once very superior, but have been long neglected, as the castle is no longer the seat of the noble owner, but is partly in private occupancy. In the old castle David king of Scots was confined a prisoner; and also the celebrated Roger Mortimer, earl of March, who was seized here by Edward III. and his friends, entering through a secret passage, still called Mortimer's hole. Behind the castle is the park, of 130 acres, used for pasture and gardens : from various parts of it the prospects are rich, beautiful, and picturesque. It contains some curious caves; and at the upper end of it, adjoining the Derby road, are the barracks, a spacious range of brick buildings, erected by government in 1793, in an open and airy situation.

The town of Nottingham is one of the twelve where the king's guineas are run for, besides other

money and plate ; the races are in July. The course, which was formerly four miles round, is at this time but two, and is one of the best in England, being never out of order for running.

Nottingham has long been one of the principal seats of the stocking manufacture. The goods made are chiefly of the finer kinds, as those of silk and cotton ; and the trade is extended to the neighbourhood round, and some of the more distant towns. 10,000 frames have

commonly been at work here in this business. The spinning of silk and cotton has also been largely introduced into the neighbourhood, as well as the manufacture of lace. There is also a manufacture of coarse earthenware, and the malting and tanning business is considerable, but not so much so as formerly. The inland navigation has of late much promoted a general trade in provisions, groceries, &c., with which Nottingham largely supplies the neighbouring country. The supply of coal is also ample from the same circumstance; but it is said to be singularly high in price.

In the reign of king John, a charter was granted wherein all persons within ten miles round Nottingham are forbidden to work dyed cloth but in the borough. This manufacture continued in a prosperous state till the reign of queen Mary ; then it gradually went off, till at last it entirely left this place. The tanners were once so numerous that the masters of this trade were, in the year 1641, thirty-six in number; and in 1664 forty-seven.

The market-place is at the west end of the town, and is in spaciousness superior to most in the kingdom. The market days are on Wednesdays, Fridays, and Saturdays. At the east end is the new exchange, 123 feet long and nearly as wide.

Among other amusements, such as the races (which commence on the first Thursday in August, and continue three days), a respectable company of comedians have a theatre here, and perform about three months in the year; and in the exchange and low pavement rooms frequent assemblies are held.

The public charities of Nottingham are numerous, and many of them on an extensive scale. The principal are Plumtre's, Collin's, and the Lumbley hospital. The workhouses are also very commodious and well conducted. Of the other benevolent institutions, the most important is the general infirmary, an excellent institution, founded in 1781, which has proved of the greatest benefit in relieving the distresses of the people. The building consists of an elegant and spacious centre, with two advanced wings, and two ends, to which considerable additions have recently been made, through the benevolence of an unknown donor of ––20,000, three per cent. consols. It stands in an airy situation, surrounded with beautiful walks; and its internal arrangements are excellent. The lunatic asylum, both for paupers and those who can pay, is also on a large scale. It is among tlie first completed under the late act of parliament, and was opeiud in 1812.

Nottingham has a free grammar school, which %\as founded by one

often called lady Mellers, the widow of Richard Mellers, a wealthy bell-founder of this town ••• she obtained a license for it, for one master anil one usher in the parish of St. Mary, bearing date November 22d, the fourth year of king Henry VIII., A. D. 1513. Here are likewise a charity-school, maintained by voluntary contributions, for the instruction of fifty poor children ; a school in St. Mary’s parish where thirty poor children are instructed ; and various similar institutions. The places of worship for the dissenters are numerous and well attended.

The town is a county of itself, governed by a mayor, six aldermen, a recorder, two sheriffs, and twenty-four common council-men, two coroners, and two chamberlains, with a town clerk and other inferior officers; their privileges are very extensive, and the magistrates are always dressed in scarlet on public occasions. It sends two members to parliament ; the returning officers are the sheriffs. Nottingham is 1 24 J miles from London.

NOTTINGHAM, a post town of Rockingham county, New Hampshire. 2. Of Hillsborough county, same state. 3. Of Burlington county, New Jersey. 4. Of Chester county, Pennsylvania. 5. Of Prince George county, Maryland.

NOTTINGHAMSHIRE. The county town, whence is derived the name of the county itself, comes from a Saxon word, signifying ‘ a place abounding with caverns,’ several such being found in that vicinity. Nottinghamshire was anciently inhabited by the Coritani. After the subjection of the island, the Romans included it in the province named Flavia Caesariensis. During the Saxon heptarchy it belonged to the kingdom of Mercia. This is an inland county, situated between 52•• 50’ and 53•• 34’ N. lat. It is bounded on the west by Derbyshire, on the north by Yorkshire, on the east by Lincolnshire, and on the south by Leicestershire. It is about fifty miles in length, and twenty-six in breadth ; and contains 496,540 acres, or 776 square miles. This county is divided into six wapentakes or hundreds; three of them south of the Trent, *viz.* Rushcliff, Bingham,and Newark hundreds; and three north of the trent, *viz.* Bassetlaw, subdivided into north and south, Clay, and Hatfield divisions (which make it equal to three hundreds), Braxtow hundred, and Thurgarton-a-Leigh. In the usual divisions of this shire Bassetlaw and Newark are equal to the other four wapentakes, the town of Nottingham being left out. There arc

nine market towns, and 450 villages. The county is included in the midland circuit, and in the province and diocese of York.

Lowe, in the Agricultural Survey, says, (hat from his own observation and that of many experienced persons he had consulted, he liad reason to conclude much less rain falls in this county than in the neighbouring ones to the north and to the west. The greatest rains are observed to cone with the easterly winds. ††† The soil and sui-face are thus delineated. Except the level through which the Trent runs, the surface is un-even, and may perhaps be said to be hilly, though none of the lulls rise to any considerable degree of elevation. The soil may l>e divided into the three districts of sand or gravel, clay and litne-

stone, and coal land. The sand or gravel may again be divided into the Forest Country, or the borders of it ; the Trent Bank Country ; and the tongue of land, east of the Trent, running into Lincolnshire. The forest district, consisting of the ancient forest, and the borders of it, of the same kind of soil, is in length about thirty miles, and in breadth from seven to ten, more or less in different places. Mr. Lowe considers as Trent Bank Land the level ground accompanying the Trent, from its entrance into the county down to or a little below Sutton-upon-Trent, where the clay soil comes down to the river on the west side; and on the east a poorer sand runs in a tongued-shape into Lincolnshire. The same writer includes in it likewise the level grounds running up the river Soar, from its junction with the Trent up to Rempston, as the townships of Rat-cliff-upon-Soar, Kingston, Sutton Bonington, Normanton, and Stanford, and those lying on the back of them ; as east and west Leak, Cort-lingstock, and Rempston, which, though on higher ground, are much lower than the Woulds, and of a good mixed loam, convertible and equally fit for tillage or pasture ; now let, Mr. Lowe says, at less than 20*. an acre throughout, taking upland and meadow together ; as well as the strip of higher land, on which are the townships of East Bridgeford, Kneeton, Flintham, and Stoke, which, though above the level of the rest, are of a mellow mixed soil,

different from the clay of Belvoir, adjoining. This level is in general of a mellow soil or vegetable mould on sand or gravel, though in some places these rise to the surface. It is of different breadths ; in some places not above a mile and a half; in others, three, four, and five miles wide, and is mostly enclosed. The tongue of land east of the Trent is of a sandy soil, in some parts rather better than others, but in general very poor. The clay district may be thus divided : 1st. The clay north of the Trent, consisting of the north and south divisions, and the hundred of Thurgarton. 2dly, South of the Trent, comprehending the Vale of Belvoir and the Woulds. The clays north of the Trent are in general not of so tenacious a nature as in many counties, being more friable from containing a portion of sand, and falling more readily by the weather, particularly the red clay, of which there is a great deal in the country round Tuxford, and in the hundred of Thurgarton, which might perhaps be more properly called a clayey loam ; and a blackish clay soil, commonly called a woodland soil, in which there is plainly a mixture of sand. The vale of Belvoir, having no precise boundaries as to soil, may nevertheless be said to include the district lying between the hills called the Nottinghamshire Woulds, and the strip of land running along the Trent, on which stand East Bridgeford, Kneeton, Flintham, and Stoke ; which, as has been observed, though not on the same level with the rest of the Trent bank land, has the same kind of mellow low mixed soil. The Nottinghamshire Woulds are a ran<re of high bleak country, the soil being generally a cold clay. The lime and coal districts may be denned to lie to the west of a line drawn from the river at Shire-Oakes, pretty nearly south by west to the river Lene, near Woolaton and Radford, no lime beinsr found east of the

Lene. The limestone, which may be called a hungry limestone, rising up to the vegetable mould, commencing at Shire-Oaks, and beginning to abut on the coal near Teversall, runs afterwards between it and the sand. The line of coal begins a little north of Teversall, runs about south and by west to Brookhill, then south to Eastwood, afterwards about southeast or a little more easterly to Bilborough, Woolaton, and the Lene. This line is scarcely above a mile broad in this county, and above the coal is a blue or yellow clay. Between this and the sand of the forest is the strip before-mentioned of limestone. This county may be said to be well watered for different purposes. The navigable Trent en-ters the county near Thrumpton, and runs through Nottinghamshire on both sides, till a little below North Clifton, from whence to the northern point of the county it forms the boundary between it and Lincolnshire. The Erwash forms the boundary between this county and Derbyshire, for ten or twelve miles, down to its

junction with the Trent, a little below Thrumpton. The Soar forms the boundary between Nottinghamshire and Leicestershire, for seven or eight miles above its junction with the Trent, a little above Thrumpton. On the Forest side no less than five fine streams cross from east to west almost parallel to each other, and afterwards run to the north, forming the river Idle. The Rainworth Water runs from near Newsted Park to Inkersall Dam and Rufford, and joins the Marm at Ollerton. The Marm goes from Mansfield, by Clipston and Edwinstow, to Ollerton. The Meaden, by Budby and through Thoresby Park, joining the Marm near Perlthorp. From this junction the river is called The Idle. The Wallin, through Welbeck Park, and after receiving the Poulter from Lang-with and Cuckney, by Carberton, and through Clumber Park into the Idle, near Elksley. The Worksop runs from Worksop by Scofton, Bilby, Blyth, and Scrooby, into the Idle at Bawtry. Two other rivers run southward ; the Lene from Newsted ParkbyPapplewick, Bulwell, Basford, and Lenton, into the Trent, by Nottingham bridge. The Dover or Dare Beck, from near Blidworth, by Oxton and Calverton, Eperston and Lowd-ham, into the Trent near Caythorp. In their course through the Forest, these rivers run mostly through boggy bottoms. In the clay district, north of the Trent, are the Dover Beck, the Greet, and many smaller nameless streams. In the Vale of Belvoir are the Devon, the Smite, and other smaller rills. By the canal from Chesterfield to Worksop and Ratford, and to the Trent at Stockwith, a great trade is carried on. There are also the Erwash and Nottingham ca-nals, which now form a junction with the Cromford canal of Derbyshire. In fact we find Nottinghamshire as well supplied in that mode of commercial intercourse as any county in the kingdom. The Nottingham canal in some measure claims the precedence, its general course being about fifteen miles through the county in a north-westerly direction, but not exactly in a right line. It commences in the river Trent, and proceeds to the Cromford canal near Laagley Bridge, very near to the termination of the Er-wash canal ; and it is also connected with the side-cut from the Trent and Mersey navigation,

called generally the Trent Canal, which enters near its southern limit. This navigation was finished in 1802. The Grantham canal is also connected with the Trent, commencing near Holm Pierpoint. The Idle river canal is more properly a river navigation than a cut. It commences at Bawtry, and runs nearly east for ten miles along the northern verge of the county. In one part of its course it has the name of Bycar Dyke ; and about half a mile from Stock with, where it joins the Trent (close to the junction of the Chesterfield canal with that river), is Misterton sluice, which has an opening of seventeen feet eight inches high, with two lock doors or gates sixteen feet high, opening to the Trent, for the purpose of keeping the floods out of the low lands, through which this river flows. But the most impottant water communication, in the northern district of the county, is the Chesterfield canal above mentioned, which commences in Derbyshire, close to that town, and enters Nottinghamshire near Shire-Oaks, thence by Worksop through the northern limits of Sherwood Forest, in a circuitous direction by Babworth to Retford, where it changes its course suddenly to the north, passing through Wellow, Hayton, Clarborough, and Clayworth, by Wiseton Hall, Everton, and Drakelow, where it runs through a tunnel of 250 yards, and thence round Gringley-on-the-Hill in a north-east direction, through Misson Car to Misterton, across Walkingham Moor, and thence into the Trent at Stockwith. The whole line of this canal is about forty miles. This county produces hops in considerable quantities, particularly in most of the north clay districts. Weld or woad for dyers is also cultivated here. The mineralogy of Nottinghamshire has no peculiar feature : coal is the principal article.

The Roman and Saxon remains are numerous. As the camps at Barton Hill, at Combes farm, Gringley, Hexgrave, and Wenny Hill, and a Roman villa near Mansfield ; the Castle of Newark, the Abbeys of Newstead, Rufford, atid Welbeck ; the priories of Mattersey and Worksop ; and the churches of Balderton, Bingham, Blythe, and Southwell.

This county returns ten members to parliament; *viz.* four for the county ; two for Nottingham, the county town ; two for East Retford ; two for Newark.

This county gave birth to the following distinguished persons : ××× John Ardern, a learned surgeon, born at Newark-upon-Trent. He is mentioned as the reviver of sunrery, and flourished in the fourteenth century. ××× Dr. John Blow, an eminent musician, born at Collingham, about 1G48; died 1708. ××× Dr. William Chappel, the learned and pious bishop of Cork, Cloyne, and Ross; one of the

reputed authors of The Whole Duty of Man. ◆◆◆ The ingenious Dr. Erasmus Dar-win, an eminent poet, philosopher, and physician, who is said to have cleared a guinea per line l>y his poetical works ; born at Elston, near Newark, in 1731 ; died in 1802. ◆◆◆ Sir Geoflry or John Fenton, translator of the elaborate work of Guic-ciardini; died 1608. ◆◆◆ Ilis brother Edward, of whom an account may be found in Hackluyt's Voyages, was also a native of this county. ◆◆◆ Dr. Samuel Jebb, a learned physician, was born at Nottingham, and died in 1772. ◆◆◆ The late amiable and celebrated biographer, ◆◆◆ Dr. Andrew Kippis, was also a native of Nottingham ; born in the year 1725; died in 1795. ◆◆◆ The learned archbishop of Canterbury, Dr. Seeker, was born at Sibthorpe, 1693; died 1768.◆◆◆ The Rev. Dr. R. Sterne; died 1684.◆◆◆ The late Rev. Gilbert Wakefield was born at Nottingham, 1756 ; died 1801.◆◆◆ The late Dr. William Warburton, bishop of Gloucester, who might be denominated the Gilbert Wakefield of the church establishment, was a native of Newark-upon-Trent ; born in 1691 ; died 1779.

The malting business is carried on to a great extent in this county, particularly at Nottingham, Newark, and Mansfield, and in many other places. At Newark are breweries, which vie with those at Burton-upon-Trent. There is one also at Nottingham. The stocking trade is the most anciently established manufacture in this county. Nottingham and the surrounding villages abound with works in this trade. The hosiery frames were the discovery of a clergyman of this county, na~◆◆d Lee, in the reign of queen Elizabeth, who, being but little encouraged at home, repaired to Paris, and commenced his work un-der the auspices of Henry IV. The death of that monarch depriving him of a patron, he died in France, we are told, of chagrin, and the workmen returned home and introduced the machinery in this neighbourhood. Cotton-mills are erected in various places to prepare the thread for the Manchester manufacture, and for stockings and other purposes. The silk business is carried on at Nottingham ; and Mansfield is a brisk place in the stone trade. Artificial marble is likewise made, and a considerable thread manufacture, and another of British lace.

NOTTS, n. s. Lat. The south wind.

With adverse blast upturns them from the south, Not us and Afer black, with thunderous clouds From Sierra Liona. Milton'* Puratiite Lott.

NOT WHEAT, n. 5. Not and wheat.

Of wheat there are two sorts; French, which is bearded, and requireth the best soil, and notirheat, so termed because it is unbearded, being contented with a meaner earth. Carew.

NOTWITHSTANDING, con;. Or more properly, as Dr. Johnson observes, a participial adjective, compounded of not and withstanding, and answering exactly to the Latin non obttante. It is therefore most properly and analogically used in the ablative case absolute with a noun ; as, he is rich notwithstanding his loss ; it being not so proper to say, he is rich notwithstanding he has lost much; yet this mode of writing is frequent. When a sentence follows, it is more grammatical to insert that ; as, he is rich notwithstanding that he has lost much. When notwithstanding is used absolutely, the expression is elliptical, this or tliat being understood.

They which honour the law as an image of the wisdom of God himself, are Hotu-ithttanding to know that the same had an end i;i Christ. Hookrr.

The knowledge is small, which we have on earth concerning things that arc done in heaven ; n►►ttrith-sttuiding this much we know, even of saints in heaven, that they pray. Jd.

He hath a tear for pity, and a hand

Open a* duy, for melting charity ;

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Yet notwithstanding, being incensed, he's flint ;

As humorous as winter. S/wfopeare. Henry IV.

Those on whom Christ bestowed miraculous cures were so transported, that their gratitude made them, notwithstanding his prohibition, proclaim the wonders he had done for them. Decay of Piety.

\ person languishing under an ill habit of body, may lose several ounces of blood, notwithstanding it will weaken him for a time, in order to put a new ferment into the remaining mass, and draw into it fresh supplies. Add'uon.

NOVALAISE, a town of Savoy, in the province of Chamberry, with 1500 inhabitants. In the neighbourhood are coal mines. Ten miles north-east of Pont-de-Beauvoisin.

N O VARA, a province of the Sardinian Milanese, sometimes called the Novarese, contains an area of 1400 square miles. It is divided into Upper and Lower Navara, the latter being a flat, and the former a more diversified country ; but neither are very fertile; and Lower Navara being damp, and only fit for the cultivation of rice, is unhealthy. Flax and rice are the chief products of the Novarese ; which is reckoned to contain 226,000 inhabitants.

NOVAHA, an ancient town in the north-west of Italy, capital of the Novarese, and a bishop's see. Some writers say that this place was built by the Trojans, and called Nova Ara, *i.e.* the new altar, because they had erected there a temple to Venus. Tacitus mentions its being made a municipal city by the Romans ; and there are many inscriptions extant which prove its ancient splendor. It is now a small but well-built and fortified town, defended by a castle, and situated on a little eminence, in a fine country, betwixt two rivers. It is remarkable for the several sieges sustained in past times, and for being the birth-place of Peter Lombard. It was taken by the French republicans, under general Victor, on the 6th December, 1798, previous to the erection of the shortlived Piedmontese Republic. After the overthrow of that democracy it was again taken by the French, under Murat, on the 30th of May 1800, and long annexed to the empire. It has a cathedral and seventeen churches, and had eighteen

convents. In front of the ca-tle is a spacious square containing a theatre. The churches worth notice are those of St. Do-minici and St. Gaudengo : here is also a fine mansion of the Bellini family, and manufactures of silks, linen, and leather. Population 13,000. It lies ten miles north-east of Vercelli, and twenty-six W. S.W. of Milan.

NOVA SCOTIA, called by the French Acadia, a province of BRITISH AMERICA (see that article), bounded on the north-west by Canada, on the north-east by the gulf of St. Laurence, on the southeast by the Atlantic, and on the south by the Atlantic Ocean and the United States of America; between 300 and 400 miles from east to west, and of very different breadth : in some places 150, in others not more than forty from north to south. It was in the year 1784 divided into two provinces, *viz.* New Brunswick and Nova Scotia proper. Nova Scotia, in this limited sense, is a peninsula, joined to the continent by a narrcrv isthmus, at the north-east extremity of die bay of Fundy, and is about 240 miles in

length from south-west to north-east, and from thirty to sixty in breadth, and lies to the west of New Brunswick. The winter is here of great length and severity, continuing at least seven months, and to this succeeds, without the intervention of spring, a hot summer ; the heat in-deed is not of long continuance, the country being, for a considerable part, even of this sea-son, wrapt in perpetual fog. The soil is thin and barren, and the grain it produces very inferior. The timber called lumber, with its fishery, are its only riches.

The coasts are rocky, and broken by innumerable bays, forming excellent harbours. The most worthy of notice are, Chaleurs Bay, which is many leagues deep, and which, being well situated for the fishery in the gulf of St. Laurence, has many fishing stations on its shores. The island Bonaventura, north of the bay, is inhabited by a few persons, who winter on it, merely tc preserve the right to the neighbouring fishing grounds. The pierced rock, south of this island, at a distance resembles a ruined aqueduct. It is 400 yards long, 200 feet high, and is perforated in three places in the form of arches; through the central and largest of which a boat can pass under sail. Green Bay, in Northumberland Strait, forms the narrowest part of the isthmus of Nova Scotia, being but four miles from the head of the river Missaquash, which falls into the Bay of Fundy.

The Bay of Fundy (Baie Francoise of the French) is fifty leagues long. It is chiefly remarkable for the strength and height of the tides, which

are said to run up the creeks witli immense velocity, in a kind of bore, whose elevation is from fifty to seventy feet. The river St. John, or Clyde, the principal one of the province, falls into the Bay of Fundy, and is navigable for vessels of sixty tons fifty miles, and for boats 200 ; the tide flowing up it eighty miles. It abounds in small sturgeon, salmon, and bass : and its banks are level and fertile. Frederick Town, the capital of the province, is on this river, ninety miles from its mouth.

Passamaquody Bay, the western limit of the province, receives the river St. Croix. Before it are the Manan Islands, asserted by the Americans to be within their limits, but occupied by the English. The peninsula of Nova Scotia is joined to New Brunswick by an isthmus, four miles broad. Here the French established themselves prior to their settlement in Canada, and increased largely : but the first grant of lands seems to have been made to Sir William Alexander by our James I., from whom it received the name of Nova Scotia. It has more than once changed proprietors ; nor was it confirmed to England till the peace of Utrecht. Thirty-six years after 3000 families were conveyed hither at the charge of the English government; and the town of Halifax, the present capital, founded. Since that time several other places have been founded, especially during the American war, when many royalists retired here.

NOVATIAN,anheresiarchofthethird century, who was originally a pagan philosopher. lie was baptised in bed when dangerously ill : recovering, he was afterwards ordained prieat of

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the cliurch of Rome, his bishop having obtained this favor for him, which the clergy and people were not disposed to grant. By his talents and eloquence he might have been peculiarly serviceable to the church, had he not with cowardice shrunk from persecution. His ambition to be made a bishop likewise misled him. On the deaih of Fabian, bishop of Rome, he wrote to St. Cyprian to be appointed to succeed him ; but the promotion of Cornelius to that dignity excited his envy and jealousy to such a pitch that he separated from the new bishop, and from all who professed to believe, what Novatian strenuously denied, that the church could receive those again who had been guilty of idolatry. He soon had a number of followers among the laity, and some even among the clergy. Novatus, a priest of Carthage, joined with his adherents. He was consecrated bishop of Rome in a most infamous and clandestine manner by three weak men whom he had imposed upon, and one of whom did penance for his concern in the business. But he never was acknowledged as bishop, Cornelius being confirmed, whilst he was condemned and excommunicated. He still, however, taught his doctrine, and at length be-came the head of the party which bears his name. St. Jerome informs us that he wrote on the Passover, on the Sabbath, on Circumcision, on the High Priests, on Prayer, on Jewish meals, and on firmness of mind, &c., with a treatise on the Trinity. None of them appear under his own name, and some are thought spurious.

NOVATIANI, NOVATIANS, a sect of ancient heretics that arose in the end of the third century, so called from Novatian. They were called also Cathari, from eaOapoc, pure, q. d. Puritans. Novatian first separated from the communion of Cornelius on pretence of his being too easy in admitting to repentance those who had fallen off in times of persecution. Novatus, coming to Rome, joined Novatian; and both maintained that there was no other admission into the cliurch but by repentance in baptism ; grounding their opinion on that of St. Paul : ‘ It is impossible for those once enlightened, and who have tasted the heavenly gift, if they fall away, to renew themselves by repentance.’ Not that they denied but a person, fallen into any sin, might obtain pardon by repentance (for they themselves recommended repentance in the strongest terms), but their doctrine was, that the church had it not in its power to receive sinners into its communion, as having no way of remitting sins but by baptism ; which once received could not be repeated. The two leaders were proscribed, and declared heretics,

not for excluding penitents from communion, but for denying that the church had a power of remitting sins. See NOVATUS.

NOVATION, or INNOVATION, in civil law, denotes the change of one kind of obligation for another, as when a promise is accepted instead of a written obligation.

NOVATUS, a priest of Carthage in the third century, who, to avoid being punished for a crime, joined with the deacon named Felicissimus against St. Cyprian. He went to Rome in 251, and there found Novatinn, with whom he contracted a friendship ; and afterwards pro-

moted his consecration to the see of Rome. This produced a very great schism. See NOVATIAMS.

NOVA ZEMBLA (Rus. Zemlia, country, sig nifying therefore New Land), is the name of iwc large islands, placed by some geographers in Europe, and by others in Asia ; they are separatee by a strait named Matotchink, eternally frozen. Both islands are traversed from north to south by a chain of mountains, chiefly of slate, but with some fine black marble with white veins. A salt lake, pit coal, and mineral tar or asphaltum, have also been discovered. In the valleys the soil is frozen turf. The east coast is seldom accessible by ships. The reindeer, the isatis, and an animal resembling the rabbit, but only the size of the rat, are the only quadrupeds here. The eider duck is here in its proper climate ; and the Sa mo ides of the continent visit the southern shores of these islands to collect the down of these birds ; and to hunt the seal and wolves. Between Nova Zem-bla and the continent is Waigat's island, the channel between which and the main is named Waigat's Strait, in which the greatest depth is eighty fathoms. The two islands, Matvief and Dolgoi, are south-wtst of Waigats, and are considered as appendages of Nova Zambia, which was taken possession of by Russia in 1679.

NOV'EL, adj. & ►►. s. j IT. nouvclle ; Lat.

NOV'ELIST, n. s. 5-not'its, novellux. New;

NOV'ELTY. j unusual ; of late date;

in the civil law, appendant to the code : as a substantive it is used for a law annexed to the code ; and in the French sense for a small or short tale, 'generally of love," says Dr. Johnson, and generally small enough in sense, though often in modern times extending to several

volumes: a novelist is an innovator, a supporter or asserter of novelties ; also a writer of novels: novelty, newness; innovation; state of being new.

They which do that which men of account did before them, are, although they do ai-.iis:,, yet the less faulty, because they are not the authors of harm : anil, doing well, their actions are freed from prejudice or notxlly. iiit-kfr.

A”i>tvi<v is only in request ; and it is dangerous to be aged in any kind of course. Shaiujrurt.

Teltsius, who hath renewed the philosophy ot” 1’ar-munides, is the best of n<nrli.-.t$. Biican.

The Presbyterians are exacters of submission to their rxtv/ injunctions, befo.e they are stamped with the authority of laws. Ai/i►► C/mr/ ►►.

It is no m*v/ usurpation, but, though void of other title, has the prescription of many ages.

Ueciiu <<f I’i-‘ty.

The fathers of this synod weie not schisraatiral.u novelists in the matter of the s.ibbath. While.

Aristotle rose,

\Vho nature’s secrets to the world did teach, %

Vet that great M.U! our ►►.‘iWi►►fs impeach.

Dtnlntm.

The fooleries of some affected witli►►t have dii-ciediied new discoveries. (.”Uinrittr’t S-r;i►►i►►.

Nothing of a foreipn tiatuie : like the tntling H.nr/s which Ariosto inserted in Ills poems.

Drti.lm.

As religion entertains our speculations witli great objects so it entertains the:n with new ; and ►►wir/ti/ is the -‘real parent of pleasure ; upon which account it is that men are so much pleased with variety.

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Her mangled fame in barbarous pastime lost, The coxcomb's novel, and the drunkard's toast.

Prior.

By the novel constitutions, burial may not be de-nied to any one. Aylijfe's Parergon.

By the civil law no one was to be ordained a presbyter till he was thirty-five years of age : though by a later novel it was sufficient if he was above thirty. Id.

Such is the constant strain of this blessed saint, who every where brands the Arian doctrine, as the new, novel, upstart heresy, folly and madness.

Waterland.

The abettors and favourers of them he ranks with the Abonites, Argemonites, and Samosaterians, condemned hereticks, brands them as novelists of late appearing. Id.

Words still suffice ; No single word but has its price : No term but yields some fair pretence For novel and increased expense. Cowpcr. I admire the preface, in which you have given an air of novelty to a worn out topic, and have actually engaged the favour of the reader by saying those things in a delicate and uncommon way, which in general are disgusting. Id. Private Correspondence.

NOVEL, in the civil law, a term used for the constitutions of several emperors, more particularly those of Justinian. They were called novels, either from their producing a great alteration in the face of the ancient law, or because they were made on new cases, and after the revival of the ancient code.

NOVEM'BER, n. s. Lat. November. The eleventh month of the year, or the ninth reckoned from March, which was, when the Romans named the months, accounted the first.

November is drawn in a garment of changeable green, and black upon his head. Peacham.

NOVEMVIRI, nine magistrates of Athens, whose government lasted but for one year; the first of whom was called archon, or prince ; the second basileus, or king ; the third polemarchus, or general of the army : the other six were called thesmothetae, or lawgivers. They took an oath to observe the laws ; and, in case of failure, obliged themselves to bestow upon the commonwealth a statue of gold equal to their own weight. Those who discharged their office with honor were received into the number of the senators of Areopagus.

NOV'ENARY, n. s. Lat. novenarius. Num-ber of nine; nine collectively.

Ptolemy by parts and numbers implieth climac-terical years ; that is, septenaries and novenaries.

Browne.

Looking upon them as in their original differences and combinations, and as selected out of a natural stock of nine quaternions, or four novenarlet, their nature and differences lie most obvious to be understood. Holder.

NOVER'CAL, adj. Lat. novercalis, noverca. Having the manner of a stepmother; beseeming a stepmother.

When the whole tribe of birds by incubation, produce their young, it is a wonderful deviation, that some few families should do it in a more novercal way. Derham.

NOUGHT, n.s. Sax. neauht. Naught, as it should be written ; but naught is by custom applied to bad or worthless things: and nought

to signify nothing; ' to set at naught' is not to value or regard.

Ye have tet at nought all my counsel, and would none of my reproof. Prov. i. 25.

Ye are of nothing, and your work of nought.

Isaiah xli. 24. Thereto, said he, ' Faire Dame,' be nought dis—

maid, For sorrowes past ; their griefe is with then* gone.

Spenser. Faerie Queerie. Who cannot see this palpable device 1 Yet who so bold, but says he sees it not 1 Bad is the world, and it will come to nought, When such ill dealings must be seen in thought.

Shaktpeare.

Such smiling rogues as these sooth every passion , Renege, affirm, and turn their halcyon beaks With every gale and vary of their masters, And knowing nought, like dogs, but following. Id.

In young Kinaldo fierce desires he spyed, And noble heart, of rest impatient, To wealth or sovereign power he nought applyed.

Fairfax.

Be frustrate all ye stratagems of hell, And devilish machinations come to nought.

Milton.

Who fixed the corner-stone ; what hand declare, Hung it on nought, and fastened it in air, When the bright morning stars in concert sung, Whea heaven's high arch with loud hosannas rung.

Young.

But oh ! she's an heiress, auld Robin's a laird, And my daddie has nought but a cot-house and

yard ;

A wooer like me maunna hope to come speed, The wounds I must hide that will soon be my dead.

Burns.

But recollecting, with a sudden thought, That flight in circles urged advanced them nought, They gathered close around the old pit's brink, And thought again ††† but knew not what to think.

Cowper.

NOVGOROD, a considerable province of European Russia, to the east of the governments of Petersburg and Pskov. It lies between 20†† 50' and 38†† 50' of E. long., and 57†† 30' and 60†† 30' of N. lat., having an area of 55,000 square miles, but the number of inhabitants do not exceed 780,000. This province is surrounded by a part of the elevated tract called the Valdaic Mountains. In the north large tracts are covered either with marshes or moss ; but the south part produces corn, hemp, flax, timber, and some iron and salt. The whole is divided into ten districts or circles. The rivers are the

Volchov, the Msta, and the Mologa. The lakes Ilmen, Bielojo, Osero, and Vosh. Some manufactures of common articles are carried on in the towns ; and in the country soap, linen, candles, and potash, are made. The exports are corn, flax, hemp, and wood. The capital of the province, employed in commerce, was declared, by an official report, in the beginning of this century, to be ►►1,200,000.

NOVGOROD, or NOVGOROD-VELIKI (the Great Novgorod), a large town of the north-west of European Russia, the capital of the above government, is situated in a plain at the north extremity of the lake Ilmen. The Volchov, a deep and rapid stream, divides it into two parts. The part on the right bank is called the Torgaraia, or Market Town ; that on the left, the Sophiskaia,

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and is surrounded with a rampart of earth, and a ditch flanked with towers. It is about a mile and a half in circumference, but this includes much open space, and contains the Kremlin or citadel, in which is an ancient palace of the czars, and the cathedral of St. Sophia, a large building with sculptured brazen gates. Some of the paintings here are of great antiquity, and the Russians, according to Dr. Clarke, are fond of copying them. ‘ We find at the end of the eighteenth century,’ he observes, ‘ a Russian peasant placing before his bogh (God), a picture purchased in the market of St. Petersburg or Moscow, exactly similar to those brought from Greece during the tenth; the same stiff representation of figures which the Greeks themselves seem to have copied from works in mosaic ; the same mode of mixing and laying on the colors on a plain gold surface ; the same custom of painting upon wood ; and the same expensive covering of a silver coat of mail.’ Here are also some curious specimens of the architecture as well as painting of the eleventh and twelth centuries. The tombs of Vladimir and of Theodor are in the cathedral, the gates of which are said to have been brought by the former from Cherson.

On the bridge leading to the Kremlin from the other part of the town, Dr. Clarke noticed, ‘ a small sanctuary, where every peasant who passes deposits either his candle or his penny. Before this place, which is filled with old pictures of the kind already described, and which a stranger might really mistake for a picture-stall, devotees during the whole day may be seen bowing and crossing themselves. A Russian hardly commits any action without this previous ceremony. If he be employed to drive your carriage, his crossing occupies two minutes before he is mounted. When he descends, the same motion is repeated. If a church be in view, you see him at work with his head and hand as if seized with St. Vitus’s dance. If he make any earnest protestation, or enter a room, or go out, you are entertained with the same manual and capital exercise. When beggars return thanks for alms, the operation lasts a longer time ; and then, between the crossing, by way of interlude, they generally make prostration, and touch their foreheads to the earth.’

‘ The melancholy ideas excited by the present appearance of Novgorod,’ Dr. Clarke further remarks, ‘ have been felt by all travellers. Who has not heard the ancient saying, which prevailed in the days of its greatness ××× Quis contra Deos et magnam

Novogordiam ? ??? Who can resist the gods and Novgorod the Great? Nomade Slavo-nians were its founders, about the time that the Saxons, invited by Vortigern, first came into Britain. Four centuries after, a motley tribe, collected from the original inhabitants of all the watery and sandy plains around the Finland Gulf, made it their metropolis. Nearly 1000 years have passed away since Ruric, the Norman, gathering them together at die mouth of the Volchova (Volkhov), laid the foundation of an empire, destined to extend over the vast territories of all the Russias ; afterwards, ascending the river to the spot where its rapid current rushes from the lake Ilmen, to the Ladoga Lake, he

fixed bis residence in Novogorod. In the midit of those intestine divisions which resulted from the partition of the empire, at the death of Vladimir (A. D. 1015), who divided his states among his twelve sons, there arose three independent princes and a great number of petty confederacies. The seat of government was successively removed to Suzedal, Vladimir, and Moscow. Novogorod adopted a mixed government, partly monarchical and partly republican. In the middle of the thirteenth century (A. D. 1250) it was distinguished by the victories of its grand duke over the Swedes on the banks of the Neva ; and, by its remote situation it escaped the ravages of the Tartars in the fourteenth. In the fifteenth it submitted to the yoke of Ivan I , whose successor Ivan II., in the sixteenth, ravaged and desolated the place, carrying away the palladium of the city, tlie famous bell, which the inhabitants had dignified with the appellation of eternal.' About the middle of the fifteenth century this town was the chief factory of the Hanseatic league, in their trade with Russia and Poland. Its territory at this time reaching, on the north, to the frontiers of Livonia and Finland, and comprising a great part of the province of Archangel, with a district beyond the north-west limits of Siberia. In 1553, in consequence of Ivan IV. seizing the effects, and imprisoning the persons, of the merchants resident there, Novogorod was abandoned by the Hanseatic league, and its traders removed first to Revel, and afterwards to Narva. It still continued, however, to be the most commercial city in Russia. Chancellor, who passed through it, thus describes in it 1554: ??? ' Next unto Moscow, the city of Novgorod is reputed the chiefest of Russia ; for although it be in majestie inferior to it, yet in greatnesse it goeth beyond it. It is the chiefest and greatest mart town of all Muscovy ; and albeit the emperor's seat is not there, but at Moscow, yet the commodiousness of the river, falling into that gulf which is called Sinus Finnicus, whereby it is well frequented by merchants, makes it more famous than Moscow itself.' ' But its ruin

was not fully accomplished,' as Dr. Clarke observes, ' until the building of St. Petersburg, when all the commerce of the Baltic was transferred to that capital.' The other part of the town contains the governor's house; the rest of the houses are wooden structures, very irregularly placed at present. But here a number of brick churches and convents witness its former consequence. A trade in corn is carried on here, and there are some inconsiderable manufactures of canvas and other articles. The population of the whole city at present amounts only to 8000. Novgorod is still the see of an archbishop, and is 112 miles S. S. E. of St. Petersburg.

NovGOEOD-SiEVERSKOr, a town in the government of Czernigov, in F.uropean Russia. It was for some time the capital of the government, and has three yearly fairs. It stands at the confluence of the Dnieper and Desna. Inhabitants 3000. Eighty-six miles E. N. E. of Czernigov.

NOVI, a town of North-west Italy, in the Sardinian states, situated in a fertile plain, at the foot of the Appennines ; on an eminence stands

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the castle. The houses are often painted of various colors gn the outside; several of the affluent inhabitants of Genoa have country residences here, and the place is on the whole well built. In front of the principal church is a pub-lic square. The chief manufactures are silk, and this place is an entrepot for goods coming from the Levant, which pass into Lombardy and the north of Germany. In August, 1799, one of the most sanguinary battles in the eighteenth century took place here, between the French under Joubert and Moreau, and the Austro-Russian forces under Suwarrow, in which the latter was victorious. Inhabitants 5400. Twenty-tliree miles north by east of Genoa.

NOVI-BAZAR, or NOVI-PAZAR, a considerable town of small trade, in the north of European Turkey, in Servia, near the Oresco, formerly the capital of the province of Rascia. It contains about 8000 inhabitants, partly Christians and partly Turks, and is seventy miles west by north of Nessa.

NOVICE, n. s. ~\ FT. novice, noviciat ; Lat.

NOVIT'IATE, ˆnovitius. One newly ac—

NOV'ITY. j quainted with a thing ; a

fresh man ; probationer : one in monastic affairs, who has not taken the vow : novitiate, the state of a novice, or of being under tutelage : novity, a foolish redundancy in our language, adopted only, as we find, by the author of ' Vulgar Errors' for novelty, newness.

Not a novice, lest being puffed up with pride he fall into the condemnation of the devil. St. Paul.

Bring me to the sight of Isabella, A novice of this place.

Shakspeare. Measure for Measure, You are novices ; 'tis a world to see

How tame when men and women are alone,

A meacock wretch can make the cursest shrew.

Shakspeare.

We have novices and apprentices, that the succession of the former employed men do not fail.

Bacon.

The good man's actions are so many copies for novices to take out no less instructive than the wiser men's precepts. Bp. Hall.

Some conceive she might not yet be certain, that only man was privileged with speech, and, being in the novity of the creation and unexperience of all things, might not be affrighted to hear a serpent speak. Browne.

I am young, a novice in the trade, The fool of love, unpractised to persuade ; And want the soothing arts that catch the fair, But caught myself lie struggling in the snare. And she I love, or laughs at all my pain, Or knows her worth too well, and pays me with disdain. Dryden.

This is so great a masterpiece in sin, that he must have passed his tyrocinium or novitiate in sinning, before he come to this, be he never so quick a proficient. South.

If any unexperienced young novice happens into the fatal neighbourhood of such pests, presently they are plying his full purse and his empty pate. Id.

In these experiments I have set down such circumstances, by which either the phenomenon might be rendered more conspicuous, or a novice might more easily try them, or by which I did try them only.

Newton's Oplicks.

NOVIODUNUM, in ancient geography, the name of seven towns, mostly in Gaul; *viz.* 1. A town of the ./Edui, commodiously seated on the Liguris (Caesar), the Nivernun of Antonine ; now called Nevers, on the Loire. 2. A town of the Aulerci Diablintes, in Gallia Celtica (Antonine, Ptolemy). 3. A town of the Bituriges (Caesar), now called Nueve sur Baranion ; fifteen miles north of Bourges. 4. A town of Mcesia Inferior (Ptolemy), situated on the Ister; now Nivorz. 5 A town of Pannonia Superior (Antonine) ; now Gurkfeld in Carinthia. 6. Noviodunum Saessionum, the same with Augusta Suessionum. 7. A town of the Veromandui, in Gallia Belgica (Caesar); now called Noyon.

NOVITIATE, or NOVICIATE, is a year of probation appointed for the trial of novices, whether they have a vocation, and the necessary qualities for living up to the rule; the observation whereof they are to bind themselves to by vow. The noviciate lasts more than a year in some houses. It is esteemed the bed of the civil death of a novice, who expires to the world by profession.

NOUN, n. s. Old French, noun ; Lat. nomen. The name of any thing, in grammar.

Thou hast men about thee, that usually talk of a noun and a verb, and such abominable words as no Christian ear can endure to hear. Shakspeare.

A noun is the name of a thing, whether substance, mode, or relation, which in speech is used to signify the same when there is occasion to affirm or deny any thing about it, or to express any relation it has to any other thing. Clarke.

The boy, who scarce has paid his entrance down, To this proud pedant, or declined a noun. Dryden.

NOUR'ISH, v. a & n. s.-\ Fr. nourrir ; Ital.

NOUR'ISHABLE, adj. { nodrire, nutrire ;

NOUR'ISHER, n. s. i Span, nutrir; Lat.

NOURISHMENT. J nutria. To support ; maintain ; encourage ; feed ; promote growth and strength ; train; educate: and, in an obsolete sense, to gain strength or grow : nourishable is susceptible of nourishment : a nourisher, he who yields or communicates strength, support, or maintenance : nourishment, nutriment ; support of strength ; hence food ; sustentation.

A restorer of thy life, and a nourisher of thine old

age.

Ruth.

I travel not, neither do I nourish up young men, nor bring up virgins. Isaiah xxiii. 4.

Pharaoh's daughter took him up, and nourished him for her own son. Acts vii. 21.

Thou shall be a good minister of Jesus Christ, nourished up in the words of faith. 1 Tim. iv. 6.

What madness was it with such proofs to nourish their contentions, when there were such effectual means to end all controversy ! Hooker.

He instructeth them, that as in the one place they use to refresh their bodies, so they may in the other learn to seek the nourishment of their souls. Id. Whilst I in Ireland nourish a mighty band,

I will stir up in England some black storm.

Sliakipeare.

Sleep, chief nourisher in life's feast. Id.

In vegetable there is one part more nourishing than another ; as grains and roots nourish more than their leaves. Bacon.

Milk warm from the cow is a great nourisher, and a good remedy in consumptions. Id.

Him will I follow, and this house forego

That nourished me a maid. Chapn an.

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NOW

Yet to nourish and advance the early virtue of young persons was his more chosen desire. Fell.

He that commanded the sea to stand still and guard da, can as easily command the earth to nourish us. Bp. Hull.

Please to taste

These bounties, which our nourisher hath caused The earth to yield. Milton's Paradise Lost.

By temperance taught, In what thou eatest and drinkest ; seeking from

thence Due nouriihment, no gluttonous delight. Milton.

The chyle is mixed herewith, partly for its better conversion into blood, and partly for its more ready adhesion to all the nourishable parts. Grew.

When the nourishment grows unfit to be assimilated, or the central heat grows too feeble to assimilate it, the motion ends in confusion, putrefaction and death.

Newton's Opticki.

The limbs are exhausted by what is called an atrophy, and grow lean and thin by a defect of nourishment, occasioned by an inordinate scorbutick or erratick heat. Blackmore.

Through her nourished powers enlarged by thee, She springs aloft. Thomson's Seasons.

You are to honour, improve, and perfect the spirit that is within you : you are to prepaie it for the kingdom of heaven, to nourish it with the love of God and of virtue, to adorn it with good works, and to make it as holy and heavenly as you can. Law.

And seems it nothing in a father's eye That unimproved those many moments fly I - And is he well content his son should find No nourishment to feed his growing mind But conjugated verbs and nouns declined 1 For such is all the mental food purveyed By public hacknies in the schooling trade.

Cowper.

Pride at the bottom of the human heart Lay, and gave root and nourishment to all That grew above. . Pollok.

NOUR'ITURE, n. s.ˆ Fr. nourrice, noitrri-NOUR'SLING, > ture. See NURSE and

NOUR'SLE, v. n. J NURTURE. Tutelage;

education : a noursling is used by Spenser for the creature nursed: to noursle by Bp. Hall for to tutor, educate.

Thither the great magician Merlin came, As was his use, oftimes to visit me ;

For he had charge my discipline to frame, And tutors nouriture to oversee. Spenser.

If the poor seduced souls of foreign subjects, that have been invincibly noursled, commisserate with weeping eyes and bleeding hearts, be carried hood-winked to those hideous impieties ††† shall the native subjects of the defender of the faith, who have been trained up in so clear a light of the gospel, begin to cast wanton eyes upon their glorious superstitions'?

Bp. Hall.

NOU'SEL, n. s. The same with nuzzel, and both corrupted from nursle. To nurse up : hence to confine. Obsolete.

Bald friars and knavish shavelings sought to nousel the common people in ignorance, lest being once acquainted with the truth of things, they would in time smell out the untruth of their packed pelf and mass-penny religion. Spenser.

NOW, adv., con;. & n.s.) Sax. nu ; Goth.,

NOWADAY, adv. \ Swed. and Dan. nu ;

Teut. nun ; Lat. nunc ; Gr. vvv : there is also a Pers. nu. At the present time ; at any time supposed to be present ; a little while ago : it is often used conjunctively as a particle of connec-

tion or inference : and, by way of contrast with then, to denote present time emphatically ††† or a succession of places, as they rise to notice : as a substantive, seldom used but in poetry, it signifies the present moment : now-a-days, means in the present age ; in these days.

Thy servants trade hath been about cattle, from our youth even until now. Gen. xlvi. 34.

Then cried they all again, saying, Not this man but Barabbas ; now

Barabbas was a robber.

St. John.

Not so great as it was wont of yore. It's nowadayt, ne half so strait and sore.

S/ifnser.

Now whatsoever he did or suffered, the end thereof was to open the doors of the kingdom of heaven, which our iniquities had shut up. Hooker.

Note and then they ground themselves on human authority, even when they most pretend divine. Id. Now the blood of twenty thousand men

Did triumph in my face, and they are fled.

Shakspeare.

Reason and love keep little company together nowadays. Id.

A mead here, there a heath, and now and then a wood. Dray ton.

Natural reason persuades man to love his neighbour, because of similitude of kind : because mutua love is necessary for man's welfare and preservation, and every one desires another should love him. Now it is a maxim of Nature, that one do to others, according as he would himself be done to. White.

Nothing is there to come, and nothing past. But an eternal noic does ever last. Coicley.

How frail our passions ! They that but now for honour and for plate. Made the sea blush with blood, resign their hate.

Walla:

Refer all the actions of this short and dying life to that state which will shortly begin, but never have an end ; and this will approve itself to be wisdom at last, whatever the world judˆe of it now.

Tillotton.

Such are those principles which, by reason of the bold cavils of perverse and unreasonable men, we are nowadays put to defend. Id.

Now and then something of extraordinary, that is any thing of your production, is requisite to refresh your character. Dryden,

She vanished, we can scarcely say she died, For but a now did heaven and earth divide ; This moment perfect health, the next was death. ►► Id.

How shall any man distinguish note betwixt a parasite and a man of honour, where hypocrisy and interest look so like duty and affection ?

L' Eft range.

Now that languages abound with words standing for such combinations, an usual way of getting these complex ideas, is by the explication of those terms that stand for them. Incite.

Pheasants which are granivorous birds, the young live mostly upon ants e;_rgs. AW-birds, being of a hot nature, are very voracious, therefore there had need be an infinite number of insects produced for their sustenance. /lay.

A most effectual argument against spontaneous generation is, that there is no new species produced, which would now and then happen, were there any such thing. MIt was a vestal and a virgin fire, and differed as much from that which passes by this name m►►tr-aluvs, as the vital heat from the burning of a fever.

South

NOW

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Ilelim bethought himself, that the first day of the fill! moon of the month Tizpa was near at hand. JVoio it is a received tradition among the Persians, that the souls of the royal family, who are in a state of bliss, do, on the first full moon after their decease, pass through the eastern gate of the black palace.

Addismis Guardian. The praise of doing well Is, to the ear, as ointment to the smell. Now if some flies, perchance, however small, Into the alabaster urn should fall, The odours die. Prior.

The only motives that can be imagined of obedience to laws, are either the value and certainty of rewards, or an apprehension of justice and severity. Now neither of these, exclusive of the other, is the true principle of our obedience to God.

Rogers.

They now and then appear in the offices of religion, and avoid some scandalous enormities. Id. A patient of mine is now living, in an advanced age, that thirty years ago did, at several times, cast up from the lungs a large quantity of blood.

Blackmtre.

He who resolves to walk by the gospel rule of forbearing all revenge, will have opportunities every now and then to exercise his forgiving temper.

Atterbury. Now high, now low, now master up, now miss.

Pope. While like a tide our minutes flow

The present and the past, He fills his own immortal now

And sees our ages waste. Watts.

What men of spirit nowadays, Come to give sober judgment of new plays.

Garrick. Let my obedience then excuse

My disobedience now, Nor some reproof yourself refuse

From your aggrieved Bow-wow. Cowley. Of Adam's race he was, and lonely sat By chance that day in meditation deep, Reflecting much of time, and earth, and man ; And now to pensive, now to cheerful notes, e touched a harp of wondrous melody. Pollok. NOWARAHAUT, a town of Bengal, the station of the war and state boats belonging to the nabobs of Bengal. The establishment consisted of 760 boats of various kinds ; which, beside the crew of sailors, were manned by 1000 Portuguese, or native Christians, who served as artillery-men ; and a jagier or estate was assigned for its support, yielding nearly ––100,000 per annum. Since the English reduced this establishment the town has fallen to decay. Ten miles north-east of Dacca.

NO\VEEX,oˆ'.) Lat. nodus; French now. NOWES, n. s. \ Knotted ; inwreathed : nowes, the marriage knot.

Reuben is conceived to bear three barres waved, Judah a lion rampant, Dan a serpent mured.

Brou-ne.

Thou shall look round about and see Thousands of crowned souls thronged to be Themselves thy crown, sons of thy nuwes ; The virgin births with which thy spouse Made fruitful thy fair soul. Craihaw.

NO' WHERE, adv. No and where. Not in any place.

Some men, of whom we think very reverently, have in their books and writings nowhere mentioned or taught that such things should be in the church.

Hooker.

True pleasure and perfect freedom are nowhere to be found but in the practice of virtue. Tillotton.

NO'WISE, adj. No and wise. This is commonly spoken and written by the ignorant ne-ways ; not in any manner or degree.

These animalcula glorias, these flies, these insects of glory, these not bladders, but bubbles of vanity, would be admired and praised for that which is nowise admirable or laudable. Barrow.

A power of natural gravitation, without contact or impulse, can in nowise be attributed to mere matter.

Bentley.

NOX, Night, in the pagan mythology, one of the most ancient deities among the heathens, daughter of Chaos. From her union with her brother Erebus she gave birth to the Day and the Light. She was also the mother of the Parcas, Hesperides, Dreams, Discord, Death, Momus, Fraud, &c. She is called by some of the poets the mother of all things, of gods as well as of men; and she was worshipped with great solemnity by the ancients. She had a famous sta-tue in Diana's temple at Ephesus. It was usual to offer her a black sheep, as she was the mother of the Furies. The cock was also offered to her, as that bird proclaims the approach of day during the darkness of the night. She is represented as mounted on a chariot, and covered with a veil bespangled with stars. The constellations generally went before her as her constant messengers. Sometimes she is seen holding two children under her arms ; one of whom is black, representing Death ; and the other white, representing Sleep. Some describe her as a woman veiled in mourning, crowned with poppies, and carried in a chariot drawn by owls and bats.

END OF VOL. XV.

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Volume XVI (Noxious - Perceive)

The London Encyclopaedia

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THE

LONDON ENCYCLOPEDIA.

VOL XVI.

NUBIA TO PERAMBULATOR.

J. Haddou, Printer, Castle Street, London.

THE

LONDON ENCYCLOPEDIA,

UNIVERSAL DICTIONARY

SCIENCE, ART, LITERATURE, AND PRACTICAL MECHANICS,

COMPRISING A

POPULAR VIEW OF THE PRESENT STATE OF KNOWLEDGE.

ILLUSTRATED BY

NUMEROUS ENGRAVINGS, A GENERAL ATLAS,

AND APPROPRIATE DIAGRAMS.

Sic oportet ad libnim, presertim mificeUaaei geDeris, legendum accedere lectorem, ut solet ad conviviuin conviva civilis. Convivator annttitur omnibus satisfacere ; et tamen el quid apponitur, quod hujas aut illius paˆlˆto non respondeat, et hie et \\ti urbane dissimulant, et alia fercula probant, ne quid contristent conTivatorem. Eratmus.

A reader should sit down to a book, especially of the mifceUaneous kind, as a nˆellhehRved visitor does to a banquet. The master of the feast exerts himself to satisfy his guests ; but if, after all his care and pains, something should appear on the table that does not suit this or that person’s caste, they politely pasH it over without notice, and commend other dishes, that thev raav not distress a kind host. Translation.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITANA,

ASSISTED liY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

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THE

LONDON ENCYCLOPAEDIA.

NOX'IOUS, adj. \ Lat, noxitis. Ilurt-

Nox'iousNESS, n. s. >ful; baneful; mischiev-

Nox'iousLY, adv. j ous ; unwholesome : hence criminal ; guilty ; unfavorable : the sub- stantive and adverb correspond.

The writers of politics have warned us of the noxiousness of this aoctrine to all civil governments, which the Christian religion is very far from disturb- ing. Hammond.

Those who are noxious in the eyes of the law are 'ustly punished by them to whom the execution of the law is committed. Bramhall apaimt llubbes.

Kill noxiotu creatures, where 'tis sin to save : Tliis only just prerogative we have. Dryden,

NoYAi;, a cordial. The term is French, and is derived from the use of the kernels of apricots, nectarines, and peaches, in giving it Havour. The introduction of these in too large quantities, has sometimes converted the liquor iato pcison, as Prussic acid may be extracted from them. The other ingredients of this fascinating liqueur, are Frencli brandy, celery, bitter Hlmonils, es- sence of orange peel, and essence of lemon peel. With rose water.

NOY (William), attorney-general under Charles L, was the son of William Noy of St. Burian, gent. In 1593 he was sent to Exeter College, thence to Lincoln's Inn, where he became emi- nent in

juridical knowledge. He was twice elected M. P. for Ilelston, and in both parliaments zea- lously opposed king James's attempts to increase the royal prerogative. In 1625 he was elected M. P. for St. Ives, and in that and the following parliament continued to shine as a popular patriot ; but in 1031 the court converted him by appointing liim attorney -general ; after which he pleaded for the extension of the royal prerogative as zealously as he had formerly opposed it. He wrote several treatises; particularly, 1. The Complete Lawj-er, '2. Arguments of Law, and Speeches; 3. The Principal Grounds and Maxims of the Laws of England, 4to. He died at Tunbridge Wells, in August 1634.

NOYON, an ancient and pretty post town, and chief place of a canton in the arrondissement of Compiegne, department of the Oise, France, containing 5750 inhabitants. Situated at the foot and on the side of a hill, this town is surrounded with a number of richly cultivated gardens, pre- senting an appearance of the greatest abundance and riches. It is very well built and very airy, adorned with public fountains and crossed by the \ orse, which here separates into two branches, and falls into the Oise at the distance of about a mile from the town. Noyon was, for some time, the capital of the emperor Charlemagne, who was crowned here. Hugh Capet was elected king beje in 987. Three times it was devastated by Vol. XVI.

fire, in 1131, 1152, and 1228. There are manu- factories heve of linen, muslins and caps, and large tan-yards ; and a trade is carried on in these articles, and in corn, leather, &;c. lliis is the native place of the celebrated Calvin. It is eighteen miles north-east of Compiegne, and thirty-one S.S.W. of St. Quentin.

NOZ'LE, n. s. From Nose. A portion of the Ste.\m ExGrNE, which see. The end.

It is nothing but a paltry old sconce, with the rtoxle broke off. ArbiUhnot and Pope's Mart. Scrib.

NUBIA, a country of Africa, situated between the cataract of the Nile, at Syene or .Vssouan, Abys- sinia, and the Red Sea. It sometimes is considered as including Sennaar, but this seems of sufficient importance as a separate state to be treated dis- tinctly, see Sennaar : the whole is a part of the ancient Ethiopia. Nubia consists almost entirely of rocks and sandy deserts. Along the banks of the Nile it is indeed occasionally fertile, and di- vided into a great number of petty principalities or states, governed by absolute chiefs, called me- leks or cachefs. But the whole population of this territory, which is about 500 miles long, but very narrow, is estimated by .Mr. Burckhardt at only

100,000 individuals. It is divided into two parts, called Wady Kenous, and Wady el Nouba, sometimes also called Sayd : the inhabi- tants of these two divisions speaking different languages, although their manners and customs appear similar. The city of Dongola, to which the]\Iamelukes retired on their being driven by the pacha of Egypt from that country, is the largest place along this line. Its neighbourhood is particularly famous for the breed of horses, one of which is said to be valued on the spot at ten or twelve slaves. But Dehr is regarded as the capital of Nubia.

The geography of the whole valley of the Nile south of Philar is very defective. ××× Its geology and mineral products, the probable elevation of the stream of the Nile, and its natural history, even as to the plants and animals, &c., have been wholly neglected until the journey of Burck- hardt, who himself did not penetrate farther into this region than about 20×× N. lat., and who lias by no means exhausted these topics. We shall give, however, the particulars that have been furnished, and add a few extracts from the observations of .recent travellers.

Beyond Egypt the eastern bank of the Nile is said to be better watered and adapted to culti- vation than the western ; although almost all the ruins of this region are pn the opposite bank. It is thought, therefore, that this last must have been formerly more fertile, but has been reduced to its present state by the continual encroach-

ment of the immense moving sands of the west. The territory is irrigated here not by the over- rtovving of tlie Nile, but by sakies, or wheels, constructed for the purpose of raising the waters of the river ; the government receiving for the use of each wheel so many fat sheep, and mea- sures of grain, called dhourra. This forms the great object of Nubian culture ; it is the botanical holcus arundinaceus. The people grind it by strewing the grain upon a large stone, and rub- bing a smaller one over it. If the bread is to be of superior quality, the dhourra is well washed and then dried in. the sun. This pains, however, they do not often take. It is placed in an earthen jar, and left to ferment from twenty-four to thirty-six hours, when it acquires a sourish taste ; and the substance being merely poured upon an iron plate, or flat stone, placed over the fire, in a few minutes it is baked into cakes resembling the Abyssinian liff. They are brought to table hot, in a wooden bowl, with onion sauce, broth, and milk, or butter.

Cakes of a thinner kind, and well toasted, are prepared for the caravans, and win keep for some months. They have also, after the dhourra, a crop of barley here, French beans, lentils, or water-melons. Tobacco is cul- tivated every where, and is a chief luxury, either smoked or sucked rather than chewed. Animal food is scarce. The liquors (in which they in- dulge) are palm wine, a spirit distilled from dates, and, above all, bouza, a fermented liquor made from the dhourra. No fruit is cultivated except palms for dates.

Tlie climate of Nubia, though intensely hot in summer, is very dry and salubrious. The plague, which is so common near the lower parts of the Nile, never reaching beyond the second cataract. So healthy was this country during Mr. Burck- hardt's visit, that in a journey of five weeks he did not observe a single person laboring under disease. Tlie small-pox, however, makes occa- sionally great havoc here. In general the inha- bitants are of full stature, well made, and have fine features. The women possess sweet countenances and pleasing manners. They are also said to be modest and reserved : but, if the wealthiest Nubian happen to have a daughter whom the chief demands in marriage, the father cannot venture to refuse him: and the chiefs have thus wives in every considerable village. Tlie Nubian is extremely jealous of his wife's honor, and on the slightest suspicion of her in- fidelity, we are told, would carry her in the night to the side of the river, lay open her breast by a cut with his knife, and throw her into the water, as he says, * to be food for the crocodiles.' Their houses are either of mud or loose stones ; the last being usually planted two together, one for tlie male, and the other for the female members of the family. The mud huts are roofed with dhourra stalks or palm leaves. The utensils of tiie family generally consist of about half a dozen coarse earthen jars, a few earthen plates, two stones far grinding the dhourra, and a hatchet. The domestic employment of the females consists in weaving coarse woollen and cotton cloth for shirts and mantles, and mats of date leaves ; they also make the small drinking bowls and plates used for the dhourra bread. A woollen

cloth and linen cap form the dress of the rich The women wrap themselves in black woollen gowns ; but boys and girls go about naked. In ascending the Nile, the dress of all classes be- comes more and more scanty.

Although fire-arms are comparatively rare, the Nubian is seldom unarmed ; the first purchase a boy makes is a short crooked knife, tied over the elbow, and ready to be drawn on the slightest quarrel. The Kenou and Nouba tribes are al- most always engaged in bloody quarrels ; and, when death ensues, the family of the deceased may

demand the price of blood, or retaliate on the brother, son, or near relative, so that a whole family is often thus obliged to fly. Great numbers of the lower orders repair to Cairo to act as porters.

The natives of Dar el Mahass, the most south- erly district, differ considerably from the other Nubian tribes. They are perfectly black, and their lips like those of the negro, but not the nose or cheek. I'he king of Mahass is described by Burckhardt as a mean-looking man, attended by half a dozen naked slaves, armed with shields and lances. This is the nearest part of the black country whence slave traders arrive at Cairo. Their houses are constructed of mats made of palm leaves, fastened to high poles, the extre- mities of which go through the roof.

Nubia is principally visited for its splendid remains of antiquity, rivalling the most colossal monuments of Thebes or Ilindostan. Tlie most magnificent is that of Ipsambul, still in a state of almost complete preservation, and sculp- tured out of the li\ ing rock. It has at least ten colossal figures attached; six in front, and four that Mr. Burckhardt found buried in the sand, at about the distance of 200 yards. One of them, from the dimensions of the shoulder, could not, if uncovered, be less than sixty-five or seventy feet in height. They were conjectured to have been constructed to serve as ornaments to an immense temple : some of their countenances were beautifully expressive.

Another extensive part of Nubia extends from the Nile to the Red Sea ; and here modem tra- vellers have only penetrated in the line taken by the caravan to Sennaar. It is said to contain not a single permanent abode, but is a complete desert, interspersed with wadys or valleys, af- fording some few trees and slii'ubs, with a few wells or rills. BurckJiardt, after passing through the deserts of Suez and Sinai, did not think, however, this quite so drear}\ Unlike the other African deserts, it is covered with hills.

At the southern extremity of this tract is Ber- ber, consisting of four large villages, employetl in a brisk trade between Egj'pt, Arabia, and Central Africa. The people are said to be a handsome race, of a dark red-brown color. Tlie men are taller than the Egjptians, and much stronger ; the nose is often perfectly Grecian here, and the cheek bones not prominent. ' We are Arabs, not negroes,' they say ; and they are careful to maintain the purity of their race. Few men have more than one wife; but every one who can afford it keeps a slave or mistress, called his companion. Few traders pass through Berber without taking one of them, were it only for a

week or two ; and a general dissoluteness of manners is the natural effect. Every thing dis- creditable to humanity is said to be found in the character of this race ; but treachery and avidity predominate. Quarrels are frequent and violent, especially at their drinking parties ; and they commonly end in bloodshed. The chief scenes of these disorders are the bouza huts, kept by women of infamous character, by whom the liquor is manufactured : no one ventures there witliout taking his sword with him ; and various persons of distinction who have entered have never been known to return. A common trick is to en- tice strangers to one of these women, who next day is owned as a relation, and vengeance or presents demanded for the dishonor done to the family.

Another part of the miscellaneous territory is the road to Souakin, through the populous and fertile district of Taka.

The chief trade of Berber, and of Nubia gene- rally, consists in slaves imported from the inte- rior of Africa, and conveyed northwards into Egypt, or across the Red Sea by Souakin and Jidda. The annual number is estimated at 5000, of whom about 2500 are for Arabia, 1500 for Egypt, and 1000 for Dongola and the Bedouins of the mountains. Few of these unhappy beings are above the age of fifteen ; they are chiefly used in the east as domestics. The most “sa.ued are between eleven and fifteen ; if males they sell for fifteen or sixteen dollars ; if females, for twenty-five or twenty-six. While they remain within the negro territories they are treated with great indulgence ; but when once in the desert, where they have no chance of escape, the treat- ment is entirely changed.

The late Air. Legh, is the earliest of the modern band of travellers whose contributions to the illustration of this region are before us. He penetrated further along the banks of the Nile into the ancient Ethiopia than any pre- ceding traveller. At Siala it was deemed expe- dient to wait on the Douab cacheff, who was encamped about a mile and a half from the river, forming a sort of advanced guard of the Nubians : they found the men in wigwams ; the women and children apart in tents ; the whole body about 400 ; the horses and camels feeding around them. The cacheff received them kindly ; made no sort of objection to their pro- ceeding up the river, and told them he would send an express to Dehr, to inform Hassan cacheff of their intended visit to his capital. He offered them milk, flour and butter, invited them to eat out of the same bowl with him, the strongest mark of hospitality and friendship, and, in return for some coffee and tobacco,

presented them with a sheep.

At Dondour was a small temple containing nothing more remarkable than the character A J Q upon the fragments showing it to have been the possession of some early Christians. The weather began now to be exceedingly sultry ; the thermometer in the cabin was at 86►► ; in the outer air 96►►, and in the sand 126►► ; but it was a great relief to find the inhabitants every where peaceably disposed ; they brought the travellers dates, milk, and whatever their scanty means enabled them to afford. The temple of Sibhoi was minutely

examined, and no doubt remained of its havin" been a celebrated sanctuary of pure Egyptian arcliitecture. Mr. Legh thinks it probably of an earlier date than those in Egypt ; the walls being- built in a ruder style, and the hieroglyphics, though bold, of inferior execution ; but the sta- tues, he adds, and the sphinxes would bear a closer examination. He was greatly struck with the high state of preservation of the stone and outward walls of these venerable ruins, as com- pared with the state of those below the cata- racts. ' No reasonable allowance of difference of date,' he says, ' will explain this ; and we must seek for the cause in the mild unalterable climate between the tropics. The corroding- hand of time has no effect upon them, but they are abandoned to the desert, and many of them will in a few years entirely disappear.'

About fourteen miles further brought them to Dehr, the capital of Nubia, to wait on Hassan cacheff, the chief of the Barabras. At this mo- ment the people were celebrating the festival of the cacheff's marriage, which our travellers were rather surprised to hear them call (in lingua Franca) a fantasia. They rode through scattered plantations of date trees, among which were in- terspersed a number of mud huts, till they reached the house of the chief, distinguished only by being built of brick, and consisting of two stories. The natives, many of whom were drunk, were greatly astonished at the sudden ap- pearance of the strangers ; but offered.them no in- civility. They brought them paste, with boiled goat's flesh swimming in butter. After waiting about four hours, the cacheff made his appear- ance, attended by five or six officers, and a num- ber of Negro guards ; he was a young man, about six feet high, of a handsome person, half drunk with araki, a spirit distilled from dates. He asked them boisterously what they wanted, and why they came to Dehr ? This was but a dis- couraging reception from a man who had 300 armed negroes at his elbow, and at least 3000 in the district, ready to execute any of his com- mands. On retiring, he ordered his secretary, who spoke Arabic, to conduct them to a lodging for the night ; this was a mud hut of two apart- ments,

but without a roof; it was, however, next to that of the cacheff, the best in all Dehr. Early in the morning the secretary called upon them, and hinted that his master expected a pre- sent, and that one of their swords would be ac- ceptable. On waiting on the Cacheff, ihey offered him a watch, of which he declined the acceptance, as they were unable to comprehend its use. Perceiving that any facilities for the further progress of their journey depended on the sacrifice of one of their swords, Mr. Legh pre- sented him with a fine Damascus blade worth at least 500 piastres : the effect was instantaneous : his eyes sparkled with pleasure, and his lips ut- tered nothing but friendship. He enquired after our author's harem ††† if he had left it at the ca- taract, ' meaning,' says Mr. Legh, ' as I under- stood, to give me a female slave to wait upon ray wife.' He afterwards made him a present of a negro boy, and granted permission for them to proceed to Ibrira, offering horses and dromeda- ries, or any thing else that could be of service.

B2

NUBIA.

It required half a day's journey from Dehr to reach Ibrim, and, as there ††vas nothing to interest them there, they returned to Dehr the same evening. The following is all that we are told of Ibrim. ' Not a vestige of life was seen about us ; the destruction of Ibrim by the Mamelukes, when they passed two years ago into Dongola, had been so complete that no solitary native was to be found wandering among its ruins ; there was not even a date tree to be observed. The walls of the houses, which are in some places still standing, alone attest that it has once been inhabited. The population was partly carried off by the Mamelukes, and has partly removed to Dehr.'††† p. 76.

At Dehr the only monument of antiquity is a temple or grotto, excavated in the solid rock ; but at Amada, about an hour's journey from thence, on their return, they saw a fine temple which had been converted by the early Chris- tians into a church ; the painted figures that had been stuccoed over were in wonderful preserva- tion. Below Sibhoi they fell in with their old acquaintance shekh Ibrahim (Mr. Burckhardt), †††whom they had left at Siout in good health and condition, and well dressed like a Turkish gen- tleman ; he had now the appearance of a com- mon Arab, looking very thin and miserable. He had been living, he said, for some time with the shekhs of the villages on lentils, bread, salt, and water, and was most happy to share a mutton chop with our travellers, though cut from a lean and half starved sheep, for which, however, they had paid the extravagant

price of a dollar. Ibrahim then departed on his route to the south-ward.

At Dakki there is a fine and perfect temple, with the hieroglyphics in high relief. The height of the propylon is about fifty feet ; its front ninety feet, and its depth at the base eighteen feet. The space between that and the temple forty-eight feet ; the temple itself eighty-four feet in length, thirty in breadth, and twenty-four in height. Many Greek inscriptions are cut on the propylon, recording the devotion of those who visited these sacred buildings. Of these our travellers copied two. The first is ‘ I, Apollo- r.ius, the son of Apollonius, commander-in-chief of the province of Ombi, and of the district about Elephantina and Philje, came and wor- shipped.’ The second ‘ I, Callimachus, the son of HermoB, came with him and worshipped the same God, in the thirty-second year of the em- peror-1 (bO\(t)’ ~^^^ meaning of which they r ivjyv./ \v|y pi-etgnd not to determme.

At Guerfeh Hassan, nine miles below Dakki, they found also an excavated temple ‘ that far surpassed any thing they had witnessed above or below Essouan, and was indeed a stupendous monument of the labor bestowed by the ancients on their places of devotion.’ It consists of an area or outer court sixty-four feet in length, and thirty-six in breadth, having six columns on each side, to which are attached statues of priests. The passage into the temple, through a door six feet wide, is formed by three immense columns on each side, to which are attached colossal sta- tues of priests (on pedestals three feet three nches high), each eighteen feet six inches in

height ; and whose splendid dresses had once been covered with paint and gold. There art- three chambers of considerable size, and four smaller apartments. ‘ We found,’ the travellers say, ‘ no inscription on this temple, which is a most astonishing monument of labor and ancient magnificence. The various apartments we ex- plored, together with the statues that ornament them, are all hewn out of the living rock.’ A similar magnificent though ruined structure was found at Kalaptshi.

The plain of Umbarakat is strewed with ruins. At Sardab and Debode are also many interesting ruins which are briefly described. On the second arrival of our travellers at PhilsE they observed that ‘ it is impossible to behold the pro- fusion of magnificent ruins with which this island abounds without feelings of admiration and as- tonishment :’ at the same time it is avowed that the excavated temple of Guerfeh Hassan, and the ruins of Dakki and Kalaptshi, appeared to rival some of the finest specimens of Egyptian archi- tecture.

‘ During the whole of this interesting journey,’ says Mr. Legh, ‘ we had found the natives uni- versally civil, conducting us to the remains of antiquity without the least suspicion, and sup- plying us with whatever their scanty means would afford. It is true they viewed us with curiosity, and seemed astonished at our ventur- ing among them ; and at Kalaptshi they asked our guide, ‘ How dare these people come here ? Do they not know that we have 500 muskets in our village, and that Douab cacheff has not the courage to come and levy contributions?’ ††† p. 97.

Captain Light of the artillery followed a simi- lar track with Mr. Legh to exactly the same point in Nubia, Ibrim ; whence he returned down the hill, and examined the temple of Leboo, called Legh Sibhoi ; and describes its avenues of sphinxes, its gigantic figures in alto- relievo, its pilasters, and hieroglyphics. He discovered at Ouffeddonnee the remains of a primitive Christian church, in the interior of which were many painted Greek inscriptions and figures of scriptural subjects. The ruins of a temple at Deboo are also minutely described. Captain Light thus sums up his observations on the natives of Nubia : ††† * The people who occupy the shores of the Nile between Philae and Ibrim are, for the most part, a distinct race from those of the north. The extent of the country is about 150 miles, which, according to my course on the Nile up and down, I conceive may be about 200 by water, and is estimated at much more by Mr. Hamilton and others. They are called by the Egyptians Goobli, meaning in Arabic the people of the south. My boatmen from Boolac applied Goobli generally to them all, but called those living about the cataracts Berber. Their color is black ; but the change to it, in the progress from Cairo, does not occur all at once to the traveller, but by gradual alteration to the dusky hue from white. Their countenance approaches to that of a negro ; thick lips, flattish nose and head, the body short, and bones slender : the leg bones have the cur\ e observed in negroes : the hair is curled and black, but not woolly. Men of lighter complexion are found amongst

them ; which may be accounted for by intermar- riage with Arabs, or a descent from those fol- lowers of Selim the Second who were left here upon his conquest of the country. On the other hand, at Galabshee, the people seemed to have more of the negro than elsewhere ; thicker lips, and hair more tufted, as well as a more savage disposition.

‘ The Nubian language is different from the Arabic. The latter, as

acquired from books and a teacher, had been of very little use to me in Egypt itself; but here not even the vulgar dia- lect of the Lower Nile would serve for common intercourse, except in that district extending from Dukkey to Deir, where the Nubian is lost, and Arabic prevails again : a curious circum- stance ; and, when considered with an observa- tion of the lighter color of this people, leads to a belief of their being descended from Arabs. The Nubian, in speaking, gave me an idea of what I have heard of the clucking of Hottentots. It seems a succession of monosyllables, accom- panied with a rise and fall of voice that is not disagreeable. I saw few traces among them of government, or law, or religion. They know no master, although the cachef claims a nominal command of the country : it extends no farther than sending his soldiers to collect their tax, or rent, called Mirri. The pasha of Egypt was named as sovereign in all transactions from Cairo to Assuan. Here, and beyond, as far as I went, the reigning sultan Mahmood was considered the sovereign ; though the cachef s was evidently the power they feared the most. They look for redress of injuries to their own means of revenge, which, in cases of blood, extends from one gene- ration to another, tiU blood is repaid by blood. On this account they are obliged to be ever on the watch and armed ; and, in this manner, even their daily labors are carried on, ××× the very boys go armed. They profess to be the followers of Mahomet, though I rarely happened to observe any of their ritual observances of that religion. Once, upon my endeavouring to make some of them comprehend the benefit of obedience to the rules of justice for punishing offences, instead of pursuing the offender to death as they practised, they quoted the Koran to justify their requiring blood for blood. Their dress, for the men, is a linen smock, commonly brown, with red ordark- oolored scull cap. A few wear turbans and slippers. The women have a brown robe thrown gracefully over their head and body, discovering the right arm and breast, and part of one thigh and leg. They are of good size and shape, but very ugly in the faˆe. Their necks, arms, and ancles, are ornamented with beads or bone rings, and one nostril with a ring of bone or metal. Their hair is anointed with oil of cassia, of which every village has a small plantation. It is matted or plaited, as now seen in the heads of sphinxes and female figures of their ancient .statues. I found one at Elephantina which might have been supposed their model. Their little children are naked. Girls wear round the waist an apron of strings of raw hide, and boys a gir- dle of linen. Their arms are knives or daggers, fastened to the back of the elbow or in the girdle, i.ivelins, tomahawks, swords of Roman shape.

but longer, and slung behind them. Some have round shields of

buffalo hide, and a few pistols and muskets are to be seen.' ††† pp. 93-97.

In January 1813 Mr. Burckhardt left Cairo on his first journey through Nubia, and returned to Assuan on the 30th of March, thirty-five days after setting out from this place, during which he only allowed himself a single half-day's rest at Derr. No opportunity offering of proceeding into Western Africa, he projected a second jour- ney to the banks of the Atbara, or Astabora.s, and from thence to Djidda or Moka, and to re- turn by land along the eastern shore of the Red Sea to Cairo. The detailed account of this ex- pedition, as far as Djidda on the Arabian coast of the Red Sea, forms the subject of the greater part of a volume of his travels now before us. In this journey he crossed that desert to the westward of Dongola by which Bruce returned from Abyssinia, and which has been described in such frightful terms by this enterprising tra- veller; but the dangers and the sufferings of Burckhardt were occasioned neither by the pri- vations of the desert, nor its poisonous winds, nor its moving pillars of sand ; but by his ap- parent poverty, which exposed him to every kind of insult from the wretches with whom he travelled. In fact he economised the means sup- plied to him by the African Association, until he had nearly defeated the objects for which he was employed. On the 24th February he left Assouan, on the first of these journeys in Nubia, with two dromedaries, and an Arab guide, a na- tive of Nubia, for whose services he bargained as far as Derr, a journey of 140 miles, and for which one Spanish dollar was considered as am- ple payment. The Nubians of Assouan were, at the time of his departure, at war with their southern neighbours, on account of the latter having intercepted a vessel laden with dates be- longing to a merchant of the former. In the scuffle a woman in a state of pregnancy had been killed by a stone. The southern party, to whom the deceased belonged, were now demanding from their enemies ' the debt of blood,' not only for the woman, but for the child also which she bore in her womb ; and this dispute had not been adjusted on our traveller's return. Imme- diately beyond Assouan the mountains approach so near to the Nile as to leave scarcely the width of 100 yards of cultivable ground. Our traveller passed the first night with the shikh of Wady Debot (it may here be observed, once for all, that though the term wady generally means a river, it is used, along the borders of the Nile as far as Sennaar, for a valley, or ravine in the mountains). ' Here,' says Mr. Burckhardt, ' I first tasted the country dish ††† which, during a journey of five weekg, became my constant food ††† thin, unleavened, and slightly baked cakes of dhourra (holcus arundinaceus), .served up with sweet or sour milk.'

The whole of the road to Derr, on the east bank of the river, is perfectly safe, provided the traveller be accompanied by a native. The people were every where curious and inquisi- tive. From Assouan to Deh}Tnt the granite chain of mountains had been uninterrupted ; from the hitter place to the second cataract al

Wady Haifa, the mountain next the river was sandstone, with the exception of some granite rocks above Tafa, extending as far as Kalabshe. At Gyrshe, two days' journey from Assouan, the plain between the river and the mountains is about a mile in width ; it is a poor village, and two-thirds of the cottages were abandoned in consequence of the oppressions of the Mame- lukes. At Korosko the shore widens, and a grove of date trees enlivens the banks of the Nile the whole way from hence to Ibrim. Groups of houses occur at every 100 yards ; and as far as Derr the fields are as carefully cultivated as in any part of Egypt. At Derr Mr. Burckhardt alighted, as all travellers do, at the house of Hassan cachef, who enquired the object of his journey. Encouraged by the success of Messrs. Legh and Smelt, he replied that he had merely come on a tour of pleasure through Nubia, like the two gentlemen who had been at Derr before him ; but his Turkish dress and manners, and his perfect knowledge of Arabic, created a sus- picion in the bystanders that he was practising deception. His present to the cachef, though handsome under ordinary circumstances, ap- peared when contrasted with that which he had just received from Mr. Legh, to die value of about 1000 piastres, very insignificant and ' un-English.' ' Besides,' said Hassan, ' this gentleman pro- ceeded only as far as Ibrim ; whereas you give me a few trifles, and wish to go even to the se- cond cataract !' But Burckhardt hinted that if he sent him back to Esnfe, and the Beg was there informed of the little attention paid to his letter of recommendation, he might be induced to levy a contribution on the merchandise of the cachef's caravan then about proceeding to Egj'pt : and our traveller obtained leave to proceed to Sukkot.

As far as Derr he found the eastern bank of the Nile covered with the rich deposit of the river ; whereas on the western side the sands of the desert impetuously swept the very brink of the river driven by the north-west winds which prevail during the winter and spring : it is in those places only, where the sandy torrent is ar- rested by the mountains, that the narrow plain admits of cultivation : the eastern shore is in consequence much more populous than the western. Not

far from Derr our traveller no- ticed a temple of the most remote antiquity. It was hewn entirely out of the sand-stone rock with its pronaos, sekos or cella, and adyton ; ‘ the gods of Egypt,’ he observes, ‘ seem to have been worshipped here long before they were lodged in the gigantic temples of Karnac and Gome, which are, to all appearance, the most ancient temples in Eg}‘pt.’

The Bedouin who accompanied our traveller was of that branch of the Ababde who pasture their cattle on the banks of the river and its islands from Derr to Dongola : they are very poor ; mats of the leaves of palm-trees form their tents : they do not permit their women to intermarry with the Nubians ; and they have through ages preserved the purity of their race. ‘ They pride themselves, and justly,’ says our traveller, ###’ in the beauty of their girls.’ They are an honest and hospitable people, and of a more kindly

disposition than any of the other tribes of Nubia. The inhabitants of a small island near the vill^e Ketta are thus described : ### * These people, who all speak Arabic as well as the Nouba language are quite black, but have nothing of the negro features. The men generally go naked, except a rag twisted round their middle ; the women have a coarse shirt thrown about them. Both sexes suffer the hair of the head to grow ; they cut it above the neck, and twist it all over in thin ringlets, in a way similar to that of the Arab of Souakin, whose portrait is given by JNIr. Salt in lord Valentia’s Travels. Their hair is very thick, but not w oolly ; the men never comb it, but the women sometimes do ; the latter wear on the back part of the head ringlets, or a small or- nament made of mother of pearl and Venetian glass beads. Both men and women grease their head and neck with butter whenever they can afford it ; this custom answers two purposes ; it refreshes the skin heated by tlie sun, and keeps off” vermin.’ ### p. 31.

The castle of Ibrim and the inhabitants of its territory have an aga who is independent of the governors of Nubia, with whom they are often at war. They are of white complexion as compared with the Nubians, and still retain the features of their ancestors, the Bosnian soldiers who were sent to garrison Ibrim by Sultan Se- lym. ‘ In no part of the eastern world,’ says Mr. Burckhardt, ‘ have I ever found property in such perfect security as in Ibrim. The inhabit- ants leave the dhourra in heaps on the field with- out a watch during the night ; their cattle feed on the banks of the river without any one to tend them ; and the best parts of their household furniture are left all night under the palm-trees around the dwelling.’ ### But he adds ‘ that the Nubians in general are free from the vice of pil- fering ;’ and, what

is more important, that ‘ tra- vellers in Nubia have little to fear from the ill will of the peasants : it is the rapacious spirit of the governors that is to be dreaded.’

Near Wady Haifa is the second cataract of the Nile, whose noise was heard in the night at a considerable distance. This part of the river is described as very romantic : the banks, over- grown with large tamarisks, have a picturesque appearance amidst the black and green rocks, which, forming pools and lakes, expand the width of the river to more than two miles. Be- tween this place and Sukkot the navigation is interrupted for about 1 00 miles by rapids, similar to that at Assouan : in some places, however, the river is tolerably free from rocks and islands ; in these its bed is narrow, and its banks are high ; near INIershed, Mr. Burckhardt says, ‘ I could throw a stone over to the opposite side.’ At Wady Seras our traveller put up for the night at a hut of Kerrarish Arabs, who were watching the produce of a few cotton fields, and bean plantations. They had not tasted bread for the last two months. Burckhardt made them a pre- sent of some dhourra, on condition of their letting the women (who are seldom permitted to enjoy this luxury) partake of it with them ; the latter immediately set to work to grind it between two granite stones ; ‘ and the girls sat up eating and singing the whole night.’ The mountain

crossed by our traveller to tlie southwanl of Seras was of granite and quartz. The Arabs, who act as guides in these desolate mountains, have devised a singular mode of extorting pre- sents from the traveller. Tliey first beg a pre- sent ; if refused, they collect a heap of sand, and, placing a stone at each extremity of it, they apprise the traveller that his tomb is made. Be- fore he got out of this mountainous district Mr. Burckhardt had a practical proof of this custom : having refused to give any thing to one of these grave-diggers, the man set about making his sand-heap ; upon this our traveller alighted and began another, observing, that ‘ as they were brethren, it was but just that they should be buried together.’ The fellow laughed ; and they mutually agreed to destroy each other’s labors : on Burckhardt’s remounting his horse, the dis- appointed Arab gravely observed from the koran, ‘ No mortal knows the spot upon earth where liis grave shall be digged.’ At Wady Okarae tlie dominions of the governor of Sukkot begin, and the country opens out on each side of the river. Having a letter of recommendation from Hassen cachef to the governor of Sukkot, who resides at Kolbe, an island in the Nile, Mr. BurckJiardt crossed over in a kind of ferry-boat called a ramous. It consists of the trunks of date trees loosely tied together,

and worked by a paddle about four feet in length, forked at the upper extremity, and lashed to the raft by ropes of straw. Its close resemblance to those repre- sented on the walls of the Egyptian temples shows that man, here at least, has not been an improving animal.

The district of Say begins at Aamara, on the plain of which are the ruins of a fine Egj'ptian temple. The shafts of six large columns of cal- careous stone remain, being the only specimen to be met with of that material, those of Egypt being all of sandstone. Mr. Hamilton has ob- served, that ' the ancient Egyptians do not appear to have employed granite in any of their build- ings in Upper Egypt, except in the obelisks and some few of their propyla.' The castle of Say is built of alternate layers of stone and brick, on an island of the Nile, and, like Ibrim and As- souan, has its own aga, independent of the go- vernors of Nubia ; like these, too, its territories are inhabited by the descendants of Bosnian sol- diers. Beyond Say, thick groves of date trees and numerous habitations crowded both banks of the river. ' Tlie dates of Sukkot and Say are preferred to these of Ibrim, and are considered superior to all that grow on the banks of the Nile, from Sennaar down to Alexandria ; they are of the largest kind, generally three inches in length.'

Burckhardt, on the 13th of March, reached the territory of Mahass, and passed several villages the houses of which were constructed of mats of palm-leaves. The castle of Tinareh had been seized by a rebel cousin of the king of Mahass, but having been besieged for several weeks by the two brothers Hosseyn and Mohammed cachefs, it had capitulated the evening preceding his ar- rival. He visited the camp of the latter, the son on the mother's side of a Darfur slave, but without any of that mildness which generally

characterises the negro countenance. ••• * He rolled his eyes at me,' says our traveller, ' likˆa mad- man, and, having drunk copiously of palm-wine at the castle, he was so intoxicated that he could hardly keep on his legs.' Goat skins of palm- wine were brought in, and in the course of half an hour the whole camp was as drunk as their chief. Muskets succeeded ; and a feu-de-joie was fired with ball in the hut where all were sitting. ' I must confess,' says Burckhardt, ' that at this moment I repented of having come to the camp.' At length, however, the whole party dropped asleep, and a few hours brought the cachef to his senses, so that he could talk ration- ally. Buckhardt's situation, however, was not much improved. He was suspected of being an agent of the pasha of Egypt ; ••• ' But,' said the cachefs Arabic secretary, ' at Mahass we spit at Mohammed Aly's beard, and cut off the heads of

those who are enemies to the Mame- lukes.'

' I was now,' says our traveller, * without a friend or protector, in a country only two days and a half distant from the northern limits of Dongola, the newly conquered kingdom of the IMamelukes, against whose interests I was sus- pected to be acting, while the governors of Ma- hass supported them.' Under these circum- stances he prudently determined to return ; but the cachef abruptly ordered him to stay tdl next day. Burckhardt however expressed his anxiety to reach Derr as speedily as possible, and was dismissed with the usual mixture of in- sult and contempt.

At the village of Kolbe our traveller obtained a ramous for the baggage, and he and his guide swam the river at the tails of their camels, each beast having an inflated goat skin tied to its neck. He now availed himself of the opportu- nity of examining, in his way down, the hitherto undiscovered temple of Ipsambul. The six colossal figures in front he found to represent juvenile persons ; they are placed in narrow re- cesses, three on each side of the entrance ; their height from the ground to the knee is about six feet and a half. The spaces of the smooth rock between the niches are covered with hierogly- phics, as are also the walls of the apartments. Tliis temple Mr. Burckhardt thinks to have been the model of that at Derr, but much anterior to it in point of time. On the side of the moun- tain facing the north, against which there was a vast accumulation of sand, and at a distance of about 200 yards from the temple, the upper parts were discovered of four immense colossal statues cut out of the living rock, all the other parts being buried beneath the sands, which are drifted here in torrents from the desert. The head of one of these statues was yet above the surface ; ' and,' says our author, ' it has a most expressive youthful countenance, approaching nearer to the Grecian model of beauty than that of any ancient Egyptian figure I have seen ; in- deed, were it not for a thin oblong beard, it might well pass for a head of Pallas.' ••• ' This statue,' he adds, ' measures seven yards across the shoulders, and cannot therefore, if in an up- right posture, be less than sixty-five or seventy feet in height ! the ear is one yard and four

inches in length.' Mr. Burckhardt conjectured, that if the sand could be cleared away, an im- mense temple would be discovered, to the en- trance of which the four colossal figures served as ornaments, in the

same manner as the six be- longing to the neighbouring temple of Isis ; and he concluded, from a hawk-headed figure sur- mounted by a globe, in the centre of the four statues, that this buried temple had been dedi- cated to Osiris. It was this conjecture that in- duced Belzoni to undertake the bold enterprize of uncovering it as far down as the doorway, which he effected, with the able assistance and personal exertions of captains Mangles and Irby, of the royal navy. Mr. Burckhardt does not hesitate to pronounce the works of Ipsambul to belong to the finest period of Egyptian sculp- ture.

The account given by Belzoni and his asso- ciates of these extraordinary temples, sculptured out of a whole mountain, induced Mr. Bankes to make a visit here in company with Mr. Salt, to explore these sacred recesses more minutely. For the fatigue and expense of this enterprise, and the exertions of a month in removing the sand, and excavating the rubbish, &c., they were amply rewarded by many new and brilliant dis- coveries; among the first of which must be reckoned that of a (J reek inscription on the leg of one of the colossal statues which guards the entrance, recording the visit of Psammeticus (spelt i'AM M ATIXOI in the dative, and writ- ten in very ancient letters), which, from appear- ances, it was judged must have been engraved when the temple was already encumbered with sand.

' This is probably,' says the Quarterly Review, ' the most ancient inscription that exists in any intelligible language, as Psammeticus died more than 600 years before Christ ››› more than 100 years before the conquest of Egypt by Cam- byses the Persian ››› and nearly 200 years before the visit of Herodotus to that country. It is in- valuable as an additional corroboration of the truth and accuracy of the Father of Profane His- tory, from whom we learn that this Psammeticus was one of the twelve princes who ruled Egypt ; that by the assistance of some lonians and Ca- rians ››› ' men of brass' ››› he subdued his eleven associates, and became sole sovereign of the country ; that in return for this service they had lands assigned to them, and tlwt they taught the Greek language to the Egyptian youth. 'This inscription is valuable,' adds the above writer, ' in another point of view, as it may assist, with the corresponding hieroglyphics, to decypher those mysterious characters ; and it is peculiarly valuable as an undoubted specimen of the ad- vanced state of the arts among the ancient Eg}'p- tians ; for the temple of Ipsambul is said to contain the finest examples of sculpture, of paint- ing, and of design, now existing either in Nubia or in Egypt. By a new and ingenious contri- vance for giving light within the temple, Mr. Bankes made out the complete historical design on the wall of one of the chambers, in which, besides the usual delineations of fortresses, war- chariots, &c., he observed

three horsemen mount- ;d witnout saddles, but with regular bridles.'

Belzoni's subsequent operations may be here briefly detailed. After eighteen days' hard labor he and his boat's crew arrived at the door- way of that temple, which Mr. Belzoni considers as ' the finest and most extensive excavation in Nubia, and one that can stand a competition with any in Egypt, except the tomb newly dis- covered in Beban-el-Molook.' As the temple of Ipsambul has, in all probability, been covered with sand 2000 years, or more, our readers will not be displeased with the description of it.

' From what we could perceive, at the first view, it was evidently a very large place ; but our astonishment increased when we found it to be one of the most magnificent of temples, en- riched with beautiful intaglios, painting, colossal figures, &c. We entered at first into a large pronaos, fifty-seven feet long and fifty-two wide, supported by two rows of square pillars, in a line from the front door to the door of the sekos. Each pillar has a figure, not unlike those at Me- dinet Aboo, finely executed, and very little in- jured by time. The tops of their turbans reach the ceiling, which is about thirty feet high ; the pillars are five feet and a half square. Both these and the walls are covered with beautiful hieroglyphics, the style of which is somewhat superior, or at least bolder, than that of any others in Egypt, not only in workmanship, but also in the subjects. They exhibit battles, storm- ing of castles, triumphs over the Ethiopians, sacrifices, &c. In some places is to be seen the same hero as at Medinet Aboo, but in a different posture. Some of the columns are much injured by the close and heated atmosphere, the tempe- rature of which was so hot that the thermometer must have risen to above 1 30►►. The second hall is about twenty-two feet high, thirty-seven wide, and twenty-five and a half long. It contains four pillars about four feet square : and the walls of this also are covered with fine hieroglyphics in pretty good preservation. Beyond this is a shorter chamber, thirty-seven feet wide, in which is the entrance into the sanctuary. At each end of this chamber is a door, leading into smaller chambers in the same direction with the sanc- tuary, each eight feet by seven. The sanctuary is twenty-three feet and a half long, and twelve feet wide. It contains a pedestal in the centre and at the end four colossal sitting figures, the heads of which are in good preservation, not having been injured by violence. On the right side of this great hall, entering into the temple, are two doors, at a short distance from each other, which lead into two long separate rooms, the first thirty-eight feet ten inches in length, and eleven feet five inches wide ; the other forty-eight feet seven inches, by thirteen feet three. At the end of the first are several unfi- nished hieroglyphics, of which some, though merely sketched,

give fine ideas of their manner of drawing. At the lateral comers of the entrance into the second chamber from the great hall is a door, each of which leads into a small chamber twenty-two feet six inches long, and ten feet wide. Each of these rooms has two doors lead- ing into two other chambers, forty-three feet in length, and ten feet eleven inches wide. There are two benches in them, apparently to sit on.

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fhe most remarkable subjects in this temple are, 1st, a group of captive Ethiopians, in the western corner of the great hall : 2dly, the hero killing a man with his spear, another lying slain under his feet, on the same western wall : 3dly, the storming of a castle, in the western comer from the front door.'pp. 211 213.

Such is the interior. The description of the exterior follows :

'The outside of this temple is magnificent. It is 117 feet wide, and eighty-six feet high ; the height from the top of the cornice to tlie top of the door being sixty-six feet six inches, and the height of the door twenty feet. There are four enormous sitting colossi, the largest in Egypt or Nubia, except the great sphinx at the pyramids to which they approach in the proportion of near two-thirds. From the shoulder to the elbow they measure fifteen feet six inches ; the ears three feet six inches ; the face seven feet ; the beard five feet six inches ; across the shoulders twenty-five feet four inches ; their height is about fifty-one feet, not including the caps, which are about fourteen feet. There are only two of these colossi in sight, one is still buried under the sand, and the other, which is near the door, is half fallen down, and buried also. On the top of the door is a colossal figure of Osiris twenty feet high, with two colossal hieroglyphic figures, one on each side, looking towards it. On the top of the temple is a cornice with hieroglyphics a torus and a frieze under it. The cornice is six feet wide, the frieze is four feet. Above the cor- nice is a row of sitting monkeys eight feet high, and six across the shoulders. Tliey are twenty- one in number. This temple was nearly two- thirds buried under the sand, of which we removed thirty-one feet before we came to the upper part of the door. It must have had a very fine landing-place, which is now totally buried under the sand. It is the last and largest tem- ple excavated in the solid rock in Nubia or g)'pt, except the new tomb. p. 213,214. Mr. Belzoni observes that the heat on first entering this temple was so great that they could scarcely bear it, and the perspiration from their hands was so copious as to render the paper by its dripping unfit for use. On the first opening that was made by the removal of the sand, the only living object that presented itself was a

toad of prodigious size. The inanimate objects within were the figures of two lions with hawks' heads, as large as life, and a small sitting human figure.

Opposite to Derr Burckhardt fell in on his return with Hassan cachef, who told him that he had no business in Mahass, and seemed surprised that his brothers had suffered him to pro- ceed thither. Here he witnessed one of those wanton acts of despotism which are but too common in the east. ' In walking over a large field, with about thirty attendants and slaves, Hassan told the owner that he had done wrong in sowing the field with barley, as water- melons would have grown better. He then took some melon seed out of his pocket, and giving it to the man, said, ' you had better tear up the barley and sow this.' As the barley was nearly ripe, the man of course excused himself from complying with the cachef's command: 'Then I

will sow them for you,* said the latter; and ordered his people immediately to tear up the crop, and lay out the field for the reception of the melon seed. Tlie boat was then loaded with the barley, and a family thus reduced to miserj', in order that the governor might feed his horses and camels for three days on the barley stalks.' None of the numerous temples nor of their in- scriptions escaped Mr. Burckhardt's notice, on his return by the western bank of the Nile. Those of Dakke, Gyrshe, Dondour, Kalabshe, Tafa, Kardassy, Debot, are all particularly des- cribed, and the comparative excellence of each characterised : but our space forbids extracting his able delineation.

On the evening of the 30th of March, after a hazardous journey of thirty-five days, in which he had rested only one day, Mr. Burckhardt re- turned to Assouan, having travelled generally at the rate of ten hours a day. What follows is a remarkable feature of this enterprize : ' I put,' says he, 'eight Spanish dollars into my purse, in conformity with the principle I have constantly acted upon, namely, that the less the traveller spends while on his march, and the less money he carries with him, the less likely are his tra- velling projects to miscarry ; and I returned,' he adds, ' after a journey of 900 miles, with three dollars, having spent about five dollars, including every expense, except the present to Hassan cachef.'

As no caravan for Eastern Africa set out in the year after his return, Mr. Burckhardt remained quiet at Esne; he kept no company, dressed himself in the poorest garb of an inhabitant of Egypt; and, in order to conceal his real character more effectually, spent as little money as possi- ble, the amount of his daily expenses, of his ser- vant, dromedary, and ass, being about eighteen- pence, and that of his horse

sixteen-pence a month. Yet with all these precautions he was not free from the suspicion of possessing some hidden treasure. Here, however, he remained, till the end of February, when a caravan being on the point of starting from Daraou (three days' journey to the northward of Esne), for the con- fines of Sennaar, he determined to accompany it, and to try his fortune in this new route un- attended by any servant.

Our limits will not permit us to trace the route pursued by the caravan. It was on the eastern side of the Nile, but at a great distance from it, being the chord of that great bend of the river to the westward in which Dongola is situated, and the extremities of which are not far removed from Assouan on the north and Berber on the south : it is, in fact, the precise route which was taken by Bruce on his return from Abyssinia. It lies over a perfect desert, except where those numerous wadys, or valleys, in the ridge of mountains on the left, open upon the plain, and in which alone trees, shrubs, and grass, are to be found for the cattle of the cara- vans, and wells or rills of fresh water. The scarcity of this article is sometimes severely felt ; but when calamitous accidents occur, as they occasionally do, Mr. Burckhardt seems to think they happen either from taking circuitous routes, or neglecting to fill an adequate number of

water-skins. The extraordinary sufferings of Mr. Bruce in this desert he conceives to be greatly exaggerated in the relation; at the same time he adds, ' I cannot but sincerely admire the wonderful knowledge of men, firmness of charac- ter, and promptitude of mind, which furnished Bruce with the means of making his way through these savage and inhospitable nations, as a European. To travel as a native has its incon- veniences and difficulties ; but I take those which Bruce encountered to be of a nature much more intricate and serious, and such as a mind at once courageous, patient, and fertile in expe- dients, could alone have surmounted.'

The wady of Berber consists of four villages situated on the Sandy Desert, about half an hour's walk from the Nile. Each is composed of several quarters, independent of one another ; the houses are also separated by court-yards, so that there are no regular streets. They are built of mud, or sun-baked bricks. The rooms all open into the court-yard ; two of them are usually occupied by the family, a third serves as a store room, a fourth for the reception of strangers, and a fifth for less laudable piirposes. An oblong frame of wood with four legs, with

a seat of thin stripes of ox-leather drawn across, is the principal article of furniture ; this is called angareyg, and answers the double purpose of a sofa by day and a bed by night. Mats of reeds or carpets of leather, without any pillow, are their only bedding. He gives a dreadful picture of the immoral habits of all classes here.

Part of the caravan, and with it Mr. Burck- hardt, left Berber on the 7th of April, and pro- ceeded towards Shendy. Tliey soon reached Has al V'ady, the principal ˆ illage in the dominions of another mek of the name of Hanoze. This sublime personage detained them from morning till late in the evening, without sending them any food, and they could not venture to taste their own, as they were now considered as his guests. The mek himself kept out of sight, but his son came to the caravan to beg some presents. The great man made his appearance, however, the following day, quite naked, with the exception of a towel round his loins, and attended by six or eight slaves, one of whom carried his water- flask, another his sword, and a third his shield. Seeing a fine ass, he ordered his hopeful son to mount it; and, notwithstanding the resistance of its owner, the animal was trotted off to the mek's stable : the caravan was then permitted to depart. At the end of four hours' travelling they reached the river]\Iogren (not Mareb, as Bruce calls it), the bed of which was nearly dry ; but the banks, being covered with fresh herbage and tamarisk bushes, afforded a delightful prospect after the passage of a long and dreary desert. Tliey soon reached the district of Damer, the character of whose inhabitants is just the reverse of that of the Berbers. The town of Damer contains about 500 houses, all neat and uniformly built in re- gular streets, and inhabited by a tribe of Arabs, the greater part of whom are Fokera, or religious men. They have a pontiff called El Faky el Kebir (the great Faky), who is their chief and .judge. Damer has acquired reputation for its schools, to which young men are sent from Dar-

four, Sennaar, Kordofan, and other parts of Sou- dan, to study the law.

The caravan remained here five days, and, set- ting out on the 1 6th of April, reached Shendy on the 18th. Next to Sennaar and Cobbe in Darfour, Shendy is the largest town in eastern Soudan ; it consists of several quarters, divided from each other by public market-places, and contains from 800 to 1000 houses, similar to those of Berber. Those of the chief and his relatives have court-yards twenty feet square, enclosed by high walls. The name of the mek is Nimr, or the Tiger. He holds his mekship in right of his mother, who was of the Sennaar tribe, which explains Bruce's account of his having found a woman (Settina, our lady) on the throne. Three different tribes of Arabs

inhabit the country of Shendy, besides that to which the mek's wife belongs, and their dissensions among themselves assist materially in the preservation of his authority. As merchandise pays no duty at Sliendy, it has become a place of flourishing trade. It is a very large market for slaves.

As a visit to Mecca at the time of the pilgri- mage, in order to obtain the title of Hadji (the most powerful recommendation and best pro- tection in any future journey into the interior of Africa), had been the principal motive of our traveller's second journey into Nubia, he set about his preparations for the journey. With this view he sold his little stock of merchandise at Shendy, purchased a slave-boy for sixteen dollars, a camel for eleven, and, after laying in a stock of dhourra meal, butter, and dammour, found he had just four dollars remaining ; whicli he calculated would suffice to carry him to Djidda, on which place he had a letter of credit from Cairo. Tlius prepared he joined the caravan for Suakin, by the route of Taka ; and here we must leave him for the present. See Taka.

Twice the serab or mirage appeared to them in crossing this desert, but somewhat different from what had been observed in Egypt. ' Its color was of the purest azure, and so clear that the shadows of the mountains which bordered the horizon were reflected on it with the greatest precision, and the delusion of its being a sheet of water was thus rendered still more perfect. I had often seen the mirage in Syria and Egypt, but always found it of a whitish color, rather re- sembling a morning mist, seldom lying steady on the plain, but in continual vibration, but here it was very different, and had the most perfect resemblance to water. The great dryness of the air and earth in this desert may be the cause of the difference. The appearance of water ap- proached also much nearer than in Syria and Egypt, being often not more than 200 paces from us, whereas I had never seen it before at a dis- tance of less than half a mile. Tliere were at one time about a dozen of these false lakes round us, each separated from the other, and for the most part in the low grounds.'

To avoid a notorious robber, their Arab guide, in taking them an unfrequented path, lost his way. What follows is higlily interesting : ◆◆◆

' After five days march in the mountains, their stock of water was exhausted, nor did they know where they were. They resolvet\, timrefore, to

direct their course towards the setting sun, liopiiig thus to reach the Nile. After two days thirst, fifteen slaves and one of the merchants died. Another of them, an Ababde, who had ten camels with him, thinking that the camels might know better than their masters where water was to be found, desired his comrades to tie him fast upon the saddle of his strongest camel, that he might not fall down from weakness ; and thus he parted from them, permitting his camels to take their own way : but neither the man nor his camels were ever heard of af- terwards. On the eighth day after leaving (Jwareyk, the survivors came in sight of the mountains of Shigre, which they immediately recognised, but their strength was quite exhausted, and neither men nor beasts were able to move any farther. Lying down under a rock, they sent two of their servants with the two strongest remaining camels, in search of water. Before these two men could reach the mountain, one of them dropped off his camel, deprived of speech, and able only to wave his hands to his comrade as a signal that he desired to be left to his fate. The survivor then continued his route, but such was the effect of thirst upon him, that his eyes grew dim and he lost the road, though he had often travelled over it before, and had been per- fectly acquainted with it. Having wandered about for a long time, he alighted under the shade of a tree, and tied the camel to one of its branches ; the beast, however, smelt the water (as the Arabs express it), and, wearied as it was, broke its halter, and set off galloping furiously in the direction of the spring, which, as it after- wards appeared, was at half an hour's distance. The man, well understanding the camel's action, endeavoured to follow its footsteps, but could only move a few yards ; he fell exhausted on tlie ground, and was about to breathe his last, when Providence led that way from a neighbouring encampment a Bisharye Bedouin, who, by throw- ing water upon the man's face restored him to his senses. They then went hastily together to the water, filled the skins, and, returning to the caravan, had the good fortune to find the suf- ferers still alive. The Bisharye received a slave for his trouble. My informer, a native of Yembo, in Arabia, was the man whose camel discovered the spring, and he added the remarkable circum- stance that the youngest slaves bore the thirst better than the rest, and that while the grown up boys all died, the children reached Egypt in safety.' Mr. Burckhardt has since fallen a sac- rifice to a climate which had previonsly proved the grave of so many Europeans.

Nl/'BILE, adj. French, nubile; Latm, nubilis. Marriageable; fit for marriage.

The cowslip smiles, in brighter yellow drest, Than that which veils the nubile virgin's breast.

Pope. NU'CLEUS, n.s. Lat. nucleus. A kernel; any thing about which matter is gathered or con- centrated.

The crusts are each in all parts nearly of the same

thickness, their figure suited to the nucleus, and the

outer surface of the stone exactly of the same form

with that of the nucleus. Wooduard.

NUCTA, a dew, which, falling in Egypt about

St. John's day, is by the superstitious natives considered as miraculous, and the peculiar gift of that saint. It is occisioned by the rains which at this period fall in Ethiopia. The Nile at this season is almost stagnant, and in many of its cisterns putrid ; but, when it is augmented by these showers, the sun resumes its suspended power of disengaging this light vapor, which never fails to put an immediate stop to the plague, that is but too frequently raging.

NUDDEA (Navadwipa, the New Island), is a large district in the province of Bengal, situated between 22►► and 24►► of N. lat. It is bounded on the north by Kaujishy ; on the south by Hooghly and the Sunderbunds; to the east by Jessore; and on the west it is separated from Burdwan by the Hooghly River. In ancient re- cords this district is called Oukerah; but more recently Kishenagur, from the zemindar who held it. In the beginning of the eighteenth cen- tury it was bestowed on Ragooram, a Brahmin, ancestor of the present family. This district is fertile in all the more valuable productions of India. It enjoys, besides, the easy and quick navigation of the Hooghly, the Jetlinghy, and the Issamutty; yet the revenue is said to bear no comparative proportion to that of the adjacent district of Burdwan. In 1784, by major Ren- nell's mensuration, this district contained 3115 square miles; the chief towns are Kishenagur, Nuddeah, and Santipoor. Inhabitants about 764,000, in the proportion of two Mahometans to seven Hindoos.

NuDDEA, a town in the province of Bengal, capital of the district of Nuddea, is situated at the Jellinghy and Cossimbazar rivers with the Hooghly, sixty miles north from Calcutta. It was the capital of a Hindoo principality anterior to the Mogul conquest of Hindostan. A. D. 1204 it was destroyed by Mahommed Bukhtyar Khiljee, the first Mahometan invader of Ben- gal. In modern times it has been the seat

of a Brahmin seminary.

NU’DITY, n. s. French, nuditi; Lat. nudus. Naked parts; nakedness.

There are no such licenses permitted in poetry, any more than in painting, to design and colour ob- scene nudities. Dryden.

The world’s all face ; the man who shews his heart Is hooted for his nudities and scorned. Young.

NUGA’TION, W..S. ˆ Lat. nugor. The act

Nu’gatory, ►►(/;. i or practice of trifling: idle ; futile.

The opinion, that putrefaction is caused either by cold, or peregrine and preternatural heat, is but uu- galion. Bacon.

Some great men of the last age, before the mecha- nical philosophy was revived, were too much addicted to this niigaturu art, when occult v]ualitv, and sym- pathy and antipathy were admitted for satisfactory explications of things. Btnlleii.

NUGENT (Tliomas), F. S. A. and LL. D., an

ingenious miscellaneous writer and compiler, was born in IreUmd, and died in London April 27th. 1 772. In 1 765 he obtained his diploma from the university of Aberdeen. Among his publications are. Travels through Germany, 1768, 2vols.8vo.; Observations on Italy and its Inhabitants, 1709, 2 vols. 8vo. ; and a popular French and English

NUL

dictionary. He translated Henault’s Chrono- logical Abridgment of the History of France; the Life of Benvenuto Cellini; and various other works.

Nugent (Christopher), M.D., F.R.S., was a native of Ireland, and father-in-law of Mr. Burke. He published An Essay on Hydrophobia, and practised with reputation as a physician in the metropolis. He died November 12th, 1775.

NUISANCE, n..s. Ft. nuisance. See Noiance. Something noxious or offensive.

Nuisancet, as necsssary to be swept away, as dirt out of the streets. Kettlewell.

This is the liar's lot : he is accounted a pest and a nuisance ; a person marked out for infamy and scorn.

South.

A wise man who does not assist with his counsels, a rich man with his charity, and a poor man with his labour, are perfect nuisances in a commonwealth.

SwijYs Miscellanies.

The encroaching iiuis(nice asks a faithful hand, Patient, affectionate, of high command, To check the procreation of a breed Sure to exhaust the plant on which they feed.

Cowper.

Nuisance, inlaw. Nuisances are either pub- lic or private. A public nuisance is an offence against the public in general, either by doing what tends to the annoyance of all the king's subjects, or by neglecting to do what the com- mon good requires : in which case all annoyances and injuries to streets, highways, bridges, and large rivers, as also disorderly alehouses, bawdy- houses, gaming-houses, stages for rope-dancers, &c., are held to be common nuisances. A pri- vate nuisance is when only one person or family is annoyed by the doing of any thing ; as where a person stops up the light of another's house, or builds in such a manner that the rain falls from his house upon his neighbour's.

'NULL, V. a., adj., ˆn. s.f LaX. nullm. To

Nul'lify, v. a. > make void ; annul ;

Nul'lity, n. J. J annihilate : void,

ineffectual : something of no power or signifi- cancy : to nullify is also to annul ; make void : nullity, synonymous with null as a noun sub- stantive, but a better v/ord.

Their orders are accounted to be null and invalid by many. Lesley.

If part of the people be somewhat in the election, you cannot make them nulls or ciphers in the priva- tion or translation. Bacon.

A hard body, struck against another hard body, will yield an exteriour sound, in so much as if the percussion be over soft it may induce a nullity of sound ; but never an interior sound. Id.

Thy fair enchanted cup, and warbling charms. No more on me have power, their force is nulled.

Milton.

With what impatience must the muse behold The wife, by her procuring husband sold ! For tho' the law makes null the adulterous deed Of lands to her, the cuckold may succeed. Dryden.

Reason hath the power of nulling or governing all other operations of bodies. Grew's Cosmologia.

It can be no part of my business to overthrow this distinction, and to shew the nullity of it ; which has been solidly done by most of our polemick writers. South.

The jurisdiction is opened by the party, in default of justice from the ordinary, as by appeals or nulli- ties. —^'J^'ff'^-

The pope's confirmation of the church lands, :o those who hold them by king Henry's donation, was null and fraudulent. Swi/i,.

By such a change thy darkness is made light. Thy chaos order, and thy weakness might ; And He, whose power mere nullity obeys, Who found thee nothing, formed thee for his praise.

(Jowper,

NUMA (Pompilius), the second king of Rome, and the fourth son of Pompilius Pompo, an il- lustrious Sabine. He had married Tatia, the daughter of king Tatius, and with her remained in his native country, preferring the tranquillity of a private life to the splendor of a court. Upon the death of his wife, with whom he had lived thirteen years, he gave himself up entirely to study ; and, leaving the city of Cures, confined himself to the country, in search only of those woods and fountains which religion had made sacred. His recluse life gave rise to the fable, which was very early received among the Sa- bines, that Numa lived in familiarity with the nymph Egeria. (See Egeria.) Upon the death of Romulus, the senate and people of Rome des- patched Julius Proculus and Valerius 'olesus, two senators of distinction, to make him an offer of the kingdom. The Sabine philosopher re- jected at first their proposal ; but at last yielded, and set out for Rome, where he was received by all ranks of people with joy. Spurius Vettius, the interrex for the day, having assembled the curiae, he was elected in

due form, and the elec- tion was unanimously confirmed by the senate. The beginning of his reign was popular ; and he dismissed the 300 guards which his predecessor had kept around his person. He was not, like Romulus, fond of war, but applied himself to tame the ferocity of his subjects, to inculcate in their minds a reverence for the Deity, and to quell their dissensions by dividing all the citizens into classes. He established different orders of priests, and taught the Romans not to worship the Deity by images, and hence none appeared in the temples of Rome for 160 years. He en- couraged the report of his paying visits to the nymph Egeria, to give sanction to the laws which he introduced. He established the col- lege of the vestals, and told the Romans that the safety of the empire depended upon the preser- vation of the sacred ancyle or shield, which, it was believed, had dropped from heaven. He dedicated a temple to Janus, which, during his whole reign, remained shut as a mark of peace. After a reign of forty-two years, in which he had given every encouragement to the useful arts, Numa died A.U.C. 82. Not only the Romans, but the neighbouring nations, were eager to pay their last offices to a monarch whom they revered. He left behind him one daughter, called Pom- pilia, who married Numa Marcius, and became the mother of Ancus Marcius, the fourth king of Rome.

NUMANTIA, a very noble city, the ornament of Hispania Citerior (Floras), celebrated for the long war of twenty years which it maintained against the Romans. Numantia was taken by the Romans, A.U.C. 629, after a siege, produc- tive of hardships to the inhabitants unparalleled in historv. See Rome.

NUM 13

‘NUMB, adj. h V. a. \ Saxon, benum, be- Numb’edness, n. s. ˆnumeˆe; Gothic and Numb’ness. j Arm. num. Torpid ;

motionless ; senseless ; hence chill or cold to torpidity : to numb is to reduce to this state. When we both lay in the field, Frozen almost to death, how he did lap me Even in his garments, and did give himself All thin and naked to the numb cold night.

Shakspeare. Bedlam beggars, with roaring voices Strike in their numbed and mortified bare arms Pins, wooden pricks, nails, sprigs of rosemary : And with this horrible object, from low farms, Inforce their charity. Id. King Lear.

Stir, nay, come away ; Bequeath to death your numbness ; for from him Dear life redeem you. Id. Winter’s Tale.

Leaning long upon any part maketh it numb and asleep ; for that the compression of the part suffereth not the spirits to have free access ; and therefore, when we come out of it, we feel a stinging or prick- ing, which is the re-entrance of the spirits. Bacon.

Cold numbness straight bereaves Her corpse of sense, and the' air her soul receives.

Denham. She can unlock The clasping charm, and thaw the numbing spell.

Milton. Till length of years, And sedentary numbness, craze my limbs To a contemptible old age obscure. Id.

Plough naked, swain, and naked sow the land. For lazy winter numbs the labouring hand. Dryden.

Silence is worse than the fiercest and loudest ac- cusations ; since it may proceed from a kind of numb- ness or stupidity of conscience, and an absolute do- minion obtained by sin over the soul, so that it shall not so much as dare to complain, or make a stir.

South. Nought shall avail. The pleasing song, or well repeated tale. When the quick spirits their warm march forbear, And numbing coldness has embraced the ear. Prior.

If the nerve be quite divided the pain is little, only a kind of stupor or numbiiess.

Wiseman's Surgery. NUM'BER, V. a. & n. s. ˆ Fr. nombre ; Lat. iVum'berer, n. s. ynumero. To count ;

Num'berless, ►►t(7. J reckon ; reckon as

one of a kind or sort : a number is the species of a quality ; any particular aggregate of things ; many ; a multitude, considered in the aggregate ; harmony (proportions or varieties of sound re- duced to numbers), poetry, verse; in grammar, the variation that denotes quantity, as one, or more than one : a numberer is he who numbers : numberless, without number; innumerable.

If a man can number the dust of the earth, then shall thy seed also be numbered. Genesis xiii.

He was numbered with the transgressors, and bare the sin of many. Isaiah liii. 12.

I will number you to the sword. Id. Ixv. 12.

‘J’he silver, the gold, and the vessels, were weighed by number and by weight. Ezra viii. 34.

Of him came nations and tribes out of number.

2 Esd. iii. 7.

Much of that we are to speak may seem to a num- ber perhaps tedious, perhaps obscure, dark, and intri- cate. Hooker. Hye tˆee from this slaughter-house,

Lest thou increase the number of the dead.

Shakqeare.

NUM

This is the third time ; I hope good luck lies in odd numbers ; they say there is divinity in odd num- bers, either in nativity, chance, or death.

Id. Merry Wives of Windiw. How many numbers is in nouns ? ••• Two. Id,

I forgive all ; There cannot be those numberless ofliences ‘Gainst me. S/iaktpeare.

Number itself importeth not much in armies, where the people are of weak courage : for, as Virgil says, it never troubles a wolf how many the sheep be.

Bacon. If you will some few of you shall see the place ; and then you may send for your sick, and the rest of your number, which ye will bring on land.

Bacon’s New Atlanta. Sir George Summers, sent thither with nine ships and five hundred men, lost a great part of their 7ium> bers in the isle of Bermudaz, Heylin.

The chances and contingencies that trouble us are no more to be numbered than the minutes of eternity. Jer. Taylor

Deserts so great. Though numberless, I never shall forget. Denham. Loud as from numbers without number. Milton. Then feed on thoughts that voluntary move, Harmonious numbers, as the wakeful bird Sings darkling. Id.

About his chariot numberless were poured Cherub and seraph. Id. Paradise Lost.

As one diamond is worth numberless bits of glass : so one solid reason is worth innumerable fancies.

Burrow. In the noun is the variation or change of termina- tion to signify a number more than one. When men first invented names, their application was to single things ; but, soon finding it necessary to speak of several things of the same kind together, they found it likewise necessary to vary or alter the noun.

Clarke'i Latin Grammar. Ladies are always of great use to the party they espouse, and never fail to win over numbers.

Addison. The soul converses with numberless beings of her own creation. Id. Spectator.

Some convey their instructions to us in the best chosen words, others in the most harmonious num- bers, some in point of wit, and others in short pro- verbs. Addison. Yet should the muses bid my numbers roll Strong as their charms, and gentle as their soul.

Pope. Travels he then a hundred leagues. And suffers numberless fatigues.

Swift's Miscellanies. Could I, from Heaven inspired, as sure presage To whom the rising year shall prove his last, As I can number in my punctual page.

And item down the victims of the past. Cowper. The numberless suckers and straggling branches of a fruit tree, if permitted to shoot out unrestrained while they are themselves barren and useless, dimi- nish considerably the vigour of the parent stock.

Canning.

Number. (See Arithmetic.) Number, says Malcolm, is either abstract or applicate : Ab- stract, when referred to things in general, wthout attending to their particular properties; and ap- plicate, when considered as the number of a par- ticular sort of things, as yards, trees, or the like. When particular things are mentioned, there is always something more considered thau barely their numbers ; jo that what is true of number

in the abstract, or when nothing but tlie number of things is considered, will not be true when the question is limited to particular things : for in- stance, the number two is less than three; yet two yards is a greater quantity than three inches ; because regard must be had to their different na- tures as well as number, whenever things of a different species are considered; for, though we can compare the number of such things ab- stractedly, yet we cannot compare them in any applicate sense. And this difference is necessary *o be considered, because upon it the true sense, and the possibility or impossibility, of some questions depend. Number is unlimited in respect of increase ; because we can never con- ceive a number so great but still there is a greater. However, in respect of decrease, it is limited ; unity being the first and least number, below which therefore it cannot descend, except by subdivision into decimal or other parts, which may also be extended infinitely, at least in idea, if not in fact ; for we cannot conceive any particle of matter so small, but that it may be supposed capable of being rendered still smaller, by divi- sion and subdivision.

Number, Golden. See Chronology, Index.

Numbers, Ancient. Numbers were by the Jews, as well as the ancient Greeks and Romans, expressed by letters of the alphabet: hence we may conceive how imperfect and limited their arithmetic w”as, because the letters could not be arranged in a series, or in different columns, con- venient for ready calculation. The mvention of the arithmetical figures which we now make use of, and particularly the cypher, has given us a vast advantage over the ancients in this respect. (See Arithmetic, Index.) The Jewish cabba- lists, the Grecian conjurors, and the Roman au- gurs, had a great veneration for particular num- bers, and the result of particular combinations of them.

Numbers, Book of, the fourth book of the Pentateuch, taking its denomination from its numbering the families of Israel. A great part of this book is historical, relating to several re- markable passages in the Israelites’ march through the wilderness. It contains a distinct relation of their several movements from one place to another, or their forty-two stages through the wilderness. But the greatest part of this book is spent in enumerating those laws and ordinances, whether civil or ceremonial, whicli were given by God, but not mentioned before in the preceding books.

NU’MEKAL, adj. Nu’merable, Nu’merally, adv. Nu’merary, adj. Numera’tion, n.s. Numera’tor, n.s. NuMER’iCAL, adj. Numer’ically, adv. Nu’merist, n.s. Numeros’ity, Nu’merous, adj. Nu’merousness, n.

~] Ft. numeral, nume- rateur, numeration ; Lat. numerus, nume- ratio. numerator, nu- merosus. Relating to [numbers : numerable f is capable of being numbered : numerary, any thing pertaining to a certain number: numeration, the act or S.J art of numbering ; number contained ; a rule of arithmetic : a nu- merator is a person who numbers; or a given number, the niea.sure of others : numerical, de- noting or pertaining to numbers ; identical ; the

same not only in kind but number: nunierist, one who deals in or reckons numbers : numero- sity, the state of being numerous: numerous, many ; containing many ; containing musical numbers ; harmonious ; melodious : numerous- ness, the quality of being numerous ; harmony.

Many of our schisms in the West were never heard of by the numerous Christian churches in the east of Asia. Lesley.

Queen Elizabeth was not so much observed for having a numerous, as a wise counsel. Bacon.

The blasts and undulary breaths thereof maintain no ceitainty ia their course ; nor are they numerally feared by navigators. Browne.

In the legs or organs of progression, in animals, we may observe an equality of length, and parity of nnmeration. Id.

ˆVe cannot assign a respective fatality unto each which is concordant unto the doctrine of the nume- rists. Id.

Of assertion if numerosity of assertors were a suffi- cient demonstration, we might sit down herein as an unquestionable truth. Id.

Thy heart, no ruder than the rugged stone, I might, like Orpheus, with my numerous moan Melt to compassion. Waller.

I must think it improbable that the sulphur of antimony would be but numerically different from the distilled butter or oil of roses. Boyle.

His verses are so numerous, so various, and so harmonious, that only Virgil, whom he professedly imitated, has surpassed him. Dryden.

That which will distinguish his style is, the)?u7?7e- rousness of his verse. There is nothing so delicately turned in all the Roman language. Id.

‘Numeration is but still the adding of one unit more, and giving to the whole a new name or sign, whereby to know it from those before and after.

Locke.

Some who cannot retain the several combinations of numbers in their distinct orders, and the depend- ance of so long a train of numeral progressions, are not able all their lifetime regtdarly to go over any moderate series of numbers. Id.

The numerical characters are helps to the memory, to record and retain the several ideas about which the demonstration is made. Id.

Contemplate upon his astonishing works, particu- larly in the resurrection and reparation of the same numerical body, by a re-union of all the scattered parts. South.

A supernumerary canon, when he obtains a pre- bend, becomes a numerary canon.

Ayliffe’s Pareryon.

Put thy little state in good order ; govern wisely and holily those numerous people which are con- tained in so little a kingdom ; that is to say, that multitude of aflˆections, thoughts, opinions, and pas- sions, which are in thine heart. Mason.

Words none, things numerous it contains : And, things with words compared,

Who needs be told, that has his brains.

Which merit most regard ? Couper.

To the wall, with Hate and Hunger, Numerous as wolves and stronger. On they sweep. Byron.

In Time’s pursuits men ran till out of breath : The astronomer soared up, and counted stars, And gazed upon the heaven’s bright face. Till he dropped down dim-eyed into the grave : The numerist, in calculations deep, Grew gray. PolUJu

Numeral Ciiauactfrs of the Arabs are those figures which are now used in all the oper- ations of arithmetic in every nation of Europe. A writer in the Gentleman's Magazine thus en- deavours to prove that the Arabs derived their notations from the Greeks : ❖❖❖ ' I maintain,' says he, 'that the Indians received their numeral cha- wcters from the Arabians, and the Arabians from the Greeks, as from them they derived all their learning, which in some things they improved, but for the most part have altered. The numeri- cal figures whicli they received from the Greeks are proofs of this alteration ; which is so great, that without particular attention one can scarcely discover in them the vestiges of their origin. But when we compare them carefully, and with- out prejudice, we find in them manifest traces of the Greek figures. The Greek numerical figures were no other than the letters of their alphabet. A small stroke was the mark of unity. The B, being abridged of its two extremities, produced the 2. If you incline the y a little on its left side, and cut off its foot, and make the left horn round towards the left side, you will produce a 3. The A makes the 4, by raising the right leg perpendicularly, and lengthening it a little below the base, and lengthening the base on the left side. The t forms the 5, by turning the lowest semicircle towards the right, which before was turned towards the left side. The number 5 forms the 6 by having its head taken ofi", and its body rounded. Z, by taking away the base, makes the 7. If we make the top and bottom of H round, we shall form an 8. The Q is the 9 with very little alteration. The cypher 0 was only a point, to which one of the figures was added to make it stand for ten times as much. It was necessary to mark this point very strongly : and, in order to form it better, a circle was made, which was filled up in tiie middle ; but that cir- cumstance was afterwards neglected. Theo- phanes, an historian of Constantinople, who lived in the ninth centurj', says expressly, that tlie Arabians retained the Greek figures, having no characters in their language to represent all the numbers. The Greeks observed in tlieir numbers the decuple progression, which the Arabians have retained.' That this reasoning is plausible will hardly be questioned ; but whe- ther it be conclusive our readers must deter- mine.

Numeral Letters, or Numerals, those let- ters of the alphabet which are generally used for figures; as I, one; V, five; X, ten; L, fifty ; C, 100; 1), 500; M, 1000, &c. It is not agreed how the Roman numerals originally received iheir value. It has been supposed that the Ro- mans used iNI to denote 1000, because it is the first letter of mille, the Latin for 1000; C to denote 100, because it is the first letter of cen- tum, the Latin for 100 ; that D, being formed by dividing the old M in the

middle, was therefore appointed to stand for 500, or half as much as the M s ood for when it was whole ; or, more probat'y, that D stands for dimidium mille, the half of 1000 : and that L, bemg half a C, was, for tlie same reason, used for fifty ; that V stood for five, because it is the fifth vowel ; that X stood for ten, because it contains V twice, one of them

inverted ; and that I v/as used for one, because it is the first letter of initium, the beginning. But all these are fanciful derivations ; and the following are perhaps equally so, though some think they afford the most natural account of the matter. The Romans probably put down a single stroke, I, for one ; this I they doubled, trebled, and quadrupled, to express two, three, and four; thus 11. III. IIII. So far they could easily number the strokes with a glance of the eye. But they found that, if more were added, it would be necessary to tell the strokes one by one; they therefore expressed five by joining two strokes together in an acute angle, thus, \, which is the more probable, as the progression of the Roman numbers is from five to five, i. e. from the fingers on one hand to the fingers on the other. After they had made this acute angle V, for five, they added the single strokes to it to the number of four, thus, VI. VII. Vlil. Villi., and then, to prevent confusion, they doubled their acute angle by prolonging the two lines beyond their intersection, thus, X to denote two fives, or ten. After this they doubled, trebled, and quadrupled, this double acute angle thus, XX. XXX. XXXX. They then joined two single strokes in another form, and, instead of an acute angle, made a right angle L to denote fifty. When this fifty was doubled, they then doubkd the right angle thus, E, to denote 100; and hav- ing numbered this double right angle four times, thus, EE. EEE. EEEE. when they came to the fifth number as before, they reversed it, and put a single stroke before it, thus, yj, to denote 500 ; and, when this 500 was doubled, then they also doubled their double right angle, setting two double right angles opposite to each other, with a single stroke between them, thus, EI'j, to de- note 1000: when this note for 1000 had been four times repeated, then they put down lEj for 5000, EEIˆ;ˆ for 10,000, and YJ-J-J for 50,000, EEEI'jjj for 100,000, m'j'j for 500,000, and ECEEI333J for 1,000,000. That the Romans did not originally write M for 1000, and C for 100, but square characters, as they are written above, we are expressly informed by Paulus Manutius ; but the corners of the angles being cut off by the transcribers for despatch, these figures were gradually brought into what are now numeral letters. When the corners of EI;ˆ were made round, it stood thus, CT3, which is so near the Gothic ai, that it soon devi- ated into that letter: so yj having the comer made

round, it stood thus, J3, and then easily deviated into D. E also became a plain C by the same means; the single rectangle which denoted fifty was, without alteration, a capital L the double acute angle was an X ; the single acute angle a V consonant ; and a plain single stroke the letter I ; and thus these seven letters, M, D, C, L, X, V, I, became numerals. ??? See Arithmetic

NUMIDA, in ornithology, a genus belonging to tlie Older gallince. On each side of the head there is a kind of colored fleshy horn ; and the beak is serrated near the nostrils.

N. cristata, the crested guinea-hen, a species mentioned by Latham, inhabiting Africa. Per- haps it may have some relation to the crested

sort which Marcgrave ipentions to liave seen, and which came from Sierra Leone. This had a kind of membranous collar about the neck, was of a bluish-ash color, and had a large roundish black crest. Buffon, who describes it at great length, calls it la peintade. Linnaeus and Gmelin call it numidameleagris, &c. Ray and Willoughby call itgallus and gallinaGuineensis,&c. Mr. Pen- nant contends, and seems to prove, that the pin- tadoes had been early introduced into Britain, at least prior to the year 1277. But they seem to have been much neglected, on account of the difficulty of rearing them ; for they occur not in our ancient bills of fare. They have a double caruncle at the chaps, and no fold at the throat.

N. meleagris, the Guinea hen, is a native of Africa. It is larger than a common hen. Its body is sloped like that of a partridge, and its color is all over a dark gray, very beautifully spotted with small white specks ; there is a black ring round the neck ; its head is reddish, and it is blue under the eyes. They naturally herd together in large numbers, and breed up their young in common ; the females taking care of the broods of others, as well as of their own. Barbut informs us, that in Guinea they go in flocks of 200 or 300, perch on trees, and feed on worms and grasshoppers ; that they are run down and taken by dogs ; and that their flesh is tender and sweet, generally white, though sometimes black. They breed very well with us. Mr. Latham observes ‘that the native place of this bird is without doubt Africa, and that it is the meleagris of old authors. It is supposed origin- ally to have come from Nubia, and was esteemed in the Roman banquets. It has been met with wild, in flocks of 200 or 300, by various travel- lers. Dampier

found them in numbers in the island of Mayo ; and Forster speaks of them as numerous at St. Jago ; but they have been transported into the West Indies and America, and are now in a wild state in those places as well as domesticated.' The white-breasted one is a mere variety, of which there are many : it is mostly found in Jamaica.

N. mitrata, is a different and not a common species: it inhabits Madagascar and Guinea. Pallas seems to think that it may be the bird mentioned by Columella as differing from the common one ; and will account for Pliny's hav- ing thought the numida and meleagris to be different birds.

NUMIDIA, an ancient kingdom of Africa, bounded on the north by the Mediterranean Sea ; on the south by G-aetulia, or part of Libya Inte- rior ; on the west by the Mulucha, a river which separated it from Mauritania ; and on the east by the Tusca, another river that bounded it in common with Africa Propria. Dr. Shaw has rendered it probable that the river formerly named Malva, Malvana, Mulucha, or Molochath, is the same with that now called MuUooiah by the Algerines ; in which case the kingdom of Numidia must have extended upwards of 500 miles in length ; its breadth, however, cannot be so well ascertained ; but, supposing it to have beeu the same with that of the present kingdom of Algiers, in the narrowest part it must have been at least forty miles broad, and in the widest

upwards of 100. This country included two districts, one inhabited by the Massyli, and the other by the Maseesyli ; the latter being also called in after times Mauritania Caesariensis, and the former Numidia Propria. The country of the Massyli, or, as some call it, Terr i Meta- gonitis, was separated from the proper territory of Carthage by its eastern boundary, the river Tusca, and from the kingdom of the Masaesyli, or Mauritania Caesariensis, by the river Ampsaga. It seems to correspond with that part of the pro- vince of Constantina, lying between the Zaine and the Wed al Kibeer, which is above 130 miles long, and more than 100 broad. The sea- coast of this province is for the most part men- tioned as rocky, answering to the appellation given to it by Abulfeda, viz. El Edwaa, the high or lofty. It is far from being equal in extent to the ancient country of the Masaesyli, which Strabo informs us was yet inferior to the country of the Massyli. Its capital was Cirta, a place of very considerable note among the ancients. The most celebrated antiquarians think that the tract extending from the isthmus of Suez to the lake Tritonis was chiefly peopled by the de- scendants of Mizraim, and that the posterity of his brother Phut spread themselves all over the country between that lake and the Atlantic Ocean. Herodotus countenances this ; for he tells us, that the

Libyan Nomades, whose territories on the west were bounded by the Triton, agreed in their customs and manners with the Egyptians ; but that the Africans, from that river to the At- lantic Ocean, differed in almost all points from them. Ptolemy mentions a city called Putea, near Adrametum ; and Pliny, a river of Mauri- tania Tingitana, known by the name of Fut, or Phut ; and the district adjacent to this river was called Regio Phutensis, which plainly alludes to the name of Phut.

The history of Numidia, during many of the early ages, is buried in oblivion. It is probable, however, that, as the Phoenicians were masters of a great part of the country, these transactions had been recorded, and generally known to the Car- thaginians. Jarbas, or Hiarbas, probably reigned here as well as in Africa Proper, if not in Mau- ritania, and other parts of Libya, when Dido began to build Byrsa. Justin says that, about the age of Herodotus, the people of this country were called both Africans or Libyans, and Nu- midians. He likewise intimates that about this time the Carthaginians vanquished both the Moors or Mauritanians, and Numidians; in consequence of which they were excused from paying the tribute which had hitherto been de- manded of them. After the conclusion of the first Punic war the African troops carried on a bloody contest against their masters the Cartha- ginians ; and the most active in this rebellion, according to Diodorus Siculus, were a part of the Numidian nation named Micatanians. This so incensed the Carthaginians, that, after Hamil- car had either killed or taken prisoners all the mercenaries, he sent a large detachmer. to ravage the country of those Numidians. That detachment executed his orders with the utmost cruelty, plundering the district, and crucifying all the prisoners without distinction. This filled

ihe rest with such indignation and resentment, that both they and their posterity ever afterwards bore an implacable hatred to the Carthaginians. In the time of the second Punic war, Syphax, king of the Masaesyli, entered into an alliance with the Romans, and attacked the Carthaginians. This induced Gala, king of the Massyli, to con- clude a treaty with the Carthaginians, in conse- quence of which his son Masinissa marched at the head of a powerful army to give Syphax battle. The contest ended in favor of Masinissa; 30,000 Masassyli were put to the sword, and Syphax driven into Mauritania ; and similar misfortunes attended Syphax in another engage- ment, where his troops were entirely defeated and dispersed.

Gala dying, whilst his son Masinissa was act- ing at the head of the Numidian troops sent to the assistance of the Carthaginians in Spain, his brother Desalces, according to the rules of suc- cession in Numidia, took possession of the Mas- sylian throne. That prince dying soon after, Capusa his eldest son succeeded him. But he did not long enjoy his high dignity ; for one Mezetulus a person of the royal blood, but an enemy to the family of Gala, excited a great part of his subjects to revolt. A battle soon took place between him and Capusa, in which the latter was slain, with many of the nobility, and his army entirely defeated. But, though Mezetulus thus became possessed of the sove- reignty, he did not think proper to assume the title of king, but styled himself guardian to La- cumaces, the surviving son of Desalces, whom he graced with the royal title. To support him- self in his usurpation he married the dowager of Desalces, who was Hannibal's niece, and consequently of the most powerful family in Carthage. To attain the same end, he sent am- bassadors to Syphax, to conclude a treaty of alliance with him. In the mean time Masinissa, receiving advice of his uncle's death, and his cousin's slaughter, and of Mezetulus's usurpation, immediately passed over to Africa, and went to the court of Bocchar, king of ˆlauritina, to so- licit succours. Bocchar, sensible of the great injustice done Masinissa, gave him a body of 4000 Moors to escort him to his dominion. His subjects, having been apprised of his approach, joined him upon the frontiers with a party of 500 men. The Moors, in pursuance of their orders, returned home as soon as Masinissa reached the confines of his kingdom. Notwith- standing which, and the small body that declared for him, having accidentally met Lacumaces at Thapsus with an escort going to implore Sy- phax's assistance, he drove him into the town, which he carried by assault, after a faint resis- tance. However, Lacumaces, with many of his men, escaped to Syphax. The fame of this ex- ploit gained Masinissa so great credit that the Numicˆians flocked to him from all parts, and, amongst the rest, many of his father Gala's ve- terans, who pressed him to make a speedy and vigoroi 5 push for his hereditary dominions. La- cumaces having joined Mezetulus with a rein- forcement of Masaesylians, which he had pre- vailed upon Syphax to send to the assistance of his ally, the usurper advanced at tl>.e head of a Vol. XVI.

numerous anny to ofTer Masmissa battle ; which that prmce, though much niferior m numbers did not decline. Hereupon an engagement ensued ; which, notwithstanding the inequality of numbers, ended in the defeat of Lacumaces. The immediate consequence of this victory of Masinissa was a quiet and peaceable possession of his kingdom ; Mezetulus and Lacumaces, with the few that attended them, flying

into the territories of Carthage.

Notwithstanding this success, Masinissa being apprehensive that he should be obliged to sus- tain a war against Syphax, he offered to treat Lacumaces with as many marks of distinction as his father Gala had Desalces, provided that prince would put himself under his protection. He also promised Mezetulus pardon, and a res- titution of all the effects forfeited by his treason- able conduct, if he would make his submission to him. Both of them readily complied with the proposal, and immediately returned home ; so that the tranquillity and repose of Numidia would have been settled upon a solid and last- ing foundation, had not this been prevented by Asdrubal, who w-as then at Syphax's court. He insinuated to that prince, ' that he was greatly mistaken, if he imagined Masinissa would be satisfied with his hereditary dominions : that he was a prince of much greater capacity and am- bition than either his father Gala, his uncle De- salces, or any of his family. And that, in fine, unless this rising flame was extinguished before it came to too great a head, both the Masaesylian and Carthaginian states would be infallibly con- sumed by it.' Syphax, alarmed by these sugges- tions, advanced with a numerous body of forces into a district then in possession of Masinissa. This brought on a general action between these two princes ; wherein the latter was totally de- feated, his army dispersed, and he himself obliged to fly to the top of mount Balbus, attended only by a few of his horse. Such a decisive battle at this juncture, before Masinissa was fixed on the throne, could not but put Syphax into pos- session of the kingdom of the Massyli. Ma- sinissa in the mean time made nocturnal incur- sions from his post upon mount Balbus, and plundered all the adjacent country, particularly that part of the Carthaginian territory contiguous to Numidia. This district he not only thoroughly pillaged, but likewise laid waste with fire and sword, carrying off" an immense booty, which was bought by some merchants, who had put into one of the Carthaginian ports for that pur- pose. In fine, he did the Carthaginians more damage, not only by committing such dreadful devastations, but by massacring and carrying into captivity vast numbers of their subjects on this occasion, than they could have sustained in a pitched battle, or one campaign of a regular war. Syphax, at the pressing and reiterated instances of the Carthaginians, sent Bocchar, one of his most active commanders, with a de- tachment of 4000 foot, and 2000 horse, to re- duce this pestilent gang of robbers, promising him a great reward if he could bring Masinissa either alive or dead. Bocchar, watching an op- portunity, surprised tlie iVIassylians, as they were straggling about the country without any

order or discipline ; so that he took many pri- soners, dispersed the rest, and pursued Ma- sinissa himself, with a few of his men, to the top of the mountain where he had before taken post. Considering the expedition as ended, he not only sent many head of cattle, and the other booty that had fallen into his hands, to Syphax, but likewise all the forces, except 500 foot and 200 horse. With this detachment he drove Ma- sinissa from the summit of the hill, and pursued him through several narrow passes and defiles, as far as the plains of Clupea. Here he so sur- rounded him, that all the Massylians except four, were put to the sword, and Masinissa him- self, after having received a dangerous wound, escaped with the utmost difficulty. As this was effected by crossing a rapid river, in which at- tempt two of his four attendants perished in the sight of the detachment that pursued him, it was rumored all over Africa that Masinissa also was drowned. For some time he lived undis- covered in a cave, where he was supported by the two horsemen that had made their escape with him. But having cured his wound, by the application of some medicinal herbs, he boldly began to advance towards his own frontiers. In his march he was joined by about forty horse, and, soon after his arrival among the Massyli, so many people flocked to him from all parts that out of them he formed an army of 6000 foot and 4000 horse. With these forces he not only reinstated himself in the possession of his do- minions, but likewise laid waste the borders of the Masaesyli. This so irritated Syphax that he immediately assembled a body of troops, and encamped very commodiously upon a ridge of mountains between Cirta and Hippo. His army he commanded in person ; and detached his son 'ermina, with a considerable force, to take a compass, and attack the enemy in the rear. In pursuance of his orders, Vermina set out in the beginning of the night, and took post in the place appointed him, without being discovered by the enemy. In the mean time Syphax de- camped, and advanced towards the Massyli, to give them battle. When he had possessed him- self of a rising ground that led to their camp, and concluded that his son 'ermina must have formed the ambuscade behind them, he began the fight. Masinissa being advantageously- posted, and his soldiers distinguishing them- selves in an extraordinary manner, the dispute was long and bloody. But Vermina unexpectedly falling upon their rear, and thus obliging them to divide their forces, which were scarcely able before to oppose the main body under Syphax, they were soon thrown into confusion, and forced to betake themselves to a precipitate flight. All the avenues being blocked up, partly by Syphax and partly by his son, such a dreadful slaughter was made of the

unhappy Massyli, that only Masinissa himself, with sixty horse, escaped to the Lesser Syrtis. Here he remained betwixt the confines of the Carthaginians and Gara- mantes, till the arrival of Laelius and the Roman fleet on the coast of Africa, when he joined with the Romans ; and by the assis- tance of La-lius, at last reduced Syphax's king- dom See Rome. According to Zonoras, Ma-

sinissa and Scipio, before the memorable bat- tle of Zama, deprived Hannibal by stratagem of some advantageous posts ; which greatly contributed to the victory the Romans ob- tained. At the conclusion, therefore, of the second Punic war, he was amply rewarded by the Romans for the important services he had done them. As for Syphax, after the loss of his dominions, he was kept in confinement for some time at Alba ; whence being removed to grace Scipio's triumph, he died at Tibur in his way to Rome. Zonoras adds, that his corpse was de- cently interred ; that all the Numidian prisoners were released ; and that Vermina, by the assis- tance of the Romans, took peaceable possession of his father's throne. However, part of the Massesylian kingdom had been before annexed to Masinissa's dominions, to reward that prince for his singular fidelity and attachment to the Romans. A short time before the beginning of the third Punic war he again attacked the Car- thaginians, and by drawing a line of circumval- lation around their army, posted upon an eminence, under the command of Asdrubal, Massinissa cut off all manner of supplies from them ; which introduced both the plague and famine into their camp. As the body of Nu- midian troops employed in this blockade was not near so numerous as the Carthaginian forces, the line here mentioned must have been ex- tremely strong, and the effect of great labor and art. The Carthaginians, finding themselves re- duced to the last extremity, concluded a peace upon the following terms, which Masinissa dic- tated : ××× 1. That they should deliver up all deserters. 2. That they should recal their exiles, who had taken refuge in his dominions. 3. That they should pay him 5000 talents of silver within fifty years. 4. That their soldiers should pass under the yoke, each carrying off" only a single garment. As Masinissa himself, though between eighty and ninety years of age, conducted the whole enterprise, he must have been extremely well versed in fortification, and other branches of the military art. Soon after, the consuls landed an army in Africa, in order to lay siege to Carthage, without imparting to Masinissa their design. This not a little chagrined him, as it was contrary to the former practice of the Romans ; who, in the preceding war, had com- municated their intentions to him, and consulted him on all occasions. When, therefore, the consuls applied to him for a body of his troops to act in concert with their forces, he answered, '

that they should have a reinforcement when they stood in need of it.' It could not but be provoking to him, that a/ter he had extremely weakened the Carthaginians, and even brought them to the brink of ruin, his' pretended imperi- ous friends should come to reap the fruits of his victory, without giving him the least intelligence of it. However, his mind soon returned to its natural bias in favor of the Romans. Finding his end approaching, he sent to iEmilianus, then a tribune in the Roman army, to desire a visit from him. What he proposed by this visit, was to invest him with full powers to dispose of his kingdom and estate as he should think pro- per, for the benefit of his children. The high

idea he had entertained of that young hero's abilities and integrity induced him to take this step. But, believing that death would not per- mit him to have a personal conference with il'milianus upon this subject, he informed his wife and children, in his last moments, that he had empowered him to dispose in an absolute manner of all his possessions, and to divide his kingdom amongst his sons. To which he sub- joined, ' I require, that whatever .TL,milianus may decree, shall be executed as punctually as if I myself had appointed it by my will.' Before the arrival of the tribune he expired.

During his youth he had met with strange reverses of fortune. His kingdom iinally, how- ever, extended from Mauritania to the western confines of Cyrenaica ; whence it appears, that he was one of the most powerful princes of Africa. Many of the inhabitants of this vast tract he civilised, teaching them to cultivate their soil, and to reap those natural advantages which the fertility of their country offered them. He was of a more robust habit of body than any of his contemporaries, being blessed with the greatest health and vigor to the last, and his youngest son, Stembal, was only four years old at his decease. Though above ninety years of age, he performed all the exercises used by yeang men, and always rode without a saddle. Ac- cording toAppian, he left a numerous and we.l- disciplined army, and an immense quantity of wealth behind him. Of fifty-four sons that sur- vived him, only three were legitimate, to wit, Micipsa, Gulussa, and Mastanabal. jEmi- lianus, arriving at Cirta after he had expired, divided his kingdom, or rather the government of it, amongst these three, though to the others he gave considerable possessions. To Micipsa, the eldest, who was of a pacific disposition, he assigned Citra, the metropolis, for the place of his residence, in exclusion of the others. Gulussa, the next

to him, being a prince of a military genius, had the command of the army, and the transacting of all affairs relative to peace or war. And Mastanabal, the youngest, had the adminis- tration of justice allotted him as an employment suitable to his education. Tliey enjoyed in common the immense treasures IVIasinissa had amassed, and were all of them dignified by jEmi- lianus with the royal title. After he had made these dispositions, he departed from Cirta, taking with him a body of Numidian troops, under the conduct of Gulussa, to reinforce the Roman army that was then acting against the Carthaginians.

INIastanabal and Gulussa died soon after their father, and Micipsa therefore became sole mo- narch of Numidia. In his reign, according to Orosius, a great part of Africa was covered with locusts which destroyed all the produce of the earth, and even devoured dry wood. But at last they were all carried by the wind into the African Sea, out of which being thrown in vast heaps upon the shore, a tremendous plague en- sued. In Numidia alone 800,000 men perished, and in Africa Propria 200,000 ; amongst the rest, 30,000 Roman soldiers quartered in and about Utica for the defence of the last province. At Utica, in particular, the mortality raged to such a degree, that 1500 dead bodies were carried

out of one gate in a day. Micipsa had two sons, Adherbal and Hiempsal, whom he educate! in his palace, together with his nephew Jugurtha. That young prince was the son of INIastanabal ; but, his mother having been only a concubine, Masinissa had taken no great notice of him. However, Micipsa, considering him as a prince of the blood, took as much care of him as he did of his own children. Jugurtha became very handsome, endued with great strength of bodv, and adorned with great intellectual endowments. He exercised himself in running, riding, hurling the javelin, and other manly exercises, suited to the martial genius of the Numidians. The chase was I'.is chief delight; but it was that of lion, and other savage beasts. His talents at first charmed Micipsa, who thought them an orna- ment to his kingdom. But he soon began to reflect, that he was considerably advanced in years, and his children in their infancy ; that mankind naturally thirst after power, and often stick at nothing to gratify their ambition. These reflections excited his jealousy, and deter- mined him to expose Jugurtha to various dan- gers, some of which he hoped might prove fatal to him. For this purpose he gave him the com- mand of a body of forces which he sent to assist the Romans, who were then besieging Numantia. But Jugurtha, by his admirable conduct, not only escaped all danger, but acquired the esteem of the whole army, and Scipio sent a high cha- racter of him to his uncle Micipsa, while he also gave him some prudent advice in relation to his future conduct.

The heroic bravery he had shown in Spain, his undaunted courage, joined to the utmost calmness of mind, and above all the advantageous testimonials of his conduct given by Scipio, attracted a universal esteem. Micipsa himself, charmed with the high idea the Roman general had entertained of his merit, changed his behaviour towards him; resolving, if pos- sible, to win his affection by kindness. He therefore adopted him, and declared him joint heir with his two sons to the crown. Finding, some few years afterwards, that his end approached, he sent for all three to his bed side ; where, in the presence of the whole court, he desired Ju- gurtha to recollect with what extreme tenderness he had treated him, and consequently to consider how well he had deserved at his hands. He then intreated him to protect his children on all occa- sions ; who, being before related lo him by the ties of blood, were now by their father's bounty be- come his brethren. He farther insinuated, that neither arms nor treasures constitute the strength of a kingdom, but friends, who are neither won by arms nor gold, but by real services, and an inviolable fidelity. Tlien, addressing himself to Adherbal and Hiempsal, ' And you (said he) I enjoin to pay the highest reverence to Jugurtha. F.ndeavour to nnitate, and if possible surpx=;5 his exalted merit, that the world may not here- after observe Micipsa's adopted son to have re- flected greater glory upon his memory than hi? own children.'

Micipsa's kindness made no impression or the mind of the ungrateful Jugurtha. Soon after the old king's death, he found means to assas- sinate Hiempsal in the city of Thirmida where

his treasures were deposited, and drive Adhtrbal out of his dominions. That unhappy prince fled to KoiTie, where he endeavoured to engage the senate to espouse his quarrel ; but, notwithstand- ing the justice of his cause, Jugurtha's ambas- sadors, by distributing vast sums of money amongst them, brought them so far over, that a majority palliated his inhuman proceedings. This encouraged those ministers to pretend that lliempsal had been killed by the Numidians on account of his excessive cruelty, and that Ad- herbal was the aggressor in the late troubles. They therefore intreated the senate to judge of Jugurdia's behaviour in Africa from his conduct at Numantia, rather than from the suggestion of his enemies. Upon which the majority of the senate declared in his favor. A few, however, who were not abandoned to

corruption, insisted upon bringing him to condign punishment. But as they could not prevail, he had the best part of Numidia allotted him, and Adherbal was forced to rest satisfied with the remainder. Jugurtha, finding now that every thing was venal at Home, thought he might pursue his towering projects without any obstruction from that quarter. He therefore threw oft" the mask, and attacked his cou- sin by open force. As Adherbal was a prince of a pacific disposition, and in almost all respects the reverse of Jugurtha, he was by no means a match for him. The latter therefore pillaged his terri- tories, stormed several of his fortresses, and overran a great part of his kingdom without op- position. Adherbal, depending on the friend- ship of the llomans, which his father in his last moments assured him would be a stronger support to him than all the troops and treasures in the universe, despatched deputies to Rome to complain of these hostilities. But, whilst he lost his time in sending thither fruitless deputations, Jugurtha overthrew him in a pitched battle, and soon after shut him up in Cirta. During the siege of this city, Roman commissioners arrived there, to persuade both parties to an accommo- dation ; but, finding Jugurtha untractable, they returned without so much as conferring with Adlierbal. A second deputation, composed of senators, with yEmilius Scaurus, president of the senate, at their head, landed some time after at Utica, and summoned Jugurtha to appear before them. That prince at first seemed to be under dreadful apprehensions, especially as Scaurus re- proached him with his enormous crimes, and threatened him with the resentment of the Ro- mans, if he did not immediately raise the siege of Cirta. However, the Numidian, by his address and tiie irresistible power of his gold, so mollified Scaurus, that he left Adherbal at his mercy. In fine, Jugurtha had at last Cirta surrendered to him, upon condition only that he should spare the life of Adherbal. But the merciless tyrant, when he had obtained possession of the town, ordered him to be put to a most cruel death. The merchants likewise, and all the Numidians in the place capable of bearing arms, he caused, without distinction, to be put to the sword. Rome was struck with horror at the news of this tragical event. Yet the venal senators still concurred with Jugartha's ministers in palliating Id-; enormous crimes. Notwithstanding which,

the people, excited by Cams Memmius their tiibune, who bitterly inveighed against the ve- nality of the senate, resolved not to let so flagrant an instance of villany go unpunished. This in- duced the senate likewise to declare their inten- tion to chastise Jugurtha. For this purpose an army was levied to invade Numidia, and the command of it given to the consul Calpurnius Bestia, a person of great abilities but of the most insatiable avarice. Jugurtha, being informed of these

great preparations, sent his son to Rome, to avert the impending storm, plentifully supplied with money. But Bestia, in the hopes of great advantages from an invasion of Numidia, de- feated all his intrigues, and had a decree passed, ordering him and his attendants to depart Italy in ten days, unless they were come to deliver up the king himself, and all his territories, to the republic. This decree being notified to them, they returned without so much as having entered the gates of Rome ; and the consul soon after landed with a powerful army in Africa. I'or some time he carried on the war very briskly ; he reduced several strong holds, and took many Numidian prisoners. But, upon the arrival of Scaurus, a peace was granted Jugurtha upon advantageous terms. That prince coming from Vaca, the place of his residence, to the Roman camp, to confer with Bestia and Scaurus, and the preliminaries of the treaty being immediate- ly after settled between them in private con- ferences, every one at Rome was convinced that the president of the senate and the consul had sacrificed the republic to their avarice. The indignation therefore of the people in general displayed itself in the strongest manner. Mem- mius also fired them with his speeches. It was therefore resolved to despatch the prcetor Cassius, a man they could confide in, to Numidia, to prevail upon Jugurtha to come to Rome, that they might learn from himself which of their generals and senators had been seduced by the pestilent influence of corruption. Upon his ar- rival there he bribed one Baebius Salca, a man of great authority amongst the plebeians, but of insatiable avarice, by whose assistance he not only eluded all the endeavours of tne people of Rome to bring him to justice, but likewise en- abled Bomilcar, one of his attendants, to get Massiva, an illegitimate son of Micipsa, assassi- nated in the streets of Rome. That young prince was advised by many Romans of probity, well-wishers to the family of Masinissa, to ap- ply for the kingdom of Numidia; which coming to Jugurdia's ears, he prevented the application by this execrable step. However, he was obliged to leave Italy immediately. Jugurtha had scarcely set foot in Africa, when he received advice that the senate had annulled the shameful peace concluded with him by Bestia and Scaurus. Soon after, the consul Albinus trans- ported a Roman army into Numidia. Flatter- ing himself with the hopes of reducing Jugurtha to reason, he found himself deceived ; for that crafty prince, by various artifices, so amused and imposed upon Albinus, that nothing of moment ha])pened that campaign. His brodier Aulus, who succeeded him in the command of the army, was still more unsuccessful ; for after

a fruilless attempt to besiege Suthel, where the king's treasures were deposited, he marched his forces into a defile out of wliich he found it impossible to extricate himself. He therefore was obliged to submit to the ignominious cere- mony of passing under the yoke, with all his men, and to quit Numidia in ten days, to save his troops from immediate destruction. This scandalous treaty was declared void at Rome, as being concluded without the authority of the people. The Roman troops retired into Africa I'ropria, which they had now reduced into the form of a Roman province. In the mean time Caius Mamilius Limetanus, tribune of the people, excited the plebeians to enquire into the conduct of those persons by whose assistance Jugurtha had eluded all the decrees of the senate. Tliis occasioned a great ferment, which produced a prosecution of the guilty senators, that was carried on for some time with the ut- most zeal. Lucius Metellus, the consul during these transactions, had Numidia assigned him for his province, and was appointed general of the army against Jugurtha. As he entirely dis- regarded wealth, the Numidian found him .superior to all his offers. Jugurtha was there- fore now forced to regulate his conduct accord- ing to the motions of Metellus with the greatest caution ; and to exert his utmost bravery. The Romans soon reduced Vacca, a large opulent city, and the most celebrated mart in Numidia. They also defeated Jugurtha in a pitched battle ; overthrew Bomilcar, one of his generals, upon the banks of the MuthuUus ; and, in fine, forced Jugurtha to take shelter in a place rendered almost inaccessible by rocks and woods. How- ever, Jugurtha exerted himself surprisingly, exhibiting the courage, abilities, and attention of a consummate general, to whom despair ad- ministers fresh strength. But his troops could not make head against the Romans ; they were again worsted by Marius, though they obliged Metellus to raise the siege of Zama. Jugurtha, therefore, finding his country every where ra- vaged, his most opulent cities plundered, his fortresses reduced, his towns burnt, vast num- bers of his subjects put to the sword and taken prisoners, began to think seriously of coming to an accommodation with the Romans. His favorite Bomilcar, in whom he reposed the highest confidence, but who had been gained over by Metellus, observing this disposition, persuaded him to deliver up his elephants, money, arms, horses, and deserters, into the hands of the Romans. Some of these last, to avoid punishment, retired to Bocchus, king of Mauritania, and listed in his service. But Metellus, ordering Jugurtha to repair to Tisi- dium, a city of Numidia, and wait farther .di- rections, and he refusing, hostilities were renew- ed with greater fury than ever. Fortune now seemed to declare in favor of Jugurtha : he retook 'acca, and massacred all the Roman garrison, except Turpilius the commandant. But soon after a Roman legion seized again upon it,

and treated the inhabitants with the utmost severity. About this time Gauda, a son of Mastanabal, whom Micipsa in his will had appointed to succeed if his two legitimate sons

and Jugurtha died without isstie, wrote to the senate in favor of Marius, who was then en- deavouring to supplant Metellus. The Roman, soothing the vanity of Oauda, assured him that, as he was the next heir to the crown, he might depend upon being fixed upon the Numidian throne, as soon as Jugurtha wa.s eitlier killed or taken ; and that this must soon happen, when once he appeared at the head of the Roman army with an unlimited commission. Soon after, Bomilcar and Nabdalsa formed a design to assassinate Jugurtha at the instigation of iMe- tellus ; but, this being detected, Bomilcar and most of his accbmplices suffered deatli. The plot, however, had such an effect upon Jugur- tha, that he enjoyed afterwards no tranquillity. He suspected persons of all denominations, Numidians as well as foreigners, of some black designs against him. Perpetual terrors sat brooding over his mind ; he often changed his bed, and his sleep was disturbed by a spirit of fear, jealousy, and distraction. Jugurtha having destroyed great numbers of his friends, on sus- picion of their having been concerned in the late conspiracy, and many more deserting to the Romans and IBocchus king of Mauritania, he found himself destitute of counsellors, generals, and all persons capable of assisting him in carrying on the war. This threw him into a deep melancholy, which rendered him dissatis- fied with every thing, and made him fatigue his troops with a variety of contradictory motions. At last he was forced by Metellus to a battle. Tliat part of the Numidian army which Jugur- tha commanded behaved with resolution ; but the other fled at the first onset. The Romans, therefore, entirely defeated them, took all their standards and made a few prisoners. A few were slain in the action, but the majority fled. Metellus pursued Jugurtha and his {fugitives to Thala. His march, being tlirough vast deserts, was extremely tedious and difficult. But being supplied with water by the natives, who sub- mitted to him, Metellus advanced towards that city ; when a copious shower of rain, a pheno- menon in those deserts, proved a seasonable refreshment to his troops. This so animated them, that, upon their arrival before Thala, they attacked the town with such vigor, that Jugurtlia with his family and treasures deposited therein, thought proper to abandon it. After a brave defence, it was reduced ; the garrison, consist- ing of Roman deserters, setting fire to the king's palace, and consuming themselves with every thing valuable in the flames.

Jugurtha, being now reduced to great ex- tremities, retired into Gzetulia, where he formed a considerable corps. Thence he advanced

to the confines of Mauritania, and engaged Boc- chus king of that country, who had married his daughter, to enter into an alliance widi him ; in consequence of which, having reinforced his Gaetuilan troops with a powerful body of Mau- ritanians, he turned the tables upon Metellus, and obliged him to keep close within liis in- trenchments. Sallust informs us that Jugurtha bribed Bocchus's ministers to influence that])rince in his favor ; and that, having obtained an audience', he insinuated that, should Numi-

dia be subdued, INIauritania must be involved in its ruins, especially as the Romans seemed to have vowed the destruction of all the tlirones in the universe. Bocchus was also determined to assist Jugurtha against his enemies, bj' the slight the Romans had formerly sho\%n him. Tliat prince, at the first breaking out of the war, had sent ambassadors to Rome, to propose an offen- sive and defensive alliance to the republic ; ###which, though of the utmost consequence to it at that juncture, a few of the most venal and infamous senators prevented from taking effect. This undoubtedly wrought more powerfully upon Bocchus, in favor of Jugurtha, than the relation he stood in to him. Such was the situation of affairs when Metellus received advice of the promotion of Marius to the con- sulate. But, notwithstanding this injurious treatment, he generously endeavoured to draw off Bocchus from Jugurtha, though this would facilitate the reduction of Numidia for his rival. To this end ambassadors were despatched to the Mauritanian court, who intimated to Bocchus ' tliat it would be highly imprudent to come to a rupture with the Romans, and that he had now a fine opportunity of concluding a most advan- tageous treaty with them,' &c. To this Bocchus replied, ' That there was nothing he wished for more than peace, but that he could not help pitying the deplorable condition of Jugurtha; that if the Romans therefore would grant that prince the same terms they had offered him, he would bring about an accommodation.' Metel- luslet the Mauritanian monarch know, that it was not in his power to comply with what he de- sired. However he took care to keep up a private negociation with him till Marius's arri- val. By this conduct he served two ends : 1st he prevented Bocchus from coming to a general action with his troops, as Jugurtha wished ; and 2dly, this inaction enabled him to discover something of the genius and disposition of the Moors ; a nation of whom the Romans had scarcely formed any idea. Jugurtha, being in- formed that iNIarius with a numerous army was landed at Utica, advised Bocchus to retire, with part of the troops, to

some place of difficult access, whilst he himself took post upon another inaccessible spot with the remaining corps. By this measure he hoped the Romans would be obliged to divide their forces, and thus be more exposed to his attacks. However he was dis- appointed ; for Marius cut off great numbers of the Gaetulian marauders, defeated many of Jugurtha's parties, and had almost taken that prince himself near Cirta. These advantages intimidated Bocchus, who now made overtures for an accommodation ; but the Romans paid no attention to them. In the mean time Marius pushed on his conquests, reducing several places, and at last resolved to besiege Capsa. That this enterprise might be conducted with the greater secresy, he suffered not the least hint of his design to transpire, not even among his officers. To blind them he detached A. Manlius, one of his lieutenants, with some light- armed cohorts, to the city of Lares, where he had fixed his principal magazine, and deposited the military chest. He then bent his march to-

wards the Tanais, and in six days arrived upon its banks, where he pitched his tents to refresh his troops ; after which he advanced to Capsa, and made himself master of it. As the situation of this city rendered it extremely commodious to Jugurtha, whose operations during the war it had exceedingly favored, he delivered it up to the soldiers to be plundered and levelled with the ground. The citizens, being more strongly attached to that prince than any of the other Nu- midians, and of course bearing a more implacable hatred to the Romans, he put to the sword or sold for slaves. The Numidians, ever after this exploit, dreaded the very name of Marius ; who had now eclipsed the glory of all his predeces- sor's great achievements, particularly the reduc- tion of Thala, a city, in strength and situation, nearly resembling Capsa. Most of the places of strength in Numidia either opened their gates, or were abandoned at his approach, being terri- fied with what had happened to Capsa. Others, taken by storm, he laid in ashes ; and, in short, filled Numidia with blood, horror, and confu- sion.

After an obstinate defence, he reduced a castle that seemed impregnable, seated near JNIulucha, where Jugurtha kept part of his treasures. In the mean time Jugurtha, not being able to prevail upon Bocchus to advance into Numidia, was obliged to have recourse to his usual method of bribing the Mauritanian ministers. He also pro- mised Bocchus a third part of his kingdom, pro- vided they could either drive the Romans out of Africa, or get all the Numidian dominions con- firmed to him by treaty. So considerable a cession prevailed on Bocchus to support Jugur- tha with his whole power. The two African monarchs, having joined their forces, surprised Marius near Cirta as

he was going into winter quarters. The Roman general was so pushed, on this occasion, that the barbarians thought them- selves certain of victory ; but their incaution enabled IMarius to give them a defeat ; which was followed foxir days after by so complete an overthrow that their numerous army, consisting of 90,000 men, was entirely routed. Sylla, Marius's lieutenant, most eminently distinguished himself in the last action, which laid the foundation of his greatness. Bocchus now looking upon Ju- gurtha's condition as desperate, and not being willing to run the risk of losing his dominions, showed a disposition to make peace vvith Rome. However, the Romans informed him that he could not be ranked amongst their friends, till he had delivered up Jugiˆirtha, their inveterate enemy. Bocchus, having entertained a high idea of an alliance with Rome, resolved to se- cure it ; and was confirmed in his resolution by Dabar, a Numidian prince, the son of Massu- grada, and descended by his mother from Masi- nissa. Being closely attached to the Romans, he defeated all the intrigues of Aspar, Jugurtha's minister, and upon Sylla's an'ival at the Mauri- tanian court, the affair there seemed to be en- tirely settled. However, Bocchus, who was in the highest degree perfidious, debated within himself whether he should sacrifice Sylla or Jugurtha, who were both then in his power. But at last he delivered up Jugurtha to Sylla, to l)e con-

ducted to Marius ; who put him into a prison, where he died six days after of hunger.

The kingdom of Numidiawas now reduced to a new form : Bocchus, for his important services, had the country of the JVIasaesyli contiguous to INIauritania assigned him ; wliich, from this time, took the name of New Mauritania. Nuraidia Propria, or the country of the Ma.ssyli, was di- vided into three parts ; one of which was given .0 Hiempsal, another to Mandrestal, both de- scendants of Masinissa ; and the third the Ro- mans annexed to Africa Propria, or the Roman orovince adjacent to it. Jugurtha's two sons survived him, but spent their lives in captivity at V'enusia. However, one of them, named Oxyn- tas, was released from his confinement by Aponius, who brought him to his army, where he treated him as a king, to draw the Numidian forces off from the Roman service. Accordingly tliose Numidians no sooner heard that the son of their King was fighting for the allies, than they began to desert by companies ; which obliged Julms tJsesar to send all his Numidian cavalry back into Africa. A few

years after this event, Pompey aefeated Cneius Domitius Ahenobarbus, and Hiar- oas one of the kings of Numidia, killing 1 7,000 of tneir i*en upon the spot ; pursued the fugitives to their camp, which he soon forced, put Do- mitius to the sword, and took Hiarbas prisoner. He then reduced that part of Numidia which belonged to Hiarbas, who had succeeded Man- drestal, and gave it to Hiempsal, a Numidian prince, descended from Masinissa, who had always opposed the Marian faction. Suetonius informs us, that a dispute happening between Hiempsal and one Masintha, a noble Numidian, Caesar warmly espoused the cause of Masintha, and grossly insulted Juba, Hiempsal's son, when he attempted to vindicate his father's conduct on this occasion. He pulled him by the beard, than which a more unpardonable affront could not be offered to an African. In short, he screened Masintha from the insults and violence of his enemies ; which was the reason of Juba's ad- hering so closely afterwards to the Pompeian faction. In consequence of this indignity, Juba did Caesar great damage in the civil wars betwixt him and Pompey. By a stratagem he drew Curio, one of his lieutenants, into a general action, w hich it was his interest to have avoided. He caused it to be given out, all over Africa Propria and Numidia, that he was retired into some remote country at a great distance from the Roman territories. Tliis coming to Curio's ears, who was then besieging Utica, it prevented him from taking precautions against a surprise. Soon after. Curio hearing that a small body of Numidians was approaching his camp, he put himself at the head of his forces to attack them, and, lest they should escape, began his march in the night. Some of their advanced posts he found asleep, and cut them to pieces ; which still farther animated him. In siiort, about day break, he came up with the Numidians, whom he attacked witli great bravery, though his men were then fasting, and vastly fatigued by their forced march. In the mean time Juba, who had marched i)rivately with the main body <⬛⬛f his army, advanced to the relief of his men.

The Romans had met with great resistance be- fore he appeared ; so that he easily broke them, killed Curio, with a great part of his troops] upon the spot, pursued the rest to thei; camp, which he plundered, and took many of them prisoners. Most of the fugitives, who endea- voured to make their escape on board tlie ships in the port of Utica, were either slain by the pursuers or drowned. The remainder fell into the hands of Varus, who would have saved them ⬛⬛⬛ but Juba, who claimed the honor of the victory, ordered most of them to be put to the sword. This victory infused new vigor into the Pompeian faction, who conferred great honors upon Juba, and gave him the title of kmg of all Numidia'. But Caesar and his adherents declared him an enemy

to Rome, adjudging to Bocchus and Bogud the sovereignty of his dominions. Juba, afterwards uniting his forceswith those of Scipio, reduced Caesar to great extremities, and would in all probability have totally ruined him., had he not been relieved by Publius Sittius. That gene- ral, having formed a considerable corps, consist- ing of Roman exiles, and Mauritanian troops sent him by Bocchus, according to Dio, or, as Caeˆr has it, by Bogud, made an irruption into Gaemlia and Numidia, whilst Juba was in Africa Propria. As he ravaged those countries in a dreadful manner, Juba immediately returned with the best part of his army, to preserve them from utter destruction. Caesar, knowing his horse to be afraid of the enemy's elephants, did not attack Scipio in the absence of the Numidian, till his own elephants, and a fresh reinforcement of troops, arrived from Italy. In the mean time Scipio despatched reiterated expresses to Juba to hasten to liis assistance; but could not prevail upon him to move out of Numidia, till he had pro- mised him all the Roman dominions in Africa, on the expulsion of Caesar. Upon this, having sent a large detachment against Sittius, he marched with the rest of his troops to assist Scipio. However, Caesar overthrew Scipio, Juba, and Labienus, near the town of Thapsus, and forced all their camps. As Scipio was the first surprised and defeated, Juba fled into Numidia, without waiting for Caesar's approach ; but the Numidians sent against Sittius, having been dis- persed by that general, none of his subjects there would receive him. He therefore, in despair, sought death in a single combat with Petreius, and, having killed him, caused himself to be despatched by one of his slaves. After this de- cisive action, and the reduction of Africa Propria, Caesar made himself master of Nuraidia, which lie reduced to a Roman province, appointing Crispus Sallustius to govern it in quality of pro- consul, with private instructions to plunder the inhabitants, and thus put it out of their power to shake off the Roman yoke. However, Boc- chus and Bogud still preserved a sort of sove- reignty in the country of the Masaesyli and Mauritania. The former, having deserted Caesar, sent an army into Spain to assist the Pompeians ; and the latter, with his forces, determined the victory in favor of Caesar at the battle of Munda. Bogud, afterwards siding with jVntony against Octavius, sent a body of forces to assist him in Spain ; when, the Tingitanians revolting from

him, Bocchus ⬚⬚⬚with an army composed of Ro- mans in the interest of Octavius, who passed over from Spain into Africa, and his own sub- jects, possessed himself of Mauritania Tingitana. Bogud fled

to Antony ; and Octavius, after the conclusion of the war, honored the inhabitants of Tingiwith all the privileges of Roman citizens. He likewise confirmed Bocchus king of INIauri- tania Caesariensis, or the country of the Masiesyli, in the possession of Tingitania, which he had conquered, as a reward for his important ser- vices. In this he imitated the example of Julius

Cffisar, who divided some of the fruitful plains oT Numidia among the soldiers of P. Sittius, who had conquered great part of that country, and appointed Sittms himself sovereign of that district. Sittius merited this reward, having taken Cirta, killed Sabura, Juba's general, entirely dispersed his forces, and either cut off or taken prisoners most of the Pompeian fugitives that escaped from the battle of Thapsus. After Bocchus's death, Mau- ritania and the Masaesylian Numidia were in all respects considered as Roman provinces.

NUMISMATOLOGY.

NUailSMATOLOGY, from Greek voiiifffia money, and \oyoc a discourse, is the name given to the science which treats of coins and medals, whether ancient or modern. The application of this term has, however, generally been confined to the consideration of coins rather as objects of historical or antiquarian research, than as media of commerce or tests of value ; and the coinage, like the history of the passing day, is too uni- versally understood to be a fit subject for study. As an auxiliary to history, numismatology cer- tainly appears in its most important character, and affords documents too durable and too widely diffused to be utterly destroyed, and at the same time too valuable and too numerous to be easily falsified. Gold, the only metal on which the finger of time leaves no impression, was in ancient times comparatively common, and the coinage of the Roman emperors may be seen in the cabinets of the curious in as perfect a state as when first issued from the imperial mint. In modern times official papers and public records verify the statement? of the historian ; but in the earlier and more barbarous ages of the world such annals were seldom compiled, and when they were, in the wars and tumults of succeeding times, they were constantly liable to be destroyed. Before the introduction of printing but few copies of the most important records could be obtained, and an incursion of the enemy or an accidental conflagration would leave a people de-])endent for their history on tradition (attested by this art) alone. The more civilised nations, it is true, erected public buildings and mo- numents upon which they inscribed important transactions and occurrences; but these, few in number, were confined in their utility to the country where they were erected, and were not near so durable as the small gold medals com-

monly struck in honor of their erection.

Ancient writers frequently omit in the course of their narratives the dates of particular trans- actions, and, were it not for these metallic docu- ments, we should often be at a loss to discover even the order in which they occurred. Vaillant in his learned history of the kings of Syria, published at Paris 1681, set the first important example of fixing tne dates and arranging the order of events in ancient historians by means of these infallible vouchers. By them alone he was enabled to as- certain in a very great degree the chronology of important events m three of the most celebrated

kingdoms of the ancient world : viz. those of Egypt, Syria, and Parthia. In the Roman medals, in particular, we most commonly have, with the portrait of the prince and date of the consulship or tribunitian power, the representa- tion or poetical symbol of some great event on the reverse. The reigns of Nerva and Trajan, for instance, are much better illustrated by coins than by historians ; for Suetonius ends with Do- mitian, and the Historise Augustae Scriptores begin with Hadrian. Capitolinus, in his life of Maximinus Junior, is in doubt whether Alaximus and Pupienus were two emperors, or two names for the same emperor ; had he met with one of the coins inscribed M. CI. Pupienus Maximus Avg. he would have decided that Maximus was only another name for Pupienus. Medals also by supplying portraits of the great men of anti- quity create in the mind a peculiar interest in their history, and we study their actions as in a theatre with the actors before us. ??? We see with delight the ???

Black-eyed Caesar, with The eagle’s beak between those eves which ne’er Beheld a conqueror or looked along The land he made not Rome’s ;

and recognise, in the savage features of a Nero, the imperial matricide and incendiary.

But it is not to history alone that numismato- logy confines her assistance : the knowledge of ancient geography may be greatly increased by an attentive study of ancient medals. On many Greek coins the situation of the town where they were struck is inscribed, and particularly if near some noted river or mountain. Thus we have on a Magnesian coin MATNHTQN smVAOY proving Magnesia to be by mount Sipylus ; and an Ephesian medal is inscribed EˆESIQN, with KAI2TP0S on the exergue, showing Ephesus to have stood on the river Cayster. Many similar instances might be given on this head. The beautiful symbols on the Roman coins also merit the attention of the poet and the painter. Hap- piness is here represented (as on a gold

coin of Severus) with heads of poppy, to express that large portion of our bliss which lies in the ob- livion of misfortune ; Hope is depicted as a young virgin walking quickly and looking intently for- ward ; with her left hand holding up her gar- ments that they may not impede her progress, and with her right presenting the bud of a

flower. Abundance is symbolised by a sedate matron with a cornucopia in her hands of which she scatters the fruit over the ground ; not liold- ing up the mouth of it as many painters make her do, as if to keep its contents entirely to her- self. Security stands leaning on a pillar and the posture itself corresponds to her name. National prosperity is figured by a ship sailing before a favorable breeze ; and the different countries of the then known world are delineated in all their interesting and striking peculiarities.

To a Briton it affords peculiar satisfaction to see his native island represented on imperial coins as a female sitting on a globe with the la- barum, the symbol of power, in her hand, and the oceaa rolling under her feet. Countries and rivers are also admirably personified on coins. On a colonial middle brass of rude execution, in- scribed to Augustus and Agrippa, the conquest of Egypt is represented by the apposite symbol of the crocodile, esteemed at that period peculiar to that country, chained to a palm-tree, the em- blem of triumph and a native symbol of Egypt. The emperor Titus having occasion to import a large supply of com during a scarcity at Rome, that supply or annona is finely represented on one of his coins as a sedate matron, with a well filled cornucopia in her left hand, which she holds upright, to indicate that she cannot scatter it as Abundance may have right to do, but distributes it only as equity points out. This last particular is signified by her holding in her right hand a little image of justice, with her scales and hasta pura or pointless spear, over a basket filled with wheat. Behind the female figure is the prow of a ship decked with flowers, to imply that the com was brought by sea (from Africa), and that the vessels had had a prosperous passage. No poet could present a finer train of imagery, no painter could convey more ideas in so small a compass.

The Roman medals likewise give us an excel- lent picture of the dress and arms of the times, and the shape of the toga may be as accurately learned from those of Hadrian as from any of the ancient statues. Their utility to natural history chiefly arises from the coins struck at the cele- bration of the secular games, on which the figures of various animals are preserved. On many of the Greek medals also lively

represen- tations of uncommon plants and animals may be seen: as the tortoise on the drachmas of iEgina, the most ancient silver coin of Greece; and on most of the medals of Gyrene the celebrated])lant called sylphium ; as, on those of Tyre, the shell fish from which the famous Tyrian purple was procured. By means of medals also the exact delineations of many noble edifices are pre- served, while not a vestige of their ruins even is in existence: so that the uses of them to the ar- chitect are very considerable. The skill dis- played in the Greek sculpture has always been an object of admiration to the world, w hile their coins, equally worthy of attention, have been greatly neglected. Considered as mere works of art, the J greatly excel those of Rome, even those of her best times ; and the perfect beauty and tenderness of the female portraits, and the strength and expression of the male, are certainly

not exceeded by the larger efforts of tlie Grecian chisel. But in every respect the Roman coins are superior to those of the eastern nations, and, if any era were to be assigned as more eminent for workmanship than another, that from Augustus to Hadrian must have the preference.

Sect. I. ??? History of Numismatology. This study does not appear to be of an ancient date, and no mention is made of a medallic collec- tion by classic writers. Suetonius, indeed, infornus us that Augustus used on solemn occasions to pre- sent his friends with medals of foreign states and princes ; and we know that individuals must have formed complete collections, for a complete set of silver coins was lately found in our own island containing all the emperors down to Ca- rausius, and similar collections have before been discovered in other parts of Europe. Such col- lections, however, were seldom made, as they were not esteemed valuable. A set of the coins indeed struck by the innumerable petty states using the Greek characters and language, could, at first, scarcely have been regarded as any acquisi- tion ; as they would have to a Greek the air of a domestic coinage, and be regarded with but little curiosity, however beautiful their impressions. Among the Romans, however, it was different. Banduri in his preface quotes Ulpian to show that certain coins were specially preserved among them, and it appears from the Justinian code that ancient gold and silver were used pro gem- mis, for gems. From thevdecline of the empire the history of this science, with that of most others, is enveloped in darkness, till the revival of literature : or rather until the fall of Constan- tinople compelled the Greeks, the earliest chil- dren of science, to carry their leaming into fo- reign lands.

Of modern authors, the first who attended sys- tematically to the

study of medals was Petrarch, who, being desired by the emperor Charles I'. to form a biography of illustrious men and place him on the list, with noble pride answered, that he would wait till the emperor's life and actions should deserve it. Taking occasion from this, he sent him a collection of medals in gold and silver with the following address : ‘ Ecce, Csesar, quibus successisti. Ecce quos imitari studeas, et mirari : ad quonim formulam et imaginem te componas : quos praeter te unum, daturus nulli homini sum, tua me movit auctoritas. Licet enim horum mores et nomina, honim ego res gestas novim, tuum est, non modiim nosse, sed sequi : tibi itaque debentur.’ ‘ Behold, Caesar, whom thou hast succeeded. Behold whom you should study to imitate and admire, upon whose model and image you should mould yourself: these I should have given to no one but your- self, they were due to your situation of autho- rity. I can only know the manners, names, and great deeds of these men ; it is in thy power not only to know but to imitate them : and it is therefore thy duty.’

A collection of coins was made in the next century by Alphonso king of Arragon ; but, although this monarch collected all that could be found throughout Italy, there could not have been very many, as the whole were contained iu

an ivory cabinet, and carried always about with him. A very considerable collection was made by Anthony cardinal of St. Mark, nephew to Eugene IV'., who was pope in 1431 ; and soon after the grand museum at Florence was begun by Cosmo de Medicis, where a collection of ancient coins and medals had a place among other curiosities. Matthias Corvinus, king of Hungary, about the same time, formed a noble collection of coins, along with ancient MSS. and other valuable relics of antiquity.

Mr. Pinkerton considers Agnolo Poliziano, or Angelus Politianus, as the first writer who ad- duced medals as vouchers of ancient orthogra- phy and customs. He cites different coins of the Medicean collection in his Miscellanea, written about 1 490. By means of a cabinet of medals collected by Maximilian I. emperor of Germany, John iluttichius was enabled to publish a book of the lives of the emperors, enriched with their portraits, delineated from ancient coins. It is ge- nerally supposed that this book, which appeared in 1525, was the first work of the kind; but Labbe, in his Bibliotheca Nummaria, mentions another

named lUustrium Imagines, by one An- drew Fulvius, printed in 1517, in which most of the portraits seem to be from medals. About 1512 also, William Bude, a French author, had written his treatise De Asse, though it was not printed till many years afterwards. M. Grollier, treasurer of the French armies in Italy, during part of the sixteenth century, had a great col- lection of coins in different kinds of metals. After his death his brass medals were sent to Provence, and were to have been sent into Italy; but the king of France, having received infor- mation of the transaction, gave orders to stop them, and purchased the whole at a very high price for his own cabinet of antiquities. M. Grollier had an assortment of gold and silver, as well as of brass medals : the cabinet in which they were contained fell two centuries afterwards into the hands of the abbe de Bothelin ; and was known to have been that of Grollier, from some slips of paper, on which was his usual inscrip- tion for his books, Johannis GroUerii et ami- corum .

Contemporary with Grollier was William de Choul, who was likewise a man of rank and for- tune. He had a good collection of medals, and published many in his Treatise on the Religion of the ancient Romans, in 1557. In the Nether- lands, we know, from the letters of Erasmus, that the study of medals was attended to about the beginning of the sixteenth century. About the middle of that century Hubert Goltzius, a printer and engTaver, travelled over most coun- tries in Europe, searching for coins and medals, to publish books concerning them. From one of these works it appears that there were then in the Netherlands 200 cabinets of medals ; 1 75 in Germany ; upwards of 380 in Italy ; and 200 in France. But we are not to imagine that all these were grand collections ; for of such there are not above a dozen even in Italy : most of those just mentioned were of the class named caskets of medals, containing from 100 to 1000 or 2000.

There are few countries, Italy excepted, in which a greater number of coins have been found

than in Britain ; though we are by no means well acquainted with the time when the study of them commenced. Camden seems to have been one of the first British authors who published medals in his works, and probably had a small col- lection.

In the seventeenth century Sheed's Chronicle was illustrated with coins from Sir Robert Cot- ton's cabinet. Henry, prince of Wales, the eldest son of James I., bought the collection of Gor- Iseus, amounting to 30,000 coins and medals, and left it to his brother Charles. Archbishop Laud bought a collection of 5500 coins, which he pre-

sented to the Bodleian library. Thomas, earl of Arundel and Surrey, earl marshal of England, had in his collection of antiquities a rich cabinet of medals, gathered by Daniel Nelsum. The dukes of Buckingham and Hamilton, Sir William Paston, Sir Thomas Fanshaw, Sir Thomas Han- mer, Ralph Sheldon, Mr. Selden, and many more, are enumerated by Mr. Evelyn, as having collections. To this number we may add the earl of Clarendon, the historian, and Charles I. The fine cabinet of this unhappy monarch was dissipated and lost in the civil commotions. Oliver Cromwell had also a small collection ; and that of Charles II. is mentioned by 'aillant. Since the time of Mr. Evelyn many noble cabi- nets have been formed in this country, which our limits will not permit us to enumerate. The British Museum, lately enriched by some of those above mentioned, and the universities, have also collections ; also the lawyers' library, and one or two colleges in Scotland ; to which might be added private collections both there and in Ireland. But that of the late Dr. Hunter, be- queathed by him to the University of Glasgow, deserves notice, as one of the most considerable, if not the largest, in Europe. From the middle of the seventeenth century down to these times almost every year has produced some new work, or new discovery, in the science of medals.

Of writers on this science the following are the most worthy of notice : ××× Eneas Vico, who published in 1548 his Discourses on the Coins and Seals of the Ancients. His example was imitated in France by Antoine le Pois, who, in 1579, published a work on the medals of ancient Greece and Rome. In 1665 Charles Patin pub- lished his History of Medals, the last edition of which appeared in 1695. In 1692 Pere Jobert, or Joubert, presented to the public his Science des Medailles, the best edition of which is that of baron Bimard de la Bastie, 1759. Of those published by the father himself the first is un- doubtedly the best; that of 1715, in 2 vols., being swelled only by the reveries of Pere Har- douin, whom Joubert wished to flatter. His own knowledge of coins was very limited, and he makes assertions at random without the slightest foundation. He asserts, for instance, that a sow on medals denotes Judea preserved by Vespa- sian, whereas it occurs on consular brass before the Romans had any connexion with Judea. In these it refers to the ancient method of ratifying treaties mentioned by Livy ; as on the imperial coins it is meant to represent the sow with young found by /Eneas the supposed founder of the Roman empire. Indeed, almost all the va-

iviabre notes of De la Bastie's edition are occu- pied with refutations of the errors of the author; so that what the reader imagines he has learned from the text, he finds, with perpetual chagrin, he has to unlearn in the notes. Had the baron given an entirely new work it would have been much more valuable. In the year in which Jon- bert published his treatise a work somewhat similar appeared in tlie English language, en- titled The Greek and Roman History illustrated by Medals and Coins representing their religion, rites, &c., by O. W. (Obadiah Walker), London, 1692. In 1695 a translation of Joubert's work appeared, under the title of the Knowledge of Medals, also ascribed to Walker. The Nomis- mata, or Discourse on Medals, ancient and mo- dern, by Mr. Evelyn, was printed in 1697, fol. out most of his observations are taken from Joubert, Vico, Le Pois, or Patin. In 1720 Ni- colas Ilaym, an Italian musician, published in London his Tesoro Britannico, or British Trea- sury, in Italian and English. If but a letter appears on a coin, says Mr. Pinkerton, Haym can tell to what name that letter belongs ; if but a nose, he will find a face to it; and, even if the coin is quite bare, to divine its ancient form ###ˆosts him but a moment's thought. With the 'lelp of Diogenes Laertius he would find all the sages of Greece on old coins. He pretends to mark the rarity of several series of coins, but his statements cannot be relied on.

We have, in modern times, no work in which the writer has fully availed himself of the excel- lent public and private collections of this coun- try : such a work is a desideratum which we hope to see shortly supplied ; in the interim, tLose who wish to study this interesting science at greater length cannot do better than procure Mr. Pinkerton's Essay on Medals, 2 vols. 8vo. ; after which they may turn to Iroelich's Notitia Nuraismatum Urbium Liberum, Regum et Prin- cipum ac personarum illustrium; to Vico's work already mentioned ; and to Patin. The study of the Greek coins may be commenced with the Historia Sicilia; Graeciae ex antiquis Numisma- tibus, fol. of Goltzius, pitblished at Antwerp in 1644. Gesner's Thesaurus Numismatum, Ti- g-uri 1738, 2 vols. fol. may then follow. Dr. Combe's work on Dr. Hunter's Coins of Greek Cities, London, 1782, 4to., is one of the best of the kind ; and of the Greek monarchic coins Gesner's will be found the most ample col- lection. Tlie Roman consular coins are also fully described by Gesner; and descriptions may be found in Vaillant's Nummi Antiqui Fa- miliarum Romanariun, Amsterdam, 1703, 2 vols, fol., or the Thesaurus Morellianus, Amsterdam, 1734, 2 vols, fol., a later and still better work. Gesner may also be referred to for the Roman imperial coins, with whom, for the rare coins, should be read Vaillant's Numismata Imperato- rum Komanorum, published by Baldini at Rome, 1743, 3 vols. 4to. ; Khell's Numismata Impera-

torum Romanorum, 'indobon►►, 1767, 4to. ; Banduri's Numismata Imperatorum Romano- rum, a Trajano Decio usque ad Palseologos, Lutetiw, 1718,2 vols, fob; and Occo's Numismata Imperatorum Romanorum, of which the best edition is the second of Occo himself.

We shall add in this place a brief account of the most celebrated public numismatical collec- tions in Europe, of which that belonging to the king of France is by far the largest and most complete. The considerable treasures formerly collected by Boze, the marechal d' Etrces, Seguin, Patin, and in more modern times by Pellerin, are all incorporated with that valuable collection. Its basis was formed by Louis I. at Fontainebleau : Henry IL, Louis XIIL, and particularly Louis XIV. increased its treasures with royal munifi- cence ; and the last of the just mentioned mo- narchs caused the large medals of this cabinet to be engraved by de la Bossiere. Besides the above mentioned collections, this cabinet ac- quired, in 1793, the Cabinet de St. Genevifeve at Paris. An idea of the value of the present collection may be formed by the valuation made of it above half a century ago, which amounted to no less than 6,000,000 of livres. The Cabinet of St. Genevieve, which, having been threatened by robbers in 1793, was removed to the national library, and incorporated with the great collection, has been described by Claude du Molinet in 1692. The Himterian collection, now in the pos- session of the university of Glasgow, is one of the most celebrated in Europe. The foundation of this collection was laid in the year 1770, from those of the Rev. Mr. Dawes and Thomas Sadler, Esq. The next year added much to the stock from various cabinets, particularly that of Isaac Jamineau, his majesty's consul at Naples. Mr. Sainthill, surgeon, in 1772 ; the prhice of Peralta, and Mr. West, in 1773, continued to enrich Dr. Hunter's cabinet. In 1776 the Egyptian coins were much increased from the collections of Mr. Bruce and Lindegreene a Swede, who had re- sided in Egypt. Mr. Dorana added his collec- tion to Dr. Hunter's in the same year, and it contained the accumulated treasures of many eminent scholars and antiquarians. At the same time Mr. White supplied, from bis museum, those coins which were wanting in Dr. Hunter's ; and, as if this year was to be distinguished by the value of the acquisitions and the characters of the benefactors. Dr. Russel supplied those de- ficiencies which his ample collection enabled him to discover. The year 1777 furnished still ad- ditional stores from Dr. Combe, a foreign noble- man, Mr. Swinton, Mr. I. Smith, the Rev. Dr. Eyre, and Mr. Samuel of Lincoln, and from numerous other benefactors. In the year 1782 Dr. Combe published his Nummorum X'eterum Populorum et Urbium qui in Museo Gulielmi Hunter Asservantur Descriptio; a highly useful work, in w'hich the Greek and Roman coins are arranged

according to the different cities in which they were struck.

The very rich collection of coins and medals in the British Museum was formed from the cabinets of Sir Hans Sloane and Sir Robert Cotton, and has been from time to time enlarged by many valuable purchases and donations, but principally by the munificent bequest of the Rev. C. M. Cracherode. It is comprehended under the three following heads. ••• 1. Ancient coins; 2. Modern coins; 3. Medals. The first of these heads consists of Greek and Ronian coins. The (ˆreek coins are arranged in geographical order.

and include all those which are struck with Greek characters, in Greece, or elsewhere, by kings, states, or cities, which were independent of the Romans. VV'ith this class are placed, likewise, the coins of free states and cities, which made use of either the Etruscan, Roman, Punic, Spanish, or other characters. The Roman coins are placed, as far as it can be ascertained, in chronological order. Tliey consist of the As in its divisions; family or consular coins; imperial •••coins struck in Rome; imperial coins struck in Egypt; imperial coins struck in the Roman colo- nies ; imperial coins struck with Punic characters ; contorniates. The second head, comprising mo- dem coins, consists of Anglo-Saxon, English, Anglo-Gallic, Scotch, and Irish coins, and like- vvise the coins of foreign nations. This class is arranged according to the respective countries to which the coins belong, those of each country being kept separate.

The third head, which comprises a class con- siderably more modern than either of those which precede it, consists of medals struck in our own country, and of those which have been struck abroad, lliese are arranged in the same manner as the modern coins. The celebrated imperial collection of coins at Vienna, if we except that of Paris, stands unrivalled among the cabinets of the continent. It was begun by the emperor Ferdi- nand I., and soon considerably increased by the accession of other collections, such as that formed by the archduke Albert, under the direction of the Chiflets; and the most valuable collection formed by the archduke Ferdinand at Ombras in Tyrol. It was afterwards considerably added to by the collections of the learned monarchs Maxi- milian I. and Rudolph II.; but particularly by the zeal of the emperor Charles VI., who was himself a great lover of numismatology, and who purchased the cabinets of the Carthusians at Rome, together with that of count Parr. In the reign of Maria Theresa

it was farther increased by the purchase of the Granelli collection. Several years ago the number of coins and medals of this collection amounted to upwards of 40,000, of which about 22,000 were antique. We possess a masterly catalogue of the 'ienna collection by the celebrated Joseph Eckhel, published as early as 1779, and therefore far from giving a correct idea of the present state of that highly valuable repository.

The Prussian cabinet of medals is considered the greatest in Germany, next to the Imperial collection of Vienna. The celebrated Laurent Beger published a catalogue of this collection, in 3 vols, folio, entitled Thesaurus Brandenburgi- cus Selectus, Coloniae MarchictE, 1696, 1699, and 1701. Though king Frederick William I. took out a number of large gold coins (among which was the very large one, eight pounds, or 500 ducats in weight, bearing the portraits of Frederic William the Great, and his queen), which were converted into small current money, yet the collection is still richly furnished : the number of its antique treasures having been in- creased by 6000 coins from the cabinet of the late margrave of Anspach.

Next in importance among the numismatologi- cal collections of Germany is that of Gotha, the

basis of which was formed by Ernest the Pioug. It was materially increased by the excellent Arn- stadt cabinet of medals, which was formed by Antony Gunther, prince of Schwarzburg, assisted by several celebrated antiquaries and historians, such as Andreas Morellus, Christian Schlegel, Olearius, ike. This latter collection was pur- chased, in 171 3, by John Frederick, duke of Saxe- Gotha, for the sum of 100,000 dollars. It is preserved in small cabinets, each of which is placed on a table, furnished below with a shelf for books relative to the coins above. This cele- brated collection has been at different times con- siderably increased by others, such as those of Schachman and Sultzer, that of Mr. Gerning, rich in scarce Greek coins, that of baron Secken- dorf, &c. The coins in the Gotha collection are still arranged after the old way, by the sizes and metals, and the same mode is adopted in the catalogue, seven volumes of which comprise the antique coins as follows : gold coins, kings ; coins of cities and free states; coins of families; im- perial silver; coins of first size; coins of second and third size.

Sect. II. ††† Manufacture of Ancient Coins AND Medals, with a General Descrip- tion OF them.

The ancient methods of coining appear, from the coins themselves,

and from the instruments sometimes represented on their reverses, to have been extremely simple. Of the Grecian mint we know comparatively nothing ; but from the extreme beauty of the workmanship of its coins, and the purity of metal they exhibit, we may conclude that no small share of attention was devoted to their manufacture. Among the Ro- mans we know the mint was regarded as one of the most important offices of the state, and was therefore placed under the direction of the ques- tor, who also had the control of the treasury. About B. C. 266, when silver was first coined in Rome, the triumviri monetales appear to have been first appointed, and their office continued till the time of Caracalla. They were originally chosen from the senatorial order, but in the time of Augustus they were taken also from the equestrian, and we find them noticed on one of the coins of that emperor as III VIR. A. A. A. F. F. Triumvii'i, Auro, Argento, (Ere, Flundo, Feriundo, triumviri, for melting and striking gold silver and brass. Under Aurelian there appears to have been but one master of the mint, called the rationalis, who was soon after styled procurator monetae. In the colonies the direc- tion of the coinage appears to have been entrusted to duumviri, whose names often occur in colo- nial pieces, and who were chosen annually like the consuls at Rome. The other officers of the Roman mints were the assayers, spectatores, or nummularii ; the engravers of the die, coela- tores ; the refiners, cenarii ; the melters, fusarii, or flaturarii ; the equatores monetarum, who ad- justed the weight; the suppostores, who placed the pieces in the die ; and the malleatores, who struck it. A prunicerius was at the head of each office, and there was a kind of foreman called optio et exactor.

Gold and silver in their unmixed state were

early found too flexible and soft for gene- ral use, and hence arose the necessity of mixing with them a certain quantity of harder metal as alloy. The quantity or proportion of this alloy is various in different ages and countries. The mo-"* ancient gold coins existing, those of Lydia ana otner states in Asia Minor, are not of the purest gold, many not being above twenty carats line. Many of the earliest coins seem to be formed of the metal anciently called electrum, and consisting of gold and silver. But when I'hilip, the father of Alexander the Great, coined tlie first Grecian gold, procured from the mines of Philippi, the art of refining gold had attained great perfection, and his coins are of the utmost purity. They are rivalled, however, by those of his son

Alexander, and of otiier princes and cities within a few centuries of that age. The (jold coins of the Egyptian Ptolemies are twenty- three carats three grains fine, with one grain alloy. The Roman gold coinage is very pure from the earliest times, and remained in this state till the reign of Severus. Most of the Roman gold was from Dalmatia and Dacia, where this metal is still found. Pliny says that the gold was refined by mercury, which mingled with it but rejected alloy, and the gold was afterwards delivered from tlie mercury by squeezing it in skins, when the mercury r;in through and left behind the gold pure. In his time, indeed, the gold coins were very fine ; and Boden tells us, that the goldsmiths of Paris, upon melting one of Vespasian's gold coins, found only ˆ part of alloy.

Most of the ancient silver, particularly that of Greece, is less pure than that of succeeding times ; even the Roman silver is rather inferior to the present standard ; but, in the time of Se- verus, the silver appears very bad, and continues so until the time of Dioclesian. Many writers upon this subject have mistaken the denarii serei, ' coins of brass washed with silver,' for sil- ver currency. Silver coins are extremely scarce from the time of Claudius II. to that of Diocle- sian, or from A. D. 270 to 284 ; in which short space no fewer than eight emperors reigned. Silver at that time was found mostly in Spain ; and such were the troubles of the times, that both the silver and gold coins of those eight em- perors are extremely scarce. There is still, how- ever, some silver extant of these eight em- perors. Occasional deprivations of silver had taken place long before ; as Pliny tells us that Mark Antony mixed iron with his silver dena- rii ; and Mr. Pinkerton informs us that he had seen a denarius of Antony wliich was attracted by a magnet.

The ancient brass coins are of two kinds : the red or Cyprian, which indeed is no other than copper; and the common yellow brass. In the Roman coinage brass was double the value of copper ; and it was probably the same among the Greeks : the latter is the metal most com- monly made use of in the Greek coinage. The Roman sestertii are always of brass ; the mid- dling-sized kind are partly copper and partly brass ; the former being double the value of the latter, which are the asses. As the medals of tiiese metals are always covered with platina the difference has not excited attention.

Of tlie mixed metals beside electrum the most valuable was the Corinthian brass, which how- ever does not appear to have been used at all m the fabrication of medals. Besides the autho- rity of Pliny and other antiquaries of more modern date, who all declare that they never saw a single medal of Corinthian brass, or of that metal mixed with silver and gold, Mr. Pin- kerton adduces other evidence which he

looks upon to be superior to either, viz. that those who have advanced this opinion imagine that the large pieces called sestertii, and others called dupondiarii, worth about two-pence or a penny, are said to have been composed of this precious metal. It is unreasonable to think that any proportion of gold or silver could have been made use of in these. The coins said to have been struck upon Corinthian brass are only done upon a modification of common brass ; of which we know, that, in proportion to the quantity of zinc made use of in conjunction with the cop- per, the metal assumes a variety of hues. Pliny says that the coins mistaken for Corinthian brass were no other than prince's metal.

The Egyptian silver coins struck under the Roman emperors are at first of tolerably pure silver ; but afterwards degenerate into a mixture of copper and tin with a little silver, styled by the French potin. They are very thick, but many of them are elegantly struck, with uncom- mon reverses. There are likewise three sets of brass coins belonging to this country from the earliest times of the Roman emperors there. Some of these are of bell-metal or pot-rnetal ; and after the time of Gallienus and 'alerian, the coin- age of brass with a small addition of silver be- come authorised by the state ; the coins struck upon it being called denarii eerei. Those of lead or cop- per plated with silver have been fabricated by Roman forgers. Some coins of lead, however, have been met with of undoubted antiquity : and an ancient writer informs us that tin money was coined by Dionysius; but none has been found. The lead coins of Tigranes, king of Ar- menia, mentioned as genuine by Jobert, are ac- counted forgeries by modern medallists. Plau- tus, however, makes mention of leaden coins, and several of them have been found ; but they are generally thought to have been chiefly essay pieces, struck in order to let the artist judge of the progress of the die. Others are the plated kind already mentioned, fabricated by ancient forgers, but having the plating worn ofl'. A great number of leaden coins are mentioned by Fico- rini in a work entitled Piombi Antichi, in which he supposes them to have served as tickets for guests ; and coins of the same kind are also mentioned by Passeri.

Whatever the metal of which the coins were composed, the Roman moneyers cast it into a round bullet, in order to assist the high relief, as appears from the ancient coins not being cut or filed at the edges, but often cracked ; and always rough and unequal. In modern coinage the blank pieces are flat, and cut round by the stroke of a machine, a plan followed even in the seventh and eighth century ; but the hammered coin of the ancients appears never to have been cut The bullets were put into the die, and

recehed the impression by lepeated strokes of the haiEiner, though sometimes a machine ap- pears to have been used for this purpose : for Boiterue informs us that there was a picture of the Roman mintage, in a grotto near Baise, where a machine was represented holding up a large stone, as if to let it fall suddenly, and strike the coin at once. None of the ancient money was cast in moulds, excepting the most ancient and very large Roman brass, commonly called weights, and other Italian pieces of that sort ; all the rest being mere forgeries of ancient and modern times. Some Roman moulds which have been found are a proof of this ; and from these some medallists have erroneously imagined that the ancients first cast their money in moulds, and then stamped it, in order to make the impression more clear and sharp.

The ancients had some knowledge of creuating the edges of their coins, which they did by cut- ting out regular notches upon them ; and of this kind we find some of the Syrian and ancient consular coins, with a few others. The former were cast in this shape and then struck ; but the latter were crenated by incision, to prevent forgery, by showing the inside of the metal : however, the ancient forgers also found out a method of imitating this ; for Mr. Pinkerton informs us that he had a Roman consular coin of which the incisions, like the rest, were plated with silver over the copper.

As most medals and coins have a portrait on one side, that side is called the face or obverse, the opposite the reverse. The field is the inte- rior space, which is enclosed nearly all round by the rim, except the bottom part, called the exergue, which is commonly separated from the field by a line upon which the figures of the reverse stand. Most medals contain, besides the portrait and other figures, also letters or words illustrative of some circumstance concerning them. If these letters or words occupy the field, they are denominated inscriptions ; but if they run round the margin, or upon either side of the figures, or upon the exergue, they are more properly denominated legends.

In large cabinets medals are generally chrono- logically arranged under the separate heads of gold, large and small ; silver, large and small; and brass, large, middle, and small ; which are not so much distingiiished by the breadth or thickness of the medal itself, as by the size of the head stamped upon it. But beside the ordinary coins of the

ancients, which passed in common circulation, there were others of a larger size, which are now termed medallions. These were struck on the commencement of the reign of a new emperor, and other solemn occa- sions ; frequently also, by the Greeks in particu- lar, as monuments of gratitude or of flattery. Sometimes they were mere trial or pattern pieces ; and those abound after the time of Maximinian, w'hh the words Tres Monetse on the reverse. The common opinion is, that all the Roman pieces of gold exceeding tlie denarius aureus, and all in brass exceeding the sestertius, went under the denomination of medallions ; but many of these large pieces went in circulation, though not very commonly The finest medallions

were presented by the mint-masters to the em- peror, and by the emperor to his friends, as specimens of workmanship. The best we have at present are of brass, and many of them com- posed of two sorts of metal ; the centre being copper, with a ring of brass around it, or the contrary ; and the inscription is sometimes con- fined to one of the metals, sometimes not. There is a remarkable difference between the Greek and Roman medallions in point of thick- ness ; the latter being frequently three or four lines thick, while the other seldom exceed one. Very few medallions, however, were struck by the Greeks before the time of the Roman em- perors ; but the Greek medallions of the empe- rors are more numerous than those of the Romans themselves.

All these pieces, however, are of such high prices, that few private persons are able to pur- chase them. In the seventeenth century, Chris- tina, queen of Sweden, procured about 300. In the king of France's collection there have been reckoned 1200, a number formerly supposed not to exist; but Dr. Hunter's collection con- tains about 100, exclusive of the Egyptian.

Besides these large pieces, there are smaller ones of a size somewhat larger than our half- crowns; and by Italian medallists are called medaglioncini, or small medallions. They are still scarcer than the large kind.

There is still a third kind, which have almost escaped the notice of medallists, viz. the small coins or missilia scattered among the people on solemn occasions; such as those struck for the slaves on account of the Saturnalia; counters for gaming ; tickets for baths and feasts ; tokens in copper and in lead, &c. JMany, or perhaps almost all, of those struck for the Saturnalia were satirical ; as the slaves had then a license to ridicule not only their masters, but any per- son. One of the most common pieces of this kind has on the obverse the head of an

old woman veiled, with a laurel crown ; the reverse only s. c. within a wreath.

A fourth class of medals are called contor- niati, from the Italian contorniato, encircled, because of the hollow circle which commonly runs around them. They are distinguished from medallions by their thinness, faint relief, re- verses sometimes in relief, sometimes hollow, and in general by the inferiority in their workmanship. The opinions of medallists con- cerning these pieces are very various : some suppose them to have been struck by Gallie- nus to the memory of illustrious men and cele- brated athletae, at the time that he caused all the consecration coins of his predecessors to be restored ; others ascribe their invention to Greece, &c.; but Mr. Pinkerton is of opinion that they were only tickets for places at public games. Many of them, notwithstanding their inferior workmanship, are very valuable, on account of their preserving the portraits of some illustrious authors of antiquity no where else to be found, though some think much dependence cannot be put on them. They, however, are valuable, as beinff ancient, and perhaps traditional portraits of these great men.

The usage of coining money for the immo-

diate use of a blockaded town is very ancient.

The medals thus struck are called obsidional, and generally bear in their fabrication and ma- terial evidences of the calamitous and bereaved condition svhich gave rise to their existence. They are mostly of bad metal, and rudely formed, an observation to which some exceptions of course occur, but they are not numerous. The shape of these coins or medals varies: ××× some- times they are round, sometimes oval, sometimes square ; occasionally, even, octagon or triangu- lar, &c. The type and inscriptions vary equally. Some are engraved on both sides, which how- ever is rare ; by far the greater part having no reverse. It is more common to see the name of the town only (either entire or abridged) with the date and value.

Their different thickness forms a remarkable distinction between the Greek and Roman me- dallions ; the Roman being often three or four lines thick, while the others seldomi exceed one. By the Greek medallions we mean those struck in the imperial periods ; for few Greek medal- lions are found prior to the emperors of Rome. But there

is a fine one struck at Syracuse, upon the defeat of Icetas by Timoleon. The medal- lion is of silver, with the head of Ceres upon one side, and upon the other a female figure, perhaps representing Sicily or Syracuse, in a car, a vic- tory crowning her, and spoils in the exergue. Its w orkmˆanship is fine, but not equal to that of the gold coin of the same Icetas, struck at Sy- racuse, EIII IKETA, under Icetas, which is a perfect gem surpassing all description. Syracuse also affords a most remarkable medallion on an- other great occasion, llie only one perhaps existing formerly belonged to Dr. Combe, and was engraven by his order. It is exquisitely wrought, in high relief, and perfect preservation ; of copper, and about two inches in diameter. Upon one side is a female head, covered with a helmet, on which is a caduceus and roma. Upon the other is a man's head, with a helmet wreathed with laurel, and M. M. Dr. Combe thinks this fine piece, now in Dr. Hunter's cabinet, was struck by Syracuse, in honor of Marcus Claudius Marcellus, who besieged and took that city, 210 years B. C. Tliis medallion is most remarkable for its being unique ; for its beauty, for its pre servation, and for the portrait of this great man. These are perhaps the only Greek medallions prior to the Roman empire.

As for the ornaments of portraits, the chief is the diadem, or vitta, a ribband worn about the head, and tied in a floating knot behind, the ancient simple badge of kingly power. It is observable upon the Greek monarchic medals, from the earliest ages to the last ; and is almost an infallible sign of the portrait of a prince. In the Roman coins it is seen on the consular one with Numa and Ancus ; but never after till the time of Licinius.

The Romans had such an abhorrence of this badge of kingly distinction, that their emperors had, for two centuries, wore the rad'ated crown, peculijiT to the gods, before they dared to as- sume this tyrannic badge. However, in the family of Constantine, tlie diadem became com- mon, but divested of its ancient simplicity; be-

ing ornamented on either side with a row of pearls, and various other decorations. The radi ated crown, at first, as in the posthumous coins of Augustus, a mark of deification, was, in little more than a century after, put upon most of the emperors' heads in their several medals. The crown of laurel, at first the honorary prize of conquerors, was afterwards commonly worn, at least in their medals, by all the Roman emperors from Julius, who was permitted by the senate to wear it always, in order to hide the baldness of his forehead. In the lower empire, the laurel is often held by a hand above the head, as a mark of piety. Agrippa appears on his coins with the rostral crown, a sign of naval victoiy or com- mand, being made of gold, in resemblance of

prows of ships tied together. He is likewise seen with the mural or turreted crown, the prize of first ascending the walls of an enemy's city. ITie oaken, or civic crown, is frequent on re- verses, as of Galba and others ; and was the badge of having saved the life of a fellow citizen, or of many citizens. See Crown. Besides the diadem, the Greek princes sometimes appear with tlie laurel crown. The Arsacidae, or kings of Parthia, wear a kind of sash round the head, with their hair in rows of curls like a wig. Ti- granes, and the kings of Armenia, wear the tiara. Xerxes, a petty prince of Armenia, appears on a coin in a conic cap, with a diadem around it. Juba, the father, has a singular crown, like a conic cap, all hung with pearls.

The successors of Alexander assumed different symbols of deity on the busts of their medals ; such as the lion's skin of Hercules, surrounding the head of the first Seleucus ; the horn placed behind the ear, an image of their strength and power, or of their being the successors of Alex- ander, called the son of Jupiter Ammon ; the wing, placed in like manner behind the ear, symbolic of the rapidity of their conquests, or of their descent f-om the god INIercury, &c. Pyrrhus, as Plutarch informs us, had a crest of goat's horns to his helmet ; and the goat was a symbol of Macedon. llie successors of Alex- ander might take this badge on that account. The helmet also appears on coins, as in those of Macedon, imder the Romans, which have Alex- ander's head, sometimes covered with a helmet. Probus has the helmet : and Constantine I. has helmets of different forms, curiously ornamented.

The Greek queens have the vitta or diadem. Most queens of Egjpt have the sceptre. The Roman empresses never appear with the dia- dem, the variety of their head-dresses compen- sating the want of it. The remarkable part of the Roman head-dress among the ladies was the sphendona, or sling, on the crown of the head, which was of gold, and so prominent as to b" even remarkable on a coin. Sometimes the bust of an empress is supported by a crescent, de- noting that she was the moon, as her husbana was the sun of the state. There are other sym- bolic ornaments of the head observable on some Roman coins. Suc'n is the veil, cr rather toga, drawn over the head, and seen on the busts of Julius CcEsar, when Pontifex Maximus, and others. Latterly the veil was only a mark of consecration, and is common on coins of cm-

presses, as Faustina and otliers. In the coins of Claudius Gotliicus it is first found as a mark of the consecration of an emperor ; and it \Aas

con- tinued in those of Constantius I., Maxiinian 1., and Constantine I. ‘ These coins/ says Mr. Pirkerton, ‘ rank with those that are valuable for their rarity.’

The nimbus, or glory, now peculiar to the saints, was formerly applied to emperors. A nimbus appears round the head of Constantine II., in a gold coin of that prince, and of Flavia INlaxima Fausta, in a gold medallion; and of Justinian in another. But the idea is as ancient as the reign of Augustus. Ilavercamp gives a singular coin, which has upon the reverse of the common piece with the head of Rome, URBS ROMA, in large brass. Constantine I., sitting amid victories and genii, with a triple crown upon his head, for Europe, Asia, and Africa : legend SECURITAS RO]\LF,. ITie bust alone is generally given on ancient coins ; but some- times half the body, or more ; in which latter case the hands often appear, with tokens of majesty in them. Such is the globe, said to have been introduced by Augustus, to express posses- sion of the world ; the sceptre, sometimes con- founded with the consular staff; the roll of parchment, symbolic of legislative power ; and the handkerchief, expressing that of the public games, where the emperor gave the signal. Some princes hold the thunderbolt, showing that their power on earth was equal to that of Jupiter in heaven. Others hold an image of victory.

The reverses of medals contain figures of deities at whole length, with their attributes and symbols ; public buildings and diversions ; allegorical representations ; ceremonies civil and religious; historical and private events; figures of ancient statues ; plants, animals, and other subjects of natural history : ancient magistracies, with their insignia; and, in short, almost every object of nature or art. Some reverses bear the portrait of the queen, the son, or the daughter of the prince who appears on the obverse. Such are highly esteemed by antiquaries, not merely because coins stamped with portraits on both sides are valuable, but because they identify the personage on the reverse to have been the wife, the son, or the daughter, of such a particular prince, and thus help in the adjustment of a series. Some medals with two portraits are very common ; such are Augustus reverse of Caligula, and i\I. Aurelius reverse of Antoninus Pius. The reverses of the Roman coins have more of art and desiscn than the Greek; but the Greek have more exquisite relief and workmanship than the other. In the very ancient coins no reverse is found except a rude mark stnick into the metal, as of an instrument with four blunt points, on which the coin was struck. After- wards, by degrees, we see some little image of a dolphin, or other animal, inserted into one of the departments of the rude mark, or into a hollow square. Then follows a perfect reverse jf a horse, or the like, with a slight mark, and

It length without any mark, of the hollow square. Some ancient Greek reverses are .struck in intaglio, not in cameo; hollow, not

relief Such are those of Caulonia, Crotona, Metapontum, and some other ancient cities of Graecia Magna. These reverses sometimes bear the same type in intaglio which the obverse has in cameo; and sometimes they are quite dif- ferent. When complete reverses appear on the Greek coins, about 500 years B. C, they are of exquisite relief, minute finish, and beauty. The very muscles of men and animals are seen, and will bear inspection with the largest magnifier, as ancient gems.

Of Roman coins the reverses are very uniform, the prow of a ship, a car, or the like, till about 100 years B.C., when various reverses appear on their consular coins in all metals. The variety and beauty of the Roman imperial re- verses are well known. The medallist much values those which have a num.ber of figures, as the Puellae Faustinianas of Faustina, a gold coin no larger than a sixpence, which has twelve figures: that of Trajan, ‘ Regna adsignata,’ which has four : the ‘ Congiarium’ of Nerva, with five : the ‘ Allocutum’ of Trajan with seven ; of Ha- drian, with ten ; of Probus, with twelve. Some Roman medals, to which no peculiar name has been appropriated by medallists, have small figures on both sides, as the ‘ Apolloni Sancto’ of Julian II. Others have only a reverse, as the noted ‘ Spintriati,’ which have numerals I. II. &c. on the obverse.

Tlie figures of deities and personifications on the Roman coins are commonly attended with their names, besides being distinguished with their attributes. Tliese names, without an ad- junct, are put down merely because it was neces- sary that the coin should have a legend. Thus, in a coin of Lucilla, Venus, though well known by the apple which she alwˆays holds in her hand, has nevertheless the name round her, “I’enus, without any addition. But an adjunct is most commonly added, and this renders the insertion of the name very proper and necessary, as in the instance of a Neptune, with Neptuno reduci : ××× a \enus, with Veneri victrici, and others similar. The like may be said of the coins with a figure of modesty, pudicitiae Augusts ; of virtue, virtus Augusti, &c. ; for it is the legend which appro- priates the virtue to the emperor or empress, and thus leaves no doubt as to the meaning of the re- verse.

In the Greek coins a superior delicacy is ob- served by not expressing the name of the deity, but leaving it to the easy interpretation of fixed symbols.

The principal symbols of the divine attributes to be met with on the Greek medals are as fol- low : ❖❖❖ ❖❖❖

1. Jupiter is known on the coins of Alexander the Great by his eagle and thunderbolts : but, when the figure occurs only on the obverses of coins, he is distinguished by a laurel crown, and placid bearded countenance. Jupiter Ammon is known by the ram's horn twisting round his ear ; a symbol of power and strength assumed by some of the successors of Alexander the Great, parti- cularly by Lysimachus.

2. Neptune is known by his trident, dolphin, or being drawn by sea-horses ; but he is seldom met with on the Grecian coins.

3. Apollo is distinguished by a harp, branch of laurel, or tripod ; and sometimes by a bow and arrows. In the character of the sun his head is surrounded with rays; but, when the bust only occurs, he has a fair young face, and is crowned with laurel. He is frequent on the coins of the Syrian princes.

4. Mars is distinguished by his armour, and sometimes by a trophy on his shoulders. His head is armed with a helmet, and has a ferocious coun- tenance.

5. Mercury is represented as a youth, with a small cap on his head, wings behind his ears, and on his feet. He is known by the cap, which re- sembles a small hat ; and the wings. He appears also with the caduceus, or wand, twined with serpents, and the marsupium, or purse, which he holds in his hand.

6. iEsculapius is known by his bushy beard, aud his leaning on a club with a serpent twisted round it. He sometimes occurs with his wife Hygeia or Health, with their son Telesphorus or Convalescence between them.

7. Bacchus is known by his crown of ivy or vine, his diadem and horn, with a tiger and satyrs around him.

8. The figure of Hercules is common on the coins of Alexander the Great, and has frequently been mistaken for that of the prince himself. He appears sometimes as a youth, and sometimes with a beard. He is known by the club, lion's skin, and remarkable apparent strength ; some- times he has a cup in his hand ; and a poplar tree, as a symbol

of vigor, is sometimes added to the portrait.

9. The Egyptian Serapis is known by his bushy beard, and a measure upon his head.

10. Apis is delineated in the form of a bull, with a flower of the lotos, the water lily of the Nile, supposed by Macrobius to be a symbol of creation ; and Jamblicus tells us that Osiris was thought to have his throne in it.

1 1 . Harpocrates, the god of silence, appears with his finger on his mouth ; sometimes with the sistrum in his left hand ; a symbol common to most of the Egyptian deities.

12. Canopus, another Egyptian deity, appears in the shape of a human head placed on a kind of pitcher. See Canopus.

13. ITie Holy Senate and Holy People appear frequently on Greek imperial coins, sometimes represented as old men with beards, on others as youths.

The goddesses represented on medals are,

1. Juno, represented by a beautiful young woman, sometimes with a diadem, sometimes without any badge, which is reckoned a suf- ficient distinction, as the other goddesses all wear badges. Sometimes she appears as ˆhe goddess of marriage; and is then veiled to the middle, and sometimes to the toes. She is known by the peacock, a bird sacred to her from the fable of Argus.

2. INIinerva is very common on the coins of Alexander the Great ; and her bust has been mis- taken by the celebrated painter Le Brun for the hero himself. Her symbols are her armour; the spear in her right hˆind, and the aegis with a

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Medusa's head in her left; an owl commonly standing by her.

3. Diana of Ephesus is commonly represented on the Greek imperial coins ; and appears with a great numbe- of breasts, supposed to denote uni- versal nature. She is supported by two deer, and carries a pannier of fruit upon her head. The bust of this goddess is known by the crescent on her brow, and sometimes by the bow and c|uiver at her side.

4. Venus is known by an apple, the prize of beauty, in her hand. Sometimes she is distin- guished only by her total want of dress; but is always to be known by her extraordinary beauty, and is sometimes adorned with pearls about the neck.

5. Cupid is sometimes met with on the Syrian coins, and is known by his infancy and wings.

6. Cybele is known by a turreted crown and lion : or is seen in a chariot drawn by lions.

7. Ceres is known by her garland of wheat, and is common on the Sicilian coins; that island being remarkable for its fertility. Sometimes she has two serpents by her, or is drawn in a chariot by them. She carries in her hands the torches, as if in search of her daughter Proser- pine.

8. Proserpine herself is sometimes met with on coins with the name of icop►►j, or the girl.

9. The Egyptian Isis has a bud or flower on her head ; a symbol of the perpetual bloom of the inhabitants of heaven. She carries also a sistrum in her hand.

10. The Sidonian Astarte appears on a globe supported on a chariot with two wheels, and drawn by two horses.

These are the deities most commonly repre- sented on the Greek coins. The more uncommon are, Saturn with his scythe, or with a hook on the Heraclean coins ; 'ulcan with his tongs, on the reverse of a coin of Thyatira, represented at work in the presence of Minerva. Adranus, a Sicilian god, is sometimes represented on coins with a dog. Anubis, an Egyptian deity, has a dog's head. Atis is known by his Phrygian bonnet ; Castor and Pollux by a star on the head of each; Pluto by his old face, dishevelled hair and beard, and a hook; Flora by a crown of flowers ; Nemesis by her wheel ; and Pan by his horns and ears of a beast.

There are likewise to be found on medals many diflerent symbols by themselves ; of which we subjoin a list, with their significations :
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1. '^ases with sprigs signify solemn games. 2. Small chest or hamper, with a serpent leaping out, mystic rites of Bacchus. 3. Anchor, on Seleucian medals, coin struck at Antioch, where an anchor was dug up. 4. Apollo, on Syrian coins, on an inverted hamper, covered tripod. 5. A bee, Aristeus, the son of Apollo. 6. Laurel, Apollo. 7. Reed, a

river. 8. Ivy and grapes, Bacchus. ˆ. Poppy, Ceres and Proserpine. 10. Corn, Ceres. 11. Owl and olive, Minerva. 12. Dove, Venus. 13. Torch, Diana, Ceres, or Proserpine. 14. Mudnis, or conic stone, the Sun, Belus, or Venus. 15. Pomegranate flowers, Khodes. 16. Owl, Athens. 17. Pegasus, Co- rinth. 18. Wolf's head, Areos. "l9. Bull's

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head, Bceotia. 20. Minotaur's head and laby- rinth, Crete. 21. Horse's head, Pharsalia. 22. Lion, Marseilles. 23. Tortoise, Peloponnesus. 24. Sphinx, Scio. 25. Three legs joined, Sicily. 26. Horse, Thessaly. 27. The crescent, Byzan- tium. 28. Ensign, with the letters col., a co- lony drawn from one legion. 29. Bull, Apis, strength or security. 30. Caduceus, Peace and concord. 31. Cornucopia, Abundance. 32. Parazonium, baton of command. 33. Globe on an altar with three stars, the world preserved by the gods for the three sons of Constantine I. 34. Fort and gate, Security. 35. Altar or tripod, Piety. 36. Dolphin, Apollo. 37. Lectisternia, festivals. 48. Lituus, or twisted wand, Augur- ship. 39. Apex, or cap with strings, pontifi- cate. 40. Thensa, or chariot employed to carry images, consecration of an empress. 41. Pea- cock, ditto. 42. Eagle, consecration of an emperor. The most remarkable symbols of countries and cities on Greek coins are, for Rhodes, the flowers of the pomegranate : for Athens the owl : for Corinth a pegasus: for Argos a wolf's head: for Bceotia a bull's head : for Crete a mino- taur's head, and the labyrinth: for Pharsalia a horse's head : for Marseilles a lion : for Pelo- ponnesus a tortoise : for Scio a sphinx : for Sicily three legs joined: and for Thessaly a horse. The badge of Byzantium was the crescent, which appeared early on the coins of Byzantium, with the legend BYZAKTINH 2QT.; the pre- server of Byzantmm. The occasion was this; when Philip of Macedon besieged Byzantium, and was proceeding to storm it iu a cloudy night, the moon shone out, snd discovered his approach, so that the inhabitants observed and lepulsed him. The Turks, upon entering Constantinople, found this ancient badge in many places; and, suspecting some magical power in it, assumed the symbol and its power to themselves ; so that the crescent is now the chief Turkish ensign. The bull is very frequent on Greek coins, ge- nerally signifying a river, on which the country or town was situated : accordingly, the river Achelous is called BovicpavoQ, or bull-headed, by Sophocles in Trachin, v. 13: and Cephisus is said to have rai'po/top0ov ofifia KrjipKTov Trorpoc; by Euripides, Ion. v. 1261. The Latin poets speak

of the horns of rivers; thus Horace de- scribes the Aufidus, ‘ Sic tauriforrais volvitur Aufidus.’ The bull was a token of fertility, but the horns seem to allude to the force of the stream, &c.

Sect. III. ††† A Chronological Examination

OF ANCIENT CoiNS, MeDALS, &C.

The origin of coinage is too remote to be ac- curately traced. In the earliest ages in which metal was used as a medium of traffic, it is most probable that each person weighed or cut his gold or silver into pieces of different size and form, according to the quantity to Jbe given for any merchandise he was desirous of purchasino-. By degrees it was found more commodious to have pieces ready weighed ; and as there were different weights required, according to the value of the different wares, all those of the same weight began to be distinguished by the same mark : thus coins were carried onward one step.

At length the use of money in commerce begin- ning to be disturbed by frauds, both in the weight and in the metal, public authority interposed, and hence arose the first stamps or impressions of money, to which succeeded the names of the moneyers and the effigy of the prince, the date, legend, &c., and thus the art was complete.

Herodotus ascribes the invention of coins to the Lydians, and Pliny to Bacchus ; but it is evidently too remote an event to be traced to any authentic source. Lycurgus ordered that iron money only should be used in Sparta, which seems to imply that before his time a better kind had been known, and the introduction of copper coin into Italy is ascribed to Janus or Saturn. Before his invasion of Italy their money con- sisted of pieces of lead of certain weight and size. Homier, who wrote about 850, mentions scales, in the manner they seem to be mentioned in the book of Genesis (see our article Coins), but says nothing of money. If we look further east, says Mr. Pinkerton, there are tliree or four great nations who might be supposed capable of claiming this invention, namely, the Assyrians, Medes, Phoenicians, Indians, and Chinese : for the Persians are out of the question, as their em- pire began not till 570 years before Christ. The Assyrians, a great nation of the same race and speech with the Arabs and Phrenicians, con- quered the Scythians, or oldest Persians, about 2220 years before Christ, and established the Assyrian empire ; which lasted till the Medes, 920 years before our a;ra, seized the north of present Persia; and in Babylon and the south, till Cyrus, about 570 years before Christ, esta- blished the Persian empire on the ruins of both Median ?.vd Bahylonic. But certain it is thai no coins are found which can be

even imagined to belong to Assyrian, !N-Ledi2n, or Babylonio kings; their empire, though rich in itself, was unknown in commerce ; and weight alone, ac- cording to Scripture, was used in estimating metals. Tlie oldest coins found in that part of the world are palpably Persian, and similar to the Greek.

The Phoenicians, a people famous for ancient civilisation, appear not to have coined money, till after the Greeks had set the example. No Phoe- nician coins are found of much antiquity ; and not one without both obverse and reverse ; nor is there cause to think any of them older than about 400 years before our sera. From Scrip- ture it also appears that weight alone was used in the famous cities of Tyre and Sidon ; nor is there a hint in any ancient writer of coins pecu- liar to them or at all used by them.

India, though famous for its Brahmins and early civilisation and commerce, appears not to have any claim to early use of coinage. No In- dian or Chinese coins exist, till within a late pe- riod : and those of both countries are so rude as hardly to deserve collecting.

Upon the vshole the Lydian coins seem the most ancient in Asia. The wealth of the Lydian kings is famous in history and poetry : unhap- pily their coins have no legends, so that conjec- ture only points out the ancient coins in electrum and silver, found in Asia Minor, and different from the Persian, to be Lydian

In Dr. Hunter's cabinet there is a gold coin weighing a tetradrachm which is extremely an- cient. It has the usual rude globosity of early antiquity, and bears the indented marks of the first coinages on one side, while the other pre- sents a man kneeling with a fish held out in his left hand, Lydia being a maritime country, and a sword depending in his right. It is of very pale gold, like electrum, which is owing to the want of art at first in refining the metal ; which, as Pliny tells us, was often found mingled with a great deal of silver. When the silver was above one-fifth of the gold it was denominated native electrum ; and, indeed, sometimes more highly valued by the ancients than gold itself. In the same drawer of that cabinet, among the uncertain coins, there are near a score of other gold coins, some of them not much inferior to this in apparent antiquity. Dr. Combe, who published them in his excellent description of Dr. Hunter's coins of cities, thinks the later ones, which are meant for one size of about forty grains, belong to the

cities of Asia ˆMinor. The oldest of them may have been struck there when coinage was proceeding from Lydia through Asia Minor towards Greece. The gold is in many extremely pale ; and all, even those which bear the indented mark, are of a most exquisite fabric, surpassing all description ; and as much superior to that of the best Sicilian coins as the later are to all other coins in the world.

The coins that must rank next in age to those of Lydia and the cities of Asia Minor are un- questionably those of Greece. The Greek coins, if not the most ancient which we have, are at least of superior antiquity to any whose claims can be clearly authenticated. Perhaps some of the Barbaric pieces, and probably some of the Lydian, may have a claim to priority of sera ; but as such medals have no legends it is difficult to fix the precise date of their coinage.

The most ancient Greek coins of silver have an indented mark upon one side, and a tortoise upon the other ; and those of greatest antiquity have no letters upon them. Those of latter date have Airi marked upon them, which has been interpreted of ˆ‘Egium in Achaia; but which is more probably a contraction of iEgina, the mint of which was much celebrated.

The general denomination of the Greek money is the drachma, or eighth part of an ounce ; which to this day is retained in the medical weights, the Grecian coins receiving their names from the weights they bore ; though in some instances the weights received their appellations from the coins. The silver drachma, according to jNIr. Pinkerton, was about 9d. sterling ; and he finds fault with those who make the drachma and denarius both equal to one another, the latter being no more than Qd. The didrachm of silver, according to the same calculation, was worth l.s. Gd. ; but the tridrachra occurs very .rarely: and medallists often give this name to the didrachm of /Egina. The largest of the Grecian coins is the tetra- drachm, which on the .T-ginean standard is worth 5s.; but in those of the other states only 4.’;. There are, however, many subdivisions in the silver drachma; the highest being the tetraobolion or coin of four oboli ; being in proportion to the

drachma as our groat to Gd., weighing about forty-four grains, and being in value about six- pence. The hemidrachm or triobolion comes next in value, weighing about thirty-three grains, and worth fourpence half-penny. The silver diobolion or third of the drachma weighs about twenty-two grains, and is worth three pence. The obolus of silver weighs about eleven grains, and is worth only three halfpence. There is likewise a hemi- obolion in silver, or half the obolus, of five grains

and a half, value three farthings : and another called tetraptobolion dichalos, or quarter obolus, which is the most minute coin yet met with ; and by reason of its extreme smallness, weighing only two grains and a quarter, is now very scarce : but there is one in the cabinet of Dr. Hunter, and some of them are likewise met with at Ta- rentum. It would appear, however, that there were some still smaller, and of value only three- fourths of a farthing. None of these have been met with ; and the smallness of the size renders it improbable that any will ever be met with : as the peasants, who commonly dis- cover coins, would probably either not observe them at all, or, if they did, would neglect them as things of no value.

Many different names have been imposed on the coins belonging to the different states of Greece : thus Kop►►j, the maiden, was a name often applied to the tetradrachm, and which would seem to apply to those of Athens ; XtXojvt, the shell, was the name of another coin from its type. A Sicilian coin was named At/io- ptTiov, from Gelon's wife. A tetradrachm was named Kpa-rrarayovg, and had eight evQttag, or hemidraras. Tlie Tpoi'njviov, so called from its country Troizene, had Pallas on one side and a trident on the reverse. The hemiobolion was the IltXavo}) of Lacedaemon ; and the VLoXXvfioQ is supposed to have been equal to the Roman sestertius or quarter drachma. The cystophori were coins with the mystic chest or hamper of Bacchus upon them, out of which a serpent rises ; and are much celebrated in antiquity. The most probable opinion concerning them seems to be, that they are all silver tetradrachms ; such as belong to the cities of Apamea and Laodicea in Phrygia ; Pergamus in Mysia ; Sardis andTralles in Lydia ; and Ephesus.

Another set of coins famous in antiquity were those of Cyzicus in jNIysia, which were of gold ; but they are now almost entirely vanished, being recoinedin other forms. The ApiavSiKov vo/iiff/xa, or money of Aryandes, who was made governor of Egypt by Cambyses, is mentioned by Ilesy- chius ; but none of them have reached our times. They must have been marked with Persian cha- racters, if with any. The coin of queen Philistis is mentioned by the same writer, and many of these pieces are still extant ; but we know not where this queen reigned, nor does there seem to be any method of finding it out. The most par- ticular attention with regard to the names and standard of coins is due to those of Athens ; and it is remarkable that most of them which have reached us are of a very late period, with the names of magistrates inscribed upon them. Some of these bear the name of Mithridates ; and few are older than the era of that prince ; who, it is

well known, took the city of Athens in his war with the Romans. It is still more remarkable, that the fabric of Athenian coins is almost universally very rude : a singular circumstance if we reflect how much the arts flourished there. It can only be accounted for from the excellence of their artists bemg such as to occasion all the good ones to be called into other countries, and none but the bad left at home. In like manner, the coins struck at Rome in the imperial times are excellent, as being done by the best Greek artists; while those of Greece, famous at that time for producing artists, are during that period commonly of very mean execution.

The copper money of the Greeks is next in antiquity to the silver. It was not used at Athens till the twenty-sixth year of the Peloponnesian war: about A. A. C. 404, and 300 after silver was first coined there. The first copper coins were those of Gelo of Syracuse, about 490 B. C.

The whole brass coins of Athens published by Dr. Combe are reducible to four sizes, which may be the lepton, dilepton, tetralepton or hemichalcos, and chalcos. The first is not above the size of one of king James I.'s farthing tokens; the last about that of our common farthing. The lepta was also called (ctp/xa, as being change for the poor. The KidafSoe, perhaps so called from the figure of a wolf upon it, was the coin of a particular state, and if of brass must have weighed three chalci. The other names of the copper coins of Greece are but little known. Lycurgus ordered iron money to be coined at Sparta ; but so perishable is this metal that none of that kind of money has reached our times.

After the conquest of Greece by the Romans most of the coins of that country diminished very much in their value, the gold coinage being to- tally discontinued ; though some of the barba- rous kings who used the Greek character were permitted to coin gold, but they used the Roman model ; and the standard used by the few cities in Asia who spoke the Greek language in the times of the emperors is entirely unknown. Copper seems to have been the only metal coined at that time by the Greeks themselves ; and that upon the Roman standard, then universal through the empire, that there might be no impediment to the circulation of currency. They retained, however, some of their own terms, using them with those of the Romans. The assarion or assarium of Rome, the name or the diminished as, being sixteen to the drachma or denarius ; the obolus was so much diminished in value as

to be struck in brass not much larger than the old chalcus, and valued at between two and three assaria ; which was indeed its ancient rate as to the drachma. This appears from the copper coins of Chios, which have their names marked upon them. The brass obolus, at first equal in size to the Roman sestertius or large brass, les- sens by degrees to about the size of a silver drachma. From the badness of the imperial coinage in Greece also, it appears that brass was very scarce in that country, as well as in all the cities using the Greek characters, being found mostly in the western countries of the Roman empire. The time of this declension in size of the Greek coins is supposed to have been from

Augustus down to Gallienus. The copper obolus, however, at first above the size of largH brass, was used in Greece about the time of 'Is first subjection to Rome ; and, the lepta ceasing, the chalci came in their room, with the dichalcus and the hemiobolion of brass.

With respect to the gold coins of the Greeks, none of that metal it would seem was coined before the time of Philip of Macedon, as none have reached our times prior to the reign of that monarch.

Notwithstanding, however, this deficiency of gold coin among the Greeks, it is certain that the coinage of gold had taken place in Sicily long before ; as we have gold coins of Gelo about 491 B. C, of Iliero I. 478, and of Dionysius I. in 404, all using the Greek characters ; though not to be ranked among the gold coins of Greece, as Philip caused his to be.

Gold coins were used in the cities of Brettium, Tarentum, and throughout Magna Graecia : also in Panticapaca in Thrace, and likewise in Cosa in that country ; but not in Tuscany, as is com- monly believed, though Neumann proves that they were struck by Brutus, and are unques- tionably as ancient as the Greek coins. The Thebans and Athenians probably coined the first gold after Philip had set them the example, and when they were attempting to resist the projects of that enterprising monarch. The iEtolians probably coined their gold during the time of their greatest power, about a century after Philip, and when they were combating the power of Aratus and the Achsean league. ' There is,' says Mr. Pinkerton, ' but one rifiixpvaoc of Thebes, much worn, in Dr. Hunter's cabinet, and weigh- ing but fifty-nine grains ; and perhaps not above two or three xpiˆˆoi or gold didrachms of Athens in the world ; one of which is also in the collec- tion of Dr. Hunter, and weighs 132ˆ grains. It appears to be more modern than the reign of Philip. That monarch, having got possession of the mines of Philippi in Thrace, improved them so much that they produced him

annually above 1000 talents of gold, or ––2,880,000 of our money. From this gold the first coins named from the monarch Philippi were struck. ITiey were marked with his portrait ; and for many ages after were so numerous that they were common in the Roman empire ; whence the name Philippi be- came at length common to gold, silver, and at last even brass coins of their size. Even in the time ot Philip gold was very scarce in Greece ; but, after the Phocians had plundered the temple of Delphos, this precious metal, which had been valued as gems, and consecrated only to the de- coration of the temples of the gods, began to be known among the Greeks. Tlie comparative values of gold and silver, however, seem to have been at that time very different from what they are now. Herodotus values gold at thirteen times its weight in silver: Plato in his Hippar- chus at twelve ; and even the low value of ten to one seems to have been the stated value in Greece, though in Rome the plenty of silver from the Spanish mines made the value of gold to be much higher ; and there is no reason to think that it was ever valued in that city at less than twelve times its weight in silver. The Philippus, xptˆffog, gold piece, or stater, is a didrachm, and

is the most common of all the ancient coins. There are proofs of the Philippi being didrachms, both from the writings of ancient authors and from numbers of the coins themselves, which re- main to this day ; and that the xpvffog, or prin- cipal gold coin of Greece, was of the same weight, is also evident from ancient writings. It was anciently worth about fifteen shillings, but, valuing gold now at the medium price of ––4 per ounce, it is worth about twenty shillings. The tlfiixpvffog, or half the former coin, scarcely occurs of the coinage of Philip and Alexander, though it does of Iliero I. of Syracuse, and of king Pyrrhus. It passed for ten silver drachms, and was valued only at seven shillings and sixpence, though now worth ten shillings. There was another division of this kind worth about five shillings. There were besides some less di- visions of gold coins, which could not be worth above two drachms. These were coined in Gy- rene ; and there were besides several old gold coins of Asia Minor, the value of which is now unknown. Our author supposes that they were coined, not with relation to their weight as parts of the drachma, but merely to make them cor- respond with so many silver pieces as was ne- cessary. There are also larger coins than the xpvaog, the Aixpvauc of Alexander and Lysima- chus being double its value. Some others are met with of Lysimachus, Antiochus III., and some of the Egyptian

monarchs, weighing four times the ˆpueroc, and now worth about ►►4 ster- ling.

Next are the Persian, which are well known, from the archer on them, and from Mithras, the Persian deity ; the dress of the princes and other marks. None of these coins can be older than 570 years before our era, when the Persian em- pire began. Tlie famous Darics were issued by Darius Hystaspis, who began to reign 518 years before Ghrist. The joke of Agesilaus is well known, who being forced to retire from an inva- sion of Persia, by the bribery used by the great king to instigate the enemies of Sparta, said that 30,000 archers had defeated him. These coins are extremely scarce, bemg mostly melted down for his own coinage by Alexander the Great, upon his conquest of Persia. One, however, is in lord Pembroke's collection, having an archer upon one side, and the rude indented mark of early coinage on the other.

All the real darics are gold ; the silver coins with the archer are later, and never were called darics. Most of the Persian coins which have reached us are silver; and have generally a king in a chariot of two horses, with a charioteer, and sometimes another figure on foot behind, on the obverse ; while the reverse presents a ship, the Persians being powerful at sea, as well as by land. Some have Persian characters. One in Dr. Hunter's cabinet has a ram on one side, with a long legend : the reverse has some sacred symbol in a hollow square. This, symbol also occurs in the coins of the Sassanidae. Another has a lion, another a bull. One has a fine Mithras, the Persian name of the sun, with his usual appearance of a bird's wings springing from his middle, and a bird's tail and feet : the obverse is a king, three quarters length, of fine

work. Some are of copper, very thick, with the king in a car on one side, and the ship on re- verse.

But it will be proper to say a few words on the weight and ancient value of the Persian coins. The darics of Persia are celebrated in all antiquity ; and were gold coins, so called from Darius son of Hystaspes, who began to reign 518 years before our era. As the first gold coins of Macedon were called Philippi, from Philip the first king who coined gold ; it may, perhaps, be inferred from analogy, that the first gold coin- age in Persia was known under Darius. The size and weight of these darics are subject to doubt. Josephus says they were equal to the tetradrachm in weight, and worth fifty Greek drachmjE. But we have many authors, one of them, Xenophon, particularly respectable, who informs us they were didrachms, and worth twenty Attic silver drachmas.

The darics are described by ancient writers as having the figure of an archer. I'here is one of these darics in lord Pembroke's cabinet, and weighs 129 grains, which shows them to have been didrachms on the Euboeic or Attic stan- dard. The reader will see from the print of it, plate I, that it has the globosity and indented mark of early coinage ; perhaps longer retained in the east than in Greece. It is likely that the late bishop of Bagdat who resides in their na- tive countrj', and had, as Mr. Ives tells us in his voyage to the East Indies, a large collection of Persian coins in all metals, may have had some in his possession. There is one piece, but of silver, in Dr. Hunter's cabinet, evidently Per- sian, which has a king on horseback on one side, and an archer kneeling in act to shoot on the reverse. It weighs 168 grains, and if the Baby- Ionic talent, which seems to have been the stan- dard of the Persian silver, was eighty Attic minse,this would have been the didrachm of that talent.

But as gold was not the primitive coinage of Greece or Rome, so it is probable that silver preceded it in Persia ; and we have silver coins of Persia which bear every mark of remote anti- quity. The most ancient, which are very rude, and have a shapeless hollow on the reverse; with an archer on the obverse, but with his bow in one hand and arrow in the other, not shooting as in that above described, weigh about eighty-two grains. Others with a king's head on one side, and a ship on reverse, weigh about the first mentioned, or 164 grains; some weigh fifty-three grains, and others about twenty-six. A fine one with a king three quarters length on one side, and Mithras on reverse, with his usual sym- bols of a bird's feet and tail, and the wings at his waist, weighs 160j grains; but is much worn on the sides, and must at first have reached the first, or 168 srrains. There are four or five others, with a king in a chariot, a charioteer and attendant on one side, a ship on the other, of great size, not less than 432 grains, being more than seven Attic drachmas. I refer to those in the vast collection of the late Dr. Hunter, to which indeed I have been indebted for most of my references to coins. The above Persian coins, in particular, add much to the riches ot

that wonderful cabinet, as hardly one of them is known to any other collection in Europe.

Of Persian coins there is a second series, that of the Sassanidce, beginning about A. D. 210, when Artaxerxes overturned the Parthian

mo- narchy. The Parthian coins have all Greek legends, as before mentioned; but these later Persian bear only Persian characters. They are large and thin ; with the king's bust on one side, and the altar of Mithras on the other, generally with a human figure on each side, as the reader will see in the fine specimen, plate I. The Per- sian letters are the only ones of antiquity which have not been explained, though so many speci- mens remain. The oldest inscriptions at Perse- polis are in those called Scandinavian antiqua- ries. Palmyrene or Syriac inscriptions also occur there. But the letters on Persian coins are peculiar, and no attempt has yet been made to explain them. They seem to partake of the an- cient Greek, Gothic, and Alanic. The later Per- sian coins extend to the year 636, when Persia was conquered by the Arabian caliphs.

In Rome, as well as in Greece, the money was at first estimated by weight ; and the first metal coined by that people was copper, silver being long unknown in Home ; nor is it certainly known that any silver has ever been found in the Italian mines. In Rome the first valuation of money was by the libra gravis i3eris, or pound of heavy brass : and, in the progress of their con- quests, the little silver and gold that came in their way was regulated by the same standard, as appears from the story of Brennus. The weights made use of were the same with those which continue to this day. The pound consisted of twelve ounces of 458 grains each ; but the pound by which the money was weighed appears to have consisted only of 420 grains to the ounce, or to have contained in all 5040 grains. This became the standard of copper ; and, when silver came to be coined, seven denarii went to the ounce as eight drachms did in Greece. Gold was regulated by the scriptulum or scrupulum, the third part of a denarius, and by the larger weights just mentioned. The number 10 was at first used by the Romans in counting their money ; but, finding afterwards that a smaller number was more convenient, they divided it into quarters ; and, as the quarter of ten is two and a half, they for this reason bestowed upon it the name of sestertius or ' half the third ;' to express that it was two of any weights, measures, &c., and half a third ; whence the sestertius came at last to be the grand estimate of Roman money. The as being at first the largest, and indeed the only Roman coin, the word sestertius means sester- tius as, or ' two asses and ahalf.' On the first coin- ing of silver, the denarius of ten asses was struck in the most common and convenient denary division of money, or that by tens ; the sestertius being of course two asses and a half. But, the denarius being afterwards estimated at sixteen asses, the name sestertius was still applied to a quarter of the denarius, though it now contained four asses. The term sestertius was applied to all sums

not exceeding 1000 sestertii, or ––8 6s. 8d.; but for greater sums tfie mode of the sestertius was like- wise altered, though not to exclude the former.

Very large sums of money were estimated by the hundred weight of brass ; for the Romans were at first unacquainted with the talent. Thˆ hundred weight, by way of eminence, was dis- tinguished by the name of pondus, and sester- tium pondus became a phrase for 2ˆ cwt. We may value the as libralis of ancient Rome at about eight-pence English. Estimating the . as therefore at a pound weight, the sestertium pondus was equal to 1000 sestertii, or ––8 6s.8d. and, by a coincidence which our author supposes to have been the eflTect of design, as soon as the silver coinage appeared, the sestertium centum denariorum was always equal to sestertium ––8 6s. 8d. also. The word itself, however, seems to have been unknown prior to the coinage of silver money at Rome : the pondca gravis aeris being sufficient before that time for all the pur- poses of a state in which money was so scarce. But, however this maybe, the pondus or hundred weight of brass was precisely worth 100 denarii, or a pound of silver. As the great sestertium was always valued at 1000 of the smaller, or ––8 6s. 8d., we never find one sestertium men- tioned in authors, but two, three, or more; 10,000 of them being equal to ––8,333,333 64’. 8d.

Some coins are found which exceed the as libralis in weight; and these are supposed to be prior to the time of Servius Tullius. Some of them are met with of thirty- four and of fifty-three Roman ounces ; having upon one side the figure of a bull rudely impressed, and upon the other the bones of a fish. They are most commonly found at Tudder, or Tudertum in Umbria ; but they appear always broken at one end ; so that perhaps some might be struck of the decussis form, or weighing ten pounds. These pieces make it evident that the Romans derived their large brass coins from the Etruscans and the neighbouring states : they are all cast in moulds ; and the greater part of them appear much more ancient than the Roman asses, even such as are of the greatest antiquity.

Mr. Pinkerton agrees with Sir Isaac Newton as to the time that Servius Tullius reigned in Rome, which he supposes to be about 460 B. C. His coinage seems to have been confined to the as, or piece of brass having the impression of Janus on the one side and the prow of a ship on the other, because Janus arrived in Italy by sea. Varro, however, informs us that the very first coins of Tullius had the figure of a bull or other cattle upon them, like the Etruscan coins, o which they were imitations. Those with the figure of Janus and the prow of a ship

\ipon them may be supposed first to have appeared about 400 B. C. ; but, in a short time, various subdivisions of the as were coined. The semis or half is commonly stamped with the head of Jupiter laureated ; the triens or third, having four cy- phers, as being originally of four ounces' weight, has the head of Minerva ; the quadrans or quar- ter, marked with three cyphers, has the head of Hercules wrapt in the lion's skin ; the sextans or sixth, having only two cyphers, is marked with the head of Mercury with a cap and wings ; while the uncia, having only one cypher, is marked with the head of Rome. All these coins appear to have been cast in moulds, by a con

siderable number at a time ; and in the British Museum there are four of them all united toge- ther as taken out of the mould in which perhaps dozens were cast together. In process of time, however, the smaller divisions were struck in- stead of being cast ; but the larger still continued to be cast until the as fell to two ounces. Even after this time it was still called libra, and ac- counted a pound of copper : though there were now larger denominations of it coined, such as the bissas or double as : tressis and quadrussis of three and four asses ; nay as far as decussis or ten asses, marked X. Olivieri mentions one in his own cabinet weighing upwards of twenty-five ounces, and cast when the as was about three ounces' weight. There is likewise in the Musaeum Etruscum a decussis of forty Roman ounces, cast when the as was at four ounces. There was likewise a curious decussis in the Jesuits' library at Rome, for which an English medallist offered ––20 ; but it was seized by the pope along with every other thing belonging to the society.

The as decreased in weight at the following periods. About the year 300 B. C. it weighed ten ounces ––– eight ounces about 290 ––– six ounces about 280 ––– four ounces about 270 ––– three ounces about 260 ––– two, accordingtoPliny, about 250 ––– one according to the same author, about 214 ––– and about 175 he says that the as was reduced to half an ounce by the Papyrian law, at which it continued till the time of Pliny himself, and long after.

After the Romans began to have an intercourse with Greece a variety of elegant figures appear upon the parts of the as, though not on the as it- self till after the time of Sylla. Towards the latter end of the republic also, dupondii, or dou- ble asses, were coined, together with the sestertii aerei, which came in place of the quadrusses, when the

denarius began to be reckoned at six- teen asses ; probably at the time the latter was reduced to half an ounce. In some instances it is to be observed that the Romans accommodated their coins to the country where their army was stationed ; whence we have many coins marked as Roman, which have been coined in Magna Graecia and Sicily, and are evidently upon the Greek and not the Roman scale. In the latter part of the republican times, also, the types begin to vary ; so that we have a brass coin sup- posed to be struck by Sextus Pompeius in Sicily, having upon it a double head of that warrior, representing a Janus. This coin is of copper, and still weighs an ounce, notwithstanding its antiquity.

The largest imperial copper coin was the ses- tertius, a piece worth about two-pence of our money.

No change took place in the Roman coinage for several years, and that already manufactured retained nearly its original value. But before the timeofJuiiusCaesaryellow brass began to be used, and was always looked upon to be double the value of Cyprian or red copper. There are but few coins in large brass immediately before Julius Ca:sar, or even belonging to that emperor; but, from the time of Augustus downward, the large coins are all found of brass, and not one of them copper. The largest of what are called the middle size are all

of yellow brass ; and the next size, which is the as, and weighs half an ounce, is universally copper. What the ancients named orichalcum, or what we call brass, was always looked upon to be greatly superior in value to the aescyprium. Procopius tells us that brass inferior in color to gold is almost equal in value to silver. The mines of native brass were very few in number, and were owing entirely to the singular combi- nation of copper and lapis calaminaris in the bowels of the earth, which very seldom occurs ; and the ancients were far from being well ac- quainted with the method of combining these two bodies artificially ; so that yellow brass was always esteemed at double the value of copper : and hence, in the ancient coinages, the brass and copper pieces were kept as distinct as those of gold and silver.

The sestertius underwent no change till the time of Alexander Severus, when it was dimi- nished by one-third of its weight. Trajanus Decius was the first who coined double sestertii, or quinarii, of brass : but from the time of Tre- bonianus Gallus to that of Gallienus, when the first brass ceases, the sestertius does not weigh above the third part of an ounce; the larger coins are accounted double sestertii ; and after the time of Gallienus it totally vanishes. In the time of Valerian and

Gallienus we find a new kind of coinage, mentioned by the name of denarii aeris, or Philippi aerei. Two sizes of de- narii began to be used in the time of Caracalla, the larger of six sestertii, or twentyrfour assaria ; the smaller of four sestertii, or sixteen assaria, as usual. In the time of Pupienus the latter was reduced to such a small size as not to weigh more than thirty-six grains ; though in Caracalla's time it weighed fifty-six. After the time of Gor- dian III. the smaller coin fell into disuse, as breeding confusion. The larger denarius of six sestertii, though diminished at last to the size of the early denarius, still retained its value of six sestertii, or twenty-four assaria. The Philippus aereus came at length in place of the sestertius. It was also called denarius ; from which we may learn, not only their size, but that they vvere in value ten assaria, as the first denarius. In the reign of Dioclesian, the place of the sestertius was supplied by the follis, that emperor having restored the silver coin to its purity, and like- wise given this form to the copper ; but it would seem that this restoration of the coinage only took place towards the end of his reign ; whence we have but few of his silver coins, and still fewer of the follis, though the denarii aerei con- tinue quite common down to the time of Con- stantine. The follis of Dioclesian seems to have weighed above half an ounce ; and that Diocle- sian designed this coin to supply the place of the denarius aereus ; which of course was worth ten assaria, and six of them went to the silver dena- rius. From this time the assarium diminishes to the size of thirty grains ; and soon after the follis appeared the denarius aereus was entirely dropped, the former having gradually supplied its place. Some mints appear to have retained the use of the denarius longer than others ; and in some the change was preceded, and gradually brought in, by washing the follis with silver gr

tin as the denarius had formerly been. Pieces of this kind occur in the times of Dioclesian, Maximian I. and II., and Constantius I. ; that is, for about ten years after the follis made its appearance. Some countries, however, retained the denarius aureus ; others the foUis ; and some had a medium betwixt the two, or the follis washed in imitation of the denarius.

Towards the end of the reign of Constantino I. a new coinage was introduced throughout the whole empire. The follis coined by this prince was of half an ounce weight ; twenty-four of them going to the milliarensis, or larger silver coin. The word follis signifies also a purse,

in which sense we sometimes find it mentioned in the Byzantine history. The common follis of silver, when it occurs by itself, means a purse of 250 milliarenses, as the sester ium was 250 de- narii ; and, by a law of Constantine I., every man paid to the sate a follis or purse according to his income. The method of counting by purses continues in Turkey to this day.

The dupondius was only half the value of the sestertius, or about one penny sterling ; and be- fore the yellow brass appeared it seems to have been struck upon copper, and double the size of the as. There are some of this coin, struck in tlie time of Julius Csesar in yellow brass, weigh- ing half an ounce; with a head of Venus 'ic- trix upon one side ; on the reverse a female figure, with serpents at her feet; while others have a Victory on the reverse, with Q. Oppius Pr. After the time of Augustus the dupondius was struck in yellow brass ; which Pliny tells us was also the case in his time. The word du- pondiarius seems to have been used by Pliny, and adopted, not to express that the coin was dupondius, but tliat it was of dupondiary value. Neither was the former word confined to signify double weight, but was used also for double length or measure, as in the instance of dupon- dius pes, or two feet, &c. In the imperial times, therefore, dupondius was used, not to signify a coin of double the weight of the as, but of double the value. It was one of the most common of the Roman coins ; and seems to have been very common even in Constantinople. The dupon- dius, though of the same size with the as, is commonly of finer workmanship, the metal being greatly superior in value. It continued to be of yellow brass, as well as the sestertius, to the time of Gallienus ; but the as is always of cop- per.

The imperial as, or assarium, was worth only a halfpenny. At first it weighed half an ounce, and was always of copper till the time of Gal- lienus, when it was made of brass, and weighed only the eighth part of an ounce. From the time of Gallienus to that of Dioclesian it con- tinued to diminish still more, the size being then twenty to an ounce. This was the same with the lepta, or smallest coins but the vovpia, which weighed only ten grains.

The parts of the as occur but seldom ; which may indeed be well expected considering the low value of it; though there still occur some of Ihose called semis, triens, quadrans, sextans, and uncia, coined in the times of JVero and Domitian. There is no small brass from the tim.e of Perti-

nax to that of Gallienus, excepting that of Tra- janus Decius ; but in the time of Gallienus i* becomes extremely common ; and the coins ot

small brass, as well as the larger, are always marked S. C. (such as want it universally being accoimted forgeries), and were plated with silver, though the plating be now worn off. The small pieces struck for slaves during the time of Satur- nalia must also be distinguished from the parts of the as. The S. C. upon these most probably signifies Saturni Consulta, and were struck in ridicule of the true coins, as the slaves on that occasion had every privilege of irony.

The sestertius diminishes from Pertinax to Gallienus so fast that no parts of the as are struck, itself being so small. Trajanus Decius, indeed, coined some small pieces, which went for the semis of the time. The small brass coins under Gallienus were called assaria, sixty of which went to the silver denarius. They are about the size of the denarius, and some of them occur, of the coinage of Gallus and his family, of half that size, which appear to have been struck during the latter part of his reign, when the assarium was diminished to a still smaller size. It is probable, however, that some of these very small coins had been struck in all ages of the empire, in order to scatter among the people on solemn occasions

The assarion or lepton of the Constantinopoli- tan empire was one of the smallest coins known in antiquity, weighing no more than twenty grains ; and the noumia were the very smallest which have reached our times, being only one- half of the former. By reason of their extreme smallness they are very scarce ; but Mr. Pink- erton had a fine one of Theodosius II. which has on it the emperor's head in profile, Theodosius P. F. AV. ; on the reverse a wreath, having in the centre vox. xx. : mult. xxx.

The principal coin of the lower empire was the follis, which was divided into a half and a quarter, named jj/xio-oˆoXtof and TerpairTov ; the latter of which is shown by Du Cange to have been a small brass coin. Besides these the follis was divided into eight oboli, sixteen assaria or lepta, and thirty-two noumia, though in common computation it contained forty of these last. This coin, notwithstanding so many divisions, was of no more value than a halfpenny.

There are pieces of Justinian which weigh a whole ounce ; but the size of copper was in- creased as the silver became scarcer ; and the value of the coinage cannot be deduced from the weight of the coins, as it is plain that our own coinage is not of half the value with regard to ihe metal. A great number of medallions were struck by Constantius II., but there is no other copper larger than the half ounce, excepting that of Anastasius, when the follis began to be struck larger. All medallists

allow the others to be medallions.

The metal employed in these very small coins, though at first of brass, was always a base and refuse kind ; but copper is generally made use of in the parts of the as i'rom the earliest times to the latest ; and if brass be sometimes em- ployed it is never such .is appears in the sestertii and dupondiarii, which is \ cry fine and beautiful,

but only the refuse. Yellow brass of the right sort seems totally to have ceased in the Roman oomage with the sestertius, under Gallienus, though a few small coins of very bad metal ap- pear under that hue as late as Julian II.

Silver began to be coined in Rome so late as A. U. C. 485, or A. A. C. 266.

The first silver denarii coined at Rome are supposed to have been those which are impressed vrith the Roma. There are fifteen of these in the cabinet of Dr. Hunter ; one of the largest weighs ninety-eight grains and a quarter ; and the rest, which seem to be of greatest antiquity, are of various weights betwixt that and eighty-four ; the smaller and more modern weigh fifty-eight or fifty-nine grains ; but tlie large ones are of the very first Roman coinage, and struck during that interval of time betwixt the coinage of the first silver denarius and the as of two ounces. The indentation of the word Roma is a mark of great antiquity; such a mode being scarcely known any where else, except in Caulonia, Crotona, and otlier towns of Italy ; all of them allowed to be struck at least 400 B. C. As these large coins are not double denarii they must have been struck prior to the small ones ; and Newmann has given an account of one of them recoined by Trajan, in which the indenttition of Roma is carefully preserved. The first denarius was in value ten asses, when the as weighed three ounces ; and, allowing ninety grains at a medium for one of these large denarii, the proportion of copper to silver must have been as one to 160 ; but when the as fell to one ounce the proportion was as one to eighty ; when it fell to half an ounce, so that sixteen asses went to the denarius, the proportion was as one to sixty-four, at which it remained. Copper with us, in coinage, is to silver as one to forty; but in actual value as one to seventy-two.

At Rome the denarius was worth eight pence ; the quinarius four

pence ; and the sestertius, whether silver or gold, two pence. The denarius is the coin from which our penny is derived, and was the chief silver coin in Rome for 600 years. According to Celsus, seven denarii went to the Roman ounce, which in metals did not exceed 430 grains; but, as all the denarii hitherto met with weigh at a medium only sixty grains, this woidd seem to make the Roman ounce only 420 grains ; though perhaps this de- ficiency may be accounted for from the unavoid- able waste of metal even in the best preserved of these coins. According to this proportion, the Roman pound contained eighty-four denarii ; but in tale there was a very considerable excess ; for no fewer than 100 denarii went to the Ro- man pound. The Greek ounce appears to have been considerably larger than that of Rome, containing about 528 grains ; yet, notwithstand- ing this apparently great odds, the difference in the coins was so small, that the Greek money went current in Rome, and the Ixoman in Greece. The denarius at first went for ten asses, and was marked X ; it was afterwards raised to sixteen ; which Mr. Pinkerton supposes to have been about 175 B.C. Some are met with bear- ing the number XVI. ; nay, with every number up to CCCCLXXVI. These large numbers are

supposed to have been mint-irarks of some kind or other. After being raised to sixteen asses, it continued at the same value till the time of Gal- lienus ; so that, till that time, we are to look upon its constituent parts to be sixteen asses or assaria, eight dupondii, four brass sestertii, and two silver quinarii. Under the emperor Severus, however, or his successor Caracalla, denarii were struck of two sizes, one of them a third heavier than the common ; which we must of consequence suppose to have borne a third more value. This large piece obtained the name of argenteus, and argenteus Philippus, or the ‘ silver Philip ;’ the name of Philip having become common to almost every coin. The common denarii now began to be termed minuti and argente< Philippi minutuli, &c., to express their being smaller than the rest. Some have imagined that the large denarii were of the same value with the small, only of worse metal. The first mention of the minuti is in the time of Alexander Severus, who reduced the price of pork from eight minuti at Rome to two and to one. The minutus argenteus of that age .was about forty grains'; and, from the badness of the metal, was not worth above four pence of our money.

According to Zozimus, and other writers, the purity of the Roman coin was restored by Au- relian ; and his successor Tacitus is said to have allowed no brass to be mixed with the silver on any account ; yet the few coins of this emperor are very much alloyed. We are certain, however, that the emperor Dioclesian restored the silver to its ancient purity ; the denarii struck in his reign being very small indeed, but of

as fine silver as the most ancient coins of the empire. After Gordian III. the small denarius entirely vanished, while the large one was so much di- minished that it resembled the minutus, or small one of Caracalla, in size. Gallienus introduced the denarii oerei instead of the sestertii. The argenteus, though reduced more than one-third in size, contained six denarii serei,the old standard of the sestertii. According to the writers of this period, and some time afterwards, the denarius argenteus contained sixty assaria ; whence it fol- lows that each denarius aereus had ten; and from this it probably had its name. The assaria are of the size of the argentei already mentioned ; and show the copper to have retained nearly its old proportion of value to the silver, viz. one to sixty.

A larger silver coin was introduced by Con- stantine I., who accommodated the new money to the pound of gold in such a manner that 1000 of the former in tale were equal to the latter in value ; so that this new piece from thence obtained the name of the milliarensis. Its weight, .at a medium, is seventy grains, or seventy to the pound of silver. The code says that sixty went to the pound ; but the numbers of this are quite corrupt. The milliarensis was worth about a shilling sterling. The argentei denarii, however, were still the most common currency ; and, having been originally rated at the 100 to the pound of silver in tale, they from hence began to be called centenionales, or ‘ hun- dreders.’ Those of Constantine I. and II., Constans and Constantius, weigh from fifty

grains down to forty ; those of Julian and Jovian, from forty to thirty ; and of the succeeding em- perors, from that time to Justinian, from thirty to twenty. Under Heraclius they ceased entirely ; and, from Justinian to their total abolition, had been brought down from fifteen to ten grains. A like decrease of weight took place in the mil- liarensis ; those of Constantine and Constans being above seventy grains in weight ; those of Arcadius not above sixty ; and the milliarensis of Justinian not more than thirty grains. These coins were also called niajorinse.

The smaller silver coins of Rome were, 1. The quinarius, at first called victoriatus, from the image of Victory on its reverse ; and which it continued to bear from first to last. Its original value was five asses, but it was afterwards raised to eight, when the value of the denarius increased to sixteen. According to Pliny, it was first coined in

consequence of the lex Clodia, about the 523th year of Rome. Some are of opinion that it was called Kepanov under the Constanti- nopolitan empire, because it was worth a KepuTiov of gold, 144 of which went to the ounce ; but this is denied by Pinkerton, because, at the time that the word (ctpanoi/ first appears in history, the denarius did not weigh above thirty grains : and of consequence, as twenty-five must have gone to the gold solidus, of which there were six in the ounce, 150 denarii must have gone to the ounce of gold. He is therefore of opinion that the word etpanovwas only another name for the denarius when much reduced in size; probably owing to the great scarcity of silver in Constan- tinople, though in the same city there was plenty of gold ; and of consequence the gold solidus was never diminished. The quinarius diminishes in size along with the other coins ; those of Au- gustus weighing thirty grains, of Severus twenty-five, of Constantine 1. twenty, of Justinian twelve, and of Heraclius only five. A new silver coinage seems to have taken place after the days of this emperor ; as the little we then meet with, which in the best cabinets scarce exceeds a dozen of coins, consists entirely of large un- shapely pieces of coarse metal.

2. The consular denarius had also four silver sestertii, till the as fell to half an ounce, when it was thought proper to coin the sestertius in brass, as it continued to be ever afterwards. ‘ The very last silver sestertius which appears is one with a head of._Mercury, and H. S. ; on the reverse a caduceus p. sepvllivs ; who appears to be the p. sepvllivs macer of the denarii of Julius Csesar. If so, as is most probable, the sestertius was coined in silver down to Augus- tus ; and it is of course not to be expected that any of the brass can appear till Augustus, imder whom they are actually quite common. Not one silver sestertius appears during the whole imperial period ; yet we know that the sestertius was the most common of all silver coins. The consular sestertii of silver, marked H. S., are not uncommon, nor the quinarii ; but the latter are very scarce of all the emperors, if we except one instance, the asia recepta of Augustus.

‘ The Roman gold coinage was still later than that of silver. Pliny tells us, that ‘ gold was coined sixty-two years after silver; and the

scruple went for sixty sesterces. It was after- wards thought proper to coin forty pieces out of the pound of gold. And our princes have by degrees diminished their weight to forty-five in the pound.’ Tliis account is confirmed by the pieces which still remain ; for we have that very coin weighing a scruple, which went for twenty ses- terces. On one side is the head of Mars, and on the other an eagle ; and it is marked “. We have another coin of the same kind, but double, marked

”” ; and its triple ►►//% or sixty ; the i// being the old numeral character for fifty.’

The aurei, or Roman gold coins, were at first forty-eight in the pound ; but they were after- wards diminished in number to forty, owing to an augmentation in the weight of each coin. In the time of Sylla, the aureus weighed no less than from 164 to 168 grains, and there were only thirty in the pound ; but such confusion in the coinage was introduced by that conqueror, that no person could know exactly what it was worth. Till this time the aureus seems to have continued of the value of thirty silver denarii, about one pound sterling ; for about that time it was en- larged a whole third, that it might still be equi- valent to the full number of denarii. But after Sylla had taken Athens, and the arts and man- ners of Greece became objects of imitation to the Romans, the aureus fell to forty in the pound, probably when Sylla had abdicated his dictator- ship. Thus, being reduced near to the scale of the Greek xp”<"oc> it passed for twenty denarii, as the latter did for as many drachmas, being in currency thirteen shillings and four pence sterling. We know from Suetonius that Csesar brought from Gaul so much gold that it sold for nine times its weight of silver ; but the Gallic gold vvas of a very base sort.

In tlie time of Claudius, the aureus was valued at 100 sestertii, or twenty-five silver denarii, at which it continued till the time of Heliogabalus, when it fell to aboui ninety-two grains at a me- dium, or rose in number to fifty-five in the pound. In the reign of Philip, during which the city completed its 1000th year, the aureus was coined of two or three sizes. These are impressed with a head of Rome on one side, and various figures on the other ; but the workmanship is so rude that they are supposed to have been struck in some of the more uncivilised provinces of the empire. Tlie practice of having different gold coins, however, continued under Valerian, Gal- lienus, and his successors. In the time of Gallienus, they were of thirty, sixty-five, and from eighty-six to ninety-three grains ; the dou- ble aurei being from 172 to 183ˆ grains; but the aureus, properly so called, was from eighty-six to ninety-three; those of thirty and thirty-two being the trientes aurei of the HistorivE Augustae Scriptores ; while the larger, from sixty-two to sixty-five, are to be accounted double trientes, and were perhaps called minuti aurei. The va- lue of these diflerent sizes of aurei is not known.

That Aurelian made some alteration in the coin is certain ; but Pinkerton supposes it to have been only in the gold ; because, under him and his successor Probus, the common aureus was of 100 grains, a size confined to those em- perors ; there are likewise halves of about

fifty grains; and double aurei, commonly of very

fine workmanship, of upwards of 200 grains. In the time of Gallienus, the precious metal was so common that this emperor vied in magnificence witli Nero and Heliogabalus. Aurelian, who plundered the rich city of Palmyra, and thus became master of the treasures of the east, obtained such a profusion of gold that he looked upon it to be produced by nature in greater plenty than silver.

In his reign a terrible rebellion took place among the money coiners, which is generally ascribed to his having ordered tlie gold to be restored to its former size, but to pass for no more silver than it had formerly done. So very little silver occurs of this period (and indeed we learn from history that but little was struck) that it is evident no alteration in that coinage could occasion disturbance ; and in the brass no change was attempted. But when he ordered the au- reus, which had fallen to eighty grains, to be raised to about 100, it is not surprising that the contractors should make an uproaj ; for a whole quarter of their coinage amounting, as would seem, to about the whole of their profit, was lost to them. Aurelian judged that, when he found gold so common in the east, it was equally so in the west, and that therefore the moneyers in that part of his empire were making most ex- orbitant profits. Such, however, does not appear to have been the case ; and after his short reign, which did not continue above five months after the alteration, the gold returned to its former course, although a few pieces occur of Aurelian standard, struck, as would seem, in the com- mencement of the reign of Probus his successor.

From this time to that of Constantine I. the aureus weighed between seventy and eighty grains; but in his reign it was changed for the solidus, of which six went to the ounce of gold, which went for fourteen milliarenses and twenty- five denarii as before, the value of silver being now to that of gold as fourteen to one. This new coin continued of the same value until the final downfal of the western empire, gold being always very plentiful in Constantinople, though silver became gradually more and more scarce. The solidus was worth twelve shillings sterling. The gold coins called Bezants in Eu- rope, because sent from Byzantium, were solidi of the old scale, six to the ounce. In Byzantine wiiters the solidi are named from the princes whose portraits they bear, as Michaelate Manue- lati. Solidus is a term used also for the aureus, even in the praetorian edicts of Trajan, and

by Apuleius, who lived in the time of Antoninus ; but in the time of 'alerian, when aurei of differ- ent sizes had been introduced, it became neces- sary to distinguish what particular kind of aurei were meant. Hence, in the Imperial Rescripts published by the Ilistorise Augustae Scriptores, X'alerian uses the terms aurei Philippi and Phi- lippeos nostri vultus for the common aurei. Gallienus uses aurei 'aleriani for his father's coins; aurei Antoniani are likewise put by Vale- rian for coins of the early Antonini, which were of superior standard to any then used.

In the first gold coinage of Rome the aureus was divided into four parts, the semissis of sixty sestertii ; the tremissis of forty ; the fourth, the name of which is never mentioned, of thirty ;

and the scrupulum of twenty. But in a short time these fell into disuse, except the semissis, or half, which also is extremely scarce. It ap- pears to be an erroneous opinion that the semis- sis was sometimes called a denarius aureus. Indeed the aureus itself had this name ; and the name of quinarius would be applied to the semissis with greater propriety than the former. Trientes of gold are found of 'alerian and his son Gallienus, and weigh about thirty grains, while those of Salonia, the wife of Gallienus, weigh thirty-three grains. Under the western empire trientes again made their appearance ; and from the time of Valentinian downwards are the most common gold coins, these being worth about four shillings sterling. The semissis is likewise mentioned, but none occur earlier than the time of Basiliscus. The gold tremissis was the pattern of the French and Spanish gold coins ; as the silver denarius, in its diminished state, was of the Gothic and Saxon penny.

The deities and personifications in Roman coins have so generally their names in the legend, that it is not necessary to give any lengthened description or explanation of them; some few may however be noticed. When an ensign stands alone on the reverse of a Roman colonial coin, without any persons, it shows a colony drawn from one legion ; but when more than one en- sign appears, it evinces the colony to have been drawn from as many legions as there are ensigns. A bull on these coins often represents Apis as a symbol of strength and security : such was pro- bably the bull upon the reverse of the common coin of India, victa, with two stars over him, and the legend securitas reipub. The caduceus marks peace and concord; the cornucopia abun- dance ; the pontifical hat the priesthood. They all appear upon a reverse of Julius Csesar, and are symbols of the concord of the empire, and the plenty which attended his power; the last symbol denoting that he was Pontifex INIaximus. The

‘parazonium’ on Roman coins was a baton of command, and not a pointless dagger, as it has been described by many antiquaries. In later times the globe on an altar, with three stars, is supposed to typify the world preserved by the gods for the three sons of Constantine I. The fort and the gate are symbols of security. Tlie altar is a well known mark of piety : the tripod was a portable altar, used in temples for liquid offerings, as the altar was for solid sa- crifice.

The palm-tree, on both Greek and Roman coins, is symbolic of Phctnicia, where that tree flourished ; as the silphium is of Cyrene, from the earliest times down to those of the western empire.

Titles are generally found upon the face of the medal. These are titles of honor, as Impe- rator, Caesar, Augustus, given to all the Roman emperors after (.)ctavianus ; Dominus, first as- sumed by Aurelian : other titles given to par- ticular persons on account of their virtues, as Pius to Antoninus, and with the addition of Felix to Commodus. Pater Patrire, first bestowed on Cicero, on his discovering and defeating the conspiracy of Catiline, and afterwards assumed by the emperors ; Justus, the title of Pescen- nius ; Beatissimus and Felicissimus, of Diocle-

sian ; Optimus et Clemens, decreed to Trajan by the senate ; Maximus, assumed by Constan- tine ; and Invictus by Victorinus. In the lower empire, Stauracius first, and then Michael Du- cas, and others, assumed the proud addition of BASIAEYS, or king; which was followed by that of AESnOTHS, or despot. Other titles are the names of offices, as cos. for consul, with a number annexed to it, signifying how many times the person had been thus elected : Tribu- nitia potestas, with the year of the tribuneship commonly expressed after the title, as trie. POT. X. or XVI., &c. The office of pontifex maximus, expressed by p. m., was assumed by the emperors, and generally expressed among their titles, from Augustus to Constantine, by whom it was refused : it was re-assumed by Ju- lian, and laid aside by Gratian. Julius assumed the title of dictator perpetuus ; Claudius that of censor; and Domitian made himself censor per- petuus.

The large early copper coins only bear roma in the reverse. Afterwards we find the names and titles of the quaestor or director of the pub- lic treasury, the triumviri monetse, who directed the mint ; the praetor, the curule aedile, the aedile of the people ; the prasfect of the city,

augur, flamen martialis and quirinalis ; and latterly, triumvir reipublicae constituendae, and ad fru- mentum emundum. Of the great magistrates out of Rome, who had moneyers with them, in order, from bullion and the spoil of the enemies, to coin money for paying t]je troops engaged in foreign service, we have the names and titles of imperator, proconsul, propraetor, legatus, legatus pro praetore, quaestor, proquaestor, legatus clas- sis, triumvir colonise deducendae, or reficiendis sacris aedibus. All these titles appear on the reverses of what are called consular coins ; while the obverse bears the head of a deity, generally without a legend. In time the magistrates put the head of some illustrious ancestor on the coins, with his name, as Numa, Ancus Martins, Quirinus, or Romulus ; Brutus, Ahala, and the like. This led the way to Caesar, who first put his own head on his coins, when made perpetual dictator ; with the legend of names and titles on the obverse, and not on the reverse as before. The inscription vox. v. mvlt. x. vox. x. mvltis XX. occurs on many reverses of Roman medals, and most commonly marked on a shield, or within a crown of laurel. Tliis Du Cange in- terprets to refer to the artifice of Augustus, who pretended to lay down his power, and resume it for ten years longer as at the request of tlie senate. This term, he says, was by succeeding emperors shortened to five; and solemn vows were entered into by their subjects for their safety to the end of that period ; nay, that the double of that period might be allotted to their reign, again to be prolonged, on the wishes of their people, to a luture date. This inscrip- tion is also found upon coins of Ciispus, and other heirs of the empire ; and it hence appears that the honor of such solemnities was also con- ferred on them, when created Caesars. The ??? vota decennalia,' as on coins of Pertinax and of Papianus, were only vows to perform the decenaalia, if the emperor should reign ten

years ; while ' primi decennales,' or ' secundi decennales,' imply these games to have been actually performed, and the emperor to have reigned ten or twenty years. On coins of Lu- cilla, Hadrian, Severus, Caracalla, and others, we find voxA pvBLiCA,with a sacrifice; showing that the vows were undertaken with that rite, as they were afterwards performed with solemn games and rejoicings. Coins of Constantine II. and of Constans often bear sic. x. sic. xx., to express the wishes of the people, that, as the emperors had happily reigned ten years, so they might reign twenty.

Tlie following is a table which will greatly assist the student in deciding the country and aera of coins : ???

I. Ancienx Greek Coins. ??? 1. With one or more hollow indented marks on one side, and an impression in relief on the other, are those

of Calcedon on the Hellespont, Lesbos, Abdera in Thrace, Acauchus in Macedon, and ˆvina, or Jigium, in Achaia. This class continues from aoout 900 to 700 B. C. 2. With an indented square divided into segments, having a small figure in one of them ; the rest blank, with a figure in relief on the obverse, are those of Syra- cuse, and other places adjacent. Continue from 700 to 600 B. C. 3. Coins hollow on the reverse, with figures in relief on the obverse, belong to Caulonia, Crotona, Metg,pontum, &c. ; supposed by some to be a local coinage of Magna Graecia ; but probably of equal antiquity with the former. 4. Coins in which a square die is used on one or both sides are those of Athens, Cyrene, Argos, &c. ••• Of Alexander I. and Archelaus I. of Macedon. Disused in the reign of the latter, about A. A. C. 420. 5. Com- plete coins, both in obverse and reverse, occur first in Sicily in the time of Gelo, about A. A. C. 491. 6. Coins of Alexander the Great and his. successors. About the time of this hero the Greek coins began to attain perfection and beauty. It is re-markable that on the coins of this monarch his own portrait seldom occurs. After his death many coins bear his portrait. Trebellius Pollio informs us that some coins, particularly those of Alexander, used to be worn as amulets ; and many of his medals are met with in cabinets bored seemingly with that intention. 7. Coins of the successors of Alex- ander.••• Those of the Syrian monarchs almost equal the coins of Alexander himself in beauty. Those of Antiochus VI. are supposed to be the most perfect patterns of manly beauty any where to be met with. The Egyptian Ptolemies are somewhat inferior. 8. The coins of the Arsaci- dae of Parthia, executed by Grecian artists, are worth notice. 9. The Greek imperial coins being such as have the head of an emperor or empress ; such as have not these impressions being classed with the civic coins, though struck under the Roman power. None of the imperial coins occur in gold. Of silver there are those of Antioch, Tyre, Sidon, Tarsus, Berytus, Caesarea. Eg}‘ptian silver coins of base metal. Syrian silver coins, which sometimes bear on the reverse the club of Hercules, or the Tyrian shell-fish. Those of Sidon bear the image of the goddess Astarte, or her chariot. Tliose of Caesarea in

Cappadocia, are better work than the Syrian. Lycian coins of good workmanship : on the reverse two harps, and an owl sitting upon them. Silver coins of Gelon in Sarmatia, resembling the Syrian. The situation of this town is very much unknown. It seems to have been situated on the north of the Euxine Sea, where some Sarmatic or Sclavonic tribes were mingled with the Scythians or Goths. The Greek

imperial brass coins are very numerous. A series of almost all the emperors may be had from those of Antioch, with a Latin legend on the obverse, and Greek on the reverse. Those of Bithynia and Phrygia are remarkable for good workman- ship. The coins of Tarsus, remarkable for their curious views of obj ects, are almost in perspective. The Egyptian coins, from Augustus to Nero, are worse executed than afterwards. From Nero to Comraodus they are often of admirable work- manship, and in a peculiar style, distinct both from the Greek and Roman. From the time of Commodus the Egyptian brass coins of the Roman period are likewise of excellent work- manship, especially in the time of Antoninus Pius.

II. Ancient Roman Coins. ††† 1. The consu- lar coins, called also the coins of families, and arranged alphabetically in cabinets, according to the names of the families which appear on them. They are,

Brass Coins. ††† These consist chiefly of large pieces, of rude workmanship, without any inte- resting imagery. They are generally kept in boxes apart by themselves. The as bears the head of Janus ; the semis, of Jupiter, with S ; the triens, of Minerva, with four cyphers ; the quadrans, of Hercules, with three cyphers ; the sextans, of Mercury, with two cyphers ; and the uncia bears the head of Rome, with one cypher. In all these pieces the prow of a ship is con- stantly the figure on the reverse, with very few exceptions. Sometimes, indeed, they have a shell, two heads of barley, a frog, an anchor, or a dog, on the reverse. About the time of Julius Caesar both the obverses and the reverses of the coins began to be altered.

Silver. ††† Of this the denarius was the first and principal coin. It was stamped originally with X, denoting that the value was ten asses. On the reverse were Castor and Pollux, or a chariot of Victory. Afterwards the busts of various deities appear ; and in the seventh century of Rome the portraits of illustrious persons de- ceased are met with: but till the time of Julius Caesar no portrait of any living person is to be met with, Julius himself being the first who assumed that lionor. Tlie workmanship on the best and worst silver is much the same. The reverses are very curious, and point out many remarkable events in Roman history; but none of these occur till about a century before the Christian aera. The large denarii, with Roma, are the most ancient; and some of these bear the Pelasgic A, not the Roman. The silver ses- tertii have a head of Mercury, with a caduceus on the reverse. Tlie quinarii have always a head of Jupiter, with a Victory on the reverse.

Gold. ••• Most of these are of great value. Their number dues not exceed 100; those of brass 200;

and of silver 2000. The aureus is the geneial gold coin; but two or three gold semisses of families likewise occur.

2. Roman imperial coins. Brass. ••• ˆTh's is of three sizes ; large, middle, and small. The first forms a most beautiful series, but very expen- sive, ˆfhe various colors of the patina have the finest efl"ect. It is the most important of all the Roman coins, and exceeds even the gold in value.

The middle brass is next in value to the for- mer; and in it are many rare and curious coins, particularly interesting to Britons, as elucidating the history of the island.

The small brass series abounds also with cu- rious coins. They are scarce till the time of \ alerian and Gallienus, but very common after- wards. Mr. Pinkerton recommends, therefore, to form a series in silver as well as brass, as the cheapest of all the Roman coins. ' In this series,' says he, ' it is a common fault to arrange many coins which have been plated with gold or silver, the forgeries of ancient times, but which time has worn off, either wholly or in part. All real brass coins have the S. C. till the time of Gal- lienus; as the senate alone had the power of striking brass, while the emperor himself had that of gold and silver. When the S. C. there- fore is wanting, the coin was certainly once plated ; as, in general, the different type and fabric, being those of gold and silver, sufficiently show themselves. With Pertinax, A.D. 192, there is a temporary cessation of small brass ; nor after him do any princes occur in that series till 'alerian, A D. 254, excepting Trajanus De- ems, A. D. 250 only. After Vˆalerian the series is continuous and common. The brass coinage gradually declined in size from the time of Se- verus ; so that parts of the as could not be struck, or at least it was held unnecessary to strike them. Trajanus Decius attempted in vain to re- store the coinage; and Valerian and Gallienus were forced to issue denarii aerei and small assa- ria. The series of large and of middle brass are of two fixed and known sizes ; the former about that of our crown, the latter of the half crown : though after Severus they gradually lessen. But the small brass takes in all parts of the as ; and every brass coin not larger than our shilling be- longs to this series.

The minimi, indeed, or very smallest, it is proper to keep apart. The coins of Julius Caesar in this size are of peculiarly fine workmanship. They bear his portrait reverse of Augustus, or the reverse has a

crocodile, Egypto capta. There are several with Marc Antony, and some with Cleopatra; but the more common pieces are those vvith only numerals on the obverse, which go to the length of XIII. ; probably tickets for the baths. From the time of Nero to that of 'espasian no small brass occurs ; but there are many of the latter, and of his son Titus ; while Domitian has as many as Nero, and Domitia his wife almost as many. Succeeding emperors to Pertinax have also many brass coins; but from his time to that of Valerian there are no real small brass, excepting those of Trajanus Decius. After Gallienus there are many coins of this kind ; and Mr. Pinkerton mentions one in Dr. Hunter's

cabinet of an unknown person named Nigrianus. The coin seems to have been struck at Carthage; and our author concludes that he was an African usurper, father to Nigrinianus.

Silver. ††† This series is very complete, and the cheapest of any, especially as the small brass becomes a fine supplement to it ; the latter being had in plenty when the silver becomes scarce, and the silver being plentiful when the brass is scarce.

Gold. †††The Roman imperial gold coins form a series of great beauty and perfection ; but, on account of their great price, are beyond the pur- chase of private persons.

The colonial coins (speaking generally) occur only in brass; the colony of Nemausus being the only one allowed to coin silver. They begin in Spain with Julius Caesar and Antony, and cease with Caligula, who took away the privilege of coinage from the Spanish colonies. The most beautiful are those of Corinth. The other re- markable colonial coins are those of Emerita, Ilice, Terraco, Cassandria, Babba, Berytus, Cas- sarea, Petrae, Emisa, Heliopolis or Balbec, Pto- lemais, Sidon, Tyre, Deulton, Diom, Troas, Rhesania, and Neapolis of Samaria, which bears a representation of Mount Gerizzim with the temple on it. On some of these coins we meet with fine representations of temples, triumphal arches, gods, goddesses, and illustrious persons. But coins with those representations are by no means common ; the colonial coins till the time of Trajan bearing only a plough, or some other simple badge of a colony. Camelodunum is the only colony in Britain of which we have any coins.

The minimi. ††† This includes the smallest coins of all denominations ; most of them do not ex- ceed the size of a silver penny. No series of them was ever formed by any person, except the abbe Rothelin, whose collection passed to the queen of Spain. The reason of the scarcity of these small coins is probably their diminutive size.

Numbers of Roman coins are found in all countries once subject to that powerful people. Some have been met with in the Orkneys, and many in the most remote parts of Europe, Asia, and Africa, known to the ancients.

No Indian or Chinese coitis are to be met with till a very late period ; and then so rude as scarcely to be worth notice. Voltaire mentions a collec- tion of ancient Chinese and Indian coins made by the emperor of China in 1700; but Pinkerton supposes it to have consisted only of the Greek and Roman money which had been introduced into these countries.

The Hebrew shekels, originally didrachms, but after the time of the Maccabees tetradrachms, are almost all forgeries of modern Jews, as well as the brass coins with Samaritan characters upon them. They have all a sprig upon one side and a vase on the other. The admission of one of them into a cabinet would almost be a disgrace to it.

Phaniciun and Punic coins are very interesting on account of the great power and wealth of these nations. The alphabets have been cleared by their relation to the Hebrew and Syriac lan-

guages. The coins of Palmyra come under the same denomination with the former, Palmyra being a Syrian city.

The Etruscan coins have the characters of that nation, which have been explained by their affi- nity to the Pelasgic, or oldest Greek and Latin.

The Spanish coins are inscribed with two or three alphabets allied to the old Greek or Punic; but the inscriptions have not been sufficiently explained.

Gaulish coins. ††† These are numerous ; but the most ancient have no legends; and even after the Greek letters were introduced into Gaul, by a colony at Marseilles, the legends are very dif- ficult to be explained.

British coins. ††† From a passage in Caesar’s Commentaries it has

been inferred, that the Bri- tons used some sort of coins even in his time. Rude coins of copper very much mingled with tin are frequently found in England; which may probably be some of the ancient British money. They are of the size of a didrachm, the common form of the nummus aureus among the ancients. After the time of Csesar coinage increased among the Britons ; and there are many found of Cuno-belinus, mentioned in the Roman History. Most of these have on one side Cuno, with an ear of wheat, a horse, a kind of head of Janus, or other symbol; and have frequently also the letters Camu ; supposed to mean Camelodunum. Some- times the word Tascia occurs ; the meaning of which has never yet been explained.

The coins of Japan are thin plates of gold and silver, large and oval, stamped with little orna- ments and characters. The only known ones of China are copper, about the size of a farthing, with a square hole through the middle, in order to their being strung for the convenience of enu- meration or of carriage. They bear an inscrip- tion in Chinese, expressing the year of the prince's reign, without his name. It is said that Canghi, the emperor, who died in 1722, after a reign of sixty-one years, formed a complete cabinet of Chinese coins, and appointed a Mandarin to keep it. The coins of Tartary, posterior to Jenghis Khan, are rude, and generally present only in- scriptions. In Thibet, Pegu, and Siam, the coins are various; but evidently of late origin, and generally bearing inscriptions on both sides. Such also are those of many smaller states in Eastern Asia. In the ancient India, where, the Mahometan faith is predominant, the precept of Mahomet, which forbids the representation of any living creature has had a pernicious effect on the arts; and it is doubtful whether any Indian coins exist before the time of the Moguls. But some old coins have been found near Cal- cutta, of gold, silver, copper, and tin, all mingled in one base mixed metal. On one side they bear a warrior with a sword, and on the other a female idol. The later coins of India are well known, such as the pagoda, rupee, and cash (the most common copper), whence our word. All these are very thick, like the old Egyptian. On one remarkable set of rupees are represented the twelve signs, a lion on one of them, a bull on another, &c. ˆc. The Portuguese, English, French, and Dutch, sometimes struck coins in their settlements with Persian inscriptions on one

side and Latin on the other. Rupees and cash are known of Elizabeth, of Charles II., of the year 1730, and of other periods. The coins of

Persia have continued on the Arabian model, even after the Arabian caliphs lost their domi- nion in that country, and bear on both sides pious inscriptions from the Koran. The Persian cop- per, however, has the sun and lion, the arms of Persia, on one side. Of Mannus, and some other petty kings in Arabia, we have coin during the imperial period of Home. The brass coins of Haroun Al Ilaschid, the Charlemagne of Asia, and his contemporary, and of other powerful princes who resided at Bagdad, have, on the re- verse, an Arabic inscription ; the obverse is a transcript of any old Greek or Roman coin that fell in the way of the moneyer. This is often very perplexing to a tyro. The gold and silver coins have many inscriptions. The later Arabian coins, which are silver, bear the name and titles of the prince on one side, and some sentence from the Koran, &c. on the other. The more modern are in the shape of a fish-hook, with Arabic in- .ˆcriptions. The coins of Turkey resemble those of Persia and Arabia, having merely inscriptions on both sides. The coins of Morocco, Fez, Tri- poli, Algiers, Sec, are upon the Mahometan plan of mere inscriptions.

Passing over Abyssinia, and the interior of Africa, as little known, and the civilised empires of America, Mexico on the north, and Peru on the south, where coinage was not practised, we proceed to the coins of Europe. In Italy, when the Roman empire in the west ceased with Romulus A. D. 476, the Gothic kings struck coins till Teias, the last of them, was conquered in 552 by Narses, the general of Justinian. Then the exarchs of Ravenna, viceroys for the Byzan- tine emperors, issued copper with felixravenna, &c. ; but the gold and silver of the Greek em- perors sufficed for Italy. After Charlemagne, about the year 780, made a great revolution in Italy, there are coins of him struck in Rome and Milan. In the next century the modern coins of Italy begin with the silver pennies of different states. The papal coins originate with Hadrian I. 772 ××× 795, to whom Charlemagne gave leave to coin money. The silver pennies continued till a late period, with the name of the pope on the one side, and scus petrus on the other. On these coins there are rude portraits of some of the popes. Afterwards, when the pope ceased to have power in Rome, from Paschal II. till Bene- dict XI. in 1303, there are pennies of the Roman senate and people, bearing on one side Peter, ROMAN PRINCIPE, on the other Paul, SEN AT. POPUL. Q. R. In the middle ages the chief bishops of Italy, France, and England, struck coins, as well as the pope. The first gold coin is of John XXII. 1316. The coins of Alexander VI., Julius II., and Leo X., are remarkably elegant.

Milan. ××× The coinage began with Charlemagne. The first coin of the family of Visconti occurs in 1330, under Azo. The set finishes with

Louis XIL

Naples. ••• Coinage begins in 840 and 880, with duke Sergius and bishop Athanasius. The next coins are of Roger of Sicily, and Roger II. in 1130, William I. II. and Tancred. Naples and

Sicily were subdued in 1194 by the emperor oi Germany; in 1255 Manfred appears; in 1266 Charles of Provence ; and others till Joan in 1414: after which follow the house of Arragon, and later kings.

Venice begins in the tcntli century. The first coins are silver pennies marked Veneci. Then follow the coins of Henrico Dandulo in 1192, of Ziani in 1205, &c. Gold was first coined at Venice in 1280, and copper in 1471 ; but the silver groats are as old as 1192.

Florence. ••• Silver was coined here in the twelffn century or before; but in 1252 the first gold coins struck in Europe after the eighth century made their appearance, and were named florins from the flower of the lily upon them. They were imitated by the popes, by France, and Eng- land. They have on one side St. John the Baptist standing, on the other a large fieurs de lis, and it is not doubted that the French fleur de lis took their origin from these coins. They weigh a drachm, and are no less than twenty-four carats fine, according to Italian writers, and are worth about twelve shillings.

Geneva first began to coin money in 1129, under the government of Conrad. Those of the dukes of Savoy began in the same century.

Aquileia. ••• Coins were issued from this city by the patriarchs from 1204 to 1440.

Ferrara. ••• Coins of the marquises from 1340.

French coins. ••• During the race of Clovis, from 490 till 751, the coins are chiefly gold trientes, with some solidi and semisses. The former are of good workmanship, with the heads of kings. The reverse has a cross with the name of the town where they werQ. struck.

Tlie coinage did not begin to improve till 1226 under St. Louis, when the groat appears. Its name in Italian is grossa, in French grosse, in English groat, or great coin ; so called from its size in com-: parison with the penny ; and it passed from Italy to France, to Germany, and to England. After the conquest of France by the English, base coins of many kinds were introduced ; and in the year 1574, in the time of Henry III., copper was first introduced into the French coinage. Besides these, the other remarkable coins of France are, the blancs or

billon groats, first issued in 1348; the ecus a la couronne, or crowns of gold, so called from the crown on one side, and begun by Charles VI. in 1384 ; those of Ann of Bretagne in 1498 : the teston, or piece with the king's head, of Louis XII. ; the Henri of Henry II., with Gaul sitting in armour, and a victory in her hand. And in 1642 Louis XIV. takes the title of Cataloniae princeps. The first louis d'or made its appearance in 1640.

Spanish coins. ••• The most early series of these consist almost entirely of trientes finely done. On one side they have the head of the king with his name; and on the other a cross, with the name of the town, commonly in Bcetica, or the south port of Spain, where there were very many Roman colonies, and which was fertile to a pro- verb. The Moresque coins of Spain, like those of the rest of the]\Iahometan states, present us only with inscriptions on both sides. Indeed the Mahometan religion, by its absolute re- fusal to allow the representation of any living

creature, has prevented the progress of coinage in any degree throughout those regions which it has overspread. The inscriptions on the ancient Spanish coins are in theCusic or old Arabic cha- racters.

Germany. ••• The emperors and many of the cities, particularly those called Hanse Towns, issued money ; and many of the coins issued by the cities were superior in elegance even to those issued by the emperors.

Denmark. ••• Here the coinage begins with Ca- nute the Great in 1014. The pieces are at first extremely rude, ornamented only with rings and Runic characters. These are succeeded by cop- per pieces, some of which have a cross, others a pastoral staff on one side, with the letter A on the other. Later coins have strokes iiii, &c., all round them ; but those of Harold, Hardicanute, and Magnus Bonus, in 1041, are of neat work- manship, and have the portraits of the princes at half-length. The coins of Nicholas or Neil, as he is called by the Danes, are rude, as well as those of Waldemar I. and the celebrated Marga- ret. In 1376 Olaf caused money to be struck with a grinning full face, with a crowned O upon the other side. Silver was first coined in Den- mark by Philippa queen of Eric, and daughter to Henry IV. of England.

Sweden. ••• The coinage of this kingdom began in 818 under

Biorno, on the plan of Charle- magne. These coins are marked with a cross. Next follow those of Olaf, in 1019, which were struck on the English model. During the time that Sweden was subject to Denmark, or miserably harassed by the Danes, the coins of both king- doms were the same; but after tlie time of Gus- tavus Vasa many elegant pieces appear. In 1 634 dollars were coined, with the portrait of Gustavus Adolphus, who was killed two years before: on the reverse they have the arms of Sweden, with the chemical marks of mercury and sulphur. In 171C, 1717,and 1718, Charles XII., being in extreme want of money, issued small copper coins with Saturn, Jupiter, Mars, &c., upon them to go for dollars ; and on account of this scheme, baron Goertz, the suggester of it, was brought to the block.

Norway. ††† The coins of this country begin with Olaf in 1006; after which time there are various coins of other princes ; but copper was not coined till the year 1343. Besides the coins already mentioned, there are ecclesiastic coins ot France, Germany, Denmark, Sweden, Norway, &c. Those of Denmark and Sweden are nume- rous ; but the Norwegian coins of this denomina- tion are rare. Mr. Pinkerton describes a silver one in his possession as having arms and a mitre, with the inscription on one side Sanctus Olaws Rex Norvey ; on the reverse Olaws Dei Gra. Arcep. Nid'sen, meaning Nidro- siENSis, or archbishop of Nidros, now Drontheim.

Bohemia. ††† The coinage of this kingdom ap- pears at a very early date, viz. in the year 909, under duke Boleslaus I. These coins are fol- lowed by others of Boleslaus II. and Emma his wife in 970 ; of Boleslaus III. in 1002 ; Jaromir in 1020; Udalrich in 1030, and other princes. The bracteate money of Ottocar I. was coined in

1197.

Poland. ††† The coinage of this country is nearly

as ancient as that of Bohemia. The coins are on the German model, but no particular account of them has been published.

Russia. ††† None of the Russian money appears to be more ancient than the thirteenth centmy ; the first are the kopecks or silver pennies, which have upon them rude figures of animals on one side, and a man standing with a bow or spear on the other. There are likewise coins of Moscow, struck by Aristoteles the architect in 1482, the roubles or dollars and their halves. There are some of the impostor Demetrius in 1605, which are very scarce.

Prussia. ††† The first Prussian coins were struck at Culm by the Teutonic knights in 1230. They were silver pennies, and upon the German plan. In the next century were struck shillings, groats, and schots ; the last were the largest, and are ex- tremely rare. They have the Prussian shield, an eagle surmounting a cross, with a rose-shaped border, moxeta dominorum prussije: on the reverse is a cross fleurie, within a border of a similar kind, having the inscription honor ma-GisTRi justitiam diligit. ††† Gold coins were struck in the same century. In the time of Co- pernicus the money was so debased that twelve or thirteen marks were worth but one of pure silver.

England. The English coins are of various kinds.

Heptarchic coin are only of two sorts, viz. the skeatta or penny of silver, and the styca of cop- per. Few of the pennies appear till after the year 700 ; though some are met with which bear the name of Ethelbert I. king of Kent, as old as 560. At first they had only rude figures of ser- pents ; but in later times legends were likewise added. Most of these pennies have pagan sym- bols upon them. The styca was only coined in Northumberland, and was a very small piece about the value of half a farthing.

Coins of the chief monarchs of England. ††† The coins of the chief monarchs form almost a com- plete series from the time of Egbert to Edgar. The only chief monarch of whom there are no coins is Ethelbald, who reigned in 857. Most of these coins bear rude portraits : but the re- verses are sometimes curious and interesting. Some have views of cathedrals and other build- ings ; particularly one of Edward the Elder in 900, which has the cathedral of York with three rows of windows, round arched, as the other Saxon and Norman buildings ; the Gothic arch being quite unknown till after the twelfth cen- tury. Some coins of Anlaf king of Northumber- land have the famous raven, the Danish ensign ; and those of other princes have frequently very curious reverses.

Ecclesiastic coins appear of the archbishops of Canterbury, Wulfrud, in 804, Ceolnoth in 830, and Piegmund in 889.

Coins of the kings. ††† The silver penny, which had begun during the heptarchy, continued to be the general coin after the kingdom had been united under one head ; and extends in a con- tinued series from Egbert almost to the present reign. The only kings wanting are Edmund Ironside, Richard I., and John. At first the penny weighed twenty-two grains and a half; but towards the close of the reign of Edward III. it

fell to eighteen grains; and in that of EiMard IV. to eleven. In thetimeof Edward V'l. Awas diminished to eight grains ; and in queen Eli- zabeth's reicfn to 7|^ ; at which it still continues.

Halfpennies and farthings were first struck in silver by Edward 1. in 1280; the former con- tinued to the time of the commonwealth, but the latter ceased with Edward VI. The groat was mtroduced by Edward III. in 1354, the half- groat or twopence is of the same date.

Shillings were first coined by Henry VII. in 1503. At first it was called testoon, from the teste, tete, or head of the king upon it : the name shilling being derived from the German schelling ; under which appellations coins had been struck at Hamburgh in 1407. The crown was first coined in its present form by Henry \Tn. For- merly it had appeared only in gold, whence the phrase of crowns of gold ; though these indeed were the largest gold coins known for a long time in France and other countries on the continent being worth about ten shillings sterling. They had their name from the crown stamped on one side, and were first coined by Charles VI. in 1384, and continued till the time of Louis XI'. The halfcrown, sixpence, and threepence, were coined by Edward VI. In 1558 queen Elizabeth coined three half- penny, and in 1561 three farthing pieces; but they were discontinued in 1582. From the year 1601 to the present time the coins of England remain the same.

Gold was coined in England by Henry III. in 1257 ; the piece was called a gold penny, and was larger than the silver one ; and the execution is by no means bad for the time. The series of gold coinage, however, commences properly from Ed- ward III. In 1344 this monarch first struck florins, in imitation of those in Italy ; and it is remarkable, that though these coins, at the time they were first issued, bore only six shillings value, they are now intrinsically worth nineteen shil- lings ; so much has the value of gold increased since that time. The half and quarter florin were struck at the same time, but only the last has been found. The florin, however, being in- convenient, gave place to the noble of 6s. 8d. value, and exactly half a mark. The latter had its name from being a limited sum in accounts ; and was eight ounces in weight, two-thirds of the money pound. It is sometimes also called selibra, as being one half of the commercial pound of sixteen ounces. The noble had its name from the nobility of the metal ; the gold of which it was coined being of the finest sort. Sometimes it is

called rose noble, from both sides being impaled in an undulating circle. It con- tinued with the half and quarter noble to be the only gold coin till the angels of Edward IV. ap- peared in 1465. These had their name from being stamped with the image of Michael and the dragon. The angelites of 3s. 4cl. value were substituted in their place. In 1527 Henry VIII. added to the gold coins the crown and half crown at their present value ; and tnc same year he gave sovereigns of ––l 2s. 6d. ana ryals of lis. ‘3d. angels at 7s. 6d. and nobles at their old value of 6s. Qd. In 1546 he caused sovereigns to be coined of the value of ––l, and half sovereigns in proportion- His gold crown Vol. XVI

is about the size of our shilling, and the half crown of sixpence, but thin. All his coins, however, gold as well as silver, are much de- based ; and it was not without much labor and trouble that Edward VI. brought it back to its former standard. On the union of the two crowns, James gave the sovereign the name of unite ; the value continuing of ––l aˆ before. He coined also rose-ryals of ––l 10s. value, spur-ryals of 15s., angels of 10s., and angelets of 5s. Under the commonwealth, the sovereign got the name of the twenty-shilling piece, and continued cur- rent till the coinage of guineas. These were so called from their being coined of Guinea gold, and were at first only to go for ––l, though by a universal but tacit consent they always passed for ––l Is. Half-guineas, double guineas, and five guinea pieces, were also coined during the same reign. Quarter guineas were coined by George 1., but they were found so troublesome, on account of their small size, that they were stopped within a year or two when leceived at the- bank of England. The guinea rose to ––l . Is. 6d., and continued to increase in value till 1696, when it was as high as ––l 10s.; but after the recoinage, in 1697 and 1698, it fell by de- grees, and at 1717 was at its old standard of ––l Is., and at that time silver was fixed at its present standard value, viz. one to fifteen and a half in weight.

Though the first money coined in Britain was copper, yet, except the Northumbrian stycas, no copper coin was found in England from the time of the Saxon conquest till the year 1672. An aversion to a copper coinage, it seems, was pre- valent throughout the nation ; and qileen Eliza- beth, who without hesitation used base monev for Ireland, yet scrupled at coining copper for England. This want of small coin occasioned such an increase of private tokens for halfpennies and farthings that it became a seriotis object to government; and in 1594 a copper coinage was seriously thought of. This year a small copper coin was struck, about the size of a silver two- pence, with the queen’s monogram on one side, and a rose on the other; the running legend on

both sides being the pledge of a halfpenny. Of this there are patterns both in copper and silver, but both of them soon fell into disuse. On the 19th of May, 1613, king James, by royal proclamation, issued farthing tokens. They are generally of the same size with the two-pence, with two sceptres in saltier surmounted with a crown, and a harp upon the other; with an in- tention, as it would seem, that if they were re- fused in England they might pass in Ireland. In 1635 Charles I. coined those with the rose instead of the harp ; but the circulation of these was en- tirely stopped by the vast number of counterfeits which appeared, and by the king's death in 1648. After this the private tokens began again to cir- culate, till put a stop to by the coinage of farthings in 1670. The workmanship of the tokens is quite contemptible. In 1672 the halfpence as well as the farthings, which had been struck two years before, began to circulate. They were of pure Swedish copper, the dyes engraved by lloettier ; and they continued till the year 1684, when some disputes arose about the copper lately

obtained from the English mines. Tin farthings were coined with a stud of copper in the centre, and inscribed round the edge as the crown pieces, with NUMMORUM FAMULUS, 1685 Or 1686. In 1685 halfpence of the same kind were coined; and the tin coinage continued till the year 1692, to the value of more than ––65,000 ; but next year the tin was all called in by government, and the copper coinage recommenced. The farthings of queen Anne are all trial pieces, excepting those of 1714, the last year of her reign. ' They are,' says Mr. Pinkerton, ' of exquisite workmanship, exceeding most copper coins either ancient or modern, and will do honor to the engraver, Mr. Croker, to the end of time. The one whose re- verse is Peace in a car, pax missa per orbem, is the most esteemed; and next to it the Britan- nia under a portal. The other halfpence and farthings are less valuable.'

Scotland. ––– Silver pennies of Alexander I., who reigned in 1107, are believed to exist; and there certainly are some of Alexander II. in 1214. There are likewise coins of David I. in 1124; but perhaps none of Malcolm IV. his successor, whose reign was very short. There are many coins of William I. in 1165, and a large hoard of his pennies was found at Inverness in 1780.

The money of Scotland continued to be of the same value with that of England, till the country was drained by the vast ransom of David II., after which it became necessary to reduce its size ; and so much did this diminution affect England, that Edward III. fdund himself obliged to lessen the English coin also. The diminution of the Scottish coin, however, continued still to go on until it became impracticable to keep par with that of England. In the first year of Ro- bert III. it passed only for half its nominal value in England; in 1393 Richard II. ordered it only to go for the weight of the genuine metal it contained. In 1600 it had sunk to such a degree as to pass only for a twelfth part of the English money, and continued at that low ebb till the coinage of Scotland was entirely cancelled by the union of the two kingdoms.

Of silver coins we have only pennies till tlie year 1293, when, Edward I. having coined half- pence and farthings, Alexander III. of Scotland coined also halfpence, of which we have a few, but no farthings are to be met with ; but there are silver farthings of Robert I. and David II. The latter introduced the groat and half groat, which completed the set of Scottish silver. It continued unaltered till the time of queen Mary, when they all ceased to be coined in silver, on account of the high price of that metal. In 1533 shillings were first coined, with the bust of the queen on one side, and the arms of France and Scotland on the other. The silver crown was first coined in 1565, which went for thirty shillings Scots ; less pieces of twenty shillings and ten shillings have likewise been struck ; and marks of silver, worth three shillings and four pence English, were also coined about the same time. These coins have upon them Jie marks XXX. XX. X. to denote their value. They are commonly called Cruickstone dollars, from the palm-trees upon them, mistaken for a remarkable yew at Cruickstone near Glasgow, where Henry

Darnley resided. It is described, however, in the act as a palm, with a ‘ shell padoc ‘ (a tor- toise) crawling up. This alludes to Darnley’s marriage with the queen, as the motto from Pro- pertius, dat gloria vires, also implies. The motto NEMO ME iMPUNE LACES3ET first appears on the Scottish coins in 1578, and the invention is given to the celebrated Buchanan. In 1582 the crown of an ounce weight went for forty shillings Scots, and was accordingly marked XL. In 1397 the mark was L., the Scottish money being then only one-tenth of the English : the mark was LX. in 1601, the value being then re- duced to one-twelfth, at which it has ever since continued. In the time of Charles I. half-marks, forty and twenty penny-pieces were coined. In 1 675 the Scottish dollars first appeared, in value fifty-six shillings Scots, with halves and quarters of proportional value. In 1686 James VII. coined sixty, forty, twenty, ten, and five shilling pieces ; but only

those of forty and ten shillings are known, with these numbers under the bust. At the union of the kingdoms all the Scottish coins were called in, and recoined at Edinburgh, with the mark e under the bust to distinguish it ; since which there has been no coinage in Scot- land. The Scottish silver coins are in general equal, if not superior, in the workmanship to the English.

Gold was first issued by Robert II., about thirty years after Edward III. of England had coined the same metal in that country. The pieces were at first called St. Andrew's, from the figure of that tutelar saint upon the cross, and who appears on the obverse with the arms of Scotland, and on the reverse a lion in a shield. The lion was another name for the largest gold coin in Scotland, from the arms of the kingdom upon it. The next was the unicorn under James III., which were followed by the bonnet-pieces of James V. These last are of admirable work- manship, being almost equal to the ancient coins in this respect. In imitation of the French, the monarch we speak of diminished the size of the coin without lessening its weight ; an im- provement not adopted by the English for a whole century. The last gold coin in Scotland was the pistole and half pistole, of twelve and six pounds Scots. These coins have the sun under the head. The gold coins of Scotland fell in the same proportion with the silver.

Tlie copper coinage of Scotland is of more early date than that of England. It was pre- ceded by money of billon, or copper washed with silver, called black money. James III. first coined black farthings in 1466; and this is recorded by historians as one of his greatest faults. This kind of coinage, however, continued as late as the reign of James VI. In his time the true copper coinage began ; but, as the value of Scottish money had now declined almost to the utmost, the pieces suddenly assumed a form almost resembling that of the French coins. The bodle, so called from Bothwell the mintmaster, being equal in size to the Hard, and worth two pennies Scottish, was stnick. The billon coin, formerly called bas piece, and worth six pennies Scots, was now coined in copper, and termed the bawbee. Thus it corresponded with the French

half sol and English halfpenny, the Scots penny being now equivalent to the French denier. Some pieces named Achesons were coined by James VI. in 1582, when the Scottish money was to the English as one to eight; but, on its being still farther reduced, they went for eight

pennies, a third more than the value of the bawbee. Be- sides these there were the bardie and plack, the former being worth three and the latter four pen- nies Scots. This coinage continued through the reigns of Charles I. and XL; but Scottish coins of the former are yjerhaps the scarcest of any.

Ireland. ††† The first coins introduced into this kingdom seem to have been those of the Danes, and which have only a number of strokes round them instead of letters. In the tenth century, however, this coinage had been considerably im- proved ; and in 930 and 994 there are pennies struck in Dublin, with the inscription on Dvfli or Dvi-Li, Duflin or Dyflin being the Danish name of that city. There are likewise coins of the Irish princes themselves, and of the English monarchs, struck in Ireland as early as the ninth century ; and it is asserted by some that Ireland, even in these days, had been conquered by Eng- land ; of which, indeed, these coins seem to be a proof. None of the Irish coins of Henry II. are to be met with ; but we have some of the coins of Jolin ; and from his time to that of Henry V. tlie Irish coins are known by a triangle enclosing the king's head, which appears also upon the coins of other nations at this period. The harp does not appear upon the Irish coins till the time of Henry VIII. Till the time of this monarch the English and Irish coins are the same ; but the same debasement of the coin which at that time took place in England ex- tended also to Ireland; but in 1601 copper half- pence and farthings were coined also for this kingdom. These circulated in Ireland when James VI. issued his farthing tokens of copper, the latter being of two sizes, that if they failed in England they might be sent to Ireland as pennies and half-pence. In 1635 a mint was established in Dublin by Charles I. ; but it was stopped by the Irish massacre, and the many disturbances which followed ; since which lime the scheme has not been resumed. After the massacre, St. Patrick's halfpence and farthings were coined by the Papists, bearing the legends FLOREAT REX, and on the reverse ecce grex ; on the farthing quiescat plebs. Copper tokens were struck by towns and tradesmen, as in Eng- land and Scotland. In 1680 halfpence and far- things were issued by authority, with the harp and date. In 1689 James II., having invaded Ireland, instituted a mint, and coined shillings and half crowns of all the refuse metal he could find, particularly some brass guns were em- ployed, whence the coinage is commonly called gun money. Even this metal, however, soon became so scarce, that a diminution m its size is quite apparent from June 1689 to July 1690; and, as the month of their mintage is marked upon them, this decrease is easily perceived. In March, 1690, pennies of lead mixed with tin were issued; and on the 15th of June, the same year, crowns of white metal were coined ;

but these are now very scarce In 1722 the patent for

coining halfpence and farthings was given to William Wood which excited such discontent in Ireland. From the small size allowed by the patent to these pieces, it was supposed that the patentee would have gained ––60,000, but as he caused them to be struck of a size still smaller, his gains were estimated at ––100,000. See Coins.

The first Modern Medals of gold were those of David II. of Scotland, struck between the years 1330 and 1370. Only two of them now exist ; one in the collection of Mr. Barker of Birmingham, and the other in that of Dr. Hun- ter. In 1478 there is a medal of James III., sent to the shrine of St. Amboise in France. It is described as of two inches and a third in dia- meter ; the weight nearly two ounces ; having on the obverse a beardless king, with long hair, sitting on a throne, holding in one hand a naked sword, in the other a shield, with the Scottish arms. On the borders of the canopy above the throne is an inscription in Gothic letters, in mi deffen, being corrupt French for in my defence ; a common motto in the Scottish arms. Above the canopy is villa berwici : the reverse bears St. Andrew and his cross, salvum fac populvm TUUM, DOMiNE. There is also a medal of James IVˆ. in the collar of St. Michael, having on the reverse a Doric pillar surmounted by a young Janus, standing on a hill, beyond which is the sea, and land on either side. Tliis, however, is by some suspected to be a forgery.

The most remarkable Scottish medals are those of the unfortunate Mary. The first is pro- perly French, having been issued at her corona- tion as queen of France, along with her husband king Francis II. On the obverse of this piece there are portraits of Francis and Mary, face to face, with three legends around them, the outermost containing their titles ; tlie middle one the following sentence : hora nona

DOMINUS J. H. S. EXFIRAVIT HELLI CLAMANS ;

the innermost the name of the city (Paris). On the reverse are the arms of France and Scotland. Fine testoons were also coined upon the same plan, and are now so rare that Dr. HuTiter gave ten guineas for one he has in his collection- The same portraits appear on the fine crown of Mary and Henry, in 1565, which is so rare as to be esteemed a medal of the highest value ; and Mr. Pinkerton imagines that if brought to a sale it would bring forty or fifty guineas.

Another remarkable medal of Mary represents her full-faced, and weeping, with the inscription,

0 GOD, GRANT PATIENCE, IN THAT I SUFFER

VRANG. The reverse has, in the centre, qiho

CAN COMPARE WITH ME IN GRIEF? I DIE AND

DAR NOCHT SEEK RELIEF; with this legend around, hourt not the (figure of a heart) QUHAis JOY THOU ART. There are also many counters of this unfortunate princess, being thin silver pieces of the size of a shilling. ‘They all appear,-‘ says Mr. Pinkerton, ‘ to have been done in France by Mary’s direction, who was fond of devices. Her cruel captivity could not debar her from intercourse with her friends in France, who must with pleasure have executed her orders, as affording her a little consolation.’ The coronation medal of Charles I., struck at

Edinburgh for his inauguration, June 18th 1663, is remarkable as being the only one ever coined of Scottish gold, and the first in Britain struck with a legend on the edge. With respect to the workmanship, it is inferior to Simon’s. Of these medals only three are known to exist, of which one is in the Museum. It is not uncommon in silver; in which case it sometimes wants the legend on the edge.

2. Italian medals. These appear in the fifteenth century, and from that time successively in most European countries. Vittore Pisano, a painter of Verona, is celebrated as the restorer of the art ; but it remains to be accounted for how the medals of king David already mentioned came to exist so long before. Mr. Pinkerton considers this artist rather as an inventor than a restorer, his medals having no resemblance to the ancient coins, as being large, and all cast. They were first modelled in wax, then a mould taken from the model in fine sand and other ingredients. After a good cast was procured, it was touched up, and made a model for the rest. These me- dals of Pisano are almost always inscribed opus piSANi PiCTORis. The portraits of a great num- ber of illustrious men were done by him in this manner; and in the British Museum is a large brass medal of Pisano by himself ××× Other artists were Boldu, Marescotto, Matthaus de Pastus, Sperandes, Misaldone, &c. Towards the end of the century, however, the medals began to assume a more elegant appearance ; and the papal ones are not only the most elegant, but the most an- cient series of all the modern medals. The im- provement began in the reign of Alexander VI., so famous for his own crimes and those of his nephew Csesar

Borgia. His successors, Julius II., Leo X., Hadrian VI., and Clement VII., had many of their medals designed by Raphael, Ju- lio Romano, and other eminent painters, and the engraving executed by artists of equal merit. Among these were the celebrated Cellini, and the noted Paduan forgers of Roman coins, Ca- vino and Bassiano. In 1644 Cormanni, a me- dallic artist, was imprisoned on account of a piece which represented the pope upon one side and Olympia Maidalchina, the relation of his holiness, on the other. The unfortunate Cor- manni poisoned himself. About this time the family of the Hamerani, originally from Ger- many, began to engrave the papal medals ; which they did with surprising merit for several generations. Each of the daughters did a fine medal, as we are informed by Venuti.

Besides the papal medals there are many issued by the various states of Italy. There are medals of Frederick II. of Sicily in 1501, of several Vene- tian generals in 1509, of Alfonso duke of Ferrara in 1511, and of the celebrated Andrew Doria in

1528.

3. Trench 7nedah. Till the reign of Louis XIV. the medals of this country are neither fine nor numerous; but this monarch exceeds all modern princes in this way. Many of his pieces are well designed and executed, though objec- tionable on account of their falsehood.

4. Danish medals. These appear of Christian II. in 1516; of Frederic and Sophia in 1532; of Frederic I. and Christian TIL, in bonnets worn

in the sixteenth century. The elephant of the house of Oldenburg is frequent upon Danish medals.

5. Swedish medals. These begin with Gusta- vus Vasa ; and several of Christina are likewise to be met with. There are also some curious ones of Charles XII.

6. Dutch medals. These begin in 1566; and many of them are remarkable for maps and plans, which must be very interesting to posterity. ‘ Had the Greeks and Romans (says Mr. Pinker- ton) given us maps and plans, what a fine sys- tem of ancient geography and topography a cabinet of medals must have been !’

7. Medals of Spairi, Portugal, and Germany. The Spanish medals began with Gonsaloin 1503, many of which are curious and interesting. Un- der Charles V. there are many curious Spanish medals ; but those of Germany begin with Fre- derick in 1453. They are extremely numerous ; as we may easily suppose from the greatness of

the empire, and the various states which compose it. There is a famous medal of Sebastian king of Portugal, famous for his unfortunate expedi- tion into Africa in 1578 ; with his bust, full face, and three quarters in length. On the reverse is a shell-fish in the sea, with the moon and seven stars, bearing the inscription serena favent CAUSˆ. There is also a curious lozenge-shaped coin of the same, with the arms of Portugal, and the king's name and title : on the reverse is a cross with the inscription in hoc signo vinces,

1578.

8. Satiric medals. These began almost as soon as the knowledge of the art of coining medals was revived. They seem to have been almost un- known to the ancients. One indeed of the em- peror Gallienus is supposea to have been satiric. It has on the front the emperor's bust, with the inscription GALLiENiE aug., the reverse is Peace in a car, pax ubique ; but this has been proved to be only a blundered coin. Some other ancient medals, however, are not liable to this objection. The first modern satiric medal published was tliat of Frederick king of Sicily in 1501, against his antagonist Ferdinand king of Spain. It has on one side the head of Ferdinand, with the in- scription ferdinandus r. ar. vetus vulpes ORBis ; on the reverse a wolf carrying ofFa sheep,

JVGVM MˆVM SVAVE EST, ET ONVS MEVM LEVE.

Many others have been struck, of vvhicii tlie wit would now perhaps be difficult to be found out : but of all nations the Dutch have most distin- guished tliemselves in this way; and paid very dear for their conduct, as they brought upon themselves, by one or two satiric medals, the whole power of France under Louis XIV.

9. English medals. The first of these is in the duke of Devonshire's collection. It is of a very large size, and done on the plan of the early Italian medals. It has on the reverse the arms of Kendal, with the inscription tempore obsidiok is TURCORUM. MccccLxxx. On the other side is a portrait with lo. kendal rhodi turclpellek 1 1 >. It was found last century in Knaresborough fo- rest ; but Mr. Pmkerton has no doubt of ils having been done in Italy. The next is that of Henry VIII. in 1545, and is of gold, larger than the crown-piece, with the king's head upon the ob-

verse, and three legends within each other, in- cluding his titles, &.c.

The reverse contains two inscriptions, declarino; him tc be the head of the church; the one in Hebrew, the other in Greek. It was imitated exactly by Edward VI., whose coronation medal is the first we have. There are two medals of Philip and Mary, whose execu- tion is tolerably good ; but those of Elizabeth are very poor. There are good medals of James I. and his queen ; with a fine one of Charles I and Henrietta, though the workmanship is much in- ferior to the antique. There are many good me dais of Charles, with various devices upon theii reverses. Under the commonwealth the cele- brated Simon produced medals which are de- servedly reckoned the most admirable pieces of modern workmanship. There are many good medals of Charles II., James II., and William III. Some are also found of James after his abdication. Some fine gold, silver, and copper medals, were issued in the time of queen Anne ; the two last affording a series of all the great ac- tions of the duke of Marlborough. About the year 1740 a series of medals was engraved in London by Daffier, a native of Geneva, containing all the kings of England ; being thirty-six in number. They are done upon fine copper, and executed with great taste. There are besides many me- dals of private persons in England ; so that it may justly be said that this country, for medals, exceeds almost every other in Europe.

To this account of modern coins and medals we shall add that of another set called siege- pieces, and which were issued during the time of a siege in cases of urgent necessity. These were formed of any kind of metal; sometimes of no metal : and Patin mentions a remarkable one struck at Leyden in 1574, when the place was besieged by the Spaniards. It was of thick pa- per or pasteboard, having a lion rampant, with this inscription, pvgno pro patria, 1574; and on the reverse lvgdvnvm batavorvm. There are various siege-pieces of Charles I., both in gold and silver, some of the latter being of the value of 20s.

The nummi bracteati are a species of modern coins, somewhat between counters and money ; and have their name from the word bractea a spangle or thin bit of metal. They are common- ly little thin plates of silver, stamped as would seem with wooden dies upon one side only, with the rude impression of various figures and inscrip- tions. Most of them are ecclesiastic, and were struck in Germany, Switzerland, Denmark, Swe- den, Norway, and a few in Poland. They con- tinued to be in use in Germany till the end of the fifteenth century; and some are still used in Switzerland.

Sect. V. ××× Of the Preservation of Coins and Medals.

We now come to consider what it is that distinguishes one medal from another, and why some are so highly prized more than others. This, in general, besides its genuineness, consists in the high degree of preservation in which it is. This, by Mr. Pinkerton, is called the conserva- tion of medals, and is by him regarded as good

and as perfect. In this, he says, that a (rue judge is so nice, that he will reject even the rarest coins if in the least defaced either in the figures or legend. Some, however, are obliged to content themselves with those which are a little rubbed, while those of superior taste and abilities have in their cabinets only such as are in the very state in which they came from the mint ; and such, he says, are the cabinets of Sir Robert Austin and Mr. Walpole, of Roman silver, at Strawberryhill. It is absolutely necessary, however, that a coin be in what is called good preservation : which in the Greek or Roman emperors, and the colonial coins, is supposed to be when the legends can be read with some diffi- culty ; but when the conservation is perfect, and the coin just as it came from the mint, even the most common coins are valuable.

The fine rust, like varnish, which covers the surface of brass and copper coins, is found to be the best preserver of them; and is brought on by lymg in a certain kind of soil. Gold cannot be contaminated but by iron mold, which hap- pens when the coin lies ir a soil impregnated with iron ; but silver is susceptible of various kinds of rust, principally green and red ; both of which yield to vinegar. In gold and silver coins the rust must be removed, as being prejudicial ; but in brass and copper it is preservative and ornamental ; a circumstance taken notice of by the ancients. ‘ This fine rust,’ says Mr. Pinker- ton, ‘ which is indeed a natural varnish not imi- table by the art of man, is sometimes a delicate blue, like that of a turquoise ; sometimes of a bronze brown, equal to that observable in an- cient statues of bronze, and so highly prized ; and sometimes of an exquisite green, a little on the azure hue, which last is the most beautiful of all. It is also found of a fine purple or olive, and of a cream color or pale yellow : which last is exquisite, and shows the impression to much advantage, as paper of cream color, vised in all great foreign presses, does copperplates and printing. The Neapolitan patina (the rust in question) is of a light green ; and when free from excrescence or blemish is very beautiful. Some- times the purple patina gleams through an upper coat of another color, with as fine effect as a variegated silk or gem. In a few instances a rust of a deeper green is found ; and it is sometimes spotted with the red or bronze shade, which gives it quite the appearance of the East Indian stone called the blood stone. These rusts are all, when the real product of time, as hard as the metal itself, and preserve it much better than

any artificial varnish could have done ; concealing at the same time not the most minute particle of the impression of the coin.'

The value of medals is lowered when any of the letters of the legend are misplaced ; as a sus- picion of forgery is thus induced. Such is the case with many of those of Claudius Gothicus. The same, or even greater diminution in value, takes place in such coins as have not been well fixed in the dye, which has occasioned their slipping under the strokes of the hammer, and thus made a double or treble image. Many coins of this kind are found in which the one side is perfectly

✿✿✿well formed, but the other blundered in the manner just mentioned. Another blemish, but of smaller moment, and which to some may be rather a recommendation, is when the workmen, through inattention, have put another coin into the dye without taking out the former. Thus the coin is convex on one side and concave on the other, having the same figure upon both its sides.

The medals said by the judges in this science to be countermarked are very rare, and highly valued. They have a small stamp impressed upon them, in some a head, in others a few letters, such as aug: n. probus, &c., which marks are supposed to imply an alteration in the value of the coin; as was the case with the countermarked coins of Henry VIII. and queen Mary of Scotland. Some have a small hole through them, sometimes with a little ring fast- ened in it, having been used as ornaments ; but this makes no alteration in their value. Neither is it any diminution in tlie value of a coin that it is split at the edges : for coins of undoubted anti- quity have often been found in this state, the cause of which has already been explained. On the contrary, this cracking is generally considered as a great merit ; but Mr. Pinkerton suspects that one of these cracked coins has given rise to an error with respect to the wife of Carausius, who reigned for some time in Britain. The in- scription is read Oriuxa Alg. : and there is a crack in the medal just before the O of oriuna. Without this crack Mr, Pinkerton supposes it V, ould have been read Fortuna Aug.

Some particular soils have the property of giving silver a yellow color as if it had been gilt. It naturally acquires a black color through time, which any sulphurous vapor will bring on in a few minutes. From its being so susceptible of injuries, it was always mixed by the ancients with much alloy, in order to harden it. Hence tlie impressions of the

ancient silver coins re- main perfect to this day, while tliose of the modern coins are obliterated in a few years. On this account Mr. Pinkerton expresses a wish that modern states would mix a much greater proportion of alloy in their silver coins than they usually do. As gold admits of no rust, except that from iron above-mentioned, the coins of this metal are generally in perfect conservation, and fresh as from the mint.

To clean gold coins from this rust it is best to steep them in aquafortis, which, though a very powerful solvent of other metals, has no effect upon gold. Silver may be cleansed by steeping for a day or two in vinegar, but more effectually by boiling in water with three parts of tartar and one of sea-salt ; on both these metals, however, the rust is always in spots, and never forms an entire incrustration as on brass or copper. The coins of these two metals must never be cleansed, as they would thus be rendered full of small holes eaten by the rust. Sometimes, however, they are found so totally obscured with rust that nothing can be discovered upon them ; in which case It is best to clear them with a graver ; but it may also be done by boiling them for twenty- four hours in water with three parts of tartar and one of alum ; not sea-salt as in silver coins.

Sect. VI. ••• Of the Distinction between Genuine Medals and Counterfeits.

The most difficult and most important thing in the whole science of numismatography is the method of distinguishing the true from the coun- terfeit. The value put upon ancient coins made the forgery of them almost coeval with the sci- ence itself; and, as no laws inflict a punishment upon such forgers, men of great genius and abi- lities have undertaken tlie trade.

Forgeries are more conspicuous among the Roman medals than any other kind of coins; but we are not to look upon all these as the work of modern artists. On the contrary, we are assured that many of them were fabricated in the times of the Romans themselves, some of them being even held in more estimation than the genuine coins themselves, on account of their being plated, and otherwise executed in a manner to which modern forgers could never attain. Even the ancients held some of these counterfeits in such estimation, that Pliny informs us there were frequently many true denarii given for one false one.

Of the Roman consular coins not very many have ever been forged. The celebrated silver de- narius of Brutus, with the cap of liberty and

two daggers, is the chief instance of a consular coin of which a counterfeit is known. But it is easily rejected by this mark : in the true coin the cap of liberty is below the guard or hilt of the daggers; in the false the top of it rises above that hilt.

The imperial series of medals is the grand object of modern medallic forgeries ; and the deception was at first extended to the most eminent writers upon the subject. The coun- terfeits are by Mr. Pinkerton divided into six classes :

I. Such as are known to be imitations, but valued on account of the artists by whom they are executed. In this class the medals of Ca- vino, the Paduan, rank highest ; the others being so numerous that a complete series of imperial medals of almost every kind, nay almost of every medallion, may be formed from among them.

The Paduan forgeries may be distinguished from those of inferior artists by the following marks: ××× 1. The former are seldom thinner than the ancient, which others almost always are. 2. They very seldom appear as worn or damaged, but the others very frequently, especially in the reverse, and legend of the reverse, which some- times, as in forged Othos, appear as half con- sumed by time. 3. The letters in moulds taken from the antique coins have the rudeness of antiquity. 4. False varnish is commonly light green or black, and shines too much or too little.

5. The sides of forged coins are frequently quite smooth, and undi&tinguishable from the ancient, though to accomplish this requires but little art.

6. Counterfeit medals are frequently as irregular in their form as the genuine ; but the Paduan are generally circular; though false coins have often little pieces cut off, in perfect imitation of the genuine. 7. In cast coins the letters do not go sharp down into the metal, and have no fixed outline ; their minute angles, as well as those of the drapery, are commonly filled up, and have

not the sharpness of the genuine kind. Where the letters or figures are faint, the coin is greatly to be suspected.

The letters form the great criterion of medals, the ancient being very rude, but the modern otherwise ; the reason of which, according to

Cellini, is, that the ancients engraved all their matrices with the graver or burin, while the modern forgers strike theirs with a punch.

According to Vico, the false patina is green, black, russet-brown, gray, and iron-color. The trial of brass coins with the tongue is not to be despised ; for, if modern, the patina tastes bitter or pungent, while if ancient it is quite tasteless.

Mr. Pinkerton informs us that all medallions from Julius Cresar to Adrian are much to be suspected of forgery ; the true medals of the first fourteen emperors being exceedmgly valu- able, and to be found only in the cabinets of princes.

II. The second class of counterfeit medals contains those cast from moulds taken from the Paduan forgeries, and others done by eminent masters. These are sometimes more difficult to be discovered than the former, because in casting them they can give any degree of thickness they please; and, filling the small sand holes with mastic, they retouch the letters with a graver, and cover the whole with varnish. The instruc- tions already given for a former class, however, are also useful for those of the second, with this addition, that medals of this class are generally lighter than the geimine, because fire rarifies the metal in some degree, while that which is struck is rather condensed by the strokes.

III. Medals cast in moulds from an antique. ••• The directions given for discovering the two former deceptions hold good also in this.

IV. Ancient medals retouched and altered. ••• This is a class of counterfeits more difficult to be discovered than any other. The art (says Mr. Pinkerton) exerted in this class is astonish- ing; and a connoisseur is the less apt to suspect it, because the coins themselves are in fact ancient. The Italian artists alter the portraits, the reverses, and the inscriptions themselves, in a surprising manner. This fraud is distinguished by the false varnish which sometimes marks it ; but, above all, by the letters of the legend, which are always altered. Though this be sometimes done with an artifice almost miracu- lous, yet most commonly the characters straggle, are disunited, and not in a line. In counterfeits of this kind, sometimes the obverse is not touch- ed, but the reverse made hollow, and filled with mastic colored like the coin, and engraven with such device and legend as was most likely to bring a great price ; others are only retouciied in some minute parts, by which, however, the value of the coin is much diminished.

V. Medals impressed with new devices or sol- dered.••• In the first

article of this class the re- verses have been totally filed off”, and new ones impressed with a dye and hammer. The dif- ference of fabrication in the face or reverse will be discovered at tlie first glance by any person of skill.

The soldered medals consist of two halves belonging to different medals, sawed through

the middle and then joined with solder. This mode of counterfeiting is common in silver and brass coins. Medals which have a portrait on each side, and which are generally valuable, are the most liable to a suspicion of this fraud. To a very nice eye the minute ring of solder is al- ways visible ; and, upon inserting a graver, the fabrication falls into halves.

VI. Plated medals, or tliose which have clefts. ††† It has been already remarked that many true medals are cracked in the edges, owing to the repeated strokes of the hammer, and the little degree of ductility which the metal possesses. This the forgers attempt to imitate by a file ; but it is easy to distinguish betwixt the natural and artificial cleft by means of a small needle. The natural cleft is wide at the extremity, and appears to have a kind of almost imperceptible filaments; the edges of the crack corresponding with each other in a manner which no art can imitate.

The plated medals which have been forged in ancient times were long supposed to be capable of resisting every effort of modern imitation ; but of late years some ingenious rogues (says Mr. Pinkerton) thought of piercing false medals of silver with a red hot needle, which gave a blackness to the inside of the coin, and made it appear plated to an injudicious eye. This fraud is easily distinguished by scraping the inside of the metal. It is, however, very difficult to dis- tinguish the forgeries of rude money when not cast, and our author gives no other direction than to consult a skilful medallist. Indeed, notwithstanding all the directions already given, this seems to be a resource which cannot by any means safely be neglected.

Forgeries of modern coins and medals are almost as numerous as of the ancient.

Sect. VII. ††† Of the Value of Ancient Coins and Medals.

All ancient coins and medals, though equally genuine, are not equally valuable. In medals, as vvell as in every thing else, the scarcity of a coin stamps a value upon it which cannot otherwise be derived from

its intrinsic worth. There are four or five degrees of rarity reckoned up; the highest of which is called unique. The cause is generally ascribed to the smallness of number thrown off originally, or to their having been called in, and recoined in another form.

Sometimes the rarest coins lose their value, and become common. This our author ascribes to the high price given for them, which tempts the possessors to bring them to market; but chiefly to the discovering of hoards of them. The former cause took place with queen Anne's farthings, some of which formerly sold at five guineas; nay, according to the newspapers, one of them was, several years ago, sold for no less than ––960 ! ! The latter cause took place with the coins of Canute the Great, king of England and Denmark, which were very rare till a hoard of them was discovered in the Orkneys. As such discoveries, however, produce a temporary plenty, so, when they are dispersed, the scarcity returns, while some of the common coins become rare, merely through neglect.

As there are many more copper coins of Greek cities to be met with than silver, the latter are much more valued ; but the reverse is the case with those of the Grecian monarchs. All the Greek civic coins of silver are very rare, except- ing those of Athens, Corinth, INIessana, Dyrrha- chium, Massilia, Syracuse, and some others. Of the Greek monarchic coins, the most rare are the tetradrachms of the kings of Syria, the Ptolemies, the kings of Macedon and Bithynia, excepting those of Alexander the Great and I,y- simachus. Those of the kings of Cappadocia are of a small size, and hardly to be met with. Of those of Numidia and Mauritania, tiie coins of Juba the father are common ; but those of the son and nephew, Ptolemy, are scarce. Coins of the kings of Sicily, Parthia, and Judea, are rare; the last very much so. We meet with no coins of Arabia and Comagene except in brass ; those of the kings of Bosphorus are in electrum, and a few in brass, but all of them rare ; as are also those of Philetenis, king of Pergamus, and of the kings of Pontus. In 1777 a coin of Mithridates sold for ––26 5s. Didrachms of all kings and cities are scarce, excepting those of Corinth and her colonies; but the gold coins of Philip II. of Macedon, Alexander the Great, and Lysimachus, are common. The silver te- tradraclnns of all kings bear a very high price. The didrachm of Alexander the Great is one of the scarcest of the small silver Greek coins; some of the other princes are not uncommon.

The copper money of the Greek monarchs in general is scarce, but that of Hiero I. of Syra- cuse is uncommonly plentiful, as well as that of several of the Ptolemies of Egypt. Many of the copper civic coins of Greece, too, are also com- mon. They are almost all of those sizes which are called small brass in the Roman series; the middle size is scarce. The largest, prior to the Roman emperors, are extremely rare. The com- mon Grecian civic coins in small brass sell at from 3d. to Is. 6(1. according to their preserva- tion. Very many cities, however, of which not above one or two coins are known to be extant, and those of brass bring far higher prices. ‘ The want of a few cities, however,’ says ilr. Pinker- ton, ‘ is not thought to injure a collection ; as indeed new names are discovered every year, so that no assortment can be perfect. To this it is owing that the rarity of the Grecian civic coins is not much attended to.’ The Greek copper coins are for the most part scarcer than the sil- ver, except the Syro-Grecian, which are com- mon, and almost all of tlie size called small brass. They ought (says Pinkerton) to bear a high price; but the metal and similarity to the copper civic coins, which are common, keep their actual price moderate, if the seller is not well instructed, and the buyer able and willing to pay the price of rarity.’

The gold coins of Philip II. and Alexander the Great, being very common, bear but from 5s. to 10s. above their intrinsic value; but those of the other princes, being rare, sell at from ––3 to ––30 each, or even more.

The tetradrachms are the dearest of the silver monarchic money, selling at from ,5s. to 10s., and, if very rare, from ––3 to ––.ˆ0 each. Iliiif of

these prices may be given for the drachmas, and the coins of the other denominations in pro- portion.

The gold coins of Carthage, Cyrene, and Syracuse, are worth about double their intrinsic value as metal ; but the other gold civic coins are worth from ––5 to ––30 each. The only gold coins of Athens certainly known to exist are twr purchased a few years ago by his majesty, one of which remains in the royal cabinet, and the other was given by the queen to Dr. Hunter. There was another m the British Museum, bu. it is suspected not to be genuine. Dr. Hunter’s coin then, if sold, would draw the highest price perhaps ever given for a coin.

The silver coins of Syria, Dyrrhachium, Mas- silia, Athens, and a few other states, are com- mon ; the drachmas and coins of less size are worth about 5s. each ; the didrachms, tetra- drachms, &c., from 5s. to

10s., according to their size and beauty ; the largest, caeteris paribus, being most valuable. The tetradrachms of cities, whose coins are common, are worth from 7s. 6d. to 21s.; but it is impossible to put a value upon the rare civic coins: ten guineas have been given for a single one.

The most rare of the consular Roman coins are those restored by Trajan. Of the others, the gold consular coins are the most rare, and the silver the most common ; excepting the coin of Brutus with the cap of liberty, and a few others. Some of the Roman imperial coins are very scarce, particularly those of Otho in brass ; nor does his portrait occur at all on any coin struck at Rome, owing to the shortness of his reign. His head upon the brass coins of Egypt and Antioch is very badly executed, as well as all the other imperial corns of Greek cities. The best likeness is on his gold and silver coins ; the latter of which are common. The Greek and Egyptian coins are all of small or middling sizes, and have various reverses ; those of Antioch, as well as most of its other imperial coins, have Latin legends. They have no other reverses but S. C. in a wreath, excepting in one or two of the large and middle brass, where the inscriptions are Greek. Latin coins of Otho in brass, with figures on the reverse, are reckoned false, though in the cabinet of D'Ennery at Paris there was an Otho in middle brass, restored by Titus, which was esteemed genuine by connoisseurs.

The leaden coins of Rome are very rare : most of them are pieces struck or cast on occasion of the Saturnalia; others are tickets for festivals and exhibitions. The tickets for theatres were made of lead, as were also the contorniate, per- petual tickets, like the English silver tickets for the opera. Leaden medallions are also found below the foundations of pillars and other public build- ings, to perpetuate the memory of the founders. From the time of Augustus leaden seals were also used. A work of Ticorini on this subject, entided Piombi Antiochi, is much recommended by Mr. Pinkerton.

The Roman coins, which have been blundered in the manner formerly mentioned, are very rare, and undeservedly valued by connoisseurs. The blunders in the legends of the.se corns, which are probablv the mere effects of accidents, have been

so far mistaken by some medallists, as to have given life to imaginary

emperors who never existed. A coin of Faustina, which has on the reverse Sousti. s. c. puzzled all the German an- tiquaries, till Klotz ridiculed their investigations by the following humorous interpretation : Sine omni utilitate sectamitii tantas ineptias !

As to the Roman imperial coins, some of those which belong to the emperors whose coins are numerous, may yet be extremely valuable by having uncommon reverses. Mr. Pinkerton points out one of Augustus, with the legend C. Marius Trogvs, which is worth three guineas, though the silver coins of Augustus in general are not worth above Is. In like manner the common gold coins of Trajan are not worth above 20s., while those with Basilica Ulpia, ToRfM Trajani, Divi Nerva et Trajaxus, Pater, Divi Nerva et Platina Aug. Pro- FECTio Aug. Regna assigxata, Rex Parthus, and some others, draw from ––3 to ––6. The ticket medals belonging to tlie senate are worth from 3s. to 10s.

The ancient Roman asses are worth from 2s. to ––2, according to the singularity of their de- vices. The name of weights, given to the ancient Roman asses, is (says Mr. Pinkerton) exceed- ingly improper, as the Romans had weights of lead and brass sides, without the least appearance of a portrait upon them. These denote the weight by the number of knobs, and have likewise small fleurettes engraved upon them. Whenever, therefore (he adds) we meet with a piece of metal stamped on both sides, with busts and figures, we may lay it down as a certain rule that it is a coin ; but when slightly ornamented, and marked on one side only, we may with equal certainty conclude it to be a weight.

r'.onsular gold coins are worth from 20s. to ––5. Pompey with his sons ––21, and the two Bruti ––25. The silver coins are universally worth from Is. to 2s. 6d. excepting that of the cap of liberty, and a few others, which, if genuine, will bring from 10s. to ––5. The consular copper bears an equal price with tlie silver, but is more rare ; the consular silver coins restored by Tra- jan are worth 20s. each.

Of the coins of other nations those of Hilderic, king of the Vandals, in silver, are worth 10s., the small brass of Athanaric ox.; the gold of Theo- doric 40s. ; the second brass of Theodahat 5s. ; tlie second brass of Badueta, being rare, are worth 10s.; the third brass 3s. each. Coins and medals with unknown characters are always caice and dear.

Ancient British coins are very rare, and worth from 10s. to two guineas each, sometimes much more. The heptarchic coins of England are generally rare, except those called Stycas, which are very

common, as well as those of Bursrred, king of jNIercia. The coins of Alfred the Great with his bust are scarce, and his other money much more so. Those of Hardycanute are so rare that it was denied they had any existence, till Mr. Pinkerton informed the public that there are three in the British Museum, upon all of which the name IIartiiecnut is quite legible. Saxon pennies of the iieptarchy are ra-e, and vorth from 10s. to ––l0, according to their scar-

city and preservation. Coins of Edward the Confessor are pretty plentiful ; others are rare, and worth from 10s. to two guineas ; while two of Ilardicanute are worth no less than ten gui- neas each.

The coins of the English monarchs after the conquest are common, except those of Richard I. and John, not one of which is to be met with ; though there are some French coins of Richard 1., and Irish ones of king John. ‘ Leake,’ says Mr. Pinkerton, ‘ made a strange blunder in as- cribing coins of different kings with two faces, and otherwise spoiled in the stamping, to Richard I.; in which, as usual, he has been followed by a misled number.’ The gold medals of Henry VIII. in 1545, and the coronation medals of Edward VI., are worth ––20 each ; the Mary of Trezzo ––3 ; Simon’s head of Thurloe, in gold, is worth ––l2 ; his oval medal in gold, upon Blake’s naval victory, is worth ––30 ; and his trial piece, says Pinkerton, if sold, would bring a still higher price. The medals of queen Anne, which are intrinsically worth two guineas and a half, sell at ––‘3 each; the silver, of the size of a crown, at 10s. ; and the copper from 5s. to 10s. Daffier’s copper pieces sell at from 2s. to 5s., and a few still higher.

The English coins struck in Ireland are of much the same value with those struck in England ; but the St. Patrick’s halfpence and farthings are rather scarce, and the rare crown of white metal is worth ––4. The gun money of James II. and most other Irish coins are very common.

The Scottish gold coins sell higher than the English, but the others are on a par. Coins of Alexander I. and II. are rather scarce, but those of Alexander III. are pretty plentiful. Those of John Baliol are rare, and none of Edward Baliol are to be found. The shilling of queen Mary with her bust is rare, and sells for no less than ––30 ; the half for ––3 ; and the royal for five guineas. The French testoon of Francis anr Mary brings ten guineas; and the Scottish one INIary and Henry would bring ––50; as would also the medal of James I'. The coronation medal of Francis and Mary is worth ––20. Briot’s coronation medal sold, in 1755, for only two guineas at Dr. Mead’s sale, but would now bring ––20 if sold according to its rarity.

Sect. VIII. ••• Of the Arraxgemekt of Coins AXD Medals.

One of the principal uses of medals being the elucidation of ancient history, the arrangement of medals is the first thing that occurs in the formation of a cabinet. The most ancient medals extant are those of Alexander I. of Macedon, who began to reign about 501 years before Christ. The series ought, therefore, to begin with him, and to be succeeded by the medals of Sicily, Caria, Cyprus, Ileraclea, and Pontus. Then follow Egypt, Syria, the Cimmerian Bos- phorus, Thrace, Bithynia, Parthia, Armenia, Damascus, Cappadocia, Paphlagonia, Pergamus, Galatia, Cicilia, Sparta, Pisonia, Epirus, Illyri- cuin, Gaul, and the Alps, including the space of time from Alexander the Great to the birth of Christ, which is to be accounted the third medal-

lie series of ancient monavchs. The last series goes down to the fourth century, including some of the monarchs of Thrace, Bosphorus, and Par- thia, with those of Coraagene, Edessa or Osrhoene, Mauritania, and Judea. A most distinct series is formed by the Roman emperors, from Julius CcGsar to the destruction of Rome by the Goths ; nay, for a much longer period, were it not that towards the latter part of it the coins became so barbarous as to destroy the beauty of the collec- tion. Many series may be formed of modem potentates.

Medals likewise afford a good number of por- traits of illustrious men ; but they cannot easily be arranged in chronological order, so that a series of them is not to be expected. It is like- wise vain to attempt the formation of a series of gods and goddesses to be found on ancient coins. Mr. Pinkerton thinks it much better to arrange them under the several cities or kings whose names they bear. A collection of the portraits of illustrious men may likewise be formed fronˆ medals of modern date.

Abbreviations used in tJte Legends of Coins and Medals; after Mr. Pinkerton.

Greek Coins.

A. Athens, Argos, Aulus, Asylum, primi or first ; as Efemov A Aaiag, ‘ Ephesians, first people of Asia.’ A. Abassus, Abdera, Abydus on Hellespont. AB. Abydus in Egypt. ABY. Abydus on Hellespont. AO. AGE. Athens. Air. Aegina. AirOSIlO. Aegospotamos. AIA. Aelius, Aelia Capitolina. AIN. Aenos. AK. ••• AKPArAN. Agrigentum. AKI.

Acilium. AKT. Actium. AAE. Alexandria. AM. Amyn- tas. AMBP. Ambracia. AM$I. Amphdo- chia, ANe. AvOviraroQ, Proconsul. ANTI2. Antissa. ANA. Anactoria. ANTI. Antium. AN. Ancyra. ANT. Antoninus, Antioch. AS. Axus in Crete. AON. Aonitas. AOYE. Ave- nio. Pell. All. Appius. AHA. Apamea. Alio. Apollonia. AIITA. Aptara. AP. Ara- dus, Hai-ma. APFE. Argennos. APr. Argos. API. Aricanda. APIM. Ariminum. AP2I. Arsinoe. APY. Aryca. APX. Apx”P►►vc or Apxov, high priest or magistrate. AS] APX. Asiarchae, presidents of the games of Asia*. AS. Asylum. A. S. Upo-roi Svptae, First of Syria. ASK. Ascalon. AT. Atabyrium. ATAP. Atarnse. AYP. Augustus. AYPHA. Aurelius. AY. AYT. AvroKparop, Emperor. AYTON. AvTovofioi, enjoying their own laws. A$I. Aphyta. A$P. Africanus. AX. Achaii.

B. Bot;\j;e, Council, Berytus, Bithynia. BAPH- AAo. Bagadaonia. BAA. Valerius. BH. Berytus. BITON. Bitontum. BOI. Boeotia. BPYN. Brundusium. BY. Byzantium.

r. PP. PPAM. Grammaticus, or keeper of the records. P. Gaius, or Caius. PA. Gallus, Gallerius, Gallienus. P. Vvupijiov, Illustrious. PEA. Gelas. PEP. Germanicus. PN. Gneius. roPTY. Gortyna. PPA. Gravisca.

A. Decimus, Dymae. AAk. Dacicus. AAM. Damascus. AAp. Dardanum. AH. Atjiˆog, the people. AHMApx. ESOYS. with Tribu-

- There were also Syriarchae, LyciarchaB, Gala- tarchcB, Bithyniarchffi, Cappadociarchas, &c.

nitian power. AE. Decelia. AEK. Decius.

AEP. Derbe in Lycaonia. AH. Delos. AI.

Diospolis. APE. Drepanum. AYP. Dyrrha-

chium. E. Eryce. E. EPES. Eresus. EAEY. E.eusis.

EAEYG. EXevOepoi, Free. EHI. Epidaurus.

EPI. Eriza in Caria. EPX. Erchia. EPY.

Erythrae. ET. ETO. Etovq. Year. ET.

Etenna in Pamphylia. EX. Exovaia, Power.

EY. EYBO. Eubcea. EYS. Evac/irte. Pious.

EYT. EvTvxrjQ. Happy. E*. EZANKA. Zancle, Messana an- ciently so called. H. Elium. HP. Hyt/uoj/oc, President. HPAK.

Heraclea. GA. Thasus. . GE. Thespiae. GES. Thessalonica.

GH. GHB. Thebae. I. lEP. Jepac- Sacred. lEPAHY. Hierapythae.

IKAP. Hiccara. lAI. Ilium. IQY. lulis a

city, or Julius. lOYA. Julia. IIIA. Hippana.

IP. Irene Ins. Pellerin. IS. Isus, Istiaea. K. Caius ; Kovivrog, Quintus. K. KAIS. Caesar.

K. K. Koivov KiXiKiag, Community of Cilicia.

KAIA. Caelius. KAA. Chalcedon. KAAAI.

Calliopolis. KAMA. Camara. KAN. Canata.

KAll. Capua. KAnn. Cappadocia. KAP.

Carrhae. KAPT. Carthago. KAY. Caulonia.

KE. Ceos. KE$. Cephalsedis. KI. Cianus,

Cibaeum. KIA. Cilbiani. KA. Claeonae, Clau- dius. KAA. Clazomene. KNI. Cnidus. KG.

Corinth. KOIN. Koivov, Community. KOA.

KoXoviae, Colony, Colophon. KOM. Com-

modus. KOP. Corcyra. KP. Cragus in

Lycia. KPA. Cranos. KPH. Crete. KTH.

Ctemene, Pell. KY. Cuma, Cydonium, Cvon.

KYG. Cythnus. KYH. Cyprus. KYP. ‘Cy-

rene. A.orL. AvKajSavTog, Year. A. Lucius. AA.

Lacedsemon. AAM. Lamea, Lampsacus,

AAP. Larissa. AAPI. Larinum. AE. AEY.

Leucas. AEON. Leontium. AHM. Lemnos.

Ain. Li para. AIYI. Liviopolis. AO. AQK.

Locri. AOP. Longone. AYP. AYK. Lyctus. M. Marcus, Malea, Megalopolis, Mazaka. MA.

Maronea, Massilia, Macedonia. MAp. Mag- nesia. MAKPO. Macrocephali. MAM.

Mamertini. MASS. Massilia. MAZ. Ma-

zara, ME. Menelais, on Syrian regal coins.

MENEK. Menecrates. ME. MEP. Megara,

Megalopolis, Melite. MEP. MsyaXog, Great.

MES. Messana. META. Metapontum. M.

MHTPO. Metropolis. MI. Miletus. MK.

Mazaka of Cappadocia, on coins of Mithri-

dates VI. MOP. Rlorgantia. MY. Mycenae.

MYP. Myrlea. MYTI. Mytilene. N. Naupactos. NAS. Naxos, NAYAPX. Nav-

apx^^oi, enjoying a sea-port. NE. Nemea.

N. NEQK. Neocori. NEOn. Neopolis. NEP.

Nerva. NIK. Nicseum, Nicomedia. NYS.

Nysaei, on coins of Scythopolis, Pell. 01. Oethaei. ON. Ovrog, being. ODEA. Ope-

lius. on. Opus. OPY. Orycus. OPX. Or-

chomenus. OYU. or YII. Ovnarog or \7raT0g,

Consul. OYEP. Verus. OYH. Vetus. OYESIl.

Vespasianus. OYITEA. V'itellius. 0

Ophrynium. n. Bapa, Upog, upon. n. XIOHA. Publius. IT.

DA. Paphos or Paros. IIAIS. Paestum. IT AN.

Panormus. IIAP. Paropinum. IlApi. Paros.

IIAPe. Parthicus. IIE. Perinthus. IlEA.

Pella, HEP. Fergus. IIEPT. Pertinax.

nESK. Pescennius. IT. nH. Pelusium. niN.

Pinamyta;. IIAA. Platete. no. Pontus.

nOAY. Polyrrhenum. n02. Posidonia.

nPAS. Prassus. n. OPY. Upyravog, Prefect.

nP. nPES. nptajisoQ, Legate. nPO. Procon-

nesus. nPOAI. UpociKog, Curator, n. nPQT.

TIooroQ, First. IIT. Ptolemais. IIY. Pylos. PO. Rhodes. 2. 2 A. Salami's, Samos, Syria. 2A. Samosate.

2AAAn. Salapia. 2AP. Sardis. 2E. Seri-

phus, Segeste. 2EB. ˆtˆarog, Augustus.

2EA. Selinus, Seleucia. 2EIIT. Septimus.

21. Siphnos. 2IA. Side. 2INQ. Sinope.

2MY. Smyrna. 2TP. 2TPA. 2rparjjyoe,

Praetor. 2YB. Sybaris. 2Y. 2YPA. Syracuse.

2YP. Syria. 2Q. Solae. T. Titus. TABAA. Tabala. TA. TANA. Ta-

nagra. TAP. Tarentum, Tarsus. TAYP.

Tauromenum. TE. Tementis. TEP. Terina.

TH. Tenus. TI. TIB. Tiberius. TPA.

Trallis. TPI. Tripolis. TPO. Troizene.

TYAN. Tyana. TY. Tyndaris. TYP. Tyre

(monogram). YE. YEA. Velia. YH. YHAT. YTrarog. Consul. *. Philip,

Phoestus, Philuntium. $A. Phaselis.

$AP. Pharsalus. $1. Vibius, Philippopolis.

*IXE. Phineium. $A. Flavius. $0K. Pho-

caeum. $OYA. Fulvia. $Y. Phycus in Cy-

rene.

Chios. XAA. Chalcis. XEP. Chersonesus.

XI. Chytri in Crete.

Greek Numerals.

X

A 1.

I

10.

P

100.

B 2.

K

20.

2 or

C 200.

r 3.

A

30.

T

300.

A 4.

M

40.

Y

400.

E 5.

N

50.

$

500.

s

60.

X

600.

Z 7.

0

70.

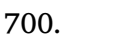

700.

H 8.

n

80.

Q

800.

e 9.

qorq

90.

q

900.

Examples. ××× I is 10: add A to I, lA makes 11 : so IB, 12 ; IP, 13, &c. K is 20, KA, 21, &c. PIA makes 111. The English word air marks the grand initial numerals. On coins the numerals are often placed in retrograde order ; which makes no difference in the value, as every letter is appropriated to its number. Thus TAP or PAT imply the same, 333. But this advan- tage, being unknown to tlie Roman numerals and Arabic cyphers, is apt to puzzle the be- ginner.

Roman Coins. A. AULus : in the exergue it implies the first mint, as ant. a. coined at Antioch in the first mint. A. A. A. F. F. Auro, Argento, JEre, Flando, Feriundo. a. or an. Annus, a. a. Apollo Augusti. a. f. a. n. Auli filius, Auli nepos. ABN. Abnepos. act. Actiacus, or Actium. AD. FRY. EMV. Ad fruges emundas. ADiAB. Adiabenicus. adop. Adoptatus. adq. \dquisiti. adv. Adventus. aed. /Edes. aed, p. vEdilitia potestate. aed. s. TEdes sacra;. AED. cvR, iEdilis Curulis. aed. pl. iEdilis Plebis. .ˆbL. iElius. aem. or aimil. Jimilius.

AET. iEtemitas. afr. Africa, or Africanus ALBiN. Albinus. alim. ital. Alimenta Italiae. ANN. avg. Annona Augusti. a. n. f. f. An- num Novum Faustum Felicem. anic. Ani-

CiuS. ANN. DCCCLXIIII. NAT. VRB. P. CIR.

CON. Anno 864 Natali Urbis Populo Circenses

constituti. ant. avg. Antonius Augur, ant.

Antonius, or Antoninus, ap. Appius. a. p. F.

Argento Publico Feriundo. a pop. frvg. \c.

A Populo Fruges Acceptse. aq. or aql.

Aquilius. aqva mar. Aqua Martia. arab.

adq. Arabia Adquisita. arr. Arrius. avg.

Augur, Augustus, Augusta, avg. d. f. Augus- tus Divi Filius. avgg. Two Augusti. avggg.

Three Augusti. avr. or avrel. Aurelius. B. The mark of the second mint in any city.

BON. event. Bonus Eventus. b. r. p. nat.

Bono Reipublicse Nato. brit. Britannicus.

brvt. Brutus, c. Caius, Colonia. c. a. Caesarea Augusta, c.

cae. or CAES. Caesar, caess. Caesares. garth.

Carthage. cen. Censor, cens. p. Censor

Perpetuus, cest. Cestius, or Cestianus. cir.

CON. CircumCondidit, or Circenses Concessit,

CIVIB. ET. sign. MILIT. A PARTH. RECVP. Ci-

vibus, et Signis Militaribus a Parthis Recupe- ratis. CN. Cneius. coel. Coelius. con. ob. Coustantinopoli Obsignata, or Constantinopoli Officina secunda, or Conflata Obryzo. col. Colonia. con. svo. Conservatori suo. con- cord. Concordia, cl. v. Clypeus Votivus. coMM. Commodus. clod. Clodius. cl. or CLAVD. Claudius, cos. Consul, coss. Con- sules. CORN. Cornelius, cvr. x. f. Curavit Denarium Faciendum.

D. Decimus, Divus, Designatus. dac. Dacicus. D. F. Dacia felix. d. m. Diis Manibus. des. or DESiG. Designatus. dict. Dictator, domit. Domitianus. d. n. Dominus noster. did. Didius. D. P. Dii Penates, dv. Divus.

EiD. MAR. Idus iVIartise. ex cons. d. Ex Con- sensu Decurionum. ex. s. c. Ex Senatus Consulto. EQ. ORDiN. EquestrisOrdinis. ex. A. pv. Ex Argento, or Auctoritate Publica. EXER. Exercitus. etr. Etruscus.

F. Filius, or Filia, or Felix, or Faciendum, or Fecit. FEL. Felix, felic. Felicitas. fl. Flavius. flam. Flamen. fort. red. Fortunae Reduci. fovri. Fourius for Furius. font. Fonteius. frvgif. Frugiferae (Cereri). fvl. Fulvius. fvlg. Fulgerator.

g. Gneius, Genius, Gaudium. ga. Gaditanus. G. d. Germanicus Dacidus. gen. Genius. GERM.Germanicus. gl. e. r. Gloria Exercitus Romani. gl. p. r. Gloria Populi Romani. GOTH. Gothicus. g. p. r. Genio Populi Ro- mani. G. T. A. Genius Tutelaris iF".gypti, or Africae.

hel. Helvius. hel. Heliopolis. her. Heren- nius, or Herennia. ho. llonos. hs. Sester- tius.

1. Imperator, Jovi, Julius, ian. clv. Janum clusit for clausit. imp. Imperator. impp. Imperatores. i. s. m. r. Juno Sospita, Mater or Magna Regina. it. Italia, Iterum. ite. Iterum. ivl. Julius or Julia, ivst. Justus. I ??? I. s. Sestertius, i. o. m. sacr. Jovi Optimo, Maximo, Sacrum, ii. vir. Duumvir, iii. vin. R. p. c. Triumvir Reipublicae Consfi

tuendae. iiii. vir. a. p. f. Quatuorvir, or Quatuorviri, Auro, or Argento, or iEie, Pub- lico Feriundo. ivn. Junior.

L. Lucius. LAT. Latinus. leg. propr. Legatus Proprsetoris. leg. i., &c. Legio Prima, &c. LEP. Lepidus. lent. cvr. x. f. Lentulus Curavit Denarium Faciundum. libero p. Libero Patri. lib. pvb. Libertas Publica. Lie. Licinius. l. s. den. Lucius Sicinius Dentatus. lvc. Lucifera. lvd. cir. Ludi Circenses. lvd. eq. Ludi Equestres. lvd. saec. f. Ludos Saeculares Fecit.

M. Marcus, or Marius. mar. cl. Marcellus Clodius. M. F. Marci Filius. m. otacil. Marcia Otacilia. mag. or magn. Magnus. MAC. Macellum. max. Maximus. mar. Mar- tia (aqua), mar. vlt. Marti Ultori. mes. Messius. METAL. Metallum. minat. Mina- tius. MINER. Minerva, m. m. i. v. Municipes Municipii Julii Uticensis. mon. or monet. Moneta.

N. Neops or Noster. n. c. Nobilissimus Caesar. NAT. VRB. Natalis Urbis. nep. Nepos. nep. RED. Neptuno Reduci.

o. Optimo. OB. c. s. Ob Gives Servatos. of. Officina. OPEL. Opelius orb. ter. Orbis Terrarum.

or POT. Potestate. pac. orb. ter. Pacatori Orbis Terrarum. papi. Papius or Papirius. PARTii. Parthicus. perp. Perpetuus, pert. or PiRTiN. Pertinax. pesc. Pescennius. p. F. Pius Felix, plaet. Ploetonius. p. l. n. Pecunia Loudini Notata. p. lon. s. Pecunia Londini Signata. p. m. or pont. max. Ponti- fex Maximus. pomp. Pompeius. p. p. Pater Patriae, pr. Praetor, p. r. Populus Romanus.

PRAEF. CLAS. ET OR. MARIT. PrsefcCtUS Classis

et Orae Maritimse. princ. ivvent. Princeps Juventutis. priv. Privernum. proc. Pro- consul, pron. Pronepos. prop. Propraetor. PROQ.

Proquaestor. prov. deor. Providen- tia Debrum. pvpien. Pupienus.

Q. Quintus, or Quaestor, q. c. m. p. i. Quintfs Caecilius Metellus Pius Tmperator. q. desig. Quaestor Designatus. q. p. Quaestor Praetorius. Q. PR. Quaestor Provincialis.

R. Roma, Restituit. recep. Receptis, or Re- ceptus. rest. Restituit. rom. et avg. Roraae et Augusto. R. p. Respublica.

saec avr. Saeculum Aureum. saec fel. Saeculi Felicitas. sal. Salus. sal. Sallustia. sarm. Sarmaticus. s. c Senatus Consulto. scip. ASIA. Scipio Asiaticus. sec. orb. Securitas Or- bis. SEC PERP. Securitas Perpetua. sec. te. Securitas Temporum. sen. Senior, sept. Sep- timius. ser. Servius. sev. Severus. SEX.Sex- tus. SIC V. SIC X. Sicut Quinquennalia, sic Decennalia. sio. Signis. s. m. Signata Moneta. s. p. Q. r. Senatus Populusque Romanus. sta- BiL. Stabilita (terra), svl. Sulla.

T. Titus, Tribunus. ter. Terentius, orTertium. temp. Temporum. ti. Tiberius, tr. orTREV. Treveris. treb. Trebonianus. tr. mil. Tri- bunus Militaris. tr. p. or trie. pot. Tribu- nitia Potestate.

V. Quintum. v. c Vir Clarissimus. vesp. Ves- pasianus. vib. Vibius. vict. Victoria, vii. VIR. EPVL. Septemvir Epulonum. vil. pvb. Villa Publica. viut. Virtus, vn. mr. Vene-

randae Memoriae, vot. x mvlt. xx. Votis Decennalibus Multiplicatis Vicennalibus.

X. Decem, Denarius, xv. vir. sacr. FAcQuin- decim Vir Sacris Faciundis.

Abbreviations on the Exergue ;from Banduri and Monaldini. Pinkertou.

A. Officina Prima, ale. Alexandria, amb. An- tiocbensis Moneta Secundae Officinae. an. ANT. anti. Antioceia. anb. Antiochiae Secun- da Officina; to a nh. Antiochiae Octava Officina. a. p. l. (In officina) Prima percussa Lugduni. AQ. AQL. Aquileia. aq. o. b. f. Aquileiae Of- ficinae Secundae Fabrica. aq. p. s. Aquileiae Pecunia Signata. aq. s. Aquileiae Signata. a. ar. arl. Arelate. a. sisc. Prima (in officina) Sisciae.

B. siRM. Secunda Sirmii. b. s. l. c. Secunda Signata Lugduni.

c. 0 Constantinopoli Nona, comob. Conflata Moneta Obryzo. Only on gold or silver from a gold die. con. Constantinopoli. conob. Conflata Obryzo. Only on gold. cons. Con- stantinopoli.

KART. Carthago, k. o. Carthaginiensis Officina.

L. LC. LVC. lvg. Lucduni, Lugduni. l. lon. Londini. l. p. Lugdunensis vel. Londinensis Pecunia. tvc. p. s. Lugduni Pecunia Signata.

MDPS. Mediolani Pecunia Signata. m. k. v. t. Moneta Kartaginensis Urbis (in officina) Ter- tia. M. L. Moneta Lugdunensis vel Londinen- sis. mostt. Moneta Officinae Secundau Treve- rorum. mstr. Moneta Signata Treveris.

0. Officina. off. hi. const. Officina Tertia Con- stantinopoli.

PARE. Percussa or Pecunia Arelate. plon. Pe- cunia Londinensis. plvg. Pecunia Lugdu- nensis. p. R. Pecunia Romana, or Percussa Romae. p. t. Pecunia Treverensis.

Q. AR. Quinta Arelatensis (officina).

R. RO. ROM. Romae. ra. Ravennae. rops. Romae Pecunia Signata.

s. ar. Arelate Signata. s. const. Signata Con- stantinopoli. SIS. Sisciae. ss. p. Sisciensis Pecunia. sisc v. Siscia Urbs. sma. Signata Moneta Antiochiae. s. m. her. Signata Moneta Heracleae. s. m. n. Signata Moneta Nico- medias. s. m. r. Signata Moneta Romae. s. t. Signata Trereris.

tesob. Thessalonicae Officina Secunda. theopo. Theopoli. tr. Treveris. trob. Treveris Officina Secunda.

A List of Roman Colonies whose Coins re- main.

Abdera in Spain. Acci in Spain. ActuUa in Africa. iElia Capitolina in Judea. Agrip- pina in Germany. Antiochia in Pisidia.

in Syria. Apamea in Bithynia. Arna

in Thessaly. Astigi in Spain.

Babba in Mauritania Tingitana. Berytus in Phoenicia. Bilbilis in Spain. Boslra in Arabia. Bracara Augusta in Spain. Buthrotum in Epirus.

Cabellio in Gaul. Cassar-Augusta in Spain. Cae- sarea in Palestine. Calagurris in Spain. Calpe in Spain. Camelodunum in Britain. Carrhae in Mesopotamia. Carteia in Spain. Carthago in Africa. Carthago Nova in Spain. Cas- cantum in Spain. Cassandria in Macedon

Celsa in Spain. Clunia in Spain. Coillu in

Numidia. Comana in Cappadocia. Corintlius

in Greece. CremnainPisidia. CullainThrace. Damascus in Coelosyria. Dertosa in Spain.

Deulton in Thrace. Dium in Macedon. Ebora in Spain. Edessa in Mesopotamia. Eme- ita in Spain. Eraesa in Phoenicia. Ergavica

in Spain. Germe in Galatia. Graccuris in Spain. Hadrumetum in Africa. Heliopolis in Ccelo-

syria. Hippo Regius in Africa. Iconium in Lycaonia. Ilerda in Spain. lUerga-

vonia in Spain. Illeci in Spain. lol in Mau- ritania. Italica in Spain. Laelia in Spain. Laodicea in Syria. Leptis in

Africa. Liigdunum in Gaul. Neapolis in Palestine. Nemausus in Gaul. Ni-

sibis in Mesopotamia. Norba Caesarea in

Mauritania. Obulco in Spain. Oea in Africa. Olba in Pam-

phylia. Osca in Spain. Osicarda in Spain. Panormus in Sicily. Parium in Mysia. Paralis

in Lycaonia. Patricia (Corduba) in Spain.

Pella in Macedon. Philippi in Macedon.

Philippopolis in Arabia. Ptolemais in Phos-

nicia. Ptuscino in Gaul. Romula (Hispalis) in Spain.

RhestEua in Mesopotamia. Sabaria in Hungary. Saguntum in Spain. Se-

baste in Palestine. Segobriga in Spain. Sidon

in Phoenicia. Singara in Mesopotamia. Si-

nope in Pontus. Stobi in Macedon. Tarraco in Spain. Thessalonica in

Macedon.

Traducta (Julia) in Spain. Troas in Phrygia.

Turiaso in Spain. Tyana in Cappadocia. Ty-

rus in Phoenicia. Valentia in Spain. Vienna in Gaul. Vimina-

ciura in Moesia. Utica in Africa.

Abbreviations on Colonial Coins.

Acci. Accitana Colonia, Guadiz in Spain, adi. Adjutrix legio. ael. mvn. coel. iElium Mu- nicipium Coela, near Cestos on the Hellespont. AST. Astigitana, Aceja in Andalusia. .

B. A. Braccara Augusti, Braga in Portugal.

c. A. Csesarea Antiochias. c. a. a. p. or patr. Colonia Augusta Aroe Patrensis. cab. Cabel- lio. c. A. bvt. Colonia Augusti Buthrotum, in Epirvs. c. A. c. Colonia Augusta Coesarea. c. A. I. Colonia Augusta Julia, Cadiz, c. a. e. Colonia Augusta Emerita, Merida. cal. Cala- gurris, Calahorra in Spain, c. a. o. a. f. Co- lonia Antoniana Oea. Aug. Felix. Tripoli tn Africa, c. a. pi. met. sid. Colonia jEmi- lia Pia Metropolis Sidon. c. a. r. Colonia Augusta Rauracorum or Colonia Asta Regia : Augst. in Switzerland, or Ast near Xeres de la Frontera in Spain, c. c. a. Colonia Caesarea Augusta, Saragossa in Spain, c. c. col. lug. Claudia Copia Colonia Lugdunensis. c. c. i. E. Colonia Campestris JuKa Babba, in Mau- ritania, c. c. I. B. D. D. Colonia Campestris Julia Babba Decreto Decurionum. c. c. i. ii. p. A. Colonia Concordia Julia, Hadrumetina, Pia Augusta, c. civ. d. d. p. Corona Civicadata Decreto Publico, c. c. n. a. Colonia Carthago Nova Augusta, c. c. n. c. d. d. Colonia Con- cordia, Norba Cajsareana, Decreto Decurio- num. c. COR. Colonia Corinthus. c. c. h.

Ducenfesima Remissa. c c. s. Colonia Clau- dia Sabaria, in Hungary, c. f. p. d. Colonia Flavia Pacensis Develton. Develton. De- velton in Thrace. c. c. i. h. p. a. Colonia Gemella Julia Hadriana, Pariana, Augusta, c. I. c. A. Colonia Julia Concordia Apamea. c. I. A. D. Colonia Julia Augusta Dertona, Tortona near Milan, c. i. a. v. Colonia Julia Aug. Cadiz, c. l. avg. f. sin. Colonia Julia Augusta Felix Sinope. c. i. b. Colonia Julia Balba, in Mauritania, c i. c. a. p. a. Colonia Ju- lia Carthago Augusta Pia Antiqua, or Corinth, or Carthago Nova. c. i. cal. C'olonia Julia Calpe, Gibraltar, c. i. f. Colonia Julia Fe- ix. Cadiz, c. i. o. a. Colonia Julia Gemella Augusta. C.I. I. a. Colonia Imraunis Illice Augusta, FJche in Spain, c. i. n. c. Colonia Julia Norba Caesareana, or

Alcantara : some times it means Col. Julia Nova Carthago. c. I. V. Colonia Julia Valentia, Valencia in Spain. . c. v. t. Colonia Victrix Tarraco. c. L. I. COR. Colonia Laus Julia Corinthus. c. l. I. n. avg. Colonia Laus Julia Nova Augusta, Laus or Lfldi in Lucania. c. m. l. Colonia Me- tropolis Laodicea, in Cxlesyria. co. dam. METRO. Colonia Damascus Metropolis, couh. PRET. VII. p. VI. F. Cohortes Praetoriana? Sep- timum Piae, Sextum Felices. ecu. i. cr. Cohors Prima Cretensis. coh. pret. phil. Cohors Praetoriana Philippensium. col. ael A.H. met. Colonia /Ella Augusta Hadrume- tina Metropolis, in Africa, col. ael. cap. coMM. p. F. Colonia NAidL Capitolina Com- modiana Pia Felix, col. alex. troas. Colo- nia Alexandriana Troas. col. amas. or ams. Colonia Amastriana, in Paphtagonia. col. ant. Antioch in Pisidia. col. arelat. sextan. Co- lonia Arelate Sextanorum, Arks. col. ast. AVG. Colonia Astigitana Augustana, Augusta, Eceja in Spain, col. avg. fel. ber. Colonia Augusta Felix Berytus. col. avg. fir. Colo- nia Aug. Firma, Eceja. col. avg. iul. philip. Colonia Augusta Julia Philippensis. col. avg. pat. trevir. Colonia Augusta Paterna Trevirorum, Treves in Germany sent from Paternum in Italy, col. aur. kar. comm. p. F. Colonia Aurelia Karrhae Commodiana Pia Felix, or Carneatum Commagene, or Carrha in Asia. col. b. a. Colonia Brac- cara Augusta, Braga. col. bryt. l. v. Colonia Berytus Legio Quinta. col. cabe. Colonia Cabellio. col. caes. aug. Co- lonia Caesarea Augusta, in Palestine, col. camalodvn. Colonia Camalodunura, Eng- land. coL. CASiLiN. Colonia Casilinum, Cas- tellazo in Italy, col. cl. ptol. Colonia Clau- dia Ptolemais, Acre in Phoenicia, col. damas. metro. Colonia Damascus Metropolis, col. F. I. A p. barcin. Colonia Flavia Julia Au- gusta Pia, Barcino or Barcelona, col. fl. PAC. devlt. Colonia Flavia Pacensis Deul- ton, Develtom in Thrace, col. ha. me. t. Colonia Hadriana Mercurialis Thaenitana, Mercuriali, Eermo in Italy, and Thenes in Africa, col. h. (or hel.) leg. h. Colonia Heliopolis Legio Heliopolitana. col. hel. i. o. m. n. Colonia Heliopolis Jovi Optimo Maximo Heliopolitano. col. ivl. avg. c. i. F. coMAN. Colonia Julia Augusta Concordia

Invicta Felix Comanorum, drawn from Con- cordia in Italy, and sent to Comana in Cappa- docia. COL. ivl. avg. fel. cremna. Colonia Julia Augustus Felix Cremna, in Pamphylia.

COL. IVL. CER. SAC. AVG. FEL. CAP. OECVM. ISE.

HEL. Colonia Julia Certamen Sacrum Augus- tum Felix Capitolinum Oecumenicum Isetas- ticum Heliopolitanum. col. ivl. conc. apam.

AUG. u. D. Colonia Julia Concordia Apamea Augusta Decreto Decurionura. col. ivl. pa- ter. NAR. Colonia Julia Paterna Narbonensis. COL. NEM. Colonia Nemausus. col. kiceph. COND. Colonia Nicephorium Condita, in Me- sopotamia, col. patr. Colonia Patrensis, or Patricia, Patras in Greece, or Cordova in Spain. COL. p. f. avg. f. caes. met. Colonia Prima Flavia Aug. Felix Csesarea Metropolis, in Palestine, col. p. fl. avg. caes. metrop. p. s. p. same as above, p. s. p. is Provincia Syriae Palestinoe. col. pr. f. a. cesar. Co- lonia Prima Flavia Augusta Csesarea, in Palestine, col. r. f. avg. fl. c. metrop. Colonia Romana Felix Aug. Flavia Caesarea Metropolis. The same. col. rom. Colonia Romuiea, or Seville, col. rom. lvo. Colonia Romana Lugdunura. col. rvs. leg. vi. Co- lonia Ruscino Legio Sexta, Roussilloii in France, col. sabar. Colonia Saburiae. col. sabas. Sebaste in Palestine, col. ser. g. neapol. Colonia Servii Galbas Neapolis, in Palestine, col. v. i. celsa, or col. vie. ivl. celsa. Colonia Victrix Julia Celsa, Kelsa in

Spain, col. vic. ivl. lep, Colonia Victrix Julia Leptis, in Africa, col. vim. an. i. or II. &c., Colonia Viminacium Anno primo. IViddin i►► Servia. col. vlp. tra. Colonia Ulpia Trajana : Kellen, or Warhal, in Tran- sylvania. CO. p. f. cae. metro. Colonia Prima Flavia Caesarea Metropolis, co. p. i. a. Colonia Pacensis Julia Augusta, or Col. Octaviana. c. r. i. f. s. Colonia Romana Julia Felix Sinope. c. t. t. Colonia Togata Tarraco. c. v. il. Colonia VMctrix lUice, Elche in Spain.

D. Decuriones. d. c. a Divus Caes. Aug. dert. Dertosa.

gen. col. ner. patr. Genio Coloniae Neronianae Patrensis. g. l. s. Genio Loci Sacrum.

m. h. illergavonia dert. JMunicipium Hibera lUergavonia Dertosa, Tortosa in Catalonia. M. m. I. v. Municipes Municipii Julii Uti- censis. m. r. Municipium Ravennatium. MVN. CAL. ivl. Municipium Calagurris Julia, in Spain, mvn. clun. Municipium Clunia, Crunna in Spain, mvn. fane. ˆl. Munici- pium Fanestre Aelium, Fano. mvn. stob. Municipiu'n Stobense, Sobi in Macedon. mv. TV. Municipium Turiaso, in Spain.

N. TR. alexandrine; col. bostr. Nerriae Tro- jans Alexandrianae Coloniae Bostroe, in Pa- lestine.

SEP. COL. LAVD. Septima Colonia Laudiceaˆ o~ Laodicea. sep. tyr. met. Septima Tyrus Metropolis.

TABLE I.

The Value and Proportion of Ancient Grecian Coins, according to

Arbuthnot.

(Sterling.) s. d. qrs.

Lepton 0 0 0^'[illegible]

14

28

56

112

224

336

672

1344

1680

Chalcus 0 0 0?i

16

32

48

96

192

240

Dichalcus – 001^

Hemiobolum 0 0 27i

Obolus OllJ

Diobolum 0 2 2^

2 Tetrobolum 0 5 Of

8

16

24

48

96

120

8

12

24

48

60

12

24

30

12

15

II

Drachma

Didrachmon . . .

1

Tetradrachstater

4

2i

11 PenUdr.

.073 .13 2 .270 .323

Note. Of these the drachma, didrachma,
 ॐ ॐwere of silver, the rest, for the most part, of brass. The other parts, as tridrachm, triobolus, &c., were sometimes coined.

Note also, the drachma is here, with the ge- nerality of authors, supposed equal to the dena- rius : though there is reason to believe the drachma was somewhat the weightier. See Drachma and Denarius.

(Sterling.) ॐ. s. d.

The Grecian gola com was the sta- ter aureus, weighing two Attic drachms, or half of the stater ar- genteus ; and exchanging usually for tAventy-five Attic drachms of silver; in our money .... 0 16 If

According to our proportion of gold

to silver 10 9

NUN

There were likewise the stater Cyzi- cenus, exchanging for twenty-eight Attic drachms, or 0 18 1

Stater Philippicus, and stater Alex- andrinus, of the same value.

Stater Daricus, according to Jose- phus, worth fifty Attic drachms, or 1123ˆ

Stater Croesius, of the same value.

TABLE II.

The Values and Proportions of Jewish Coins.

(Sterling.) ॐ. s. d. Gerali 0 0 1.ˆ

Bekah 0 1 1{ˆ

... 0 2 33

63

NUN

10

20

1200

60000

120

2 Shekel . . .

such a fellow : dull, doltish.

They have talked like numskulU. Arbuthnot.

Hocus has saved that clod-pated, numskulled, nin- nyhammer of yours from ruin, and all his family.

Arbuthnot. Or toes and fingers, in this case.

Of Numskulls self should take the place. Prior.

NUN,' n. J. I Sax.nun; Teut.ni►►(n;Dan.and

Nun'nery. Sˆt. nonore. A woman secluded from the world by a religious vow : nunnery is the abode of women thus secluded. I\Iy daughters

Shall all be praying nuns, not weeping queens.

Shakspeare.

A devout nun had vowed to take some young child, and bestow her whole life, and utmost indus- try, to bring it up in strict piety. Hammond.

put your sister into a nunnery, with a strict command not to see you, for fear you should have wrought upon her to have taken the habit. Dryden.

The most blooming toast in the island might have been a mm. Addison.

Every shepherd was undone. To see her cloistered like a 7iun.

Swift'a Miscellanies.

Nun. See Monastery, and Monk. That there were females in the ancient Christian church who made public profession of virginity, before the monastic life was known, appears from the works of Cyprian and TertuUian. These, for distinction's sake, are sometimes called eccle- siastical virgins, and were commonly enrolled in the canon or matricula of the church. They dif- fered from the monastic virgins chiefly in this, that they lived privately in their father's houses, whereas the others lived in communities ; but their profession of virginity was not so strict as to make it criminal in them to marry afterwards, if they thought fit. The consecration of virgins was usually performed publicly in the church by the bishop. The virgin made a

public profession of her resolution, and then the bishop put upon her the accustomed habit of sacred virgins. One part of this habit was a veil, called sacrum vela- men ; another was a mitre or coronet worn upon the head. At present, when a woman is to be made a nun, the habit, veil, and ring, of the can- didate are carried to the altar ; and she herself, accompanied by her nearest relations, is con- ducted to the bishop, who, after mass and an anthem (the subject of which is, ‘ that she ought to have her lamp lighted, because the bridegroom ###s coming to meet her’), pronounces the bene- diction : then she rises up, and the bishop con- secrates the new habit, sprinkling it with holy water. When the candidate has put on her religious habit, she presents herself before the bishop, and sings on her knees, Ancilla Christi sum, &c. ; then she receives the veil, and after- wards the ring, by which she is married to Christ, and lastly, the crown of virginity. When she is crowned, an anathema is denounced against all who shall attempt to make her break her vows. In the more barbarous times the nunneries often afforded protection and support to otherwise destitute and unprotected females, and were almost the only seminaries for the instruction of the sex. But they were also ready instruments of tyranny in the hands of avarice or of super- stition, and many were thus immured for life to atone for a father’s sins, or facilitate the trans- mission of the family estate.

Nun, NooxV, or Wedinoon, a region of Mo- rocco, south >)f the high range of the Atlas, which renders its subjection and revenues ex- tremely partial and precarious. Tlie soil is neither so fertile as that of the other districts of Morocco, nor so barren as that of the immense deserts which extend on the south towards Sou- dan and Tombuctoo. Gum, wax, and ostrich feathers, are the only articles of export : the in- habitants, however, carry on a considerable and lucrative trade with Central Africa. A large amount of gold-dust is imported thence into this country ; and Nun forms a general depot for the merchandise between Soudan and Mogodor. But the whole extent of its coast, from Agadeer

to Cape Bojador, does not afford a single harbour, and only two roads for shipping. The conse- quence is that European vessels, when driven upon these shores, have repeatedly suffered dreadful shipwreck. The character of the inha- bitants is that of the most cruel barbarians :

they not only seize the property of a vessel, but treat the mariners as slaves. J ackson calculates them at 300,000.

NUN'CHION, n. s. From Noon, which see, and Teut. essin, food, says Mr. Thomson. A portion of food taken between meals.

Laying by their swords and trunchions, They took their breakfasts or their imnchions.

Htidibras. NUN'CIO, n. s. } Ital. nuncio ; Lat. nun- Nun'ciature, n. s. i cius. A messenger or ambassador ; and particularly an envoy from t'le pope : nunciature is his office.

She will attend it better in thy youth, Than in a nuncio of more grave aspect. Slmkspeare,

They honoured the inmcios of the spring ; and the Rhodians had a solemn song to welcome in the swallow. , Browne.

This man was honoured with the character of nuncio to the Venetians. Atteibury,

NiNCio, or NuNTio, an ambassador from the pope to some Catholic prince, state, or con- gress. The word nuncio has the same import with ambassador ; but is restrained in its use to the ambassadors of the papal see alone, as that of internuncio is to their envoys extraordinary.

NUNDYDROOG, a celebrated fortress and country of Hindostan, in the province of My- sore. The former is built on the summit of a rock, about 1700 feet high, three-fourths of its circumference being inaccessible. Our forces took it by storm in 1791, after a three weeks' siege. It stands in long. 77►► 53'E., and lat. 13►► 22′ N.

NUNIA, a village of Irak, Arabia, distin- guished as being on the site of the ancient Nine- veh. Its history after it ceased to be the seat of empire is almost unknown ; and in the time of Adrian it was completely destroyed. A city was afterwards erected on the spot, bearing the name of Ninus ; and in Mr. Kinneir's opinion it is the ruins of that city, and hot of the ancient Nineveh, that are now visible. They consist of a rampart and fosse, forming an oblong square, not exceed- ing four miles in compass. The wall is on an average twenty feet high ; but there is no ap- pearance of stones or rubbish of any kind.

NUNJENGODE, a town of the south of In- dia, in the Mysore, and standing on the south bank of the Cubany lliver. It is inhabited chifcdy by brahmins, who are supported by a ce- lebrated and handsome

pagoda, to which im- mense numbers resort to make their annual offering. This temple is very ancient, and kept in good repair. Long. 76►► 50′ E., lat. 12►► l’ N. NUP’TIAL, ar/;’. ˆ Y. nuptial ; l.?i.. nuptia- Nup’tials, n. s. S lia, nuptiie. Pertaining or relating to marriage ; constituting or performed in marriage : nuptials is a word used only in the plural (except by Shakspeare) for the marriage ceremony.

Confirm that amity With nuptial knot, if thou vouchsafe to grant Bono ‘►►► ZZugland’s king. Shakspeare.

Lift up your countenance, as ‘twere the day

Of celebration of that nuptial, which

We two have sworn shall come. Id.

Because propagation of families proceedeth from

the nuptial copulation, I desired to know of him

what laws and customs they had concerning marriage.

Bacuii. Whoever will partake of God’s secrets, must pare off whatsoever is amiss, not eat of this sacrifice with a defiled head, nor come to this feast without a mtp- iial garment. Taylor,

Then all in heat They light the nuptial torch. Milton’s Paradise Lout. Let our eternal peace be sealed by this. With the first ardour of a nuptial kiss. Dryden.

This is the triumph of the nuptial day, My better nuptials, which in spite of fate, For ever join me to my dear Moral. Id

NUREMBURG, the former capital of Fran- conia, and once a free city of the German empire, is now a large and handsome town, included in the Bavarian dominions. It is distinguished by its manufactures of maps, prints, mathematical and musical instruments, curious clock-work, and several articles in iron, steel, ivory, wood, and alabaster : there is also a celebrated school for painting. Here gim powder is said to have been first invented, by Berthold Schwartz, a monk. Martin Behem, to whom the discovery of America has been ascribed, was also born here ; and Albert Durer, the famous engraver on wood.

Nuremburg is included in the province or circle of Ilezat, and stands in a wide, sandy, but well-cultivated plain, on the river Pegnitz, a large but not navigable stream, which, flowing from east to west, divides it

into two nearly equal parts. That on the north of the river is called the Sebald side ; the other, on the south, the Laurence side : each deriving its name from a principal church. The town is surrounded with an old weak wall and ditch, with round towers : it is entered by eight gates, and its cir- cumference is full three miles. The form of the town is nearly a square ; and several of the streets are wide, but for the most part they are both crooked and irregular. The houses are generally of stone.

Of the public edifices the chief are the fort called Reichsfeste, the occasional residence of the emperors of the middle ages, but now used as a granary : the council-house, built in 1619, a fine old structure; and the church of St. Sebald. The public library is remarkable for its MSS. and early editions of books. The church of St. iEgidius, rebuilt in 1718, has elegant columns, and a beautiful altar-piece by Van Dyke. Tlie regalia and imperial jewels of a remote age were long preserved in a church adjoining the river. Nuremburg has also public warehouses for mer- chandise, and public fountains. In former times it was noted for the extent of its funds, for the relief of the poor and for education. It has still an alms-office, foundling hospital, and house of correction.

The establishment of the burgrave of Nurem- burg took place in 1060 ; and the purchase of the city rights by the inhabitants from the empe- rors in 1427. Its trade soon received from Ve- nice a strong impulse ; and it shared with Augs-

burg the exchange of the spiceries, silks, drugs, and other articles of the south, in return for the bulky commodities of the north. But its cliief traffic and grand consequence lay at this early period in its manufactures, this having been four centuries ago a noted place for all kinds of fine hardware. Paper was also made here at an early date ; and it has long been famous for its extensive bookselling and printing establishments. It is rifty-eight miles E. S. E. of Wurzburg, and 100 north by west of Munich.

NURSE, n.s. &: v.u.ˆ Yx.jwurrice,mnirrir.

Nur’ser, ►►. s. (One who nourishes;

Nur’sery, ˆone who has the care

Nur’sling. ‘ of a child or a sick per-

son ; hence, an old woman ; state of being nursed : to nurse is to nourish or bring up a child ; to feed ; maintain ; tend or cherish in sickness or weakness ; pamper ; fondle : nursery is the act, office, or place of nursing, and is also applied to a place appropriated to the rearing of young trees : a nursling is one under or just come from a nurse’s care ; a fondling.

Shall I call a nurse of the Hebrew women, that she may mine the child. Exodus ii. 7.

Thy daughters shall be nursed at thy side.

Isaiah Ix. 4. I was nursed in swaddling cloaths with cares.

]Visdcm vii. 4. This keeping of cows is of itself a very idle life, and a fit niirserii for a thief. Spenser en Ireland.

Then was she held in sovereign dignity, And made the iiuvsl’tng of nobility. Spenser.

Never master had, A page so kind, so duteous, diligent. So feat, so 7ii

I’ the’ swathing cloaths, the other from their

7mrsery Were stolen.

Id.

One Mrs. Quickly, which is in the manner of his mirse, or his dry nurse, or his cook. Shakspeare.

Rome, the nurse of judgment. Invited by your noble self hath sent One general tongue unto us. Id. Henry VIII.

I loved her most, and thought to set my rest On her kind nursery. Id. Ling Lear.

See where he lies, inhersed in the arms Of the most bloody nurser of his arms.

Shakipeare. Unnatural curiosity has taught all women, but the beggar, to find out nurses, which necessity only ought to commend. Raleigh.

You see before you the spectacle of a PlantPgenet, wbo hath been carried from the nurseriˆ to the sanc- tuary, from the sanctuary to the direful prison, from the prison to the hand of the cruel tormentor, and from that hand to the wide wilderness ; for so the world hath been to me. Bacon.

Your nurserii of stocks ought to be in a more bar- ren ground than the ground is whereunto you re- move them. /(/.

And what is strength, but an effect of youth, which if time nurse, how can it ever cease? Daiies. Can wedlock know so great a curse. As putting husbands out to nurse? Cleaveland. If thou repentest truly, pluck up sin by the roots, take away its principle, strangle its nurse, and de- stroy every thing that can foment it.

Jeremy Taylor. Our monarchs were acknowledged here, That they their churches nursing fathers were.

Denhani. Vol.. XVI.

She went forth among her fruits and flowers, To visit how they prospered, bud and bloom Her nursery : tliey at her coming sprung. And touched by her fair tendance gladlier grew.

Milton, 1 was his nursling once, and choice delight. His destined from the womb. Miltun's Agonistes,

Put into your breeding pond three melters for one spawner ; but if into a jiurse pond or feeding pond, then no care is to be taken. Walton.

A nursery erects its head. Where queens are formed and future heroes bred ; Where unfledged actors learn to laugh and cry.

Dry den. In their tender nonage, while they spread Their springing leaves and lift their infant head, Indulge their chilhood, and the mirsling spare. Id. Him in Egerian grove Aricia bore, And nursed his youth along the marshy shore.

Id. A luxurious court is the nursery of diseases ; it breeds them, it encourages, nourishes, and entertains them. L'Estrunge.

By what fate has vice so thriven amongst us, and by what hands been nursed up into so uncontrouled a dominion ! Locke.

The Niscans in their dark abode, Nursed secretly with milk the thriving god.

Addison, My paper is a kind of nursery for authors ; and some, who have made a good figure here, will here- after flourish under their own names. Id, Forthwith the devil did appear. Not in the shape in which he plies At miss's elbow when she lies ; Or stands before the nursery doors. To take the naughty boy that roars. Pnor, Can tales more senseless, ludicrous, and vain, By winter-fires old nurses entertain 1 Blackmore.

They have public nurseries, where all parents are obliged to send their infants to be educated.

Swift. But I wi' my sweet nurslings here, Nae mate to help, nae mate to cheer. Pass widowed nights and joyless days. While Willie's far frae Logan braes. Burns, In cities vice is hidden with most ease, Or seen with least reproach ; and virtue, taught By frequent lapse, can hope no triumph there Beyond the achievement of successful flight. I do confess them nurseries of the arts. In which they flourish most ; where in the beams Of warm encouragement, and in the eye Of public note, they reach their perfect size.

Cewper. Philosophy, as thou shalt hear, when she Shall have her praise, her praise and censure too. Did much, refining and exalting man ; But could not 7iurse a single plant that bore True happiness. Pollok.

NvRSE, military, a person, generally a fe male, whose sole business it is to attend the sici in the general or regimental hospital. She is under the immediate direction of the surgeon, and receives at the rate of one shilling per diem Her duty is to prepare the slops and comforts for the sick, and occasionally to assist in admi- nistering medicines, cooking the victua", waˆh- ing, &c. ; and for every ten men confine I to bed by fever an additional nurse and orderl —nian should be allowed. All the patients, who are able, are every morning and evening to assist in cleaning and airing the hospital, carrying away

dirt, &c., and by every means to assist the help- less. The additional allowance to the Ser- jeants, orderly-men, and nurse, in regiments of the line, is to be made by the paymaster ; and, m regiments of militia and fencibles, the sur- geons are to pay them out of their allowances.

NURTINGEN, a town of Wirtemberg, on the Neckar, fourteen miles south-east of Stutgard. Its inhabitants, about 3400, are employed in agriculture, and manufactures of mother of pearl, musical instruments, &o. It has a good school, and had formerly a well endowed hospi- tal. Long. 9►► 20′ E., hit. 48►► 37′ 36″ N.

NUR’TURE, 71. s. Ikv. a. ˆ Fr- nourriture ;

Nutrica’tion, n.s. Nu’triment, Nutriment’al, adj. Nutrit’ion, n. s. Nutrit’ious, adj. Nu’tritive,

NUTRITURE, n. S.

\ Ital. nutrire, nu- tricere ; Span. [yndrir ; Lat. nu- C trire, nutritin, nu- tricatio. Food ; diet ; mainte- nance ; educa-

tion : to educate ; train ; feed ; maintain : nutri- cation is the manner of being fed : nutriment, ali- ment ; food ; that which nourishes : nutrimental, alimental ; nourishing : nutrition, the act or quality of nourishing or supporting strength or growth ; also that which nourishes : nutritious and nutritive are synonymous of nutrimental, and nutriture is an obsolete word for the power of nourishing.

Thou broughtest it up with thy righteousness, and nurtureihi it in ihy law, and reformedst it with thy judgment. 2 Esdr. viii. 12.

She should take order for bringing up of wards in good nurture, not suffer them to come into bad hands. Spenser.

The thorny point

Of bare distress, hath ta’en from me the show

Of smooth civility ; yet am I inland bred.

And know some nurture.

Shakspeare. As You Like It, This slave

Has my lord’s meat in him.

Why should it thrive and turn to nutriment 1

Shakspeare.

He was nurtured where he had been born in his first rudiments, till the years of ten. Wotton.

Never make a meal of flesh alone, have some other meat with it of less nutriture. Harvey.

For this did the angel twice descend ?

Ordained thy nurture holy, as of a plant

Select and sacred. Milton's Agonistes.

Besides the teeth, the tongue of this animal is a second argument to overthrow this airy nutrication.

Browne.

New parts are added to our substance to supply

our continual decaylngs ; nor can we give a certain

account how the aliment is so prepared for nutrition,

or by what mechanism it is so regularly distributed.

Gla)iville's Scepsis.

0 may'st thou often see

Thy furrows whitened by the woolly lain

Nutritious! secret nitre lurks within. Philips.

When an insolent despiser of disci|line, nurtund into impudence, shall appear before a church govei- nour, severity and resolution are that governours virtues. Soˆlth.

The stomach returns wtiat it has received, in strength and nutriment, diffused into all the parts of the body. /rf.

While the secretory, or separating glands, are too

much widened and extended, they suffer a great quantity of nutritive juice to pass through.

Blarkmore.

By virtue of this oil vegetables are nutrimental, for this oil is extracted by animal digestion as an emulsion. Arbuthnot.

The obstruction of the glands of the mesentery is a great impediment

to nutrition ; for the lympli in those glands is a necessary constituent of the ali- ment before it mixeth with the blood. Id.

The heat equal to incubation is only nutritious ; and the nutiitious juice itself resembles the white of an egg in all its qualities. Id.

They suppose mother earth to be a great animal, and to have nurtured up her young offspring with a conscious tenderness. Bentley.

Fixed like a plant on his peculiar spot.

To draw nutrition, propagate and rot. Pope.

Does not the body thrive and grow,

By food of twenty years ago ?

And is not virtue in mankind.

The nutriment that feeds the mind 1

Swift's Miscellanies. Now tell me, dignified and sapient sir,

My man of morals, nurtured in the shades

Of Academus ••• is this false or true 1

Is Chrsit the abler teacher, or the schools ?

Cowper.

Inveterate habits choke the' unfruitful heart, Their fibres penetrate its tenderest part. And, draining its nutritious powers to feed Their noxious growth, starve every better seed. Id.

NUT', ra.s. ˆ Sax.).nur ; Belg-

Nut'brown, adj.

Nut'-crackers, n. s.

Nui'gall,

Nut'-patcii,

Nut'-jobber, or

Nut'-picker,

Nut’-hook,

Nut’meg,

Nut’-shell,

Nut’-tree.

noot ; Swed. not ; Fr. noix ; Lat. nux. A fruit of certain trees ; a knotted excrescence,)> either of trees or ani- mal bodies ; a small mechanical body (pro- bably so named from its shape), having cogs : nut-brown is brown

as a nut : nut-crackers, an instrument to enclose and break nut-shells : nut-gall, the excrescence of an oak tree : nut-hatch, nut-jobber, or nut-picker, names for the picus martins (see Picus) : a nut-hook is a hook used to get at the nuts of trees ; hence (meta.), a mere tool : nutmeg (nut and Fr. tmiguet), the fruit of the Myristica MoscHATA, which see : nut-shell and nut-tree ex- plain themselves, the last being commonly used for the hazel.

I to my pleasant gardens went, AVhere nutmegs breathe a fragrant scent.

Sandys. I could be bounded in a nut-shell, and count my- self a king of infinite space. Shakspeare. Nut-hook, nut-hook, you lie. Id. Henry IV. One chanced to find a nni In the end of which a hole was cut. Which lay upon a hazel root,

There scattered by a squirrel ; Which out the kernel gotten had ; When quoth this Fay, dear queen be glad. Let oberon be ne’er so mad, I’ll set you safe from peril.

” Drayton’s Nymphiad.

To have a grave wise man wrangle for nut-shellsˆ and a judge scramble for apples, is an indecency big- ger than the sin, and dishonours him by the dispi-o- j-‘ortiiˆn. Jcr. Taylor.

NUT

67

NYC

Nut, Bladder. See Stai’hyl.ea.

Nut, Cashew. See Anacardium.

Nut Cocoa. See Cocos.

Nut, Earth. See Bunium.

Nut, Fausel. See Areca.

Nut, Hazel. See Corylus.

Nut, Fig. See Bunium.

Nutmeg. See Myristica.

Nutation, from the Latin nututio, of the axis of the earth. In the article Precession of the Equi- noxes, the reasons are given why the axis of the globe undergoes annually a change of position ot about 50”, on account of the irregularity in the at- traction of the sun and moon, occasioned by the spheroidal form of the earth. Of these 50”, 30″ on an averaije are referrable to the attraction of the moon. But she cannot produce this effect regu- larly on account of her own change of position ××× and there result from these changes not only in- equalities in the quantity of the precession of the equinoxes, but also a small motion or nuta- tion in the axis of the earth, or in the plane of the equator, in consequence of which tlie stars appear sometimes to approach the equator, at other times to recede from it, varying from their mean place about 9.J seconds. This apparent change in the declination of the stars was first discovered by observation by Bradley, and the physical causes of it were explained by D’AIem- bert and others. It is obvious that a change in the position of the moon towards the earth must produce a change in the attraction of the moon upon the spheroidal part of the earth. Now, this position is affected considerably by the change in the situation of the moon’s nodes, which are subjected to an annual motion of about 18”, completing a revolution round the heavens in about eighteen or nineteen years. In consequence of this, the position of the moon’s orbit to the equator can vaiy 10”; and the change in the attraction of the moon on the spheroidal part of the earth, arising from tHis change of in- clination, produces the nutation of 9ˆ seconds, the period of which is about eighteen or nine- teen years. The precession and nutation alter the right ascensions, declinations, and longitudes o/ the heavenly bodies ; the latitudes remain un- changed. D’Alembert, in his Rechcrches sur la Precession des Equinoxes et sur la Nutation, Paris, 1749, 4to., and Laplace, Mecanique Celeste, have succeeded, by analysis, in reducing all these intricate phenomena to the law of gra- vity, and the

corrections, calculated thereupon, and contained in the astronomical tables, agree most perfectly with observations.

Nutrition, in the animal economy, is the repairing, by food, the continual loss wiiich the different parts of the body undergo. The motion of the parts of the body, the friction of these parts with each other, and especially the action of the air, would destroy the body entirely, if the loss was not repaired by a proper diet, containing nutritive juices ; which being digested in the stomach, and afterwards converted into chyle, mix with the blood, and are distributed through the whole body for its nutrition. In young persons, the nutritive juices not only serve to repair the parts that are damaged, but also to increase them, which is called growth. In grown

persons, the cuticle is every where constantly des- quamating, and again renewing; and in the same manner, the parts rubbed off, or otherwise separated from the fleshy parts of the body, are soon supplied with new flesh ; a wound heals, and an emaciated person grows plump and fat. BuflTon, to account for nutrition, supposes the body of an animal or vegetable to be a kind of mould, in which the matter necessary to its nu- trition is modelled and assimilated to the whole. As to the nature of this matter, he supposes that there exists in nature an infinite number of living organical parts, and that all organised bo- dies consist of such organical parts; that their existence is constant and invariable ; so that the matter which the animal or vegetable assimilates to its substance is an organical matter of the same nature with that of the animal or vegetable, which consequently may augment its volume, without changing its form or altering the quality of the substance in the mould. ‘As to tlTe power that communicates it, there exist,’ says he, ‘ in nature certain powers, as that of gravity, that have no affinity with the external qualities of the body, but act upon the most intimate parts, and penetrate them throughout, and which can never fall under the observation of our senses.’ And, lastly, he supposes that the internal mould itself is reproduced, not only by a similar power, but that it is the very same power that causes the unfolding and reproduction thereof; ‘ for it is sufficient, ‘ proceeds he, ‘ that in an organised body that unfolds itself there be some part si- milar to the whole, in order that this part may one day become itself an organised body, alto- gether like that of which it is actually a part. See Aliment and Physiology.

NUX Vomica, a flat, compressed, round, and poisonous fruit, about the breadth of a shilling, brought from the East Indies. Its surface is not much corrugated ; and its texture is firm like horn, and of a pale grayish-brown color. It is said to be used as a specific against the bite

of a species of water-snake. It is considerably bitter and deleterious ; and has been used in doses from five to ten grains twice a-day or so, in intermittents, particularly quartans, and in contagious dysen- tery. The strychnus Ignatii is a tree of the same kind, producing a gourd-like fruit, the seeds of which are improperly called St. Ignatius's bean*. These, as also the woods or roots of some such trees, called lignum colubrinuni, or snakewood, are very narcotic bitters, like the nux vomica.

'Jo NUZ'ZLE, v.a. Corrupted from nursle ; but some writers have supposed it to come from nozzle or nose, and in that sense used it. To nurse; to foster; thrust forward the nose.

Old men long nozzled in corruption, scorning them that would seek reformation. Sidney.

lie charged through an army of lawyers, some- times with sword in hand, at other times nuzzling like an eel in the mud. Arhuthnot.

Sir Roger shook his ears, and nuzzled along, well satisfied that he was doing a charitable work.

ArbuthnoVs John Bull. The blessed benefit, not there confined. Drops to the third who nuzzles close behind.

Pope. NYCIITIIEMERON, among the ancients sig- nified the whole natural day, or day and night,

consisting of twenty-four hours, or twenty-four equal parts. See Day. Before the Jews had introduced the Greek language into their dis- course, they used to signify this space of time by the simple expression of a night and a day. it is proper here to observe that all the eastern countries reckoned any part of a day of twenty- four hours for a whole day ; and say a thing that was done on the third or seventh day, &c., from that last mentioned, was one after three or seven days. And the Hebrews having no word which exactly answers to the Greek tivxOrjfupov, signi- fying ' a natural day of twenty-four hours,' use night and day, or day and night, for it. So that to say a thing happened

after three days and three nights, was, with them, the same as to say it happened on the third day. This explains what is meant by ‘ the Son of Man’s being three days and three nights in the heart of the eartli.’

NYCTANTIIES, Arabian jasmine, a genus of the monog}nia order, and diandria class of plants ; natural order forty-fourth, sapiariae: tou. cal. octofid : perianth, dicoccous: caps, two-celled: SEEDS solitary, species one only.

N. arbor tristis, the melancholy or sorrow- ful tree. This shrub, the pariatacu of the Bra- mins, grows naturally in sandy places in India, particularly in Ceylon and Java, where it is produced in great abundance, and attains the height of eighteen or twenty feet. It rises with a four-cornered stem, bearing leaves that are oval, and taper to a point. They stand opposite on short foot-stalks: are of a shining brownish-green on the upper side, a more vivid green on the un- der, and of a taste that is astringent and some- what bitter. From the middle rib, on the under surface of the leaves, proceed on both sides a number of costulae or smaller ribs, which run nearly to the margin, and mark tlie surface with the impression of their arched furrows. The flowers, which are white and highly odoriferous, having a sweet smell, consist of one petal deeply divided into eight parts, which are narrower towards the stalk, and dilated towards the sum- mit. They stand upon foot-stalks, which emerge from tlie origin of the leaves ; are rigid, ob- liquely raised towards the top, grow opposite in pairs, and are divided into three short lesser branches, which each support five flowers placed close together, without partial foot-stalks. The fruit is dry, capsular, membranaceous, and com- pressed. It is generally asserted of this plant, that the flowers open in the evening, and fall oft’ the succeeding day. Fabricius and Paludanus, however, affirm, from actual observation, that this effect takes place only in such flowers as are immediately under the influence of the solar rays. Grimmius remarks, in his Laboratoriiim Ceylonicum, that the flowers of this tree afford a fragrant water, which is cordial, refreshing, and often employed with success in inflammations of the eyes. The tube of the flower, v%hen dried, has the smell of saffron ; and, being pounded and mixed with sanders wood, is used by the natives of the Malabar coast for imparting a grateful fragrancy to their bodies, which they rub or anoint with the mixture.

NYCTASTRATEGI. amon- the ancients, vvei►► officers appointed to prevent fires in the

night, or to give alarm and call assistance when a tire broke out. At Rome tliey had the com- mand of the watch, and were called nocturni

triumviri, from their otfice and number.

NVCTEUS, in fabulous history, a son of Neptune, by Celene, king of Lesbos, or Thebes ; who married Amalthata, by whom he had Nyctimene and Antiope, the mother of Amphion and Zethus. lie was mortally wounded in battle by Epopeus, who had carried off Antiope.

Ni'CTIMENE, a daughter of Nycteus, who, having committed incest with her father by means of her nurse, was changed into an owl by Minerva.

NVE (Philip), an English nonconformist, a native of Sussex, was born about 1596. After attending at a grammar school, he was sent to Oxford, and entered a commoner of Brazen- nose College, in 1615, whence he removed to Magdalen Hall. He was admitted A. B. and A. M. in 1619 and 1622, about which time he entered into orders, and was, in 1620, curate of St. Michael's church in Cornhill, London. Resolving, however, to reject the constitution of the Cliurch of England, he became obnoxious to all the censures of the episcopal court ; to avoid which he went to Holland, in 1633. He conti- nued at Arnheim till 1640 ; when, the power of the parliament beginning to prevail over the king, he returned home, and was soon after made minister of Kimbolton in Huntingdonshire, by Edward lord Kimbolton, then earl of ˆlanches- ter. In 1643 he was appointed one of the assembly of divines at Westminster, and became a great champion of the Presbyterians, and of the solemn league and covenant ; and, having married the daughter of Stephen Marshall, was sent with his father-in-law into Scotland the same year, to expedite the taking of the covenant. After his return both houses of parlia- ment took the covenant the same year ; when he preached a sermon in defence of it, showing its warrant from Scripture, and was rewarded with the rectory of Acton near London, in the room of Dr. Daniel Featley, who was ejected. Not long after, however, Nye disagreed with the as- sembly, and opposed their plan of discipline, joining the Independents. In December, 1647, he was sent with Stephen Marshall, to the king at Carisbrook Castle, in attendance upon the commissioners then appointed. Nye was also employed about that time to obtain subscriptions from the apprentices in London, &c., against a personal treaty with the king, while the citizens of that metropolis were petitioning for one. In April, 1G48, he was employed, as well as]\Iarshall and Joseph Caryl, by the Independents, to invite the secured and secluded members to sit in the house again, but without success. In 1653 he was appointed one of the triers for the approbation of public preachers ; in which office he not only procured his son to be clerk, but, with the assistance of his father-in-law, obtained for himself a

livincr of ►►400 a-year. In 1054 he was joined wit’n Dr. Lazarus Seaman, Samuel Clark, Richard 'ines, Obadiah Sedgwick, Jo- seph Caryl, Sec, as an assistant to the commis- sioners appointed by parliament to eject such as were then called scandalous and ignorant minis-

NYL

ters and schoolmasters in London. After the Restoration, in 1660, it was debated for several hours together, whether he and John Goodwin should be deprived of the benefits of the act of indemnity. The result was, that ‘ if Philip Nye, clerk, should, after the 1st September, 1660, ac- cept or exercise any office, ecclesiastical, civil, or military, he should, to all intents and pur- poses in law, stand as if he had been totally ex- cepted for life.’ In November, 1662, he was suspected to be engaged in Tongue’s plot ; but the suspicion was never proved. He died in Corn- hill, London, in September 27th, 1672, and was buried in the upper vault of the said church.

NYIREGYIIAZA, a town of Hungary, in tlie palatinate of Szaboles. It contains churches for Lutherans, Calvinists, Catholics, and Greek Christians. The employment of the inhabitants (about 8000) consists chiefly in the tillage of the vicinity, the rearing of cattle, and making wine. Twenty-nine miles north of Debreczin, and 123 E. N. E. of Pest.

NYKOPING, a town and government of Sweden, containing the western and most consi- derable part of Sodarmaria. The town is well built, with broad and straight streets ; but its population is not above 2400. Its manufactures and its trade and navigation are considerable; and the Swedish language is supposed to be spoken in its greatest purity here. Forty-nine miles south-west of Stockholm.

NYLAND, a province of European Russia, in Finnland, bounded by the gulf of Finnland, Carelia, Tavastland, and Finnland Proper. Its area is 4880 square miles, consisting of good pasturage, and extensive forests. The fisheries supply a considerable part of the food ; the mine- ral chiefly found is copper. It has several small lakes, from one of which issues the Kymmene. Inhabitants 115,000.

N YL-GHAU, in zoology, an East Indian ani- mal, classed as a species of antelope, by Drs. Gmelin and Pallas, Messrs. Pennant, Kerr, &c., though others reckon it a species of bos. Tlie name denotes a blue cow, or bull. The nyl-ghau is larger than any ruminant of this country, except the ox ; its flesh is delicious. In size it appears to be between black cattle and deer ; and in its form also there is a very evident resemblance to both. Its body, horns, and tail, are not unlike those of a bull, and the head, neck, and legs, are very like those of a deer. Mr. Hunter, who dissected it, apprehends that it is an entirely new and

distinct genus. The co- lor, in general, is ash or gray, from a mixture of black hairs and white ; the height of the back is about four feet, and the trunk, from the root of the neck to the pendulous tail, is about the same length ; along the ridge of the neck the liair forms a short and thin upright mane ; the legs are small in proportion to their length ; the neck is long and slender as in the deer ; at the throat there is a shield-like spot of beautiful white hair ; and lower down, on the beginning of the con- vexity of the neck, there is a mane-like tuft of long black hair. There are six grinders on each side of the jaw ; and four incisores in each half of the lower jaw ; the horns are seven inches long, and of a triangular shape. The nyl-ghau

eats oats, but is fonder of grass and hay. It is vicious and fierce in the rutting season, but at other times tame and gentle. The female differs so much from the male that we should scarcely suppose them to be of the same species. She is much smaller, both in height and thickness. In her shape and yellowish color she very much re- sembles deer, and has no horns ; yet has four nipples, and is supposed to go nine months with young: ; she has commonly one at a birth, and sometimes twins. The young male nyl-ghau resembles the female in color.

NYMPH, n. s. Lat. nympha ; Gr. vvfiˆrj. A goddess of the woods, meadows, or waters.

And as the moisture which the thirsty earth Sucks from the sea to fill her empty veias,

From out her womb at last doth take a birth, And runs a nijiiiph along the grassy plains. Davies, This resolve no mortal dame,

None but those eyes could have overthrown ;

The nifmph I dare not, need not name. Jl’aller.

Tending all to niimphish war. Drayton.

Nymph, in entomology, that state of winged insects between their living in the form of a worm, and their appearing in the winged or most perfect state. The eggs of insects are first hatched into a kind of worms or maggots ; which after- wards pass into the nymph state, surrounded with shells or cases of their own skins ; so that in reality, these nymphs are only the embryo in- sects wrapped up in this covering, from which they at last get loose, though not without great difficulty. During this nymph state the creature loses its motion. Swammerdam calls it nympha aurelia, or simply aurelia ; and others give it the name of chrysalis, a term of the like import ; but modern

entomologists prefer the term pupa to both. See Entomology.

Nymphs, in mythology, were certain inferior goddesses, inhabiting the mountains, woods, wa- ters, &c., said to be the daughters of Oceanus and Tethys. All the universe was represented as full of these nymphs, who are distinguished into several ranks or classes. The general divi sion of them was into celestial and terrestrial. The former were called Uraniae, and were sup- posed to be intelligences that governed the hea- venly bodies or spheres ; the latter, called Epigeia;, presided over the several parts of the inferior world, and were divided into those of the waters and those of the earth. The nymphs of the water were the oceanides, or nymphs of the ocean ; the nereids, the nymphs of the sea ; the naiads and ephydriades, the nymphs of the fountains; and the limniades the nymphs of the lakes. The nymphs of the earth were the oreades, or nymplis of the mountains ; the napceffi, nymphs of the meadows ; and the drj'ads and hamadryads, were nymphs of the forests and groves. Besides these we meet with nymphs who took their names from particular countries, rivers, &c., as the Cithteroniades, so called from Mount Cithaeron in Boeotia ; Dodonides, from Dodona ; Tiberi- ades, from the Tiber, &c. Goats were sometimes sacrificed to the nymphs ; but their constant offerings were milk, oil, honey, and wine. ' They were supposed to enjoy longevity, but not to be immortal. They are described as sleepless, and dreaded by the country people. They wpresm-

ceptible of passion. The Argonauts landing on the shore of the Propontis, in their way to Col- chos, sent Hylas, a boy, for water, who disco- vered a lonely fountain, in which the nymphs Eunica, Malis, and Nycheia, were preparing to dance ; and these seeing him were enamoured, and, seizing him by the hand as he was filling his vase, pulled him in. The nymphs, it was the popular persuasion, occasionally appeared ; and nympholepsy is characterised as a phrenzy which , arose from having beheld them. On Cithairon, in BcEOtia, there were nymphs called Sphragitides, whose cave, once also oracular, was on a summit of the mountain. Their dwellings had generally a well or spring of water ; the former often a collection of moisture condensed or exuding from the roof and sides ; and this, in many instances, being pregnant with stony particles, concreted, and marked its passage ' by incrustations, the ground-work in all ages and countries of idle tales framed or adopted by superstitious and credulous people. A cave in Paphlagonia was sacred to the nymphs

who inhabited the moun- tains about Heraclea. It was long and wide, and pervaded by water, clear as crystal. There also were seen bowls of stone, and nymphs and their webs and distaffs, and curious work, excit- ing admiration.

NYMPHiE, in anatomy, two membranaceous parts, situated on each side of the rima. See Anatomy.

NYMPILEA, in antiquity, structures about which the learned are not agreed. Some take them to have been grottoes, deriving their name from the statues of the nymphs with which they were adorned ; but that they were considerable works appears from their being executed by the emperors, or by the city prefects. In an in- scription, the term is written nymfium. Scarce any of these nymphsea have lasted down to our time ; but one was discovered some years ago be- tween Naples and 'esuvius. It is a square building, with only one entrance, and some steps that went down to it. On the right hand, in en- tering towards the head, there is a fountain of the purest water ; along which is laid a naked Arethusa of the whitest marble ; the bottom or ground is of variegated marble, and encompassed with a canal fed by the v/ater from the fountain; the walls are set round with shells and pebbles of various colors ; by the setting of which, as in a mosaic picture, are expressed the twelve months of the year, and the four political virtues ; also the rape of Proserpine ; Pan, playing on his reed, and soothing his flock ; besides the repre- sentations of nymphs swimming, sailing, and wantoning on fishes, &c. It seems pretty evident that the nymphsea were used as baths ; for, at the same time that they were furnished with pleasing grottoes, they were also supplied iwith cooling streams, by which they were rendered exceedingly delightful, and drew great numbers of people to frequent them. Silence seems to have been a pai-ticular requisite here, as appears by this in- scription : ‘ Nymphis loci, bibe, lava, tace.’

Nymphˆa, in botany, the water lily; a genus of the monogynia order, polyandria class of plants ; natural order fifty-fourth, miscellaneae : OR. polypetalous : cal. tetraphyllous or penta-

phyllous; berry multilocular and truncated There are five species :

1 . N. alba, the white water lily, is a native oJ Britain, and grows in lakes and ditches. The root has an astringent and bitter taste, like those of most aquatic plants that run deep into die mud. The Highlanders make a dye with it, of a dark chestnut color.

2. N. lien-hoa, or nenufar, a native of China, is highly extolled in that country for its virtues, and ranked among those plants which are employed in the composition of the liquor of im- mortality. The seeds are there eaten as we eat filberts in Europe : they are more delicate when they are green, but harder of digestion ; they are preserved in many different ways with sugar. The root of this plant is also admitted by the Chinese to their tables : in whatever manner it be prepared, it is equally wholesome. Great quantities are pickled with salt and vinegar, which they reserve to eat with their rice. When reduced to powder, it makes excellent soup with water and milk. The leaves of the nenufar are much used for wrapping up fruits, fish, salt provision, &;c. When dry, the Chinese mix them with their tobacco, to render it softer and milder.

3. N. lotus, the Egyptian lotus, with heart-shaped toothed leaves, thought to be peculiar to Egypt, is thus mentioned by Herodotus : ‘ when the river Nile is become full, and all the grounds round it are a perfect sea, there grow a vast quantity of lilies, which the Egyptians call lotus, in the water. After they have cut them, they dry them in the sun; then, having parched the seed within the lotus, which is most like the poppy, they make bread of it, baking it with fire. The root also of the lotus is eatable, easily be- coming sweet, being round, and of the size of an apple.’ M. Savary mentions it as growing in the rivulets and on the sides of the lakes ; and there are two sorts of varieties of the plant, the one with a white, the other with a bluish flower. ‘The calyx, he says, blows like a large tulip, and diffuses a sweet smell, resembling that of the lily. The first sort produces a round root like that of a potatoe ; and the inhabitants of the banks of the lake Menzel feed upon it. The ri- vulets in the environs of Damietta are covered with this majestic flower, which rises upwards of two feet above the water.’ The high veneration in which the nymphaea lotus was held by the Egyptians, is well known ; and it is still equally venerated by the Hindoos. See Lotus.

4. N. lutea, the yellow water lily, is a native of Britain, growing in lakes and ditches. Lin- nffius tells us that the swine are fond of the leaves and roots, and that the smoke of it will drive away crickets and blattse, or cock-roaches, out of houses.

5. N. nelumbo, is a native of the East and West Indies, called nelumbo in Ceylon. The leaves wlich rest upon the surface of the water are smooth, imdivided, perfectly round, thick, target-shaped, and about one foot and a half in diameter. The foot-stalk of the leaves is prickly ; and inserted, not into the base, or margin, as in most plants, but in tlie centre of tlie lower disk or surface. V’rom this centre, ujion the upper

suifuce, issue, like rays, a great number of large libs, or nerves, which, towards the circumference, are divided and subdivided into a small number of very minute parts. The flowers are large, flesh-colored, and consist of numerous petals, disposed, as in the other species of water-lily, in two or more rows. The seed-vessel is shaped like a top, being broad and circular above, nar- row and almost pointed below. It is divided into several distinct cells, which form so many large round holes upon the surface of the fruit ; each containing a single seed. The stalks, which are used as a pot herb, are of wonderful length. The root is very long, extends itself transversely, is of the thickness of a man's arm, jointed and fibrous, with long intervals betwixt the joints. The fibres surround the joints in verticilli or whirls.

N YMPHiEUM, in ancient geography, a sacred place near ApoUonia, in Illyricum, sending forth continually fire in detached streams from a green valley and verdant meadows. Plutarch. Dio Cassius adds, that the fire neither burns up nor parches the earth, but that herbs and trees grow and thrive near it, and therefore the place is called Nymphseum ; near which was an oracle. It was there that the sleeping satyr was caught, which is said to have been brought to Sylla as he returned from the Mithridatic war.

NYMPHIDIUS (Sabinus), a person of mean descent, but appointed by Nero colleague of Tigellinus in the command of the praetorian guards. About the time, however, that the Ger- man legions revolted from this despicable prince, he was also betrayed by Nymphidius, and abandoned by his guards. Nymphidius pre- tended to espouse the cause of Galba, but, after Nero's death, usurped the supreme authority. Galba, however, was again acknowledged and proclaimed, and Nymphidius, notwithstanding his artifices, detected and slain by the soldiers who \ere proclaiming Galba.

NYS. Corrupted of ne is. None is ; not is. Obsolete.

Thou findest fault, where nys to be found,

And buildest strong work upon a weak ground.

Speiistr.

NYSA, or Nyssa, in ancient geography, a town of Ethiopia, south of Egypt. Some place it in Arabia. This city, with another of the same

name in India, was sacred to Bacchus, who was said to have been educated there by the nymphs of the place, and who received the name of Dionysius, from Atog, Jupiter, and ‘Hvaa, the place of his education. Bacchus made this place the seat of his empire, and the capital of the conquered nations of the east.

NYSSA, in botany, a genus of the orderdioecia, and polygamia class of plants ; natural order twelfth, holoraceje: herm. cal. quinquepartite : COR. none: the stamina are five; there is one pistil; fruit a plum inferior: male cal. quinque- partite, no corolla, and ten stamina. There is only one species, viz.

N. aquatica, the tupelo tree. It is a deciduous tree or shrub, a native of moist or watery places in America, and consists of two varieties; the entire-leaved, and the serrated-leaved tupelo. The entire-leaved tupelo tree, in its native soil and climate, grows to nearly twenty feet high; in

this country its size varies according to the 3oil or situation. In a moist rich earth, well sheltered, it rises to nearly twenty feet ; in others, that are less so, it makes slower progress, and is pro- portionally lower. The branches are not very numerous ; and it rises with a regular trunk, at the top of which they generally grow. The leaves are of a lanceolated figure, and of a fine light-green color. They end in acute points, and are very ornamental, of a thickish con- sistence, soft, grow alternately on pretty long foot-stalks, and often retain their verdure late in the autumn. The flowers, which are not very ornamental, are produced from the sides of the branches, growing sometimes singly, sometimes many together, on a foot-stalk. They are of a greenish color; and, in the countries where they naturally grow, are succeeded by oval drupes, enclosing oval, acute, farrowed nuts. In Eng- land they seldom produce fruit.

The serrated-leaved tupelo tree grows usually nearly thirty feet in height; and divides into branches, near the top, like the other. The leaves are oblong, pointed, of a light-green color, and come oyt without order on long foot-stalks. The flovfers come out from the wings of leaves on long foot-stalks. They are small, of a greenish color; and are succeeded by oval drupes containing sharp-pointed nuts, about the size of a French olive. The propaga- tion of these trees is from seeds, which come from America. As soon as they arrive they should be sown in large pots of light sandy earth an inch deep. No plants come up the first spring. The gardener, after this work is done, should plunge his pots up to their rims in the ground ; and, if it be a

moist place, it will be the better. Weeding must be observed during the summer; and a few furze bushes should be pricked round the pots in November, which will prevent the ground from freezing, and forward the coming up of the seeds. In the next spring the pots should be plunged into a hot-bed, after which the seeds will soon appear. As much air as possible, and watering, should be afforded them ; and they must be hardened soon to be set out. The pots should then be plunged to their rims again in the natural mould ; where they are to remain till October. Water- ing must be given them ; and they should also be shaded in the heat of the day. In October they must be housed with other green-house plants, or else set under a hot-bed frame, or some other cover, during winter. The third spring they should be taken out of the larger pots, and each planted in a smaller, in which their growth may be assisted by a gentle heat in a bed ; and if they are planted up to the rims in a moist place, and shaded in dry weather, they will grow very well. Though by this time they should have become hardy, yet it will be proper to shelter them the winter following in bad weather. They require little more care during their stay in the pots, which may be either two, three, or more years, if they are large enough; when in spring they may be turned out, with the mould, into the places where they are to remain, which ought always to be moist and properly sheltered.

o

o.

O, as a letter, is the fourteenth in the alphabet, and the fourth vowel. In English, has a long sound ; as in drone, g'oan, stone, alone, cloke, broke, coal, droll ; or short, as in got, knot, shot, prong, long ; the long sound is often denoted by a servile a or m subjoined ; as in moan, soul ; or by e. at the end of a syllable ; as in bone : when these vowels are not appended, it is generally short, except before // ; as, droll, scroll, and even then, sometimes, as in loll, poll. Its sound is often so soft as to require it double, and that chiefly in the middle of words; as, goose, re proof, &c. And in some words this oo is pro- nounced like u short.; as in flood, blood, &c. In Irish O signifies a descendant, being abbreviated from og, ogha, young ; it is also used as a pos- sessive or equivalent to the English of, as in Clem o' Cleugh. O is also an interjection of wishing or exclamation. It is used with no great ele- gance by Shakspeare for a circle or oval.

Can this cockpit hold The vasty field of France ? or may we cram Within this wooden 0, the very casks That did affright the air at Agincourt. Shakspeare. 0 ! by what name, for thou above all these, Above mankind, or aught than mankind higher, Surpassest far my naming, how may I Adore thee, Author of this universe. And all this good to man? Milton.

O unexpected stroke, worse than of death ! INIust I thus leave thee, Paradise 1 thus leave Thee, native soil, these happy walks and shades Fit haunt of gods ! Id.

0 that we, who have resisted all the designs of his love, would now try to defeat that of his anger !

Deciiv of Pie t If. 0 ! were he present, that his eye—, and hands]Might see, and urge the death which he commands.

Dryde)i. The Greeks had two O's; viz. omicron, o, and omega, w; the first pronounced on the tip of the lips with a sharper sound; the se- cond in the middle of the mouth, with a fuller sound, equal to oo in our language. As a unmeral O was sometimes used for 11 among the ancients; and with a dash over it, thus t', for 11,000. In modern arithmetic it is used for the cypher, and represents nothing. (See Arithmetic.) As an abbreviation, in the notes of the ancients, O. CON. is read opus conduc- tum; (). C. Q. opera consilioque; O. D. M. operae donum munus; and O. LO. opus loca- tum. Among the Irish, the letter O, at the be- gmning of the name of a family, is said to be a character of dignity annexed to great houses. Thus, in the history of Ireland, we frequently meet with the O Neals, O Carrols, &c., con- siderable houses in that island. Cambden ob- serves that it is the custom of the lords of Ireland to prefix an O to their names, to distinguish them from the commonalty. In music, the ancients used O as a mark of triple time; from a notion that the ternary, or number three, was the most perfect of numbers, and therefore properly ox)Messed by a circle, the most perfect of figures.]l IS not, strictly speaking, the letter O, but the

figure of a circle 0> or double C3, used to ex- press tempo perfecto, or triple time. Hence the Italians call it circolo. The seven antiphones, or alternate hymns of seven verses, &c., sung by the choir in the time of Advent, were formerly called O, from their beginning with such an ex- clamation.

OAF, n. s. This word is also written auff, ofe, and oph. Goth, alf; Teut. uuf. It seems a corruption of ouph, a demon or fairy, says Dr. Johnson

; in Germ, alf, from which elf ; and means properly the same with changeling ; a foolish child left by malevolent ouphs or fairies in the place of one more witty.' A changeling a foolish child left by the fairies.

These, when a child haps to be got Which after proves an idiot, W'hen folk perceives it thriveth not.

The fault therein to smother : Some silly doating brainless calf. That understands things by the half. Says that the fairy left this oaf, And took away the other.

Drayton's Nymphid. OAK, n. s. "\ Sax. ac, oec, ' signifying

Oak'-apple, ' strength,' Skinner says, ' to Oak'ex, adj. ˆshow how easy it is to play Oaken-pix, n.s. 'the fool, under a show of literature and deep researches, I will, for the diversion of my reader, derive from oiKog, a house ; the oak being the best timber for build- ing.' He seems to have had Junius in his thoughts, who on this word has shown his usual fondness for Greek etymology. ' Ac or oak,' says that critic, ' signified among the Saxons, like robur among the Latins, not only an oak but strength, and may be well enough derived, ' non incommode deduct potest,' from oXktj strength ; by taking the three first letters, and then sinking the X, as is not uncommon. The Quercus, which see: oaken is made of oak : oaken-pin, a kind of apple. He returned with his brows bound with oak

Shakspeare. He lay along Under an oak, whose antique root peeps out Upon the brook that brawls along this wood. Id. jNo tree beareth so many bastard fruits as the oak: for, besides the acorns, it beareth galls, oak apples, oak nuts, which are inflammable, and oak berries, sticking close to the body of the tree without stalk. Bacon's Natural History. No nation doth equal England for oaken timber wherewith to build ships. Bacon's Advice to Villiers.

By lot from Jove I am the power. Of this fair wood, and live in oaken bower. Milton.

The monarch oak, the patriarch of the trees, Shoots rising up, and spreads by slow degrees : Three centuries he grows, and three he stays Supreme in state ; and in three more decays.

Drydeii. Clad in white velvet all their troop they led, With each an oaken chaplet on his head. Id.

An oak growing from a plant to a great tree, and then lopped, is still

the same oak. Locke.

Oaken pin, so called from its hardness, is a lasting fruit, yields excellent liquor, and is near the nature of the Westbury apple, though not in fonn.

[ilor'.imi'y.

OAK 7

An oaken garland to be worn on festivals was the recompense of one who had covered a citizen in bat- tle. Addison.

A light, earthy, stony, and sparry matter incrusted and affixed to nak leaves. IVoodward on Fussih.

He snatched a good tough oatet cudgel, and began to brandish it. Arbuthnot's John Bull.

Let India boast her plants, nor envy we The weeping amber and the balmy tree, While by our oaks the precious loads are born. And realms commanded which those trees adorn.

Pope.

The oak-tree hath male flowers, or katkins, which consist of a great number of small slender threads. The embryos, which are produced at remote distances from these on the same tree, do afterwards become acorns, which are produced in hard scaly cups : the leaves are sinuated. The species are five. Miller.

The fruit is an acorn like the common oak. The wood of this tree is accounted very good for many sorts of tools and utensils ; and affords the most durable charcoal in the world. Id.

It seems idolatry, with some excuse.

When our fore-father Druids in their oaks

Imagined sanctity. Cou-per

And such in ancient halls and mansions drear May still be seen ; but perforated sore, And drilled in holes, the solid oak is found. By worms voracious eating through and through.

Id.

Oak Bark, the bark of the oak, which is very useful in tanning. See Tanning. Tlie bark of oak trees was formerly thought to be extremely useful in vegetation. One load (Mr. Mills in his Treatise on Husbandry informs us) of oak bark, laid in a heap and rotted, after the tanners have used it for dressing of leather, will do more service to stiffen cold land, and its effects will last longer, than two loads of the richest dung ; but this has been strenuously controverted. The bark, in medicine, is also a strong astringent ; and hence is recommended in haemorrhages, al- vine fluxes, and other preternatural or im- moderate secretions ; and in these it is some- times attended with good effects. Some have alleged that by the use of this bark every pur- pose can be answered which may be obtained from Peruvian bark. But, after several very fair trials, this is found not to be the case. Be- sides the bark, the buds, the acorns, and their cups are used ; as also the galls, which are ex- crescences, caused by insects, on the oaks of the eastern countries, of which there are divers sorts ; some perfectly round and smooth, some rougher with small protuberances, but all generally hav- ing a round hole in them. All the parts of the oak are styptic, binding, and useful in all kinds of fluxes and bleedings, either inward or outward. The bark is frequently used in gargarisms, for the relaxation of the uvula, and for sore mouths and throats : it is also used in restringent clysters and injections, against the prolapsus uteri or ani. The acorns, beaten to powder, are frequently taken by the vulgai' for pains in tlie side.

O.AK Leaf Galls are of several kinds; the remarkable species, called the mushroom gall, is never found on any other vegetable substance but the*.e leaves ; and, besides this, there are a great number of other kinds. The double gall of these leaves is very singular, because the genenility of productions of this kind affect only

one side of a leaf or branch, and grow all one way ; whereas tliis kind of gall extends itself both ways, and is seen on each side of a leaf, in form of two protuberances, opposite the one to the other. These are of differently irregular shapes; but their natural figure seems that of two cones, with broad bases, and very obtuse points, though sometimes they are round, or very nearly so. These make their first appearance on the leaf in April, and remain on it till June or longer. They are at first green, but afterwards yellowish, and are softer to the touch than many other of the productions of this kind ; they are usually about the size of a large pea ; but sometimes they grow to the bigness of a nut. When opened, they are found to be of that kind which are in- habited each by one insect only, and each con- tains one cavity. The cavity in this is, hovsever, larger than in any other gall of the size, or even in

many others of three times the size ; the sides of it being very little thicker than the substance of the leaf. It is not easy to ascertain the origin of the several species of flies which are at times seen in this manner to come out of the same species of galls. It seems the common course of natuie that only one species of insect forms one kind of gall ; yet it may be that two or three kinds may give origin to the same kind. There is, however, another occasion of our seeing dif- ferent species come out of different galls of the same kind; and this is the effect of the enemies of the proper inhabitants. It might appear that the parent fly, when she had formed a gall for the habitation of her worm-offspring, had i placed in an impregnable fortress : but this is not the case ; for it frequently happens that a fly, as small perhaps as that which gave origin to the gall, produces a worm which is of the carnivorous kind, as the other feeds on vegetable juices. This little fly, well knowing that where there is one of these protuberances on a leaf there is a tender and defenceless insect within, pierces the sides of the gall, and deposits her egg witliin it. This, when it hatches into a worm, feeds upon the proper inhabitant; and, finally, after devouring it, passes into the chrysalis state, and thence ap- pears in the form of its parent fly, and is seen making its way out of the gall, in the place of the proper inhabitant. On opening these leaf galls, which are properly the habitation only of one animal, it is common to find two, the stronger preying upon the body of the other, and sucking its juices as it does those of the leaf; often it is found wholly employed in devouring its unof- fending neighbour at once : this is probably the case when its time of eating is nearly over; and, in fine, when we find the gall inhabited by only one insect, or containing only one chrysalis, as it ought in its natural state to do, we are never cer- tain that this is the proper inhabitant, as it may be one of these destroyers who has eaten up the other, and supplied its place. See Aphis and

PUCERON.

Oak Leaves. The uses of oak bark in tan- ning and in hot-beds are generally known. For the latter of these purposes, however, oak-leaves are now found to answer equally well, or better. Wlien raked into heaps, the leaves should im- mediately be carried into some place near the

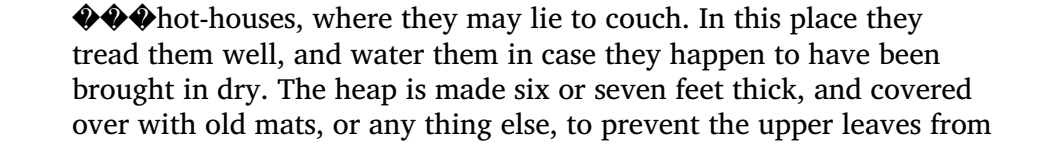 hot-houses, where they may lie to couch. In this place they tread them well, and water them in case they happen to have been brought in dry. The heap is made six or seven feet thick, and covered over with old mats, or any thing else, to prevent the upper leaves from

being blown away. In a few days the heap will come to a strong heat. It will be proper to let them remain five or six weeks in the heaps before they are again watered, and trodden down, in layers, till the pits are quite full. The whole is then covered with a tan bark, to the thickness of two inches, and well trodden down, till the surface becomes smooth and even. On this the pine-pots are to be placed in the manner they are to stand, be- ginning with the middle row first, and filling up the spaces between the pots with tan. In this manner we are to proceed to the next row, till the whole is finished; and this operation is per- formed in the same manner as when tan only is used. The leaves require no farther trouljle through the whole season; as they will retain a constant and regular heat for twelve months without stirring or turning; and our author in- forms us, that, if he may judge from their ap- pearance when taken out (being always entire and perfect), it is probable they would continue their heat through a second year; but, as an annual supply of leaves is easily obtained, the experiment is hardly worth making.

OAKA, or Oakamundal, a district of Guje- rat, Hindostan, situated on the south side of the Gulf of Cutch, and separated by the swamp called the Run from the mainland. This swamp, which is from five to six miles broad, is during the spring tides covered by the sea to the height of one or two feet. The bottom is a firm sand, but covered with mud. The soil here is in general very poor, and produces little else than two species of coarse grain. The few inhabitants, however, breed a number of camels, but the oc- cupation of the greater part is piracy. They are governed by various independent chiefs.

Oaka, the capital of the above district, was long celebrated as the nest of a gang of pirates, who recently received a severe chastisement from the British flag. The practice was, previous to undertaking a cruise, to visit the temple of their idol at Dwarca, and vow that, if they were suc- cessful, they would devote a certain portion of their plunder to the deity; by which means the Brahmins were so enriched that they are said to have had several ships of their own in this service. Long. 69►► 36′ E., lat. 22►► 14 N.

OAKHAM. See Okeham.

OAKHAM PTON, a post and market town of Devonshire, situate near the source of the small river Oak, twenty-one miles west from Exeter, and 193 west froRi London. The church is situate on a hill, and in the market place is an ancient chantry chapel. In the suburbs are the ruins of an ancient castle, dismantled by Henry VHI. on the attainder of Henry Courtenaye, marquis of Exeter. It has a small manufactory of

serges. It was formerly a borough, and is governed by a mayor, eight aldermen, eight com- mon-council, town-clerk, &c., and sent two members to parliament ; the mayor is chosen annually by tlie corporation from among >he

eight aldermen or principal burgesses. It was disfranchised in the year 1832.

OA'KUM, 71. s. ' Formed by some corruption ' says Dr. Johnson : but there is a regular Saxon cecumbe, i.e. combings, refuse. Cords untwisted and reduced again to hemp, with which leaks are stopped.

They make their oahiun, wherewith they calk the seams of the ships, of old seer and weather-beaten ropes, when they are over spent and grown so rotten as they serve for no other use but to make rotten oakum, which moulders and washes away with every sea as the ships labour, and are tossed. liuleigh.

Some drive old oakum through each seam and rift ; Their left hand does the calking-iron guide, The rattling mallet with the right they lift.

Diiiden.

OANNES, a being in Chaldean mythology, represented as half a man and half a fish. Ac- cording to Berosus and others, this monster was the civiliser of the Chaldeans ; to whom he taught a system of jurisprudence so perfect as to be incapable of imjjrovement. See Mvthology.

OAR', n. s., V. n., k. v.a. } Sax. ape ; Goth.

Oar'y, adj. \ and Swed. ar ;

Teut. opr ; Belg. oar (which also signifies the ear). Johnson with superabundant learning says, ' perhaps by allusion to the common ex- pression of plowing the water, from the same root with ear to plow ; Lat. uro ;' as if any illi- terate people would row thus far about for a word of such frequent use as this. Minsheu sug- gests its more probable corruption from Roar (Sax. jiajuan), which see. The instrument of rowing; to row or impel by rowing: oary is having the form or use of an oar. The oars were silver, Which to the tune of flutes kept stroke, and made The water, which they beat, to follow faster. As amorous of their strokes.

Shakspeare. Antony and Cleopatra, His bold head

‘Bove the contentious waves he kept, and oared

Himself with his good arms in lusty strokes

To tn’ shore. Id. Tempest.

So tc-wards a snip the oar-finned gallies play, Which wanting sea to ride, or wind to fly. Stands but to fall revenged. Denlmnis Poems.

Its progressive motion may be effected by the help of several oars, which in the outward ends of them shall be like the fins of a fish to contract and dilate.

Wilki7lS.

The swan with arched neck, Between her white wings mantling, proudly rows Her state with oari/ feet. Milton.

In shipping such as this, the Irish kern And untaught Indian, on the stream did glide,

E’er sharp-keeled boats to stem the flood did learn. Or fin-like oars did spread from either side.

Dry den. His hair transforms to down, his fingers meet In skinny films, and shape his oary feet. Addison. He more undaunted on the ruin rode, And oared with labouring arms along the flood.

Pope. Dr. Johnson sat high on the stern like a magnifi- cent Triton. The boatman and Mr. M ‘Queen chorussed, and all went well. At length Malcolm himself took an oar, and rowed vigorously.

BostveU’s Tour to the Hebrides.

Oar. That part of the oar which is out of the vessel and which enters the water, is called

the blade; and that which is within board is termed the loom, whose extremity, being small enough to be grasped by the row.ers or persons

managing the oars, is called the handle. To push the boat or vessel forwards, by means of this instrument, the rowers turn their backs forward, and, dipping the blade of the oar in the water, pull the handle forward, so that the blade at the same time may move aft in the water: but, since the blade cannot be so moved without striking the water, this impulsion is the same as if the water were to strike the blade from the stern towards the head: the vessel is therefore necessarily moved according to this direction. Hence it follows, that she will advance with the greater rapidity, by as much as the oar strikes the water more forcibly. Thus it is evident tliat an oar acts upon the side of a boat or vessel like a lever of the second class, whose fulcrum is the station upon which the oar rests on the boat's gunnel. In large vessels, this sta- tion is usually called the row-port ; but in lighters and boats it is always termed the row-lock.

OARISTUS, or (Jaristys, a term in the Greek poetry, signifying a dialogue between a husband and his wife ; such as that in the sixth book of the Iliad, between Hector and Andromache. Scaliger observes that the oaristus is not pro- perly any particular little poem, or entire piece of poetry, but always a part of a great one. He :i(kls that the passage now cited in Homer is the iiuly proper oaristus extant in the ancient poet►►

Oasis, Coptic, an inliabited place ; a fertile spot, situated in the midst of the uninhabitable deserts of northern Africa : the name is also applied to a cluster of verdant spots. They serve as stopping-places for the caravans, and often contain villages. In the desert of Sahara there are thirty-two of these regions, which contain fountains, and date and palm trees : twenty of them are inhabited. Those of the Libyan desert are the following : ►►► the Great Oiisis, of which the principal town is El Kargeh ; it consists of a number of insulated spots, extending, for about a hundred miles, in a line parallel with the Nile; it is the first stage of the Darfour caravan, and it contains interesting ruins : ►►► the Little Oasis, or that of El Wah, or El Kassar, of which the best account has been given by Belzoni ; the Northern Oasis, or that of Siwah, (29►► 12';N. ; Lon. 26►► 6′ E.) inhabited by a population of about 8000 souls, and supposed by some to contain the ruins of the temple of Jupiter Ammon : ►►► the Western Oasis, lat. 20►► N., first visited by Edmondstone, in 1819, is composed of 12 villages. ►►► See his Journey to the Oases of Upper Egypt, London, 18'23; see, also, the Travels of Browne, llenni- ker, and Caillaud.

OAST', n. s. Belg. ast. A kiln. Not m use. OA'l", M. s. -V Sax. ate, aten ; from Goth.

Oat’cake, n. s.i cit,ette,(ood. Agrain largely Oat’en, adj. yused as food, both by men Oat’malt, n. s. i and horses : the plural, oats, Oatmeal. J is the word more commonly

-ised : oaten is made of, or bearing oats : the compounds explain themselves.

The oat is of the grass-leaved tribe ; the flowers have no petals, and are disposed iu a loose panicle : the

grain is eatable. The meal makes tojerahlp ˆoo,]

At breakfast this morninc

lonof a prolusion of

other things, there were oat-cakes, made of what is called graddaned meal, that is, meal made of grain se- parated from the husks, and toasted by the fire, iastead of being threshed and kiln dried. Bosuell’s Tour. His diet was of wheaten bread

And milk, and oats, and straw ; Cou/, .

Oat-lands, a town of Van Diemen’s land, ‘n Austral-Asia, fifty miles from Hobart Town, si- tuated in a level, fertile district, and in the vi- cinity of a spacious largoon. A military bar- rack, excellent inn, gaol, and other public build- ings, have been erected here. It is a prosperous place, and the population is rapidly increasing. At Cross Marsh, in the township of Oatlands, the annual market is held.

OATES (Titus), a celebrated and infamous partizan, was born about 1619, and was the son of a Baptist preacher. He was educated at Mer- chant Tailor’s school, whence he removed to Cam- bridge ; took orders ; and, according to Hume, became a chaplain on board the fleet, whence he was dismissed for unnatural practices. In 1677 he turned Roman Catholic and Jesuit, to obtain, as he boasted, a knowledge of their se- crets with a view to betraying them ; but suhs – quently declared himself a Protestant, and, in conjunction with one Dr. Tongue, gave infor- mation of a pretended plot, for the destruction of the Protestant religion, and falsely accused the Catholic lords Petre, Powis, Bellasis, Arundel of Wardour, and other persons of quality, several of whom, including lord Stafford, were executed for the alleged conspiracy. Such was the cele- brated popish plot, and such the credulity of the times, that this unworthy character was rewarded with a pension of ––l200 per annum, and lodged for safety at Whitehall palace. (Jn the accession of James II., however, he was

indicted and con- victed of perjury, and sentenced to stand in the pillory five times a year during his life, and to be whipped from Aldgate to Newgate, and thence to Tyburn. Though the whipping was severely inflicted, he recovered, and, at the lle- volution, the tide of popular prejudice again turning in his favor, he was rewarded with a pension of ––l000 per annum. In 1698 he en- deavoured to rejoin the Baptists ; but in the course of a few months was expelled as a hypo- crite. He died in 1705, universally execrated.

OATH, K.s. \ Sa..a.i; Goth, ait/i;

Oath'able, ––f/;. ˆ Belg. ced: as Mr.

OATH'BiiEAKiNG, W.S.J Tliomson suggests from Sax. de, Goth, and Swed. e, law or justice. A solemn attestation of any kind : particularly one calling the Divine Being to witness or attest its truth : oath able is capable of taking an oath (obsolete): oathbreaking, perjury.

For men sweren bi a gretter than himsilf, and the ende of al her pie is an oath to confirmacyoun.

Wiclif. Ebrewis 6.

Read over Julia's heart, thy first best love. For whose dear sake thou then did'st rend thy faith Into a thousand oaths ; and all tliose oaths Descended into perjury to love me. Shakqjeare'.

You're not oathable, " Ithougb I know you'll swear Into strong shudders the immortal i>ods. Id,

His oathbreahhig he mended thus, By now forswearing that he is forsworn. Id.

We have consultations which inventions shall be

published, which not : and take an oath of secrecy

for the concealing of those which we think fit to keep

secret. Bacoji.

All the oath-rites said,

I then ascended her adorned bed.

Cliapinan.

Profit or pleasure there is none in swearing, nor any thing in men's natural tempers to incite them to it. For, though some men pour out oiiths so freely as if they came naturally from them, yet surely no man is born of a swearing constitution. TUlotson.

Those called to any office of trust are bound by an oath to the faithful discharge of it : but an oatk is an appeal to God, and therefore can have no in- fluence, except upon those who believe that he is.

Swift.

Oaths terminate as Paul observes, all strife. Some men have surely then a peaceful life ; Whatever subject occupy discourse. The feats of Vestris, or the naval force, Asseveration blustering in your face Makes contradiction such a hopeless case ; In every tale they tell, or false or true, Well known, or such as no man ever knew, They fix attention, heedless of your pain. With uaths like rivets forced upon the brain.

Coivper,

An Oath is an invocation of God to witness the truth of what we say, accompanied by an implied and sometimes expressed imprecation of his vengeance, or a renunciation of his favor, if ###what we affirm be false, or what we promise be not performed. The laws of all civilised states have required the security of an oath for evidence given in a court of justice ; and the Christian religion, while it utterly prohibits pro- fane and needless swearing, does not seem to forbid oaths duly required, or taken on necessary occasions.

The Quakers and IVIoravians, swayed by the sense which they put upon that text of Scripture (Matth. V. 34), ' swear not at all ;' and St. ###James's words, chap. v. 12, refuse to swear upon any occasion, even at the requisition of a ma- gistrate, and in a court of justice. These scruples appear to proceed from not distinguishing be- tween the proper use and abuse of swearing. It is doubtless impious to call upon God to witness trifles, or to use his tremendous name as a mere expletive in conversation ; but it does not follow that we may not solemnly call upon him to wit- ness truths of importance. If it be lawful to ask of God our daily bread, and other earthly blessings, it cannot surely be unlawful, where the lives or properties of our neighbours, or the security of government is concerned, to invoke him with reverence to witness the truth of our assertions, or the sincerity

of our intentions ; be- cause of our tnith and sincerity, in doubtful cases, none but he can be the witness.

In the Old Testament we find frequent men- tion made of oaths taken and imposed : ††† Gen. xxiv. Abraham made Eliezer, his steward, swear by the Lord, the God of heaven and earth. ††† Gen. xxvi. Abimelech, king of Gerar, and Isaac, took an oath of each other. ††† Gen. 1. Joseph made his brethren swear. ††† Exod. xxii. An oath was ordered by God to be imposed on one who

should lose cattle committed to his care. ††† 1 Sam. xiv. Saul imposed an oath on his subjects.

In the New Testament we are told that ‘ an oath for confirmation is an end of all strife.’ ††† Heb. vi. 16. Our blessed Saviour himself, who came not to destroy the law, but to fulfil it, ‘ submitted to be put on his oath by Caiaphas, the Jewish high priest, before which adjuration he held his peace.’ ††† Matt. xxvi. 63. St. Paul uses language which, without controversy, must be held to be equivalent with the most solemn oath. ‘ I call God for a record upon my soul.’ ††† 2 Cor. i. 23.

The swearing wliich we think lawful is ††† 1. When the occasion is important; 2. When the necessity is urgent; 3. When the truth is not attainable without it, the matter being involved in obscurity; 4. When the evidence is contra- dictory ; or, 5. When any evil would arise from the neglect, or good from the use, of it ††† as the escape of the guilty and the punishment of the innocent ; or the punishment of the bad, and the acquittal of the innocent.

The oaths which we consider to be prohibited are ††† 1 Vain or useless; 2. Frequent or custo- mary; 3. Profane or idolatrous; 4. Rash or heedless; 5. False or deceitful; nor do we allow it to be proper to swear at all, by any other per- son, place, thing, time, or object than God only. And hence we understand our Saviour and his apostle James not as absolutely forbidding all swearing, but all swearing by heaven or earth, sun or moon, life or limb, man or angel, or other animate or inanimate thing, in those often quoted, but often misunderstood passages, Matt. v. 34 ; James v. 12. As the original Greek was with- out stops, the above passages might with equal, if not greater propriety, have been rendered, * Swear not at all by heaven,’ &c. ; or ‘ Swear not at all, either by heaven,’ &c. ; or, perhaps, still better, ‘ Neither swear not at all by heaven,’ &c. That this was the sense of the reformers, and the compilers of our Common Prayer Book, may be seen in ‘ The Fathers of the English Church,’ passim ;

and in the thirty-ninth article of our church : ‘As we confess that vain and rash swearing is forbidden Christian men, by our Lord Jesus Christ, and James his apostle, so we judge that (the) Christian religion doth not pro- hibit, but a man may swear when the magistrate requireth, in a cause of faith and charity, so it be done according to the prophet’s (Jeremiah iv. 2) teaching, in justice, judgment, and truth.’

They who defend the lawfulness of oaths say, 1 Oat/is xvere permitted under the law, which Christ came not to destroy but to fulfil. The Friends reply, so were arbitrary divorce, hatred of ene- mies, retaliation, &c. ; the same discourse which forbad these forbad swearing also, and in terms at least equally explicit. Sw ear not at all (oXwe, om- nino, altogether). In this first gospel sermon, the axe (as had been predicted) was laid at the root of the tree of evil ; anger was forbidden, as the root of murder ; unlawful desire, as that of adultery; and so swearing, as the root of perjury. ‘ Christ,’ says Basil, ‘ cuts oflT the opportunity of perjury.’

2. Our Lord and the apostle Paul swore. ‘The Friends reply. When our blessed Redeemer was brought before the sanhedrim, the high priest said,

I adjure thee by the living God,’ &:c.; to which Jesub replied, ‘Thou hast said.’ Ifthiswas anoath, it was evidently all on the part of Caiaphas, our Lord had no agency in it. But for three reasons we do not consider it one. 1st, Eˆopkiˆw, though translated ‘ adjure,’ means rather to solemnly exhort and enjoin, as Schleusner himself allows. 2nd, If the high priest had wished to put our Saviour on his oath, it would doubtless have been done in the ordinary form. But, 3rd, It is not likely that he was sworn at all. He was not attending the court as a witness, neither was there any fact to which he was called upon to depose. He was accused of having assumed the divine character; the evidence was suspicious and unsatisfactorj’, and it was evidently for the purpose of entrapping him into the repetition of his supposed crime, that the high priest solemnly enjoined him to declare whether he was or was not the Son of God.

With respect to the apostle Paul, no expression, they continue, can be

extracted from his writings which would be admitted for an oath in any court of judicature. Similar protestations were frequently made by primitive Friends, but un- availingly, and the affirmation granted them by law used to contain the words ‘ in the presence of Almighty God.’ Besides, this argument would prove, if it proved any thing, too much, for the advocates of oaths generally, allow that only juridical swearing is admitted by the law of Christ, which Paul must have transgressed in his oaths, as they were made in epistles to his friends.

3. The third argument in defence of oaths is that Matthew v. 3 3 ††† 37, and James v. 1 2, may be trans- lated ‘ Swear not at all, eithei- by heaven,’ Ike, not includiug ‘ by Jehovuh.’ This interpretation, reply the Friends, though phdologically almost groundless, we will grant ; but while tliese words remain, ‘ or by any other oath,’ of what service can it be t It is very strange that any one should fall to per ceive that these oaths (by heaven, by earth, &c., and specified because most common) were for- bidden for this very reason, that even they, vir- tually and in fact, were oaths by Jehovah him- self. This reason is most explicitly given by our Lord, ‘ Swear not at all ; neither by heaven, for it is God’s throne; nor by the earth, for it is his footstool; neither by Jerusalem, for it is the cuy of the Great King,’ &c. ‘ Whoso shall swear by the temple, sweareth by it and by Him that dwelieth therein; and he that shall swear by heaven, sweareth by the throne of God and by Him that sitteth thereon ;’ so that swearing by heaven and by God is the same thing. If then one is unlawful, the other must be so also. And, if swearing by any thing created was forbidden simply because of its virtual connexion with swearing by the Creator, how much more offen- sive to that Great Being must be the oath by his own awful name ! The Friends observe further, and in conclusion, that for nearly 300 years after Christ, oaths were considered contrary to his command.

They also quote from TertuUian, ‘swearing itself is unlawful to Christians,’ and from Chry- sostom, ‘ Let the Christian entirely avoid oaths, ‘in obedience to our Lord’s prohibition.’ \ ide Gurney on t’ne Peculiarities of Friends.’

Oats, in botany. See Avena.

OAXACA, or (Jiaxaca, a fertile and beauti- ful intendancy of Mexico, bounded on the north by 'era Cruz, on the east by Guatimala, on the west by the province of Puebla, and on the south, for eleven leagues, by the Pacific Ocean. The air is fine, and the vegetation so beautiful and viixorous that it produces more mulberry trees and more silk tlian any province in Ame- rica ; togetlier with wheat, cattle, sugar, cotton,

honey, cocoa, and plantains. In the temperate region the rivers are very copious from the month of May to the month of October. Yet, except the valley of Guaxaca, the greatest part of the country is mountainous. It has rich mines of gold, silver, and lead ; and all its rivers have gold m their sands. Cassava, cochineal, crystal, and copperas, abound in this province ; as also vanilla, a drug used to give chocolate a flavor. In 1803 the inhabitants amounted to 534,000 ; the extent of surface in the province is 4447 square leagues.

Oaxaca, the capital of the last mentioned province, and a bishop's see, lies 230 miles south of the city of Mexico, in a delightful valley of this name. It is watered by a beautiful river, and on the north several aqueducts bring pure and abundant waters from the mountains. The climate presents a perpetual spring. The town is an oblong square, nearly two miles by one and a quarter, including the suburbs, which are full of gardens and plantations of cochineal. The streets are wide and well paved ; and the houses, generally but of two floors, are of free- stone. The modern town-house in the great square is built with a sea-green stone, llie bishop's house and the cathedral form two sides of the same square, which is surrounded with arcades. The churches and monasteries, which are numerous, are all solidly built, and hand-somely decorated. From the enumeration made in 1792, it appears that the inhabitants amount to 24,000. Oaxaca is greatly subject to earth- quakes.

OBADIAH, Heb. naj; and n% i. e. the ser- vant of the Lord, a valiant man of David's army, who came to join him in the wilderness, with several others of the tribe of Gad, 1 Chron. xii. 9.

Obadiah, the prophet, is believed to have been the same with the governor of Ahab's house, mentioned in the first book of Kings (xviii. 3, &c.), who hid and fed the hundred prophet-; whom Jezebel would have destroyed; and some say that he was that Obadiah whom Josiah made overseer of the works of the temple (2 Chron. xxxiv, 12.) The truth is, that when he lived or prophesied is very uncertain : though most writers make him contemporary with Ilosea, Amos, and Joel.

Obadiah, The Prophecy of, a canonical book of the Old Testament, which is contained in one single chapter ; and is partly an invective against the cruelty of the Edomites, who mocked and de- rided the children of Israel as they passed into captivity ; and with other enemies, their confede- rates, invaded and oppressed those strangers, and divided the spoil among themselves ; and partly a prediction of the deliverance of Israel, and of

the victory and triumph of the whole church over her enemies.

Obdorsk, a name formerly given to that part of Asiatic Russia which extends along the moun- lai'ious northern part of the course of the Obi, to th< Frozen Ocean. The soil is here destitute of wood, and covered only here and there with a few shrubs. Every attempt to introduce plants, vegetables, or domestic animals, has failed : a horse seldom lives more than one year, and a cow not more than five ; here rein deer form, there- fore, the only resource of the country. The summer, however, is agreeable. ••• This is also the name of a small palisadoed fort, the most north- erly of any maintained by Russia, garrisoned by twenty-five cossacks and an officer, who forms a species of sovereign to the tribes of Ostiaks and Samoyedes. The town consists only of a church and five houses, with a number of huts, which serve as magazines for furs collected as a tribute. Lat. 67•• N.

OBDU'CE, v.a. i Lat. ofcdwco. Todrawover Obduc'tion, 11. s. > as a covering. No animal exhibits its face in the native colour o f its skin but man ; all others are covered with fea- thers, hair, or a cortex that is obduced over the cutis.

Hale. OB'DURATE, arfj. ˆ Lat. obduratus. Hard Ob'duracy, 72. s. in heart; obstinate;

Ob'durately, adv. { impenitent; stub- Ob'durateness, n. s. [born; firm: obduracy Obdura'tion, I is inflexibility; impe-

Ob'durated, adj. J nitence ; state of being firm in evil. All the other derivatives follow these senses.

Sometimes the very custom of evil makes the heart obdurate against whatsoever instructions to the con- trary. Hooker.

What occasion it had given them to think, to their greater obduration in evil, that, through a froward and wanton desire of innovation, we did constrainedly those things for which conscience was pretended 1 ˆ ˆ Id.

Thou think'st me as far in the Devil's book, as thou and Falstaff, for obduracy and persistency.

Shakspeare. Henry IV, If when you make your prayers,

God should be so obdurate as yourselves.

How would it fare with your departed souls 1

Shakspeare, Women are soft, mild, pitiful, and flexible ;

Thou stern, obdurate, flinty, rough, remorseless.

Id.

To what a height of obduration will sin lead a man, and, of all sins, incredulity. Bp. Hall.

I confess finding the obduredness of that man, I bent my prayers against him, beseeching God daily that he would be pleased to remove, by some means or other, that apparent hinderance to my faithful labours. Id.

This barren season is always the reward of obsti- nate obduration. Hammond.

To convince the proud what sins avail, Or wonders move the obdurate to relent ; They hardened more, by what might more reclaim.

Id.

This saw his hapless foes, but stood obdured, And to rebellious fight rallied their powers Insensate. fd. Paradise Loˆt.

God may, by a mighty grace, hinder the absolute completion of sin in final obduracy. Suutli.

No such thought ever strikes his marble, obdurate heart, but it presently flies oflT and and rebounds from it. It is impossible for a man to be thorough paced in ingratitude, till he has shook ofl' all fetters of pity and compassion. South.

Obdurate as you are, oh ! hear at least

]My dying prayers, and grant my last request

Driiden.

They joined the most obdurate consonants without one intervening vowel. Swift,

And if he doom that people with a frown. And mark them with a seal of wrath pressed down. Obduracy takes place; callous and tough. The reprobated race grows judgment-proof. Couper.

OBE’DIENCE, n. s.ˆ Fr. obedience; Lat.

Obe’dient, adj. I obedientia. Conform-

Obedien’tial, Vityto command; sub-

Obe’diently, adv. i mission to authcij:ity ;

Obey, v. a. ˆ hence obsequiousness :

obedient and obediential mean, compliance witli command or authority ; submissive ; obsequi- ous : to obey is, actively or passively to comply with commands ; conform to the requirements of authority. It formerly took to before the person obeyed, which Addison has mentioned as one of Milton’s Latinisms; but it is frequent, as Dr. Johnson observes, in old writers : when we borrowed the French word v.e borrowed the syntax, obeir aii roi.’

His servants ye are to whom ye obey, whether of sin unto death, or of obedience unto righteousness.

jfˆiiHi. iv. 16. To this end did I write, that I might know the proof of you, whether ye be obedient in all things.

2 Cor. ii. 9. He commanded the trumpets to sound, to which the two brave knights obeying, they performed their courses, breaking their staves. Sidney.

The flit bark, obeying to her mind, Forth launched quickly, as she did desire.

Spenser. If you violently proceed against him, it would shake in pieces the heart of his obedience.

Shakspeare, The will of Heaven Be done in this and all things ! I obey. Id,

To this her mother’s plot She, seemingly obedient, likewise hath Made promise. Id. Merry]Vives of Windsor. It was both a strange commission, and a strange obedience to a commission, for men so furiously as- sailed to hold their hands. Bacon. The ancient Britons yet a sceptred king obeyed.

lyrctytun. We must beg the grace and assistance of God's spirit to enable us to forsake our sins, and to walk in obedience to him. Duty of Man.

Never any man lost by his obedience to the High- est. -Bp. Hall.

Faith is such as God will accept of, when it aflbrds fiducial reliance on the promises, and obedi- ential submission to the command. Hammond. In vain thou bid'st me to forbear. Obedience were rebellion here. Cowley, Nor did they not perceive the evil plight In which they were, or the fierce pains not feel. Yet to their general's voice they soon obetˆed.

Milton. Nor can this be, But by fulfilling that which thou didst want. Obedience to the law of God, imposeii On penalty of death. Id. Farad isa Lost.

OBE

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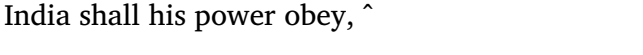 Religion hath a good influence upon the people, to make them obedient to government, and peaceable one towards another. Titlotson.

We should behave ourselves reverently and ohe- dientlxi towards the Divine Majesty, and justly and charitably towards men. Id.

Africk and India shall his power obey, ˆ

He shall extend his propagated sway ?

Beyond the solar year, without the starry way. 5

Dry den.

Faith is then perfect, when it produces in us a fiduciary assent to whatever the gospel has revealed, and an obediential submission to the commands.

Wake's Preparutionjor Death.

The chief his orders gives; the obedient band. With due observance, wait the chiefs command.

Fope.

The obedience of men is to imitate the obedience of angels, and rational beings on earth are to live unto God as rational beings in heaven live unto him.

Law. The stout tall captain, whose superior size

The minor heroes view with envious eyes.

Becomes their pattern upon whom they fix

Their whole attention, and ape all his tricks ;

His pride, that scorns to obey or to submit.

With them is courage, his effrontery wit. Coaper.

O'BEIRNE (Thomas Lewis), D. D., a learned prelate of the established church, and a native of the county of Longford, in Ireland, was born in 1748 of a Catholic family, by whom he was sent to St. Omers at an early age, with his brother John, to study for the priesthood. John in due course took orders and became a Catholic priest in the diocese of which his brother was after- wards the Protestant bishop. Thomas, on the contrary, renounced the Catholic creed, and at the commencement of the American war, having taVen orders, accompanied lord Howe as chap- lain of the fleet. On his return to England he published a vindication of his patron, whose conduct was at that time a subject of parliamen- tary enquiry ; and his connexion with that noble family introduced him to the duke of Portland. In 1782 he accompanied the duke to Ireland, as]i!ivate secretary, and obtained, the following year, from his grace, two valuable livings in Nor- thumberland and Cumberland. He afterwards was first chaplain to earl Fitzwilliam, and was promoted to the see of Ossory, from which, on the death of Ur. Maxwell, he was translated to that of Meath. The writings of this popular pre- late were, The Crucifixion, a poem, in 4to. 1776 ; Tlie (ienerous Impostor, a comedy, 1780; A Short History of the last Session of Parliament, 8vo., anonymous ; Considerations on the late Disturbances, by a Consistent ^^ hig, 8vo. ; Con- siderations on the Principles of Naval Discipline and Courts-Martial, 8vo., 1781 ; and several ser- mons and charges. He died February 15th, 1823.

OBETSANCE, n.s. ►►t. obeisance. A bow; a courtsey ; an act of reverence.

Bathsheba bowed, and did obeisance unto the king. 1 Kings i. 16.

Bartholomew my page, See drest in all suits like a lady : Then call him

INIadara, do him all obeisance.

Shakspeare.

The lords and ladles paid ˆ

Their homage, with a low obei$a7ice made ; >

And seemed to venerate the sacred shade. j

Dry den.

OBE

OB’ELISK, n. s. hat. obeliscws ; Gt. ofiiXoc- A pyramidal piece or pillar of marble, or other fine stone, having usually four faces.

He published the translation of the Septuagint, having compared it with the Hebrew, and noted by asterisks what was defective, and by obelisks what redundant. Grew.

Between the statues obelisks were placed. And the learned walls with hieroglyphicks graced.

Pcpe.

An Obelisk, in architecture, is a truncated quadrangular, and slender pyramid, raised as an ornament, and frequently charged either with in- scriptions or hieroglyphics. Obelisks appear to be of very great antiquity, and to have been first raised to transmit to posterity precepts of philo- sophy, which were cut in hieroglyphical charac- ters; afterwards they were used to immortalise the great actions of heroes, and the memory of persons beloved. The first obelisk mentioned in history was that of Ramases king of Egjˆpt, in the time of the Trojan war, which was forty cubits high. Phius, another king of Egypt, raised one of fifty-five cubits ; and Ptolemy Philadelphus another of eighty-eight cubits, in memory of Arsinoe. Augustus erected one at Rome in the Campus Martins, which served to mark the hours on an horizontal dial drawn on the pavement. They were called by the Egyptian priests the fingers of the sun, because they were made in Egypt also to serve as styles or gnomons to mark the hours on the ground. The Arabs still call them Pharaoh’s needles; whence the Italians call them aguglia, and the French aiguilles. One of the most common and frecjuent situations in which obelisks were erected was the space before a temple. Diodorus makes mention of two obelisks of Sesostris placed before a The- ban temple, which were 120 cubits

high. Hero- dotus mentions two others, 100 cubits high, one of which was erected before a temple at Sais, and the other before the temple of the sun at He- liopolis.

The Romans, in the plenitude of their power and splendor, removed many of these relics of times, then ancient, from their original situations into Italy. When that majestic empire was overrun by the barbarians most of these noble monuments were thrown down, defaced, or de- molished. The exhumations made by the decree of pope Sextus V. brought to light four of them, which were repaired by his architect, Fontana. Since that period several others have been dug up. Several obelisks Tiave likewise been pre- served at Constantinople, the most celebrated of which stood in that part of the hippodrome de- nominated Media Spina. On the four sides of the base of this noble monument were sculptured a variety of subjects : the bassi-relievi of the northern side have been published by Spon. At Catana, in Sicily, fragments have been discovered of two Egj'ptian obelisks, most probably con- veyed thither by the Romans. One has been set up again, presenting a curious appearance from its having eight faces. On the north side of Pen- rith, in the church-yard, are two square obelisks, of a single stone each, eleven or twelve feet high, about twelve inches diameter, and twelve by eight at the sides ; the highest about eighteea

inches diameter, with something like a transverse piece to each, and mortised into a round base. They are fourteen feet asunder, and between them is a grave enclosed between four semicircular stones of the unequal lengths of five, six, four and a half, and two feet high, having on the out- sides rude carving, and the tops notched. This is called the Giant's grave, and ascribed to Sir Ewan Caesarius, who is said to have been as tall as one of the columns, and capable of stretching his arms from one to the other.

OBERLAND, a district of Switzerland, form- ing the south-east part of the canton of Bern. In the north is a lofty mountain ; but the district contains large valleys and plains, which are fer- tile in fruit and corn. Towards the south it be- comes more and more hilly, and terminates in the highest region of the Alps.

OBERLIN (Jer. James), a learned German philosopher and metaphysician, was born at Strasburgh in 1735. He studied at his native place, where in 1757 he published his Dissertatio Pliilologica de veterum ritu condiendi Mortuos. After this he contributed

assistance to Dr. Ken- nicot, by collating for him four MSS. in the ###Strasburgh library. In 1763 he was appointed librarian to the university, and in 1770 became professor of Latin eloquence. In 1782 he ob- tained the chair of logic and metaphysics. He died in 1806. His other works are ### 1. Rituura lioraanorum primae Lineae, orbisantiqui,Artis Di- plomaticae, &c. ; 2. Jungendorum Marium Flumi- numque (Jmnis aevi Molimina ; 3. De Latinae 1-insuaeMedii aevi mira Barbaria; 4. Essaisurle patois Lorram ; 5. Glossarium Germanicum Me- (Jii ievi, I'otissimum Dialecti Suevicae ; 6. The .Strasburgh Almanac ; 7. Editions of Horace, Tacitus, (;a*sHr. kc; 8. Life of Guttenberg, &c.

OBESE'NESS, 71.S. ˆ LaX. obesus. Morbid

OoLs'iTY. I fatness ; incumbrance

of flesh.

On these many diseases depend ; as, on the strait- ness of the chest, a phthisis ; on the largeness of the veins, an atrophy ; on their smallness, obesity.

Grew's Cosmol.

OBI, a considerable river of Asiatic Russia, traversing the whole government of Tobolsk. It is said to rise in 52## N. lat. on the south side of tlie Altai INIountains, from the lake Altyn Noor. Here it is called By, but formerly received the name of the Great River, as being the largest which flows through Asiatic Russia. It takes the name of Obi after its junction with the Katoune: after receiving the Irtysch, it becomes very broad : but it divides into branches, which again re- unite and form numerous isles. This river has an en- tire course of upwards of 2000 miles, and every where abounds in fish.

OBIAN, a river of the United States, in Ten- nessee, which mns into the Mississippi, long. 90## 8′ W., lat. 35## 48′ N.

OBIDOS, a town in the central part of Por- tugal, near the coast on the small river Lagoa de Obidos. On an adjoining hill are the ruins of a castle. An action took place here between the British advanced guard and a party of French, on 15th August, 1808, shortly before the battle of Vimeira. Inliabitants 3000. Forty-four miles north of Lisbon.

OB'JECT, n.s. & ?;. a. ˆ Ob'ject-glass, n.s. Objec'tion, Objec'tive, adj.

Objec tively, adv. Objec'iivekess, n.s Objec'tor.

Fr. objei ; Lat. vhjectum, i. e. o6and jacio,io cast against. >That against or to ward which the sight is cast, or any J power or faculty employed ; hence any thing presented to the senses ; any thing influenced by another thing : to object is, therefore, to oppose ; propose as a change ; taking to or against after it : objection, the act of presenting any thing opposed ; charge made ; adverse argument or fault found : objective is belonging to, residing in, or made an object : objectively, in the manner or state of an object : objectiveness, the state of being an object : ob jector, he who offers or sustains objections.

Were it not some kind of blemish to be like unto Infidels and Heathens, it would not so usually be objected ; men would not think it any advantage in the cause of religion to be able therewith justly to charge their adversaries. Hooker.

The book requireth due examination, and giveth liberty to object any crime against such as are to be ordered. Whitgifte.

Dishonour not your eye By throwing it on any other object.

Shakspeare. Pardon The flat unraised spirit, that hath dared, On this unworthy scaffold, to bring forth So great an object. Id. Henry J

Speak on, Sir, I dare your worst objections.

Id. Henry Vllf. Men in all deliberations find ease to be of the negative side, and affect a credit to object and foretel difficulties ; for when propositions are denied, there is an end of them ; but if they be allowed, it requi- reth a new work ; which false point of wisdom is the bane of business. Bacon.

Flowers growing scattered in divers beds, will show more so as that they be object to view at once.

Id. There is ever between all estates a secret war. I know well this speech is the objection and not the decision ; and that it is after refuted. Id.

They are her farthest reaching instrument. Yet they no beams unto their objects send ;

Kut all the ravs are from their objects sent. And in the eyes with pointed angles end.

Davies. I find our weak powers are subject to an unavoid- able lassitude ; and we can no more contemplate al- ways those divine objects than our bodily eyes are able to fix themselves on the body of the sun in his brightest splendour. Bp. Hall.

The object of true faith is, either God himself, or the word of God : God who is believed in, and the word of God as the rule of faith, or matter to be believed. Hammond.

The old truth was, object ingratitude, and ye object all crimes : and is it not as old a truth, is it not a higher truth, object rebellion, and ye object all crimes ?

Holiday. Why else this double object in our sight. Of flight pursued in the air, and o'er the ground?

Milton. If this one small piece of nature still affords new matter for our discovery, when should we be able to search out the vast treasuries of oljcciive knowledf-j that lie within the compass of the universe ?

Hale's Origi.i of Mankind.

OBL

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OBL

Is there such a motion of ohjectiveness of external bodies, which produceth light I The faculty of light Is fitted to receive that impression or ohjectiveness, and ihat ohjectiveness fitted to thai faculty. Id.

The accusative after a verb transitive, or a sen- tence in room thereof, is called, by grammarians, the object of the verb. Clarke.

The basilisk should be destroyed, in regard he first receiveth the rays of his antipathy and veno- mous emission, which objectively move his sense.

Browne. The act of faith is applicated to the object accord- ing to the nature of it ; to what is already past, as past ; to what is to come, as still to come ; to that which is present, as it is still present.

Pearson. Truth is the object of our understanding, as good is of the

will. Drydens Dufresnoy .

It was objected against a late painter that he drew many graceful pictures, but few of them were like.

Id. This may fitly be called a determinate idea, when, such as it is at any time objectively in the mind, it is annexed, and without variation determined to an ar- ticulate sound, which is to be steadily the sign of that same object of the mind. Locke.

I have shewn your verses to some, who have made that objection to them. Walsh's Letters.

This the adversaries of faith have too much reason to object against too many of its professors ; but against the faith itself nothing at all. Sprat.

Those things in ourselves, are the only proper ob- jects of our zeal, vˆhich, in others, are the unques- tionable subjects of our praises. Id.

Whoever makes such objections against an hypo- thesis hath a right to be heard, let his temper and genius be what it will. Burnet.

Others object the poverty of the nation, and diffi- culties in furnishing greater supplies. Addismi.

An ohjectglass of a telescope I once mended, by grinding it on pitch with putty, and leaning easily on it in the grinding, lest the putty should scratch it.

Newton's Optics. But these objectors must the cause upbraid, That has not mortal man immortal made.

Blackmore. There was but this single fault that Erasmus, though an enemy, could object to him. Atterburi/.

This passenger felt some degree of concern at the sight of so moving an object, and therefore withdrew.

Id. Let the objectors consider, that these irregularities must have come from the laws of mechanism.

Bentley. Pallas to their eyes The mist objected, and condensed the skies.

Pope. Certainty, according to the schools, is distinguished into objective and subjective. Objective certainty is when the proposition is

certainly true in itself; aˆd subjective, when we are certain of the truth of it. The one is in things, the other in our minds.

Watts's Logick. As you have no mistress to serve, so let your own soul be the object of your daily care and attendance.

Imw. Refined sense, and exalted sense be not so useful tis common sense ; their rarity, their novelty, and the nobleness of their objects, make some compensation, and render them the admiration of mankind, as gold, though less serviceable than iron, acquires from its scarcity a value which is much superior. Hume.

OBIT. It signifies a funeral solemnity, or office for the dead, most commonly performed Vol. XVI.

when the corpse lies in the church uninterred. The anniversary of any person's death was aiso called the obit ; and to observe such day with prayers and alms, or other commemoration, was the keeping of the obit. In religious houses they had a register, wherein they entered the obits or obitual days of their founders and benefactors ; which was thence termed obituary. The tenure of obit or chantry lands is taken away and ex- tinct by 1 Edward VI. c. 14, 15, and Car. II. c. 9.

OBJUR'GATE, T).a.ˆ t . i-

OBjuRGA'Ti0N,n.s. i Jfˆ- "ˆJ"'S"- To

Objur-gatory, adj. 5 '^'^^ ►► " '^P""^-

If there be no true liberty, but all things come to pass by inevitable necessity, then what are all in- terrogations and objurgations, and reprehensions and expostulations 1 Bramhull.

OBLATE', adj. Lat. ohlatus. Flatted, as a globe at the poles.

By gravitation bodies on this globe will press to- wards its center, though not exactly thither, by rea- son of the oblate spheroidical figure of the earth, arising from its diurnal rotation about its axis.

Cheyne's Philosophical Principles.

ylra Oblate Spheroid has its axis shorter than its middle diameter, being formed by the rota- tion of an ellipse about the shorter axis.

OBLATI, Lat., in church history, secular per- sons who devoted themselves and their estates to some monastery, into which they were

admitted as a kind of lay brothers. The form of their ad- mission was putting the bell-ropes of the church round their necks as a mark of servitude. They wore a religious habit, different from that of the monks.

OBLATION, n. s. Fr. oblation ; Lat. oblatus. An offering; sacrifice, or any thing connected with religious worship.

She looked upon the picture before her, and straio-ht sighed, and straight tears followed, as if the idol of duty ought to be honoured with such oblations.

Sidney.

IMany conceive in the oblation of Jephtha's dauo-h- ter, not a natural but a civil kind of death, and a separation from the world. Browne.

The kind oblation of a falling tear. Drijden.

The will gives worth to the oblation, as to God's acceptance, sets the poorest giver upon the same level with the richest. South.

Behold the coward, and the brave. All make oblations at this shrine. Swift.

OB'LIGATE, i;.a. ˆ Yi. obligation; 1.2X- j obligo. Obligate and oblige are both used I for to bind or compel ••• by contract, duty, or [gratitude ; and the lat- ter for to please; gra-

Obligatiox, n. s. Ob'ligatory, adj. Ob'ligate, v. a. Obligee', n.s. Oblige'mext, Obli'ger,

Obli'g ING, parˆ. adj. Obli'cingly, adt.

tify : obligation is the binding power; con-

Obli'gixgness, 7z. 5. J tract ; act; engage- ment, or favor: obligatory, imposing or con- veying obligation ; coercive ; used with to or on : obligee is the person bound by an obligation: the obliger, he who binds : obligement (from the Fr. obligement), synonymous with obligation: obliging, compliant; complaisant; urbane; en- gaging: obligingly, civilly; complaisautly : obligingness, force; obligation- ci %'ility; ur- banity.

OBL

It is safer to affront some people than to oblige them ; for the better a man deserves the worse tliey will speak of him, as if the possessing of open hatred to their benefactors were an argument that they lie under no obligation. Sidney.

Whatever we owe it is our part to find where to pay it ; for, whether the obliger be good or bad, the debt is still the same. Id.

Your father lost a father ; That father his ; and the survivor bound In filial obligation, for some term, To do obsequious sorrow. Shakspeare. Hamlet. There was no means for him as a Christian to satisfy all obligations both to God and man, but to offer himself for a mediator of an accord and peace. Bacon s Henry VII. And concerning the lawfulness, not only permis- sively, but whether it be not obligatory to Christian princes and states. Bacon.

This doom though reversible by the tribunal of heaven is still obligatory on earth. Bp. Hall.

I will not resist, whatever it is, either of divine or human obligement, that you lay upon me.

Milton’s Education. The heir of an obliged person is not bound to make restitution, if the obligation passed only by a personal act ; but, if it passed from his person to his estate, then the estate passes with all its burthen.

Taylor’s Rule of Holy Living. As long as the law is obligatory, so long our obe- dience is due. Id.

Nothing can be more reasonable than that such creatures should be under tlie obligation of accepting such evidence as in itself is sufficient for their con- viction. Wilkins.

Obligation is thraldom, and thraldom is always hateful. Hobbes.

He that depends upon another, must Obliif►► his honoiu- with a boundless try^t.

\f oiler. Religion obliges men to the practice of those vir- tues which conduce to the preseivation of our health.

Tillotson. The better to satisfy this ofc/i^ofioH, you have early cultivated the genius you have to arms. Dryden.

Vain wretched creature, how art thou misled, To think thy wit these godlike notions bred ! These truths are not the product of thy mind, liut dropt from heaven, and of a nobler kind : Revealed religion first informed thy sight, And reason saw not, till faith sprung the light. Thus man by his own strength to heaven would soar, And would not be obliged to God for more. Id.

Let this fair princess but one minute stay, A look from her will your obligements pay. /(/. Where is the obligation of any man's making me a present of what he does not care for himself ?

L'Estrange. Nothing could be more obliging and respectful than the lion's letter was, in appearance ; but there was deatli in the true intent. Jd-

Some natures are so sour and so ungrateful that they are never to be obliged. Id.

Nobody is under an obligation to know every thing : knowledge and science in general is the bu- siness only of those who are at ease and leisure.

Locke. A great man gets more by obliging his inferior, than by disdaining him ; as a man has a greater ad- vantage of sowing and dressing his ground than he can have by trampling upon it. South.

The church hath been thought fit to be called Ca- tholick, in reference to the universal obedience which it prescribeth ; both in regard to the persons, obliging iii►►n of all conditions, and in relation to the precepts,

requiring the performance of all the evangelical commands. Pearson.

They look into them not to weigh the obligingness, but to quarrel with the difficulty of the injunctions : not to direct practice, but e-xcuse prevarications.

Decay of Piety. Happy the people who preserve their honour By the same duties that oblige their prince !

Addison's Cato. IMonseigneur Strozzi has many curiosities, and is very obliging to a stranger who desires the sight of them. Addison.

Eugenius informs me very obligingly, that he never thought he should have disliked any passage in my paper. Id.

rhelaw mxisl oblige in all precepts, or in none. If it oblige in all, all are to be obeyed ; if it oblige in none, it has no longer the authority of a law.

Rogers. No ties can bind that from constraint arise, Where cither's forced, all obligation dies.

Granville. To those hills we are obliged for all our metals, and with them for all the conveniencies and comforts of life. Bentley.

When interest calls off all her sneaking train, When air the' obliged desert, and all the vain. She waits or to the scaffold or the cell. Pope.

Obliging creatures ! make me see All that disgraced my betters, met in me. Id. So obliging that he ne'er obliged. Id.

A people long used to hardships look upon them- selves as creatures at mercy, and that all impositions laid upon them by a stronger hand are legal and obligatory. Swift.

If this patent is obligatory on them, it is contrary to acts of parliament and therefore void. Id.

I see her taste each nauseous draught. And so obligingly am caught ; I hJess the hand from whence they came, Nor dare distort my face for shame.

Id. Miicellanir.s.

A man who owes a little can clear it off in a very little time ; whereas a man who, by long negligence owes a great deal, despairs of being ever able to dis- charge the obligation, and therefore never looks into his accounts at all. Chesterjield.

Obligation, in law, signifies a bond, wherein is contained a penalty, with a condition annexed for the payment of money, &;c. The difference between it and a bill is, that the latter is gene- rally without a penalty or condition, though it may be made obligatory ; and obligations are sometimes, by matter of record, as statutes and recognizances.

OBLIQUA'TION, n. s. La.t. obliquatin, from obliquo. Declination from straightness or per- pendicularity ; obliquity.

The change made by the obliquation of the eyes, is less in colours of the densest than in thin sub- stances. Nevˆton's Optics. OBLIQUE', adj.

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obliquer sphere ; While by fixed laws, and with a just return, They feel twelve hours that shade, for twelve that burn ? Prior.

Bavaria's stars must be accused, which shone That fatal day the mighty work was done. With rays oblique upon the Gallic sun. Id.

It has a direction oblique to that of the former motion. Chetjne.

Criticks form a general character from the obser- vation of particular errors, taken in their own oblique or imperfect views ; which is as unjust as to make a judgment of the beauty of a man's body from the shade it casts in such and such a position. Broome. Declining from the noon of day, The sun obliquely shoots his burning ray. Pope. He composed much in the morning, and dictated in the day, sitting obliquely in an elbow chair, with his leg thrown over the arm. Johnson.

Oblique Circle, in the stereographic projec- tion, is any circle that is oblique to the plane of projection.

Oblique Descension is that point of the equinoctial which sets with the centre of the sun, or star, or other point of the heavens, in an oblique sphere.

OBLIQUE Force, or percussion, or power, or stroke, is that made in a direction oblique to a body or plane. Tt is demonstrable that the effect of such oblique force, &c., upon the body, is, to an equal perpendicular one, as the sine of the angle of incidence is to radius.

Oblique Line, that which, falling on another line, raakes oblique angles with it, viz. one acute, and the other obtuse.

Oblique Planes, in dialling, are those which decline from the zenith, or incline towards the horizon. See Dial.

Oblique Sailing, in navigation, is when a ship sails upon some rhumb between the four cardinal points, making an oblique angle with

the meridian; in which case she continually changes both latitude and longitude. See Navi- gation.

OBLITERATE, v. a. > Lat. oblitero. To

Oblitera'tion, n. s. S efface that which has been written ; hence to wear out or destrey.

The wickedness of Eli's house was neither purged by sacrifice, nor obliterated by time. Bp. Hall.

Wars and desolations obliterate many ancient mo- numents. Hale.

Considering the casualties of wars, transmigra- tions, especially that of the general flood, there might probably be an obliteration of alt those monu- ments of antiquity that ages precedent at some time have yielded. Id. Origin of Mankind.

These simple ideas, the understanding can no more refuse to have, or alter, or blot them out, than a mirrour can refuse, alter, or obliterate the images, which the objects set before it produce. Locke.

Let men consider themselves as ensnared in that unhappy contract, which has rendered them part of the devil's possession, and contrive how they may obliterate that reproach, and disentangle their mort- gaged souls. Decay of Piety.

OBLIVION, n. s.) Lat. oblivio. Forget-

Obliv'ious, adj. J fulness ; non-reraem- brance ; cessation of memory : oblivious, caus- ing oblivion.

Water drops have worn the stones of Troy, , And blind oblivion swallowed cities up, And mighty states characterless are grated To dusty nothing.

Shakspeare. Trnilus and Cressida.

Thou shouldst have heard many things of worthy memory, which now shall die in oblivion, and thou return unexperienced to thy grave. Shakspeare.

Raze out the written troubles of the brain.

And with some sweet oblivious antidote

Cleanse the foul bosom. Id. Macbeth.

By the act of oblivion, all offences against the crown, and all particular trespasses between subject and subject, were pardoned, remitted, and utterly extinguished. Davies.

Knowledge is made by oblivion, and, to purchase a clear and warrantable body of truth, we must forget and part with much we know. Browne.

Among our crimes oblivion may be set ;

But ‘tis our king’s perfection to forget. Drj/den.

Can they imagine that God has therefore forgot their sins, because they are not willing to remember them 1 Or will they measure his pardon by their own oblivion. South.

The British souls Exult to see rl\e crowding ghosts descend Unnumbered ; well avenged, they quit the cares Of morta,’ life, and drink the oblivious lake.

Philips.

Oh, born to see what none can see awake ! Behold the wonders of the oblivious lake. Pope.

How many good and generous actions have been sunk into oblivion by a distrustful look, or stampt with the imputation of proceeding from bad motives by a mysterious and seasonable whisper ‘. Sterne.

OB’LONG, adj. } French ohlong ; Lat. ol>-

Ob’longxy, adv. S /ongMS. Longer than broad; in an oblong form.

The best figure of a garden I esteem an oblong upon a descent. Temple’s]\Iiscell(inies.

Every particle, supposing them globular or not very oblong, would be above nine million times their own length from any other paiticle. Beutley.

Thus a rectangled parallelogram, whose sides are unequal, is oblong ; so also an ellipsis is ohlong, oi

G 2

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which shape Cassini originally opined the earth to be. Sharpe.

1 he surface of the temperate climate is larger than it would hare been, had the globe of our earth, or of the planets, been either spherical, or oblurigly sphe- roidical. Cheiine.

An Oblong Spheroid is that which is formed by an ellipse revolved about its longer or trans- verse axis, in contradistinction from the

oblate spheroid, or that which is flatted at its pole.

OB’LOQUY, n. s. Lat. obloquor. Censori- ous language ; slander; reproach.

Reasonable moderation had freed us from being deservedly subject unto that bitter kind of obloquy, whereby as the church of Rome doth, under the co- lour of love towards those things which be harmless, maintain extremely most huitful corruptions; so we peradventure might be upbraided, that, under colour of hatred towards those things that are corrupt, we are on the other side as extreme even against most harmless ordinances. Hooker.

My chastity’s the jewel of our house. Bequeathed down from many ancestors ; Which were the greatest ofc/oiju]/ i’ th’ world In me to lose. Shakspeare.

Here now aspersions, with new obloquies, Are laid on old deserts. Daniel’s Civil War.

Canst thou with impious oUoquii condemn The just decree of God, pronounced and sworn ?

Milton. Shall names, that made your city the glory of the earth, be mentioned with obloquy and detraction?

Addison. Every age might perhaps produce one or two true geniuses if they were not sunk under the censure and obloquy of plodding, servile, imitating pedants.

Swift.

OBMUTES’CENCE, n. s. Lat. obmutesco. Loss of speech.

A vehement fear often produceth obmutescence.

Browne. OBNOXIOUS, adj. } Lat. ohnoxius. Lia- OiiNOx’iousNESs, 71.x. S ble ; exposed; parti- cularly applied to exposure to punishment or disadvantage : hence reprehensible ; not of good famˆ.

I propound a character of justice in a middle form, between the speculative discourses of philosophers, and the writings of lawyers, which are tied and oh- noxiom to their particular laws. Bacon.

But what will not ambition and revenge Descend to ???? who aspires, must down as low As high he soared ; obnoxious first or last.

To basest things. Milton i Paradise Lost.

Conceiving it most reasonable to search for primi- tive truth in the primitive writers, and not to suffer his understanding to be prepossest by the contrived and interested schemes of modern, and withal olmox- ious authors. Fell.

All are ohnajrious, and this faulty land. Like fainting Hester, does before you stand. Watching your sceptre. Waller.

We know ourselves obnoxious to God's severe jus- tice, and that he is a God of mercy, and hateth sin ; and, that we might not have the least suspicion of his unwillingness to forgive, he hath sent his only begotten son into the world, by his dismal sufferings and cursed death, to expiate our offences. Calaniy.

Thy name, O Varus, if the kinder powers Preserve our plains, and shield the Mantuan towers, Obnoxious by Cremona's neighbouring crime. The wings of swans, and stronger pinioned rhime Shall raise aloft. Dnˆden.

OBS

Beasts lie down. To dews obnoxious on the grassy iˆoor, Jrf.

They leave the government a trunk naked, de- fenceless, and ohnoj- ious to every storm. Davenant.

OBNU'BILATE, v. a. Lat. obnubilo. To cloud ; to obscure.

OBOLARIA, in botany, a genus of the angi- ospermia order and didynamia class of plants ; natural order fortieth, personatse : gal. bifid : COR. campanulated and quadrifid : caps, unilo- cular, bivalved, and polyspermous ; the stamina rising from the divisions of the corolla. Species one only, a native of Virginia, bearing clusters of beautiful pale red flowers.

OB'OLE, 71. s. Lat. obolus. In pharmacy, twelve grains.

OBOLUS, an ancient silver money of Athens, the sixth part of a drachma; worth somewhat more than a penny farthing sterling. The word is derived from the Greek o/SoXof or oj3i\oc, a spit or broach ; either because it bore such an impression, or because, according to Eustathius, it was in form thereof. But those now in the cabinets of antiquaries are round.

Obolus, in medicine, is used for a weight of ten grains, or half a scruple.

OBRECHT (Ulric), a learned German, born of a noble family in Strasburg in 1646, where he filled the chairs of civil law and history with great distinction. He was a Protestant ; but when Louis XIV. made himself master of Strasburg, and went thither with his court, he changed, and abjured in 1684. In 1685 the king nominated him to preside in his name in the senate of Stras- burg, with the title of praetor royal, in imitation of the ancient Romans ; from which time he ap- plied himself entirely to public affairs. He was the editor, translator, and writer of several learned works, and died in 1701. His principal pieces are, Prodromus rerum Alsatiarum, 4to. ; Excerpta Historica de naturˆ Successionis in Monarch. Hispan. 3 vols. 4to. ; Quintilian with notes ; and Dictys Cretensis.

OBREPTION, n. s. Lat. obreptio. The act of creeping in with secresy or by surprise.

OBRO'GATE, v. a. Lat. obrogo. To pro- claim a contrary law for the dissolution of the former. ××× W' e insert the four last words after Dr. Johnson ; but find no other authority for them. OBSCENE', arfj. \ Ft. ubsccTie ; Lat. o6 Obscene'ly, arfu. 9scanus. Lewd; immo- Obscene'ness, n. s. /dest ; not agreeable to Obscen'ity. J chastity or delicacy : the

derivatives corresponding.

Chemos the obscene dread of Moab's sons.

Milton. Care shuns thy walks, as at the chearful light. The groaning ghosts, and birds obscene take flight.

Dry den. A girdle foul with grease binds his obscene attire.

Id.

Home as they went, the sad discourse renewed, '1

Of the relentless dame to death pursued, >

And of the sight obscene so lately viewed. Id. j

Words that were once chaste, by frequent use

grow obscene and uncleanly. Walts's Loyich.

No pardon vile obscenity should find. Though wit and art conspire to move your mind.

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It IS the sun's fate, like your's, to be displeasing to owls and obscene animals, who cannot bear his lustre.

Id. Letters.

OBSCURE', adj. & v. a.

Obscura'tion, n.s.

Obscure'ly, adv.

Obscure'ness, n. s.

Obscu'rity. ' eniigt

abstruse ; unintelligible ; living in the dark : to obscure is to darken ; make less visible ; less glorious, beautiful, striking, or intelligible ; to conceal : the adverb and nouns follow these senses.

Lo ! a day of darkness and obscurity, tribulation and anguish upon the earth. Esther xi. 8.

Whoso curseth his father or mother, his lamp shall be put out in vliscure darkness. Proverbs.

'I'hey are all couched in a pit hard by Heme's oak, with obscured lights ; which, at the very instant of Falstaffs and our meeting, they will at once dis- play to the night. Sliakspeare.

The obscure bird clamoured the live-long night.

Id.

What, must I hold a candle to my shames 1 They in themselves, good sooth, are too, too light. Why, 'tis an office of discovery, love. And I should be obscured. Id.

Should Cynthia quit thee, Venus, and each star. It would not form one thought dark as mine are : I could lend them obscureness now, and say, Out of myself there should be no more day. Donne.

O might I here In solitude live savage, in some glade Obscured, where

highest woods, impenetrable To sun or starlight, spread their umbrage broad.

Milton.

The woman's seed at first obscurely told, Now amplier known, thy Saviour and thy Lord.

Id. Who shall tempt with wandering feet The dark unbottomed infinite abyss. And through the palpable obscure find out His uncouth way ˆ Id. Paradise Lost.

Thinking by this retirement to obscure himself from God, he infringed the omnisciency and essen- tial ubiquity of his Maker. Browne's Vulgar Errours,

Not to mention that obscureness that attends pro- phetic raptures, there are divers things knowable by the bare light of nature, which yet are so uneasy to be satisfactorily understood by our imperfect intel- lects, that, let them be delivered in the clearest ex- pressions, the notions themselves will yet appear obscure. Boyle on Colours.

There is scarce any duty which has been so obscured by the writings of learned men as this.

Wake.

By private consent it hath been used in dangerous times to ofoscure writing, and make it hard to be read by others not acquainted with the intrigue. Holder.

Think'st thou, vain spirit, thy glories are the same, And seest not sin obscures thy godlike frame 1 I know thee now by thy ungrateful pride,

That shows me what thy faded looks did hide.

Drijden. You are not for obscurity designed.

But, like the sun, must cheer all human kind.

Such was the rise of this prodigious fire, Which in mean buildings first obscurely bred, From thence did soon to open streets aspire. fd.

As to the sun and moon, their obscuration or change of colour happens commoD'y before the eruption of a fiery mountain. Burnet.

OBS

What lies beyond our positive idea towards infinity, lies in obscurity, and has the undeterminate confu- sion of a negative idea, wherein I know ! do not comprehend all I would, it being too large for a finite capacity. Locke.

There live retired Content thyself to be obscurely good.

Addison. He says, that he is an obscure person ; one, I sup- pose, that is in the dark. Atterbury. Sudden the thunder blackens all the skies. And the winds whistle, and the surges roll Mountains on mountains, and obscure the pole.

Pope. In poverty's low barren vale.

Thick mists, obscure, involved me round ; Though oft I turned the wistful eye.

No ray of fame was to be found. Burns,

Shall gentle C e pass unnoticed here.

To turgid ode and tumid stanza dear. Though themes of innocence amuse him best Yet still obscurity's a welcome guest. Byron.

What is writ, is writ Would it were worthier ! but I am not now That which I have been, and my visions flit Obscurely now before me, and the glow Which in my spirit dwelt is fluttering faint and low.

Id.

OBSECRA'TION, n. s. Lat. obsecratio, ub- secro. Intreaty ; supplication.

OB'SEQUIES, n. s. Fr. obsequies, obsequium. Funeral rites or solemnities.

There was Dorilaus valiantly requiting his friends help, in a great battle deprived of life, his obsequies being not more solemnized by the tears of his parta- kers, than the blood of his enemies. Sidney. Fair Juliet, that with angels doth remain, Accept this latest favour at my hand ; That living honoured thee, and being dead. With funeral obsequies adorn thy tomb.

Shaltspeare. Or tune a song of victory to me, Or to thyself, sing thine own obsequy,

Crashaw. Him I'll solemnly attend, With silent ohsetjui/ and funeral train, Home to his father's house.

Milton's Agonistes. I spare the widow's tears, their woeful cries. And howling at their husband's obseijuies ; How Theseus at these funerals did assist, And with what gifts the mourning dames dismist.

Dryden. His body shall be royally interred, I will, myself.

Be the chief mourner at his obsequies. Id.

Alas ! poor Poll, my Indian talker dies. Go, birds, and celebrate his obsequies. Creech. OBSEQUENS (Julius), a Latin writer, sup- posed to have lived before Honorius's reign. He made a collection of the prodigies which Livy related in his history. There are several editions of those remains. Lycosthenes endeavoured to supply w'nat was wanting in the original.

OBSE'QUIOUS, adj\ Latin ohsequiutn. Obse quiously, adv, > Compliant ; obedient ; Obse'quiousness, n. s. f unresisting ; servile : Shakspeare uses it for fimeral : the adverb and substantive follow the foregoing senses. Your father lost a father ; That father his ; and the survivor bound In filial obligation, for some term. To do obsequious soirow. S/uihspeare. Hamifi:.

I a while obsequiouslv lament The untimely fall of virtuous Lancaster.

S/uikspeare. Adore not so the rising son, that you forget the father, who raised you to this height ; nor be you so obsequious to the father, that you give just cause to the son to suspect that you neglect him. Bacon.

I am ashamed to see these thy creatures so obse- quiously pliant unto me while 1 consider my dispo- sition and deportment towards thee my Creator.

Bp. Hall. At his command the up-rooted hills retired Each to his place ; they heard his voice, and went Obsequious. Milton's Paradise Lost.

I followed her ; she what was honour knew, And, with obsequious majesty, approved My pleaded reason. Id.

See how the obsequious wind and liquid air The Theban swan does upward bear. Cowley. A genial cherishing heat acts so upon the fit and obsequious matter, as to organize and fashion it ac- cording to the

exigencies of its own nature. Boyle. They rise, and with respectful awe, At the word given, obsequiously withdraw.

Dry den . We cannot reasonably expect that any one should readily and obsequiously quit his own opi- nion, and embrace ours with a blind resignation.

Locke. They apply themselves both to his interest and humour, with all the arts of flattery and obsequious- ness, the surest and the readiest way to advance a man. South.

His servants weeping. Obsequious to his orders, bear him hither.

Addison. The vote of an assembly, which we cannot recon- cile to public good, has been conceived in a private brain, afterwards supported by an obsequious party.

Swifl. Obsequious, artful, voluble, and gay. On Britain's fond credulity they play. All sciences a fastmg Monsieur knows, And bid him go to hell, to hell he goes.

Johnson.

OBSERVE', V. a. & v. n.ˆ Obser'vable, adj.

Fr. observer ; Lat. observo. To regard with at- tention ; watch ; note; inspect;

)ˆ keep or practise strictly or reli- giously ; to be at- tentive; make a remark : observ-

J able is worthy

Obser'vably, adv.

Obser'vance, M.S.

Obser'vant, adj.

Observa'tion, n. s.

Observa'toe,

Oeser'vatory,

Obser'ver,

Obser’ving, part. adj.

Obser’vingly, adv. ˆ

or proper to be remarked; remarkable; emi nent : observance, notice ; attention ; respectful or ceremonial practice ; rule of practice ; punctilious or reverential regard : observant is a cor- respondent adjective : observation, the act or habit of observing; remark or note made; obedience : observator and observer, one who ob- serves or peculiarly remarks : observatory, a place for astronomical or scientific observations : observing is synonymous with observant.

A night to be much observed unto the Lord, for bringing them out of Egypt. Exodus xxii. 42.

Many nations aTe superstitious, and diligent ob- servers of old customs, which they leceive by tra- dition from their parents, by recording of their bards and chronicles. Spenser.

OBS

Use all the observance of civility, ˆike one well studied in a sad ostent To please his grandam. Shakrpeare.

These kind of knaves in this plainness, Harbour more craft, and more corrupter ends. Than twenty silky ducking observants That stretch their duties nicely. Id.

Angelo, There is a kind of character in thy life That to the observer doth thy history VuUy unfold. Id. Measure for Measure.

There is some soul of goodness in things evil, Would men observingly distil it out. Shahspeare.

These writers, which gave themselves to follow and imitate others, were observant spectators of those masters they admired. Raleigh.

The king after the victory, as one that had been bred under a devout mother, and was in his naluie a great observer of religious forms, caused Te Deum to be solemnly sung in the presence of the whole army upon the place. Bacon.

Having had surh experience of his fidelity and ob- servance abroad, he found himself engaged in honour to support him. Wottou.

if a slow-paced star had stolen away. From the observer s marking, he

might stay Three hundred years to seeT again. Donne.

We are told how observant Alexander was of his master Aristotle. Digbq on the Soul, Dedication.

Remember, that as thine eye observes others, so art thou observed by angels and by men. Taylor.

There can be no observation or experience of greater certainty, as to the increase of mankind, than the strict and vigilant observance of the calculations and registers of the bills of births and deaths.

Hale's Origin of 3Iankind. The observator of the bills of mortality, hath given us the best account of the number that late plagues have swept away. Hale.

These proprieties affixed unto bodies from conside- rations deduced from east, west, or those observahle points of the sphere, will not be justifiwl from such foundations. Broune.

It is prodigious to have thunder in a clear sky as is observably recorded in some histories. /(/.

Love rigid honesty And strict observanct of impartial laws

Roscummoi: . Arcite left his bed, resolved to pay Observance to the month of merry May.

Dryden.

She may be handsome, yet be chaste, you say, ???

Good observator, not so fast away. Id.

If our idea of infinity be got from the power we observe in ourselves, of repeating without end our own ideas, it may be demanded why we do not at- tribute infinity to other ideas, as well as those of space and duration. Locke.

Company, he thinks, lessens the shame of vice by sharing it ; and therefore, if he cannot whoily avoid the eye of the observer, he hopes to distract it at least by a multiplicity of objects. South.

He was so strict an observer of his word that no consideration whatever could make him break it.

Prior. I took a just account of every observable circum- stance of the

earth, stone, metal, or other matter, from the surface quite down to the bottom of the pit, and entered it carefully into a journal.

Woodward's Natural History. Another was found near the observatory in Green- wich Park. Id. On Fossils.

The great and more observable occasions of exer- cising our courage occur but seldom. Rogers.

OBSERVATORY.

Some represent to themselves the whole of religion as consisting in a few easy observances, and never lay the least restraint on the business or diversions of this life. Rogers.

The rules of our practice are taken from the con- duct of such persons as fall within our observation.

Id.

Sometimes purulent matter may be discharged from the glands in the upper part of the wind-pipe, while the lungs are sound and uninfected, whicii now and then has imposed on undistinguishing ob- servers, Blackmore.

Himself often read useful discourses to his ser- vants on the Lord's day, of which he was always a very strict and solemn observer. Atterhury.

Wandering from clime to clime observant strayed. Their manners noted, and their states surveyed.

Pope.

Wherever I have found her notes to be wholly another's, which is the case of some hundreds, I have barely quoted the true proprietor, without ob- serving upon it. Pope's Letters. Careful observers may foretel the hour,

By sure prognostics when to dread a shower.

Swift.

In matters of human prudence, we shall find the greatest advantage by making wise observations on our conduct, and of the events attending it.

Watts's Logick.

Observing men may form many judgments by the rules of similitude and proportion, where causes and effects are not entirely the same. Watts.

lie alone is an acute observer, who can observe mi- nutely without being observed. Sterne. Let observntion with extensive view

Survey mankind from China to Peru ;

Remark each anxious toil, each eager strife.

And watch the busy scenes of crowded life.

Johnson.

Such dupes are men to custom, and so prone To reverence what is ancient, and can plead A course of long observance for its use, That even servitude, the worst of ills. Because delivered down from sire to son. Is kept and guarded as a sacred thing. Cowper.

Observatory. An observatory is a term applied emphatically to buildings erected and furnished with instruments for astronomical ob- servations. Formerly it assumed the sliape of a tower or turret erected on some eminence ; but in modern erections of this kind conveni- ence and scope in regard to aspect, and solidity of structure, have been more particularly re- garded.

Astronomers carry us back not only to the pyramids of Egypt, but even to the tower of Babel as originally designed for some pur- pose of this kind. It would appear probable that the temple of Belus was devoted to this use by the Chaldaean astronomers ; as was the famous tomb of Osymandias, in Egypt. See our article Astronomy. At Alexandria an observatory was built more than 300 years before the Chris- tian era, and continued in repute for upwards of live centuries.

Oriental Observatories. The oriental vestiges of ancient observatories are well collect- ed in Bailly's Ilistorie de I'Astronomie Indienne, and in the Asiatic Researches, by Sir William Jones, Mr. Colebrooke, &c. The Hindoo ob-

servatories of more modern times are said to have been five in number, viz. at Delhi, Benares, Matra, Oujein, and Suvai Jeyjˆiour, and were erected by order of Mahommed Shah, with a view to reforming the calendar. The task of constructing them was committed

to Jeysing, or Jeyasinha, rajah of Ambhere, learned in the mysteries of science.

- Seeing that very important affairs,' says Jey- sing, 'both regarding religion and the administra- tion of empire, depend upon these ; and that in the time of the rising and setting of the planets, and the seasons of eclipses of the sun and moon, many considerable disagreements of a similar nature were found ; I (Jeysing) re- presented it to his majesty of dignity and power, the sun of the firmament of felicity and domi- nion, the splendor of the forehead of imperial magnificence, the unrivalled pearl of the sea of sovereignty, the incomparably brightest star of the heaven of empire,' &c. &c. His majesty was pleased to reply, ' Since you, who are learn- ed in the mysteries of science, have a perfect knowledge of this matter; having assembled the astronomers and geometricians of the faith of Islam and the Brahmins and Pundits, and the astronomers of Europe, and having prepared all the apparatus of an observatory, do you so la- bor for the ascertaining of the point in question, that the disagreement between the calculated times of those phenomena and the times in which they are observed to happen may be rectified.' See a curious paper containing this astronomer's own account of his proceedings in the Asiatic Researches, vol. v. p. 177. Of the Benares observatory we have in the Piiilosophi- cal Transactions vol. Ixvii. the following account from Sir Robert Barker ; who says that it was said in his time to have been built by the emperor Acber. Mr. Hunter's would seem, however, to be the best authenticated account.

' We entered this building,' says Sir Robert Barker, ' and went up a stair-case to the top of a part of it, near the river Ganges, that led to a large terrace, where, to my surprise and satisfac- tion, I saw a number of instruments yet remain- ing, in the best preservation, stupendously large, immoveable from the spot, and built of stone, some of them being upwards of twenty feet in height ; and, though they are said to have been erected 200 year? before, the graduations and divisions on the several arcs appeared as well cut, and as accurately divided, as if they had been the performance of a modern artist. The execution in the construction of these instru- ments exhibited a mathematical exactness in the fixing, bearing, and fitting of the several parts, in the necessary and sufficient supports to the very large stones that compose them, and in joining and fastening them into each other by means of lead and iron cramps. The situation of the two large quadrants wliose radius is nine feet two inches, by being at right angles with a gnomon at 25 elevation, are thrown into sucli an oblique situation as to

render them the most difhcult, not only to construct of such a magnitude, but to secure in the position for so long a period, zxiti affords a striking instance of the

ability of the architect in their construction ; for, by the shadow of the gnomon thrown on the quadrants, they do not appear to have altered in the least from their original position ; and so true is the line of the gnomon that by applying the eye to a small iron ring, of an inch diameter, at one end, the sight is carried through three others of the same dimension to the extremity at the other end, distant thirty-eight feet eight inches, without obstruction, such is the firmness and art wi.h which this instrument has been ex- ecuted. This performance is the more extraor- dinary when compared with the works of the artificers of Hindostan at this day, who are not under the immediate direction of a European mechanic ; but arts appear to have declined equally with science in the east.

‘ Lieut, col. Arch. Campbell, at that time (1777) chief engineer in the East India com- pany’s service at Bengal, a gentleman whose abilities do honor to his profession, made a perspective drawing of the whole apparatus that could be brought within his eye at one view; but I lament he could not represent some very large quadrants, whose radii were about twenty feet, being on the side whence he took his drawing. Their description, however, is, that they are exact quarters of circles of different radii, the largest of which I judged to be twenty feet, constructed very exactly on the sides of stone walls built perpendicular, and situated, I sup- pose, in the meridian of the place : a brass pin is fixed at the centre or angle of the quadrant, from which the brahmin informed me they stretched a wire to the circumference when an observation was to be made ; from which it occurred to me the observer must have moved his eye up or down the circumference, by means of a ladder or some such contrivance, to raise or lower himself, till he had discovered the alti- tude of any of the heavenly bodies in their passage over the meridian, so expressed on the arcs of these quadrants; these arcs were very exactly divided into nine large sections ; each of these again into ten, making ninety less divisions or degrees; and those also into twenty, express- ing three minutes each, of about two-tenths of an inch asunder ; so that it is probable they had some method of dividing even these into more minute divisions, at the time of observa- tion.

‘ My time would only permit me to take down the particular dimensions of the most capital instrument, or the greater equinoctial sun-dial, which appears to be an instrument to express solar time by the shadow of a gnomon on two quadrants, one situated to the east and the other to the west of it ; and indeed the chief part of their instruments at this place appear to be con- structed for the same purpose, except the quad- rants, and a brass instrument described hereafter. There is another instrument for the purpose of determining the exact hour of the day by the shadow of a gnomon, wliich stands perpendicu- lar to, and in the centre of, a flat circular stone, supported in an oblique situation by means of four upright stones and a cross piece; so that the shadow of the gnomon, which is a perpen- dicular iron rod, is thrown on the divisions of

the circle described on the face of the flat cir- cular stone. There is also a brass circle, about two feet diameter, moving vertically on two pivots between two stone pillars, having an index or hand turning round horizontally on the centre of this circle. This instrument appears to be made for taking the angle of a star at setting or rising, or for taking the azimuth or amplitude of the sun at rising or setting. The use of another instrument I was at a loss to guess. It consists of two circular walls ; the outer of which is about forty feet in diameter, and eight feet high ; the wall within about half that height, and appears intended for a place to stand in to observe the divisions on the upper circle of the outer wall, rather than for any other purpose; and yet both circles are divided into 360►►, each degree being subdivided into twenty small divisions, the same as the quadrants. Tliere is a door-way to pass into the inner circle, and a pillar in the centre, of the same height with thelowercircle, havingahole init, being the centre of both circles, and seems to be a socket for an iron rod to be placed perpendicularly in it. The divisions on these, as well as all the other instruments, will bear a nice examination with a pair of compasses. There is also a smaller equinoctial sun-dial, constructed on the same principle as the large one. This obser- vatory at Benares is said to have been built by the order of the emperor Ackbar; for, as this wise prince endeavoured to improve the arts, so he wished also to recover the sciences of Hin- dostan, and, therefore, directed that three such places should be erected ; one at Delhi, another at Agra, and the third at Benares. Some doubts have arisen with regard to tlie certainty of the ancient brahmins having a knowledge in astronomy, and whether the Persians might not have introduced it into Hindostan when con- quered by that people ; but these doubts, I think, must vanish, when we know that the pre- sent brahmins pronounce, from the records and tables which have been handed to them by their forefathers, the

approach of the eclipses of the sun and moon, and regularly as they advance give timely information to the emperor and the princes in whose dominions they reside.' ††† Philosophical Transactions, vol. Ixvii. p. 598, or Abi-idgment, vol. xiv. p. 214.

Mr. Hunter's paper speaks distinctly of the same astronomer having ' bound the girdle of resolution to his soul, and constructed at Delhi several of the instruments of an observatory, such as had been formerly erected at Samercand, agreeably to the Mussulman books.' ' Thus an accurate method,' it continues, ' of constructing an observatory was established ; and the differ- ence which had existed between the computed and observed places of tlie fixed stars and planets, by means of observing their mean mo- tions and aberrations with such instruments was removed. And, in order to confirm the truth of these observations, he constructed instruments of the same kind in Suvai Jeypour, and Matra, and Benares, and Oujein.'

Father le Compte describes a very magnificent observatory, erected at Pckin so far back as the thirteenth century, and furnished by the late

emperor of China with many new instruments, of which a catalogue may be found in Duhal- de's China. This was at the intercession of some Jesuit missionaries, chiefly father Verbiest, whom he appointed his chief observer. The instruments are exceedingly large ; but the divi- sions are less accurate, and, in some respects, /he contrivance is less commodious than in those made in Europe at this period. The chief are, an armillary zodiacal sphere, of six Pans feet diameter ; an azimuthal horizon, six feet diameter ; a large quadrant six feet radius; a sextant eight feet radms; and a celestial globe, six feet dia- meter.

European Observatories. ××× Copernicus is stated to have been the first European who set an instrument in the meridian: this was in the year 1540. Twenty years after William 1. of Hesse furnished his observatory at Cassel, under the direction of Tycho Brahe and Bailly, re- garded then as the first regular erection of tlie kind in Europe.

Tycho Brahe's own observatory, or that of Uranibourg, on the Iluen Island in the Sound, was the next in order. He projected this erection for the purpose of making a new cata- logue of the fixed stars ; a determination to which he was induced by the appearance of a new and very bright star in Cassiopeia, which filled all Europe with astonishment and conster- nation. The first stone was laid in August 1576, under the immediate patronage of Frederick n. of Denmark ; and it contained a noble set of instruments until the beginning of the last century. Among them was a celestial globe six feet in diameter. The whole town, however, has long since been a heap of ruins : this globe was burnt in the general conflagration of Copen- hagen in 1728. His celebrated sextant has been transferred as a constellation to the heavens, and is marked sextans or sextans Uranise, under the breast of Leo.

The other European observatories we shall describe in alphabetical order, with the excep- tion of those of our own country, which will close the article.

Avignon. Here an observatory was built by father Bonfa, so early as 1683, and it has been occupied by a succession of learned ecclesiastics, who have frequently contributed to the enlarge- ment of astronomical science.

At Berlin Frederick I. of Prussia founded an observatory in 1711,

under the direction of Leibnitz, president of the Royal Academy of Sciences. It is a large square tower. Here Grischovv, Kies, and La Lande, made various observations. The last astronomer says that, about the year 1752, he raised enormous pillars here, to which he attached the mural quadrants, north and south, (Memoires de I'Academie, 1751 and 1752.) Frederick H. added a fine building, where the Academy of Sciences holds its assemblies. The late astronomer royal, M. Bode, distinguished himself as the publisher of one of the most complete celestial atlases ex- tant, entitled Uranographia, which is accompa- nied with a well arranged catalogue and history of the stars observed liere.

At Beziers (F"rince) the bishop's tower was

converted to an observatory, where observations have been made by Bouillet on Saturn's ring.

Bologna observatory was erected in the palace of the Institute in 1714, by count Marsigli; pope Benedict XIV. giving the instruments. Here, it may be remembered, is the celebrated meridian line of Cassini. See Bologna.

At Bourdeaux is an observatory seventy-five feet high, and twenty feet square, situated ex- actly in latitude 45►►, or the middle of our tem- perate zone. IlereTurgot procured a complelt' set of observations to be made on the length of a pendulum vibrating seconds.

Biest has an observatory on a small scale for the naval academy ; and plans have been formed for a larger edifice.

At Bremen, in Dr. Oiler's observatory, were discovered the new planets Pallas and X'esta.

Brunswick has an observatory where the de- termination of the orbits of the new planets, and other valuable observations, have been made by Dr. Gauss.

Cadiz has an observatory attached to the marine academy, and furnished both with Eng- lish and French instruments. The observations made here by Varilla have been published in two vols.

Carthagena has also an observatory.

At Copenhagen an astronomical tower was built by Christian IV. in 1G56, at the suggestion of Longomentames. Mr. Bugga, formerly the astronomer here, mentions various observatories in Greenland,

Iceland, and Norway, as having been at various times erected by the Danish monarchs.

At Dantzic a former observatory was used by Hevelius, who has described it in his Machena Celestis. The modern one was built in 1778.

At Dijon M. Necker converted the tower of the king's lodge into an observatory, where tlie able Bertnard made numerous published obser- vations.

Dorput in Livonia has an observatory, under the able direction of M. Struve, which has been supplied, in the most handsome manner, \ith fine instruments by the emperor of Russia. Rl. Frauenhofer of Munich has been occupied for two years in completing, for this observatory, an achromatic telescope, fourteen feet in focal length, and with an aperture of nine inches. ' You may judge from this,' says M. Struve, in a letter to baron de Zach, ' how much our liberal govern- ment does for astronomy. Our observatory is particularly indebted to the curator of our uni- versity, M. General Comte de Lievan, who has not only provided it with every thing that is ex- cellent and perfect in the way of instruments, but has also built a commodious house for the astronomer. He has likewise ordered a great meridian circle, similar to that of Gottingen, Munich, and Konigsberg : a great repeating circle ; and a universal instrument, &c., all from the manufactory of MM. Reichenbach and Ertel of Munich.' ••• Zach's Corres. Astro.\o.'\.^- 370.

Florence has an observatory, erected by the magnificent cardinal Ximei\es, which contains a quadrant by Toscanelli, the largest known, and with which he made observations to prove the secular diminution of the obliquity of the eclip-

tic. At his death he bequeathed the vrhole to the Jesuits' college. In 1772 the grand duke Leopold built an observatory, which M. Fontana superintended, and in 1786 it was furnished with several fine instruments of Ramsden's.

Gottingen observatory has long been cele- brated by the labors of Mayer : it has lately been refitted with instruments under the direction of M. Gauss. See our article Gottingen. Here in 1804 the planet Juno was discovered.

Leipsic had an old tower of great firmness con- verted into an observatory in 1788.

At Lilienthal, near Bremen, is a well-furnished observatory, which was long under the direction of M. Schroeter, who has made many valuable observations on the phases of the moon and planets.

Lisbon observatory was erected by John V. in 1728, at the royal palace. In 1726 some good observations were made at another observatory here belonging to the Jesuits. Vide Philos. Trans, xxxv. A second royal observatory was constructed at the Chateau de St. George, Lis- bon, in 1787, by Custodio Gomez.

At Li/ons the college observatory was built on an eminence by Father St. Benet, and is a fine edifice.

At Malta was formerly the most southerly observatory in Europe, viz. in 30►► lat. It was erected under the auspices of the grand master Eman. de Rohan in 1783, furnished with the best instruments, and placed under the able direction of the Chevalier d'Angos. In 1789 the valuable papers of this observatory were acci- dentally burnt, and the instruments greatly damaged.

The Marseilles observatory is chiefly famous for the observations of M. de Sylvabelle.

At Milan is an observatory built by the Jesuits in 1765, chiefly at the expense of father Pallavinci, under the direction of the celebrated Boscovich. The instruments were selected both in England and France, and Cesaris, Oriani, and Reggio, havebeen distinguished observers here.

At Montauban the due de la Chappelle erected an observatory, where he made many interesting observations, particularly of the transit of Venus over the sun in 1769.

Montpelier has long had an observatory erected on one of the towers of the city. M. Ratte and M. Poitevin have here distinguished themselves.

At Moscow, before the conflagration, was an observatory, furnished with instruments by Cary of the Strand : whether it has survived that ca- tastrophe we have not heard.

An observatory was built at Nuremberg in the year 1678, and another in 1692. M. Zimmert and M. Wuzzelbau have been able authors and

accurate observers, connected with these estab- lishments.

At Padua the observatory was originally a tower of the tyrant Egellin's, and contained, in the thirteenth century, the dungeons in which he placed his prisoners in the civil wars of the pe- riod. On its being converted into an observa- tory in the year 1769 Boscovich wrote the following lines : ###

QuaB quondam infernas turns ducebat ad umbras. Nunc Venetum auspiciis pandit ad astra viani. This tower to infernal realms once led below.

But now the way to heaven's bright realms doth show.

At Palermo an observatory has been construct- ed in the former palace of the viceroy. Father Piazzi collected the instruments in Pans and England in 1788 and 1789, among which are a fine transit instrument, and a complete circle, by Ramsden. The first labors of this astronomer were directed to the f6rmation of a catalogue of stars, and, as a foundation, he chose VVoUaston's catalogue, and, as his chief points of reference, Dr. Maskelyne's thirty-six stars. In the prose- cution of this task he discovered, in 1801, the new planet Ceres, so named in honor of Sicily.

The Paris royal observatory was begun in 1667, and finished in 1672. It is 160 'feet in front length, 120 broad, and ninety feet high, having a terrace at top ; and cellars underneath ninety feet deep. There is said to be neither iron nor wood employed in its construction. Here was not long since an old thermometer of M. de la Hire, which stood always at the same height; thereby showing that the tem.perature of the place remained always the same. The mural quadrant used by La Lande here, has been, in imitation of that of Tycho Brahe, transferred t## the heavens as a constellation, situated between Hercules, Bootes, andtheSerpent, as thequadrans muralis, containing forty stars. New rooms and vaults have been added to this building since 1788, as well as a large transit instrument and circle by Ramsden, and three observers were established here by the unfortunate Louis XVI. On the first floor of the west tower is a geogra- phical chart, twenty-seven feet in diameter, traced under the direction of Cassini.

' The astronomers of the academy had besides several private observatories erected in different parts of Paris,' says La Lande, ' as the royal ob- servatory was not sufficient for all. That of M. le Monnier has been, from the year 1742, in the garden of the Capuchins. That of the marine, which Joseph de I'lsle used in 1748 at the Hotel de

Clugny, where I labored during two years, is at present (1792) occupied by M. Messier. That of la Caille still exists in the Mazarin College. I, as well as M. d'Agelet, have made several observations there since his death. That of the palace of Luxembourg is above the port royal. Joseph de Lisle observed there, and I likewise occupied it for some time. That of M. Pingre at the abbey of St. Genevieve was built in 1736. There is one of M. Cagnoli's, Rue de Richlieu, which this able astronomer built at his own expense in 1785, when he still resided at Paris. The observatory of the mili- tary school, built for M. Jeaurat in 1768, was occupied afterwards by M. d'Agelet. The late M. Bergeret, receiver-general of finances, con- structed in 1774, at my request, a large mural quadrant of eight English feet radius, the last and the best instrument made by the celebrated Bird, the loss of whose talents we still regret. This instrument was obtained by the military academy, as well as an excellent transit instrument, and a

parallactic telescope. M. d'Agelet made a great number of observations there from 1778 to 1785, when he left it to make a voyage round the world with la Perouse. In 1788 the changes made in the military school occasioned the de- molition of this observatory ; but it has been re- built, by my desire and care, a little more to the west, with all necessary attention and expense, so that it is the most complete observatory we have at Paris. Having received the direction of it, I began, in 1789, to make the following ob- servations. M. le Francois la Lande, my relation and pupil, who is a very good astronomer, has also made a prodigious nnmber of observations, and we observed, in 1791, more than 10,000 northern stars with excellent instruments. This work was very much wanted, and I consider it as one of the most important and difficult things that could be undertaken for astronomy.

 An observatory was built in 1775 at the royal college for the use of the professor of as- tronomy of this celebrated school. M.Geoffroy d'Assy built, in 1788, an observatory at his house, Rue lie Paradis, and it will become one of the most useful by the zeal and intelligence of M. de Lombre.'

The St. Petersburg observatory is one of the most magnificent and well-furnished in Europe, and was an erection of the czar Peter I. shortly after his visit to England. It has three stories, and is 130 feet high. M. de ITsle, according to La Lande, has made a number of

excellent obser- vations here.

At Pisa is an observatory in the form of a tower. It was erected in 1730, at the expense of the university, and supplied with beautiful apparatus made by Sisson, Short, Graham, &c. Perelli and Slope, who published an excellent collection of observations in 1789, made here for many years.

At Rome, cardinal Zelada, at his own expense, constructed, on the southern side of the Roman collecre, a fine observatory, which contains the large sector of Boscovich, and instruments by Ramsden and DoUond ; the abbe Calandrelli observed here with great accuracy for many years. In different parts of Rome are several minor establishments of this kind.

At Secberg, near Gotha, is one of the most complete observatories in the world. It has a large transit and two murals of eight feet radius, by Ramsden, and a circle of eight feet diameter. Baron Zach, appointed in 1788, was the first pro- fessor. In 1798 he was visited here by La Lande and all the great astronomers of Germany.

The StockholiH observatory was founded by the Academy of Sciences of that city, in 1746. It is situated on a hill north of the town, and has a good collection of English instruments. War- gentein and Nicarder here have been celebrated professors.

‘ At Strasbiirg, Brackenhoffer, professor of ma- thematics, had an observatory over the city gates, and was succeeded by Herzenschneider.

The observatory of INI. Darquier at Toulouse, has been distinguished by his zeal and ability. Observatories have also been built in this city by M. Gauprey and M. Bonrapos. The princi- pal one was, in 1813, under the care oˆ Vidal.

At 2’uriri, father Beccaria erected an observa- tory ; and in 1790 a larger one was built here by the king of Sardinia, at the Royal College of Nobles, and the care of it given to the abbe Caluso.

At Venice is the observatory of father Pani- gai, and the small one near the town by Miotti.

At Verona Cagnoli erected, in 1787, an ob- servatory, furnished with the best instruments, at his own expense. He has made many accu- rate and important observations here on the pre- cession of the equinoxes, and on the places of 473 northern, and twenty-eight

southern stars.

The university oljservatory of J'ienna was founded by the empress Maria Theresa, in the year 1755, who furnished it with many superb instruments. There is another now belonging to the academical college, which was built in 1735, and endowed by tiie Jesuits. It is fur- nished with very fine instruments by English artists, and has had a succession of very learned observers. The reputation of the university ob- servatory was maintained for many years by the abbe Maximilian Hell, who conducted the Vienna Ephemeris.

The observatory at Upsal, built and endowed in 1739 by the king of Sweden, was first super- intended by the learned Celsius, who has been followed by Hooker and Wargentin, the author of the Tables of Jupiter's Satellites.

At Utrecht an ancient tower was, in 1726, converted into an observatory. Here the cele- brated Van Muschenbroek observed for many years.

At Wihia, in Poland, is a splendid establish- ment of this kind, originally built and well endowed by the countess Puzynia, a lady of considerable astronomical attainments. Being completed in 1 753, the king of Poland, by letters patent, gave it the title of a Royal Observatory, and appointed the Jesuit Poezobat astronomer royal. In 1788 a second erection was added under his direction, and several new instruments, by Ramsden.

Observatories of Great Britain and Ire- land. Having supplied every part of Europe with some of the most important and accurate instru- ments which these erections contain, it was to be expected that within our own island some splendid and useful establishments of the same description should be found. Nor will the scien- tific enquirer after them be disappointed.

First in importance, perhaps, among the ob- servatories of the world, is that of Greenwich. It was built and endowed in the year 1676, by order of king Charles II., at the instance of Sir Jonas Moore, and Sir Christopher Wren : the former being surveyor-general of the ordnance : a circumstance from which the office of astrono- mer royal has been placed under that depart- ment.

This observatory was at first furnished with various accurate and beautiful instruments ; par- ticularly a noble sextant of seven feet radius with telescopic sights ; and the astronomers royal have always

been distinguished. The person to whom the province of observing was first com- mitted was Mr. John Flamsteed ; a man who, as Dr. Halley expresses it, seemed born for the

employment. During fourteen years he watch- ed the motions of tlie planets witli unwearied diligence, especially those of the moon. In 1690 having provided himself with a mural arch of near seven feet radius, made by his assistant Mr. Abraham Sharp, he began to verify his catalogue of the fixed stars (which had hitherto depended altogether on the distances measured with the sextant) after a new and very different manner, viz. by taking the meridian altitudes, and tlie moments of culmination, or in other words tiie right ascension and decimation. And he was so well pleased with this instrument that he discon- tinued almost entirely tlie use of the sextant. In tlie space of upwards of forty years this astro- nomer collected an immense number of observa- tions, which may be consulted in his Historia Ccelestis Britannica, published in 1725 ; the principal part of which is the Britannic catalogue of the fixed stars.

On his death, in 1719, Mr. Flamsteed was succeeded by Dr. Halley, and he by Dr. Bradley in 1742, and this last by Mr. Bliss in 1762.

On the demise of Mr. Bliss, in 1765, the office devolved on Dr. Nevil Maskelyne, whose valuable observations have been published, from time to time, under the direction of the Royal Society. Of these observations La Lands says, in his Astro- nomy (vol. ii. page 121), Le recueil le plus mo- derne et le plus precieux de tous est celui de M. Maskelyne, astronome royal d'Angleterre, qui commence a 1765, et qui forme deja deux vo- lumes en folio jusqu'a 1786. La precision de ces observations est si grande, qu'on trouve sou- vent la mˆme seconde pour I'ascension droite d'une planete deduite de differentesetoiles, quoi- qu'on y emploie la mesure du temps.' His catalogue of fundamental stars is an invaluable treasure. These and his other numerous and various improvements in this science, made dur- ing the forty-six years he was astronomer royal, entitle him to the most distinguished rank among both critical and practical astronomers.

Dr. Maskelyne died in the spring of 1811, and was succeeded by Mr. J. Pond, F. R. S., the translator of La Place's Exposition du SystSme du Monde.

The establishment here consists of two princi- pal buildings, one of which is the observatory, and the other the residence of the astronomer royal. The observatory is an oblong edifice, running east and west, containing four rooms, or apartments on the ground-floor. It was erected on the site of the ancient moated tower of duke Humphrey, uncle to Henry VI., and the first stone of it was laid August 10th, 1675, by Mr. Flamsteed. It is situated on the highest emi- nence of Greenwich Park, about 160 feet above low water mark ; the soil being a flitity gravel, through which the rain soon passes, and thus the atmosphere is generally dry which contributes both to the preservation of the instruments, as well as to the uniformity of refraction.

The first, or most easterly apartment has been fitted up for the reception of a very fine transit circle, by Troughton and a clock of great value by Hardy. The next apartment is the transit room : it has a double sloping roof, with sliding shutters, which are opened both north and south.

with great ease, by pulleys. Tlie transit instru- ment, which is eight feet long, and the axis three feet, is suspended on two stone pillars. This in- strument is famous as having been used by Halley Bradley, and Maskelyne. It was originally made by Bird, and has been improved by Dol- lond and Troughton. The astronomical or tran- sit clock, which is attached to a stone pillar, was made by Graham, and improved by Earnshaw. The third apartment is the assistant observer's library, and the western apartment of the build- ing is the quadrant room. Here is erected a stone pier, running north and south, to which are attached two mural quadrants, of eight feet ra- dius each. That on the eastern face, which ob- serves the southern meridian, was made by Bird, and the other, which observes the northern, by Graham. Suspended to the western wall is the zenith sector, with which Dr. Bradley made those observations at Kew and Wanstead, which led to the discoveries of the aberration of light, and the nutation of the eanli's axis. South of the quad- rant room is a wooden building for making oc- casional observations in any direction, where only the use of a telescope, and an accurate knowledge of the time, are required. It is fur- nished with sliding shutters on the roof and sides, to view any point of the hemisphere, and con- tains some excellent telescopes, particularly a forty-inch achromatic, with a triple object-glass, and a five feet achromatic, by DoUond ; with a six-feet reflector by Dr Herschel.

North of the observatory, and east of the house, are two small buildings, covered with hemisphe- rical sliding domes, in each of

which is an equa- torial sector, by Sisson, and a clock, by Arnold. These are chiefly used for observing comets. Over the dwelling apartments is a large octagonal room, which contains a great variety of astrono- mical instruments, and a valuable scientific li- brary. On the top is an excellent camera ob- scuia. In Flamsteed's time there was a well sunk in the south-east corner of what is now the garden, for the purpose of seeing the stars in the day-time, and observing the earth's annual pa- rallax. It was 100 feet deep, with stone stairs down to the bottom : but it has been long arch- ed over, as the improvements in the telescope have rendered it useless.

The observations made at the Royal Observa- tory are not only allowed to possess an unrival- led accuracy, but have been the foundation of the most important work on practical astronomy ever published ; we mean the Nautical Almanack which Dr. Maskelyne commenced here in 1767. Delambre, in a paper on the life and labors of Dr. Maskelyne, read before the National Insti- tutejof trance, January 4th, 1813, says ••• ' He (Dr. Maskelyne) has given a catalogue of stars, not numerous, but so accurate, as to have served, almost solely for the last thirty years, as the foundation of all astronomical researches. In short, it may be said of the four volumes of Ob- servations which he has published, that if, by a great revolution, the science should be lost, and this collection only were saved, there would be found in it sufficient. materials to construct al- most an entire edifice of modern astronomy; which cannot be said of any other collection.'

OBSERVATORY.

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The Orfhrd ob>;ervatory claims, perhaps, our next attention ; it was founded in 1772 by funds bequeathed by Dr. Kadcliff, on a grant of land from the duke of Marlborough. Here are some very excellent telescopes and clocks, by Dr. Herschel, DoUond, and Shelton, and a fine tran- sit instrument ten feet long, which is said to have cost 150 guineas; the zenith sector 200, and the two mural quadrants 600 guineas ; it was built under the direction of Dr. Hornsby, professor of astronomy, who observed here for many years. The observations are all registered, and have con- sisted chiefly of the right ascensions and zenitli distances of the sun, moon, planets, and fixcd stars.

At Cambridge there have long been small ob- servatories at Christchurch, Trinity, St. John's &c. ; but the noble plan for erecting one upon a scale worthy the scientific fame of the university lias been

at last completed. See our article As-

TIIONOMY.

The Portsmouth observatory, at the Royal Marine Academy, was first erected and placed under the superintendance of Mr. Bailey, a for- mer assistant astronomer at Greenwich, who ac- companied Cook in his latter voyages. It has been particularly useful in regulating the time- keepers of vessels. Christ's Hospital and Somerset House have also observatories attached on a small scale.

The late Dr. Herschel's observatory at Slough; stands, periiaps, at the head of our private es- tablishments of this kind. His larger instru- ments aie in the open air; and the celebrated forty-feet telescope contains a mirror of a ton weight; and this great instrument, with nearly an additional ton of cases, &c., is five feet in dia- meter, and is managed by a very slight force. The top is suspended by ropes from very lofty ladder-work. Thus, by a system of wheels, pi- nions, racks, and pulleys, the motions, both hori- zontal and vertical, are given, and any celestial object is readily and commodiously viewed. It was finished in 1789, and on the first trial a new satellite of Saturn was discovered. The great speculum of this noble instrument is forty-nine inches and a half in diameter ; its polished sur- face forty-eight inches, ††† its thickness three inches and a half, and its weight, when newly cast, 21 18 lbs. The tube was thirty-nine feet four inches long, and four feet ten inches in diameter, and every part of it was made of rolled or sheet iron, united without rivets, by a species of seal- ing used in making the iron-funnels for stoves. The thickness of the iron was less tlian the thirty- sixtii part of an inch, and a square foot weighed about fourteen ounces. Hence, it was so liglit, that a wooden one would have exceeded it in weight at least 1000 lbs. It magnifies 6450 times. La Lande speaks with great admiration of this instrument. Other telescopes of various sizes are mounted around ; and two smaller ones have discovered six comets. That by which in 1781 the Dr. first saw the Georgium Sidus has been made a constellation in the heavens between Gemini, the Lynx, and Auriga, and contains eighty- one stars. In Bode's Atlas it is engraved with its apparatus, and marked ' Telescopium Herschelli.'

In addition to our memoir of this great astro- nomer, we may observe, that the subject of the construction of the heavens, which Dr. Herschel had made entirely his own, formed the principal topic of his later communications to the royal Society. In 1814 he published in the Transac- tions his Astronomical Observations relating to tlie sidereal part of the heavens, and its connex- ions with tiie nebulous part. He

supposes, m this paper, that the various nebulosities which fill the heavens are condensed by attraction, and converted into stars ; that stars previously formed sometimes attract nebulous matter, and increase in size, and that neighbouring stars gradually ap- proach each other, and constitute globular clus- ters. This paper was followed, in 1817, by Observations tending to investigate the local ar- rangement of the Celestial Bodies in space, and to determine the extent and condition of the Milky Way ; which contains much interesting discussion, and in which its author concludes, that not only our sun, but all the stars we can see wit!) the eye, are deeply immersed in the milky way, and form a component part of that immense nebula. The last paper which Dr. Herschel wrote on this subject, and indeed the last which he communicated to the Royal Society, was entitled Astronomical Observations and Ex- periments selected for the purpose of ascertain- ing the relative distances of Clusters of Stars, and of investigating how far the power of our Telescopes may be expected to reach into Space, when directed to ambiguous celestial Objects. From these observations our author concludes that a star of the first magnitude would just come to be visible by the naked eye, if removed to twelve times its distance, and by the most pow- erful telescope hitherto constructed, if removed to 2300 times its distance. Yet such a telescope still shows stars in the milky way at the utmost limits of their visibility. This extraordinary as- semblage of stars is therefore equally fathomless by our eyes and by our finest telescopes. Con- ceiving, however, that the united lustre of side- real systems may reach us from a still greater distance in space. Dr. Herschel estimates their distance by the aperture of the speculum, which just resolves them into stars, and in this way he has estimated the distances of forty-seven clus- ters. Such clusters are again taken as connect- ing links with such ambiguous objects as can- not be resolved by. the telescope. Resolvable clusters are actually found to put on similar ap- pearances with inferior telescopes, and hence we may compare their distances with those of the former kind, by the same principles as those with the nearest fixed star. When objects of this kind are lost to the sight, the utmost limits of human vision seem to be obtained, and our author sup- poses that this must take place at about the 35,000th order of distances.

The late king's private observatory, in Kic/i- r►►oW gardens, is an extremely beautiful structure, but the apparatus was originally very inferior. It was built, in 1768, by order of George III., who, it is said, made several observations here, particularly of the transit of Venus in 1769. It contains a transit instrument, zenith sector, and mural arc, with several good telescopes, especi-

ally a ten-feet reflector of Dr. Herschel's. There is also a superb equatorial on the top of the build- ing, which has a moveable roof.

The Scottish observatories are not remarkable. Aberdeen, Edinburgh, and Glasgow, contain small establishments of this kind ; and in the Scottish capital we observe (see our article Edin- burgh) a new observatory is said to have been finished since 1813. The Glasgow Macfarlane observatory is also honorable to that city.

The Irish observatories are on a more imposing scale. That at Armagh was founded, in 1793, by the most Rev. lord Rokeby, the primate of Ireland. On this erection and the museum con- nected with it he bestowed ––l 5,000. The for- mer stands on a hill about ninety feet above the level of the town, and surrounded by several un- dulating hills of about the same altitude. The building is founded on a base of limestone, and all the walls are of larsje hewn stone, of the most firm and substantial workmanship. The tower, which adjoins the dwelling house, contains a very fine equatorial by Troughton, fixed on a large pillar, which is raised so high that the in- strument in the dome can overlook all the build- ings. To the east of the house is a range of buildings for the transit room, and other astrono- mical purposes. The principal instruments, be- sides the equatorial and transit, are a lert-feet sextant by Troughton ; a ten-feet reflecting tele- scope by Dr. Herscliel ; a five-feet triple object glass achromatic telescope by Dollond ; and also a fine night glass upon an equatorial stand. The clocks are by Earnshaw of London, andCrossth- waite of Dublin. Liberal incomes are allowed to the principal astronomer and his assistant. The former the Rev. James Archibald Hamilton, D. D. dean of St. Coleman, Cloyne, has contri- buted several learned papers to the Transactions of the Royal Irish Academy, on astronomical subjects. His observations of the fixed stars are considered very accurate, and several of his declinations have been transcribed into the Lon- don Philosophical Transactions. The registered observations here are those made with the tran- sit instrument and equatorial ; and an account of the temperature and weight of the atmosphere. Of these, a series of about eighteen years is pre- served. The right ascensions of the sun and moon, compared with the fixed stars, are regular and unbroken ; but their north polar distances have not been so constantly taken. There belong to this establishment about twenty acres of plan- tation and pleasure grounds, which are open for the recreation of the inhabitants of the city.

The observatory of Trinity College, Dublin, ◆◆◆was begun in the year 1783; and founded and endowed by Dr. Andrews, provost of the college. It is situated at Dunnoux, three miles from that city. The structure is elevated, and the founda- tion a solid rock of limestone, of several miles extent.

The building fronts the east, and the lower range of windows and doors are twenty-three in number. In the centre is a noble dome of three stories high, with a moveable roof for the equa- torial instrument, which is placed upon a pillar of sixteen feet square, of the most substantial masonry, and surrounded by a circular wall, a

foot distance, that supports the moveable dome, and also the tloors, which in no part touch the pillar : thus no motion of the floor or wall can be communicated to the instrument. The aper- ture for observation in the dome is two feet and a half wide.

On each side of the centre building are two handsome edifices, of two stories high, for tlie residence of the professor, and to each is attach- ed a wing of one story only, but terminated with domes of two stories. These domes are intend- ed for occasional observations, such as of eclipses, occultations, and comets. But the most import- ant erection of this establishment is behind the main building, and at right angles to it, in order to obtain an uninterrupted view north and south. This is the meridian or transit room, which con- tains both the transit instrument and the circle. It is thirty-seven feet long, twenty-three broad, and twenty-one high. Fine pillars of Portland stone are erected for both instruments on the most firm basis, and the floor is so framed as to let all tlie pillars rise totally detached from it ; and such was the first professor Dr. Usher's at- tention to extreme accuracy, that he first ascer- tained the pillars to be perfectly homogeneous, lest any variety in their substance might admit of a differerree in their expansion or contraction by heat, cold, or other changes of atmosphere. The clocks aie attached to pillars of the greatest stea- diness ; they were made by Arnold, who exerted his best skill, and are finished in a masterly man- ner : the pallets are of ruby ; and all the last holes of the movement jeweled ; the suspension springs are of gold, with Arnold's own five- barred pendulum, and cheeks capable of experi- mental adjustment, so as to make all vibrations isochronal, whatever may be the excursion of the pendulum. Around the dome is a platform commanding one of the most extensive and va- ried prospects that can be imagined.

OBSESSION, n. s. } Lat. obsessio, obsiclio-

Obsid'ional, adj. }nalis. The act of be- sieging : belonging to a

sieg□□.

OBSIDIAN, or Obsidiams Lapis, in the natural history of the ancients, the name of a stone which they have also described under the name of the Chian marble. It is a very smooth and hard marble, extremely difficult to cut, but capable of a fine polish ; and was used among the ancient Greeks for the purpose of making re- flecting mirrors. The name obsidianus seems only a false spelling of the word opsianus, airo ri]s oipsw^, from seeing the images of things in it.

OB'SOLETE, adj. | Lat. obsoletus. Grown

Ob'soleteness, n. s. i out of fashion or use ; disused.

Obsolete words maybe laudably revived, when they are more sounding, or more significant than those in practice. Dryden.

What if there be an old dormant statute or two against him, are they not now obsolete ? Sicift.

And Echo learns politely to repeat The praise of names for ages obsolete. Cowper.

OBSOP.EUS (John), a German physician, born at Brettin in the Palatinate, in 1556. He was educated at Neunhaufs, and at Heidelburg, under Zacharius Ursinus. He studied physic at Frankfort on the INIaine, and, after travelling

throuffh Eng.and and Holland, was made pro- fessor of medicine at Heidelburg. lie published several works, and died in 1 596, aged forty.

Obsoh.eus (Simon), brother to John, born in 157o, also acquired reputation as a physician, and -became professor at Heidelburg, where he published some tracts, and died in 1619, aged forty-four.

OB'STACLE, n. s. Fr. obstacle; Lat. obsta- culum. Obstruction; hindrance; something op- posed.

Conscience is a blushing shame-faced spirit, That mutinies in a man's bosom ; it fills One lull of obstacles. Shakspeare. Richard III.

If all obstacles were cut away, And that my path were even to the crown. As the right reverence and due of birth.

Shakspeare, Disparity in age seems a greater obstacle to an in- timate friendship than inequality of fortune. For the humours, business, and diversions, of young and old, are generally very different. Collier.

The thing I am most afraid of is fear ; and with good reason, that passion alone being able to create and magnify obstacles. Steele.

Some conjectures about the origin of mountains and islands, I am obliged to look into that they may not remain as obstacles to the less skilful.

Woodward's Natural Historij. What more natural and usual obstacle to those who take voyages, than winds and storms. Pope.

OBSTET'RIC, adj. i Latin obdetrix. Obstetrica'tion, 71. s. S Pertaining to, or per- forming, a midwife's office. Obstetrication, the office of a midwife.

There all the learned shall at the labour stand, And Douglas lend his soft obstetrick hand. Pope.

Obstetrick Art, or Obstetrics, the same with Midwifery, which see.

OB'STINATE, adj. j Lat. obstinatus. Re Oe'stinacy, n. s. (solute; firm; unmoved; Ob'stinately, adv. iˆ stubborn. 'Absolutely OB'sTiNATENESS,n.s. 3 used,' says Dr. Johnson, * it has an ill sense ; relatively, it is neutral.' Obstinacy and obstinateness (the last rarely used) signify firmness ; stubbornness ; pertina- city. Obstinately follows the meaning of obsti- nate.

Yield, Except you mean with obstinate repulse, To slay your sovereign. Hhakspeare.

The queen is obstinate, Stubborn to justice, apt to accuse it, and Disdainful to be tried by't. Id. Henrij Vlll. Chusing rather to use extremities, which might drive me to desperate obstinacy, than apply moderate remedies. King Charles.

Pembroke abhorred the war as obstinatelij as he loved hunting and hawking. Clarendon.

Animosity raised by such usage rendereth him in- vincibly obstinate in his conceits and courses.

Barrow. I have known great cures done by obstinate resolu- tions of drinking no wine. Temple. Jler father did not fail to find, In all she spoke, the greatness of her mind ; Yet thought she was not obstinate to die. Nor deemed the death she promised was so nigh.

Dryden, A Greek made himself their prey, T' impose on tueir belief, and Troy betray ; Fixed on his aim, and obstinalelu bent To die undaunted, or to circumvent. Id.

Most writers use their words loosely and uncer- tainly, and do not make plain and clear deductions of words one from another, which were not difficult to do, did they not find it convenient to shelter their ignorance, or obstinacy, under the obscurity of their terms. Iˆche.

The man resolved, and steady to his trust,

Inflexible to ill, and obstinately just,

Can the rude rabble's influence despise.

Addismi. My spouse maintains her royal trust, Tho' tempted chaste, and obstinately just.

Pope. What crops of wit and honesty appear,

From spleen, from obstinacy, hate or fear. Id.

At twenty she mocks at the duty you taught her. Oh what a plague is an obstitmle daughter.

Sheridan.

OBSTREFEIU)US, adj. f Lat. obstreperus.

Obstrep'erously, adv. > Clamorous ; loud ;

Obstrep'erousness, n. s. j noisy : the adverb and noun-substantive correspond.

These obstreperous scepticks are the bane of divi- nity, who are so full of the spirit of contradiction, that they raise daily new disputes. Huwel.

These obstreperous villains shout, and know not for what they make a noise. Dryden.

The players do not only connive at his obstreperous approbation, but

repair at their own cost whatever damages he makes. Addison.

OBSTRIC'TION, n. s. Lat. obstrictus. Ob- ligation ; bond.

He hath full right to exempt Whom so it pleases him by choice. From national obstriction. Milton.

OBSTRUCT, V. a. -\ Latin obstruo.

Obstruc'ter, n.s. i Strictly to stop

Obstruc'tion, > up by building

Obstruc'tive, adj. & n. s. i against ; to block

Obstruc'tent. ' up; bar; barri-

cade ; oppose ; retard : an obstructer is he who hinders or opposes : obstruction, the act of hin- dering, opposing, or impeding; also the hin- drance ; obstacle ; impediment ; Shakspeare has used it for any thing heaped together : obstructive and obstruent mean, causing hindrance; block- ing up.

Aye, but to die, and go we know not where ;

To lie in cold obstruction, and to rot ;

This sensible warm motion to become

A kneaded clod.

Shakspeare. Measure j'or Measure.

All obstructions in parliament, that is, all freedom in differing in votes, and debating matters with rea- son and candour, must be taken away.

King Charles.

Havmg thus separated this doctrine of God's pre- determining all events from three other things con- founded with it, it will now be discernible how noxious and obstructive this doctrine is to the super- structing all good life. Hammond.

The second obstructive is that of the fiduciary, that faith is the only instrument of his justification, and excludes good works from contributing any thing toward it. Id.

In his winter-quarters the king expected to meet with all the obstructions and difficulties his enraged enemies could lay in his way. Clarendon.

Sure God by these discoveries did design That his clear light thro' all the world should shine ; Butthe oistructio/i from that discord springs, The prince of darkness makes 'twixt Christian kings.

Denham.

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No cloud interposed, Or star to iibstruct his sight. Milton.

They who think too well of their own perform- ances are apt to boast in their preface how little time their works have cost them, and what a number of obstructions they have met with. Dryden.

Roughly handling is apt to defeat or obsii-uct the cure. Barrow.

In their passage through the glands in the lungs, they obstruct and swell them with little tumours.

Blackmore.

Fat people are subject to weakness in fevers, be- cause the fat, melted by feverish heat, obstntcls the small canals. Arbuthnot.

Obstruction denotes the blocking up of any canal in the human body, so as to prevent the flowing of any fluid through it, on account of the increased bulk of that fluid, in proportion to the diameter of the vessel,

Quincy.

Whenever a popular assembly, free from obstruc- tions, and already possessed of more power than an equal balance will allow, shall continue to think that they have not enough, I cannot see how the same causes can produce different effects among us, from what they did in Greece and Rome. Swift.

I would recommend our rising actresses never to take notice of the audience, let the spectators applaud ever so loudly, except at the end

of the epilogue for mere obstructions. Goldsmith.

A transition from an author's book to his conver- sation is too like the entrance into a large city. Remotely we see nothing but spires of temples and turrets of palaces, but, when we have entered, we find it perplexed with passages, disgraced with des- picable cottages, embarrassed with obstructions, and clouded with smoke. Johnson.

OBSTUPEFAC'TION, n. s. } Lat. obstupe- Obstupefac'tive, adj. Sfacio. Stupid-

ity ; the act of inducing stupidity ; stupefying. The force of it is obstupef active, and no other.

Abbot.

ˆ OBTAIN', V. a. St v.n.'\ Fr. ohtenir ; Lat.

Obtain'able, at?;. ˆobtineo. To acquire ;

Obtain'er, n. s. j procure ; gain : as a

neuter verb, to be or continue in use ; be estab- lished ; prevail : obtainable is, procurable ; to be gained : obtainer, he who obtains.

INIay be that I may obtain children by her. Genesis.

We have obtained an inheritance. Ephes. i. 11.

Ijy his own blood he entered in once into the holy place, having obtained etevndii redemption for us.

Hebrews ix. 12.

In such our praj'ers cannot serve us as means to obtain the thing we desire. Hooker.

If they could not be obtained of the proud tyrani, then to conclude peace with him upon any con- ditions. Knolles.

There is due from the judge to the advocate some commendation, where causes are fairly pleaded ; especially ft)wards the side which obtaineth not.

Bacon.

The conclusion of the story I forbore, because I could not obtain frem

myself to shew Absalom un- fortunate. Dryden. Our impious use no longer shall obtain.

Brothers no more by brothers shall be slain. Id.

Whatever once is denied them, they are certainly not to obtain by crying.. Locke on Education.

What thinks he of his redemption, and the rate it cost, not being obtainable unless God's only Son would come down from heaven, and be made man, and pay down his own life for it 1 Kettlewell.

The Theodosian code, several hundred years after Justinian's time, did obtain in the western parts of Europe. Baker.

\ here wasting the publick treasure has obtained in a court, all good order is banished. Daienunt.

The situation of the sun and earth, which the theorist supposes is so far from being preferable to this which at presents obtains, that this hath infi- nitely the advantage of it. Woodward.

The juices of the leaves Sltb obtained hy expression.

Arbuthnot.

Spirits which come over in distillations, miscible with water, and wholly combustible, are obtainable from plants by previous fermentation. Id.

The general laws of fluidity, elasticity, and gra- vity, obtain in animal and inanimate tubes.

Cheyne.

OBTEND', -y. a. ˆ Lat.o6

Obten'sion,7i. s. S propose ; oflTer as a reason. Thou dost with lies the throne invade, Obtending Heaven for whateer ills befal.

JJrvden.

OBTENEBRATION, ►►. s. Lat. ob and tene- brcE, darkness. The state of being in the dark ; the act of darkening ; darkness ; cloudiness.

In every meagrim or vertigo there is an obtene- bration joined with a semblance of turning round.

Bacon.

OBTEST', V. a.) l.at.obtestor. To beseech;

Obtesta'tiox. S supplicate. Suppliants demand A truce, with olive branches in their hand ; Obtest his clemency, and from the plain Beg leave to draw the bodies of their slain.

Dryden.

OBTRUDE', V. a.-\ Lat. obtrudo. To thrust

Obtru'der, ?i. s. for force upon; hence,

Obtru'sion, i thrust into any place ;

Obtru'sive, adj. J impose one's company ; urge or offer with unreasonable eagerness : the obtruder is he who obtrudes : obtrusion, the act or instance of obtruding : obtrusive, disposed to obtrude or intrude.

It is their torment that the thing they shun dot!i follow them, truth, as it were, even obtruding itself into their knowledge, and not permitting them to be so ignorant as they would be. Hooker.

There may be as great a vanity in retiring and withdrawing men's conceits from the world as in obtruding them. Bacon.

Some things are easily granted ; the rest ought not to be obtruded upon me with the point of the sword. King Charles.

Who can abide that, against their own doctors six books should, by their fatherhoods of Trent, be, under pain of a curse, imperiously obtntded upon God and his church ? Hall.

Why shouldst thou then obtrude this diligence In vain, where no acceptance it can find 1 Milton.

Whatever was not by them thought necessary, must not by us be obtruded on, or forced into that catalogue. Hammond.

Do justice to the inventors or publishers of the true experiments, as well as upon the obimders of false ones. Boyle.

A cause of commoiˆ error is the credulity of men that is, an easy assent to what is obtruded, or be- lieving at first ear what is delivered by others.

Browne.

The objects of our senses obtrude their particular ideas upon our minds, whether we will or no ; and the operations of our minds will not let us be with- out some obscure notions of them. Luthe.

Whether thy great forefathers came From realms that bear 'esputio's name ; For so conjectures would nbtntde. And from thy painted skin conclude. Swift. This thing of rhyme I ne'er disdained to own, Though not obtrusive, yet not quite unknown.

Buron. OBTUND', v.a. Lat. oltundo. To blunt; dull ; quell.

Avicen countermands letting blood in cholerick Dodies, because he esteems the blood a bridle of gall, nbtwiding its acrimony and fierceness.

Hai-veu. The most pertinacious and vehement demonstrator may be wearied, in time, by continual negation, and incredulity, which an old poet, in his address to Ra- leigh, calls ' the wit of fools,' obtunds the argu- ments which it cannot answer, as woolsacks deaden arrows, though they cannot repel them. Johnson, OBTUSE', adj. -V Lat. obtusus. Blunt or Obtusan'gular,/ broken at the point; not Obtuse'ly, ˆ acutely pointed : hence

Obtuse'ness, i dull ; stupid : obtusangular, Obtu'sion". J having an angle or angles

larger than a right angle : obtusely, without point ; stupidly : obtuseness and obtusion, the act of dulling or blunting, or state of being dulled or stupid.

Thy senses then Obtuse, all taste of pleasures must forego.

Miltcm. Obtusion of the senses, internal and external.

Harvey. A national taste cannot be wholly changed at once ; we must yield a little to men's obtuse minds and we may then bring them by degrees to adopt what wou d ofi'end them if attempted to be introduced by violence. Sir J. Reiˆnolcls.

OBVEN’TION, n.s. Lat. obvenio.’ Acci- dental advantage.

ˆV’hen the country grows more rich, and better in- habited, the tythes and other nbventions will also be more augmented and better valued. Spenser.

OBVERT’. Lat. obverto. To turn towards.

The laborant with an iron rod stirred the kindled part of the nitre, that the fire might be more dif- fused, and more parts might be ohverted to the air.

Boifle. A man can from no place behold, but there will be amongst innumerable superficieculae, that look some one way, and some another, enough of them oh- verted to his eye to afford a confused idea of light.

Bovle on Colours. An erect cone placed in an horizontal plane, at a great distance from the eye, we judge to be nothing but a flat circle, if its base be ohverted towards us.

IVatts’s Logick.

OB’ VI ATE, v.a. ‘\ Fr. obvier; Lat. ob- Ob’viois, adj. (ˆvius. To meet as in the

Ob’viouslv, adv. I way, i. e. contra viam ; to Ob’viousness, n. s. J intercept; obvious is meeting; opposed in front or openly; exposed : hence easily discovered ; plain ; evident ; natu- ral : the other words follow these senses.

For France, .ˆpain, and other foreign countries, the volumes of their laws and lawyers have obviously particulars concerning place and precedence of their magistrates and dignities. Selden.

I to the evil turn My obvious breast ; arming to overcome By suffering, and earn rest from labour won.

Millon. Vol. XVL

Whether such room in nature unpossesl Only to shine, yet scarce to contribute Each orb a glimpse of light, conveyed so far Down to this habitable, which returns Light back to them, is obvious to dispute. Id.

It is obvious to discover that imperfections of one kind have a visible tendency to produce perfections of another. Shenitone.

Slight experiments are more easily and cheaply tried ; I thought their easiness or obviousness fitter to recommend than depreciate them. Boyle.

They are such lights as are only obvious to every man of sense, who loves poetry and understands it.

Dry den. All purely identical propositions obviously and at first blush contain no instruction. Locke.

To lay dov.‘n every thing in its full light, so as to obviate all exceptions, and remove every difficulty, would carry me out too far. IVooduard.

We may then more obviouslu, yet truly liken the civil state to bulwarks, and the church to a city.

Holiday. These sentiments, whether they be impressed on the soul, or arise as obvious reflections of our reason, I call natural, because they have been found in all ages. Rogers.

All the great lines of our duty are clear and o6- vious ; the extent of it understood, the obligation acknowledged, and the wisdom of complying with it freely confessed. Id.

I am apt to think many words difficult or obscure, which are obvious to scholars. Suift.

Yet how fallacious is all earthly bliss. What obvious truths the wisest hands may miss : Some pleasures live a month, and some a year. But short the date of all we gather here ; Xo happiness is felt, except the true, That does not charm the more for being new.

Cowper OBUM’BRATE, v. a. Lat. obumbro. Tu shade ; to cloud.

The rays of royal majesty, reverberated so strongly upon 'illerio, dispelled all those clouds which did hang over and obumbrate him. Howel.

OBYJ or OvBv, an island of the eastern seas, seems to be a continuation of the chain of Xulla. The Dutch have, on the west end, a small fort; and the sultan of Bachian, who claims the sove- reignty, has a pearl fishery here. Farther north is the island ˆNlya, formerly well inhabited, and abounding in clove trees, but which have been all rooted out. It is of middling height, and has a good road : clove trees are said to flourish. Tyfoa Island, north-west of it, is low. Oby Pulo, is

five leagues south of Cambodia Point, in the east of the Gulf of Siam. It is an island some miles in extent, and formed of several hills, the centre one rising to a height to be seen eighteen leagues. The inhabitants are a few banished families from the main, who cultivate rice and maize enough for their subsistence. A stream of fine water descends from the great mountain, and empties itself into the sea on the north, where 100 butts of water may be filled in a day. As water is in the dry season very scarce on the op- posite coast, a number of junks are kept con- stantly employed in supplying it from this stream.

OCANA, an old town of Spain, tlie capital of the lower district of la Mancha, situated at the entrance of a fine plain : but the favorable im- pression produced at first by grounes of stcej les

and some large buildings, is entirely destroyed on enteiliig the town, which is in a state of com- plete decay. It has four churches, and eleven religious houses ; but its chief ornaments are two beautiful fountains. The inhabitants, about 5000, manufacture silk, leather, and soap. The vicinity was, on 20th November 1810, the scene of a general action between the French and Spa- niards. Eight miles E.S. E. of Aranjuez, and thirty S.S.E. of Madrid.

OCATAHULA,a river of the United States, in Louisiana. Tt runs S. S.E. through the great- est part of its course ; then east, passing through a lake of the same name, and joining the Oua- chitta at the junction of the Tensaw. OCCA'SION, Ji.s. Set;. ►►.'\ , Ei"- occasion;

Occa'sional, adj. I Lat. occasio. Sea-

Occa'sionally, adv. ˆ son ; opportunity ;

Occa'sioner, 7i..s. J incident; conve-

nience ; casualty ; accidental cause, or reason ; casual need : to occasion is to cause accidentally ; produce without design, or not by direct de- sign or influence : occasionalis casual ; incidental ; produced by accident or exigence : occasionally and occasioner, corresponding in sense.

Because of the money returned in our sacks are we brought in, that he may seek occasion to fall upon us, and take us for bondmen. Gen. xliii. 18.

Use not liberty for an occasion. Gal. v. 13.

She with true lamentations made known to the world, that her new greatness did no way comfort her in respect of her brother's loss, whom she studied all means possible to revenge upon every one of the occasioned.. Sidney.

Me unweeting, and unaware of such mishap. She brought to mischief through occasion. Where this same wicked villain did me light upon.

Spenser. Have you ever heard what was the occasion and first beginning of this custom 1 Spenser on Ireland.

The laws of Christ we find rather mentioned by occasion in the writings of the apostles, than any so- lemn thing directly written to comprehend them in legal sort. Hooker.

My occasions have found time to use them toward a supply of money. Shakspeare.

Your business calls on you. And you embrace the occasion to depart. Id. That woman that cannot make her fault her hus- band's occasion, let her never nurse her child herself, for she will breed it like a fool. Id.

Some men will load me as if I were a wilful and resolved occasioner of my own and my subjects' mi- series. King Charles. Authority and reason on her wait, As one intended first, not after made Occasionally. Milton's Paradise Lost. Let me not let pass Occasion which now smiles. Id. In case a man dig a jiit and leave it open, whereby It happeneth his neiglihour's beast to fall thereinto and perish, the owner of the pit is to make it good, jnasnmch as he was the occasioner of that loss to his neighbour. Sanderson.

The ground or occasional original hereof, was the amazement and sudden silence the unexpected ap- pearance of wolves does often put upon travellers. Broirne's Vtilgar Errours. With a mind as gieat as theirs he came 'I'o find at home occaxion for his fame, \ liere dark confusions did the nations hide.

Wallt .

I doubt not whether the great increase of that dis- ease may not have been occasioned by the custom of much wine introduced into our common tables.

Temple. The fair for whom they strove. Nor thought when she beheld the fight from far. Her beauty was the occasion of the war. Dryden.

They who are desirous of a name in painting, should read with diligence, and make their observa- tions of such things as they find for their purpose, and of which they may have occasion. Id.

Those letters were not writ to all ; Nor first intended but occasional. Their absent sermons.

Id. Hind and Panther. If we enquire what it is that occasions men to make several combinations of simple ideas into distinct modes, and neglect others which have as much an aptness to be combined, we shall find the reason to be the end of language. Locke.

Who can find it reasonable that the soul should, in its retirement, during sleep, never light on any of those ideas it borrowed not from sensation, preserve the memory of no ideas but such, which, being occa- sioned from the body, must needs be less natural to a spirit ? Id.

From this admonition they took only occasion to redouble their fault, and to sleep again. South.

Thus much is sufficient out of scripture, to verify our explication of the deluge, and according to the Mosaical history of the flood, according to many occa- sional reflections dispersed in other places of scripture concerning it. Burnet.

The ancient canons were very well fitted for the occasion of the church in its purer ages. Baker.

A consumption may be occasionedhy running sores, or sinuous fistulas, whose secret caves and winding burrows empty themselves by copious discharges.

Blackmore. The good Psalmist condemns the foolish thoughts, which a reflection on the prosperous state of his affairs had sometimes occasioned in him. Atterbury.

This one has occasion of observing more than once in several fragments of antiquity, that are still to be seen in Rome. Addison.

Besides these constant times there are likewise occasional times for the performance of this duty.

Duty of Man. I have endeavoured to interweave with the asser- tions some of the proofs whereon they depend, and occasionally scatter several of the more important observations throughout the work. Woodward.

By its styptic quality it affects the nerves, very often occasioning tremors. Arbuthnot on Aliments. A prudent chief not always must display. His powers in equal ranks, and fair array. But with the occasion and the place comply, Conceal his force, nay, seem sometimes to fly.

Pope. God hath put us into an imperfect state, where we have perpetual occasion of each other's assistance.

Saift.

Love or of force or of persuasion

Avails him as best suits the occasion.

And all who've felt his tingling daj|t

Will own his conquest o'er the heart.

Sheridan. OCCECA'TION, n. s. Lat. occcecatio, from occo'co. The act of blinding or making blind.

Those places speak of obduration and ocrecation, so as if the blindness that is in the minds, and hard- ness that is in the hearts of wicked men, were from (iod. Sanderson,

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OCCIDENT, n s.f Lat. occidens, occiden- Occiden'tal, ad;. > talis. The west ; west- Occid'uous. j ern.

The envious clouds are bent To dim his glory, and to stain the tract Of his bright passage to the Occident.

Shakspeare. Ere twice in murk and occidental damp, Moist Hesperus

hath quenched his sleepy lamp.

Id. If she had not been drained she might have tiled her palaces with occidental gold and silver. Houel.

East and west have been the obvious conceptions of philosophers, magnifying the condition of India above the settling and occidental climates. Browne. OCCIPUT, n. s.) Lat. occiput, occipitalis. Occip'iTAL, adj. \ The back of the head ; pertaining to or placed in the back of the head. His broad-brimmed hat Hangs o'er his occiput most quaintly. To make the knave appear more saintly.

Butler.

Occiput, in anatomy, os memoriae, os nervo- rum, or OS basuare, the name given to that bone which forms the posterior and inferior part of the scull. It is of an irregular figure, convex on the outside, and concave internally. Its external surface is very irregular, and thus serves for the attachment of several muscles. The inferior portion of the bone is stretched forward in form of a wedge, whence it is called the cuneiform, or basilary process. At the base of this process, situated obliquely on each side of the foramen magnum, are two flat oblong protuberances, named condyles. They are covered with cartil- age, and serve for the articulation of the head with the first vertebra of the neck. At the basis of the cranium, and immediately behind the cuneiform process, there is a considprable hole, through which the medulla oblongata, the nervi accessorii, and the vertebral arteries, pass into the spine. Man being designed for an erect posture, this foranum magnum is found nearly in the middle of the basis of the human cranium, and at a pretty equal distance from the posterior part of the occiput, and the anterior part of the lower jaw ; whereas in quadrupeds it is nearer the back part of the occiput.

This bone is thicker and stronger than any other of the bones of the head, except the petrous parts of the ossa temporum. The reason for this seems to be that it covers the cerebellum, in which any wound is of the utmost consequence, and that it is, by its situation, more lialile to be fractured by falls than any other bone of the cranium. For if we fall forwards the hands are naturally put out to prevent the forehead's touch- ing the ground ; and if on one side the shoulders in a great measure protect the sides of the head ; but if a person falls backwards the hind part of the head consequently strikes against the earth, and that too with considerable violence. Nature therefore has wisely constructed this bone so as to be capable of the greatest strength at its upper part, where it is most exposed to injury. See Anatomy, Index.

OCCLUDE’, V. a. j Lat. occludo. To en- Occluse’, arf;’. > close; shut up : occluse

OccLu’sioN, 77. s. J is euclosed : occlusion, tie act of shutting up

They take it up, and roll it upon the earths, whereby occluding the pores they Conserve the natural humidity, and so prevent corruption. Browne.

The appulse is either plenary and occluse, so as to preclude all passages of breath or voice through the mouth ; or else partial and pervious, so as to give them some passages out of the mouth. Holder.

OCCOA, a river of Hispaniola, which runs into the sea, and forms a bay on the south coast, to which it gives name, west of Point Salinas.

OccoA, a bay at the eastern extremity of the island of Cuba.

OCCULT’, adj. ˆ Fr. occulte ; Lat. oc- Occulta’tion, w. s. ˆcultus. Obscure; se- Occult’ness. j cret ; hidden ; un-

known : occultation, in astronomy, is the time that a star or planet is hid from our sight by the interposition of the body of the moon, or some other planet : occultness, secretness ; the state of being hid.

If this occult guilt Do not itself unkennel in one speech, It is a damned ghost that we have seen.

Shakspeare.

An artist will play a lesson on an instrument without minding a stroke ; and our tongues will run divisions in a tune not missing a note, even when our thoughts are totally engaged elsewhere : which ef- fects are to be attributed to some secret act of the soul, which to us is utterly occult, and without the ken of our intellects. Glanville.

These instincts we call occult qualities ; which is all one with saying that we do not understand how they work. L’ Estrange.

These are manifest qualities, and their causes only are occult. And the Aristotelians give the name of occult qualities not to manifest qualities, but to such qualities only as they suppose to lie hid in bodies, and to be the unknown causes of manifest effects. Newton s Optichs.

OCCUPANCY, n. s. ˆ Lat. occvpo. The

Oc’cupant, I act of taking or keep-

Oc’cuPATE, t’. ►►. l.‘ng possession: an

Occupa’tion, 71. s. f occupant is he who

Oc’cupiER, takes or keeps pos-

Oc’cuPY, v.a.Si v.n. J session: occupate, to possess ; hold : occupation, the act of taking or holding possession : hence employment ; busi- ness ; avocation : an occupier is a possessor ; one who follows any employment or calling : to occupy, to possess ; keep ; hold ; take up ; give employment to ; follow as a business ; use ; spend ; apply.

All the gold occupied for the work was twenty and nine talents. Eiod. xxxviii. 2.

Thy merchandise and the occupiers of thy mer- chandise shall fall into the midst of the seas.

Ezek. xxvii. 27.

He called his ten servants, and delivered them ten pounds, and said unto them, Occupu till I come.

Luke xix. 1.3.

He was of the same craft with them, and wrought, for by their occupation they were tent-makers. Acts.

How shall he that occupieth the room of the un- learned say Amen at thy giving of thanks, seeing he understandeth not what thou sayest 1

1 Corinthians.

Thej’ occupied themselves about the sabbath yield- ing exceeding praise to the Lord. 2 Maccabeus.

How can he get wisdom that driveth oxen and is occupied \a their labours, and whose talk is of bul- locks ‘ K.clus. xxxviii. 25.

An archbishop may have cause to occupy more chaplains than six.' Act uf Henry VIII.

They occupy their business in deep waters.

ComTTMn Praqer.

The red pestilence strikes all trades in Rome, And occupations perish. Shakspeare. Coriolanus.

If the title of occupiers be good in a land unpeo- pled, why should it be bad accounted in a country peopled thinly ? Raleigh.

Of beasts and birds the property passeth with the possession, and goeth to the occupant ; but of civil people not so. Bacon.

Drunken men are taken with a plain destitution in voluntary motion ; for that the spirits of the wine oppress the spirits animal, and occupate part of the place where they are, and so make them weak to move. id. Natural Historic.

Spain hath enlarged the bounds of its crown within this last sixscore years much more than the Ottomans ; I speak not of matches or unions, but of arms, occupations, invasions. Bacon.

My occupations must vary according to occasions. My end shall be one, and the same now on earth that it must be one day in heaven. Hall.

In your most busy occupations, when you are never so mucli taken up with other affairs, yet now and then send up an ejaculation to the God of your sal- vation. Wake.

Powder being suddenly tii d altogether, upon this high rarefaction, recjuiretli a greater space than be fore its body occupied. Browne.

He must assert infinite generations before that first deluge ; and then the earth could not receive them, but the iiifi iite bodies of men must occupy an infinite

space.

Bentleu's Sermons.

Of moveables, some are things natural ; others, things artificial. Property in the first is gained by occupancy, in the latter by improvement.

Warburton. Such were the distresses of the then infant world, so incessant their occupations about provision for food, that there was little leisure to commit any thing to writincr. Woodward.

There was deep silence in the chamber : dirn

And distant from each other burned the lights. And slumber hovered o'er each lovely limb Of tlie fair occupants. Byron.

OccLPASCY, in law, is the taking possession of those things which before belonged to nobody. This, says judge Blackstone, is the true ground and foundation of all property, or holding those things in severalty, wljich, by the law of nature, unqualified by that of society, were common to all mankind. But, when once it was agreed that every thing capable of ownership should have an owner, reason suggested that he who could first declare his intention of appropriating any thing to his own use, and, in consequence of such his Intention, actually took it into possession, should thereby gain the absolute property of it ; according to that rule of the law of nations, re- cognised by the laws of Rome, Quod nuUius est, id ratione naturali occupanti conceduur. This right of occupancy, so far as it concerns real pro- perty, has been confined by the laws of England within a very narrow compass ; and was extend- ed only to a single instance ; namely, where a man A'as tenant pour autre vie, or had an estate granted to himself only for the life of another man, and died during the life of.cestuy que vie, or him by whose life it was holden : in this case he that could first enter on the land might law-

fully retain the possession so long as cestuy que vie lived by right of occupancy. This seems to have been recurring to first principles, and call- ing in the law of nature to ascertain the property of the land when left without a legal owner. For it did not revert to the granter, who had parted with all his interest, so long as cestuy que vie lived ; it did not escheat to the lord of the fee, for all escheats must be of the absolute entire fee, and not of any particular estate carved out of it, much less of so minute a remnant as this ; it did not belong to the grantee, for he was dead ; it did not descend to his heirs, for there were no words of inheritance in the grant ; nor could it vest in his executors, for no executors could suc- ceed to a freehold. Belonging therefore to no- body, like the haereditas jacens of the Romans, the law left it open to be seized and appropriated by the first person that could enter upon it, during the life of the cestuy que vie, under the name of an occupant. But there was no right of occupancy allowed where the king had the re- version of the lands ; for the reversioner has an equal right with any other man to enter upon the vacant

possession; and, where the king's title and a subject's interfere, the king's shall always be preferred. Against the king, therefore, there could be no prior occupant, because nullum tempus occurrit regi. And, even in the case of a subject, had the estate pour autre vie been granted to a man and his heirs during the life of cestuy que vie, there the heir might, and still may, enter and hold possession, and is called in law a special occupant ; as having a special ex- clusive right, by the terms of the original grant, to enter upon and occupy this haereditas jacens, during the residue of the estate granted ; though some have thought that such estate is rather a descendible freehold. But the title of common occupancy is now reduced almost to nothing by two statutes ; the one 29 Car. II. c. 3, which enacts that where there is no special occupant, in whom the estate may vest, the tenant pour autre vie may devise it by will, or it shall go to the executors, and be assets in their hands for payment of debts; the other, that of 14 Geo. II. c. 20, which enacts that it shall vest not only in the executors, but, in case the tenant dies intes- tate, in the administrators also ; and go in course of a distribution like a chattel interest. By these two statutes the title of common occupancy is bitterly extinct and abolished : though that of special occapancy, by the heir at law, continues to this day : such heir being held to succeed to the ancestor's estate, not by descent, for then he must take an estate of inheritance, but as an oc- cupant, specially marked out and appointed by the original grant. For the statutes must not be construed so as to create any new estate, or to keep that alive which, by the common law, was de- termined, and thereby to defeat the granter's re- version ; but merely to dispose of an interest in being, to which by law there was no owner, and which therefore was left open to the first occu- pant. When there is a residue left the statutes give it to the executors, &c., instead of the first occupant ; but they will not create a residue on purpose to give it to the executors. So also, in some cases, where the laws of other nations give

a right by occupancy, as in lands newly created, by the rising of an island in a river, or by the alluvion or dereliction of the sea; in these in- stances the law of England assigns them an iin- nˆediate owner. For Bracton tells us that if an island arise in the middle of a river it belongs in common to those who have lands on each side thereof; but, if it be nearer to one bank than the other, it belongs only to him who

is propri- etor of the nearest shore ; which is agreeable to the civil law. Yet this seems only to be reason- able where the soil of the river is equally divided between the owners of the opposite shores ; for if the whole soil is the freehold of any one, as it must be whenever a several fishery is claimed, there it seems just (and so is the practice) that the islets arising in any part of the river shall be the property of him who owneth the piscary and the soil. However in case a new island arise in the sea, though the civil law gives it to the first occupant, yet ours gives it to the king. And as to lands gained from the sea, either by alluvion, by the washing up of sand and earth, so as in time to make terra firma; or by derelic- tion, as when the sea shrinks back below the usual water-mark ; in these cases the law is held to be, that if this gain be by little and little, by small and imperceptible degrees, it shall go to the owner of the land adjoining. For de minimis non curat lex : and besides, these owners being often losers by the breaking in of the sea, or at charges to keep it out, this possible gain is there- fore a reciprocal consideration for such possible charge or loss. But, if the alluvion or dereliction be sudden and considerable, in this case it be- longs to the king ; for as the king is lord of the sea, and so owner of the soil while it is covered with water, it is but reasonable he should have the soil when the water has left it dry. So that the quantity of ground gained, and the time during which it is gained, are what make it either the king's or the subject's property. In the same manner, if a river, running between two lord- ships, by degrees gains upon one, and thereby leaves the other dry ; the owner who loses his land thus imperceptibly has no remedy; but if the course of the river be changed by a sudden and violent flood, or other hasty means, and thereby a man loses his ground, he shall have what the river has left in any other place as a recompense for this sudden loss. And this law of alluvions and derelictions with regard to rivers is nearly the same in the imperial law ; whence indeed those our determinations seem to have been drawn and adopted : but we ourselves, as islanders, have applied them to marine in- creases, and have given our sovereign the pre- rogative he enjoys, as well upon the particular reasr>ns before- mentioned as upon this other ge- neral ground of prerogative, formerly remarked, that whatever has no other owner is vested by the law in the king. See Prerogative.

OCCUR', v. n. "\ Lat. ocrurro; Fr. oc-

Occur'rence, n. s- f currence. To come to me-

Occur'rent, t2(/;. ˆniory; appear here and

Occur'sion, 71. s. J there; ⬛⬛⬛* clash; strike

against ; intercept : occurrence (from the Fr.) is,

incident; accidental event: occurrent, incident:

occursion, accidental blow ; clash.

Contentions were as yet never able to prevent two evils, the one a mutual exchange of unseemly and unjust disgraces, the other a common hazard of both, to be made a prey by such as study how to work upon all occurrgnts, with most advantage in private.

Hooker.

He did himself certify all the news and ocrurretits in every particular, from Calice, to the mayor and aldermen of London. Bacon.

There doth not occur to me any use of this experi- ment for profit. Id. Natural History.

So pleasing is the vicissitude of things that the intercourse even of those occurrents which in their own nature are less worthy, gives more contentment than the unaltered estate of better. Bp. Hall.

In the resolution of bodies, by fire, some of the dissipated parts may, by their various occursion occa- sioned by the heat, stick closely. Boyle.

Now should those active particles, ever and anon justled by the occursion of other bodies, so orderly keen their cells without alteration of site.

Glanville.

In education most time is to be bestowed on that which is of the greatest consequence in the ordinary course and occurrences of that life the young man is designed for. Locke.

The mind should be always ready to turn itself to the variety of objects that occur, and allow them as much consideration as shall be thought fit. Id.

Bodies have a determinate motion according to the degrees of their external impulse, their inward prin- ciple of gravitation, and the resistance of the bodies they occur with. Bentley.

Before I begin that, I must occur to one specious objection against this proposition. Id.

Voyages detain the mind by the perpetual occur- rence and expectation of something new. Watts.

The far greater part of the examples that occur to us are so many encouragements to vice and disobe- dience. Rogers.

O'CEAN, n. $. & adj. \ Fr. ocean; Lat. oce-

Ocean'ic. S anus. The main sea ;

any great expanse : ocean is classically used by Milton in the sense of oceanic, i. e. pertaining t(? the ocean.

The golden sun salutes the morn. And, having gilt the ocean with his beams. Gallops the zodiack. Shakspeare.

Will all great Neptune's ocean wash this blood Clean from my hand ? Id. Macbeth.

In bulk as huge as that sea-beast, Leviathan, which God of all his works Created hugest that swims the' ocean stream.

Milton. Bounds were set

To darkness, such as bound the ocean wave. Id.

Time, in general, is to duration, as place to ex- pansion. They are so much of those boundless oceans of eternity and immensity, as is set out and distinguished from the rest, to denote the position of infinite real beings, in those uniform, infinite oceans of duration and space. Locke.

And I have loved thee Ocean, and my joy

Of youthful sports was on thy breast to be

Borne like thy bubbles onward : from a boy

I wantoned with thy breakers. Byroru.

Hear ! hear Prometheus from his rock appeal To earth, air, ocean, all that felt or feel His power and glory ; all who yet shall hear A war eternal as the rolling year. Id.

So some tall rock, whose bare broad bosom high Towers from the earth, and braves the' inclement sky ; On whose vast top the blackening deluge pours, At whose wide base the thundering ocean

roais.

In conscious pride its huge gigantic form Surveys imperious, and defies the storm. Canning. Ocean. The oceans of the globe occupy, collectively, about six-tenths of the earth’s sur- face. See our article Geography. We have in that article considered the immense body of ter-

restrial waters as divisible into two great basins, which we have called the Great Atlantic and the Great Pacific basins. This outline is in a manner followed by the late celebrated Make Brun in his Precis de la Geographic Univer- selle : the following is his exact sketch : ###

r 1-

A. he calls ‘ The Great Southern Ba- sin ;’ occupying the J greater part of the ‘ aquatic hemisphere of the globe.

B. the ‘ Western x Basin,’ forming a# kind of channel be > tween the two great i continents J

r Its frontier may be fixed by a line drawn from Cape Southern) Horn to the Cape of Good Hope ; thence to Van Diemen’s Ocean. \ Land, and returning by the south of New Zealand to Cape

VHorn.

f a. The great Archipelago, or the part comprised between

I New Zealand on the south, the Marquesas on the east, the island of Formosa on the north, and the sirai of Malacca on the west. Great Pacific < (b. The North-Eastem Ocean, between Asia and North Ocean. I America. The seas of Japan, of Kamtschatka, and Beer-

I ing’s Strait, make a part of it.

I c. The South-Eastern Ocean, stretching from the islands 1, of the great Archipelago to South America.

With its various gulfs. The limits above indicated show what remains for this section of the great eastern basin. The Red Sea, or Arabian Gulf, thfi Persian Gulf, and the Bay of Bengal, form part of this division. ” a. North Sea. It is separated from the Atlantic on the south-

west by the Straits of Dover, Great Britain, the Islands of Faroe and Iceland. The Baltic with its gulfs, and the northern Frozen Ocean, constitute parts of this division.

b. The Atlantic Ocean, extending from the above line of demarcation to the two nearest points of Brasil and Guinea.

r 1. The Mediterranean and its gulfs. Branches. } 2. The Gulf of Rlexico, &c.

t.3. Hudson and Baffin's Bay, or the Esquimaux Seas

c. Ethiopian Ocean, between Brasil and Africa, as far as the line which joins Cape Horn and the Cape of Good

ˆHope.

Indian Ocean.

[;

Western Ocean.

On this it may be observed, that neai'ly one half of the globe is covered with water, while almost the whole of the land is situated in the other half. If the frozen regions about the south pole, says Mr. Myers, do not contain any large tracts of land, we may, by following the meridian of the Cape of Good Hope through the pole to the environs of Beering's Straits, trace a line of about 200►►, which is equal to 4000 marine leagues, or 13,840 English miles. This line, therefore, exceeds half the circumfer- ence of the globe by about 400 leagues, and passes wholly over an aquatic surface. A line drawn under the equator through Sumatra and Borneo, to the western coast of America, presents, with only two or three interruptions, an aquatic expanse of 4200 leagues. Again, the fortieth parallel of south latitude exhibits a liquid zone, with only 15►► of land, and consequently form- ing an extent of 5300 leagues, a little less than two-thirds of the whole circumference of the earth. Such is the vast extent of the great southern basin of the terrestrial globe.'

The ocean, by its refreshing exhalations con- tributed to the atmosphere, supports vegetable life, and feeds by its vapors the streams of running water, which, though ever tlowing, are never exhaused. According to Dr. H alley, the vapors which arise from the ocean, and which the winds convey to the land, are sufficient to create and replenish all the rivers and other waters at the surface of the

earth. Without

the benign infiuence of its vapors indceil the whole earth would become an inanimate desert ; and the drying up of the ocean would probably be alone sufficient to destroy all organised nature. This vast body of water serves also to decom- pose a great part of the corruptible matter of both the vegetable and animal reigns, while, by opening a boundless field for navigation, it unites nations whom impassable mountains and immense deserts would otherwise have separated for ever.

The shoi'es washed by the ocean are of three descriptions. 1. Elevated or rocky, sometimes composed of perpendicular cliffs several hun- dred feet high. 2. Downs or coasts formed of sand-hills accumulated by the waves and winds. 3. Low, or generally formed by the retiring of the sea.

The irregular depths of the ocean prove its bottom to be similar to the surface of the conti- nents, and that if left dry it would in like man- ner present mountains, valleys, and plains. It is only by this analogy that we can form any estiijiate of its greatest depth, and this may lead us to conclude that the mountains of the con- tinents correspond with the abysses of the ocean. The greatest depth that had been soimded in 1815 was, according to captain Tuckey, 891 fathoms (by Ellis, in his voyage to Hudson's Bay), without finding bottom. Since this Mr. Scoresby (in June 1817) sounded to the depth of 7200 feet : now the highest mountains exceed

tliree times this number of feet, and, if we allow half that quantity for their abrasion by the ac- tion of the elements since their formation, we may conclude that the greatest depth of the ocean is, perhaps, between 30,000 and 40,000 feet. The depth of the sea near the shores is generally observed to be in proportion to their iieight and declivity, deep water being found close to elevated and steep shores, and shallow water near low ones. The bottom of t?ie ocean, as far as has been ascertained, is composed of sand, gravel, and rock, mixed with the spoils of testaceous animals and coralaginous substances ; in many place.", these latter cover the bottom so as to resemble petrified forests, while in others masses of granite appear.

The level of the waters of the ocean is, gene- rally speaking, every

where the same : hence the ocean taken collectively has a spherical or rather a spheroidical surface which may be considered the true surface of our planet. As exceptions to t'lis general level, it has been pretended that the Baltic and Zuyder Zee are higher than the Bri- tish Sea, the Red Sea than the Mediterranean, and that there is a difference in the levels of the Atlantic and Pacific Oceans on the opposite sides of the isthmus of the Darien ; but the facts on which these suppositions rest are by no means sufficiently verified, and, with respect to the Baltic in particular, the contrary has been proved by recent experiments. It seems, how- ever, probable that gulfs or internal seas open to the East are higher than the main ocean, from the accumulation of waters in them by the con- stant movement of the sea from east to west.

The water of the ocean, besides pure water, contains many foreign substances, the propor- tions of which vary in different places : the most common are muriatic acid, sulphuric acid, a fixed mineral alkali, magnesia, and sulphated lime. The degree of saUness also varies with the localities, or from adventitious causes, and in many places it has been found to be less at the surface than at a considerable depth. Natu- ralists have proposed different solutions for the l>henomenon of the saltness of the sea, some supposing it to be caused by primitive banks of salt at the bottom ; but, if such banks exist, tliey are probably rather formed by the deposition of the saline particles of the water, than the cause of its saltness. Halley and Buffon ascribed it to the corruption of vegetable and animal matter, conveyed to the sea by rivers ; for it being cer- tain that the fresh water received by lakes that have no outlet corrupts, is decomposed, and forms depositions of salt, they considered the ocean as a vast lake, the common reservoir of all the fresh waters of the globe. But if this hypo- thesis were correct the saltness of the sea must be continually increasing, which there seems to be no reason for supposing. Many naturalists have conceived the ocean to be the residue of a pri- mitive fluid, that held in dissol.ition all tlie sub- stances of which the earth is composed, and tliat, after this fluid had deposited all the earthy and metallic particles, there remained in t'^o residue or actual sea some of the saline elementary principles too intimately combined with the water to escape. The only method of freeing

sea-water from its salt is by distillation; but this process is so tedious, and requires such a quantity of fuel, that it can scarcely ev er be car- ried to sufficient extent to supply tiie total want of fresh water at sea, though it may considerably protract the arrival of so dreadful a calamity ; besides, distillation does not entirely deprive the sea-water of its bitter taste when it contains sal ammoniac. This bitterness,

which renders sea- water so nauseous, is found to decrease with tiie depth, whence it probably proceeds from animal and vegetable matter in a state of decomposition near the surface. Sparrman found that sea-water taken from the depth of sixty fathoms had the taste of fresh water in which common salt had been dissolved, and on an analysis it was found to contain an extremely small proportion of mag- nesia. The analysis of three pounds of water taken up near Aurich, in East Friezeland (British Sea), and the same quantity from INevv Rostock in the Baltic gave : ###

Brit. Sea. Ealtic. Muriate of soda, or common salt

grains 522 263 Muriate of magnesia, or Epsom

salt 198L 111

Sulphate of lime, or selenite .23 12 Sulphate of soda, or Glauber salt 1 ˆ l Residue IJ 1

746i 388 The following are observations showing con- siderable differences in the degrees of saltness in nearly the same places.

From Bergman's Physical Geography. Near Iceland, of its weight . . . Va to -ˆ Near the south coast of Norway . -,'5 i.

In the Cattegat ### . ˆ

In the Baltic ˆ

In the Gulf of Bothnia ... j to ; In the British Sea, on the coast of Hol- land 3'ˆ

on the coast of North- umberland ˆ

off the North Foreland ˆ

In the English Channel ˆ

In the Irish Channel oft' the coast of

Cumberland ,5

In the Atlantic,' near the coast of France ˆ

near the coast of Spain I'j.

In the Mediterranean near Castiglione jˆ Five miles north of Malta ....

5ˆ From De Pages' N'oyage round the ^^'orld. In lat. 81►► N. among the ice ►►► ►►► ►►► ►►► h

74►► no ice ˆi

64►► between Iceland and Norway ˆ 59►► between Zetland and Norway ˆ

In the Atlantic 45►► N 55

39►► . . \ . . i

26►► ˆ\

10►► h

ˆa 55

U►► S ji

On the equator ˆ

20ˆ►► S. . . . . ,'5

26►► ./-

In the Gt. S Ocean 40ˆ►► .ˆ'j

46►► ife

30►► i

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OCEAN.

Though the saltness of the sea considerably aids in preserving it from putrefaction it is not alone sufficient for that purpose, and without the constant motion produced by winds, tides, and currents, it would in a short time corrupt, as has been frequently experienced in long calms with- in the tropics.

The general color of the sea in the open ocean is a deep greenish blue : the latter tint, which is predominant, seems to proceed from the same cause that gives an azure color to the atmosphere, and a deeper blue to distant moun- tains ; for, the blue rays being the most refrangi- ble, are reflected in greatest quantity by the aquatic fluid, which, by

reason of its density and depth, causes them to undergo a strong refraction. The other shades, which have been observed in the waters of different seas, seem to depend on local causes, and often perhaps on optical illu- sion ; thus the water of the Levant is said at times to have a purple tint, the sea in the Gulf of Guinea to be whitish, and near the Maldiva Islands black. The water of the Gulf of Cali- fornia is reddish, whence its name Vermilion Sea. The changes of color in proceeding from the British Sea to the Frozen Ocean have been noticed by several voyagers ; in the first it is the common greenish blue, in the sea of Norway a clear deep blue, and in the Frozen Ocean a deep black. The approach to the coasts of the conti- nents, or of large islands, is generally denoted by the lighter green or yellowish tint of the w”ater denoting being in soundings. The southern seas present at times a phenomenon which ter- rified their early navigators, who, . seeing large spaces of the sea of a blood color, conceived it a portent of some dreadful catastrophe ; this ap- pearance, however, seems to be generally pro- duced by a multitude of sea insects of a red color.

The luminous appearance of the sea at night is a magnificent and imposing spectacle. When gently agitated, innumerable sparkles of light, some of dazzling brilliancy, others of a silvery white, will group themselves in a thousand f ˆrms ; but when disturbed the appearance is i.iore tumultuously grand, waves of fire rising, rolling onward, and breaking in brilliant foam. This phenomenon has occupied the attention of many naturalists, some ascribing it solely to ani- mals of the zoophile and mollusca classes, all of which they say possess phosphorus, in a greater or less degree ; others, while they admit the ex- istence of luminous sea insects, are of opinion that the light of the sea is more particularly caused by animal and vegetable substances, which in the process of putrefaction discharge their phosphorus. Sir Isaac Newton was inclined to attribute it to friction alone, from the obser- vation that the light is more brilliant when the sea is most agitated ; others again, from particu- lar experiments, conceive that it may proceed, at least in part, from a matter contained in the sea-water which has a direct analogy with elec- tricity; finally, it has been supposed that the spawn of fish has a considerable share in this phenomenon. See our article Mediterranean. The observations made on the temperature of the sea afford the following general results. 1st.

That the sun’s rays rarely penetrate below the depth of forty-five, or according to some of 113 fathoms, below which the sea receives no light, and consequently little or no direct heat from the sun ; hence it is inferred that the temperature of the bottom must follow that of the interior of the globe in the diff’erent latitudes. 2dly, That the temperature of the sea at the surface differs from that of the

atmosphere plus or minus, according to the circumstances of locality, season, weather, time of the day, &c. And 3dly,That the tempe- rature decreases with the depth to a certain de- gree, but never to freezing, which is prevented by the constant internal heat of the earth.

The following series of observations on the specific gravity and temperature of sea-water, by Dr. Davy, inserted in the Edinburgh Philo- sophical Journal, were made during a voyage homeward from Ceylon, in 1819 and 1820. They embrace a very large portion of the earth's surface, and, from the accuracy and sagacity of the able chemist by whom they were made, they will be regarded by philosophers as forming a valuable addition to our hydrographical know- ledge.

The series of experiments commences at Co- lumbo in Ceylon, on the 4th of December, 1819 ; and between the 1st of February and the end of June 1820 : they were made on board the Eclipse.

Columbo, December 4.th, 1819. Temp. Air. Temp. Water. Sp. Gr. Wind. 9hA.M. 79►► 82►► 1-0228 N.

5 P.M. 83 83 1-0230 N.

In both these experiments the water was taken from the shore below the flag-staff".

Columbo, December 11th. Air, Water. Sp. Gr. Wind.

9h A.M. 78►► 82►► 1-0231 N.

February 4th 18'20. On board the Eclipse. N. lat. 5►► 19', E. long. 80►► 10'.

Air. Water. Wind and W' eather. lOh A. M. 80►► 80-5►► E. gentle, overcast. 12 80 81 N.E. do. do. light rain.

2 P.M. 79 81 N.E. gentle, pretty clear.

5 80 81 N.E. by N. do. do.

8 77 80-5►► N. E. do. little overcast.

These temperatures were taken in sight of land.

February 5th 1820. N. lat. 4►► 10', E. long. 80►► 15'.

Air. Water. Wind.

Ih A.M. 79►► 80-5►► N. N.E. gentle, pretty clear. 8 76 80-5 Do. overcast, after a heavy

shower. 10 77 80-5 Do. raining slightly.

12 79 81 Do. slightly overcast.

2 p.m. 80-5 81-5 Do. rather cloudy. 4 80 82 Do. clear.

6 77 81-5 Do. pretty clear. 8 80 81-5 Do. clear.

10 80 81-5 Do. clear.

By comparing the chronometer and dead reckoning, it appeared that the ship had been in a current flowing towards the west tlie whole day.

February 6th 1820. N. lat. 2►► 19’, E. long. 81►► 14′

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Air. Water. Wind and Weather. 8h A.M. 81-5►► 82►► N. E. Moderate, a few clouds. 10 82 82 Do. do. do.

12 82-5 82-5 Do. do. do.

2 p. M. 82-5 82-5 Do. do. do. 5 82 82 Do. do. do.

9 81-5 82-5 Do. clouds collecting.

Thunder. The ship seemed, during this day, to have been in a current from the north.

Febrmry 7th 1820. N. lat. 0►► 48’. Air. Water. Wind and Weather.

lOnA.M. 77►► 82►► Calm, overcast, rainy. 12 77 82 N. E. raining slightly,

overcast. 2 p. M. 78 82-5 Calm, and overcast. 5 75 81-5 W. very gentle, heavy

shower just passed. 9 77-5 82 E. by N. gentle, pretty

clear. There was much thunder and lightning daring the night, and the weather was squally with heavy rain.

February 8th 1820. S. lat 0►► 5’, E. long. 81►► 37’.

Air. Water. Wine and Weather. 6ˆhA.M. 79►► 82-5►► N.E. almost calm, clear. 8 81 82-75 Do. do.

10 82 83 Do. gentle.

12 82 83-5 Do. do. do.

2 p. M. 82-5 84 Do. do. do.

5 84 84-5 Calm, do. 6h p. M. 81-5 83-75 Calm, clear

8 80 83 N. \V. Almost calm,

clear. 10 79 82-5 Do. do. do.

The night was fine, and almost calm. February 9th 1820. S. lat. 0►► 41’, E. long. 81►► 49’.

Air. Water. Hygr. Wind and Weather. 6ˆhA.M. 77►► 82-5►► W. very gentle, cWr. 8 80 83 W by S. do do

10 81 83 W. gentle da

12 81 84 6►► W. by N. do. do.

2 P.M. 78 83 4 N.W. squally, raining hard.

6 80 83-5 5 Do. do. cloudy. 10 79 82 3 Do. do. do.

The night was rather squally and cloudy, with occasional showers. These hygromeiTical obser- vations were made with two thermometers, one of which had its bulb covered with an absorbent substance, and wetted with water. The degrees in the column show the descent of the mercury by the cold, produced by evaporation.

February 10th 1820 S. lat. 2►► 8’, E. long. 81►► 54’.

Air. Water. Hygi Wind and Weather. 7nA.M. 77►► 81-5►► 2-5►► N. by W. squally, cloudy, showery. 10 78-5 82 3-5 Do. do.

12 80 5 82 5-5 Do. do.

2 P. M. 82 82 5 Do. do.

6 79 81 4 Do. do.

The night was boisterous, with heavy rain, and some thunder and lightning.

VthruarijWth 1820. S. lat. 4►► 45’, E. loner. 81►► 54’.

Air. Water. Hygr. Wind and Weatlie 7hA. M. 79►► 81-5►► 4►► W. by W. stormy, cloudy. 10 81 82 4-5 W. do. do.

12 79 81-5 4 W. overcast, rainy.

2 P. M. 31 82 4 \V. squally, do.

6 78 81-5 2 W. do. raining

slightly. 9 79 81-5 4 W. fresh, pretty

clear. The wind was fresh during the night, and the sky pretty clear, with occasional showers.

February 12th 1820. S. lat. 7►► 10’, E. long 82►► 26’.

Air. Water. Hygr. Wind and Weather. 6ihA.M. 77►► 81-5►► 2►► W. fresh, cloudy, rain- ing slightly. 10 80-5 82 5-5 \. by S. do. pretty

clear. 12 81 82 5 Do. do. shower coming.

2 P. M. 82 82-5 6 S. S. W. moderate,

cloudy. 6 80 82 4 S. W. very gentle,

cloudy, slight rain. 8 81-5 82-5 5-5 S. W. do. cleai

The night was rather squally, with some heavy showers.

Between about N. lat. 3►► and S. lat. 7►► or 8►► a north-west or westerly wind prevails during the same month that the north-east wind prevails in Ceylon. About the limits of the north-east and north-west, and of the south-east and north- west, calms commonly occur. Hence, we may expect that, as those parts of the ocean within the tropics are particularly liable to calms, the temperature of the water will be unusually high; and that in those parts of the ocean within the tropics which are particularly liable to squalls, the temperature of the water will be lower. The north-west or little monsoons blow from Madagascar, and the diiection is probably con- nected with that great island. The north-west is succeeded by the south-west monsoon in the ►►►above latitudes.

February 13th 1820. S. lat. 7►► 57’, E. long. 8-2►► 52’.

Air. Water. Hygr. Wind and Weather. 6|b d.ii. 78-5= 83►► 2-5►► S. W.very gentle,

pretty clear

8 81 83-5 5 Calm, clear.

10 81 83-75 5 S. W. by W. very

gentle, clear. 12 83-5 85 S. by E. do. do.

2 p. M. 825 85-5 65 S. E. do. do.

6 81-5 84-5 6-5 S. do. do.

9 82 83 6 S. by E. do do. The night was calm, with frequent showers. February lAth 1820. S. lat. 7►► 59’, E. long

82►► 20’.

Air. Watei. Hygr. Wind and Weather. 6ˆh A.M. 80►► 83-5►► 3-5►► S.W.verj’ gentle, cloudy. 10 80 83-5 5 Do. gentle do.

12 83-5 84-5 75 Calm, light clouds

2 p. M. 80 84 4 S. fresh, a sq-uall

approaching. 6 82 84 6 Calm, light clouds.

9 81-5 83-5 3 S. by E.” moderate.

Till midnioht there was a fresh breeze, whiih was followed by a calm and much rain.

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February \5th 1820. S. lat. 8►► 34’, E. long.

81″ 29.

Air. Water. Hygr. Wind and Weather. 61 h A M. 79►► 83-5►► 3►► Calm, partially overcast. 10 81 84 4 W. by N. gentle.

12 82 84-5 5 W. by W. do.

2 P. M. 84 85 6 Calm, partially overcast. 6 81 84 4 S. W. very gentle.

9 80 84 4 Calm, clear.

The night was clear and calm, and there was some swell from the south-east.

Februari/ Wth 1820. S. lat. 9►► 3', E. long. 81►►- Air. Water. Hygr. Wind and Weather. 6ih A. M. 81►► 83-5►► 6►► S. E. very gentle, pretty clear. 10 85 84-5 8 Do. do. do.

12 85 84-5 8-5 Do. do. do.

2 p. M. 85 85-25 9 Do. do. do. 6 80 84-5 4 N. gentle, dark

clouds. 9 82 84 4 Calm, some dark

clouds. The night was calm and fine.

February 17th 1820, S. lat. 9►► 19', E. long. 80►► 39'.

Air. Water. Hygr. Wind and Weather.

6ˆh A. M. 80►► 83-5►► 4►► Calm, pretty clear.

10 83 84-5 6 Do. rather cloudy.

12 83-5 84-5 6 Do. cloudy.

2 p. M. 86 84-5 9 Do. rather cloudy.

6 81 84 3-5 W. gentle do. after

a shower. 8 81-5 84 4-5 Do. do.

The night was rather fine, and the wind oc- casionally approaching to fresh.

Februari/ IQtk 1820. S. lat. 10►► 8', E. long. 80►► 29'.

Air. Water. Hygr. Wind and Weather. 7h A. M. 76►► 83-5►► 2-5►► S. W. gentle, over- cast. 10 81 83-5 5 S. S. W. do. do.

12 82 83-5 6 S.byE. do. slightly

overcast.

2 p. M. 81 83"5 5 S. W. do. overcast. 6 80 83 6 S. moderately do.

8 80 83 5 S. gentle, clear. The night was fine with little wind.

February 19th 1820. S. lat. 10►► 27', ►►. long. 80►► 25'.

Air. Water. Hygr. Wind and Weather. 7h A. M. 80►► 83►► 4►► Calm, pretty clear. 10 82 84 6 W.N. W. very gen-

tle, do. 12 84 83-5 7 Do. do. do.

3 p. M. 83-5 84-5 8 Do. do. do.

6 82 83-5 6 W. by N. gentle,

rather clear.

9 78 83 2 Calm, overcast after

a shower. The night was rainy, with little wind. February 20th 1820. Air. Water. Evap. Wind and Weather. 6Jh A. M. 77►► 82-5►► 2►► Calm, overcast. 10 79 83 4 Do. do. do.

12 79 83 3 Variable, very gen-

tle, slight rain. e p. M. 76 82 1 W. N. W. gentle, overcast.

The night was stormy and rainy, and the wind blowing a gale. During this gale the sky was thickly overcast, so as to be of a dark gray or light sooty hue, but the sea retained its usual color. Its blue color appeared very distinct, when one looked immediately down from the ship into the sea, and it was equally evident in the waves as they rose, their heads being be- tween the light and the eye of the observer. Even in the color of the surface of the sea in general a tint of blue might be distinguished, but it was not bright on account of the darkness of the surface. Hence we may infer that the ocean does not owe its blue color to the reflect- ed azure of the sky, as several authors have supposed.

It was long doubted whether sea-water would freeze, and this doubt was strengthened by the experience of navigators, who found that the ice taken up from the ocean, when thawed, produced perfectly fresh water : hence Buffon supposed it to be formed in rivers, by whose currents it was carried into the ocean. Captain Cook on the contrary ascribed its origin to snow; which, be- ing more solid, and at the same time lighter, bulk for bulk, than the sea-water, would float on the surface and be converted into ice, which must continually augment in thickness from other snow, rain, Sec. It is now, however, proved that it requires no veiy extraordinary de- gree of cold to freeze water more

impregnated with salt tlian that of the ocean, and that it gets rid of its salt in the process of congelation. Oceanic ices are generally met with in lower latitudes of the southern than of the northern hemisphere ; for the northern polar sea being al- most surrounded by land, which opposes the free drift of the ices, it is only the pieces formed in the bays of the rivers of America that are car- ried by the polar current to the south, and such are occasionally met with on the west side of the Atlantic, so low as the latitude of 40►►. On the contrary, the Greenland ships who keep along the coast of Europe, where is a constant current from the south, seldom meet with ice till they arrive at the latitude of 76►►, and they are usually enabled to advance to the latitude of 80►► or even of 82►► before their progress is finally stopped by connected field ice. Between Asia and Ame- rica captain Cook found the continents joined by ice in 70►►, and his farthest progress was only 70►► 48'.

In the southern seas, there being no obstacle from lands to the drifting of the ices, they are often met with in large masses in latitude 40►►. In 60►► the ice islands are so numerous as to render navigation extremely perilous, and con- nected field ice usually entirely arrests it in 70►►. In this ocean captain Cook was unable to approach the pole nearer than 71►► 10'. This navigator also describes the ice islands of the southern seas as of much greater extent and ele- vation than those he ever met with in the northern. It is obser^'ed that the atmosphere is warmer where ice islands are first met with than in the immediate lower latitude previously passed through, which seems to proceed from the ice reflecting the sun's rays, and also that the tem- perature is greater near these masses in the x'>

gions of their formation than when having drifted into lower latitudes they are thawing, which is evidently caused by the progress of fusion ; for, ice being formed by the deprivation of caloric, its fusion can only be produced by a new combination of the same element, which it absorbs from the atmosphere, and renders it ex- tremely cold. The approach to ice islands is denoted, even in the darkest night, by a whitish light which they reflect in the horizon, and which seamen call the blink.

Humboldt has some observations on this sub- ject, which combine, in his own manner, a great deal of scientific and practical information : ►►► ' We must distinguish,' he says, ' with respect to the

temperature of the ocean, four different phe- nomena. 1st. The temperature of the water at the surface corresponding to different latitudes, the ocean being considered at rest, and destitute of shallows and currents. 2dly, The decrease of heat in the superimposed strata of water. 3rdly, The effect of billows on the temperature of the surface water. 4thly, The temperature of cur- rents, which impel with an acquired velocity the waters of our zone across the immoveable waters of another zone. The region of warmest waters no more coincides with the equator, than the region in which the waters reach their maxi- mum of saltness. In passing from one hemi- sphere to another, we find the warmest waters between 5►► 45′ of N. lat., and 6►► 15′ of S. lat. Perrins found their temperature to be 82-3►►; Quevedo 83-5►►; Churruca 83-7►►; and Rodman 83-8►►. I have found them in the South Sea to the east of the Galapagos Isles 84-7►►. The variations and the mean result do not extend beyond 1-3►►. It is very remarkable that, in the parallel of warmest waters, the temperature of the surface of the sea is from 3-6►► to 5-4►► higher than that of the superincumbent air. Does this difference arise from the motion of the cooled particles towards the bottom, or the absorption of light which is not sufficiently compensated by the free emission of the radiant caloric ? As we advance from the equator to the torrid zone, the influence of the seasons on the temperature of the surface of the sea becomes very sensible; but, as a great mass of water follows very slowly the changes in the temperature of the air, the means of tlie months do not correspond at the same epochs in the ocean and in the air. Be- sides, the extent of the variations is less in the water than in the atmosphere, because the in- crease or decrease in the heat of the sea takes place in a medium of variable temperature, so that the minimum and the maximum of the heat which the water reaches are modified by the atmosplierical temperature of the months which follow die coldest of the warmest months of the year. It is from an analogous cause that in springs which have a variable temperature, for example near Upsal, the extent of the variations of temperature is only 19-8►►, while the same extent in the air from the month of January to August is 39-6►►. In the parallel of the Canary Islands Baron Von Buch found the minimum of the temperature of the water to be 68ˆ, and the maximum 74-8►►. The temperature of the air in the warmest of the coldest months is, in

that quarter, from 64-4►► to 75-2►►. In advancing towards the north, we find still greater differ- ences of winter temperature between the surface of the sea and the superincumbent air. The cooled particles of water descend till their tem- perature reaches 39-2►► ; and hence in 46►► and 50►► of latitude, in the part of the Atlantic which is

near Europe, the maximum and minimum of heat are

In the water at its surface. In the air from the mean

of warmest and coldest

months,

68-0►► and 41-9►►

66-2 and 35-6

The excess in the mean temperature of the water over that of the air attains its maximum beyond the polar circle, where the sea does not wholly freeze. The atmosphere is cooled to such a degree in these seas (from 63►► to 70►► of lat., and 0►► of long.) that the mean temperature of several months of winter descend on the con- tinents to 14** and 10-4►►, and on the coasts to 23►► and 21-2►►, while the temperature of the surface of the sea is not below 32►► or 30-2►►. If it is true tha* even in those high latitudes the bottom of the sea contains strata of water which, at the maximum of their specific gravity, have 39‘2►► or 41►► of heat, we may suppose that the water at the bottom contributes to diminish the cooling at the surface. These circumstances have a great influence on the mildness of coun- tries in continents separated from the Pole by an extensive sea.

The superior degree of cold of the southern he- misphere than of the northern, in equal latitudes, is now generally ascribed to the greater extension of the southern ices towards the temperate zone. The absence of any considerable land in the high southern seas, and the form of the conti- nents, which terminate in angular points, leave a free course to the polar currents, and permit them, as we have already observed, to convey the ices of the pole far into the temperate zone, where their presence causes those sudden transi- tions from heat to cold, and those intense fogs, met with by na\igators in the great southern ocean. Astronomers have also attributed the superior cold of the southern hemisphere to the sun’s being seven days and eighteen hours less in the southern than in the northern signs ; but the difference produced by this cause ought not to exceed the one twenty-fifth,- while the real difference appears to be one-seventh. Tlie theory of the rays of heat has afforded another explana- tion in the attempt to demonstrate that in a given time the southern hemisphere loses a greater proportion of its constant proper heat than the northern : but this cause ought not to cease suddenly, between 35►► and 40►► of lat., as is observed to be the case.

In several places near the shores of the sea springs of fresh water are observed, rising to the surface, and refusing to combine with the salt water that surrounds them. The most remarka- ble instances of these phenomena are in the gulf of Spezia ; in the Persian Gulf, near the

isles of Bahrein ; and in the bay of Xagua, on the south coast of Cuba. It may be presumed that veins of water, finding no outlet towards the surface□□/

the land, follow the direction of internal fissures even under the sea, until they meet with such an outlet, through which they naturally ascend, with a force in proportion to the elevation of their sources and the declivities of the subterraneous canals, in the same manner as spouting springs on the land.

The waters of the ocean cede to very slight impulsions, and are constantly ao;itated by three different movements; 1. The undulatory move- ment, or waves ; 2. The sidereal movement, or tides; and 3. Currents.

Every movement of the atmosphere, in the form of winds, produces a correspondent move- ment on the surface of the ocean, which increases in rapidity and violence with the velocity and force of the winds : thus a moderate breeze pro- duces a gentle undulation, which, moving slowly onwards, exhausts itself and subsides tranquilly. In a storm the ocean is furrowed by tremendous □□□waves or mountainous ridges of water, each of which rolls on with furious rapidity, until its summit arrives at an overcharging elevation, from which it necessarily precipitates itself by the force of gravity, and, by the acceleration it has acquired in its descent, impels forward the mass of water immediately before it, which in its turn rises, forms a wave, and pushes forward the water before it, and thus is a continual succes- sion of waves generated. Dr. Woolaston found the velocity of the waves to be nearly sixty miles an hour close to the east coast of England. It seems of necessity that their comparative velo- city must be greater in the open ocean than near the shores in shoal water, where the mixed par- ticles of sand and mud increasing the density of the fluid, as well as the friction on the bottom, must considerably retard their progress.

Geometricians have attempted to calculate the velocity of the propagation of waves, as being the same as that which a heavy body acquires in descending from a height, equal to half the depth of water in the channel ; consequently, if the depth is one foot, the velocity of the wave will be 5 ,ˆj55 feet per second of time, and, as the depth is greater or less, the velocity will vary into a ratio underdoubled of the

depths, provided they are not too great. ††† La Grange Alecanique Ana- lytique.

To that state of the ocean after a storm, when mountainous and long billows follow each other slowly and subside without breaking, seamen give the name of swell, while high breaking waves are called a sea. After a storm, if a wind springs up in an opposite direction, the waves it creates being contrary to the swell, what is called a cross sea is produced, often more dangerous than the most mountainous but regular waves. A swell is often experienced in a contrary direction to the wind blowing at the moment, and is a cer- tain prognostic of a change of wind to the direc- tion of the swell, the latter sometimes preceding the former several hours. The extraordinary long swell, always met with near the equator, seems to be caused by the more direct and pow- erful influence of the sun and moon on this part of the ocean, by which it is necessarily more agitated than nearer the poles, where the action of the heavenly bodies is indirect ; besides, the

equatorial region performing its diurnal revolu- tion with greater velocity, and at the same time tracing a larger circle than any other portion of the globe, its waters must be more agitated by the centrifugal force, which, depriving them of a portion of their gravity, renders them more sus- ceptible of external impressions. It is doubtfu, to what depth the sea is agitated by the winds : twenty fathoms seem to be the farthest to which divers have descended, and at this depth they have found the water so troubled, that mud and shells were carried to considerable distances ; while other divers pretend that at the depth of fifteen fathoms they have found the water per- fectly tranquil even in the greatest storms. The breaking of the waves on a flat shore is named a surf, and is a phenomenon, worthy of particular notice. The surf, says Marsden, (History of Sumatra), is at times composed of but one rank of waves along the shore, at other times there are two, three, four, and even more, one behind the other, extending half a mile from the shore. The surf begins to take its form at some distance from the place where it breaks, and augments by degrees as it advances, until it arrives at the common height of fifteen or twenty feet, from the summit of which elevation the wave precipi- tates itself like a cascade from a precipice, with a noise that may be heard at several miles dis- tance, and which often in the night gives the na- vigator sufficient notice of his danger to enable him to escape shipwreck on shores where there would be no human possibility of saving his. life. Although from the first formation of the surf the water seems to have a rapid progressive motion towards the land, yet a light object float- ing on it, instead of being carried on shore, drifts parallel to it if the tide is flowing, and drives off” if it is ebbing ; whence it

seems probable that the movement is propagated in the fluid alone as sound is in the air, and that the mass of the wave is not propelled forward, the only real progressive movement being produced by the perpendicular fall at the moment of the breaking of the surf, when the wave, by its descending weight, spreads itself in foam to a greater or less distance, in proportion to its elevation and to the declivity of the shore. Though the wind pro- duces the wave which is to form tlie surf, it is certain that the wind is not the immediate cause of the surf itself, for it is often greatest in a calm, and least in a storm, and is also often most vio- lent when the wind blowg off the shore. Mars- den supposes that when the wave approaches a shore whose depth is not in proportion to its volume, this wave, instead of pressing on a mass of water which would elevate itself to an equal height and form another wave, presses on the ground, the reaction of which forces it to preci- pitate itself as we have described. The greatest surfs are observed between the tropics, and par- ticularly on the coast of Africa, on that of Coro- mandel, and the west coast of Sumatra.

Tides are periodical oscillations of the sea, caused, as it is said, by the attractions of the sun and moon, and more particularly of the latter ; but they involve considerations of suflicient im- portance to entitle them to a distinct notice. See Tides.

Between the tropics, when uninfluenced by any local circumstances, they flow from the east with the movement of the celestial bodies. In the northern temperate zone they flow from the south, and in the southern temperate zone from the north ; that is in both from the equator, where the power of these bodies is most forcibly exert- ed on the waters. In the northern Frozen Ocean the tides are in general very weak, owing to its distance from the centre of the sidereal attraction, from the lands which surround it, and from the ices with which it is encumbered. Of the tides in the southern Frozen Ocean we have little or no knowledge. The irregularities of the bottom of the ocean, the position of coasts, their decli- vity under water, the different breadths of chan- nels and straits, winds, currents, and other local and temporary causes, destroy the regularity of tides, and, by varying the degree of friction of the waters, shorten or prolong the duration of the ebb and flood. In most places of the globe the tide flows twice in twenty-four hours, according to the principles of the sidereal attraction ; there are, however, a number of exceptions, particu- larly among the Asiatic islands within the tro- pics, as well as on the coast

of 'an Diemen's Land, where there is but one tide of flood in twenty-four hours, and in those places the pas- sage of the moon over the meridian usually makes high water. ††† Horsburgh. Ind. Direc. Thus among the scattered islands of the tropics the tides are regular, but the rise is inconsiderable ; while on the oceanic coasts of Europe, and on the east coast of Asia, they are extremely strong, and subject to many irregularities. The highest tides yet observed are in the Gulf of St. Malo, on the coast of France, where the flood, driven back by the coast of England, accumulates and rises to the height of seven and eight fathoms. It is difficult to give credit to the accounts of the travellers who inform us that, in 1632, the is- land of Formosa experienced a tide that passed over the chain of mountains that traverses the is- land !

Among pilots it is customary to reckon the time of high water by the point of the compass t!ie moon bears on at that time, allowing three quarters of an hour for each point : thus in))laces where it is high water at noon, the tide is said to flow north and south, or twelve o'clock; if she bears south-east at high water, it is said to flow south-east and north-west, or nine o'clock ; and if she bears south-west it is said to flow south-west and north-east, or three o'clock ; and so on for every point of the moon's bearing. But this method of reckoning the time of high water by the compass is liable to great errors. Thus, for instance, it is said, the tide flows east and west, or six hours at Plymouth ; but if it was thence understood that the moon is always east or west when it is high water there at full and change very dangerous consequences might re- sult ; for, when the moon has a high northern de- clination, it may happen that she will not bear due east till near eight o'clock in the morning at Plymouth, which will be about two hours after hiˆh water, and on the same day she will bear due west soon after four o'clock in the afternoon, or nearly two hours before high water. The best

rule would be to say it is high water so many hours after the moon nas passed the meridian.

Currents are movements of the ocean produc- ed by various causes, and may be divided into general and particular ; the former, depending on fixed and general causes, always preserve the same direction and limits ; while the latter, result- ing from local and temporary ones, vary in both. Between the latitudes of 30††, in both hemispheres, a constant movement of the ocean is observed, which seems to convey its waters from east to west, or in a contrary direction to the rotation of the globe : by another movement the waters of the polar seas are conveyed towards the equator. The causes of these two

general and constant cur- rents are the heat of the sun and the rotation of the globe. See our article Current.

The existence of contrary superior and inferior currents, supposed by Halley and denied by Buff”on, is still doubtful. Those who admit these opposite currents assign as the possible causes the diff’erent densities of the waters at diff’erent depths, a great rapidity of movement towards the surface, and the cohesion of the molecules of fluids. In the Strait of Gibraltar, the Sound, and the channel of Constantinople, these con- trary currents are asserted to exist. See Gi- braltar.

When two opposite currents of equal force meet they form a spiral vortex, or whirlpool, of which the most celebrated are the Maelstrom, on the coast of Norway, and Euripus, in the Strait of Negropont. Charybdis, in the Strait of Mes- sina, has also been described, both by the an- cients and moderns, as a whirlpool, though it seems to be only a violent agitation of the waters at the surface by the meeting of the tides, and has no vortex. It was the phenomena of whirl- pools that gave rise to the now exploded idea of abysses, which penetrating through vast masses of land formed subterranean communications between distant seas ; such as between the sea of Norway and the Gulf of Bothnia by the Maelstrom, between the Persian Gulf and Caspian Sea, &c.

If we set out from 63►► of N. lat., on the east side of the old continent, and follow its coasts to beyond the equator, we find them pre- senting a series of vast basins and gulfs pene- trating into the continent, and enclosed within chains of islands and banks, separated by naiTow and winding channels. On the western side of the same continent we observe nothing similar. From the north cape of Lapland to the Cape of Good Hope the coast presents a continuity un- broken, except by the mouths of rivers, and by the entrances of the Baltic and ˆlediterranean seas ; the formation of which are accounted for on different principles ; and with respect to the British islands, which form a mere point in this space, their separation from the continent was probably produced by a sudden convulsion of ‘ the earth, rather than by the gradual action of the waters.

In following the eastern coasts of the new continent, from the latitude of 60►► N. to within 10►► of the equator, ruptures of the land and chains of islands and banks are presented to us similar to those we have observed on the east coasts of our onui continent: thus Davis’s Stiait

and Hudson's Bay answer to the Sea of Tartary, the Gulf of St. Lawrence to the Sea of Japan, while the West India islands enclose the Gulf of Mexico and Caribbean Sea, as the Lieu-Kieu islands and the Malay Archipelago do the seas of Corea, of China, and of Sunda. No such appearances are observed on the western coast of America, which, with the exception of the gulf of California, from Cape Horn to Cape Prince of Wales, presents a rampart of abrupt cliffs, immediately washed by the Grand Ocean.

This broken state of the eastern coasts of the continents is ascribed by Buffon and other writers to the constant movement of the ocean from east to west ; and this opinion is strength- ened by the observation, that the coast of Asia is more broken than that of America, and that it ought to be so from the difference in the masses of waters of the two oceans, the Grand Ocean being at least three times broader than the At- lantic, consequently allowing them the same lengths, and supposing their depths in propor- tion to their different breadths, the former has nine times the solid contents of the latter, and therefore must, their velocities being equal, act A\ith nine times the power on the body of land that opposes it. Moreover the greatest effect ought to be produced near the equator, because it is there that the masses of the waters and the velocity of their constant movements are greatest ; and accordingly it is between the tropics that the eastern coasts of both continents are most torn, and the greatest effect is manifested pre- cisely where the breadth of the ocean is greatest, that is, in the Atlantic, between the parallels of 7►► and 29►► N. and in the Grand Ocean, on the entire space between the tropics ; for it is at the equator itself that this ocean has the greatest breadth. The only diflBculty in adopting the opinion of Buffon is, that the lapse of several centuries has scarcely rendered sensible the action of the sea on these coasts ; but to this ob- jection it may be replied that, the sea having washed away the lighter or less cohesive matter that primitively united the now detached lands to the continents, there remain only substances of so hard a nature that the efforts of the ocean against them are almost powerless. It is also to be observed, in support of this hypothesis, that the coast of South America within the tropic, which is exposed to the continual action of the equatorial winds and currents, is lined by a chain of rocky banks which protect it from their vio- lence, while the opposite coast of Afnca is bor- dered by a beach of fine sand.

But, though the changes produced by the sea on the coasts since the period of history are in- significant in a great general point of view,

they are nevertheless sufficient to demand particular notice. The sea forms new lands by the sand, shells, marine plants, and mud of rivers which it deposits on the margins of the shores, and also by retiring from some parts, in consequence of having encroached on others. The coasts of the Mediterranean have both gained and lost, so that it is probable the one compensates the other. The port of Alexandria, on the coast of Egypt, grows every day shoaler ; and Damietta, the walls of which were washed by the sea in the

thirteenth century, is at present considerably in- land. These alterations, however, seem to be produced rather by the sand blown from the desert, than by matters thrown up by the sea ; and to compensate them Lake Menzaleh appears to have been formed, either by an irruption of the sea, or by a branch of the Nile, whose chan- nel has been neglected. Some of the ancients sup- posed that a great gulf once penetrated into Egypt as far as Thebes, by which the isle of Pharos was separated a day's navigation from the Terra Firma ; but the existence of this gulf is unsup- ported by any historical or natural proof, and. with the few trifling alterations wc have noticed, the coast of Egypt at this day answers to the earliest description by Herodotus.

On the coast of Syria the island of Tyre has been united to the continent, and on the west coast of Asia Minor the inhabitants of Miletus and Ephesus have several times been obliged to change the sites of their towns to follow the sea which receded from them. The valley through which the Meander now serpentizes was evi- dently once a gulf, its soil consisting of the de positions of the sea and river. On the west coast of Greece many islets have been joined to the main, while the celebrated peninsula of Leu- cadia has become an island. In the Adriatic the sea has encroached on the coasts of Dalmatia and Istria, and retired from those of Italy, so that the greater part of ancient Lombardy has been formed by the combined depositions of the sea and the Po. Ravenna, which formerly had an excellent port, and was surrounded by lakes and salt marshes, is now three miles from the sea, in the midst of gardens and meadows ; Aquileia was also formerly on the margin of the sea, and finally the lagoons of "enice are daily filling up.

From the Mediterranean coasts of France and Spain the sea has retired in several places and gained on none; thus much new land has been formed at the mouths of the Rhone ; and Aigues Mortes, which in the thirteenth century was a sea-port, is now five miles inland. INliquelon. and Psalmodi were islands in 815, though now two leagues from the sea, and the vineyards of Agde were covered by the sea only a centuˆ past. The coasts of Valencia and Catalonia have also considerably

gained from the sea, and the port of Barcelona is fast filling up. From this series of facts it would appear that the coasts of the Mediterranean have gained more than they have lost ; but it must be considered that, with the exception of Egj'pt, we are unacquainted with the relative ancient and modern state of the coast of Africa : and besides a number of cele- brated ports preserve the same depths as in the time of the ancients, such are Marseilles, Genoa, Syracuse, Navarin, &c.; hence there seems to be no sufficient reason to suppose a diminution of the waters of the Mediterranean.

The waters of the Atlantic by their depositions have formed the bases of the landes, or sandy downs that border the coast of France from Bayonne to Bordeaux, and by which several ancient bays have been filled up. The marshes of la Vendee have also been left by the sea. In the English Channel the bay on the coast of France, in which is Mount St. Michael, grow

shoaler, while near Dol the sea is again encroach- ing on the lands from which it had formerly re- tired. The sea has encroached on some of the coasts of England and retreated from others ; thus the Goodwin Sands are generally thought to have been formed by an irruption of the sea in 1100, while in later times several of the best harbours between the Thames and Beachy-head have been filled up. On the coast of Lincoln the sea seems to have alternately formed new lands and submerged them.

On the coast of Holland the most remarkable alterations and vicissitudes have been produced by the sea. In the earliest history of this coun- try it is described as composed of immense marshes, alternately inundated by the sea and rivers; the first threw up sand on the shores, and the latter deposited mud on their banks, and thus elevated spots were formed, round which human industry raised embankments, tliought capable of resisting the utmost fury of the ocean. The country, however, still remained intersected by lakes and rivers, which silently undermined these new formed lands, and the sea in high tides rushing up the rivers produced ter- rible inundations. Before 1250 the Zuyder Zee was a lake of middling size, which communicated with the British Sea by the river "lie ; in that year an irruption of the sea gave it its present form and extent. Until 1300 the gulf of the Dollartwas a rich plain; and, in 1421, aimited inundation of the sea and rivers formed the Bies- boch, by submergintr seventy-two

villages with 100,000 souls.

The coasts of llolstein and Sleswick have al- ternately lost and pained by the action of the sea. In 1240 the territory of North Friezeland had an extent of fifteen leagues east and west, and con- sisted of rich pastures and com lands. An ir- ruption of the sea destroyed this smiling ap- pearance, swallowing up a considerable por- tion of tlie territory, and, detaching the rest from the continent, formed the island of Nord- strand, which at the commencement of the fif- teenth century had still an extent of six to eight leagues, and was celebrated for its fertility and population. The sea still continuing to encroach on it, dikes were thrown up to arrest its progress, and the inhabitants, to the number of 8000, thought themselves in perfect safety. In 1643, however, the sea penetrated by more than forty breaches in the dikes, swept away 1000 habita- tions and 6000 persons, and of the island left but two fragments above water and several submerged banks ; even these small remains have been at- tacked by the merciless element, the dikes being considerably damaged in 1791 and 1793. On the other hand, the sea deposits on the shores of the mainland of these provinces a fat mud, which forms new lards, that by their great fertility in a few years repay the considerable expense of em- banking them. All the west and north coasts of Jutland appear to owe their formation to the sea, which by throwing up sand has made a con- nected coast of what was formerly probably a chain of islands. It is at least certain, that se- veral gulfs, which, according to the annals of the north, afforded retreats to the Scandinavian pi- rates, have been thus filled up. The alterations

produced by the action of the waters on the coasts of the Baltic since the memory of his- tory seem to compensate eacli other, and to be principally produced by currents.

On the eastern shores of the old continent we know that the sea retires from the east shore of the bay of Bengal and encroaches on the west, where it has washed away almost the whole of the ancient city of Mahabilipur, some of the ruins of which, called by the English the seven pago- das, are still to be seen between Madras and Sa- dras. The sea has also encroached on the Ma- labar coast, where a part of the old city of Calicut is now under water. The whole coasts of the lied Sea, according to Niehbur, indicate the retreat of the waters. On a great part of the coasts of Cochin-China and Tonquin are ob- served proofs of the recent retreat of the sea, while on some parts it has encroached, and obliged the inhabitants to remove their villages inland.

The changes operated on the coasts of the new continent are little known to us ; the new lands formed at the mouths of the Mississippi and Oronoka owe their origin to the alluvion of these rivers. On the western coast the sea is said to gain on the land, and captain \ ancouver observed appearances which indicated a consi- derable encroachment on the north-west coast.

We are now brought to the consideration of a question which has long divided the most cele- brated naturalists : ??? ‘ Aje the waters of the ocean diminishing?’ Celsius, a learned Swede, to- wards the middle of the last centurj-, revived the opinion held by some of the ancients, respecting the gradual desiccation of the ocean, and pub- lished a memoir in which he supported the di- minution of the waters from the first existence of our continents, and the continuance of that diminution, which, from observations made on the coasts of the Baltic, he estimated at fifty-four inches in every 100 years. This hypothesis was favored by many learned naturalists of the north, among whom Linnaeus stood foremost, and on it founded a theory of the earth ; but it at the same time met with great opposition, and even the states of Sweden took a part in the dispute, the clergy anathematising it as contrary to holy writ, and the citizens uniting with them, while the nobles and peasants more wisely remamed neutral.

Tlie argiiments in favor of tlie diminution are founded on the shells and other remains of sea animals met with on the highest mountains, the filling up of ancient ports and straits, and the anchors and remains of vessels found far from the sea, and at considerable heights above its present level.

The opposers reply that the two first of these facts ought to be referred to two very different periods ; for that the remains of sea animals be- long to an aiie anterior to the formation of the present continents, and consequently prior to tlie existence of the present ocean, while tlie changes produced by the sea on the coasts have generally been effected since the memoiy of history. Witji respect to the anchors and vessels they explain the fact by supposing them to be the monuments of inland navigations on lakes and rivers which no longer exist, or of the universal deluge, pre-

vious to wliich tliere existed other continents in- them by the temperature of the waters and their habited by men, and which

disappeared in the own species of food To commence with the

grand catastrophe that brought our present con- tinents out of the waters ; hence, say they, it is presumable that the antediluvians navigated over our present lands, and threw out their an- chors on our mountains, which were then shoals covered by the ocean. It is further observed by the opposer sof the diminution, that the experience

lowest class, or zoophites, they are in great mea- sure so little known, and so difficult to class, that we cannot say if each region exclusively possesses such or such a species. Tlie varieties of corals, called madrepores, millepores, tube- pores, &c., seem to exist in a state of vitality only in the tropical regions, and there we find

of twenty centuries, handed down to us by histo- them forming what may be justly named coral

rical record, proves that the ocean with respect to its total volume is perfectly stationary, the diminution by evaporation being exactly com- pensated by the supplies it receives from rains, rivers, &c. To this it may be replied, that the loss of the sea by evaporation, being compen- sated only by these supplies, whatever tends to decrease tliem must necessarily produce an ab- solute diminution of the ocean ; but, as the moun- tains decrease in height by the action of the

seas ; such are the South Pacific Ocean, the re- gion between the coast of Malabar and the island of Madagascar and the West Indian seas. The various species of mollusca also appear to be confined to their respective regions, those of the torrid zone not being met with beyond the low- est limits of the temperate. The abysses of the ocean contain monsters of this class, of which we have still but a very imperfect knowledge. Po- lypuses and hydras, several yards long, have

elements, the vapors they arrest, and the con- been observed in the English Channel and in the

densation of which produces rains and rivers, must also be diminished. But what then, it may be asked, becomes of the water thus withdrawn from the ocean ? Is it absorbed by volcanoes or by vegetables, or does it rise in vapors to other spheres ? These are questions which it is not given to science to resolve, nor are they the only insolvable ones on the subject of the immense ocean, the probable cradle of the universe, and of which it may possibly be also the grave. A variety oi plants are nourished by the ocean

strait of Messina ; nor is it unlikely that the fa- mous sea snake of the

Norwegian seas is an im- mense animal of the same class. There is also reason to suppose that the depths of the sea are inhabited by testaceous molluscas, whicli are never seen on the shores ; such appear to be the comes d'ammon and other species found in a petrified state in the bowels of the earth, and of which none have been hitherto met with on the shores, or fished up from the bottom of the sea. The want of industry in fishes renders it pro-

to which are given the general denomination of bable also that each region has its peculiar spe-

fuc-i, and which are vulgarly known by the names of sea and rock weeds. Some species adhere to the rocks close to the bottom, while others rise from these rocks to the surface, over which they spread for considerable spaces ; such IS the fucus giganteus observed by captain Cook in the Great Southern Ocean, near Terra del Fuego and Kerguelen's Land, which rising from rocky bottom, twenty-four fathoms deep.

cies, which never quit it : thus the various species of the cod (gadus), the herring, and the mackarel, are only found in the northern seas ; while the dolphins, albicores, bonetas, &c., are confined to the tropics, or a little beyond them, where they wage an unmerciful war against the flying fish, which is also confined to the torrid region. Cetaceous and oceanic amphibious ani- mals being under the necessity of frequently

spreads over the sea in such a manner that its respiring the atmospheric air, it is probable that

vvhole length is estimated at sixty fathoms, thotigh the thickness is not greater than that of a man's thumb. In the North Atlantic is a space extending between the latitudes of 20►► and 40►►, and between the longitudes of 25►► and 40►► W., which is at all seasons covered wdth a species of weed (fucus natans) of a beautiftd green color, whence the early Dutch navigators gave to this space of the ocean the name of Rroos Zee, Sea of Duckweed, and the Portuguese that of Mer de Sargafo. It was formerly generally believed that this weed was torn from the Florida Reefs, and conveyed by the gulf stream to where it is

their various species are confined to certain cli- mates ; thus the black whale of the Northern Frozen Ocean seldom appears in the temperate zone ; while the spermaceti whale, which affords ambergris, is scarcely ever seen out of the tropi- cal seas. The seals of the southern

seas also differ from those of the north ; and the great sea lion of Kamtschatka from that of Greenland. Each grand maritime division of the globe has also its particular species of birds ; the alba- tross and several of the petrel tribe, the penguin, &c., are only met with in the temperate or frozen zones, while the man of war and tropic

met with, and hence it received the name of gulf bird never quit the equatorial regions

weed : an accurate examination has however shown this idea to be unfounded, and leads to the inference that it propagates in the sea, and vegetates floating. Navigators have been led from isolated facts to consider the meeting patches of rock-weed at sea as a sign of the vici- nity of land ; this however is by no means a certain indication, such weeds being frequently met with at some hundreds of leag-ues from any land, and out of soundings.

It seems probable that the different regions of the ocean have their peculiar animals confined to

A few words as to the dominion of the ocean may be excused from us as Englishmen.

England has long claimed the empire of the Channel, and even of all the three seas, encom- passing the British isles. It is in consequence of this claim that children born in these seas are declared naiaral Englishmen, as much as if born on English ground. The justice of this preten- sion is strenuously argued between Grotius and Selden.

The open sea in its own nature cannot be exclusively possessed, as no one is able to settle

there so as to hinder others from passing. But a nation powerful at sea may forbid others to na- vigate it and to fish in it, declaring that it appro- priates its dominions to itself, and that it will destroy the vessels that shall dare to appear in it without its permission. 'attel investigates its right to do this. It is evident, in the first place, that nobody has a right to appropriate to himself the use of the open sea ; for he who navigates or fishes in it does no injury to any one, and the sea, in both these respects, is sufficient for all mankind. Nor does

Nature give to any man a right of appropriating to himself things that may be innocently used, and that are inexhaustible, and sufficient for all ; since, every one being able to find in their state of communion what was sufficient to supply their wants, to undertake to render themselves sole masters of them, and to exclude all others, would be to deprive them, without reason, of the benefits of nature. Al- though the law of nature approves the rights of dominion and property, which put an end to the primitive manner of living in common, this rea- son could not take place v'ith regard to things in themselves inexhaustible, which cannot therefore be justly appropriated. If the free and common use of a thing of this nature were prejudicial or dangerous to a nation, the care of its own safety would authorise it to subject, if possible, that thing to its dominion, in order to permit the use of it with sucli precautions as prudence should direct. But this is not the case with the open sea, in which people may sail and fish without the least prejudice to any person, and without putting any other people in danger. No nation then has a right to lay claim to the open sea, or to appropriate the use of it to itself to the exclusion of others.

The kings of Portugal have formerly arrogated to themselves the empire of the seas of Guinea and the East Indies ; but the other maritime powers gave themselves little trouble about such a pretension. The right of navigating and fish- ing in the open sea being then a right common to all men, the nation which attempts to exclude another from that advantage does it an injury, and gives a sufficient cause for war : nature au- thorising a nation to repel an injury; that is, to make use of force against any one who would deprive it of its rights. Besides, a nation which, without a title, would arrogate to itself an exclu- sive right to the sea, and support it by force, does an injury to all nations whose common right it violates ; and all are at liberty to unite against it, in order to repress such an attempt.

However, observe these casuists, each has the liberty of renouncing its rights, and a nation may acquire exclusive rights of navigation and fishing by treaties, in which other nations renounced in its favor the right they derive from nature. These are obliged to observe their treaties, and the na- tion they have favored has a right to maintain by force the possession of its advantages. Tlius the house of Austria has renounced, in favor of England and Holland, the right of sending ves- sels from the Netherlands to the East Indies. Many examples of like treaties may be found in Grotius, De Jure Belli et Pacis, lib. ii. cap. 3.

OCEANIDES, or Oceanitides, in mytho- logy, sea nymphs, daughters of Oceanus and Vol. XVI.

the goddess Tethys. Tliey were 3000 according to ApoUodorus, who mentions the names of seven of ˆthem : Asia, Styx, Electra, Doris, Eurynome, Amphitrite, and Metis. Ilesiod speaks of the eldest of them, of whom he reckons forty-one. Hyginus mentions sixteen, whose names are almost all different from those of ApoUodorus and Hesiod. The Oceanides, like the rest of the inferior deities, were honored with libations and sacrifices. Prayers were offered to them, and they were intreated to protect sailors from storms and dangerous tempests. The Argonauts, before they proceeded to their expedition, made an offering of flour, honey, and oil, on the sea shore, to all the deities of the sea; sacrificed bulls to them, and intreated their protection. When the sacri- fice was made on the sea shore, the blood of the victim was received in a vessel ; but, when it was in open sea, they permitted the blood to run down into the waters. When the sea was calm they generally afforded a lamb or a young pig ; but if it was agitated by the winds, and rough, a black bull was deemed the most acceptable victim.

OCEANUS, in pagan mythology, the son of Coelus and Terra, the husband of Tethys, and the father of the Oceanides. The ancients called him the Father of all things, imagining that he was produced by Humidity, which, according to Thales,was the first principle from which every thing was produced. Homer represents Juno visiting him at the remotest limits of the earth, and acknowledging him and Tethys as the parents of the gods. He was represented with a bull's head, as an emblem of the rage and bellowing of the ocean when agitated by a storm. Accord- ing to Homer, he was the father of all the gods, and on that account he received frequent visits from them. He is often, indeed almost always, represented as an old man with a long flowing beard, sitting upon the waves of the sea. He often holds a pike in his hand, while ships under sail appear at a distance, or a sea monster stands near him. Oceanus presided over every part of the sea, and even the rivers were subjected to his power. The ancients were superstitious in their worship of him, and revered with gTeat solem- nity a deity to whose care they entrusted them- selves when going on any voyage.

OCEL'LATEU, adj. Lat. ocellatus. Resem- bling the eye.

The white butterfly lays its offspring on cabbage leaves; a very beautiful reddish ocellated one.

Derltam's Physico-TJieology .

OCEIXUS LucANUs, or the Lucaman, an ancient Pythagorean philosopher, who lived be- fore Plato His work Iltpi rs Uavroc, or the

Universe, is the only piece of his which is come down entire to us ; and was written originally in the Doric dialect, but was translated by another person into the Attic ; William Christian, and after him Louis Nogarola, translated this work into Latin ; and there are several editions of it both in Greek and Latin. A fragment is also extant of his work on Laws, which is praised bv Plato.

OCHINUS (Bernardin), a celebrated Italian bom at Seine in 1487, and at first a Cordelier. He afterwards attended to the study of physic,

and acquired the esteem of cardinal Julius de Medicis, afterwards pope Clement 'II. But once more changing his mind he resumed las monk's habit, and, aiming at still higher perfec- tion, he, in 1534, joined the reformed sect of the Capuchins. He practised with the most rigorous exactness all the rules of the order; which he contributed so much to improve, that some have called him the founder of it. He was made vicar-general, and became highly eminent for his pulpit eloquence. Pope Paul HI., on ac- count of his extraordinary merit, made him his father confessor and preacher. He was thus the favorite both of pope and people ; when falling in with one John V'alde, a Spaniard, who had imbibed Luther's doctrine, he became a prose- lyte. He was then at Naples, and began to preach in favor of Protestantism; on which he was summoned to appear at Rome ; and in his way thither met at Florence with Peter Martyr, who persuaded him not to put himself into the pope's power : and they both agreed to withdraw to some place of safety. Ochinus wˆent first to Ferrara, where he disguised himself as a soldier ; and, proceeding thence to Geneva, arrived there in 1542, and married a woman of Lucca. He then went to Augsburg, where he published some sermons. In 1547 he was invited, together with J eter INIartyr, into England, by archbishop Cran- mer, to assist in carrying on the Reformation. They arrived in December at Lambeth, were kindly received by Cranmer, and were made prebendaries of Canterbury. Ochinus labored heartily in the Reformation; and his dialogue cpon the usurped primacy of the bishop of Rome was transLated into Latin by Ponet bishop of Winchester, and published in 1549. But upon the death of Edward VI. being forced to leave England, they both retired to S'trasburg in 155.ˆ. From this city

Ochinus went to Basil, and was invited thence in 1555 to Zurich, to be minister of an Italian church, which consisted of some refugees from Locarno. Ochinus subscribed the articles of faith agreed upon by the church of Zurich, and met in that city with BuUinger, who proved a very good friend to him. He governed this Italian church till 1563, when he was ba- nished thence by the magistrates for publishing some dialogues, wherein he defended polygamy. From Zurich he went to Basil ; but, not being suffered to stay there, he fled in great distress into Moravia, where he fell in with the Socinians, and joined them. Stanislaus Lubienitski, the great patron of this sect, gives the following account of his last days in his Hist. Reformat. Polon. * Ochinus,' says he, ' retired into Moravia and Poland, and even there he was not out of the teach of Calvin's letters.' He returned into Moravia after king Sigismund's edict ; who, in 1564, banished all Tritheists, Atheists, &:c. During his travels, he fell sick of the plague at Pincksow, and received there all possible kind- ness from one of the brethren, named Phillippo- vius. His daughter and two sons, who were with him, died of the plague ; but he had buried his wife before he left Zurich. He continued his journey to Moravia, and within three weeks died at Slakow in 1564, aged seventy-seven. His writings are numerous.

OCIINA, in botany, a genus of the monogynJ►► order and polyandria class of plants : cor. pen- tapetalous : cai. pentaphyllous : berries mono- spermous, and affixed to a large roundish recep- tacle. Species two, both natives of the East Indies.

O'CHRE, n. s. \ Fr. acre, ochre ; Lat. oc/ira ;

O'cHKOUs, adj. J Or. cuxpa- A coarse kind of

O'cHUEY. dearth: ochreous and ochrey

mean consisting or partaking of ochre.

This is conveyed about by the water ; as we find in earthy, ochrey, and other loose matter.

]]'oodward.

In the interstices of l!he flakes is a grey, chalkvj or nchreoits matter. Id. on Fossils.

The earths distinguished by the name of ochre. are those which have rougli or naturally dusty sur- faces, are but slightly coherent in their texture, and are composed of fine and soft argillaceous particles, and are readily difi'usible in water. They are of va- rious colours : such as

red, yellow, blue, green, black. The yellow sort are called ochres of iron, and the blue ochres of copper. Hitl.

This family is commonly accompanied by native copper, malachite, and brown iron ochre. Kirwan.

Ochre, in mineralogy and the arts, a yellow earthy powder, generally consisting of some sub- salt, or oxide of iron, united with argil or lime. The iron is generally derived from the decompo- sition of supersulphuret of iron, which is first converted by exposure to the atmosphere and to moisture into sulphuret of iron and then into suboxysulphate. This latter salt, being insoluble, forms a yellow deposit, which penetrates the earth, and constitutes the most common kind of ochre.

Artificial ohcres may be prepared of equal, and perhaps of superior quality to those of na- ture. The sulphate of iron in the majuifacture of tills article b►►;omes oxjˆulphate by long ex- posure to the air. it remains in this situation tdl it gradually resolves itself into the super-oxysulphate and the sub oxysulphate. The latter falls to the bottom of the vessel in the fo m of a yellow powder, which, when washed and dried, constitutes a beautiful color. If carbonate of potash is added to the super-oxysulphate, the carbonate of iron will be formed, which will precipitate in the state of a yellow powder. This powder, when washed, and the water evaporated, constitutes an ochre which is a little deeper in color than the last. The heat of boiling water drives oft” the carbonic acid, leaving the oxide of a fine brown color.

Ochre, Red, in mineralogy, is arranged by Cleveland as a species of earthy oxide of iron. Its color is described as blood red,sometimes brownish red. It is usually friable, and easily reduced to pow- der. Fracture dull and earthy. Strongly soil- ing the fingers, but not unctuous. Specific gra- vity about 3-00. .‘seldom in large masses, usually appearing on the surface of ores of iron, or dissemi- nated. It never effervesces with acids, and is often a very pure oxide. By mixture with argillaceous earths, it gradually passes into reddle, bole, &c. It is often found with specular and sparry iron ; uut in its purest state seldom occurs in large quantities.

When purified by agitation in water it con

sUtutes an important paint lor many purposes. It may be made to assume various tints of red, by changing its state of oxidation by the action of a mild heat. To this variety belongs the pigment, called Indian red, brought from the Isle of Ormus, in the Persian Gulf.

OCHRIDA, a town of Greece, in Albania, situated north-east of the lake of Ochrida, and on the declivity of Mount Maniana Petrin. In the neighbourhood are mines of silver and sul- phur which principally employ the inhabitants, who amount to about 6000. It is 100 miles north of Joanniva.

OCniUJMA, in botany, a genus of the pen- tandria order, and monadelphia class of plants ; natural order thirty-seventh, columniferse : cor. consists of six petals, three external and three internal ; antherae unite, and form a spiral pillar round the style: caps, long, and has tive locula- ments, which contain a number of black round SEEDS. Of this there is only one species, viz. ###

O. lagopus, the down tree or cork wood. This tree is frequent in Jamaica, is of speedy growth, and rises to about twenty-five or thirty feet. The flowers are large and yellow. The capsules are about five inches long, rounded, and covered with a thin skin ; which when dry falls off in five longitudinal segments, and leaves the fruit greatly resembling a hare's foot. The down is short, soft, and silky: it is used sometimes to stuff beds and pillows : but, like other vegetable downs, is apt to get into clots. An insipid clear gum exudes from the tree when wounded. The bark is tough, and its fibres are in a reticulated form : it might be made into ropes. The dried wood is so very light and buoyant as to be used by the fisher- men in Jamaica for their nets instead of pieces of cork.

OCHUS Artaxerxes, a king of Persia, cruel and avaricious ; who, to strengthen himself on his throne, murdered all his brothers and sisters. His subjects revolted ; but he reduced them, and added Egypt to his dominions. Bagoas, his favorite eunuch, poisoned him for the insults he had offered to Apis the god of the Egyptians ; gave his flesh to be eaten by cats, and made han- dles for knives with his bones.

OCKER, a river of Lower Saxony, which rises in the Hartz Mountains, eight miles south- east of Goslar, passes Wolfenbutile, Brunswick, and Aller.

OCKHAM, Occam, or Occham (William), a celebrated scholastic divine in the fourteenth century, of the order of Cordeliers. He was a native of England, and disciple to the famous Duns Scotus. He was head of

the Nominalists ; and acquired so much celebrity as to be deno- minated the invincible doctor. At the request of Michael de Cesena, general of his order, he became a party man with Lewis of Raviere, who was an avowed enemy of the church of Rome ; and he wrote vigorously against pope John XXII. and his successors. Trithemius informs us that he used to say to Lewis, ‘ My lord, lei your sword defend me, and my pen shall be always ready to support you.’ He treated Charles and Clement in a book he wrote against them with gross scurrility- The consequence was an accusation against him and Cesena. They were

charged with maintaining that neither Christ nor his apostles had any possessions at all. This doctrine gave rise to that pleasant question, called the bread of the Cordeliers ; whether the dominion of things consumed in the use, such as bread and wine, belonged to them, or only the simple use of them, w ithout the dominion ? Their rule not permitting them to have any thing as property, pope Nicholas III., who had been of their order, devised a method to enrich them without breaking their rule. He made an ordi- nance that they should have only the usufruct of the estates, and that the soil and fund of all such donations should belong to the Roman church. But on this account, pope Nicholas’s bull was revoked by John XXII. who con- demned the use without the dominion, by his Extravaganta ad Conditorem. He also con- demned, by another Extravaganta cum inter, the doctrine about the possession of estates by Christ and his apostles. Ockham and Cesena were also excommunicated, because they had departed from Avignon without the pope’s li- cence, and had written against him. Ockham, however, was absolved before he died, which was about 1347. Several pieces of his, written with considerable wit and subtlety, are extant. The reformed church sometimes makes use of his reasonings against the church of Rome. Mel- chior Goldast printed, in his Treatise on Mo- narchy, 413 questions of Ockham. His works are mentioned by many authors.

OCKLEY (Simon), a learned orientalist, born at Exeter in 1678, and educated at Queen’s College, Cambridge, where lie distinguished himself by his intense application to literature. At the usual time he took his degrees of A.M. and B. D., but, marrying very young, was pre- cluded from a fellowship in his college. In 1705 he was presented to the vicarage of Swavesey in Cambridgeshire; and in 1711 he was chosen Arabic professor of the university. He was per- fect master of the Arabic and other oriental tongues; the learned Reland said of him, \ ir si quis alius, harum literarum peritus. After- wards he had the misfortune to be confined in Cambridge castle for debt. The above prefer- ments, notwithstanding, he enjoyed till his death, August 9th,

1720. He wrote, 1. Introductioad Linguas Orientales ; 2. The history of the pre- sent Jews throughout the world ; translated from the Italian of Leo Modena, a Venetian rabbi ; 3. Tlie Improvements of Human Reason, exhi- bited in the Life of Hai Ebn Yokdhan, trans- lated from the Arabic ; 4. The history of the Saracens, collected from the most authentic Arabic authors, in 2 vols, 8vo. He was also well skilled in the French, Spanish, and Italian lan- guages.

OCNUS, in fabulous history, the son of the prophetess Manto, by the river Tiber, or rather by Tiberinus king of Alba. He assisted /Eneas against Turnus, and afterwards built Mantua. Virg. 7F,n. x. 198.

OCRISIA, in fabulous Roman history, the wife of Cornicvdus, one of the attendants of Ta- naquil, the wife of Tarquinius I. As she was throwing into the flames for offerings some of the meats that were served on the table of Tar-

OCTAGON, n. s.-\ Gree Octag'onal, adj. fyiovia, Octang'ular, ˆeight-ai Octahe'dral. ' ing eiel

A figure consisting of eight sides and angles, when all the sides and angles are equal, is called a regular octagon, which may be inscribed in a circle.

OCTAGON, n. s.-ˆ Greek oktw eight and an angle. An angled figure; hav ig eight angles : octahe- dral is, having eight sides.

A figure consisting of eight sides and angles, when all the sides and angles are equal, is called a regular octagon, which may be inscribed in a circle.

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A figure consisting of eight sides and angles, when all the sides and angles are equal, is called a regular octagon, which may be inscribed in a circle.

Harris.

OCTANDRIA, oicrw eight, and ovjjp, a man, the eighth class in Linnaeus's sexual system ; con- sisting of plants with hermaphrodite flowers, which are furnished with eight stamina, or male organs of generation. See Botany.

OCTANT, adj. ˆ In astrology, is applied

Oc'tile. S to the aspect of a planet dis-

tant only one-eighth of a circle, or 43►► from another.

OCTAPLA, in sacred literature, denotes a po- lyglot bible, consisting of eight columns, and as many different versions of the sacred text ; viz. the original Hebrew both in Hebrew and Greek characters, Greek versions, &c.

OCTAVE, n. s. Fr. octave ; Lat. octaviis. The eighth day after some particular festival ; eight days after such a festival taken collec- tively : in music, an interval of eight sounds.

But in this organ the hautboy stop seems to be an octave higher Addison.

OCTAVIA, a Roman lady, distinguished for her virtues, her beauty, and her accomplish- ments, the sister of Augustus, and the wife of Marc Antony. She was first married to Clau- dius Marcellus, by whom she had three children ; and after his death, which happened a short time after the war with Persia, became the wife of Antony. She was at this time universally respected and esteemed, and much beloved by her brother ; and, although her husband had be- fore been captivated by the allurements of Cleo- patra, the merits of Octavia made a great im- pression on him. He passed two years and a half with her, during which time she bore him two daughters. She soon after accompanied him into Greece, and restored concord between her husband and brother. She then returned to Rome, while Antony went into the east ; and then it was, says Plutarch, that the worst of all diseases, love, and the love of Cleopatra, whicli had lain so long dormant in his breast, and seemed to have given place to the temperate du- ties of life, upon his approach to Syria, ga- thered strength, and broke out into a flame : he had another interview with her, which rivetted

his fetters, and sealed his fate. Octavia was soon apprised of his infidelity, but resolved for that reason to omit no duty that became her situation as his wife : she collected considerable supplies for the

war in which he was engaged, and sailed with them to Athens. Here she received the mortifying and distressing orders to advance no farther. Despairing now of a renewal of his affection, she returned to Rome, where Augustus, extremely enraged, wished to persuade her to re- tire from the world. But she refused to quit her husband's house, and devoted herself to the edu- cation of her children, bestowing no less care on those of Antony by Fulvia, his first wife, than she did upon her own. She readily and libe- rally entertained all her husband's friends who were sent to Rome on business, and used her best endeavours to promote his interest. His attachment, however, to Cleopatra rendered him insensible to her kindness; he solemnly divorced her and married Cleopatra. This affront was highly resented by Augustus, who resolved to re-' venge her cause by arms, which he ultimately did. See Antonius. Marcellus, her son by her first husband, was married to a niece of Au- gustus, and was publicly intended as a successor to his uncle ; but his sudden death plunged all his family into the greatest grief. Virgil, upon this occasion, paid, in his ihneid, a melancholy tribute to the memory of a young man whom Rome regarded as her future father, lie was de- sired to recite his composition in the presence of Augustus and of his sister, but Octavia, when he repeated Tu Marcellus eris, swooned away. This pathetic encomium upon the virtues of young Marcellus was liberally rewarded by Octavia, and Virgil received 10,000 sesterces for every one of the verses. Octavia had two daughters by Antony, Antonia Major and Antonia Minor. The death of Marcellus continually preyed upon the mind of Octavia, who died of melancholy about ten years before the Christian era.

Octavia, daughter of the emjieror Claudius by Messalina. She was betrothed to Silanus, but by the intrigues of Agrippina she was mar- ried to the emperor Nero in the sixteenth year of her age. She was soon after divorced under pre- tence of barrenness ; and Nero married Poppaea, who procured her banishment into Campania. She was afterwards recalled by the people ; but Poppsea, determined on her ruin, caused her again to be banished to an island, where she was ordered to kill herself by opening her veins. Her head was then cut off and carried to Pop- paea.

OCTAVIANUS (Caius Julius Csesar Octavi- anus Augustus), originally called Caius Octavius, was the son of a senator of the same name, who had been preetor in Macedon ; and of Accia, daughter of Julia, the son of Julius Csesar. The Octavian family had been originally settled in Velitrse, in the country of the Volsci, and that branch of it from which Augustus sprung had arrived at opulence in the equestrian order. Oc- tavianus was born during the consulate of Cicero, A. U. C. 689, and,

according to the most ap- proved chronologists, B. C. 62. At the oarly age of four years he lost his father, and his mo- ther Accia contracted a second marriage with

OCTAVIANUS.

H7

Lucius Marcus Philippus. By the care of his mother and father-in-law he received a very libe- ral education in Rome, and such was his proficiency in the art of public speaking that, Ijefore he was twelve years of age, he pronounced the funeral eulogy over his grandmother Julia. His early maturity of judgment, perhaps partly owing to the necessity occasioned by his want of a father, and his discreet behaviour, recommended him to the notice of his great uncle Julius Ctesar, who declared his design of adopting him should he have no children of his own, and who would have taken him into Spain to learn the military art under himself in the war with Pompey's sons, but his mother detained him on account of his weak, health. Whilst Octavianus was at Apollo- nia, improving his powers of eloquence under the famous Apollodorus of Pergamus, he received the news of his uncle's tragical death, and of his own adoption. Although he was dissuaded by his father and mother, and other timid friends, from declaring eitlier his pretensions or his resent- ment, he determined, though only eighteen, to pass over into Italy without delay, and to judge on the spot what measures it would be proper for him to adopt. Accordingly he landed at Lupia, a small port between Brundusium and Ilydruntum, and, upon his arrival, the Brundusian garrison, ###which was very numerous, and which consisted of veteran soldiers, went out to meet him, and introduced him in a kind of triumph into the city. Octavianus thanked them for their attachment, and, having offered a sacrifice to the gods, de- clared himself Caesar's heir, and assumed the title of Caius Julius Ceesar Octavianus. Having supplied himself with money, arms, and provi- sions, he pursued his route through Campania ; and after paying a visit to Cicero at his villa, in the neighbourhood of Cumse, arrived at Rome, ###where the party of Antony and Lepidus, under a pretence of avenging Caesar's death, had ob- tained universal sway. As Octavianus approached the capital he was met by most of the magis- trates, the officers of the army, and the people ; but Antony declined showing him any token of respect. As soon as his adoption was publicly ratified in the forum, and duly registered, he ###waited upon Antony ; and requested to have de- livered to him, as Caesar's chief heir, the money which he had conveyed from Caesar's house to his own, that he might be enabled to discharge his legacies. Antony's behaviour, at this inter- view, was haughty and

imperious ; his reply with regard to the money demanded, and of which part had been appropriated to his ambitious pur- poses, was unsatisfactory ; and his address closed
॰ with reminding Octavianus, in a style of autho- rity and menace, that the favorites of the people are, generally speaking, short-lived, and that popular affection is more inconstant than the waves of the ocean. Octavianus retired disgust- ed and offended ; and, being aware that the con- sul withheld his adopted father's money and estate from him in order to disable him from purchasing the favor of the people, he sold his own patrimony, and the estates of his mother and father-in-law, and with the produce of these sales paid part of Caesar's legacies ; and by this act of generosity he so charmed the populace

that they unanimously espoused his interest, and broke out into bitter invectives against Antony for witholding Caesar's estate.

The army near Rome, who had long wished to see the conspirators punished, began to turn from Antony to his rival, whom they saw more sincerely bent on gratifying their desires. Antony having procured also the government of Hither Gaul from the people, two of the legions that he had brought home from his former government of Macedonia went over to Octavianus. This produced, as usual, interviews, complaints, re- criminations, and pretended reconciliations, which only widened the difference ; so that at length both sides prepared for war. Thus the state was divided into three distinct factions ; that of Octavianus, who aimed at procuring Caesar's inheritance and avenging his death ; that of Antony, whose sole view was to obtain abso- lute power ; and that of the conspirators, who endeavoured to restore the republic. New oc- casions of variance continually occurred, and at length Octavianus was charged with a design of assassinating his rival, and this furnished Antony with a pretext for drawing into Italy a consider- able army. Octavianus, alarmed by this hostile preparation, hastened into Campania; and having collected 10,000 veterans, who had served under Caesar, marched immediately towards Rome. But as he had no military title, nor any magis- tracy which gave hrm a right to command forces, he thought it ad-visable to halt at the temple of Mars, within two miles of the city, till he ob- tained the consent of the people for his entry, which was soon granted him. Antony was at this time at Brundusium, and, as he was hourly expected with a considerable force, it was appre- hended that the flames of a civil war would be instantly kindled within the walls of the city. Parties were formed for one and the other of these formidable rivals ; and, whilst many of the senators were deliberating which side to take, Cicero, probably with a view of procuring for himself a bountiful master, declared for Octavi- anus. At

his motion Antony, who had actually inraded the province of Cisalpine Gaul, and laid siege to Mutina, was declared an enemy to his country. On this the senate sent Octavia- nus, with the army he had raised, to attack him. The consuls Hirtius and Pansa joined all their forces ; and, thus combined, they marched at the head of a numerous army against Antony, into Cisalpine Gaul. After one or two ineffectual conflicts both armies came to a general engage- ment ; in which Antony was defeated, and com- pelled to fly to Lepidus, who commanded a body of forces in Further Gaul. The two consuls were mortally wounded ; but Pansa, previous to his death, called (Jctavianus to his bed-side, and advised him to join with Antony, telling him that the senate only desired to depress both by opposing them to each other. The advice of the dying consul siij^k deep into his mind ; so that from that time he only sought a pretext to desert their party. Tlieir giving the command of a part of his army to Decimus Brutus, and their deny- ing him a triumph soon after, served to alienate his mind entirely from the senate, and made him resolve to join Antony and Lepidus. He was

willing, however, to try the senate thoroughly, before he came to an open rupture ; wherefore he sent to demand the consulship, which was re- fused. He then privately sent to sound the in- clinations of Antony and Lepidus concerning a junction of forces, and found them as eager to assist as the senate was to oppose him. Antony was, in fact, the general of both armies, and Le- pidus was only nominally so, his soldiers re- fusing to obey him upon the approach of the for- mer. Wherefore, upon being assured of the assistance of Octavianus upon their arrival in Italy, they soon crossed the Alps with an army of seventeen legions, breathing revenge against all who had opposed their designs. The senate now began, too late, to perceive their error in disobliging Octavianus, and gave him the con- sulship which they had so lately refused ; and to prevent his joining with Antony flattered him with new honors, giving him a power superior to all law. The first use Octavianus made of his new authority was to procure a law for the con- demnation of Brutus and Cassius ; after which he joined his forces with those of Antony and Lepidus.

As they advanced, he went out to meet them ; and their meeting took place at a small island formed by the river Rhenus, now Reno, which falls into the Po, after having watered the territory of Bolonia, or Bologna. Here was planned the famous system of power called the

triumvirate. Having cemented and disgraced their new connexion by the proscription, which was to cut off all their enemies public and private, and to fill their treasury by confiscations, and by the mutual sacrifice of some of their nearest friends and relations, among whom was Cicero, they proceeded to Rome, and filled the city with blood and rapine. In fulfilment of one article of the treaty, settled on this occasion, Oc- tavianus and Antony prepared for an expedition against Marcus Brutus and Cassius, who had made themselves masters of most of the pro- vinces in the east. Accordingly they passed over into Macedon-, and met the republican leaders on the plains of Philippi, where the con- test was decided by two battles, the second of which terminated with the death of Brutus. On this occasion Octavianus, who was actuated by an implacable spirit of revenge against the authors of Caesar's death, is chargeable with a de- gree of cruelty which fixed an indelible stain 'ipon his reputation.

AlS soon as the republican party was entirely destroyed, Antony went over into Asia, while Octavianus, who undertook to lead back the veteran troops and settle them in Italy, was assi- duously employed in providing for their subsist- ence. He had promised them lands at home as a recompense for their past services ; but they could not receive new grants without turning out the former inhabitants, which caused great discon- tent and disaffection. He was involved soon after in an actual civil war through the violence of Ful- via, and Antony's brother Lucius. This, however, was soon terminated by the activity of his gene- rals, who obliged Lucius to capitulate with his forces in Perusia. This unhappy town, which /lad shown an inviolable attachment to Lucius,

was punished with inhuman barbarity by Octa- vianus, who gave it up to plunder, and con- demned to death all its senate, in number 300. To the supplications and remonstrances of some of them he answered with charajteristic insensi- bility, ' You must die.' Antony, who came to support his party in this short war, found it ter- minated; and a new agreement was made be- tween him and Octavianus, in which they shared between them the Roman empire, leaving to Le- pidus the African provinces. Octavianus, in thiˆ partition, had Rome and the west ; and his sister Octavia was married to Antony to strengthen their union. The triumvirs had then a war to maintain with Sextus Pompey, who, being master by sea, reduced the capital to great distress for want of corn. An accommodation with him, therefore, became necessary, which took place under circumstances of apparent friendship, but such as could not be durable. In the interval of domestic peace Octavianus marched into Gaul, where he easily reduced some revolted nations. W hen he came back to Rome he

found a new war with Pompey inevitable,and began preparing for it. In the mean time he was captivated by the charms, personal and mental, of the celebrated Livia, then the wife of Claudius Tiberius Nero. He himself was married to Scribonia, the sister of Scribonius Libo, whom he had taken, chiefly from political motives, after his repudiation of Clodia. But though she had borne him a daughter, and Livia was advanced in pregnancy, so little was his de- licacy and so imperious his tyranny, that he divorced Scribonia; and, causing Livia to be divorced from her husband, immediately married her. Within three months she was delivered of a son named Tiberius, afterwards emperor.

Octavianus now resolved to rid himself of Sextus Pompeius. He was master of two fleets; one of which he had caused to be built at Ra- venna, and another which Menodorus, who re- volted from Pompey, brought to his aid. His first attempt was to invade Sicily ; but being overpowered in his passage by Pompey, and his fleet afterwards shattered in a storm, he was obliged to defer his design till the next year. During this interval he was reinforced by a fleet of 120 ships, given him by Antony, with which he resolved once more to invade Sicily. He w as again disabled and shattered by a storm : which so raised the vanity of Pompey that he began to style himself the son of Neptune. However, Octavianus having refitted his navy and recruited his forces, he gave the command of both to Agrippa, who proved himself worthy of the trust. He began his operations by a vic- tory over Pompey; and, though he was shortly after worsted, he soon after gave his adversary a complete and final overthrow. Pompey re- solved to fly to Antony, from whom he expected refuge, as he had formerly obliged that triumvir by protecting his mother. However, he tried once more, at the head of a small body of men, to make himself independent, and surprised Antony's officers, who had been sent to accept of his submissions. But he was at last aban- doned by his soldiers, and delivered up to Titus, Antony's lieutenant, w ho caused him to be slain The death of this general removed one very

powerful obstacle to the ambition of Octavianus, and he resolved to get rid of the rest of his as- sociates. An offence was soon committed by Lepidus, that served as a pretext for depriving liim of his share in the triumvirate. Being at the head of twenty-two legions, with a strong body of cavalry, he supposed that his power was more than equivalent to the popularity of Octavianus. He therefore resolved to add Sicily to

his province ; pretending a right, as having first invaded it. His colleague having previously expostulated without success, and knowing that his secret intrigues and largesses had entirely attached the army to himself, went alone to the camp of Lepidus, deprived him of all his authority, and banished him to C'ir- caeum.

The Roman world was now governed by a duumvirate ; a partnership of authority which, it was evident, could not last long. \ hile An- tony, advancing to old age, acted the part of a heedless dissipated youth, enslaved to love and pleasure, the youthful Octavianus was the cool and prudent statesman, making his advantage of every false step of his colleague, and playing the game of ambition with tlic skill of a master. He took pains to ingratiate himself with the people of Rome, whose gratitude he in some measure deserved by the restoration of peace and plenty to all Italy. His prudent and gene- rous action of throwing into the fire unopened a number of letters from senators, found among Pompey's papers, seemed an earnest of a milder spirit of government. He likewise solemnly declared his intention of resigning his uncon- stitutional power as soon as Antony should re- turn from his Parthian war. In the mean time he accepted of the important dignity of per- petual tribune of the people, which rendered his person sacred and inviolable.

He now only waited a pretext to declare open war against Antony, and this was soon afforded him by his treatment of his wife Octavia, the sister of Octavianus. But he deferred it for a while, being then employed in quelling an in- surrection of the lUyrians. The following year was taken up in preparations against An- tony. Antony ordered Canidius with his army to march into Europe ; while he and Cleopatra followed to Samos, to prepare for carr}'ing on the war with vigor. The kings who attended ××× him endeavoured to gain his favor more by their entertainments than their warlike preparations ; the provinces strove rather to please him by sacrificing to his divinity, than by their alacrity in his defence. In short, his best friends now began to forsake him. His delay at Samos, and afterwards at Athens, where he carried Cleopatra to receive new honors, was extremely favorable to the arms of Octavianus ; who was at first scarcely in a disposition to oppose him, had he gone into Italy ; but he soon found time to put himself in a condition for carrying on the war, and shortly after declared it against him in form. All Antony's followers were invited over to join him, with great promises of rewards. Their armies were suitable to the empire they con- tended for. Tlie one was followed by all the forces of the east ; the other by all the strength

of the west. Antony's forces composed a body of 100,000 foot and

12,000 horse; his fleet amounted to 500 ships of war. The anny of Octavianus mustered only 80,000 foot, but equalled his adversary's in number of cavalry : his fleet was but half as numerous as Antony's , however, his ships were better built, and manned with better soldiers. The great decisive engage- ment, which was a naval one, was fought near Actium, a city of Epirus, at the entrance of th►► gulf of Ambracia. Antony ranged his ships before the mouth of the gidf; and Octavianus drew up his fleet in opposition. The two land armies, on opposite sides of the gulf, were drawn up only as spectators. The battle began on both sides with great ardor ; nor was there any advantage on either side, till of a sudden Cleo- patra fled from the engagement attended by sixty sail ; what increased the general amaze- ment was to behold Antony himself following soon after. Yet the engagement continued with great obstinacy till five P.M. when Antony's forces submitted. The land forces soon after followed the example of the navy ; and all yielded without striking a blow the fourth day after the battle. See Rome, Antomus, and Cleopatra.

After the death of Antony, and after having settled the affairs of Egypt, Octavianus left Alexandria in the beginning of September, in the year of Rome 720, with a design to return through Syria, Asia Minor, and Greece, to Italy. On his arrival at Antioch he found there Tiri- dates, who had been raised to the throne of Par- thia, in opposition to Phrahates, and ambassadors from Phrahates, who were come to solicit the assistance of the Romans against each other. Octavianus gave a friendly answer both to Tiri- dates and the ambassadors of Phrahates, with- out intending to help either ; but with a design to animate the one against the other, and thus to weaken both. After this, having appointed Messala Corvinus governor of Syria, he marched into Asia, and took up his winter quarters. He spent the winter in settling the several provinces of Asia Minor and the adjacent islands ; and early in spring passed into Greece, whence he set out for Rome, which he entered in the month Sextilis, afterwards called August, in three tri- umphs, which were celebrated for three days together. And now Octavianus was at the height of his wishes, sole master of the whole Roman empire. But, to persuade the people that they still enjoyed their ancient government, he continued the old magistrates, with the same name, pomp, and ornaments ; but they were to have only subordinate military power, and their old jurisdiction of deciding finally all causes, except such as were capital ; and, though some of these last were left to the governor of Rome, yet the chief he decided himself. He likewise won the hearts of the populace by the continued cheapness of provisions and plentiful markets ; and he frequently entertained them with shows and sports.

Having settled all affairs in the capital he passed into Gaul, towards the close of the year B. C. 27, with a design of proceeding to the reduction of the British islands ; but, on his arrival at Narbonne, he received information

that the Salassians, at the foot of the Alps, and the Cantabrians and Austrians in Spain, had shaken off the Roman yoke : he therefore discontinued his progress, and marched in person into Spain, for the purpose of subduing those nations that had revolted. The conquest of the Salassians he committed to his generals. In the year B.C. 23 Octavianus married his daughter Julia to his nephew Marcellus ; and in the course of the year he was seized with a dangerous dis- order, which threatened his life, of which he was cured by his physician Antonius Musa. When his life was thought to be in danger he had delivered his ring to Agrippa, thus intimating that he deemed him to be a proper successor. Mar- cellus, who was generally regarded as his intended successor, was disgusted by this pre- ference ; but the death of this prince, who was greatly regretted by the Roman people, made way for the introduction of Agrippa to court, and from this time he continued the most con- fidential friend of Octavianus. At this time the administration of the empire was conducted with great equity and moderation ; and many instances are recorded in which he exercised great lenity and self-denial. In the year B. C. 22 he declined the office of dictator and of cen- sor, which were offered him by the senate, and in his general conduct he affected to appear no otherwise than as a private citizen.

Rome being now at peace, Augustus deter- mined to visit the eastern part of the empire ; but, as it was necessary to invest some person with authority in Rome during his absence, he ap- pointed Agrippa for this purpose ; and, in order to annex additional dignity to his character, he gave him in marriage his daughter Julia, the widow of Alarcellus. In his progress through the eastern provinces, during the years B.C. 21 and 20, the emperor recovered from Phrahates, king of Parthia, the Roman standards and cap- tives that had been taken from Crassus; he placed Tigranes on the throne of Armenia ; and at Samos, to the inhabitants of which he granted the liberty and use of their own laws, he re- ceived ambassadors from the remotest part of India. Augustus, after his return, directed his attention to various abuses which needed reform, and to the enactment of regulations that contributed to the perfection of government. He re- duced the number of

senators from 1000 to 600, aˆd fixed at a higher rate the fortune that was requisite for qualifying a person to be elected of that body ; and, that no persons who were eminently fit for the office, mioht be excluded, he made up their deficiencies of fortune by his own liberality. In the year of Rome 747, B.C. 17, he celebrated the secular games with <;xtraordinary splendor. About this time he also adopted his two grandsons Caius and Lucius ; the children of Agrippa and Julia. Having re- ceived from Gaul many complaints against the attendants whom he had appointed to levy the tribunes and imposts, and particularly against Licinius, he visited that country ; but the principal aggressor, Licinius, contrived to soothe his displeasure by giving him a large portion of the treasures which he had amassed. Upon his return from Gaul, B. C. 13, the death of Lopidiis

afforded him an opportunity of assuming the office of supreme pontiff; and, in the first exer- cise of this authority, he collected all books of divination, of which more than 2000 were com- mitted to the flames. The books of the Sibyls, however, were preserved and entrusted to the custody of the priests. The death of Agrippa was, at this time, a very distressing event to Augustus; but it served to advance Tiberius in the family of the emperor, who by an unwar- rantable act of tyranny caused him to be divorced from a wife to whom he was affectionately at- tached, and to marry the widowed Julia.

The war with Germany now began to be pur- sued with ardor. That martial people had some time before defeated LoUius, proconsul of Gaul ; but Drusus marching into their country with a powerful army obtained great successes in four campaigns against their confederate tribes, and carried his arms as far as the Elbe. His brother, Tiberius, likewise subdued the Pan- nonians and Dacians. But the joy occasioned by these victories was damped by the death of Drusus, as he was returning to the banks of the Rhine. A peace soon after ensued ; and the temple of Janus was again shut for the third time in this reign, in which state it continued twelve years. Before this event Augustus had lost his beloved sister Octavia ; and soon after his favorite minister jNIacenas died, who had, indeed, for some time been less in his confidence than formerly. The emperor's intrigues with Terentia, the wife of the minister, are alleged as the cause of their coolness. During these years Augustus received many warm and unequivocal demonstrations of the affection of the people ; and, after enjoying the imperial authority for twenty years, he was unanimously requested to accept it for ten years more.

The young Ceesars, grandsons to theˆmpe- ror, now began to come forwards on the scene ; and their early ambition gave him much dis-

quiet. The jealousies that arose between them and Tiberius so disgusted the latter that he re- tired to Rhodes. In order to grace the solem- nity of the assumption of the toga by his elder grandson, Caius Augustus accepted the consulate a twelfth time ; and the year before its close, was rendered memorable by the birth of Christ, which event the best critics date four years be- fore the vulgar era. Tliree years afterwards he was consul the thirteenth time, when Lucius Caesar took the toga. In this year his domestic peace received a severe wound by the discovery of the scandalous disorders of his daughter Julia, of which he alone seems to have been long before ignorant. The indignation he conceived at this disgrace induced him to treat with great severity herself, and all her gallants and confidants, some of whom he put to death, and banished others.

Some troubles in Armenia, which succeeded, caused Caius Caesar to be sent into the east, where he remained some years ; but at length, A. D. 3, he received a wound which proved fatal His brother Lucius had died some time before at Marseilles. Octavianus therefore recalled Tiberius from his unhonored residence at Rhodes, and adopted iiim, some months after the death of Caius. He also adopted his remaming grandson,

ˆ.grippa Posttmmus ; but ihe intractable disposi- tion and gross understanding of this youth caused him afterwards to annul the adoption and send him into exile. A daughter of Julia, of the same name, followed her mother’s example, and some years afterwards vvas similarly punish- ed. The poet Ovid was, it is said, in an unknown manner involved in her crime, and was on that account exiled to the mout’i of the Danube, whence all his adulation could not procure his recall. These unworthy descendants were the source of bitter affliction to Augustus, who never named them without a sigh, and often repeated a verse from Homer, expressing a wish that he had lived in celibacy and died childless.

The year 4 was distinguished by an act of clemency which confers great honor on the cha- racter of Augustus : ××× Cinna, grandson of Pom- pey, a man of rank and great opulence, but of little merit, had formed a conspiracy against the emperor’s life. Every thing was prepared for its execution, when the whole was disclosed by one of the persons engaged in it. Octavianus, by the advice of Eivia, sent for Cinna to his closet, and after enumerating all the favors he had con-

ferred upon him, charged him with the ingrati- tude of his design, at the same time repeating so many circumstances of the plot that Cinna could not doubt of its discovery. He proceeded to say that, being still more desirous of having him for a friend than punishing him as an enemy, he freely forgave him for all that was past, and should rely upon his future fidelity. Cinna, pe- netrated with compunction, and overcome by the emperor's goodness, was converted into one of his most zealous friends. Augustus named him consul for the next year; and Cinna, at his death, appointed the emperor his sole heir. Such was the effect of this conduct that this was the last .conspiracy formed against him.

Various domestic regulations, and war renew- ed in Germany and Pannonia, whicli exercised the military talents of Tiberius and (iermanicus, are the principal events of some succeeding years. The encouragement of matrimony, and suppression of celibacy, was a point much la- bored by the emperor ; and a famous law, called the Papian-Poppsean (from the consul of the year) was passed for this purpose, appointing great privileges and exemptions for the married, and penalties and disabilities for the single.

The year 9 was rendered black in the Roman annals by the destruction of 'arus and three en- tire legions in Germany, where Arminius had formed a powerful confederacy against the power of Rome. The standards and two of the eagles fell into the hands of the enemy, who took a pride in aggravating the loss by every species of insult and indignity. This disaster nearly over- came all the fortitude of Augustus, accustomed to glory and prosperity. He put on mourning, suffered his hair and beard to grow, and frequently exclaimed, in a paroxysm of grief and despair, ' 'arus, restore me my legions !' The sense of danger from a martial and inveterate foe was added to that of disgrace. Tiberius, hovvˆever, by his military skill, repressed the ravages of the Germans, and in a great measure wiped off the ignominy. By his conduct he obtained the favor

and confidence of Octavianus to such a degree that he was elevated to an equal share of the imperial authority. One of the most remarkable of the remaining acts of Augustus was a tyran- nical law rendering all libels and defamatory writings criminal, and subjecting the authors to the penalties of high treason.

flis advanced age and declining health now rendered him studious of repose, and he devolved the principal cares of empire upon Tiberius. It is said, however, that he manifested a returning affection to his grandson Agrippa Posthumus, which alarmed Livia and her son ; and

Livia has been suspected of hastening the death of the emperor, on this account, by poison. But the progress of his malady is a sufficient refutation of this mere suspicion. It was a weakness of the stomach and bowels; and he was seized with it as he was conducting Tiberius towards lUyrium. On his return towards Rome his complaint in- creased, and obliged him to stop at Nola, where he took to his bed and patiently waited the ap- proach of death. On the last day of his life he called for a mirror ; he had his head dressed ; and then calling his friends to his bed-side, asked them whether they did not think he had acted his part pretty well in the comedy of human life ? and then addressed them in a Greek verse, with which they generally closed their plays :

Aon KpoTov, Kai iravrsg vfieig fitra x'^^c-i KTVTrrjffa. Clap your hands, and let all applaud with joy.

After this kind of comic adieu, he ordered every body to retire, and died in Livia's arms, saying, Livia, conjugii nostri memor, vive et vale. His death took place on the 10th of August A. D. 14, A. U. C. 767, and in the seventy-sixth year of his age. The duration of his power, if we reckon from the time of the triumvirate, of which he took possession the 27th of November, in the year of Rome 711, B. C. 43, was about fifty-six years. If we reckon from the battle of Actium, fought the '2d of September, in the year of Rome 721, B.C. 31, when his sole possession of the Roman empire properly commences, Augustus will then appear to have enjoyed the sovereign power about fortj-four years.

Crevier states the true time of his becoming emperor to have been the 7th of January, in the year of his seventh consulship, which, according to his reckoning, was the 725th of Rome, and, referring his death to the 765th of Rome, he go- verned as prince and emperor forty years, seven months, and thirteen days. ' All the rest,' he says, ' was manifest usurpation and tyranny.' Josephus, and others after him, compute the be- ginning of the reign of Augustus from the year in which Caesar was killed, A. U. C. 710, B.C. 44, and make its duration fifty-seven years, six months, and some odd days. Ptolemy in his canon, and St. Clement of Alexandria, date the commencement of his reign in the year after the battle of Actium, A. U. C. 724, and compute its duration to be forty-three years.

Before the funeral of Augustus his will was presented to the senate-house by the vestal vir- gins, in whose custody it had Ijeen deposited, and read aloud by Polybius, one of his freedmen. By this will, made sixteen months before his

death, Tiberius and Livia were appointed his first heirs, his grand-cliildren and their children his second, and the great men of Rome his third heirs. Livia was adopted into the Julian family, and honored with the title of Augusta. He be- queathed as a legacy 40,000,000 of sesterces (about 5,000,000 of livres) to the Roman people ; 3,500,000 (437,500 livres) to the tribes, that is 100,000 (12,500 livres) to each ; to each of his guards 1000 sesterces (125 livres); to each of the soldiers appointed to guard the city 500 ses- terces (sixty-two livres) ; and to each legionary soldier 300 sesterces (thirty-seven livres).

Gibbon has given the following sketch of the character and history of Augustus : ••• ‘ The tender respect of Augustus for a free constitution, which he had destroyed, can only be explained by an attentive consideration of the character of that subtle tyrant. A cool head, an unfeeling heart, and a cowardly disposition,- prompted him, at the age of nineteen, to assume the mask of hy- pocrisy, which lie never afterwards laid aside. With the same hand, and probably with the same temper, he signed the proscription of Ci- cero and the pardon of Cinna. His virtues, and even his vices, were artificial, and according to the various dictates of his interest, he was at first the enemy, and at last the father of the Roman world. When he framed the artful system of the imperial authority his moderation was in- spired by his fears. He wished to deceive the people by an image of civil liberty, and the ar- mies by an image of civil government.

‘In the exercise of that sovereign and absolute power which he acquired, by means which none can attempt to justify, and which he contrived most effectually to secure by apparent modera- tion and self-denial, he seems to have been soli- citous for making the people contented and hap- py ; and in many respects he was entitled to the character of a wise and equitable governor. ‘As a compensation for liberty, he gave his subjects security, ease, prosperity, and all the advantages of high civilisation, with as little as possible of the severity of restraint and coercion. He filled Rome and all Italy with improvements of every kind : made highways, constructed harbours, raised edifices for use and convenience, and could boast that he received a capital of brick, and left one of marble. He so encouraged letters that one of the great ages of excellent human productions takes its name from him.’ Those whom he encouraged by his liberality

repaid him with an adulation which was not honorable to themselves, and which made no addition to his reputation. The love of flattery, however, is not charged upon him as one of his predominant foibles. In private life he had many estimable qualities. Affectionate to his family and friends, condescending and indulgent to his domestics and dependents, frugal and sober with regard to every indulgence, one excepted, which regarded himself, he commanded affection and respect. But his disposition to gallantry and licentious- ness in his conduct towards the female sex ex- posed him to just censure and reproach ; nor did the counsel of his friends, nor the wisdom of experience, avail to the due restraint of his cri-

minal passions. Sometimes indeed, it has been said, his intrigues were the result of that policy which directed his general conduct, as they served to discover secrets of state, and to obtain informa- tion concerning any plot or sedition that might have been formed by the husbands of those wives with whom he was connected. In other respects he paid a high regard to external decorum ; and, whatever migiit have been his sentiments with regard to religion in early life, he appears in ma- turer and more advanced age to have been much inclined to superstition.

OCTA'V'O, adj. & n. s. Lat. octavo. Ap- plied to a page or leaf constituting the eighth part of a sheet.

They accompany the second edition of the original experiments, which were printed first in English in octavo. Boyle.

Lord C ••• 's works most resplendenlly bound in octavo, form a conspicuous ornament to his book shelves.

The rest is all but leather and prunella.

Byron.

OCTEN'NIAL, adj. } Lat. octennium, octo- Octog'enary. S geni. Happening every

eighth year ; lasting eight years : octogenary is,

of eighty years of age.

OCTO'BER, n. .s. Lat. October. The eighth

month in the year ; also a name given to ale

brewed in that month.

October is drawn in a garment of yellow and car- nation ; upon his head a garland of oak leaves, in his right hand the sign scorpio, in his left a basket of services. Peacham.

Nor wanting is the brown October drawn Mature and perfect, from his dark retreat Of thirty years, and now his honest front Flames in the light refulgent, not afraid Even with the vineyard's best produce to vie.

Thomson. October, in chronology, was the eighth month of Ilomulus's year, which the name implies ; but the tenth in the kalendar of Numa, Julius Caesar, &c. The senate gave this month the name Faustinus, in compliment to Faustina, the wife of the emperor Antoninus ; Commodus would have it called Inv ictus ; and Domitian named it Domitianus. This month was sacred to Mars, and under his protection.

OCTOBRIS Equus, a horse annually sacri- ficed to Mars in October, because the horse is a warlike animal. A race was run with chariots drawn by two horses, previous to the sacrifices, and he that ran quickest was adjudged to be the victim.

OC'TONARY, adj. \ Lat. octonaTius, octu- Oc'tuple. \ plus. Belonging to the

number of eight ; eightfold.

OCTONOC'ULAR. Latin octo and oculus. Having eight eyes.

Most animals are binocular ; spiders for the most part oclonociilar , and some senocular. Derham.

OCTOPET'ALOUS, adj. Gr. oicrw and iri- Tokov. Having eight flower leaves.

OC'TOSTYLE. Gr. o/crw and ###rnXof. In architecture, the face of a building having eight columns.

Fr. oculaire, of Lat. ocidus. Relating to, or

,- seen by, the eye : ocu- i larly, visibly by the eye : J oculate is, having eyes ;

OCULAR, adj.

Oc'u LARLY, Udv. Oc'ULATE, adj. Oc'uLisT, n. s.

Oc'uLUS BELI, n. S

having perception by the eye : oculist, he who studies or professes to cure diseases of the eye : oculus beli. Woodward will define.

Prove my love a whore, Be sure of it ; give me the ocul

Sluikspeare. If there be a speck in the eye, we take it off; but he were a strange oculist who would pull out the eye.

Biiciin. He that would not believe the menace of God at first, it may be doubted whether l)efore an ocular example he believed the curse at first. Browne.

'J'he same is ocularly confirmed by Vives upon Austin. Id.

The oculus hell of jewellers, probably of Pliny, is an accidental va'-iety c ' the agate kind ; having a grey horny ground, circular delineations, and a spot iu tlie middle, resembling the eye ; whence its name.

Wot'dward.

Oculus Beli, in li.hology, one of the se- mipellucid gems, of a grayish-white colo.r, varie- gated with yellow and with a black central nu- cleus : it is of a roundish form, and its variega- tions very beautifully represent the pupil and iris of the eye : whence the name. It seems to be a species of opal.

OCUMARA, a bay of Venezuela, Colombia, five leagues east of Porto Cabello, and about twenty-eight miles S.S.E. of the city of Ca- raccas. its port is good and is defended on the east by a battery mounting eight pieces of cannon. The town, at the distance of one league from the port, is watered by a river of the same name, which discharges itself into the bay.

OCYMUM, basil, a genus of the gymno- spermia order, and didynamia class of plants ; natural order forty-second, verticillatae : cal. upper lip orbiculated, inferior one quadrifid : fOR. resupinated, vsith one li])

quadrifid, the oilier undivided ; the exterior filament sends out a reflected process at the base. There are eight .species, all natives of warm climates, rising from six inches to two feet in height, and luiving a strong aromatic smell, resembling that of cloves. One species is used in the kitchen in soups and sauces. It rises about ten inches high, sending out branches by pairs opposite, from the bottom ; the stalks and branches are four-cornered ; the leaves are oval, spear-shaped, ending in acute points, and are indented on their edges ; the whole plant is hairy, and has a strong scent of cloves, too powerful for most persons, but to some it is very agreeable. These plants are propagated by seeds, will thrive in this country in the open air, and will even ripen their seeds if placed in a stove or airy glass-case.

OCZAKOV", a town of the government of Cherson, European Russia, near the mouth of the river Dnieper. This place was never of great size ; and, since the building of Odessa, its trade and population have greatly dwindled ; but the Russians and Turks have often disputed its pos- session. In 1737 it was attacked by the former under count Munich, and carried by assault.

Being afterwards abandoned, it was fortified by the Turks; and in 1788 attacked again by a Russian army under prince Potemkin, who did not take it till after a delay of six months, and a great sacrifice of lives. The restoration of this place to Turkey by Russia, formed the alleged motive for the interference of the British go- vernment against the latter power in 1790. It is fifty-four miles west by south of Cherson.

ODA-BACHI, or Oddabassi, an officer in the Turkish soldiery, equivalent to a Serjeant or cor- poral among us. The common soldiers and ja- nissaries, called oldachis, after having served a certain term of years, are always preferred and made biquelairs ; and of biquelairs in time be- come odabacliis, i. e. corporals of companies, or chiefs of certain divisions, whose number is not fixed being sometimes ten and sometimes twenty. Their pay is six doubles per month ; and they are distinguished by a large felt, a foot broad and above a foot long, hanging on the back, with two long ostrich feathers.

()\)D, adj. -\ Arab, uhud; Swed. itdda ;

Odd'ly, adv. (^ Goth, eitt Cone). Sole; single;

Odd'ness, 71. s. i not divisible by two ; noteven

Odds, 7i. s.) or twofold ; hence singular ; particular ; unusual ;

uncouth ; unnoticed ; strange ; unlucky (see the instance from Shaksceare) ; but some learned gossips in ‘ luck’ consider the odd a lucky number : oddly and oddness follow all the above senses : odds is used to express in- equality; excess on either side of a comparison; more than even in a wager; more likely than otherwise; hence advantage; superiority; also, from the notion of strangeness, uncouthness, it signifies difference amounting to dispute ; de- bate; quarrel.

The odd man to perform all three perfectly is, Joannes Sturmius. A scham’s Schoolmaster.

The case is yet not like, but there appeareth great odds between them. Spenser on Ireland,

Between these two cases there are great odds.

Hooker. This is the third time ; I hope Good luck lies in odd numbers. Shakspeare.

The trust Othello puts him in. On some odd time of his infirmity. Will shake this island. ‘id. Othello.

There are yet missing some few odd lads that you remember not. Jd. Temjiest.

IIow oddlu will it sound, that I Must ask my child forgiveness. Id.

I will lay the odds that ere this year expire, We bear our civil swords and native fire As far as France. Id. Heriry IV.

The fox, the ape, and the humble bee, ˆVere still at odds, being but three ; Until the goose came out of door, And staid the odds by adding four. Shakspeare. Her madness hath the oddest frame of sense. Such a dependency of thing on thing. As e’er I heard iu madness.

Shakspeare. Measure for Measure. The account of the profits of Ulster, from the fifth year of Edward III. until the eighth, do amount but to nine hundred and odd pounds.

Davies on Ireland. Shall I give him to partake Full happiness with me ? or rather not,]5ut keep the odds of knowledge in my power Without co-par .ner? Milton’s Paradise Lost,

And tho’ the sword, some understood, In force had much the odds of wood, ‘Twas nothing so ; both sides were balanced So equal, none knew which was valiajit’st.

Hudibras, What verity there is in that numeral conceit, in the lateral division of man by even and odd ; ascrib- ing the odd unto the right side, and the even unto the left ; and so, by parity or imparity of letters in men’s names, to determine misfortunes. Browne. Cromwell, with odds of number and of fate, Removed this bulwark of the church and state.

Waller. The year, without regard to days, ends with an odd day and odd hours, odd minutes, and odd seconds of minutes ; so that it cannot be measured by any even number of days, hours, or minutes. Holder.

Coveting to recommend himself to posterity, Ci- cero begged it as an alms of the historians, to re- member his consulship ; and, observe the oddness of the event, all their histories are lost, and the vanity of his request stands recorded in his own writings.

Dry den. The dreams of sleeping men are made up of the waking man’s ideas, though for the most part oddli/ put together. Locke.

All these, thus unequally furnished with truth, and advanced in knowledge, I suppose of equal na- tural parts ; all the odds between them has been the different scope that has been given to their under- standings to range in. Id..

When I broke loose from writers who have em- ployed their wit and parts in propagating of vice, I did not question but I should be treated as an odd kind of a fellow. Spectator.

Mt. Locke’s Essay would be a very odd book for a man to make himself master of, who would get a re- putation by critical writings. Id.

Sixteen hundred and odd years after the earth was made, it was destroyed in a deluge of water.

Burnet’s Theory. Since every man by nature is very prone to think the best of himself, and of his own condition, it is odds but he will find a shrewd temptation. South. No fool Pythagoras was thought ; He made his list’ning scholars stand, Their mouth still covered with their hand : Else, may be, some odd thinking youth, Might have refused to let his ears Attend the musick of the spheres. Prior.

As masters in the clare obscure, With various light your eyes allure : A flaming yellow here they spread; Draw off in blue, or charge in red ; Yet from these colours oddly mixed. Your sight upon the whole is fixed. Id.

One man is pressed with poverty, and looks some- what oddtij upon it. Collier on the Spleen.

A knave is apprehensive of being discovered ; and his habitual concern puts an oddness into his looks.

Collier. This blue colour, being made by nothing else than by reflection of a specular superficies, seems so odd a phenomenon, and so difficult to be explained by the vulgar hypothesis of philosophers, that I could not but think it deserved to be taken notice of.

Neutori's Opticks. Patients have sometimes coveted odd things which have relieved them ; as salt and vinegar. Arbuthnot.

Fossils are very oddly and elegantly shaped, ac- cording to the modification of their constituent salts, or the cavities they are formed in. Bentley.

So proud I am no slave, So impudent I own myself no knave. So odd, my country's ruin makes me grave. Pope.

ODE

The pre►►byterian party endeavoured one day to introduce a debate about repealing the test clause, when there appeared at least four to one odds against them. Swift.

They had seen a great black substance lying on the ground very oddly shaped. Id.

My wife fell into a violent disorder, and I was a lit- tle discomposed at the oddness of the accident. Id. To counterpoise this hero of the mode. Some for renown are singular, and odd ; What other men dislike is sure to please Of all mankind these dear antipodes. Young. Sir Benj. ►►► Oh lud, ma'am, how very odd, but that is the reason it was believed at once. Sheridan.

ODE, 71. s. Gr. mSt) ; Latin ode. A lyric poem ; a poem set to music. See below.

A man haunts the forest that abuses our young plants with carving Rosalind on their barks ; hangs odes upon hawthorns, and elegies on brambles, all forsooth deifying the name of Rosalind.

Shakspeare. O run, prevent them with thy humble ode. And lay it lowly at his blessed feet. Milton.

He would an elegy compose, On maggots squeezed out of his nose ; In lyric numbers wrote an ode on His mistress eating a black pudden.

Butler's Huttlfiras. What work among you scholar gods ! Phoebus must write his am'rous odes ; And thou, poor cousin, must compose. His letters in submissive prose. Prior.

However, I have some o(/f s and love-elegies, which, when I am favoured with the lady's name for whom they are to be written, I intend to give to the public.

Sheridan. Laugh when I laugh, I seek no other fame. The cry is up, and scribblers are my game ; Speed Pegasus, ye strains both great and small. Ode, epic, elegy, have at ye all. Byron.

Ode. Among the ancients the ode signified no more than a song, but with the modems they are reckoned different compositions ; the ode being usually appropriated to grave, lofty, and solemn subjects. Horace has pointed out the subjects proper for both, in few words : ××× Gods, heroes, conquerors, Olympic crowns, Love's pleasing care, and the free joys of wine. Are proper subjects for the Lyric song. It was also employed, not only to praise the Almighty for bounties received, but to solicit him in time of trouble, as is plain from the odes written by king David, Asaph, &c., and collected by Ezra into the books of Psalms. Many other nations imitated the Israelites in songs of praise and petitions addressed to their deities. This afterwards gave rise to the custom of the heathen poets invoking the Muses ; still ridiculously kept up by modern Christian poets, as if these ideal deities of Parnassus had a real existence.

This fancied inspiration led the ancient lyric poets to indulge in a more unbounded liberty in this than in any other species of poetry ; soaring in sudden transitions, bold digressions, and lofty excursions, sometimes away from their subject altogether. But Pindar, the most daring and lofty of all the lyric poets, in his sublimest flights, and amidst all his raptures, returning to hjs subject again, has preserved harmony, and often uniformity in his versification ; yet so great is his variety of measures that the traces of

sameness are haidly perceptible ; and this is one of the excellencies for which he is admired, and which, though seemingly void of art, requires so much, that he has seldom been successfully imi- tated.

ODENATUS, a celebrated prince of Palmyra. He very early inured himself to bear fatigues, and, by hunting leopards and wild beasts, accus- tomed himself to the labors of a military life. He was a faithful friend to the Romans ; and, when Aurelian was'taken prisoner by Sapor king of Persia, Odenatus solicited his release, by writ- ing to the conqueror, and by sending him pre- sents. The Persian tyrant was offended at this liberty, tore the letter, and ordered the presents to be thrown into a river ; and commanded Ode- natus to appear before him, on pain of being devoted to instant destruction. Odenatus de- spised this haughty summons, and opposed force by force. He obtained considerable advantages over the troops of Sapor, and took his wife pri- soner, with a great booty. In return for these services Gallienus, then emperor, named Odena- tus his colleague, and gave the title of Augustus to his children and of Augusta to his wife, the celebrated Zenobia. On his return from this ex- pedition he marched against the Goths or Scy- thians, who had invaded Asia, and obliged them to make a hasty retreat. Shortly after this he fell a victim to domestic treason. His nephew Mseonius, when hunting with him, presumed to throw his javelin before that of his uncle; and though reproved repeated the offence. Odenatus, provoked at this show of insolence, took away his horse, a mark of infamy among the barba- rians, and ordered the youth into confinement. The offence was soon forgotten, and IVIaeonius restored, but the punishment was remembered, and he caused his uncle to be assassinated in the midst of an entertainment, at Emessa, about A. D. 267, and Zenobia succeeded him. See Palmyra.

ODENSEE, a town of Denmark, the capital of Funen, is situated on a river which runs into a large bay of that island about a mile from the town. It is a bishop's see, and though not large is of note for its manufactures, chiefly of woollens, leather, and soap. Here are an old palace, ca- thedral, and several churches worth notice. The Danish language is spoken with great purity, and education is well attended to. At a diˆt held here, in 1528, the Protestant discipline of the Danish church was settled. Population 6000. Eighty-six miles W. S. W. of Copenhagen, and sixty-eight N. N. E. of Sleswick.

ODEON, or Odeum, in ancient architecture Gr. uiSfiov, from uSri a song, a name given among the Greeks to a species of theatre in which

the poets and musicians submitted their works to the approval of the public, and disputed for prizes. This, however, it is probable was not the original object for which Pericles built that at Athens, which served as a magazine wherein to deposit all the paraphernalia used in religious and other solemn processions, and had likewise another destination, namely that of offering under its portico a shelter to the spectators assembled in the theatre of Bacchus (by the side of which it was erected) in case of surprise from bad weather.

It was not, apparently, until a later period that the odeon became itself a theatre or saloon for the purposes of music and declamation. Some- times, even, it is said to have been used by the Archontes, as a council-house in which they dis- pensed justice.

The form of theodeons resembled that of other theatres, except that they were inferior in point of extent, and were covered with a roof. The inside of that built by Pericles, before alluded to, was filled with seats and ranges of pillars, and on the outside the roof descended shelving down- wards from a point in the centre, with many bendings, in imitation of a famous pavilion of the king of Persia. V'itruvius is of opinion that the roof of this building was constructed of the masts or sail-yards of Persian ships which the Athenians had taken in their war with that peo- ple.

ODER, a considerable river of Germany and the Prussian states, rises in Moravia, about eigh- teen miles north-east of Olmutz, enters Silesia, and flows through that province, Brandenburg, and Pomerania, where it forms the large mari- time lake called the Haff, and runs into the Bal- tic by three mouths, the Peene, the Swine, and the Divensa. Tliese streams form here two large islands called Usedom and Wollin. In Silesia this river has a very rapid course ; but, on reach- ing the level ground, this impetuosity diminishes ; but it here frequently overflows its banks. It becomes navigable for small boats at Ilatisbon, and vessels of fifty tons reach Breslau : it re- ceives numerous tributaries, and communicates by canals with both the Elbe and the 'istula. Breslau, Frankfort, and Stettin are on its banks.

ODERICO (Gasper Lewis), a learned Genoese antiquary and medallist, entered early into the society of the Jesuits, and going to Rome be- came professor of theology. He was admitted a member of the Etruscan academy of Cortona, un- der the name of Theodemio Ostracinio. On the suppression of his order he retired to his native city, where he was made conservator of the uni- versity library. In

1787 he went to Turin with his brother, to conduct some negociations, and remained there six years. The revolution de- prived him of his office at Genoa, but on the re- organisation of the university he was replaced, and chosen a member of the Institute. He died December 10th, 1803, of apoplexy, aged seventy- eight. He published several valuable works on ancient medals and inscriptions; and left in MS. Notizie istoriche sulla Taurica fino all, anno 1475, written at the request of the empress Ca- therine.

ODEYPOOR, a fertile Hindoo principality in the province of Ajmeer, of which it occupies the south-eastern quarter, and situated between 24►► and 26►► of N. lat. It yields sugar, indigo, cot- ton, and the grains of India : it also produces mines of iron and sulphur. It formerly bore the appellation of Mewar; and its chief, who is of the Rajpoot, or military tribe, is descended of the most ancient and honorable family in Hin- dostan, frequently denominated in history the Ranahs of Chitore. The present territories of this prince are estimated at 110 miles in length by seventy in breadth. The lands are held on a sort

of feudal system, every Rajpoot being a soldier by profession ; but, owing to tlie frequent inroads of the Mahrattas, the revenues have been grea ly diminished. The cultivators of the soil are Hin- doos, of the tribes of Brahmin, Jaut, Bheel, and Rajpoot ; the weapons of the latter, which he frequently carries into the fields with him, while ploughing, &c., are a lance, sword, matchlock, or bow and arrow. The cattle here are smaller than in the neighbouring countries; but they breed a number of sheep and camels.

Odeypoor, the capital of the above district, is situated on the south side of the Banass, in an amphitheatre of hills. It can only be approach- ed through three narrow defiles, barely wide enough to admit a carriage. When, in the begin- ning of the fourteenth century, Chitore, the for- mer capital, was taken by the Mahometans, the royal family took refuge in this place, and the al- liance of the Ranah has been always sought by the neighbouring Hindoo princes. Through his alliance with the British he has been enabled to throw off the Mahratta yoke. Long. 74►► 5′ E., lat 25►► 28′ N.

ODESSA, a thriving modern sea-port of Southern Russia, in the

government of Cherson, stands on a bay of the Black Sea between the mouths of the Dniester and Dnieper. Russia, it is well known, particularly after her acquisitions in south-east Poland, had long looked for an es- tablishment in this direction. At the peace of J assy Catherine II. fixed in 1792 on this place, then called Kodjabeg, and consisting of only a few houses. But without having a river it has a fine bay, with sufficient depth of water almost to the edge for large ships of war. Its bottom is of fine sand or gravel, and it is hardly ever fro- zen. The public works were quickly construct- ed, and the emperor Alexander followed up the views of Catharine, and greatly benefited the new town by the judicious selection of the duke of Richelieu, at that time a French emigrant noble- man, as its governor. Under his supermtend- ance a number of excellent establishments were set on foot, under the patronage of the govern- ment. In 1804 the population had risen to 15,000; and when Dr. Lyall was here in 1824 to

40,000.

Odessa stands in lat. 46►► 29′ 30″ N., and long. 30►► 45′ 22”, as astronomically ascertained, on the declivity of a considerable eminence in the south-west of the bay of Adschai,andin the midst of a number of fertile plains. The streets are laid out with great regularity and generally intersect each other at right angles ; some are very long, but all of them unpaved : the houses are not ge- nerally contiguous but separated by a portion of garden ground. They are neatly built of stone, with roofs of wood, or sheets of iron, the stone of which they are constructed being the same as the rock on which the town is built, ►►► a semi- indurated limestone, exhibiting throughout its en- tire mass an assemblage of small cockle-shells, tinged with an iron oxide. Odessa contains seven churches, an admiralty court, a custom- house, hospital, theatre, several inns, a lyceum, and schools for trade and navigation, and for the instruction of girls. The air is pure and remark- ably wholesome ; but it labors under the want of

fresh water. A large export trade in corn is con- ducted with England, France, Spain, Italy, the Levant, and Germany. The articles of importa- tion are wines, liqueurs, tobacco, cotton stuffs, cloth, perfumes, shawls, oil, spices, porcelain, and paper. Other exports latterly have been butter, caviare, tallow, hog’s-lard, ironmongery from Tula, furs, &c. About 800 vessels arrive annually; 400 of which are British. The villages in the neighbourhood produce the rarities in the south of Russia, of butter and cheese, potatoes, and remarkably fine melons. The mutton here is also very fine. Fuel is scarce ; and bundles of weeds, and cow-dung, are used as a substitute.

The Greek inhabitants are the most numerous : and are chiefly retail merchants and workmen. The Russians are principally servants : the most wealthy and powerful are the French, English, and Germans. Jews abound, but they are mostly poor. The corn brought hitherfrom the Ukraine and neighbouring provinces is conveyed chiefly in carts or waggons drawn by oxen, which travel in companies, and stop at intervals, to let the oxen feed in the steppes or vast natural pastures of the road, so that the expense of carriage is tri- fling. In summer several hundred waggons ar- rive in the town in a single day. Other articles produced in the Ukraine, and exported at Odessa, are tallow, hides, flax, and timber. Brewing and distilling are carried on on a large scale ; and there are manufactures of woollens, silk, gunpowder, and soap. The great disadvantages hitherto have been the want of water, of mechanics for the town, and of farmers for the surrounding district. The government has spared no expense to pro- cure all of these ; and those who fix on tjie coun- try round Odessa are allowed a house, a pair of oxen, a plough, a little money, and an exemp- tion, during twenty-five years, from all taxes and military service.

ODIN, in Saxon mythology, called also in the dialect of the Anglo-Saxons Woden, or Wodan, a name given by the ancient Scythians to their supreme god.

Odin, in Saxon history, a name assumed about A. A. C. 70 by Sigge, a Scythian prince, who conquered the northern nations, made great changes in their government, manners, and reli- gion, enjoyed great honors, and had even divine honors paid him. According to the account gi- ven of this conqueror by Snorro, the ancient his- torian of Norway, and his commentator Torsasus, Odin was a Scythian, who withdrew himself, with many others in his train, by flight, from the vengeance of the Romans, under Pompey ; and, having officiated as priest in his own country, he assumed the direction of the religious worship, as well as the civil government, of the nations which he conquered. Having subdued Denmark, Swe- den, and Norway, he retired to Sweden where he died. Dr. Henry gives this account of him : ‘ Odin is believed to have been the name of the one true God among the first colonies who came from the east and peopled Germany and Scandi- navia, and among their posterity for several ages. But at length a mighty conqueror, the leader of a new army of adventurers from the east, over- run the north of Europe, erected a great empire, assumed the name of Odin, and claimed the ho-

nors which had been formerly paid to that deity. From thenceforward this deified mortal, under the name of Odin or Wodin, became the chief object of the idolatrous worship of the Saxons and Danes in this island, as well as of many other nations. Having been a mighty and successful warrior, he was believed to be the god of war, who gave victory, and revived courage in the conflict. Having civilised, in some measure, the countries which he conquered, and introduced arts formerly unknown, he was also worshipped as the god of arts and artists. He was at the same time a priest, a soldier, a poet, a monarch, and a victor. He imposed upon the credulity of his superstitious countrymen, and made them believe that he could raise the dead, and that he was acquainted with futurity. When he had ex- tended his power and increased his fame by conquest and by artifice, he determined to die in a different way from other men. He assembled his friends, and with the sharp point of a lance he made in his body nine different wounds in the form of a circle; and, when expiring, he declared that he was going to Scythia, where he should become an immortal god. He added that he would prepare bliss and felicity for those of his countrymen who lived a virtuous life, who fought with bravery, and who died like heroes in the field of battle. These injunctions had the wish- ed-for effect : his countrymen superstitiously be- lieved him, and constantly recommended them- selves to his protection when they engaged in battle; and they entreated him to receive the souls of such as fell in war. In a word, to this Odin his deluded worshippers impiously ascrib- ed all the attributes which belong only to the true God ; to him they built magnificent temples, offered many sacrifices, and consecrated the fourth day of the week, which is still called by his name Woden's day, or Wednesday, in Eng- land and in all the other countries where he was formerly worshipped. Notwithstanding all this, the founders of all the kingdoms of the Anglo- Saxon heptarchy pretended to be descended from Wodin, and some of them at the distance only of a few generations.' His wife's name was Frea. See Mythology. Grater, with great boldness, insists that the island Sams, mentioned in the Edda, is the Samos of the Archipelago ; and, from some faint resemblance between the Gothic cosmogony and that of a Samian philoso- pher, he infers Odin to have been a pupil of Melissus ; and thus he throws back his antiquity to a period which would make it probable that the Scythian kings of Herodotus are the heroes deified in Gothic song. Mallet defends the equally wild conjecture that the arms of Pom- pey occasioned Odin to migrate from the Euxine to the Baltic. In this case, Pliny and Tacitus would have met with traces of his progress among the nations whom

they describe. Extensive re- cent conquests, terminating in the imposition of a new religion, could not but live in the memory ,.ven of barbarians. It is therefore most proba- ble that Odin is posterior to these writers, and that the Anglo-Saxon historians are correct, who describe Hengist as fifth in descent from Odin, and who have, preserved the intervening pedi- gree. An interval of 125 years would then be

sufficient to allow between Odin himself and his grandson Vecta's great-grandson, Hengist. This would place Odin in the year of Christ 325, about seventy years before Alaric, and would plausibly account for the momentous impulse which, about that time, propelled the Gothic multitudes against all the provinces of the Ro- man empire.

Odin is called in the Edda, and by Snorro, Runhofdi and Runomfauthr, father of letters, king of spells, as the poets phrase it ; which favors the opinion that he introduced the art of writing among the Goths. Now Tacitus expressly pro- nounces the alphabet to have been unknown to the Germans ; literarum secreta viri pariter ac fceminse ignorant ; Odin, then, must have lived subsequently to this period. The oldest Runic inscriptions on stone commemorate the fortunes of soldiers who had served at Constantinople in the corps of 'arangi ; and the art of stone cut- ting in the north is therefore posterior to the transfer of the seat of empire from Rome to Constantinople. Now Odin, according to Snorro, first introduced the practice of using grave-stones : in his time, no doubt, they were simply in

De ODIO ET Atia. The writ de odio et atia was anciently directed to the sheriff, com- manding him to enquire whether a prisoner charged with murder was committed upon juit cause of suspicion, or merely propter odium tt atiam, for hatred and ill-will; and if upon the inquisition due cause of suspicion did not then appear, then there issued another writ for the sheriff to admit him to bail. This writ, accord- ing to Bracton, ought not to be denied to any man ; it being expressly ordered to be made out gratis, without any denial, by magna charta, c. 26, and stat. Westm. 2. 13, Edw. I. c. 29. But tJie statute of Gloucester, 6 Edw. I. c. 9, restrain- ed it in the case of killing by misadventure or self-defence; and the statute 28 Edw. III. c. 9 abolished it in all cases whatsoever ; but, as the stat. 42 Edw. III. c. 1 repealed all statutes then in being contrary to the great charter, Sir Ed- ward Coke is of opinion that the writ de odio et alia revived. See Habeas Corpis.

O'DIOUS, ××(//. \ ××t. udieux; Lˆ X. odiosu!ˆ, O'DiovshY, adv. iˆodiuni. Hateful; invidi 0'DiousN××SS,n.s. ˆous; exposed to, or caus-

O’dium. 3 ing hate: odiously and

odiousness follow these senses : odium, quality or state of provoking hatred ; hence invidious- ness; disrepute; badness of character; op- probrium.

There was left of the blood royal an aged gentle- man of approved goodness, who had gotten nothing by his cousin’s power but danger from him, and odiousness for him. Sidneu.

Another means for raising money was, by in- quiring after offences of ofhcers in great place, who, as by unjust dealing they became most odious, so, by justice in their punishment, the prince acquired both love and applause. Haxiuard.

The odium and offences which some men’s rigour

or remissness had contracted upon my government, I was resolved to have expiated. ###&‘J”^ Charles.

He had rendered himself odious to the parliament.

ClareiLiloH.

The seventh from thee, The only righteous in a world perverse, And therefore hated, therefore so beset With foes, for daring single to be just. And utte## odious truth, that God would come To judge them with his saints.

Milton’s Paradise Lust.

Had thy love, still odiously pretended. Been as it ought, sincere, it would have taught thee Far other reas’nings. Milton s Agouistes.

Harsh speech rendereth advice odious and un- saroury to the receiver. Barrow.

Let not the Trojans, with a feigned pretence Of proffered peace, delude the Latian prince : Expel from Italy that odious name. Dryden.

Arbitrary power no sober man can fear, either from the king’s

disposition or his practice ; or even where you would odiously lay it, from his fcinisters.

Id. She threw the odium of the fact on me,

And publickly avowed her love to you. Id.

For ever all goodness will be most charming ; for ever all wickedness will be most odious. Sprat.

Hatred is the passion of defence, and there is a kind of hostility included in its very essence. But then, if there could have been hatred in the world, when there was scarce any thing odious, it would have acted within the compass of its proper object.

South.

Projectors, and inventors of new taxes, being hateful to the people, seldom fail of bringing odium upon their master. Davenaiil.

She breathes the odious fume

Of nauseous steams, and poisons all the room.

Granville.

Green fields, and shady groves, and crystal springs, And larks, and nightingales, are odious things ; But smoke, and dust, and noise, and crowds, delight.

Y'oung.

Mar. Such reports are highly scandalous.

Mrs. C. So are they child, shameful, odious. But the world is so censorious no character escapes.

Sheridan.

ODO, or St. Odo, second abbot of Clugni in France, illustrious for learning and piety in the tenth century. Tire sanctity of his life contributed greatly to enlarge the congregation of Clug-ni; and he was so esteemed that bishops, and secular princes, usually chose him for the arbiter of their disputes. He died about the year 942, and his works are printed in the Bibliotheque of Clugni.

Odo Camtianus, so called as being a native of Kent in England, was a

Benedictine monk in the twelfth century, in which order his learning and eloquence raised him to the dignity of prior and abbot. He was the intimate friend of arch- bishop Becket. He composed Commentaries on the Pentateuch and the Snd Book of Kings ; Moral Reflections on the Psalms ; treatises en- titled De Onere Philistim ; De Moribus Ecclesi- asticis; De vitiis et virtutibus Animse, &c.

ODOACER, king of the Heruli, according to Ennodius, was only a private man in the guards of the emperor Auguslulus, when (A. D. 476,

under the consulship of Basilicus and Armatus) the barbarians chose him for their leader. The barbarians thought, as they often defended Italy, they had a right at least to part of it ; but, upon demanding it, they were refused, and the conse- quence was a revolt. Odoacer is said to have been a man alike capable of commanding an army or governing a state. Having left liis own country when he was very young, to serve in Italy, as he was remarkably tall, he was ad- mitted among the emperor's girards, and con- tinued in that station till the above year ; when, putting himself at the head of the barbarians in the Roman pay, who, though of different nations, had unanimously chosen him for their leader, he marched against Orestes and his son Augustulus, who still refused to share any of the lands in Italy. The Romans, being inferior both in num- bers and valor, were easily conquered : Orestes was ordered to be slain; but Augustulus was spared ; and, though stripped of his dignity, was treated with humanity, and allowed a liberal sum for his support and that of his relations. Odoacer was proclaimed king of Italy, but assumed neither the purple nor any other mark of im- perial dignity. He was afterwards defeated and slain by Theodoric the Ostrogoth.

ODONTALGIC, in medicine, from Or. oSov- ToKyia, the tooth ache {odovg, a tooth, and aXyog, pain) is a term applied to all remedies for the tooth-ache. When the aftection is rheumatic, blistering behind the ear, or applying flannel dipped in spirits and covered with ginger or pepper, will generally cure ; but, when it pro- ceeds entirely from the injury of a carious tooth, the pain is much more obstinate. In this case it has been recommended to touch the pained ca rious part of the tooth with a hot iron, or with oil of vitriol, in order to destroy the aching nerve ; to hold spirits in the mouth ; to put a drop of oil of cloves into the hollow of the tooth, or a pill made of camphor, opium, and oleum caryophylli. Others recommend gum mastich, dissolved in oleum terebinthinae ; others camphor alone, kept in the mouth. The great Boerhaave is said to have applied camphor, opium, oleum caryophylli, and alkohol, upon cotton. The caustic oil which may be

collected from writing paper, rolled up tight, and set fire to at the end, will sometimes destroy the exposed nervous sub- stance of a hollow tooth. The application of radix pyrethri, by its power of stimulating the salivary glands, either in substance or in tincture, has also been attended with good effects. But one of the most useful applications of this kind is strong nitrous acid, diluted with three or four times its weight of spirit of wine, and introduced into the hollow of the tooth, either by means of a hair pencil or a little cotton. When the consti- tution has had some share in the disease, the Peruvian bark has been recommended, and per- haps with much justice, on account of its tonic and antiseptic powers. When the pain is not fixed to one tooth, leeches applied to the gum are of great service. But very often all the foregoing remedies will fail, and the only infallible cure is to draw the tooth.

ODONTOLOGY, in anatomy. See Teetb

CDORjOr “^ Fr. odeur; Lat.

O’dour, n. s. odor. Scent ; smell ;

O’borate, adj. [fragrance; perfume.

Odorif’erous, Todorate is having a

OdorifʼerousnesSjW.s. I strong smell, good or

O’dorous, adj. J bad : odoriferous and

odorous, yielding scent ; usually yielding a sweet

or agreeable scent; fragrant: odoriferousness,

sweetness of scent ; fragrance.

Such fragrant flowers do give most odorous smell, But her sweet odour did them all excel. Speiuer.

Me seemed I smelt a garden of sweet flowers, That dainty odours from them threw around, For damsels fit to deck their lovers’ bowers. Id. Smelling is with a communication of the breath, or vapour of the

object odorate.

Bacon's A'atural Uistnru. True virtues, like precious odouM, are sweeter when incensed and crushed. Bacon.

Democritus, when he lay a dying, sent for loaves of new bread, whicn, having opened and poured a little wine into them, he kept himself alive with the odour till a certain fast was past. Id.

A bottle of vinegar so buried, came forth more lively and odoriferous, smelling almost like a violet.

Id. There stood in this roome presses that enclosed Robes odoriferous. Chapman.

Gentle gales, Fanning their odorij'erous wings, dispense Native perfumes, and whisper whence they stole These balmy spoils. Milton's Paradise Lost.

By her intercession with the king she would lay a most seasonable and popular obligation upon the whole nation, and leave a pleasant odour of her grace and favor to the people behind her. Clarendon.

They refer sapor unto salt, and odour unto sulphur ; they vary much concerning colour. Browne.

Their private roofs on odorous timber borne, Such as might palaces for kings adorn. Waller.

Smelling bodies send forth effluvia of steams, without sensibly wasting. A grain of musk will send forth odoriferous particles for scores of years, without its being spent. Locke.

The Levites burned the holy incense in such quantities as refreshed the whole multitude with its odours, and filled all the region about them with per- fume. Addison.

We smell, because parts of the odorous body touch the nerves of our nostrils.

' Cheyne's Philosophical Principles.

Where silver riv'lets play through flowery meads, And woodbines give their sweets, and limes their

shades, Black kennels absent odours she regrets. And stops her nose at beds of violets. Young.

With vials full of odom-s sweet. And harps of sweetest sound. Watts.

OECOLAMPADIUS (John), a celebrated German reformer, born at Reinspurg in Fran- conia, in 1482. He studied at Heilbrun, and afterwards at Heidelburg, where he took his de- gree of bachelor in philosophy in his fourteenth year. His reputation induced the elector-palatine to appoint him preceptor to his son. He com- pleted his studies at Tubingen, under Reuchlin ; after which he was invited to Basil, and made D. D. At Augsburg he embraced the sentiments of Luther, and published his Confession, which containing doctrines disagreeable to the monks of his convent, he quitted it, and returned to Basil in 1522, where the council appointed him professor of divinity and city preacher. lie Vol. XVI.

translated St. Chrysostom's Commentaries upon Genesis into Latin. In the dispute between Luther and Zuinglius, respecting the eucharist, he defended the opinions of the latter, in a work which is reckoned well written. In 1528 he married, and completed the reformation of the churches of Basil and Ulra. In 1529 he assisted at the conference at Marspurg; and, returning to Basil, died of the plague in 1531, aged forty- nine. A monument is erected in the cathedral to his memory. He left a son and two daughters. His works are numerous and highly esteemed.

CECONOM'ICS, 71. s. Greek oiKovofiiKoˆ. Household management. See Economy.

A prince's leaving his business wholly to his ministers is as dangerous an errour in politicks as a master's committing all to his servant is in oecano- micks. L'Estrange.

OECONOMISTS, a sect of philosophers in France, ihe founder of which was Dr. Duquesnai, who had so well insinuated himself into the favor of Louis XV. that he used to call him his thinker. They were styled Oeconomists because the economy and order to be introduced into the finances, and other plans of alleviating the dis- tresses of the people, were their constant topics. Under pretence of ameliorating the condition of the people, and instructing them, they drew several of the king's best friends in, to patronise their society and their ostensible measures; but in the mean time held private and secret meetings with all whom they could trust, at baron Hol- bach's ; where they prepared and revised tracts for publication ; in some of which they disguised their sentiments, but in others were so bold as to publish under such titles as Christianity Un- masked ! &c. Tlieir principal members were Messrs. D'Alembert, Turgot, Condorcet, Diderot, La Harpe, and La

Moignon, keeper of the seals.

CECUMEN'ICAL, adj. Gr. otKnntviKog. Ge- neral ; universal : applied in particular to certain ecclesiastical councils.

This Nicene council was not received as an oecu- menical councd in any of the eastern patriarchates, excepting only that of Constantinople.

Stillingfiett.

We must not make a computation of the Catholick church from that part of it which was within the compass of the Roman empire, though called ecu- menical. Lesley.

OECUMENIUS, a Greek author who flou- rished in the middle of the tenth century, and wrote a paraphrase of some of the books of the New Testament in Greek. His works were printed, along with those of Aretas, in 1631, in 2 vols, folio.

GEDE'MA,7j..?.

(Ei

CEdem'atous. 3 of swelling, stances.

It is primarily generated out of tue eff'usion of melancholick blood, or secondarily out of the dregs and remainder of a phlegmonous or oedematick tu- mour. Harvey.

The great discharge of matter, and the extremity of pain, wasted her, oedenuitous swellings arose in her legs, and she languished and died. Wiseman.

An (Edem.\, or phlegmatic tumor, in medi- cine and surgerj', is a tumor attended with pale- ness and cold, yielding little resistance, retaining

K

jis. roiio.

EDE'MA, Tj..?. "^ From Gr. oiˆtijia, oihw, EDEUA.T'ic,adj. ˆ to swell. A particular kind Edem'atous. J of swelling. See the in-

the print of the finger when pressed with it, and accompanied with little or no pain. It has no certain situation in any particular part of the body, since the head, eye-lids, hands, and some- times part, sometimes the whole, body is af- flicted with it. When this last is the case, the patient is said to be troubled with a cachexy, leucophlegmatia, or dropsy. See Medicine.

OLDENBURG, or Soprony-Varmegye, a pa- latinate of" Hungary, adjacent to Austria, the lake of Neusiedl, and the river Raab. Its area is 1300 square miles. Towards the east it is flat, but the rest is intersected by ranges of moun- tains, so that it affords a great variety of soil. Its climate is, however, mild ; and it produces much rye, wheat, and fruits. Near the capital, and in the vicinity of Rust, is produced a red wine, in great request. The mineral products are coal and lime, which are both exported. Population 165,000, composed of a mixed race, of German and Magyar descent, with Croats, and soYne Jews.

Oedenburg, or Soprony (the Roman Sopro- nium), the capital of the palatinate of this name, stands in a pleasant district, between Hungary and Austria Proper, and is neatly built. It has one Lutheran and two Catholic churches, a ca- thedral chapter, a Catholic and Lutheran gym- nasium, and is almost the only place in Hungary that has a manufacture of fine woollen. It pos- sesses also a sugar refinery, and manufactures of glass and potash. But Oedenburgh derives its chief importance from its markets for corn and cattle. The number yearly sold is 40,000 head of cattle, and 80,000 hogs. Of the latter a large proportion are driven from the frontiers of Tur- key. Inhabitants 12,500, partly of Hungarian, partly of German descent. Thirty-seven miles S.S.E. of Vienna.

OLDER (George Louis), an eminent German physician and botanist, born at Anspach in 1728, studied at Gottingen under Haller. Having practised as a physician, at Sleswick, he was in 1752 invited to the botanical chair at Copen- hagen. The first part of his Flora Danica ap- peared in 1763. He also published, in 1769, a Memoir on the Civil and Political State of the Peasantry. Count BernstorfF consulted him ; and under Struensee he was appointed counsel- lor of finance, and president of the council of revenues for Norway. On the fall of that minis- ter he removed from Copenhagen, and was made bailli of the duchy of Oldenburgh, where he es- tablished a fund for the benefit of widows. He died the 28th of October, 1791. Besides the works referred to, he published Elementa Bo- tanica, 1762 ××× 64, 2 vols.

Bvo.; Nomenclator Botanicus, 1769, 8vo. ; Figures of Plants grow- ing spontaneously in Denmark and Norway, 1766, folio; Observations on a Bank for Wi- dows, Copenhagen, 1771, Bvo.; and many me- moirs in periodical journals. Linnseus, in honor of this botanist, gave the name of (Edera to a genus of plants of the Cape of Good Hope.

OEDERA, in botany, a genus of the polygamia segregata order, and syngenesia class of plants : CAL. are multiflorous : the cor. tubular, hermaph- rodite, and one or two feminine ones ligulate ; the receptacle is chaffy ; the pappus with nu- merous chaff".

ffiDIPUS, in fabulous history, a son of Laius,

king of Thebes, and J ocasta. Laius, the fathe* of (Edipus, was informed by the oracle, as soon as he married Jocasta, that he must perish by the hands of his son. This dreadful intelligence awakened his fears, and, to prevent the fulfilling of the oracle, he resolved never to approach Jo- casta ; but his resolutions were violated in a fit of intoxication. The queen became pregnant, and Laius ordered his wife to destroy her child as soon as born. The mother did not obey, yet she gave the child to one of her domestics, with orders to expose him in the mountains. The servants bored the feet of the child, and suspended him with a twig, by the heels, to a tree on mount Cithaeron, where he was soon found by one of the shepherds of Polybus, named Phorbas, king of Corinth. The shepherd carried him home, and Peribcea, the wife of Polybus, who had no children, educated him as her own child. The accomplishments of the infant, who was named CEdipus on account of the swelling of his feet (oiStw, to swell, and ttoSeq, the feet), soon became the admiration of the age. His companions envied him, and one of them told him that he was an illegitimate child. On this he went to consult the oracle of Delphi, and was there told not to return home ; for if he did he must neces- sarily be the murderer of his father, and the hus- band of his mother. This answer terrified him ; he knew no home but the house of Polybus, and therefore resolved not to return to Corinth. He travelled towards Phocis, and, in his journey, met in a narrow road Laius on a chariot with his armor- bearer. Laius ordered Qˆdipus to make way for him. Qildipus refused, and a contest ensued, in which Laius and his armor-bearer were both killed. Oedipus, ignorant of the rank of the men whom he had killed, continued his journey, and was attracted to Thebes by the fame of the Sphynx, whose cruelty had become an object of public conoern ; and, as the successful explana- tion of an enigma would end in the death of the Sphynx, Creon, who at the death of Laius had ascendwi the throne of Thebes, promised his crown and Jooasta to him who succeeded in the attempt. Tlie enigma proposed was this : ††† What animal in

the morning walks upon four feet, at noon upon two, and in the evening upon three ? This was left for O'.dipus to explain, and he said to the monster that man, in the morning of life, walks upon his hands and his feet; when he has attained the years of manhood, he walks upon his two legs ; and in the evening he sup- ports his old age with the assistance of a staff". The monster, mortified at the true explanation, dashed his head against a rock and perished. (Edipus then married Jocasta, by whom he had two children, Eteocles and Polynices. An en- quiry at length into the death of Laius disclosed to hira the parricide and incest of which he had been unintentionally guilty. Struck with horror at the unintentional criminality in which he had been involved, he tore out his eyes, as unworthy to behold the light, and taking sanctuary in the grove of the furies in Attica, there ended his miserable life. Jocasta also put an end to her life, and, to complete the tragedy, their sons were distinguished by the inveteracy of their

mutual hatred. The death of Gˆdipus is placed by chronologists about the year 1228 B. C.

OELAND, is a long narrow island of the Baltic, separated from the coast of East Goth- land by the Strait of Calmar, from two to three leagues broad. The east coast of the island is bold and clean, but the west is lined with dan- gers. An elevated ridge, called Alwar, runs through its whole length, which is twenty-five leagues, and its breadth only one and a half to two. The base of the island is a calcareous reddish stone with green and gray veins, besides which it possesses aluminous schistus, free-stone, blocks of granite, porphyry, rock crystal, and a great quantity of petrified shells, and coralagi- nous substances. All the elevated ground is stony and barren, producing only a scanty pas- ture for sheep. The rivulets which descend from these elevations fertilise their declivities as well as the border of level ground towards the sea, where are produced the oak, beech, hazle, and walnut, besides pasture for a consi- derable number of horses, horned cattle, and sheep. The horses are very small but active and hardy. The island has some wild deer and boars. The population, in 1800, was 22,605 souls, whose chief industry, besides raising cattle, is cutting building-stone, burning lime, and drawing the aluminous schistus from the mines, all of which are sent to the continent. There

is no town on the island, but Borgholm is an ancient and royal castle on the west, sur- rounded with round towers at the angles, and high walls, without which is a village.

The southern channel into the strait of Calmar is between the island of Oeland and a group of rocks called the Utclippers or Out-lookers : between these latter and the main there is no ship channel, the space being filled with rocks. Nearly in the middle of the strait, towards its northern extremity, is an insular rock almost perpendicular, 230 feet high, and sarrouoded by reefs. In its crevices grow some oaks, beeches, and birch, and its only inhabitants are wild goats and sea-birds. Its proper name in Swed- ish is BlokuUa, or the Blue Mountain, but, as it is celebrated in the popular tales of the country as the resort of sorcerers, the superstitious sea- men, believing this a name of ill omen, call it the V'irgin's Mountain.

OEILTAD, 71. s. Fr. oeillade, oeil. A glance; wink.

She gave oeiliads and most speaking looks To noble Edmund. Shakspeare. King Lear.

OELS, a principality of Silesia, now part of the government of Breslau, belonging to the duke of Brunswick. It has an area of 740 square miles, with 85,000 inhabitants, and is said to yield an income of ––15,000 a year.

Oels, a town of Prussian Silesia, the capital of the above principality, is situated on a small river of the same name, sixteen miles E. N. E. of Breslau. It is surrounded with walls, has a palace where the prince formerly resided, one Catholic and five Protestant churches, a free-school, public library, and museum of natural history. Population 3800.

OENANTHE, water dropwort, a genus of the digynia order and pentandria class of plants ;

natural order forty-fifth, umbellatae. The florets are difform ; those of the disc sessile and barren; the fruit crowned with the calyx. There are five species ; of which the most remarkable is the

O. crocata, or hemlock drop-wort, growing frequently on the banks of ditches, rivers, and lakes, in many parts of Britain. The root and leaves are strong poison; several persons have perished by eating it, through mistake, for water parsnips or for celery, which last it resembles pretty much in its leaves. Lobel calls this plant oenanthe aquatica cicutae facie. It grows in great plenty all over Pembrokeshire, and is called by

the inhabitants five-fingered root : it is much used by them in cataplasms, for the felon or worst kind of whitlow. They eat some parts of it, but carefully avoid the roots and stalk. These indeed are most pernicious, and prove instantly fatal, unless a proper remedy is ap- plied. This plant is so extremely like celery, and so apt to be mistaken for it, that it cannot be enough guarded against.

Mr. Howard, a surgeon, at Haverford West, relates the case of eleven French prisoners who had the liberty of walking in and about the town of Pembroke. Three of them, being in tlie fields a little before noon, dug up a large quan- tity of this plant, which they took to be wild celery, to eat with their bread and butter for dinner. After washing it they all three ate, or rather tasted of the roots. As they were enter- ing the town, without any previous notice of sickness at the stomach, or disorder in the head, one of them was seized with convulsions. The other two ran home, and sent a surgeon to him. The surgeon endeavoured first to bleed and then to vomit him ; but those endeavours were fruit- less, and he died presently. Ignorant of the cause of their comradeˆs death, and of their own danger, they gave of these roots to the other eight prisoirers, who ate of them with their din- ner. A few minutes afterwards the remaining two who gathered the plants were seized in the same manner as the first, of which one died ; the other was bled, and a vomit with great diffi- culty forced down, on account of his jaws being as it were locked together. This operated, and he recovered, but was some time affected with dizziness in his head, though not sick, or the least disordered in his stomach. The other eight, being bled and vomited immediately, were soon well. Stanpaart Vander Wiel mentions two cases o fthe fatal effects of eating the poisonous root, both of which were attended with great heat in the throat and stomach, sickness, vertigo, and purging; they both died in the course of two or three hours after eating the root. The Dutch physicians make mention of similar mis- chief from the use of the same root; and Sir W. Watson cites an instance of a person who was poisoned by eating the leaves of the plant boiled in pottage. Most brute animals are equally affected by this poison with man.

OENEUS, in fabulous history, a king of Caledonia in iEtolia, son of Parthaon, grandson of Neptune, and father of Meleager, Tydei's Dejanira, &c. See these articles. He was driven from his throne by the sons of his brother

Agrius, but restored by his grandson Diomedes, and died at Gene.

OENOMAUS, in fabulous history, the son of Mars, by Sterope, the daughter of Atlas and father of Hippodamia, the wife of Pelops. See Pelops.

OENONE, a nymph of Mount Ida, daughter of the river Cebrenus, and wife of Paris, before he was known to be the son of king Priam. Being endued with the spirit of prophecy, she foretold to him that his voyage to Greece would be attended with the ruin of his family and coun- try ; and that he would return to her for aid at the hour of his death ; all which happened, and Genone killed herself on his body. See Paris.

GENOPT.E, in Grecian antiquity, a kind of censors at Athens, who regulated entertainments.

GENGS, from Oivoq, vinum, wine, in orni- thology, a name given to the stock-dove, or wood-pigeon, called also by some vinago, from its winecolor ; somewhat larger than the com- mon pigeon, but of the same shape and general color. Its neck is of a fine changeable hue, as differently opposed to the light ; and its breast, shoulders, and wings, are of a fine purplish Ime, or red wine color. Its legs are red, and feathered a little below the joint. See Columba.

GENGTHERA, tree prnnrose, a genus of the monogynia order, and octandria class of plants ; natural order seventeenth calycanthemˆ : cal. is quadrifid ; the petals four : the caps, cylindric beneath; the seeds naked. There are seven species ; the most remarkable are these : ⁂

1. G. biennis, the common biennial tree prim- rose, has a long, thick, deeply striking root; crowned with many large, oval, spear-shaped, plane, spreading leaves ; upright, thick, firm, rough, hairy stems, rising three or four feet high ; garnished with long, narrow, lanceolate, close- sittinsc leaves, irreg-ularly ; and at all the axillas, fromˆthe middle upwards, large bright yellow flowers.

2. G. fruticosa, the shrubby, narrow-leaved, perennial tree-primrose, has long thick roots ; upright under-shrubby like red stems, two or three feet high: spear-shaped, lightly indented leaves ; and at the axillas pedunculated clusters of yellow flowers, succeeded by

pedicellated, acute-angled capsules.

3. G. octovalvis, the eight- valved, smooth, biennial tree primrose, has upright, firm, some- what hairy stems, rising a yard high ; oblong, spear-shaped, pointed, plane, smooth leaves ; and at the axillas large bright yellow flowers.

4. G. puraila, the low perennial tree primrose, has fibrous roots, crowned with many oval, spear-shaped, close-sitting leaves ; slender herba- ceous stems from ten to twelve inches long ; gar- nished with spear-shaped, blunt, smooth leaves, having very short foot-stalks ; and at the axillas smallish bright yellow flowers, succeeded by acute angled capsules. All these plants flower very profusely in June and July, coming out almost half the length of the stalks from the axillas ; and, as the stalk advances in stature, new flowers are produced, succeeding those be- low ; in which order the plants continue flower- ing from about Midsummer till Gctober : each flower is moderately large and conspicuous, con-

sisting of four plane petals, wiiich with tne calyx form a very long tube below, and spreading above, generally expand most towards the even- ing; and are succeeded by plenty of seed in autumn. Tliese plants, though exotics from Ame- rica, are all very hardy, prosper in any common soil and situation, and have been long in the English gardens, especially the three first sorts; but the Oenothera biennis is the most commonly known. They are proper to be employed as plants of ornament for embellishing the pleasure garden ; they may be placed any where, and will effect a very agreeable variety three or four months with their plentiful blow of flowers. The biennial kinds must be raised annually from seed, for they totally perisli after they have flowered. But the perennials, once raised, con- tinue for years by the root.

GENGTRI, the people of Genotria. These Oenotrians were called aborigines ; and, after they had been engaged for many years in a war with the Siculi, entered into an alliance with a colony of the Pelasgi, who came from Tliessaly into Italy, after having been driven from the for- mer country.

GENGTRIA, an ancient name of Italy; so- called from the Genotri (Virgil) ; who inhabited between Paestum and Tarentum (Gvid), originally Arcadians (Dionysius Halicarnassceus), who came under the conduct of Genotrus, son of Ly- caon, seventeen generations before the war of Troy, or 459 years, at twenty- seven years each generation, and gave name to the people. Cato derives the name from Genotrus, king

of the Sabines and Etruscans : but 'arro from a king of the Latins of the same name, and Servius from the Greek name for wine, for which Italy was famous ; of which opinion also is Strabo.

G’ER. Contracted from over. See Gver.

GESEL, an island of the Baltic, belonging to Russia, at the mouth of the gulf of Riga. Its length is about seventy miles ; its breadth various, being at one place above fifty, and at another not above two or three miles : its area is 1 1 44 square miles. It contains the small town of Arensberg, the chief place of a circle in the government of Riga. Gesel is in general level, but the soil is poor : when manured, however, it produces wheat, rye, barley, and in good sea- sons oats and peas. The forests are also exten- sive, and the stone quarries fine. Many blocks have been extracted from them for statuary. Tlie fisheries on the coast are also productive. Population, including the small adjoining islands of Moen and Runoe, 35,000.

GESGPH’AGUS, n. s. Of Or. oiaoc, wicker, and

Both run by one another, till at the ninth the oeso- phagus turns again to the left, pierces the midriff, and is continued to the left orifice of the stomach.

Quincv

Wounds penetrating the oesophagus, and aspera ar- teria, require to be siitched close, especially those of the oesophagus, where the sustenance and saliva so continually presseth into it. Wiseman’s Surgery. Gesophacts. See Anatomy. GESTRUS, in entomolog}’, a genus of insects belonging to the order nf diptera. It has no

mouth; but three punctures, without trunk or beak : antennee taper, proceeding from a lenti- cular joint. This is one of the most curious genera of insects. They are distinguished into several species, named from the different places ###wherein they deposit their eggs. Some, know- ing that their eggs cannot be hatched but under the skins of living creatures, such as bulls, cows, reindeer, stags, and camels, fix upon them at the instant of laying their eggs. From the hinder part of their body issues a whimble of wonder- ful structure. It is a scaly

cylinder, composed of four tubes, which draw out like the pieces of a spying-glass ; the last is armed with three hopks, and is the gimblet with which the cestri bore through the tough hide of horned cattle. The animal seems to experience no pain from the puncture, unless the insect, plunging too deep, attacks some nervous fibre; in which case the beast runs about, and becomes furious. The eggs being hatched, the grub feeds on the mat- ter of the wound. The place of its abode forms upon the body of the quadrupeds a bunch sometimes above an inch high. When full grown, the larva breaks through the tumor, and slides down to the ground, in the cool of the morning, that it may neither be overpowered by the heat of the day, nor chilled by the cold of the night : it then digs itself a burrow, into ###which it retires. Its skin grows hard, and turns to a very solid shell. There it is transformed to a chrysalis, and afterwards to a winged insect. The shell wherein the oestrus is enclosed is of so strong a texture, that it could not make its way out, if at one of the ends there were not a small valve, fastened only by a very slight filament. The first push the cEstrus makes, the door gives way, the prison opens, and the insect wings its way to ###woods and places frequented by cattle. See Entomology.

OETA, in ancient geography, a mountain of Thessaly, extending from Thermopylae west to the Sinus Ambracius, and crossing at right angles the mountainous country stretching out between Parnassus on the south and Pindus on the north. At Thermopylae it is very rough and high, rising and ending in sharp and steep rocks, affording a narrow passage between it and the sea from Thessaly to Locris (Strabo), with two paths over it ; the one above Trachis, very steep and high ; the other through the country of the .ˆnianes, much easier and readier for travellers : by this it was that Leonidas was attacked in rear by the Persians. (Pausanias.) Here Her- cules laid himself on the funeral pile (Silius Italicus, Ovid) ; the spot thence called Pyra, according to Livy, who says, that the extreme mountains to the east are called Oeta ; and hence the poets allege that day, night, sun, and stars arose from Oeta (Seneca, Silius Italicus, Catullus, Virgil’s Culex) : circumstances which show the height of this mountain. It is now called Banina.

OF, prep. Sax. op. Isl. of. Concerning; relating or belonging to ; from ; among ; by or pro- duced by ; according to : denoting power ; cau- sality; ability; choice; qualities or properties; composition ; extraction ; adherence ; motive ; form or manner ; proportion : ‘ of late’ seems to moan ‘ in late time ;’ ‘ of old,’ ‘ in old time ‘

It was called Corcyra of Corcyra the daughter of

.iEsopUs. Sanrfi/□□’□□ Travelt.

I was friendly entertained q/“the English consul.

Sandys.

The captain of the Helots, with a blow whose vio- lence grew of fury, not of strength, or of strength proceeding of fury, struck Palladius upon the side of the head. Sidney.

As if our Lord, even of purpose to prevent this fancy of exteraporal and voluntary prayers, had not left, of his own framing, one which might remain as a part of the church liturgy, and serve as a pattern whereby to frame all other prayers with eflBcacy, yet without superfluity of words. Hooker.

I cannot instantly raise up the gross Of full three thousand ducats. Shakspeare.

He borrowed a box of the ear of the Englishman, and swore he would pay him again when he was able.

Id.

Your Highness shall repose you at the Tower. □□□ I do not like the Tower o/any place. Id.

Tubal, a wealthy Hebrew of my tribe, Will furnish me. Id. Merchant of Venice.

The chariot was all of cedar, gilt and adorned with crystal, save that the fore-end had pannels of sap- phires set in borders of gold, and the hinder end the like of emeralds of the Peru colour. Bacon.

Like heaven in all, like earth in this alone. That tho’ great states by her support do stand.

Yet she herself supported is of none. But by the finger of the Almighty’s hand. Davies.

The senate And people of Rome, of their accustomed greatness. Will sharply and severely vindicate Not only any fact, but any practice ‘Gainst the state. Ben Jmtsan’s Catiline.

The quarrel is not now of fame and tribute, Or of wrongs done unto confederates. But for your own republick. Ben Jonton.

The most renowned of all are those to whom the name is given Philippinae. Abbot.

He was a man of a decayed fortune, and of no good education. Clarendon.

O miserable of happy ! is this the end Of this new glorious world, and me so la*e The glory of that glory, who now become ###

Accursed, o/" blessed? Milton's Paradise Lost. The Venice glasses would crack of themselTes.

Boule. Of late, divers learned men have adopted the three hypostatical principles. Id. on Colours.

They do of right belong to you, being most of them first preached amongst you. Tillotson.

All men naturally fly to God in extremity, and the most atheistical person in the world, when for- saken of all hopes of any other relief, is forced to ac- knowledge him. Id. Of himself is none. But that eternal infinite and one, Who never did begin, who ne'er can end ; On him all beings, as their source, depend.

Dryden. He, to his natural endowments of a large inven- tion, a ripe judgment, and a strong memory, has joined the knowledge of the liberal arts. Id.

Our sovereign Lord has pondered in his mind The means to spare the blood of gentle kind ; And, of his grace and inborn clemency. He modifies his first severe decree. Id.

Tancred, whose delight Was placed in his fair daughter's daily sight, 0/ custom, when his state affairs were done, NVould pass his pleasing hours with her alone.

Id.

OFF

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OFF

In days o/old there lived, of mighty fame,

A valiant prince, and Theseus was his name. Id.

Mother, says the thrush, never had any such a friend as I have of this swallow. No, says she, nor ever mother such a fool as 1 have of this same thrush.

L' Estrange. The rousing of the mind with some degrees of vigour, does set it free from those idle companions.

Locke. How many are there of an hundred, even amongst scholars themselves '! Id.

This cannot be understood of the first disposition of the waters, as they were before the flood.

Burnet. Peace, of all worldly blessings, is the most valuable.

SmaUridge. No particle of matter, nor any combination of particles ; that is, no bodies can either move (f themselves, or of themselves alter the direction of their motion. Chei/ne.

We are not to describe our shepherds as shepherds at this day really are, but as they may be conceived then to have been, when the best of men followed the employment. Pope.

To cultivate the advantages of success, is an affair of the cabinet ; and the neglect of this success may be of the most fatal consequence to a nation.

Swift. Howe'er it was civil in angel or elf. For he ne'er could have filled it so well of himself.

Id. The common materials which the ancients made their ships of, were the wild-ash, the ever-green oak, the beech, and the alder. Arbuthnot on Coins,

While heard from dale to dale, Waking the breeze resounds the blended voice Of happy labor, love, and social glee. Tliomson.

This truth at least let Satire's self allow, No dearth of bards can be complained cf now .: The loaded press beneath the labor groans, And printers' devils shake their weary bones.

Byron. It is with men of their wit as with women of their beauty. Tell a woman she is fair, and she will not be offended that you tell her she is cruel.

Canning.

OFF, adv., prep., & interj. } Sax. op ; Goth.,

Off'ing, n s. 5 Maes. Goth.,Teut.,

Belg., Dan., and Isl. af; Lat. ab. From ; out of; opposed to on; and denoting generally dis- junction ; separation ; breach of continuity, agreement, or promise ; absence ; distance ; dis- appointment ; opposition. ' Ofl-hand,' means unstudied ; quickly performed : ' to come off,' to escape or recede from a contract by accident or subterfuge : ' to get off' is to escape : ' to go ofT,' desert or abandon ; take fire and be dis- charged : 'off' also signifies a state of being, separately considered, as ' he is well or ill off'' means he is in a good or bad state or condition : as an interjection, off commands away, or to de- part ; and expresses disgust or abhorrence.

Philoclea, whose delight of hearing and seeing was before a stay from interrupting her, gave herself to be seen unto her with such a lightening of beauty upon Zelmane, that neither she could look on, nor would look off. Sidney.

Since the wisdom of their choice is rather to have my cap than my heart, I will practise the insinuating nod, and be oˆto them most counterfeitly .

Shakspeure. Coriolanus.

Where are you. Sir John ? come, off with your boots. Shakfpeare.

West of this forest, scarcely off a mile, In goodly form comes on the enemy. Id.

About thirty paces off were placed harquebusiers.

KnoUes. I continued feeling again the same pain ; and finding it grow violent I burnt it, and felt no more after the third time ; was never off my legs, nor kept my chamber a day. Temple.

See The lurking gold upon the fatal tree ; Then rend it off. Dryden.

Several starts of fancy oˆ"hand look well enough.

L'Estrange. Competitions intermit, and go off and on as it happens, upon this or that occasion. Id.

A piece of silver coined for a shilling, that has half the silver clipped off, is no more a shilling than a piece of wood which was once a

sealed yard is still a yard, when one half of it is broke off. Locke.

The questions no way touch upon puritanism, either off or on. Sanderson.

Cicero's Tusculum was at a place called Grotto Ferrate, about two miles ojf' this town, though most of the modern writers have fixed it to Frescati.

Addison on Italij. Truth, guide some genuine bard, and aid his hand To drive this pestilence from off the land. Byron.

OFFA, or Uffa, an Anglo-Saxon monarch, king of Mercia, who succeeded Ethelbald, A. D. 755. He treacherously murdered Ethelbert, king of the East Angles, and took possession of his kingdom. As an atonement he gave the tenth of his goods to the poor, went on a pilgrimage to Rome, instituted the tax called Peter pence, and built the monastery at St. Albans. He also erected the wall which bears his name. See England. He died in 794.

OF'FAL, n. s. Belgic qfval. Off and fall, i. e. that which falls off, or is refuse; waste, par- ticularly waste or refuse food ; coarse flesh ; car- rion ; any refuse.

What trash is Rome ! what rubbish and what offal ! Shakspeare.

I should have fatted all the region kites With this slave's offal. Id. Hamlet.

If we come into a barn floor and see some few grains scattered amongst a heap of chaff, we do not call it a corn heap, the quantity of the offal devours the mention of those insensible grains. Hall.

Cramm'd, and gorg'd, nigh burst With suck'd and glutted offal.

Milton's Paradise Lost. If a man bemoan his lot, That after death his mould'ring limbs shall rot, A secret sting remains within his mind ; The fool is to his own cast offals kind. Drijden. To have right to deal in things sacred was ac- counted an argument of a noble and illustrious de- scent ; God would not accept the offals of other professions. South.

He let out the offals of his meat to interest, and kept a register of such debtors in his pocket-book.

Arbuthnot. They commonly fat hogs with offal corn.

Mortimer.

OFFENBACH, a mean town of Germany, in the grand duchy of Hesse-Darmstadt, the chief place of the principality of Isenburg-Birstein. It is partly walled and divided into the Old, the New, and the French district. It has three Pro- testant churches, a synagogue, a ducal palace, and 8000 inhabitants. This is the only manu-

facturing town in the duchy, and is noted for its snuff and tobacco, wax, japanned goods, niu- sical instruments, carriages, and trinkets. The printing of books is also carried on extensively ; and the wine produced in the vicinity forms a good article of tiaffic. It stands on the Maine, four miles E. S. E. r,{ Frankfort.

OFFENCE', 71. s. ˆ Fr. offence ; Latin Offence'ful, edj. off'endo. Crime ; vice ;

Offence'less, Offend', v. a. Sc v.n Offen'der, n. s Offen'dress, Offen'sive, adj. Offen'sively, adv. Offen'siveness, n.s.ˆ

transgression ; inj iry ; attack ; act of wicked- ; ness, or causing injury or disgust; the disgust caused ; displeasure or anger : offenceful is, disgustful ; displeas-

mg ; injurious : offenceless, harmless ; unoffend- ing : to offend, to transgress ; violate rules ; make angry ; disgust ; displease ; attack ; in- jure : as a neuter verb, be criminal ; cause an- ger ; commit transgression or sin (taking against after it) : an offender is a criminal, he who has committed a crime or an injury ; offendress, an unusual feminine noun of the same signification : offensive is causing anger or displeasure ; pain or injury; assailant; not defensive : offensively and offensiveness follow these senses.

All that watch for iniquity are cut off, that make a man an offender for a word. Isa. xxix. 21.

Giving no offence in any thing, that the ministry be not blamed. 2 Cur. vi. 3.

Whosoever shall keep the whole law, and yet of- fend in one point, he

is guilty of all. James ii.

I am young and unkonning as thou wost, and, as I trow, with love offended most of any living crea- ture. , Chaucer.

He was fain to defend himself, and withal so to offend him, that by an unlucky blow the poor Phi- loxenus fell dead at his feet. Sidney.

Earnest in every present humour, and making himself brave in his liking, he was content to give them just cause of offence when they had power to make just revenge. Id.

Courtesy, that seemed incorporated in his heart, would not be persuaded to offer any offence, but only to stand upon the best defensive guard. Id.

It shall suffice to touch such customs of the Irish as seem offensive and repugnant to good government.

Spenser.

Since no man can do ill with a good conscience, the consolation which we herein seem to find is but a meer deceitful pleasing of ourselves in error, which must needs turn to our greater grief, if that which we do to please God most, be for the manifold effects thereof offensive unto him. Hooker.

In the least thing done nffensivelit against the good of men, whose benefit we ought to seek for as our own, we plainly shew that we do not acknowledge God to be such as indeed he is. Id.

The emperor himself came running to the place in his armour, severely reproving them of cowardice who had forsaken the place, and grievously offended with them who had kept such negligent watch.

KnoUes' Historii of the Turks.

Thou hast stolen that which after some few hours Were thine without offence. Shakspeare. Henry IV. It seems your most offenceful act Was mutually committed. Shakspeare.

You are but now cast in his mood, a punishment more in policy than in malice ; even so as one would beat his offenceless dog to affright an imperious lion.

Id. Othello.

If much you note him You shall offend him, and extend his passion . Feed and regard him not. Id. Macbeth.

All vengeance comes too short Which can pursue the offender. Shakspeare. Virginity murthers itself, and should be buried in highways out of all sanctified limit, as a desperate offendress against nature. Id.

The pleasures of the touch are greater than those of the other senses; as in warming upon cold, or refrigeration upon heat : for, as the pains of the touch are greater than the offences of other senses, so like- wise are the pleasures. Bacon.

It is an excellent opener for the liver, but offensive to the stomach. Id. Natural History.

Thither with speed their hasty course they plyed. Where Christ the Lord for our offences died.

Fairfax. So like a fly the poor offender dies ; But, like the wasp, the rich escapes and flies. We enquire concerning the advantages and disad- vantages betwixt those military offensive engines used among the ancients, and those of these latter ages.

Wilkins. A lady had her sight disordered, so that the images in her hangings did appear to her, if the room were not extraordinarily darkened, embellished with seve- ral off'ensively vivid colours. Boyle.

Cheaply you sin, and punish crimes with ease, Not as the' offended, but the offenders please.

Dryden. I have given my opinion against the authority of two great men, but I hope without offenae to their memories ; for I loved them living, and reverence them dead. Id.

If, by the law of nature, every man hath not a power to punish offences against it, I -see not how the magistrates of any community can punish an alien of another country. Locke.

The muscles of the body being preserved sound and limber upon the bones, all the motions of the parts might be explicated with the greatest ease and witliout any offeitsiveness. Grew's Bluseum,

The bishops therefore of the church of England did no ways offend by receiving from the Roman church into our divine service, such materials, cir- cumstances, or ceremonies, as were religious and good.

White. By great and scandalous offences, by incorrigible misdemeanours, we may incur the censure of thf church. Pearson.

Gross sins are plainly seen, and easily avoided, b' persons that profess religion. But the indiscreet ant dangerous use of innocent and lawful' things, as it does not shock and offend our consciences, so it is difficult to make people at all sensible of the danger of it. Law.

The conscience of the offender shall be sharper than an avenger's sword. Clarissa.

Some particular acrimony in the stomach some- times makes it off^ensive, and which custom at last will overcome. Arbuthnot.

How shall I lose the sin yet keep the sense, And love the' offender, yet detest the offence ?

Pope. Our language is extremely imperfect, and in many instances it offends against every part of grammar.

Swift. The watchful guests still hint the last offence. The daughter's petulance, the son's expence, Improve his heady rage with treacherous skill. And mould his passions till they make his will.

Johnson. Conscience is a great ledger book in wnich all our

offences are written and registered, and which time reveals to the sense and feeling of the offender.

Sheridan. OF'FER, V. a., v. ii., & n. s. ^ Fv. offrir, offre ; Of'ferer, n. s. i Lat. offero. To

Of'fering, > present ; exhibit

Of'fertory, i any thing with

Of'ferture. J a view to its

being taken : hence to give, and to attempt or propose anj thing ; to sacrifice ; immolate ; de- vote; or present, as an act of worship (taking up emphatically) : to bid ; propose as a price or re- ward : as a neuter

verb, to be present or at hand ; to present itself ; make an attempt (taking at) : an offer is, an advance ; a proposal ; attempt or endeavour ; price bid ; tribute or acknowledg- ment : an offerer, he who in any of the foregoing senses offers : offering, the thing or subject matter offered : offertory, tiie act of offering : offerture, an old synonyme of offer ; overture.

Which hath not nede ech dai, as preestis firste for hisse owne giltis to ,ffre sacrifices, and afterwarde for the peple, for he dide this thyng in offryng himselff oonys. Wiclif.

They offered unto the Lord, of the spoil which they had brought, seven hundred oxen.

2 Chronicles. When thou shalt make his soul an offering for sin, he shall see his seed. Isaiah liii. 10.

Lysimachus armed about three thousand men, and began first to offer violence. 2 Mac. iv. 40.

But trewly to tellen atte last. He was in cliirche a noble ecclesiast ; Wei coude he rede a lesson or a storie. But alder best he sang an offertorie. Chaucer.

In all the parish vvif ne was ther non,

That to the offring before hir shulde gone ;

And, if tliei did, certain so wroth was she,

That she was out of alle charitee. Id.

No thought can imagine a greater heart to see and

contemn danger, where danger would offer to make

any wrongful threatning upon him. Sidnei/.

Fair slieams that do vouchsafe in your clearness to represent unto me my blubbered face, let the tri- bute offer of my tears procure your stay awhile with me, that I may begin yet at last to find something that pities me. Id.

If the mind' of the offerer be good, this is the only thing God respecteth. Hooker.

Force compels this offer. And it proceeds from policy, not love ###

Mowbray, you overween to take it so ; This offer comes from mercy, not from fear.

Shakspeare. Plucking the entrails of an offering forth. They could not find a heart within the beast.

Id. Many motions, though they be unprofitable to expel that which hurteth, yet they are offers of na- ture, and cause motions by consent; as in groaning, or crying upon pain. Bacon,

We came close to the shore, and offered to land.

Id. He went into St. Paul's church, where he made offertory of his standards, and had orisons and Te Deums sung. Id.

Thou hast prevented us with offertures of thy love, even when we were thine enemies.

King Charles. One offers, and in offering makes a stay ; Another forward sets, and doth no more. Daniel.] hope ihey will take it well that I should offer at a ncvi thing, and could forbear presuming to n:eddle

where any of the learned pens have ever touched be- fore. Graunt.

The administration of the sacrament he reduced to an imitation, though a distant one, of primitive fre- quency, to once a month, and therewith its anciently inseparable appendant, the offertory. Fell.

Nor, shouldst thou offer all thy little store.

Will rich lolas yield, but offer more. Dryden. Whole herds of offered bulls about the fire,

And bristled boars and woolly sheep expire. Id.

I would treat the pope and his cardinals roughly, if they ojfered to see my wife without my leave. Id. 'Jhe gloomy god

Stood mute with awe, to see the golden rod ;

Admired the destined offering to his queen,

A venerable gift so rarely seen. Id.

Write down and make signs to him to pronounce them, and guide him by shewing him by the motion of your own lips to offer at one of

those letters ; which being the easiest, he will stumble upon one of them. Holder.

In that extent wherem the mina wanders in re- mote speculations, it stirs not one jot beyond those ideas which sense or reflection have offered for its contemplation. Locke.

Servants, j;lacing happiness in strong drmk, make court to my young master, by offering him that which they love. Id.

It is in the power of every one to make some essay, some offer and attempt, so as to shew that the heart is not idle or insensible, but that it is full and big, and knows itself to be so, though it wants strength to bring forth. South's Sermons.

When he commanded Abraham to sacrifice Jsaac, the place of the offering was not left undetermined, and to the offerer's discretion. ui.

I enjoined all the ladies to tell the company, in case they had been in the siege, and had the same offer made them as the good women of that place, what every of them would have brought off with her, and have thought most worth the saving.

Addison's Spectator,

One sees in it a kind of offer at modern architec- ture, but, at the same time that the architect has shown his dislike of the Gothic manner, one may see that they were not arrived at the knowledge of the true way. Id. on Italy

I'll favour her.

That my awakened soul may take her flight,

Renewed in all her strength, and fresh with life.

An offering fit for heaven. Id. Cato.

When a man is called upon to off'er iip himself to his conscience, and to resign to justice and truth, he should be so far fiom avoiding the lists, that he should rather enter with inclination, and thank God for the honour. Collier.

It contains the grounds of his doctrine, and offers at somewhat towards the disproof of mine.

Atterhuty.

The Arians, Eunomians, and Macedonians, were then formally and solemnly challenged by the Ca- tholicks to refer the matter in dispute to the con- curring judgment of the writers that lived before the controversy began ; but they declined the offer.

Waterland.

Some nymphs there are, too conscious of their face ; These swell their prospects, and exalt their pride. When offers are disdained, and love denied. Pope. When stock is high, they come between,

Making by second hand their offers ; “hen cunningly retire unseen.

With each a million in his coffers. Swift.

Without offering at any other remedy, we hastily engaged in a war, which hath cost uss sixty millions.

Id,

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Inferior offerings to thy god of vice, Are duly paid in fiddles, cards, and dice. Young. The lover too shuns business and alarms. Tender idolater of absent charms. Saints offer nothing in their warmest prayers, ‘i’hat he devotes not with a zeal like theirs : ‘Tis consecration of his heart, soul, time ; And every thought that wanders is a crime.

t Cowper,

Offerings, Jewish. The Hebrews had seve- ral kinds of offerings, which they presented at the temple. Some were free-will offerings, and others were of obligation. The First-fruits (see that article), the tenths, the sin-offerings, were of obligation ; the peace-offerings, vows, offerings of wine, oil, bread, salt, &c., made to the temple or to the ministers of the Lord, were Vifferings of devotion. The Het)rews called all offerings in general corban. But the offerings of bread, salt, fruits, aud liquors, as wine and oil, which were presented to the temple, they called miiicha. Th-e sacrifices are not properly offer- ings, and re not commonly included under that name. The offerings of grain, meal, bread, cakes, fruits, wine, salt, and oil, were common in the temple. Sometimes these offerings were alone, and sometimes they accompanied the sacrifices. Honey was never offered with the sacrifices ; but it might be offered alone in the quality of the first fruits. These were the rules that were observed in the presenting of those offerings, called in Hebrew mincha or kerbon mincha ; in the Septuagint, offerings of sacrifice ; and the same by St. Jerome, oblationem sacrificii ; but by our translators meat offerings (Lev. ii. 1, &c.) There were five sorts of these offerings : 1 . Fine flour or meal. 2. Cakes of several sorts, baked in an oven. 3. Cakes baked upon a plate. 4. Another sort of cakes, baked upon a gridiron, or plate with holes in it. 5. The first fruits of the new corn, which were offered either pure and without mixture, or roasted or parched in the ear or out of the ear. The cakes were kneaded with olive oil, or fried with oil in a pan, or only dipped in oil after they were baked. The bread offered to be presented upon the altar was to be without leaven ; for leaven was never offered upon the altar, nor with the sacrifices : but they might make presents of common bre;;d to the priests and ministers of the temple. The offer- ings now mentioned were appointed on account of

the poorer sort, who could not go to the charge of sacrificing animals. Those that offered only oblations of bread or of meal offered also oil, incense, salt, and wine, which were in a manner the seasoning of it. The priest in wait- ing received the offerings from the hand of him that offered them ; laid a part of them upon the altar, and reserved the rest for his own subsist- ence, as his right. Nothing was burnt quite up but the incense, of which the priest kept back nothing for his own share. When an Israelite offered a loaf to the priest, or a cake, the priest broke the loaf or cake into two parts, setting that part aside that he reserved to himself, and broke the other into crumbs; poured oil upon it, salt, wine, and incense ; and spread the whole upon the fire of the altar. If these offerings were accompanied by an animal for a sacrifice.

it was all thrown upon the victim, to be con- sumed along with it. If the offerings were the ears of new corn, either wheat or barley, these ears were parched at the fire or in the flame, and rubbed in the hand, and then offered to the priest in a vessel ; over which he put oil, incense, wine, and salt, and then burnt it upon the altar, first having taken as much of it as of right belonged to himself. The greatest part of these oflˆerings were voluntary, and of pure devotion. But when an animal was offered in sacrifice, they were not at liberty to omit these offerings. Every thing was to be supplied that was to accom- pany the sacrifice, and which served as a season- ing to the victim. There were some cases in which the law required only offerings of corn, or bread ××× for example, when they offered the first fruits of their harvest, whether they were offered solemnly by the whole nation, or by the devo- tion of private persons. As to the quantity of meal, oil, wine, or salt, which was to go along with the sacrifices, we do not find that the law determined it. The priest threw a handful of meal or crumbs upon the fire of the altar, with wine, oil, and salt in proportion, and all the in- cense. All the rest belonged to him ; the quan- tity depended upon the liberality of the offerer. Moses appoints an assaron, or the tenth part of an ephah of meal, for those that had not where- withal to offer the appointed sin-offering. (Lev. V. 11, xiv. 21.) In the solemn offerings of the first fruits of the whole nation, they offered an entire sheaf of corn, a lamb of a year old, two tenths of fine meal mixed with oil, and a quarter of a hin of wine for the libation. (Lev. xxiii. 10, 11, 12, &:c.) In the sacrifice of jealousy (Numb. v. 15), when a husband accused his wife of infidelity, the husband offered the tenth part of a satum of barley-meal, without oil or incense, because it was a sacrifice of jealousy, to discover whether his wife was guilty or not. The offerings of the fruits of the earth, of bread, of wine, oil, and salt, are

the most ancient of any that have come to our knowledge. Cain offered to the Lord of the fruits of the earth, the first fruits of his labor (Gen. iv. 3, 4) ; Abel offered the firstlings of his flocks, and of their fat.

OF'FICE, n. s. & v. a."^ Fr. offiie; Lat. qf-

Of'ficer, n. s. \Jicium. Agency;

Of'ficered, adj. \ charge ; business ;

Offic ial, adj. & 7i. s.)^ particularly public

Officiality, n. s.

Offic'iate, v. a. Sc v. n.

OfFIc'iNAL, 11. s.

of the state ; devotion ; formulary of devotion ; place of business : to otfice is used by Shak- speare for to perform; do: officer is, a public agent or servant; particularly a military servant of the state ; also one who has the charge of ap- prehending criminals : officered is, furnished with officers : official is, appropriate or condu- cive to some assigned office ; also, as a noun substantive, an ecclesiastical officer described in the extract from Ayliffe : officiality is, charge, state or quality : to officiate is, to yield or give in course of office ; to discharge an office : officinal, used in a shop or druggist's office, applied to medicinal plants and drugs.

business or agency ; magistracy ; employ- ment in the service

Full thredbar was his overest courtessy. For he hadde gotten him yet no benefice, He was nought worldly to have an office.

Chaucer You have contrived to take From Rome all seasoned office, and to wind Yourself into a power tyrannical. Shahspeare. This gate Instructs you how t' adore the heavens, and bows you lo morning's holy office. Id. Cymbeline.

Wolves and bears. Casting their savageness aside, have done Like offices of pity. Id. Winter's Tale.

Methought this staff, mine (iˆce-badge in court. Was broke in twain. Id. Henry VI.

What shall good old York see there, But empty lodgings and unfurnished walls, Unpeopled offices, untrodden stones 1

Shakspeare. The thieves are possest with fear So strongly, that they dare not meet each other ; Each takes his fellow for an officer. Id.

The tribunes Endue you with the people's voice. Remains That in the' official marks invested, you Anon do meet the senate. Id. Coriolanus.

I will begone, altho' The air of Paradise did fan the house. And angels officed all. Shakspeare.

Empsom and Dudley, though they could not but hear of these scruples in the king's conscience, yet as if the king's soul and his money were in several offices, that the one was not to intermeddle with the other, went on with as great rage as ever. Bacon.

The next morning there came to us the same officer that came to us at first to conduct us to the stranger's house. Id.

A poor man found a priest over-familiar with his wife, and, because he spake it abroad and could not prove it, the priest sued him before the bishop's official for defamation. Camden.

No minister officiating in the church can with a good conscience omit any part of that which is com- manded by the aforesaid law. Sanderson.

Whosoever hath children and servants, let him take care that they say their prayers before they be- gin their work ; the Lord's prayer, the ten command- ments, and the creed, is a very good office for them, if they are not fitted for more regular offices.

Taylor, The sun was sunk, and after him the star Of Hesperus, whose office is to bring Twilight upon the earth. Milton's Paradise Lost.

All her numbered stars that seem to roll Spaces incomprehensible, for such Their distance argues, and their swift return Diurnal, merely to officiate light Round this opacous earth, this punctual spot.

Milton. In this animal are the guts, the stomach, and other parts official unto nutrition, which, were its aliment the empty reception of air, their provisions had been superfluous. Browne.

Who of the bishops or priests that officiate at the altar, in the places of their sepulchres, ever said, We offer to thee Peter or Paul ? Stillingfleet.

If it should fall into the French hands, all the princes would return to be the several officers of his court. Temple.

Is it the magistrate's office to hear causes or suits at law, and to decide them ? Kettlevwrth.

Since he has appointed officers to hear it, a suit at law in itself must needs be innocent. Id.

You who your pious offices employ, To save the reliques of abandoned Tro" . Dry den.

If he did not nimbly ply the spade. His surly officer ne'er failed to crack His knotty cudgel on his tougher back. Id. The wolf took occasion to do the fox a good office.

L' Estrange. Birds of prey are an emblem of rapacious officers. A superior power takes away by violence from them, that which by violence they took away from others.

Id. What could we expect from an army officered by Irish papists and outlaws 1 Addison's Freeholder.

To prove curates no servants is to rescue them from that contempt which they will certainly fall into under this notion ; which, considering the number of persons officiating this way, must be very prejudi- cial to religion. Collier.

In this experiment the several intervals of the teeth of the comb do the office of so many prisms, every interval producing the phenomenon of one prism. Neviions Opticks.

The office of an officially to an archdeacon.

Ayliffe. Official is that person to whom the cognizance of causes is committed by such as have ecclesiastical jurisdiction. Id.

The bad disposition he made in landing his men, shews him not only to be much inferiour to Pompey as a sea officer, but to have had little or no skill in that element. Arbuthno*

And make the symbols of atoning grace An office-key ; a picklock for a

place. Cowper. I hope I shall not depart from the simplicity of official language in saying, that the majesty of justice ought to be approached with solicitation.

Warren Hastings, Will they thank the noble lord for reminding us how soon these lofty professions dwindled down to little jobbing pursuits for followers or dependants, as unfit to fill the offices procured for them, as the offices themselves were unfit to be created] Slier idan.

He thinks that my right honourable friend, if in office, would renounce the principle he has avowed.

Id. It is certainly true, that that charter was brought from Brazil, who has filled, and still continues to fill, an office of high trust from this country.

Canning.

Office, in the canon law, is used for a bene- fice that has no jurisdiction annexed to it.

Offices, in architecture, denote all the apart- ments appointed for the necessary occasions of a palace or great house ; as kitchen, pantries, confectionaries, &c.

An Officer, in the army, is any person entrusted with command. General officers are those whose command is not limited to a single troop or regiment, but extends to a body of forces composed of several regiments ; such are the general, lieutenant-general, major-general, and in some armies brigadier-general. Staff- officers are the quarter-master-general, and the adjutant-general, brigade officers, and aides-de-camp : also the quarter-masters, adjutants, the physicians, surgeons, and chaplains. Com- missioned officers in our service are those ap- pointed by the king's commission ; such are all from the general to the cornet and ensign, both inclusive; and in the blues, oi royal horse guards, the quarter-master bears the king's com- mission. Those persons are also called com- missioned officers that act under the signature of the lord-lieutenants of counties, or under that

of the colonel or commandant of a regiment, as in the militia,

vclunteer, and yeomanry corps. Warrant officers, those who have no commissions, but only warrants from such boards, or persons, as are authorised by the king to grant them. Brevet officer, one who, in doing duty with other corps, takes rank according to the commission which he holds from the king, and which is superior to the one for which he actually receives pay, or by which he can do duty in his own. A captain, for instance, in the sixty-second regiment of foot, who has the rank of brevet- major in the army, may, when that corps does brigade duty, command every captain on service with him. Non-commissioned officers are serjeant- majors, quarter-master Serjeants, Serjeants, cor- porals, drum and fife majors; who are nomi- nated by their respective captains, and appointed by the commanding officers of regiments, and by them reduced without a court-martial. Orderly non-commissioned officers are those who are orderly, or on duty, for that week ; who, on hearing the drum beat for orders, are to repair to the place appointed to receive them, and to take down in writing, in the orderly book, what is dictated by the adjutant, or serjeant-major : they are then immediately to show these orders to the officers of the company, and afterwards warn the men for duty.

Officers, Great, of the Crown, are, the lord high-steward, the lord high-chancellor, the lord high-treasurer, the lord high-president of the council, the lord privy seal, the lord chamber- lain, the lord high-constable, and the earl- marshal ; each of which see under its proper article.

Officers, Staff, are such as, in the king's presence, bear a white staff or wand ; and at other times, on their going abroad, have it car- ried before them by a footman bare-headed; such are the lord-steward, lord-chamberlain, lord-treasurer, &c. The white staff is taken for a commission ; and at the king's death each of these officers breaks his staff over the hearse made for the king's body, and thus lays down his commission, and discharges all his inferior officers.

Official is also a deputy appointed by an archdeacon as his assistant, who sits as j udge in the archdeacon's court.

Official, in the canon law, an ecclesiastical judge, appointed by a bishop, chapter, abbot, &c., with charge of the spiritual jurisdiction of the diocese.

OFFICIOUS, adj. ˆ Fr. officieux ; Latin

Offic'iously, adv. , officiosus. Kind ; per-

Offic'iousness, 7i. s. 3 forming good offices; importunately or obtrusively kind : hence im- pertinent ; meddling : the adverb and noun-sub- stantive follow these senses.

You are too officious

In her behalf that scorns your services.

Shukspeare.

At Taunton they killed, in fury, an officious and eager commissioner for the subsidy. Bacan.

Yet, not to earth are those bright luminaries Officious ; but to thee, earth's habitant. Milton.

In whom is required understanding as in a man, courage and vivacity as in a lion, service and minis-

terial offtciousness as in the ox, and expedition as in the eagle. Browne,

The most corrupt are most obsequious grown, And those they scorned officiously they own.

Dryden. Let thy goats officioutly be nurst, And led to living streams to qnench their thirst.

Id.

I shew my officiousness by an offering, though I betray my poverty by the measure. South.

Cato, perhaps

I'm too officious ; but my forward cares

Would fain preserve a life of so much value.

Addison.

Offing, or Offin, in the sea language, is that part of the sea, a good distance from shore, where there is deep water, and no need of a pilot to conduct the ship : thus, if a ship from shore be seen sailing out to seaward, they say she stands for the offing ; and, if a ship, having the shore near her, have another a good way without her, or towards the sea, they say, that ship is in the offing.

OFFSET, w.s. Off and set. Sprout; the shoot of a plant.

They are multiplied not only by the seed, but many also by the root, producing offsets or creeping under ground. Ray.

Some plants are raised from any part of the root, others by offsets, and in others the branches set in the ground will take root. Locke.

OFFSCOUR'ING, n. s. Off and scouring. Recrement ; part rubbed off in scouring or cleansing.

Thou hast made us as the offscouring and refuse in the midst of the people. Lamentations iii. 45.

Being accounted, as St. Paul says, the very filth of the world, and the offscouring of all things.

Kettlewell.

OFF'SPRING. Off and spring. Propaga- tion : more generally that which is propagated ; children ; descendants ; production.

All things coveting to be like unto God in being ever, that which cannot hereunto attain personally doth seem to continue itself by offspring and propa- gation. Hooker.

When the fountain of mankind Did draw corruption, and God's curse, by sin ;

This was a charge, that all his heirs did bind.

And all his offspring grew corrupt therein.

Daviet, Tho' both fell before their hour.

Time on their offspring hath no power ;

Nor fire nor fate their bays shall blast,

Nor death's dark vale their days o'ercast.

Denham. To the gods alone Our future offspring, and our wives are known.

Dryden.

His principal actor is the son of a goddess, not to mention the

offspring of other deities. Addison.

OYT’, adv. -ˆ Sax. opt; Teut. oˆi*, o/Ven.

Oft’en, f Frequent: this both oft and

Oft’en times, I often signify; and, as Dr. John-

Oft’times. J son observes, the latter was probably a longtime the plural of the former : of- times and oftentimes are, frequently ; many times.

In labours more abundant, in stripes above mea- sure, in prisons more frequent, in deaths oft.

2 Corinthians ii. 23.

Use a little wine for thy stomach’s sake, and thine often infirmities. 1 Timothy v. 23.

Is our faith in the blessed Trinity a matter need- less, to be so oftentimes mentioned and opened in the principal part of that duty which we owe to God, our public prayer”! Hooker.

The queen that bore thee, Oftener upon her knees than on her feet, Died every day she lived. Shakupeare. Macbeth. A lusty black-browed girl, with forehead broad and high, That often had bewitcht the sea gods with her eye.

Drayton. Who was ever so wise as not sometimes to be a fool in his own conceit, ofltimes in the conceit of others ? Hall.

It may be a true faith, for so much as it is ; it is one part of true faith, which is oft mistaken for the whole. Hammond.

Ofttimes nothing profits more Than self-esteem, grounded on just and right. Well managed. Milton’s Paradise Lost.

These sort of speeches, issuing from just and honest indignation, are sometimes excusable, o/tewtimes com- mendable. Barrow, Ofttimes before I hither did resort. Charmed with the conversation of a man Who led a rural life. Dryden and Lee. Who does not more admire

Cicero as an author, than as a consul of Rome, and does not oftener talk of the celebrated writers of our own country in for- mer ages, than of any among their contemporaries 1 Addison s Freeholder. The difficulty was, by what means they could ever arrive to places often times so remote from the ocean.

Woodward. It is equally necessary that there should be a fu- ture state, to vindicate the justice of God, and solve the present irregularities of Providence, whether the best men be oftentimes only, or always the most mi- serable. Atterbury. Favours to none, to all she smiles extends, Oft she rejects, but never once offends. Pope.

The sun Sheds weak and blunt his wide refracted ray, Whence glaring oft with many a broadened orb He frights the nations. Thomson.

Some men employ their health, an ugly trick, In making known how oft they have been sick, And give us in recitals of disease A doctor's trouble, but without the fees. Cowper.

OG. Heb. a1J7> i.e. a cake. Akingof Bashan, of a most gigantic stature. His bedstead was of iron, and was nine cubits long and four broad ; ###which, according to some calculations, is sixteen feet five inches long, and above seven feet three inches broad. The learned Calmet, however, makes it only fifteen feet four inches long, and six feet ten inches broad. Wolfius makes Og more that thirteen feet high. The rabbis pre- tend that he lived before the flood, and preserved himself during the time of it, by mounting on the outside of the ark and receiving food from Noah, &c. When he heard of the defeat of Sihon, king of the Amorites, by Moses, he col- lected all his troops and attacked the Israelites at Edrei ; but his numerous host was routed, himself killed, and his country conquered. The Ammonites some time afterwards carried off his iron bedstead. Num. xxi.; Deut. iii. 1 ### 14.

OGE', a Creole, or quarteroon, of St. Domingo, was, at the commencement of the revolution, established at Cape Franfais in commerce. His affairs having drawn him to Paris, he was there

admitted into the society of Amis des Noirs, and warmly solicited the National Assembly in favoi of his brethren. Meeting with little attention he returned to St. Domingo, resolved to adopt some more efficacious means for tJieir freedom. In the quarter of Dondon, where he was born, he began by inviting all the people of color and negro slaves to join him, and an insurrection took place in November, 1790, in the Grande Riviere. The insurgents at first demanded nothing but

freedom and equality; but their cause was ere long disgraced by crime. Tliese, however are said not to be fairly attributable to their leader, but to his lieutenant Chavannes. Troops of the national guard and of the line being sent against the blacks, they were obliged to give way ; and Oge, with a few of his followers, took refuge in the Spanish territories. Here he was given up by tlie governor to the French, tried before the superior council at Cape Fran- ˆais, and condemned, with his lieutenant, to be broken on the wheel. Oge, on hearing this sentence, took a measure of black seed in his hand, and covered them with a few white grains : he then shook them together, and said to his judges, ‘ Where are the whites V

OGEE’, 71. s. I A sort of moulding in ar-

Ogive’. S chitecture, consisting of a round

and a hollow, almost in the form of an S, and is the same with what Vitruvius calls cima. Cima reversa is an ogee with the hollow downwards.

OGEECHEE, a river of Georgia, United States, which rises near the Apalachian Moun- tains, passes by Lexington, Louisville, and Geoigetown, flows south-east nearly parallel with the Altamaha, into Ossabaw Sound, at Hard- wick. Length 200 miles.

OGHAMS, a particular kind of steganogra- phy, or writing in cypher, practised by the Irish ; of which there were three kinds : the first was composed of certain lines and marks, which de- rived their power from their situation and posi- tion, as they stand in relation to one principal line over or under which they are placed, or through which they are drawn; the pjincipal line is horizontal, and serves for a rule or guide, whose upper part is called the left, and the un- der side the right : above, under, and through wliich line, the characters or marks are drawn, ⬛⬛⬛which stand in the place of vowels, consonants, diphthongs, and triphthongs. Some authors have doubted the existence of this species of writing in cypher, called ogham among the Irish ; but several MSS. in this character still exist.

OGILBY (John), an eminent writer, bom in or near Edinburgh, November 17th, 1600. His father having spent his estate, and being prisoner in the King’s Bench, could contribute little to liis education ; however, he obtained some know- ledge in the Latin grammar, and afterwards so much money as to procure his father’s discharge from prison, and to bind himself an apprentice to a dancing-master in London ; when, by his dexterity in his profession, he obtained money

to buy out the remainder of his time, and to set up for himself. But, being afterwards appointed to dance in the duke of Buckingham's grand mask, he strained a vein in the inside of his leg,

OGL

which occasioned his being ever after somewhat lame. When Tliomas earl of Strafford was made lord-lieutenant of Ireland he was enter tained as a dancing-master in his family, and made one of the earl's troop of guards ; at which time he composed a humorous piece called the Character of a trooper. He was soon after ap- pointed master of the revels in Ireland, and built a theatre at Dublin. About the end of the war in England, he left Ireland, and, being ship- wrecked, came to London in a necessitous con- dition; but soon after walked to Cambridge, where, being assisted by several scholars, he be- came so complete a master of the Latin tongue, that in 1649 he published a translation of V ir- gil. He soon after learned Greek ; and in 1660 published, in folio, a translation of Homer's Iliad, with Annotations. In 1662 he went into Ireland, where he was made master of the revels by patent. He then built another theatre in Dublin, which cost him about ––lOOO. He pub- lished at London, in folio, a translation of Homer's Odyssey, with Annotations ; and after- wards wrote two heroic poems, entitled the Ephesian Matron, and die Roman Slaves. He next composed the Charolics, an epic poem, in twelve books, in honor of king Charles I., but this was lost in the fire of London ; when his house in White Friars was burnt down, and his whole fortune, except about ––5, destroyed. He however, got his house rebuilt, set up a print- ing-office, was appointed cosmographer and geo- graphic printer, and printed several large works, translated or collected by himself and his assist- ants, particularly his Atlas. He died in 1676.

OGIVE, in architecture, an arch or branch of a Gothic vault ; which, instead of being circular, passes diagonally from one angle to another and forms a cross with the other arches. The mid- dle, where the ogives cross each other, is called the key ; being cut in form of a rose, or a cul de lampe. The members or mouldings of the ogives are called nerves, branches, or reins ; and the arches which separate the ogives, double arches.

O'GLE, V. a. & n. s. Belgic oogh, oog/iler ; Lat. oculus. To survey wistfully ; regard with a kind of sly fondness; one who thus gazes at an object.

From their high scaffold with a trumpet cheek, And ogling all their audience, then they speak.

Dry den.

If the female tongue will be in motion, why should it not be set to go right? Could they talk of the different aspects and conjunctions of planets, they need not be at the pains to comment upon oglhigs and clandestine marriages. Addison.

Upon the disuse of the neck-piece, the tribe of oglers stared the fair sex in the neck rather than in the face. Id.

Jack was a prodigious ogler ; he would ogle you the outside of his eye inward, and the white up- ward. Arbuthnot.

Whom is he ogling yonder! himselfin his looking- glass. Id.

Sir Anth. Z ××× ds, sirrah ! the lady shall he as ugly as I choose : she shall have a hump on each shoulder ; she shall be as crooked as the crescent ; her one eye shall roll likeˆthe bull's in Cox's mu- seum ; she shall have a skin like a mummy, and the beard of a Jew ××× she shall be all this, sirrah ! ××× yet

I will make you ogle her all day, and sit up all nigfat to write sonnets on her beauty. Sheridan.

OGLETHORPE, a county in the north-west part of Georgia. Population 12,297. Chief town, Lexington.

Oglethorpe (James Edward), a British officer, of a very ancient family in Yorkshire, born about 1698. He entered early into the army, and was made a captain-lieutenant in the queen's grenadiers in 1715. He obtained the rank of colonel, August 25th, 1737 ; of major- general, March 30th, 1745; lieutenant-general, September 13th, 1747; and of general, February 22d, 1765. He was elected M. P. for Hasle- mere in Surrey in 1722, and continued to re- present that borough till 1754. In 1729, finding a gentleman, whom he went to visit in the Fleet prison, loaded with irons and otherwise barba- rously used, he engaged in the philanthropic en- quiry into the state of tlie jails, and was appointed chairman of the Committee of Enquiry by the House of Commons. In 1732 he was appointed governor of Georgia, in the settlement of which he engaged with that ardor which marked all his undertakings ; and, after overcoming numberless difficulties, proved successful, though at the ex- pense of large sums of his private fortune, which, it is said, were never repaid. In 1734 he re- turned to England, and was chosen deputy governor of the African Company; and in 1735 carried

back with him to Georgia Messrs. John and Charles Wesley, with the pious intention of instructing the Indians. Returning to England, he raised a regiment, which he carried over to Georgia in 1738. In 1740 he attacked the Spaniards, took two forts, and besieged St. Augustine, but without success. In 1742 the Spa- niards attacked the new settlement, but were re- pulsed. In 1745 he accompanied the duke of Cumberland into Scotland, which was his last military expedition. In 1754 he married Eli- zabeth Wright, an heiress, and spent the rest of his life in easy retirement at her seat of Cran- ham Hall in Essex ; where he died, June 30th,

1785.

O'GLIO, n. s. Span, olla ; Port, olha ; or Ital. alia (a stewpan). A dish of medleys, or various kinds of meat ; a hotchpotch, mental or literal.

These general motives of the common good, I v\ill not so much as once offer up to your lordship, though they have still the upper end ; yet, like great oglios, they rather make a shew than provoke appetite.

Suckling.

Where is there such an oglio or medley of various opinions in the world again, as those men entertain in their service, without any scruple as to the diver- sity of their sects and opinions "! f^"'S Cfuirles.

He that keeps an open house, should consider that there are oglios of guests, as well as of dishes, and that the liberty of a common table is as good as a tacit invitation to all sorts of intruders.

L'Estrange.

Oglio, a river of Austrian Italy, which has its source in the Alps, flows through the lake of Iseo, traverses the plains between the Brescian and the Cremonese, and joins the Po near Bor- goforte, eight miles from Mantua. It is naviga- ble in the lower part of its course to Ponte-vico, and receives in its progress the Cherio, the

Mil la, the Chiese, and a number of smaller navigation is generally suspended eight or ten

streams. It gave name to a department of the weeks, during the winter, by floating ice. Its

late kingdom of Italy. current, when at mean height, is estimated at

OGYGIA, the island of Calypso (Homer) ; three miles an hour ; when very low, two miles,

placed by Pliny in the Sinus Scylaceus, in the The river contains 100 islands, but there are

Ionian Sea, opposite to the promontory Laci- none between the states of Ohio and Kentucky.

niura ; by Mela who calls it (Eac, m the strait of Steam boats are now employed on this river with

Sicily : others place it at the promontory Cir- great advantage. The principal towns on the

ceium, and call it the island of Circae. Ohio, below Pittsburg, are Steubenville, Wheel-

OH! interj. A note of pain, sorrow, or won- ing, Marietta, Gallipolis, Maysville, Cincinnati,

der. Louisville, and Jeffersonville.

He, The length of the Ohio, from Pittsburg to the

Like a full acorned boar, a churning on, Mississippi, as measured, according to its mean-

Cryed oh ! and mounted. ders, by captain Hutchins, is 1188 miles. But,

Shakspeare. Cymheline. according to the public surveys on the north bank,

Oh me ! all the horse have got over the river, what it is only 949 miles. The following table of dis-

shall we do] Walton’s Angler. tances is taken from Dr. Drake, and is founded

My eyes confess it, chiefly on those surveys. This table differs con-

My every action speaks my heart aloud ; siderably from that of Hutchins : ###

But oh the madness of my high attempt

Speaks louder yet ! Dryden’s Spanish Fryar. Miles. Whole dist.

0/t Sophonisba, Sophonisbaiˆ oA .’ Thomson. Froni Pittsburg to

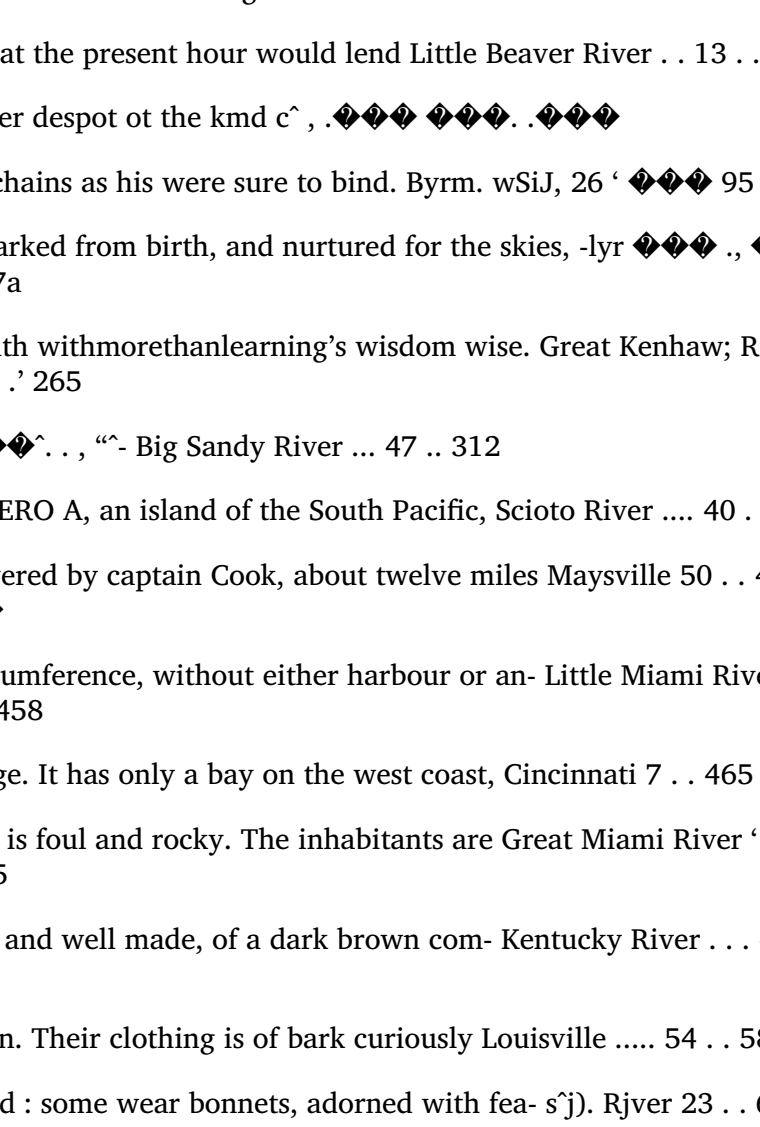

by the union of the Alleghany and the Monon- Shawneetown .” .’ .’ .’ 10 . . 831

gahela, at Pittsburg. It separates Virginia and Cave-in-rock .... 20 . . 851

Kentucky on the south from the states of Ohio Cumberland River ” . ! 40 . . 091

and Indiana, and the Illinois territory, on the Tennessee River . . . 12 . . 903

north; and, after a W.S. W. course of 949 miles. Fort Massic . . . . . 8 . . 911

joins the Mississippi, 193 miles below the Mis- Mississippi 38 949 souri, in long. 88’’ 58′ W., lat. 37►► N. From

Pittsburg to its mouth, by a direct line, it is only Ohio, one of the United States of North Ame-

614 miles. The river varies in breadth from rica, is bounded north by Michigan territory,

400 to 1400 yards. At Cincinnati it is 534 east by Pennsylvania, south by the river Ohio,

yards, which may be regarded its mean breadth, which separates it from Virginia and Kentucky,

It has an inland navigation. Its current is very and west by Indiana. Long. 80►► 35′ to 84►► 47′

gentle, and nowhere broken by any considerable W., lat. 38►► 30′ to 42►► N. : 216 miles long, and

falls, except at Louisville. The whole descent 216 broad ; containing 39,128 square miles,

here, in two miles, is twenty-two feet and a half; Population in 1800 45,365 ; in 1810 230,760;

but the current is not so broken but that boats and in 1815 it was estimated at 324,070. The

have, in many instances, ascended the falls. A number of militia in 1816 was 49,427.

canal is contemplated around these falls. Columbus is the seat of government ; but Cin-

The annual range from high to low water is cinnati is much the largest town. The other most

upwards of fifty feet, and its extreme range about considerable towns are Chillicothe, Steubenville,

sixty feet. When lowest it may be forded in Zanesville, Marietta, Dayton, New Lancaster,

several places above Louisville. It is frozen over New Lisbon, St. Clairsville, Urbana, Lebanon,

almost every winter near Pittsburg, and has been Circleville, and Gallipolis. There are besides a

frozen about 400 miles below Pittsburg. The number of other flourishing towns.

OHIO.

143

Thi3 Counties, number of Towns, population for 1810, and 1830, and the Cliief Towns are exhibited in the following Table.

Counties.

Adams

Ashtabula

Athens . . . . .

Belmont

Brown

Butler

Champaign

Clark {....-.

Clermont

Clinton

Columbiana . . . .

Coshocton

Cuyahoga

Dark

Delaware

Fairfield

Fayette

Franklin

Gallia

Geauga

Guernsey . . ??? . .

Green

Hamilton

Harrison

Highland

Huron

Jackson

Jefferson

Knox

Licking

Logan

Madison

Medina

Miami

Monroe

Montgomery ....

Morgan

Muskingum ....

Perry

Pickaway . . . .4^^

Pike

Portage

Preble

Richland

Ross

Scioto

Stark

Trumbull

Tuscarawas

Warren

Washington

Wayne

52

Towns

4 11

9 9

8

3

17

7

15

4

12 8 9 6

11

15 5 7

6

6

7

11

10

9

7

16 9 7

19

5 12

320

Population.

1810.

9,434

2,791 11,097

11,150 6,303

9,965

2,674

10,878

1,459

2,000 4,361 1,854 3,486

4,181 2,917 3,051 5,870 15,258

5,760

17,260 2,149 3,852

1,603

3,941

7,722

10,036

7,124

2,995 3,304

15,514 3,399 2,734 8,671 3,045 9,925 5,991

Population.

1830.

12,278 14,584

9,763 28,412 17,867 27,044 12,130 13,074 20,466 11,292 35,508 11,162 10,360

6,203 11,523 24,788

8,180

14,766

9,733 15,813 18,036 15,084 52,321 20,920 16,347 13,345

5,974 22,489 17,124 20,864

6,442

6,190

7,560 12,806

8,770 24,252 11,796 29,325 14,016 15,935

6,024 13,827 16,255 24,007 24.053

8,730 26,784 26,154 14,298 21,493 11,731 23,344

Chief Towns.

230,760 ; 937,679

West Union.

Jefferson.

Athens.

St. Clairsville.

Ripley.

Hamilton.

Urbana.

Springfield.

Williamsburg.

Wilmington.

New Lisbon.

Coshocton.

Cleveland.

Greenville.

Delaware.

New Lancaster,

Washington. i Franklinton. (Columbus.

Gallipolis.

Chardon.

Cambridge.

Xenia.

Cincinnati.

Cadiz.

Hillsborough.

Huron.

Jackson.

Steubenville.

Mount Vernon.

Newark.

Belle Fontaine.

New London.

Mecca.

Troy,

Woodsfield.

Dayton.

M’Connetsville.

Zanesville.

Somerset.

Circleville.

Piketon.

Ravenna.

Eaton.

Mansfield.

Chillicothe.

Portsmouth.

Canton.

Warren.

N. Philadelphia.

Lebanon.

Marietta.

Wooster.

With 21 new Counties.

There have been twenty-nine banks chartered in this state ; and charters have been granted for three institutions, styled universities, in this state, at Athens, Cincinnati, and Oxford. The Ohio university at Athens has commenced its

operations. There is a respectable literary semi- nary also at Cincinnati, and academies have been established at Athens, Burton, Chillicothe, Day- ton, Lebanon, Marietta, Putnam, Steubenville, Tallmadge, Worthington, and Xenia. In but

few of these, however, are kept regular classical schools. Common schools are encouraged more or less throughout the state.

The number of ministers of the several deno- minations of Christians in Ohio, in 1817, vvas stated as follows : ××× Presbyterians forty-eight ; Methodists thirty-four ; Baptists thirteen ; New Lights of the Christian church nine ; Seceders six ; Episcopalians three ;

Congregational ists three. The number of meetings of Friends in this state and Indiana was stated at fifty-nine.

The legislature is composed of a senate and house of representatives. The latter, who must not exceed seventy-two, nor be less than thirty-six in number, are elected annually. The sena- tors, who must equal one third, but not ex- ceed one-half of the number of representatives, are chosen biennially. The governor is elected biennially by the people. The annual elections are held on the second Tuesday in October. This state sends six members to congress.

The rivers which flow into Lake Erie on the north are Maumee, Sandusky, Huron, Vermil- lion, Black, Cuyahoga, Grand, and Ashtabula ; those in the south flowing into the Ohio are the Muskingum, Hockhocking, and Little and Great Miami. The Au-Glaize and St. Mary's in the western part of the state are branches of the Maumee.

The interior and northern parts of the country bordering on Lake Erie are generally level, and in some places marshy. Nearly one-third of the eastern and south-eastern part is very hilly a.id broken. The hills are exceedingly numerous, but they seldom rise into considerable mountains. Immediately upon the banks of the Ohio, and several of its tributaries, are numerous tracts of interval or meadow land, of great fertility. In the interior, on both sides of the Scioto, and on the Great and Little Miami, are perhaps the most extensive bodies of level and rich land in the state. In many parts there are large prairies, particularly on the head waters of the Muskin- gum and Scioto, and between the Scioto and the two Miamies. Some of these prairies are low and marshy, producing large quantities of coarse grass, from two to five feet high ; some of which is of a tolerably good quality : other prairies are elevated, and are frequently called barrens ; not always on account of their sterility, for they are often fertile. The most elevated tracts of country between the rivers are the wettest and most marshy in the state ; and the dryest land is that which borders on the various streams of water. Among the forest trees are oak of various species, maple, hickory, beach, birch, poplar, sycamore, ash, pawpaw, buckeye, cherry, &c.

Wheat is the staple production. Other sorts of grain, various kinds of fruit, grass, hemp, and flax, are extensively cultivated. From seventy to 100 bushels of Indian corn, it is said, have in many instances been produced in a year from one acre.

Coal is found in great quantities in the eastern parts. Iron ore has been

discovered and wrought pretty extensively in several places, particularly on the south of Licking River, four miles west of Zanesville, on Brush Creek, and in some other places. Salt springs are found on some of the eastern waters of Muskingum, and on Salt

Creek, twenty-eight miles south-east of Chilli, cothe, where there are considerable salt works.

The summers are warm and pretty regular, though somewhat subject to tornadoes. Spring and autumn are very pleasant ; and the winters generally mild. In some parts near the marshes and stagnant waters the inhabitants are subject to the fever and ague ; but the climate gene rally- is accounted remarkably healthy. The north-west part of the state, amounting in extent to nearly 8000 square miles, remains in the possession of the Indian tribes.

Ohio, a county in the north-west part of Vir- ginia, bounded north-west and west by the Ohio, north by Brooke county and Pennsylvania, east by Pennsylvania, south-east by Monongalia and Harrison counties, and south-west by Wood county. Population 817.5. Chief town Wheeling. Also a county in the west part of Kentucky, on the Ohio. Population 3792. Chief town Hart- ford.

OHITTAHOO, an island of the South Pacific, about nine miles in length and twenty-one in circuit. A ridge of hills runs through its length. It is divided by deep and fertile valleys, adorned with trees, and watered by brooks and cascades. On the western side are several coves. That in which the Europeans usually anchor is situated in long. 139 8′ W., lat. 9 55′ S. This island, and the three which lie nearest it, were discovered in July 1595 by Alvaro Mendana, who named them, in honor of the viceroy of Peru, Las Mar- quesas de Mendoca. .

OHLAU, a town of Prussian Silesia, on the river Ohlau, fourteen miles south-east of Breslau. A large quantity of tobacco is raised in the envi- rons. Population 2800.

OHRDRUFF, a town of Saxe-Gotha, the chief place of the county of Gleichen, a territory be- longing to the prince of Hohenlohe. It stands at the commencement of the forest of Thuringia, on the Ohr. It is surrounded with a wall, and has a considerable number of manufacturing establishments, such as paper, saw and oil mills : the weaving of woollen and linen is also carried on. Its bleachfields are of some extent. Inha- bitants 4200. Ten miles south of Gotha.

OIL, n.s. & V. a.ˆ Sax. eel ; Fr. huile; Ital.

Oil’-color, w. s. oglio i Latin oleum; Gr.

Oil’iness, tXatov. The expressed

Oxl’-man, (.juice of the olive; any

Oil’-shop, “unctuous expressed juice

Oil’y, adj. of this kind : to lubricate

Oil’grain, n. s. or cover with oil : oil-co-

Oil’-palm, J lor is a color made by

grinding various substances in oil : oiliness, unc- tuousness ; oily quality : oil-man and oil-shop are the man who deals in oils, and place where they are sold : oily means consisting of, contain- ing or resembling oil : oily-grain and oily-palm are plants.

Being pure oil olive beaten for the light. Exod, This nily rascal is known as well as Paul’s ;

Go call him forth, Shahspeare, H

Basil hath fat and succulent leaves ; which oilimss, if drawn forth by the sun, will make a very great change. Bacon.

The cloud, if it were oily or fatty, will not dis- charge ; not because it sticketh faster, but because air preyeth upon water and flame, and fire upon oil. Id. Natural History.

OILS.

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The men fell a rubbing of armour, which a great while had lain uikd. Wotton.

Flame is grosser than gross fire, by reason of the mixture with it of that viscous oily matter, which, being drawn out of the wood and candle, serves for fewel. Digby.

Smoke from unctuous bodies, and such whose oili- ne►►s is evident, he nameth nidor. Bruwne.

Amber will attract straws thus oiled, it will con- vert the needles of dials, made either of brass or iron, although they be much oiled, for in those needles consisting free upon their center there can be no ad- hesion. Id. Vulgar Errours.

Oilcolours, after they are brought to their due tem- per, may be preserved long in some degree of soft- ness, kept all the while under water. Botjle.

After this expressed oil, we made trial of a distilled one ; and for that purpose made choice of the common oil or spirit. Id.

Chyle has the same principles as milk, viscidity from the caseous parts, an oiliness from the butyra- ceous parts, and an acidity from the tartareous.

Flayer.

The flesh of animals which live upon other ani- mals is most antiacid ; though offensive to the sto- mach sometimes by reason of their oiliness.

Arbuthnot on Aliments.

In most birds there is only one gland ; in which are divers cells, ending in two or three larger cells, lying under the nipple of the oil bag. Derham.

Oil with chemists called sulphur is the second of their hypostatical, and of the true five chemical prin- ciples. It is an inflammable, unctuous, subtile sub- stance, which usually rises after the spirit. The chemists attribute to this principle all diversity of colours. There are two sorts of oil ; one of which will swim upon water, as oil of aniseed and lavender, which the chemists call essential ; and another kind, which probably is mixt with salts, and will sink in water, as the oil of guaiacum and cloves. Harris.

Swift oils many a spring which Harley moves.

Swifl. A curious artist long inured to toils

Of gentler sort, with combs, and fragrant oils,

Whether by chance, or by some god inspired.

So toucht his curls, his mighty soul was fired.

Young. ××× So, warm and buoyant in his oilxj mail.

Gambols on seas of ice the unwieldy whale ;

Wide waving fins round floating islands urge

His bulk gigantic through the troubled surge.

Daruin.

Oils are defined by modern chemists to be proper juices of a fat or unctuous nature, either solid or fluid, indissoluble m water, combustible with flame, and volatile in different degrees. They are never formed but by organic bodies, and all substances in the mineral kingdom which present oily characters have originated from the action of vegetable or animal life. Oil then is a term which comprizes a great multitude of unc- tuous liquids, which, when dropped upon paper, sink into it, and make it semi-transparent; or, in common language, give it a greasy stain. Many of these have been known from a very re- mote period, and especially those which are ap- propriated to burning in lamps, since we know that lamps furnished with this material were in use as far back as the epoch of Abraham. The olive plant was very early cultivated, and oil extracted from it in Egypt. Cecrops introduced it into Greece from Sais, a town of Lower Egypt, where it had long been cultivated, and taught

the Athenians the method of obtaining the oil ; and from Greece the use of olive oil has progres- sively spread over all Europe.

It is, however, a singular circumstance that Homer makes no mention of the use of lamps, and constantly describes his heroes as lighted by torches of wood ; from which circumstance we may safely collect that the Greeks did not ap- propriate oil to this purpose till a period subse- sequent to the Trojan war.

In the comprehensive sense in which the term is employed in modern chemistry, it has been necessary to arrange the substances which it comprises under different heads. Thus unctuous vegetable oils comprehend those which are usu- ally known under the name of fixed, expressed, or heavy oils. Eixed oil is mostly procured from the fruits or seeds of vegetables, by expression, or by decoction with water. When pure it is inodorous, and almost perfectly insipid ; but is often mixed with the mucilaginous or extractive matter of the vegetable from which it is extract- ed ; from which it acquires taste and odor,

and by which the oils of particular vegetables are dis- tinguished from each other. Cold-drawn oil is more pure than when expressed with the aid of heat, or extracted by decoction. Fixed oils are thick and unctuous, lighter than water, congeal by exposure to cold, and some are even concrete in the usual temperature. Fixed oil is insoluble in water or alcohol. Exposed to warm air it absorbs oxygen, becomes thick and colored, ac- quires a disagreeable odor, and a sharp unplea- sant taste, changing to what is called rancescence. It boils at 600 of Fahrenheit, is changed into vapor which is readily inflamed, and is thereby converted into water and carbonic acid. Without materially raising its temperature it burns imper- fectly in a common lamp, giving out a consider- able quantity of smoke, which consists of carbonaceous matter and empyreumatic oil. With a very slender wick, or a cylindrical one properly managed, it is almost totally converted into water and carbonic acid, as in the combus- tion of its vapor. By distillation, in close ves- sels, it loses its mildness and unctuosity, becomes more limpid and volatile, and a portion of car- bonaceous matter is left in the retort. Trans- mitted through an ignited tube it is converted into carbonic acid and hydro-carbonic gas. Sul- phuric acid renders it black ; part of the oxygen from the acid combines with the hydrogen of the oil, carbonaceous matter is deposited, and a thickish liquid, having a hepatic smell, is formed, which has not hitherto been analysed, but which may probably contain sulphur, or its oxide, com- bined with a part of the oil, in a state similar to petroleum. Nitric acid thickens expressed oil ; and when empyreumatic or rancid, from expres- sion by heat or otherwise, readily sets it on fire. Oxymuriatic acid thickens it, and in some in- stances renders it concrete. All these changes deserve minute investigation.

Water seems to be incapable of combining with fixed oil in any proportion. If the two fluids are strongly shaken together in a half filled phial, the oil is broken into very minute globules, and thus gives the water the appearance of thin milk or whey ; but, after standing for a few se-

conds, the whole of the oil rises to the surface, and the two liquors remain as clear and distinct as at first. That a considerable attraction, how- ever, subsists between the water and the oil is manifest from the well known fact that if a drop of oil be let fall into a basin of water it does not retain its globular form, hut immediately spreads itself into a thin iridescent film, with which the whole surface of the water is

covered.

The method of procuring oils by expression is very simple : thus if either sweet or bitter al- monds, that are fresh, be pounded in a mortar, the oil naay be forced out with a press, not heat- ed : and in the same manner should the oil be pressed from linseed and mustard. The avoiding the use of heat, in preparing those oils intended for internal medicinal use, is of great importance, as heat gives them a very prejudicial rancidness. This method holds of all those vegetable matters that contain a copious oil in a loose manner, or in certain cavities or receptacles ; the sides of which being broken or squeezed makes them let go the oil they contain ; and thus the zest or oil of lemon peel, orange peel, citron peel, Sec, may be rea- dily obtained by pressure, without the use of fire. But how far this method of obtaining oils may be applied to advantage seems not hitherto considered. It has been commonly applied to olives, almonds, linseed, rapeseed, beech mast, ben-nuts, walnuts, bay-berries, mace, imtmeg, &c., but not, that we know of, to juniper berries, cashew-nuts, Indian cloves, pine-apples, and many other substances that might be enumerated both of foreign and domestic growth. It has, however, been of late successfidly applied to mustard-seed, so as to extract a curious gold- colored oil, leaving a cake behind fit for making the common table mustard. Certain dry matters, as well as moist ones, maybe made to afford oils by expression, by grinding them into a meal, which being suspended to receive the vapor of boiling water will thus be moistened so as to afford an oil in the same manner as almonds ; and thus an oil may be procured from linseed, hemp-seed, lettuce-seed, white poppy-seed, &:c. Oils obtained by expression should be suffered to depurate themselves by standing in a mode- rately cool place, to separate from their water, and deposit their faeces; from both which they ought to be carefully freed. And if they are not thus rendered sufficiently pure they may be ###washed well with fresh water, then thoroughly separated from it again by the separating glass, whereby they will be rendered bright and clear.

In the arts fixed oils are of the most extensive utility. They are employed in the fabrication of soaps, for mixing colors in painting, for some kinds of varnish, and for defending substances from the action of air and moisture. The greater or less period of time these unctuous substances have been subjected to the action of fire, the greater or less is their degree of thickness and consistency. The oil of walnuts is especially serviceable to the painter in grinding and diluting his colors ; and that of the aspic (a species of lavender) has also been strongly recommended for the purpose of rendering the colors already mixed smoother, firmer, and more siccative. The oil of the white poppy,

extracted from the plant

of tliat name, is clearer and whiter than any other. That produced from flax is of a deep yel- low, and very fat. M. Millan speaks of boilino- this or walnut oil with litharge and onions until the latter are reduced to cinder : this composi- tion, he says, is useful to mix with black, brown, and other colors which have little body and do not dry readily.

Expressed oil unites, by boiling, with sulphur into a compound which has an excessively off^fn- sive odor, and a very disagreeable acrid taste, usually called balsam of sulphur. It likewise combines with phosphorus, and unites with gum, resin, and several other vegetable products. With mucilage it forms a milky compound, call- ed in pharmacy emulsion, and with sugar what is called oleo-saccharum. The ultimate elements of expressed oil, so far as is yet known, are car- bon, hydrogen, and oxygen.

'olatile or essential oil is procurable from a variety of parts of many vegetables, usually by distillation with water. A small part unites with the distilled water, and the rest swims, for the most part, on the surface, though a few of these oils are heavier than water. Sometimes this oil is contained in distinct vesicles of the vegetable, and is obtained by expression. In volatile oil the peculiar odor of each plant is generally found, from which the term essential is derived ; and, although from some highly odorant vegetables very little volatile oil is procurable, and a consi- derable quantity from such as have little odor, it would appear that the smell emitted by odorant vegetables is produced by its natural evaporation.

'olatile oil is odorous, sapid, and pungent. It is for the most part liquid, even in low tem- peratures, though some congeal in moderate de- grees of cold, and others are concrete in the ordinary temperatures. It dissolves sparingly in water ; to which it communicates its peculiar odor, taste, and pungency ; as likewise to alcohol and proof spirits, in which it is more abundantly soluble. Botli these solutious are usually ac- complished by distillation, but may likewise be formed by other means. That with water is call- ed, in pharmacy, simple distilled water, or mere- ly water of the peculiar vegetable ; with proof- spirit or alcohol, it gets the name of compound distilled water, or spirit of the vegetable ; when in large quantity, combined with alcohol, it is de- nominated essence or quintessence, and is then more readily soluble in water, and in larger pro- portion.

Exposed to the air, volatile oils gradually lose their peculiar odors, are

thickened, and finally become concrete, resembling resins ; often depo- siting acid crystals, and sometimes granules re- sembling camphor. By moderate heat, they are volatilised without change ; but are partially decomposed by greater heat than is necessary for distillation. Heated in contact with air, they are more volatile, more readily inflammable, and produce more water in combustion, than fixed oils, and consequently contain a larger proportion of hydrogen. By the acids, they are oxidated, becoming black with sulphuric acid. Nitric acid, especially when mixed with sulphuric, rea- dily sets them on fire. Dilute nitric acid, and oxymoriatic, convert them into resinous sub-

stances by oxidation. They combine with, or fumer; not only where essential oils cannot be dissolve, sulphur, phosphorus, resin, and cam- well obtained in sufficient quantities, but also phor ; but combine difficultly and sparingly with where they are too dear. The essential oil of the alkalies. By sugar, mucilage, and some jessamine flowers, honey- suckles, sweet-briar, other vegetable products, they are rendered mis- damask roses, lilies of tlie valley, 6s:c., are eithc cible with water, in the state of emulsion. Pre- extremely dear, or scarcely obtainable by distil- viously united with alcohol, into what has been lation ; and, in some of them, tlie odorous matter called essence, they are considerably soluble in is so subtile as almost to be lost in the opera- water. Their ultimate elements seem the same tion. But if these flowers be barely infused in with those of fixed oils. fine oil of nuts, or oil of ben, drawn without

Many of the essential oils being dear, it is heat and kept in a cool place, their subtile odor- very common to adulterate them several ways, to ous matter will thus pass into the oil, and richly render them cheaper. These several ways seem impregnate it with their flavor. And these es- reducible to three general kinds, each of which sences may be rendered still more perfect by has its proper method of detection, viz. 1st, ^^‘ith straining off” the oil at first put on, and letting it expressed oils ; 2dly, With alcohol ; and, 3dly, stand again without heat, upon fresh flowers ; With cheaper essential oils. If an essential oil repeating the operation twice or thrice. be adulterated with an expressed oil, it is easy Drying oils are formed of linseed oil, prepared to discover the fraud, by adding a little spirit of by means of boiling, sometimes with and some- wine to a few drops of the suspected ess’ential times without the addition of other substances. oil, and shaking them together ; for the spirit Those commonly added to oil, in this prepara- will dissolve all the oil that is essential, or pro- tion, are

white vitriol, sugar of lead, seed-lac, cured by distillation, and leave all the expressed gum mastic, gum sandarac, gum anime, gum oil, that was mixed with it, untouched. If an copal, umbre, colcothar, litharge, and red-lead, essential oil be adulterated with alcohol, or recti- A drying oil for the nicer works may be prepar- fied spirit of wine, it may be done in proportion, ed by boiling two ounces of gum sandarac; white up to that of an equal quantity, without being vitriol, and sugar of lead, of each one ounce ; in easily discoverable either by the smell or taste : the a pint of nut or poppy oil, till the solid ingre- way to discover this fraud is to put a few drops dients be dissolved, and the mixture becomes of of the oil into a glass of fair water; and, if the the color of linseed oil. For coarser work, take oil be adulterated with spirit, the water will im- one gallon of linseed oil, one pound of litharge mediately turn milky, and, by continuing to shake of gold or silver, half a pound of white vitriol, the glass, the whole quantity of spirit will be ab- and sugar of lead, gum arable, and umbre, of sorbed by the water and leave the oil pure at top. each a quarter of a pound ; boil them as long as Finally, if an essential oil be adulterated by a the discoloring of the oil, which is the gradual cheaper essential oil, this is commonly done very consequence of boiling, will allow. That made artfully ; the method is to put fir-wood, turpen- for sale is prepared by boiling one gallon of lin- tine, or oil of turpentine, into the still, along seed oil, and one pound and a half of red-lead, with the herbs to be distilled for their oil, such as long as the color will bear it. When the as rosemary, lavender, origanum, &c., and by calxes of lead are united in small quantity with these means the oil of turpentine distilled from oil they diminish its fluidity, and dispose it to these ingredients comes over in great quantity, dry more readily. These oils are much used in and intimately blended with the oil of the genu- painting, on account of their drying quality, ine ingredient. The oils thus adulterated al- - pj^^ following is a list of the plants which ways discover themselves in time, by their own j ^^^ fixed oils occurring usually in com

flavor being overpowered by the turpentine j^-p-pp .

smell ; but the ready way to detect the fraud is

to drench a piece of rag, or paper, in the oil, and 1 ××× Linum usitatissimum ^ Linseed oil

hold it before the fire ; for thus the grateful fla- et perenne . . . . S

vor of the plant will fly oflf, and leave the naked 2. Corylus avellana } -^^^ ^jj

turpentine scent behind. 3. Juglans regia . S ‘ ‘

The next class of oils are those made by infu- 4. Papaver somniferum . . Poppy oil.

sion or decoction, wherein the virtues of some 5. Cannabis sativa . . Hemp oil.

herb or flower are drawn out in the oil; as the 6. Sesamum orientale . . Oil of sesamum.

oils of roses, chamomile, hypericum, alder, &c. 7. Olea Europaea .... Olive oil.

However, these require to be differently treated : 8. Amygdalus communis . Almond oil.

thus, for the scented flowers, particularly roses, 9. G ii andin Mohrinˆ- a . . Oil of behen.

insolation does best; because much boiling 10. Cucurbita pepo et ###e- ˆ Cucumber oil

would exhale their more fragrant parts ; but oils lapepo S

impregnated with green herbs, as those of cha- 1 1 . Fagus sylvatica .... Beech oil.

momile and alder, require long boiling, before 12. Sinapis nigra et arven- ˆ q-ˆ ˆˆ mustard

they receive the green color desired. In general sis S

no oils will bear to be boiled any longer than 13. Helianthus annuus ˆM Qil of sunflower

there remains some aqueous humidity, without perennis J

turning black. There are many compound oils 14. Brassica napus et cam- } ʳˆˆˆQQˆ oil

prepared in the same mimner, viz. by boiling pestris S

and insolation, and then straining off the oil for 1,5. Ricinus communis . . . Castor oil.

use. The same contrivance has likewise its use 16. Nicotiana tabacum

ˆt > rp, ^^^ pjj

in making essences for the service of the per- tustica 5

L2

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17. Prunus domestica

1 8. Vitis vinifera . .

19. Theobroma cacao

20. Laurus nobilis .

21. Arachis hypogaea

OILS.

Plum-kernel oil. Grapeseed oil. Butter of cacao. Laurel oil. Ground-nut oil.

The following table contains a copious list of plants which yield volatile oils. The part of the plant from which it is extracted, and the English name of the oil, are added in separate columns.

Plants.

1 . Artemisia absynthium

2. Acorus calamus . 2. Myrtws pimenta .

4. Anethum graveolens

5. Angelica archangelica.

6. Pimpinella anisum

7. lUicium anl atum .

8. Artemisia vulgaris

9. Citrus aurantium .

10. Meloleuca leucodendra

1 1 . Eugenia caryophyllata

12. Carum canii . . .

13. Amomum cardamomum

14. Carlina acaulis . .

15. Scandix chaerefolium

16. Matricaria chamomilla

17. Laurus cinnamomum

18. Citrus medica . .

19. Cochlearia officinalis

20. Copaifera officinalis

21. Coriandrum sativum

22. Crocus sativus

23. Piper cubeba . .

24. Laurus culilaban .

25. Cuminum cymium

26. Inula helenium

27. Anethum foeniculum

28. Croton eleutheria .

29. Maranta galanga .

30. Hyssopus officinalis

31. Juniperus communis

32. Lavendula spica .

33. Laurus nobilis

34. Prunus laurocerasus

35. Levisticum logusticum

36. Myristica moschata

37. Origanum majorana

38. Pistacia lentiscus .

39. Matricaria parthenium

40. Melissa officinalis .

41 . Mentha cripsa

42. Mentha piperitis .

43. Achillea millefolium

44. Citrus aurantium .

45. Origanum creticum

46. Apium petroselinum

47. Pinus sylvestris et abies

48. Piper nigrum . .

49. Rosmarius officinalis

50. Mentha pulegium .

51. Genista canariensis

52. Rosa centifolia

53. Ruta graveolens .

54. Juniperus sabina .

55. Salvia officinalis .

56. Santalum album .

57. Laurus sassafras .

58. Satureia hortensis .

59. Thymus serpillum

60. Valeriana officinalis

61 . Kaempferia rotunda

62. Amomum zinziber

63. Andropogon schsenanthum

Parts.

Leaves

Root

Fniit

Seeds

Root

Seeds

Seeds

Leaves

Rind of the fruit

Leaves .

Capsules

Seeds .

Seeds .

Roots .

Leaves .

Petals .

Bark .

Rind of the fruit

Leaves .

Extract

Seeds .

Pistils .

Seeds .

Bark .

Seeds .

Roots .

Seeds .

Bark ,

Roots .

Leaves .

Seeds .

Flowers

Berries

Leaves

Roots .

Seeds .

Leaves .

Resin .

Plant .

Leaves .

Leaves .

Leaves .

Flowers

Leaves .

Flowers

Roots .

Wood and

Seeds .

Plant .

Flowers

Root .

Petals .

Leaves .

Leaves .

Leaves .

Wood .

Root .

Leaves .

Leaves and

Root

Root

Root

flowers

Oil of

Wormwood Sweet flag Jamaica pepper Dill . . Angelica . Anise . . Stellat. anise Mugwort . Bergamot . Cajeput . Cloves . . Caraways . Card-seeds

Chervil Chamomile Cinnamon Lemons . Scurvy grass Copaiba . Coriander seed Saffron . . Cubeb pepper Culliaban . Cummi Elecampane Fennel Cascarilla . Galanga . Hyssop Juniper . Lavender . Laurel . Laurocerasus Loveage . Mace . . Marjoram . Mastich . Motherwort Balm . .

Peppermint Millefoil . Neroli . . Spanish hop Parsley Turpentine Pepper Rosemary . Pennyroyal Rhodium . Roses , Rue . . Savine . . Sage . . Santalum . Sassafras . Satureia . Thyme A'alerian . Zedoary . Ginger . .

Color.

Green. Yellow. Yellow. Yellow.

White. Brown.

Yellow.

Green.

Yellow.

Yellow.

Yellow.

White.

Sulph. yellow.

Blue.

Yellow.

Yellow.

Yellow.

White.

White.

Yellow.

Yellow.

Brown yellow.

Yellow.

White.

White.

Yellow.

Yellow.

Yellow.

Green.

Yellow.

Brownish.

Yellow.

Yellow.

Yellow.

Yellow.

Blue.

White.

White.

“^‘ellow.

Blue and green.

Orange.

Brown.

Yellow.

Colorless.

Yellow.

Colorless.

Yellow.

Yellow.

Colorless.

Yellow.

Yellow.

Green.

Yellow.

Yellow.

ˆ ellow.

Yellow.

Green.

Greenish blue.

Yellow.

Brown .

OlS

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OIS

Table of Volatile Oils.

Names.

Color.

Turpentine

Juniper

Rosemary

Mint

Cloves .

Lemon .

Orange .

Cinnamon

Sassafras

Fennel .

Tansy

Dill

Carraway

Penny Royal

Cummin

Nutmegs

Aniseed

Thyme .

Spike

Lavender

Origanum

Wormwood

Camomile

Hop’s

Parsley .

Bergamotte

Cardamom

Mace

Roses

Peppermint

Savine .

Pepper .

None.

Green.

None.

None.

None.

Yellow.

Yellow.

Yellow.

None.

None.

None.

None.

Brown.

Yellow.

None.

Green.

Blue.

Green.

Green.

Yellow.

None.

None. Green. None. None.

Specific Gravity.

792 611 934 975 034

035

094

997

946

994

94

978

975

948

.94

Consistency at 60. Freezes at 14.

Fluid as water.

Very fluid.

Thin liquid.

Very fluid.

Oily and very fluid.

Thin liquid.

Ditto.

Oily and less liquid.

Oily.

Becomes solid at 50.

Like butter. Becomes solid at 50. Crystallises.

Thin liquid.

Like butter.

Not oily. Is solid at 2 3

Oily.

Oily.

Thin liquid.

Like butter.

Odor.

Strong. Strong smell. Like the plant. Agreeable. Very fragrant. Very agreeable. Nearly similar. Pleasant. Like the root.

Very strong.

Very strong and pungent. Agreeable, like the plant.

Very pleasant.

Very strong.

Like camphor.

\ ery strong.

'ery agreeable.

Very strong and acrid.

Like the flower.

Very pleasant.

Agreeable.

Very agreeable. Disagreeable. Very acrid.

Several of the gum-resins, as myrrh and gal- banum, yield an essential oil ; and likewise the balsams, as benzoin, &c.

Oil, Whale. See Whale and Balance.

OILYPALM. See Ricinus.

OINT, V. a. \ Fr. oint ; of Lat. unguo,

Oint'ment, n. s. S unctio. To bedew or cover with oil ; to anoint (the more common word) : ointment is, unctuous matter more or less fluid ; unguent; salve.

There n'as quicksilver, litarge, ne brimston Boras, cerus, ne oilc of tartre non ; Ne oinement that wolde dense or bite. That him might helpen of his whelkes white.

Chaucer. Life and long health that gracious ointment gave, And deadly wounds could heal, and rear again I he senseless corpse appointed for the grave.

Spenser. They oint their naked limbs with mothered oil, Or from the founts where living sulphurs boil They mix a med'cine to foment their limbs.

Dry den. Ismarus was not wanting to the war. Directing ointed arrows from afar ; And death with poison armed. ††† Id. JEneid. OISE, DEPARi MENT OF THE, France, formed out of part of Beauvoisis and part of Valois, a small country once dependent on the province of tlie Isle of France, and taking its name from the river Oise, which crosses the eastern part. The

principal place of this prefecture is Beauvais ; it is divided into four arrondissements, Beauvais, containing 127,533 inhabitants: Clermont 83,419; Corapiˆgne 90,142 ; and Senlis 72,723; making a total population of 375,817 souls on a superficial extent of 2682 square miles, yielding a territorial revenue of 25,609,000 francs. It is I)art of the first military division, having a royal court at Amiens, and consisting of three electoral arrondissements, which send five members to the chamber of deputies. This department is bounded on the north by that of the Somme; on the east by that of the Aisne ; on the south by those of Seine-et-Marne and Seine-et-Oise, and on the west by those of the Lower Seine and the Eure.

The face of the country is intersected with hills, well cultivated plains, and rather extensive forests, of which that of Compiegne is the most remarkable. The soil is generally good, and fruitful in corn of a good quality, most of which serves for the supply of Paris ; the same may be said of the vegetables, which are excellent in some of the cantons. Great quantities of hemp and rape seed, and very fine fruits, are produced here. In some parts the vine is cultivated with much care ; but in general the wine is poor. There are some good pastures for cattle and sheep, the flesh of which is greatly esteemed. The soil is a fat, rich earth, cultivated with

horses, and yielding an ample supply for its in- habitants ; it contains 83,320 hectares of forests (oak and birch), and 3500 of vineyards ; the average produce of the hectare of arable land being estimated at thirty-nine francs, eighty centimes. Besides what has been mentioned there is abun- dance of game, especially hares and rabbits ; also excellent fresh water fish, horses, mules, asses, pigs, poultry, and many bees. There are quar- ries of gray marble, free stone, mill stones, paving stone and plaster; crucible clay, potters’ clay, marie, and turf.

The manufactures consist of woollen stuffs, calicoes, Holland lawns, cambrics, blond, black and white lace, printed cottons, carpets, caps, gold and silver lace, whip handles, walking sticks, turnery, ivory goods, fans, mirrors, spec- tacles, ropes, agricultural implements, china, delf, sulphate of iron, cotton yarn, paper, leather, and boat building. There is also a royal manufac- tory of tapestry. A considerable trade is carried on in corn, flour, and all the above articles. The principal rivers that water this departihent are, the Oise, the Aisne, and the Ourcq, navigable ; the Therain, the Avelon, the Bresche, and the Nonette ; and it is crossed by the great roads of Paris, Amiens, Abbeville and Rouen.

Oise, a river in France, which rises near Se- logne, in the kingdom of the Netherlands, at a short distance from the frontiers of France. It soon enters the department of the Aisne, passes by Hirson, Etree-au-Pont, Guise, Origny, Ri- bemont, la Fere, Chauny, Noyon, Compiegne, Pont St. Maxence, Creil, Beaumont, I'lsle Adam, and Pontoise, and falls into the Seine, at Con- flans St. Honorine. It begins to be passable for floats at Butor, and navigable at Chauny. Its navigation is very important, as it connects the canal of St. Quentin, and all the northern canals, with the Seine. In its course, which is about 165 miles, it receives the waters of the Serre, the canal of Crozat, the Aine, the Bresche, the No- nette, and several other streams.

OISEL (James), a Dutch lawyer, born in 1631. He became professor of civil law at Gro- ningen; and wrote a treatise on ancient brass coins, entitled Thesaurus selectorum numisma- tum antiquorum sere expressorum ; and several other works. He died in 1686, aged fifty-five.

OKA, a large navigable river in the central part of Russia, in Europe, which rises in the go- vernment of Orel, flows north-east, and. after receiving the Moskva, joins the Wolga at Niznei- Novgorod. It receives a number of small streams.

OKEHAM or Oakham, the county town of Rutland, situate in a rich valley called the vale of Catmose, sixteen miles E. N. E. from Leicester, ninety-five from London. It consists of two parishes or manors, called the lord's hold and the dean's hold, the former being vmder the earls of Winchelsea, who hold annual courts, at which parish officers, &c., are chosen, the latter under the dean of Westminster, who holds a triennial court. The church is a spacious structure dedicated to All Saints, with a native chancel, side aisles, and tower, terminated by a lofty spire. Its ancient ca-stle has long been demolished, and the building now called the castle is the hall where the assizes

are held and the public business of the county transacted ; the town is well built. There are some well endowed free schools and alms houses, and an hospital. The noble mansion of the earl of Winchelsea is in the neighbourhood, near Burleigh on the hill, and is an extensive and magnificent structure, built of free-stone.

O'KER, n. s. Or Ochre, which see. A color. And Klaius taking from his younglings cark,

Lest greedy eyes to them might challenge lay,

Busy with oker did their shoulders mark. Sidney.

Red oker is one of the most heavy colours ; yellow oker is not so, because it is clearer. Drqden.

OKEY Hole, a celebrated natural cavern of England, on the south side of Mendip hills. The entrance is in the fall of those hills, beset all about with rocks, and has near it a precipi- tate descent of nearly twelve fathoms deep, at the bottom of which there continually issues from the rocks a considerable current of water. Tiie naked rocks above the entrance are about thirty fathoms high, and the whole ascent of the hiil above is about a mile, and very steep. As you pass into this vault, you go at first upon a level ; but, advancing farther, the way is rocky and uneven, sometimes ascending, and sometimes descending. The roof of this cavern, in the highest part, is about eight fathoms from the ground, but in many places it is so low that one must stoop to get along. The breadth is not less various than the height, for in some places it is five or six fathoms wide, and in others not more than one or two. It is in length about 200 yards. At the farthest part of the cavern there is a stream of water, large enough to drive a mill, which passes all along one side of the cavern, and at length slides down about six or eight fathoms among the rocks and then, pressing through the clefts, falls into the valley. The river within the cavern is well stored with eels, and has some trouts. In dry summers a great number of frogs are seen all along this cavern, even to the farthest part of it ; and on the roof are vast numbers of bats.

OKHOTZK, one of the four circles of the government of Irkoutsk, Asiatic Russia. It is a maritime territory, extending along the seas of Okhotzk, of Kamtschatka, and of Anadir, and both barren and unwholesome from the excessive moisture and thick mists. About ten or twelve miles inland there is a ridge of hills, which, though of no great elevation, arrest the influence of the sea air ; and beyond them the trees grow well, and the meadows are rich.

Okhotzk, the capital of the above circle, is built upon a long and narrow ridge, between the sea and the river Okhota, and composed chiefly of an accumulation of debris. It is upwards of three miles long, but not more than from 100 to 300 feet broad. The town contains about 130 houses, which extend in a line two-thirds of a mile long. It has a church, magazines, and a double row of shops, and is supported by being the channel of trade between Irkoutsk and Kamt- schatka. The goods are conveyed down the Lena to Yakoutsk, thence up the Aldane to its con- fluence with the Judoma, then up the Judoma, till a short land carriage conveys them to Ok- hotzk. The journey from Okhotzk to Irkoutzk

is performed more easily by descending; the Ju- doma and Aldane. In the land part of the route the goods are placed on pack horses or men's backs, as there are no waggons of any descrip- tion. It can be performed only in spring, to avoid the danger of sinking in morasses. Long. 142►► 44', E. lat. 59►► 20′ N.

Okhotzk, Sea of, a gulf of the Eastern Ocean, between Kamtschatka, the circle of Okhotzk, part of Chinese Tartary, and Saghalien. In its opening into the ocean are the Kurile Islands and part of Jesso.

O'Kfeffe, John, a dramatic writer, was born in Dublin, educated by a Jesuit, named Austin, brought up as an artist. Pleading vveakness of sight in extenuation of his abandonment of the fine arts for the sock and buskin, he appeared on the Dublin stage, and continued to perform there for several years. His talents for dramatic composition had there an opportunity of de- veloping themselves, and his first eifort, " Tony Lumpkin in Town," was transmitted to Colman, and produced successfully in the Haymarket, in 1778, He was not successful in obtaining an en- gagement as an actor, but continued to write for tiie stage, and in twenty years he produced the pieces enurserated at the end of this article. Be- fore he attained the age of fifty, his sight totally failed him, and in the year 1800 betook a benefit at Covent Garden, on which occasion he was led on the stage by Lewis, and delivered an address, characteristic of his style, remarkable for the happy blending of humour and pathos. From this period, O'Keeffe appeared to have been to- tally forgotten and neglected. His unmerited distresses were made known by the benevolent bishop of

Chichester, to his Majesty, George IV., who immediately settled a small annuity upon O'Keeffe, which was continued to him until his death. The Literary fund also transmitted a handsome sum, but he returned it with warm expressions of gratitude, preferring to depend v!pon the hand of his royal benefactor. It was in Chichester he resided, when his poverty, hu- mility, and resignation excited public attention and regard, from whence he removed to Bedford cottage, Southampton, where he expired, on the 16th of February, 1793, in the eighty-sixth year of his age. The printed works of O' Keeffe are :
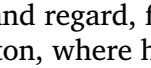

"Tony Lumpkin in Town, fc. 8vo. ; Son-in- Law, 8vo., 1779; the Birthday, Bvo., 1783; ( )mai, p. 8vo., 1783 ; Prisoner at Large, cr. 8vo., 1788 ; the Toy, cr. 8vo., 1789 ; World in a Vil- lage, com. 8vo., 1795 ; London Hermit, cr. 8vo., 1793; Wild Oats, cr. 8vo., 1794; Life's Va- garies, cr. 8vo., 1793 ; Irish Mimic, mus. enter. 8vo., 1715. In 1798 the following were col- lected and published ; Alfred, a drama, 8vo. ; the Basket-maker, mus. enter., 8vo. ; A Beggar on Horseback, farce, 8vo. ; the Blacksmith of Antwerp, fc. 8vo. ; the Castle of Andalusia, com. opera ; the Czar Peter, ditto, 8vo.; the Dol.'n;m,fc. 8vo. ; the Farmer, fc. 8vo. ; Fontain- bleai.', com. opera, 8vo.; Le Grenadier, panto- mime, 8vo. ; Highland Reel, com. opera, 8vo. ; Little Hunchback, fc. 8vo. ; Love in a Camp, fc. 8vo. ; INIan-Milliner, fc. Bvo. ; Modern Antiques, fc.Bvo. ; Poor Soldier, com. opera, Bvo. ; Positive Man, fc. 8vo. ; Sprigs of Laurel, com. opera,

8vo. ; Tantarara Rogues all, fc. Bvo. ; Wicklow Gold Mines, opera, Bvo. Memoir of Himself. Besides these pieces, the author has produced many which remain in the hands of the pro- prietors of the theatres as stock plays."

OLATRUS (Nicolas), a Hungarian divine and historian, born at Hermanstadt. He was made chancellor of Hungary and archbishop of Stugo- nira. He wrote, 1. A Chronicle of his own time; 2. A History of Attila; and 3. A De- scription of Hungary. He died in 1568.

OLAVIDES (Paul, A. J.), a Spanish states- man and modern victim of the inquisition, was born in 1725 at Lima in Peru, of wealthy parents. At an early age he was appointed audiior of the province; but having, by the liberality of his opinions, given offence to the monks and friars, they had him sent to Spain, where he was com- mitted to prison by the holy office, but shortly after liberated. He now took up his residence at Madrid, and was appointed atrent for his Pe- ruvian countrymen. Powerfully seconding the mea.sures of the Spanish minister, the count d'Aranda, for the expulsion of the Jesuits, at length

the government appointed him intendant of Andalusia, where he founded a new colony, which flourished greatly. But, having endeavoured to exclude as much as possible the mo- nastic and mendicant orders, they charged him with heresy; and in Nov. 1776 he was arrested and thrown a second time into the dungeons of the inquisition. After two years' confinement he was brought up to receive his sentence. It was charged against him that he had in his library the French Encyclopedie, Bayle's Dictionary, Mon- tesquieu's Spirit of Laws, and the works of Vol- taire and Rousseau, together with a letter from that philosopher to himself, containing the phrase ••• ' It is much to be wished that Spain possessed forty such persons as yourself.' Olavides was condemned to eight years' seclusion in a monas- tery to practise exercises of piety, and to be af- terwards banished twenty leagues from all great cities ; to be incapable of public employment, &c. But he contrived to escape from the convent, and took refuge in France and Geneva. On the death of Charles III. he was permitted to return to France, where he resided at the revolution ; and under the reign of terror was imprisoned at Orleans. He employed the period of his confine- ment, and his subsequent leisure, in writing The Triumph of the Gospel, a work which attracted notice in his own country, and was translated into French. Its success induced those who had persecuted him to boast of his conversion, and they obtained his recal to Spain. Thither he went in 1798, and retired to his estate in Anda- lusia, where he died in 1803.

OLAX, in botany, a genus of the monogynia order, triandria class of plants: cal. entire : cor. funnel-shaped and trifid ; the nectarium tetra-phyllous.

OLD, adj. '\ Sax. eal'o ; Dan. aide ;

Old'fashioned, adj. 'Ooth. aldu ; Teut. alt.

Old'en, i Ancient ; of long exist-

Old'ness, 71. s. 'ence or continuance;

of a specified duration or length of lite; past the middle of life ; not new, young, or modern ; (in a burlesque sense) more than enough ; ' of

old,’ signifies from ancient times : oldfashioned, obsolete, not a-la-mode : olden, the ancient plu- ral of old, now used only in poetry : oldness, quality of being old; old age; antiquity. Raiment waxed not old upon thee.

Deuteronomy. Then said I unto her that was old in adulteries, will they now commit whoredoms with her ?

Ezek. xxxiii. 43. To old age, since you yourself aspire, Let not old age disgrace my high desire. Sidney-

These things they cancel, as having oeen insti- tuted in regard of occasions peculiar lo the times ►►/ old, and as being now superfluous. Hooker.

Plead you to me, fair dame 1 I know you not ; In Ephesus I am but two hours old, As strange unto your town as to your talk.

Shakspeare.

OLDCASTLE (Sir John), called the gooa lord Cobham, was born in the reign of Edward III., and was the first author, as well as the first martyr, among the English nobility : he obtained Iris peerage by marrying the heiress of that lord Cobham who with so much virtue and patriot- ism opposed the tyranny of Richard II. By liis means the famous statute against provisors was revived, and guarded against by severe penalties ; he was one of the leaders of the reforming party; was at great expense in procuring and disper-

sing copies of Wickliffe’s writings among the people, as well as by maintaining a number of his disciples as itinerant preachers. In the reign of Henry IV. he commanded an army in France, and compelled the duke of Orleans to raise the siege of Paris. In that of Henry . he was accused of heresy, the growth of which was attiibuted to his influence. Being a domestic in the king’s court, the king delayed his prose- cution, that he might reason with him himself; but, not being able to reclaim him to the church of Rome, he in gTeat displeasure resigned him to its censure. He was apprehended and con- demned for heresy ; but, escaping from the tower, lay concealed for four years in Wales, until the rumor of a pretended conspiracy was raised against him, and a price set upon his head. He was at last seized, and executed in St. Giles’s fields; being hung alive in chains upon a gallows, and burned by a fire placed underneath. He wrote Twelve Conclusions, addressed to the Parliament of England.

OLDENBURG, Grand Duchy of. The dominions of the duke of

Oldenburg include several portions of territory in the north-west of Germany. The chief of them is Oldenburg Proper, almost surrounded by Hanover, and extending north to the shores of the German Ocean.

Oldenburg Proper includes the country of Delmenhorst

with the lordships of 'arel, Jever, and Kniphausen The principality of Eutin or Lubeck . The lordship of Berkenfeld

Area. Population.

2250 178,000

200 20,000

170 20,000

This duchy is divided into seven circles, hav- ing eacli a court of justice : the majority of the inhabitants are Lutherans, and well educated. The revenue is ►►126,000, and the contingent army 2000.

Oldenburg Proper is entirely flat, and greatly resembles Holland, many parts of the coast requiring similar dikes to prevent inundation. Here, and near the banks of the rivers, the soil is rich, but in many others it is marshy or sandy, and yields but little that is valuable. The climate is of course moist. The chief rivers are the Weser, Hunte, and Delme. The only small lake is the Dummersee. The population are chiefly employed in attending to cattle and fish- ing, as the country seldom grows sufficient grain to supply the wants of the inhabitants. Its common produce is grain, hemp, flax, and hops ; and a great many horses and cattle are bred. These, together with butter and cheese, are the articles of export. Amber is sometimes found on its coast, and turf is dug from the moors.

Oldf.nburg, the capital of this duchy, is situ- ated on the river Hunte. It is fortified, and, including the suburbs, has a population of about 5000. The palace of the grand duke, with three churches, thiee hospitals, and an observatory, are its chief public buildings. There is also a gymnasium, and a seminary for the instruction of schoolmasters. The courts of justice and government ofticos are situated here. It has also soap-houses, lannerius, and sugar refineries; but

Total 2620 218,000

its chief trade is in wood. Few manufacturing establishments are to be

found in this duchy ; and the linen, yarn, and stockings, that are made are produced l3y the peasants during the inter- vals of their other occupations. The illustrious house of Oldenburg have,been allied to almost all the regal families of Europe.

Oldenburg (Henry), a learned German, in the seventeenth century, descended from the ancient earls of Oldenburg in Westphalia. He was born in the duchy of Bremen ; and during the long parliament, in king Charles I. time, w as appointed consul for his countrymen at London, after the usurpation of Cromwell : but, being discharged from that office, he was made tutor to lord Henry O'Bryan, an Irish nobleman, whom he attended to the university of Oxford, where he was admitted to study in the Bodleian library, in 1656. He was afterwards tutor to William lord Cavendish, and was acquainted with Milton the poet. During his residence at Oxford he became also acquainted with the members of that body there, who gave birth to the royal society ; upon the foundation of which he was elected fellow, and was chosen assistant secre- tary to Dr. Wilkins. He began the publication of the Philosophical Transactions in 1664; and held a correspondence with more than seventy learned persons, upon a vast variety of subjects, in diff"erent parts of the world. He was a con- stant correspondent of Mr. Robert Boyle, with whom he had a very intim.ate friendship ; and

translated several of his works into Latin. He continued to publish the Transactions, to No. XXXVI. June 25th, 1677; after which they were discontinued till January, 1678, when his successor in office, Mr. Nehemiah Grew, resumed and carried on the work. Mr. Oldenburg died at Charleton, near Greenwich, in August, 1678.

OLDENLANDIA, in botany, a genus of the monogj'nia order, and tetandria class of plants ; natural order forty-seventh, stellatae : the em- palement of the flower is permanent, sitting upon the germen : the flower has four oval petals, which spread open, and four stamina, terminated by small summits ; it has a round- ish germen, situated under the flower, crowned by an indented stigma ; the germen afterwards turns to a globular capsule, with two cells filled with small seeds. We have but one species of this plant in the English gardens ; but Linnaeus enumerates six.

OLDERMAN (John), a learned German, born in Saxony in 1686. He studied at Helm- stadt, and became professor of Greek in that university in 1717. He wrote several learned dissertations, 1. De Imperfectione Sermonis hu- mani ; 2. De Phraate Fluvio, &c. He died at Helmstadt in 1723.

OLDHAM (John), an English poet in the seventeenth century, son of a nonconformist minister, was educated under his father, and then sent to Edmund Hall in Oxford. He be- came usher to the free-school at Croydon in Surry, and was afterwards private tutor for a considerable time. Having saved a little money, he went to London, and became acquainted with Dryden, Rochester, and the wits of his time. He lived mostly with the earl of Kingston at Holme-Pierpoint in Nottinghamshire, where he died of the small-pox in 168.3, in his thirtieth year. His works chiefly consist of satires, odes, translations, oaraphrases of Horace, &c., elegiac verses, imitations, parodies, familiar epistles, &c.

Oldham Borough, and market town of Ens- land, in the parisliof Prestwich, hundred of Sal- ford, and county of Lancaster, 191 miles from London, with 67,o70 inhabitants. The cotton manufacture has attained a high degree of prosperity here: hat-making constitutes, also, a profitable occupation, and the vicinity abounds in coals. The borouoh returns two members to parli.iment.

Old Head, a cape of Ireland, in Cork, JMunster, four miles south of Kinsale; it runs far mto the sea, and has a light-house. Lat. 51►► 36′ N. Lon. 8►► 30′ W.

Old Man oi thk Mountain. See Assassins.

OLDYS (William), esq., Norroy king at arms, and an eminent antiquary, was born in 1687. He was a good historian, a correct writer, and well versed in English antiquities. He wrote, 1. The British Librarian, 8vo. 1737; 2. The Life of Sir Walter Raleigh, prefixed to his His- tory of the World; 3. Various Lives in Biogra- phia Britannica. He died in London April 1.5th, 1761. The following anagram is in one of his MSS. :►►►

In word and will i am a friend to you,

And one friend old is worth a hundred new.

OLEA, in botany, the olive-tree, a genus of the monogynia order, and diandria class of plants : natural order forty-fourth, sepiariae : <;or. quadrifid, with the segments nearly ovate. 'Hie fruit is a

monospermous plum, ITiere are three species : ???

1. O. Capensis, the Cape box-leaved olive, rises with shrubby stems, branching numerously from the bottom, six or seven feet high ; small, oval, thick, stiff, shining leaves ; and at the ax- illas small clusters of whitish flowers, succeeded by small fruit of inferior value.

2. O. Europea, the common olive-tree, rises with upright solid stems, branching numerously on every side, twenty or thirty feet high; spear-shaped, stiff, opposite leaves, two or three inches long, and half an inch or more broad ; and at the axillas small clusters of white flowers, succeeded by oval fruit. This species is the principal sort cultivated for its fmit, the varie- ties of which are numerous, varying in size, color, and quality. It is a native of the south- ern warm parts of Europe, and is cultivated in great quantities in the south of France, Italv, and Portugal, for the fruit, to make olive oil, which is in great repute, and is transported to all parts, to the great advantage of those countries where the trees grow in the open ground : the green fruit is also in much esteem for pickling. Olive trees are easily propagated by shoots, which, when care has been taken to ingraft them properly, bear fruit in eight or ten years. Those kinds which produce the purest oil, and bear the greatest quantity of fruit, are ingrafted on the stocks of inferior kinds. Different names are given by the French to the varieties of the olive tree ; and of these they reckon nineteen, whilst in Florence are cultivated no fewer than thirty- two. Olive shoots are ingrafted when in flower. If the operation has been delayed, and the tree bears fruit, it is thought sufficient to take off a ring of bark, two fingers breadth in extent, above the highest graff. In that case the branches do not decay the first year; they afford nourish- ment to the fruit, and are not lopped oflT till the following spring. Olive trees are commonly planted in the form of a quincunx, and in rows at a considerable distance from one another. Between the rows it is usual to plant vines, or to sow some kind of grain. It is observed that olives, like many other fruit trees, bear well only jnce in two years. The whole art of dressing these trees consists in removing the superfluous wood ; for it is remarked that trees loaded witVi too much wood produce neither so much fruit ..or of so good a quality. Their propagation in Eniiland is commonly by layers. The laying is performed on the young branches in spriuir. Give plenty of water all summer, and they will sometimes be rooted and fit for potting off in autumn ; but sometimes they require two summers to be rooted effectually. When, how- ever, they are properly rooted”^ take them off” early in autumn, and pot them separately; give water, and place them in the shade till they have taken fresh root ; and in October remove them into the green-house, &c. Those you intend to plant in the open ground should be kept in

pots, to have occasional shelter of a garden-frame, two

or three years, till they have acquireci some size, and are hardened to the full air ; then transplant them into a warm border against a wall ; mulch their roots in winter, and mat their tops in frosty weather. Olives have an acrid bitter, extremely disagreeable taste : pickled they prove less disagreeable. The Lucca olives, which are smaller than the others, have the weakest taste ; the Spanish, or larger, the strongest ; the Pro- vence, which are of a middling size, are gene- rally the most esteemed. When olives are in- tended for preservation they are gathered before they are ripe. The art of preparing them con- sists in removing their bitterness, in preserving them green, and in impregnating them with a brine of aromatised sea-salt, which gives them an agreeable taste. For this purpose different methods are employed. Formerly they used a mixture of one pound of quicklime with six pounds of newly sifted wood-ashes; but of late, instead of the ashes, they employ nothing but a lye. This softens the olives, makes them more agreeable to the taste, and less hurtful to the constitution. In some parts of Provence, after the olives have lain some time in the brine, they remove them, take out the kernel, and put a caper in its place. These olives they presei ve in excellent oil ; and, when thus prepared, they strongly stimulate the appetite in winter. Olives perfectly ripe are soft, and of a dark red color. They are then eaten without any preparation, excepting only a seasoning of pepper, salt, and oil ; for they are extremely tart, bitter, and corro- sive. Great drought, as well as much rain, is extremely injurious to the crop of olives. This fruit is much exposed to the attacks of a worm peculiar to itself, and which injures it so much that, after the olives are gathered, the produce of the oil extracted from them is dimin- ished one half. ††† The wood of the olive tree is beautifully veined, and has a pretty agreeable smell : it is in great esteem with cabinet-makers, on account of the fine polish which it takes. It is of a resinous nature, and consequently excel- lent for burning. As the laurel branch is the symbol of glory, so the olive branch covered with leaves has, from the most ancient times, been the emblem of concord, the symbol of friendship and peace. The leaves of olive trees have an astringent quality. Many people use them in making gargles for inflammations of the throat. These plants in this country must be iept principally in pots, for moving to the shel- ter of a green-house in winter ; for they are too tender to prosper in the open ground in this climate, though sometimes they are planted against a warm south wall, and sheltered occa- sionally from frost in winter by mulching the roots, and matting their tops ; whereby they may be preserved, and will sometimes

produce fruit for pickling. A very severe winter, however, often kills or greatly injures their young branches ; therefore let the principal part be potted in rich earth, and placed among the green-house shrubs, and managed as others of that kind. These trees are often sent over from Italy to the Italian warehouses in London, along with orange trees, &c., where pretty large plants may be purcliased reasonably, which should be managed as direct-

ed for orange trees that are imported from the same country. See Citrus. \

OLEAGTNOUS, arfj.) lad. oleagims. Oily;

Oleag'inousness, n. s.) unctuous.

In speaking of the oleaginousness of urinous spi- rits, I employ the word most rather than all. Boyle.

The sap, when il first enters the root, is earthy, watery, poor, and scarce oleaginous, Arbulhnot.

OLEARIUS (Adam), minister to the duke of Holstein, and secretary to the embassy sent in 1633 to the great duke of Muscovy and to the king of Persia. He spent six years in this em- ployment; and, on his return, published a re- lation of his journeys, with maps and figures, at Sleswick, 1656, in folio. lie wrote an Abridg- ment of the Chronicles of Holstein from 1448 to 1663 : and was appointed librarian to the duke of Holstein, in which capacity he proba- bly died. He has the character of an able ma- thematician, an adept in music, and a good orientalist, especially in the Persian language.

Olearius (Godfrey), son of Godfrey Olearius, D. D., superintendant of Halle in Saxony, was born there in 1639. He became professor of Greek at Leipsic. He discharged the most im- portant posts in the university, and, among other dignities, was ten times rector of it. His learn- ing and industry were displayed in 106 theolo- gical disputations, sixty-one in philosophy, some programmas upon difficult points, several speeches and theological councils ; which make two thick volumes ; besides his Moral Theology, his Introduction to Theology which treats of cases of conscience, and his Hermeneutica Sacra. He died in 1713.

Olearius (Godfrey), eldest son of the above, was a man of genius and learning, a professor in the same university, and published several

works ; but died young of a consumption before his father.

O'LEARY (Rev. Arthur), an eminent Irish Roman Catholic divine, born at Cork in 1729. He was a Dominican friar, and preached in his friary in Cork for many years. As a public author he ranks high in the literary world. Sir Lucius O'Brien compared him to Ganganelli. He wrote, 1. A Defence of the Divinity of Christ and the Immortality of the Soul (Cork, 1784); in a series of letters to the author of a profane work, entitled Thoughts on Nature and Religion, by Michael Servetus, but which was the impious effusion of a physician in Cork, whom O'Leary exposed to merited contempt. 2. Loyalty Asserted, 3. An Essay on Toleration. 4. Letters to Mr. John Wesley. 5. A Defence of his Conduct and Writings, during the Dis- turbances in Munster, in answer to Dr. Wood- ward, bishop of Cloyne, and Mr. Trant, who wrote under the signature of Theophilus; 1781. In this piece, on the topic of purgatory, he re- commended a truce, as being a proposition that could neither be demonstratively supported nor disproved ; and therefore his lordship should take the thing as he found it, as it is possible ' he may go farther and fare worse.' He was a man of great urbanity of manners : in his writ- ings he was pleasant, humorous, and energetic. He died at London, January 8th, 1802, aged seventy-three.

OLEASTER, n. s. Latin oleaster. A spe- cies of wild olive.

OLEFIANT Gas. See Chemistry. Index.

OLEIC Acid. When potash and hog's lard are saponified, the margarate of the alkali sepa- rates in the form of a pearly looking solid, while the fluid fat remains in solution, combined with the potash. When the alkali is separated by tartaric acid the oily principle of fat is obtained, which Mr. Chevreul purifies by saponifying it again and again, recovering it two or three times ; by which means the whole of the margarine is separated. As this oil has the property of sa- turating bases, and forming neutral compounds, he has called it oleic acid. In his sixth me- moir he gives the following table of results : ###

100 Oleic acid of human fat.

Saturate Barytes. Stroatian. Lead.

26-00 19-41 8-2-18

1 00 Oleic acid of sheep fat.

-26-77 19-38 81-81

, 100 Oleic acid of ox fat.

28-93 19-41 . 81-81

lOO Oleic acid of goose fat.

26-77 19-38 81-34

100 Oleic acid of hog fat.

27-00 29-38 81-80

Oleic acid is an oily fluid without taste and smell. Its specific gravity is 0-914. It is ge- nerally soluble in its own weight of boiling al- cohol, of the specific gravity of 0-7952 ; but some of the varieties are still more soluble. 100 of the oleic acid saturate 16-58 of potash, 10-11 of soda, 7-52 of magnesia, 14-83 of zinc, and 13-93 peroxide of copper.

OLENUS, or Olen, a Greek poet, older than Orpheus, born at Xanthe, a city of Lycia. He composed sevral hymns, which were sung in the island at Delos upon festival days. Olenus is said to have been one of the founders of the oracle of Delphi ; to have been the first who filled at that place the oflHce of priest of Apollo ; and to have given responses in verse.

OLEOSE', adj. Latin oleosus. Oily.

Rain water may be endued with some vegetating or prolifick virtue, derived from some saline or nleose particles it contains. Bacon.

In falcons is a small quantity of gall, the oleous parts of the chyle being spent on the fat.

Floyer on the Ilutiwurs.

OLERON, Island of, France, on tlie coast of the Atlantic Ocean, opposite to the mouths of the Sendre and the Charente, at about three miles from the continent. It is eighteen miles long, six broad, and forty-eight in circumference, and forms part of the department of the Lower Ciiarente, making two cantons of the arrondisse- ment of Marennes. It is fertile in corn, maize, beans, wood, red and white

wine, and excellent vegetables. There are here numerous marshes, which furnish a beautifully white salt. This island contains the little towns of Chateau He, and St. Pierre d'Oleron, the boroughs of St. Denis, Dolus, St. George's, St. Trojan, and seve- ral villages, including a population of about 15,000. It is crossed from south to north, throughout almost its whole extent, by a great road, which terminates at the tower of Chasseron, an elevated lighthouse on the northern extremity

of the island. There are here brandy distilleries and dock-yards ; and a considerable trade is carried on in grain, salt, wines, and brandy.

Oleron, Sea Laws of, certain laws relative to maritime affairs, made by king Richard I. when he was at the island of Oleron. These laws, being accounted the most excellent sea laws in the world, are recorded in the Black Book of the admiralty; and are the foundation of the maritime laws of most states in Europe. See Selden's Mare Clausum. See Maritime.

OLEUM Palms: Christi, commonly called castor oil, is extracted from the kernel of the fruit produced by the Ricinus Americanus. See RiciNis. This oil is much used as a purgative in medicine. It acts gently on the bowels, with little or no irritation. By many physicians it has been deemed a sovereign remedy in bilious, calculous, and nephritic complaints ; but its taste is extremely nauseous, and, when frequently used, it is apt to relax the tone of the bowels. It is recommended to be given in clysters; and Dr. Canvane of Eath affirms, that when children cannot be made to swallow any medicine, if tlie navel and hypochondria be rubbed with this oil, it will produce one or two physical stools. He adds tliat in small draughts, or by clyster, or by embrocation, it is an excellent vermifuge.

OLFACT', V. a. ˆ Latin olfnctus. To smell;

Olfactory, adj. S used only, as we find, in burlesque : olfactory, having or pertaining to the sense of smell.

There is a Machiavelian plot, Tho' every nare olfact it not. Hudibras.

Effluvia, or invisible particles that come from bodies at a distance, immediately affect the oljactori/ nerves. Locke.

OLGA, the queen of Igor, the second mo- narch of Russia, who flourished about A. D. 880, having succeeded his father Ruric, who died in 878. Olga was born in Plescow, and was of the best family in that city. She bore him one son, called Swetoflaw. Igor being mur-

dered by the Drewenses, or Drewliani, Olga re- venged his death. She went afterwards to Con- stantinople, where she was baptised by the name of Helena. The emperor, John Zimisces, was her god-father, and fell in love with her ; but she, alleging their spiritual alliance, refused to marry him. Her example made some impres- sion upon her subjects, many of whom became converts to Christianity ; but none upon her son, who reigned for a long time after her death, which happened at Pereslaw, in the eightieth year of her age, fourteen years after her baptism. The Russians rank her among their saints, and keep her festival on the 11th of July.

OLIBANUM, in pharmacy, a gummy resin, the product of the juniperus lycia Linnai, brought from Turkey and the East Indies, usually in drops or tears like those of mastich, but larger ; of a pale yellowish, and sometimes reddish color ; a moderately warm pungent taste, and a strong, not very ˆagreeable smell. This drug has received many different appella- tions, according to its diflerent appearances ; the single tears are called simply olibanum, or thus ; when two are joined together, they have been called thus masculum, and, when very large.

thus fcemininum : sometimes four or five, about the bigness of filberts, are found adhering to a])iece of the bark of the tree from which they exuded ; these have been named thus corticosum ; the finer powder which rubs off from the tears in the carriage, mica-thuris ; and the coarser powder, manna thuris. This drug is not how- ever, in any of its states, what is now called thus or frankincense in the shops. Olibanum consists of about equal parts of a gummy and resinous substance; the first soluble in water, the other in rectified spirit. With regard to its virtues, abundance have been attributed to it, particularly in disorders of the head and breast, in hsemoptoes, and in alvine and uterine fluxes : but its real effects in these cases are far from answering the promises of the recommenders. Riverius is said to have had large experience of the good effects of this drug in pleurisies, espe- cially epidemic ones ; he directs a scooped apple to be filled with a dram of olibanum, then co- vered and roasted under the ashes ; this is to be taken for a dose, three ounces of carduus water after it, and the patient covered up warm in bed ; in a short time, he says, either a plentiful sweat, or a gentle diarrhoea ensues, which carries off the disease. Geoffroy says, that he has frequently made use of this medicine after venesection,

with good success.

O’LID, adj.) Lat. olidus. Unsavory of

Ol’idous. i smell ; stinking; fcetid.

In a civet cat a different and offensive odour pro- ceeds, partly from its food, that being especially fish, whereof this hamour may be a garous excretion and olidnus separation. Browne.

The fixt salt would have been not unlike that of men’s urir.e ; of which olid and despicable liquor I chose to make an instance, because chemists are not wont to take care for extracting the fixt salt of it .

Boyle.

OLIFANT’S River, a fine river of the dis- trict of Drakenstein, in the settlement of the Cape of Good Hope, falling into the Atlantic 200 miles north of Cape Town. The fertile valley through which it flows, between the ranges of the Bokkeveld, forms one of the divisions of Stellenbosch.

OLIGAR’CHY, n. s. Gr. oXiyapxia. Go- vernment by a few persons ; aristocracy.

The worst kind of oligarchy is, when men are go- verned indeed by a few, and yet are not taught to know what those few be whom they should obey.

Sidney.

We have no aristocracies but in contemplation ; all oligarchies, wherein a few men domineer, do what they list. Burton.

After the expedition into Sicily, the Athenians chose four hundred men for administration of affairs, who became a body of tyrants, and were called an oligarchy, or tyranny of the few ; under which hate- ful denomination they were soon after deposed.

Swift.

O’LIO, n. s. Span, and Ital. olla. See Oc- Lio. A mixture or medley.

Ben Jonson, in his Sejanus and Catiline, has given us this olio of a play, this unnatural mixture of comedy and tragedy. Dryden.

I am in a very chaos to think I should so forget myself. But I have such

an olio of affairs, I know not what to do. Consreve.

OLITORY, n. s. Lat. alitor. Pertaining t►► the kitchen garden.

Gather your olitory seeds. Evelyn's Kalendar.

OLIVA (Alexander), a celebrated cardinal, and general of the Austin monks, was born at Saxoferato in 1408. He was admitted young among the Augustines, and studied at Rimini, Bologna, and Perugia; in which last university he was appointed professor of philosophy and divinity. He was successively chosen provin- cial, solicitor-general, vicar, and general of his order; and in 1460 was appointed a cardinal and bishop of Camerino by Pius II. lie pub- lished, 1. De Christi Ortu Sermones Centum. 2. De Ccena cum Apostolis Facta. 3. De Peccato in Spiritum Sanctum. 4. Orationes Elegantes. He died at Tivoli in 1463.

Oliva (John), a learned Italian, professor of morality at Azalo. He was patronised by Cle- ment XL, and wrote some pieces, but his works are not interesting.

Oliva, a sea-port town of Pomerania, on a bay of the Baltic ; with a monastery ; famous for a peace concluded in it between the emperor and the kings of Sweden and Poland in 1660. It is three miles, says Dr. Brookes, ten, says Mr. Cruttwell, west of Dantzic. Long. 18►► 29′ E.,lat. 54►►99'N.

Oliva, a town of Spain, in Valencia.

OLIVARES, or Olivarez, a town of Spain in Old Castile ; eighteen miles south-east of Valladolid.

Olivarez (Gasper de Guzman, count de), favorite and minister to Philip IV. of Spain ; a man of great talents and boundless ambition. Philip no sooner became king than he became the subject of this his favorite. The king had abilities, but, whilst he spent his time in inacti vity, the whole government was under the direc tion of Olivarez. The count, on the most plausible pretexts, removed all such as he thought stood in his way, even to death, of which don Rodrigo Calderonawas a melancholy instance, which excited universal compassion. By his imprudent conduct he provoked the re- sentment of the most powerful states, particu- larly England, France, and Holland, to conspire against Spain, Olivarez, however, never lost his credit ; for, though Spain was put to the severest trials, it acquired a degree of fame which in the general opinion overbalanced its losses. Olivarez too was fortunate in making the peace ; wherein he gained considerable advantage over Richelieu, so that things appeared to be still in a favorable train. But,

in 1627, he again drew Spain into a war with Mantua, contrary to the sentiments of the wisest politicians ; from which is justly dated its declension. He endeavoured to break the alliances of the duke of Mantua by various stratagems; but they did not succeed. He had soon after this another cause of mortifi- cation, on Richelieu (whom he considered as his enemy) being created a duke and peer of France, and admitted among the Venetian no- bility. The people at length began to be dis- pleased with his conduct ; which in many instances was cruel and detestable. Spain, however, was so unusually successful, that the faults of the minister were overlooked for the

time ; which rendered him more insolent and obstinate than ever. He had set his heart on the reduction of Casal in Italy, but the Spanish army was totally defeated. The revolt of the Catalans, whom he wished to deprive of their privileges, was the next consequence of his folly : he employed the Marquis de los V'elez to quell this rebellion ; but the cruelty of the measures used for this purpose only inflamed it the more. The revolution of Portugal, another disastrous event, was also the result of his ob- stinacy and rigor. The great secret, by which Olivarez had governed his master, was being the confidant of his pleasures. While he assumed a specious appearance of religion, he was not only immersed in vice himself, but encouraged it in his prince. Among other mistresses, he procured for him the fair actress Calderona. By this woman he had a son, named Don Juan of Austria, whom in the fourteenth year of his age he appointed generalissimo of the army against Portugal ; while the heir apparent to the crov/n, Don Balthasar, was left under the tui- tion or custody of the countess of Olivarez; at which conduct the queen was chagrined, and the people enraged. His schemes now began to be defeated every where, and he fell under the displeasure of the emperor, the grandees, and the people all at once. His ill fortune did not, however, wholly overpower him ; he was obliged to conceal himself, to avoid the rage of the populace ; but he had still the confidence to publish an Apology for his conduct, which possessed a considerable share of wit and humor, tempered with spirited and masterly reasoning. This, however, did not prevent his being ba- nished to Toro, where, worn out by infirmities, he died in 1645.

OLIV'AS'TER, adj. Fr. olivustre. Darkly brown ; tawny.

The countries of the Abysenes, Barbary, and Peru, where they are tawny, olivaster, and pale, are generally more sandy. Bacon.

OLTVE, n. s. Fr. olive ; Ital. uUva ; Latin oliva, olca. Atree yielding oil ; the fruit of the tree ; an ancient emblem of peace.

The seventh year thou shall let it rest. In like manner thou shalt deal with thy vineyard, and olive yard. Exod,,s xxiii. 11.

To thee the heavens, in thy nativity.

Adjudged an olive branch and laurel crown.

As likely to be blest m peace and war.

Shakspeare. In the purlieus of this forest stands A sheepcote fenced about with olive trees. Id.

Their o/ive-bearing town. Brydens jˆneid.

It is laid out into a grove, a vineyard, and an al- lotment for olives and herbs. Broome,

‘ The leaves are for the most part oblong and ever- green ; the flower consists of one leaf, the lower part of which is hollowed, but the upper part is divided into four parts ; the ovary, which is fixed in the cen- tre of the flower cup becomes an oval, soft, pulpy fruit, abounding with a fat liquor, inclosing a hard rough stone.’ Miller.

Olive, in botany. See Olea.

Olive, Wild. See Elˆˆagnus.

Olive Oil. The oil is undoubtedly that part ttf the produce of olive trees which is of greatest value. The quality of it depends on the nature

of the soil where the trees grow, on the kind of olive from which it is expressed, on the care which is taken in the gathering and pressing of the fruit, and likewise on the separation of the part to be extracted. Unripe olives give an intolerable bitterness to the oil ; when they are over ripe the oil has an unguinous taste : it is therefore of importance to choose the true point of maturity. When the situation is favorable, those species of olives are cultivated which yield fine oils ; other- wise they cultivate such species of trees as bear a great quantity of fruit, and they extract oil from it for the use of soaperies, and for lamps.

They gather the olives about November or December. It is best to put them as soon as possible into baskets, or into bags made of wool or hair, and to press them immediately, to extract a fine oil. Those who make oil only for soaperies let them remain in heaps for some time in their storehouses ; when afterwards pressed, they yield a much greater quantity of oil. Those, even, who ex- tract oil to be used in food sometimes allow them to ferment in heaps, that they may have more oil; but this is extremely hurtful to the quality of the oil, and is the reason why fine oil is so very rare. M. Duhamel recommends not to mix sound olives with those in which a fer- mentation has already begun, the oil which is extracted being then of a bad quality and unfit for preservation. To have the oil in its purity, we must allow it to deposit its sediment, and then pour it off into another vessel. The oil extracted from the pulp only of olives is the most perfect which can be obtained, and will keep for several years ; but that which is extracted from the kernel only, or from the nut, or from the whole olive, ground in the common way in pub- lic mills, has always more or fewer defects, loses its limpidity in a certain time, and is very apt to become rancid. Care must be taken likewise to keej) it in proper vessels well shut. Ailer all, in the course of time, olive oil loses its qualities, becomes disagreeable to the taste and smell, diminishes in fluidity, and at length thickens considerably. The refuse of the first pressing, when squeezed a second time, yields an oil, but thicker and less pure than the former. What remains after the second pressing, when mixed with a little water and placed in a pan over the fire, produces by pressure a third oil, but of a very inferior quality. What remains afler all the oil is expressed is termed grignon, and is of no farther use but as fuel. The sediment, or faeces, of new oil we name, after the ancients, amurca ; it is an excellent remedy in rheumatic affections. In Paris the wax used for shoes is commonly made of the dregs of defecated oil and smoke-black. Oil of olives is an ingredient in the composition of many balsams, ointments, plasters, mollifying and relaxing liniments. It is of an emollient and solvent nature ; mitigates gripes, and the pains accompanying dysentery ; and is one of the best remedies when one has chanced to swallow corrosive poisons : but it by no means prevents the fatal accidents which en- sue from the bite of a snake, as has been pretended. It is an effectual cure, M. Bourgeois tells us, for the stings of wasps, bees, and other insects. A bandage soaked in the oil is immediately applied

to the sting, and a cure is obtained without inflam- mation or swelling. Olive oil is of no use in painting, because it never dries completely. The best soap is made of it, mixed with Alicant salt- wort and quick-lime.

Olive (Peter John), a French monk, was born in 1247, and died in 1297, aged fifty. After his death his body was dug up, and he
॥was condemned as a heretic, for having advanced, in his writings, ‘ that the pope was the mystical antichrist ; that St. Francis was the angel in the Revelations said to have the mark of the living God, and that his rule was the true gospel ; that the perfect state of tlie church began with St. Francis ; and that Christ and his apostles had no property, either in common or particular, but only the usufruct of what they enjoyed.’

OLIVENZA, or Oliven9a, a fortified town in the west of Spain, on the frontier of Estre- madura, situated in a plain on a small river of this name, which falls into the Guadiana, nine miles north-east of the town, which belonged to Portugal until ceded to Spain at the treaty of Badajoz, in 1801. The congress of Vienna, in 1815, recommended its restoration, but without effect. The number of inhabitants is 4500. Fifteen miles south-east of Elvas, and forty-two south of Evora.

OLIVER (Isaac), an English painter, bom in 1556, eminent both for history and portraits. Se- veral of his miniatures are in the collections of our nobility and gentry. His drawings are finished to an extraordinary degree of perfection : many being copies after Parmegiano. Rubens and Van- dyck painted James I. after a miniature of Oliver’s. He died in 1617.

Oliver (Peter), the son and disciple of Isaac, was born in 1601. He arrived at a de- gree of perfection, in miniature portraits, supe- rior to his father and all his contemporaries. In the collectiˆons of Charles I. and James II. there were thirteen historical subjects painted by this Oliver, of which seven are still preserved in the closet of queen Caroline at Kensington. He died in 1660.

Oliver, a learned English Benedictine monk, born at Malmsbury, in the eleventh century. He invented artificial wings, but in attempting to fly with them from a high tower he fell and broke his leg. He died A. D. 1060.

Oliver (William), M. D., an eminent Eng- lish physician, who practised with success many years at Bath, and wrote a Treatise on the Virtues of the Bath Waters. He assisted the celebrated Nash in procuring the

establishment of the Bath Hospital. He was during the greater part of his life a zealous infidel, but a short time before his death became a penitential convert to Christianity. He died in 1764.

Oliver Cromwell. See Cromwell.

OLIVES, Mount of. See Olivet.

OLIVET, or Mount of Olives, in ancient geography, was seated to the east of Jerusalem, and parted from it only by the brook Kedron and the valley of Jehoshaphat, which stretches out from north to south. It was upon this mount that Solomon, in his dotage, built temples to the gods of the Ammonites (1 Kings xi. 7), and of the Moabites, out of complaisance to his wives.

who were natives of these nations. Hence Mount Olivet is called the mountain of corrup- tion (2 Kings xxiii. 13). Josephus says that this mountain is at the distance of five stadia or fur- longs from Jerusalem, which make 625 geome- trical paces, or the length of a Sabbath day's journey, says St. Luke (Acts i. 12). It had three summits, or was composed of three several mountains, ranged from north to south. The middle summit is said to be that whence our Saviour ascended into heaven. It was upon that towards the south that Solomon built temples to his idols. The summit which is most to the north is distant two furlongs from the middle- most. This is the highest of the three, and is commonly called Galilee. In the time of king Uzziah the mount of Olives was so shattered by an earthquake that half of the earth on the west fell down, and rolled four furlongs or 500 paces thence, towards the mountain which was oppo- site to it on the east, so that the earth blocked up the highways, and covered the king's gar- dens►►

Olivet (Joseph), a learned French writer, born in 1682. He entered early into the society of the Jesuits, but left it in 1715. He then went to Paris, where he became so eminent in literature that he was chosen a member of the French Academy. He published an excellent edition of Cicero's works in 9 vols. 4to. He wrote also Histoire de I'Academie Francoise, and several other works. He died in 1678,

OLI VET AN (Robert), a printer, related to Calvin, who printed at Neufchatel in 1535, in folio, a version of the Bible in French, the first which had been translated from the original He- brew and Greek. It is written in an uncouth and barbarous style, and is far from being faith- ful. The characters in which it is printed are Gothic, and the language is no less so. It is valued only on account of its rarity and age. Olivetan

survived his publication but a short time; for he was poisoned at Rome the year after, of which his translation is alleged to have been the cause. Olivetan's Bible, revised by John Calvin and N. Mahnger, was reprinted at Geneva, in 1540, in 4to. This edition is still rarer than the former. It is called the Bible de I'Epee, because the printer had a sword in his sign.

OLIVEYRA (Francis Xavier de), a Portu- guese knight of the order of Christ, was born at Lisbon in 1702, and at the age of fourteen ad- mitted into a public office. In 1732 he went to IVIadrid, where his uncle held a diplomatic situa- tion, and presented him to the king of Spain. He shortly after succeeded his father as secretary of embassy at Vienna ; but having had a dispute with the count de Taronca, the ambassador, re- signed his employment, and went to Holland in 1740. At Vienna the Lutherans had excited in his mind suspicions of the soundness of his Catholic faith, which he shows in Memoirs of his Travels and Familiar Letters, published in 1741 and 1742. These works were accordingly cen- sured by the inquisition ; while the author, hav- ing removed to England, made in 1746 an open profession of Protestantism. Here he published a Pathetic Discourse to his countrymen, on the

earthquake at Lisbon, and the following year a second discourse. In September 1762, being declared a heretic at an Auto-da-Fe, he was burnt in effigy, on which he published a book entitled The Chevalier d'Oliveyra burnt in Effigy as a Heretic, why and wherefore ? Anecdotes and Reflections on the subject laid before the Pub- lic by himself. He died at Hackney in 1783, liaving written, besides the pieces above men- tioned, a great number of MSS., including Oli- veyriana, or Memoirs, historical and literary, 27 vols. 4to.

OLIVIER (Claude Matthew), advocate of the parliament of Aix, was born at Marseilles in 1701, and appeared at the bar with eclat. He had a chief hand in the establishment of the Academy of Marseilles, and was one of its ori- ginal members. He possessed a quick and lively genius. He died in 1736, at the age of thirty- five. He published 1. L'llistoire de Philippe roi de Macedoine, et pere d' Alexandre le Grand, 2 vols. 12mo. 2. Memoire sur les secours donnes aux Romains, par les Marseillois, pen- dant la 2de Guerre Punique. 3. Memoire sur les

secours donnes aux Romains, par les Mar- seillois, durant la Guerre contre les Gaulois.

Olivier (Guillaume Antoine), M.D., a mo- dern French naturalist and traveller, was born near Frejus in 1 756, and studied at Montpelier,

served as a state prison ; eighty miles N. N. E. of Vienna. Population 347,300.

OLMUTZ, or Holomautz, a town of Mo- ravia, formerly the capital of the province, now only the cliief town of the above circle, stands on the river IMarch, and is strongly fortified, but the houses^ though substantial, are high and gloomy, raised for the most part on square but- tresses, with piazzas. The university was re- moved to Brunn in 1778, and its place is now- supplied by a lyceum. Olmutz was long a bishop's see : this was raised to an archbishopric in 1777, and is one of the richest benefices of the empire. The principal public buildings are the hospital for lying-in women and orphans ; the cathedral, in that part of the city called the Dom ; a board for the management of the affairs of widows and minors ; the riding academy ; and an extensive public library. Olmutz has several tanneries and manufactories. One of its principal branches of trade is the sale of cattle from the soutli-west of Russia and Moldavia. This town was besieged in 1758 by Frederick II., but his efforts were baffled by the garrison, and the manoeuvres of marshal Daun. Popula- tion 1 1 ,000. 1 30 miles east by south of Prague, and 100 N. N. E. of 'ienna.

OLN E Y, or O u ln ey, a market town and parish of Bucks, situate on the Ouse, five miles nortli

where he received his diploma at the age of from Newport Pagnell, and fifty-five from Lon-

seventeen. Botany and entomology were his favorite pursuits : at the age of twenty-three he went lo Paris to assist in the composition of a work on the natural history of that district. He was afterwards sent into England and Holland, to collect materials for a history of insects ; and was employed on the entomological part of the

don. This town consists of one long street, and has long been noted for its manufacture of bone lace. Tlie church has a beautiful spire, the only one in the county. Market day, Monday.

OLOCENTROS, in natural history, a name given by the Greeks to a small animal of the spider kind, whose bite was accounted mortal.

Encyclopedie Methodique. At the period of It is the same with the solipuga, so called from

the revolution Olivier travelled to Persia with its stinging or biting most violently in places or

M. Bruguieres, on a diplomatic mission planned seasons where the sun had the most power, as

by the minister Roland, whose death deprived Africa, &c. The name solifuga was a corrupt way

the envoys of all their financial resources. Oli- of writing that word ; and olocentros seems also

vier returned to Paris, December, 1798, after an absence of six years, during which he visited Egypt, Greece, Turkey, Arabia, Persia. He brought home valuable collections in natural history, of which he published an account in his Voyage dans I'Empire Ottoman, 1′ Egypt, et la Perse, 3 vols. 4to., with plates. He died sud- denly at Lyons, in 1814.

a false way of writing heliocentros, which signi- fies the same as solipuga.

OLONETZ, an extensive government of Eu- ropean Russia, lying to the south of that Archangel, and to the east of Finland, between 29►► 40′ and 40►► 20′ of E. long., and 59►► 40′ and 65►► 38′ of N. lat. Its area (being equal to that of Great Britain) is 87,500 square miles : its

OLMEDO, a decayed town in the interior of population not more than 282,000, partly Rus- Spain, and province of 'alladolid, on the river sians, and partly Finns and Laplanders. The

Adagia. It was formerly large, and its walls are still of considerable extent ; but it has now only 2000 inhabitants. Twenty miles south of Valladolid.

OLM ETO, a town in the island of Corsica, with 1600 inhabitants. Nine miles south-west of Bastia.

OLMUTZ, a circle of the Austrian province of Moravia, comprising the north comer of the country adjoining to Glatz. Its area is 2020 square miles. The south part is level and fer- tile ; the north hilly, enclosing a part of tiie Schneegebirge range of mountains. This circle IS watered

by the March, running from north to ►►outh, and contains several iron mines, an alum- work, large manufactures of woollen, linen, and (inen-yarn ; cotton-works, paper-mills, and glass- bouses. The castle is strong, and has often

most remarkable rivers are the Onega, the Wug, tlie Kem, the Svir, the Schuja, the Vutegra, and the Vodlo. Of the lakes, by far the largest, those of Ladoga and Onega. Tliis province has a range of low mountains in the north, extending southward from Scandinavia, called Mons Alau- nus. The rest is level ; but the soil is univer- sally poor, and but partially productive, the val- leys being marshy, and the plains sandy. The climate is severe, particularly in the north, where little is produced besides moss and a few low shrubs and trees. These disadvantages prevent corn from being much cultivated, and necessitate a large annual import. There are forests on the southern mountains, and on the islands in the lake Onega, the timber of which, with the iron, marble, and vitriol of the mines, form the chief exports. Game and fish are abundant, and the

alter is exported in large quantities. The pro- vince is divided into seven circles; Petrozavodsk is the capital.

Olonetz, a town of European Russia, in the government of the same name, eighty-four miles north-east of St. Petersburg, and 140 south of Petrozavodsk, on the river Olonza, near the lake Ladoga. It has a communication by water with St. Petersburg, and is remarkable as being the place where the first dock-yard was erected by Peter the Great. Ship-building is still carried on here. Inhabitants 2800. Long. 32►► 58′ E., lat. 60►► 23′ N.

OLOT, a considerable manufacturing town of Catalonia, Spain, on the river Fluvia, twenty miles W. N. W. of Gerona. It has j.even squares, great and srfiall, three churches, two monasteries, and a large hospital. The manufactures are silk, woollen, and cotton stockings ; rateens, serges, and coarse woollen stuffs ; cottons, cotton yarn, leather, and soap. Inhabitants 15,000.

OLYMPIA, or Olympia Pisatis according to Strabo, in ancient geography, a town of Elis, celebrated for a temple of Jupiter Olympius, be- fore which stood a grove of wild olive trees, in which

was the stadium or foot course, so called because the eighth part of a mile ; and by which the Alpheus runs. Olympia was famous also for a temple of Juno, sixty-three feet long, with columns round it of the Doric order; and a Metroum ok temple to the mother of the gods, a large Doric edifice, with holy treasuries. These and the porticoes, a gymnasium, prytaneum, and many more public buildings, with the houses of the priests and other inhabitants, made Olympia a considerable place. The stadium was in the grove before the great temple ; and near it was the hippodrome, or course for horse and chariot races. The temple of Jupiter was of the Doric order, sixty-eight feet high to the pediment, ninety-five wide, and 230 long ; the cell encom- passed with columns. It was erected with the country stone ; the roof of Pentelic marble ; the slabs disposed as tiles ; the way to it up a wind- ing staircase. The two pediments were enriched with sculpture ; and one had over the centre a statue of V'ictory gilded, and underneath a votive buckler of gold. At each corner was a gilded \S►►e. Above the columns were fixed twenty-one gilded bucklers, offered, at the conclusion of the Achaean war, by the Roman general Mummius. The gates of the two fronts were of brass, and over them were carved the labors of Hercules. Within the cell were double colonnades, between which was the approach to the image. The Jupiter of Olympia immortalised its maker Phi- dias. It was of ivory and gold, the head crowned with olive. In the right hand was a statue of Victory ;. in the left a- flowered sceptre, composed of various metals, on which was an eagle. The sandals were of gold,, as also the vestment, which vias curiously embossed with lilies and animals. The throne was gold inlaid with ebony and ivory, and studded with jewels, intermixed with paintings and exquisite figures in relievo. The pillars between the feet contributed to its sup- port. Before it were walls, serving as a fence, decorated principally with the exploits of Her- cules ; the portion opposite to the door of a blue color. It was the office of a family descended

from Phidias, called phaedruntse, or the polishers, to keep the work bright and clean. Tlie veil or curtain was cloth rich with the purple dye of Phoenicia, and with Assyrian embroidery, an ofliering of king Antiochus, and was let down from above by strings. The image appeared higher and broader than it measured. Its mag- nitude was such that, though the temple was very- large, the artist seemed to have erred in the pro- portions. The god sitting nearly touched the ceiling with his head. A part of the pavement before it was of black marble, enclosed in a rim of Parian or white, where they poured oil to pre- serve the ivory. The altar of Jupiter Olympius was of great antiquity, and covered with ashes from the thighs of the victims,

which w-ere car- ried up and consumed on the top with wood of the white poplar tree. The ashes also of the prytaneum, in which a perpetual fire was kept on a hearth, were removed annually on a fixed day, and spread on it, being first mingled with water from the Alpheus. The cement v/as made with that fluid only ; and therefore this river was esteemed the most friendly of any to the god. On each side of the altar were stone steps. Its height was twenty-two feet. Girls and women were allowed to ascend the basement, which was 125 feet in circumference. The people of Elis sacrificed daily, and private persons as often as they chose. Many deities were worshipped besides Jupiter. Pausanias has enumerated above sixty altars of various shapes and kinds. One of the unknown gods stood by the great altar. The people of Elis offered on all these monthly ; laying on them boughs of olive, burning incense, and wheat mixed with honey ; and pouring liba- tions of such liquors as the ritual prescribed. At the latter ceremony sometimes a form of prayer was used, and they sung hymns composed in the Doric dialect. Olympia was situated on an eminence, between two mountains called Ossa and Olympus. Though its ancient splendor is gone, the place reminds the traveller of what it once was. It is in the Morea, and is now a small place, called Langanico, fifty miles south of Le- panto. Long. 22►► 0′ E., lat 37►► 40′ N.

Olymfia Maldachim (Donna), a woman of a very uncommon character. She flourished about the middle of the seventeenth century. She was sister-in-law to Pope Innocent X., and ac- quired an unlimited power over this vain and weak ecclesiastic. Her avarice and ambition were unbounded : she disposed of all benefices, which were kept vacant till she informed herself of their value : she rated an office of 1000 crowns for three years at one year's revenue, and if for life at twelve year's purchase, one half of winch she required to be paid in advance : she gave audience upon public affairs, enacted new laws, and sat in council with Innocent, with bundles of memorials in her hands. It was said that they lived together in a criminal correspondence. On the election of pope Alexander \ II. a number of memorials were sent in against her, and he banished her from Rome, and began to examine witnesses respecting her conduct. She was cut off", however, before the trial was finished, by the plague in 1636. Her immense property was not confiscated ; the pope only reserving for his own relations about 1 000 000 of crowns.

OLYMPIAD, Olymi'ias, the space of four years, whereby the Greeks reckoned time. The first Olympiad fell, according to the most accurate and learned computations, exactly 776 years before the first year of Christ, or 775 before that of his birth, in the year of the Julian period 3938, and twenty-two years before the building of Rome. The games were exhibited at the time of the full moon next after the summer solstice ; therefore the Olympiads were of unequal length, because the time of the full moon differs eleven days every year, and for that reason they some- times began the next day after the solstice, and at other times four weeks after. The computation by Olympiads ceased, as some suppose, after the 364th, in the year 440 of the Christian era. It was universally adopted, not only by the Greeks, but by many of the neighbouring countries ; though still the Pythian games served as an epoch to the people of Delphi and to the Boeotians ; the Nemar-an games to the Argives and Arca- dians; and the Isthmian to the Corinthians and the inhabitants of the Peloponnesian isthmus. '^o the Olympiads history is much indebted. They have served to fix the time of many mo- mentous events ; and, indeed, before this method of computing time was observed, the history of Greece is mostly fabulous, and filled with ob- scurity, contradiction, and anachronism.

Oi.YMPiAS, a celebrated princess, daughter of Alexander I. king of Epirus, who married Philip II. king of Macedonia, by whom she had Alex- ander the Great. Her haughtiness, and probably her infidelity, obliged Philip to repudiate her, and to marry Cleopatra, the niece of king Atta- I'is. Olympias and Alexander showed their dis- approbation of this measure, by retiring from tourt. The murder of Philip soon followed (see Macedox) which some attribute to the intrigues of Olympias, who paid the greatest honor to her husband's murderer. She gathered his mangled limbs, placed a crewn of gold on his head, and laid his ashes near those of Philip. The admi- nistration of Alexander was in some instances offensive to Olympias ; but, when the ambition of her son was concerned, she declared publicly that Alexander was not the son of Philip, but the offspring of Jupiter, who, in the form of an enormous serpent, had introduced himself into her bed. When Alexander was dead, Olympias seized the government of Macedonia ; and, to establish her usurpation, she cruelly put to death Aridaeus, with his wife Eurydice; Nicanor, the brother of Cassander, with 100 leading men of Macedon, who were inimical to her interest. These barbarities did not long remain unpun- ished : Cassander besieged her in Pydna, where she had retired with the remains of her family, and she surrendered after an obstinate siege. The conqueror ordered her to

be put to death. A body of 200 soldiers were ordered to put the bloody commands into execution, but the splen- doi and majesty of the queen disarmed their courage. She was at last massacred by those whom she had cruelly deprived of their chil- dren, about A. A. C. 316. See Macedon.

Olympic Games, solemn games among the ancient Greeks, so called from Jupiter Olym- pms, to whom they were dedicated and said to

have been first instituted by him, after his vic- tory over the sons of Titan : others ascribe their institution to Hercules, the son of Alcmena; others to a Hercules of much greater antiquity ; others to Pelops. But, by whomsoever thev were instituted, at a period rather early they had fallen into disuse. The wars which prevailed among the Greeks had totally interrupted the religious ceremonies and exhibitions v.ith which they had been accustomed to honor their com- mon gods and heroes ; but the Olympic games were restored by Iphitus, a descendant of Oxy- lus, to whom the province of Eleia had fallen in the general partition of the peninsula. The fes- tival, which lasted five days, began and ended with a sacrifice to Olympian Jove. The inter- mediate time was chiefly filled up by the gym- nastic exercises, in which all freemen of Grecian extraction were invited to contend, provided they had been born in lawful wedlock, and had lived untainted by any infamous immoral stain. The preparation for this part of the entertain- ment was made in the gymnasium of Elis, a spacious edifice, surrounded by a double range of pillars, with an open area in the middle. Adjoining were various apartments, containing baths and other conveniences for the combatants. The neighbouring country was adorned wit'i porticoes, s' ady walks and groves, interspersed with seats and benches ; the whole originally destined to relieve the fatigues and anxiety of the candidates for Olympic fame ; and frequent- ed in later times by sophists and philosophers, who were fond to contemplate wisdom, and communicate knowledge, in those delightful re- treats. The order of the athletic exercises or combats was established by Lycurgus, and cor- responded almost exactly to that described by Homer, in the twenty-third book of the Iliad, and eighth of the Odyssey. Iphitus appointeil the other ceremonies and entertainments ; settled the regular return of the festival at the end of every fourth year, in July ; and gave to the whole solemnity that form and arrangement which it preserved with little variation above 1000 years; a period exceeding the duration of the most famous kingdoms and republics of antiquity. Among the benefactors of Olympia, at a much later period, was reckoned Herod, afterwards king of Judea. Seeing, on his way to Rome, the games neglected or dwindling: into

insignificance, from the poverty of the Eleans. he displayed a vast munificence as president, and provided an ample revenue for their future support and dignity. The care and management of the Olympics belonged for the most part to the Eleans ; who on that account enjoyed their possessions without molestation, or fear of war or violence. They appointed a certain num- ber of judges, who were to take care that those who offered themselves as competitors should perform their preparatory exercises ; and these judges, during the solemnity, sat naked, having before them a crown of victory, formed of wild olive, which was presented to whomsoever they adjudged it. Those who were conquerors were called Olympionices, and were loaded with honors by their countrymen. At these games women were not allowed to be present ; and if

any woman was found, during the solemnity, to have passed tlie river Alpheus, she was to be thrown headlong from a rock. This, however, was sometimes neglected ; for we find not only women present at the celebration, but also some among the combatants, and some rewarded with the crown. The preparations for these festivals were great. No person was permitted to enter the lists, if he had not regularly exercised himself ten months before the celebration at the public gymnasium of Elis. No unfair dealings were allowed ; whoever attempted to bribe his adversary was subjected to a severe fine ; and even the father and relations were obliged to swear that they would have recourse to no arti- fice which might decide the victory in favor of tlieir friends. No criminals, nor such as were connected with impious and guilty persons, were suffered to present themselves as combat- ants. The wrestlers were appointed by lot. Some little balls superscribed with a letter were thrown into a silver urn, and such as drew the same letter were obliged to contend one with the other. He who had an odd letter remained the last ; and he often had the advantage, as he was to encounter the last who had olitained the supe- riority over his adversary. In these games were exhibited running, leaping, wrestling, boxing, and throwing the quoit, all which together were called irevTaOXov, or quinquertium. There were also horse and chariot races, and contentions in poetry, eloquence, and the fine arts. Tlie only reward that the conqueror obtamed was a crown of

olive. This, as some suppose, was in me- moiy of the labors of Hercules, which were accomplished for the imiversal good of mankind, and for which the hero claimed no other reward but the consciousness of having been the friend of mankind. So small and trifling a reward stimulated courage and virtue, and was the source of greater honors than the most unbound- ed treasures. The statues of the OlympionicEB were erected at Olympia in the sacred wood of Jupiter. Their return home was that of a war- like conqueror; they were drawn in a chariot by four horses, and every where received with the greatest acclamations. Their entrance into their native city was not through the gates ; to make it more grand and more solemn, a breach was made in the walls. Painters and poets were employed in celebrating their names; and indeed the victories severally obtained at Olympia are the subjects of the most beautiful odes of Pin- dar. The combatants were naked. A scarf was originally tied round their waist; but when it had entangled one of them, and been the cause that he lost the victory, it was laid aside. The Olympic games were observed every fifth year, or, to speak with greater exactness, after a revo- lution of four years, and in the first month of the fifth year; and they continued for five successive days. As they were the most ancient and most solemn of all the festivals of the Greeks, it will not appear wonderful that they drew so many people, not only inhabitants of Greece, but of the neighbouring islands and countries.

OLYMPIODORUS, a peripatetic philoso- pher of Egypt, born in Thebes, who flourished under Theodosius II., and wrote a history of the

eastern empire in Greek, in twenty-two books, from the seventh consulship of Honorius, and second of Theodosius, to the accession of Valen- tinian I. He wrote also, 2. A History of an Embassy to some of the Barbarous Nations of the North ; 3. Commentaries on the Meteors of Aristotle, published by Aldus in 1550, folio; and 4. A Life of Plato.

OLYMPUS, a celebrated mountain of Mace- donia and Thessaly, now called Lacha. The ancients supposed it to be the highest mountain in the world ; that its top reached heaven ; was the court of Jupiter, and the residence of the gods ; and the poets feigned that upon it there were neither clouds, rain, nor wind, but an eternal spring. ××× Homer, Iliad 1. Virg. JEn. ii. vi. Ovid, Met. Lucan, Claudian, &c. It was also fabled to have been the scene of the battle between the gods and the giants. Its real height is about 6000 feet perpendicular ; its top is always covered with snow.

OLYNTHIANS, the inhabitants of Olynthus; a brave people, who, being betrayed by the Athenians, were conquered and sold for slaves

by Philip II. See Macedon.

OLYNTHUS, a celebrated city and republic of Macedon, on the isthmus of the peninsula of Pallene, once very flourishing, and able to dis- pute with Athens and Sparta. It was at last destroyed by Philip II. of Macedon.

OLYRA, in botany, a genus of the triandria order, and monoecia class of plants : natural order fourth, gramina : male cal. biflorous and aristated glume : cor. a beardless glume : fe- male CAL, a uniflorous, patulous, and ovate glume : style bifid : seed cartilaginous.

OLZOFFSKI (Andrew), LL. D., an eminent Polish divine, born in 1618, and descended of an ancient family in Prussia. Having finished his studies, in law and divinity, he went to Rome, and took his degree of LL.D. He went tlience to Paris, whence he, attended the princess Mary Louisa, on her marriage with Ladislaus IV., king of Poland, to whom he was made Latin secretary. He attended the election of the em- peror Leopold I. as ambassador from Poland, and on his return was made prebendary to the crown, bishop of Culm, and afterwards vice- chancellor, and grand chancellor. After the deaths of Ladislaus IVˆ. and Michael, he had a great hand in procuring the election of king John Sobieski, who made him archbishop of Gnesna, and Primate of Poland. His right to the primacy being disputed by the bishop of Cra- cow, he published a work in defence of his right. He wrote several other tracts ; and died at Dantzic, whither he had gone to settle some dis- putes between the senate and people, in 1678.

OMAGH, a barony in the county Tyrone, and province of Ulster, in Ireland. In this barony is a town of the same name, upon the river Ownreagh. The town, which is also the assize town of the county, is in the form of a Y, the stem being a long and regular avenue. Here is a new court-house, a gaol, large church, Ro- man Catholic chapel, and two Presbyterian meeting-houses. Omagjh is a good market town, holds four fairs annually, is on the great road from Dublin to Londonderry, and r-ias some very

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interesting scenery, as well as ancient remains of” military architecture in the vicinity. The name Omagh appears to be derived from Oigh-magh, which signifies the residence of the chief.

OjVIAR I., surnamed Ebn Al Khattab, suc- cessor of Abu Beer, was originally a violent opposer of the Arabian prophet. Mahomet felt this opposition, and regretted it ; and it is said by prayer effected the conversion of this his dangerous antagonist. Omar had no sooner read the twentieth chapter of the Koran than he was convinced ; upon which he instantly repaired to Mahomet and his followers, and declared his conversion. On the death of Abu Beer, who succeeded the impostor in the regal and ponti- fical dignities, Omar was raised to the throne. He conquered the Persians, and Jerusalem sub- mitted to his power ; nor does he appear to have been checked in a single instance. He was stabbed by a person of the Magian sect while performing his devotions ; and, after languishing three days, died in the month of Dhu'lhajja, and twenty-third year of the Hegira, which be- gan A. D. 643, aged sixty-three. The Arab historians say that he reigned between ten and eleven years. His extensive conquests made the Moslem empire one of the most powerful and formidable monarchies in the world. His dis- position is represented as one of the best possi- ble, and his temperance is highly extolled.

Omar II., the thirteenth caliph of the race of Ommiades, succeeded his cousin Solyman in 717. He laid siege to Constantinople, but was forced to raise it, and his fleet suffered much from a violent tempest. He was poisoned at Emessa, A. D. 720.

OMBI, a city of ancient Egypt, afterwards called Arsinoe and Crocodilopolis, was the capi- tal of one of the nomes into which that country was divided, and is remarkable in the annals of idolatry for the hatred of its inhabitants to the religion of their neighbours the citizens of Ten- tyra. The cities and nomes of Egypt being at one time prone to rebellion, and to enter into conspiracies against monarchical government, one of their most politic kings contrived to introduce into the neighbouring nomes the wor- ship of different animals ; so that, while each reverenced the deity which itself held sacred, and despised that which its neighbours had con- secrated, they could hardly be brought to join cordially in one common design to the disturb- ance of the government. In this distribution of gods, he conferred upon Ombi the crocodile, and upon Tentyra the mortal enemy of that monster, the ichneumon. The consequence was, that while the Ombites worshipped the croco- dile, the Tentyrites took every opportunity of slaughtering him. Thus the mutual hatred of those cities, on account of their hostile gods, rose to such a height, that, whenever the inhabi- tants of the one were engaged in the more solemn rites of their religion, those of the other were sure to embrace the opportunity of setting fire to their houses, and doing them every injury in their power. And this animosity continued between the inhabitants of the two cities long

after the crocodile and ichneumon had lost their divinity.

OM'BRE. n. s. Span, hombre (a man). A game of cards, played by three ; supposed suit- able to men.

He would willingly carry her to the play ; b►►it she had rather go to lady Centaure's, and play at ombre.

Tatler.

When ombre calls, his hand and heart are free. And, joined to two, he fails not to make three.

Young.

Ombiie is a game borrowed from the Spa- niards, and played by two, by three, or by five persons, but generally by three. When three play, nine cards are dealt to each party ; the whole pack being only forty, as the eights, nines, and tens, are thrown out. There are two sorts of counters for stakes, the greater and the less ; the last having the same proportion to the other as a penny to a shilling : of the greater counters each man stakes one for the game ; and one of the lesser for passing for the hand, when eldest, and for every card taken in. As to the order and value of the cards, the ace of spades, called spadillo, is always the highest trump, in what- soever suit the trump be ; the manille, or black duce, is the second ; and the basto, or ace of clubs, is always the third : the next in order is the king, the queen, the knave, the seven, the six, the five, four, and three. Of the black there are eleven trumps ; of the red twelve. The least small cards of the red are always the best, and the most of the black ; except the duce and red seven, both of which are called the manilles, and are always second when tlie red is a trump. The red ace, when a trump, enters into the fourth place, and is called punto ; otherwise it is only called an ace. The three principal cards are called matadores ; which have this privilege, that they are not obliged to attend an inferior trump when it leads ; but, for want of a small trump, the person may renounce trumps, and play any other card ; and, when these are all in the same hand, the others pay three of the greater counters* a-piece ; and, with these three for a foundation, he may count as many matadores as he has cards in an uninterrupted series of trumps ; for all which the others are to pay one counter a-piece. He who has the first hand is called ombre, and has his choice of playing the game, of naming the trump, and of taking in as many and as few cards as he pleases ; and after him the second, &c. But, if he does not name the trump before he looks on the cards he has taken in, any other may prevent him, by

naming what trump he pleases. He that has the first hand should neither take in, nor play, unless he has at least three sure tricks in his hand : for, as he wins the game who wins most tricks, he that can win five of the nine has a sure game ; which is also the case if he wins four, and can so divide the tricks as that one person may win two, and the other three. If a person plays without dis- carding or changing any cards, this is called playing sans prendre ; and, if another wins more tricks than he, he is said to win codille. The oversights in the course of the game are called bea.sts. And, if the ombre wins all the nine tricks, it is called winning the vole. In ombre by five, which many, on account of its not re- quiring so close an attention, prefer to that by

three, only eight cards a-piece are de>nlt ; and five tricks must be won, otherwise the ombre is beasted. Here the person who undertakes the game, after naming the trump, calls a king to his assistance ; upon which the person in whose hand the king is, without discovering himself, is to assist him as a partner, and to share his fate. If, between both, they can make five tricks, the ombre wins two counters, and the auxiliary king only one ; but, when the counters are even, they divide them equal'y. If the ombre venture the game without calling in any king this too is called playing sans prendre ; in which case the other four are all against him, and he must win five tricks alone, or be beasted. The rest is much the same as by three.

Ombre de Soleil, or shadow of the sim, in heraldry, is when the sun is borne in armory, :ˆo as that the eyes, nose, and mouth, which at other times are represented, do not appear ; and the coloring is thin, so that the field can appear through it.

OME'GA, n. s. Gr. w/itya. The last letter of the Greek alphabet ; used in Scripture, there- fore, for the last.

I am alpha and omega, the beginning and the ending. Revelations.

OM'ELET, n. s. Fr. omelette. A kind of pancake made with eggs.

O'MEN, n s. ') Latin omen, ominor. A

O’mened, udj. I prognostic ; a sign or

Ominate, ►►. fl. (^ token of some supposed

Om INCUS, ►►((;’. (“future event: omened

Ominously, adv. \ and ominous mean con-

Om’inousness, 72. S.J taining or exhibiting

omens, the latter being generally used in a bad

sense, or of inauspicious omens : to ominate is

to prognosticate ; foretoken ; pretend to foretel :

ominously and ominousness follow the senses of

ominous.

Let me be duke of Clarence, For Glo’ster’s dukedom is ominous.

Shakspeare. Pomfret, thou bloody prison, Fatal and o/n/noMs to noble peers. /(/.

Though he had a good ominous name to have made a peace, nothing followed. Bacon’s Henry Vll.

Hammond would steal from bis fellows into places of privacy, there to say his prayers, ojnens of his future pacifick temper and eminent devotion. Fell.

These accidents, the more rarely they happen, the more ominous are they esteemed, because they are never observed but when sad events do ensue.

Hay ward. It brave to him, and ominous does appear, To be opposed at first, and conquer here.

Coicleti, Roving the Celtic and Iberian fields, He last betakes him to this ominous wood.

Milton.

The falling of salt is an authentick presagement of ill luck, yet the same was not a general prognostick of future evil among the ancients ; but a particular emination concerning the breach of friendship.

Browne.

When young kings begin with scorn of justice. They make an omen to their after reign. Dryden. Pardon a father's tears, And give them to Charinus' memory : May they not prove as ominous to thee. Id.

As, in the heathen worship of God, a sacrifice without an lieart was accounted ominous ; so, in the Christian worship of him, an heart without a sacrifice is worthless. South.

This ominates sadly, as to our divisions with the Romanists. Decay of Piety.

Choose out other smiling hours Such as have lucky omens shed O'er forming laws and empires rising.

Prior. Fame may prove, Or omened voice, the messenger of Jove, Propitious to the search. Pope's Odyˆsei/.

England a fortune-telling host As numerous as the stars can boast ; IMatrons who toss the cup, and see Omens of fate in grounds of tea. Churchill.

Omen, in its proper sense, signifies a sign or indication of some future event taken from the language of a person speaking without any in- tent to prophesy. Hence TuUy says, ' the Py- thagoreans attend to the discourse not only of gods, but also of men, which they call omens.' This sort of omen was supposed to depend much upon the will of the person concerned in the event ; whence the phrases accepit omen, arri- puitomen. Such were the original omens; but they were afterwards derived from things as well as from words. Thus Paterculus, speaking of the head of Sulpicius on the rostrum, says, it was 'the omen of an impending proscription.' Suetonius says of Augustus, that he believed im- plicitly in certain omens ; and that, ' if his shoes were improperly put on in the morning, espe- cially if the left shoe was put upon his right foot, he held it for a bad omen.' Omen was used in a still larger sense, to signify an augury ; as in the following line of TuUy : ' Thus Jove con- firmed the bright omen of the eagle.' It was lastly used, in the most generic sense of all, for a portent or prodigy ; as in the third book of the iEneid, where a myrtle torn up by iEneas dropped blood. Upon this appearance, says the hero, ⬛⬛⬛

Mute and amazed, my hair with terror stood ;

Fear shrunk my sinews, and congealed my blood.

And the same thing being repeated upon his breaking a branch from another tree, he prayed to the gods to avert the omen. These portentous or supernatural omens were either external or internal. Of the former sort were those showers of blood so frequently occurring in the Roman history, which were much of the same nature with this adventure of iEneas, which ha calls monstra deiˆim. Of the second sort were those sudden consternations which, seizing upon men without any visible cause, were imputed to the agency of the god Pan, and hence called panic fears. But indeed there was hardly any thing, however trivial, from which the ancients did not draw omens. That it should have been thought a direful omen when any thing befel the temples, altars, or statues of the gods, need excite no wonder ; but that the meeting of a eunuch, a negro, a bitch with whelps, or a snake lying in the road, should have been looked upon as por- tending bad fortune is a deplorable instance of human weakness, and of the pernicious influence of superstition on the mind. It is probable that this practice of making ordinary events ominous

of good or bad fortune took its rise in Egypt, the parent country of almost every superstition of paganism ; but wherever it may have arisen, it spread itself over the whole inhabited globe, and still prevails in a greater or less degree among the vulgar of all nations. That paying any re- gard to omens is contrary to every principle of sound philosophy, all philosophers will readily acknowledge; and whoever has studied the writings of St. Paul must be convinced that it is inconsistent with the spirit of genuine Chris- tianity.

OMENTUM, n. s. Lat. omentum. The re- ticulated caul that covers the guts.

When the peritonaeum is cut, as usual, and the cavity of the abdomen laid open, the omentum or cawl presents itself first to view. This membrane, which is like a wide and empty bag, covers the greatest part of the guts. Quincu.

Omentum. See Anatomy, Index.

OMER, Homer, Corus, or Chomer, in the Jewish antiquities, was a measure containing ten baths, or seventy-five gallons and five pints, as a measure of things liquid, and thirty-two pecks and one pint, as a

measure for things dry. The corus or omer was most commonly a measure for things dry; and the greatest that was used among the Jews. It contained, according to the rabbins, ten ephahs or thirtj sata or seahs. Corus is the most usual term in the historical writers, and omer or chomer among the prophets.

Omer (St.), a handsome and strong town of the department of the Pas de Calais, France, and the chief place of a subprefecture. Here is an inferior court of judicature, boards of trade and manufactures, an agricultural society, and a communal college. It is a post town of the third military division, with 18,250 inhabitants. This town is situated in a marshy country, on the Aa, which is navigable here, and at the mouth of the canal of Neuf fosse. It is generally well built, and surrounded with good fortifications. The streets are broad, spacious, and airy, and the great square is adorned with several beautiful buildings. The foundation of St. Omer is traced to ‘as early a period as 626, the epoch of the founding of the celebrated abbey of Bertin. It was encompassed with walls in 880, and has in- creased considerably since that period. The French took possession of it in 1677. Here are manufactures of cloth, twisted thread, starch, soap, oil, glue, pipes, and fishing nets ; also dye- houses, sugar refining houses, brass foundries, paper mills, and tan-yards. A considerable trade is ceirried on in corn, wine, oil, brandy, grocery, flax and coal. The public library contains 20,000 volumes. The cathedral is a fine Gothic edifice; the college church, with its two towers and its wooden arch, is very remarkable. There are also some fine walks near the town. It is fifty-one miles north-west of Arras, thirty-six east of Dunkirk, and 178 north of Paris.

OMIS’SION, w. s.ˆ Lit. omisxus. A for

Omit’, D. a. ˆbeirance; or neglect of

Omit’tance, n. .?. ˆperformance: to omit is, to leave out ; neglect to practise or to mention : o’nit;ance, an obso’e’e synonyme of omission.

He Slid, mine eves were black, and my hair black : And, now I am renicuibered, scorned at nie ;

I marvel, why I answered not again ;

But that’s all one: omittance is no quittance.

Shakgpeare, Omission to do what is necessary. Seals a comhˆiission to a blank of danger. Id.

These personal comparisons I omit, l)ecause I would say nothing that may savour of a spirit of flattery. Bacon.

Great Cato there, for gravity renowned.

Who can omit the Gracchi, who declare

The Scipios' worth ? Dryden.

Whilst they were iield back purely by doubts and scruples, and want of knowledge without their own faults, their omission was fit to be connived at.

Kettlewell.

The most natural division of all offences is into those of omission and those of commission.

A ddifon .

Her father omiftprf nothing in her education, that might make her the most accomplished woman of her age. fd.

If he has made no provision for this change, the omission can never be repaired, the time never re- deemed. Rogers.

Omitting, therefore, any mention of sultry Sirius ††† sylvan shade ††† purling rills ††† gurgling fountains, &cc., he tells us simply that it was ' all on a summer's day.' Canning.

OMMANEY, Cape, a very remarkable pro- montory, the south extremity of king George the Third's archipelago. It terminates in a high bluff rocky cliff, with a round rocky islet close to it ; and by its shores on the eastern side taking a sharp northerly direction, it becomes a very narrow point of land, which received the name which it now bears from captain Colnety. Long. 225†† 37′ 30″ E., lat. 56″ 10′ N.

OMMEN, a town of the Netherlands, in the province of Overyssel, on the Vechte, with 800 inhabitants. A few miles to the north lies the fortress of Ommerschautz, fourteen miles east of ZwoUe.

OMMON, a division of Arabia, comprising the coast extending from its eastern extremity of Rasalgate, to the entrance of the Persian Gulf. The interior consists in a great measure of sandy wastes. The coast, however, is diversified by mountains, and well watered ; so that it

yields barley, palms, lentiles, grapes, &c. The mhab- itants have always been amongst the most active and commercial Arabs. They are the best navi- gators of Arabia : and use vessels called tran- kies, very broad in proportion to their length, and which have sails made of cloth, instead of those of mat which are used in Yemen ; but the most singular circumstance in their construction is, that the planks, instead of being fastened to- gether by nails, are merely tied and sewed. Ommon has repeatedly become an object of am- bition. The Portuguese early invaded and took possession of Maˆkat, its principal port, which they retained for nearly 200 years. In the course of the last century Nadir Shah invaded and con- quered it ; but, his arms being diverted in other quarters, tiie native princes regained the dominion. Kostak is the residence of the Imam ; but Maskat is the place through which the country is known to Europeans. Kalhat and Sohar are also large towns.

OMNIFA'RIOUS, adj. Lat. ominfarium. Of all kinds.

These particles could never of themselves, by nm- nifarious kinds of motion, whether fortuitous or mechanical, have fallen into this visible system.

Bentley.

But if thou omnifarious drinks wouldst brew ; Besides the orchard, every hedge and bush Affords assistance. Philips.

OMNIF'IC, adj. Lat. omnis SLndfacio. All- creating.

Silence, ye troubled waves, and thou deep peace ! Said then the' omnijick word, your discord end.

Milton.

OMNIPARITY, n. s. Lat. omnis and par. General equality.

Their own working heads affect, without com- mandment of the word, to wit, omniparity of church- men. White.

OMNIP'OTENCE, n. s. \ Lat. omnipoten-

Omnip’otency. >tia. Almightiness;

Omnip’otent, adj. j boundless or uni-

versal power.

You were also, Jupiter, a swan, for the love of Leda : oh, omnipotent love ! how near the god drew to the complexion of a goose ! Shakspeure.

The perfect being must needs be omnipotent ; both as self-existent and as immense ; for he that is seif- existent, having the power of being, hath the power of all being ; equal to the cause of all being, which is to be omnipotent. Greiv.

Whatever fortune

Can give or take, love wants not, or despises ;

Or by his own omnipotence supplies. Denham.

As the soul bears the image of the divine wisdom,

What can escape the eye Of God all- seeing, or deceive his heart Omniscient ? Hilton’s Paradise Lost.

Whatsoever is knowu is some way present ; and that which is present cannot but be known bv him wlio is omniscient. South.

It is one of the natural notions belonging to the Supreme Being, to conceive of him that he is omni- scient. Wilkins.

The views of that omniscient Spirit who gave tlie prophecy ††† not the surmises of the men whose facul- ties or whose organs that Spirit employed, are to be the standard of interpretation. Horsley.

Omnium ; a term in use among stock-brokers and speculators in the funds, to express the whole of the articles which the subscribers to a loan receive from government. Thus, if the subscribers, according to their agreement with go- vernment, are to have, for every hundred pounds advanced, a certain sum in 3 per cent, consols, a further sum in 4 per cents, and a proportion of the long annuities, the blank receipts which they receive for making the instalments on the several articles, are, when disposed of independ- ently of each other, as the 3 per cent, consols only, called scrip (a. contraction of subscriptions); when the receipts are sold together as originally received, they are

usually called omnium.

OMNIVOROUS, adj. Lat. omnis and voro. All-devouring.

OMOLONE, a river of Irkoutsk, Asiatic Russia, which falls into the Kolyma, after a course of about 250 miles. Its banks are chiefly

so this part of the body represents the omnipotence of inhabited by exiles, who employ themselves in eW, whilst it is able to perform such wonderful fishing and hunting.

effects. Wilkins.

The greatest danger is from the greatest power, and that is omnipotency. Tillutson.

How are thy servants blest, 0 Lord, How sure is their defence ;

Eternal wisdom is their guide, Their help, omnipotence. Addison.

Will omnipotence neglect to save. The suffering virtue of the wise and brave 1

Pope. OMNIPRES'ENCE, ►►. s. ? Lat. 07,mis and Omnipres'ent, adj. ˆprcesens. Ubiqui-

ty ; universal presence.

He also went Invisible, yet staid, such privilege Hath omnipresence . Milton's Paradise Lost. Adam, thou knowest his omnipresence fills Land, sea, and air. Id.

'I'he soul is involved and present to every part ; and, if my soul can have its effectual energy upon my body with ease, with how much more facility can a being of immense existence and omnipresence, of in- finite wisdom and] power, govern a great but finite universe ! Hale.

God is omnipresent ever felt In the void waste as in the city full.

Thomson.

OMNIS'CIENCE, n. s.-ˆ Lat. omnis and

Omnisˆcient, ac?;. ˆscientia. Boundless

Omnis'cious. j or universal know-

?edge ; infinite wisdom : omniscient and omnis-

lious are both used as the adjective.

By no means trust to your own judgment alone : for no man is omniscient. Bacon s Advice to Villiers.

In all this misconstruction of my actions, as I have no judge but God above me, so I can have comfort to appeal to his omniscience. King Charles.

OjNIOPHAGIA, an ancient Greek festival, in honor of Bacchus Omophagos. This festival was observed in the same manner with the other festivals of Bacchus, in which they counterfeited madness. What was peculiar to it was, that the worshippers used to eat the entrails of goats, raw and bloody, in imitation of the god, who was supposed to have done the same thing.

OMPHACINE Oil, an ancient name for a viscous brown juice extracted from green olives. With this oil the ancient athletse, when going to wrestle, anointed themselves ; and, when that gymnastic exercise was over, they rolled them- selves in the sand, which, mixing with the oil and sweat on their bodies, constituted the strimenla so highly esteemed in the cure of several dis- eases. This precious medicine was carefully scraped off the body of the athlete with a kind of instniment something like a comb, which was called strigilis ; and such was the demand for the scrapings that they were a very lucrative article of trade.

OMPHALE, in fabulous history, a queen of Lydia, daughter of Jardanus. She married Tmolus, who at his death left hev mistress of his kingdom. Omphale had been informed of the great exploits of Hercules, and wished to see so illustrious a hero. Her wish was soon gratified. After the murder of Eurytus, Hercules by way of atonement was ordered to be sold as a slave, that he might recover the use of his senses. Mer- cury was commissioned to sell him, and Omphale bought him, and restored him to liberty. The hero became enamored of his mistress, and the queen favored his passion, and had two sons by

Inm, Agelaus and Lamon ; from whom were de- scended Gyges and

Croesus ; though some make these Lydian monarclis spring from Alcaeus, a son of Hercules, by one of the female servants ‘.f Omphale. Hercules is represented by the poets as so desperately enamoured of the queen, that, to conciliate her, he spun by her side among her women, while she covered herself with the lion’s skin, and armed herself with the club of the hero, often striking him with her sandals for the uncouth manner with which he held the dis- taff, &c.

OMPHALEA, in botany, a genus of the tri- andria order, and the monoecia class of plants : MALE CAL. tetraphyllous : cor. none : the re- ceptacle into which the antherse are sunk is ovate : female cal. and cor. as in the male ; the stigma trifid : caps, carnous and trilocular : SEED one. There are two species.

OMPHALO-MES ENTERIC, in anatomy. All foetuses are wrapped up in at least two coats or membranes ; most of them have a third called allantoides or urinary. Some, as the dog, cat, hare, &c., have a fourth, which has two blood- vessels, viz. a vein and an artery, called ompha- lo-mesenterics, because passing along the string to the navel, and terminating in the mesentery.

OMRATTEE, a large fortified trading town of Hindostan, in the province of Berar. It be- longs to the Nizam ; and from this place a con- siderable quantity of cotton is sent the distance of 500 miles by land, to Mirzapore, a famous mart on the banks of the Ganges, in the province of Allahabad.

OMSK, a fortress and small town of the go- vernment of Tomsk, in Asiatic Russia, at the junction of the river Om with the Irtysch. The original fort was built in 1716, upon a spot higher up the Irtysch ; but in 1 766 general Springer fixed upon the present site, where a regular and strong fortress has been erected. Omsk is in- tended as a barrier against the Kirghises : it ter- minates the military line of the Irtysch, and begins that of the Ischim. Tlie general’s house, church, and military school, are handsome edi- fices. ‘Long. 74►► 54′ E., lat. 55►► 4′ N.

ON, prep., adv., & interj.~\ Sax. on; Goth.

On’set, w. s. & f. a. \on; Danish and

On’slaught, ˆTeut.aw;Belg. aa►►,

On’ward, adv. J aen, an. As a pre-

position, it is placed before that which is under, which supports any

thing, and which keeps it from falling ; which is struck by a body falling ; or to which the thing preceding it is added : also ac- cumulation ; elevation ; progression ; approach ; in- vasion ; reliance ; occasion or motive ; invocation ; imprecation ; stipulation or condition ; distinc- tion or opposition ; manner ; it is placed before the subject of action or passion. As an adverb, it signifies in order of succession ; forward ; upon (as an article of dress); resolution, and is the re- gular opponent of off. As an interjection, it is taken elliptically for ‘ go on,’ and commands or encourages forward or to attack. On fire, de- notes the state of combustion : onset (on and set), means a set-on or attack ; storm ; assault ; something set on : to attack or assault : on- slaught is an obsolete compound (of on and slay) of the same sense : onward is forward ; progres- sively ; further on.

In the second month, on the twenty-seventh day.

Ggnesis. A long cloak he had on. Sidtiey.

The horses burnt as tliey stood fast tied in the sta- bles, or, by chance breaking loose, ran up and down with their tails and manes on a light fire.

KnoUes’s History of llie Turks. The Rhodians, on the other side, mindf \d of their former honour, valiantly repulsed the enemy.

Knolles. What news ❖❖❖❖❖❖ ❖❖

❖❖❖ Richmond is on the seas. ❖❖❖ There let him sink, and be the seas on him.

Shakspeare. This tempest, Dashing the garment of this peace, aboded The sudden breach on’t. Id. Henry VII f.

On each side her Stood pretty dimpled boys, like smiling Cupids. Id. Antony and Cleopatra.

Let them sleep, let them sleep an, Till this stormy night be gone. And the eternal morrow dawn. Crushaw. Distracted terror knew not what was best ; Oft what determination to abide. Daniel’s Civil War. Since ‘tis decreed, and to this period lead A thousand ways, the noblest path we’ll tread; And bravely on, till they or we, or all, A common sacrifice to honour fall. Denliam.

Satan was now at hand, and from his seat The monster, moving onward, came as fast > With horrid strides. Milton’s Paradise Lost.

Him thro' the spicy forest onward come Adam discerned, as in the door he sat Of his cool bower. Id.

How soon hath Time, the subtle thief of youth, Sto'ln on his wing my three and twentieth year.

Milton. So saying, on he led his radiant files. Id.

You roam about, and never are at rest ; By new desires, that is, new torments still possest : As in a fev'rish dream you still drink on, And wonder why your thirst is never gone.

Dryden. The joy of a monarch, for the news of a rittory, must not be expressed like the extacy of a harlequin on the receipt of a letter from his mistress. id.

Hence on thy life ; the captive maid is mine, Whom not for price or prayers I will resign. Id. Could tears recal him into wTCtched life. Their sorrow hurts themselves ; on him is lost.

Id. Th' unhappy husband, husband now no more, Did on his tuneful harp his loss deplore. Id.

INlischiefs on mischiefs, greater still and more. The neighbouring plains with arms are covered o'er.

Id. The best way to be used by a father on any occa- sion, to reform any thing he wishes mended in his son. Locke.

If the tenant fail the landlord, he must fail his creditor, and he his, and so on. Id.

A thriving gamester has but a poor trade ont, who fills his pockets at the price of his reputation.

Id. on Education. As he forbore one act, so he might have focborn another, and after that another, and so on, till he had by degrees weakened, and at length mortified and extinguished the habit itself. South.

Go to, I did not mean to chide you ; On with your tale. Bone's Jane Shore.

The spacious firmament on high. Addison,

On God's providence and on your bounty, all ther present support and fut ire hopes depend.

Smallridge.

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We abstain on such solenm occasions from things lawful, out of indignation that we have often grati- fied ourselves in things unlawful. Id. Stiff in brocade, and pinched in stays, Her patches, paint, and jewels on ; All day let envy view her face. And Phillis is but twenty-one. Prior. These smaller particles are again composed of others much smaller, all which together are equal to all the pores or empty spaces between them ; and so on perpetually till you come to solid particles, such as have no pores. Newton.

What kindled in the dark the vital flame. And, ere the heart was formed, pushed on the red'- ning stream? Blackmore on Creation.

A painted vest prince Vollager had on, Which from a naked Pict his grandsire won.

Blackmore. On me, on me let all thy fury fall. Nor err from ree, smce I deserve it all. Pope. His fancy grows in the progress, and becomes on fire, like a chariot wheel, by its own rapidity. Id. On then, my muse ! and fools and knaves expose, And, since thou can'st not make a friend, make foes.

Young. But aye the ruthless driver goads them on. And aye of barking dogs the bitter throng. Makes them renew their unmelodious moan. Thomson, Place me ore Sirmium's marble steep, Where nothing save the waves and 1 IVIay hear our mutual murmurs sweep. There, swan-like, let me sing and die. Bifron. Thou too ††† the nameless bard I ††† whose honest zeal For law, for morals, for the public weal. Pours down impetuous on the country's foes The stream of verse, and many-languaged prose.

Canning. On, in ancient geography, a city of Egypt, sacred to the sun, and by the Greeks, on that account, called Heliopolis. It was remarkable for the wisdom and learning of its priesthood, and for the spacious buildings in which they cul- tivated the studies of philosophy and astronomy. The priests of On were esteemed more noble tVian all the other priests of Egypt, and were always ministers of state, owing to their high antiquity and great learning. Bishop "W arbur- ton affirms that they lield the system which now distinguishes the name of

Copernicus; and that I'ythagoras received it from Oenuphis, a priest of On, and brought it into Greece.

ONE,ac/;.&M.s. ###\ Sax. cene; Goth, ein ; OscE, adj. Si.n. s. (Teut. ein; Gr. tv. Single ; One'eyed, ˆsole; different or diverse

OiNe'ness, n.s.) (opposed to another); the same ; future, as in ' one day :' as a noun substan- tive, an unit; single person or mess; the same thing ; first hour ; a person indefinitely ; a distinct or particular person; an eminent person ; persons united ; concord ; agreement : it takes, but not ele- gantly, a plural both absolutely and relatively, as ' the great ones of the world ;' ' his waking thoughts only reflect his sleeping ones.' Once signifies a single time; an instant or indivisible pomt of time ; time past and not to be repeated or again occur ; at the immediate time ; formerly : as a noun substantive it seems to mean occasion; occurrence ; instance ; as ' this or that once :' ciie-eyed is having but one eye : oneness, quality of being one ; unity ; compactness.

iˆ'or he dide this thynge in ofTrvngehimselfe onnw.

Wiclif.

Ask from the one side of heaven unto the other, whether there hath been any such thing as this 1

Deuteronomy iv. 32. When any one heareth the word of the kingdom, and understandeth it not, then cometh the wicked one and catcheth away that which was sown in his heart. Mat. xiii. 19.

It is not so worthy to be brought to heroical effects by fortune or necessity, like Ulysses and yEneas, as by one's, own choice and working. Sidney.

One day when Phcebe fair. With all her band, was following the chase.

This nymph, quite tired with heat of scorching air, Sat down to rest. Spenser.

Although the beauties, riches, honours, sciences, virtues, and perfections of all men, were in the present possession of one, yet somewhat beyond and above all this there would still be sought and ear- nestly thirsted for. Hooker.

Our God is one, or rather very oneness and nicie unity, having nothing

but itself in itself, and not consisting, as all things do besides God, of many things. /(/.

If one by one you wedded all the world. She you killed would be unparalleled.

Shukspeare. Till ‘tis one o’clock, our dance of custom Let us not forget. Id.

Then must you speak Of one, that loved not wisely, but too well ; Of one, not easily jealous ; but, being wrought. Perplexed in the extreme. Id. Othello.

Be not found here ; hence with your little ones.

Shakspeare. I answered not again ; But that’s all one. Id.

As I have made ye one, lords, one remain : So I grow stronger, you more honour gain. Id. Pindarus the poet, and one of the wisest, acknow- ledged also one God, the most high, to be the father and creator of all things, Raleigh.

That man should be the teacher is no part of the matter ; for birds will learn one of another.

Bacon’s Natural History. The king was well mstructed how to carry himself between Terdinando and Philip, resolving to keep them at one within themselves. Bacon.

Trees that bear mast are fruitful but once in two years ; the cause is, the expence of sap. Id.

Heaven waxeth old, and all the spheres above Shall one day faint, and their swift motion stay ; And time itself in time, shall cease to move, But the soul survives and lives for aye. Davies.

If any one prince made a felicity in this life, and left fair fame after death, without the love of his subjects, there were some colour to despise it.

Sacklinrj. The obedience of the one to the call of grace, when the other, supposed to have sufficient, if not an equal measure, obeys not, may reasonably be im- puted to the humble, malleable, melting temper.

Hummond. The oneness of our Lord Jesus Christ, referring to the several hypostases, is the one eternal, indivisible, divine nature, and the eternity of the son’s generation, and his co-eternity, and his consubstantiality with the Father when lis came down from Heaven and was incarnate. Id.

Once every morn he marched, and once at night.

Cowley. Thereon his arms and once- loved portrait lay. Thither our fatal marriage-bed convey. Denham. At once with him they rose : Their rising all at once was as the sound Of thunder heard remote. Milton's Paradise Lˆst,

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Edward I. was one who very well knew how to use a victory, as well as obtain it. Hate.

These successes are more glorious which brinˆ benefit to the world, than such ruinous ones as are dyed in human blood. Glanvilie.

The church is therefore one, though the members may be many ; because they all agree in one faith. There is one Lord and one faith, and that truth once delivered to the saints, which whosoever shall receive, embrace, and profess, must necessarily be accounted one in reference to that profession : for if a company of believers become a church by believing, they must also become one church by believing one truth.

Pearson. With lives and fortunes trusting one,

Who so discreetly used his own. JVuller.

Both the matter of the stone and marchasite had been at once fluid bodies, till one of them, probably the marchasite, first growing hard, the other, as being yet of a 'nore yielding consistence, accommodated itself to the harder's figure. Boijle.

lie that will overlook the true reason of a thing which is but one, may easily find many false ones, error being infinite. Tillotson.

He is not at o/je with himself what account to give of it. Id.

From his lofty steed he flew. And raising one by one the suppliant crew, To comfort each. Drijden's Knight's Tale.

If one must be rejected, one succeed,

Make him my lord, within whose faithful breast.

Is fixed my image, and who loves me best. Id. Night came on not by degrees prepared.

But all at once ; at once the winds arise.

The thunders roll. Id. Cimon and Jphigenia.

Fuscinus, those ill deeds that sully fame,

In blood o)ice tainted, like a current run

From the lewd father to the lewder son.

Dry den.

It is oiie thing to draw outlines true, the features like, the proportions exact, the colouring tolerable, and another thing to make all these graceful. Id.

A sign-post dauber would disdain to paint The oneeyed heroe on his elephant. Id.

It is one thing to think right, and another thing to know the right way to lay our thoughts before others with advantage and clearness. Locke.

Suppose the common depth of the sea, taking one place with another, to be about a quarter of a mile.

Bnrnet.

There can be no reason why we should prefer any one action to another, but because we have greater hopes of advantage from the one than from tin: other.

Smalliktge.

Arbitrary power tends to make a man a bad sove- reign, who might possibly have been a good one, had he been invested with an authority limited by law. Addison’s Freeholder.

My legs were closed together by so many wrap- pers one over another, that I looked like an I^^gyptian mummy. Addison.

The mighty family Of one-eiied brothers hasten to the shore. Id.

Now that the fixed stars by reason of their im- mense distance, appear like points, unless so far as tlieir light is dilated by refraction, may

appear from liencc, that when the moon passes over and eclipses them, their light vanishes, not gradually like that of the planets, but all at once. Nen-Um.

One would imagine these to be the expressions of a nian blessed with ease, affluence, and power ; not of one vj\o had been just stripped of all those ad- vantages. Atterbun/.

The following plain rules and directions are not
े he less useful because they are plain ones. Id.

This hath all its force at once, upon th”} first im pres.sion, and is ever afterwards in a declining state.

Id.

For provoking of urine, one should begin with the gentlest first. Arbuihnot on Aliments.

Two bones rubbed hard against one another, oi with a file, produce a fetid smell. Arbuthnoi.

When joined in one, the good, the fair, the great, Descends to view the muses humble seat.

Granville.

At one time they keep their patients so warm as almost to stifle them, and all of a sudden the cold regimen is in vogue. Baker.

For some time one was not thought to understand Aristotle, unless he had read him with Averroe’s comment. Id.

In your tuneful lays,

Once more resound the great Apollo’s praise.

Pope.

This evil fortune which attends extraordinary men, hath been imputed to divers causes that need not be set down, when so obvious an one occurs, that when a great genius appears, the dunces are all in conspiracy against him. . Swijt.

A good acquaintance with method will greatly assist every one in ranging human affairs. Watts.

Smooth to the shelving brink a copious flood Rolls fair and placid ; where collected all

one impetuous torrent down the steep It thundering shoots. Thomson.

New forms in dire vicissitude invade, The rustling brake alarms and quivering shade ; Nor light, nor darkness, brings his pain relief. One shows the plunder, a u one hides the thief.

Johnson.

God, working ever on a social plan, By various ties attaches man to man : He made at first, though free and unconfined. One man the common father of the kind. Cowper.

The wretch that works, and weeps without relief. Has One that notices his silent grief. He, from whose hands alone all power proceeds. Ranks its abuse amongst the foulest deeds ; Considers all injustice with a frown, But marks the man that treads his fellow dcwn.

And she may now be as discreet and wise, As ojice absurd in all discerning eyes. Sobriety perhaps may now be found Aˆ here once intoxication pressed the ground. Id. When one is vexed by 07ie person, to revenge one's self on another that happens to come in the vvay, is the vilest injustice. Sheridan.

But pause one moment more and take The curse of him thou didst forsake, And look once more to heaven, and see Its love for ever shut from thee. Byron.

Who, when terror and doubt through the universe reigned, While rapine and treason their standards unfurled. The heart and the hopes of his country maintained. And one kingdom preserved midst the wreck of tiie world. Canning.

ONEEHOW, one of the Sandwich Islands, in the North Pacific, about forty miles in circum- ference. It is fruitful in yams, and contains about 10,000 inhabitants. The coast is high, and rises on the east abruptly from the sea; the rest of the island consists of low grovind, except a round bluff head on the south-east point.

ONEGA, a large lake of European Russia, in the government of Olonetz, to the east of La- doga. Its length is about 130 miles, its breadth

from seventy to eighty. It contains several islands, of which the basis is marble : its waters are beautifully clear, and abound in fish. The Svir, a navigable stream, joins these lakes ; and as the smaller lake of Bielo, situated to the south, and in the direction of the Wolga, is at the distance of only twenty-five miles, it has been proposed to join these by a canal.

Onega, a river of the north of European Rus- sia, which rises to the east of Onega, and, flowing northward, falls into the Wliite Sea, in a gulf of tliis name.

ONEGLIA, a province of Piedmont, which, until 1566, formed a distinct principality be- longing to the house of Doria; but is now transferred to Sardinia. Its principal produc- tions are olive-oil and fruit. It contains, on a surface of 100 square miles, one town, fifty-one villages, and nearly 29,000 inhabitants.

Onkglia, a town in the north of Italy, the capital of the Piedmontese province of this name, situated on the sea coast, at the mouth of the river Impero. It has a small harbour, a popu- lation of 5000, and a traffic in wine, fruit, and olive-oil. It is partly fortified, and contains some fine churches and a gymnasium. Here the cele- brated Andrew Doria was born. It is thirty-six miles E. N. E. of Nice.

ONEIDA, a county of New York, bounded north by Lewis county, east by Herkimer county, and south-west by Madison county, and west by Oswego county. Population 33,792. Chief towns, Whitesborough, Utica, and Rome.

Oneida, a lake, chiefly in Oneida county, is twenty miles long and four broad. It receives Wood Creek on tlie east end, and communicates with Lake Ontario by the Oswego. It is a very beautiful lake, abounding in fish.

Oneiua Creek, a river of New York, which runs north into the east end of Oneida Lake. Length twenty-five miles.

ONEIROCRIT'IC, n. s. l Gr. ovtipoKpiriKog.

Oneirocrit'ical, adj. S An interpreter of dreams ; interpretative of dreams.

If a man has no mind to pass by abruptly from his imagined to his real circumstances, he may em- ploy himself in that new kind of observation which my oneirocriticul correspondent has directed him to make. Addison's Spectator.

Having surveyed all ranks and professions, I do not find in any quarter of the town an oneirocritic, or an interpreter of dreams. Id.

ON'ERARY, arfj.-ˆ Lat. owero. Fitted for

On'erate, w. a. > burdens: to load or bur-

On'erous, adj. j den : burdensome.

A banished person, absent out of necessity, retains all things oneroui to himself, as a punishment for his crime. Ayliffe.

ONESIiE Thermˆe, were, according to Strabo, excellent baths, and salutary waters, at the foot of the Pyrenees in Aquitania. Near the river Adour, the ancient Aturus, stands Bagneres, famous for its waters, which appear to be the Onesia; of Sirabo. See Bagneres.

ONESICRITUS, a cynic philosopher and historian of iEgina, who accompanied Alexander the Great into Asia, and was sent by him to the Indian Gymnosophists. He wrote a history of Alexander's expedition, which has been censured

for tlie romantic and exaggerated anecdotes it contams. Pint, in Alex. Q. Curt. ix. 10.

ONESIMUS, a Macedonian nobleman and historian, who flourished at Rome in the third century, and was patronised by the i-eigning emperors. He wrote the lives of the emperors Probus and Cams with great elegance and ac- curacy.

ONGLEE, in heraldry, an appellation given to beasts or birds when the talons or claws are borne of a different color from that of the body of the animal.

ONGOLE, a district and town, in the Northern Carnatic, situated between 15►► and 16►► of N. lat. The district was formerly de- pendent on the Kirpa or Cudapah principality ; but was afterwards incorporated with the Car- natic below the Ghauts, and subject to Arcot. The sovereignty was finally acquired by the East India Company in 1801, by treaty with the na- bob ; and with Neloor, and now forms one of the coUectorships, into which the Carnatic has been

subdivided. It is of inferior fertility to Tanjore, and has never been remarkable for trade or manufactures. The Mussy and the Gonde-ganima are the principal rivers. The chief towns are Ongole, Courchier, and Sintalsheroo The town, formerly fortified, is 173 miles north by west from Madras.

ONIiE Oppidum, and Oniˆe Templum, a town and temple, so called from Onias, the high-priest of the Jews in Egypt ; who built a temple in imitation of that at Jerusalem, by per- mission of the king of Egypt, on the spot where stood the temple of Diana Aretis in Leontopo- lis ; it was encompassed with a brick wall, and had a large tower like that at Jerusalem. (Jose- phus). It was the metropolis of the Nomos Hesiopositis (Ptolemy), because in Strabo's time Ileliopolis was fallen to decay.

ONION, n. s. Fr. oignon ; (Lat. unio ?) A well known bulbous plant.

If the boy have not a woman's gift To rain a shower of commanded tears, An onion will do well. Shakspeare,

I, an ass, am onion-eyed. Id

This is every cook's opinion. No savory dish without an onion ; But, lest your kissing should be spoiled. Your onions must be thoroughly boiled.

Swift.

Of the second division, or the onion kind, the cha- racters, &c., the species are these, 1st. Cepa, or common onion, the best garden varieties of which are the Strasburgh or common round onion, the oval long keeping common onion, the Spanish large flat onion, &c. Dr. A. Rees.

Onion. See Allium. Onions, leeks, and garlic, are all of the same genus; and in their recent state are acrid, but harmless to the human body. When, by age or climate, this acrimony is too great, they are not used as food. In Spain the garlic, being equally mild with the onion, is used as common food. By the ordinary culinary preparation their acrimony is dissipated, and a remarkably mild substance remains, affording much nutriment. They are used in medicine, uniting the two qualities of pectorals, viz. by their acrimony, being in their recent state expec- torant ; in their boiled state, on account of their

mucilage, demulcent, provided the quantity taken be sufficient. Some have found in leeks a som- niferous quality ; and onions are undoubtedly possessed of this property, as any person may be satisfied, by eating one or two, when wakeful in the night. Besides the three species above mentioned, there are several others belonging to the same tribe, which we use as condiment ; but only the leek and onion as diet. In its recent state the onion is the most acrid ; in its boiled state the leek retains its acrimony most tena ciously. On account of this, and some difference of texture, the onion is more easily digested and more universally used than the leek ; being more easily broken down, and more generally agreeable.

Ok ION River, a river of Vermont, which is formed in Cabot, passes by Montpelier, and nms west into lake Champlain, four miles north- west of Burlington, North America. It is one of the principal rivers of Vermont, and flows through a fertile country. Between Colchester and Bur- lington it has worn through a solid rock of lime stone, forming a chasm seventy or eighty feet deep, and at Bolton there is another similar chasm. Length seventy miles.

OMISCUS, in zoology, a genus of insects be- longing to the order of aptera. It has fourteen legs, bristly feelers, and an oval body. The most remarkable species are these : ###

1 . O aquaticus, of an ashen color, and tolera- bly smooth. Its body is composed of seven ar- ticulations, exclusive of the head and tail ; which last part is much larger than the other segments, round at the extremity, from which issue two appendices, each divided into two threads. It has seven legs on each side ; the last of which gradually increase in length, and are constantly larger than the foremost. The antennse have but three long articulations, the last of which is much longer than the rest. Tliis insect is found in pools, small rivulets, and especially in springs.

2. O. armadillo is broad, very glossy, and smooth ; its color is black, with a small portion of white on the edge of the segment, which color often varies ; but still the insect is glossy and smooth. Its body is composed of ten segments, besides the head and tail. Of the ten seuraents, tlie first seven are broad, and the last three short. The first of these three appears divided in the middle, which is broader than the rest, into three more. These last short segments, with that of the

tail, form the extremity of the body, which is round, without any appendix, and constitutes the specific character of this insect. It has four- teen feet, seven on each side. When touched, it rolls itself up into a ball, bringing its head and tail together like the armadillo, and neither an- tennae nor feet are seen : it might be taken for a round shining pearl. It is found in woods.

3. O.asellus, millepes, or wood-louse, is oval; the tail obtuse, with two undivided bristles ; various as to color ; length, five lines.

4. O entomon, the sea wood-louse, is white ; eyes black ; convex above, beneath flat, margin acute ; antennae four ; four hind pair of legs lar- gest, hairy. Body of ten segments. Length one line and a half. Found on the coast. It accom- panies the herring, and is an enemy well known

to our fishermen : these insects will frequently eat up a whole fish while it hangs in the net.

ONKELOS, sumamed the Proselyte, a famous rabbi of the first century, and the author of the Chaldee Targum on the Pentateuch. He flourished in the time of Jesus Christ, according to the Jewish writers. The Talmudists tell us that he assisted at the funeral of Gamaliel, and was at a very large expense to make it magnificent.

ON'LY, adj. & adv. From one. Single; sole; this, emphatically: one-like; simply; singly; merely; so and no otherwise.

Every imagination of the thoughts of his heart was only evil continually. Genesis, vi. 5.

The only child of shadeful Savernake. Drayton.

The posterity of the wicked inherit the fruit of their father's vices ; and that noto)t/v by a just judg- ment, but from the natural course of things.

Tillotson.

All who deserve his love, he makes his own ; And, to be loved himself, needs only to be known.

Dryden.

Of all whom fortune to my sword did bring. This only man was worth the conquering. Id.

The logick now in use has long possessed the chair, as the only art taught in the schools for the direction of the mind in the study of the sciences. Locke,

I propose my thoughts only as conjectures. Burnet.

]Nor must this contrition be exercised by us only for grosser evils ; but when we live the best. Wake.

To maintain a character then with decency, we must keep our eye only upon that which is proper to It. Mason.

Can you resolve on shame ? that onlii ill

The generous fear that kills the soul itself.

Thoni Oil.

By numbers here from shame or censure free. All crimes are safe, but hated poverty. This, only this, the rigid law pursues ; This, only this, provokes the snarling muse.

Johnso I.

Arts once esteemed maybe with shame dismissed; Charity may relax the miser's fist ; The gamester may have cast his cards away. Forgot to curse, and only kneel to pray. Cowper.

ONOMACRITUS, an Athenian soothsayer? who flourished under Pisistratus and his sons, about A. A. C. 516. He is generally believed to have been the author of the Greek poem on the Expedition of the Argonauts, which bears the name of Orpheus ; as well as of the elegant poems still extant under the name of Musaeus. He was exiled by Hipparchus. Herod, vii. 6.

ON'OMANCY, n. s. } Gr.ovo/xa, name and

Onoman'tical. 5 fiavTig, divination.

Prediction by names.

Destinies were superstitiously, by onomancy, de- ciphered out of names, as though the names and natures of men were suitable, and fatal necessities concurred herein with voluntary motion. Camden.

Theodatus, when curious to know the success of his wars against the Romans, an onomantical or name- wisard Jew, willed him to shut up a

number of swine, and give some of them Roman names, others Gothic names with several marks, and there to leave them. Camden.

Onomancy, Onomantia, or Onomancia, a branch of divination, which foretels the good or bad fortune of a man from the letters in his name. From the same principle the young Romans drank to their mistresses as often as

there were letters in their names : hence Mar- tial says, Naevia sex cyathis, septem Justina bibatur.

ONON, a river of Asiatic Russia, on the fron- tier of Chinese Tartary. It rises in a mountain- ous country, and flows north-east till, combined with the Ingoda, it forms the Chilka, which afterwards discharges itself into the Amour. Its waters abound in fish, and throw on shore frag- ments of cornelian, chalcedony, and jasper. The banks are chiefly occupied by tribes of wander- ing Bannats, Tunguses, &c.

ONONDAGA, a county of New York, bounded north by Oswego county, east by Ma- dison county, south by Courtland county, and west by Cayuga county. Population 25,987.

Onondaga, a post town, the capital of Onon- daga county. New York, fifty miles west of Utica, 145 west of Albany. It is a large, valuable, and flourishing town, and has two villages, Onon- daga Hollow, and West Hill. The latter, which is two miles west of the former, contains a court house, a jail, printing-office, &c. Onondaga Hollow contains a state arsenal, an academy, a meeting-house, a printing-office, and considerable manufactures. 200 of the Onondaga Indians live three miles south of this village ; 200 of the same tribe reside on Buff”alo Creek, 100 on the Alleghany, and 100 on the Ouse, in Upper Canada.

Onondaga, or Salt Lake, a lake in Onondaga county ; seven miles north of Onondaga ; seven miles long, and two broad. It discharges its waters from the north end into Seneca River On its borders are celebrated salt springs.

ONONIS, in botany, a genus of the decandria order, belonging to the diadelphia class of plants ; and in the natural method ranking under the tliirty second order, papilionacese. The calyx is quinquepartite,

with the segments linear ; the vexillum striated ; the legumen turgid and ses sile ; the filaments coalited without a fissure.

ONOPORDUM, woolly thistle, in botany, a genus of the polygamia sequalis order, belonging to the syngenesia class of plants ; and in the natural method ranking under the forty-ninth order, compositae. The receptacle is honey- combed ; the scales of the calyx mucronated or pointed.

ONORE, or Honavur, a sea-port of North Canara, Hindostan, standing at the mouth of a small river which communicates with a fine salt water lake. This lake extends nearly as far to the east as the foot of the mountains, and is studded with islands. The fish are salted by the natives, and form a considerable article of trade. The country also produces much pepper and rice. Ships may anchor to the south of Fortified Island, at the distance of one mile and a half, or two miles, from the shore, in five or six fathoms water. Onore, when the Portugue:ie first arrived in India, was the seat of an inde- pendent rajah, whom they subdued, and built a fortress here. It was subsequently taken from them by the Dutch, who relinquished it ; for in 1763 it was taken by Tlyder Aly, and then con- sidered one of the possessions of the ranee of Bednore. Hyder caused docks to be erected here for the purpose of building ships of war ;

but in the year 1768 it was taken by the British, and the buildings destroyed ; shortly after which it was retaken by Hyder. In 1783 it was re- taken by the British under general Matthews, who found five ships of war, and a number of small vessels ; but it was restored to Tippoo on the conclusion of the peace. The sultan, con- vinced of the impracticability of forming a marine at that place, withdrew the artificers, and, with the province of Canara, it came into British possession in 1799.

ONOSANDER, a Greek author and Platonic philosopher, who wrote Commentaries on Plato’s politics, which are lost; but particularly famous for a treatise entitled Aoyog Srparjjyieof, ‘ Of the Duty and Virtues of the General of an Army ;’ which has been translated into Italian, Spanish, and French. The time when he lived is not precisely known ; but is imagined to have been in the reign of Claudius I.

ONOSMA, in botany, a genus of the mono- gynia order, belonging to the pentandria class of plants ; and in the natural method ranking under the forty-first order, asperifoliae. The co- rolla is campanulated, with the throat pervious ??? there are four seeds.

ON’SET, n. s. & v. a. On and set. A set on; attack; assault; first brunt: to assault.

As well the soldier dieth, which standeth still, as he that gives the bravest onset. Sidney.

All breathless, weary, faint. Him spying, with fresh onset he assailed, And kindling new his courage, seeming queint, Struck him so hugely, that through great restraint He made him stoop. Spenser.

I will with deeds requite thy gentleness ;

And for an onset, Titus, to advance

Thy name and honourable family,

Lavinia will I make my empress. Shakspeare.

This for a while was hotly onsetled and a reason- able price offered, but soon cooled again. Carew. The shout Of battle now began, and rushing sound Of onset. Milton’s Paradise Lost.

Sometimes it gains a point ; and presently it finds itself baffled and beaten off; yet still it renews the onset ; attacks the difficulty afresh ; plants this rea- soning and that argument, like so many intellectual batteries, till at length it forces a way into the ob- stinate enclosed truth. Smith.

Without men and provisions it is impossible to

secure conquests that are made in the first onsets of

an invasion. Addison.

Observe

The first impetuous onsets of his grief ;

Use every artifice to keep him stedfast.

Philips.

ON’SLAUGHT, n. s. On and slay. See Slaughter. Attack ; storm ; onset. Not in use. They made a halt To view the ground, and where t’ assault. Then called a council, which was best, By siege or onslaught to invest The enemy ; and ‘twas agreed By storm and onslaught to proceed. Hudibras. ONSLOW, a county, south part of North Carolina,

on the coast. Population 6669. Slaves 2299. Chief town Swansborough.

ONTARIO, Lake, one of that great northern chain which divides the United States from

Upper Canada. In length it is 171 miles, its ‘greatest breadth fifty-nine and a half, and it is 467 in circumference; the depth of water varies, but it is seldom less than three, or more than fifty fathoms, except in the middle, where attempts have been made with 300 fathoms, without striking. Its bearing is nearly east and west. Towards the south and in the north-east the shores are low and marshy ; to the north and north-west they assume a lofty character. The country around is covered with wood, except where patches of settlements diversify the scene. Of the many rivers flowing into Lake Ontario there are none that lay claim to no- tice but the Genesee and Osvvego : but there are some fine bays and inlets. Burlington Bay is both spacious and secure ; but its entrance is narrow, and so shallow as to admit nothing larger than boats. Hungry Bay, on the contrary, affords good anchorage and safe shelter among the islands, to ships of the largest size. York and Kingston harbours, belonging to the English, and Sacket’s harbour to the Americans, are unques- tionably the best upon the lake. The two latter are strongly fortified. V’ery heavy squalls of wind occur here, but they are unattended either with difficulty or danger. Of the many islands at the east end the Grand Isle, which lies imme- diately at the outlet of the lake into the St. Lawrence, is the most considerable : and, below this, the islands are so numerous in the channel of the St. Lawrence that they have received the appellation of the Thousand Isles. The Ontario lake discharges its waters into the St. Lawrenca from the north-east end, and communicates with Lake Erie at the south-west part, by the Ps’ia- gara. Long. 76►► 30′ to 80►► W., lat. 43►► 15′ to 440 N.

Ontario, a county of New York, bounded north by the above lake, east by Seneca county, south by Steuben and Alleghany counties, and west by Genesee county. Canadoqua is the capital. Also a county of Upper Canada, con- sisting of islands in lake Ontario.

ONTIGOLA, a well-built village of Spain, three miles east of Aranjuez,

on a small lake of the same name. The foreign envoys reside here, when the court is at Aranjuez.

ONTINIENTE, a considerable manufacturing town of Valencia, Spain, is situated in a moun- tainous and fertile neighbourhood. It is an in- land place, twelve miles south-west of the town of San Felippe ; than which, though nearly as po- pulous, as it contains about 11,000 inhabitants, it is much less known, from being unfortified and distant from any sea-port. Its inhabitants carry on manufactures of woollen, paper, and copper. The variety of temperature gives rise to a con- siderable diversity in the fruits, the lower grounds producing figs ; the higher pears, apples, and other products of a colder climate.

ONTOL'OGY, 7j. s.) Gr. ovroXoyia. The

Ontol'ogist. i science of the general

affections of being. Metaphysics, which see.

The modes, accidents, and relations that belong to various beings, are copiously treated of in meta- physicks, or more properly ontology. Watu's I.ogick.

Others, with moie propriety, conceive metaphysics

to be what some others call ontology, or ontosophy, i. e. the doctrine de ente, or of being, quatenus bei.ig.

Dr. A. Rees. ONUPHRIUS Paxvinus, a learned Italian, of the order of hermits of St. Augustine. He was bom of a noble family at Verona in 1 529 ; and became so indefatigable in his studies that he spent whole days and nights in reading the ancients ; which made Manutius style him llelluo Antiquitatis. His first performance was A Chronicle of Popes and Cardinals, which was printed without his knowledge at Venice iu 1557, and some time after more correctly by himself. He afterwards continued Platina's Lives of the Popes, from Sextus IV. to Pius V., and subjoined annotations. He also wrote four pieces upon Roman Antiquities, which are printed in Gra;vius's Collection. He died in his thirty-ninth year in 1568.

ON'YCHA, n. s. Gr. owxa. A fragrant gum. See below. Take sweet spices, oniicha, and galbanum. Eiodus.

ONYCOMANCY, or Oxymancv, a kind of divination by the nails of the fingers. The word is from the Greek owˆ, nail, and fiavrua, divi- nation. The ancient practice was to rub the nails of a youth with oil

and soot, or wax ; and to hold up the nails thus smeared against the sun. Upon them were supposed to appear figures or characters which showed the thing re- quired.

O’NYX, n s. Gr. owˆ. A gum. See below. Nor are her rare endowments to be sold For glittering sand by Ophir shown, The blue-eyed saphir, or rich ontix stone.

Sandys. The oniˆ.r is an accidental variety of the agate kind : it is of a dark horny colour, in which is a plate of a bluish white, and sometimes of red : when on one or both sides the white there happens to lie also a plate of a reddish or fresh colour, the jewellers call the stone a sardonyx. Woodward on Fossils.

Onyx, in lithology, one of the semipellucid geras, with variously colored zones, but none red. There are four varieties of this gem. I. A bluish white one, with broad white zones : 2. A very pure onyx, with snow-white veins : 3. The jasponyx, or horny onyx, with green zones . 4. The brown onyx, with bluish white zones. The ancients attributed wonderful propeˆ:ties to the onyx, and imagined that if worn on the finger it acted as a cardiac ; they also recom- mended it as an astringent ; but at present no re- gard is paid to it. The word ovvK signifies nail ; the poets feigning this stone to have been formed by the Parcae from a piece of 'enus’s nail, cut off by Cupid with one of his arrows.

Onyx, in ichthyology, or the onyx fish, found in the Red Sea, and has the property of being uncommonly odoriferous, whence it is a princi- pal ingredient in the Indian perfumes, ^^‘e have met with no description of it.

OOCHINADROOG, Ujayini Durga, a strong hill fort in the Balaghaut territories, dis- trict of HarponuUy. Lat. 14►► 32′ N., long. 75″ 55′ E ITiis fortress is situated about twelve miles to the eastward of Hurryhur, and has the appearance of great strength ; being of consider-

able heiglit, unconnected and abrupt, particularly to the northward and westward, where it is almost perpendicular. When Tippoo besieged a rebel Hindoo chief here in 1793 he was so en- raged at the

garrison holding out for three months that on its capitulating he ordered all the boys to be made eunuchs : very few, it is said, survived.

OOJAIN, OuJEiN, or Ugeen, a large district and city of Hindostan, in the province of Mal- wah, situated between 23►► and 24►► N. lat., and between 75►► and 77►► E. long. The soil is in general a soft black mould, and the roads are nearly impassable in the wet season. It contains, besides the city, 175 villages; but most of the lands are let on a feudal tenure, and it only yields a revenue of about ►►60,000 per annum. It was formerly the private estate of the Mahratta Dowlut Row Sindia. The capital is situated on the banks of the Sipperah, m lat. 23►► 12′ N., long. 75►► 50′ E., and is one of the most ancient cities of Hindostan. It was known to the Greeks as Ozene; and its Sanscrit name is Ujayini. It is stated to have been the capital of rajah Bickermajit, a short time after the com- mencement of the Christian era. The ancient city stood about a mile north of the present ; and perhaps was much larger ; for, on digging to the depth of fifteen feet, brick walls, pillars of stone, and other ruins, are frequently discovered here. Adjoining to these ruins, near the bank of the river, is the remarkable cavern rajah Bhirtery's cave. It consists of a long gallery, supported by pillars, with chambers on each side contain- ing a number of figures carved on the granite walls. At some distance, and in an island of the river, there is a subterranean palace, built about the year 1500, by sultan Nasir Addeen Khilije, king of Malebah, who, having contracted an intolerable heat of constitution by the use of mercury, used to spend the hot season of the year in this place, around every apartment of which the water flowed in various channels. The fine state of these works, now above 300 years old, is surprising.

The modem Oojain is of an oblong form, about six miles in circumference, surrounded by a stone wall with towers. The principal bazaar is a spacious and regular street, paved with stone, and having houses of two stories in height on each side. The houses are generally built of brick, and tiled. The whole of the lower story is laid out in shops ; the upper ones are dwel- lings. The principal buildings in the town are the mosques and temples. The palace makes but a poor figure. The southern quarter, called Jeysingpoor, contains an observatory erected by rajah Jyesing of Jyenagur. See our article Ob- servatory. Two miles from the city the late Mahdajee Sindia laid the foundation of an ex- tensive fort, citadel, and palace ; but his death put a stop to the works.

OON, a town of Hindostan, in the province of Gujerat, noted for the thievish disposition of its inhabitants, who are mostly of the lowest

classes of Hindoos. It contains about 2000 tolerable houses, and the palace of the rajah. The chief is a Hindoo of the low tribe of Coolee : his in- come is said to amount to 12,000 rupees per

annum ; a moiety of which is supposed to be derived fiom his share of the plunder of his neighbours. Long, 71►► 45′ E., lat. 24►► 15′ N.

OORT (Adam 'an), the son of Lambert Van Oort, a painter of considerable reputation for perspective and architecture, was born at Ant- werp in 1557. He was mstructed in the art by his father, and soon rose into esteem, not only as a painter of history, but of landscape and por- traits. But the greatest honor of Van Oort is, that he was the first instructor of Rubens, whose works have eternised his master's memory, along, with his ovm. He painted a great number of designs for the altars of churches in Flanders, which have much merit, and are still beheld with pleasure by good judges. He was a mannerist.

OOSCAT, a town of Anatolia, in Asia Minor. It has been almost entirely rebuilt in modem times. It is situated in a hollow, surrounded on all sides by barren hills, but is said to contain 16,000 inhabitants, of which the greater propor- tion are Turks ; the remainder are Greeks, Arme- nians, and Jews. The houses, though small, are neat and painted in the manner of those at Con- stantinople. The palace is an extensive build- ing of brick and wood, two stories high, in the centre of the town. A handsome mosque has lately been erected of hewn stone, in imitation of St. Sophia. The defences consist of a slight wall, built of sun-dried brick and mud ; and in certain open spots large wooden granaries have been erected. 110 miles east of Angora. Lat. 39►► 42′ N.

OOSCOTTA, a small fortress of the south of India, province of Mysore. We first read of this place in 1688, when it was in possession of the Mahrattas. In 1757 it was taken from them by the nabob of Cuddapah, but retaken by the Mahrattas. In 1761 it was besieged and taken by Hyder Aly and the brother of the Nizam. Seven years after this the British got possession of it; but in 1773 it was recovered by Hyder. The events of the war of 1799 again threw it into our hands, by whom it was made over, along with the province, to the young rajah of Mysore. It is a place of considerable strength, and stands fifteen miles north-east of Bangalore.

OOST (James Van), a painter of history, landscape, and architecture, bom at Bruges about 1600. He learned the art in his native city, but travelled to Italy to study the works of the great masters. Among these he attached himself particularly to the style of Annibal Ca- racci, and

imitated him in such a manner as to surprise the most able connoisseurs at Rome- He died in 1671.

OOZE’, n. s.k,v.n. } Saxon psej-, wetness.

Oo’zY, adj. 5 Mud or mire in a soft

state ; slime : hence, soft flow ; to flow softly ; drain away.

My son i’ the’ ooze is bedded. Shakspeare.

Some carried up into their grounds the ooze of salt water mud, and found good profit thereby.

Carew.

Old father Thames raised up his reverend head, Deep in his ooze he sought his sedgy bed. And shrunk his waters back into his urn. Dryden.

When the contracted limbs were cramped, even then A waterish humour swelled and oozed a►►;en. Id.

OPAL.

17ˆ

From his first fountain and beginning ooze, Down to the sea each brook and torrent flows.

Prior. From his oozu bed, Old father Thames raised up his reverend head.

Pope. The lily drinks The latent rill, scarce oozing thro’ the grass.

‘ITionuon. At once he darts along Deep struck, and runs out all the lengthened line, I’hen seeks the furthest ooze and sheltering weed. The caverned bank, his old secure abode. Id.

Laughs the glad Thames, and clasps each fair one’s charms, They scream and scramble in his oozy arms.

Canning.

OPA’CATE, V. a.”\ Lat. opaco. To shade; Opac’ity, w. s. ˆ cloud; obscure: opacity O p a’ covs, adj. ˆ is, cloudiness ; darkness; Opaque’. ˆ want of transparency: and

opacous, opaque, the corresponding adjectives.

When he perceives that opacous bodies do not hinder the eye from judging light to have an equal diffusion through the whole place that it irradiates, he can have no difficulty to allow air, that is dia- phanous, and more subtile far than they, and conse- quently divisible into lesser atoms ; and having lesser pores, gives less scope to our eyes to miss light.

Digby. Upon the firm opacous globe

Of this round world, whose first convex divides

The luminous inferior orbs, inclosed

From chaos, and the' inroad of darkness old,

Satan alighted. Milton's Paradise Lost.

They

Shot upward still direct, whence no way round

Shadow from body opaque can fall. 3Iilton.

Can any thing escape eyes in whose opticks tliere is no opacity? Browne.

Mad there not been any night, shadow, or opacity, we should never have had any determinate conceit of darkness. Glanmlle.

How much any body hath of colour, so much hath it of opacity, and by so much the more unfit is it to ******ansrait the species. Ray.

The least parts of almost all bodies are in some measure transparent ; and the opacity of those bodies ariseth from the multitude of reflexions caused in their internal parts. Newton.

These disappearing fixt stars were actually extin- guished and turned into more opaque and gross pla- net-like bodies. Cheyne.

In a great work there is a vicissitude of luminous and opaque parts, as there is in the world a succes- sion of day and night. Johnson.

The whole of the choroides is opaque, by which means no light is allowed to enter into the eye, but what passes through the pupil. To

render this opacity more perfect, and the chamber of the eye still darker, the posterior surface of this membrane is co- vered all over with a black mucus, called the pigmen- tum nigrum. Imison.

O’PAL, n. s. Lat. opalus. A kind of gem. See below.

Thy mind is a very opal.

Shakspeare. Twelfth Niglu. The’ empyreal heaven, extended wide In circuit, undetermined square or round ; With opal towers, and battlements adorned Of living saphir. Milton’s Paradise Lost.

We have this stone from Germany, and it is the same with the opal of the ancients. Woodward.

OPAL, in mineralogy, a sub-species of the indivisible quartz of Mohs. See Mineralogy. Of this stone there are six diflferent kinds, as follows : ###

1. Precious opal. Color milk-white, inclin- ing to blue. It exhibits a beautiful play of many colors. Massive, disseminated, in plates and veins. Lustre splendent. Fracture perfect conchoidal. Translucent, or semitransparent. Semi-hard in a high degree. Brittle. Uncom- monly easily frangible. Specific gravity 2-1. Before the blow-pipe it whitens and becomes opaque, but does not fuse. Its constituents are, silica 90, water 10. It occurs in small veins in clay porphyry, with semi-opal, at Czscherwenitza, in Upper Hungary; and in trap rocks at Sandy Brae, in the north of Ireland. Some of them become transparent by immersion in water ; and are called oculus mundi, hydrophane, or change- able opal.

2. Common opal. Color milk-white. Mas- sive, disseminated, and in angular pieces. Lus- tre splendent. Fracture perfect conchoidal. Semitransparent. Scratches glass. Brittle. Adheres to the tongue. Infusible. Its constitu- ents are, according to Klaproth, silica 93-5, oxide of iron 1, water 5. It occurs in veins along with precious opal in clay porphyry, and in me- talliferous veins in Cornwall, Iceland, and the north of Ireland

3. Fire opal. Color hyacinth-red. Lustre splendent. In distinct concretions. Fracture perfect conchoidal. Completely transparent. Hard. Uncommonly easily frangible. Specific gravity 2-12. Heat changes the color to pale flesh-red. Its constituents are, silica 92, water 7-75, iron 0-25. It has been found only at Zimapan in Mexico, in a particular variety of hornstone porphyry.

4. Semi-opal. Colors white, gray, and brown ; sometimes in spotted, striped, or clouded deli- neations. ˆMassive, disseminated, and in imita- tive shapes. Lustre glistening. Fracture con- choidal. Translucent. Serai-hard. Itather easily frangible. Specific gravity 2-0. Infusi- ble. Its constituents are, silica 85, alumina 3, oxide of iron 1-76, carbon 5, ammoniacal water 8, bituminous oil 0-33. ††† Klaproth. It occurs in porphyry and amygdaloid, in Greenland, Iceland, and Scotland, in the Isle of Kume, &n.

5. Jasper opal, or Ferruginous opal. Color scarlet-red, and gray. Massive. Lustre shining. Fracture perfect conchoidal. Opaque. Between hard and semi-hard. Easily frangible. Specific gravity 2-0. Infusible. Its constituents are, silica 43-5, oxide of iron 47-0, water 7-5. ††† Klaproth. It is found in porphyry at Tokay in Hungary.

6. \ ood opal. Colors very various. In branched pieces and stems. Lustre shining. Fracture conchoidal. Translucent. Semihard in a high degree. Easily frangible. Specific gravity 2-1. It is found in alluvial land at Zastravia in Hungary. Opals are generally dis- covered in detached pieces, in an envelop of a different kind of stone, from the size of a pin's head to that of a walnut. Beautiful opals of this last size are extremely rare : so that it is difficult to find an opal sufficiently perfect and

large to be completely possessed of all its beau- ties. This renders it so precious, and makes it indeed almost impossible to determine its value. It has, however, we believe, been agreed to estimate a beautiful oriental opal at double the price of a sapphire of the same dimensions.

The Russian general, Prince Potemkin, pur- chased, for the sum of 1000 ducats, a stone of this kind, said to have been taken by the famous Nadir Shah from the head of a Gentoo idol, of which it formed one of the eyes. By what cir- cuitous road it found its way to the Russian prince does not appear : but it is said to have disappeared, together with many other gems, from the tent of the Persian conqueror, when he was assassinated. It is related that Non- nius, a Roman senator, seemed willing ratlier to forfeit his life than to cede an opal to Marc Antony.

Opal, says Mr. Jameson, which is a hydrate of silica, and eminently distinguished by the beauty of its range of external characters, occurs

in small veins and imbedded portions, in various primitive rocks. But its principal dis- tribution is in rocks of the secondary class, par- icularly in traps and porphyries. In these it is arranged in veins, drusy cavities, and im bedded masses, and assumes the various forms of precious opal, common opal, semi-opal, wood- opal, and meuilite. The menilite and wood- opal are the most modern of these, ••• the first occurring imbedded in the adhesive slate of the Paris formation, the other in tuffaceous rocks, of the nature of trachyte. The opals are found sometimes so soft that they can be flattened between the fingers. The alluvial rocks are not without opal, for it is daily forming by deposi- tion from the waters of various springs, parti- cularly hot springs, as those of Iceland. From the magnitude and abundance of these springs, in many regions of the earth, and the quantity of siliceous matter they deposit, we can form a general estimate of the great quantity of opaline matter formed in this way. Opal indeed is one of those minerals which have an extensive geog- nostical range, and which are still forming in the mineral kingdom ; but one of the most interest- ing features in its natural history remains to be noticed, viz. its formation by the organic powers of plants. It is well known to botanists that silica occurs in considerable abundance in se- veral tribes of plants, and that it communicates to the parts of the plants containing it a con- siderable degree of hardness. The bamboo is one of the most remarkable in this respect, as the earth it contains occurs not only in the vege- table structure itself, but is secreted from it, and appears in the joints of the plant, in solid masses, named Tabasheer, and which bear a strong resemblance to opal.

The most celebrated locality for opals is the village named Cservenicza by the Sclavonians, about two miles from Kaschau, in the trachytic range, which extends from Tokoj to Eperies. It appears that these mines have been wrought for many ages; for Fichtel asserts that, in the archives of Kaschau, there exist papers which mention that, in the year 1400, there were 300 " ••• >rkmen employed in the country of Cservenitza,

as well for the working of opal as for that of mercury. At the present day there are not more than thirty, but the working begins to be con- ducted with regularity.

The varieties which are most abundant are, the opaque opal, of a yellowish or reddish white, and the milky opal, which is more or less trans- lucent. The latter becomes sometimes more or less dull, and assumes the characters of certain whitish menilite of the neighbourhood of Paris. The fire-opal, of a beautiful topaz yellow- color, with great lustre, and equally beautiful with that which M. De

Humboldt discovered at Mexico, is still pretty common ; but the small masses in which it occurs are very much cracked, and it becomes almost impossible to cut them : it would, however, be a very beautiful stone, were it possible to procure pieces of tolerable size free of fissures. It appears that the yellow color is owing to iron; for this stone blackens quickly before the blowpipe. It is probable that the metal is here in the state of a hydrate, for it is thus that it occurs in the fissures of the rock where it is deposited by itself. Limpid opal, without color, occurs pretty frequently in the interior of small geodes, the mass of whicli consists of opaque or milky opal ; it forms an undulated crust of greater or less thickness, which passes gradually into the preceding layer. Sometimes it occurs by itself in minute fissures ; and at other times it is interposed in small layers in the substance of various kinds of opal. Sta- lactitic opal (I'opal concretionnce), transparent, translucid, or opaque, is still found in certain fissures of which it lines the walls, or in geodes ; these are composed of small stalactites, which adhere more or less firmly to one another, and which, when limpid, difl'er in no respect from hyalite. They also assume a pearly lustre ; when slightly heated, lose their coherence ; and break into small scales when exposed to a red heat Their aggregation gives rise to masses which have the appearance of being homogene- ous, and present the aspect of opals similar to some one of the varieties already mentioned, and even to the iridescent opal. Sometimes the stalactites are extremely minute, and completely fill up the irregular cavities ; the small fissures by which the siliceous matter has penetrated into the rock being equally filled.

In some instances, the opaline matter has formed on the walls of the fissures only a very thin layer, which presents the appearance of minute tortuous canals, having their surface covered with very minute stalactitiform points lying lengthwise. These surfaces often present the aspect of certain earthy pumices, with elon- gated and tortuous vesicular cavities. Iridescent opal (I'opale irisee), which is the principal object of research, is also plentifully disseminated in the rocks, but almost always in extremely minute nests ; it is very rarely that it occurs in large pieces, like the other varieties. The working sometimes goes on for years before a piece oc- curs of the size of a twenty sous piece. The largest which has ever been found is that of the imperial cabinet of Vienna; it is of the size of one's fist, and weighs seventeen ounces This magnificent specimen jias been known at Vienna

for more tlian two centuries, and it is neither known at what period, nor how it was obtained. It is polished irregularly to avoid diminishing its size. There are many fissures in it, and it is not completely disengaged from the matrix. The colors presented by this kind of opal are extremely various ; all the tints of blue, violet, red, yellow, green, &c., are blended in a thou- sand different ways, and present the most bril- liant and agreeable reflections. This beautiful stone is also in great request, and always main- tains a high price ; the smallest, when beautiful, do not sell for less than four to five guineas ; and, when the dimensions are large, the value augments altogether beyond proportion. There is a very beautiful specimen at Kaschaa, of the size of a small crown piece, for which 30,000 florins (or 79,000 francs) were offered.

The iridescent colors presented by opal are not assuredly owing to cracks or fissures, as has sometimes been said ; for there is not the least appearance of fissiire to be seen in the most beautiful specimens ; the smallest fragments into which a piece may be broken present ex- actly the same play of light as the largest. This play of light is explained, in a less forced man- ner, by the unequal distribution of vacuities, of different sizes, in which water is found enclosed ; it is easy, from the colors observed, to estimate the size, or rather the degree of minuteness, of these vacuities, proceeding upon the Newtonian theory of colored rings.

Ferruginous opal also occurs pretty frequently in the same veins as the other varieties : it is impregnated with a greater or less quantity ot hydrate of iron, which has probably been si- multaneously deposited, or into which the sili- ceous matter may have been subsequently infiltrated. Sometimes the appearance is that of a dull opaque opal, slightly colored with yellow ; but we find, in the same nests, the quantity of iron augmenting by little and little, and often we find nothing but an opal-jasper. Sometimes the iron becomes so abundant that the opaline matter discovers itself only by the re- sinous lustre which it communicates to the mass.

Opaque opal, more or less colored, and opal- jasper, by impregnating wood buried in the midst of pumicose debris, have given rise to opalised wood (Ilolzopal, Wern.), which, as we know, presents a great variety of colors, and de- grees of lustre. It is evident that the wood, in this case, has merely served as the receptacle of the siliceous matter which has been successively infiltrated, and in the same manner as it has formed in kidneys in the same conglomerates, or been deposited

in the fissures of rocks. The organic nature of the bodies for which the silica has been substituted, in this case, has had no sort of influence on the modification which reduces it to the state of opal, since it pre- sents itself with the same characters, in nests or in veins, in the neighbourmg parts where no organic debris is found to receive it. A single difference that is observed here, and which still proves that the petrifaction is owing to the infil- tration of siliceous matter, is, that this is in some measure pure, and is found disengaged Vol. XVI.

from extraneous matter as liy a filter. Tlie greater part also of the opalised wood which ua”” been collected has a more or less determinate translucidity ; the matter is commonly harder, and, whatever the color may be, the powder does not stain the fingers like that of the ferrugmous opal-jaspers. Sometimes perfectly transparent opal is observed in the cavities of wood, in small undulated nests, or in stalactites.

The colors which these opalised woods pre- sent are extremely numerous ; sometimes they are absolutely white, and sometimes they assume very deep colors, yellow, red, brown, green, as well as all the intermediate tints, resulting from the mixture of these principal colors. The same piece of wood, if it be of considerable size, as sometimes happens, presents colors alto- gether different in their different parts, as well as more or less translucidity or opacity. In many cases the texture of the wood is completely pre- served ; and, when the color is also retained in an equal degree, it is impossible to distinguish by mere inspection the petrified specimens from those which are in their original unaltered state.

OPARO, a mountainous island in the Pacific Ocean, discovered by Vancouver in December 1791. Its high craggy mountains form most romantic pinnacles, with perpendicular cliffs, and the vacancies between may more properly be termed chasms than valleys, as they have no ap- pearance of cultivation or fertility; and are chiefly clothed with shrubs and dwarf trees. On all of them people were observed, as if on duty, con- stantly moving about. Captain Vancouver saw about thirty double and single canoes, which were mostly built after the model of those in the Society Islands. The natives he estimated at 1500, who appeared to be extremely well fed. Long 215►► 58′ E., lat. 27►► 36′ S.

OPE, or ˆ Sax. o)3e, open;

O’PEN, V. a., V. 71., & adj. Gothic and Belgic

O’PENER, n.s. open ; Swed. oppen.

Open eyed’, adv.

Openhand’ed, adj.

Openheart’ed, adj.

0’PENHEARTEDNESS,n. S.

O’pemng, n. s.

O’PENLY, adj. Openmouthed’, adj.

O’PENNESS, n. S.

To unclose ; unco- ver ; divide ; un- lock ; show ; ex- plain ; disclose : to unclose itself; not to remain close or concealed ; to bark J (a hunting term) :

as an adjective, unclosed; plain; apparent; public ; clear : the compounds and derivatives follow these senses.

If a man shall open a pit and not cover it, and an ox fall therein, the owner of the pit shall make it good. Exodus xxi. 33.

The eyes of the Lord are upon the righteous, and his ears are open unto their cry. Psatm xxxiv.

If Demetrius and the craftsmen have a matter against any man, the law is open, and there are de- puties ; let them implead one another. Acts xix.

He was so secret therein, as not daring to be open, that to no creature he ever spake of it. Sidney.

Some things wisdom openeth by the sacred books of Scripture, some things by the glorious works of nature. Hooker.

Prayers are faulty, not whensoever they be openly made, but when hypocrisv is the cause of open pray- inff ” Id,

The world’s mine oyster, Which I with sword will open. Shakspeare. If I cry out thus upon no trail, never trust me when 1 open again. Id. Merry Wives of Windsor.

The gates are ope ; now prove good seconds ; *Tis for the followers fortune widens them, Not for the fliers. Id. Coriolanus.

The service that I truly did his life, Hath left me open to all injuries. Shakspeare. Deliver with more openness your answers To my demands. Id. Cymbeline.

Why should you have put me to deny This claim which now you wear so openly 1

Shakspeare. To us, the’ imagined voice of heaven itself j The very opener and intelligencer Between the grace, the sanctities of heaven. And our dull workings. Id. Henry IV.

While you here do snoring lie, Openeyed conspiracy

His time doth take. Id. Tempest.

An open and warm winter ‘portendeth a hot and dry summer. Bacon s Natural Historij.

Lord Cordes, the hotter he was against the English in time of war, had the more credit in a negotiation of peace ; and besides was held a man open and oi good faith. Bacon.

After the earl of Lincoln was slain, the king opened

himself to some of his council, that he was sorry foi

the earl’s death, because by him he might have known

the bottom of his danger. Id.

He irefully enraged would needs to open arms.

Drayton, Gramont, governor of Bayonne, took an exquisite notice of their persons and behaviour, and opened himself to some of his train, that he thought them to be gentlemen of much more worth than their habits bewrayed. Wotto7i.

The English did adventure far for to open the north parts of America.

Abbot's Description of the World. The under-work, transparent, shews too plain : "Where open acts accuse, the' excuse is vain. Daniel,

Adam, now ope thine eyes ; and first behold The' effects which thy original crime hath wrought In some to spring from thee. Milton's Paradise Lost,

True opener of mine eyes, Much better seems this vision, and more hope Of peaceful days portends, than those two past.

Milton, I knew the time. Now full, that I no more should live obscure. But openly begin, as best becomes The authority which I derived from heaven. Id. The draw-bridges at Amsterdam part in the middle, and a vessel, though under sail, may pass them with- out the help of any one on shore ; for the mast-head, or breakwater of the ship, bearing against the bridge in the middle, opens it. Browne,

There may be such openers of compound bodies, because there wanted not some experiments in which it appeared. Boyle,

How grossly and openly do many of us contradict the precepts of the gospel, by our ungodliness and worldly lusts ! Tillotson,

The night restores our actions done by day ; As hounds in sleep will open for their prey.

Dryd►►n, You retained him only for the opening of your cause, and your main lawyer is yet behind. Id, With dry eyes, and with an open look. She met his glance midway. Id, Boccace,

Darah Too openly does love and hatred show : A bounteous master, but a deadly foe. Dryden.

They meet the chiefs returning from the fight. And each with open arms embraced her chosen knight. Id,

I know him well ; he's free and openhearted. Id. Up comes a lion opennwulhed towards the ass. L' Estrange. Moral principles require reasoning and discourse to discover the certainty of their truths ; they lie not open as natural characters engraven on the mind.

Locke. God has been pleased to dissipate this confusion and chaos, and to give us some openings, some dawn- ings of liberty and settlement. Soutk's Sermons.

In that little spot of ground, that lies between those two great oceans

of eternity, we are to exercise our thoughts, and lay open the treasures of the divine wisdom and goodness hid in this part of nature and providence. Burnet.

Good heaven, who renders mercy back for mercy. With openhanded bounty shall repay you. Roue.

The French are always open, familiar, and talka- tive ; the Italians stiff, ceremonious, and reserved.

Addison. The wall of the cathedral church was opened by an earthquake, and shut again by a second. Id.

A friend who relates his success talks himself into a new pleasure; and, by openniˆ his misfortunes, leaves part of them behind him. Collier.

The fire thus up, makes its way through the cracks and openings of the earth. Woodward,

We express our thanks by openly owning our parentage, and paying our common devotions to God on this day's solemnity. Atterbury,

When the matter is made, the side must be opened to let it out. , Arbuihnot on Aliments,

Of an openhearted generous minister you are not to say that he was in an intrigue to betray his country ; but in an intrigue with a lady. Arbuthnot,

Unnumbered treasures ope at once, From each she nicely culls with curious toil, And decks the goddess.

Pope's Rape of the Lock. These letters, all written in the openness of friend- ship, will prove what were my real sentiments.

Id, Letters. This reserved mysterious way of acting towards persons, who in right of their posts expected a more open treatment, was imputed to some hidden design.

Swift. Hark ! the dog opens, take thy certain aim ; The woodcock flutters. Gay's Rural Sportt.

Give opening Hemus to my searching eye. And high Olympus pouring many a stream.

Thomson. This adroitness in breaking through fences was termed ' getting her [the cow's] own living.' What is scarcely credible, this

character is openly given of a cow, to enhance her value at a fa.ir [in Ireland], by one poor person to another. Edgeworth.

Look again at the same boy in the company of those who inspire no terror : his countenance is open; his altitude erect ; his voice firm ; his language free and fluent ; his thoughts are upon his lips ; he speaks truth without effort, without fear. Id,

Wise to promote whatever eiid he means, God opens fruitful nature's various scenes : Each climate needs what other climes produce. And offers something to the general use ; No land but listens to the common call. And in return receives supply from all. Cowper. And thus ends the first part or beginning, which is simple and unembellished, and opens the subject in a natural and easy manner. Canning.

Though, by the respect of those at whose expense it pleases them to be merry, they may be secured

from being rendered openly ridiculous ; yet they may still be liable, and likely, to become secretly con- temptible. Id.

It' the ministers I have mentioned had pledged themselves ••• that the character of the Directory had something in it of peculiar candour, integrity, inge- nuity, and openness, I should yet be willing to give credit to [this] retraction [of this opinion]. Id.

OPELEUSAS, a county and tovk'n in the south-west part of Louisiana, North America. Po- pulation 5048. The town is sixty miles west of Baton Rouge.

OP'ERA, n. s. Ital. opera, from the Lat. opera. A species of dramatic representation, defined in the extract from Dryden.

An opera is a poetical tale or fiction, represented by vocal and instrumental musick, adorned with scenes, machines, and dancing. Dryden.

You will hear what plays were acted that week, which is the finest song in the opera. Law.

He was a critic upon opfvas too.

And knew all nations in the sock and buskin ;

And no Venetian audience could endure a

Song scene, or air, when he cried seccatura.

Byron.

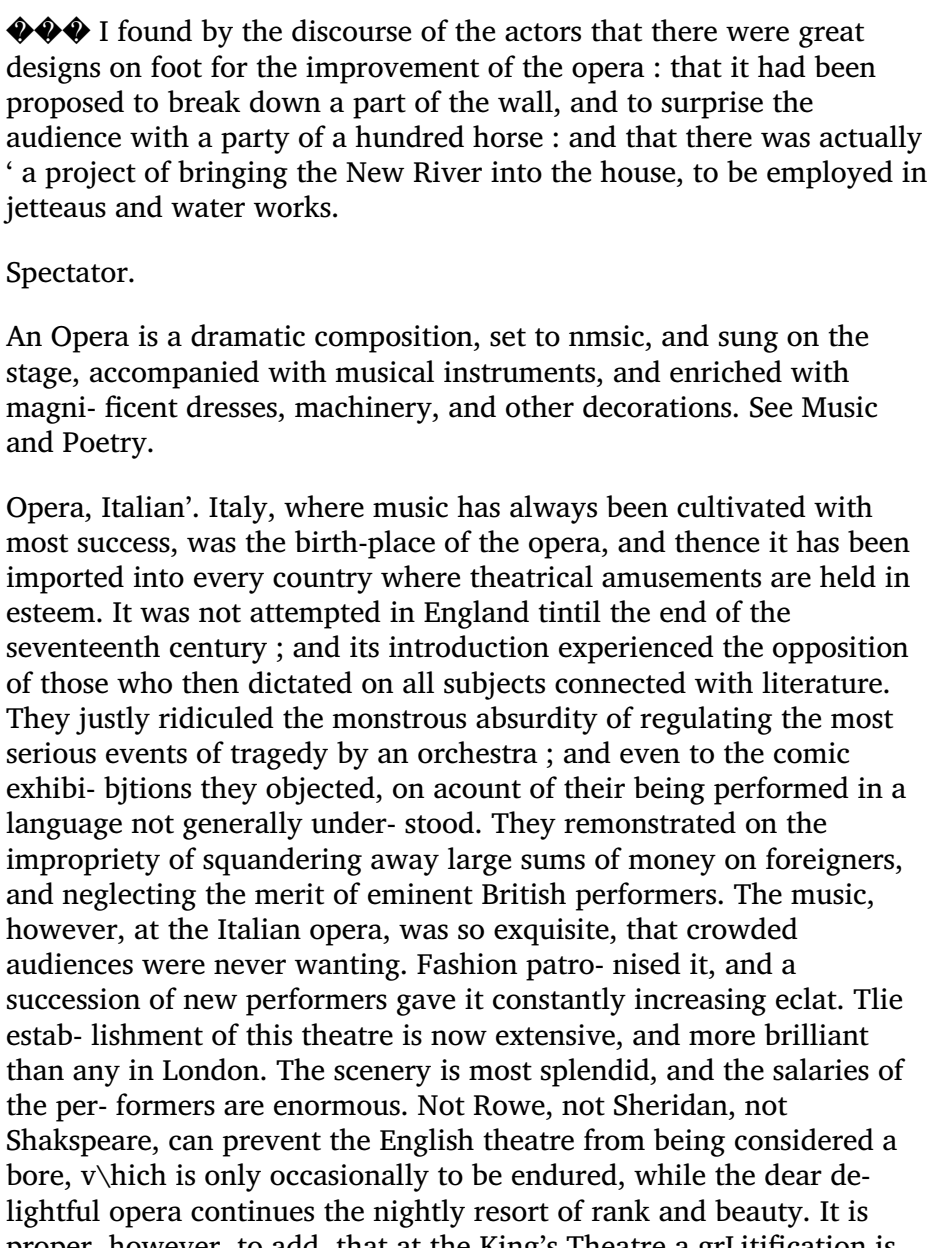

I found by the discourse of the actors that there were great designs on foot for the improvement of the opera : that it had been proposed to break down a part of the wall, and to surprise the audience with a party of a hundred horse : and that there was actually ‘ a project of bringing the New River into the house, to be employed in jetteaus and water works.

Spectator.

An Opera is a dramatic composition, set to nmsic, and sung on the stage, accompanied with musical instruments, and enriched with magni- ficent dresses, machinery, and other decorations. See Music and Poetry.

Opera, Italian’. Italy, where music has always been cultivated with most success, was the birth-place of the opera, and thence it has been imported into every country where theatrical amusements are held in esteem. It was not attempted in England tintil the end of the seventeenth century ; and its introduction experienced the opposition of those who then dictated on all subjects connected with literature. They justly ridiculed the monstrous absurdity of regulating the most serious events of tragedy by an orchestra ; and even to the comic exhibi- bjtions they objected, on acount of their being performed in a language not generally under- stood. They remonstrated on the impropriety of squandering away large sums of money on foreigners, and neglecting the merit of eminent British performers. The music, however, at the Italian opera, was so exquisite, that crowded audiences were never wanting. Fashion patro- nised it, and a succession of new performers gave it constantly increasing eclat. Tlie estab- lishment of this theatre is now extensive, and more brilliant than any in London. The scenery is most splendid, and the salaries of the per- formers are enormous. Not Rowe, not Sheridan, not Shakspeare, can prevent the English theatre from being considered a bore, v\hich is only occasionally to be endured, while the dear de- lightful opera continues the nightly resort of rank and beauty. It is proper, however, to add, that at the King’s Theatre a grLitification is

afforded, in the ballet, to the eye as well as the ear ; and more of the loungers who frequent t'le opera-houses are attracted by the luxurious dis- play of female elegance, than by the magic of sv\eet sounds.

OP'ERATE,t;.n.ˆ Lat. operor. To act; Op'erable, atj;. perform; have agency; Op'erant, taking on before tlie ob-

Opera'tion,ˆ. s. Vjsct: operable is fractic- Op'erative, flff;". I able: oyjerant and opcra- Op'erator, n. s. \ tive mean active ; having Op'erose, adj. J causative power ; vigor- ous : operation is action ; efficacy or eflTect ; agency : operator, he who performs or effects any thing: operose, laborious; tedious.

There are in men operations natural, rational, supernatural, some politick, some finally ecclesiasti- cal. Hooker.

By all the operations of the orbs. From whom we do exist and cease to be, Here I disclaim all my paternal care. Shakspeare. Earth, yield me roots ! Who seeks for belter of thee, sauce his palate With thy most operant poison. Id. Timon.

I must leave thee, love, and shortly too ; My operant pc-wers their fuaclioas leaˆ'e to do.

Shakspeare. To be over curious in searching how God's all- piercing and operative spirit distinguishing gav.eform to the matter of the universal, is a search like unto his, who, not contented with a known ford, will pre- sume to pass over the greatest rivers in all parts where he is ignorant of their depths. Raleigh.

All operafioHS by transmission of spirits, and imagi- nation, work at distance, and not at touch.

Bacon's Natural History. Repentance and renovation consist not in the strife, wish, or purpose, but in the actual operations of good life. Hammond.

Waller's presence had an extraordinary operation to procure any thing desired. Clarendon.

Many of the nobility endeavoured to make them- selves popular, by speaking in parliament against those things which were most grateful to his majesty ; and he thought a little discountenance upon those persons would suppress that spirit within themselves, or make the poison less operative upon others. Id.

In actions of religion we should be zealous, active, and operative, so far as prudence will permit.

Taylor. The tree whose operation brings Knowledge of good and ill, shun to taste.

3IUton. Being incapable of operable circumstances, or rightly to judge the prudentiality of affairs, tlicv only gaze upon the visible success, and thereafter condemn or cry up the whole progression. Browne.

The offices appointed, and the powers exercised in the church, by their institution and operation are holy. Pearson.

If the operation of these salts be in convenient glasses promoted by warmth, the ascending steams may easily be caught and reduced into a penetrant spirit. Boyle.

\ ritten language, as it is more operous, so it is more digested, and is permanent. Holder.

Speculative painting, without the assistance of manual operation, can rever attain to perfection, but slothfully languishes ; for it was not with his tongue that Apelles performed his noble works. Dryden.

The pain and sickness caused by manna are the effects of its operation on the stomach and guts, by the size, motion, and figure of its insensible paits.

Jˆocke. N 2

OPH

180

OPH

Bodies produce ideas in us, manifestly by irapulse, tiie only way which we can conceive bodies operate in. id-

The will is the conclusion of an operative syllogism.

N orris.

Such an explication is purely imaginary, and also very operose ; they would be as hard put to it to get rid of this water, when the deluge was to cease, as they were at first to procure it. Burnet.

It holds in all operative principles, especially in morality ; in which, not to proceed is certainly to go backward. South.

An imaginary operator opening the first with a great deal of nicety, upon a cursory view it appeared like the head of another. Addison's Spectator.

The virtues of private persons operate but on a few ; their sphere of action is narrow, and their influence is confined to it. Atterbury.

In this understanding piece of clock-work, his body, as well as other senseless matter, has colour, warmth, and softness. But these qualities are not subsistent in those bodies, but are operations of fancy begotten in something else. Bentlep.

To administer this dose, there cannot be fewer than fifty thousand operators, allowing one operator to every thirty. Swift.

A plain convincing reason operates on the mind both of a learned and ignorant hearer as long as they live. Id.

This circumstance of the promise must give life to all the rest, and make them operative toward the producing of good life. Decay of Piety.

Where causes operate freely, with a liberty of dif- ference to this or the contrary, the effect will be con- tingent, and the certain knowledge of it belongs only to God. Watts.

Although I have taught surgery seventeen years, and exhibited the most difficult operations upon the dead body, I have never ventured to apply a cutting instrument to a living subject, through a fear of giving too much pain. Haller. Bibl. Chir. 1775.

No prudent mother will permit this eloquent vil- lage matron to quell the hearts of her children with terrors. We were once present when a group of speechless chikfeen sat listening to ' Blue-beard,' breathing astonishment. A gentleman, who saw the charm beginning to operate, resolved to counteract its dangerous influence. Edge worth.

These are all the essential circumstances which need here be mentioned, in regard to the mode of operating. The first day after the operation afforded hopes of a cure ; and the circulation in the fore-arm was returning ; but a difficulty of breathing after- wards came on, the limb mortified, and the patient died on the sixth day. Dr. A. Rees.

OPHIDIUM, a genus of fishes belonging to the order of apodes. The principal characters are these : ••• The head is somewhat naked ; the teeth are in the jaws, palate, and fauces ; the body long ; the fins of the back, tail, and anus, confounded in one ; no fin on the under part of the body ; and the eyes covered by the common skin. Of this genus there are several species, of vrhich the most curious is the

O. barbatum of Linnseus, thus described by Dr. Broussonet in the seventy-first volume of the Philosophical Transactions :••• ‘ The scales of the ophidium,’ says he, ‘ are irregularly placed and dispersed over the whole body. Their form is sometimes round, sometimes nearly oval. They are larger near the head, and in the lower part of the body; but are hardly to be distin- guished near the tail. They adhere to the body

by means of a particular transparent skin, which is in general very thin, but somewhat thicker near the neck, and extended loosely over the whole head : this skin is very easily destroyed, after wliich, the scales falling, the body appears spotted. When you look at them with the naked eye, they appear as covered with very small grains ; but, viewed through a microscope, the middle of them appears more elevated than the margin ; and from the centre to the margin, close by each other, there are many lines or ray•• formed by small scales placed one upon another, like tiles upon a roof, the superior being always the nearer to the centre. This sort of scales, which may be called umbonata, are fastened to the body by very small vessels, which are in- serted in their middle ; they are to be seen on the body only, not on the head nor the fins.’ The anatomy of this fish comprehends some very remarkable circumstances, which, our author thinks, were never observed in any other species. When the skin is drawn off there appears a thin membrane of a silver color, which covers the muscles. The muscles being removed, we find the peritoneum, which lines the abdominal cavi- ty, and is adherent to the swimming bladder by some elongations. It is of a silver hue, with some very small black points. The ventricle is not to be distinguished from the intestines by any other mark but by its size ; its form is ob- long ; it is extended almost to the anus, whence the intestinal duct has a retrograde course, and then descends again, having a little dilatation near the anus. On the vertebrae next the anus, on the outside of the peritonseum, is a kind of cavity of an oblong form, containing a reddish viscus, which he takes to be the kidney. The first vertebra from the head has nothing very remarkable in its structure. The second has on each side an elongated and sharp apophysis, to the apex of which is annexed a small ligament. The third is very flat, and has on each side a kind of triangular and sharp apophysis, to which

adheres a ligament, as to the second. The fourth is remarkable in having a sharp apophy- sis on each side, articulated with the body of the vertebra; and under each of them is another articulated apophysis, flatfish, thick, roundish at its extremities, and forked at its basis. The fifth, which is strongly adherent to the former, has in its middle a bifid process. The sixth has in its middle a flatfish elevation, sharp on each side. Between the extremity of the larger apo- physis of the fourth vertebra is a bone, or rather a hard cartilage, which bears the figure of a kid- ney, its convexity being turned towards the body of the vertebra : its position is parallel to the bodies of the vertebrae ; its motion is half circular, one of its parts, viz. the lowest, being in the cavity of the swimming bladder, to which it adheres by a thin membrane, so that' no air can escape at that part. It is covered by membranes, which adhere strongly to its middle ; in this part are fastened the two ligaments of the apophysis of the second and third vertebrae, which are of a great tenuity. In the same point are fastened also two ligaments, each of which belongs to an oblong muscle parallel to each other, and fixed to the bones of the lowest and

posterior part of the head. All this apparatus is certainly subservient to the purpose of swim- ming ; but it is very remarkable that, if these parts are necessary to some animal function, they should not be found in all the individuals ; ' for I have seen,' says our author, ' two, of which the vertebras were not different from the vertebrce of the other species ; which difference depends, perhaps, on the difference of sex. I am inclined to believe so ; but the generation in this fish seems to be no less mysterious than that of the eel : I could never distinguish a male from a female in this species.' This fish com- monly grows to the size of eight or nine inches. It is found in all the Mediterranean Sea, and in great plenty in the Adriatic : its flesh is not of a good taste, rather coarse, as is that of all the species of fishes which, having no ventral fins, are obliged to make great efforts in swimming, and have consequently the muscles harder.

OPIIIOGLOSSUM, adder's tongue, a genus of the naUiral order of Alices, and the cryp- togamia class of plants. The spike is articu- lated, flat, and turned to the two sides ; with the articuli or joints opening across. There are seven species, of which the only remarkable one is the

O. vulgatum, the common adder's tongue, which is a native of several places of Britain, growing in meadows and moist pastures. The country people make an ointment of the fresh leaves, and use it as a

vulnerary to green wounds ; which is a very ancient application, recommended by Matthiolus, Tragus, and others.

OPHIOMANCY, in antiquity, the art of making predictions from serpents. Thus Calchas, on seeing a serpenl devour eight sparrows with their dam, foretold the duration of the siege of Troy : and the seven coils of a serpent that was se►►n on Anchises's tomb were interpreted to mean the seven years that iEneas wandered from place to place before he arrived at Latium.

OPHIOPH'AGOUS, a4). Gr. o. Serpent eating. Not used.

All snakes are not of such poisonous qualities as common opinion presumeth ; as is confirmable from ophiophagims nations, and such as feed upon serpents.

Browne.

OPHIORRHIZA, in botany, a genus of the monogynia order, and pentandria class of plants : natural order forty-seventh, stellatae : cor. fun- nel-shaped : CAPS, twin, bilocular, and poly- spermous. There are two species ; the most remarkable is the

O. Asiaticum, or true lignum colubrinum. The root of this is known in the East Indies to be a specific against the poison of that most dreadful animal called the hooded serpent. There is a treatise in Amoen. Acad. tom. iv. upon this subject, wherein the author, John And. Darelius, undertakes, from the description of such authors as had seen it upon the spot, to ascertain the plant from whicli the genuine root is taken. It appears in this account that it had puzzled the European pliysicians; and what had been sold in the shops for it is the root of a very Jiflerent plant, and o'a poisonous nature. The irae root is called mung i>,for the following reason : ►►► There is a kind of weasel in llm Ea.*/.

Indies, called mungutia by the natives, mungc by the Portuguese, and muncas by the Dutch. This animal pursues the hooded serpent, as the cat does the mouse. As soon as the serpent appears, the weasel attacks him ; and, if she chances to be bit by him, she immediately runs to find a certain vegetable, upon eating which she returns and renews the fight. ►►► The Indians are of opinion that this plant is the mungus. That celebrated traveller Kaempfer, who kept one of these weasels tame, that eat with him, lived with him, and was his companion where- ever he went, says he saw one of these battles

between her and the serpent, but could not cer- tainly find out what root the weasel looked for. But, whether the weasel first discovered this an- tidote or not, it is an infallible remedy against the bite of the hooded serpent.

OPHIOXYLON, in botany, a genus of the moncEcia order, and polygamia class of plants : HERMAPHRODITE CAL. quiuquefid : COR. quin- quefid and funnel-shaped ; with a cylindrical nectarium within its mouth.

OPHIR, a country mentioned in Scripture, from which Solomon had great quantities of gold brought home in ships, which he sent for that purpose ; but respecting the situation of which authors are much divided in opinion. Some have gone to the West, others to the East Indies, and the eastern coasts of Africa, in search of it. But the two opinions which have been most plausibly supported are those of Mr. Bruce, the Abyssinian traveller, and Dr. Doig, author of Letters on the Savage State. The lat- ter holds that Ophir was somewhere on the west coast of Africa ; the former is satisfied that it was the country which is now called Sofala, a kingdom of Africa, on the coast of Mosambique, near Zanguebar.

OPHI'TES, n. s. A stone resembling a ser- pent.

Ophites has a dusky greenish ground, with spots o►► a lighter green, oblong, and usually near square.

]Voodwiird. Ophites, in church history. Christian heretics, so called both from the veneration they had for the serpent that tempted Eve, and the worship they paid to a real serpent : they pretended that the serpent was Jesus Christ, and that he taught men the knowledge of good and evil. They distinguished between Jesus and Christ : Je- sus, they said, was born of the Virgin, but Christ came down from heaven to be united with him ; Jesus was crucified, but Christ had left him to return to heaven. They distinguished the God of the Jews, whom they termed Jalda- baoth, from the supreme God : to the former they ascribed the body, to the latter the soul of men. They had a live serpent, which they kept in a kind of cage ; at certain times they opened the cage-door, and called the serpent : the ani- mal came out, and, mounting upon the table, twined itself about some loaves of bread ; this bread they broke, and distributed it to the com- pany, who all kissed the serpent : this they called their eucharist.

OPilRYS, twyblade, a genus of the diandria, order, and gjnandria class of plants : natural order seventh, orchidea;. Tlie nectarium is a

little carinated below. The species are nume- rous ; but the most remarkable are the following :

1. O. anthropophora, man-shaped ophrys, or man-orchis, has a roundish bulbous root, crowned with three or four oblong leaves ; upright thick stalks, rising a foot and a half high, adorned with narrow leaves, and terminated with loose spikes of greenish flowers, representing the figure of a naked man ; the,lip of the nectarium linear tripartite, with the middle segment longest and bifid. There is a variety with brownish flowers tinged with green.

2. O. insectifera, the insect orchis, bee-flower, or gnat-flower, has two roundish bulbous roots, crowned with oblong leaves ; erect leafy stalks, from six to ten or twelve inches high, terminated by spikes of insect-shaped greenish flowers, having the lip of the nectarium almost five-lobed. This wonderful species exhibits flowers in dif- ferent varieties, that represent singular figures of flies, bees, and other insects ; and are of differ- ent colors in the varieties.

. O. monorchis, or musky ophrys, has a roundish bulbous root : crowned with three or four oblong leaves ; an erect naked stalk, six inches high ; terminated by a loose spike of yel- lowish, musky scented flowers.

4. O. nidus avis, or bird’s nest, with a bul- bous, fibrated, clustered root; upright, thick, succulent stalks, a foot high, sheathed by the leaves, and terminated by loose spikes of pale- brown flowers ; having the lip of the nectarium bifid.

5. O. ovata, oval-leaved ophrys, or common twy-blade, has a bulbous, fibrated root ; crowned by two oval, broad, obtuse, veined, opposite leaves ; an erect, succulent green stalk, six or eight inches high, naked above, and terminated by a loose spike of greenish flowers, having the lip of the nectarium bifid. The flowers of this species resemble the figure of a gnat.

6. O. spiralis, spiral orchis or triple ladies tresses, has bulbous, oblong, aggregated roots ; crowned by a cluster of oval, pointed, ribbed leaves ; erect simple stalks, half a foot high ; terminated by long spikes of white odoriferous flowers hanging to one side, having the lip of the

nectarium entire, and crenated. All these species of ophrys flower in summer, at different times, in different sorts, from May until July; and in most of the sorts exhibit a singularly cu- rious appearance. The plants are perennial in their roots, which are of the bulbous fleshy kind, from which the flower stalks rise annually in spring, and decay in autumn ; at which period is the proper time for removing the roots from one place to another. They all grow wild in Britain, &;c. ; are residents of woods, bogs, marshy grounds, sterile pastures, chalky soils, and the like places, where they flourish and dis- play their singular flowers in great abundance, from which places they are introduced into gar- dens for variety; and having procured some plants at the proper season, and planted them in soils and situations somewhat similar to that in which they naturally grow, the roots will abide for several years, and flower annually. As to their propagation, it may be tried by seed in a shady border, as soon as it is ripe ; likewise by

offsets from the root, though they nmltiply spar ingly in gardens : however, roots of some stand- ing may be examined at the proper season, and any off'sets separated and planted in their proper places.

OPHTHAL'MIC, actj.) Fr. opthahme ; Gi Op'hthalmy, n. s. S o

The use of cool applications ext&rnally is most easy to the eye ; but, after all, there will sometimes ensue a troublesome ophthaimy. Sharp's Surgcrt/.

The ophthalmia, I hope, has left you. Without doubt this complaint has been occasioned in yourself, from the too great use you have made of your eyes ; but a similar one, which afflicted our troops in Kgypt, proceeded, I think, from a too great glare of light.

Bp. Watson. O PIATE, n. s. & adj. From Opium, which see. A soporific ; a medicine causing sleep : som- niferous.

The particular ingredients of those magical oint- ments, are opiate and soporiferous. For anointing of the forehead and backbone is used foi procuring dead sleeps. Bacon.

All their shape Spangled with eyes, more numerous than those Of Argus, and more wakeful than to drouze, Charmed with Arcadian pipe, the past'ral reed Of Hermes, or his opiate rod. Milton.

Lettuce, which has a milky juice with an anodyne or opiate quality resolvent of the bile, is proper for melancholy. Arbuilmot.

They chose atheism as an opiate, to still those frightning apprehensions of hell, by inducing a dul- ness and lethargy of mind, rather than to make use of that native and salutary medicine, a hearty re- pentance. Bentley. Thy thoughts and music change with every line ; No sameness of a prattling stream is thine, Which with one unison of murmur flows. Opiate of inattention and repose. Harts. Should tempting novelty thy call refrain. And Sloth effuse her opiate fumes in vain ; Should Beauty blush or fix her fatal dart, Nor claim the triumph of a labored heart.

Johnson. OPIE (John), R. A., and professor of paint- ing at the academy, was born in 1761 in the parish of St. Agnes, Cornwall. His father was a carpenter, and intended hiin for the same occu- pation, but his talents when he was very young attracted the notice of Dr. Walcot (the Peter Pindar of the last reign), a physician at Truro, who gave him some instructions, and enabled him to travel in the neighbourhood as a portrait painter. He returned from his first expedition with twenty guineas, earned by his pencil, and thenceforward resolved to devote himself to paint- ing. At about nineteen years of age he removed to London, but it was not till 1786 that any of his pictures were admitted into Somerset House. He was shortly after nominated an associate of the academy, and an academician. He first ex- ercised his literary ability in a life of Sir Josliua Reynolds, in Dr. Walcot's edition of Pilkington's painters. He then published An Enquiry into the requisite Cultivation of the Arts of Design in England ; and delivered lectures at the Royal Institution. In 1804 he succeeded Mr. Fuseh as professor of painting. He died April 9th, 1807, and was interred in St. Paul's. His pencil

was employed on the pictures exhibited in the Boydell and Macklin galleries, and some of his lectures as professor of painting have been pub- lished.

OP'IFICE, n. s. i Latin opificium, opife.r.

Op'xficer. S Workmanship: opificer, the

workman or artificer.

There is an infinite distance betwixt the poor mortal artist and the

almighty opificer. Bentleii.

ˆ Latin opinor. To think ; judge ; suppose : opinable means which may be thought : opina- tion, opinion ; no- tion ; opinator, he >who holds or con- ceives a notion : o- piniative, imagined ; stiff in opinion : opi- niator, one who holds or is fond of par- ticular notions : o- piniatre (Fr. opinia-

OPINE’, V. n. Opi’nable, adj.

OpINa’tiON, 71. s.

Opina’tor,

Opin’iative, adj.

Opinia’tor, n.s.

Opinia’tre, adj.

Opinia’trety, or

Opinia’try, n. s.

Opin’ion, w.s. &►►. a.

Opin’ionatiˆve, adj.

Opin’ionate,

Opin’xonately, adv.

Opin’ionateness, re. s.

Opin’ionist. tre), a needless Gallicism, for obstinate, stubborn in opinion : opiniatrety or opiniatry (a word of the same character as the last), obstinacy ; per- tinacity of opinion : all the above words are of unusual occurrence, of little use, and less ele- gance. Opinion is, notion ; persuasion of mind ; sentiment ; judgment : to opinion (an obsolete verb), means to opine ; thmk ; deem : opiniona- tive, tenacious or stubborn in opinion ; which sense the adverb and noun-substantive following take : opinionist, one who is opinionative ; one stubborn or inflexible in his notions.

What will not opiniaton and self-believing men dispute of and make doubt of? Raleigh.

Opinion is a light, vain, crude, and imperfect thing, settled in the imagination, but never arriving at the understanding, there to obtain the tincture of reason. Ben Jonson.

Howsoever I have no opinion of those things ; yet so much I conceive to be true, that strong ima- gination hath more force upon things living, than things merely inanimate. Bacon.

In actions of arms small matters are of great mo- ment, especially when they serve to raise an opinion of commanders. Hayward.

He is a rare man that is not wise in his own conceit ; and that says not within himself, ‘ I see more than my neighbour ; ‘ for we all are born proud and seU-opinionate. Bp. Halt.

Where no such settled custom hath made it law, there it hath force only according to the strength of reason and circumstances joined with it, or as it shews the opinion and judgment of them that made it ; but not at all as if it had any commanding power of obedience. Selden.

Time wears out the fictions of opinion, and doth by degrees discover and unmask that fallacy of un- grounded persuasions ; but confirms the dictates and sentiments of nature. Wilkins.

Essex left lord Roberts governour ; a man of a sour and surly nature, a great opiniator, and one who must be overcome, before he would believe that he could be so. Clarendon,

Opinion is, when the assent of the understandiug is so far gained by evidence of probability that it rather inclines to one persuasion than to another, yet not altogether without a mixture of uncertainty or doubting. Hale.

Consider against what kind of opinaton, the reason above given is levelled. id.

Fear is an ague, that forsakes And iiaunts by fits those whom it takes ; And they’ll opine they feel the pain And blows they felt to-day, again. Hudihras.

The Stoicks cpinioned the souls of wise men dwell about the moon, and those of fools wandered about the earth ; whereas the Epicureans held nothing after death. Bnmne.

Lest popular opiniatry should arise, we will deliver the chief opinions. Id. Vulgar Errours.

It is difficult to find out truth, because it is in such inconsiderable proportions scattered in a mass of opi- niaiiie uncertainties ; like the silver in Hiero's crown of gold. Glarmlle.

That the soul and angels are devoid of quantity and dimension, is generally opinioned. Id.

Every conceited opinionist sets up an infallible chair in his own brain. Id. to Albiiis.

We may allow this to be his opinion concerning heirs, that where there are divers children the eldest son has the right to be heir. Locke.

Instead of an able man you desire to have him an insignificant wrangler, opiniatre in discourse, and priding himself in contradicting others. Id.

The one sets the thoughts upon wit and false co- lours, and not upon truth ; the other teaches fallacy, wrangling, and opiniatry. Id on Education.

So much as we ourselves comprehend of truth and reason, so much we possess of real and true know- ledge. The floating of other men's opinions in our brains, makes us not one jot the more knowing, though they happen to be true : what in them was science, is in us but opiniatrety. Locke.

One would rather chuse a reader without art, than one ill instructed with learning, but opinionative and without judgment. Burnet.

In matters of mere speculation, it is not material to the welfare of government or themselves, whether they opine right or wrong, and whether they be phi- losophers oi no. South.

Charity itself commands us, where we know no ill, to think well of all ; but friendship, that always goes a pitch higher, gives a man a peculiar right and claim to the good opinion of his friend. Id.

A story out of Boccalini sufficiently shews us the opinim that judicious author entertained of the cri- ticks. Addison.

Blest be the princes who have fought For pompous names, or wide dominion.

Since by their error we are taught, That happiness is but opinion. Prior.

I can pass by opiniatry, and the busy meddling of those who thrust themselves into every thing.

JVooduard's Letters.

I was extremely concerned at this opiniatrety in leaving me ; but he shall not get rid so. Pope.

But I, who think more highly of our kind,

Opine, that nature, as in duty bound,

Deep hid the shining mischief under ground. Id.

If a woman had no opinion of her own person and dress, she would never be angry at those who are of the opinion with herself Law.

The only view in which the Srciptures ever regards belief of the .truth is as the foundation of virtuous practice : without which effect, not right opinions only, but also all other qualifications whatsoever, are, in the religious estimation of things, reputed as nothing. S. Clarke.

Set your opinion at whatever pitch, Knots and impediments make something hitch ; Adopt his c'.vn, 'tis equally in vain. Your thread of argument is .,! apped again ;

The wrangler, rather than accord with you, Will judge himself deceived and prove it too.

Cowper.

Here they are, the family of the Surfaces up to the Conquest. Sir. O. ••• And in my opinion a goodly collection.

Sheridaii.

We should never triumph" over children for changing their opinions. You think it is a want of judgment that he changes his opinion. Do you think it a proof that your scales are bad, because they vi- brate with every additional weight that is added to either side ? Edgewortk.

I protest that if the ministers whom I have men- tioned, had pledged themselves yet deeper to a mis- taken opinion of France, I should yet

be willing to credit their asseveration, if they were now to come forward and tell us, that the declaration and confes- sion of France herself had completely changed their opinion. Canning.

Opinion is that judgment which the mind forms of any proposition for the truth or false- hood of which there js not sufficient evidence to produce science or absolute belief. That three angles of a plane triangle are equal to two right angles is not a matter of opinion, nor can it with propriety be called an object of the mathe- matician's belief : he does more than believe it ; he knows it to be true. W"hen two or three men, under no temptation to deceive, declare that they were witnesses of an uncommon though not pre- ternatural event, their testimony is complete evi- dence, and produces absolute belief in the minds of those to whom it is given; but it does not produce science-like rigid demonstration. The fact is not doubted, but those who nave it on re- port do not know it to be true, as they know the truth of propositions intuitively or demonstrably certain. When one or two men relate a story including many circumstances to a third person, and another comes who positively contradicts it, either in whole or in part, he, to whom those jarring testimonies are given, weighs all the cir- cumstances in his own mind, balances the one against the other, and lends an assent, more or less wavering, to that side on which the evidence appears to preponderate. This assent is his opinion respecting the facts of which he has re- ceived such dilTerent accounts.

OPITIUS, or Opjts (Henry), a learned Lu- theran divine, born at Altenburg in Misnia, in 1642. lie was professor of theology and of the oriental languages at Kiel, where he acquired creat reputation by a variety of excellent works concerning oriental literature and Hebrew anti- quities. He died in 171'2.

OPITS, or OriTius (Martin), a celebrated German poet, born at Breslaw in 1507. He ac- quired great fame by his Latin, and more by his German poems ; and, retiring to Dantzic, wrote a history of the ancient Daci. He died of the olaˆue in 1 639.

OPIUM, n. s. Arab, itfyoou; Gr. ottiov; Lat. opium, supposed from Gr. oTrog, sap. The inspissated juice of the oriental poppy. See below.

Sleep hath forsook and given me o'er To death's benumbing opium as my only cure.

Milton.

The color and taste of opium are, as well as its so- porifick or anodyne virtues, mere powers dependint;

on its primary qualities, whereby it is fitted to pro- duce different operations on different parts of our bo- dies. Locke.

Opium, in the materia medica, is the inspis- sated juice of the papaver aibu.. brought to us in cakes from eight ounces to a pound weight. It easily receives an impression fiom the finger. It is to be chosen moderately firm, and not too soft ; its smell and taste should be very strong, and care taken that there be no dirty or stony matter in it. In Asia, when the heads are near ripening, they wound them with an instrument that has five edges, which, on being stuck into the head, makes at once five long cuts in it ; and from these wounds the opium Hows, and is next day taken off by a person who goes round the field, and put up in a vessel which he carries fastened to his girdle ; at the same time that his opium is collected the opposite side of the poppy-head is wounded, and the opium col- lected from it the next day. After they have collected the opium they moisten it with a small quantity of water or honey, and work it a long time upon a flat, hard, and smooth board, with a thick and strong instrument of the same wood, till it becomes of the consistence of pitch ; and then work it up with their hands, and form it into cakes or rolls for sale. Opium, at present, is in great esteem, and is one of the most valuable of all the simple medicines. In its effects on the" animal system it is the most extraordinary substance in nature. Its first effects are like those of a strong, stimulating cordial, but are soon succeeded by universal languor or irresistible propensity to sleep, at- tended with dreams of the most rapturous and enthusiastic kind. After these contrary effects are over, which are generally terminated by a profuse sweat, the body becomes cold and torpid ; the mind pensive and desponding ; the head is affected with stupor, and the stomach with sick- ness and nausea. Those who take opium to ex- cess experience languor and dejection of spirits common to such as drink spirituous liquors in excess ; to the bad effects of which it is similar, since, like those, they are not easily removed without a repetition of the dose. By the indiscri- minate use of that prepaiation of opium called Godfrey's cordial, many children are yearly cut oflT; for It is frequently given dose after dose, without moderation, by ignorant women and mercenary nurses, to silence the cries of in- fants and lull them to sleep, by which they are at last rendered stupid, inactive, and rickety. Opium is used as a luxury in the east. Mr. Grose informs us, that most of the hard-laboring people at Sural, and especially the porters, take great quantities of this drug, which, they i)re- tend, enables them to work, and carry heavier burdens than they otherwise could do. Some of these, our author

assures us, will take more than an ounce at a time without detriment. Be- sides these effects of opium, it is said by the In- dians to have a very singular one, in bringing on a seeming heaviness of the head and sleepiness of the eye, at the same time that it really pro- duces great watchfulness. It is also considered as a great inspirer of courage, or rather insensibility to danger ; so that the commanders make no

scruple of allowing large quantities of it to the soldiers, when they are going to battle or engaged in any hazardous enterprise. The best opium in the wcrrld is said to come from Patna on the Ganges, where, at least, the greatest traffic of it is made, and whence it is exported all over India ; though in some parts, especially on the Malay coasts, it is prohibited under pain of death on account of the madness, and murders consequent upon that madness, which are occa- sioned by it ; notwithstanding which severe pro- hibition, however, it is plentifully smuggled into all these countries. The soil about the Ganges is accounted best for producing the strongest kind of opium. Opium, if long kept upon the skin, takes off the hair, and always occasions an itching in it ; sometimes it exulcerates it, and raises little blisters, if applied to a tender part. Sometimes, on external application, it allays pain, and even occasions sleep ; but it must by no means be applied to the head, especially to the sutures of the skull ; for it has been knowii to have the most terrible effects in this applica- tion, and even to bring on death itself It ap- pears, too, from some curious experiments made by Dr. Leith, to act as the most powerful of all styptics. Opium contains gum resin, essential oil, salt, and earthy matter; but its narcotic or somniferous power has been experimentally found to reside in its essential oil. Agreeably to the descriptions given of the powers of opium by most medical authors, we have used the term narcotic; but Dr. Beddoes objects to it in the following words : ‘ It is curious to see what pains medical writers have taken to imagine hy- potheses, either out of mere complaisance to the term narcotic, or because opium is a drug in Christendom, and wine an article of diet, rather than suffer themselves to see that opium makes a man merry oi drunk, then lays him asleep, then afterwards causes him to awake with a head-ache, in the same manner as wine.’

In 1799 the manufacture of opium in India was placed under the management of the govern- ment then under marquis Wellesley. All the abuses that had prevailed in the preparation of the drug, adulteration, fallacious envelopes of the cakes, short weight, Sec, were

at that period abolished, and, ever since, the utmost care has been taken, that the opium put up at the com- pany's sales shall be in the utmost state of puiity, that the envelopes shall be of the due degree of thickness, and the drug of the proper consistence. Dr. John Fleming, M. P., then president of the Medical Board at Calcutta, had the merit of hav- ing formed and recommended this plan of pro- viding the opium, and, on his return to Eng- land in 1803, he received on this account a remuneration from the Honorable Court of Directors, of Sicca rupees 50,000, or ––6250 sterling. According to Orfila, a dangerous dose of opium is rather aggravated than counteracted by vinegar. The proper remedy is a powerful emetic, such as sulphate of zinc, or sulphate of copper. See an interesting and well-treated case, in the first volume of the Medico-Chirurgi- cal Transactions, by Dr. Marcet and Mr. Astley Cooper. Tlie experiments of M. Magendie have shown that the salt eˆctracted long ago from

opium by Derosnes, and which has been called narcotine, produces a stupor differing from real sleep and acts on dogs as a poison in small doses. This narcotine may be separated by sulphuric ether, from the strained watery extract of opium. The ether afterwards deposits the narcotine in crystals ; while the residuary opium is supposed to be better fitted than before, for procuring tranquil sleep.

The monopoly of the opium, produced from the culture of the poppy, is the third principal branch of the East India Company's territorial revenue in India.

In 1773 the contract or extensive privilege for providing opium was granted to Meer Mun- keer, in preference (as was stated by govern- ment) to any one else, because, being the person employed by the gentlemen of Patna in that business, he was the best acquainted with the proper mode of managing it, and would account for any outstanding balances. He was to delive the Bahar opium at 320 rupees, and the Oude at 350 rupees per maund.

Since that time the East India Company's annual revenue upon that article alone, has risen from eight to upwards of eighty lacs of rupees, or more than ––1,000,000 sterling. By a report, dated East India House, 29th February 1816, which was at that time laid before Parliament, the sale of opium in Bengal for the year 1813- 14, amounted to ninety-six lacs, 40,729 current rupees, the advances and charges upon which, only amounted to ten lacs, 77,638 current rupees.

But the opium used in Britain is principally supplied from Turkey. The

gross amount of duty upon opium, imported into Great Britain in the year 1816, was only ►►2,651 13s., while the average quantity consumed in Britain is 14,400 lbs., which is chargeable with a duty of 8s. 8d. per pound. There are besides from 250 to 300 chests of opium imported from Turkey, and lodged in bond warehouses for exportation, each chest containing from 150 lbs. to 200 lbs. of opium. This statement was made by a member of the Turkey Company in London.

The following account of the Indian method of cultivating opium, as practised in the province of Baha, is given by Mr. Kerr: ►►► ' The field,' he says, ' being well prepared by the plough and harrow, and reduced to an exact level superficies, it is then divided into quadrangular areas of se- ven feet long, and five feet in breadth, leaving two feet of interval, which is raised five or six inches, and excavated into an aqueduct for con- veying water to every area, for which purpose they have a well in every cultivated field. The seeds are sown in October or November. Tlie plants are allowed to grow six or eight inches dis- tant from each other, and are plentifully supplied with water. When the young plants are six or eight inches high, they are watered more spar- ingly. But the cultivator strews all over the areas a nutrient compost of ashes, human ex- crements, cow-dung, and a large portion of ni- trous earth, scraped from the highways and old mud walls. ˆVhen the plants are nigh flowering, they are watered profusely, to increase the juice. When the capsules are half grown, no more v. a-

ter is given, and they begin to collect the opium. At sun -set they make two longitudinal double incisions upon each half-ripe capsule, passing from below upwards, and taking care not to pe- netrate the internal cavity of the capsule. The incisions are repeated every evening until each capsule has received six or eight wounds ; they are then allowed to ripen their seeds. ITie ripe capsules afford little or no juice. If the wound was made in the heat of the day, a cicatrix would be too soon formed. The night dews, by their moisture, favor the extillation of the juice. Early in the morning, old women, boys, and girls, collect the juice by scraping it off the wounds with a small iron scoop, and deposit the whole in an earthen pot, where it is worked by the hand in the open sunshine, imtil it be- comes of a considerable spissitude. It is then formed into cakes of a globular shape, and about four pounds in weight, and laid into little earthen basins, to be further exsiccated.

These cakes are covered over with the poppy or tobacco leaves, and dried until they are fit for sale. There are about 600,000 lbs. of it annually exported from the Ganges.'

It appears highly probable that the white poppy might be cultivated for the purpose of obtaining opium to great advantage in Britain. ' The milky juice, drawn by incision from poppy-heads, and thickened either in the sun or shade, even in this country, has all the characters of good opium ; its color, consistence, taste, smell, faculties, phenomena, are all the same ; only, if carefully collected, it is more pure and more free of feculencies.' Indeed the cultivation of it has been in several instances attempted with success.

Opium, called also Opium Thebaicum, from be- ing anciently prepared chiefly at Thebes, has been a celebrated medicine from the remotest times. It differs from the meconium, which by the ancients was made of the expressed juice or decoction of the poppies. It has a reddish brown color, and a strong peculiar smell ; its taste at first is nau- seous and bitter, but soon becomes acrid, and produces a slight warmth in the mouth ; a watery tincture of it forms an ink, with a chalybeate solution. The use of this celebrated medicine, though not known to Hippocrates, can be clearly traced back to Diagoras, who was nearly his con- temporary, and its importance has ever since been gradually advanced by succeeding physi- cians of different nations. Its extensive practi- cal utility, however, has not been long well understood ; and in this country, perhaps, may be dated from the time of Sydenham. Opium IS the chief narcotic now employed ; it acts di- rectly upon the nervous power, diminishing the sensibility, irritability, and mobility of the sys- tem. From this sedative power of opium, by which it allays pain, inordinate action, and rest- lessness, it naturally follows, that it may be em- ployed with advantage in a great variety of diseases. Indeed, there is scarcely any disorder in which, under some circumstances, its use is not found proper ; and, though in many cases it fails of producing sleep, yet if taken in a full dose, it occasions a pleasant tranquillity of mind, and a drowsiness which approaches to

sleep, and refreshes the patient. The requisite dose of opium varies in different persons, and in different states of the same person. A quarter of a grain will in one adult produce effects which ten times the quantity will not do in another ; and a dose that might prove fatal in cholera or cholic, would not be perceptible in many cases of teta- nus or mania. The lowest fatal dose, to those unaccustomed to take it, seems to be about four grains ; but a dangerous dose is so apt to produce vomiting, that it has seldom time to occasion death. When given in too small a dose, it often produces disturbed sleep, and other

disagreeable consequences ; and in some cases it seems im- possible to be made to agree in any dose or form. Often, on the other hand, from a small dose, sound sleep and alleviation of pain will be produced, while a larger one occasions vertigo and delirium. Some prefer the repetition of small doses ; others the giving a full dose at once ; its operation is supposed to last about eight hours.

OPOBALSAM. The most precious of the balsams is that commonly called balm of Gilead, opobalsamum, balsamaeleon, balsamum verum album, ˆ‘Egj’ptiacum, Judaicum, Syriacum, b Mecca, &c. This is the produce of the amyris opobalsamum.

The true balsam is of a pale yellowish color, clear and transparent, about the consistence of Venice turpentine, of a strong, penetrating, agreeable, aromatic smell, and a slightly bitterish pungent taste. By age it becomes yellower, browner, and thicker, losing by degrees, like vo- latile oils, some of its finer and more subtile parts. To spread, when dropped into water, all over the surface, and to form a fine thin rainbow-colored cuticle, so tenacious that it may be taken up en- tire by the point of a needle, were formerly infallible criteria of the genuine opobalsam. Neumann, however, had observed that other balsams, when of a certain degree’of consistence, exhibit these phenomena equally with the Egyp- tian. According to Bruee, if dropped on a woollen cloth, in its pure and fresh state, it may be washed out completely and readily with sim- ple water.

OPOCALPASUM, Opocarbasum, or Apo- CALPASUM, a gummy resinous substance, which has a strong resemblance to the best liquid myrrh, and which in the time of Galen they mixed with myrrh. It was difficult, according to this writer, to distinguish the one from the other unless by their effects. It was a poisonous juice, which frequently produced lethargy and sudden strangling. He has known several per- sons who died in consequence of inadvertently taking myrrh in which there was a mixture of opocarbasum. Perhaps it was only a juice com- posed of a solution of euphorbia, in which drops of opium were macerated. Poisons of this kind have from time immemorial been as common in Africa as that of arrows poisoned with the juice of the mancanilla is in America.

OPODELDOC, a quack medicine, com- pounded of camphor, soap and spirits, similar to the medical prescription called by regular practitioners the saponaceous balsam ; only the opodeldoc has a larger proportion of soap. It is

prescribed for rheumatisms, chilblains, and all kinds of sprains.

OFOFONAX is the name of a medicinal gum of a tolerably firm texture, sometimes in masses formed of a number of small granules connected by a quantity of matter of the same kind ; but these are usually loaded with extrane- ous matter, and are greatly inferior to the pure loose kind. The drops or granules of the fine opoponax are on the outside of a brownish-red color, and of a dusky yellowish or whitish color within : they are of a somewhat unctuous appear- ance, smooth on the surface : and are to be chosen in clear pieces, of a strong smell and acrid taste. This gummy substance is obtained from the roots of an umbelliferous plant, which grows spontaneously in warm countries, and bears tlie cold of this. The juice is brought from Turkey and the East Indies ; and it is an attenuating and aperient medicine. Boerhaave frequently employed it, along with ammoniacum and galbanum, in hypochondriacal disorders, ob- structions of the abdominal viscera, and sup- pressions of the menstrual evacuations, from a sluggishness of mucous humors ; with these in- tentions it is a useful ingredient in the pilulte gummosce and compound powder of myrrh of the London Pharmacopeia, but it is not em- ployed in any composition of the Edinburgh. It may be given by itself in the dose of a scruple, or half a drachm : a whole drachm proves in many constitutions gently purgative : also dispels flatulencies, is good m asthmas, in inveterate coughs, and in disorders of the head and nerves.

UFORINUS (John), a celebrated German printer born at Basil, in 1507. His father was a painter, and being a man of education taught him Latin himself, in which he improved him- self farther when he studied Greek at Strasburg. He afterwards kept a school, transcribed MSS., and became a corrector of the press. He mar- ried an old woman, the widow of one Xelotect, a canon of Lucerne, who, though rich, was a perfect Xantippe, and, when relieved by her death, he was as poor as ever. He married, however, three times afterwards. He studied physic, and was for two years secretary to the famous Paracelsus. He at last commenced printer ; and published many valuable works, from old MSS., with notes ; as well as some original pieces of his own. He died in 1568, aged sixty-one.

OPORTO, or the Port, a large city, the second place of commercial consequence in i'ortugal, stands near the mouth of the Douro on its north bank, and covers an ac- clivity rising from the brink of tlie river.

It is the grand outlet for all the products of tlie northern part of the kingdom, and particu- larly of the wine so well known by its name, and of which from 50,000 to 70,000 pipes are annually shipped. It has an old wall, five or six feet thick, flanked at intervals with towers, and is further protected by a small fort : but, as the harbour is extremely difficult of entrance, the r'ortuguese government have given little atten- tion of late to the fortifications. The quay ex- tends the whole length of the town ; on one side

is a street, the other side is walled and raised for the purpose of fastening ships' cables. At cer- tain seasons, in consequence of the rains, or of the melting of the snow on the mountains, the Douro is swelled here to a great size, and be- comes a mighty torrent, when a number of booms are placed on the quay to secure the vessels. The roadstead of Oporto is very spacious.

The streets on the declivity of the hill are narrow, crooked, and dirty, but several of those on the top are fine and broad. Indeed Oporto is allowed on the whole to be the cleanest and most agreeable town in Portugal. The steepness of the hill, however, renders walking or riding difficult: on the east of the town the houses overhanging the side of the river are built on so steep a declivity, as to be accessible only by steps cut out of the rock.

The climate here is moist in winter, both from the vicinity of the Atlantic, and the mountains and woods of the neighbourhood. The cold is therefore keen for the latitude, but seldom reaches to frost : in summer, on the other hand, the heat would be intense, were it not moderated by thewinds which blow regularly from the east in the morning, from the south in the middle of the day, and at night from the west. The gardens in the en- virons of the town are beautiful and pleasant, producing, according to their respective degrees of elevation, the fruits of the northern or southern latitudes : and the whole appearance of the place to a stranger is very imposing.

On the opposite bank of the Douro westward is Gaya, reputed to occupy the site of the ancient town of Cale, and considered now as a suburb of Oporto, which was once called Portus Cale. In process of time it became the more considerable town of the two, and took the title of O Porto (the Port), and the kingdom took that of Portus Cale (Portugal). To the east of Gaya is another small but populous town, called Villa Nova do Porto, inhabited by mechanics and the lower orders. Altogether the population of the two towns on the south bank is not short of 20,000. Between (iaya and 'illa Nova are immense warehouses for storing the wine from the interior. The vicinity

exhibits many traces of metallic ores, and particularly veins of copper.

The wine exported is produced, not strictly in the adjacent country, so much as in the exten- sive province of Tras los Monies, to the north-west, and in some districts of Entre Douroe Minho. The amount exported differs in different years. A chartered company for the regulartion of this trade was establis'hed by the government in 1756. The lesser exports are linen, oil, sumach, and oranges. The imports are woollen, cotton, and hardware manufactures, all chiefly from England ; fish from the west of England and Newfoundland ; hemp and flax from the Baltic; and rice from the United States. Oporto has long been the seat of a British factory. The established commercial houses of the British are in number about thirty ; but in addition there is always a number of English in Oporto as tem- porary visitors. They have an exchange or place of daily meeting in a part of the High Street covered with canvas. Tliey have also a caˆsino, or house fitted up with reading rooms. The ex-

change with this country is computed as at Lis- bon, in milrees, of which about sixty-five (more or less according to circumstances) are reckoned to ►►l sterling.

Oporto, in addition to its commercial esta- blishments, contains a naval arsenal and dock yard, but the harbour, partly from rocks at the mouth of the Douro, and partly from the accu- mulation of sand, is seldom entered by ships of war. It is a bishop's see, the seat of a corregi- dor, a provedor, a military commander, and a theatre. The population of the whole, including the suburbs to the south, is about 70,000.

This city was in the possession of the French in 1808, and the spring of 1809, when marshal Soult was surprised here by lord Wellington. It remained ever after undisturbed by the French. It is 172 miles north by east of Lisbon, and forty-nine north of Coimbra.

OPOSSUM, in zoology. See Didelphis.

OPPIA Lex, the Oppian law, in Roman an- tiquity, a law introduced by C. Oppius, the tri- bune, A U. C. 540. It enacted, that no woman should wear above half an ounce of gold, have party colored

garments, or be carried in any city or town, or to any place within a mile, unless to celebrate some sacred festival. It was made while Hannibal was in Italy, and Rome was in great distress, but created much discontent. The Roman ladies, eighteen years after, petitioned for its repeal. Cato opposed the repeal, and sati- rised the ladies for appearing in public to solicit votes. The tribune Valerius answered the sage's objections, and carried the repeal with the unanimous consent of all the Comitia, Cato alone excepted. Liv. xxxiii.

OPPIANUS, a poet and grammarian of Ana- zarbain Cilicia in the second century. He com- posed a poem on Hunting, and another on F ish- ing, for which Antoninus Caracalla gave him as many golden crowns as there were verses in his poems ; they were hence called Oppian's golden verses. He died in the thirtieth year of his age.

OPPELN, a considerable government of Prussian Silesia, containing the principality of Oppeln, Neissy, and Ratibor, together with the Prussian part of Jagerndorf and Troppau, or an area of 5000 square miles, divided into the circles of

Neisse,

Grotkau,

Oppeln,

Rosenberg,

Strehlitz (Great)

Lublinitz,

Kosel,

Leobschutz.

Beuthen,

Plesse,

Falkenberg,

Ratibor,

Tost,

Neustadt,

Rybnik,

The entire population amounts to about 450,000, chiefly Catholic. The province is altogether hilly, and often called High or Upper Silesia. It abounds in forests and valuable minerals. In the mountains the old Sclavonic dialect is spoken. The Oder is the chief river, and, though only partially navigable, greatly facili- tates the transport of timber, and the other pro- duce of the district. The numerous lakes abound in fish.

The principality of Oppeln, more than a third covered with forests, occupies more than the half of this government. It lies to the south of Breslau and Oels, and is still more backward than the rest, being inhabited almost exclusively by an illiterate race, of Vandal descent. It was governed by its own dukes of the race of Piast, till 1532, when, the family becoming extinct, it fell to Bohemia, and was acquired by Prussia, with the rest of Silesia, in 1742.

Oppeln, the capital of the above princi- pality and government, situated on the Oder, has several churches, a collegiate foundation, a seminary for priests, two monasteries, and an hospital ; also some linen manufactures and tan- neries. Inhabitants 3200. It is fifty miles south-east of Breslau, and eighty-five north-east of Olrautz.

OPPENAU, a thriving town of Baden. The article of cherry brandy is here a principal ob- ject of export ; also pitch, turpentine, and tar, prepared in the neiaˆhbouring mountains of the Black Forest. Population 1700. Fifteen miles east of Strasburg.

OPPENHEIM, a town of Hesse-Darmstadt, to the west of the Rhine. Population 1700. Here general Sacken's corps of the Prussian army crossed the Rhine on the 1st of January, 1814, in the invasion of France, and the troops took, in the presence of their king, a redoubt, with 700 prisoners and six cannon. Ten miles south by east of Mentz.

Oppenheim, a post-town of Montgomery county, New York, on the north bank of the Mohawk River, fifteen miles west of Johnstone, and fifty-six W.N.W. of Albany.

OPPIDO, a large town of Naples, in Cala- bria Ultra, situated among the mountains which form the south-west extremity of the Appennines. It is the see of a bishop, but was mxich injured by the earthquake of 1783. Population 8000. Twenty miles north-east of Reggio, and twenty E. N. E. of Messina, in Sicily.

OPPIG'NERATE, v. a. Lat. oppignero. To pledge; pawn. Obsolete.

The duke of Guise Henry was the greatest usurer in France, for that he had turned all his estate into obligations ; meaning that he had sold and oppigno- rated all his patrimony, to give large donatives to other men. Bacon.

OPPILA'TE, i;. a.-^ La.t. oppilo. To heap

Oppila'tion, n. s. >up obstructively: the

Oppila'tive. 3 obstruction caused: ob-

structive.

The ingredients prescribed in their substance ac- tuate the spirits, reciude oppilations, and mundify the blood. Harvey.

OPPO'NENT, adj. & n. a. Latin opponens. Antagonist ; adverse : one who opposes or takes the opposite side of the dispute or argument.

Inasmuch as ye go about to destroy a thing which is in force, and to draw in that which hath not as yet been received, to impose on us that which we think not ourselves bound unto ; that therefore ye are not to claim in any conference other than the plaintiff's or opponent's part. Hooker.

How becomingly does Philopolis exercise his office, and seasonably commit the opponent with the respon- dent, like a long practised moderator. il/oce.

OPP

Ere tlie foundations of this earth were laid, It was ojiponent to our search ordained, That joy still sought, should never be attained.

Prior.

We should never argue, or suffer others to argue for victory with our pupils : we should not praise them for cleverness in finding out arguments in support of their own opinion : we should praise their candour and good sense, when they perceive and acknow- ledge the force of their opjjonent's argument.

Edgeworth.

.Toking on the poverty of his opponent, he remarks that if his learning would get him a good living he would say something. Canning,

OPPORTUNE’, adj. \ Fr. opportune ; Lat.

Opportune’ LY, (irfi;. ˆoppurtunus. Season-

Opportu’nity, w. s. 3 able; well-timed or circumstanced ; convenient : the adverb follow- ing these senses : opportunity is, fit time or place; convenience; propitious; concurrence of circumstances.

He was resolved to choose a war rather than have Uretagne carried by France, being situate so oppor- timely to annoy England either for coast or trade. Bacon’s Henry VII.

There was nothing to be added to this great king’s felicity, being at the top of all worldly bliss, and the perpetual constancy of his prosperous successes, but an opportune death to withdraw him from any future blow of fortune. Baeon.

A wise man will make more opportunities than he finds. Men’s behaviour should be like their apparel, not too straight, but free for exercise. Id.

Opportunity like a sudden gust. Hath swelled my calmer thoughts into a tempest. Accursed cpportimity !

That workest our thoughts into desires, desires To resolutions ; those being ripe and quickened. Thou givest them birth, and bringest them forth to action. Denfuim.

Will lift us up in spite of fate, j > Jˆearer our ancient seat ; perhaps in view Of those bright confines, whence, with neighbouring

arms And opportune excursion, we may chance Re-enter heaven. Milton’s Paradise Lost.

The experiment does opportunely supply the defi- ciency. Boyle.

I had an opportunity to see the cloud descend, and, after it was past, to ascend again so high as to get over part of the mountain. Browne’s Travels.

Neglect no oj)por

All poets have taken an opportunity to give long descriptions of the night. Brcome.

Had it not been for me I am persuaded Dr. John- son never would have undertaken such a journey, and I must be allowed to assume

some merit from having been the cause that our language has been enriched with such a book, &c., as I had such oppor- tunities of knowing from what very meagre materials it was composed. Boswell's Tour.

He who first saw his fellow creature suflfer, could not fail to participate in the pain, and endeavour to find out the means of affording relief. Opportunities of exercising this useful inclination were never want- ing. Dr. A. Rees.

To protect the peaceable in their ordinary occupa- tions IS as much the province of the laws as to pro- vide opportunities of discussion, for every purpose to wiiich it is necessanly and practically applicable.

Canning.

OPPOSE', V. a. & V. n.') Fr. opposer ; Latin

(Jppose'less, adj. | oppono, oppositus. To

Oppo'ser, n. s.

Op'posite, adj. & n. s.

Oppositely, adv.

Op'pcsiteness, n. s.

Opposi'tion.

I resist ; hinder ; act ˆagainst ; put in oppo-

Isition ; place over against, or in front : J as a neuter verb, to

act adversely ; object : opposeless is, not to be opposed; irresistible: opposer, an antagonist; rival; enemy: opposite, contrary; adverse; placed in front or over against : as a noun sub- stantive, an adversary ; opponent : oppositely, corresponds with the senses of opposite as an adjective : opposition is, situation fronting some- thing opposed ; resistance ; hostility ; contrariety of interest, meaning, or measures ; inconsistency : and, in a political sense, the party generally op- posing those in power, and ' never really,' accord- ing to Mr. Wilberforce, ' wishing mischief to the country ; but only so much mischief as might drive their opponents out, and place themselves in their room.'

To the best and wisest, while they live, the world IS continually a froward opposite, a curious observer of their defects and imperfections ; their virtues L* afterwards as much admireth. Hooker.

The parts of every true opposition do always both concern the same subject, and have reference to the same thing, sith otherwise they are but in shew op- posite, not in tiuth. Id. There's no bottom, none In my voluptuousness : and my desire All continent impediments would o'erbear. That did oppose my will. Shakspeare. Macbeth.

Her grace sat down In a rich chair of state ; opposing freely The beauty of her person to the people.

bhakspeare Now the fair goddess fortune Fall deep in love with thee, and her great charms Misguide thy opposers' swords : bold gentleman ! Prosperity be thy page. Id. Coriolanus.

1 could bear it longer, and not fail To quarrel with your great opposeless wills.

Shakspeare.

He is the most skilful, bloody, and fatal cppoˆte that you could have found in Illyria. Id.

He Cryed Oh I and mounted ; found no opposition From what he looked for should oppose. Id.

He practised to dispatch such of the nobility as were like to oppose against his mischie\ous drift, and in such sort to encumber and weaken the rest that they should be no impediments to him. Hayward.

To the' other five, Their planetary motions and aspects. In sextile, square, trine and opposite. Of noxious efficacy. Milton's Paradise Lost. Virtue which breaks thro' opposition. And all temptation can remove. Most shines, and most is acceptable above.

Milton. Brave wits that have made essays worthy of im- mortality ; yet, by reason of envious and more popu- lar opposers, have submitted to fate, and are almost lost in oblivion. "> Glanville.

When the church is taken for the persons making profession of the Christian faith, the catholick is often added in opposition to hereticks and schismaticks.

Pearson.

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la this fallen state of man religion begins with re- pentance and conversion, the two opposite terms of which are God and sin. Titlotaon.

They who never tried the experiment of a holy life,

measure the laws of God not by their intrinsical

goodness, but by the reluctancy and opposition which

they find in their own hearts. Id.

I thro' the seas pursued their exiled race,

Engaged the heavens, opposed the stormy main ;

But billows roared and tempests raged in vain.

Dry den. The knight whom fate or happy chance Shall grace his arms so far in equal fight. From out the bars to force his opposite, The prize of valour and of love shall gain. Id. Nothing of a foreign nature, like the trifling novels by which the reader is misled into another sort of

pleasure, opposite to that which is designed in an epick poem. Id.

He considers Lausus, rescuing his father at the ha- zard of his own life, as an image of himself when he took Anchises on his shoulders, and bore him safe through the rage of the fire and the opposition of his enemies. Id. Dufresnoy.

The lesser pair are joined edge to edge, but not oppositely with their points downward, but upward.

Grew. If all men are not naturally equal, I am sure all slaves are, and then I may, without presumption, oppose my single opinion to his. Loeke.

Particles of speech have divers, and sometimes al- most opposite significations. Id.

Reason can never permit the mind to reject a greater evidence to embrace what is less evident, nor allow it to entertain probability in opposition to know- ledge and certainty. Id.

The use of language and custom of speech, in all authors I have met with, has gone upon this rule or maxim, that exclusive terms are always to be under- stood in opposition only to what they are opposed to, and not in opposition to what they are not opposed to.

Waterland. A hardy modern chief, A bold opposer of divine belief. Blackmore. This is a prospect very uneasy to the lusts and passions, and opposite to the strongest desires of flesh and blood. Rogers.

I do not see how the ministers could have conti- nued in their stations, if their opposers had agreed about the methods by which they should be ruined.

Swift. The subject of diflference in political principles was introduced. Johnson. ••• It is much increased by opposition. There was a violent Whig with whom I used to contend with great eagerness. After his death I felt my Toryism much abated.

BosweU's Tour. The emphatic speaker dearly loves to' oppose, In contact inconvenient, nose to nose. As if the' gnomon on his neighbour's phiz, Touched with a magnet had attracted his. Couper.

Children, piqued instead of being convinced, hunt only for arguments in their own favour, and are mortified when a good reason is brought on the oppo- site side of the question. Edgeworth.

If an administration should succeed him, under which wisdom and prudence produced their usual effects of security and quiet, the right honourable gentleman would be at the head of the most violent and clamorous opposition that that country ever wit- nessed. Sheridan.

Opposition, in British politics, is collectively used for the minority in parliament, or that body

of members in both houses who oppose the measures of ministry.

OPPRESS', V. a. ~v Latin oppressus. To

Oppres'sion, ra. s. f crush by severity; over-

Oppres'sive, arf;. ˆ power ; subdue : oppres-

Oppres'sor, n. s. ' sion is, the art or habit of

such severity or cruelty; or the state of suffering

it ; hence misery ; hardship of any kind ; and the

dulness of spirit it produces ; the adjecliTe and

second noun substantive corresponding.

If thou seest the oppressions of the poor marvel not at the matter, for he that is higher than the highest regardeth. Kicks.

Israel and Judah were oppressed together, and all

that took them captives held them fast ; they refused

to let them go. Jeremiah.

I from oppressors did the poor defend,

The fatherless, and such as had no friend.

Sandifs, We're not ourselves. When nature, being opprest, commands the'mind To suffer with the body. Shakspeare. King Lear.

Famine is in thy cheeks ; Need and oppression stare within thine eyes. Contempt and beggary hang upon thy back.

Shahpeare* Cˆesar himself has work, and our oppression Exceeds what we expected.

Id. Antony and Cleopatra, The cries of orphans, and the' oppressor's rage, Had reached the stars. Dryden.

Alicia, reach thy friendly arm, And help me to support thy feeble frame, That nodding totters with oppressive woe. And sinks beneath its load.

Rome's Jane Shore. We are all subject to the same accidents ; and, when we see any under any particular oppression, we should look upon it as the common lot of human na- ture. Addison.

Drowsiness, oppression, heaviness, and lassitude, are signs of a too plentiful meal. Arbuthnot.

To ease the soul of one oppressive weight. This quits an empire, that embroils a state.

Pope. Alas ! a mortal most opprest of those Whom fate has loaded with a weight of woes.

Id. Come ! by whatever sacred name disguised. Oppression, come ! and in thy works rejoice ! See nature's richest plains to putrid fens Turned by thy fury. From their cheerful bounds. See razed the' enlivening village, farm and seat.

Thomson. In blazing height of noon. The sun oppressed, is plunged in thickest gloom.

Id. Power when employed to relieve the oppressed, and to punish the oppressor, becomes a great blessing.

Swift. Has heaven reserved, in pity to the poor. No pathless waste or undiscovered shore ; No secret island in the boundless main. No peaceful desert yet unclaimed by Spain . Quick let us rise, the happy seats explore. And bear oppression's insolence no more.

Johnson. Where individuals are oppressed, they combine against their oppressor, and oppose cunning and false- hood to power and force : they think themselves re- leased from the comnact of truth with their masters, &c. EdgeiLorth.

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tlis head was drooping on his breast, Fevered, throbbing, and apjrrest ; And o'er his brow so downward bent, Oft his beating fingers went. Byron.

OPPRO’BRIOUS, adj. ˆ Lat. opprobrium. Oppro’briously, adv. ˆ Reproachful ; dis- Oppro’buiousness, n. s. j graceful ; slander- ous; scurrilous; blasted witli slander or re- proach : the adverb and noun substantive cor- responding.

Himself pronounceth them blessed, that should for his name sake be subject to all kinds of ignominy and opprobrious malediction. Hooker.

Think you, this little prating York Was not incensed by his subtle mother. To taunt and scorn you thus opprobrioiisly ?

Shakspeare. T will not here defile My unstained verse with his opprobrious name.

Daniel. Solomon he led by fraud to build His temple right against the temple of God, On the opprobrious hill. Milton.

They see themselves unjustly aspersed, and vindi- cate themselves in terms no less opprobrious than those by which they are attacked. Addison.

OPPUGN’, V. a. “ˆ Lat. oppugno. To op- Oppug’nancy, n.s. Spose; resist; attack: op- Oppugn’er. J position : he who op-

pugns or opposes.

For the ecclesiastical laws of this land we are led by a great reason to observe, and ye be by no neces- sity bound to oppugn them. Hooker.

Take but degree away, untune that string, And hark what discord follows, each thing meets In mere oppugnancy.

Shakspeare. Troilus and Cressida. The ingredients reclude oppilations, mundify the blood, and oppugn putrefaction. Harvey.

They said the manner of their impeachment they could not but conceive did oppugn the eights of par- liament. Clarendon. If nothing can oppugn his love. And virtue envious ways can prove. What cannot he confide to do That brings both love and virtue too 1

Hvdibras.

OPT

The moderate and degenerate Jews be, upon the score of being the great patrons of man’s free will, not causelessly esteemed the great oppugnen of God’s free grace. Boyle.

Neither the secret envy of those who repine at these encouragements which God's providence hath conferred on priests, nor the open malice of those that furiously oppugn their welfare, shall ever overwhelm them. Barrow.

Ramus was one of the first oppugners of the old philosophy, who disturbed with innovations the quiet of the schools. Johnson.

OPS, in mythology, the daughter of Ccclus and Terra, the sister and wife of Saturn, and mo- ther of Jupiter, Neptune, and Pluto, &c. She is also called Cybele, Rhea, Bona Dea, Magna Mater, Tellus, Thya, &c. See these articles. Lempriere confounds her with Juno, Proserpina, and even Minerva ; but the mytho- logy of the ancient Greeks and Romans is a sufficient mass of confusion and inconsistency, without confounding the mother with her daugh- ters and grand-daughters. Her festivals were the Opalia.

OP'TABLE, adj. ˆ Lat. optabilis. Desirable:

Op'tative. J oj

sire.

jptative, expressive of de-

The verb undergoes in Greek a different formation to signify wishing, which is called the optative mood.

Clarke.

The Optative Mood, in the Greek grammar, is that which serves to express an ardent desire or wish for something. In most languages, except the Greek, the optative is only expressed by prefixing to the subjunctive an adverb of wishing ; as utinam, in Latin.

OPTATUS, bishop of Melevia, a town of Numidia, in Africa, flourished in the fourth cen- tury, under \alentinian and Valens. He wrote a Tjook on the Schism of the Donatists, about A. D. 370, against Parmenian, bishop of that sect, which was published by Du Pin at Paris, in fol. 1700. He also wrote The Sacred Geo graphy of Africa. He died A.D. 384,

OPTICjOrf;. &n. s.*\ Fr. optique ; Gr. ott- { TiKog. Visual; produc-

{ ing or relating to vision ;

Op’tical, adj. Optic’ian, n. s.

Op’tics. J the organ, or an instru-

ment, of sight : optical is relating to vision, or to the science of optics: optician, one skilled in that science, or a maker of optical instruments : optics, the science of “ision. See below.

Where our master handleth the contractions of pil- lars, we have an aptick rule, that the higher they are, the less should be always their diminution aloft, be- cause the eye itself doth contract all objects, accord- ing to the distance. Wotton. Our corporeal eyes we find. Dazzle the (ˆticks of our mind. Derham. Can any thing escape the perspicacity of eyes which were before light, and in whose opticks there is no opacity] Brmcne.

It seems not agreeable to what anatomists and op- tical writers deliver, touching the relation of the two eyes to each other. Boyle,

And quickly cold indifference will ensue, When you love’s joys through honour’s optick view.

Prior. May not the harmony and discord of colours arise from the proportions of the vibrations propagated through the fibres of the optick nerves into the brain, as the harmony and discord of sounds arise from the proportions of the vibrations of the air ?

Newton’s Opticks. Why has not man a microscopick eye ‘> For this plain reason, man is not a fly : Say what the use, were finer opticks given, T’ inspect a mite, not comprehend the heaven ?

Pope. Those who desire satisfaction must go to the ad- mirable treatise of opticks by Sir Isaac Newton.

Cheyne.

1. Optics, as a science, dates its origin but little prior to the time of Alhazen, an Arabian philosopher of the twelfth century ; and it may with truth be remarked that almost every thing useful in the science has originated within the last 500 years. The reflection of the rays of light is, indeed, an occurrence too frequent and too obvious to have escaped the notice of the earliest observers : a river or a fountain was

the first mirror: its effect was easily Imitated by specula of metal; and, as soon as any])hiloso- phical attention was paid to the phenomenon, it was easy to collect the equality of the angles of incidence and reflection ; but, although it was well known that an oar, partially immersed in water, no longer appeared straight, it was long before any attempts were made to ascertain the relation between the angles of coincidence and refrac- tion.

2. Some very important facts illustrative of the nature of Light will be found under that article, and we may now proceed to a brief historical outline of the science.

3. Empedocles is perhaps the first person on record that wrote systematically on light. He maintained that it consisted of particles projected from luminous bodies, and that vision was per-

formed both by the eflFect of these particles on the eye, and by means of a visual influence, emitted by the eye itself. Botlt of these doc- trines were combated by Aristotle, who thought it absurd to suppose that a visual influence should be emitted by the eye, and that it should not enable us to see in the dark ; and who con- sidered it as more probable that light consisted in an impulse, propagated through a continuous medium, than in an emanation of distinct parti- cles. Light, he says, is the action of a transpa- rent substance ; and, if there were absolutely no medium between the eye and any visible object, it would be absolutely impossible that we should see it.

4. It is said that Archimedes made a com- pound burning mirror, of sufficient power to set on fire the Roman ships : in this form the story is scarcely probable, although the possibility of burning an object at a great distance by a col- lection of plane mirrors has been sufficiently shown by the experiments of Buffon. It is, however, not unlikely that Archimedes was ac- quainted with the properties of reflecting sur- faces, and that he confirmed his theories by some exoerimental investigations. The work on ca- toptrics, attributed to Euclid, contains the de- termination of the effects of reflecting surfaces of different forms ; but it is not supposed to be genuine. The existence and the magnitude of the atmospheric refraction were well known to Ptolemy, and a treatise of this astronomer on the subject is still extant in MS.

5. The mathematical theory of optics, or the science of dioptrics and catoptrics made some advances in the middle ages from the labors o. Alhazen and Vitellio. Alhazen was mistaken in some of his propositions respecting refraction ; Vitellio, a native of Poland, gave a more direct theory of this subject, and constructed a table of refractive

densities, showing the supposed pro- portions of the angles of incidence and refraction in the respective mediums.

6. The invention of the magic lantern is at- tributed to Roger Bacon, and the lens was soon afterwards commonly applied to the assistance of defective sight. It has been much disputed whether or not Bacon was acquainted with tele- scopes; the prevalent opinion is, that the pas- sages which have been alleged to prove it are in- suflicient for the purpose ; but therˆ. is reason to suspect, from the testimony of Recorde, who wrote in 1551, not only that Bacon had actually invented a telescope, but that Recorde himself knew something of its construction. Digges, also, in a work published in 1571, has a passage of a similar nature; and, from Bacon's own words, it has been conjectured that an instrument resembling a telescope was even of much higher antiquity. But the first person who is certainly known to l)ave made a telescope is Jansen, a Dutchman, wliose son, by accident, placing a concave and a convex spectacle glass at a little distance from each other, observed the increased apparent mag-

nitude of an object seen through tliem ; the father upon this fixed two such glasses in a tube a few inches long, and soUi the instrument in this form. He also made some telescopes of greater powers, and one of his family discovered a satel- lite of Jupiter with thf ni. Galileo had heard of the instrument, but had i,ot been informed of the particulars of its construction; he re-invented it in 1609, and, the foUownig year, rediscovered also the satellite which Jansen had seen a little before.

7. It was, Iiowever, Kepler that first reduced the theory of the telescope to its true principles; he laid down the common rules for finding the focal lengths of simple lenses of glass ; he showed how to determine the magnifying power of the telescope, and pointed out the construction of the simple astronomical telescope, which is more convenient for accurate observations than the Galilean telescope, since the micrometer may be more easily applied to it ; a third glass, for re- covering the erect position of the object, was af- terwards added by Scheiner, and a fourth, for increasing the field of view, by Rheita. Kepler made also some good experiments r.n the nature of colored bodies, and sliowcd the inverted situ- ation of the image formed on the retina of the eye. Maurolycus of Messina had demonstrated, in 1575, that the pencils of light are brought to focal points on the retina ; Kepler's observations were thirty or forty years later.

8. The next great step in optics was made by De Dominis, who in 1611 first explained the cause of the interior or primary rainbow, and this was soon followed by a still more important discovery respecting the nature of refraction, first made by Snellius, who ascertained, about 1621, that the sines of the angles of incidence and re- fraction are ahvays in the same proportion to each other at the same surface ; he died, how- ever, in 1626, without having made his discovery public. T3escartes is generally supposed to have seen Snellius's papers, although he published this law of refraction without acknowledging to whom he was indebted for it. Descartes also explained the formation of the secondary rainbow, and truly determined the angular magnitude of both the bows from mathematical principles; he did not, however, give a sufficient reason for the production of colors in either case. Descartes imagined light to consist in motion, or rather pressure, transmitted instantaneously through a medium infinitely elastic, and colors he attributed to a rotatory motion of the particles of tliis me- dium. He supposed that light passed more ra- pidly through a denser medium than through a rarer; other philosophers about the same time maintained a contrary opinion, without deciding with respect to any general theory of light : thus Fernat and Leibnitz deduced, on this supposition, the path of refracted light from the natural ten- dency of every body to attain its end by the shortest possible way ; and Barrow derived the same law, in a more geometrical manner, from a similar hypothesis respecting the velocity of light, by considering a pencil of light as a collection of collateral rays influencing each other's motions. We are indebted to this learned mathematician for the first accurate investigation of the proper-

ties of refracting and reflecting surfaces and for the most general determination of tiie situations of focal points.

9. The industrious Mr. Boyle had noticed with attention the phosphorescence of diamonds, the colors produced by the eff'ect of scratches on tlie surfaces of polished metals, and tlie diversified tints which a bubble or a film of soapy water usually assume. His assistant. Dr. Ilooke, in- vestigated these and other similar appearances with still greater accuracy, and proposed, in his Micrographia, which was published in 1665, a theory of light considerably resembling that of Descartes : he supposes that light is an impulse propagated through a medium highly, but not infinitely, elastic ; that refraction is produced by the readier transmission of light through the denser medium, and diat difference of color consists from the law of the different impulse constituting colored light, so that red and blue difler from each other

in the same manner as the sound of a violin and of a flute. He explained the colors of thin plates from the interference of two such impulses partially reflected from the upper and under surface; but the hypothesis which he as- sumed, respecting the nature of colors, renders tiiis explanation wholly inadequate ; nor were the phenomena at that time sufticiently investigated for a complete solution of the difiiculiies attend- ing them.

10. It was still believed that every refraction actually produced color, instead of separating the colors already existing in wliite light; but in the year 1666 Newton first made the important discovery of the actual existence of colors of all kinds in white light, which he showed to be no other than a compound of all possible colors, mixed in certain proportions with each other, and capable of being separated by refraction of any kind.

11. About the same time *hat Newton was making his earliest experiments on refraction, Grimaldi's Treatise on Light appeared ; it con- tained many interesting exi)eriments and inge- nious remarks on the eflTects of dift'iaction, which is the name that he gave to the spreading of light in every direction upon its admission into a daik chamber, and on the colors which usually accom pany these effects. He had even obseived that in some instances the light of one pencil tended to extinguish that of another, but he had not as- certained in what cases and accordin'it to what laws such an interference must be expected.

12. The discoveries of Newton were not rt*- ceived without some controversy either at home or abroad ; the essential points of his theory were, however, soon established : but Dr. Hooke very warmly opposed the hypothesis which New- ton had suggested respecting the nature and pro- pagation of light. On this subject Newton pro fessed himself by no means tenacious ; he was not, however, convinced by Dr. Ilooke, and disliked the dispute so much that he deferred the publication of his treatise on optics till after Hooke's death in 1703. 'ery soon after his first communication to the Royal Society, in 1672, he had sent them a description of his re- flecting telescope, which was perhaps the first that had been constructed with success ; although

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Gregory had invented his instrument some years before, and a plan of a similar kind had been suggested by Eskinard as early as 1615. The principal parts of the treatise on optic? had been communicated at different times to the Royal Society ; besides the experiments on refraction, snd the theory of the rainbow, they consist of an elegant analysis of the colors of thin transparent substances, in which the piienomena are reduced to their simplest forms, and of a collection of mis- cellaneous experiments on the colors produced in cases of inflection or diffraction.

13. With respect to the nature of light, the theory which Newton adopted was materially different from the opinions of most of his prede- cessors. He considered indeed the operation of an ethereal medium as absolutely necessary to the production of the most remarkable effects of light, but he denied that the motions of such a medium actually constituted light ; he asserted, on the contrary, that the essence of light con- sisted in the projection of minute particles of matter from the luminous body, and maintained that this projection was only accompanied by tlie vibration of a medium as an accidental circum- stance, which was also renewed at the surface of every refractive or reflective substance.

14. In the mean time Bartholin had called the attention of naturalists and opticians to the singu- lar properties of the Iceland crystal, and had hastily examined the laws of its unusual refrac- tion. On this subject Huygens had been much more successful ; his analysis of the phenomena of the double refraction is a happy combination of accurate experiment with elegant theory ; it was published in 1690, making a part of his trea- tise on light, the fundamental doctrines of which he had communicated to the academy of Paris in 1678. They scarcely differ in their essential parts from those of our countryman Dr. Hooke, but the subject of colors Huygens has left wholly untouched. Roemer had then lately made the discovery of the immense velocity with which light passed through the celestial regions, by ob- serving the apparent irregularities of the eclipses of Jupiter's satellites ; and Huygens readily ad- mitted this property into his system ; although Hooke, by a singular caprice, professed himself more ready to believe that the propagation of light might be absolutely instantaneous, than that its motion could be successive, and yet so incon- ceivably rapid. The merits of Huygens in the mathematical theory of optics were no less con- siderable than in the investigation of the nature of light; his determination of the observations of lenses was the first refinement on the con- struction of telescopes.

15. In the year 1720 Dr. Bradley had the good fortune to discover both the existence and the cause of the aberration of the fixed stars. He had for some time observed an irregularity in the places of the stars, which he was wholly unable to explain, and the idea of attributing it to a combination of the effect of the earth's motion in its orbit, with the progressive motion of light, occurred to him first as he happened to observe the apparent direction of the wind on board of a boat which was moving in a transverse direction. He also determined with accuracy the magnitude of the atmospherical refraction, which had been

theoretically investigated by Newton and by Tay- lor, but never before practically ascertained with sufficient precision. The formula, which Brad- ley appears to have deduced from observation only, agrees precisely with an approximation which was obtained by Simpson from calcula- tion ; but it cannot be considered as rigidly ac- curate.

16. The optics of Bouguer were first published in 1729, and an improved edition appeared thirty years afterwards ; the merits of this author in the examination of the properties of a variety of sub- stances, with respect to the transmission and re- flection of light in different circumstances, and in the comparison of lights of different kinds, re- quire to be mentioned with the highest commen- dation. Dr. Porterfield's investigations of the functions of the eye tended greatly to illustrate the economy of this admirable orijan, and som" valuable remarks of Dr. Jurin on the same sub- ject were soon after published in Dr. Smith's elaborate treatise on optics,* which contains all that had been done at that time with respect to the mathematical part of the science.

17. The invention of achromatic telescopes is with justice universally attributed to our coun- tryman Mr. Dollond ; but there is reason to be- lieve that he was not absolutely the first author of the improvement. Mr. Hall, a gentleman of Worcestershire, is said to have discovered, about 1729, Sir Isaac Newton's mistake, in supposing that the rays of different colors must of necessity be equally separated by all surfaces which pro- duce an equal mean refraction; and, by combin- ing the different dispersive properties of different kinds of glass, he constructed, in 1733, several compound object glasses, which were calculated not only for avoiding all appearance of color, but also for correcting the imperfect refractions of the spherical surfaces of the separate lenses. He did not, however, make known the particulars of his investigations, and his invention was soon wholly forgotten. It was in consequence of a discussion with Euler, Klingenstierna, and some other mathematicians, that Mr. Dollond was led to make experiments

on the refraction of different kinds of glass ; these gentlemen had not ques- tioned the geneial truth of Newton's opinion res- pecting the dispersion of the different colors, but Euler had asserted that the eye itself produced a refraction free from the appearance of color, and Klingenstierna had shown the possibility of pro- ducing a deviation by refraction, without a sepa- ration of color, according to the laws of refrac- tion laid down by Newton himself When Dollond had once discovered the material dis- tance which exists between the dispersive pro- perties of flint glass and of crown glass, it was easy to produce the combination required ; but this ingenious artist was not satisfied with the advantage of freedom from colors only ; he ad- justed the forms and apertures of his lenses in the most skilful manner to the correction of aberrations of various kinds, and he was also particularly fortunate in being able to obtain, about the time of his discovery, a glass of a quality superior to any that has been since manu- factured.

18. The opinion of Euler respectmg the eye was, however, by no means well founded ; for the

eye acts very differently in rays of different colors, as we may easily observe by viewing a minute object in different parts of a beam of light, trans- mitted through a pri-sm. It must be allowed that this great mathematician was less fortunate in his optical tlieories than in many other de- partments of science ; his mathematical investi- gations of the effects of lenses are much more intricate and prolix than the subject actually re- quires, and, with respect to the nature and pro- pagation of light, he adopted several paradoxical opinions. Assuming the theory of liuygens, with the additional hypothesis respecting the nature of colors which had been suggested by Newton, and maintained by Pardies and Male- branche ; that is, that the difference of colors, like that of tones in music, depends on the fre- quent differences of the vibrations constituting light; he imagined that opaque bodies are not seen by reflected light, but that their particles are agitated by the impulse of the light which falls on them, and that the vibrations of these particles render the bodies again visible in every direc- tion ; he also conceived that the undulations of light are simply propagated through the solid substances of transparent mediums, in the same manner as sound travels through the air. But, on these suppositions, all bodies would have the properties of solar phosphori, and the refraction of the rarest of natural bodies would be incom- parably greater than that of the densest is actually found to be

: and on the whole, although the character of Euler has been so highly and so de- servedly respected as to attach a certain degree of authority to all his opinions, so that in this instance the name of Huygens has been almost superseded by that of Euler, yet in fact he has added no augmentative evidence whatever to the theory, but, by inaccurate and injudicious rea- soning, has done a real injury to the cause which he endeavoured to support.

19. The researches of Lambert may be con- sidered as a continuation of those of Bouguer; they present us with many interesting observa- tions on the natural history of light, and the pro- perties of various bodies with regard to it. Mr. Lambert first ascertained that aluminous surface emits its light very nearly with equal intensity in all directions, so that any part of it appears almost equally brilliant to an eye placed in any direction, while the light thrown by each square inch or square foot of the surface in any direc- tion differs according to the obliquity of that di- rection. The mathematical theory of optics is considerably indebted to the labors of Clairault, D'Alembert, and Boscovich ; Jeaurat, Beguelin, Redern, and Klugel, have also continued the in- vestigation ; their calculations may be of con- siderable utility to the practical optician ; but il requires the ingenuity of a DoUond or a Rams- den to apply the whole of the results to any useful purposes.

20. The experiments of Mazcas on the colors of their plates are mere repetitions of those of Newton, under disadvantageous circumstances. Mr. Dutour has, however, considerably diversi- fied and extended these experiments, as well as those on the colors which are produced in dif- fracted liglit, yet without obtaining any general

results of importance. Corparetti's experiments on inflection have every appearance of accuracy ; but they are much too intricate to be easily com- pared with each other, or with those of former observers.

21. The late Dr. Priestley rendered an essen- tial service to the science of optics, considered as a subject for the amusement of the general reader, by an elegant and well-written account of the principal experiments and theories, which had been published before the year 1770. But this work is very deficient in mathematical accu- racy ; and the author was not sufficiently master of the science to distinguish the good from the indifferent.

22. Mr. Delaval's experiments on colors ap- pear to show very satisfactorily, that all the co- loring substances in common use owe their tints to rays', which are separated from white light during its passage through them, and not, as Newton supposed, to the reflection

of a particular color from the first surface. It has been ob- served that Keplet and Zucchius had long ago made experiments nearly similar to those of Mr. Delaval. Dr. Robert Darwin's investigation of the effects of strong lights on the eye appears to comprehend almost all possible varieties of these ocular spectra; but it does not lead to any fun- damental analogy capable of explaining the most intricate of them.

23. The phenomena of the unusual atmospheric refraction, which frequently produces double or triple images of objects seen near a heated sur- face, have been successfully illustrated by Mr. Huddart, Mr.Vince, and Dr. WoUaston; so that at present there appears to be little doubt re- maining with respect to their origin. Dr. Wol- laston's instrument, for the measurement of refractive densities, very much facilitates the ex- amination of the optical properties of substances of various kinds ; he has applied it very success- fully to the confirmation of Iluygens's theory of double refraction ; he has corrected the common opinion respecting the division of the prismatic spectrum ; he discovered, without being ac- quainted with the observations of Ritter, the dark rays which blacken the salts of silver ; and he has remarked a single property in some natural as well as artificial crystals, which appear of one color when viewed in the direction of the axis, and of another when in a transverse direction.

24. To Dr. Herschel the sciences of optics and astronomy are equally indebted. He has carried the construction of the reflecting telescope to a degree of perfection far exceeding all that had been before attempted ; and the well known im- provements which astronomy has derived from his observations are numerous and important. In the course of his researches for the attainment of his more immediate objects he has also had the good fortune to discover the separation of the rays of heat from those of light by refraction ; a fact which has been sufficiently established by the experiments of several other persons.

25. We must now furnish a brief sketch of ××× the labors of the experimental philosophers : ××× Euclid, the well known author of the Elements of (Jeometry, appears to have been the first amongst the ancients celebrated for his know

ledge of optical science. Tliis distinguished georaeter did not venture to offer a decided opinion respecting the nature of light ; but contented himself with remarking some of its ordi- nary properties, and applying them to the pur- poses of human vision. Aristotle has given a definition of light similar to that of motion ❖❖❖ the act or energy of a transparent body, inas- much as it is transparent ; and, in proceeding to speculate upon its nature, he altogether denied it to be a substance. This opinion he founded upon the apparently instantaneous transmission of light in any direction. For, as he argued on the general rule, that bodies move with a velo- city inversely as the quantity of matter which they contain, light could not, in his estimation, be a material substance, or, the inconceivable ve- locity of its particles could not be established. As it is not our intention to present an analysis of the opinions of the ancients respecting the na- ture of light, we shall proceed to a period in its history of the utmost importance to the science of optics ; we refer to the foundation of the Car- tesian school of philosophy. What has been said respecting the opinions of the ancients is merely intended to show that Descartes, in de- nying the materiality of light, hˆs only pursued the path marked out by his predecessor Aris- totle ; though it must be acknowledged that his views of the subject are far more scientific.

26. The opinion of Descartes, and many other modern philosophers of the French school, was, that light is an extremely subtile fluid, pervading the whole sphere of the universe, and receiving from bodies of a luminous nature a series of agi- tations similar to those excited in a sonorous body by the intervention of the atmospheric air. This theory has undergone some revision, and been somewhat corrected by such modern en- quirers as have adopted it; who, to reconcile it with the ordinary and received ideas of the re- flection and propagation of light, have supposed its particles to be elastic, and, instead of existing in a state of perfect contiguity, to have small intervals between them. According to this hypo- thesis, therefore, a ray of light consists of a suc- cession of moleculae, having a number of oscilla- tions continually repeated. Now, a very great objection to this theory of the French philoso- pher appears to exist in the rectilinear direction of light; a principle that was discovered by Euclid, and has been subsequently confirmed by minute and conclusive experiments. For, upon this supposition, light would not only be propa- gated in a direct line, but, like sound, would be transmitted in every direction ; the consequence of which would be the exclusion of night, and the impossibility of a phenomenon that has been frequently exhibited in the total eclipse of the sun.

27. Notwithstanding these great objections to the theory of light we

have referred to, so great was the estimation in which the French philoso- pher was held by the scientific world during the age in which he lived, that no one ventured to dispute its accuracy, until it found an irresistible opponent in Sir Isaac Newton. The theory of this great mathematician and experimentalist, to which modern philosophy has given a decided

preference, consists in the materiality of light According to this principle, the origin of light is to be traced to an actual emanation, or emis- sion, of particles of luminous bodies thrown oflf in continued fcuccession, and succeeding one ano- ther without interruption. The objections which have been urged against this hypothesis are alto- gether inconsistent with a just idea of the true nature of light, and possess none of that force by which the objections to the hypothesis of Des- cartes are accompanied. It fias been objected, that, upon the indulgence of this supposition, the rays of light continually emitted from the sun and stars would interfere with each other, and, consequently, prevent their procedure in a rectilinear direction. This difficulty, which is certainly the greatest that has hitherto been ad- duced, may be readily obviated by taking into consideration the extreme minuteness of the lu- minous particles, and the disparity which there is between the length of their diameters and re- lative distance from each other.

28. Having adverted to the Newtonian the- ory of the materiality of light, it now becomes an object of considerable importance and interest to investigate the nature of its particles. We have already hinted at their extreme minuteness. This may be illustrated by reference to a very simple experiment. If a small hole be made with a needle in a sheet of paper, a spectator lying in a position horizontal to the surface of the earth, and looking through the aperture thus made, would be able to see all the objects in the celestial hemisphere. Now, upon the principle we have stated above, the rays of light, proceed- ing from the several objects of vision to which the eye of the spectator has been directed, must, of necessity, pass through the aperture at once, without the slightest collision of their particles. Nor will it appear incredible that these myriads of rays should be transmitted through the aper- ture without the appearance of interruption, when we consider their relative proportion to each other. The utmost efforts of iiuman skill and ingenuity have been directed to the con- struction of the most delicate optical instruments (as in the case of solar microscopes) ; and, al- though they have succeeded in refracting the rays of light to an almost inconceivable extent, yet have hitherto experienced an entire failure in the attempt to discover the distinct particles of this subtile fluid.

29. Another experiment, in illustration of the extreme minuteness of the particles of light, is equally conclusive. If a candle be lighted and placed on an elevation, and no object intervene to obstruct the progress of its rays, it will diffuse itself over an entire space of two miles and up- wards in every direction, and form, in itself, a concentric circle, having a diameter of four miles in extent ; and this distribution of rays is effected without any sensible diminution of the original luminous body. If the principles we have stated need further confirmation, we may refer to the passage of light through the pofes of diamonds, and other gems of a vitreous nature, which have hitherto eluded the detection of the most accu- rate microscopes.

30. The inconceivable velocity of light is a

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J.Shtiry Sen

OPTICS.

1.97

principle which may be no less satisfactorily ex- plained than the minuteness of its particles. The propagation of light was, for a long period, sup- posed to be instantaneous ; because no method that had been adopted had succeeded in marking tlie degree of its velocity. Astronomers had jneviously ascertained the fact, that the distance of the sun, the great source of light, from the earth, is alout 95,000,000 of miles; and that a cannon ball, travelling with uniform velocity from the earth, would scarcely measure the distance in twenty-five years. The fixed stars had been pre- viously determined to be still more remote; and yet the rays of light were known to be emitted from all these luminaries, and to arrive at the earth, comparatively, in a very short time. But, whilst the general fact of the rapidity of light might have been felt to be fully established by these familiar occurrences, it was evident that they could furnish no data by which to ascertain the degree of its velocity. Roemer, a Danish philosopher, who flourished in the seventeenth century ; and Cassini, an astronomer born at

Piedmont in 1635, discovered a rule by which to determine this velocity. They observed the eclipses of the satellites of Jupiter, and discovered that they are visible to us about eight minutes sooner (according to Dr. Bradley, eiglit minutes and thirteen seconds), than they ought to be when the earth is placed between the sun and this planet. On the other hand, it was remarked that, when the sun was between the planet Jupiter and the earth, the appearance of these eclipses was first observed about eight minutes later than it ought to have been, from accurate calculations previously made. Hence it was inferred that light occupies about eight minutes in traversing the d. stance between the sun and earth, which we have already stated has been estimated at about 95,000,000 of miles.

31. The above will be better understood by referring to plate I, Optics, fig. 1. Let A be the sun, and BC D E the annual orbit of the earth round the sun ; let the small circle at F repre- sent the planet Jupiter, GUI the orbit of the nearest satellite, which, entering the shadow of Jupiter atG, comes out at the point H. When the earth is at B, in its annual progress round the sun, and the satellite is observed to come out of the shadow, the same emersion will be again perceived in 42ˆ hours. Suppose the earth to remain constantly at B, then, in 42ˆ hours mul- tiplied by 50 (or 42ˆ X 50 := 2125 hours), there would be fifty distinct emersions perceptible. Let the earth, however, be removed further from Jupiter towards C ; then, if the doctrine of Des- cartes be not true, or, in other terms, if a portion of time be requisite for the transmission of light, the emersion of the satellite must be obscured as much later than 42ˆ hours X 50 as the time may amount to ××× that is, occupied in the trans- mission of light over the space K C, which is the difference of the spaces C G and K G. In fact, the time consumed by the passage of light over the space KBC must be added to 42ˆ hours X 50, making 42ˆ X 50 ××× 2125 hours + eight

minutes ; or, according to Dr. Bradley's compu- tation, eight minutes and thirteen seconds.

32. To afford a more simple illustration of the prodigious velocity of light, we may refer to many facts of daily occurrence. For instance, we perceive the flash of a gun; but, perhaps, a second or two may elapse before we hear the re- port produced by its discharge. Of the same nature is the flash of lightning which illuminates the celestial hemisphere, and may be succeeded by the peal of thunder after the lapse of sereral minutes. Hence, we infer, that, whatever may be the rate at which sound travels, the rapidity of light is far greater.

33. The rectilinear propagation of light was known to the ancients ;

and in modern times has been abundantly confirmed by experiments. Every luminous body emits continually small particles of matter from its surface, which pro- ceed in straight lines, and in every direction, until they meet with some resisting medium. When this, therefore, occurs ††† when the rays of light fall on the superficies of a dense and opaque sub- stance, through which it is impossible for them to pass, they do not travel round it, but are alto- gether stayed in their course; and must, either by turning back again, form what philosophers call the angle of incidence, or be completely ab- sorbed. No contrivance of man has hitherto been able to cause them to move in a curvilinear direction.

34. We have already slated the immense ve- locity with which light is emitted from the sun's body, and it will be easy to conceive that it can- not suffer any change in velocity or direction, till it meets with some ponderable matter. In ap- proaching any planetary body, such as our earth, we have reason to believe that they are mutually attracted. Rays falhng nerpeHdicularly upon the atmosphere are equally attracted on every side, and come in a straight line to the earth ; while those rays which fall obliquely are bent out of their original direction; and, since the atmo- sphere is not of uniform density, such oblique rays will come to the earth in curved lines. If our atmosphere were of uniform density, the re- fraction would not be altered ; but the oblique rays falling upon its surface would be reflected in a very great degree ; a circumstance which would deprive us of much of the sun's light. No doubt a great quantity of light becomes extin- guished in its passage through the aerial me- dium, as we may justly learn from the dif- ference of intensity in the light at different alti- tudes of the sun : but how much must tliis loss of light appear, when we recur to the statement already made, namely, that the whole effects of the sun's light would be lost by passing through 679 feet of sea-water, and that the same effect would take place by its passage through 3,110,310 feet of air !

35. The following is a table from M. Bouguer, showing the intensity of the sun's light at differ- ent altitudes, and the thickness of air it has lO penetrate at each angle.

Thickness of sir

Intensity of

Sun’s altitude.

in toises.

light, the whole being 10,000.

90 ‘

3911

8123

80

3971

8098

70

4162

8016

66 11

4295

7968

6.5

4315

7951

60

4516

7866

5.5

4776

7759

50

5104

7624

45

5530

7454

40

6086

7237

35

6813

6963

30

7784

6613

25

9191

6136

20

11,341

5474

19 16

11,744

5358

19

11,890

5316

18

12,515

5143

17

13,220

4954

(6

14,000

4753

)5

14.880

4535

14

15,880

4301

13

17,012

4050

12

18,344

3773

11

19,908

3472

10

21,745

3149

9

23,975

2797

8

26,672

2423

7

29,996

2031

6

34,300

1616

5

39,893

1201

4

47,480

802

3

58,182

454

2

74,429

192

1

100,930

47

0

138,823

6

36. When a ray of light falls upon the surface of a body it is either reflected, absorbed, and extinguished, or transmitted. And under some circumstances all these eflfects take place.

37. If the object be at A, oblique to the sur- face DE of the

looking-glass, and a person wishes to see it in the glass at C, the eye must be at a, be- cause the angle of incidence A C F is equal to the angle of reflection F C a. If the object be at B the eye must be at h to see it at C in the glass ; for the angle of incidence B CF is equal to the an- gle of reflection F C 6.

38. The reflection of the ray depends, 1st, Upon the nature of the body ; 2dly, Upon the

state and color of the surface ; and Sdly, Upon the quantity of the angle of incidence. Under all these circumstances, however, the angle at wliich the ray is reflected is equal to the angle of incidence. The same laws, therefore, which govern the collision between perfectly elastic bodies and absolutely hard surfaces, may be ap- plied to the reflection of light. Of the diff'erent bodies which reflect light, metals possess this power in the greatest degree, and perhaps in pro- portion to their density and hardness. Smooth or polished surfaces reflect

more light than rough ones.

39. Of colored surfaces the lightest colors re- flect the most ; hence the whitest metals make the best reflectors. The order will, therefore, in all probability, be as follows, beginning with the best reflectors: ††† white, yellow, red, blue, black. The two extremes are very striking in the well known experiment of two pieces of cloth, one while and the other black, laid on the surface of snow in the sun. The black piece very soon sinks into the snow, from absorbing a greater quantity of light, which causes the heat. The white piece reflects a greater portion, and is longer in becoming heated. With regard to the quantity of reflection, as affected by the angle of the incidence, it is found that opaque bodies are more heated as the rays strike their surfaces more perpendicularly, and the quantity of light which enters transparent bodies is the same. In both instances, therefore, more light enters the bodies, and less is reflected. In the first instance the light which is not reflected becomes extin- guished, producing heat ; in the second it is transmitted, still retaining the property of light. Hence, therefore, we ought to conclude that the reflection will be inversely as the angle of inci- dence, supposing the angle to be formed by the ray and the surface of the medium.

40. M. Bouguer has informed us that the light reflected from a surface of mercury, when the angle of incidence was 11†† 30’, was only equal to one-fourth of the whole, and he thinks it pro- bable that no substance reflects more. It is certain, however, that polished silver reflects much more. The same philosopher observes that the metallic reflectors change less in their power of reflection with the angle of incidence. He made the following experimentwith polished black marble : ††† At an angle of 3†† 35′ with the reflecting surface, 6 were reflected, the whole being unity; at 15†† of incidence ‘156 were re flected; at 30††, -051 ; and at 80, -023. The rest of course became extinguished, and would heat the marble.

41. A similar diminution of the reflective power, with the angle of incidence, is observed in transparent bodies by the same author. The following table gives the results with water and plate glass : †††

The quantity of light reflected, the

Angle of inci- dence.

whole being 1000.

From water.

From plate glass.

o

721

1

692

H

669

2

639

2ˆ

614

584

5

501

543

n

409

474

10

433

412

12ˆ

271

356

15

211

299

17^

178

20

145

222

25

97

157

30

65

112

40

34

57

50

22

34

60

19

27

70

18

25

80

18

25

90

18

25

42. The reflections in this instance are partly made from the upper, and the rest from the under surface. The remainder of the 1000 parts are transmitted, with the exception of a few which are in all probabdty extinguished.

43. That, under certain circumstances, the rays of light are extinguished, even in transpa- rent bodies, is rendered highly probable by the above enquirer. M. Bouguer tells us that, if our atmosphere were 518,385 toises in height, we should have no light from the sun, even in his meridian splendor. It has been estimated that, of the horizontal sun-beams passingthrough about 200 miles of air, sgˆth part only reaches us.

44. The nature of Refraction will be fully dis- cussed under that department of our work, and we only allude to it in the present instance to illustrate the passage of a ray of light through media differing in their density. In the accom- panying diagram A is a medium of air, B, a me-

dium of water, or plain glass. The ray C D falling obliquely on the surface of the medium B, is bended at D, and goes on in the direction D E. But the ray FG, falling perpendicularly on the surface of the medium B, goes on in the same straight direction GH.

45. Light, in passing within a certain distance of the surface of bodies, is bent so as to form

apparently a rectilinear angle at that place. Thus, if a small hole be made in the shutter of a window of a darkened room, and the light of the sun be permitted to pass through it, the image of the sun, or white spot which is formed upon a screen placed to receive that light in the room, will be found to be larger than it ought to be if right lined rays proceeded from the various points of the sun's surface, and passed through the hole to the screen ; hence it appears that they are bent at the hole ; for otherwise the image would be smaller than experience shows it to be.

46. This property of light was not discovered till about the middle of the seventeenth century. The person who first made the discovery was F. Grimaldi ; at least he first published an account of it in his treatise De Lumine, Coloribus, et Iride, printed in 1666. Dr. Hooke, however, laid claim to the same discovery, though he d'd not publish his observations till six years after Grimaldi.

47. Dr. Hooke, having niade his room com- pletely dark, admitted into it a beam of the sun's light by a very small hole in a brass plate fixed in the window shutter. This beam, spread- ing itself, formed a cone, the apex of which was in the hole, and the base was on a paper, so placed as to receive it at a distance. In this image of the sun, thus painted on the paper, he observed that the middle was much brighter than the edges, and that there was a kind of dark penumbra about it, of about a sixteenth part of the diameter of the circle; which penum- bra, he says, must be ascribed to a property of light, which he promised to explam. ××× Having observed this, at the distance of about two inches from the former, he let in another cone of light ; and, receiving the bases of them at such a dis- tance from the holes as that the circles inter- sected each other, he observed that there was not only a penumbia,or darker ring, encompass- ing the lighter circle, but a manifest dark line, or circle, which appeared even Where the limb of the one interfered with that of the other.

48. The shadows of all bodies, metals, stones, glass, wood, horn, ice, kc, in this light were bordered with three parallel fringes, or bands of colored light, of whicli that which was contigu- ous to the shadow was the broadest and most lunjjnous, while that which was the most remote was the narrowest, and so faint as not easily to be visible. It was difficult to distinguish these colors unless when the light fell verj' obliquely upon a smooth paper, or some other smooth white body, so as to make them appear much broader than tliey would otherwise have done ; but m these circumstances the colors were plainly visible, ard in the following order The first or inner- most fringe was violet, and deep blue next the shadow, light blue, green, and yellow in the

middle, and red without. The second fringe was almost contiguous to the first, and the third to the second ; and both were blue within and yellow and red without ; but their colors were very faint, especially those of the third. The colors, therefore, proceeded in the following order from the shadow : violet, indigo, pale blue, green, yellow, red ; blue, yellow, red ; pale blue, pale yellow, and red. The shadows made bj

scratches and bubbles in polished plates of glass, were bordered with tlie like fringes of colored light. By looking on the sun through a feather, or black riband, held close to the eye, several rainbows will appear, the shadows which the fibres or threads cast on the retina being bor- dered with tlie like fringes of colors. Measuring these fringes and their intervals, with the greatest accuracy, he found the former to be in the pro- gression of the numbers, 1, \/ i \/ 3> and their intervals to be in the same progression with them, that is, the fringes and their intervals toge- tlier to be in continual progression of the num- bers 1, ►►/ 5, s/ i, \/ i\/ 3, or thereabouts. And these proportions held the same very nearly at all distances from the hair, tlie dark intervals of the fringes being as broad in pronortion to the breadth of the fringes at their tirst appearance as afterwards, at great distances from the hair, though not so dark and distinct.

49. In Sir Isaac's observations we find a very remarkable and curious appearance, pretty simi- lar to the one noticed by Dr. Ilooke. The sun shining into iiis darkened chamber, through a hole three-fourths of an inch broad, he placed at the distance of two or three feet from the hole, a sheet of iˆiasteboard, black on both sides ; in the middle of it he made a hole about one-fourth of an inch square, for the light to pass ilirough; behind tlie hole iie fastened to the pasteboard the blade of a sharp knife, to intercept some part of the light which passed through the bole. Tiie planes of the pasteboard and blade of the knife were parallel to one another, and perpendicular to the rays ; and when they were so placed that none of the light fell on the pasteboard, but all of it passed through the hole to the knife, and there part of it fell upon the blade of the knife, and part of it passed by its edge, he let that part of the light which passed by fall on a white paper, two or three feet beyond the knife, and there saw two streams of faint light shoot out both ways from the beam of light into the shadow, like the tails of comets. But because the sun's direct light, by its brightness upon the paper, obscured these faint streams, so that he could scarce

see them, he made a little hole in the midst of the paper for that light to pass through and fall on a black cloth behind it : and then he saw the two streams plainly. They were like one another, and pretty nearly equal in length, breadth, and quantity of light. Their light, at tiiat end which was next to the sun's direct light, was pretty strong for the space of about one- fourth of an inch, or half an inch, and decreased gradually till it became insensible. The whole length of each of these streams, measured upon tlie paper, at three feet from the knife, was about six or eight inches ; so that it subtended an angle, at the edge of the knife, of about 10►► or 12►►, or at most 14►►. Yet sometimes he thought he sav.' it shoot 3►► or 4►► farther; but with a light so very faint that he could hardly perceive it. This light he suspected might, in part, arise from some other cause than the two streams ; for, placing his eye in that light, beyond the end of that stream which was behind tlie knife, and looking towards the knife, he could see a line of light upon its edge; and that not only when his eye

was in the line of the streams, but also when it was out of that line, either towards the point of the knife or towards the handle. This line of light appeared contiguous to the edge of the knife, and was narrower than the light of the in- nermost fringe, and narrowest when his eye was farthest from the direct light ; and therefore seemed to pass between the light of that fringe and the edge of the knife ; and that which pass- ed nearest the edge seemed to be most bent, though not all of it. He then placed another knife by the former, so that their edges might be parallel, and Ioo'k towards one another, and that the beam of light might fall upon both the knives and some part of it pass between their edges. In this situation he observed that, when the distance of their edges was about the 400th part of an inch, the stream divided in the middle, and left a shadow between the two parts. This shadow was so black and dark that all the light which passed between the knives seemed to be bent and turned aside to the one hand or the other ; and, as the knives still approached one another, the shadow grew broader, and the streams shorter next to it, till, upon the contact of the knives, all the light vanished.

50. From this experiment he concludes that the light wliicli is least bent, and which goes to the inward ends of the streams, passes by the edges of the knives at the greatest distance ; and this distance, when the shadow began to appear between the streams, was about the 800th part of an inch ; and the light which passed by the edges of the knives, at distances still less and less, was more and more faint, and went to those parts of the streams which were farther from the direct light; because, when the knives approach- ed one another till they touched, those parts of the streams vanished last which were farthest

from the direct light. In the experiment of one knife only, the colored fringes did not appear ; but, on account of the breadth of the hole in the window, became so broad as to run into one another, and, by joining, to make one continued light in the beginning of the streams ; but in the last experiment, as the knives approached one another, a little before the shadow appeared be- tween the two streams, the fringes began to ap- pear on the inner ends of the streams, on either side of the direct light ; three on one side, made by the edge of one knife, and three on the other side, made by the edge of the other knife. They were most distinct when the knives were placed at the greatest distance from the hole in the win- dow, and became still more so by making the hole less ; so that he could sometimes see a faint trace of a fourth fringe beyond the three above- mentioned : and, as the knives approached one another, the fringes grew more distinct and lar- ger, till they vanished ; the outermost vanishing first, and the innermost last. After they were all vanished, and the line of light which was in the middle between them was grown very broad, ex- tending itself on both sides into the streams of light described before, the above-mentioned shadow began to appear in the middle of this light, and to divide it along the middle into two lines of light, and increased till all the light va- nished. This enlargement of the fringes was so

great, that the rays which went to the innermost fringe seemed to be bent about twenty times jnore when the fringe was ready to vanish, than when one of the knives was taken away.

51. From both these experiments, compared together, Sir Isaac concludes that the light of

he first fringe passed by the edge of the knife at d distance greater than the 800th part of an inch ; that the light of the second passed by the edge of the knife at a greater distance than the light of the first fringe, and that of the third at a greater distance than that of the second ; and that the light, of which the streams above-mentioned con- sisted, passed by the edges of the knives at less distances than that of any of the fringes.

52. He then got the edges of two knives ground truly straight, and attaching them to a board, so that their edges might look to- wards one another, and, meeting near their points, contain a rectilinear

angle, he fastened their handles together, to make the angle invari- able. The distance of the edges of the knives from one another, four inches from the angular point, where the edges of the knives met, was the eighth part of an inch; so that the angle -contained by their edges was about 1►► 54'. The knives being thus fixed together, he placed them in a beam of the sun's light let into his darkened chamber, through a hole the forty-second part of an inch wide, ten or thirteen feet from the hole; and he let the light which passed between their edges fail very obliquely on a smooth white ruler, half an inch or an inch from the knives ; and there he saw the fringes made by the two edges of the knives run along the edges of the shadows of the knives, in lines parallel to those edges, without growing sensibly broader, till they met in angles equal to the angle contained by the edges of the knives ; and where tliey met and joined they ended, without crossing one another. But if the ruler was held at a much greater dis- tance from the knives, the fringes, where they were farther from the place of their meeting, were a little narrower, and they became some- thing broader as they approached nearer to one another, and after they met they crossed one another, and then became much broader than before. From these observations he concluded that the distances at which the light comi)osing the fringes passed by the knives were not in- creased or altered by the approach of the knives, but that the angles, in which the rays were there bent, were much increased by that approach ; and that the knife which was nearest to any ray determined which way the ray should be bent, but that the other knife increased the bending.

53. When the rays fell very obliquely upon the ruler, at the distance of a third part of an inch from the knives, the dark line between the first and second fringe of the shadow of one knife, and the dark line between the first and second fringe of the shadow of the other knife, met one another, at the distance of the fifth part of an inch from the end of the light which passed between the knives, where their edges met one another ; so that the distance of the edges of the knives, at the meeting of the dark lines, was the l60th part of an inch ; and one half of that light passed by the edge of one knife, at a distance

not greater than the 320th part of an inch, and. falling upon the paper, made the fringes or the shadow of that knife ; wliile the other half pass- ed by the edge of the other knife, at a distance not greater than the 320th part of an inch, and, falling upon ttie paper, made the fringes of the shadow of the other knife. But, if the paper was held at a distance from the knives greater than the third part of an inch, the dark lines above- mentioned met at a greater distance than the fifth part of an inch from the end of the li<ˆht which passed between the knives, at the meeting of their edges; so that the light which fell upon

the paper where those dark lines met passed be- tween the knives, where their edges were farther distant than the 160th part of an inch. For at another time, when the two knives were eight feet and five inches from the little hole in the window, the light which fell upon the paper where the above-mentioned dark lines met passed between the knives, where the distance between their edges was, as in the following table, at the distances from the paper there noted : ###

54. Distances of the pa-

Distances between the

per from the knives in

edges

of the knives in

inches.

millesimal parts of an

inch.

1-J

0012

3i

0020

8i

0034

32

0057

96

0081

131

0087

55. From these observations he concluded that the light which makes the fringes upon the paper is not the same light at all distances of the paper from the knives ; but that, when the paper is held near the knives, the fringes are made by light which passes by the edges of the knives at a less distance, and is more bent than when the paper is held at a greater distance from the knives.

56. When the fringes of the shadows of the knives fell perpendicularly upon the paper, at a great distance from the knives, they were in the form of hyperbolas, their dimensions being as fol- lows : ††† Let C A, C B, fig. 2, represent lines drawn upon the paper, parallel to the edges of the knives ; and between which all the light would fall if it suffered no inflection. D E is a right line drawn through C, making the angles A C D, B C E, equal to one another, and termi- nating all the light which falls upon the paper, from the point where the edges of the knives meet. Then e i s, fkt, and glv, will be three hyperbolical lines, representing the boundaries of the shadow of one of the knives, the dark line between the first and second fringes of that shadow, and the dark line between the second and third fringes of the same shadow. Also xip,ykq, and zlr, will be three other hyper- bolical lines, representing the boundaries of the shadow of the" other knife, the dark line between the first and second fringes of that shadow, and the dark line between the second and third frinj;es of the same shadow. These three hyper- bolas are similar, and equal to the former three, and cross them in the points i, k, and / ; so that

the shadows of the knives are terminated, and distinguished from tlie first luminous fringes, by the lines eis and xip, till the meeting and crossing of the fringes, ; and then those lines cross the fringes in the form of dark lines termi- nating the first luminous fringes on the inside, and distinguishing them from another light, †††which begins to appear at i, and illuminates all the triangular space ip D Es, comprehended by these dark lines and ihe right line D E. Of tliese hyperbolas one asymptote is the line D E, and the otiier asymptotes are parallel to the lines C A and C B. The sun shining into his darkened room, through the small hole mentioned above, he placed at the hole a prism to refract the light, and to form on the opposite wall the colored image of the sun ; and he found that the slia- dows of all bodies held in the colored light, be- tween the prism and the wall, were bordered with fringes of the color of that light in which they were held ; and, comparing the fringes made in the several colored

lights, he found that those made in the red light were the largest, tliose made in the violet were the least, and those made in the green were of a middle bigness. For the fringes with which the shadow ofa man's hair were bordered, being measured across the shadow, at six inches from the hair, the distance between the middle and most luminous part of the first or innermost fringe on one side of the shadow, and that of the like fringe on the other side of the shadow, was in the full red light j of

i

an inch, and in the full violet ^'g. The like distance between the middle and most luminous parts of the second fringes, on either side of tlie shadow, was in the full red light ^^, and the vio- let ^j of an inch; and these distances of the fringes held the same proportion at all distances from the hair without any sensible variation.

.57. From these observations it was evident, that the rays which made the fringes in the red light, passed by the hair at a greater distance than those which made the like fringes in the violet; so that the hair, in causing these fringes, acted alike upon the red light or least refrangible rays at a greater distance, and upon the violet or most refrangible rays at a less distance; and thereby occasioned fringes of different sizes, without any change in the color of any sort of light. It may therefore be concluded, that when the hair in the first observation was held in the white beam of the sun's light, and cast a shadow which was bordered with three fringes of colored light, those colors arose not from any new modifications impressed upon the rays of light by the hair, but only from the various inflections whereby the several sorts of rays were separated from one another, which before separation, by the mixture of all their colors, composed the ###white beam of the sun's light ; but, when sepa- rated, composed lights of the several colors which they are originally disposed to exhibit.

58. The first person who pursued any experi- ments similar to those of Newton on inflected .ight, was M. Maraldi ; whose observations chiefly respect the inflection of light towards other bodies, whereby their shadows are partially illuminated ; and many of the circumstances

which he noticed relating to it are well worthy of attention. He exposed in the light of the sun a cylinder of wood three feet long and six lines and a half in diameter; when its shadow, being received upon a paper held close to it, was every where equally black and well

defined, and continued to be so to the distance of twenty- three inches from it. . At a greater distance the shadow appeared to be of two diff'erent densities; for the two extremities of the shadow, in the direction of the length of the cylinder, were ter- minated by two dark strokes, a little more than a line in breadth. Within these dark lines there was a faint light, equally dispersed through the shadow, which formed a uniform penumbra, much lighter than the dark strokes at the ex- tremity, or than the shadow received near the cylinder. As the cylinder was removed to a greater distance from the paper, the two black lines continued to be nearly of the same breadth, and the same degree of obscurity ; but tlie pe- numbra in the middle grew lighter, and its breadth diminished, so that the two dark lines at the extremity of the shadow approached one another, till, at the distance of sixty inches, they coincided, and the penumbra in the middle entirely vanished. At a .still greater distance a faint penumbra was visible ; but it was ill defined, and grew broader as the cylinder was removed farther off", but was sensible at a very great distance. A narrow and faint penumbra was also seen on the outside of the dark shadow ; and on the outside of this there was a tract more strongly illuminated than the rest of the paper. The breadth of the external penumbra increased with the distance of the shadow from the cylinder, and the breadth of the tract of light on the outside of it was also enlarged; but its splendor diminished with the distance.

59. He repeated these experiments with three other cylinders of diff'erent dimensions; and from them all he inferred, that every opaque cylindrical body, exposed to the light of the sun, makes a shadow which is black and dark to the distance of thirty-eight to forty-five diameters of the cylinder which forms it ; and that, at a greater distance, the middle part begins to be illuminated in the manner described above. Other rays were deflected from the body, and formed a strong light on the outside of the sha- dow, and which might at the same time con- tribute to dilute the outer shadow, though he supposed that penumbra to be occasioned prin- cipally by that part of the paper not being enlightened, except by a part of the sun's disk only, according to the known principles of optics. The same experiments he made with globes of several diameters ; but he found that, whereas the shadows of the cylinders did not disappear but at the distance of forty-one of their diameters, those of the globes were not visible beyond fifteen of their diameters ; which he thought was owing td the light being inflected on every side of a globe, and consequently in such a quantity as to disperse the shadows sooner than in the case of the cylinders. In all these cases the penumbra occasioned by the inflected light began to be visible at a less dis- tance from the body in

the stronger light of the

sun than in a weaker, on account of the greater quantity of rays inflected in those circumstances.

60. M. Maraldi, being sensible that the above mentioned phenomena of the shadows were caused by inflected ###light, was induced to give more particular attention to this remarkable pro- perty, and to repeat the experiments of Grimaldi and Sir Isaac Newton m a darkened room. In doing this, he observed that, besides the enlarged shadow of a hair, a fine needle, &c., the bright gleam of light that bordered it, and the three colored rings next to this enlightened part, when the shadow was at a considerable distance from the hair, the dark central shadow was di- vided in the middle by a mixture of light; and *hat it was not of the same density, except when it was very near the hair. This new appearance is exactly similar to what he had observed with respect to the shadows in the open day-light above- mentioned.

61. Having placed a bristle in the rays of the sun, admitted into a dark chamber by a small hole, at the distance of nine feet from the hole it made a shadow, which, being received at five or six feet from the object, he observed to con- sist of several streaks of light and shade. The middle part was a faint penumbra, bordered by a darker shadow, and after that by a narrower penumbra ; next to which was a light streak broader than the dark part, and next to the streak of light, the red, violet, and blue colors were seen as in the shadow of the hair. He also placed in the same rays, several needles of different sizes ; but the appearances were so exceedingly various and singular, that he does not recite them. He exposed in the rays of the sun, admitted by a small hole into a dark cham- ber, a plate two inches long, and a little more than half a line broad. This plate being fixed perpendicularly to the rays, at the distance of nine feet from the hole, a faint light was seen uniformly dispersed over the shadow, when it was received perpendicularly to it, and very near. The shadow of the same plate, being received at the distance of two feet and a half, was divided into four very narrow black streaks, separated by small lighter intervals equal to them. The boundaries of this shadow on each side had a penumbra, which was terminatml by a very strong light, next to which were the colored streaks of red, violet, and blue, as before.

62. The shadow of the same plate, at four feet and a half distance from it, was divided into two black streaks only, the two outermost having disappeared ; but these two black streaks which remained were broader than before, and sepa- rated by a lighter shade, twice as broad as one of the former black streaks, when the shadow was taken at two feet and one-third. This pe- numbra in the middle had a tinge of red. After the two black streaks there appeared a pretty strong penumbra, terminated by the two streaks of light, which were now broad and splendid, after which followed the colored streaks. A second plate, two inches long and a line broad, being placed like the former fourteen feet from the hole by which the rays of the sun were admitted, its shadow, being received perpendi-

cfilarly very near the plate, was illuminated by a faint light, equally dispersed, as in the pre- ceding plate. But being received at thirteen feet from the plate, six small black streaks began to be visible. At seventeen feet from the plate, the black streaks were broader, more distinct, and more separated from the streaks that were less dark. At forty-two feet from the plate, only two black streaks were seen in the middle of the penumbra. This middle penumbra be- tween the two black streaks was tinged with red. Next to the black streaks there always appeared the streaks of light which were broad, and the colored streaks next to them. Receiving the shadow of the same plate at the distance of seventy-two feet, the appearances were the same as in the former situation, except that the two black streaks were broader, and the interval between them, occupied by the penumbra, was broader also, and tinged with a deeper red.

63. In the same rays of the sun he placed diff'erent plates, larger than the former, one of them a line and a half, another two lines, ano- ther three lines broad, &c., but receiving their shadows upon paper, he could not perceive in them those streaks of faint light which be had observed in the shadows of the small plates, though he received these shadows at the distance of fifty-six feet. Nothing was seen but a weak light, equally diff'used as in the shadows of the two smallest plates, received very near them. The streaks of light in the shadows of needles of a middling size, our author ascribed to the rays of light which are inflected at diff'erent distances from the bodies ; and he imagined that their crossing one another was sufficient to account for the variations observable in them at different distances. The extraordinary size of the shadows of these small substances M. Ma- raldi thought to be occasioned by the siiadow from the enlightened part of the sky, added to that which was made by the light of the sun, and also to a vortex occasioned by the circula- tion of the inflected light behind the object.

64. M. Maraldi, having made the preceding experiments upon single long substances, had the curiosity to place two of them so as to cross one another in a beam of the sun's light. The shadows of two hairs placed in this manner, and received at some distance from them, appeared to be painted reciprocally one upon another, so that the obscure part of one of them was visible upon the obscure part of the other. The streaks of light also crossed one another, and the colored streaks did the same. Having placed a needle and a hair crossing one another, their shadows, at the same distance, exhibited the same appearances as the shadows of the two hairs, though the shadow of the needle was the stronger. He also placed in the rays of the sun a bristle and a plate of iron a line thick, so that they crossed one another obliquely ; and when their shadows were received at the same distance, the light and dark streaks of the S'hadow of the bristle were visible so far as the shadow of the plate on the side of the acute angle, but not on the side of the obtuse angle, whether the bristle or the plate were placed next to the ray. The plate made a shadow sufficiently dark, divided

into six black streaks ; and these were again divided by as many light ones equal to them ; and yet all the streaks belonging to the shadow of the bristle were visible upon it. ###

65. M. Maraldi exposed several small globes in the light of the sun in his dark chamber, and compared their shadows with those of the long substances, as he had done in the day-light, and the appearances were still similar. There was much more light in the shadows of the globes than in those of the cylmders, not only when they were both of an equal diameter, but when that of the globe was larger than that of the cylinder, and the shadows of both the bodies were received at the same distance. He could perceive no difference of light in the shadows of the plates which were a little more than one line broad, though they were received at the distance of seventy-two feet ; but he could easily see a difference of shades in those of the globes, taken dt the same distance, though they were two lines and a quarter in diameter. To explain the colors at the edges of these shadows, he contrived to throw some of the shadows upon others ; and the following oliservations, though they did not enable him to accomplish what he intended, are worth reciting : ### Having thrown several of the similar colors upon one another, and thereby produced a tinge more lively than before, he threw the gleam of light, which always

intervened between the colors and the darker part of the shadow, upon different parts of other shadows; and observed that, when it fell upon the exterior penumbra made by another needle, it produced a beautiful sky-blue color, almost like that which was produced by two blue colors thrown toge- ther. When the same gleam of light fell upon the deeper shadow, in the middle, it produced a red color. He placed two plates of iron, each three or four lines broad, very near one another, but with a very small interval between them ; and having placed them in the rays of the sun, and received their shadows at fifteen or twenty feet from them, he saw no light between them but a continued shadow, in the middle of which were some streaks of a lively purple, parallel to one another, and separated by other black streaks ; but between them there were other streaks, both of a very faint green, and also of a pale yellow.

66. If a solid opaque body, such as a hair, a slender wire, &c., be placed in the stream of light within the room, the size of the shadow of that body will be found different from what it ought to be if the rays of light were not bent in passing by it This bending of the rays of light by passing, not through, but near the surface of a body, is called tlie inflection of light.

67. Let X, fig. 3, be the hole (about the fif- tieth part of an inch) of the light's passage into a darkened room, and let X A, X B, be lines drawn from each external opposite edge on one side of the solar disc, to each external opposite edge on the contrary side of the hole, crossing one another : X C D will represent the beam of light after its passage through the hole, at ail distances therefrom, considerably larger than the penumbral cone E A B.

68. At seven feet from the hole the breadth

of the beam was || parts of an inch. If the light had not been bent, that breadth could not have exceeded fj. Hence it must be concluded that the light, being attracted by the sides of the hole, is inflected, and of course caused to proceed more divergingly than otherwise it would have done.

69. With a hole one-tenth of an inch wide, or wider, the centre of the beam was composed of the dense direct light of the sun unchanged in its passage ; but farther therefrom, towards the borders of the beam, this light began to increase in density, and gradually decayed more and more ill the approaches nearer and nearer to the bor- ders, becoming at last considerably diluted and evanescent, and rendering the edge of the beam ill-defined and indistinct.

70. With a smaller hole than the last the cen- tral dense light entirely disappeared, and, with a hole yet smaller than this, the external edges of the beam became more condensed and better defined ; and the whole beam of light became, as before described, of more uniform density in all its parts. With a hole smaller than any of the foregoing, about ˆ|ˆth part of an inch wide, various colors began to appear in the beam, the central parts of which became now, in their turn, more diluted than the rest, the ex- ternal parts denser than these, and bordered with tinges of yellow and red light on the very edge or margin of the beam.

71. All these appearances are to be ascribed to the same attractions of the edges of the holes, and of the different parts of the edges. These, when the hole is large, affect only the parts of the light passing nearest to them ; when the hole is reduced they attract and dilate the whole of the passing light; when the hole is yet more considerably diminished, they act, not only each part upon the light passing nearest to each, but each part also upon the light passing nearest to each opposite part of the edge, condensing by diminishing the attraction and diffusion of the light on the edges of the beam, and rendering the whole more equably and uniformly divergent, and these at last, when the hole is in its most reduced state, of about fˆth part of an inch wide, by their various actions produce colors in the passing light.

72. In the beam of solar light passing through the small hole sˆth part of an inch wide, the sha- dows of very slender bodies, such as pins, needles, straw, hairs, &c., were observed to be considera- bly broader, as they ought to be in this divergent light, than the bodies themselves ; but, as each of these bodies exercises upon the light passing by it the same attractions by which the light is bent in passing through the hole, the author of these experiments concluded that a part of the light would be in every case bent, in passing by, towards the body into the shadow, and illuminate it and diminish its breadth.

73. Across a beam of solar light, admitted into a dark chamber through a small hole in a thin piece of lead, nearly 55th of an inch wide, a hair of a man’s head was interposed, and the beam being received on a screen or sheet of white paper, with an obliquity convenient for the purpose, the following appearances were noted :

74. At the termination of the shadow, whose intensity or darkness was

not considerable, the following orders and distinctions of colors appeared. First and nearest to the dark or blue parts of the shadow might be seen a diluted blue, changing into a breadth of white light, followed by breadths of yellow and red. To these suc- ceeded an interval of diluted shade, then breadths of diluted violet, blue, diluted green, yellow, red ; then green, diluted yellow, red ; diluted green, red ; white, diluted red, and finally, white light. These are ttie more general orders of the colors. Of these orders the three first were sufficiently obvious and distinct ; the last evanescent and requiring accommodation of circumstances to produce, and attention to perceive them.

75. When the distance of observation from the hair was very small, and before the first bright streak of light began to appear, the shadow of the hair was distinct and well-defined, and of intense blackness. At a greater distance this shadow appeared to be divided by a parallel line of light throughout its whole length, into two parts, and resembled a double shadow, or the shadows of two hairs, but was by no means of the same degree of blackness as was the single shadow observed close to the hair. At still greater distances it increased in breadth and di- minished in blackness, whilst the transverse dimensions of the dividing line of light increased at the same time, until, at a considerable distance from the hair, this intermediate band or line of light began to put on the appearance of colors on its edges, and to assume, on both sides exter- nally, casts of yellowish and reddish light. By further increase of distance this apparent shadow, these dark intervals became more diluted, and of nearly the same color throughout, the line of light more and more diffused, and was at last ex- tinguished by the extreme diffusion and ultimate invisibility of the light that produced it.

76. Whilst at all these different distances these changes proceed in the shadow, and in the light nearest to the body, in the other adjoining parts of the light passing next in order of distance by the hair considerable changes are also produced.

77. The shadow that first appeared close to the hair is perfectly and truly a shadow, being produced by the interception of the passing light by the hair.

78. This shadow, however, quickly ceases to appear, the rays of light nearest to it on both sides of the hair being bent into it at considerable angles of inflection and dispersion, and crossing, illuminating, and extinguishing it.

79. The rays of light are not only bent, they are also distributed or divided into different rays of different colors, in angles of dispersion greater as the distances are less, and less as the distances are greater, in such a manner that of different colors at the same distance, the purples, blues, greens, yellows, and reds, are bent towards the body ; the purples most, each of the others in due succession less, and the reds least, accord- ing to the order of their statement; and of colors of the same sorts, at different distances, the nearer more than the mcrre remote, and the more remote less than the nearer. So various, however, are the bendings of different colors at different distances.

that in certain distinct portions of light, and at d liferent distances of observation, the more remote and the nearer rays of different colors contained within each of those portions or divisions of the light, become variously intermingled with each other, and, by their various intermixtures, form each of these divisions into party-colored fringes ; whilst, the rays of different divisions never mix- ing with those of others, the intervals of the divisions are preserved, and become the dark intervals which separate the fringes.

80. The discoveries of M. A. Fresnel respect- ing the inflexion of light are in the highest de- gree important, and caimot fail to be regarded as affording a strong confirmation of the Huyge- nian theory of light. The following is a summary of the principal results: ###

81. (1.) M. Fresnel found that the fringes formed by inflexion may be examined by an eye- glass, without receiving them upon a white sur- face ; and, by adapting a micrometer to the eye- glass, he was able to determine their breadths, even to the 100th or 200th part of a millimetre.

82. (2.) By following the external fringes to their origin by means of a lens with a short focus, he perceived the third fringe at the dis- tance of less than the 100th of a millimetre fion-j the edge of the inflecting body.

83. (3.) The inflexion of the passing light is influenced by the distance of the radiating or luminous point from the inflecting body, as ap- pears from the following re##ults : ###

Distance of the radiating point from the body.

100 millimetres. 6 metres.

Distance behind! Angular devia- the body where’tion or inflexion

the inflexion was measured.

1 metre. 1 metre.

of the red rays

of the first

fringe.

12′ 6″ 3′ 55″

84. Hence it follows that the ray suffers a less degree of inflexion in proportion to the dis- tance from which it diverges.

85; (4.) When the inflexion of the same fringe is measured at different distances behind the inflecting body, the distance, of the radiant point remaining the same, it is found to be dif- ferent at different distances; and hence it follows that the successive positions of the same fringe are not in a straight line, but form a curve whose concavity is turned towards the inflecting body. The lines which join the different positions of the fringe of all the orders of colors are hyperbolas, having for their common foci the radiatine point and the edge of the inflecting body. In some of M. Fresnel's experiments the sagitta of cur- vature was about one millimetre, or the twenty- fifth part of an inch, which is nearly fifty times greater than the error of observation.

86. (5.) M. Fresnel measured the fringes pro- duced by various bodies, and found, by accu- rate measurement, that they all produced the same inflexion, the back of a razor giving the same fringes as its sharp edge.

87. Results of a similar kind were ohtainrd by Dr. Brewster in two sets of experiments, one

of which was made in 1798, and the other in 1812 and 1813. He compared the fringes formed by gold leaf with those made by masses of gold; those formed by films which produced the colors of thin plates with those formed by masses of the same substance. lie examined the effects of platinum, diamond, and cork, in inflecting tlie light ; the effects of grooves in metallic surfaces, &c. ; and of cylinders of glass immersed in fluids of the same refractive power : and from

these he concluded that the Newtonian theory of inflexion could not be true ; that the inflexion was not produced by any force inherent in the bodiej themselves, but arose from a property of the light itself, which always shows itself when divergent light was stopped in its progress.

88. (6.) The fringes in the interior of the sha- dow were first explamed by Dr. Thomas Young. He showed, in the clearest manner, that they were formed by the interference of two portions of light coming from the opposite sides of the inflecting body. Having introduced the sun's light into a dark room, through two small holes very near each other, he received the admitted light upon a sheet of paper from each of the holes separately, and observed no particular effect. But when the light was admitted through both the holes at the same time, so as to inter- fere, a series of obscure and brilliant fringes was produced.

89. M. Fresnel obtained a similar effect by reflecting light from two metallic mirrors slightly inclined to each other, and whose surfaces were nearly in the same plane. The formation of these bands depends on the lengths of the paths of tv/o interfering portions of light. When the paths are exactly of the same length, the two portions of light will form a very brilliant fringe, having an intensity greater than that of either portion. If the next brilliant fringe corresponds to a difference of paths equal to d, then other brilliant fringes will be formed when the differ- ences of the paths are 2 d, 3 d, 4 rf, &c. When the differences of the paths are ˆ d; d \ ˆ d; 2 rf | i (/, or ˆ d, the interfering por- tions neutralise or destroy one another, and con- sequently produce a black fringe. The quantity d has a different value for the rays of different colors, and varies as the length of the fits in Newton's theory. M. Fresnel has found d to be iDˆiioth of a millimetre for red light.

90. This beautiful theory of Dr. Young is em- braced by M. Fresnel. Both these philosophers tad ascribed the exterior fringes to the inter- ference of the direct rays with rays reflected from the margin of the inflecting body. M. Fresnel, nowever, has since found that this explanation is insufficient ; for the real place of the fringe is sometimes ˆih of a millimetre different from what it should be upon this supposition ; and at any rate, if the hypothesis were true, the ex- tent and curvature of the margin of the inflecting body would have an influence upon the inten- sity of the fringes, which is contrary to experi- ment. He is therefore obliged to admit that the rays which pass at a sensible distance from the inflecting body are made to deviate from their primitive direction, and concur also in iLe pro- duction of the colored fringes.

91. It is by no means easy to explain to ge- neral readers the hypothesis by which M. Fresnel has accounted for the fringes upon the principle of interference ; but we shall attempt to make it as intelligible as possible.

92. Let A M E, fig. 4, be a luminous wave or undulation, propagated from the radiant point C, and partly intercepted by the inflecting body A G. Then, if we suppose it divided into an infinity of small arcs A?n, in m, m M, M n, nn', n' n", &c., M. Fresnel obtains the intensity of any point (P) of the wave A M E, when it has readied the position B P D, by supposing ele- mentary waves to be propagated from every point m, m, M, n, n, &c., of its preceding posi- tion at A M E. These elementary waves are propagated in all directions, and with intensities sensibly equal vˆhen they do not deviate much from the perpendicular. M. Fresnel does not take into account the waves which are most in- clined, and which, according to his hypothesis, destroy one another ; and in this way he deter- mines the intensity of the light resulting from the reciprocal influence of all the rays which are slightly inclined to the perpendicular. By thus combining the principle of Huygens with Dr. Young's law of interference, he has obtained a formula which represents the observations with surprising accuracy.

93. (7) The phenomena of inflexion are con- sidered by M. Fresnel to be inexplicable on the Newtonian theory of the emission of luminous particles ; while almost all of them may be di- rectly deduced from the Huygenian Theory of Undulations.

94. There are two very important and com- paratively new branches of optical science to which we must now direct our readers' attention, namely, the double refraction and polarisation of light.

95. About the middle of the seventeenth cen- tury Dr. Erasmus Bartholinus, a physician at Copenhagen, and the author of several excellent works on geometry, procured, from some of the Danish merchants that frequented Iceland, a crystal stone like a rhombick or rhomboid prism, which, when broken into small pieces, kept the same figure. It was dug out of a very high mountain, not far from the Bay of Roerfiord, in 65 of lat. Its whole body was rather clear than bright, aid of the color of limpid water ; but that color, when it was immersed in water and dried again, became dull. With this sub- stance, which from its locality was called Ice- land crystal, Bartholinus made a number of experiments both chemical and optical ; and, haying discovered some of the singular effects which it produced upon light, he published an account of them at Copenhagen in 1669, under the title of Experiraenta Crystalli Islandici Dis diaclastici,

cjuibus mira et insolita refractio detegitur. There does not appear to be a copy of this work in this country, but the want of it is well supplied by an account of sundry experi- ments made and communicated by Dr. Erasmus Bartholinus, addressed to Dr. Oldenburgh, and printed in the sixty-seventh number of the Philo- sophical Transactions. From this account we shall select those parts which relate to double

refraction, and shall in general give them in the words of the author.

96. (1.) ‘The objects seen throujjh this crys- talline prism appear sometimes, and in certain positions of the prism, double ; where it is to be noted, that the distance between the two images is greater or less, according to the different big- ness of the prism ; insomuch that in thinner pieces this difference of the double image almost vanisheth.

97. (2.) ‘The object appearing doiible, both images appear with a fainter color; and some- times one part of the same species is obscurer than the other.

96. (3.) ‘ To an attentive eye one of these images will appear higher than the other.

99. (4.) ‘ In a certain position tlie image of an object seen through this body appears but single, like as through any other transparent body.

100. (5.) ‘We have also found a position wherein the object appears six-fold.

101. (6.) ‘ If any of the obtuse angles of this prism be divided into two equal parts by a line, and the visual rays do pass from the eye to the object through that line or its parallel, both images will meet in that line, or in another pa- rallel to it.

102. (7.) ‘Whereas objects seen through dia- phanous bodies are wont to remain constantly in the same place, in what manner soever the transparent body be moved, nor the image on the surface move, except the body be movea ; we have observed here that one of the images is moveable, the other remaining fixed ; although there be a way also to make the fixed image moveable, and the moveable fixed in the same crystal, and another to make both moveable.

103. (8.) ‘ The moveable image doth not move at random, but always about the fixed, which while it turneth about, it never describeth a perfect circle but in one case.

104. (9.) ‘ Dioptrics teach, that a diaphanous body having one only surface, sends from one object but one image refracted to tlie eye, and, having more surfaces than one, it represents one image in each. But, whereas in our substance there occuis but one plain surperficies to the eye, and yet a double image of one object, it concern- ed us to consider whence this double image might be caused. Two ways offered themselves to us, reflection and refraction. How reflection could perform it, was difficult to find. For, having dulled the clearness of the two plain sides of our crystalline prism, thereby to make them unfit for reflectincr the light, the rays being di- rected through its upper and lowermost superfi- cies, the image still appeared double. Again, two species appearing through a great prism, upon breaking of the same into pieces, and so reducing it into divers smaller ones, it came to pass, that through each of these less portions the same object was seen always douhle. Whence I collected, that if it should be said that one of the images proceeded from the reflection of the plain sides, the former of these experi- ments would discountenance that assertion. But then if another should derive the cause from ××ome internal reflection of the surfaces of this

body, certainly the same effect would not have been found in every one of its parts ; but the double appearance that was exhibited in the smallest portion would have been multiplied in a greater hulk.

105. ‘ Reflection, therefore, not satisfyincr, we recurred to refraction. But whereas it is known that no image can pass through two diaphanous bodies of a different nature but by refraction, and that one image supposeth one refraction, it did follow that, if refraction were made the cause of this phenomenon, there would be a double re- fraction for a double image. And forasmuch as the appearances of our Iceland crystal are not of the same kind, but one of them is fixed, the other movelh, we shall distinguish the refractions themselves which refract the double rays arrivinfj to the eye, and call the one which sends the fixed image refracted to our sight, usual ; the othe- which transmits the moveable to the eye, unusual. And hence, namely, from this peculiar and nota- ble property of the double refraction in this Ice- land-stone, we have not scrupled to call it dis ××× diaclastick.

106. ‘ This being supposed, it will not be irra- tional to suspect that these two refra××tions pro- ceed from different principles. For, since it is commonly known from dioptrics that an object, by visual rays

affecting the eye, exhibits some image on the superficies of the diaphanous bodies, which image is but one as long as the superficies is one, and the upper plain parallel to the lower ; as also, that if, the eye remaining steady, the diaphanous body be moved, that image remains always fixed, as long as the object whence it comes remains unmoved ; therefore, in this transparent substance, the image which appears fixed may proceed according to the ordinary laws of usual refraction; but that which moveth, and is carried about according to the motion of the diaphanous body, while the object remains unstirred, shovveth an unusual kind of refraction, hitherto unobserved by dioptricians.

107. ‘Hence, that I might examine the nature and difference of both, I put upon some object, as the point A, fisf. 5, the prism of my double refracting crystal N P R Q T B S, and, the eye M being perpendicularly posited over the upper plain of the prism NPRQ, I noted wliether there was any refraction of the point A, for the usual laws of refraction teach that there is none. But the perpendicular ray of the eye was observed to pass not through the moveable but the fixed image, thereby being conformable to the rules of usual refraction, as striking the eye un- refracted, so that the eye, the image, and the ob- ject, were seen in the same line. But when in the same site of the eye, the object A did also exhibit the other image X, at no small distance from the former, I took notice that this object A was not seen unreffacted by the means of the image X, though the eye M remained perpendi- cular over the plain ; and that, consequently, this unusual refraction is not subject to the re- ceived axiom of dioptrics, which imports that a ray, falling perpendicularly on the superficies of a diaphanous body, is not refracted, but passeth unrefracted.

108. ‘Next I so placed the eye in O that the

ray from the object A arriving to the eye, might be’ parallel to the lines 11 T and Q B of the plane R Q T B, &c. ; then it appeared that the rays were trajected from the object A without refrac- tion, through the moveable image Q ; the object A, the moveable image Z, and the eye O, being in the same line ; and that the same object A did transmit to the eye O, remaining in the same position, yet another species Y, through the re- fracted ray A Y (). Whence it was manifest to me that this unusual refraction had for its rule the parallel of the sides of this double refracting crystal, while the usual refraction was directed according to the perpendicular of the superficies. 109. ‘But

considering that the place of the point appearing through our diaphanous body cannot easily be determined, as being only ob- vious in the uppermost part, we shall add the way whereby we have found its diversity, by drawing on the subjacent table a straight line through that point ; the place of which line will be determined by the one eye through this crys- tal, and by the other eye without the crystal. For, in the same figure, let through the object A be drawn upon the table a straight line BC. The eye being in M, that double line H D and I E will appear, the species being cast on the upper surface ; and, if you will attend well, you will observe one of the images, viz. the fixed II D, to be congruent to the adjacent line BC, whilst the other, namely, the moveable E I, tendeth towards R. But if afterwards the eye be posited in O, the same object, I mean the line B C, will not only be represented double by the images KF and LG, but also the moveable image G Lbe congruent to the inferior line BC, while the fixed F K is not so, but tends towards N.'

110. After describing these experiments, Bar- tholinus proceeds to measure the ratio of the an- gles of incidence and refraction in the ordinary imaire, and he finds it to be as five to three, which makes the index of refraction 1-667. He endeavours to account for the double refraction, by supposing that the Iceland crystal has two sets of pores; one, according to the ductus or direction of the sides, and parallel thereto ; since it may be observed that, ' according to tliis disposition of the sides, it is broken, and the parts severed from one another, and that one of the images, namely the moveable, passeth through them. Next, besides these pores lying accord- ing to the parallelism of the sides, it has others, such as glass, water, and right crystals have, through which the right image is transmitted.'

111. Bartholinus next supposes that there are some directions in which the rays pass through the crystal unrefracted ; and though, in ordinary diaphanous bodies, these directions are perpendicular to their surfaces, yet in other bo- dies they may have another position. He like- wise supposes that half of the incident pencil is refracted usually, and the other half unusually ; or, what is the same thing, that the usual and unusual refractions have the same power to re- fract the incident light.

112. From this account of Bartholinus's ex- periments, he appears to have discovered three important facts.

113. (1.) That Iceland spar has the property

of double refraction.

114. (2.) That one of these refractions is per- formed according to a law which is common to all transparent solids and fluids, while the other is performed according to an extraordinary law which had not previously been observed by phi- losopiiers ; and,

115. (3.) That the incident light is equally divided between the ordinary and extraordinary pencils.

116. Bartholinus does not seem to have trans- mitted the ordinary and extraordinary pencils through a second piece oi, Iceland spar, and it was therefore reserved for the celebrated Huy- gens to discover, by means of this experiment, the remarkable properties which arise from the polarisation of these two pencils.

117. A few years after the publication of Bar- tholinus's work on Iceland crystal, the attention of Huygens was directed to the subject of double refraction. He was induced to begin this inves- tigation principally with the view of obviating any objection that might be drawn from the facts discovered by Bartholinus, against his own theory of ordinary refraction; and he was led to the par- ticular views which he has published from a desire to assimilate the two classes of phenomena.

118. Ills researches on the subject from the fifth chapter of his Traite de la Lumiere, which is entitled Del'Estrange Refraction du Cristal d'ls- lande. This work was composed about the year 1678, and read to several of the learned indivi- duals who then composed the Academy of Sciences ; but it was not published till the year 1690, when its author was resident in Holland.

119. After a few preliminary observations, in whicli he gives Bartholinus the credit of having discovered some of the principal phenomena, he supposes A B E F, fig. 6, to be a piece of Iceland crystal, and conceiving one of the three obtuse angles, which form the solid angle C, namely, A C B, to be bisected by C G, he calls the plane C G H F, which passes through this line, and the side C F, the principal section of the crystal.

120. If the surface A B is now exposed to the sun, being all covered but a small aperture K in C G, and if a ray I K is incident perpendicularly at K, it will be divided at the point K into two rays, one of which, K L, will be a continuation of I K ; while the other, K M, will deviate from K L towards C, by an angle of 6►► 40', but will still be in the plane C G H F. This ray will emerge at M in the direction M Z parallel to I K. Hence, since the point M, by the extraor- dinary

refraction, is seen by the refracted ray M K I, the eye being at I, any point or aperture at L, by the same refraction, will be seen liy the refracted ray LKI, LK being parallel to M K, if I is very distant. The point L will conse- quently be seen in the direction IRS, and, as the same point is seen by the ordinary refraction in the direction I K, it will necessarily appear double.

121 . If the ray now falls in the direction N O, in the plane C G H F, making an angle of 73►► 20′ with C G, or nearly parallel to C F, which makes with F H an angle of 70►► 57’, it will be divided at O into two rays, one of which will be

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a continuation of N O, without refraction, wliile the other will be refracted in the direction O (j, both rays being in the plane C G li F. This is true of all planes parallel to the principal sec- tion.

122. In order to determine the law of the two refractions, Iluygens drew upon a smooth sur- face a black line, A B, fig. 7, and two lines C E D, K M L, perpendicular to it, and having their distance E M greater

ur less, according to the obliquity at which tlie refraction is to be e.x- amined. The crystal being placed upon E, so that A B is in, or parallel to, the principal sec- tion E G, place the eye above it, and the line A B will be seen single, but C D will be double. The ordinary image will be easily distinguished from the extraordinary image, from the latter being always more elevated, or from the former remaining fixed in turning the crystal, while the latter revolves round the ordinary image.

123. If the eye is now placed at I, perpendi- cular to AB, till it sees the ordinary image of CD coinciding with the part of C D without the crystal, let the point II be marked on the crystal where the intersection at E appears. Let the eye be now taken towards O, in the same per- pendicular plane, till the ordinary image of C D coincides with K L, and let the point N, where the intersection E now appears, be marked upon the crystal. The lines N II, E M, and H E, the thickness of the crystal, being accurately mea- sured, then, joining N E and N M, the ratio of refraction will be that of E N to N P, because these lines are as the sines of the angles of inci- dence and refraction N P H, N E P. In this way Iluygens found the ratio to be that of five to three at all incidences, as Bartholinus had previously determined.

124. In order to find the extraordinary refrac- tion, he next withdrew his eye to Q, till the ex- traordinary image of C D coincided with K L ; he marked the point R, and consequently ob- tained by measurement the ratio of E R to E S, or the ratio of the sine of incidence to that of re- fraction. By numerous observations he found that this ratio was not constant, but changed with the inclination of the incident ray.

125. In continuing his observations on the extraordinary refraction, Iluygens found that it observed the following law : ××× Let C G II F, fig. 8, be the principal section; and S K, V K, two incident rays equally inclined to the perpendicu- lar I L ; and KT, K X, the extraordinary rays af- ter refraction; the distances T M and XM of these rays from the point M, where the refraction of the perpendicular ray I K cuts the base by F, will always be equal. This law is also true in the refraction of the other sections.

126. Having succeeded in explaining, in a very satisfactory manner, the refraction of ordi- nary transparent bodies, by means of spherical emanations of light, Huygens was naturally led to suppose that, as Iceland spar had two diflerent refractions, it must also have two different ema- nations of waves of light, one of which might be propagated in a spherical form in the ethereal matter spread through the crystal. He conceives that this ethereal matter exists in greater

quantity than the solid particles, and is alone capable of

producing transparency. From these spherical undulations, which are propagated more slowly within the crystal than without it, proceed the phenomena of the ordinary refraction. The other set of undulations, to which the irregular refraction is owing, he conceives to be elliptical or ratlier spheroidal, and to be propagated indifferently both through the ethereal matter and through the solid particles. Huygens considers tliatthe regular arrangement of the particles may contribute to the formation of the spheroidal waves, as nothing more is required for this than that the light be propagated more quickly in one direction than another ; and he was convinced that such an arrangement actually exists in Ice- land spar.

127. In proceeding to explain his theory, Iluygens supposes A B, fig. 1, plate II., to be the surface of Iceland spar, exposed to a beam of light ; and as a perpendicular ray incident upon this surface from a distant luminary is, by the theory of undulation, no more than the incidence of a parcel of waves parallel to A B, he consi- ders the line B C, parallel and equal to A B, to be a portion of the wave of light, of which' the points R, H, h, C, meet A B at A, K, k, B. In- stead of hemispherical waves, as in ordinary re- fractions, he supposes the waves to be now hemispheroids, whose major semi-axes are ob- lique to the plane A B. Hence S Vˆ I will repre- sent an individual wa\e coming from the point A, after R C has arrived at A B. Now, as all tlie other points K, k, B, will propagate waves similar to S V I, in the same space of time that the point A did, the common tangent N Q of all these semi-ellipses will be the propagation of the wave R C in the transparent body, according to the above theory.

128. But the tangent NQ, ###which is equal and parallel to A B, is not directly opposite to A B, but comprehended between AN and BQ, con- jugate diameters to those which are in the line A B. 'In this way,' says Iluygens, ' I have been able to conceive what appeared very difficult, how a perpendicular ray could suffer refraction in a transparent body,' the wave R C, instead of going straight on when it entered the surface A C, extending itself between the parallels A B and N Q.

129. In order to determine the form and situa- tion of the spheroids in Iceland crystal, Iluygens considered that all the six faces produced the same refraction, which were equally related to the principal sections shown in fig. 2, by dotted lines drawn from C. Hence he concluded

that the spheroid which had the same relation to these three sections must have its axis coincident with the axis of the solid angle C, and therefore that the short diagonal of the rhomb determined the position of the axes of all the spheroidal waves, propagated from any point, taken either within or at the surface of the crystal, since all the spheroids ought to be similar, and have their axes jjarallel.

130. In the section GCF the angle C is 109″ 3’, and the angle F 70►► 57’; and if we con- ceive a spheroidal wave round the centre C, its axis will he in the same plane. Let C S, fig. 3, be the half of this axis, then the angle G C S

will be found to be 45►► 20’. In detemiining the form of the spheroid, or the ratio of the semi- diameters C S, C P, which are perpendicular to each other, Huygens considers that the point M, where F II, parallel to C G, touches the ellipse, must be so situated that C M makes an angle of 6►► 40′ with the perpendicular C L, being the de- viation of the extraordinary ray. Hence we shall have,

CM = 100000 CP = 105032 CS = 93410 CG = 98779

and the ratio of C P to C S that of 9 to 8 ; the spheroid is therefore produced by the revolution of an ellipse round its smaller diameter..

131. In order to determine tlie refraction of oblique rays, Huygens saw that they depended on the proportion between the velocity without and within the crystal ; and he supposes this proportion to be such that while the light in the crystal describes the spheroid G S P, fig. 4, it describes without it a sphere whose semi-dia- meter is equal to the line N, which will be after- wards determined. Now, if RC is a ray incident at the surface C K, draw C O perpendicular to R C, and from O draw O K equal to N, and at right angles to C O. Having then drawn K I, touching the ellipse G S P, the line I C will be the refracted ray required. For the refraction of R C is nothing else than the progress of the point C of the curve CO, continued in the crystal; but the points H H of this wave, during the time that O comes to K, will arrive at the surface C K by the lines H x, &c., and will also have pro- duced in the crystal particular hemispheroidal waves from the centres ,r, .r, &c., similarly situ- ated with the hemispheroid G S Pg ; and whose great and small diameters will have the same ratio to the lines xv (which

are continuations of H X to K B parallel to C O) as the diameters of the spheroid G S P have to the line C B or N. The common tangent, therefore, of all the sphe- roids, which are here represented by ellipses, will be the line I K, which will be the propagation of the wave CO ; and the point I that of C.

132. In order to find the point of contact, I, we must find a third proportional C D to the lines C K, C G ; and having drawn D I parallel to C M, the diameter conjugate to C G, and pre- viously determined, we have only to draw H I, which will touch the ellipse at I.

133. In like manner we may find the refracted ray C i of any other ray r C, incident on the op- posite side, by drawing C o perpendicular to C r and following the rest of the preceding con- struction.

134. Hence we see that, if C ?□□□ and CR are incident at equal angles, we shall have Cdzz C D, since C & = C K and C g = C G. Conse- quently I i will be bisected in E by C M, to which D I, D i, are parallel ; and, because C M is the conjugate diameter to C G, it follows that I i will be parallel to g G. If we then prolong the refracted rays, CI, C i, till they meet the tangent M L in 1? and t, the distances M T, M t, will also be equal.

135. Huygens next found, by measuring the

irregular refraction, that the ratio of N to C G was that of 156962 to 98779, or of 8 to 5ˆ, and he proceeds to explain an abridged method of finding the irregular refraction.

136. Let g G, fig. 5, be the surface of the crystal, G P g the ellipse, and C M the refraction of the perpendicular ray F C which deviates 6□□ 40’, and let R C be any other ray, whose refrac- tion is required.

137. From the centre C, and with the semi- diaraeterCG, describe the circumference g 11 G, cutting the ray RC in R, and let fall RV per- pendicular to C G. Then, since C D is known from the analogy, N:CG=CV:CD; draw DI parallel to C M, cutting the ellipse gMG in I, and joining C and I, C I will be the re- fracted ray required. For let C O be perpendi- cular to C R, and O K drawn equal to N, and perpendicular to C O ; then, if K I touches the ellipse in I, C I must be the refraction of R C. Since RCO is a right angle, the right-angled triangles R C V, K C O, are similar. Hence C K

: K O = R C : C V ; but K O = N, and R C /-< /ˆ .

Whence C K : N = C G : C V ; but by con- struction, N □□□ C G = C

V : C D ; therefore, CK:CG = CG:CD;

and, because D I is parallel to C M,the diameter conjugate to C D, it follows that K I touches the ellipse in I.

138. It appears, therefore, that, as there is in ordinary refractions, a constant ratio between the sines of incidence and refraction, so in the pre- sent case there is such a proportion between C V and C D or I E, that is between the sine of the angle of incidence, and the line intercepted be- tween the refracted ray and the diameter C M ; for the ratio of C V to C D is always the same as that of N to the semi-diameter C G.

139. In comparing the regular and irregular refraction, Huygens observes, that if APBS, fig. 6, is the spheroid by which the light propa- gates itself in the crystal in a certain space of time, and produces the irregular refraction, then the inscribed sphere B V S.Tis the propagation, in the same space of time, of the light which serves for the regular refraction. For, since N is the radius of a spherical wave of light in the air, while in tlie crystal it is propagated by the sphe- roid APBS, the ratio of N to C S is that of 156962 to 93410. But the ratio of the regular refraction is that of 5 to 3, that is, N being the radius of a spherical wave of light in air, its pro- pagation in the crystal forms in the same time a sphere whose radius is to N as 3 to 5. But 156962 is to 93410 as 51-3 minus ,.

140. Though there are two different propaga- tions of light within the crystal, yet it is only in the direction of the perpendiculars to the axis B S of the spheroid, that one of these propaga- tions is more rapid than the other, for they have the same velocity in another direction, namely, in that of lines parallel to the same axis BS, wliich is also the axis of the obtuse angle of the crystal.

141. The ratios of the refractions being such as have now been determined, it follows that a ray of light, R C fig. 7, incident at an angle of

73►► 30′ with C G, should have its refraction C I intlie same straight line witli 11 C, or should pass throue;h the crystal without refraction. For since “0 0= CR = 98779; CM►►► 100000 and R C V =: 73►► 20’, C V will be 28330. But, because C I is the refraction of R C, C V ; C D = 1 56962 : 98779 =: N : C G, and C D zz 1 7828. And since C G- = CIVF = G D x Dgl DP we have D I = C E =r 98353. But as

C E : E I = C M : M T ; M T r= 1B127, which being added to M Lzn 11609 (the sine of LCM rr 6𝍐𝍐𝍐𝍐𝍐 40') we have L T = 27936, which is to LC= 99324 as C V is to V R, that is as 29938, the cotangent of RC V, is to the radius. Whence it appears that R C I T is a straight line.

142. Huygens goes on to show that the ray C I, emerging at the opposite surface of tlie crys- tal, ought to pass straight on without refraction, by demonstrating in general, that the reciproca- tion of refractions takes place in tliis crystal as well as with transparent bodies ; that is, if a ray R C, fig. 8, incident on the surface of the crystal C G, is refracted in CI, the ray C I, emerging at the opposite and parallel surface I B of the crys- tal, will have its refraction I A parallel to the ray R C.

143. Let CO, perpendicular to C R, repre- sent, as formerly, a portion of a wave, whose continuation' in the crystal is I K, so that the point C is continued by C I during the time that

0 arrives in K. If we now take a second space of time equal to the first, the point K of the wave

1 K will, in this second portion of time, have moved through the right line K B, equal and pa- rallel to C I, because every point of the wave C O, in arriving at the surface C K, ought to con- tinue in the crystal the same as the point C, and in the same time it will propagate from the point I in the air a spherical wave having a semi- diameter I A = K O, since KO is described in the same time. If we consider any other point h of the wave I K, it will advance by /(7n parallel to C I, and reach the surface I B, while the point K describes K / 𝍐𝍐𝍐 h m, and during the time that K has completed the remainder, I B, there will have been propagated from the point m a sphe- rical wave, whose serai-diameter m n will have the same ratio to / B as I A ; K B. The waves m n and I A will therefore have the same tangent AB, and the same is true of all the other sphe- rical waves that are propagated out of the crystal by the impulsion of all the points of the wave I K against the surface of the other I B. The tangent B A will therefore be the continuation of the wave I K out of the crystal, when the point K has come to B ; and consequently I A, which is the perpendicular to B A, will be the refraction of the ray C I in going out of the crystal. But I A is parallel to R C since I B =: C K, and I A = K O and A and O right angles.

144. The only observations which Sir Isaac Newton appears to have published, on the sub- ject of double refraction and polarisation, arc contained in the queries printed at the end of the Third Book of his Optics. As they are written with great perspicuity, and easily understood, we shall lay them before our readers in his own words.

145. < Query 25. Are there not other original

properties of the rays of light, besides those al- ready described ? An instance of another ori- ginal property we have in the refraction of Iceland crystal, described first by Erasmus Bar- tholine, and afterwards more exactly by Huy- genius, in his book De laLumiere. This crystal is a pellucid fossile stonˆe, clear as water or crys- tal of the rock, and without color ; enduring a red heat without losing its transparency, and in a very strong heat calcining without fusion. Steeped a day or two in water it loses its natural polish. Being rubbed on cloth it attracts pieces of straws and other light things, like amber or glass ; and with aquafortis it makes an ebullition. It seems to be a sort of talc, and is found in form of an oblique parallelepiped, with six paralello- gram sides and eight solid angles. The obtuse angles of the parallelograms are each of them 101*ˆ 52'; the acute ones 78►► 8'. Two of the solid angles opposite to one another, as C and E, fig. 9, are compassed each of them with three of these obtuse angles, and each of the other six' with one obtuse and two acute ones. It cleaves easily in planes parallel to any of its sides; and not in any other planes. It cleaves with a glossy polished surface not perfectly plane,but with some little unevenness. It is easily scratched, and by means of its softness it takes a polish very diffi- cultly. It polishes better upon polished looking glass than upon metal, and perhaps better upon pitch, leather, or parchment. Afterwards it must be rubbed with a little oil or white of an egg, to fill up its scratches ; whereby it will become very transparent and polished. But for several experi- ments it is not necessary to polish it. If a piece of this crystalline stone be laid upon a book, every letter of the book seen through it will ap- pear double, by means of a double refraction. And if any beam of light falls either perpendi- cularly, or in any oblique handle upon any sur- face of this crystal, it becomes divided into two beams, by means of the same double refraction. Which beams are of the same color with the in- cident beam of light, and seem equal to one another in the quantity of their [light, or very nearly equal. One of these refractions is per- formed by the usual rule of optics, the sine of in- cidence out of air into this crystal being, to the sine of refraction as five to three. The other re- fraction, which may be called the unusual re- fraction, is performed by the following rule.

146. 'LetADBC represent the refracting surface of the crystal, C the biggest solid angle at that surface, G E li Fthe opposite surface, and C K a perpendicular on that surface. This per- pendicular makes, with the edge of the crystal C F, an angle of 19►► 3'. Join K F, and in it take K L, so that the angle K C L be 6►► 40', and the angle L C F 12►► 23 . And, if S T represent any beam of light incident at T in

any angle upon the refracting surface A D B C, let T V be the re- fracted beam determined by the given propor- tion of the sines five to three, according to the usual rule of optics. Draw V X parallel and equal to K L. Draw it the same way from V in which L lieth from K ; and, joining T X, this line T X shall be the otiier rcfractedj beam car- ried from T to X, by the unusual refraction.

147. ‘ If, therefore, the incident beam ST be

perpendicular to the refracting surˆice, the two beams T V and T X, into which it sViall become divided, shall be parallel to the lines C K and C L ; one of these beams going through the crystal perpendicularly, as it ought to do by the usual laws of optics, and the other T X by an unusual refraction diverging from the perpendi- cular, and making with it an angle V T X of about 6, as ib found by experience. And hence tiie plane V T X, and such like y>lanes which are pa- rallel to the plane C F K, may be called the planes of perpendicular refraction. And the coast towards which the lines K L and VX are drawn, may be called the coast of an unusual refraction.

148. ‘ In like manner crystal of the rock has a double refraction : but the differences of the two refractions is not so great and manifest as in Iceland crystal.

149. ‘ When the beam ST, incident on Ice- land crystal, is divided into two beams T V and TX. and these two beams arrive at the farther surface of the glass ; the beam T ', which was refracted at the first surface after the usual man- ner, shall be again refracted entirely after the usual manner at the second surface ; and the beam T X, which was refracted after the unusual manner in the first surface, shall be again re- fracted entirely after the unusual manner in the second surface ; so that both these beams shall emerge out of the second surface in lines parallel to the first incident beam S T.

150. ‘ And if two pieces of Iceland crystal be placed one after another, in such a manner that all the surfaces of the latter be parallel to all the corresponding surfaces of the former, the rays which are refracted after the usual manner in the first surface of the first crystal shall be re- fracted after the usual manner in all the follow- ing surfaces, and the rays which are refracted after the unusual manner in the first

surface, shall be refracted after the unusual manner in all the following surfaces. And the same thing happens though the surfaces of the crystal be any ways inclined to one another, provided that their planes of perpendicular refraction be pa- rallel to one another.

151. ‘ And, therefore, there is an original dif- ference in the rays of light, by means of which some rays are, in this experiment, constantly re- fracted after the usual manner, and others con- stantly after the unusual manner. For if the difference be not original, but arises from new modifications impressed on the rays at their first refraction, it would be altered by new modifica- tions in the three following refractions; whereas it suffers no alteration, but is constant, and has the same effect upon the rays in all the refrac- tions. The unusual refraction is, therefore, per- formed by an original property of the rays. And it remains to be enquired, whether the rays have not more original properties than are yet discovered ?

152. ‘ Query 26. Have not the rays of light several sides, endued with original properties ? For, if the planes of perpendicular refraction of ihe second crystal be at right angles with the planes of perpendicular refraction of the crystal, the rays whjch are refracted after the usual man- ner in passing through the first crystal will be

all of them refracted after t!ie usual manner in parsing through the second crystal, and the rays which are refracted after the unusual manner in passing through the first crystal will all of them be refracted after the usual manner in passing through the second crystal. And, therefore, there are not two sorts of rays differing in their nature from one another, one of which is con- stantly and in all positions refracted after the usual manner, and the other constantly and in all positions after the unusual manner. The difference between the two sorts of rays, in the experiment mentioned in the twenty-fifth ques- tion, was only in the positions of the sides of the rays to the planes of perpendicular refrac- tion. For one and the same ray is here refracted sometimes after the usual, and sometimes after the unusual manner, according to the position which its sides have to the crystals. If the sides of the ray are posited the same way to both crystals, it is refracted after the same man- ner in them both. But, if that side of the ray which looks towards the coast of the unusual re- fraction of the first crystal be 90►► from that side of tlie same ray which looks towards the coast of the unusual refraction of the second crystal (which may be effected by varying the position of the second crystal to the first, and by conse- quence to the rays of light), the ray shall be re- fracted after several manners in the several crystals. There is nothing more required to de- termine whetiier the rays of light which

fall upon the second crystal shall be refracted after the usual, or after the unusual manner, but to turn about this crystal, so that the coast of thi►► crystal's unusual refraction may be on this or on that side of the ray. And, therefore, every ray may be considered as having four sides or quarters ; two of which, opposite to one another, incline the ray to be refracted after the unusual manner, as often as either of them are turned towards the coast of unusual refraction, and the other two, whenever eidier of them are turned towards the coast of unusual refraction, do not incline it to be otherwise refracted than after the usual man- ner. The two first may, therefore, be called the sides of unusual refraction. And since these dispositions were in the rays before their inci- dence on the second, third, and fourth surfa(;es of the two crystals, and suffered no alteration (so far as appears) by the refraction of the rays in their passage through those surfaces, and the rays were refracted by the same laws in all the four surfaces : it appears that those dispositions were in the rays originally, and suffered no alte- ration by the first refraction, and that by means o those dispositions the rays were refracted at their incidence on the first surface of the first crystaV some of them after the usual, and some of them after the unusual manner, according as their side4 of unusual refraction were then turned towards the coast of the unusual refraction from that crystal or sideways from it.

153. ' Every ray of light has, therefore, two opposite sides, originally endued with a property on which the unusual refraction depends, and the other two opposite sides not endued with that property. And it remains to be enquired, whe- ther there are not more properties of light by

whicli the sides of the rays differ, and are dis- tinguished from one another.

154. ' In explaining the differenceof the sides of the rays above mentioned, I have supposed that the rays fall perpendicularly on the first crystal. But, if they fall obliquely on it, the suc- cess is the same. Those rays which are refracted after the usual manner in tiie first crystal will be refracted after the unusual marmer m the second crystal, supposing the planes of perpendicular refraction to be at right angles with one another, as above, and on the contrary.

155. ' If the planes of the perpendicular re- fraction of the two crystals

be neither parallel nor perpendicular to one another, but contain an acute angle, the two beams of light which emerge out of the first crystal will be each of them divided into two more at their incidence on tiie second crystal. For in this case the rays in each of the two beams will some of them have their sides of unusual refraction, and some of them their other sides turned towards the coast of tlie unusual refraction of the second crystal.

156. ‘ To explain the unusual refraction of Iceland crystal by pressure or motion propagated, has not hitherto been attempted (to my know- ledge) except by Huygens, who, for that end, supposed two several vibrating mediums within that crystal. But when he tried the refractions in two successive pieces of that crystal, and found them such as is mentioned above, he con- fessed himself at a loss for explaining them. For pressions or motions, proj)agated from a shining body through a uniform medium, must be on all sides alike ; whereas by those experiments it appears, that the rays of light have different pro- perties in their different sides. He suspected that the pulses of ether, in passing tiirough the first crystal, might receive certain new modifica- tions, which might determine them to be propa- gated in this or that medium within the second crystal, according to the position of that crystal. But what modifications those might be he could not say, nor think of any thing satisfactory on that point. And if he had known that the un- xisual refraction depends, not on new modifica- tions, but on the original and unchangeable dis- positions of the rays, he would have found it as difficult to explain how those dispositions which he supposed to be impressed on the rays by the first crystal could be in them before their inci- dence on that crystal ; and, in general, how all rays emitted by shining bodies can have those dispositions in them from the beginning. To me, at least, this seems inexplicable, if light be nothing else than pression or motion propagated through ether.’

157. Those who have already examined the law of double refraction, as given by Iluygens, and its agreement with observations made in all sections of the crystals of Iceland-spar, must experience no small degree of surprize, when they find that Sir Isaac Newton has proposed another law, difierent from his, and absolutely incompatible with observation. As Sir Isaac remarks that Iluygens has described the pheno- mena more exactly than Barlholinus, there is reason to believe that he made some experiments

on the subject, whic’.; confirmed those of Iluy- gens ; and yet it is strange that, without assign- ing any reasons he should reject Huygens’s law, and substitute another, entirely inconsistent with the

very experiments he has praised. In his speculations respecting the cause of the disap- pearance and reappearance of the pencil, when light is transmitted through two rhombs of cal- careous spar, Newton has been more fortunate ; and he has undoubtedly the merit of having first suggested the idea of the polarity of light, and of having described the phenomena of the pola- risation of the pencils in Iceland-spar, to original properties possessed by different sides of the rays.

158. A paper entitled An Account of tiie Double Refractions in Crystals, by Father John Beccaria, professor of experimental philosophy at Turin, was read before the Royal Society of London on the 18th of March 1762, and printed in the Transactions for that year, vol. lii, p. 486. The principal result of these experiments is, that the double refraction in rock crystal is greatest when the ray is perpendicular to the axis of the crystal, and that the images ap- proached to coincidence as the ray approached to that axis. This conclusion must be considered as of some importance, as it overturns the pecu- liar law of double refraction, which Huygens had devised for rock crystal alone. According to this law, the double refraction of rock crystal should be the same in every direction ; whereas Beccaria has proved that it diminishes as the ray approaches to the axis.

159. Beccaria's paper is concluded with some unimportant queries, in one of which he con- jectures that the examination of the double re- fraction of different crystals may lead to the determination of their structure, and mode of formation .

160. Towards the end of the last century tiie abbe Ilaiiy began to direct his attention to the kindred subjects of crystallography and minera- logy, and to lay the foundation of that beau- tiful system which has immortalised his name.

161. Not content with the external examina- tion of mineral bodies, he directed his notice to all their physical properties, and thus availed himself of the lights of natural philosophy, in giving a .scientific form to the science of mine- rals.

162. In accomplishing this great event, he was naturally led not only to observe the double re- fraction of minerals, but to employ it as an es- sential character in his descriptions ; and it was from this cause, more than from any other, that the attention of philosophers was recalled to a subject which had almost disappeared from mo- dern physics.

163. The following are the general views given by this eminent author in his Traite de Mineialogie, vol. i. p. 230, which appeared ir. the year 1801.

164. ‘ The quantity of double refraclion,‘says he, ‘ or, what is the same thing, the magnitude of the angle formed by the two rays, by means of which the eye sees the two images, varies from one substance to another, all other things being similar, according to the nature of the sub-

stances themselves. In zircon, for example, the double refraction is very strong, while it is much less sensible in emerald. Besides, this quantity varies in each substance from different causes. In general it increases or diminishes with the re- fracting angle, or that which is formed by the two faces through which we look at the object. But there is another cause of variation, which com- bines itself with the preceding, and which de- pends on the position of the refracting surfaces, relative to the faces of the primitive form ; and such is the influence of this cause that with two equal refracting angles, differently situated, we may have distances perceptibly unequal between the images of the same object, and there is even a limit where the effect of double refraction be- comes nothing, that is, when the two images are combined into one.

165. ‘ This limit takes place in quartz and in emerald where one of the faces containing the refracting angle is perpendicular to the axis. It takes place in sulpliate of barytes when one of the same faces, being parallel to the axis is at the same time parallel to a plane pass- ing through the long diagonals of the base of its primitive form.

1 66. ‘ On this subject I possess only a small number of observations ; but it is probable that all the substances which have double refraction are included in one or other of the two preceding cases, which give the i’limits of all the positions that the refracting surfaces can have, relative to the primitive form. But, as the position pa- rallel to the axis is variable in its turn, between several limits Vvˆhich correspond to the diago- nals and to the sides of the base of the primi- tive form, it is necessary to know which of these last limits is that which belongs to each sub- stance.

167. ‘ I shall show, under the article Emerald, how a mistake

conducted me to these results ; and I confess that there remains still an uncer- tainty respecting the refraction of some sub- stances, as I have not had leisure to multiply my researches sufficiently, in order to ascertain if a crystal, which gives only a single image of ob- jects, would produce two after being cut in a particular manner.

168. ‘ Another observation, which will be of some use in generalising the theory of these phe- nomena, consists in this, that all the substances whose integrant molecule is remarkable by its symmetry have single refraction. Such are those which have for their primitive form the cube, the regular octahedron, and the rhomboidal dodecahedron.

169. ‘ Experiments on this object have hitherto been made only on those bodies which are called stones. I have extended these experiments to several called salts, and also to inflammable sub- stances, and to metallic substances, oxidated and united to other substances, and I have found that there is no class of minerals which does not present bodies endowed with double refraction.’

170. After mentioning the methods which he employed for observing the double refraction, but which are entirely superseded hy methods equally simple and much more certain, our auilior iemarks, ‘ That it would be difficult to

find a character more prominent than that which is drawn from double refraction, since it belongs to the very essence of tlie minerals in which it exists ; and that it is fortunate that we are able, in this way, to supply the disappearance of crys- talline forms by a physical observation, and thus to read in a certain degree in the interior of the stone, when its exterior no longer speaks to the eye.’

171. The following is the list of substances which have double refraction, as given by the abbe Haiˆiy : ###

Rdity’s Table of Doubly Refracting CrystaU. \

1.

Carbonate of lime strong.

2.

Sulphate of lime.

3. 4. 5.

Sulphate of barytes. Sulphate of strontian. Borate of soda.

6

Quartz.

7.

8.

9.

10.

Zircon, very strong. Cymophane. Topaz. Emerald.

11.

Corundom.

12. 13.

Euclase, strong Feldspar.

14. 15. 16. 17.

Peridot, strong. Mesotype. Sulphur, strong. Mellite.

18.

Carbonate of lead.

19.

Sulphate of iron.

20.

Arragonite, strong.

H

avfs

Table of Crystals with Single Refraction

1.

Fluate of lime.

6. Jmphigcne.

2. 3.

Phosphate of lime. Telesie.

7. Tourmaline.

8. Aainite.

4 5.

Spinelle. Garnet.

9. Disthene. 10. Sulphuret of zinc

172. In his article on the Double Refraction of Iceland Spar, Haiiy gives a detailed account of vanous PX[>f!ri.meuts, that possess no very par- ticular interest. He demonstrates by experi- ment the error of Newton's law, which we have already mentioned. lie establisiies the tnith of the Iluygenian law ; but erroneously remarks, that it accords with observations only within certain limits, aiid he adopts the physical hypo- thesis of Newton, that the particles of light have two kinds of poles, on which the Iceland spar exerts a particular action, whose centre is placed in the region of the small solid angle of the crystal.

173. The only observations which we have to offer on the preceding articles, relate to the remark, that the culjical octahedral, and rhom- boido-dodecahedral crystals have single refrac- tion. The oidy meaning which can be attached to this remark is, that some of these bodies have single refraction; for, out of the ten crystals which Haiiy gives as having only single refrac- tion, there are no fewer than six which belong to none of the above primitive forms, viz. those marked in italics.

174. The absolute incompatibility of Haiiy's conclusions with his own facts, will appear still more strikingly from his list of transparent crys-

tals, which have the cube for their primitive form, viz.

Boracite. Muriate of soda. Amphigene.

Analcime, Schcelin calcaire. Oxide of tin.

every one of which, with the single exception of muriate of soda, has double refraction.

175. Believing, therefore, tliat all these five crystals had no double refraction, when they actually possessed it, Ilaiiy deduced the conclu- sion that all cubical crystals had single refrac- tion, whereas this property belonged only to one out of six. The conclusion, however, is still true, and has been established by more numerous and recent observations, both optical and crys- tallographical. Boracite belongs to the rhom- boidal system of crystallisation; scheelin, calcaire, and oxide of tin, to the pyramidical system; mupliigene to the prismatic

system ; and analcime to the composite system. Muriate of soda, therefore, is the only crystal left among the cubical forms to authorise the deduction of our author.

176. In the Bakerian lecture for 1801, our learned and ingenious countryman. Dr. Thomas Young, pointed out the advantages of the Huy- genian theory of light, in affording an explana- tion of several phenomena which had not been accounted for by any other hypothesis. Dr. WoUaston, who had invented a new method of measuring the refractive powers of bodies, con- ceived the idea of employing this method to examine the accuracy of Huygens's theory of double refraction. Huygens had himself done this by direct experiment; but it was desirable to have the same examination repeated by a phi- losopher of Dr. Wollaston's accuracy, and by a method which promised to afford very nice results. In this way Dr. WoUaston obtained the following results : ###

Index of refraction.

1. When the line of sight bisects an acute angle of a natural surface of

the spar 1'488

2. When the plane of incidence is pa- rallel to one of the sides . . 1"518

3. In a direction at right angles with

either side 1-537

4. In the plane bisecting an obtuse

angle 1'571

5. On a surface perpendicular to the

axis of the rhomb 1-488

6. The regular refraction found by the ordinary method, from an average of several experiments . . . 1-657

7. The inclination of two surfaces . 105## 8'

8. Inclination of a refracted perpendi- cular ray to the perpendicular . 6## 16'

Having obtained these results. Dr. WoUaston then contrasts them with

those calculated by Hauy.

Observed. Calculated. Exp. 2 1-518 1-5215

3 1-537 1-539

4 1-571 1-5736

Observed angle 6►► 10′ 0►► 7\

177. Dr. WoUaston considers the result of this comparison as highly favorable to the Iluy- genian theory; and he adds that though the existence of two refractions at tiie same time, and in the same substance, be not well account- ed for, and still less their interchange with each other, when a ray of light is made to pass through a second piece of spar, situated trans- versely to the first ; yet the oblique refraction, when considered alone, seems nearly as well ex- plained as any other optical phenomenon.

178. The attention of the illustrious La Place was no doubt directed to the subject of double refraction by the labors of Dr. Young and Dr. WoUaston, who had drawn the attention of the scientific world to this recondite branch of physi- cal science.

179. These investigations are contained in a memoir, entitled Sur les Mouvemens de la Lumiere dans les Milieux Diaphanes, which was read at the Institute on the 30th of January, 1808, and published in their Memoirs for 1809, p. 300►►►342.

180. It occurred to M. La Place that it would be highly interesting to refer the law of Huygens to attractive and repulsive forces, as Newton had done the ordinary refraction. In employing the principle of least action for this purpose, he remarks that, in the case of the extraordinary refraction, the velocity of the light within the crystal must be independent of the manner in which it enters, and must depend only on the position of the ray with respect to the axis of the crystal, that is, on the angle which the ray forms with a line parallel to the axis.

181. In setting out from this datum, M. de La Place arrives at two differential equations given by the principle of least action, and in which the interior velocity is an indeterminate function of the angle, which the refracted ray forms with the axis of the crystal. In the first case which he examines, the square of the velo- city of the ray is increased in the interior of the medium by a constant quantity (which is the case of ordinary transparent mediums), and this constant

quantity expresses the action of the medium upon light. The two equations, then, show that the incident and refracted, ray are in the same plane, and that the ratio of the sines of their inclination to a vertical line is constant.

182. In the next case the action of the me- dium upon light is equal to a constant quantity, plus, a term proportional to the square of the cosine of the angle which the refracted ray forms with the axis; for as this action is equal on all sides of the axis, it must depend only on the even powers of the sine and cosine of Uiat angle. The expression of the square of the interior velo- city is thus of the same form as that of the action of the medium. By substituting this expression in the differential equation of the principle of least action, M. de La Place then determines the formulae of refraction in relation to this case, and he finds that they are identically those which are given by the law of Huygens. Hence it follows, that the Iluygenian law satisfies botii the principle of least action, and the condition that the interior velocity depends only on the angle formed bv the axis and the refracted rav

183. M. de La Place then proceeds to remark, that the hypothesis of Huygens, lliat the velocity of the ray is expressed by the variable radius of the ellipsoid, does not satisfy the prmciple of least action, but that it satisties the principle of Fermat, which consists in this, that the light arrives from a point taken without the crystal, to a point taken within it, in the least time possi- ble. For it is obvious that this principle be- comes the same as that of least action, by re- versing the expression of the velocity. Hence both these principles conduct to the law of refraction discovered by Huygens, provided that, in the principle of Fermat, we assume with Huygens the radius of the ellipsoid as a measure of the velocity, and that, in the principle of least action, we assume this radius as representing the time employed by light in traversing a deter- minate space taken for unity.

184. The identity of the law of Huygens and the principle of Fermat's results, as M. de La Place has remarked, from the ingenious way in which Huygens considers the propagation of the waves of light, so that his way of considering it, though very hypothetical, represents nevertlieless all the laws of refraction which may be due to attractive and repulsive forces, since the princi- ple of Fermat gives the same laws as that of the least action, by reversing the expression of the velocity.

185. It will be evident that, in a work like the present, our space will not admit of further ana- lysis of M. de La Place's JNIemoir, but merely to remark, that the formula; which he deduces from the principle of least action, and that of Fermat, are found to be identical with the ele- gant forraulJE which Mains deduced from the construction of Huygens. For a variety of full and interesting particulars, on tiiis curious part of optical science, we must refer our readers to the Journal edited by Dr. Brewster.

186. Polarised Light. ••• It has been usual to commence this subject by considering the well known phenomenon of double refraction, a pro- perty possessed by all crystals, the primitive form of which is neither the cube nor regular hexahedron. Of all known bodies the Iceland spar, or rhomboidal carbonate of lime, shows the fact with the greatest certainty ; and as it is a mineral easily procured, and of sufficient size and transparency, it has been generally made use of. The crystals of this substance have the form of a rhomboid, having six acute solid angles, and two obtuse. These last, .r and .r, fig. 10, are formed by the junction of three equal plane angles, and equally inclined to each other. The line x .r, joining these two angles, is there- fore similarly situated with respect to the three planes forming each angle, and is called the axis of the crystal. A plane, perpendicular to the natural surface of the crystal, and coinciding with this line, is called its principal section, which term is also applied to any plane parallel to it.

187. We have already stated that an object seen through the crystal in its natural form (that form to which it is easily brought by cleavage) will give two images, one of which will appear in its situation according to the common law of refrac-

tion, while the other will be observed throˆ'n towards the lower obtuse angle, but always in the plane of the principal section. (The most convenient method to examine these facts is to pierce a small hole through any opaque plate, which may be applied to the lower surface of the crystal, and directed to a sheet of whhe pa- per). Let X A, X B, fig. 11, be the principal section of the crystal, and L a pencil of light falling on its surface, one part of the light will proceed in the ordinary direction (we will sup- pose perpendicularly), and is therefore called the ordinary ray, while the other portion of the light deviates considerably from this direction, and is called the extraordinary ray. I o will represent the ordinary, and I e the extraordinary ray.

188. Let the crystal be cut by two planes A B, and CD, fig. 12, parallel

to the axis, and two other planes AC, and DB, perpendicular to the axis, to allow an object to be seen through it in the direction A C, or AB : it will be found that the two images will be farther separated, viewed in the direction AC, which is perpendicular to the axis, while in the direction of the axis there will be only one image. The inference from these experiments is, that there tˆxists some pe- culiar force acting on the light passing through the crystal, producing a separation of the rays, and that this force emanates from the axis itself. As this produces a deviation of the second image towards, or from, the axis of the crystal, it is considered positive or negative, or, by Biot, attractive or repulsive.

189. The two rays into which a pencil of light is divided in passing through a crystal of Ice- land spar are always of the same intensity, and always in the plane of the principal section. But the two emerging rays are not merely di- minished in intensity by the division of the light between them, but have undergone a most im- portant modification ; for, if the rays be made to pass through another crystal, placed similarly to the first, there will be no subdivision of the light ; the two images will be merely separated to a greater distance, from the increased thick- ness through which the light passes. If now the two crystals are so placed that the principal sections are at right angles to each other, there will still be only two images, but the ray ordi- narily refracted in the first will become extraor- dinary in the second, and the extraordinary, ordinary. But at all intermediate positions of the two crystals there will be a subdivision of each ray, consequently four images : these four images will be of equal intensity when the principal sections of the two crystals are at an angle of 45►► to each other ; at all other angles one or other of the images diminish in intensity, as the principal sections approach to a perpen- dicular or parallelism ; not by the coalescence of the two images, but by the gradual diminu- tion of the intensity of one, and the augmenta- tion of that of the other. In plate III. figs. 1, 2, and 3, we have supposed the rhomboids re- duced to the form of cubes in all three, the axis is denoted by .r .r, and the direction of the rays by the lines passing through the figure, and the letters e and o the extraordinary and ordinary

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rays. It is thus seen that each emerging ray is only subject to a farther division, in particular positions of the second crystal ; whereas natural light is always divided into two portions of equal intensity. Each ray has suffered a physical change ; it is not acted on by the force of the second crystal, as natural liglit would be, but requires that the force be applied in a particular direction relatively to the modification it has received from the first crystal. This has been called polarisa- tion. We know nothing of the poles, nor even of the molecules to which these poles are said to belong ; it must be considered merely as a con- ventional term to express a phenomenon ; and, to avoid the repetition of the conditions pro- ducing it, it is usual to consider the poles of the ordinary ray as coinciding with the principal section of the crystal, and those of the extraordi- nary ray in a plane perpendicular to it.

190. In these experiments an effect is pro- duced on the two rays, by the passing through a crystal, which so modifies them that it requires the action of a second crystal to be exerted in two directions, at right angles to each other, to produce a similar effect. As direct light is always divided into two rays of equal intensity by a double refracting crystal, it may be used as a test to discover and ascertain the direction of polarisation.

191. When light is reflected from the surface of transparent bodies it is found to be polarised in the plane of reflection, more or less com- pletely, according to the angle formed with the surface. This angle varies for different sub- stances, and to Dr. Brewster we are indebted for a law connecting the angle with the index of refraction of the given body, viz. ‘ that the tan- gent of the angle of polarisation, measured from the perpendicular, is equal to the index of re- fraction,’ when complete polarisation, or the greatest the body is capable of, is produced.

192. The index of refraction is a number having the same proportion

to 1 that the line of the angle of incidence has to the angle of refraction. It is, therefore, constant for all angles of incidence in the same body. It is generally calculated for light passing from a vacuum into the given body.

193. From this law are deduced three con- sequences : ###

1 . That the complement of the angle of polari- sation is equal to the angle of refraction.

2. That the reflected ray is perpendicular to the refracted ray.

3. That the angles of polarisation and refrac- tion are together equal to a right angle.

194. Let C E, fig. 4, be the incident ray at the angle of complete polarisation, R E the re- flected ray, and E G the refracted ray.

The sine D C : sine G II ; : index ; 1

But index zz: tangent A B; and radius A E ir: 1

As A B : A E : : d c : g h A B : D E : : D c : D E : : G n = D E iz

C S, and the angle C E S = anj^^le G E H.

H E S is a right angle, from which is taken GEH. But as GEll = CES=: RES ### RES-t-GES=:a right angle.

195. This law gives an easy method to deter- Jtiino the angle of polarisation of any body of

which tiie index of refraction is known. Look in a table of tangents for the given index as a tangent, and the corresponding angle will be the angle of polarisation. If such a table be not at iiand, let S S be the surface, and A E drawn perpendicularly; from a scale make A B i^ index, AE being 1. Join BE, and the angle A E B will be the required angle.

196. Tlie index is generally given, for light passing from a vacuum ; if it be required to de- termine the index under other circumstances, divide the index of the given body by the index of the medium from which it passes, and the quotient will be the index required. In bodies the opacity of which prevents the direct measure- ment of the angle of refraction, the angle of polarisation gives the index of refraction ; if this law be rigorous, which it appears to be for all bodies whicli have

been yet examined, though M. Fresnel seems to think it more probably an approximation.

197. We may here remark that some authors give the angle of polarisation measured from the surface : and sometimes the index of refraction is calculated on the passage from air.

198. We may here mention that Malus and Biot state, that the peculiar influence of crystals is not excited on light reflected from their surfaces ; and that the angle of polarisation is the same whether the plane of incidence be parallel, perpendicular, or oblique, to the principal sec- tion of the crystal. But Dr. Brewster found a difference of more than 2►►. He found the angle of polarisation to be 57►► 14′ when the incidence was in the plane of the principal section, and 59″ 32′ when in a plane perpendicular to it. The surface was that produced by a careful cleavage of the crystal.

199. One of the first laws of optics is, that ‘ light falling on a plane mirror is reflected at an angle equal to the angle of incidence ;’ but, if this mirror be transparent, the light so reflected is found to have received a polarity in the plane of reflection, more or less complete as the angle of incidence approaches the angle of polarisation for the substance employed. In fact there is some trace of polarisation discernible in light reflected from every body, at every angle of incidence except the perpendicular; but this in so feeble a degree, that we may consider it, at present, insensible, except from transparent bodies.

200. We have already explained that there are, for some bodies, certain angles, at which complete polarisation takes place ; in some others, though very transparent, yet of high refractive power, complete polarisation does not take place at any angle, as in the diamond ; in others, as black marble, ebony, black varnishes, where the re- fractive density is less, complete polarisation takes place, though they be opaque. This angle for water is 52►► 45′ from the perpendicular, and about 55►► for glass.

201. In our explanation we may have recourse to an instrument, which, though not indispensa- ble. Will be found useful in many experiments where accuracy is required. But, for the satis- faction of any one as to the general facts, two])ieces of unsilvered mirror glass are all that will

be essential, as in fig. 5. The reflected ray is seen to descend upon the plate A, which would have been polarised if the angles had been 35►►, and consequently not reflected. But partial polarisation is produced by the plate B. The instrument shown at iig. 6 hardly requires de- scfiption. It consists of a tube having a frame at each end, holding reflectors A and B, which are capable of being adjusted to any angle with the axis of the tube, and of being turned round the tube so that the planes of reflection may be at any angle to each other. Suppose the two mirrors (of unsilvered glass) inclined on their axis to the polarising angle 35►►, remove the mir- ror B, and make a ray of natural light passing through the axis of the tube fall on the mirror A, it will be found that the light will be reflected equally in whatever direction the mirror is turned by the ring D, whether upwards or downwards, to the right or to the left. Let now the mirror B be replaced, and the apparatus so placed that the light reflected from it falls on the other mir- ror A, if the plane of reflection of tlie two mirrors coincide ; that is, if the plane of each reflection is towards the same direction. To an eye placed opposite A there will be a reflection of a considerable part of the light incident on it. After being satisfied that there is in this position a partial reflection of the light, turn the ring D a quarter round either to the right or left, and with it the mirror A (the inclination of which to the axis remains the same), and on looking on the mirror there will be now found a total obscura- tion, that is, no light will be reflected, the whole passing through the glass. To be satisfied that this does not take place from any accidental de- rangement of the instrument, it is only necessary to turn the mirror slowly from one position to the other, and a gradual diminution of the in- tensity will be observed, passing from its maxi- mum in the first position to complete obscuration in the last, or when the plane of the first reflec- tion is at right angles to what would have been the plane of the second reflection had the light been direct.

202. A farther proof that this is no deception is afforded by substituting a metallic reflector in the place of the mirror B ; in which case no such alteration takes place.

203. To return to the experiments. Continue to turn the mirror A gradually in the same di- rection, so that the reflection is again parallel to the first, but in an opposite direction, and the light will be again at a maximum ; and, if the mirror be still turned in the same direction until it has made three-fourths of a revolution, the light reflected will again be reduced to nothing.

204. In this experiment we see that light, liaving been reflected from a surface at a certain angle, is entirely transmitted by another mirror, if the plane of incidence on the second mirror is perpendicular to the plane of incidence on the first, while natural light would have been equally reflected in every position.

205. It must be observed that, if the angle of reflection of either mirror be greater or less than the angle of polarisation, there will not be a total obscuration. The angle mode by the two planes of reflection is often called the azimutli.

To succeed perfectly in this experiment the back of each mirror should be blackened, to prevent the admission of extraneous light. It will now be not difllcult to show that the direction of polarity, in the reflected light, is to the plane of reflection, similar to the polarity of the ordinary ray in Iceland spar to its principal section, or an identity of the modification produced in the reflected ray and the modification produced by the action of the crystal on the ray ordinarily re- flected ; for if the ray reflected from water or glass at the polarising angle be received on a crystal of Iceland spar, the principal section of which coincides with the plane of reflection, tlie ray entering the crystal will proceed through it in the same direction that the ordinary ray, emerging from another crystal, would have])ro- ceeded. But, if the principal section of tlie crystal be placed perpendicular to the plane of reflection, tlie ray will be reflected extraordina- rily ; but in both positions there will be no bifurcation of the ray. If the principal section of the crystal be any otherwise situated, as to the plane of reflection, there will be two rays, but of equal intensity, when the angle contained be- tween these two planes is 45►►. If, again, the ordinary ray emerging from a crystal be made to fall at the proper angle, on the surface of water, or any other reflecting surface capable of pola- rising light completely, it will be reflected when the principal section and plane of reflection co- incide, but entirely transmitted when the planes are perpendicular to each other. But, if the ex- traordinary ray fall on the surface, the reflection will take place when the planes are at right an- gles, and a total transmission will result when the planes coincide.

206. We are therefore justified in assuming that the physical change the light has suffered is the same in the two cases. That whether an ordinary ray be examined by subsequent reflec- tion, or the reflected ray by a doubly reflecting crystal, the influence is, that the polarity of each is in the same direction : the one in the plane of the principal section, and the other in the plane of reflection.

207. Light is not only reflected from the first surface of transparent bodies, but another por- tion is reflected from the second surface. We will suppose these two surfaces parallel, and it will not be difficult to see, that if the light be completely polarised by reflection from the first surface ‘a, fig. 7, the portion reflected from the second surface b’ will also be completely pola- rised, and in the same plane.

208. Let A I be the incident ray, and I R tlie reflected polar ray ; II the refracted ray, par- tially reflected and refracted to R’ and I’ G, the remaining refracted light will be perpendicular to r R’, the reflected ray, a condition we have seen before producing complete polarisation.

209. From various experiments it has been proved that the quantity of light reflected, even from the two surfaces of a transparent body, is small in proportion to the incident light, and it is now convenient to enquire the condition of the refracted portion, under circumstances in which polarisation of the reflected light is produced. K the ray IG’, fig. 7, be examined by a rhomboid

it will be found divided into two rays, but not of equal intensity ; for the ordinary or extraordinary ray will be found the more intense, as the section of the crystal is parallel or perpendicular to the plane of refraction. This condition of light is called partial polarisation, and is the same as the state of reflected light when the incidence is not such as to produce complete polarisation.

210. M. Arago gives the following experi- ments : ??? Let us suppose a plate of glass, E D, fig. 8, placed perpendicularly on a sheet of tine white paper A B, the eye placed at O will see at the same time the reflected ray a i o, and the refracted ray bio; interpose an opaque plate perforated with a small hole S ; let the eye at O be furnished with a doubly refracting crystal C. If by a black screen, placed between b and i, we stop the ray 6 i, which would have been trans- mitted by the glass plate, the hole in the plate S is illuminated by the reflected light alone ; and if the principal section of the crystal coincide with the plane of reflection, we see two images of the pole, of which the ordinary is the most brilliant. If the screen be now so placed as to intercept the reflected ray, a i o, there will be still two images, but now the extraordinary will be the most brilliant,

211. Now, if the screen be entirely removed, allowing both reflected

and refracted light to reach the crystal, the intensity of the two images is found by actual experiment to be exactly equal. It is hence to be inferred, that the plane which contains the poles of light, polarised by transmission, is perpendicular to the plane which contains poles of light polarised by reflection ; and that the quantity of polarised light, contained in the ray transmitted by a transparent plate, is exactly equal to the quantity of polarised light contained in the ray reflected from its surface, whatever the angle of incidence may be. M. Arago observes, that a body which, at its angle of complete polarisation, would reflect half the the incident light from its surface, would also completely polarise the transmitted ray ; and that when there is no transmission of light there is no polarisation ; and which seems proved experi- mentally, as no trace of partial polarisation is discoverable in the light reflected from the in- terior of a glass prism, when the reflection is total.

212. As transparent substances reflect but a small portion of the incident rays, the quantity of polarised light in the transmitted ray is small in proportion to the light which has not under- gone that modification. Dr. Brewster considers the transmitted ray as consisting of one portion completely polarised in a plane at right angles to the plane of incidence, and another portion of light ‘which has suffered a physical change more or less approaching to complete polarisation.’ Light, having passed through a pile of plates, is at last polarised in a plane perpendicular to the plane of polarisation of the reflected light. This efi’ect requires the agency of twenty-four plates at an incidence of 61 ; ‘ consequently,’ says Dr. Brewster, ‘ twelve plates will not polarise the whole pencil at that angle. Let us now suppose that the quantity not polarised amounts to twenty out of 100, then if these twenty were abso-

lutely unpolarised, and in the same state as direct light, they would require to pass through twenty-four plates in order to be completely po- larised. But experiments prove that they require to pass only through twelve other plates to be completely polarised; it therefore follows that the twenty rays have been half polarised by the first twelve plates, and the polarisation com- pleted by the other twelve.’

213. This reasoning may be good; but as Malus, Biot, and Arago, consider this partially polarised light to consist of light completely polarised, and light in the state of direct or natural light and as this view of the question admits of a ready explanation we shall adopt it.

214. Let , b, c, d, be supposed to represent the successive plates

through which the incident ray 1000 is to pass, and at a given angle, fifty out of 100 be completely polarised by reflec- tion, and a similar quantity of rays by re- fraction ; the light emerging from the first lamina will consist of 900 in the state of direct light, and fifty of light polarised in a plane perpen- dicular to the plane of incidence. We have already seen that light polarised in one plane will not be reflected in a plane perpendicular to its plane of polarisation, and consequently the portion fifty of transmitted light will escape reflection from the lamina 6, and therefore the light reflected from b, which we have supposed one-twentieth of the in- cident light, must be taken from the 900 of direct light. In this manner we may suppose the quantity of direct light constantly diminished, and the po- larised light increased by each succeeding trans- mission. According to this view, complete polarisation could never be produced, but the quantity of direct light, after a few transmissions, would be absolutely imperceptible.

215. It cannot be necessary to explain the re- sult of submitting the ray emerging from a suc- cession of plates to another pile of plates, to a doubly refractive crystal, or to a reflection from a polarising surface. It is in all respects similar in its polarisation relatively to the plane of inci- dence on the first surface to the extraordinary ray transmitted by a crystal, relatively to its prin- cipal section.

216. We will, however, mention one conse- quence of the foregoing laws ; that polarised light, falling on the first surface of a pile of plates, will be partially reflected when the plane of inci- dence coincides with the plane of polarisation; and, a farther portion being also reflected at each successive plate, an eye placed at the back of the plates will receive no sensible quantity of light. If, on the contrary, the plane of polarisation be])erpendicular to the plane of incidence, the whole light will be transmitted. It therefore follows that an apparatus may be constructed of the most transparent plates of glass, in two piles or bundles, forming a system perfectly transparent in one position of the piles, yet perfectly opaque in ano- ther. This effect is only to be produced by a great number of plates of glass, if the incidence be near the perpendicular ; yet some substances possess this property of polarising transmitted light, wiiatever the incidence. A thin plate of tourmaline, cut parallel to the axis of theciystal, completely [)olanses the light at any incidence

m a plane perpendicular to the axis, and a se- cond plate will transmit

or stop all the rays, as the axis of the two plates are parallel or perpendicular to each other.

217. Dr. Brewster found that a plate of agate, having surfaces perpendicular to its lamina, about one-fifteenth of an inch in thickness, com- pletely polarised the tiatismitted light.

218. Dr. Brewster, in the course of his expe- riments on the absorption of polarised light, had occasion to investigate the law of a very interest- ing class of phenomena, which appeared by the transmission of common light in different direc- tions through crystallised bodies. Cordier, when he discovered the dichroite, observed the two co- lors of the light which it transmitted in different directions, and gave it the name of dichroite on the presumption that nature had confined to this mineral the property of giving two colors. The count de Bournon had observed the double co- lor in small crystals of mica, and tlie marquis de Dree had noticed a similar fact in the tourma- line. During the experiments of Dr. Brewster he found thatdichroisra was a very common pro- jierty of crystallised bodies ; that it was related to the axes of double refraction, whether the crys- tal had one or more axes ; and that it arose from the absorption of common light modified by the doubly refracting forces of the crystal.

219. As the phenomena of dichroism are very beautiful, and can be seen without any apparatus &nd merely by exposing the crystals to a com- mon light, we shall describe the most important facts as they are seen in mica, augite, and tolite.

220. There are many crystals of mica which exhibit the phenomena of dichroism, but it is only in some of the small hexahedral crystals, wiiicli are transparent in a direction perpendicu- lar to the lamina, that they are seen to the great- est perfection.

221. In one of tliese crystals, where the in- clination of the resultant axes was about 1 1►►, Dr. Brewster found that it was highly transparent in a direction coincident with the plane of tlie la- minae, even at a thickness of one-sixth of an inch ; in this position the extraordinary ray only was transmitted. As the inclination of the ray to the laminee increased, the intensity of the trans- mitted light diminished ; and, in a direction per- pendicular to the laminae, the crystal was per- fectly opaque. A candle, whose light was freely transmitted through a thickness of 0-243 of an inch across the faces of the hexagonal prism, was completely invisible through the terminal planes when the thickness was only 0-040 of an inch. Another crystal, which in one direction was as transparent as the ordinary specimens

of olivine, would not admit through a thickness of one- tenth of an inch a single ray of the meridian sun on the 20th of May, when it passed along the axis of the prism. The ordinary ray, which was entirely lost in one direction, became gradually visible in thin plates, and at last of equal inten- sity to the other ray, as the ordinary light formed a greater angle with the laminee.

222. Out of a piece of yellowish-brown agate without any crystalline form, Dr. Brewster cut plates with parallel and well-polished surfaces. Wiien one of these plates was exposed vertically

to common light, the transmitted nght had a mode- rate intensity. When it was inclined to one sid e in the plane of one of its neutral axes, the light be- came more and more intense as the obliquity in- creased, notwithstanding the increased thickness of the mineral through whicli the light had to make its way. Upon examining tlie transmitted light, with a prism of calcureous spar, it was found to be all polarised in a plane perpendicu- lar to the plane of inclination.

223. When the plate was now inclined from this last position, in the opposite direction, but still in the plane of the same neutral axis, the intensity of the light gradually diminished, till, on tlie other side of the perpendicular, the plate became absolutely impervious to the strong rays of the sun. Upon again examining the trans- mitted liglit with a prism of calcareous spar, be- fore the plate had become opaque the pencil which had formerly vanished now re-appeared, and gradually increased in intensity becomini;- more and more green, while liie other pencil, wiiich became fainter, grew more and more red, till at a very great obliquity the one pencil be- came perfectly green, and the other deep blood- red. By exposing the plate to the polarised light of the sun, the red and green were alternate- ly absorbed, according to the position of tlie neutral axis with respect to the plane of primi- tive polarisation.

224. If we now take two plates of augite, one of which has been cut from the other, and ad- just each of them separately in a position where the sun's rays are very much enfeebled : if they are then brought together, without altering the in- clination of the incident light, the sun's rays will penetrate through both the crystals, even though the one is turned round before the other, the in- cidence remaining the same. If, on the con- trary, we adjust each of the plates separately, in a position where the transmitted light is a maxi- mum, and where the eye cannot endure the strength of the solar ray ; and if they are then brought together, so that the planes of incidence are transverse to one another, not a single ray of light will reach the eye.

The cause of this is obvious ; as the light transmitted through the first plate is all polarised in one plane, it is all ab- sorbed by the second plate when placed in a transrerse position. Though this same fact is seen in agate, yet it becomes doubly interesting to observe the light all polarised in one plane, when the transmitted pencil is a maximum.

225. lolite, so called byllaiiy from its bluish- violet color, crystallises in six or twelve-sided prisms, which appear of a deep blue color when seen along the axis, and of a yellowish-brown color when seen in a direction perpendicular to the axis. If ate rf, fig. 9, is a section of a prism of iolite, by a plane passing through the axis of the prism, the transmitted light will be blue through the faces ab and dc, and yellowish- brown through ad, be, and in every direction pjerpendicular to the axis of the prism. If we grind down the angles a, c, b, d, so as to replace them with faces m n, m n, and op,o' p, inclined 31►► 41′ to ad, or to the axis of the prism ; then, if the plane abed pass through the resultant axes of double refraction, we shall observe, by

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transmitting polarised liglit through the crystal ill the directions uc, bd, 'dnd subsequently ana- lysing it, a system of rings round each of these axes. Tlie system will exhibit the individual rings very plainly if the crystal is thin ; but if it is thick we shall observe, when tlie plane ab cclis perpendicular to tlie plane of primitive polarisa- tion, some

branches of blue and white light, diverging in the form of a cross from the centre of the system of rings, or the poles of no-polari- sation, as shown atjaand p', fig. 10, where the shaded branches represent the blue ones. The summits of the blue masses at p and p' are tipped with purple, and are separated by whitish light in some specimens and yellowish light in others. The white light becomes more blue from p and p' to o, where it is quite blue, and more yellow from p and p to c and d, where it is completely yellow. When the plane abed is in the plane ot primitive polarisation, the poles p, p, are mark- ed by spots of white light, but every where else the light is a deep blue.

226. In the plane cadb, fig. 10, the mineral, when we look through it at common light, exhi- bits no other color but yellow mixed with a small quantity of blue, polarised in an opposite plane. The ordinary image at c and d is \ ellowish-brown, and the extraordinary image faint blue ; the for- mer acquiring some blue rays, and the latter some yellow ones from c and d to a and b, where the difference of color is still highly marked. From a and b towards ;; and p' the yellow image be- comes fainter till it changes into blue, and the weak blue image is reinforced by other bine rays, till the intensity of the two blue images is nearly equal. The faint blue image increases in inten- sity as the incident ray approaches from c and d to p and/)', and the yellow one acquiring an ac- cession of blue light, becomes bluish-white. From p andp' to o the ordinary image is whitish, and the other deep blue ; but the whiteness gra- dually diminishes towards o, where they are both almost equally blue, the ordinary image being more luminous at o. From a and 6 to o the yel- lowish image becomes more blue, and the bluish image also more blue.

227. The principal axis of iolite is negative, and its greatest refracted image is purplish-blue, T.hile the ordinary or least refracted image is yel lowish-brown, passing into one another as above described. The index of the ordinary refraction is about 1-549 ; and the mineral belongs to the prismatic spectrum of IMoh's, though both this mineralogist and M. Ilaiiy place it under the rhomboidal system.

228. The splendid exhibition of colors which distinguishes mother-of-pearl from every other substance, and the successive development of fresh tints by every gentle inclination of the plate, have always been ascribed to the lamellat- ed structure of the shell, and have been regarded as a fine proof of Newton's theory of the colors of natural bodies. Dr. Brewster has given an account of some experiments which he perform- ed on this substance, in the Transactions of the Royal Society for 1814, and he observes, that he had no disposition to call in question this expla- nation, nor do the general train of his experiments

lead him to such an enquiry. In examining the

colored rings whicli mother-of-pearl, like the tc- paz, exhibits by polarised light, and in ascertain- ing the relation between its refractive power and the angle at which it gives polarity to the reflect- ed ray, he was under the necessity of grinding and polishing, with the utmost care, various plates of this substance. The development of new colors and the extinction of others, which took place during these processes, indicated the operation of some unknown and extraordinary cause, and encouraged him to pay the most mi- nute attention to all the phenomena which were presented. The results of this investigation we shall endeavour to explain under the four follow- ing heads

I . On the optical properties peculiar to mother- of-pearl.

II. On the communication of these properties to other bodies.

III. On the causes by which these phenomena are produced.

IV. On a new species of polarisation peculiar to mother-of-pearl.

229. I. Mother-of-pearl sometimes possesses a regular, and sometimes an irregular structure, and has a striking resemblance to the agate, in the immense variety of forms which it exhibits. Sometimes it is composed of parallel or con- centric laminae : sometimes the veins are inflect- ed in various successions, and sometimes it exhibits the same appearances as those which constitute what is called the hammered agate.

230. The regularly formed mother-of-pearl is of a uniform whiteness, somewhat resembling the pearl itself, and, in day light, scarcely exhi- biting any of the prismatic colors; and, unless it is mentioned, this was the kind which Dr. Brews- ter employed in these experiments.

231. Let A B, tig. 1, plate IV., be a plate of mother-of-pearl, not polished, but havincf its two surfaces ground perfectly, either upon a blue hone or upon a plate of glass with the powder of schistus, and let the light II r of a candle be in- cident at any angle on the point ? ???, this ray will be reflected according to the ordinary law, so that the angle R r C is equal to C r S, and the lines R ?; C r, and S r, in the same plane.

If the eye is now placed very close to the mo- ther-of-pearl at B, so as to receive the reflected rays, it will perceive at S, in the direction rS', the common reflected image of the candle which will not be very bright, owing to the roughness of the reflecting surface. On the lower

side of S’ at the distance of some degrees there will also be seen a highly colored image of the candle at s, formed by rays reflected in the direction rs. In this spectrum the blue rays are nearest the common image, and the color is so great that it requires a prism of flint glass with a refracting angle of 65►► to correct it, a large secondary spec- trum being left, having the uncorrected green towards the vertex of the prism.

232. If the candle at R is kept steady, and the plate A B turned round r as a centre, so that the ray R r may preserve the same angle of in- cidence, the colored ray ?►►► 5 will have a motion of rotation about r S, the common section A B of the plane srS and the surface of the motheT- of-pearl being invariable.

233. Tlie line A B may be called the axis of extraordinary reflection; the extremity A, to- wards which the colored rays is reflected, the primary pole of extraordinary reflection ; s ?►►► C the angle of extraordinary reflection ; and s r S the angle of aberration.

234. If the ray 11 r is now reflected from the opposite surface of the mother-of-pearl, as re- presented in fig. 2, the same phenomena will be observed; but the colored ray rs will now be reflected towards B, and will be seen at s’ above the common image S’, being formed by rays re- flected in the direction rs. The extremity B therefore of the axis A B will be the primary pole of extraordinary reflection for the lower surface. Hence the two surfaces of mother-of-pearl have always their poles in opposite directions, unless in specimens where a change of structure takes place.

235. Let the plate A B be now brought into

the position in fig. 1, where the plane rs S coin- cides with the plane of ordinary reflection RrS, and let it be placed upon a goniometer so that we may ascertain by measurement the changes which take place by varying tlie angle of inci- dence RrC. It will then be found that the angle of aberration srS regularly increases with the angle of incidence. Ttie variations which it undergoes are represented with tolerable accu- racy in the following table; but, owing to the elongation and indistinctness of the colored image at large angles of incidence, the measures are not susceptible of great correctness. The first column contains the angle of incidence ; the se- cond the complement of that

angle ; the third the angle of aberration as determined by experi- ment; and the fourth, formed by adding the second and third columns, contains the comple- ment of the angle of extraordinary reflection.

Angle of I

ncidence.

Complements of the Angle of Incidence.

Observed Angle of Aberration.

Comp ement of the An- gle of Extraordinary Reflection.

Calculated Angle of Aberra- tion.

o

86

40

□□3 20

O /

9 14

1□□2 34

O /

9 26

85

5

8 46

13 46

8 38

82

30

7 30

7 58

15 28

7 41

80

10

7 12

17 12

6 55

75

15

5 50

20 50

5 52

70

20

5 0

25 0

4 56

65

25

4 9

29 9

4 17

60

30

3 45

34 45

3 44

55

35

3 25

38 25

3 20

50

40

3 9

43 9

3 1

45

45

2 53

47 53

2 48

40

50

2 35

52 35

2 37

35

55

2 30

57 30

2 28

30

60

2 25

62 25

2 21

25

65

2 17

67 17

2 15

20

70

2 13

72 13

2 9

12

78

2 7

80 7

2 7

RrCr

- SrC

A= S;B=R;A

.r :^ s r S

A H- X = s 7- B

X

236. If we now compare the angles of aber- ration in the third column with the angles of ex- traordinary reflection in the fourth column, and make

A 1= R r A = S r B, the complement of the angle of incidence or ordinary reflection.

.r ir s r S the angle of aberration.

A | j; s r B the complement of the angle of extraordinary reflection, it will be found that

sin. X : sin. / rr sin. A' \ x' : sin. A j .r That is, the sines of the angles of aberration are to one another inversely, as the sines of the com- plements of the angles of extraordinary reflec- tion.

237. Assuming the numbers in columns third and fourth, Dr. Brewster has, upon this princi- ple, computed those in the fifth, which are the calculated angles of aberration, and which agree very strikingly with the observed angles.

233. If we now turn round the mother-of- pearl 1 80►►, so that the pole A may be brought into the position of B, the ray r s will be reflected to- wards the pole A, fig. 2, and the complement of the angle of extraordinary reflection will be equal to the difference between the angles of aberration and the complement of the angle of ordinary re- flection. In this case we shall obtiain the results given in the following table.

OPTICS.

Angle of Incidence.

Complement of tne Angle of Incmence.

Observed Angle of Aberration.

Complement of the An- gle of Extraordinary Reflection.

Calculated Angle of Aberra- tion.

O

60 55 50 45 40 30 20

30 35 40 45 50 60 70

O /

4 30 4 37 3 11 2 57 2 38 2 16 2 7

25 30 31 23 36 40 42 3

47 22 57 44 67 53

o >

4 33 3 46 3 16 2 56 2 40 2 19 2 7

A

X A ••• X \ X

1 I

239. By comparing the observed angles of aberration with the complements of the angles of extraordinary reiiection, we shall find that

sin. X : sin. x' zz sin. A' ••• x : sin. A ••• x, •••wliich indicates the same relation as formerly be- tween the angles of aberration and extraordinary reflection. Upon this principle Dr. Brewster iias computed the numbers in the fifth column which agree very well with the observed angles.

240. While the primary pole A is describing a semicircle round r till it reaches B, and ano- ther semicircle from B to A again ; a point s iu the

extraordinary ray rs will describe a curve round S composed of two semi-ellipses having the same conjugate axis, but having their semi-transverse axes of different lengths. Thus, in fig. 3, if S be a point in the reflected ray r S, fig. 2, and S .9, S N, S i', S M, diflerent values of the angles of aberration when the pole A is in the directions Ss, SN, &c. ; then the point s will describe the semi-ellipse M.sN, and the semi- ellipse M t N, which have their conjugate axis I\I N common, and their semi-transverse axes S s, St, of unequal lengths. The conjugate axis M N is a constant quantity, while S s, S <, vary according to the law already mentioned. At dif- ferent angles of incidence, therefore, the point s will describe other curves such as M s' N T, which approach to a circle as the angle of incidence diminishes.

241. The angles of aberration vary in different pieces of mother-of-pearl, but there is no devia- tion from the laws which have just been ex- plained.

242. On the outside of the extraordinary ray r s, fig. 1, a mass of colored light rp makes its appearance nearly at the same distance from the extraordinary image that the extraordinary image is from the common image : these three images are always in a straight line, but the angle of aberration of the mass of colored light varies ac- cording to a law different from that of the extra- ordinary ray. At great angles of incidence this mass of light is of a beautiful crimson color. At anangle of about 37►► it becomes green, and at less angles of incidence it acquires a yellow hue, ap- proaching to white, and becomes very luminous. These colors, which become more brilliant when the mother-of-pearl is polished, vary with the thickness of the plate.

243. The fracture of mother-of-pearl always Teflects the extraordinary ray r s, as if the surface

of the fracture were parallel to the real surface ; but, when the fracture is ground flat, no extraor- dinary reflection takes places.

244. When the extraordinary ray rs is reflect- ed from another piece of mother-of-pearl, it ex- periences, as might have been expected, both an ordinary and an extraordinary reflection. In vir- tue of the ordinary reflection, an image is formed exactly like the extraordinary image ; but in vir- tue of the extraordinary reflection, the highly colored image is sometimes rendered more highly colored, and at other times converted into a greenish white image, according as the second reflection conspires with, or opposes the first.

245. Hitherto we have attended to the pheno- mena only when the surface is rough and unpo- lished. When a slight degree of polish, however, is communicated to it, a new colored image appears on the oppasite side of the common image formed by the rays r t, figs. 1 and 2. This new image resembles in every r.espect the other color- ed image, and follows the same laws ; and, after a high degree of polish is induced upon the mo- ther-of-pearl, it is almost as bright as the first colored image which has its brilliancy somewhat impaired by polishing. If the polish is removed by grinding, the second colored image vanishes, and the first resumes its former brilliancy. As this second image is reflected towards the pole A in fig. 1, and the pole B in fig. 2, they may be called the secondary poles of extraordinary re- flection.

246. If we now examine the light transmitted by the mother-of-pearl, we shall perceive pheno- mena analogous to those which have been de- scribed. A colored image will appear on each side of the common image, having the same an- gles of aberration as those seen by reflection, and resembling them in every respect, the blue light being nearest the common image, and the red light farthest from it. These two images, however, are usually fainter than those seen by reflection, and, when the second extraordinary reflected image is extinguished by removing the polish, it is then the most brilliant when seen by transmission; and in general the image which is brightest by reflection is faintest by transmission.

247. In some irregularly formed pieces of mother-of-pearl which are ground very thin, and in which the axes of extraordinary reflection for the two surfaces are not coincident, four colored images are seen by transmission. Two of them

are produced by each surface, and the line whicli joins the two images formed by the same surface always coincides with its axis of extraordinary retiection. It is also deserving of notice that vhe transmitted extraordinary ray is bent towards the same pole as the extraordinary reflected ray 0 to which it belongs.

248. Like all other bodies, mother-of-pearl polarises light by reflection, and the angle at which the quantity of polarised light is a maxi- mum is about 59►►. The two extraordinary images are also polarised at the same angle, but the mass of green and crimson light

exhibits no marks of polarity. This substance has also the property of depolarising light in every position like horn, tortoise-shell, caoutchouc, and gum arabic.

249. II. The phenomena which have now been described must be admitted to be very sin- gular and instructive ; and it is probable that some philosophers would have contented them- selves with ascribing them to reflections from dierently inclined planes in the interior of the mother-of-pearl.

250. In order to measure the angles contained in the preceding tables. Dr. Brewster had occa- sion to fix the mother-of-pearl to a goniometer by a hard cement. Upon removing it from the cement the plate left a clean impression of its own surface, and he was surprised to observe that the cement had by this means received the property of producing the colors which were ex- hibited by the mother-of-pearl. This strange re- sult he at first attributed to a thin film detached from the plate, but subsequent experiments soon convinced him that this was a mistake, and that the mother-of-peail really communicated to the cement the properties which it possessed.

251. Dr. Brewster has also succeeded in im- parting the same faculty of producing color to black and red wax, balsam of Tolu, gum arabic, gold leaf placed upon wax, tinfoil, the fusible metal composed of bismuth and mercury, and to lead by hard pressure, or by the blow of a ham- mer. When the impression is first made upon the fusible metal, the play of colors is singularly fine, but the action of the air corrodes the metal, and speedily destroys the configuration, as well as the polish of its surface. The same effect was produced when the metal was immersed in oil.

252. In order to show that in these cases no part of the mother-of-pearl is detached, he plunged the wax, after it had received the im- pression, into nitric acid, which had no effect either in destroying or diminishing tlie colorific property of the surface. In soft cements, made of bees' wax and rosin, the slightest degree of heat destroyed the superficial configuration by which the color is produced. In sealing-wax, gum arabic, and realgar, a much greater heat was requisite to remove the color ; and in tinfoil and lead this could only be effected by the temperature at which they cease to become solid.

253. Let us now examine more minutely the phenomena which present themselves when the light is reflected from the surface of wax ; and let us suppose that the impression upon the wax is icade by the lower surface, when rough, of the snothcr-of-pearl, as represented in

fig. 2, where

B is its primary and A its secondary pole. When the light It r of a candle is reflected from the surface of wax A B, fig. 4, the extraordinary image, instead of being reflected towards the pri- mary pole B as in fig. 2, is reflected from it, and A is tlie primary pole of the wax, whereas B was the primary pole of the mother-of-pearl. By polishing the mother-of-pearl, and taking anew impression from it, the wax will now reflect the other extraordinary image in the direction rt, and therefore B is the secondary poleof the wax. Hence it follows that mother-of-pearl communi- cates to wax and other bodies the optical pro- perties of the surface opposite to that from which the impression is taken.

254. At different angles of incidence the two colored images formed by the wax follow the same laws as those produced by the mother-of-pearl ; but the mass of green and crimson light never appears, and is therefore caused by some internal structure which cannot be communicat- ed to other bodies. When an impression is taken from the fracture of mother-of-pearl, its fa- culty of producing color is also communicated.

255. In imparting to gum arabic and balsam of Tolu the superficial configuration of mother-of- pearl, we are enabled, on account of their trans- parency, to observe the changes induced upon the transmitted light. The extraordinary images formed by reflection were both visible, the pri- mary one being remarkably brilliant, and the se- condary one scarcely perceptible ; but, when the light was transmitted through the gum, the primary image was nearly extinct, while the secondary one was unusually brilliant and highly colored, far surpassing in splendor those whicli are formed by transmission through the mother- of-pearl itself. When both the surfaces of gum arabic are impressed with mother-of-pearl, four images are seen. The colors seen by transmis- sion are more brilliant in the gum than in the balsam, as the latter has the greatest reflective power; but the colored images produced by re- flection do not seem to have suffered a greater dispersion when they are formed by the metals than when they are formed by cements.

256. When the impression is taken from a pearl, the wax receives a character similar to that which is possessed by the pearl. The image re- flected from the surface of the pearl is enveloped in a quantity of unformed light, arising from a cause which will afterwards he explained ; and the very same while nebulosity is reflected from the wax.

257. III. From a careful examination of the preceding facts, we must now be prepared to infer that all the peculiar phenomena of mother-of-pearl, as seen by reflection and transmission, are owing to a particular configuration of sur- face : that the communication of these properties to other bodies is the necessary consequence of the communibation of its superficial structure; and that none of the light which is concerned in the production of these phenomena has penetrat- ed the surface of the mother-of-pearl.

256. What this configuration of surface is> and in what manner it generates the colored images, are point's of high interest, and of corre- sponding difficulty. The facts naturally lead us

to conjecture, that the extraordinary reflections are produced by faces either curved or rectilineal, slightly inclined to the general surface of the mother-of-pearl. In attempting to determine this point, Dr. Brewster anticipated no assistance from microscopical observations, as it was contrary to all our notions of the action of bodies upon light to imagine that a plate of mother-of-pearl re- flecting an image as perfectly as the mirror of a telescope could exhibit to the human eye any superficial irregularities. These anticipations, however, were wholly erroneous. By the appli- cation of single microscopes with powers of 200, .300, and even 400, Dr. Brewster has discovered on almost every specimen of mother-of-pearl an elementary grooved surface, which no polishing can modify or remove. This structure resem- bles very closely the delicate texture of the skin at the top of an infant's finger ; or the lines pa- rallel to the coast upon a map, by which the engraver marks the limits of the sea and land. When the mother-of-pearl has a regular structure these grooves or lines are always parallel, but, M'hen there is any irregularity of configuration, the grooves vary their direction, and are arrang- ed in all possible forms like the veins of an agate, or like the lines upon the coast of a map, where are numerous inlets and islands to be re- presented.

259. Sometimes the spaces between the grooves are so wide that they can be seen with a magni- fying power of six or eight times, and in one or two specimens he has observed tliem with the naked eye. At some parts of the surface the distance between the grooves is so small that he has counted more than 3000 in an inch ; and in some pieces they can scarcely be detected with any magnifying power. When the space be- tween the grooves is large a new groove often commences,

and there is frequently a sudden change from a space with a series of distant grooves, to another space with a series of very close ones. Similar appearances were also seen in the structure of pearls. When the mother-of- pearl is scratched or indented, the bottom and the sides of the scratch are grooved exactly like the parts that are polished. The same grooved structure is likewise distinctly seen in wax, gum arable, and the metals, after they have received the impression of the mother-of-pearl.

260. In every case the grooves are at right angles to the axis of extraordinary reflection, and hence in irregularly formed mother-of-pearl, where the grooves are often circular and have every possible direction, the axes of extraordi- nary reflection have also every possible direction, and the colored images appear irregularly scat- tered round the ordinary image. In the real pearl these colored images are crowded into a small space round the common image, on account of the spherical form of the pearl, and the various hues .are thus blended into a white unformed light, which gives to this substance its high value as an ornament.

261. Having thus ascertained that the surface of mother-of-pearl is actually grooved, and dif- ferent in this respect from all other bodies that nave yet been examined, we must now seek, in

this peculiarity of structure, the cause of its opti- cal properties. The facts which have been detailed will enable us to draw several important con- clusions of a general nature, but they leave us in the dark respecting the immediate cause of the phenomena.

262. Let us now suppose that fig. 5 represents a section of a plate of mother-of-pearl, having Aanmb cB for its upper surface, and B' u n m' b' c' A' for its lower surface. Let O P be the line at which the attracting or refractive force ends, and where the repulsive or reflecting force begins, and let the reflecting force terminate at M N ac- cording to the Newtonian theory. We have al- ready seen that when the surface A B of the mother-of-pearl is ground as flat as possible, and brought to a high polish, the light which is inci- dent on the repulsive stratum JNINOPis re- flected as in ad other bodies, and affords a perfect image of the object from which it radiates. Ilence it follows that the light which forms the extraordinary images has escaped reflection, and penetrated the attractive stratum O P ; and that its separation into colors and extraordinary re- flection are produced by one or more causes re- siding between O P and the surface AB of the mother-of-

pearl.

263. Let us first attend to the aberration of the extraordinary images. Since the real surface of A B is composed of faces inclined to the general surface, A 6 c B, we are led to suppose that the primary extraordinary image is reflected from the face in, while the secondary extraordinary image is reflected from the face n. Now this could only happen from two causes, either in conse- quence of the mother-of-pearl having a repulsive force different from the ordinary repulsive force which produces reflection : or from its possess- ing the power of reflecting light from its actual surface. That this extraordinary force is, in other respects, like the ordinary reflecting force, is manifest from a portion of the extraordinary pencil being transmitted, while the other portion suffers reflection. The existence of such a force being unquestionable, we have next to consider the form and position of the surfaces to which it belongs. The changes in the angle of aberration, at different angles of incidence, is a proof that the surfaces ??y, n, present diff'erent inclinations to the incident ray ; and hence their form must be curvilineal, as represented by the dotted lines above m and n. If we suppose that the ray has been refracted before it experiences the extraor- dinary reflection, the angles of aberration still re- quire that the faces have a curved form.

264. Takingthe index of refraction 7n :=z 1-653, and making A =r angle of incidence ; a n: angle of refraction, and consequently the new angle of incidence upon the fiices w, or n ; 6 m angle of extraordinary reflection, and z zz the inclination of the reflecting face ?►► or n, then we shall have

sin. A , sni. a :z and :

_ a + b _

b ►►► a

2

By calculating the value of 3 for different an- gles of incidence, we obtain the following re- sults : ►►►

Q

Angles of incidence

86 41

70

65

60

12

Inclination of the faces m or n.

. 20 8

. 15 9

. 13 48

. 12 19

. 1 20

But since the refraction cannot be completed when the ray reaches the surfaces ni or ii, liaving passed through only half the space of refracting activity, let us suppose the value of ;►► correspond- ing to the partial refraction to be 1-300, and we shall have the following values of 2 : ►►►

Angles of

Inclination of tlie

incidence.

faces, 7)1, n.

86ˆ 41′

13►► 34′

70

9 16

65

1 19

60

7 14

12

0 20

If the light, therefore, suffers either a total or a partial refraction, or if it suffers no refraction at all, the extraordinary reflection must be made from faces of variable curvature.

265. The most unaccountable circumstance, however, accompanying the extraordinary re- flection, is the difference of effect produced upon the surfaces m and n by reirioving the polisJi. The surface m retains its power of reflecting the primary extraordinary image, notwithstanding the roughness which is thus superinduced, while the surface ?? loses the power of reflecting the secondary image, and acquires the faculty of transmitting tlie whole of the colored pencil which composes it. The force, therefore, which reflects tlie primary extraordinary image, would appear to be different from that which reflects the secondary extraordinary image, tlie latter being wholly dependent on the smoothness of the surface.

266. Hitherto we have avoided all considera- tion of the cause which separates the extraor- dinary pencils into their component colors, nor can we pretend to afford even a plausible con- jecture respecting their origin. It is quite ob- vious that the separation into colors is produced before tiie pencil suffers extraordinary reflection, and, as the transmitted colors are not complemen- tary to those which are reflected, it is equally manifest that the phenomenon has no connexion with the colors of thin plates. If the spectra were produced by the ordinary dispersive force of the body, then the dispersion ought to be least in gum arable, greater in wax, and still greater in realgar and the metals, whereas in all these cases the quantity of color appears to be the same. The extraordinary spectra have no re- semblance whatever to those which are the effect of inflexion ; and, even if we could suppose that the light was inflected by the grooves, the cause would be inadequate to explain the continuance of the color, when the plane of incidence coin- cides with the direction of the grooves, and when there are manifestly no angles to bend the pass- ing light.

267. But, whatever be the cause of the pheno- mena of mother-of-

pearl, the facts themselves are

peculiarly instruclive, and naturally lead us to tlie following conclusions : ###

(1). Besides tiie ordinary forces which reflect and refract ligiit, there reside without the sur- face of mother of pearl, and of all bodies to which its superficial configuration can be im- parted, new forces which reflect light, and se- parate it into its component colors.

(2). The lines which bound the space of re- flecting actively in all surfaces which possess this configuration, are straight, and are not parallel to the grooved structure of the surface. Hence a surface which appears, even to the unassisted eye, to be full of eminences and depressions, is capable of reflecting light with perfect accuracy.

(3). Since a particular configuration of sur- face, independent of chemical composition and crystalline structure, is capable of producing the most brilliant colors, may not the colors of all natural bodies be owingto the arrangement of their superficial particles, and may not the changes which these colors undergo by the action of light, heat, and atmospherical causes, arise from a cor- responding change in the superficial structure ? Dr. Brewster has endeavoured to communicate to wax the faculty of producing color possessed by Labrador spar, the metallic oxides, and various other bodies ; but, though he has not suc- ceeded in this attempt, it by no means follows that the color is not produced by tiie configura- tion of the surfect. Tlie structure may in these cases be so minute, that fluid wax cannot be forced into the grooves or depressions; and we have an approach to this delicacy of conforma- tion in some specimens of mother-of-pearl, where the grooves cannot be seen by the most powerful microscopes.

(4). Since a particular structure of surface is always accompanied with a new repulsive force, residing nearer the body than the common re- pulsive force which produces ordinary reflec- tion, may there not reside also, near the surface of all crystallised bodies, a new refractive force wiiich produces double refraction ? And is not this supposition countenanced by the fact that the extraordinary pencil formed by Iceland spar suffers the ordinary as well as the extraordinary refraction ?

268. We may conclude this head with a few remarks on the crimson and green light, which always accompanies the primary colored image. This mass of light is never produced by the wax, and as it appears, even when the rays are inci- dent upon the mother-of-pearl

from a fluid of the same refractive power, it is evidently uncon- nected with the forms of surface. These masses of color appear to have the same origin as the colors of thin plates described by Newton. Even when the angle of incidence is the same, the crimson light appears at one thickness of the mother-of-pearl, and the green at a less thick- ness; and the transmitted light consists of colors complementary to those of the reflected light. We are, therefore, in this case, presented with phenomena almost exactly the same as those of thin plates, though produced by plates of mother- of-pearl of considerable thickness.

269. IV. Having seen, in the course of the preceding experiments, so many deviations from the ordinary laws of optics, Dr. Brewster sus-

pected that motlier-of-pearl might exhibit similar anomalies in tlie polarisation of light. This conjecture was immediately confirmed by the discovery of a remarkable property, wliich forms the connecting link between the phenomena of polarisation, as effected by crystallised and un- crystallised bodies.

270. lu all doubly refracting crystals, the op- posite polarisation of the two images is invari- ably related to some axis or fixed line in the primitive form ; while in uncrystallised bodies the polarisation is related to the planes of re- flection and refraction, the reflected pencil being always polarised in an opposite manner to the refracting pencil. Thus, if A B, fig. 6, be a plate of glass, and R r a ray incident upon it, at the polarising angle, the reflected ray /××× S will be po- larised in the same manner as one of the pencils formed by calcareous spar, and a small portion of the transmitted ray ?-T will also be polarised, but in a manner opposite to ;××× S like the other pencil in calcareous spar: or, if the ray 11 r is transmitted through a bundle of glass plates, the whole of the pencil r T will be polarised in that manner.

271 . If we now suppose A B a single plate of mother-of-pearl about one-fortieth of an inch thick, and the angle of incidence Rr C about 60××, the reflected ray /-S will be polarised as in every other transparent body ; but the trans- mitted ray r Twill be wholly polarised, and in the same manner as the reflected ray j-S, while in every other transparent body that has been examined the rayr T possesses an opposite kind of polarisation. If we now turn the plate A

B round its centre /□□□, so as to preserve its inclina- nation to the incident ray R r, no change what- ever takes place, the transmitted ray still retain- ing its former polarity.

272. The angle of incidence Rr C, at which the transmitted light rT is wholly polarised, va- ries in the inverse ratio of the thickness of the plate A B, and the whole pencil is polarised at any angle greater than that angle. The relation between the angle of polarisation and the thick- ness of the plate remains to be determined ; though he suspects it will be found that the tan- gents of the angles of incidence, at which the whole of the pencil is polarised, are inversely as the thickness of the plates.

273. The phenomena above described. Dr. Brewster has observed, in every piece of mother- of-pearl that he has tried ; and as they are not aflPected when the incident pencil is refracted from balsam of Tolu, or any other cement, into the mother-of-pearl, they are obviously uncon- nected with its superficial configuration. Ivory does not produce the same effect upon light.

274. From these results, the following con- clusions are clearly deducible : □□□

(1). That mother-of-pearl polarises light in a manner different from all crystallised bodies, the polarisation having no reference to any fixed line in the plate.

(2). That mother-of-pearl polarises light in a manner different from all uncrystallised bodies, the transmitted pencil being wholly polarised by a single plate, and in the same manner with the reflected pencil.

(3). That if mother-of-pearl polarises light in virtue of its laminated structure, the laminas themselves must have the property of polarising light in a manner opposite to all other bodies.

275. Mr. J. F. W. Ilerschel, in repeating the above experiments of Dr. Brewster, observed some new phenomena exhibited by that singular body in its action on transmitted light, depend- ing on the internal arrangement of its molecules, and at the same time connected with a jieculiarity in its sujjerficial appearance under the micro- scope, which seems to have eluded his notice. When a plate of mother-of-pearl, cut parallel to the natural surface of the shell, is reduced by grinding to a thickness between .jLth and j'gth of an inch, and highly polished on both sides (in which circumstances it is very transparent) ; if a distant candle be viewed through it, besides the pair of colored images described by Dr. Brewster, which have the same origin with those seen by reflection, there may be observed two large very brilliant and highly colored nebulous

masses, one on each side of the candle, and equidistant from it, which may readily be distin- guished from the preceding, by the following cha- racters.

276. The first pair of colored images, origi- nating in the transferable superficial structure of the pearl, are always similar in position and color, and complementary in brightness to those seen by extraordinary reflection. In conse- quence, nothing can be more capriciously irre- gular than their situation, brightness, and dis- tance from the centre. On passing various parts of the plate, with a parallel motion between the pupil of the eye and the candle, they will be seen to shift their direction, expand, contract, or dis- appear altogether, with every change in the point examined. This is not the case with the pair of nebulous masses now under consideration, which undergo little or no variation in any of these particulars, through whatever portion of the plate they are viewed. The axis of nebulous dispersion then (or line joining the two nebulae) is parallel to itself, or nearly so, throughout the whole extent of the mother-of-pearl, and the energy of the cause producing it nearly or per- fectly uniform.

277. These nebulous masses are usually about twice the distance of the colored images, de- scribed by Dr. Brewster from the centre ; and, except the plate be very thin, are much larger and more conspicuous, and particularly distin- guished from them by the equable gradation and softening of their colors, which are those of the prismatic spectrum, the red being outermost. Their angle of deviation, or distance from the central image, increases on inclining the ydate in the plane passing through them ; while their brightness rapidly diminishes, the former being a minimum, and the latter a maximum, at a per- pendicular incidence. This angle, as well as the shape and color of the nebula\ is the same, or nearly so, in all the specimens Mr. Ilerschel has examined ; nor does any marked variation in these particulars arise by a variation in the thickness of the plate, or by cutting it at any moderate angle with the natural surface; only, in the latter case, the maximum of their inten

sity, and minimum of distance, takes place at such an angle of incidence that the ordinary ray traverses the substance in a direction perpendi- cular to the natural surface of the shell, which is also the

direction of its greatest transparency. The minimum angle of deviation in the nebu- lous images appears to be ,

For the extreme red about . . 10►► 29′ For the mean rays . . . 6 59 For the extreme violet. . . 4 16

“278. The extraordinary images seen by re- flection, and their complementary pair by trans- mission, are completely obliterated by surround- ing the mother-of-pearl with oil, or varnishing its surfaces. This, however, is so far from impairing the nebulous masses, that it heightens them a little, by perfecting the polish ; and, should any doubt arise as to the identity of either pair, it may thus be immediately removed. From all these circumstances, compared with what Dr. Brewster has demonstrated respecting the former pair of images, we might reasonably conclude that the latter are entirely vinconnected with any peculiarity in the superficial structure, and Rlr. Herschel scarcely expected the application of the microscope to afford farther information, or lead to any result worth notice. On examining, how- ever, many specimens of mother-of-pearl with a powerful double microscope, he found that this extraordinary body, in addition to the irregular grooved superficial structure, as described by Dr. Brewster, possesses another of great regu- larity and delicacy; but, like the former, resist- ing every attempt to impair it by polishing the surface. It may be seen to most advantage on a thin polished specimen, in which the first set of undulations vary a good deal in direction and coarseness. When we view such a plate succes- sively with a series of increasing magnifiers, under a double microscope, a power of 123 will barely show, and one of 229 completely verify, the appearance of a minute system of rounded undulations, consisting as it were of fibres occasionally branching from each other, but never continued for any length. They are uniformly diffused over the whole surface, and, in their general direction, disposed in straight and exactly parallel lines, running from one end to the other. In consequence, they cross the first set of grooves at all angles, giving the whole surface much the appearance of a piece of twilled silk, or the larger waves of the sea intersected with minuter riplings.

279. The interval between these undulated ap- pearances is nearly the same in all the specimens Mr. H. has examined. To ascertain it, twenty- five were counted in the space of an inch, in an image projected on a plane ten inches from the eye, while the diameter of a small wire, pro- jected on the same plane with the same power, measured seven inches. The diameter of this wire taken by the sphaerometer being 0-0227 inches gives 0-000129, or .yˆth of an inch for their mutual distance. To see them distinctly, a careful

management of the illumination from below is necessaiy, and candle light must be used.

280. To demonstrate the connexion of these

undulations (which, whether real or apparent, we shall for brevity call the second set of grooves, denoting those observed by Dr. Brew- ster by the first set) with the nebulous masses above described, Mr. Herschel chose a plate in which the first set varied from the extreme of coarseness to that of delicacy, and were particu- larly irregular in their direction and curvature. In this he carefully marked, by small ink circles, numbered 1, 2, 3, 4, 5, 6, 7, which were *hen subjected to microscopic examination.

At No. 1 and 2 t'ae two sets of grooves co- incided in direction.

At No. 3 they made an angle rather more than 45►► by the eye.

At No. 4 no grooves of the first set could be seen, but a power of 229 showed some obscure and very irregular traces of coarse elevations and depressions. Whh this power, however, tlie second set were seen precisely as in every other part of the surface, and in the same uni- form direction.

281. At No. 5 the first set, as they approached this point, grew smaller and smaller, requiring powers of 26, 34, 43, 123, in succession to per- ceive them. \Vˆith this latter power the second set just became visible ; wiiile with 229, both sets were seen crossing each other at right angles, with the most perfect regularity and dis- tinctness, the former being about twice the breadth of the latter.

At No. 6 the direction of the first set varied a good deal, crossing the second from 45►► to 60. At No. 7 they crossed at a small angle.

282. JNIr. H. now detached the mother-of- pearl, and by passing a small sun-beam succes- sively through each of the marked spots, and noticing the relative situations of the two pairs of colored images, it appeared that

At No. 1 and 2 the axes of dispersion in the first and second pair of colored images were co- incident.

At No. 3 they made an angle of 45►► with each other.

At No. 4 there were no colored images of 'the first pair whatever, while those of the second pair had precisely the same appearance and

di- rection as in the other parts of the plate.

At No. 5 the axes of dispersion formed a right angle, the images of the first pair being very vivid, and separated by an unusually large interval.

At No. 6 the angles of dispersion formed an angle of 60►►.

At No. 7 they were 17►► inclined to each other.

283. In general, in different specimens, he could always predict, a priori, the situation of the nebulous masses of the second pair, by ob- serving with the microscope the direction of the second set of grooves to which they are invaria- bly at right angles ; and the connexion between the two phenomena is thus clearly demonstrated. Yet this connexion is not, as in the case of the reflected colors, tluit of cause and effect. The nebulous masses, as we have seen, subsist when the grooves, if any, are obliterated by immersion in a fluid of equal refractive density. It is, therefore, in the internal structure of the pearl

that we must look for the common cause of both occurrences. When we examine a thin plate of this substance by polarised liutit, the phenomena of a crystal with two axes of double refiaction are observed ; the isochroraatic lines being per- fectly regular, and similarly disposed in all parts of the surface, and the colors, though not vivid and somewhat hazy, yet following in their proper order, and extending sometim.es to six, seven, or eight, repetitions of the same color from either pole. If now, we notice the situation of the axes of double refraction, with respect to what has above been called the axis of nebulous dispersion, we shall find that the latter is in all cases at right an;iles to the plane in which the former lie, or to the optic meridian of the ciystal.

284. The nebulous masses then, in all proba- bility, originate in a regular laminated structure, perpendicular to the natural surface of the shell, and uniformly pervading all the coats of which it consists. The laminae, to agree with the above facts, must run parallel to each other, and in lines nearly straight along the whole surface, and tlie alternate ones at least must be regular crystals, having their optic meridians parallel to their own plane, and their optic axis (by which is meant the axis of symmetry in their spheroid of double refraction) perpendicular to the natural surface. The intermediate laminae, if

composed of the same substance, must have their axes inclined to those of the former at some determinate angle. The grooved appearance above described may possibly arise from an actual diffeience in the resistance of these two sets of laminae to the action of the polishing particles, and therefore consist in a real difference of level ; but this Mr. Herschel much doubts, from the simple fact, that he has never been able to transfer their impres- sion to other transparent bodies, such as melted rosin, shell-lac, balsam of Tolu, &c , though in all cases the first set of grooves, however fine, has been transferred with the utmost fidelity, and the 7700th part of an inch, though a very minute quantity to our senses, appears to him enor- mously too wide to oppose the free introduction of a fluid under such circumstances. It is more probable that the appearance is a mere optical illusion, though a most complete one, arising from the difference of action of the contiguous surfaces on the light transmitted from below.

285. The regularity of structure here sup- posed is not at all incompatible with the irregu- lar and arbitrary disposition of the grooves de- scribed by Dr. Brewster. The^^e are the inter- sections of the plain artificial surface with the thin coats deposited in succession by the living animal, which, though laid symmetrically on each other, like the laminee of mica, have yet a slight degree of irregular curvature, and a small and varying inclination to the polished face. Tlieir form and breadth is regulated by this curvature and inclination, like the level lines traced by a receding tide on a slightly inclined sea- beach, or those on the surface of a wooden board, where its concentric layers rise in succession at different angles to the surface. Indeed, the face of an or- dinary deal plank, cut at some distance from tiie centre of fne tree, however coarse the simile

may appear, when smoothed by planing and af- terwards subjected to the friction of rough par- ticles, as in a floor, is a lively and faithful repre- sentation of the surface of a polished plate of mother-of-pearl, in which the edges of the laminse reduced to the utmost tenuity, by the eflfect of their inclination to the general surface, are torn up in their direction of least resistance, by tiie action of the polishing particles. This is ren- dered perfectly evident by the microscopic exa- mination of the surface in different stages of its progress, from the rough grinding to the most perfect polish, when the grooves, from an irregu- lar, jagged, and deeply indented outline, will be seen to assume a greater and greater neatness of termination, till their curvature acquires that graceful and flowing character which ultimately distinguishes them.

286. The remarkable phenomena to which we now propose to direct the attention of our read- ers, while they possess all the interest which be- longs to them as physical facts, have attached to them another kind of interest not less deserving of attention. To those who are in the practice of exercising a presumptuous confidence in their own judgments, and who trust in the indications of their senses as infallible guides, we would re- commend the particular study of this class of de- ceptions. They will here find their judgments deluded, where every thing is favorable to the discovery of the truth ; and even when they are aware of the source of the deception they will find themselves again brought under its dominion, and again released from it, by the operation of the most trivial circumstances which they are not able to discover, and the influence of which, if they do discover them, they are not able to ap- preciate. If all this takes place, in matters of simple observation, where the senses of sight and of touch are allowed their undisturbed exercise, how much more liable must they be to error where their passions, their prejudices, or their feelings, concur in promoting the delusion, or even in any remote degree prepare the mind for its reception !

287. The class of deceptions to which we allude were, so far as we know, first noticed at one of the early meetings of the Royal Society of London, when a compound microscope, on a new construction, was exhibited. When the members were looking through it at a guinea, some of them saw the head upon the coin de- pressed, while others considered it to be raised, as it was in reality.

288. This deception was studied by Dr. Philip Frederick Gmelin, of Wirtemberg, who commu- nicated the following observations upon it to the lloyal Society in 1774 : ###

289. ‘ Being informed by a friend,’ says he, that if a common seal was applied to the focus of a compound microscope, or optical tube, which has two or three convex or plano-convex lenses, that part which is cut the deepest in it would appear very convex, and so on the contrary ; and that sometimes, but very seldom, it would appear in the same state as to the naked eye. I was desirous to make the observation myself, and found it constantly to happen ai my friend told me. I thought the experiment worthy of being farilier prosecuted ; and accordingly on the 16th

of April, the morning not being very clear, but in a pretty light chamber, 1 viewed a watch hanging against a plain wall through the optical tube ; the whole of it appeared concave, and fixed into the wall. I also observed some flies that were running about the wall, and they ap- peared in like manner. I also viewed a small globe of a thermometer filled with red spirit, and this also seemed hollow, and fixed within the frame. I found the same to happen with the round parts of garments of all colors, and with the brazen protuberances of a small cabinet ; all which appeared concave, and deeply sunk into the cloth and wood. I also viewed a small stag's head cut in wood, and hanging horizontally on the wall; this also appeared concave, and fixed snto the wall.

290. ' After this I observed a ball of Fahren- heit's thermometer, full of quicksilver : but it did not change its natural convexity, nor did the empty glass ball of the inverted thermometer hanging against the wall, though the lower ball of the same, filled with red spirit, and that also of Fahrenheit's filled with spirit, lost their con- vexity. Hence I presently concluded that white or shining uncolored bodies appear under the focus of this tube in the same manner as they appear to the naked eye ; at the same time I must fairly acknowledge that an assisting friend has sometimes made observations directly opposite to mine in the same circumstances; nay, in a darker day, I myself have found my observations quite contrary to those I had made the day be- fore. Hence, though the observations with the seal held constantly the same, I imagined there must be some particular circumstances hitherto undiscovered in which these objects appear thus perverted. I therefore endeavoured to discover some certain laws, according to which these per- verted objects appeared when exposed to these foci, and some others according to which they constantly appeared as when they were exposed to the naked eye. After various experiments I partly obtained my end.

291. ••• As often as I viewed any object rising upon a plane, of what color soever, provided it was neither white nor shining, with the eye and optical tube directly opposite to it, tiie elevated parts appeared depressed, and the depressed parts elevated, as it happened in the seal, as often as I held the tube perpendicularly, and brought il in such a manner that its whole surface almost covered the last glass of the tube ; and in like man- ner it happened under the compound microscope. But as often as I viewed any of the other objects depending perpendicularly "from a perpendicular plane in such a manner that the tube was sup- ported in a horizontal situation directly opposite to it, the same always happened and the appear- ance was not altered when the object hung ob- liquely or even horizontally. I

was mightily de- lighted with the observation of a tobacco-pipe, which had a porcelain bowl of a snowy white- ness, and a tube of horn almost black, and hung obliquely from a beam ; the bowl preserved its natural convexity, and the tube was deeply sunk, and seemed to be almost immersed in the wall. I also observed that, when I placed the watch horizontally upon a horizontal plane, and then

looked on it perpendicularly, near the window, it no longer appeared so depressed, and sur- rounded with a shady ring; whence I began to suspect that all those fallacies were owing to shade, just as painters can elevate or depress a figure by making the ground lighter or deeper. Thus when the raised object was so placed be- tween the windows that it must be illuminated on all sides, it did not change its convexity. But at last I discovered a method of making objects appear always with their natural convexity. If any object hung against a wall, or was contiguous to it in any situation whatsoever, I viewed side- ways, in such a manner as not to oppose the tube directly against it, but below the eminence near the plain at some distance. By those means the protuberance of the instrument and other ob- jects always appeared to me of their true natural convexity. With regard to the seal I held it in such a manner that the whole circumference was perpendicular, or rather a little inclined. Then I applied the lower side of the tube exactly to the upper margin of the disc of the seal, so that the tube formed an obtuse angle with the seal ; then, carefully preserving the same situation, I very gently raised the tube from the rim of the seal upon its face ; and then I always saw the seal with its true natural face. But why all these things happen exactly after the same manner I do not pretend to determine; nor why white or uncolored transparent bodies, rising in any man- ner above any plain, afford an exception from that rule of vision, and do not appear depressed when viewed after the method above-mentioned.'

292. In the year 1780 this subject occupied the attention of David Rittenhouse, president of the American Philosophical Society, who gave a correct explanation of the illusion, by referring it to the inversion of the shadow by the eye- tube. He employed in his observations an eye- piece, having two lenses placed at a distance greater than the sum of their focal distances ; and by throwing a reflected light on the cavities observed, in a direction opposite to that of the light which came from his window, he was able to see them raised into elevations by looking through a tube without any lenses. INIr. Ritten- house also observed that, by putting his finger into the cavity, the illusion ceased to take place.

293. Having thus given a brief detail of the experiments of Gmelin and

Rittenhouse we shall proceed to explain more minutely the principles on which this illusion depends. It will after- wards be seen that inverting telescopes and mi- croscopes are not necessary to the production of this illusion ; but it may be best seen by viewing with the eye-piece of an achromatic telescope the engraving upon a seal when illuminated either by a candle or the window of an apartment. This eye-piece inverts the objects to which it is applied like the compound microscope, and the excavations or depressions of the seal are imme- diately raised up into elevations like a cameo, or a bas-relief. The cause of this illusion will be understood from fig. 7, where A represents a spherical cavity illuminated by a candle C. The shadow of the cavity will of course be on the left side S, and, therefore, if we view it through an inverting eye-piece or microscope, the cavity

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H-ill be seen as at A, fij. 8, with its shadow on the right hand S of the cavity. As the candle C remains where it was, the observer instantly con- cludes that what was formerly a cavity mast now be a spherical elevation or segment of a sphere, as nothing but a raised body could have its sha- dow on the right hand S. If a second candle is now placed on the right hand side of A, so that it is between two candles, and is equally illumi- nated by both, the elevation w,ll again sink into a cavity, as in fig. 9.

294. If the object A, in place of being a ca- vity, is actually the raised segment of a solid sphere, the same phenomena will be observed, the

inverting eye-piece converting it into a cavity. These two experiments may be made most successfully with a seal, and an impression taken from it.

295. It cannot therefore be doubted that the optical illusion of the conversion of a cameo into an intaglio, and of an intaglio into a cameo, by an inverting eye-piece, is the resnlt of an opera- tion of our own minds, whertˆliv we judge of the forms of bodies by the knowledge we have acquired of light and shadow. The greater our knowledge is of this subject, the more readily does the illusion seize upon us ; while, if we are but imperfectly acquainted with tiie effects of light and shadow, the more difficult is it to be deceived. If the hollow is not polished, but ground, and the surface round and of uniform color and smoothness, almost every person, whe- ther young or old, will be subject to the illusion; but, if the object is the raised impression of a seal upon wax, we have often found that, when viewed with the eye-piece, it still seemed raised to the three youngestof six persons, while the three eldest were subject to the deception. By such trifling and often unappreciable circumstances is our judgment affected, that the same person at one moment sees the convexity raised, and at another time depressed, though viewed as nearly aspossible under the same circumstances. This remarkable effect no doubt arises from the intro- duction of some casual reflected lights which the slightest change of position will produce.

296. Having thus seen how our judgment con- cerning elevations and depressions is aftected by our degree of knowledge of the effects of light and shade, and by unappreciable causes, we shall proceed to consider how our judgment is again deceived by the introduction of new substances.

297. Let the depression A, illuminated by one candle as in fig. 7, be converted into an elevation as in fig. 8, by the application of an inverting eye-piece ; then if another candle C, fig. 9, is introduced so as to illuminate the de])ression A in the same manner, and with nearly the same intensity as C does, the elevation will fall down into a depression. The cause of this is obvious : the application of the inverting eye-piece pro- duces no effect whatever, for both the sides of the cavity are symmetrically illuminated. In moving round the second candle C from its po- sition C’, so as to stand beside C, it is curious to observe the progress of the deception by which the depression is again changed into an elevation.

298. If, when the depression A, fig. 10, is convert<;J into an elevation, we introduce a small

unpolished opaque body M, at > d place it either beside the hollow or in it, so that the body M, and its shadow m, may be distinctly seen by the microscope, we shall have the appearance shown in fig. 11, the elevation having sunk into a de- pression. This correction of the depression arises from the introduction of a new illusion, namely, that which arises from the shadow vi ; for it is evident tliat, as the body M appears to project its shadow in the direction M ;►►, the lu- minous body must be supposed to be on the same side D ; and the evidence that this is the case is more powerful than our knowledge that the can- dle is actually at C, because it co-exists along with our perception of the depression A, whereas our knowledge of the situation of the candle is an act of recollection.

299. This correction of the delusion may be effected in another manner, which is perhaps more complete. If, in place of the unpolished body, we use a pin with a highly polished head, as shown at M, fig. 12, and then apply the in- verting eye-piece, we shall have the effect shown in fig. 13, the cavity A appearing depressed. Tlie image s of the candle C, being seen by re- flection in the polished head of the pin M,is seen by the application of the eye-piece at s, on the right hand side of I\I in fig. 13, so that we im- mediately conceive, in opposition to our previous knowledge, that the candle must be at D ; and hence the elevation falls into a depression the moment the pin head is pushed up into the field of view. The shadow M m has also its influ- ence in the present case.

300. The next case in which this illusion is dispelled is when the sense of touch corrects the deduction formed through the medium of sight. Let the cavity A be raised into an elevation by the inverting, eye-piece, as in fig. 8. Then if the cavity is sufficiently deep, and if we place the point of our finger in the cavity, the evidence which this gives us of its being a depression is superior to the evidence of its being a cavity arising from the inversion of the shadow; the apparent elevation will of course sink into a de- pression ; but the moment the finger is with- drawn it will again rise into an elevation. If the cavity is a long groove, the part not touched by the finger will appear elevated, while the part touched by it will appear depressed.

301. Having thus considered some of the principal phenomena arising from the inversion of the object, we shall now proceed to explain some analogous facts which are owing to the semi-transparency of the body. If M N, fig. 14, is a plate of mother-of-pearl, and A a cavity ground or turned in it ; then if this cavity is illu- minated by a candle C, or by a window at C, in place of their being a shadow at the side 5, as there would have been had the body been opaque, there is a

quantity of refracted light seen along the whole side s next the candle. The conse- quence of this is that the cavity appears as an elevation when seen only by the naked eye, as it is only an elevated surface that could have the side s illuminated. The fact which we have now stated is a very important one, in so far as it may affect the labors of the sculptor. In some kinds of marble the transparency is so great that

the depressions and elevations in the human face cannot be represented by it with any degree of accuracy ; and consequently transparent marble ought never to be used for works of any import- ance.

302. Illusions arising from the same cause may be observed even when the surface of the object is perfectly plain and smooth. If M N, fig. 15, is the surface of a mahogany table, M N nma. section of it, and a be a section of a knot in the wood, then it often happens, from the transparency of il;e thin edge at a, next the can- dle, that that side is illuminated while the oppo- site side at c is dark, the eye being placed in the plane of the section ►► be. The consequence of this is that the spot a be appears to be a hollow in the table.

303. Hence arises the appearance in certain plates of agate, which has obtained for it tlie name of hammered agate. The surface on which these cavities appears is a section of small sphe- rical aggregations of siliceous matter like ab c in fig. 15, which present exactly the same phenome- non, arising from the sam.e cause as the knots in mahogany and other woods.

304. The very same phenomenon is, as we have already stated, often seen in mother-of-pearl. Indeed it is so common in this substance that it is almost impossible to find a mother-of-pearl counter which seems to have its surface flat, al- though they are perfectly so when examined by the touch. Owing to the refraction of the light by the different growths of the shell lying in dif- ferent planes, the Ihiltest surface seems to be un- equal and undulating.

305. Dr. Brewster states that one of the finest deceptiotis which he ever met with, arising from the disposition of light and shadow, presented itself on viewing through a telescope the surface of a growing field of corn, illuminated by the sun when near the horizon. This field, on Sir Walter Scott's estate at Abbotsford, was about two

miles distant, and was divided into furrows, which were directed to the eye of the observer, as shown in fig. 16, where A B, C D, E F, re- present the furrows. These furrows are of course depressed, and the growing corn rises gradually from two adjacent ones towards the middle m ii, op, so that the surfaces A m C, Co E, were con- vex. The drills of corn on the highest summits m n, op, caught the rays of the settintj- sun, which shone upon them very obliquely in tiie direction S s, and illuminated their summits laterally, while the furrows AB, CD, EF, were in sha- dow. The consequence of this disposition of the light and shade was, that the whole field seemed to be trenched, and the corn to be grow- ing in the trenches as well as upon the elevated beds between them. The half furrow AB n m, being shaded on its edge A B, and illuminated on its edge mn, became the elevated part of the trenched ground, while the other half vi ?j C D ap- peared the sunk part, in consequence of the side mn being illuminated, and its odier side C D in shade. At a certain period of the day this de- ception did not take place, and it was dispelled the moment the sun had set. The telescope had no effect whatever in producing it, as it showed objects erect.

306. An illusion of an analogous nature Dr, Brewster once observed when looking at the ab- bey church of Paisley, where the clustered columns of a Gothic pillar all sunk into hollow flutings. The cause of this deception was not discovered, but it must have arisen from some mistaken notion respecting the direction in which the object was illuminated.

307. The last species of illusion of this nature, and perhaps the most remarkable of all of them, may be produced by a continued efibrt of the mind to deceive itself. If we take one of the in- taglio moulds used for making bas-reliefs, and direct the eye steadily to it without noticing sur- rounding objects, we may entice ourselves into the belief that the intaglio is actually a bas-relief. It is difficult at first to produce the deception, but a little practice never fails to accomplish it. Dr. Brewster states that he has succeeded in car rying this deception so far as to be able, by the eye alone, to raise a complete hollow mask of the human face into a projecting head. In order to do this we must exclude the vision of other ob- jects : and also the margin or thickness of the cast.

308. The pliP.nomena arising from atmospheric refruetion may be best understood by an examina- tion of the apparent alteration in the colors of the heavens

309. If the light of the setting-sun, by pass- ing through a long tract of

air, be divested of a portion of its rays, the remainder, which is transmitted, will illunnnate the western clouds with an orange color, and as the sun sets more and more, a great number are reflected, while the clouds grow more deeply red, till at length the entire disappearance of the sun leaves them of a leaden hue.

310. When a direct spectrum is thrown on colors darker than itself, it mixes with them ; as the yellow spectrum of the setting-sun, thrown on the green grass, becomes a greener yellow. But, when a direct spectrum is thrown on colors brighter than itself, it becomes instantly changed into the reverse spectrum, which mixes with those brighter colors. So the yellow spectrum of the setting sun thrown on the luminous sky becomes blue, and changes with the color or brightness of the clouds on which it appears. But the reverse spectrum mixes with every kind of color on which it is thrown, whether brighter than itself or not : thus, the reverse spectrum obtained by viewing a piece of yellow silk, when thrown on white paper, was a lucid bUie-greeii ; when thrown on black Turkey leather became a deep violet : and the spectrum of blue silk, thrown on white paper, was a light yellow ; on black silk was an obscure orange ; and the blue spectrum obtained from orange-colored silk, thrown on yellow, became a green.

311. Of the natural phenomena produced oc- casionally by the separation of the primary colors the rainbow is one of the most beautiful. This meteor, which in poetical language is called the iris, never makes its appearance except when the spectator is situated between the sun and a shower of rain; and that this conclusion is just any one may satisfy himself by the following experiment : ××× Fill a hollow glass globe with water, and susoend it in the sun, in such a

manner that it may be raised or lowered at pleasure; at a certain height above the eye of the spectator, who looks at it with his back to the sun, the globe will appear to be red ; let it then be slowly lowered, and it will appear to be orange, and afterwards, in succession, as it descends, it will appear yellow, green, blue, indigo, and violet. Hence the same drop of rain, which must be considered as a little globe, supplies all the seven colors to the eye. There are sometimes two rainbows seen at the same time, one within the other, and, what may seem remarkable, the order of the colors of the exte- rior bow is the reverse of that of the interior one. When two bows are seen, the exterior one is comparatively faint, and it is, therefore, some- times

called the false or secondary bow ; while the greater distinctness of the interior one has obtained for it the appellation of the primary bow. The rainbow was one of those phenome- na which astonished and perplexed the ancients; and, after many absurd and unsuceessful conjec- tures, their best philosophers, Pliny and Plu- tarch, relinquished the enquiry as one which was above the reach of human investigation. In the year 1611 Antonio de Dominis made a consi- derable advance, however, towards the theory of the rainbow, by suspending a glass globe in the sun's light, when he found that, while he stood with his back to the sun, the colors of the rain- bow were reflected to his eye in succession by tiie globe, as it was moved higher or lower. He was, however, unable to account for the produc- tion of the different colors, as the experiments with the prism had not yet been made, and it was reserved for Newton to perfect the discovery.

312. To trace the progress of a ray of light through a drop of rain in each of these bows, will explain the cause of their differing in bright- ness. In the true or primary bow, the rays of light arrive at the spectator's eye, after two re- fractions and one reflection.

31.3. Thus, let A, in plate V. fig. l,be a drop of rain, and S a ray from the sun falling on the upper part of the drop. It will suffer a refrac- tion, and, instead of going forward in a right line, it will be bent to n ; at n part of it will emerge, but the remainder will be reflected tog; at g it will be again refracted on passing into the air towards the eye at h ; being thus twice refracted and once reflected, the ray is separated into its primitive colors ; the red part, which is least thrown out of its course, makes an angle, at its emergence, with the incident solar ray of 40►► 2', as Sfh; and the violet, bemg tlie most easily thrown out of its course, makes with tlie solar light an angle of 40►► 17'. The different colors, therefore, at the distance of the specta- tor, are considerably separated, and affect the eye in succession with the seven colors; but the succession is so quick, and so many drops fall through the same circuit in the same time, that the mind loses the idea of succession, and the bow seems permanent as long as the shower continues in a proper direction for the eye.

314. The exterior or secondary how is formed by two reflections and two refractions. Let B represent one of the drops of rain forming this bow ; a ray, T, from the sun, falling upon it at

r, is refracted, and falls upon the back of tlie drop at s; from the transparency of tiie drop a portion of it passes through towards iv, but the remainder of it is reflected towards t ; here again, for the same reason as before, part of it emerges from the drop, in the direction x,

but the portion still left is reflected to m, where it is refracted towards the spectator, with the red rays uppermost. The great quantity of light lost at each reflection is the cause of the indistinctness of this bow, and therefore we cannot be sur- prised that we rarely, if ever, see bows formed by a still greater number of reflections within the drops; for, though they may exist, they are too faint to be seen. The secondary bow can- not be seen when the elevation of the sun is above 54►► 7', and it is broader than the interior bow, because the rays are more dispersed before they reach the eye.

315. The marine or sea bow is a phenomenon sometimes observed in a much agitated sea; when the wind, sweeping part of the tops of the waves, carries them aloft, so that the sun's rays falling upon them, are refracted, &c., as in a common shower, and paint the colors of the bow.

316. Rohault mentions colored bows on the grass, formed by the refraction of the sun's rays in the morning dew. Dr. Langwith, indeed, once saw a bow lying on the ground, the colors of which were almost as lively as those of the common rainbow. It was extended several hun- dred yards, and was not round, but oblong, being as he conceived the portion of an hyper- bola. The colors took up less space, and were much more lively in those parts of the bow which were near him than in those which were at a distance.

317. We may now notice a peculiar perspect- ive appearance of aerial light and shade. It occurred on the evening of August 19th, 1826 ; and was observed from the undercliff at the back of the Isle of Wight, just above Puckaster Cove. The sky was clear; the sun had just set to those who were standing where the appear- ance was observed ; when several enormous rays of light and shade were remarked towards the east, north-east, and south-east, all radiating in straight lines from a spot rather soutli of east, and just upon the horizon. They were ten or twelve in number, did not join at the place whence they appeared to originate, but seemed to emerge from an obscure portion of surface of a convex form, 8►► or 9►► in horizontal extent, and about the third of that in height. The rays extended from 30►► to 40►► on the right and left from the centre, but were of less extent as they became more vertical. They diminished gradu- ally in intensity at the extremities, until they could be traced no farther. The appearance slowly faded away, some of the rays disappear- ing before others, but was observed upon the whole for about half an hour.

318. At first the phenomenon seemed inex- plicable, but after a little consideration was referred (and as it appeared from after observa-

tions correctly) to an efiect of aerial perspective. The rays which seemed to originate from a com- mon centre on the east were really only the in- tervals between long shadows caused by the

occurrence of clouds far to the west, and were in fact passing to the place whence they seemed to originate ; and the circumstances of the case seem to have been as follow : ××× the atmosphere contained a slight haze, which allowed the sun's beams to pass" forward with but little interruption, but was yet in sufficient quantity to reflect a consi- derable portion of light to the eye. The sun was just setting ; the clouds very far to the west, and out of sight from the place where the ob- server stood, stopped the light wherever they interfered, and cast immense horizontal, or nearly horizontal, shadows along the sky, parallel to each other, and over the head of the observer. The difference between these shadows and the intervening illuminated parts could not be ob- served over head, or on the right or left hand, i. e. perpendicular to their direction, because of the want of sufficient depth, as it were, in the parts thus circumstanced, to make them visible ; but, as they receded from the-observer in the di- rection from the sun, they became fore-shortened, and tlien from the greater depth of mass, and consequently greater number of particles looked at, became visible. This is at least one reason why they were so visible towards the east ; but another is the probable existence of more haze in that direction than towards the west, or to the right or left of the observer's situation : the rays could not be seen between the sun and the ob- server, though the sun was out of sight, and consequently the general light, it may be sup- posed, not too great; which seems to imply that less haze existed in that direction ; and its presence was fully proved towards the east by the dull red color which the moon assumed upon rising a short time after the appearance had ceased. The convergence of the rays to one spot, and that opposite the sun, was merely an effect of perspective, and requires no expla- nation here.

319. Although the appearance on this evening was exceedingly beautiful and rare, and the more striking from the absence, to the observer, of the sun or clouds, and the complete insulation of the phenomenon, yet by close observation, upon other evenings, it was found that partial effects of the same kind were very common ; and, from the manner in which these could be observed, the explanation above given fully con- firmed. On several evenings after, when ob-

serving the sun set from the neighbouring hill of St. Catherine, it was found that if the atmo- sphere was generally clear, but with compact and distinctly-formed clouds floating in it, the effect was produced. The usual appearance of rays at sunset, diverging amongst the clouds in the west, from the sun, is well known ; but, even when these were not visible, upon looking to the eastern half of the hemisphere, and especially to the north or south of east towards the horizon, it was rarely that some clouds could not be dis- tinguished, with long shadowy projections be- hind them, always converging to the spot oppo- site to the sun. Frequently, clouds could be selected moving more immediately in the neigh- bourhood of the observer : of those which pass- ed overhead the shadows could not be observed close to the clouds; but, carrying the eye onwards

towards the east, the same shadows became visible, when considerably fore-shortened, and could be observed moving on and changing with the clouds themselves. All these phenomena, with their variations, were easily referrible to their causes, and may be observed at almost any sun-set in fine weather; but the effect of the first evening, so similar in kind, though so dif- ferent in appearance, was not again remarked. It is with a view of guarding persons v/ho may observe the same effect, against any mistake as to its origin, that the appearance, with its nature, has been thus particularly described.

320. The elevation of coasts, ships, and moun- tains, above their usual level, when seen in the distant horizon, has been long known and de- scribed under the name of Looming. The name of mirage has been applied by the French to the same class of phenomena; and the appella- tion of Fata Morgana has been given by the Italians to the singular appearances of the same kind which have been repeatedly seen in the straits of Messina.

321. The phenomena of the mirage are most frequently seen in the case of ships when they are just beginning to appear above the visible horizon. Mr. Huddart, Dr. Vince, and captain Scoresby, have described various appearances of this kind, of which the following are the most interesting : ###

322. On the 1st of August, 1798, Dr. Vince observed at Ramsgate a ship which appeared as at A, fig. 2, the top mast being the only part of it that was seen above the horizon. An in- verted image of it was seen at B immediately above the real ship A, and an erect image at C, both of them being complete and well defined. The sea was distinctly seen between them as at V w. As the ship rose to the horizon the image C gradually disappeared, and while this was going on the image B

descended, but the main- mast of B did not meet the mainmast of A. The two images B C were perfectly visible when the whole ship was actually below the horizou.

323. While navigating the Greenland Sea on the 28th of June, 1820, captain Scoresby ob- served about eighteen or nineteen sail of ships at the distance of from ten to fifteen miles. He saw them from the mast head, beginning to change their form. One was drawn out, or elongated, in a vertical plane; another was con- tracted in the sanie direction ; one had an in- verted image immediately above it as at a fig. 3, and two at 6 and c, had two distinct inverted images in the air: along with these images there appeared images of the ice, as at b and c, in two strata, the highest of which had an altitude of about 15'.

324. In a later voyage, performed in 1822, captain Scoresby was able to recognise his father's ship, when below the horizon, from the inverted image of it which appeared in the air. * It was,' says he, * so well defined, that I could distinguish by a telescope every sail, the general ' rig of the ship,' and its particular character; insomuch that I confidently pronounced it to be my father's ship, the Fame, wliich it afterwards proved to be ; though, in comparing notes with my father, I found that our relative position at

the time gave our distance from one another very nearly thirty miles, being about seventeen miles beyond the horizon, and some leagues beyond the limit of direct vision. I was so struck by the peculiarity of the circumstance that I mentioned it to the officer of the watch, stating my full conviction that the I'ame was then cruising in the neighbouring inlet.'

325. One of the most curious phenomena of this kind was seen by Ur. V'ince on the Gth of August, 1806, at 7 P.M. To an observer at Ramsgate the tops of the four turrets of Dover castle are usually seen over a hill between Rams- gate and Dover. Dr. 'ince, however, when at Ramsgate saw the whole of Dover castle as if it had been brought over and placed on the Rams- gate side of the hill. The image of the castle was so very strong and well defined, that the hill itself did not appear through tlie image.

32(3. In the sandy plains of Eeypt the mi- rage is seen to great advantage. These plains are often interrupted by small eminences,

upon which the inhabitants have built their villages, in order to escape the inundations of the Nile. In the morning and evening objects are seen in their natural form and position, but, when the surface of the sandy ground is heated by the sun, the land seems terminated at a particular distance by a general inundation; the villages which are beyond it appear like so many islands in a great lake, and between each village an inverted image of it is seen.

327. Our limits will not permit us to give any farther examples of these curious phenomena. We shall therefore attempt to give a popular ex- planation of their cause.

328. Let S II, fig. 4, be a ship in the horizon, and visible to the eye at E, by rays S E, HE, proceeding in straight lines to E, through a tract of the atmosphere in its usual state. If we suppose, what is known to be sometimes the case, that the refractive power of the atmosphere, or air, above the line S a E varies, so as to be less at c than at a, then rays Sd, H c, proceeding upwards from the ship, and that never could in the ordinary state of the air reach the eye at E, will be refracted into curve lines H c, Sd; and, if tlie variation of refractive power is such that these last rays cross each other at x, then the ray Sd, in place of being the uppermost, will now be the undermost, and consequently will enter the eye as if it came from the lower end of the object.

329. If we now draw lines E s, E A, tangents to these curve lines at E, these lines will be the direction in which the ship will be seen by the rays lie, Sd, and the observer at E will see an inverted image s h of the ship S H considerably elevated above the horizon. The refractive power of the air still continuing to diminisii, other rays, II ?►►, II n, that never could reach the eye at E in the ordinary state of the atmosptiere, may likewise be bent into curves which will not cross each other before they reach the eye at E. In this case the tangent E s' to the upper curve Sn E will be uppermost, and tiie tangent EA' to the lower curve S m E lowermost, so that the observer at E will see an erect imaˆe .s' // of the ship above the inverted image. It is possible

that a mtrd and even ►► 'ourth image may be

seen.

330. If the variation of refractive power takes place only in the tract of air through which the rays H r, S rf, pass, then there may only be an inverted image ; and if it takes place only in the tract through which S m, S n, pass, there may only be an erect image. It is also obvious, that if the variation of refractive power commences at the line joining the

eye and the horizon, the ordinary image S H will not be seen ; and, in like manner, it is clear that the inverted and erect images s //, s h', may be seen even if the real ship S II is below the visible horizon.

331. In the case of Dover Castle, the rays from the top and bottom of the castle passed above the hill in curve lines, and the top of the hill was seen by the observer at Ramsgate, by means of a curved ray which reached the eye between the rays of the top and bottom of the castle.

332. That the phenomena of the mirage are produced by such variations in the refractive power of the atmosphere as we have mentioned may be proved by actual experiment. All the phenomena may be represented artificially to the eye, and we may even venture to predict nevr phenomena which have not yet been witnessed. If the variation of the refractive power of the air takes place in a horizontal line perpendicular to the line of vision, that is, from right to left, then we may have a lateral mirage, that is, an image of a ship may be seen on the right or left hand of the real ship, or on both, if the varia- tion of refractive power is tlie same on each side of the line of vision. If there should happen at the same time both a vertical and a lateral varia- tion of refractive power in the air, and if the variation should be such as to expand or elon- gate the object in both directions,. then the object would be magnified as if seen through a tele- scope, and might be seen and recognised at a distance at which it would not otherwise have been visible. If the refractive powerˆ on the contrary, varied, so as to contract the object in both directions, the image of it would be di- minished as if seen through a concave lens.

333. In order to represent artificially the effects of the mirage. Dr. WoUasion views an object through a stratum of spirit of wine lying above water, or a stratum of water laid above one of syrup. These substances, by their gradual in- corporation, produce a refractive power dimin- ishing from the spirit of wine to the water, or from the syrup to the water; so that by looking through the mixed, or tlie intermediate stratum at a word or object held behind the bottle which contains the fluids, an inverted image will be seen. The same effect Dr. Wollaston has shown may be produced by looking along the side of a red-hot poker at a word or object ten or twelve feet distant. At a distance less than three-eighths of an inch from the line of the poker, an inverted image was seen, and within and without that an erect image.

334. The method employed by Dr. Brewster to illustra'e these phenomena consists in holding a heated iron above a mass of water

bounded by parallel plates of glass ; as the heat descends

slowly throiish tlie fluid, we have a regular va- riation of density which gradually diminishes from the bottom 1o the surface. If we now withdraw the heated iron, and put a cold body in its place, or even allow the air to act alone, the superficial stratum of water will give out its heat, so as to produce a decrease of density from the surface to a certain depth below it. Through the medium thus constituted the pheiiomena of the mirage may be seen in the finest manner.

335. We have no doubt that some of the facts ascribed in the Western Highlands of Scotland to second sight have been owing to the unusual refraction of the atmosphere, and that the same cause will explain some of those wonders which sceptics discredit, and which superstitious minds attribute to supernatural causes. The beacon keeper of the Isle of France, who saw ships in the air before they rose above tlie visible horizon, may now recover his good character in the eyes of the former, while the latter may cease to re- gard him as a magician.

336. Very beautiful effects resulting from the decomposition of white light are visible on the surface of the feathers of birds; and, as we have stated in a previous section, are also exhibited on the surface of mother-of-pearl. Dr. Brew- ster, while pursuing a series of experimental investigations on this subject, found, by the aid of the microscope, that they arose from grooves in the striated surfaces ; that they were produced when the flat surface was un- polished, and that they could be communicated to wax, gum-arabic, tin-foil, the fusible metal, and even to lead, by hard pressure or the blow of a hammer lie determined also that the mottled colors upon all bodies with an im- perfect polish, and the scratches or grooves upon polished metals, could be communicated to wax and other substances. Tiie same structure which gives these communicable colors he succeeded in producing artificially on the surface of calves- feet jelly; that had been boiled a considerable time; and he discovered, with a powerful micro- scope, the same minute grooves wiiich exist in motlier-of- pearl, and they were so near one an- other that some thousands of them must have been contained in a single inch. These grooves were completely visible to the unassisted eye, but they gave in a very distinct manner the colors of mother-of-pearl.

337. Mr. Barton, of the mint, has succeeded in ornamenting steel and other articles, with the colors of striated surfaces, and of applying this principle to practical purposes.

338. In applying the principle ot striated co- lors to ornament steel, the effect, or pattern, is produced upon the polished surface by the point of the diamond, so that either the whole or a ###part of the surface is covered widi lines or grooves, whose distance may vary from the 1000th to the 10,()00th of an inch. “When these lines are most distant tlie prismatic images of the candle, or any luminous body, seen by reflection from the polished surface, are nearest one another, and the common colorless image: and, when the lines are least distant, the colored images are farthest from one -inother, and tiie colors are most vivid.

339. In daylight the colors produced by these

minute grooves are scarcely distinguishable, un- less at the boundary between a dark and a lu- minous object. In sharp lights, however, and particularly in that of the sun, the colors shine with extraordinary brilliancy, and the beautiful tints which accompany every luminous image can only be equalled by their matchless exhibition on the reflections of the diamond.

340. The colors transmitted by plates of glass containing a film of air or water are well worth an attentive examination. The plates of reflec- tion or transmission of the se’/eral colors in a series are so near each other that tlie colors dilute each other by mixture, whence the number of series in the open daylight seldom exceeds seven or eight : but if the system be viewed through a prism, by which means the rings of various colors are separated, according to their refrangibilities, they may he seen on that side towards which the refraction is made, so numerous that it is impos- sible to count them. Or if, in a dark chamber, the sun’s light be separated into its original rays by a prism, and a ray of one uncompounded co- lor be received upon two glasses, the number of circles will become very numerous. In this ex- periment it is also seen that, in any series, the circles formed by the less refrangible rays exceed in magnitude those which are formed by the more refrangible rays, and consequently that, in any series, tiie more refrangible rays are reflected at less thicknesses than those which are less re- frangible. If the light be incident obliquely, the rings of colors dilate and enlarge themselves, wlience it follows that the thickness required to reflect the colors of any series is diff”erent in dif- ferent obliquities.

341. ^^‘hen tlie solar rays are passed through a convex lens, or reflected from a concave, a very intense heat is produced by the concentration of tlie rays. Count r:;ˆmford has shown that when the rays of the sun are made to pass through a certain aperture, and fall upon any substance to be lieated, while the same area of light is made to pass through a lens, in the focus of which the same quantity of matter is to be heated, they be- come heated in the same time to tiie same degree. Nothing is better known, in short, than that the rays of the sun are capable of exciting sensible heat. Newton, and the philosophers of his age, accounted for heat by the motion excited in the parts of the body by the agitating power of the absorbed light. Melville supposed that the heat was expelled from the terrestrial matter by die light. At present it is generally ndmitted, on the strength of some valuable experiments to which we have already alluded, that the rays of light and caloric are separately emitted from the sun, the luminous rays producing light, and the ca- loric, heal.

342. It was originally remarked by Newton, and the fact has since been confirmed by the ex- periments of Dr. Herschel, that the different- colored rays have not the same illuminating power. The violet rays appear to have tlie least luminous etfect : tlie indigo more; and the eff”ect increases in the order of the colors, the the green being very great ; between the green and yellow the greatest of all ; the yellow the same as the green ; but the red less than the yellow.

343. Sir William Ilerscliel introduced a beam of ligbt into a dark room, which was decompos- ed by a prism, and then exposed a very sensible thermometer to all the rays in succession, and observed the heights to which it rose in a e;iven time. He thus determined that the heating power of the red, to that of the green rays, was two and three-quarters to one; and three and a half to one in red to violet.

344. On repeating these experiments he found that the greatest quantity of calorific rays were even beyond the colored spectrum at about half an inch from the commencement of the red rays. At a greater distance from this point it began to diminish, but was very perceptible even at the distance of an inch and a half.

345. It will appear, from vvhat has been stated, that these calorific rnys are less refrangible than the rays of light ; hence the calorific focus will fall beyond that of the luminous. Dr. Herschel made an

experiment to verify this inference, but did not come at any thing conclusive. lie after- wards made experiments to collect these invisible calorific rays, and caused them to act independ- ently of the light; by which he concludes that they are sufficient to account for all the effects produced by the solar rays in exciting heat ; thati they are capable of yjassing through glass, and of being refracted and reflected, after they have been finally detached from the solar beam.

346. Dr. Morichini appears to have been the first person to point out the connexion between light and magnetism. To experimentally illus- trate this important fact, he employed a prism, and caused the decomposed rays to fall on a se- ries of small needles, and the needle intersected by the violet ray was soon found to acquire per- manent polarity. It has since been ascertained that this property is liot peculiar to tlie violet Tay, but extends, though in a less degree, through several other rays in the series.

347. Our present article was commenced with a few facts illustrative of the history of optics, when viewed in connexion with the theory of light; it may now be advisable to furnish similar data for a right understanding of the progress that has been made in the construction of optical mac/lilies.

348. The ancients were so little acquainted with the science of optics that they seem to have had no instruments of the optical kind, excepting the glass globes and speculums formerly men- tioned,which they used in some cases for magnify- ing and burning. Alhazen gave the first hint of the invention of spectacles, and it is probable that they were found out soon after his time. From the writings of Alhazen, together with the ob- servations and experiments of]{oger Bacon, it is not improbable that some monks gradually hit upon the construction of spectacles ; to whicii Bacon's smaller segment, notwithstanding his mistake concerning it, was a nearer approach than Alhazen's larger one. Whoever they were that pursued the discoveries of Bacon, they pro- bably observed that a very small convex glass, when held at a greater distance from the book, would magnify the letters more than when it ###was placed close to them, in which position only Bacon seems to have used it. In the next

place, they might try whether two of these sma'' segments of a sphere placed together, or a glass convex on both sides, would not magnify more than one of them. They would then find that two of these glasses, one for each eye, would answer the purpose of reading better than one ; and, lastly, they might find that different degrees of convexity suited different persons.

349. It is certain that spectacles were well known in the tliirteenth century, and not long before. It is said that Alexander Spina, a native of Pisa, who died in 1313, and who was very ingenious in executing whatever he saw or heard of as having been done by others, happened to see a pair of spectacles in the hands of a person who would not explain them to him ; but that he succeeded in making a pair for himself, and immediately made the construction public, for the good of others. It is also inscribed on the tomb of Salvinus Armatus, a nobleman of Florence, who died in 1317, that he was the inventor of spectacles.

350. The use of concave glasses to help those persons who are shortsighted was probably a discovery that followed not long after that of convex ones for the relief of those whose sight is def.- e in the contrary extreme, though we find no 1 xe of this improvement. From this time, though both convex and concave lenses were sufiiciently common, yet no attempt was made to form a telescope, by a combination of them, till the end of the sixteenth century. Descartes considers James Wetius, a person who was no mathematician, though his father and brother had applied to those sciences, as the first constructor of a telescope ; and says that, as he vvas amusing himself with making mirrors and burning-glasses, he casually thouglit of looking through two of his lenses at a time, and that happening to take one that was convex and another that was concave, and happeningalso to hit upon a pretty good ad- justment of them, he found that, by looking through them, distant objects appeared very large and distinct. In fact, without knowing it, he had made a telescope.

351. Others say that this great discovery was first made by John Lippersheim, a maker of specta- cles at Middleburg, or rather by his children ; who, like Melius, were diverting themselves with looking through two glasses at a time, and plac- ing them at different distances from one another. But Borellus, tlie author of a book entitled De vero Telescopii Inventore, gives this honor to Zacharias Joaiinides or Jansen, another maker of spectacles at the same place, who made the first telescope in 1590 ; and it seems now to be the general opinion that this account of Borellus IS the most probable. Indeed his account of the discovery of telescopes is so circumstantial, and so well authenticated, that it does not seem pos- sible to call it in question. It is not true, he says, that this great discovery was made by a person who was no philosopher ; for Zacharias Jausen was a diligent enquirer into nature ; and, being engaged in these pursuits, he was trying what uses could be made of lenses for those pur- poses, when he fortunately hit upon the construc- tion.

352. This ingenious mechanic and philosopher

had no sooner fnunrl tjie ˆrrans;ement of glasses that produced the effect he desired than he en- closed them in a tube, and ran with his instru- ment to prince Maurice, who, immediately con- ceiving that it might be of use to him in his wars, desired the author to keep it a secret. But this was impossible; and several persons in that city immediately began to make and sell telescopes. One of the most distinguished of these was John Laprey, called Lippersheim by Sirturus. By liim some person in Holland being very early supplied with a telescope, he passed with many for the inventor; but both Melius above men- tioned, and Cornelius Drebell of Alcmaer, in Holland, applied to the inventor hnnself in 1620 ; as did also Galileo, and many others. The first telescope made by Jansen did not ex- ceed fifteen or sixteen inches in length ; but Sir- torus, who says that he had seen it and made use of it, thought it the best that he had ever examined.

353. Jansen, having a philosophical turn, ap- plied his instrument to such purposes as he had in view when he hit upon the construction. Di- recting it towards celestial objects, he distinctly viewed the spots on the surface of the moon, and discovered many new stars, particularly seven pretty considerable ones in the Great Bear. His son, John Zacharias, noted the lucid circle near the limb of the moon, whence several bright rays seem to dart in different directions ; and he .says that the full moon, viewed through this in- strument, did not appear flat, but was evidently spherical, the middle part being prominent. Ju- piter also, he says, appeared round, and rather spherical ; and sometimes he perceived two, sometimes three or four small stars, a little above or below him ; and, as far as he could observe, they performed revolutions round him. This was probably the first observation of the satellites of Jupiter.

354. It may be proper to add, that Francis Fontana, an Italian, also claims the invention ; but he did not pretend to have made it before 1608, and it is well known that the instruments were made and sold in Holland some time be- fore.

355. Some say that Galileo was the inventor of telescopes ; but he himself acknowledges that he first heard of the instrument from a German; but he says that being informed of nothing more than the

effects of it, first by common report and a few days after by a French nobleman, J. Badovere, at Paris, he himself discovered the construction, by considering the nature of refrac- t'on: and thus he had much more real merit than the inventor himself. The account of what Galileo actually did in this business is circum- stantially related by the author of his life, pre- fixed to the 4to. edition of his works,' printed at Venice in 1744. About April or May, 1609, it ˆas reported at Venice, where Galileo (who was professor of mathematics in the university of Pa- doa) then happened to be, that a Dutchman had presented to prince Maurice of Nassau a certain optical instrument by means of which distant ob- jects appeared as if they were near; but no far- ther account of the discovery had reached that place, though this was nearly twenty years after ths first discovery. Struck, however, with this

account, Galileo instantly returned to Padua, considering what kind of an instrument this must be. The night following the construction occurred to him ; and the day after, puttmg the parts of tlie instrument together, as he had pre- viously conceived of it, and notwithstanding the imperfection of the glasses tiiat he could then procure, the effect answered his expectation, as he acquainted his friends at Venice, to which place lie six days afterwards carried another and a better instrument, and where, from several eminences, he showed to some of the principal senators of that republic a variety of distant ob- jects, to their very great astonishment. When he had made farther improvements in the instru- ment, he made a present of one of them to the doge, Leonard Donati, and of one to each of the senators of 'enice; giving along with the in- strument a written paper, in which he explained the structure and wonderful uses that might be made of it both by land and at sea. In return, the republic, on the 25th of August, the same year, more than tripled his salary as professor.

356. Galileo, directing his tube towards tiie moon, found that the surface of it was diversified with hills and valleys, like the earth. He also discovered that the via lactea and nebulae con- sisted of a collection of fixed stars, which, on account either of their vast distance or extreme smallness, were invisible to the naked eye. He likewise observed innumerable fixed stars dis- persed over the face of the heavens, which had been unknown to all the ancients : and, examining Jupiter with a better instrument than any he had made before, he found that he was accompanied by four stars, which performed periodical revolutions round him, and which, in honor of the Medici, he called Medicean planets. This discovery iie made in January 1610, N. S., and in March he published an account of all his discoveries, in his Nuncius Sidereus, printed at Venice, and de- dicated

to Cosmo, great duke of Tuscany, who, by a letter dated 10th of July 1610, invited him to quit Padua, and assigned him an ample sti- pend, as primate and extraordinary professor at Pisa, but without any obligation to read lectures, or to reside. The extraordinary discoveries con- tained in theNunciusSidereus, which was quick- ly reprinted in Germany and France, were the cause of much debate among the astronomers ; many of whom could not credit Galileo's account, wiiile others ridiculed his discoveries as fictions or illusions. Some could not be prevailed upon even to look through a telescope; so devoted were they to the system of Aristotle. But, when it was found vain to oppose the evidence of sense, some affirmed that the invention was taken from Aristotle; and quoting his writings, in which he mentions stars seen in the day-time from the bottom of a deep well, said, that the well corresponded to the tube of the telescopes, and that the vapors which arose from it gave the hint of putting glasses into it; and that in both case? the sight is strengthened by the transmission of the rays through a thick and dark medium. Ga- lileo himself, who tells this story, humorously com- pared such men to alchymists, who pretend that the art of making gold was known to the ancients, but lav concealed under the fables of the poets.

OPTICS.

357. In July, 1610, Galileo being still at Pa- dua, and getting an imperfect view of Saturn's ring, imagined that the planet consisted of three parts; and therefore, in the account which he gave of this discovery to his friends, he calls it planetam tergeminam. He also observed some spots on the face of the sun : but did not then publish his discovery ; partly for fear of irritat- ing the obstinate Aristotelians, and partly to make more exact observations on this remarkable phe- nomenon. He therefore contented himself with communicating his discovery to some of his friends at Padua and Venice, among whom was F. Paul. This delay, however, was the cause of this discovery being contested with him by the famous Scheiner, who likewise made the same observation in October 1611, and anticipated Galileo in the publication of it. About the end of August Galileo left Padua and went to Flo- rence ; and in November following he was satis- fied, that from September Venus had been con- tinually increasing in bulk, and that she changed her phases like the moon. About the end of March 1611 Galileo went to Rome, where he gratified the cardmals and the chief nobility with a view of the new wonders he had discovered in the heavens, and among others the solar spots. From these discoveries Galileo obtained the name of Lynceus, after one of the Argonauts, who was famous in antiquity for the acuteness of his sight; and the marquis of Monticelli instituted an academy, with the title of Lincei, and made

him a member of it. Galileo enjoyed the use of his telescope twenty-nine years, continually en- riching astronomy with his observations : but, by too close application during the nocturnal air, his eyes grew gradually weaker, till in 1639 he became totally blind ; a calamity which, how- ever, neither broke his spirits, nor interrupted the course of his studies. The iirst telescope that Galileo constructed magnified only three times; but soon after he made another which magnified eighteen times ; and afterwards, with great trou- ble and expense, he constructed one that magni- fied thirty-three times : and with this he discovered the satellites of Jupiter and the spots of the sun.

358. Although Galileo had great merit with respect to telescopes, yet he did not explain the rationale of the instrument. This important ser- vice to science was performed by John Kepler, whose name is famous in the annals of philoso- phy, especially by his discovery of tlie great law of motion respecting the heavenly bodies ; which is that the squares of their periodical times are as the cubes of their distance from the body about which they revolve ; a proposition which, how- ever, was not demonstrated before Sir Isaac Newton. Kepler was astronomer to several em- perors of Germany ; he was the associate of the celebrated astronomer Tycho Brahe, and the mas- ter of Descartes. He made several discoveries relating to the nature of vision ; and not only explained the rationale of the telescopes which he found in use, but also pointed out methods of constructing others of superior powers and more commodious use. Kepler first gave a clear ex- plication of the effects of lenses in making the rays of a pencil of light converge or diverge. He showed that a plano-convex lens makes rays pa-

rallel to its axis to meet at the distance of the diameter of the sphere of convexity; but that, if both sides of the lens be equally convex, the rays will have their focus at the distance of the radius of the circle corresponding to that degree of con- vexity. But he did not investigate any rule for the foci of lenses unequally convex. To Caval- lieri we owe this investigation. He laid down this rule : as the sum of both the diameters is to one of them, so is the other to the distance of the focus. All these rules concerning convex lenses are applicable to those that are concave ; with this difference, that the focus is on the contrary side of the glass.

359. The principal effects of telescopes depend upon these plain maxims, viz. That objects ap- pear larger in proportion to the angles which they subtend at the eye ; and the effect is the same whether the pencils of rays by which objects are visible to us come directly from the objects them- selves, or from any place nearer to the eye, where

they may have been united so as to form an image of the object ; because they issue again from those points where there is no real substance, in certain directions, in the same manner as they did from the corresponding points in the objects themselves. All that is effected by a telescope is, first to make such an image of a distant ob- ject, by means of a lens or mirror; and then to assist the eye in viewing that image as near as possible ; so that the angle, which it shall sub- tend at the eye, may be very large compared with the angle which the object itself would subtend. This is done by an eye-glass, which so refracts the pencils of rays as that they may afterwards be brought to their several foci by the natural humors of the eye. If, instead of an eye glass, an object may be looked at through a small hole in a thin plate or piece of paper, held close to the eye, it may be viewed very near to the eye, and, at the same distance, the apparent magni- tude of the object will be the same in both cases, But, as very few rays can be admitted through a small hole, there is seldom light sufficient to view an object to advantage in this way.

360. Such was the telescope first discovered and used by astronomers ; and it is of a much more difficult construction than some other kinds that have been invented since. The great in- convenience attending it is, that the field of view is exceedingly small. For, since the pencils of rays enter the eye very much diverging from one anothfer, but few of them can be intercepted by the pupil ; this inconvenience increases with the magnifying power of the telescope, so that philo- sophers at this day cannot help wondering that it was possible, with such an instrument, for Galileo and others to have made the discoveries they did. It must have required incredible patience and address. No other telescope, however, than this, was so much as thought of for many years after the discovery. Descartes, who wrote thirty years after, mentions no others as actually con- structed. To Kepler we are indebted for the in- vention of the astronomical telescope, the best adapted for viewing the heavenly bodies. The rationale of this instrument is explained, and the advantages of it are clearly pointed out, by this philosopher, in his Catoptrics ; although he ne-

ver actually reduced his excellent theory into practice. Montucla conjectures that he was not aware of the great increase of the field of view, and that, being engaged in other pursuits, he might think it of no importance to construct an instrument which could do little more than an- swer the same purpose with those of which he was already

possessed. Kepler's new scheme of a telescope was however soon executed. The first who made an instrument of this construction was F. Scheiner, who described it in his Rosa TJrsina, published in 1630. If, says he, you in- sert two similar lenses (both convex) in a tube, and place your eye at a convenient distance, you will see all terrestrial objects inverted indeed, but magnified and very distinct, with a consider- able extent of view. lie subjoins an account of a telescope of a different construction, with two convex eye-glasses, which reverse the images, and make them appear in their natural position. This disposition of the lenses had also been pointed out by Kepler. F. Rheita soon after hit upon a better construction, using three eye-glasses instead of two. This was named the terrestrial telescope, being chiefly used for terrestrial ob- jects.

361. The first and last of these constructions are those which are now in common use. The proportion in which the first telescope magnifies is as the focal length of the object-glass to that of the eye-glass. ••• The only difference between the Galilean telescope and the other is, that the pencils by which the extremities of any ob- ject are seen in this case enter the eye diverging; •••whereas, in the other, they enter it converging; but, if the sphere of concavity in the eye-glass of the Galilean telescope be equal to the sphere of convexity in the eye-glass of another telescope, their magnifying power will be the same. The concave eye-glass however, being placed between the object-glass and its focus, the Galilean tele- scope will be shorter than the other by twice the focal length of the eye-glass. Consequently, if the length of the telescopes be the same, the Ga- lilean will have the greater magnifying power. The invention of the telescope and microscope having incited mathematicians to a more careful study of dioptrics, and this having soon become almost a perfect science, by the discovery of Snellius, many different constructions were offer- ed to the public. Huygens was particularly eminent for his systematic knowledge of the sub- ject, and is the author of the chief improvements which have been made on all the dioptrical in- struments till the time of Mr. DoUond's discovery. He was well acquainted with the theory of aber- ration arising from the spherical figure of the glasses, and has showed several ingenious me- t!x)ds of diminishing them by proper construc- tions of the eye-pieces. He first showed the advantages of two eye-glasses in the astronomi- cal telescope and double microscope, and gave rules for this construction, which both enlarges the field and shortens the instrument. Mr. Dol- lond adapted his construction to the terrestrial telescope of Rheita ; and his five eye-glasses are nothing but the Iluygenian eye-piece doubled. This construction has been too hastily given up by the artists

of the present day for another, also

of Mr. DoUond's, of four glasses. 'ision js more distinct in the Galilean telescope than in the other, owing perhaps in part to there being no intermediate image between the eye and the object. Besides, the eye-glass being very thin in the centre, the rays will be less liable to be distorted by irregularities in the substance of the glass. Whatever be the cause, we can some- times see Jupiter's satellites very clearly in a Galilean telescope not more than twenty or twenty-four inches long : when one of four or five feet, of the common sort, will hardly make them visible.

362. F. Rheita also invented a binocular tele- scope, which F. Cherubin of (Jrleans endeavour- ed to bring into use. Itconsistsof two telescopes fastened together, and made to point to the same object. When this instrument is well fixed, the object appears larger and nearer to the eve, when it is seen through both the telescopes, than through one of them only, tiiough they have the very same magnifying power. But diis is only an illusion, occasioned by the stronger impression that two equal images, equally illuminated, make upon the eye. This advantage, however, is counterbalanced by the inconvenience attending the use of it.

363. The first who distinguished themselves in grinding telescopic glasses were two Italians, Eustace Divini at Rome, and Campani at Bo- logna, whose fame was much superior to that of Divini, or that of any other person of his time ; though Divini pretended that in all the trials that were made with their glasses, his of a great focal distance performed better than those of Campani, and that his rival was not willing to try them fairly, viz. with equal eye-glasses. Campani, however, really excelled Divini, both in the goodness and the focal length of his object- glasses. It was with telescopes made by Cam- pani that Cassini discovered the nearest satellites of Saturn. They were made by the express or- der of Louis XI'., and were of eighty-six, 100, and 136 Parisian feet focal length. Campani sold his lenses at a high price, and took every possible method to keep his art a secret. His laboratory was inaccessible till after his death ; when it was purchased by pope Benedict XIV., who made a present of it to the Institute of that city ; and, by the account which M. Fougeroux has given of what he could discover from it, we learn, that (except a machine, which M. Campa- ni constructed to work the basins on which he ground his glasses) the goodness of his lenses depended upon the clearness of his glass, his Venetian tripoli, the paper with which he polish- ed his glasses, and his great skill and address as a workman. He made few lenses of a very great focal distance ; and having the misfortune to

break one of 141 feet in two pieces, he look in- credible pains to join the two parts together, which he did at length effectually, so that it was used as if it had been entire.

364. Sir Paul Neille, Dr. Hooke says, made telescopes of thirty-six feet, pretty good, and one of fifty. Afterwards Mr. Reive, and then Mr. Cox, who were the most celebrated in England as grinders of optic glasses, made some good ones of fifty and sixty feet focal distance, and

Mr. Cox made one of 100. Rorelli also, in France, made object-glasses of a great focal length, one of which he presented to the Royal Society. With respect to the focal length of telescopes, these and all others were far exceeded by M. Auzout, who made one object-glass of 600 feet focus ; but he was never able to make any use of it. Hartsocker is even said to have made some of a still greater focal length ; but this in- genious mechanic, finding it impossible to make use of object-glasses the focal distance of which was much less than this, when they were enclosed in a tube, contrived a method of using them without a tube, by fixing them at the top of a tree, a high ˆvall, or the roof of a house.

365. JNIr. Huygens also made considerable improvements in the method of using an object- glass without a tube. lie placed it at the top of a very long pole, having previously enclosed it in a short tube, which was made to turn in all di- rections by a ball and socket. The axis of this tube he could command with a fine silken string so as to bring it into a line with the axis of ano- ther short tube which he held in his hand, and which contained the eye-glass. lie thus could Jse object-glasses of the greatest magnifying power, at whatever altitude his object was, and even in the zenith, provided his pole was as long as his telescope ; and, to adapt it to the view of objects of different altitudes, he had a contrivance by which he could raise or depress a stage that supported his object-glass at pleasure.

366. M. Auzout, in a paper read before the Royal Society, observed that the apertures which the object-glasses of refracting telescopes can bear with distinctness are in about a sub-dupli- cate proportion to their lengths ; and upon this suppositiou he drew up a table of the apertures proper for object-glasses of a great variety of focal lengths, from four inches to 400 feet. Upon this occasion Dr. Ilooke observed that the same glass will bear a greater or less a{>erture, ac- cording

to the less or greater light of the object. If, for instance, he was viewing the sun, or Venus, or any of the fixed stars, he used smaller apertures ; but if he wanted to view the moon by day light, or Saturn, Jupiter, or Mars, by night, he used a larger aperture.

367. Eut the merit of all those improvements was in a manner cancelled by the discovery of the much more commodious reflecting telescope. For a refracting telescope, even of 1000 feet focus, supposing it possible to be made use of, could not be made to magnify with distinctness more than 1000 times ; whereas a reflecting telescope, not exceeding nine or ten feet, will magnify 1200 times. ‘ It must be acknowledged,’ says Dr. Smith in his Complete System of Optics, ‘ that Mr. James Gregory of Aberdeen was th►► first inventor of the reflecting telescope.’ But, according to Dr. Pringle, Mersennus was the man who entertained the first thoughts of a re- flector. A telescope with specula he certainly proposed to the celebrated Descartes many years before Gregory’s invention, though indeed in a manner so very unsatisfactory that Descartes, who had given particular attention to the im- provement of the telescope, was so far from ap- proving the proposal, that he endeavoured to

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convince Mersennus of its fallacy. See Tele- scoPE. Dr. Smith had not seen two letters of Descartes to Mersennus on that subject.

368. Gregory, a young man of an uncommon genius, was led to the invention in seeking to correct two imperfections of the common telescope : the first was its too great length, which made it less manageable; the second, the incor- rectness of the image. Mathematicians had de- monstrated that a pencil of rays could not be collected in a single point of a spherical lens ; and also that the image transmitted by such a lens would be in some degree incurvated. These inconveniences he believed would be obviated by substituting for the object-glass a metallic speculum, of a parabolic figure, to receive the image, and to reflect it towards a small speculum of the same metal ; this again was to return the image to an eye-glass placed behind the great speculum, which for that purpose was to be per- forated in its centre. This construction he pub- lished in 1663 in his Optica Promota. But as Gregory was endowed with no mechanical dex- terity, nor could find any workman capable of realising his invention, after some fruitless at- tempts in that way, he was obliged to give up the pursuit ; and probably, had not some new discoveries been made in light and colors, a re- flecting telescope would never more have been thought of, considering the difficulty of the exe- cution, and the small

advantages that could ac- crue from it, deducible from the principles of optics then known.

369. But Newton, whose genius for experi- mental knowledge was equal to that for geometry, happily interposed, and saved this noble inven- tion from well nigh perishing in its infant state. He likewise, at an early period of life, had ap- plied himself to the improvement of the telescope ; but, imagining that Gregory's specula were nei- ther very necessary nor likely to be executed, he began with prosecuting the views of Descartes, who aimed at making a more perfect image of an object by grinding lenses, not to the figure of a sphere, but to that of a conic section. While he was thus employed, three years after Gregory's publication, he happened to examine the colors formed by a prism, and, having by that simple instrument discovered the different refrangibility of the rays of light, he perceived that the errors of telescopes, arising from that cause alone, were some hundred times greater than those occasioned by the spherical figure of lenses. This circum- stance forced Newton to fall into Gregory's track, and to turn his thoughts to reflectors. ' The dif- ferent refrangibility of the rays of light,' he says, in a letter to Mr. Oldenburg, secretary to the Royal Society, dated February, 1672, ' made me take reflectors into consideration ; and finding them regular, so diat the angle of reflection of all sorts of rays was equal to the angle of inci- dence, I understood that, by their mediation, optic instruments might be brought to any de- gree of perfection imaginable, providing a reflect- ing substance could be found which would polish as finely as glass, and reflect as much light as glass transmits, and the art of communicating to it a parabolic figure be also obtained. Amidst these thoughts I was forced from Cambridge by

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the intervening plague, and it was more than two years before I proceeded further.' If Newton, tnen, was not the first inventor of the reflecting telescope, he was the main and effectual inventor. By his admirahle genius he fell upon this new property of light ; and thereby found that all lenses, of whatever figure, would be affected more or less with such prismatic aberrations of the rays as would be an insuperable obstacle to the perfection of a dioptric telescope.

370. About the end of 1668, or beginning of 1669, Newton, not

relying on any artificer for making his specula, set about the work himself, and early in 1672 completed two small reflecting telescopes. In these he ground the great specu- lum into a spherical concave, but found himself unable to accomplislithe parabolic form. In the letter that accompanied one of these instru- ments, which he presented to the Society, he writes, ‘ that though he then despaired of per- forming that work (to wit, the parabolic figure of the great speculum) by geometrical rules, yet he doubted not but that the thing might in some measure be accomplished by mechanical devices.’

371. Not less did the difficulty appear to find a metallic substance that would be of a prope. hardness, have the fewest pores, and receive the smoothest polish : a difficulty which he deemed almost insurmountable, when he considered tliat every irregularity in a reflecting surface would make the rays of light stray five or six times more out of their due course than the like irregularities in a refracting one. In another letter written soon after he tells the secretary ‘ that he was very sensible that metal reflects less light than glass transmits ; but as he had found some metaUic sub- stances to be more strongly reflective than others, to polish better, and to be freer from tarnishing than others, so ha hoped that there might in time be found out some substances much freer from these inconveniences than any yet known.’ New- ton therefore labored till he found a composition that answered in some degree, and presented a reflecting telescope to the Royal Society ; from whom he received such thanks as were due to so curious and valuable a present. And Huygens, one of the greatest geniuses of the age, and a dis- tinguished improver of the refractor, no sooner was informed by jNIr. Oldenburg of the discovery, than he wrote an answer ‘ that it was an admira- ble telescope; and that Mr. Newton had well considered the advantage which a concave specu- lum had above convex glasses in collecting the parallel rays, which, according to his own cal- culation, was very great ; hence that Mr. Newton could give a far greater aperture to that speculum than to an object-glass of the same distance of focus, and consequently much more magnify in his way than by an ordinary telescope. Besides that by the reflector he avoided an inconvenience inseparable from object-glasses, which was the obliquity of both their surfaces, which vitiated the refraction of the rays that pass towards the sides of the glass, and did more hurt than men were aware of. Again, that by the mere reflec- tion of the metalline speculum there were not so many ravs lost as in glasses, which reflected a consideraLile quantity by each of their surfaces, and, besides, intercepted many of them by the

obscurity of their matter : that the main busi- ness would be to find a matter for this speculum that would bear as good a polish as glass.’

372. Mr. Huygens was not satisfied with thus expressing to the Society his high approbation of Newton's invention ; but drew up a favorable account of the new telescope, which he caused to be published in the Journal de Scavans for 1672, by which it was soon known over Europe. But how excellent soever the contrivance was, how well soever supported and announced to the public, yet whether it was that the artists were deterred by the difficulty and labor of the work, or that the discoveries even of a Newton were not to be exempted from the general fatality attending great and useful inventions, the makini:; a slow and vexatious progress to the authors; the fact is that, excepting an unsuccessful attempt which the Society made, by employing an arti- ficer to imitate the Newtonian construction, but upon a larger scale, and a disguised Gregorian telescope, set up by Cassegrain abroad as a rival to Newton's, and that in theory only (for it was never put in execution by the author) no reflector was heard of for nearly half a century after. But a reflecting telescope was at last produced to the world, of the Newtonian construction, by Dr. Hadlev, which the author had the satisfaction to find executed in such a manner as left no room to fear that the invention would any longer con- tinue in obscurity.

373. This memorable event was owing to the genius, dexterity, and application of Dr. Hadley, the inventor of the reflecting quadrant, another most valuable instrument. The two telescopes which Newton had made were but six inches long, were held in the hand for viewing objects, and in power were compared to a six feet re- fractor ; whereas Hadley 's was above five feet long, was provided with a well-contrived appa- ratus for managing it, and equalled in perform- ance the famous aerial telescope of Huygens of 123 feet in length. Excepting as to the manner of making the specula we have, in the transactions of 1723, a complete description, with a figure of this telescope, together with that of the machine for moving it ; but, by a strange omission, New- ton's name is not once mentioned in that paper; so that any person not acquainted with the history of the invention, and reading that account only, might be apt to conclude that Hadley had been the sole inventor. The same celebrated artist, after finishing two telescopes of the Newtonian construction, accomplished a third in the Grego- rian way ; but, it would seerr, less successfully, by Dr. Smith's declaring so strongly in favor of the other. Dr. Hadley instructed Mr. Molyneux and the Rev. Dr. Bradley ; and when these gen- tlemen had made a sufficient proficiency in the art, being desirous that these telescopes should become more public, they liberally communicated to some of the principal instrument-makers of London the knowledge they had acquired from him. Such scholars soon advanced beyond their

masters, and completed reflectors by other and better methods than what had been taught them.

374. IVIr. James Short, as early as 1734, had signalised himself at Edinburgh by his instruments

of this Kind. Mr. Maclaunn wrote that year to Dr. Jurin, ‘ that Mr. Short, who had begun with making glass specula, was then applying ˆ himself to improve the metallic; and that, by taking care of the figure, he was enabled to give them larger apertures than others had done ; and that upon the whole they surjjassed in perfection all that he bad seen of other workmen,’ He added, ‘ that Mr. Short’s telescopes were all of the Gregorian construction ; and that he had much improved that excellent invention.’ Tliis character of ex- cellence Mr. Short maintained to the last ; as he had been well grounded both in the geometrical and philosophical principles of optics, and upon the whole was a most intelligent person in what- ever related to his profession. It was supposed he had fallen upon a method of giving the para- bolic figure to his great speculum ††† a point of perfection which Hadley never attempted, either in his Newtonian or Gregorian telescope. Mr. Short indeed said he had acquired that faculty, but never would tell by what means he effected it ; so that the secret of working that configura- tion died with that ingenious artist. Mr. Mudge, however, has lately realised the expectation of Sir Isaac Newton, who about 100 years ago pre- saged that the public would one day possess a parabolic speculum, not accomplished by mathe- matical rules, but by mechanical devices.

375. This desideratum was not the only want supplied by this gentleman : he taught us like- wise a better composition of metals for the spe- cula, how to grind them better, and how to give them a finer polish ; and the polish, he remarks, was the most difficult and essential of the w-hole operation. ‘ In a word,’ says Sir John Pringle, * I am of opinion there is no optician in this great city (which has been so long and so justly renowned for ingenious and dextrous makers of every kind of mathematical instruments) so partial to his own abilities as not to acknowledge that, however some parts of the mechanical pro- cess now disclosed might have been known before any individuals of the profession, yet that Mr. Mudge has opened to them all some new and important lights, and upon the whole hath greatly improved the art of making reflecting tele- scopes.’

376. The late Rev. and ingenious John Ed- wards devoted much of his time to the improve- ment of reflecting telescopes, and brought them to such perfection that Dr. Maskelyne, the astro- nomer royal, found telescopes constructed by him to surpass in brightness, and other essentials, those of the same size made by the best artists in London. The chief excellence of his tele- scopes arises from the composition, which, from various trials on metals and semimetals, he dis- covered for the specula, and from the true para- bolic figure, which, by long practice, he had found a method of giving them, preferable to any that was known before him. His directions for the comoosition of specula, and for casting, grinding, and polishing them, were published, by order of the commissioners of longitude, at the end of the Nautical Almanac for 1787 ; to which is also annexed his account of tlie cause and cure of the tremors which particularly aff'ect reflecting telescopes more than refracting ones,

togetlicr with remarks on the said tremors by Dr. Maskelyne.

377. But, in constructing reflecting telescopes of extraordinary magnifying powers, Dr. Iler- schel displayed skill and ingenuity surpassing all his predecessors. He made them from seven, ten, twenty, to even forty feet in length. Of its construction, magnifying powers, and the curious collection of machinery by which it is supported and moved from one part of the hea- vens to another, accounts will be found under Telescope.

378. The greatest improvement in refracting telescopes hitherto made public is that of Mr. Dollond. But besides the obligations we are under to him for correcting the aberration of the rays of light in the focus of object-glasses, arising from their diff'erent refrangibihty, he made ano- ther considerable improvement, viz. by correcting both this kind of aberration, and also that which arises from the spherical form of lenses, by an expedient of a very different nature, viz. increas- ing the number of eye-glasses. If any person, says he, would have the visual angle of a tele- scope to contain 20►►, the extreme pencils of the field must be bent or refracted in an angle of 10►►; which, if it be performed by one eye- glass, will cause an aberration from the figure, in proportion to the cube of that angle ; but, if two glasses are so proportioned and situated as that the refraction may be equally divided between them, they will each of them produce a refraction equal to half the required angle ; and therefore the aberration, being in proportion to the cube of half the angle taken twice over, will be but a fourth part of that which is in proportion to the cube of the whole angle ; because twice the cube of one is but one-fourth of the cube of two ; so the aberration from the figure, v,here two eye- glasses

are rightly proportioned, is but a fourth of what it must unavoidably be where the whole is performed by a single eye-glass. By the same reasoning, when the refraction is divided between three glasses, the aberration will be found to be but the ninth part of what would be produced from a single glass ; because three times the cube of one is but one-ninth of the cube of three. Whence it appears that, by increasing the num- ber of the eye-glasses, the indistinctness which is observed near the borders of the field of a tele- scope may be very much diminished, though not entirely taken away.

379. The method of correcting the errors aris- ing from the different refrangibihty of light is of a different consideration. For, whereas the errors from the figure can only be diminished in a cer- tain proportion according to the number of glasses, in this they may be entirely corrected by the addition of only one glass ; as we find in the astronomical telescope that two eye-glasses, rightly proportioned, will cause the edges of ob- jects to appear free from colors, quite to the border of the field. Also in the day telescope, where no more than two eye-glasses are abso- lutely necessary for erecting the object, we find that, by the addition of a third rightly situated, the colors, which would otherwise make tiie image confused, are entirely removed. This, however, is to be understood with some limita-

tion ; for, if the glasses exceed a certain lenˆjth, the colors may be spread too wide to be admitted through the pupil of the eye ; which is the cause that in long telescopes, with three eye-glasses, the field is always greatly contracted.

380. These considerations first set Mr. Dol- lond on contriving how to enlarge the field by increasing the number of eye-glasses without any hindrance to the distinctness or brightness of the image ; and though others had been about the same work before, yet, observing that some five- ˆ‘lass telescopes then made would admit of far- tlier improvement, he endeavoured to construct one with tlie same number of glasses in a better manner ; which was allowed by the best judges to be a considerable improvement on the former. Thus encouraged he resolved to try if he could make some farther enlargement on the field by the addition of another glass, and by placing and proportioning the glasses in such a manner as to correct the aberrations, without

detriment to the distinctness. At last he obtained as large a field as is necessary, even in the longest telescopes that can be made. These telescopes with six glasses having been well received, and some of them purchased abroad, the author fixed the date of his invention, in a letter, addressed to Mr. Short, which was read to the Royal Society, March 1st, 1753.

381. Various attempts were made about this time to shorten and otherwise improve telescopes. Among these we must mention that of Mr. Caleb Smith, who thought he had found it possible to rectify the errors which arise from tlie difl'erent degrees of refrangibility, on the principle that the sines of refraction, or rays differently refrangible, are to one another in a given proportion, when their sines of incidence are equal ; and he pro- posed for this purpose to make the speculums of glass instead of metal, the two surfaces having different degrees of concavity. But his scheme was never executed ; nor is it probable, for rea- sons which have been mentioned, that any ad- vantage could be made of it.

382. To Mr. Short we are indebted for the ex- cellent contrivance of an equatorial telescope, or portable observatory ; whereby pretty accurate observations may be made with little trouble by those who have no building adapted to the pur- pose. This instrument consists of an ingenious piece of machinery, by the help of which a tele- scope mounted upon it may be directed to any degree of right ascension or declination, so that, the place of any of the heavenly bodies being known, they may be found without any trouble, even in the day-time. Being made to turn paral- lel to the equator, any object is easily kept in view, or recovered, without moving the eye from its situation. By this instrument, Mr. Short in- forms us, that most of tlie stars of the first and second magnitude have been seen even at mid- day, and the sun shining bright; as also Mercury, Venus, and Jupiter. Saturn and Mars are not so easy to be seen, on account of the faintness of their light, except when the sun is but a fev/ hours above the horizon. This particular effect depends upon the telescope excluding almost all the light, except what comes from the object itself, and which might otherwise efface the im- pression made by its weaker light upon the eye.

For the same reason stars are visible in the day time from the bottom of a deep pit. Mr. Rams den has also invented a portable observatory or equatorial telescope. This, however, as well a? the improved telescopes by Herschel and Rams- den, will be fully described under the article ex- clusively devoted to the subject.

383. The most important part of every com- pound optical instrument is the lens ; it may therefore be advisable to illustrate their general form by a series of diagrams, and then furnish the mathematical data for their construction.

384. A lens is any transparent substance, as glass, crystal, water, or diamond, having one or both of its surfaces curved to collect or disperse the light transmitted by it. The lenses in gene- ral use are made of glass, and are usually called magnifying glasses. Glass, however, does not possess a greater share of the magnifying pro- perty than other transparent substances. In fig. o tliere are six differently shaped lenses, shown in section. A is called a plano-convex, from having one side flat, and the other spherically rounded. B is a double convex, and has both sides spherically rounded. When these sides are unequally curved, as at C, it is termed a crossed lens. D is a plano-concave, having one side spherically hollow. E is a double concave with both sides hollow. F is a meniscus (so called from its moon shape), and has one side convex and the other concave.

385. The passage of light when transmitted by a plano-convex lens, is shown in the accompany- ing diagram. The parallel rays a, b, c, &c., fall-

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f

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B.

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ing upon the plano-convex lens A D B, and pass- ing through it, are but half as much refracted as they would be in passing through the double convex lines A D B E, and therefore their focus or point of meeting is not at C but at F, which is at twice the distance, or double the radius of the convexity of the lens. After intersecting at F they diverge.

386. When an object is placed in the focus of a lens, the rays diverging from it will, by the action of the lens, be rendered parallel. Thus, in the annexed diagram, the radiant point A,

from which the rays d, e,f, &c., diverge, is in the centre of convexity of the double convex lens a, b, c After passing through the lens, the rays go on parallel to each other in the space C D. if the lens had been plano-convex, the radiant point for this purpose must have been at B, or at twice tlie distance of A from B.

387. Rays diverging from a radiant point be- yond the focal distance of a convex lens, will, after passing through the lens, converge to a point or focus on the other side of the lens. Thus i the following diagram F is the focus of the lens

A-4

B, and A is the radiant point from which the rays a,b, c, &c., diverge. After passing through the lens they will converge and meet in a focal point, as at C. The farther A is from B the nearer will C be to it.

388. Rays diverging from a radiant point be- tween a convex lens and its focus will continue lo diverge, though in a less degree, after passing through the lens, as in the accompanying figure,

in which A is the radiating point from which the rays a, b, c. &c., diverge, and F is tlie focus of the lens B. These rays, after passing through the lens, continue to diverge in the space C D. 389. The focus of the sun's parallel rays, when transmitted through a double convex lens, is shown in the annexed figure. The parallel rays

a' r' '' '' '''' '' obliquely on tne surface A D of a double convex lens, are refracted or bent inward in glassing through tlie lens ; and

meet in a focus or point at C, which is the cen- tre of the lens's convexity, beyond which they diverge to the contrary sides as a,b,c,d, &c. The middle ray d, falling perpendicularly on tlie surface of the lens at D, suffers no refraction in passing through it.

390. A convex glass magnifies the angle of vision ; the reason is this. Without a lens, F G,

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the eye wou d see the arrow B C under the an- gle 6 Ac. But the rays BF and C G, from the extremities of the arrow, in passing through the lens are refracted to the eye in the directions ^"A, gA, which makes the arrow to be seen under the much larger angle DAE, the same as the angle /'A g. Therefore the arrow will appear so much magnified as to extend in length from D to E.

391. Parallel rays become parallel again by passing through two convej^ lenses placed parallel to each other and at double their focal distance. Thus, in the accompanying diagram, C is the fo-

cus of both the lenses A and B. The parallel rays a, b, c, d, e,f, having passed through the lens A, go on converging to its focus C, where they unite and thence diverge in a contrary order to the lens B, and after passing through it they go on parallel to each other, but in an inverted order as a, b, c, d, e,f, g. The middle my d goes on straight, because it falls perpendicularly on the surface of both the lenses. ###

392. Concave lenses obey the same Jaws of refraction as convex, but, as the curvatuie is re- versed, the rays are bent, outwards ; hence a con- cave lens will render parallel rays diverging, as may be seen in the following diagram. The rays “, b, c, &c., after passing through a plano-con- cave lens A, will go on in a diverging state, the same as if the lens were taken away, and the rays had issued from a radiant point F in the virtual focus of the lens, which is at double thedistante C A or radius of concavity of ilie lens.

393. Parallel rays passing through a double concave lens may also be made to diverge. Thus

the rays a, b, c, &c,, after passing through the double concave lens A, will go on in a diverging state, the same as if the lens were taken away and the rays had proceeded from a radiar.t point F in the virtual focus or centre of concavity of the lens.

394. The manner in wliich the foci of lenses of different curves are calculated, and how the foci of combined lenses may be obtained, are as follows : ### When the lenses are made of plate- glass, the focal distance is nearly the diameter of the sphere from which we may suppose a plano- convex lens to be cut, or it is equal to twice the radius of the circle that forms the convex surface of the lens. For example, if **he globe of glass is one inch in diameter, and a portion is cut off to form a plano-convex lens, the focus will be one inch, or twice the radius of the circle. If the lens is double convex, the focus will be equal to the radius, or half the diameter. When the lens is crossed, or unequally convex, the focal length will be twice the product of the two radii, divided by the sum of the radii. For example, let the radius on one side be two inches, and on the other side six inches; the focus of this will be 2 X 2 X 6 = 24, divided by 2 f 6 = 8or three inches. The focus of the miniscus lens is found by dividing twice the product of the two radii by their difference. Example ; let the ra- dius on the**

convex side be two inches, and on the concave side four, the focus is 2 x 2 X 4 = :16 divided by 4 ••• 2 zz 2, or eight inches, the focus of the lens.

- In many cases it is found advisable to ascertain the radii of the two surfaces of a convex lens, as well as its focus, by a more accurate method. This may be effected by forming a reflected image by the pos- terior surface, which distance will be half of the ra- dius of curvature (or one quarter the focus of a plano-convex lens) ; then, by exposing the other side, we obtain the radii of the opposite surface. This method was adopted by professor Robison to mea-

395. If two lenses are placed in contact, the compound focus, when each lens has the same power, will be half the focus of the single lens Wˆhen two convex lenses are in contact, having different focal lengths, then, as the sum of the two foci is to one of them, so is the other to the compound focus required. For example, let the foci of the lenses be 2 and 6 ; then, as 2 j 6 zr: 8 : 2 .". 6 : 1ˆ, the compound focus. Lastly, if two lenses are not in contact, the compound fo- cus is found by dividing the product of the two lenses by the sum lessened by their distance. Example : let the foci of the lenses be 2 and 4, their distance 2; then 2 x 4 : = 8 divided by (2 + 4) ••• 2 zz. 4 gives 2 as the compound focus.

396. If lenses be made of different substances, although the curves may be the same, the focal lengths will vary ; while, in like mediums, the action will always be equal. Let ab, fig. 6, be a ray of light, and let it enter the medium c d s.t the point 6 ; instead of continuing in a right line to e it will pass on in the direction bf, should the medium c d be denser than the first a b ; now if on the point b a circle be drawn, and a line s i parallel to the surface of the medium, touching the incident ray •• b, be produced to e, this line will be the sine of incidence ; and, if another line pr be drawn in the same manner to the refract- ed ray, it will be the sine of refraction. Now if the angle a b c be varied to any degree, the sine s i will always be in the same proportion to the sine of refraction p r. If the dense medium is water, the sine p r will be three-fourths of s i. When glass is used the sines are as 2 to 3 nearly, and in diamond as 2 to 5.

397. When a ray is passing out of a dense medium into a rarer, the direction will be chang- ed, and the ray i/'will now be bent further from the perpendicular, so as to make the sines there- verse of the former case. Out of water they will be as 4 to 3; from glass as 3 to 2, and from dia- mond as 5 to 2. The theorems just described for finding

the foci of lenses are called geometrical, and will be nearly the same as the refracted, when the lens is made of plate-glass. The refracted focus is only jˆtSt part less than the geometrical, when ascertained by accurate experiment. The refracted focus of lenses of other media may be obtained by dividing the geometrical focus by the cˆuotient obtained when the sine of incidence (j), minus the sine of refraction (r), is divided by

half the sine of refraction, i ###ˆ ‘ j

398. Convex lenses, in their simple state, have been applied to collect the heat of the sun’s rays for purposes similar to that of burning mirrors One of the largest lenses that have been mounted for these purposes was that made of flint glass by Mr. Parker. This lens was three feet in diame- ter, and, when mounted, exposed a surface of 330 square inches to the sun’s light; its focal distance was three feet nine inches, and the dia- meter of the circular spot of light was one inch. But, in order that the light might be condensed as much as possible, he employed. another lens

sure the different radii of double and triple achromatic object-glasses.

###fi’i-teen inches diameter, and of twenty-nine inches focus, so as to decrease the diameter of the focal point to three-eighths of an inch. The apparatus on which it was mounted is shown in fig. 7 : a is the large convex lens mounted in a ring, and connected to the smaller lens b by wooden ribs c, c ; the lower rib lias a piece e at- tached to it, capable of adjustment to or from the smaller lens : to this bar is fixed the holder (I, having a universal joint. On this holder the substance to be expermiented on is placed. Tlie following are some of its effects on bodies placed in its focus ; twenty grams of pure gold were fused in four seconds ; ten grains of platma fused in three seconds; and a diamond, weighing ten grains, exposed for thirty minutes, lost four grains. This lens, which is now in the posses- sion of the emperor of China, cost ##700.

399. In large burning lenses the weight of the glass employed becomes of considerable import- ance ; and, to effect as great a saving as possible, count Buffon has proposed to construct them of circular rings, as shown in fig. 8, where the lens is composed of three pieces, two rings, a and b, and a lens c. When, however, the size is very great,

the rings may be composed of several pieces, as shown by the front view E, where tiie lens is built of ten pieces. These instruments have been denominated by Dr. Brewster, who suggested this division, polyzonal lenses.

400 The following advantages of these lenses have been laid down by Dr. Brewster : ###

1. The difficulty of procuring a mass of flint- glass proper for a solid lens of great dimensions is in this construction completely removed.

2. If impurities exist in the glass of any of the spherical segments, or if an accident happen to any of them, it can be easily replaced at a very trifling expense. Hence the spherical segments may be made of glass much more pure and free from flaws and veins than the corresponding por- tions of a solid lens.

3. From the spherical aberration of a convex lens, the focus of the outer portion is nearer the lens than the focus of the central parts, and there- fore the solar light is not concentrated in the same point of the axis. This evil may, in a great measure, be removed in the present con- struction, by placing the different zones in such a manner that their foci may coincide.

4. A lens of this construction may be formed by degrees, according to the convenience and means of the artist. One zone, or even one seg- ment, may be added after anotiier, and at every step the instrument may be used as if it were complete, without the rest of the zone to which it belongs ; and it will contribute, in the propor- tion of its area, to increase the general effect.

5. If it should be thought advisable to grind the segments separately, or two by two, a much smaller tool will be necessary than if they form- ed one continuous lens. But, if it should be reckoned more accurate to grind each zone by itself, then the various segments may be easily held together by a firm cement.

6. Each zone may have o different focal length, and may, therefore, be placed at different distances from the focal point, if it is thought proper.

401. When two lenses are mounted in a frame to fix before the eyes, they are denominated spectacles: the lenses are employed to render the objects before the wearer more distinct. The eye, which consists of a convex lens, called the crystalline lens, refracts the light proceeding from the object placed before it in the same manner as a convex glass :

the image of tlse object is formed at the focusof the lens, where it is received on a screen at the back of the eye ; this screen, called the retina, is an expansion of the optic nepe, which conveys the sensation of vision to the mind. As the crystalline lens of the eye will only produce distinct vision when the focus i& thrown on the retina, it is obvious that, should any defect occur with respect to that organ, in- distinct and imperfect vision will arise. Thus, if the lens of the eye is not of a proper convexity to bring the image on the screen, an. indistinct- ness must ensue. This is the case ###when the lens through age has become flattened ; the image will then be thrown beyond the retina, and thus convey an imperfect representation of the object to the mind. To obviate this defect, we must make the rays pass through a glass of sufficient convexity to assist the eye, and enable it to form the image at the required place, which is in this instance done by shortening the focal distance of the crystalline lens of the eye. If, on the con- trary, the eye should be too convex, or short- sighted, as is often the case with young persons, then the image will not be formed at a sufficient distance from the lens of the eye to reach the re- tina, and thus imperfect vision of distant objects is produced. To remedy this defect concave lenses must be resorted to, in order to diverge the rays before they enter the eye, and thus lengthen the focus of the crystalline lens to form an image on the retina. When the eyes are not directed near the centre of the spectacle-glasses, the obliquity of their surface to the rays will be increased, so as to occasion a confused appear- ance of the object. A great portion of this con- fusion is removed in the spectacles now usually made, when compared with those formerly em- ployed, whose size, being very large, augmented the imperfection ; for it may be observed that, when objects are seen through spectacle-glasses, no more of the glass is employed at one view than a portion equal to the size of the pupil of the eye : this on an average may be reckoned at the eighth of an inch in diameter. Thus we see how small a portion is used for the purposes of vision ; but as it would be tedious to require the eye always to look through a small aperture, the glasses are left of a sufficient size to admit of a moderate degree of motion ; and, as we require a greater latitude horizontally than vertically, their figure is made of an oval form.

402. In the selection of spectacle glasses great care should be used in examining them, and the first point of importance is the goodness of the material of vvhicli they are formed ; this should be free from all veins or small bubbles, for if one of these occur in the portion through which we look it will greatly impair the eyes. The next circumstance is the color of the glasses; the best adapted for general purposes is a pale blue. The figure of their surfaces should be perfectly sphe-

lical; for if they are curved more in one direction than in another they will injure the sight, unless liiey are cylindrically formed, as for some par- ticular disease. The polish should be clean, and free from Hare, which too often arises from the manner in which they are usually polished on hete- roGˆeneous surfaces, producing what is techni- cally termed a curdled glass.

403. Dr. WoUaston, in order to allow the eyes a considerable latitude without fatigue, invented a peculiar form of glasses, called by him peris- copic, from two Greek words si►►,Tiifying seeing about ; their form is that of a meniscus with the concave side always turned towards the eye. When they are intended for long-sighed persons, or old age, the anterior surface, or that next the object, is formed spherically convex, with a curve deeper than the concave, so as both to gain the required power, and compensate for the diver- gency occasioned by the concave side ; this form is shown at A, fig. 9. The periscopic form em- ployed for correcting the defect of a short or near sight is shown in section at B, having its anterior surface convex, as in the former case ; but here the concavity on its posterior side is in- creased to procure the required divergency, and compensate for the convex side.

404. Tlie calculation of an achromatic object- glass, and in general that of every achromatic telescope, requires a precise knowledge of the ratio of the sines of incidence and refraction, and of the ratio of dispersion of the different kinds of glass which are used in the com- position of telescopes. The methods hitherto employed for measuring these ratios have given results differing considerably from each other, in spite of the care and accuracy employed in the computation. We ought, therefore, to ex- pect inaccuracies, which render the perfection of the object-glass doubtful. Experiments, repeated during many years, have led M. Frauenhofer, of Munich, to discover new methods of obtaining these ratios. The following is the order in which he made those experiments : ►►►

405. lie began by determining the dispersion of the single kind of glass, from the size of the prismatic spectrum, formed by a prism of a given angle in a dark chamber, and at a given distance, and from this he deduced the disper- sion. The ends of the spectrum, however, were ill terminated, and a considerable uncertainty was attached to the results.

406. In order to determine the ratio of the refraction and dispersion of flint and crown glass, M. Frauenhofer made use of prisms of these two kinds of glass, having their respective angles small, and placed in opposite directions. These last were then successively changed, till, on tjie one hand, the refrantribility, and on the other the refraction, was nothing. The ratio of the angles was then the inverse ratio of that of the refrangibility or the refraction. Several prisms, however, thus put together in pairs, gave diffeient results, particularly for. the dispersion. Hence, in order to determine the relative dis- persion, he selects larger prisms, having their refracting angles also greater, and placed in op- posite directions. Tlie prism of crown-glass hid an angle of from 60ˆ to 70►►. The angle ol one of the prisms was chunued till the dis-

persion was almost destroyed ; and the iiUle that remained was then corrected, by changing the angle of incidence of the ray. Since, in prisms with great angles, the light is totally re- flected at the second surface, even by a small variation of the angle of incidence, he covered the two touching faces of the prisms with a strong refracting fluid, such as oil, and by this means the light was transmitted at almost all angles of incidence. He applied the two prisms before the object-glass of the telescope, and a repeating theodolite, having placed them upon a horizontal plane, with a steel axis, round which it moved. The box in which the axis turned was firmly united with the telescope, as shown in fig. 10. By this procedure he was enabled to measure exactly the angle of incidence at which the dispersion was destroyed. He first looked through the telescope across the prism, at a dis- tant object, having its edges vertical and very distinct ; he then changed the angle of incidence, by turning the plane upon which the prism rested, and the alidade of the theodolite, till the dispersion appeared to be very small, or rather till the vertical edges of the object were most distinct. In order to measure the angle of in- cidence, he had put upon the turning-plane a ruler, which carried two steel points that exactly touched the first surface of the prisms. On this ruler was fixed a telescope, a little elevated, whose axis was perfectly parallel to the two points of steel. See fig. 1 1 . This telescope was fixed upon the ruler only by its two ends, so that, through the interstice between the telescope and the ruler, the light could freely fall upon the prisms. Hence it was easy to measure in this manner by the theodolite the angle of incidence. Knowing, therefore, this angle, and also the index of refraction, and the angles of the prisms, which can be obtained exactly by the same ruler of the theodolite, the ratio of dispersion could then be deduced by a very exact expres- sion.

407. The observation made with two similar prisms agreed so well

that, in an object-glass calculated after these data, there was no injurious aberration of color. But if, in determining the relative dispersion, we employ different pairs of prisms, formed of the same kind of glass, and having their angles different, the results present differences which might leave an uncorrected aberration injurious to object-glasses of consider- able dimensions. This result conducted him V) the following experiments : ###

408. If we look at an object across two prisms of flint and crown-glass, with their refracting angles in opposite directions, particularly with a telescope, it wih never appear without color. At a certain angle of the incident rays the dis- persion is a minimum, and, either by increasing or diminishing ihis angle, the dispersion in- creases. The remaining dispersion arises, as i > well known, from the different prismatic colors having a different ratio of dispersion in the two kinds of glass. If, in crown-glass, for example, the dispersion of the red rays is to that of the siune rays in flint-glass as ten to nineteen, then the violet rays may be dispersed in the ratio of ten to twenty-one. Hence, the two dispersions can ntvi.- entirely compensate one another.

409 It would be of great importance to de- termine for every species of glass the dispersion of each separately-colored ray. But, since the different colors of the prism do not present any precise limits, the spectrum cannot be used for this purpose. More precision would be obtained if we possessed glasses or colored iluids which permitted only light of the same color to pass ; the one, for example, permitting only the blue light to pass, and the other only the red. M. Frauenhofer was not, however, fortunate enough to procure either a glass or a fluid which pos- sessed this property. In every case the white light which passed through was still decomposed nto all its colors, with this difference only, that in the spectrum the color peculiar to the glass or the fluid was more brilliant than the rest. Even the colored flames obtained by burning alcohol, sulphur, &c., seen through a prism, do not yield a homogeneous light corresponding to the color. These flames, however, such as that of a lamp, particularly that of a candle, and, in general, the light produced by the flame of a fire, exhibit between the red and yellow of the spectrum a clear and well marked line, which occupies the same place in all the spectra. This line appears to be formed by rays which are not decomposed by the prism, and which consequently are homo- geneous. In the green space we perceive a si- milar line, but it is weaker and less distinct, so that it is

often very difficult to find.

410. It was, however, absolutely necessary for M. Frauenhofer to have homogeneous light of each color, and the following was the method which he employed : ††† Behind an aperture in a -shutter, 1-5 of an inch wide and 0-07 wide, he placed a prism A, fig. 12, of flint-glass, with an angle of about 40†† ; and at B C, a distance of about thirteen feet, he placed six lamps, whose light fell through narrow apertures on the prism A. The width of these apertures was 0*05 of an inch, their height nearly 1-5, and the distance of one lamp from another 0-58. The light of the lamps which fell on the prism A was refracted by it, and decomposed into colors, and after- v/ards passed through the aperture in the shutter. From the lamp C, for example, the red rays came in the direction of E, and the violet in that of D. From the lamp B the red rays passed towards F, and the violet rays towards G, &c. At the window of another house, 692 feet from A, and at the same height of the plane B A C, he placed the theodolite already mentioned, before the telescope of which, on the horizontal plane, was set the prism II, whose index of refraction for the different colored rays he wished to deter- mine. The prism II could only receive from the lamp C the red rays, the others, for example the violet, going to a side at D, did not fall upon the prism. In like manner, from the lamp B, it was only the violet rays which fell upon the prism II. In this way the prism relieved from each lamp rays of a difierent color, setting out from the same point. If the prism H, or the aperture of the object-glass, was not too broad, some rays of the six lamps, for example those between the violet and the blue, between the blue and the green, &c., will not fall upon the prism H, but will be entirely wanting. In this case the spec-

trum of rays passing by the small aperture A, and seen by the prism II, and by the telescope of the theodolite, will appear as in fig. 13, where I is the violet, K the blue, L the green, &c., and each color will appear separate. The distances ON, N M, &c., will increase as the dispersive power of the glass with the same angle of the prism H is greater. Since these distances, and the angle formed by the incident ray with an emergent ray, may be measured by the theodolite with a great degree of accuracy, it is easy, by means of this mechanism, to determine the index of refraction of each colored ray for every kind of refracting substance. Above the prism A, at the distance of one foot and a half, he made another aperture in the shutter, in the same vertical line with A, behind which he placed a lamp, from which the prism H likewise received light. The spectrum produced by the lamp ought then to appear by the prism before the telescope of the theodolite, and below the colored points as P, R, Q. The shining orange or reddish line which

appears in every spectrum of the light of the fire is shown ⁂St R. This line enables us, in the present case, to be certain that, on different days of observa- tion, we have always the same color in the colored points, which would not take place if the table on which the lamps are placed suffer the least change in relation to the prism. On this account we ought to place the table so that the point N may always be found in the same vertical line with R. \Mien this is not the case it is easy to bring it to the position by the adjusting-screws B and C. Since the distance of the lamps, or rather that of the small apertures by which the light falls on the prism A is invariable, we are sure, on different days of observation, to have always the same color in the colored points.

411. The distances of some of these colored points, for example the violets, the blues, and the reds, whose light is weak, cannot be measured without illuminating the micrometer wires of the telescope. These colored points, however, lose, by the ordinary method of illuminating the field, as much licjht as the wires receive, and therefore this method cannot be employed. It was neces- sary, therefore, to have a mechanism by which the wires alone could be illuminated, while the rest of the field remained dark. Such a mecha- nism M. Frauenhofer applied to his micrometer The illuminating of tlie wires may thus be modi- fied at pleasure, and always with facility. This is effected on the side of the eye-glass by means of a small lamp enclosed in a hollow globe, from which the light falls upon a lens, and throws it in a parallel manner on the wires. At the inner margin of the eye-glass, constructed for the pur- pose, the rest of the incident light is absorbed without falling on the lens. With this apparatus he has measured the angles of refraction of the different colored rays for several refracting sub- stances, the results of which are given in the fol- lowing table. With all the substances the angle of the incident ray is equal to the angle of die emergent ray N. Each angle was measured four times. Since the light which sets out from A does not fall in a parallel manner on the prism H ; or rather, since the plane in which the prism II is placed is not in the axis of the theodolitˆ

but at its centre is distant frorn the axis 4-25 inches, it was necessary to apply a small correc- tion to the angle that the incident ray makes with the emergent ray N. The distance of A from H

being 692 feet, the correction for the prism of flint-glass is + 31”, for

that ot crown-glass + 40”, and for water 40”, &c. The angles L M, N M, &;c., do not require this correction.

Refracting Media.

Temp- Reau-‘

Specific Gravity.

Angle of the Prism.

Angle of De- viation, or ofN.

Sea Fig. 12.

1

ON

NM

j\ L

NK Nil

Crown glass, No. 9.

3

2-535

39 20 35

22 38 20

6

11

5 46

11 2*2

16

56,22 16

Flint glass, No. 13.

5k

3-723

26 24 30

17 27 9

7

17

7 15

14 18

21

3ll28 46

Water

8

1-000

58 5 40

22 36 41

6

35

6 19

12 9

17

45 23 18

Water

9i

1-000

58 5 40

22 36 43

6

30

6 12

12 5

17

43 23 10

Sulphuric acid . . .

n

1-841

58 5 40

29 27 47

7

50

7 15

14 3

20

30 26 45

Alcohol

9

0-809

58 5 40

25 8 32

6

35

6 17

12 55

18

45

Vitriolic ether . . .

9

58 5 40

24 38 39

6

20

6 27

12 55

19

10

Sulphuric ether . .

9

58 5 40

24 38 39

6

20

6 27112 55

19

10

Oil of turpentine . .

7

0885

58 5 40

33 22 8

11

00

11 35;22 45

34

20

Kali dissolved in water

8ˆ

1-416

58 5 40

27 45 54

8

32

7 58

15 35

23

6

30 24

One part sugar of lead,

three parts water .

81

58 5 40

24 34 49

7

54

7 31

14 47

21

40

28 22

Oil of turpentine . .

8i

0-885

58 5 40

33 20 8

11

5

11 32

22 45

33

56

44 50j

1

412. In the following table we have given the indices of refraction for the different colored rays in flint glass, crown glass, and water, which

have been computed from the observed angles, calling O n the index of refraction for the ray O, and N n that for the ray N, &c.

Refracting]Media.

On

N n

Mn

Ln

K n

In

Flint glass. No. 13. Crown glass, No. 9. ^'ater ....

1-63074 1-52736 1-33209

1-63505 1-52959 1-33359

1-63933 1-53173 1-33501

1-64349 1-53380 1-33635

1-64775 1-53586 1-33763

1-65203 1-53783 1-33888

413. From these data there results the ratio of the dispersion of the different colored rays for these refracting media, as is shown in the follow-

ing table, where O n, N ►►', Jfc, are the indices of refraction from the substances that have the strongest dispersion.

Refracting Media.

Nn'►►► On'

Mn' ►►► Nn'

Lji' ►►► Mn

Kn’ ⬛⬛⬛ Ln’

In’ ⬛⬛⬛ Kn’

N7j’ ⬛⬛⬛ On’

M n ⬛⬛⬛ N n

L n’ ⬛⬛⬛ M n’

Kn ⬛⬛⬛ L n

In ⬛⬛⬛ K n

Flint glass, No. 139. } Crown glass. No. 9. 5 Flint glass. No. 139.]⬛⬛⬛ Water ... !i Crown glass. No. 93. > Water 5

1-93 2-87 1-49

2-00 3-01 1-51

2-01 3-10 1-55

2-07 3-33 1-61

2-17 3-42 1-58

414. From these results it is obvious that there are great anomalies in the ratio of the dis- persion of the differently-colored rays in some refracting media.

415. These experiments led him to make some observations on the influence of heat upon the refraction of fluids. By the least change of temperature, the refraction of all fluids becomes stronger in the lower part of the prismatic spec- trum than it is in the upper part : and hence every fluid acquires a kind of undulation, which prevents the colored points of the spectrum from being precisely distinguished. In making these experiments during the night, when the tempera- ture continually changes, M. P’rauenhofer was

obliged to stir the fluid every five or ten minutes, in order to render it homogeneous. These dif- ferences are not great in water, but in other fluids they are so considerable that all the spec- trum is dispersed and confounded, even if the vessel is shut up from the air. Hence it follows that we ought not to expect good object-glasses by substituting fluids in place of flint-glass, ^^‘e see also, from these experiments, how difficult it must be to melt flint and crown glass of a per- fect

homogeniety, since in every furnace of a glass-house the heat of the upper part of the crucible is almost one-third stronger than that of the lower part.

416. In order to obtain the indices of refrac-

tion of the differently-colored rays witli more exactness, and in order to determine if the ac- tion which refracting substances exert upon the light of the sun is the same as upon artificial light, he adopted the following method : ⬛⬛⬛

417. Into a dark room and through a narrow vertical aperture in the window-shutter, about 15″ broad, and 36″ high, he introduced the rays of the sun upon a prism of flint-glass placed upon the theodolite. This instrument was twenty-four feet from the window, and the an- gle of the prism was nearly 60⬛⬛. The prism was placed before the object-glass of the telescope, so that the angles of incidence and emergence were equal. In looking at this spectrum for the bright line, which he had discovered in a spec- trum of artificial light, he discovered, instead of this line, an infinite number of vertical lines of different thicknesses. These lines are darker than the rest of the spectrum, and some of them appear entirely black. When the prism was t\irned, so that the angle of incidence increased, these lines disappeared ; and the same thing happened when the angle was diminished. If the telescope was considerably shortened, these lines re-appeared at a greater angle of incidence; and, at a smaller angle of incidence, the eye- glass required to be pulled much farther out, in order to perceive the lines. If the eye-glass had the position proper for seeing distinctly the lines in the red space, it was necessary to push it in to see the lines in the violent space. If the aperture by which the rays entered was enlarged, the finest lines were not easily seen, and they dis- appeared entirely when the aperture was about 40”. If it exceeded a minute the largest lines could scarcely be seen. The distances of these lines and their relative proportions suffered no change, either by changing the aperture in the shutter, or varying the distance of the theodolite. The refracting medium of which the prism is made, and the size of its angle, did not prevent the lines from being always seen. They only be- came stronger or weaker, and were consequently more or less easily distinguished in proportion to the size of the spectrum. The proportion even of these lines to one another appeared to be the same for all refracting substances ; so that one line

is found only in the blue, another only in the red, and hence it is easy to recognise those which we are observing. The spectrum, formed by the ordinary and extraordinary pen- cils of calcareous spar, exhibit the same lines. The strongest lines do not bound the different colors of the spectrum ; for the same color is almost always found on both sides of a line, and the transtion from one color to another is scarcely sensible.

418. Fig. 14, shows the spectrum with the lines such as they are actually observed. It is, however, impossible to express on this scale all the lines and the modifications of their size. At the point A the red nearly terminates, and the violet at I. On either side we cannot define with certainty the limits of these colors, which, however, appear more distinctly in the red than in the violet. If the light of an illuminated cloud falls through the aperture on the prism,

the spectrum appears to be hounded on one side between G and H, and on the other at B. The light of the sun, too, of great intensity, and re- flected by a heliostate, lengthens the spectrum almost one-half. In order, however, to observe this great elongation, the light between C and G must not reach the eye,. because the impression of that which comes from the extremities of the spectrum is so weak as to be extinguished by that of the middle of the spectrum. At A, we observe distinctly a well-defined line. This, however, is not the boundary of the red, which still extends beyond it. At a there is a mass of lines, forming together a band darker than the adjacent parts. Tlie line at B is very distinct, and of a consider- able thickness. From C to D may be reckoned nine very delicate and well-defined lines. The line at C is broad, and black like D. Between C and D are found nearly thirty very fine lines, which, however, with the exception of two, can- not be perceived but with a high magnifying power, and with prisms of great dispersion ; they are besides well-defined. The same is the case with the lines between B and C. The line D consists of two strong lines, separated by a bright one. Between D and E we recognise about eighty-four lines of different sizes. That at E consists of several lines, of which the mid- dle one is the strongest. From E to 6 there are nearly twenty-four lines. At h there are three very strong ones, two of which are separated by a fine and clear line. They are among the strongest in the spectrum. The space b F contains nearly fifty-two lines, of which F is very strong. Between F and G there are about 185 lines of different sizes. At G many lines are accumulated, several of which are remarkable for their size. From G to H there are nearly 190 different lines. The two bands at H are of a very singu- lar nature. They are both nearly equal, and are formed of several lines, in the middle of which there is one very strong and deep. From H to I they likewise occur in great numbers. Hence it follows that in the space B II

there are 574 lines, the strongest of which are shown in the figure. The relative distances of the strongest lines were measured with the theodolite, and placed in the figure from observation. The faintest lines only were inserted from estimation by the eye.

419. Various experiments and changes, to which M. Frauenhofer has submitted these lines, convinces him that they have their origin in the nature of the light of the sun, and that they can- not be attributed to illusion, to aberration, or any other secondary cause. In transmitting the light of a lamp through the same aperture, we observe only the light shown at R, in fig. 13. It occupies, however, exactly the same place as D in fig. 14; so that the index of refraction of the line D is the same as that of R.

420. It is easy to understand why the lines are not well marked, and why they disappear, if the aperture of the window becomes too large. The largest lines occupy nearly a space of from 5″ to 10”. If the aperture is not such that the light which passes through it cannot be regarded as a single ray, or if the angle of the width of the

aperture is greater than that of the width of the ‘ne, then the image of the same line will be projected several times parallel to itself, and will consequently become indistinct, and dis- appear when the aperture is too great. The reason why, in turning the prisms, we cease to see the lines, unless the telescope is lengthened or shortened, may be thus explained :

421. Tlie emersion of the rays, in respect to their divergence, is similar to their immersion only in the case where the angles of incidence and emergence are equal. If the first angle is greater, the rays after refraction will diverge, as it were, from a more distant point, and, if it is smaller, from a nearer point. The reason of this is, that the path of the rays which pass nearer the vertex of the prism is shorter than that of those which pass at a greater distance from the vertex. Hence the angles of the refracted rays are not changed, but the sides of the triangles for the emergent rays ought to be in the one case greater, and in the other smaller. This differ- ence ought to vanish if the rays fall in parallel directions on the prism, which is also proved by experiment. As the violet rays have, by the object-glass of the telescope, though a chroma- tic, a focal distance a little shorter than the red rays, we see clearly why it is necessary to dis- place the eye-

glass, in order to perceive the lines distinctly in the different colors.

422. As the lines of the spectnmi are ex- tremely narrow, the apparatus must be very per- fect, in order to avoid all aberration, by which the lines may be rendered indistinct, and even dispersed. The sides of the prism ought con- sequently to be perfectly plain, and the glass of which the prisms are made ouglit to have neither scratches nor striae. With English flint-glass which is never entirely free of these striae, we can only see the strongest lines. Com- mon glass, and even the English crown-glass.

contains many striae, though they are not always visible to the eye. Those who cannot procure a perfect prism of flint-glass should use a fluid of great dispersive power, such as oil of anise- seed, in order to see all the lines. In this case, the prismatic vessel ought to have its sides per- fectly plane and parallel. In general, the sides of all the prisms should form an angle of 90″ with their base, and this base ought to be placed horizontally before the telescope, if the axis of the telescope is horizontal. The narrow aper- ture by which the light passes ought to be ex- actly vertical. The reason why the lines be- come indistinct, if any of the conditions now mentioned is neglected, may now be readily un- derstood.

423. As the lines of the spectrum are seen w-ith every refracting substance of uniform den- sity, M. Frauenhofer has employed this circum- stance for determining the index of refraction of any substance for each colored ray. This could be done with the greater exactness, as most of the lines are very distinct and well marked. For this purpose he selected the largest lines, be- cause with substances of low refractive pow'er, or with prisms of small refracting angles, the lines of less masnitude could scarcely be per- ceived with a strong magnifying power. The lines which he preferred were those marked B, C, D, E, F,G, H, in fig. 14. He made no use of the line b because it is too near F, and he endeavoured to use the middle one between D and F. It is not practicable to measure larger arcs, such as B H, but only small ones like BC, C D, because, in order to see the lines of the different colors distinctly, the eye-glass requires to be displaced.

424. The following table contains the mea- sures of the angles obtained from different kinds of glass, and other refracting substances : ⬛⬛⬛

i' fracting media.

u

Sp. Gr.

An the

gle of prism.

Angle of deviation.

B C

C D

BE

E F

FG

GH

o

o

O ‘ /’

,

/ ”

O ‘/

O ‘ u

Flint glass. No. 13.

15

3-723i26 24

30117 27 8

3 16

9 4-2 11 50

10 33 9

20 23-9

18 18

Crown glass. No. 9.

14

2-535|39

20

35 22 38 19

2 44-5

7 23-5 9 14

8 14

15 10

13 18

Water.

15

1-000 58

5

40,22 36 40

3 24

8 10 9 58

8 38

15 16

12 41-9

Water. ,

15

1-000|58

5

40,22 36 40

3 12-4

8 10-6 9 57-5

8 30-5

15 15-6

12 46-2

Kali dissolved in > water. 5

9

41658

5

40,27 45 56

4 2

10 26

12 54

1112

20 36

17 24

Oil of Turpentine.

8i

0-885 58

5

40,33 20 12

4 56

13 52

18 46-1

1614

31 8

27 28

Flint glass, No. 3.

3‘512;27

41

3517 35 16-6

3 8

8 22

10 46

9 50

19 10

17 10

Flint glass. No. 30.

3-695|21

42

15 14 3 9

2 35 6

6 56-8

9 12-6

a 19

16 15-6

14 32-2

Crown glass No. 13.

2-535,43

27

36 25 26 35-4

3 5

8 14-4

10 28-2

910

17 14-8

14 48-4

Crown glass, M.

2-756 42

56

40 26 39 13

3 32-8

9 37-6

12 29-8111 1-6

20 53-6

18 17-4

Flint glass. No. 23.

3-724 60

15

42 49 55 13-2

11 12-6

31 14-8,41 21-4 38 14-5

1 14 45-2

1 8 3-6

Flint glass. No. 33.

3-724 45

23

14 32 45 12-2

6 26

17 47-8 23 31-8,2123-8

1 1

41 33-4

37 28-8

OPTICS.

25J

42.’). The following table contains the indices of refraction for the different colored rays in etiCh refracting substance : ???

Refracting media.

B n.

C n. D 71.

E 71.

F n.

G n.

H n.

1-671062

Flint glass, No. 13.

1-627749

1-629681

1-635036

1-642024

1-648260ˆ 1-660285

Crown glass, No. 9.

1-325832

1-526849

1-529587

1-533005

1-536052 1-541657

1-546566

Water

1-330935 1-331712

1-333577

1-335851

1-3378181 1-341293

1-344177

Water .

1-330977

1-331709

1-333577

1 -.335849

1-3377881 1-341261

1-344162

Kali

1-399G29

1-400515

1-402805

1-405632

1-408082′ 1-412579

1-416368

Oil of Turpentine .

1-470496

1-471530

1-474434

1-478353

1-481736 1-488198

1-493874

Flint glass, No. 3. .

1-602042

1-603800

1-608494

1-614532

1-620042 1-630772

1-640373

Flint glass. No. 30.

1-623570

1-625477

1-630585

1-637356

1-643466

1-655406

1-666072

Crown glass. No. 30,

1-524312

1-525299

1-527982

1-531372

1-534337

1-539908

1-544684

Crown glass, M.

1-554774

1-555933

1-559075

1-563150

1-566741

1-573533

1-379470

Flint glass. No. 23) Prism of 60►►. J

1-626596

1-628469

1-633667

1-640495

1-646756 1-658848

1-669686

Flint glass. No. 23 ˆ Prism of 45►► J

1-626564

1-628451

1-633666

1-640544

1-646780 1-658849

1-669680

426. The following table contains the ratios of fracting substances, according to the results in the different dispersive powers of the differently the preceding table : ►►► colored rays, in several combinations of the re-

Refractins: media.

Flint glass. No. 13, and water. Flint glass, No. 13, and crown >

glass, No. 9 3

Crown glass, No. 9, and water. Oil of turpentine and water. Flint glass, No. 13, and oil of ˆ

turpentine i

Flint glass, No. 13, and Kali.

Kali and water

Oil of Turpentine and Kali. Flint glass, No. 3, and crown)

glass, No. 9 i

Crown glass. No. 13, and water. Crown glass, M, and water. Crown glass, M, and crown ˆ

glass. No. 13 S

Flint glass. No. 1 3, and crown I

glass, M S

Flint glass. No. 13, and crown }

gla.ss, M i

Flint glass, No. 30, and crown }

glass. No. 13 S

Flint glass, No. 23, and crown

glass, No. 13

C n ××× B n

C n ××× B n

2-562

1-900

1-349 1-371

1-868

2-181 1-175 1-167

1-729

1-309 1-537

1-174 1-667 1-517 1-932 1-904

D n ◆◆◆ C n

Dn◆◆◆Cn

2-871

1-956

1-468 1-557

1-844

2-338 1-228 1-268

1 714

1-436 1-682

1-171 1-704 1-494 1-904 1-941

E n ◆◆◆ D n’

En ◆◆◆ Dn

3-073

2-044

1-503 1-723

1-783

2-472 1-243 1-386

1-767

1-492 1-794

1-202 1-715 1-482 1-997 2-022

F n ◆◆◆ E n

F 71 E 71

3-193

2-047

1-560 1-732

1-843

2-545 1-254 1-381

1-808

1-518 1-839

1-211 1-737 1-534 2-061 2-107

G n ◆◆◆ F jt’iH n- ◆◆◆ G^‘l

Gn ◆◆◆ Fn H 7) ◆◆◆ G 71

3-460

2-145

1-613 1-860

1-861

2-674 1-294 1-437

1-914

1-604 1-956

l-2‘20

1-770 1-579 2143 2-168

3-726

2-195

1-697 1-963

1-899

2-844 1-310 1-498

1-956

1-651 2052

1-243 1-816 1-618 2-233 2-268

427. The preceding table shows the difference of dispersion relative to differently-colored rays for each combination of refracting substances. For example, for flint-glass, No. 13, and water, the ratio of dispersion of the rays in the space BC is as 1 to 2-56 ; and of the space G II as 1 to 3-73. As these differences, however, are very small in some substances, as in flint-glass and oil of turpentine, we may expect, with some confidence, that, in varying the ingredients, we may obtain a kind of glass, in which the differ- ences will be smaller than in that which has hitherto been employed. The crown-glass M, for example, is of such a composition.

4‘28. Calling 1 the aberration of an object- glass of crown-glass. No. 9, and flint-glass, No.

3, produced by the difference of dispersion rela- tive to the different colors, this aberration be- comes about 0-57 for an object-glass of the same focus, and composed of crown-glass, No. 9, and flint-glass, No. 13, and 1-74 with crown-glass. No. 9, and crown-glass M. Iji calcu- lating the e aberrations, he has taken into account the rela tive intensities of the differently-colored rays, of which we have already spoken.

429. The results given by tw’o]irisms of f3int- glass, No. 23, show the degree of confidence which may be placed in the mrasured angles. With the prism of 45►► made of this glass, a change of an arc of 2″ produces a change of one in the fifth decimal of tlie index of refraction. With a itfism of 60►► it requires an angular

change of 3-5″ to produce the same variation in the decimal.

430. If, in achromatic object-glasses, the aber- ration produced by the unequal refrangibility of the differently-colored rays ought to be destroyed ; then, since the focal lengths of the lenses of flint and crown-glass ought to be nearly in the ratio of the dispersion of the two kinds of glass; and since, on the other hand, the ratio of dis- persion for the different colors is not the same, it is evident that some aberration must still re- main ; and we must, therefore, determine this ratio, in order that this aberration may be a mi- nimum for the distant

vision of objects. This cannot take place, if the difference between the focal lengths for the rays of different refrangibi- lity in the same object-glass is a minimum ; for the different colors have not the same intensity : the aberration of the yellow rays, for example, which have the greatest brightness, will produce in the ratio of their intensity a worse effect than the violet ones, if the aberration for the latter is of the same magnitude. Hence we must know the intensity of each color in tlie spectrum, or in what ratio the impression of any color of the spectrum is stronger or weaker than that of an- other color. In order to measure this intensity, M. Frauenhofer constructed the following apparatus.

431. To an eye-glass, constructed for that purpose, for the telescope of the theodolite, he applied a small plain metallic mirror, the edge of which being well defined, cut the field of the telescope in the middle, as shown at a in fig. 15. It was placed before the eye-glass E, at an angle of 45□□, and at the place of the image formed by the object-glass A. The eye-glass E is pulled out till the edge of the mirror, w- hich ought to be vertical, is distinctly seen. At the side of the eye-glass, and in a direction perpendicular to the edge of the mirror a, and to the axis of the telescope AE, he fixed a tube c B, cut in the direction of its lene^th at b ; and in this cut he placed a narrower and a shorter tube M N, fig. 16, which crossed the larger tube cB per- pendicularly. In this narrow tube was a small flame, in the axis of the larger tube, which was supplied with oil from an external vessel. The narrow vertical tube b, fig. 15, or M N fig. 16, had in the axis of the larger tube a small round aperture, turned towards the mirror a, by which the light of the tiame fell upon it. By this con- trivance, we perceive, in half of the field, the mirror a illuminated by the flame, and in the other half one of the colors of the spectrum formed by a prism placed before the object- glass A. The nearer the tube b is brought to a,)he more will the flame illuminate the mirror,

and consequently we can obtain, at (he same time, an impression produced on the eye by the light of the mirror (as seen by the eye-glass) of the same intensity as that which is produced by a color of the spectrum in the other half of the field. The squares of the distances of the flame from the mirror, for the different colors of the spectrun., are then inversely as the ratios of their intensity. Though at first it appears diffi- cult to compare the light of two different colors, yet it becomes easy by a little practice. The intensity of the light of the mirror approaches more to that of any color in the spectrum, if, at the same position of the eye-glass, its vertical margin is less distinct. If the mirror is adjacent to a part of the spectrum, more or less illumi- nated, the edge of the mirror becomes, in both cases, more distinct ; because,

in the first case, the mirror appears to be placed in the shadow, and, in the second case, it is the color of the spectrum that is found there. The experiment with the mirror is a little difficult and uncertain, if we perceive clearly the lines of the spectrum, because the brightest and the darkest lines touch one another almost in every color. On this account the aperture in the window-shutter is made so broad that only the strongest lines are just visible, and the fine ones not at all. In place of the mirror outside of the shutter, by which the lignt entered, he put a white plane surface illu- minated by the sun, because by any imperfection of the mirror the light is irregularly dispersed, which renders the observations more dubious.

43-2. In order to vary the experiments, he at one time enlarged the round aperture before the flame, and at other times contracted it. He placed at the end c of the wide tube, a piece of ground glass, through which the mirror received its light. In this case he measured the distances of the flame from the ground glass. To avoid all illu- sion the aperture before the eye-glass ought to be small, and to be at the place where the principal rays, or the axes of the r, ys coming from the edge of the field, cut the axis of the tele- scope. With the prism of flint-glass. No. 13, having an angle of 26►► 24′ 5”, he obtained the following results. Though the experiments were made in clear weather, and at noon, he some- times perceived, in the course of the observations, a slight change in the density of the light which the prism received- The differences of the four sets of experiments may have been partly owing to this change, and the flame may also have changed its intensity in the course of the obser- vations. If we call the intensity of the light at the brightest part of the spectrum 1, we shall then have ►►►

Experiment I.

Experiment II.

Experiment III.

Experiment IV.

Mean of four Experiments.

Intensity of Light.

Int. of Light.

Int. of Light.

Int. of Light.

Int. of Light.

At ... . Br: 0-010

0-044

0-533

0-020

0-032

At .... C n: 0-048

0-096

0-15

0-084

0-094

At . . . . D =z 0-61

0-59

0-72

0-62

0-64

Between D and En 1-00

1-00

1-00

1-00

1-00

At . . . E =: 0-44

0-38

0-61

0-49

0-48

At . . . . E ::= 0-084

0-14

0-25

0-19

0-17

At ... . Grr 0-010

0-029

0-053

0-032

0031

At . . . . n ××× 00011

00072

0 0090

0-0050

0-00056

OPTICS.

255

433. The brightest part of the spectrum is nearly at one-third or one-fourth of DE from I). Its position cannot be determined more exactly, nor is it of any great importance.

434. The curve in fig. 14 represents the in- tensity of the light in the different colors. The above values are the ordinates, and the measured arcs BC, CD, in the table containing the mea- sures of the angles obtained from different kinds of glass, &c., from flint-glass, No. 1 3, the abscis- sas. We may suppose that the quantity of the light in the different colored spaces is repre- sented by the areas of the curve BC, CD. If we call this quantity 1 , for the area of the space D E, then we shall have ×××

Area of BC = 0021 CD r= 0-299 DE z= 1000 E F = 0-328 FG=: 0-185 GH=: 0035

435. Having several object-glasses of the same aperture, the same focal length, and the same kind of glass, we may determine in which of them the aberration produced by unequal re- frangibility is the best compensated, if we cover one-half of each of them by a screen passing through the centre of the object-glass in a straight line. In those where the margin of a distant object is most distinct the aberration is best compensated. In making this comparison we must attend only to the

distinctness of the ob- ject, and not be deceived by the colors, because one object-glass may show less color than ano- ther, and yet its distinctness be less. This de- tailed method of finding the best ratio of disper- sion is useful only for determining how much the aberration of the faintest rays ought to ex- ceed that of the brightest rays. Tliis result will be still more accurate if it is obtained by trials made with greater object-glasses, whose apertures are in the ratio of the greatest possible focal length. It is scarcely necessary to add, that the aberration of sphericity was corrected in all the object-glasses employed in these experiments. There is still another aberration which takes place in the eye itself, and to which we ought to pay attention if we wish to find the best ratio of the colorific dispersion.

436. On placing the red color of the spectrum in the middle of the field of the telescope of the theodolite, and on adjusting the eye-glass so as to be able to distinguish the fine micrometer wires, these wires will be no longer seen when the violet rays enter the field, the eye-glass remain- ing fixed. In order to see the wire in this color, we must bring the eye-glass much nearer the wire ; that is, more than double the aberration produced by the unequal refrangibility of the two kinds of rays in the eye-glass. This proves that the differently colored rays in the eye have not the same focal distance, and that the eye is not achromatic. The distance to which the eye-glass ought to be displaced in different co- lors, in order to see the wire distinctly, enables us to calculate this aberration of the eye, which IS by no means small ; but we must take into account the aberration produced by the eye-

glass itself. It is scarcely necessary to state, that, in observations of this kind, no other light but that of the spectrum ought to enter into the field of the telescope, and that the wire should not receive any foreign light. M. Fraueniiofer has found, with a lens of crown-glass, No. 13, with a focus of 0-88 Paris inches, that the eye- glass, in passing the wire from the ray C to G, ought to be displaced 0-054 of an inch, in order to see the wire with equal distinctness in both colors. A lens of crown-glass. No. 13, of 1-33 Paris inches focus, requires to be displaced 0-111 for the same colors ; a lens of flint-glass, No. 30, with a focus of 0-867, requires a dis- placement of 0-074 ; and another of flint-glass, No. 30, and a focus of 1-338, required to be dis- placed 0-148 of an inch. In these experiments he looked with one eye at a fixed object, whilst with the other he observed at the wire through the lens, in order that he might be certain that, with the different colored rays, the eye was always equally susceptible of uniting on the re- tina white rays of a given divergency ; and, con- sequently, that it did not change, in that respect, for the different colors. Even with that precau- tion, however, the results did not differ greatly from the preceding.

437. The result given by the first lens is, that, if the red rays fall parallel on the eye, the blue rays ought to diverge from a point 23-7 inches distant, in order to have in the eye the same focal distance. With the second lens this dis- tance was 21-3; with the third 19-5; and with the fourth 17-9. In this calculation he has taken into account the influence produced on this dis- placement by the unequal refrangibility of the two kinds of rays in the lens. This aberration in the eye cannot be fixed more rigorously, but by varied and repeated trials. It would be de- sirable to have the experiments repeated on the eyes of different persons in order to obtain a mean result. In order to determine this aber- ration with still more precision, we must also take into account the diameter of the luminous cylinder formed by the rays which go from the eye-glass to the eye. The diameter of this cylin- der varies, and depends on the aperture of the object-glass, and the focus of the lenses of the eye-glass. It is easy to conceive that this aberra- tion increases with the diameter of the cylinder. Great care is therefore requisite, in the calculation of object-glasses, to attend to the aberration of the eye, and to make it disappear from the ob ject-glass.

438. If, in the calculation of achromatic object- glasses for the spherical aberration, we wish to make this aberration disappear entirely, the in- dices of refraction for the flint and crown-glass ought to belong to the same colored ray ; for if these indices belong to different rays the aberra- tion can never be extinguished, notwithstanding the most rigorous calculation. As the discovery of the lines on the spectrum enables us to deter- mine these points with accuracy, they must be considered of great utility in removing this aber- ration.

439. Before the discovery of the lines in the spectrum, M. Frauenhofer determined the iden- tity of the refracting powers of two kinds ot

glass by cementing them together, and forming them into a single prism. If the two specula seen by this prism appeared on the same place, and without any reciprocal displacement, he concluded that their refracting power was the same. After the discovery of these lines, how- ever, he found that two pieces of glass might still have a different refractive power, without that difference being perceived by the above me- thod. This difference in refracting power was not only found in pieces of glass taken from dif- ferent parts of the same crucible, but even in pieces taken from the two extremities of oppo-

site sides of the same piece of glass. By repeated experiments on the manufacture of flint and crown glass, he has succeeded to such a degree, that in a crucible containing 400 lbs. of flint glass, two pieces, one of which was taken from the bottom, and the other from the top, have the same refractive power.

440. In observing the great quantity of lines in the solar spectrum, we might be led to believe that the inflexion of light at the narrow aperture in the window-shutter had some connexion with them, though the experiments described do not give the least proof of this, and, indeed, esta- blish the contrary opinion. In order to put this beyond a doubt, and also to make some other observations, he varied the experiments in the foUowino; manner : ###

441. if we make the sun's rays pass through a small round aperture in the window-shutter, nearly 15″ in diameter, and cause it to fall on a prism placed before the telescope of the theodo- lite, it is obvious that the spectrum seen by the telescope can only have a very small width, and consequently will form only a line. In a line, however, of almost no breadth, it is impossible to see the fine and delicate lines which transverse it ; and, on that account, the fixed lines are not seen in a spectrum of this kind. In order, how- ever, to see all the lines in this spectrum, it is necessary only to widen it by an object-glass, without altering its length. He obtained this effect by placing against the object-glass a glass having one of its faces perfectly plane, and the other ground into a segment of a cylinder of a very great diameter. The axis of the cylinder was exactly parallel to the base of the prism. The spectrum could not, therefore, change in its length, and was therefore only widened. In the spectrum thus altered he recognised all the lines occupying the very same position that they had when the aperture was long and narrow.

442. He employed the same apparatus for ex- amining in the night time the planet Venus, without allowing the light to fall upon a small aperture.

443. In the spectrum formed by this light he found the same lines, such as they appeared in the light of the sun. That of Venus, however, having little intensity compared with that of the sun reflected from a mirror; the brightness of the violet and the exterior red rays is very feeble. On this account we perceive even the strongest lines in these two colors with some difficulty; but in the other colors they are easily distin- guished. M. Frauenhofer has seen the lines D, E, b, F, fig. 14, very well terminated; and

he has recognised that those in b are formed of two, namely, a fine and a strong line. The weakness of the light, however, prevented him from seeing that the strongest of these two lines consisted of two ; and, for the same reason, the other finer lines could not be distinguished.

444. With the same apparatus he has also made several observations on some of the bright- est fixed stars. As their light was much fainter than that of Venus, the brightness of their spec- trum was consequently still less. He has never- theless seen, without any illusion, in the spectrum of the light of Sirius, three large lines, which apparently have uo resemblance with those of the sun's light. One of the.m i-s in the green, and two in the blue space. Lines are also seen in the spectrum of other fixed stars of the first magnitude ; but those stars appear to be differ- ent from one another in relation to these lines. As the object-glass of the telescope of the theo- dolite has only thirteen lines of aperture, these experiments may be repeated, with greater pre- cision, by means of an object-glass of greater dimensions.

445. The electric light is, in relation to the lines of the spectrum, very different from the light of the sun and of a lamp. In this spec- trum we meet with several lines, partly very clear, and one of which, in the green space, seems very brilliant, compared with the other parts of the spectrum. Another line, which is not quite so bright, is in the orange, and appears to be of the same color as that in the spectrum of the light of a lamp ; but, in measuring its angle of refraction, M. Frauenhofer finds that its light is much more strongly refracted, and nearly as much as the yellow rays of the light of a lamp. Towards the extremity of the spec- trum we perceive in the red a line of very little brightness ; yet its light has the same refrangi- bility as that of the clear line of the light of a lamp. In the rest of the spectrum we may still easily distinguish other four lines sufficiently bright.

446. In making the light of a lamp fall through a narrow aperture, from 1 5″ to 30″ wide, upon a prism of great dispersion, placed before the teles- cope, we perceive that the red line of this spectrum is formed by two very delicate bright lines, similar in size and in distance to the two dark lines D, fig. 14. Whether the aperture through which the light of the lamp passes is wide or narrow, if we cover the point of the flame, and the lower blue extremity of it, the red line appears less clear, and is more difficult to be distinguished. Hence it appears that this line derives its origin principally from the light of the two extremities of the flame, particularly the inferior one.

447. The reddish line is, in relation to the other parts of the spectrum,

very bright in the spectra of light produced by the flame of hydro- gen gas and alcohol. In the spectrum of the flame of sulphur it is seen with difficulty..

448. Optical instruments in general have within the last century been brought to so high a degree of perfection that it may almost be doubted if there remain any real improvement to be made in them ; nevertheless Dr. Goring states, that in the humble part of their con-

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struction which provides against the admission of false light, tliere is still left some capability of a farther advancement towards perfection, which may be effected with advantage, to the performance of astronomical refracting telescopes, Newtonian reflectors, and compound micro- scopes. As it is necessary to understand the nature of an evil before we can remedy it, as well as to feel the utility of removing it, we shall here give a slight account of the indistinct- ness occasioned by fog.

449. When we look through a telescope ad- mitting false light, at a printed bill, the plate of a clock, or other such object, especially if the day is clear, and the sun shines on it, we find, however perfect the

instrument may be in other respects, the letters or figures do not appear so black and sharp as when viewed by the naked eye under the same angle, but rather of a brownish color ; in other words, the effect upon tlie eye is similar to that of looking through a mist, or through glasses dimmed by moisture; in short, what an ordinary observer would ex- press by saying, that the instrument did not shew objects clear and distinct. Now, on ex- amining the pencil of rays proceeding from the eye-piece of such a telescope, with a magnifier, it will (supposing no other source of indistinct- ness exists), be found surrounded by a variety of foreign rays, forming different haloes above it, instead of appearing like a spangle on a piece of black cloth, -which it will do when all the light is stifled, as in Gregorian and Cassagrain reflectors by their eye-hole, and in refractors with erecting eye-pieces, which have a stop be- tween the two bottom glasses, producing the same effect, by suffering nothing but the true and genuine pencil of light, from the object- glass or metal, to reach the retina. Indeed, in these instruments, the quantity of spurious rays would be so great as absolutely to preclude any thing like distinct vision, without the stops and eye-holes in succession.

450. In those to which Dr. Goring proposes to apply an equivalent contrivance for extinguish- ing fog, though there may not be the same im- perious necessity for its applicatitm, still he thinks the advantage to be gained by the improvement is not to be despised, but will rather be admitted to be highly useful and ap- propriate, as placing optical instruments one step nearer perfection than they otherwise would be, by producing the maximum of distinctness and clearness of vision, of which they can be ren- dered susceptible, consistently with their ex- cellence in other respects. Opticians have not been entirely insensible to the advantages to be obtained by excluding all inefficient light ; being aware that no kind of blacking, applied to the inside of an optical tube, is sufficient to effect that salutary purpose, they have had recourse to other means, though inadequate to the end in view. Thus it is common, in a refracting astro- nomical telescope, to meet with one stop and sometimes two, placed in the interval between the object and eye-glass ; the apertures of the roagnifiers are likewise contracted on the same principle. But these stops are never in suffi- cient number, or sufficiently contracted, or

placed in such situations as they should be to be efficient. Dr. Goring states that it seeiUs to him as if they were possessed of some supe.‘Sti- tious dread of cutting off some of the ligln of the object-glass by inserting stops ; or perhaps have wished to show their customers that

the apertures of their glasses were clear, it being a common trick to make a large object glass, and then to cut off the effect of the imperfect edges by a contrivance, such as has been mentioned, which ordinary purchasers are not aware of, and thus suppose the instrument to be much finer and better than it really is ; at least it is not uncommon to meet with this species of fraud in the works of the continental artists, who are very fond of making larger object-glasses than the English workmen.

451. To enter, however, into the subject, wc shall here, as succinctly as possible, describe the method which Dr. Goring experimentally found to answer best for stifling fog in the astronomi- cal refractor. It is a consideration which must obviously present itself, that, if an eye-hole be placed at the end of a telescope, precisely of the size and exactly in the focus of the pencil of rays produced by any particular magnifier, the end here proposed will be attained, as in the Gregorian and Cassagrain telescopes; it will, moreover, confine the eye truly to the axis of the tube, and thus prevent us from seeing any of that color in the image, which m.ay always be perceived in the best instruments when the eye is a little removed from its true situation. Nevertheless, after sufficient trial. Dr. Goring rejected this method, as less expedient than the following, on account of the difficulty of ex- ecuting it properly with high powers, as well as that it confines the field of view, and is dis- agreeable to the eye. It is evident, that with high powers the pencils of rays will be exceed- ingly small ; therefore, if the aperture of the eye-hole is too large, it will be ineffectual, if too small it will obstruct light ; it must, therefore, be executed to a very great nicety, which is not always to be expected ; besides, in a case of such delicacy, if the eye-piece be not screwed on to a particular mark on the body of the tube, or if any of the parts of which the magnifying apparatus is composed be more or less screwed home than at the time of adjustment, it will be highly probable that the eye-hole will be a little thrown out of its true situation, and thus do away with the sole object for which it was con- structed. Thus it is that what is perfect in theory will not always answer in practice. As to using eje-glasses with very small apertures for the same purpose (as contradistinguished from eye-holes placed at the ends of the cones of light, drawn to a point by the magnifiers), it is a method which cannot be made to exclude false rays with any degree of precision, even though their diameters are so much reduced as greatly to contract the field of view.

452. We shall now give an account of the plan which Dr. Goring has selected as most ele- gible, and which he has applied to a thirty inch, and eighteen inch refractor with complete suc- cess. Fig. 1, Plate VI., is an engraving of the section of a refractor, in which may be seen

i;tops in the course of the tube and eye-piece (exclusive of the field bar), five of which are placed in such a manner, and of such apertures, as to pinch the cone of rays proceeding from the object glass as tight as possible, without in- tercepting any. It will be obvious that no foreign rays, or rays that are not parallel, will be able to find their way to the eye, nor can any light be reflected from the sides of the tube, so as to become visible. To execute this, use the following method : ††† When the telescope is finished in the usual way, and before any stop is inserted, attach its lowest astronomical eye- piece to it, and find the true solar or sidereal focus of the object-glass : when thus adjusted, measure carefully with a dynameter the size of the pencil of rays proceeding from the eye-piece, and note it down. Having then procured a plank of wood, covered with paper of sufficient length, take the aperture of the object-glass, and set it off at one end of the board ; bisect it and draw a line at right angles to it, to the exact length of its focus ; fix three strong needles into the three points of the focus and aperture of the object-glass, and then stretch a fine thread over them, which will then represent the cone of light which forms the image; setoff six or seven inches from the focal extremity (an efficient stop cannot be placed nearer without contracting the field of view), and ascertain the distance between the threads at this point, which will give the diameter of the fifth stop. Then divide the re- mainder of the focal length into five equal parts, and the distance of the threads will give the dia- meter of four more stops, 4, 3, 2, and 1, in the figure, all sufficiently correct for the purpose. The stops are then to be made and inserted into the tube in their proper places ; it will not, however, be amiss to make No. 1, 2, 3, and 4, a little too large, and to confide the main business of stopping the false rays to No. 5, which may be attached to the eye-tube, and move along with it, in adjusting the focus of the magnifier. This will give the instrument the power of ad- justing itself to nearer objects on the earth, without losing any light from the effect of the stops, which otherwise must be adjusted to the shortest focus of the object-glass, and supposed to act perfectly only with parallel rays. It will not be amiss to have a very small eye-hole, placed correctly in the focus of the object-glass, which will give a great facility of adjusting the stops, as it will show, by merely looking through the instrument, if they are correctly placed or not. Lastly, having fixed these, apply the eye-piece, carrying the lowest magnifier as before ; and again, with the

dynameter measure the size of the cone of rays at the eye ; if it measures precisely as before, you may be quite confident you have cut off no true light. Probably it will be thought there is already a superabun- dant quantity of stops, but, on examining the pencil with a magnifier, it will most likely be found that some false light is still reflected from the eye-tube ; to remedy which, two more stops ###will be necessary as Nos. 6 and 7 ; both of these, however, must be larger than No. 5, and No. 7 the larger of the two, or the field of view will be contracted in the low powers. The

higher the power, the nearer an efficient stop may be placed toward the focal extremity of the pencil, proceeding from the object-glass ; the lower it is, the farther the stop must recede, gradually of course, increasing in its aperture (unless the length of the eye-tube is increased in proportion to the focus of the magnifier em- ployed). The distance of the main stop is fixed upon six or seven inches, which will suit all telescopes, and all magnifiers which are not more than one inch in focus. Here it seems proper to observe that when once the false light is duly excluded from a telescope, in the manner here recommended, the eye-glasses may be used of any aperture, and thus the field of view may be had of any size, even with a single eye-glass, which, when high magnifiers are used, is a great convenience, as it enables us to keep a celestial object in sight more easily, though we should only see it distinctly in the axis of the telescope ; moreover, should it not be thought worth while to have the false light as perfectly excluded, as it possibly can be under all cir- cumstances, the stops Nos. 1, 2, 3, and 4., may be rejected, and 5, 6, and 7 only executed ; the con- sequence will only be, that some false light will be rendered sensible when the eye is not confined to the centre of the eye-glass.

453. We have given the full complement of stops, to render the exclusion as complete as possible. A good method of illustrating the efl'ect of the stops is the following : ### It is known that a terrestrial telescope, with an erecting eye- piece of four-glasses, would be rendered nearly useless by withdrawing the little stop placed between the two glasses which erect the image, by the quantity of fog which would be let in, supposing the instrument to be constructed in the usual way. But, in a telescope with such stops as above described, it is of no consequence whether the little stop is introduced or not, the performance being precisely the same in point of distinctness in both cases. In performing this experiment it is necessary, however, that the aper- ture of the little stop should be correctly and truly accommodated to the size of the pencil, which is formed by the glass, in the focus of which it is placed, so that it shall barely admit the

image of the object-glass without cutting any of the side rays off, otherwise the experi- ment will not be fair. Opticians are apt sometimes to make these apertures so small as to in- tercept some of the light of the object-glass as effectually as a cap over the end of it would ; for the achromaticity of an erecting eye-piece depends very much upon the size of the little aperture in question. Thus, where the diameter of an object-glass bears a very large proportion to its focal length, it will be impossible to admit the whole of the light proceeding from it into the eye-tube, without at the same time destroy- ing the achromatic property of the latter, by the necessity which would arise of opening this stop too wide to consist with it. In the ex- periment we have detailed there is sufficient proof that the effect of the stops is equivalent, indeed more than equivalent, to that produced by the stop which is inserted in erecting eye- pieces for the purpose of procuring distinct

vision, Tfit Qoctor observes ‘ Is there any merit in naving effected, by means of half a dozen stops, what may be done well enough by one ? certainly not. But take away the erecting eye-tube, screw on an astronomical eye-piece Ceitherwith or without a tield bar), and where, I ask now,’ he continues, ‘ is that part of structure which is to do the work that was performed in the erecting compound magnifier, now removed l)y the little stop of which I have said so much, supposing the telescope constructed in the usual inanner, that is to say, without stops in the course of the focal distance of the object-glass, or at least without effectual ones ?’ It cannot be asserted tliat there is any thing equivalent in the instrument in its yjresent condition to the former provision in it, for the valuable purpose of excluding f;ilse rays, though the expediency and utility of it in both cases must be equally admitted or denied, and it is clear that this can only be supplied in the astronomical telescope, liy some such expedients as above resorted to.

454. As we conceive no one will be hardy enough to assert that there is no use in ex- cluding false rays from a telescope intended to be used at night, for viewing the heavens, it will be superfluous for us to set about proving that we shall see a celestial object the better if no light, either direct or reflected, reaches the eye, save that actually proceeding from it. If the light of the heavens in a star-light night, and that of the bodies which produce it, are very faint, still there is the same ratio between their brightness and the false light they produce, though perhaps not so conspicuous as there is in that of terrestrial

objects. Indeed it is per- fectly well known to astronomers that, in the darkest night, wearing a black hood over the eyes greatly facilitates the vision of very faint and delicate objects, such as nebulse, &c., from the sensibility and tranquillity endured by these means in the retina, rendering it susceptible of the slightest impressions. Surely the effect of foreign light reaching the eye directly, or through the medium of a telescope, must be equally pernicious. It is in viewing the class of objects here designated that the utility of the stops we have described will be found ; no one will expect that they can render a telescope better able to define or divide a star, because these properties depend upon the perfection of an entirely different part of its structure.

455. The Newtonian telescope has, among its other valuable peculiarities, that of having less false light in it than any other kind of telescope. The same striking effect, therefore, will not be manifest in excluding the triflmg fog there is in it, as in another construction where it is more abundant Nevertheless, there is something to be done. If we examine the pencil of rays proceeding from its eye piece with the magnifier, it does not precisely represent the image of a spangle on a piece of black cloth as it should do ; a good deal of foreign liirht may be seen, formed partly by the side of the tube behind the diagonal metal, and partly by such portion of the end next the large mirror~as the plain one can reflect along with the image, together

perhaps with some reverberated by the little tube which carries the magnifiers.

456. In fig. 2 is represented the method taken to remedy these imperfections in a seventy-seven inch focus, and seven inch aperture, Newtonian. The alterations from the common construction are as follows : ××× The tube which carries the mag- nifiers is seven inches long, instead of being only two inches or perhaps less, as is usual, ××× the diagonal metal is likewise placed nearer than usual to the large one, so that the length of the telescope is reduced about five inches ; this is of course necessary to render the pencil of rays, reflected at right angles from the axis, long enough to acPwith the increased length of the eye-tube. As the diameter of the spectrum of the great mirror increases as we recede from its focal extremity, more of the small plain one will in this case be called upon to act ; it, however, will still do the work without any increase in its size. By this arrangement a sufficien: length of eye-tube is obtained to insert the stops 5, 6, and 7, as in the refractor ; No. 5 is the efficient stop as before, and is seven-twentieths of an inch in diameter. The extrusion of the aber- rant light is complete as long as the eye is in the axis of

the instrument.

457. It would of course be impossible to in- sert any stops similar to those, 1,2, 3, and 4, in the refractor, to render the effect more complete ; nevertheless, Dr. Goring thinks, were it any object, a Newtonian would, by the aid of the contrivance he applied to his, act sufficiently well with a skeleton tube only. It now remains to describe the new adjustment which so long an eye-tube requires ; for it is evident that any want of centricity and parallelism in the lenses composing the eye-glass to the axis, which might be tolerated in a very short tube, will be perfectly insupportable when aggravated by a longer one ; moreover, the stop No. 5 will, if not truly con- centrical with the cone of light on which it operates, evidently impede some, as in such a case is perceptible by looking through the small eye-hole recommended in adjusting the refractor, or by examining the extreme pencil after it has passed the eye-glass with a magnifier. It is evident that the adjustment of a Newtonian is complete, when the pencil of rays which is re- flected from the small metal truly perforates the axis of the eye-tube, and the centres of tlie lenses composing it; it matters not at what angle or in what direction the said cone of rays proceeding from the large metal be thrown by the diagonal one, provided these conditions are fulfilled (supjiosing, of course, the position of the small metal to be the centre of the tul)e, so that it shall truly receive the whole of the light tˆf the great one). We may, therefore, either adjust the small metal to the eye-tube or the eye-tube to the small metal, or we may do both, which latter will probably be the most expedient ; Dr. Goring has effected it in a very simple manner, by having the tube made to fit loosely into another wider piece, which is screwed on in the usual way, to the side of the telescope ; the vacancy between them is filled up with wax, the inner tube is tight at the bottom of the ex-

ternal one by the interposition of a small setting chamfered at the edge, but admits of a slight rotatory motion towards the eye-glass by heating the wax with the flame of a candle, which is in- serted into the external tube, and which unites them both together; time will be given to adjust it before the wax cools, when it will all set tight, and will not be liable to get out of order. Two small niches should be made, one in he shoulder of the screw of the external tube, and the

other in that of the female screw to which it is applied, to be a guide that the two pieces may always be screwed hom.e to a particular point; or it is very probable the adjustment may be spoiled, because it will be a chance if the eye-tube when fixed, is precisely at right angles to the side of the telescope. A rarioly of methods of effecting this adjustment will pre- sent themselves to the workman. Thus, instead of the wax, three screws might be used, fixed into the external tube; or such a contrivance as is represented in fig. 2, by having counter sciews to play against those by which the setting for the eye-piece is attached to the rackwork, on the side of the telescope, &c. To conclude, as an Ilerschelian telescope is nothing but a Newtonian, used without the interposition of a small metal reflector, whatever has been said of the latter, will equally apply to it, and the same principle in the eye-tube and adjustment will for the same reasons be equally adapted to both, though the manner of execution will be dif- ferent.

458. Microscopes, though but toys compared with telescopes, nevertheless deserve to be ren- dered as perfect as possible ; for they yield not to thera in the quantity and variety of rational amusement which they are capable of intro- ducing to us (though not of the sublime descrip- tion of the wonders of the heavens). Compound microscopes, though not so much to be depended upon for the purposes of discovery and philoso- phical investigation as single lenses, are still best adapted for recreation ; but all those con- structed on the common principle are so full of fog as to be quite disagreeable for examining opaque objects, which render this defect more striking than transparent ones. This false light resiilts from the custom of making the object- glass of a very small aperture, instead of giving it a larger one, and placing a stop in its proper place (the focus of the lens employed). It is totally impossible to get rid of the fog in any other way. No doubt the larger the aperture of the lens of the common object-glass, the more indistinctness is sensible ; and the more it is reduced, the less ; but no practical construction of the aperture will effect the desired purpose completely, because the principle is itself in- trinsically bad, and incorrect at least for low powers.

459. Now, if we form a microscopic object- glass of a single lens of considerable aperture, having a stop in its focus of about the same diameter as the apertures of the common lenses used for compound microscopes, that is to say, about one-tenth or one-twelfth part of their focal distance, we shall form an object-glass which gives a clear image, free from fog indeed.

but very deficient in other respects ; for, the stop being placed where the rays cross each other, a large portion of the aperture of the lens is

called into action in comparison to what is usually made use of, when it is at once limited by a stop of the same diameter applied close to the glass ; the aberrations both chromatic and spherical are here immediately felt; to remedy these, another lens must be employed, the best position for which is close to, or very near the farther side of the stop. The focus of it must be to that of the first as three to two, or as two to one ; for low powers, however, it may be about two and a half to two ; for the higher, the best proportions seems to be as two to one. The lenses employed should be plam convex, having their curves towards each other as re- presented in figs. 3, 4, 5, and 6, which are drawings of four object-glasses of this descrip- tion which Dr. Goring caused to be executed ; the lowest power is two inches focus, the highest half an inch; the foci of the lenses, and the size of the stops, &c., are as there represented. These object-glasses are bright, clear, and dis- tinct, free from spherical aberration, and will show no sensible color with opaque objects of any kind, not even with so trying a one as the enamelled white letters on a black-ground gene- rally used by opticians to try their telescopes with. When, however, they are made to view an object illuminated from behind, which does not suffer the light to pass through it while its edges are seen, as for example the legs of some insects, some kinds of moss, &c. which have very little transparency, the uncorrected col r is then decidedly seen ; such objects are the best tests of achromaticity for telescopes as well as microscopes ; equivalent terrestrial ones for a telescope will be the bars of a window seen from the interior of the apartment to which it belongs, or the naked branches of a tree in win- ter, seen against the light of the sky, more espe- cially of the sun, and nearly opposite the ob- server. In addition to the four object-glasses, above described, Dr. Goring has two more of one-fourth and one-eighth of an inch focus, which are not inserted, because, although ex ecuted with the utmost care, they are no better than the common ones. Dr. Goring states tliat he was grievously disappointed with these ; for he had fully expected that the same principle applied to deep object-glasses would form as superior an object-glass for high powers as foi low ones ; however, the reverse is the fact ; it is one of those things which can only be learnt from experience, and could not have been pre- dicated a priori. Still, therefore, the common object-glass is the best for high powers, viz. for those of a quarter of an inch focus, and up- wards. There are, nevertheless, many trans- parent objects which cannot be seen without object-glasses of at least one-tenth of an inch focus; such are many kinds of animalcules and the minute lines on the dust of a butterfly's wing, &c. For these the common single lens of small aperture will perhaps ever remain the only efficient object-glass ; an equivalent power ob- tained with Dr. G.'s object-glasses, or those of the common

construction of similar focus, by

increasing the depth of the eye-glass will never show the objects in question, because what may be called the penetrating power of a compound microscope depends upon the depth of its ob- ject-glass, as that of a telescope upon tiie aper- ture of the metal or glass which forms the image viewed by the eye-glass. The eye-glass, either of a microscope or telescope, merely de- velopes what is contained in the image it ena- bles us to view ; it cannot of course render any thing sensible to our sight which does not exist in the spectrum formed by the object-glass or metal.

460. We may here advert to a circumstance, relative to the proper apertures of the common microscopic object-glasses, which is, perliaps, not duly attended to. It is certain that the more their apertures are reduced (within a cer- tain point) the more fog you exclude ; and in this way you improve the instrument; yet, t this reduction is pushed too far, it will pre- vent you from seeing a certain class of objects, even while the vision of others seems to be anr.eliorated. Thus the parallel lines on the dust or feathers of a butterfly's wing can be just seen with an object-glass of one-tenth of an inch focus, and one-twenty-fifth of an inch aperture, as it can be measured : if, however, this aper- ture is very slightly contracted, they can no longer be seen with any art or management of the light ; at the same time other objects will appear foggy and indistinct with this same aper- ture, especially if opaque, and the vision of tliem will be improved by diminishing it. Dr. Goring thinks, therefore, that the apertures should be regulated by this ratio of one-twenty-fifth of an inch aperture to one-tenth of an inch focus.

461. In figs. 7, 8, and 9, are representations of some silver cups for holding very deep single lenses, intended to view opaque objects. It is generally supposed that single lenses will show objects perfectly clear and without fog, but this is not the case unless their apertures are very small ; lenses of ˆ, ˆ, 5L, and g'ˆth of an inch focus require their apertures to be so much reduced to sliow opaque objects clearly, that it is scarcely possible to see at all with them from tlie want of light. These cups were so contrived to remedy this defect as far as it is practicable ; their radius is only one-fourth of an inch, their focus consequently. These condense light much more than the larger cups commonly used, and illuminate much more powerfully. It is true that

they only enlighten a small portion of an object, but then we can only see a very small portion with such deep lenses as they are in- tended to hold; they are not so small but that they may be made to receive and condense the whole of the light proceeding from a bull's-eye lens placed at a proper distance from them, and in this way, with no other light than that of a common candle, Dr. Goring has been enabled to see an opaque object well with a compound microscope, having an object-glass of only one- tliirtieth of an inch focus set in one of them, with only a moderate aperture. A lens of one- sixtieth of an inch set in this manner, used as a single lens, likewise shows opaque objects in a manner which leaves notliing to be desired

462. It is necessary, hoVvever, for the stop? between which tlie lenses are placed to be very accurately made. They should be turned out of a piece of solid brass, the external one very thin, and the lioles so correct as always to coincide with each other when the stops are turned round ; tlie apertures must be quite free from burrs ; in addition to which the stops must be so adjusted tliat the focus of the lens and that of the cup may precisely correspond, otherwise the benefit of the cup is in a great measure lost. Fig. 9 will carry one-eighth or one-tenth of an inch without any stop at all, which is a great convenience; for the lens is in this case close to the eye, and the field of view larger in conse- quence : the stops for the deeper lenses are much shorter than they would be with larger cups, so that the field is increased in the same way, and the eye much less strained in using them, than it would be were the lens fartlier off from it.

463. We may now notice the monochromatic lamp contrived by Dr. Brewster for microsco- pical and other purposes, with an account and description of which he furnished the Royal So- ciety of Edinburgh, and which is inserted in vol. IX. p. 433 of their Transactions. Our limits will not admit of the elaborate account of this important invention presented to the society, but the following abridgment of the paper will enable our readers to fully appreciate its value.

464. Dr. Brewster observes that in a paper on \ ision through colored glasses, which he sub- mitted to the society, he pointed out the. advai/- tages of colored media in microscopical and telescopical observations. Having experienced the great utility of green and red lenses, in developing vegetable structures that required to be examined with high powers, he was anxious to derive from this new principle all the advan- tages which it appeared to possess. In attempt- ing to do this, it became necessary to ascertain the power of giving distinct vision, which be- longed to each separate color of the spectrum ; and though he had stated in his former paper, tliat it was

difficult to discover any reason why one colored medium should be preferred to another, provided each of them transmit equal quantities of homogeneous light ; yet it was de- sirable to put this theoretical opinion to the test of direct experiment. Sir William Herschel had long ago javestigated this point, in refer- ence to the use of colored media for solar obser- vations, and had concluded that every color of the spectrum possessed the same power of giv ing distinct vision ; but his method of observa tion, which consisted in viewing through a mi- croscope a nail illuminated in succession with each of the colors of the prism, was by no means calculated to give definitive results, and there- fore left the question in all its uncertainty.

465. In order to obtain precise indications, which were not capable of being misinterpreted when applied to practical purposes. Dr. Brew- ster formed a spectrum from a luminous disc, by means of a prism of a hisjidy dispersing sub- stance, and with a large refracting angle. He then examined this spectrum through a great variety of colored media, both solid and fluid.

and mark-ad the size and shape of the image into which it was converted. The perfection of this image, or its narrowness in the direction of the length of the spectrum, became a precise and unequivocal test of the fitness for distinct vision which belonged to the light out of which it was formed.

466. By this method of observation he found that a distinct image of the luminous disc could not be obtained either by producing a blue or a green image, and that it was only in the red portion of the spectrum that such an effect was likely to be obtained. In the use of purple glasses it was observed that the middle portion of the red space was absorbed before the two extreme portions, so that instead of one red image there were two quite separate, and tole- rably distinct. By increasing, however, the thickness of the plate, the most refrangible red image was absorbed, and the least refrangible one left in a state of the most perfect distinct- ness. Although he had now determined the part of the spectrum that was best fitted for giving perfect vision, yet the quantity of light extinguished before the insulation of the extreme red ray was affected was so great as to render the determination of lil'le practixˆal utility, ex- cepting in cases where tiie outline of an object was to be observed. Had it been possible to in- sulate the most luminous rays of the spectrum as perfectly as the extreme red ones,

the advan- tage would have been of very considerable amount ; but he found this quite impracticable.

467. Abandoning, therefore, all hopes of ob- taining from colored media any farther improve- ment upon the microscope than what had been formerly announced, it occurred to Dr. Brewster that the object which he had in view might be obtained, if he could procure from the combus- tion of inflammable substances a homogeneous flame for illuminating microscopic objects.

468. It had long been known that a great quantity of homogeneous yellow light was cre- ated by placing salt or nitre in the white flame of a candle, or in the blue and white flame of burning alcohol. A light, however, generated in this manner, was more fitted for a casual ex- periment than for a permanent source of illumi- nation ; and, as insalubrious vapors are disen- gaged during the combustion of these salts, he did not avail himself of this method of obtaining yellow light.

469. After numerous experiments, attended with much trouble and disappointment, he found that almost all bodies in which the combustion was imperfect, such as paper, linen, cotton. Sec, gave a light in which the homogeneous yellow rays predominated ; that the quantity of yellow light increased with the humidity of these bodies ; and that a great portion of the same light was generated when various flames were urged meclianically by a blow-pipe or a pair of bellows.

470. As the yellow rays seemed to be the product of an imperfect combustion. Dr. Brew- ster conceived that alcohol diluted with water would produce them in greater abundance than when it was in a state of purity ; and, upon making the experiment, found it to exceed be- yond his most sanguine expectations. The whole

of the flame, with the exception of a small por- tion of blue light, was a fine homogeneous yel- low, which, when analysed by the prism, exhi bited faint traces of green and blue, but not a single ray of red or orange light. The green and blue rays, which accompanied the yellow flame had comparatively so little intensity, thai they disappeared in the processes of illumi- nating and magnifying the object under exami- nation ; and, even if they had existed in greater abundance, it was quite easy to absorb them at once by the intervention of a plate of the palest yellow glass, and thus render the lamp perfectly monochromatic.

471. From many experiments on the combus- tion of diluted alcohol he found that the dis- charge of yellow light depended greatly on t!)e

nature of the wick, and on the rapidity with which the fluid was converted into vapor. A piece of sponge, with a number of projecting points, answered the purpose of a wick better than any other substance, and the extrication of the yellow light became more copious by placing a common spirit-lamp below the burner of the other. In order to obtain a very strong light, for occasional purposes, he connected with the top of the burner a frame of wire-gauze, which by moving vertically round a hinge, or by a motion to one side, could be placed in a hori- zontal position, about half an inch above the wick. As soon as it had become red-hot it was made to descend into contact with the sponge, when it converted the alcohol rapidly into vapor, and produced an abundant discharge of yellow light.

472. If a permanently strong light is required, it is found preferable to dispense entirely with the use of the wick, and to allow the diluted alcohol to descend slowly from the rim into the bottom of a concave dish of platinum, kept very hot by a spirit-lamp placed beneath it. The bottom of the dish is made with a number of projecting eminences, in order that the film of the fluid which rests upon it may be exposed at many points to the action of the heated sur- face. After the lamp has burned for some time, a portion of unevaporated water, mixed with a small quantity of alcohol, will remain at the bottom of the dish, in a state unfit for combus- tion. This water may be taken up by a sponge, or it might be prevented from accumulating, by having a fountain of pure alcohol, from which the exhausted strength of the diluted fluid could be renewed.

473. The monochromatic lamp being thus completed. Dr. Brewster lost no time in apply- ing it to the illumination of microscopic objects. The effect which it produced far exceeded his expectations. The images of the most minute vegetable structures were precise and distinct, and the vision in every respect more perfect than it could have been, had all the lenses of the microscope been made completely achro- matic by the most skilful artist.

474. Independent of its use in microscopical observations, the monochromatic lamp will find an extensive application in various branches of the arts and sciences. In certain cases of im- perfect vision, where a number of colored image?

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are formed by the separation of the fibres of the crystalline lens, a homogeneous light will im- jjrove the vision, by removing the prismatic tints, which obliterate the principal image. In illuminating the wires of transit instruments and micrometers; in graduating the limbs of divided instruments, which is generally done by candle- light; in reading off the same divisions in fixed observations ; in forming signals in trigonome- trical surveys ; in obtaining correct and uniform measures of refractive powers ; in measuring the separation of the two pencils in doubly-refract- ing crystals ; in determining the focal lengths of lenses; in observing various optical phenomena, where the light is decomposed ; in these, and in general in all delicate works, where correct vision is essential, the employment of a homo- geneous flame will be found to confer the most signal benefits.

475. Fig. 10 represents one form of the mo- nochromatic lamp, where A is the reservoir con- tainiug the diluted alcohol, which descends by the cliannel A B C D to the broad wick E, which is generally made of sponge. A frame of wire- gauze F moves round a hinge H, so that it can be brought over the flame, and made to descend, when hot, upon the surface of the wick. Excel- lent wicks may be made with concentric cylin- ders of thin mica, or of platinum foil.

476. Fig. 1 1 is another form of the lamp, without a wick, in which the diluted alcohol is burned in a flat platinum or metallic dish M N, which may be made to have a slight spontaneous oscillatory motion, for tlie purpose of bringing the fluid over the heated projections of the pla- tinum. A common spirit-lamp () P, enclosed in a case, is placed below the platinum-dish M N, in order to produce sufficient heat for throwing ofl” the vapor from the diluted alcohol. A chim- ney, or a cylinder, of pale yellow glass may be placed round the flame, if it

should be thouglit of any consequence to absorb the small portion of blue light which accompanies the yellow flame.

477. The photometric instrument we are now about to describe is likely to be of the utmost importance in the science of optics, and as Mr Ritchie has just furnished the Royal Society with an account of the theory on which it is con- structed, as well as the delicate minutiae essential to its completion, our readers may for a few

hillings readily construct a similar apparatus.

478. The instrument consists of two cylinders of planished tin plate, from two to ten or tvvelye inches in diameter, and from a quarter of an inch to an inch deep. One end of each cylinder is enclosed by a cu'cular plate of the same metal, soldered completely air-tight, the other ends being shut up by circular plates of the finest and thicTcest plate glass, made perfectly air-tight. Half way between the plates of glass and the ends of the cylinders there is a circular piece of black bibulous paper, for the purpose of absorb- ing the light which permeates the glass, and in- stantly converting it into heat.

479. The two cylinders are connected by small pieces of thermometer-tubes, which keep them steady, with their faces parallel to each other, but turned in opposite directions, and all serve

to make the insulation as complete as possible The chambers are then connected by a small bent tube in the form of the letter U, having small bulbs near its upper extremities, and con- taining a little sulphuric acid, tinged with car- mine. The instrument is supported upon a pe- destal, having a vertical opening througii ihe stem, to allow the glass tube to pass along it, and thus secure it from accidents.

480. A small scale divided into any number of equal parts is attached to each branch of the tube. In plate VII. fig. 1, A BCD and EFGH are the cylinders ; A B, and F G, the plates of glass. CD, E F G, the ends shut up by the cylinder tin plates : the blackened paper is re- presented by the lines between A B, CD, and E H, F G. The othei- parts will be obvious from the mere inspection of the figure.

481. The accuracy of the instrument evidently depends upon the perfect equality of its two op- posite ends. To ascertain if it be accurately constructed, place it between two steady flames, and move it nearer the one or the other, till the liquid in the tube remains stationaiy at the di- vision of the scale at which it formerly stood. Turn it half round, without altering its distances from the flames, and,

if the liquid remains sta- tionary at the same division, the instrument is correct. To show the extreme delicacy of the instrument, place it opposite a single candle, and it will be sensibly affected at the distance of ten, twenty, or thirty feet, provided it be of suf- ficient diameter, whilst it will not be sensibly acted upon at the same distance by a mass of heated iron affording twenty times the quantity of heat. In order to cut off effectually the in- fluence of mere radiant heat, I sometimes use screens composed of two plates of glass, placed parallel to each other, with a quantity of water interposed.

482. Place the instrument between any number of steady lights whose intensities are known : as, for example, between four wax candles opposite one end, and one candle opposite the other, and move the photometer till the fluid remains sta- tionary at the division where it formerly stood, and it will be found that the distances are di- rectly as the square roots of the number of can- dles ; or, in other words, that the intensities of the lights will be inversely as the squares of the distances. If gas lights be employed having burners capable of consuming known quantities of gas in equal times, and the photometer be placed between them, so that the efl'ect upon the air in each chamber shall be the same, it will be found that the quantities of gas consumed by each will be exactly proportional to the squares of the distances of their respective flames from the end of the photometer

483. This instrument seems well adapted for determining the relative quantities of light given out by the combustion of coal and oil-gas. I'lace the instrument as before between the two burn- ers, and ascertain the relative intensities of the two lights, by squaring their distances from the adjacent ends of the instrument ; ascertain the quantities of gas consumed by each of the bur- ners in the same time; multiply these quantities by the squares of the respective distances, and

the product will he the relative quantities of light aft'ordeil by the gases. Let d be the distance of the coal-gas light, and dˆ that of the oil-gas light ; and let q be the quantity of coal-gas consumed in a given time, and 5′ the quantity of oil-gas consumed in the same time, then the intensity of the coal-gas will be to that of the oil-gas q dˆ to q' d'\

484. To find the ratio between the quantities of light given out by the

sun and that afforded by a common candle, place one end of the instrument opposite the sun, and bring the candle opposite the other end, till the fluid in the stem remains stationary at the original division ; and the light given out by the candle, will evidently be to that given out by the sun, as the square of a few inches to the square of the number of inches contained in 95,000,000 miles, pro- vided none of the sun's light had been absorbed in its passage through the atmosphere. The delicacy of the instrument is such that, if it be placed opposite the sun without a counteract- ing force, the light absorbed from the body will be so great, as to cause the liquid to move through a tube twenty or thirty feet long. By covering one end of the instrument and directing the other to various quarters of the sky, we can ascertain the relation between the quantities of light reflected from the atmosphere and clouds floating in those regions.

485. Thougli this instrument has some resem- blance to professor Leslie's photometer, yet it is founded on principles essentially different : the one depending on the difference of the tempera- tures of the two bulbs, whilst the perfection of the other results from the equality of the tempe- rature of the air contained in both chambers. The one has a scale a few inches long attached to one end of the vent tube, whilst the scale of the otlier is the distance between the two antagonist flames. The delicacy of the one is, from its very nature, combined within very narrow limits, whilst that of the other may be increased at pleasure.

486. Having thus furnished a brief outline of the most valuable new instruments, we cannot better conclude our general view of this import- ant science than by furnisliing our readers with a few experiments illustrative of the subject.

487. The cistula is a machine or apparatus whereby small bodies are represented extremely large, and near ones extremely wide, and dif- fused through a vast space, with other agreeable phenomena, by means of mirrors, disposed by the laws of catoptrics, in the concavity of a kind of chest.

488. Of these there are various kinds, ac- commodated to the various intentions of the arti- ficer : some multiply the objects ; some deform ; some magnify, &c. The structure of one or two of them will suffice to show how many more may be made.

489. If we wish to make a catoptric cistula to represent several different scenes of objects, when viewed at different holes, it is only necessary to provide a polygonous box, of the figure of the

midtilateral prism, A B CD E, in the following diagram, and divide its cavity by diagonal planes K B, LC, Da, intersecting each other in the cen- tre into as many triangular locules, or cells, as thcchest has sides.],ine these diagonal planes

with plane mirrors : in the lateral planes make round holes, through which the eye may be direct- ed within the cells of the box. The holes are to be co- vered with plain glasses, ground within, but not polished, to prevent the object, in the cells, from appear- ing too distinctly. In each cell are to be

placed the different objects whose images are to be exhibited ; then covering up the top of the box with a thin transparent membrane, or parchment, to admit the light, the machine is complete.

490. For, from the laws of reflection, it fol- lows, that the images of objects, placed within the angles of mirrors, are multiplied, and appear some more remote than others ; whence the ob- jects in one cell will appear to take up more room than is contained in the whole box. By looking, therefore, through one hole only, the objects in one cell will be seen, but those multi- plied and diffused through a space much larger than the whole box ; thus every new hole will afford a new scene : according to the different angles the mirrors make with each other, the representations will be different : if they be at an angle greater than a right one, the images will be distorted.

491. The parchment that covers the machine, may be made pellucid, by washing it several times in a very clear ley, then in warm water, and bracing it tight, and exposing it to the air to dry. If it be desired to throw any color on the objects, it may be done by coloring the parch- ment. Zahnius recommends verdigris ground in vinegar for green ; decoction of Brasil wood for red, &c.

492. Let us now, however, point out how to make a catoptric cistula to represent the objects within it prodigiously mul- tiplied, and diffused through a vast space. To construct this

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amazmg apparatus, take a chest, as in the above engraving, but without divid- ing the inner cavity into any apartments, or cells ; line the lateral planes C B H I, B H L A, A L M F, &c., with plane mirrors, and at the fo- ramina, or apertures, pare off the tin and quick- silver, that the eye may see through : place any objects in the bottom M I, as a bird in a cage,&:c. 493. Here the eye, looking through the aper- ture

h, will see each object placed at bottom vastly multiplied, and the images removed at equal distances from one another. Hence, with a large multangular room, in a royal palace, lined with large mirrors, over which were plain jaellucid glasses to admit the light, it is evident

.hat the effects would be very surprising and mag- cent.

494. Make two holes in the wainscot of a room, each a foot high and ten inches wide, and about a foot distant from each other. Let these apertures be about the height of a man's head ; and in each of them place a transparent glass in a frame, like a common mirror.

495. Behind the partition, and directly facing each aperture, place two mirrors, enclosed in the wainscot, in an angle of 45►►. These mirrors are each to be eighteen inches square : and all the space between them must be en- closed with pasteboard painted black, and well closed, that no light may enter: let there be also two curtains to cover them, which may be drawn aside at pleasure. When a person looks into one of these fictitious mirrors, instead of seeing his own face, he will see the object that is in front of the otlier ; thus, if two persons stand at the same time before tliese mirrors, instead of each seeing himself, they will reciprocally see each other. There should be a sconce with a ligiited candle, placed on each side of the two glasses in the wainscot, to enlighten the faces of tlie persons who look in them, or the experiment will not have so remarkable an effect.

496. Place a shilling in a large drinking glass of a conical shape, sma'. at the bottom and wide at the top, and let it be half full of water ; then place a plate on the top of it, and turn it quickly over, that the water may not escape. There will be seen on the plate a piece of coin the size of half-a-crown, and a little higher up, another the size of a shilling.

497. The multiplying-glass is a flat plano-

convex lens, ah, c d, in the above figure. Rays issuing, from the object B, and falling upon the plane surface be, come to the eye A in the di- rection e/", which show the object in its true place at B. But rays from the same object also fall upon the flat surfaces u b and c d, and thence coming to the eye in the directions k and A", make the object also to be seen at C and D, so that the object B will be multiplied into as many different objects as the lens has flat sur- faces.

498. The following experiment was made by Mr. II. Phillips, to show the different effects of natural and artificial lights on plants. He selected plants of the mimosa, elegans, nova, and decurrens, while their pinnated leaves were fully expanded. On placing them in a dark room, the leaves immediately collapsed like the sticks of a fan, or as the feathers of a bird's wing fold over each other. The strongest artificial light that could now be thrown on them had no effect

on the automatic motion of the plants, and the foliage remained in a collapsed state until they were removed into the natural light of day, when their sensitive properties immediately be- came perceptible, and the whole of the leaflets were seen moving towards their natural and elegant direction, with as much regularity as a regiment of soldiers file off at the word of com- mand.

499. Dr. Brewster's mode of arranging the plane mirrors in the caleidoscope is exceedingly perfect. In the ordinary form it is, however, still confined to the gaze of tlie individual whose eye is placed in contact with the tube; and we now furnish a sketch illustrative of the magic lantern caleidoscope, by which it may be exhibited in a large room.

500. The general principle of the apparatus requisite for this subject is shown in fig. 2, where C D G F is the tube containing the re- flectors A, O, E, &c. The objects from which the pictures are to be created are placed in the cell C D, which may be made either to have a ro- tatory movement round the axis of the tube, or to slide through a groove, like the sliders of a magic lantern. These objects are powerfully illuminated by a lens B, which concentrates upon them the direct light of the lamp or candle H ; and also the part of the light which is reflected from the mirror MN. At the eye end E of the caleidoscope is placed a lens L L, close to the end of the reflectors, and having its centre coin- cident with the centre of the aperture at E. In order that this lens may form behind it an image, P P, of the objects placed in the object-plate C D, its focal length must be less than the length A E of the plates. If the focal length of L L is so small as one half of A E, then it follows, from the principles of optics, that the distance LP, at which the image is formed behind the lens, will be precisely equal to the distance A E of the object ; but this is obviously too small a distance, for the diameter of PP would be equal only to the apparent diameter of the circular aperture of the caleidoscope, or to twice A O. Hence it is necessary that the focal length of the lens L L be less than A E, and greater than half of A E. Two-thirds or three-fourths of A E will be found to be a suitable focal strength ; for, if it is larger than this, the image will be formed upon the wall at too great a distance from the

instrument.

501. When the instrument is thus fitted up, an enlarged image of the pattern will be thrown upon the wall, which must be covered with white paper, or some white ground, in order to exhibit the colors to advantage. By turning the object-plate round its centre, or, if it is a rectili- neal one, by pushing it through the groove, and at tlie same time giving it a rotatory motion, tiie pattern on the wall will undergo every possible transformation, and exhibit to the spectators, in a magnified form, all those variations which would have been observed by applying the eye to the caleidoscope.

502. If a box be formed with a small aperture in one of its sides, and three lights be made to revolve on a piece of wood in the centre, the candle opposite the axis will be visible on a

semi-transparent screen intended to receive its image. The other two candles will also have their flames depicted on the screen, at similar distances, on each side. This experiment serves to show the exceeding minuteness of the rays which emanate from the candles : for, if they were not exceedingly small, they could not pass each other without destroying the perfection of the image.

503. This experiment may be made very amusing by placing a piece of glass, with a ship or any other object painted on it, in the aperture; and, when the candles are parallel to the screen, three images will be seen ; but, on raakin’:;: them revolve through a quarter of a circle, only one image will be visible on the screen. Ey increas- ing the number of candles the ships will be in- creased in an equal ratio ; and a single ship, by turning the row of candles, will be converted into an entire fleet.

504. If a person be placed directly before a large concave mirror, but further from it than its centre of concavity, he will see an inverted image of himself in the air, between him and the mirror, of a less size than his own person. If he hold out his hand towards the mirror, the hand of the image will come out towards his hand, and coincide with it, of an equal bulk when his hand is in the centre of concavity ; and he will imagine he may shake hands with his image. If he reach his hand further, the hand of the image will pass by his hand, and come between it and his body; and, if he move his hand towards either side,

the hand of the image will move towards the other ; so that whatever way the object moves the image will move the contrary way. A bystander will see nothing of the image, because none of the reflected rays that form it enter his eyes.

505. From this remarkable property of a con- cave mirror to form an image in the air, mirrors of this sort are used to produce a variety of sin- gular appearances, to amuse the curious, or to impose upon the ignorant and superstitious. To a few we shall give a place. If a fire be made in a large room, and a smooth mahogany table be placed at a considerable distance, near the wall, before a large concave mirror, so situated that the light of the fire may be reflected from the mirror to its focus upon the table ; if a person stand by the table he will see nothing upon it but a longishbeam of light; but, if he stand at a distance towards the fire, not directly between the fire and the mirror, he will see an image of the fire upon the table, large and erect. If another person, who knows nothing of the ex- periment beforehand, should chance to come into the room, and should look from the fire towards the table, he would be startled at the appearance ; for the table would seem to be on fire. In this experiment there should be no light in the room but what proceeds from the fire ; and the mirror ought to be at least fifteen inches in diameter.

506. If the fire used in the last experiment be extinguished or covered by a screen, and a large candle be placed in a similar position, a person .standing by tlie candle will, see the appearance of a star, or rather planet, upon the table, as brilliant as Venus or Jupiter in a cloudless sky.

If a slender wax-taper be placed near the canile, a satellite to the planet will appear on the table; and, if the taper be moved round the candle, the mimic satellite will go round the planet.

507. If a person looks for some minutes stea- dily on a window, in the beginning of the even- ing twilight, or in a dark day, and then moves his eyes a little, so that those parts of the retina on which the dark frame-work of the window was delineated may now fall on the glass part of it, many luminous lines, representing the frame- work, will appear to lie across the glass panes : for those parts of the retina which were before least stimulated by the dark frame-work are now more sensible to light than the other parts of the retina which were exposed to the more luminous parts of the w indow.

508. Make with ink, on white paper, a very black spot, about half an inch in diameter, with a tail about an inch in length, so as to represent

a tadpole; look steadily for a minute on this spot, and, on moving the eye a little, the figure of the tadpole will be seen on the white part of the paper, which figure of the tadpole will ap- pear whiter or more luminous than the other parts of the white paper; for the part of the retina on which the tadpole was delineated is now more sensible to liglit than the other parts of it which were exposed to the white papei. This experiment is mentioned by Dr. Irwin, but is not by him ascribed to the true cause, namely, the great sensibility of that part of the retina which has been exposed to the black spot, than of the other parts which had received the white field of paper.

509. Fig. 3 will serve to illustrate the con- struction of a very elegant optical toy, or hydro- manfic temple.

510. Let us suppose two vessels, the upper- most filled with water, and sustained by two little pillars ××× one of which is hollow, and fur- nislied with a cock, e. Let the other vessel be divided by a partition into two parts ; the lower of which may be opened or closed by means of a cock at e. Upon the partition place an image, a, which the spectator at J' cannot see by a direct ray, /', g. If now the cock, e, be opened, the water descending into the cavity, beneath the ray, w ill be refracted from the perpendicular ; so that the spectator will now see the object by the refracted ray. And again shutting the cock e, and opening the other d, the water will descend into the lower cavity; whence, the refraction ceasing, no rays will now come from the object to the eye ; but, shutting the cock d again, and opening the other e, the water will fill the cavity again, and bring the object in sight afresh.

510.* Provide a sufficient number of small equilateral prisms, a few lines only in breadth, and in length equal to the height of the painting which you intend to make, and place them all close to each other on the ground to be occupied by the painting. Then cut the painting into bands equal to each of the faces of the prism, and cement them, in order, to the faces of the same side. When this is done, take a painting quite different from the former, and, having divided it into bands in the same manner, ce- ment them to the faces of the opposite side. It

is hence evident, that when on one side you can see only the faces of the prism turned towards that side, one of the paintings will be seen ; and, if the picture be looked at on the opposite side, the first will disappear, and the second only will be seen. A painting may even be

made which, when seen in front, and on the sides, shall ex- hibit three different subjects. For this purpose, the picture of the ground must be cut into bands, and be cemented to that ground in such a manner that a space shall be left between them, equal to the thickness of a very fine card. On these intervals raise, in a direction perpen- dicular to the ground, bands of the same card, nearly equal in height to the interval between them ; and, on the right faces of these pieces of card, cement the parts of a second painting, also cut into bands. In the last place, cement the parts of a third picture, cut in the same manner, on the left faces of the pieces of card. It is evi- dent that when this picture is viewed in front, at a certain distance, the bottom painting only will be seen ; but if you stand on one side, m such a manner that the height of the slips of card conceals from you the bottom, you will see only the picture cemented in detached portions to the faces turned round towards tliat side ; if you move on the other side, a third painting will be seen.

511. The reason why an object appears smaller and smaller as we recede furtlier from it will be best illustrated by a diagram.

At the distance B D the arrow A C C appears, or is seen by the eye D, under the angle AU C. At the distance B E, double that of B D, the ar- row is seen under the angle AE C, which is but I'alf the quantity of A D C. And at the distance B F, triple the distance BD, the same arrow is seen imder the angle A F C, which is but a third part of the quantity of the anˆle AUC. And therefore the arrow must appear but half as long when seen from E as from D, and but a third part so long when seen from F as from D.

512. Fix, at the height of the eye, on a dark ground, a small round piece of white paper, and a little lower, at the distance of two feet to the right, fix up another, of about three inches in diameter; then place yourself opposite to the first piece of paper, and, having shut the left eye, retire backwards, keeping your eye stil. fixed on the first object ; when you are at the distance of nine or ten feet, the second will en- tirely disappear from your siijlit.

513. If you place yourself before a concave mirror, at a proper distance, your figure will ap- pear m' e'ted ; ai ', it you stretch out your hand towards tne mirror, your will perceive anothe

hand stretched out to join and n.eet it, thougli not perceptible to the touch. But if a sword be substituted for the hand, and your mirror is a foot or more in diameter, another sword will appear, and seem to encounter with that in the hand. The larger the mirror is, the more

per- fect will be the illusion.

514. Affix to a dark wall a round piece of paper, an inch or two in diameter ; and a little lower, at the distance of two feet on each side, make two marks ; then place yourself directly opposite to the paper, and hold the end of your finger before your face in such a manner that, when the risht eye is open, it shall conceal the mark on the left, and, when the left eye is open, the mark on the right: if you then look with both eyes to the end of your finger, the paper, which is not at all concealed by it from either of your eyes, will nevertheless disappear.

515. The general effect of the camera obscura is the same as may often be observed in a dark room, where there is a small hole in the window-shutter ; the great masses of light and shade before the windows, being represented in an inverted position in the parts of the room diametrically opposite to them, which are illuminated in different de- grees, according to the quantity of light which can reach tljem in straight lines from the external ob- jects. Alens, of a focal length somewhat smaller than the distance of the surface on which the picture is projected, renders the images much more dis- tinct ; but some of them are unavoidably im- perfect and ill defined, unless the objects happen to be situated at the same distance from the aperture ; for the focus of the lens can never be adjusted at once to nearer and more remote ob- jects; nor would the picture be rendered more natural by such an adjustment, for it would pre- sent to the eye at one view, with equal distinct- ness, objects which never can be seen at once without some degree of confusion. Sometimes the picture is intercepted by a speculum placed obliquely, and is thrown upwards on the surface of a plate of ground glass, upon which its out- line may be traced with a black-lead pencil, and an impression may be taken from it on moist paper, which will represent the natural situation of the objects without inversion. Another ar- rangement is, to place the lens horizontally, with the speculum above it, which throws the image through the lens, upon a flat surface placed be- low, on which the objects may be delineated in their natural position, but not without some impediment from the interception of the light by the hand and the instrument employed. Such a surface, however, ought not to be perfectly flat, in order to afford the most distinct image ; al- though by means of a meniscus-lens, with a cover admitting the light only through a small aperture near its centre, on the principal of Dr. ˆVollaston's periscopic spectacles, an image nearly flat might be obtained ; but in this case too much of the light would be excluded. It has been usual to consider the imatre of a very distant object, formed by a convex lens, as a portion of a spherical surface, of which every part is equally distant from the centre of the lens ; but this estimate is

extremely erroneous, for the effect of the obliquity of tiie difl’ereni

pencils of rays materially increases the curva- ture of the image. In fact no pencil of rays, falling obliquely on a spherical surface, can be collected any where to a perfect focus : the image of a circle would become most distinct at one distance, and that of its diameter at another; but for both these images the surface ought to be much more curved than that which has been usnally considered, and the mean of the cur- vature required for them, which must be the best for the ground or bottom of a camera ob- scura is equal to that of a sphere of which the radius is three-eighths of the focal distance, when a double convex lens of crown-glass is em- ployed.

516. The general arrangement of this appara- tus may be best understood by a reference to the accompanying diagram. Diverging pencils of

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rays, as a 6 c, def, g h i, issuing from all points of the object A B, on the side next the convex lens E F, after passing through the lens, will converge to as many points beyond it, and at those points of convergent meeting they will form an inverted picture C D of the object on a white paper.

517. Among the various phenomena of vision which were observed by the philosophers of the last century those which arise from indirect impres- sions, and from the influence of highly attenuated light upon the retina, seem to have escaped their notice.

518. If we look at a narrow slip of white pa- per placed upon a black or a colored ground, it will never appear to vanish, however long and attentively we view it. But if the eye is fixed steadily upon any object within two or three inches of the paper, so as to see it only indirectly, or by oblique division, the slip of paper will occa- sionally disappear, as if it had been entirely re- moved from the ground ××× the color of the ground extending itself over the part of the retina occu- pied by the image of the slip of paper.

519. Ifthe object seen indirectly is a black stripe on a white ground, it vanishes in a similar manner ; and, what is still more remarkable, the same phe- nomena of disappearance take place, whether the object is viewed with one or with both eyes.

520. When the indirect object is luminous, like a candle, it never vanishes entirely, unless it is placed at a great distance, but it swells and con- tracts, and is surrounded by a halo of nebulous light, so that the excitement must extend itself to contiguous portions of the retina, which are not influenced by the light itself.

521. If we place two candles at the distance of about eight or ten feet from the eye, and about twelve inches from each other, and view

the one directly, and the other indirectly, the in- direct image will be encircled with a bright ring of yellow light, and the bright line within the ring will have a pale blue color. If the candles are viewed through a prism, the red and green lights of the indirect image vanish, and leave only a large mass of yellow, terminated with a portion of blue light.

522. While Dr. Brewster was performing this experiment, and looking

steadily and directly at one of the prismatic images of the candle, lie was surprised to observe that the red and green rays began to disappear, leaving only yellow and a small portion of blue, and, when the eye was kept immovably fixed on the same part of the image, the yellow light became almost pure white, so that the prismatic image was converted into an elongated image of white light.

523. Ifthe slip of white paper, viewed indi- rectly with both eyes, is placed so near as to be seen double, the rays which proceed from it no longer fall on corresponding points of tlie retina. In this case the two images do not vanish simul- taneously ; but, when the one begins to disap- pear, the other begins soon after it, so that they sometimes appear to be extinguished at the same time.

524. In order to ascertain whether or not the accidental color of an object seen indirectly would remain after Ll.e object itself had disap- peared, he placed a rectangular piece of a red wafer upon a white ground, and, having looked steadily at an object in its vicinity, the wafer disappeared, and, though the accidental color showed itself just before the wafer vanished, yot no trace of color was visible afterwards.

525. The insensibility of the retina to indirect impressions, has a singular counterpart ia its in- sensibility to the direct impressions of attenuated light. When the eye is steadily directed to ob- jects illuminated by a feeble gleam of light, it is thrown into a condition nearly as painful as that which arises from an excess of splendor. A sort of remission takes place in the conveyance of the impressions along the nervous membrane; the object naturally disappears, and the r-yf is agitated by the recurrence of excitements \ˆfnch are too feeble for the performance of its functions. If the eye had, under such a twilight, been mak- ing unavailing efforts to read, or to examine a minute object, the pain which it suffers would admit of an easy explanation ; but, in tlie present case, it is the passive recipient of attenuated light, and tlie uneasiness which it experiences can arise only from the recurring failures in the retina to transmit its impressions to the optic nen’e.

526. The preceding facts respecting the aflec- tions of the retina, while they throw considerable light on the functions of that membrane, may serve to explain some of those phenomena of the evanescence and reappearance of objects, and of the change of shape of inanimate objects, which have been ascribed by the vulgar to supernatural causes, and by philosophers to the activity of the imagination. If in a dark night, for example, we unexpectedly obtain a glimpse of any

object, either in motion or at rest, we are naturally anxi- ous to ascertain wliat it is, and our curiosity calls forth all our powers of vision. This anxiety.

however, serves only to baffle us in all our at- tempts. Excited only by a feeble illumination, the retina is not capable of affording a perma- nent vision of the object, and, while we are straining our eyes to discover its nature, tlie ob- ject will entirely disappear, and will afterwards appear and disappear alternately. The same phenomenon may be observed in day-light by the sportsman, when he endeavours to mark, upon the monotonous heath, the particular spot where moor-game has alighted. Availmg himself of the slightest difference of tint in the adjacent heath, he keeps his eye steadily fixed upon it as he advances ; but, whenever the contrast of illu- mination is feeble, he invariably loses sight of his mark, and, if the retina is capable again of taking it up, it is only to lose it agaia.

527. Mr. Herschel and Mr. South have lately described a curious fact, which has some analogy with the phenomena now described : ###

528. ‘ Another singular method,’ they remark, ‘ of obtaining a view, and even a rough measure of the angles of stars of the last degree of faint- ness, has often been resorted to, viz. to direct the eye to another part of the field. In this way a faint star, in the neighbourhood of a large one, will often become very conspicuous, so as to bear a certain illumination, which will yet totally disappear, as if suddenly blotted out, when the eye is turned full upon it, and so on, appearing and disappearing alternately, as often as you please. The lateral portions of the retina, less fatigued by strong lights, and less exhausted by perpetual attention, are probably more sensible to faint impressions than the central ones, which may serve to account for this phenomenon.’

529. ‘ As it is with much diffidence,’ observes Dr. Brewster, ‘ that I venture to controvert any opinion entertained by Mr. Herschel, I have been at some pains to investigate the subject experimentally. I was at first disposed to as- scribe the evanescence of the faint star solely to the same cause as the evanescence of faintly illuminated surfaces, and the reappearance of the star by indirect vision to the circumstance of the retina recovering its tone, by contemplating another object sufficiently luminous for vision; but this opinion was not well

founded.

630. ‘ If a given quantity of light, which is unable to afford a sustained impression when ex- panded over a surface, is concentrated into a luminous point, it is still less fitted for the pur- poses of vision. It then acts upon the retina somewhat in the same way as a sharp point does upon the skin. The luminous point will alter- nately vanish and reappear ; and, if the retina is under the influence of a number of such points, it will be thrown into a state of painful agitation. The same effect is produced by a sharp line of light ; the retina is, in this case, thrown into a state of undulation, so as to produce an infinite number of images parallel to the luminous line ; and, when this line is a narrow aperture held near the eye, a sheet of paper, to which it is directed, will appear covered with an infinity of broken serpentine lines parallel to the aperture. When the eye is steadfastly fixed for some time upon the parallel lines which are generally used to repre- sent the sea in maps, the lines vvill all break into

portions of serpentine lines, and red, yellow, green, and blue tints will appear in the inter- stices of them.

531. ‘ The evanescence of stars, therefore, of the last degree of faintness, must be ascribed, both to their deleterious action upon the retina as points of light, and to the insufficiency of their light to maintain a continued impression upon the retina.

532. When the eye is adjusted to the distinct perception of an object placed in the axis of vision, an object placed out of the axis cannot be seen with the same distinctness, both from the pencils not being accurately converged upon the retina, and from the expansion of the image, which, as we have already described, accompa- nies indirect vision. A luminous point, there- fore, seen indirectly, swells into a disc, and thus loses its sharpness, and acts upon a greater por- tion of the retina. In order to determine whether this evjianaiou, and ihe. tP- ia,ge of the lu- minous point, was the cause of its supcTˆG? visi- bility, I turned my eye full upon a lumn’roiis point till it ceased to be visible ; and then, re-adjusting my eye so as to swell the point into a circular disc by direct vision, I invariably found that its visibility was instantly increased. If this explanation of the phenomenon be the correct one, the practical astronomer may, with direct vision, obtain a clearer view of minute and faint stars, either by putting the telescope out of its focus, or by adjusting his ‘eye to nearer objects.’ ††† See Brewster’s Journal for September

1825.

533. The peculiar phenomena that result from vision are too important to be passed unnoticed here. The rays of light being emitted or re- flected from a visible

object in all direc- ˆ/A

tions, it must be plain that some of them from every part of it H/ must reach the eye. Thus the object H K, in the annexed en- graving, is visible to an eye in any part where the rays HA, II B, H C, H D, H E, II F, IIG, KA, KB, K C, K D, K E, K F, KG, I A, IB, IC, II), IE, IF, and I G, can come. But, though rays are re- flected from every point of the object to ever part of the circumambiant space, yet it is evi- dent that only those rays which pass through the pupil of the eye can affect the sense ; and those rays also give the ideas of color, according to the properties of those bodies which transmit or reflect them.

534. As the direction in which the extrem- pencils of light cross each other in the eye bears a due proportion to the angle in which they are transmitted from the object to the eye, it is evident that the image formed upon the retina will be proportioned to the apparent magnitude; and thus we have our first ideas of the size and

distance of oodies, which, however, in many cases, are corrected by experience. The nearer any object is to the eye, the larger is the angle by which it will appear in the eye, and therefore the greater will be the seeming magnitude of that body. In fig. 4 let A B be an object viewed directly by the eye Q R. From each extremity draw the lines AN and B M, intersecting each other in the crystalline humor at I. Then draw the line I K in the direction in which the eye is supposed to look at the object. The angle A I B is then the optical or visual angle, and the line I K is called the optical axis, because it is the axis of the lens or crystalline humor con- tinued to the object.

335. The apparent magnitude of objects then, depending thus on the angle under which they are seen, will evidently vary according to their distances. Thus diiferent objects, as A B, C D, E F, the real magnitudes of which are very un- equal, may be situated at such distances from the eye as to have their apparent magnitudes all equal ; for if they are situated at such distances that the rays A N, B M, shall touch the extremi- ties of each, they will then appear all under the same optical angle, and the diameter INI N of each image on the

retina will consequently be equal.

536. In the same manner objects of equal mag- nitude, situated at unequal distances, will appear unequal. For let A B and G H, two objects of equal size, be placed before the eye at different distances I K and I S ; draw the lines G P and n O, crossing each other in I ; then O P, the image formed by the objects G 11 on the retina, is evidently of a greater diameter than the image M N, which represents the object A B; in other words the object G H will appear as large as an object of the diameter T ' situated at the same place as tlie object A B.

537. To render the subject still clearer, suppose the object H K, fig. 5, to be at 100 yards distance, it will form an angle in the eye at A. At 200 yards distance the angle it makes will be twice as small in the eye at B. Thus, to whatever moderate distance the object is removed, the angle it forms in the eye will be proportionably less, and therefore the object will be diminished in the same proportion.

538. Hence it follows that objects situated at different distances, whose apparent magnitudes are equal, are to each other as their distances from the eye ; and, by the same rule, equal objects situated directly before the eye have their apparent magnitudes in a reciprocal pro- portion to their distances.

539. This last proposition must, however, be received with some allowance ; for it is only applicable to very distant objects, and to those where the sense is not corrected by the judg- ment. For, if the objects are near, we do not judge of their magnitude according to the visual angle. Thus, if a man of six feet high is seen at the distance of six feet under the very same angle as a dwarf of only two feet high, at the distance of two feet, still the dwarf will not appear as large as the man, because the sense is corrected by the judgment. In most cases, how- ever, where the distance is considerable, the rule will be found accurate.

540. If the eye is placed above a horizontal

plain, the different parts of this plain will appear elevated in proportion to their distance, till at length they will appear on a level with it. lor, in proportion as the different parts are more distant, the rays which proceed from them to form angles with the optical axis I K, fig. 4, more and more acute, and at length become almost parallel. This is the reason why, if we stand on the sea-shore, those parts of the ocean which are at a great distance appear elevated ; for the globular form of the earth is not percept- ible to the eye, and, if it was, the

apparent eleva- tion of the sea is far greater than the arch which a segment of the globe would form within any distance that our eyes are capable of reaching.

541. For the same reason, if a number of objects are placed on the same plain, and at the same height below the eye, the more distant will appear taller than the others ; and if the same objects are placed on a similar plane above the eye, the more distant will appear the lowest.

542. The distant parts of a ˆJng wall, for the same reason, appear to a person who stands near one end to curve or incline towards him. In the same manner, the high wall of a lofty tower seems to a spectator placed directly under it to bend over him, and threaten him with in- stant destruction. If any person who wishes to try the experiment will lie down on his back in a situation of this description, at the distance of five or six feet from the wall of which he con- tem])lates the tremendous height, he will imme- diately be made sensible of the phenomenon.

543. If the distance between two objects forms an invisible angle, the objects, though in reality at some distance from each other, will appear conti- guous. Tliis is assigned by some astronomers as the reason why the ring or belt of Saturn ap- pears as one mass of light, while they contend that it is formed from a number of little stars or satellites ranged within a certain distance of each other.

544. If the eye is carried along as in a boat, without being sensible of its own motion, the objects which are stationary on each side will appear to move in a contrary direction. Thus we attribute to the sun and the other heavenly bodies a diurnal motion, which only affects the earth which we inhabit.

545. If two or three objects at a considerable distance, and on which the eye of the spectator is fixed, move with equal velocity past a third object which is at rest, the moving objects will appear to be actually at rest, and that which is really stationary will appear in motion. Thus the clouds which pass over the face of the moon appear at rest, while the moon itself appears to proceed rapidly along in an opposite direction. This happens because the eye, which is fixed upon the clouds, follows their motion mechani- cally, and therefore the moon appears to move and not the clouds, as in the boat we do not per- ceive its motion, but conceive the banks are retiring behind us.

546. If the centre of the pupil, that is, the optic axis, is directed along

the surface of any slender object in a perfectly straight line, this line will appear only a point, because, in fact, the extremities only are visible.

547. An extended and distant arch, viewed

by an eye which is exactly in the same line, will appear as a plane surface, because, all the parts appearing equally distant, the curvature will not be perceived.

548. If a circle is viewed obliquely it will appear an oval, because the diameter which is perpendicular to the eye is shortened ; in other words, the rays which proceed from the extremi- ties form an an3:le so much the more acute as the obliquity is greater ; on the contrary tlie diame- ter which is parallel to the eye is apparently ex- tended.

549. We are indebted to S. L. Kent, Esq., honorary secretary of the London Institution, for the following very important facts, which tend materially to illustrate the real arrangement of the prismatic spectrum, as it serves to reduce the number of colors to three ; while Dr. Wol- laston's latest experiments would indicate the number four, as their ultimate component parts.

550. The prism used in these experiments was five inches long, and the side planes one inch broad ; the lens wa.s six inches in diameter, having a focus of two feet three inches ; and it was found requisite that the diameter of the lens should exceed the length of the prism in order to insure a good spectrum.

551. Experim.ent 1. ••• Mr. Kent threw the colors of the prism on a screen eleven feet dis- tant ; and having placed the lens between them, and only two inches from the prism, as in fig. 6, he found the prismatic colors magnified and in llie same order, to the dimension of t%\o feet six inclies in width, and one foot three inches in depth. In this case the sun's rays were ad- mitted through a \ enetian blind ; but, when admitted through a hole in a shutter of five inches by four, the dimension was only two feet by nine inches.

552. Experiment 2. ••• Having placed tlie lens at the distance of two feet six inches from the prism, as in fig. 7, the figure of the prism was clearly defined, but without exhibiting any pris- matic colors whatever on the screen.

553. Experiment 3. ❖❖❖ He placed the lens three feet from the prism, as in fiij. 8, which pro- duced only the figure of the prism having tlie violet ray at the bottom and the yellow above.

554. Experiment 4. ❖❖❖ When the lens was five feet from the prism, as in fig. 9, the figure of it was distinctly seen with the prismatic colors re- versed.

555. Experiment 5. ❖❖❖ Mr. Kent placed the lens behind the prism, as in fig. 10, and threw the sun's rays on it at its focal distance, two feet three inches, when the prismatic colors were in- creased, both in brilliancy and macmitude, considerably more than in the first experiment.

556. Experiment 6. ❖❖❖ The lens was put within the focal distance of the screen, as in fig. 1 1 , when a small figure of the prism was seen very bright, but without any prismatic color.

557. Experiment 7. ❖❖❖ Having placed the lens as in the second experiment, no prismatic spec- trum was produced, but a perfect spectrum of the prism in a strong white light ; Mr. Kent then placed another prism in the focus of the lens, as in fig. 12, which produced three colors only, viz. yellow, of a greenish tint, red, and

deep violet. Wishing to ascertain if those three colors were neutral, he tried them with a third prism, and found not the slightest alteration ; and, having placed a card so as to receive them, he found, on giving it a whirling motion, that the colors were entirely lost.

558. In the most perfect form of the phantas- magoria lantern the sliders are made opaque, except where the figures are introduced, the glass being covered, in the light parts, with a more or less transparent tint, according to the effect re- quired. Several pieces of glass may also be oc- casionally placed behind each other, and may be made capable of such motions as will nearly imitate the natural motions of the objects which they represent. The figures may also be drawn with water colors on their paper, and afterwards varnished. By removing the lantern to different distances, and altering at the same time more or less the position of the lens, the image may be made to increase or diminish, and to become more or less distinct at pleasure, so that to a person unaccustomed to the effects of optical instru- ments the figures may appear actually to advance and retire. In reality, however, these figures be- come much brighter as they are rendered smaller, w hile in nature the imperfect transparency of the air causes them to appear fainter when they are remote than when they are near : this imperfec-

tion might be easily remedied – by the interposi- tion of some semi-opaque substance, which might gradually be caused to admit more light as the figure becomes larger, or by uncovering a larger or smaller portion of the lamp, or of its lens. Sometimes, by throwing a strong light upon the actual opaque object, or on a living person, its image is formed on the curtain, retaining its natu- ral motions; but in tlus case the object must be considerably distant, otherwise the images of its nearer and remoter parts will never be suthciently distinct at once, the refraction being either too great for the remoter, or too small for the nearer parts : and there must also be a second lens, placed at a sufficient distance from the first to allow an inverted image to be formed between them, and to throw a second picture of this image on the screen in its natural erect position ; unless the object be of such a nature that it can be inverted without inconvenience. Tliis effect was very well exhibited at Paris by Robertson ; he also combined with his pictures the shadows of living objects, which imitate tolerably well the appearance of such objects in a dark night, or by moon-shine ; and, while the room was in complete darkness, concealed screens were pro- bably let down in various parts of it, on which some of the images were projected ; for they were sometimes actually situated over the heads of the audience.

559. Dr. Young's suggestions may be thus . illustrated : ××× The light of the lamp A, fig. 13, is

thrown by the mirror B and the lenses C and D on the painted slider at E, and the magnifier T forms the image on the screen at G. This lens is fixed to a slider, which may be drawn out of the general support or box H : and, when the box is drawn back on its wheels, the rod I K lowers the point K, and by means of the rod K L adjusts the slider in such a manner Uiflt the

image is always distinctly painted on the screen G. When the box advances towards the screen G, in order that the images may be diminished and appear to vanish, the lens F suffers the screen M to fall and intercept a part of the light. The rod K N must be equal to I K, and the point I must be twice the focal length of the lens T, be- fore the object, L being immediately under the focus of the lens. The screen M may have a triangular opening, so as to uncover the middle of the lens only, or the light may be intercepted in any other manner.

560. That the rays of lignt flow in all direc- tions from different bodies, without interrupting one another, is plain from the following experi- ments : ❖❖❖ Make a little hole in a thin plate of metal, and set the plate upright on a table, facing a row of lighted candles standing near together ; then place a sheet of paper or pasteboard at a little distance from the other side of the plate, and the rays of all the candles, flowing through the hole, will form as many specks of light on tlie paper as there are candles before the plate ; each speck as distinct and large as if there were only one candle to cast one speck ; which shows that the rays do not obstruct each other in their mo- tions, although they all cross in the same hole.

561. If three pieces of paper are fixed against the wall of a room at equal distances, at the height of the eye, the operator placing himself directly before them at a few yards distance, and the right eye being closed, he will perceive with liis left only two of them, ❖❖❖ suppose the first and second ; let the position of the eye be altered, and the first and third will be seen ; if altered a second time, the second and third ; but never the whole three together.

562. An artificial halo may be formed by placing a candle on one side of a glass receiver, and, the spectator having placed himself at a dis- tance on the other side, let the air be exhausted, and the light of the candle will be refracted in circles jof various colors like the halo which en- circles the sun.

563. Opticians sometimes grind a glass mirror concave in one direction only, or longitudinally ; it is in fact a concave portion of a cylinder, the breadth of which may be considered that of the mirror. A person looking at his face in this mirror, in the direction of its concavity, will see it curiously distorted in a very lengthened ap- pearance ; and, by turning the cylindrical mirror a quarter round, his visage will appear distorted in another way, by an apparent increase in width only. If in a very near situation before it you put your finger on the right hand side of the nose, it will appear the same in the mirror ; but if in a distant situation, somewhat beyond the centre of concavity, you again look at your face in the mirror, your finger will appear to be removed to the other side.

564. Tlie thaumafrope, or wonder-turner, a very ingenious philosophical toy, invented we believe by Dr. Paris, is founded on the well known op- tical principle that an impression upon the reti- na continues for about the eighth part of a second after the object which produced it is withdrawn. The luminous rings formed by the whirling of a burning stick in the dark are well

known, and Homer has availed himself of the same principle in his description of the length- ened sliadow of the flying javelin.

565. The thaumatrope consists of a number of circular pieces of card, about two inches and a half in diameter, which may be twirled round with great velocity by the application of the fingers to pieces of silk string attached to two opposite points of their circumference. On each side of the card is painted a part of a picture, so that, if we could see both sides at once, the two parts of the picture w ill form a whole picture. For example, let us suppose a card on one side of which is a cage, and on the other a bird. If we now take hold of each of the silk strings, and put it into a twirling motion, the bird and the cage will appear to the eye at the same moment, in consequence of the impres- sion of each continuing on the retina for a short space of time. The following are some of the otlier devices on the cards of the thaumatrope : ###

A rose-tree, with a garden-pot on the reverse.

A horse, with a man on the reverse.

A leafless branch, which becomes verdant on the twirling of the card.

A female in one dress on one side and another dress on the other.

The body of a Turk, with his head on the re- verse.

Harlequin and Columbine on different sides, appear together by the revolution of the card.

A comic head on one side, which, on turning round, becomes invested with a wig.

A man sleeping, and awakened by beins turned round.

566. The principle of the thaumatrope may be extended to many other devices. Parts of a sentence may be written on one side, and the rest of the sentence on the other; and we may even put halves of the letters or words on one side and the other halves on the other side. This method of breaking down letters or words or sentences may be varied ad infinitum, and will furnish us with a variety of rotatory cyphers.

567. Those who have used the thaumatrope must have been dissatisfied with the general ef- fect of the two combined pictures. There is a hobbling motion, arising from the imperfection of the method adopted to produce the rotatory motion, which entirely

destroys the effect ; and it is manifest that the rotatory motion should be produced by quite different means.

568. If strings are adopted they ought to be attached to the circular pieces of card so that the axis of rotation should be in the plane of the card ; but a solid axis of rotation is decidedly preferable, and will produce much more pleasing combinations.

569. A curious optical deception may be thus produced. It is to exhibit an erect object which, when placed near a hole in a card, will appear to be on the other side, and also inverted and mag- nified. Let a card be perforated with a small hole, and placed opposite a white wall or win- dow, the eye of the observer being situated on the other side of the card. A pin being then placed between the eye and card will be seen on the other side of the aperture, inverted and magnified as already described. The reason

of this is, as M. Le Cat has observed, that the eye in this case sees only the shadow of the pin on the retina; and, since the light wliich is stopped by the upper part of the pin or its head comes from the lower part of the white wall or “ivindow, whilst that which is stopped by the lower end of the pin comes from the upper part, the shadow must necessarily appear inverted with respect to the object.

570. Another variation of Le Cat’s experiment is as follows : ××× Take a common pin and hold it in any position near the eye, so that the observer sees reflected from its head a faint circle of

light ; then hold a second pin opposite to it, and an inverted image of the one pin will be seen in the head of the other. If the head of the first pin is round and well polished, the inverted and magnified image of the other will be more dis- tinct. In this form of the experiment a diverg- ing pencil of light, from the window or a candle, replaces the diverging pencil which proceeds from the perforation in the card, and of course produces the same effect. The little round knob by the pressure upon which the case of a watch is often opened will answer better than the finest pin head.

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OPU

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OR

OP’TIMACY, n. s. ˆ Lat. optimates. ISobi-

Optim’ity. S lity ; the body of nobles ;

one of the divisions of the Roman people : opti- mity, the state of being best.

In this high court of parliament there is a rare co- ordination of power, a wholesome mixture betwixt monarchy, optimacy, and democracy. Houel.

OPTIMATES, in ancient history, a political party among the Roman people, opposed to populares. They were warm supporters of the dignity of the chief magistrates and promoters of the senatorial power; whereas the populares boldly stood up for the rights of the people, pleaded for larger privileges, and labored to bring matters nearer to a level. Cicero says, that the optimates were the best citizens, who wished to deserve the approbation of the better sort ; and that the populares courted the favor of the populace, not so much considering what was right, as what would please the people, and gratify their own thirst of vain glory and empty applause.

OPTIO, an officer in the Roman army, an as- sistant or lieutenant to every centurion ; so called because he was the choice or option of the cen- turion in later times : at first, however, he had been chosen by the tribune, or chief commander of the legion. These optiones are also sometimes called succenturiones and tergiductories ; the last name was given them because their post was in the rear of the company. Some authors mention suboptiones, or sublieutenants.

OPTION, n. s. Lat. optio. Choice ; election.

Transplantation must proceed from the option of the people, else it sounds like an exile ; so the colo- nies must be raised by the leave of the king, and not by his command. Bacon.

lie decrees to punish the contumacy finally, by assigning them their own options. Hammond.

Which of these two rewards we will receive, he bath left to our option. Smallridge.

Option, in ecclesiastical polity. When a new suffragan bishop is consecrated, the arch- bishop of the province, by a customary preroga- tive, claims the collation of the first vacant bene- fice, or dignity, in that see, according as he shall choose ; which choice is called the archbishop's option. But if the bishop dies, or is translated, before the incumbent of the promotion chosen by the archbishop die or be removed, it is gene- rally supposed that the option is void ; as the granter, singly and by himself, could not convey any right or title beyond the term of his con- tinuance in that see. And, if the archbishop dies before the voidance happen, the right of filling up the vacancy shall go to his executors or ad- ministrators.

OPULENCE, n. s.-\ Fr. opulence; Ital.

Op'ulency, fopiilenza; Port. Span.

Op’ulent, adj. ˆand Lat. opulentia. Af-

Op’ulently, arfu. ‘ fluence ; riches; splen- did style of living : opulent is, wealthy ; rich ; affluent.

It must be a discovery of the infinite flatteries that follow youth and upulency. Shakspeare. Timon.

He made him his ally, and provoked a mighty and opulent king by an offensive war in his quarrel.

Bucon,

After eight j-ears spent in outward opulency and inward murmur, that it was not greater ; after vast sums of money and great wealth gotten, he died un- lamenied. Clarendon.

To begin with the supposed policy of gratifying only the rich and opulent :□□□ □□□ does our wise man think that the grandee whom he courts does not see through all the little plots of his courtship ? South.

He had been a person not only of great opulency, but authority. Atterhury.

There in full opulence a banker dwelt,

Who all the joys and pangs of riches felt ;

His side-board glittered with imagined plate.

And his proud fancy neld a vast estate. Swift. How few can rescue opulence from want !

Young.

OPUNTIA, the prickly pear tree, a species of cactus ; see Cactus. The fruit of the opuntia is remarkable for coloring the juices of living animals, though it appears not to be poisonous or even hurtful to the body. The prickly pear grows in great abundance about Carolina ; and, cochineal insects are found upon it, though no attempt has yet been made to cure them for use as the Spaniards do.

OR, conj. Sax. oˆeji ; Goth, odr; Teut. oder. Other; either (of both which it is used as a con- traction) ; before a disjunctive particle denoting clioice, distribution, and sometimes opposition.

Learn before thou speak, and use physick or ever thou be sick. Eccles. xviii. 19.

The dead man's knell Is there scarce asked, for whom; and good men's

lives Expire before the flowers in their caps, Dying or ere they sicken. Shakspeare, Macbeth.

How great soever the sins of any unreformed per- son are, Christ died for him because he died for all ; only he must reform and forsake his sins, or else he shall never receive benefit of his death. Hammond. For thy vast bounties are so numberless, That them or to conceal, or else to tell, Is equally impossible. Cowley.

Or we go to the declaration of this psalm, it shall be convenient to shew who did write this psalm.

Fisher. Inquire what the ancients thought concerning this world, whether it was to perish or no"! whether to be destroyed or to stand eternally 1 Burnet.

He my muse's homage should receive. If I could write, or Holies could forgive.

Garth. At Venice you may go to any house either by land or water. Addison.

By intense study, or application to business that requires little action, the digestion of foods will soon proceed more slowly, and with more uneasiness.

Blackmore. Every thing that can be divided by the mind into two or more ideas is called complex. Watts.

The restless fry Run bustling to and fro with foolish haste In search of pleasures vain that from them fly. Or which obtained the caitiffs dare not taste ; When nothing is enjoyed, can there be greater waste ?

Thomson. Speak thou, whose thoughts at humble peace repine, Shall VVolsey's wealth with Wolsey's end be thine'! Or livest thou now with safer pride content, The wisest justice on the banks of Trent ? Johnson. But the sound of the church-going bell These valleys and rocks never heard,

ORA

Never sighed at the .sound of a knell, Or smiled when ii. sabbath appeared.

Cmvper.

A fourth as marble, stittue-hke and still,

Lay in a breathless, hushed, and stony sleep ;

While, cold and pure, as looks a frozen rill. Or the snow minanˆt on Alpine steep,

Or Lot’s wife done in ‘salt, ††† en- what you will.

Byron, Was it the squire, for killing of his game? or

Covetous parson, for tas lilhes distraining ?

Or roguish lawyer, made you lose your little

All in a lawsuit ? Cunning.

Or, n. s. Fr. or. Gold ; an heraldic term. Tlie showery arch With listed colours yay, or, azure, gules, Delights and puzzles the beholders’ eyes.

Philips.

Or, the French word for gold, by which this metal is expressed in heraldry. In engraving it is denoted by small jjoints all over the field or bearing. See Heraldry.

ORA, in antiquity, was a term equivalent to an ounce ; but it has been much debated among antiquaries, whether the ora was a coin, or only money of account. Dr. Hickes says, that the mode of reckoning money by marks and oras was never known in England till after the Danish in- vasions ; and from the old nummulary estimates, among the principal Gothic states upon the Baltic, it appears that the ora and solidus were synonymous terms, and that the ora was the eighteenth part of the mark. From several Danish laws, it likewise appears that the Danish ora, derived by corruption from aureus, was the same as the Frank solidus of 1 2d. As a weight the ora was regarded as the uncia or unit, by which the Danish mark was divided; and in Doomsday book the ora is used for the ounce, or the twelfth part of

the nummulary Saxon pound, and the fifteenth of the commercial : as a coin, it was an aureus, or the Frank solidus of 12d. There was another ora mentioned in tlie rolls of the twenty- seventh of Henry III. the value of which was sixteen pence ; and this was probably derived from the half mancus of the Saxons. Such, in all appearance, was the origi- nal of these two oras ; as there were no aurei of that period to which these two denominations of money of sixteen and twelve pence can possibly be ascribed. The name ora distinguishes the gold coins in several parts of Europe to this day. Tlie Portuguese moidore is nothing else but moeda d'oro, from the Latin moneta de auro ; the French Louis d'ores come from the same use of the word, and owe their appellation to the ora. See Clarke on Coins.

ORACH. See Atriplex.

OR'ACLE, n. s. & v. 71. —ˆ Fr. oracJe ; Belg.

Orac'ular, adj. i and Teut. orakel ;

Orac'ulous, \ Ital. Span, and Port.

Orac'ulously, arfu. \oraculo; Lat. ora-

Orac'ulousness, n. s. J culum (ab oro, to speak). Something delivered by superior or su- pernatural wisdom ; the place where, or person by whom, such communications are delivered : to utter oracles : oracular and oraculous, mean vittering or resembling oracles ; the adverb and noun substantive corresponding.

The main principle whereupon our belief of all things therein contained dependeth, is, that the Scriptures are the oracles of G(.d himself. Hooker. Why, by the verities on thee made good, May they not be my oracles as well, And set me up in hope ? Shahspeare. Macbeth. God hath now sent his living oracle Into the world to teach his final will, And sends his spirit of truth henceforth to dwell, In pious hearts an inward oracle. To all truth requisite for men to know. Milton, No more shall thou by oracling abuse The gentiles. /(/.

Thy counsel would be as the oracle of Urim and thummim, those oracvlous gems On Aaron's breast, or tongue of seers old Infallible. Id. Paradise Regained.

The testimonies of antiquity, and such as pass ora- cidously amongst us, were not always so exact as to examine the doctrine they delivered.

Browne's Vidgar Errours. Though their general acknowledgments of tlie weakness of human understanding look like cold and sceptical discouragements ; yet the particular expres- sions of their sentiments are as oraculous as if they were omniscient. Glanville's Scepsis.

Here Charles contrives the ordering of his states. Here he resolves his neighb'ring princes' fates ; What nation shall have peace, where war be made. Determined is in this oraculous shade. Waller.

Hence rise the branching beech and vocal oak. Where Jove of old oraculously spoke. Dryden.

He spoke oraculous and sly, He'd neither grant the question, nor deny.

King, There mighty nations shall enquire their doom. The world's great oracle in times to come. Ptrpe.

They have something venerable and oracular, in that unadorned gravity and shortness in the txpres sion. /(/.

The' oraculous seei frequents the Pharian coast, Proteus a name tremendous o'er the main. Id.

A graver coxcomb we may sometimes see, Quite as absurd, though not so light as he : A shallow brain behind a serious mask, An oracle within an empty cask. Couper.

Oracle, in sacred history, is sometimes used for the mercy-seat, or the cover of the ark of the covenant ; and by others it is taken for the sanctuary, or for the most holy place, wherein the ark was deposited. Among the Jews we may distinguish several sorts of oracles. They had first oracles that were delivered viva voce ; as when God spake to Moses face to face, as one friend speaks to another. (Numb. xii. 8.) 2. Prophetical dreams sent by God : as the dreams which God sent to Joseph, and which foretold his future greatness (Gen. xxxvii. 5, 6). 3. 'i- sions ; as when a jirophet in an ecstasy, being neither properly asleep nor awake, had super- natural revelations. (Gen. xv. 1 ; xlvi. 2) 4. The oracle of Lˆrim and Thummim, which was accompanied with the ephod or the pectoral worn by the high-priest, and which God had endued with the gift of foretelling things to come (Numb. xii. 6. Joel ii. 28.) This manner of enquiring of the Lord was often made use of, from Joshua's time to the erection of the temple at Jerusalem. Fifthly, After the building of the temple, they generally consulted the prophets, who were frequent in Judah and Israel. From Ilaˆgai, Zechariah, and Malachi. who are the last

of the prophets that have any of their writings remaining, the Jews assert that God gave them what they call Bathkol, the daughter of the voice, which was a supernatural manifestation of the will of God, performed either by a strong inspi- ration or internal voice, or else by a sensible and external voice, which was heard by a number of persons sufficient to bear testimony of it. For example, such was the voice that was heard at the baptism of Jesus Christ. (Matth. iii. 17.)

Oracle, among the heathens, was the answer, which the gods were supposed to give to those who consulted them upon any aiTair of import- ance. The credit of oracles was so great tliat in all doubts a►►d disputes their determinations were held sacred and inviolable : whence vast num- bers flocked to them for advice ; and no business of importance was undertaken, scarcely any peace concluded, any war waged, or any new form of government instituted, without the advice and approbation of some oracle. The answers were given by the priest or priestess of the god v/lio was consulted ; and generally expressed in such dark and ambiguous phrases as might be easily wrested to prove the truth of the oracle whatever was the event. It is not, therefore, to be wondered at, that the priests who delivered them were in the highest credit and esteem, and that they man:ˆed this reputation so as greatly to promote tlieir own advantage. They accordingly allowed no man to consult the gods before he had offered costly sacrifices, and made rich pre- sents to them. And to keep up the veneration for their oracles, and to prevent their being taken unprepared, tliey admitted persons to consult the gods only at certain stated times ; and sometimes they were so cautious that the greatest person- ages could obtain no answer at all.

The most ancient oracle was that of Dodona (see Uodoxa) ; but the most famous was that of Delphi, to which article we also refer for fur- ther particulars on this subject, so famous in Pagan antiquity. Another celebrated one was the oracle of Trophonius, in the neighbourhood of Lebadia, a city of Bceotia, which was held in high estimation. It received its name from Tro- phonius, brother of Agamedes, who lived in a subterran-eous dwelling near Lebadia, and pre- tended to the faculty of foretelling future events. lie died in his cave, and was deified as an ora- cular god. This oracle owed its reputation to one Saon. Those who repaired to this cave for information were required

to offer certain sacri- fices, to anoint themselves with oil, and to bathe in a certain river : they were then clothed in a linen robe, took a honeyed cake in their hands, and descended into the sub-terraneous chamber by a narrow passage. Here it was that futurity was unfolded to them, either by visions or extra- ordinary sounds. The return from the cave was by the same passage, but the persons consulting were obliged to walk backwards. They generally came out astonished, melancholy, and dejected ; hence the proverb. Etc Tpofcoviov fienavrevrai. The priests on their return placed them on an elevateu sear, called the seat of Mnemosyne, where an account was taken of what they had seen and heard. They were then conducted to the chapel of good Genius by their companions,

where, by degrees, they recovered their usual composure and cheerfulness. Besides these three principal oracles of Greece, that of Ara- phiaraus, at Oropius in Attica, was famous. It was so called from Amphiaraus, the son of Oicleus, a man skilled in magic, the interpreta- tion of dreams, &:c., and who after his death was deified and delivered oracles in a temple erected to his divinity. They who applied to him for information were to purify themselves, offei sacrificeˆ fast twenty-four hours, abstain from wine two days, and make an offering of a ram to Amphiaraus ; on the skin of which they were to sleep, and see their destiny in a dream. Near the temple was Amphiaraus's fountain, which was sacred, and the waters of it forbidden to be used for ordinary purposes. At Delos also there was an oracle of the Delian Apollo ; in Milesia was that of the Branchidce, with others of less note, such as that of the camps at Laced.tmon, that of Nabarcha, and those of Chrysopolis, Cla- ros in Ionia, Mallos, Patarea, Pella, P'hasellides, Sinope, Orpheus's head, &c. Though the Ro- mans consulted the Grecian oracles upon many occasions, and had few oracles in their own country, yet we must not omit mentioning the CˆumEan oracles, which were delivered by the Sibyl of Cnmae. For an account of the Sibyls, see the article Siutl. See also DˆEMorc and DEMONIAC Of the oracles of false gods there was a far greater number than our limits permit us to enumerate.

It has been generally held by the early writers in tlie Christian church, that oracles ceased at the birth of Jesus Christ : yet some have endeavoured to maintain the contrary, by showing that they were in being in the days of Julian, commonly called the Apostate, and that this emperor himself con- sulted them; nay, farther, say they, history makes mention of several laws published by the Chris- tian emperors, Theodosius, Gratian, and 'alen- tinian, to punish persons who interrogated them, even in their days ; and that the Epicureans were the first who made a jest of this super- stition, and exposed the

roguery of its priests to the people. As we suspect most of the facts here asserted should be understood in a qualified sense, we shall discuss this point in as few words as possible, although it is undoubtedly a matter of some consequence. 1st, The question, properly stated, is not, whether oracles became ex- tinct immediately on the birth of Christ, or from the very moment he was born ? but, if they fell gradually into disesteem, and ceased, as Christ and his gospel became known to mankind ? And that they did so is most certain, from the con current testimonies of the fathers, which, who- ever would endeavour to invalidate, may equally give up the most respectable traditions and his- tory of every kind. 2dly, But did not Julian the Apostate consult these oracles ? We answer in the negative : he had indeed recourse to magical operations, but it was because oracles had already ceased ; for he bewailed the loss of them, and assigned pitiful reasons for it ; which St. Cyrill refuted, adding, that he never couW have offered such, but from unwillingness to ac- knowledge that when the world had received the light of Christ, the dominion of the devil was at

an end. 3rdly, The Qiristian emperors do in- deed seem to condemn the superstition and idola- try of those yvho were still for consultinir oracles ; but the edicts of those princes do not prove that oracles actually existed in their times, any more than that they ceased in consequence of their laws. It is certain that theywere for the most part extinct before the conversion of Coitstantine. 4thly, Some Epicureans might make a jest of this superstition; however the Epicurean philo- sopher Celsus, in the second century, was for crying up the excellency of several oracles, as appears from Origen's seventh book against him. OR/EA, certain solemn sacrifices of fruits which v,ere oflTered in the four seasons of the year, in order to obtain mild and temperate weather. They were offered to the goddesses who presided over the seasons, who attended upon the sun, and who received divine worship at Athens.

OR'ALSON, or ˆ Fr. oraiaon ; Lat. oralio, Or'ison, n. s. S Prayer ; oral worship ; ado- ration or supplication.

His daily orisons attract our ears.

Sandys on Job. Nymph, in thy orisons Be all my sins remembered.

Shakspeare. Hamlel. l\Iy wakeful lay shall knock At the' oriental gates, and duly mock The early lark's shrill orisons, to be An anthem at the day's nativity. Crashaw. He went into St. Paul's church, where he had orisons and Te Deum sung. Bacon's Henry J'll.

I have grieved to see poor misguided souls under the papacy measuring their orisons not by weight, but by number. Hall.

Lowly they bowed, adoring and began Their orisons each morning duly paid. Milton. So went he on with his orisons, Which, if you mark them well, were wise ones.

Cotton. Business might shorten, not disturb her prayer ; Heaven had the best, if not the greater share : An active life, long oruisons forbids. Yet still she prayed, for still she prayed by deeds.

Dry den. Here at dead of night The hermit oft, mid his orisons, hears Aghast the voice of time-disparting towers.

J)f/er. The midnight clock attests my fervent prayers. The rising sun my orisons declares. Hurte.

Most glorious orb ! that wert a worship, ere The mystery of thy making was revealed ! Thou earliest minister of the Almighty, Which gladdened, on their nN-ˆiintain tops, the heart Of the Chaldean shepherds, till they poured Themselves in orisons! Byron.

O'RAL, adj.) Fr. oral ; Lat. os, oris, the O'rally, cf/u. ˆ mouth. Delivered by the moutli or in speech : orally, by the mouth, with- out writing.

Oral tradition were incompetent without written monuments to derive to us the original laws of a king- dom, because they are complex, not orally traducible to so great a distance of ages. Hale.

Oral discourse, whose transient faults dying with the sound that gives them life, and so not subject to a strict review, more easily escapes observation. Locke on Education.

St. John was appealed to as the livbg orac)e of the church ; and, as his oral testimony lasted the first century, many have observed, that by a particular providence several of our Saviour's disciples, and of the early converts, lived to a very great age, that they might personally convey the truth of the gospel to tiiose times which were very remote.

Addison.

OR AM A LA, a town of the Sardinian states, in the Milanese province of Bobbio. It is situated on the declivity of a hill, at the foot of which flows the Staffora. Inhabitants 3100.

ORAN, or Warran, a considerable town m the province of Tlemsan or Tremecen, Algiers. The Spaniards commanded by cardinal Ximenes, took it in 1500, and retained possession of it till the period of the succession war, when, in 1708, the Algerines, perceiving it neglected, found means to obtain possession. The Spa- niards, however, regained it in 1732, and re- tained it till a recent period, when they restored the town, retaining the castle of Mers al Kebeer. This place is built on the declivity and foot of a high mountain, which overlooks it from the north, and on the summit are built two fine, strong castles, one of which is that retained by the Spaniards. Dr. Shaw did not find here any Roman antiquities ; but several beautiful churches have been built by the Spaniards. 170 miles south-west of Algiers. Long- 0►► 18′ W ., lat. 35►► 50′ N.

OR’ANGE, n. .?. \ Fr. orange ; Lat. avrun- Or’angery, / tium (ab uureo colore. ►►►

Or’ancemusk, ˆAinsworth). A fruit or Or’angetawxey, i fruit-tree ; a species of C i- Or’angewife. J TRLs, which see : an oran- gery is, a place where oranges are raised : orange- musk, a species of pear : orange-tawney, a color resembling that of the orange : orange-wife (orange, and Sax. pip, Goth, huif, a woman’s hood), a woman who sells oranges.

I will discharge it in your straw-coloured beard, your orange taicny beard. Shakspeare.

You wear out a good wholesome forenoon in hear- ing a cause between an orangewife and a fosset seller.

Id. The notary came aboard, holding in his hand a fruit like an orange, but of colour between oianye tuuny and scarlet, which cast a most excellent o our, and is used for a preservative against infection.

Bacon’s New Atlantis. The ideas of orange colour and azure, produced in th-e mind by the same infusion of lignum ne- phriticurn, are no less distinct ideas than those of the same colours taken from two different bodies.

Locke. A kitchen garden is a more pleasant sight than the finest

orangery, or artificial green-house.

Spectator. Fine oranges, sauce for your veal, Are charming when squeezed in a pot of brown ale.

Sui/t. Baronets, or knights of Xova Scotia, are com- monly distinguished froni others by a ribbon of orangetawneif. HetiLn.

The panic granate oped its rose-like flowers ; The orange breathed its aromatick powers. Ilarte.

Orange, in botany. See Citrus.

Orange, colonia; secundanorum, an ancient post town of the department of 'aucluse, France ; the chief place of a subprefecture containing 8000 inhabitants, and having an inferior court

of judicature, an agricultural society, and a com- munal college. It is situated in a magnificent plain, which is watered by the Aiques and a multitude of smaller streams. It is in general but badly built ; the streets are narrow and close, but ornamented with handsome public fountains, the waters of which are excellent. Ptolemy calls it Aurosio Cavarum, as it was one of the four towns belonging to the Cavares. The Ro- mans had possession of it for several centuries, and it is celebrated for the monuments of their power which are yet remaining. The Burgun- dians and Visigoths were the first that wrested it from the Romans ; they were driven out by the kings of France of the first Race. During the wars, that were terminated by the treaties of Nimeguen and Ryswick, Louis XIV. seized upon Orange, and demolished its citadel. Formerly it was the capital of a principality of the same name, which was extinct before the revolution.

The manufactures of this town consist of hand- kerchiefs, printed calicoes, and serges. There are also silk mills and mills for grinding madder. The inhabitants carry on a trade in wine, brandy, trufl3es, saffron, honey, yellow wax, wool, mad- der, grain of all kinds, perfumery, gums, &c. About 400 yards from the town, on the road from Lyons to Marseilles, is a triumphal arch, almost entire, which was erected in memory of the victory of Rlarius and Catulus over the Cimbri. It is sixty-six feet broad and sixty feet high, pierced with three

arcades, of which the centre is the largest, being designed for carriages. Fluted Corinthian columns rise on each side of the arcades, the middle ones supporting a trian- gular pediment, above which is an attic crowned with a beautiful cornice. There is not even in Rome itself a triumphal arch so magnificent as this. On a mountain in the neighbourhood there is still to be seen a theatre of Roman construc- tion, in very good preservation, built in a semi- circle, and bounded by a w-all still entire. It is 108 feet high and 300 feet broad, built of fine square stones, and decorated with two rows of arcades and an attic.

Orange is twenty-one miles north of Avig- non ; eighteen west of Charpentras ; twelve south- west of Pont St. Esprit, and 483 south-east of Paris.

Orange, Sea, in natural history, a name given by count Marsigli to a very remarkable species of marine substance, which he denomi- nates a plant. It is tough and firm in its struc- ture, and in many things resembles the common fucus ; but, instead of growing into the branched form which the generality of those substances have, it is round and hollow, and in every respect resembles the shape of an orange. It has, by way of root, certain very fine filaments, which fasten themselves to the rocks, or to shells, stones, or any thing else that comes in the way. From these there grows no pedicle ; but the body of the orange, as it is called, is fastened by them to the rock, or other solid substance. The orange itself is usually of about three or four inches in diameter ; and, while in the sea, is full of water, and even retains it when taken upj. In this state it frequently weighs a pound and a half; but, when the water is let out, and it is dried, it be-

comes a mere membrane, weighing scarcely any thing. It is best preserved by stuffing it with cotton as soon as the water is let out of it, and then hanging it up to dry. Its surface is irregu- lar and rough, and its color a dusky green on the outside, and a clearer, but somewhat bluish, green within ; and its thickness is about an eighth part of an inch. When viewed by the microscope, it is seen to be all over covered with small glandules, or rather composed of them ; for they stand so thick one by another as to leave no space between, and seem to make up the whole substance ; so that it appears very like the rough shagreen skin used to cover toys. These are indeed so many hollow ducts, through which the sea-water finds a passage into the globe formed by this skin, and by these means it is kept always full and distended; on cutting it with a pair of scissars the water immediately runs out, and the skins collapse ; but there is something extremely remarkable in this; for the whole substance, near the wounded place, is in motion, and seems as if alive, and sensible of the wound. The

glandules are found full of water, and resembling small transparent bottles.

Orange-Dew, a kind of dew which falls in the spring-time from the leaves of orange and lemon trees, which is extremely subtile. M. De la Hire observing this, placed some flat pieces of glass under the leaves to receive it ; and, having procured some large drops of it, was desirous of discovering what it was. He soon found that it was not a merely aqueous fluid, because it did not evaporate in the air ; and that it was not a resin, because it readily and perfectly mixed with water : it was natural then to suppose it a liquid gum ; but neither did this, on examina- tion, prove to be the case ; for, being laid on paper, it did not dry as the other liquid gums do. Whence he concluded that it was a kind of manna, which more detailed experiment proved to be the case.

Orange River, a river of Southern Africa, in the Graaf Reynet, district of the Cape colony. It first flows north-west, but afterwards almost due west, till it falls into the Atlantic. In the east part of its course it forms the limit between the country of the Hottentots and Boshuanas; and on the south the banks present an entirely different character of animal and vegetable life from those on the north. Westward it passes a desert, in which waggon wheels sink, and can with the utmost difiiculty be dragged along. The sand-stone rocks here rise in perpendicular walls to a vast extent. The heat is here very severe and scorching. After a course of about 600 miles, it falls into the Atlantic, lat. 28►► 30′ S.

Orange-Tree, in botany. See Citrus.

Orange-Fi.owers are justly esteemed one of the finest perfumes ; and, though little used in medicine, yet the water distilled from them is accounted stomachic, cordial, and carminative. The fruit is cooling, and good in feverish dis- orders, and particularly in diarrhoeas. Orange- peel is an agreeable aromatic, proper to repair and strengthen the stomach, and gives a very grateful flavor to any infusions or tinctures into whose compositions it enters. It is particularly

useful in preparations of the bark; gives an agreeal)le warmth to the infusion ; and, according to Dr. Percival, considerably increases its

virtue. In the Philosophical Transactions there is a very remarkable account of a tree standing in a grove near Florence, having; an orange stock, which had been so grafted upon it, that it became, in its branches, leaves, flower, and fiuit, three-formed : some emulating the orange, some the lemon or citron, and some partaking of both forms in one ; and what was very remarkable, was, that th►►se mixed fruits never produced any perfect seeds ; sometimes there were no seeds at all in them, and sometimes only a few empty ones. GRAIN G-OUTANG. See Simia. ORA'TIGN, n. s. ˆ Fr. oration ; Ital. ora Gr'ator, I tione ; Span, oracion ;

Grator'ical, arfy. % Lat. oraiio. A formal Grator'ically, at//', i speech : a regular or Gr'atory, n. s. J systematic harangue: an orator is, he who delivers such an harangue ; oratorical, relating to, or befittmg, oratory or rhetoric ; rhetorical : oratory, eloquence ; rhe- toric ; exercise of eloquence; also (Fr. oratoire) a place devoted to prayer.

And for to don his rite and sacrifice He cstward hath upon the gate ahovp. In worship of Venus, goddesse of love, Don make an auter and an oratorie.

Chaucer.

Poor queen and son ! your labour is but lost ; For Warwick is a subtle orator. Shukspeare.

Gratorio ; a musical drama of a dignified character, which is destined only for musical ex- ecution, not for theatrical action. Hence, on the part of the poetry, it requires, though not in the strict sense of the tlieatrical drama, the repre- sentation of an action or event, either immedi- ately by the persons concerned in the action or event, or mediately by those who narrate the circumstances, and by the chorus at intervals, in which the whole body of individuals con- cerned express their feelings in music. The subject should be of a noble character (as, for example, the Creation), and the music adapted to express various elevated and tender affec- tions. Oratorios are generally on religious sub- jects, particularly biblical histories and events. The oratorio, properly speaking, commenced when sacred music was distinctly separated from worldly. It had its origin partly in the songs and alternating choruses of the Christian pil- grims, who sung on their pilgrimages, in the time of the crusades, of the life and death of the Redeemer, the last judt;ment, and other re- ligious subjects, in the streets and public places : and partly in the mysteries, or dramatic re- presentations of sacred narratives. As early as 1243, a spiriluale commedia was performed in Padua. St. Philip of Neri (born

at Florence, 1515, died at Rome in 1595), the founder of the congregation of priests of the oratorio, is regarded as the person who first instituted regular oratorios about the year 1540, in or- der to direct the fondness for the musical dra- ma to religious subjects. The oratorios were then little more than hymns accompanied by instrumental music, whence they first appeared in Rome under tlie name of laudi spirituali.

The recitative, or musical narration, was in- vented afterwards. At first, however, the ora- torios were narratives, rather than dramas, for an actor related tlie story to the spectators, and detailed the principal points ; and only a few musical passages were performed, by wliich the feeling appropriate to the different situations was expressed. These performances in sacred music obtained the name of oratorios in the middle of the seventeenth century, either from the congre- gation before spoken of, or from the church where they were executed. Emilio del Cava- lieri (about 1590) composed oratorios with reci- tatives. In the seventeenth century, the oratorio, as well as the opera, became developed in its poetical and musical form. The first oratorios had short choruses, in simple counter-point ; but, in the second half of the seventeenth century, it was customary to conclude with a duet every separate portion of an oratorio, which generally occupied about an hour in the performance. In the beginning of tiie eighteenth century, Pariati, the Jesuit Cera, Lei. Grsini, Spagna, Zeno, and INIetastatio, wrote oratorios, and Caldara, .lo- inelli, Leo, Buononcini, composed the music. A more elevated cliaracter was given to the ora- torio by Handel, who devoted all his power to the chorus till 1732. Haydn distinguished him- self by richness of description, and he introduced worldly subjects and music into the oratorio. ??? Oratwio signifies, likewise, a place of prayer, es|)ecially in monasteries.

Orator, among the ancient Romans, differed from a patronus : the latter was allowed onlylo plead causes on behalf of his clients ; whereas the former might quit the forum and ascend the rostra or tribunal, to harangue the senate or the people. The orators had rarely a profound knowledge of the law, but they were eloquent, and their style was generally correct and concise. They were employed in causes of importance, instead of the common patrons. Similar to the Roman orators were the Grecian Rhetores. See Rhetores.

Orator, Public, an officer of very consider- able dignity, and of some emolument, in the English universities. The public orator is the principal, and in many cases the only ostensible agent for the university in all those matters or forms which are merely external. He

carries on or superintends all correspondences which are calculated to promote the dignity, or raise the utility of the seminary. He has little to do, in- deed, with the internal government of the body, for which a variety of officers in difterent de- partments are appointed ; but in all public af- fairs lie is, as it wf-re, the mouth of the whole ; putting their deliberations into proper form, and communicating or publishing them, according to the intention of the university. Thus, if the whole university, or a committee appointed by them, by statute, or by the will of any particular benefactor, have, after a comparative trial, ad- judged a prize to any person or persons, it is the business of the public orator to inform the suc- cessful parties of the issue of the trial Again, if for singular learning, or for any remarkable good-will shown to the university by any person or persons, the senate or convocation are pleased to declare their grateful sense of it, either bv

conferring degrees, or otherwise, as they think fit, the public orator is to notify this intention to the person or persons concerned ; and so in other cases.

Another part of the public orator's business is to present young noblemen, or those who take honorary degrees, tanquam nobiles, to the vice- chancellor : this he does in a Latin oration, of which the subject is generally a defence of that particular statute which allows the sons of noble- men, and some few others, to proceed to de- grees before what is called the statutable time. In doing this, encomiums are made upon the learning and virtue of the noble candidate ; a view is taken of the dignity of his ancient house ; the honor is mentioned which has accrued to the university from the accession of such a member; and the oration concludes witli promising great credit from his future conduct, as well as benefit from the influence of his rank in the state. These circumstances are deemed sufficient grounds for exempting the sons of noblemen from that tedious course of study through which 'he sons of commoners must all pass before they be thought worthv of academical honors.

Oratorio, in the Italian music, a sort of sacred drama of dialogues; containing recita- tivos, duettos, trios, ritorn□□□llos, choruses, &c. The subjects of those pieces are usually taken from Scripture. Oratorios are greatly used in Rome in the time of Lent, and are now common in England. Menestrier attributes the origin of oratorios to the crusades, and says that the pil- grims returning from Jerusalem

and the Holy Land, &c., composed songs, reciting the life and death of the Son of God, and the mysteries of the Christian faith, and celebrating the achievements and constancy of saints and martyrs. Others, with more probability, observe that the oratorio was an avowed imitation of the opera, with only this difference, that the foundation of it was always some religious or moral subject. Crescimbeni ascribes its origin to St. Philip Neri, who, in his chapel, after sermons, in order to al- lure young people to pious offices, had hymns and psalms sung by one or more voices. Among these spiritual songs were dialogues ; and these entertainments, improving every year, gave rise in the seventeenth century to oratorios, so called from the place of their origin.

R A T 0 R Y,

Oratory has been defined the art of speaking well upon any subject, in order to persuade. The terms rhetoric and oratory, having no other difference but that one is taken from the Greek language, and the other from the Latin, may be used synonymously ; but the case is not the same with respect to the words rhetorician and orator. For, although the Grecians used t'ne former, both to express those who taught the art, and those who practised it, yet the Romans after- ward, when they took that word into their lan- guage, confined it to the teachers of the art, and called the rest orators. And there seems to have been a sufficient reason for this distinction, since the art was the same in both, and might there- fore go by either name : but the different pro- vince of rhetoricians and orators made it not proper that they should be called by different names. Besides, anciently, before rhetoric was made a separate and distinct art from philoso- phy, the same persons taught both. And then they were called not only rhetoricians but so- phists. But, because they often employed their art rather to vindicate what was false and un- just, than to stipport truth and virtue, this disin- genuous conduct, by which they frequently imposed upon weak minds, brought discredit both upon themselves and their profession. Ana therefore the word sophist, or sophister, has been more generally used in an ill sense, to signify one skilled rather in the arts of cavilling, than qualified to speak well and accurately upon any subject.

Histori/ of oratnry. ??? The invention of oratory is by the Egyptians and the fables of the poets ascribed to Mercury. Quintilian says 'The faculty of speech we derive from nature ; but the art from observation.' But no certain account can be given when, or by whom, this art first

began to be cultivated. We learn from Homer that the art was very early in high esteem among the Greeks, as that poet greatly celebrates Nestor and Ulysses for their eloquence. Quintilian says that afterwards Empedocles is the first upon record who attempted any thing concerning it. And he, by Sir Isaac Newton's account, flourished about 500 years after Troy was taken. Cicero says, ' Though some had spoken well be- fore Corax and Tisias, yet none with order and method.' But Gorgias had a golden statue erected to him at Delphos, an honor conferred upon him only ; and he is said to have been so great a master of oratory, that, in a public as- sembly, he would undertake to declaim im- mediately upon any subject proposed to him. He wrote, as Cicero informs us, in the demon- strative or laudatory way ; which requires most of the sublime, and makes what Diodorus Sicu- lus says of him the more probable, that ' he first introduced the strongest figures, members of periods opposite in sense, of an equal length, or ending with a like sound, and other ornaments of that nature.' And hence those figures which give the greatest force and lustre to a discourse were anciently called by his name. Cicero tells us farther that Thrasymachus and Gorgias were the first who introduced numbers into prose, which Isocrates afterwards brought to perfection. Quintilian likewise mentions Protagoras, Gorgias, Prodicus, and Thrasymachus, as the first who treated of common places, and showed the use of them. Plato wrote an elegant dialogue upon this subject, which is still extant, entitled Gor- gias.

Isocrates was the most renowned of all Gor- gias's scholars. Cicero extols him as the greatest master and teacher of oratory ; ' whose school, like the Trojan horse, sent forth many great men.

Aristotle was chiefly induced to engage in this province from an emulation of his glory. Quin- tilian says they both wrote upon the art, though there is no system of the former extant. But that of Aristotle is esteemed the best and most complete of any in the Greek language. In this age the Grecian eloquence appeared in its highest perfection. Demosthenes was a hearer both of Isocratds and Plato, as also of Isaeus (ten of whose orations are yet extant) ; and by his surprising genius, and indefatigable industry, made such advantage of their precepts, that he has been always esteemed by the best judges the prince of Grecian orators. His great adversary and rival iEschines, after his banishment, is said to have gone to Rhodes, and employed his time there in teaching rhetoric. Theodectes and Theophrastus, both

scholars of Aristotle, imi- tated their master in writing upon the art. And from that time the Greek philosophers, especially the stoics and peripatetics, applied themselves to lay down the rules of oratory ; which Socrates had before separated from the province of a philosopher. There is preserved a treatise upon this subject, which some ascribe to Demetreus Pha- lereus, though others, more probably, to Diony- sius of Halicarnassus. Quintilian mentions several other rhetoricians in the following ages, who were likewise writers ; as Hermagoras, Athenaeus, ApoUonius, Molo, Areus Caecilius, Dionysius of Halicarnassus, ApoUonius of Per- gamus, and Theodore of Gadara. But of these nothing now remains upon the subject of oratory, except some tracts of Dionysius, who flourished in the reign of Augustus. But some eminent writers on this subject have appeared among the Greeks since the time of Quintilian, particularly Hermogenes, and Longinus, the author of the incomparable treatise of the Sublime.

It was long before the Romans cultivated this art, and not without difficulty at first. The reason was, that for several ages they were wholly addicted to military affairs. Therefore, so late as A. U. C. 592, when by the industry of some Grecians the liberal arts began to flourish in Italy, a decree passed the senate, by which all philosophers and rhetoricians were ordered to de- part out of Rome. But in a few years after, when Carneade?, Critolaus, and Diogenes, who were not only philosophers but orators, came ambassadors from Athens to Rome, the Roman youth were so charmed with the eloquence of their harangues, that they could no longer be stopped from pursuing the study of oratory. And, by a further acquaintance with the Greeks, it soon came into such esteem, that persons of the first quality employed their time and pains to acquire it. Seneca tells us, that Lucius Plotius, a Gaul, was the first who taught the art of ora- tory ui Rome in Latin ; which, Cicero says, was while he was a boy. Seneca adds, that this pro- fession continued for some time in the hands of freed men ; and that the first Roman who en- gaged in it was Blandus, of the equestrian order, who was succeeded by others ; some oj whose lives are extant, written by Suetonius, as many of the Grecians are by Philostratus and Euna- pius. Quintilian likewise gives us the names of ihose Romans who wrote upon the art. ‘ The

first,’ says he, ‘who composed any thing upon the subject, was M. Cato the censor; and after him Antony the orator ; which is the only work he has left, and that imperfect. Then followed some of less note. But he who carried elo- quence to its highest pitch among us was Cicero ; who has, likewise, by his rules, given the best plan both to practise and teach the art. Cornificius wrote largely upon the subject; Ster- tinius, and Gallio, the father, each of tiiem some- thing. But Celsus

and Lenas were more accu- rate than Gallio : and in our times Virginius, Pliny, and Rutilius. Time has deprived us of most of the writers mentioned by Quintilian. But we have the less reason to regret this ; inas- much as, besides his Two Books of Invention, which Quintilian here calls his Books of Rhe- toric, there are extant his Three Books of an Orator ; one of Famous Orators ; and another entitled The Orator ; also his Topics, a preface concerning the best sort of Orators ; and a trea- tise of the Parts of Oratory. Each of these treatises, whether we regard the justness and de- licacy of the thoughts, the usefulness of the rules, or the elegance and beauty of the style, de- serves to be frequently perused by all lovers of eloquence. But the four books to Herennius, which are published among Cicero's works, seem with good reason to be attributed to Cornificius.

Celsus, whom Quintilian places among the best rhetoricians, is also said to have taught ora- tory. His eight books of Medicine are yet ex- tant, written in so beautiful a style as plainly shows him a master of eloquence. But Quin- tilian himself excelled all who went before him in diligence and accuracy as a writer. His In- stitutions are so comprehensive, and written with such exactness and judgment, that they are ge- nerally allowed to be the most perfect work of the kind. There were some other orators in the following ages, whose works are extant ; but, a:, they contain nothing of moment, it is unneces- sary to enumerate them. Tlie archbishop of Cam – bray gives it as his opinion, that the method of forming the system of oratory is to collect it from the finest precepts of Aristotle, Cicero, Quintilian, Longinus, and other celebrated au- thors of antiquity.

Objects and divisions of oratory. ••• The business of oratory is to teach us to speak well ; which, as Cicero explains it, is to speak justly, metho- dically, floridly, and copiously.

It consists of four parts ; invention, disposi- tion, elocution, and pronunciation. Every one whd aims to speak well and accurately upon any subject, pursues such thoughts as seem most proper to explain and illustrate the thing upon which he designs to discourse. And, if the nature of it requires that he should bring reasons to confirm what he says, he not only seeks the strongest, and such as are like to be best received, but prepares to answer any objection which may be offered to the contrarj'. 'ITiis is invention. After this he considers how he can best arrange those arguments which have occurred to his mind, that they may appear in the plainest light, and not lose their force by disorder and confusion. This is disposition. His next care is to give his thoughts an agreeable dress; by selecting the

most proper words, cieaj-est expressions, smootn and harmonious periods, with other ornaments of style, as may best suit the nature of his sub- ject, brighten his discourse, and render it most entertaining to his hearers. This is elocution. The last thing is to deliver what he has thus composed with a just and agreeable pronuncia- tion. And daily experience convinces us how much this contributes both to engage the atten- tion, and impress what is spoken upon the minds of the hearers.

PART I. OF INVENTION.

I. Of invention in general ; and particularly of common places, and the state of a cause. ××× In- vention, in general, is the discovery of such things as are proper to persuade. To attain this end, the orator proposes three things : 1 . To prove or illustrate the subject upon which he treats ; 2. To conciliate the minds of his hearers, and to engage their passions in his favor ; and, 3. As these require different kinds of arguments or motives, invention furnishes him with a sup- ply for each of them. An argument, as defined by Cicero, is a reason which induces us to be- lieve what before we doubted of. And, as different kinds of discourses require different arguments, rlietoricians have considered them two ways ; in general, under certain heads, as a common fund for all subjects ; and, in a more particular man- ner, as they are suited to demonstrative, deli- berative, or judicial discourses.

Extensive knowledge is the noblest fund of invention. An orator, therefore, should be fur- nished with a stock of important truths, solid maxims, and a variety of knowledge, collected both from observation and acquaintance with the liberal arts ; that he may not only be able to ex- press himself in the most agreeable manner, but likewise to support what he says with the strongest and clearest arguments. But, as all have not the same opportunity to cultivate their minds with learning and knowledge, art has prescribed a method to lessen in some measure, these difficulties, and help every one to a supply of arguments upon any subject. And this has been done by common places, which Cicero calls the seats or heads of arguments, and, by a name from the Greek, topics. They are of two sorts, internal and external.

1. Internal topics arise from the subject upon which the orator treats ; and are therefore distin- guished from external, which he fetches from without, and applies to his purpose. Cicero and Quintilian make them

sixteen ; of which three comprehend the whole thing they are brought to prove, namely, definition, enumera- tion, and notation ; of the remaining thirteen, some contain a part of it, and the rest its various properties and circumstances, with other consi- derations relating to it ; these are, genus, species, antecedents, consequents, adjuncts, conjugates, cause, effect, contraries, epposites, similitude, dissimilitude, and comparison. Definition ex- plains the nature of the thing defined, and shows what it is. Enumeration takes in all the parts cf a thing. And from this we prove, that what

agrees to all the parts agrees to the whole. No- tation, or etymology, explains the meaning or signification of a word. Genus contains under it two or more species of things, differing in na- ture. Species is that which comprehends under it all the individuals of the same nature. Ante- cedents are such things, as, being once allowed, others necessarily, or very probably, follow. Consequents are such things, as, being allowed, necessarily or very probably infer their antece- dents. Adjuncts are separable properties of things, or circumstances that attend them. These are very numerous, and afford a great variety of arguments. They do not necessarily infer their subject ; but, if fitly chosen, render a thing cre- dible, and are a good ground for assent. Con- jugates are words deduced from the same origm with that of our subject. By these the habit is proved from its acts. A cause is that by the force of which a thing does exist. There are four kinds of causes, matter, form, efficient, and end, which afford a great variety of arguments. The way of reasoning from them is to infer the effect from the cause. An effect is that which arises from a cause, therefore the cause is proved by it. Contraries are things, which, under the same genus, are at the utmost distance from eacli other ; so that what we grant to the one we deny the other. Opposites are things, which, though repugnant to each other, yet are not directly con- tradictory : as. To love and to injure, to hate and to commend. They differ from contraries in this, that they do not absolutely exclude one another. Similitude is an agreement of things in quality. Dissimilitude is a disagreement of things in quality. Comparison is made three ways ; for either a thing is compared with a greater, with a less, or with its equal. This, therefore, differs from similitude on this account, that the quality was considered in that, but here the quantity. From this account of common places, as laid down by the orators of ancient Greece and Rome, it is easy to conceive what a large field of discourse they open to the mind upon every subject. ‘ One who had no other aim,’ says Dr. Blair, ‘ but to talk copiously and plausibly, by consulting them on every subject, and laying hold of all that they suggested, might discourse without end ; and that too, though he had only the

most superficial knowledge of his subject. But such discourse could be no other than trivial. What is truly solid and persuasive must be drawn from a thorough knowledge of the subject, and profound meditation on it. They who would direct students of oratory to any other sources of argumentation, only delude them ; and, by attempting to render rhetoric too perfect an art, they render it, in truth, a trifling and childish study.'

2. External topics are all taken from authori- ties, and have one general name. Testimony. All testimonies may be distinguished into two sorts, divine and human. A divine testimony, when certainly known to be such, is incontestable, and admits of no debate. Human testimonies, con- sidered as furnishing the orator with arguments, may be reduced to three heads ; writings, wit- nesses, and contracts. The occasion of dispute respecting written testimonies, which may anord

the orator an opportunity of displaying liis abi- lities, may arise from five circumstances, viz. ambiguity, disagreement between words and in- tention, contrariety, reasoning, and interpreta- tion. Of these it would be superfluous to give examples.

3. Of the state of a controversy. ••• The ancients, observing that the principal question or point of dispute in all controversies might be referred to some particular head, reduced those heads to a certain number, that both the nature of the ques- tion might thus be better known, and the argu- ments suited to it be discovered with greater ease. And these heads they call states. The number of these states both Cicero and Quinti- lian reduce to three ; and tell us that three things may be enquired into in all disputes : Whether a thing is ? what it is ? and how it is ?

II. Of arguments suited to demonstrative discourses. ••• These consist either in praise or dispraise; and, agreeably to the nature of all contraries, one of them will serve to illustrate the other. Either persons or things may be the subjects of praise.

1. In praising or dispraising persons, rhetori- cians prescribe two methods : 1 . To follow the order in which every thing happened that is mentioned in the discourse ; 2. To reduce what is said under certain general heads, without a strict regard to the order of time. i. In pursu- ing the former method, the discourse may be very conveniently

divided into three periods. The first of which will contain what preceded the person's birth ; the second the whole course of his life ; and the third what followed upon his death, ii. The other method is to reduce the discourse to certain general heads, without re- garding the order of time. As if any one, in praising the elder Cato, should propose to do it, by showing that he was a most prudent senator, an excellent orator, and most valiant general.

1. In praising things, all beings inferior to man may be proper subjects for praise or dis- praise ; whether animate or inanimate ; whether ideal or real ; as virtues, vices, countries, cities, &c. But what chiefly claim the attention of the orator, as subjects of praise or dispraise, are the actions of men.

III. Of arguments suited to deliberative dis- courses.••• This kind of discourse must have been very ancient ; since, doubtless, from the earliest period of men conversing together, they delibe- rated upon their common interest, and offered their advice to each other. But neither those of the laudatory nor judicial kind could be intro- duced till mankind were settled in communities. The early practice of suasory discourses appears from sacred writ, where we find that, when Moses was ordered upon an embassy into Egypt, he would have excused himself for want of elo- quence. And Homer represents the Greeks at the siege of Troy, as anxiously ninning to hear their generals harangue them. Nor is this part of oratory less conspicuous for its usefulness to mankind than for its antiquity ; being highly beneficial either in councils, camps, or any so- cieties of men. How many instances have we upon record, where the fury of an enraged mul- titude has been checked and appeased by the

prudent and artful persuasion of some particular person ! Tlie story of INlenenius Agrippa, who pacified the commons of Rome, when they with- drew from the senators, and retired out of the city, by his fable of the Belly deserted by the other members, is well known. And how often have armies been fired to the most dangerous exploits, or recalled to their duty, when ready to mutiny, by a moving speech of their general !

The principal heads of argument proper for advice are those taken from the nature of the thing under consideration. 1. Pleasure often affords a very cogent argument in discourses of this nature. 2. Profit or advantage has no less influence upon mankind than the former ; and, when it respects things truly valuable, it is a veryjuSt and laudable motive. 3. Honor, i\mn which no argument will sooner prevail with ge- nerous minds, or inspire them with greater ardor.

But although a thing, considered in itself, ap- pear beneficial if it could be attained, yet the expediency of undertaking it may still be ques- tionable; in which case the following heads, taken from the circumstances which attend it, will afford proper arguments to engage in it : ††† 1. The possibility of succeeding may sometimes be argued as one motive to this end. 2. But an argument founded upon probability will be much more likely to prevail. 3. But as even probability is not a motive strong enough with many persons to engage in the prosecution of a thing which is attended with considerable difln- culties, it is often necessary to represent the facility of doing it, as an additional reason. 4. If the thing advised can be shown to be in any respect necessary, this will render the motive still much stronger for undertaking it. 5. To these heads may be added the consideration of the event, which in some cases carries great weight with it. As when we advise to the doing of a thing from this motive, That whether it succeed or not, it will yet be of service to undertake it.

These are the principal heads which furnish the orator with proper arguments in giving ad- vice. But no small skill and address are re- quired in giving it. For since the tempers and sentiments of mankind, as well as their circum- stances, are very various, it is often necessary to accommodate the discourse to their opinions and prejudices. And therefore the weightiest argu- ments are not always the most proper and fittest to be used on all occasions. Cicero, in treating upon this subject, distinguishes mankind into two sorts ; the ignorant, who always prefer profit to honor ; and such as are civilized, who prefer honor and reputation.

I'. Of arguments stilted to judicial discourses. ††† Injudicial controversies there are two parties ; the plaintiflf or prosecutor, and the defendant or person charged. The subject is always some- thing past, and the ends proposed by them Cicero calls equity or right ; the former of which arises from the laws of the country, and the latter from reason and the nature of things.

All judicial causes are either private or pul>- lic. I'rivate causes, iˆr civil causes, relate to the right of particular persons. Public causes are those which relate to public justice and the go- vernment of the state ; which are also called

criminal, because by them crimes are prosecuted, whether capital, or

of a less heinous nature. We need only take the heads of the arguments from this last kind, because they are more copious, and easy to be illustrated ; whence such as agree to the former will sufficiently appear. 1. The conjectural state. When the accused person denies the fact, there are three things which the prosecutor has to consider : whether he �would have done it, whether he could, and whe- ther he did it. And hence arise three topics ; from the will, the power, and the signs or cir- cumstances which attended the action. The affections of the mind discover the will ; as passion, an old grudge, a desire of revenge, a resentment of an injury, and the like. The se- cond head is the power of doing a thing ; and there are three things which relate to this, the place, the time, and opportunity. The third head comprehends the signs and circumstances which either preceded, accompanied, or followed, the commission of the fact. So threats, or the accused person being seen at or near the place before the fact was committed, are circumstances that may probably precede murder ; fighting, crying out, bloodshed, are such as accompany it; paleness, trembling, inconsistent answers, hesitation, or faltering of the speech, something found upon the person accused which belonged to the deceased, are such as follow it. These are the topics from which the prosecutor takes his argiiments. The business of the defendant is to invalidate these. Therefore such as are brought from the will, he either endeavours to show are not true, or so weak as to merit very little regard. And he refutes those taken from the power, by proving that he wanted either op- portunity or ability; as, if he can show, that neither the place nor time insisted on was at all proper ; or that he was then in another place. In like manner he will endeavour to confute the circumstances, if they cannot be directly denied, by showing that they are not such as necessarily accompany the fact, but might have proceeded from other causes, though nothing of what is al- leged had been committed ; and it will be of great service to assign some other probable cause.

2. The definitive state, which is principally concerned in defining and fixing the name pro- per to the fact ; though orators seldom use exact definitions, but commonly choose larger descrip- tions, taken from various properties of the sub- ject or thing described. The heads of argument in this state are much the same to both parties. For each of them defines the fact his own way, and endeavours to refute the other’s definition.

3. The third state is that of quality, in which the dispute turns upon the justice of an action. And here the defendant does not deny he did the thing he is charged with ; but asserts it to be right and equitable, from the circumstances of the case, and the motives which induced

him to it.

4. Lastly, a fact is sometimes rather excused than defended, by pleading that it was not done designedly, or with any ill intent. This is called concession ; and consists of two parts, apology

and intreaty. The former represents the matter as the effect of inadvertency, chance, or necessity.

V. Of the character and address of an orator. ••• Having considered and explained the first part of invention, which furnishes the orator witli such arguments as are necessary for the proof of his subject, we are next to show what are the proper means to conciliate the minds of his hearers, to gain their affection, and to recom mend both himself and what he says to then good opinion and esteem. This is by Quintilian called propriety of manners. And he adds, it is necessary ‘ that every thing appear easy and natural, and the disposition of the speaker be discovered by his words.’ There are four quali- ties said to be suited to the character of an ora- tor, which should appear in his discourses, to render what he says acceptable to his hearers ; and these are, wisdom, integrity, benevolence, and modesty. It is the orator’s business to consider the various characters and circumstances of life, with the different bias and way of think- ing they give to the mind ; that he may so con- duct himself in his behaviour and manner of speaking as will render him most acceptable, and gain him the good esteem of those whom he addresses.

VT. Of the passions. ••• As it is often highly necessary for the orator, so it requires his greatest skill, to engage the passions in his interest. Where persons will neither be convinced by reason, nor moved by the authority of the speaker, the only way left to put tliem upon action is to engage their passions. The passions may be separately referred, either to demonstra- tive, deliberative, or judicial discourses ; though they are not confined to any of them. 1 . To the demonstrative kind we may refer joy and sor- row, love and hatred, emulation and contem]it. 2. To deliberative discourses may be referred fear, hope, and shame. 3. To judicial discourses may be referred anger and lenity, pity and in- dignation.

These are the passions with which an orator is principally concerned. In addressing whicn, not only the greatest warmth and force of expres- sion is often necessary, but he must likewise first endeavour to impress his own mind with the same passion he would excite in others. A man may convince, and even persuade others to act, by mere

reason and argument. But that degree of eloquence which gains the admiration of man- kind, and properly denominates one an orator, is never found without warmth or passion. Pas- sion, when in such a degree as to rouse and kin- dle the mind, without throwing it out of the possession of itself, is universally found to exalt all the human powers. It renders the mind more enlightened, penetrating, vigorous, and masterly, than it is in its calm moments. A man actuated by a strong passion becomes much greater than he is at other times. lie is at no loss for words and arguments. He transmits to others, by a sort of contagious sympathy, the warm sentiments which he feels ; his looks and gestures are all persuasive ; and *iature here shows herself infinitely more powerful than art.

ORATOR Y.

PART II. OF DISPOSITION.

As invention supplies the orator with neces- sary materials, so disposition directs him how to place them in the most proper order. What is here chiefly intended by it is, the placing the several parts of a discourse in a just method and dependence upon one another. Writers are not all agreed in determining the parts of an oration : though the difference is rather in the manner of considering them than in the things themselves. Cicero mentions six, viz. introduction, narra- tion, proposition, confirmation, confutation, and conclusion.

I. Of the introduction. ••• The design of the in- troduction is to prepare the minds of the hearers for a suitable reception of what is to follow. For this end, three things are requisite ; that the orator gain the good opinion of his hearers, that he secure their attention, and give them some general notion of his subject. As to attention, Cicero says, ‘ We shall be heard attentively on one of these three things ; if we propose what is great, necessary, or for the interest of those to whom the discourse is addressed. Some general account of the subject of the discourse is always necessary. For every one expects to be soon informed of the design of the speaker, and what he proposes to treat of. These are the heads which commonly furnish matter for this part of a discourse. In some cases, orators have re- course to a more artful way of opening their sub- ject, endeavouring to remove jealousies, apologise for what they are about to say, and seem to re- fer it to the candor of the hearers to judge of it as they please. This is called insinuation ; and may be necessary, where a cause is in itself doubtful, or may be thought so from the preju- dices of the hearei’S, or the impressions already made upon them by the contrary side. An honest man would not knowingly engage in a bad cause; and yet, through

prevailing prejudice, that may be so esteemed which is not so in it- self. In these cases great prudence is neces- sary to give such a turn to things as may be least liable to offence.

II. Of narration. ••• Tlie orator having prepared his hearers to receive his discourse with candor, and acquainted them with his general design, before he proceeds directly to his subject, often finds it necessary to give some account of what preceded, accompanied, or followed upon it. And this he does to enlarge the view of the par- ticular point in dispute, and place it in a clearer liuht. This is called narration ; which is a re- cital of something done, in the order and man- ner in which it was done. Those things which properly enter into a narration are the cause, inanner, time, place, and consequences of an action ; with the temper, fortune, views, ability, associates, and other circumstances of those con- cerned in it. In relating a fact, the orator de- scribes it in so strong and lively a manner as may give the greatest evidence to his hearers, and make the deepest impression upon their minds. There are four properties required in a good narration; that it be short, perspicuous, probable, and interesting.

III. Of the proposition. ••• In every regular discourse, the speaker's intention is to prove or illustrate something. And, when he lays down his subject in a distinct and express manner, this is called the proposition. Orators use seve- ral ways in laying down the subject of their dis- courses. Sometimes they do it in one general proposition. At other times, to give a clearer and more distinct view of their discourse, they subjoin to the proposition the general heads of argument by which they endeavour to suppoit it. But when the subject relates to several dif- ferent things, which require to be separately laid down in distinct propositions, it is called a partition. Some have made two kinds of parti- tion, one called separation, and the other enu- meration. By the former, the orator shows in what he agrees with his adversary, and wherein he differs from him. By the latter he acquaints his hearers with the several parts of hig discourse upon which he designs to treat. And this alone, properly speaking, is a partition. There are three things requisite in a good partition ; that it be short, complete, and consist but of a few mem- bers. A just partition is attended with consider- able advantages. It gives both light and ornament to a discourse. In a sermon, or a pleading at the bar, few things are of greater consequence than a proper division. It should be studied with much care ; for, if one take a wrong method at first setting out, it will lead him astray in all that follows, and render the whole discourse either perplexed or languid.

IV\ Of confirmation. ••• The orator, having ac- quainted his

hearers, in the proposition, with the subject on which he designs to discourse, usually proceeds either to prove or illustrate what he has laid down. Some discourses require nothing more than an illustration, to set them in a proper light, for which reason, they have often no distinct proposition. But, where arguments are brought in defence of the subject, this is properly confirmation. Cicero dehnes ‘ confirmation, that which gives proof, authority, and support, to a cause, by reasoning.’ If any thing in the proposition seems obscure, or liable to be mis- understood, the orator first explains it, and then offers such argiiments in proof of it, and repre- sents them in such a light, as seem most proper to gain the assent of his hearers. Two methods of reasoning are employed by orators, tlie syn- thetic and analytic.

1. Every piece of synthetic reasoning may be resolved into a syllogism or series of syllogisms. As a logical syllogism consists of three parts or propositions, a rhetorical syllogism frequently contains four or five. Cicero reckons this last the most complete. But all that is said in confirmation of either of the premises is accounted but as one part. But orators do not often use complete syllogisms, but most commonly enthy- memes. An enthymeme is an imperfect syllo- gism, consisting of two parts; the conclusion, and one of the premises : and, in this kind of syllogism, that proposition is omitted, whether it be the major or minor, which is sufficiently manifest of itself, and may easily be supplied by the hearers. But tlie proposition that is ex- pressed is usually called the antecedent, and

the conclusion of the consequent. It is reckoned a beauty in enthymeraes when they consist of contrary parts : because the turn of them is most acute and pungent. Such is that of Mi- cipsa in Sallust : ‘ What stranger will be faithful to you who are an enemy to your friends ?’ Ora- tors manage enthymemes in the same manner they do syllogisms ; that is, they invert the order of the parts, and confirm the proposition by one or more reasons : and therefore a rhetorical enthymeme frequently consists of three parts, as a syllogism does of five. Though, strictly speak- ing, a syllogism can consist of no more than three parts, and an enthymeme but of two.

2. The other method of reasoning is tlie ana- lytic, in which the orator conceals his intention concerning the point he is to prove, till he has gradually brought his hearers to the designed conclusion. They are led on, step by step, from one known truth to another, till the con- clusion

be stolen upon them, as the natural con- sequence of a chain of propositions. Under the analytic may be comprehended reasoning by example. Rhetoricians use this word in a differ- ent sense from the common acceptation. In oratory the word example is used for any kind of similitude; or, as \ ossius defines it, ‘when one thing is inferred from another, by reason of the likeness which appears between them.’ Hence it is called an imperfect induction, which infers something from several others of the like nature, and has always the greatest force when the examples are taken from facts. But com- parisons are sometimes made between facts and other things, to infer some difference or oppo- sition between them. In comparing two facts, on account of some disagreement and unlike- ness, the inference is made from the difference between one and the other in that particular respect only. Thus we have given a brief account of the principal methods of reasoning used by orators. As to the disposition of argu- ments, or the order of placing them, some advise to put the weaker, which cannot wholly be omitted, in the middle : and such as are stronger partly in the beginning, to gain the esteem of the hearers, and render them more attentive ; and partly at the end, because what is last heard is likely to be retained longest : but, if there are but two arguments, to place the stronger first, and then the weaker ; and after that to return to the former, and insist principally upon it. But this must be left to the prudence of the speaker. Nor ought arguments to be crowded too closely upon one another ; for that takes off from their force, and does not leave the hearers sufficient time duly to consider them.

V. Of confutation. ••• The forms of reasoning here are the same as have been explained under confirmation. Confutation, however, is often the more difficult task; because he who is to prove a thing comes usually prepared ; but he who is to confute it is frequently left to a sudden answer. Therefore, not only a good judgment, but a readiness of thought is neces- sary. Those arguments that are foreign to the subject may in a very few words be shown to be insignificant. There ought also to be a distinc- tion made between such things as relate to the

subject, according to their importance. Those that appear to have no great weight should be slightly remarked ; and are generally better turned off with an air of neglect, a pungent question, or an agreeable jest, than confuted by a serious and labored answer. But those which relate to the merits of the cause may be confut- ed either by contradicting them, or by showing some mistake in the reasoning, or their invalid- ity when granted.

Things may be contradicted several ways. What is apparently false may be expressly de- nied. And what the adversary cannot prove may likewise be denied. It is a handsome way of contradicting a thing, by showing that the adversary himself maintained the contrary. An adversary is never more effectually silenced than when he is charged with contradictions; for this is stabbing him with his own weapon. Sometimes a thing is not in express terms denied, but represented to be utterly incredible. And this method exposes the adversary more than a bare denial. There is likewise an ironi- cal way of contradicting a thing, by retorting that and other things of the like nature upon the adverse party. Such an unexpected return is sometimes of great service to abate the confi- dence of-an adversary.

A second method of confutation is, by observ- ing some flaw in the reasoning of the adverse party. Syllogisms may be refuted, either by showing some mistake in the premises, or that the conclusion is not justly deduced from them. Enthymemes may be refuted, either by showing that the antecedent is false, or the consequent not justly inferred from it. As to induction and example, by wliich the truth or equity of a thing is proved from its likeness to other things, the reasoning is invalid if the things so com- pared can be shown not to have that similitude or agreement on which the inference is founded. The last method of confutation is when the orator does in some sense grant the adversary his argument* and at the same time shows its in- validity. This is done by a variety of ways, according to the nature of the subject. Some- times he allows what was said may be true ; but pleads that what he contends for is necessary. At other times he pleads that, although the con- trary opinion may seem to be attended with advantage, yet that his own is more just or honorable. Such was the case of Regulus. Another way of confutation is by retorting upon the adversary his own argument. The orator takes this advantage where an argument proves too much, that is, more than the person intended who made use of it. Inversion resembles this, by which the orator shows that the reasons offered by the opposite party make for him. Sometimes the charge is acknowledged, but the crime shifted off to another. Another method is to alleviate the charge, and take off the force oi it, by showing that the thing was not done with that intention which the adversary insinu- ates. Such are the methods of confutation used by orators, in answering arguments brought by the contrary party. But sometimes they raiso such objections themselves to what they have said as they imagine may be made by otheis ###

which tliey afterwards answer, the belter to in- duce their hearers to think that notliing con- siderable can be offered against what they have advanced, but what will admit of an easy reply. This is an effectual way of defeating an adver- sary, when the objection is well stated, and clearly answered.

'l. Of the conclusion. ••• Rhetoricians make the conclusion of a discourse to consist of two parts : recapitulation, and an address to the passions.

1. Recapitulation is a summary account of what the speaker has before offered in main- tenance of his subject ; and is designed both to refresh the memory of the hearers, and to bring the principal arguments together into a narrow compass, that they may appear in a stronger light. There are several things necessary to a good recapitulation. (1.) It must be short and concise, as it is designed to refresh the memory, and not to burden it. The chief things only are to be touched, on which the cause principally depends; the general heads of the discourse, with the main arguments brought to support them. (2.) They should be recited in the same order in which they were at first laid down. The hearers will thus be enabled better to keep pace with the speaker as he goes along. Every thing ought to be represented in the strongest terms, and in so lively a manner as may at the same time both entertain the audi- ence, and make the deepest impression upon their minds. Sometimes a repetition is made, by running a comparison between the speaker's own arguments and those of the adverse party. But when the discourse is very long, and the arguments insisted on have been many, to pre- vent the hearers losing patience by a more par- ticular recital, the orator sometimes only just mentions such things as he thinks of least con- sequence by saying that he omits or passes over them, till he comes to what is of greater moment, which he represents more fully. And this is what the writers upon this art call preterition.

2. By an address to the passions, the orator sometimes endeavours occasionally to work upon his hearers in other parts of his discourse, but especially in the conclusion, where he is warmest himself, and labors to make them so. For the main design of the introduction is to conciliate the hearers; of the narration, proposition, and confirmation, to inform them ; and of the con- clusion, to move them. And, therefore, says Quintilian, 'here all the springs of eloquence are to be opened. It is here we secure the minds of the hearers, if what went before was well managed. Now we are past the rocks and shallows, all the sails may be hoisted. And, as the greatest part of the conclusion consists in illustration, the most pompous language and strongest

figures have place here.' The passions, which the orator addresses, differ according to the nature of the discourse. In demonstrative orations, when laudatory, ††† love, admiration, and emulation, are usually excited ; but, in invec- tives,††† hatred, envy, and contempt. In delibe- rate subjects, either the hope of gratifying some desire is set in view, or the fear of some ira- oending evil. And, in judicial discourses, almost

all the passions have place, but more especially resentment and pity. But the same passion may be excited by very different methods. Horace endeavours to recommend virtue by laughing vice out of countenance ; Persius moves us to an abhorrence of vice, with the severity of a philosopher ; and .luvenal by open and vehe- ment invectives. So orators make use of all these methods, but they should not dwell long upon the same passion. When the emotion is once carried as high as it can be, the hearers should be left under its influence.

Orators sometimes endeavour to raise contrary passions, as they are concerned for opposite parties. So the accuser excites anger and re- sentment, but the defendant pity and compas- sion. But the orator should always express the same passion himself with which he endeavours to affect others, in his action, voice, language, words, and expression. But a decency and propriety of character is always to be observed. This' justness of character is admirably well ob- served by Cicero, in his defence of Milo; who being a man of most undaunted courage, it would have been improper to introduce him moving pity, and begging for mercy. Cicero therefore takes this part upon himself ; and what he could not do with any propriety in the cha- racter of Milo, he performs in his own. But, as persons are commonly more affected with what they see tiian with what they hear, orators some- times call in the assistance of that sense in moving the passions. For this reason it was usual among the Romans, in judicial cases, for accused persons to appear with a dejected air and a sordid garb, attended by their parents, children, &c., with the like dress and aspect. The Areopagites at Athens, if the orator began to say any thing which was moving, an oflicer immediately bade him be silent. There is cer- tainly a medium between these extremes.

VII. Of digressio7i, transition, and amplifi- cation.††† Besides the number, order, and nature of the parts which constitute a complete and regular oration, explained in the preceding chapters, there are several other things necessary to be known by an orator, which come under the second branch of his art. These are, digres- sion, transition, and amplification.

1. Digression, as defined by Quintilian, is, ‘a going off from the subject we are upon to some different thing, which may, however, be of service to it.’ As where a subject is of itself dry, or requires close attention, it relieves the mind by something entertaining. But they should neither be too frequent nor too long. Indeed orators sometimes, when sore pressed, and the cause will not bear a close scrutiny, artfully run into digressions, to divert the atten- tion of the hearers from the subject, and turn them to a different view. And in such cases, to be unobserved, they do it tacitly, that they may get clear of a difficulty, till they enter upon some fresh topic.

2. T?ansitions are often used not only af^er a digression, but upon other occasions, and reca pitulate in a few words both what has been said already, and what is next designed to be said. \Vhere a discourse consists of several

parts, this is very proper, especially when the parts are of a considerable lengUi ; tor it assists the heaners to carry on the series of the discourse in their minds. But sometimes, in passing from one thiiig to another, a general hint may be thought sufficient; at other times, for greater brevity, the transition is imperfect, and mention made only of the following head.

3. Bi/ umplijication is meant, not barely en- larging upon a thing, but the representation of it in the fullest and most comprehensive view, so that it may in the liveliest manner strike the mind. Rhetoricians have observed several ways of doing this. One is to ascend from a particular thing to a general. Thus Cicero in his defence of Archias, having commended him as a poet, says many things in praise of polite literature in ge- neral. A contrary method is, to descend from generals to particulars. As if any one, while speaking in commendation of eloquence, should illustrate what he says from the example of Ci- cero, and show the services he rendered his country, and the honors he gained to himself, by his admirable oratory. A third method is the enumeration of parts. Such representations greatly enla/ge the image of a thing, and afford the mind a much clearer view of it than if it were contracted into one single proposition: and a thing may likewise be illustrated by its oppo- site. Thus the blessings and advantages of peace may be recommended from the miseries and ca- lamities of war.

4. Gradation is another beautiful way of doing this. As when Cicero

would aggravate the cruelty and barbarity of Verres for crucify- ing a Roman citizen, by showing it to be a pu- nishment only inflicted upon slaves. Facts may be amplified from their circumstances ; as time, place, manner, event, and the like. As the de- sign of amplification is not barely to prove the truth of things, but to adorn and illustrate them, it requires a florid and beautiful style, strong and emphatic words, flowing periods, harmonious numbers, lively tropes, and bright figures.

PART III. .OF ELOCUTION.

On this subject we need only here observe, that it has been divided by rhetoricians into three parts: elegance, composition, and dignity. A discourse which has all these properties suitably adjusted, must, with respect to the language, be perfect in its kind.

I. Elegance consists in purity and perspi- cuity ; both with respect to single ords ,.nd their construction in sentences.

1. Purity includes the choice of such words and phrases as are agreeable to the use of the language m which *e speak : and so grammarians reduce the faults they oppose to it to two, barbarism and solecism ; the former of which respects single words, and the latter their construction. But in oratory, neither all words nor all expressions are called pure which occur in language; but such only as come recom- mended by the authority of those who speak or write with accuracy and politeness. Orators must also gibstain from antiqiiated or obsolete

words and phrases, as well as vulgar or sordid ones ; and the use of new terms, until they have been established, should also be carefully avoided.

2. Perspicuity, as well as purity, consists partly in single words, and partly in their con- struction.

i. As

Sometimes two or more words have the same signification, and may therefore be used synony- mously. Of this kind are the words pity and compassion. There are other words of so near an affinity to each other, that they are commonly thought synonymous. Such are mercy and pity ; though mercy in its strict sense is exercised towards an ofi”ender, and pity respects one in dis- tress. This peculiar force and distinction of words is carefully to be attended to. Though words, when taken in their proper signification, generally convey the plainest

and clearest sense, yet some are more forcible, sonorous, or beautiful, than others. And by these considerations we must often be determined in odr choice of them. So whether we say, he got, or he obtained, the victory, the sense is the same : but the latter is more full and sonorous. As to tropes, though generally speaking they are not to be chosen where perspicuity is only designed, and proper words may be found ; yet, through the penury of all languages, the use of them is often necessary. And some, especially metaphors, which are taken from the similitude of things, may, when custom has rendered them familiar, be considered as proper words, and used m their stead. Thus, whether we say, I see your meaning, or I under- stand your meaning, the sense is equally clear, though the latter expression is proper, and the former metaphorical.

ii. But perspicuity arises not on►►ly from a choice of single words, but likewise from the construction of them in sentences. For the meaning of all the words in a sentence, consi- dered by themselves, may be very plain and evi- dent ; and yet, by a disorderly construction, or confusion of the parts, the sense of the whole may be obscured.

Ambiguity of expression is one cause of ob- scurity. This sometimes arises from the diff'erent senses in which a word is capable of being taken. In all serious discourses ambiguities ought care- fully to be avoided. But obscurity more fre- quently arises from., the ambiguous construction

of words, which renders it difficult to determine in what sense tneyare to be taken, (iuintilian gives us this example : ‘ A certain man ordered in his will, that his heir should erect for him a statue liolding a spear made of gold.’ A question arose here, of great consequence to the heir, from the ambiguity of the expression, whether the words made of gold were to be applied to the statue or the spear.

Obscurity is also occasioned either by too short and concise a manner of speaking, or by sentences too long and prolix : and parentheses, when either too long or too frequent, have the same effect.

II. Of Composition. ►►► Composition, in the sense here used, gives rules for the structure of sentences, with the several members, words, and syllables of which they consist, in such a manner as may best

contribute to the force, beauty, and evidence of the whole. It consists of four parts, which rhetoricians call period, order, juncture, and number. The first treats of the structure of sentences ; the second of the parts of sen- tences, which are words and members ; and the two last of the parts of words, which are letters and syllables. For all articulate sounds, and even the most minute parts of language, come under the cognizance of oratory.

1. Of period. ??? In every sentence or propo- sition something is said of something. That of which something is said logicians call the sub- ject, and that which is said of it the predicate : but, in grammatical terms, the former is a noun substantive, and the latter a finite verb, denoting affirmation, and some state of being, acting, or suffering. A simple sentence consists of one such noun and verb, with whatever else is joined to either or both of them. And a compound sen- tence contains two or more of them ; and may be divided into so many distinct propositions as there are such nouns and verbs, either expressed or understood. Some sentences consist, either wholly or in part, of such members as contain in them two or more compound ones, which may, therefore, for distinction's sake, be called decom- pound members. In the proper distinction and separation of the members, in such complex sen- tences, the art of pointing chiefly consists. For the principal use of a comma is to divide the simple members, a semicolon the compound ones, a colon such as are decompounded, and a period the whole, from the following sentence. See Punctuation.

Sentences, wuth respect to their form or com- position, are distinguished into two sorts, called by Cicero tracta, straight or direct ; and contorta, bent or winding. By the former are meant those whose members follow each other in a direct order, without any infiectiou ; and by the latter those which strictly speaking are called periods. For TTfpioJoc in Greek signifies a circuit or circle : and so the Latins call it circuitus and ambitus : by which both mean a sentence consisting of correspondent parts, so framed that the voice in pronouncing them may have a proper elevation and cadency, and distinguish them by its in- flection ; and as the latter part returns back, and unites the fermer, the period, like a circle, siir- rouiids and encloses the whole sense. T!:is ele- VoL. XVI.

vation of the voice, in the former part of the period, is by the Greeks called Trporadtc and by the Latins propositio ; and the depression of it, in the latter part, by the one a-KoSoviQ, and by the other redditio. As simple sentences have not these correspondent parts which require any in- flection of the voice, nor a circular form, by rea- son of their

brevity, they are not properly periods, in the strict sense of the word : though, in com- mon speech, the words sentence and period are used as equivalent terms. As to those compound sentences whose members follow each other in a direct order, without any inflection, there is little art required in their composition. Since such sentences, therefore, may be limited at pleasure, it seems more convenient both for the speaker and hearers to confine them to a moderate length. But the principal art relating to this part of composition lies in the frame and structure of such compound sentences as are properly called periods. In the formation of these, two things are chiefly to be regarded ; their length and cadency. As the length ought to be suited to the breath of the speaker, the ancient rhetori- cians scarcely admit of more than four colons ; by which we may understand compound members of a moderate size, which will be generally found a suitable and proportionate length. As to the cadency, Cicero has observed that the ears judge what is full and what is deficient ; and direct us to fill up our periods, that nothing be wanting of what they expect. When the voice is raised at the beginning of a sentence, they are in suspense till it be finished ; and are pleased with a full and just cadency, but are sensible of any defect, and displeased with redundancy. Therefore care must be taken that periods be neither defi- cient, and as it were maimed, so as to defraud the ears of what seemed to be promised them ; nor, on the other hand, offend them by too long and immoderate excursions. This rise and ca- dency of the voice, in pronunciation, depend on the nature and situation of the members. By the word members is to be understood such as are uncompounded. In a period of two mem- bers the turn of the voice begins with the latter member. If a sentence consist of three mem- bers, the inflection is best made at the end of the second ; for, if it begin immediately after the first, the voice will be either apt to sink too low, and not to be heard, before it reach the end ; or else be precipitated, to prevent it. But a period of four members is reckoned the most complete and perfect, where the inflection begins at the middle, that is with the third member. An equality of the members should also be attended to in the composition of a period, the better to adjust their rise and cadency. And for this rea- son, in sentences of three members, where the cadency begins with the third, or in those of four members, where it begins at the fourth, it promotes the harmony to make the last number longest. This is properly the nature of rheto- rical periods, which, when rightly formed, have both beauty and dignity. But as all discourse is made up of distinct sentences, and whenever we express our thoughts it is in some of the forms above mentioned, so the use of them is not promiscuous, but suited to answer different

designs in speaking. And in this view they are considered and made use of by tlie orator. Examples of all these might be quoted from Cicero and other ancient orators ; but it is un- necessary to swell this article with long quota- tions.

2. Of order. ??? Order is of two kinds, natural and artificial ; and each of these may be con- sidered with respect to the parts, either of sim- ple or compound sentences, i. As to simple sentences, we call that order natural, when all the words in a sentence are so placed as they are connected with or follow each other in a grammatical construction, ii. Artificial order, as it respects simple sentences, has little or no regard to the natural construction of words ; but disposes them in such a manner as will be most agreeable to the ear, and best answer the design of the speaker.

As to compound sentences, or such as consist jf two or more members, either simple or com- pounded, what relates to the words in each member separately is the same as in simple sen- tences. But, with regard to the disposition of the several members, that is called the natural order which so places them as they mutually depend on each other. When this order is inverted, it is styled artificial. It is unnecessary to enlarge farther, or to adduce examples upon this subject, as it is discussed, and the beauties as well as defects of the analogous and transpositive languages pointed out under the article Lan- guage.

But there are some other considerations rela- ting to order, which, being taken from the nature of things, equally suit all languages. So, in amplifying, there should be a constant gradation from a less to a greater ; as when Cicero says, ‘ ambition creates hatred, shyness, discords, se- ditions, and wars.’ On the contrary, in ex- tenuating, we should descend from a greater to a less ; as if, speaking of the ancient laws of Rome, one should say, ‘ they were so far from suffering a Roman citizen to be put to death, that they would not allow him to be whipt, or even to be bound. In constituting any whole, we put the parts first ; as, ‘ invention, disposi- tion, elocution, and pronunciation, make up the art of oratory.’ But in separating any whole, the parts follow ; as, ‘ the art of oratory may be divided into these four parts; invention, disposition, elocution, and pronunciation.’ In every enumeration care must be taken not to mix the whole widi the parts ; but, if it be men- tioned at all, it must either be put first or last. So it would be wrong to say ‘ he was a man of the greatest prudence, virtue, justice, and mo- desty :’ for the word virtue here contains in it the other three, and therefore should not be in- serted among them.

3. Juncture and number relate to letters and syllables ; the former treating of their connexion, and the latter of their quantity.

Juncture respects the quality of syllables. A due attention is to be paid to the nature of the vowels, consonants, and syllables in the con- nexion of words, with regard to the sound. \ hen a word ends with a vowel, and the next begins either with a different vowel, or the same repeated, it usually renders the pronunciation

hollow and unpleasant. Those which liave the weakest and smallest sound follow best ; because they occasion the least alteration of the organ in forming the two sounds. If a word end with a vowel, the next ought to begin with a consonant, or such a vowel whose sound may agree well with the former. But, if a word conclude with a consonant, either a vowel should follow, or such a consonant whose proper pronunciation will suit with it. And the same syllable ought not to be repeated at the end of one word, and the beginning of the next. Tliis last, however, rarely happens in our language, which abounds with consonants.

4. Number respects the quantity of syllables. In the Greek and Roman languages every sylla- ble has its distinct quantity ; and is either long, short, or common : two or more of which joined together in a certain order make a foot, and a determinate number of these in a different order constitute their several sorts of verse. Though their prose was

not so confined with regard to the feet, either as to the kind or place of them, as their metrical compositions, yet it had a sort of measure, more especially in the rise and ca- dency of their periods. This they called rheto- rical number. But their rules are not applicable to our language, which has not that accurate dis- tinction of quantity in its syllables. A great num- ber of monosyllables do not sound well together. For as there ought to be a greater distance in the pronunciation between one word and another than between the syllables of the same word, such pauses, though short, yet, when too fre- quent, make the sound rough, and thus spoil its harmony. This is the more necessary to be at- tended to, because the English language abounds with monosyllables. On the contrary, a con- tmuation of many long words makes a sentence move too slow and heavily. And, therefore, such periods generally run best which have a proper mixture of words of different lengths. Besides, as every word has its accent, which with us stands for quantity, a number, either of monosyllables or long words coming together, abates the harmony, as it lessens the variety. Several words of the same ending do not sound well together, especially where the accent falls upon the same syllable in each of them. For this creates too great a jingle by the similitude of sound ; and displeases from an appearance of affectation. Of this kind is the following sentence : ‘ Nothing is more welcome, delight- some, or wholesome, than rest to a wearied man.’ In such expressions, if the order of the words cannot well be altered, some other word should be substituted in the room of one of them at least. But, if a sentence end with a monosyl- lable, it is apt to hurt the cadence, and disap- point the ear; whereas words of a moderate length carry a greater force with them by the fulness of their sound, and afford the ear what is expected. There is one sort of monosyllables, especially, which never sound well at the con- clusion of a period, viz. the signs of cases ; as when we say, ‘ avarice is a crime which wise men are too often guilty of;’ instead of ‘avarice is a crime, of which wise men are too often guilty.’ Nor are very long words weli suited either to the beginning or conclusion of a pe-

riod ; for they retard the pronunciation at first, and fall too heavy at the end.

III. Of Dignity. Dignity chiefly consists in the right use of tropes and figures. It is not sufficient for an orator to express himself ###with propriety and clearness, or in smooth and harmonious periods ; but

his language should be suited to the nature and importance of the subject. And therefore, as elegance trives rules for the first of these, and composition for the second, so does dignity for the last. It is evident that different subjects require a different style and manner of expression ; for, as Quintilian says, ‘ what is magnificent in one discourse would be turgid in another.’ This variety in the man- ner of expression arises in a great measure from tropes and figures, which not only enliven and beautify a discourse, hut give it likewise force and grandeur.

1 . Of tropes. ††† A trope is a figure of words, and has been usually defined to be the change of a word from its proper signification to some other with advantage, either as to beauty or strength. But this definition is not strictly just ; for, in every trope a reference is had to two things, which occasions two ideas ; one of the thing expressed, and another of that to which it has a respect. For all tropes are taken, either from tilings internally or externally related ; or from some similitude between tliem ; or from a contrariety. The first of these is called synec- doche, the second metonymy, the third meta- phor, and the last irony. The reasons which occasioned the introduction of tropes, as Quin- tilian observes, are three ; necessity, emphasis, and beauty.

i. Tropes were first introduced from necessity, deriving their origin from the barrenness of language ; because no langiiage contains a suffi- cient number of proper words to express all the difl^erent conceptions of our minds : but the principal cause of their introduction seems to be that extensive influence which imagination possesses over every kind of speech. The mind considers the same thing various ways; views it in different lights ; and compares it with other things. Hence it is furnislied w itii an almost infinite number of ideas, which cannot all be expressed by proper words, since new ideas occur daily. And, were this possible, yet would it be impracticable ; because the multitude of words must be so vastly great, that the memory could not retain them, nor recall them as occa- sion required. Tropes have remedied both these inconveniencies. llius, where a word is want- ing to express any particular thing, it is clearly represented by the name of some other thing resembling it ; the cause is signified by the effect, the subject by the adjunct, or the con- trary, and the whole is often understood by a part, or a part by the whole. Tims, by the use of tropes, the mind is helped to conceive of something not expressed, from that which is ex- pressed.

ii. A second use of tropes is emphasis. Tropes often express things with greater force than can be done by proper words. Sometimes a lively

trope conveys a fuller and more just idea of a thing than a large periphrasis. Thus, when

Virgil calls the Scipios two thunderbolts of war, he giveti a more lively image of the rapid force and speedy success of their arms than could have been conveyed by a long description in plain words. And in many cases the tropical use of words is so emphatical that in this respect it may be justly esteemed the most]iroper. So, incensed with anger, inflamed with desire, fallen into an error, are all metaphorical expressions, yet])eihaps no proper words can be nwde use of which will convey a more lively image of the thing we design to represent by them.

iii. Beauty and ornament have been another cause of the use of tropes. Some subjects re- quire a more florid and elegant dress than others And it is the business of an orator to entertain his hearers while he instructs them. Cicero has observed, that ‘ as garments were first invented from necessity, to secure us from the injuries of the weather, but improved afterwards for orna- ment and distinction ; so the poverty of language first introduced tropes, which were afterwards in- creased for delight.’ As a moderate use of tropes, justly applied, beautifies and enlivens a discourse, so an excess of them causes obscurity, by running it into abstruse allegories and riddles. Tropes are not the ordinary dress of our thoughts, but a foreign habit ; and therefore he who fills his discourse with a continued series of them, acts like one who appears in public in a strange dress. Care should also be taken not to transfer tropes from one language into another.

Primary tropes are subdivided into four species: 1. Metaphor; 2. Metonymy: 3 Sy- necdoche : 4. Irony.

1. A metaphor is usually defined, a trope, which changes words from their proper significa- tion to another different from it, by reason of some similitude between them. But it is certain that a word, when used metaphorically, does not alter its signification, but retains its proper sense. Cicero calls a metaphor a similitude reduced to a single word. It is a similitude, when I sav of a man, he has acted like a lion ; and a meta- phor, when I say, he is a lion. Metaphors are derived from every part of nature. 1 . From simi- litudes between animate, and from similitudes between inanimate beings. 2. From similitudes between inanimate things and animals : and 3. Those are esteemed the finest and strongest which ascribe life and action to inanimate things. All forced and harsh metaphors should be avoided, nor should they be too numerous ; in a word, they ought not to be used, but either where a proper word is wanting, or where they are more significant or

beautiful than the proper word. See Met.aphor.

2. Metovyvii), as defined by Quintilian, is the putting one word for another. But 'ossius de- scribes it more fully, when he calls it, ‘ a trope which changes the names of things that are natu- rally united, but in such a manner as that one is not the essence of the other.’ A word used as a metonymy changes its sense, and denotes some- thing different from its proper signification. Thus, when Mars is put for war, and Ceres for corn, they lose their personal sense, and stand for the effects of which those deities were said to to be the cause. A metonymy is not so exten-

sive as a metaphor, nor altogether so necessary ; because nothing is said by a metonymy which cannot be expressed in proper words ; wliereas metaphors are often used for want of proper words to express some ideas. However, metony- mies enrich a discourse with an agreeable variety, and give both force and beauty to an expression. And some metonymies, in common discourse, are more frequently made use of than the proper words in whose room they are put. So, it is more usual to say, this is such a person’s hand, or 1 know his hand, than his writing, when we intend this last sense of the word. Metonymies commonly receive their names from the cause and effect, the subject and the adjunct.

i. A metonomy of the cause is when the ex- ternal cause is put for the effect; as tongue for language, sword for slaughter, &c.

ii. The second kind of metonymy puts the effect for the efficient cause, whether the agent, or only the means and instrument. So 'irgil calls the two Scipios the destruction of Libya, because they were the agents who effected it.

iii. The third kind of metonymy is when the subject is put for the adjunct. Thus the seat of any faculty or affection is used for the faculty or affection itself. So it is usual to say, a man of a clear head, when we mean a clear mind ; or of a warm heart, when we mean kind affections. Thus also the time is put for the persons living in it ; as the degeneracy of the present age, the virtue of former times. The popish doctrine of transubstantiation is founded upon an abuse of this trope. For when our Saviour, speaking of the bread and wine then before

him, says, ‘ this is my body, and this is my blood,’ his plain meaning is they vrere the signs of his body and blood, the thing signified being put for the sign by this sort of metonymy. In like manner, our Saviour, in a metaphorical sense, calls himself a vine, and a door, expressions which even the Catholics themselves do not interpret literally.

iv. The fourth kind of metonymy is that wherein the adjunct is put for the subject. As when Virgil says, ‘ they lie down upon purple ;’ that is, upon couches died with purple. By this trope virtues and vices are put for the per- sons in whom they are found. As in that beau- tiful passage of Cicero, where, comparing the profligate army of Catiline with the forces of the state, he says, ‘ on this side modesty is en- gaged, on that impudence ; on this chastity, on that lewdness ; on this integrity, on that deceit ; on this piety, on that profaneness ; on this con- stancy, on that fury; on this honor, on that baseness ; on this moderation, on that unbridled passion; in a word, equity, temperance, forti- tude, prudence, and all virtues, engage with in- justice, luxury, cowardice, rashness, and all vices.’ A third use of this trope is by putting a thing for the time in which it was done. Thus we say of a person, he has served so many cam- paigns, meaning so niany summers. Lastly, the sign is put for the thing it signifies ; as, the crovvn for the regal dignity, and the sword for the authority of the magistrate.

3. Synecdoche is a trope by which either the whole of a thing is put for a part of it, or a part for the whole ; so that the things whose ideas are

presented to the mind in this trope are internally related to each other. In a synecdoche tlie word retains its proper sense, and the expression is elliptical.

i. One species of synecdoche puts the genus for the species. Thus, virtue in general is sometimes used to denote some particular virtue ; as, when Cicero mentions virtue as one of the four qualifications necessary in a general, he means greatness of mind.

‘ii. The second kind of synecdoche puts the species for the genus. Thus bread denotes any kind of food : as when a person is said to get his bread by his labor ; and money is put for any kind of wealth.

iii. The third species is, when the essential whole is put for one of its parts ; that is, either for the matter or form. Thus, it is usual to say of a deceased person, he was buried at such a time. And, in the iruicriptions of sepulchral mo- numents, here lies such a one, that is,

his corpse.

iv. The fourth kind of synecdoche is when either the matter or form is put for the whole being. Thus silver and gold are used to sig- nify money made of those metals. And soul is put for the whole person. This way of speak- ing occurs nowhere more frequently than in the sacred writings. But sometimes only part of the matter stands to express the whole essence or being ; thus, so many head of cattle means entire cattle.

V. By the fifth species of synecdoche the whole of any material thing or quantity, whether continued or discrete, is put for a part of it. So when Cicero says, a war is kindled through the whole world, he calls the Roman empire the world. The same figure is used by St. Luke, ch. ii. ver. i.

vi. The sixth and last kind of synecdoche puts a part of any material thing or quantity for the whole of it. So we say of a fleet, that it consists of so many sail ; meaning so many ships. And by this trope, that is ascribed to a single person which was done by the assistance of others, and in conjunction with them : as when it is said, that Lord Nelson defeated the French at Aboukir. To this kind of synecdoche may also be referred expressions in which the singu- lar number is put for the plural ; as, a man is liable to be misled by irregular passsions ; mean- ing mankind in general.

4. Irony is a trope in which one contrary is signified by another : as if any one should say, well done ; when his design is to intimate that the thing was ill done. Not that the word is changed from its usual signification ; but, by the circumstances attending the expression, we per- ceive the contrary to what is spoken is intended. Quintilian observes, that an irony may be known by one of these three ways : < By the manner of pronunciation, or from the nature of the person or the thing. For, where any of these do not suit with the words, it is plain the speaker intends the contrary.' The proper subjects of irony are vices and follies of all kinds ; and this way o* exposing them is often more effectual than serious reasoning. Socrates used it so much that he got the name of ttpwaˆ, that is, the droll.

II. Secondary tropes are so called, because

they are all of the same nature with the former, 9nd may be referred

to someone or other of tliem, though they have received different names. They are eiglit in number ; antouomasia, communica- tion, litotes, euphemism, catachresis, hy[)erbole, metalepsis, and allegory. The three hrst are simple tropes, and may all be referred to sy- necdoche. But the five last are of a mixed or complex nature, and not confined to any one of the primary tropes.

1. Antonomatiia. ××× A common or general word is sometimes used for the proper name of some particular thing or person, who upon any ac- count is eminent and remarkable. So we say, he is gone to, or he came from the city, that is, London. By the Scriptures we mean the Bible. The orator is used for Cicero, the poet for Homer or Virgil, the philosopher for Aristotle ; and the apostle for St. Paul. On the contrary, the proper names of tilings or persons are some- times applied to any other of tlie same cliaracter. Thus we use the word gospel for any certain and undoubted truth. And punic faith prover- bially stood for falsehood among the Romans.

2. Communication, among orators, signifies a change of persons. Sometimes, to prevent the imputation of pride, in assuming to themselves tlie praise of any laudable action, they ascribe it to their hearers, and do not say we, but ye, did so and so. At other times, when it is necessary to remind them of something they have done amiss, or to caution them against some wrong step, they take it upon themselves, or join them- selves with them, and do not say, you have done this, or do not do this ; but we have done it, or let us not do it. At other times, in compliment to their hearers, they join them as partners in the commendable actions or virtues of other persons. Such tropes often occur both in Demosthenes and Cicero.

3. But there is a mode of speech in which, by denying the contrary, more is intended than the words express. This is called litotes ; and is often used where a person is led to say any thing in his own praise, or to soften an expression which in direct terms might give offence. As if one should say, I do not commend you for that; meaning, I greatly discommend or blame you for it.

4. When any displeasing or ungrateful thing is expressed by a more soft and agreable word, it is called euphemism. As death carries in it a dis- agreeable idea, instead of saying a person is dead, we often say he is departed. But when St. Luke, speaking of Stephen, who was stoned to death, says he fell asleep ; this is a beautiful metaphor.

5. Catachresis signifies in general any harsh trope, though it is most commonly found in metaphors. It is principally used by poets, to

enforce an expression, where the proper word does not seem strong enough. As when Milton, in describing the angel Raphael's descent from heaven, says, he sails between worlds and worlds.

6. Hyperbole is the boldest of all tropes : for it exceeds the strict bounds of truth, and purposely represents things either greater or less, better or worse, than they really are. But the represen- t.ition is made in such a manner as not to im-

pose on the hearers. The excess in this trope is called auxesis ; as when we say of any thinˆ that is very high, it reaches to the skies. The defect, or contrary extreme, is termed meiosis ; so we say of a very lean person, he is nothing but skin and bones, or a mere skeleton. Those hyperboles which are expressed comparatively are commonly most emphatical. To say a thinˆ is as light as a feather, carries the idea very far ; but to say it is lighter, heightens it greatly.

7. Sometimes two or more tropes, and those of a different kind, are contained under one word ; so that several gradations, or intervening senses, come between the word that is expressed and the thing designed by it. And this is called a metalepsis. The contests between Sylla and Marius proved very fatal to the Roman state. Julius Cffisar was then a young man. But Sy Ihi, observing his aspiring genius, said of him, * in this young man there are many Mariuses.' In this expression there is a metalepsis, containing a synecdoche, an antonomasia, and a melonomy. So tliat Sylla's meaning, divested of these tropes, was, that Caesar would prove a most dangerous person to the Roman republic ; which afterwards proved true.

8. Allegory is a continuation of several tropes in one or more sentences. Thus Cicero says, ' fortune provided you no field, in which your virtue could run and display itself;' where the words field and run are metaphors taken from corporeal things, and applied to the mind. But in allegories, care should be taken that the same kind of trope be carried through the whole, so as to compose one \iniform and consistent set of ideas. It is likewise necessary that the allusions be all evident. These are called pure allegories. See Allegory.

II. Of figures. ••• This term seems to have been borrowed from the stage, where the different habits and gestures of the actors, suitable to the several cliaracters they sustained, were by the Greeks called axviiciTa, and by the Latins figurx' ; and it is usual to say of a person, both with re- spect to his dress and action, that he makes a very bad, or a very graceful figure. As language is the dress of our thoughts, in which they appear to others ; so any particular manner of speaking

may be called its figure. But rhetoricians restrain the sense of the word to such forms of speech as differ from the ordinary ways of expression ; as the theatrical habits of actors on the stage difier from their usual garb at other times. A figure, therefore, in the sense used by rhetoricians, is a mode of speaking different from, and more beautiful and emphatical than, the usual way of ex- pressing the same sense.

Figures seem to have been among the last or- naments introduced into the art of oratory. Aris- totle, who treats so accurately upon other parts, says very little of this. But the Greek writers who came after him have supplied that defi- ciency. They took notice of tlie several modes of expression, observed their force and beauty, and gave them distinctive names. And indeed they have treated the matter with such minute- ness that (ˆuintilian thinks they have multiplied figures to excess. The author of Homer's life, wiiich some ascribe to Plutarch, has shown that

there is scarcely a figure mentioned by rhetoricians but is to be met with in that most ancient poet. And, from the nature of speech, we may easily perceive that mankind must have very early in- troduced tropes to supply the want of proper words to express their simple ideas ; and the like necessity must have put them upon the use of figures to represent their passions. When the mind is disturbed, we show it by our words as well as by our countenances and actions. Hence some have styled figures the language of the passions. And Cicero calls them ' the prin- cipal weapons of an orator.' His oration against Catiline, when he had just discovered his plot to destroy the Roman state and burn the city, affords a grand specimen of the strongest and most mcTving figures. And the discourse had its desired effect; for, when Catiline stood up to make his defence, the whole senate were so in- flamed by what Cicero had said, that they had not patience to hear him speak; upon which he immediately left the city. Of a different descrip- tion, but equally excellent, are those of Virgil, when Dido finds that ˆ"Eneas is about to leave her, and using all her arts to detain him, she discovers her fear, anger, and revenge, with the whole crowd of passions which possessed her mind.

Figures should always be accommodated to the sentiments, and rise in proportion to the images, designed to be conveyed by them : but where the language outstrips the tliought, though it may please the

ear, yet an intelligent hearer will soon feel the impropriety. In the use of pathetic figures, it is generally better to be nerv- ous than copious, that the images, by their closer union, may impress the mind with greater energy. All figures should be so interwoven in a dis- course as not to render the style rough and un- even, sometimes high, and at other times low. In a word, they should rather seem to arise from nature than art.

Figures are divided into figures of words, and figures of sentences. The difference consists in this; that in the former, if we alter the words, or even the situation of them, we destroy the figure ; but in the latter the figure remains, whatever words are used, or in wliatever manner the order of them is changed. Thus, when the name of a person or thing is repeated, to inti- mate some known property or quality thereof, it is a verbal figure called ploce. Cicero was a true patriot ; and therefore we say that at the time of Catiline's conspiracy, Cicero appeared like Cicero. The sense would remain the same, but the figure would be lost, if we should say, at that time Cicero appeared like himself. So when two or more sentences, or members of a sentence, end with the same word, it is called epistrophe ; as when we say, to lose all relish of life is in effect to lose life. But if the order of the words be changed in the latter clause, thus, to lose all relish of life, is to lose life in effect ; the figure vanishes. Such is the nature of the verbal figures. But it is not so in figures of sen- tences ; they continue the same, whatever altera- tions are made in the words.

I. Verbal figures may be distinguished into three sorts, as they consist in a deficiency, a re- dundancy, or a repetition, of words.

Of the first sort are ellipsis and asindeton. 1 Ellipsis is when one or more words are wanting in a sentence, to complete the construction, and fully express the sense. This figure is often used in proverbial expressions : as when we say. Many men, many minds ; i. e. have many minds ; and, the more danger, the more honor; i. e. gains more honor. But where more is intended by such expressions than mere brevity, and espe- cially when they are the effect of some passion, the figure is called aposiopesis. 2. Asyndeton is when the particles tliat connect the members of a sentence are left out, to represent either the celerity of an action, or the haste and eagerness of the speaker. Thus Csesar expresses his speedy conquest of Pharnaces : I came, I saw, I con- quered. If he had inserted the copulatives, and said, I came, and I saw, and I conquered, it would have retarded the communication of his ideas, and not given so just an idea of the swift- ness of the action. We took notice, in a preced- ing section, of the vehement and impetuous manner in which Cicero attacked Catiline in his first

oration, where his design was to fire the minds of the senate against him, and oblige him to leave the city. The next day, when Catiline was gone, he calls together the citizens, and in a sort of rapture tlms begins, he is gone, departed, escaped, broke out ; intimating both the exces- sive rage in which Catiline left Rome, and the great pleasure with which he was himself affected on that account. This concise way of speaking adds likewise a great emphasis to an expression, and affects the mind with great force.

ii. The second sort of verbal figures is con- trary to these, and consists in a redundancy or multiplicity of words ; which are likewise two, pleonasmus and polysyndeton. 1. When we use more words than are necessary to express a thing it is called pleonasmus. This is done some- times for greater emphasis, as when we say. Where in the world is he ? At other times it is designed to ascertain the truth of what is said : so the servant in Terence, when the truth of what he had related was called in question, replies. It is certainly so ; I saw it with these eyes. 2. VVhen the several parts of a sentence are united by proper particles it is called poli/syndeton. This adds a weight and grarity to an expression, and, by retarding the course of the sentence, gives the mind time to reflect upon every part distinctly. We often meet with this figure in Demosthenes. Thus he encourages the Athe- nians to prosecute the war against Philip II. from this consideration, that now ‘ they had ships, and men, and money, and stores, and all other things which might contribute to the strength of the city, in greater number and plenty than in former times.’ Every article here has its weight ; but, if we remove the copulatives, the sentence will lose much of its force.

iii. The third kind of verbal figures consists in a repetition. Either the same word in sound or sense, is repeated ; or one of a like sound or signification, or both. Of the former sort there are ten, called antanaclasis, ploce, epizeuxis, cli- max, anaphora, epistrophe, symploce, epana- lepsis, anadiplosis, and epanodos. The two first of these agree in sound, but difler in sense ; the eidit following agree in both.

1 . When the same word in sound, but not in sense, is repeated, it is called antanuclasis. This figure sometimes carries a poignancy in it; and, when it appears natural and easy, discovers a ready turn of thought. As when a son, to clear himself of suspicion, assured liis

father. He did not wait for his death ; his father replied, But I desire you would wait for it. Here the word wait is taken in two different senses. And our Saviour uses this figure, when he says to one of his disciples, who desired to go and bury his fa- ther. Follow me, and let the dead bury their dead. Where dead in the one place denotes a natural death, and in the other a moral or spi- ritual death.

2. Sometimes the name of some person or thing is repeated, to denote some particular cha- racter or property ; and then it is called ploce. Thus Cicero says, Young Cato wants experience, but yet he is Cato ; meaning he had the steady temper of the family.

3. When a word is repeated with vehemence in the same sense, it is called epizeuxis. This figure shows tlie earnestness of the speaker, and his great anxiety about what he says ; and there- fore has a natural tendency to excite attention. It is suited to express anger, surprise, sorrow, and several other passions. As when Cicero would express his indignation against Anthony, for having been the chief instrument in bringing on the civil war, he says to him : You, you An- thony, pushed Caesar upon the civil war. Or when our Saviour would express his great con- cern for the wickedness of the Jews, he exclaims, O Jerusalem, Jenisalem, who killest the prophets !

4. Climax is a beautiful kind of repetition, when the word, which ends tlie first member of a period begins the second, and so through each meralier, till the whole is finished. There is a great deal of strength as well as beauty in this figure, where the several steps rise naturally, and are closely connected. As in diis example : ••• There is no enjoyment of property without go- vernment, no government without a magistrate, no magistrate without obedience, and no obedi- ence where every one acts as he pleases. But, as (juintilian observes, this figure is apt to look too much like art ; for which reason he advises not to use it often.

5. When several sentences, or members of a sentence, begin with the same word, it is called unuphora. This is a lively and elegant figure, and serves very much to engage attention : for, by the frequent return of tlie same word, the mind of the hearer is held in an agreeable sus- pense, till the whole is finished. ‘ You do nothing,’ says Cicero to Catiline, ‘ you attempt nothinsr, you think nothing, but what I not only hear, but also see and plainly perceive.’ It is frequently used by way of question ; which ren- ders it not only beautiful, but strong and ner- vous. As at the beginning of the same speech : ‘ Does neither the night-guard of the palace, nor tlie city-watch, nor the people’s fear, nor the agreement of all good men, nor the meeting of the senate in

this fortified place, nor the coun- tenances and looks of this society, at all move j ou I ‘

6. F.phtrophe is contrary to the former, and makes the repetition at the end of each member

or sentence. As thus : ††† Since concord wis lost, friendship was lost, fidelity was lost, liberty was lost ; all was lost.

7. Symploce takes in both these last figures. As in that of Cicero : ††† ‘ You would pardon and acquit him whom the senate have condemned, whom the people of Rome have condemned, whom all mankind have condemned.’ Here the several members both begin and end with the same word.

8. When a sentence concludes with the wo d with which it began, it is called epanalepis. As in that expression of Plautus: ††† ‘ 'irtue contains all things ; he wants no good thing who has vir- tue.’ This figure adds force to an expression, when the principal thing designed to be conveyed is thus repeated, by leaving it last upon the mind. And it heightens the beauty, when the senteace has an agreeable turn arising from two opposite parts.

9. When the next sentence begins with the same word with which the first concluded, it is termed anadiplosix. As in the following instance : Let us think no price too great for truth ; truth cannot be bought too dear. This figure generally suits best with solemn discourses.

10. Epauodos is the inversion of a sentence, or repeating it backwards, so that it takes in the two last figures ; for it both begins and ends with the same word, and the same word is likewise repeated in the middle. It serves to illustrate and enforce the sense, by setting it in two oppo- site views. As in that expression of the pro- phet : ††† ‘ Wo unto them wdio call good evil, and evil good ; who put darkness for light, and light for darkness ! ‘ &c.

11. Those figures which consist in a repetition of words of a like sound or signification, or both, are four : paronomasia, homoioptoton, sy- nonymia, and derivatio ; the two first of which respect words that are similar in sound only, the third in sense, and the last in both.

i. When two words very near in sound, but diff’erent in sense, respect each other in the same sentence, it is called paronomasia. As when we say. After a feast comes a fast ; and, A friend in need is a friend indeed. We usually call it a pun, which, when new, and appositely used, passes for wit, and serves to enliven conversation. Nor is it

wholly to be excluded from grave and serious discourses ; for a witty jest has sometimes had a better effect than a solid argument, and prevailed with those who could not be moved by close reasoning. And therefore Cicero and the best speakers have sometimes recourse to it.

ii. When the several parts of a sentence end with the same case, or tense of a like sound, this is the figure named homoioptoton. As thus : ††† No marvel though wisdom complain that she is eitiier wilfully despised, or carelessly neglected ; either openly scorned, or secretly abhorred. This figure is esteemed most beautiful when the parts are all or nearly of the same length ; as it adds to the harmony of the period, and renders the ca- dence of the several members more musical. The Greek rhetoricians were much addicted to it, partie.Jarly Isocrates ; but some of the best orators avoided it, as having too much the ap- pearanct of art.

iii. Tlie next figure is synotij/mia. Strictly

speaking, synonymous words are those which have exactly tlie same sense ; but, there being few such, the term is extended to comprehend words of a near affinity in their signification, which in discourse are frequently put for one another. So, to desire, and entreat, are used as equivalent terms ; and esteem and honor are often taken for synonymous words, though they clearly have not the same sense. When two or more such words come together they constitute this figure.

iv. When such words as spring from the same root, as justice, just, injustice, unjust, and the like, come together in the same sentence, they make the figure called derivatio. This figure re- ceives an additional beauty when repeated in two opposite members ; as. He wished rather to die a present death than to live a miserable life.

II. Figures of sentences. ††† Of these some are principally adapted for reasoning, and others to move the passions.

i. Figures suited for proof, are six : Prolepsis, hypobole, anacoinosis, epitrope, parabole, and antithesis.

1. Prolepsis, or anticipation, is so called, when the orator first starts an objection, which he foresees may be made either against his conduct or cause, and then answers it. Its use is to prevent the exceptions of an

adversary, which cannot afterwards be introduced with so good a grace ; and it serves to C' nciliate the au- dience, while the speaker appears desirous to TBpresent matters fairly, and not to conceal any objection which may be made against him. The occasions of this figure are various; and Cicero's orations abound with examples, as well as those of our best speakers in parliament.

2. Hypobole, or subjection, is similar; when several things are mentioned that seem to make for the contrary side, and each of them refuted in order. It consists of three parts, when com- plete ; a proposition, an enumeration of parti- culars with their answers, and a conclusion.

3. Anacoinosis, or communication ; by which the speaker deliberates or expostulates either with the judges, the hearers, or the adversary. Cicero uses it in addressing the judges against ^^erres; and the sacred writers sometimes intro- duce God himself thus expostulating with man- kind. See Malachi i. 6.

4. Epifrope, or concession, grants one thing, to obtain another more advantageous. It is either real or feigned ; and either the whole of a thing, or a part only, is granted. Nothing more confounds an adversary than to grant him his whole argument, and at the same time either to show that it is nothing to the purpose, or to offer something else to invalidate it. Thus Cicero, in his defence of Milo, represents the taking off Clodius, with which Milo was accused, as a glo- rious action ; after he lias shown that Milo's ser- vants did it without his knowledge.

5. Farubole, or similitude, illustrates a tiling by comparing it with some other to which it bears a resemblance. Similitudes are indeed but weak arguments, but where the design is not so much to prove what is doubtful as to set things in a clear and agreeable light, they are veiy proper figures

f^. Antithesis is a contrast or opposition, by which things contrary or different are compared, to render them more evident. Tlius Cicero says, ' the Roman people hate private luxury, but love public grandeur.' This is a very florid figure ; and suited no less for amplification than proof. It is esteemed a beauty in this figure when any of the members are inverted, which some call antimetathesis. As where Cicero op- poses the conduct of Verres, when governor of Sicily, to that of Marcellus who took Syracuse the capital of that island. To this figure may also be referred oxymoron, or seeming contradic- tion; that is, when the parts of a sentence dis- agree in sound, but are consistent in sense. As when Ovid says of Althea, that she was im-

piously pious. And so Cato used to say of Scipio Africanus, that ‘ he was never less at leisure, than when he was at leisure ; nor less alone than when alone.’ Dr. Blair observes, ‘ contrast has always this effect, to make each of the contrasted objects appear in the stronger light. White, for instance, never appears so bright as when it is opposed to black, and when both are viewed together. Antithesis therefore may, on many occasions, be employed to advan- tage, to strengthen the impression which we in- tend that any object should make. To render an antithesis more complete, it is always of ad- vantage that the words and members of the sentence expressing the contrasted objects be similarly constructed, and made to correspond to each other. At the same time, the frequent use of antithesis, especially where the opposition in the words is nice and quaint, is apt to render the style disagreeable. A maxim or moral say- ing properly enough receives this form ; but where a string of such sentences succeed each other, where this becomes an author’s favorite and prevailing manner of expressing himself, his style is faulty ; and ˆupon this account Seneca has been often and justly censured.’ There is another kind of antithesis, which consists in sur- prising us by the unexpected contrasts of things which it brings together; but it is wholly beneath the dignity of an orator, and is fit only for pieces of humor, calculated to excite ridicule.

ii. Figures suited to move the passions, are

1. Epanorthosis, or correction, by which the speaker either recals or amends what he had last said. Sometimes one or more words are recalled, and others substituted in their room ; at other times, without recalling what has been said, something else is substituted as more suitable. Cicero, in his defence of Milo, speaking to the judges concerning Clodius, says, ‘ are you only ignorant what laws, if they may be called laws, and not rather torches and plagues of the state, he was about to impose and force upon us ?’ Sometimes the correction is made by substituting something contrary to what had been said be- fore; ‘ Caesar,’ says Cicero, ‘ when Antony was most enraged, and we dreaded his cruel return, raised a very powerful army of invincible vete- rans ; to efiect which he threw away his whole estate. Though I have used an improper word; he did not throw it away, but employed it for the safety of the government.’

2. Varalcpsis, or omission, is a figure, when

the speaker pretends to omit, or pass by, what at the same times he declares. It is used either in praise or dispraise. Thus Cicero, in his defence of Sextius ; ‘ I might say many things of liis liberality, kindneis to his domestics, his com- mand in the army, and moderation during his office in the province; but the honor of the state presents itself to my view ; and calling me to it, advises me to omit these lesser matters.’ There is a beautiful instance of this figure in St. Paul’s epistle to Philemon, ver. 19. Hermogenes ob- serves that tills figure is principally used on three occasions : either when things are small, but yet necessary to be mentioned ; or well known, and need not be enlarged on ; or ungrateful, and therefore to be introduced with caution.

3. Parrftesia, or reprehension. The orator sometimes prepares his hearers for this by com- mending them first, urging the necessity of it, representing his great concern for them as his motive, or joining himself with them. Thus Ci- cero charges the senate with the death of Servius Sulpicius, for sending him to Mark Antony under a very ill state of health. His design was to make them agree to a motion he was to make, that a statue and monument might be erected to his memory at the public expense. Sometimes the orator assumes an air of reproof, with a view only to pass a compliment with a better grace. As Cicero in his address to Caesar, when he says, * I hear that saying from you with concern, ‘ that you have lived long enough, either for the purposes of nature or glory :’ for nature perhaps, if you think so ; and, if you please, for glory ; but what is principally to be regarded, not for your country.’

4. Aparithmesis, or enumeration, is when that which might be expressed by a few words is branched out into several particulars. Cicero, in pleading for the iVIanilian law, where his design is to conciliate the esteem of the people to Pompey, thus enlarges upon his character: ‘ What can be said either worthy of him, or new to you, or which every one has not heard ? For those are not the only virtues of a general which are commonly thought so; labor in affairs, cou- rage in dangers, industry in acting, despatch in performing, design in contriving; which are greater in him than in all other generals we have ever seen or heard of.’ ,

5. Exergasia, or exposition, has an affinity with the former figure ; but differs in this, that it con- sists of several equivalent expressions, or nearly such, to represent the same thing in a stronger manner ; whereas the other enlarges the idea by an enumeration of different particulars. So that this figure has a near relation to synonymia.

6. Jpnria, or doubt, expresses the debate of the mind with itself upon a pressing difficulty. A person in such a state is apt to hesitate, or start .several things successively, without coming to any fixed resolution. Of this kind is that of Cicero for Cluentius, when he says, ‘ I know not which way to turn myself. Shall I deny the scandal thrown upon him of bribing the judges ? Can I say the people were not told of it ? &c.’ Orators sometimes begin their discourse with this figure. A diffidence of mind at first is not unbecoming, but graceful ; it carries in it an air of modesty,

and tends very much to conciliate the affections of tiie hearers.

7. Sometimes a passion has that effect, not f^ much to render a person doubtful what to sa/, as to stop him in the midst of a sentence, and prevent his expressing the whole of what he de- signed ; and then it is called aposiopesis, or concealment. It denotes different passions ; as anger, which, by its heat and vehemence, causes persons to break off abruptly in their dis- course : and Cicero, in a letter to Cassius, uses it to express fear, when he says to him, ‘ Brutus could scarcely support himself atMutina; if he is safe we have carried the day. But if ??? heaven avert the omen! all must have recourse to you.’ ilis meaning is, ‘ If Brutus should be defeated.’

8. Erotesis, interrogation. Every question i not figurative; but it becomes figurative, when the putting it by way of question &ives it life and spirit. As when Cicero says, ‘ Catiline, hov/ long will you abuse our patience ? Do not you perceive your designs are discovered V It serves also to press and bear down an adversary. Thus in his defence of Plancius: ‘ I will make you this offer, clioose any tribe you please, and show by whom it was bribed ; and if you cannot, as I be- lieve you will not, I will prove how he gained it. Is this a fair contest .’ Will you engage on this foot ? I cannot give you fiiirer play. \Miy are you silent ‘. Why do you dissemble .’ Why do vou hesitate ? I insist upon it, urge you to it, press it, require, and even demand it of you.’

9. Ecphonesis, or exclamation, is a vehement extension of the voice, occasioned by a cominf>- tion of mind, naturally venting itself. This figure is used by Cicero to express a variety of])as- sions.

10. Epiphonemu, or acclamation, has a great affinity with the figure. It is so called, when the speaker, at the conclusion of his argument, makes some lively and just remark upon what he has been saying, to give it the greater force. It is not so impetuous as exclamation, being usually expressive of the milder and more gentle passions. \ hen Cicero has shown that recourse is never to be had to force, but in

cases of the utmost necessity, he adds, ‘ thus to think, is prudence ; to act, fortitude ; both to think and act, perfect and consummate virtue.’

11.” Apostrophe, or address, is when the speaker breaks off from the series of his discourse, and addresses himself to some particular person pre- sent or absent, living or dead ; or even to inani- mate nature : thus he has an opportunity of saying many things with greater freedom than if immediately addressing the persons themselves. He can admonish, chide, or censure, without giv- inar offence. Thus Cicero, in his defence of Milo, expressing his concern if he should not succeed in it, says, ‘ And how shall I answer it to you, my brother Quintus, the partner of my misfor- tunes, who art now absent ?’ An appeal to lieaven, or any part of inanimate nature, has something very sublime and solemn in it, which we often meet with in sacred writ. So the divine prophet : ‘ Hear, O heavens ! and give ear, O earth ! for the Lord hath spoken.’ And Jeremy : ‘ Be astonished, O je heavens, at this.’ See

1 2. Prosopopoeia, or the fiction of a person : by which either an absent person is introduced speaking; or one who is dead, as if he were alive and present; or speech is attributed to some inanimate being. There is no figure, per- il aps, which serves better purposes to an orator than this. For by it he is enabled to call in all nature to his assistance. There is scarcely any thing fit to be said, but may be introduced this way. When he has severe things to say, and which may give offence as coming from himself, he avoids this by putting them into the mouth of some other person, from whom they will be better taken ; or makes inanimate nature bring a charge, or express a resentment, to render it the more affecting : and by the same method lie sometimes secures himself from a charge of flat- tery, in carrying a compliment too high. Cicero, in his oration for Balbus, introduces Marius, who was dead, to plead in his defence : ‘ Can Balbus,’ says he, ‘ be condemned, without con- demning Marius for a like fact? Let him be present to your thoughts, since he cannot be so in person. Let him tell you, he was not unac- quainted with leagues, void of examples, or ig- norant of war.’ And again, in his first invective against Catiline, he represents his coimtry as ex- postulating with himself, and vipbraiding him for suffering such a criminal as Catiline to live. In the management of this figure, care should be taken that what is said be

always consistent with the character introduced.

In treating upon figures, we have hitherto considered them separately ; but some expres- sions consist of a complication of them, and may come under the denomination of several figures, as well verbal as those of sentences, differently considered. Examples of this the judicious reader will easily discover, both in ancient and modern orations.

IV. Of style, and its different characters. ××× The word style properly signifies the instrument which the ancients used in writing. For as they commonly wrote upon thin boards covered over with wax, and sometimes upon the barks of trees, they made use of a long instrument like a bod- kin, pointed at one end, with which they cut their letters, and broad at the other, to erase any thing they chose to alter. This the Latins called stylus. But, though this be the first sense of the word, yet aftervkards it came to denote the man- ner of expression. In this sense we likewise use it, by the same kind of trope that we call any one's writing his hand. Style, then, in the common acceptation of the word, is the peculiar manner in which a man expresses his concep- tions by means of language. The reasons which occasion a variety of style, we cannot here dis- cuss.

The foundation of a good style is good sense. Cicero recommends to all who are candidates for eloquence, and desirous to become masters of a good style, to write much. This affords them an opportunity to digest their thoughts, and weigh their words and expressions so as to give every thing its proper force and evidence : while, by reviewing a discourse composed, we correct its errors or supply its defects.

Different countries have not only a different

langiiage, but a peculiarity of style. The eastern nations, for instance, had a lofty and majestic manner of speaking. Their words are full and sonorous, their expressions strong and forcible, and warmed with the most lively and moving figures. This is evident from the writings of the Old Testament, in which we find a most agree- able mixture of simplicity and dignity. On the contrary, the style of the more northern lan- guages generally partakes of their climate : ' There is,' says Mr. Addison, ' a certain cold- ness and indifierence in the phrases of our Eu- ropean languages, compared with the oriental forms of speech. And it happens very luckily, that the Hebrew idioms run into the English tongue with a peculiar grace and beauty. Our language has received innumerable elegancies and improvements from that infusion of Hebra- isms, which are derived to it out of the poetical passages in

holy writ. They give a force and energy to our expressions, warm and animate our language, and convey our thoughts in more ar- dent and intense phrases, than any that are to be met with in our own tongue. There is something so pathetic in this kind of diction that it often sets the mind in a flame, and makes our hearts burn within us.' Spect. No. 405.

The style of the same nation has been found also to vary with the great events of its history and the prevailing manners. The Athenians, while they continued a free state, were an active, in- dustrious and frugal people ; and cultivated the arts and sciences beyond any other nation : but as they had powerful enemies, and were exceed- ingly jealous of their liberties, this preserved them from luxury. Their style was at this time agreeable to their conduct ; accurate and close, but very expressive. The Asiatics, on the other hand, were more gay and loose in their manners, devoted to luxury and pleasure ; and accordingly they affected a florid and swelling style, filled with redundancies and superfluities of expression. The Rhodian style was a medium between these two ; neither so concise and expressive as the Attic, nor so loose and redundant as the Asiatic. Quintilian says it had a mixture of its author, and the humor of the people ; and, like plants set in a foreign soil, degenerated from the Attic purity, but not so wholly as to lose it. They first received it from TEschines, who, being worsted in his famous contest with Demosthenes, retired thither, and taught them rhetoric.

Cicero tells us that the first Latin historians aimed at nothing more than barely to make themselves intelligible, with as much brevity as possible. Those who succeeded them advanced a step further ; and gave a better turn and ca- dence to their sentences, though still without or- nament. But afterwards, when the Greek lan- guage became fashionable at Rome, by copying after Herodotus, Thucydides, Xenophon, and others, they gradually introduced all their beau- ties into theirown tongue, which in Cicero's time was brought to its highest perfection. But it did not long continue in that state. A degeneracy of manners soon corrupted their language, which Quintilian very much regrets. The case was the same with respect to the Greek tongue ; though its purity continued much longer than that of the

Latin. Sot can any language be exempt from the coni_'oo fate of all

human productions ; which have tneir beginning, perfection, and decay. Besides, there is a sort of fashion even in language. Cicero tells us that the most ancient Greek orators whose writings were extant in his time, such as Pericles, Alcibiades, and others, were subtle, acute, concise, and abounded in sense rather than words. But another class that followed them, among whom were Critias, The- ramenes, and Lysias, retained the good sense of the' former, while they improved their style. After these came Isocrates, who added all the flowers and beauties of eloquence : and, as he had many followers, they applied these ornaments and decorations according to their different tastes ; some by pomp and splendor, and others by greater force and energy. In this last way Demosthenes principally excelled. Afterwards they sunk into a softer and smoother manner, not less exact and florid, but more cold and life- less.

But the chief distinction of style arises from the different subjects of discourse. The same way of speaking no more suits all subjects than the same garment would all persons and all ranks. The style, therefore, should always be adapted to the subject, which rhetoricians have reduced to three ranks : viz. the low or plain style, the middle or temperate, and the lofty or sublime : which are likewise called characters, because they denote the quality of the subject upon which they treat. This division of style into three characters was taken notice of very early by ancient writers. Some observe it even in Homer, who assigns the sublime to Ulysses, when he represents him so copious and vehement an orator that his words came from him like winter snow ; while he de- scribes Menelaus as a polite speaker, but concise and moderate ; and represents Nestor's manner as between these two, not so high as the one, nor so low as the other ; but smooth, even, and plea- sant, or, as he expresses it, more sweet than honey. Quintilian observes that, although accu- racy and politeness were general characters of the Attic writers, yet among their orators, Lysias excelled in a low and familiar style ; Isocrates in elegance, smoothness, and the fine turn of his periods ; and Demosthenes in fire and rapidity, by which he carried all before him. Gellius tells us that the like difference was found in the three philosophers who were sent from the Athenians to Rome (before the Romans had any relish for the polite arts) to solicit the remittance of a fine laid upon them. Carneades was vehement and rapid in his harangues ; Cri- tolaus neat and smooth ; and Diogenes modest and sober. The eloquence of these orators, and the agreeable variety of their manner, so capti- vated the Roman youth, and inflamed them with such a love of the Grecian arts, that old Cato, who did all he could to check it by hurrying away the ambassadors, could not prevent their vigorous pursuit of them, till the

study became in a manner universal. And the old philosopher himself afterwards learned the Greek language, when it became more f’ > 5hionable ; which lord Bacon styles a punishment upon him for his for- mer crime. It seldom happens that the same

person excels in each of tliese characters. They seem to require a different genius, and most orators are naturally led to one of them more than another; though all of them are requisite for an orator on different occasions. See Style.

V. Of the style of an orator. ••• The style of an orator must occasionally comprehend all the characters of low, middle, and sublime, as they are applied by him in the different parts of his province. For the language must be suited to the subject, and the different views of the speaker necessarily occasion a variety in the manner of expression. Now an orator has three objects in view ; to prove what he asserts, to represent it in an agreeable light, and to move the passions. Each of these parts of his pro- vince requires a different style. The low style is most proper for proof and information ; the middle style is best suited for pleasure and en- tertainment ; but the sublime is necessary to influence the passions. Here the orator calls in all the assistance of nature and art; the most raised and lofty thoughts, clothed witli the brightest and strongest coloring, enter into this character. As short periods are proper in the low style, so less care is necessary in their turn and cadency. But the words should be well chosen and proper, suited to the ideas they are designed to convey ; the expressions plain and clear, and the artificial ornaments few and modest. Bold or lofty metaphors, or in which the allusion is dark and remote, ought to be avoided. Of these, such as come nearest to the natural way of expression are most proper for this style.

As the middle style is more adapted for plea- sure and delight, it admits of all those beau- ties and ornaments which soothe and entertain the mind. It has more force and energy than the low style, but less than the sublime. Smooth and harmonious numbers, well-turned periods, of a just length, delightful cadence, and accurate disposition of the words, are suited to this style. The most beautiful and shining tropes, which strike the fancy, and all those figures which, by repetition, similitude, or pro- portion of sounds, please and gratify the ear, help to form this character.

But it is the sublime style which perfects the orator. This requires the most forcible and emphatical words, the boldest metaphors, and strongest figures. In verbal figures, repetitions, synonymes, gradations, contraries, with others of a like force and energy, are chiefly

employed here. But figures of sentences are the most considerable, and principally contribute to make up this character. Among these are similies taken from lofty subjects, prosopopoeia, apos- trophe, exclamation, epiphonema, aposiopesis, and others of a like nature. But due care must be taken of the form, construction, and harmony of the periods ; which seem best disposed when long and short ones are intermixed. For, though round and swelling periods carry in them some- thing grand and majestic, yet they often move too slow to strike the passions ; whereas short ones are more acute and pungent, and, by returning quick, awaken the mind, and raise the passions. But, to render it complete, it must

1)6 supported with strong reason, grandeur of thought, and sentiments every way equal to tlie expression ; without which it will be liable to swell into bombast. Mr. Burke's admiraljle Essay on the Sublime and Beautiful lias long been a standard work on this part of our sub- ject.

PART IV.

OF PRONUNCIATION.

I. Of prorcunciafion in general. ••• Pronuncia- tion is by some of the ancients called action : though, if we attend to the proper signification of these words, the former respects the voice, and the latter the gestures and motions of the body. But, if we consider them as synonymous, in this large sense pronunciation or action may be said to be a suitable conformity of the voice, and the several motions of the body, in speaking, to the subject matter of the discourse. The best judges among the ancients have represented this as the principal part of an orator's province, whence he is chiefly to expect success in the art of persuasion. When Cicero, in the person of Crassus, has largely and elegantly discoursed upon all the other parts of oratory, coming at last to speak of this, he says : ' All the former have their effect as they are pronounced. It is the action alone that governs in speaking; with- out which the best orator is of no value, and is often defeated by one, in other respects, much his inferior.' And he says that Demosthenes was of the same opinion, who, when he was asked what was the principal thing in oratory, replied action ; and being asked again a second and a third time, what wˆas next considerable, he still made the same answer; by which he intimated that the whole art did

in a manner consist in it. And indeed, if he had not judged this highly necessary for an orator, he would scarcely have taken so much pains in correcting those natural defects under which he labored at first, in order to acquire it. See Demosthenes. Nor was he less careful in endeavouring to gain the habit of a becoming and decent gesture ; for which purpose he used, we are told, to pro- nounce his discourses alone before a large glass. Quintilian says that 'it is not of so much moment what our compositions are, as how they are pronounced ; since it is the manner of the delivery by which the audience is moved.' And he therefore asserts that 'an indifferent dis- course, assisted by a lively and graceful action, will have greater efficacy than the finest ha- rangue, which wants that advantage/

The truth of this sentiment of the ancients might be proved from many instances. Ilor- tensius, a contemporary with Cicero, and, while living, next to him in reputation as an orator, was highly applauded for his action. But his orations after his death, as Quintilian tells us (for there are none extant), did not appear an- swerable to his character. Bat Cicero himself is a decisive instance. After the death of Pom- pey, when Csesar had usurped the government, many of his acquaintance interceded with him in behalf of their relations and friends, who had been of the contrary party in the late wars.

Among others, Cicero solicited for his friend Ligarius ; which Tubero understanding, wlio owed Ligarius a grudge, he opposed it, and un- dertook to represent him to Caesar as unworthy of his mercy. Cajsar himself was prejudiced against Ligarius ; and therefore, when the cause was to come before iiim, he said, ' we may \en- ture to hear Cicero display his eloquence ; for I know the person he pleads for to be an ill man, and my enemy.' But, in the course of his oration, Cicero so worked upon his passions, that, by the frequent alteration of his counte- nance, the emotions of his mind were very con- spicuous. And when he came to touch upon the battle of Pharsalia, which had given Caesar the empire of the world, he represented it in that moving and lively manner that Caesar could no longer contain himself, but was thrown into such a fit of shivering that he dropped the papers which he held in his hand. This w;is the more remarkable, because Ccesar was himself one of the greatest orators of that age, knew all the arts of address, and consequently was better prepared to guard against them. But r.either his skill nor resolution was of sufficient force against the power of oratory ; the conqueror of the world became a conquest to the charms of Cicero's eloquence ; so that,, contrary to his intention, he pardoned Ligarius. This oration is still extant; but can scarcely be thought, in reading it, to have had so surprising an effect; which must therefore have been chiefly owing to the wonderful manner of the

speaker.

The more natural the pronunciation is, it will be the more moving. The ancients, therefore, make it one qualification of an orator, that he be a good man ; because a person of this character will make the cause he espouses his own, and the more sensibly he is touched with it himself, his action will be the more natural. Cicero says, ‘ it is certain that truth in every thing ex- cels imitation; but, if that was sufficient of itself in action, we should have no occasion for art.’ In his opinion, therefore, art, if well managed, will assist and improve nature. Sometimes the force of it is so great that, even where it is wholly counterfeit, it will work the effect of truth. This is well known to those who frequent the theatre. The warmth of expression and vehemency of action should rise in proportion to the importance of the subject and concern of the speaker. The learned author of Dialogues on Eloquence, p. 92, says, ‘the Romans had a very great talent this way, and the Greeks a greater. The eastern nations excelled in it, and particularly the Hebrews. Nothing can equal the strength and vivacity of the figures they em- ployed in their discourse ; and the actions they used to express their sentiments, such as put- ting ashes on their heads, tearing their garments, and covering themselves with sackcloth under any deep distress and sorrow of mind.’ As action, therefore, was judged so necessary a qualification in an orator among the ancients, so they made use of several methods and expedients for the better attaining it. (Juintilian gives di- rections how young persons should be taught to pronounce, when they first learn to read, The ancients likewise had persons whom they

called phonasci, whose proper business \va.s to teach them how to regulate their voice ; and others who instructed them in tlie whole art of pronunciation, both as to their voice and ges- tures. These last were generally taken from the theatre, being eminent experienced actors.

But Cicero well represents the distinction be- tween the action of an orator and that of an actor. ‘ The action of the body,’ he says, ‘ ought to be suited to the expressions, not in a theatrical way, mimicking the words by particular gesticulations, but in a manner expressive of the general sense, with a sedate and manly inflection ; not taken from the stage and actors, but from the exercise of arms and the palestra.’ ‘ Every gesture and motion of the comedians,’ says Quintilian, ‘ is not to he imitated, nor to the same degree.’ When thus prepared, they were

sent to the schools of the rhetoricians, to cultivate their style, and acquire the whole art of eloquence; particularly a just and accurate pronunciation. And, as the Greeks were most celebrated for their skill in oratory, the Roman gentry and nobility generally sent their sons abroad, under tlie tuition of some Grecian master. Thus Cicero was sent to Ixhodes under the famous iNIolo, and Brutus under Pammenes ; Caesar was going to the same place when taken by pirates ; and Augustus afterwards studied there under Apollodorus. After this pains and industry, the ancients did not think themselves sufficiently qualified to take upon them the character of orators, till they ˆot together their friends, and declaimed before them in private ; which gave them an opportu- nity to correct any defects at first, before they became habitual.

II. Of the Voice. ××× The influence of sounds, either to raise or allay our passions, is evident from music : and certainly the harmony of a fine well pronounced discourse is as capable of mov- ing us. As persons are differently affected when they speak ; so they naturally alter the tone of their voice. It rises, sinks, and has various in- flections, according to the state and disposition of the mind. When the mind is calm and sedate the voice is moderate and even ; when the former is dejected with sorrow the latter is languid ; and, ××hen that is enflamed by passion, this is raised and elevated. It is the orator's business, therefore, to endeavour that the tone of his voice appear natural and unaffected. For this end, he must suit it to the nature of the subject. Some deliver a discourse in a low drawling manner ; others hurry on in so loud and boiste- rous a tone, as if they imagined their h-earers were deaf. But all the harmony of speech lies in the proper temperament of the voice between these extremes. The principal properties of voice may be referred either to quantity or quality.

1 . The quantity of the voice consists in its highness or lowness, swiftness or slowness, and the intermediate degrees between them.

i. Every person who speaks in public should endeavour to fill the place where he speaks. But still he ought to be careful not to exceed the na- tural key of his voice. If he does, it will neither be soft nor agreeable ; but either harsh and rough, or too shrill and squeaking. Besides, he will not be able to give every syllable its full and

distinct sound , which will render what he says o'jscure.

ii. The like caution is to be used against the contrary extreme, that the voice be not dropped, and suffered to sink too low. Tliis will give the

speaker pain in raising it again to its proper pitch, and be no less offensive to the hearers. The medium is a moderate and even voice. But this is not the same in all ; that which is mode- rate in one would be high in another. Every person therefore must regulate it by the natural key of his voice. A calm and sedate tone is generally best; as a moderate and distinct sound is most pleasing to the ear. But this equality of the voice must also be accompanied with variety. Nothing is less pleasing than a discourse pronounced throughout in one continued mono- tony. The gradations, whether higher or lower, should be gentle and regular ; an even tone of voice being best fitted to keep up attention. But the voice ought to agree with the style ; and as the orator's province is not only to apply to the mind, but likewise to the passions, these require a great variety of the voice, high or low, vehe- ment or languid, according to the nature of the passion he designs to affect.

iii. That some addresses ought to be pro- nounced faster than others is manifest. Gay and sprightly ideas should not only be expressed louder, but also faster, than such as are sad and melancholy. And, when we press an adversary, the voice should be brisk and quick. A preci- pitant and hasty pronunciation, however, is cul- pable, as well as speaking too slow. This armes a heaviness in the speaker ; and, as he appears cool himself, he can never expect to warm his hearers. In Ion? periods, the voice should be favored by beginning low and sedately, that it may hold to the end without respiration ; or, if not, the breath ought to be recovered without sinking the voice. For, if once the voice droo for want of breath before the period be finished, not only the beauty but the sense will be injured. Quintilian lays a great stress upon a due attention to these pauses ; and says, ' Though it may ap- pear not so considerable in itself, yet all the other virtues of a good pronunciation are defi- cient without it.'

2. The chief qualities of tise voice are strength, clearness, fulness, and smoothness ; and various defects of the voice may be helped by care and attention. Temperance is a great preservative of the voice, and all excess is prejudicial to it. The voice must suffer, if the organs cf speech have not their proper tone.

i. A strong voice is serviceable to an orator, but he who has a weak one should be careful not to strain it. He ought to beˆin low, and rise gradually to such a pitch as the key of his voice will easily carry him, without being obliiˆed to sink afterwards. Frequent inflections of the voice will be some assistance to him. But he should take care to speak 'deliberately, and ease his voice, by allowing due time for respiration at all the pauses. It is an extreme much less in- convenient for such a

person to speak too slow than too fast. But this defect of a weak voice is often capable of being helped by proper methods ; as is evident from the instance of Demosthenes.

ii. A voice is said to be clear when the organs of speech are suited to give every single letter, and all the combinations of them in syllables and words, their proper and distinct sound. Such a tone of voice is very agreeable to the hearers ; and no less so to the speaker, as it saves him a great expense of spirits. For a moderate voice, if clear, will be as distinctly heard as one much louder, if obscure. This is a great advan- tage to the speaker, because he can better help his voice under command, and modulate it at pleasure. An obscure and confused voice is not always occasioned by a deficiency in the organ ; but is often the effect of a bad habit. Some, either from want of due care at first, or from in- advertency and negligence afterwards, run into a very irregular and confused manner of expres- sing their words ; either by misplacing the accent, confounding the sound of the letters, or huddling the syllables one upon another, so as to render what they say often unintelligible.

iii. A full voice fills the ear, but it is often not pleasant. And therefore, to render it so, it should be frequently varied. Yet it seems better suited to the character of an orator than a small and shrill voice ; because it has something in it more manly. Those who have the misfortune of a very small voice, should be cautions of raising it to too high a pitch, especially at once ; because the sudden compressure of the organ is apt to occasion a squeaking and disagreeable sound.

iv. A soft and smooth voice is the most musi- cal, especially if it be flexible.

in. Of gesture. ††† By gesture is meant a sui- table conformity of the motions of the counte- nance and several parts of the body in speaking. It is not agreed among the learned, whether voice or gesture has the greater influence in oratory. But, as the latter affects us by the eye as the for- mer does by the ear, gesture seems to have this ad- vantage, that it conveys the impression more speedily to the mind. Nor is its influence less upon our passions ; nay, in some instances, it appears to act more powerfully. A cast of the eye shall express desire in as moving a manner as the softest language ; and a different motion of it resentment. Nor is it in some respects less various and expressive

than language. Ci- cero tells us, he often diverted himself by trying this with Roscius the comedian ; who could ex- press a sentence as many ways by his gestures, as he himself by words. And some dramas, called pantomimes, are carried on wholly by mutes, who perform every part by gestures only, in a way very intelligent, as well as entertaining to the spectators. Well, therefore, might Cicero call action (or gesture) the language of the body, since it is capable in so lively a manner to ex- press both our ideas and passions. But, with re- spect to oratory, gesture may be very properly called the second part of pronunciation ; in which, as the voice should be suited to the im- pressions it receives from the mind, so the several motions of the body ought to be accommodated to various tones and inflections of the voice. When the voice is even and moderate, little ges- ture is required ; and nothing is more unnatural than violent motion, in discoursing upon ordi- nary and familiar subjects. The motions of the

body should rise, therefore, in proportion to thp vehemence and energy of the expression, as the natural and genuine effect of it.

It is hardly necessary to mention that, by the uniform practice of all nations, the most proper gesture for a public speaker is to address his au- dience standing. But thougli standing appears to be the most proper posture, yet it is very unbe- coming for the body to be entirely without mo- tion. It should not long continue in the same position, but be constantly changing impercepti- bly. There ought to be no appearance of stiffness, but a certain ease and pliableness, suiting every expression ; by which means, when a greater de- gree of motion is necessary, it will appear less sudden and vehement ; for as the raising, sinking, and various inflections of the voice must be gradual, so likewise should the motions of the body. It is only on some particular occasions that a hasty impetuosity is proper in either case.

The head, in calm and sedate discourse, ought to keep its natural state, an upright posture. However, it should not be long without motion, but gently turn, sometimes on one side, and sometimes on the other, as occasion requires. It should always accompany the other actions of the body, and turn on the same side with them ; except when aversion to any thing is expressed, which is effectually done by stretching out the right hand, and turning the head to the left. But it is the countenance that chiefly represents both the passions and disposition of the mind. By this we supplicate, threaten, soothe, invite, forbid, consent, or refuse, without speaking, the several parts of the face bearing their part, and contributing to the proper and decent motion of the whole. In a calm and sedate discourse, all the features retain their natural appearance. In sorrow, the forehead and eyebrows

lour, and the cheeks hang down. But, in joy and cheerfulness, the forehead and eyebrows are expanded, the cheeks contracted, and the corners of the mouth drawn upwards. Anger and resentment contract the forehead, draw the brows together, and thrust out the lips ; and terror elevates both the brows and the forehead.

Cicero advises that the greatest care should be taken in the management of the eye. We readily guess at a person's intention by observa- tion of this member; any sudden change or emotion of the mind being presently followed by an alteration in the look. In speaking, therefore, upon pleasant and delightful subjects, the eyes are brisk and cheerful ; as, on the contrary, they sink and are languid in delivering any thing me- lancholy. A gentle and moderate motion of the eyes is in an orator most suitable, directed occa- sionally to all parts of his audience, and gradu- ally turning from side to side with an air of respect and modesty. The shoulders ought not to be elevated ; as it contracts the neck, and hin- ders the proper motion of the head. Nor, on the other hand, should they be drawn down and depressed, as this occasions a stiffness both on the neck and the whole body. Their natural posture is most easy and graceful. A continued motion of the arms any way, is *i0 be avoided. Their action should generally ” very moderate, and follow that of the hands.

Quintilian seems to think the hands as neces- sary and powerful in action, as Cicero the eyes. ‘ The hands,’ says he, ‘ without which all gesture is lame and weak, have a greater variety of motions than can well be expressed ; for they are almost equal to our words. In short he styles them ‘ the common language of all man- kind.’ In admiration, and addresses to heaven, they must be elevated, but never raised above the eyes : in speaking of things below us, they are directed downwards. Side motions should generally begin from the left, and terminate gently on the right. In demonsleating, address- ing, and on several other occasions, they are moved forward ; and in threatening sometimes thrown back. But, when the orator speaks of himself, his right hand siiould be gently laid on his breast. When no other motion is necessary, she hands should l)e kept about as high as the breast. This is not only a graceful, but likewise the most easy posture, and gives the least strain to the muscles. They should never be suffered to hang down, or loll upon a cushion or bar. The left hand should never move alone, but ac- commodate itself to the motions of the right. In promises and expressions of compliment, the motions of the hands

should be gentle and slow ; but in exhortations and applause more swift. The hands should generally be open ; but in ex- pressions of compunction and anger they maybe closed. All finical and trifling actions of the fingers ought to be avoided. The feet should continue steady, and not give the body a waver- ing and giddy motion by frequently shifting ; though some persons fall into that habit without moving their feet. Philip, the Roman orator, was wont to tell his friends, ‘ he was never fit to
उउtalk, till he had warmed his arm.’ He doubt- less, therefore, used a more violent motion with his arms and hands than is common with us. And Cicero calls the arm projected the orator’s weapon.

To speak low at first has the appearance of modesty, and is best for the voice : which, by rising gradually, will with more ease be carried to any pitch that may be afterw’ards necessary, without straining it. However, some variation of the voice is always proper to give it harmony. Sometimes it is not improper for an orator to set out with a considerable degree of warmth, ex- pressed by such an elevation of the voice and gestures of the body as are suited to represent the emotions of his mind. But this is not ordinarily the case. We have some happy instances of it in Cicero ; as in his oration for Roscius Ameri- nus, where the heinousness of the charge could not but excite his indignation against the ac- ववउcusers. And in thai against Piso, and the two

first against Catiline, which begin in the same manner, from the resentment he had conceived and wished to inspire against their persons and “londuct.

In narration the voice ought to be raised to a higher pitch. Facts should be stated distinctly and accurately, with a proper emphasis laid upon the principal circumstances. The proposition should be delivered with a clear and audible voice, and its divisions distinctly marked. The confirmation admits of a great variety, both of voice and gesture ; and the reasoning ought to be accompanied with suitable actions. In con- futation, the arguments of the opposite party should be stated plainly and distinctly, unless they appear unworthy of a serious answer ; in which case they may be answered with humor, or exposed with ridicule. Tabero, having made it yjart of his charge against Ligarius that he was in Africa during the civil war between Caesar and Pompey, Cicero, in his reply, said, ‘ Caesar, my kinsman, Tubero has laid before you a new crime, and till this day unheard of, that Q. Ligarius was in Africa !’ In a conclusion, both the voice and gesture should be brisk and sprightly, which may seem to arise from a sense of the speaker’s opinion of the goodness of his cause, and that he has

offered nothing but what is agreeable to reason and truth ; as likewise from his assurance that the audience agree with him in the same sentiments. In every under- taking that requires care and thought persons are apt at first to be sedate and moderate, but when it is drawing to an end, and is nearly finished, it is very natural to appear more gay. If an enumeration of the principal arguments of the discourse be convenient, as it sometimes is, where they are pretty numerous, or the discourse is long, they ought to be expressed in the most clear and forcible manner.

Thus have we laid before our readers a brief but comprehensive view of the principles, rules, chief requisites, and practice of oratory. But, after all, it may be said of the orator as of a poet, ‘ nascitur non fit.’ But the student of this science should consider his own genius. We seldom find that any actor can excel in all charac- ters, but if he performs one well hje is deficient in another; and therefore he commonly con- fines himself to such as best suit his powers. The case is the same with the orator, who should keep within those bounds which nature has prescribed. Every one should endeavour to know his own powers, and act in aid of them, as in most cases nature may be much assisted and im- proved by art.

Oratory, a small closet or apartment near a bed-chamber, furnished for private devotions.

ORB, n. s. ˆ Fr. and Ital. orbe ;

Orbed’, adj. I Lat. orbis. A sphere ;

Orbic’ular, I globular or circular

Oebic’ularly, adv.)>body ; hence the eye ;

Orbic ulated, adj Or’bit, n.s Or’by, adj.

a wheel ; circle ; parti cularly a heavenly body J or light; circle or revo-

lution of such a body ; mundane circle ; period ;

evolution of time : orbed and orbicular mean rounded, circular, or globular ; as does the obsolete word orby : orbit is chiefly used for the line of a planet, path, or revolution ; and by Young, improperly, as a diminutive of orb.

It smote Atrides’ orbie large : out runae not through the brasse.

Chapman.

ORB

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When now arraid The world was with the spring ; and orhie houres Had gone the round againe, through herbs and flowers. Id’

In the floor of heaven There’s not the smallest orh which thou beholdest, But in his motion like an angel sings, Still quiring to the young-eyed cherubims.

Sliafispeare. Will you again unknit This churlish knot of all abhorred war, And move in that obedient orli again, Where vou did give a fair and natural light?

Id. All those sayings will I overswear. And all those swearings keep as true in soul. As doth that orbed continent the fire. That severs day from night. Id.

Astronomers, to solve the phenomena, framed to their conceit ecceutricks and epicycles, and a won- derful engine of orbs, though no such things were.

Bacon. The orhs Of his fierce chariot rolled as with the sound Of torrent floods. Mitton^s Paradise Lost.

Self-begot, self-raised. By our own quickening power, when fatal course Had circled his full orh, the birth mature Of this our native heaven. Id.

A drop serene hath quenched their orbs, Or dim suffusion veiled. Milton.

Truth and justice then Will down return to men. Orbed in a rainbow, and like glories wearing. Id.

He shall monarchy with thee divide Of all things, parted by the’ empyreal bounds. His quadrature from thy orbicular world. Id.

With smiling aspect you serenely move In your fifth orb, and rule the realm of love.

Drvden, They with a storm of darts to distance drive The Trojan chief ; who held at bay from far. On his Vulcanian orb sustained tlie war. Id.

That fine part of our constitution, the eye, seems as much the receptacle and seat of our passions, ap- petites, and inclinations, as the mind itself. Love, anger, pride, and avarice, all visibly move in those little orbs. Spectator.

A golden axle did the work uphold. Gold was the beam, the wheels were orbed with gold.

A ddison. The form of their bottom is not the same ; for whereas before it was of an orbicular make, they now look as if they were pressed. Id.

By a circle I understand not here a perfect geome- trical circle, but an orbicular figure, whose length is equal to its breadth, and which as to sense may seem circular. Newton.

A mighty collection of water, inclosed in the bowels of the earth, constitutes an huge orb in the interior or central parts ; upon the surface of which orb of water the terrestrial strata are expanded.

Woodward's Natural History. Suppose more suns in proper orbits rolled. Dissolved the snows and chaced the polar cold.

Blackmore. Suppose the earth placed nearer to the sun, and revolve for instance in the orbit of Mercury ; there the whole ocean would even boil with extremity of heat, and be all exhaled into vapours ; all plants and animals would be scorched. Bentley.

Attend, and you discern it in the fair Conduct and finger, or reclaim a hair; Or roll the lucid orbit of an eye ; Or in full joy elaborate a sigh. Young.

Ancient dame, how wide and vast,

'I'o a race like ours appears. Rounded to an orb at last

All thy multitude of years ! Cowpcr

Glorious orb! the idol Of early nature and the vigorous race Of undiseased mankind, the giant sons Of the embrace of angels, with a sex More beautiful than they, which did draw down The erring spirits who can ne'er return. Byron,

Orb, in military tactics, is the position of a number of men in the form of a hollow circle. The celebrated marshal de Puysegur prefers this position for a body of infantry in an open coun- try to resist cavalry,

or even a superior force of infantry ; because it is regular and equally strong, and gives an enemy no reason to expect better success by attacking one place than ano- ther. Csesar drew his whole army in this form when he fought against Labienus. The whole army of the Gauls were formed into an orli, under the command of Sabinus and Cotta, vˆhen fighting against the Romans. This orb was generally formed six deep.

ORBE, O KBEN, or Urbacu, a neat built town of West Switzerland, in the Pays de Vaud, on the river Orbe, over which is a bridge. The most remarkable objects of the place are a curious hydraulic engine, and the botanical garden. Population 2000 : seven miles south-west of Yverdun.

ORBELUS, a mountain chain of European Turkey, to the westward of the great litmus ridge, and rising to the greatest elevation to the south of Sophia. Parts of this track contain silver, copper, and iron ores, and the Turks have here some valuable mines.

Orbit, in astronomy, is the path of a planet or comet, or the curve that it describes in its revolution round its central body ; thus the earth's orbit is the curve which it describes in its annual course round the sun. See Astro- nomy.

ORBITELLO, a town and fortress of Tus- cany, in the province of Sienna, situated on a kind of promontory projecting into a lake of this name, about eighteen miles in circuit. It has a good harbour, defended by several forts. With the sea it communicates only by a narrow inlet. It is chiefly remarkable for the size and number of eels which are caught here (some of them weighing from eight to ten lbs.), and wliich are sent to Rome, Naples, and various large towns. Eighty miles north-west of Rome, and ninety south of Florence.

ORC, n. s. Lat. orca; Gr. opuya. A sort of sea-fish.

An island salt and bare, The haunt of seals and ores, and sea-mews* clang.

Milton.

OR'CIIARD, n. s. Saxon ojitˆeajiˆ, either hortyard or wortyard, says Skinner. The Goth. aurt, and Sax. ojir, seem to correspond with the Lat. /tortus. A garden of fruit tiees.

Planting of orchards is very profitable, as well as pleasurable. Bacon's Advice to VilUers,

They overcome their riches, not by making

Baths, orchards, fish-pools. Ben Jonson.

ORCHARD.

His parsonage-house from an incommodious luin he liad rendered a fair and pleasant dwelling, with the conveniences of gardens and orchuntx. Fell.

Her private orchards walled on every side, To lawless Sylvans all access denied. Pope.

Hence from the busy joy-resounding fields In cheerful error let us tread the maze Of .\utumn unconfined, and taste revived The breath of orchard big with bending fruit.

Th'jmsnn.

An Orchard is a portion of garden ground appropriated to the growth of standard fruit- trees, or for furnishing a large supply of the most useful kinds of fruit. The trees are mostly apple, pear, plum, and cherry-trees ; to render the orchard more complete, it may also contain quinces, medlars, mulberries, service-trees, fil- berts, Spanish nuts, barberries, walnuts, and chestnuts. The two last sorts, as well adapted for sheltering the others from high winds, should, Mr. Forsyth thinks, be planted in the boundaries of the orchard, a little closer than ordinary for that purpose. In providing trees too much care cannot be taken to admit of none but such as have good roots, fair clean stems, and proper heads ; and at the same time attention should be paid that a proper assortment of the different sorts be procured for the supply of the table during the whole year. A few of the summer sorts are sufficient, but more of the autumn, and still a larger quantity of the winter kind will be necessary. Large orchards of apples are only met with in districts where cider-making is con- ducted upon a large scale. In some counties, as Kent, there are orchards wholly of cherries, or of cherries and filberts. In general, however, there ought lo be a much larger proportion of apples than of any other fruit in orchards, as in proper situations they are very profitable, and always of fine appearance.

The extent of ground for an orchard must be proportioned, in some measure, to the extent of land, and the quan.ity of fruit required either for private use or for public supply ; so that an orchard may be from

half an acre to twenty or more in extent. With respect to the situation of an orchard, we may observe very thriving orchards both in low and high situations, on declivities and plains, in various aspects or ex- posures, provided the soil is good; but very low damp situations should be avoided as much as possible ; for in very wet soils no fruit trees will prosper; but a moderately low situation, free from copious wet, may be more eligible than an elevated ground, as being less exposed to tempestuous winds. Yet a situation having a small declivity is very desirable, especially if its aspect incline towards the east, south-east, or south, which are more eligible than a west as- pect ; but a north aspect is the worst of all, un- less compensated by the good quality of the soil. And, as for soil, any common field or pas- ture that produces good crops of corn, grass, or kitchen vegetables, is suitable for an orchard, which should be sheltered from the east, north, and westerly winds, by sultableplantatiuns, where not naturally protected by hills or rising grounds : but such plantations, when they consist of forest- trees, should neither be too large nor too near Vol. XVI.

the orchard; as, wiiere that is the case, they pre- vent a free circulation of air. Mr. Forsyth advises, where the ground does not admit of such plantations, planting cross rows of fruit-trees, in the manner directed in gardens, as well as some of the largest growing trees, nearest the outsides exposed to those winds, two or three rows of which should be planted closer than ordinary, which would greatly shelter those in the interior parts of the orchard, and be of great service, in addition to the walnut and chestnut trees, as mentioned above. Orchards succeed well on a clialk bottom, or subsoil. On such a soil Mr. Forsyth has seen roots twelve feet deep, and the trees thrive well. Where the bottom is clay the roots should be cut-in once in four years, to prevent them from penetrating the clay, which would greatly injure the trees. Whatever the nature of the soil may be, it should have a good depth, as two or three feet.

The preparation of the ground for the recep- tion of trees is by trenching ; or, if for very considerable orchards, by deep ploughing; but trench digging, one or two spades, as the soil will admit, is the most eligible, either wholly or partially, in the places where the lines of trees are to stand, a space of six or eight feet wide, all the way in each row, especially if it be grass-ground, and intended to be kept in the sward ; or, if any of the under crops are designed to be raised, the ground may be wholly trenched at first; in either case trench the ground in the usual way to the depth of the natural soil ; and, if in grass, turn the sward clean to the bottom of each trench, which, when rotted, will prove an excellent manure. In planting orchards, how- ever, on grass grounds, some only dig pits for each tree, capacious

enough for the reception of the roots, loosening the bottom well, without the labor of digging any other part of the ground. The ground must be fenced securely against cattle, &c., either with a good ditch and hedge, or with a paling fence, as may be most conve- nient.

In bad shingly or gravelly soils Mr. Forsyth recommends that holes should be dug at least three feet deep, and filled up with good mould ; if mixed up with rotten dung, rotten leaves, or other manure, the trees will in time amply repay the expense : the dung used for this purpose should be that from the melon and cucumber beds, mixed with the mould from the same, when the beds are broken up in autumn, or winter ; and be laid up in heaps, and continued so for one year at least; but be frequently turned, ap' have some good fresh mould mixed with it.

The best season for planling all sorts of frur trees is autumn, soon after the fall of the leat from, about the end of October until December; or in open weather from October until March. Of apples and pears in particular, choose a much greater quantity of the autumnal and late kinds than of the early sorts ; but most of all apples ; for the summer fruit is of short dni.ition, only proper for temporary service ; but the later ripen- ing kinds keep sound for some considerable time for autumnal use ; and the later sorts, that ripen in October, continue in perfection for various uses all winter, and several sorts until the seasen

af apples return. Having made choice of the proper sorts, and marked them, let thein be taken up with the utmost care, so as to preserve all their roots as entire as possible ; and, when taken up, prune off any broken or bruised parts of the roots, and just tip the ends of the principal roots, in general, with the knife on the under side, with a kind of slope outward. If the trees have been already headed, or so trained as to havte branched out into regular shoots to form each a proper head, they must be planted with the heads entire, only retrenching or shortening any irregular or ill-placed shoot that takes an awkard direction, or grows across its neighbours, or such as may run considerably longer than the rest, &c. The arrangement of the trees must be in rows, each kind separate, at distances according to the growth of the different sorts ; but for the larger growing kinds,

such as apples, pears, plums, cherries. See, they should stand from twenty-five to thirty feet every way asunder, or forty feet at most. Each species and its varieties should gene- rally be in rows by themselves, tlie better to suit their respective modes of growth : though for variety there may be some rows of apples and pears arranged alternately, as also of plums and cherries ; and towards the boundaries there may be ranges of lesser growth, as quinces, medlars, filberts, &c., and the outer row of all may be walnut-trees, and some chestnuts, set pretty close to defend the other trees from violent winds. According to the above distances proceed to stake out the ground for making the holes for the reception of the trees ; which, if made to range every way, will have a very agreeable effect, and admit the currency of air and the sun's influence more effectually. In planting very extensive orchards some divide the ground into large squares of different dimensions, with intervals of fifty feet between ; serving both as walks, and for admitting a greater currency of air ; in dif- ferent quarters planting different sorts of fruit, as apples in one, pears in another, and plums and cherries in another, he, and thus it may be re- peated to as many quarters for each species and its varieties as may be convenient. As to the mode of planting the trees, a wide hole must be dug for each, capacious enough to receive all the roots freely every way without touching the sides. When the holes are all ready proceed to planting, one tree in each hole, a person holding the stem erect, whilst another trims in the earth, previously breaking it small, and casting it in equally all about the roots, frequently shaking the tree to cause the mould to settle close about all the smaller roots and fibres, and so as to raise the tree gradually up, that the crown of the roots may be but two or three inches below the general surface ; and, when the hole is filled up, tread it gently, first round the outside, then near the stem of the tree, forming the surface a little hollow ; and then if on the top of all is laid some inverted turf to the width of the holes, forming it with a sort of circular bank, three or four inches high, it will support the tree, and guard the roots from drying winds and summer's drought; observing that each tree stand per- fectly upright, and that they range exactly in thei- proper rows.

The (ifter management consists principally in keep-.ng the trees properly pruned and cut ; as, where this is judiciously done, the trees will come into bearing sooner, and long continue in vigor. But with standard trees less culture is necessary than in other cases. No branch sliould ever be shortened unless for the figure of the tree, and then it should be taken off close at the separation. The more the range of branches shoot circularly, a little inclining upwards, the more equally will the sap be distributed, and the better the tree bear. The ranges of

branches should not be too near each other, that the fruit and leaves may not be deprived of their full share of sun ; and, where it suits, the middle of the tree should be so free from wood that no branch may cross ano- ther, but all their extremities point outwards. About October or November, or as soon as the fruit is removed, is the most proper season for tliis work.

Take off superfluous branches with a saw, and afterwards smooth the place with a knife ; for it is essential that every branch that is to come off should be cut perfectly close and smooth. The wounded part may then be smeared over with composition. Such branches should always be taken off as come near to the ground, that have received any material injury, where the leaves are much curled, or that have a tendency to cross the tree, or run inwards : and attention may be given to the beauty of the head, leaving all the branches as nearly equidistant as possible. Where there are any remaining blotches they should be opened or scored with a knife ; and where the bark is ragged, from any laceration, it should be pared gently down to the live wood : the moss should be rubbed clean off, and the trees scored. In this last operation care should be taken not to cut through the inner or white rind, which joins the bark to the wood. The young shoots, in spring, should be rubbed off, and not cut, as cutting is apt to increase the number. The great enemy of apple-orchards is misletoe, and it is often permitted to become very injurious. The usual method of clearing trees from it is to pull it out with hooks in frosty weather, when brittle. A laborer is capable of clearing fifty or sixty trees in a day. Other diseases to which orchard-trees are subject are the canker, gum, mildew, and blight, which are rather to be prevented by such culture as will induce a healthy state than to be remedied by topical applications. Too much lime. Sir H. Davy thinks, will bring on the canker, and if so, the replacing a part of such soil with alluvial or vegetable earth would be of service. The gum, it is said, may be constitu- tional, arising from offensive matter in the soil ; or local, arising from external injury. In the former case, improve the soil ; in the latter, ap- ply the knife. The mildew, it is observed by T. A. Knight and Abercrombie, may be easily sub- dued at its appearance by scattering flour of sul- phur upon the infected parts. As this disease is now generally considered the growth of para- sitical fungi, the above remedy is likely to succeed. For the blight and caterpillars Forsyth recommends burning of rotten wood, weeds, potatoe haulm, wet straw, &c., on the windward side of the trees when they are in blossom. He

also recommends washing the stems and branches of all orchard trees with a mixture of fresh cow- dung with urine and soap-suds, as a white-washer would wash the ceiling or walls of a room. The promised advantages are, destruction of insects ard ‘ tine bark ;’ more especially, he adds, ‘ when you see it necessary to take all the outer bark off.’

Mr. Bucknell found it impossible to take off great branches of fruit-trees without leaving a stump, or improper wound : and, as it is essential that every branch be cut perfectly close and smooth, he used saws, and afterwards smoothed over the saw-cut with a knife, immediately ap- plying his medicated tar to the wound. This tar is composed of half an ounce of corrosive subli- mate, reduced to a fine powder, and put into a three-pint pipkin, with a glassful of spirits of hartshorn, and stirred well together till the subli- mate is dissolved. The pipkin is then filled by degrees with common tar, and constantly stirred till the mixture is blended as intimately as possi- ble. This composition has been found by Mr. Bucknell to answer the purposes of excluding the air, keeping off insects and vermin of every description, and of assisting the wound to heal.

*In heading down old decayed apple-trees, for the sake of symmetry,’ says the author of the Treatise on Fruit-trees, ‘ it will be necessary to cut at the forked branches, as near as can be to the upper side of the fork, cutting them in a sloping manner to carry off the wet, at the same time rounding the edges. The orchardist may begin at the lower branches, cutting just above the lower bark, and, proceeding upwards, cut the rest of the branches to six joints or forks, ac- cording to their strength, till he have finished cutting in the whole head. If any of these branches should have the canker all the infected part must be cut out. Vˆhen the tree is all pre- pared, the composition must be immediately ap- plied, beginning at the top of the tree, and finish- ing with the powder of wood ashes and burnt bones in descending, which will save its being rubbed off during the operation, and the compo- sition will prevent the sun and air from injuring the naked inner bark. A tree thus prepared will, in the course of three or four years, produce more and finer fruit than a maiden tree that has been planted upwards of twenty years.’

Mr. Marshall, in his Rural Economy of Glou- cestershire and Herefordshire, observes that spring frosts are an enemy, against which, per- haps, it is most difficult to guard orchard trees. Dry frosts are observ-ed to have no other effects than keeping the blossoms back

; consequently are frequently serviceable to fruit-trees. But wet frosts, namely, frosts after rain or a foggy air, and before the trees have had time to dry, are very injurious even to the buds. An instance is mentioned in which a flying hazy shower in the evening was succeeded by a smart frost : that side of the trees against which the haze drove was entirely cut off; while the opposite side, which had escaped the moisture, likewise escaped the effect of the frost.

The Hereford Agriculture Report insists that the pear, although, in general, producing an in- ferior liquor, possesses many advantages for ge-

neral culture, when compared with the apple. It will flourish in a greater variety of soils, is more productive, and being incapable (in those sorts which are proper for perry) to be eaten or ap- plied to any common culinary purpose, it is little subject to be stolen, even in situations where fruit does not abound. As an ornamental tree, it possesses sufficient merit to entitle it to a place where ornament is the principal object; its form is often picturesque, and it blossoms in the spring, and its fruit in autumn is always beau- tiful. Every tree, when nearly full grown, will afford, in moderately good ground, an annual produce of twenty gallons of liquor (taking many years together), even at the lowest calculation. Many single trees in Herefordshire have pro- duced a hogshead in one season, and an extraor- dinary tree growing on the glebe land of the parish of Horn Lacy has more than once filled fifteen hogsheads in the same year; when the branches of this tree, in its original state, became long and heavy, their extreme ends successively fell to the ground, and, taking fresh root at the several points where they touched it, each branch became a new tree, and in its turn produced others in the same way. The produce of an acre planted with apple-trees will generallj > be found nearly one-third less than the same quantity of ground planted with pear-trees would affsrd, with the exception of the halmer pear, and oldfield ; but the apple tree begins to bear at an earlier age, and cider will ever be justly preferred to the juice of the pear. As an object of sight, the pear-tree has every advantage over its rival ; but Mr. A. Knight is of opinion that under the sys- tem now practising, to procure new varieties, the apple-tree may, in some degree at least, acquire the recommendation of ornament, as well as use : those crossed with the Siberian crab promise to be of this description.

Orchards, says Mr. Loudon, have doubtless existed in Britain for many ages as appendages to wealthy religious establishments ; but as ob- jects of farming, or field culture, they do not ap- pear to have been adopted till about the beginning of the seventeenth century.'

‘ The most generally useful fruit that can be grown in farm orchards is the apple ; next the pear; then the plum for tarts, or wine; and to these may be added the cherry, filbert, walnut, chestnut, and elder. In the cider countries where the climate is more certain than in some others, it is customary to plant but a few good sorts ; and not to mix above one or two sorts together in making cider; in the northern dis- tricts, on the contrary, it is a maxim to plant a considerable number of different sorts, both of those which blossom early and late ; because, should the blossoms of one variety be destroyed by a frosty wind, that of another may escape. In cold districts, it is advisable to plant orchards in sheltered hollows, exposed to the sun, and to plant thick ; but in the warmer southern counties, many descriptions of rider and perry fruits may be grown to perfection in the hedge-rows, or as cultured trees in permanent pastures.’

We are indebted to this author for the follow- ing

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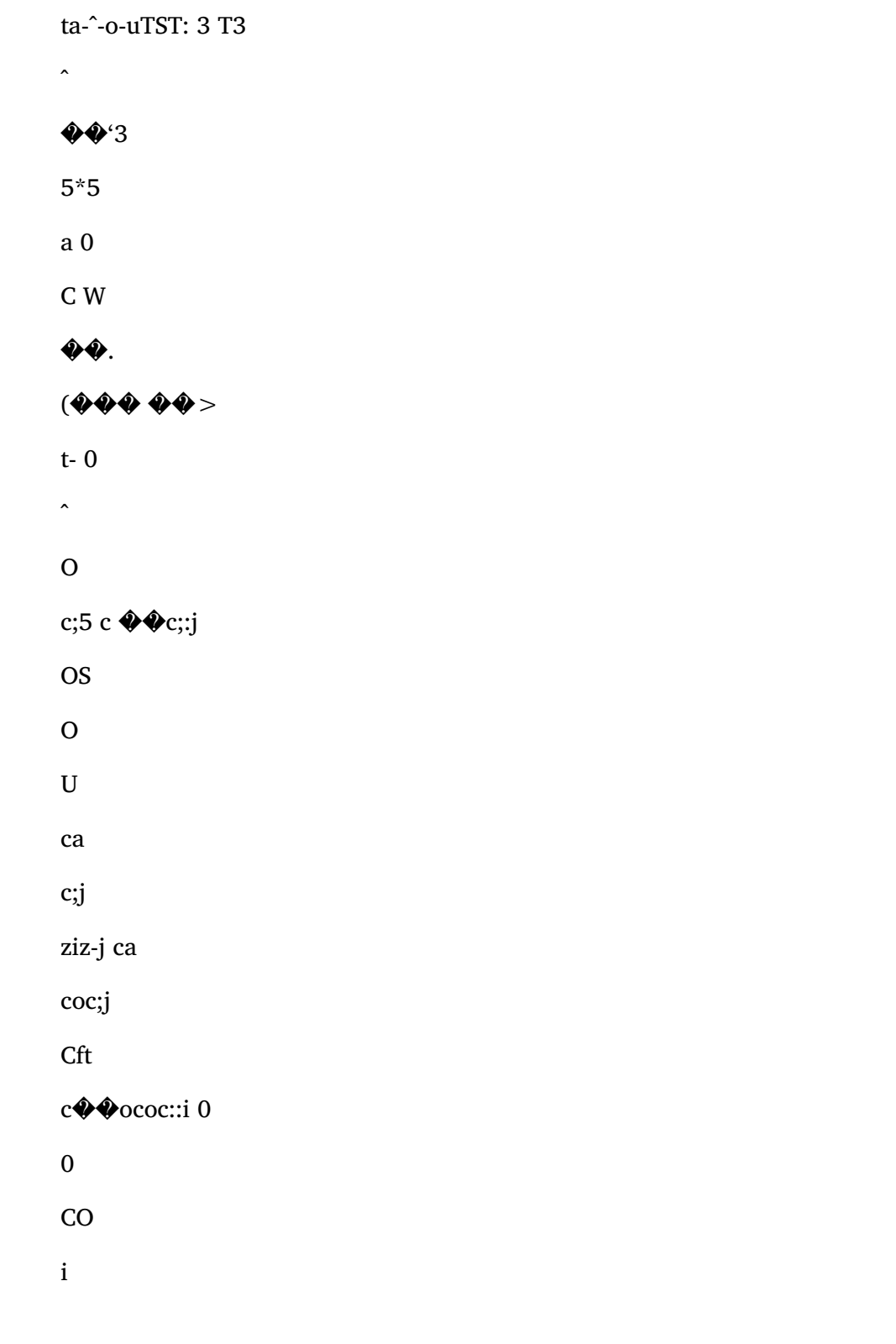

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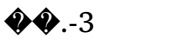

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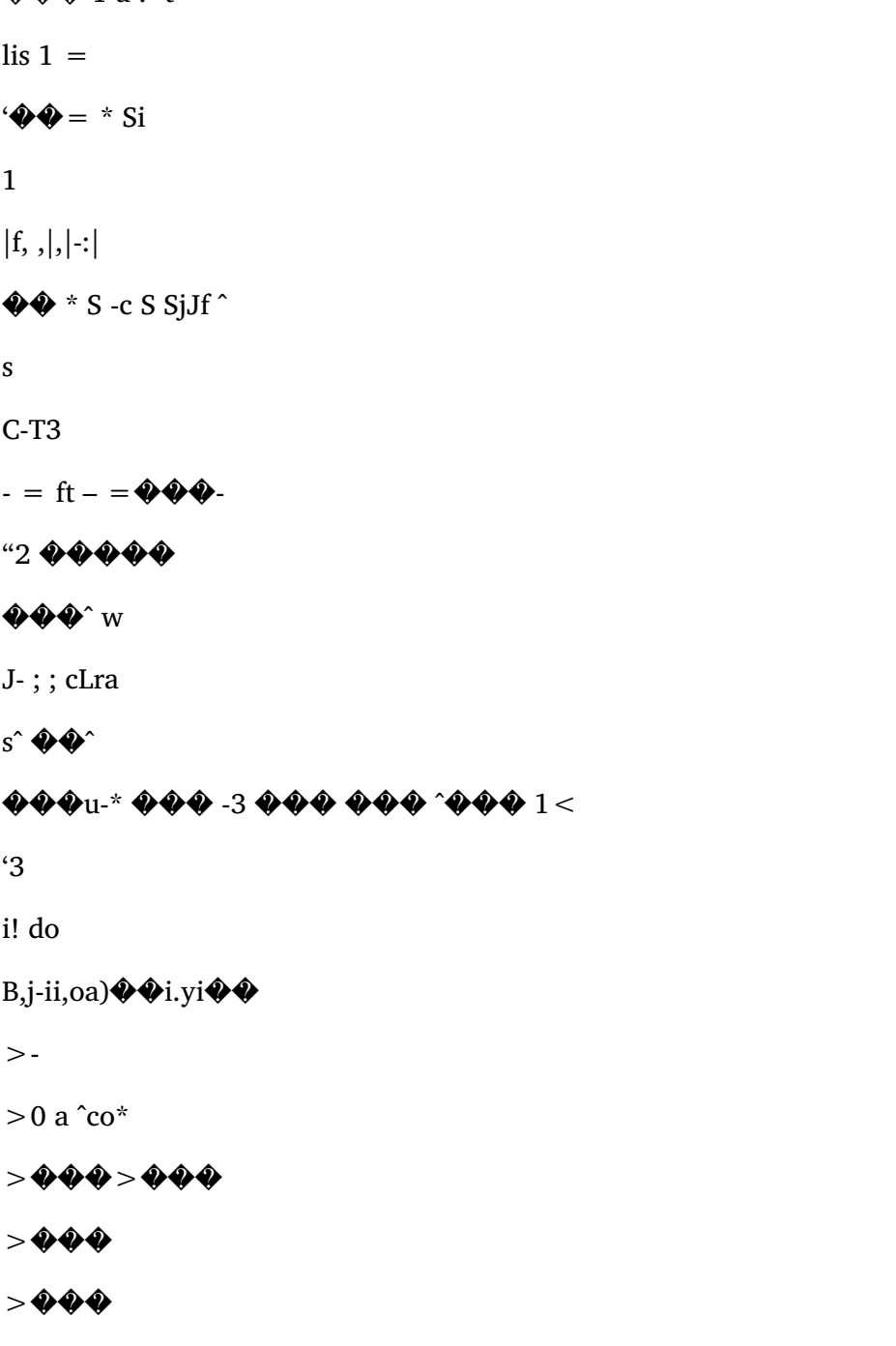

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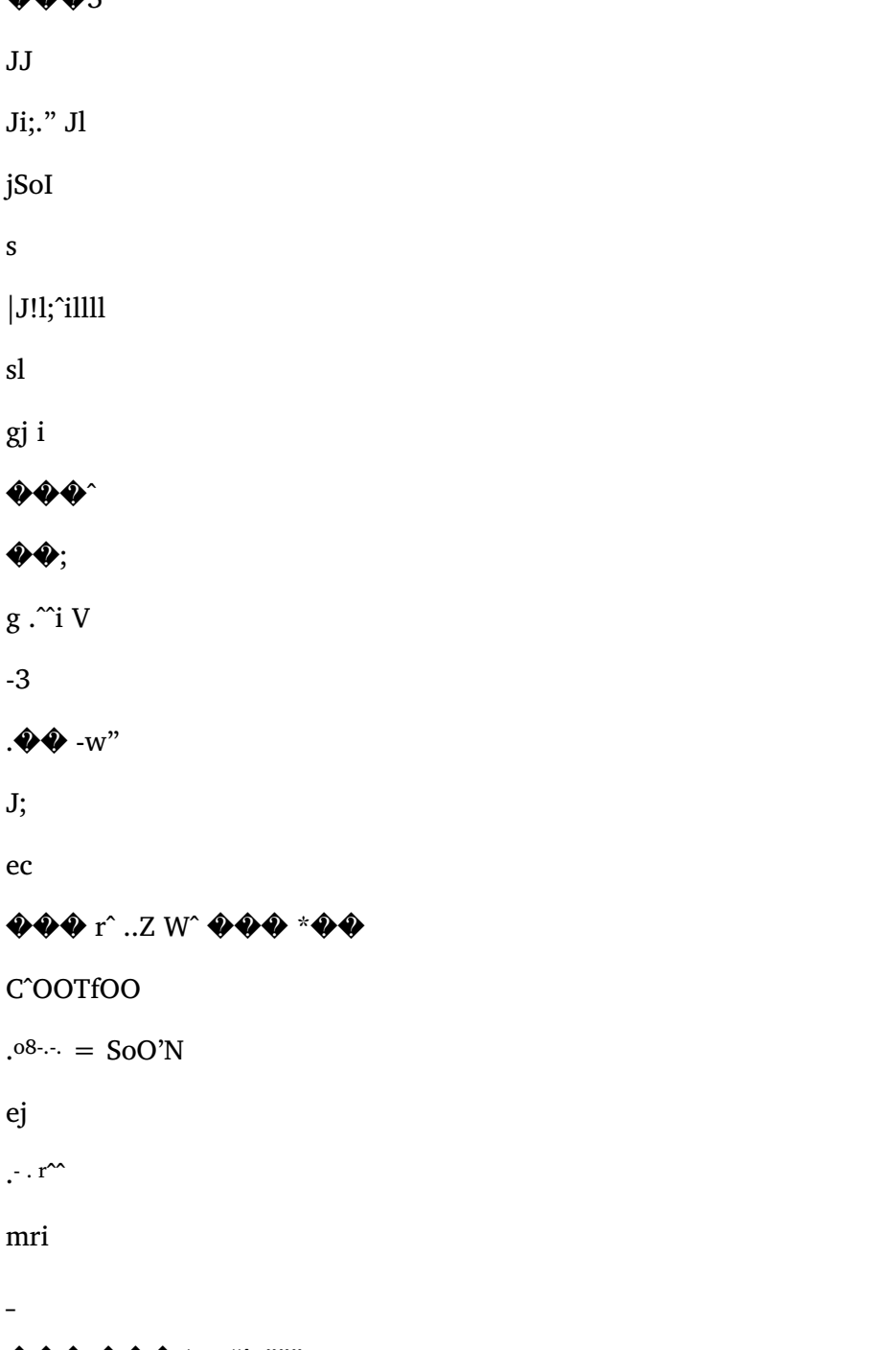

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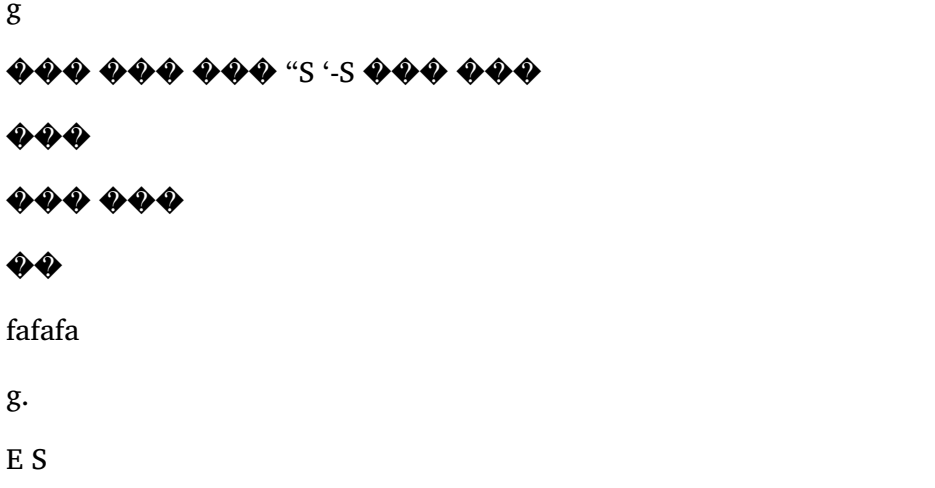

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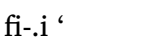

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The most approved sorts of cider pears, ac- oording to this writer, are the followin’ˆ : ⬚⬚⬚

Barland, Pom. Her. t. 27, Forsyth, p. 143, fruit very austere, hardly upright tree. Hol- more. Pom. Her. t. 20, Forsyth, p. 144, up- right tree. Huffcap, Pom. Hei. t. 24., Forsyth, p. 154, fruit austere, larse. hardy uees. Uld- field, Pom. Her. t. 11, Forsyth, p. 144, large tree. Rough cap, Forsyth, p. 144, very austere, hardy free-growing tree. Squasli teinton. Pom. Her. t. 13, Forsyth, p. 144, fruit very austere, upright tree and great bearer.

The baking and dessert pears fit for orchards, according to Nicol, are the following : ⬚⬚⬚ * Jar- gonelle, Crawford or lammas, * carnock or drum- mond, * gray achan, swan egg, * moorfowl egg * yair, * golden knap (good), Longuevilie, *summerbergamot, * autumn ditto,* Scot’s ditto, musk robin (good), saffron, * hanging leaf (very good), the pound pear, cadilac, warden (for bak- ing.

The best sorts of baking plums are, damson, buUace, muscle, winesour, and magnum bonum. Of tiiese the damson is by far the best, and next the winesour, which thrives only on a calcareous soil, and grows wild in abundance in the West Hiding of Yorkshire.

The following are excellent dessert plums for an orchard : ⬚⬚⬚ * Green-gage, Orleans, * damask (black, good), white perdigron, *b!ue ditto, blue gage, * white magnum bonum, red ditto or im- perial, *drap d’or (yellow, good). Of these the green-gage, Orleans, and damask are much the best.

ORCHESTRA, n. s. Gr. dpxvˆpa. The place occupied by musicians at a public enter- tainment.

Orchestra, in the Grecian theatres, was that part of the proscenium or stage where the chorus used to dance. In that of Athens a kind of altar was erected in the opxrf'pa, called the Jjujui'Xjj (thymele among the Uomans), which sometimes served to offer sacrifices on to Bac- chus (whence the edifice was named the Theatre of Bacchus), and sometimes as a tribune from which orations were made by the maˆristrates and orators to the assembled people, it being customary for the Greeks often to hold public meetings in their theatres. It is probable that this altar, as well as the orchestra itself (of which it formed the centre) was sunk somewhat below the level of the proscenium (as in modern days), in order that the view of the performance on the stage might not be interrupted. The orchestia was semi-circular and surrounded w ith seats. In the Roman theatres it made no part of the scena, but answered pretty nearly to the pit in our play-houses, being taken up with seats for senators, magistrates, vestals, and other persons of distinction. The actors never went down into it.

ORCHIA Lex, instituted by Orchius the tribune of Rome, A. U. C. 566. Its intention was to limit the number of guests that were to be admitted at an entertainment ; and it also enforced that during supper, which was the chief meal among tne Romans, the doors of every house should be left open.

ORCHILLA, a small cluster of islands in the

West Indies, near South America. Th< largest is in the form of a crescent, and low, excepting on the east and west capes. Here the trees and verdure abound, whilst on the other sides the soil is barren. The only animals are goats and lizards ; and it contains but little fresh water. On the south-west side the water is very deep, and the shore perpendicub.r, like a wall. Tiie different islands are separated by narrow chan- nels of difficult navigation. Long. 65►► 20′ VV. lat. 12►► N.

ORCHLS, in botany, a genus of the diandria order, and gynandria class of plants ; natural order seventh, orchidae. Its characters are these : it has a single stalk, with a vague sheath, and no empalement ; the flower has five petals, three without and two within ; the nectarium is of one leaf, fixed to the side of the receptacle, between the division of the petals ; the upper lip is short and erect, the under large, broad, and spreading ; tlie tube pendulous, corniform, or like a horn, and

prominent behind ; it has two short slender stamina, sitting upon the pointal, with oval erect summits, fixed to the upper lip of the nectarium ; there is an oblong contorted germen, under the flower, with a short style, fastened to the upper lip of the nectarium ; the germen afterwards turns to an oblong cap- sule, with one cell, having three keel-shaped valves, opening on the three sides, but jointed at top and bottom, filled with small seeds like dust. iMiller enumerates ten, and Linnceus thirty-three species. All those sorts of orchis described by Miller grow wild in several parts of England, but, on account of the extreme beauty of their flowers, deserve a place in every good garden ; and the reason of their not being cultivated in gardens proceeds from the difficulty of trans- planting them : though this may be easily over- come, where a person has an opportunity of marking their roots, in their time of flowerin,, and letting them remain until their leaves are decayed, when they may be transplanted with safety. But, if their soil and situation be adaj)ted to their various sorts, they will thrive and con- tinue several years, and during their season of flowering will afford as great varieties as any flowers which are at present cultivated. The most remarkable species are

O. mascula, with a root composed of two bulbs, crowned with oblong, broad, spotted leaves ; upright stalks, a foot high ; garnished with one or two narrow amplexicaule leaves ; and terminated by a long .spike of reddish pur- ple flowers, having the petals reflexed back- ward ; a quadrilobed crenated lip to the necta- rium, and an obtuse horn. The flowers of this species possess a very agreeable odor. This species is the most valuable.

O. militaris has a double bulbous root, crowned with oblong amplexicaule leaves ; erect flower-stalks, eight or ten inches high ; terminated by a loose spike of ash-colored and reddish flowers, having confluent petals ; a quinquefi J, rough, spotted lip to the nectarium, and an ob- tuse horn. The structure of the flowers exhibits the figure of a naked man ; and are often of di li- ferent colors in the same flower, as _ash-colo!> red, brown, and dark-striped.

O. morio, has a double bulbous root, crowned ###with oblong, ribbed, spreading leaves ; erect flower-stalks, eight or ten inches high ; garnished with a few amplexicaule leaves ; and terminated by a short loose spike of flowers, having conni- vent petals, a quadrifid crenated lip to the nec- tarium, and an obtuse horn. All the species are very

hardy perennials, with bulbous fleshy roots. The flowers appear in May, June, and July, but principally in June : their mode of flowering is universally in spikes, many flowers in each spike ; and each flower is composed of five petals in two series, and a nectarium. This plant flourishes in various parts of Europe and Asia, and grows in our country spontaneously, in great abundance. It is assiduously cultivated in the east ; and the root of it forms a consider- able part of the diet of the inhabitants of Tur- key, Persia, and Syria. From it is made the alimentary powder called salep ; which, prepared from foreign roots, is sold at 5s. or 6s. per lb., though it might be furnished by ourselves at the sixth part of that price, if we would cultivate this plant. The orchis mascula is the most valued for this purpose. A dry, and not very fertile, soil is best adapted to its growth. The most tit time for gathering the roots is when the seed is formed, and the stalk is ready to fall; because the new bulb, of which the salep is made, is then arrived at its full maturity, and may be distinguished from the old one by a white bud rising from the top of it, which is the germ of the orchis of the succeeding year.

ORCUS, or Pluto, god of the infernal re- gions, so called from opxoc►► ˆ tomb or sepulchre, or from oˆkoq an oath by the river Styx. The ;mcients gave this name also to all the divinities of the infernal regions, even to Cerberus. This deity has also been confounded with Charon : he had a temple at Rome.

One us, a river of Thessaly, which took its rise from the marshes of the Styx, and the waters of which were so thick that they floated like oil upon the surface of the river Peneus, into which they discharged themselves.

ORDAIN’, V. a.) Fr. ordonner ; Span, and

Ordain’er, n.s. S ˆort. odinar ; lia. ordinare ; Lat. 07-dino. To fix ; decree ; appoint ; settle ; institute ; invest with office or power.

All signified unto you by a man who is mdained over the affairs, shall be utterly destroyed. Esther.

As many as were ordained to eternal life believed.

Acts.

He commanded us to testify that it is he which was ordained of God to be the judge of quick and dead. Acts x. 42.

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refresh the miad of man After his studies, or his usual painl Shakspeare.

Mulmutius Ordained our laws, whose use the sword of Csesar Hath too much mangled. Id. Cymbeline.

God, from Sinai descending, will himself In thunder, lightning, and loud trumpets sound. Ordain them laws. Milton's Paradise Lost.

Si. James was bishop of Jerusalem, and St. Peter, lames, and John, were his ordainers.

Jeremy Tayior. To souls oppressed and dumb with grief,

'J'he Gods ordain this kind relief.

That musick should in sounds convey What dying lovers dare not say. Waller.

Meletius was ordained by Arian bishops, and yet his ordination was never questioned. Stillingjleet.

The fatal tent. The scene of death, and place ordained for punishment. Dryden. Some laws ordain, and some attend the choice of holy senates, and elect by voice. Id. My reason bends to what thy eyes ordain ; For 1 was born to love, and thou to reign.

Prior. Sure 'tis the happy hour ordained above, When vanquished vice shall tyrannize no more.

Johnson, Ye sylphs of death, on demon pinions Around the guillotine ordained for Pitt. Canning.

OR'DEAL, n. 5. Sax. op'eal; Goth, ordeil ; Fr. ordalie; barb. Lat. ordalium. The prefix or or ur has been traced to the Chald. ur, fire. An ancient form of trial by fire ; also by water : see below.

\Vhere so you list, by ordal or by othe,

By sorte or in what wise, so that you leste

For love of God, let preve it for the beste.

And if that I be gilty dome die. Chaucer.

Their ordeal laws they used in doubtful cases, when clear proofs wanted. Hakewill on Providence.

In the time of king John, the purgation per ignem et aquam, or the trial by ordeal, continued ; but it ended with this king. Hale.

Ordeal was an ancient form of trial. See Trial. It was an appeal to the immediate in- terposition of divine power, and was peculiarly distinguished by the appellation of judicium Dei ; and sometimes vulgaris purgatio, to dis- tinguish it from the canonical purgation, which was by the oath of the party. That the purga- tion of ordeal, of some one kind or other, is very ancient, admits not of a doubt; and that it was very universal in the times of super- stitious barbarity is equally certain. It seems even to have been known to the ancient Greeks. And Grotius gives us many instances of water ordeal, in Bithynia, Sardinia, and other places.

There were two sorts of it more common than the rest, in Europe, by fire, and by water. The former was confined to persons of higher rank, the latter to the common people. Both these might be performed by deputy ; but the prin- cipal was to answer for the success of the trials the deputy only venturing some corporal pain, for hire, or perhaps for friendship. The fire ordeal was performed either by taking up in the hand, unhurt, a piece of red-hot iron, one, two, or three pounds weight ; or else by walk- ing barefoot and blindfold over nine red-hot plough-shares, laid lengthwise at unequal dis- tances : and, if the party escaped being hurt, he was adjudged innocent; but if it happened otherwise, as without collusion it usually did, he was then condemned as guilty. Water ordeal was performed, either by plunging the bare arm up to the elbow in boiling water, and escaping unhurt thereby, or by casting the person sus- pected into a river or pond of cold water ; and, if he floated therein without any action of swimming, it was deemed an evidence of his guilt; but if he sunk he was acquitted. It is casv to trace out the traditional relics of this wa r ordeal, in the ignorant barbarity still prac

tistd in many countries to discover witches, by casting them into a pool of water, and drowning tnem to prove their innocence. In the Eastern empire the fire ordeal was used for the same purpose, by the emperor Theodore Lascaris, wlio, attributing his sickness to magic, caused all tliose whom he suspected to handle the hot iron ; thus joinmg (as has been well remarked) to the most dubious crime in the world the most dubious proof of innocence. Besides these methods of trials, there were some others common in Europe ; as the judicial

combat, the ordeal of the cross, and the ordeal of the cor- sned. The judicial combat was well suited to tlie genius and spirit of fierce and warlike na- tions, and was one of the most ancient and uni- versal modes of trial. It was exceedingly com- mon in Germany in very remote ages. It was also used in some countries on the continent at pretty early periods : it is not, however, men- tioned in any of the Anglo-Saxon laws ; and it does not appear to have been much used in England till after the Conquest. There are, however, two remarkable instances of it recorded in Ur. Henry's History of Great Britain, to which we shall refer the inquisitive reader. We need scarcely add, that this detestable form of trial was the foundation of the no less detestable crime of duelling, which disgraces our age and nation. See Duel. It was so much the custom, in the middle ages of Christianity, to respect the cross even to superstition, tliat it would have been indeed wonderful if the same ignorant bi- gotry had not converted it into an ordeal : ac- cordingly we find it used for this purpose, and in so many diff'erent ways as almost to preclude description. Dr. Henry gives the following account of it : ††† * In criminal trials, the judg- ment of the cross was commonly thus conducted. When the prisoner had declared his innocence upon oath, and appealed to the judgment of the cross, two sticks were prepared exactly like one another ; the figure of the cross was cut on one of these sticks, and nothing on the other : each of them was then wrapped up in a quantity of fine white wool, and laid on the altar, or on the relics of the saints ; after which a solemn prayer was put up to God, that he would be pleased to discover, by evident signs, whether the prisoner was innocent or guilty. These solemnities being finished, a priest approached the altar, and took up one of these sticks, which was uncovered with much anxiety. If it was the stick marked with the cross, the prisoner was pronounced in- nocent ; if it was the other, he was declared guilty.' When the judgment of the cross was appealed to, in civil causes, the trial was con- ducted in this manner : ††† The judges, parties, and all concerned, being assembled in a church, each of the parties chose a priest, the. youngest and stoutest that he could find, to be his repre- sentative in the trial. These representatives were then placed one on each side of some fa- mous crucifix ; and, at a signal given, they both at once stretched their arms at full length, so as to form a cross with their body. In this painful posture they continued to stand while divine . .service was performing ; and the party whose representative dropped his arms first lost his

cause. These, and the like relics of superstition and barbarism, were abolished in England (as had been done in Denmark above a century be- fore), by act of parliament 3 Hen. III. according to Sir Edward

Coke, or rather by an order of the king in council.

We have, in Mr. Turner's well known History of the Anglo-Saxons, a full account of the or- deals in use among that people from the laws of Ina. ' The iron,' says Mr. Turner, ' was to be three pounds in weight for the threefold trial, and therefore probably one pound only for the more simple charge ; and the accused was to have the option, whether he would prefer the water ordeal or the iron ordeal.

No man was to go within tlie church after the fire was lighted by which tlie ordeal was to be heated, except the priest and the accused. The distance of nine feet was to be then measured out, from the stake, of the length of the foot of the accused. If the trial was to be by hot water, the water was heated till it boiled furiously ; and the vessel that contained it was to be iron or copper, lead or clay.

If the charge was of the kind they called an- feald, or simple, the accused was to immergehis hand as far as the wrist in the water, to take out the stone ; if the charge was of a threefold mag- nitude, he was to plunge his arm up to the elbow.

When the ordeal was ready, two men were to enter of each side, and to agree that the water was boiling furiously. Then an equal number of men were to enter from each side, and to stand along the church on both sides of the or- deal, all fasting. After this the priest was to sprinkle them with holy water, of which each was to taste ; they were to kiss the gospels, and to be signed with the cross. All this time the fire was not to be mended any more ; but the iron, if the ordeal was to be by hot iron, wˆas to lie on the coals till the last collect was finished ; and it was then to be placed on the staples which were to sustain it.

While the accused was snatching the stone out of the water, or carrying the hot iron for the space of nine feet, nothing was to be said but a prayer to the Deity to discover the truth. The hand was to be then bound up and sealed, and to be kept so for three days ; after that time the seal and the bandage were removed, and the hand was to be examined, to see whether it was foul or clear.

From this plain account, the ordeal was not so terrible as it may at first sight appear ; because, independently of the opportunity which the ac- cused had, by going alone into the church, of making terms with the priest, and of the ease with which his dexterity could have substituted cold iron or stone for the heated substances, at the moment of the trial, and the impossibility of the detection, amid the previous forms of the holy water, the diminution of the fire, prayers

on the occasion, and the distance of the few spectators ; independently of these circum- stances, the actual endurances of the ordeal ad- mitted many chances of acquittal. It was not exacted that the hand should not be burnt, but that after the space of three days it should not ex-

hibit that appearance which would be called foul or guilty. As the iron was to be earned only lor the space of nine of the feet of the accused, it would be hardly two seconds in his hand. The hand was not to be immediately inspected, but it was carefully kept from air, which would irritate the wound, and was left to the chances of a good constitution to be so far healed in three days, as to discover those appearances when in- spected, which were allowed to be satisfactory. Besides there was, no doubt, much preparatory training, suggested by the more experienced, which would indurate the epidermis so much as to make it less sensible to the action of the hot substances which it was to hold.

Ordeals were forbidden on festivals and fast- days.

Of the single ordeal it was ordered, that if the persons had been accused of theft, and were found guilty by it, and did not know who would be their borh, they should be pi.i mto prison, and be treated as the laws had enjoined.

An accused mint-master was to undergo the ordeal of tlie hot iron.

The ordeal might be compounded for.

The law of iEthelstan added some directions as to the ordeal. Whoever appealed to it was to go three nights before to the priest who was to transact it, and should feed on bread and salt, water and herbs. He was to be present at the masses in the mean time, and make his oifer- ings and receive the holy sacrament on the day of his going through the ordeal ; and he should swear that with folc-right he was guiltless of the accusation before he went to the ordeal. If the trial was the hot water, he was to plunge his arm half way above the elbow on the rope. If the ordeal was the iron, three days were to pass be- fore it was examined. They who attended were to have fasted, and not to exceed twelve in num- ber of either side ; or the ordeal was to be void unless

they departed.

A thief found guilty by the ordeal was to be killed, unless his relations redeemed him by pay- ing his were, and the value of the goods, and giving borh for his good behaviour.

The command of the ordeals must have thrown great power into the hands of the church ; and, as in most cases they who appealed to them did so from choice, it is probable that whoever ex- pressed this deference to the ecclesiastical order were rewarded for the compliment, as far as dis- cretion and contrivance would permit.

0K’DER,7ˆ.s-., v.►►. &u.n.ˆ It. ordre ; Lat.

Or’derer,*!. 4-. I o7do. Method;

Or’derless, aˆ/;’. [ˆarrangement; re-

Or’derly, adj. & adv. T gulation; regular

Or’derliness, 11. a. \ process or mode;

Or’ders. J rule; means; care;

rank ; architectural mode or fashion ; class ; fra- ternity : hence proper state or standing; regular government ; society of persons remarkable for particular honors or insienia; and, in the plural, hierarchical or clerical state : to order is, to regu- late; manage; adjust; dispose; conduct; com- mand ; give command or direction : an orderer, one wl:o regulates, commands, or methodises : orderless is, disorderly; without rule or order: orderly, methodically ; observant of method ; not

tumultuous or clamorous; according to estab- lished rule: orderliness follows these senses.

The king commaaded the high priest, and the priests of the second order, to bring forth out of the temple all the vessels. 2 Kings xxiii. 4.

These were the orderings of them in their service, to come into the house of the Lord.

1 Chron. xxiv. 19. To him that ordereth his conversation ariglit will I shew the salvation of God. Pˆaln 1. 23.

The money promised unto the king he took no order for, albeit Sostratus required it. 2 Mac. iv.

It is walled with brick and stone, intermixed or- derly. Sandys.

The kitchen clerk that hight digestion. Did order all the cates in seemly wise. Spenser. It were meet you should take some order for tlie soldiers, which are now first to be discharged and disposed of some way ; which may otherwise grow to as great inconvenience as all this that you have quit us from. Spenser on Ireland.

The church hath authority to establish that for an order at one time, which at another time it may abolish, and in both do well. Hooker.

As for the orders established, sith the law of Na- ture, of God and man, do all favour that which is in being, till orderly judgment of decision be given against it, it is but justice to exact obedience of you.

Id. The book requireth due examination, and giveth liberty to object any crime against such as are to be ordered. Whitgift.

Then to their dams Lets in their young ; and wondrous orderli/. With manly haste, dispatcht Ids housewifery.

Chapman. Pnvide me soldiers. Whilst I take order for mine own affairs.

Slmkspeare. Give order to my servants, that they take No note of our being absent. Id.

Find a barefoot brother out. One of our order, to associate me, Here visiting the sick.

Id. Romeo and Jtdiet, All form is formless, order orderless, Save what is opposite to England's love.

Shakspeare. Make it orderli/ and well, According to the fashion of the time. Id. Bias, being asked how a man should order his life, answered, as if a man should live Jong, or die quickly. Bacon.

Princes many times make themselves desires, and set their hearts upon toys ; sometunes upon a build- ing ; sometimes upon erecting of an order. Id.

To know the true state of Solomon's house, I will keep this order ; I will set forth the end of our foun- dation, the instruments for our works, the several em- ployments assigned, and the ordinances we observe. Id. New Atlantis. This order with her sorrow she accords. Which orderless all form of order brake. Daniel. Virgins must

remember that the virginity of the body is only excellent in order to the purity of the soul ; for, in the same degree that virgins live more spiritiially than other persons, in the same degree is their virginity a more excellent stale. Taylor.

But yet, supposing that Presbyters were included under the word Episcopus, yet it is not because the otfices and orders are one, but because that the order of Presbyter is comprehended within the dignity of a bishop. hreiny Taylor.

If the lords of the council issued out any order against them, or if the king sent a proclamation for their repair to their houses, presently some noblemen published a protestation against those orders and proclamations. Clarendon .

Balfour, by an orderly and well-governed march, passed in the king's quarters, without any consider- able loss, to a place of safety. Id. Th' Almighty seeing.

From his transcendant seat the saints among,

To those bright orders uttered thus his voice.

Milton. So spake the universal Lord, and seemed So ordering. Id.

How should those active particles, justled by the occursion of other bodies, whereof there is an infinite store, so orderly keep their cells without any altera- tion of site ? Glanville.

As there is no church where there is no order, no ministry ; so, where the same order and ministry is, there is the same church. Pearson.

When Christians became a distinct body, courts were set up by the order of the Apostles themselves, to minister judicial process. Keltleworth.

We should behave reverently towards the Divine Majesty, and justly towards men ; and, in order to the better discharge of these duties, we should govern ourselves in the use of sensual delights with temperance. Titlotson.

She left immortal trophies of her fame, And to the noblest order gave the name. Dryden.

If the faults of men in orders are only to be judged among themselves, they are all in some sort parties.

Id.

As St. Paul was full of the doctrine of the gospel, so it lay all clear and in order, open to his view.

Locke.

Any of the faculties wanting, or out of order, pro- duce suitable defects in men's understandings. Id.

In the body, when the principal parts, the heart and liver, do their offices, and all the inferior smaller vessels act orderly and duly, there arises a sweet en- joyment upon the whole, which we call health.

South' s Sermons.

Kings are the fathers of their country : but, unless they keep their own estates, they are such fathers as the sons maintain, which is against the order of Na- ture. Davenant.

By shining marks, distinguished they appear, And various orders various ensigns bear. Granville.

Having in his youth made a good progress in learn- ing, that he might dedicate himself more entirely to religion, he entered into holy orders, and in a few years became renowned for his sanctity of life.

Addison's Spectator.

Like use you make of the equivocal v.ord dignity, which is of order, or office, or dominion, or nature; and you artificially blend and confound all together.

U'utei land.

AVhat we see is in order only to what we do not see ; and both these states must be joined together.

Atterbury.

A clergy, reformed from popery in such a manner as happily to

preserve the mean between the two ex- tremes, in doctrine, worship, and eovernment, per- fected this reformation by quiet and orderly methods, free from those confusions and tumults that elsewhere attended it. Id.

W hen Ouranius first entered into holy orders, he had haughtiness in iiis temper, a great contempt and disregard for all foolish and unreasonable people ; but he has prayed away this spirit. Law.

One man pursues power in order to wealth, and another wealth in order to power, which last is the safer wsy, and generally followed. Swift.

The moderator, when either of the disputants breaks the rules, may interpose to keep them to oˆder. Watts.

In a colonade, or range of pillars, the intercolum- niation or space between columns in the Tuscan order is four diameters ; in the Doric order two and three-quarters ; in the Ionic order two and a quarter , in the Corinthian order two ; and in the Composite Older one and a half. Builder's Dictionary.

I have received an order under your hand for a thousand pounds in words at length. Tatler.

Thine orders, mighty Sultan, are performed, and all Irene now is breathless clay. Johmon's Irene. AVith sparkling gems bedecks it round:

With gems, that, ranged in order due,

Piesent the fair one's name to view. Sheridan.

Pray, Sneer, won't you go to Drury-Lane theatre the first night of Puffs tragedy ?

Sneer. Yes ; but I suppose one shan't be able to get in ; for on the first night of a new piece they always fill the house with orders to support it. Id.

We'll add a title ××× " Count Arnold :" it hath no ungracious sound, And will look well upon a billet-doux.

Arnold. Or in an order for a battle-field. Byron.

Order, in architecture. See Architecture.

Order is also the title of certain ancient books, containing the divine office, with the order and manner of its performance. The Romau order is that wherein are laid down the ceremo- nies which obtain in the Romish church which are very eminent.

Orders, in a military sense, all that is law- fully commanded by superior officers. Orders are gˆiven out every day, whether in camp, gar- rison, or on a march, by the commanding officer ; which orders are afterwards given to every officer in writing by their respective Serjeants.

Orders, Holy, or Orders by way of emi- nence, denote a character peculiar to ecclesias- tics, whereby they are set apart for the ministry. See Ordination. This the Roman Catholics make their sixth sacrament. In no reformed church are there more than three orders ; viz. bishops, priests, and deacons. In the Roman church there are seven, exclusive of the episco- pate; all which the council of Trent enjoins to be received and believed, on pain of anathema. They are distinguished into petty or secular orders, and major or sacred orders. Orders, petli/, or minor, are four : viz. those of door- keeper, exorcist, reader, and alcolyth. Those in petty orders may marry without a dispensation ; in effect, the petty orders are looked on as little other than formalities, and as degrees necessary to arrive at the higher orders. Yet the council of Trent is very serious about them; enjoins that none be admitted into them without under standing Latin ; and recommends it to the bishops to observe the intervals of conferring them, that the persons may have a sufficient time to exer- cise the function of each order; but it leaves the bishops a power of dispensing with these rules; so that the four orders are usually con- ferred the same day, and only make the first part of the ceremony of ordination. The Greeks disavow these petty orders, and pass immedi- ately to the subdiaconate; and the reformed to the diaconate. Their first rise Tleury dates in the time of the emperor Justinian. There is no call nor benefice required for the four petty

‘ rders ; and even a bastard may enjoy them without any dispensation ; nor does a second marriage disqualify. Orders, sacred, or major, are three ; viz. those of deacon, priest, and bishop. The council of Trent forbids any per- son being admitted to the major orders, unless he be

in peaceable possession of a benefice sufficient for a decent subsistence ; allowing no ordinations on patrimonies or pensions, except where the bishop judges it for the service of the church. A person is said to be promoted to orders per saltum, when he has not before passed the inferior orders. The council of Constantinople forbids any bishop being ordained without pass- ing all the degrees ; yet church history records instances of bishops consecrated without having passed the order of priesthood; and Panormas thinks such an ordination valid.

OR'DINABLE, adj. ˆ Fr. ordinal; Lat. or-

Or'diˆal, adj. &cn. s.ydinale, ordino. Such

Or'dinance, n. s. J as may be appointed: ordinal is marking or denoting order; thus first, second, and third, are ordinal numbers : also, as a noun substantive, a ritual of devotions; a book containing orders : ordinance is, rule ; law ; that which is ordained, commanded, or ap- pointed : used by Shakspeare foi" cannon. See Ordnance.

I have no woman suffisant certain The chambres to arrange in ordinance After my lust. Chaucer.

It seemeth hard to plant any sound ordinance, or reduce them to a civil government ; since all their ill customs are permitted unto them. Spenser.

Let Richard and Elizabeth, The true succeeders of each royal house, By God's fair ordinance conjoin together!

Shakspeare.

Caves and womby vaultages of France, Shall chide your trespass and return your mock. In second accent to his ordinance. Id.

There are seven Egyptian masters from whose slavery Christ hath delivered us. Sm, an accusing conscience, danger of God's wrath, tyranny of Satan, the curse of the law, Mosaical ceremonies, and hu- man ordinances. Bp. Hall.

All the ways of oeconomy God hath used toward a rational creature, to reduce mankind to that course of living which is most perfectly agreeable to our na- ture, and by the mercy of God ordinable to eternal bliss. Hammond.

The moon's age is thus found : add to the epact the day of the month,

and the ordinal number of that month, from March inclusive, because the epact be- gins at March, and the sum of those, casting away thirty or twenty-nine, as often as it ariseth, is the age of the moon. Holder.

One ordinance ought not to exclude the other, much less to disparage the other, and least of all to undervalue that which is the most eminent.

Taylor.

An Ordinance is a statute or command of a sovereign or superior ; thus the acts of parlia- ment are sometimes termed ordinances of par- liament, as in the parliament rolls. Though in some cases we find a difference made between the two ; ordinances being only temporary things, by way of prohibition; and capable of being altered by the commons alone ; whereas an act is a perpetual law, and cannot be altered but by king, lords, aud commons. Coke asserts

that an ordinance of parliament differs from an act, as the latter can only be made by the king, and the threefold consent of the estates ; whereas the former may be made by one or two of them.

OR’DINAllYjflrff. &►►. s. ˆ Fr. ordinaire;

Or’dinarii.v, adv. S Ital. Span, and

Port, ordinuria ; Lat. ordinarius. Established : regular ; methodical ; usual ; common ; mean ; ugly : as a noun substantive, established state ; actual and usual office; established judge; par- ticularly, in this country, an established judge in the ecclesiastical law ; regular price of a meal ; a place of taking meals at a price : ordinarily is according to established rule or method; com- monly ; of course.

The evil will

Of all their parishioners they had constrained.

Who to the ordinary of them complained.

Hubberd,

If fault be in these things any where justly found, law hath referred the whole disposition and redress thereof to the ordinary of the place. Hooker.

Men of common capacity, and but ordinary judg- ment, are not able to

discern what things are fittest for each kind and state of regiment. Id.

We are not to look that the church should change her publick laws and ordinances, made according to that which is judged ordinarily and commonly fittest for the whole, although it chance that for some par- ticular men the same be found inconvenient. Id.

Yet did she only utter her doubt to her daughters, thinking, since the worst was past, she would attend a further occasion, lest overmuch haste might seem to proceed of the ordinary ndslike between sisters in law. Sidney.

Our courteous Antony, Being barbered ten times o'er, goes to the feast ; And for his ordinary pays his heart For what his eyes eat only. Shakspeare.

Spain had no other wars save those which were grown into an ordinary; now they have coupled therewith the extraordinary of the Valteline and Palatinate. Bacon.

Vilbers had an intimation of the king's pleasure to be his cupbearer at large ; and the summer following he was admitted in ordinary. Wottnn.

He at last accepted, and was soon after made chaplain in ordinary to his majesty. ?'eW.

Jlere is plainly the eminency of an Episcopal chair, and Jerusalem the seat of St. James, and the clergy his own, of a college of which he was the prepositus ordinarius ; he was their ordinary.

Jeremy Taylor.

The instances of human ignorance were not only clear ones, but such as are not so ordinarily sus- pected. Glanvilie.

It is sufficient that Moses have the ordinary credit of an historian given him. Tillotson.

There is nothing more ordinary than children's re- ceiving into their minds propositions from their pa- rents ; which, being fastened by degrees, are at last, whether true or false, rivetted there. Locke.

Prayer ought to be more than ordinarily fervent and vigorous before the sacrament. South.

Nothing is so modish as an agreeable negligence. In a word, good-breeding shows itself most, where to an ordinary eye it appears the least. Addison.

Though in arbitrary governments there may be a body of laws observed in the ordinary forms of jus- tice, they are not sufficient to secure any rights to the people ; because they may be dispensed with.

Id. Freeholder,

Through the want of a sincere intention of pleas- ing God in all our actions, we fall into such irregu-

larities of life, as by the ordinary means of grace we should have power to avoid. Law.

The standing ordinary means of conviction failing to influence them, it is not to be expected that any extraordinary means should be able to do it.

Alterhury.

Springs and rivers do not derive the water which lliey ordinaril]! refund, from rain. Woodward.

\ ou will wonder how such an ordinary fellow as Wood could get his majesty's broad seal. Swift.

They reckon all their errors for accomplishments : and all the odd words they have picked up in a coffee-house, or a gaming ordinarv, are produced as flowers of style. ' Swift.

Ordinary, in common or canon law, denotes one who has ordinary or immediate jurisdiction in matters ecclesiastical in any place. In this sense archdeacons are ordinaries, but the appel- lation is most frequently applied to the bishop of the diocese, who has of course the ordinary ecclesiastical jurisdiction, and the collation to benefices within such diocese. There are some chapels, chapters, abbeys, &:c., exempted from the jurisdiction of the ordinary. The archbishop is ordinary of the whole province, to visit, and receive appeals from the

inferior judicatures. The Romish writers on canon law call the pope, by way of eminence, ordinary of ordinaries, since by the Lateran council he has taken the right of collat- ing, by probation, to all benefices, in exclusion of the common collators.

Ordinary, in naval language, denotes the establishment of persons employed by govern- ment to take charge of the ships of war, which are laid up in the several harbours adjacent to the royal dock-yards. These are principally composed of the warrant officers of the said ships, as the gunner, boatswain, carpenter, deputy purser, and cook, and three servants. There is besides a crew of laborers inrolled in the list of the ordinary, who pass from ship to ship occa- sionally, to pump, moor, remove, or clean them, whenever it is necessary. The term ordinary is also applied to the ships themselves : it is like- wise used to distinguish the inferior sailors from the most expert and diligent. The latter are rated able on the navy books, and have ––l. 4s. per month ; whereas those who are rated ordi- nary have only 19s. per month.

Ordinary or Newgate is one who is atten- dant in ordinary upon the condemned malefac- tors in that prison, to prepare them for death. OR’DINATE, z;. ft. &––(/;. ˆ Lat. ordinatus. Ordina’tiox, Ji. s. S To appoint : regu-

lar ; methodical; appointed: ordination, estab- lished order or method ; act of investing with office or authority, particularly ecclesiastical office.

There, as a wedded man in his estat, Liveth a lif blissful and ordinat, Under the yoke of marriage ybound Wei maye his herte injoye and blisse abounde.

Chaucer. Finding how the certain right did stand, With full consent this man did ordinate The heir apparent to the crown and land.

Daniel. Now they, in their ordaining assistant ministers, did not in every ordination give a distinct order as the church hath done since the apostles.

Jeremy Taylor.

Virtue apd vice have a natural ordinatton to the happiness and misery of life respectively. Korris.

Though ordained by Arian bishops, his ordination was never questioned. SiiUinyfeet.

Ordinate figures are such as have all their sides and all their angles equal. Ray on the Creation.

St. Paul looks upon Titus as advanced to the dignity of a prime ruler of the church, and entrusted with a large diocese under the immediate govern- ment of their respective elders ; and those deriving authority from his ordination. South.

Ordinates, in geometry and conies, are lines drawn from any point of the circumference of an ellipsis, or other conic section, perpendicularly across the axis, to the other side. See Com c Sections.

Ordination is the act of initiating a person into the priesthood, by prayer and the laying on of hands. In episcopal churches it has always been esteemed the principal prerosrative of bishops, and they still retain the function as a mark of spiritual sovereignty in their dioceses. Without ordination, no person can receive any benefice, parsonage, vicarage, &;c. A person must be twenty-three years of age, or near it, before he can be ordained deacon, or have any share in the ministry ; and full twenty-four De- fore he can be ordained priest, and thus be per- mitted to administer the holy communion. A bishop, on the ordination of clergymen, is to examine them in the presence of the ministers, who, in the ordination of priests, but not of deacons, assist him at the imposition of hands; but this is only done as a mark of assent. In case any crime, as drunkenness, perjury, for- gery, &c., be alleged against any one tliat is to be ordained, either priest or deacon, the bishop ought to desist from ordaining him. The person to be ordained is to bring a testimonial of his life and doctrine to the bishop, and to give an account of his faith in Latin ; and both priests and deacons are obliged to subscribe to the thirty-nine articles. The ordination of bishops is more properly and more commonly called consecration. In the ancient discipline there was no such thing as a vague and absolute or- dination ; but every one was to have a church, whereof he was to be ordained clerk or priest. In the twelfth century they grew more remiss, and ordained without any title or benefice. The council of Trent restored the ancient discipline, and appointed that none should be ordained but those who were provided of a benefice sufficient to subsist them. The council of Rome, in 744, orders that no ordinations shall be held except on the first, fourth, seventh, and tenth months. In England, by can. 31, ordination days are the four Sundays immediately following the Ember weeks : being tlie second Sunday in Lent, Tri- nity Sunday, and the Sundays following the first Wednesday after September 14th, and Decem- ber 1 3th. These are the stated times ; but ordina- tions may take place at any other time, according to the discretion of the bishop, or

circumstances of tlie case. Pope Alexander 11. condemns or- dination per saltum, as they call it; i. e. the leap- ing to a superior order without passing through the inferior. In the establishment of Scotland, where thcr: are ho bishops, the power of ordi

nation is lodged in the presbytery, and by the Independents in the suffrage of the people.

ORD'NANCE, n. s. A contraction of ordi- nance, or from Fr. oˆdoiinance. Great guns ; can- non.

Have I not heard fˆreat ordnance in the field ? And heaven's artillery thunder in the skies ?

Shakspeare,

When a ship seels or rouls in foul weather, the breaking loose of ordnance is a thing very dangerous.

Rateisrh.

Men have devised to imitate these instruments of death, and send forth deadly bullets out of a cloud of smoke, wherein yet, as there is much danger, so much uncertainty ; but this God, that discharges his ordnance from heaven, directs every shot to a head, and can kill as easily as shoot. Bp. Hall.

There are examples of wounded persons that have roared for anguish and torment at the discharge of ordnance, though at a very great distance. Bentley.

Ordnance Bills, or Ordn akce Debentures, are bills issued by the board of ordnance on the treasurer of that office, for the payment of stores, &c. These are not payable at any certain time, and do not bear any interest, so that the discount upon them is often very high ; but they are seldom much above two years in arrear.

Ordnance, Office, or Board of, an office kept vpithin the tower of London, which super- intends and disposes of all the arms, instruments, and utensils of war, both by sea and land, in all the

magazines, garrisons, and forts in Great Bri- tain. In ancient times, before the invention of guns, this office was supplied by officers under the following titles : the bowyer, the cross bow- yer, the galeator or purveyor of helmets, the ar- mourer, and the keeper of the tents ; and in this state it continued till Henry VIII. placed it under the management of a master, a lieutenant, surveyor, &c. &c. Some improvements have been since made ; and this very important branch is now under the direction of the master-general of the ordnance, having under him a lieutenant- general, a surveyor-general, a clerk, a storekeeper, a clerk of the deliveries, and a treasurer, with a very great number of inferior officers, employed in the Tower of London, at Woolwich, and in almost all the forts, garrisons, and principal ports in his majesty's dominions. The office of ordnance is divided into two distinct branches, the civil and the military ; the latter being subordinate to, and under the authority of the former.

Master-general of the Ordnance is deemed the principal officer in the civil branch of the ord- nance; yet he is always chosen from amongst the first generals in his majesty's service. His trust is very great, as in him is vested the sole power of storing all the military magazines in the king's dominions with proper munitions of war, and likewise to supply the royal navy with what they may need in his department; the parliament granting money for this purpose. He is colonel in chief of the royal regiment of artillery, and he is invested with a peculiar jurisdiction over all his majesty's engineers employed in the several fortifications in his majesty's dominions : to him they are all accountable for their proceedings, and from him they receive their particular orders and instructions, according to the directions and commands given by his majesty in council.

In enquiring for the details of the modern state and arrangements of this part of the public service, we find much has been effected in the way of retrenchment and reform from the time of lord Mulgrave to that of the duke of Wellington, and particularly under the auspices of the latter : but that the recent recommendations of the finance committee are likely to result in still more important alterations.

ORDOVTCES, an ancient nation of Britons, occupying that country which is now called North Wales, and containing the counties of Mont- gomery, Merioneth, Caernarvon, Denbigh, and Flint. These Ordovices, or (as. they are called by 'Tacitus) Ordeuices, are supposed to have been originally of the same tribe or nation with the Iluicii of Warwickshire, who were under subjection to the Cornavii ; but the Iluicii of North Wales, being a free independent people, were called Ordh Huici, or the free iluicii. When invaded by the Romans they

showed a courage worthy of their name, and fought with great bravery in defence of their freedom and in- dependence. Though routed by the Roman ge- neral Ostorius, in conjunction with the Silures they maintained the war for a considerable time, until at length they were subdued wiih great slaughter by the renowned Agricola. It was probably owing to the nature of the country, and to the vicinity of Diva, now Chester, where a whole legion was- quartered, that the Romans had so few towns or stations in the territories of the Ordovices. Medialonum, mentioned by Pto- lemy, was the capital of the nation, and was pro- bably situated at Maywood, in Montgomeryshire. It was a place of some consideration in the Ro- man times, but was afterwards demolished by Edwin, king of Northumberland. Besides this, the Romans had a few other towns in this coun- try ; as Segontium, now Caernarvon ; Conovium, now Conway; and Varae, now Bodvary; which are all mentioned in the eleventh journey of Antoninus. The country of the Ordovices was comprehended in the Roman province, called Britannia Secunda.

ORDUNA, a town in the province of Biscay, Spain, situated in a pleasant valley, surrounded by lofty mountains. It is the chief place of a district, called the Four Towns, and here is one of the chief custom-houses for the examination of merchandise coming by land from France. Inhabitants 4000. Fifty-seven miles W. S. W. of St. Sebastian, and fifty-seven N.N.E. of Burgos.

OR’DURE, n. s. Fr. 07-d, ordure ; Ital. or- dura; Teut. ord, schord; from Lat. sordes. ††† Skin- ner. Dung ; excrement ; filth.

Gardeners with ordure hide those roots That shall first spring and be most delicate.

Shakspeare. Working upon human ordure, and by long prepa- ration rendering it odoriferous, he terms it zibetta occidentalis. Browne.

We added fat pollutions oi our own, T’ encrease the steaming ordures of the stage.

Lryden.

Renewed by ordure’s sympathetic force, y\s oiled with magick juices for the course, \ igorous he rises. Popeˆ

ORE, n.s. Sax. ofie, ojia; Belg. oor; Teut. ofr. Unrefined metal ; metal as it comes from the mine; metal in any state.

Round about him lay, on every side, Great heaps of gold that never would be spent ;

Of which some were rude ore, not piirified, Of Mulciber's devouring element. Spenser.

They would have brought them the gold ore aboard their ships. Raleigh's Apology.

A hill not far, Shone with glossy scurf, undoubted sign That in his womb was hid metallic ore, The work of sulphur. Milton's Paradise Lost. The liquid ore he drained, First his own tools ; then what might else be wrought, Fusile, or graven in metal. Id.

Who have laboured more ˆ

To search the treasures of the Roman store, S Or dig in Grecian mines for purer ore ? j

Roscommon. Quick-silver ore of this mine is the richest of all ores I have yet seen ; for ordinarily it contains in it half quick-silver, and, in two parts of ore, one part of quick-silver, and sometimes, in three parts of ore, two parts of quick-silver. Browne.

Those who unripe veins in mines explore. On the rich bed again the warm turf lay, Till time digests the yet imperfect ore. And know it wil' be gold another day. Dryden.

'I'hose profounder regions they explore, AVhere metals ripen in vast cakes of ore. Garth. That head, with greater than magnetic power, Caught it as Danae caught the golden shower ; And, though the thickening dross will scarce refine. Augments its ore, and is itself a mine. Byron.

Ore, in natural history, the compound mine- ral, glebe, earth, stone, or other substance, which is sufficiently rich in metallic particles to be worth purification, and separation of the metal from it, whether gold, silver, copper, &c. See Chemistry, Metallurgy, and Mineralogy, also the various metals in their order.

OllEADES, in ancient mythology, nymphs of the mountains, daughters

of Jupiter, or, as other.? say, of Phoroneus and Hecate. They attended Uiana in huntinoj. See Nymph.

OREBRO, a district of Middle Sweden, com- prising the former province of Nerike, the west part of Westmanland, and a part of Warmeland. Its area is 1780 square miles; population about 100,000. The province is fertile in corn; and abounds more in mines and pasturage. The chief town is also Orebro.

Orebro, an old neatly built town of Sweden, in the province of Nerike, on the river Svartelf, about two miles from the lake Hjelmar. Its manu- factures have almost disappeared. Yet its inha- bitants (about 4000) carry on an active trade with Stockholm, by the lake, the canal of Ar- boga, and the lake Maelar. It has wide streets, paved with round pieces of granite ; and the prin- cipal church contains the monument of Engelhart.

OREL, an extensive and fertile government of European Russia, to the south of those of Tula and Kaluga, extending from 32►► 50′ to 39►► of E. long, and from 52►► to 54►► of N. lat. Its area is 16,000 square miles. Its climate is tem- perate, and it is thought one of the best com countries in Russia. Its pastures also are good, and rear a number of horses. The sheep pro- duce a sufficient oaantity of wool for consump-

tion, but little for export ; the rearing of bees and honey and wax, form objects of consider- able importance. As yet manufactures have made little progress. The trade is of more con- secˆuence, an official return having declared the mercantile capital to be ►►2,000,000. The exports consist of the products of agriculture, and the forests of some iron mines, and finally, of lime and alabaster qiiarries. The government is di- vided into twelve circles. Population 1,000,000.

ORELLANA (Francis), the first European who discovered the river of the Amazons. In 1539 he embarked near Quito, upon the river Coca, which farther down takes the name of Napo. Frora this he fell into another larger river; and, leaving himself entirely to the direc- tion of the cu-rrent, he arrived at Cape North, on the coast of Guiana, after sailing nearly 1800 leagues. Orellana perished ten years after, with three vessels which had been entrusted to him in Spain, without being able to find again the mouth of this river. In sailing down the river, he met with some armed women, against whom an In- dian cacique told him to be on his guard ; and he thence named it the River of the Amazons.

ORENBOURG, the most westerly govern- ment of Asiatic Russia, having on one side the government of Tobolsk, and on the other Russia in Europe. To the south, and in a great mea- sure to the east, it borders on Independent Tartary. This is one of the most mountainous regions in the empire, comprehending the most elevated part of the great chain of the Ourals. Yet it yields grain sufficient to become an object of exportation, and maintains vast flocks and herds. Even the camel is bred here for the purposes of the trade with Interior Asia. Bees are also a very profitable object of attention. A great quantity of large fish and caviar, taken in the Oural, are exported. Its mountains are equally a source of wealth, being filled with rich mines of copper and iron ; it contains sal-gem and saline lakes. It is divided into twelve dis- tricts, the principal being Orenbourg Proper, and Oufa, the last of which contains the capital. On the Tartar frontier Orenbourg is exposed to the incursions of the Kirghise and Kalmouk hordes, for defence against which there have been erected a chain of frontier forts. Popula- tion 629,426.

Orenbourg, a town in the government of the same name, of which it was the capital till 1702, when the seat of government was transferred to Oufa. It is of an oval form, in a vast plain, and regularly fortified. The streets are straight, and well built; it has nine churches, and was originally built higher up the Oural, but in 1739 was transferred 120 miles lower, and in 1742 fifty miles more. It is chiefly supported by the ††† trade with Tartary and Bukharia. Through this channel are exported cloths of a red or scarlet color, velvets, Russia leather, linens, blue and white, copper and iron utensils, sugar and other colonial produce, glass, toys, &c. From Tartary the caravans bring India muslins and cottons, Persian silks, cotton-wool, gold dust, lapis lazuli and a few precious stones ; also skins, wool, and hair. The Kalmouks and the Kirghises bring to the market of Orenbourg from 40,000 to 60,000

sheep, and 10,000 liorses. Tlie last are transported into Russia, and the sheep chiefly employed in the production of tallow, which is sent to Pe- tersburg. A pretty considerable branch of trade consists in the sale of golden eagles, which are highly valued by the Kirghises. Long. 52†† 31′ 10″ E., lat. 31†† 46′ N.

ORESTES, in fabulous history, the son of Agamemnon and Clytemnestra. When his father was cruelly murdered by Clytemnestra and ˆEgisthus, young Orestes was saved from his mother's dagger by his sister Electra, called by Homer Laodicea, who privately conveyed him to the house of Strophius, king of Phocis, who had married a sister of Agamemnon. He was tenderly treated by Strophius, who educated him with his son Pylades. The two young princes soon contracted a most inviolable friend- ship. When Orestes came of age he visited Mycense, and avenged his father's death, by kill- ing his mother Clytemnestra and her adulterer ˆEgisthus. After this he was acknowledged king of Mycenae ; but, being tormented by the Furies for having slain his mother, he exiled himself to Argos, where Apollo purified him, and he was acquitted by the unanimous decision of the Areopagites, whom Minerva herself insti- tuted on this occasion, according to the poet iEschylus. Pausanias says, Orestes was purified of the murder at Trcezene, where still was seen a large stone at the entrance of Diana's temple, upon which the ceremonies of purification had been performed. There was also at Megalopolis, in Arcadia, a temple dedicated to the furies, near which Orestes bit off one of his fingers with his teeth, in his insanity. But Eurijˆides says that Orestes, after the murder of his mo'.her, con- sulted the oracle of Apollo at Delphi, where he was told that nothing could deliver him from the furies, if he did not bring into Greece Diana's statue, from the Taurica Chersonesus, which, as was believed, had fallen down from heaven. Thoas, king of Chersonesus, always sacrificed to the goddess all who entered his country. Ores- tes and his friend were therefore both doomed to be sacrificed. Iphigenia, the sister of (Jrestes, was then priestess of Diana's temple, and it was her oftice to immolate these strangers. The in- telligence that they were Grecians delayed the preparations, and Iphigenia was anxious to learn something about her native country. She interested herself in their misfortunes, and offered to spare the life of one of them, provided he w-ould convey letters to Greece. This was a difficult trial ; never was friendship more truly displayed.

Ire jubet Pylades carum moriture Orestem ; Hie negat ; inque vicem pugnat uterque mori.

At last Pylades yielded to the intreaties of his friend, and consented to carry the letters to Greece. These were addressed to Orestes him- self, and led to a discovery of the connexion of the priestess with the man whom she was going to immolate. Iphigenia, when the cause of their journey had been explained, resolved to fly from Chersonesus with them, and to carry away the statue of Diana. Their flight was discovered, and Thoas preoared to pursue them ; but Mi-

nerva interfered, and told him that all had been done by the will of the gods. Orestes came to Cappadocia from Chersonesus, and left there the statue of Diana at Comana. After this Orestes reigned at Argos ; married Hermione tlie daughter of Menelaus, and gave his sister to his friend Pylades. Hermione had been promised to Orestes, but Menelaus had married her to Neoptolemus the son of Achilles, who had exerted himself so much in his cause during the Trojan war. Orestes, to recover her, assassinated Neoptolemus. According to Ovid she had always been faithful to her first lover. With her he retired to his kingdom of Argos. His old age was crowned with peace, and he died in his ninetieth year, leaving his throne to his son Tisa- menes ; who was, three years after, expelled by the Heraclidae. Orestes died in Arcadia, by the bite of a serpent ; and the Lacedemonians, who had become his subjects at the death of Mene- laus, were directed by an oracle to bring his bones to Sparta. They were some time after discovered at Tegea, and his statue appeared to be seven cubits, according to the traditions mentioned by Herodotus and others. The friend- ship of Orestes and Pylades became proverbial ; and the two friends received divine honors among the Scythians.

ORESTIDA, a country of Greece, south-west of Macedonia, so named by the subjects and descendants of Orestes, who settled in it, after they were expelled from Argos by the Heraclidae. ORE'WEED, or) Lat. ora, the shore. A Ore'wood, n. s. ˆ weed either growing upon the rocks under high water mark, or broken from the bottom of the sea by rough weather, and cast up by the wind and flood. ††† Caretu's Cornwall.

ORF'GILD, n. s. The restitution of goods or money taken away by a thief by violence, if the robbery was committed in the day-time.

ORFORD, a post and market-town of Suf- folk, eighty-nine miles from London, situated between two channels, where the river Ore, after having joined the Aid, falls into the sea. It was once a large populous town, with a castle and nunnery, of which there are still some ruins. The towers of the castle and its church are a sea mark. The town was incorporated by Henry III., has a mayor, eighteen portmen, twelve chief burgesses, a recorder, a town clerk, &c. It sent members to parliament in the 26lh of Edward I., but ceased to do so in 1832. It is an lU-builttown, but was once a place of considerable trade, till, tne sea throwing up a dangerous bar at the mouth of the harbour, it was choked up, and the town fell to decay. In it is a town- hall, and an assembly-house. It is eighteen miles east by north of Ipswich.

Orford, Cape, a point on the north-west coast of North America,

formed by the low land, projecting from a high rocky coast a considerable way into the sea, and terminating in a wedge- like cone. It was thus called by X'ancouver, in honor of the earl of Orford, and is in long. 124►► 31′ W., lat. 42►► 52′ N.

ORGAGNA (Andrew), an excellent Italian painter, born at Florence in 1329. In his youtV he learned sculpture ; he was also a poet and an

architect. His style resembled that of the other painters of his time. Most of his works are at Pisa. The most admired of them is his picture of the Last Judgment, in which he painted his friends among the blessed, and his foes in hell. He died in 1389.

OK'GAN, ►►. .V. "^ Fr. orgorze; Ital. Span. Orgak'ic, adj. and Port, orgario ; Lat.

Organ'ical, organwn ; Gr. opyavov.

Org A^'icjLLL\, adv. An instruinent of any Or'ganism, n. .S-. [kind, particularly a na- Or'ganist, f tural instrument con-

Organisa'tion, sidered in relation to

Or'ganise, u. a. some specific faculty;

Or'gan-loft, 7J.S. thus we call the ear Or'gan-pipe. J the organ of hearing: a

wind instrument of music, of peculiar power : orsanic is, relating to organs ; composed of various co-operating parts; instrumental: or- ganically, by means of organical disposition of parts : organism, organic structure : organist, one who plays upon the organ: organisation, con- struction by mutually subservient parts ; me- thodical structure or arrangement : to organise is to form, construct, or bring into action organi- cally, or by the mutual co-operation of parts : organ-loft, and organ-pipe, are the loft and pipe of a musical organ.

As the soul doth organize the body, and give unto every member that substance, quantity, and shape, which nature seeth most expedient, so the inward grace of sacraments may teach what serveth best for their outward form. Hooker.

When he shall hear she died upon his words, The ever lovely organ of her life Shall come apparelled in more precious habit Than when she lived indeed. Shakspeare.

The thunder, That deep and dreadful organpipe, pronounced The name of Prosper. /'/. Tempest.

For a mean and organ, bv which this operative virtue might be continued, God appointed the light to be united, and gave it also motion and heat.

Raleigh.

The aptness of birds is not so much in the con- formity of the organs of speech, as in their attention.

Bacon.

He rounds the air, and breaks the hymnlck notes In birds, heaven's choristers, organick throats ; Which, if they did not die, might seem to be A tenth rank in the lieavenly hierarchy. Donne. He, with serpent tongue Organick, or impulse of vocal air. His fraudident temptation thus began. Milton.

Every man's senses differ as much from others in their figure, colour, site, and infinite other peculiari- ties in the organization, as any one man's can from itself, through divers accidental variations.

Glanville's Scepsis.

They who want the sense of discipline, or hearing, are by consequence deprived of speech, not by any immediate orgariical indisposition, but for want of discipline. Holder.

A genial and cherishing heat so acts upon the fit and obsequious matter, wherein it was harboured, as to organize and fashion that disposed matter accord- ing to the exigencies of its own nature. Boyle.

An organist serves that office in a publick choir.

Id.

She could not produce a monster of any thing that nath more vital and organical parts than a rock of Diarble. " J'ai/.

Those nobler faculties in iht mind, matter orga- nized could never produce. Id. on the Creation.

All stones, metals, and minerals, are real vege- tables ; that is, grow organically from seeds, as well as plants. Locke.

‘J he identity of the same man consists in a partici- pation of the same continued life, by constantly fleeting particles in succession vitally united to the same organized body. Id.

That being then one plant which has such an or- ganization of parts in one coherent body, partaking of one common life, it continues to be the same plant, though that life be communicated to new particles of matter, in a like continued orgunization. Id.

How admirable is the natural structure or organism of bodies. Grew’s Cosmologia.

Each then has organs to digest his food ;

One to beget, and one receive, the brood. Prior.

The organical structure of human bodies, whereby

they live and move, and are vitally informed by the

soul, is the workmanship of a most wise, powerful,

and beneficent being. Bentley.

While in more lengthened notes and slow.

The deep, majestick, solemn, organs blow. Pope.

Five young ladies of no small fame for their great severity of manners, would go no where with their lovers but to an organloft in a church, where they had a cold treat and some few opera songs. Taller.

Organ, in music, denotes the largest and mn►►t harmonious of all wind instruments; on which account it is called opyavov, the organ, the in- strument, by way of excellence ; chiefly used for playing a thorough bass, with all its accompani- ments.

That organs are the invention of remote anti- quity is generally allowed ; but the particular time and country in which the discovery was made are uncertain. In ancient authors there are various passages where mention is made of the organ, but it was probably an instrument very different from that which now goes by this name. It appears indeed to nave been borrowed by the Latins from the Greeks, but not to have been in general use till the eighth century. Vi- truvius

describes an organ in his tenth book, and St. Jerome mentions one with twelve pairs of bellows, which might be heard 1000 paces, or a mile off; and another at Jerusalem, which might be heard at the Mount of Olives. It has been afhrmed that, in France, it was not known till the time of Louis I. A. D. 815, when an Italian priest taught the use and construction of it, which he had learned at Constantinople. By some, however, it has been carried as far back as Charlemagne, and by others as far as Pepin. See article Music, p. 280.

The Greeks called the organ organum, to in- dicate instrumental music, which, by uniting several pipes, imitated several voices ; and to distinguish the organ from other musical instru- ments the Romans called it organum pneumati- cum, an instrument of air. We do not find, says Mr. Danneley, any traces amonst the ancients which inform us that there was, in their time, an instrument at all assimilating with our organ, excepting the clepsydra, and the instrument in- vented by Pericles, unless amongst the Hebrews, when in the time of David and Solomon, one amongst others, was made use of in their religi- ous ceremonies called the huggab, composed of several pines of diflerent sizes methodically ar-

ranged. But since the Jews were dragged into captivity and the destruction of their temple un- der Titus, nothing is known either of their in- struments or of their music. The invention of the modern organ is generally attributed to Ar- chimedes, who flourished 200 years before the Christian era; and he is said to have made the bellows act by a hydraulic machine, but we are ignorant of the substitute for the clavier (see Clepsydra) and of the number of notes of which his organ was composed. This species of me- chanical organ was in use till the sixth century ; but since that epoch this instrument has been enlarged and brought to perfection ; and in the eighth century the clavier comprised only two octaves. Matheson, in his Perfect Organist, says that the English had their first organ in 650. In the tenth century there were several organ build- ers in Italy, and in the eleventh organs were built in the churches belonging to the monaste- ries ; from the twelfth to the fifteenth the art of constructing organs increased, particularly in Germany ; the clavier comprised already three octaves, and in the year 1480 the pedal was in- troduced by a person named Bernard ; in the sixteenth century organs were made with two claviers or rows of keys, comprising four octaves and with a greater number of stops. Since that time this instrument has become not only one of the

principal ornaments in churches, but it has also contributed to the perfection of the musical art; and this art, as well as that of poetry, paint- ing, architecture, eloquence, and literature in general, is ip.uch indebted to religion for its ad vancement and support.

Bellarmine says that the organ began to be used in the service of the churcli about 660 Ammonius thinks, however, that this happened after 820, in the time of Louis the Pious. The learned Bingham, in his Origines Sacrre, affirms that organs were not used till after the time of Thomas Aquinas, and he adds these words: ‘ Our church dof!S not use musical instnimentjs, as harps and psalteries, to praise God withal, that she may not seem to Judaize.’ Hence it has been concluded, by the learned Gregory, that they were not used in churches in his time, about A.D. 1250. It appears, however, from the testimony of Gervas the monk of Canterbury, who flourished A. D. 1200, that organs were in- troduced upwards of 100 years even before that time. If Gervas’s authority be held good, it will give countenance to a pretty general opinion, that in Italy, Germany, and England, they be- came frequent about the tenth ceniury. See Music. But it is certain that the use of the’ organ was very common in the latter a2;es of the church, and the propriety of it was undisputed. In the seventeenth century, however, during the civd wars, organs were removed from the churches m England ; and so generally reprobated that, at the Restoration, there could scarce be found either organists, organ builders, or singers. Or- gans have never yet been used in the establish- ment of Scotland since it became Presbyterian ; but they are used m Holland, where that form of church government also obtains.

Organs, remarkably large. The organs in Germany (says Dr. Burney) in magnitude,

and the organists in abilities, seem unrivalled iu any other part of Europe, particularly in the use of pedals. In iNIarpurg’s Essays, vol. iii., there is a minute account of a variety of organs in Germany ; of all which the longest pipe of the manuals is sixteen feet long, and of the pedals thirty-two. One of the largest organs in (jer- many is at Gorliz in Upper Lusatia. The un- common merit of Handel as an organist is well known. The organ in the cathedral church at Ulm in Germany is ninety-three feet high and twenty-eight broad : its largest pipe is thirteen inches diameter, and it has sixteen pairs of bellows. The complicated nature of the meciianism <-f the organ renders it a very difficult task to give a clear description of it. To make it more in- telligible, we shall separately describe the se- veral parts, viz. the bellons, the porte vent or wind trunk, the wind-chest and its furniture, the sound-boards, the slicers, the stock and rack boards, the pipes, the

key and draw-stop move- ments. The bellows are of two kinds, single and double ; the former are commonly used in church organs, the latter in chamber organs. Single bellows consist of two oblong boards a b, cd (plate Organ, fig. 1), connected at 6 by a joint of leather or web, and at the other three sides by thin folds of wood joined together with leather. The lower board is fixed, the other movable. In the lower board, at e /', is an aperture covered with a valve (called by organ builders a pallet), opening inwards. At g is another aperture covered with a hollow box p cl, communicating with the wind-trunk, upon the mouth of which is another pallet, opening outwards. When the upper board a 6 is raised by pressing down the handle of the lever /; i, the air enters the bellows at the aperture e f, and, upon letting go the lever, is fcrced into the wind trunk at d, by the pressure of weights placed on the upper board. The pallet at d prevents the return of the wind from the wind-trunk when the upper board is raised. It will easily be seen that it is necessary to have at least two pairs of bellows of this kind to keep up a constant supply of air. Most of the English church organs have three ; and many of the large German instruments (as Dr. Burney informs us) have twelve, and even sixteen pairs. Double bellows are made with three boards ; a b (fig. 2) the riser, c d the middle, and e_/'the feeder boards. At g. in the feeder, is an aperture and pallet, to receive the air; at h, in the middle board, is the pallet of communication ; and at /, in tiie riser, the waste pallet, which is contrived to open when the bellows are sufficiently full. The riser empties itself into the wind-trunk at c. In old bellows of this kind, the riser is connected with the middle board in a manner similar to the single bellows ; but it is now usual to join them with folds of an equal breadth in all parts, so that the upper board in rising is always parallel to the middle board. These are called horizontal bellows, in contradistinction to those which rise diagonally. Their action is very superior to those of the old form. They afford a greater quantity of wind in proportion to the case-room tiiey occupy ; the pressure is more equal ; and they are not liable to jerk or quaver. Though

lately brought into common use, they are by no means a modern invention, as Pcie Mersenne describes them under the name of bellows ‘ a la Lantcrne.’ ••• Lˆ Ilar/nonie Universelle, folio, Faris, 1636.

The sound-board (fig. 3) is made of an ob- long frame, the upper part of which is covered by a stout board. In the two longest sides of the fram.e, and m tiie under side of the board, grooves are dug, in which

are fixed a number of bars of wood, dividing the box thus formed into par.ˆUel channels, completely separated from each other. A number of holes, corresponding ###with the number of ranks of pipes of which the organ consists, are bored through the upper side of the sound-board into each channel. The number of channels is regulated by the compass of the organ, there being a channel to each finger-key.

The wind-chest is attached to the under side of the sound-board. It is a box made air-tight in all parts, so that the wind which it receives from the bellows, through the wind-trunks, cannot escape except through the channels of the sound- board. Each of the channels within the wind- chest is covered with a pallet, which opens downwards, and is closed by the action of a spring of brass wire. The pallet is connected with the key-movement by small wire hooks, which pass through a perforation in a brass plate upon the bottom of the wind-chest. Fig. 3 shows a pallet with its spring, chest-hook, and pull-down. All the under side of the sound- board, which is without the wind-chest, is closely covered with leather or parchment. Upon the upper side of the sound-board are placed thin bars of wood called the sliders, extending the whole length of the sound-board, and pierced with holes, corresponding with those bored through the sound-board into the channels. These sliders, being movable in grooves in a transverse direction to the channels, admit or exclude the wind from any rank of])ipes placed over them, as the holes correspond witli or cover those of the sound-board. Lastly, upon these are screwed the stock-boards, which are also bored with holes corresponding with those in the sliders and sound-board, in which the pipes are placed. The racks are thin boards mounted on small pillars, pierced to receive the upper part of the feet of the pipes.

The key-movement is a combination of rollers and levers, or of quadrants connected by wooden rods, so contrived that each key, when pressed down, may open its corresponding pallet in the wind-chest, and so admit the wind to the pipes over the channel which the pallet covers.

The draw-stop movement is also a combination of levers and rollers, so contrived that each draw- stop may open or shut its corresponding slide, and so admit or exclude the wind from that rank of pipes to which it belongs. Those ranks of pipes which in the construction of the in- strument are so planted as to be subservient to the action of one draw-stop are called stops. A stop consisting of one row of pipesˆ is called simple, of more than one, compound.

The pipes are of four kinds; stopped, half Vol. XVI.

stopped (with a funnel or chimney at the top), open, and reed pipes. 'arious materials have been used for their construction ; but the most common practice is to make the stopped pipes of wood, and the open and reed pipes of a metal composed of tin and lead.

The organ has from one set of keys in chamber organs, to four or five sets in the largest church organs. Each of these sets of keys acts upon a separate organ, which has nothing in common with the others, except the case and bellows.

Besides the manuals or keys for the hand, there are, in large church organs, pedals or keys played with the feet, said to be the invention of Bernard, a German, about the year 1400.

These command certain pipes which to increase the harmony are tuned an octave below the diapason. It is much to be lamented that the English builders have not followed some certain and invariable rule for the position of their pedals, as they do for that of their keys. Scarcely two organs in the kingdom have their pedals alike, either with respect to number or position ; so that every performer who comes to an organ with which he is not previously acquainted (be he ever so skilful in the use of pedals) has the whole of his business to learn again. The dis- position of the pedals of the fine organ in St. Paul's cathedral might serve as a model for all other English organs. Each octave of the pedals occupies two octaves of the finger-keys ; and the C's are placed under each other.

The interior of an English church organ has three rows of keys. One is appropriated to the swell, another to the great or chorus organ, and the third to the choir or soft organ. The swell is said to be an English invention ; and Dr. Eurney, in his tour through Germany, says that he found only one organ in which a swell had been attempted, and that in a very imperfect manner. It has its pipes enclosed in a stout wooden box, with a sliding door, w*hich being gradually opened, by the pressure of the per- former's foot, the sound is increased, and is di- minished by a contrary motion. The swelling organ is generally placed in the upper part of the case, either over the great organ or over the choir. The great organ is commonly placed in the fore part of the case, for the convenience of planting the largest pipes in the ornamental front, and that it may appear louder. The choir organ is sometimes placed directly behind the great organ, and sometimes in front of it, in a separate case, at the back of the player. Hence it is not unfrequently called the chair organ.

The most celebrated organ in Europe is that of Haarlem. It has sixty

stops, two tremulants, two couplings or springsof communication, four separations or valves to close the wind-chest of a whole set of keys, in case of a cip/icr, and twelve pairs of bellows. As this organ has many stops which are altogether unknown to English builders, and not to be found in the organs of this kingdom, we have subjoined a list of the stops of the organ at Great Yarmouth, in the county of Norfolk, as this noble instrument con- tainsnearlyall the stops with which our workmen are acquainted.

Great Organ. Cornet.

Trumpet.

Fiivnituie, 3 ranks.

Tierce.

Twelfth.

Open Diapason.

Stop Diapason.

Organ.

Vox humana.

Stop Flute.

Open Diapason.

Double Diapason. Organ.

Trumpet,

Cornet.

Open Diapason.

Clarion.

Trumpet.

Sesquialtera, 5 ranks.

Fifteenth.

Principal.

Open Diapason.

Double Diapason.

Choir Vox humana.

Mixture, two ranks.

Principal.

Stop Diapason.

Swell Clarion.

French Horn.

Principal.

Stop Diapason.

The organ was built by Jordan, Bridge, and Byfield, in the year 1740, though roughly re- paired, and some stops added, by Mr. G. P. England, in 1812. Compass of the great and choir organs from G G, to /‘in altissimo ; of the swell from C below middle, to f in altissimo. Pedals from G G G to C C.

The organs in our churches that have been well preserved of father Schmidt’s make, such as St. Paul’s the temple, St. Mary’s, Oxford, Trinity College, Cambridge, &c., are far superior in tone to any of more modern construction ; but the mechanism has been improved during the last century by Byfield, Snetzler, Green, Gray, &c. Tiie touch is lighter, the compass extended, and the reed-work admirable. The dulciana stop, brought hither by Snetzler, is a tall, delicate, narrow pipe, of an exquisitely sweet tone, without a reed ; on which account it stands in tune equally well with the open diapason. Though the best-keyed instruments in England have been made by Germans, they work here better than in their own country in size and number of stops ; they greatly surpass us in the size of their organs, but the mechanism is infinitely inferior, which is accounted for by the work- manship being better paid for here than in Ger- many, where labor is cheap. The long keys of our old church organs were made of box or ebony, and the short, or flats and sharps, of ivory. But at present the

long keys, or natural notes, like those in harpsichords and pianofortes, are of ivory, and the flats and sharps of ebony, or dyed pear-tree wood. An organ, when complete for cathedrals, is of three-fold construction, and fur-

nished with three sets of keys ; one for what is called the great organ, and which is the middle set ; a second (or lower set) for the choir organ ; and a third (or upper set) for the swell. In the great organ the principal stops are known by the following names : ††† the two diapasons, the prin- cipal, the twelfth, the fifteenth, the sesquialtera, the mixture or furniture, the trumpet, the clarion, and the cornet. The choir organ usually contains tlie stop diapason, the dulciana, the principal, the flute, the bassoon, and the vox humana. The swell comprises the two diapasons, the principal, the hautboy, the trumpet, and cornet. Besides this complete organ, there are other organs of smaller sizes and more limited powers, adapted to church, chapel, and chamber use. There is also the barrel or chamber organ, which has the parts of other organs, with the addition of a cylinder or barrel revolving on pivots ; on the circumference of this, by means of wires, pins, and staples, are set the tune it is intended to perform. These pins and staples, by the revolution of the barrel, act upon the keys, and give admission to the wind from the bellows to the pipes. The barrel organ is frequently made portable, and so con- trived that the same action of the hand which turns the barrel supplies the wind by giving motion to the bellows. Barrels are now very generally added to chamber organs, operating on the same pipes as the finger-keys, though by a different set of keys ; so that either barrel or finger- keys may be used independently of each other.

Those who wish to be further informed in the history and practice of organ-building are re- ferred to L'Harmonie Universelle, folio, Paris, 1636; Harmonicorum libri duodecimi, folio, Paris, 1648; Facteurd'Orgues, Paris, 1766; and Mr. Mason's Essays on English Church Music.

Organ, the Hydraulic, denotes a musical machine that plays by water instead of wind. Of these there are several in Italy, in the grottoes of vineyards. Ctesebes of Alexandria, who lived in the time of Ptolemy Euergetes, is said to have in- vented organs that played by compressing the air with water, as is still practised. Archimedes and Vitruvius have left us descriptions of the hydrau- lic organ. In the cabinet of queen Christina is a beautiful and large medallion of Valentinian, on the reverse whereof is seen one of these hydraulic organs ; with two men, one on the right, the other on the left, seeming to pump the water which plays it, and to listen to its sound. It has

only eight pipes, placed on a round pedestal. The inscription is placeas Petri.

An eight-feet is a term used to describe an organ the lowest pipe of which measures eight feet in length. A stopt eight feet is one of which the pipes of four feet, being stopt, produce the eff'ect of an open eight feet; because in that case the column of air of four feet has double the dis- tance to make before it finds an issue; it has therefore eight feet instead of four, and gives the unison of the open pipe of that size. A pipe mea- suring sixteen feet and stopt, therefore, will pro- duce the unison of an open pipe of thirty-two feet.

The pipes of organs are distinguished by their sound : some are soft, brilliant, and some of a piercing or shrill nature, and extend throughout the clavier; some imitate the flute, hautboy.

clarinet, and bassoon, whilst others imitate the trumpet, trombone, cremorne, ike, and extend only through certain portions of the clavier; i.e. according to the diapason or natural compass of the instruments imitated. But in order to pro- vide for these deficiencies of the clavier other stops of a corresponding; quality of tone are joined with the short stops. The materials em- ployed for the formation of pipes are wood, cop- per, pewter, and tin ; copper and f)ewter amal- gamated form the metal ; lead, wood, and lead ; lead and tin or pewter amalgamated ; silver and copper gilt, white iron and carton. In general the harder the substance, as copper and silver, pewter or tin, the more brilliant or piercing the tone. Pipes of wood or lead, on the contrary, give soft sounds ; there are also pipes of porce- lain, glass, and baked earth ; these are far less subject to be out of order by the change of tem- perature of the atmosphere than those of wood or metal.

An organ pi])e of the deepest species will not suddenly intonate when not accompanied with the sound of another pipe ; but, if its octave be in play at the same time, it will answer the fleet- est touch upon the clavier : because the tone of the largest pipe, being in accordance, causes a motion of the air contained in the greater pipe, and the vibrations of the contained air, being co- incident with those of the sound of the pipe, pro- mote its speaking by* putting the pulses of the mouth into a regular motion. The greater the pipe the less quickly it intonates of itself, and the shorter, therefore, the pipe the more suddenly it intonates : a principle imperatively requiring a suitable

mixture of stops for the production of simultaneous and correct harmony.

To the temperament given to the principal, all other stops are tuned ; it extends throughout the clavier and is made of wood, also of metal. The lowest pipe of this stop measures either four, eight, sixteen, or thirty-two feet in length.

An organ, however large and numerous its stops, is never displayed to advantage if entirely tuned in octaves and unisons to the principal; and unless the third, decima, tenth, or seven- teenth, and the fifth, or twelfth, of each of these octaves and unisons be heard at one and the same time, much of the brilliancy and richness of the organic sound would be lost. Stops denominated thirds and fifths are therefore inserted amongst the list of organ stops. But as these thirds and fifths which, without trial, one might be induced to think insufferable to the ear when repeated in succession throughout the instrument, constitute perfect major harmonic combinations of sound, their effects, as may easily be understood, would be intolerable were they suffered to predominate over the unisons and octaves of the other stops : perfect harmonics by direct movement being strictly forbidden; and a major species of har- monic combination of sound would be set in op- position, occasionally, with the minor mode, to the dominant of which it could only satisfactorily amalgamate. These accessory stops, although extending throughout the organ, do notabsolutely comprise, on account of their peculiar diapason or extent, more than three octaves; these are repeated in the lower part of the clavier. Flutes,

tierces, and fifths, comprising each an extent of one octave only, are occasionally repeated to every octave of the clavier : a system productive of the finest effects. The greater number of stops tuned in octaves and unisons, the greater must be the proportion of tierces, fifths, and compound stops. The tierce stop is considered higher than the fifth, a principle ascertained to be derived from nature : every sonorous body producing by its vibrations the sounds of the twelfth and seventeenth major. See Sol’nd.

Cornets and mixtures are designated compound stops.

Cornets are of three species, consisting of five ranks of pipes each, called the grand cornet, solo cornet, and echo cornet, each lever of which causes five different pipes to sound at the same time, viz. the octave, fifth, fourth, and major third, yet they produce but one sound : for in- stance, when the lever or the note C is held down It produces the octave, its twelfth, double octave, and its seventeenth major, but C

js only supposed to be heard or appreciated, which proves that sound is not a simple element, but an aggregate of concomitant sounds. The cornet stops were formerly much used in churches with the diapasons in the interludes, and giving out of the psalms. In modern organs these compound stops, from motives of economy, in England, have been superseded by others of the reed spe- cies. Dr. Smith is mistaken in saying that the best tuning of an organ cannot wholly prevent that disagreeable battering of the ears with a con- stant rattling noise of beats, quite different from all musical sounds, and destructive of them, chiefly caused by the compound stops called the cornet, mixture, and sesquialter : these battering effects arising in cases only where a dispropor- tionate force is given to the fundamental stops of the octaves and unisons.

The mixture is composed of four, six, eight, ten, and, upon the continent, often extends to twelve ranks of pipes. The pedals have also their mixture stops, and are in proportion to those belonging to the claviers : without this pro- portion the inequality of tone would be insup- portable and totally destructive of harmony. Mixtures are divided into the great, middle, and little, of which one, two, or the whole may, by the action of a coupling stop, be brought to act simultaneously with the other stops, i. e. accord- ing to the proportionate force required by quan- tity, and quality of tone given to the different claviers.

The bellows expiring and inspiring the air by turns by the aid of levers, give a brisk agitation to the air by enlarging and contracting its capa- city. This pneumatic machine has been much improved of late in England in the horizontal bellows; a column of air being now supplied and drawn at the same moment by the action of a crank and other appendages, instead of levers, &c., upon four feeders and pumpers.

Organs vary in size, and are of two, four, five, six, seven,fifteen, twenty, thirty-six, forty-six, fifty- six, sixty, sixty-one, sixty-five, seventy-five, and eighty stops, with from one to five claviers, and one or two claviers for the feet.

The following is the description of the organ

at St. Sulpice in Paris. It lias five claviers for the hands besides those

for the feet; fourteen pairs of bellows six feet in length by three and a half, of which six are for the great organ, four for the positive, and four for the pedals, and is considered the most complete in Europe: ◆◆◆

First clavier.

I. Grand cornet, composed of five ranks of pipes, made of pewter.

.2. Montre (front) of eight feet pewter.

3. Bourdon (stopt diapason) of sixteen feet; the upper half with a small funnel or pipe at the top of each tube, and the lowest entirely stopt, made of oak.

4. Flute of eight feet in pewter, comprising three octaves.

5. Bourdon (stopt diapason) of four feet, stopt in unison, with an open diapason of eight feet.

6. Prestant,from prestare, signifying to figure, to nm divisions, to ornament a given subject (open diapason) of four feet, in pewter.

7. Nazard of four feet, the fifth from tlie pres- tant, made of pewter.

8. Quarte de nazard, the octave of the prestant, of two feet in pewter.

9. Doublette of two feet in pewter, the octave of the prestant.

10. Tierce, seventeenth.

II. Larigot, the octave flute.

12. Furniture, or mixture, of five ranks in pewter.

13. Cymbale of four ranks of pipes in pewter.

14. Clarinet, of three perfect octaves, a reed stop made of pewter.

15. Cromorne, or crooked horn, a reed stop of four feet pewter, and of the bassoon species.

16. Bassoon, four complete octaves, pewter.

17. Trumpet of eight feet, four octaves, pew- ter.

18. Clarion of four feet, four octaves, pewter.

Second clavier.

1. Montre (front) of thirty-two feet, the upper half the clavier of pewter, the other of oak.

2. Montre of sixteen feet, an open stop made of pewter.

3. Bourdon of eight feet, stopt diapason.

4. Montre of eight feet, open diapason.

5. Flute of eight feet, open.

6. Grand cornet of five ranks of pipes, in pewter.

7. Bourdon, of four feet stopt; the treble and tenor open and made of pewter ; the bass stopt, and made of oak.

8. Prestant of four feet, open.

9. Great nazard of six feet, sounding the fifth of eight feet.

10. Nazard, an open stop of three feet, the fifth of the prestant of four feet, in pewter.

11. A quarter nazard, an open stop of two feet in unison with octave of the prestant, of four feet in pewter.

12. Great tierce of three feet.

13. Little tierce.

14. Doublette the octave of the prestant.

15. Furniture of nine ranks of pipes.

16. Cymbale of five ranks. This stop is oc- casionally composed of nine ranks of pipes.

17. Trumpet of eight feet.

18. Vox humana. This stop is in unison with the open diapason, and is composed of short metal pipes of a wide and globular form at the top, resembling the human mouth.

19. Trumpet.

20. Trumpet of three octaves, douoled in the lower octave by a

clarion.

21. Clarion in pewter.

Third clavier.

1. Grand cornet of five ranks of pipes

2. Bombarde of sixteen feet in pewter, of the reed species. This stop is sometimes made of wood.

3. Trumpet of eight feet, pewter.

4. Clarion of four feet, pewter.

Fourth clavier.

1. Open flute for solo, made of lead, descent! ××× ing to F below tlie treble staff.

2. Cornet, for solo, composed of five rank? ii pipes, made of lead.

3. Hautboy, solo, made of pewter.

4. Trumpet, solo, in pewter.

Fifth Clavier.

1. Open flute, an echo stop, in lead, descend- ing to C below the treble statf.

2. Bourdon, an echo stop, with a funnel at the top of each pipe.

3. Cornet of five ranks of pipes.

4. Trumpet.

5. Clarion.

Sixth Clavier.

1. Pedal of sixteen feet stopt, of wood.

2. Ditto.

3. Pedal of eight feet open.

4. Two pedals of eight feet open.

5. Pedal of the great nazard.

6. Pedal of four feet.

7. Pedal of the bombarde of thirty-two feet; a reed stop in wood.

8. Pedal ditto of twelve feet.

9. Trumpet pedal of twelve feet.

10. Second trumpet pedal of twelve feet.

11. Clarion pedal of six feet.

12. Two pedals of tremblants.

These stops consist of moveable machines placed in the principal channel of the wind- chest, near the port-vent to intercept the regular current of air. Turning upon their axes by the force of the wind, they give to the sound of the organ a trembling or beating effect, of which there are two sorts called the gentle and violent tremblants ; the former consists of one plate, and the latter of two plates, of iron, inversely placed and fastened to a piece of wood. On certain occasions of divine service in the Roman church, these stops are exceedingly effective.

In addition to the number of stops already noticed, of which we have not their equivalents in England, are the flute creuse, cors de nuit, nassat, tibia angusta, flautone, musette, salcional, chalameau, shallmey, ranquet, regal, sourdine, viola da gamba, viol d'amour, violoncello, unda maris, vox angelica, forest flute, fistula vulgaris, bear flute, cornemuse, flageolet, bass cornet, violin, carillon or campanetta, bird stops of the nightingale and cuckoo, timbals, cymbals, fan- fares, fugara, double flutes, bissera, and the

otoile, wliich consists of an immense number of small pieces of sonorous metal all turning upon separate axes, serving, by the action of the wind conducted from the wind-chest, to prolong the ressonance of a pair of cymbals.

The etymology of many of the terms given to tlie above stops is unknown; their powers as combined with others more generally

known to us being unnecessary to describe, we will con- clude this article with a few remarks upon the proper management of the stops generally al- loted to organs of English manufacture ; of these, for tlie great organ, are open diapasons, stopt diapasons, principal, twelfth, iifteentii, tierce, mixture, or furniture, sesquialtra, trumpet, and cornet. For the choir organ are the stopt diapasons, flute, principal, twelfth, fifteenth, mixture, cremona, and vox humana ; and for the swell are the open diapason, stopt diapason, principal, corrtct, trumpet, and hautboy.

To produce the most perfect combination of organic sound, the flute stops form the principal attention of the experienced organists of Germany; the depth and shrillness of all other stops as of thirty-two, sixteen, four, two and one foot, being so arranged by them, that the greater powers of the larger pipes do not stifle the less powers of the smaller pipes.

A stop remarkable for its softness of tone must never be set in opposition with a powerful toned stop ; several of the former may be effect- ively employed with the latter.

Too great a distance between the octaves, as for example, between a sixteen and a two feet stop, must be avoided ; a stop is well supported by another of an octave higher, as a thirty-two and a sixteen feet stop. A distance of an octave, or even a double octave, may be advantageously adopted in the performance of a solo, especially with a stop of peculiar qualities, as of the reed species, giving the harmonic support to the solo wit!) the other hand upon a different clavier.

To the stops in general use, as the diapasons and principal, must be added, for the accompa- niment of the psalms, tierces, twelfths, octaves, and fifteenths, according to their nearest pro- portions, and in proportion to the number of people assembled for the celebration of the divine service.

To the full organ may be added tlie reed stops and the whole play of the pedals ; to the choir organ half the play of the pedals.

Reed stops, being of peculiar structure, re- quire a different mode of treatment. They are used principally in solos, and in such a manner as appears best suited to the powers or expres- sron of the human voice intended by the com- poser to be imitated. From the nasal qualities of some of the reed stops they should never be employed in the accom])animent of the psalms. The disagreeable qualities of some of the reed stops are lost in the combination with flute stops of eight or

four feet.

Particular attention should be paid to the style of music to be executed, in order that the stops employed should be applicable to the ex- pression required. In the performance of a specimen of harmony in four, five, or six sus- tained parts, flutes and diapasons are necessary,

and the reed stops are on no account to be tolerated. The attention of the organist is also particularly directed to the study of the lugu- brious effects so peculiar to the stopt diapasons than which, when combined with the flute, nothing interests the heart so much or prepares the soul to devotional feeling. On the continent organs for this purpose are muffled or covered with cloth, and the tremblants are used. The expert organist profits greatly by the multiplicity of claviers, employing one for the harmonic support of the melody and the pedals for the bass, and another for the melody suitable for the diapasons of instruments or voices intended to be imitated, producing by this display of his tact, genius, and experience, the most grateful sensations upon the minds of the congregation.

The facility with which organists of Germany and France execute difficult passages with their feet upon the pedals, displaying at the same time their intimate knowledge of the powers of harmony upon different claviers with their feet, is truly astonishing, and, to musicians conversant only with the music generally adopted in the church of England, the recital of these extraor- dinary feats appears incredible. High heeled shoes facilitate much the execution of quick passages for the pedals.

From the great variety of forms and modes of worship observed in the Roman and Protestant churches in Germany, France, Italy, and Switzerland, the qualifications requisite for an organ- ist are of greater magnitude than those necessary for one of the church of England. But, unfor- tunately, such is the degraded state to which sacred music is brought in our churches, that the ability of playing one of Handel's overtures and a couple of psalm tunes, are considered by the umpires deputed to decide upon the merits and demerits of the musical candidates, to be the only requisites for the regular installment of an organist. Hence, instead of a well conducted musical education, which, next to respectability of character, ought at all times to be the pass- port to the exercise of the honorable functions of an organist, persons of mean pretensions are])ut into the possession of the majority of the organs in the metropolis ; a misfortune, tending not only to the exclusion from the celebration of divine service of that talent and experience which upon all occasions, would ensure the correct and judicious performance of the finest specimens of harmony and melody, of the Ger- man, Italian, and English schools, thereby form- ing and improving the taste for tood music in England, but to facilitate the introduction of those contemptible and interminable effusions designated extemporaneous performances, which, resulting nearly in all cases from gross ignorance, throw ridicule upon the principles of music as a science, and are with difficulty to be endured with common decency although performed in the sanctuary.

The best and indeed the only criterion of the abilities of an organist is his intimacy with the finest specimens of classical music, and his power of performing them with facility and judgment. But, to ensure at all times the mode most suitable for the church, every parish should be provided

with a musical library consisting of about eiglit volumes of well and classically chosen compo- sitions; and this music, as much as possible,

should be strictly and regularly performed, a system ensuring at once respect for the organist, and that decency which is commended by tlie ritual.

The swell, on the score of expression, is tlie most valuable part of the organ, but a dangerous instrument in the hands of an organist not gifted with an ear to sound, as in discourse, musical periods with discrimination.

ORGASM, 7?. s. Ft. 0}-gas)m; Gr. opyaffuof. Sudden vehemence.

I'his rupture of the lungs, and consequent spitting of blood, usually arises from an orgasm, or immode- rate motion of the blood. Blackmore.

By means of the curious lodgment and inoscula- tion of the auditory nerves, tlie orqasms of the spirits should be allayed, and perturbations of the mind quieted. Deiliam.

OR'GEIS, n. s. A sea-fish, called also or- ganling, corruptions of the orkenyling, perhaps as being taken on the Orkney coast.

ORGIA, feasts and sacrifices in honor of Bacchus, held every third year, and chiefly celebrated by women, called Bacchae. The chief solemnities were performed in the night, to con- ceal, perhaps, their shocking impurities ; and a mountain was generally chosen as the place of celebration. They were instituted by Orpheus ; and from him are sometimes called Orphica. Authors are not agreed as to the derivation of the word ; but from the frantic proceedings of the Bacchanalians, opy►►j, furor, seems to be the true etymology. See Bacchanalia. Orgia, according to Servius, was a common name for all kinds of sacrifices among the Greeks, as ceremoniae was amongst the Romans.

ORG'ILLOUS, adj. Fr. orgueil/ieux. Proud ; haughty Not in use.

From isles of Greece

The princes orgillous, their high blood chafed,

Have to the port of Athens sent their ships.

Shakspeare.

OR'GIES, n. s. Fi. orgies; 'Lat. orgia. The old mad rites of Bacchus ; frantick revels.

These are nights. Solemn to the shining rites Of the fairy prince and knights, While the moon their urgies lights.

Ben Jonson.

She feigned nocturnal orgies ; left my bed, And, mixed with Trojan dames, the dances led.

Dryden.

In Bacchus' orgies I can bear no part, A nd scarcely know a diamond from a heart. ' Whyte's Poems,

ORGUES, in the military art, are thick long pieces of wood, pointed at one end, and shod with iron, loose one from the other ; hanging, each by a particular rope or cord, over the gate- way of a strong place, perpendicularly, to be all let fall at once in case of the ayiproach of an enemy. Orgues are preferable to herses or port- cullices, because these may be either broke by a petard, or they may be stopped in their falling down ; but a petard is useless against an orgue, for, if it break one or two of the pieces, they im-

mediately fall down again and fill up the vacancy; or, if they stop one or two of the pieces from falling, it is no hindrance to the rest; for, being all separate, they have no dependence upon one another. It is also the name of a machine com- posed of several harcjuebuss or musket barrels bound together, by means whereof several dis- charges are made at the same time. It is used to defend breaches and other places attacked.

ORIBASIA, in botany, a genus of the mono- gynia order and pentandria class of plants, natural order forty-seventh, stellatae : cok. small, tubu- lated, and monopetalous ; pericarp a globular berry, grooved longitudinally; quinquelocular and containing one seed. Of this there are si:: species, all natives of the warmer parts of Ame- rica.

ORIBASIUS, or Oribasus, a celebrated phy- sician, greatly esteemed by the emperor Julian, in whose reign he flourished. He abridged the works of Galen, and of all the most respectable writers on physic, at the request of the emperor. He accompanied Julian into the east, but his skill proved ineffectual in attempting to cure the fatal wound which his benefactor had received. After Julian's death he fell into the hands of the barbarians. The best edition of his works is that of Dundas, 4to. Lug. Bat. 1745.

O’RICHALCH, n. s. Lat. orichalcum. Brass, See AuRicHALcuM.

Not Bilbo steel, nor brass from Corinth fet. Nor costly orichalch from strange Phoenice, But such as could both Phoebus’ arrows ward. And the hailing darts of heaven beating hard.

Spenser,

Orichalch, Orichalcum, or Aurichal- cuM, a metallic substance resembling gold in color, but very inferior in value. It was well known to the old Romans, who often took ad- vantage of its resemblance to gold ; for some sacrilegious characters, who could not resist the temptation of taking gold from temples and other public places, chose to conceal their guilt by substituting orichalcum for it. It was thus that Julius Caesar acted, when he robbed the capitol of 3000 pound weight of gold ; in which he was followed by Vitellius, who despoiled the tem- ples of their gifts and ornaments, and put this inferior metal in their place. It has been a matter of dispute, with philosophers and others, what this metal could be, or how it was procured or made; it is probable, at least, that it was greatly analogous to our brass, if not wholly the same with it. See Brass. The resemblance of brass to gold, in color, is obvious at first sight. Both brass and gold are susceptible of a variety of shades of yellow, in proportion to their alloy with copper; but the nearness of the resem- blance is sufficiently proved by the difficulty of distinguishing substances gilded with brass or Dutch leaf from such as are gilded with gold leaf. The Romans knew the manner of making orichalcum, and the materials from which they made it were the very same from which we make brass. There are, indeed, authors of re- pute who think otherwise. M. Cronstedt does not think it just to conclude from old coins and other antiquities, that it is evidently proved that the making of brass was known in the most

ancient times ; aud the autliors of the French Encyclopedie assure us that our brass is a very recent invention. It appears, however, from Pliny’s Natural History, lib. xxxiv, sect. 2, and from tlie concurring testimony of other writers, that orichalcura was not a pure or original me- tal ; but that its basis was copper, which the Romans changed into orichalcum by means of cadmia, a species of earth which they threw upon the copper, and which it absorbed. The testi- mony of Ambrose,

bishop of Milan, in the fourth century; of Primasius, bishop of Adrumentum, in Africa, in the sixth; and Isidorus, bishop of Seville, in the seventh, all confirm Pliny's ac- count. We may therefore safely conclude that the Uomans knew the method of making brass by mixing cadmia or calamine with copper; yet it is probable they were not the inventors of this art. It appears from a variety of testi- monies that brass was made in Asia, in a man- ner very similar to that- at Rome ; and it is sup- posed that in India it was made in the remotest ages. It is generally supposed that there were two sorts of orichalcum, one factitious, the other natural. The factitious, whether we consider its qualities or composition, appears to have been the same with our brass. As to the natural ori- chalcum, it is not impossible that copper ore may be so intimately blended with ore of zinc, or of some other metallic substance, that the compound, when smelted, may yield a mixed metal of a paler hue than copper, and resembling the color of either gold or silver. In Du Ilaldtˆ's History of China we meet with the following account of the Chinese white copper : ††† ' The most extraordinary copper is called de-tong, or white copper ; it is white when dug out of the mine, and still more white within than without. It appears, by a vast number of experiments made at Pekin, that its color is owing to no mixture ; on the contrary, all mixtures diminish its beauty ; for, when it is rightly managed, it looks exactly like silver ; and were there not a necessity of mixing a little tutenj\g, or some such metal, with it, to soften it and prevent its brittleness, it would be so much the more extra- ordinary, as this sort of copper is perhaps to be met with nowhere but in China, and that only in the province of Yun- nan.' ††† Vol. I., p. 16. Notwithstanding this, it is certain that the Chi- nese white copper, as brought to us, is a mixed metal ; so that the ore from which it is extracted must consist of various metallic substances, and from some such ore it is possible that the natu- ral orichalcum, if ever it existed, may have been made. But, though the existence of natural ori- chalcum cannot be proved impossible, yet there is reason to doubt whether it ever had a real ex- istence. We know of no country in which it is now found ; nor was it any where found in the age of Pliny ; nor does he seem to have known the country where it ever had been found. Plato acknowledges that orichalcum was a thing only talked of in his time ; it was nowhere then to be met with, though in the island of Atlantis it had been formerly extracted from its mine. Tlie Greeks were in possession of a metallic sub- stance, called orichalcum, before the foundation cf Rome ; for it is mentioneil by Homer and by

Hesiod in such a manner as shows that it was then held in great esteem. Other ancient writers have expressed themselves in similar

terms of commendation ; and it is prmcipally from the circumstance of the high reputed value of ori- chalcum that authors are induced to suppose the ancient orichalcum to have been a natural sub- stance. But this conclusion cannot be justly drawn from their encomiums upon it ; for, at whatever time the method of making it was first discovered, both its novelty and scarceness, joined to its utility, would enhance its value. Respecting the etymology of the word there is great diversity of opinions. Those who write it auriclialcum i:;i;k it is composed of the Latin word aurum, crold, and the Greek ^^aXicoc, brass or co]iper. The m(st ###. eneral opinion is, how- ever, that it is compos (1 of opoc, a mountain, and ^aX/coc, alludinsr to its being found in moun- tains. See Memorials of the Literary and Phi- losophical Society of Manchester, vol. ii. The following etymology is also given, which seems equally well founded, and is as ingeniou-; as either. The Hebrew word or, aur, signifies light, fire, flame; the Latin terms uro, to burn, and aurum, gold, are derived from it, inasmuch as gold resembles the color of flame ; and hence it is not improbable that orichalcum may be composed of a Hebrew and a Greek terra, and that it is rightly rendered flame-colored copper. In confirmation of this, the Latin epithet luci- dum, and the Greek one (paeivov, are both ap- plied to orichalcum by the ancients.

ORICUM, or Oricus, an ancient town of Epirus, with a good harbour, on the Ionian Sea, founded by a colony from Colchis ; called, also, Dardania, because Helenus, the son of Priam, king of Troy or Dardania, reigned in it along with Andromache, after the destruction of Troy.

O’RIENT, adj. & n. s. \ Fr. orient ; Latin

Oeiex’t.a.l, adj. k. n. s. (oriens. Rising, as

Orien’talism, i the sun: hence

Orien’tally, ##(/t;. ‘ eastern; bright;

shining ; the east : oriental is, eastern ; proceed- ing_ from, or pertaining to, the east ; and, as a noun-substantive, an inhabitant of that part of the globe : orientalism, an idiom of the east ; an eastern mode of expression.

The liquid drops of tears that you have shed. Shall come again transformed to orient pearl ; Advantaging their loan with interest, Oftentimes double gain of happiness. Shahspeare.

We have spoken of the cause of orient colors in birds ; which is by the

fineness of the strainer.

Bacon’s Natitral History.

Your ships went as well to the pillars of Hercules, as to Pequin upon the oriental seas, as far as to the borders of the east Tartary. Bacon.

There do breed yearly an innumerable company of gnats, whose property is to fly unto the eye of the lion, as being a bright and orient thing. Abbot.

Wherefore hath he clothed the trees in cotton, or the fields with fiax ••• wherefore hath he treasured up such orienf and pleasing colors in grains and fishes, if not for the use and behoof of man ? Hall.

Moon, that now meet’st the m-ient sun, now fly’st. With the fixed stars. Milton’s Paradise Lost.

In thick shelter of black shades embowered, He offers to each weary traveller His orient liquor in a crv’stal glass, To quench the drouth of Phabus. MilUm.

Some, ascribing hereto the generation of gold, con- ceive the bodies to receive some appropriate influence from the sun’s ascendant and oriental radiations.

Browne. His revolution being regular, it hath no efficacy peculiar from its orientality, but equally disperseth his beams. id.

The chiefs about their necks the scutcheons wore, With orient pearls and jewels powdered o’er.

Dry den. They have been of that great use to following ages, as to be imitated by the Arabians and other orientals.

Grew. His victory was that of orient light. When the sun’s shafts disperse the gloom of night.

Co V- per.

OR’IFICE, n. s. Fr. orifice; Lat. orificium; ab. ore ˆxiAfucio. The mouth

or opening of a wound or perforation.

The prince of ()range, in his first hurt by the Spa nish boy, could find no means to staunch the blood, but was faiu to have the orifice of the wound stopped by men's thumbs, succeeding one another for the space of two days. Bacon.

Their mouths AVith hideous orifice gaped on us wide, Portending hollow truce. Milton.

^^tna was bored through the top with a monstrous orifice. Addison.

Blood-letting, Hippocrates saith, should be done with broad lancets or swords, in order to make a large orifice by stabbing or pertusion. Arbuthnot.

ORIFLAMB, or Okiflame. See Auri-

FLAMME.

ORIGANUM, Origany, or marjoram, a genus of the gymnospermia order, belonging to the didynamia class of plants, and in the natural method ranking under the forty-second order, verticillatae. There is a strobilus or cone collect- ing the calyces together. There are sixteen spe- cies, mostly natives of Palestine and the east.

O. dictamnus, dittany of Crete. This holds the first rank among the medicinal plants pro- duced in Crete. The praises betowed on its vir- tues by the ancients are altogether extravagant; yet we, perhaps, treat its medicinal virtues with too much contempt. Its leaf is very balsamic, and its flower diflfuses a delicious odor. The in- habitants of Crete apply it with success on various occasions. The leaf, when dried and taken in an infusion with sugar, makes a very pleasant drink. Tliis plant assumes an under- shrubby growth, often with abiding stalks, if it has shelter in winter.

O. heracleoticum, or winter sweet marjoram ; a finely scented aromatic, excellent for culinary purposes. It is also useful for giving fragrance to ointments, and other medical purposes.

O. marjoranum, or annual sweet marjoram, is an aromatic of the highest fragrance, is proper both for the kitchen and pleasure garden, but more particularly for the former. It is often called knotted marjoram, from the flowers grow- ing in close knotted-like heads.

O. vulgare, the common wild pot marjoram, possesses the same

properties with the heracle- oticum. All these species flower in July and August ; the flowers are small, monopetalous, ringent, universally hermaphrodite; and collect- ed into verticilli round the stalks ; succeeded by ripe seed in autumn ; though in tliis country the

annual marjoram and the three green-house sorts seldom perfect seed well, unless the autunui proves remarkably fine and warm : in default, however, of seed, the propagation of all the perennial sorts, both hardy and green-house kinds, is easily effected by slips of the roots, &c. And the seed of the annual sort is imported plentifully from France and Italy.

ORIGEN, one of the most celebrated eccle- siastical writers of the primitive church, during the third century, was born at Alexandria, A. D. 185, and was surnamed Adamantius, either from his indefatigable application to study, or from the firmness he discovered amidst the torments he suffered for the faith. Leonidas his father trained him with great care, and made him study the Holy Scriptures from his infancy, in which he made surprising progress ; and very early manifested a taste for expounding the Scriptures allegorically, which he afterwards carried to great excess. He had afterwards for his instructors in philosophy Ammonius, the celebrated Christian philosopher, and St. Clement of Alexandria. At eighteen years of age he succeeded St. Clement in the office of catechist, an important employ- ment, which consisted in teaching divinity, and expounding the Scriptures. Leonidas his father had suffered martyrdom the year before, during the persecution of Severus in 202 ; and Origen had shown such eagerness to follow his father to martyrdom, that his mother was obliged to hide his clothes to prevent his going abroad. Origen had a great concourse of auditors who attended his school, some of whom were of the faithful, and others pagan. He confirmed and strength- ened the first in their faith, and converted many of the others ; and there was such a number of martyrs amongst his disciples, that it might be said that he kept rather a school of martyrdom than of divinity. Taking in a too literal sense what Christ says of becoming voluntary eunuchs, he castrated himself, to prevent his deserving or suffering scandal, as he instructed females in the doctrines of the New Testament. He took a voyage to Rome in 211, in the beginning of Caracalla's reign, and under the pontificate of Zepherinus. After his return he published many ###works, by which he acquired an extraordinary- reputation, that drew to him a great number of auditors. But Demetrius, bishop of Alexandria, conceiving a jealousy of him, endeavoured by various pretences to injure him. At length Origen went to Antioch, whither the empress Mammaea had sent for him to hear him discourse on the Christian religion. He returned to

Alex- andria, where he continued to teach till the year 228, when he travelled into Achaia and Palestine, and was ordain”ed by the bishops of that pro- vince, at forty-two years of age. His being ordained by foreign bishops, without the per- mission of Demetrius, renewed that prelate’s resentment ; on which Origen returned to Alex- andria, to endeavour to mollify him : but Deme- tru’s drove him thence in 231, and caused him to be excommunicated, and even deposed, in a council held at Egypt. Origen then returned to Csesarea in Palestine, where he raised a cele- brated school, and had St. Gregory Thaum itur- gus, and a great number of illustrious ‘lersons

among his disciples. He afterwards travelled to Athens; and, at the desire of Firmilianus, staid some time at Caesarea in Cappadocia ; whence he was invited into Arabia. Under the seventh persecution of the Christians, in the reiiˆn of De- cius, none were used with greater severity than Origen ; but he supported with incredible con- stancy the dreadful torments which his perse- cutors invented against him. He died at Tyre in 254, aged sixty-nine. He was the author of a great number of excellent works. The princi- pal of those extant are, i. A Treatise against Celsus ; 2. A number of Homilies, with XJom mentaries on the Holy Scriptures ; 3. Philo- calia, and several other treatises ; 4. Fragments of his Hexapla, collected by father iVlontfaucon, 2 vols, folio. Of all Origen’s books, the loss of his Hexapla is moˆt to be regretted. This work was thus named from its containing six columns ; in the first of which was the Hebrew text of the Bible ; in the second the same text in Greek characters ; in the third the Greek version of the Septuagint ; in the fourth that of Aquila ; in the fifth that of Symmachus ; and in the sixth that of Theodotion. This admirable book gave the first hint for our Polyglot Bibles. 5. The book of Principia, of which we have only an incor- rect Latin version. In all his writings he dis- covers modesty, candor, and humility ; a noble and sublime genius, profound learning, and great erudition. He wrote with so much ease that he is said to have dictated to seven or eight amanuenses at a time.

ORIGENIANI, or Origenians, ancient he- retics, who even surpassed the abominations of the Gnostics. Epiphanias speaks of them as subsisting in his time ; but their numbers, he says, were inconsiderable. He fixes their rise about the time of the great Origen ;

but distin- guishes them from the Origenisti, whom he derives from Origen Adamantius. And St. Au- gustine expressly asserts that it was another Origen. Their doctrines were shameful : they rejected marriage ; they used several apocryphal books, as the Acts of St. Andrew, &:c., and endeavoured to excuse their open vices by say- ing that the Catholics did the same in private.

ORIGENISTI, in church history, a Christian sect in the fourth century, so called from their asserting that they derived their opinions from the writings of C)rigen. The Origenists main- tained, that the souls of men had a pre-existent state ; that they were holy intelligences, and had sinned in heaven before the body was created ; that Christ is only the son of God by adoption ; that he has been successively united with all the angelical natures, and has been a cherub, a seraph, and all the celestial virtues one after another; that in future ages he will be crucified for the salvation of the devils, as he has already been for that of men ; and that their punish- ment, and that of the damned, will continue only for a certain limited time.

ORIGIN, n. s. ˆ French origirte ;

Orig'inal, n. s. & adj. Lat. origo, origi- Orig'inally, (zrfw. \ 7ialis ; vh orior,

Orig'inalness, n. s.)►►to rise, or spring.

Orig'inary, Off;. I Beginning; spring

Oric'inatf., r. a. & v. n. | head; sou'-ce ; Origina'tion, n. s. j cammencemcnt of

existence ; first state of existence ; derivation ; descent. Both origin and original are used in all the above senses ; original further means first copy or language in which any thing is written ; archetype ; and, as an adjective, primitive ; first ; primary : originally is primarily ; having regard to the first cause or author ; at first : originary is productive ; causing existence ; primitive : to originate, to bring into existence ; and (unusu- ally) to take existence: origination is the act or mode of production ; descent.

Remember I am built of clay, and must Resolve to my crui'mary dust. Sandys on Job,

Nature, which contemns its origin, Cannot be bordered certain in itself.

Shakspeare.

A very great difference between a king that hold- eth his crown by a willing act of estates, and one that holdeth it originally by the law of nature and descent of blood. Bacon.

The tradition of the origination of mankind seems to be universal ; but the particular methods of that origination excogitated by the heathen were particu- lar. Hale.

For what criginalli/ others writ jMay be so well disguised, and so improved, That with some justice it may pass for yours.

Roscommon .

As God is originally holy in himself, so he might communicate his sanctity to the sons of men, whom he intended to bring into the fruition of himself.

Pearson.

The Greek word used by the apostles to express the church signifieth a calling forth, if we look upon the origination. Id.

The original question was, whether God hath for- bidden the giving any worship to himself by an image 1 Stillingjieet.

They, like the seed from which they sprung, ac- curst, Against the gods immortal hatred nurst ; An impious, arrogant, and cruel brood. Expressing their original from blood. Dryden.

External material things, as the objects of sen- sation ; and the operation of our minds within, as the objects of reflection ; are the only originals from whence all our ideas take their beginnings.

Locke.

This eruca is propagated by animal parents, to wit, butterflies, after the common origination of all caterpillars. Ray.

Some philosophers have j laced the original of power in admiration, either of surpassing form, great valour, or superior understanding. Daienant.

Had Adam obeyed God, his original perfection, the knowledge and ability God at first gave him, would still have continued. Wake.

A present blessing upon our fasts, is neither ori- ginalli) due from God's justice, nor becomes due to us from his veracity. Smallridge,

The sacred historian only treats of the origin of terrestrial animals. Bentlen's Sermons.

Compare this translation with the original, the three first stanzas are rendered almost word for word, not only with the same elegance, but with the same turn of expression. Addison,

You still, fair mother, in your offspring trace The stock of beauty destined for the race ; Kind nature forming tliem, the pattern took From heaven's first work, and Eve's original look.

Prior., Original of beings ! power divine ! ince that I live and that I think, is thine. Id.

These great orbs,

Primitive founts, and origins of light. Id.

The metallic and mineral matter, found in the perpendicular intervals of the strata, was originally and at the time of the deluge, lodged in the bodies of those strata. Woodward.

If any station upon earth be honourable, theirs was ; and their posterity therefore have no reason to blush at the memory of such an original.

Atterburii.

The production of animals in the originary way, requires a certain degree of warmth, which proceeds from the sun's influence. Cheiine.

The merit of these is the inveterate likeness, all stiff and awkward as the originals, and like notjiing in human nature besides. Ulieridan.

Oeiginal Sin. See Theology. OllIG NY (Anthony John Baptist. AbTaham d') , born in 1734 ai Rheims, was counsellor of the mint, and member of many provincial acade- mies. He died in October, 1798, having pub- lished Dictionnaire des Origines, ou Epoches des

Inventions, Decouvertes, &c. Paris, 1776, 1778, 6 vols. 8vo. ; Abrege de I'PIistoire du Theatre Franˆ-ais, tome quatrierae, 1783, in continuation of a work by Mouhy ; and Annales du Theatre Italien, 1788, 3 vols. 8vo.

Origny (Peter Adam d'), was also a native of Rheims, and died there September 9th, 1774. In the early part of his life he became a captam of grenadiers ; but having been disabled by a wound at the attack of the lines of Weissem- bourg, he retired from the service with a pension. He was the author of L'Egypte Ancienne, ou Memoires Historiques et Critiques sur les Objets les plus Importans du Grand Empire des Egyptiens, 1762, 2 vols. 12mo. ; and another on Egyptian Chronology : at the time of his death he was occupied in more extended researches relating to this subject.

ORIHUELA, a large well-buiVfc town of Spain, near the north-east of the province, and in the Huerta, or plain of Aiurcia, on both sides of the Segula. It is situated at the foot of a mountain, at the entrance of a beautiful country, but the town is narrow, though of considerable length. Its streets are in general airy and straight but, instead of pavement, they are covered with sand, which is removed from time to time. Some of the widest only have a raised pavement on each side. The town contains five small squares, but the houses here are indifferent. There are two bridges over the river, the water of wliich is used for culinary purposes. The public edifices have nothing to attract attention ; except that the grating of the high altar of the cathedral is con- sidered a master piece. An episcopal see was founded here in the fifteenth century ; ar.d the town contains, besides the cathedral, four churches, nine monasteries, three convents, a poor house, and hospitals for the sick, and for orphans. There is also a small university, and two foundation schools. The manufactures .car- ried on here ††† namely, silk spinnintr, distilling of brandy, and some saltpetre works ††† are all on a small scale. The employment of the majority of the inhabitants, about 20,000, is derived from the cultivation of the neighbouring country, which resembles a succession of fruit gardens of various kinds, such as orange, lemon, almonl

pomegranate, and mulberry trees. Tlie corn fields are also so productive that it has become a proverb in Spain, ' rain or no rain, there is always corn at Orihuela.' This city was in the posses- sion of the Moors 550 years; in 1264 they lost it to the Arragonese ; it was laid waste by the plague in 1648 ; and in 1651 a great part of it was destroyed by an extraordinary rise of tha river. In 1706 it was taken by Belluga, the bishop of Murcia, who gave it up to pillage. It was the Orcelis of the Romans, the Orzuela of the Goths ; the Orguella of the

Moors ; whenca the Orihuela of modern Spaniards. Twelve miles north-east of Murcia.

ORILLON, in fortification, is a small round- ing of earth, faced with a wall ; raised on the .shoulder of those bastions that have casemates, to cover the cannon in the retired flank, and prevent their being dismounted by the enemy. See Fortification.

ORINOCO, an immense river of South America, the source of which has never been perfectly ascertained. Humboldt wishing to pe- netrate in 1800 was prevented by a nation of warlike savages. He was obliged, therefore, to trust to the natives for all his information on this point. According to La Cruz, it rises in a small lake called Ipava, in 55►► N. lat., and turning round thence enters the lake of Parima to the south-east, whence it issues by two outlets, and afterwards turning holds a circular northerly course, when, being joined by the numerous large streams from the eastern Andes, it is swelled to an immense size. Here a junction is formed between this river and its great rival the Ama- zons, by means of the Rio Negro and Cassiqui- ari. This was first ascertained by M. Humboldt, who entered the Orinoco by the Cassiquiari, in 3►► 30′ N. lat., and mounted the current of the great river as far as Esmeraldas, the last Spanish settlement in that quarter. The whole country for 300 miles was a complete desert, in which the ants and mosquitoes were so trx)ublesome as almost to deter him from proceeding. On its southern or left bank this river receives the Ma- quiritari, the Cunucunuma, Ventuari, Caura, Aruy, and Caroni ; and from its northern, or rather its western or right bank, it receives sti.ll more important accessions from the Cassiquiari, Guariari, the Meta, and tlie Apure, with theii tributary streams which often equal the main river. After being enlarged with these vast ad- ditions to its stream, it turns eastward, and pur- sues its course to the ocean.

Including the windings its length is estimated at 1380 miles ; at 200 leagues from the sea it has a breadth of from 2500 to 3000 fathoms, without the interruption of a single isle : its breadth be- fore St. Thomas's is 3850 fathoms, and its depth at the same place in March, when its waters are at the lowest, has been found to be sixty-five fathoms.

The Delta of the Orinoco commences about 100 miles from the coast ; and, like all the other rivers which roll a vast body of water over a fiat country, it makes its way into the ocean by au innumerable variety of channels. The inunda- tion during the highest flood is calculated to ex- tend on each side from eighty to ninety miles.

It is computed that the river has fifty outlets into the ocean, only seven of which are navigable, and these not for vessels of any great burden. The Guayanos Indians, although born on the islands, and accustomed to the intricacies of the different channels, yet frequently lose themselves here, and are obliged to allow the current to carry them out to sea, and then to re-enter, after the most minute observations to ascertain the proper passage. It eren requires great skill to find the current. The grand mouth is formed by Cape Barima to S. S. E. which is in 8►► 54′ N. lat., and the island of Cangrejos, twenty-five miles off, lying W.N.W. of the cape: the breadth of the navigable part of this passage is not quite three. The depth of water on the bar, which lies a little farther out to sea than the cape, is ai ebb seventeen feet. On passing the bar, the depth on the side of the island is four or six fathoms, whilst on the side of the cape it is not more than one fathom and a hilf. The flats ex- tend from Cangrejos seven leagues into the sea, but from Cape Barima not more than two leagues.

The banks of the Orinoco are described as magnificent. Forests filled with aromatic trees extend on every side ; birds of all varieties of song and plumage are every where observed, and hordes of monkeys. In other places enormous plains extend their verdure further than the eye can reach, and the cataracts of the Orinoco give their name to the whole Cordillera ; but no good description of these falls has yet been given. They are situated at Maypura and Atures, two villages in about 6►► N. lat. The liver through- out abounds with fish and amph’bious animals ; among which the alligator is conspicuous. The annual swell of the Orinoco commences in April and ends in August. All the month of Septem- ber it remains with the vast body of water which it has acquired the five preceding months : about 1300 miles from the ocean the rise is thirteen fathoms. In February it is at its lowest ebb. The mouth of the great estuary is in long. 59►► 50′ W., and lat. 8►► 30′ N.

ORIOLE or Oriolus, in ornithology, a genus belonging to the order of picae. The bill in this genus is straight, conic, very sharp pointed ; edges cultrated, inclining inwards ; mandibles of equal length. Nostrils small, placed at the base of the bill, and partly covered ; tongue divided at the end : toes, three forward, one backward ; the middle

joined near the base to the utmost one. These birds, mostly inhabitants of America, are a noisy, gregarious, frugivorous, granivorous, and voracious race, very numerous, and often build- ing pensile nests. The several species, which are very numerous (for Latham enumerates and de- scribes forty-five), are chiefly distinguished by their color.

O. acuta Cauda, the sharp-tailed oriole, is about the size of a lark: the bill is dusky; the crown is brown and cinereous : the cheeks are brown, bounded above and below with deep dull yellow. The throat is white ; the breast, sides, thighs, and vent, are a dull pale yellow, spotted with brown ; the belly is white ; the back is varied with ash-color, black, and white; the wing-coverts are dusky, with ferruginous edges. The quills are also

dusky ; the tail consists of narrow sharp-pointed feathers, of a dusky color, tinged with olive, and obscurely barred; and the legs are pale brown,

O. Baltimorus, of Linnaeus, the Baltimore bird of Catesby and Latham, le Baltimore of Buffon, and the Baltimore oriole of Pennant, is an inhabitant of North America ; which it quits before winter, and probably retires to INIexico, the xochitoU of Fernandez seeming to be of the same species. The head, throat, neck, and upper part of the back of the male, are black ; the less coverts of the wings orange ; the greater black, tipt with white ; the breast, belly, lower part of the back, and coverts of the tail, of a bright orange ; the primaries dusky, edged with white ; the two middle feathers of the tail black ; the lowet part of the same color, the remaining part orange ; and the legs black. The head and back of the female are orange, edged with pale brown ; the coverts of the wings of the same color, marked with a single bar of white ; the under side of the body and coverts of the tail yellow ; the tail dusky, edged with yellow. The length both of the male and female is seven inches. This spe- cies suspend their nests to the horizontal forks of the tulip and poplar trees, formed of the fild- ments of some tough plants curiously woven, mixed with wool, and lined with hairs. The nest is of a pear shape, open at top, with a hole on the side through which the young discharge their excrements, and are fed. In some parts oi North America, this species, from its brilliant color, is called the fiery hang-nest. It is named the Baltimore bird from its colors resembling those in the arms of lord Baltimore, whose family were proprietors of Maryland. There are several other species of orioles, all inhabitants of North America. These, according to J\Ir. Pennant, are the white-backed, the bastard, the black, the brown-headed, the rusty, the white-headed, the Hudsonian white-headed, the

olive, the yellow- throated, the Unalaschka, and the red-wing. This last species, in America, is named the red-winged starling, and the swamp black-bird. Although they appear at New York only from April to October, they probably continue through the whole year in the southern parts. They are seen at times in such prodigious flocks as even to obscure the sky. They were esteemed the pest of the colonies, making most dreadful havock among the maize and other grain, both when new sown and when ripe. They are very bold, and not to be terrified by a gun ; for, after the sports- man makes slaughter in a flock, the remainder will take ashort flight, and settle again in tlie same field. The farmers sometimes attempt their de- struction, by steeping the maize, before they sow it, ia a decoction of white hellebore. Tliis potion is particularly aimed at the purple jack- daws, which consort in myriads with this spe- cies. But these seemingly destructive birds are not formed in vain. Notwithstanding they cause such havock among the grain, they make ample recompense, by clearing the ground of the noxious worms with which it abounds ; particularly the bnichus pisi, or peas beetle. There is another va- riety of this species, called the bastard Baltimore : its size is nearly that of the true Baltimore, but it measures somewhat less in length : the bill is

)ead-colored ; the forehead and cheeks black mixed with yellow : the hind head and nape are olive gray, marked with a few spots of black ; the upper part of the back is the same, but somewhat dullei ; the lower part of the back, the rump, fore part of the neck, breast, belly, sides, thighs, upper and lower tail-coverts, and under the wings, are orange-yellow, but brightest on the breast and tail-coverts ; the less wing-coverts are deep brown ; the greater are the same, tipped with dirty yellowish white : the quills are brown, bordered on both edges with white ; the two middle tail feathers are olive, then blackish, marked at the end with a longitudinal yellowish spot ; the next on each side are olive and black, confusedly mixed ; and the four outer ones are of a yellowish olive : the legs and claws are bluish. They inhabit North America. There seems to be great confusion and uncertainty as to the true and bastard Baltimores and their fe- males ; perhaps they are only varieties of one species refernble to one or other sex of the true Baltimore, in the different stages of growth.

ORION, in astronomy, one of the constellations of the southern

hemisphere. The ancients placed it near the feet of the bull. It was composed of seventeen stars in the form of a man holding a sword ; for which reason the poets often speak of Orion's sword. As the constellation of Orion, which rises about the ninth day of March, and sets about the 21st of June, is generally supposed to be accompanied at its rising with great rains and storms, it has the epithet of aquosus given it by \irgil. The name is formed from the Greek apeiv, to produce water : the ancients supposing that it occasioned floods at its rising and setting. See Astronomy.

Orion, in mythology, was the son of Jupiter, Neptune, and Mercury. For, as these gods were visiting the earth, they entered the house of Ilyrieus, a native of Tanagra, in Boeotia, as be- nighted travellers, he being famed for hospitality to strangers. Hyrieus treated them generously, and even killed an ox, the only one he had, for their entertainment. This liberality so pleased the gods that they bid him request any favor he would at their hands, and he should receive it. Hyrieus answered that having no children these were what he chiefly desired, and soon after says llyginus, ' Mercurius de tauro quem Hyrieus immolaret, corium pertulit. Illi (i. e. Jupiter, Neptune, and Mercury) in eum urinam fecerunt et in terram obruerant unde natus est. Ourion afterwards, to obliterate the memory of his birth, changed the first letter of his name and called himself Orion. Soon afterwards he became con- spicuous ; and Diana took him among her at- tendants, and became deeply enamored of him. His gigantic stature, however, displeased O-mo- pion king of Chios, whose daughter Hero or Merope he requested in marriage. The king, not willing to deny him openly, promised to make him his son-in-law as soon as he delivered his island from wild beasts. This task, which ffinopion supposed to be impracticable, was soon performed by Orion, who demanded his reward. Qinopian, on pretence of complying, intoxicated his illustrious guest, and put out his eves on the sea-shore, where he had laid himself

down to sleep. Orion found nimself blind when he awoke. He went, directed by the sound, to a neighbouring forge, where he placed one of the w orkmen on his back, and by his directions went to a place where the rising sun was seen with the greatest advantage. Here he turned his face to- wards the luminary, recovered his eye-sight, and hastened to punish the perfidious cruelty of Qinopion. Orion was an excellent workman in iron, and fabricated a subterraneous palace for ˆ ulcan. Aurora, whom 'enus had inspired with love, carried him away into the island of Delos, that she might enjoy his company ; but Diana, who was jealous of this, killed him with her arrows. Some say, that Orion had provoked Diana's resentment, by oflering violence to Opis, one of her female attendants ; or, as others say, because he had

attempted the virtue of the god- dess herself. Perhaps the fable denotes that Orion was an astronomer, who lost his sight, and at last his life by studying the moon and stars in cold nights. According to Ovid, Orion died of the bite of a scorpion, which Terra produced to punish his vanity, in boasting that no animal on earth could conquer him. Some say that Orion was son of Neptune and Euryale, and that he received from his fatner the privilege and power of walking over the sea without wetting his feet. Others assert that he was a son of Terra, like the rest of the giants. He had married a nymph called Sina, before his connexion w ith the family of Qinopion ; but Sida was the cause of her own death, by boasting herself fairer than Juno. Diodorus says that Orion was a celebrated hunter, superior to the rest of mankind, by his strength and uncommon stature. He built the port of Zancle, and fortified the coast of Sicily against the inundations of the sea, by heaping a mountain of earth called Pelorum, on which he built a temple to the gods of the sea. After death Orion was placed in heaven, and changed into a constellation. Orion was buried in the island of Delos; and the monument which the people of Tanagra in BcBOtia showed, as containing his re- mains, was a Cenotaph. The daughters of Orion distinguished themselves as much as their father ; and, when the oracle had declared that Boeotia should not be delivered from a dreadful pesti- lence before two of Jupiter's children were im- molated on the altars, they voluntarily sacrificed themselves for the good of the country. Their names were Menippe and Merioche. They had been carefully educated by Diana ; and Yen-. is and Minerva had made them rich and valuable presents. The infernal deities were struck at the patriotism of these two females; and instantly two stars arose from the earth, which still smoked with their blood, and were placed in the heavens in the form of a crown. According to Ovid, their bodies were burned by the Thebans, and from their ashes arose two persons, whom the gods soon after changed into constellations.

ORISSA, or Uddessa, an important pro- vince of the Deccan, Hindostan, extending from 16►► to 23►► of N. lat. To the north il is bounded by Bengal ; to the south by the Gc da- very ; on the east it has the Bay of Bengal ; and on the west the province of Gundwana. In length, from north-east to south-west, it may le

estimated at 530 miles, by ninety the average breadth.

In 1592 Orissawas divided into five districts, viz. Jellasir, comprising

Midnapoor, and the Bri- tish possessions lying north and east of the river Subunreeka; 2. Buddruck (now C attack) ; 3. Cuttack ; 4. Kulling, or Cicacole; 5. Itajamun- dry. Besides this territory on the sea-coast, Orissa also comprehended an unproductive re- gion on the western frontier, making part of the Jeharcund, or Jungly country, with the districts ###of Ruttenpoor and SumhuUpoor : but the two latter properly belong to Gundwana. The modern subdivisions of this province are, Cica- cole, Rajamundry, Cuttack, Mohurbunge, Mid- napoor, and Konjeur. The interior of the pro- vince still remains in a savage state, being com- posed of rugged hills and uninhabited jungles, surrounded by deserts and forests, pervaded by a pestilential atmosphere. It forms a strong natural barrier to the maritime districts, being only tra- versed during the driest season from February to May by the Lumballies, or inland carriers ; and there are only two passes properly explored, in the whole length of the great ridge, extending from the Godavery to the Mahanuddy : the one direct from Chandah to Cicacole ; the other ob- lique from Choteesghur by the wayof Kalahindi ; both uniting at the pass of Saloor, or Saureacca. By this pass, during the French possession of the northern Circars in 1754, a body of Mah- rattas were introduced ; more than half of whom perished from the noxious air of the hills. The chief rivers are the Godavery, the Mahanuddy, the Byturnee, and the Subunreeka, besides innume- rable mountain streams. Although, as compared with Bengal, Orissa may be generally described as a barren province, yet the maritime part equals in fertility any territory in the Carnatic ; and the district of Midnapoor is exceelled by few in Bengal. The country between the Gaintee and Bamoni is one of the finest parts of the province, and is inhabited by a considerable number of weavers of coarse muslins for turbans, &c. The best bamboos used for palanquins come from the purgunnahs of Tolchan and Hindole.

In the back parts of tliis province, beyond the British dominion, the native Ooreas are a fierce people, commonly armed with bows and arrows, or swords ; the latter being generally carried naked. They are broad at the end, but narrow in the middle. These people have a rooted an- tipathy to the Mahrattas. The language of this province, and the character in which it is written, are both called Ooreeah. This was formerly an independent Hindoo kingdom, governed by a dynasty of princes of the race of Gujaputty, who, in 1592, were conquered by i \Iansingh, the em- peror Acber's viceroy in Bengal, to which do- minion it was then annexed. It then measured along the sea coast nearly 600 miles, by forty the medium breadth, stretching to the hills west- ward, and contained the nation of the Ooreas, a distinct race of Hindoos, differing in language, manners, and some peculiarities of

religion, from the other Brahminical sects of Ilindostan. From the accounts of ancient European travellers, frag- ments of national history, and a few remnants of former splendor, it was probably a flourishing

country before the Mahommedan invasion ; but soon after fell into a state of comparative de- pression. It does not appear, however, that the iVIahommedans ever completely occupied or co- lonised this province, which still remains one of those in which the Hindoo manners are preserved in their greatest purity. The temple of Jugger nauth is famous for its antiquity, sanctity, and the great annual resort of pilgrims. After the expulsion of the Afghauns from Bengal, during the reign of t-he emperor Acber, they retreated into Orissa, and retained possession of the mari- time and more fertile portions of it, and also of the Juggernauth temple for many years.

No province of India exhibits a greater differ- ence, with respect to the proportion of inhabit- ants. Midnapoor, which comprehends less than 7000 square miles, has been found, by enumera- tion, to contain a million and a half of souls ; yet it is probable the population of the whole province does not exceed four millions and a half. Three-fourths of this extensive territory are possessed by the British, the remainder by various petty native chiefs in a state of perpetual hostility with each other.

ORISON, n. s. Fr. oraison. See Oraison A prayer; oral supplication.

The ORKNEY Islands, the Orcadesofthe Ro- mans, are separated from the north-east extremity of Scotland by the Pentland Frith, which is be- tween ten and eleven miles broad. They are about thirty in number ; but many are uninha- bited, being small, and producing only sheep pasture. The principal inhabited islands are Pomona or Mainland, Hoy, North Ronaldshay, South Ronaldshay, Sanday, Stronsay, Eday, Westray, Shapinshay, Eglishay, Grremsay, Rou- say, Weir, Enhallow, Papa Westray, Papa Stronsay, Burray, &c. The small uninhabited islands are often denominated holms ; and the sharp and rugged rocks, overflowed at high wa- ter, and with scarcely any soil on them for the production of vegetables, are called skerries. The forms of the islands are very irregular, and their dimensions very different, some not exceed- ing a mile in length; whereas the Mainland ex- tends to nearly twenty-five. They are disjoined from one another by sounds or friths, from one to five miles broad, having exceedingly rapid and dangerous currents ; the whole extending from the south-west to north-east, the distance not less than seventy miles, and upwards of forty m breadth. The east and north coasts are in gene- ral

low; the western more elevated, terminating in bold and steep cliffs. From similar appear- ances on the opposite coasts, many have con- cluded that they were formerly joined to the mainland of Great Britain. Near the small is land Swinna are two great whirlpools, called the wells of Swinna, which are particularly danger- ous in a calm.

Mainland or Pomona, the grand island of the archipelago, and occupying its centre, is eight leagues long and one to three broad, but so deep- ly indented by bays that these dimensions give no accurate idea of its surface. Though very hilly, it has a considerable portion of fertile land, and on it are the two towns of the islands, Kirk- wall and Strom :.ess : the former is the chief place

and is on a bay of the north coast, forming a good haven ; itconsists of about 300 neat houses, inhabited by the chief persons of the island, be- sides shop-keepers and tradesmen. Here is a vast cathedral dedicated to St. Magnus, and the ruins of the bishop's palace. Stromness, on the west side of the island, has recently risen from a poor hamlet to a thriving town, and almost vies with Kirkwall ; its haven is entered by 200 to 300 vessels a year, caught in foul winds in the Pentland Frith.

The following are the inhabited islands soutli of Mainland. 1. South Ronaldsay, two leagues long and one broad, 1600 inhabitants, is one of the most fertile, and has a good harbour on the north. 2. Burray, separated from the preceding island by a strait two miles broad, is only five or six miles in circuit, but produces potatoes, car- rots, and other garden vegetables, in greater per- fection than the other islands. 3. Hoy, the highest land of the islands, is three leagues lonˆ and two broad, but at high water is nearly divided into two islands. On the north is a hdl 1600 yards high called the Warth or Ward of Hoy, and at its foot in a dark glen is the greatest curiosity of the island, a hermitage cut out of a solid block of freestone, thirty-eight feet long, eighteen broad, and nine thick, and which seems to have tumbled from the hill. This island chiefly pastures sheep; its population is 1400; it has three good har- bours, of which that named Longhope is much frequented by vessels for shelter. West of Hoy is a stupendous rock called the Old Man of Hoy, 1300 feet high, and resembling the ruins of an immense building. 4. Flotay, noted for its good road for ships, named Panhope, and also for its abundance of moor game. It has 200 in- habitants.

The smaller islands south of Mainland are Gnem- say, one mile and a half from Stromness, three miles in circuit. It is in great part composed of schistus, and has 180 inhabitants. Teray pas- tures some sheep. Sinthay and Lamau ; Cavay has only three families, and Lamholm, only one.

The islands north of Mainland areShapiushay, tolerably fertile, has 750 inhabitants ; Stronsay, two leagues long and one broad, has two good harbours, 900 inhabitants. Papa Stronsay is a little pleasant island off the north end of Stronsay. Eday, five miles long and two broad, abounds in peat which it supplies to the other islands; great numbers of lobsters are taken round it : population 600. It has two good harbours. Sanday, four leagues long and one broad, is one of the most populous and the richest of the archipe- lago, making 300 tons of kelp a year ; it has two good harbours. Westray, two leagues long and one broad, has abundance of pastures and peat ; 1400 inhabitants. Papa Westray, north-east of the preceding, is a pleasant island with a little lake of fresh water ; on it are the ruins of two buildings, supposed to have been druidical tem- ples. It has 200 inhabitants.

Faray is one of the most level of the islands, and is clothed with grass. Eagleshay, two miles long, was accounted so much superior to the other islands, that it was the residence of the bi- shops and earls of Orkney ; it is also noted for the murder of St. Magnus; it has 200 inhabitants.

Koussay, two leagues long and one broad, is one of the most rugged of the islands ; it has 700 inhabitants. North Ronaldsay, three miles long and one broad, is one of the most level islands ; it has 420 inhabitants. Weir, 150 inhabitants; Enhallon ; Gairsay, a conical hill, fifty inhabi- tants ; Domsay, a fine little island a mile in cir- cuit, before the bay of Kirkwall, has but one family.

Copihshay, east of Mainland, is a noted mark for seamen ; it has but two or three families.

Fair Island lies between the Orkneys and Zet- land, and has a little haven.

The commerce of the Orkney Islands consists in the export of beef, pork, tallow, hides, linen, yarn, coarse linen, feathers, and especially kelp, to the amount of 2300 tons. The imports be- sides luxuries are coals. The following is a statement of the trade in several years :

The plan of husbandry is to till very shal- low, and to harrow sparingly, as the farmer relies more on the quantity of manure for raising a good crop. The manure is almost solely the sea-weed drifted ashore. Fallowing is rarely used, aiid a proper rotation of crops never fol- lowed. Black oats are sown in the end of INIarch, or the beginning of April ; and bigg or bear from the 1st to the 20th of May. The sum- mer is chiefly employed in preparing turf and peat for fuel. The crop is reaped from the 20th of August to the end of September ; if it should remain after that time it is lost, in the violent gales and storms which generally succeed. There is scarcely a tree or shrub to be seen ; and, although several experiments have been tried to raise trees, they have failed ; but the hills are

well clothed with heath, and the valleys are va- ††† riegated with a profusion of beautiful herbs. The whole district is well supplied with lakes and rivulets, which yield delicious trout and salmon; turn mills, &c.

Rain falls in considerable quantity through the islands. Snow generally comes from the north-west and south-east. About the middle of June, a cold wind, accompanied with snow and hail showers, often blows from the north about two or three weeks, and checks the pro- gress of vegetation. When this is past the wind changes, and warm showers succeed. Thunder and lightning are most common in winter. The aurora borealis is more frequent and more splen- did in this than in most otlier regions. In sum- mer the inhabitants can distinctly see to read at midnight; but in December and .fanuary the days are, on the other hand, proportionably short. During this season very little work is done ; and it is then that the neighbouring farmers en- joy their convivial pleasures. On the coast, the small farmers employ themselves in fishing dur- ing the winter months, and in the summer in the making of kelp.

The land animals are small horses, cattle, sheep, swine, and rabbits. Of these the sheep are the most numerous, there being upwards of 50,000 in the islands, and, within the last twenty years, a far greater degree of attention has been paid than formerly to the breeding them. The domes- ticated fowls are as common here as in other parts of Scotland, and the heaths abound with snipes, red grouse, and plovers. The other wild fowl are large eagles of various kinds ; wild geese and ducks in great variety, herons, hawks, gulls, solan geese or gannets,

swans, &c. The eagles make much havock among the lambs, so that, by law, he that kills an eagle is entitled to a hen from every house in the parish where it was killed. The half-tide rocks swarm with seals ; sea otters are very common ; the friths are occasionally visited by whales, and by great herds of grampuses. Cod, ling, haddock, and flat-fish are abundant in the surrounding seas. Coal-fish, under the names of sillocks, cooths, and sethes, form much of the food of the people. Shoals of herrings used formerly to frequent the bays ; but they have d.sappeared for some years. On the shores are found a variety of sponges, corals, and corallines ; large oysters, mussels, cockles, &c. Ambergris and spermaceti are sometimes thrown ashore ; but the greatest curi- osity which the sea brings to these islands are the large Molucca or Orkney beans, all of American or West Indian origin, being conveyed across the Atlantic by the gulf-stream. The seeds of the mimosa scandens are the most common.

The coarse woollen manufacture of cloth, stock- ings, and blankets, has of late been less attended to than formerly ; and, instead of it, that of linen yarn and linen cloth was introduced about the year 1747, and is in a flourishing state; but kelp is still the staple commodity.

It has been asserted that the Orkneys, as well as the hills of Shetland, were originally peopled from Norway, in the ninth, tenth, or eleventh century. Others imagine that the Picts were the original inhabitants, and call Orkney the an-

cient kingdom of the Picts. Certain singular houses, now overgrown with earth, are called Picts Houses; and the Pentland frith (formerly Pightland, or Pictland) evidently retains their name. Claudian's line, cited by Camden, proves that the Picts, with some other German colony, particularly the Saxons, were then in possession of these isles ; and so Ninnius expressly says. Many of the inhabitants used, until of late years, the Norse language, which differs but little from the Teutonic. The English language, with a Norwegian accent, is now that of these islands ; but the appearance of the people, in their man- ners and genius, evidently show their northern origin.

The best and in all probability the most au- thentic account we have of this early part of the history of the Orkneys is fromTorsaeus. Accord- ing to this writer, during the reign of Gregory tlie Great, when by his policy the Picts were driven from other parts of Scotland, they came to the Orcades, but did not meet with a favorable reception, for many of them migrated to Shetland, and thence to Norway. These islands were at various times harassed and plundered by adventurers from Scandinavia ; and the Nor- wegian princes often laid the

inhabitants under tribute. The Christian religion was transported to the Orkneys from Norway, in the beginning of the eleventh century, when Sigurdis possessed the entire dominion of these isles. About this time he married a daughter of Malcolm III., by whom he had a son named Torphinus, who suc- ceeded him. He defeated Ronald, a grandson of Sigurdis, who had lived in Norway, and who was esteemed the rightful heir to the earldom of Orkney, after he had made a successful descent. He established salutary laws, and encouraged the arts of industry. Torphinus built a sumptuous church in Byrsa, where the first bishops of Ork- ney resided, and to which he retired in the de- cline of his life, and was interred in it, on his death at an advanced age. He left two sons, Paul and Erland, who amicably shared in the government of their father's extensive domain. During this period the northern counties are said to have arrived at a very superior degree of cultivation and improvement, which became equally conspi- cuous in the richness of their lands and in the mildness of their disposition. Their sons, how- ever, did not both inherit their father's virtues. Magnus, the son of Erland, was pious and peaceable : a great promoter of religion, and anxious in patronising the establishment of Christianity : but Hacon, the heir of Paul, was vehement, wild, and impatient of restraint. He saw how Magnus was revered, envy drove him to revenge, and having, by the most deliberate villany, got Magnus into his power, he murdered him. The latter part of his life was spent in penitence, and in improving his dominions Magnus's singular piety, and his unfortunate death, were so well represented at Rome that he was canonised. Harquin had two sons, Paul the Silent, and Harold the Orator. Harold suc- ceeded in Caithness, and the Orkneys were go- verned by Paul. Ronald, a descendant of St. Magnus, an elegant and accomplished youth, ap- peared at the court of Norway, and was supported

in his claim upon the Orkneys, as the heir of the canonised martyr. He sent messengers to Paul and offered to share the government with him; but this proposal was refused. By a very artful mancBuvre, however, Ronald obtained his pur- pose, and shared his sovereignty with Harold, the heir of Paul. They lived amicably together till Ronald was at last assassinated by a proud chieftain; and Harold possessed the unrivalled sovereignty of the north for a lonˆ period.

In 1196 he was able to bring 7000 men to the field, and a body of cavalry, against the army of William, king of Scotland, but was

defeated. In 1197 the Caithnessians rebelled, headed by one Roderic, and Torphinus, son of Harold. The king met and defeated them near Inverness. Roderick was slain: and William, seizing on Harold in the extremity of Caithness, detained him till Torphinus surrendered himself as an hostage ; but, on some new treasons of the father, the king caused the eyes of the unhappy youth to be put out ; and had him emasculated, of which he soon died in prison. Harold died in the seventy-third year of his age ; and with him ended the independent sovereignty of the north of Scotland. Ttie Norwegians seem to have been in possession of these isles as late as 1266; for then Magnus IV., king of Norway, being worsted in war with the Scots, yielded them to Alexander III., king of Scotland, by treaty, and Haquin, king of Norway, confirmed the possession of them to king Robert Bruce in 1312. Lastly, in 1464, Christian I., king of Norway and JJen- mark, when he gave his daughter in marriage to James III., king of Scotland, transferred all his right to them, to his son-in-law, and his succes- sors; to make which more binding, the pope's confirmation was obtained. Magnus sold them to Alexander for 4000 merks sterling, and a yearly acknowledgment of 100 merks. The Danes, however, had pretensions to the Orkneys, which were not totally abandoned, until James VI. marrying Anne, daughter of the king of Denmark, the possession was finally recognised in favor of the Scottish king. Queen jNIary ad- vanced James Hepburn, earl of Bothwell, to the dignity of duke of Orkney, which became extinct on his death, when king James VI. created a natural son of James V. earl of Orkney ; which failing in his son, it returned to the crown. The title of earl was revived in the family of Hamil- ton in 1696, and in that family it remains.

The Orkney and Shetland isles compose one stewartry, and send one member to the imperial parliament. The Shetland freeholders, however, neglect their franchise, which is exercised solely by those of Orkney. The right of superiority to the Orkneys was dismembered from the crown by the union parliament, and granted, for a cer- tain yearly consideration, to the earl of Morton, who was by queen Anne appointed hereditary steward and justiciary. Upon the abolition of hereditary jurisdictions the appointment of the steward Ijecame vested in the crown ; but as the earl of Morton possessed the patronage of the stewartry, that nobleman long possessed the office of steward and sheriff. Sir Thomas Dundas, now created lord Dundas, acquired many years ago the superiority of the islands, from the earl of

Morton, by purchase, and still possesses it, with the rigirt of patronage to all the parishes of the stewartry except two. Some of the islands con- tain ores of lead and iron, near Slromness and in Hoy. Limestone is common in tliem. They are divided into eighteen parochial districts.

ORLEANS, Genabum, a large, handsome, and very ancient post town and city, the princi- pal place of the department of the Loiret, 1′ ranee, ha\ing a royal court for that department, and those of the Loir-et-Cher, and the Indre-et- Loire; an inferior court of judicature; a chamber of commerce ; an exchange ; an academy ; a so- ciety of sciences, Belles Lettres, and the arts; a royal college ; and a free-school, for drawing and architecture. Its population is 43,000. It is situated in a fine fertile plain, on the rigiit bank of the Loire, over which there is a magnificent bridge built of freestone. It is generally well built ; the streets are wide, clean, and airy ; its public squares are large, and its walks very pleasant. It is surrounded by numerous coun- try houses, and extensive suburbs, which be- speak the opulence of a great city. Placed almost in the centre of France, at the branching out of the great roads that lead to every part of the kingdom, on the banks of a river which af- fords a facility for the conveyance of the produc- tions and manufactures of all the departments, this place is the mart of a considerable quantity of mer- chandise, and the centre of a flourishing trade.

The origin of Orleans is to be traced to a very distant period. It is said to have been built on the ruins of the ancient Genabum, which was taken and burned by Caesar; it was one of the principal cities of Gaul under the Roman power. In the year 450 it sustained a memorable siege by Attila, king of the Huns, and owed its safety to its general Actius, who obliged these barba- rians to retire, and defeated them on the plains of Champagne. On the fall of the Roman em- pire it came into the possession of the I'rancs, and under the successor of Clovis was the ca- pital of that kingdom. It was re-united to the crown in the reign of Hugh Capet. In 1428 the English laid siege to it, and were compelled to renounce their enterprise by the heroic valor of Joan of Arc and Dunois. Sixteen councils have been held here.

There are manufactures here of caps for the Levant, hats, woollen counterpanes, shot, files, rasps, curry-combs, candle-sticks, chemicals, paste, pipes, square tiles, earthen and brass pots, &c. ; also cotton and woollen spinning factories, numerous and fine sugar-refining houses, vinegar breweries, wax bleaching-houses, dye-houses, brass-foundries, tan-yards, and manufactories of white and chamois leather. A considerable trade is carried on in wine, vinegar, brandy, flour, corn, sugar, saffron, timber, coals, grocery, drugs, and the above-mentioned articles. This is the native place of Amelot de la Houssaye, the celebrated commentator, and Pothier, a fa- mous lawyer. Here are a public library, con- taining 23,000 volumes ; the bridge over the Loire, commenced in 1751, and remarkable for its extent and its lightness, the middle arch being 100 feet broad; the monument erected to the

memory of Joan of Arc, in the Place Mar-

Iroy; the cathedral, one of the finest in 1″ ranee, begun in the reign of Henry IV., and stil\ unfi- nished : the entrance, surmounted by two round towers, is very beautiful. Orleans is eighty-four miles south-west of Melun ; eisfhty-one N. N. VV. ofBourges ; forty-two north-east of Blois ; eighty- seven north-east of Tours, and eighty-eight south of Paris ; in W. long, from that capital 1►► 26′ N., lat. 47►► 54’.

Orleans, New, city, port of entry, and capi- tal of Louisiana, in a parish and on an island of the same name ; 105 miles by the course of the river, above the bar at the mouth of the INIissis- sippi, and about ninety in a direct line. It is distant from Washington about 1260 miles. Long. 90►► 8′ W., lat. 29►► 57′ N. Population of the city, in 1810, 17,242, of whom 5,961 were slaves, and of the parish 24,552. The popula- tion of the city in 1802 was estimated at 10,000 or 11,000 ; and in 1818 at 36,000. The city is on the left bank of the Mississippi, but so situated on a bend that it faces to the east. It is regularly laid out ; the streets are generally forty feet wide, and intersect each other at right angles. On the streets near the river the houses are principally of brick, but in the back parts of the town they are mostly of wood. The build- ings have no cellars, except the space between the ground and the lovvcr floors, which are raised five or six feet from the earth. Most of the houses in the suburbs have beautiful gardens, ornamented with orange groves. The country here is lower than the surface of the river, which is confined within its channel by an artificial embankment, called the Levee, raised at great expense, and extending about 100 miles. It is directly in front of the town, and affords a very pleasant walk.

Tlie city contains a court-house, a jail, a mar- ket-house, an arsenal, a governor’s palace, a custom-house, a hospital, a French theatre, a ca- tholic college, a female orphan asylum, a nunnery containing thirty or forty nuns, three insurance oflices, four banks, one of whic?5 is a branch of the L^nited States’ bank, and three houses of public worship, one for Roman Catholics, one for Episcopalians, and one for Presbyterians. There also two chapels and a hall where public worship is celebrated. Most of the public buildings are large and handsome. The Catholic cathedral church is a large and elegant edifice. The Presbyterian church, just erected, is a spa- cious and handsome edifice of brick and stone.

llie buildings of the city were formerly almost entirely of wood, but those recently erected are, for the most part, handsomely built of brick ; and the place is of late, in various respects, very rapidly improving. The population is fast in- creasing by accessions from all the states in the \mion, and from almost every kingdom in Eu- rope. The French language, fifteen years ago, was here almost universal, but at present the English predominates. There are five newspa- pers published in the city, three of which are printed in English, the other two both in French and English.

New Orleans is very advantaceously situated for trade, near the mouth of one of the noblest risers in the world, whose numerous branches, Vol. XVL

extending many hundred miles in different direc tions, waft to this port the products of various climates ; and it is already become one of the greatest emporiums of commerce in America. The shipping belonging to this port, in 1816, amounted to 13,299 tons. The number of ar- rivals and clearances in a year, ending October 1st, 1815, was 623; 1816, 699; and 1817, 1,030. In the year ending October 1st, 1817, 1,500 flat-bottomed boats, and .500 barges, arrived at the city, from the upper country, bringing its productions. There are twenty steam boats now navigating the rivers Mississ' ppi and Ohio ; and several more are building.

Statement of the principal articles of domestic production which arrived at New Orleans in one year, ending October 1st, 1817 : ###

Table of productions, 1816-17.

barrels cwts.

Apples

Bacon and hams

Bagging for cotton

Bark : quercitron

Beef

Beer

Butter

Candles

Cider

Cotton

Cordage

Corn

Corn meal

Flour

Ginseng

Hemp

Do. yams

Hides

Lard

Lead

Ditto shot

Molasses

Sugar

Tafiia

Tallow

Tar

Tobacco

Ditto carrots

Ditto manufactured

Wax, bees' . .

Wheat

Whiskey

5,000 18,000

pieces . 2,500

hhds. . 800

bbls. . 4,000

do. . 300

do. and kegs 1,800

boxes . 150

bbls. . 500

bales . 65,000

coils . 4,300

bushels . 140,000

bbls. . 4.000

do. 190,000

do. . 1,200

tons .

reels . 200

sides . 6,000

bbls. and kegs 4,000

cwts. . 7,000

do. . 600

gallons . 1,000,000

iihds. . 20,000

gallons . 400,000

cwts. . 200

bbls. . 8.000

hhds. . 28,000

carrots . 10,000

cwts. . 1,500

do. . 300

bushels . 95,000

gallons . 250,000

Tlie total amount of exports from the port of New Orleans, from October 1st 1816, to Octo- ber 1st 1817, 13,501,036 dollars 72 cents.

The British made an attack on New Orleans in December, 1814, but were repulsed by the Americans under general Jackson, with the loss of about 3000 men, killed, wounded, and pri- soners. The American army lost only seven men killed and six wounded.

The ix/inni of New Orleans is formed by the river INIssissippi on one side, and the lakes Pontchartrain and Maurepas, together with an outlet of the Mississippi, called the river Iberville, on the other. It is about 160 miles long, and from three to fifty broad. It produces sugar, lemons, oranges, and figs. Lake Portchar- train communicate with the city by the Bayou

St. John, which is navigable for small vessels, which pass between New Orleans, Mobile, and Pensacola. Fort. St. John is situated at its en- trance into the lake, seven miles north of New Orleans. Fort St. Charles is situated north-east of the city.

Orleans (Louis, duke of), son of Philip, the regent of France, was born at ^^ersailles, August 4, 1703. He had for a tutor the abbe Mongault, who inspired him with an early taste for study ; which was combined, however, in the first part of his life with much dissipation. lie married in 1724 the princess of Baden, and, having the misfortune to lose her

two years after, he fell into a profound melancholy, which at length in- luced him to preclude himself from the world, tie had an apartment in the abbey of St. Gene- cieve in 1730, and resided there entirely from 1742 till his death, February 4, 1752. He wrote translations, paraphrases, and annotations on the Scriptures, and other theological works.

Orleans (Louis Joseph Philip, duke of), the celebrated Egalite, was a grandson of the fore- going, and born at St. Cloud, April 13, 1747. He was first called the duke of Chartres, and in 1769 was married to the daughter of the duke of Penthievre, the grand admiral of France. To this office the prince wished to have succeeded, but, not being able to do so, he went as a volun- teer on board the squadron of d'Orvilliers, and was present at the engagement with the English off Ushant, where he is said to have behaved with extreme cowardice. On his return home, the post of colonel-general of the hussars was be- stowed on him. Some time after he suc- ceeded the count de Clermont as chief of the French freemasons. On the death of his father, 1787, he became possessed of the hereditary es- tates, and from that period adopted various me- thods to obtain popularity, and gradually drew around him the friends of the rising revolution. His behaviour towards the king at the royal ses- sion, November 19, 1787, occasioned his exile to Villiers Coteret. Before the convocation of the States-general, attempts were made to gain him over to the court, but, becoming a member of that body, he protested against all the decrees of the chamber of nobles, and at length joined the tiers etat to form the National Assembly. He evidently at this period wished to reduce the king to a state of tutelage, and procure for himself the of- fice of lieutenant-general of the kingdom. But he soon became the passive instrument of the Jacobins, and ultimately the victim of his own and their schemes. Chosen a member of the Convention in September, 1792, the commune of Paris authorised him to adopt for himself and his descendants the appellation of Egalite, and he abandoned the name and title of his family. He voted in the Convention for the death of the king, and on the 7th of April following he was himself arrested and committed to prison at Mar- seilles ; but, being brought before the tribunal of the department, he was declared innocent of all charges of conspiracy against the government. Tlie committee of public safety, however, forbade his liberation, and after six month's detention he was transferred to Paris. At his examination on a new trial, he defended himself witli considerable

address, but was condemned to suffer bv the guillotine, and executed November 6, 1793."

OiiLEANS (Charlotte Elizabeth, duchess of) the daughter of Charles Louis of Bavaria, was born in 1632, and became in 1671 the second wife of the brother of Louis XIV., by whom she was the mother of the celebrated regent duke of Orleans. Her person was plain, but her disposition was lively, and her talents and wit made an impression on the king. She died in 1722. Her letters ad- dressed to duke Ulric of Bavaria, and the princess of Wales, tend to elucidate the history of Louis XIV., and the regency of her son. They were published at Paris in 1788, and reprinted in 1807 ; the best edition is that of M. Schubart, Paris, 1823, 8vo.

Orleans (Peter Joseph), a French Jesuit, born at Bourges in 1641. He taught the belles let- tres for some time in his society, but afterwards devoted himself to history. He wrote a History of tlie Revolutions of Spain : a History of Two Conquering Tartars, Chunchi and Camhi ; the Life of Father Coton ; and a History of the Re- volutions in England, under the Stuarts, from 1603 to 1690. He died in 1698.

ORLOFF (Gregory), a favorite of Catherine II. of Russia, first served in the artillery under the empress Elizabeth, and was aide-de-camp to general Schuvaloff, whose mistress preferring him to the general, the intrigue was discovered, and Orloff was dismissed from his post. Ca- therine, then grand duchess, saved him from being sent into Siberia. He and his brother Alexis, who is said to have strangled the emperor, had a principal share in the subsequent revo- lution. He was now made grand master of the artillery, and raised to the first offices in the state. He even aimed at sharing the throne; but the empress, it is said, would only submit to a private marriage, which he imprudently refused. His influence, in consequence, declined, and he was supplanted by a new favorite. He was then ordered to travel, gratified with magnificent pre- sents, and received the title of prince of the German empire. After an absence of five months he returned, and resided several years at Petersburgh, hoping to recover his former in- fluence. Disappointed in this, he made a tour in Germany, Italy, and France. He retired to Petersburgh in 1782, when he became deranged, and died at Moscow the following year. He had by the empress one son, named Bobrinski, edu- cated under the direction of his mother, but he showed himself unworthy of her care.

OR’LOP, 71. s. Belg. ovcrloop ; Teut. overloft. The middle deck of a ship.

A small ship of the king’s, called the Pensie, was assailed by the Lyon, a principal ship of Scotland ; wherein the Pensie so applied her shot, that the Lyon’s orcloop was broken, her sails and tackling torn ; and,

lastly, she was boarded and taken.

Hayward.

ORME (Rooert), a modern historical writer, was born in 1728, at Anjengo, in the East Indies, where his father was a physician. He was sent to be educated at Harrow, after which he obtained a civil appointment in India, and became a member of the council at Fort St George ; and commissary and accomptant-gene-

ral. In 1758 he returned to England and wrote The History of the Military Transactions of the British Nation in Indostan, 2 vols, 4to. Also a work entitled Historical Fragments of the Mogul Empire of the Mahrattas, &c., in one volume, 8vo. He died at Ealing in 1801. After his death appeared a new edition of the last work, with additions, and his life.

ORMSKHIK, in Lancashire, is a handsome town, with a good inland trade, lying about forty miles south by west of Lancaster, twelve from Liverpool, and 219 N.N.W. from London. By the inland navigation it has communication with the Mersey and its extensive windings. There is a bituminous earth about this place, from which oil is extracted that preserves raw Hesh, and serves the poor people instead of can- dles. The only remarkable monuments are those of the ancient family of the Stanleys. Near this town is Latham House, the mansion of the earl of Derby, to which belongs a large estate, and a fine park. It was gallantly defended in the civil wars by lady Charlotte, countess of Derby, who gloriously held it to the last extre- mity against the parliament's forces, till she was relieved by prince Rupert. It was, however, ruined in a second siege. The church is an ancient Gothic structure, having a square tower, and at a small distance, in the church-yard, a spire-steeple was built by two sisters of the name of Orme. Besides the church there are two chapels of ease, and other places of worship.

OllMUZ, an island in the Persian Gulf, on which was built a city, once the most splendid and celebrated in all Asia in consequence of its being then the emporium of the trade not only between India and Persia, but also between Europe and the former country, its commodities beinii- carried up the Euphrates and across the Syrian

desert. Ormuz, indeed, did not owe its greatness in any degree to natural advantages, it being a mere rock of salt, producing not a single article of provision, nor a drop of water; so tliat it became a difficult task to render it liabitable. When the Portuguese fleets had found their way round the Cape into the Indian seas, their cupidity was soon excited by the riches of Ormuz. They made several abortive attempts to seize it ; but in 1514 Albuquerque sailed thither with a force so overwhelming, that resistance was scarcely attempted. It continued thus one of the most important seats of Portu- guese power, till Shah Abbas conceived the de- sign of wresting it from their hands. His efforts, however, would probably have been fruit- less, had he not engaged the aid of an English squadron, then cruising in the Indian seas, which combined with him and took possession of the island of Kishnie, on which Ormuz mainly de- pended for supplies. They then landed and obliged the Portuguese to evacuate the town, and retire into the castle, which was at last re- duced by famine. The Persian monarch soon after ordered the inhabitants to evacuate the place, leaving only a Persian garrison. About the end of the last century, Ormuz was taken] > ossession of by the Imam of Maskat ; but, as a city and mart, it had no longer any existence, containing not more than twenty families. The

fort has now been put into a tolerable state of repair. The island, when viewed from the sea, resembles a mass of rocks and shells, thrown up by some violent convulsion of nature. The whole of the ancient city is one mass of ruins, the reservoirs for water being the only buildings that are at all in a perfect state. Long. 56►► 40′ E., lat. 27″ 8′ N.

OR’NAMENT, n. s. ˆ Fr. ornement ; Ital.

Orn’amental, arf;. Span, and Port, orno-

Ornamen’tally, a(/i/. [mefo; Lat. ornnmen-

Or’n ATE. ►►(//’. (tum,ornatus. Decora-

Or’nateness, ?z. s. I tion; embellishment;

Or’nature. J adornment; dress;

honorable attire or insignia : ornamental and or- namentally follow these senses : ornate is, decked ; decorated ; set off; fine : ornateness and ornature (rarely used), embellishment; finery.

So may the outward shows be least themselves ; Tlie world is still deceived with oi-nament.

Shakspeare.

Ivorie, wrought in ornaments to decke the cheekes of horse. Chapman.

What thing of sea or land, Female of sex it seems. That so bedecked, ornate and gay. Comes this way sailing 1 Milton's Agonistes.

Some think it most ornamental to wear their brace- lets on their wrists, others about their ancles.

Browne. The Tuscan chief to me has sent Their crown, and every regal ornament. Dryden.

If the kind be capable of more perfection, though rather in the ornamental parts of it than the essential, what rules of morality or respect have I broken, in naming the defects, that they may hereafter be amended "! Id.

The persons of different qualities, in both sexes, are indeed allowed their different ornaments ; but these are by no means costly, being rather designed as marks of distinction than to make a figure.

AdtUson.

They are abused and injured, and betrayed from their only perfection, whenever they are taught that any thing is an ornament in them that is not an orna- ment in the wisest among mankind. Law.

No circumstance of life can place a man so far be- low the notice of the world, but that his virtues or vices will render him, in some degree, an ornament or disgrace to his profession. Rogers.

Even the Heathens have esteemed this variety not only ornamental to the earth, but a proof of the wis- dom of the Creator. Woodward.

Your ornaments hung all On some patched doghole eked with ends of wall.

If no advancement or knowledge can be had from universities, the time there spent is lost ; every orna- mental part of education is better taught elsewhere. Swift on Religion.

A man vvhose great qualities want the ornament of exterior attractions is like a naked mountain with mines of gold, which will be frequented only till tlie treasure is exhausted. Johnson.

OKNli, a river in France, which rises at Au- non, near Seez, in the

department to which it gives its name, and passing by Argentau, Ecouches, Pont-d'Ouilly, Harcourt, and Caen, falls into the Manche, below Salkmelles, in the depart- ment of Calvados, after a course of ninety miles. It is navigable at high tides from Caen to its mouth, and conveys along its stream wines. Z2

brandies, salt and salt fish, iron, wood soap, flax seed, building stones, plaster, &c. In its course it receives the waters of the Noiveau, the Aize, the Odon, and several other rivers, and at one spot forms a grand cascade falling between two rocks frroni a height of more than 100 feet.

Orne, Department of the, in France, is form- ed of the Perche and the southern part of the an- cient province of Normandy, and takes its name from the river Orne, which flows through it from the east to the north-west. The chief place of this prefecture is Alencon ; it is divided into four arrondissements ; Alenˆ'on, contaming 72,115 inhabitants; "Argentau, 113,218; Dqmfront, 117,266; and Mortagne, 120,285 ; being a total population of 422,884 souls, on an area of 2790 square miles, and yielding a territorial revenue of 22,096,000 francs. It is in the fourteenth military division, having a royal court at Caen and a bishopric at Seez, and containing thirty- five cantons and 627 communes, consisting of four electoral arrondissements, which send seven members to the chamber of deputies. This de- partment is bounded on the north by that of Cal- vados, on the north-east by that of the Eure, on the east by the Eure-et-Loir ; on the south by those of the Sarthe and the Mayenne, and on the west by that of the Channel.

The surface of the country is intersected through its whole length by a chain of lofty hills, partly covered with woods ; some parts consist of uncultivated lands, and some of fertile plains producing all sorts of grain, and valleys abounding in pasturage, for the feed of great immbers of cattle and horses, which are held in high estimation for cavalry. This district is ge- nerally fertile in corn, hemp, flax, and great quantities of apples for cider. The quality of the soil and the variations of the climate are un- favorable to the cultivation of the vine. It is mostly cultivated with horses, and produces more than a sufficient supply for its inhabitants ; con- sisting of 58,960 hectares of forest (oak, beech, and birch), besides arable land, which produces on an average twenty-nine francs twenty-two centimes per hectare. Besides the articles al- ready mentioned there is abundance of small game,

such as hares, red and gray partridges, &c., good fresh-water fish, sheep, pigs, poultry, geese, and bees. There are mines of iron, black lead, and manganese, and quarries of marble, granite, and freestone, and great quantities of turf. There are hot-baths at Bagnoles, and a mineral spring at Herse ; also a royal stud at Pin, which is one of the finest in Europe, and races, at Alen- con, for twenty-one departments.

The manufactures consist of pointlace at Alen- con, iron wire, pins, sewing and knitting-needles, ironmongery, oil of vitriol, thread, tapes, laces, linen cloths for the colonies, cotton, canvas, di- mities, &c. There are also woollen and cotton spinning factories, twelve blast furnaces, thirty- six wire-forges, glass-houses, delf-potteries, pa- per-mills, bleaching grounds, tan-yards, and curriers' shops. A considerable trade is carried on in grain, trefoil-seed, timber of different kinds, cattle, pigs, poultry, goose feathers, Sec. The chief rivers that water this department are the Orne, the Sarthe, the Eure, the Mayenne, the Noireau, the Iton, the Huisnes, the Egrenne, the \ arennes, the Don, the Dive and the Rille. It is crossed by the great roads of Caen, Laval, Mans, and Chartres.

ORNICUS Lapis, a name given by some authors to the sapphire of the ancients, which is a peculiar species of our lapis lazuli, in which the gold-colored matter is not disposed in veins, but in separate spots of the form of a star. It was first called oriniscus and orinus, by corrup- tion from aurinus, golden; and thence came at length the word ornicus.

OliNITlIL'l'',, a name given by the ancients to certain winds, which usually blew in the spring, at the time when the birds of passage came over to them. Pliny says that these winds blew from the west, and that by some the Ete- sian winds were called by this name. Others suppose that they blew from the north or north- west.

ORNITHOGALUM, star of Bethlehem ; a genus of the monogynia order, and hexandria class of plants ; natural order tenth, coronariae : cor. hexapetalous, erect, persisting, and patent above the middle ; the filaments alterdilated at the base. There are forty-three species, herbaceous peren- nials, rising from six inches to three feet high, having stalks terminated with long spikes of hexapetalous, star-shaped, white, and yellow flowers. Some of these are very hardy, and will prosper in any situation, but

O. Capense, a native of the Cape of Good Hope, requires the assistance of artificial warmth to preserve it in this country. They are all easily propagated by off'-sets from the roots. The bulbous roots of all the

species are nutritious and wholesome.

ORNIS’CIPIST, M.S. > Gr. opvig, a bird,

Ornithol’ogy. S and laKOTra- One who

prognosticates by the flisrht of birds : ornithology is the science which treats of their distinctions and peculiarities. See below.

ORNITHOLOGY.

Ornithology is a branch of zoology, or the science which treats of birds, describes their form, external and internal, and teaches their economy and their uses.

A bird is an animal covered with feathers, fur- nished with a bill, having two wings, and only two legs, with the faculty, except in a very few instances, of removing itself from place to place through the air.

Sect. I. ††† External parts of Birds. A bird may be divided into the head, the body, and the limbs.

I. Head.

1. Bill (rostrum) is a hard horny substance, consisting of an upper and under part, extend- ing from the head, and answering to the mandi- l \es in quadrupeds. Its edges generally plain

and sharp, like the edge of a knife, cultrated, as are the bills of crows ; but sometimes serrated, as in the toucan ; or jagged, as in the gannet and some herons ; or pectinated, as in the duck ; or denticulated, as in the mergansers; but always destitute of real teetii immersed in sockets. The base in falcons is covered with a naked skin or cere (cera) ; in some birds with a carneous ap- pendage, as the turkey; or a callous, as the cu- rasso. In birds of prey, the bill is hooked at the end, and fit for tearing ; in crows, straight and strong for picking : in water-fowls, either long and pointed for strikmg, or slender and blunt for searching in tiie mire, or flat and broad for gobbling. Its other uses are for building nests ; feeding the young; climbing, as in parrots; or, lastly, as aa instrument of defence or offence.

2. Nusti-ils (nares), the nice instruments of discerning their food, are placed either in the middle of the upper mandible, or near the base, or at the base, as in parrots ; or behind the base, as in toucans and hornbills : but some birds, as the gannet, are destitute of nostrils. The nostrils are generally naked ; but sometimes covered with bristles reflected over them, as in crows, or hid in the feathers, as in parrots, Sec.

The fore part of the head is called the front (capistrum) ; the summit (vertex), or the crown ; the hind part, with the next joint of the neck (nucha), the nape ; the space between the bill and the eyes, which in herons, grebes, &c., is naked (lora) the straps ; the space beneath the eyes (genae) the cheeks.

3. Or6t

4. Ears. Birds are destitute of auricles or external ears, having an orifice for admission of sound ; open in all but owls, whose ears are fur- nished with valves.

5. The chin, the space between the parts of the lower mandible and the neck, is generally cover- ed with feathers ; but, in the cock and some others, has carneous appendages called wattles (palearia) ; in others is naked, and furnished witii a poucli, capable of great dilatation (saccu- lus), as in the pelican and corvorants.

6. Xeck (collum), the part that connects the head to the body, is longer in birds than in any other animals; and longer in such as have long legs than in those that have short, either for ga- thering up their meat from the ground, or strik- ing their prey in the water ; except in web-foot- ed fowls, which are, bv reversing tlieir bodies, destined to search for food at the bottom of wa- ters, as swans, and the like. Birds, especially those that have a long neck, have tiie power of retractinir, bending, or stretcliing it out, in order to cliange their centre of gravity from their legs to tiieir wings.

II. Body.

1. Consists of the buck (dorsum), which is flat, straight, and inclir.es ; terminated by tlie

2. Rump (uropygium), furnished with two

glands, secreting a fattish liquor from an orifice each has, which the birds express with their bills, to oil or anoint the discomposed parts of

their feathers. These glands are particularly large in most web-footed water-fowls ; but in the grebes, which want tails, they are smaller.

3. Breast (pectus) is ridged and very muscu- lar, defended by a forked bone (clavicula), the merry-thought. The short winged birds, such as grouse, &:c., have their breasts most fleshy or muscular; as they require greater powers in fly- ing than the long-winged birds, such as gulls and herons, which are specifically lighter, and have greater extent of sail.

4. Belli/ (abdomen) is covered with a strong skin, and contains the entrails.

5. The Vent, or vent-feathers (crissum), which lies between the thighs and the tail. The anus lies hid in those feathers.

III. Limbs.

1. Wings (alae), adapted for flight in all birds except the dodo, ostriches, cassowary, great auk, and the penguins, whose wings are too short for the use of flying ; but in the dodo and ostrich, when extended, serve to accelerate their motion in running; and in the penguins perform the office of fins in swimming or diving. The wings have near their end an appendage, covered with four or five feathers, called the bastard wing (ala notha), and alula spuria.

The lesser coverts (tectrices) are the feathers which lie on the bones of the wings. The greater coverts are those which lie beneath the former, and cover the quill-feathers and the se- condaries.

The quill-feathers (primores) spring from the first bones (digiti and metacarpi), of the wings, and are ten in number. Quill feathers are broader on their inner than their exterior sides. The secondaries (secondariae), are those that rise from the second part (cubitus), and are about eighteen in number, and equally broad on both sides. The primary and secondary wing-feathers are called remiges. A tuft of feathers placed beyond the secondaries near the junction of the wings with the body. This in water-fowls is generally longer than tiie secondaries, cuneiform, and may not unaptly be called the tertials.

The scapulars are a tuft of long feathers arising near the junction of the wings (brachia) with the body, and lie along the sides of the back, but may be easily distinguished, and raised with one's finger. The inner coverts are those that clothe the under side of the wing. The subaxil- lary are peculiar to the greater Paradise. The wings of some birds are instruments of offence. The anhima of Marcgraye has two

strong spines in the front of each wing. One, species of plover has a single one in each ; the whole tribe of jacana, and the gambo, or spur-winged goose of Willoughby, the same.

2. The tail is the director, or rudder, of birds in their flight ; they rise, sink, or turn by its means ; for, when the head points one way, the tail inclines to the other side ; it is, besides, an equilibrium or counterpoise to the other parts; the use is very evident in the kite and swallows. The tail consists of s'.rong feathers (ret.trices), ten

ill number, as in the woodpeckers, &c. ; twelve in the hawk tribe, and many others; in the gal- linaceous, the mergansers, and the duck kind, of more. It is either even at the end, as in most birds ; or forked, as in swallows; or cuneated, as in magpies, &c. ; or rounded, as in the purple jackdaw of Catesby. The grebe is destitute of a tail, the rump being covered with down ; and that of the cassowary with the feathers of the back. Immediately over the tail are certain fea- thers, that spring from the lower part of the back, and are called the coverts of the tail (uro- pygium).

3. Thighs (femora) are covered entirely with feathers in all land birds, except the bustards and the ostriches ; the lower part of those of all waders, or cloven-footed water fowls, are naked ; that of all webbed-footed fowls the same, but in a less degree : in rapacious birds, they are very muscular.

4. Legs (crura); those of rapacious fowls very strong, furnished with large tendons, and fitted for tearing and a firm gripe. The legs of some of this genus are covered with feathers down to the toes, such as the golden eagle : others to the very nails; but those of most other birds are co- vered with scales, or with a skin divided into segments, or continuous. In some of the pies, and in all the passerine tribe, the skin is thin and membranous ; in those of web-footed water- fowls, strong. The legs of most birds are placed near the centre of gravity : in land birds, or in waders that want the back toe, exactly so ; for they want that appendage to keep them erect. Auks, grebes, divers, and penguins, having their legs placed quite behind, are necessitated to sit erect : their pace is awkward and difficult, walking like men in fetters : hence Linne styles their feet pedes corapedes. The legs of all clo- ven-footed water fowls are long, as they must wade in search of food : of the palmated, short, except those of the flamingo, the avoset, and the

courier.

5. Feet (pedes), in all land birds that perch, have a large back toe ; most of them have three toes forward, and one backward. Woodpeckers, parrots, and other birds that climb much, have two forward, two backward ; but parrots have the power of bringing one of their hind toes forward while they are feeding themselves. Owls have also the power of turning one of their fore toes backward. All the toes of the swift turn for- wards, which is peculiar among land-birds; the tridactylous woodpecker is also anomalous, hav- ing only two toes forward, one backward; the ostrich is another, having but two toes.

6. Toes (digiti). The toes of all waders are divided ; but between the exterior and middle toe is generally a small web, reaching as far as the first joint. The toes of birds tliat swim are either plain, as in the single instance of the com- mon water-hen or gallinule ; or pinnated, as in the coots and grebes; or entirely webbed or palmated, as in all other swimmers. All the plover tribe, or charadrii, want the back toe. In the swimmers the same want prevails among the albatrosses and auks. No water fowls perch, except certain herons, the corvorant, and the shag.

7. Claws (ungues). Rapacious birds have

very strong, hooked, and sharp claws, vultures excepted Those of all land birds that roost on trees have also hooked claws, to enable them lo perch in safety while asleep. The gallinaceous tribe have broad concave claws for scraping up the ground. Grebes have flat nails like the human.

Among water fowls, only the skua and the black-toed gull have strong hooked or aquiline claws. All land birds perch oe trees, except the struthiousand some of the gallinaceous tribes. Parrots climb ; woodpeckers creep up the bo- dies and boughs of trees ; swallows cling. All water fowls rest on the ground, except certain herons, and one species of ibis, the spoonbill, and one or two species of ducks and of corvorants.

IV. ??? The Feathers.

Feathers are designed for two uses; as cover- ings from the inclemency of the weather, and instruments of motion through the air. They are placed in such a manner as to fall over one another (tegulatim), so as to permit the wet to run off”, and to exclude the cold ; and those on the body are placed in a quincuncial form ; mo?t apparent in the thick-skinned water fowls, par- ticularly in the divers.

The parts of a feather are, the shafts ; corne- ous, strong, light, rounded, and hollow at the lower part ; at the upper, convex above, concave beneath, and chiefly composed of a pith.

On each side the shafts are the vanes, broad on one side and narrow on the other ; each vane consists of a multitude of thin lamina, stiff", and of the nature of a split quill. These lamina; are closely braced together by the elegant con- trivance of a multitude of small bristles ; those on one side hooked, the other straight, which lock into each other, and keep the vanes smooth, compact, and strong. The vanes near the bot- tom of the shafts are soft, unconnected, and downy.

Feathers are of three kinds : ××× such as com- pose instruments of flight; as the pen-feathers, or those which form the wings and tail, and have a large shaft ; the vanes of the exterior side bending downward, of the interior upward, lying close on each other, so that when spread not a feather misses its impulse on the air.

The feathers that cover the body, which mav be properly called the plumage, have little shaft and much vane ; and never are exerted or re- laxed, unless in anger, fright, or illness.

The down (plumje), which is dispersed over the whole body amidst the plumage, is short, soft, unconnected, consists of lanuginous vanes, and is intended for excluding that air or water which may penetrate or escape through the for- mer. This is particularly apparent in aquatic birds, and remarkably so in the anserine tribe. There are exceptions to the forms of feathers. The vanes of the subaxillary feathers of the Paradise are unconnected, and the laminae dis- tant, looking like herring-bone. Those of the tail of the ostrich, and head of a species of curasso, curled. Those of the cassowary consist of two shafts, arising from a common stem at the bottom ; as do, at the approach of winter, those i'(the ptarmigans of arctic countries. The

featoers of the penguins, particularly those of the wings, consist chiefly of thin flat shafts, and more resemble scales than feathers; those of the tall like split whale-bone.

Sect. II. ××× Of the Flight of Bzuds. The flight of birds is various ; for, had all the same, none could elude that of rapacious birds. Those which are much on wing, or flit from jilace to place, often owe their preservation to that cause ; those in the water to diving.

Kites, and many of the falcon tribe, glide smoothly through the air, with scarcely any ap- parent motion of the wings. Most of the order of pies fly quick, with a frequent repetition of tlie motion of the wings. The bird of Paradise floats on the air. Wood-peckers fly aukwardly, and by jerks, and have a propensity to sink in their progress.

The gallinaceous tribe, in general, fly very strong and swiftly ; but their course is seldom long, by reason of the weight of their bodies.

The columbine race is of singular swiftness; witness the flight of the carrier pigeon. The passerine fly with a quick repetition of strokes ; their flight, except in migration, is seldom dis- tant. Among them, the swallow tribe is re- markably agile, their evolutions sudden, and tlieir continuance on wing long

The struthious race cannot fly ; but still, in running, their short wings are of use wlien erect, to collect the wind, and accelerate their motion. Many of the greater cloven-footea water-fowls, or waders, have a slow and flagging flight; but most of the less fly swiftly, and most of them with extended legs, to compensate the shortness of their tails. Rails and gallinules fly with their legs hanging down. Coots and grebes with difhculty are forced from the water; but, when they rise, fly swiftly.

Grebes and also divers fly with their hind parts downwards, by reason of the forwardness of their wings. Web-footed fowls are various in their flight. Several have a sailing or flagging wing, such as gulls- Penguins, and a species of auk, are denied the power of flight. Wild geese, in their migrations, fly off in a regular figure, in order to cut the air with greater ease ; for example, in long lines, in the figure of a > , which the ancients report that the cranes as- sumed in their annual migrations, till their order was broken by storms.

The flight of birds is much assisted by their being endowed with the peculiar faculty of enlarging their bulk at will ; and from this cir- cumstance the animal is enabled to buoy itself up the easier in the air, its specific gravity being lessened in proportion as the bulk is increased.

Tiiis arises from certain air-vessels communi- cating with the lungs, and dispersed over va- rious parts of the body, whereby the bird, by filling or emptying these vessels, has the power of contracting or dilating itself according to the occasion it may have for the change. See Zoo- tomy.

Sect. III. ××× Of the Nuptials, Nidification, AND Eggs of Birds. Most

birds are monogamous, or pair; in spring fixing ou a male, and keeping constant

till the cares of incubation and educating the young brood is past. Birds that lose their mates early, associate with others; and birds that lose their first eggs will pair and lay again. The male as well as the female, of several, join alternately in the act of incu' ation, and always in that of nufrition; when the young are hatch- ed, both are busied in looking out for and bring- ing food to the nestlings; and at that period the mates of the melodious tribes, who before were perched on some sprig, and by their warbling alleviated the care of the females confined to the nest, now join in the common duty.

Of the gallinaceous tribe, the greatest part are polygamous, at least in a tame slate; the phea- sants, many of the grouse, the partridges, and bustards are monogamous

The males of polygamous birds neglect their young; and, in some cases, would destroy them if they met with them. The economy of the struthious order, in this respect, is obscure. It is probable that the birds which compose it are polygamous, like the common poultry, for they lay many eggs ; the dodo, however, is said to lay but one.

All waders or cloven-footed fowls are mono- gamous ; and all with pinnated feet are also monogamous, except the rufl's. The swimmers, or web-footed fowls, observe the same order.

The afi'ection of birds to their young is very strong during the whole lime of nutrition, or as long as they continue in a helpless state ; but, as soon as the brood can fly and shift for itself, the parents neglect, and even drive it from their haunts; the affection ceasing with the necessity for it.

The nest of a bird is one of those daily won- ders that, from its familiarity, is passed over without regard. PLach bird, after nuptials, pre- pares a place suited to its species, for depositing its eggs and sheltering its little brood ; different genera, and different species, set about the task in a manner suitable to their several natures ; yet every individual of the same species collects the same kind of materials, puts them together in the same form, and chooses the same sort of situation for placing this temporary habitation. The young bird of the last year, which never saw the building of a nest, pursues the same plan in the structure of it, and selects the same materials, as its parents did before. Birds of the same species, of different ai.d remote countries, do the same. The swallows of Britain, and of the remoter

parts of Germany, observe the same order of architecture ; and in many instances have been known to return to the same places in which they had reared their young the year before.

The nests of the larger rapacious birds are rude, made of sticks, and bents, but often lined with something so^\; they generally build ia high rocks, ruined towers, and in desolate places; enemies to the whole feathered creation, they seek solitude. A few build upon the ground. Shrikes, allied to the rapacious birds, build their nests in bushes, with moss, wool, &c. The order of pies is rery irregular in the struc- ture of their nests. Parrots, and in fact all birds with two toes forward and two backward.

lay tlieir eggs in the hollows of trees. And most of this order creep along the bodies of trees, and lodge their eggs also within them. Crows build in trees: among them, the nest of the magpie, composed of rude materials, is made with much art, quite covered witii thorns, and only a hole left for admittance.

The nests of the orioles are contrived with wonderful sagacity, and are hung at the end of some bough, or between the forks of extreme branches. In Europe only three birds have pensile nests ; the common oriole, the parus pendulinus or hang-nest titmouse, and one more. But in the torrid zone, where the birds fear the search of the gliding serpent and inquisitive monkey, the instances are very frequent; a mar- vellous instinct implanted in them for the preser- vation of their young. See Okiolus.

All of the gallinaceous and struthious orders lay their eggs on the ground. The ostrich is the only exception, among birds, of the want of natural affection ; * which leaveth her eggs in the earth, and warnieth them in the dust, and forgetteth that the foot may crush them, or the wild beast may break them.'

The columbine race make a most artless nest, a few sticks laid across may suffice. Most of the passerine order build their nests in shrubs or bushes, and some in holes of walls or banks. Several in the torrid zone are pensile from the boughs of high trees ; that of the tailor bird is a wondrous instance. Some of this order, such as larks, and the goatsucker, on the ground. Some swallows make a curious plaster nest be- neath the roofs of houses ; and an Indian spe- cies, nests of a

certain glutinous matter, which are collected as delicate ingredients for soups of Chinese epicures.

Most of the cloven-footed water fowls, or waders, lay upon the ground. Spoonbills and the common herons build in trees, and make large nests with sticks, &c. Storks build on churches, or the tops of houses. Coots make a great nest near the water side. Grebes, in the water, a floating nest, adhering generally to some neighbouring reeds.

Web-footed fowls breed on the ground, as the avosets, terns, some of the gulls, mergansers, and ducks ; the last pull the down from their breasts to make a softer and warmer bed for their young. Auks and guillemots lay their eggs on the naked shelves of high rocks ; penguins, in holes under ground : among the pelicans, that which gives name to the genus makes its nest in the desert, on the ground. Shags sometimes on trees; cormorants and gannets on high rocks, with sticks, dried algae, and other coarse materials.

Rapacious birds, in general, lay few eggs; eagles and the larger kinds fewer than the lesser. The eggs of falcons and owls are rounder than those of most other birds ; they lay more than six.

The order of pies vary greatly in the number of their eggs. Parrots lay only two or three white eggs. Crows lay six eggs, greenish, mot- tled with dusky. Cuckoos, as far as we can learn, two. Woodpeckers, wryneck, and kings- fisher, lay eggs of a clear white and semi-trans- parent color. The woodpeckers lay six, the otliers more.

The nuthatch lays often inlhe year, eight at a time, white, spotted with brown. The hoopoe lays but two cinereous eggs. The creeper lays a great number of eggs. The honeysucker, the least and most defenceless of birds, lays but two ; but the extinction of the genus is prevented by a swiftness of flight that eludes every pursuit.

The gallinaceous order, the most useful of any to mankind, lay the most eggs, from eight to twenty. ‘Benigna circa hoc natura, innocua, et esculenta animalia foecunda generavit,’ is a fine observation of Pliny; with exception of the bus- tard, a bird that hangs between the gallinaceous and the waders, which lays only two. The co- lumbine order lay but two white eggs ; but the domestic kind, breeding almost every month, supports the remark of the Roman naturalist.

All of the passerine order lay from four to six eggs, except the titmouse and the wren, which lay fifteen or eighteen, and the goatsucker, which lays only two. The struthious order disagree much

in the number of eggs ; the ostrich laying many, as far as fifty, the dodo but one.

The cloven-footed water fowls, or waders, lay, in general, four eggs ; tbe crane and the Norfolk plover seldom more than two. All of the snipe and plover genus are of a dirty white, or olive spotted with black, and scarcely to be distinguish- ed in the holes they lay in. The land rails (an ambiguous species) lay from fifteen to twenty. Of birds with pinnated feet, the coot lays seven or eight eggs and sometimes more. Grebes from four to eight, and those white.

The web-footed, or swimmers, differ in the number of their eggs. Those which border on the order of waders lay few eggs ; the avoset two; the flamingo three ; the albatross, the auks, and guillemots, lay only one. egg a piece: the eggs of the two last are of a size strangely large in proportion to the bulk of the birds. They are commonly of a pale green color, spotted and striped so variously, that not two are alike ; which gives every individual the means of distin- guishing its own on the naked rock where such multitudes assemble. Divers lay only two. Terns and gulls lay about three eggs, of a dirty olive, spotted with black. Ducks lay from eight to twenty eggs ; the eggs of all the genus are of a pale green, or white, and unspotted. Pen- guins probably lay but one egˆ.

Of the pelican genus, the gannet lays but one egg ; the shags or cormorants six or seven, all white ; the last the most oblong of eggs.

A minute account of the eggs of birds might occupy a treatise of itself. This is only meant to show the great conformity in the sliape and colors of congenerous birds; and that tlie same uniformity of color is in the eggs as in the plu- mage of the birds they belong to.

Zinanni published at Venice, in 1737, A Trea- tise on Eggs, illustrated with accurate figures of 106 eggs. Mr. Reyger of Dantzic published, in 1766, a posthumous work by Klein, with twenty- one plates, elegantly colored.

Sect IV. ††† Of Systems of Ornithology.

Of the many systems that have been offered to the public of late years. Pennant gives the pre- ference to that composed by Ray, in 1667, and afterwards published in 1678; but observes, at

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ORNITHOLOGY.

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the same time, that it would be unfair to conceal the writer from whom our great countryman took the original hint offorming tiiat system, which has proved the foundation of all that have been com- posed since that period.

Belon of Mans, a Frenchman, who first at- tempted to range birds according to their natures, published a work on ornithology in 1555. His arrangement of rapacious birds is as judicious as that of the latest writers. His second chapter treats of vultures, falcons, shrikes, and owls ; in the two next he passes over to the web-footed water fowls, and to the cloven-footed ; in tiie fifth he includes the gallinaceous and struthious, but mixes with them the plovers, buntings, and larks ; in the sixth are the pies, pigeons, and thrushes ; and the seventh takes in the rest of the passerine order.

Ray, and his illustrious pupil Francis Wil- loughby, assumed the same plan; but formed the great division of the terrestrial and aquatic birds ; they made every species occupy their proper place, consulting at once exterior form and na- tural habit.

The subjoined scheme of arrangement, by Mr. Pennant, is introduced with

the following obser- vations : ••• ‘ Mr. Ray’s general plan is so judicious that to me it seems scarcely possible to make any change in it for the better ; yet, not- withstanding he was in a manner the founder of systematic zoology, later discoveries have made a few improvements on his labors. My candid friend Linne did not take it amiss, that I, in part, neglected his example; for I permit the land fowl to follow one another, undivided by the water- fowl, the Gralla, and anseres of his system; but, in my generical arrangement, I most punctually attend to the order he has given in his several divisions, except in those of his anseres and a few of his gralla?. For, after the maaner of Mr. Biisson, I make a distinct order of water-fowl with pinnated feet, placing them between the waders or cloven-footed water fowl and the web- footed. The ostrich, and land birds with wings useless for flight, I place as a distinct order. The trumpeter (psophia Linnaei), and the bus- tards, I place at the end of the gallinaceous tribe; the last granivorous, swift runners, avoiders of wet places ; and both have bills somewhat arched. It must be confessed that both have legs naked above the knees, and the last, like the waders, lay but few eggs. They seem ambiguous birds, that have afhnity with each order ; and it IS hoped that each naturalist may be indulged the toleration of placing them as suits his own opinion.’

Table of Pennant’s Arrangement, with the cor- respondent Orders and Genera in the Systema Naturae of Linne. Division I. ••• Land Birds. Division IL ••• Water Fowl. f Order L Rapacious. Accipitres Lin.

IL Pies. PicEe.

I III. Gallinaceous. Galling.

r)ivˆ? J,.ˆ IV. Columbine. Passeres.

j V. Passerine. Passeres.

1 \;r c-. .u- S Gallinse.

t VI. Struthious. I gˆˆjjˆ

(“Order \TI. Cloven-fooled J ˆ ., I or waders. J ‘““a’ ‘2

Divis. JI.-<

VIII. Pinnated feet. l’“‘f;’ˆ- I Grallae.

1 .X

‘.. Web-footed.

5 Anseres < Grallae.

Division I.

Order L-

⬩⬩⬩Rapacious.

1. Vulture.

Vultur.

2. Falcon.

Falco.

3. Owl.

Strix.

Order

II.⬩⬩⬩ Pies.

4. Shrike.

Lanius.

5. Parrot.

Psittacus.

6. Toucan.

Ramphastos.

7. Motmot.

Ramphastos.

8. Hornbill.

Buceros.

9. Beefeater.

Buphaga.

10. Ani.

Crotophaga.

11. Wattle.

12. Crow.

Corvus.

13. Roller.

Coracias.

14. Oriole.

Oriolus.

15. Grakle.

Gracula.

16. Paradise.

Paridisaea.

17. Curucui.

Trogon.

18. Barbet.

Bucco.

19. Cuckoo.

Cuculus.

20. Wryneck

Junx.

21. Woodpecker.

Picus.

22. Jacamar.

Alcedo.

23. Kingsfisher.

Alcedo.

24. Nuthatch.

Sitta.

25. Tody.

Todus.

26. Bee-eater.

Merops

27. Hoopoe.

Upupa.

28. Creeper.

Certhia.

29. Uoneysucker.

Trochilus.

Okdeh III.

-Gallinaceous:

30. Cock.

Phasianus.

31. Turkey.

Meleagris.

32. Pintado.

Numida.

33. Curasso.

Crax.

34. Peacock.

Pavo.

35. Pheasant.

Phasianus.

36. Grous.

Tetrao.

37. Partridge.

Tetrao.

38. Trumpeter.

Psophia.

39. Bustard.

Otis.

Order IV.-

****Columbine.*

40. Pigeon.

Columba.

Order V.-

****Passerine,*

41. Stare.

Sturnus.

42. Thrush.

Turdus.

43. Chatterer.

Ampelis.

44. Coly.

Loxia.

45. Grosbeak.

Loxia.

46. Bunting.

Emberiza.

47. Tanager.

Tanagra.

48. Finch.

Fringilla.

49. Flycatcher.

Muscicapa.

50. Lark.

Alauda.

51. Wagtail.

Motacilla.

52. Warbler.

Motacilla.

b3.

Manakin.

Pipra.

54.

Titmouse.

Parus.

.55.

Swallow.

Hirundo.

56.

Goatsucker.

Caprimulgus.

Order VI

. ❓❓❓ Struthious.

57.

Dodo.

Didus.

58.

Ostrich.

Struthio.

Division II.

0

‘RDER VII. CLOVEN-FoOrED, Or WaDERS.

59.

Spoonbill.

Platalea.

60.

Screamer.

Palamedea.

61.

Jabiru.

Mycteria.

62.

Boatbill.

Cancroma.

63.

Heron.

Ardea.

64.

Umbre.

Scopus. Briss.

65.

Ibis.

Tantalus.

66.

Curlew.

Seolopax.

67.

Snipe.

Scolopax.

68.

Sandpiper.

Tringa.

69.

Plover.

Charadrius.

70.

Oystercatcher.

Hfematopus.

71.

Jacana.

Parra.

72.

Pratincole.

Hirundo.

73.

Rail.

Rallus.

74.

Sheathbill.

75,

Gallinule.

Fulica.

Order VIII.-

Pinnated Feet.

76.

Phalarope.

Tringa.

77.

Coot.

Fulica.

78.

Grebe.

Colymbus.

Order IX.

xxx Web-Footed.

79.

Avosetta.

Recurvirostra.

80.

Courier.

Currira. Briss.

81.

Flammant.

Phoenicopterus.

82.

Albatross.

Diomedia.

83.

Auk.

Alca.

84.

Guillemot.

Colymbus.

85.

Diver.

Colymbus.

86.

Skimnwr.

Rhyncops.

87.

Tern.

Sterna.

88.

Gull.

Larus.

89.

Petrel.

Procellaria.

90.

Merganser.

Mergus

91.

Duck.

Anas.

92.

Penguin.

S Diomedia. i Phaeton.

93.

Pelican.

Pelicanus.

94.

Tropic.

Phaeton.

95.

Darter.

Plotus.

Ind. Orn. Syn. of birds.

Avium Genera. Genera of Birds.

Div. I. Div. I.

AvES Terrestres. Land Birds.

Ordo I. ??? Accipitres. Order I. ??? Rapacious.

1. Vultur. Vulture.

2. F'alco. Falcon.

3. Strix. Owl.

Table of the Orders and Genera in the Index Ornithologicus, and General Sy- nopsis OF Birds, Published by Latham.

Ind. Orn. Syn. of birds.

Avium Ordines. Orders of Birds.

Div. I. Div. L

I.

IL

Accipitres. Picse.

Rapacious. Pies.

III.

Passeres.

Passerine.

IV.

Columbas.

Columbine.

V.

Gallinae.

Gallinaceous.

VI.

Struthiones.

Struthious.

Div. IL

Div. II,

VII.

Grallae.

Waders.

VIIL IX.

, Pinnatipedes. Palmipedes.

Pinnated feet. Wed-footed.

Order II. ××× Picˆe.

4. Lanius.

5. Psittacus.

6. Ramphastos.

7. Momotus.

8. Scylhrops.

9. Buceros.

10. Buphaga.

11. Crotophaga.

12. Callaeas.

13. Corvus.

14. Coracias.

15. Oriolus.

16. Gracula.

17. Paradissea.

18. Trogon.

19. Bucco.

20. Cuculus.

21. Yurx.

22. Picus.

23. Galbula.

24. Alcedo.

25. Sitta.

26. Todus.

27. Merops.

28. Upupa.

29. Certhia.

30. Trochilus. Ordo III, ??? Passxisxs,

31. Sturnus.

32. Turdus.

33. Aropelis.

34. Colius.

35. Loxia.

36. Emberiza.

37. Tanagra.

38. Fringilla.

39. Phytotoraa.

40. Muscicapa.

41. Alauda.

42. Motacilla.

43. Sylvia.

44. Pipra.

45. Parus.

46. Hirundo.

47. Caprimulgus.

Ordo IV.

COLUMBˆ;.

48. Columba.

Ordo V. Gallinˆe.

49. Pavo.

50. Meleagris.

51. Penelope.

52. Numida.

53. Crax.

54. Phasianus.

55. Tinamus.

56. Tetrao.

Order II. ××× Pies. Shrike. Parrot. Toucan. Motmot.

Hornbill. Beefeater. Ani.

Wattle-bird. Crow. Roller. Oriole. Grakle. Paradise-bird. Curucui. Barbet. Cuckoo. Wryneck. Woodpecker. Jacamar. Kingsfisher. Nuthatch. Tody. Bee-eater. Hoopoe. Creeper. Humming-bird. Ord. \1L ××× PaSS××RISE Starlmg. Thrush. Chatterer. Coly. Grosbeak. Bunting. Tanager. Finch.

Fly-catcher.

Lark.

Wagtail.

Warbler.

Manakin.

Titmouse.

Swallow.

Goatsucker.

Order IV. Columbine. Pigeon.

Order V. Gallinaceous Peacock. Turkey.

Pintado.

Curasso. Pheasant. Tinamon. Grouse.

ORO

347

ORO

Ind. Orn.

St/n. of birds.

57. Perdix.

Partridge,

58. Psophia.

Trumpeter.

59. Otis.

Bustard.

Ordo VI.

Order VI.

Struthiones

Struthious.

60. Didus.

Dodo.

61. Struthio.

African ostrich.

62. Casuarius.

Cassowary.

63. Rhea.

American ostrich

Div. II.

Div. II.

AVES AQUATICiE.

Water Birds.

*Ordo VII. ••• Grall**

. Order VII.••• Wadi

64. Platalea.

Spoonbill.

65. Palamedea.

Screamer.

66. Mycteria.

Jabiru.

67. Cancroma

Boatbill.

68. Scapus.

Umbre.

69. Ardea.

Heron.

70. Tantalus.

Ibis.

71. Numenius.

Curlew.

72. Scolopax.

Snipe.

73. Tringa.

Sandpiper.

74. Charadrius

Plover

75. Cursorius.

76. Haematopus.

Oyster-catcher.

77. Glareola.

Pratincole.

78. Rallus.

Rail.

79. Parra.

Jucana.

Ind. Orn. 80. Gallinula.

Syn. of birds. Gallinuie.

81. Vaginalis.

Sheath-bill

Ordo VIII.

Order VIII.

PiNNATIPEDES.

With Pinnated Feet.

82. Phalaropus.

83. Fulica.

Phalarope. Coot.

84. Pcdicepo.

Grebe.

Ordo IX.

Order IX.

Palmipedes.

Web-Footed.

- *Pedibus longioribus.*
- *With long legs.*

85. Recurvirostra.

Avoset.

86. Corrira.

Courier.

87. Phcenicopterus.

Flamingo.

+t Pedibus brevioribus. ft Witli short legs. 88. Diomedea. Albatross.

89. Aica.

Auk.

90. Uria.

Guillemot.

91. Colymbus.

92. Rhynchops.

93. Sterna.

Diver.

Skimmer.

Tern.

94. Larus.

Gull.

95. Procellaria.

Petrel.

96. Mergus.

97. Anas.

Merganser. Duck.

98. Aptenodytes.

99. Pelicanus.

Penguin. Pelican.

100. Phaeton.

Tropic-bird.

101. Plotus.

Darter.

ORNITHOPUS, in botany, bird's-foot, a genus of the decandria order, and diadelphia class of plants : natural order thirty-second, papilionaceae. Legumen articulated, cylindrical, and bent in the form of a bow. Species five, of which one is common to our own pastures, and was formerly thought a specific for the stone.

ORNUS, a species of the fraxinus, or ash tree, which produces the manna. Its smaller leaves are sawed, with flowers having petals. To ob- tain the manna, those employed in July and August make an oblong incision, and take off from the bark of the tree about three inches in length, and two in breadth : they leave the wound open, and by degrees the manna runs out,

is almost suddenly thickened to its proper consistence, and is found adhering to the bark. This is collected in baskets, and called manna grassa. When they want fine manna, they ap- ply to the incision of the bark thin straw, or small bits of shrubs ; so that the manna in coming out runs upon these bodies, and is col- lected in a sort of regular tubes, which give it the name of manna in cannoli.

OROBANCIIE, in botany, broom rape, a genus of the angiospermia order, and didynamia class of plants : natviral order fortieth, person- atae : cal. bifid: cou. ringent: caps, unilocu- lar, bivalved, and polyspermous : there is a glandule under the base of the germen. Specie3 eighteen, five of which are common to the fields and woods of our own country ; the rest are scattered over Europe, Asia, and America.

OROBIO (Balthasar), a celebrated Jew of Spain. He was so skilled in the scholastic philosophy of Spain, that he was made professor of metaphysics in the university of Salamanca.

Afterwards, however, applying himself to the study of physic, he practised that art at Seville with success, till, accused of Judaism, he was thrown into the inquisition, and suffered the most dreadful tortures. After three years con- finement, during which he constantly denied that he was a Jew, and professed to be a true Christianˆ he was discharged ; and, repairing to France, was made professor of physic at Thou- louse. At last, weary of dissembling, he repaired to Amsterdam, where he was circumcised, took the name of Isaac, and professed Judaism ; still continuing, however, to practise physic, in which he was much esteemed. He distinguished him- self in a controversy with Limborch, and by writing against Spinoza. Orobio died in 1687.

OROBUS, bitter vetch, a genus of the decan- dria order, and diadelphia class of plants : natu- ral order thirty-second, papilionaceae : style linear : cal. obtuse at the base, with the upper segments deeper and shorter than the rest. There are nine species. All of them have fi- brated roots, which are perennial, but are annual in stalk, rising early in spring, and decaying in autumn. They are very hardy plants, and pros- per in any common soil of a garden. Most of these plants are very floriferous, and the flowers conspicuous and ornamental for adorning the flower compartments. The flowers are univer- sally of the papilionaceous or butterfly kind, consisting each of four irregular petals, i. e. a standard, two wings, and a keel ; and are all succeeded by long taper seed-pods, furnishing plenty of ripe seed in autumn ; by which the plants may be propagated abundantly, as also by parting the roots.

(). tubcrosus, wood pea, or peas heath. The

Highlanders have a great esteem for the tuber- cles of the roots of this species. They dry and chew them to give a better relish to their liquor; they also affirm that they are good against most disorders of the breast, and that by the use of them they are enabled to resist hunger and thirst for a long time. In Breadalbane and Ross- shire they sometimes bruise and steep them in water, and make an agreeable fermented liquor with them. They have a sweet taste, something like the roots of liquorice ; when boiled, are nutritious and well flavored ; and in times of scarcity they have served as a substi- tute for bread.

ORODES, a prince of Parthia, who murdered his brother INIithridates, and ascended his throne. He defeated Crassus, the Roman triumvir, and poured melted gold down the throat of his fallen enemy, to reproach him for his avarice and am- bition. He joined the party of Cassius and Brutus atPhilippi. It is said that, when Orodes became old and infirm, his thirty children ap- plied to him, and disputed in his presence their right to the succession. Phraates, the eldest of them, obtained the crown from his father; and, to hasten him out of the world, he attempted to poison him. The poison had no effect ; and Phraates, still determined on his father's death, strangled him with his own hands, about thirty- five years before the Christian era. Orodes had reigned about fifty years.

ORONTES, a famous river of Syria, about which Strabo and other ancient authors mention many fabulous stories of its disappearing and running under ground for several miles, &c. It rises in Coslosyria, and after a rapid course falls into the Mediterranean below Antioch. It is now called Asi.

ORONTIUM, in botany, a genus of the mo- nogynia order, and hexandria class of plants : natural order second, piperita. Spadix cylin- drical, covered with florets: cor. hexapetalous and naked : the follicles monospermous. Style none.

OROPESA,a town of Peru, the capital of the province of Cochabamba, situated on one of the tributary streams of the Rio Grande. Its in- habitants, about 17,000, are chiefly employed in trading with the neighbouring provinces in fruits and grain. They include many rich and noble families. Eight miles north of Cochabamba, and eighty-nine N. N. W. of Chuquisaca. There are other settlements of this name in the neigh- bourhood.

OROSIUS (Paul), a Spanish historian and divine, and a disciple of St. Augustin ; who sent him to Jerusalem to consult St. Jerome on the origin of the soul. He wrote a Universal His- tory from the creation to his own time, entitled Miseria Humana, in which he displays more learning and diligence than chronological accu- racy. The best edition is that of Havercanys, 4to. Lug. Bat. 1767. He wrote also a treatise on Free Will, and other pieces. He flourished about A. D. 416.

OR'PHANjTi.s.kadj.ˆ Fr. orphelin ; Gr. Or'phanage, 7<. s. >op(pavoc A child be- Or'phanism. J reft of parents; ap-

plied to a child who has lost either one parent or

both : orphanage and orphanism, mean the stats of an orphan.

Poor orphan in the wide world scattered. As budding branch rent from the native tree. And thrown forth until it be withered : Such is the state of man. Spenser.

Sad widows, by thee rifled, weep in rain, And ruined orphans of thy rapes complain.

Sandvi- This king, left orphan both of father and mother, found his estate, when he came to age, so disjointed, even in the noblest and strongest limbs of govern ment, that the name of a king was grown odious.

Sidney Who can be bound by any solemn vow To 'reave the orphan of his patrimony, To wring the widow from her 'customed right, And have no other reason for liis wrong. But that he was bound by a solemn oath 1

Shakspeare. The sea with spoils his angry bullets strow. Widows and orphans making as they go. Waller.

Pity, with a parent's mind. This helpless orphan whom thou leavest behind.

Dryden. Collections were made for the relief of the poor, whether widows or orj'haus. XeUon.

Coriolanus's father died when he was an infant. Alcibiades andCoriolanus would, with Demosthenes, make as noble a trio of orphans as all antiquity could furnish. Bp. Watson.

Rich, noble, but an orphan; left an only Child to the care of guardians good and kind ; But still her aspect had an air so lonely. Byron.

First stern philanthropy ; not she who dries The orphan's tears and wipes

the widow's eyes, But French philanthropv, whose boundless mind Glows with the general love of human kind.

Canning. ORPHEUS, a celebrated poet and musician of antiquity, who, according to Sir Isaac New- ton, was the son of Q^agrus, who received Thrace from Sesac when he conquered that country. W'itli the kingdom, the latter gave Grlagrus one of his singing women, for his wife, who brought him Orpheus. Hence his mother was fabled to be Calliope. On account of the great antiquity of Orpheus, numberless fables have been intermingled with his historj', but there can be no doubt of his existence. To his father he was indebted for his first instruction in religion, and he afterwards became a disciple of the Idaei Dactyli in Crete. Thence he travelled into Egypt, and became a proficient in all kinds of literature. From the latter country he transplanted the whole fable of Osiris into Greece, adapting it to the family of Cadmus. The people held him in the highest veneration, supposing him to be possessed of the secrets of expiating crimes, curing disea.ses, and appeasing the gods. He promulgated an idea of hell, in- stituted the mysteries of Hecate among the TF.sinetes, and those of Ceres in Sparta. He is chiefly famed for his music, which is poetically represented to have had the eff'ect of taming the most ferocious animals, and making the trees of the forest dance in concert to his lyre. Eury- dice made a deep impression on the melodious musician, and their nuptials were celebrated. Tlieir happiness, however, was but suot,..- fjr /!ristaeus became enamoured of her; and as she

fled from her pursuer, a serpent bit her foot, and she died of the poisoned wound. Her loss was severely felt by Orpheus, and he resolved to recover her or perish in the attempt. With his lyre in his liand, he entered the infernal regions, and gained an easy admission to the palace of Pluto. Having charmed all hell with his strains, Pluto and Proserpine consented to restore Eurydice, provided he forbore looking behind him till he had come to the extreme borders of hell. The conditions were gladly accepted, and Orpheus was already in sight of the upper regions of the air, when he forgot his promise, and, turning back to look at his wife, lost her for ever. The only comfort he could find was to soothe his erief by the sound of his musical instrument in grottoes or on mountains. lie totally separated himself from the society of mankind ; and the Thracian wo- men, whom he had offended by his coldness to their amorous passion, attacked him while they celebrated the orgies of Bacchus ; and, after they had torn his body to

*pieces, they threw his head into the Hebms, which still arti- culated Eurydice ! Eurydice ! as it was carried down the stream into the ˆEgean Sea. Others say, that as he attempted to conjure his wife from the dead, which they understand by the story of his going down to hell, he thought he saw her ; and when afterwards, on looking back, he missed her, he died of grief. Pausanias speaks of a temple m Thesprotia, where Orpheus went to call up the ghost of Eurydice. Some say that he was killed by a thunder-bolt. He was buried at Pieria, in Macedonia, according to Apollodorus The inhabitants of Dion boasted that his tomb was in their city, and the people of INIount Libethrus in Thrace claimed the same honor ; and reported that the night- ingales, which built their nests near his tomb, sang with greater melody than all other birds. Orpheus, after death, received divine honors; the muses gave an honorable burial to his re- mains, and his lyre became one of the constella- tions. Tzetzes explains the fable of his drawing his wife Eurydice from hell, by his great skill in medicine, with which he prolonged her life, and thus snatched her from the grave. With respect to the writings of Orpheus, he is mentioned by Pindar as author of the Argonautics, and Hero- dotus speaks of his Orphics. His hymns, says Pausanias, were very short, and but few in num- ber. Those poems that bear his name, many of which are known to be the work of others, were published at Nuremberg in 1702, and re- printed at Leipsic, in 1764, under the title of 0P*EQ2 AHAKTA.*

Orphets, in ichthyology, the name of a fish caught in the Archipelago. It is of a broad and flat figure, and of a fine purple color ; its eyes are large and prominent; and its teeth serrated ; it has only one fin on the back, and the anterior rays of that are prickly, the others soft to the touch ; its anus is small, and is said to have no passage for the semen. This was the fish called Orpheus by the ancients, but the modern Greek call another fish by that name. It is a species of the spaius, of a flat figure, but very thick, has

a small mouth, and is covered with small but very rough scales, which adhere very firmly to the flesh ; the tail is not forked ; it has fleshy lips, and very small teeth ; its back and sides are black ; its belly white ; it has a large black spot at the root of the tail ; its head is reddish, and its fins are very elegantly diversified with various colors : it has only one back fin, and that has the anterior ray prickly, the hinder ones not at all so. It grows sometimes to twenty pounds weight, and is much esteemed among the modem Greeks.

OR'PIMENT, n.x. Fr. orpiment ; Lat. auri- pigmentum. A gold-colored fossil, defined in the extracts.

For the golden color, it may be made by some small mixture of orpimetU, such as they use to brass in the yellow alchymy ; it will easily recover that

which the iron loseth. Bacon.

True and genuine orpiment is a foliaceous fossil, of a fine and pure texture, remarkably heavy, audits colour is a bright and beautiful yellow, like that of gold. It is not hard, but very tough, easily bending without breaking. Orpiwetit has been supposed to contain gold, and is found in mines of gold, silver, and copper, and sometimes in the strata of marl.

, Hill.

Orpiment, in natural history, a mineral com- posed of sulphur and arsenic, sometimes artifi- cially produced, but found also native, and con- stituting one of the ores of arsenic. It is of two kinds, red and yellow, the former called realear. It is commonly found in shapeless masses, very seldom crystallised ; though baron Borne once found it in a polyhedral form on a blue clay in Hungary. The red orpiment is a very beautiful substance of a fine bright red, very elossy, and a little transparent, and is found in the Turkish dominions, in the islands of the Archipelago, and even in our own country, Dr. Hill having received some of it from Cornwall, under the name of red mundic. The yellow kind contains about one-tenth of its weight of sulphur. It is the common orpiment of the shops. Some think that the noxious qualities of the arsenic are so much counteracted by the sulphur with which this substance is mixed, that it may be swallowed with safety ; but Macquer positively asserts the contrary, and cautions against its use, even thoueh we be certain that the orpiment is native. There is, besides, a broad-flaked, gold-colored kind, well-known among the ancients, as is plain from the description of it left by Dioscorides, and still much esteemed by our painters. It is found in the islands of the Archipelago, in the mines of Gosselaer, in Saxony, in some parts of Turkey, and the East Indies, and in its utmost purity about Smyrna. It makes the finest of all yellows in painting. The small flaked, yellow kind, which is the common orpiment of the shops, is also a fine color, though greatly inferior to the former.

OR'PINE, n. s. Fr. orpin. A plant. Tlie sedum telephium of Linnaeus.

Cool violets and orpine growing still, Embathed balm and cheerful ˆmlingale.

Spenser

Orpixe, in botany. See Sefum.

ORRERY. The employment of planetary machines to illustrate and explain the motions of ihe heavenly bodie? appears to have been coeval with the construction of clepsydrae and other horological automata, as nearly all the early water-clocks, of a complex character, represented the motions of the starry sphere, and in this respect the ancients were more successful than the mechanics of the present day. But the splendid graphic delineations furnished by the modern astronomer were wanting, and for these we are mainly indebted to the labors of Walker and Bartlet. The eidouranion is indeed a mimic representation of the vast system of which our earth forms so insignificant a part. It may, however, be advisable to commence our notice of this useful apparatus for popular instruction, by examining some of the best early planetary machines.

Ptolemy, who died about 140 years after the commencement of the Christian era, devised the circles and epicycles that distinguish his system, in order to account for the apparent irregulari- ties of the planetary motions ; and, though he probably could not construct a machine to repre- sent these motions exactly, yet, in his Almagest, he described a sphere, furnished with the con- stellations, to which he could refer the apparent paths of the heavenly bodies, and by -diich he could eiplain his system.

From the time of Ptolemy to the sixteenth century, in which Copernicus revived the system of Philolaus, or, as is generally said, of Pytha- goras, the machines wliich were constructed represented the Ptolemaic system, which, like the Egyptian, placed the earth in the centre, but supposed the moon and planets all sepa- rately revolving round it every day, whilst they slowly performed periodic cycles and epicycles, to account for the stationary and retrograde ap- pearances, that could not otherwise be explained. The most ancient machine of which we have met with any account during this period is that of Chromatins, the governor of Piome, in the third century, which is mentioned in the first volume of Beckmann's History of Inventions and Discoveries. According to the accounts of St. Sebastian and Polycarp, this costly piece of mechanism consisted of a pavilion of glass, in the construction of which were consumed 200 lbs. weight of gold, as materials for the work- manship, and all the heavenly bodies were repre- sented by mechanism, together with the phases of the moon ; there also appears to have been an ecliptic circle divided into signs. But, whatever might be^the particular construction of this ma- chine, it was entirely destroyed, on account of some imaginary impiety attached to such a re- presentation of the heavens.

The planetary clock invented by the celebrated mathematician Finee was begun in 1553, and made during the space of seven years by the best workmen that could be found. The interior shape of this machine is represented as a pen- tagonal column seventeen inches in diameter, and six

feet high, surmounted by a brass celestial globe of seven inches diameter, which contains forty-eight constellations, and which revolves once in every twenty-four hours from east to

west. Tlie interior part of this pillar contains upwards of 100 wheels to give the respective motions to the sun, moon, and planets, actuated by clock-work, and the whole kept in their respective motions by a weight suspended within the pillar, the fall of which is one foot per dav, and the motions continue forty-eight hours and upwards. The movement of each planet consists of twelve, ten, or eight wheels, as the ne- cessary accuracy requires, and they are all made of steel, and actuated by one common arbour. The description of this elaborate instrument is contained in a printed description preserved in the Royal Library, Paris, in which it is said that the increase and decrease of velocity is affected by the interior mechanism ; and the motions of the heavenly bodies are represented, together with the eccentricities and motions of the apogees, nodes, and latitudes of each. The five plain sides of the pentagonal column have each a brass face of two feet in length, and ten inches in breadth, in each of which are two circles, the upper and the lower, except in that containing Ihe places of the sun and moon, which has three circles ; and hands or pointers are made to indicate the different motions on the respective dials or circles which are appropriated accord- ing to the subjoined arrangement, viz.

Face 1st. The motion of Saturn above, and of Jupiler below.

2nd. Tire motion of Mars above, and of I\Ier- cury below.

3rd. The motion of Venus above, and of the sun below.

4th. The motion of the moon above, and of the moon's nodes below.

5th. The hours above, and astrolabe below ; and in the middle the conjunctions, opposition, eclipses, &c., of the sun and moon.

The wheel work and other mechanical parts of the instrument are not contained in Ber- thoud's extract, whence this detail is abridijed ; but the times of the various revolutions attri- buted to the movements, and also to the celestial bodies themselves, which are said to be repre- sented to a minute in a revolution, are given in the subjoined table.

Planets.

Whole periods.

Motion foil

in twenty – r hours.

d. h. m. s.

Mercury .

87 23 15 36

0

59

8

V'enus . .

224 17 53 2

0

59

8

Sun . . .

365 5 48 15

0

59

8

Mars . . .

688 23 31 56

0

31

26

Jupiter . .

4332 14 49 31

0

4

39

Saturn . .

10759 4 58 25

0

2

1

Moon . .

27 13 18 35

13

3

54

Do. synodic

29 12 44 3

13

8

35

Do. nodes .

19 years.

This machine does not exhibit to the eye the representatives of the planets in their orders and distances, but only indicates on their different faces the periods of their sideresl revolutions; the earth is considered by the inventer as the centre of the orbits ?f the Moon, Sun, Mars,

Jupiter, and Saturn, the three last of which are made to move in the Ptolemaic epicycles, but the sun is made the centre of the orbits of Mercury and Venus, according to the Egyptian sys- tem, which is the reason why the daily progress in the ecliptic is put down for these three alike. It is somewhat remarkable that this arrangement is not according to the Copernican system, though Copernicus had published his book called the lievolutions of the Celestial Orbs, which laid the foundation of his system, twelve years before ; hence we must suppose, either that the book had not found its way from Prussia into France at that time, or else that the system at first met with opposition. Thus a union of the Ptolemaic with the old Egyptian system be- came the favorite of the astronomer before us, and three years afterˆvards he published a book in defence of this theory.

The next machine we meet with is the planeta- rium of P. Schirleus de llheita described in the Technica Curiosa of Schott, and made about the year 1650. Tliis machine is said to have represented all the true and mean motions of the planets, their stations, and direct and retrograde appearances, without epicycles or equations, and with very few wheels by the help of endless screws and pulleys. The movements were ac- tuated by water, and on the exterior part of the instrument were three separate faces, or dials, described into a number of circles for the orbits of the planets and signs of the zodiac ; the lowest face contained the circles of the Sun, Venus, and Mercury, which were denominated the inferior planets, and their respective hands or arms ; the uppermost face had the circle of Saturn, Jupiter, and Mars, with their respective hands ; and the face in the middle had twelve hours, and also a circle for the moon. The first wheel, which gave motion to all the rest, was carried round by a fall of water once in a minute, on the arbor of which was a single endless screw w'hich drove a wheel of fifteen teeth round in as many minutes ; on the arbor of this was another screw driving another wheel of twenty-four round in six hours ; again, on the arbor of the wheel of twenty-four was another screw, making a wheel of twenty teeth revolve in five days : and, lastly, a screw on the arbor of the last mentioned wheel of twenty impelled a wheel of seventy-three once round in exactly 3(35 days, which represented the annual motion of the sun in his supposed orbit round the earth. The last screw also drove a wheel of forty-five teeth round in 255 days, which, by the help of two equal pulleys, carried Venus round the sun in this period ; and in like manner, it is said, motions were produced in the rest of the planets ; but the numbers of the other wheels are not given by Berthoud. Alexander, in his Traite des Ilorloges, thus describes the mecha- nism : ' This machine,' says he, ' cannot be of great utility, nor will it represent the motions of the planets with sufficient accuracy.

1. ' The first wheel which moves all the rest is carried round by a fall of water which cannot have the requisite regularity.

2. 'The movement is not regulated by a ba- .ance, pendulum, or fly.

3. ' The motion of the sun completes the year

in exactly 365 days, which makes an error of twenty-five days in a century.

4. ' The discs of the planets are made much too large in proportion to the sun.

The last of these observations must necessarily constitute an objection in every instrument, where the ball for the sun is not made incon- veniently bulky.

Passemant's planetary apparatus possessed con- siderable merit. It is thus described by Ber- thoud : ××× The clock is surmounted by a sphere, which it puts in motion according to the Coper- nicum system. It was presented to the Academy of Sciences on the 23d of August 1749, by M. Passemant, the author of the calculations of the sphere. The gentlemen of the Academy, from the report of Messrs. Camus and Deparcieux, the committee named for the examination of this clock, certified that the revolutions of the planets were exact in it; as they did not find a degree of difference from the astronomical tables in mere than 3000 years. Dauthiau, the clock maker who constructed this machine, employed twelve years upon it. It was presented to the king at Choisy, on the 7th of September 1750. His majesty testified his approval of it, and ordered a new case to be made for it after a design of his own choice. It is now at 'ersailles.

The sphere represents from day to day the dif- ferent motions of the planets round the sun, viz. of Saturn, Jupiter, and Mars, the Earth, Moon, A'enus, and Mercury, also their places in the zodiac, their configurations, stations, and appa- rent retrogradations with respect to the earth. Upon every circle which carries the orb of a planet is engraven the time of its revolution round the sun. The earth, during its annual revolution, makes its movement of parallelism, and the spectator views the sun passing through the signs and degrees of the zodiac ; also through the months and their lesser divisions of time, indicating the seasons, the equinoxes, and sol- stices ; besides it makes a rotation in twenty-four hours, being divided by twenty-four meridian lines : it has likewise a map of the principal places of the globe; so that the rising, setting, and meridian passage of the sun, together with its different elevations, and the continuance of day and night, may be seen for every principal place. The moon finishes her revolution round the earth in 29d. 12h. 44mi. Ssec, during which time are indicated her age and different phases ; her progress through the sines of the zodiac ; her nodes,

her eclipses, and those of the sun with precision, viz. their place, size, and duration ; besides the various altitudes, the time of rising, setting, and southing.

The clock beats seconds, which are indicated in the centre of the dial-face by a dead-beat es- capement of a particular construction. This clock effects the equation by itself, by showing both apparent and mean time ; it strikes the hours and the quarters of solar time, which it will repeat at pleasure. The movement of the striking part is by a spring, fusee, and chain ; that of the clock by a weight of twenty pounds doubly sus- pended, which has a descentof eight inches in six weeks, and the goine is not interrupted by wind- ing up the weight. The pendulum rod consists

of bars of steel and brass, adjusted so as to keep the metallic ball always at the same distance from the pomt of suspension by the difference of their expansions ; and by this difference a hand is made to point out the variation of temperature on a divided circle on the top of tlie rod, which forms a natural thermometer by the sole actions of metals.

On the front of the clock, over the face, is a planisphere marking the age and phases of the moon ; m which are besides the day of the week, the names and days of the month and year ; and though some months have twenty-eight, thirty, and thirty-one days each, yet the clock makes February to have twenty-nine dajs every fourth year for bissextile. The mechanism for showing the days of the year will point them out for 10,000 years by means of four indexes, revolving respectively in ten, 100, 1000, and 10,000 years. In this clock and sphere are three contrivances for disengagement : the first for the escapement, the second for the sphere to be detached from the clock work to move by a handle ; and the third for detaching the diurnal motion of the earth ; and the planets may have a quick motion by means of a corresponding handle. Thus the different portions may be disengaged from each other to make the necessary rectifications. The number of wheels and pinions employed in this mechanism amounts to sixty, some of which are in the interior part of it ; the diameter of the sphere is one foot, and is surrounded by a cover of glass ; the case ofthe clock is gilt with four faces, having glass covers neatly designed, well finished, and so exposed to view that all the mechanism may be see,n. The whole height from the top of the spheie is seven feet. According to the report of Antide Janvier, who was employed to repair this instrument previously to its being placed in the gallery of the thuilleries at Paris, the following are the numbers of the wheels and pinions, which are

put down according to his method of noting them, and also their respective values in time.

The periodic revolution of the moon from a motion of forty-eight hours. Pinions,72-25-20-41-20>_ , ., .ˆ,,□□□ ,□□□,. Wheels, 75- 54- 44- 31- 73 5 ” ^^,^^ ^^,^ ^^^,^^ Revolution of Mercury from a motion of twenty-seven days seven hours, &c.

W^“T ;\SJi-87d.23h. U’lyoe”’ Wheels 84- 101 S Annual revolution of the Earth from a motion of eighty-seven days twenty-three hours, &c. Pinions 8 35- 83 > ..gˆj ^^_ ˆg, ˆg”. 3”’ Wheels 43 44- 51 S Revolution of 'enus from a motion of 365 days five hours forty-eight minutes. Sec.

Sl?’□□f fo lo \ = 2-24d. 16h. 40′ 30″ Wheels 42- 59 S

Revolution of Mars from a motion of 365 days

five hours forty-eight minutes, &:c.

Pinions 53- 75 | _ _ 32^^^g. 32′ 11″

\ heels 84- 89 S □□□’ Revolution of Jupiter from a motion of 365 days five hours forty-eight minutes, &c.

SiuˆT .1′ tt \ – lly- 312d. 22h. 28′ 0″ Wheels 49- 98 S ˆ

Revolution of Saturn from a motion of 365 days

five hours forty-eight minutes, &c

*Pinions 7- 40) □□□f, ˆ ,ˆ , -□□□, .c’ *,ˆ’*

Wheels 80-103 J = 29y. 156d. 12h. 46 40

Revolution of the Moon, with respect to the nodes, from a motion of twenty-nine days twelve hours forty-four minutes three seconds. Pinions 50- G7 > _ □□□_, ,, ., _□□□, Wheels 49- 63 \ ” ^^d- 5h. 5 36 ‘ It may be asked,’ says Janvier, in a note to his report, ‘ where is the revolution of twenty-niue days twelve hours forty-four minutes three seconds which gives motion to this last movement, it being not contained in the preceding statement ; but we have seen the periodic revolution, which con- sists of the time which the moon goes round the heavens ; that interval, we know, is shorter than a synodic revolution ; but this (synodic) revolu- tion has no real existence, but by means of the earth’s change of situation, whose orbit carries a wheel immoveably fixed at the centre of the moon’s orbit, round which the moon revolves really in twenty-nine days twelve hours forty-four

minutes three seconds ; it is this wheel, then, which giˆ‘es motion to the wheel-work which represent the eclipses with great accuracy. The last wheel of this movement carries a small dial plate, on which the moon shows her position with respect to her node ; this dial carries besides an eccentric piece, which marks the moon's place below and above the plane of the ecliptic within the limits of her greatest latitude.'

The artificial globe serves as a useful instru- ment for determining, in a rough manner, \ˆith- out calculation, the arrangement of the heavenly bodies at particular times ; their places being first ascertained from tables, or, in the case of the sun, merely from a scale of the globe's hori- zon, or on its surface. We have only to adjust the elevation of the pole of the globe in such a manner that its axis may form the same angle with its horizon, as the axis of the earth does with the real horizon of !he place; then, finding a point on its surface corresponding to the place of the sun or planet, we may represent its ap- parent motion by the motion of this point, and the time occupied by that motion will be sho\ˆ n by the index of the globe : thus we may find the length of the day and night, and the time and place of rising and setting, and, by means of a graduated circle perpendicular to the hori- zon, we may measure the altitude of the sun or planet at any other time, and also its azimuth or the distance of this circle from the north or south point of the horizon, li we have a ring of any kind parallel to the horizon, and 33′ be- low it, we may consider this ring as the appa- rent horizon, allowing for the effects of refraction; if it be still 15′ or 16′ lower, it will represent the rising or setting of the extreme margin of the sun or moon. We might also have a circle about 1►► above either of these which might represent the sensible apparent horizon with regard to the moon, including the correction for her parallax ; and a similar ring, placed still lower, would show the duration of twilight, or any supposition that might be formed respecting the depression of the sun required for producing total darkness. By means of the celestial globe the apparent motions of the fixed stars may be represented in a manner nearly similar, proper

attention being paid to tlie situation of the sun in the ecliptic, as determining the corresponding time.

Many of these operations may also be per- formed with equal convenience with a plani- sphere, whicli is a stereographical projection of the globe on a plane surface. Professor Bode's planisphere comprehends in one view all the stars that are ever visible at Berlin : he has added to it a movable circle, representing the horizon of that place, carrying with it tlie circles of altitude

and azimuth, delineated on a trans- parent paper, which is adjusted, by graduations at the margin of the chart, to the day and hour for which he wished to ascertain the apparent place of the heavenly bodies. Any other chart of the .stars, having the pole in its centre, may be applied to a similar use by cutting out a circle, or part of a circle, to represent the horizon of a place of which the latitude is given ; and, if the stars are projected as is usual on two equal charts, they must have two equal arcs to repre- sent the respective parts of the horizon belonging to them.

The common orrery or planetarium is de- scribed in our article Astronomy. A large brass frame is so contrived as to contain twelve wheels and pinions, actuating one another respectively m such a way as to produce the mean motions of the six primary planets, that have been long discovered, of which our earth is one. There is a revolving arbor, pivotted into holes made in the upper and lower parts of the frame, and is made to revolve by means of an endless screw, acting with the lowest wheel of 83 teeth, which is made fast to it, as are also the five other wheels

and pinions with the number of teeth specified in the figure. There is also an upright stem of steel wire, screwed fast into the lower plate, and ascending through a large hole made in the up- per plate, which it does not fill. The six wiieels revolving round this stem have each a separate tube, to tlie inferior end of which they are ic- spectively attached ; and the tubes are so con trived that the exterior surface of the innermost forms a stem for the bore of the next largest, till all the six are fitted one within another round the stem of steel, which keeps them in a vertical position while tliey revolve separately with dif- ferent velocities. The large arbor, which receives its motion from the handle by the medium of the endless screw, is assumed as revolving in a year, which may either be civil, sidereal, or tropical ; but, whichever be the period assumed, the pairs of wheels that act together respectively will be so jnany fractions of that period. Thus, the lowest wheel of 83 teeth, on the annual arbor, will drive its fellow 20 with its tube round in f►► of a year, and the little arm that is fixed by friction on its superior end will perform a revolution round the sun in the same time. In like manner, the period of Venus will be performed in ?►► of the year ; the earth in fg or one year ; Mars in |g ; Ju- piter in i' ; and Saturn in ˆi" ; the driving wheels being the denominators of the fraction, and the driven ones the numerators, agreeably to our di- rections, given under the article Clock Work, for computing the value of wheel-work acting in this simple manner.

If we assume an exact solar year as the period of the first moving or driving wheels, then the fraction will produce the period subjoined, viz.

Mercury will revolve |g of 265, 342, &c or

Vˆenus . ◆◆◆ U ◆◆◆

Earth . ◆◆◆ i .

Mars . ◆◆◆ ip .

Jupiter . , f .

Saturn . . ‘f .

d.

h.

m.

s.

88

0

14

24

224

18

20

9

365

5

48

48

684

19

52

19

4330

17

30

3

10738

2

54

43

[f these periods be compared with the true periods, already fidly adverted to, it will be seen that the mean motions produced by this simple mechanism are far from being accurate ; and the errors, by continual accumulation, will be- come sensible in a comparatively short spac-e of time; but where general representation only is aimed at, and the respective times of the pheno- mena exhibited by the planetarium are disre- garded, this is the cheapest and simplest construc- tion of a planetary machine that has yet been devised : and, where its imperfection can be dis- pensed with, its simplicity is no small recom- mendation. Still, however, the true places of the planets, depending on the equator as well as mean motions of these bodies, are not the places indicated by this planetarium, supposing its mean motions ever so accurate ; nor are the motions of the five recently discovered planets attempted to be exhibited, which they misht be by addi- tional wheel-work, without altering the construc- tion of the machine. For the use of those who are satisfied with the representation of mean motions only, we beg leave to suXVT.

revolutions of these five diminutive bodies also. Let |►► be taken for Vesta, || for Juno, and l^ for both Ceres and Pallas, with one tube only for these two pairs ; and these wheels, acting in the same way that has been describing, will give the mean revolutions with as much accuracy as the present state of our knowledge of the motions of these little bodies will allow. The planet ller- schel would require f for its long period, whicii numbers are impracticable in a small machine ; but for this planet a train might be substituted, such as will be described as forming a part of the following machine. When a planetarium of this common construction is fitted up, its ap- pendages are usually alunarium and tellurium, separately adapted to the same stand, but in those the annual and lunar trains are

never free from considerable errors.

The late Mr. Ferguson's ingenious orrery may be thus described, without reference to a plate.

This machine shows the motions of the Sun, JNIercury, \ enus. Earth, and moon ; and occa- sionally the superior planets, INIars, Jupiter, and Saturn, may be put on ; Jupiter's four satellites are moved round him in their proper times by a

small winch ; and Saturn has his five satellites, and the ring which keeps its parallelism round the Sun.

In the centre is a brass ball, representing the Sun, supported by its axis, inclining almost 8►► from the axis of the ecliptic, and turning round in twenty-five days and a quarter on its axis, of which the north-pole inclines towards the 8►► of Pisces in the great ecliptic beneath, whereon the months and days are engraven over the signs and degrees in which the sun appears, as seen from the earth, on the difterent days of the year. The nearest planetary body to the sun is iler- cury, which goes round him in eighty-seven days twenty three hours, or 87|i diurnal rota- tions of the earth ; but has no motion round its axis in the machine, because the time of its diurnal motion in the heavens is not known to us.

The next known planet in order is Venus, which performs her annual course in 224 days seventeen hours, and turns round her axis in twenty-four days eight hours, or in twenty-four and one- third diurnal rotations of the earth. Her axis mclines 75►► from the axis of the eclip- tic, and her north-pole inclines towards 20►► of Aquarius, according to the observations of BiaiT>- chini.

The next without the orbit of Venus is the earth, which turns round its axis, to any fixed point at a great distance, in twenty-three hours fifty-six minutes four seconds of mean solar time, but from tlie sun to the sun again in twenty-four hours of the same time. There is a sidereal dial- plate under the earth ; and also a solar dial- plate on the cover of the machine. The index of the former shows sidereal, and of the latter solar time ; and hence the former index gains one entire revolution on the latter every year, as 365 solar or natural days contain 366 sidereal days, or apparent revolutions of the stars. In the time that the earth makes 365 i- diurnal

rotations on its axis, it goes once round the sun in the plane of the ecliptic, and always keeps opposite to a moving index, which regularly shows the sun's apparent daily change of place, and also the days of the months.

The earth is half covered with a black cap, for dividing the apparently enlightened half next the sun from tlie other half, which, when turned away from him, is in the dark. The edge of the cap represents the circle bounding light and darkness, and shows at what time the sun rises and sets to all places throughout the year. The earth's axis inclines 23 1►► from the axis of the ecliptic ; the north-pole inclines towards the be- ginning of Cancer, and keeps its parallelism throughout its annual course; so that in summer the northern parts of the earth incline towards the sun, and in winter from him ; by which means the different length of days and nights, and the cause of the various seasons, are demon- strated to the sight.

There is a broad horizon, to the upper side of which is fixed a meridian semicircle in the north and south points, graduated on both sides from the horizon to 90►► in the zenith, or vertical point. T!ie edge of the horizon is graduated from the east and west to the south and north points, and

within these divisions are the points of the com- pass. From, the lower side of this thin horizon- plate stand out four sm.all wires, to which is fixed a twilight circle 18►► from the graduated side of the horizon all round. This horizon may be put upon the eartii (when the cap is taken away), and rectified to the latitude of any place ; and then, by a small wire, called the solar ray, which may be put on so as to proceed directly from the sun's centre towards tiie earth's, hut to come no further than almost to touch the horizon, the beginning of twilight, time of sun-rising, with its amplitude, meridian altitude, time of setting, amplitude then, and end of twilight, are shown for every day of tlie year at that place to which the horizon is rectified.

The moon is seen to go round the earth, from between it and any fixed point at a great distance, in twenty-seven days seven hours forty-three minutes, or through all the signs and degrees of her orbit, which is called her periodical revolu- tion ; but she goes round from the sun to the sun again, or from change to change, in twenty- nine days twelve hours forty-five minutes, which is her s\ nodical revolution ; and in that time she exhibits all the phases already described.

When the above-mentioned horizon is rectified to the latitude of any given place, the times of the moon's rising and setting, together with her amplitude, are shown to that place, as well as the sun's ; and all the various phenomena of the harvest moon are made obvious to sight.

The moon’s orbit is inclined to the plane of the ecliptic, one-half being above and the other below it. The nodes or points are made to lie in the plane of the ecliptic, and shift backward through all its signs and degrees in eighteen years and two-thirds. The degrees of the moon’s latitude, to the highest at N. L., north latitude, and the lowest at S. L., south latitude, are en- graven both ways from her extreme nodes ; and, as the moon rises and falls in her orbit according to its inclination, her latitude and distance from her nodes are shown for every day ; having first rectified her orbit, so as to set the nodes to their proper places in the ecliptic, and then, as they come about at different and almost opposite times of the year, and point twice towards the sun, all the eclipses may be shown for hundreds of years (widiout any new rectification), by turn- ing the machinery backward for time past, or for- ward for time to come. At 17►► distance from each node, on both sides, is engraved a small sun, and at 12►► distance a small moon, which show the limits of solar and lunar eclipses; and when, at any change, the moon falls between either of these suns and the node, the sun will be eclipsed on the day pointed to by the annual index, and, as the moon has then north or south latitude, one may easily judge whether that eclipse will be visible in the northern or southern hemisphere, especially as the earth’s axis inclines towards the sun or from him at that time. And when, at any full, the moon falls between either of the little moons and node, she will be eclipsed, and the annual index shows the day of that eclipse. There is a circle of twenty-nine and a half equal parts, on the cover of the machine, on which an index shows the days of the moon’s age.

A semi-ellipsis and semi-circle are fixed to au elliptical ring, which, being put like a cap upon the earth, and the forked part upon the moon, shows tlie tides as the earth turns round within them, and they are led round it by the moon. When the different places come to the semi- ellipsis already described, they have tides of flood ; and, when they come to the opposite semicircle, they have the tides of ebb; the index on the hour circle showing the times of these phenomena.

There is a jointed wire, of which one ei.d being put into a hole in the upright stem that holds the earth’s cap, and the wire laid into a small forked piece which may be occasionally put upon 'enus or Mercury, shows the direct and retrograde motions of these two planets, with their stationary times and places, as seen from the earth.

The whole machinery is turned by a large winch or handle, and is so easily moved that a clock might turn it without any danger of stop- ping.

To furnish a plate of the wheel-work of this machine would answer no purpose, because many of the wheels lie so behind others as to hide them from sight in any view whatsoever.

Simple as this apparatus may at first view ap- pear, it is sufficiently accurate for furnishing a general notion of the arrangement of the pla- netary bodies and the phenomena of the seasons. It may be proper to add, that the vertical orre- ries of Bartlet and Walker are constructed on nearly similar principles.

OR'RIS, 11. s. Lat. orris. A plant.

Or'ris, n. s. Fr. orris; Lat. aureus. A kind of gold lace.

ORSI (Francis Joseph), a learned cardinal, born in Tuscany, and raised to the purple by Clement XIII. He wrote an Ecclesiastical History, in 20 vols. 4to.

Orsi (John Joseph), an ingenious philologer and poet, born at Bologna in 1652. He studied polite literature, philosophy, the civil law, and mathematics. His house was a kind of academy, where many persons of literature regularly as- sembled. He wrote many ingenious sonnets, pastorals, and other works, in Italian, and died in 1733. – -.

ORSKAIA, a town of Asiatic Russia, in the government of Orenboiwg, on the side on which the town of Orenbourg was originally built. It is distinguished by two forts of earth, near the Or, one of which is built upon a rock of jas- per, of fine quality. A number of indifferent houses are built round the forts. The Asiatic caravans usually pass the Oural in their way to Orenbourg, near this place. 132 miles east of Orenbourg.

ORT, n. s. Scot. art. Plural Orts, in which form it chiefly occurs. According to Skinner, from Germ, ort, the fourth part ; to Mr. Lye, from Irish orda, a fragment. Dr. Johnson adds, ' In Anglo-Saxon ord signifies the beginning ; whence in some provinces odds and ends, for ords and ends, signify remnants, scattered pieces, refuse ; from ord thus used probably came ort. Mr. Thomson refers us with yet greater proba- bility to the Sax. o\>ep. a'rs, over feedings. Waste food ; refuse; something left or thrown away.

He must be taught and trained, and bid go forth ;

A barren-spirited fellow, one that feeds

On abject oris and imitations. Shakspeare.

The fractions of her faith, nrts of her love, The fragments, scraps, the bits, and greasy reliques Of her o'er-eaten faith, are bound to Diomede. Id. j \Iuch good do't you then ;

Brave plush and velvet men

Can feed on orts, and safe in your stage-cloths,

Dare quit, upon your oaths,

The stagers, and the stage-wrights too.

lien Jonson.

Like lavish ancestors, his earlier years Have disinherited his future hours, ˆVhich starve on orts, and glean their former field.

Young.

ORTEGIA, a genus of plants of the class tri- andria, and order monogynia; natural order twenty-second, caryophylleae.

ORTELIUS (Abraham), a celebrated geogra- pher, born at Antwerp, in 1527. He was well skilled in languages and mathematics, and ac- quired such reputation by his skill in geography that he was called the Ptolemy of his time. He resided at Oxford in the reign of Edward VL, and came a second time into England in 1577. He was the author of several excellent astrono- mical and geographical works. He died at Antwerp in 1598.

ORTHITE, from Gr. opOog, right, is the name of a mineral so called because it always occurs in straight layers, generally in felspar. It re- sembles gadolinite, and, according to the analy- sis of Berzelius, consists of peroxide of cerium 19-5, protoxide of iron 12-44, protoxide of man- ganese 3-44, yttria 3-44, silica 32-0, alumina 14-8, lime 7-84, water 5-36. It is found in the mine of Finbo, in the vicinity of Falilum in Sweden. The mine is situated in a vein of gra- nite which traverses gneiss.

ORTHODOX, adj. ˆ Gr. op9og, and

Or'thodoxal, >co(C►►w, to think.

Orthodoxy, ii. s. j Sound or right in

opinion : applied sometimes collectively to par- ties. Supposed to be so as in the phrase ' the orthodox :' orthodoxy is soundness of doctrine or opinion.

Be you persuaded and settled in the new pro- testant religion professed by the church of England, which is as sound and orlliodox in the doctrine thereof as any Christian church in the world.

Bacon.

The doctrine of the church of England, expressed in the thirty-nine articles, is so soundly, and so ortlwdiulif settled, as cannot be questioned without extreme danger to the honour of our religion. Id.

Eternal bliss is not immediately superstructed on the most orthodox belief ; but, as our Saviour saith, If ye know these things, happy are ye if ye do them ; the doing must he first superstructed on the knowing or believing, before any happiness can be built on it.

Hammond.

Origen and the two Clemens's, their works were originally ortlwdox, but had been afterwards corrupted, and interpolated by hereticks in some parts of them.

Waterland.

Basil himself bears full and clear testimony to Gregory's orthoduxii. Id.

An uniform profession of one and the same ortho- doxal verity, which was once given to the saints in the holy Apostles' days. White.

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I do not attempt explaining the mysteries of the X!ˆhristian religion ; since Providence intended there should be mysteries, it cannot be agreeable to piety, orthodoxu, or good sense, to go about it. Swift.

OR'fHOUROMICKS,n. s.) From oqOoc Or'tuodromy, n. s. i and cctofiog.

The art of sailing in the arc of some great circle, which is the shortest or straightest distance be- tween any two points on the surface of the globe.

OR'THOGON, n. s. } Gr. op9oQ and yovia, Orthoo'oxal. \ an angle. A right-

angled figure; rectangular.

The square will make you ready for all manner of compartments ; your cylinder for vaulted turrets and round buildings ; your orthcgoji and pyramid, for sharp steeples. Peacham.

OR'THOGRAPHER, 71. s.ˆ French orˆAo-

Orthograp'hical, cc/;'. 9 graphic ; Greek

Orthograph'ically, adv. t opOoc and yoa-

Orthog'raphv, n. s. J

delineate. One who writes or spells a word

correctly : orthographical is, rightly spelled : or-

tliography, that part of grammar which teaclies

to spell words correctly ; the practice of so doing ;

also the delineation of a buildmg, particularly

Its elevation.

He was wont to speak plain, like an honest man and a soldier ; and now he is turned orthographer, his words are just so many strange dishes.

Sliakspeare.

This would render languages much more easy to be learned, as to reading and pronouncing, and es- pecially as to the writing them, which now as they stand we find to be troublesome, and it is no small part of grammar which treats of orthography and right pronunciation. Holder.

I received from him the following letter, which, after having lectified some little orthoyraphirul mis- takes, I shall make a present of to the public.

Addison's Spectator.

In the orthographical schemes there should be a true delineation and the just dimensions of each face and of what belongs to it. Mortimer.

You have the orthography or upright of this ground plot, and the explanation with a scale of feet anj inches. 3Io.ron.

In London they clip their words after one mannei about the court, another in the city, and a third in the suburbs ; all which, reduced to writing, would entirely confound orthography. .Sui/i.

Orthographical Projection of the Spherf., that wherein the eye is supposed to be at an infinite distance ; so called, because the perpendiculars from

any point of the sphere will all fall in the common intersection of the sphere with the plane of the projection. See Geogra- phy and Maps.

Orthography is that part of grammar which teaches the nature of letters, and is one of the four great divisions of grammar. See Grammar.

Orthography, in geometry, the art of draw- ing or delineating the fore right plan of any ob- ject, and of expressing the heights or elevations of each part. It is called orthography on ac- count of its determining objects by perpendicular lines falling on the geometrical plane.

ORTHOTNOEA, n. s. Gr. ooOoTriˆoia ; Fr. orthopn'ce. A disorder of the lungs, in which

ORT

respiration can be performed only in an upright posture.

His disease was an asthma oft turning to an or- tliopnxa ; the cause a translation of tartarous hu- mours from his joints to his lungs. Hurveiˆ.

Orthopnoea is a species of astlmia, where there is such a difficulty of respiration that the patient is obliged to sit or stand upright in order to be able to breathe. See Medicine.

ORTIIUS, in mytholog)', a dog which had two heads. lie was the son of Typhon and Echidna, and the brother of Cerberus and the Hydra. He was kept by Geryon, and killed by Hercules.

ORTIV'E, in astronomy, is the same with eastern. The ortive or eastern amplitude is an arch of the horizon intercepted between tlie place where a star rises, and the east point of the ho- rizon, or point where the horizon and equator intersect.

ORTOLAN, n. s. Fr. ortolan ; Ital. horto- luno ; from Lat. fiurtus. A very delicate and scarce little bird.

Nor ortolans nor godwits.

Cowley,

Ortolan. See Emberiza.

ORTON (.Tob), a celebrated nonconformist, was born at Shrewsbury in 1717. He was edu-" cated at the free-school of his native place, and under Ur. Doddridge, whose assistant he after- wards became. In 1741 he became minister of the Independent congregation at Shrewsbury; but in 1765, his

health being in a delicate state, he was obliged to desist from preaching. He now fixed his residence at Kidderminster, and passed his time in various literary occupations until his death in 1783. Though Mr. Orton re- ceived the degree of doctor in divinity several years previous to his death, he never would be addressed by that title. His principal works are Memoirs of Dr. Doddridge; Christian Zeal, three Discourses ; Discourses on Eternity ; Re- ligions Exercises ; Christian Worship, three Discourses ; Sacramental Meditations ; Summaiy of Doctrinal and Practical Religion ; Exposition of the Old Testament ; Discourses to the Aged ; Letters to a young Clergyman, &:c.

Orton, a market town of Westmoreland, eight miles S.S.W. of Appleby, and 276 from London. Its church is an extensive ancient building, with an old tower steeple, and there are two free schools in this town. Market day Wednesday.

ORTONA-A-MARE, a town and bishop's see of Naples, in the Abruzzo Citra, situated on a hill on the coast, between the Pescara and Sangro. It has a cathedral, with several other churches and convents, and its environs produce wine. It has a small harbour. Inhabitants 5700. Fifty miles east of Aquila, and 100 north of Na- ples.

ORTYGIA, the birth place of Diana, was a beautiful grove of trees of various kinds, chiefly cypresses, near Ephesus. This place was filled with shrines and images. The priests of' the goddess were eunuchs, and greatly respected by the people. A general assembly was held there yearly, and splendid entertainments were pro- vided, and mystic sacrifices solemnised. Tlie

Cenchrius ran through it; and above it was the mountain Solmissus. But the birth-place of Diana and its sanctity are now forgotten, and the groves and buildings which adorned it ap- pear no more.

Ortygia, an island of Sicily, in the bay of Syracuse, which formed one of the four quarters of that great city. In this island the celebrated fountain Arelhusa arose.

ORV'IETO, a town in the States of the Church, Italy, situated on a steep hill. It is sixty miles N. N. W. of Rome, at the confluence of the Paglia and Chiana, and is the see of a bishop. The cathedral is a fine Gothic edifice,

and contains some good sculptures and paintings. The only public institution worth notice is a col- lege of Jesuits. Inhabitants 7000.

OllXTLLE (James Philip), a learned critic, born at Amsterdam, of French parents, in 1696. He travelled into England, France, and Ger- many; and on his return, in 1730, he was made professor of history, eloquence, and Greek ; but resigned in 1742. He wrote several learned dis- sertations in the Observationes Miscellaneas, r. work of deep erudition. He died in 1743.

ORUIKJ, a bleak but fertile province of Pera, bounded on the nortii by the province of Sica- sica, east by Cochabamba, south and south-east by Paria, and west and north-west by Pacajes. It is very subject to tempests, and has numerous herds of cattle and Peruvian camels. It formerly had silver mines of considerable value, which are now in a great measure filled with water. In 1796 one individual obtained, we are told, even by the imperfect mode of amalgamation in use, a considerable gain from the residuum thrown away. Population 8000.

*ORWELL, a river of England, which rises in the middle of Suffolk, where it is called Gip- ping; passes by Stow, Needham, and Ipswich, where it is named Ipswich W ater, and, uniting
ॡ with the Stour from iVIanningtree, forms the fine harbour of Harwich. See Hauwich.*

ORYX, in zoology. See Capra.

ORYZA, rice, in botany, a genus of the di- gynia order, and hexandria class of plants, natu- ral order fourth, graraina: cal. a bivalved uni- florous glume: cor bivalved, nearly equal, and adhering to the seed. There is but one species, viz.

O. sativa, common rice. This plant is greatly cultivated in most of the eastern countries, where it is the chief support of the inhabitants ; and great quantities of it are brought into England and other European countries every year, as it is too tender to be produced in these northern countries without the assistance of artificial heat. It grows upon moist soils, where the ground can be flowed over with water after it is come up. So that whoever would cultivate it in this coun- try should sow the seeds upon a hot-bed ; and, when the plants are come up, they should be removed into pots filled with light rich earth, and placed in pans of water, which should be plunged into a hot-bed ; and, as the water wastes, it must from time to time be renewed. In July these plants may be set abroad in a warm situa- tion, still preserving the water in the]ians, other- wise they will not thrive; and, toward the end

of August, they will produce their grain, which wilt ripen tolerably well, provided the autumn proves favorable. The leaves of rice are long, like the reed, and fleshy ; the flowers blow on the top like barley: but the seed

which fol- lows is disposed in clusters, each of which is enclosed in a yellow husk, ending in a spiral thread. The seed is oblong, or rather oval, and white. Hasselquist gives the following descrip- tion of the manner in which the Egyptians dress and separate it from the husks : ••• ' It is pounded by hollow iron pestles of a cylindrical form, lifted up by a wheel worked by oxen. A person sitting between the two pestles pushes forward the rice when the pestles are rising ; another sifts, winnows, and lays it under the pestles. In this manner they continue working it until it is entirely free from chaff' and husks. When clean they add a thirtieth part of salt, and pound them together ; by which the rice, formerly gray, be- comes white. After this purification, it is passed through a fine sieve to part the salt from the rice ; and tlien it is ready for sale.' See Rice.

OSACCA, a large city of Japan, and the port town of Meaco. It is situated at the head of a bay of this name, at the moutli of a considerable river, and is one of the most flouris-hing places in the empire. In the neighbourhood is an earth of a beautiful orange color, which is ex- ported to all parts of Japan, for covering the houses. Twenty-five miles south-west of Meaco.

OSAGE, a river of Louisiana, whicli joins the Missouri, 133 miles from the Mississippi. It is very crooked, and navigable for boats about COO miles.

OSBORN (Francis), an eminent English writer in the seventeenth century. He frequented the court, and was master of the horse to ˆVilliam earl of Pembroke. Upon the breaking out of the civil wars, he adhered to the parliament, and had several public employments conferred upon him. In the latter part of his life he lived at Oxford, in order to print several books, and to look after his son, for whom, by the favor of the parliament, he procured a fellowship in All Souls College. His Advice to a Son being complained of to Dr. John Tenant, vice-chan- cellor of Oxford, as of irreligious tendency, it was ordered that no bookseller or others should sell it, which, as usual in such cases, only made it sell the faster. lie wrote also Historical Me- moirs of the Reigns of Queen Elizabeth and King James I. ; a Discourse on the greatness and cor- ruption of the Church of Ivome ; a Discourse upon IMachiavel, &c. He died in 1659.

OSCHEOCELE, n. s. Gr. oaxtov and (CJJX7. A kind of hernia when the intestines break into the scrotum,

OSCHOPHORIA, a festival observed by the Athenians. It receives its name, a-ro rov ˆooftv rag offˆaf, from carrying boughs hung up with grapes, called ouxat- Its original institution is thus mentioned by Plutarch in Theseus : ••• The- seus, on returning from Crete, forgot to hang out the white sail, by which his fother was to be a])prised of his success. Tliis neglect proved fatal to .Egeus, for he threw himself into the sea, and perished.

Theseus no soonei reached the land than he sent a herald to inform his father*

of his safe return, and in the mean time he began to make the sacrifices which he had vowt to make when he first set sail from Crete. The herald, on his entrance into the city, found the people in great agitation. Some lamented the king's death, while others, elated at the sudden news of the victory of Theseus, crowned the he- rald with garlands in token of their joy. The herald carried back the garlands on his staff to the sea shore ; and, after waiting till Theseus had finished his sacrifice, he related the melancholy account of the king's death. Upon this the people ran in crowds to the city, showing their grief by cries and lamentations. From this circumstance, therefore, at the feast of Oschophoria, not the herald, but his staff was crowned with garlands, and all the people that were present exclaimed eXtXiv, 18, i8, the first of which expresses haste, and the others a consternation or depression of spirits. The historian further mentions, that Theseus, when he went to Crete, did not take with him the usual number of virgins, but that, m the place of two of them, he took two youths of his acquaintance, whom he caused to pass for women, by disguising their dress, and by accustoming them to the ointments and per- fumes of women, as well as by a long and suc- cessful imitation of their voice. The imposition succeeded ; their sex was not discovered in Crete ; and, when Theseus had triumphed over the Minotaur, he, with these two young men led a procession, with branches in their hands, in the same habit, which was still used at the celebra- tion of the festival. The branches which were carried were in honor of Bacchus and Ariadne, or because they returned in autumn, when the grapes were ripe. Besides this procession, there was also a race in which young men only, whose parents were both alive, were permitted to engage. It was customary for them to run from the tem- ple of Bacchus to that of Minerva, which was on the sea-shore. The place where they stopped was called ogxo'popiov, because the boughs which they carried in their hands were deposited there. The reward of the conqueror was a cup called TTEvraTrXoa, five-fold, because it contained a mix- ture of five difterent things ; wine, honey, cheese, meal, and oil.

OSCI, an ancient people of Italy, who dwelt between Campania and the country of the Volsci, and assisted Turnus against iEneas. ††† Tacit. Ann. iv. c. 14.

OSCILLA, small images of wax or clay made in the shape of men or women, and consecrated to Saturn, to render him propitious. The word is sometimes used to signify a kind of masks scooped from the bark of trees, and worn by the performers of comedy in the ruder ages of Rome. In this sense we find it in Virg. Geo. ii. 386. It also signifies little heads or images of Bac- chus, which the countrymen of old hung upon trees, that the face might turn every way, out of a notion that the countenance of this god gave felicity to themselves, and fertility to their vine- yards. An allusion to this opinion and custom is also found in Virgil, Geo. ii. 388.

OSCILLA'TION, n. s. > Lat. oscillum. The

Oscilla'torv, (tdj. S act of moving back- nr.rds and forwards, or in the manner rf a pen- dulum.

The actions upon the solids are stimulating or in creasing their vibrations, or oscillatory motions.*

Arbuthnot.

OS'CITANCY, n. i. ˆ Lat. oscitatio.

Os'ciTANT, arf;. > Yawning; sleepiness;

Oscita'tion, n. s. j hence, carelessness : oscitation is the act of yawning.

Our oscitant lazy piety gave vacancy for them, and they will now lend none back again.

Decay of Pietij.

If persons of circumspect piety have been over- taken, what security can there be for our reckless oscitancy ? Government of the Tongue.

It might proceed from the oscitancy of transcribers, who, to dispatch their work the sooner, used to write all numbers in cyphers. Addison's Spectator.

I shall defer considering the subject till I come to my treatise of oscitation, laughter, and ridicule.

Tatler.

OSIANDER (Adam), chancellor of the uni- versity of Tubingen, published a work entitled Theologia Causalis ; a System of Casual Theo- logy ; containing the solution of dubious ques- tions and cases of conscience, six vols. 4to. Tubingen, 1682.

OsiANDER (Andrew), a Lutheran divine, born in Bavaria, in 1498. He studied at Wirtemberg, and became professor of theology at Konigsberg. He denied the doctrine of im.puted righteousness, which gave rise to a controversy between him and other Lutheran divines, and he died in 1532.

O'SIER, n. s. Fr. osier, vitex. Atree of the willow kind, growing by the water, of which the twigs are used for basket work.

The rank of osiers, by the murmuring stream, Left on your right hand brings you to the place.

S/takspeare.

Ere the sun advance his burning eye, I must fill up this osier cage of ours With baleful weeds and precious juiced flowers.

Car comes crowned with osier, segs, and weeds.

Drayton.

Bring them for food sweet houghs and osiers cut. Nor all the winter long thy hay-rick shut. May,

Like her no nymph can willing osiers bend, la basket works, which painted streaks commend.

Drydetit Along the marshes spread. We made the osier fringed bank our bed.

Pope.

Osier, in botany. See Salix.

OSIRIS, in mythology, one of the gods of ancient Egypt, and generally supposed to mean the sun, or the mind actuating that luminary. Macrobius says that, in the hieroglyphic writings of ancient Egypt, ' Osiris was represented by a sceptre and an eye,' to denote that this god was the sun looking down from heaven on all things upon earth. Some of the ancients, however, and a few of the most learned moderns, have con- tended that, by Osiris, the Egyptians understood the Nile, or spirit of the Nile, whilst others have confounded him with the Grecian Bacchus. But though the original Osiris was undoubtedly the sun, or the intelligence actuating the sun, yet there was a secondary Osiris, who was said to be the founder of the Egyptian monarchy ; and, as was customary in those days, having either re- ceived the name of the sun, or communicated his own to tjiat luminary, was after his deatli

deified for the beoefits wliich he had rendered lo his country ; and, being at first worshipped only as a demigod, was in process of time advanced to full divinity, and confounded with the sun. The Greeks, who, though original in nothing, were always prompted by tlieir vanity to hold themselves out as the first of the nations, claimed this Osiris as their own, and pretended that he was the son of Jupiter and Niobe. See Myste- ries.

OSMAN I., or Othman I., emperor of the Turks, succeeded his uncle 'Mustapha I., who was deposed in 1618. He marched against the Poles in 1621, with a great army; but, being re- peatedly defeated, concluded a disadvantageous peace, and returned home, where he v/as deposed by the janizaries, and Mustapha restored, who caused him to be strangled.

OSMIUM. A new metal lately discovered by Mr. Tennant among platina, and thus called by him from the pungent and peculiar smell of its oxide. For the mode in which he extracted it, see Iridium.

Its oxide may likewise be obained in small quantity by distilling with nitre the black pow- der left after dissolving platina ; when at a low red heat an apparently oily fluid sublimes into the neck of the retort, which on cooling con- cretes into a solid, colorless, semi-transparent mass. This, being dissolved in water, forms a concentrated solution of oxide of osmium. This solution gives a dark stain to the skin that can- not be effaced. Infusion of galls presently pro- duces a purple color in it, which soon after becomes of a deep vivid blue. This is the best test of the oxide. With pure ammonia it be- comes yellow, and slightly so with carbonate of soda. With lime it forms a bright yellow solu- tion ; but it js not affected either by chalk, or by pure magnesia. The solution with lime gives a deep red precipitate with galls, which is turned blue by acids. It produces no effect on solution of gold or platina; but precipitates lead of a yellowish-brown, mercury of a white, and mu- riate of tin of a brown color.

Oxide of osmium becomes of a dark color with alcohol, and after some time separates in the form of black films, leaving the alcohol with- out color. The same effect is prodliced by ether, and much more quickly.

It parts with its oxygen to all the metals ex- cept gold and platina. Silver, kept in a solution of it some time, acquires a black color, but does not deprive it entirely of smell. Copper, tin, zinc, and phosphorus, quickly produce a black or gray powder, and deprive the solution of smell, and of

the property of turning galls blue. This black powder, which consists of the metallic osmium, and the oxide of the metal employed to precipitate it, may be dissolved in nitro-mu- riatic acid, and then becomes blue with infusion of galls.

If the pure oxide dissolved in water be shaken with mercury, it soon loses its smell, and the metal forms a perfect amalgam. By- squeezing the superflous mercury through leather, and dis- tilling off the rest, a dark gray or blue powder is left, which is the osmium.

Exposed to a strong heat in a cavity in a piece

of charcoal, it does not melt ; nor is it volatile, if oxidation be carefully prevented. With cop- per and with gold it forms malleable alloys, which are easily dissolved in nitro-muriatic acid, and afford by distillation the oxide of osmium. The pure metal, previously heated, did not ap- pear to be acted upon by acids. Heated in a silver cup, with caustic alkali, it combined with it, and gave a yellow solution, similar to that from which it was procured. From tliis solution acids separate the oxide of osmium. ??? Fhiloso- phkai Tj-amactiona.

OSMUNDA, in botany, moon wort; a genus of the order of filices, and class cryptogamia. There are several species ; the most remarkable is the

O. regalis, osmund royal, or flowering fern. This is a native of Britain, growing in putrid marshes. Its leaf is doubly winged, bearing bunches of flowers at the ends. The root boiled in water is very slimy ; and is used in the north to stiffen linen, instead of starch. Some of the leaves only bear flowers.

OSNABRUCK, a province in the S. S. W. of Hanover, between the grand duchy of Olden- burg and Westphalia. Its form is an irregular oblong, having its length from south to north, and an area of about 920 square miles. The majority of the people are Lutherans, and the rest Catholics. Jews, by the old constitution, were not tolerated here. The peasants were long in a singular state of vassalage here, the proprietor of the soil sharing the property, at the father's death, with the children. A large pro- portion of this province consists of heath, and sandy eminences ; but the want of wood is sup- plied by turf'from the bogs, and the produce of the coal mines. Tlie chief corn raised is rye, oats, barley, and buck-wheat. Inferior hemp and flax are also raised ; and great quantities of the coarse linen, known by the name of Osna- burgs, are manufactured here. The see is of very remote antiquity, having been founded by Charlemagne. After the reformation, most of the inhabitants embracing the Lutheran faith, it was agreed at the treaty of Westphalia that the bishop should be alternately a

Catholic and a Lutheran, the chapter being left at liberty in their choice of the former, but limited in the election of a Protestant to the family of Bruns- wick-Luneburg. The Catholic bishop was ge- nerally an aged member of the chapter, and the Protestant a young prince; so that since 1648 the principality has been much longer subject to the house of Brunswick than to the Catholics. Neither party, however, were able to introduce any change, until, in 1802, it was agreed that the bishopric should devolve in perpetuity on the house of Hanover. It was annexed in 1807 to the kingdom of Westphalia, but restored to Hanover in 1814. T\e public revenue is be- tween ►►50,000 and ►►60,000. It is divided into six baliwics. Population 126,000.

OsN.ˆBuucK, or OsNABURG, the capital of the principality of this name, is situated on the river Hase. It" is divided into the Old and New town (both irregularly built), and surrounded with old walls and ditches, and entered by five gates. The best buildings are the cathedral and

town iioiise, in which was concluded the peace of Westplialia in 1648, at the same time as at Munster, Osnaburg being the place for the con- ferences of the Protestant ambassadors. The quarter called the Freyung is a favorite resort, and has a very pleasant promenade. Other public buildings are two Lutheran, and two Catholic churches, a Lutheran orphan house, four hospitals, a workhouse, and the Catholic and Lutheran gymnasiums. Here are manufac- tories of coarse woollen, leather, and tobacco ; several linen hleach-helds, and the Usnaburgs of the surrounding country are brought here to be measured and stamped. Two miles off is Ebers- burg, with a botanical garden containing some curious exotics. Inliabitants 9300. Seventy miles west of Hanover, and twenty-eight north- east of Munster. Long. 2=' 1′ 11″ E., lat. 52ˆ 16′ 32″ N.

OSORIO, or OsoRius (Jerom), was born of a noble family in Lisbon, in 1500. He was edu- cated at the university of Salamanca, and after- wards studied at Paris and Bologna. On his return to Portugal he gradually rose to the bishopric of Sylves, to which he was appointed by Catherine of Austria, regent in the minority of Sebastian. At the request of cardinal Henry, of Portugal, he wrote his History of King Emanuel, and the Expedition of Gama ; which his great contemporary Camoens made at the same time the subject of iiis immortal Lusiad. Osorius used many arguments to dissuade Se- bastian from his unfortunate e>.pedition into

Africa, and felt so deeply the miseries which be fell the Portuguese, after that fatal event, that his grief accelerated his death. He died in 1580. His various works were published at Rome in 1592, by his -nephew, in 4 vols, folio.

Osorius (Jerome), nephew of the preceding, was also a man of letters. He was canon of Evora, and wrote the life of his uncle, and se- veral theological works.

OS'PKAY, n. s. Lat. oasifragia, of which the word is a corruption. See Ossifiiage. The sea-eagle. Dr. Johnson, to explain the extract from Shakspeare, adds, ' of which it is reported, that when he hovers in the air, all the fish in the water turn up their bellies, and lie still for him to seize whicli he pleases.'

Among the fowls shall not be eaten, the eagle, the ossifrage, and tlie ospraij. Numbers, xi. 13.

I think he'll be to Rome, As is the osjirai/ to the fish, who takes it By sovereignty of nature.

Shakspeare. Coriolamts.

O^pray, or OspRFY. See Fai,co.

OSSA, a lofty mountain of Thessaly, near the Peneus, which runs between this mountain and (Jlympus ; famous in fabulous history as one of those which tlie giants piled up to flicilitate their attack on heaven. (Homer, 'irgil, Horace, Se- neca, Ovid). It was once the residence of the Centaurs, and was formerly joined to mount Olympus ; but Hercules is fabled to have sepa- rated them, and made between them the cele- brated valley of Tempe. This separation was probably effected by an earthquake which hap- pened about A. A. C. 188,5.

OSSAT (Arnauld de), born in the diocese of

Audi in 1336, of mean parentage, was taken notice of by a gentleman in the diocese, vvho made him study with his ward, the lord of Cas- tlenau de Magnoac. He studied the law at Dijon under Cujace, and applied himself to the bar at Paris. He was secretary at Home to M. de Foix, ai'chbishop of Thoulouse ; to cardinal Este ; and afterwards to cardinal de Joyeuse, by the French king's express command. After rising to the highest dignities, both in church and state, in 1599 he was created a cardinal by pope Clement VIII. He died in 1604. An eminent French writer gives him the following character: ❓❓❓ ' He was a man of great penetration ; applied himself so closely to business, and was so ju- dicious in forming his

resolutions, that it is almost impossible to find out one false step in the many negociations in which he was concerned.' His works, and especially his letters, have been much esteemed.

OS'SELET, n. s. ˆ Fr.osselet; dim. of Lat.

Os'sicLE, n. s. \ ossis, ossiculum. Osselet

Os'siFic, adj. is a term in farriery, for a

Ossification H.s. [ˆsmall hard substance that

Os'siFRAGE, w. s. T grows in a horse's knee

Os'siFY, V. a. among the small bones :

Ossiv'oKOUs, adj. ! ossicle is, a small bone :

Os'suARY, 72. s. J ossific, having the power

or tendency to make bone or bony substance :

ossification, act of growing into or becoming

bone : the ossifrage is a kind of eagle, so called

because reported to break the bones of its prey

for the marrow : to ossify is, to change to bone :

ossivorous is devouring bones : ossuary, a char-

nel or bone house

There are three very little bones in the ear, upon whose right constitution depends the due tension of the tympanum ; and if the action of one little muscle, which serves to draw one of these ossicles, fixed to the tympanum, be lost or abated, the tension of that mem- brane ceasing, sound is hindered from coming into the ear. Holder.

The bore of the gullet is not in all creatures alike answerable to the body or stomach : as in the fox, which feeds on bones, and swallows whole or with little chewing ; and next in a dog and other ossivorous quadrupeds, it is very large. Derham.

If the caries be superficial, and the bone firm, you may by medicaments consume the moisture in the caries, dry the bone, and dispose it, by virtue

of its ossijick faculty, to thrust out callus, and make sepa- ration of its caries. Wiseman.

Ossijications or indurations of the artery, appear so constantly in the beginnings of aneurisms, that it is not easy to judge whether they are the cause or the eflfect of them. Sharp.

The dilated aorta every where in the neighbour- hood of the cyst is generally ossijied.

Sharp's Stirgerii.

OSSIAN, a celebrated Celtic poet, who is supposed to have flourished about the end of the second or beginning of the third century, and to have been the son of Fingal a Caledonian chief. Little, however, is know n of him beside what is contained in those of his poems which were col- lected, translated, and published by Mr. M'l'her- son. Fingal is said to have commanded the Caledonians during the invasion of Severus , and it appears, from his poems, that, in one of his early expeditions to Ireland, Ossian had fallen in love with and married Evirallin, daughter 'i

Branno, petty king of Lego. This Evirallin brought him his sou Oscar, whose exploits he celebrates in many of his poems, and whose death he laments in the first book of Temora. Evirallin died some time before Oscar (Fingal. b. iv.), who seems to have been her only child ; and Ossian did not marry afterwards : so that hi.s posterity ended in tlie death of Oscar ; who seems to have died as he was about to be married to Malvina, the daughter of Toscar. This cele- Ijratod maid remained with her intended father-in- law while she lived, and paid him every attention which his age demanded. It is not certain at what age Ossian died ; but from his having been long blind with years, and from the many con- trasts between his present and past situation, in poems composed, as it would appear, at a con- sideral)le distance of time from each other, it is most likely he lived to an extreme old age. The current tradition is, that he died in the house of a ('uldee, called the Son of Alpin, with whom he is said to have held several conferences about the doctrines of Christianity. T!ie principal residence of Ossian was in the vale of C'ona, now Glenco, in Argyleshire. His poems relate many of his expeditions to Ireland, Scandinavia, Clyde, and Tweed or Tuetha. His exploits on these occasions, after making a large ailowancf^ for])oetical exaggeration, show him to have been no less a warrior than a poet. Such is

the brief amount of our knowledge respecting Ossian, and the authenticity even of these particulars ha: been disputed by men of the highest literary eminence. As the controversy that has arisen on the subject cannot be narrated with per- spicuity, without entering more minutely into de- tail than our plan will allow, we shall avoid it entirely. Dr. Hugh Blair in a private letter to Mr. William Morison, bookseller, Perth, dated Summerfield, 7tli October, 1800, gives the fol- lowing opinion upon it, entitled to considerable respect : ??? ‘ That Mr. M’Pherson may not have given an exact and scrupulous translation of all these poems : that he may have joined and col- lected scattered pieces into one, and have omitted some pieces that were in the original, is what I never called in question. But that they are not poems of his composing, but are really and truly in the substance of them genuine, original and ancient Gaelic songs, well known to many natives of the Highlands, is what, from innume- rable circumstances which I had access to trace, I am as fully convinced, and as certain of, as I can be of any thing under the sun.’ An Enquiry into the Authenticity of the Poems ascribed to Ossian, was first published by Mr. W. Shaw, author of a Gaelic grammar and dictionary, in 1781. He was answered by Mr. John Clarke, a member of the society of Scottish antiquaries, and a translator of Caledonian poetry. Mr. Laing more recently attacked the credit of the Ossianic poetry, and was opposed by Mr. Archi- bald Macdonald and Dr. Patrick Graham. See Report of the Highland Society, published by Henry M’Kenzie, Esq , and the pieces at- tached to tlie (jaelic poems, published as tlie originals of Ossian, with a literal Latin version, by Uobert M’larlan, A. M. 3 vols. 8vo. ‘

OSSIFICATION, in the aninnd economy, is

the formation of the bones, but more particularly the conversion of parts naturally soft to the hard- ness and consistency of bones ; as the blood of old men, which by a long course of circulation becomes in a manner unfit for the common office of nutrition, is apt to ossify, and convert into bones, many of the tendons and ligaments, and even the coats of the vessels themselves, whose substance being next to the bones the most com- pact, admits only of the smallest particles of the blood, which therefore soonest become osseous, as they are frequently found. Dr. Nesbit’s opinion of ossification is, that in the blood, or a fluid secreted from h, there is an ossifying juice, having particles which are not apparent : that, whenever nature designs an ossification between membranes, or within a cartilage, she occasions a more than usual afflux of this fluid; which so much dis- tends the vessels which were before invisible as to make them capable of receiving the red glo- bules of blood, which are always to be seen near to the place where ossification is begun. In this blood, gritty bony particles may be felt by the point of a knife, which have been formed by the attraction and cohesion of the particles oif” the ossifying juice obstructed,

along with other grosser fluid-;, in the beginning of the vessels prepiffed to receive refirtent juices.

OSSLNA, a large inland town of Audal-U?ia, Spain, in the province of Seville. It has a col- legiate church, fifteen monasteries and convents, and three hospitals. It had formerly a univer- sity, now suppressed, and is a place of great antiquity. In a military sense it possesses strength, principally from its neighbourhood being destitute of water, while in the town is a good spring, a circumstance which obliged Caesar, when he besieged it, to bring from a great dis- tance the provisions and water for his army. Inhabitants 15,000. Forty-eight miles east of Seville, and twenty-eight W. N^W. of Antequera.

OSTADE (Adrian 'an), an eminent Dutch paifiter, born at Lubec, in 1610. He was a dis- ciple of Francis llal.s. The subjects of this painter were always of the low kind, having the same ideas as Teniers ; but, though Ostade co- pied nature as it appeared in the lower class of mankind, yet there is so much spirit in his com- positions, such truth, nature, life, and delicacy of pencil, that, even while many of his objects are in some respects disgusting, a spectator can- not forbear to admire his genius and execution. His pictures are so transparent and highly finished, that they have the lustre and polish of enamel, being at the same time warm and clear. They have frequently a force superior to Te- niers, and are always more highly finished ; though it must be acknowledged that Teniers grouped his objects better, and showed more skill in the disposhion of his design than Ostade. He perfectly understood the principles of chiaro- obscuro, and introduced his lights and shadows with so much judgment that every figure seems animated ; it might, however, be wished that he had not designed his figures so short. His tone of coloring is exquisitely pleasing and natural; his touch light and wonderfully neat ; and throughout all his works tliere is a peculiar and uncommon transparency. The figures of Ostade

were so universally admired for their lively ex- pression, that several of the most eminent among his contemporary artists solicited him to paint the figures in their landscapes ; which at the present day contribute greatly to their value. His works are very scarce, especially those of his best time and manner ; and, when the genuine productions of Ostade are to be purchased, no price is accounted too exorbitant for them. This clever artist produced many etchings from his own designs tha are very deservedly

admired. He died in 1685, aged seventy-five.

OSTEN'SIBLE, adj. } Lat. ostendo. Pro- Osten'sive.) per, or intended, to be

shown.

His ostensible motive was the embarkation of the troops ; but it is more than probable that some un- derplot engaged his attention. Swift. OSTENT', n. s. ') Fr. ostentuteur ; Ostenta'tion, Lat. ostentum, os- Ostenta'tious, adj. ! tentatio. Show ; Ostentatiously, arfy. | manner ; portent; Ostenta'tiousness, n.s. omen ; appearance ; Ostenta'tour. J Shakspeare uses it for token or sign : ostentation is, outward show ; mere show or display ; ambitious or boastful display; all the other derivatives following this sense : ostentatour, a needless Gallicism for a boaster.

To stirre our zeales up, that admired, whereof a fact so cleane Of all ill as our sacrifice, so fearfuU an ostent, Should be the issue. Cha-pman.

Be merry, and employ your chiefest thoughts To courtship, and such fair ostents of love As shall conveniently become you there.

Shakspeare. Use all the observance of civility, Like one well studied in a sad ostent, To please his grandam.

Id. Merchant of J'enice. The king would have me present the princess with some delightful ostentation, show, pageant, antick, or firework. Shakspeare.

If these shows be not outward, which of you But is four Volscians 1 ००० March on my fellows ; IMake good this ostentation, and you shall Divide in all with us. Id. Coriolanus.

Latinus, frighted with this dire ostent, For council to his father Faunas went ; And sought the shades renowned for prophecy, Which near Albania's sulphurous fountain lie.

Drj/de7i. Your modesty is so far from being ostentatious of the good you do, that it blushes even to have it known ; and therefore I must leave you to the satis- faction of your own conscience, which, though a silent panegyrick, is yet the best. Id.

They let Ulysses into his disposition, and he seems to be ignorant, credulous, and ostentatious. Bruome.

If all these secret springs of detraction fail, yet a vain ostentation of wit sets a man on attacking an es- tablished name, and sacrificing it to the mirth

and laughter of those about him. Addison's Spectator.

AVith all licT lustre, now, her lover warms ; Then out of ostentation hides her charms. Yowig.

OSTEND, a fortified town of Belgium, in the province of West Flanders, contauung]0,.')00 inhabitants, and seated upon a harbour communicating with the north sea, and svheie the larg- est ships may enter at flood tide. Lat. 51►► 13′ N.

Lon. 2►► .55′ E. It communicates by canals witli Bruges and Ghent, on the east, and with Nieu- port, on the west. Regular post-office packets carry the mails backward and forward twice in each week, between Dover and Ostend. This place sustained a siege of three years against the Spaniards (1601 ►►► 1604), and capitulated finally on honorable terms. See Belgium.

OSTEOCOPE, n. s. i Fr. ostcocope ; Gr.

Osteol'ogy. 5 o?tov and kotctu).

Pains in the bones or surrounding membranes : osteology is a description of the bones, or the science that describes them.

Richard Farloe, well known for his acuteness in dissection of dead bodies, and his great skill in oste- ology, has now laid by that practice. Tatler.

Osteocolla, oTfOKoXXa, in natural historj', a white or ash-colored sparry substance, in shape like a bone. It is found in long, thick, and ir- regularly cylindric pieces, which are in general hollow, but are sometimes filled up with a marly earth, and sometimes contain within them the remains of a stick, round which the osteocolla had been formed ; but, though it is plain from thence that many pieces of osteocolla have been formed by incrustations round sticks, yet the greater number are not so, but are irregularly tubular, and appear to be formed of a flat cake, rolled up in a cylindric shape. The osteocolla is found of different sizes, from that of a crow- quill to the thickness of a man's arm. It is composed of sand and earth, which may be se- parated by washing the powdered osteocolla with water, and is found, both in digging and in several brooks, in many parts of Germany and else- where. It is called hammosteus in many parts of Germany. It has this name in these places from its always growing in sand, never in clay, or any solid soil, nor even in gravel. ^^ here a piece of it any where appears on the sur- face they dig down for it, and find the branches run ten or twelve feet deep. They usually run straight down, but sometmtes they are found spreading into parts near the surface, as if it were a subterraneous tree, w-hose main stem began at twelve feet deep, and thence

grew up in a branched manner till met by the open air. The main trunk is usually as thick as a man's leg, and the branches that grow out from it are thickest near the trunk, and thinner as they separate from it. The thinnest are about the size of a man's finger. The people employed to collect it, when they cannot find any mark of it on the surface, search after the specks of white, or little lumps of whitish soft matter, which they find lying in various parts on the top of the sand. These always lead them, either to a bed of perfect osteocolla, or to some in the formation. If they miss it, they still find a sub- stance like rotten wood ; which, when traced in its course, is found to proceed from a main trunk, at the depth of that of the osteocolla, and to spread itself into branches in the same man- ner. The diggers call this substance the flower of osteocolla or hammosteus. What the rotten substance resembling the decayed branches of trees is, we cannot determine, unless it really be such ; but the opinion of the common people, that it is the root of something, is absurd ; be-

cause its thickest part always lies at the greatest depth, and the branches all run upwards. The osteocolla is a marly spar, which concretes round this matter ; but what it is that determines it to concretes nowhere on the same ground but about these branches, it is difficult to say. The rottenness of this substance, which forms the basis of the osteocolla, renders it very liable to moulder and fall away ; and hence it is that we usually see the osteocolla hollow. Sometimes it is found solid ; but in this case there will be found to have been a vegetable matter serving as its basis ; and, instead of one branch, it will be found in this case to have concreted about a number of fibres, the remains of which will be found in it on a close examination.

OSTERVALD (John Frederick), a celebrated Protestant divine, born at Neufchatel in 16G3, and descended from an ancient family. He made such rapid progress in his studies, that he became M. A. at Saumur before he was sixteen years of age. He afterwards studied at Orleans ard at Paris. On his return to Neufchatel, in 1699, he became professor of divinity and pastor of the church there; and contracted a strict friendship with the celebrated John Alphonsus Turretin of Geneva, and the illustrious Samuel Werenfels of Basil. The union of these three divines, which was called the triumvirate of the divines of Switzerland, lasted till his death. Mr. Oster- vald acquired the highest reputation by his zeal in instructing his disciples, ajid restoring eccle- siastical discipline. He wrote many books in French, the principal of which are, 1. A Trea- tise concerning the Causes of the

present Cor- ruptions of Christians, and the remedies, which was translated into Ensjlish, and has been often published ; 2. A Catechism, or Instruction in the Christian Religion, which has been tran- slated into German, Dutch, and English; and the Abridgment of the Sacred History, which he prefixed to it, was translated and printed in Arabic, to be sent to the East Indies, by the Society for the Propagation of the Gospel, estab- lished in London, who admitted him an hono- rary member ; 3. A Treatise against Impurity ; 4. An edition of the French Bible of Geneva, with Arguments and Reflections, in folio ; 5. Ethica Christiana ; 6. Theologiae Compendium, &c. He died in 1747. He had a son, who was pastor of the English church at Basil, and main- tained the reputation of his father. He published a work, which was much esteemed, entitled Les Devoirs des Communions.

OSTIA, an ancient and celebrated town of Italy, in Campagna, at the mouth of the Tiber, sixteen miles south-west of Rome. It was built by Ancus Martins, the fourth king of Rome, and was called Ostia Tiberina, i. e. the two mouths of the Tiber, which were separated by the Holy Island, an equilateral triangle, whose sides were each of them computed at two miles. The colony of Ostia was founded immediately be- yond the south or left, and tlie port immediately beyond the north or right, branch of the river ; and the distance between their remains measures something more than two miles. In the time of Strabo the sand and mud deposited by the Tiber had choked the harbour of Ostia ; the

progress of the same cause ha3 added much to the size of the Holy Island, and gradually left both Ostia and the port at a considerable dis- tance from the shore. The dry channels and the large estuaries mark the changes of the river and the efforts of the sea. Its port was one of the most stupendous works of the Roman mag- nificence, and it was a long time one of the best towns on the coast ; but having been destroyed by the Saracens, and the harbour choked up, it has never since been able to recover its impor- tance. There were salt-works in Ostia, called Salinae Ostienses, as early as the reign of Ancus Martins (Livy) ; from which the Via Salaria took its name. It gave name to the gate of Rome called Ostiensis.

Ostia, an unhealthy modem tovra in the States of the Church, Italy, situated near the in- flux of the Tiber into the Mediterranean. It is the see of a bishop, and in the neighbourhood are extensive salt-works, which supply a great part of the Ecclesiastical States. Population 4000. The ancient town of Ostium stood be- tween this place and the sea. It appears to have been three or four miles in circuit. Four- teen miles south-west of Rome.

OS'TIARY, n. s. Lat. ostium. The opening at which a river disembogues itself.

It is received, that the Xilus hath seven ostiaries, that is, by seven channels disburtlieneth itself unto the sea. Browne.

OS'TLER, n. s. 1 Fr. hostelier. A person

Os'tlery. S who has charge of the horses

at public stables : the ostlery is his place of abode.

The smith, the oi'.k', and the boot- catcher, ought to partake. Swijt.

OSTRACISM, n. s. Gr. o

Donne.

Public envy is an ostracism, that eclipseth men wlien they grow too great ; and therefore it is a bri- dle to keep them within bounds. Bacon's Essays. Hyperbolus by suffering did traduce The ostracism and shamed it out of use.

Cteaveland.

This man, upon a slight and false accusation of favouring arbitrary power, was banished by ostracism ; which in English would signify, that they voted he should be removed from their presence and council for ever. Swift.

Ostracism, in Grecian antiquity, denotes the banishment of persons whose influence excited the jealousy of the people of Athens, lest they should attempt any thing against tlie public liberty. Tliis punishment was called ostracism, from the Greek word o?paKoi', which properly signifies a shell; but, when applied to this ob ject, it is used for the billet on which the Athe- nians wrote the names of the citizens whom they intended to banish, which was a piece of baked earth in the form of a shell : the person who proposed the law was its first victim; but

as to his name, and the time of its establishment, the ancients differ 'jxtremely. Many think that ostracism owes its origin to very remote times. The punishment of ostracism was inflicted by the Athenians when their liberty was in danger. When jealousy or ambition liad sowed discord among the chiefs of the republic, and different parties were formed, which threatened a revolu- tion, the people assembled to propose measures proper

to be taken, to prevent the consequences of a division, which in the end might be fatal to freedom. A decree was made, by which a day was fixed to proceed to the sentence of ostra- cism. Then they who were threatened with banishment omitted no art to gain them the favor of the people. Some time before the meet- ing of the assembly, a wooden enclosure was raised in the forum, with ten doors, as many as there were tribes in the republic ; and, when the appointed day was come, the citizens of each tribe entered at their respective doors, and threw into the middle of the enclosure the small brick on which the citizen's name was written whose banishment they voted. The archons and the senate presided at this assembly, and counted the billets. He who was condemned by 6000 of his fellow-citizens was obliged to quit the city within ten days ; for 6000 voices, at least, were requisite to banish an Athenian by ostra- cism. The Athenians, without doubt, foresaw the inconveniences to which this law was sub- ject ; but they chose rather, as Cornelius Nepos has remarked, sometimes to expose the innocent to an unjust censure, than to live in continual alarms. Yet, as they were sensible that the in- justice of confounding virtue and vice would have been too flagrant, they softened, as much as they could, the rigor of ostracism. It was not aggravated with the circumstances which were most dishonorable and shocking in the or- dinary mode of exile. They did not confiscate the goods of those who were banished by ostra- cism. They enjoyed the produce of their effects in the places into which they were banished ; and they were banished only for a certain time. But, in the common banishment, the goods of the exiles were always confiscated, and no hopes were given them of ever returning to Athens.

OSTRACITES, or fossile oysters, are common in many parts of England. They are of various shapes and kinds ; and the name is by some au- thors used for the shell itself, when preserved in its native state and condition ; as is the case with those about Woolwich and Blackheath ; and by others for the stone cast or formed in those shells, or in cavities whence they have been washed away and dissolved : in both these cases the stone carries the exact resemblance of the shell, even in its nicest lineaments; in the first case, bearing every mark of the inside; in the other, of the outer surface. We have this stone in great plenty in manˆ parts of England ; and it is famous, in some places, for its reputed virtue in cases of gravel.

OSTREA, the oyster, in zoology, a genus be- longing to the order of vermes ˆestacea. The shell has two unequal valves ; the cardo has no teeth, but a small hollowed one with transverse lateral streaks. There are numerous species,

principally distinguished by peculiarities in their shells. The common oyster is reckoned an ex- cellent food ; and is eaten both raw and variously prepared. The character of the genus, in the words of Barbut, is : 'The

animal is a tethys ; the shell bivalve, unequivalve, with something like ears ; the hinge void of teeth, with a deep oval hole, and transverse streaks on the sides. There is no womb nor anus.' This sea fish occupies in the scale of nature one of the degrees the most remote from perfection ; destitute of defen- sive weapons and progressive motion, without art or industry, it is reduced to mere vegetation in perpetual imprisonment, though it every day opens regularly to enjoy the element necessary to its preservation. The animal figure, and the springs of its organisation, are scarcely discernible throus:h the coarse and shapeless mass ; a liga- ment placed at the summit of the shell serves as an arm to its operations. Oysters are reputed to be hermaphrodites ; the spawn, which they cast in May, adheres to the rocks and other matters at the bottom of the sea; and, in the space of twenty-four hours, is provided with shells, in which are contained other oysters, that never leave the spot on which they were fixed tdl the greedy fisherman tears them from the element. The green oysters, eaten at Paris, are commonly brought from Dieppe. Their color is owing to the care taken to bed them in creeks encom- passed with verdure, whence they acquire their delicacy. Common oysters should be fresh, tender, and moist. The most esteemed are those caught at the mouths of rivers, and in clear water. Great account is made of oysters from Britanny; but still greater of those that come from Marennes in Saintonge. Preference is given to those that are edged with a small brown fringe, or beard, which epicures call fecundated oysters; but that these are females is a mistake. The want of fresh water renders oysters hard, bitter, and unpalatable. Mud and sea-weeds destroy them in their very birth; galangal root, muscles, scollops, sea-stars, and crabs, are for- midable enemies to the oyster. There are found in Spain red and russet-colored oysters ; in 11- lyria brown colored, with the flesh black; and, ia the Red Sea, of the colors of the Iris. Oys- ters of the mangle tree are of two sorts ; those of St. Domingo are delicate, adhering to the stumps of the trees that dip in the water. The negro divers cut them off" with a bill, and they are served upon table with the roots. Britain has been noted for oysters from the time of Juvenal. The luxurious Romans were very fond of this fish, and had their layers or stews for oysters as we have at present. Sergius ( )rata was the first inventor of these, as early as the time of L. Crassus the orator. He did not make them for the sake of indulging his appetite, but through avarice, and made great profits from them. Orata got great credit for his Lucrine oysters ; for, says Pliny, the British were not then known. The ancients eat them raw, having them carried up unopened, and generally eating them at the beginning of the entertainment, but sometimes roasted. They had also a custom of stewing them with mallows and ducks, or with fish. Britain still preserves its superiority in oysters

✱✱✱over other countries. Most of our coasts pro- duce theni naturally ; and in such places they are taken by dredging, and are become an article of commerce, both raw and pickled. The very shells, calcined, become a useful medicine as an absorbent. In common with other shells, they prove an excellent manure. Stews or layers of oysters are formed in places which nature never allotted as habitations for them. Those near Colchester have been long famous ; at present there are others tliat at least rival tiie former, near the mouth of the Thames. The oysters, or their spats, are brought to convenient places, where they improve in taste and size. It is an error to suppose that the fine green, ob- served in oysters taken from artificial beds, is owing to copperas; it being notorioiis how de- structive the substance or the solution of it is to all fish,

‘ In May the oysters cast their spawn, which the dredgers call their spats ; and in the same month the dredgers (by the law of the admiralty court) have liberty to catch all oysters of what size soever. When they have taken them, with a knife they gently raise the small brood from the clutch, and then they throw the clutch in again, to preserve the ground for the future, un- less they be so newly spat that they cannot be

the Arab shnotror ; Ital. stiuzzn. A species of struthio or cassowary. See SinuTiiio.

Gavest thou the goodly wings unto the peacock? or wings and feathers unto the osdic/t 1 Job xxxix.

I’ll make thee eat iron like an ostrich, and swallow my sword like a great pin, ere thou and I part.

Shahspeare.

The Scots knights errant fight, and fight to eat. Their ostrich stomachs make their swords their meat.

Cletivetiiiid.

IModern ostriches are dwindled to mere larks, in comparison with those of the ancients. Arhnthnnt.

The ostrich swallows bits of iron or brass, in t!ie same manner as other birds will swallow small stones or gravel, to assist in digesting or comminutiii”- their food. It lays its eggs upon the ground, hides them under

the sand, and the sun hatclies them.

Calmet.

OsTRicn. See Struthio.

OSTROGOSHK, a large town of European Russia, in the government of 'oronez. Of its 1 1,000 iniiabitants, a part are Cossacs, and itcon- tains ten churches, and a number of shops built of brick. At the annual fairs horses and oxen are brought from different parts.

OSWALD (St.), the first Christian king of Northumberland, during the heptarchy. He totally defeated Cadwell, the British monarch, at the village named from him St. (Jsvvald ; but

safely severed from the clutch; in that case they ‘^as afterwards defeated and killed by Penda, are permitted to take the stone or shell, &c., king of Mercia, at Oswestry, on the oth of

that the spat is upon, one shell having many times twenty spats. After May, it is felony to carry away the clutch, and punishable to take any other oysters, unless it be those of size ; that is to say, about the bigness of a half-crown piece, or when, the two shells being shut, a fair shilling will rattle between them. The places where these oysters are chiefly caught are called the Pent-Burnham, Maiden, and Colne waters ; the latter taking its name from the Colne, which passes by Colchester and gives name to that town. See Colne. This brood and other oysters they carry to the creeks of tiie sea, at

August 642. The Pagan barbarian, Penda, cut his body in pieces, and exposed them on stakes, in the field, as trophies of his victory. The priests, therefore, ranked him as a saint and martyr, and pretended to confirm his saintship by miracles.

OSWEGO, a river of New York, which runs from Oneida Lake into Lake Ontario. After a very crooked course of eighteen miles, it meets Seneca River at Three River Point, whence to its mouth it is twenty-four miles. The principal fall is at Volney, twelve miles from Oswego. This is a rapid river, and its navigation is improved

Brickelsea, Mersy, Langno, Fingrego, Wivenho, by locks and canals.

Tolesbury, and Saltcoast, and there throw them Oswego, a county of New York, bounded

into the channel, which they call their beds, or north-west by Lake Ontario,

north by Jefferson

layers, where they grow and fatten ; and in two or three years the smallest brood will be oysters of the size aforesaid. Those oysters which they would have green, diey put into pits about three feet deep in the salt-marshes, which are over- flowed only at spring tides, to which they have sluices, and let out the salt water until it is about a foot and a-half deep. These pits, from some quality in the soil co-operating with the heat of the sun, will become green, and commu- nicate their color to the oysters that are put into them four or five days, though they commonly let them continue there six weeks or two months, in which time they will be of a dark green. The oysters, when the tide comes in, lie witii their hollow shell downwards ; and, when it goes out, they turn on the other side : they remove not from their place, unless in cold weather, to cover themselves in the ouse. The oysters are sick

county, east by Lewis and Oneida counties, south by Oneida Lake, Onondaga and Cayuga counties, and west by Cayuga.

OS WEST 11 Y, an ancient market-town of England, in Shropshire; 174 miles from London ; with a castle. It was anciently a borough, and is celebrated in Saxon history for the defeat and death of king Oswald. From its situation it was much harassed during the conquest of Wales by J'".dward I. ; and, during the barons wars, king John set fire to the town; it was soon afterwards rebuilt, and again destroyed by Llewellyn, in the year 1233. The town-gates were fixed at the four cardinal points, which are all down, and but few vestiges of the walls are now to be seen. The ancient name of Oswaldstre, Oswald's cross, is supposed to have been derived from Oswald, king of Northumberland, who was killed here in a battle with Penda, king of Mercia, be-

after they have spat ; but in June and July they fore which time it was called Masefield. The

begin to mend, and in August they are perfectly town, in consequence of an act obtained in 1810,

^^'cll. has been very considerably improved, and it is

OS'TRICH, n. s. Fr. autruche, probably from now well-paved and lighted. Its church was

36e?

O T A H E I T E E.

formerly a monastery called Blancminster. It is spacious, and has a handsome plain tower. In 1542 and 1567 this town suffered much by fire. It is governed by two bailiffs, burgesses, &c., and once carried on considerable trade in Welsh cottons and flannels, which is now much decayed. But, besides a good grammar school, it has an excellent charity school for forty boys, besides girls. There are only two fragments of the castle remaining. It stood on an artiircial mount, sur- rounded by a fosse, extending to the Willow-gate. It is 180 miles north-west of London, and eighteen north of Shrewsbury.

OSYMANDES, or Osymandyas, a famous king of Egypt, who, according to some authors, was the first monarch who collected a great num- ber of books for the purpose of forming a library. To this curious collection he gave the curious title of Pharmacy of the Soul. ' He appears to have been a prince of great elegance and taste.' Diodorus Siculus describes many sumptuous edi- fices erected by him ; among these his palace or mausoleum has been eminently distinguished for irne paintings and sculptures with which it was adorned.

OTACOUS'TIC, n. s. Gr. wra and aKsio ; Ft. otacoustique. An instrument to facilitate hearing.

In a hare, which is very quick of hearing, it is supplied with a bony tube ; which, as a natural ota- coustick, is so directed backward as to receive the smallest and most distant sound that comes behind her. Crew's Cosmologia.

OTAHEITEE, or King Geokge the Third's Island, an island of the South Sea, discovered by captain Wallis in 1767; visited in 1768 by M. Bougainville; and by captain Cook in 1773 and 1774, who had in 1769 sailed round the is- land in a boat to observe the transit of Venus. Long, from 149►► 13′ to 150►► 0′ W., lat.from 17►► 30′ to 17►► 48′ N. Tlie island consists of two distinct parts united by a narrow neck of land; the larger being called by the natives Tiarrabou, or 0-Taheitee-Neu ; the smaller one Opoureonou, or O-Taheitee-Ete. The circumference of the whole island is about forty leagues.

The country has a delightfully romantic ap- pearance, rising from the sea like an amphithea- tre, and being covered with fruit trees of various kinds, particularly the cocoa-nut. About three miles from the shore the country ascends into lofty hills, terminated in peaks, covered with wood to the summits, from which large rivers are precipitated into the sea. The climate is ex- tremely healthy and pleasant ; there is generally a little breeze of wind from east to S. S. E., and the tide rises very little, being governed by the winds. In the published account of the first missionary voyage, it is mentioned that from March till August the thermometer never fell below

65□□, and seldom rose above 73□□. During the other half of the year the weather is, how- ever, hotter. From December to IMarch the weather is often rainy and tempestuous. The wind blows hard from the west, with rain, and a heavy swell breaks on the shore. During the remainder of the year the easterly wind prevails, with an alternate land and sea breeze.

The islanders, who inhabit huts exposed to all

the winds, and hardly cover the earth, which serves them for a bed, with a layer of leaves, are remarkably healthy and vigorous, and live to old age without enduring any of its infirmities ; their senses are acute, and they retain their beautifiil teeth to the last. They are subject, however, to several sorts of leprous complaints ; some were seen by captain Cook that had ulcers upon va- rious parts of their bodies : yet they seemed lit- tle regarded by those who were afflicted with them, and no application whatever was used to them. They are sometimes also afflicted with cholic, and coughs are frequent ; the chiefs are sometimes attacked with a disorder similar to the gout, in which the legs are swelled and exces- sively painful. M. de Bougainville's surgeon had seen many with marks of the small pox. The usual method employed here to restore the sick to health is by incantations, after which the exorcist applies the leaves of the cocoa tree plaited to the fingers and toes.

The soil is a rich fat earth, of a blackish color. It produces spontaneously, or with very slight culture, a great variety of the most excellent fruits ; such as the bread-fruit, cocoa-nuts, bana- nas, plantains, potatoes, yams, sugar-canes, gin- ger, turmeric ; a fruit that grows in a pod like a large kidney-bean ; a tree called wharra, which produces fruit something like the pine-apple ; a species of fern ; and the Chinese paper mulberry, of the bark of which they make their cloth ; the ava-ava, the barringtonia, with many other rare plants.

When the trade wind gets far south, and blows fresh, it generally rains on the south side of the island, bringing the clouds from the mountains of Tiarrabou. 'This occasions a great difi'erence in the bread-fruit season between the north and south sides of the island. The great bread-fruit harvest commences on the northern side about November, and continues till the end of Janu- ary ; whilst, on the south side, in some parts, it begins in January, and continues in different dis- tricts till November. But though this is the case with the general harvest, on both sides of the island, there are some kinds of bread-fruit, though scarce, in season all the year in the dis- trict of Attahooroo. The different species of the same tree amount to thirty.

On the hills the soil changes from the rich loam into various veins of red,

white, dark, yel- low, or bluish earth, clay, or marl : in the red are found stones resembling cornelian or flint ; but being full of veins, though they will strike fire with steel, they break on a second stroke. The white appears a pipe-clay, or fuller's earth ; the dark a fine fat mould, probably the decayed parts of vegetable substances ; the yellow is mixed with gravel ; the blue a marly substance. These are all found in digging ten or twelve feet, and the under stratum appears a soft sandstone of a brownish color, intermixed with hard rock. The hflls also afford a blackish stone, a kind of lava, in pieces of eight or ten feet long, and from four to ten inches thick, of which they formerly made their stone tools : it is of a fine grain, though not very hard, nor apt to splinter ; which answered best the purposes of the natives, as they could thus bring them more easily to an

*edge ; but at every stroke almost theii adzes re- quired whetting, and two-thirds of their time nearly was employed in this labor. The beds of the rivers consist of stones and gravel ; many of
 ॐ ॐwhich contain a glassy substance, and will melt in a strong fire ; others are more infusible, and many are found like pumice stone. In powder the magnet attracts many particles. In the dis- trict of]\latavia is a cliff' called Peeha, which one of the missionaries describes as formed of an immense number of oblong pieces of stone, strongly cemented together, and hanging in a very romantic manner. It is about eighty or ninety feet high, and twice as broad ; at the bottom runs the largest river in the island. This is probably basaltic. The mountains are in some parts bare and full of precipices, broken as by earthquakes. In the bosom of those which bound the district of Vyeorede there is a large fresh- water lake called 'yeheerea, which the natives say cannot be sounded with any line, and con- tains very large eels. On the banks many inha- bitants are seated, who have plenty of all sorts of provisions, except the bread-fruit, for which they substitute the mountain plantain. This lake empties itself into the valley of \ yeorede.*

The bay of Matavai has safe anchorage during eight months of the year, but is dangerous from December to iNIarch. The weather is in general temperate ; captain Cook, and all the other navi- gators by whom this island have been since visited, concur in stating that they were not in-commoded by the heat.

The food of the common people entirely con- sists of the bread-fruit, bananas, plantains, yams, apples, and a sour fruit, which, though not plea-sant by itself, gives an agreeable relish to roasted bread-fruit, with which it is frequently beaten up. The flesh, which is reserved for the tables of the

great, is that of poultry, hogs, or dogs : the flesh of their fowls is not well tasted, but that of dogs is esteemed by the natives beyond pork. The dogs are fed on vegetables, and ne- ver allowed to taste animal food. The smaller fish are generally eaten raw, as we eat oysters : every thing that can be procured from the sea is made an article of their food. To dress their food they kindle a fire, by rubbing the end of one piece of dry wood upon the side of another. They then dig a pit about half a foot deep, and two or three yards in circumference ; they pave the bottom with large stones, which they lay down very smooth and even, and then kindle a fire in it with dry wood, leaves, and the husks of cocoa-nuts. When the stones are sufficiently heated, they take out the embers, and rake up the ashes on every side ; they then cover the stones with a layer of green cocoa-nut leaves, and wrap up the animal that is to be dressed in the leaves of the plantain. When it is placed in the pit, they cover it with the hot embers, and lay upon them bread-fruit and yams, which are also wrapt up in the leaves of plantain. They were quite unacquainted, when first visited, with the method of boiling water, and had no vessels among them that would bear the fire. Their ge- neral drink was water, or the milk of the cocoa- nvU. They showed in general an aveision to strong liquors ; and, when one of them happen-

ed to drink so freely with any of the sliip's com- pany as to be intoxicated, he resolutely refused to taste any thing that was likely to produce the same eff'ect again ; but they have a plant called ava-ava, from the root of which they procure a liquor which has an inebriating quality. Tlie quantity of food which they eat at a meal is pro- digious. Captain Cook says, he has seen one man devour two or three fishes as big as a perch ; three bread-fruits, each bigger than two fists; fourteen or fifteen plantains, or bananas, each six or seven inches long and four or five round ; and nearly a quart of the pounded bread-fruit. JNlen of rank are constantly fed by their women. They have also a kind of fermented paste called ma- hie. The men and women never eat together.

The government is monarchical and hereditary. There is also an aristocracy, consisting of the chiefs of the several districts, some of whom are supreme in one district, and exercise in their own territories all regal power, yet still subject to the monarch as their sovereign paramount. There is a third rank next to these, namely, rattira, or gentlemen ; and another class of them who cultivate the land, and a fifth class of ser- vants. In the scale of rank birth enjoys singu- lar distinction. A chief is always a chief; and though expelled from his command, losing his district, or having his honors transferred to his child, he continues noble ; on the other hand no acquisition can raise a common man to a higher station than that of towha, or rattira : yet the meanest are in no slavish dependence. The honor and respect which they pay their chief is rather through force of custom

than the fear of punishment. They are admitted as their com- panions on all occasions, and treated with perfect freedom ; indeed in outward appearance they can hardly be distinguished. The king is not averse to converse with the lowest of his sub- jects, or to be their visitor ; and never treats them with hauteur. His retinue is often changing : no man serves him longer than he pleases. They have no wages, nor engage for any stated time, though some remain in the same family all their lives ; and these ancient domestics are as much respected as their own relations.

They have no writing or records respecting property, but memory and landmarks. Every man knows his own ; and he would be thought of all characters the basest who should attempt to infringe on his neighbour, or claim a foot of land that did not belong to him or his adopted friend ; for the tayo may use it during his friend's lifetime, and, if he has no child, possess it at his death. If a man bequeaths his property to ano- ther on his death-bed, no person disputes the bequest, as there are always witnesses abundant to the gift, if the heir is not present. The land- marks set by their ancestors the father points out to the son or heir ; should any dispute arise, multitudes know where the mark stood, and the matter is in general easily settled. In- deed it is much the same in all litigations ; the case is referred to a by-stander, and the party which he declares in the wrong submits, and makes the other a peace-off'ering of the plantain- stalk. If any matter of serious offence is given, the whole family or district take it up, and go to

war with their adversaries ; but, if they choose not to fight, a peace-offering must be made, which is never refused : if they will fight the weakest must suff"er ; and, as all the relations adopt the quarrel, there is sometimes much bloodshed.

The chief use which they make of their houses is to sleep in ; for, unless it rains, they generally eat in the open air. These houses are sheds, not quite four feet from the ground, raised on three rows of pillars, and erected on an oblong square ; their width is nearly half their length. They are all built in the woods between the sea and the mountains. The roof resembles our thatched houses in England, and consists of two flat sides inclining to each other, covered with palm- leaves. The floor is covered with hay, over which they spread mats. Some of these huts are furnished with a stool, and a few blocks of wood, which being square, one side is hollowed into a curve ; and these they use as pillows. In these open dwellings the whole family repose at night. Their day-clothes are their only night covering.

The stature of tlie men, in general, is from five feet seven to five feet ten inches : the tallest men seen by captain Wallis measured six feet three inches and a half; and captain Cook, in liis second voyage, describes 0-Too, the king of Ota- lieitee, to be of that height. They are of a paJe brown complexion ; their hair in general is black, and finely frizzled ; they have black eyes, flat noses, large mouths, and white teeth; the men wearing their beards in many fashions, but all of them pluck out a great part. The women, in general, are much smaller, especially those of the lower ranks, which is attributed to their early and promiscuous intercourse with the men ; the better sort are above the middle stature of Eu- ropeans. Their skin is most delicately smooth and soft ; they have no color in their cheeks ; their nose is generally somewliat flat, but their eyes are full of expression, and their teeth beau- tifully even and white. ' The women,' says M. de Bougainville, ' have features not less agreeable than the generality of Europeans, and a symme- try of body and beautiful proportion of limbs, which might vie with any of them. Some have their hair brown, red, or flaxen, in which they are exceptions to all the natives of Asia, Africa, and America, who have their hair black univer- sally ; here, in the children of both sexes, it is generally flaxen. The strongest expression is painted in the countenances of these people ; their walk is graceful, and all their motions are performed with great vigor and ease.' When Vancouver visited the island, he did not find that the personal attractions of the women cor- responded to the accounts of former navigators. According to the account of the natives, they had fallen off" in their looks, which they attributed to their indiscriminate commerce with the Euro- peans, and to the loathsorae diseases they had received from their visitors.

The language of these islanders is soft and melodious, abounding with vowels ; it was found very difficult to teach the natives to pronounce a single English word ; but Spanish and Italian words ending in a vowel they pronounce with the greatest ease. They called captain Cooke

Toote, Mr. Ilicks, the first lieutenant, Hete, &c., and gave their ovvn names to almost every man in the ship.

The Otaheiteans are industrious, and friendly in their dispositions ; but, like all other nations not fully civilised, their passions are violent, and they are very fickle. Bougainville says, ' even in Europe itself one cannot see more expert fil- chers than the people of that country.' They are lascivious almost beyond credibility. A number of the principal people are said to have formed themselves into a society, in which every woman is common to every man. This society is named Arreoy. If any of the female members prove with child, unless she can procure some man to adopt the child as his own, not all the strong af- fections of a mother can save the life of the pre-condemned innocent ; but the child as soon as born is smothered, and the

mother is left at li- berty to renew her former course of execrable prostitution. Should any man co-operate with a woman in saving the life of a child, they are both excluded for ever from the arreoy, and are considered as man and wife. Both men and women wash their whole bodies three times a day in running water, and are remarkably cleanly. They are most expert swimmers, being accus- tomed to the water from their infancy. ‘ Their countenances,’ says captain Cook, ‘ very re- markably express the abundant good nature which they possess, and are entirely free from that savage keenness which marks nations in a barbarous state. Their peaceable disposition is evinced from the friendly reception all strangers have met with who have visited them. Instead of offering to attack them openly or clandestinely, as has been the case with most of the inhabitants of these seas, they have never appeared in the smallest degree hostile, but, on the contrary, like the most civilised people, have courted an inter- course with their visitors by bartering, which is tlie only medium that unites all nations in a sort of friendship.’

The principal manufacture among the Ota- heitan is cloth, made of the bark of trees, which are of three kind►►, viz. the Chinese mulberry- tree, or aouta; the bread-fruit tree, or ooroo; and one that is described by Dr. Haweskworth as resembling the wild fig-tree of the West Indies. Of all these the paper mulberry affords the best cloth ; being both finer, softer, whiter, and better suited to take a color ; the ooroo pro- duces cloth much inferior in contexture ; and the last is very coarse, in color resembling the darkest brown paper; but this last is the only kind that withstands water. They likewise prepare a red dye ; made by mixing the yellow juice of a small species of fig, which the natives call matee, with the greenish juice of a sort of fern or bind- weed, or of several other plants, which produce a bright crimson : and this the women rub with their hands, if the piece is to be uniformly of a color ; or they make use of a bamboo reed, if the piece is to be marked or sprinkled into different patterns : they also make finer mats than any in Europe. .Rushes, grass, the bark of trees, and the leaves of a plant called wharrow, are their materials, and the matting is applied to various u?es. The coarser kind is employed for sleep-

ing or sitting on ; the finer sort its used for gar- ments. Tliey are dexterous too in making basket and wicker-work. Hopes and lines are made of the bark of a tree ; and the fibres of the cocoa-nut furnish them with thread, with which they fasten the different parts of their canoes, &c. The bark of a nettle which grows in the mountains, called orawa, supplies them with excellent fishing- lines ; their hooks are made of mother-of-pearl, to which

they fix a tuft of hair, made to resemble the tail of a fish. The point is turned inwards. They make also a kind oi seine of a coarse broad grass, the blades of which are like flags. These they twist and tie together in a loose man- ner, till tiie net, whicli is about as wide as a large sack, is from sixty to eighty fathoms long. This they haul in smooth slioal-water ; and its own weigiit keeps it so close to the ground that scarcely a single fish can escape. Their cane harpoons, pointed with hard wood, are very effectual weapons. Tools used by the Otaheiteans are, an adze made of a kmd of basaltes, of a gray or blackish color, not very hard, but of considerable touglmess ; a chisel or gouge of bone, generally the bone of a man's arm between the wrist and elbow ; a rasp of coral, and the skin of a sting-ray ; also coral and sand, as a file or polisher. With such tools tliey generally take up several days in felling a tree ; but after it is down, and split into planks, they smooth them very expeditiously with their adzes, and can take off a thin coat from a whole plank with- out missing a stroke.

The men of consequence wear the nails of their fingers long, as a badge of distinction. The women always cut their hair short round their heads. Both sexes tattoo the hinder part of their tliighs and loins with black lines in various forms ; these marks are made by striking the teeth of an instrument somewhat like a comb just through the skin, and rubbing into the punctures a kind of paste made of soot and oil, which leaves an indelible stain. Both sexes are gracefully clothed. Their dress consists of two pieces of this cloth ; one of them, having a hole in the middle to put the head through, hangs from the shoulders to the mid-leg before and behind ; another piece between four and five yards long, and about one broad, they v.rap round the body ; this cloth is made like paper, of the macerated fibres of the inner bark spread out and beaten together. Their ornaments are feathers, flowers, pieces of shell, and pearls ; the pearls are worn chiefly by the women. In wet weather they wear matting. They have a custom also of anointing their heads with what they call monoe, an oil expressed from the cocoa-nut, in which some sweet herbs or flowers have been infused : as the oil is generally rancid, the smell is at first very disagreeable to a European ; and as they live in a hot country, and never use a comb, they are not able to keep their heads free from lice, which the children and common people pick out and eat ; a custom wholly dif- ferent from their manners in every other particu- lar, for they are delicate and cleanly, almost without example ; and those to whom captain Cook distributed combs, soon delivered them- selves from vermin. Later voyagers,' however, Vol, XVI.

give the same account of their filthiness in thi❖❖ respect as Cook. Since ca])tain Cook was nere the number of the inhabitants on the island is much decreased ; it is not now supposed to con- tain above 5000 souls.

The priesthood seems to be hereditary in one family or tribe ; and is said to

be numerous. These priests are professedly the men of science and medicine. They teach that the Supreme Deity, besides many female descendants, ha.s one son named Tane, and to him they direct their worship, though they do not believe that the good or bad conduct of mankind on earth makes tliem more or less acceptable to him. They believe the existence of the soul after death, and of a greater or less degree of happi- ness to be then enjoyed ; but they seem to have no conception of a state of punishment hereafter. The share of happiness they imagine every indi- vidual will enjoy in this future state will be assigned to him according to the rank he holds on earth. Much parade is used in their attempts to recover the sick, though their reme- dies consist only of ridiculous ceremonies and enchantments. The marriages are secular con- tracts ; but no one has a right to perform tattoo- ing except the priests ; and, this being a custom universally adopted, it may be supposed that the performing it is a lucrative employment. The males in general undergo a kind of circumcision which is likewise the exclusive privilege of the priests to perform. But what most establishes the credit of this order of men is their skill in astronomy and navigation.

Captain Cook saw a wicker representation of Mauwe, one of their Eatuas, or gods of the second class, which was said to be the only one of the kind inOtaheitee. It was seven feet high. These people pray at sun-rise and sun-set. Our navigator, who had some reason to believe that, among the religious customs of this people, hu- man sacrifices were sometimes oflered up to their deities, went to a morai, or place of wor- ship, accompanied by captain Furneaux, having with them a sailor who spoke the language tole- rably well, and several of the natives. In the morai was a tupapow, a kind of bier, with a shed erected over it, on which lay a corpse and some provisions. Captain Cook asked if the plantain were for the Eatua ? If they sacri- ficed to the Eatua hogs, dogs, fowls, &c. ? To which an intelligent native answered in theaftir mative. He then asked if they sacrificed men to the Eatua .' He was answered, ' bad men tliey did ; first beating them till they were dead.' He then asked if good men were put to death in this manner ? His answer was No. He gathered that men for certain crimes were condemned to be sacrificed to the gods, provided they did not possess any projierty, which they might give for their redemption. It seems to rest with the high-priest to single out the victims for sacrifice.

The dead bodies are placed in the open air till the bones become quite dry : a shed was erected on one occasion close by the house where the deceased had resided ; it was about fifteen feet long, and eleven broad ; one end was left quite open ; the other end and the two sides were partly enclosed with a sort of wicker-work. The

bier was a frame of wood, like that on which the sea beds, called cots, are placed, with a matted bottom, and supported by four posts, at the height of about four feet from the ground. The body was covered tirst with a mat, and then with wliite cloth ; by the side of it lay a wooden mace, one of their weapons of war ; and near the head of it, which lay next to the close end of the shed, lay two cocoa-nut shells ; at the other end a bunch of green leaves, and some dried twigs, all tied together, were stuck in the ground, by which lay a stone about as big as a cocoa- nut. Near these lay one of the young plantain- leaves that are used for emblems of peace, and close by it a stone axe. At the open end of the shed also hung, in several strings, a great num- ber of palm-nuts ; and without the shed was stuck up in the ground a stem of a plantain- tree, about six feet high, upon the top of which was placed a cocoa-nut shell full of fresh water ; against the side of one of the posts hung a small bag, containing a few pieces of bread-fruit ready roasted. The food so placed by the corpse seemed designed as an offering to their gods. They cast in, near the body, small pieces of cloth, on which the tears and blood of the mourners have been shed ; for in their paroxysms of grief it is a universal custom to wound themselves. The mourner is always a man ; and he is dressed in a very singular habit. When the bones are stripped of their flesh, and become dry, they are buried.

The mourning which is worn here is a head- dress of feathers, the color of which is conse- crated to death, and a veil over the face. The whole nation is said to appear thus on the death of their king. The mourning for fathers is very long. The women mourn for their husbands, but not the husbands for their wives.

Their boats or canoes are of different sorts. Some are made out of a single tree, and hold from two to six men. These are principally employed in fishing ; others are constructed of planks very dexterously sewed together ; they will sometimes hold from ten to forty men ; they generally lash two of these together, and set up two masts between them ; or, if they are single, they have only one in the middle ; and in these vessels they will sail far beyond the sight of land. A third sort seems to be princi- pally designed for pleasure. These are very large, but have no sail ; and in shape resemble the gondolas of Venice. The plsink of which these vessels are constructed is made by split- ting a tree, with the grain, into as many thin pieces as possible. The boards are brought to the thickness of about an inch, and are after- wards fitted to the boat with great exactness. To fasten these planks together, holes are bored with a piece of bone, fixed into a stick for that purpose. Through these a kind of plaited cord- age is passed, so as to hold

the planks strongly together. The seams are caulked with dry rushes ; and the whole outside of the vessel is painted over with a kind of gummy juice, which supplies the place of pitch. Their wea- pons are slings, which they use with great dex- terity; pikes headed with the skins of sting- rays, and clubs of about six or seven feet

long, made of a very hard wood. Thus ?rme(l, they fight with great obstinacy, and give no quarter to man, woman, or child, who happens to fall into their hands during the battle, nor for some time afterwards, till their passion subsides. They have likewise bows and arrows; but the lat- ter are headed only with stone, and none of them pointed. They have targets of a semicircular form, made of wicker-work, and plaited strings of the cocoa-nut fibres, covered with glossy bluish green feathers belonging to a kind of pigeon, and ornamented with sharks' teeth, arranged in three concentric circles.

European visits led to the attempt to estab- lish missionaries on this island ; but, after vari- ous efforts to introduce Christianity and the arts of civilised life, those worthy laborers were com- pelled to retreat.

OTAKOOTAI, or Wenooaette, an island in the South Pacific Ocean, about three miles in circumference, discovered by Cook in the year 1777. The beach within the reef is composed of a white coral sand, and the land within does not rise above six or seven feet : it is entirely des- titute of water. The only common trees found there were cocoa-palms, of which there were several clusters ; and vast numbers of the wharra. The only bird seen was a beautiful cuckoo, of a chestnut brown, variegated with black. But upon the shore were some egg-birds, a smaller sort of curlew, blue and white herons, and great numbers of noddies. Though there were at this time no fixed inhabitants, indubitable marks remained of its being, at least occasionally, frequented. Long. 201►► 37′ E., lat. 19►► 51′ S.

OTFORD, a town of England, in Kent, cele- brated for a battle between the two Saxon kings, Offa of Mercia, and Alrick of Kent, who was killed by Offa; and another in 1016, wherein the Danish king Canute was routed by king Ed- mund Ironside. Offa, to atone for the blood he had shed in that battle, gave this place to Christ- churcli, Canterbury (as the deed says), in pascua porcorum, ' for feeding the archbishop's hogs;' and so it remained in the archbishop's liberty, till exchanged with king Henry VIII. for other lands. There was a chantry founded at the Ryehouse in this parish.

OTH'ER, adj., pron., & n. s.ˆ Sax. oˆep

Oth'er-gates, adv. I a iSep ; Goth.

Oth'er-where, y awc?ro(fr;Teut.

Oth'er-while, iorfjr; French

Otii'erwise. J autre. Differ-

ent; not this; not the same; not I or he; some- thing beside ; correlative to each; the remain- ing one of two ; the next ; the third part ; other gates (from other and gates, meaning way) is in another manner : otherwhere, in other places : otherwise, in a different manner ; or in different respects ; by or from other causes.

In lowliness of mind let each esteem other better than themselves. Philip, ii. 3.

Of good actions some are better than other some.

Hooker,

They only plead that whatsoever God revealeth, as necessary for all Christian men to do and believe, the same we ought to embrace, whether we have re- ceived it by writing or otherwise, which no man de- nieth. Id

As Jews they liad access to the teniple and syna- gogues, but as Christians they were of necessity forced otherivhere to assemble themselves. Id.

The dismayed matrons and maidens, some in their

houses, nther some in the churches, with floods of

tears and lamentable cries, poured forlli their prayers

to the Almighty, craving his help in that their hard

distress. Knolles.

Were I king,

I should cut off the nobles for their lands ;

Desire his jewels and this ollwrn house.

Sliahspeare. Will it not be received That they have don't?

* 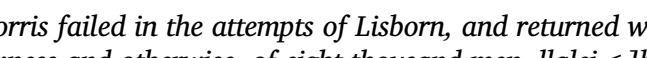 Who dares receive it other ! Id.*

If Sir Toby had not been in drink, he would have tickled you othergates than he did. td.

Sir John Norris failed in the attempts of Lisborn, and returned with the loss, by sickness and otherwise, of eight thousand men. llalei <]h.

Physicians are some of them so conformable to the humour of the patient, as they press not the cure of the disease : and some other are so regular in pro- ceeding according to art, as they respect not the con- dition of the patient. Bacon.

Bind my hair up : as 'twas yesterday ? No, nor the other day. BenJonson.

The king had all he craved, or could compel, And all was done let others judge how well.

Daniel. His godlike acts, and his temptations fierce. And former sufferings otherwhere are found.

IMilton, The evidences for such things are not so infallible, but that there is a possibility that the things may be otherwise. IVilkius.

I can expect no other from those that judge by single sights and rash measures, than to be thought fond or insolent. Glanville.

Scotland and thou did each in other live. Nor would'st thou her, nor could thee she survive.

Dry den. He that will not give just occasion to think that all government in the world is the product only of force and violence, and that men live together by no other rules but that of beasts, where the strongest carries ; and so lay a foundation for perpetual dis- order and mischief, tumult, sedition, and rebellion ; things that the followers of that hypothesis so loudly cry out against, must of necessity find out another state of government. Locke.

There is that controlling worth in goodness, that the will cannot but like and desire it ; and, on the other side, that odious deformity in vice, that it never offers itself to the affections of mankind but under the disguise of the other. South.

In these good things, what all others should practise, we should scarce

know to practise otherwise.

Sprat. Thy father was a worthy prince. And merited, alas ! a better fate ; But heaven thought otherwise.

Addison's Cato. Never allow yourselves to be idle, whilst others are in want of any thing that your hands can make for them. Lav

Men seldom consider God any otherwise than in relation to themselves, and therefore want some ex- traordinary benefits to excite their attention, and en- gage their love. Rogers.

No leases shall ever be made other than leases for years not exceeding thirty-one, in possession, and not in reversion or remainder. Swijt.

I have long discontinued this practice, and many vthers which I found necessary to adopt, that 1 might

escape the worst of all evils, both in itself and in lU consequences ??? an idle life. Cowper.

Sure never were seen two such sweet little ponies , Other horses are clowns, and these macaronies ; And to give them this title I'm sure is'nt wrong. Their legs are so slim and their tails are so long.

Sheridan. And the pale smile of beauties in the grave.

The charms of other days, in starlight gleams Glimmer on high ; their buried locks still wave

Along the canvas. Bi^ron.

OTHNIEL, the celebrated judge of Israel, was the son of Kenaz, of the tril)e of Judali. We are told (Josliua xv. 17 and Judges i. 1.3) that he was Caleb's younger brother. But, if Caleb and Othniel had been brothers, tlie latter could not have married his niece Achsah the daughter of Caleb. The Scripture mentions Kenaz as fa- ther to Othniel, and Jephunneh as the father of Caleb. It is therefore supposed that Kenaz and Jephunneh were brothers, and that Othniel and Caleb were cousin-germans, and in this sense to be brothers according to the language of Scrip- ture. Thus, Achsah being but second-cousin in respect of Othniel, he might marry her consist- ently with the letter of the law. The heroism by which he obtained Achsah is recorded in Joshua XV. 16, 17 : and the still greater heroism by which he delivered his country from the op- pressions of Chushanrishathaim, A. M. 2599, is recorded in Judges iii. 9 ??? 11. Whether he judged Israel during the forty years of peace that followed is uncertain

OTHO, a tribune of the people, who, in Ci- cero's consulship, introduced a regulation to permit the Roman knights at public spectacles to have the fourteen first rows after the seats of the senators. This was opposed with virulence by some, but Cicero ably defended it.

Otho (M. Salvius), the eighth emperor of Rome, born A. D. 32, of a family descended from the ancient kings of Etruria. He was among the nuraberof Nero's favorites, was raised to the highest offices of the state, and made go- vernor of Pannonia by the interest of Seneca, who wished to remove him from Rome, lest Nero's love for Poppsea should prove his ruin. After Nero's death, Otho conciliated the favor of Galba the new emperor ; but, when Galba re- fused to adopt him as his successor, he])rocured his assassination, and proclaimed himself empe- ror. He was acknowledged by the senate, but the sudden revolt of Vitellius in Germany ren- dered his situation very precarious. Otho ob- tained three victories ; but in a general engage- ment near Brixellum his forces were defeated, and he stabbed himself when all hopes of suc- cess had vanished, in the thirty-seventh year of his age, after a reign of about three months. The last moments of Otho's life were those of a phi- losopher. He comforted his soldiers who la- mented his fortune, and, expressing his concern for their safety, observed, that it was better that one man should die than that all should be in- volved in ruin on account of liis obstinacy. His nepliew was much afltcted, and feared the anger of the conqueror; but Otho observed, that Vi- tellius would be kind to the relations of Otho, since, in the time of their greatest enmity, the mother of 'itellius had received every friendly

treatment from his hands. He also burnt the fetters which, by falling into the hands of V'itel- lius, might provoke his resentment against those who had favored the cause of an unfortunate general. His father was a favorite of Claudius.

OTHONNA, in botany, African ragwort, a genus of the polygamia necessaria order, synge- nesia class of plants ; natural order forty-ninth, composite: receptacle naked; there is almost no pappus : cal. monophyllous, multifid, and nearly cylindrical. Species one, a native of the south of Europe.

OTHRYADES, one of the 300 Spartans who fought against 300 Argives,

when those two na- tions disputed their respective right to Thyreata. Two Argives, Alcinor and Cronius, and Othry- ades, survived the battle. The Argives went home to carry the news of their victory ; but Othryades, who had been reckoned among the number of the slain on account of his wounds, recovered himself, and carried some of the spoils of which he had stripped the Argives into the camp of his countrymen ; and after he had raised a trophy, and had written with his own blood the word vici on his shield, he killed himself, unwilling to survive the death of his country- men.

OTHUS AND Ephialtes, in mythology, two giants, sons of Neptune by Iphimedia, the wife of the giant Aloeus ; who educated them as his own, whence they were called Aloeides. They grew nine inches every month, and were only nine years old when they made war against the gods; but were slain by Apollo and Diana. They built the town of Asera, at the foot of Mount Helicon.*

OTIS, in ornithology, a genus of birds belong- ing to the order of grallae. There are several species, principally distinguished by their color. One of these,

O. tarda, the bustard, is the largest of the Bri- tish land fowls ; the male at a medium weigh- ing twenty-five pounds ; there are instances of some very old ones weighing twenty-seven : the breadth nine feet ; the length nearly four. Besides the size and difference of color, the male is dis- tinguished from the female by a tuft of feathers about five inches long on each side of the lower mandible. Its head and neck are ash-colored : the back is barred transversely with black and bright rust color : the greater quill-feathers are black : the belly white : the tail is marked with broad red and black bars, and consists of twenty feathers : the legs are dusky. The female is about half the size of the male : the crown of the head is of a deep orange, traversed with black lines ; the rest of the head is brown. The lower part of the fore side of the neck is ash-colored : in other respects it resembles the male, only the colors of the back and wings are far more dull. These birds inhabit most of the open countries of the south and east parts of England, from Dorsetshire, as far as the Wolds in Yorkshire. They are exceedingly shy, and difficult to be shot ; run very fast, and when on the wing can fly, though slowly, many miles without resting. They take flight with difficulty, and are some- .imes run down with greyhounds. They keep near tneir old haunts, seldom wandering above

twenty or thirty miles. Tlieir food is com and otlier vegetables, and those large earth worms that appear in great quantities on the Downs be- fore sun-rising in the summer. These are replete with moisture, answer the purpose of liquids> and enable them to live long without drinking on those extensive and dry tracts. Besides this, the males have an admirable

magazine for their security against drought, being a pouch, whose entrance lies immediately mider the tongue, and which is capable of holding nearly seven quarts; this they fill with water, to supply the hen when sitting, or the young before they can fly. Bustards lay only two eggs, of the size of those of a goose, of a pale olive brown, marked with spots of a dark color ; they make no nest, only scrape a hole in the ground. In autumn they are (in Wiltshire generally found m large turnip fields near the Downs, and in flocks of fifty or more.

OTODINI, Ottadini, orOxTODiNi, a nation of ancient Britons, seated on the north-east of the Brigantes, in the countries now called Nor- thumberland, Merse, and the Lothians. As the Otodini are not mentioned by any of the Roman historians, but only by Ptolemy, it is uncertain whether they formed a distinct independent state, or were united with the Brigantes. They were, however, a considerable people, and possessed a long tract of the sea coast, from the Tyne to the Frith of Forth. Their name is derived by Bax- ter from the old British words Ot o dineu, which signify a high and rocky shore; descriptive enougli of their country. They were probably reduced by Agricola at the same time with their more powerful neighbours the Brigantes ; but, as they lived without the wall of Severus, they were, like the rest of the Maeatse, engaged in frequent revolts. In the most perfect state of the Roman government in this island, the country of the Otodini made a part of the Roman province called Valentia; which comprehended all that large tract between the two walls. As this pro- vince was never long together in the peaceable possession of the Romans, they had but few sta- tions in tlie country of the Otodini, except those on the line of the wall of Severus. Various opinions are entertained among the learned respecting the real situation of the Otodini ; and it is even doubtful whether their country was in England or in Scotland. The celebrated Drum- mond of Ilathornden contends for the latter. From Dr. Henry's description, above quoted, it appears to have been in part of both.

Otranto, or Terra d'Otranto, a province of Naples, forming the south-east extremity of Italy, having the gulf of Taranto on the west, and the Adriatic on the east. It has a super- ficial extent of 2600 square miles ; and, though mountainous, is very fertile. It suffers, however severely from a want of water. The chief pro- duct is olives, whole forests of which grow wild cotton, tobacco, vines, and fruits. On the hills is found noble pasturage ; and, on the sea-coast, abundant encouragement to fishing. Otranto is divided into the three districts of Lecce (the capital), Taranto, and Messagna. Population

292,000.

Otranto, a fortified town in the Neapolitan province to which it gives name,

on the Adriatic.

It is miserably built and decayed ; and its in- habitants do not amount to more than 2400. They carry on some trade in olive-oil. In I'SIO Fouche, Buonaparte's minister of police, received the title of duke of Otranto. Thirty-three miles east by north of Gallipoli, and eighty east by south of Taranto.

Otkanto, Capo di, a cape of Italy, on the coast of the Adriatic, a few miles south of the town of Otranto.

OTRAR, or Farab, a town of independent Tartary, on the Arscli, formerly a place of con- siderable extent. It is stated that Timur died at this place ; but other accounts represent his death to have taken place at Samarcand. 110 miles north-west of Toncat.

OT'TEIl, n. s. Sax. otep. ; Goth, otr ; Teut. otter ; Dan. odder ; Sans. ood. An amphibious animal. See below.

The toes of the ottfr's hinder feet, for the belter swimming, are joined together with a membrane, as in the bevir ; from which lie differs principally in his teeth, which are canin ; and in his tail which is felin, or a long taper : so that he may not be unfitly called putoreus aquaticus, or the water polecat, lie makes himself burrows on tlie water side as a bevir ; is sometimes tamed, and taught, by nimbly sur- rounding the fishes, to drive them into the net.

Grew.

At the lower end of the hall is a large otter's skin stuffed with hay. Addison's Spectator.

Would you preserve a numerous finny race 1 Let your fierce dogs the ravenous otter chase ; 1 he amphibous monster ranges all the shores, Darts through the waves, and every haunt explores.

Gay.

Otter, in zoology. See Mustela.

Otter Creek, a river of Vermont, United States, which rises near Dorset,

and runs west of north, passes by Rutland, Pittsford, Brandon, Middlebury, New Haven, Vergennes, besides other towns, and flows into Lake Champlain, at Basin Harbour, in Ferrisburg. It is navigable for sloops to Vergennes, six miles. Length eighty-five miles.

Otter Creek, a river of Kentucky, which runs into the Ohio, long. 86►► 24′ W., lat. 37►► 45′ N. Also a river of 'ermont.

OTTERBURN, a town of Northumberland, near Ellesdon. It was the field of battle be- tween the English and Scots in 1388, wherein Henry Percy, called Hotspur, was taken prisoner, and Douglas the Scotch general was killed. On this battle was founded the old ballad of Chevy- chase; the village being situated by the river]lhead, on the south side of the Cheviot Hills. The entrenchments are still visible ; and a num- ber of tumuli scattered over the adjacent ground mark the slaughter made there. It lies twenty- one miles from Morpeth.

OTTERY, St. Mary's, a market town in Devonshire, 159 miles west of London, and ten miles east of Exeter. Its market is on Tuesday, and it has two fairs. The church is very ancient, and resembles a cathedral. A very extensive woollen manufactory was established here by Sir George Yonge and Sir John Duntze, barts. It derived its name from the Otter, and that from ►►►he otters formerly found in it. This town was given by king Edward the Confessor to the

church O' St. ?►►Iary at Rouen in Normandy ; but was afterwards bought by Grandison bishop of Exeter, who made of it a quarter college- in the reign of Edward III., and therein placed secular priests, with other ministers, to whom he gave the vvhole manor, parish, tytlies, fines, spiritual profits, &c., which amounted to ►►304 2s. \0d. yearly.

O'lTOGANO, or Ottagano, a fine old town of Italy, Naples, situated at the eastern base of Mount V^esuvius, about twelve miles east of Naples. The town is understood to owe its name and origin to the ancient Roman villa of Octavianum. Ii contains three churches, and a castle on the top of an adjacent hill. A large proportion of the inhabitants, about 14,000, sup- port themselves by cultivating gardens.

OTTOMAN Porte, a title given by Eu- ropeans to the grand signior, or the Turkish em- peror; from Othoman, the first emperor of the Turks. It is also used metaphorically for the Turkish power, and often simply for the Porte by way of emphasis.

OTVV'AY (Thomas), an eminent tragic poet, the son of JNIr. Iliimphry Otway, rector of Wol- beding in Sussex; was born at Trottin in that county

on the 3d of March 1651. He was educated at Oxford ; but went to London, where he became a player, with but indifferent success. However, the sprightliness of his conversation gained him the favor of Charles Fitz-Charles, earl of Plymouth, who procured him a cornet's, commission in one of the regiments sent into Flanders ; but he returned in very necessitous circumstances, and applied himself to writing for the stage. In comedy he has been deemed too licentious ; which, however, was no great objection to his pieces in the profligate days of Charles II. But, in tragedy, few English poets have ever equalled him ; and perhaps none ever excelled him in touching the tender passions. There is generally something familiar and domestic in the fable of his tragedies, and there is amazing energy in his expression. But though Otway possessed in so eminent a degree the rare talent of writing to the heart, yet he was not always successful in his dramatic composi- tions. Dr. Johnson gives this account of his death : ••• ' He died in a manner which I am un- willing to mention. Having been compelled by his necessities to contract debts, and haunted, as is supposed, by terriers of the lav/, he retired to a public-house on Tower Hill, where he died of want; or, as it is related by one of his biogra- phers, by swallowing, after a long fast, a piece of bread which charity had supplied. He went out, as is reported, almost naked, in the rage of hunger, and finding a gentleman in a neighbour- ing coffee-house, asked him for a shilling. The gentleman gave him a guinea ; and Otway going away bought a roll, and was choked with the first mouthful. All this, I hope, is not true ; but that indigence, and its concomitants sorrow and despondency, brought him to the grave, has never been denied.' The doctor adds, that Otway had not much cultivated versification, nor much replenished' his mind with general knowledge. His principal power was in moving the passions, to which Dryden in his latter ycJˆrs

left an illustrious testimony tie appears by some of his verses to have been a zealous royalist ; and, as was in those times the common reward of loyalty, he lived and died neglected.' ••• ••• His dramatic writings are nine in number; the most admired are, The Orphan, and Venice Preserved. He also made some translations, and wrote several miscellaneous poems. His whole works are printed in two pocket volumes. He wrote four acts of a play, which are lost.

OUACHITTA, or Wachitta, or Washita, a river of North America, which rises in the Mis- souri Territory, enters Louisiana, and, pursuing a S. S. E.

course, joins Red River, about twenty- three miles from its mouth. About thirty miles by the course of the river above its junction with Red River, it is joined by the Tensaw and Ocatahoola, and after its junction it usually lakes the name of Black River.

Ouachitta (False), is a branch of Red River, which it joins between long. 98►► and 99►► west.

O'V^AL, adj. & n. s. Fr. oval ; of Lat. ovum, an egg. Of an egg shape.

The mouth is low and narrow, but, after having entered pretty far in the grotto, opens itself on both sides in an oval figure of an hundred yards.

Addison. Mercurius, nearest to the central sun, Does in an oval orbit circling run ; But rarely is the object of our sight In solar glory sunk. Blackmore.

A triangle is ll)at which hath three angles, or an eval is that which has the shape of an egg.

Walts's Logick.

Oval is an oblong curvilinear figure, other- wise called ellipsis. See Ellipsis. However, the proper oval, or egg shape, differs consider- ably from that of the ellipsis, being an irregular figure, narrower at one end than at another : whereas the ellipsis, or mathematical oval, is equally broad at each end ; though, it must be owned, these two are commonly confounded to- gether; even geometricians calling the oval a false ellipsis.

OUAQUAPHENOGAW, or Okefonoco, or Ekanfanoka, or Okerfonoke, a marshy lake in the state of Georgia, between tlie Oakmulgee and Flint Rivers. It is about 280 miles in cir- cumference. In wet seasons it appears like an inland sea with several fertile islands.

OVAR, a brisk trading town of the central part of Portugal, near the coast, stands on a small river which flows tlirough an inland lake, and afterwards into the Vouga. Inhabitants 5000. Twenty-two miles S.S.W. of Oporto.

OX'ARIUjNI, in botany, the germen or seed- bud, containing the rudiments of the future seed. See Botany.

OVA'RIOUS, aHj. i Latin ovum, ovarium.

O'vary, ►►.s. S Consisting of eggs: a

part of the human matrix.

The O V'ATION generally began at the Albanian mountain, whence the general with his retinue made his entry into the city on foot, with many flutes or pipes sounding in concert as he passed along, and wearing a garland of myrtle as a to- ken of peace. Tlie term ovation, according to Servius, is derived from ovis, a sheep ; because on this occasion the conqueror sacrificed a sheep, 35 in triumph he sacrificed a bull. The senate.

knights, and principal plebeians, assisted at the procession ; which concluded at the capital, where rams were sacrificed to Jupiter. The first ovation was granted to Publius Posthumus the consul, for his victory over the Sabines, A. U. C.

253.

OUCH, n.s. An ornament of gold or jewels.

Ouches or spangs, as they are of no great cost, so they are of most glory. Bacon.

OUDE, a fertile province of Hindostan, situ- ated between 26►► and 28►► of N. lat., is bounded on the north by Nepaul, on the east by Bahar, on the south by Allahabad, and on the west by Delliy and Agra. It is 250 miles in length, by 100 in breadth. The whole surface is flat, and well watered by large rivers, or their copious tributary streams. The land yields fine crops of wheat, barley, rice, and other grains, cotton, sugar-cane, indigo, and poppies. It is celebrated for its grapes, mangoes, and other fruits. In some of the districts saltpetre and lapis lazuli are found ; and a variety of cotton cloths and a coarse kind of flannel, is made here; also bows, arrows, shields, matchlocks, and swords. The rains are not so violent, nor of so long a duration here as in Bengal, and the four cold months of the year are delightful.

The Gogra and Goompty rivers are here both navigable by boats at all seasons of the year ; and the Ganges runs along the western boundary of this province. To the north-east are extensive woods and plains covered with grass, which abound in game. The principal towns are Luck- now, Fyzabad, Oude, Khyrabad, Goorackpore, and Bahreich. The inhabitants are about one- third Mahometans, the remainder are Hindoos of a fine handsome race. Great numbers of them enlist in the British service.

Oude, or Ayodhya, was the kingdom of the famous demigod Rama, said to have extended his empire through the whole south of India, and to have conquered the island of Ceylon. It was conquered by the Mahometan kings of Delhy in the thirteenth century, with little opposition, and was long held

as a dependent province by one of the chiefs of that court. It was not till the ancestor of the present nabob's family obtained the government, and the invasion of Nadir Shah in 1739, that it became hereditary. Saadit Khan died at this time by poison, taken in consequence of the humiliating treatment he experienced from Nadir Shah ; and his son-in-law, having possession of all his trea- sure, was confirmed in the government of Oude. Suflder Jung proved an excellent and brave of- ficer, and in 1747 repulsed the Afghauns ; in recompense for which service he was honored with the title of Abul Munsur (the victorious), and appointed prime minister. From this pe- riod, Abul Munsur Suffder Jung took a leading part in all the measures of the court ; and, in ad- dition to the government of Oude, he obtained that of the province of Allahabad. At length, finding his influence begin to decline, he retired to Oude, where he died in the year 175.3. Shujaa ad Dovvleh succeeded to his father with- out opposition, till the ypar 1764, when he took part with Cossim Aly Khan against the British, and ˆvas defeated at the battle of Buxar; in con sequence of which he wa? compelled to throw

liimself on their clemency. He died in 1773, and was tranquilly succeeded by his eldest son, a weak prince, who died in the year 1797. Dur- ing his government the seat of authority was transferred from Fyzabad to Lucknow, and Be- nares ceded to the British. He nominated vizier Aly his successor, but, the illegitimacy of this youth having been proved, he was dethroned by the British, and the eldest brother of the deceas- ed nabob, named Saadet Aly, called to the mus- nud. This was a shrewd prince; but the go- vernment ofOude had now been so mismanaged that the British found it requisite to dismember his territory, and, in lieu of a subsidy for the payment of the army, to take from him a num- ber of districts. Saadut Aly died in the year 1814, and left a treasure of several millions, no- minating his second son, Mirza Ahmed, his suc- cessor ; but the British elevated the eldest son Ghazee addeen Hyder to that honor. This prince, in gratitude to the British, immediately offered a present of ►►1,000,000 sterling in specie to the governor-general. Tlie donation was re- fused ; but, during the Nepaul war, the sum of ►►2,000,000 was accepted as a loan ; and, on the conclusion of the war, a portion of the conquer- ed territories which adjoined Oude were made over to him in discharge of the loan. A battal- ion of British infantry is also always stationed at Lucknow.

Oude, or Ayodhya, the capital of the above- mentioned province, long the

residence of a Hindoo dynasty, is situated on the south bank of the Dewah or Grogra River, and said once to have been of an incredible extent. In the Ayeen Akberry, which was compiled in the end of the sixteenth century, we are told that it was situated only two miles below the confluence of the rivers Soorjew and Gogra, whereas the present town is at the distance of nearly forty miles. In the vi- cinity are two remarkably large tombs of great antiquity, which the Mahometans believe are the tombs of Seth and Job. It is related in the his- torj' of this place, that the Afghaun emperor Balin, about the year 1280, ordered the governor to be hansed at the city gate for having been defeated by the rebel governor of Bengal. After the bat- tle of Buxar, m 1764, Shugaaad Dowleh found- ed the city of Fyzabad, on the ruins of the ancient capital, at the distance of two miles from the modern town, which is now in a ruinous state. Long. 82►► 10′ ►►., lat. 26►► 45′ N.

Oude, a small river of Scotland, in Argyle- shire, which falls into the head of Loch Melfort.

Oude Hasle, a village in the north-east of the Netherlands, province of Friesland, with 900 in- habitants. Eighteen miles south by east of Leeuwarden.

OUDENARDE, or Audexarde, a manufac- turing town of the Netherlands on the Scheldt, by which it is divided into two parts. It has sustained several well known sieges, but is best known in history from the victory gained over the French here, in 1 708, by prince Eugene and the duke of Marlborough. The battle took place on 1 1th of July, in the afternoon, the allies liaving to make a very long previous march, and the position of the French was so favorable, that tlie duke of Marlboroueh would have declined it

had not some successes of tlie enemy made it imperative on him to come to close action. The resLilt, after several fluctuations, was, thatat night fall the allies had driven in and surrounded all the posts of the French army. The total loss of the latter was 15,000 men, of whom nearly half were prisoners ; that of the allies 5000. The town is unfortified, but well built, and contains 5100 inhabitants, wlio carry on manufactures of woollen and linen. Fifteen miles south by west of Ghent, and thirty-two west of Brussels.

OUDIN (Casimir), a French monk, born at Mezieres in 1638. He published a Supplement to Bellarmine, containing an account of the ec- clesiastical writers omitted by him. He went to Leyden in 1693, became a protestant, was made librarian to the university, and died tlieie in

1717.

OUDRI (John Baptist), a painter, bom in Paris. He acquired the principles of his art under the celebrated Largilieres, and evinced superior talent for painting animals. He painted several hunting-pieces for the king of France, which adorn some of the royal castles. Oudri was so well acquainted with the magic of his art, that he frequently pleased himself with painting white objects on white groun'i<, which have a fine efiect. He superintended the manu- factory of Beauvais, where pieces of tapestrj' were produced equally brilliant with the pictures which had served for their model. The king gave him a pension and apartments in ti e Louvre. He died at Paris, May 1st, 1755, aged seventy-four.

OVEN, n. s. Sax. open ; Goth, ofon; Teut. ofcn ; Isl. and Swed. of a (Goth fon, is fire, Mr. Thomson observes : but the Sax. oppie, h bank or mount, is not an improbable etymology of this word). An enclosed cavity or utensil heated by fire, for baking, &c.

He loudly brayed that like was never heard, And from his wide devouring i- ien sent

A flake of fire, that, flashing in his beard, Him all amazed. Speuser.

Here's yetin the world hereafter, the kneading, the making of the cake, the heat of the oven, and the baking. Shakspeare.

Bats have been found in ovens and other hollow close places, matted one upon another ; and theie- fore It is likely that they sleep in the winter and eat nothing. Bacon.

An OvEX is a kind of domestic furnace, used for bakinsT, of a circular structure, with a very low roof, well lined, on the top, bottom, and sides, with stone ; it has a small entrance in the front, which is exactly fitted by a kind of door. It appears from the kiln-burnt pottery which has been discovered in the British sepulchres, and from the British appellation of an odyn or oven, that furnaces for baking were generally known among the original Britons. An odyn was ge- nerally erected at tlie mansion of each British baron, for the use of himself and his retainers.

O'VER, prep. & adv. Saxon o-pe ; Gothic tijhr, oj'ur ; Swed. o/irer ; Teut. o6 ire. Above; across, as applied to a stream ; upon ; difiused ; opposed both to below and under ; and applied to place, time (when it sometimes signifies before as in ' over night'). Station in life ; rule, or au-

thoiity ; &c. As an adverb, beyond measure, or An assigned quantity ; above the top ; (hence, exiraordinary) ; from side to side ; throughout ; completely : on the whole surface ; from beyond sea ; past in point of time ; and, repeated, ano- ther time ; as in ‘ over and over.’ ‘ Over and above,’ means besides ; beyond a first supposi- tion or intention : ‘ over against,’ opposite : ‘ to give over,’ to cease from ; also to help or attempt to benefit no longer. Over is used so variously and extensively in composition that we can only refer to the extracts as generally expressive of more than enough, too much, and to the more regular and estalDlished compounds that follow.

The first came out red all over, like an hairy gar- ment. Genesis.

When they did mete it, he that gathered much had nothing over, and he that gathered little had no l%ck. Exodus, xvi. 18.

On their intended journey to proceed, And over night whatso thereto did need.

Hubberd. Even here likewise the laws of nature and reason be of necessary use ; yet somewhat over and besides them is necessary, namely, human and positive law.

Hooker. Soliman pausing upon the matter, the heat of his fury being something over, suffered himself to be in- treated. Knolles. The street sliould see as she walkt over head.

SItxtkspeare. Well, Have you read oVr the letters I sent you f Id.

He over and over divides him, ‘Twixt his unkindness and his kindness. Id.

Devilish Macbeth By many of these strains hath sought to win me Into his power ; and modest wisdom plucks me i’rom over-credulous haste. Id. Macbeth.

Certain lakes and pits, such as that of Avennes, poison birds which fly over them. Bacon.

It hath a white berry, but is not brought ever with the coral. Bacon’s Natural History.

Wise governors have as great a watch over fames, as they have of the actions and designs. Bacon.

This golden cluster the herald delivereth to the Tirsan, who delivereth it

over to that son that he had chosen. Id.

Meditate upon the effects of anger ; and the best time to do this is to look back upon anger when the fit is over. Id.

The ordinary soldiers having all their pay, and a month's pay over, were sent into their countries.

Hayuard. All the world over, those that received not the commands of Christ and his doctrines of purity and perseverance, were signally destroyed.

Hammond. The act of stealing was soon over, and cannot be undone, and for it the sinner is only answerable to God or his vicegerent. Taylor,

What the garden choicest bears To sit and taste, till this meridian heat Be over, and the sun more cool decline. Milton.

Angelic quires Sung heavenly anthems of his victory Over temptation and the tempter proud. Id.

Thrice happy is that humble pair. Beneath the level of all care ; Over whose head those arrows fly, Of sad distrust and jealousy. Waller.

Young Pallas shone conspicuous o'er the rest ; Gilded his arms, embroidered was his vest.

Dryden.

Thou, my Hector, art thyself alone.

My parents, brothers, and my lord in one ;

O kill not all my kindred o'er again.

Nor tempt the dangers of the dusty plain ;

But in this tower for our defence remain. Id.

Captain, yourself are the fittest to live and reign, not over, but next and immediately under the people.

Id.

He gathered a great mass of treasure, and gained over and above the goodwill and esteem of all people wherever he came. L'Estrange.

When children forget, or do an action aukwardly, make them do it over and over again, till they are per- fect. Locke.

This part of grammar has been much neglected, as some others aver- diligently cultivated. It is easy for men to write one after another of cases and gen- ders. Id.

The fan of an Indian king, made of the feathers of a peacock's tail, composed into a round form, bound altogether with a circular rim, above a foot over. Grew.

Let them argue over all the topics of divine good- ness and human weakness, yet how trifling must be their plea ! South' s Sermons,

The church has over her bishops, able to silence the factious, no less by their preaching than by their authority. South.

Over against this church stands a large hospital, erected by a shoemaker. Addison on Italy.

If this miracle, of Christ's rising from the dead, be not sufficient to convince a resolved libertine, neither would the rising of one now from the dead be suffi- cient for that purpose ; since it would only be the doing that over again which hath been done already.

Atterbury.

He will, as soon as his first surprise is over, begin to wonder how such a favour came to be bestowed on him. Id,

The eastern people determined their digit by the breadth of barley corns, six making a digit, and twenty-four a hand's breadth : a small matter over or under. Id-

These, when they praise, the world believes no more Than when they promise to give scribbling o'er.

Pope,

The commentary which attends this poem will have one advantage over most commentaries, that it is not made upon conjectures. Id.

It will afford field enough for a divine to enlarge on, by showing the advantages which the Christian world has over the heathen. Stvijt.

The most learned will never find occasion to act over again what is fabled of Alexander the Great, that when he had conquered the eastern world, he

wept for want of more worlds to conquer. Waiti.

They brought new customs and new vices o'er ; Taught us more arts than honest men require.

Philips.

He crammed his pockets with the precious store. And every night reviewed it o'er and o'er. Harie.

Throw the broad ditch behind you ; o'er the hedge. High bound, resistless ; nor the deep morass Refuse, but thiough the shaking wilderness Pick your nice way. Thomson.

Forced from home and all its pleasures,

Afric's coast I left forlorn ; To increase a stranger's treasures.

O'er the raging billows borne. Covper.

Oh I who can tell 1 save he whose heart hath tried And danced in triumph o'er the waters wide. The exulting sense ••• the pulses maddening play. That thrills the wanderer o'er that trackless way.

byvKi.

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Drenched each smart garb, and clogged each struggling limb. Far o'er the stream the cockneys sink or swim.

Canning.

OVER-ABOUND', v. n. Over and abound. To abound more than enough.

Both imbibe Fitting congenial juice, so rich the soil, So much does fructuous moisture o'er-abound.

Philips. The learned, never over-abounding in transitory coin, should not be discontented. Pope's Letters.

OVER-ACT, V. a. Over and act. To act more than enough.

‘You over-act, when you should underdo : A little call yourself again, and think.

Ben Jonson. Princes courts may over-act their reverence, and make themselves laughed at for their foolishness and extravagant relative worship. Slillingjieet.

Good men often blemish the reputation of their piety, by over-acting some things in religion ; by an indiscreet zeal about things wherein religion is not concerned. Tdlotson.

He over-acted his part ; his passions, when once let loose, were too impetuous to be managed.

A tterhury.

OVERALL (.Tohn), a celebrated English bi- shop, born in 1559, educated at St. John’s Col- lege, Cambridge ; but, removing to Trinity, was cliosen fellow of that college. In 1596 he was made regius professor of divinity- and D. D., and elected master of Catherine-hall. In 1601 he was made dean of St. Paul’s, London, by the recommendation of Sir Fulk Greville and queen Elizabeth ; and in king James’s reign he was cho- sen prolocutor of the lowerhouse of convocation. In 1612 he was appointed one of the first go vernors of the Charter-house hospital, and in April 1614 he was made bishop of Litchfield and Coventry; and in 1618 was translated to Norwich where he died in May 1619, aged sixty. He was buried in that cathedral, where after the restoration, Cosin, bishop of Durham, who had been his secretary, erected a monument to him, with this inscription, Vir undequaque doctissi- mus, et omni encomio major. Wood says, he was the best scholastic divine in England. He is also celebrated by Smith for his distingui-shed wisdom, eriidition, and piety. In the contro- versy about predestination and grace, he held a middle opinion inclining to Arminianism. He seems indeed to have paved the way for the re- ception of that doctrine in England. The bishop is known in England chiefly by his Convocation Book.

OVER-ARCH’, V. a. Over and arch. To cover as with an arch.

Where high Ithaca o’erlooks the floods. Brown with o’er-arching shades and pendent woods.

Pope.

OVER- AWE’, V. a. Over and awe. To keep in awe by superior influence.

The king was present in person to overlook the magistrates, and to over-

awe those subjects with tlie terror of his sword. Spenser,

Her graceful innocence, her every air Of gesture, or least action, over-awed' IJis malice. Milton's Paradise Lost.

I could be content to be jour chief tormentor, ever paying you mock reverence, and sounding in

your ears the empty title which inspired yon with

presumption, and over-awed my daughter to comply.

Addison's Guardian.

A thousand fears

Still over-awe when she appears.

Granville's Poems. Thus free from censure, over-awed by fear. And praised for virtues that they scorn to wear. The fleeting forms of majesty engage Respect, while stalking o'er life's nanow stage. Then leave their crimes for history to scan, And ask with busy scorn, ' Was this the man V

Courper.

OVER-BAL'ANCE, v. a. & n. s. To weigh down ; to preponderate. Something more than equivalent.

Not doubting but by the weight of reason I should counterpoise the over-balancings of any factions.

King Charles,

Our exported commodities would, by the return, encrease the treasure of this kingdom above what it can ever be by other means, than a mighty over-ba- lance of our exported to our imported commodities.

Temple,

The mind should be kept in a perfect indifference, not Inclining to either side, any further than the over- balance of probabiFity gives it the turn of assent and belief. Locke.

The hundred thousand pounds per annum, wherein we over-balance them in trade, must be paid us in money. Id.

When these important considerations are set be- fore a rational being,

acknowiedginij the truth of every article, should a bare single possibility be of weight enough to averbalance them 1 Rogers.

0'ER-BAT'TLE, adj. From over and battle. Too fruitful; exuberant.

In the church of God sometimes it cometh to pass, as in over-battle grounds ; the fertile disposi- tion whereof is good, yet, because it exceedeth due proportion, it bringeth abundantly, through too much rankness, things less profitable, whereby that whicK principally it should yield, either prevented in place or defrauded of nourishment, faileth. Houlter.

OVER-BEAR', v. a. Over and bear. To repress: to subdue; to whelm ; to bear down.

What more .savage than man, if he see himself able by fraud to over-reach, or by power Xo over-hear the laws ? Hooker.

The Turkish commanders, .with all their forces, assailed the city, thrusting their men into the breaches by heaps, as if they would, with very multi- tude, have discouraged or over-born the Christians.

Knu.ies.

The ocean, over-peering of his list, Eats not the flats with more impetuous haste, Than young Laertes, in a riotous head, O'er-bears your officers. Shakspeare. Hamlet.

The point of reputation, when news first came of the battle lost, did over- bear the reason of war.

Bacon. Yet fortune, valour, all is over-bo}~n

By numbers ; as the long resisting bank

By the impetuous torrent. Denham,

A body may as well be over-bom by the violence of a shallow rapid stream, as swallowed up in the gulph of smooth water. L'Estrunge.

The judgment, if swayed by the over-bearing o, passion, and stored with lubricous opinions instead of clearly conceived truths, will be erroneous.

Glanville's Scepsis,

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Take care that the memory of the learner be not too much crowded by a tumultuous heap, or over-bearing multitude of documents at one time.

Watts.

The horror or loathsomeness of an object may over- bear the pleasure which results from its greatness, novelty, or beauty. Addison.

OVER-BID', V. a. Over and bid. To offer more than equivalent.

You have o'er-bid all my past sufferings.

And all my future too. Dryden's Spanish Friar.

OVER-BLOW, V. n. & v. a. Over and blow. To be past its violence.

Led with delight, they thus beguile the way. Until the blustering storm is over-blown. Spenser. This ague fit of fear is over-blown. An easy task it is to win our own.

Shakspeare. Some angel that beholds her there, Instruct us to record what she was here ; And when this cloud of sorrow's over-blown. Through the wide world we'll make her graces known. Waller.

Seized with secret joy, When storms are over-bloun.

Dryden's Virgils.

OVERBOARD, adj. Over and board. See Board. Off the ship, out of the ship.

The great assembly met again ; and now he that was the cause of the tempest being thrown over- board, there were hopes a calm should ensue.

Howel. The trembling dotard to the deck he drew. And hoisted up and over-board he threw ; This done he seized the helm. Dryden,

He obtained liberty to give them only one song be- fore he leaped over-board, which he did, and then plunged into the sea. L'Estrange.

A merchant having a vessel richly fraught at sea in a storm, there is but one certain way to save it, which is, by throwing its rich lading over-board.

South, Though great ships were commonly bad sea-boats, they had a superior force in a sea engagement : the shock of them being sometimes so

violent, that if would throw the crew on the upper deck of lesser ships over-board. Arbuthnot.

Then rose from sea to sky the wild farewell, Then shrieked the timid, and stood still the brave. Then some leaped over-board with dreadful yell. As eager to anticipate their grave. Byron.

OVER-BULK, t;. a. Over and bulk. To op- press by bulk.

The feeding pride. In rank Achilles, must or now be cropt. Or shedding, breed a nursery of like evils. To over-bulk us all.

Shakspeare. Troilus and Cressida.

OVER-BUR'DEN, v. a. Over and burden. To load with too great weight.

If she were not cloyed with his company, and that she thought not the earth over-burdened -with him, she would cool his fiery grief. Sidtiey.

OVERBURY (Sir Thomas), a learned and accomplished English gentleman, was born in 1581, and studied at Oxford. His intimacy with Sir Robert Can procured him the honor of knighthood, and also occasioned his death. When Sir Robert became viscount Rochester, he contracted an intimacy with the countess of

Essex, of which Sir Thomas disapproved in ?o plain terras, that the viscount treacherously used his influence with the king to inspire him with unjust suspicions of the baronet, who was thrown into the tower, where, in the course of a few months, he was poisoned, in 1613. The trea- cheary was afterwards discovered, but the mur- derers were only punished with a temporary banishment from court. He published an ac- count of his travels on the continent, and several poems.

OVER-BUY', V. a. Over and buy. To buy too dear.

He, when want requires, is only wise. Who slights not foreign aids, nor over-buys; But on our native strength, in time of need, relies.

Dryden.

OVER-CAR'RY, v. a. Over and carry. To hurry too far ; to be urged to any thing violent or dangerous.

He was the king's uncle, but yet of no capacity to succeed ; by reason whereof his natural affection and duty was less easy to be over-carried by ambition.

Hayuard.

OVER-CAST', V. a. & part., overcast. Over and cast. To cloud ; to darken ; to cover with gloom. To cover. Tliis sense is hardly retained but by needle women, who call that which is en- circled with a thread, overcast ; to rate too high.

Their arms abroad with gray moss over-cast. And their green leaves trembling with every blast.

Spenser. As they past. The day with clouds was sudden over-cast. Id. When malice would work that which is evil, and in working avoid the suspicion of an evil intent, the color wherewith it over-cusieth itself is always a fair and plausible, pretence of seeking to further that which is good. Hooker.

Hie, Robin, over-cast the night-, The starry welkin cover thou anon. With drooping fogs as black as Acheron.

Shakspeare. Our days of act are sad and over-cast, in which we find that all of our vain passions and affections past, the sorrow only abideth. Raleigh.

The king, in his accompt of peace and calms, did much over-cast his fortunes, which proved full of bro- ken seas, tides, and tempests. Bacon. 1 of fumes and humid vapors made. No cloud in so serene a mansion find.

To over-cast her ever-shining mind. Waller. Those clouds that over-cast our morn shall fly. Dispelled to farthest corners of the sky. Dryden. The dawn is over-cast, the morning lours. And heavily in clouds brings on the day.

Addison.

OVER-CHA>RG.E', v. a. Over and charge. To burden ; to overrate ; to fill too full ; to op- press ; to cloy ; to surcharge.

Here's Gloster, a foe to citizens, O'er-charging your free purses with large fines.

Shakspeare. They were As cann i s over-charyed with double cracks. Id. On air we feed in every instant, and on meats but at times ; and yet the heavy load of abundance, wherewith we oppress and overcharge nature, maketb her to sink unawares in the mid-way.

Raleigh's History of the World.

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Who in deep mines for hidden knowledge toils, Like guns o'er-charged, breaks, misses, or recoils.

Denham. If they would make distinct abstract ideas of all the varieties in human actions, the number must be in- finite, and the meiaoiy otier-charged to little purpose.

Locke. The fumes of passion do as really intoxicate, and confound the judging and discerning faculty, as the fumes of drink discompose and stupify the brain of a man over-charged with it. South.

The action of the Iliad and .Eneid, in themselves exceeding short, are so beautifully extended by the invention of episodes, that they make up an agree- able story sufficient to employ the memory without over-charging it. Addhon's Spectator.

A man may as well expect to grow stronger by al- ways eating, as wiser by always reading. Too much over-charges nature, and turns more into disease than nourishment. Collier,

Our language is over-charged vpith consonants.

Pope. OVER-CLOUD', r. a. Over and cloud. To cover with clouds.

The silver empress of the night, O'er-clouded, glimmers in a fainter light.

Tickel. OVER-CLOY', V. a. Over and cloy. To fill beyond satiety.

A scum of Britons and base lacquey peasants, ˆVhom their over-cloyed country vomits forth To desperate adventures and destruction.

Shakspeare. OVERCOME', V. a. \ To subdue ; to con- Ovep.com'er, 7z. s. i quer ; to surmount or overflow; to invade suddenly.

Of whom a man is overcome, of the same is he brought in bondage. 2 Peter, ii. 19.

This wretched woman, overcome Of anguish rather than of crime hath been.

Spenser. Can't such things be And overcome us like a summer's cloud, ˆ\ ithout our special wonder"! Shakspeare.

Fire by thicker air overcome. And downward forced in earth's capacious womb. Alters its particles : is fire no more. Prior.

In unfallowed glebe Yearly o'ercumes the granaries with stores.

Philip . INIiranda is a constant relief to poor people in their misfortunes and accidents ; there are sometimes little misfortunes that happen to them, which of themselves they could never be able to overcome.

Law OVER-COUNT', r. a. Over and count. To rate above the true value.

Thou knowest how much We do o'ercount thee.

Shakspeare. Antony and Cleopatra.

OVER-COVER, r. a. Over" and cover. To cover completely.

Shut me nightly in a charnel house, Cer-covered quite with dead men's rattling bones With reeky shanks and yellow chapless sculls.

Shakspeare.

OVER-CROW', V. a. Over and crow. To crow as in triumph.

A base varlet, thai being but of late grown out of the dunghill, beginneth now to overcrow so high mountains, and make himself the great protector of all outlaws. Spemcr.

OVERDO', V. a Over and do. To do more than enough,

*Any thing so over-done is from the purpose of plav- '********ng ; whose end is to hold the mirror up to nature!*

Shakspeare.

Nature, so intent upon finishing her work, much ohener over-does tha.n under does. You shall hear of twenty animals with two heads, for one that hath none. Grew.

When the meat is over-done, lay the fault upon your lady who hurried you. Swift.

OVER-DRESS, r. a. Over and dress. To adorn lavishly.

In all, let Nature never be forgot ; But treat the goddess like a modest fair. Nor over-dress nor leave her wholly bare.

Pope. OVER-DRIVE', V. a. Over and drive. To drive too hard or beyond strength.

The flocks and herds with young, if men should over-drive one day, all will die. Gen. xxxiii. 13.

OVER-EYE', V. u. Over and eye. To super- intend ; to observe ; to remark.

I am doubtful of your modesties, Lest over-eying of his odd behaviour, You break into some merry passion.

Shakspeare. OVER-EMP'TY, v. a. Over and empty. To make too empty.

The women would be loth to come behind the fashion in newfangledness of the manner, if not to costliness of the matter, which might over-empty their husband's purses. Carew.

OVERFAU, 72. s. Over and fall. Cataract. Tostatus addeth, that these which dwell near those falls of water, are deaf from their infancy, like those that dwell near the overfals of Nilus.

Raleigh's History of the World. OVER-FLOAT, i;. 71. Over and float. To swim ; to float.*

The town is filled with slaughter, and o'erfoats, With a red dehige, their increasing moats.

Dryderu

OVERFLOW, i;.n.,r.fl., 8c 71. i.-^ To be

OvERFLOw'iNG, Ti. s. Mullcr than

OvERFLOw'iNGLY, udv. J the brim

can hold ; to abound ; deluge, or drown ; to

overrun : the noun signifies exuberance, as also

overflowing. Overflowingly is, exuberantly ; in

great abundance.

*The Scythians, at such time as the northern na- tions overjiowed all Christendom, came down to the sea coast. Spenser^*

Did he break out into tears ? ••• In great measure. ••• A kind

overflow of kindness.

Shakspeare. Where there are great overflows in fens, the drown- ing of them in winter maketh the summer following more fruitful ; for that it keepeth the ground warm. Bacons Natural History. Suppose thyself in as great a sadness as ever did load thy spirit, would'st thou not bear it cheerfully if thou wert sure that some e.xcellent fortune would relieve and recompense thee so as to overjiow all thy hopes 1 Taylor.

When men are yo\ing, they might vent the over- fintings of their fancy that way. Denham.

Nor was it his indigence that forced him to make the world, but his goodness pressed him to impairt the goods which he so overfoningly abounds with.

Boyle.

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New milk that all the winter never fails,

And all the summer over-Jiown the pails.

Drijdeyi.

While (lur strong walls secure us from the foe, Ere yet with blood our ditches uverjiow. Id.

It' requires pains to find the coherence of abstruse writings : so that it is not to be wondered that St. Paul's epistles have, with many, passed for disjointed pious discourses, full of warmth and zeal and oier- Jiows of light, rather than for calm, strong, coherent reasonings all through. Locke.

Had 1 the same consciousness that I saw Noah's flood, as that 1 saw the overjiowing of the Thames last winter, I could not doubt, that I who saw the Thames overflowed, and viewed the flood at the gene- ral deluge, was the same self. Id.

Do not the Nile and the Niger make yearly inun- dations in our days, as they have formerly done ? and are not the countries so overflown still situate be- tween the tropics? Bentleii.

Sixteen hundred and odd years after the earth was made it was overflowed and destroyed in a deluge of water, that overspread the face of the whole earth, from pole to pole, and from east to west. Burnet.

After every overflow of the Nile there was not al- ways a mensuration. Arbuthnot on Coi}is.

The expression may be ascribed to an overflow of gratitude in tlie general disposition of TJlysses.

Broome.

When the overflowings of ungodliness make us afraid, the ministers of religion cannot better discharge their duty of opposing it. Rogers.

Thus oft by mariners are shown.

Earl Godwin's castles overflown. Swift.

OVER-FLY', V. a. Over and fly. To cross by flight.

A sailing kite

Can scare o'er-fly them in a day and night.

Dryden,

OVER-FOR'WARDN ESS, n. s. Over and forwardness. Too great quickness : too great readiness.

By an over forwardness in courts to give counte nance to frivolous exceptions, though they make nothing to the true merit of the cause, it often hap- pens that causes are not determined according to their merits. Hale.

OVER-FREIGHT', v. a. ; pret. over- freighted; part, over-fraught. Over and freight. To load too heavily ; to fill with too great quan- tity-

A boat over-freighted with people, in rowing down

the river, was, by the extreme weather, sunk.

Carew. Giief, that does not speak, Whispers the o'er-fraught heart and bids it break.

Shakspeare. Sorrow has so o'er-fraitght This sinking bark, I shall not live to show How I abhor my first rash crime. Denham.

OVERGET', V. a. Over and get. To pass ; to leave behind.

With six hours hard riding through so wild places, as it was rather the cunning of my horse sometimes, than of myself, so rightly to hit the way, I over-got them a little before night. Sidney.

OVER-GLANCE', v. a. Over and glance. To look hastily over.

i have, but with a cursory eye, O'er-glanced the articles.

Shakspeare. Henry V. OVER-GO', V. a. Over and go. To surpass ; to excel

Thinking it beyond the degree of humanity to have a wit so far over-going his age, and sudv dreadful terror proceed from so excellent beauty.

Sidney. Great nature hath laid down at last That mighty birth wherewith so long she went, And over-went the times of ages past. Here to lie in upon our soft content. Daniel.

OVER-GORGE', v. a. Over and gorge. To gorge too much.

Art thou grown great And, like ambitious Sylla, over-gorged ?

Shakspeare.

OVER-GREAT', adj. Over and great. Too great.

Though putting the mind unprepared upon an un- usual stress ought to be avoided : yet this must not run it, by an over-great shyness of ditHculties, into a lazy sauntring about obvious things. Locke,

OVER-GROW', v.a. &cv.n. } Over and giow. Over-growth', H. s. S To cove- with

growth ; to grow beyond the fit and natural size , to rise above : overgrowth is exuberant ov ex- cessive growth.

Iioof, and floor, and walls, were all of gold. But over-grown with dust and old decay. And hid in darkness tiiat none could behold The hue tiiereof. Spenser.

One part of his army, with incredible labour, cut away tlirough the thick and over-grown woods, and so came to Solyman. Knolles.

The over-growth of some complexion. Oft breaking down the pales and forts of reason.

Shakspeare. The fortune in being the first in an invention doth cause sometimes a wonderful over-growlh in riches.

Baani. Suspected to a sequent king, who seeks To stop their over-growth, as inmate guests Too numerous. Milton's Paradise Lo-t.

The woods and desart caves, With wild thyme and the gadding vine o'cr-grown. And all their echoes mourn. Milton.

A huge over-grown ox was grazing in a meadow.

Jj'Kslrange. If the binds be very strong and much over-grotK the poles, some advise to strike off' their heads with a long switch. Mortimer.

Him for a happy man I own, Whose fortune is not over-grown. Swift.

OVER-HALE', v.a. Over and hale. To spread over.

The welked Phoebus gan availe His weary wain, and now the frosty night Her inaaile black thro' heaven gan over-hale.

Spenser.-

*O VˆER-HANG', v.a.k v. n. Over and hang. To jut over ; to imjˆend over. Lend the eye a terrible aspect, Let *\ie brow overwhelm it. As fearfully as doth a galled rock U er-hang and jutty his confounded base.*

Shakspeare. The rest was craggy cliff", that overhang Still as it rose, impossible to climb. Milton.

Hide nie, ye forests, in your closest bowers, Where flows the murm'ring brook, inviting dreams. Where bord'ring hazle over-hangs the streams. Gay.. If you drink tea upon a promontory that orcr hangs the sea, it is preferable to an assembly. Pope.*

OVER-HAR'DEN, r. a. Over and hardeo. To make too hard.

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By laying it ia the air, it has acquired such a hardness, that it was brittle, like over-hardened steel,

BoijLe. OVER-HEAD', arfy. Over and head. Aloft; in the zenith ; above ; in the ceiling. Over-head the moon Sits arbitress, and nearer to tlie earth Wheels her pale course. Milton's Paradise Lost. The four stars oyer-ftead re;i esent the four chil- dren. Addisun. ˆow owr-head, a rainbow, bursting through

The scattering clouds, shone ••• spanning the dark sea, Resting its bright base on the quivering blue.

Byron .

OVER-HEAR', v. a. Over and hear. To hear those who do not mean to be heard.

T am invisible And I will over-hear their conference. Shakspeare.

They had a full sight of the Infanta at a mask dancing, having over-heard two gentlemen who were tendiiˆ towards that sight, after whom they pressed.

Wutton. That such an enemy we have who seeks

Our ruin, both by thee informed I learn.

And from the parting angel over-heard. Milton.

'J'hey were so loud in their discourse, that a black- berry from the next bridge over-heard them.

L'Eslranye. The nurse. Though not the words, the murmurs over-heard.

Drjiden.

*The witness, oi'**r-Aearinˆ the word pillory repeated, slunk away privately. Addison.*

OVER-HEAT, v. a. Over and heat. To heat too much.

Pleased with the form and coolness of the place, And over-heated by the morning chase. Addison.

It must be done upon the receipt of the wound, before the patient's spirit be over-heated with pain or fever. Wiseman.

And to confound two things together, which are so essentially different, can be the effect of nothing but great ignorance, inconsideration, or an over-heated injudicious zeal. Mason.

OVER-HEND', v. a. Over and hend. To overtake ; to reach.

Als his fair leman flying through a br-ook, lie uver-hent naught moved with her piteous look.

Spenser.

OVER-JOY', V. a. & n. s. Over and joy. To transport; to ravish : in the noun, transport; ecstasy.

The mutual conference that my mind hath had. Makes me the bolder to salute my king With ruder terms ; such as my wit affords. And over-joy of heart doth minister. Shakspeare.

He that puts his coniidence in God only, is neither over-juiied in any great good things of this life, nor sorrowful for a little thing. Taylor s Guide.

The bishop, partly astonished and partly over- joyed with these speeches, was struck into a sad silence for a time. Hayicurd.

This love-sick virgin, over-joyed to find

The boy alone, still followed him behind.

Addison.

*OVER-LABOR, v. a. Over and labor. To take too much pains on any thing; to harass with toil. ***) , , . She without noise will over-see*

*

'His children and his family ;

And order all things till he come,

Sweaty and over-labotired home. Dry den.

OVERLADE', v. a. Over and lade. To over- burden.

i hus to throng and over-lade a sou. With love, and then to have a room for fieur. That shall all that controul, \ˆ hat is it but to rear. Our passions and our hopes on high,

Tliat thence they may descry The noblest way how to despair and die ?

Suckling. OVERLARGE', flf/y. Over and large. Larger than enough.

Our attainments cannot be over-large, and yet we manage a narrow fortune very unthriftily.

Collier. OVERLASH'INGLY, adv. Over and lash. With exaggeration. A mean word, now ob- solete.

Although I be far from their opinion who writes too overlashingly, that the Arabian tongue is in use in two third parts of the inhabited world, yet I find that it extendeth where the religion of .Mahomet is professed. Brereicood.

OVERLAY', V. a. Over and lay. To op- press by too much weight or power ; to smo- ther ; to overwhelm ; to cover superficially.

Some commons are barren, the nature is such, And some over-layeth the commons loo much.

Tusser, Phoebus' golden face it did attaint. As when a cloud his beams did over-lay.

Spenser. Not only that mercy which keepeth from being over-laid and opprest, but mercy which saveth from being touched with grievous miseries. Hooker.

Wˆhen any country is over-laid by the multitude which live upon it, there is a natural necessity com- pelling it to disburden itself and lay the load upon others. Raleigh.

We praise the things we hear with much more willingness than those we see ; because we envy the present, and reverence the past ; thinking ourselves instructed by the one, and over-laid by the other.

Ben Jonson. Good laws had been antiquated by the course of time, or over-laid by the corruption of manners.

King Charles. Nor then destroys it with too fond a stay, Like mothers, which their infants over-lag.

Milton. Thou us impowered To fortify thus far, and over-lay, With this portentous bridge, the dark abyss. Id. By his prescript a sanctuary is framed Of cedar, over-laid with gold. Jd.

The strong Emetrius came in Arcite's aid, And Palamon with odds was over-laid. Dryden.

The stars, no longer over-laid with weight. Exert their heads from underneath the mass. And upward shoot. td.

They quickly stifled and over-laid those infant principles of piety and virtue, sown by God in their hearts ; so that they brought a voluntary darkness and stupidity upon their minds. South's Sermons.

Season the passions of a child with devotion, which seldom dies ; though it may seem extinguished for a while, it breaks out as soon as misfortunes have brought the man to hiiuself. The lire may be covered and over-laid, but cannot be entirely quenched and smothered. Addison s Spectatot.

In preaching, no men succeed better than those who trust to the fund of their own reason, advanced but not uver-laid bv commerce with books. Suijt.

OVER-LEAP', V. a. Over and leap. To pass by a jump.

A step On which I must fall down, or else o'er-leap, For in my way it lies. Shakspeare. Macbeth.

In vain did Nature's wise command Divide the waters from the land ; If daring ships and men prophane The eternal fences over-leap. And pass at will the boundless deep. Dryden. OVER-LEATH'ER, n. s. Over and leather. The part of the shoe that covers the foot.

I have sometimes more feet than shoes ; or such shoes as my toes look through the over-lenther.

Shakspeare.

OVER-LIGHr, n. s. Over and light. Too strong light.

An over-light maketh the eyes dark, insomuch as perpetual looking against the sun would cause blind- ness. Bacon.

OVˆER-LIVE', V. a. k v. n. Over and live. To live longer than another; to survive; to out- live ; to live too long.

JIusidorus, who shewed a mind not to over-live Pyrocles, prevailed. Sidney.

He concludes in hearty prayers,

That your attempts may over-live the hazard

And fearful meeting of their opposite.

Shakspeare.

They over-lived that envy, and had their pardons afterwards. Hayicard.

Why do I over-live? Why am I mocked with death, and lengthened out To deathless pain? Milton's Paradise Lust.

OVER-LOAD', V. a. Over and load. To burden with too much.

The memory of youth is charged and over-loaded, and all they learn is mere jargon. Felton.

]\Ien over-loaded with a large estate May spill their treasure in a nice conceit ; The rich may be polite, but oh ! 'tis sad, To say you're curious, when we swear you're mad.

Young.

OVER-LONG', adj. Over and long. Too long.

I have transgressed the laws of oratory, in making my periods and parenthesis over-long. Boyle.

OVE-R-LOOK', V. a. > Over and look. To

Over-look'er, n. s. S viewr from a high place ; to revise ; to watch over ; to pass indul- gently over a fault ; to neglect : an overlooker is one who watches over others.

He was present in person to over-look the magis- trates, and to overawe those subjects with the terror of his sword. Spenser.

In the greater out-parishes many of the poor pa- rishioners, through neglect, do perish for want of some heedful eye to over-look them. Graunt.

The time and care that are required. To over-look and file, and polish well. Fright poets from that necessary toil.

Roscommon.

I will do it with the same respect to him as if he were alive, and over-lookirig my paper while I write.

Dryden.

The pile o'er-looked the town, and drew the sight. Surprised at once with reverence and delight. Id.

Of the two relations, Christ over-looked the meaner, and denominated them solely from the more honour- able. South.

Religious fear, when produced by just apprehen- sions of a divine power, naturally over-looks all hu-

man greatness that stands in competition with it, and extinguishes every other terror. Addison.

This part of good-nature, which consists in the pardoning and over-looking of faults, is to be exer- cised only in doing ourselves justice in the ordinary commerce of life. Id.

In vain do we hope that God will over-look such high contradiction of sinners, and pardon offences committed against the plain conviction of conscience.

Rogers.

They over-look truth in the judgments they pass on adversity and prosperity. The temptations that attend the former they can easily see, and dread at a dislance ; but they have no apprehension of the dan- gerous consequences of the latter. Atterburxf.

To over-look the entertainment before him, and languish for that which lies out of the way, is sickly and servile. Collier.

The original word signifies an over-looker, or one who stands higher than

his fellows and over-looks them. Watts.

OVER-LOOP', n. s. The same with orlop.

In extremity we carry our ordnance better than we were wont, because our nether over-loops are raised commonly from the water ; to wit, between the lower part of the port and the sea. Raleigh.

OVER-MAST'ED, adj. Over and mast. Having too much mast.

Cloanthus, better manned, pursued him fast. But his o'er-masted gaily checked his haste.

Dryden.

OVER-MAS'TER, v. a. Over and master. To subdue ; to govern. ††† For your desire to know what is between us, O'er-master it as you may. Sluikspeare. Hamlet.

So sleeps a pilot whose poor bark is prest With many a merciless o'er-mastering wave.

Crashaw. They are over-mastered with a score of drunkards, the only soldiery left about them, or else comply with all rapines and violences.

Milton on Education.

OVER-MATCH', v. a. & n. s. Over and

match. To be too powerful ; to conquer ; to

oppress by superior force : the noun signifies

one of superior power ; one not to be overcome.

I have seen a swan

With bootless labour swim against the tide.

And spend her strength with over-matching waves.

Shakspeare. Sir William Lucy, with me Set from our o'er-matched forces forth for aid. Id. Spain is no over-match for England, by that which leadeth all men ; that is, experience and reason.

Bacon. Assist, lest I, who erst Thought none my equal, now be over-matched.

Paradise Regained. Eve was his over-match, who self-deceived And rash, before-hand had no better weighed The strength he was to cope with or his own.

Milton, He from that length of time dire omens drew. Of English over-matched, and Dutch too strong. Who never fought three days but to pursue.

Dryden, How great soever our curiosity be, our excess is greater, and does not only over-match , but supplant it. Decay of Piety.

In a little time there will scarce be a woman of quality in Great Britain, who would not be an over- match for an Irish priest. Addiion,

OVER-MIX', V. a. Over and mix. To mix with too mucli.

Those things these parts over-rule, no joy shall know, Or little measure over-viixt with woe. Creech.

OVERMUCH', adj., adv. Sc n. s.) Over and Overmuch'ness, n.s. S much. More

than enougli. In too great a degree : overmuch- ness is superabundance.

The fault which we find in them is, that they over- much abridge the church of her power in these things. Whereupon they recharge us, as if in these things we gave the church a liberty which hath no limits or bounds. Hooker.

There are words that do as much raise a style, as others can depress it ; superlation and over-mudmess amplifies. It may be above faith, but not above a jneau. Ben Junson.

Perhaps I also erred, in over-much admiring What seemed in thee so perfect, that I thought No evil durst attempt thee.

Milton's Paradise Lost. By attributing over-much to things Less excellent, as thou thyself perceivest.

Milton. It was the custom of those former ages, in their ouer-ptuch gratitude, to advance the first authors of aa useful discovery among the number of their gods.

Wilkim. With respect to the blessings the world enjoys, even good men may ascribe over-much to themselves.

Grew. An over-much use of salt, besides that it occasions thirst and over-much drinking, has other ill-effects.

Locke.

OVER-NAME', v. a. Over and name. To name in a series.

Over-name them ; and as thou namest them I will describe them. Shakspeare. 3Ierchant of Venice.

OVER-NIGHT', n. s. Over and night. Night before bed-time.

If I had given you this at over-night.

She might have been o'erta'en. Shakspeare,

Will confesses, that for half his life his head ached every morning with reading men overnight.

Addison.

OVER-OF'FICE, v. a. Over and office. To insult by virtue of an office.

This might be the fate of a politician which this ass over-offices. Shakspeare. Hamlet.

OVER-OFFICIOUS, adj. Over and offici- ous. Too busy ; too importunate.

This is an over-officious truth, and is always at a man's heels ; so that, if he looks about him, he must take notice of it. Collier.

OVERPASS', r. fl. Over and pass. To cross; to pass with disregard ; to omit.

If the grace of him which saveth over-pass some, so that the prayer of the church for them be not re- ceived, this we may leave to the hidden judgments of righteousness. Hooker.

The complaint about psalms and hymns might as well be over-past without any answer, as it is with- out any cause brought forth. Id.

What can'st thou swear by now? ••• By time to come. ••• That thou hast wronged in the time o'er -past.

Shakspeare.

AritlimeticaJ progression demonstrates how fast manmnd would increase, over-passing as miraculous,

though indeed natural, that example of the Israelites who were multiplied in two hundred and fifteen years, from seventy to sixty thousand able men.

Raleigh. Remember that Pellean conqueror, A youth, how all the beauties of the east He slightly viewed, and slightly over-passed.

Milton. I read the satire thou entitlest first, 7\nd laid aside the rest, and over-past, And swore, I thouglit the writer was accurst. That his first satire had not been h'-j last.

Harrington . I stood on a wide river's bank. Which I must needs o'er-pass. When on a sudden Torrismond appeared, Gave me his hand, and led me lightly o'er.

Dryden. OVERPAY', V. a. Over and pay. To re- ward beyond the price.

Take this purse of gold, And let me buy your friendly help thus far, A\ hich I will oier-paii, and pay again. When I have found it. Shakspeare.

You have yourself your kmdness over-paid. He ceases to oblige who can upbraid. Dryden. Wilt thou with pleasure hear thy lover's strains. And with one heavenly smile o'er-pay his pains?

Prior. A single doit would overpay The' expenditure of every day, And who can grudge so small a grace To suppliants, natives of the place 1 Coxcper.

OVERPERCIT, v. a. Over and perch. To

fly over.

With love's light wings did I u'er-perch these walls. For stony limits cannot hold love out. Shakspeare.

OVERPEER', .v. a. Over and peer. To over-look; to hover above. It is now out of use.

The ocean, over-peering of his list.

Eats not the flats with more impetuous haste,

Than young Laertes, in a riotous head,

O'er-bears youi officers. Shakspeare. Hamlet, Your argosies with portly sail.

Do over-peer the pretty traffickers.

That curt'sy to them, do them reverence.

Shakspeare.

Mountainous error would be too highly heapt, For truth to over-peer. Id. Coriolanus,

Thus yields the cedar to the ax's edge, Whose top branch over-peered Jove's spreading tree, And kept low shrubs from winter's powerful wind.

Shakspeare.

They are invincible by reason of the over-peering mountains that back the one, and slender fortifications of the other to land-ward. Sandy's Journal.

0'\ˆERPLUS, n. a. Over and plus. Surplus , what remains more than sufficient.

Some other sinnere there are, from which that overplus of strength in persuasion doth arise.

Hooker s Preface.

A great deal too much of it was made, and the overjthis remained still in the mortar. L' Estrange.

It would look like a fable to report that this gen- tleman gives away all which is the overplus of a great fortune. .Addison.

0'ERPLY', V. a. Over and ply. To em- ploy too laboriously.

What supports me, dost thou ask 1 The conscience, friend, t'have lost them over-plied, In liberty's defence. Milton's Poem.

OVERPOISE', V. a. & n.s. Over and poise. To outwe;gh : the noun signifies preponderance of weight.

Whether cripples who have lost their thighs will float ; their lungs being able to waft up their bodies, which are in others nver-poised by the hinder

legs ; we have not made experiment. Browne.

Horace, in his first and second book of odes, was still rising, but came not to his meridian till the third. After which his judgment was an over-poise to his imagination. . lie grew too cautious to be bold enough, for he descended in his fourth by slow de- grees. Drydeii.

The scale O'er—poised by darkness, lets the night prevail ; And day, that lengthened in the summer's height, Shortens till winter, and is lost in night. Creech.

OVERPOWER', V. a. Over and power. To be predominant over ; to oppress by supe- riority.

Now in danger tried, now known in arms Not to be over-powered. Miiton's Paradise Lost.

As much light over-powers the eye, so they who have weak eyes, when ground is covered with snow, are wont to complain of too much light. Boi/ le.

After the death of Crassus, Pompey found himself outwitted by Cssar ; he broke with him, over- powered him in the senate, and caused many unjust decrees to pass against him. Drijden.

The historians make these mountains the standards of the rise of the water ; which they could never have been, had they not been standing when it did so rise and over-power the earth. Woodicard.

Inspiration is, when such an mier-powering im- pression of any proposition is made upon the mind by God himself, that gives a convincing and indu- bitable evidence of the truth and divinity of it.

Watts's Logick.

OVERPRESS', V. a. Over and press. To bear upon with irresistible force ; to overwhelm ; to crush.

Having an excellent horse under him, when he was over-pressed by some he avoided them. Sidney. Michael's arm main promontories flung.

And over-pressed whole legions weak with sin.

Roscommon.

When a prince enters on a war, he ought ma- turely to consider whether his coffers be full, his people rich by a long peace and free trade, not over-

pressed with many burthensome taxes. Swift.

OVERPRISE', V. a. Over and prise. To value at too high price.

Parents wer-prixe their children, while they be- hold them through the vapours of affection.

Wotton.

OVERRANK', adj. Over and rank. Too rank.

It produces over-rank binds. Mortimer.

OVERRATE', v. a. Over and rate. To rate at too much.

While vain shows and scenes you over-rate,

'Tis to be feared.

That, as a fire the former house o'erthrew,

Machines and tempests will destroy the new.

Dry den.

To avoid the temptations of poverty, it concerns us not to over-rate the conveniences of our station, and, in estimating the proportion fit for us, to fix it rather low than high ; for our desires will be pro- portioned to our wants, real or imaginary, and our temptations to our desires. Rogers.

OVERREACH', V. a. Over and reach. To rise above ; to circumvent ; to go beyond.

What more cruel than man, if he see himself able by fraud to over-reuch, or by power to overbear the laws whereunto he should be subject"! Hooker.

1 have laid my brain in the sun and dried it, that it wants matter to prevent so gross over -reaching.

Shakspeare. The mountains of Olympus, Atho, and Atlas, over-reach and surmount all winds and clouds.

Raleigh. A man who had been matchless held In cunning, over-reached where least he thought, To save his credit, and for very spight. Still will be tempting him who foils him still.

Milton. There is no pleasanter encounter than a trial of skill betwixt

sharpers to over-reach one anotlier.

L'Estrunge. Forbidding oppression, defrauding and over-reach- ing one another, perfidiousness and treachery.

Tillotson. We may no more sue for them than we can tell a lie, or swear an unlawful oath, or over-reach in their cause, or be guilty of any other transgression.

Kettleivorth. Such a principle is ambition, or a desire of fame, by which many vicious men are over-reached, and en- gaged contrary to their natural inclinations in a glorious and laudable course of action. Addison.

Sixteen hundred years after the earth was made, it was over-flowed in a deluge of water in such ex- cess that the floods over-reached the tops of the highest mountains. Burnet.

John had got an impression that Lewis was so deadly cunning a man that he was afraid to venture himself alone with him ; at last he took heart of grace ; let him come up, quoth he, it is but sticking to my point, and he can never over-reach me.

History of J. Bull.

OVERHEAD', V. a. Over and read. To peruse.

The contents of this is the return of the duke ; you shall anon over-read it at your pleasure.

Shakspeare. OVER-RED', V. a. Over and red. To s:iear with red.*

Prick thy face and over-red thy fear. Thou lily livered boy. Shakspeare. Macbeth.

OVER-RI'PEN, V. a. Over and ripen. To make too ripe.

Why droops my lord, like over-ripened corn. Hanging tlie head with Ceres' plenteous load?

Shakspeare.

OVERROAST', v. a. Over and roast. To roast too much.

'Twas burnt and dried away. And better 'twere that both of us did fast, Since of ourselves, ourselves are cholerick, Than feed it with such over-roasted flesh.

Shakspeare.

OVER-RULE', V. a. From over and rule. To influence with predominant power ; to govern ; to supersede : as, in law, to over-rule a plea is to reject it.

What if they be such as will be over-ruled with some one, whom they dare not displease 1

Whitgifte.

Except our own private, and but probable resolu- tions, be by the law of publick determinations over- ruled, we take away all possibility of sociable life m the world. – Hooker.

Which humour perceiving to over-rule me, I strave against it. Sidney.

Wherever does he now come forth and openly over-rule, as in other matters he is accustomed f

Hay ward.

Ills passion and animosity over-ruled his con- science. Clarendon.

A wise man shall over-rule his stars, and have a greater influence upon his own content than all the constellations and planets of the firmament. Taxilor.

Thirty acres make a farthing land, nine farthings a Cornish acre, and four Cornish acres a knight's fee. liut this rule is over-ruled to a greater or lesser quantity, according to the fruilfulness or barrenness of the soil. Carew.

He is acted by a passion which absolutely over- rules him ; and so can no more recover himself than a bowl rolling down a hill stop itself in the midst of its career. South.

"lis temerity for men to venture their lives upon unequal encounters ; unless where they are obliged by an over-ruling impulse of conscience and duty.

U Estrange.

A man may, by the influence of an over-ruling planet, be inclined to lust, and 3'et, by the force of reason, overcome that bad influence. Sniji.

OVERRUN', V. a. Over and run. To hara^is by incursions ; to ravage ; to rove over in a hos- tile manner; to outrun ; to overspread ; to pester : among printers, to be obliged to change the dis- position of the lines and words in correcting, by reason of the insertions.

With an over-running flood he will make an utter end of the place. Nahum i. 8.

Those barbarous nations that over-ran the world, possessed those dominions, whereof they are now so called. Si)enser,

We may out-run

V>y violent swiftness, that which we run at,

And lose by over-running . Slutkspeare,

Till the tears she shed,

Like envious floods o'er-ran her lovely face,

She was the fairest creature in the world. Id.

Galilffius noteth, that if an open trough, wherein water is, be driven faster than the water can follow, the water gathereth upon an heap towards the hinder end, where the motion began ; which he supposeth, holding the motion of the earth to be the cause of the ebbing and flowing of the ocean ; because the earth over-runneih the water. Bacon.

Pyrocles, being come to sixteen, over-run his age in growth, strength, and all things following it, that not Musidorus could perform any action on horse or foot more strongly, or deliver that strength more nimbly, or become the delivery more gracefully, or employ all more virtuously. Sidney.

They err, who count it glorious to subdue

By conquest far and wide, to over-run

Large countries, and in field great battles win.

Great cities by assault. Milton s Paradise Lost. The nine Their fainting foes to shameful flight compelled. And with resistless force o'er-run the field. Druden.

To flatter foolish men into a hope of life, where there is none, is much the same with betraying people into an opinion that they are in a virtuous and happy state, when they are over-run with passion, and drowned in their lusts. L'Estrange.

This disposition of the parts.of the earth, shews us the foot-steps of some kind of ruin which happened in such a way, that at the same time a general flood of waters would necessarily otei -run the whole earth.

Burnit.

Vol. XVI.

Wˆere it not for the incessant labours of this indus- trious animal, Egypt would be over-run with croco- diles. Addison.

Gustavus Adolphus could not enter this part of the empire after having over-run most of the rest.

Addison.

Such provision made, that a country should not want springs as were convenient for it ; nor be over- run with them, and afford little or nothing else ; but a supply every way suitable to the necessities of each climate and region of the globe.

Woodward's Natural History.

A common-wealth may be nver-i-un by a powerful neighbour, which may produce bad consequences upon your trade and liberty. Swift's Miscellanies.

OVERSEE', V. a. } Over and see. To su-

Overseer', n. s. \ perintend ; to overlook ; to omit ; or mistake : any superintendant is an overseer.

He had charge my discipline to frame,

And tutors nouriture to oversee. Spenser.

There are in the world certain voluntary overseers of all books, whose censure would fall sharp on us.

Hooker.

A common received error is never utterly over- thrown, till such time as we

go from signs unto causes, and shew some manifest root or fountain thereof common unto all, whereby it may clearly ap- pear how it hath come to pass that so many have been overseen. Id.

Such overseers, as the overseers of this building would be so ovfrseen as to make that which is nar rower, contain that which is larger. Holyday.*

I, who resolve to ‘^versee

No lucky opportunity,

Will go to council to advise

Which way t’ encounter or surprise. Hudibras.

They rather observed what he had done and suf- fered for the king and for his country, without farther enquiring what he had omitted to do, or been overseen in doing. Clarendon.

The church-wardens and overseers of the poor might find it possible to discharge their duties whereas now in the greater out-parishes many of the poorer parishioners, through neglect, do perish for want of some heedful eye to overlook them.

Grauht She without noise will oversee His children and his family. Dryden.

To entertain a guest, with what a care

Would he his household ornaments prepare ;

Harass his servants, and as o’erseer stand.

To keep them workino- with a threat’ning wand.

Clean all my plate, he cries. Id.

A reformer of Luther’s temper and talents would, in five years, persuade the people to compel the par- liament to abolish tithes, to extinguish pluralities, to enforce residence, to confine episcopacy to the wer- seeing of dioceses, to expunge the Athanasian Creed from our Liturgy, to free Dissenters from test acts, and the ministers of the Establishment from sub- scription to human articles of faith. Bp. Watson.

OVERSET’, V. a. Over and set. To t-im bottom upwards ; to throw off the basis ; lo sub- vert ; to disorder.

The tempests met,

The sailors mastered, and the ship o'er-set.

Dryden.

His action against Catiline ruined the consul, when it saved the city ; for it so swelled his soul, that ever afterwards it was apt to be over-set with vanity. Id.

It is forced through the hiatus's at the bottom ol the sea with such Vflieme:.ce, that it puts the sea into

horrible perturbation, even when there is not llie least breath of wind ; oversetting ahips in the harbours, and sinking them. Woodnard.

Would the confederacy exert itself as much to annoy the enemy, as they do for their defence, we might bear them down with the weight of our armies, and over-si't the whole power of France. Addison. Nature in arms, her elements at strife, The storms, that overset the joys of life. Are but his rods to scourge a guilty land. And waste it at the bidding of his hand. Cowper.

OVERSHADE', v. a. Over and shade. To cover with any thing that causes darkness.

Dark cloudy death o'er-shades his beams of life. And he nor sees, nor hears us. SImkspeare.

No great and mighty subject might eclipse or over- shade the imperial power. Bacon. If a wood of leaves o'ershade the tree, In vain the hind shall vex the threshing floor. For empty chatf and straw will be thy store.

Dryden. Should we mix our friendly talk O'ershaded in that favorite walk ; Both pleased with all we thought we wanted.

Prior.

OVERSHAD'OW, v. a. Over and shadow- To throw a shadow over any thing ; to shelter ; to cover with superior influence.

Weeds choak and over-shadow the corn, and beat it down, or starve and deprive it of nourishment.

Bacon. Death, Let the damps of thy dull breath Overshadow even the shade. And make darkness self afraid. Crashaw.

Darkness must over-shadow all his bounds, Palpable darkness, and blot out three days.

Milton. On her should come The holy ghost, and the power of the highest O'er-shadow her. Id.

OVERSHOOT', v.a. & v.n. Over and shoot. To shoot or fly too far; to pass swiftly over ; to venture too far; to assert too much.

For any thing that I can learn of them, you have overshot yourself in reckoning. fVhitffifte.

In finding fault with tlie laws, I doubt me, you shall much overshoot yourself, and make me the more dislike your other dislikes of that government. Spenser on Ireland.

Leave it to themselves to consider, whether they have in this point or not overshot themselves ; which is quickly done, even when our meaning is most sin- cere. Hooker.

Every inordinate appetite defeats its own satisfac- tion, by overshooting the mark it aims at. Tillotson.

Often it drops, or over-shoots by the disproportions of distance or application. Collier on Reason.

High-raised on fortune's hill, new apples he spies, O'ershoots the valley which beneath him lies. Forgets the depths between, and travels with his eyes. Harte.

O'VERSIGHT, n. s. From over and sight. Superintendence; mistake; error.

They gave the money, being told unto them that had the over-sii/ht of the house. 2 Kings xii.

Feed the flock of God, taking the over-sight thereof, not by constraint, but willinglv. 1 Peter.

Amongst so many huge volumes, as the infinite pains of St. Augustine have brought forth, what one hath gotten greater love, commendation, and

honour, than the book wherein he carefully owns his over-sights and sincerely condemneth them 1

Hooker's Preface. They watch their opportunity to take advantage of their adversaries' over-sight. Kettlewell.

Not so his son, he marked this over-sight. And then mistook reverse of wrong for right.

Pope. OVERSIZE', w.►►. Over and size. To sur- pass in bulk : a compost with which masons cover walls ; to plaster over.

Those bred in a mountainous country, over-size those that dwell on low levels. Sandij's Journey. He, thus over-siz'd with coagulate gore. Old grandsire Priam seeks. Shakspeare. Hamlet. OVERSRIP', V. a. Over and skip. To pass by leaping; to pass over ; to escape.

Presume not, ye that are sheep, to make yourselves guides of them that shall guide you ; neither seek ye to over-skip the fold, which they about you have pitched. Hooker.

JVIark if to get them she o'er-skip the rest, Mark if she read them twice, or kiss the name.

Donne. When that hour o'er-skipsme in the day. Wherein I sigh not, Julia, for thy sake; The next ensuing hour some foul mischance Torment me.

Shakspeare. Two Gentlemen of Verona. ˆVho alone suffers, suffers most i' th' mind ; But the mind much sufferance does o'er-skip, When grief hath mates and bearing fellowship

Shakspeare. OVERSLIP', V. n. Over and slip. To pass undone, unnoticed, or unused ; to neglect.

The carelessness of the justices in imposing this rate, or the negligence of the constables in collecting it, or the backwardness of the inhabitants in paying the same, over-slipped the time. , Carew.

lie that hath over-slipped such opportunities is to bewail and retrieve them betimes. Hammond.

It were injurious to over-slip a noble act in the duke during this employment, which I must celebrate above all his expences. Wotton.

OVERSNOW, X. a. Over and snow. To cover with snow.

These I wielded while my bloom was warm. Ere age unstrung my nerves, or

time o'er-snowed my head. Dryden's Mneis.

OVERSOLD', part. From overselL Sold at too high a price.

Life with ease I can disclaim. And think it over-sold to purchase fame.

Dryden.

OVERSOON', adv. Over and soon. ' Too soon.

The lad may prove well enough, if he over-soon think not too well of himself, and will bear away that he heareth of his elders. Sidney.

OVERSPENT', parˆ. Over and spend. Wea- ried ; harassed ; forespent. The verb overspend is not used.

Thestylis wild thyme and garlick beats. For harvest hinds, o'er-spent with toil and heats.

Dryden.

OVERSPREAD', v. a. Over and spread. To cover over; to fill; to scatter over.

Of the three sons of Noah was the whole earth overspread. Genesis ix. 19.

Whether they were Spaniards, Gauls, Africans, Goths, or some other which did overspread all Christendom, it is impossible to affirm. Spenser

Darkness Europe's face did oversjuTad. From lazy cells, where superstition bred.

Denham. Not a deluge that only over-run some particular region ; but that overspread the face of the whole earth from pole to pole, and from east to west.

Buniet.

OVERSTAND', v. a. Over and stand. To stand too much upon conditions.

Her's they shall be, since you refuse the price, What madman would o'er-

stand his market twice.

Drxtden.

OVERSTARE', v. a. Over and stare. To stare wildly.

Some warlike sign must be used ; either a slo- venly buskin, or an over-staring frounced head.

Ascliam.

OVERSTOCK', V. a. Over and stock. To fill too full ; to crowd.

Had the world been eternal, it must long ere this have been over-stocked, and become too narrow for the inhabitants. Wilkins.

If raillery had entered the old Roman coins, we should have been over-stocked with medals of this nature. Addison.

Since we are so bent upon enlarging our flocks, it may be worth enquiring what we shall do with our wool, in case Barnstaple should be ever ouer-s^oc/ced.

Swift.

OVERSTORE', v. a. Over and store. To store with too much.

Fishes are more numerous than beasts or birds, as appears by their numerous spawn ; and, if all these should come to maturity, even the ocean itself would have been long since over-stored ⬛⬛⬛w'iX\i fish.

Hale.

OVERSTRAIN, V. n. Over and strain. To make too violent efforts.

He wished all painters would imprint this lesson deeply in their memory, that with overstraining and earnestness of finishing their pieces, they often did them more harm than good. Dryden's Dufresnoy.

Crassus lost himself, his equipage, and his army, by over-straining for the Parthian gold. Collier.

Overstra'in, v. a. To stretch too far.

Confessors were apt to over-strain their privileges, in which St. Cyprian made a notable stand against them. Ayliffe.

OVERSWAY', V. a. Over and sway. To over-rule ; to bear down.

When they are the major part of a general as- sembly, then their voices, being more in number, must over-sway their judgments who are fewer.

Hooker.

Great command o'er-sways our order. Shakspeare.

Some great and powerful nations over-sway the rest. Heyliin.

OVERSWELL', v. a. Over and swell' " To rise above.

Fill, Lucius, till the wine o'cr-swell the cup. I cannot drink too much of Brutus' love.

Shakspeare, When his banks the prince of rivers, Po,

Doth over-swell, he breaks with hideous fall.

Fairfax.

O'VERT, adj. Fr. ouvert. Open ; pulDlic ; apparent.

To vouch this, is no proof.

Without more certain and more overt test.

Than these thiu habits and poor likelihoods.

Shakspeare.

Overt and apparent virtues])ring forth prarse but there be secret and hidden virtues that bring forth fortune ; certain deliveries of a njan's self.

Bacon.

My repulse at Hull was the first overt essay to be made how patiently I could bear the loss of my king- doms. King Charles.

The design of their destruction may have been projected in the dark ; but, when all was ripe, their enemies proceeded to so many overt acts in the face of the nation, that it was obvious to the meanest.

Swift.

Whereas human laws can reach no farther than to restrain the overt action, religion extends to the mo- tions of the soul. Rogers.

OVERTAKE', v. a. Erom over and take. To catch any thing by pursuit ; to come up to some- thing going before ; to take by surprise.

The enemy said, I will pursue, I will overtake, I will divide the spoil. Exodus xv. 9.

If a man be over-taken in a fault, ye which are spiritual restore such an one in the spirit of meek- ness. Galatians yi. 1.

We durst not continue longer so near her con- fines, lest her plagues might suddenly over-take us before we did cease to be partakers with her sins.

Hooker.

If I had given you this at over night, She might have been overtaken ; and yet she writes Pursuit would be but vain. Shakspeare.

My soul, more earnestly released. Will out-strip hers ; as bullets flown before A latter bullet may o'er-

Donne. To thy wishes move a speedy pace.

Or death will soon o'er-take thee in the chace.

Dryden.

How must he tremble for fear vengeance should over-take him, before he has made his peace with God ! Rogers.

If it fall out, that through infirmity we be over- taken by any temptation, we must labour to rise again, and turn from our sin to God by new and speedy repentance. Perkins.

OVERTASK', V. a. Over and task. To burden with too heavy duties or injunctions.

That oflSce is performed by the parts with diflSculty because they were overtasked. Harvey.

OVERTAX', V. a. Over and tax. To tax too heavily.

OVERTHROW", v. a. & n. s. Over and throw. To turn up side dow n ; to throw down ; to demolish ; to conquer, destroy, or subvert : the noun follows these significations.

God overthroweth the wicked for their wickedness.

Proverbs.

Thou walkest in peril of thy overthrowing.

Ecclus. xiii. 13.

Our endeavour is not so much to overthrow them With whom we contend, as to yield them reasonable causes. Hooker.

Of those christian oratories, the overthrow and ruin is desired, not by infidels, pagans, or Turks, but by a special refined sect of Christian believers. Id. Here Glo'ster

O'er-charging your free purses with large fines.

That seeks to overthrow religion. Shakspeare.

His oierthroiv heaped happiness upon him;

For then, and not till then, he felt himself,

And found the blessedness of being little. Id

From without came to mine eyes the blow. Whereto mine inward thoughts did faintly yield;

l;⬛⬛8

Both these conspired poor reason's overthrmv ; False in myself thus have 1 lost the field. Hulneti.

She found means to have us accused to the king, as though we went about some practise to overthrow him in his own estate. Id.

They return agam into Florida, to the murther anJ overthrow of their own countrymen. Abbott.

From these divers Scots feared more harm by vic- tory than they found among their enemies by their overthrow. Hayward,

The overthrown he raised, and as a herd Drove them before him. Milton.

O loss of one in heaven, to judge of wise Since Satan fell, whom folly overthrew. Id.

Pittacus was a wise and valiant man, but his wife o'^erthrew the table when he had invited his friends.

Taylor. To Sujah next your conquering army drew, Him they surprised, and easily oVrt/ireui. Dryden. Poor Hannibal is maul'd. The theme is given, and strait the council's called. Whether he should to Rome directly go. To reap the fruit of the dire overthrow. Id.

Blood is not water ; and where shall we find Feelings of youth like those which overthrown lie By death, when we are left, alas ! behind. Byron. OVERTHWART', adj. (Over and thwart. Overthwart'ly, at/r. S Opposite; being over against : in the adverb transversely; hence perversely.

Two or three acts disposed them to cross and op- pose any proposition ; and that over-thwart humour was discovered to rule in the breasts of many.

Clarendon. We whisper, for fear our overthwart neighbours should hear us, and betray us to the government.

Dryden. The brawn of the thigh shall appear, by drawing small hair strokes from the hip to the knee shadowed again over-thwart. Peacham on Drawing.

OVERTOP', V. a. Over and top. To rise above : to raise the head above ; to excel ; to surpass ; obscure, or make of less importance by superior excellence.

Who ever yet Have stood to charity and displayed the effects Of disposition gentle, and of wisdom er-topping woman's power ?

Shakspeare. Henri/ VIII. Pile your dust upon the quick and dead, T' o'er-top old Pelion, or the skyish head Of blue Olympus. Id. Hamlet.

Whereas he had been heretofore an arbiter of Eu- rope, he should now grow less, and be overtopped by so great a conjunction. Bacon.

As far as the soul o'er-tops the body, so far its pains, or rather mournful sensations, exceed those of the carcase. Harvey.

In the dance the graceful goddess leads The quire of nymphs and over-tops their heads.

Dryden. One whom you love. Had champion killed, or trophy won, Rather than thus be overtopt, Would you not wish his laurels cropt 1 Swift.

OVERTRI'P, V. a. Over and trip. To trip over ; to walk lightly over. In such a night. Did Thisbe fearfully o'ertrip the dew. And saw the lion's shadow ere himself, \nd ran dismayed away.

Shakspeare. Merchant of Veiiice.

O'VERTURE, 72. s. Yr.ouverturc. Opening; disclosure ; discovery ; proposal ; offerˆ

Overture, in music ; an introductory svm- phony, chiefly used to precede great musical compositions, as oratorios and operas, and in- tended to prepare the hearer for the following composition. But the Germans have even com- posed overtures for poetical works, as Beeth- oven's overture to Goethe's Egmont. Overtures are often played independently of the work for winch they were written, as at the beginning ot concerts ; but their highest office is to convey to the intelligent lover of music the whole cliaracter of the following piece, or to concentrate its chief musical ideas, so as to give a sort of outline of it in instrumental music. The latter mode of composing overtures was first conceived by the French, and such is the character of the over- tures of their great composers, particularly Cherubini. Charles Maria von Weber, in the overtures to the Freischiitz and Oberon, has ob- served this rule, which did not exist when Mozart composed his admirable overtures to Figaro and Don Juan, in wiiich the general character of the following piece is given. In the eldest overtures tlie fugue was the chief part, preceded by a grave in \ time, not too much prolonged, and closing in tlie dominante. The grave was often repeated after the fugue. Most of the overtures of Handel's oratorios have this form. Another form came into vogue at a later period ××× three musical parts, in different move- ments××× an allecjro, an andante, and again an allegro, or presto, were united. At present the most usual form is a brilliant and passionate allegro, preceded by a short, solemn passage. Gluck, in his overture to Iphigenia in Aulisy was the first who used this form.

OVERTURN', V. a. Over and turn. To throw down; to topple down ; to subvert; to ruin : an overturner, one who subverts.

If we will not encoiirage publick works of benefi- cence, till we are secure that no storm shall over- turn what we help to build ; there is no room left for charity. Atterbury.

A monument of deathless fame, A woman's hand overturns. Bowe.

I have brought before you a robber of the publick treasure, an overturner of

law and justice, and thi destruction of the Sicilian province. Swift.

OVERVAL'UE, v. a. Over and value. To rate at too high a price.

We have just c?use to stand in some fear, lest by thus over-valuing their sermons they make the price and estimation of scripture, otherwise notified, to fall.

Hooker. To over-valm human power is likewise an argu- ment of human weakness. Holyday.

OVERVEIL', V. c. Over and veil. To cover.

The day begins to break, and night is fled ; Whose pitchy mantle over-veiled the earth.

Shaitspeare.

OVERVOTE', V. a. Over and vote. To con- quer by plurality of votes.

The lords and commons might be content to be over-voted by the major part of both houses, when they had used each their own freedom.

King Charles.

OVERWATCH', v. n. Over and watch. To subdue with long want of rest.

While the dog hunted in the river, he had with- drawn himself to pacify with sleep his over-watcUed eyes. Sidney.

Morpheus is dispatched : Which done, the lazy moaaich over-watched, Down from his popping elbow drops his head. Dissolved in sleep, and shrinks within his bed.

Dri/(ten.

OV'ERWEAR', adj. Over and weak. Too weak ; too feeble.

Paternal persuasions, after mankind began to for- get the original giver of life, became in all over-weak to resist tlie first inclination of evil ; or after, when it became habitual, to constrain it. lialeiyh.

OVEllVVEA'RY, v. a. Over and weary. To subdue with fatigue.

Might not Palinurus fall asleep and drop into the sea, having been over-wearied with watching !

Briiden. OVERWEATH'ER,i;. a. Over and weather. To batter by violence of weather. How like a younker or a prodigal. The skarfed bark puts from her native bay. Hugged and embraced by the strumpet wind ! How like the prodigal does she return, With over-weathered ribs, and ragged sails, Lean, rent, and beggar'd by the strumpet wind !

Shakspeare. OVERWEEN', V. n. Over and ween. To lliink too highly; to think with arrogance.

Oft have I seen a hot overweening cur. Run back and bite, because he was with-held.

Sliakspeare. My eye's too quick, my heart o'erwpens too much, Cnless my hand and strength could equal them.

Id. 'I'ake heed of overweening, and compare T!iy peacock's feet with thy gay peacock's train ;

Study the best and highest things that are, Jlut of thyself an humble thought retain. Davies. They that over ween, yVnd at thy growing virtues fret their spleen. No anger find in thee. Milton.

Satan might have learnt Less overweening, since he failed in Job, Whose constant perseverance overcame Whate'er his cruel malice could invent. Id. No man is so bold, rash, and overweening of his own works, as an ill painter and a bad poet.

Dryden. Men of fair minds, and not given up to the over- tveening of self-flattery, are frequently guilty of it: and, in many cases, one with amazement hears the arguings, and is astonished at the obstinacy, of a worthy man who yields not to the evidence of reason.

Locke. Now enters overweening pride, And scandal ever gaping wide. Swift.

OVERWEIGH', V. a. Over and weigli. To preponderate.

Sharp and subtile discourses of wit, procure many times very great applause, but, being laid in the ba- lance with that which the habit of sound experience delivereth, they are overweighed. Hooker.

My unsoiled name, the' austereness of my life. Will so your accusation

overweigh. That you shall stifle in your own report.

Shakspeare.

OVERWEIGHT', n. s. Over and weight. Preponderance.

Sinking into the water is but an overweight of tho oody, in respect of the water.

Bacon's Natural History, OVERWHELM', z;. a. f To crush under- Overwhel'mingly, at/y. jl neath something; violent or weighty ; to overlook gloomily : the adverb signifies irresistibly .

Back do I toss these treasons to thy head, With the hell hated lie o'erwhelm thy heart.

Siiakxpeare, Let the brow o'erwhelm it. As fearfully as doth a galled rock O'erhang and jutty his confounded base. Id.

An apothecary late 1 noted, In tattered weeds with overuhelming brows. Culling of simples. Id. Romeo and Juliet.

W hat age is this, where honest men.

Placed at the helm, A sea of some foul mouth or pen.

Shall overwhelm '! Ben Jonson.

Men should not tolerate themselves one minute in any known sin, nor impertinently betray their souls to ruin for that which tliey call light and trivial ; which is so indeed in respect of the acquest, but overwhelmingliˆ ponderous in regard of the pernicious consequents. Decay of Piety.

How trifling an apprehension is the shame of being laughed at by fools, when compared with that ever- lasting shame and astonishment which shall over- whelm the sinner, when he shall appear before the tribunal of Christ ! Rogers.

Blind they rejoice, though now, even now they fall; Death hastes amain ; one hour o'erwhehns them all.

t ojje. OVERWISE', adj. Over and wise. Wise to affectation.

Make nut thy sell ovenoise. Eccl. vii. 16.

OVERWROUGHT', pari. Over and wrought. Labored too much; worked all over.

Apelles said of Protogenes, that he knew not when to give over. A work may be overwrought, as well as underwrought : too mucn labour often takes away the spirit, by adding to the polishing ; so that there remains nothing but a dull correctness, a piece without any considerable faults, but with few beau- ties. Drxjden. Of Gothic structure was the northern side, Overwrought with ornaments of barbarous pride.

Pope, OVERWORN', ywri. Over and worn. Worn out ; subdued by toil ; spoiled by time. The jealous o'erworn widow a-i 1 herself Are mighty gossips in this monarchy.

ˆakspeare. 'With watching meruwm, with cares opprest. Unhappy I had laid me down to rest. Dryden.

0\ ERY EARED', adj. Over and year. Too old.

Among them dwelt A maid, whose fruit was ripe, not overyeared,

Fairfax.

0ˆ'ERYSSEL, a large level province of the Netherlands, having Guelderland on the south- west, and on the east a part of Hanover and Westpiialia. It contains large tracts of marshy ground, and the soil is consequently ill fitted for tillage, except along the banks of the Yssel. It IS watered by this river, the X'echte, the Zwarte water, the Schiepbel, and the Linde. The air is dam)) and in various parts unhealthy, from tlie exhalations that rise from the large expanses of

water. It produces buck-wheat, potatoes, a lit- tle fruit, rape seed ; timber ; cattle, and sheep. Turf for fuel is found in almost all parts. The chief exports, after cattle, are butter, cheese, tal- low, hides, wool, turf, and linen, which is made and bleached in considerable quantities. This is the least populous of the Dutch provinces; its inhabitants amounting: only to 147,000, partly Protestants, and parUy Catholics. It has no port of consequence ; but sends four members to the states-general of the Netherlands ; belong- ing to the second military division, and to the jurisdiction of the high court of the Hague. It is divided into three districts, viz. ZwoUe (the capital) in the north-west, Deventer in the south- west, and Almeloo in the east.

OVERZEAL'OUS, adj. Over and zealous. Too zealous.

It is not of such weighty necessity to determine one way or the other, as some cverzeaUms for or against the immateriality of the soul, have been forward to make the world believe. Locke.

OUESSENT, Isle of, France, situated in the Atlantic Ocean, about eighteen miles from the coast of Brittany, and thirty-six W. N. W. from Brest, which is its post town. It constitutes one of the cantons of the arrondissement of Brest, in the department of Finisterre ; but it is of small extent, not containing more than eighteen square miles. The soil is rather fertile, and covered in some parts with fine meadows, feeding a great number of horses and sheep. This island con- tains a few hamlets, a strong castle, and a little port frequented by fishermen. The access to it is very dangerous on account of the rocks which surround it. There are some other smaller is- lands near it, called by the same name. On the coast there is a fishery for pilchards and other fish.

OUFA, a large city of Asiatic Russia, the ca- pital of the government of Orenbourg, was built in 1573, by the czar Ivan Vassilievitch. It is said that there was anciently upon this spot a great Tartar city, the residence of the khans of Nogais; and two mosques of brick, and several remarkable sepulchral monuments, which bear Arabic and Cufic inscriptions, would seem to confirm this tradition. The town is situated on the Belaia, near itˆ- junction with the Oufa. Its site is intersected by numerous torrents and ra- vines. Oufa was once fortified, but, the frontier being now extended, the works have fallen into decay. It has seven churches, two convents (one for nuns), an academy, and two schools. It is also the residence of a primate, who bears the title of archbishop of Orenbourg and Oufa. In- habitants 2500.

Ot'FA, a considerable river of Asiatic Russia, wˆhich rises in the Oural mountains, and flows through a mountainous country, till it falls into the Belaia, near the city of this name. Several of its tributary streams have rich mines of iron on their banks.

OUGHT, n. s. } Sax. aphir. More properly

Ough'ty. i written aught. Any thing.

He asked him if he saw ought. jSIurk, viii. 23.

For ought that I can understand, there is no part but the ba'e English pale, in which the Irish have not the greatest footing. . Spenser on Ireland.

To do ought good never will be our task ; But ever to do ill our sole delight.

Mubm.

Universal Lord ! be bounteous still To give us only good ; and if the night Have gathered ought of evil, or concealed. Disperse it, as now light dispels the dark. Id. Ought, imp. verb. & preter. of owe. Owed ; obliged ; to be fit or necessary.

Know how thou oughtest to behave. Timothy, Speak boldly as I ought to speak. Ephesiatis.

Judges ought to remember that their office is to interpret law, and not to make or give law. Bacon.

Apprehending the occasion, I will add a continu- ance to that happy motion, and besides give you some tribute of the love and duty I long have ought you. Spelman,

This blood which men by treason sought. That followed, sir, which to myself I ought

Dry den. If grammar ought to be taught, it must be to one that can speak the language already. Locke.

We ought to profess our dependance upon him, and our obligations to him for the good things we enjoy. We ought to publish to the world our sense of his goodness with the voice of praise, and tell of all his wondrous works. We ought to comfort his servants and children in their afflictions, and relieve his poor distressed members in their manifold neces- sities ; for he that giveth alms saciificeth praise.

Nehon. She acts just as she ought, But never, never, reached one gen'rous thought.

Pope. But Reason still, unless divinely taught, Whate'er she learns, learns nothing as she ought.

Couper. Whate'er thou takest, spare awhile poor Beauty! She is so rare, and thou hast so much prey.

What though she now and then may slip from duty . The mote's the reason why you ought to sta}'.

Bj/ron.

OUGHTRED (William), an eminent mathe- matician, born and educated at Eton, in 1573, whence he was sent to King's College in Cam- bridge, of

which he afterwards became fellow. Being admitted to holy orders, he left the uni- versity about 1603, and was presented to the rectory of Aldbury, near Guildford in Surry; and about 1628 was appointed by the earl of Anindel to instruct his son in the mathematics. He coiTesponded with some of the most eminent scholars of his time upon mathematical subjects ; and young gentlemen came from all parts to re- ceive his instructions. Upon hearing the news of the vote at Westminster, for the restoration of king Charles II., he expired in a sudden trans- port of joy, aged eighty-eight. He wrote, 1 . Clavis Mathematica ; afterwards published in English. 2. A DescriptiiDn of the double hori- zontal Dial. 3. Opuscula Mathematica; and se- veral other works. He left also behind him a great number of papers upon mathematical sub- jects, in the museum of William Jones, esq., F. R. S. He had one son, whom he bred a watchmaker.

OVID, a post town, the capital of Seneca coun- ty. New York ; twenty miles south by east of Geneva, forty-one north of Elmira, 205 west of Albany. Population 4535. It is situated be- tween Seneca and Cayuga lakes, is a large and excellent agricultural town, and contains four houses of public worship. Tlie county buildings

are in a small village called Verona, or Ovid. A w erkly newspaper is published here.

OVIDIUS Naso (Publius), a celebrated Latin V'oet of the Augustan age, and a Roman knight, I'orn at Sulmo, A. A. C. 43. He studied rhetoric under Aurelius Fuscus, and for some time fre quented the bar. His progress in eloquence was great, but nothing could deter him from pursu- ing his natural inclination to poetry. Every thing he wrote was expressed in poetical num- bers. A lively genius and a fertile imagination soon gained him admirers : the learned became his friends; Virgil, Propertius, Tibullus, and Horace, honored him with their correspondence, and Augustus patronised him with tlie most un- bounded liberality. However, he afterwards in- curred his displeasure, and was banished to To- mos, a city on the Pontus Euxinus, near the mouth of the Danube, when he was fifty years of age. The cause of this exile is unknown, but several passages indicate that it was some im- proper connexion with the family of Augustus. His writings in exile, although full of flattery and impatience, failed to procure him a pardon, and he died in the seventh or eighth year of his banishment, and in the fifty-seventh year of his age. He was buried at Tomos. The greatest part of his poems are extant, consisting of his Metamorphoses, his Fasti, his Tristia, Elegies, the Heroides, three books

Amorum, and three de Arte Amandi, with the other de Remedio Amoris, his Ibis, and fragments of other poems, among which are part of a tragedy called Medea. His Epistles from Pontus are the language of a servile flatterer.

OVTEDA, in botany, si genus of the angios- permia order, and didynamia class of plants ; natural order fortieth, personatce : cal. quinque- fid: coR. tube almost cylindrical above, and very long : BERRY globose and dispermous.

OVIEDO (John Gonsalvez de), born at Ma- drid about 1478, was sent by Ferdinand V. to the island of Hayti (now St. Domingo), as in- tendant and inspector-general of the trade of the New World, and on his return to Spain publish- ed Suramario de la Historia general y natural de las Indias Occidentales.

OviEuo, an inland town of Spain, the chief place of Asturias, stands in a plain at the con- fluence of two small rivers called the Ovia and the Nora. It is of a horse-shoe form, with a square in the centre. The streets are straight and regular ; and the town a bishop's see, and has an elegant Gothic cathedral, rich in vases, relics, and ornaments. It contains the bones of four- teen kings and queens who reigned in the north of Spain while the rest of the peninsula was in the hands of the Moors. Another church culled St. Salvador was built in the eiohth century. In the ninth century Oviedo had the title of the City of Bishops, from the great number of pre- lates who took refuge here from the Saracens. In 877 a general council was held here. The other public establishments are a university, an ancient aqueduct, the episcopal palace, a collegiate chapter, three churches, three monasteries, three convents, three hospitals, and a drawing school. The trade is, or was, chiefly in the colonial pro- duce landed at Gijon. Here are also tanneries ;

manufactories of hats, combs, and bone buttons; with a depot of arms. Population 7600. Sixty miles north of Leon, and 130 W. N. W. of Burgos.

O'VIFORM adj. > Lat. ovum. Of the shape

Ovip'arous. J of an egg : bringing forth

eggs.

This notion of the mundane egg, or that the world was oviform, hath been the sense and language of all antiquity. Burnet.

Birds and oviparous creatures have eggs enouorli at first conceived in them to serve them for many years' laying. liaj/.

That fishes and birds should be oviparous is a plain sign of providence.

More's Antidote agaijist Atheism.

OVTLIA, or Septa, a place in ancient Rome, in the Campus Martins, at first railed in like a sheep-pen, whence its name. Afterwards it v/as mounted with marble, and beautified with walks and galleries, as also with a tribunal, or a seat of justice. Within this precinct, or enclosure, the people were called to give their suffrages for the election of magistrates. The ascent into the ovilia was not by stairs, but by pontes, or naiTOw boards, laid there for the occasion ; on which account, de ponte dejici signified ' to be deprived of the privilege of voting ;' and persons thus dealt with were called depontani.

OVTS, the sheep, in zoology, a genus of tlie class mammalia, and of the order of pecora. The characters are these : the horns are concave, turned backwards, and full of wrinkles ; there are eight fore-teeth in the under jaw, and no dog-teeth. The wool of these animals is only a congeries of very long and slender hairs twisted and contorted, and variously interwoven with one another. This, as far as is yet known, is a clothing peculiar to the sheep kind, no other animal having been seen to possess it. It is not, however, the clothing of all the species of sheep, some that are found in distant nations having short hair like that of the goat. Linne enumerates three species, viz. ???

1 . O. aries, or the ram-sheep, the horns of which are shaped like a half-moon, and com- pressed.

2. O. Guineensis, the Guinea sheep, which has pendulous ears, lax hairy dewlaps, and a prominence on the hind part of the head. The wool is short like that of a goat. It is a native of Guinea.

3. O. strepsiceros, or the Cretan sheep, which has straight cariated horns, twisted in a spiral manner, and is a native of Mount lola.

Pallas, in his very extensive travels in the Russian empire, more particularly in Siberia and amongst the pastoral nations of Great Tar- tary, found what he regards as only one species of sheep, subdivided into four varieties.

i. O. brachiura, the short-tailed sheep, is called the Russian sheep by the natives. It seems to be the ovis Islandicus of authors, with smaller horns. It is reared throughout all the north of Russia, and resembles that of Iceland in size, tail, and coarseness of fleece ; but, though this be the case in these few respects, yet it difl'ers from it in a very essential character, that of horns, which are much smaller, and have nothing

of that exuberance which BuflTon and others at- tnbute to the sheep of that island. It resembles the Tscherkessian sheep in the form of its head, straight upright ears, and in thickness of fleece ; but the quality of the two fleeces is very diff'erent, this variety having wool almost as coarse as dog's hair ; but the great distinguishing cliaracter between them is the tail, which is almost a quar- ter of a yard shorter than that of the Tscherkes- sian. The brachiura, or short-tailed sheep, is reared not only by the northern Russians, but likewise by the Fins and other neighbouring na- tions. Some of this variety have been transported into Siberia, where they have supported them- selves on some pastures, though in poor condi- tion ; but through all the southern coimtries they are in less estimation than the long-tailed and fat-tailed varieties, which are much superior to them for size, fat, and good eating.

ii. O. Bucharicais by Pallas called Bucharian, from his finding it reared by the Bucharian Tartars in immense flocks. It is also raised by the Persians in great numbers. Pallas regards this as a mixed breed, arising, as he supposes, from the union of the long-tailed and fat-tailed sheep. The head of this variety is like that of the Kirguise ; but the muzzle is sharper, resemb- ling the Indian of Buffon : the body is rather smaller than fna.t of the Kirguise sheep ; the ears are larger and pendant ; they have a small uro- pygium, like that of the Tartar sheep on the Jenisy, especially when begotten by a Kirguise ram ; but in general they have a tail fat and broad at the base, with a long narrovv' appendage, and resembles the tail of the Tscherkessian sheep.

iii. O. dolichura, the long-tailed sheep, is named both by the Tartars and Russians Tscher- kessian sheep ; it is the ovis longicauda of au- thors. It is a handsome animal, with a noble air, in its native country and the south of Russia, resembling in its habits, horns, fleece, and length of tail, the Spanish, but more particularly the Englisli sheep. Its head is well proportioned, and of an elegant form ; ears straight ; horns large, even, rounded in the angles, tapering to a]ioint, and bending inwardly towards the back. The rams are seldom without horns, and the ewes have them often bent in a lunar form. The wool, though coarse, is without admixture of hair, which is perhaps but an accidental distinction, and promises to be much meliorated by crossing the breed, and rearing the animal with more care and skill. It is even known to become much finer without the assistance of art, merely from the influence of a temperate climate, as on Mount Caucasus. The tail of the ram is co- vered with fine long wool, like the Indian sheep described by Buff'on, which trails on the ground, so as to

eff'ace the prints made by the animal's feet on sand, and it contains often twenty joints or vertebrae. In passing from the state of nature to that of servitude, it seems to have lost its na- tive ferocity, together with its coarse fleece. There are sheep in Morocco which belong to this variety, on account of the distinguishing charac- ter of it, a long tail, although otherwise diff'erent, in having an ugly look, head covered entirely with hair, little hanging ears, and remarkably long wool.

iv. O. steatopyga, the fat-tailed sheep, has ap- pellations as various as the provinces where ii u reared ; it is the ovis laticaudata of authors. This is both the most abundant and largest breed of sheep in the world. It is reared through- out all the temperate regions of Asia, from the frontiers of Europe to those of China, in the vast plains of Tartary. All the Nomade hordes of Asia, the Turkomans, Kirguise, Calmucks, and Mongul Tartars, rear it ; and, indeed, it con- stitutes their chief riches, the number they pos- sess being enormous. The flocks of all the Tartar hordes resemble one another by a large yellowish muzzle, the upper jaw often projecting beyond the lower ; by long hanging ears ; by the horns of the adult ram being large, spiral, wrinkled, angular, and bent in a lunar form. The body of the ram, and sometimes of the ewe, swells gra- dually with fat towards the posteriors ; where a solid mass of fat is formed on the rump, and falls over the anus in place of a tail, divided into two hemispheres, which take the form of the hips, with a little button of a tail in the middle, to be felt with the finger. The uropygium, or fat-rump, which is made up of this oily species of fat, is so very large as to incommode the animal in walking; but, when the same sheep are carried into the interior parts of Russia, the tail loses half its size and weight ; nay, sometimes more, from a change in their food and mode of life. This variety, besides the characters mentioned above, have slender legs in proportion to their bodies, a high chest, large hanging testicles, a large prepuce, and tolerably fine wool mixed with hair. Such are the great characteristic marks by which the flocks of all the Tartar hordes resemble one another ; but climate, soil, &c., produce some small difference on this variety, whether reared by the Tartars or the Russians, in the western de- serts of Great Tartary, from the river 'olga to the Irtish, and the Altaic chain of mountains.

*Mr. Kerr, in his translation of Gmelin's Zoo- logical System of Linne, gives a more complete and satisfactory classification of this genus than any of the authors above quoted. He enume- rates four species and fifteen varieties, viz. ***

i. O. ammon, the argali, or O. fera of Pallas ; or the wild sheep of Pennant. The horns are large, semicircularly arched backwards and di- vergent, wrinkled on their upper surface, and flattish on the under side; the neck has two pendent hairy wattles. Pallas paid particular attention to this

species. He says, he ‘ found the ovis fera, or wild sheep, in all its native vigor, boldness, and activity, inhabiting the vast chain of mountains which run through the cen- tre of Asia to the eastern Sea, and the branches which it sends off” to Great Tartary, China, and the Indies. This wild animal, probably the musimon of Pliny, and the ophion of the Greeks, is called argali, or wild sheep, by the Siberians ; and by the Russians kamennoi barrann, or sheep of the rocks, from its ordinary place of abode. It delights in the bare rocks of the Asiatic chain just mentioned, where it is constantly found basking in the sun ; but it avoids the woods oi the mountains, and every other object that would intercept the direct rays of the glorious luminary. Its food is the Alpine plants and shrubs it find.ˆ

amongst the rocks. The argali perfers a tempe- rate climate, although he does not disdain that of Asiatic Siberia, as there he finds liis favorite bare rocks, sunshine, and Alpine plants ; nay, he is even found in the cold eastern extremity of Siberia and Kamtschatka. The argali loves solitude, and flees the haunts of man ; gradually abandoning a country in proportion as it becomes peopled. The ewe of the argali brings forth before the melting of the snow, ller lamb resem- bles much a young kid, except that it has a large flat protuberance in place of horns, and that it is covered with a woolly hair, frizzled, and of a dark gray. When pursued, the argali does not run straight forward, but doubles and turns like a hare, at the same time that it scrambles up and over the rocks with wonderful agility. In the same proportion that the adult argali is wild and untameable, the lamb is easily tamed when taken young, and fed first on milk and afterwards on fodder, like the domestic sheep, as has been found on numerous experiments made in the Russian settlements in these parts. This animal formerly frequented the regions about the upper Irtish, and some other parts of Siberia, where it is no longer seen since colonies have been settled in these countries. It is common in the Mongalian, Songarian, and Tartarian mountains, where it enjoys its favorite solitude and liberty. The ar- gali is found likewise on the banks of the Lena, up as high as 60►► of lat. N. ; and it propagates its species even in Kamtschatka, as noticed before. The argali is also found in the mountains of Persia, and is said to exist in the Kuril islands in great size and beauty. The argali is about the height of a small hart, but its make is much more robust and nervous. Its form is less ele- gant than that of the deer, and its legs and neck shorter. The male is larger than the female, and every way stouter. Its head resembles that of a ram, with long straggling hairs about the mouth ; but no beard. Its ears are rather smaller than those of a ram. The tail is very short. The summer coat consists of short hair, sleek, and resembling that of

a deer. The winter coat con- sists of wool like down, mixed with hair every where an inch and a half long at least, concealing at its roots a fine woolly down, generally of a white color. The color of its coat was in general of a dark grayish brown, with white tips to the longer hairs, and consisted of hair mixed with wool, of a dark iron gray.

ii. O. Amnion Europaea, the Corsican argali, is a variety mentioned by Mr. Kerr on the autho- rity of Mr. Pennant, differing from the above chiefly in color ; having a large vvhite spot on the neck, and being black on the shoulders. In Corsica it is called mufro.

iii. O. aries, the common sheep, has the horns spirally twisted outwards. The disposition of the sheep is so mild and gentle, that, although in its wild state, it fears not to defend itself against the most formidable antagonists ; yet, when do- mestic, it is the most timid and apparently de- fenceless of all animals. It is of the most extensive utility to man. We are clothed by its fleece, and the^flesh is a delicate and wholesome food. The skin, dressed, forms diff'erent parts of our apparel, and is used for covers of books.

The entrails, properly prepared and twisted, serve for strings for various umsical instruments. The milk is thicker than that of cows, and con- sequently yields a greater quantity of butter and cheese ; and in some places is so rich that it will not produce the clieese without a mixture of water to make it part from the whey. The dung is a remarkably rich manure ; insomuch that the folding of sheep is become too useful a branch of husbandry for the farmer to neglect. In sliort, this animal has nothing tliat does not redound to our benefit. Ti>e ram is capable of generation at the age of eighteen months ; and the ewe can be impregnated when a year o.d. One ram is sufficient, according to Buffon, for twenty-five or thirty ewes ; they have often been known indeed to beget 100 lambs in a sin- gle season, lie ought to be large and well proportioned ; his head should be thick and strong, his front wide, his eyes black, his nose flat, his neck thick, his body long and tali, his testicles massy, and his tail long. White is the best color for a ram. The ewes whose wool is most plentiful, bushy, long, soft, and vvhite, are most proper for breeders, especially when at the same time they are of a large size, have a thick neck, and move nimbly. In this climate, ewes fed in good pastures admit the ram in July or August ; but September or October are the months when the greatest part of our ewes, if left to nature, take the ram. They go with young about five months, and generally bring forth but one at a time, though frequently two ; in warm climates they may bring forth twice in a year ; but in Britain, France, and most parts of Europe, only once. They give milk plentifully for seven or eight months. They live from ten to twelve years ; they are capable of bringing forth as long as they live, when properly managed ; but are generally old and useless at the age of seven or eight years. The ram,

though he lives twelve or fourteen years, becomes unfit for propagating when eight years old. ^\ hen the male lambs are not intended to be kept for propagation, but fattened for food, they ought to be castrated at the age of five or six months. After castration they are called wedders. The ram, ewe, and wedder, when one year old, lose the two fore teeth of the under jaw ; six months afterwards they lose the two fore teeth next to these ; and, at the age of three years, the teeth are all re- placed. The age of a ram may likewise be dis- covered by his horns, which always appear the first year, and frequently as soon as he is brought forth. These horns uniformly acquire an addi- tional ring every year as long as the creature lives. The ewes commonly have no horns, but a kind of long protuberimce in place of them ; however some of thcnr have two and some four horns. As white wool is most valued, black or spotted lambs are generally slaughtered. In some places, however, almost all the sheep are black ; and black lambs are often produced by the commixture of white rams with white ewes. In France there are only white, brown, black, and spotted sheep : but in Spain there is a reddish kind ; and in Scotland there are some of a yel- lowish color. But all these varieties of color are more accidental than those produced by dif-

ferent races ; which, however, proceed from the influence of climate, and the difference of nou- rishment. In the northern parts of Europe, as Denmark and Norway, the sheep are not good ; but, to improve the breed, rams are occasionally- imported from England. The rams, ewes, and ⬛⬛⬛wedders of Iceland, differ chiefly from ours by .arger and thicker horns. Some of them have three, four, and even five horns. This, however, is not common. In Spain, and the southern parts of Europe, the flocks of sheep are kept in shades or stables during the night : but in Britain, where there is now no danger from wolves, they are allowed to remain without, both night and day ; which makes the animals more healthy, and their flesh a more wholesome food. Dry and mountainous ground, where thyme and sheep's fescue grass abound, are the best for the pasturing sheep. Sheep are subject to many diseases : some arising from insects which deposit their eggs in different parts of the animal : others are caused by their being kept in wet pasture ; for as the sheep requires but little drink, it is naturally fond of a dry soil. The dropsy, vertigo (the pendro of the Welsh), the phthisis, jaundice, and worms in the liver, annually make great havock among our flocks : for the first disease, the shep- herd finds a remedy by turning the infected into fields of broom ; which plant has been also found to be very efficacious in the same disorder among the human species. The sheep is also infested by different sorts of insects : like the horse, it has its peculiar

csslrus or gadfly, which deposits its eggs above the nose in the fionlal sinuses. When these turn into maggots, they become excessively painful. The French shep- herds make a common practice of easing the sheep, by trepanning and taking out the maggot ; this practice is sometimes used by the English shepherds, but not always with the same success. Besides these insects, the sheep is troubled with a kind of tick and louse, which magpies and starlings contribute to ease it of, by lighting on its back, and picking the insects off. Mr. Kerr enumerates fifteen varieties of this species.

1. O. aries Africana, inhabiting Africa, and has short hair instead of wool.

2. O. aries Anglica, the English hornless sheep ; without horns ; the tail and scrotum hang down as low as the second joint of the hind leg, and the wool is fine. This kind is common in most parts of Britain ; those of Lin- colnsliire are the largest, and very small breeds are found in Wales and Shetland. They have generally either no horns or very small ones ; and many of them have very short tails.

3. O. aries barbata, the bearded sheep, or Siberian goat of Mr. Pennant, has a long di- vided beard, hanging down from the lower part of the cheeks and upper jaw. It is the tragelaphus of Pliny. It inhabits Barbary and Mauritania. The color is a pale rusty brown.

4. O. aries Bucharica, the Bucharian sheep of Pallas already described.

5. O. aries Capensis, the Cape Sheep, has large pendulous ears, and a large broad tail. The horns ,are short and bent back; the body and neck are covered with long hair, or wool not curled ; the legs are black and naked.

6. O. aries Guineensis, the Guinea, or wat tied sheep, already described.

7. O. aries hispanica, the Spanisn sheep, has horns twisted into a spiral, which is lengthened outwards ; the wool is very fine and famous all over Europe.

8. O. aries jubata, the Chinese morvant, has a short red and gray mane on the neck ; and a long beard on the breast round the neck; on the shoulders are longish red gray hairs ; the rest of the body is covered with a bright yellow wool, a little curled and soft at the ends, but coarse at the roots ; the legs are deep red ; the tail is yellow and white, with long coarse hairs.

9. O. aries laticaudata, the broad-tailed sheep, has a long and very broad tail. This kind is common in Syria, Barbary, Ethiopia, Thibet, and Tartary. The tails are so long as to trail on the ground. They are sometimes pointed at the end, but mostly rounded ; they sometimes weigh fifty pounds, and, being com- posed of a substance between fat and marrow, are reckoned a

great delicacy. Those of Thisbet produce the fine wool of which shawls are made.

10. O. aries longicauda, the long-tailed sheep, described before.

11. O. aries nana, the dwarf sheep, has no horns, is of a very small size, and has a turned up nose. This variety is found in Lincolnshire. The wool forms a ruff round its face. The un- der jaw is protruded ; the nose crooked upwards ; the ears small and erect.

12. (). aries polycerata, the many-horned sheep; ovis Gotland ica of Pallas: the Iceland sheep of Buflbn, has more than two horns. This variety is common in Iceland, Siberia, and Tartary; but in the same flocks in which many are found with three, four, five, or six horns, others have only the usual pair : whence Mr. Kerr thinks they can hardly form a distinct variety.

13. O. aries rustica, the rustic, or black- faced sheep, is horned, the tail round and short, and the wool white but rather coarse. This is the most common breed of sheep all over Europe ; the horns are large, wrinked, turned backwards in a comprised, spiral, screw-like twist, which comes down to t!ie sides of the head, taking several turns, and becoming very large on old rams. The face is covered with short black, dark brown, or gray hair. They are very agile, and exceedingly shy. The mutton is much esteemed. The most perfect breed is found in Tweed-dale.

14. O. aries steatopyga, the fat-rumped sheep, described above.

iv. O. pudu, the pudu, or capra puda of Molina, has round, smooth, divergent horns, and inhabits the Cordilleras in South America. It is about the size of a half-year old kid, and lives in flocks on the mountains ; whence they descend into the south plains of Chili, when the hills are covered with snow. It resembles a goat, but the horns are small, and turned outwards, like those of a sheep. It has no beard ; the female has no horns ; the color is dusky. This is the only animal of the genus which seems indigenous to America.

V. O. strepsiceros, the Cretan sheep, or Wal- lachian sheep of Buffon. Described above. This

species inhabit Candia, and the other Grecian islands, and are common in Hungary and Austria, where thfy are called zackl.

OUISCONSIN, a river of the United States, which runs south-west into the Mississippi, lat. 43►► 40′ N. It is connected with Fox River, which flows into Green Bay by a portage of three miles. Length about 300 miles.

OULABAllEAH, a trading town of Bengal in Burdwan, pleasantly situated on the west bank of the Hoogly River. On the destruction of the English factory at Hoogly, in 1G87, this town was assigned for the residence of the

British, but after the expenditure of some money, the president of the factory (Mr. Charnock) took a dislike to the place, and obtained permission to remove to Chuttanutty, a site now occupied by Calcutta. This town, which only consists of thatched houses, is situated eighty miles from the mouth of tlie river, and twenty below Calcutta.

OUNCE, n.. 9. Fv. once ; LoX. ttrtcia. A small weiglit.

The blood he hath lost,

Which I dare vouch is more than that he hath

liy many au ounce, he dropt it for his country.

Shakspeare.

A sponge dry weighcth one ounce twenty-six grains ; the same sponge, being wet, weigheth four- teen ounces six drams and three quarters. Bacon.

Ounce, n. s. Fr. once ; Span. onza. An ani- mal between a panther and a cat. The ounce, The libbard, and the tiger, as the mole Rising, the crumbled earth above them threw In hillocks. Milton's Paradise Lost.

OVOLO, or Ovum, in architecture, a round moulding, whose profile or sweep, in the Ionic and Composite capitals, is usually a quadrant of a circle : whence it is also commonly called the quarter-round. It is usually cut with represen- tations of eggs and arrow-heads or anchors placed alternately.

OUPHE, n.s.) Teut. auf; Goth. alf. A

Ouph'en, arf;. i fairy ; elf; sprite: elfish.

Nan Page and my little son, we'll dress Like urchins, ouphes, and fairies, green and white

Shakspeare. Fairies, black, gray, green, and white,

Ye moon-shine revellers and shades of night,

You ouphen heirs of fixed destiny,

Attend your office. Id.

OU-POEY-TSE a name given by the Chinese to nests made by certain insects upon the leaves and branches of the tree called yen-fou-tse. These nests are much used in dyeing, and the physicians employ tliem for curing many dis- tempers. Some of these nests were brought to Europe, and put

into the hands of the celebrated Geoffroy. After having examined them with the utmost attention, this learned academician thought he perceived some conformity in them to those excrescences which grow on the leaves of the elm, and which the vulgar call elm-bladders : he found these nests so sharp and astringent to the taste, that he considered them as far superior to every other species of galls used by the dyers. According to him, they are the strongest astrin- gents existing in the vegetable kingdom. It is certain that there is a great aftiuity between the

ou-poey-tse and the elm-bladders. The form of both is unequal and irregular; they ai"e covered on the outside with a short down, which renders them soft to the touch : within they are full of a whitish gray dust, in which may be observed the dried remains of small insects, without discover- ing any aperture through which they might have passed. These nests or bladders harden as they grow old ; and their substance, which appears resinous, becomes brittle and transparent; how- ever, the Chinese do not consider the ou-])oey- tse, notwithstanding tlieir resemblance to elm- bladders, as excrescences of the tree yen-fou-tse, upon which they are found. They are persuaded that the insects produce a kind of wax, and con- struct for themselves on the branches and leaves of this tree (the sap of which is proper for their nourishment) little retreats, where they may wait for the time of their metamorphosis, or at least deposit in safety their eggs, which compose that fine dust with which the ou-poey-tse are filled. Some of the ou-poey-tse are as large as one's fist ; but these are rare, and are generally produced by a worm of extraordinary strength, or which has associated with another, as two silk-worms are sometimes seen shut up in the same ball. The smallest ou-poey-tse are of the size of a chestnut ; the greater part of them are round and oblong ; but they seldom resemble one another entirely in their exterior configura- tion. At first they are of a dark green color, which afterwards changes to yellow; and the husk, though pretty firm, becomes then very brittle. The Chinese peasants collect these before the first hoar-frosts. They take care to kill the worm enclosed in the husks, by exposing them for some time to the steam of boiling water. Without this precaution, the worm might soon break through its weak prison, which would immediately burst and be useless. They are used at Pekin for giving paper a dura- ble and deep black cole; in the provinces of Kiang-nan and Tche-Kiang, where a great deal of beautiful satin is made, they are employed for the dyeing of the silk before it is put on the loom. The Chinese literati also blacken their beards with them when they become white. The medicinal properties of the ou-poey-tse are very numerous. The Chinese physicians introduce them into the composition of many of their re- medies.

OUR, proR. poss. "^ Sax. Ufie ; Goth, uar; Ourself', > Dan. ►►'or. Of or belong-

OuRSELVEs'. 3 ing to us; when placed

after the substantive, it is written ours ; ourself is a barbarism formerly used in the regal style or title : ourselves is the plural reciprocal pro- noun of we, added to we by way of emphasis, and used also for us, not others, in oblique cases.

You shall Lead our first battle, brave IMacdufT, and we Shall take upon us what else remains.

Shakspeare. Edmund, whose virtue in this instance So much commands itself, you shall be ours. Id

To make society The sweeter welcome, we will keep ourf.elf Till supper-time alone. Id. Macbeth,

OUR

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OUR

Not so much as a treaty can be obtained, unless wc would danude oiirself of all force to defend us.

Clarendon. Be ours, whoe'er thou art. Forget the Greeks. Denhatn.

Taxallan, shook by]Montezuma's powers, Has, to resist his forces, called in ours. Dryden.

Safe in ourselves, while on ourselves we stand, The sea is ours, and that defends the land.

Dryden. Heading furnishes the mind only with materials of knowledge, it is thinking makes what we read f ur.s ; it is not enough to cram ourselves with a great load of collections ; unless we chew thetn over again, they will not give us strength. Locke.

We ourselves might distinctly number in words a great deal farther than we usually do, would we find out but some fit denominations to signify them by.

fd.

Our confession is not intended to instruct God,

who knows our sins much better than ourselves do,

but it is to humble ourselves, and therefore we must

not think to have confessed aright till that be done.

Duty of Man. Their organs are better disposed than ours for re- ceiving gratpful impressions from sensible objects.

jitterbury. Our soul is the very same being it was yesterday, last year, twenty years ago. Beaitle.

He is ours. To administer, to guard, to adorn the state, But not to warp or change it. We are his, To serve liim nobly in the common cause. True to the death, but not to be his slaves. Cowper.

Long life to the grape ! for, when summer is flown, The age of (rur nectar shall gladden our own ; We must die, who shall not ? may our sins be for- given. And Hebe shall never be idle in heaven. Byron.

The sword we dread not : ††† of ourselves secure. Firm were our strength, our peace and freedom sure. ††† Let all the world confederate all its powers, "Be they not backed by those that should be ours." High on his rock shall Britain's genius stand, Scatter the crowded hosts, and vindicate the land.

Canning.

OURAL. See Ural Mountains.

OUIlALvSK, the capital city of the Cossacs of the Oural, is a large and populous place, but irregularly built. The Cossacs are divided into seven regiments, tlie whole commanded by the ataman of the troops, under the superintend- ance of the governor-general of Orenbourg. Their occupation chiefly consists in taking fish, which are abundant in the Oural, and are sup- posed to be of a superior quality to those caught in the Caspian. The place is surrounded with an irregular rampart. Inhabitants 3700. Long. 52†† 6′ E., lat. .50†† 11′ N.

OURCIIA, a town, once a famous city, of Hindostan, in Allahabad, and Bundelcund. The rajah of Ourcha being once the head of all the Bondelah tribes; the present family are of the Rajpoot race, and their ancestor is said to have obtained possession of his dignity by the murder of his predecessor, to which it is stated that he added that of the celebrated Abul Fazil. At his death he was master of fifty-two forts, which, with the territories depending, he divided by will among his eight sons, leaving, however, the largest portion, with tlie title of rajah, to his eldest son, named Ilijar or Jijer Sing. This

prince haying, in the year 1628, opposed the measures of the emperor Shah Jehan, his country was invaded, and himself and son taken prisoner; but, by the payment of a sum of money, he was released, and restored to his dignity. In 1633 he again rebelled, when another JNlogul army, under the command of Aurungzebe, entered the country, and, having taken sereral of his 'brts, at length besieged him in his strongest fortress, called Joragur. The rajah, being reduced to despair, put his women and children to death, and issuing from the fort, at the head of liis cavalry, cut his way through the besiegers, and, although closely pursued, effected his escape into the province of Gundwaneh, where he and all his followers were put to death by the inha- bitants for the sake of the plunder they brought with them. After this a relation of the present family was raised to the throne by Aurungzebe, and this rajah is still the head of the chiefs of Bundelcund. His revenue is about ►►2000 per annum.

OUllFA, or Orfa, a pachalic of Asiatic Turkey, forming a part of the ancient Mesopo- tamia. It is almost entirely encircled by the windings of the Euphrates and the Khabour ; and touches north and east on the pachalic of Diar- bekir, while on the south and west it is separated by the Euphrates from the deserts of Syria. The southern part is, for the most part, sandy and uncultivated, inhabited by nomade tribes of Arabs. In the north, being more mountainous and diversified, it is better inhabited. This divi- sion of Mesopotamia was taken from the empe- ror Heraclius, by Yezid, the general of the Sara- cens ; seized during the first crusade by Baldwin, brother to Godfrey of Bouillon ; and erected into a Christian principality. It was included in thedominionsof Saladin, and was subsequently swallowed up in the Turkish empire. The towns are Ourfa, Racca, and Soverick.

OuRFA, a town of Turkey in Asia, the capi- tal of the above pachalic. Under the successors of Alexander it was known as Edessa, and after- wards became the residence of the Courtneys, when they erected a kingdom in Asia. It was sacked by Zingis in the thirteenth century, and by Timur in the fourteenth. Since falling to the Turks, it has been the residence of a pacha with two tails. It is built on two hills, and in the intermediate valley at the south-west extre- mity of a fine plain. The town is about three miles in circumference, surrounded by walls, and defended by square towers ; and it is adorned by some fine springs, which rise froin the hills. The castle is on the south side of the city. The ascent is very steep, and the hill is here about half a mile in circumference, surrounded by a deep ditch cut in the rock, which, when neces- sary, can be filled with water. On the rock are also the ruins of a building called by the Arabs the palace of Nimrod, consisting of two lofty and fine Corinthian pillars, and having some extra- ordinary subterraneous apartments. Ourfa con- tains also a magnificent mosque, dedicated to Abraham, and a handsome but decayed Armenian cathedral. It is the thoroughfare for the cara- vans which pass from Aleppo

into the interior of Persia, and noted for the preparation of Turkey

.eather. The inhabitants, Turks, Arabs, Arme- nians, Jews, and Nestorians, are said to be about

20,000.

OURIQUE, a town of Portugal in Alentejo, remarkable for a victory obtained at it by Viria- tus over the Romans, in the year of Rome 606, and for another by Alphonso I. over the Moors A. D. 1139. Population 2300. Eighty-nine miles S.S. E. of Lisbon.

OUSE, in geography, a river of Sussex, formed by two streams, which rise, the one in St. Leo- nard's forest, the other in that of Worth ; it then passes by Lewes, and falls into the channel below Newhaven, where it forms a good harbour at its mouth.

OusE, a river of Yorkshire, formed by the con- flux of the Eure and the Swale, four miles below Boroughbridge ; after which it passes by Aid- borough, York, Selby, &c., and after receiving the Wharf from the north-west, the Derwent from the north-east, the Aire from the west, the Don from the south-west, joins the Trent on the holders of Lincolnshire; where the united streams form the Humber, seventeen miles west of Hull. See Humber.

OusE, Greater, a river of England, which rises near P'itwell in Oxfordshire, and proceeds to Buckingham, Stony-Stratford, and Newport- Pagnel, in Buckinghamshire ; thence it proceeds to Bedford, and turning north-east it passes on to Huntingdon and Ely, till at length it arrives at Lynn-Regis in Norfolk, and falls into the sea. It is navigable to some distance above Down- ham, where there is a good harbour for barges ; and a considerable trade is carried on by it to Lynn and other towns. It is liable to great floods at the equinoxes.

OU'SEL, 71. s. Sax. ople. A blackbird.

The merry lark her mattins sinˆs aloft. The thrush replies, the mavis descanc plays.

The ousel shrills, the ruddock warbles soft ; So goodly all agree with sweet

consent, To this day's merriment. Spenser.

The (miel cock so black of hue, With orange tavvney bill. Shakspeare.

Thrushes, and ousels, or blackbirds, were com- monly sold for three pence a-piece. Hakewill.

OUST', V. a. Fr. ouster ; Goth, austa. To force or cast out ; deprive ; eject.

Multiplication of actions upon the case were rare formerly, and thereby wager of law ousted, which discouraged many suits. Hale.

Though the deprived bishops and clergy went out upon account of the oaths, yet this made no schism. No, not even when they were actually deprived and ousted by act of parliament. Lesley.

OUSTER, or dispossession, in law, an injury which carries with it the amotion of possession ; for by means of it the wrong doer gets into the actual possession of the land or hereditament, and obliges him that has a right to seek a legal remedy, in order to gain possession, together with damages. This ouster may either be of the freehold by abatement, intrusion, disseisin, dis- continuance, and deforcement; or of chattels real, as an estate by statute-merchant, statute- staple or elegit, or an estate for years.

OUT, adv., inteij. ˆv. a. ") Sax.ut; Belg. Out of, prep. I ut/t ; Swed. ult.

iivi'ER, adj. Abroad; dis-

Out'erly, adv. \ closed ; unco-

Out'ermost, at/;. ˆvered; exhaust-

Out'most, ed ; ejected ; un-

Out'ward, adj., adv. Sc n. s. employed ; un- Oui'wARDLY, adv. restrained ; to

Out'wards, adv. J the end; away;

erroneously; at a loss ; deficient; used empha- tically with verbs of discovery, as, ' he is found out,' and before ala.H f as in the extract from Suckling: as an interj.it expresses abhorrence or disgust, and commands expulsion : to out, is to deprive by expulsion : out of, is to be re- garded as a kind of compound preposition in which out modifies the sense of of; their joint meaning is from ; beyond ; without ; excluded ; dismissed ; not or no longer in ; past; by mean or in consequence of; denoting absence; dere- 'iction ; unfitness ; extraction ; separation ; res cue ; irregularity ; change of*

state ; exhaustion : ‘ out of hand ‘ means immediately ; quickly done : outer, without; opposed to inner: outerly, towards the outside : outermost, remotest from the middle : outmost, a contraction of outer- most; utmost: outward is external; extrinsic; visible ; foreign ; tending towards the outsidie ; to foreign or outer parts ; external form : out- wardly corresponds : outwards is towards the outside.

If ye will not do so, be sure your sin will find you out. Numbers xxxii. 23.

So many Neroes and Caligulas, Out of these crooked shores must daily rise.

Spenser. He bade to open wide his brazen gate, Which long time had been shut, and out of hand Proclaimed joy and peace through all his state.

Id. The sacred nymph Was out of Dian’s favor, as it then befel.

Faerie Queene. Amongst those things which have been received with great reason, ought that to be reckoned which the ancient practice of the church hath continued out of mind. Hooker.

That which inwardly each man should be, the church outwardly ought to testify. Id.

It was great ign’rance, Gloster’s eyes being out. To let him live ; where he arrives he moves All hearts. Shakspeare. King Lear.

Like a dull actor now, I have forgot my part and I am out, Even to a full disgrace. S/uikspeare. Coriolanus. Court holy water in a dry house, is better than the rain waters out of door. Jd. king Lear.

Out, varlet, from my sight. Jd.

She is persuaded I will marry her, out of her own love and flattery, not out of my promise.

Sliakspeare. Othello, Sweet prince, the’ untainted virtue of your years Hath not yet dived into the world’s deceit ; Nor more can you distinguish of a man. Than of his outward shew ! Id. Richard III.

I do not think So fair an outward, and such stuff within, Endows a man but him. Id. Cymbcline.

So we’ll live and hear poor rogues I’alk of court news, and we’ll talk with them too Who loses, and who wins, who’s iu, who’s tmt.

Shakspeare.

When the butt is out we will drink water, not a drop before ; bear up and board them. Id.

Guiltiness

Will speak, though tongues were out of use. Id. I am out o/' breath. > ••• How art thou out of breath, when thou hast breath To say to me that thou art out uf breath 1 Id.

No more ado,

But gather we our forces out of hand,

And set upon our boasting enemy. Id.

Out on thee, rude man ! thou dost shame thy mother. Id.

This youth was such a mercurial, as the like hath seldom been known ; and could make his own part, if at any time he chanced to be out. Bacon.

Juices of fruits are watery and oily : among the watery are all the fruits out of which drink is ex- pressed ; as the grape, the apple, the pear, and cherry. Id.

The pope, out of the care of an universal father, had in the conclave divers consultations about an holy war against the Turk. Id.

Fruits and grains are half a year in concocting ; whereas leaves are out and perfect in a mon^h. Id.

Try if three bells were made one within another, and air betwixt each ; and the outermost bell were chimed with a hammer, how the sound would differ from a single bell. Id.

It was intended to raise an outward war to join with some sedition within doors. Hauward.

Grieved with disgrace, remaining in their fears. However seeming outwardlti content. Yet the' inward touch their wounded honour bears.

Daniel. Out, alas ! no sea I find, Is troubled like a lover's mind .

Suckling.

The members of both houses who withdrew were counted deserters, and outed of their places in parlia- ment. King Charles.

Outicard appearances are deceitful guides to our judgments or our affections. Hall.

When the soul being inwardly moved to lift itself up by prayer, the outward man is surprised in some other posture ; God will rather look to the inward motions of the mind, than to the outward form of the body. Duppa.

Let all persons avoid niceness in their cloathing or diet, because they dress and comb out all their opportunities of morning devotion, and sleep out the care for their souls. Taylor.

Cromwell accused the earl of Manchester of having betrayed the parliament out o/' cowardice.

Clarendon.

Out, out, hyena ; these are thy wonted arts, To break all faith. Milton's Agonistes.

Chaos retired.

As from her outmost works a broken foe. Milton. Not out of cunning, but a train

Of atoms justling in his brain,

As learned philosophers give out. Hudibras.

Many handsome contrivances of draw-bridges I had seen, sometimes many upon one bridge, and not only one after, or behind another, but also sometimes two or three on a breast, the outermost ones serving for the retreat of the foot, and the middle for the horse and carriages. Browne.

As he that hath been often told his fault.

And still persists, is as impertinent

As a musician that will always play.

And yet is always out at the same note.

Roscommon.

Upon the great Bible, he was out fifty pounds, and reimburst himself only by selling two copies.

Fell.

Make them conformable to laws, not only for wrath and out of fear of the magistrate's power, which is but a weak principle of obedience ; but out o/' conscience, which is a firm and lasting principle.

Tittotson.

With a longer peace, the power of France with so great revenues, and such application, will not en- crease every year out of proportion to what ours will do. Temple

You have still your happiness in doubt,

Or else 'tis past, and you have dreamed it out.

Dry den. The cavern's mouth alone was hard to find.

Because the path disused was otit of mind. Id.

He is softer than Ovid ; he touches the passions more delicately, and performs all this out of his own fund, without diving into the sciences for a supply.

Id. He took a lowering leave ; but who can tell

What outivard hate might inward love conceal ?

Id.

So many of their orders, as were outed from their fat possessions, would endeavour a re-entrance against those whom they account hereticks. Id.

Distinguish betwixt those that take state upon them, purely out of pride and humour, and those that do the same in compliance with the necessity of their affairs. L'Estrange.

If the laying of taxes upon commodities does af- fect the land that is out at rack rent, it is plain it does equally affect all the other land in England too.

Locke.

The kidney is a conglomerated gland only in the outer part : for the inner part, whereof the papillje are composed, is muscular. Grew's Cosmol.

In the lower jaw, two tusks like those of a boar, standing outerly, an inch behind the cutters.

Grew.

St. Paul quotes one of their poets for this saying, notwithstanding T. G.'s censure of them out of Horace. . Stillingfleet.

Many wicked men are often touched with some inward reverence for that goodness which they can- not be persuaded to practise ; nay, which they out- uurdly seem to despise. Sprat.

Those that have recourse to a new creation of waters, are such as do it out of laziness and igno- rance, or such as do it out of necessity. Burnet.

What they do not grant out of the generosity of their nature, they may grant out of mere impatience,

Smallridge.

Christianity recovered the law of nature out of all those errors with which it was overgrown in the times of paganism. Addismi.

Thoul't say my passion's out of season. That Cato's great example and misfortunes Should both conspire to drive it from my thoughts.

Id. The tale is long, nor have I heard it out ;

Thy father knows it all. Id. Cato.

The gown with stiff embroid'ry shining,

Looks charming with a slighter lining ;

The ottt, if Indian figures stain,

The inside must be rich and plain. Prior.

Do not black bodies conceive heat more easily from light than those of colours do, by reason that the light falling on them is not reflected outwards, but enters the bodies, and is often reflected and re- fracted within them until it be stifled and lost ?

Nevton's Optics.

If any man suppose that it is not reflected by the air, but by the outmost superficial parts of the glass, there is still the same difficulty. Id.

The generality of men are readier to fetch a rea-

son from the immense distance of the starry lieavens, and the outmnst walls of the world. Benlley.

Our successes have been the consequences of a necessary war ; in which we engaged, not out of ambition, but for the defence of all that was dear to us. Atterlturii.

Those lands were out upon leases of four years, after the expiration of which tenants were obliged to renew. Arbuthiwt.

At all I laugh, he laughs no doubt; The only difference is, I dare laugh out. Pope.

My retreat the best companions grace, Chiefs out of war, and statesmen out of place.

Id. According to Hobbes's comparison of reasoning with casting up accounts, whoever finds a mistake in the sum total, must allow himself out, though after repeated trials he may not see in which article he has misreckoned. Swijl.

Large coals are properest for dressing meat ; and when they are out, if you happen to miscarry in any dish, lay the fault upon want of coals. Id. Whereas insisting in or out of season

Convinces all men, even a politician ; Or ††† what is just the same ††† it wearies out. So the end's gained, what signifies the route ?

Bqron. OUTACT', V. a. Out and act. To do be- yond.

He has made me heir to treasures. Would make me out-act a real widow's whining.

Otway. OUTBAL'ANCE, v. a. Out and balance. To overweigh ; to preponderate.

Let dull Ajax bear away my right, When all his days outbalance this one night.

Drt/d'in. OUTBAR', V. a. Out and bar. To shut out by fortification.

These to outbar with painful pionings, From sea to sea be heaped a mighty mound.

Spenser. OUTBID', v.a. Out and bid. To over- power by bidding a higher price.

If in thy heart Kew love created be by other men. Which have their stocks entire, and can in tears, In sighs, in oaths, in letters outbid me, This new love may beget new fiears. Donne.

For Indian spices, for Peruvian gold, Prevent the greedy, and outbid the bold. Pope.

OUTBID'DER, n. s. Out and bid. One that outbids.

OUTBLOWED', at^;. Out and blow. In- flated ; swollen with wind.

At their roots grew floating palaces. Whose outhlowu bellies cut the yielding seas.

Drijden. OUTB(mN', adj. Out and born. Foreign ; not native.

OUTBOUND', adj. Out and bound. Des- tinated to a distant voyage; not coming home. Triumphant flames upon the water float, And outbound ships at home their voyage end.

Dry den. OUTBRAVE', V. a. Out and brave. To bear down and defeat by more daring, insolent, or splendid appearance.

I would outstare the sternest eyes that look. Outbrave the heart most daring on the earth. To win thee, ladv. Shakspeare.

Here Sodom"s towers raise their proud tops on high. The towers, as well as men, outbrave the sky,

Cowley. We see the danger, and by fits take up some faint resolution to outbrave and break through it,

U Estrange. OUTBRA'ZEN, v. a. Out and brazen. To bear down with impudence.

OUTBR'EAK, n. s. Out and break. That which breaks forth ; eruption.

Breathe his faults so quaintly That they may seem the taints of liberty. The flash and outbreak of a fiery mind.

Shakspeare, OUTBREATHE', r.a. Out and breathe. To weary by having better breath ; to expire.

Mine eyes saw him Rendering faint quittance, wearied and outbreathed. To Henry JMonmouth. Shakspeare.

That sign of last outbreathed life did seem.

Spenser.

OUTCAST, n. s. & part. Out and cast. It may be observed that both the participle and the noun are indifferently accented on either syl- lable. It seems most analogous to accent the participle on the last, and the noun on the first. Thrown into the air as refuse, as unworthy of notice; banished, ††† hence an exile.

.'Vbandon soon, I read, the caitive spoil Of that same outcast carcass. Spenser.

Let's be no stoicks, nor no stocks. Or so devote to Aristotle, As Ovid, be an outcast quite abjured.

Shakspeare.

0 blood-bespotted Neapolitan,

Outcast of Naples, England's bloody scourge !

Id. Behold, instead Of us outcast, exiled, his new delight Mankind created. Milton's Paradise Lost. For me, outcast of human race, Love's anger only waits, and dire disgrace.

Prior. He dies sad outcast of each church and state ! And harder still flagitious, yet not great. Pope. OUTCHANG-FOU, a city of Chma, of the first rank, the capital of the province of Hou- quang. Hang-yang-fou, a city on the opposite side of the river Yang-tse-kiang, added to this constitutes the emporium of the central part of the empire, and the river, though 500 miles from the sea, is here navigable for the largest vessels. The country around is noted for its fine tea, and bamboo paper.

OUTCRAFT', V. a. Out and craft. To excel in cunning.

Italy hath outcrafted him, And he's at some hard point.

Shakspeare. Cymbeline. OUTCRY, n. s. Out and cry. Cry of ve- hemence ; cry of distress ; clamor ; clamor of detestation.

These outcries the magistrates there shun, since they are readily hearkened unto here. Spenser.

So strange thy outcry, and thy words so strange Thou interposest, that my sudden hand Prevented, spares, Milton's Paradise Lost.

I make my way Where noises, tumults, outcries, and alarms

1 heard. Denham.

OUT

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OUT

There is not any one vice, incident to the mind of man, a<ˆainst which the world has raised such a loud and univcsai outcru, as against ingratitude.

South. OUTDARE', V. a. Out and dare. To ven- ture beyond.

Myself, ray brother, and his son, That brought you home, and boldly did outdare The dangers of the time. S/uiksjieare.

OUTDATE', V. a. Out and date. To anti- quate.

Works and deeds of the law, in those places sig- nify legal obedience, or circumcision, and the like Judaical outdated ceremonies ; faith, the evangelical grace of giving up the whole heart to Christ, with- out any such Judaical observances. Hammond.

OUTDO', V. a. Out and do. To excel ; to surpass ; to perform beyond another.

He hath inˆthis action outdone his former deeds, doubly. Shakspeare.

What brave commander is not proud to see Thy brave Melantius in his gallantry ? Our greatest ladies love to see their scorn Outdone by thine, in what themselves have worn.

Waller Heavenly love shall outdo hellish hate, Giving to death, and dying to redeem, So dearly to redeem what hellish, hate So easily destroyed. Milton.

Here let these who boast in mortal things, Learn how their greatest monuments of fame. And strength, and art, are easily outdone By spirits reprobate. Id.

An impostor outdoes the original. L' Estrange. I must confess the encounter of that day Warmed me indeed, but quite another way ; Not with the fire of youth, but generous rage. To see the glories of my youthful age So far outdone. Drydeu.

The boy's mother, despised for not having read a system of logick, outdoes him in it. Locke.

I grieve to be outdone by Gay, In my own humourous biiing way. Swift.

OUT'DWELL', V. a. Out and dwell. To .stay beyond.

He autdwels his hour ; For lovers ever run before the clocic.

Shakspeare.

OUTFACE'. 7;. a. Out and face. To brave; to bear down by show of magnanimity ; to bear down with impudence ; to stare down.

We shall have old swearing That tliey did give the rings away to men ; But we'll outface them, and out-swear them too.

Shakspeare. Dost thou come hithei To outface me with leaping in her grave 'i Be buried quick with her, and so will I. Id. Be fire with fire ; Theaten the threatener ; and outface the brow Of bragging horror. Id. King John.

We behold the sun, and enjoy his light, as long as we look towards it circumspectly ; we wann ourselves safely while we stand near the fire ; but if we seek to outface the one, to enter into the other, we forth- with become blinder burnt. Baleigh.

Tliey bewrayed some knowledge of their persons, but were outfaced. Wotton.

OUTFAWN , i;. a. Out and fawn. To ex- cA in fawning.

In affairs of less import Thai neither do us good nor hurt,

And they receive as little by, Outfiwn as mucli and out comply ; And seem as scrupulously just To bait the hooks for greater trust.

Hudibras. OUTFLY', V. a. Out and fly. To leave be- hind in flight.

His evasion winged thus swift with scorn, Cannot outjiij our apprehensions. Shakspeare,

Horoscop's great soul, Raised on the pinions of the bounding wind, Outjlew

the rack, and left the hours behind.

Garth. OUTFORM', n. s. Outandform. External, appearance.

Cupid, who took vain delight In mere outforms, until he lost his sight, Hath changed his soul, and made his object you.

Ben Jonson. OUTFROWN', V. a. Out and frown, .ˆo: frown down ; to overbear by frowns.

For thee, oppressed king, am I cast down, Myself could else oi/i/ri)W7t false fortune's frown.

Shakspeare. OUT'GATE, 71. s. Out and gate. Outlet ; passage outwards.

Those places are so fit for trade, having most con- venient out-gates by divers ways to the sea, and iu- gates to the richest parts of the land, that thes'ˆ would soon be enriched. Spenser.

OUTOn'E', V. a. Out and give. To sur- pass in giving.

The bounteous player outgave the pinching lord.

Dry den. OUTGO', V. a. pret. outwent ; part, outgone. Out and go. To surpass ; to excel ; to pass ; to circumvent.

Many ran afoot thither out of all cities, and out- went them, and came unto him. Murk vi. 33.

For frauk, well ordered, and continual hospitality, he out-went all shew of competence. Carew.

Mollesson Thought us to have out-gone With a quaint invention. Denham.

Wˆhile you practised the rudiments of war, yiiu out-uxvl all other captains ; and have since found none but yourself alone to surpass. Dryden.

Where they apply themselves, none of their neigh- bours out-go them. Locke on Education.

OUTGROW', V. a. Out and grow. To sur- pass in growth ; to grow too great or too old for any thing.

Much their work outgrew,

The hands dispatch of two, gard'ning so wide.

Milton. When some virtue much outgrows the rest,

It shoots too fast and high. Dryden.

This essay wears a dress that possibly is not so suitable to the graver geniuses, who have outgrown all gaieties of stile and youthful relishes. GlanmUe.

The lawyer, the tradesman, the mechanic, have found so many arts to deceive, that they far outgrow the common prudence of mankind. Swift.

OUT'GUARD, n. s. Out and guard. One posted at a distance from the main body, as a defence.

As soon as any foreign object presses upon the sense, those spirits which are posted upon the out' guards, immediately scowr oft' to the brain. South,

These outguards of the mind are sent abroad. And still patrolling beat the neighbouring road.

Or to the parts remote otx-dienl fly,

Keep posts advanced, aud on tlie iVontier l^e.

Blackmore. OUTJEST, V. a. Out and jest. To over- power by jestin^.

The fool labours to outjest His heart-struck injuries.

Shakspeare. King Lear. OUTKNAVE', V. a. Out and knave. To surpass in knavery.

The world calls it out-witting a man, when he is only oulknared. L'Estrange.

OU TLAND'ISII, adj. Out and land. Not native; foreign.

Yourself transplant Awhile from hence : perchance outlandish ground

Bears no more wit than ours ; but yet more scant Are those diversions there which here abound.

Donne. Tedious waste of time to sit and near So many hollow compliments and lies, Outlandish flatteries. Milton.

Upon the approach of the king's troops, under general Wallis, who was used to t!ie outlandish way of making war, we put in practice passive obedience.

Addiion. OUTLAST', V. a. Out and last. To surpass in duration.

Good housewives, to make their candles burn the longer, lay them in bran, which makes them harder ; rnsomueh as they will out-last other candles of the same stufl^, half in half. Bacon.

Summer's chief honour, if thou hadst outlasted Bleak winter's force that made thy blossoms dry,

Millon. The present age hath attempted perpetual motions, whose revolutions might outlast the exemplary mobi- lity, and out-measure time itself. Browne. What may be hoped, When not from Helicon's imagined spring. But sacred writ, we borrow what we sing 1 This with the labrick of the world begun. Elder than light, and shall outlast the sun.

Waller.

OUT'LAW, n. s. 5c i-. a. } Sax. utla^a ; Goth.

Oit'lawry. S vtlug. One excluded

from the benefits or protection of the law ; to

deprive of such benefits; the decree or word of

deprivation.

Gathering unto him all the scatterlings and outlaws out of the woods and mountains, he marched forth into the English pale. Spenser.

As long as they w'ere out of the protection of the law, so as every Englishman might kill them, how should they be other than outlaws and enemies to the crown of England ? Davies.

I had a son Now outlawed from my blood ; he sought my life.

Sha/ispeare. He that is drunken Is outlawed by himself ; all kind of ill Did with his liquor slide into his veins.

Herbert.

Like as there are particular persons mttlaued, and

proscribed by civil laws, so are there nations that are

outlawed and proscribed by the law of nature and

nations. Bacon.

Divers were returned knights and burgesses for the

farliament ; many of which had been by Richard II. attainted by outlatcries. Id.

You may as well spread out the unsunn'd heaps Of miser's treasure by an outlaw's den. And tell me it is safe, as bid me hope Danger will let a helpless maiden pass. Milton. Vol. XVI.

*A drunkard is outlawed from all worthy and cre- ditable converse : men abhor, loath, and despise I'***. *South.*

.ill those spiritual aids are withdrawn, which should assist him to good, or fortify him against ill ; and like an outlawed person he is exposed to all that will assault him. Decay of Pielij.

Outlawry is the punishment of a person who, being called into law, and lawfully, according to the usual forms, sought, does contemptuously refuse to appear. The effect of being outlawed at the suit of another, in a civil cause, is the for- feiture of all the person's goods and chattels to the king, and the profits of his land, while the outlawry remains in force. If in treason or fe- lony, all the lands and tenements which he has in fee, or for life, and all his goods and chattels, are also forfeited ; and, besides, the law inter- prets his absence as a sufficient evidence of guilt; and, without requiring farther proof, accounts the person guilty of the fact; on which ensues cor- ruption of blood, &c. However, to avoid inhu- manity, no man is entitled to kill him wantonly or wilfully; but in so doing he is guilty of mur- der, unless it happens in endeavouring to appre- hend him ; for any body may arrest an outlaw, either of his own head, or by wˆit or warrant of capias utlagatum, in order to bring him to exe- cution. If, after outlawry in civil cases, the de- fendant publicly appear, he is to be arrested by a writ of capias utlagatum, and committed till the outlawry be reversed ; which reversal may be had by the defendant's appearing in court (and in the king's bench by sending an attorney, ac- cording to statutes 4 and 5 William and 'Mary cap. 18), and any plausible circumstance, how- ever trifling, is in general sufficient to reverse it ; it being considered only as a process to force appearance. The defendant must, however, pay full costs, and must put the plaintiff in the same condition as if he had appeared

before the writ of exegi facias was awarded. It is appointed by magna charta that no freeman shall be outlawed, but according to the law of the land. A minor or a woman cannot be outlawed. In Scotland outlawry anciently took place in the case of re- fusal to fulfil a civil obligation, as well as in cri- minal cases. At present, however, it only takes place in the two cases of flying from a criminal prosecution, and of appearing in court attended by too great a number of followers. But the defender, upon appearing at any distance of time, and offering to stand trial, is entitled, de jure, to nave the outlawry reversed, and to be admitted to trial accordingly, and even to bail, if the of- fence be bailable.

OUTLEAF, n. s. Out and leap. Sally; flight ; escape.

Since youth must have some liberty, some outleaps, they might be under the eye of a father, and then no very great harm can come of it. Locke.

OUTLET, n.i. Out and let. Passage out- wards ; discharge outwards ; egress ; passage of egress.

Colonies and foreign plantations are very neces- sary, as outlets to a populous nation. Bacon.

The enemy was deprived of that useful outlet.

Clarendon .

So 'scapes the' insultin'g fire his narrow jail. And makes small outlets into open air. Drydtn.

Have a care that these members be neither the in- lets nor outlets of any vices ; that they neither give admission to the temptation, nor be expressive of the conception of them. i^"y-

OUTLINE, n. s. Out and line. Contour; line by which any figure is defined; extremity.

Painters, by their outlines, colours, lights, and shadows, represent the same in their pictures.

Dry den. But, more or less, the whole's a syncope Or a singulte ••• emblems of Emotion,

The grand Antithesis to great Ennui, Wherewith we break our bubbles on the ocean. That watery outline of eternity. Byron.

OUTLIVE', V. a. Out and live. To live beyond ; to survive.

Will these mossed trees. That have outlived the eagle, page thy heels. And skip when thou point'st out ? Skakspeare.

Die two months ago, and not forgotten !

Yet then there is hopes a great man's memory

May outlive his life half a year. Id.

He that outlives tWis day, and conies safe home,

Will stand a tiptoe when this day is named. Id.

His courage was so signal that day, that too much could not be expected from it, if he had outlived it.

Clare)idon. Thou must outlive Thy youth, thy strength, thy beauty, which will

change To withered, weak, and gray. Milton.

Time, which made them their fame outlive, To Cowley scarce did ripeness give. Denluim. The soldier grows less apprehensive by computing upon the disproportion of those that outlive a battle, to those that fall in it. L'Estrange.

Since we have lost Freedom, wealth, honour, which we value most, I wish they would our lives a period give ; 'J'hey live too long who happiness outlive.

Dryden. It is of great consequence where noble families are gone to decay ; because their titles outlive their estates. Swift.

Pray outlive me, and then die as soon as you please. Id.

Two bacon-flitches made his Sunday's chear ; Some the poor had, and some outlived the year.

Harte.

OUTLOOK', V. a. Out and look. To face down ; to brow beat.

I culled these fiery spirits from the world,

To outlook conquest, and to win renown,

Even in the jaws of danger and of death.

Skakspeare .

OUTLUS'TRE, v. a. Out and lustre. To excel in brightness.

She went before others I have seen, as that dia- mond of yours out-lustres many I have beheld.

Skakspeare. Cymbeline.

OUTLYTNG, part. adj. Out and lie. Not in the common course of order ; removed from the general scheme.

The last survey I proposed of the four out -lying empires, was that of the Arabians. Temple.

We have taken all the out-lying parts of the Spanish monarchy, and made impressions upon the very heart of it. Addison.

OUTMARCH', ?;. a. Out and march. To leave behind in the march.

The horse out-marched the foot, which, bv reason of the heat, was not able to use grea/, expedition.

Clarendon.

OUTMEAS'URE, v. a. Out and measure. To exceed in measure.

The present age hath attempted perpetual motions and engines, and those revolutions might out-last the exemplary mobility, and out-measure time itself.

Browne.

OUTNUM'BER, v. a. Out and number. To exceed in number.

The ladies came in so great a body to the opera, that they out-numbered the enemy. Addison.

OUTPAR'ISH, n. s. Out and parish. Parish not lying within the walls.

In the greater oufpariskes many of the poorer pa- rishioners, through neglect, do perish for want of some heedful eye to overlook them. Gruunt.

OUTPART, w.s. Out and part. Part re- mote from the centre or main body.

He is appointed to supply the bishop's jurisdiction and other judicial officers in the outpuns of his dio- cese. Aylife.

OUTPACE', V. a. Out and pace. To outgo ; to leave behind.

Orion's speed Could not outpace thee ; or the horse Laomedon did breed. CJiapmans Iliads.

OUTPOUR', V. a. Out and pour. To emit ; to send forth in a stream.

He looked and saw what number, numberless The city gates out-poured ; light arm'd troops In coats of mail and military pride. Milton.

OUTPRIZE', v.a. Out and prize. To ex- ceed in the value set upon it.

Either your unparagoned mistress is dead, or She's outprised by a trifle. Skakspeare. Cymbeline.

OUT'RAGE, n. s., v. a. & v.a.'\ Fr. outra-

Outra'geous, adj. ' geux, out-

Outra'geously, aJy. itrage; Ital.

Outra'geousness, n. s. } oltaraggie ;

barb. Lat. ultragium. Extreme or utmost rage open violence ; tumult : to injure or insult vio- lently ; commit exorbitancies or extravagancies ; the adjective, adverb, and substantive following take the senses of outrage.

Ah heavens ! that do this hideous act behold, And heavenly virgin thus outraged see ; How can the vengeance just so long withhold !

* 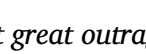 Spenser.*

He wrought great outrages, wasting all the countrj where he went. Speyiser on Ireland.

As she went, her tongue did walk In foul reproach and terms of vile despight, Provoki::g him by her oulragious talk, To heap more vengeance on that wretched wight.

Spenser.

That people will have colour of employment given them, by which they will poll and spoil so out- ragiously, as the very enemy cannot do worse.

Id. on Ireland.

Three or four great ones in court will outrage in apparel, huge hose, monstrous hats, and garish colours. Aschwn.

In that beastly fury

He has been known to commit outrage.

And cherish factions. Skakspeare. Timon.

Think not, although in writing 1 preferred

The manner of thy vile outragious crimes.

That therefore I have forged. Skakspeare.

Under him they committed divers the most out- ragious viHanies, that a base multitude can imagine.

Sidney,

The news put divers young bloods into such a fury as the Englisli ambassadors were not witliout peril to be outraged. Bacon.

They viewed the vast immeasurable abyss,

Outragious as a sea, dark, wasteful, wild. Milton.

My characters of Antony and Cleopatra, though they are favourable to them, have nothing of out- ragious panegyric. Dryden.

When he knew his rival freed and gone, He swells with wrath ; he makes outragious moan ; He frets, he fumes, he stares, he stamps the ground ; The hollow tower with clamours rings around. Id.

Virgil, more discreet than Homer, has contented himself with the partiality

of his deities, without bringing them to the outragiousness of blows. Id.

Let lust burn never so outragiously for the present, yet age will in time chill those heats. South.

Base and insolent minds outrage men, when they have hopes of doing it without a return. Atterbury.

This interview outrages all decency ; she forgets her modesty, and betrays her virtue, by giving too long an audience. Broome.

See with what outrage from the frosty north.

The early valiant Swede draws forth his wings

In battailous array. Philips.

iVIercy to him that shows it, is the rule And righteous limitation of its act, By which Heaven moves in pardoning guilty man ; And he that shows none, being ripe in years. And conscious of the outrage he commits. Shall seek it, and not find it, in his turn. Cowper.

OUTRAM, or Owtram (William), D.D., a divine of the established church, was born in Derbyshire in 1625, and educated at Cambridge. After various promotions, he was collated to the archdeaconry of Leicester, and installed preben- dary of St. Peter's church in Westminster. He was also rector of St. M'argaret's, in the same city. He died in 1679, celebrated for his rabbi- nical learning, and his acquaintance with the Fathers of the church. His works are, De Sa- crificiis Libri duo ; quorum altero explicantur omnia Judaeorum, et nonnulla Gentium profana- rum sacrificia ; altero Sacrificium Christi, Sec, re- cently translated by Mr. Allen ; Twenty Sermons preached upon different Occasions.

OUTREACH', V. a. Out and reach. To go beyond.

This usage is derived from so many descents of ages, that the cause and author outreach remem- brance. Carew.

Our forefathers could never dream so high a crime as parricide, whereas this outreaches that fact, and exceeds the regular distinctions of murder. Browne.

OUTRIDE', V. a. Out and ride. To pass by riding.

This advantage age from youth hath won, As not to be outridden, though outrun. Dryden.

OUT-RIDER, n. s. Out and rider. A sum- moner whose office is to cite men before the sheriff.

OUTRIGHT', adv. Out and right. Imme- diately; without delay ; completely.

When these wretches had the ropes about their necks, the first was to be pardoned, the last hanged outright. Arbuthnot.

By degrees accomplished in the beast.

He neighed outright, and all the steed exprest.

Addison.

OUTROAR', V. a. Out and roar. To exceed in roaring.

O that I were Upon the hill of Basan, to outroar The horned herd !

Shakspeare. Antony and Cleopatra. OUTRODE, n. s. Out and rode. Excur- sion.

He set horsemen and footmen, to the end that, is- suing out, they might make outrodes upon the ways of Judasa. 1 Maccabees xv. 41.

OUTROOT', V. a. Out and root. To extir- pate ; to eradicate.

Pernicious discord seems Outrooted from our more than iron age ; Since none, not even our kings, approach their

temples With any mark of war's destructive rage, But sacrifice unarmed.

Rowe's Ambitious Step-Mother. OUTRUN', V. a. Out and run. To leave behind in running ; to exceed.

By giving the house of Lancaster leave to breathe. It will outrun you, father, in the end. Shakspeare. The expedition of my violent love Outruns the pauser reason. Id. Macbeth.

We may outrun. By violent swiftness, that which we run at.

Shalupeare. When things are come to the execution, there is no secrecy comparable to celerity, like the motion of a bullet in the air, which flieth so swift as it outruns the eye. Bacon.

This advantage age from youth hath won. As not to be outridden, though outrun. Dryden. We outrun the present income, as not doubting to

reimburse ourselves out of the profits of some future project. Addison.

OUTSAIL', V. a. Out and sail. To leave behind in sailing.

The word signifies a ship that outsails other ships.

Broome.

OUT'SCAPE, n. s. Out and scape. Power of escaping.

It past Our powers to lift aside a log so vast, As barred all outscape. Chapman,

OUTSCORN', V. a. Out and scorn. To bear down or confront by contempt ; to despise ; not to mind.

He strives in his little world of man t' outscom The to and fro conflicting wind and rain.

Shakspeare.

OUTSELL', V. a. Out and sell. To exceed in the price for which a thing is sold ; to sell at a higher rate than another.

It would soon improve to such a height as to outsel our neighbours, and thereby advance the pro- portion of our exported commodities. Temple. Her pretty action did outsel her gift. And yet enriched it too.

Shakspeare. Cymbeline.

OUTSHINE', r. a. Out and shine. To emit lustre ; to excel in lustre.

Witness my son, now in the shade of death ; Whose bright outshining beams thy cloudy wrath Hath in eternal darkness folded up. Shakspeare. By Shakspeare's, Jonson's, Fletcher's lines,

Our stage's lustre, Rome's outsliines. Denham.

Beauty and greatness are so eminently joined in your royal highness, that it were not easy for any but a poet to determine which of them outshines the other. Druden.

OUT

Homer does not only outslnne all other poets in the variety, but also ia the novelty of his characters.

AdHison. We should see such as would outshine the rebel- lious part of their fellow-subjects, as much in their gallantry as in their cause. fd.

Such accounts are a tribute due to the nieniorv of those only who have outshone the rest of the world by their rank as well as their virtues.

Atterbury. Happy you I Whose charms as far all other nymphs outshine. As others' gardens are excelled by thine. Pope. OUTSHOOr, V. a. Out and shoot. To ex- ceed in shooting.

The forward youth Will learn t' oulshoot you in your proper bow.

Drydeii. Men are resolved never to outshoot their fore- father's mark ; but write one after another, and so the dance goes round in a circle. Norris.

OUT'SIDE, n. s. Out and side. Superficies ; surface ; external part ; superficial appearance ; extreme part; the part beyond.

You shall find his vanities forespent Were but the outside of the Roman Brutus Covering discretion with a coat of folly.

Shakspeare. Fortune forbid, my outside have not charmed her !

Id. Your outside promiseth as much as can be expected from a gentleman. Bacon.

Hold an arrow in a flame for the space of ten pulses, and, when it cometh forth, those parts which were on the outsides of the flame are blacked and turned into a coal. Id.

What admirest thou, what transports thee so 1 An outside? fair, no doubt, and worthy well Thy cherishing and thy love. Milton.

What pity that so exquisite an outside of a head should not have one grain of sense in it.

L'Estrange. The leathern outside, boisterous as it was, Gave way and bent. Dryden.

The ornaments of conversation, and the outside of fashionable manners, will come in their due time.

Locke. Created beings see nothing but our outside, and can therefore only frame a judgment of us from our exterior actions. Addison's Spectator.

*I threw open the door of my chamber, and found ***he family standing on the outside. Id.***

Two hundred load upon an acre, they reckon the outside of what is to be laid. Mortimer.

OUTSIT', v. a. Out and sit. To sit beyond the time of any thing.

He that prolongs his meals and sacrifices his time, as well as his other conveniences, to his luxury, how quickly does he outsit his pleasure ! South.

OUTSLEEP', r. a. Out and sleep. To sleep beyond.

Lovers, to bed ; 'tis almost fairy time : I fear we shall outsleep the coming morn.

Shakspeare. OUTSPEAK', V. a. Out and speak. To speak something beyond ; to exceed.

Rich stuffs and ornaments of household I find at such proud rate, that it outspeaks Possession of a subject.

Shakspeare. Henrif VIII. OUTSPORT, t;. a. Out and sport. To sport teyond.

Let's teach ourselves that honourable stop Not to outsport discretion, Hhakspaure. Oinello. OUTSPREAD', V. a. Out and spread. To extend; to diffuse.

With sails outspread we fly. Pope.

OUTSTAND', f. a. Out and stand. To support ; to resist.

Each could demolish the other's work with ease enough, but not a man of them tolerably defend his own ; which was sure never to outstand the first at- tack that was made. Woodward. I have outstood my time, which is material To the tender of our present.

Shakspeare. Cymheline. OUTSTARE', V. a. Out and stare. To face down; to brow-beat; to out-face with effron- tery.

I would outstare the sternest eyes that look. To win thee, lady.

Shakspeare. Merchant of Venice.

These curtamed windows, this self-prisoned eye,

Oulstares the lids of large-lookt tyranny. Crashaw.

OUT'STREET, n. s. Out and street. Street in the extremities of a town.

OUTSTRETCH', I), a. Out and stretch. To extend ; to spread out.

INlake him stand upon the molt-hill. That caught at mountains with out-stretched arms.

Shakspeare. Out-stretched he lay on the cold ground, and oft Cursed his creation. Milton's Paradise Lost.

A mountain, at whose verdant feet A spacious plain, out-stretched, in circuit wide Lay pleasant. Id. Paradise Regained.

Does Theseus burn 1 And must not she with out-stretched arms receive

him? And with at equal ardour meet his vows ? Smith.

OUTSTRIP', v.a. According to Skinner, out and Germ, spritzen, to spout. To outgo; leave behind.

If thou wilt out-strip death, go across the seas. And live with Richmond from the reach of hell.

Shakspeare. Do not smile at me, that I boast her off ; For thou shall find, she will out-strip all praise. And make it halt behind her. Id. Tempest.

Thou both their graces in thyself hast more Out-stript, than they did all that went before.

Beti Jonson. My soul, more earnestly released. Will out-strip hers ; as bullets flown before A later bullet may o'ertake, the powder being more.

Donne. With such array Harpalice bestrode HerThracian (purser, and out-stripp'd the rapid flood.

Dryden. A fox may be out-witted, and a hare out-stript.

L'Estrange. He got the start of them in point of obedience, and thereby out-stript them at length in point of knowledge. South.

OUT-SWEET'EN, v. a. Out and sweeten. To excel in sweetness.

The leaf of eglantine, which not to slander. Out-sweetened not thy breath.

Shakspeare, Cymbebne.

OUT-SWEAR', v.a. Out and swear. To overpower by swearing.

We shall have old swearing. But we'll out-face them, and out-swear them too.

Shaksp 'are.

OUT

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OWE

OUT-TONGUE', w. a. Out and tongue. To bear down by noise.

Let him do his spite :

My services, which 1 have done the signory,

Shall out-tongue his complaints. Slul sjienre.

OUT-TALK', V. a. Out and talk. To ovix- povver by talk.

This gentleman will oxit-Udk us all. Shakspeire.

OUT-VAL'UE, v.a. Out and value. To transcend in price.

He gives us in this life an earnest of expected joys, that out-milues and transcends all those momentary pleasures it requires us to forsake. Boijle.

OUT-VEN'OM, V. a. Out and venom. To exceed in poison.

'Tis slander ; Whose edge is sharper than the sword, whose

tongue Out-venoms all the worms of Nile. Shakspeare.

OUTVIE', v.a. Out and vie. To exceed; to surpass.

For folded flocks, or fruitful plains, Fair Britain all the world outvies. Dn/ den.

One of these petty sovereigns will be still endea- vouring to equal the pomp of greater princes, as well as to out-vie those of his own rank. Addison.

OUT-VIL'LAIN, V. a. Out and villain. To exceed in villany.

He hath out-viUained villainy so far, that the rarity redeems him. Shakspeare.

OUT-VOICE', V. a. Out and voice. To out- roar ; to exceed in clamor.

The English beach Pales in the flood with men, with wives and boys. Whose shouts and claps out-voice the deep-mouthed sea. Shdkspeure.

OUT- VOTE', D. a. Out and vote. To con- quer by plurality of suffrages.

They were out-voted by other sects of philosophers, neither for fame nor number less than themselves.

South,

OUT-WALK', V. a. Out and walk. To leave one in walking.

OUT'-WALL, n. s. Out and wall. Outward p►►irt of a building ; superficial appearance. For confirmation that I am much more

Than my out-uall, open this purse, and take

What it contains. Shakspeare. King Lear.

OUT-WEED', V. a. Out and weed. To ex- tirpate as a weed.

Wrath is a fire, and jealousy a weed ; The sparks soon quench, the springing weed out- weed. Speyiser.

OUTWEIGH', v.a. Out and weigh. To exceed in gravity, or excel in influence.

If any think brave death out-weighs bad life. Let him express his disposition. Shakspeare.

These instruments require so much strength for the supporting of the weight to be moved, as may be equal unto it, besides that other super-added power whereby it is out-ueighed and moved. VVitk.

All your care is for your prince I see,

Your truth to him out -weig hs you.v love to me.

Driiden.

Whenever he finds the hardship of his slavery out- voeigh the value of his life, it is in his power, by re- sisting the will of his master, to draw on

himself the death he desires. Locke.

The marriage of the clergy is attended with the poverty of some of them, which is balanced and out- weighed by many single advantages. Atterbury.

OUT-WELL', V. a. Out and weU. To pour

out. Not in use.

As when old father Nilus 'gins to swell. With timely pride about the / Kgypt'an vale,

His fattie waves do fertile slime out-uetl, And overflow each plain and lowly dale. Spenser.

OUTWIT', V. a. Out and wit. To cheat ; to overcome by stratagem.

Justice forbids defrauding, or going beyond our brother in any manner, when we can over-reach and out -wit him in the same. KettleueU.

After the death of Crassus, Pompey found himself out witted by Cajsar, and broke with him. Drudtn.

The truer hearted any man is, the more liable he is to be imposed on ; and then the world calls it oul- witting a man, when he is only out-knaved.

L Estrange. Nothing is more equal in justice, and indeed more natural in the direct consequence of eft'ects and causes, than for men wickedly wise to out-wit them- selves ; and for such as wrestle with Providence, to trip up their own heels. South.

OUT'WORK, n. s. Out and work. Tbe parts of a fortification next the enemy.

'lake care of our out-work, the navy royal, which are the walls of the kingdom ; and every great ship is an impregnable fort ; and our many safe and com- modious ports as the redoubts to secure them.

*Bacon. Death hath taken in the *ut-icorki. And now assails the fort ; 1 feel, 1 feel him Gnawing my heart-stfings. Denham.*

OUTWORN', par<. From out-wear. Con- sumed or destroyed by use.

Better at home lie bed-rid, idle. Inglorious, unemployed, with zg& out-worn.

Milton. OUTWˆREST', V. a. Out and wrest. To ex- tort by violence.

The growing anguish Rankled so sore and festered inwardly. Till that the truth thereof I did out-wrest.

Spenser. OUTWROUGIIT', part. Out and wrought. Out-done: exceeded in efficacy. In your violent acts, The fall of torrents and the noise of tempests, 'The boyling of Charybdis, the sea's wildness, The eating force of flames, and wings of winds. Be all out-wrought by your transcendent furies.

Ben Jonson. OUTWORTH', v. a. Out and worth. To excel in value.

A beggar's book Out-worths a noble's blood.

Sliakspeare. Henry VIII. OWE, i;. a. ˆ Sax. ahan; Goth, oˆa; IsL Owing, part. S eg- To have or be obliged to pay ; to be indebted ; to be obliged for ; hence to have, as from a cause ; possess : owing, con- sequential ; imputable to; and, in a passive but improper sense, due as a debt.

1 owe you much, and, like a witless youth. That which I owe is lost.

Shakspeare. Merchant of Venice. Not poppy nor mandragora. Nor all the drowsy syrups of the world, Shall ever med'cine thee to that sweet sleep Which thou owed'st yesterday. Id. Othello,.

If any happy eye This roving wanton shall descry.

Let the finder surely know

IMine is the wag ; 'tis I that owe

The winged wanderer. Crashaw.

By me upheld, that he may know how frail His fallen condition is, and to me owe All his deliverance, and to none but me. Milton.

All your parts of pious duty done, You owe your Ormond nothing but a son. Dryden.

You are both too bold ; I'll teach you all what's owing to your queen. Id.

If, upon the general balance of trade, English merchants owe to foreigners one hundred thousand pounds, if commodities do not, our money must go

out to pay it. Locke.

The debt, owirig from one country to the other, cannot be paid without real effects sent thither to that value. Id.

If we estimate things, what in them is owing to nature, and what to labour, we shall find in most of them f□□□ˆ to be on the account of labour. Id.

A son owes help and honor to his father ; and is a subject less indebted to the king? Holiday.

This was owing to an indifference to the pleasures of life, and an aversion to the pomps of it.

Atterbury.

O deem thy fall not owed to man's decree, Jove hated Greece, and punished Greece in thee.

Pope.

The custom of particular impeachments was not limited any more than that of struggles between nobles and commons ; the ruin of Greece was owinr/ to the former, as that of Rome was to the latter.

Swift. But the monarch ou-es

His firm stability to what he scorns.

More fixed below, the more disturbed above.

Cowper. For me, who, when I'm happy, owe No thanks to fortune that I'm so. Who long have learned to look at one Dear object, and at one alone. Sheridan.

OWEN (Dr. John), an eminent and learned dissenting minister, born in 1616, at Hadham in Oxfordshire, of which place his father was vicar. At twelve years of age he was admitted into Queen's College, Oxford, and in 1635 was made A. M., but soon after, disapproving the new regulations made by archbishop Laud, their chancellor, he was obliged, in 1637, to leave the university; when, taking orders, he became chaplain to Sir Robert Dormer of Ascot, in Oxfordshire, and tutor to his eldest son. He was afterwards chap- lain to John lord Lovelace of Hurley, in Berk- shire. When the civil war broke out, he openly avowed the cause of the parliament, which caused his uncle to disinherit him. When lord Love- lace joined the royal army, INIr. Owen went to London, and soon after joined

the non-confor- mists. The earl of Warwick gave Mr. Owen the living of Coggeshall ; where he soon left the Pres- byterians, and formed a church of Independents. He was now sent for several times to preach before the parliament ; and Cromwell was so pleased with him that he took him to Ireland, where he remained about half a year. Soon after Cromwell sent him into Scotland ; but he also returned thence after about half a year's stay at Edinburgh. He was then promoted to the deanery of Christ Church, (Oxford, whither he went in 1651 ; and Cromwell, being now chancellor of the University, nominated him his vice-chancellor. The next year he was created

D. D. Dr. Owen enjoyed the post of vice-chan- cellor five years; during which he behaved with the greatest moderation to the royalists. At the death of Cromwell, he was removed from the vice-chancellorship ; and at the Restoration was ejected from his deanery of Christ Church, when he retired to an estate he had purchased at Had- ham. Lord Clarendon afterwards offered to prefer him if he would conform, but he declined. He died at Ealing in 1683. His works are printed in 7 vols, folio.

Owen, (William), R.A., an English artist of considerable reputation, was a native of Shrop- shire, and bom in 1769. He was educated at the grammar-school, Ludlow, where his pas- sionate love of painting attracted the notice of Mr. Payne Knight. By the advice and assistance of that liberal patron he was sent to London, and placed under Charles Catton ; he made an excellent copy of one of Sir Joshua Reynolds's portraits, in consequence of which that great painter paid him much attention; and, after some slight pecuniary difficulties, settled, in 1800, at Pimlico. In 1813 our artist was ap- pointed principal portrait painter to the prince regent, on which occasion he was offered, but declined, the honor of knighthood. His profes- sional emoluments, as well as his reputation, continuing to increase, he in 1818 removed to an establishment in Bruton Street, but from this time his health abandoned him ; and, although he survived till the February of 1824, yet, during the five last years of his life, he could only bear to be wheeled from his bed-room to his drawing- room. His disease was immediately occasioned by the carelessness of a chemist's apprentice, who, mixing up for his use a cathartic, and a prepara- tion of opium, known by the name of ' Battley's Drops,' transposed the labels of the phials. The whole contents of the one, containing the latter, were in consequence swallowed, and the patient fell into a lethargy that proved fatal. Among his historical pieces, his Blind Beggar of Beth- nal Green; The \ illage Schoolmistress; and Road Side, have been engraved, and are very popular. He was enrolled among the members of the Royal Academy in the spring of 1 806.

Owen (John), an excellent epigrammatist, born in Caernarvonshire, and

educated at Win- chester, and at New College, Oxford, where he took his degree of L L. B. He became school- master at Tryleigh, and afterwards at Warwick. His Latin Epigrams, Joannis Audoeni Epigram- mata, were much esteemed, both at home and abroad, and went through many editions and translations. He died in 1622.

Owen (Henry), a learned divine, born in 1715, in Monmouthshire, and educated first at Ruthin, and next at Jesus College, Oxford, where he took the degree of M. D. He after- wards entered into orders, and became vicar of Edmonton, in Middlesex, and St. Olaves, Lon- don. His works are, 1. Observations on Scrip- ture Miracles ; 2. Remarks on the four Gospels ; 3. Enquiry into the LXX. Version; 4. Sermons preached at Boyle's Lecture; 5. Introduction to Hebrew Criticism; 6. Modes of Quotation used by the Evangelists; 7. Sermons, 2 vols. He died in 1795, aged eighty.

Owen (Thomas), a judge of tˆe common pleas, ton of Richard Owen, esq., of Condover in Shropshire. He was educated at Oxford ; and, Jiaving taken his degree of A. M., he left the uni- versity, and entered himself of Lincoln's Inn in London, where he became an eminent counsel- lor. In 1583 he was elected Lent reader to that society. In 1590 he was made serjeant at law, and queen's serjeant soon after. In 159.3 he was made judge of the common-pleas ; which office he executed with great abilities and in- tegrity. He died in 1598, and was buried in Westminster Abbey, where a monument was erected to his memory. He was a learned man, and a patron of literature. He was the author of Reports in the Common Pleas, London, 1656, folio.

Owen (John), M.A., a modern divine, one of the earliest members and long the Church of England's secretary of the Bible Society, was educated at Corpus Christi College, Cambridge, where he obtained a fellowship, and proceeded to the degree of master of arts. In 1791 he tra- velled through Europe, with a pupil, and on his return published an amusing account of his tour, in two volumes octavo. After this he became curate of Fulham, where his exertions procured him the patronage of bishop Porteus, who gave him the living of Paglesham, in Essex. But Dr. Randolph, the successor of that prelate, in- sisted upon Mr. Owen's residence at his rectory, by which he was obliged to relinquish the curacy of Fulham ; when the inhabitants presented him with a purse of nearly ►►700. He died September 26th, 1822. His other works, besides tracts and sermons, are. The Retrospect, or Reflections on the State of Religion and Politics in France and Great Britain, 8vo. ; The Christian Monitor for the Last Days,

8vo. ; Vindication of the Bible Society. 8vo. ; History of the same, 4 vols, 8vo.

OWHYHEE, the easternmost, and by far the largest, of the Sandwich Islands. It is of a triangular shape. The angular points make the north-east and south extremities, of which tlie northern is in long. 204►► 2′ E., lat. 20►► 17′ N.; the eastern in long. 205►► 6′ E., lat. 19►► 34′ N.; and the southern extremity in long. 204►► 15′ E., lat. 18►►54'N. Its greatest length, which lies in a direction nearly north and south, is eighty-five miles ; its breadth is seventy-two miles : and it is about 255 geographical, or 293 English, miles in circumference. It is divided into six large dis- tricts ; two of which, on the north-east side, are separated by a mountain that rises in three peaks, which are perpetually covered with snow, and may be seen clearly at forty leagues distance. To the north of this mountain the coast consists of high and steep cliffs, down which fall many beautiful cascades. The whole country is covered with cocoa-nut and bread-fruit trees. The peaks of the mountains on the north-east side are about half a mile in height, and entirely covered with snow. To the south of this mountain the coast presents a prospect of the most dreary kind, the whole country appearing to have undergone a total change by some dreadful convulsion. Among the plantations are a few huts, for shelter to the laborers ; but there are no villages at a greater distance from the sea than four or five

miles. There are supposed to be on this island above 100,000 inhabitants. The men are above the middle size, stout, well made, and fleshy, but not fat. Their color is brown olive. The women are in general masculine, though there are some exceptions. The features of both sexes are good; and some of the females are really fine women. They are very healthy, and some live to a great age. They are all thieves, without exception. The custom of tattooing prevails greatly among them ; but the men have a much larger share of it than the women. Both men and women are very cleanly in their persons ; the latter wash their whole bodies in fresh water twice, and sometimes three times, a-day. They are extremely lascivious. Their clothing con- sists of cloth of different kinds : that worn by the men, which is called marro, is about half a yard wide, and four yards long; that of the women, three-quarters of a yard wide, and of the same length as the men's : this they call pah-o-ouwa ; they both wear it round their middle, but the men pass it between their legs. This is the general dress of both sexes ; but the better sort sometimes throw a large piece loosely over their shoulders. Besides the marro, they have several other kinds of cloth ; all, however, are made from the Chinese paper mulberry tree. Tlie principal of these is the cappa, which is about ten or twelve feet long, and nearly as many wide, and is thick and warm ; they wrap them- selves up in this when they retire to sleep. They have another kind, which is white, and much thinner; it is

sometimes twenty or thirty yards long, and wide in proportion. The marro and pali-o-buwa are curiously painted of various patterns ; but the others are generally white, or dyed red, black, and yellow. The principal ornaments of the men are feather-caps and cloaks. They have also a kind of fly-flap, made of a bunch of feathers, fixed to the end of a thin piece of smooth and polished wood. The handle is very frequently made of one of the bones of the arm or leg of those whom they have killed in battl^, curiously inlaid with tortoise-shell : these they deem very valuable, and will not part with them under a great price. This ornament is common to the superiors of both sexes. The ornament which the women value most is the oral. This is a kind of ruff or necklace, made of red, green, black, and yellow feathers, curiously put together, and in most elegant patterns. Others are composed of small variegated shells ; and some consist of several rows of twisted hair, with a piece of carved wood or bone, highly polished, the bottom part forming a curve. They have also the poo-remah or bracelet ; the most valuable of which are made of boars' tusks, fastened together side by side with a piece of string, by means of a hole drilled through the middle.*

In 1794 this island was ceded by the king and his chiefs to Great Britain.]Mr. Pucet, lieute- nant of the Discovery, accompanied by some of the officers, went on shore, there displayed the British colors, and took possession of the island in his majesty's name, in conformity to the in^ clinarions of Tamaahmaah and his subjects. On this ceremony being finished, a salute was fireJ

from the vessels: after which the following in- scription on copper was deposited in a very conspicuous place at the royal residence : ••• ' On the 25th of February 1794, Tamaahmaah, king of Ovvhyhee, in council with the principal chiefs of the island, assembled on board his Britannic majesty's sloop Discovery, in Karakakooa Bay, and in presence of George Vancouver, com- mander of the said sloop ; lieutenant Peter Pu- get, commander of his said majesty's armed tender the Chatham; and the other ofhcers of the Discovery, after due consideration, unani- mously ceded the said island of (Jwhyhee to his Britannic majesty, and acknowledged themselves to be subjects of Great Britain.' On this island the celebrated captain Cook fell a sacrifice to a misunderstanding;, or sudden impulse of revenge, in the natives, on Sunday the 14th of February,

1779.

Since captain Cook discovered these islands, an astonishingly rapid civilisation has taken place amongst the natives, by their intercourse with Europeans. In 1791 captain Vancouver laid down the keel, and prepared the frame-work, of a vessel for the king, whose size was thirty- six feet by nine and a quarter. Ten years after, this chief had increased his navy to twenty ves- sels of different sizes, from twenty-five to fifty tons, and some of them coppered, chiefly built by Americans. In 1805 his largest vessel was seventy tons, and he was well supplied with naval stores. His people, from making frequent voyages to the north-west coast of America, and in the South Sea whalers, have become expert seamen, and they talk of opening a direct trade ill their own vessels with China; the island producing pearls, pearl-shell, and sandal-wood, all valuable in the C'hina market. The king has a fortification round his house, mounting ten guns ; and a guard of 200 native soldiers, well disciplined, and perfect in the use of fire-arms, who do regular duty night and day. He has, besides, 2000 stand of arms, and upwards of 12,000 Spanish dollars, together with other valuable articles, which he has collected in trade, and deposited in regular store-houses. Some horned cattle left at Owhyhee by Vancouver have greatly multiplied.

OWL, 72. s.) Sax. ule; Pan. vgle ; Sans.

Owl'et. S oolloo ; Lat. uluta. (All, perhaps, from the noise of the bird). A well-known bird of night.

Return to her! No! rather I abjure all roofs, and chuse To be a comrade with the wolf and owl.

Shdkspeare. 'Twas when the dog-star's unpropitious ray iˆmote everv brain, and withered every bay ; Sick was the sun. the owl forsook his bower.

Duncixid. Then lady Cynthia, mistress of the shade, Goes, with the fashionable owls, to bed. Young. The night (I sing by nijlit❑❑❑ sometimes an owl. And now gnd then a nightingale) ❑❑❑ is dim.

And the loud shriek of sage IMinerva's foul Ili.ttles around me her discordant hymn. Byron.

Owl, in ornithology. See Strix. OWL'ETi, 71. s. Supposed to be corrupted from woollei . A contraband dealer in wool.

We understand by some owlers, old people die in France. Taller.

By running goods, these graceless owiers gain.

Swift. OWLING, so called from its being usually carried on in the night, is the offence of trans- porting wool or sheep out of this kingdom, to thp detriment of its staple manufacture. This was forbidden at common law, particularly by stat. 11 Edw. III. c. 1, when the importance of our woollen manufacture was first attended to ; and there are now many later statutes relating to this oftence, the principal of which are those enacted in the reign of queen Elizabeth, and since. The stat. 8 Eliz. c. 3, makes the trans- portation of live sheep, or embarking them on board any ship, for the first offence, forfeiture of goods, and imprisonment for a year, and that at the end of the year the left hand shall be cut oflF in some public market, and shall be there nailed up in the openest place ; and the second offence is felony. The statutes 12 Car. II. c. 32, and 7 & 8 Will. III. c. 28, make the exportation of wool, sheep, or fullers' earth, liable to pecuniary penalties, and the forfeiture of the interest of the ship and cargo by the owners, if privy ; and con- fiscation of goods, and three years' imprison- ment to the master and all the mariners. And the statute 4 Geo. I. c. 11 (amended and farther enforced by 12 Geo. II. c. 21, and 19 Geo. II. c. 34) makes it transportation for seven years, if the penalties be not paid.

OWN, n. s. & V. a. \ Sax. aˆan ; Goth, agn,

Own'er, >aihn (property). Now

Own'ership. 3 used as an emphatical

addition to personal pronouns, as ' my own/ ' his own,' &c., meaning his property or posses- sion. See Owe. Also denoting domestic as distinguished from foreign; mine ; or his ; yours : to own is to claim as property : hence to avow or avouch ; confess : owner is he who owns or possesses ; rightful possession : ownership, right of property or possession. "

Every nation made gods of their own, and put them in high places. 2 Kings, xvii. 29.

I yet never was forsworn. Scarce have coveted what was my ovm.

Shakspeare. It is not enough to break into my garden,

Climbing my walls in spite of me the owner.

But thou wilt brave me. Id.

Here shew favour, because it happeneth that the owner hath incurred the forfeiture of eight years' pro- fit of his lands, before he cometh to the knowledge of the process against-him. Bacon.

They intend advantage of my labours, With no small profit daily to my owners.

Milton.

These toils abroad, these tumults with his own. Fell in the revolution of one year. Daniel.

Nor hath it been thus only amongst the more ci- vilized nations ; but the barbarous Indians likewise have owned that tradition. Williini,

Blake this truth so evident that those who are un- willing to own it may yet be ashamed to deny it.

Tillotion. I'll venture out alone, Since you, fair princess, my protection cwi.

Dryden.

Tell me, ye Trojans, for that name you own. Nor is your course upon our coasts unknown. Id.

OXALIC ACID.

These wait the owners last despair. And what's permitted to the flames invade. Id. There's nothing sillier than a crafty knave out- witted, and beaten at his own play. L' Estrange.

It is conceit rather than understanding, if it must be under the restraint of receiving and holding opi- nions by the authority of any thing but their own perceived evidence. Locke,

Others will own their weakness of understanding.

Id. In a real action, the proximate cause is the pro- perty or ownerahip of the thing in controversy.

Arjlifffi.'s Parergon. That small muscle draws the nose upwards, when it expresses the contempt which the owner of it has upon seeing any thing he does not like. Addison.

Jt must be owned, that, generally speaking, good parents are never more fond of their daughters, than when they see them too fond of themselves. Law.

Victory hath not made us insolent, nor have we taken advantage to gain any thing beyond the honour of restoring every one's right to their just owners.

Atterbury. Passion and pride were to her soul unknown, Convinced that virtue only is our owyi. Pope.

Others on earth o'er human race preside, Of these the chief, the care of nations own, And guard with arms divine the British throne.

Id. What is this wit, which must our cares employ ? The owner's wife, that other men enjoy. Id.

For he that wrote so much, and so fast, would through inadvertence and hurry, unavoidably have departed from rules which he might have found in books ; but his own truly poetical talent was a guide which could not suffer him to err. Cowper.

But, by each joy of his I've known, And all I yet shall make my own, Never will I, with humble speech. Pray to a heaven I cannot reach. Sfieridan.

Then how, my soul, can we be poor. Who own what kingdoms could not buy ? Of this true heart thou shalt be queen, And, serving thee, a monarch I. IJ.

The patient Sculptor owns an humbler part, A ruder toil, and more mechanic art ; Content with slow and timorous stroke to trace The lingering line, and mould the tardy grace.

Id. But Virtue's self, with all her tightest laces. Has not the natural stays of strict old age ; And Socrates, that model of all duty, Owned to a penchant, though discreet, for beauty.

Byron Adeline, no deep judge of character. Was apt to add a colouring from her own.

'Tis thus the good will amiably err. And eke the wise, as has been often shown. Id. France at our doors, he sees no danger nigh, P)Ut heaves for Turkey's woes the' impartial sigh ; A steady patriot of the world alone, The friend of every country ††† but his imn.

Canning. OX, n. s. ˆ Plural Oxen. Sax. oxa; Gotli. OxGANG. 5 Dan. and Swed. oie ; Teut. ocfig ; Welch 1/ch. A castrated bull : a general name for black cattle : an oxgang was an ancient mea- sure of land, containing twenty acres.

Sheep run not half so t'm'rous from the wolf, Or horse or ojren from the leopard. As you fly from your oft-subdued slaves.

Shakspeare. I'he black m hath not trod on his foot.

Camden.

Thu horns of oien and cows are larger than tho bulls ; which is caused by abundance of moisture.

Bacon,.

Although there be naturally more males than fe- males, yet artificially, that is, by making geldings, oxen, and wethers, there are fewer. Graunl,

The field is spacious 1 design to sow.

With oxen far unfit to draw the plough. Drvden.

I saw the river Clitamnus, celebrated by the poets for making cattle white that drink of it. The inha- bitants of that country have still the same opinion, and have a great many oxen of a whitish colour to confirm them in it. Addison.

The frowning bull

And ox half-raised. Thomson's Summer.

Ox. See Bos.

OXALIC Acid, in chemistry, which abounds in wood sorrel, and which, combined with a small portion of potash, as it exists in that plant, has been sold under the name of salt of lemons, to be used as a substitute for the juice of that fruit, particularly for discharging ink spots and iron-moulds, was long supposed to be analogous to that of tartar. In the year 1776, however, Bergman discovered that a powerful acid might be extracted from sugar by means of the nitric ; and a few years afterwards Scheele found this to be identical with the acid existing naturally in sorrel. Hence the acid began to be distinguished by the name of saccharine ; but has since been known in the new nomenclature by that of oxalic.

Scheele extracted this acid from the salt of sorrel, or acidulous oxalate of potash, as it exists in the juice of that plant, by saturating it with ammonia, when it becomes a very soluble triple salt, and adding to the solution nitrate of barytes dissolved in water. Having well washed the oxalate of barytes, which is precipitated, he dis- solved it in boiling water, and precipitated its base by sulphuric acid. "To ascertain that t\o sulphuric acid remained in the supernatant li- quor, he added a little of a boiling solution of oxalate of barytes till no precipitate took place,, and then filtered the liquor, which contained nothing but pure oxalic acid, which he crystal- lised by evaporation and cooling.

It may be obtained, however, much more rea- dily and economically from sugar in the follow- ing way : ••• To six ounces of nitric acid in a stoppered retort, to which a large receiver is luted, add, by degrees, one ounce of lump sugar coarsely powdered. A gentle heat may be ap- plied during the solution, and nitric oxide will be evolved in abundance. W hen the whole of the sugar is dissolved, distil off a part of the acid, till what remains in the retort has a syrupy consistence, and this will form regular crystals, amounting to fifty-eight parts from 100 of "sugar. These crystals must .be dissolved in water, re- crj'stallised, and dried on blotting paper.

Oxalate of lime is found in the roots of the follow ing plants : ••• Alkana, apium, bistorta, car- Ima acaulis, curcuma, dictamnus albus, foenicu- luin, gentiana rubra, Yincetoxicuni, lapathum, liquiritia, mandragora, ononis, iris Vlorentina, ins nostras, rheum, saponana, scilla, sigillum saloraonis, tormentilla, Valeriana, zedoaria, zingi- ber. And in the following barks: ••• berberis, cassia fistularis, caneila alba", cinairomum, cas-

carilla, cassia caryophyllata, china, culilavan, frangula, fraxinus, quassia, quercus, simaruba, lignum sanctum, ulmus. In the state of binoxy- late of potash it exists in the leaves of the oxalis acetosella, oxalis corniculata, different species of rumex, and geranium acidum.

The juice of the cicer parietinum is said to be pure oxalic acid. Bergman procured it from honey, gum-arabic, alcohol, and the calculous concretions in the kidneys and bladders of ani- mals. Scheele and Hermbstadt from sugar of milk. Scheele from a sweet matter contained in fat oils, and also from the uncrystallisable part of the juice of lemons. Hermbaadt from the acid of cherries, and the acid of tartar. Goett- ling from beech-wood. Kohl from the residuum in the distillation of ardent spirits. Westrumb, not only from the crystallised acids of currants, cherries, citrons, and raspberries, but also from the saccharine matter of these fruits, and from the uncrystallisable parts of the acid juices. Hoffmann from the juice of the barberry ; and Berthollet from silk, hair, tendons, wool; also from other animal substances, especially from the coagulum of blood, whites of eggs, and likewise from the amylaceous and glutinous parts of flour. M. Berthollet observes that the quantity of the oxalic acid obtained by treating wool with nitric acid was very considerable, being above half the weight of the wool employed. He men- tions a difference which he observed between animal and vegetable substances thus treated with nitric acid, namely, that the former yielded, beside ammonia, a large quantity of an oil which the nitric acid could not decompose ; whereas the oily parts of vegetables were totally destroyed by the action of this acid : and he remarks that in this instance the glutinous part of flour re- sembled animal substances, whereas the amy- laceous part of the flour retained its vegetable properties. He further remarks that the quantity of oxalic acid furnished by vegetable matters thus treated is proportionable to their nutritive quality, and particularly that, from cotton, he could not obtain any sensible quantity. Deyeux, having cut with scissars the hairs of the chick pea, found they gave out an acid liquor, which, on examination, proved to be an aqueous solu- tion of pure oxalic acid. Proust, and other chemists, had before observed that the shoes of persons walking through a field of chick peas were corroded.

Oxalic acid crystallises in quadrilateral prisms, the sides of which are alternately broad and nar- row, and summits dihedral ; or, if crystallised rapidly, in small irregular needles. They are efflorescent in dry air, but attract a little hu- midity if it be damp ; are soluble in one part of hot and two of cold water ; and are decomposable by a red heat, leaving a small quantity of coaly residuum. 100 parts of alcohol take up nearly fifty-six at a boiling heat, but not above forty cold. Their acidity is so great that, when

dis- solved in 3600 times their weight of water, the solution reddens litmus paper, and is perceptibly acid to the taste.

The oxalic acid is a good test for detecting lime, which it separates from all the other acids, unless they are present in excess. It has like-

wise a greater aifinity for lime than for any other of the bases, and forms with it a pulverulent in- soluble salt, not decomposable except by fire, and turning syrup of violets green.

From the oxalate of lead Berzelius infers its prime equivalent to be 4-352, and by igneous decomposition he finds it resolved into 66‘534 oxygen, 33-222 carbon, and 0-244 hydrogen. Since Berzelius published his analysis, oxalic acid has been made the subject of some ingenious remarks by Dobereiner, in the I6th vol. of Schweigger’s Journal. We see that the carbon and oxygen are to each other in the simple ratio of 1 to 2 ; or, referred to their prime equivalent, as 2 of carbon =: 1-5, to 3 of oxygen ˆ 3-0. This proportion is what would result from a prime of carbonic acid zz C | 2. U, combined with one of carbonic oxide ˆ C | O. C being carbon, and O oxygen. The sum of the above weights gives 4-5 for the prime equivalent of oxalic acid, disregarding hydrogen, which con- stitutes but one-thirty-seventh of the whole, and may possibly be referred to the imperfect desic- cation of the oxalate of lead subjected to analysis. Oxalic acid acts as a violent poison when swal- lowed in the quantity of two or three drachms ; and several fatal accidents have lately occurred in London, in consequence of its being im- properly sold instead of Epsom salts. Its vul- gar name of salts, under which the acid is bought for the purpose of whitening boot-tops, occasions these lamentable mistakes. But the powerfully acid taste of the latter substance, joined to its prismatic or needle-formed crystallisation, are sufficient to distinguish it from every thing else. The immediate rejection from the stomach of this acid by an emetic, aided by copious draughts of warm water containing bicarbonate of potash, or soda, chalk, or carbonate of magnesia, are the proper remedies.

With barytes it forms an insoluble salt ; but this salt will dissolve in water acidulated with oxalic acid, and afford angular cr}‘stals. If, however, we attempt to dissolve these crystals in boiling water, the excess of acid will unite with the water, and leave the oxalate, which will be precipitated.

The oxalate of strontian too is a nearly insolu- ble compound.

Oxalate of magnesia too is insoluble, unless the acid be in excess.

The oxalate of potash exists in two states, that of a neutral salt, and that of an acidule. The latter is generally obtained from the juice of tlie leaves of

the oxalis acetosella, wood sorrel, or rumex acetosa, common sorrel. The expressed juice, being diluted with water, should be set by for a few days, till the feculent parts have sub- sided, and the supernatant fluid is become clear ; or it may be clarified, when expressed, with the whites of eggs. It is then to be strained off, evaporated to a pellicle, and set in a cool place to crystallise. The first product of crystals being taken out, the liquor may be farther evaporated and crystallised ; and the same process repeated till no more can be obtained. In this way, Schlereth informs us, about nine drachms of crystals may be obtained froip two pounds of juice, which are generally afforded bv tpn pounds

of wood sorrel. Savary, however, says that ten parts of wood sorrel, in full vegetation, yield five parts of juice, which give little more than a 200th of tolerably pure salt. He boiled down the juice, however, in the first instance, without clarifying it ; and was obliged repeatedly to dis- solve and recrystallise the salt to obtain it white.

This salt is in small, white, needley, or lamel- lar crystals, not alterable in the air. It unites withbarytes, magnesia, soda, ammonia, and most of the metallic oxides, into triple salts. Yet its solution precipitates the nitric solutions of mer- cury and silver in the state of insoluble oxalates of these metals, the nitric acid in this case com- bining with the potash. It attacks iron, lead, tin, zinc, and antimony.

This salt, beside its use in taking out ink spots, and as a test of lime, forms with sugar and N'.'ater a pleasant cooling beverage ; and, accord- ing to BerthoUet, it possesses considerable powers as an antiseptic.

The neutral oxalate of potash is very soluble, and assumes a gelatinous form, but may be brought to crystallise in hexahedral prisms with dihedral summits, bj adding more potash to the liquor than is sufficient to saturate the acid.

Oxalate of soda likewise exists in two different states, those of an acidulous and a neutral salt, which in their properties are analogous to those of potash.

The acidulous oxalate of ammonia is crystal- Usable, not very soluble, and capable, like the preceding acidules, of combining with other bases, so as to form triple salts. But, if the acid be saturated with ammonia, we obtain a neutral oxalate, which, on evaporation, yields very fine crystals in tetrahedral prisms with dihedral sum- mits, one of the planes of which cuts

off three sidus of the prism. This salt is decomposable by fire, which raises from it carbonate of am- monia, and leaves only some slight traces of a coaly residuum. Lime, barytes, and strontian, unite with its acid, and the ammonia flies off in the form of gas.

The oxalic acid readily dissolves alumina, and the solution gives on evaporation a yellowish transparent mass, sweet and a little astringent to the taste, deliquescent, and reddening tincture of litmus, but not syrup of violets. This salt swells up in the fire, loses its acid, and leaves the alumina a little colored.

OXAIjIS, wood sorrel, a genus of the pen- tagj'nia order, and decandria class of plants : natural order fourteenth, gruinales : cal. penta- yihyllous, the petals connected at the heels : caps. pentagonal, and opening at the angles. There are seven species ; the only remarkable one is

(). acetoseila, common wood sorrel. This grows naturally in moist shady woods, and at the sides of hedees in many parts of Britain, and is seldom admitted into gardens. The roots are composed of many scaly joints, wˆhich i)ro- pagate in great plenty. The leaves arise imme- iliately from the roots upon single long foot- stalks, and are composed of three heart-shaped lobes. They are gratefully acid, and of use in the scur'y and other putrid disorders.

OXFORD, a city of England, the county town of Oxfordshire, and celebrated for its university,

which in the extent and number of its institu- tions and the wealth of its endowments is un- equalled. The city stands on a gentle eminence, in a valley, at the confluence of the Isis and Cherwell, which descending towards the south, and uniting at an acute angle, nearly encompass it. Between these streams and the city, particu- larly on the south and west, are beautiful and luxuriant meadows ; and beyond them the pros- pect is bounded on the east, south, and west, by an amphitheatre of hills. From these hills the city presents a noble spectacle. It is of an oval form, and was formerly surrounded by a wall, about two miles in circumference, having bas- tions at 150 feet distant from each other; very little of these works, however, remain. The city and suburbs now include a circuit of three miles, extending in length a mile and a quarter from east to west, and about as much from north to south. The entrances east, south, and west, present bridges crossing the respective rivers.

Magdalen bridge is an elegant stone building over the Cherwell, 526 feet in length, built in 1779, at an expense of ►►8000. That over the Isis, on the west, consists of three substantial arches. On the south is another over the

same river, on which, till lately, stood a lofty tower, termed Friar Bacon's Study. From Magdalen bridge the High-street stretches westwards, un- der different names, through the whole city. At Quarte 'ois, or Carfax church, this is crossed at right angles by St. Giles's, the other principal street ; and from these most of the other streets diverge.

High-street is perhaps the most beautiful in the world for its length and breadth, the number and elegance of its public buildings, and its remarkably graceful curvature, continually pre- senting new combinations of objects. St. Giles's begins near the church of that name, and is for some distance of a fine width. It contains the town hall and Christ Church. All the streets are well lighted, paved, and watched. The houses oriscinally erected as lodgings for the students or gentry during the occasional resi- dence of the court here, still appear, and are often built of stone on an extensive scale. The best modern houses are situated in St. Giles's.

The university consists of twenty colleges, and four halls, each of which has its own students and teachers, revenues and regulations, while they are all united in a common university govern- ment. The students all live in their respective colleges at their own expense or that of the uni- versity ; and on their entrance qualify as mem- bers of the church of England. The university, as a corporate body, acts under a charter of Charles I., and consists of fhe vice-chancellor, heads of houses, and proctors ; of the house of convocation, which is formed by the vice-chan- cellor, proctors, and all doctors and masters who have taken out their regency ; and of the con- gregation, which is composed of the vice-chaa- cellor, the proctors or their deputies, the neces- sary regents (doctors in divinity, law, or medicine, or masters of arts for the first tw►► years after they are admitted to their degrees), and the regents ad placitum (all resident doctors, all public professors and lecturers, all heads of

colleges and lialls, and in their absence their deputies, the masters of the schools, the public examiners, and deans and censors of colleges). In the first body must originate all new statutes, orders, and regulations ; and, being there passed, they are ratified by the house of convocation. The administrative officers of the university are the chancellor, high steward, vice-chancellor and two proctors. The chancellor is elected by the members of the convocation, and is usually a distinguished member of the nobility. His office was once annual, but since the fifteenth cen- tury, when Russell, bishop of London, was made chancellor for life, this mode of election has been continued. The chancellor has a court, in which he can preside either

in person or by deputy, and his authority is recognised by every one of the colleges. The high steward is nominated by the chancellor. His duty is to assist tlie chancellor, vice-chancellor, and proc- tors ; and executively under the chancellor to defend the privileges of the university. In the court he sits when required, as legal representa- tive of the chancellor, and holds the court leets of the university. His appointment is for life, and he is generally a man of high birth and eminent talent. Tlie vice-chancellor is no- minated by the chancellor, recommended by the heads of houses, and sworn into office before the convocation. He is always the head of some college, and annually nominated. His duty is to superintend the performance of the university discipline, to call convocations, congregations, and courts, to license taverns, &c. He is assisted by four deputies, termed pro-vice-chancellors. The two proctors are masters of arts of at least four years standing, and not more than ten from their regency. They are chosen from the several colleges in turns. The proctors are elected by the common suffrages of all doctors and masters of arts. They assist the vice-chancellor in con- vocations and congregations, to see that the scholastic exercises are duly performed, the sta- tutes and discipline observed, just weights and measures kept, &c. They name four masters of arts as assistants or pro-proctors. There is also a public orator of the university, who is chosen by the convocation, and must be at least either a bachelor of civil law or master of arts. His duty is to write letters and addresses on public occasions, as the organ of the university ; and to present the honorary degree of master of arts ; he also is keeper of the archives and charter, and registrar of the convocations, congrega- tions, and other meetings, and acts. He also collects and receives the rents of the university.

There are at Oxford public lecturers and pro- fessors of divinity, Hebrew, Greek, civil law, medicine, modern history, botany, natural phi- losophy, astronomy, geometry, ancient history, anatomy, music, Arabic, poetry, Anglo-Saxon, common law, and chemistry. Four terms are kept in the year at the university, and degrees are taken in divinity, law, physic, music, and the arts. The total number of members in the uni- versity books is about 3000, 1000 of whom are maintained on the revenues of the university, and the rest at their own expense.

The twenty colleges are, All Souls, Baliol,

Brazen Nose, Christ Church, Corpus Christi, Exeter, Jesus, Hertford, Lincoln, Magdalen,]Merton, New College, Oriel, Pembroke, Queen's, St. John Baptist's, Trinity, University, Wad- ham, and Worcester. All Souls college, founded in the year 1437, by Chichele, arch- bishop of Canterbury, has a warden, forty fel- lows, two chaplains, and six clerks and chori- sters. Two spacious courts, one entering from- High-street, and the other

from the paved court in which the Radcliffe library stands, are its principal parts. The front, towards High-street, is a low irregular range of building, but the interior has considerable grandeur. One court is 172 feet by seventy-two, and the other 172 by 155. The interior of the chapel was arranged by Sir Christopher Wren and Sir James Thorn- hill. The hall is a room of striking elegance, and the library is forty feet high, and 198 feet by thirty-two and a half Sir Christopher Wren and Sir William Blackstone were educated here.

Baliol was founded about the year 1263, by Sir John Baliol of Bernard Castle, father of Baliol, king of Scotland. The society consists of a master, twelve fellows, fourteen scholars, and eighteen exhibitioners ; but none of the present buildings are older than the reign of Henry \T. The chapel was built in 1529, and contains fine specimens of painted glass. The hall is a neat building, in the pointed style. The library was lately rebuilt by Wyatt, in the Gothic style.

Brazen Nose was founded in 1509 by William Smyth, bishop of Lincoln, and Sir Richard Sutton. It consists of a principal, twenty fel- lows, thirty-two scholars, and fifteen exhibition- ers, and derives its name from a large brazen face, which was fixed on the door of an ancient hall as a knocker. It is built on tiie site of several ancient halls, among which was Little University Hall, supposed to have been instituted by Alfred. The court is occupied in the south by the library and the chapel ; and besides the quadrangle and court are several new buildings. The hall is spacious : the present chapel wa& begun in 1656.

Christ Chiirch was founded by Cardinal Wolsey in 1525: in 1529, when he fell into disgrace, Henry VIII. suspended it for three years, when he re-established it under his own name, and in 1546 translated the episcopal sef hither from Oseney. Queen Elizabeth converted the grammar scholars into students, whose va- cancies should be supplied from the Westminster school. The society consists of a dean, eight canons, 101 students, three professors, eight chaplains, and a suitable choir. The buildings consist of the cathedral, two spacious quadran- gles, and two smaller courts. The west, or principal front, has a noble air. From the gate- way in the centre rises a stately tower, in which is suspended the famous bell Great Tom, at the sound of which, every evening, the students are directed, by the statutes of the university, to retire for the night. The grand western quad- rangle, entered through the gateway, was erected, and the foundation stone laid, by Wolsey. It is nearly a square of 260 feet. The second great quadrangle is termed Peckwater Court, and

the architecture is perfectly classical. The southern side contains the library. Canterbury Square is a small quadrangle, built after the model of Peckwater. Christ Church cathedral IS one of the most interesting objects in Oxford. The chief parts can be traced to the reign of Henry I. ; and the style is even of an earlier period. It has the form of a cross, with a square tower, surmounted by a spire steeple in the centre. The choir is ornamented with a splendid Gothic roof. The hall was built en- tirely under the direction of Wolsey ; and is 115 feet long, and forty wide; containing se- veral interesting paintings. The oak ceiling is beautifully carved.

Corpus C/ir'isti wSiS founded in 1516 by bishop Fox, lord privy seal to Henry VII. and \I1I.; and the society consists of a president, twenty fellows, twenty scholars, two chaplains, two clerks, and two choristers. The building is at the east of Christ Church, and to the west of j\lerton College, and consisted at first of one spacious quadrangle ; but various additions have since been made. The library is well fur- nished.

Exeter, was founded by Walter Stapleton, bisliop of Exeter, in 1314; it consists of a rector, twenty-five fellows, one scholar, and ten exhibi- tioners.

Hertford, formerly called Hert Hall, was founded also by Walter Stapleton in 1312. It consists of a principal, four senior and eight junior fellows, eight probationary students, twenty-four actual students, and four scholars. The buildings are incomplete, and the college has had no principal since 1805. Here the late Mr. Fox was educated.

Jesus was founded in 1571 by queen Eliza- beth, and endowed by Hugh Price, treasurer of St. David's, for a principal, eight fellows, and eight scholars, which has been since raised to nineteen fellows, and eighteen scholars, besides exhibitioners.

Lincoln was founded by Richard Fleming, who obtained a license from Henry VI. in 1427, to make All Saints' church collegiate, and to found a college for a rector and seven scholars. It was finished in 1475, by Ilotherham, bishop of Lincoln, and consists of a rector, twelve fellows, eight scholars, thirteen exhibitioners, and a Bible clerk. The buildings consist of two quadrangles. The chapel was built in 1631, and the hall in 1636.

Magdalen is one of the noblest institutions in the university. It was founded in 1458 by ^^ illiam Waynflete, bishop of Winchester, and consists of a president, forty fellows, thirty de- mies, a divinity lecturer, four chaplains, eight clerks, and sixteen choristers. No commoners are admitted. It is

situated at the eastern extremity of the city, and the side towards the High-street is ornamented by a lofty tower. The great quadrangle is composed of the chapel, hall, library, a part of the president's lodgings, and chambers for the fellows and demies. The chapel is a beautiful Gothic structure, divided into two parts ; the inner chapel retaining much of its original sublimity. The library is a low but extensive room. The interior of the hall is

very elegant. Magdalen is required by its sta- tutes to entertain the kings of England and their eldest sons, whenever they visit (Jxford, and has been honored with the presence of many of our kings. Attached tp tlie college on the banks of the Cherwell are beautiful pleasure grounds. Cardinal Wolsey, Cardinal Pope, Hampden, Collins, and Addison, were educated here.

Merton is the most ancient college in Oxford, and was founded in 12G4 by Walter de Merton, bishop of Rochester, and chancellor of England. It consists of a warden, twenty-four fellows, fourteen post-masters, four scholars, two chaj)- lains, and two clerks, and is situated to the east of Corpus Christi ; consisting of three courts. The first is small and irregular, but a handsome arch leads to the inner quadrangle of a plccising style of Gothic architecture ; the third court is also on a small scale : the library occupies two sides of it. The hall is a plain but respectable structure. The chapel is one of the finest Gothic buildings in the university. It is the parish church of St. John Baptist, and was erected in 1424, on the ruins of a more ancient building.

New College was founded in 1379 by W illiam of \ ykeham, bishop of Winchester. It is com- posed of a warden, seventy fellows, ten chap- lains, three~clerks, and sixteen choristers, and consists of a quadrangle, with attached chapel, hall, and library, a fine range of cloisters, and a series of buildings for the use of students, termed the Garden Court, which was completed in 1684 on the model of the palace of Versailles. The chapel is, in the interior, one of the most splendid in the university. It has undergone numerous modern alterations, under the direc- tion of Wyatt. The painted windows are a re- markable feature of the building. The library consists of two rooms in different stories, and the gardens are laid out in good taste.

Oriel was founded in 1324 by Adam de Brom, archdeacon of Stow. The society is composed of a provost, eighteen fellows, and thirteen exhibitioners : the buildings consist of a quadrangle, with two ranges on the east and west sides of the garden, between which is placed the library, a chaste and classical struc- ture, begun in 1788.

Pembroke was founded in 1620, by Thomas Teesdale of Glympton, in Oxford, and Richard Wightwick, rector of Isley, Berks, being named after

the earl of Pembroke, then chancellor of the university. It consists of a master, fourteen fellows, and thirty scholars and exhibitioners. The chapel is a small building of tlie Ionic order.

Queens takes the sixth place in the order of foundation, though the present buildings are of recent date. It was founded in 1340, by Robert Eglesfeld, confessor of queen Philippa, consort of Edward III., and consists of a provost, six- teen fellows, eight taberdars, sixteen scholars, two chaplains, two clerks, and forty exhibitioners. The hall is a fine room, sixty feet by thirty, and the library is one of the largest attached to any university.

St. Johns was founded m 1555 by Sir Thomas White, and consists of a president, fifty fellows,

two chaplains, and choir. It stands on the north of the city, and has in front a wide terrace and a beautiful row of elms. It is formed of two Gothic quadrangles; tlie hall is a fine and well-proportioned room; the library occupies- the upper story of the east and south sides of the second quadrangle. In the chapel the Co- rinthian order prevails.

Trinity was founded in 1554 by Sir Thomas Pope. The members are a president, twelve fellows, and twelve scholars ; the chapel has great simplicity of arrangement, and the hall is a plain but noble room.

Univeisiti/ College continues erroneously as- cribed to king Alfred as its founder, but was founded by William of Durham, rector of Wearmouth, in 1249. It consists of a master, twelve fellows, and seventeen scholars, and is situated on the north side of High-street. The valuable library was completed in 1699. The hall is a spacious and handsome room : in the common room is a fine bust of Alfred.

Wadhum was founded in 1611, by Nicholas Wadham, esq., of Edge and Merrifield, in So- mersetshire, for a warden, fifteen fellows, fifteen scholars, two chaplains, and two clerks It con- sists of a single quadrangle 130 feet square : the chapel is a handsome structure, in the Gothic style, and the library has a fine Gothic window; the hall is capacious, and here the Royal Society originated.

Worcester, originally named Gloucester Col- lege, was founded in 1714, by Sir Thomas Coke of Bentley, in Worcestershire. The whole architecture is of a noble character. It has had several endowments since, and now consists of a provost, twenty-one fellows, ten scholars, and three

exhibitioners. Being a seminary for edu- cating the novices of Gloucester monastery, it was at the reformation converted for some time into an episcopal palace. It is agreeably situated near the Isis, at the western extremity of the city.

The halls at Oxford were originally houses erected by the citizens of Oxford for the accom- modation of the students, to whom they were let. After the foundation of so many colleges, they sunk into neglect ; four, however, remain, viz. St. Alban's, St. Edmond, St. Mary Magda- len, and New Inn Hall, and have been enriched by various endowments. Each is governed by a principal, and by the university statutes ; the students possessing the privileges, and wearing the same dress, with those of the colleges. If entitled to little notice, amidst the blaze of archi- tectural beauty around, the buildings are in ge- neral commodious, and the halls have produced a due proportion of eminent characters. Of the other public buildings, the schools form, together with the Bodleian library and the picture gallery, a noble quadrangle. These schools were erected in the fifteenth century, the professors reading lectures in their sciences, and the scholars of the university being enjoined to perform here their exercises for degrees. The Bodleian comprises three extensive rooms, disposed in the conve- nient form of the letter H. It was founded by Humphrey duke of Gloucester, but greatly aug- mented by the munificence of Sir Thomas Bodley, and now contains one of the most va-

luable collections of books, MSS., &c. in Europe, In an ajiartment on the nortli side of the schools are the famous Arundelian Marbles : see that article. The theatre is a fine building, on the plan of the Roman theatre of Marcellus. It was built by Sir Christopher Wren, and is ca- pable of containing 4000 persons. The Claren- don printing-house is also a large and respecta- ble edifice, built in 1711, with the profits of the sale of lord Clarendon's History. The Radclifle library is another of the ornaments of the uni- versity, founded by Dr. Radclifle, and com- pleted in 1749. The Ashmolean museum was founded in 1682, by Elias Ashmole, for the re- ception of curiosities both natural and artificial. The observatory is an elegant building, in a retired situation, at the extremity of the north suburb.

At St. Mary's church, the chief members of the university attend divine service ; and, besides this, Oxford contains thirteen other churches, be- longing respectively to the thirteen parishes into which it is divided, viz. All Saints, Carfax or St. Martin's, St. Clement's, St. Ebb's, St. Giles's, Holywell, St. John's, St. Mary Magdalen's, St. Michael's, St. Peter's in the East, St. Peter's in the Bailey, St. Aldgate's or St. Old's, and St. Thomas's. There are also places of worship for the Roman Catholics, Quakers, Methodists, Baptists, 8cc. The other public buildings are the town and county-hall and jail, city bridewell, music room, Radcliffe infirmary, and

the well- contrived general market. Here are also various charity schools ; but no theatrical representations are allowed in the city.

Oxford has no considerable manufacture or branch of trade ; the canal, however, has re- cently opened new sources of commerce ; and the city sends four members to parliament, two for the city, elected by the citizens and freemen, and two for the university. The government, subject to the chancellor or vice-chancellor of the university, in all affairs of moment, is vested in a mayor, high steward, recorder, four alder- men, eight assistants, two bailiff's, a town-clerk, two chamberlains, and twenty-four common council. The mayor, at the coronation feasts ot the kings and queens of England, receives a gilt bowl and cover as his fee. The history of Ox- ford would require a volume of no ordinary size to trace : its early portions are involved in obscu- rity, and no credit can be given to any accounts of it before the reign of Alfred, when it appears to have had a famous monastery dedicated to the Trinity. The name is supposed to be derived from a ford for oxen, being formerly written Oxenford, and it was certainly a town in the tenth century. William the Conqueror was compelled to force an entrance into this city ; his successors frequently made Oxford the place of their residence, and summoned both parliaments and councils here. Charles I. spent here the whole winter of 1646. Oxford early attained a degree of distinction from the number of its schools, but no regular corporate institution de- serving the name of a university appears to have existed even at the period of the Norman Con- quest. Many halls and schools were erected under the patronage of Richard I. ; and, in the

reign of king John, the number of scholars is said to have amounted to 3000. In that of Henry III. the students greatly increased; and about this time was introduced the practice of erecting and endowing colleges, which since this reign have gradually accumulated to their pre- sent state. Market on Wednesday and Saturday, iifty-eight miles west by north of London.

Uxi ORu, a county in the west part of Maine, bounded east by Somerset and Kennebeck counties, south by ('umberland and Oxford counties, and west and north-west by New Hamp- shire. Population 17,630. Chief town, Paris.

Oxford, a post town of Chenango county. New York, eight miles south of Norwich, 1 10 west of Albany. Population 2988. It is a flourishing town, has an academy, and a con- siderable village. A weekly newspaper is pub- lished here. Also a post town of Sussex county, New Jersey, on the east side

of the Delaware ; seventeen miles N. N. E. of Easton. Popu- lation 2470.

Oxford, a post town and port of entry, Tal- bot county, Maryland, on the Treadhaven, eight miles above its mouth. Thirteen miles S. S. W. of Easton, forty-eight south-east of Baltimore. It is a place of considerable trade. The ship- ping belonging to this port in 1816 amounted to 15,720 tons.

OXFORDSHIRE. This county takes its name from the city of Oxford. When the Ro- mans entered Britain under Aulus Plantius, by command of the emperor Claudius, a great por- tion of the districts now denominated Glouces- tershire and Oxfordshire was inhabited by a race of aboriginal Britons termed Dobuni; and du- ring the Saxon heptarchy it formed a part of the kingdom of Mercia. Oxfordshire is an inland county, bounded on the east by Buck- inghamshire, on the west by the county of Glou- cester; on the S. S. W. and south-east its limits unite with those of Berkshire ; the river Cher- well separates Oxfordshire from Northampton- shire on the north-east, while the county of Warwick lies contiguous to the north-west. It is of a very irregular figure ; near the centre of the county, at the city of Oxford, it is not more than seven miles across ; and yet in the more northern part, at no great distance, its diameter is thirty-eight miles. Proceeding northward it assumes the resemblance of a cone, and termi- nates at what is called the Three Shire Stone, in a complete point or apex ; the part south of Oxford is likewise disproportionately narrow, when compared with the chief central districts of the county ; at no point south of the city of Oxford above twelve miles in width : its greatest length is fifty miles. Oxfordshire is divided into fourteen hundreds ; and contains one city, twelve market towns, and 207 townships. Ac- cording to a topographical survey, made by Mr. Davis, there are about 450,000 acres of land in the county. The whole is in the diocese of Ox- ford, and in the province of Canterbury. It is included in the Oxford circuit. The climate of Ox- fordshire may be accounted in general cold, particularly the westward part of the northern division, where the fences consist chiefly of

stone walls, and consequently afford little or nc shelter. It is cold also upon and near theChil- tern Hills, especially on the poor white lands at the foot of the hills, where it is always to be ob- served that the frost will take efl'ect sooner and continue longer on that soil than it does on the deeper lands further situated from the hills. The climate of the Chiltern country is moist, on account of the fogs, which are more frequent on the hills and woods than in the vale. The soil of this county contains (according to Young's Survey) three distinctions of soil, that are so marked by nature as to allow of little doubt respecting them. 1. The red land of the north- ern district, which in fertility much exceeds that of any other portion of equal extent. 2. The district of Stonebrush. 3. The Chiltern Hills. 4. Miscellaneous loams. The proportionate ex- tent of these soils, taking the total of the county at

450,000 acres, may be thus stated, in the es- timation of Mr. Neele : ††† Red land 79,635 acres, Stonebrush 164,023, Chiltern 64,778, miscel- laneous 166,400 ; total 474,836. In so much as the counties of Oxford and Berks are con- tiguous, they are separated from each other by the rivers Isis and Thames. The river Thames, which runs through the county, falls into the Isis at Dorchester, and from that place takes the name of Thames. Other rivers in Oxfordshire are the Cherwell, which divides this county from Northamptonshire on a part of the boun- dary only; the Windrush; the Evenlode; the Glym ; and the Ray, besides numerous streams of inferior note : so that this county may be considered as inferior to none in point of being well watered. The Oxford Canal enters the county at its northern extremity, between Clay- don and the Three Shire Stone. Approaching the vicinage of the river Cherwell, at Cropredy, it proceeds at a small distance from the banks of that river to the city of Oxford, where it falls into the navigation of the Isis. Tlie advantages derived from this recent cut are incalculably great, as it opens an immediate connexion between the interior of the county and Birming- ham, Liverpool, Manchester, and the Wednes- bury collieries. The produce of this county is chiefly like that in most of the midland farming counties : much butter and cheese are made, and numerous calves are reared and fed for the London markets ; it grows also a considerable quantity of corn. The principal manufactures are those of blankets at Witney, shag at Ban- bury, gloves and polished steel at Woodstock, and some lace-making and spinning by the country people towards the borders of Bucking- hamshire. This county returns nine members to parliament, viz., three for the county, two for the city of Oxford, two for the university of Ox- ford, one for Woodstock, one for Banbury. The dukes of Marlborough have long possessed a great sway over this county ; but the Jenkinsons represented it from 1707 to 1734.

OXIDES. Substances combined with oxygen, without being in the state of an acid.

OXIGENE, in chemistry. See Oxygkn.

OX'LIP, n. s. Ox and lip. Another narae for the cowslip.

A bank whereon the wild tliyme blows, Where oilip and the nodding violet grows.

Shakspeare.

OXNAM, formerly called Oxenham, a parish of Scotland, ia Roxburohshire, nine miles in length, and upon an average five miles in breadth. It is watered by the rivers Oxnam, Coquet, and various other streams. The number of in- habitants is between 700 and 800.

OX'TONGUE, 71. s. Fr. buglossa. A plant.

OXUCItE, in natural history, from Gr. oKvg, sharp, and kiwi', a column, a genus of fossils of the class of selenitae, but of the columnar, not the rhomboidal, kind. Of this genus there are only two known species : ००० 1. A fine kind with flakes and transverse filaments, found in the clayey banks of the river Nen, near Peterborough in Northamptonshire ; and, 2. A dull kind with thick plates and longitudinal filaments. This is common in Yorkshire, and lies sometimes in a yellow and sometimes in a blue clay.

OXUS, a river of Central Asia, the principal part of whose course is through Independent Tartary, rises in tlie high table land of Pamer, in a narrow valley, enclosed on three sides by a high mountain called Pooshtikhur, where the stream is seen issuing from a vast mass of ice. It first rolls S.S.W., and then W. N. W., but always between lofty mountains, and receiving large accessions of water. It then bursts into the plain, and, being turned by a branch of the Hindoo Coosh, directs its course to the north- west. It now flows through tlie plain of Buk- haria, on passing which it reaches an extensive desert, near the Tartar cities of Khieva and I 'r- gunge, and at length falls into the Aral Sea, after a course of more than 1200 miles. It has been believed that it fell anciently into the Cas- pian, and was turned artificially into its present receptacle ; but this is solely fotmded upon the ancients being ignorant of the existence of the Aral as a separate sea, and who therefore could find no other termination for the ( )xus than the Caspian. It passes through a desart country abounding with sands.

OX'YCPiATE, n. s. Gr. o'i,vKpaTov ; French oxycrat; Gr. oˆvq and Ktoaio. A mixture of water and vinegar.

Apply a mixture of the same powder, with a com- press prest out of oxycrate, and a suitable bandage.

Wiseman.

OXYDATION, a term applied by modern chemists to express the process by which bodies are converted into oxides ; and it is allow ed on all hands to be exactly similar to combustion. The nature of this process has been much dis- puted ; and the question involves in it great part of the controve.sy between the followers of Stahl and the celebrated Lavoisier, the founders of

the phlogistic and antiphlogistic theories, which for some years divided the chemical world. But the latter doctine has now completely triumphed, and the former is quite exploded. See Caiˆci- NATiON, Chemistry, Combustion, Inflamma- tion, and Phlogiston.

OXYGEN Gas. This gas was obtained in 1774 from red oxide of mercury exposed to a burning lens, by Dr. Priestley, who observed

its distinguishing properties of rendering com- bustion more vivid and eminently supporting life. Scheele obtained it in different modes in 1775; and in the same year Lavoisier, who had begun, as he says, to suspect the absorption of atmospheric air, or of a portion of it, in the cal- cination of metals, expelled it from the red oxide of mercury heated in a retort.

Oxygen gas forms about a fifth of our atmo- sphere, and its base is very abundant in nature. Water contains 88-88 per cent, of it ; and it exists in most vegetable and animal products, acids, salts, and oxides.

This gas may be obtained from nitrate of pot- ash, exposed to a red heat in a coated glass or earthen retort, or in a gim-barrel ; from a pound of wliich about 1200 cubic inches may be ob- tained ; but this is liable, particularly towards the end of the process, to a mixture of nitrogen. It may be expelled, as already observed, from the red oxide of mercury, or that of lead ; and still better from the black oxide of manganese, heated red hot in a gun-barrel, or exposed to a gentle heat in a retort with half its weight, or somewhat more, of strong sulphuric acid. To ob- tain it of the greatest purity, however, the chlo- rate of potash is preftraole to any other sub- stance, rejecting the portions that first come over as being debased with the atmospheric air in the retort. Growing vegetables, exposed to the solar light, give out oxygen gas; so do leaves laid on water in similar situations, the green matter that forms in water, and some other substances.

Oxygen gas has neither smell nor taste. Its specific gravity is I'llll; 100 cubic inches wei;h 33-88 grains. It is a little heavier than atmospheric air. Under great pressure water may be made to take up about half its bulk. It is essential to the support of life : an animal will live in it a considerable time longer than in atmospheric air; but its respiration becomes hurried and laborious before the w'hole is con- sumed, and it dies, though a fresh animal of the same kind can still sustain life for a certain time in the residuary air.

Combustion is powerfully supported by oxy- gen gas. Any inflammable substance previously kindled, and introduced into it, burns rapidly and vividly. If an iron or copper wire be in- troduced into a bottle of oxygen gas, with a bit ofligrhted touchwood or charcoal at the end, it will burn

with a bright light, and throw out a number of sparks. The bottom of the bottle should be covered with sand, that these sparks may not crack it. If the wire coiled up in a spiral like a corkscrew-, as it usually is in this experiment, be moved with a jerk the instrmt a melted globule is about to fall, so a? to throw it against the side of the glass, it will melt its way through in an instant, or, if the jerk be less violent, lodge itself in the substance of the glass. If it be performed in a bell glass, set in a plate filled with water, the globules will frequently fuse the vitreous glazing of the plate, and unite with it so as not to be separable without detaching the glaze, though it has passed through perhaps two inches of water.

OXYGENATION. This word is often used instead of oxidation, and frequently confounded

witli it ; but it differs in being of more general import, as every union witii ox3gen, whatever the product may be, is an oxygenation ; but oxydation takes place only when an oxide is formed .

OX'YMEL, 71. s. Gl. oSv/iitXt, iˆvg, and fit\i. A mixture of vinegar and honey.

In fevers, the aliments prescribed by Hippocrates, were ptisans and decoctions of some vegetables, with oxymel or the lAixture of honey and vinegar.

ArbiUhnnt.

OXYMO'RON, n. s. Gr. olvfiwpov. A rhe- torical figure, in which an epithet of a quite contrary signification is added to any word.

OXYR'RHODINE, n. s. Gr. oˆvppoStvov, oKvg, and poˆov. A mixture of two parts of .oil of roses with one of vinegar of roses.

The spirits, opiates, and cool things, readily com- pose oxyrrhodiiies. Floyer on the Humours.

OYER and Terminer, Fr. Oiiir et Ter- 77nner ; Lat. Audiendo et Terminando. A com- mission directed to the judges, and other gen- tlemen of the county to which it is issued, by virtue whereof they have power to hear and de- termine treasons, and all manner of felonies and trespasses.

In our statutes the term is often printed Oyer and Determiner.

OYES'. Fr. oyez, hear ye. Is the intro- duction to any proclamation or advertisement given by the public criers both in England and Scotland. It is thrice repeated.

Fairies, black, grey, green, and white.

Attend your office and your quality.

Crier hobgoblin, make the fairy 0 yes !

Shakspeare. O yes ! if any happy eye This roving wanton shall descry ; Let the finder surely know Mine is the wag. Crashaw.

OY'LETHOLE, n. s. See Eylet. It may be written oi/let, from oeillet, Fr. but eylet seems better.

Distinguished slashes deck the great,

As each excels in birth or state ;

His oyletholes are more and ampler,

The king's own body was a sampler. Prior.

OYOLAVA, one of the larger Navigator's Islands, in the South Pacific, in long. 121►► 24 W., and lat. 14►► S., separated from Maouna, or Massacre Island, by a channel about nine leagues wide ; and, according to Perouse, Otaheite can scarcely be compared with it for beauty, extent, and fertility. When his vessel was within three leagues of the coast it was surrounded by canoes laden with bread-fruit and other provisions, and the island seemed very populous from the cen- tral mountain to the shore.

OY'STER, n.s. ˆ Belg. oester ; Lat.

Oy'sterwench, >ostrea; Gr. oˆpiov. A

Oy'sterwoman, 3 vvell-knownshell fish: the oyster wench and oyster woman are women em- ployed in the sale of this fish ; and generally, any low woman.

I will not lend thee a penny, ►►► Why then the world's mine oyster, which I with sword will open.

Shakspeare. Merry Wives of Windsor. Off goes his bonnet to an oysterwench. Shukspeare. Vol. XVI.

Rich honesty dwells like your miser, sir, in e poor house ; as your pearl in your foul oyster. la. The oysterwomen locked their fish up. And trudged away to cry no bishop.

Hudibras. Another mass held a kind of oyster shell, and other bivalves. Woodward.

There may be many ranks of beings in the invisi- ble world as superior to us as we are superior to all the ranks of being in this visible world ; though we descend below the oyster to the least animated atoms discovered by microscopes. Watts.

Where oyster tubs in rows Are ranged beside the posts, there stay thy haste.

Gay.

Oyster Harbour, a bay in the north part of King George the Third's Sound, New Hol- land, discovered by Vancouver in the year 1791 ; and so called from the abundance' of oysters there. It will only admit vessels of a middle size, the shallowness of the water on the bar ex- tending from shore to shore, on which were found seventeen feet water only. Long. 118►► 15′ E.

Oyster Island, an island in the bay of Ben- gal, very dangerous to navigation on account of its rising but just above the level of the sea, and being surrounded by rocks. It abounds with rock oysters, which the natives of the opposite coast catch with hammers, and carry to Ghitta- gong, Dacca, and Calcutta ; but it is dangerous to eat them till they have been purged in salt. It lies nine miles S.S. W. of the north point of the Arracan River.

Oyster Shells are an alkali far more power- ful than is generally allowed, and in all proba- bility much better medicines than many of the more costly and pompous alkalies of the same class. These shells produce very sensible effects on the stomach, when it is injured by acid humors.

OZAMA, a river of Hispaniola, formed by the confluence of the Isabella and Ozama, two streams which unite about a league above the capital, and fall down in a beautiful wood-girted channel, as wide as the Thames at Chelsea. In rainy seasons this stream is of great convenience for bringing down provisions and produce.

OZANAM (James), an eminent French ma- thematician, bom at Boligneux in Bresse, in 1640. His father designed him for the church; but his mathematical genius showed itself so early that he made that study his profession, and taught that science at Lyons. In 1702 he was admitted into

the Royal Academy of Sciences; and died of an apoplexy in 1717. He was of a mild and serene temper, and a cheerful disposition. His works are very nume- rous, and have met with approbation. The principal are, 1. Practical Geometry, 12mo. 2. A Mathematical Dictionary. 3. A Course of Mathematics, 5 vols. 8vo. 4. Mathematical and Philosophical Recreations, the most complete edition of which is that of 1724, in 4 vols. 8vo. 5. An Easy Method of Surveying. 6. New Ele- ments of Algebra, a work much commended by M. Leibnitz. 7. Theoretical and Practical Per- spective, Sec.

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PAB

P.

P, a labial consonant, is formed by a slight compression of the anterior part of the lips ; and is confounded by the German and Welsh with b. It has an uniform sound ; but is sometimes mute before t ; as accompt, receipt ; but the mute p is in modern orthography commonly omitted. P is used, 1. as a letter; 2. as an abbreviation; 3. it was anciently used as a nu- meral. 1. As a letter, P is the fifteenth of the alphabet, and the eleventh consonant. The sound is ftˆrmed by expressing the breath some- what more suddenly than in forming the sound of b ; in other respects these two sounds are pretty much alike. When p stands before t or s its sound is lost ; as in the words psalms, psychology, ptolemaic, ptisan, &c. When placed before h they both together have the sound oi f; as in philosophy, physic, &c. P and B are so like each other, that in ancient in- scriptions, and old glossaries, these two letters have often been confounded. Several nations still pronounce one for the other. The Welsh and Germans say, ponum vinum for bonura vinum. Among the Latins, as often as an s followed, the b was changed into a p, as scribo, scripsi. St. Jerome observes, on Daniel, that the Hebrews had no P; but that the ph served them instead ; adding that there is but one word in the whole Bible read with a P. viz. apadno. 2. As an abbreviation, P stands for Publius, Pondo, &c. P. A. DIG. for Patricia Dignitas ; P. C. for Patres Conscripti ; P. F. for Publii Filius ; P. P. for Propositum, or Propositum publice ; P. R. for Populus Romanus ; P. R. S. for Prsetoris sententia; P. R. S. P. for Prases provincise. P.M., among astronomers, is fre- quently used for post meridiem, or afternoon ; and sometimes for post mane, after the morning, i. e. after midnight. On the French coins, P de- notes those that were struck at Dijon. In the Italian music, P stands for piano, or softly ; and P. P. P. for pianissimo, or very softly. Among phy- sicians, P stands for

pugil, or the eighth part of a handful ; P. iE. partes aequales, or equal parts of the ingredients ; P. P. signifies pulvis patrum, or Jesuit's bark in powder; andj[)/)<. prseparatus, prepared. 3. As a numeral, P was used among the ancients to signify the same with the G, viz. 100 ; though Baronius thinks it rather stood for seven. When a dash was added a-top of P, it stood for 400,000. The Greek tt signi- fied eighty.

PA, a city of China, in Sechuen, of-the second rank. It stands in long. 106►► 24′ E., lat. 31►► 31′ N.

Pa, a fortified city of China, of the second rank, in Pe-che-lee, fifty miles south of Pekin. Also a town of Thibet, 450 miles east of Lassa.

PAARDEBERG, or the Horse Mountain, a division of the district of Drakenstein, Cape of Good Hope, so named from the number of zebras that were formerly found here. Its chief produce is wheat.

PAARLBERG, a mountain in the territory of the Cape, to the north of the peninsula on which Cape Town is situated. A chain of large rocks.

like a necklace, pass over the summit, and pre- sent a very remarkable appearance, which gives name to the mountain. Two of them, placed near the central and highest point, are called the Diamond and the Pearl. The Pearl is about 400 feet above the summit of the hill, and thf circumference of its base is rfearly a mile. The Diamond is larger. See Cape of Good Hope.

PAAW (Peter), a Dutch physician, born at Amsterdam in 1564. He became eminent at Leyden, where he wrote several Latin treatises on medicine, and died in 1716.

PABAY, a small island of the Hebrides, about eight miles from Barray, nearly a mile and a half long, one broad, inhabited by three fami- lies.

PABBA, a small island of Scotland, two miles from Sky, about a mile long, and three-fourths of a mile broad. It is used only for pasturing cattle. In one place are indications of iron ore; and many of the rocks are of the finest limestone, and exhibit beautiful petrifactions. At its north- ern extremity are the remains of a chapel.

PABBAY, one of the isles which compose the district of Harris, Inverness, Scotland. It has a conical appearance, and rises to a high peak. Its diameter, at the base, may measure about two miles and a half. This island, once fertile in corn, has its south side now covered with sand drift, and exhibits the most desolate ap- pearance. Towards the south-west, indeed, it is partially sheltered, and still productive ; but on the north-west

again, where exposed to the sea- spray, scarcely any vegetation remains.

PABLO, a small lake of Quito, in the province of Otabalo, on which is situated a settlement of this name. Forty miles east of Quito. It is also the name of other settlements of South America.

PAB'ULAR, adj. ###\ Lat. pabulum. Afford-

Paeula'tion, n. s. f ing aliment : pabulation

Pab'ulous, Of/;'. lis the act of feeding or

Pab'ulum, n.s. J procuring food: pabu- lous, alimental : pabulum, food; support; main- tenance in regard to food.

We doubt the air is the pabiilons supply of fire, much less that flame is properly air kindled.

Brouneˆs Vulgar Errours.

PACAJES, a province of Peru, bounded north by Chucuito and the great lake, north-east by Omasuayos, east by La Paz and Sicasica, south by Oruro, Paria, and Carangas, and south-west and west by the lofty chain of the Andes. Its length from the bridge of the Desaguadaro, which divides it from Chucuito, to the province of Paria, is fifty-six leagues, and its greatest width forty. The climate is cold, and the population, chiefly Indian, very thinly scattered. A mine of talc, which supplies the whole of Peru with win- dow lights, is its only remarkable production.

PACAMOROS Yaguarsongo, or San Juan de Salinas, vulgarly called De Bracamoros, a province and government of Quito, bounded north by the territory of Zamoraand the province of Loxa, west by Piura, south by the river Ama- zon, and east by Indian territories. This pro-

vince is thinly peopled, but has rich gold mines. The pastures and tobacco are excellent. It also yields wax, cotton, and the finest cacao.

PACASMAYU, a river and bay of Peru, in the province of Saria, which flows down the mountains of Caxamarca, runs west, and falls into the Pacific. In its mouth are caught excel- lent fish. Lat. of its mouth 7## 24′ S.

PACCALONGANG, a PLuropean town and fort on the north coast of the island of Java, 282 miles east of Batavia. It is the seat of a resident, a few Dutch families, and a numerous population of natives and Chinese. The great road across the island passes through this place ; and near it is a forest many miles in extent, which is so unhealthy that about 4000 people perished in cutting that part.

PACE, n. s., v.n., &cv. a.\^ Ir. pas ; Italian

Pa'ced, adj. S passo ; Lat. passm.

Step ; manner of step or walk ; gait ; gradation ; degree of celerity ; a measure of five feet ; a particular movement of a horse : to move regularly or slowly ; to measure by steps : paced, is having a particular gait.

He soft arrived on the grassie plain. And fairly paced forth with easy pain.

Spenser. To-morrow, and to-morrow, and to-morrow. Creeps in this petty pace from day to day. To the last syllable of recorded time ; And all our yesterdays have lighted fools Tiie way to dusky death. Shakspeare. Macbeth.

Where is the horse that doth untread again His tedious measures with the' nnbated fire That he did pace them first 1 i>hakqie(ti'&.

If you can pace your wisdom In that good path that I would wish it go, And you shall have vour bosom on this wretch.

Id. Remember well, with speed so pace, To speak of Perdita. Id. Winter's Tale.

Nor her winged speede. The faulcon gentle could for pace exceed.

Chapman. His teachers were fain to restrain his forwardness ; that his brothers, under the same training, might hold pace with him. Wotton's Buckingham.

The violence of tempests never moves the sea above ^\x paces deep.

Wilkins's Mathematical Magick. He mended pace upon the touch. Hudibras.

They rode, but authors having not Determined whether pace or trot ; That's to say, whether tollutation As they do term it, or succussation. Id.

Measuring land by walking over it, they styled a double step ; i. e. the space from the elevation of one foot to the same foot set down again,

mediated by a step of the other foot ; a pace equal to five foot ; a thousand of which paces made a mile. Holder.

The first pace necessary for his majesty to make is to fall into confidence with Spain. Temple.

Revenge is sure, though sometimes slowly paced ; Awake, awake, or sleeping sleep thy last. Dryden.

The beggar sings, ev'n when he sees the place Beset with thieves, and never mends his pace. Id.

Hudibras applied his spur to one side of his horse, as not doubting but the other would keep pace with it. Addi.wn.

The moon rose in the clearest sky I ever saw, by whose solemn light I paced on slowly without inter- ruption. Pope.

A Pace is a measure taken from the space between the two feet of a man in walking ; usually reckoned two feet and a half, and in some men a yard or three feet. The geometrical pace is five feet ; and 60,000 such paces make 1►► on the equator.

Pace (Richard), a learned Englishman, bom about 1482. Henry VIII. made him secretary of state; and he was admitted prebendary of York, archdeacon of Dorset, and dean of St. Paul's, &c., during his absence on foreign embas- sies. Falling under the displeasure of Wolsey, he was so ill treated as to drive him mad, and was thrown into the Tower on his complaining to the king. After being confined two years, he was enlarged, resigned his deaneries, and died in retirement, at Stepney, in 1532, after having written several works. He was much esteemed by the learned men of his time, especially Sir TTiomas More and Erasmus.

PACHA, a title of honor and command in the east, synonymous with bashaw. See Bashaw.

PACHETE, or Packer, a zemindary in the province of Bengal, now incorporated in the surrounding districts of Ramgur, Birbhoom, and Burdwan. In 1784 Pachete, Chuta, Nag- poor, Palamow, and Ramgur, contained, accord- ing to major Rennel's mensuration, 21,732 square miles, of which 16,732 were nearly waste. The revenue was 161,216 rupees. Pa- chete is bounded by Chuta Nagpoor, and Ram- gur, containing a jungly territory of about 2779 square miles, which was once a frontier territory towards the western confines of Bengal, and still retains much of the sterility and barbarism. of the neighbouring regions to the south. The climate is very unhealthy. ITie principal towns are Pachete,

Rogonauthgunge, and Jauldah, which, with the zemindary, were formerly held by the Rajpoot Narrain family. The chief pro- ducts of this province are rice and cotton.

Pachete, a town in the province of Bengal ,- the capital of the zemindary of this name, 126 miles north-west from Calcutta.

*PACHODECARHOMBIS, in the ancient sys- tem of mineralogy, a genus of fossils, of the class of selenitse. The word is derived from the Greek "*********"X"?' thick, ˆiKa, ten, and popjiog, a rhombus, and expresses a thick rhomboidal body, com- posed of ten planes. The characters are that the selenitse of it consist of ten planes ; but, as the top and bottom in the leptodecarhombes are broader and larger planes than any of the rest, the great thickness of this genus, on the con- trary, makes its four longer planes in all the bodies of it, meeting in an obtuse angle from it* sides, its largest planes. There are four species*

PACHUCO, a town and province of the ii. tendancy of Mexico. It has a magnificen parish church ; and the royal cofifers, where the treasurer and accomptant reside, were formerly here. The trade in silver is the principal of the place. The ground on which it stands is 8141 feet high, forty-five miles north-east of Mexico.

PACHYMERUS (George), a Greek historian of the fourteenth century. He wrote a History of the East, which merits the more credit from the share he had in the transactions he records. It commences with the year 1308.

PACIFIC, adj. -ˆ Pacifica'tion, n. s Pacif'icator,

Fr. pacifique, paci- jier ; Lat. pacijicus, pacifico. Peaceable;

Pacif'icatory, arf;. 'ˆmaking peace; mild;

Pacifier, n. Pac'ify, v. a.

gentle: pacification is the act of making

peace : pacificator, he who makes peace : pacifi- catory, tending to make peace : to pacify is to appease; quell anger, resentment, or desire.

Menelaus promised Ptolemy money, if he would pacify the king. 2 Mac. iv. 45.

The Most High is not pacified for sin by the mul- titude of sacrifices. Ecclus. xxxiv. 19.

While the dog hunted in the river, he had with- drawn to pacify with sleep his over-watched eyes.

Sidneij.

A world was to be saved by a pacification of wrath, through the dignity of that sacrifice which should be offered. Hooker.

He sent forthwith to the French king his chaplain, chusing him because he was a churchman, as best sorting with an embassy of pacification. Bacon.

He set and kept on foot a continual treaty of peace ; besides he had in consideration the bearing the blessed person of a pacificator. Id.

In his journey he heard news of the victory, yet he went on as far as York, to pacify and settle those countries. Id.

God now, in his gracious pacific manner, comes to treat v/ith them. Hammond\ Fundamentals.

Returning, in his bill

An olive leaf he brings, pacific sign ! Milton.

O villain ! to have wit at will upon all other occa- sions, and not one diverting syllable now at a pinch to pacify our mistress. L'Estrange.

Nor William's power, nor Mary's charms,

Could or repel, or pacify his arms. Prior.

David, by an happy and seasonable pacification, was took off from acting that bloody tragedy.

South.

Pacific Ocean, Mare Pacificum, or South Sea, in geography, that vast ocean which sepa- rates Asia from America, originally called Paci- fic from the moderate weather which the first mariners, and particularly Magellan, who sailed in it, met with between the tropics ; and it was called the South Sea, because the Spaniards crossed the Isthmus of Darien from north to

south. With regard to America it is also some- times called the Western Ocean. Far from this ocean being less infested with storms than the Atlantic, no sea is subject to rougher storms in high latitudes ; but Magellan happening to have a very favorable wind, and not meeting with any thing to ruffle him when he first tra- versed this vast ocean in 1520, gave it the name which it has retained ever since. Maty adds, lliat the wind is so regular here that the vessels would frequently go from Acapulco to the Philippine Islands, without shifting a sail. The general trade winds in the Pacific Ocean are similar to those of the Atlantic, blowing con- stantly between the north and east in the northern tropic, and between the south and east in the southern. Near the west coast of America their limits are strictly confined to the tropics, or even within them, but they widen as they move onwards towards the coast of Asia.

This ocean fills the largest cavity of the globe, occupying nearly half of its surface from the eastern shores of New Holland to the western of America; and it is diversified with several

groups of islands, which seem, as it were, thp summits of vast mountains. Separately consi- dered, this ocean receives but few rivers ; the chief being the Amur from Tartary, and the Hoan-ho and Kian-ku from China, the principal American rivers running east. As the boundary of the Russian empire, the Pacific washes the sliores of the government of Irkutsk, from Tschukotskoy Noss, or Cook's Straits, to the frontiers of China ; or from the mouth of the river Aimakan, that is, from 65►► to 45►► N. lat. It is divided into two great parts. That lying eastwards from Kamtschatka, between Siberia and America, is eminently styled the Eastern or the Pacific Ocean ; that on the west side from Kamtschatka, between Siberia, the Chinese Mongoley, and the Kurilly Islands, the sea of Okhotsk. Again, from the place where the river Anadyr falls into it, it is called the sea of Anadyr ; about Kamtschatka, the sea of Kamt- schatka ; and the bay between the districts of Okhotsk and Kamtschatka, is called the sea of Okhotsk, the upper part of which is termed Penjinskoye Mare as it approaches the mouth of the river Penjina. See our articles Geogra- phy and Ocean.

PACK, n. s., V. a., h v.n.ˆ Fr. pacquet ;

Pack'-cloth, n. s. j Ital. pacchetto ;

Pack'er, Swed. and Belg-

Packet, n. s. & v. a. [pack; Dun. packke.

P.\CKHORSE, n. s. (A bundle; bale;

Packsaddle, Packthread, Packwax.

band ; set ; num- ber : hence a given J number of cards

or hounds, party of people, &c. ; any great number: to pack is to bind iip for carriage or despatch : hence to unite selected persons in a design ; sort cards in a particular man- ner : to tie up goods ; go after, or remove, ir. haste ; concert measures (generally applied in an ill sense) : a packet is a small pack or bundle ; particularly of letters ; the vessel which carries a mail bag : to packet is used by Swift for to bind up parcels : a packhorse is, a horse of bur- den ; a horse used for carrying packs : pack- saddle and packthread a saddle and thread, used to carry and tie up packages : packwax, an ani- mal secretion.

New farmer thinketh each hour a day. Until the old farmer be packing away. Tusser.

You panderly rascals ! there's a knot, a gang, a pack, a conspiracy, against me. Shakspeare.

He cannot live, I hope, and must not die. Till George be packed with post horse up to heaven.

Id. Enos has Packt cards with Czesar, and false played. Id. I rather chose To cross my friend in his intended drift, Than, by concealing it, heap on your head A pack of sorrows. Id. Merchant of Venice.

Rogues, hence, avaunt ! Seek shelter, pack. Shakspeare,

Go pack with him. Id. Timon Andronictu.

In the dark Groped I to find out them. Fingered their packet, and in fine withdrew.

Shakspeare. .

Ere you were queen, ay, or your husband king, I was a packhorse in his great affairs. Id.

L,□□□.hmMM"l fynmˆ"f-'tn.,.!.,. ˆ

PAC

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PAC

Youv beards deserve not so honourable a grave a.ˆ to stuff a butcher's cushion, or to be entombea in an ass's packsaddle. Id.

About his shelves Remnants of packthread, and old cakes of roses, Were thinly scattered. Id. Romeo and Juliet. There be that can jxick cards and yet cannot play well ; so there are some that are good in canvasses and factions, that are otherwise weak men.

Bacon's Essays. Themistocles said to the king of Persia, that speech was like cloth of Arras, opened and put abroad, whereby the imagery appears in figures ; whereas in thoughts they lie but as in packs. Bacon.

There passed continually packets and dispatches between the two kings. Id. Henry VII.

Girding of the body of the tree about with pack- thread, restraineth the sap. Id. Natural History.

The wind no sooner came good, but away pack the gallies with all the haste they could. Carew.

That this so profitable a merchandize, riseth not to a proportionable enhancement with other less be- neficial commodities, they impute partly to the eastern buyers packing, partly to the owners not vending the same. Id,

Had sly Ulysses at the sack Of Troy, brought thee his pedlar's pack.

Cleaveland. The marigold, whose courtier's face Ecchoes the sun, and doth unlace Her at his rise, at his full stop Packs and shuts up her gaudy shop. Li.

That brave prancing courser hath been so broken and brought low by her, that he will patiently take the bit and bear a packsaddle or panniers. Howel. Upon your late command To guard the passages, and search all packets. This to the prince was intercepted. Denhain.

Never such a pack of knaves and villains, as they who now governed in the parliament.

Clarendon. Our knight did bear no less a pack Of his own buttocks on his back. Hudibrus.

When they have packed a parliament, We'll once more try the expedient ; Who can already muster friends, To serve for members to our ends. Id,

A poor merchant driven on unknown land. That had by chance packed up his choicest treasure In one dear casket, and saved only that. Otway.

The bunch on a camel's back may be instead of a packsaddle to receive the

burden. More.

His packets returned with large accessions of ob- jections and advertisements. Fell,

If they had been an hundred more, they had been all sent packing with the same answer. Stillingfleet.

Resolved for sea, the slaves thy baggage pack. Each saddled with his burden on his back.

Dryden. Two ghosts join their packs to hunt her o'er the

plain. Id,

The fury fires the pack ; they snuff, they vent, And feed their hungry nostrils with the scent. Id,

Pack hence, and from the covered benches rise, This is no place for you. Id,

But when they took notice how stupid a beast it was, they loaded it with packs and burdens, and set boys upon the back of it. L'Estrange.

A thief kindled his torch at Jupiter's altar, and then robbed tlie temple : as he was packing away with his sacrilegious burden, a voice pursued him.

ˆ Id.

It is not to be expected that a man, who drudges on in a laborious trade, should be more knowing in the variety of things done in the world, than aj > ac-*

horse who is driven constantly forwards and back- wards to market, should be skilled in the geographv of the country. Iˆcke.

Several parts peculiar to brutes are wanting in man ; as the strong aponeuroses of the neck, called packwax. Rau.

Brutes, called men, in full cry packed by the court or country, run down in the house of com- mons, a deserted horned beast of the court.

Wycherley. The pack taken together, composed of fifty-two c" s, is palpably a symbol of the solar year, con- sisi.ng of fifty-two weeks, referring to time in gene- ral ; and however dealt out, in its speedy revolution, affords a document, that even in our pastimes we should be mindful of its transient and brief duration. Wii/te's Poems, notes. It is wonderful to see persons of sense passing avray a dozen hours together in shuffling and divid- ing a

pack of cards. Addison.

What we looked upon as brains, were an heap of strange materials, packed up with wonderful art in the skull. Id.

His horse is vicious, for which reason I tie him close to his manger with a packthread. Id,

The expected council was dwindled into a conven- ticle ; a packed assembly of Italian bishops, not a free convention of fathers from all quarters.

Atterbury. Women to cards may be compared, we play A round or two, when used we throw away, Take a fresh pack. Granville,

I can compare such productions to nothing but rich pieces of patchwork, sewed together with pack- thread, Felton.

The judge shall jobb, the bishop bite the town. And mighty dukes pack cards for half a crown.

Pope. BickerstafF is more a man of honour than to be an accomplice with a pack of rascals that walk the streets on nights. 6'ai/l.

Poor Stella must pack off to town, From purling streams and fountains bubbling, To Liffy's stinking tide at Dublin. Id.

People would wonder how the news could come, especially if the wind be fair when the packet goes over. Id.

My resolution is to send you'all your letters, well sealed and packeted. Id.

So many greater fools than they, Will pack a crowded audience the third day.

Southern, The savage soul of game is up at once. The pack full opening various. Thomson's Summer,

PACORUS, the eldest of the thirty sons of Orodes, king of Parthia, who defeated Crassus, and took him prisoner, and took Syria from the Romans. He supported Pompey and the re- publican party; but was at last killed by Bassus, A.A.C. 39. See Partuta.

PACOS, in zoology, a species of camel,

known among many by the name of the Indian

sheep, or Peruvian sheep. See Camelvs. This

creature has been accounted a sheep, because

its hair is so long as to resemble wool, and it is

prodigiously thick, its head and neck alone

having more wool on them than the whole body

of our largest sheep. Its body is clothed in the

same proportion with a woolly hair equally fine.

PACT, n. s. "J Fr. pact; Lat. pactum.

Pac'tion, >Both the substantives are

Pactit'ious, adj. y used to signify a bargait

or covenant : pactitious is, settled by covenant.

PAD

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PAD

The queen, contrary to her pact and agreement concerning the marriage of her daughter, delivered her daughters out of sanctuary unto king Richard.

Bacon,

The French king sent for Matthew, earl of Leve- nox, to remove the earl of Arraine from the regency of Scotland, and reverse such pactions as he had made. Hayward.

There never could be any room for contracts or pactions, between the Supreme Being and his intelli- gent creatures. Cheyne.

PACTOLUS, a river of Lydia, rising in Mount Tmolus, called Chrysorrhoas, from its rolling down golden sand, according to Herodo- tus, Plutarch, Pliny, and Strabo. In this river Midas was fabled to have washed himself; and from it Croesus is thought to have had all his riches. In Strabo's time it ceased to roll down any. It ran through Sardes ; after which it fell into the Hermus, and both together into the iEgean Sea at Phoc?ea in Ionia. The kings of Persia obtained possession of the Pactolus and its treasures by

Cyrus's conquest of Lydia. Xerxes I. drew gold from tlie Pactolus, and this valuable metal was furnished by it in the time of Herodotus ; but it afterwards failed long before the time of Strabo. The gold of the Pactolus was derived from the mine'^ of Mount Emolus ; and, when these were exhausted, the supply of the river was discontinued. This river was, according to Varro and Chrysostom, the chief source of the wealth of Croesus.

PACUVIUS (Marcus), a native of Brundu- sium in Calabria, a tragic poet in high reputa- tion about the year of Rome 600. He was ephew of Ennius ; published several theatrical pieces, though we have only some fragments of his poetry remaining; and died at Tarentum, at above ninety years of age.

PAD, n. s. & v. 71.) Sax paad ; Belg. pad ;

Pad'der, n. s.) Teut. pfad; Sans, pad;

Gr. iraroQ. A path ; road ; footway ; an easy- paced horse ; a soft saddle ; a robber infesting the roads on foa t : to tread gently or at a slow pace ; beat a way ; rob on foot : a padder is a foot highwayman.

Tremellius was called scropha or sow, because he hid his neighbour's sowundera pad, and commanded his wife to lie thereon ; he sware that he had no sow but the great sow that lay there, pointing to the pad and the sow his wife. Camden.

We shall not neefl to say what lack Of leather was upon his back ; For that was hidden under pad. Hudibras.

Spurr'J as jockies use, to break. Or padders to secure a neck. Id,

Worse than all the clattering tiles, and worse Than thousand padders is the poet's curse ; Rogues that in dog-days cannot rhyme forbear ; But without mercy read, to make you hear.

Dryden,

Let him walk afoot with his pad in his hand ; but let not them be accounted no poets who mount and show their horsemanship. Id,

We have seen this to be the discipline of the state as well as of the pad. L' Estrange.

A grey pud is kept in the stable with great care, cut of regard to his past services. Addison.

The squire of the pad and the knight of the po?t, Find their pains no more baulked, and their hopes no more crost. Prior,

If he advanced himself by a voluntary engaging in unjust quarrels, he has no better pretence to honour than what a resolute and successful padder may chal- lenge. Collier.

1 would have set you on an easier pad, and re- lieved the wandering knight with a night's lodging.

Pope's Letters.

PADANG, a Dutch settlement on the west coast of Sumatra, to which the factories at Pulo Chinco, Priaman, and Adjerhadja, were formerly subordinate. Lat. 0►► 48′ S., long. 99►► 55′ E. The town lies one mile within the river: the land to the northward is low towards the sea, but mountamous up the country. Some pep- per, camphor, and benzoin, are furnished ; but ever since the establishment of the English settlement at Bencoolen the quantity collected has been small. A considerable quantity of gold is sent to Batavia. Near to Padang is a vein of this metal which formerly was worked; but, not finding the returns adequate to the expense, the Dutch East India Company let it to farm, and it now produces little or nothing. Padang was first visited by the English East India Company's ships in 1649. It was in our possession from 1794 to 1814; but in the last year given up again to the Dutch.

PA'DAR, n. s. L. B. paleatura. Grouts; coarse flour.

In the bolting and sifting of near fourteen years of such power and favour, all that came out could not be expected to be pure and fine meal, but must have amongst it padar and bran in this lower age ot human fragility. Wotton.

PAD'DLE, u. n. & TJ. s. ? Fr. partouiller ; Lat. Pad'dler, n. s. S patulus. To row ;

beat or play with water, as with oars ; to finger ; a paddle is an oar or broad-ended staff.

Have a paddle upon thy weapon. Deut. xxiii. 13. Paddling palms, and pinching fingers, And making practised smiles, As in a looking-glass.

Shakspeare, Winter's Tale. As the men were paddling for their lives.

L'Estrange. A wolf lapping at the head of a fountain, spied a lamb paddling a good way off. Id.

The brain has a very unpromising aspect for think- ing ; it looks like an odd sort of bog for fancy to paddle in. Collier.

Paddling ducks the standing lake desire. Gay. PAD'DOCK, n. s. Sax. jTa"►►a ; Danish and Belg. padde. A toad : also corrupted from par- rok (see Park), an enclosure for deer.

Where I was wont to seek the honey-bee. Working her former rooms in waxen frame ;

The grisley toad- stool grown there mought I see, And loathing paddocks lording on the Scune.

Spenser.

The paddock, or frog paddock, breeds on the land, is bony and big, especially the she. Walton.

The water-snake, whom fish and paddocks fed. With staring scales lies poisoned. Dryden.

A Paddock, or Paddoc-Course, is piece of ground encompasst d with pales or a wall, and taken out of a park, for exhibiting races with grey-hounds, for plates, wagers, or the like. These paddocks, from their great ex- tent, were seldom seen but in the royal parks, or upon the demesnes of the most opulent.

The sport has been a long time discontinued, and the word paddock is employed in the pre- sent time only to a small enclosure or pasture, having a pale to protect it ; or to a small tract of land, surrounding, or appertaining to, a rural mansion, where a few brace of fallow deer may be kept, but not of magnitude sufficient to ac- quire the appellation of a park.

PADERBORN, i. e. the source of the Pad er, an ancient town of Westphalia, subject to Prus- sia. This place was for a time the residence of Charlemagne, and, on different occasions, the temporary abode of succeeding emperors. It was a member of the Hanseatic confederacy, but fell by degrees into complete subjection to the bishop of Paderborn, who governed a dis- trict of above 1000 square miles, adjacent to the landgraviate of Hesse. This bishopric, founded by Charlemagne, has belonged to Prussia since the secularisation of 1802. It contains at pre- sent a population of 120,000. The town of Paderborn was taken in 1622 by

duke Chris- tian of Brunswick, at the head of a Protestant force. The cathedral is a fine edifice; and there are here no fewer than six hospitals or alms- houses. The town is tolerably built, but its trade is insignificant. Population about 5300. Thirty-seven miles south by west of Minden, and fiftv-eight south-west of Hanover.

PAD'LOCK, n.s. & v. a. Belgic pcidde. A lock for a gate originally ; to fasten with a lock and staple.

Let all her ways be unconfined ; And clap your padlock on her mind. Prior.

Some illiterate people have padlocked all those pens that were to celebrate their heroes, by silencing Grub-street. J. Bull.

PAD-NAG, n. s. From pad and nag. An ambling nag.

An easy pad-nag to ride out a mile. Dr. Pope.

PADOGI, a punishment used in Russia. The body of the criminal is stripped to the waist, and then laid upon the ground ; one slave holds the head of the person to be punished be- tween his knees, and another the lower part of the body ; then rods are applied to the back till some person gives notice to desist, by crying out enough ! This punishment is considered in Russia merely as a correction of the police, exercised on the soldier by military discipline, by the nobility on their servants, and by per- sons in authority over all such as are under their command. After the accession of Eliza- beth to the throne of Russia, the punishments were reduced to two kinds, viz. the padogi and knout.

PADSTOW, a market and sea-port town of England, on the north coast of Cornwall, on the Camel, near the Bristol Channel. It has a market on Saturday, and a good trade with Lon- don, Bristol, and Ireland ; from which last it is twenty-four hours' sail distant. The church is an ancient structure, dedicated to the first St. Petrock. In this town is also a INIethodist cha- pel. At the mouth of the Camel is a convenient harbour for vessels of 500 tons burden, at high water ; but it is rather difficult of access, having rocks on the east side, and a bar of sand on the west. Padstow has also a small fishery for

herrings, and, during the season, is much fre- quented for sea-bathing. It has a custom-house and good quays. It is thirty miles west of Lauiiceston, and 243 west by south of London.

PADUA, a province of Austrian Italy, in the government of 'enice, adjoining the delegations of Vicenza, Treviso, Venice, Rovigo, and Vero- na. Its superficial extent is 860 square miles; producing the most abundant crops

of corn, of which, however, little is exported, owing to the density of the population. Large quantities of wine, fruit, and silk, are likewise raised ; and the pastures are rich and well stocked. The surface is agreeably diversified by the Euganean hills, a chain of moderate height, which passes througli the province. It is watered by the Brenta, the Bacchiglione, and several smaller streams. Population 270,000.

Padua, a city of Austrian Italy, the capital of the above delegation. It stands near the junc- tion of the Brenta and Bacchiglione, and is of a triangular form, surrounded with a mound and ditch. The circuit of these is nearly seven miles ; but the interior contains much open space. The town is traversed by several canals, and the streets are bordered on each side with arcades, which, while they afford a pleasant shade in hot weather, give the town a gloomy appearance. The streets are also otherwise dark and ill paved. The houses are, however, in general lofty and well built, and several of the public edifices are magnificent. The town- house is in the form of an oblong quadrangle, supported by galleries resting on marble pillars. At each end are great stair-cases, leading to an arched saloon, said to be the largest hall in Eu- rope, being 300 feet long, 100 broad, and 100 high. It is so constructed that the roof has no support but the walls. The interior contains some fresco paintings, and a busi of Li^^, who was a native of Padua. Near the town-house is situated the palace of the Podesta, remarkable for its Doric saloon, and fine paintings. The palace of the co.'p.mandant is a model of beauti- ful architecture. The cathedral is less remark- able for its architecture than for its paintings and ornaments. The church of St. Antonio, an ancient Gothic edifice, is likewise rich in sculp- ture and painting. That of St Justina is also a fine marble edifice, with a good library and a number of valuable paintings.

The university was at one time resorted to by crowds of students from all parts of Europe. Among its eminent pupils w ere Galileo, Petrarch, and Columbus. Trie buildings are the work of Palladio, and the observatory, botanical garden, anatomical theatre, cabinet of natural history, and Iiall of midwifery, are all on a large well- supported scale. The university was new mo- delled in 1814, and consists of the faculties of mathematics, philosophy, medicine, and law. The number of professors is thirty-two ; the average number of students not above 300. Here is also an academy of sciences, founded by the senate of Venice. Padua is likewise the seat of one of the five sections of the Institute of Austrian Italy.

Padua was a distinguished place when it first submitted to Rome, and was treated not as a

conquered, but as an allied city. In the dark ages it found means to form itself, like a num- ber of other cities in Italy, into an independent state ; but finally fell under the sway of the Carrara family. This took place in the four- teenth century, and in the fifteenth it was incor- porated into the Venetian republic. In trade it is not conspicuous, its only branches consisting of manufactures on a small scale of silk, wool- lens, and leather.

‘ Whoever,’ says the lively lady Morgan, ‘ would judge of the mere materielle of a city, should avoid visiting its public buildings in the society of agreeable people ; and I confess that after some hours given to the perambulation of Padua, with the sole exception of its singular and Gothic hall in the Palazzo della Giustizia, the magnificent church of its patron saint, and the venerable cloisters of its ancient university, I have carried away a most imperfect impression of the city of Antenor and Livy, and a most gracious one of the amiable persons who accom- panied us.

‘ The Palazzo della Giustizia was begun in 1172 by Pietro Cozzo, and finished in 1306; it is, therefore, one of the most ancient fabrics in Italy, and has all the air of being so. The sa- lone, or great hall, is a monument of the man- ners of the middle ages. It was a sort of change for the Paduan merchants, a bazaar for the peo- ple, who came there to make purchases of such glittering foreign wares as were exposed to sale on either side of this immense covered space. Its roof, 300 feet long, and 100 wide, is sup- ported only by its own massy walls, which have stood the proof of nearly six centuries, and are still illustrated by the frescoes of Giotto, on which so many successive generations have gˆzed. A monument, raised to Titus Livius, completes the interest of this forum of the mid- dle ages, whose vastness, when we visited it, was only occupied by scene painters, painting some decorations for the opera. The palace of the university is of much more modem date. It is by Palladio, and contains the public schools, the theatre of anatomy, and the museum of na- tural history, collected by Valisnieri ; attached to the establishment there is a handsome botani- cal garden.

‘ The dim gloomy court of the university, and its successive tiers of arcades or porticoes, have out little of the usual cold Greek character of Palla- dio’s architecture, or else the inscriptions and bas- sn-relievoes with which these walls are decorated take from their antique severity ; for it is in these porticoes that the effigies, names, countries, and ages, of several of the students of Padua, are registered, who came here to ••• ‘ happily institute A course of learning and ingenious studies,’ from all parts of the world. Here many an Italian ‘ Lucentio,’ with ‘ his man Tranio,’ ar- rived

‘ For the great desire ‘ he had

‘ To see fair Padua, nur.sery of arts ; ‘

and here even many a British youth, abandoning

the alma-maters of England or Edinburgh, has

come thus far

‘ To suck the sweets of sweet philosophy’

*under Italian skies. Among the names which we ran over, inscribed on tliese old walls, under youthful, but ill-paiuted heads (long laid low), we read some well-known Scotch and English names··· one was * Thomas Erskine, Scotus,’ another, ‘A. Henley.’*

‘ St. Anthony of Padua is one of the most notorious saints in the calendar, and his church is one of the most splendid in Italy. We visited it in a happy moment, during the celebration of high mass on a Sunday morning. It was the first time I ever saw a great Italian church filled with an Italian congregation, one-third of w-hich seemed composed of the higher classes : for the women were elegantly dressed a la Franˆaise, and yawned, pointed their glasses, and looked about them, with such an air of fashionable ennui, that I almost fancied myself in an English Protestant church ; while, as we returned, family groups, with prayer-books and parasols, followed by footmen in respectable liveries, completed the delusion.

*The old part of Padua, * la citta vecchia,’ with its dark narrow streets and high old palaces, however gloomy and incommodious, has an in- terest of its own, well worth the more spacious avenues and Palladian facades of the modern town. Here, doubtless, stood Gremio’s house ‘ within the city,’ which was*

‘ Richly furnished with plate and gold, Basins and ewers to lave the dainty hands And hangings all of Tyrian tapestry : ‘

In the inventory of his rich furniture, he ob- serves···

‘ In ivory coffers I have stuffed my crowns. In cypress chests my arras, counter-points, Costly apparel, tents and canopies, Fine linen, Turkey cushions, ‘bossed with pearl, Valance of Venice, gold in needle-work. Pewter and brass, and all things that belong ‘l”o house or house-keeping.’

- *This was the genuine catalogue of an Italian noble’s house, in the age of Shakspeare, authen- ticated by all which time and change*

have spared in Italy; there is not an article here descril)ed, that I have not found in some one or other of the palaces of Florence, 'enice, or Genoa ††† the mer- cantile republics of Italy ††† even to the

‘ Turkey cushions ‘bossed with pearl.’

‘ It has been the fashion to dispute the learn- ing of Shakspeare ; but his knowledge was over- whelming††† like the frenzied eye of his own poet †††

It ‘ glanced From heaven to earth,’ and such was its exquisite and appropriate aji- plication, that from the Roman capitol to the house of the Paduan merchant, the details were facts, indisputable as they were minute.’

Tlie late enterprising traveller Belzoni was a native of this place. It is eighteen miles south- east of 'icenza, and twenty west of Venice. if PADUANI, among medallists, those counter- feits of antique medals that were struck in the seventh century, by an Italian painter born at Padua. See Numismatology.

PADUS, anciently called Eridanus, a river famous for the fable of Phaeton. It rises in Moimt 'esulus, in the Alpes Cottiae, from three

springs, dividing the Cisalpine Gaul into the Transpadana and Cispadana ††† (Strabo) ; and, swelled by other rivers falling into it on each side from the Alps and Apennines, it discharges itself, with a course from west to east, at seven mouths, into the Adriatic. ††† Mela. The lake through which it discharges itself into the sea, is called by the natives the Seven Seas ; now the Po.

Padus, in botany. See Prunus.

PiE’AN, n. s. From the songs sung at fes- tivals to Apollo, beginning 16 Paean. A song of triumph.

O may I live to hail the glorious day. And sing loud paans tlirough the crowded way.

Roicommon. See from each clime the learned their incense bring : Hear, in all tongues consenting pieans ring. Pope.

PˆAN, among the ancient pagans, was a song of rejoicing sung in honor of Apollo, chiefly used on occasion of victory and triumph. See Apollo.

PvEAN, in the ancient poetry, a foot consisting of four syllables; of which there are four kinds, the psean primus, secundus, &:c. Paean primus consists of one long syllable and three short ones, or the trochaeus and pyrriiichius, as tempo- ribus ; paean secundus consists of a short sylla- ble, a long, and two short, or an iambus and a pyrrhichius, as potentia; paean tertius consists of two short syllables, a long and a short one, or a pjTrhichius and a trochaeus, as animatus ; paean quartus consists of three short syllables and a long one, or a pyrrhichius and iambus, as ce- leritas.

PiEDEROTA, in botany, a genus of the mo- nogynia order, and diandria class of plants ; natural order thirtieth, contortae. The berry is empty, brittle, and dispermous ; the style bifid.

PˆDO-BAPTISM, infant-baptism, or that conferred on children ; from iraie, infant, and fiaizTKjfioq, baptism. See Baptism.

P.EDO-BAPTISTS, of Tra.c, 7ra.,5oc, infant, and jSairTiˆti), I baptise, are those who maintain that baptism should be administered to infants.

1. One of their chief arguments in support of this opinion is, that if infants, under the Christian dispensation, were excluded from bap- tism, the Christian institution must appear, in this respect, to be less complete and perfect than that of the Jews : and it is not (a priori) likely that God would appoint an external sign of peculiar distincrion and benefit for children under the patriarchal and Jewish constitution, without a similar appointment under the Chris- tian dispensation; more especially as the first proselytes to Christianity, and those in particu- lar who were converted from among the Jews, would naturally expect some token of distinc- tion and privilege, comprehending their chil- dren, and resembling in its design, though milder in its nature, that which Christianity had abrogated. This expectation was encouraged by the affectionate manner in which our Lord expresses himself concerning infants, particu- larly when he says, Mark x. 14, 'of such is the kingdom of God ;' which some understand to signify, that the rights and privileges of the CJyisuan church belong to such. '\'iih these

views, it is easy to conceive to what subjects tney would applj- the general charge to baptise proselytes, unless directed and restricted by an express order.

2. Wall, in his History of Infant Baptism, un- dertakes to show from the books of' the Jews themselves, and those of others, that understood the

Jewish customs, and have written concern- ing them, that ‘ it was the custom of the Jews before our Saviour’s time, and, as they affirm, from the beginning of their law, to baptise as well as circumcise any proselyte that joined them from other nations, and with him, at his desire, his infant children likewise.’ Upon this argument such occasional stress has been laid by able writers, that it is desirable, perhaps, that it should receive greater attention from the Bap- tists. See our article Baptism.

3. The advocates for infant baptism urge moreover the argument from ’”□□□-ˆnumcision, or that the covenant made with , braham was a covenant of grace, by which spiritual and eter- nal blessings were promised tp him, quoting Matt. xxii. 31, 32 ; Heb. xi. 6 : Rom. iv. 11□□□ 17; Gal. iii. 6. 18. 29; and that as such it comprehended both Jews and Gejitiles, and their seed, ‘ This argument,’ says Mr. H. F. Burder, ‘ may be divested of all complexity. The cove- nant with Abraham is the same in substance with that under which we live. The same bles- sings of that covenant are denoted both by cir- cumcision and by baptism. The covenant then being the same, and the ordinance being in im- port the same, the subjects entitled to its administration are also the same. But infants were entitled to circumcision, on tlie ground of their connexion with their parents ; therefore infants, on the ground of their connexion with their parents, are entitled to baptism. This strong, and as we think, conclusive argument founded on the Abrahamic covenant, our oppo- nents endeavour to invalidate, by giving a repre- sentation of the nature of that covenant which, we think, degrades its character, impairs the beauty and the harmony of the divine dis- pensations, and is at variance with the reason- ings and conclusions of the apostle Paul. The assertion has been made that our argument fails ‘by reason of the essential difference between the Jewish and Christian religions.’ What a revolution must be effected in our views of the covenant of grace ; what a new system of inter- pretation must we apply to the apostolic epistles, before we can conceive of the Jewish and the Christian dispensations as two different religions, separated from each other by a difference no less than essential ! If, indeed, in order to evade the force of our argument, it be necessary to resort to such a sentiment, or even to identify or confound together the covenant with Abra- ham and the law of Moses, we may infer from the very character of the arguments employed by our opponents the strength and solidity of our own.

‘The point of primary importance in the present argument is □□□ the connexion established under the former ‘□□□conomy between])arents and their infant-offspiiag. By virtue of that con- nexion, infants wei□□. v- iiCimcised ; and if that

connexion has never been, hy divine appoint- ment', dissolved or diminished, then, by virtue of that connexion, infants should be baptised. But where in the whole compass of the New Testa- ment do we find the slightest intimation that the connexion is terminated ? From what part of Scripture can it be proved that such a change has been introduced into the constitution of the covenant of grace ? When were infants exclu- ded, and by what law ? On the contrary, do not the addresses of the apostles proceed, in many instances, on the supposition that in this important respect the state of things in the church of God remains unaltered ? Observe the manner in which they adduce, on some occa- sions, the promises made to Abraham in refer- ence to his offspring, and correspondent pro- mises recorded by the prophets. On the day of Pentecost Peter said to the enquiring and agi- tated multitude, Repent and be baptised every one of you in the name of Jesus Christ, for the remission of sins ; for the promise is unto you and to your children. Acts ii. 38. 39. On a subsequent occasion, he said, Ye are the children of the prophets and of the covenant which God made with our fathers, saying unto Abraham, And in thy seed shall all the kindreds of the earth be blessed. ??? Acts iii. 25. Now the ques- tion is, in what sense such an application of the ancient promises would be naturally understood by the Jewish people who were thus addressed. The promise quoted was the promise made to Abraham. That promise, as appears from the seventeenth chapter of Genesis, was given in immediate connexion with the appointment of infant-circumcision, and now the apostle Peter adduces the ancient promise in immediate con- nexion with baptism. ' Repent, and be baptised every one of you, for the promise is unto you and to your children ; then they that glarlly received his word were baptised.' It is not expressly said that their children were baptised with them ; but if the preceding considerations be correct, with regard to the principle, the inference will not be difficult with regard to the fact.'

4. We state another argument of the Paedo- baptists in the words of this respectable author : ' That the connexion established between parent and child remains unaltered under the Christian economy, may, I think, be clearly inferred from the decision of the apostle Paul in the seventh chapter of the First Epi. >Lle to the Coriatuians. 'If any brothei hath a wife that believeth not, and she be pleased to dwell with him, let him not put her away. And the woman who hath a husband that believeth not, and if he be pleased to dwell with her, let her not leave him. For the unbelieving husband is sanctified by the wife, and the unbelieving wife is sanctified by the husband ; else were your children unclean ; but now are they holy.' There are, I think, but three acceptations of the term holy in this pas- sage, which can claim attention. Either it imports purity in the highest sense

⁂ that which gives a fitness for the church above; or purity in the lower sense ⁂ that which gives a fitness for some external privilege of the church on earth ; or purity in the lowest sense ⁂ that which

is opposed to illegitimacy of birth. In the first of these senses, neither we nor our opponents can understand it. In the last of these senses it has usually been understood by our Baptist brethren ; but is this exposition trnable .' Can we suppose either the reality or the profession of the Christian faith essential to the validity of the marriage contract, or the legitimacy of the offspring ? Would the apostle have pronounced illegitimate the offspring of parents, both of whom were heathens or unbelievers ? And yet, if the faith of one of the parents were requisite to the legitimacy of the children, it must follow that, if neither of the parents believed, the chil- dren must be illegitimate, and consequently the marriage contract invalid. As this cannot be maintained, the second acceptation of the term holy remains for our adoption, according to which it denotes a fitness for some external privilege of the church. The Jews considered those chil- dren as unholy, and not entitled to circum- cision, whose parents were in a state of heathen- ism ; and they considered those as holy and entitled to circumcision who were born of Jews or proselytes. In this sense it seems reasonable to suppose that the words of the apostle would be understood by those to whom they were addressed. His decision, then, proceeds upon the principle of the continuance of the ancient connexion between parent and child in the church of God. His decision is, that if either of the parents be a believer, the children are entitled to the same external privilege as if both the parents were believers. But there is only one external privilege of the Christian economy to which this decision can apply, and that privi- lege is Infant Baptism. In this sense the pas- sage appears to have been understood byTertul- lian and the greater number of the early fathers.' See Dr. Wail's History of Infant Baptism, part I. ch. 4, 15.

It may be added that Dr. Doddridge regarded this passage in a similar light.

5. Pa;do-baptists acknowledge that there is no direct and express command to baptise infants ; but appeal to the history of the administration of baptism, as strongly implying their participation of it. They argue that the apostles are said to have baptised whole families (Acts xvi. 15, 33 ; 1 Cor. i. 16); and, therefore, probably infants were comprehended under this general denomi- nation. And they apprehend that they have been able to trace such intimations at least of infant baptism, in the earliest ages of the church as may, to a high degree of probability, prove it to be an apostolic, and consequently divine institution.

Thus Irencrus, born about the time of St. John's death, and probably of Christian parents, mentions infants among the regenerate, i. e. the baptised,

as the word generally signifies in his writings. Justin Martyr, about foity years after the time of the apostles, speaks of some who had been made disciples from their infancy. TertuUian, about 100 years after the apostles, though he advises parents to defer baptising their children, except when their lives were in danger, speaks of the practice as generally received and observed in his tin-.e. Cyprian,

about 150 years after the apostles, is allowed by all to speak expressly of infant baptism as gene- rally used in the church ; and we learn that, in his time, A. D. 253, a question being agitated among sixty-six bishops in the council of Car- thage, whether an infant must be kept till he was eight days old before he be baptised, all unanimously gave their opmion to the contrary. There are also various passages, say these writers, that expressly refer to infant baptism in the works of Origen, who was bom of Christian parents ; and as his father was martyred in the year 202, when he was seventeen years old, the remoter Christians of his family must have been nearly contemporary with the apostles. Again, in the apostolic constitutions, which are allowed to be very ancient, express mention occurs of infant baptism, as commanded by Christ. Matth. xix. 14. Wall contends that, in the fiist 400 years after the apostles, there appears to be only one, viz. Tertullian, who, in some cases, advised the delay of infant baptism ; and another, viz. Gregory, who practised such delay in the case of his own children : ‘ but no society of men adopted this opinion, nor did any one per- son pretend to say it was unlawful to baptise infants : and is the next 700 years there is not so much as one man to be found that either spoke for or practised any such delay ; and, if truth were to be determined by numbers, the general and uniform practice of the Christian church is very much in favor of infant baptism.’

‘ It is of great importance,’ says Mr. Burder, ‘ to understand the nature and value of this spe- cies of evidence. If any are disposed to ques- tion its validity, let them be reminded that the evidence is precisely of the same character with I’iiat by which the authpnticity and genuinenes-s of the books of the New Testament have been proved, with so much strength of convincing ar- gument, by Dr. Lardner, Dr. Paley, Dr. Chal- mers, and other able and successful advocates of the same class. They have established the au- thenticity of the books of the New Testament, by proving that they have been quoted or alluded to by a continued series of Christian writers, beginning with those who were contemporary with the Apostles, or who immediately followed t!icm. ‘ This medium of proof,’ observes Dr. Paley, ‘ is of all others the most unquestionable, and is not

diminished by the lapse of ages.' By this species of evidence has been firmly esta- blished the fact of the general prevalence of mfant baptism in the early ages, and the fact that it was then regarded as a practice derived from Apostolic authority. A full and particular induction of the evidence on this point is ob- viously incompatible with the narrow limits of a single discourse. Nor is an extended statement on the present occasion requisite. The sources whence it is to be derived are open to the en- quirer, and without the necessity of referring to the voluminous writings of the Fathers, ample satisfaction may be obtained by consulting the col- lection exhibited by the learned and indefatigable Dr. Wall, in his History of Infant Baptism. A slight sketch of the mass of evidence is all that 1 can with propriety attempt.'

The Baptists plead, on the other hand, that in-

fants are incapable of complying with the terms required in order to baptism, i. e. repentance and faith, and of receiving those instructions which Christ directed, as previous to it. Matt, xxviii. 19, compared with 1 Peter iii. 21. But the Pffido-baptists, to adopt Dr. Rees's summary of their arguments, reply that those instructions and conditions were required only of those w .o were capable of them. Besides the word /laOrj- Ttvaan, which some understand of teaching, previous to baptism, may signify make disciples : and that infants may be comprehended under that name, some have argued from Acts xv. 10. Tlie word used by Justin Martyr, in the passage above cited, and applied to infants, is ifiaSifriv- aav. And it has been farther alleged, that the penmen of Scripture, and other Christian writers, have commonly used the word to signify the reception of any one to the number and degree of disciples, as preparatory to subsequent in- struction ; so that persons thus received, in order to be taught, were, before the instruction itself denominated disciples. Compare Luke ix. 57, and Matt. viii. 19 ००० 21. Eusebius Evang. De- most, lib. iii. sect 7, where he styles those who were desirous of learning of Christ, his disciples.

When it is further objected, that infants are incapable of receiving any benefit from baptism ; and that, in this case, the ordinance is exposeo to, contempt, the Psedo-baptists say that, on the con- trary, there are many advantages resulting from baptism administered to infants, both to them and principally to their parents, whose imme- diate act it IS ; that an ordia nee, as in the case of Christ, who was hiniielf baptised, may some- times be a,dmmi

The Paedo-baptists differ from the Baptists also as to the mode of administering the Chris- tian ordinance. The former perform it by sprink- ling or pouring on water ; the latter by the im- mersion of the whole body, which they contend to be an essential circumstance, see our article

Baptism. In favor of immersion it is pleaded that the word /3u7rriˆaj, being derived from Pair-io. properly signifies to plunge : on the other hand it is urged, that in this diminutive and derivative form it may signify any method of washing, and is sometimes used in Scripture for washing things which were not dipped in water, but on which it was poured. Compare Luke xi. 38, Mark vii. 4, and those passages in which the pouring out of the spirit is called baptism. Acts i. 5, ch. xi 15, 16 ; to which some add 1 Cor. x. 2.

Another argument in favor of immersion is drawn from the account of Philip and the eunuch. Acts viii. 38, 39, who went down {tts) into the water ; and, after the baptism, they are both said to come up (tic) out of the water. But many passages might be cited where tic signifies to or

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unto, and tic, from Matt. xv. 24, chap. xvii. 27, chap. iii. 11. John ix. 1. 2 Cor. v. 1. Rev. xix. 5. It is farther argued, that plunging alone represents our being buried with Christ in bap- tism. Compare Rom. vi. 4. Col. ii. 2. The Paedo-baptists, though they allow that there is in these passages an allusion to the mode of bap- tism which then generally prevailed, maintain that, in the institution of the ordinance, there is no declaration that it was chiefly designed to re- jiresent this, and persons were baptised before it was generally known that Christ should die and arise from the dead. Our being cleansed from sin seems to be the thing primarily intended, which may properly be represented by pourmg on water; and as this more naturally represents the pouring out of the Spirit, the sprinkling us with it, and the sprinkling of the blood of Jesus, it may answer as valuable purposes as that mode, which, more directly, represents death and a re- surrection.

*'The position which our Baptist brethren ad- vance and which we dispute is,' says a writer we have already quoted, ' to use the very words of a venerable opponent, * that Baptism is immer- sion ; and that Christian baptism is neither more nor less than an immersion of the whole body in water, solemnly performed in the name of the Father, the Son, and the Holy Spirit.' Dr. Ry- land's Candid Statement.*

' In support of this opinion, they lay great stress on the import of the Greek words em- ployed in the New Testament to express the act of baptising. In reply, we endeavour to prove, by a variety of instances and examples, that these terms do not necessarily and uniformly denote immersion, and that

they authorise no decision whatever with regard to the manner in which water should be applied in the adminis- tration of baptism.

- *Again, our opponents appeal to the descrip- tions given in the New Testament of the circum- stances in which baptism was dispensed. In all the instances which they adduce we can find no proof of even one single case of actual immer- sion ; we can find no description of the perform- ance of the rite, even when a river is specified, which is not explicable on the supposition of the person to be baptised going down from the higher ground to the edge of the water (as the most convenient method under existing circumstances), and having water poured or sprinkled on his head. That this was the ancient method of ad- ministering baptism, the learned author of Facts and Evidences, already alluded to, has rendered in a high degree probable, by adducing various representations in sculpture and in painting of the mode of baptising which lay claim to remote antiquity. In support of the mode of adminis- tration we adopt, we appeal to the analogy be- tween baptism with water, and baptism with the Holy Spirit, whose influences are frequently re- presented by expressions which denote pouring and sprinkling, and also by allusions to the cleansing properties of water, without reference to any particular mode of its application.*

- *Finally we urge the characteristic spirit of the Christian economy, and argue that in the ab- sence of direct precept, and of clear and indu-*

bitable examples of immersion, it is not to be supposed that immersion can be essential to bap- tism. On the contrary we maintain, that to at- tach so much importance to the mode of baptism is uncongenial with the spirit of the Christian dispensation ; and that the immersion of the whole person, under the circumstances in which it is usually practised (to say nothing with re- gard to decorum), seems scarcely compatible with the apostolic assertion, that the command- ments of our Saviour are not grievous. Sucii are the leading considerations which induce us to regard immersion as by no means essential to Christian baptism, and to consider the adminis- tration of the ordinance by pourins or sprink- ling as equally valid, as decidedly preferable.

PiEDOTRlBA, in antiquity, one of the four officers in the ancient Gymnasium, whose busi- ness was to teach the exercises mechanically, without their theory.

PiEONIA, piony, a genus of the digynia order, and polyandria class of plants ; natural order twenty-sixth, multisiUquae : cal. penta- phyllous ; the

petals five ; there are no styles : CAPS, are polyspermous : species two, both very hardy, which will flourish in any common soil. They are large and herbaceous flowery perennials, with tuberous roots, sending up strong annual stalks from one to three feet in height ; termi- nated by very large flowers of a beautiful red color, and much larger than any rose.

P. officinalis, the common officinal, or male piony, is remarkable for its capsules turning backward, opening and displaying their red inside, together with the numerous seeds, in a singularly agreeable order, appearing very orna- mental after the flower is past. The plants may be propagated either by parting the roots or l3y seed. This plant was formerly celebrated in nervous distempers.

P/ESTUM, a town of Lucania, on the Sinus Paestinus ; called Posidonia by the Greeks, an ancient colony prior to the first Punic war, ac- cording to Livy. The utmost taste for art seems to have reigned in this once famous town, and all which could in those days be imagined of ingenious, of delicate, or voluptuous, was to be found within its walls. The climate conspired to complete the charms and graces of the spot, and during the era of Augustus, Horace, Virgil, Propertius, and Ovid, each vied with the other in singing the praises of

‘ Pffistum’s twice-blowing roses.’

This place is now, and has been for many suc- cessive ages, a perfect solitude. Towards the year 930 it was sacked by the Saracens. Still, however, that rude people left standing abundant eridences of its former splendor and magnifi- cence, and it was reserved for Robert Guiscard, nearly two centuries after, to destroy what the barbarians had spared. By the directions of this man, all the ancient edifices were demo- lished, the temples most of them razed to the ground, and their precious remains, such as beautiful columns of verd antique, &c., trans ported to Salerno, there to ser'e towards the con- struction of a church. From the ashes of tb❑❑❑❑ old town, however, arose a new one, which wais

denominated Pesti, and which was not finally abanaoned until 1580. Since that period the ruins of the ancient city do not appear to have attracted notice until 1745. The lirst modern author who treated of them was the baron Joseph Antonini, in his work on Leucania, published at Naples in 1745 and following years.

The tirst artist who measured and made draw- ing's of them was, according to Millin, J. G. Soufflot, a celebrated architect of his day, who built the basilica of St. Genevieve, afterwards called the Pantheon. ' These drawings,' says Millin, ' although executed in 1750, lay for a long time unused in the artist's portfolio, and were not published until 1764 at Paris, by M. Du- mont, professor of architecture.'

The ruins of the ancient town of Piestum are situated in the gulf of Salerno, twenty-two leagues from Naples, and in a vast and mountainous plain. The precise extent of their antiquity is altogether baffling; in all probability it stretched far "beyond the conquest of the town by the Romans.

The circumference of the city, in form an an- gular oblong, which is contracted towards the west, is enclosed by tliick wall-:, partly ruinous, but still lofty in many places, and their height varying from twelve to twenty-one feet. Sub- stantial square towers flank each angle of the walls, and there are several other intermediate ones between these and the gates. There remained a few years ago one gate (towards the ea-st) quite perfect.

These walls enclose a prodigious multitude of ruins, the principal of which are those of three temples, which were denominated by the disco- verers the grand temple, the lesser temple, and the basilica. The latter difl'ers from every otlier temple in existence, having nine columns in the front. While we now write (1830), attempts are making to unrol some curious MSS. that have been lately dug up at this place.

PAGAIIM, an ancient town of the Birman empire, situated on the east side of the Irawad- dy, in lat. 21►► 9′ N., long. 94►► 35′ E. In remote times this city, says Mr. Hamilton, was the resi- dence of a long dynasty of kings, and is still famous for its numerous temples, to count which is among the proverbial impossibilities of the Birmans. It is said to have been abandoned 500 years ago in consequence of a divine admo- nition. Scarcely any thing now remains of an- cient Pagahm, except its numerous mouldering temples, and the vestiges of an old brick fort, the ramparts of which are still to be traced. Many of tlie most ancient temples at this place 'ciie not solid at the bottom. A well arched dome supports a ponderous superstructure, within which an image of Gaudma sits enshrined. His general posture is sitting

PA'GAN, 71. s. & adj.) Sax. pajanipc ; Lat, Pa'gamsm, n. s. S poganus {pagus, avil-

lage). A heathen ; a worshipper of idols ; heathenish: paganism is heathenism.

The name of popery is more odious than very payunism amongst divers of the more simple sort.

Huoker. Their cloaths are after such a pagan cut too, That sure they have worn out Christendom.

Shakspeare. The secret ceremonies I conceal, Uncouth, perhaps unlawful to reveal ; liut such they were as pagan use required.

Dryden. Our labanim, in a state of paganism, you have on a coin of Tiberius. It stands between two other ensigns. Addison.

The Christian faith, Unlike the timorous creed of pagan priests. Was frank, stood forth to view, invited all.

Pollok.

Pagan (Blaise Francis, count of), an emi- nent French mathematician, born at Avignon in Provence, March 3d, 1604. He became a soldier at fourteen, and signalised himself in an extraor- dinary manner on many occasions. After the loss of his eyesight, which prevented him from continuing to serve his country in the field, he published many valuable treatises chiefly on mathematical subjects. His principal works are, tieometrical Theorems, The Theory of the Pla- nets, and Astronomical Tables. He died in Paris, November 18th, 1665; unmarried.

Pagan (Peter), professor of history and poe- try at Marpurg. lie wrote a history of the Ho- ratii and Curatii in Latin verse; and various pieces of miscellaneous poetry. He died at Wanfrid, in Lower Hesse, May 20th, 1576.

PAGANALIA, certain festivals observed by the ancient Romans in the month of January. They were instituted by Servius Tullius, who appointed a certain number of villages (pagi), in each of which an altar was to be raised for an- nual sacrifices to their tutelar gods; at which all the inliabitants were to assist, and give presents in money, according to their sex and age, by which means the number of country people was known. The servants upon this occasion oflTered cakes to Ceres and Tullus, to obtain plentiful harvests.

PAGANELLUS, a species of gobius.

PAGANICA, a town of Naples, in Abruzzo Ultra; eight miles N.N.W. of Aquila.

PAGE, n. s. & ►►. a. 1 Tv.page ; Lat. pagina.

Pag'inal, adj.] One side of the leaf of

a book : to mark the pages of a book : paginal is consisting of pages.

If a man could have opened one of the pages of the divine counsel, and seen the event of Joseph's being sold, he might have dried up the young man's tears. Taylor.

An expression proper unto the paginal books of our times, but not so agreeable unto volumes or roll- ing books, m use among the Jews. Browne.

Thy name to Phn-bus and the muses known. Shall in the front of every jmge be iiiown. Dryden.

A printer divides a book into sheets, the sheets into pages, the pages into lines, and the lines into letters. Ilotes.

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Page, n.s. Sc v. a.. Fr. and Span, page ; Ital. paggeo. An attendant : to attend as a page. Will these mossed trees, That have out-lived the eagle, page thy heels, And skip when thou pointest out ? Shukspeare. The fair goddess Fortune, Fall deep in love with thee, and her great charms Misguide thy opposers' swords ! Prosperity be thy page ! Shakspeare. Coriolanns. He had two pages of honor, on either hand one.

Bacon. Where is this mankind now 1 who lives to age Fit to be made IMethusalem his page. Donne.

This day thou shalt my rural pages see, For 1 have dressed them both to wait on thee.

Dry den. Philip of Macedon had a page attending in his chamber, to tell hirn every morning, Remember, O king, that thou art mortal. Wake.

Page (William), D. D., was a native of Har- row, Middlesex, or, according to others, of Lon- don, and born in 1590. He was educated at Baliol College, Oxford, but quitted in 1619, on being chosen fellow of All Souls. Ten years after he obtained the head-mastership of Reading grammar-school, and the rectory of East Locking, Berks; but, on the breaking out of the civil war, he was ejected from his school as a loyalist, though the profits of his benefice were not se- questered. He is known as the author of a devo-

tional treatise on Genuflexion, in 4to., printed at Oxford in 1631 ; a Keply to John Hales's Tract on Schism ; and a translation of the De Imita- tione, &c. of Thomas a Kempis. He died in

1663.

PA'GEANT, n. s., adj., Ik v. a. f Lat. peg- Pa'oeantry, w. s. ˆwa; Greek,

****Kfiyjia. A scenic show ; a statue in a show : pageantry means, pomp ; show.*

With ridiculous and aukward action, Which, slanderer, he imitation calls, He pageants us. Shakspeare. Troilus and Cressida. When all our pageants of delight were plaid, Our youth got me to play ihe woman's part. And I was trimmed in madam Julia's gown.

Shukspeare. Strange and unnatural, let's stay and see This pageant of a prodigy. Cowley.

Were she ambitious, she'd disdain to own The pageant pomp of such a servile throne.

Dryden. Such pageantry be to the people shown ; There boast thy horse's trappings and thy own.

Id. Inconveniences are consequent to dogmatizing, supposing men in the right ; but, if they be in the wrong, what a ridiculous pageantry is it to see such a philosophical gravity set man out a solecism !

Government of the Tongue. The poets contrived the following pageant or ma- chine for the pope's entertainment ; a huge floating mountain that was split in the top in imitation of Parnassus. Addison.

The breath of others raises our renown. Our own as soon blows the pageant down. Young. Thus unlamented pass the proud away, The gaze of fools, and pageant of a day. Pope.

PAGES (Francis Xavier), a French compiler and romance-writer, was born at Aurillac, in the department of Cantal, in 1745, and settled at Paris a short time before the beginning of the Revolution, of which he professed himself an

admirer. He died at Paris, December 2 1 st, 1 802. Among his works may be mentioned, Histoire Secrete de la Revolution Francaise, 1796-1801, 6 vols. 8vo., which was translated into English, Italian, and German; and Nouveau Voyage au- tour du Monde, en Asie, en Amerique, et en Afrique,

precede d'un Voyage en Italie, 1797, 3 vols. 8vo.

Pages (Pierre Marie Francois, vicomte de), a French navigator, of a noble family, was born at Toulouse in 1748. He entered into the navy at the age of nineteen, and, in 1767, embarked at Cape Francoise in St. Domingo, on a voyage with a view to explore the Indian Seas, and travel through China and Tartary to the Northern Ocean. He arrived at the Philippine Islands in October 1768, and, it being impossible to pene- trate China, went by sea to Bassora, and, tra- velling through the desert to Syria, reached France in December 1771. In 1773 he sailed in Kerguelin's expedition towards the South Pole ; and on his return made a voyage in a Dutch vessel employed in the whale fishery in the North Seas, when he proceeded as far as 81►► 30′ N. lat. Pages obtained, as the re- ward of his services, the rank of captain, and the cross of St. Louis, and was chosen a corre- spondent of the Academy of Sciences. He served in the American war, and after the peace of 1783 retired to St. Domingo, wliere he was murdered by the negroes in 1793. He pub- lished a work which Humboldt mentions with approbation, Voyages autour du Monde, 1767- 1776, 2 vols. 8vo.

PAGI (Anthony), a very celebrated cordelier, one of the ablest critics of his time, born at Rogne in Provence, in 1624. He took the habit in the convent at Aries, in 1641, and was four times provincial of his order; he died in 1699. His most considerable work is, A Critique upon the Annals of Baronius ; the best edition of which is that in 4 vols, folio, Geneva, 1705.

Pagi (Francis), nephew of Anthony, and a member of the same order, wrote A Chronolo- gical Abridgment of the History of the Popes, in Latin, 3 vols. 4to.

PAGNINUS (Sanctes), an Italian Dominican, eminent for his skill in oriental languages and biblical learning, was born at Lucca in 1466, and became afterwards an ecclesiastic of the order of St. Dominic. He was the author of trans- lations of both the Old and New Testaments, of an Hebrew Lexicon, and an Hebrew Grammar. He died in 1536, aged seventy.

PAGO, a small island of the gulf of Quar- nero, in the Adriatic, belonging to the circle or district of Zara, in Austrian Dalmatia. It is situated opposite to the coast of Croatia, and is thirty-four miles in length, but narrow ; and a great part of the interior is occupied by an inlet of the sea. Its area is about fifty square miles; its population 4000. In the climate the extremes of heat and cold predominate, the island being exposed in winter to the bora, a keen and pierc- ing wind from Croatia, while in the summer the heat is such as to ripen grapes. The chief ex- ports are wine and salt. Sage, aromatic herbs, and coal, are abundant. The inhabitants have been alternately subject to the \ˆenetians, and to

their neighbours on tiie Greek coast. Pago, the chief place of the island, is situated on a bay in the interior, twenty-two miles north-west of Zara, and contains 1000 inhabitants.

PA'GOD n. s. Pers. and Hind, hoit, khoda, or kuda, i. e. the house of God. An Indian tem- ple or idol.

See thronging millions to the Pagod run.

And offer country, parent, wife, or son. Pope.

They worship idols called pagods, after such a terri- ble representation as we make of devils.

StiUii}iifieei.

Pagod, or Pagoda, a name whereby the East Indians call the temple in which tliey worship their gods. Before they build a pagod they con- secrate the ground as follows : ××× aftei having en- closed it with boards or palisadoes, when the grass is grown on the ground they turn an ash-colored cow into it, who stays there a whole day and night; and, as cow-dung is thought by the Indians to be of a very sacred nature, they search for this sacred deposit, and, having found it, they dig there a deep pit, into which they put a mar- ble pillar, rising considerably above the surface of the earth. On this pillar they place the- image of the god to whom the pagod is to be conse- crated. After this the pagod is built round the pit in which the pillar is fixed. The pagod usually consists of three parts: the first is a vaulted roof supported on stone or marble columns. It is adorned with images, and, being open, all persons, without distinction, are al- lowed to enter it : the second part is filled with grotesque and monstrous figures, and nobody is allowed to enter it but the brahmins themselves : the third is a kind of chancel, in which the statue of the deity is placed : it is shut up with a very strong gate.

We cannot afford room to go into detail on the several pagodas of different nations and their peculiar circumstances ; and shall therefore con- tent ourselves with offering the reader some ac- count of the most interesting structures of this class in existence. An excellent account of the sculptures, &c., at Mavalipuram, a few miles north of Sadras, and known to seamen by the name of the seven pagodas, is given in the Asiatic Researches. The monuments appear to be the ruins of some great city decayed many centuries ago. 'They are situated close to the sea, between Covelong and

Sadras, somewhat remote from the high road that leads to the dif- ferent European settlements ; and, when visited in 1776, there was still a native village adjoining to them, which retained the ancient name, and in which a number of brahmins resided that seemed perfectly well acquainted with the subjects of most of the sculptures to be seen there.' ' Pro- ceeding on, by the foot of a hill on the side facing the sea, there is a pagoda rising out of the ground, of one solid stone, about sixteen or eighteen feet high, which seems to have been cut upon the spot, out of a detached rock that has been found of a proper size for that purpose. The top is arched, and the style of architecture, according to which it is formed, different from any now used in those parts.' Beyond thi-; a numerous group of human figures in bas relief, considerably larger than life, attract attention.

They represent considerable persons, and theii exploits, many of which are now very indistinci through the injuries of time, assisted by the cor- roding nature of the sea air ; while others, pro- tected from that element, are as fresh as when recently finished. The hill, which is at first or easy ascent, ' is in other parts rendered more so by very excellent steps cut out in several places, where the communication would be difficult or impracticable without them. A winding stair of this sort leads to a kind of temple cut out of the solid rock, with some figures of idols in high re- lief upon its walls, very well finished and per- fectly fresh, as it faces the west, and is therefore sheltered from the sea air.' This temple our au- thor conjectures to have been a place of worship appertaining to a palace; some remains of which still exist, and to which there is a passage from the temple by another flight of steps. This finishes the objects ' on that part of the upper surface of the hill, the ascent to which is on the north ; but, descending thence, you are led round the hill to the opposite side, in which there are steps cut from the bottom to a place near the summit, where is an excavation that seems to have been intended for a place of worship, and contains various sculptures of Hindoo deities. The most remarkable of these is a gigantic figure of Vishnou (see Polytheism) asleep on a kind of bed, with a huge snake wound about in many coils by way of pillow for his head ; and these figures, according to the manner of this place, are all of one piece, hewn from the body of the rock.' These works, however, although they are unquestionably stupendous, are, in our author's opinion, surpassed by others about a mile and a half south of the hill. ' They consist of two pa- godas of about thirty feet long by twenty feet wide, and about as many in height, cut out of the solid rock, and each consisting originally of one single stone. Near these also stand an ele- phant full as big as life, and a lion much larger than the natural size, but very well executed, each hewn also out of one stone. The great rock above described is at some distance from the sea, perhaps fifty or 100 yards, and in that space the Hindoo village before mentioned stood in 1776. But close to the sea are the remains of a

pagoda built of brick, and dedicated to Sib, the greatest part of which has evidently been swallowed up by that element ; for the door of the innermost apartment, in which the idol is placed, and be- fore which there are always two or three spacious courts surrounded with walls, is now washed by the waves, and the pillar used to discover the meridian at the time of founding the pagoda is seen standing at some distance in the sea. In the neighbourhood of this building there are some detached rocks, washed also by the waves, on which there appear sculptures, though now much worn and defaced. And the natives de- clared to the writer of this account, that the more aged people among them remembered to have seen the tops of several pagodas far out in the sea, which, being covered with copper (probably gilt), were particularly visible at sun-rise, as their shining surface used then to reflect the sun's rays; but that now that effect was no longer pioduced, as the copper had since be-

come incrusted with mould and verdigri-.' From these cncumstances it is probable that the magnificent city, of which these appear to be part of the ruins, has been destroyed partly by an earthquake, by which the rock was rent, and partly by a sudden inundation of the sea oc- casioned by this commotion of the earth.*

Pacoda, or Pagod, is also the name of a gold and silver coin, current in several parts of the East Indies.

PAIL, n. s. 1 Span, paila ; Ital. pnco/; Lat. Pail'ful. Spatdla. A wooden vessel to carry water or milk.

Von same cloud cannot chuse but fall by pailfuls.

Shakspeare.

In the country, when wool is new shorn, they set vuits of water in the same room, to increase the weight. Bacon.

New milk that all the winter never fails,

And all the summer overflows the pails. Bryden.

PAILMA'IL, n.s. The same with pall mall, a beater or mall to strike the ball. Violent; boisterous.

A stroke with a pailmail beetle upon a bowl makes it fly from it. iJigby on the Soul.

PAIMBQiUF, an important, though small, post-town and sea-port, the chief place of a sub- prefecture in t],j department of the Lower Loire, France, contaiuuˆg about 4000 inhabitants, with an inferior coun of justice, a drawing school, a maritime syndicate, an agricultural society, and a communal college. This town, which is situated ill a marshy country, on the left bank of the Loire, at tiie commencement of the eighteenth century was only a hamlet, inhabited by a few fishermen ; its situation at the mouth of a great river, its port, where the largest vessels can an- chor, and its proximity to Nantes, have rendered it a very important place. It consists of one well-built street, on a long quay, on which ves- sels disembark their cargoes, that are then con- veyed in lighters as far as Nantes ; here also they receive their cargoes on putting out to sea. Here are manufactories of bricks and tiles, and docks for the building and refitting of ships. The trade of the place consists chiefly in grain. It is thirty miles W. N.W. of Nantes, fifteen south of Pornie, twenty-seven south of Bourgneuf, and 315 south-west of Paris.

PAIN, n. s.ˆ V. a.ˆ Sax. pm ; Fr. peine ;

Painful, Lat. pwna. Punish-

Painfully, adv. \ ment denounced ; pe-

Painfulness, n. s.).nalty; sensation of un-

Painless, adj. easiness or anguish : in

Painstaker, n. s. \ the plural, labor ; work;

Painstaking, adj. J toil: toaftlict; torment; make uneasy or anxious : with the reciprocal jwonoun (little used), to labor: the adjective, adverb, and substantive follow these senses : painless is free from, or void of pain : pains- taking, laboi ious ; industrious.

I am pained at my very heart, because thou hast heard, O my soul, the sound of the trumpet.

Jeremiah iv. 19.

She bowed herself and travailed ; for her pains came upon her. 1 Sani'wl iv. 19.

One laboureth and taketh pains, maketh haste, and is so much the more

behind. Ecclus. xi. 11.

When I thought to know this, it was too painful for me. Psalm Ix.xiii. 16.

T'one paine in a cottage dothe take, W hen t'other trim bowers do make. Tutser. Though the lord of the liberty do pain himself to yield equal justice unto all, yet can there not but great abuses lurk in so absolute a privilege.

Spenser. He soft arrived on the grassy plain. And fairly paced forth with easy pavn. Id.

Paiufulness by feeble means shall be able to gain that which in the plenty of more forcible in- struments is through sloth and negligence lost.

Honker.]\Iany have taken the pains to go out of Europe to reside as friars in America. Abbot.

The painful service, The extreme dangers, and the drops of blood Shed for my thankless country, are requited But with that surname. Shakspeare. Coriolanus.

On pain of death no person being so bold, Or daring hardy, as to touch the list. Shakspeare. Such as sit in ease at home raise a benefit out of their hunger and thirst, that serve their prince and country painfully abroad. Raleigh's Essaiis.

Because Eusebius hath yet said nothing, we will, by way of mulct or pain, lay it upon him. Bacon.

As the pains of the touch are greater than the offences of the other senses ; so likewise are the. pleasures. Jd.

There the princesses determining to bathe them- selves, thought it was so privileged a place, upon pain of death, as nobody durst presume to come thi- ther. Hiduei/. With diamond in window-glass she graved, Erona die, and end this ugly painfulness. hi. AVhen of the dew, which the eye and ear do take. From flow'rs abroad and bring into the brain.

She doth within both wax and honey make ; This work is hers, this is her proper pain. Davies. Robin red-breast painfully Did cover them with leaves.

Children in the Wood. The pains they have taken was very great.

Clarendon. Pain is perfect misery, the worst Of evils ; and, excessive, overturns All patience. Milton's Paradise Lost.

Is there yet no other way, besides These painful passages, how we may

come To death '> Id.

They called him a thousand fools for his pains.

L' Estrange PAINE, (Robert Treat), a signer of the De- claration of American Independence, was born in Boston in 1731. His father had been for some time pastor of a church in Weymouth, near Boston ; but in consequence of ill health, he had removed to the latter place, where he engaged in mercantile pursuits. When fourteen years old, he became a student in Harvard col- lege, and after leaving it, kept, for a period, a public scliool, the fortune of his father having been greatly reduced. He contributed, in this way, to the support of his parents, and likewise made a voyage to Europe, with the view of ac- quiring ampler means for their maintenance. In 1 755 he acted as chaplain to the troops of the provinces at the norihward, having previously studied theology. Not long afterwards, how. ever, he devoted his attention to the law, and during the prosecution of his studies, again kept a school for bis support. On being admitied to the bar, he established himself at Taunton, in

*the county of Bristol, where he resided for many years. In 176*2 he was chosen a delegate from that town to the convention called by the leading men of Boston, in consequence of the abrupt dissolution of the general court by governor Barnard. In 1770 he conducted the prose- cution, on the part of the crown, in the absence of the attorney-general, in the celebrated tnal ot caˆitain Preston and his men, for the part which tliey acted in the well-known Boston massacre. The way in which he discharged that duty cave him great reputation. In 1773 he was elected a representative to the general assembly from Taunton. He was afterwards chosen a member of the continental congress, which met at Phila- delphia in 1774. The following year he was re-elected, and rendered important services as chairman of the committee named for the pur- pose of introducing the manufacture of saltpetre, which was then but imperfectly understood, while the colonies were suffering for want of gunpowder ; also as a member of the committee for the encouragement of the manufacture of cannon and other implements of war. In 1776, 1777, and 1778, he was also in congress, and, in the intervals of their sessions, filled several important offices in Massachusetts. In 1780 he was sent to the convention which met in order to deliberate respecting a constitution for that commonwealth, and of the committee which framed the instrument he was a conspicuous member. Under the government which was or- ganized, he was appointed attorney-general. This office he held until 1790, when he was raised to the*

bench of the supreme court, where he continued to sit till 1804. He was then seventy-three years old. He died May 11, 1814, in the eighty-fifth year of his age. He was a founder of the American academy, esta- blished in Massachusetts in 1780, and continued his services to it until his death.

Paine (Thomas), a celebrated deist and po- litical demagogue of the American and French Revolutions, was born at Thetford, in Norfolk, in 1737, where his father carried on the business of a staymaker. All sects have had their dis- graceful members and offspring. Paine's father, a peaceful and industrious Quaker, connects him with the exemplary sect of the Friends. He received his education at the grammar-school of his native place, but attained to little beyond the rudiments of Latin ; but he seems to have paid considerable attention to arithmetic, and to have evinced an early predilection for the mathema- tics. His first application to business was in the trade of his father, which he followed in London, Dover, and Sandwich, v;here he mar- ried. Afterwards he became a grocer and excise-man at Lewes in Sussex. This situation he lost for some misdemeanor, but was subsequently restored on petition, until finally dismissed for keeping a tobacconist's shop, which was thought to interfere with his official duties. After this, however, so well were the public authorities of his native country disposed to serve him, that one of the commissioners of excise gave him a letter of recommendation to Dr. Franklin, then a colonial agent in London, who recom- mended him to go to America. At this period Vol. XVL

he had first exercised his talents as a writer, by drawing up a pamphlet, recommending the ad- vance of the salaries of excisemen.

His age at this time was thirty-seven. His first engagement in Philadelphia was with Mr. Aitkin, a respectable bookseller, who, in Janu- ary 1775, commenced the Pennsylvania Maga- zine, the editorship of which work became the business of Mr. Paine, for which he had a salary of ►►50 currency a year. According to Mr. Cheetham, this work was well supported by him, and it was here that he published his song upon general Wolfe, which by his biographer is called beautiful ; but taste either in prose or poetry does not appear to us to be among Mr.

Cheetham's biographical qualifications When

Dr. Rush of Philadelphia suggested to Paine the propriety of preparing the Americans for a separation from Great Britain, it seems that he seized with avidity the idea, and immediately commenced his famous pamphlet on that mea- sure, which being shown in MS. to Drs. Franklin and Rush, and Mr. S. Adams, was, after some discussion, entitled, at the suggestion of Dr. Rush, Common Sense.

For this production the legislation of Pennsyl- vania voted him ►►500. ; he also received the degree of M. A. from the university of the same province, and was chosen a member of the American Philosophical Society. We hope the literary honors were communicated in a tongue which he could read ; as his mortal aversion to learned languages is well known. To these rewards was soon afterwards added the office of clerk to the committee for foreign affairs, which, although a confidential situation, scarcely justi- fied him, says one of his friendly biographers, in assuming the title of 'late secretary for foreign affairs,' which he did in the title-page of the Rights of Man.

' Bitterly,' says Mr. Cheetham, ' as he pre- tended to be opposed to titles, when grasping the pillars of the British government he endea- voured to subvert it, he was yet so fond of them, in reality, that he not only assumed to himself a title to w hich he had no claim, but he seems to have gloried in the fraudulent assumption. In his title-page of his Rights of Man, he styles himself ' Secretary for Foreign Affairs to the congress of the United States, in the late war.' The foreign affairs of the United States were conducted by a committee, or board, of which he was secretary, or clerk; clerk more properly, at a very low salary. His business was merely to copy papers, number and file them, and, gene- rally, to do the duty of what is now called a clerk in the foreign department ; he was, however, determined to give himself a higher title. Un- substantial in essence as superadditions to names are, he nevertheless liked them, and seemed to be aware that, universally, they]iossess a charm to which he was by no means insensible. From this, and many other circumstances, we may in- fer that his objections to being himself a lord of the bedchamber, or a groom of the stole, a master of the hounds, or a gentleman in wailing, would not have been stronger than were his wishes to be retained in llie excise.'

While in this office, he published a series of

appeals on the nature of the pending struggle be- tween the colonies and Great Britain, which he denominated the Crisis. In 1779 he was obliged to resign his secretaryship, owing to a controversy with Mr. Silas Deane, whom he de- tected in a fraudulent attempt to profit by con- veying the secret supplies of warlike stores from France. Paine divulged the real state of the case, which was deemed an injurious breach of trust, and one which might aliei\ate the French court from its creditable services to the new re-

public. The next year, however, he obtained the subordinate appointment of clerk to the as- seml)ly of Pennsylvania; and in 1785, on the re- jection of a motion to appoint him historiograplier to the United States, received from congress a donation of 3000 dollars, and 500 acres of highly cultivated land from the state of New York. In 1787 he embarked for France, with a letter of recommendation from Dr. Franklin to the Duke de la Rochefoucault, in which he calls him 'an ingenious honest man, the author of a famous piece entitled Common Sense.' From Paris he returned to England, with a view to the prose- cution of a project relative to the erection of an iron bridge, of his invention, at Rotherham, in Yorksliire. We need hardly add, that tliis ma- terial has since been employed with advantage in bridge-building. In the course of the following year he was arrested for debt, when he was bailed by some American merchants, and went to Paris in 1791 to publish, under the name of Achilles Duchatellet, a tract recommending the abolition of royalty. On returning to this country, he wrote the first part of his Rights of Man, in answer to Mr. Burke's Reflections on the French Revolution. The second part was published early in 1792; and, on the 21st of May that year, a proclamation was issued against wicked and seditious publications, alluding to, but not naming, our author's productions. On the same day the attorney-general commenced a prosecu- tion against him.

On these circumstances his American biogra- phei remarks : ❖❖❖ ' Whatever party and passion, prejudice and malignity, ignorance and injustice, may roundly assert, Paine experienced from the British government a mildness, a forbearance, which no man urging amongst us, in the boldest language of sedition, a dissolution of the union, a destruction of the national government, and a consequent civil war, could expect from the government pf the United States. The first part of the Rights of Man, not a jot less intemperate and rebellious than the second, was published not only with impunity, but without notice from the government. I do not mention the fact in commendation ; Paine ought to have been punished. Alarm, if the government was alarmed, was a poor apology. When did fear beget respect ? When did imbecility avert danger?' (p. 124.)

' The king-'s proclamation was an act of gra- ciousness. The work was clearly seditious in the malice of intention, as well as in the cri- minality of object. As thousands of persons be- sides the booksellers had industriously published it, the law, if the administrators of it had been vindictively inclined, had full scope for opera- tion. The proclamation notified to the kingdom

the diabolical intentions of the author, the ten- dency of his demoralising work, and the penal- ties which all publishers of it incurred of those admirable laws, not which were made for the case, but of those ancient

and free laws which the United States have adopted for the govern- ment of the press. It was therefore preventive, not retributive justice.' (p. 156.)

We continue our memoir, in the language of Mr. Cheetham, to the close of his connexion with this country : ❓❓❓ ' Loyal associations now sprung up to counteract the revolutionary efforts of the revolution clubs. Passion met passion,, until, in the struggle, on the one side for a dis- solution of the government, on the other for its existence, the nation became more and more agitated. In this state of things, Paine published, about August 1792, his Address to the Addressors. This is a miserable lampoon on the orators in par- liament who had spoken on the side of the king's proclamation, as well as on those placemen into whose offices Paine would willingly have crept, before he left England, in the year 1774. He states that a prosecution had been commenced against him ; declares the incompetency of a jury to decide on work so recondite and impor- tant as the Rights of Man ; talks quite philo- sophically upon the propriety of taking the sense of the nation upon it, by polling each man ; pro- nounces the laws in relation to the press as fun- damentally bad, the administration of them by the courts as notoriously corrupt, and denies that the Rights of Man is seditious, for that ' it con- tains a plan for augmenting the pay of the sol- diers, and meliorating the condition of the poor !' While he was preparing this stuff for the press, he published letters to the chairmen of several of the meetings, which were convened to com- pliment the king on his proclamation. He was now evidently awed by the vigor of the govern- ment, and the pariotic spirit of the nation. All over England he was carried about in effigy, with a pair of stays under his arm ; and the po- pulace, staymaicers and all, alternately laughed and swore at the impudent attempts of a stay- maker to destroy their government. His trial was to come on in the following December. Whilst he foresaw, and no doubt dreaded, the imprison- ment which awaited him, a French deputation announced to him in London, in the preceding September, that the department of Calais had elected him a member of the national conven- tion. This was doubly grateful, gi'ateful in the escape which it afforded him from a just punish- ment, without the imputation of cowardice ; grateful in the honor which bloody anarchists had conferred upon him by electing him a mem- ber of their order. Without delay he proceeded to Dover, where a custom-house officer examined his baggage, and finally let him pass. He had not, however, sailed from Dover for Calais more than twenty minutes, when an order was received from the goveinment to detain him. He states his detention and examination at Dover, in a letter to Mr. Dundas, dated Calais, September 15th, 1792.' (p. IGO.)

He arrived in this monthi at Paris ana was an advocate in the convention for the trial of Louis XVI.; but he voted against the sentence o"*

death passed on hiin, i)roposing his imprison- ment during tlse war, and his subsequent banish- ment. This conduct, however, offended the Jacobins, and, towards the close of 1793, he was excluded from the convention on the ground of his being a foreigner (though he had been natu- ralised), arrested, and committed to the prison of the Luxembourg. Just before his confinement he nad finished the first part of his Age of Reason, Deing an investigation of true and fabulous theo- logy ; and, having confided it to the care of his friend Joel Barlow, it was published. He was now taken ill, to which circumstance he ascribes his es- cape from the guillotine ; and on the fall of Robes- pierre was released. In 1795 he published, at Paris, the second part of his Age of Reason, and in May, 1796 addressed to the Council of Five Hundred, The Decline and Fall of the System of Finance in England ; and published his pamphlet entitled Agrarian Justice. lie remained in France till August, 1802, when he embarked for America. Paine had at this time lost his wife (the year following his marriage), and, after a cohabitation of three years and a half, had separated from a second several years before by mutual consent.

Among his other lucubrations in France we find the following sage eulogy on the number fixed upon to constitute the directory : ‘ After preferring a plural to an individual executive, the next question is,’ he observes, ‘ What shall be the number of the plurality V And here we request the grave attention of some of our most accurate calculators of the class of reformists.

‘ Three are too few, either for the variety or the quantity of business. The constitution has adopted five, and experience has shown that this number of directors is sufficient for all the pur- poses, and therefore a greater number would only be an unnecessary expense. The number which France had hit upon (and which I agree with him,’ says Mr. Cheetham, ‘ is quite suflFi- cient), he seems to think, designed by nature for all governments, although human wisdom, in no part of the world, except in France, has as yet adopted it. Nature,’ he says, ‘ has given us exactly Jive senses, and the same number of fingers and toes; pointing out to us, Ly this kindness, the propriety of an executive directory of five, precisely as in France. If one sense,’ he continues, ‘ had been sufiicient, she would have given us no more; an individual executive,’ he therefore infers, ‘ is unnatural and unphilosophical, individuality being exploded by nature.’ Surely tyranny never had a more fawning parasite, freedom a more decided ene- my,’ p. 219.

This writer, ‘ supposing him (Paine) to be a gentleman,’ was employed to engage a room for him at Lovett’s hotel, New York. ‘ On his arrival’ (in 1802), he says, ‘ about ten at night he wrote me a note desiring to see me immedi- ately. I waited on him at Lovett’s, in company with Mr. George Clinton, jun. We rapped at the door ; a small figure opened it within, meanly dressed, having on an old top coat, without an under one; a dirty silk handkerchief loosely thrown round his neck ; a long beard of more than a week’s growth ; a face well carbuncled

fiery as the setting sun, and the whole figure staggering under a load of inebriation. I was on the point of enquiring for Mr. Paine, when I saw in his countenance something of the por- traits I had seen of him. We were desired to be seated. He had before him a small round table, on which were a beef-steak, some beer, a pint of brandy, a pitcher of water, and a glass. He sat eating, drinking, and talking, with as much composure as if he had lived with us all his life. I soon perceived that he had a very re- tentive memory, and was full of anecdote. The bishop of Landaff was almost the first word he uttered, and it was followed by informing us that he had in his trunk a manuscript reply to the bishop’s Apology. He then, calmly mum- bling his steak, and ever and anon drinking his brandy and beer, repeated the introduction to his reply, which occupied him nearly half an hour. This was done with deliberation, the utmost clearness, and a perfect apprehension, intox- icated as he was, of all that he repeated. Scarce- ly a word would he allow us to speak. He always, I afterwards found, in all companies, drunk or sober, would be listened to ; in this regard there were no rig/its of wen with him, no equality, no reciprocal immunities and obli- gations, for he would listen to no one.’

On the 13th of October 1802 he arrived at Baltimore, under the protection of Mr. Jeffer- son. But it appears that curiosity induced no- body of distinction to suffer his approach. While at his hotel he was principally visited by the lower class of emigrants from England, Scot- land, and Ireland, who had there admired his Rights of Man. With them it appears ‘ he drank grog in the tap-room morning, noon, and night, admired and praised, strutting and stagger- ing about, showing himself to all, and shaking hands with all. The leaders of the party to which he had attached himself paid him no at- tention.’ He had brought to America with him a woman, named Madame Bonneville, whom he had seduced away from her husband, with her two sons ; and whom he seems to have treated with the utmost meanness and tyranny.]\Ir. Cheetham gives the following account of his manner of living at this time : ***

‘ In the spring of 1804 he returned to his farm at New Rochelle, Purdy having left it, taking with him the two Bonnevilles, and leaving their mother

in the city. Not chosing to live upon the farm himself, he hired one Christopher Derick, an old man, to work it for him. \ hile Derick was husbanding the farm, Paine and the two young Bonnevilles boarded sometimes with Mr. Wilburn, in Gold-street, in the city, but principally with Mr. Andrew Dean, at New Rochelle. Mrs. Dean, with whom I have con- versed, tells me that he was daily drunk at their house, and that in his few sober moments he was always quarrelling with her, and disturbing the peace of the family. She represents him as de- liberately and disgustingly filthy. It is not sur- prising, therefore, that she importuned her hus- band to turn him out of the house : but owing to Mr. Dean's predilection for his political WTitings, her importunities were, for several weeks, un- availing Constant domestic disquiet very

naturally ensued, which was increased byPaine's peevishness and violence. One day he ran after Miss Dean, a girl of fifteen, with a chair whip in his hand, to whip her, and would have done so but for the interposition of her mother. The enraged Mrs. Dean, to use her own language, ' flew at him.' I'aine retreated up stairs into his private room, and was swiftly pursued by his antagonist. The little drunken old man owed his safety to the bolts of his door. In the fall of the year Mrs. Dean prevailed with her hus- band to keep him in the house no longer. The two Bonnevilles were quite neglected. From Dean's he went to live on his farm. Here one of his first acts was to discharge old Derick, with whom he had wrangled, and to whom he had been a tyrant from the moment of their engage- ment. Derick left him with revengeful thoughts.

' Being now alone, except in the company of the two Bonnevilles, of whom he took but little notice, he engaged an old black woman of the name of Betty to do his housework. , Betty lived with him but three weeks. She seems to have been as intempejrate as himself. Like her master she was every day intoxicated. Paine would accuse her of stealing his New England rum, and Betty would retort by calling him an old drunk- ard. Often, Mrs. Dean informs me, would they both lie prostrate on tlie same tloor, dead- drunk, sprawling and swearing and threatening to fight, but incapable of approaching each other to com- bat. Nothing but inability prevented a battle.' p. 241.

We must not withhold from our readers part of a letter written to Paine from an illiterate brother democrat and infidel, after a sordid quarrel

*which had taken place between them : ***

*‘ From the first time I saw you in this country, to the last time of your departure from my house, my conscience bears me testimony that I treated you as a friend and a brother, without any hope of extra rewards, only the payment of my just demand. I often told many of my friends, had you come to this country without one cent, of property, then, as long as I had one shilling, you should have a part. I declare when I first saw you here I knew nothing of your possessions, or that you were worth ****400 per year, sterling. I, Sir, am not like yourself. I do not bow down lO a little paltry gold at the sacrifice of just principles. I, Sir, am poor, with an independent mind, which perhaps renders me more comfort than your independent fortune renders you. You tell me further that I shall be excluded from any thing, and every thing, contained in your will. All this I totally disregard. I believe, if it was in your power, you would ˆo further, and say you would prevent my obtaining the just and lawful debt that you contracted with me ; for when a man is vile enough to deny a debt, he is not honest enough to pay without being compelled. I have lived fifty years on the bounty and good provi- dence of my Creator, and I do not doubt the goodness of his will concerning me. I likewise have to inform you that I totally disregard the powers of your mind and pen ; for should you, by your conduct, permit this letter to appear in public, in vain may you attempt to print or pub- lish any thing afterwards. Do look back to my*

*past conduct respecting you, and try if you can- not raise one grain of gratitude in your heart towards me for all the kind acts of benevolence I bestowed on you. I showed your letter, at the time I received it, to an intelligent friend ; he said it was a characteristic of the vileness of your natural disposition, and enough to damn the re- putation of any man. You tell me that I should have come to you, and not written the letter. I did so three times ; and the last you gave m*** the ten dollars, aihl told me you were going to have a stove in a separate room, and then you would pay me. One month had passed and 1 wanted the money, but stdl found you with tlie family that you resided with; and delicacy pre- vented me to ask you for pay of board and lodging ; you never told me to fetch the account, as you say you did. When I railed the last time but one, you told me to come on the Sunday follow- ing, and you would pay or settle with me ; I came according to order, but found you particu- larly engaged with the French woman and her two boys, &c.*

‘ You frequently boast of whflt you have done for the woman above alluded to ; that she and her family have cost you 2000 dollars ; and since you came the last time to York you have been bountiful to her, and given her 100 dollars per time. This may be all right. She may have rendered you former and present secret services, such as are not in my power to perform

; but at the same time I think it would be just in you to pay your debts. I know that the poor black woman, at New Rochelle, tliat you hired as a servant, and I believe paid every attention to you in her power, had to sue you for her wages before you would pay her, and Mr. Shute had to become security for you.

‘ A respectable gentleman from New Rochel’e called to see me a few days past, and said that every body was tired of you there, and no one would undertake to board and lodge you. I thought this was the case, as I found you at a tavern, in a most miserable situation. You ap- peared as if you had not been shaved for a fort- night, and as to a shirt it could not be said that you had one on ; it was only the remains of one, and this likewise appeared not to have been off your back for a fortnight, and was nearly the color of tanned leather, and you had the mos disagreeable smell possible ; just like that of our poor beggars in England. Do you not recollect the pains I took to clean and wash you ? That I got a tub of warm water and soap, and washed from head to foot, and this I had to do three times before I could get you clean. I like- wise shaved you and cut your nails, that were like birds’ claws. I remember a remark that I made to you at that time, which was, that you put me in mind of Nebuchadnezzar, who was said to be in this situation. Many of j our toe- nails exceeded half an inch in length, and others had grown round your toes, and nearly as far under as they extended on *.he top. Have you forgotten the pains I took with you when you lay sick wallowing in your own filth .’ I remem- ber that I got Mr. Hooton (a friend of mine, and whom I believe to be one cf the best hearted men in the world) to assist me in removing and*

cleaning you. He told me he wondered how I could no it ; for his part he would not like to do the same again for ten dollars. I told him you were a fellow being, and that it was our duty to assist each other in distress. Have you forgotten ray care of you during the winter you staid with me ? How I put you in bed every niglit, with a warm brick to your feet, and treated you like an infant one month old ? Have you forgotten like- wise how you destroyed my bed and bedding by fire, and also a great coat that was worth ten dollars ?

‘ I remember, during one of your stays at my house, you were sued in the justice’s court by a poor man, for the board and lodging of the French woman, to the amount of about thirty dollars ; but as the man had no proof, and only depended on your word, he was non-suited, and a cost of forty-two shillings thrown upon him. This highly gratified your unfeeling

heart. I believe you had promised payment, as you said you would give the French woman the money to go and pay it with. I know it is customary in England that when any gentleman keeps a lady, that he pays her bo|rd and lodging. You com plam that you suffered with the cold, and that there ought to have been a fire in the parlour. But the fact is, that I expended so much money on your account, and received so little, that 1 could not go to any further expense, and if I had I should not have got you away. A friend of yours that knew my situation told you that you ought to buy a load of wood to burn in the par- lour; your answer was that you should not stay above a week or two, and did not want to have the wood to remove ; this certainly would have been a hard case for you to have left me a few sticks. of wood.

‘ Now, Sir, I think I have drawn a complete portrait of your character ; yet to enter upon every minutia would be to give a history of your life, and to develop the fallacious mask of hy- pocrisy and deception under which you have acted in your political as well as moral capacity of life. There may be many grammatical errors in this letter. To you I have no apologies to make ; but I hope the candid and impartial public will not view them ‘ with a critic’s eye.’ ‘ William Carver.’ ‘ Thomas Paine, New York, Dec. 2, 1806.’

‘ He lived at Ryder’s until 4th of ˆNlay, 1809, about eleven months ; during which time, except the last ten weeks, he got drunk regularly twice a day. As to his person, said Mr. Ryder, we had to wash him like a child, and with much the same coaxing ; for he hated soap and water. He would have the best of meat cooked for him, eat a little of it, and throw away the rest, that he might have the worth of the money which he paid for his board. He chose to perform all the functions of nature in bed. ??? When censured for it he would say, ‘ I pay you money enough, and you shall labor for it.’

‘ He returned,’ says Mr. Cheetham, ‘ to his farm at New Rochelle, taking with him Madame Bonneville and her sons. On his arrival he hired Rachel Gidney, a black woman, to cook for him. Rachel continued with liim about two

months. But as he never thought of paying for services, or for meat, or for any thing else, Rachel had to sue him for five dollars, the amount of her wages. She got out a warrant, on which he was apprehended, and Mr. Shute, one of his neighbours and political admirers, was his bad. The wages were finally obtained, l)ut he thought it hard that he should be sued in a country for which he had done so much !’

It is now time to bring this article to a close. NV e will conclude it with a passage from a letter written by Dr. Manley, who attended this extra-ordinary person in his last illness, in answer to enquiries from Mr.

*Cheetham : ***

‘ During the latter part of his life, though his conversation was equivocal, his conduct wa.s singular. He would not be left alone night or day. He not only required to have some person ^^ith him, but he must see that he or she wa.s tliere, and would not allow his curtain to be closed at any time ; and if, as it would sometimes unavoidably happen, he was left alone, he would scream and holla until some person came to him. When relief from pain would admit, he seemed thoughtful and contemplative, his eyes being generally closed, and his hands folded upon his breast, although he never slept without the assist- ance of an anodyne. There was something remarkable in his conduct about this period (which comprises about two weeks immediately pre- ceding his death), particularly when we reflect that ‘Ihomas Paine was author of the Age of Reason. He would call out during his parox- ysms of distress, without intermission, ‘ O Lord help me, God help me, Jesus Christ help me, () Lord help me,’ &c., repeating the same expres- sion without any the least variation, in a tone of voice that would alarm the house. It was this conduct which induced me to think that he had abandoned his former opinions ; and I was more inclined to that belief when I understood from his nurse (who is a very serious, and, I believe, pious woman) that he would occasionally en- quire, when he saw her engaged with a book, what she was reading, and being answered, and at the same time asked whether she should read aloud, lie assented, and would appear to give particular attention.*

*‘ I took occasion, during the night of the 5th and 6th of June, to test the strength of his opi- nions respecting revelation. I purposely made him a very late visit ; it was a itime which seemed to sort exactly with my errand : it was midnight; he was in great distress, constantly exclaiming in the words above mentioned ; when, after a considerable preface, I addressed him in the following manner, the nurse being present : *** ‘ Mr. Paine, your opinions, by a large portion of the community, have been treated with deference : you have never been in the habit of mixing in your conversation words of course : you have never indulged in the practice of profane swearing : you must be sensible that we are acquainted with your religious opinions as they are given to the world. What must we think of your present conduct ? Why do you call upon Jesus*

- *Tiie book she usually read was IMr. Hobart’s Companion for the Altar.*

Christ to help you ? Do you believe that he can help you ? J)o you believe in the divinity of Jesus Christ >. Come now answer me honestly ; I want an answer as from the lios of a dying man, for I verily believe that you will not live twenty- four hours.' I waited some time at the end of every question ; he did not answer, but ceased to exclaim in the above manner. Again I ad- dressed him : ••• ' Mr. Paine, you have not answered my questions ; will you answer them ? Allow me to ask again ••• Do you believe ? or let me qualify the question ••• do you wish to believe that Jesus Christ is the Son of God ?' After a pause of some minutes, he answered, ' I have no wish to believe on that subject.' 1 then left him, and know not whether he afterwards spoke to any person, on any subject, though he lived, as I before observed, till the morning of the 8th.

' Such conduct, under usual circumstances, I conceive absolutely unaccountable, thougli with diffidence I would remark, not so much so in the present instance ; for, though the first necessary and general result of conviction be a sincere wish to atone for evil committed, yet it may be a question worthy of able consideration wliether excessive pride of opinion, consummate vanity, and inordinate self-love, might net pre- vent or retard that otherwise natural conse- quence ? '

On the 8th of June, 1809, about nine in the morning, died this memorable reprobate, aged seventy-two years and five months.

- *For the sake of England and humanity,' says an able anonymous writer, ' it is to be wished that his impostures and his memory may rot to- gether. In speaking of such a man it is impos- sible to suppress indignation. Decency towards*

the dead may draw the curtain of oblivion over transient obliquities of conduct, but duty to the living demands the records of villany to be honestly severe. The examples of the dead either for warning or imitation are the property of the living ; and the veritable description of virtue and vice is among the genuine 'Rights of Man.' We shall now leave him to his reckoning with those whom his false and presumptuous theories may have conducted to practical misery ; and whom his Rights of Man, and Age of Reason, may have rendered proudly insensible to the concerns of the soul.

PAI'NIM, n. s. & adj. Fr. •••payen. Pagan ; infidel.

Champions bold, Defyed the best ot Painim chivalry To mortal combat, or carriere with lance.

ililcon. The cross hath been an ancient bearing, even before the birth of our Saviour, among the Faiiiims themselves. I'eacham.

Whole brigades one champion's arms o'erthrow. Slay Painims vile that force the fair. Tickle.

The Solymean sultan he o'erthrew. His moony troops returning bravely smeared With Painim blood effused. Philips.

PAINSWICK, a town of Gloucestershire, with a considerable woollen manufacture of white cloths. It abounds with a kind of stone for pavement, remarkable for its beauty. As the town is seated on a high ground, it has a most extensive prospect every way, of great part of the counties of Salop, Hereford, and Monmouth ; of the windings of the Severn, and of Malvern Hills, &c. It is seven miles south-east of Gloucester, and 101 west bv north of London.

PAINTING.

i from Lat. pingo.

Span, pentar.

Paint'er, n. s.

Pain'ting,

Pain'ture. .J To delineate ; re-

present by lines or colors : painture is from the Fr. peinteur, and (rarely) used as synonymous with painting.

Jezebel painted her face and tired her head.

2 Kings ix. 30. Such is his will that paint The earth with colours fresh, The darkest skies with store of starry lights.

Spenser. Hath not old custom made this life more sweet Than that of painted pompl are not these woods More free from peril than the court 1 S/ iakspeare. This is the very painting of your fear ; This is the air-drawn dagger which you said Led you to Duncan. Id. Macbeth.

Painting is welcome ; The painting is almost the natural man : For since dislionour trafficks with man's nature. He is but outside ; penciled figures are Even such as they give out. Id. Timon.

If any such be here Ttiat love this painting, wherein you see me smeared, Let him express his disposition. Shahspeare.

Live to be the shew and gaze o' the time : We'll have thee, as our rarer

monsters are. Painted upon a pole. Id. Macbeth.

Who fears a sentence or an old man's saw. Shall by a painted cloth be kept in awe. Shakspeare.

The lady is disloyal. ††† Disloyal !

††† The word is too good to paint out her wickedness.

Id.

In the placing let some care be taken how the painter did stand in the working. Wotton.

The air Floats as they pass, 'fanned with unnumbered

plumes :

From branch to branch the smaller birds with song

Solaced the woods, and spread their painted wings,

'Till even. Milton's Paradise Lost.

To the next realm she stretched her sway.

For painture near adjoining lay,

A plenteous province. Dryden.

Painting and poesy are two sisters so like, that they lend to each other their name and office ; one is called a dumb poesy, and the other a speakin†† picture. Id. Dnfresnoy.

Beauty is only that which makes all things as they are in their proper and perfect nature ; which the best painters always chuse by contemplating the forms of each. Dryden.

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Till we from an author's words †††paint his very thoughts in our minds, we do not understand him.

Locke.

The church of the annunciation looks beautiful in the inside, all but one

corner of it being covered with statues, gilding, and paint, Addison.

Poets are limners To copy out ideas in the mind : Words are the paint by which their thoughts are

shown. And nature is their object to be drawn. Granville. 'Tis in life as 'tis in painting, Much may be right, yet much be wanting.

Prior.

Gh ! if to dance all night, and dress all day, Charmed the small-pox, or chased old age away, To patch, nay ogle, might become a saint, Nor would it sure be such a sin to paint. Pope. Her charms in breathing paint engage,

Her modest cheek shall warm a future age. Id.

Arts on the mind, like paint upon the face, Fright him, that's worth your love, from your em- brace. Young. The showery arch With listed colours gay, or, azure, gules, Delights and puzzles the beholder's eye, That views the watery brede with thousand shews Of painture varyed. Philips.

Sir Benj. Nay now. Lady Sneerwell, you are severe upon the widow. Come, come, 'tis not that she paints so ill ००० but when she has finished her face, she joins it so badly to her neck, that she looks like a mended statue, in which the connoisseur sees at ०००once that the head's modern, though the trunk's an- tique. Sheridan.

Painting is the art of repi'esenting to the eyes, by means of figures and colors, every ob- ject in nature that is discernible by the sight ; and of sometimes expressing, according to the principles of physiognomy, and by the attitudes of the body, the various emotions of the mind. A smooth surface, by means of lines and colors, ."epresents objects in a state of projection; and may represent them in the most pleasant dress, and in a manner most capable of enchanting the senses. The art of painting is extremely diffi- cult in the execution ; and its merit can only be appreciated by devotees to the art.

Tlie painter who is disting-uished for noble and profound conceptions ; who by means of a perfect delineation, and colors more capable of fixing the attention and dazzling the eye, conveys to the spectators the sentiments with which he himself was inspired ; who animates them with his genius, and makes a lasting impression on their mind ; this artist resembles a poet, and is worthy to share even in the glories of Homer.

PART I.

HISTORY OF THE ART.

Sect. I. ††† Of the Rise and Progress of

Painting in Ancient Times. Painting originally consisted of simple out- lines, and long continued in this state before the expression of relievo, or tlie application of color. The next step in the art was to render the imitation more complete by applying colors ; which was done in the same way that we color maps , and several nations, as the Egyptians, the Chinese, and the different nations of India, tiave never yet vˆiinttid in a better manner.

Even that great improvement in painting, the Claro-Obscuro, was discovered by the Greeks before the invention and proper application of colors.

Plato, who lived 400 years before the Chris- tian era, states, that painting had been practised in Egypt for 10,000 years. Without regarding his Egyptian chronology as accurate, we may consider it as designed to impress us with the very remote antiquity of the art.

The monuments of Egyptian painting with which we are best acquainted, says Winckel- man, are the chests of mummies. These have resisted the injuries of time, and are still sub- mitted to the examination of the curious. The white, made of white lead, is spread over the ground of the piece ; the outlines of the figure are traced with black strokes, and the colors are generally blue, red, yellow, and green, laid on without any mixture or shading. The red and blue prevail most ; and these colors seem to have been prepared in the coarsest manner. Tlie light is formed by leaving those parts of the ground where it is necessary covered with the white lead, as it is formed by the white paper in some of our drawings. This description is suffi- cient to convince us that the whole art of paint- ing in Egypt consisted in coloring ; but every person knows that without tints, and the mix- ture of colors, painting can never arrive at per- fection. Pliny says, that the Egyptian artists painted the precious metals; that is, they var- nished or enamelled them. It is doubtful what this art was, but most probably it consisted in covering gold or silver with a single color. The Egyptians are supposed to have continued this coarse style till the reign of the Ptolemies.

The ancient Persians were so far from excel- ling in the arts, that the paintings of Egypt were highly esteemed among them after they had conquered that country. The only ancient painter of Persia, whose name is preserved, is Manes ; and he is more celebrated for his at- tempt to accommodate the Persian theology of two first principles to the Christian system, than for his skill as a painter. He was famed, how- ever, for drawing straight lines without a ruler. The modern Persians have made no

progress in the art.

In India the art seems to be confined to mon- .strous figures connected with their religion. See Polytheism. And the paintings of Thibet are only remarkable for the fineness of their strokes.

The Chinese seem never to have had the least idea of perspective. Their landscapes have no plan, no variety in the appearance of the clouds, and no diminishing of the objects in proportion to their distance ; and their representations of human beings are caricatures upon the human figure.

It is undoubtedly to the Greeks that we are indebted for the highest cultivation which the imitative arts have known. In sculpture this is even now sufficiently jialpable, since at this day their performances remain not only unequalled but unapproached. The same observation holds with respect to architecture ; and it is probable that, so far as relates to the perfect representation of a single figure, it might be applied also to

their painting ; but there is great reason to con- clude that in many branches of this art they are surpassed by the great names among the moderns. In Egypt the knowledge of that principle which is most desirable in art (selec- tion) never appears to have operated far. When a speˆfic form of character was once adopted, there it remained, and was repeated imchanged for generations. Little action was given to figures, and no attempts at all made at expression. Pliny reports, that the statues executed by the Egyptians in his time differed in no respect whatever from those made by them 1000 years before. Of their paintings a few remain to the present era, but the date of these relics is by no means evident. Two of them (seen at Thebes and described by Bruce) are referred by him to the time of Sesostris (about 700 years B. C), who is said to have restored and embellished that city; but this is mere conjecture. He remarks of these paintings, that they might be compared with good sign- paintings of his day.

We cannot here detail the reasons and the coincidence of fortunate circumstances which raised the Greeks to be the arbiters of form. ‘ The standard they erected,’ says Fuseli, ‘ the canon they framed, fell not from heaven : butx as they fancied themselves of divine origin, and religion was the first mover of their art, it fol- lowed that they should endeavour to invest their authors with the most perfect form ; and, as man possesses that exclusively, they were led to a complete and intellectual study of his elements and constitution ; this, with their climate, which allowed that

form to grow, and to show itself to the greatest advantage ; with their civil and political institutions, which established and en- couraged exercises and manners best calculated to develope its powers ; and above all, that sim- plicity of their end, that uniformity of pursuit, which in all its derivations retraced the great principle from which it sprang, and, like a cen- tral stamen, drew it out into one immense con- nected web of congenial imitation ; these, I say, are the reasons why the Greeks carried the art to a height which no subsequent time or race has been able to rival or even to approach. Great as these advantages were, it is not to be supposed that nature deviated from her gradual progress in the development of human faculties, in favor of the Greeks. Greek art had her in- fancy, but the graces rocked her cradle, and love taught her to speak. If ever legend de- served our belief, the amorous tale of the Corin- thian maid, who traced the shade of her de- parting lover by the secret lamp, appeals to our sympathy to grant it ; and leads us at thfe same time to some observations on the first m.echani- cal essays of painting, and that linear method which, though passed nearly unnoticed by Winckelman, seems to have continued as the basis of execution, even when the instrument for which it was chiefly adapted had long been laid aside.

‘ The etymology of the word used by the Greeks ro express painting being the same with that which they employ for writing, makes the similarity of tool, materials, method, almost

certain. The tool was a style or pen of wood or metal ; the materials a board, or a levigated plane of wood, metal, stone, or soina prepared compound ; the method, letters cr lines.

‘ The first essays of the art were skiagrams, simple outlines of a shade, similar to those which have been introduced to vulgar use by the students and parasites of physiognomy, under the name of Silhouettes; without any other addition of character or feature but what the profile of the object, thus delineated, could afford.

‘ The next step was the monogram, outlines of figures without light or shade, but with some addition of the parts within the outline, and from that to the monochrom, or paintings of a single color on a plane or tablet, primed with white, and then covered with what they called punic wax, first amalgamated with a tough resinous pigment, generally of a red, sometimes dark brown, or black color. In, or rather through, this thin inky ground, the outlines were traced with a firm but pliant style, which they called oestrum ; if the traced line happened to be incorrect or wrong, it was gently effaced with the finger or with a sponge, and easily replaced by a fresh one. When the whole design was settled, and no farther alteration intended, it was suffered to dry, was covered, to make it permanent, with a brown encaustic

varnish, the lights were work- ed over again, and rendered more brilliant with a point still more delicate, according to thte gradual advance from mere outlines to some indications, and at last to masses of light and shade, and from those to the superinduction of different colors, or the invention of the poly- chrom, which, by the addition of the pencil to the style, raised the mezzotinto or stained draw- ing to a legitimate picture, and at length pro- duced that vaunted harmony, the magic scale of Grecian color.

‘ If this conjecture, for it is not more, on the process of linear painting, formed on the evi- dence and comparison of passages always un- connected, and frequently contradictory, be founded in fact, the rapturous astonishment at the supposed momentaneous production of the Herculanean dancers, and the figures on the earthen vases of the ancients, will cease; or rather, we shall no longer suffer ourselves to be deluded by palpable impossibility of execution: on a ground of levigated lime, or on potter’s ware, no velocity or certainty attainable by human hands can conduct a full pencil with that degree of evenness equal from beginning to end with which we see those figures executed, or, if it could, would ever be able to fix the line on the glassy surface without its flowing : to make the appearances we see possible, we must have recourse to the linear process that has been de- scribed, and transfer our admiration to the per- severance, the correctness of principle, the ele- gance of taste that conducted the artist’s hand, without presuming to arm it with contradictory powers : tlie figures he drew, and we admire, are not the magic produce of a winged pencil, they are the result of gradual improvement, ex- quisitely finished monochroms.

‘ How long the pencil continued only to

assist, when it began to engross, and when it at last entirely supplanted the cestrum, cannot, in the perplexity of accidental report, be ascer- tained. ApoUodorus, in the ninety-third olym- piad, and Zeuxis in the ninety-fourth, are ►►aid to have used it with freedom and with power. The battle of the Lapithae and the Centaurs, which, according to Pausanias, Parrhasius paint- ed on the shield of the Minerva of Phidias, to be chased by Mys, could be nothing but a mono- chrom, and was probably designed with the cestrum, as an instrument of greater accuracy. Apelles and Protogenes, nearly a century after- wards, drew their contested lines with the pencil ; and that alone, as delicacy and evanes- cent subtlety w-ere the characteristics of those lines, may give an idea of their mechanic ex- cellence. And yet in their time the diagraphic process, which is the very

same with the linear one we have described, made a part of liberal education. And Pausias of Sicyon, the con- temporary of Apelles, and perhaps the greateit master of composition amongst the ancients, when employed to repair the decayed pictures of Polygnotus at Thespias, was adjudged by general opinion to have egregiously failed in the attempt, because he had substituted the pencil for the cestrum, and entered a contest for su- periority with weapons not his own.

‘ Here it might seem in its place to say some- thing on the encaustic method used by the an- cients ; were it not a subject by ambiguity of expression and conjectural dispute so involved in obscurity that a true account of its process must be despaired of: the most probable idea we can form of it is, that it bore some resemb- lance to our oil-painting, and that the name was adopted to denote the use of materials, inflam- mable or prepared by fire, the supposed durabi- lity of which, whether applied hot or cold, autiiorised the terms kviKavue and inussit.’ See our article Encaustic Painting.

The ancient inhabitants of Etruria were among the first who connected the arts with the study of nature. In some of their monuments, which still remain, there is to be observed a first style, which shows the art in its infancy ; and a second which, like the works of the Flo- rentine artists, shows more of greatness and exao’geration in the character than precision or beauty. Pliny says that painting was carried to great perfection in Italy before the foundation of Rome ; but it appears that even in his time the painters of Etruria were held in great repu- tation. The only Etnarian paintings which remain have been found in the tombs of the Tarquins. They consist of long painted friezes, and pilasters adorned with huge figures, which occupied the whole space from the base to the cornice. These paintint;s are executed on a ground of thick mortar, and many of them are in a state of high preservation.

Winckelman is of opinion that the Greek colonies established at Naples and Nola had at a very early period cultivated the imitative arts, and taught them to the Campanians established in that coutiLry. He considers as works purely Campanian certain medals of Capua and Teanum, cities of Campania into which the CJreek colo-

nies never penetrated. But there have been discovered, adds he, a great number of Campa- nian vases covered with painting. The desiijn of the greatest part of these vases, says he, in such, that the figures might occupy a distin- guished place in the works of Raphael. Those vases, when we consider that this kind of work admits of no correction, and that the stroke which forms the outline must remain as it is originally traced, are wonderful proofs of the perfection of the art among the ancients. But the count de Caylus is persuaded that the Cam- panian vases are of Greek

origin.

The name of Phidias is as familiar to every man of education as his own. That of Panaenus, his brother, is known only to the few who trace back to their starting-post the early and obscure footsteps of the muse of painting. Tlie per- formances of Phidias, particularly those in the temple of Alinerva, called the Parthenon, re- main even to the present day a source of admira- tion, of wonder, and envy. Those of Panaenus exhibited his art still in its infancy, and have been for many revolving ages buried in the stream of oblivion. ••• To this man, however, Greece appears to have been indebted for an anxious zeal, at least, to advance the art he prac- tised to a more equal station with sculpture ; and in his time there were prizes established both at Delphos and Corinth, for its encourage- ment, whereat he himself contended, but was excelled by Timogras of Chalcis.

The first great name of that epoch of the pre- paratory period, when facts appear to overbalance conjecture, is that of Polygnotus of Thasos, who painted the Pcecile at Athens, and the Lesche, or public hall, at Delphi. Of these works, but chiefly of the two large pictures at Delphi, which represented scenes subsequent to the eversion of Troy, and Ulysses consulting the spirit of Tiresias in Hades, Pausanias gives a minute and circum- stantial detail ; by which we are led to surmise that what is now called composition was totally wanting in them as a whole ; for he begins his description at one end of the picture, and finishes it at the opposite extremity ••• a senseless method, if we suppose that a central group, or a principal figure to which the rest were in a certain degree subordinate, attracted the eye; it appears as plain that they had no perspective, the series of figures on the second or middle ground being described as placed above those in the fore- ground, and the figures in the distance above the whole : the honest method, too, which th.e painter chose of annexing to many of his figures their names in writing, savors much of the infancy of painting. This circumstance, however, we should be cautious in imputing either to ignorance or imbecility, since it might rest on the tirm base of permanent principles. The genius of Polygnotus was, more than that of any other artist before or after, a public genius, his works monumental works, and these very pictures the votive offer- ings of the Gnidians. Polygnotus was, in fact, a man endowed with uncommon ability, and cer- tainly advanced his art very far in point of ex- pression and action in his figures, and in ideal coloring. Of the truth of t!us observation, his figure of the demon Eurynomus, in one of the

pictures abovementioned, namely, Ulysses con- sulting the shade of Tiresias in Hades, affords sufficient proof. ‘ His color,’ says Pausanias, ‘ is between black and azure, like that of the files which infest meat ; he shows his teeth, and sits upon the skin of the vulture.’ Lucian and I’liuy both speak in high commendation of this artist ; U\e former, in particular, invoking his aid to finish his perfect woman, exclaims : ❖❖❖ ‘ Polyg- notus shall open and spread her eyebrows, and give her that fine, glowing, decent blush, which beautifies so irresistibly his Cassandra. lie also shall give her a flowing, unconstrained attire, which, with all its delicate wavings, shall partly adhere to her body and partly flutter in the wind.’

Polygnotus, says Aristotle, improves the model. His invention reached the conception of undescribed being in the demon Eurynomus; filled the chasm of description in Theseus and Pirithous, in Ariadne and Phaedra ; and im- l>roved its terrors in the spectre of Tityus; whilst color to assist it became in his hand an organ of expression ; such was the prophetic glow which still crimsoned the cheeks of his Cassandra in the time of Lucian. The improve- ments in painting which Pliny ascribes to him, of having dressed the heads of his females in variegated veils and bandeaus, and robed them in lucid drapery ; of having gently opened the lips, given a glimpse of the teeth, and lessened the former monotony of face; such improvements were surely the most trifling part of a power to which the age of Apelles and that of Quintilian paid equal homage : nor can it add much to our esteem for him, to be told by Pliny that there existed, in the portico of Pompey, a picture of his with the figure of a warrior in an attitude so ambiguous as to make it a question whether he were ascending or descending. Such a figure could only be the offspring of mental or technic imbecility, even if it resembled the celebrated one of a Diomede carrying off the palladium with one, and holding a sword in the other hand, on the intaglio inscribed with the name of Dios- corides.

With this simplicity of manner and materials the art seems to have proceeded from Polygnotus, Aglaophon, Phidias, Panaenus, Colotes, and Evenor, the father of Parrhasius, during a period of more or less disputed olympiads, till the ap- pearance of Apollodorus the Athenian, who ap- plied the essential principles of Polygnotus to the delineation of the species, by investigating tlie leading forms that discriminate the various classes of human qualities and passions. The acuteness of his taste led him to discover that as- all mec were connected by one general form, sc they were sepa-ated each by some predominant power, which fixed character, and bound them to a class: that, in proportion as this specific powe- partook of individual peculiarities, the farther it was removed from a share in that harmoniou;- system wiiich constitutes nature, and consists ir a due balance of all its parts: thence he drew his line of imitation, and personified the centra! form of the class to which his object belonged . and to which the

rest of its qualities administered without being absurlxd : agility was not suffered

to destroy firmness, solidity, or Mˆeight; nor strength and weight agility ; elegance did not degenerate to effeminacy, or grandeur swell to hugeness ; such were his principles of style : his expression extended them to the mind, if we may judge from the two subjects mentioned by Pliny, in which he seems to have personified the characters of devotion and impiety ; that in the adoring figure of a priest, perhaps of Chryses, expanding his gratitude at the shrine of the god whose arrows avenged his wrongs and restored his daughter ; and this, in the figure of Ajax wrecked, and from the sea-swept rock hurling defiance unto the murky sky. As neither of these subjects can present themselves to a painter's mind without a contrast of the most awful and the most terrific tones of color, magic of light and shade, and unl:mited command over the tools of art, we may with Pliny and with Plutarch consider Apollodorus as the first assertor of the pencil's honors, as the first colorist of his age, and the man who opened the gates of art which the Heracleot Zeuxis entered. From the essential style of Polygnotus, and the specific discrimination of Apollodorus, Zeuxis, by com- parison of what belonged to the genius and what to the class, framed at last that ideal form, which, in his opinion, constituted the supreme degree of human beauty, or, in other words, embodied possibility, by uniting the various but homogeneous powers scattered among many, in one ob- ject, to one end. Such a system, if it originated in genius, was the considerate result of taste refined by the unremitting perseverance with which he observed, consulted, compared, and selected, the congenial but scattered forms of nature.

Quintilian remarks of Zeuxis that he con- sidered the poetic unity of character adopted by Homer, in the descriptions of his heroes, as his model ; giving to each individual he painted the peculiar distinction of a class. It is said, and the anecdote bears on the remark, that, previously to commencing a picture of Juno for her temple at Agrigentum, he requested to see all the most beautiful maidens of the city naked, and from them selected five whose shape he most admired ; purposing to exhibit the most perfect combina- tion of female forms, by selecting and adopting the most beautiful parts of each. Of the coloring employed by Zeuxis, little is known with cer- tainty ; but it may doubtless be inferred with some fairness that it rivalled the excellencies of his design ; and, from his alleged method of painting monochroms on a black ground, adding the lights in white, we may deduce that he un- derstood the extension of light and shade to masses.

Timanthes, Eupompus, Androcides, and Par- rhasius the Ephesian, all flourished during the same era with Zeuxis. The latter, however, is the only one who may be said to have rivalled that eminent artist; and indeed it is

hard to tell which of the two bore the palm, or most self- sufficiently claimed it. The story related by Pliny of their contest is not decisive on the former point, since those pictures had little to do with the real excellencies of either artist, ex- cept in the one quality of coloring. Zeuxis painted grapes; and, on exhibitiiig his picture,

**.]ie birds came with the greatest avidity to pluck them. The rival artist then proceeded to dis- play his performance, and, on being introduced to the spot, Zeuxis exclaimed, ‘ Remove your curtain that we may see the painting.’ The cur- tain was the painting, and Zeuxis confessed him- self vanquished, exclaiming, ‘ Zeuxis has deceived birds, but Parrhasius has deceived Zeuxis him- self.’ Now, how does this fact, if it be regarded as one, tally with the limitation of Pliny as to the colors used by the ancient artists ? A cur- tain may, it is true, be of a dull color, and such a one might possibly have been imitated by Parrhasius with such materials, and so perfectly, as to have deceived Zeuxis: but it is to be pre- sumed that the luscious transparency, color, and brilliancy of the grape, in those days, were not very widely different from what it now exhibits; and those pure qualities can only be represented by the purest and most perfect of colors. Par- rhasius is reported to have had a surer eye than this celebrated rival for proportion and symmetry : he circumscribed the ample style of Zeuxis, and, by subtle examination of outline, established that standard of divine and heroic form which raised him to the authority of a legislator from whose decisions there was no appeal. He gave to the divine and heroic character, in painting, what Polycletus had given to the human in sculpture, by ‘his Doryphorus, a canon of pro])ortion. Phidias had discovered in the nod of the Ho- meric Jupiter the characteristic of majesty, in- clination of the head : this hinted to him a higher elevation of the neck behind, a bolder protrusion of the front, and the increased perpendicular of the profile. To this conception Parrhasius fixed a maximum ; that point from which descends the ultimate line of celestial beauty, the angle within which moves what is inferior, beyond which wiiat is portentous. From the head conclude to the proportions of the neck, the limbs, the ex- tremities ; from the father to the race of gods ; all the sons of one, Jupiter ; derived from one source of tradition. Homer ; formed by one artist, Phidias: on him measured and decided by Parrhasius. In the simplicity of this princi- ple, adhered to by the succeeding periods, lies the uninterrupted progress, and the unattainable superiority, of Grecian art. With this preroga- tive, which evidently implies a profound as vˆell as general knowledge of the parts, how are we to reconcile the criticism passed on the inter- mediate parts of his forms as inferior to their outline ? or how could Winckelman, in contra-*

diction with his own principles, explain it, by a want of anatomic knowledge ? how is it possible to suppose that he who decided his outline with such intelligence that it appeared ambient, and pronounced the parts that escaped the eye, should have been uninformed of its contents ? Let us rather suppose that the defect ascribed to the intermediate forms of his bodies, if sucii a fault there was, consisted in an aflTectation of smoothness bordering on insipidity, in something effeminately voluptuous, which absorbed their character and (he idea of elastic vigor ; and this Euphranor seems to have hinted at, when, in comparing his own Theseus with that of Par- rhasius, he pronounced the Ionian's to have fed

on roses, his own on flesh : emasculate soflness was not in his ojjinion the proper companion of the contour, or flowery freshness of color aa adequate substitute for the sterner tints of heroic form.

*None of the ancients seem to have united or wished to combine, as man and artist, more qualities seemingly incompatible than Par- rhasius:*********the volubility and ostentatious inso- lence of an Asiatic with Athenian simplicity and urbanity of manners; punctilious correctness with blandishments of handling and luxurious color; and with sublime and pathetic conception a fancy libidinously sportive. If he was not the inventor, he surely was the greatest master of allegory, supposing that he really embodied, by signs universally comprehended, that image of the Athenian AHMOS or people, which was to combine and to express at once its contradictory qualities. Perhaps he traced the jarring branches to their source, the aboriginal moral principle of the Athenian character, which he made intuitive. This supposition alone can shed a dawn of pos- sibility on what else appears impossible. We know that the personification of the Athenian ATjfiog was an object of sculpture, and that its images by Lyson and Leochares were publicly set up; but there is no clue to decide whether they preceded or followed the conceit of Par- rhasius. It was repeated by Aristolaus, the son of Pausias. The decided forms of Parrhasius, Timanthes the Cythnian, his competitor for fame, attempted to inspire with mind and to animate with passions. No picture of antiquity is more celebrated than his immolation of Iphigenia in Aulis, painted, as Quintilian informs us, in contest with Colotes of Teos, a painter and sculptor from the school of Phidias ; crowned with victory at its rival exhibition, and since the theme of unlimited praise from the orators and historians of antiquity, though the solidity or justice of their praise relatively to the irt has been questioned by modern criticism.*

The art now continued to advance with rapid strides. Nature was the guide ; and to develope her various charms, in expression, shape, and color, the object of the artists. The leading principle of Eupompus may be traced in the advice which he gave to Lysippus, as preser'ed by Pliny, whom, when

consulted on a standard of imitation, he directed to the contemplation of human variety in the multitude of characters who were passing by. ‘ Behold,’ said the painter, ‘ behold my models ! From nature, not from art, by whomsoever wrought, must he study who seeks to acquire reputation and extend the scope of his art.’ The doctrine of Eupompus was adopted by Pamphilus the Amphipolitan, the most scientific artist of his time, and by him transmitted to Apelles of Cos, or, according to Lucian, of Ephesus, his pupil. This wonderfu. person was, if we may credit the tradition res- pecting him, gifted with such a combination of natural and acquired endowments as never, per- haps, either before or since, fell to the lot of another individual. In addition, he had the happiness to live at that period v herein the genius of his country had reached its highest point of elevation. The name of Ajiil’S in

Pliny is the synoiiyine of unrivalled and unat- tainable excellence ; but, in our estimate of his talents, \e must candidly consider what modifi- cations may be requisite on an enumeration of his actual works. It is very difhcult to ascertain how far real value may be attached to the pane- gyrics on works of art. These will always be bestowed, in the highest strain, on the best works of the writer’s time : and thus we observe that, at all periods, contemporary authors have expressed the same degrees of approbation, and in the same terms, of the pictures they have seen produced ; whilst we know that, as art was slow in its progress, it is impossible that in every stage it could have merited equal commenda- tion. The works of Apelles, so fiir as it is pos- sible to comprehend their nature, exhibit neither the deepest pathos of expression, the widest sphere of comprehension, nor the most acute discrimmation of character: liis great prerogative consisted, perhaps, more in the unison than in the extent of his powers : he knew better what his capabilities could achieve, and what lay be- yond them, than any other artist. Grace of con- ception, and refinement of taste, were his ele- ments, and went hand in hand with grace of execution, and completeness in finish, irresistible when found united. The Venus of Apelles, or, as it may rather be called, the personification of the birthday of Love, was esteemed as the most splendid achievement of art ; the outline of the goddess baffled every attempt at improvement, whilst imitation shrunk from the purity, the force, the brilliancy, the evanescent gradations of her tints. The pictures produced by this con- summate artist appear to have been numerous, and the reader will find, in Pliny, lib. xxxv. cap. 10, a pretty extensive list. A brief enumeration of some of them will serre to convey a just idea of the class of .subjects generally chosen by him.

The portraits painted by hira both of Alex- ander the Great and his father Philip were numerous ; some of them single, some accom- panied by other figures. Alexander launching thunder, in the temple of Diana at Ephesus, has been greatly extolled for its effect and the bold- ness of its relief, ‘ the hand which was raised appearing to come forward, and the lightning to be out of the picture.’ In another portrait of the same prince he v.as represented in a triumphal chariot, and near him the figure of war, with his hands tied behind his back.

This, and another Alexander, accompanied by Castor and Pollux, and a figure of \ ictory, were presented by Augustus to the forum.

*Many other portraits are alluded to : namely, Antiochus, king of Syria ; Antigonus ; Archelaus, with his wife and daughter; Abron, an efl’emi- nate debauchee ; Clatus, on horseback armed (except his head), with an attendant delivering his helmet to him ; and Megabysus, a priest of the temple of Diana at Ephesus, sacrificing, in ’”********is pontifical vestments. In fanciful subjects we find : ******** Diana attending a sacrifice, surround- ed by her nymphs ; Neoptolemus, son of Achil- les, on horseback, contending with Persians ; Hercules, with his back towards the observer, u.ud his head turned round so as to show his tace ; and lastly his renowned picture of X’enus*

rising from the sea, already mentioned, which, being taken to Rome, was dedicated by Augus- tus in the temple of Julius Caesar ; and upon which several Greek epigrams are to be found in the Anthologia.

‘ The refinements of the art were by Aristides of Thebes applied to the mind. The passions which history had organised for Tiinanthes, Aristides caught as they rose from the breast or escaped from the lips of nature herself; his volume was man, his scene society : he drew the subtle discriminations of mind in every stage of life, the whispers, the simple cry of passion, and its most complex accents. Such, as histo y informs us, was the suppliant whose voice you seemed to hear, such his sick man’s half extin- guished eye and laboring breast, such the sister dying for her brother, and, above all, the half- slain mother shuddering lest the eager babe should suck the blood from her palsied nipple. This picture was probably at Thebes, when Alexander sacked that town ; what his feelings were when he saw it we may guess from his sending it to Pella. Its expression, poised be- tween the anguish of maternal affection and the pangs of death, gives to commiseration an image which neither the infant piteously caressing his slain mother in the group of Epigonus, nor the absorbed feature of the Niobe, nor the struggle of the Laocoon, excite. Timanthes had marked the limits that discriminate terror from the excess of horror; Aristides drew the line that separates it from disgust. His subject is one of those that touch the

ambiguous line of a squeamish sense. ••• Taste and smell, as sources of tragic emotion, and, in consequence of their power, command- ing gesture, seem scarcely admissible in art or on the theatre, because their extremes are more nearly allied to disgust, and loathsome or risible ideas, than to terror. The prophetic ranee of Cassandra, who scents the prepared murder of Agamemnon at the threshold of the ominous hall ; the desperate moan of Macbeth's queen on seeing the visionary spot still unefTaced infect her hand ••• are images snatched from the lap of terror ••• but soon would cease to be so were the artist or the actress to enforce the dreadful hint with indiscreet expression or gesture- This, completely understood by Aristides, was as com- pletely missed by his imitators, Raffaelle in the Morbetto, and Poussin in his Plague of the Philistines. In the group of Aristides our sym- pathy is immediately interested by the mother, still alive though mortally wounded, helpless, beautiful, and forgetting herself in the anguish for her child, whose situation still suffers hope to mingle with our fears : he is only approaching the nipple of the mother. In the group of Ilaffaelle the mother dead of the plague, herself an object of apathy, becomes one of disgust, by the action of the man, who bending over her, at his utmost reach of arm, with one hand removes the child from the breast, whilst the other, applied to his nostrils, bars the effluvia of death. Our feelings alienated from the mother, come too late even for the child, who by his langour already betrays the mortal symptoms of the poison he imbibed at the parent corpse. It is curious to observe the permutation of ideas which takes

place, as imitation is removed from the sources of nature : Poussin, not content with adoptintˆ the group of llatfaelle, once more repeats the loathsome attitude in the same scene ; he forgot, in his eagerness to render the idea of contagion still more intuitive, that he was averting our feelings with ideas of disgust.'

At the same era flourished Protogenes of Rhodes, towards whom the generous conduct of Apelles deserves particular attention. Protogenes nad painted a picture of Jalysus, which so de- lighted Apelles that he sailed to Rhodes on pur- pose to visit his accomplished contemj30rary. There, finding him in poverty and obscurity, he is reported to have bought several of the performances of Protogenes with the avowed intention of selling them as his own, and thus succeeded in exciting the notice of the people of Rhodes towards the abilities of their fellow citizen, who thence rose from his hitherto humble situation to fame and fortune. The vsˆell known friendly contest of Apelles and Protogenes respecting the lines has been

described elsewhere, and stands as a fact on undeniable testimony. The tablet whereon they were drawn, having been taken to Rome, was there seen by Pliny himself, who speaks of it as having the appearance of a large blank surface, the extreme delicacy of the lines rendering them invisible except on close inspection. They were drawn with different colors ❖❖❖ one upon, or rather within the other. Judging from Pliny's account it might be ima- gined that all the beauty lay in the extreme delicacy of the points which had been used, and of the hands which had applied them ; but it is reasonable to suppose that the first direction of the line might have some principle of beauty for its guide, by which, as well as by the neatness of its execution, Protogenes was immediately moved to the declaration, that none but Apelles could have drawn it.

In comparing the performances of modern painters with the character of those the names and description of which ancient authors have handed down to us, it will appear pretty clearly that the Greek artists surpassed the moderns in sen- timent, in invention or imagination, in expres- sion, in position of figures, in proportion, and contour. With regard to color, although they are remarkable for vividness, the case is by no means so evident. Pliny allows them the use of but four, and yet at other times makes allu- sions which palpably imply their means of that kind to be far more extensive. The use of oils has however given to moderns a decided advan- tage in this particular.

In A. R. 259, and A. A. C. 494, Appius Claudius consecrated a number of shields in the temple of Bellona, which contained in basso relievo the portraits of his family. Tiiis exam- ple was followed ; and in process of time it was common among the Romans to place those images in private houses. The execution in basso relievo is a proof that they had an idea of painting, at least with one color. As lonsj as the Romans employed artists of other nations, they had little desire to cultivate the arts ; but about the year of Rome 450, and 303 years before Christ, one of the Fabii employed himself in

painting. He painted the temple of Safet) , and his works remained till that temple was burnt, in the reign of Claudius. The example of Fabius, surnamed Pictor from his profession, did not excite his fellow citizens to imitation. A century and a half elapsed before the tragic poet Pacuvius, nephew of Ennius, painted the temple of Hercules in the forum boarium. The glory which he had acquired by his dramatic works shed some lustre on the art which he exercised ; bui did not confer on it that respect which could recommend it to general practice. The paintings of Fabius were the recreations of his youth ; those of Pacuvius the amusements of his old age ; but painting is a difficult art, which requires a man's whole time and attention to be solely devoted to it.

There were in fact no eminent painters at Rome till the time of the emperors ; but, as the national spirit was changed, the profession of the fine arts acquired more respectability. The Romans, during the time of the republic, were animated with the spirit of liberty and the de- sire for conquest. When these two passions were weakened, the love of the arts obtained among them. As a proof of this, Nero himself gloried in being an artist. A Colossian picture of 1'20 feet was painted at Rome by his com- mand, which was afterwards destroyed by light- ning. The name of the painter is not recorded, but this is the only painting on cloth mentioned by ancient authors.

The paintings of the ancient artists were either moveable, or on the ceilings or compartments of buildings. According to Pliny, the most emi- nent were those who painted moveable pictures. The latter were either on fir wood, larch, box- wood, or canvas, sometimes on marble. When they employed wood, they laid on first a white ground. Among the antiquities of the Hercu- laneum are four paintings on white marble. Their immoveable paintings on walls were either in fresco, or on dry stucco in distemper. Indeed all the ancient paintings may be reduced to, 1st, fresco painting; 2dly, water color, or distemper painting on a dry ground ; and, Sdly, encaustic painting. The ancient fresco paintings appear to have been always on a white stucco ground, the colors inlaid very deep, and the drawing much more bold and free than any similar performance of modern art. The out- lines of the ancient paintings on fresco were probably done at once, as appears from the depth of the incision, and the boldness and freedom of the design, equal to the care and spirit of a penciled outline.

In general the ancients painted on a dry ground, even in their buildings, as appears from the Herculanean antiquities, most of which are executed in this manner. At Rome and Naples the first (deepest) coat is of true Puzzolana, of the same nature with the terras now used in mortar, required to keep out wet, about one finger thick : the next of ground marble or alabaster, and sometimes of pure lime or stucco, in thickness about one- third of the former. Ipon tliis they' appear to have laid a coat of black, and then another of red paint ; on which last the subject itself was executed. Such seems to have been

their method of painting on walls ; but in their moveable pictures, and in the performance of their first artists, and where the etfects of shade and light were necessary, tliey doubtless used white. The colors employed they seemed to have mixed up with size, ot which they pre- ferred that made by

boiling the ears and genitals of bulls. This appears to have made the colors so durable and adhesive, that the ancient paintings lately found bear washing with a soft cloth and water; and sometimes even diluted aquafortis is employed to clean their paintings on fresco. Pliny says, that glue, dissolved in vineaar and then dried, is not again soluble.

The ancient colors, we have said, were vivid : it is obvious also that they were remarkably en- during, from the fact of the Greek paintings having existed uninjured, and become objects of admiration to the Romans several ages after they were executed. They were in the habit of employing a sort of varnish called atramentum, which served to secure their paintings from the influence of the atmospheric air.

Whether the art of composition, at least in the scientific way now practiced, was ever under- stood by them, or whether they possessed any knowledge whatever of the laws of chiaro-scuro, is wrapped up in doubt and mystery which it is next to impossible any opportunity will occur of unravelling. The accounts of these perform- ances by ancient writers do not seem to have sprung from any practical acquaintance with the rules of the art, and hence they are, as will be readily imagined, very vague and unsatisfactory to the painter. According to the light which is thus afforded us we are led to conclude that the chief aim of the Greek artists was to impress on the mind of the spectator in the most energetic way the effect of one particular image ; we do, it is true, occasionally encounter descriptions of pictures containing many figures, but in general the subject is confined to the introduc- tion of two or three. Nothing is said by these writers of what we term background, and little on the contrasts of light and shade, &:c. That they had some knowledge of this kind, however, is apparent from an observation of Plutarch, namely, that ‘ painters heighten the brilliancy of light colors by opposing them to dark ones, or to shades ;’ and from another of Pliny, who, speaking of painters in the monochromatic style, adds : ‘ In process of time the art assumed new powers, and discovered light and shadow, by gradating which the colors are alternately kept down or heightened. Afterward splendor was added, which was different from light, and which, being a medium between light and shade, was denominated tonon ; while the union of colors, and transition from one to another, they called harraogen ;’ lib. xxxv. c. 5. Hence we find that the great requisites for the science of chiaro-scuro, viz. contrast, tone, and harmony, were comprehended by them ; that the various degrees of light and shade, distinctly and in com- bination, were duly felt ; and that the value of middle or half tint was perceived and attended to. Led away by these facts, M. du Bos and ethers have concluded that chiaro-scuro was scientifically comprehended and practised by

them. It will not fail, however, to strike tlie artist that every thing stated by

Pliny to have been known by the ancient artists is resolvable into that which is requisite for the due execution of a single figure on a plain ground, and in the most simple style of execution. In the best of the paintings found at llerculaneum there is exhibited an unusually skilful management of chiaro-scuro in the reduction of tone on parts, both of the flesh and drapery, but it is inconclu- sive on the general pohit at issue.

With respect to their knowledge of perspec- tive similar uncertainty appears to exist. V'itru- vius, indeed, reports it to have been practised byAgatharcus (a contemporaryof iEschylus and Polygnotus) in the theatre at Athens ; and to have been shortly after reduced to principles, and treated as a science by Anaxagoras and De- mocritus. The deductions, however, are made from premises of a similarly inconclusive nature to those enumerated in our observations on chi- aro-scuro.

Lastly, we may remark that no mention, at all events none of consequence, is made of a ground of relief on the ancient writers on paint- ing. Landscape also appears to have been wholly disregarded. There are attempts at background made in several of the paintings of Herculaneum, but undeserving of any commend- ation ; and the most beautiful of those produc- tions of ancient art which have hitherto been displayed to the eyes of the modems are of figures relieved off plain grounds, or rather amal- gamated into them. In none of the criticisms or observations of ancient authors is a secondary object ever mentioned as being m the distance.

We shall not dwell on the degree of cultiva- tion bestowed on the art of painting by the ancient Romans, but pass on to enumerate the several colors stated by Pliny to have been known to them. See lib. xxxv., caps. 6 and 7.

Whites. ••• Melinitm. A native white earth from the island of Melos, used by Apelles before white lead prepared with vinegar was invented.

Purdctonium. An Efjyptian white earth used in distemper, and similar, probably, to the white now called Cremnitz white, from Hungary. Pliny complains that para;tonium was often adulterated with Cimolian earth, which was used by the fullers at Rome.

Eretria. An ashy white. It is so named from a town of Euboea, now Trocco.

Cei'ussa. White lead.

Anulare. Gypsum. Creta. Chalk.

Yellows. ••• Si/. Ochre of four kinds ; named Atticum, Lucidum, Syricum, and Marmorosum.

Auripigmentum, or Arsenicum. Orpiment.

Ceriissa usta. Masticot, first discovered by the fire at the Piraeus.

Reds. ??? Minium. Red lead, both natural and artificial. The best native minium was found in a quicksilver mine near Ephesus ; and, in endeavouring to extract gold from it, Callias the Athenian discovered vermilion.

Vermilion. The same as now used

Sinopis. A red earth. The best was found near Lemnos, and was so valuable as to be sold sealed up. It approached near, in color, to minium.

Rubrica. A red earth.

Cinnubur. Native Indian name for dragon's Mood.

Sandaraclia. A red orpiment.

Sandyx. By some thought to be vegetable red, and obtained somewhat after the manner of our laices, viz. absorbing the coloring matter of a decoction of the vegetable matter in chalk.

Furpurissum. A lake made from the ingre- dient used in dyeing purple, being absorbed in tripoli.

Syricum. A mixture of sinopis and sandyx.

Armenium, or Azure, also called Ceruleum. Verd'azur, or blue vitriol. Pliny calls it a sand ; and says there were three kinds, viz. the Egyp- tian, the Scythian, and the Cyprian.

Indicum. Indigo.

Greens. ??? Chrysocolla. Malachite, or moun- tain green.

Appianum. Another of the same nature.

Blacks. ??? Atramentum. A common name for all black colors. Pliny speaks of one kind as oozing from the earth ; and it may possibly have been some kind of bitumen : of another as being made from smoke of resin and pitch. Burnt lees of wine, or husks of grapes, produced a third, used by

Polygnotus and iNlycon, under the name of truginon; and a fourth was invented and used by Apelles, by burning ivory. That, being made thin by some process, was probably the atramentum or varnish, which he is said to have laid over the surface of his pictures. What this process was is unknown : perhaps, as the mode of painting with wax by heat was practised, it might have been some modification of that ma- terial. Of the above coloring substances, Apelles and other ancient artists employed, if we are to give credit to Pliny, only four. Here, however, he seems to have placed himself between the horns of a dilemma : since we are compelled to question either his correctness as to their limita- tion of colors, or the abundant encomiums which he bestows on their works. Four perfect colors, it is true, with all their modifications and combi- nations, may be regarded as adequate to every purpose the art of coloring might require. But the celebrated historian has forbidden us to specu- late on the possibility of this perfection, by naming the substances; and since thˆ present practice of art, although possessed of substances far more powerful than those enumerated above, denies the knowledge of any four pigments equal to the production of a really fine piece of coloring, we are, as before observed, compelled to suspend our judgment on the subject.

Sect. II. ❖❖❖ Of Modern Painting. The art of painting was revived in Europe about the end of the thirteenth, or beginning of the fourteenth, century. It might have been practised in an humble and obscure manner somewhat earlier; but it was not until a still later period that it made any thing like progress. The human mind, having been plunged into pro- found ignorance, was destitute of every principle of sound philosophy which enables it to deter- mine on the object of the arts ; and consequently the painters contented themselves with works adapted to the general taste, without proportion

and without beauty. In Italy, where the first attempts were made, they were employed chiefly on subjects connected wiih religious feelings, such as the mysteries of the passion, &c.; and their labors were principally in the adornment of ecclesiastical buildings. Painting, however, did not long continue in the imperfect condition in which it was left by those wlio first cultivated it among the moderns. It was to be expected that their successors would endeavour to surpass them by joining some degree of theory to the barbarous practice they had adopted. Amon”- the first points of art discovered after its restora- tion was the principle of perspective, a know- ledge of which made the artists capable of expressing what is denominated foreshortening, by means of which a greater degree of truth rjid effect was afforded to their peiiormances. Cima- bue, Giotto, Masaccio, Mantegna, and Luca Sig- norelli, successively upheld tlie dawning glories of revived art. The latter, in particular, appears to have been the first who contemplated objects with a discriminating eye ; perceived what was

accidental, what essential; balanced light and shade, and decided the motion of his figures. He foreshortened with equal boldness and intelligence ; and thence it is, probably, that 'asari fancies to have discovered, in the Last Judgment of Michael Angelo, traces of imitation from the Lunetta, painted by Luca in the church of the JVIadonna, at Orvieto; but the powers which ani- mated him there, and before at Arezzo, are no longer visible in the Gothic medley with which he filled two compartments in the chapel of Sextus IV. at Rome.

Two years after the death of Masaccio, namely, in 1445, was born Leonardo da Vinci, whose genius broke forth with a splendor which distanced former excellence : ‘ made up of all the elements that constitute the essence of genius, favored by education and circumstances, all ear, all eye, all grasp ; painter, poet, sculptor, anato- mist, architect, engineer, chyniist, machinist, mu- sician, man of science, and sometimes empiric, he laid hold of every beauty in the enchanted circle, but, without exclusive attachment to one, dismissed in her turn each. Fitter to scatter hints than to teach by example, he wasted life, insatiate in experiment. To a capacity which at once penetrated the principle and real aim of the art, he joined an inequality of fancy that at one moment lent him wings for the pursuit of beauty, and the next flung him on the ground to crawl after deformity : we owe him chiaro-scuro with all its magic, we owe him caricature with all its incongruities. His notions of the most elaborate finish, and his want of perseverance, were at least equal ; ××× want of perseverance alone could make him abandon his cartoon destined for the great council chamber at Florence, of which the celebrated contest of horsemen was but one group ; for to him who could organise that com- position, JNlichael Angelo himself ought rather to have been an object of emulation than of fear : and, that he was able to organise it, we may be certain from the remaining sketch in the Etruria Pittrice lately published, but still more from the admirable print of it by Edelinck, after a dra' – ing of Rubens, who was Leonardo’s great ad-

mirer, and has done much to impress us with the beauties of his Last Supper, in the Refectory of the Dominicans at Milan, which he abandoned likewise without finishing the head of Christ, ex- hausted by a wild chase after models for the heads and hands of the apostles : had he been able to conceive the centre, the radii must have followed of course.’ Towards the beginning of the century in which Leonardo da Vinci was born, the use of oil was adopted as a vehicle for painting, and afforded the means of most exten- sive improvements, particularly in color and ef- fect. The methods to

which the former execu- tion of the art had been restricted (namely, distemper, in colors mixed with size and water, and afterwards fresco) were of a limited nature, especially the latter, in which, no means being given to change or retouch the colors without manifest detriment to the work, the artist was hampered in his plan of conduct and manage- ment of design. The invention of oil-painting remedied this disadvantage ; and, as it allowed endless variety in effects as well as disposition of colors, together with complete harmony throughout the whole, the fancy of the artist was now permitted to take its fidl swing, and to produce enchantments which successive ages have not been sufficient to dissolve or even weaken.

lire circumstance of varnishing over pictures which had been painted in water colors is thought, and perhaps justly, to have been that which led to this important discover)'. John Van Eyck, who flourished at Brussels in 1410, is the artist to whom the first exercise of painting with colors ground and mixed with oil has been at- tributed. At all events, if he was not the first who actually applied it to the purposes of his art, it was he who first made effectual use of it. In any other case, his application of the system would not, to use the words of Vanmander, ' liave made as much noise in the world as the discovery of gunpowder by Bertoldo Schwartz had done nearly a century before.' According to this same writer, the art of painting had been carried into Flanders, about the time of Giotto, by some Flemings, who went to Italy for the purpose of receiving instruction in it; and he goes on to describe it as having been practised 'with gum and eggs, at its first commencement, by Cimabue.' The Germans, likewise, acquired the art about the same time ; but its most succes- ful progress and achievements were confined to ihe classic countries of Italy.

'Bartolomeo della Porta, or di S. Marco, the .ast master of this period, first gave gradation to color, form and masses to drapery, and a grave dignity, till then unknown, to execution. If he was not endowed with the versatility and com- prehension of Leonardo, his principles were less mixed with base matter, and less apt to mislead him. As a member of a religious order, he con- fined himself to subjects and characters of piety; but the few nudities which he allowed himself o exhibit show sufficient intelligence and still more style : he foreshortened with truth and boldness ; and, whenever the figure admitted of it, made his drapery the vehicle of the limb it invests. He was the true master of Raffaelle,

whom his tuition weaned from the meanness of Pietro Perugino, and prepared for the mighty style of Michel Angiulo Buunurrotti.

' Sublimity of conception, grandeur of form, and breadth of manner, are the elements of Michel Angiolo's style. By these principles he selected or rejected the objects of imitation. As painter, as sculptor, as architect, he

attempted, and above any other man succeeded, to un.te magnificence of plan, and endless variety ol subordinate parts, with the utmost simplicity and breadth. His line is uniformly graud : character and beauty were admitted only as far as they could be made subservient to grandeur. Tlie child, the female, meanness, deformity, were by him indiscriminately stamped with grandeur. A beggar rose from his hand the patriarch of poverty ; the hump of his dwarf is impressed with dignity ; his women are moulds of genera- tion ; his infants teem with the man ; his men are a race of giants. This is the ' terribil via' hinted at by Agostino Caracci, though perhaps as little understood by the Bolognese as by the blindest of his Tuscan adorers, with Vasari at their head. To give the appearance of perfect ease to the most perplexing difficulty was the exclusive power of Michel Angiolo. He is the inventor of epic painting, in that sublime circle of the Sistine chapel, which exhibits the origin, the progress, and the final dispensations of theocracy. He has personified motion in the groups of the cartoon of Pisa ; embodied sentiment on the monuments of St. Lorenzo ; unravelled the fea- tures of meditation in the prophets and sybils of the chapel of Sextus; and in the Last Judgment, with every attitude that varies the human body, traced the master-trait of every passion that sways the human heart. Though, as sculptor, he expressed the character of flesh more per- fectly than all who went before or came after him, yet he never submitted to copy an indi- vidual, Julio the second only excepted, and in him he represented the reigning passion rather than the man. In painting he contented himself w ith a negative color ; and, as the painter of mankind, rejected all meretricious ornament. The fabric of St. Peter, scattered into an infinity of jarring parts by Bramante and his successors, he concentrated ; suspended the cupola, and to the most complex gave the air of the most sim- ple of edifices. Such, take him all in all, was Isl. Angiolo, the salt of art : sometimes he no doubt had his moments of dereliction, deviated into manner, or perplexed the grandeur of his forms with futile and ostentatious anatomy : he met with armies of copyists, and it has been his fate to have been censured for their folly.

' The inspiration of ˆMichel Angiolo was fol- lowed by the milder genius of Rajf'aelle Sanzio, the father of dramatic painting, the painter of humanity ; less elevated, less vigorous, but more insinuating, more pressing on our hearts, the warm master of our sympathies. What eflect oi human connexion, what feature of the mind, from the gentlest emotion to the most fervid burst of passion, has been left unobserved, ha not received a characteristic stamp from that examiner of man ? INI. Angiolo came to nature, nature came to Raffaelle ••• he transmitted her*

features like a lucid glass- unstained, unmodified. We stand with awe before M. Angiolo, and tremble at the height to which he elevates us ••• we embrace Rafi'aelle, and follow liim wherever he leads us. Energy, with propriety of character and modest grace, poise his line, and determine his correctness. Perfect human beauty he has not represented ; no face of Kaffaelle's is per- fectly beautiful ; no figure of his, in the abstract, possesses the proportions that could raise it to a standard of imitation : form to him was only a vehicle of character or pathos, and to those he adapted it in a mode and with a truth which leaves all attempts at emendation hopeless. His invention connects the utmost stretch of possi- bility with the most plausible degree of proba- bility, in a manner that equally surprises our fancy, persuades our judgment, and affects our heart. His composition always hastens to the most necessary point as its centre, and from that disseminates, to that leads back, as rays, all secondary ones. Group, form, and contrast, are subordinate to the event, and common- place ever excluded. His expression, in strict unison with, and decided by, character, whether calm, ani- mated, agitated, convulsed, or absorbed by in- spiring passion, unmixed and pure, never con- tradicts its cause, equally remote from tameness and grimace : the moment of his choice never suffers the action to stagnate or to expire ; it is the moment of transition, the crisis big with the past and pregnant with the future. ••• If, separately taken, the line of Raffaelle has been excelled in correctness, elegance, and energy ; his color far surpassed in tone, and truth, and harmony ; his masses in roundness, and his chiaro-scuro in ef- fect••• considered as instruments of pathos, they have never been equalled ; and in composition, invention, expression, and the power of telling a story, he has never been approached.

' \ hilst the superior principles of the art were receiving the homage of Tuscany and Rome, the inferior but more alluring charm of color began to spread its fascination at Venice, from the pallet of Giorgione da Castel Franco, and irresistibly entranced every eye that approached the magic of Titiano Vecelli of Cadore. To no colorist before or after him did nature unveil herself with that dignified familiarity in which she appeared to Titiano. His skill, universally and equally fit for all her exhibitions, rendered her simplest to her most compound appearances with equal purity and truth. He penetrated the essence and the general principle of the sub- stances before him, and on these established his theory of color. He invented that breadth of local tint which no imitation has attained ; and first expressed the negative nature of shade : his are the charms of glazing, and the mystery of re- flexes, by which he detached, rounded, connected, or enriched his objects. His harmony is less in- debted to the force of light and shade, or the artifices of contrast, than to si due balance of color, equally remote from monotony and spots. His backgrounds seem to be dictated by nature. Landscape, whether it be considered as the tran- script

of a spot, or the rich combination of con- genial objects, or as the scene of a phenomenon, dates its origin from him : he is the father of Vol. XVI.

portrait painting, of resemblance with form, character with dignity, and costume with subor- dination.

‘ Another charm was yet wanting to complete the round of art□□□ harmony : it appeared with Antonio Lseti, called Correggio, whose works it attended like an enchanted spirit. The harmony and the grace of Correggio are proverbial : the medium which by breadth of gradation unites two opposite principles □□□ the coalition of light and darkness by imperceptible transition□□□ is the element of his style. This inspires his figures with grace, to this their grace is subordinate : the moot appropriate, the most elegant attitudes were adopted, rejected, perhaps sacrificed to the most awkward ones, in compliance with this im- perious principle : parts vanished, were absorbed, or emerged in obedience to it. This unison of a whole predominates over all that remains of him, from the vastness of his cupolas to the smallest of his oil pictures. The harmony of Correggio, though assisted by exquisite hues, was entirely independent of color: his great organ wa.s chiaro-scuro in its most extensive sense ; compared with the expanse in which he floats, the eflfects of Lionardo da 'inci are little more than the dying ray of evening, and the concen- trated flash of Giorgione discordant abruptness. The bland central light of a globe, imperceptibly gliding through lucid demitints into rich reflected shades, composes the spell of Correggio, and affects us with the soft emotions of a delicious dream.’

The patronage which the art had enjoyed in Italy, from the commencement of its restoration, kept pace with its progress, and was at length perfected by Julius II. and Leo X. at Rome, and by the truly illustrious family of the Medici at Florence. Cosmo di iMedici, at the same time that his care and thoughts were directed to the state affairs of the latter province, still found time and means to watch over the development of the fine arts. His grandson Lorenzo (sur- named the Magnificent), who became his succes- sor A. D. 1464, carried these elegant tastes to a still greater extent, and increased, among other praiseworthy actions, that mass of ancient relics which the industrious search prescribed by his predecessor had collected, and which adorned the Medici palace. Desirous of stimulating his countrymen to a succesful rivalry with these in- valuable treasures, Lorenzo threw open his gardens, wherein they had been deposited, as a school for study, and honored both his own dis- crimination and the consummate ability of the artist by placing Michel Angiolo at the head of it. By the influence of this potentate, princi- pally, the council hall of the Florentine republic (which had been shortly before rebuilt), was adorned with paintings by Michel Angiolo and Lionardo da 'inci, each being allotted one

side of the hall for the exercise of his talents. This may be considered as the first instance of any moment of public civil employment being given to the painters of Italy; their chief exertions having been previously restricted to the decora- tion of religious edifices.

The internal discords which about this period began to engross the attention of the Florentines

prevented them from continuing to patronise the arts as they had done ; and, added to this, Julius II., who then filled the papal chair, aware of the splendor and glory attached to a state by the successful cultivation of the fine arts, summoned to Rome both Raffaelle and Michel Angiolo, who, under his auspices, began those inimitable works in the Vatican which every judicious ar- tist or amateur both thinks and speaks of with enthusiasm. Leo X., his successor, was son of Lorenzo di Medici, and thus possessed a double stimulus, both from the example of his father and his predecessor, to encourage and preside over art. We use but weak words when we say this stimulus was not disregarded. It served to direct the efforts of painting towards the service and splendor of the church over which he swayed, of his rank as a secular sovereign, and of himself as one of the INIedici. Thus was the principal seat of the arts transferred from Flo- rence to Rome ; which gradually became, in consequence of its many combined advantages, a complete university of art, and the resort of all such as were ambitious to excel therein ; and thus may be said to have terminated in the reign of Leo X. the second grand epoch of the art.

‘ The resemblance which marked the two first periods of ancient and modern art vanishes altogether as we extend our view to the consi- deration of the third, or that of refinement, and the origin of schools. The pre- eminence of an- cient art, as we have observed, was less the result of superior powers, than of simplicity of aim and uniformity of pursuit. The Ilelladic and the Ionian schools appear to have concurred in directing their instruction to the grand prin- ciples of form and expression : this was the stamen which they drew out into one immense connected web. The talents that succeeded genius applied and directed their industry and polish to decorate the established system, the re- finements of taste, grace, sentiment, color, adorned beauty, grandeur, and expression. The Tuscan, the Roman, the Venetian, and the Lom- bard schools, whether from incapacity, want of education, of adequate or dignified encourage- ment, meanness of

conception, or all these together, separated, and in a short time substi- tuted the medium for the end. Michel Angiolo lived to see the electric shock which his design and style had given to art, propagated by the Tuscan and Venetian schools, as the ostentatious vehicle of puny conceits and emblematic quib- bles, or the palliative of empty pomp and de- graded luxuriance of color. He had been copied but was not imitated by Andrea Vannuchi, sur- named del Sarto, who in his series of pictures on the life of John the Baptist, in preference adopted the meagre style of Albert Durer. The artist who appears to have penetrated deepest to his mind was Pelegrino Tibaldi of Bologna ; celebrated as the painter of the frescoes in the Academic Institution of that city, and as the ar- chitect of the Escurial under Philip II. The compositions, groups, and single figures of the Institute exhibit a singular mixture of extraor- dinary vigor and puerile imbecility of concep- tion, of character and caricature, of style and

manner. Polypheme groping at the mouth of his cave for Ulysses, and ˆEolus granting him favor- able winds, are striking instances of both : than the Cyclops, INIichel Angiolo himself never con- ceived a form of savage energy with attitude and limbs more in unison ; whilst the god of winds is degraded to a scanty and ludicrous semblance of Thersites, and Ulysses with his companions travestied by the seraibarbarous look and costume of the age of Constantine or Attila; ihe manner of Michel Angiolo is the style of Pelegrino Tibaldi ; from him Golzius, Ilemskirk, and Spranger, borrowed the compen- dium of the Tuscan's peculiarities. With this mighty talent, however, Michel Angiolo seems not to have been acquainted : but by that unac- countable weakness incident to the greatest powers, and the severe remembrancer of theii vanity, he became the superintendent and assis- tant tutor of the Venetian Sebastiano, and of Daniel Ricciarelli, of \olterra; the first of whom, with an exquisite eye for individual, had no sense for ideal color, whilst the other rendered great diligence and much anatomical erudition useless, by meagreness of line and sterility of ideas: how far Michel Angiolo succeeded in initiating either in his principles, the far famed pictures of the Resuscitation of Lazarus, by the first (once in the cathedral of Narbonne, and now one of the chief ornaments of the British National Gallery), and the fresco of the Descent from the Cross (in the church of La Trinita del Monte), at Rome, by the second, sufficiently evince : pictures which combine the most hete- rogeneous principles. The group of Lazarus in Sebastiano del Piombo's, and that of the women, with the figure of Christ, in Daniel Ricciarelli's, not only breathe the sublime conception that in- spired, but the master hand that shaped them : offsprings of iNIichel Angiolo himself, models of expression, style, and breadth, they cast on all the rest an air of inferiority, and only serve to prove the incongruity of partnership between unequal powers ; this inferiority, however, is respectable when compared with the deprava- tions of Michel Angiolo's

style by the remainder of the Tuscan school, especially those of Giorgio Vasari, the most superficial artist, and the most abandoned mannerist of his time, but the most acute observer of men, and the most dexterous flatterer of princes. He overwhelmed the palaces of the Medici and of the popes, the convents and churches of Italy, with a deluge of medi- ocrity, commended by rapidity and shameless ‘ bravura’ of hand : he alone did more work than all the artists of Tuscany together, and to him may be truly applied, what he had the insolence to say of Tintoretto, that he turned the art into a boy’s toy.’

Giulio Romano was the most eminent of the pupils of Raffaelle; but though, like his illus- trious master, impressed with the stupendous views and style of Buonarotti, he had by no means equal force of judgment, or delicacy of taste, to guide him in his application of these qualities. It is not so much from his tutored works in the Vatican that we are to judge of the best achievements of Romano as from the grand concentions, the pathetic or sublime allegories,

and the luxurious reveries which constitute the principal charm of the palace del T, near Mantua : had the artist united purer taste with loftiness of imagination, the magnitude of these performances would perhaps have distanced all competition : but, as it is, they have been likened to a mighty stream, sometimes flowing in a full and limpid vein, but oftener turbid with rubbish. Besides this celebrated artist, Parme- giano, Tintoretto, Polydori, and Caravaggi, were amongst the most skilful of those who continued to uphold the practise of art with ability. No artist ever painted his own mind so powerfully as did Michel Angiolo Amerigi, surnamed II Caravaggi. To none did nature ever set limits with a more decided hand. Darkness gave him light; into his melancholy cell light stole only with a pale reluctant ray, or broke on it as flashes in a stormy night. The most vulgar forms he recommended by ideal light and shade, and a tremendous breadth of manner.’

Titian and Correggio had, in point of the adoption of their respective])rinciples, fates widely different. That of the former bemg less pure in itself, and less decided in its object of imitation, than either Angiolo’s or Raffaelle’s, suffered comparatively less from the various ap- plications of it by his followers. It had besides for its support the irresistible fascinations of color, which speak to every spectator, and hence was successfully pursued for a considerable time. But the principle of Correggio was not calcu- lated for this species of longevity. It vanished with its author. Ilis expansive

breadth of light ; IliSrfinexpressible grace (so much talked of, yet so little understood) ; his perfect harmony and depth of tone have never been otherwise than partially imitated. Parmegiano may be consi- dered to have imbibed his style the most fully. This admirable artist, was, like Raffae'J.e and Gior- gione, abstracted from this world in early man- hood, and perhaps before the complete capabili- ties of his mind had been developed.

Such was the condition of the ait when, tow- ards the end of the sixteenth century, the Ca- racci (Ludovico, Agostino, and Annibale), found- ed at Bologna that Eclectic School, the aim of which was, by selecting the be^nties, correcting the faults, supplying the defects, and avoiding the extremes of the different styles then practised, to establish a perfect system. The plan was laid down by Agostino Caracci in the following sonnet :
<lt;

*Chi farsi un buon Pittor cerca, e desla, 11 disegno di Roma habbia alia mano. La mossa coU' ombrar Veneziano, J'^ il degno colorir di Lombardia. Di Michel' Angiol la terribiJ via, II vero natural di Tiziano, Del Correggio lo stil pure, e sovrano, E di un Rafel la giusta simetria. D'fil Tibaldl il decoro, e il fondrmento, Del dotto Primaticcio I'inventare, E un po di gratia del Parmigianino. Ma senza tanti studi, e tanlo steato, Si ponga I'opre solo ad imitare, Che qui lasciocci il nostro Niccolino. * Take,' says Agostino, <lt;* *the design of Rome, Veaetian motion and shade, the dignified tone of*

Lombardy's color, the terrible niantier of Michel Angiolo, the just symmetry of Raflaelle, Titiano's truth of nature, and the sovereign purity of Cor- reggio's style : add to these the decorum and so- lidity of Tibaldi, the learned invention of Pri- maticcio, and a little of Parmegiano's grace; but to save so much study, such weary labor, apply your imitation to the works which our dear Nicolo has left us here.' This tone of ad- vice has, it must be confessed, very much the character of a good receipt for making blacking ; and it is the more curious that it should be so, in- asmuch as the object projjosed by these celebrated relatives, although not effectually attained, yet was sufficiently so to arrest for awhile the backward progress of the art. Ludovico, indeed, instead of blindly following the dictates of any master or masters, was the decided pupil of nature : by the simplicity and purity of his taste and exe- cution not only surpassing his kinsmen, Anni- bale and Agostino, but in a considerable degree restoring the art once more to its first and greatest principles. Annibale, it is true, disputed the point vigorously by his energetic execution and academic acquirement ; but the work on which his fame chiefly reposes (the gallery of the Far- nese palace at Rome), proves, that if superior to both of his kinsmen in those accomplishments, he was inferior to either in taste, sentiment, or discrimination.

Sir Joshua Reynolds, who saw the works of Ludovico Caracci at Bologna, holds him out, in his Discourses, as the best model for what is more specifically denominated style in painting. ‘ Ludovico Caracci,’ says he (‘I mean in his best works), appears to me to approach the nearest to perfection. Ilis unaffected breadth of light and shadow, the simplicity of coloring, which, hold- ing its proper rank, does not draw aside the least part of the attention from the subject, and the solemn effect of that twilight which seems dif- fused over his pictures appears to me to cor- respond with grave and dignified subjects better than the more artificial brilliancy of sunshine which enlightens the pictures of Titian. The school formed by the Caracci for the improve- ment of their art was entitled L’Academi degli Desiderosi, but is better recognised as the Aca- demy of the Caracci, and gave rise to many ar- tists of high name and merited celebrity. But these individuals soon threw aside, at least as completely as they could, the heterogeneous principle on which it was founded, each follow- ing the dictates of his own uncontrolled imagi- nation, and differing from his fellow students as well in manner as in objects of imitation. The greatest of these names is that of Guido Rheni, whose grace, although exquisite, was yet arti- ficial ; his female forms, more especially, may be considered as abstracts of antique beauty, at- tended by languishing attitudes, and dressed in voluptuous attire. Domenichmo comes next, who, unusually obedient to the prescription of his master, strove tocombine with the expression of Ralfaelle the energy of Annibale C-aracci, and the color of Ludovico. Schidone, Lanfranco, Guercino, each studied in the school of the Ca- racci; but the indefinite nature of its system soon wˆrought its downfall.

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PAINTING.

From this period is to be dated the rapid de- cline of the art in Italy. Da Cortona and Gior- ‘lana both possessed great powers, but abused Jhem by yielding implicitly to the tasteless sug- gestions of their employers. Nicholas Poussin, a Frenchman, but grafted on the Roman stock, placed himself in the gap, and endeavoured to stem the torrent of corrupted taste. He reverted for his models to the pure source of Grecian art : indeed, such was his attachment to the an- cients, that he has been said to have copied their relics rather than imitated their spirit. The costume, the mythology, the rites of antiquity, were his elements ; his scenery, his landscape, are pure classic ground. The wildness of Sal- vator Rosa opposes a striking contrast to the classic regularity of Poussin. ‘I’errific and grand in his conceptions of inanimate nature, he was re- duced to attempts of hiding, by boldness of hand, his inability of exhibiting her impassioned, or in the dignity of

character. With Poussin and Salvator closes all record worth notice of the his- tory of the art in Italy.

The first name which claims our attention, in noticing the progress of painting in Germarit/, is that of Albert Durer. This man's talents were various, his compositions the result of deep study, his thoughts ingenious, his colors brilliant. On the other hand he has been blamed for stiff- ness and aridity in his outlines, for the absence of taste or grandeur in his expression, for igno- rance of costume, of aerial perspective, and of gradation of colors. Lucas of Leyden was Durer's most successful rival, unless we except Holbein, who, if he did not equal him in com- position, unquestionably surpassed him, and that greatly, in portrait.

The history of the art in the neighbouring countries of Flanders and Holland is not dis- tinct from that of Germany until the appearance of those two meteors of art Peter Paul Rubens and Rembrandt Van Rhyn. The former of these extraordinary men produced an immense num- ber of works. He excelled alike in historical painting, in portrait and landscape, in fruit, flowers, and animals. He both invented and executed with the utmost facility ; and, to show the extent, of his powers, frequently made a great number of sketches of the same subject alto- gether different, and without allowing any time to elaose between them. His figures appear to be the exact counterpart of his conceptions, and their creation nothing more than a simple act of the will. He had great knowledge of anatomy, but was often hurried away by the impetuosity of his imagination, and his ardor for execution. He preferred splendor to beauty of form, and occasionally sacrificed correctness of design to the magic of color. In short, the qualities of Rubens, generally speaking, indicate a mind full of fire and vigor rather than accuracy or pro- found thought.

It appears evident, from the works of Rubens, that his method of painting was to lay the colors in their place one at the side of another, and mix them after\ˆards by a slight touch of the pencil. Titian mingled his tints as they are in nature, in such a manner as to render it impos- sible to discover where they began or terminated ;

the effect is evident, the labor is concealeu. 1 hus Rubens is more dazzling, and Titian more har- monious. In this respect, the first excites tlie attention, the second fixes it. The carnations of Titian resemble the blush of nature ; those of Rubens are brilliant and polished like satin, and sometimes even his tints are so strong and se- parate, as to have the effect of spots. ' Ru- bens,' says Sir Joshua Reynolds, ' is a remark- able instance of the sˆme mind being seen in all the various parts of the art. The whole is so much of a piece, that one can scarce be brought to believe but that, if any one of them had been more correct and perfect, his works would not be

so complete as they appear. If we should allow a greater purity and correctness of draw- ing, his want of simplicity in composition, co- loring, and drapery would appear more gross.' He was truly the father of Flemish art, so re- markable for brilliancy of coloring, for exact- ness of drawing, and the magic of their chiaro- scuro. To these may be added profound arrangement, though not exercised on the most beautiful forms ; a composition not destitute of grandeur, a certain air of nobleness in the figures, strong and natural expression ; in short, to speak generally, a species of art neither copied from the ancients, nor from the Roman or Lombard schools, and indeed unknown to any other part of the world ; and which, during the course of the seventeenth century, furnished those countries wherein it arose with innumera- ble works of the greatest perfection in their kind.

*Rembrandt was a genius of the first order, if we except what relates to form, and in him the choice of low figures is the more offensive, as his compositions frequently required the very opposite. As his father was a miller near Ley- den, his education must altogether have de- pended on the exertion of great talents, and the study of nature. He studied the grotesque figure of a Dutch peasant, or the servant of an inn, with as much application as the greatest masters of Italy would have studied the Apollo Belvi- dere or the 'enus de Medici. In spite, how- ever, of the most portentous deformity, and without dwelling on the spell of his chiaro-scuro, such were his powers of nature, such the gran- deur, pathos, or simplicity of his composition, from the most elevated or extensive arrange- ment to the meanest or most homely, that the best cultivated eye, the purest sensibility, and the most refined taste, are equally fascinated by them. Like Shakspeare he combined transcen- dant excellence with many even unpardonable faults, and reconciled us to them. ' He pos- sessed the complete empire of lisrht and shade, and of all the tints which float between thei□□. He tinged his pencil, with equal success, m the cool of dawn, in the noontide ray, in the livid flash, in evanescent twilight, and rendered dark- ness visible. Tliough made to bend a stedfast eye on the bolder phenomena of nature, he knew how to follow her into her calmest abodes, gave interest to insipidity or baldness, and plucked a flower in every desert.' * Rem- brandt's manner of painting (says M. Descamps) is a kind of magic. No artist knew better the*

effects of different colors mingled together, nor could better distinguish those which did not agree from those which did. lie placed every tone in its yjlace with so much exactness and harmony, that he needed not to mix

them, and so destroy what may be termed the flower and freshness of the colors. He made the first draft of his pic- tures with great precision, and with a mixture of colors altogether particular. He proceeded on his first sketch with vigorous application, and sometimes loaded his lights with so great a quantity of color that he seemed to model rather than to paint. His workshop was occasionally made dark, and he received, through a hole, the light, which fell as he chose to direct it. On par- ticular occasions, he placed behind his model a piece of cloth of the same color with the ground he wanted, and this piece of cloth, receiving the same ray which enlightened the head, marked the difference in a sensible manner, and allowed the painter the power of augmenting it accord- ing to his principles.'

It is difficult to determine the progress of painting in France. Miniature painting, and pamting on glass, were early cultivated in that country ; and in these two kinds the Italians liad often recourse to the French artists. The art, for some time encouraged by Francis I., fell into a state of languor from which it did not re- cover till the reign of Louis XIII. Jaques Blanchard, who has been called the French Ti- tian, flourished about this period ; but, as he died young, and without educating any pupils to perpetuate his manner, he cannot be regarded as the master of any school. We have already spoken of Nicholas Poussin, in our review of Italian art, to which he more properly belonged. But the seeds of mediocrity which the Caracci had attempted to scatter over Italy found a more congenial soil, and reared an abundant harvest, in France : ' to mix up a compound from some- thing of every excellence in the catalogue of art was the principle of their theory, and their aim in execution. It is in France where Michel An- giolo's right to the title of a painter was first questioned. The fierceness of his line, as they call it, the purity of the antique, and the cha- racteristic forms of Raffaelle are only the road to the academic vigor, the lib rated style of Anni- bale Caracci, and from that they appeal to the model ; in composition they consult more the artifice of grouping, contrast, and richness, than the subject or propriety ; their expression is dictated by the theatre. From the uniformity of this process, not to allow that the school of France oflers resnectable exceptions would be unjust ; without recurring ag;..in to the name of Nicholas Poussin, the works of Eustache le Sueur, Charles le Brun,Sebastien Bourdon, and sometimes Pierre Mignard, contain original beauties and rich materials. Le Sueur's series of pictures in the Chartreux exh-'nt the features of contemplative piety, in a purity of style and a placid breadth of manner that moves the heart. His dignified martyrdom of St. Laurence, and the burning ofthe magic books at Ephesus, breathe the spirit of Raffaelle. Tlie powerful comprehen- sion of a whole, only equalled by the fire which pervades every part of the battles of Alexander,

by Chas. le B”un, would entitle him to the highest rank in history, had the characters been less man- nered ; had he not exchanged the Argyraspids and the Macedonian phalanx for the compact le- gionaries of the Trajan pillar ; had he distin- guished Greeks from barbarians rather by na- tional feature and form than by accoutrement and armour. The seven works of charity by Seb. Bourdon teem with surprising, pathetic, and always novel images ; and in the plague of David, by Pierre Mignard, our sympathy is roused by energies of terror and combinations of woe, which escaped Poussin and Raffaelle himself.

The obstinacy of national pride, perhaps more than the neglect of government or the frown of superstition, confined the labors of the Spanhh school, from its obscure origin at Sevilla to its brightest period, within the narrow limits of in- dividual imitation. But the degrees of perfection attained by Diego 'elasquez, Joseph Ribera, and Murillo, in pursuing the same object by means as different as successful, impresses us with deep respect for the variety of their powers. That the great style ever received the homage of Spanish genius, appears not ; neither Alfonso Beruguette nor Pelet;rino Tibaldi left followers : but that the eyes and the taste, fed by the sub- stance of Spagnuoletto and Murillo, should without reluctance have submitted to the gay vo- latility of Lucca Giordano, and the ostentatious flirasiness of Sebastian Conca, would be matter of surprise, did we not see tlie same principles successfully pursued in the plafonds of Antonio Raphael Mengs, the painter of philosophy, as he is styled by his biographer D’Azara. The cartoons of the frescoes painted for the royal palace at Madrid, representing the apotheosis of Trajan and the temple of Renown, exhibit less the style of Raffaelle in the nuptials of Cupid and Psyche in the Farnesina, than the gorgeous but empty bustle of Pietro da Cortona.’

We conclude this sketch of the history of painting by a brief notice of its progress in our uwti country. But little is known respecting the existence of painting in England previously to the reign of Henry VUL, who patronised the talents of Holbein and Torregiano, and invited Titian to visit his court. It was but a short pe- riod before that these islands had begun to cul- tivate the elegant arts of life, and to shake off the influence of rude and ignorant manners. The choice of subjects, however, prescribed by Henry and his courtiers to those eminent men who then resided in England, was unquestionably to be lamented, and suffers extremely from a contrast with what was done by his rival, Francis I., the French king, who employed and enriched An- drea del Sarto, Rustici, Rosso, Primaticcio, Cel- lini, and Niccolo, not to aggregate a mass of painted and chisseled treasures for the mere gra- tification of his own vanity, but to scatter the seeds of real taste throughout France ; while, on the other hand, Torregiano and Holbein under Henry, as well as Frcderigo Zucchero under Elizabeth, were condemned to Gothic work and portrait painting. The Reformation,

however great the satisfaction with which the English people justly regard it, was, without doubt, highly injurious to the cultivation of the prin-

riples of art. Tlie stern spirit of the early re- formers led them not only into a total disregard, but into an absolute condemnation, of every thing ornamental or superfluous ; and the arts of painting and sculpture, more particularly, owing their principal splendor and success to the mu- nificent patronage of the mother church, fell under the peculiar and powerful ban of her re- volted daughter. If, on the contrary, at this juncture, when the national spirit was remo- delled, and when that stupendous change laid open almost all that was grand in intellect or spirited in action, the fine arts had participated in the vigorous upspringing, and had received the encouragement instead of the reprobation of those lofty-minded theologians, it is more than probable that England would at this day have had to boast, in addition to her brilliant and re- cognised claims on the score of literature and science, the glory of exhibiting a national and superior style of historical painting. But, as it was, the injunction of Henry against images (which had been made the instruments of idola- trous delusions in churches), and still more the rigid edicts of Edward VI. and Elizabeth against statues and pictures in general, while they sud- denly checked the career of historical and reli- gious painting, seem to have set a mark of dis- grace on the arts themselves, and to have left them, for a considerable length of time, a prey to indifference and scorn.

Charles I., it is true, strove to introduce a feeling for the art; and, whilst Rubens sojourned amongst us in the character of an ambassador from the court of Madrid, employed him to paint the ceiling of his newly erected banquet- ing room (now the chapel) at Whitehall. He also, by countenancing and patronising that prince of portrait painters, Vandyck, as well as other foreigners of talent, conferred on his coun- try a treasure for which we trust she is at length grateful. Charles collected a very considerable gallery of pictures, and, at the instance of Ru- bens, bought the invaluable cartoons of Raffaelle, now the chief and envied ornament of Hampton Court : he likewise, at a cost of ––20,000, pur- chased the cabinet of the duke of Mantua, and commissioned an artist to copy for him the works of Titian in Spain. But the exertions of Charles were frustrated and intercepted by his unhappy destiny; and the whole of his artistical collection was sold and dispersed by the parliament of 1643, which issued a mandate ‘ that all pictures which had the representation of the Saviour or the Virgin Mary in them should be burnt.’ As if to complete this unfortunate distribution, so prejudicial to the interests of the art in

England, a large part of this magnificent collection, which had been on the Restoration replaced in the pa- lace of Whitehall, was utterly destroyed by t!.e fire which consumed that edifice.

Charles II., with the cartoons of Raffaelle in his possession, and with the splendid pictorial ornaments of Whitehall before his eyes, permitted the absurdities of Verrio, and the dull mimicries of Gennaro to render unsightly the walls of his palaces, whilst the genuine talent of Sir Peter Lely was degraded in painting ˆJie Cymons or Iphigenias of his vob ptuous court. This distin-

guished artist, the rival, and in many instances the successful rival, of Vandyck, was succeeded by Sir Godfrey Kneller, who, with undoubted natural abilities, sufl'ered the love of gain, when those abilities had lifted him into notice, to per- vert his taste and deaden his ambition.

In historical painting no British artist had ap- peared to rival the performances of foreign ex- cellence until Sir James Thornhill, born in 1677, arose to dispute the honors of the jjaletle with La Guerre, whom many among our nobility had employed to decorate their halls and staircases. Sir James Thornhill received a commission from the state to decorate St. Paul's cathedral and Greenwich Hall, in which performances he was assisted by a German artist of the name of An- dre. It will not, however, be imagined that much value was set on the talents of these gen- tlemen, when we state that Sir James's engage- ment was ►►2 per square yard ! Thornhill's merits, indeed, as an historical painter, cannot be said , to demand any very great commendation ; still he was the father of English art in that particu- lar, and for a long time had no successful imi- tator. ' In the commencement of the reign of George I. (says Sir Horace W"alpole) the arts of England were sunk almost to the lowest ebb.' Portraiture, it is true, had been successfully practised by Dobson, Riley, Cooper, Greenhill, Jervas, and Richardson, but by none with any remarkable eminence.

It was not, however, to continue always thus ; and the time at length arrived when the English artists appeared not only desirous but capable of raising the character of their country in this respect, at least, to a level with that of any other nation of Europe. The principal difficulty in the outset of this event was to rescue the art from the degrading influence of a vicious taste, to retrace the steps of our predecessors (or ra- ther to burst the bandages in which they had enthralled us), and resort at once to the original principle of imitation; which, when pure and select, is the only sound basis of the art. The first step towards this reformation was the esta- blishment of a school for drawing from the living figure. This had been begun by Sir James Thornhill, in most inexplicable conjunction with Sir Godfrey Kneller, who, one would imagine, from his latter works, had left

all consideration of the value of such a thing far behind. Thus, however, he assisted in laying the foundation of a remedy for the evil which he, more than any other man, had occasioned. This school Sir James continued at his own house in the Piazza for some years. His death, in 1734, obliged the artists to procure another situation, which was not effected without some difficulty ; for the])eople were so unprepared to regard the study from the naked figure as necessary to artists, that their meetings were even suspected to be held for immoral purposes. Another school was at length formed by Michael Moser, a native of Schaff'hausen, and a chaser by profession, and six other artists, principally foreigners, the ma- nagement resting with Moser. After a while they were visited by Hogarth and others, and a larger body was formed in consequence, who established tb.emselves in Peter's Court, St. Mar-

tin's Lane, in the year 1739. Having acquired some property by combined exhibitions of their works tliey solicited a charter of incorporation, and, the schame being sanctioned by his late majesty, their charter was granted in 1765. But, dissensions arising in the body, a secession of many of its principal members took place, and the result was the establishment of the Royal Academy in 1768, under the more immediate patronage of the king; Sir Joshua Reynolds being nominated its first president. ••• Introduc- tion to Edwards s Anecdotes of Painters.

The general taste of the country was, in fact, awakened and purified with respect to art, and, on the success of Ilogartli, Reynolds, and Wil- son, several societies were formed throughout the kingdom for the avowed purpose of patronising and cultivating it.

Richardson, whose tracts ousht to be known to every student and amateur of painting, died)al745, at the advanced age of eighty. He was a bad painter, but his treatises on the art are full of enthusiasm, and of judicious observations on the theory of tlie art. Of one of these Sir Joshua Reynolds declared, that it had confiimed him in his love of the art, and elevated his ideas of its professors. Richardson contended stre- nuously for the propriety of painting portraits in the costume of their time ; thus striking at the absurd system of flowing robes which had been adopted by Kneller. This suggestion of Richardson's, dictated by common sense, pro- duced the happiest effects. The nonsensical draperies which had invested the represented persons of the gentlemen, together with the un- graceful silk robe which they contrived to throw negligently over the shoulders of the ladies, were laid aside ; and the succeeding portrait painters, headed by a

son-in-law of Richardson (Hudson, and a Frenchman of the name of Van Loo bro- ther of Carle 'an Loo), began to dress their sit- ters in all the formality of the day ; Hudson being assisted by a Fleming of the name of 'an Aiken, in the representation of the silks and laces. Nor did the reformation stop here : it extended into the region of historical painting : and Hayman, the successor of Sir James Thornhill, perceived tlie propriety of retaining the costume properly appertaining to those figures introduced into his paintings ; no longer, by an unmeaning affecta- tion, changing them into Grecian heroes or Ro- man centurions. This period might be denomi- nated the infancy of English art ; and it is not a little curious, that at the time when painting was verging towards a state of hopeless decline all over the continent of Europe, it should have revived, and that to no small purpose, in these islands, the inhabitants of which had been fre- quently taunted by foreigners as unable to exe- cute a fine painting.

We shall not dwell on its incipient stat-"" of improvement ; indeed, the commendations bestowed on the jjainters alluded to above regard ihe principle of imitation rather than the thing imitated, since nothing could possibly be more untasteful or repulsive than the stiff, starch, and unsightly uniform (both male and female) of those days. But the principle of attention to actual representation once established, it soon

produced the fruits of a better taste in the art generally ; and, accordingly, it was not long before the matchless talent of Hogarth beamed forth in unapproachable splendor to gild the on- ward progress of the muse of painting, and to herald the appearance of a kindred genius in the person of Sir Joshua Reynolds.

Hogarth traced out a department m painting which was at once novel and exciting ××× and he filled it :

Within that circle none durst walk but he !

His pictures are pregnant with meaning. Eacli one tells you a whole history. He had the faculty to grasp all the minutiae of the scene which he placed before you ××× nothing was suf- fered to escape.

' It is the fashion,' says Mr. Charles Lamb, ' with those who cry up the great historical school in this country, to exclude Hogarth from that school, as an artist of an inferior and vulgar class. Those persons seem to me to confound the painting of subjects in common or vulgar life with the being a vulgar artist. The quan- tity of thought which Hogarth crowds into every picture would alone unvulgarise every subject which he might choose. Let us take the lowest of his subjects, the print called Gin Lane. Here is plenty of poverty and low stuff to disgust upon a superficial view: and accordingly

*a cold spectator feels himself immediately disgusted and repelled. I have seen many turn away from it, not being able to bear it. The same persons would perhaps have looked with great complacency upon Poussin's celebrated picture of the Plague at Athens. Disease and death and bewildering terror, in Athenian garments, are endurable, and come, as the delicate critics express it, within the ' limits of pleasurable sen- sation.' But the scenes of their own St. Giles's, delineated by their own countryman, are too shocking to think of. Yet if we could abstract our minds from the fascinating colors of the pic- ture, and forget the coarse execution (in some respects) of the print, intended as it was to be a cheap plate, accessible to tlie poorer sort of people, for whose instruction it v,as done, I think we could have no hesitation in conferring the palm of superior genius upon Hogarth, com- paring this work of his with Poussin's picture. There is more of imagination in it ••• that power which draws all things to one ••• which makes things animate and inanimate, beings with their attributes, subjects and their accessories, take one color, and serve to one effect. Every thing in the print, to use a vulgar expression, tells. Every part is full of * strange imaees of death.' It is perfectly amazing and astounding to look at. Not only the two prominent figures, the woman and the half-dead man, which are as terrible as any thing which Michel Angiolo ever drew, but every thing else in the print contributes to bewilder and stupify ••• the very houses, as I heard a friend of mine express it, tumbling all about in various directions, seem dnmk ••• seem abso- lutely reeling from the effect of that diabolical spirit of phrenzy which goes forth over the whole composition. To show the poetical and almost jiropheiical conception in the artist, one little*

circumstance may serve. Not content with the dying and dead figures, which he has strewed in profusion over the proper scene of the action, lie shows you what (of a kindred nature) is pass- ing beyond it. Close by the shell, in which, by direction of the parish beadle, a man is depositing his wife, is an old wall, which, par- taking of the universal decay around it, is tum- bling to pieces. Through a gap in this wall are seen three figures, which appear to make a part in some funerul procession which is passing by on the other side of the wall, out of the sphere of the composition. This extending of the interest beyond the bounds of the subject could only have been conceived by a great genius. The faces of Hogarth have not a mere moment- ary interest, as in caricatures, or those grotesque physiognomies which we sometimes catch a glance of in the street, and, struck with their whimsicality, wish for a pencil and the power to sketch them down ••• and forget them again as rapidly ; but they are permanent abiding ideas.

Not the sports of nature, but her necessary eter- nal classes. We feel that we cannot part with any of them, lest a link should be broken. It is worthy of observation, that he has seldom drawn a mean or insignificant countenance. If there are any of that description, they are in his Strol- ling Players, a print which has been cried up by lord Orford as the richest of his productions ; and it may be, for what I know, in the mere lumber, the properties, and dead furniture of the scene ; but in living character and expression it is (for Hogarth) lamentably poor and wanting; it is, perhaps, the only one of his performances at which wˆe have a right to feel disgusted. Hogarth's mind was eminently reflective ; and, as it has been well observed of Shakspeare, that he has transfused his own poetical character into the persons of his drama (they are all more or less poets), Hogarth has impressed a thinking character upon the persons of his canvas. This remark must not be taken universally. The exquisite idiotism of the little gentleman in the bag and sword beating his drum in the print of the Enraged Musician, would of itself rise up against so sweeping an assertion. But I think it will be found to be. true of the generality of his countenances. The knife-grinder and Jew flute-player in the plate just mentioned may serve as instances, instead of a thousand. They have intense thinking faces, though the purpose to which they are subservient by no means required it ; but indeed it seems as if it was painful to Hogarth to contemplate mere vacancy or insignificance. This reflection of the artist's own intellect from the faces of his cha- racters is one reason why the works of Hogarth, so much more than those of any other artist, are objects of meditation. Our intellectual natures love the mirror which gives them back their own likenesses. The mental eye will not bend long with delight upon vacancy.

- *Another line of eternal separation between Hogarth and the common painters of droll or burlesque subjects, with whom he is often confounded, is the sense of beauty, which in the most unpromising subjects seems never v.holly to have deserted him. ' Hogarth himself,' says*

Mr. Coleridge, from whom I have borrowed this observation, speaking of a scene which took place at Ratzeburg, ' never drew a more ludi- crous distortion, both of attitude and physiog- nomy, than this effect occasioned ; nor was there wanting beside it one of those beautiful female faces which the same Hogarth, in whom the satirist never extinguished that love of beauty which belonged to him as a poet, so often and so gladly introduces as the central figure in a crowd of humorous deformities ; which figure (such is the power of true genius) neither acts nor is meant to act as a contrastˆ but diff"uses through all, and over each of the group, a spirit of reconciliation and human kindness ; and even when the attention is no longer consciously directed to the cause of this feeling, still blends its tenderness with our laughter : and thus pre- vents the instructive merriment

at the whims of nature, or the foibles or humors of our fellow- men, from degenerating into the heart-poison of contempt or hatred.' To the beautiful females in Hogarth, which Mr. C. has pointed out, might be added the frequent introduction of children (which Hogarth seems to have taken a particular delight in) into his pieces. They have a singular eff'ect in giving tranquillity and a portion of their own innocence to the subject. The baby riding in its mother's lap in the March to Finchley (its careless innocent face placed directly behind the intriguing time-furrowed countenance of the treason-plotting French priest) perfectly sobers the whole of that tumultuous scene. The boy movxrner winding up his top with so much unpretending insensibility in the plate of the Harlot's Funeral (the only thing in that assembly that is not a hypocrite) quiets and soothes the mind that has been disturbed at the sight of so much depraved man and woman kind.'

Sir Joshua Reynolds was the first president of the Royal Academy ; and on his return from Rome, at a previous part of his life, carried the art (at least as far as regards portrait-painting) to its very highest point of perfection. The life, the grace, the truth of his portraits liave, for a long series of years, demanded and received the tribute of universal admiration. His best specimens are perhaps inferior to no pictures of the same kind in existence, and in some points may be said to exceed the performances of any preceding artist. He not only appears to have always aspired to attain the highest excellence of coloring, but in very many instances he did attain it ; there being no one particular in which, generally speaking, he left his contemporaries so far behind him as in the richness and mellow- ness of his tints, when his colors were success- ful and permanent.

Though the landscapes Sir Joshua has given in the background of many of his portraits are eminently beautiful, he seldom exercised his hand in regular 'andscape-painting ; but in the historical department he took a wider range ; and, by his successful exertions in that higher branch of his art, he not only enriched various cabinets at home, but extended the fame of the English school to foreign countries.

And here it may not be amiss to observe

upon the notion wliich prevails of the coloring hivino; faded and perished in the miijority of Sir Joshua Reynolds's works. This is not correct : far the greater part of his pictures pre- serve their original hue, and are in perfect preservation. Those which have failed have been mentioned again and

again, and thus have been multiplied in the imaginations of con- noisseurs.••• Nor should it be forgotten, that the pictures of other considerable painters have not been more durable than lus. As many perished pictures of Gainsborough are, it lias been affirmed, to be found in cabinets as of Sir Joshua Reynolds. Even the great colorists of tiie continent were not wholly free from this defect. Several pictures of Titian and Van- dyck, and more particularly of the exquisite French painter VVatteau, have entirely lost tiiat brilliancy which, without doubt, they once pos- sessed.

What Reynolds did for portrait-painting, his distinguished contemporary, Wilson, did for landscape. He also had studied at Rome, and brought home thence a refined taste, and a power of execution at once chaste, glowing, and brilliant : while, in the historical department. Sir Joshua's successor, the late lamented Mr. \Vest, without rivalling either of the three great names just mentioned, yet displayed sufficient ability to throw completely into the background what had been previously produced by the suc- cessors of Sir James Thornhill, Hayman, Pine, and Whale. Besides West, we cannot forbear to make honorable mention of the names of Roraney, Opie, and Barry.

The present state of painting in this country is very encouraging to tlie lover of art. In portrait, besides the late highly-gifted president of the academy, Sir Thomas Lawrence, we have several other eminent professors : in landscape and ma- rine subject!, Turner and Callcott are at the head of a numerous body of followers. The pencil of Wilkie tiirows a brilliant lustre over both the humorous and pathetic departments of art; and in the arduous walk of history (a walk of art which, although ii is entitled, when successfully pursued, to the highest honors, is too often followed without either profit or distinction,) there are several names which we might select, whose bearers appear to us quali- fied to elevHte the national reputation far higher tlian it lias ever hitherto been raised. For the truth of these observations, we need only appeal to the annual exhibitions both at Somerset House and at the British Institution.

It would lead us beyond the limits of this work to go much at large into the. theory and [)ractice of painting. This article would be, liovvever, incomplete did we not .subjoin a few observations on these subjt ts.

PART II.

THEORY AND PRINCIPLES OF THE ARTIST'S STUDIES.

Sect. I. ••• Gi-nekal Principles.

And first, of anatomy. It would be unneces- sary to cite what the greatest

authorities have declared with respect to the requisiteness of this

point of knowledge. It must be obvious that a man unacquainted with the construction and form of the several bones that govern and sup- ►► port llie human frame, or who does not under- stand the way in which the muscles moving these bones are fixed to them, can make nothing of what appears to them through the integu- ments with which they are covered ; which ap- pearance, however, is one of the noblest objects of tiie pencil. It seldom happens that the painter's business is limited to the mere exact copying of an object before him. For instance, if he has to depict gestures any way sudden, or motions any way violent, a living model would scarcely answer his purpose, since it holds but two or three instants, soon growing languid, and settling into a fixed attitude, which is produced by an instantaneous concourse of the animal spirits. Here then the painter's acquaintance with anatomy should come into play, his know- ledge not only of the skeleton, but of the origin, progress, and shape of the muscles which cover the bones, and also the different degrees in which nature has clothed these muscles with fat. It was the intention of Michael Angelo to give the public a complete treatise on this subject, and it is much to be regretted that he never .should have accomplished so desirable a pur- pose. This sublime painter having observed (as appears in Condivi's life of him) that Albert Durer was deficient with respect to anatomy, resolved to compose a theory founded on his long practice : and surely no one could be better qualified to furnish anatomical precepts than he who, as competitor of Leonardo da 'inci, formed that famous cartoon of naked bodies which was studied by Raffaelle himself, and subsequently obtained the approbation of the 'atican. The want of Michael Angelo's])recepts may be in some measure compensated by books written on the same subject by Moro, Cesio, and Tortelat ; and more recently by Boucherdon, one of the most famous statuaries of France. Nothing, however, can be of equal service with the lessons of some able dissector, besides which a good deal of improvement may be acquired by the study of anatomical casts.

It was the particular happiness of the Greeks to be callable of characterising and expressing the various parts of the human body much better than we can pretend to do ; towards this end their earnest study of the naked figure mainly contributed, as did also the constant exercise taken by the Grecian youth in gymnastic giunes, which, by development and display of the mus- cular system, afforded the painter and statuary far more perfect models tlum those at present employeil. It has been well suggested, that the student might make himself more thoroughly master of the science of anatomy by taking one part of any well-known figure, the thighs of the Laocoon, for instance, and adding to them legs suitable to that state in which tlie muscles of the thighs are represented. To the simple contour of an anatome, or statue, he might add the parts included by it,

and give it a system of muscles conformable to the quality of that particular contour. Exercises of this nature would soon establish him in the most fundamental principles

of painting, especially if he had an opportunity of comparing his drawinirs with the statue or cast from which the parts given him to work upon were taken. See Anatomy.

It cannot fail to appear obvious that the study of symmetry should immediately succeed that of anatomy ; since it would not much avail us to be acquainted with the different parts of the human body, and their several offices, were we, on the other hand, ignorant of the relative order and proportion of those parts to one another. The Greek sculptors were as eminent for the just symmetry of members as for anato- mical skill. Polygnotus executed a statue which he denominated the Rule, from which other art- ists might take measures for cvery part of the human body. These measures, not to speak of those books which professedly treat of them, may now be derived from the Apollo Belvedere, the Laocoon, the \enus de Medici, and particu- larly the Antinous, which was the rule adopted by Nicholas Poussin. See Symmetry.

Perspective, according to Leonardo da Vinci (an authority from which there can be no appeal) is to be considered as the reins and rudder of painting. It teaches the proportion in which the parts fly from, and lessen on, the eye ; how figures should be marshalled upon a plane sur- face, and foreshortened. It contains, in a word, the whole rationale of design.

As the demonstration of the rules of perspec- tive depends on the doctrine of proportions, on the properties of smiilar triangles, and on the intersection of planes, it is desirable that an abridgment of Euclid should be put into the hands of the young painter, in order that he may understand these rules fundamentally, and not stand confined to a blind practice of them : at the same time, there is nothing in this author relative to the art of painting which might not easily be acquired in a few months. See Per- spective.

The study of optics, so far as it is requisite to determine the proportion in which objects are to be illuminated or shaded, should proceed hand in hand with that of perspective : and this in order that the shades cast by figures upon the planes on which they stand may fall properly, and be neither too strong nor too light : ††† in a word, that those most beautiful eff'ects of the chiaro-scuro may run no risk of ever de- viating

from truth, which, sooner or later, is sure to render itself visible.

‘ Colorincf,’ says Sir Joshua Reynolds, ‘ though it may at first sight appear a part of painting merely mechanical, yet it still has its rules, and those grounded upon that presiding principle which regulates both the great and the little in the study of a painter. By this, the first eflTect of the picture is produced; and, as this is per- formed, the spectator, as he walks the gallery, will stop, or pass along. To give a general air of grandeur at first view, all trifling, or artful play of little lights, or attention to a variety of tints, is to be avoided ; a quietness and sim- plicity must reign over the whole work ; to which a breadth of uniform and simple color will very much contribute. Grandeur of effect is produced by two different ways, which seem

entirely opposed to each other. One is, by re- ducing the colors to little more than chiaro-scuro, which was often the practice of the Bolognian school ; and the other, by making the colors very distinct and forcible, such as we see in those of Rome and Florence ; but still the presiding principle of both these manners is simplicity. Certainly, nothing can be more simple than mo- notony ; and the distinct blue, red, and yellow colors which are seen in the draperies of the Roman and Florentine schools, though they have not that kind of harmony which is produced by a variety of broken and transparent colors, have that effect of grandeur which was intended. Perhaps these distinct colors strike the mind more forcibly, from there not being any great union between them ; as martial muse, which is intended to rouse the nobler passions, has its eff’ect from the sudden and strongly marked transitions from one note to another, which that style of music requires ; whilst, in that which is intended to move the softer passions, the notes imperceptibly melt into one another.

Drapery, being also a most important branch of the art, accordingly requires the greatest study and attention. It but seldom occurs that a painter has only naked figvires to represent ; and it may be observed, that the flowing of the folds in every garment depends principally on the relief of tne parts which lie under it. A certain author, whose name we do not recollect, remarks, that as the inequalities of a surface are discover- able by the inequalities in the water that runs over it, so the shape and posture of the members must be discernible by the folds of the vestment which covers them.

Of landscape and architecture. ??? The most eminent landscape painters are Claude Lorraine, Poussin, and Titian. The former of these cele- brated men, although he reigns triumphantly in every department of landscape, and in marine subjects also, yet might be said to have applied himself principally to express the various pheno- mena of light, particularly those observable in the heavens; and thanks to the delicious climate of

Italy, where he studied and practised, he has bequeathed us the brightest skies, and the most splendid horizons, that can, be imagined. Pous- sin was distinguished, and deserved to be so, for his uncommon application. His compositions are fraught with imagery of a classical as well as delightful character, being set off with learned episodes, such as poets reciting their verses in the woods, Grecian youths exercising gymnastic games, &:c. Titian may be styled the Homer of landscape painting. One of the finest landscapes that perhaps ever issued from mortal hands is the background of his Martyrdom of St. Peter ; which has so much truth, so much variety, so much bloom, that it is almost impossible to be- hold without desiring to make an excursion into it. Paolo 'eronese is, in architecture, what Titian is in landscape. To excel in landscape, we must, above all things, study nature ; to excel in architecture we must regard princi- pally the finest among the works of art : sucn, for instance, as the elevations of ancient edifices, together with the fabrics of those moderns who have best studied and best copied antiquity.

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‘ Invention in painting does not,’ according to Sir Joshua Reynolds, ‘ imply the invention of the subject ; for that is commonly supplied by the poet or historian. With respect to the choice, no subject can be proper that is not generally interesting. It ought to be either some eminent instance of heroic action or heroic suffering. There must be something either in the action, or in the object, in which men are universally con- cerned, and which powerfully strikes upon the public sympathy. As it is required that the subject selected should be a general one, it is no less necessary that it should be kept unembar- rassed with whatever may any way serve to di- vide the attention of the spectator. Whenever a story is related, every man forms a picture in his mind of the action and expression of the per- sons employed. The power of representing this mental picture on canvas is what in a painter we call invention. And as, in the conception of this ideal picture, the raind does not enter into the minute peculiarities of the dress, furniture, or scene of action ; so, when the painter comes to represent it, he contrives those little necessary concomitant circumstances in such a manner, that they shall strike the spectator no more than they did himself in his first conception of the story. The great end of the art is to strike the imagination. The painter therefore is to make no ostentation of the means by which this is done; the spectator is only to feel the result in his bosom. An inferior artist is unwilling that any part of his industry should be lost upon the spectator. He takes as much pains to discover, as the greater artist does to conceal, the marks of his subordinate assiduity. In works of the lower kind, every thing appears studied and encumbered ; it is all boastful

art, and open affectation. The ignorant often part from such pictures with wonder in their mouths, and indifference in their hearts. But it is not enough in invention that the artist should restrain and keep under all the inferior parts of his subject ; he must sometimes deviate from vulgar and strict historical truth, in pur- suing the grandeur of his design. How much the great style exacts from its professors to con- ceive and represent their subjects in a poetical manner, not confined to mere matter of fact, may be seen in the cartoons of Raffaelle. In all the pictures in which the painter has represented the apostles, he has drawn them with great no- bleness ; he has given them as much dignity as^ the human figure is capable of receiving; yet we are expressly told in Scripture they had no such respectable appearance ; and of St. Paul, in particular, we are told by himself that his bodily presence was mean. Alexander is said to have been of a low stature : a painter ought not so to represent him. Agesilaus was low, lame, and of a mean appearance : none of these defects ought to appear in a piece of which he is the hero. In conformity to custom, I call this part of the art history painting ; it ought to be called poetical, as in reality it is.

' As in invention, so likewise in expression, care must be taken not to run into particulari- ties. Those expressions alone should be given to the figures which their respective situations generally produce. Nor is this enoueh : each

person should also have thai expression which men of his rank generally exhibit. ••• ^The joy or the grief of a character of dignity is not to be expressed in the same manner as a similar pas- sion in a vulgar face. Upon this principle Ber- nini, perhaps, may be subject to censure. This sculptor, in many respects admirable, has given a very mean expression to his statue of David, who is represented as just going to throw the stone from the sling ; and, in order to give it the expression of energy, he has made him biting his under lip. This expression is far from being general, and still farther from being dignified. He might have seen it in an instance or two ; ind he mistook accident for generality.'

Of Portraiture. ••• There are four things ne- cessary to make a portrait perfect; viz. air, coloring, dress, and attitude.

1. The air respects the lines of the face, the head attire, and the size. The lines of the face depend upon exactness of draught, and agree- ment of the parts ; for it is not exactness of de- sign in portraits that gives spirit and true air, so much as the agreement of the parts at the very moment when the disposition and temperament of the sitter are to be caught. We see several portraits, which, though correctly designed, have a cold, languishing, and stupid air ; whilst others, less correct in design, strike us,

how- ever, at first sight, as a resemblance.

Few painters are careful enough to put the parts well together : Sometimes the mouth is smiling, and the eyes are sad ; at other times the eyes are cheerful, and the cheeks lank ; by which means their work has a false air, and looks un- natural. Of all the parts of the face, that which contributes most to likeness is the nose ; it is therefore of great moment to set and draw it well. Tliough the hair of the head seems to be part of the dress which is capable of various forms with- out altering the air of the face ; yet the head at- tire which one has been most accustomed to, creates such a likeness, that we scarce know a familiar acquaintance on his putting on a Avig, or any other head attire, different from that which he used to wear. It is necessary, therefore, as far as possible, to take the air of the head ornament, and make it accompany and set off that of the face.

As to the stature, it contributes so much to likeness, that we very often know people without seeing their face : it is, therefore, extremely pro- per to draw the size of a full length portrait, after the sitter himself, and in such an attitude as he usually appears in. In sitting, the person appears to be of a less free make, through the heaving of his shoulders : wherefore, to adjust his size, it is proper to make him stand for a short time in the posture we would give him, and then make our observations. All deformities, when the 'air and temper may be discovered without them, ought to be either corrected or omitted in portraits. But in some faces we can- not be too exact, whether the parts be beautiful or not ; as every thing in an im]>ortant picture is precious that is faithful. But, after whatever manner the painter acquits himself in this point, let him never forget good air and grace'; and that there are moments particularly advantageous for hitting them off.

2. Coloring, m portraiture, is an effusion of nature, often connected with tiie true tempers of persons ; and, the temper being essential to like- ness, it ought to be handled as exactly as the de- sign. This part is the more valuable, as it is rare and difficult to hit. Many painters have come to a likeness by strokes and outlines ; but few have shown in colors the tempers of persons. Two points are necessary in coloring; exactness of tints, and the art of setting them off. The former is acquired by practice, in examining and comparing the colors we see in life with those by which we would imitate it ; and the art of those tints consists in knowing what one color will produce when set by another, and in making good what either distance or time may abate on the glow and freshness of the colors. A painter who does

nothing more than what he sees, will never arrive at a perfect imitation; for, though his work may seem on the easel to be good to him, it may not appear so to others, nor perhaps even to himself at a distance. A tint, which, near, appears disjoined, and of one color, may look of another at a distance, and be confounded in the mass it belongs to. If you would have your work, therefore, to produce a good effect in the place where it is to hang, both the colors and lights must be a little loaded, but with discretion. In this point consult Titian, Rubens, Vandyck, and Rembrandt's methods : for indeed their art is wonderful. The tints usually require three times of observation. The first is at the person's first sitting down, when he has more spirit and color than ordinary. The second is when, being composed, his look is as usual. And the third is when, through tiresomeness by sitting in one posture, his color alters to what weariness usually creates. On which account, it is best to keep to the sitter's usual tint, a little improved.

3. In the dress and draperies of men's por- traits, we need only observe great truth and force ; but in women's there must also be charms ; whatever beauty they possess must appear in a fine light, and their blemishes must be softened. For this reason a white, lively, and bright tint, ought never to be set off by a fine yellow, which would make it look like plaster ; but rather by colors inclining to green, blue, or gray, or such others as, by their opposition, may make the tint appear more fleshy than usual in fair women. Vandyck often made a fiUemot-colored curtain for his ground; but that color is soft and brown. Brown women, on the other hand, who have yellow enough to support the character of fleshi- ness, may very well have yellowish draperies, to bring down the yellow of their tints, and make them look the fresher; and, near very high-colored and lively carnations, linen does wonders.

In grounds, two things are observable ; the tone and the color. The color is to be consi- dered in the same manner as those of draperies, with respect to the head. The tone must be al- ways different from the mass it supports, and of which it is the ground, that the objects coming upon it may not seem transparent, but -solid and raised. The color of the hair of the head usually detpvraines the tone of the ground ; and, wlien

the former is a bright cliestnut, we are o.flcn ein- barassed, unless helped by means of a curtain, or some accident of the claro-obscuro, supposed to be behind, or unless the ground is a sky. Where a ground is neither curtain nor land- scape, but is plain like a wall, it ought to be very much party-colored, with almost imper- ceptible patches or stains; for, besides its being so in nature, the picture will look the more grand.

4. Attitudes ought to suit the ages and quali- ties of persons and their

tempers. In old men and women they should be grave, majestic, and sometimes bold : and generally, in women, they ought to have a noble simplicity and modest cheerfulness : a charm infinitely beyond co- quetry : and indeed coquettes themselves care not to be painted such. Attitudes are of two kinds : one in motion, the other at rest. Those at rest may suit every person : but those in mo- tion are proper for young people only, and are hard to be expressed ; because a great part of the hair and drapery must be moved by the air ; motion, in painting, being never better expressed than by such agitations. The attitudes at rest must not appear so much so as to seem to re- present an inactive person, and one who sits for no other purpose but to oe a copy. And, though the figure that is represented be at rest, yet the painter, if he think fit, may give it a flying dra- pery, provided the scene or ground be not a chamber or close place.

It is above all things necessary that the figures which are not employed shoxild appear to satisfy the spectator's curiosity; and for this purpose show themselves in such an action as suits their tempers and conditions, as if they would inform him what they really were. In a word, attitude is the language of portraits ; and the skilful painter ought to give great attention to it. The best attitudes are such as induce the spectator to think that the sitter took a favorable opportunity of being seen to advantage, but yet without affec- tation. With regard to women's portraits, in whatever attitude they are placed, they should sway in such a manner as to give their face but little shade ; and we should carefully examine whether the face ajipear more beautiful in a smiling or in a serious air.

According to De Piles, portraiture requires three different sittings and operations : viz. dead coloring, second-coloring, and retouching or finishing. Before the painter dead-color, he must attentively consider what aspect will best suit the sitter, by'putting him in different posi- tions, if he have not any settled design ; when this is determined, it is of the utmost conse- quence to put the parts well together, by com- paring always one part with another ; for not only the portrait acquires a greater likeness when well designed, but it is troublesome to make alterations at the second sitting, when the artist should only think of painting, that is, of difS- posing and uniting his colors.

i. The dead-coloring ought to be clean, because of the slope and transparency of the colors, es- pecially in the shades ; and when the parts are well put together, and become clammy, they must be judiciously sweetened and melted in

*each other; yet without talcing away the air of the picture, that tlie painter may finisli it, in pro-]iortion as he draws. But if fiery geniuses do not like this method of scumblinˆC, let them only mark the parts sliiˆjhtly, and so far as is neces- sary for giving an air. In dead-coloring it is proper to put in rather too little than too much hair about the forehead ; that, in finishing, we may be at liberty to place it where we please, and to paint it with all possible softness and de- licacy. If, on the contrary, you sketch upon the forehead a lock which may appear to be of a ˆood taste, and becoming the work, you may ******** puzzled in finishing it, and not find the life exactly in the same position as you would ***pauit it.*

ii. The business of the second sitting is to put liie colors well in their places, and to paint them m a manner that is suitable to the sitter and to the effect we propose ; but, before they are made clammy, we ougiit to examine afresh whether the parts are rightly placed, and here and there to give some touches towards likeness, that, wlien we are assured of it, the work may go on with greater satisfaction. If the portrait be justly de- signed, the painter ought, as much as possible, to work quick, as the work will thus have the more spirit and life. But this readiness is only the effect of long study and experience.

lii. Before we retouch or finish, it is proper to terminate the hair, that, on finishing the carna- tions, we may be able to judge of the effect of the whole head. If, at the second sitting, we cannot do all we intended, which often happens, the third makes up the loss, and gives both spirit, physiognomy, and character. If we would paint a portrait at once, we must load the coloring; but neither sweeten nor drive, nor very much oil it ; and, if we dip the pencil in varnish as the work advances, this will readily enable us to put color on color, and to mix them without driving. There is nothing so rare as fine bands, either in the design or coloring. Ii is, therefore, convenient to cultivate a friendship with some women, who will take pleasure in serving for a copy. But if an opportunity oc- curs of copying hands after Vandyck, it must not be let slip ; for he drew them with a surprising delicacy and an admirable coloring. It is of great service to copy after the manners which come nearest to nature ; as are those of Titian and Vandyck.

Before we begin coloring, we must catch the very first moments, which are commonly the most agreeable and most ad/antageous, and to keep them in our memory for use when we are finish- ing ; for the sitter, growing tired with being long in the same place, loses those spirits which, at his first sitting down, gave beauty to the parts, and conveyed to the tint more lively blood, and a fresher color. In short, we must join to truth a probable and advantageous possibility, which, far from abating likeness, serves rather to set it off. For this end, we ought to begin with ob- serving the ground of a

tint, as well what it is in lights as in shades ; for the shades are only beautiful as they are proportioned to the light. We must observe, if tlietint be very lively, whe- ther it partake of yellowness, and where that yel- lov.ness is placed ; because usually, towards the

end of the sitting, fatigue diffuses a general yel- lowness, which makes us forget what parts were of this color, and what were not, unless we had taken due notice of it before. For this rea- son, at the second sitting, the colors must be every where readily clapped in, and such as ap- pear at the first sitting down ; for these are always the finest. The surest way to judge of colors, is by comparison ; and, to know a tint, nothing is better than to compare it with linen placed next it, or else placed next to the natural object if there is occasion. The portrait being now finished, nothing remains, but, at some distance of time, to view both the picture and sitter together, to determine with certainty, whether there is any thing still wanting to the work.

Of theati'ical decorations, Sfc. ??? Theatrical decorations require a particular art which unites several of the general parts of painting with the knowledge of architecture, perspective, &c. They who apply themselves to it would do well to design their decorations by day, and to color them by candle light, as they will be much better able to judge of the effect of a painting intended to be viewed by that light.

The designs for furniture, carriages, porcelain, and other branches of manufacture, form also a very important article of painting in general, and of academy painting in particular. This is a distinct branch of the art ; and without doul^t not the least useful, as it contributes so essentially to the success of manufactures, and consequently to the prosperity of a state ; and it is an art which has now attained a degree of perfection which places the porcelain painting of Great Britain on a level with the productions of Paris and Potsdam.

These may be deemed the chief principles of the art of painting, which it behoves the student indispensably to acquire not only the knowledge but likewise the practice of. There are also others, which must not by any means be over- looked, and among these are to be enumerated ??? disposition, costume, and illusion. This latter quality cannot, perhaps, in its strictest sense, be attained by painting: there is, however, a species of it (although probably the name is not fairly applied) which demands the greatest at- tention, and forms one of the chief fascinations of the art. It is this : that the painting shall resemble truth to such an extent, by the justness of its forms, the combination of its colors, and all its general effects, that the image thereby presented shall afford all the gratification result- ing from the imitation of reality. This, it is admitted, is not illusion

in the stricter sense of the word ; for it exists as well in pictures on a small scale as in those of equal dimensions with the thing represented : but it is that exactness of imitation of which painting is susceptible, even in pictures which compriseany number of figures at a reasonable distance from each other.

We shall now proceed to illustrate the theore- tical part of our subject by a few practical obser- vations.

And, first: ??? Let us warn the young artist against being led astray by the ambition of com- posing facilely, or acquiring that which is termed a masterly handling of the chalk or pencil. To this mistaken aim, however, young men are in- cited in various ways. There is something dash-

ing and fine about the notion in the first place ; and in the next they are tempted to it by that slothful feeling too natural to us all. They are terrified at the prospect of the toil required to obtain exactness ; not considering that the lives of all those painters who attained eminence fur- nish instances and recommendations of unceas- ing industry and application. When these great masters imagined a subject, they first executed a variety of sketches ; afterwards a finished drawing of the whole ; after that a more correct drawing of every separate part : ??? they then painted the picture, and concluded the whole by retouching it from the life. At the same time a student is not always advancing because he is employed ; he must exert his strength in those parts of the art where the real difficulties lie ; in those parts which distinguish it as a liberal art, and not in such as may be resolved into the merely ornamental.

It is, secondly, a matter of considerable im- portance, that those drawings on which the young artist first exercises his ability, should be of the very best kind ; that the profiles, the hands, the feet, &c., given him to copy be of the first mas- ters, in order that both his eye and his hand may become early acquainted with the most exqui- site proportions and the most charming shapes.

Thirdly, It would be desirable that the student should copy some of the fine heads to be met with on Greek and Roman medals : he will hence become acquainted (if we may be allowed the phrase) with the personages whom he may in course of time transplant into his pictures; and, above all, improve himself in the important art of copying from relief. Hence, also, he will become initiated into the doctrine of light and shade, and the nature of that chiaro-scuro by which the different forms of things may, justly speaking, be said to be distinguished.

The chief divisions of the art of painting are into historical (comprising mystical and allegori- cal), grotesque, portrait, fancy, animals, fruits and flowers, battles, landscapes, sea views, still life, and architecture.

Grotesque paintings are to be found in the ce- lebrated loggia of the Vatican palace at Rome, painted from the designs of Raffaelle, and on the ceiling of the portico of the capitol, carved from those of Michel Angiolo.

The other departments are sufficiently ex- plained by their respective names : it may be as 'veil, however, to observe, that the term still life refers to all inanimate objects, and chiefly to household furniture, instruments of use, &c.

Sect. II.❓❓❓ Modes and Materials of Paint- ing.

The different methods of painting at present practised are ❓❓❓

Oil painting, which is preferable to any other mode, since it allows a complete gradation of tints, in the most enduring of all materials, ex- cept those of mosaic.

Fresco is performed with colors diluted in water, and laid on a wall newly plastered, with which they incorporate, becoming often as dura- ble as the stucco itself. See the following sec- tion.

Crayons, in which colors, either simple or compound, are ground in water, mixed with gum. and made into small rolls of a hard paste, which are then used on paper or parchment.

Miniature, consisting of colors prepared with water or gum, and laid on vellum or ivory. A smaller kind of portrait.

Enamel, performed on copper or gold, with mineral colors dried by fire. This method is likewise extremely durable. See Enamel.

Encaustic, executed by the mixture of wax with the varnish and colors. See

Encaustic.

Water colors, more properly denominated limning. This is performed with colors mixed with water, gum, size, or paste, on silk, paper, and sundry other materials.

Besides these various methods we may add the painting in distemper ; namely, with co- lors mixed with size, white of eggs, or any tliin glutinous substance, and used on paper, linen, silk, board, or wall. There are also painting on Glass (which word see), and clydonic painting, consisting of a mixed use of oil-colors and water. The various pigments at present in use, and fitted for the general purposes of oil painting, are : ––– Cremnitz white, white lead of different sorts ; a fine yellow, recently discovered from chromate of iron; king's yellow or orpiment; patent yellow, Naples' yellow, ochres, Dutch pink, terra di Sienna, yellow lake, red lead, ver- milion, red ochre, Indian red, 'enetian red, lakes of various kinds, brown pink, Vandyck's brown, umber, burnt and unbumt ; terra di Sienna, burnt ; Prussian and Antwerp blue, ul- tra marine, ivory black, blue black, asphaltum. These may be reckoned the chief colors for the palette ; there are, however, several others, which are employed for particular purposes, such as verdigris, &c.

The oils best adapted to the ends of painting are poppy, nut, and linseed oils ; and in this climate a preparation of the latter, by boiling it with some siccative, is in common use. See Oil.

We will subjoin two or three observations, made by a quaint old writer on art (Richardson), with respect to the method of distinguishing a genuine picture of one of the old masters from a copy : ––– ' There are some pictures and draw- ings which are seen to be originals, though the hand and manner of thinking are neither of them known ; and that by the spirit and freedom of them ; which sometimes appears to such a de- gree as to assure us it is impossible they should be copies. But we cannot say, on the contrary, when we see a tame, heavy handling, that it is not original merely upon that account, because there have been many bad originals, and some good masters have fallen into a feebleness of hand, especially in their old age. The best counterfeit hands can rarely do it so well as to deceive a good connoisseur ; the handling, the coloring, the drawing the airs of heads, some, nay, all of these discover the author ; more or less easily, however, as the manner of the mas- ter happens to be : what is highly finished, for example, is more easily imitated than what is loose and free. Copies made by a master after his own work are discoverable by being well ac-

(juainted with what that mafiter did when he fol- lowed nature ; these shall have a spirit, a freedom, a naturalness which even he cannot put into what he copies from his own work. To conclude, there is one qualification absolutely necessary to him that would know hands, and distinguish co- pies from originals ; as it also is to any one who would judge well of the goodness of a picture or drawing ; or indeed of any thing else what- soever ; and that is ††† he must know how, and accustom himself, to take in, retain, and manage, clear and distinct ideas.'

Sect. III. ††† Of Painting in Fresco.

Of all kinds of painting, fresco is the most durable, the most speedily executed, and the most proper to adorn great buildings. It ap- pears, that most of the fragments of ancient paint- ing handed down to us by the Romans are in fresco. Norden, quoted by Winckelman, speaks of the ruins of Egyptian palaces and temples, iti which are Colossian paintings on walls eighty feet high. The description which those authors have given of these paintings, of the prepared ground, ainl of the manner in which the colors have been employed, Sec, shows plainly that they have bi en thus executed. The stability of fresco is den.onslrated, therefore, by the exist- ence of these fragments of the highest antiquity. There are no other kinds of painting which could equally have resisted the injuries of the weather, the excessive aridity of certain elements, the moisture of subterraneous situations, and the de- structions by barbarians.

In making paintings in fresco, the choice of place, when they are without doors, is of the greatest importance. In countries where there is little or no frost, an exposure to the north is the most favorable; and in cold climates a western exposure should be made choice of, be- cause the first rays of the rising sun have a very pernicious effect after frost.

The choice of materials is the next thing of importance. To make it durable, the ground is the object of chief attention; and, to make this perfect, the mortar used by the ancients, now unknown, would be necessary. It is easy to perceive that a minute detail of forms, an exten- sive mixture and gradation of tints, and the me- rit of a delicate and gentle touch, can make no part of the excellencies of this kind of painting. It cannot bear a close examination like a picture in oil. There is always something dry and rough which displeases. An artist who would flatter himself with success in a fresco placed near the eye would be grossly deceived ; a com- mon spectator would find it coarse and badly finished.

Fresco is chiefly employed in palaces, tem- ples, and public edifices. In

these vast places no kind of painting can be preferred to it; large, vivid in its strokes, and constantly fresh, it en- riches the architecture, animates it, and gives relief to the eye from the repetition of the same forms, and the monotony of color, in a place where colored marbles and bronzes are not em- ployed. A fine fresco gives the greatest effect to a lofty building, which serves as a frame and support to this enchanting art. which fixes the

attention of every person of sensibility and taste Fresco has a freshneis, splendor, and vigor, not to be found in oil or water colors.

A known principle in all painting is, that the coloring is more perfect in proportion as it ap- proaches to the lights and shades in nature. As colors applied to any subject can never reach this degree of perfection, the dlusion which painters produce consists in the comparison and opposition of the tones of colors among them- selves.

If tile white of the finest and purest oil appears heavy and gray, compared with great lights in natural whites, it follows, that, in order to copy them with fidelity, the tones which follow the first white must be degraded in an exact propor- tion. Thus it is necessary that the shades of a])icture be considerably deeper than those of the model ; especially, if, from the greatest lights to the browns, one hath proportionably followed the distance which is found between the colors on the pallet and the tones of the object copied. Now, if the white of fresco be infinitely more bright than that of oil, the same effect will be obtained in a brown tone. On the other side if it constantly happens that the brown tones of fresco are much more vigorous than those of water colors, and equal even to the browns of oil itself, it is certain that it possesses a splendor and vigor more extensive than any other kind of painting. Thus, in the hands of an artist who is well acquainted with the colors fit for fresco, it is more susceptible of the general effect, and more capable than any other kind of giving projection and the semblance of life to the figures.

If we enquire why painting in fresco is now seldom or never practised, we may ascribe it to the great talents required to execute it. ‘ Many of our painters,’ says Vasari, ‘ excel in oil and water colors, and yet fail in fresco ; because of all kinds this requires the greatest strength of genius, boldness in the strokes, and resolu- tion.’ If in an age abounding in great masters it was difficult to excel in this kind, it must be much more so in ours ; but we should not re- quire the characters of sublimity and style to which men were accustomed in the time of Va- sari.

We should execute in tresco as we do in oils ; for Italy herself along with Michel Angiolo, and Zuicharo, had Cortonni Giardano and Francis- chini as middling fresco-painters. And in France, Lafosse, Bon Bologne, and

Perur, performed se- veral works in fresco, which might be imitated by the painters of ‘ˆur times. But the real causes for abandoning this art proceed from the want of knowledge and taste in the persons who employ the artists, and from the manners of the age. As a pleasant or licentious conceit, unfi- nished coloring, and bold efl’ects of shade, are the chief objects of consideration, a very smooth painting, enlivened by gentle touches, complete- ly gratifies the person who pays the price ; and therefore the philosophical principles of the art, which require study, are not cultivated.

The mechanical process of this useful and beautiful kind of painting is as follows: before painting it is necessary to apply two layers, I the wall on which vou are to paint is ot brick

the layer is easily applied ; but if it is of free- stone closely united, it is necessary to make ex- cavations in the stone, and to drive into tiiem nails or pegs of wood in order to hold the first layer. Tiie first layer is made of good lime and a cement of pounded brick, or, which is still better, river sand; this latter forms a layer more uneven, and better fitted to retain tlie second smooth and polished layer applied to its surface. There should be experiments to discover a layer still more compact, and more independent of the variations of the air ; such, for example, as covers the aqueducts and ancient reservoirs con- structed oy the Romans m the neighbourhood of Naples.

Before applying the second layer, or what you are to paint, it is necessary that the first be per- fectly dry ; for there issues from the lime, wlien it is moist, a smell both disagreeable and perni- cious to the artist. When the first layer is per- fectly dry, it is wet with water in proportion to its dryness, tliat the second layer may the more easily incorporate with it. The second layer is composed of lime, slaked, and long exposed in the air, and of river sand, of an equal grain, and moderately fine. It requires an active and in- telligent mason to apply this layer, as the surface must be altogether equal. The operation is per- formed with a trowel ; and the operator requires to have a small])iece of svood to take away the large grains of sand, which, remaining, might render the surface uneven. To give a fine po- lish to this layer, one ought to take a sheet of paper, apply it to the wall, and pass and repass the trowel over the paper. By these means the little inequalities which hurt the exactness of the stroke, and which produce false appearances at a distance, are entirely smoothed. The artist must not lay more than the painter can finish in a day, as this kind of painting must be

executed on a fresh ground.

The layer being tlius prepared, the painter begins his operation ; but as painting in fresco must be executed rapidly, and as there is no time to retouch any of the strokes, the painter takes care to provide himself with large cartoons, on which he has drawn, with exactness, and in their full size, the figures wliich he is to paint, which leaves him nothing to do but to copy them on the wall.

The cartoons are composed of several sheets of large paper pasted one on another, neither too thick nor too slender. The painter traces the tracks of the figures on the plaster by passing a steel point over the tracks in the cartoons, or in pricking them. Having thus attained an exact and speedy drawing, it now remains to execute the painting. But it is essential, when one wishes to finish any small work of this kind, in the first place, to be informed of the proper co- lors, and of those which cannot be used.

In general, the colors extracted from earths, and those which Iiave passed through the fire are the only ones which can be employed in this kind of painting. The colors are white, made of lime, the wiiite of egg-shells, ultramarine, the black of charcoal, yellow ochre, burnt vitriol, red earth, green of Verona, Venetian black, and burnt ochre.

There are others which require to be used with great precaution, such as enamel blue, cinnabar, and white marble dust. When enamel blue is used, it requires to be applied instantaneously, and when the lime is very moist, otherwise it does not incorporate with the plaster; and, if one retouch with this color, it must be done an hour or more after the first appHcation, to increase its lustre. With regard to the white marble dust, it is apt to turn black if it be not mixed up with a proper quantity of wiiite lime.

Cinnabar, whicli has a splendor almost supe- rior to all other colors, loses it almost entirely when mixed with lime. At the same time it may be employed in places not exposed to the air, with a little degree of care in the preparation. Reduce a quantity of the purest cinnabar to pow- der, put it into an earthen vessel, and pour lime- water on it for two or three times. By this process die cinnabar receives some impression of lime-water, which makes it capable of being employed in fresco-painting.

One of the best colors, and the one most used in fresco for the gradation of tints, and for giving the requisite tone, is white of lime. This white is prepared by mixing lime slaked long before with good water. The lime deposits a sediment at the bottom of the vessel ; when the water is poured off", this sediment is tiie white of lime.

Anotlier kind of white might be used, the ef- fects of whicli would be known by experience, namely, the white of egg-shells. To prepare this while, one must take a great quantity of sliellsof eggs, which must be pounded and lioiled in wa- ter along with a quantity of quick lime; after this, they are put into a strainer, and washed re- peatedly with fountain water. The shells are ag^in pounded until the water employed for that purpose becomes pure and limpid ; and, when they are in this manner reduced to powder, this powder is grinded in water, and formed into small pieces, and dried in the sun.

All the diff'erent kinds of ochres make excel- lent colors for fresco, and take different shades, being previously burned in iron chests. Wiih regard to the Naples yellow, it is dangerous to use it where the painting is much exposed to the air. The blacks of charcoal, of peach stones, and of vine twigs, are good ; but that extracted from bones is of no value.

Roman vitriol gathered at the furnaces, and called burnt vitriol, ground afterwards in spirit of wine, resists the air extremely well when em- j)loyed in lime. There is also a red extracted from this preparation somewhat like that pro- duced from lac. This color is very proper for preparing the layers to be colored with cinnabar; and the draperies painted with these two colors will vie in splendor with those painted with fine lac in oil.

The ultramarine ij> the most faithful color; and it not only never changes, but it communicates this precious quality to those colors with which it is mixed.

The manner of employing these colors is to grind them in water, and to begin by arranging them into the principal tints to be employed ; these are afterwards put into pots ; and it is ne- cessary to use many pallets raised at the edges

?oform the intermediate shades, and to have un- der one's eye all the shades required. As all the tints, except burnt ochre, violet, red, and blacks of all kinds, are apt to become clear, the painter must have beside him some pieces of brick or new tile very dry. A dash of the colors is ap- plied to one of these with the pencil, before using them ; and, as tile instantaneously imbibes the water, one perceives what the shade will be after the fresco is dry.

Sect. IV. ••• Of Painting with Crayons.

The student must provide himself with strong- blue paper, the thicker the better, if the grain is not too coarse. The knots should be levelled with a penknife or razor, otherwise they will prove exceedingly troublesome. The paper must be pasted very smooth on a linen cloth, previ- ously strained on a deal frame, the size accord- ing to the artist's pleasure ; on this the picture is to be executed ; but it is most eligible uot to paste the paper on till the whole subject is first dead -colored. The method of doing this is by laying the paper, with the dead-color on its face, upon a smooth board, when, by a brush, the back side of the paper must be covered with paste ; the frame with the strained cloth must then be laid on the pasted side of the paper ; after which, turn the painted side uppermost, and lay a piece of clean paper upon it, to pre- vent smearing it : this being done, it may be stroked gently over with the hand ; by which means all the air between the cloth and the paper will be forced out.

When the painters want to make a very correct picture, they generally use tiffany or black gauze, strained tight on a frame, which they lay flat on the subject to be imitated, and with a piece of chalk, trace all the outlines on the tiffany. They then lay the canvas to be painted on, flat upon the floor, placing the tiffany with the chalked lines upon it, and with a handkerchief brush the ⬛⬛⬛whole over; this presents the exact outlines of the picture on the canvas. The crayon-painter may also use this method when the subject of liis imitation is in oils; but, in copying a crayon pic- ture, he must have recourse to the following me- thod, on account of the glass.

The picture being placed on the easel, let the outlines be drawn on the glass with a small ca- mel's hair pencil, dipped in lake, ground thin with oils, with great exactness. After this, take a sheet of paper of the same size, and place it on the glass, stroking over all the lines with the hand, by which means the color will adhere to the paper, which must be pierced with pin-holes pretty close to each other. The paper intended to be used for the painting must next be laid up- on a table, and the pierced paper placed upon it; then, with some fine pounded charcoal tied up in a piece of lawn, rub over the pierced lines, which will give an exact outline ; but great care must be taken not to brush this off till the whole is drawn over with sketching chalk, which is a com- position made of whiting and tobacco-pipe clay, rolled like the crayons, and pointed at each end. When a student paints from the life, it is proper to make a correct drawing of the outlines on ano- ther paper, the size of the picture he is going to Vol. XVI.

paint, which he may trace by the preceding me- thod.

The student will find the sitting posture, with the box of crayons in his lap, the most conveni- ent in wiiich to paint. The part of the picture he is painting should be rather below his face, else the arm will be fatigued. Let

the windows of the room be darkened, at least to the height of six feet from the ground ; and the subject to be painted should be placed so that the li'^ht may fall with every advantage on the face.

The features being correctly drawn with chalks, take a crayon of pure carmine, and carefully draw the nostril and edge of the nose next the shadow ; then, with the faintest carmine teint, lay in the highest light upon the nose and forehead, which must be executed broad. Then proceed gradually with the second teint, and the succeed- ing ones, till he arrives at the shadows, which must be enriched with much lake, carmine, and deep green. The several pearly temts discerni- ble in fine complexions must be imitated with blue verditer and white, which answers to the ultramarine teints used in oils. But, if the parts of the face where these teints appear are in sha- dow, the crayons composed of black and white must be substituted in their place.

Let the student be careful when he begins the eyes, to draw them with a crayon inclined to the carmine teint, of whatever color the irises are ; he must lay them in brilliant, and at first not loaded with color, but executed lightly. The student must let the light of the eye inclme very much to the blue cast, avoiding a staring white appearance, but preserving a broad shadow thrown on its upper part by the eye-lash.

The student should begin the lips with pure carmine and lake, and in the shadow use some carmine and black ; the strong vermilion teints should be laid on afterwards. He must form the corner of the mouth with carmine, brown ochre, and greens, variously intermixed. If the hair is dark, he should preserve much of the lake and deep carmine teints therein.

After he has dead-colored the head, he is to sweeten the whole together, by rubbing it over with his finger, beginning at the strongest light upon the forehead, passing his finger very lightly, and uniting it with the next teint, which he must continue till the whole is sweetened toge- ther, often wiping his finger on a towel, to pre- vent the colors being sullied. When the head is brought to some degree of forwardness, let the back ground be laid in, which must be done by covering it as ttiin as possible, and rubbing it into the paper with a leathern stump. Near the face the paper should be almost free from color. The ground, being painted thin next the hair, affords an opportunity of painting the edges of the hair over in a light and free manner in finishing.

The above method, properly executed, pro- duces the appearance of a painting composed of three colors, viz. carmine, black, and white, which is the best preparation a painter can make for the producing a fine crayon picture. The next step is, to complete the back ground and the hair ; thence

proceed to the forehead, finishing down- ward.

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In painting over the forehead the last time, begin the highest light with the most faint ver- milion teint, in the same place where the faint carmine was first laid, keeping it broad in the same manner. In the nest shade, the student must work in some light blue teints, composed of verditer and white, intermixing with them some of the deeper vermilion teints, insensibly melting them into one another. Some brilliant yellows may also be used, and, towards the roots of the hair, strong verditer teints, intermixed with green, will be of singular service. Cooling crayons, composed of black and white, should succeed these, and melt into the hair. Beneath the eyes, the sweet pearly teints are to be pre- served, composed of verditer and white, and under the nose, and on the temples, the same may be used ; beneath the lips, teints of this kind also are proper, mixing them with the light greens and some vermilion. In finishing the cheeks, let the pure lake clear them from any dust contracted from the other crayons; then with the lake may be intermixed the bright ver- milion; and, last of all, a few touches of the orange-colored crayon, but with caution.

The eye is the most difficult feature to execute in crayons, as every part must be expressed with the utmost nicety, to appear finished ; at the same time that the painter must preserve its breadth and solidity while he is particularising the parts. To accomplish this, the student should use his crayon in sweetening as much, and his finger as little as possible. When he wants a point to touch a small part vvith, he may break off a little of his crayon against the box, which will produce a corner fit to work with in the mi- nutest parts. When the eye-balls are sufficient- ly prepared, the shining speck must be made with a pure white crayon, which should be first broken to a point, and then laid on firm ; but, as it is possible they may be defective in neatness, they should be corrected with a pin, taking off the redundant parts, by vvhich means they may be formed as neat as can be required.

The difficulty, with respect to the nose, is to preserve the lines properly determined, and at the same time so artfully blended into the cheek as to express its projection, and yet no real line to be perceptible upon a close examination ; in some circumstances it should be quite blended with the cheek, which appears behind it, and determined entirely v^-ith a slight touch of red chalk. The shadow caused by the nose is ge- nerally the

darkest in the whole face. Carmine and brown ochre, carmine and black, and such brilliant crayons, compose it best.

The student having prepared the lips with the strongest lake and carmine, &c., must with these colors make them completely correct ; and, when finishing, introduce the strong vermilions, but with caution. This, if properly touched, will give the lips an appearance equal if not supe- rior to those executed in oils, notwithstanding the seeming superiority the latter has, by means of glazing, of which the other is entirely desti- tute.

When the student paints the neck, he should avoid expressing the muscles too strong in the stem; nor should tlie bones appear too evident

on the chest. Tlie most necessary part to be expressed is a strong marking just above the place where the collar bones unite; and, if the head is much thrown over the shoulders, some notice should be taken of the large muscle that rises from behind the ear, and is inserted into the pit between the. collar bones. All inferior mus- cles should be avoided. In coloring the neck, let the student preserve the stem of a pearly hue, and the light not so strong as on the chest. If any part of the breast appears, its transparency must also be expressed by pearly teints ; but the upper part of the chest should be colored with beautiful vermilions delicately blended with the other.

Dark blue, purple, black, pink, and all kinds of red draperies also should be first tinged with carmine, which will render the colors much more brilliant than any other method ; over this should be laid on the paper the middle teint, ex- cept the dark masses of shadow, which should be laid on at first as deep as possible; these, sweetened with the finger, will exhibit a master- ly breadth, which the lesser folds, when added, ought by no means to destroy. With the light and dark teints, the smaller parto are next to be made with freedom, executing as much with the crayon, and as little with the ˆnger as possible ; in each fold touching the laˆt stroke with the crayon, which stroke the finger must never touch. In the case of reflections, the simple touch of the crayon will be too harsh, therefore fingering will be necessary afterwards, as reflected lights are always more gentle than those which are direct. With respect to reflections in general they must always partake of the same color as the object reflecting, but in the case of single figures, it may be useful to make some particular observa- tions. In a blue drapery, let the reflections be of a greenish cast; in green draperies, make them of a yellow teint ; in yellow, of an orange ; in orange, reflect a reddish cast; in all reds, some- thing of their own nature, but inclined to the yellow : black should have a reddish reflection ; the reflection of a reddish teint will also present purples to the best advantage. Of whatever co- lor the drapery is, the reflection on the face must partake thereof, otherwise the picture, like paint- ings on glass, will have but a gaudy effect. Li- nen, lace,

fur, Sec, should be touched spiritedly with the crayon, fingering very little except the latter ; and the last touches even of this, like all other parts, should be executed by the crayon, without sweetening with the finger.

The methods above recommended have been practised by the most celebrated crayon-painters, whose works have been held in public estimation ; but the knowledge of, and ability to exe- cute each separate part with brilliancy and truth, will be found very insufficient to constitute a complete painter, unless he unite them with each other by correctness of drawing, propriety of light and shadow, and harmony of coloring. To ac- complish this, the student should carefully avoid finishing one part, till he has properly consider- ed the connexion it is to have with the rest

Materials. ••• The perfection of the crayons consists, in a great measure, in their softness ; for it is impossible to execute a brilliant picture with

them if they are otherwise ; on which account great care should be obiserved in the preparing them, to prevent their being hard. In all compositions flake white andwliite lead should be wholly I ejected, because the slightest touch with either of these will unavoidably turn black. They are subject to cliange ; but, whenever this happens, it is entirely owing to an injudicious use of the above mentioned whites, wliich will stand only in oils. To obviate the bad effect of such crayons use common whiting, prepared as fol- lows : •••

Take a large vessel of water, put the whiting into it, and mix them well : let this stand about half a minute, then pour off the top into another vessel, and throw the gritty sediment away; let what is prepared rest about a minute, and then pour it off as before, which will purify the whit- ing. \ hen tills is done let tlie whiting settle, pour the water from it, after which lay it on the chalk to dry, and keep it for use, either for white crayons, or for preparing teints with other colors, for with this all other teints may be safely prepared. All colors of a heavy or gritty nature, especially blue verditer, must be purified by washing after this method.

The student must have a large flexible pallet- knife, a large stone and muller to levigate the colors, two or three large pieces of chalk to ab- sorb the moisture from the colors after they are levigated, a piece of flat glass to prevent the moisture from being absorbed too much, till the colors are rolled into form, and vessels for water spirits, &c., as necessity and

convenience shall direct.

*I. Reds. Good carmine is inclined to the vermilion teint, and good lake to the carmine teint. The carmine crayons are thus prepared : ***

1. Carmine. As their texture is inclinable to hardness, instead of grinding and rolling them take a sufficient quantity of carmine, lay it upon the grinding stone, mix it with a levigating knife with spirit of wine till it becomes smooth and even. T!ie chalk-stone being ready, lay the color upon it to absorb the spirit, but be careful that it is laid on in a proper shape for painting. If it is levigated too thin the crayons will be too flat ; and if too thick it will occasion a waste of color by their adhering to the pallet-knife. The next step is to compose the different teints by a mixture with whiting; the proportion consists of twenty gradations to one. Take some of the simple color, and levigate it with spirit of wine, adding about one part of washed whiting to three parts of carmine, of which, when properly incorporated, make two parcels. The next gra- dation should be composed of equal quantities of carmine and whiting, of which four crayons may be made. The third composition should have one-fourth carmine and three-fourths whit- ing; of this make six crayons, which will be a good proportion with the rest. The last teint should be made of whiting very faintly tinged with carmine, of which make about eight crayons which will complete the above mentioned pro- portion.

2. Lake is a color very apt to be hard ; to prevent which take about half the quantity of lake intended^ and grind it very fine with spirit

of wine ; let it diy, and then pulverise it, wiiich is easily done if the lake is good : then take the other half, and grind it with spirits, after which mix it with the pulverised lake, and lay it out directly in crayons on the chalk. This color will not bear rolling. Tlie simple color being thus prepared, proceed with the compound crayons as directed before, and in the same de- grees of gradation as the carmine teints.

3. Vermilion. The best is inclined to the ear- mine teint. Nothing is required to prepare 'his color more than to mix it on the stone with soft water or spirits, after which it may be rolled into crayons. Various teints are produced by a mix- ture of the simple color with whiting.

II. Blues. 1. Prussian blue is apt to bind, and is rendered soft with more difKculty than carmine and lake. The same method of prepa- ration is to be followed with this as directed with respect to lake. 2. Blue verditer is naturally gritty, and therefore should be washed well. Its particles are so coarse as to require to be united by slaked plaster of Paris about the size of a pea. This blue is extremely brilliant, and will be of great use in

heightening draperies, &c. The teints must be formed with whiting, as above directed.

III. Greens. In Switzerland they have a method of making greens superior to ours. We usually take yellow ochre, grind it with spirits, mix it with the powder of Prussian blue, then temper it with a knife, and lay the crayons on the chalk, without rolling them. Instead of this some use king's yellow mixed with Prussian blue, and others brown ochre and Prussian blue. The crayons made of the two last may be rolled.

IV. Yellows. 1. King's yellow is the most useful and the most briliant, levigated with spirits of wine. Yellow oclire, and Naples yel- low, ground with spirits, make useful crayons. 2. Orange is produced with king's yellow and vermilion ground together with spirits, and the teints formed as in other cases, but no great quantity of them is required.

V. Browns. 1. Cullen's earth is a fine dark brown. After six or eight of the simple crayons are prepared, several rich compound teints may be produced from it, by a mixture with carmine in various degrees. Roman or brown ochre is ai excellent color, either simple or compoundec with carmine. Whiting tinged with either oi these proves very serviceable in painting. 2. Umber may be treated in the same manner, only it is necessary to levigate it with spirit of wine.

VI. Purples. Prussian blue ground with spirits, and mixed with pulverised lake, will produce a good purple. Carmine, thus mixed with Prussian blue, will produce a purple some- thing different from the former.

VII. Black. 1. Lamp-black is the only black that can be used with safety, as all others are subject to mildew ; but, as good lamp-black is very scarce, the student should make it himself; the process is as follows : ••• Provide a tin cone, fix it over a lamp at such a height that the flame may just reach the cone for the soot to gather within it. When a sufficient quantity is collected take it out, and burn all the grease from it in a

crucible. It must then be ground with spirits, and laid on the chalk to absorb the moisture. 1. Various gray teints may be formed from this by a mixture of whiting. 2. Vermilion mixed with carmine is a composition of great use. 3. Car- mine and black is another good coiiiponnd, and various gradations should be made. 4. ˆ"ermilion and black is also a very useful

compound. 5. Prussian blue and black is another good com- pound, and will be found of singular service in painting draperies.

The different compositions of colors must be cut into a proper magnitude, after they are pre- pared, to be rolled into pastils, for use. Each crayon should be formed in the left hand with the ball of the right, first formed cylindrically, and then tapered at each end. If the composi- tion is too dry, dip the finger in water; if too wet, the composition must be laid upon the chalk again to absorb more of the moisture. The crayons should be rolled as quick as possible ; and when finished must be laid upon the chalk again to absorb all remaining moisture.

Sect. V. ??? Of House Paintikg.

Painting, as applied to buildings, comprises in the first place the coloring over all the several kinds of wood, iron-work, &:c., employed therein with mineral colors, rendered fluid by saturation with oils, oil of turpentine, &c. A pigment so prepared is spread over them with a brush, and by the repetition of several coats they together operate to their protection, and at the same time give a variety and neatness to the general ap- pearance of a house. This kind of painting will be divided in this section under its several heads as it is practised in London, and will embrace the working in common colors, also graining of its several kinds, ornamental painting, inscrip- tion writing, &c. &c. All the prismatic colors are occasionally called into use by the painter, and he varies these to suit the taste of his em- ployer into almost every gradation of teint. But the ground-work of all house-painting is formed by a paint prepared from lead, known in the arts as ceruse, or white-lead. This is manufac- tured for use at places called tlie White-lead Works, and is performed in the following man- ner, viz. by rolling leaden plates spirally up, so as to leave the space of about an inch between each coil, and afterwards placing them vertically "in earthen pots, at the bottom of which is some good vinegar. The pots are then to be covered, and exposed for a length of time to a gentle hcnt in a sand bath, or by bedding them in hot dung. The vapor of the vinegar, assisted by the ten- dency of the lead to combine with the oxygen ???which is present, corrodes the lead, and converts the external portion of it into a white substance which comes off in flakes when the lead is un- coiled. The plates are thus treated repeatedly until they are corroded through, and completely reduced to an oxide ; this is called ceruse or white lead. It is afterwards bleached, ground, and saturated with linseed oil. It is then put into tubs resembling butler firkins, each con- taining about 3 cwt. ; in such tubs it is dis- pensed at the color shops. But at such places it is frequently adulterated with powdered chalk,

so that an experienced painter, who i desirous that his work should retain

its color, prefers pur- chasing his lead at the works, where he is sure of having it pure. Lead improves by keeping, and all the best whites are performed by it when it is at least two or three years old. The Not- tingham ceruse is most esteemed for house work when it is required to be finished in what is technically called flatting or dead white.

Litharge is employed by painters to render their colors more drying, and is composed of the ashes of lead, or a kind of dusky powder that first appears in its oxidation. When in this state it is called by the chemists a subcarbonate of lead, and is afterwards saturated with linseed oil to render it more drying.

Liiiseed oil is obtained by pressure from the seed of flax; it is afterwards filtered to clear it of any of the feculce of the seed, and then suf- fered to remain in tubs to precipitate and clarify. The more colorless the oil is the better, and this is greatly promoted by keeping, as linseed oil will, by being kept a year or two, deposit all its coloring particles, and be as transparent as water : the best painting is made with oil in this state. In Holland they whiten their linseed oil by a very simple process, which is said by them to answer every purpose to be derived from its age. They take an earthen pot well glazed, into which they put one-third of fine white sand and one- third of water with the linseed oil they wish to whiten ; and after having covered the vessel with glass they expose it to the sun, taking care to stir it at least once a day. When the oil has be- come very white it is left at rest during two days, after which it is taken away for use.

Of drying oils. ••• The substances most usually employed to produce them are the oxide of lead called litharge, plaster, and umber. The pro- cess consists in taking of these several materials in the proportions as follow, viz. to one pound of oil add half an ounce of litharge with as much ceruse, umber, and plaster. The oil is boiled on these four drugs over a gentle fire, taking care to skim it from time to time ; this matter so skimmed off is called by the house-painter smudge, or dryer ; it is of a lead color, and is used by him in his outside work, and sometimes mixed in the dark colors to render them more susceptible of fixing and drying. As soon as this scum begins to rnrify and become red, the fire is stopped, and the oil being left at rest gra- dually settles and clarifies. Linseed oil so pre- pared is vended at the color shops under the name of boiled oil. All the best house-painting is done with it.

Mr. \ˆanherman has lately laid before the Society of Arts a method of rendering fish-oil apphca ble to painting ; and it appears to make a good and cheap vehicle for colors exposed to the weather, though it dries but slowly. To thirty-two gallons oT vinegar he adds twelve pounds of litharge and twelve pounds of sul- phate of zinc, shaking the mixture well twice a

day for a week. The mixture is then put into a tun of fish-oil, with which it is well shaken and mixed, and the next day the clearer part, about seven-eighths of the whole, is poured off. Twelve gallons of linseed oil, and two of oil of turpen-

tine are then added to the clear part, and tliis being well shaken together is left to settle for t^'o or three days, wlien it will be fit to grind wliite lead and all fine colors in : these, however, are to be thinned for pse with linseed oil and oil of turpentine. For cheap paints exposed to the weather, wliiting and road dirt finely sifted are to be mixed with lime water to the consistence of mortar. To this composition may be added almost any pigment ground with the sediment of the prepared oil, in the proportion of one part to two of the lime water already used, and tiie whole is to be thinned for use, by adding to every eight pounds a quart of linseed oil and as much of a mixture, of the prepared oil with lime water. The proportions of the mixture are not mentioned. If two ounces of litharge be added to a gallon of linseed oil and well shaken every day for a fortnight, and the clearer part mixed with half a pint of oil of turpentine be exposed to the sun for two or three days in shallow pans, Mr. Vanherman says ' it will be as white as nut oil.' If half a pound of frankincense be dissolv- ed in a quart of oil of turpentine and added to a gallon of this bleached oil, and white lead ground in oil of turpentine be thinned for use with the mixture, he asserts that it will be quite dry and void of smell in four hours.

Oil of turpentine, or, as it is called, turps, is in general use among us in house-painting, and is the ingredient by which the flatting, as it is termed, is performed. All th? larch and fir trees furnish a resin known by the general name of tur- pentine. Commerce distinguishes several qualities according to its degree of goodness. The larch tree furnishes what is called Venice turpentine ; it is obtained by being made to flow from the trunk of the tree through holes made with an auger in which small pipes are fixed, that conduct the juice into buckets placed to receive it. This turpentine has a yellowish and limpid color, a strong aromatic smell, and bitter taste. In Ca- nada the peasants collect it from the fir tree by perforating the sacs which contain it under the bark, with the point of a horn which is filled with this juice. It is afterwards distilled, in which it liberates an oil more or less volatile, according to the degree of heat employed. When the operation is done by a bath, a white, limpid, and odoriferous oil is obtained, wliich is called essence of turpentine. The residue from this distillation forms the boiled turpentine of commerce. This is sold at the color shops in the same way in ⬛⬛⬛which oil is, viz. by the gallon. This as well as the oil

considerably improves by age.

Of the colois. ⬦⬦⬦ The colors used by painters may be classed as follows : ⬦⬦⬦

C Vermilion, ^

Native cinnabar,

Red-lead, | Color red.

Scarlet-ochre,) tending to

Common Indian red, I orange. Spanish brown, |

Terra di Sienna, burnt, J I Carmine, ^

J Lake, # Color crim-

j Rose-pink, ^> son tending

I Red-ochre, i to purple.

l^Venetian-red J

Red

<

Blue

Yellow

Green

Orange Purple.

Brown.

Vt'hite. Black.

f Ultramarine, i Ditto, ashes, J Prussian-blue.] '^erditer, I Indigo, I Smalt, f King's-yellow,

Naples ditto,

Yellow-ochre,

Dutch-pink,

English ditto, -ˆ Light pink.

Gamboge,

Masticot,

Common orpiment,

Gall-stone, LTerra di Sienna. /“Verdigris, \ Crystals of ditto, <ˆ Prussian green, i Terra verte, ˆˆSap-green.

Orange-lake. rTrue Indian red,

< Archil,

V Logwood wash.

Brown-pink, i Bistre, J Brown-ochre, \ Umbre, f Cologne earth,

Asphaltum. fWhite-flake, I White-lead, I Calcined hartshorn, -ˆ Pearl while, I Troy white, I Eggshell white, lˆ Flowers of bismuth. r Lamp-black,

< Ivory ditto, CBlue ditto.

These embrace almost the whole of the colors employed by the house-painter, and which by experience he is enabled to mix in proportions to effect almost every tint.

Vermilion is a bright scarlet pigment, and is formed of common sulphur and quicksilver pre- pared for use by a chemical process. The best vermilion comes from China, wiiere it is said the secret of makmg it is alone known. The Dutch pretend to have obtained it, and much of the vermilion at the shops is of their manufacture. It is so dear that the painters have recourse to every expedient to avoid using it : hence it is that the true Chinese pigment of this color is seldom seen.

Cinnabar is a similar pigment, differing only from vermilion by a more crimson coloring.

Red-lead, or minium, is lead calcined till it acquire a proper degree of color by exposing it with a large surface to the fire.

Scarlet-ochre is an earth with a base of green vitriol, and is separated from the acid of the vitriol by calcination.

Common Indian red is of a hue verging to scarlet, and is imported from the East Indies.

Venetian-red is a nati\e ochre rather inchning

to scarlet ; this is the pigment which is selected for the graining, as it is called by the house- painters, of doors, &c., in imitation of maho- gany.

Spanish-brown is a native earth, found in the state and of the color in which it is used.

Terra di Sienna is a native ochre, and is brought from Italy in that state in which it is generally found. It is yellow originally, and in this state it is often made use of, and is accord- ingly placed among the yellow colors. It changes to an orange red by calcination, though not of a very bright tint, for which property it is sought to produce a pigment of that color.

Carmine is a bright crimson color, and is formed of the tinging substance of cochineal with nitric acid. It is not well calculated to mix up with oil, as its color changes rapidly by ex- posure to the air and light.

Lake is a white earthy body, as cuttle fish- bone, the basis of alum or chalk tinged with some vegetable dye, such as is obtained from cochineal or Brasil wood, taken up by an alkali and precipitated on the earth by the addition of an acid.

Rose-pink is a lake like the former, except that the earth or basis of the pigment is princi- pally chalk, and the tinging substance is extracted from Brasil or Campeachy wood.

Red-ochre is a native earth, but that which is in con'raon use is colored red by calcination, being yellow when dug out of the earth, and the same with the yellow ochre commonly used. This latter substance is chiefly brought from Ox- fordshire, where it is found in great abundance.

Ultramarine is a preparation of calcined lapis lazuli, which is, when perfect, of a brilliant blue color, of an extremely beautiful and trans- parent effect in oil, and will retain this property with whatever vehicle or pigment it may be mixed. It is excessively dear, and is frecjuently sold at the color shops in an adulterated state.

Ultramarine ashes are the residuum or re- mains of the calcined lapis-

lazuli.

Prussian blue is a brilliant pigment; it is the fixed sulphur of animal or vegetable coal chemi- cally combined with the earth of alum.

Verdiler is the mixture of chalk with the pre- cipitated copper, which is formed by adding the due proportion of chalk to the solution of cop- per made by the refiners in precipitating the silver from the nitric acid in the operation called parting, in which they have occasion to dissolve it in order to its purification.

Indigo is a tinging matter extracted from cer- tain plants which are found in both the Indies, and from whence the indigos of commerce are imported.

Smalt is glass colored with zafTer, and after- wards ground to a powder.

Kings-yellow is a pure orpiment, or arsenic colored with sulphur.

Naples-yellow is a warm yellow pigment rather inclining to orange.

Yellow-ochre is a mineral eartii, which is found in many places, but of different degrees of purity.

Dutch-pink is a pigment formed of chalk, colored with the tinging particles of Frencli

berries. It is not well adapted to work in oil byffeason of its color soon flying off'.

English and light pink are merely a lighter and coarser kind of Dutch pink.

Gamboge is a gum brought from the East Indies ; it is dissolved in water to a milky consistence, and is then of a bright yellow color.

Masticot, as a pigment, is flake-white, or white-lead gently calcined, by which it is changed to a yellow, which varies in tint ac- cording to the degree of the calcination.

Orpiment is a fossil body of a yellow color, composed of arsenic and sulphur, with a mixture frequently of lead, and sometimes other metals.

Gall-stone is a concretion of earthy matter formed in the gall bladder of beasts. It is but little used.

Verdigris is an oxide of copper formed by a vegetable acid ; it is used in most kinds of paint- ing where green is required.

Crystals of verdigris is the salt produced by the solution of copper or common verdigris in vinegar.

Prussian green is a composition similar to blue of the same name.

Terra verte is a native earth ; it is of a bluish green color, resembling the tint called sea-green.

Sap-green is the concreted juice of the buck- thorn berry.

Orange-lake is the tinging part of annatto, pre- cipitated together with th earth of alum.*

True Indian red is a native ochrous earth of a purple color, but so scarce as seldom to be met with at the color shops;

Archil is a purple tincture prepared from a kind of moss.

Logwood is brought from America, and affords a strong purple tincture.

Brown-pink is the tinging part of some vege- table of an orange color precipitated upon the earth of alum.

Bistre is a brown transparent color of a yellow- ish tint.

Brown-ochre is a warm brown or foul orange color.

Cologne eartli is a fossil substance of a dark blackish-brown color, a little inclining towards purple.

Asphaltum is sometimes employed by the painters to answer the end of brown pink.

White flake is a ceruse prepared by the acid of grape.

Troy white is simply chalk, neutralised by the addition of water in which alum has been dissolved.

Lamp-black is the soot of oil collected as it is formed by burning.

Ivory-black is the coat of ivory or bone form- ed by giving to them a great heat, all access of the air being excluded.

Blue-black is the coal of some kind of wood burnt in a close heat where the air can have no access.

Such are the several colors employed by painters ; they are all to be found

in the color shops both in a crude and prepared state. Pre- paring the colors consists in the first place of grinding them on slabs of porphyry till the par- ticles are reduced to the finest imaginable state ;

PAINTING.

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tMs is done by saturating tliem with oil or water, according as the color ground is to be used with either of them.

House-painting is known in the trade by the number ot coats of paint applied, and the paint- 'ng is divided into work in oil and what is tech- nically called flatting. This latter description of work differs from the former only in the color Dting mixed up with turpentine instead of oil. Good painting is known by the fullness and so- lidity of its appearance without any marks of the brush ; whereas cheap painters care little about this. To give a fresh appearance, and get their work out of hand, and be paid, is their only con- cern.

In the division of house-painting, as under- stood between the surveyors and workmen, the cliief terms are as follows : ??? ???

Clearcole, and finish signifies that the work is to be done in the cheapest way, and the process of doing which consists in firstdusting and clean- ing what is to be painted, and stopping and fill- ing up all cracks and defects with putty. After which the whole is ^ painted over with a paint prepared of whiting and size, which forms the ground for the finish, as it is termed. This finish consists of a coat of oil color prepared with lead. Where tlie work is not very dirty this kind of painting will answer every purpose, but it is by no means adapted for outside work.

Bringing forward, a term used by painters, applies to such new wood or other work as may have been added to old wood-work ; or in cases in which the old wood-work has been re- paired, and in consequence partly replaned, the priming and painting such parts to form aground for the color, so as that it shall appear alike when finished, is the process intended by this term.

Stopping is no more than that the painter is to well fill up all the defects in the work he may have to paint, with putty.

Twice in oil is simply that the work has been twice painted over.

Thrice in oil, and flat, signifies that the work has been done twice over in oil colors and once in color mixed or prepared in turpentine.

Three times and flat may be similarly explain- ed, that is, three coats of oil color and one of turpentine. This latter description of painting is generally that which is required to new wood- work.

The painter's tools are few in number, and they are found for the journeymen by the mas- ters. They consist of a tool, or pound brush as it is called, which is composed of hogs' hair ; this they use as a duster, until the ends of the hair of which it is composed are worn away, and become soft; it is then used in tlie color, being better adapted to spread it evenly by such pre- vious wear. The other brushes vary in size, as the mouldings and work to be])ainted do ; the smallest are to paint over the bars of sashes, or draw out lines which are intended to be left of a diff'erent tint from the general tone of the other work.

In mixing up the colors for oil-painting, white- lead forms tlie base of all ingredients ; this the color-preparer modifies and changes by adding colored substances to it, till it is tinged so as to

produce a paint of the color he wishes. All thosa colors which are derived from vegetable bodies have, at first being spread, a more .brilliant effect than those of mineral ones ; but no vegetable co- lor will long stand the combined effect of air and light ; while the mineral colors, so exposed, re- main unchanged. This defect in the vegetable colors is owing to that spontaneous oxidation or carbonization which is effected by the oxygen of the atmosphere on all vegetable matter which it can operate upon freely. To make this phe- nomenon more obvious, the air occasions a slovr combustion or burning to take place, which dis- sipates the lighter or hydrogenous particle of co- lor, and turns to a state of charcoal those which remain combined in the paint ; hence all paint- ing made with colors obtained from vegetable bodies soon appear black and discolored.

Graining is understood among painters to be the imitating of the several different species of scarce woods, such as are used for the best arti- cles of furniture, viz. satin-wood, rose-wood, king- wood mahogany, &c.&c. Imitations of this nature, when well performed, are calculated to give a zest to painting : at Paris every species of wood- work used in their houses, as a part of the build- ing, is done in this manner. The dead-white so much in vogue amongst us is not practised there. To grain satin-wood a ground is previ- ously laid, composed of Naples yellow and ceruse, diluted with oil of turpentine ; this is spread very evenly over the work to be grained, and is then left a day or two to get fixed and dry. The painter then prepares his pallet-board with small quantities of the same yellow and ochre, with a little brown, having some boiled oil and oil of turpentine mixed together, to sa- turate the colors to be used in the operation. He is also provided with several different sized camels' hair pencils, and also with one or more flat

hogs' hair brushes. When he has mixed the colors he spreads it over a pannel, or any other small part of the work, first, to see the effect of the tints, and, if it suit what he is about to per- form, he perseveres by doing a pannel at a time; and, in the instance of doors and other framing, the pannels are done first, and the margins round them afterwards. The flat hogs' hair brushes, by being dipped in the mixture of oil and tur- pentine, and drawn down the newly-laid color, occasions the shades and grainings in it : this effect takes place in the color from the brush supplying an excess of saturation to the color it touches ; and to produce the mottled appear- ance, the camels' hair pencils are applied ; and, when it is all finished, it is left to fi.x and dry, after which it is covered by a coat or two of good oil- varnish. The other fancy woods are per- formed in a similar manner, the painter varying the colors to produce them only. Some of our painters are so expert at this kind of imitation, and also in that of marbles, as to prevent their easy detection, except by the touch. Such kinds of painting are well calculated to last a great many years by being occasionally re- varnished only. It is not greatly dearer than good work in the common way, but it will last ten times as long, without appearing to lose any of its fresh- ness.*

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*Ornamental painting embraces the executing of friezes and the decorative parts of architecture ***in chiara obscura, or light and shade on walls and ceilings. It requires, in the first place, a ground to be well painted of the tint it is pro- posed to remain, and exactly drawn into the width it is intended to be left on such a ground so formed. The ornament to be painted is to be drawn out neatly with a black-lead pencil, and then to be painted and shaded, to give it its due effect.*

Such kind of painting is often painted on slips of paper, or Irish cloth, and pasted up after- wards ; some artists also, to facilitate their work, and when the ornament is of a sunilar pattern all through, do it by wiiat is termed stimelling ; this method consists in drawing out a certain length of the pattern to be painted very accurate- ly on paper, and then pricking a large sized needle in regular distances all round the pattern through the paper, which tiiey afterwards lay smoothly against the wall to be ornamented and strike its outer surface, which has been pricked through with a small linen bag containing pow- dered chalk : the powder enters the apertures in the pattern, and fixes itself against the wall, ex- hibiting the exact outline of the ornaments which the painter immediately fixes by painting it on the wall ; by this means a great saving of his time is accomplished. Some paintings in this manner are heightened with gold ; this

is per- formed after the ornament is painted in, as it is termed, by the process known as gilding in oil.

Letter or inscription writing is performed by persons known in the trade as letter-writers. The process is similar to ornament painting, ex- cepting the superior ability and taste required in the one, whereas the other is a mere mechanical operation. The letter writer sketches out in jiencil the words he has to write, and afterwards corrects the outline by the color which he ap- plies with a camels' hair pencil. When the let- ters are to be gilt, the process is similar, and as the letters are painted, they are covered with leaf-gold, and when completely covered it is left to fix itself by the drying of the painting on which it has been laid. After which a sponge and wa- ter is used to clear away the superfluous gold ; the whole is then covered by a coat of good oil varnish. Letter writing is charged by the inch, viz. the height of one of the letters being taken, will, by being multiplied by the number on the whole inscription, denote exacdy tiie quantity of inches which has been written. The price varies, inasmuch as shadowed letters are a halfpenny an inch more than plain ones, and gilt letters are treble the price of either. Twopence an inch is about the average price of inscription letters.

Painters' work is measured by the yard super- ficial, of nine square feet, and the painter is al- lowed to take his dimensions over and into every part where the brush has passed. Sash frames are valued at per piece, and sash squares at per dozen, as well as window bars, balusters of stairs, stay bars, &c. Painting done on new stucco is allowed one penny per yard more than when on wooden work, and colors are charged an additional penny more than when done in

plain whites. The pa risers' charges are regula- ted in London by the surveyors, and their regu- lations are made from an average of the price of the best materials of every kind ; but painting is frequently offered to be done at from fifteen to twenty per cent, less than the price so regulated. But, perhaps, no branch of trade requires more ex- act description than painting, as oil and colors may be purchased of all degrees of purity : hence painting, like the gold of the jewellers, will vary in its quality, or fineness, as it varies in the ratio of its alloy or adulteration.

We add, from Mr. Elmes's Dictionary of the Fine Arts, a copious list of books (5n painting. In the work of Junius, De Pictura Veterum, book 2, chap. iii. sect. 3, and in the Bibliotheca Graeca of Fabricius, book 3, chap. xxiv. sect. 10, are catalogues of Greek authors who have writ- ten upon painting ; of which, however, few have reached our times. Among this number are the Icones of the two Philostrates ; which have been translated into French under the title of Les Tableaux de Plate Peintnre, he, by Blaise

de Vigenere, corrected and augmented by Th. Embry, Paris, 1615, 1617, in fol. An excellent commentary upon this work may be found in a Memoir of Count Caylus, inserted in the twenty- ninth volume of Mcmoires de I'Academie des Belles Lettres. To some editions of tbe works of Philostrates are added a work of Callistrates, entitled E/cˆpaaie (that is, explanations or de- scriptions).

The ancient work which gives the most detailed accounts of the art of painting among the an cients is the Natural History of Pliny, who, in speaking of minerals, takes occasion to speak of colors, and their use in painting ; in which sub- ject he treats of the history of ancient painting, in several chapters of the thirty-fifth book. These chapters have been published separately, and commented upon by Durand, in a work en- titled Histoire de la Peintnre ancienne, published at London in 1725, in fol. M. Falconet has also published a translation of the thirty-fourth, thirty-fifth, and thirty-sixth, books of Pliny, with notes, Amsterdam, 1772, 8vo. These chap- ters of Pliny have also been commented upon, in several articles inserted in the Memoirs of the Academy of Inscriptions and Belles Lettres. (An English translation of the whole work, by P, Holland, was published in 2 vols, fob, London,

1634.)

Count Caylus has given, in the nineteenth vo- lume of the same work, Eclaircissemens sur quelques Passages de Pline qui concernent les Arts dependans du Dessin ; and, in the twenty- fifth volume, three Memoirs, entitled Reflexions sur quelques Chapitres du trente-cinquifeme Livre de Pline. In the second of these memoirs the reflections of the author are particularly di- rected to the kind and manner of ancient paint- ings ; and in the third the character and manner of the Greek painters. The twenty-fifth volume contains also a Memoir of M. de la Nauze, upon the manner in which Pliny has treated the art of painting. M. Quatremere de Quincy, the learned author of part of the Encyclopedie Methodique, and of Letters from London, in 1818, toCanova, on the Elgin Marbles, announced in 1805 a

new translation of this book ; but we are not certain that he published it.

Among modern works upon painting we will first mention those which are written in Latin; among the principal of which are : ••• L. Bapt. Alberti,de Pictura, libri iii. Basil, 1540, in 8vo. Among the best translations

*of this work are, one in Italian, published in Venice, 1547, 8vo.; one in French by Jean Martin, among the works of Alberti upon architecture, Paris, 1553, fob; and one in English, in the edition of his work upon architecture, by Leoni, 1726 and 1739, 3 vols. fol. Also, Job. Molanide Picturis et Ima- ginibus Sacris, libri ii., Leovard, 1570 and 1594, 8vo. Robert Fludd, or De Fluctibus, Tractatus de Arte Pictura?, Francof., 1624, fol. Jul. Ctcs. Bulenger, de I'ictura, I'lastice, et Statuaria Ve- terum, printed in his Opuscula, Ludg. Batav. 1621, Rvo. ; and also separately under the same title, in Bvo. 1627, as well as in the nintli volume of Tresor de Gronovius. Of this work Thomas Malie has given an English translation, London, 1657, fol. It is merely a nomenclature of the various articles used in painting, and of the man- ner in which they are prepared. The next in chronological order is the work of Franciscus Junius (Francis Dujong, or Young), entitled de Pictura Veterum, Amst. 1637, in 4to. A new edition of it, much augmented and corrected,
ववwas published by Graevius at Rotterdam, in 1694, fob, which is reckoned preferable to tlie first. At the end of the work is a list of ancient artists, in alphabetical order, which is, perhaps, one of the best parts of the work.*

Among the Latin works which treat of the theory and practice of the art, we find : ववव Spe- culum Imaginum Veritatis occultae per Symbola et Emblemata, Auct. Jac. Mosenio, Col. 1661, 1681, 8vo. De (jraphice sive Arte Pingendi; which is the fifth chapter of the work of Ger. J. Vossius, entitled de Natura Artium. Joannes Schefferi, Argentinensis, Graphice, id est de Arte pingendi, Norimb. 1669; Upsal, 1699, 8vo. This is an interesting little work, and is well written. De Inanibus Picturis, Diss. Joa. Yr. Jungeri, Lips. 1679, in 4to. By ' picturse inanes ' the author appears to mean those paint- ings which represent imaginary beings, or scan- dalous suojects. Dissert, de Pictura, Auct. Hulderic. Sigism. Rothmaler, Jen. 1692, 4to. De Lectione Poetarum recentiorum Pictoribus commendanda, Programma, Joh. G. Jacobi ; Ilal. 1766, 4to. De pictura contumeliosa, Diss. Joh. Lud. Kluber, Erl. 1787, in 4to. Car. Hodoby de lloda, Ars delineandi Coloribusque localibus adumbrandi, 1790, 8vo. Car. Adol. Du Fresnoy, de Arte graphica, Paris, 1658. ववव A poem on the art, with the French version by De Piles, of which Dryden published a prose trans- lation in 1694; Wills, an English painter, a metrical translation without rhymes ; and again Mason, in 1782, a translation, with notes by Sir Joshua Reynolds.

Among the works written in Italian are, Dis- corso eruditissimo della Pittura, con moUe se- grete Allegoric, circa le muse, published in the instituzione al comporre in ogni Sorte, di Rima, &c., of Mar. Equicola, Milan, 1541, 4to. Dia- logo de Pittura, di Paolo Pino, 'en. 1548, 4to.

Trattatello della nobilissima Pittura, e della sua Arte, della Dottrina, e del

Modo per conseguirla agevolmente, da Mich. Ang. Biondi, 'en. 1549, 8vo. ; a little and very superficial work. 11 Disegno del Anton. Franc. Doni, dove si tratta della Scoltura, Pittura, de Colori, de Getti, de Mo- degli, con molte cose appertinenti a quest' Arti, Venegia, 1549, 8vo. : ††† a useful little work stored with excellent directions. Delia nobilissima Pittura, e della sua Arte, del modo e della Dot- trina di conseguirla agevolmente e Presto, da Biondo, Venice, 1549, 8vo. Introduzzione alle tre Arti del Disegno, thirty-five chapters (for an account of which see Vite de Pittori da Vasari. L'Aretino, Dialogo della Pittura, di Lod. Dolce, nel quale si raginao della Dignita di essa Pittura, e di tutte le Parte necessarie che a perfetto Pittore si acconvengano : con Esempi di Pittori ant. e Mod. e nel I'ine si fa menzione delle VirtLi e delle Opere del divin Tiziano, Venice, 1557; of which there is a more modern edition, with a French translation (printed at Rome, 8vo.), and a long preface by the trans- lator ; also an English translation published in London, 1782, 12mo. Osservazioni nella Pit- tura, di M. Cristofane Sorte, V'enice, 1580, 4to. Lettera di Bartolomeo Ammanati, sopra le Pit- ture men che oneste, Firenze, 1582, 4to. II Riposo di Raffaelo Borghini, in cui si favella della Pittura e delle Scoltura, et de jiiu illustri Pittori e Scultori, antiche e moderni, Firenze, 1584, in 8vo. ; of which there has been a new edition, augmented and corrected by Antonio Maria Biscioni, Firenze, 1730, 4to. ; and a much later one in 3 vols. 8vo. Parere sopra la I'ittu- ra, di M. Bernard Campi, Pittore Cremonese> Cremona, 1584, 4to. Discorso d'Allessandro Lamo intorno alia Scoltura et Pittura, Cremona, 1584, 4to. Trattato dell' Arte della I'iltura, im' quali si contiene tutta la Teorica e la Pratiica d. essa Pittura, da Giovanni Paolo Louiazzo, Mil. Pittori, div. in vii. libri, Milano, 1584 4to. The same work is also to be found under the following title, Trattato dell' Arte della Pittura, Scoltura, et Architettura, daG. P. Lomazzo, Mil. Pitt. div. in vii. libri ne' quali si discorre della Proporzione, de' Moti,' de Colori, de' Lumi, della prospettiva, della Prattica, della Pittura, e finalmente de le Istorie d'essa Pittura, con una Tavola de' Nomi de tutti le Pittori, Scultori, Architetti, e Matematici, antichi e moderni, Milan, 1585 and 1590, in 4to. There is an English translation of this work by liaydok, London, 1598, fob; and a French translation of the first book, which appeared at" Toulouse in 1649, in folio. To this work we must add another by the same author, entitled Idea del Tempio della Pittura nella quale si discorre dell' Origine e del Fondamento delle cose contenenle del trattato, dell' Arte della Pittura, Milan, 1571 in 4to. De' veri Precetti della Pittura de Gio- vanni Bat. Armenini da Faenza, lib. iii. ne' quali con bell' Ordine d' utili e buoni Avverti- menti per chi desidera in essa Farsi con pres- tezza eccellente si dimostrano i Modi principal! del disegnare e del dipingere, di fare le Pittura che si convengouo alle Condizioni de' Luoghi e delle Persone, Ravenna, 1587, in 4to., and X'enice, 1678, in 4to. 11 Filogino, Ovvero del

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Fine della Pittura; Dialogo del P. D. Gregorio Commanino, Canon. Later, nel quale s mostra qual sia I'imitare piu perfetto, o il Pittore, o il Poeta, Mantova, 1591, 4to. Difinizione e Divi- zione della Pittura, di Giovan. Batt. Paggi, Nobile Genov. e Pittore, Geneva, 1607, folio. L'Idea de Pittori, de' Scultori, e degli Arclii- tetti, del Cav. Feder. Zuccheri, in due libri, Torino, 1607, 4to. This work is to be seen also in the sixth volume of the llaccolta di Letters suUa Pittura, Scultura, e Architettura, Rome, 17.54, 7 vols. 4to. Avvertimenti e Regole sopra I'Architettura, civile e militare, la Pittura, Scul- tura, e Prospettiva, da Pier' Antonio Barca, Milan, 1620, folio. Trattato della Pittura, fatto a commune Beneficio de' Virtuosi, da Fra. Dom. Francesco Bisagno, Cavaliere di INIalta, Ven. 1642, 8vo. La prima Parte della Luce del di- pingere, di Crisp, del. Passo, Amsterd. 1643, folio. Trattato della Pittura, de Lionardo da Vinci, dato in Luce con la Vita dell' istesso Autore scritta da Raff. Du Fresne, Paris, 1651, and Naples, 1733, folio, with engravings after designs made by Poussin. There was a new edition of it published at Florence, 1792, 4to., augmented with the life of the author by Franc. Fontani. There is also a translation of it into French by Rol. Freart. de Chambray, 1651, fol. 1716, 1724, ike, and an En2;Iish translation, London, 1721, 8vo. Trattato della Pittura e Scultura, uso ed abuso loro, composto da un Teologo (Pere Ottonelli), e da un 'Pittore (Pietro di Cortona), in cui si risilvono molti Casi di Coscienza intorno al fare e tenere, le Immagine sacre e profane ; si riferiscono niolte llistorie antiche e moderne, si considerano alcune Cose d' alcuni Pittori morti e famosi del nostro Tem- po, e si notano certi avvisi e certi particolarita circa I'operare secondo r(_)sservazioni fatte in alcune ipere, di V'alent. Luomi Firenza, 1652, 4to. II Microcosmo della Pittura, di Franc. Scanelli da Forli ; Cesena, 1657, 4to. Carta del Navigar pittoresco, dial, in quarta Rima, in Dialetto Venez. da Marco Boschini, Venezia, 1660, 8vo. Le Minere della Pittura, di M. Boschini, Venice, 1664, 4to. In the Prodromo alle Arte maestra, di. Franc. Lana, Brescia, 1670, fob: the author treats of invention, of design, of colors, and of the different kinds of painting. Riflessioni sopra la Pittura di Nico- las Poussin, printed in the Vite de' Pittori, de' Scultori, ed Architetti moderni, par Bellori, Rome, 1672, 4to. II Vocabolario Toscano dell' Arte del Disegno, co' propri Termini e 'oci non sola della Pittura, Scultura, e d'Architettura, ma Ancora di altre Arti, e che hanno per Fon- damento il Disegno, di Fil. Baldinucci, Firenza, 1681, 4to., of which Ant. Mar. Biscioni has given a new edition, published at Florence, 1730, 4to. Baldinucci is also the author of Lettera nelle quale si risponde ad alcuni quesiti in Materie di Pittura e Scultura, Rome, 1681, 4to. ; and of La Veglia, Uialogo di Sincero Vero (Philip Baldinucci), in cui si disputano, e scogliono varie Difficulta pittoriche,

Lucca, 1684, 8vo., and in the llaccolta di alcuni Opus- coli, da Fil. Baldinucci, I'ir. 1765, 4to. Bellori, della Pittura antica, Venez. 1697. Le Pittura in Parnasso, da Giovanni Maria Ciocchi, Pittore,

Firenza, 1725, 4to. La Teorica della Pittura, owero Trattato delle Materie piu necessarie per apprendere con Fondamento quest' Arte, com- posto da Ant. P'ranchi, pittore Lucchese, Lucca, 1739, 8vo. Sfogamenti d'ingegno sopra la Pit- tura e la Scultura, da P. Franc. Minozzi, Venice, 1739, 12mo. Dialoghi sopra le Arti del Diseg- no, by Bottari, Lucca, 1754, 8vo. Avvertimenti di Giamp. Cavezzoni Zanotti, per lo incamina- raento di un Giovane alia Pittura. Bal. 1756, 8vo. Dissertazione sopra I'Arte della Pittura deir Abbate Giovanni Andrea Lazzarini, in the ninety-seventh and following pages of the second volume of the Nuova Raccolta d'Opus- culi scientif. et filol. reprinted at Pesaro, 176,S, 4to.; and in the Catalogo delle Pitture nelle chiese di Pesaro, Pes. 1783, 8vo. Saggio sopra la Pittura, by count Algarotti, Livorno, 1763, 8vo. ; of which there is a French translation by Pingeron, Paris, 1769, 12mo., and an English translation, 12mo. London, 1783. L'Idea del profetto Pittore del servire di Re- gola nel Guidizio, che si deve formare Intorno air Opere de' Pittori, accresciuta della Maniera di dipingere sopra le Porcellane, Smalto, \ etro, Metalli, e Pietre, 'enice, 1771, 4to. Dell' Arte di vedere nelle belli Arti del Disegno, secondo li Principi di Sulzer e di Mengs, Venice, 1781, 8vo. The works of Mengs, in their various editions and translations. A poem, entitled dell Arte Pittorica, in eight cantos, by count Ad. Chiusole, Venice, 1768, 8vo., will attbrd some pleasure ; it has been abridged into four cantos, under the title of Precetti della Pittura, Vic. 1781, 8vo. Storia della Pittura in Italia da Luigi Lanzi. The best edition of which is in six volumes 8vo., Bassano, 1809. Vicenzo Requeno, saggi sul Ristabilimento dell' antica Arte de' Greci e Romani Pittori, Rome, 1786. A second edition of which appeared in 2 vols. Parm. 1787. Storia della Pittura e della Scul- tura dai Tempi antichi. This work, which is written in Italian and English, has also the fol- lowing title : ††† The History of Painting and Sculpture, by Thomas Hickay, and was pub- lished at Calcutta in 1788, 4to.

Among the works written in Spanish upon the theory of painting are the following, namely : ††† Arte dei Pintura, symmetria y perspectiva, por Phil. Nunnez, in Lisbon, 1615, 4to. Memorial informatorio, por los Pintores, Madrid, 1629, 4to. Dial, de la Pintura, su Defensa, Origen, Essencia, Definicion, Modos, y Differencias, por 'inc. Carducho, Firent. Madrid, 1633 and 1637, 4to. Trattato de la Pintura, su anti- guedad y grandezas, por Franc. Pacheco, Seville. 1649, in 4to. El Museo pintorico, y escala Optica, por Ant. Palamino Velasco, Madrid, 1715, 1724, 3 vols. fol. Under the title of La Pittura, Diego Ant. Reston de Silva has printed in 1788, at Segovia, a poem in three cantos, of which painting is the subject.

Among the works of French autfrors on this subject are the following : ††† Idee de la Perfec- tion de la Peinture demontree par les Principes de I'Art et par des Exemples conformes aux Ob- servations que Pline et Quintilien ont fails sur les plus c(5lebres Tableaux des anciens Peintres, mis en Parallcle avec quelques Ouvragea de ao††

meilleiirs Peintres modernes, Lion, da Vinci, Raffaelle, Jules Komain, et Le Poussin, par Roland Freart, Sieur de Chambray, au Mans, 1662, 4to.; Paris, 1672, 8vo. Le Peintre con- verti aux Rfegles precises et universelles de son Art, avec un Raisonnement au Sujet des Ta- bleaux, by Abr. Bosse, Paris, 1667, 4to. Des Principes de I'Architecture, de la Peinture, Sculpture, et des autres Arts qui en dependent, avec un Dictionnaire propre a chacun de ces Arts, par Andre Felibien, Paris, 1669, 1697, 4to. Conferences de I'Academie royale de Peinture ct de Sculpture pendant I'Annee 1667, Paris, 1669, 4to.; Amst. 1706, in 12mo. ; and in the fifth volume of Entretiens sur les Vies de& Peintres, by the same, Trev. 1725, in 12mo. Traite de la Pratique de la Peinture, par Phi- lippe de la Hire, in I'Histoire de rAcademie des Sciences de Paris, 1666 ††† 1669, vol. ix. page 635, and following. L' Academic de la Peinture nouvellement raise au jour pour instruire la Jeune.sse a bien peindre en Huile et en Minia- ture, par la Fontaine, Paris, 1679, 12mo. Con- ference de I'Academie, avec les Sentimens des plus habiles Peintres sur la Pratique de la Pein- ture et de la Sculpture, avec plusieurs Discours academiques, par Henry Testelin, Paris, 1696, fol. Livre de Secrets pour faire la Peinture, 1682, 12mo. Cours de Peinture par Principes, by M. Roger de Piles, Paris, 1708, 1720, 12mo. This work forms the second volume of his CEuvres diverses, Amsterdam, 1766, 12mo. I^lemens de la Peinture-pratique, by the same, Paris, 1684, 12mo.; 1708, 12mo. Ch. Ant. Jombert has given an enlarged edition of it, 1766, 8vo., which forms the third volume of his CEuvres diverses, Amster. 1 766, 1 2mo. Many authors, and among others M. de Murr, in his Bibliotheque de Pein- ture, at page 151, have attributed this work to Jean Baptiste Corneille, who is not the author of the engravings which are in it. Traite sur la Peinture, pour en apprendre la Theorie et se per- fectionner dans la Pratique, par Barnard Uupui du Grez, Toulouse, 1699, 4to. Reflexions sur la Poesie et sur la Peinture, by the Abbe Jean Baptiste Dubos, Paris, 1719, 2 vols. 12mo. There have appeared enlarged editions of it in 1733, and 1740, in 3 vols. 12mo. Discours pro- nonces dans les Conferences de I'Academie royale de Peinture et de Sculpture, by Antoine Coypel, Paris, 1721, 4to. Dialogues sur la Peinture, by Fenelon. They are joined to the .Life of Mignard, by the abbot Monville, Amst. 1731, in 12mo. In the Choix des Mercures, vol. ii. p, 167, is a letter upon painting,

M. Brossard de Mantenei. Observations sur la Peinture, London, 1736, 8vo. Reflexions sur la Peinture, by M. de la Font de Saint Yenne, 1746, 12mo. Lettres sur la Peinture, a un Amateur, par Louis Guillaume Baillet de Saint Julien, Genfeve, 1750, 12mo. Essai sur la Peinture, Sculpture, et Architecture, by Louis de Bachaumont, Paris, 1752, 8vo. Jaq. Gautier, Observations sur I'Hist. naturelle, sur la Phy- sique, et sur ia Peinture, Paris, 1752, 6 vols. Observations sur la Peinture et sur les Tableaux anciens et modernes, by the same, Paris, 1753, 2 vols, 12mo. In the Recueil de quelques Pieces concernant les Arts, by Cochin, Paris,

1757, 12mo. page 121, is a Mˆmoire sur la Peinture, which had already appeared in the Mercure de France. Discours sur la Peinture et sur I'Architecture, by M. du Perron, Paris,

1758, 8vo. Reflexions sur les differentes Par- ties de la Peinture, is found with I'Art de Peindre of Watelet, Paris, 1760, 4to. 1761, 12mo. In I'Amateur; ou, Nouvelles Pieces et Dissertations pour servir aux Progres du Gout et des Beaux Arts, Paris, 1762, 8vo., are some re- flections upon colors. Traite de la Peinture, suivi d'un Essai sur la Sculpture, pour servir d'Introduction aune Ilistoire universelle lelative a ces beaux Arts, by Andre Bardon, Paris, 1765, 2 vols, in 12mo. Observations raisonnees sur I'Art de la Peinture appliquees a la Galerie de Dusseldorf, by Fredon de la Bretonniere, Dus- seldorf, 1776, 8vo. Principes abreges de Pein- ture, par M. Dutems, Tours, 1779, Bvo. Traite des Principes et des Regies de la Peinture, by M. Liotard, Genfeve, 1781, Bvo. Reflexions sur la Peinture et la Gravure, by C. F. Joullain, 1785, 12mo. The author of this work speaks particularly of the dealing in pictures. There are also several memoirs upon this matter in the Bibliotheq. des Artistes et des Amateurs, by the Abbe Jean Raymond de Petity, 1766, 3 vols. 4to.

Many French didactic poems have been written on painting ; such are : ††† La Peinture, a poem, 1755, 12mo. L'Art de peindre, by Watelet, Paris, 1760, 4to., Amst.; 1761, 12mo. La Peinture, a poem, crowned at the floral games in 1767, by M. Mich. d'Avignon, Lyons, 12 mo. La Peinture, a poem in three cantos, by La Mierre, Paris, 1770, 4to. ; Amst. 1770. 12mo. There are also to be found some in- teresting articles in the Grand Livre des Pein- tres ou I'Art de la Peinture, considere dans toutes ses Parties et demontre par Principes avec des Reflexions sur les Ouvrages de quelques bons Maitres et sur les Defauts qui s'y trouvent, par Gerard de Lairesse, Paris, 1787, 2 vols. 8vo.

Among the older works in the English lan- guage upon this subject are: ††† A proper Treatise wherein is briefly set forth the Art of Limning, London, 1625, 4to. Ars Pictoria ; or, an Aca- demy treating of Drawing, Painting, Limning, and Etching ; to which are added thirty copper plates,

expressing the choicest, neatest, and most exact grounds and rules of symmetry collected out of the most eminent Italian, German, and Netherland authors, by Alexander Brown, London, 1660, 8vo. ; 1669 and 1675, small folio. Introduction to the general Arts of Drawing and Limning, London, 1674, 4to. Painting illustrated, in three Dialogues, containing some choice Observations upon the Art; together with the lives of the most eminent Painters from Cimabue to tlie time of Rafl'a- elle and Michel Angiolo, with an explication of the diflicult terms, Lond. 1685, 4to., 1719, 4to., 1785, 4to., by Will. Aglionby, and the lives of painters are corrected after Vasari. Poly- graphice ; or the Art of Drawing, Engraving, Etching, Limning, Painting, Washing, by Sal- mon, Lond. 1678, 2 vols. 8vo. ; 1701, 2 vols. 8vo. The Art of Painting of the best Italian, French, and German Masters, London 1692, fol. Art of

Painting in Oil, and Method of Coloring, by J. Smith, London, 1753, 12mo. Art of Painting after the Italian Manner, by M. Elsum, London, 1704, 8vo. Essay upon the Theory of Painting, by Richardson, London, 1719, 8vo. This work forms the first volume of a Treatise on Painting, of the same author, which has been translated into French by A. Rutgers; Amst. 1728, 8vo. 4 parts in three vols. The Art of Drawing and Painting in Water Colors, by J. Smith, London, 1730,1732,1757, and 1779, in 12mo. Essay upon Poetry and Painting, with relation to the Sacred and Profane History, by Charles La Motte, London, 1730, 12mo. The Principles of Painting, London, 1744, 8vo. Polymelis ; or, an Enquiry concerning the Agreement be- tween the Works of the Roman Poets and the Remains of the ancient Artists, by John Spence, London, 1747, 1755, and 1774, fol. Tindal has given an abridgment of it, London, 1765, repub- lished in 1786, 8vo. Plan of an Academy of Painting, Sculpture, &c., London, 1755, 4to. Practice of Painting and Perspective, in which is contained the Art of Painting in Oil, with the method of Coloring ; first Painting or Dead Coloring, second Painting, third or last Painting, Painting Backgrounds, Copying, Drapery, and Landscape Fainting, by Th. Bardwell, London, 1756, 1773, and 1782, 4to. Enquiry into the Beauties of Painting, and into the Merit of the most celebrated Painters, ancient and modern, by Dan. Webb, London, 1777, 4to. A Letter on tˆoetry, Painting, and Sculpture, by King, London, 1768, 12mo. Seven Discourses de- livered in the Royal Academy by the President Sir Joshua Reynolds, London, 1778, 8vo. There was a French translation of it published in Paris in 1787, 2 vols.]2mo. Several other Discourses of Reynolds have since been published, and are now collected in his works, London, 4to., 1796, &c. Sketches on the Art of Painting, by Talbot Dillon, 1782, 8vo. The Artist's

Repositary and Drawing Magazine, exhibiting the Principles of the polite Arts in their various Branches, Lon- don, 1784, in 4to. There are to be found also some curious details upon painting in the Hand- maid to the Arts, by M. Dossie, London, 1764, 2 vols. 8vo., as in the School of Arts, London, 1785, 8 vo.

Among the English poems upon painting are ••• A Poetical Epistle to an eminent Painter, 1778, 4to., by W. Hayley, Esq.; and the Beau- ties of Painting, by Pollinger Robinson, 1783, 4to.

More modern works by Opie, Fuseli, West, and others, are so well known that they are omitted to make room for the enumeration of others less common.

In the Dutch language are ••• Inleyding tot de hooghe School der Schilderkonst door Sam. Vˆan. Hoogstraeten, Middelb. 1641. 4to ; Rotterd. 1678, 4to. WUlh Gffire,Natuurlyk en schilder- konstig Onlwerp der Menschenkunde : leerende niet alleen de Kennis van de Gestalte, Propor- tie, Schoonheyd, Muskelen, Bewegingen, Actien, Passien en Welstand des menschenbeelden, tot de Teykenkunde, Schilderkunde, Beldhouwery, Botseer en Giet-Oeffening toe passen ; maar ook hop sich een mensch na deselve Regelen, in al-

lerhand Doeningh van Gaan, Staan, Looperi, Torssen, Dragen, Arbeyden, Spreken en Andere gebeerden bevallig en verstandelijk aanstelen zal, Amst. 1682. An excellent work, with many fine engravings. Der leermeester der schilderkonst, eertyds in rym gestelt door Karel van Mender, weder aan't licht gegeeven en ontrymi'd door Wibrandus deGeest, Schilder, Leawarden, 1712, 8vo.

Among works upon painting written in Ger- man, whose titles we have been able to collect, we sliall mention ••• Le Livre curieux des Arts a. rUsage des Peintres, Sculpteurs, et Orfevres, par Henri Vogtheren, Strasburg, 1543, 4to. Le Ma- nuel des Arts de Sebald Beham, propre a appren- dre a peindre et a dessiner d'aprcs les veritableˆ Proportions et Divisions du Cercle a I'usage des Peintres et des Artistes, Francfort, 1605, 4to., with fifty-seven engravings in wood. L'Acade- mia tedesca della Architettura, Scultura, e Pit- tura, Nurembourg, 1675, 1679, 2 vols. fol. Le vrai Chemin a suivre pour apprendre a peindre, par Guillaume Stettler, Berne, 1679, 12mo. Le Peintre curieux, Dresden, 1679, 8vo,, with en- gravings. Le Peintre instruit, habile, galant, et edifiant, par J. Dauw, Copenhagen, 1721, 8vo. ; an enlarged octavo edition by Charles Bertrand, ib., 1755, 8vo. Principes de la Peinture et du Dessin, par Joseph Widtmaisser, Vienna, 1731, 4to. Le Peintre instituteur, montrant aux Ama- teurs comment il faut s'y prendre pour appren- dre a peindre en Huile, en Pastel, en Fresque, &c., by Jean

Melchior Croecker, Jena, 1778, 8vo. Idees sur ITmitation des Monumens Grecs en Peinture et Sculpture, Dresden, 1754 and 1756. Epitre au Sujetde I'Ouvrage prece- dent, Dresden, 1755, 4to. Dissertations upon the work : Idees sur ITmitation des Monumens Grecs, ib. 1756, 4to., Jean Winckelmann. La Manicre d'apprendre a peindre : Ouvrage dans lequel on montre I'Excellence et I'Utilite de cet Art, rUsage qu'on doit en faire, et comment on doit s'y perfectionner, &c., Leipsic, 1756, 8vo. Reflexions sur la Peinture, by Chretien Louis de Hagedorn, Leipsic, 1762, 2 vols. 8vo. This work has been translated by Huber, Leipsic, 1775, 8vo. Du Laocoon ; ou, des Limites re- spectives de la Poesie et de la Peinture, by G. E. Lessing, Berlin, 1766. M. Charles Vander- bourg has given a French translation of it, Paris, Renouard, 1802, Bvo. Dissertations sur la The- orie de la Peinture et du Dessin, ou on etablit les vrais Principes propres pour former le Goiit dans les Arts, Francfort et Leipsic, 1769, in 8vo. Sur la Nature et I'Art dans les Tableaux, la Sculpture, I'Architecture, et la Gravure, Leipsic, 1770, 2 vols. 8vo. par Christophe Scheyb. The same author has also published another work upon this subject : it is entitled Orestrio sur les Arts du Dessin, avec un Appendix sur la Ma- niere de faire des Empreintes en Souffre, Plfitre, et Verre, et graver en Pierres dures, &c., Vienna, 1764, 2 vols. 8vo. Instruction sur I'Etude de la Peinture en tant qu'elle appartient aux beaux Arts, et la Peinture comme metier, prouveed'une Maniere pratique, par E. L. D. Huch, Ilalle, 1773, 8vo. L'Etude du Dessin et de la Peinture. a I'Usage des Commencans, suivi d'une l^isto des plus cclebres Peintres, Sculpteurs, et Archi-

tectes, ainsi que des Academies et Ecoles, par Chretien Louis Keinhold, Goetingue, 1773, 8vo., with forty-five engravings. Systeme des Arts du Uessin, suivi d'une Introduction a I'Etude des Antiques, Hieroglyphes, et Attributs allego- riques modemes, by the same, Munster, 1784, 8vo., with forty engravings. We may regard, as a continuation and supplement of this vvorit, L'Ecole du Dessin et de la Peinture, Munster, 1786, 8vo., with forty five engravings : and I'Aca dcmie des beaux Arts, &c., witli fourteen en- gravings, Munster, 1788, 8vo., botii by tlie same author. Principes de la Peinture, par Junker, Zurich, 1775, 8vo. Acadcmie des Arts du Des- sin, par Chretien Frederic Prangen, Ilalle, 1778, 2 vols., 8vo. Leyons sur les Arts du Uessin, destines aux Eleves des Academies des Arts, par Id. A. Mertens, Leipsic, 1783, 8vo. Instruc- tion sur la Theorie et la Pratique du Dessin et de la Peinture, pour les Commenf.ans de cet Art, Altoiia, 1778, in 8vo., with engravings. Biblio- ihlque des Arts, destinee aux Peintres, Dessina- teurs, Graveurs, et Sculpteurs, en Forme de Let- tres, par C. Lang, Erlangen, 1779. The same author has given a continuation of this work

under the title of Lettres a I'Usage des Peintres, Dessinateurs, &c., Francf. 1791 et 1792, 2 vols. 8vo. Magasin pour les Arts du Dessin, Munich, 1791, 8vo. Theorie de la Peinture; ou, ITn- struction sur la Peinture d'llistoire a I'Usage des Commen^ans, par Cliristophe Fesel, Wurtz- bourg, 1792, 8vo.

Among the best Latin works which treat on various subjects connected with the art of paint- ing, or in praise of the arts in general, may be enumerated Martin Frisius, de I].rroribus Picto- rum, Hafnise, 1703, 4to. MuUer, de Pictura, Dissertatio juridica, Jen. 1712, 4to. Brunquell, de Pictura honesta ac utili, Jen. 1733, 4to.' C. F. Voita Berg, de Pictura famosa, Jen. 1703, 4to. Pichtner, de eo quod justum est circa Picturam, Altorf, 4to. Theoph. Boeiner super Privilegiis Pictorum, Lipsias, 1751, 4to. Durr Franc. Ant. de Probatione per Picturas in sacris, Moguntiae, 1779, 4to. Kluber Joannes Ludov. de Pictura contumeliosa, Erlangen, 1787, 4to.

The best Italian works on the same subjects are : ††† Trattato della Nobilta della Pittura, cora- posto ad instanza della Venerab. Comp. di S. Luca, et della Nob. Acad, de' Pittori di Roma, da Rom. Alberti, Roma, 1585, 4to. Another edition of the same work was published at Pavia in 1604, also in 4to. The second of the Lezionv' di M. Ben. Varchi, Firenze, 1549 and 1590, 4to., is entitled, Qual sia piii nobile la Pittura o la ScuUura? Gli Onori della Pittura, e della Scultura, Discorso di Gianb. Bellori, Lucca, 1677, 4to. Pregi della Pittura, di Dom. Palletta, Roma, 1688, 8vo. La Pittura in Giudizio, ov- vero il Bene delle oneste Pitture, ed il iNIale delle Oscene, di C Gregor. Rosignoli, Venezia,

1696, 12mo., and another edition at Bologna,

1697, also in 12mo. Le tre belle Arti in Lega con I'Armi per difesa della Religione, Oraz. di Venc. Lucchesini, Roma, 1716, 8vo. Orazione in Lode della Pittura, Scultura, ed Architettura, da Nicolas Fontingueri. This tract is printed in the second volume of the Prose degli Arcadi, Rome, 1718, 8vo. Orazione della Pittura, Scul-

tura, ed Architettura, giovano per I'acquiste delle Scienze, da Vine. Santini, printed in the third volume of the same work. Orazione in Lode della Pittura, Scultura, ed Architettura di Giam- battista Alessandro Moreschi, Bologna, 178), 8vo. Esame ragionata sopra la Nobilta della Pittura e della Scultura, per Nicolas Passeri, Napoli, 1783, 8vo.

In the Spanish language the most esteemed works on the same subjects are ††† Discorsos apolo- geticos en quesedefiende la Ingenuidad del Arte de la Pintura, que es liberal y noble de todos Derechos, por Juan de Butron, Madrid, 1626, 4to. Por el Arte de la Pintura, por D. Juan Xanregui,

Madrid, 1633, 4to.

In French ††† Elogedela Peinture, par Philippe Angele, Paris, 1642, r2mo. Ichnograpiiie ; ou, Discours sur les quatre Arts d'Agriculture, Pein- ture, Sculpture, et Gravure, avec des Notes his- toriques, cosmographiques, chiffres, Lettres ini- tiales, Logogriphes, Sec, par M. Hebert, Paris,

1767, 5 vols., 12mo.

In English ††† A Parallel between Poetry and Painting, by Dryden, Lond. 1695, 4to., inserted as a preface to that great poet's translation of Du Fresnoy. The various editions of the Lec- tures of Reynolds, Barry, Fuseli (some passages from whose work have been extracted in the course of this article), Opie, West, ike. The Artist ; a Collection of Essays on Art, by various English artists, edited and conducted by Prince iloare, Esq., London, 1809, 2 vols. 4to. Our intention being more to direct our readers to scarce and valuable foreign works than to well known English treatises, this portion is rendered necessarily brief.

In the German language are to be found ††† a reply to the following question : ††† Does Painting possess any influence over a state ? Hamburg, 1763. Advice to young Artists to apply them- selves to Literature, by IL deSonnenfels, Vienna,

1768, 8vo. An Enquiry whether Painting pro- duces a greater effect than Music. A Dialogue, by Herder, inserted among the Miscellaneous Works of that author, published at Gotha, 1785, in 8vo.

The principal Lexicons and Dictionaries on Painlino; are : ††† Dictionnaire Abrege de Peinture et d'Architecture, on Ton trouve les principaux Terms de ces deux Arts, avec leur Explication, la Vie abtegee des grands Peintres et des Archi- tectes celebres, et une Description succinte des plus beaux Ouvrages de Peinture, de Sculpture, et d'Architecture, soit antiques, soit modemes, par I'Abbe Marsy, Paris, 1746, 2 vols. 8vo. Dictionnaire portatif des beaux Arts, par Lacombe, Paris, 1766, 8vo. Dictionnaire portatif de Pein- ture, Sculptute, et Gravure, avec un Traite pra- tique des differentes Manieres de peindre, par D. Ant. Joseph Pernetty, Paris, 1757, 8vo. Dic- tionnaire Iconologique ; ou, Introduction a la Connoissance des Peintres, Sculptures, Est- ampes, par M. Prezel, Gotha, 1758, 8vo. Di- zionario portatile delle belle Arti, che contiene quanto e di piii remarchevole nella Pittura, Scul- tura, Intaglio, &c., colla Vita de' piu celebri Professori delle medesime Arte, Venezia, 1758, 8vo. Nouveau Dictionnaire des Peintres, pour acquerir une Connoissance exacte des bons Tableaux auciens et modemes, avec un Appen-

dix de quelques Mono^rammes, par Louis de Winckelmann, Aug. 1796, 8vo. (in German). Dictionnaire des Arts de Peiuture, Sculpture, et Gravure, par Watelet et Levesque, Paris, 1792, 5 vols. 8vo. Theorie generale des beaux Arts, redigee par Ordre alphabetique, par J. G. Sulzer, Leipsic, 17^3, 4 vols. 8vo. (in German).

On the preservation of pictures we may con- sult, Hecueil des Memoires et diverses Experi- ences, faites au Sujet de la Conssrvation des Tableaux, avec u►► Discours sur I'lncorruptible, par G. Dagly, Berlin, 1706, 8vo.

On the origin, antiquity, and history of paint- ing among different nations, we may cite, Joa. Nicolai Funcii, Diss, de Picturae UsuetOrigme, with his Dissertationes academicae, 1746, Bvo., 470th and following pages. Lettere dell' Ori- gine, Uso, ed Abuso della Pitiura, in the Let- tere scelte del Abbate Pietro Chiari, Venice, 1750, Bvo. page 172. De I'Anciennete de la Peinture, par Fraguier, to be found in the first volume of Memoires de I'Academie des Belies Lettres. On the Origin and History of the Art, by Studemund. Jena, 1767, 8vo.

On the history of painting in general ►►► Histoire des Arts qui ont rapport au Dessin, divisee en trois Livres, ou il est traite de son Origine, de son Progres, de sa Chute, et de son Retablisse- ment, par Monier, Paris 1705, Bvo. The Per- fect Painter ; or a History of the Origin, Prouress, and Improvement of Paiuting, 1730, 12mo. Introductio ad Historiam Artis Delineatoriae, by Peter Ciner, included in his Dissertationes Lit- teraria?, Florence, 1742, Bvo. Essai d'une His- toire des Arts du Dessin, par A. F. Busching, Hamburgh, 1761, 8vo. Della Patria degli Arti del Disegno del Gherardo d'Arco, Cremona, 1785, 8vo. Anecdotes des Beaux Arts, conte- iiant tout ce que la Peinture, la Sculpture, la Gravure, I'Architecture, et la Vie des Artistes of- frent de plus curieux et de plus piquant chez tous les Peuples du Monde, depuis I'Origine de ces differens Arts jusqu'anos Jours, Paris, 1776, 8vo. 3 vols. Domenico Manni, del vero Pit- tore Luca et del Tempo del suo fiorire, Florence, 1764, 4to. Deir Erroreche persiste di attribuirsi le Pitture al S. Evang. by the same, Florence, 1766, 4to.

On the state of painting among the Greeks and Romans: ►►► De I'Amour des beaux Arts, et de I'extrfeme Consideration que les Grecs avoient pour ceux qui les cultivoient avec Succes, par Caylus, &c., in the twenty-first volume of Me- moires de I'Academie des Belles Lettres. His- toire de la Peinture ancienne, extraite de I'His- toire naturelle de Pline, avec le Texte Latin, corrige sur les Manuscrits de Vossius et sur la premiere

Edition de Venise, et traduite en Fran- cois par D. Durand. London, 1725, folio. We may recognise, as a continuation of this work, the Treatise of the count de Caylus, on the Pic- tures of Polygnotus, on several passages of Pliny relating to the Arts, on the Picture of Vˆem..-, by Apelles, &c., in the 19th, 27th, 29th, and 30th, vols, of Memoires de I'Acad. des Inscriptions et Belles Lettres. The third and fourth parts of the work entitled Gallus Rom'je Hospes, par L. Mont Josieu, Rome, 1585, 4to. (and to be found la the ninth volume of the Tresor of Gronovius),

treat of antique sculpture ana painting. De I'Origine de la Peinture et des plus excellens Peintres de I'Antiquite, Paris, 1660, 4to. Des Peintres anciens et de leurs Maniferes, in the tenth volume of Nonveaux Choix des Mercures. Joaim. Fonseca, de Pictura veterum. Delle Pittura antica, da G. B. Bellori, Venice, 1697, 4to. Treatise on ancient Painting, containing-Observations on the Rise, Progress, and Decline of that art among the Greeks and Romans, &:c., by George TurnbuU ; adorned with fifty pieces of ancient painting discovered in the ruins oi old Rome, accurately engraved from drawings ot Camillo Paderni, Lond. 1740, folio. Enquiry into the Causes of the e.ttraordinary Excellency of ancient Greece in the Arts, London, 1767, Bvo. In the Archeeologia Litteraria of Ernesti, in that of Martini, and in that of Siebenkees, appear chapters on painting among the ancients. Sur la Peinture des Anciens, par Falconet, in the sixth volume of his works, Lausanne, 1781. Recherches sur I'Origine, I'Esprit, et le Progres des Arts de la Grece, sur leur Connexion avec les Arts et la Religion des anciens Peuples de rinde, de la Perse, du teste de rA3ie, de I'Eu- rope, et de I'Egypte, London, 1785, 4to. Sur la Peinture des Anciens, servant de Supplement a I'Histore de I'Art, par A. Riem, Berlin, 1787, 4to. Observations on the Art of Painting among the Ancients, by Cooper, in the tiiird volume of Memoirs of the Literary and Philosopliical So- ciety of Manchester, 1790, Bvo.

Works which treat in general of the lives of painters of every age and country: ••• Entietiens sur les Vies et sur les Ouvrages des plus excel- lens Peintres, anciens et modernes, by Andre Felibien, Paris, 1696, 5 vols. 4to., and London, 1705, 4 vols. Bvo. The second part of the first volume of the Academia tedesca de.la Architet- tura, Scultura, e Pittura, of Sandrart, Nuremberg, 1675, folio. Noms des Peintres les plus cele- bres, anciens et modernes, Paris 1679, 12mo. Abrege de la Vie des Peintres, avec des Re- flexions sur leurs Ouvrages, par R. De Piles, Paris, 1747, 12mo. Abecedario Pittorico, o sia serie degli Uomini i piii illustri in Pittura, Scul- tura, ed Architettura, da F. P. A. Orlandi, Bo- logna, 1704, 4to. Account of the most eminent Painters, ancient and modern, continued down to the present Times according to the Order of their Succession, by R. Graham, London, 1716, Bvo. Table historique et chronologique des plus fameux Peintres anciens et modernes, par A. F. Harms, Brunswick, 1742, folio.

Dictionnaire ge- nerale des Artistes, by Fuessli, Zuric, 1767, 4to. Extraits des differens Ouvrages publies sur la Vie des Peintres, by M. Papillon de la Ferte, Paris, 1776, 12mo. Pet. Opmerii Opus Chro- mogr. Orbis universi a Mundi Exordio usque ad Annum 1611, Antwerp, 1611, folio.

Works expressly on the ancient painters : ??? Vite de' Pittori antichi, scritte ed illustrate da Carlo Dati, 1667, 4lo. Lezionedettanella Aca- demia della Crusca intorno a' Pittori, Greci e Latini, de Filippo Baldinucci, 1692, 4to. In the tenth edition of Junius's work entitled De Pictura veterum (Rotterdam, 1694) there will be found an extensive catalogue of the painters and other artists of antiquity.

Respecting modern painters in general we find details in L'Academie des Sciences et des Arts, contenant les Vies et les Pˆlogcs des Hom- ines illustres, par J. BuUart, Brussels, 1695, folio. Le Vite de' Pittori, de' Scultori, e de^\i Architetti moderni, con loro Ititratti al naturale, da Giovanni Pietro Bellori, Rome, 1672, 4to. Accresciuta coUa Vita e Ritratto del Car. Luc. Giardano, Rome, 1728, 4to. Vite de' Pittori, Scultori, ed Architetti moderni, da Lione Pas- coli, Rome, 1730 ??? 6, 2 vols. 4to. (The names of all other painters, save Italian, are dreadfully mangled in this book). Portraits of the most eminent painters and other famous artists that have flourished in Europe, curiously engraved on above 100 copper plates, from original paint- ings of Van Dyck, Jansens, Guido, Teniers, and other celebrated masters; with an account of their Lives, Characters, and most considerable Works, London, 1739, 4to. Abrege de la Vie des plus fameux Peintres, avec leurs Portraits graves en taille-douce, les Indications de leurs principaux Ouvrages, quelques Reflexions sur leurs Charactˆres, et la Maniere de connoitre les Dessins et les Tableaux des grands Maitres, par M.A. J. Dezallier d'Argensville, Paris, 1745, 3

vols. 8vo. The Gentleman and Connoisseur's Dictionary of Painters, containing a complete Collection and Account of the most distinguished Artists, who have flourished in tiie Art of Paintino in Europe from 1250 to 1767; to which is add- ed, a Catalogue of the Disciples of the mo->t fa- mous Masters, &c., by Pilkington, London 1767, 4to. Dictionnaire des Artistes, par M I'Abbe L. A. Fontenay, Paris, 1776, 2 vols. 8vo Biographical Memoirs of extraordinary Painters, exhibiting not only Sketches of their principal Works and professional Characters, but a variety of romantic Adventures and original Anecdotes, London, 1780, 12mo. Abrege de la Vie des Peintres, dont les Tableaux composent laGalerie Electorale de Dresde, Dresden, 1782, 8vo. Manualede' Pittori, for

the Year 1792, Florence, 8vo.

Our biography will be found to contain the lives of the most distinguished painters of ail ages and countries, in their alphabetical places ; but the following catalogue Raisonnee of celebrated pamters, from the revival of the art to the begin- ning of the last century, may be found a useful compendium to students.

Names.

Studied under.

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Excelled in.

Giovanni Cimabue

Certain Greeks

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First revived painting.

Andrea Taffi

ApoUonius, a Greek

History

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History

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Quitted the stiff manner of Greeks.

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Uuonaniico BufFalmacco

Andrea Taffi .

History

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Ambrogio Lorenzetti .

Giotto .

History

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Pietro CavaHini .

Giotto .

History

1364

85

Simon Memmi .

Giotto .

Portraits

1345

60

Andrea Orgagna

Imitated Giotto

History

1389

60

Tomaso Giottino

Imitated Giotto

History

1356

32

Paolo Uccello

Antonio Venetiano .

Birds, some His lory

1432

83

First who studied perspective.

Massolino .

Lorenzo Ghiberti and Gher. Stamina .

History

1418

37

Gave more grace to his figures drapery.

and

Masaccio .

Massolino

History

1443

24

Fra. Giov. Angelico da

Giottino

Hist. Miniatures

1455

68

Fiesole

Antonella da Messina

John Van Eyck

History

1475

49

Introduced oi! painting into Italy

Fra. Filippo Lippi

Masaccio

History

1488

69

Began to paint figures larger t

life. Painted in oil first at Florence.

han

Andrea del Castagno,

Domenico Venetiano

History

1480

71

detto Degl' Impiccati

Gentile del Fabriano .

Giovanni da Fiesole

History

1412

80

Giacomo Bellini .

Gentile del Fabriano

History

1470

Gentile Bellini “> Giovanni Bellini 5

C Giacomo their fa- i ther

History

1591

80

History

1512

90

Cosmo Rosselli .

.

History

1484

68

Domenico Ghirlandaio

Alessand. Baldovinetti

History

1493

44

Lively coloring, genteel de►►igning,|

and good airs.

Andrea Verocchio

Giacomo Squrcione .

History

1488

56

Observation of perspectiT.*

Andrea Mantegna

.

History

1517

66

Filippo Lippi

Fra. Philippo his fa- ther, and Sandro Boticelli

History

1505

69

Pietro Perugino .

Andrea Verocchio .

History

1524

78

Bernardino Pinturicchio

Pietro Perugino

History

1513

59

Francesco Francia

Marco Zoppo .

History

1518

“l

First considerable Master of the lognesc school.

Bo-

Rartolomeo Ramenghi,

Francesco Francia .

History

1541

48

Soft and fleshy coloring.

detto 11 Bagnacavallo

Innocenzo Francuzzi,

Francesco Francia .

History

‘

Correct drawing.

detto da Imola

**** i*

480

PAINTING.

o

Names.

Studied under.

Painted.

Died

*<

Excelled in.

Francesco Turbido, detto

Giorgione

Portraits

1521

81

11 Mauro

Luca Signorelli .

Piet, della Francesca

History

1521

82

Lionardo da Vinci

Hist, and Port.

1317 75

Exquisite designing.

Giorgio Giorgione

Imitated Lionardo's

History & Por-

1511 33

Management of the clair-obscure.

manner

traits

and coloring.

Antonio da Correggio .

History & Por-

1534 40

Divine coloring and morbidezza of

traits

his flesh ; angelical grace and joy- ous airs of his figures, and clair-obscure.

Mariotto Albertinelli .

Cosmo RoselH

History

1520

45

Baccio, detto Fra. Bar-

Cosmo Roselli

History

1517

48

tolomeo di S. Marco

Pietro di Cosimo

Cosmo Roselli

Grotes.&monst.

1521 80

Raphaellino del Garbo

Filippo Lippi .

History

1529 58

Michel Angiolo Buona-

Domenico Ghirlandaio

History

1564.90

Great correctness of design, grand

roti

and terrible subjects, profound knowledge of the anatomical i)art.

Raffaelle Sanzio d'Ur-

Pietro Perugino : cor-

History & Por-

1520 37

In every part of painting, but chiefly

bino

rected his manner upon seing the works of Lionardo da Vinci & Michael

Angelo

traits

in the thought, composition, ex- pression, and drawing.

Titiano Vecelli .

Giovanni Bellini

History & Por- traits

1576,99

The clair-obscure and all the beauties of coloring.

Domenico Puligo

Domenico Ghirlandaio

History

1525 52

Timoteo Urbino .

Raffaelle

History

1524 54

The same as his master.

Vicenzo da San Gemi-

Raffaelle

History

1527 52

niaao

Lorenzo di Credi

Andrea Verocchio, imitated Lionardo da Vinci

History

1530

Balthazar Peruz^i

Hist, buildings

1536 55; !

Giovanni Francesco Pen-

Raffaelle

History

1528 40

Good imitation of his master andj

ni, detto il Fattore

1

great despatch. |

Giulio Romano .

Raffaelle

History

1546,54

Vivid and poetical fancy, and power-!

ful thought. !

Peligrino di Modena .

Raffaelle

History

1538

Pierino Buonacorvi, det-

Raffaelle

History

1547

47

to Perin del Vago .

Giovanni da Udina

Raffaelle

Grotesques '.

156470

Animals, flowers, and fruits.

Andrea del Sarto

Pietro di Cosimo

History, Por-

1530,42

Natural and graceful airs, and cor-

*traits_*

rect drawing ; a bright manner cl coloring.

Francia Bigio

Mariotto Albertinelli

History

41

Painted iu company with and like Andrea.

Sebastiano, detto Fradel

Giov. Bellini ; 11 Gi-

History, Por-

1547

62

Painted in the strong and correct

Piombo

orgione, M. Angelo

traits

manner of this last, and colored better.

Orazio Sammachini

11 Bagnacavallo, Inno- cenzo d'Imola

History ,

1577

45

Lorenzetto Sabattini

The same

History

Prospero Fontana

The same

History, Portr.

Lavinia Fontana

Prospero her fa her

History, Portr.

1602 50

PelestrinoTibaldi

11 Bagnaravallo, Inno-

History

1692j70'A strong Michael Angelo manner. |

cenzo d'Imola

1

Primaticcio, detto 11 Bo-

The same ; Giulio Ro-

History

1570 80

Genteelness and strenuous imagina-

logna

mano

tion.

Nicolo Bolognese, detto

Primaticcio

History

r372 60

Messer Nicolo

-

11 Dosso .

Lorenzo Costa, Titian

History, lands.

Bernazzano da Milano

Animals, land- scape, & fruits

1550

Giov. Martino da Udina

Giov. Bellini .

History

1564 70

Pedgrino da san Danielo

The same

History,

Giov. Ant. Regillo, detto

Giorgione

History, Por-

1540 56

Fine coloring.

⬛⬛⬛ Licinio da Pordenone

traits

JGirolamo de Trevigi .

⬛⬛⬛ ⬛⬛⬛ ⬛⬛⬛

Hist, buildings

1544 36

)

Polidoro da Caravaggio

1

Raffaelle

History

1543 51

The correctnesss of design ar d imita- tion of the antique chiefly in chia-

1

1 1

ro-scuro. |

PAIN T 1 N G.

481

Names.

II Maturino . ,

Francesco Mazzuolo det to II Parmegiano

Girolamo Mezzuoli

Giacomo Palma, detto II Vecchio

Lorenzo Lotto

Francesco Monsignori Domenico Beccafumio

Meccarino Giacomo Pontormo

Girolamo Genga Giov. Antonio da Ver- zelli, detto II Sodoma Bastiano Anstotile Benvenuto Garofalo Girolami da Carpi

Studied under.

Raffaelle

Imitated Raffaelle .

Francesco, Lis cousin Titian and others

Painted.

History ,

History

History ,

History, Portr.

Giov.

Baldini, LorenzoCosta Garofalo, he imitated Coreggio Francesco

Bezzi'Pelegrino Tibaldi .

detto II Nosadella Ercole Procaccini Bartolomeo ˆ

and > Passerotti

tre figli J Francesco Salviati Giorgio Vasari . Daniel Ricciarelli, detto

da Volterra Taddeo Zucchero ,

Frederico Zucchero . Bartolomeo Cesi . Dionigi Calvart . John of Bruges . Albert Durer Quintin Matsys, called

the Smith of Antwerp Lucas Jacob, called Luca

d'Ollanda Peter Brueghel, called

Old Brueghel . John Holben, called

Hans Holben Roger Vandensyde John Schorel . .

Matthias Cock . Martin Heemskirke Francois Floris, called

Franc-Flore Francesco Vecelli Orazio Vecelli Nadalino di Murano . Damiano Mazza . Girolamo di Titiauo Paris Bordone Andrea Schiavone Alessandro Bonvincino,

detto II Moretto Girolamo Romanino II Muttano Pirro Ligorio

Dom. Gialio Clovio

[1 Bronrino, Angelo-Al-

lori AUessaudro Allori Giacomo Scmenti

Imitated Bellini and|History, Portr.

Giorgione Bellini . . . Portraits

Imitated Pietro Peru- History

gino Lionardo da Vinci, Al- History

bcrtinelli, Andre:

del Sarto Pietro Perugino . History History

History History History

History

History

History

History

History, Portr. History

History, Portr. History, Portr. History History

History, Portr. History, Portr. History, Portr.

History, Portr.

The same

The same

Andrea del Sarto

The same

II Sodoma"; Baldasar

Peruzzi Studied Raffaelle

II Nosadella . Prospero Fontana Hubert Van Eyck Hupse Martin .

Cornelius Engelbert Peter Koek

John Van Eyck Jacob Cornil .

John Schorel . Lambart de Liege

Titijin, his brother Titian, his father Titian . Titian Titian . Titian . Titian . Titian, imitated Raf- faelle Titian . Titian, Tad. Zucchero Giulit Romano

Giulio Romano

Giacomo Pontormo

Bronzino, his uncle Dionigi Calvart

History, Portr.

History History Landscape Droll figures . History

*Portraits History, Portr. Portraits, History, Portr. History, Portr. History, Portr. History History^*

History

Landsc. Portr.

Antique monu- ments and buildings

Miniature, His- tory

History, Portr.

History History

Died

Excelled in.

1527 37 The same ; they always painied to-

I gether.

I540l36 Great delicacy and genteelness of

drawing. ... Always imitated his master. 1596,48 Warm and mellow tints.

1544,36

151964 1549; 65

1558 65

75

Like Raffaelle.

1551 1554

1551 1559 1556

1571

156354

1584[68 1566,57 Strong sense of character.

1566 37 1609 66 . 79 161954

1470 .

1528 1529

1533

1570

1444

1562 1465 1754 1570

1579

1588

1582 1564

1567 1590 1573

1578

]l580

1607 1625

Painted with his brother.

Said to have invented oil painting. Nature, high finishing.

Great nature, extreme finishing.

Coloring.

Chaste and genteel coloring, some- what of M. Ang. in the drawing.

Names.

Marcello Venusto Marco da Faenza Sirolamo da Sermonetta Battista Naldino Nicolo del Pomerancio Jean Cousin Michael Coxis John Bol .

Peter Porbus Antony More George Hoefnaghel

Camillo Procaccini

Giulio Cesare Procac- cini

Jude Indocus Van-Win- ghen

John Strada

Bartholomew Sprangher Michael John Miervelt Paolo Cagliari, detto

Paul Veronese Carlo Cagliari Benedetto Cagliari Gabrielle Cagliari Battista Zelotti .

Giacomo da Ponte, detto II Bassano

Francesco Bassano

Leandro Bassano .

Giambattista Bassano Girolamo Bassano Giacomo Robusti, detto II Tintoretto .

Marietto Tintoretto Paul Franceschi . Martin de Vos . John Rothenamer Paolo Farinato . Marco Vecelli Livio Agresti Marco da Sienna Giacomo Rocca . Frederico Barocci II Cavaliero Francesco

Vanni Michael Angelo Amerigi,

detto II Caravaggi

Lodovico Caracci

Agostino Caracci

Annibale Caracci

Domenico Zanipieri,

detto II Domenichino Guido Reni

Cav. Giov. Lanfranco Francesco Albani

Studied under.

Perin del Vaga

Perin del Vaga II Bronzino

Van Orlay, Raffaelle

John Schorel

Painted.

History History. History History. History History History Miniat. Landsc.

Ercole, his father ;

Prospero Fontana Ercole, his father ; History

Prospero Fontana Studied in Italy .

Portraits, Hist. View of cities

Landscape History

Died \< <

157661

155046

1626i7-l

1589 1592 95

lo93‘59

1583 1575 1600

Studied in Italy

Ant. Blockland Antonio Badiglio

Paolo, his father

The same

The same

Ant. Badiglio, worked with Paul Veronese

Francesco, his father, Bonifacio Venetia- no, imitated Titian.

Giacomo, his father

The same The same The same Titian, in his drawing

imitated Michael

Angelo Tintoret, her father Tintoret . Tintoret . Tintoret . Antonio Badiglio Titian, his uncle Perin del Vaga Dan. Volterra Dan. Volterra Studied Raffaelle Fred. Baroccio

Cav. Apino

Prospero Fontana

Ludovico, his cousin,

Ludovico, his cousin.

The Caracci

Dionigi Calvart, the Caracci

The Caracci

Dionigi Calvart, the Caracci

History Battles,

Hunt-

Por-

History

Portraits

Hislorj', traits

History, Portr.

The same

The same

History, chiefly in fresco

Rustic figures, Animals, Por- traits,History.

The same

The same The same The same History, Por- traits

Portraits Landscape Landscape History . History .

History . History . History . History, Portr, History .

History, humor- ous figures

History .

History, Por- trait, landsc.

History, Por- traits, landsc.

History, Por- traits

History, Por- traits

History .

History .

1626 80

1626

1603

1604

1623 1641

Excelled in.

Commonly upon glass.

A dark, strong, expressive manner. A dark, strong, expressive manner.

1588:58, Rich and noble composition;

warm coloring. 1596 26 Imitated his father's manner. 1598 60 The same. 1631 63 The same. 1592|60

1592 82 Much nature, and fine coloring.

fine

1594

1623 1613 1622 1594

1590 1596 1604 1606 1606 1611 1580 1567

84, Imitated his father's manner, and I copied his pictures.

65 The same.

60 The same.

62|The same.

82 The boldness and softness of hi pen- cil ; variety and correctness of de- si2,n ; seldom finished.

161234 1615 51

1609

1619

40

64

160244 1609 49 1641 60 1642'68

Designed Eifter Tintoret's manner.

Fine genteel drawing.

Correct design and agreeable color- ing.

A strong and close imitation of Na- ture, but without choice ; exquisite coloring.

Exquisite design ; noble and proper composition ; strong and harmoni- ous coloring.

Similarly accomplished.

Similarly accomplished.

Correct design, strong and moving

expression. Divine and graceful airs and atti- tudes, gay and lightsome

color-

1647|66 Great force and fulgore, chiefly in

fresco. 1660 82 Genteel poetical fancy, beautiful airy

coloring, his nymphs and boys arc I most admired.

PAINTING.

483

Names.

Studied under.

Painted.

Died

0

to

<

Excelled in.

Lucio Massari .

The Caracci

History .

1633

64

Sisto Badalocchio

Annibal Cara►►ci

History .

Antonio ““‘aracci .

Annibal,his uncle

History .

I6I8I35

Ginseppe Pini, detto

Raffaelle da Rheggio

History .

1640 80

The furia and force of his composi-

Cavalier Arpino

tion .

11 Paduano

PortraiU

11 Cigoli .

Andrea del Sarto

History .

1613 54

Domenico Feti .

Cigoli .

History .

1624 33

Cherubino Alberti

History .

161563

Cavaliere Passignano

Frederic Zucchero

History .

1638 80

Orazio Gentileschi

Aurelio Lomi .

History .

1647 84

Filippo d'Angeli, detto

Landscape

1640 40

11 Napolitano

Paul Brill .

After Titian and An- nibale

Landscape

1626 72

Matthew Brill .

Landscape .

1584 34

Worked with Paul, his brother.

Pietro Paolo Gobbo

Fruit, Landsca.

1640 60

n Viola .

Annibal Caracci

Landscape

1622 50

Roland Saveri

Imitated Paul Brill

Landscape

1639 63

Much finishing, but dry.

Bartolomeo Manfrcdi

M. Ang. Caravaggio

History .

Carlo Saracino .

Imitated Caravaggio

History .

1625 40

11 Valentino

M. Ang. Caravaggio

History .

1632 32

Giuseppe Ribera, detto

M. Ang. Caravaggio

History .

1656

A dark strong manner ; dismal and

Lo Spagnuoletto

cruel subjects.

John]\Iompre

Studied nature

Landscape

Hen. Cornelius Wroon,

Com. Henrickson

Seaports, Ships

or Vroon

Agostino Tassi . ,

Paul Brill

Ships,

Tempests, Landscapes, Fruit, Per- spectives.

Fra. Mattfo Zaccolino

Perspective

1630

40

Antonio Tcmpesta

John Strada .

Animals, Bat- tles, Huntings

1630

75

Octavius Van Veen,

History .

1634 78

called Otho Vaeiiius

Jean Lp Clerc . . |Carlo Saracino

History .

1633

Simon Vouet

Laurent, his father .

History, Portr.

1641 59

Peter \opfs

Henry Steinwick

Perspective .

1651 ;35

Henry Steinwick

John De Vries

Buildings,

1603 53 Great skill and beauty in his parlicn-l

Places illu-

cular walk of art.

minated by

fire and can-

dles

Theodore Rombouts .

Abraham Jansens

Low life

1640 43

Ger.ird Segres

Abraham Jansens .

1651 62

Imitated M. A. Caravaggio.

Sir Peter Paul Rubens

Otho Va;nius .

History, Por- traits, Land- scape

1641

63

Admirable coloring ; great magni- ficence and harmony of compo- sition : a gay and lightsome man-

Sir Antony Vandyck .

Rubens

Portraits, His- tory

1641

42

His master's excellencies with more grace and correctness.

Rembrandt

History, Por- traits, Low- life

1674

68

Great knowledge and execution of the clair-obscure ; high finishing, sometimes a very bold pencil and distinct coloring ; va,st nature.

Cornelius Polcmboun; .

Abraham Bloemart .

Miniature, Landscape, with figures

1660

74

Very finished execution.

John Brueghel, called

Old Brueghel, his

Little Landsca.

1625

65

Extreme neatness and finishing.

Velvet Brueghel

father

with figures, animals, and flowers

Moses, called the Little

Com. Polembourg

Small Landsc. with figures

1650

F. Dan Legres

Young Brueghel

Flowers

1666

70

Gasper Craes

Coxis

1669

84

Bartholomew Briemberg

Studied at Rome

Landscape

1660

40

John Asselyn, called

Esaias Vander Velde

Landscape

1660

50

Little John

484

PAINTING.

Names.

Francis Snyders Ert Veest

Lewis Cousin Philip Vauvremans Gerard Dow Pietro Francesco Mola Giov. Battista Mola . Giacomo Cavedone Agostino Metelli

Angelo Michael Colona Giov. Benedetto Castig-

lione, detto II Genoese Pietro Testa Matthew Flatten, called

II Montagna . Francesco Barbieri, detto

II Guercino da Cento

Studied under.

Painted with Rubens

Painted.

John Wynants

Rembrandt

Albani, Cat'. Arpino

Albani

Ludov. Caracci

Ferrantino Paggi, Vandyck

Domenichino Asselyn .

The Caracci

Pietro Berrettini, detto Baccio Ciarpi

Pietro da Cortona Antonino Barbalonga . Domenichino Andrea Camaceo . Domenichino

Andrea Sacchi . . Albani

Simone Cantarini Cav. Carlo Cignani

Pietro Pacini

Giov. Andrea Donducci

detto 11 Masteletta . Alessandro Tiarini Leonella Spado . Giov. Andrea Sirani Elisabetta Sirani Giacomo Sementi Francesco Gessi . Lorenzo Garbieri G. Francesco Romanelli Diego Velasquez Alessandro Veronese . Mario de Fiori . Michelangelo del Cam

pidoglio . .

Salvator Rosa

II Cav, Calabrese Fer. amola Fiovarenti .

II Maltese

Claude Gelee, called Claude Lorraine

Nicholas Poussin .

Animals, dead and alive

Seafights, Tem- pests

I o

Died

Little figures History Hist. Landsc. History

Buildings, Per- spective Buildings, His.

History,Whims, Sea-pieces

Guido . Albani .

Annibal Caracci The Caracci .

Gaspur du Ghet, called

Caspar Poussiu . Eustachc Le Sueur

Prospero Fontana

The Caracci .

Guido

Andrea, her father

Guido

Guido

Lud. Caracci .

Pietro Cortona

Francesco Pacheco

Felice Riccio .

History

History

History

History, Portr

History

History

History

History

Portraits

History

Flowers

Fioravante . . Flowers and

fruits

Spagnuletto and Da- [Landscape, his-

History

History

History History History

History History

History History

1657

1670

1670 1668 1474 1666

1660 1660

1687

1650

1667

1669

1657 1661

78

87

39

Excelled in.

niel Falcone

Guercino

Godfrey Wals ; Agos- tino Tassi

Quintin Varin

Nicholas, his brother- in-law Simon Vouet .

tory

History

Vases, instru- ments, car- pets, & still- life

The same

Landscape

History, land- scape

Landscape History

1648 1719

1602 1655

1668 1622 1670 1664 1625

1654 1662 1660 1670 1656 1670

1673

1688 1512

76

73

Great truth and brilliant execution.

Strong painting. The same.

Capricious and strange designs.

A medium between the Caracci and Caravaggio ; he has two manners, one a dark and strong one ; the other more gay and gracious.

Noble compositions; bright and beautiful coloring.

A coloring more languid than Pietro Cortona, but extremely delicate and pleasing.

Noble, bold manner and bright color

ing.

Good imitation of his master.

Great fire and force.

A weak but agreeable manner.

1682

1665

1665 1665

82

71

38

Savage and uncouth places : very great and noble style ; stories that have something of horror or cru- elty.

Rural and pleasing scenes, with va- rious accidents of nature, as gleams of sunshine, the rising moon, &c

Exquisite knowledge of the antique ; fine expression ; skilful and well chosen composition and design. Scenes of the country, with an- cient buildings and historical figures intermixed.

A mixture of Nicholas's and Claude Lorraine's styles.

Simplicity, dignity, and correctness of style ; he is called the French Raffaelle.

PAI

486

PAI

Names.

Studied under.

Painted.

Died

Excelled in.

Michelangelo della Bai-

Mozzo of Antwerp .

Battles

❖❖❖ I

taglie

Jaques Stella

His father

History, minia- tures

1647

51

Painted upon marble frequently

Carlo Maratti

Andrea Sacchi

History

1713‘88

Luca Giordana .

liO Spagnuoletto

History

1705 76

Charles Le Brun

Simon Vouet ; Nico-

History

169071

las Poussia

Cav. Giacinto Brandi .

Lanfranco

History

1713

90

Giro Ferri

Pietro Cortona

History

1689

Paints. See Color-Making. PAIR, n.s., V. n. ˆ V. a, Fr. pair ; LaX. par, equal. Two things alike, of a sort, or suitable to each other ; a couple ; brace ; hence a mar- ried couple : to be joined in pairs or coupled ; to suit ; tit : as an active verb, to join in couples ; unite as corresponding or as a remarkable con- rast.

Our dance, I pray ; Your hand, my Perdita ; so turtles pair.

Sttahpeare. Had our prince seen the hour, he had paired Well with this lord ; there was not a full month Between their births. Id. Winter s Tale.

All his lovely looks, his pleasing fires. All his sweet motions, all his taking smiles, He does into one pair of eyes convey. Sudding.

O when meet now Such pairs in love and mutual honour joined ?

Milton.

Baucis and Philemon there

Had lived long married and a happy pair ;

Now old in love. Drxiden.

i\Iinds are so hardly matched, that ev'n the first,

Though paired by heaven, in Paradise were cursed.

Id. The many pairs of nerves, branching themselves to all the parts of the body, are wonderful to behold.

Ray. Ethelinda ! My heart was made to fit and pair with thine. Simple and plain, and fraught with artless tenderness.

Howe. Turtles and doves with difFring hues unite. And glossy jet is paired with shining white. Pope. Their sentiment, so well expressed, Influenced mightily the rest ; All paired, and each pair built a nest. Cowper. Ah sure a pair was never seen.

So justly formed to meet by nature ! The youth excelling so in mien, The maid in every grace of feature.

Sheridan. PAIRING, in zoology, the union of animals in couples for the purpose of rearing their young. All wild birds pair ; but with a remarkable dif- ference between such as place their nests on trees and such as place

them on the ground. The young of the former, being hatched blind and without feathers, require the nursing care of both parents till they are able to fly. The male feeds his mate on the nest, and cheers her with a song. As soon as the young are hatched, singing yields to a more necessary occupation, that of providing food for a numerous issue ; a task that employs both parents. Eagles, and other birds of prey, build on trees, or on other inaccessible spots. They not only pair, but con-

tinue in pairs all the year round ; and the same pair procreates year after year. This at least is the case with the eagles : tlie male and female hunt together, unless during incubation, at which time the female is fed by the male. A greater number than a single pair are never seen in company. Gregarious birds pair, probably to prevent discord in a society confined to a narrow space. This is the case particularly with pigeons and rooks. The male and female sit on the eggs alternately, and divide the care of feeding their young. Eider ducks pair like other birds that place their nests on the ground ; and the female finishes her nest with down, plucked from her own breast. If the nest is destroyed for the down, which is remarkably warm and elastic, she makes another nest as before. If she is robbed a second time, she makes a third nest ; but the male furnishes the down. The black game never pair : in spring, the cock, on an eminence, crows and claps his wings; and the females within hearing resort to him. Pairing birds, excepting those of prey, flock together in February to choose their mates. They soon disperse ; and are not seen afterwards but in pairs. Pairing is unknown to quadrupeds that feed on grass. To such it would be useless; as the fe- male gives suck to her young while she herself is feeding. Beasts of prey, such as lions, tygers, wolves, pair not. The female is left to shift for herself and for her young ; which is a laborious task, and often so unsuccessful as to shorten the lives of many of them. Pairing is essential to birds of prey, because incubation leaves the female no sufficient time to hunt for food. Pair ing is not necessary to beasts of prey, because their young can bear a long fast. Among ani- mals that pair not, males fight desperately for a female. The beavers, with respect to pairing, resemble birds that place their nests on the ground.ˆ As soon as the young are produced, the males abandon their stock of food to their mates ❖❖❖and live at large; but return frequently to visit them while they are suckling their young. Hedgehogs pair, as well as several of the mon key kind. We are not well acquainted with the natural history of these animals ; but it would appear that the young require the nursing care of both parents. Seals have a singular economy. Polygamy seems to be a law of nature among them, as a male associates with several females. The sea turtles have no occasion to pair, as the female performs her task at once, by laying her eags in the sand. The young are hatched by the sun, and immediately crawl to the sea.

PAISLEY, a boro' of Scotland in Renfrew- shire, about six miles and a half west of Glas- gow, on the river White Cart, over which there are two stone bridges of two arches each, and one of three. The town is very ancient ; but was of much less consequence formerly than at present. The name Paisley is supposed to be derived from the Gaelic Pais-licht, i. e. the brow or face of a rock, which was the situation of its old church in 1160. It was erected into a burgh of barony by James IVˆ in 1488, when its import- ance seems to have been derived from its rich monastery. Even in the beginning of the eigh- teenth century it was but an inconsiderable place ; consisting only of one street, about half a mile in length, with several lanes ; whereas now it appears to be one of the largest and most populous towns in Scotland. Its buildings are elegant ; its streets are well paved ; and con- nected with one another, where the rivei inter- venes, by three bridges. It is governed by three bailies, of whom the eldest is commonly in the commission of the peace, a treasurer, a town-clerk, and seventeen counsellors, who are annually elected about Michaelmas. It enjoys the powers of government and police, without the usual burdens of royal boroughs. The old part of the town runs fi"om east to west upon the south slope of a ridge of hills, from which there is a fine prospect of Glasgow and the ad- jacent country ; but on the south the view ter- minates in a ridge of green hills, about two miles distant. It is full a mile longˆ and nearly as broad. On the east side of the Car stands the new town, which was feued off by the earl of Abercorn, and is now a large and populous place. The streets are laid off in a regular manner, but not in right angles. Many of them bear evidence of the industry of the people from their names, as Silk Street, Cotton Street, Lawn Street, &c. Here the earl of Abercorn built one of the largest and most elegant inns in Scotland, and several market- places. The town of Paisley continued a part of the abbey parish till 1738; when, the magis- trates and council having purchased the patron- age from the then earl of Dundonald, a new church was built, and the town was erected into a separate parish. This, called the Laigh Church, IS built in the form of a Greek cross, very well laid out, and contains a great number of peo- ple. In 1756 another church was built, orna- mented with a lofty spire, visible at a great distance. This is called the High Church, and is a very fine building ; it is an oblong square of eighty-two feet by sixty-two, built of free-stone, with rustic corners and an elegant stone cornice. The roof is a pavilion covered with slate, having a platform covered with lead. In 1781 the Middle Church was built, and very elegantly finished ; and in 1782 the town was divided into three parishes, named from their churches. There are six churches for the established religion, one each for the Episcopalians, Roman Catholics, Secession, Cameronians, and Methodists, two for the communion of relief, and two for the Independents. In addition to these,*

numerous other religious sects have their separate places of w orship. The town-house is a very handsome

building of cut stone, with a tall spire and a clock. The flesh-market has an elegant front of cut stone, and is one of the 'nost commodious in Britain. The poor's house is a large building, very well laid out, and stands opposite to the quay, in a fine free air. It is supported by a small tax. A philosophical society, the members of which are rather numerous, and hold weekly meetings in their hall during the winter season, has long existed. A taste for reading is also general among the manufacturing classes, in proof of which it may be mentioned, that be- sides what is called the trades' library, which forms indeed a third public one, many book so- cieties have been formed ; and numerous read- ing-rooms are supported by operatives only. Paisley is now one of the first manufacturing towns in Scotland, and is greatly celebrated on account of its manufactory of silk gauze. About the beginning of the last century the manufac- tures consisted principally of muslins, coarse linens, and handkerchiefs, which were afterwards succeeded by those of lawn and gauze, and a species of thread called ounce, or white thread, from Holland. In 1812 it was computed that 350,000 spindles of linen yarn, made into thread, were annually produced ; this branch of trade has, however, greatly declined, and has been succeeded by the manufacture of wire or cotton thread. The lawn and linen gauze manu- factures have also given way to other branches of industry. About the year 1760 the silt manufacture was introduced, and succeeded be- yond expectation; but, in 1816, it had so much declined as not to employ more than a dozen looms. Since that period the silk trade, and also the fancy muslin branch, have rapidly in- creased, and, with the cotton manufactures, have been carried on to an extent before unknown, by the powerful aid of steam-engines, and other machinery. Shawls, both of silk and cotton, and also of silk mixed with Merino wool, are extensively manufactured here, under the names of scarfs, plaids, and shawls. It is difficult to give an exact account of the state of its manu- factures at present. Besides the principal ma- nufactures, there are four considerable tan-works, two soap and candle works, a manufacture of ribands, and another of inkle or tape. The Cart runs from south to north, and falls into the Clyde, after it has joined the conflux of the Gryfe and Black Cart at Inchinnan bridge, three miles below the town. At spring tides vessels of forty tons burden come up to the quay. The communication by water is of great importance to the inhabitants ; for in this way they are served with fish of different kinds, and send their goods and manufactures to Port Glas gow, Greenock, and Glasgow ; and by the great canal they have also a communication with the Frith of Forth. The trade of the town is con- siderably augmented by improving the navigation of the river Cart, by removing some rocks and shoals ; and as the channel was but shallow

under Inchinnan bridge, a navigable canal was constructed, which leaves the river a little above, and joins it a little below bridge. The Ardros- san canal also skirts the town, and is, in one place, formed into a basin, where there is an

excellent wharf. Paisley has fairs in August and November, and lies twenty-two miles north of Avr.

In' the adjoining parish there are five coal mines. Free-stone, granite, and lime-stone abound ; and fossile marine shells are found in the lime quarries, as well as corals and shells in the coal mines. The ancient abbey church, which gives name to the])arish, stands a short way south of the inn of Paisley, and was the only one which Paisley formerly required. This churcli was anciently a most noble building, and consisted of several distinct and separate places of vvorshi]i; the relics of this magnificent Oothic structure are worthy the notice of the antiqua- rian. Only the chancel now remains, which is divided into a middle and two side aisles ; all very lofty jnllars, with Gothic arches ; above these is another range of pillars much larger, being the segment of a circle, and above a row of arched niches from end to end, over wliich tiie roof ends in a sharp point. The outside of the building is decorated with a profusion of ornaments, especially the great west and north doors, than which scarcely any thing lighter or richer can be imagined. Close by the abbey church is the earl of Abercorn's burial-place. It is a vaulted Gothic chapel, without puljnt or pew, but has the finest echo perhaps in the world. In this chapel is the monument of Mar- jory Bruce, daughter of I'obert Bruce, wife of Walter, great steward of Scotland, and mother of llobert II.; and in it were interred Elizabeth Muir and Euphemia Ross, consorts to Robert II. The abbey of Paisley was founded as a priory for monks of the order of Clugni, about 1160, by Walter, great steward of Scotland. It was afterwards raised to an abbacy ; and its lands were by Robert II. erected into a regality, under an abbot. After the Reformation, the abbacy was secularised by the pope in favor of lord Claud Hamilton, son of the duke of Chatelhe- rault: and, in 1588, it was erected into a tem- poral lordship, and lord Claud was created lord Paisley. Its revenvies were very considerable; consisting of the tithes of twenty-eight parishes, with the property of several lordships. But in 1653 lord Claud's grandson, James earl of Aber- corn, sold the lordship to the earl of Angus, who in 1654 sold it to William lord Cochran. Great part of it was since sold off by the family of I3undonald ; and what remained was, in 1764, re-purchased by the late earl of Abercorn. The fabric of the abbey owed much of its magnifi- cence to abbot George Schaw, who, about

*1484, enlarged and beautified the buildine, gardens, &c. He built the refectory and other offices necessary for the monks, t!ie church and the precinct of the convent ; and enclosed the gar- dens and orchards by a wall of hewn stone, whidi measured about a mile in circuit. This wall, observes Mr. Pennant (Tour in Scotland), ‘ is a very noble and extensive one, and indi- cates the ancient grandeur of the place.’ On a stone at the north-west corner is this very singu- lar inscription : ***

Thy call it the Abbot George of Shaw About my Abbey gart mak this wavv ;

An hundred four liundredth zeir Eighty-four the date, but weir Pray for his salvtie That laid this noble foundation. The spinning of cotton was introduced into the abbey parish in 1783. The principal seat of that manufactory is at Johnstoun, a neat and re- gularly built village about three miles west from Paisley. There is also in the neighbourhood of Paisley a calico printing work and a copperas work. The bleaching business in the abl)ey |):i- rish is carried on to a very considerable extent. The distillery business is carried on to a great extent. Paisley contains 31,000 inhabitants, and returns one member to parliament.

Paisley, Black Book ov, in literary history, an ancient chronicle, often quoted in Scottish history, containing a record of public affairs and remarkable events, kept by the monks, who re- sided in the monastery. It agreed in every ma- terial fact with the Scoti-chronicon of Fordun.

*PAKFONG. The name given to the white copper of the Chinese, said to be an alloy of copper, nickel, and zinc ; in sixteen parts of which there are seven ** >f zinc, two and a half of copper, and six and a half of nickel. Tlie com- bination of zinc and nickel simply does not succeed.*

PAL’ACE, n. .9. | Yi. palais ; La.t.palutiiim. Pala’cious, adj. S (From a residence of the Caesars. See below.) A royal abode ; the abode of any sovereign or superior person; a splendid or magnificent abode : the adjective we only find used by Graunt.

This Cambuscan, of which I have you tolil. In regal vestiments sit on his dels, AVith diademe ful high in his paleis. Chamrr.

You forgot. We with colours spread, JMarched through the city to the palace gates.

Shal.s}>eui(‘. Palaces and pyramids do slope Their heads to their foundations. Li.

The palace yard is filled with floating tides, And the last comers bear the former to the sides.

DrijHen. London encreases daily, turning of great palacious houses into small tenements. Guiuut.

The sun's bright palace on high columns raised With burning gold and flaming jewels blazeil.

Addison. The old man early rose, walked forth and sate On polished stone before his palace gate. Pope.

At once is lost the pride of awful state, The golden canopy, the glittering plate, The regal palace, the luxurious board, I'he liveried army, and the menial lord. Johnson. From scenes like these old Scotia's grandeur springs

That makes her loved, at home, revered abroad : Princes and lords are but the breath of kings,

' .ˆn honest man's the noblest work of God :' And certes, in fair virtue's heavenly road.

The cottage leaves the palace far behind. Bu-ns. In such a palace Aristeus found Cyrcne when lie bore the plaintive tale Of his lost bees to her maternal ear ; In such a palace poetry might place The armory of winter. Coivpe-

Arn. To the palace Colonna, as I told you !

C.ES. Oh ! I know Mv wav tin- ' '" Byron.

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PAL

Palace, in architecture, the term generally applied to the dwelling-houses of kings and princes. There has been much difference of opinion as to the derivation of the Latin word palatium. Procopius derives it from a Grecian called Pallos, who gave his own name to a splendid house which he had built, adding, that after him the emperor Augustus applied the name palatium to the house of the Roman em perors on the hill called the Palatine. On the other hand, it has been contended that the house of Romulus, in which Augustus lived, was pro- perly called palatium, because situated on the Palatine hill. However this be, palatium, at first doubtless a jiroper name, became at length, not ' like homo, common to all men,' but, in a similar way, common to all the habitations of sovereigns. Neither is it restricted to these : for, taking different additions according to the quality

of the inhabitants, we speak of imperial palace, royal, pontifical, cardinal, ducal, episco- pal, &c. Nay, it is customary in China to build palaces in honor of celebrated ancestors : and, in the year 1263, Ilu-pi-lay, of the Mogul empire (the first who borrowed the Chinese custom), built one for his ancestors.

In the Ancient Universal History we have an account of a most magnificent palace in Upper Egjpt, not far from Aswan (the ancient Syene), the ruins whereof are so extensive as to impress the mind of the spectator with amazement. It is as large as a little city, having four avenues of columns leading to as many porticoes. At each gate, between two pillars of porphyry, stand two gigantic figures of fine black marble armed with maces. The avenues consist of columns set three and three together, in a triangle, on one pedestal : on the chapiter of each triangle is placed a sphinx and a tomb alternately. Each column is seventy feet hic;h, all of one stone.

Homer gives us details with regard to the construction of the palaces of the kings in the heroic ages. These descriptions are to be taken with a great deal of reservation. They are, most likely, in part ideal, in part embellished, and possibly taken from edifices erected long after the reputed era of the siege of Troy. At all events they are curious, even as afibrding an evidence of the notions entertained by the illus- trious old Grecian on the subject. In the sixth book of the Iliad, the palace of Priam is repre- sented as a vast edifice, the lower part of which was composed of porticoes of stone and covered galleries, beneath which were fifty chambers richly decorated for the fifty sons of Priam. In front of this edifice, and in the middle of the court-yard, stood another of stone, in which were twelve beautiful rooms for the daughters of Priam. Pans, who is represented as a prince possessing himself some knowledge of architec- ture, brought to Troy several architects to build him a palace. This" was situated between those of Priam and Hector, and like those included many apartments.

In the earliest periods of their history, the Romans applied the word domus, not only to ordinary houses, but also to the habitations of the great, and even to those of their sovereigns. Even in the time of the voluptuous madman.

Nero, the celebrated new palace built by him was denominated domus aurea Neronis, Nero's golden house. This sumptuous palace surpassed in profuse splendor, as well as in dimensions, all which either had preceded or have succeeded it. According to Suetonius, the court in which was the colossal statue of Nero was adorned with three ranges of porticoes, each a mile in length. The gardens attached to the palace were also of a prodigious size, and contained a sort of pond or lake, which Suetonius states might be

said to resemble a sea, and on the banks of which stood clusters of elegant buildings, each like a little town. The imperial portion of the building was embellished with unheard-of mag- nificence. Gold, jewels, and other articles of value were lavished around with an unsparing hand, while the essences and perfumes fuming up on all sides bore testimony to the effeminate luxury of this rival of Sardanapalus. The whole of this surpassing structure has been demolished centuries since, and it would be well for the outraged feelings of humanity if the infamy of its wretched owner had passed away with the walls he constructed.

PALˆMON (Quintus Rhemmius), a cele- brated gratamarian of Rome, in the reign of Ti- berius. He was the son of a slave at Vienna, and was first bred up a weaver : but, attend- ing his master's son to school, he acquired so much learning, that he obtained his freedom and became a teacher at Rome. He gained great reputation as a rhetorician and a poet ; but his morals were loose, and his income, though large, was not sufficient to support his continued debaucheries. His arrogance was so great, that he used to say ' that letters were born and would die with him.' We have only some fragments of his works.

PAL/EOLOGUS (Michael). See Rome.

PAL.EPHATUS, an ancient Greek philoso- pher, who flourished between the times of Aris- totle and Augustus, but whose precise age is un- certain. He wrote five books De Incredibilibus, of which the first only is extant. In it he at- tempts to explain the fables of mythology by historical facts. The best edition is that of J. Fred. Fischer, 8vo. Leips. 1773.

PAL/EPOLIS, an ancient town of Italy, m Campania, built by a Grecian colony, on the spot where Naples was afterwards erected.

PALvESTRA, in Grecian antiquity, a public building where the youth exercised themselves in wrestling, running, playing at quoits, &c. To prevent the combatants from hurting them- selves by falling, the bottom of the palaestra was thickly covered with sand.

Barthelemi's Anacharsis furnishes us with the following account : ❓❓❓ ' The palaestra; are nearly of the same form with the gjminasia. We vi- sited the apartments appropriated to all the species of baths ; those where the wrestlers leave their clothes, when they rub their bodies with oil to render their limbs supple, and where they roll themselves in the sand in order to give their antagonists a hold.

' Wrestling, leaping, tennis, and all the exer- ci-cs of the Lyceum, were here repeated before Ui with greater varieties, and with more strength

and skill on the part of the performers. Among the different groups before us we distinguished men of the most perfect beauty, and worthy of serving as models for artists : some with vigorous and boldly-marked outlines, as Hercules is re- presented ; and others of a more slim and ele- gant shape, consistent with the description of Achilles.

PALAFOX (Juan de), a learned Spaniard, horn in Arragon, in 1600. He studied at Sala- manca; and was a member of council of the Indies ; bishop of Angelopolis, and of Osma, and judge of the Indies. He wrote on various subjects and died in 1659.

PALAJNIBAM, or Palembang, a river of Sumatra, rises near the west coast of the island, about a day's journey from Bencoolen, and empties itself by several branches into the strait of Banca ; the land near its mouth is low and swampy, the breadth up to the Dutch factory, a di.stauce of fourteen leagues, is nearly a mile, and it has depth for vessels of fourteen feet draft. The Dutch establishment in 1777 (and it does not appear to have been since increased) consisted of 115 Europeans, of whom about thirty were officers, civil and military. The Malay tuun of Palembang is the most consider- able of Sumatra; it is sixty miles up the river, along both banks of which it extends for eight miles, besides a number of floating habitations on the river. The houses, are like those of the Malays in general, of wood and bamboo raised on posts. The sultan's palace is a large lofty building, surrounded by a high wall, and near it is the grand mosque, which appears to have been built by a European, having pilasters and a cupola, and glazed windows. Two forts mounting heavy cannon protect the town. Be- sides Malays, a great many strangers are settled at Palembang, principally Chinese, Cochin-Chi- nese, and Siamese. See Sumatra.

In 1812 the kingdom of Palembang was con- quered by a handful of British troops under the orders of colonel Gillespie. Tlie sultan, who had made himself universally odious by his cruelties, and by his unprovoked massacre of the Europeans resident in his capital, was de- throned, and his brother raised to the throne. The expedition which achieved this conquest set sail from Batavia on the 20th of March. After they arrived in the river of Palembang, being retarded by various obstacles in their ascent to the capital, and learning that the sid- tan, on hearing of the approach of the British, had fled, and that his adherents were resolved on an indiscriminate massacre of all the wealthy Chinese and other merchants, which was to

take place that night, colonel Gillespie, with a small party of about seventeen British grenadiers, and a determined band of officers, hastened to the capital, and forced their way into the palace, which was partly in flames, and of which the floors and pavements were covered with the blood of the wretched victims who had been lately massacred. Here they fortified them- selves, and held possession of it until the re- maining troops arrived ; after which the sultan was formally dethroned.

PALAMEDEA, in ornithology, a genus

belonging to the order of gralla;. The character of this genus, according to Latham, is, the bill bends down at the point, with a horn, or with a tuft of feathers erect near the base of it ; tlie nostrils are oval ; the toes are divided almost to their origin, with a small membrane between the bottoms of each. There are two species : ??? 1. P. cornuta, the homed screamer. It is about the size of a turkey ; in length about three feet four inches. The bill is two inches and a quarter long, and black ; the upper mandible is a little gibbous at the base, the under shuts beneath it as in the gallinaceous tribe ; the nostrils are oval and pervious, and placed near the middle of the bill. From the crown of the head springs a slender horn of more than three inches in length and pointed at the end ; the irides are the color of gold ; the plumage on the head, neck, and upper part of the body, is black, mar- gined with gray on the first and downy ; some of the feathers round the neck are likewise edged with the same ; the under parts of the wings are pale rufous, appearing on the shoulders and edges of them when closed ; at the bend of the wing are two strong, sharp, homy, yellow spurs, one above another, the uppermost an inch and a half in length ; the belly, thighs, and vent, are white ; the tail is eight inches and a half long ; the legs are stout and dusky ; the fore claws are moder- ately bent ; the hind one is nearly straight, not unlike that of a lark, and is about an inch long. These birds are always met with in pairs. They frequent places near the water; make a large nest of mud, in the shape of an oven, upon the ground ; and lay two eggs, the size of those of a goose. Bajon says they make nests in thickets and among rushes. Fermun says they build in high trees. The young are brought up in the nest till able to shift for themselves. They have but one nest in the year, which is in January or February, except the first eggs are taken away, when they make a second in April or May. Tlie young birds are frequently eaten by the natives, though the color of the flesh is very dark ; that of the old ones is tough and ill- tasted. This species is said to feed on crabs and birds, as pigeons and poultr)', and even to attack sheep and goats ; but others say its prin- cipal food is reptiles. This species is rare. It is found in Cayenne, Guiana, Surinam, and other parts of America, chiefly in the marshes and wet savannahs, and for the most part near tlio sea. These seem to be the birds mentioned by UUoa, called by the inhabitants of Quito disper- tadores, or awakeners, from their giving notice

to others of the approach of danger ; as on hearing the least noise, or seeing any one, though at a great distance, they rise from the ground and make a loud chattering like a magpie, con- tinuing the noise, and hovering over the object which caused the alarm, whereby the rest of the birds, taking the hint, are able in time to escape the impending danger. This screaming noise, which some authors relate as being exceedingly loud and terrible, occasioned Pennant to give the genus the name annexed to it.

2. P. cristata, the crested screamer. This bird is about the size of a heron ; the bill is short, bent like that of a bird of prey, and of a yellow-

ish brown ; the irides are gold colored ; on the forehead, just above the bill, is a tuft of black feathers, variegated with ash-color; the head, neck, and body are gray, mixed with rufous and brown, most inclining to the last on tlie wings and tail : the wings are not furnished w ith spurs ; the legs pretty long, of a dull yellow ; claws brown ; the hind toe placed high up, so as not to touch the ground in walking. This species inhabits Brasil. Linne makes it to belong to the screamer genus, perhaps from its cry ; for it is said to be heard at a great distance, and is not unlike that of a hen turkey. None of our later writers seem to have seen it. It is said to feed on the same food as the heron tribe ; the flesh is good, and the bird by some kept tame.

PALAMEDES, a Greek chief, son of Nau- plius, king of EubcEa, by Clymene. He was sent by the Grecian princes who were going to the Trojan war to bring Ulysses to the camp, and prevailed ; but at the expense of the in- veterate hatred of the latter, who forged a let- ter, which appeared to prove Palamedes a traitor, and he was accordmgly stoned to death. Homer is silent about the fate of Palamedes ; and Pausanias mentions, that it had been re- ported by some that Ulysses and Diomedes had drowned him in the sea as he was fishing on the coast. Philostfatus adds, that Achilles and Ajax buried his body with great pomp on the sea-shore, and that they raised upon it a small chapel, where sacrifices were regularly offered by the inhabitants of Troas. Palamedes was a man of learning as well as a soldier; and according to some he completed the alphabet of Cadmus, by the addition of the four letters, 6, ?, ˆi (p, during the Trojan war. To him also is attributed the invention of dice and backgammon ; and it is said that he was the first who regularly ranged an army in a line of battle, and who placed sentinels round the camp, and excited their vigilance and attention by giving them a watchword. He is also famed for his skill in physic.

PALAMOW, a jungly and mountainous dis- trict of the province of Bahar, Bengal, situated between 23►► and 25►► of N. lat. On the north it is bounded by llhotas, on the south and west by different wild districts in the province of Gundwana ; and on the east by liamgur. This is one of the least cultivated and most thinly inhabited parts of the East India Com- pany's dominions ; but the soil in many parts is strongly impregnated with iron. The principal towns are Palamow and Jaynagur; there are no rivers of any considerable size.

PALANQUIN', n. s. Hindos. palkee. An eastern litter or covered carriage borne by slaves.

PALARIA, among the Romans, a kind of exercise performed at a stake by the soldiers. Tire stake being fixed in the ground, and six feet high above it, the young undisciplined soldiers advanced against it, armed with a hurdle and cudgel, instead of a sword and shield, and went through all the rules of attack and defence, as if actually engaged with an adversary. Sometimes they stood at a distance, "ˆnd attacked with mis- sne weapons; at the same time using all the

requisite motions for defending themselves, and warding off what might be thrown against them.

PAL' ATE, n. s. ˆ Lat. palatum. The seat Pal'atable, adj. >of the taste; the roof of Palat'ic. 3 the mouth : hence mental

taste or relish : palatable is pleasing to the taste; grateful, and, in familiar language, admissible . bearable ; palatic, an obsolete adjective, signify- ing belonging to the palate.

It may be the palate of the soul is indisposed by listlessness or sorrow. TaiiLor.

The men of nice paUUex could not lelisli Aristotle, as drest up by the schoolmen. Baker un Learning, Let their beds

Be made as soft as yours, and let their palates

Be seasoned with such viands. Shukspeare.

These ivory feet were carved into the shape of lions ; without these their greatest dainties could not relish to tlieir palates. Hakewill on Providence.

The three labials, P. B. M. are parallel to the three gingival T. d. n. and to the three palatick k. g. l.

Holder.

Light and colours come in only by the eyes ; all kind of sounds only by the ears ; the several tastes and smells by the nose and palate. Locker

There is notliing so difficult as the art of making advice agreeable. How many devices have been made use of to render this bitter potion palatable !

Addison. By nerves about our palate placed,

She likewise j udges of the taste :

Else, dismal thought ! our vi'arlike men

Might drink thick port for fine champagne.

Prior, The vulgar boil, the learned roast an egg ;

Hard task to hit the palate of such guests. Pope. They by the alluring odour drawn in haste,

Fly to the dulcet cates, and crowding sip

Their palatable bane. Philips.

The Palate, in anatomy, is the flesh that composes the roof, or the upper and inner part of the mouth. It has much the same structure with the gums ; but it has a great number of glands, discovered so early as the time of Fallo- pius ; these are principally situated in the hinder part near the uvula, where it is pendulous, in the manner of a curtain, which part is called velum, or claustrum palati. The glands situated parti- cularly in this part secrete a mucous fluid, serving to lubricate the mouth and throat, and to facilitate deglutition ; they have a great num- ber of apertures for the discharge of this humor into the mouth. The great uses of this mem- brane are to defend the bones of the palate, and to prevent, by its claustrum or velum, any thing attempted to be swallowed from getting up into the nostrils.

PALATI, a Latin historian of Venice, who flourished in the seventeenth century. His chief work is, Monarchia Occidentalis, sive Aquila Inter! ilia, et Aquila Saxonica.

PALAT'INATE, ;i..5. ˆ Lat. palatinatus.

Pal'atine, w. s. &arf/. i The seat of a count palatine, or chief officer in the court of a sove- reign prince : a palatine is one invested with regal rights and prerogatives ; and as an adjec- tive signifies possessing royal privileges.

Many of those lords, to whom our kings had granted those petty kingdoms, did exercise jura re- galia, insomuch as there were no less than eight counties palatine in Ireland at one time. Davies,

These absolute palatines, made barons and knights, and exercised high justice in all points within their territories. Id.

Palatinate, Lower, or the Palatinate

OF THE Rhine, is a fertile province of Germany, situated chiefly on the west side of the Rhine, having Mentz on the north, Alsace on the south, and Lorraine on the south-west. It extends from 49►► to 50►► of N. lat. Its surface contains about 1600 square miles. It yields coˆn, flax, tobacco, vines, and all the fruits of the latitude. The pasturage likewise is good. The inhabitants are partly Catholics, partly Lutherans and Cal- vinists. Population about 305,000. Authors are divided about the origin of the name Pala- tines or Psalzgraves, as the Germans call them ; but it seems most likely to be derived from the palatia, or palaces, which the old Prankish and German kings and Roman emperors were pos- sessed of in different parts of the country, and over which they appointed supreme stewards or judges, who were called Palatines or Psalzgraves. The countries where these Palatines kept their courts, were, from them, called Palatinates ; which name came at last to be appropriated, by way of eminence, to this country, as bemg the most considerable of them. In the thirteenth century the government of this country became vested in a branch of the ducal family of Bava- ria. "arious changes and interruptions in the succession ensued. In 1777, the branch of the family that governed Bavaria becoming extinct, tlie elector Palatinate succeeded to his states, removed to Munich, and governed them con- junctly with the Rhenish territory. This con- tinued till 1794, when the French overran all the Palatinate to the left of the Rhine, and retained it until 1814. In that and the following year the congress of Vienna transferred the northern part to Hesse-Darmstadt, and the southern part to Austria, who ceded it the fol- lowing year to Bavaria, as part of the indemni- ties for the Tyrol and Salzburg.

Jalatinate, Upper, the former name of. a German province, bordering on Bohemia, and now part of the circles of the Regen and the Upper Maine, in the kingdom of Bavaria. Its area is 2760 square miles ; population 290,000. ►►► It is hilly and in general barren, its wealth consisting

chiefly in its wood, pasturage, mines, and quarriqs. The produce of corn is insuffi- cient for the consumption. This country formed for several centuries a part of the domi- nions of tlie elector Palatine ; but in 1620 it was lost by the reigning elector, the son-in-law of James I. of England, and has ever since been in possession of Bavaria. Its sovereign was absolute until 1818, when the whole of the Ba- varian dominions were allowed to send members to a representative body.

Palatine, a townsnip of Montgomery county. New York, on the north side of the Mohawk. Population 3111. Fifty-one miles W. N. W. of Albany.

Palatine, or Count Palatine, was a title anciently given to all persons who had any oflice or employment in the prince's palace ; but afterwards conferred on those delegated by princes to hold courts of justice in the pro-

vinces ; and on such among the lords as held a court of justice in their own houses.

Palatine Counties in England. ??? Chester, Durham, and Lancaster, are called counties palatine. The two former are such by pre- scription, or immemorial custom ??? at least as old as the Norman conquest ; the latter wa.s created by king Edward III. in favor of Henry Plantagenet, first earl, and then duke of Lan- caster ; whose heiress being married to John of Gaunt, the king's son, the franchise was greatly enlarged and confirmed in parliament, to iionor John of Gaunt himself, whom, on the death of his father-in-law, the king had also created duke of Lancaster. Counties palatine are so called a palatio; because the owners thereof, the earl of Chester, the bishop of Durham, and the duke of Lancaster, had in those counties jura regalia, as fully as the king has in his palace ; regalem potestatem in omnibus, as Bracton expresses it. They might pardon treasons, murders, and fe- lonies ; they appointed all judges and justices of the peace ; all writs and indictments ran in their names, as in other counties in the king's ; and all offences were said to be done against their peace, and not, as in other places, contra pacem domini regis. And indeed, by the ancient law, in all peculiar jurisdictions, offences were said to be done against his peace in whose court they were tried ; in a court leet, contra pacem domini ; in the court of a corporation, contra pacem balivorum ; in the sheriff's court or tourn, contra pacem vice comitis. These palatine privileges (so similar to the regal independent jurisdictions usurped by the great barons on the continent, during the weak and infant state of the first feudal kingdoms in Europe) were in all proba- bility originally granted to the counties of Ches- ter and Durham, because they bordered upon enemies' countries, Wales and Scotland ; in order that the owners, being encouraged by so large an authority, might be the more watchful in its defence ; and that the inhabitants, having justice administered at home,

might not be obliged to go out of the county, and leave it open to the enemy's incursions. And upon this account also, there were formerly two other counties palatine, Pembrokeshire and Hexamshire, the latter now united with Northumberland : but these were abolished by parliament, the former in 27 Hen. VIU. the latter in 14 Eliz. And in 27 Hen. VHI. likewise, the powers before men- tioned of owners of counties palatine were abridged ; the reason for their continuance in a manner ceasing; though still all writs are wit- nessed in their names, and all forfeitures for treason by the common law accrue to them. Of these three, the county of Durham is now the only one remaining in the hands of a subject. For the earldom of Chester, as Camden testifies, was united to the crown by Henry III. and the title has ever since been given to the king's eldest son. And the county palatine or duchy of Lancaster was the property of Henry of Bolingbroke, the son of Jolni of Gaunt, at the time when he wrested the crown from king Richard II. and assumed the title of Henry IV. But he was too prudent to suffer this to be united to the crown ; lest, if he lost one, he

should lose the other al?o. For, as riowden tt.ˆd Sir Edward Cooke observe, ' he knew he had the duchy of Lancaster by sure and inde- feasible title, but that his title to the crown wai not so assured : for that, after the decease of Richard II., the right of the crown was in the heir of Lionel, duke of Clarence, second son of Edward III.; John of Gaunt, father to this Henry IV., being but the fourth son.' And therefore he procured an act of parliament, in the first year of his reign, ordaining that the duchy of Lancaster, and all other hereditary estates, with all their royalties and franchise?, should remain to him and his heirs for ever; and should remain, descend, be administered, and governed, in like manner as if he never had attained the regal dignity; and thus they de- scended to his son and grandson, Henry Y. and Henry 'I.; many new territories and privileges being annexed to the duchy by the former. Henry 'I. being attainted in 1 Edward I". this duchy was declared in parliament to have be- come forfeited to the crown, and at the same time an act was made to incorporate the duchy of Lancaster, to continue the county palatine (which might otherwise have determined by the attainder), and to make the same parcel of the duchy ; and, farther, to vest the whole in king Edward I'. and his heirs, kings of England for ever ; but under a separate guiding and govern- ance from the other inheritances of the crown. And in 1 Hen. \ II. another act was made, to resume such part of the duchy lands as had been dismembered from it in the reign of Edward IV'., and to vest the

inheritance of the whole in the king and his heirs for ever, as amply and largely, and in like manner, form and condition, separate from the crown of England and pos- session of the same, as the three Henrys and Edward IV., or any of them, had and held the same. The Isle of Ely is not a county palatine, though sometimes erroneously called so, but only a royal franchise.

Palatike Games, in Roman antiquities, games instituted in honor of Augustus, by his widow Livia, after he had been enrolled among the gods. They were celebrated in the palace, whence the name, and were confirmed by the succeeding emperors. Some authors say that these games were instituted in honor of Julius Casar, and others again confound them with the Ludi Augustales ; but neither of these opinions ††eems to be well supported.

Palatine Mount. See Palatinus.

P.VLATINUS, a surname of Apollo, from his being worshipped on Mount Palatine.

Palatixvs Mons, or Palatium, the first mountain of Rome, occupied by Romulus, and where he fixed his residence and kept his court, as did Tullus Hostilius, Augustus, and all the succeeding emperors. The reason of the name is variously assigned; some say it is derived from the goddess Pales, or from the Palatini, who originally inhabited the place, or from balare, or palare, the bleatings of sheep, which were frequent there ; or from the word palantes, wandering, because Evander, when he came to settle in Italy, gathered all the inhabitants, and made them all one society. On the east it has

IMount Ccelius ; on the so'Jth the Aventine; on the west the Capitoline ; and on the north the Forum. Augustus built a temple to Apollo on this mount, adorned with porticoes and a library, valuable for the various collections of Greek and Latin]MSS. which it contained.

PAL.VTIUM, in ancient geography, a town of Italy, in the territory of Reate. Dionysius Ilali- carnasseus reckons it one of the first towns of the Aborigines ; and from it Varro accounts for the name of the ISIons Palalinus, viz. that a colony from Palatium settled there.

Palatium Diocletian I, the villa of Diocle- tian, a town of Italy, near Salonae, where he died (Eusebius) ; afterwards called Spalatum, which rose to a considerable city from the ruins of Salonae, situated in Dalmatia on the Adriatic; now called Spalatto, or Spalatro.

PALAWAN, a large island of the Eastern Seas, between the norlliern

extremity of Borneo and the I'hilippines. Its extreme length is 275 miles, and the average breadth about thirty-two miles. The country is fiat to the bottom of the hills, and the productions are cowries, wax, tor- toise-shell, and sea slug. There is much ebony and laka wood ; and it is said there are hot springs and mines of gold here. The west side is inhabited by a savage people, who seldom frequent the coast ; but the greater part of this island was formerly under the dominion of the Sooloos.

Fr. pale ; Lat. palli- dus. ^^ an ; faded ; light,. I or white of color ; dim ;) not bri-^ht or shining : to make pale : the deriva- I tives seem obvious in J their meaning : paly 'is used poetically for pale.

Look I so ; > a/p, lord Dorset, as the rest ? ••• Ay, my good Lord ; and no man in the presence. But his red color hath forsook his cheeks,

Shaki'peare. The glow-v.orm shews the matin to be near, And 'gins to p

The night, methinks, is but the day-light sick.

It looks a little paler. Id.

\ hy have they ds led to march

So many miles upon her peaceful bosom,

Frighting her palefaced villages with war? Id.

'J'he paleness of this flower

Eewvayed the faintness of my master's heart.

Id. Fain would I go to chafe his paly lips With twenty thousand kisses. /./.

Her blood durst not yet come to her face, to take away the name o(paleness from her most pure white- ness. Sidney.

No nightly trance, or breathed spell, Inspires the pale-eyed priest from the prophetic cell.

Mdton. To teach it good and ill, disgrace or fame, Pale it with rage, or redden it with shame.

Prior. A dim gleam the poly lanthorn shows O'er the mid pavement. Gay.

The blood the virgin's cheek forsook, A livid paleness spreads o'er all her look. Pope. Shrines, where their vigils ydle-eued virgins keep. And oitving saints, whose statues learn to weep.

In

PALE, adj. & V. a.'^ Pale-eyed, udj Pale-faced, Palely, adv Paleness, n. s. Palish, adj. Paly.

PALERMO.

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When the urine turns pale, the patient is in dan- -er. Arbuthnot.

Spirit of nitre makes with copper a palish blue ; spirit of urine a deep blue. Id. on Air,

With broken lyre and cheek serenely pale So sad AlcEeus wanders down the vale ; Tho' fair they rose and might have bloomed at last. His hopes have perished by the northern blast.

Byron. And unobserved but by the traveller's eye, Proud, vaulted domes in fretted fragments lie, And the fallen column on the dusty ground, Pale ivy throws its sluggish arms around. Cunning. Pale, n.s. & i;.a. 3 Lat. palus, a stake or Pa'lixg, n. s. 5 vine-prop. A narrow rail used for enclosures ; an enclosure ; hence a district or territory : to enclose with pales or otherwise : paling is used for a collection or series of pales.

A ceremony, which was then judged very conve- vient for the whole church even by the whole, those few excepted, which brake out of the common pale.

Hooker. There is no part but the bare English pale, in which the Irish have not the gre:.test footing.

Spenser. Will you pale your head in Henry's glory. And rob his temples of the diadem, Now in his life] Shakspeare. Henry IV.

The English beech Pales in the Hood with men, with wives and boys.

Shakspeare. Get up o' the rail ; I'll peck you o'er the pales else.

Id. The lords justices put arms into the hands of divers noblemen of that religion within the pale.

Clarendon. Let my due feet never fail To walk the studious cloister's pale, And love the high embowed roof. Milton.

Having been born within the pale of the church, and so brought up in the Christian religion, by which we have been partakers of those precious ad-

vantages of the word and sacraments. Duty cf Man. As their example still prevails. She tempts the stream, or leaps the pales. Prior. The diameter of the hill of twenty foot, may be paled in with twenty deals of a foot broad. Id.

He hath proposed a standing revelation, so well confirmed by miracles, that it should be needless to recur to them for the conviction of any man born within the pale of Christianity. Atterbury.

Confine the thoughts to exercise the breath ; And keep them in the pale of words till death.

Dunciad. Woe to the gardener's pale ! the farmer's hedge. Plash 'd neatly, and secured with driven stakes Deep in the loamy bank. Ccrujier.

The best inclosure for a park is a brick or stone wall ; but, as the expence of this is very great, it may be done by paling ; the pales must, in this case, be of sound heart of oak. Dr. A. Rees.

Palk, in heraldry, one of the ten honorable ordinaries, so called because it is like the palisadoes used about fortifications, and stands per- pendicularly upright in an es- cutcheon, dividing it length- ways from the top to the bottom, as in the annexed figure. It should occupy a third part of the shield. See Heraldry.

PALEARIUS (Aonius), a man of great pro-

bity, and one of the best writers of the sixteenth century. lie was professor of polite literature at Sienna, and afterwards settled at Lucca. Finally, he removed to Milan, where he was seized, car- ried to Rome, and burnt in 1566, for having written in favor of the Lutherans, and against the inquisition. He wrote several pieces in verse and prose, of which a poem on the Immortality of the Soul is most esteemed.

PAL'ENDAR, n. s. Lat. palus, a trunk or stump of a tree. A kind of coasting vessel. Obsolete.

Soiyman sent over light-horsemen in grexx paien- dars, which running all along the sea coast, carried the people and the cattle. Knolless History.

PA'LEOUS, adj. Lat. palea. Husky ; chaffy.

This attraction we tried in straws and paleous bodies. ••• Bruune.

PALERMO, a beautiful city of Sicily, the capital of that island, stands on the north coast, and possesses a fine harbour. This city is of great antiquity

; but by whom it was founded is uncertain ; nor have we any authentic accounts of its inhabitants till it became a colony of the PhcEnicians ; after which it passed into the hands of the various nations that became masters of this island. Its former name was Panormus.

Properly speakiag, here are two harbours, situated in the gulf between Mount Pelegrino and Cape Safiarano. In the one, which is very large, and in which there is a mole 1300 paces in length, ships lie at anchor ; in the other their cargoes are laden and unladen. Both the harbours open to the west. There is also a su- perb quay which extends a mile from west to east in a rectilinear direction, and is called La Marina. The bay of Palermo forms a large amphitheatre, with the city in the centre ; it is surrounded for some miles by a most delightful country, enclosed by romantic rocks and moun- tains. The town was formerly surrounded by a strong wall ; but the fortifications are now entirely neglected except towards the sea. The quay is the principal public walk. Palermo is environed with avenues of trees, and has four principal entrances, facing the four cardinal points which are at the extremities of the two spacious streets which cross each other. It is filled with public monuments, churches, monasteries, palaces, fountains, statues, and columns.

Seen from tlie Monte Pelegrino, to the north, the city presents a most enchanting prospect: the bay forms a graceful sweep along the shore; the domes, turrets, and spires, rise conspicuous above the other buildings; the surrounding plain is studded with convents, villas, and cot- tages, romantically interspersed among its luxu- riant foliage ; while in the distance to the east and south rises a majestic amphitheatre of mountain scenery. The houses have in general something striking in their architecture ; and the fountains, statues, and busts, in front of them, seem appropriate decorations of a capital : but a more close inspection lessens our admiration, the architecture being too uniform and frequently heavy.

The principal streets are the Cassaro and the Strada Nuova: both about a mile in length, and well paved, with broad foot-paths. Their point

of intersection forms an open space, called, from its shape, the Ultangolo. Each of the eight sides is formed by a beautiful building, three stories high, composed of the Doric, Ionic, and Corinthian orders ; and each has in its front an elegant fountain. From this spot is enjoyed a beautiful perspective view of tlie best part of the town, terminated by four gates. Of the other streets few are deserving attention. In several parts of the town they are

almost covered with booths, or rather workshops and tables, where tradesmen of all descriptions carry on their vvork as in Naples in the open air. The ground floor of the palaces, as they are termed, of the nobility, is frequently occupied by shops. In almost every house in the town there is a common stair- case ; and each stage of apartments forms the separate residence of a family. Balconies with iron railings also abound here. In winter the streets are wretchedly lighted by a few solitary lamps, scattered over different parts of the town. The Marina is a raised platform or terrace, extending above a mile along the bay, and eighty paces in breadth. At the eastern extremity is a public garden, called the Flora, laid out in walks, interspersed with statues, fountains, and summer houses; and here people of all ranks are ad- mitted. Adjoining is the botanical garden, the entrance of which is through an imitation of an ancient temple. The garden contains a collection of valuable plants. The royal palace is situated at the top of the Via Cassaro, and commands a beautiful view of the town. The adjoining gardens are delightful. Its exterior wants sy mmetry,but its apartments are spacious and finely ornamented. The square in front contains a statue of Philip IV. of Sicily. Many of the mansions of the no- bility have marble columns, either in front or in the large court which they generally enclose ; but the effect of these is frequently destroyed by the meanness of the buildings adjoining. There are in this city three theatres ; but in none is there any display of architectural or scenic taste. On the other hand, in the magnificence of its churches, Palermo is second only to Rome, and there are above forty monasteries, and fifty con- vents. The cathedral called the Madre Chiesa, and situated in the Via Cassaro, was erected in the twelfth century, and is a mixture of Grecian and Gothic styles of architecture. A considerable part of it has been lately restored in a more mo- dern style. Its interior is supported by granite pillars. The church of St. Giuseppe is also profusely ornamented, and contains some fine columns of gray Sicilian marble, nearly sixty feet high. Of the other churches, the appear- ance is generally fine, but devoid of taste. Most of the convents have elegant chapels attached to them, and good collections of paintings. The great hospital of Palermo stands near the royal palace ; that of St. Bartholomew close to the Marina. The poor-house, or Albergo de Poveri, is also an extensive edifice ; and there are seve- ral pawnbanks (Monti di Pieta) for the poor. Flere are also three public libraries, but the books are chiefly old and theological. The university, an extensive pile of building, has an observatory, and several cabinets of medals and curiosities : the number of pupils is not above a few hun-

dreds. There is, besides, a separate institufion for boys of rank, and the charity school of St. Roch for orphans. The females are for the most part educated in the convents.

The trade here is not extensive, the exports of Palermo being confined to a

few articles in silk and satin, with some manufactures for the supply of Malta ; the wine, oil, and other surplus pro- duce of the surrounding country, fish, particularly tunnies. The importations are more various, comprising almost every article, either of luxury or convenience. In the middle of the eleventh century silk manufactures were first estab- lished by government. They are still kept up, and the silk thread obtained from the fish called the Pinna Marina, and manufactured here, is of exquisite fineness.

The population amounts, according to the most accurate estimate, to about 130,000. It has been sometimes erroneously taken much higher. Po- verty seems the common lot of the frequenters of its crowded streets ; and there exists a serious obstacle to the improvement of their circum- stances, in the number of persons dignified widi titles, without the means of supporting their rank. Beggars of the most wretched appear- ance swarm every where, but in reality are not so miserable as they look, regular distributions of food being made at the difi'erent charitable and monastic institutions. The temperature in winter seldom falls below 50►► of Fahrenheit : in summer it keeps for some months between 80►► and 90►►. In that season the inhabitants gene- rally shut up their houses and shops a little before noon, and keep them shut for three or four hours. The Sirocco is at this season very oppressive, but not of frequent occurrence. Palermo is supplied with water, conveyed in pipes to the tops of the highest houses.

It is an opinion entertained by some of our countrymen who have been in Sicily, says a friend, that the people of Palermo and of the western shores of the Val di Mazzara, are not in general so attached to the English as in the other parts of the island : we know not the origin of this opinion. 'As to Palermo, perhaps it may have arisen from the dislike which the court and Neapolitans profess for the English. But we have never observed the least partiality enter- tained by the people for the French in any one cor- ner of the whole island, and we have made the entire circuit of it, and crossed the interior in two different lines. We witnessed a fray at Pa- lermo, the description of which may give our readers some idea of the materials from which we have deduced our opinions ; it occurred in the summer of 1810. Several Neapolitan dra- goons insisted on taking some cheese from a shop at a price considerably below that at which it was retailed ; ►►► an altercation ensued, which be- came ratlier violent, and one of the dragoons drew his sabre, and striking at the shopkeeper (a practice these fellows have) wounded him slight- ly. The latter instantly called to his men and to his neighbours,. with the masonic epithet 'pic- ciotti ;' ' let us, my lads,' exclaimed he, 'serve these Neapolitans as they suspect we intend to do, and as they know they merit; let us do away with them.' In a very few seconds seven

or eicfht of the dragoons Treasured their length on the ground; tlie rest escaped; and, a great concourse of people i eing assembled by this time, the wounded shopkeeper began to harangue them ; he was joined by the greater part of the mob in venting every imprecation against the Neapolitani ††† calling them Jacobini. Several time; was it exclaimed, 'had it not been for the English long since you would have betrayed us to the French, who are now at this very moment solely kept out of the island by the English, without the least exertion on your part.' They called the soldiers cowards, and spoke of them with the greatest contempt ††† saying they were only capable of practising extortion upon quiet shopkeepers. Such was the language of a mob which might have proceeded to greater lengths, had not the captain of the city, prince Carini, a nobleman at that time rather a favorite of the people, come up, and by his exertions and per- suasions dispersed the crowd and restored tran- quillity. As the weapons these picciotti made use of were rather Herculean, being sticks of the ash tree from which they make the manna in Sicily, three or four of the dragoons died, and the rest were much injured.'

Palermo, soon after the beginning of the first Punic war, passed into the hands of the Romans, who conferred on it various privileges. In a subsequent age the Saracens made it the capital of their Sicilian territories; and since their time, with the exception of very short intervals, it has been considered the capital of the island. But it has hardly any remains of antiquity, owing, in some measure, to the depth of soil and frequency of inundations here. It was the residence of the court of Naples from 1806 to 1815: at present it is the seat of a viceroy and of the chief boards of the island administration. It is like- wise the see of an archbishop, who has the title of primate of Sicily. This city has suffered greatly by earthquakes, particularly in 1693; and it was greatly damaged by a fire in 1730, when a magazine of powder was blown up, containing 400 tons. It is 130 miles west of Messina, and 200 south by west of Naples. Long, of the ob- servatory 1 3†† 20′ 0″ ††., lat. 38†† 6′ 44″ N.

PALES, in Pagan worship, the goddess of the shepherds ; to whom they offered milk and honey, in order that she might deliver them and their flocks from wild beasts and infectious dis- eases. This goddess is represented as an old woman. She was worshipped with great solem- nity at Rome ; and her festivals, called palilia, were celebrated on the 21st of April, the day that Romulus began to lay the foundation of the city of Rome. The ceremony consisted in burning heaps of straw, and in leaping over them. No sacrifices were offered, but purifi- cations were made with

the smoke of horses' blood, and with the ashes of a calf that had been taken from the belly of its mother, after she had been sacrificed, and with the ashes of beans. The purification of the flocks was also made with the smoke of sulphur, of the olive, the pine, the laurel, and the rosemary. Offerings of mild cheese, boiled wine, and cakes of millet, were afterwards made to the goddess. Some call this Testivai parilia, from pariendo, bringing forth,

because the sacrifices were offered to the divi. nity for the fecundity of the flocks.

PALESTINE, a country highly celebrated in antiquity, now a part of Asiatic Turkey, is bounded by Mount Libanus, which divides it from Syria, on the north ; by Mount Hermon, which separates it from Arabia Deserta, on the east ; by the mountains of Seir and the deserts of Arabia Petra:;a on the south ; and by the Me- diterranean Sea on the west.

This once fertile and happy spot was first called the land of Canaan, or Chanaan, from Noah's grandson. In Scripture, however, it is frequently distinguished by other names; such as the Land of Promise, the Land of God, the Land of Israel, &c. It received the name of Palestine from the Palestines or Philistines, who possessed a great part of it ; and it had the name of Juda;a, or Judcea Palestina, from Judah, the most considerable of the twelve sons of Jacolo, or rather from the tribe, his descendants. Christian writers have denominated it the Holy Land ; partly on account of the many singular blessings it received from the Divine Providence, and partly on account of its metropolis being made the centre of God's worship and his peculiar ha- bitation ; but much more for its being the place of our Saviour's birth, the scene of his preaching and manifold miracles ; and especially the place in which he accomplished the great work of our redemption. As to the name of Judtea, it did not begin to receive that till after the return of the Jews from the Babylonish captivity, though it had been styled long before the kingdom of Judah, in opposition to that of Israel, which re- volted from it under Jeroboam, in the reign of Rehoboam. By profane authors it was called by many different names ; such as Syria, Pales- tina Syria, Ccelosyria, Iduma, Idumaa, and Phog- nicia or Phcenice ; many of them given in contempt of the Jewish nation, whom they look- ed upon as unworthy of any other name than what distinguished the most obscure parts of the neighbouring provinces. That part of the coun- try which was properly called the Land of Promise was enclosed on the west by the Mediterranean ; east by the lake Asphaltites, the Jordan, the sea of Tiberias or Galilee, and the Samachonite lake ; north by the mountains of Libanus, or rather Antilibanus, or the province of Phoenicia ; and on the south by that of Edom or Idumasa, from which it was parted by another ridge of high mountains. The boundaries of the other part, which belonged

to the two tribes and a half beyond the Jordan, are not so easily de- fined, nor those of the conquests made by the more prosperous kings of the Jews. All that can be said with any probability is, that the river Arnon was the first northern boundary on that side.

Judea in its largest sense was divided into ma- ritime and inland, as well as into mountainous and champaign ; and again subdivided into Judea on this side, and Judea beyond Jordan. But the most considerable division is that which was made among the twelve tribes, by lot, under the Divine superintendance. Of these, two and a half were seated beyond Jordan, and the rest on this side. The next remarkable division was made by king Solomon, who divided his kiog-

*dom into twelve provinces or districts, each un- der a peculiar officer ; every one of whom was to supply the king with provisions for his house- hold in his turn ; that is, each for one month in the year. But the most fatal division of all was, that which obtained under his imprudent son Rehoboam ; when ten of the twelve tribes re- volted, under the conduct of Jeroboam, who be- came head of a new monarchy, styled the kingdom of Israel in opposition to that of Judah, the title which distinguished the maimed king- dom of Rehoboam from that time downwards. Under the second temple the distinction lasted a considerable time, and the same hostilities con- tinued between these two kingdoms; that of Israel taking the name of Samaria from its capi- tal. The inhabitants were a mixture of the old Israelites, and of new colonies sent thither by the kings of Assyria after their conquest of it, till they were subdued by the Maccabees, and their metropolis destroyed. Under the Romans it began to be divided into tetrarchies and lopar- chies : the larger were those of Judea, Samaria, and Galilee, Upper and Lower; the lesser, those of Geraritica, Sarona, and others of less note ; all
وwhich lay on this side of the Jordan. The rest, on the other side, were those of Gilead, Pera?a, Gaulonitis, Auranitis, Batanea, and Decapolis. Josephus mentions another division made in Gabinius's time into five districts, or, as he styles them, (TvviSpia or councils, agreeable to the Ro- man manner : these were Jerusalem, Jericho, and Sephoris on this side Jordan ; and Gadaris and Amathus on the other. In the reigns of the Ciiris- tian emperors, it was divided afresh into Pales- tina Prima, Secunda, and Tertia, or Salutaris ; which last included the greater part, if not the whole country.*

The extent of this country is variously stated by modern geographers ; some giving it no more than 170 or 180 miles from north to south, and 140 in

breadth where broadest, though not much abo'ce half the breadth where narrowest. But, from the latest and most accurate maps, it ap- pears to be nearly 200 miles in length, about eighty in breadth about the middle, and about ten or fifteen, more or less, where it widens or shrinks.

As to its present administration it is included partly in the pachalic of Acre, and partly in that of Damascus. The former comprehends all the sea coast, while the latter extends over the inte- rior ; and they are separated by a line drawn from north to south, through the whole length of Palestine. The former pachalic long groaned under the fierce and gloomy tyranny of Dsjezzar, a chief whose energy of character was solely di- rected to military achievements, and whose avarice sought to gratify itself by rapine and extortion, without ever viewing his interest as connected with the permanent prosperity of the districts which he governed. Travellers have drawn the most gloomy picture of the state to which this territory was reduced during the latter years of his administration. Towns that had once been flourishing were reduced to a few cottages ; and plains which might have borne the most luxuri- ant crops were abandoned as pasture to the wandering Arabs. On entering the territory of

the pacna of Damascus, the happiest change presented itself. The virtue, or at least the en- lightened avarice, of this chief, induced him to employ with diligence every means of protecting property, and encouraging industry ; so that the whole country subject to him was cultivated like a garden. Unluckily the pacha was not suffici- ently liberal in imparting a share to his masters at Constantinople ; and, having thus incurred their displeasure, he was driven from his post, which is now occupied by another, who is pacha at once of Damascus, Acre, and Aleppo. Tins new chief, however, though bred under the ferocious Dsjezzar, is represented by Burckhardt in a favor- able light.

Palestine is distinguished by a great variety of surface. Some modern writers have represent- ed it as barren; but this can apply only to some of the mountainous districts around, and east of Jerusalem. According to the best in- formed travellers, the greater part displays a luxuriant fertility, and corresponds to the an- cient descriptions of the promised land.

Judea proper, the ancient kingdom of Judah, comprises the territory extending from the Lake Asphaltites to the sea, and is composed of a range of limestone hills, rising as it were by stages from the level of the Mediterranean. The plain extending along the coast, though neglect- ed, appears to be excessively rich. Sandys, pass- ing from Gaza to Jaffa, describes the caravan as almost buried under pastures ' unmowed and uneaten.' As the track ascends, it becomes rug- ged and rocky, so that from Jaffa to Jerusalem the road is very steep and difficult. The sides o⬜⬜ the

mountains, however, are here suitable for the vine, the olive, and the sycamore, and are crowned with natural groves of oak and cypress; while the earth is covered with aromatic plants. Here are interposed valleys, particularly that of Jeremiah and the Terebenthine vale, covered with plentiful crops of tobacco, wheat, barley, and millet. Delicious wine is also produced. The mountains themselves are tenanted by the wildest Arabs, who find lurking places in the numerous caves. On reaching the summit of these ranges, the traveller discovers the country round Jerusalem, which certainly wears a dry, rugged, and stony aspect. Under a protecting government, even these tracks, however, might be, as formerly, highly productive. Traces may be found of walls by which the earth was formerly supported, of cisterns where the rain water was collected, and of canals by which it was distributed. Wild bees still lodge, in the hollow of the rocks, honey, which is seen flowing from them. Dr. Clarke, indeed, in travelling towards Jerusalem from the north, saw the limestone rocks and stony valleys often covered with plan- tations of figs, vines, and olives. The hills, throughout their whole height, were overspread with gardens, in the highest state of cultivation. Even the sides of the most barren mountains had been rendered fertile, by being divided into ter- races, upon which soil had been accumulated with great labor. Proceeding eastward to the Dead Sea, the scene is decidedly barren ; and gloomy and naked rocks, sand, and ashes, be- come the only objects. Dr. Seetzen discovered.

near its southern extremity, a mountain of sal- gem, tlie continual dissolution of which soems to produce the saltness of this lake. The bitumen so copiously produced is found on its shores, and floating on its surface. Seetzen contradicts the report of no bird being able to fly over its waters, and of there being a peculiar unhealthi- ness in the air around this sea.

The ancient Samaria is now chiefly comprised in the district ofNapolose; and Napolose, the ancient Sichem, is the capital. This district, though mountainous, is well cultivated, and car- ries on a considerable trade in corn, silk, and olives. The most prominent feature here is Mount Carmel, extending along the Gulf of Acre. During the middle ages this mountain was al- most entirely filled with grottoes cut in the rock, the abode of thousands of monks, who took the name of Carmelites. Pococke saw one of these monasteries, in which two or three monks still resided, and a grand excavated saloon forty feet long, twenty wide, and fifteen high, the scene of their general conferences.

North of Samaria, and communicating with Judea by the Jordan, is

Galilee, distinguished by its natural beauty and fertility. The plain of Esdraelon, two days' journey in length, and twenty miles in breadth, is described by Dr. Clarke as one vast meadow, covered with the richest pasture. He considers this as the finest part of all Palestine, though when he passed across it was entirely neglected. Above it rises Mount Tabor, in a conical form, with a plane at the top, commanding a most delightful prospect. The lake of Tiberias, or Gennesareth, is surround- ed by lofty and picturesque hills, the sides of which were once covered with towns, now al- most deserted.

The Jordan, one of the most important natural features of Palestine, with the lake of Tiberias through which it jiasses, and that of Asphaltites which it forms by its discharge, divides it com- pletely into two portions. The region beyond this river, though less noticed in history, include many tracks once fertile and flourishing, which had escaped the notice of modern geography, til! they were recently explored by Seetzen and Burckhardt. Here are the Hauran and Dschau- lan, consisting of a vast plain, not watered by any great river ; yet the inhabitants contrive, by collecting the torrents and rain water into ponds, to obtain a sufiicient supply for the purposes of agriculture. The rocks are entirely composed of basalt ; and the villages, being built on their sides of this material, present a gloomy ap- pearance. The district of El Botthin, the ancient Batantea, is distinguished by thousands of ca- verns into which the rocks have been hollowed out. There are still a number of large caves, which receive whole families, with their cattle. Here, and in the Roman district of Decapolis, are found remains of splendid cities. Those of Dscherrash, the ancient Gerasa, are compared by Seetzen to Balbec and Palmyra. They include several palaces, two superb amphitheatres, and three temples ; 200 Corinthian pillars of white marble, still supporting their entablatures, and a Tuuch greater number overthrown. The ruins of Ammon, the ancient Philadelpliia, one of the Vol. XVI.

principal cities of Decapolis, are also splendil. To the south, upon the eastern shore of the Dead Sea, is found the district of Karak, bleak, bar- ren, and mountainous; the ruins of Rabbath Moab, the ancient capital, attest its former im- portance.

The Turks occupy all the civil and military posts; while the inhabitants of the eastern em- pire, under the name of Greeks, form a very numerous part of the population. The country districts, however, are filled to a great extent with nomadic Arabs. The dress of this people is very simple ; it consists of a blue shirt, de- scending below the knees, the legs and feet being exposed, or covered with the ancient cothurnus or buskin. A cloak of very coarse and heavy camels' hair cloth, decorated with black and white stripes adorns the back : this is of one square piece, with holes for the arms ; and

a seam down the back. Upon their heads they wear a turban, or dirty rag, like a coarse hand- kerchief, bound across the temples, one corner of which generally hangs down; and this, by way of distinction, is generally fringed with strings in knots. The Arab women are not much concealed from view. Their bodies are covered with a long blue shift, but their breasts are exposed ; and extend to an extraordinary length. Upori their heads they wear a hood, and a hand- kerchief bound over it across the temples. Just above the right nostril they place a small button, studded with pearl, a piece of glass, or any other glittering substance. Their faces, hands, and arms, are tattooed, and covered with scars; their eyelashes and eyes being painted, or rather dir- tied, with some dingy black or blue powder; their lips are dyed of a deep and dusky blue ; their teeth jet black ; theirnails and fingers bright red ; their ears are loaded with ponderous rings. Their usual weapons consist of a lance, a po- niard, an iron mace, a battle axe, and sometimes a matchlock gun, and the moveables of a whole family seldom exceed a camel's load. They re- side always in tents made of goats' hair on the open plain, or on the mountains ; men, women, children, and cattle, all lodging together. In their disposition, though grave and sedate, they are said to be amiable, and most hospitable.

After the conversion of the Roman empire to Christianity, Judea became an object of religious veneration,and the empress Helena repaired hither in pilgrimage, and built various splendid tem- ples. A crowd of pilgrims resorted thither sub- sequently from every part of the world : the most numerous arriving from the west, over which the church of Rome had fully established its domi- nation. In the commencement, however, of the sixth century, an entire change took place. Ju- dea was among the countries first exposed to the invasion of the fanatical followers of Maho- met, and soon fell under their sway. The ca- liphs were at first induced to encourage pilgrim- age, from the gain which it afforded. But, when the Turks poured in from the north, they no longer observed the same courtesy. They profaned the holy places, and, the intelligence of their outrages being conveyed to Europe, roused the religious spirit of the age into those expedi- tions called the Crusades. All Europe seemed

to pour itself upon Asia : the Saracen armies were routed, Jerusalem taken by storm, and its garrison put to the sword. A Latin kingdom of Jerusalem was now erected here under Godfrey of Bouillon, which endured for above eighty years, the Holy Land streaming continually with Christian and

Saracen blood ! The Mahometan states, wliose resources wer" all at hand, gradu- ally, however, regained the ascendancy. In 1187 Judea was conquered by Saladin, on the decline of whose kingdom it passed through vari- ous hands, till in 1517 it was swallowed up in the Turkish empire. In modern times it was drawn into notice by Buonaparte's invasion of Syria, and his siege of its port of Acre ; see Acre : and we apprehend the reader will gladly receive in this place the contribution of two or three of the most celebrated modern travellers to the further illustration of its present state.

We begin with M. Chateaubriand. This au- thor is well known in the annals of modern French literature, and long had the merit of standing, amidst the moral desolation of his country, the faithful advocate of religious feelings and principles, to the extent of the light which he had received. His popular works, Les Mar- tyrs and Le Genie du Christianisme, entitle him to praise ; and, to enrich his mind with images appropriate to his romance on the Martyrs of Christianity, M. de Chateaubriand undertook his eastern journey. His description of Jerusa- lem and its environs will be satisfactory to those who wish to acquire general notions of its pre- sent state, without entering into deep researches and correct investigations. But here, as well as every where else, an allowance must be made for the prejudices of the author as a Romanist. He of course attaches an importance to certain ob- jects which appear indifFerent enough to a general reader. This, however, and the historical parts of his work, appear to us to be the best. As the ship, laden with Latin pilgrims for Jerusalem, approached the shore of Palestine near Jaffa du- ring the night, M. de Chateaubriand observes : ••• ' Je n'ai guere vu de scenes plus agreables et plus pittoresques. Le vent etoit frais, la mer belle, la nuit sereine. La lune avoit I'air de se balancer entre les mats et les cordages du vais- seau ; tantot elle paroissoit hors des voiles, et tout le navire etoit eclaire ; tantot elle se cachoit bous les voiles, et les groupes des pclerins ren- troient dans I'ombre. Qui n'auroit beni la reli- gion, en songeant que ces deux cents hommes, ii heureux dans ce moment, etoient pourtant des esclaves, courbes sous un joug odieux? lis al- ioient au tombeau de Jesus Christ oublier la gloire passee de leur patrie et se consoler de leurs maux presens. Et que de douleurs secretes ne dcposeroient-ils pas bientot a la creche du Sauveur ! Chaque flot qui poussoit le vaisseau vers le saint rivage, emportoit une de nos peines.' T. 2, p. 95.

The ship discharged its cargo at the port of Jaffa, and the affecting account of the Christian charity and hospitality of certain Italian monks ^^t that place afforded a singular contrast to other scenes which are reoordeJ in historv to h?-^" passed on the same soil.

But we hasten to the neighbourhooa ot Jeru-

salem. The church built over our Lord's nati- vity at Betlilehem must of

course be an interest- ing object of contemplation to every Christian, It is a subterranean place of worship, lighted by thirty-two lamps, presented by different Christiaa princes ; and being fitted up with much splendor and preserved with great care, affords a striking contrast to the miserable Arab ruins, and half naked savages which strike the eye on emerging from the sacred place. The circumstance of the place of our Saviour's nativity being under ground has given rise to a controversy whether this be the real stable or not. But natural exca- vations were often used as stables in ancient times, and many fathers of the church preserved a tradition that Christ was born in Bethlehem, in a stable not made by art, but by nature, i. e. in a grotto (vide Justin, M. Dialog, cum Tryph : Origen contra Cels., and many other fathers). We confess that our conviction that the know- ledge of the real place of our Lord's nativity has been preserved is very much derived from the circumstance of the emperor Adrian's having con- secrated a grove at Bethlehem to the worship of Adonis, and erected a statue of this god over the grotto in question. (Hieron. Epist. 19, Sec.) This plainly shosvs that the particular spot was visited and revered by the primitive Christians, which the heathen emperor endeavoured to prevent by the repulsive effect of profane and dissolute rites. Providence, however, so ordained, that these very profanations should be the means of ascer- taining and transmitting to future ages the know- ledge of the precise spot where the glory of the Redeemer first burst upon the world. The num- ber of pilgrims to this church has very much diminished of late years, particularly of those of opulence and high rank, whose presence and contributions were most conducive to the main- tenance of the ancient splendor of the place.

In his excursion to the Dead Sea, the author met some tribes of the Bedouin Arabs, whose morals and manners we are disposed to think he libels, when he asserts that they prostitute their wives and daughters for money. We never heard of such a depraved custom among them, and it is so contrary to the ordinary habits of the Arab race that we cannot help suspecting that it is only a tale picked up by the author, without having understood the meaning of what he was told. In the Dead Sea he perceived by day, and heard b) night, myriads of little fish playing about the shores, contrary to tlie common and received opinion that it produces and sustains no living creature. We have been informed by a person who has often conversed with the Arabs that fre- quent the shores of that sea, that where the Jor- dan disembogues itself there are many fish carried down with the stream, which live and thrive within the verge of the supply of fresh water at the mouth of the river ; but they have no means of ascertaining whether fish exist in the more central depths. Daily experience has con- vinced them of the falsehood of the report that birds cannot fly over the Dead Sea without falling down dead. "Thty constantly do so without any apparent inc'onvenience. Flames are occasion- ally emitted from the surface,

accompanied with sulphureous and niephitic smells, and fogs are

common at certain seasons. But it does not appear that there is any thing peculiarly un- wholesome in the climate of the neighbouring country. M. de Chateaubriand carried home a bottle of the water to Paris, with a view to ascer- tain whether the sea-fish of Europe would live in it. A large piece of the asphaltos, from the borders of the lake, is to be seen at the Latin convent. It resembles coal, but is more shining, burns when put on the fire, and emits a sulphu- reous and extremely offensive smell.

From Bethlehem and the Dead Sea the author proceeded to Jerusalem, the great object and end of his journey. We have no doubt that a man like M.de Chateaubriand, endued with Christian feelings, must have been highly gratified at visiting the spot where the mysteries of our holy religion were performed. But his account differs little from that of other travellers ; and the city itself and its society have undergone but little change from the state in which it was two cen- turies ago, when our plain-spoken countryman, Fynes Moryson, visited it in 1596. 'AH the citizens,' says he, ' are either tailors, shoe-makers, cooks, or smiths (which smiths make their keys and locks not of iron but of wood), and in general poore, rascall people, mingled of the scum of divers nations ; partly Arabians, partly Moores, partly the basest inhabitants of neigh- bour countries ; by which kind of people all the adjoyning territorie is likewise inhabited, which should have no trafficke if the Christian monas- teries were taken away. Finally tiie inhabitants of Jerusalem, at this day, are as wicked as they were when they crucified our Lord, and as they have been since. Hence it was that Robert duke of Normandy being sicke, and carried into Jeru- salem upon the backs of like rascalls, when he met by the way a friend who was tlien returning into Europe, desiring to know what he would command him to his friends, he earnestly entreated him to tell them that he saw duke Robert carried into heaven upon the backs of divels.' ••• Mory- son's Itinerary, folio, 1617, p. 219. We shall content ourselves with remarking such further passages of M. de Chateaubriand's description as have either a pretension to novelty, or may be otherwise interesting to our readers.

The great objects of curiosity are of course Mount Calvary, the church of the Holy Sepul- chre, the convents of Romish monks, who serve as guides and hosts to the Christians visiting Jerusalem, and the great mosque erected on the site of the temple of Solomon.]\Iount Calvary and the Holy Sepulchre, ahhough formerly at some little distance from Jerusalem, are now in the very heart of the city, a circumstance that can only be

accounted for by the very singular form of the ancient Jerusalem. It was built on two elevations, at a short distance from each other, and covered nearly the whole of their sur- face, thus forming two separate towns, which were joined together by a comparatively narrow slip of buildings across the valley between, prin- cipally occupied in ancient times by the palace and temple of Solomon. These buildings, ac- cording to an accurate general view of the city, taken by Meyer, about thirty years ago, from the Mount of Olives, and which is now before us,

are in ruins, or their sites totally bare, as well as many other parts of the old town. It is obvious that the two masses of buildings thus connected would form a town somewhat in the form of a horseshoe; and Mount Calvary and the Holy Sepulchre are situated in the valley which was included between the two elevations. But, Jeru- salem having for many years been the seat of Christian governments, it is natural to conclude that their veneration for the spots where their redemption had been fulfilled would lead them to fix their residence as near to them as possible: The church which they built over the tomb of their Saviour has also in all ages attracted crowds of pilgrims of every rank, and houses must of course have sprung up for their accommodation ; so that upon the whole there are sufficient causes to account for the increase of the town in this particular part, or rather for its removal from the elevations into the valley; for the old town, as we have just observed, has now very large spaces within its circuit either quite bare or covered with ruins.

The church of the Holy Sepulchre is now in ruins, having been burned down the year after INI. de Chateaubriand saw it in 1806. Large subscriptions have been raised among the pious Christians of the Levant for its re-erection ; al- though the following account of the priestcraft practised there by the Greek clergy, which, though unknown to M. de Chateaubriand, we have received from an eyewitness of veracity, would certainly induce us to wish that the care of this interesting place were transferred to better hands. On the day of the renewal of the holy fire, as the Greeks call it, the church of the Holy Sepulchre is crowded with pilgrims, Greek, Armenian, Copht, and Abyssinian. This holy fire is said to issue spontaneously from the Holy Sepulchre on Easter eve. At that period the Greek patriarch, with his clergy arrayed in their sacerdotal robes, and followed by the Armenian patriarch and his clergy, and the bishop of the Cophts, march in grand and solemn procession, and singing hymns, three times round the Holy Sepulchre. The procession ended, the Greek patriarch puts off his robes and enters alone into the sepulchre, probably with some phosphorus in his pocket; the Armenian and Cophtic pre- lates remain in tlie antichamber, v.here they state that the angel was sitting when he appeared to the pious women after the resurrection of our Lord. As soon as tiie holy fire is kindled, as the patriarch says by a miracle, he lights his wax taper and

comes forth from the sepulchre, ana offers it first by a previous agreement to such person as bids the highest price for the special privilege of first lighting his taper from that ot the patriarch. A considerable suit, is paid for this prefercnf e, and much competition prevails for it, as they believe that the more it is removed from its first source, the more its purity and efH cacy are diminished. The scene of confusion which ensues when the patriarch enters the church with two lighted tapers is beyond de- scription. The people press forward with such incredible eagerness to light their tapers, that Turkish guards, placed with whips and sticks, and liberally dealing out blows on every side,

can scarcely, with all their exertions, prevent many from being trodden to death. The ea^er motions of tlie populace, like waves agitated by the wind ••• the noise and clamor whicli resound within the dome of the church ••• the multitude of candles gradually lighted by which the blaze in- creases, and at length fills the whole building and illuminates its inmost recesses, can more easily be imagined than described. The Greeks assert that the continuation of this pretended miracle is an evident and convincing proof of the truth of their religion ; and it is certain that, had the fraud been discontinued, the number of pilgrims would be considerably diminished. Tlie pecuniary interests of the clergy would also have suffered ; for in former times some thousand (even 30,000) sequins have been paid for the permission of first receiving the fire from the high priest's hands; but superstition, at least among the rich, has latterly so much declined, that a few hundred sequins are now sufficient to secure the privilege. The Roman Catholic monks of Jerusalem look upon this fraud of the Greeks with horror. They are not exposed to the same temptation, and living in the midst of trials and oppressions, and exercising all tlie hospita- lity of which their scanty means are capable, appear to be a simple and interesting race of men.

The great mosque on the site of the temple of Solomon is the last object we shall here no- tice at Jerusalem, concerning which Abulfeda has the following passage in his description of Syria. 'There is at Jerusalem a masque, a greater there is none in all I-slamism, and in it there is a rock (sakhra), which is a stone elevated as a bench, about as high as a man's chest, and its breadth is equal to its height. There is a descent underneath by steps. This sakhra served the prophets, and especially the great prophet, as a place of dismounting from al-borak (a beast larger than an ass and

smaller than a camel), who had carried them to Paradise.' M. de Chateaubriand gives several extracts from ancient travellers upon the interior of the mosque ; but, as all entrance is strictly forbidden to Christians, he had of course no opportunity of verifying the information.

The following account was given of this mosque, in the year 1796, by the mufti of Jeru- salem to a European, who conversed with him in Arabic at the house of the governor of Jerusa- lem, called by the Christians Pilate's house. This European is now in England, and from him we had the following account: ••• 'Hearing me speak in Arabic he entered into conversation with me, and I took the liberty of asking him why the Mahometans would not permit the Christians to see the celebrated mosque of the rock. Upon which he opened a window which overlooks the mosque and all the ground on which it is raised, and permitted me to look at it as much as I pleased. He then said, ' We can- not permit the Christians to tread upon that ground, of which every spot is marked by the step of some holy prophet ; still less upon the sakhra, or upon the interior of the mosque. But there are thirty-two large columns which support the great arches, and many other small columns

for the support of the smaller arches ; there are many lamps that are liglited on our festivals. There is a mihrub of marble with architectural ornaments, and a staircase to it with steps of the same material. The walls are incrusted with marble like the great mosque at Damascus, and ornamented with painted tiles. The name of God (Allah !) is written in large characters in several parts of the mosque, as well as the names of Mahomet and his first successors. We believe that if an infidel should walk between the co- lumns they would meet and crush him to death.'

' The mosque, on account of its peculiar sanc- tity, was once the place towards which the Mus- sulmans of north-western Asia were to turn their faces in their prayers ; but this commandment was altered by God's special order, and the Bait Allah (house of God) at Mecca was appoint- ed for the only Kiblah. On the sakhra or rock were fixed iron rings, at which to tie the pro- phet's horses when they came to worship in the mosque. The mosque is called by many names by the iNIahometans to denote its superiority over other temples, as al aksa, the whole world, al masgid al aksa, or al giarmia al aksa, templum extremum. The origin of its importance seems to have been this :••• The kalif Abd-al-Malik al Merwan was jealous of Abdallah the son of Zo- beir, the ruler of Arabia, and in order to prevent his subjects in Syria from going in pilgrimage to Mecca, and thus enriching his rival, and proba- bly also with a view to attract the profitable concern of receiving pilgrims from other coun- tries to his own capital, he set up this mosque in opposition to that of Mecca. He adorned and beautified it in tlie year 685 of the Christian era, employing

the whole revenue of Egypt for nine years for the accomplishment of his design. It is believed, on the faith of tradition, that the sakhra or rock is the same from which God spake to the patriarch Jacob, and that the sanc- tum sanctorum was built where the mosque now stands. Upon the whole it is impossible to con- template the holy city in its desolate condition without the deepest interest. Jews, Mahometans, and Christians of all sects and denominations unite in acknowledging the existence of some- thing extraordinary and supernatural about her awful ruins. They raise their heads from the dust, and from among them is heard a voice to warn and instruct mankind, and to proclaim to all ages and nations of the word, This hath God wrought.

*Dr. Clarke assures us that he ‘ ventured to see this country with other eyes than those of monks, and to make the Scripture rather than Bede or Adamnanus his guide in visiting the holy places ; to attend more to a single chapter, nay a single verse of the gospel, than to all the le- gends and traditions of the fathers of the church.’ Now we certainly think that it was a very lauda- ble precaution to refer constantly to the gospel in travelling over the scenes where the events of that sacred history were transacted. But surely it is reasonable to conclude that the * fathers of the church,’ and even that ‘ old lady of good inten- tions, the empress Helena,’ were not unmindful of this obvious precaution.*

On the second day’s journey from Acre, Dr.

Clarke and his companions passed over the plain of Zabulon, ‘ every where covered with sporrtane- ous vegetation, flourishing with the wildest exu- berance ;’ but entirely neglected and uncultivated through the tyranny and bad policy of the tyrant Djezzar. In the centre of this plain lies the an- cient acropolis of Sapphura, or Zeph (Joshua XV. 55), once ‘ the chief city and bulwark of Galilee.’ In the ruins of a stately Gothic edifice, called the house of St. Anne, some ancient pic- tures, part of the former decorations of the church had lately been discovered ; but, from the ac- count and engraving given by Dr. Clarke, they do not appear to be essentially different from the oldest of the sacred paintings, which are occa- sionally discovered in the ancient European cathedrals. From Sephoury, notwithstanding the rumors of plague, the party proceeded to Nazareth, a small town or village situated upon the side of a barren rocky elevation facing the east, and com.manding a long valley. An en- graving of this nursing place of our Saviour is given : it appears to stand in a desolate situation surmounted by romantic hills. The plague, the tyrannical government of Djezzar, and the natu- ral

barrenness of the soil, had conspired to re- duce the few inhabitants that remained to the most wretclied state of indigence ; and to provoke a repetition of the tauntmg question, whether 'any good thing could come out of Nazareth ?' The objects of curiosity he found at Nazareth were, 1. A cave, the supposed residence of Jo- seph and the Virgin Mary ; for building a hand- some church over this retreat the empress Helena, mother of Constantine, has incurred tlie violent anger of Dr. Clarke, who even goes the length of asserting, that this good old lady would have desiccated and paved the sea of Tiberias, had not nature opposed itself to her wishes. 2. The workshop of Joseph. 3. The synagogue, where Christ is said to have read the Scriptures to the Jews ; and, lastly, a precipice without the town, which accords with the words of the Evangelist, and proves the present site of the village to be the same with that occupied by the ancient town. The following singular scenes presented them- selves during the day, which the party spent at Nazareth : ••• ' As we passed through the streets, loud screams, as of a person frantic with rage and grief, drew our attention towards a misera- ble hovel, whence we perceived a woman issuing hastily, with a cradle, containing an infant. Hav- ing placed the child upon the area before her dwelling, she as quickly ran back again ; we then perceived her beating something violently, all the while filling the air with the most piercing shrieks. Running to see what was the cause of her cries, we observed an enormous serpent, which she had found near her infant, and had completely despatched before our arrival. Ne- ver were maternal feelings more strikingly por- trayed than in the countenance of this woman. Not satisfied with having killed the animal, she continued her blows until she had reduced it to atoms, unheeding any thing that was said to her, and only abstracting her attention ft'om its man- gled body to cast, occasionally, a wild and mo- mentary glance towards her child. In the evening we visited the environs, and, walking to

the brow of the hill above the town, were grati- fied by an interesting prospect of the long valley of Nazareth, and some hills between which a road leads to the neighbouring plain of Esdraelon, and to Jerusalem. Some of the Arabs came to converse with us. We were surprised to hear them speaking Italian ; they said they had been early instructed in this language, by the friars of the convent. Their conversation was full of com- plaints against the rapacious tyranny of their governors. One of them said, ' Beggars in Eng- land are happier and better than we poor Arabs.' ' Why better ?' said one of our party. ' Hap- pier,' replied the Arab who had made the obser- vation,'in a good government : better, because they will not endure a bad one.' (p. 439).

From Nazareth they proceeded to the sea of Tiberias, ' an immense lake, almost equal in the grandeur of its appearance to that of Geneva,' surrounded bymagnificent mountains risingfrom the cultivated plains which

deck its immediate borders. At the northern extremity of the lake is a mountainous territory, still called in Arabic ‘ the wilderness,’ to which John the Baptist and Jesus himself retired in their early years. To the south-west, at the distance of twelve miles, lies Mount Thabor, having a conical form, and perfectly insulated on the northern side of the wide plains of Esdraelon. In a romantic nook, on the borders of the lake, is seated the little for- tified town of Tiberias, and near it the warm baths of Emmaus. And northward, upon a bold declivity, the travellers beheld ‘ the situation of Capernaum, upon the boundaries of the two tribes of Zabulon and Naphthali.’ This exqui- sitely interesting scene is illustrated by a well executed engraving. From Tiberias they cross- ed the plain of Esdraelon, round the base of Mount Thabor, to Napolose the ancient Sichem. On the plain were encamped parties of Djezzar’s cavalry, and the Arabs, whose incursions tiiey were sent to check, occupied the mount and the surrounding hills; a trifling conflict, for the pos- session of some cattle, had occurred between the hostile bands a few days before. To the histori- cal celebrity of this vast plain, the following well-wrought passage bears an opposite testi- mony : ‘‘‘ ‘ Here, on this plain, the most fertile part of all the land of Canaan (which, though a solitude, we found like one vast meadow, cover- ed with the richest pasture), the tribe of Issachar ‘ rejoiced in their tents.’ In tiie first ages of Jewish history, as well as during the Roman em- pire, the Crusades, and even in later times, it has been the scene of many a memorable contest. Here it was that Barak, descending with his 10,000 from Mount Thabor, discomfited Sisera and ‘all his chariots, even 900 chariots of iron, and all the people that were with him,’ gathered ‘from Harosheth of tlie Gentiles, unto the river of Kishon ;’ when ‘ all the host of Sisera fell upon the edge of t!ie sword ; and there was not a man left;’ when ‘the kings came and fought, the kings of Canaan in Taanaci), by the waters of Megiddo.’ Here also it was that Josiah, king of Judah, fought in disguise against Necho, king of Egypt, and fell by the arrows of his antago- nist. So great were the lamentations for his death that the raouvning for Josiah became ‘an

*ordinance in Israel.’ The * great mourning in Jerusalem,’ foretold by Zechariah, is said to be as the lamentations in the plain of Esdraelon, or, according to the language of the prophet, ‘ as tl)e mournino of Hadadrimmon in the valley of Megiddon.’ Josephus often mentions this very remarkable part of the Holy Land, and always under the appellation of ‘The Great Plain.’ The supplies that 'espasian sent to the people of Sepphoris are said to have been reviewed in the great plain, prior to their distribution into two divisions; the infantry being quartered within the city,*

and the cavalry encamped upon the plain. Under the same name it is also mention- ed by Eusebius, and by St. Jerome. It has been a chosen place for encampment in every contest carried on in this country, from the days of Na- buchodonosor, king of the Assyrians (in the hL?- tory of whose war with Arphaxad it is mention- ed as the great plain of Esdraelon), until the disastrous march of Napoleon Buonaparte from Egypt into Syria. Jews, Gentiles, Saracens, Christian Crusaders, and Anti-Christian French- men, Egyptians, Persians, Druses, Turks, and Arabs, warriors out of ‘ every nation which is under heaven," have pitched their tents upon the plain of Esdraelon, and have beheld the various banners of their nations wet with the dews of Thabor and of Hermon.’ (p. 496.)

‘As the traveller descends towards Napolose, it appears luxuriantly embosomed in the most delightful and fragrant bowers, half concealed by rich gardens, and by stately trees collected inˆto groves, all around the bold and beautiful valley in which it stands. Trade seems to flou- "ish among its inhabitants ;’ and in the neigh- bouring country the cultivation was every where inarvellous, affording a most striking picture of human industry ; the rocks and stony valleys of Judea were covered with figs, vines, and olives; the hills laid out with gardens ; the mountains divided into terraces in the highest state of agri- cultural perfection ; on all sides were to be seen plentiful crops of millet, cotton, linseed, tobacco, and barley, exhibiting proofs of the incalculable produce which might be raised from the Holy Land under a wise and beneficent government. ‘Its perennial harvest; the salubrity of its air; its limpid springs; its rivers, lakes, and match- less plains ; its hills and vales ; all these, added to the serenity of its climate, prove this land to be, indeed, ‘ a field which the Lord hath blessed : God hath given it of the dew of heaven; and the fatness of the earth, and plenty of corn and wine.’

On the ancient history of Sichem, connected with the stories of Joseph, Eleazar, Joshua, &c.. Dr. Clarke has an animated passage, which we regret our inability to insert. A long and tedi- ous ride, with the thermometer at 102►► of Fahren- heit, brought them to the Holy City.

We have entered fully into the present state of Jeeusalem after this writer in our article of that name. Concerning the discoveries which Dr. Clarke thinks that he has made, and his re- moval of Calvary and tlie tomb of our Saviour from their reputed localities, which have been acquiesced in for 1800 years, to a spot at a con- siderable distance, ►►► we shall content ourselves with observing that the whole hypothesis appears

to us to rest upon mere conjecture; and, although there be neither ‘impiety nor temerity in ventur- ing to surmise’ that the hypothesis is founded in probability, we think ‘ the existing documents’ produced altogether

msufficient to establish it.

After a long philippic against the empress He- lena and her architectural piety, to which every visitor to Jerusalem since the days of that pious lady is pronounced to be a dupe. Dr. Clarke describes his visit to the ordinary objects of cu- riosity in the city and neighbourhood ; we are not aware that any thing very worthy of observa- tion occurs in these remarks ; we shall, there- fore, accompany Dr. Clarke to Bethlehem, the place of our Saviour's nativity; a town covering the ridge of a hill on the southern side of a deep and extensive valley, the most conspicuous ob- ject being the monastery erected over the cave of the Nativity, An interesting engraving of this picturesque toun illustrates the following ac- count : ❖❖❖ ' The temptation to visit Bethlehem was so great, that, notwithstanding the increasuig alarms concerning the ravages of the plague as we drew near the town, we resolved, at all events, to venture thither. For this purpose, calling all our troop together, we appointed certain mem- bers of our cavalcade to keep a look-out, and act as guards in the van, centre, and rear of the party, to see that no person loitered, and that none of the inhabitants might be permitted to touch us, or our horses and camels, on any account what- soever. In this manner we passed entirely through the town, which we found almost desert- ed by the inhabitants, who, having fled the con- tagion, were seen stationed in tents over all the neighbouring hills. It appeared to be a larger place than we expected to find : the houses are all white, and have flat roofs, as at Jerusalem, and in other parts of the country. A nephew of the governor of Jerusalem, mounted upon a beau- tiful Arabian courser, magnificently accoutred, rode near the centre of our caravan. He had volunteered his company, as he said, to ensure us respect, and as a mark of the governor's con- descension. To our very great embarrassment, we had no sooner arrived in the middle of Beth- lehem, than some of the inhabitants, at the sight of this man, came towards him to salute him ; and, in spite of all our precautions and remon- strances, a Bethlehemite of some consideration came and conversed with him, placing his arm upon the velvet saddle-cloth which covered his horse's haunches. This, we knew, would be sufficient to communicate the plague to every one of us ; therefore there was no alternative, but to insist instantly upon the young grandee's immediate dismissal. However, when our resolutions were made known to him, he positively refused to leave the party : upon this, we were compelled to have recourse to measures which proved effec- tual ; and he rode off, at full speed, muttering the curses usually bestowed on Christians, for our insolence and cowardice. We reached the great gate of the convent of the nativity without further accident ; but did not choose to venture in, both on account of the danger, and the cer- tainty of beholding over again much of the same sort of mummery which had so frequently put our patience to the proof in Jerusalem. Passing

cose to its walls, we took our course down into ^'le deep valley which lies upon its nortli-easteru side; visiting the place where tradition says the angel, with a multitude of the heavenly host, ap- peared to the shepherds of Judea, with the glad tidings of our Saviour's nativity ; and finally halting in an olive plantation at the bottom of the valley below the convent and the town.' (p. 614.)

Under the walls of Bethiehem they stopped to refresh themselves with a draught of its ' pure and delicious water,' in reference to which Dr. Clarke gives the following ingenious illustration. ' David, being a native of Bethlehem, calls to mind during the sultry days of harvest, a well near the gate of the town, of whose delicious wa- ter he had often tasted, and expresses an earnest desire to assuage his thirst by drinking of that limpid spring. And David longed and said, Oh ! that one would give me drink of the water of the well of Bethlehem, which is by the gate (2 Sam. chap, xxiii.). It will be recollected, that three loyal and mighty men fought their way through the Philistine garrison, procured the draught, and laid it at the feet of their sovereign. It will also be recollected with what noble self-denial he declined the proffered luxury, and how fre- quently the example has been followed by other celebrated commanders of ancient and modern times. From Bethlehem Dr. Clarke and his friends made their way, with some risk, through hordes of hostile Arabs, to Rama (see Jeremiah xxxi. 15), and thence to Joppa, or Jaffa. The road, and particularly the neiglibour- hood of the towns, were strewed with dead bo- dies, victims of the plague, which was raging ###with great fury in this part of Palestine. From this place they returned by sea to Acre, and tlie approach to Mount Carrael and the Bay of Acre concludes this part of Dr. Clarke's Travels.

Our next traveller is a French nobleman, M. le Compte de Forbin. He sailed from Toulon 21st of August 1817, on his Travels in Greece and Syria, and arrived in October in sight of the mountains of Syria.

Mount Carmel was the first land he saw ; and soon after the vessel entered the small harbour of St. Jean D'Acre. 8000 or 10,000 Turks, Arabs, Jews, and Christians, carry about with them into the polluted streets and bazaars of this place, an air of dark and ferocious melancholy. Even human sense is disagreeably affected, we are told, by objects of deformity, filth, and wretchedness. Beings, that look as if they were risen from tombs, drag themselves along half naked, with a sort of covering of dirty white, streaked with black. At each step one sees by the side of the wretched

victims of ophthalmia, the sufferers under the cruelty of the late Djezzar Pacha (the Butcher, as the name signifies) de- prived of their eyes, noses, and ears. These miserable creatures rest always abroad, lying under the walls of the seraglio gardens. The present inhabitant of this palace, the successor of the Butcher, seldom stirs out, ••• ‘ deaf to the cries of a starved population, he passes his life in groves of myrtles which are refreshed by lim- pid rivulets.’ His minister, who relieves him entirely from the weight of public business, oc-

cupied the same honorable and elevated situa- tion under the Butcher of blessed memory, and in one and the same day had his salary doubled, and his nose and ears cut off, by the commands of his gracious master ! This tried servant of the public is described by M. de Forbin, as supple, clever, and incalculably rich. Our author was introduced to the present Pacha, Soliman ; he found him squatting in the corner of a sofa, and surrounded by courtiers, who received his per- mission, when it was thought proper, that they should laugh at the sallies of a favorite buffoon who held a high reputation at court. He ex- amined the traveller’s uniform very particularly, and described at great length the excellence of his Arabian horses, smoking as he spoke, and ordering coffee to be brought in for his visitor.

Our author left St. Jean D’Acre with a nu- merous caravan. Barren hills lie along the coast, about a league from the sea, and the intervening space is a white sandy beach. The ruins of Athlit present themselves ; it was the last pos- session held by the crusaders ; its port is now filled with sand, its ramparts are fallen, and its fine gardens are stagnant marshes. The khan (inn) of Santoura was found entirely occupied by another caravan : our traveller and his com- panions lay down in some small cabins, from which toads and centipedes soon drove them. The town of Csesarea presents a very striking sight; it is entirely deserted, yet, strange to say, stands in a state of perfect preservation. The view of its ramparts, ports, and monuments, ex- cites an undefineable surprise. The streets and the public squares are perfect ; nothing would be wanting but gates to its high and frowning’ battlements to render it susceptible of defence. The walls of the churches are yet black with the smoke of incense; the pulpit, illustrated by learned and courageous bishops, still stands ; the graves alone seem to have sustained violence ; tiiey are open ; and the human bones scattered about give the sole proof that man has once dwelt in the midst of this frightful solitude. The silence that re’gns around is only broken by the monotonous noise of the tide, that comes rolling on ••• dashing over upon the piers and quays of the port, where no step of mariner or merchant ever treads. The ceaseless beating of the waves has here shaken and shifted the stone-work : the wall of the light-house is split, and its staircase and chambers are seen within, mouldering away, though as yet they afford a sanctuary to the sea- birds, which have there found an undisturbed habitation. Superb

columns are still standing in this town. Next evening the caravan bivouacked under some sycamores, near which there was an abundant well ; and young and hand- some women ! ‘ y apportaient, d’un pas majestueux, la cruche de Rachel.’ The 1.5th of November they arrived at Jaffa, where our author was received in a miserable convent of fatiiers of the Holy Land, who are obliged to perform their rites in a secret vault, and are a prey to constant persecution. From Jaffa he proceeded to Rama, wliere he found the superior of tiie religious fraternity, by whom he was received, to be ‘a Spaniard with a thundering voice and an imposing stature. This good monk

did not sesni to me at all to like the state of martyrdom to which he was devoted. lie gave me a clean chamber, looking out on a terrace shaded by palm-trees.’

From ilama to Jerusalem the road passes for two or three miles over the well-cultivated plains of tiie ancient Arimathea: afterwards the tra- veller passes by the hills of Latroun into pro- found valleys, where vegetation becomes rare and feeble; complete barrenness succeeds; and up to Jerusalem one traverses a red and sterile soil. The eye discovers nothing in the distance but the signs of vast natural eruptions and ca- tastrophes; dry beds of torrents; and winding roads covered with sharp flints. To these may be added, to complete the picture, ruined cis- terns, at the bottom of which a little stagnant water lies fetid and green, with bare craggy mountains rising around. Such, says our author, is the scenery depicted by Jeremiah ; such is the valley of Terebintha; such is the approach, preparing the mind for the awful impression about to be made upon it by the first appearance of Jerusalem.

Jerusalem, observes Chateaubriand, has been taken and sacked seventeen times ; millions of men have been massacred witliin its bosom, and it may almost be said that these massacres still continue : ❓❓❓ a person who would take lodgings in the town would be daily m danger of his life, observes the author whom we have just men- tioned. Great cities, and even whole nations, have been cast down and destroyed :

Great Carthage self in ashes cold doth lie ; Tier niins poor the herbs in height scant pass ;

So cities fall, so perish kingdoms high ; Their pride and pomp are hid in sand and grass.

Fairfax.

But Jerusalem still exists, stilt drags on a cada- verous life, to excite horror, while these utterly fallen abodes of past greatness inspire a fine melancholy. She presents the aspect of dreary, and gaunt, and painful disease: they ofler the spectacle of calm death.

Tlie sun was on the point of setting when M. de Forbin, from an elevated part of this rough and inconvenient road, caught the first view of tliis celebrated place. ‘ I perceived, in fine, long ramparts, towers, and vast edifices, sur- rounded by barren and black ground, and rocks that looked as if they had been smitten by thunder. Here and there ruined chapels were to be observed : Mount Sion rose in view ; and more distant, the rugged mountains of the Ara- bian desert.’ Our author, with a very just feeling, expresses his indignant contempt for the poor-minded creature, of whatever country or belief, who should regard this lost city in a tem- per of ironical sceptical malice. ‘ Quelles que soient les opinions religieuses, le seul enˆour- dissement de I’esprit pourrait s’opposer a la sensation de surprise et de respect qu’ inspire Jerusalem. Tout est silencieux autour de cette ville; tout est muet: le dernier cri delTIomme- Dieu semble avoir ete le dernier bruit repete par les echos de Siloc et de Gehennon.’

The very day of his arrival afforded him a most interesting spectacle, in a meeting of the

whole Jewish population of Jerusalem, which took place in the valley of Josaphat. The Tur- kish governor had sold to these poor creatfires permission to celebrate the feast of tombs. ‘At the view of these captives seated in silence on the sepulchral stones of their ancestors, it might have been almost thought that the awful trumpet had made itself heard, that the generations of mankind crowded the borders of Cedron, and that from the bosom of the cloud the words of joy and of sorrow were about to issue.’ (p. 85). It is supposed that Jerusalem contains about 25,000 inhabitants. Not more than 200 Christian families reside th<'re. Our author calculates the Jews still remaining in this ancient capital of their people at about 8000 or 9000. Scarcely ought one to call by the name of street, the narrow, filthy, and steep passage which divides the half- fallen houses in the quarter of the Hebrews. Squalid and diseased wretches, with features strongly marked, quarrel and tear each other to pieces for the pittance which charity throws to their misery. Descending by a ruined staircase into vaults that were falling in, where they were not partially sustained by a few pillars that indicated they had been formerly gilt and sculptured, our author found himself, to his astonishment, in the grand synagogue. Some children in rags were learning, from a blind old man, the ancient his- tory of the city, and heard that their fathers adored the God of Israel, not in the wretched den where tliey then were, but under porticos of marble, and roofs built of the

cedars of Leba- non ! Such is now the condition of the remnant of the extraordinary people whose hands raised, and whose sweat and blood bathed the proudest monuments of Memphis and of Rome. The space within the walls would contain six times the number of inhabitants above specified ; so that a great part of its unpaved and steep streets is uninhabited, and a large quantity of houses, churches, and monasteries, are entirely deserted. The inhabited houses generally receive the light only by means of the door, and one or two small holes for windows, with wooden bars. In a few poor shops they sell olives and fruits brought from Damas, rice, corn, and some dried vegetables : a group of starving Arabs may be seen devour- ing these luxuries with their eyes ; while the Turkish shopkeeper smokes his pipe with indif- ference, utterly regardless, to all appearance, of his own interests.

M. de Forbin went from Jerusalem to Beth- lehem, which received its name, it is said, from Abraham himself. David there guarded his flock, and Boaz and Ruth were Bethlehemites. The first Christians built a small chapel over the spot where the stable stood in which our Saviour was born : the emperor Adrian substituted the altar of Adonis, which was afterwards thrown down by St. Helen, who caused the church to be erected that stands there to this day. The Armenians are now in possession of this temple. The convent has all the appearance of a fortress ; the princi- pal gate is made very low, to hinder, as our au- thor says, the Arabs from entering on horse-back, or in too great number. The town had just been visited with an order for a contribution of 8000 piastres ; and the population, v.fhich is

entirely Christian, was in a statˆ of great agita- tion. Tlie young women of Bethlehem are de- scribed as graceful, and finely featured : a veil envelopes, without hiding, their countenance ; and their arms are naked. M. de Forbin visited many families of the place, and was kindly re- ceived. Going out of the town, you see the mountains of Hebron, where the pretended tomb of Abraham is still shown; in the valley of Mamre repose the ashes of Caleb : further distant they point out the rock in a cave of which David hid himself from the fury of Saul.

To go to Jericho, it is necessary to leave Je- rusalem by the gate Setty-Mariam, and to cross the torrent Cedron. When M. de Forbin took this journey it was winter; but the temperature of the air scarcely permitted him to believe this. Throughout the whole of Judea, occasional rain is the only indication of winter : ‘ autumn brings no fruits, spring expands no flowers ; yet the heats of summer dry the source of Siloa : it would appear that there

are no longer seasons for this unhappy country.' (p. 92.) The road to Jericho passes through narrow valleys and deep ravines, almost impracticable, that seemed made by some recent convulsion. The mountains looked as if they were stained with sulphur, as at the Solfatara in the neighbourhood of Na- ples. The traveller, after having descended into dismal chasms, must climb sharp and steep rocks to discover the plain of Jericho. The Arabs call it Ryah : a crowd of huts, built of earth and reeds, and roofed with a sort of heath, is all that now remains bearing the name of this city, whose once celebrated walls are replaced by fagots of thorns and thistles, that hardly serve to defend the cattle against the frequent attacks of wild beasts. The aga, as wretched as his subjects, inhabited a ruined tower, which our traveller climbed with much difficulty. The best abode in the place was assigned him for the night ; but he could not support its bad smell: he joined his companions round a large fire in the open air, where they supped on a kid killed before them, and broiled on the wood ashes. ' Wrapped up in my cloak, and stretched on the ground, I slept in spite of my bad supper and the noise of my entertainers. The principal persons of Jericho (les notables) came to chat with the Turks of my escort, ••• and the conver- sation was long and loud. We were all on the alert again before break of day, and saw the sun rise behind the mountains of the Arabian de- sert.' (p. 94.)

The Dead Sea, or Asphaltic Lake of Sodom, is seen on the right of Jericho : the Jordan dis- covers itself far off in tiie distance on tlie left, between two small, hills covered with thorny shrubs. The aga added some fresh men to our traveller's escort, wlio proceeded towards the spot where the sinful towns were destroyed by the fire of heaven. The road lay over a sandy plain, thinly spotted with small shrubs, and some plants of an exquisite perfume. The party was on its guard against Arab robbers, and took prisoner a Bedouin whose com])anions fled at its approach. He was afterwards permitted to get off by throwing himself into the Jordan. The banks of this river are high, and covered

with trees ; its water is ycUow, troubled, and pretty deep. Its width here is trifling ••• about a quarter that of the Seine at Paris.

Our author's description of the Asphaltic Lake contains nothing new : he says, the Jews believe that, at the birth of Messiah, the fire- destroyed cities will re-appear. From a hill formed of ruins, supposed to be those of Gomorrah, M. de Forbin sketched a view, which in- cluded the Mount Nebo, where Moses died. ' Searching on the banks of the river for ves- tiges of the guilty town, I in fact discovered some remains of walls, of a tower, and of several columns.'

Nothing, according to our author's account, can equal the horrible

melancholy of this country. Deep and dark valleys are suddenly shut up by a lofty mountain, perfectly white, which in the twilight might be taken for an enormous phan- tom defending the passage ; the crevices and the caverns then put on the appearance of features, and the ravines down its sides mark the folds of its frightful robe. ‘ Mountains of cinders, in the shape of imperfect and reversed cones ; fantastic rocks, riven, overturned, and standing; these were the objects we encountered for several leagues, till we gained a more elevated spot, whence the bitter waters of the Dead Sea were again visible : at this moment the sun was de- scending behind the mountains of Edom. The lake seemed an exquisite surface of lapis lazuli, of which the mountains that surrounded it formed the golden border. Further off” the rocky crags, heaped one upon the other, now put on the ap- pearance of a fortified city, and now of a vast amphitheatre that had no other spectators ot actors but the kites and vultures. Immense eagles balanced themselves majestically in tiie mid-air above their ancient and undisturbed em- pire.’ (p. 101.)

The monastery of St. Sabas, one of those dis- mal inaccessible Cenobite retreats, of which num- bers are to be found in the deserts of Asia, is placed on the peak of a rock, and hangs at the height of 400 feet over the dried torrent of Ce- dron. Our author describes it as the most frightful solitude he had ever seen : the grots of the unhappy fanatics are excavated in nooks, and under projections that expose them to continual danger. Doves, and a multitude of anchorites, formerly inhabited together tlie whole of the aw- ful valley below : ??? it is now, however, deserted by the human beings, yet blue pigeons, says the traveller, still float over the abyss. Not a shrub, not a plant, not a drop of water, can be found within the enormous enclosure of tlie monastery. Two low and narrow gates, covered with iron and nails, were closely shut against the party : they begged admission in vain ; the hour seemed a suspicious one to the Greek hermits; and al that prayers the most earnest, and menaces tlie most severe, could procure, was a jar of water, long-time expected, and at last lowered to them from the top of a tower eighty feet high. The poor Caloyers are obliged to watch day and night against the Arabs, whole tribes of whom often come to attack them. Their watching, however, is of small avail : their enemies possess themselves of all the issues ; and the inmates of

the place are thus compelled to conclude a treaty, the single article of which provides for the pay- ment of a contribution.

On the 2d of December our traveller quitted Jerusalem, proceeding by the

village of Jeremiah towards the sea. As he approached Jaffa, by the road of the ancient Arimathea, the weather be- came milder still, and he breathed the perfume of orange and citron gardens, which are planted without order or art. Pleasant rivulets go mur- muring amongst the rows of trees which press thickly against each other: their branches are bent down, with the weight of flowers and fruits, into the running water at their feet, where they refresh themselves, and add to the gende noise of the streams. Noble palm-trees rise, like mina- rets, above these embalmed groves. This is a very different scene from that of the Cenobite monastery, and of the rocks and valleys of the Dead Sea! 'It is not possible to conceive the pleasure,' he says, ' we felt in plunging into these delicious thickets, after our eyes had been so long accustomed to spread themselves over bare and burning flats, and our ears had been struck by no pleasanter sounds than those of the shrill and incessant cries of an Arabian populace, al- ways apparently threatening and revolting.' ??? p.

132.

*At Jaffa our author delivered his letters of in- troduction to the aga, a brave, able, cunning, cruel, and ambitious Circassian, who seems to aim at acquiring some day an independent power. The Christian convent here is on a tolerably good footing with the chief of the go- vernment, owing to the adroitness of * le Pere Cure,' Juan Solar, a sharp intriguing ecclesi- astic, who has mad'e a friend of Elias Basila, a Syrian Christian, and second writer to Mehemet Aga. Le Pere Cure intrigues that his protector Elias may become prime minister ; and prompts, pushes, and whispers to advance this laudable end, without ceasing. The second writer, how- ever, is too indolent and too honest, says our au- thor: he smokes 200 pipes a day, while he is waiting quietly till his greatness shall be thrust upon him. M. de Forbin had determined to cross Palestine, for the purpose of arriving at Damietta. Tiie journey is far from a safe one ; but the aga furnished him with a good con- ductor. Near the ruins of Azoth, so flourishing under the Philistines, our author fell in with a Bedouin, wandering, as he stated, without any object, and mounted on a beautiful mare, with gazelle eyes, whose praises he loudly sounded, and was delighted to hear re-echoed. He stooped over the neck of the graceful animal, spoke to it as to a favorite child, and covered it with kisses.*

Ascalon is totally deserted : not one inhabitant remains within its walls. It is placed, like Naples, on an amphitheatncal slope, forming a half circle, and the sea forms the chord of the arc. The gates and ramparts still stand : the streets conduct to the squares : the wild antelope mounts the staircases of the palaces : the vast churches ring with the cry of the jackal ; and bands of these animals meet in the great market- place. They are now the sole masters of Asca- lon ! The Arabs, who call itDjaurah, struck by its

melancholy appearance, regard it as the abode

of evil spirits. They stoutly affirm that durinsf the night the city is often seen illuminated : that the sound of innumerable voices is heard, also the neighmg of horses, the clashing of arms, and all the tumult of combats. An exquisite temple of Venus, in the Greek style, stands not far from the Gothic Christian monuments. Lady Esther Stanhope has recently made excavations at As- calon ; but the expense was found by iier lady- ship to be too great, and her attempts have been discontinued. JNI. de Forbin adds a note re- specting our countrywoman, who has taken up her abode in the East: ??? ' Lady Esther Stanhope has inhabited Syria for some years past : at pre- sent she resides in the small town of Antoura, above Lebanon. Her good actions have con- quered the affections of the Bedouin Arabs ; and people say, that they are very well disposed to proclaim her their queen. A ceremony, which certainly would have resembled a coronation, was prepared for her at Tadmour, the ancient Palmyra, but her modesty induced her to decline this singular triumph.' (p. 143.)

But we have been better pleased, we confess, with Mr. Buckingham's Travels in Palestine, than with any other recent publication respecting this country. 'The itineraries of Catholic devo- tees,' he justly remarks, ' have furnished the most ample details regarding the sanctuaries and holy places ; and the names of Piiocas, Quaresmius, and Adrichomius, are associated with these early labors. The extended journeys of Protestant scholars have enlarged our acquaintance with objects of more general enquiry, and the names of Maundrell, Shaw, and Pococke, stand pre-emi- nent among these. The profound researches of both English and French critics have laid open all the stores of learnmg in illustration of the ancient geography of Judea; and the works of Keland and D'Anville, are monuments of eru- dition and sagacity that would do honor to any country, while the labors of very recent travellers would seem to close the circle of our enquiries, by the pictures which they have given of the general state of manners and the present aspect of the country, retaining still the freshness of their original coloring. Yet, among all those who have made the Holy Land the scene of their researches, there has not been one who did not conceive that he was able to correct and add to the labors of his predecessors, and, indeed, who did not really notice something of interest which had been disregarded before. It is thus that Dr. Clarke expresses his doubts and disbe- lief at every step, and attempts to refute, with indignation, authorities which travellers of every age had hitherto been accustomed to venerate. And it is thus, too, that Chateaubriand confesses, with all the frankness of disappointment, that, after he had read some hundreds of volumes on the country he came to visit, they had given him no accurate conceptions of what he subsequently beheld for himself.' (Pref. p. v. vi.)

Mr. Buckingham embarked at Alexandria on the 25th of December, 1815, on board a shuk- toor, a three-masted vessel peculiar to the navi gation of the Syrian coast, about thirty feet in length, by fifteen in its extreme breadth, and about forty tons burden. The captain and his

crew, all together ten in number, were Syrian Arabs, professing the Greek religion, unskilful in the management of their vessel, and utterly ignorant of navigation. After a tedious and perilous voyage of thirteen days, the circum- stances of which it is not necessary to detail, the vessel entered in safety the harbour of Soor, the ancient Tyre, whence he determined to pro- secute his journey by land.

*Of the present state of this proud mart of an- tiquity, whose resources of wealth and power are enumerated with so much eloquence by the pro- phet when proclaiming its destined fall ००० 'whose merchants were princes ००० whose traffickers were the honorable of the earth,' (Isaiah xxiii. 8) ००० we have the following interesting particulars : ००० * The town of Soor is situated at the extremity of a sandy peninsula, extending out to the north- west for about a mile from the line of the main coast. The breadth of the isthmus is about one- third of its length; and, at its outer point, the land on which the town itself stands becomes wider, stretching itself nearly in right angles to the narrow neck which joins it to the main, and extending to the north-east and south-west for about a third of a mile in each direction. The whole space which the town occupies may be, therefore, about a mile in length, and half a mile in breadth, measuring from the sea to its inland gate. It has all the appearance of having been once an island, and at some distant period was, perhaps, of greater extent in length than at pre- sent, as from its north-east end extends a range of fragments of former buildings, beaten down and now broken over by the waves of the sea. Its south-western extreme is of natural rock, as well as all its edge facing outward to the sea; and the soil of its central parts, where it is visi- ble by being free of buildings, is of a sandy nature.*

' While this small island preserved its original character, in being detached from the continent by a strait of nearly half a mile in breadth, no situation cculd be more favorable for maritime consequence; and, with so excellent a port as this strait must'have afforded to the small trading vessels of ancient days, a city built on it might, in time, have attained the high degree of splen- dor and opulence attributed to Tyrus, of which it is thought to be the site. On approaching the modern Soor, whether from the sea, from the hills, from the north, or from the south, its ap- pearance has notliing of

magnificence. The island on which it stands is as low as the isth- mus which connects it to the main land, and, like this, all its unoccupied parts present a sandy and barren soil. The monotony of its gray and flat- roofed buildings is relieved only by the minaret of one mosque with two low domes near it, the ruins of an old Christian church, the square tower without, the town to the southward or south-east of it, and a few date-trees scattered here and there among the houses. On entering the town, it is discovered to have been walled ; the portion towards the isthmus still remaining, and being entered by a humble gate, while that on the north side is broken down, showing only detached fragments of circular towers greatly dilaoidated. These walls, both from their con-

fined extent and style of building, would seem to be of less antiquity than those which encom- passed Tyrus in the days of its highest splendor, as they do not enclose a space of more than two miles in extent, and are of ordinary workmanship. They do not reach beyond the precincts of the present town, thus shutting out all the range to the northward of the harbour, which appears to be composed of the ruins of former buildings. The tower to the south-east is not more than fifty feet square and about the same height. It is turretted on the top, and has small windows and loop-holes on each of its sides. A flight of steps leads up to it from without, and its whole ap- pearance is much like that of the Saracenic buildings in the neighbourhood of Cairo. At the present time the town of Soor contains about 800 substantial stone-built dwellings, mostly having courts, wells, and various con- veniences attached to them, besides other smaller habitations for the poor. There are, within the walls, one mosque, three Christian churches, a bath, and three bazaars. The inhabitants are at the lowest computation from 5000 to 8000, three-fourths of which are Arab Catholics, and the remainder Arab Moslems and Turks.' (p. 47,

48.)

*During the fair season, that is, from April to November, the port is frequented by vessels from the Greek islands, the coasts of Asia Minor, and Egypt, and a considerable trade is carried on in all the productions of those parts ; Soor being one of the marts of supply for Damascus, for which its local situation is now, as it formerly was, extremely eligible. The mercantile people are chiefly tˆhristians, whose dress resembled that of the same class in Cairo : the women were habited partly after the Egyptian and partly after the Turkish fashion. In the court of the house where our traveller lodged, he observed a female divested of her outer robes. * Her garments,' he says, 'then appeared to resemble those of the Jewish women in Turkey and Egypt : the face and bosom were exposed to view, and the waist was girt with a broad girdle fastened by massy silver clasps. This woman, who was a Christian, wore also on her head a hollow silver horn, rearing itself*

upwards obliquely from her fore- head, being four or five inches in diameter at the root, and pointed at its extreme ; and her ears, her neck, and her arms, were laden with rings, chains, and bracelets. The first peculiarity re- minded me very forcibly of the expression of the Psalmist, ‘ Lift not up thine horn on high, speak not with a stiff” neck.’ ‘All the horns of the wicked will I cut ofi’, but the horns of the righ- teous shall be exalted ;’ similar illustrations of which Bruce had also found in Abyssinia, in the silver horns of warriors and distinguished men. The last recalled to ray memory, with equal readiness, the species of wealth which the chosen Israelites were commanded to borrow from the Egyptians, at the time of their departure from among them ; and of the spoils taken in their wars with the Canaanites whom they dispos- sessed, when it is stated that many shekels of silver and of gold were produced on melting down the bracelets, the ear-rings, and other or- naments of the women and children whom they

had made captive. Most of the women that we saw wore also silver bells, or other appendages of precious metals, suspended by silken cords to tlie hair of the head, and large high wooden pat- tens, which gave them altogether a very singular appearance.’ (p. 49, 50.)

As the state of the country rendered it neces- sary to Mr. Buckingham’s personal security that he should have a firman from the pacha of Acre, he went thither by the common route, which has so often been described by preceding travellers as to render any notice of it unnecessary. On his arrival at Acre, he found that Suliman Pasha, the second successor of the celebrated Djeziar, had departed thence early on the morning of the preceding day, with a large body of troops, to secure the possession of the districts of Galilee, Samaria, and all Judea to the southward ; while one of his confidential officers had previously marched with another body towards Damascus (the pacha of which had lately died), in order to prepare the way for his master’s entrance. As it was known that Suliman would make his first halt at Jerusalem, after securing possession of its neighbourhood, the English consul recommended that our author should proceed thither, and ob- tain from his hand the only protection under which he could now safely travel. While he was detained at Acre, Mr. Buckingham employed his unwilling leisure in embodying such observa- tions on it as he had been able to make, together with the information which he had obtained respecting that place from those who had been long resident there.

Several curious anecdotes are recorded by our author of the late pacha,, one of which we tran- scribe, as it justifies the appellation of Djezzar, or

the Butcher, by which that ferocious and avaricious Moslem is generally known. ‘ Some short time before his decease, he was conscious of the approach of death ; but so far was he from showing any remorse for his past actions, or discovering any indications of a wish to make atonement for them, that the last moments of this tyrant were employed in contriving fresh murders, us if to close with new horrors the bloody tragedy of his reign. Calling to him his father-in-law, Sheikh Taha, as he himself lay on the bed of death, ‘ I perceive,’ said he, ‘ that I have but a short time to live. What must I do with these rascals in my prisons ? Since I have stripped them of every thing, what good will it do them to be let loose again naked into the world ? The greatest part of them are governors, who, if they return to their posts, will be forced to ruin a great many poor people, in order to replace wealth which I have taken from them ; so that it is best both for their own sakes, and for that of others, that I should destroy them. They will be then soon in a place where proper care will be taken of them, a very good place, where they will neither be permitted to molest any one, nor be themselves exposed to molestation. Yes, yes ! that’s best ! Despatch them !’ In obe- dience to the charitable conclusion of this pa- thetic apostrophe, twenty-three wretches were immediately added to the long list of the victims of Djezzar Pasha’s cruelty ; and it is said they were all of them thrown into the sea together.

as the most expeditious mode of execution.’ (p. 80,81.)

On his departure from Accho, or Acre, Mr. Buckingham passed through Nazareth (of whose present state we have a pleasing account) ; and, while his mules were feeding at the little village of Deborah, he ascended Mount Tabor, on the summit of which is an oval plain, of about a quarter of a mile in its greatest length, covered with a bed of fertile soil on the west, and having at its eastern end a mass of ruins, seemingly the vestiges of churches, grottoes, strong walls, and fortifications ; all decidedly of some anti- quity, and a few appearing to be the works of a very remote age The panoramic view from the summit he found equally beautiful and extensive. Having with difficulty escaped being plundered by some of the marauding soldiers who, at this time, infested the country, our author, on regain- ing the village of Deborah, was obliged to re- trace his steps to Nazareth ; whence he resumed his journey towards Jerusalem on the 1 3th of January, 1816, taking his route over Mount Carmel, through Dora (in all probability the Dor of the Scriptures. See Joshua xvii. 11. ××× Judges i. 27), and Cffisarea, by Joppa and Itamla, which town is supposed to be erected on the site of the ancient llamah.

Of the ancient history of Jaffa, the Joppa of the sacred writings, we have a copious and well- written account. As it now appears, this place ‘ is seated on a promontory jutting out into the sea, and rising to the height of about

150 feet above its level, having a desert coast to the north and south, the Mediterranean on the west, and fertile plains and gardens beliind it on the east. It is walled around on the south and east, to- wards the land, and partially so on the north and west towards the sea. There are not more than 1000 habitations in all the town; and the number of three mosques, one Latin convent, and one Greek church, will afford a guide to estimate the relative proportions of these religi- ous bodies to each other. There is a small fort near the sea on the west, another on the north, and a third near the eastern gate of entrance, mounting in all from fifty to sixty pieces of can- non ; which, with a force of 500 horse, and nearly the same number of infantry, would enable the town to be defended by a skilful commander. The port is formed by a ledge of rocks running north and south before the pro- montory, leaving a confined and shallow space between these rocks and the town. Here the small trading vessels of the country find shelter from south and west winds, and land tiieir car- goes on narrow wharfs running along before the magazines. When the wind blows strong from the northward, they are obliged to warp out, and seek shelter in the small bay to the north-east of the town, as the sea breaks in here with great violence, and there is not more tlian three fa- thoms water in the deepest part of the harbour : so accurately do the local features of the place correspond with those given of it by Josephus.' (p. 157, 158.)

On his arri'al at Jerusalem, Mr. Buckingham proceeded to the Latin convent of the Terra Santa, where he met with a hearty welcome from the

procuratore, to whose holy care and protection the president of Nazareth had recommended him as a ' Milord Inglese, richissimo, affabilis- simo, ed anche dottissimo.' The monks re- siding in this convent (with the exception of two Italians) were Spaniards, and displayed all the bigotry and ignorance for which the ecclesiastics of that country have long been pre-eminently distinguished. Among the news of Europe, the re-establisliment of the Inquisi- tion was spoken of, and all exulted in the hope that under so wise and pious a king as Fer- dinand the church would again resume its em- pire, and Christianity flourish ! The brightest trait which they could find in his character was, that on any application to him for money to be applied to pious purposes, if the ' Convento della Terra Santa' was named, he usually gave double the sum demanded. ' Let the inqui- sition reign,' said they, ' and the church will be secure. Let the cross triumph, and the Holy Sepulclire shall soon be redeemed from the hands of infidels by another crusade, in which all our injuries will be avenged.' Instead of the com- fort, apparent equality, and cheerfulness, which reigned at Nazareth,

and even at Ramlah, all seemed here to stand in fear of each other ; gloom and jealousy reigned throughout, and the names of the padre superiore, and of the pro- curatore generale, were as much dreaded as they were respected. When we talked of the nature of their duties here, every one complained of them as severe in the extreme. The tinkle of the bell for service was heard at almost every hour of the day ; and, besides getting up two hours before sunrise to celebrate a mass, they were obliged to leave their beds every night at half-past eleven, for midnight prayers. Nothing was talked of but suffering, and the difficulty of obedience, ardent desire to return to Europe, and a wish to be sent any where, indeed, on the out-stations, rather than to continue at Jerusalem. Not even in a solitary instance did I hear a word of resignation, or of the joy of suffering for Christ's sake, or the love of persecution, or of the paradise found in a life of mortification, so often attributed to these men. One complained ' I came here for three years only, and have been kept seven ; God grant that I may be able to return home at the coming spring.' Another said, ' what can we do ? we are poor ; the voyage is long; and unless we have permission, and some provision made for our way, how can we think of going?' A third added, 'in Chris- tendom we can amuse ourselves by occasional visits to friends ; and, during long fasts, good fish, excellent fruit, and exquisite wines are to be had.' While a fourth continued, ' and if one should be taken sick here, either of the plague or any other disease, we have no doctor but an old frate of the convent, no aid but from a few spurious medicines, and nothing, in short, to "reserve one's life, dearer than all beside; so Jiat we must end our days unpitied, and quit the world before our time." (p. 179,180.) This convent is called ' II Convento della Terra Santa,' by way of distinction, and is at the head of all the religious establishments of the Romish faith throughout the Holy Land. The superior

is immediately dependent upon the pope, but the inferior members are sent from Naples, Sicily, and the South of Spain, indiscriminately. The funds of the institution are chiefly supplied from Rome; but these supplies being inter- rupted, during the late war, they were dependent on the charitable donations of their flock at Jerusalem. Legacies, however, are frequently bequeathed to them by the devout in Europe; and large sums are sent to them by the monarchs in that quarter of the globe. Among these, the donations of the present king of Spain are ex- ceedingly liberal; so much so, that, when a secretary of the British ambassador at Constan- tinople was sent, in 1815, with a present of ††l500 from the prince regent of England, the monks did not give him the most flattering re- ception, telling him that tlie king of Spain had just before sent them about ††6000 sterling !

Upwards of 100 pages are devoted to a de- scription and investigation of the Holy Places in Jerusalem (including an excursion to ISethlehem), the

actual site of which places it is impossible to identify, at this distance of time. As our traveller has added very little to the previous descriptions of Dr. Clarke (on whom he intro- duces some rather severe animadversions), and of viscount Chateaubriand, we shall not detain our readers with his accounts of these reputedly sacred spots, and of the various legendary tales connected with them.

But the following particulars, relative to the actual population and trade of Jerusalem, are too interesting to be omitted. From the most accurate estimate which his means of information enabled him to form, it appears that ' the fixed residents, more than one half of whom are .Ma- hometans, are about 8000; but the conlinja] arrival and departure of strangers make the total number of those present in the city, from 10,000 to 15,000 generally, according to the season of the year. The proportion which the numbers of those of diff'erent sects bear to each other, in this estimate, was not so easily ascer- tained. The answers which I received to enquiries on this point were framed difl'erently by the professors of every diff'erent faith. Each of these seemed anxious to magnify the number of those who believed his own dogmas, and to diminish that of the professors of other creeds. Their accounts were therefore so discordant that no reliance could be placed on the accuracy of any of them. The JNIahometans are cer- tainly the most numerous, and these consist of nearly equal proportions of Osmanli Turks, from Asia Minor; descendants of pure Turks by blood, but Arabians by birth; a mixture of Turkish and Arab blood, by intermarriages ; and pure Syrian Arabs, of an unmixed race. Of Europeans, there are only the few monks of the Catholic convent, and the still fewer Latin pil- grims who occasionally visit them. The Greeks are the most numerous of all the Christians, and these are cluefly the clergy and devotees. The Armenians follow next in order, as to num- bers, but their body is thought to exceed that of the 'Greeks in influence and in wealth. The in- ferior sects of Copts, Abyssiniaiis, Syrians, Ne>'- torians, INIaronites, Chaldeans, kc~, are scarcely

perceptible in the crowd. And even the Jews are more remarkable from the striking pe- culiarity of their features and dress, than from their numbers, as contrasted with the other bodies.' (p. 260 262.)

This account varies in some decree from the estimates made by other recent travellers in Pa- lestine. Captain (now colonel) Light, who vi- sited Jerusalem in 1814, computed its popula- tion at 12,000 ; but ˆIr. Joliffe, who was there in 1817, states that the highest estimate makes the total

amount to 25,000 ; of these, there are supposed to be

Mahometans .... 13,000 Jews . . . from 3000 to 4000

Greeks 2000

Roman Catholics . . . 800

Armenians 400

Copts 50

These numbers vary from the amount speci- fied by Mr. Buckingham, but it is probable that the increased number of pilgrims, whom mis- taken piety might conduct to Jerusalem in 1817, will account for the difference. Whether, how- ever, we take its population at 15,000, or even 25,000, it is a very slender aggregate, compared with the flourishing population which the city once supported : but the numerous sieges it has undergone, and their consequent spoliations, have left no vestige of its original power.

*' JerusEdem, under the government of a Turkish aga, is still more unlike Jerusalem as it existed in the age of Solomon, than Athens during the admmistration of Pericles, and Athens under the dominion of the chief of the black eunuchs. We have it upon judgment's record, that, before * a marching army a land has been as the garden of Eden, behind it a desolate wilderness.' Joel ii. 3. The present appearance of Judea has em- bodied the awful warnings of the prophet in all their terrible reality.' Joliffe's Letters from Pa- lestine, page 102. From Christmas to Easter is the period in which Jerusalem is most populous, the principal feasts of the Christmas falling be- tween these great holidays. At the latter fes- tival, indeed, it is crowded, and the city exhibits a spectacle nowhere else to be seen in the world. Mecca and Medina offer, perhaps, a still greater variety of persons, dresses, and tongues ; yet there the pilgrims visit but one temple, and are united in one faith ; while here, Jews, Ma- hometans, and Christians, all perform their devotions within a few yards of each other, each proudly believing that this city of the living God is holy and noble to himself, and his peculiar sect alone.*

In Jerusalem there is scarcely any trade, and but few manufactures. The only one that at all flourishes is that of crucifixes, chaplets, and relics, of which, incredible as it may seem, whole cargoes are shipped off from Jaffa, for Italy, Portugal, and Spain. Religion being almost the only business which brings men of opposite quarters together here, there is much less bustle than would be produced in a trading town by a smaller number of inhabitants. This city being included within the pachalic of Damascus, is governed by a Mutesellim, appointed from

thence; and the nature of his duties, and the extent of his responsibility, are similar to those in other Turkish towns. No difference is created by the peculiar sanctity of this place, as is done by that of the Arabian cities of Mecca and Me- dina ; for, while a governor of either of these is honored by peculiar privileges, the mutesellim of Jerusalem ranks only as the magistrate of a provincial town. The force usually kept up here consists of about 1000 soldiers, including horse and foot. These are armed and equipped . in the common Turkish fashion, and are com- posed of Turks, Arabs, and Albanians. The walls of the city, added to the strength of its natural position, form a sufficient defence against any attack from the armies of the country ; and some few cannon, mounted at distant intervals on the towers, would enable them to repel a be- sieging force of Arabs, but it could offer no effectual resistance to an attack conducted on the European system of war. From the general sterility of the surrounding country, even when the early and the latter rains favor the husband- man's labours, and from the frightful barrenness that extends all around Jerusalem during the parching droughts of summer, every article of food is much dearer here than it is in any other part of Syria. The wages of the laborer are ad- vanced in the same proportion ; as the lowest rate given here to those who perform the meanest offices is about the third of a Spanish dollar per day ; while, on the sea-coast of this country, it seldom exceeds a sixth, and in Egypt is never more than an eighth of the same coin. (p. 262,

263.)

The preparations for the prosecution of his journey being completed, our author bade adieu to Jerusalemon the 28th of January, 1816, in com- pany with Mr. Bankes, wˆhom he had met there. The route, which they had marked out to them- selves, wjas, to cross the Jordan and pass through Jerash (the ancient Geraza) and Gamala, two cities of whose ruins they had heard much. In this excursion they traversed the countries of Bashan and Gilead, on the east of the Jordan : and this portion of Mr. Buckingham's travels is not only the most interesting part of his volume, but may also be termed entirely new. For that stream has hitherto been the boundary of all our knowledge relative to the ancient Judea, no tra veller having explored the countries beyond it, except the late Dr. Seetzen and Mr. Burkhardt.

The first place that received the travellers was Jericho ; the road thither is rocky and wild, amidst grand and awful scenery ; and it is still infested by robbers. ' The wˆhole of this road,' says Mr. Buckingham, ' from Jerusalem to the Jordan, is held to be the most dangerous about Palestine, and, indeed, in this portion of it, the very aspect of the scenery is sufficient, on the one hand to tempt to robbery and murder, and on the other to occasion

a dread of it in those who pass that way. It was partly to prevent any accident happening to us in this early "age of our journey, and partly, perhaps, to calm our fears on that score, that a messenger had been despatched by our guides to an encampment of their tribe near, desiring them to send an escort to meet us at this place. We were met here, ac

cordingly, by a band of about twenty persons on foot, all armed with matchlocks, and presenting the most ferocious and robber-like appearance that could be imagined. The effect of this was heightened by the shouts which they sent forth from hill to hill, and which were fe-echoed through all the valleys, while the bold projecting crags of rock, the dark shadows in which every thing lay buried below, the towering height of the cliffs above, and the forbidding desolation which every where reigned around, presented a picture that was quite in harmony throughout all its parts.

' It made us feel most forcibly the propriety of its being chosen as the scene of the delightful tale of compassion which we had before so often admired for its doctrine, independently of its local beauty. See Luke x. 30 ??? 34.

' One must be amid these wild and gloomy solitudes, surrounded by an armed band, and feel the impatience of the traveller who rushes on to catch a new view at every pass and turn; one must be alarmed at the very tramp of the horses' hoofs rebounding through the caverned rocks, and at the savage shouts of the footmen, scarcely less loud than the echoing thunder pro- duced by the discharge of their pieces in the val- leys ; one must witness all this upon the spot, before the full force and beauty of the admirable story of the Good Samaritan can be perceived. Here pillage, wounds, and death, would be ac- companied with double terror, from the frightful aspect of every thing around. Here the unfeel- ing act of passing by a fellow creature in dis- tress, as the Priest and Levite are said to have done, strikes one with horror, as an act almost more than inhuman. And here, too, the com- passion of the Good Samaritan is doubly virtu- ous, from the purity of the motive which must have led to it, in a spot where no eyes were fixed on him to draw forth the performance of any duty, and from llie bravery which was ne- cessary to admit of a man's exposing himself, by such delay, to the risk of a similar fate to that from which he was endeavouring to rescue his fellow-creature.' (p. 292, 293.)

On quitting Jericho, the travellers crossed the Jordan (it appears) pretty nearly at the same ford as that which was passed by the Is- raelites when

the river had overflowed its banks. Now, however, the stream appeared to be little more than twenty-five yards in breadth ; it was extremely rapid, and its otherwise turbid waters were here tolerably clear, as well as pure and sweet to the taste, in consequence of its flowing over a bed of pebbles. From the valley of the Jordan they proceeded through the mountains of Gilead, among which they found numerous lofty plains bearing the marks of high fertility. They now entered the country of Decapolis, as it was called in the Roman division of Palestine (which is so often mentioned in the New Testa- ment), or the province of Gaulonitis from Gau- lon or Golan, its early capital. From Mr. Buckingham's description of this interesting re- gion, we select one or two paragraphs, illustra- tive of the geography of the sacred volume. ' We continued our way over this elevated tract, con- tinuing to behold, with surprise and admiration, a

beautiful country on all sides of us ; its plains co- vered with a fertile soil, its hills clothed with fo- rests, at every new turn presenting the most magni- ficent landscapes that could be imagined. Among the trees, tiie oak was frequently seen, and we know that this territory produced them of old. In enumerating the sources from which the sup- plies of Tyre were drawn in the time of her great wealth and naval splendor, the prophet says, ' of the oaks of Bashan have they made thine oars.' Some learned commentators, indeed, be- lieving that no oaks grew in these supposed de- sert regions, have translated this word by alders, to prevent the appearance of inaccuracy in the inspired writer. The expression of the 'fat bulls of Bashan, which occurs more than once in the Scriptures, seemed to us equally inconsistent, as applied to the beasts of a country generally thought to be a desert, in common with the whole tract which is laid down in our modern maps as such, between the Jordan and the Euphrates ; but we could now fully comprehend, not only that the bulls of this luxuriant country might be proverbially fat, but that its possessors too might be a race renowned for strength and comeliness of person.

' In cur way, just as we came out of a thick wood and opened on an extensive view, we were surprised by a party of peasants on foot, lo the number of thirty at least, all armed with muskets slung across their shoulder. These were Arabs, though they possessed scarcely any thing but the . language in common with the Arabs whom we had been accustomed to see. The great features of difference observable in them were, that they were generally taller, more robust, and of finer forms, and fairer complexions. Some of them had even light eyes, and many of them brown and auburn hair, which they wore in tresses hanging over their shoulders. The dress of these men differed also both from that of the desert Arabs, and of the Syrian peasants. They wore long white shirts girded round the loins, but neither turbans nor other coverings for their heads. From retaining the beard, while the hair was suffered to hang in long and curling

locks over the neck, they resembled the figures which appear in the Scriptural pieces of the great masters, and many of them reminded us of the representation of Christ himself in the principal scenes of his life. These men were cultivators of the earth, and had been occupied in the tillage of their lands, from which labor they were now return- ing. As they live in a state of complete inde- pendence of pachas or other governors, there are no boundaries that mark any peculiar portion of the earth as private property. Rich land is so abundant in every direction near them, that the only claim to the possession of any particular spot is that of having ploughed and sown it, which entitles the person so doing to the har- vest of his toils for the present season. In al'^ their occupations they continue to be armed, partly because their country is sometimes scoured by horse Arabs from the eastern deserts, against whom they are then called to defend themselves ; and partly because it is the fashion of the country to be armed, insomuch, that the being M'ithout weapons, of some kind or other, is always

imputed to great poverty or to cowardice.' (p.

327, 329.)

At lengtli they reached the ruins of Jerash (or, as Dr. Seetzen terms it, Dscherrasch), the ancient Geraza : of these interesting remains we liave a long description accompanied by several plates and vignettes, without the aid of which it is im- possible to give any account of the beautiful re- liques of ancient art that have escaped the united ravages of time, and of the Arabs. The discovery of a noble triumphal arch, though not of the chastest kind, a naumachia for the exhi- bition of sea-fights, a palace, baths, two theatres, four temples, and several Greek inscriptions, re- paid the travellers for the trouble and risk which they had incurred in penetrating to this remote region. Mr. Buckingham is of opinion that Jerash is the Gergashi of the Hebrews.

On the 2nd of February, 1816, nearly six weeks after their departure from Jerusalem, Messrs. Buckingham and Bankes reached the modern Arab settlement of Oom-Kais on the site of the ancient Gamala, whose ruins they alighted to examine. In their ascent to the hill, on the summit of which the remains of the Roman city stand, they explored numerous sepulchres, ex- cavated in the side of the gray limestone rock, which appear to have formed its necropolis. Although these repositories of the dead had been violated, and innumerable sarcophagi broken, yet they discovered not fewer than 200 which were perfect ; some of them were highly ornamented with

garlands and wreaths ; others with heads of Apollo and little Cupids, or genii with wings, joining hands together beneath those heads ; and some with shields similar to those which the travellers had seen at Geraza. The city of Ga- mala appears to have been nearly square, about half a mile in its greatest length ; and its breadth, perhaps, one-fourth less: it stands in a very commanding situation, and from its height enjoys a grand and exteiKive vievi. The ruins are those of two theatres and an Ionic temple : the prevalent orders of architecture are Ionic and Corinthian, though there are some few capitals of the Doric order. The stone was sometimes the gray rock of the mountain, and sometimes the black volcanic stone used in the tombs and sarcophagi. One of these ancient Roman tombs was used as a carpenter's shop ; and another, into which the travellers entered, was cleansed out and used as aprivate dwelling ; a perfect sarcophagus still remained within, which was used by the family as a chest for corn and other provisions. An affair of blood be- tween our author's guides and the inhabitants of the vicinity of Tiberias, together with other cir- cumstances, compelled him, instead of proceed- ing thither directly, to recross the Jordan and return to Nazareth, whence he proceeded to Ti- berias, now called Tabareeah.

The fine piece of water usually called the lake or sea of Tiberias abounds with a great va- riety of excellent fish, but, from the poverty and indolence of the people who live on its borders, there is not a single boat or raft throughout its whole extent : so that the few fish that are occa- sionally taken are caught by lines from the shore, nots never being used. jMr. Buckingham

made an excursion along the borders of this lake, in the course of which he visited Tal-hheun o. Tal-hhewm (as it is variously pronounced), an Arab station standing on the site of the ancient Capernaum, around which he discovered various remains of what must have formerly been a very considerable settlement. The waters of the lake of Tiberias lie in a deep basin, surrounded on all sides with lofty hills, excepting only the nar- row entrance and outlets of the Jordan at each ex- treme ; for which reason long continued tempests from any one quarter are unknown here ; and this like the Dead Sea, with which it communi- cates, is, for the same reason, never violently agi- tated for any length of time. The same local fea- tures, however, render it occasiotially subject to whirlwinds, squalls, and sudden gusts from the hollow of the mountains, which, as in every other similar basin, are of momentary duration, and the most furious gust is instantly succeeded by a calm; Luke viii. 23, 24. (p. 468.)

Mr. Buckingham bears testimony to the fide- lity of Josephus's description of this lake, De Bell, Jud. lib.iii. c. 13. ►► 7, the features of which, he says, are drawn by the Jewish historian with an accuracy that could only

have been attained by one who had resided in the country. ‘ The size is still nearly the same, the. borders of the lake still end at the beach, or the sands, at the feet of the mountains which environ it. Its waters are still as sweet and temperate as ever, and the lake abounds with great numbers of fish of various sizes and kinds.

‘ In more early times, the sea of Galilee, or lake of Gennesareth, was called the sea of Chinnereth, from a city of that name seated on it, belonging to the children of Naphtali, and the edge of this sea on the other side Jordan, eastward, was made the western boundary of the portion of Gad, who occupied all the cities of Gilead, and half the land of the children of Ammon. Gennesa- reth is most probably the original name of this sea of Chinnereth, gradually corrupted; Galilee was the name given to the lake from its situa- tion, on the eastern borders of that division of Palestine ; and Tiberias, which is its most mo- dern name, must have been bestowed on it after the building of that city by Herod. This last both the town and the lake still retain, under the Arabic form of Tabareeah ; and the present inha- bitants, like the earliest ones, call their water a sea, and reckon it, and the Dead Sea, to the south of them, to be the two largest known, except the great ocean. The appearance of the lake, as seen fromithis point of view at Capernaum, is still grand ; its greatest length runs nearly north and south, from twelve to fifteen miles, and its breadth seems to be, in general, from six to nine miles. The barren aspect of the mountains on each side, and the total absence of wood, give, however, a cast of dulness to the picture ; and this is in- creased to melancholy by the dead calm of its waters, and the silence which reigns throughour its whole extent, where not a boat or vessel of any kind is to be found.’ (p. 470, 471.)

The town of Tabareeah or Tiberias presents but few objects worthy of note, excepting the hot baths and some other remains of antiquity in its neighbourhood. Its total population does not

exceed 2,000 souls, one half of whom are Jews, principally from Europe, and the remainder are Mahometans, with the exception of about twenty Christian families of the Romish commu- nion. The military force here rarely exceeds twenty or thirty soldiers, under the command of an aga, and there are four old cannon mounted on difi’erent parts of the walls. Provisions are by no means abundant, and therefore are gene- rally dear : and fish, when occasionally taken by a line from the shore, are sold either to the aga, or to some rich Jews, at an exorbitant price.

In retracing his way to Nazareth, Mr. Buck- ingham deviated from the road, in order to visit Subussta, a humble village, on a strong hill, in a commanding and pleasant situation, being sur- rounded by fruitful valleys and abundance of olive trees. In its centre stood the city of Sa- maria, by Herod called Sebaste (of which its present name is a corruption). Here are some remains of ancient edifices, particularly of a large cathedral church attributed to the piety of the empress Helena. Nablous, or Kapolose (the Sichem of the Scriptures), is, as we have stated, a populous town, containing nearly 1 0,000 inha- bitants, all of whom, with the exception of about fifty Greek Christians, are Mahometans : and the grounds around it bear the marks of opu- lence and industry. It fully occupies the valley between the two hills of Gerizim on the south, and Ebal on the north. Though a place of con- siderable trade with Damascus and the towns on the sea-coast, yet there were no Jews here, who remained as permanent residents. The Samaritans, of whom a remnant remained in Maundrell's time (the close of the seven- teenth century), are now reduced to scarcely half a dozen, or a dozen families, who perform their sacred rites in studied seclusion and ob- scurity, and are, if possible, more despised here than the Jews are in other Mahometan cities.

PAL'ETTE, n. s. Fr. patette ; Ital. paletta, of Lat. pula. A painter's color board.

Let the ground of the picture be of buch a mix- ture, as there may be something in it of every color that composes your work, as it were the con- tents of your palette. Dryden. P>e yet thy pencil tries her nicer toils.

Or on thy -palette lie the blended oils,

Thy careless chalk has half atchiev'd thy art,

And her just image makes Cleora start. Tickle. When sage Minerva rose, From her sweet lips smooth elocution flows. Her skilful hand an iv'ory palette graced, Where shining colours were in order placed. Gay.

PALEY (Dr.), sub-dean of Lincoln, and rec- tor of Bishop Wearmouth, was born at Peter- borough in 1743. His father, who held a small living in that place, soon afterwards removed to Giggleswick in Yorkshire, where he was ap- pointed to be master of a grammar-school, and continued to act in that capacity till his death, which happened in tiie year 1799. Dr. Paley was educated under his father's care until he became a student of Christ College, Cambridge, in 1759. In 1763 he took the degree of bache- lor of arts, and in the previous exammation had the honor of appearing the first man of his year. His studies now being completed, and no other engagement offering, he went to be assistant at

Greenwich school. In that situation he remained nearly three years, and 'Jtien, upon being elected a fellow of Christ College, returned to a residence in the university. His election into a fellowship of the college was very soon followed by an appointment to be one of the tutors of it. His lectures on moral and political philosophy, and on the Greek Testament, contained the out- lines of the works by which he has so much benefited the world, and his old pupils preserve in their note-books some of the arguments and illustrations which have rendered them so cele- brated and so useful. After his return to tlie university, he continued to live in it about ten years. During this time he was rather a hard worker than a hard student. To his engagement as a public tutor he added others still more numerous as a private one, and, by these united labors, was in the receipt of a very considerable income. In 1770 Dr. Paley left college, and married. He had at first a small benefice in Cumberland; then the living of Appleby in Westmoreland, worth about ––300 a-year; and in a short time was promoted to a prebendal stall in the cathedral of Carlisle, together with the living of Dalston, a pleasant village situated in the neighbourhood of that city, and between it and Rose-castle, the seat of the bishop. In 1782, on the resignation of Dr. John Law, who was created an Irish bishop, he was made arch- deacon of the diocese, and not long afterwards succeeded Dr. Burn, the author of the Justice of the Peace, &c., in the chancellorship. All these preferments were bestowed on him, either by the bishop of Carlisle, or by the dean and chapter of the cathedral church, in which Dr. Law, who was a prebendary, had the leading influence. It was while his residence was di- vided between Carlisle and Dalston, that Dr. Paley undertook his Elements of Moral and Political Philosophy. Tlie public did not hesi- tate long about the reception of it. It was read with universal admiration, and editions were multiplied with a rapidity entirely unexpected by the author. It is dedicated to the bishop of Carlisle; on whose death, in 1767, archdeacon Paley drew up a short memoir of him. He soon after published his Horse Paulinac, a w ork which ranks him very high among the argumentative advocates of Scripture authority. The chief ob- ject of this work is to bring together, from the Acts of the Apostles, and from the different epistles, such passages as furnish examples of undesigned coincidence, and thus to infer the authenticity of the Scriptural writings, independ- ently of inspiration. Not long after this work had made its appearance (in 1789) Dr. James Yorke, bishop of Ely, offered him the master- ship of Jesus College, Cambridge, of which he has the disposal in right of his see. This was a singular instance of honorable and disinterested patronage. His lordship had never seen Dr. Paley, he had no knowledge of his friends, he was influenced solely and entirely by his well- earned reputation, and by a wish to render them serviceable in a high academical

situation. His preferments m the north of England, and the engagements they imposed upon him, induced him to decline the offer, after a ver)' long hesi-

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tat'.on, which, he has been heard to say, would probably have terminated otherviise, if he had not accidentally overlooked a small field belonginsc to the master of Jesus; and he ex- pressed his gratitude to the bishop in a dedi- cation of the Evidences of Christianity. This is

south from Seringapatam. Lat. 10►► 50′ N., long, 76►► 50′ E. The fort was built by Hyder Ali, on his conquest of INIalabar ; in the country called Paligatsherry, which then belonged to the Shek- ury Rajah, one of the Malabar chiefs. Around the fort are scattered many villages and bazaars,

one of Dr. Paley's most elaborate and successful all together containing a considerable popu

lation : but there is very little appearance of a town. This small district, in the year 1800, contained, according to Mr. Hamilton, the fol- lowing number of houses : ►►►

performances. Containing a general view of the evidences of our religion, it is better adapted to the wants of the common reader than an argu- ment, however masterly, which is confined to a single subject. It is distinguished, in an emi- nent degree, by that happy combination of saga- city, force, and perspicuity, which appears in all his writings. After Dr. Paley had l^ecome sub- dean of Lincoln, and rector of Bishop Wear- mouth, his residence w^as divided between those two places, his summers being spent at the latter, and his winters at the former. He now under- took and proceeded slowly with his last work, the Natural Theology, which was not published till the end of the year 1804. He professes to have chosen this subject, because, with those he had already treated of, it formed a system which was complete, though its parts had been produced in an inverted order. As a writer. Dr. Paley is not remarkable for elegant periods or splendid sentiment. He seems to have been less ambitious of pleasing the ear than of informing the understanding ; for if we except the dedi- exclusive of military, camp followers, travellers, cation of the Moral and Political Philosophy, vagrants, &c. The part occupied by thick forests, some chapters

in the same work (particularly and uninhabited, is very extensive, and is inter- that on reverencing the Deity), and the conclu- sected by several branches of the Paniani River, sion of the Natural Theology, which contain by which, in the rainy season, the timber may be some of the most elegant and dignified passages floated to the sea. About 45,000 cubical feet of to be found in our language, the general charac- teak may be procured annually, with the assist- ter of his writings is plainness and simplicity, ance of a large body of trained elephants. The In private life he had nothing of the philoso- Palighaut district was ceded to the British by pher. He entered into little amusements with a Tippoo, at the peace of 1792, when its revenues degree of ardor which, when contrasted with were valued at 88,000 pagodas, the superiority of his mind, had a pleasing effect, PALICI, or Palisci, in mythology, two and constituted a very amiable trait of his cha- deities, sons of Jupiter by Thalia, whom iEschy- racter. He was fond of company ; nor was he at ‘ — -. .. _

any time more happy than when exercising his unrivalled talents of wit and humor. He died at Bishop Wearmouth 25th May, 1805.

PALFIN (John), an eminent surgeon, anato- mist, and lecturer on surgery in Ghent, the place

Occupied by the families of rajahs

42

By Christians .....

13

By INIahometans ....

1469

By Namburies (Brahmins of high caste)

137

By Puttar Brahmins

.3309

By Nairs

4294

By artificers and tradesmen

2329

By Shanars or Tiars (cultivators)

4287

By fishermen

539

By people of Karnata, or Chera .

5054

Total houses

21,473

Containing free inhabitacts

106,500

Add Chumar, or slaves

16,574

Total population

123,074

lus, according to Macrobius, calls ffitna, in a tragedy, which is lost. The nymph /Etna, when pregnant, begged Jupiter to remove her from the pursuit of Juno. Upon which he con- cealed her in the bowels of the earth ; and, when the time of her delivery arrived, the earth

of his birth ; acquired great reputation by his opened and brought into the world two children, learning and works. Tlie principal of these are, who were named Palici, ano rov iraXiv iKiadai, 1. A 'Treatise on Osteology, in 12mo. Paris, because they came again into the world from the

1731; 2. Anatomy ofthe Human Body, in 2 vols.

8vo. Paris, 1734. He died at Ghent at a great

age, in 1730.

P AL'FREY, n.s.l Fr. pale fray ; Ital . pala- Pal'freyed, arf/. yfreno; Spanish palafren.

A small riding horse : palfreyed is using or

possessed of a palfrey.

Her wanton palfrey all was overspread With tinsel trappings, woven like a wave. Spenser. The smiths and armorers on palfreys ride.

Dryden. Such dire atchievements sings the bard that tells Of palfreyed dames, bold knights, and magick spells.

TickeL The damsel is mounted on a white palfrey, as an emblem of her innocence. Addison's Spectator.

PALICAUDCHERRY, or Palighaut, a town in the province of Malabar, 110 miles

bowels of the earth. These deities were wor- shipped with many ceremonies by the Sicilians: and near their temple were two small lakes, which were supposed to have sprung out of the earth when they were born. Near these pools it was usual to take the most solemn oaths, when any wished to decide controversies and quarrels. If any of the persons who took the oaths were perjured, they were expected to be immediately punished supematurally ; and those whose oath, by the deities of the place, was sincere, departed unhurt. The Palici had also an oracle, which was consulted upon some great emergencies, and which rendered the truest and most unequivocal answers. In a superstitious age, the altars ofthe Palici were stained with the blood of human sacrifices ; but this barbarous custom did not last long.

PALIFICA'TION, n. s. Lat. palus. The act or art of making ground firm with piles.

*PALINDROME. Gr. TraXivCpoˆia, iraXiv, and ˆpofiea. A word or sentence which is the same read backward or forward: as madam; or this sentence, Subi dura a rudibui. Some have refined upon the Palindromus, and composed verses, each word of which is the same back- wards as forwards; for mstance, that of Cam- den : ***

Odo tenet mulum, madidam mappam tenet Anna Anna tenet mappam madidam, mulum tenet Odo

PA'LINODE, n. s.) Gr. iraXivioSia, TraXiv,

Pa'linody. S and uicr], a song or reci-

tation ; a recitation.

PALINURI Promontorium, a town of Italy, mentioned by Virgil and Velleius, with a cogno- mirtal port, at the south extremity of the Simus Psestanus, on the coast of Lucania, so called from Palinurus.

PALINURUS, in fabulous history, the pilot of iEneas, who fell into the sea when asleep, and was three days exposed to the tempests, and at last came safe ashore, where the cruel inhabi- tants of the place murdered him. His body was left unburied on the sea shore. See Virg. /Eneid, lib. VI. V. 3.37.

PAL'ISADE, n s. k, v. a.} Fr. palisade;

Palisa'do. 'i Span, palisado, of

Lat. palus. Pales, taken collectively; paling; a single series or set of pales.

Palisadoes, or Palisades, in fortification, are stakes made of strong split wood, about nine feet long, six or seven inches square, three feet deep in the ground, in rows about two and a half or three inches asunder, placed in the covert way, at three feet from, and parallel to, the parapet or side of the glacis, to secure it from surprise. They are also used to fortify the avenues of the open forts, gorges, half-moons, the bottoms of ditches, &c. They are usually fixed perpendicularly, though some make an angle inclining towards the ground next the enemy, that the ropes cast over tiiem to tear them up may slip off.

Palisot de Beau va is (Ambroise Marie Franpois Joseph), an eminent naturalist, born at Arras, in the French Netherlands, m 1752. He studied at the college of Harcourt, at Paris, and in 1772 was admitted a counsellor of the parlia- ment of that city. Some time after he succeeded his elder brother as receiver-general of terri- torial imposts, which office was suppressed in 1777. lie then devoted his attention entirely to natural history, and especially botany, and in 1781 became a corresponding member of the Parisian academy of sciences, to which he ad- dressed several memoirs on botany and vegetable physiology. The love of science induced him to undertake a voyage to the coast of Guinea, with an intention to travel across the African continent to Egypt ; but he was unable to exe- cute that design, and after remaining some time at Ovvara and Benin, he sailed for St. Domingo, and arrived at cape Franpais in June, 1788. He continued there some years, occupying official situations in the colony ; but his oppo- sition to the revolutionary attempts of the negroes having endangered his

safety, he with

ditfficulty effected his escape to Phiiadelpliia, in the United States. Thence he purposed to re- turn to France, when he learned he had been proscribed as an emigrant. He was obli.'ed to support himself as a teacher of languages, and by exercising his talents as a musician, till the arrival of the French [minister Adel, who was himself a man of science, and who afforded Palisot the means of prosecuting inquiries iino the natural history of America. He was em- ployed to arrange Peale's collection, and made scientific tours to the Appalachian mountains and the country beyond. At length he received the news of his name being erased from the list of emigrants, and returned to his native country, taking with him the rich collection of natural curiosities which he had formed. In 1806 he was admitted into the institute in the room of Adanson ; and he became a member of other learned societies. He died January 21, 1820. Among his principal works are, Flore d'Oware et deˆBenin (Paris, 1804□□□ 21, 2 vols., folio); Insectes recueillis en Afrique et en Amerique (1805 □□□ 21, folio); Essai d'une nouvelle Agros- tographie, ou Nouveaux Genres des Graminees (1812, 4to and 8vo) ; all which are illustrated by engravings.

PALISSE, in heraldry, a bearing resembling a range of palisades before a fortificaiion, repre- sented on a fosse, rising up a considerable height, and pointed, with the field appearing between them.

PALISSY (Bernard de), a Parisian artist, was born at Agen in France, about 1524. He dis- covered the method of applying enamel to stone- ware, and his manufacture excelled the finest of the Italian. He is said next to have pursued the study of chemistry ; his knowledge of which enabled him to make improvements in agricul- ture. He also formed the first cabinet of natural history in FVance, on which science he delivered lectures. He was a Protestant, and so firmly attached to his religion, that during the fury of the league under Henry III., in 1584, he was committed to the bastille. The king, who had patronised him as an artist, having told him that if he did not comply with the prevailing religion he should be constrained to leave him in the hands of his enemies, Palissy replied, ' your majesty has often said that you pity me ; for my part 1 pity you for pronouncing the words ' I shall be constrained ;' this is not speaking like a king; but let me inform you, in royal language, that neither the Giusarts, your whole people, nor yourself, shall constrain a potter to bend his knee before images.' He used to say that he had no other property t!ian heaven and earth. His works are, Moyen de devenir riche, Sec. ; Discours admirable de la Nature des Eaux et Fontaines, de JMetaux, des Sols, des Salines, des Pierres, des Terres, &c. He died in 1590. His works and life were publisiied at Paris in 1777 by St. Fond.

PALIURUS, in ancient geography, a river of Africa, with a town of the same name, at the western extremity of Egypt, on the Mediterranean.

Strabo.

PALL, n. s. h. V. a. Span, pulio ; Lat. pal- lium. (There is also a Hind, pal.) See Pallium,

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PAL

A cloak or mantle of state, civil or ecclesiastical ; a covering thrown over the dead: to cloak or invest with a pall.

Ungrateful man. Base, barbarous man, the raore we raise our love. The iiiore we pall, and cool, and kill his ardour.

JJryden,

Now pall the tasteless meats and joyless wines And luxury with a sigh her stave resigns. Johnson.

Pall, in heraldry, a figure like a Greek Y, about the breadth of a pallet ; being the archiepisco- pal ornament sent from ilome to the metropolitans.

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PALLA, in Roman antiquity, a mantle which women wore over the gown called stola. It was borne on the left shoulder, whence passing to the other side, under the right arm, the two ends were bound under the left arm, leaving the breast and arm quite bare. It had many folds, and derived its name from TraXXw, to shake. From this term springs the word pall, which denotes the rich pontifical garment worn by the popes, patriarchs, primates, and metropolitans of the Romish church over their other vestments ; and which is in the shape of a band or fillet three indies broad, encompassing the shoulder, whence it has been denominated by certain writers superhumerale. Both behind and before are pendents, or strings, about a palm in length, with small laminae of lead rounded at the extre- mities, and covered with black silk with four red crosses.

PALLADINI (Archangela), a celebrated Ita- lian paintress, born at Pisa in 1599. Her father was a painter, and she attained great excellence in portrait painting; but died young, in 1622.

PALLADINU (James), an Italian author, born at Teramo, in Naples, in 1349. He became successi\ely bishop of Monopoli, Tarentum, Florence, and Spoletto, and legate in Poland. Among his works, the most celebrated is the Processus Luciferi contra Jesum. He died in Poland in 1417.

PALLADIO (Andrew), the celebrated archi- tect, was born in 1518, at 'icenza, in Lombardy. He learned the principles of his art from Trissino, after which he studied at Rome, and on his re- turn constructed a number of noble edifices. He was employed in various parts of Italy, particu- .arly at Venice, where he built the palace Foscari. He died at his native place in 1 580. His Trea- tise on Architecture was printed at Venice in 1570, folio; and again at London in 1715, in 3 vols, folio. In 1730 lord Burlington published some of Palladio's designs, in 1 vol. folio. This artist was likewise the author of a work entitled Le Antichita di Roma ; and an illustration of Lffisar's Commentaries.

PALLADIUM, in fabulous history, a statue of tl e goddess PA.las. It was about three cubits high, jind represented the goddess sitting and hoid- mgapike in her right hand, and in her leftadistaff and a spindle. It was said to have fallen down from heaven near the tent of Ilus, as he was building the citadel of Ilium. Others a;>ert

that it fell at Pessinus in Phrygia. Some main- tain that the palladium was made with the bones of Pelops by Abaris ; but, according to Apollo- dorus, that it was only a piece of clock-work which moved of itself. However various the opinions of ancient authors be about this cele- brated statue, it was universally allowed, that on its preservation depended the safety of Troy. This fatality the Greeks, during the Trojan war, were well aware of; and therefore Ulysses and Diomedes were commissioned to steal it. This they effected, and they were directed how to carry it away by Ilelenus, a son of Priam, who in this betrayed his country, because his brother Dei- phobus, at the death of Paris, had married Helen, of whom he was enamoured. Minerva was enraged at the violence off'ered to her statue ; and, according to \ irgil, the palladium itself seemed to have received life and motion ; and by the flashes which started from its eyes, and sud- den springs from the earth, it seemed to show the resentment of the goddess. The true palladium, however, according to some, was not carried away from Troy by the Greeks, but only a statue of similar size and shape, which was placed near it, to deceive whatever sacrilegious persons at- tempted to steal it. The palladium, therefore, they pretend iEneas conveyed safe from Troy to Italy, and it was afterwards preserved by the Romans with the greatest secrecy and veneration, in the temple of Vesta, unknown to all but the vestal virgins. The destiny of Rome was be- lieved to depend upon it ; and there were several others made perfectly like it, to secure it from being stolen, as was that at Troy. A palladium was also placed in the citadel of

Athens.

Palladium, in chemistry, a new metal, first found by Dr. WoUaston, associated with platina, among the grains of which he supposes its ore to exist, or an alloy of it iridium and osmium, scarcely distinguishable from the crude platina, though it is harder and heavier.

If crude platina be dissolved in nitro-mu- riatic acid, and precipitated with a solution of muriate of ammonia in hot water ; the precipi- tate washed, and the water added to the remain- ing solution, and a piece of clean zinc be immersed in this liquid, till no farther action on it take place ; the precipitate now thrown down will be a black powder, commonly consisting of platina, palla- dium, iridium, rhodium, copper, and lead. The lead and copper may be separated by dilute ni- tric acid. The remainder being then digested in nitro-muriatic acid, and common salt about half the weight of the precipitate added on the solution, on evaporating this to dryness, by a gen- tle heat, the result will be, triple salts of muriate of soda, with platina, palladium, and rhodium. Alcohol will dissolve the first and second of these, and the small portion of platina may be precipitated by sal ammoniac. The solution being diluted, and prussiate of potash added, a precipitate will be thrown down, at first of a deep orange, and afterwards changing green. This, being heated with a little sulphur and borax in a crucible, will afford a metallic button of pure palladium.'

This metal is of a white color, more of the appearance of platina than any other metal. It

is something harder tlian the above metal, being about the stiffness of jewellers' gold. It is less malleable than silver or platina, owing probably to its greater hardness. Its specific gravity, ac- cording to Dr. WoUaston, varies from 11-3 to 11-8. When heated to about 30►► of Wedge- wood, it assumes a blue color, owing to its com- bination with oxygen, in which property it has some resemblance to 'ron. If, however, the heat be increased, the oxygen flies off, and it re-as- sumes its original lustre. It does not fuse at the ordinary temperature of furnaces. Although its oxide seems to be formed at a certain tempera- ture of the open air, it has not been procured l)y these means. An orange oxide is procured by precipitation from the acids, but not sufficiently pure to get the proportion of oxygen ; hence we are at present unacquainted with the oxides of palladium. It does

not combine with carbon, nor is it known to combine with hydrogen, nitrogen, or phosphorus.

It combines with sulphur, forming a com- pound fusible at a low red heat. The sulphur gradually escapes, leaving the metal in a state of purity.

Its specific gravity is from 10-9 to 11-8. It is a less perfect conductor of caloric than most metals, and less expansible, though in this it ex- ceeds platina. On exposure to a strong heat its surface tarnishes a little, and becomes blue ; but an increased heat brightens it again. It is redu- cible per se. Its fusion requires a much higher heat than that of gold ; but, if touched while hot with a small bit of sulphur, it runs like zinc. The sulphilret is whiter than the metal itself, and extremely brittle.

Nitric acid acquires a fine red color from the palladium, but the quantity it dissolves is small. Nitrous acid acts on it more quickly and power- fully. Sulphuric acid, by boiling, acquires a si- milar color, dissolving a small portion. Muriatic acid acts much in the same manner. Nitro-mu- riatic acid dissolves it rapidly, and assumes a deep red.

Alkalis and earths throw down a precipitate from its solutions, generally of a fine orange co- lor ; but it is partly re-dissolved in an excess of alkali. Some of the neutral salts, particularly those of potash, form with it triple compounds, much more soluble in water than those of pla- tina, but insoluble in alcohol.

Alkalis act on palladium even in the metallic state ; the contact of air, however, promotes their action.

A neutralised solution of palladium is preci- pitated of a dark orange or brown by recent muriate of tin ; but, if it be in such proportions as to remain transparent, it is changed to a beau- tiful emerald-green. Green sulphate of iron pre- cipitates the palladium ra a metallic state. Sul- phureted hydrogen produces a dark brown precipitate ; prussiate of potash, an olive-co- lored : and prussiate of mercury a yellowish- white. As the last does not precipitate platina, it is an excellent test of palladium. This preci- pitate IS from a neutral solution in nitric acid, and detonates at about 500►► of Fahr. in a man- ner simdar to gunpowder. I'luoric, arsenic, phosphoric, oxalic, tartaric, citric, and some

other acids, with their salts, precipitate some of the solutions of palladium. See Metals.

All the metals, except gold, silver, and platina, precipitate it in the metallic state. If this metal were more common (its price is about six times that of gold), it might be emjiloyed for medals and che- mical vessels, and it misht

be used in place of silver in some articles of jewellery.

PALLADIUS, bishop of Ilelenopolis in By- thynia, and afterwards of Aspona. He was a Galatian, and born at Ciippadocia. He became an anchorite in the mountain of Nebria in 388, and was consecrated a bishop in 401. He was an intimate friend of St. John Chrysostom, whom he never forsook during the time of his persecu- tion, nor evˆen in his exile. He went to Rome some time after Chrysostom's death, and, at the request of Lausus, governor of Cappadocia, com- posed the history of the Anchorites or hermits, and entitled itLausiaca, after that lord, to whom he dedicated it in 420, when it was written, being then in the twentieth year of his episcopacy, and fifty-third of his age. His history was pub- lished in Greek by Meursius at Amsterdam, in 1619, and in Latin in the Bibliotheca Patrum.

Palladius (R. T. ZEmilianus), an author who flourished after the decline of literature at Rome, but the precise period is not known. A treatise written by him, De Re Rusticˆ, was published at Paris, in L'Economie Rurale, vol. 5, in 1775.

PALLANTIDES, the fifty sons of Pallas, the son of Pandion, and brother of iEgeus ; who were all killed by Theseus, the son of ˆligeus, whose succession they opposed. ××× Plut. in Tha;.

PALLAS, in mythology, a giant, the son of CiElus and Terra, who was killed by Minerva.

Pallas, a common name of Minerva, from TiraWtiv, to brandish, in allusion to her spear.

Pali.as, a freed man of Claudius, celebrated for the power and the riches which he obtained. He advised the emperor to marry Agrippina, and to adopt her son Nero for his successor, it was through him and Agrippina that the death of Claudius was hastened, and that Nero was raised to the throne. Nero, however, discarded Pallas, and some time after caused him to be put to death, that he might obtain his wealth.

Pallas (Peter Simon), a celebrated German modern naturalist, was born at Berlin, in 1741. After having studied medicine at Halle and Got- tingen, he removed to Leyden, where he gra- duated M.D. in 1760. He then came to London, to improve his professional knowledge, and about 1762 returned to Berlin. At length he settled at the Hague, where he published some valuable zoo- logical works. In 17G7 he went to Russia, and was employed by the government of that country on an expedition of discovery in the Asiatic pro- vinces. In the course of this undertaking he procured the

materials for several important works on the various branches of natural history, which he afterwards published. In 1793 and 1794 he travelled in the southern provinces of Russia, and subsequently settled in tne Crimea, on an estate bestowed on him by the empress. His death took place at Berlin in 1811. Among his principal works are, Elenchus Zoopnytorum Hag. Com., 1765 ; Miscellanea Zoologies, Kif Com., 1766, 4to; Spicliegia quibus r-ˆva J>Jf-

nalium species Iconibus illustr., Beiolin, 1767 ००० 80, 4to. ; Novae Species Quadrupedum, e Gli- rium Ordine, Erlang. 1778, 4to. ; Icones Insec- torara praesertim Rossiae, Sibiriseque peculiarium, Erlang. 1791, 4to. ; Flora Russica, seu stirpium Imp. Rossici per Europam el Asiam indigena- rum Descriptiones et Icones, Petrop., 1784 ००० 1815, 2 vols, folio; lUustrationes Plantarum imperfecte vel nondum cognitarum, Petrop., 1804 ००० 6, folio ; Linguarum totius Orbis Vocabularia comparativa, Petrop, 1786 ००० 89, 2 vols. 4to. ; Reise durcli verscliiedene Provinzen des Russis- cnenReichs, Petersb. 1771, &c. 5 vols. 4to. ; Sammlungen Historischer Nachrichten iiber die Mongolischen Volkerschaften, Leips. 1779, 8vo. ; Bemerkungen auf einer Reise in die Siidlichen Staatlialterschafte.nder Russischen Reichs in den Jahren, 179:i००० 4, Leips. 1799०००1801, 2 vols. 4to. The travels of 31. Pallas have been trans- .ated into French, under the title of Voyages dans Plusieurs Provinces de I'Empire de Russie, et dans I'Asie Septentrionale, trad, par Gautier de la Peyronie, Paris, 1788, 5 rols. 4to., and 1794, 8 vols. 8vo. ; and. Second Voyage en Rus- sie, pendant les annees, 1793 ००० 4, Paris, 1811, 4 vols. 8vo. There is also an English translation of the latter work, 1812, 2 vols. 4to.

PALLAVICINI (Ferrante), an Italian v>rit of considerable note, descended from a noble fami- ly in Placentia, where he was born about the close of the sixteenth century. He gave early proofs of an extraordinary genius, and quickly acquired a masterly knowledge in the elements of classical erudition. He was afterwards sent to complete his education in the monastery of Augustin friars at Milan, vvhere he took the habit, lived much esteemed for piety as well as learn- ing, and raised great expectations of future fame; but at length he engaged in an intrigue with a young courtezan of X'enice, to enjoy whose company without restraint, he obtained leave from his general to make the tour of France. Accordingly, he pretended to set out for that country; but never left Venice, but lived there privately with his mistress ; and imposed upon his friends, by sending them, in letters, feigned accounts of his travels through France ; also informing them of several things respecting that court, which he learned from the information

of many considerable perSbns with whom he cor- responded. But such a series of imposition could not last. Being in want of money, he wrote for the booksellers ; and, among other pieces, published a collection of Satirical Letters, the wit of which was chiefly levelled against the Spaniards, entitled The Courier robbed of his jMail. Though licensed by the inquisitors, the secretary of the republic of 'enice refused it his imprimatur ; which irritated the author so much that he published an enlarged edition of it, filled with severe invectives against, not only the Ve- netian secretary, but pope Urban VIII., his ne- phews, and the whole llimily of the Barbarini. This raised him a number of powerful enemies ; who, by the treachery of one Morfu, a French- man, who pretended to be his friend, got him at last into their power ; and, after a year's impri- sonment at Avignon, brought him for form's sake to a trial; and, notwithstanding an excel-

lent defence, condemned him to be beheaded and he was accordingly executed, in the flower of his age. The latter part of his life had beea one continued series of dissipation, debauchery, folly, and extravagance. Yet he was not without some virtues. Sincere and faithful in his friend- ships, no man was ever a more easy prey to the treachery of others. His works were published in 2 vols., with his life prefixed, at Amsterdam, in 1696.

Pallavicini (Sforza), a learned cardinal, born at Rome in 1607. He became a Jesuit in 1638. He was much employed by popes Inno- cent X. and Alexander MI. He wrote several works, the chief of which was a History of the Council of Trent, wherein he opposes that of F. Paul.

PALLENE, a small peninsula of Thrace or Macedonia, formerly called Phlegra. It is si- tuated near the bay of Thermae, and contains five cities, the principal of which is also called Pallene. It was famous in the mythology for an engagement between the gods and the giants.

PALLET, n. s. Fr. paUette ; Lat. paleafus. Written ' paillet' by Chaucer, from Fr. pcdllt, straw, as Dr. Johnson conjectures. A small mean bed : also a small measure.

Why, rather, Sleep, best thou in smoky cribs. Upon imeasy pallets stretching thee, And huslit with buzzing night-flies to thy slumber , Than in the perfumed chambers of the great. Under the canopies of costly state. And lulled with sounds of sweetest melody ?

Uliaks'peare.

His secretary was laid in a pallet near him for ven- tilation of his thoughts. Wotlun's Buckingham If your stray attendants be yet lodged,

Or shroud within these limits, I shall know.

Ere morrow wake, or the low-roosted lark

From her thatcht pallet rouse. Milton.

A surgeon drew from a patient in four days, twenty-seven pallets, every pallet containing three ounces. Hakewill.

Pallet, among painters, is a little oval table, or piece of wood, or ivory, very thin and smooth; on and round which the painters place the seve- ral colors they have occasion for, to be ready for the pencil. The middle serves to mix the colors on, and to make the tints required in the work. It has no handle, but, instead thereof, a hole at one end to put the left thumb through to hold it.

Pallet, among potters, crucible-makers, Sec, a wooden instrument, almost the only one they use for forming, heating, and rounding their works. They have several kinds, the largest are oval, with a handle ; others are round, or hollowed triangularly ; others, like large knives, serving to cut off" whatever is superfluous on the moulds of their work.

Pallet, in gilding, an instrument made of a squirrel's tail, to take up the gold leaves from the pillow, and to apply and extend them on the matter to be gilt.

Pallet, in heraldry, the di- minutive of the pale, being one- half of its breadth. Several pallets may be borne in one es- cutcheon, as in the annexed ex- ample. ' Argent .hree pallets, wavy gules ftaiut- Dov.nes.'

PAL

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Pal

PARLIAMENT, n. i. Lait. pallium. A dress or robe.

The people of Rome Send thee by me their tribute, This palliainent of white and spotless hue.

Shakspcare.

PAIAAATIE, a name which the Romans gave to such plays as the plot, being laid in Greece, required the performers to appear in Grecian habits. It is used in contradistinction to togatae, in which the scene was laid at Rome, and the dresses were Roman. The word is derived from pallium,

which was a part of dress peculiar to the Greeks ; whereas the toga belonged to the Romans only.

PAL'LIATE, V. a. "l French, pallier,

Pallia'tion, n. s. Sfrom Lat. pallium.

Pal'liative, orf;. & w. s. 3 To cover; dis- guise ; excuse ; extenuate : hence to ease or qualify pain : palliation is extenuation ; allevia- tion ; excuse; apology: imperfect cure : pallia- tive, mitigatory ; extenuating : and, as a noun substantive, synonymous with palliation, but of more frequent use as applied to medicines.

If the just cure of a disease be full of peril, let the physician resort to palliation.

Bacon's Natural History.

I saw clearly through all the pious disguises and soft palliations of some men. King Charles.

The fault is to extenuate, palliate, and indulge.

Dryden.

Such bitter invectives against other men's faults, and indulgence or palliation of their own, shews their leal lies in their spleen. Governiii!>nt of the Tongue.

Consumption pulmonary seldom admits of other than a palliative cure, and is generally incurable when hereditary. Arbuthnot.

They never hide or palliate their vices, but expose them freely to view. Swift.

It were more safe to trust to the general aversion of our people against this coin, than apply those palliatives which weak, perfidious, or abject politi- cians administer. Id.

PAL'LID, adj. Lat. pallidus. Pale ; light of color; dim.

Of every sort, which in that meadow grew, They gathered some ; the violet pallid blue.

Spetiser. When from the pallid sky the sun descends.

Thomson. Whilst, on the margin of the beaten road, Its pallid bloom sick-

smelling hen-bane showed.

Harte. And, like a withered lily, on the land His slender frame and pallid aspect lay, As fair a thing as e'er was formed of clav.

Byron.

PALLIO Co-opERiRE. It was an ancient custom, where children were born out of lawful wedlock, and their parents were afterwards mar- ried, that those children, together with the father and mother, should stand pallio co-operti, under a cloth, while the marriage was solemnising; which was a kind of adoption, and had the effect of a legitimation.

PALLIOT (Peter), a French engraver, printer, bookseller, and author, born at Dijon, in Nor- mandy. Ilis works are highly valued by literary antiquaries ; particularly two tracts on Blazoning and Genealogy. .His folio edition contains above 6000 escutcheons of his own engraving.

PALLIUM, in antiquity, an upper garment or mantle worn by the Greeks, as the toga was by the Romans. Each of these were so peculiar to the respective nations, that Palliatus is used to signify a Greek, and Togatus a Roman.

Pallium, a word often mentioned in our old historians. Durandus tells us that it was a gar- ment made of white wool, after the following manner, viz. The nuns of St. Agnes, every year, on the feast-day of their saint, ofler two white lambs on the altar of their church, during the time they sing Agnus Dei, in a solemn mass ; which lambs are afterwards taken by two of the canons of the Lateran church, and by them given to the pope's subdeacons, who send them to pas- ture till shearing time, and then they are shorn, and the pall is made of their wool mixed with other white wool. The pall, being thus made, is carried to the Lateran church, and there placed on the high altar, by the deacons, on the bodies of St. Peter and St. Paul ; and, after an usual watching, it is carried away in the night, and de- livered to the subdeacons, who lay it up safely. And, because it was taken from the body of St. Peter, it signifies the plenitude of ecclesiastical power ; and therefore it was the prerogative of popes, who pretend to be the immediate succes- sors of that saint, to invest other prelates with it ; which at first was done nowhere but at Rome, though afterwards at other places.

PALL'MALL, n. s. Fr. pule maille ; Lat. pila and malleus. A play in which the ball is struck vath a mallet through an iron ring : and which seems to have given name to the celebrated street in Westminster of this name.

PALM, n. s. &. ►►. a. -\ Fr. pahne ; Ital.,

Palm'ist, VSpan., Port., and Lat.,

Palm'istry, n. s. j palma ;Gv.TTa\anr. The inner surface of the hand : hence a measure of three inches : to conceal in the hand or palm ; hence to impose by juggling or fraud ; to handle or stroke with the hand : palraister is one who at- tempts to foretel the events of a person's life by inspecting the palm of the hand : palmistry, his pretended art : Addison uses it of another kind of cheating by the hand. See below. By this virgin palm now kissing thine,

1 will in thine. Shakspeare.

iˆrinks of extreme thin parts fretting, put upon the back of your hand, will, with a little stay, pass through to the palm, and yet taste mild to the mouth.

Bacon .

Henry VIII. of England, Francis I. of France, and Charles V. emperor, were so provident, as scarce a palm of ground could be gotten by either, but that the other two would set tlie balance of Europe upright again. Id.

The same iiand into a fish mav cloˆ. Which instantly a. palm expanded shows.

Denham.

The length of a foot is a sixth part of the stature ; a span one eighth of it ; a palm or hand's breadth one twenty-fourth ; a thumb's breadth or inch one seventy-second ; a forefinger's breadth one ninety- sixth. Holder an Time.

We shall not query what truth is in pahmtrp, or divination from lines of our hands of high denomi- nation. Browne's Viilyiir Errours. Seeking my success in love to know, I tried the infallible prophetic way, A poppy-leaf upon my palm to lay. Dryden,

If not by scriptures, how can we be sure, Reply'd the panther, what tradition's pure 2 For you may paim upon us new for old. Id.

Palming is held foul play amongst gamesters.

Id. Moll \V hite has made the country ring with seve- ral imaginary exploits palmed upon her.

Addison's Spectator. Going to relieve a common beggar, he found his pocket was picked ; that being a kind of palmistry at which this vermin are very dextrous. Id.

Frank carves very ill, yet will palm all the meat.

Prior. With the fond maids in palmistry he deals ; They tell the secret first which he reveals. Id.

Here while his canting drone pipe scann'd The mystic figures of her hand, He tipples palmistri/, and dines On all her fortune-telling lines. Cleavelaiid.

Palm, n. s. '^ ►►t. palmier ; Ital. Span.

Pal'mer, I Port, and Lat. palma, as

Pal'merworm, j some have conjectured Palmet'to, n. s.) from its leaves resembling PALMiF'ER0us,a►►/;. the open hand. A tree of Pal'my, great variety in its species.

Pal'mipede. J See below. Its branches

were borne and worn as tokens of victory; hence it intends victory; triumph; superiority: a palmer is a kind of pilgrim, so called from those who formerly returned from Palestine bear- ing palm-branches : palmerworm, a worm co- vered with hair, so called, says Johnson, because he wanders over many plants : palmi- ferous, is bearing or abundant in palms : pal- mipede, web-footed ; having the toes connected by a membrane (as the palmleaves) : palmy is literally synonymous with palmiferous, and used for high ; triumphant ; magnificent, as in the extract from Shakspeare.

Get the start of the majestic world. And bear the palm alone.

Shakspeare. Julius Caesar. In the most high and palmy state of Rome, A little ere the mightiest Julius fell, The graves stood tenantless. Id. Hamlet.

My sceptre, for a palmer's walking staff.

Shakspeare. Nothing better proveth the excellency of this soil, than the abundant growing of the pa/m-trees without labour of man. This tree alone giveth unto man whatsoever his life beggeth at nature's hand.

Raleigh. Above others who carry away the palm for excel- lence, is Maurice Langrave of Hesse. Peacham. Fruits of pa/m-tree, pleasantest to

thirst And hunger both. Milton.

It is described like fissipedes, whereas it is a pal- mipede or finfooted like swans. Browne.

A flesh fly, and one of those hairy worms that re- semble caterpillars and are called palmerworms, being conveyed into one of our small receivers, the bee and the fly lay with their bellies upward, and the worm seemed suddenly struck dead. Boyle.

Thou youngest virgin, daughter of the skies. Whose palms new plucked from Paradise, With spreading branches more sublimely rise.

Dry den . Namur subdued is England's palm alone ; The rest besieged, but we constrained the town.

She passed the region which Fanchea joined. And, flying, left the palmy plains behind. Id.

Water-fowl which are palmipede are whole footed, have very long necks, and yet but short legs, as swans.

There are twenty-one species of this tree, of which the most remarkable are, the greater palm ot date-tree. The dwarf palm grows in Spain, Portugal, and Italy, from whence the leaves ave sent hither and made into flag -brooms. The oily palm is a native of Guinea and Cape Verd Island, but has been transplanted to Jamaica and Harbadoes. It grows as high as the main mast of a ship. Milter.

Behold yon isle, by palmers, pilgrims trod. Men bearded, bald, cowled, uncowled, shod, unshod.

Pupe.

Broad o'er my head the verdant cedars wave. And high palmettos lift their graceful shade.

Thutnson .

Palm, in botany. See Palmˆe and Phct.m.x. The palm has among almost all nations been regarded as an emblem of victory, and assigned as the reward of it. The reason why this tree was adopted, and made use of to represent vic- tory, is said to be, because it is so elastic that, if pressed by the greatest weight, it will rise su- perior to the pressure, and be able to restore it- self to its former state, appearing almost in- vincible.

Palm, Cabbage. See Areca.

Palm, Cocoa Nut. See Cocos.

Palm Siˆnday, the Sunday before Easter; being so called in memory of our Saviour's triumphal entry into Jerusalem, when the mul- titude that attended him strewed branches of palm trees in his way. The ancients had other names for this day: for, 1. They called it Domi- nica Competentium, i. e. Sunday of the Compe- tents ; because on that day the catechumens came to ask the bishop leave to be admitted to baptism, which was conferred the Sunday follow- ing. They had also then given them the symbol or creed, to get off by heart, to be repeated to the bishop in the ceremony of baptism. 2. They called it Capitiluvium, the Sunday of washing the head ; because those who were to be baptised the following Sunday were prepared by washing their heads on this day.

PALMA, a north-west island of the Canaries, is eight leagues long, and six leagues broad, very mountainous and woody: the interior having many extensive volcanoes. It is only cultivated near the coast, and produces the best wine of the islands, a great quantity of almonds, some sugar and silk, and corn to serve its inhabitants half the year. It has a trade in silk which is considerable, and a good fishery on the African coast. Humboldt states it to contain 36,000 in- habitants.

Palma, the capital of Majorca, is situated at the bottom of a large bay, formed by Cape Blanco and Cala Figuera. It stands on the slope of a hill ; and, when viewed from the bay, presents a picturesque appearance. It is still surrounded with walls, and has on the land side a dry ditch and outworks, but is not capable ot sustaining a siege. Part of the streets are narrow and ill paved, but those in the lower part of the town, and the squares, are spacious and regular. The cathedral is a large and handsome Gothic building, with beautiful windows of painted glass, and has a tower remarkable for the bold-

uess and delicacy of its architecture. Tlie parisli church of St. Michael is yet more ancient, and served for a mosque under the Moors. The government house is an irregular but large build- ing, containing a chapel royal, an arsenal, bar- racks, and state prison. It has several elegant apartments. The house called de la Contratacion is a large Gothic edifice, with a beautiful hall, and is used for the meetings of merchants, as well as

for balls, and other public entertainments. The town-house attracts attention by the sculp- ture and public ornaments on its entablature. In the inside are portraits of all the great men of Majorca, from Hannibal to Don Jayme. The clock is said to be regidated, both in marking and striking the hours, by the course of the sun and by the solstices, being perhaps the only one of the kind in the world. The private houses are on the plan of the ancient Moorish residences, wliich is probably the most suitable to the climate : they have on the ground floor a portico and lobby, with pillars, and some small apart- ments. On the first floor are large rooms with- out glass windows; and above all the family apartments, such as bed-rooms, kitchen, &c In the latter there are seldom chimneys or stoves, the cooking being carried on with charcoal. The poor reside in cellars, which seldom receive air or light but by the door. See Majorca.

Palm A, a town of Sicily, noted for its sulphur cargoes shipped annually to England. It has a small harbour. Population 6000. Twelve miles S.S.E. of Girgenti.

Palma, a small town in the south of Spain, in Andalusia, on the Xenil. Population 4200. Thirty-eight miles W.S.W. of Cordova.

Palma, a town of Austrian Illyria, in Friuli, on the Natisone, near Aquileja, with 2000 inha- bitants, and a fort.

Palma, a small inland town of Portuguese Estremadura, on the right side of the river Ca- daon, twenty-eight miles east of Setubal.

Palma, a river of Brasil, which runs nearly west, and enters the Paratinga, a tributary of the Toccantines. ††† It is also the name of an island close to the mouth of the river Plata.

Palma, Nuestra Senora de la, a city of New Granada, in Tunja, on the east shore of the river Magdalena. The inhabitants carry on a considerable trade in sugar, sweets, and linen and cotton manufactures. Population 600 house- keepers. Fifty-four miles north-west of Santa Fe, and sixty-eight west by south of Tunja. Long. 74†† 52′ 30″ W., lat. 5†† 8′ N. This is the name of several other settlements in South America.

PALM/E, in botany, palms. Under this name Linnaeus has arranged several genera, which, although capable of a place in separate classes of his system, he chooses rather, on ac- count of their singular structure, to place apart in an appendix to the work. See Botany. They are defined to be plants with simple stems, which at their summit bear leaves resembling those of the ferns, being a composition of a leaf and a branch ; and whose flowers and fruit arc produced on that particular receptacle or scat called a

spadix, protruded from a common calyx in form of a sheath or scabbard, termed by Lin- nasus spatha.

PALMAS, CiviAD DE LAS, the capital of the Grand Canary Island, and the centre of all its commerce. It is the residence of a bishop, whose living is said to be worth about ►►l0,000. The convents are numerous; and the town, watered by a rivulet, has a handsome appearance. In- habitants 9437. Being less frequented by navi- gators, however, it does not equal in importance the ports of Teneriff"e.

Palmas, a small town, the capital of Gomera, one of the Canaries.

Palmas, Cape, a promontory of West Africa, forming the entrance from the north into the Gulf of Guinea, and the western termination of the Ivory coast. Here is a road affording good shelter against south winds.

*PALMER (John), an eminent actor, born in London in 1 742, made his debut, under Foote, at the Haymarket theatre, and, after having per- formed with reputation in the country, was en- gaged by Garrick at Drury Lane. He gradually appeared in a great variety of parts, both in tragedy and comedy, in some of which perhaps he was never excelled. He remained at Drury Lane, sometimes visiting Liverpool in the sum- mer, till he engaged in the scheme for erecting a new theatre in the East of London. Having been appointed manager, he laid the first stone of the new building, December 26th, 1785, and in June 1787 it was opened, but without legal authority. Mr. Palmer persevered for some time in a fruitless attempt to obtain a patent ; and was obliged at last to return to Drury Lane. His unlucky project was the cause of great pe- cuniary embarrassments, and he was committed to the King's Bench, from which he was only liberated by a compromise with his creditors. His difficulties continuing, he purposed to emi- grate to America ; and went with that view to Edinburgh, but afterwards relinquished liis scheme. Towards the close of his life he passed the summer season in the country, and his last engagement was at Liverpool. At the theatre there, on the 2d of August 1798, while perform- ing The Stranger, he fell on the stage exclaiming, in the words of the drama, * There is another and a better world !' and almost immediately expired. His distressed circumstances, the recent loss of a son by death, and other misfortunes, had preyed "greatly on his spirhs.*

Palmer (John), the projector of the mail coaches, was a native of Bath, where he at first was employed in a common brewer)'. After this, he solicited and obtained a patent for a theatre, which concern proved eminently suc- cessful. To elicit theatric talent he travelled much on horseback ; and the necessity of des- patch, but, above all, the insecurity of the ordi- nary mode of conveying the mails, inspired Mr. Palmer with the

idea of transmitting letters by coaches. He succeeded in his object, though not without great opposition; but the utility of the plan soon became manifest, and he was made comptroller general of the post-office, with a salary of ►►1500 a year. But in 1792 he was suspended, and lost the benefit to which he was entitled for the advantage he had rendered to the public. At length, on application to parliament, he received a compensation; though a very in-

auequate one, for tlie per centage which he was to have received in case his plan succeeded. He died in 1818.

PALMERSTON Island, an island of the South Pacific Ocean, discovered by captain Cook, and vi.>,ited by captain Wilson in the missionary ship Duff, who states it to consist of a group of small islets, eight or nine in number, connected to- gether by a reef of coral rocks, and lying in a direction nearly circular. ‘ The islet we landed upon,’ he says, ‘ is not a mile in circuit, and at high water is not more tlian four or five feet above the level of the sea. The soil is coral sand, with an upper stratum of blackish mould produced from rotten vegetables. All the inner area of the islet is covered with cocoa-nut trees, which, decaying and falling successively, form a thick underwood : without these, near to the beach, are the wharra-tree, and others of various sorts. We saw a vast number of men of war birds, tropic birds, and boobies. Among the trees there was plenty of red crabs, dragging after them a shell in form of a perriwinkle, but longer, being in diameter about two or three inches. We also saw the beautiful submarine grotto described in Cook’s third voyage. At one part of the reef which bounds the lake within, almost even with the surface, there is a large bed of coral, which affords a most enchant- ing pros];ect ; its base, which is fixed to the shore, extends so far that it cannot be seen, so that it appears to be suspended in the water. The sea was then unruffled, and the refulgence of the sun exposed the various sorts of coral in the most be.iv.tiful ordt-r ; some parts luxuriantly branching into the water, otiiers appearing in a vast vaiiety of figures, and the whole heightened by spangles of the richest colors, glowing from a number of large clams interspersed in every part. Even this delightful scene was greatly improved by the multitude of fishes that gently glided along, seemingly with the most perfect security; their colors were the most beautiful that can be imagined, blue, yellow, black, red, &:c., far excelling any thing that can be produced by art.’ There are no inhabitants on the island; but plenty of rats, which the missionaries sup- pose must have been drifted here on some hollow tree or root. Long. 163►► 10′ W., lat. 18►► 4′ S.

PALMETTO, in botany. See Cham.ˆrops.

PALMIPEDES, in ornithology, the third order in Mr. Latham's system; comprehending web- footed birds ; which that ingenious ornithologist found it necessary to introduce between Lin- naeus's orders of picae and grallae, answering to the anseres of Linnaeus. Latham subdivided this order into two divisions ; viz. semipalmati and palmati, in which he is followed by Kerr. The former have long legs, and their feet only half-webbed ; the body is conical and somewhat flattened ; the thighs are naked on their lower halves ; the legs are very long ; the feet are fitted for wading ; and the toes are only con- nected together at their posterior parts by a membrane. They mostly pair in breeding time, and build their nests on the ground. They feed on fish and insects. This division contains three genera. The latter have short legs, a smooth bill, covered with a membranous skin, and increasing

in size towards the point. The feet are fitted for swimming, having short legs, thin, or compressed laterally ; and the toes are all compressed to their ends by an interposed membrane. They are mostly polygamous ; they build their nests on the ground; they live much in the water, and the young are soon able to provide for them- selves.

PALMUS, a long measure used both by the Greeks and Romans. The Grecian palmus, called also yopov, was of two sorts ; the greater, which contained nine finger-breadths, and the less which contained four. The Roman palmus was also of two kinds ; the greater, which con- tained twelve finger-breadths, or eight and a half inches English ; and the less, which con- tained four finger-breadths, or nearly three inches English. The great palmus v.as taken from the length of the hand or span ; the less from the breadth of it.

PALMYRA, a noble city of ancient Syria, now in ruins, supposed to have been the ' Tad- mor in the wilderness' built by Solomon (1 Kings, ix. 18, 2 Chron. viii. 4, and Josephus, Ant. Jud. lib. 1), though this is much controverted by many learned men. Eor the world has been long and justly astonished to find in the Desert of Syria, at a distance from the sea, with only a very precarious and scanty supply of water, and without a particular connexion witii any great monarchy, ruins of a city more extensive and splendid than Rome itself, the deposit of all the arts which Greece in its most flourishing periods could afford.

Tadmor was situated where two hills con- verged, and beyond the point where they ap- proached. These hills afforded water, and the aqueducts through which it was brought froni them were discovered and described by Mr. Wood. Though the other towns now in ruins afford some remains of luxury and opulence, yet in these respects they are much inferior to Pal-

myra. ‘ The two springs of fresh water it pos- sesses,’ says 'olney, ‘ were a pow erful induce- ment in a desert every where else so parched and barren. These, doubtless, were the principal motives which drew the attention of Solomon, and induced that commercial prince to carry his arms so remote from the litnits of Judea.’ ‘ He built strong walls there,’ says the historian Josephus, ‘ to secure himself in the possession, and named it Tadmor, which signifies the place of palm trees.’ Hence it has been inferred that Solomon was its first founder; but we should, from this passage, rather conclude that it was already a place of known importance. The in- vasion of Tadmor by that prince throws a great light on the history of this city. The king of Jerusalem would never have carried his attention to so distant and detached a spot without some powerful motive of interest; and this interest could be no other than that of an extensive com- merce, of which this place svas already the em- porium. This commerce extended itself to India, and the Persian (Julf was the principal point of union.’ From the nature of the com- modities, from the requisite assistance of the Tyrians, and other forcible arguments, M. ˆ‘ol- ney infers that the Persian Gulf was the centre

of the most ancient commerce of the eastern world ; and that it was with a view of obtaining a shorter route, by the Euphrates, that Solomon turned his attention to Tadmor, distant but three days’ journey from it.

‘ An ancient historian,’ says Volney, ‘ who has informed us that Nabuchodonosor, before he laid siege to Jerusalem, took possession of Tadmor, clearly indicates that the latter city acted in con- cert with the two neighbouring capitals, Tyre and Jerusalem. Their gradual decline became, under the Persian empire and the successors of Alexander, the efficient cause of the sudden greatness of Palmyra in the time of the Parthians and Romans ; she had then enjoyed a long peace for many centuries, which allowed her inhabi- tants to erect those monuments of opulence v’hoˆe ruins we still admire.’ The verdant part of tiie ground was, perhaps, in remote times far more extensive than it is at present, the sands having without doubt encroached in a considera- ble degree on the tract calculated for bearing the fruits of the earth. A place possessed of the advantages we have mentioned was soon made a point of resort for the caravans by which the various rich commodities of India were trans- ported to European countries. Palmyra thus grew to be an independent and wealthy city ; and appears to have been permitted by the Ro- mans, during their Parthian wars, to maintain a strict neutrality. Trajan, however, incorporated it with the imperial Roman state, and it should seem that durmg the period in

which it held the subordinate rank of a Roman colony (namely, for a century and a half subsequently), those temples and palaces of Grecian architecture, whose widely extended ruins have occasioned so much speculation, were erected.

In old times Palmyra was doubtless encom- passed by palms and fig trees, and it might probably have been reduced to its present for- lorn and miserable appearance by the oceans of sand drifted over it by whirlwinds. The walls of the city are flanked with square towers ; and are of the extent of three miles in circumference. But there is no authentic history of Palmyra till after the captivity of the emperor Valerian by the Persians. It is first mentioned by the Ro- man historians, as a place which Marc Antony attempted to plunder, upon pretence that it had not observed a just neutrality between the Pto- mans and Parthians. Pliny takes notice of it, as situated in a rich soil, among pleasant streams, and separated from the rest of the world by a vast sandy desert, which had preserved its inde- pendence between Parthia and Rome. After the captivity of 'alerian, it was become an opulent city, to which its situation in the vicinity of the Roman and Parthian empires greatly contributed ; as the caravans, going to or returning from the eaˆt, frequented the place, and thus rendered it a considerable seat of merchandise. But, when the defeat and captivity of 'alerian had so much weakened the empire that the Persians seemed to be in a fair way of becoming masters of all the eastern provinces, the Palmyrenians Degan to attempt recovering their liberty. Ode- 'tttus, prince of Palmyra, sent a polite letter to Sapor on his return, accompanied with con-

siderable presents ; but by that haughty con- queror his letter and embassy were treated with the most provoking contempt. The presents were thrown into the Euphrates ; and to his let- ter Sapor replied, That his insolence in presum- ing to write to his lord was inexcusable ; but, if he could atone for it in any way, it would be by presening himself before the throne bound hand and foot. Upon this Odenatus was so provoked that he swore either to bring down the pride of the haughty conqueror, or die in the attempt. Accordingly, having assembled what forces he could, he fell upon the Persians, destroyed a great number of them, took a great part of their baggage, with Sapor's queen, and some of his concubines. But though the Persians were often vanquished, and the independency of Palmyra often established, Valerian was never released from his captivity, though Odenatus earnestly endeavoured to rescue him from his enemies. Odenatus enjoyed his sovereignty but a short time ; being murdered by his nephew, who was soon after put to death by Zenobia, the widow of Odenatus.

Zenobia was possessed of very extraordinary endowments both of body and mind. Imme- diately on the murder of her husband, she as- sumed the

government, avenged his death, and soon strengthened herself so much that she re- solved to submit neither to the Roman nor Persian power. Arabia, Armenia, and Persia, dreaded her enmity and solicited her alliance. To the dominions of Odenatus, which extended from the Euphrates to the frontiers of Bithynia, she added the inheritance of her ancestors, the populous and fertile kingdom of Egypt. The emperor Claudius II. acknowledged her merit, and was content that, while he pursued the Gothic war, she should enjoy the dignity of the empire in the east. The conduct, however, of Zenobia, was attended with some ambiguity. She blended withth.e popular manners of Roman princes the stately pomp of the courts of Asia, and exacted from her subjects the same adora tion that was paid to the successors of Cyrus. She bestowed on her three sons a Roman edu- cation, and often showed them to the troops adorned with the imperial purple. For herself she reserved the diadem and title of queen of the east. When Aurelian passed over into Asia, his presence restored obedience to Bithynia, already shaken by the arms of Zenobia. Ad- vancing at the head of his leffions, Ancyra sub- mitted, and he was admitted into Tyana, after an obstinate siege, by the treachery of a per- fidious citizen. The generous though fierce Au- relian abandoned the traitor to the racre of the soldiers : a superstitious reverence induced him to treat with lenity the countrj'men of ApoUo- nius the philosopher. Antioch was deserted on his approach ; till he recalled the fugitives, and granted a general pardon to all who, from neces- sity, had fought for the Palmyrenian queen. The unexpected mildness of such conduct reconciled the Syrians, and, as far as the gates of Emesa, the people submitted to his arms. Zenobia, however, opposed the emperor's approach. The fate of the east was decided in two great battles ; the first fought near Antioch, the second near

Emesa. In both, the queen of Palmyra ani- mated the armies by her presence, and devolved the execution of her orders on Zabdas, who had already signalised his military talents by the conquest of Egypt. The numerous forces of Zenobia consisted for the most part of light ar- chers, and of heavy cavalry clothed in complete steel. The Moorish and lllyrian horse of Aure- lian were unable to sustain the ponderous charge of their antagonists. They fled in real or affected disorder, engaged the Palmyrenians in a labo- rious pursuit, harassed them by a desultory combatˆ and at length discomfited this impene- trable body of cavalry. The infantry, when they had exhausted their quivers, remained exposed 10 the swords of the legions. After the defeat of Emesa, Zenobia found it impossible to collect a third army. As far as the frontier of Egypt, the nations subject to her empire had joined the standard of the conqueror.

Palmyra was her last resource. She retired within its walls ; made every preparation for a vigorous resistance ; and declared, with the intrepidity of a heroine, that the last moment of her reign and of her life should be the same. In his march over the sandy desert, between Emesa and Palmyra, Au- lelian was perpetually harassed by the Arabs ; nor could he always defend his army, and espe- cially his baggage, from those flying troops of daring robbers. The siege of Palmyra was an object far more difficult and important ; and the emperor, who, with incessant vigor pressed the attacks in person, was himself wounded with a dart. ' The Roman people,' says Aurelian, in an original letter, ' speak with contempt of the war which I am waging against a woman. They are ignorant both of the character and of the power of Zenobia. It is impossible to enumerate her warlike preparations, of stones, of arrows, and of every species of missile weapons. Every part of the walls is provided with two or three balistce, and artificial fires are thrown from her Jnilitary engines,' &c. Aurelian at last judged it prudent to offer terms of an advantageous ca- pitulation : to the queen, a splendid retreat ; to the citizens, their ancient privileges. His pro- posals were obstinately rejected. Zenobia hoped, that in a short time famine would compel the Roman army to repass the desert ; and that the kings of the east, particularly the Persian mo- narch, would arm in the defence of their natural ally. But the death of Sapor distracted the councils of Persia; and the inconsiderable suc- cors that attempted to relieve Palmyra were easily intercepted. The Roman camp was in- creased by the return of Probus with his victo- rious troops from the conquest of Egypt. It was then that Zenobia resolved to fly. She mounted the fleetest of her dromedaries ; and had reached the banks of the Euphrates, about sixty miles from Palmyra, when she was over- taken by Aurelian's light horse, seized, and brought back a captive. Her capital soon after surrendered, and was treated with unexpected lenity. When the Syrian queen was brought into the presence of Aurelian, he sternly asked her. How she had presumed to rise in arms against the emperors of Rome ? The answer of Zenobia was a prudent mixture of respect and

*firmness : * Because I disdained to consider a; Roman emperors an Aureolus or a Gallienus You alone I acknowledge as my conqueror and my sovereign.' But the courage of Zenobia de- serted her in the hour of trial ; she trembled at the clamors of the soldiers, who called aloud for her immediate execution ; forgot the bold despair of Cleopatra, which she had proposed as her model, and ignominiously purchased life by the sacrifice of her fame and her friends. It was to their councils, which governed the weakness of her sex that she imputed the guilt of her obsti- nate resistance; it was on their heads that she directed the vengeance of the cruel Aurelian. The fame of Longinus, who was included among the numerous and perhaps innocent victims ot her fear, will survive that of the queen who be- trayed,*

or the tyrant who condemned him. Ge- nius and learning were incapable of moving a fierce unlettered soldier, but they had served to elevate and harmonise the soul of Longinus. Without uttering a complaint, he calmly followed the executioner, pitying his unhappy mistress, and comforting his afflicted friends.

Returning from the conquest of the east, Aurelian had already crossed the straits which divide Europe from Asia, when he was provoked by the intelligence that the Palmyrenians had massacred the governor and garrison which he had left among them, and erected the standard of revolt. Without delay, he once more turned towards Syria. Antioch was alarmed by his rapid approach, and the helpless city of Pal- myra felt the irresistible weight of his resent- ment. We have a letter of Aurelian himself, in which he acknowledges, that old men, women, children, and peasants, had been involved in that dreadful execution which should have been con- fined to armed rebellion : and, although his prin- cipal concern seems directed to the re-establish- ment of a temple of the sun, he discovers some pity for the remnant of the Palmyrenians, to whom he grants the permission of rebuilding and inhabiting their city. But it is easier to destroy than to restore. The seat of commerce, of arts, and of Zenobia, gradually sunk into an obscure town, a trifling fortress, and at length a miserable village. Little is known concerning the fortune? of Palmyra since the time of Mahomet, except that it was considered as a place of strength ; and that in the twelfth century there were 2000 Jews in it.

The company with whom Mr. Wood, the pub- lisher of The Ruins of Palmyra, travelled, arrived at the end of the plain, where a ridge of barren hills, by which it was divided on the right and left, seemed to meet; between them there was a vale, through which an aqueduct formerly con- veyed water to Palmyra. On each side of this vale they remarked several sepulchres of the an- cient Paimyrenes, which they had scarcely passed, when the hills opening on a sudden, they disco- vered such piles of ruins as they had never seen. They weio all of white marble; and, beyond them, towards the Euphrates, was a wide level, stretching farther than the eye could reach, to- tally desolate, and without bounds. After having gazed some time upon this prospect, which ra ther exceeded than fell short of their expecta-

tions, they were conducted to one of the huts of the Arabs, of which there were about thirty in the court of the great temple. The inhabitants of both sexes were well shaped, and the women, though very swarthy, had good

features. They were veiled, but did not so scrupulously conceal tlieir faces as the eastern women generally do. They painted the ends of their fingers red, their lips blue, and their eye-brows and eye-lashes black. They had large rings of gold or brass in their ears and nostrils.

These celebrated ruins consist of temples, pa- laces, and porticoes of Grecian architecture ; and lie scattered over an extent of several miles. They were accidentally discovered by some Eng- lish travellers from Aleppo above a century ago. The most remarkable of them is the temple of the Sun, of which the ruins are spread over a square of 220 yards. It was encompassed with a stately wall, built of large square stones, and adorned with pilasters within and without, to the number of sixty-two on a side. Within the court are the remains of two rows of noble marble pillars thirty-seven feet high, with their capitals of most exquisite workmanship. Of these only ►►fty-eight remain entire, but they appear to have gone round the whole court, and to have sup- ported a double piazza. The walks opposite the castle appear to have been spacious. At each end of this line are two niches for statues, with their pedestals, borders, supporters, and canopies, carved with the utmost propriety and elegance. The space within this enclosure seems to have been an open court, in the middle of which stood the temple encompassed with another row of pillars of a different order, and much taller, being fifty feet high ; but of these sixteen only remain. The whole space contained within these pillars is fifty-nine yards in length, and nearly twenty-eight in breadth. The temple is thirty- three yards long, and thirteen or fourteen broad. It points north and south ; and exactly in the middle of the building, on the west side, is a ►►►most magnificent entry, on the remains of which are some vines and clusters of grapes, carved in the most masterly imitation of nature that can be conceived. Just over the door are discerned aˆ pair of wings, which extend its whole breadth; but the body, whetlier of an eagle, or an angel, is destroyed. The north end of this temple is adorned with the most curious fret-work and bas-relief; and in the middle there is a dome or cupola about ten feet diameter. North of this place is an obelisk, consisting of seven large stones, besides its capital. It is about fifty feet high ; and, just above the pedestal, is twelve feet in circumference. About a quarter of a mile from this pillar, to the east and west, are two others, besides the fragment of a third. About 100 paces from the middle obelisk is a magni- ficent entry to a piazza, which is forty feet broad, and more than half a mile long, enclosed with two rows of marble pillars twenty-six feet high, and eight or nine in compass. Of these there still remain 129, but there must originally have been no less than 560. The upper end of the piazza was closed by a row of pillars. To the left are the rums of a stately banquetting-housc, built of better marble, and finished wiih yet

greater elegance, than the piazza. The pillars which supported it were of

one entire stone. It measures twenty-two feet in length, and in com- pass eight feet nine inches. In tlie west side of the piazza are several apertures for gates into the court of the palace. Each of these was adorned with four porphyry pillars, placed by couples in the front of the gate facing the palace, two on each side. Two of these only remain entire. They are thirty feet long, and nine in circum- ference. On the east side of the piazza stand a great number of marble pillars, some perfect, but the greater part mutilated. At a little dis- tance are the remains of a small temple, without a roof. Before the entry, which looks to the south, is a piazza supported by six pillars, two on each side of the door, and one at each end. The pedestals of those in front have been filled with inscriptions, both in the Greek and Palmy- rene languages, which are become totally ille- gible. Among these ruins are many sepulchres. They are all square towers, four or five stories high. There is a walk across the whole build- ing, the space on each hand is subdivided into six partitions by thick walls. The space between the partitions is wide enough to receive the largest corpse ; and in these niches there are six or seven piled upon one another. Many- inscriptions have been found at Palmyra, which have occupied much of the attention of the learned. See Barthelemy's Reflections on the Palmyrene Alphabet, published at Paris in 1754 ; An Explication of the Inscriptions at Palmyra hitherto published by John Swinton, of Christ Church, Oxford ; Philosophical Transactions, No. 217 and 218; Ancient Universal History, Vol. 1 ; and, above all, the Ruins of Palmyra, or Tadmor in the Desert, published by Mr. R. Wood, who, with M. Bouverie and Mr. Daw- kins, travelled thither in 1751. The result of their observations was published in 1753, in the form of an atlas. The ruins of this once mighty and celebrated city are represented in fifty-seven copper plates, sixteen by twelve inches, printed on imperial paper. They are admirably exe- cuted ; Palmyra was visited by Mr. Bruce, before his journey into Abyssinia. Before he came in sight of the ruins, he ascended a hill of white gritty stone, in a very narrow winding road; but, on getting up to the top, he was struck with the most stupendous sight which, he believes, ever mortal saw. The whole plain below, which is very extensive, was so covered with magnificent buildings that they seemed to touch one another. All of them are finely pro- portioned, and composed of white stones, which at that distance appeared like marble.

In the neighbourhood of Palmyra are some salt-marshes ; and to the adjacent country a trade is carried on in kelp from Tripoli in Syria. Respecting the latitude and longitude there are various opinions. Before INIr. Bruce left Pal- myra, he observed its latitude wit!) a reflecting quadrant of Iladley, but, as the instrument waa out of order, he could not determine it exactly. In his opinion, however, 33►► 58′ is the latitude. From such observations as he could make on the longitude, he conciuaea i.

to ne 37►► 9′ E. of Greenwich. Mr. R. Wood makes the lai. 34►►

N. That which appears to be nearest the truth is long. 38►► 50′ E., lat. 33►► 20′ N. It stands about tifty leagues south-east of Aleppo, as much from Damascus, and twenty leagues west of the Euphrates.

PALMYRAS Point, the south point of Ba- lasore Bay, Bengal, is a low point, covered with palm-trees, and on each side of it a river, that on the south being navigable for small ves- sels. The bay of Balasore has but little depth, and the great danger here is of mistaking Cape False for the Point. No ship should enter Ba- lasore roads between Lady-day and Midsummer, and at all seasons a pilot should be taken on board. The East India Company have lately erected a light-house here. Long. 87►► 5′ E., lat. 20►► 44′ N.

PALNAUD, a district of the Carnatic, Hin- dostan, situated principally between 16►► and 17►► of N. lat., and on the south side of the Kistnah. This district was ceded by the nabob of the Car- natic to the British, in 1801, and is now com- prehended in the collectorship of Guntoor. The chief towns are Macheria, Timerycotta, and Cur- rumconda.

PALO, a town of Diarbekir, Asiatic Turkey, is situated on the edge of a mountain, upon the banks of the Euphrates. The top of the moun- tain is covered with ruins, supposed to be those of Balisbiga; and quantities of old coins and medals are continually dug up here. Tlie pre- sent population of Palo is about 8000 Turks, Armenians, and Koords ; but the town is ill built, and subject to earthquakes. The Euphrates is here extremely rapid. Sixty miles north of Diarbekir.

PALOS, a small town of Andalusia, in Spain, where Colombus fitted out his ships, and whence he sailed on his first voyage for the discovery of the new world iu 1492. Here also is the con- vent, at the gate of which Colombus appeared as a poor stranger, and asked bread and water for his child. It is now almost deserted, being occupied by only a few hundred inhabitants. It lies on the Tinto ; long. 6►► 58′ W., lat. 37►►

10′ N. PAL'PABLE, adj. Palpability, n. s. Pal'pableness, Pal'pably, adv. Palpa'tion, n. s.

Ft. palpable ; Latin ‘ palpor. Perceptible to . the touch ; hence easily

detected ; gross ; coarse ;

plain : palpability and

palpableness are synonymous, expressing the state or quality of being perceived by the touch ; plainness ; obviousness : palpably is the corresponding adverb : palpation (of which we find no instance) the act of feeling.

Clodius was actjuitted by a corrupt jury, that had jmlpably taken shares of money. Before they gave up their verdict, they prayed of the senaie a guard, that they might do their consciences justice.

Bacon, Darkness must overshadow all his bounds,

Palpable darkness ! and blot out three days.

Milton.

Since there is no such dissimilitude between cause and effect in the more palpable phenomena, we can expect no less between them and their invisible ef- ficients. Glanville.

They would no longer be content with the invisible monarchy of God, and God dismissed them to the palpable dominion of Saul. Holyday.

He must not think to shelter himself from so jr<;/- pable an absurdity, by this impertinent distinction.

Tillotson. Having no surer guide, it was no wonder that they fell into gross and palpable mistakes.

lVoodu:ard's Natural History. He first found out palpability of colors ; and, by the delicacy of his touch, could distinguish the dif- ferent vibrations of the heterogeneous rays of light.

Marl, ticriblerus. RIyr. And felt you not this a mere vision 1 S4R. No:

It was so palpable, I could have touched them. I turned from one face to another, in The hope to find at last one which I knew Ere 1 saw theirs : but no ††† all turned upon me.

Byron.

PALP AH, a mountainous and barren district of Northern Hindostan, situated between 28†† and 29†† of N. lat. It forms one of the principalities subject to the rajah of Nepaul, called the territories of the twenty-four

rajahs. It is inter- sected by the Gunduck.

Palpah, the capital of the above-mentioned district, the residence of a Hindoo chief named Mehadut Sein, who is tributary to Nepaul. It is situated among the mountains on the banks of the Gunduck River. Long. 82►► 55′ E., lat. 28►► 11′ N.

PAL'PITATE, V. a. 1 French palpiter ; Lat.

Palpita'tion, n. s. S palpito (a Gr. TraXXw). To pant ; throb ; beat as the heart ; flutter : the substantive corresponding.

The heart strikes five hundred sort of pulses in an hour ; and hunted into such continual palpita- tions, through anxiety and distraction, that fain would it break. Harvey.

I knew the good company too well to feel any pal- pitations at their approach. Tatler.

Anxiety and palpitations of the heart are a sign of weak fibres. Arbuthnot on Aliments.

Her bosom heaves With palpitations wild.

Thomson's Spring. While, as beautiful as May,

A female child of ten years tried to stoop

And hide her little palpitating breast

Amidst the bodies killed in bloody rest. Byron.

Palpitation of the Heart.. See Medicine, Index.

PALSGRAVE (John), a learned writer, who flourished in the reigns of Henry VII. and Henry VIII. He received his grammatical learn- ing at London, his native place. He studied logic and philosophy at Cambridge, where he became A. B., after which he went to Paris, where he spent several years in study, took the degree of A. M., and acquired such excel- lence in the French tongue that, in 1514, when a treaty of marriage was negociated between Loui? XII. of France, and the princess Mary, sister of Henry VIII. of England, Mr. Palsgrave was appointed to be tutor in that language. But Louis XII. dying soon after his marriage. Pals- grave attended his fair pupil back to England, where he taught French to the young nobility, obtained preferment in the church, and was ap- pointed one of the king's chaplains in ordinary. In 1531 he settled at Oxford, and in 1582

was made A. M. and B. D. He was much esteemed for his learning; and, though an Englishman,

was the first who reduced the French tongue to grammatical rules, or fixed it to any kind of standard. This he executed with great ingenuity, in a large work which he published in that lan- guage at London, entitled L'Eclaircissement de la Language Francoise, in three books, thick fo- Ko, 1530, with a large English introduction; so that the French nation stand originally indebted to England for that universality which their lan- guage at present possesses. He translated into English a Latin comedy called Acolastus, written by one William Fullonius, an author then living at Ilagen in Holland. He died in 1540.

PAL'S Y, n.s. Lat. paralym, of which it seems a corruption. A privation of animal motion or feeling.

The falsy, and not fear, provokes me.

Shakspeare. Palled, thy blazed youth Becomes assuaged, and doth beg the alms Of palsid eld. Id. Measure for Measure.

A palsii may as well shake an oak, as shake the delight of conscience. South.

Though she breathes in a few pious peaceful souls, like a palsied person, she scarce moves a limb.

Decay of Piety,

Let not old age long stretch his palsied hand ; Those who give late are importuned each day. Gai/.

There is a threefold division of a palsy ; a priva- vation of motion, sensation remaining ; a privation of sensation, motion remaining ; and, lastly, a pri- vation of both together. Quincy.

Eneas ! .Tesus, the true Messiah, in whose name I preach and act immediately healeth thee ! ❖❖❖ And upon this the palsy left him, and the disabled man was all at once so strengthened that he arose imme- diately and did it. Doddridge o?j Acts ix.

Palsy. See Medicine, Index. PAL'TER, V. n. & v. a. \ As Skinner and Pal'terer, (Minsheu think,

Pal'triness, ˆ from, Fr. poltron.

Pal'try, adj. J I\Ir. Thomson more

probably from Span. /a/fer, or balder (barb. Lat. paliture), Julio. To shuffle ; shift ; deal insin- cerely ; deceive : according to Ainsworth it has also been used for to squander, as ' he falters his fortune :' a palterer is a shuffler; insincere dealer or negociator: paltry, low; tricky; sordid; mean.

Be these juggling fiends no more believed, That palter with us in a double sense ; That keep the word of promise to our ear. And break it to our hope. Shakspeare. Macbeth. Then turn your forces from this paltri/ siege, And stir them up against a mightier task.

Shakspeare. Whose compost is paltry and carried too late. Such husbandry useth that many do hate. Tusser. For knights are bound to feel no blows From paltry and unequal foes. Hudibras.

It is an ill habit to squander away our wishes upon paltry fooleries, L' Estrange.

When such paltry slaves presume To mix in treason, if the plot succeeds, They're thrown neglected by ; but, if it fails. They're sure to die like dogs. Addison's Cato.

PALUDAMENTUM, in Roman antiquity, a habit that dift"ered but little from the cldamys, except that this last belonged chiefly to the lower class of people. It was worn by the officers and princi[)al men among the Romans in time of war.

who are therefore called Paludati ; distinguished from the common soldiers, who, because they wore the sagum, were called sagati. The palu- damentum came down only to tlie navel, was open on the sides, had short sleeves resembling angels' wings, and was generally white or red. It is also used to signify the common soldier's coat.

Paly, or Pale, in heraldry, is when the shield is divided into four or more equal parts, by perpendicular Imes falling from the top to the bottom.

Paly Bende is when the escutcheon is di- vided by perpendicular lines, which is paly ; and also by diagonals, which is called bendy.

PAM, n.s. Probably, as Johnson says, from palm, victory, as trump from

triumph. The knave of clubs.

Ev'n mighty pam that kings and queens o'erthrew. And mowed down armies in the fights of lu. Pope.

PAMELIUS (James), a Flemish divine, the son of Adolphus, counsellor of state to Charles Vˆ, born at Bruges, in 1536. He was canon of Bruges ; and Philip II. appointed him bishop of St. (Jmer ; but, in going to take possession of his episcopate, he died at Mons. He wrote several works ; of which the chief is his Notes upon TertuUian and Cyprian.

PAMIGER, or Paminger (Leonard), or the elder, was a scholar, musician, and the intimate friend of Martin Luther. He composed a great variety of church music, printed in four volumes, which appeared at different periods after his de- cease in 1568, under the superintendance of his son Sophonias.

The latter was born in 1 526, studied under Luther and Melancthon, at Wittemberg, and af- terwards suffered much persecution on account of his religious opinions. He became in 1568 rector of the choir at Oetingen; but, his principles forcing him to quit that place, he returned to Nuremberg, where he supported himself princi- pally by the sale of his father's works, and by teaching at the Carthusian convent. His death took place in 1603.

PAMPAS del Sacramento, vast plains of South America, to the eastward of the Andes, running in a direction nearly north and south through the province of Peru, to the extent of nearly 8000 square leagues. They are so level that they have been compared to the ocean, and are shaded with forests of eternal verdure. They are between the Ucayale and the limits of the Portuguese territories, which bound them to the east and west, while to the north they are bounded by the river Amazons. They contain abundance of lakes and rivers, whose isles and havens are inhabited by tribes greatly diversified. Rain and thunder are frequent, and for some hours of the day thick fogs always rest on the trees. The thickness of the woods often prevents the rain from penetrating to the earth, and the warmth and moisture give birth to innumerable insects and reptiles, and render these regions very un- healthy. Here some of the rarest vegetable]iro- ducts are found : balsams, oils, gums, resins, in- cense, cinnamon superior to that of Ceylon in strength, but not so valuable, on account of a juice which it transudes ; cocoa, cascarilla, and

excellent spiceries. This vast region was disco- vered about the year 1726 ; and several missions were established, which were afterwards aban- doned. In 1 790 father Sobriela was instructed by the Spanish government to set out on an expedition, for the purpose of exploring the course of the Guallaga ; and father Girval after- wards, in 1794, surveyed the Ucayale. The Spaniards have endeavoured to train the natives here to agriculture, and to the arts of civilised life ; and various missionary settlements have so far succeeded that the missionaries have com- pletely gained the good-will of the natives, and new communications are constantly opened with Peru.

PAMPELUNA, or Pamplona, a strong town in the north of Spain, the capital of the province of Navarre. It stands partly on an eminence on the banks of the Agra, partly on a plain, and is surrounded by mountains. It derives its chief defence from two castles, one in the inside, the other on the outside of the walls. The latter is the citadel and stands on a rock, of which the only accessible part is covered by a morass. It has a deep ditch, five bastions faced with stone, and in its centre an open space, of a circular form, communicating by five short streets, with five bastions. Pampeluna is said to have been the first town in Spain that embraced Christia- nity. Its bishopric is certainly one of the oldest; for it was abolished daring the Moorish invasion. The public edifices are a cathedral, four churches, and thirteen monasteries. In this, as in most towns of Spain, the education of the youth of both sexes is very imperfect, being confided to the monks and nuns, and the society of the place is very monotonous. The manufactures are insignificant, but the surroimding country is fertile and well cultivated. Population 14,000.

This town is said to have been built by Pom- pey, after the defeat of Seitorius. In June 1813, on the flight of the French army from 'ittoria, Pampeluna was hastily garrisoned and provi- sioned. It was forthwith invested bytiie British; but the approach of marshal Soult, with an army, towards the close of July, promised it an early deliverance. In tlie vicinity the obstinate con- flicts of 27th and 2'.ith July took place ; and the Irench being compelled to repass the Pyrenees, with great loss, Pampeluna surrendered on the 31st of October. Sixty-two miles E. S. E. of Bilboa, and about 200 north-east of Madrid.

PAM'PER, V. a. Itnl. pcwibere ; of Lat. panes and bibere. To fill, or rather to glut ; feed luxuriously.

It was even as two physicians should take one sick body in hand, of which the former would minis- ter all things meet to purge and keep under the body, the other to pn?'!/)?)- and strengthen it suddenly again ; whereof what is to be looked for but a most dangerous relapse "! Spenser.*

You are more intemperate in your blood

Than Venus, or those pampered animals

That rage in savage .sensuality. Shakspeare.

They are contented as well with mean food, as those that with the rarities of the earth do pamper their voracities. Sandtjs.

Praise swelled thee to a proportion ready to burst ; it brought thee to feed upon the air. and to starve rfiy soul, only to pamper thy imagination. South.

His lordship lolls within at ease, Pampering his paunch with foreign rarities.

Dryden. To pampered insolence devoted fall. Prime of the flock and choicest of the stall. Pope. Hard is the fate of the infirm and poor ; Here, as I craved a morsel of their bread, A pampered menial drove me from the door.

Moss.

PAM'PHLET, n. s. & v. a. } Fr. par un

Pam'phleteer. Sfit'ei Whence

this word is written by Caxton, paunflet. A

small book ; properly a book sold unbound, or

only stitched.

(lan'st thou with deep premeditated lines, With written pamphlets studiously devised.

Shakspeare. I put pen to paper, and something 1 have done, though in a poor pamjihleting way. Howel.

I put forth a slight pamphlet about the elements of architecture. Wotum.

Since 1 have been reading many English jˆamphlets and tractates of the Sabbath, I can hardly find any treatise wherein the use of the common service by the minister, and the due frequenting thereof by the people, is once named among the duties or offices of sanctifying the Lord's day. WJdte.

He could not, without some tax upon himself and his ministers for the not executing the laws, look upon the bold licence of some in prmting pamphlets.

Clarendon. The squibs are those who in the common phrase are called libellers, lampooners, and pamphleteers.

Taller. As when some writer, in a public cause, His pen, to save a sinking nation, draws ; While all is calm his arguments prevail, Till power, discharging all her stormy bags, Flutters the feeble pamphlet into rags. Swift.

With great injustice I have been pelted hy pam- phleteers. Id, See Louvet, patriot, pamphleteer, and sage, Tempering with amorous fire his virtuous rage. Formed for all tasks, his various talents see, ??? The luscious novel, the severe decree. Canning.

PAMPLONA, a city ofTunga, New Granada, situated on a plain, surrounded on all sides by mountains. It has a handsome parish church, with other public edifices and squares. 185 miles north-east of Santa Fe, and 156 W. S. W. of Truxillo.

PAMPHILUS, a celebrated painter of Mace- donia, in the age of Philip II. He was founder of the school for painting at Sicyon ; and he made a law which was observed not only in Si- cyon, but all over Greece, that none but the children of noble and dignified persons should be permitted to learn painting. Apelles was one of his pupils.

PAMPHYLA, an ancient Grecian authoress, who flourished in Nero's reign, and wrote a ge- neral history, in thirty-three books, much com- mended by the ancients, but not extant.

PAMPIIYLIA, the ancient name of a country of Natolia, in Asia, now called Caramania and Cay Bay, between Lycia and Cilicia, on the south coast, north of the Mediterranean. Its first name was Mopsopia.

PAN, w. s. ˆ Sax. ponne, panna; Belg.

Pan'cake, S panne ; Swed. panna. Abroad shallow vessel used in kitchens : hence, perhaps, the remarkable cavity of the knee ; the part of a

gur.lock which contains the priming, Sec : a pan- cake is an excellent preface or addition to din- ners, cooked in the frying-pan.

This were but to leap out of the yan into the fire.

Spenser. A certain knight swore by his honour they were good pancakes, and swore by his honour the mustard was naught. Shakspeare.

Our attempts to fire the gunpowder in the pan of the pistol succeeded not. Boyle.

The pliant brass is laid <)n anvils, and of heads and limbs are made, Paui, cans. Dryden.

The flour makes a very good pancake, mixed with a little wheat flour. MortimeT's limbandrq.

Pax, in mythology, the god of shepherds, hunters, and all country exercises. In Egypt he vas named Mendes, which, according to Jab- lonski, signifies fecundity. Hence his symbol 'vas a he-goat, the most salacious of all animals, llis principal temple was a magnificent building in a city of Lower Eg}'pt, called after his name, where was kept a he-goat, to whom sacrifices of a very monstrous kind were offered. Homer makes him the son of Mercury, and says he was called Pan from rcav, omne, all, because he charmed all the gods with his flute ; others say that he was the son of Demogorgon, and first in- vented the organ, of seven unequal reeds, joined together in a particular manner. Having on a time fought with Cupid, that god in spite made him fall in love with the coy nymph Syrinx, who, flying from him to the banks of Fadon, a river of Arcadia, at the instant prayers of the nymphs, was turned into a reed, as her name in Greek signifies, which the god grasping, instead of her, made a pipe of it, and, for his music, was adored by the Arcadians. The most common opinion was, that he was the son of Mercury and Pene- lope. He was by no means displeasing to the nymphs, who are generally drawn dancing round about him to hear his pipe. The goddess Luna, and the nymphs, cut the most distinguished figure in the history of his amours. The usual otierings made him, were milk and honey, in shepherds' wooden bowls ; also they sacrificed to him a dog, the wolf's enemy ; whence his usual epithet is XvKaioQ ; and whence also his priests were called Luperci. His festival brought into Italy by Evander the Arcadian, and revived af- terwards by Romulus, in memory of his pre- server, was celebrated by the Romans on the J 5th February. He was also called by them Inuus, ab inuendo. See Liv. 1. 5, Macrob. Sat. I. 22, and Serv. in Virg. iEn. VL 775. The an- cients, by giving so many adjuncts and attributes to this idol, seem to have designed him for the symbol of the universe : his upper parts being human, because the upper

part of the world is fair, beautiful, smiling like his face ; his horns symbolise the rays of the sun and of the moon ; his red face the splendor of the sky ; the spotted skin wherewith he is clothed, the stars which be-spangle the firmament ; the roughness of his lower parts, beasts and vegetables; his goat's feet the solidity of the earth ; his pipe, compact of seven reeds, the seven planets, which they say make the harmony of the spheres : his crook, bending round at the top, the years circling in one another.••• Serv. Interpr. Such is the Pan Vol. XVI.

of the poets ; but among the Egyptians, as Mtnrtes, and by the earlier Greeks, he was worshipped m a much higher character, as the soui of the uni- verse, the whole system of things, animated and eternal.

PANACE'A, U.S. Fr. panacee ; Gr. iravaKua. A universal medicine. An herb. ••• Ainsworth. PANA'DA, 71. s. I From Lat panis, bread. P.axa'do. 5 Food made by boiling

bread in water.

Their diet ought to be very sparing ; gruels, pana- das, and chicken broth. Wiseman's Surgenj.

PANA:TIUS, a stoic philosopher of Rhodes, who flourished about A.A.C. 140. lie studied at Athens, and was offered citizenship, but de- clined. He came to Rome, where he had the Scipios and the La;liuses among his disciples. Scipio Africanus, the younger, was so attached to him, that he took him along with him in all his expeditions. His countrymen, the Rhodians, were highly indebted to him for various privi- leges and immunities. He wrote a treatise on the Duties of Man, which Cicero praises greatly in his work on the same subject. He lived about thirty years after this.

PANAGIOTI, a Greek nobleman of the seventeenth century, who was chief interpreter to the Grand Signior ; and had so great niterest with him that he procured many favors to his countrj-men. He wrote a book m modem Greek, entitled The Orthodox Confession of the Catholic and Apostolic Eastern Churches. He died in 1673.

PANAMA, a province of Colombia, in the late viceroyalty of New Granada, bounded on the north by the Spanish Main, on the east by the province of Darien, on the south by the Pacific Ocean, and on the west by Verag^^ia The name of Panama is said to have been given to this country by Tello de Guzman, in 1513, from his having observed the natives engaged in fishing; the word denoting a place abounding in fish. It IS bounded on the north by the Carib- bean Sea or Spanish]Main, on the

*west by the province of 'eragua, on the east by Darien, and on the south by the Pacific Ocean. Great part of the country is still covered with thick forests ; and the land between the two seas consists ge- nerally of abrupt and broken chains of moun- tains, one of which, the Sierra de Canatague, on the borders of Panama and 'eragua, divides North from South America. On the tops of these craggy mountains the land is sterile and uninhabited, the cities, settlements, plantations, and Indian villages, being mostly along the shori> * of the two oceans.*

The river Chagre is the principal stream in this province, and may be called the high-road of Panama, being used as the means of com- munication between the eastern shore and the capital. It takes its rise in the mountains near Cruces, which place is about five leagues from Panama. The Chagre has a considerable de- scent, but is nevertheless navigable for boats up to Cruces; its velocity is about three miles an hour; therefore the ascent from the coast is rather fatiguing. The breadth of this river is about a quarter of a mile at the mouth, and 150 feet at Cruces. The distance from the estuary

to Cruces, the last navigable point in a straight line, is not above thirty-six miles ; but the river winding frequently increases this length. It re- quires four or five days to ascend it when the waters are not very high. If the water passage is counted, the sinuosities make it forty-three miles, reckoning from Fort San Lorenzo, which defends the entrance. It is by means of this river that one of the communications between the two oceans has been proposed. The ascent from Cruces, where the river is first navigable, towards the summit of the mountains, is rapid for a short space, after which there is a gentle descent the whole way to the South Sea.

In the river Chagre are seen numberless cay- mans or alligators ; they are observed either in the water or on the banks ; but, on account of the thorny shrubs and thick underwood, cannot be pursued on shore.

The climate of Panama is hot, as may be well supposed from its situation. The greatest heat is felt in the months of August, September, and October, when it is almost insupportable : the brisas, or trade-winds, and the continual rains, ameliorate the excessive heats during the other months ; but at the same time render the cli- mate very unpleasant. The mines produce so little gold or silver, that they are supposed not to answer the

expense of working.

The pearl fishery here is also at present of little importance. It was anciently carried on amongst the small islands in the bay of Panama, and was very lucrative. An endeavour has lately been made to re-establish it.

The soil of Panama is prolific, abundantly producing the tropical fruits and plants. On the borders of the Chagre the luxuriance is such, that it is very difficult to penetrate the forests. The barks which navigate the stream are formed of those trees which grow nearest the waters, some of which are very large. These forests are plentifully stocked with all sorts of wild animals peculiar to the torrid regions, among which are innumerable tribes of monkeys. The peacock, the turtle-dove, tlie heron, and various other sorts of beautiful birds, frequent the forests of tlie Chagre and of Panama. The. country is also infested with reptiles, insects, &c.

The trade of Panama consists in its relations with Veragua, and the ports of Peru and New Granada. From these it is supplied with cattle, maize, wheat, and poultry. Its exports are of no great importance or value. From Carthagena, European goods are received, for which maho- gany, cedar, and other woods, with gums and balsams, are exchanged. ••• Part of the European trade of the western shore of South America is carried on by way of Panama and Porto Bello ; but, since the galleons were disallowed, the trade of these two cities has been comparatively trifling. The province contains three cities, twelve villages, and numerous settlements of converted Indians.

Panama, the capital of the above province, a city and sea-port, built near the bottom of a large bay of the Pacific which bears the same name. From this city the Isthmus of Darien has frequently taken its appellation ; at present it is indifferently styled the Isthmus of Panama or of Darien. It stands in 9•• 0′ 30″ N.lat., and

79•• 19′ VV. long. The streets are broad and paved, both in the city and suburbs ; but the houses of the latter are mostly of wood, inter- mixed with thatched huts. The cathedral is a handsome edifice of stone, as are the churches, convents, monasteries, and an excellent hospital. The people of Panama have a disagreeable drawling method of speaking, and appear as if they were overcome by the great heat of the climate: they nevertheless are really healthy, and live in general to a good age.

Such is the spirit of trade in this place that every person is engaged in bartering. A trea- sury, custom-house, Ike, are established here, and, when the galleons came from Lima, Panama and Porto Bello might be said to be the Acapulco and 'era Cruz of South America. The former is remarkable

for its fine bay stud- ded with islands, and in the road before those of Perico, Naos, and Flamingos, ships from the south anchor in safety two leagues and a half from the town.

PANAPA Island, an island at the mouth of the Orinoco, separated from the shore by a shal- low channel, moderately wide. At the east and west points there are flats with very little water on them. That of the west point ascends more than a league, and inclines alv/ays to the south. Between this island, which is a league and a half long, and the north coast, is the principal channel of the Orinoco.

PANAROOCAN, a town of Java, formerly the capital of a principality, situated on a river which enters the sea by several mouths, about twenty miles west of Cape Sandana, the north- east entrance of the island. It is now subject to the Dutch, and has a square fort, which stands about three quarters of a mile from the sea.

PANATHEN/EA, navaQr]vaia, in Grecian antiquity, an ancient Athenian festival, in honor of Athena, or Minerva, the protectress of Athens. Harpocration and Suidas refer the institution of this festival to Erichthonius, the fourth king of Athens, who lived before Theseus. Theodoret alone says the feast was established by Orpheus. Be this as it will, till Theseus, it was never a particular feast of the city of Athens, and was called simply Athenaea ; but, that prince uniting all the people of Attica into one republic, they afterwards assisted at the feast ; whence the name Panathensea, i. e. the feast of all Attica. In effect all Attica was present ; and each people sent a bullock for the sacrifices, and for the enter- tainment of the vast multitudes of people as- sembled. There were two festivals under this denomination, the greater and the less. The greater panathensea were exhibited every five years ; the less every three, or, according to some writers, annually. Though the celebration of neither, at first, employed more than one day, yet, in after times, they were protracted for many days, and solemnised with greater prepara- tions and magnificence than at their first insti- tution. The ceremonies were the same in the great and the little panathenaea ; excepting a banner whereon the actions of the goddess were represented in embroidery, performed by maids, with the names of those who had distinguished themselves in the service of the republic which

was only borne at the greater. Piizes were es- lablislied for three ditTerent kinds of combat; the first consisted of foot and horse races ; the second of

athletic exercises ; and the third of poetical and musical contests. These last are said to have been instituted by Pericles. Singers of the first class, accompanied by performers on the flute and cithara, exercised their talents here, upon subjects prescribed by the directors of these exhibitions. A particular account of the order observed in this festival, with the various contests, races, prizes, &c., may be found in Barthelemi's Travels of Anacharsis, vol. ii. p. 434. PANAX, ginseng, a genus of the dicecia order, belonging to the polygamia class of plants. There are five species.

1. P. arborea.

2. P. fruticosum. Of these two species and the spinosa, there is nothing that merits particu- lar notice.

3. P. quinquefolium, the fiv"e-leaved ginseng, is a native of North America, and is generally believed to be the same with tlie Tartarian gin- seng ; the figures and descriptions of that plant which have been sent to Europe by the mission- aries agreeing perfectly with the American plant. This has a jointed, fleshy, and taper root, as large as a man's finger, frequently divided into two smaller fibres downwards. The stalk rises nearly a foot and a half high, and is naked at the top, where it generally divides into three smaller foot-stalks, each sustaining a leaf com- posed of five spear-shaped lobes, sawed on their edges ; they are of a pale green, and a little hairy. The flowers grow on a slender foot-stalk just at the division of the foot-stalks which sus- tain the leaves, and are formed into a small umbel at the top ; they are of an herbaceous yellow color, composed of small yellow petals, which are recurved. WoodviUe says they are white, that they are produced in a roundish ter- minal umbel, and are hermaphrodite and male on separate plants. The former stand in close simple umbels; the involucrum consists of se- veral small, tapering, pointed, permanent leaves ; the proper calyx is tubular, and divided at the rim into five small teeth ; the corolla consists of five petals, which are small, oval, equal, and re- flexed ; the filaments are five, short, and fur- nished with simple antherae; the germen is roundish, placed below the corolla, and supports two short erect styles, crowned by simple stig- mata; the fruit is an umbilicated two-celled berry, each containing a single irregularly heart- shaped seed. The flowers appear in the begin- ning of June ; and are succeeded by compressed, heart-shaped berries, which are first green, but afterwards turn red ; enclosing two hard, com- pressed, heart-shaped seeds, which ripen in the beginning of August. Ginseng was formerly supposed to grow only in Chinese Tartary, af- fecting mountainous situations, shaded by close woods ; but it has now been long known that this plant is also a native of North America, whence M. Sarrasin transmitted specimens of it to Paris in the year 1704 ; and the ginseng since discovered in Canada, Pennsylvania, and 'ir- ginia, by Lasiteau, Kalm, Bartram, and others, has been found to

correspond exactly with the

*Tartarian species ; and its roots are now regu- larly purchased by the Chinese, who consider them to be the same as those of eastern growth, which are known to undergo a certain pre- paration, whereby they assume an appearance somewhat different. l*or it is said that in China the roots are washed and soaked in a decoction of rice or millet-seed, and afterwards exposed to the steam of the liquor, by which they acquire a greater firmness and clearness than in their natural state. The plant was first introduced into England in 1740, by that industrious na- turalist, Peter Collinson. They thrive in those places where it has a light soil and shady situa- tion, and will produce flowers and seeds ; but the latter, though in appearance ripe and per- fect, will not produce any new plants, as Mr. Miller says he has repeatedly made the experi- ment, and waited for them three years without disturbing the ground. There are many good specimens in the royal botanic garden at Kew. The dried root of ginseng, as imported here, is scarcely the thickness of the little finger, about three or four inches long, frequently forked, transversely wrinkled, of a horny texture, and both internally and externally of a yellowish white color. On the top are commonly one or more little knots, which are the remains of the stalks of the preceding years, and from the number of which the age of the root is judged of. ' To the taste it discovers a mucilaginous sweetness, approaching to that of liquorice, ac- companied with some degree of bitterness, and a slight aromatic warmth, with little or no smell. It is far sweeter and of a more grateful smell than the roots of fennel, to which it has by some been supposed similar ; and differs likewise remarkably from those roots in the nature and pharmaceutic properties of its active principles, the sweet matter of the ginseng being preserved entire in the watery as well as the spirituous extract, whereas that of fennel roots is de- stroyed or dissipated in the inspissation of a watery tincture. The slight aromatic impregna- tion of the ginseng is likewise in good measure retained in the watery extract, and perfectly in the spirituous.' Lewis, Mat. Med. p. 325. The Chinese ascribe extraordinary virtues to the root of ginseng; and have long considered it as a sovereign remedy in almost all diseases to which they are liable, having no confidence in any medicine unless in combination with it. Jartoux, when in China, boasted of its effects upon him- self. But we know of no proofs of the efficacy of ginseng in Europe ; and from its sensible qualities we judge it to possess very little power as a medicine. A drachm of the ginseng root may be sliced and boiled in a quarter of a pint of water to about two ounces ; then, a little sugar being added, it may be drank as soon as it is cool enough. The dose must be repeated morning and evening; but the second dose may be prepared from the same portion of root which was used at first ; for it may always be twict boiled.*

4. P. spinosa. See No. 1.

5. P. trifolium, the three-leaved ginseng, grows naturally in North America ; but Mr. Miller never saw more than one plant, which

was sent to liim from Maryland, and did not live beyond the first year ; being planted in a dry soil, in a very dry season. The stalk was single, and did not rise more than five inches in height, dividing into three foot-stalks, each sus- taining a trifoliate leaf, whose lobes were longer, narrower, and deeper indented on their edges than the former. The flower-stalk rose from the divisions of the foot-stalk of the leaves; but, before the flowers opened, the plant decayed.

PANCIIBERARAII, a town and small dis- trict of Ilindostan, in the province of Cashmere. It was formerly esteemed one of the holy places of the Hindoos ; but, since the province came into possession of the Mahometans, it has been neglected. Long. 73►► E., lat. 34►► 32′ K.

PANCARPUS, Gr. from irav, all, and (tapTToj, fruit, in Roman antiquity, a kind of show, which the Roman emperors frequently exhibited to the people. The name was also given by the Athenians to a sacrifice wherein all kinds of fruits were offered. In this spectacle, the circus, being all set over with large trees, represented a forest, into which the beasts being let from the dens under ground, the people, at a sign given by the emperor, pursued, shot, and killed all they could lay hold of, which they afterwards carried away, to regale upon at home. The beasts usually given on these occasions were boars, deers, oxen, and sheep. Casaubon, Cujas, Pithou, &c., make the pancarpus and sylva the same thing; Salmasius will have them different. The sylva, according to him, was such a diversion as that above described ; but the pancarpus, a combat, wherein robust people, hired for that purpose, fought with wild beasts ; which opinion he confirms from Cassian, Justi- nian, Claudian, Firmicius, Manilius, and Cassi- odorus.

PANCHES, a province of New Granada, fifteen leagues in length from east to west, and twelve wide from north to south, of a hot tem- perature, and rough and craggy territory, full of mountains and ravines. It is well watered by several large rivers, and is fertile in maize and vines. Here are also many sugar engines for the manufactory of sugar. The capital is To- caima.

PANCIROLLUS (Guy), a famous lawyer of Rhegiura, was educated at the

principal univer- sities of Italy ; and became professor of law at Padua. Philibert Emanuel, duke of Savoy, in- vited him to his university in 1571, where he composed his ingenious treatise De rebus in- ventis et deperditis. But, the air of Turin not agreeing with him, he there lost an eye, and, for fear of losing the other, returned to Padua, where he died in 1591.

PANCO, Point, a remarkable cape of the north-eastern extremity of the island of Java, at the mouth of the western entrance of the straits of Madura. Here Java and European pilots are stationed, who, as soon as vessels are dis- covered standing for the channel, pilot them to Gressee and Sourabaya. Long. 112►► 44′ E., lat. 6►► 48′ S.

PANCRAS Week, a hamlet of England, in Devonshire, four miles W. N. W. from Holswor- thy. Population 403.

PANCRATIUM, from vav, all, and Kˆarioi, 1 overcome, among the ancients, a kind of inter- mixed exercise, consisting of the lucta or wrest- ling, and the pugilate or boxing ; but it differs in this, that, as the athletee were not to seize the body, their hands were not armed with gauntlets, and gave less dangerous blows. It was the third gymnastic exercise, and not introduced till long after the others. Those who engaged in these exercises were called pancratiastae, as well as those who did not confine themselves to one exercise, but succeeded in several different ones.

PANCRA'TICAL, adj. Gr. nav all, and KparoQ, strength. Excelling in all the gymnas- tic exercises.

He \vas the most paneratical man of Greece, and, as Galen reporteth, able to persist erect upon an oily plank, and not be removed by the force of three men. Browne.

PA'NCREAS, n. s. 3 Gr. ►►►rravicptag. The

Pancreat'ic, at/;. 5 sweet-bread, a gland of the conglomerate sort, situated between the bot- tom of the stomach and the vertebros of the loms : pancreatic is, contained in the pancreas.

In man and viviparous quadrupeds, the food moistened with the saliva is first chewed, then swal- lowed into the stomach, and so evacuated into the intestines, where, being mixed with the choler and]mncreatick juice, it is further subtilised, and easily finds its way iu at the stiaight orifices of the lacteous veins. R►►(/ oh the Creation.

The bile is so acrid, that nature has furnished the pancreatick juice to temper its bitterness. Arbuthnnt.

Pancreas. See Axatomv, Index.

PANCSOVA, a town of Hungary, pleasantly situated at the conriuence of the Temes and the Danube. It has a good trade with Turkey ; and having been burned down so lately as 1789, to prevent its falling into the hands of the Turks, has recovered very rapidly. Inhabitants 7000. They are a mixed race of Walachians, Rascians, Germans, and Greeks. Eight miles north-east of Belgrade.

PAN'CY, or ˆ Yr. pensee ; Lˆt. panax. A

Pan'sy, n. s. S kind of violet.

The daughters of the flood have searched the mead For violets pale, and cropped the poppy's head ; Fancies to please the sight, and cassia sweet to smell.

Dryden.-

The real essence of gold is as impossible for us to know, as for a blind man to tell in what flower the color of a pansi/ is, or is not to be found, whilst ne has no idea of the color of a pansy. Locke.

From the brute beasts humanity I learned, And in the pansy's life God's providence discerned.

Harte.

Pansy. See Viola.

PANDA, in mythology, a goddess who was invoked as the protectress of travellers and na- vigators. The goddess of peace was also called Panda, because she opened the gates which were shut in time of war. According to Varro, Panda is also a surname of Ceres, derived a pane dando, because she gave bread to mankind.

PANDANUS, in botany, a genus of the monandria order, belonging to the dicecia class of plants.

PANDARUS, in fabulous history, a son of Lycaon, who assisted the Trojans in their war with the Greeks. He wounded Menelaus and

Diomedes, but was at last killed by the latter. Horn. II. ii. and v. Viˆˆ,ˆ iEn. v. 495.

PAN'DECT, w.s. La.t. ptcn/iecta. A treatise ihat comprehends the whole of a science : parti- cularly a digest of the whole civil law.

It were to be wislied that the commons would form a pandect of their power and privileges to be confirmed by the entire legislative authority. Swift.

PANDECT;E, Pandects, from vrav, all, and ˆtxojiai, to take, q. d. a book containing all things or all laws, the digest or collection, made by Justinian's order, of 534 decisions or judgments of the ancient lawyers, on so many questions occur- ring in the civil law ; to which that emperor gave the force of law, by the epistle prefixed to them. They consist of fifty books, and make the first part of the body of the civil law. They were denoted by TTTr ; but the copyists taking those tttt for ff, the custom arose of quoting them by ff. In 1137 the pandects of Justinian, which had been brought by an Amalfilam merchant from the east, fell into the hands of the Pisans, and for nearly three centuries they were called Pan- dectae Pisanas. But about 1416, Pisa being taken by the Florentines, they were transported to Florence, where they are now preserved in the library of the Medici, and named Pandectas Florentinae. Papias extends the name of Pan- dects to the Old and New Testament. There are also Pandectae Medicinae by Mat. Sylvaticus of Mantua; Pandects of Turkey, by Leuncla- vius ; and Pandectje Canonum, by bishop Be- veridge.

PANDEMIC, adj. Gr. irav and ct]ixog, a people. Incident to a whole people.

Those instances bring a consuraption, under the notion of a jiandemick, or endemick, or rather verna- cular disease to England. Harvey.

PAN'DER, n. s. & v. a. \ From Pandarus,

Pan'derlv, adj. \ the pimp in the

story of Troilus and Cressida ; it was therefore originally written pandar, till its etymology was forgotten. ••• Johnson. A pimp ; a male bawd ; a procurer ; an agent for the ill designs of another : to pander, to be basely subservient to an- other's vices : panderly follows these senses.

If ever you prove false to one another, since I have taken such pains to bring you together, let all pitiful goers between be called panders after my name. Shakspeare. Troilus and Cressida.

Proclaim no shame,

When the compulsive ardour gives the charge,

Since first itself as actively doth burn.

And reason panders will. Id. Hamlet.

Oh you panderly rascals ! there's a conspiracy against me. Shakspeare.

Thou hast confessed thyself the conscious pander r>f that pretended passion : A single witness infamously known, Against two persons of unquestioned fame. Dryden. My obedient honesty was made

The pander to thy lust and black ambition.

Howe.

PANDIA, an ancient festival held at Athens, instituted by Pandion, from whom some derive its name ; though others insist that, as it was observed in honor of Jupiter, the name is de- rived from his omnipotence, because he ra navTa Sivtvuv, can move and turn all things as lie plca;5es.

13 PAiˆ

PANDICULATION, n. s. Eat. pandtcuhru. Tlie restlessness and uneasiness that accompany the cold fits of an intermitting fever.

Windy spirits, for want of a due volatilization, pro- duce in ihe nerves a. pandiculation , or oscitation, or stupor, or cramp in the muscles. Floyer.

PANDORA, in mythology, a woman formed by Prometheus, to whom each of the gods gave some perfection. 'enus bestowed upon her beauty ; Pallas wisdom ; Juno riches ; Apollo music ; and Mercury eloquence ; but Jupiter, being displeased at Prometheus for having stolen fire from heaven to animate the mass he had formed, gave Pandora a box, which she was ordered not to open ; and then sent her to the earth with this box, in which were enclosed age, diseases, pestilence, war, famine, envy, discord, and all the evils and vices that could afflict mankind. This fatal box was opened by Epime- theus, Prometheus's brother, when instantly all the diseases and mischiefs with which it was filled spread over the earth, and Hope alone remained at the bottom. Hesiod says that she was the first woman.

PANDOKON. See Paxdura.

PANDOSIA, a strong inland town of the Brutii, on the Acheron, where Alexander of Epirus, deceived by the oracle of Dodona, met his fate and perished. (Livy, Justin, Strabo.) Now called Mendicino. ××× Holstein.

Pandosia, a town of Epirus, on the Acheron, which Alexander of Epirus

was advised to avoid as fatal, but which he met with in Italy. (Livy.) This last is, said to have been the resi- dence of the CEnotrian kings. ••• Strubo.

PANDOUPlS are Hungarian infantry ; they wear a loose garment fixed tight to their bodies by a girdle, with great sleeves, and large breeclies hanging down to their ancles. They use fire- arms, and are excellent marksmen; they have also a kind of sabre nearly four feet long, whicli they use with great dexterity.

PANDURA, or Pandoron, a musical instru- ment, used among the ancients, resembling the lute ; so called from Trav and cwpov, i. e. all gifts. Isidore derives the name from its inventor Pandorus ; others from Pan, to whom they at- tribute its invention, as well as that of the llute. It has the same number of strings with the lute ; but they are of brass, and of consequence give a more agreeable sound than those of the lute. Its frets are of copper, like those of the cistrcˆ ; its back is flat like those of the guitar ; and the rims of its table, as well as its ribs, are cut in semicircles. Du Cange observes, that A'arro, Isidore, and others of the ancients, mention it as having only three strings ; whence it is some- times also spoken of under the denomination Tpixoptov, trichordum.

PANE, 71. s. Fr. paneau ; Ital. and Lat. pa- fihia. A square of ghxss : hence a variegated piece of work in one frame, llim all repute

For his device in hundsoming a suit,

To judge of lace, pink, panes, print, and plait.

Of all the court to have the best conceit. Donne.

Tlie letters appeared reverse through the pane, But in Stella's bright eyes Ihey were placed right Hiiuin. Swift.

The face of Eleanor owes more to that single pane than to all the glasses she ever consulted.

Pope's Letters.

PANEGYRIC, n.s. 1 Vr.panegyrique ; Gr.

Panegyrist, n, s. S TravTjyvpiQ. An eu- logy ; encomiastic piece ; praise.

Add these few lines out of a far more ancient pa- negyrist in the iime of Constantine the Great.

Camden.

The Athenians met at the sepulchres of those slain at Marathon, and there made panegyrics upon them. Siillingfleet.

That which is a satyr to other men must be a panegyric to your lordship. Dryden.

To chase our spleen, when themes like these in- crease, Shall panegyric reign and censure cease? Young.

This gentleman's name requires no panegyric.

Byron.

Panegyric is derived from ttuv all, and aytipb), to assemble ; because anciently held in public assemblies of the (Greeks, at their games, feasts, fairs, or religious meetings. To make their panegyrics the more solemn, the Greeks used to begin with the praises of the deity in whose honor the games, &c., were celebrated ; then they descended to the pmise of the people or country where they were celebrated ; then to the princes or magistrates who presided at them ; and at length to the champions, especially the conquerors who had gained the prizes in them.

PANEGYRICUM, in church history, an ec- clesiastical book, used by the Greek church, containing the panegyrical orations of various authors, on the solemnities of Jesus Christ and the saints. It is found in MS. in most churches, but is not the same in all ; each church having its particular saints, and the compilers of this kind of books usually suited their collections to the taste of their own devotion. They are dis- posed according to tlie order of months, and frequently consist of twelve volumes, answering TO the twelve mjonths. Among the principal authors of these works are Athanasius, Cyril, Basil, Chrysostoni, &:c.

PANEKA, or Pafca Point, a remarkable point of the Island of Java, situated at the north- eastern extremity, at the mouth of the wes em entrance of the straits of Madura. Here the Dutch maintain a small military guard; and Java and European pilots are stationed, who, as soon as vessels are discovered standing for the channel, go before to pilot them to Gresse and Sourabhaya. Refreshments of every kind may be procured from the masters and crews of the pilot boats at moderate prices.

PAN'EL, n. s. From Pane. A square of wood, paper, or parchment : hence a schedule or roll, containing the names of such jurors as the sheriff provides to pass upon a trial.

This fellow will join you together as they join wainscot ; then one of you will prove a shrunk panel, and, like green timber, warp. Shakspeare.

The chariot was all of cedar, save that the fore end had panels of sapphires, set in borders of gold.

Bacon.

Then twelve of such as are indiflferent, and are returned upon the principal panel, or the tales, are sworn to try the same, according to evidence.

Hale's H'sf.iiry of England.

]\Iaximilian, his whole history is digested into twenty-four square panels of sculpture in has relief. Addison on iialif. A bungler thus, who scarce the nail can hit, With driving wrong will make thˆ panel split.

Swift. PANG, re. s. & V. a. Sax. panj, venom ? Ex- treme pain; or throe of pain ; torment: to tor- ment extremely or cruelly. I grieve myself To think, when thou shalt be disedged by her. Whom now thou tirest on, how thy memory Will then be panged by me. Shakspeare.

Say, that some lady Hath for your love as great a pang of heart, As you have for Olivia. Id. Twelfth Night.

Sufferance made Almost each pang a death. /(/. Henry VIII.

Earth trembled from her entrails, as again In pangs ; and nature gave a second groan.

Milton. Juno, pitying her disastrous fate. Sends Iris down, her pangs to mitigate. Denham. My son advance Still in new impudence, new ignorance. Success let others teach, learn thou from me. Pangs without birth, and fruitless industry.

JJryden. I saw the hoary traitor Grin in the pangs of death, and bite the ground.

Addison. Ah '. come not, write not, think not once of me, Nor share one pang of all I felt for thee. Pope

Heaven and earth are pulling different ways : and, which ever succeeds in drawing him, there will be a paoting pang, when the ties give way that bind

him to the other. If the will of God be, that he should suffer either way, it is better that he should suffer the pa)ig of breaking with the world, than the pang of breaking with his God, and making shipwreck of eternity. He would fain keep on terms with both. But that cannot be. He cannot serve God and

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mammon.

PANGATARRAN, a long flat island of the Sooloo archipelago, about ten miles long by four in average breadth. It consists of a bed of coral rock, and a very thin soil. The island, however, abounds in cocoa nut trees. There is no fresh water, nor is there any good anchoring ground near, except in a few places. The island has abun- dance of cattle, goats, and poultry, and is tolerably well inhabited. It was formerly settled by the Spaniards. Some of the chief houses are built on trees, lopped off for posts, which have vege- tated afterwards. Long. 120►► 30′ E , lat. 6►► 9′ N.

PANGESANA, Pangesani, or Pangansane, an island to the south of Celebes, in the Eastern Seas, and separated from Ronton on the east by a strait which is not more than a cable's length across. It is about fifty-two miles in length, and sixteen in average breadth. The nortliern part is low, marshy, and unhealthy, but it is in general well peopled. Long. 122►► 50′ E, lat. 5►► 5′ S.

PANGOLIN, a species of the manis peculiat to Hindostan. It is certainly a remarkable va- riety, if not a different species, of the pangolin of Buffon. According to a paper in the Asiatic Researches, ' it has hardly any neck ; and, though some filaments are discernible between the scales, they can scarcely be called bristles. But the prin- cipal difference is in the tail; that of Buffon's

animal being long, and tapering almost to a point ; while that of ours is mucli shorter, ends obtusely, and resembles in form and flexibility the tail of a lobster. In otiier respects it seems to have all the characters of Buffon's pangolin ; a name derived from that by which the animal is distinguished in Java, and consequently pre- ferable to manis or philidotus, or any other appellation deduced from any European lan- guage. A female pangolin, described in the Asiatic Researches, ' had a long tongue shaped like that of

the cameleon ; and if it was nearly adult, as we may reasonably conclude from a young one found in it, the dimensions of it were much less than those which Bufibn assigns gene- rally to his pangolin ; for he describes its length as six, seven, or eight feet, including the tail, which is almost, he says, as long as the body when it has attained its full growth ; whereas ours is but thirty-four inches long from the ex- tremity of the tail to the point of the snout, and the length of the tail is fourteen inches ; but, exclusively of the head, which is five inches long, the tail and body are indeed nearly of the same length ; and the small difference between them may show, if Buffon be correct in this point, that the animal was young. The circumference of its body in the thickest part is twenty inches, and that of the tail only twelve. There are on each foot five claws, of which the outer and inner are small when compared with the other three. There are no distinct toes ; but each nail is moveable by a joint at its root. This creature is extremely inoff'ensive. It has no teeth, and its feet are unable to grasp. The nails are well adapted for digging in the ground ; and the ani- mal is so dextrous in eluding its enemies by concealing itself in holes and among rocks, that it is extremely difficult to procure one. The upper jaw is covered with a cross cartilaginous ridge, which, though apparently not at all suited to any purposes of mastication, may, by increas- ing the surface of the palate, extend the sense of taste. The oesophagus will admit a man's fore finger with ease. The tongue at the bottom of the mouth is nearly about the size of the little finger, whence it tapers to a point. The animal can protrude this member a great way from the mouth. The tongue arises from the ensiform cartilage and the contiguous muscles of the belly, and passes in form of a round distinct muscle over the stomach, through tlie thorax, immedi- ately under the sternum, and interior to the windpipe. When dissected out, the tongue could be easily elongated so as to reach more than the length of the animal exclusive of its tail. There is a cluster of salivary glands seated around the tongue, as it enters the mouth. These will ne- cessarily be compressed by the action of the tongue ; so as occasionally to supply a plentiful flow of their secretion. The stomach is cartila- gmous, and analogous to that of the gallinaceous tribe of birds. When dissected it is generally found full of small stones and gravel, which in India are almost universally calcareous. The inner surface of the stomach is rough to the feel, and formed into folds, the interstices of which are filled with a frothy secretion. The guts are filled with a sandy pulp, in which, however, are

interspersed a few distinct Hmall atones. No vestiges of any animal or vegetable food have been traced in the whole primae viae. The gall- bladder is commonly distended with a fluid re- sembling in color and consistence the dregs of beer. It is a viviparous animal. From the con- tents of its stomach and primae viae, the pangolin has been supposed by Mr. Burt, an em.ineni surgeon in Bengal, to derive its nourishment from mineral

substances. This novel conjecture is not a little confirmed by the experiments of M. Bruquatelli of Pavia, on the authority of M. Creil, by which we learn that some birds have so great a dissolvent power in the gastric juice as to dissolve in their stomachs flints, rock crys- tal, calcareous stones, and shells. See Mams.

PANG(JNIA, in the old system of mineralo- gy, from Trav, numerous, and yovoQ, an angle, a genus of crystals, consisting of such as are com- posed of many angles. The bodies of this genus are single-pointed, or imperfect crystals, com- posed of dodecangular or twelve-planed columns, terminated by twelve-planed pyramids, and the whole body therefore made up of twenty-four planes. There are three species.

PANIAN Y, a sea-port town of Malabar, forty miles south by east from Calicut. Lat. 10►► 44′ N., long. 7G►► E. It is called by the natives Pu- nang Wacul, and contains above 500 houses, belonging to traders, forty mosques, and at least 1000 huts. The town is scattered over a sandy plain, on the south side of a river, which descends from Animalaya, and enters the sea by a very wide channel : the mouth, however, is shut by a bar, which only admits boats to enter. It is very irregularly built, but many of the houses are of stone, two stories high, and thatched with cocoa nut leaves. The huts are inhabited by boatmen and fishermen, who were formerly jMi- cuas, a low caste of Hindoos, but have now all embraced the faith of JNIahomet. The trading boats here are called pattemars, and on an aver- age carry 50,000 cocoa nuts, or 1000 muddies of rice, equal to 500 Bengal bags. About sixty years ago the Moplays of this port were very rich, and possessed vessels that sailed to Surat, Mocha, Madras, and Bengal ; but the oppres- sions of Tippoo Sultan reduced them to po- verty. The exports hence are teak wood, cocoa nuts, iron, and rice ; the chief imports wheat, pulses, sugar, jagoiy, salt, cut (terra japonica), and spices.

This is the residence of the tangul, or chief priest, of the Moplays, who says he is descended from Ali and Fatima, the daughter of [Mahomet. Although of the Mahometan religion, the t-an- gul's sister's son, according to the custom of IVIalabar, is considered as the heir to this here- ditary dignity. These people are called Mo- playar in JNIalabar, and Lubbaymar at Madras ; but, among themselves, they acknowledge no other name than that of Mussulmans

Of Arabic extraction, they consider themselves, according to Mr. Hamilton, of more honorable birth than the Tartar Mahometans. They use a written character peculiar to themselves, and totally diff'erent from the present Arabic, which is kno\Ti to very few of them except their priests. The Moplays of Malabar are both traders and

farmers ; the Lubbaymars of Madras confine themselves to the former profession. As traders, they are a remarkably quiet, industrious people; but some of them in the interior, having been encouraged by Tippoo in a most licentious at- tack on the lives, persons, and property of the Hindoos, became a set of fierce, blood-thirsty, bigoted ruffians; which disposition the British government had considerable difficulty in re- forming. In religious matters the tangul is the head of the sect, and the office is hereditary in the female branch. The mosques are very nu- merous, in each of which presides an imaum, or moullah, appointed by the tangul, who usu- ally bestows the office on his sister's son, the heir of the person who last held the office. (F. Buchanan, &c.)

PANIC, n. s. & adj. Fr. panique ; Gr. iravi- KOQ. From the god Uav, groundless fear being supposed to be sent by him. A sudden and ex- treme fright : violent (as applied to fear), beyond the cause.

The sudden stir and panical fear, when chanticleer was carried away by reynard. Camhdens Remains,

Which many respect to be but a panic terror, and men do fear they justly know not what.

Browne's Vulgar Errours. I left the city in du panic fright ; Lions they are in council, lambs in fight. Dryden,

Panic, Polyjenus says, originates from Pan, one of the captains of Bacchus, who with a few men put a numerous enemy to rout, by a noise which his soldiers raised in a rocky valley, fa- vored with a great number of echoes. This stra- tagem making their number appear far greater than it was, the enemy quitted a very commo- dious encampment, and fled. Hence all ill-grounded fears have been called panics, or panic fears; and this gave occasion to the fable of the nymph Echo being beloved by the god Pan. Others derive the origin of it hence; that in the wars of the Titans against the gods. Pan was the first who struck terror into the hearts of the giants. Theon on Aratus says, he did it by tlie means of a sea-shell, which served him for a trumpet, whereof he was the inventor.

PANICLF,, in botany, denotes a soft woolly beard, on which the seeds of some plants hang pendulous ; as in millet, reeds, and hay. See Botany, Index.

PANICOLA, a town of Naples, in Lavora.

PANICUM, in botany, a e;enus of the digynia order, belonging to the triandria class of plants ; and in the natural method ranking in the fourth order, gramina. The calyx is trivalved ; the third valvule being very small. There are thirty- five species :

1. P. arborescens, 13. P. lichotomum,

2. P. brevifolium, 14. P. dactylon,

3. P. brisoides, 15. P. dimidiatum,

4. P. capillare, IG. P. distachion,

5. P. clandestinum, 17. P. divaricatum,

6. P. coloratum, 18. P. elatuni,

7. P. compositum, 19. P. filiforme,

8. P. conglomeratum, 20. P. glaucum,

9. P. coronum, 21. P. grossarium,

10. P. crus corvi, 22. P. halvoium,

11. P. crus galii, 23. P. hirtelluin,

12. P. cuivatum, 24 P. italicum,

25. P. latifolium, 31. P. repens,

26. P. lineare, 32. P. sanguinale,

27. P. miliaceum, 33. P. verticillatum,

28. P. patens, 34. P. virgatum

29. P. polystachion, 35. P. viride.

30. P. ramosum.

The species of Guinea-grass by some authors is classed as a panicum ; but by expert botanists, who have lately examined the plant, it is called the holyus polygamum. See Polygamum.

PANINI (Paul), a painter of perspective and architecture. He was born at Placentia in 1691, and studied at Rome, where he designed every vestige of ancient magnificence. In his earlier pictures his composition is rich ; the truth of his perspective exact ; and his paintings are esteemed for the grandeur of the architecture, the clearness of his coloring, the beautiful figures he intro- duced, and the elegant taste with which he dis- posed them ; but his later paintings have many faults. He died in 1758.

PANIONIA, in antiquity, a festival celebrated in honor of Neptune by people from all the cities of Ionia. In this festival, if the bull offered in sacrifice happened to bellow, it was accounted an omen of divine favor; because that sound was thought acceptable to Neptune.

PANIONIUM, a place in Asia Minor, at the foot of Mount Mycale, near Ephesus, where the deputies of the twelve cities of Ionia assembled to celebrate the above festivals, or to deliberate upon any other public business.

PANLANG, a town of Pegu, in the Birman empire, situated on the Rangoon branch of the Irrawaddy River, and formerly a place of great opulence and extent. It was taken by the cele- brated Alompra, from the Peguers, in 1755, and is still a place of consequence. It is situated sixteen miles north-west of Rangoon.

PANNADE', n. s. In the manege, the curvci of a horse.

PANNAH, a town of Hindostan, in the pro- vince of Allahabad, and district of Bundelcund. In the neighbourhood are the celebrated Panassa diamond mines of Ptolemy. They are situated in a range of hills of about twenty-four miles in length, and five in breadth, belonging to different chiefs. The richest of them is called Guddaseah, and produced the largest diamond now in Hin- dostan. The mines were formerly let out to contractors; but all stones exceeding a certain weight were the property of the chief ; so that frequently the contractors were losers. During tlie reign of Akbar, in the sixteenth century, the revenue received by him on this account amount- ed to nearly ►► 1 00,000 per annum; but after the decline of the Mogul empire, and the district came into the possession of rajah Chuttersal (about the year 1750), the profits did not exceed ►►50,000. Since that period we have no accu- rate estimate of them. Long. 80►► 17 E., lat. 24►► 43′ N.

PANNALL, a parish of England, West Riding of Yorkshire, seven miles W.N.W. from We- therby. Population 914.

PANNANACH, or Pannanich, a village of Scotland, in Aberdeenshire, noted for its mineral waters. These waters issue from the north side of tlie hill of Pannanich, and are said to resem-

ble the Seltzer water in Germany, being strongly impregnated with aerial acid. The spring has been cleared and covered, and several houses have been erected for the accommodation of the visitors, who in summer are numerous, being attracted by the surrounding scenery, which is in the highest degree romantic and sublime. There is an inn for the visitors on the banks of the Dee, about a mile from the wells.

PAN'N EL, n. s. Fr. paneau ; Belg. parmul ; \[.'a. panello, of Lat. puiinus. A rustic saddle. Apannel and wanty, pack-saddle and ped,

With line to fetch litter, and halters for hed.

Tusser. His strutting ribs on both sides showed

Like furrows he himself had plowed ;

Tor underneath the skirt of pannel,

'Twixt every two there was a channel. Hudibras.

PANNELA, or Pannell a, atown and fortress of Bejapore, Hindostan. It was formerly deemed one of the strongest fortresses in India, and was only taken by the celebrated Mahratta chief Se- vajee, by stratagem, in the year 1660. It was subsequently besieged in vain by the army of the king of Bejapore, but yielded to the arms of Aurungzebe, after his capture of Sambajee, about the year 1670. Near this place the British am- bassador, Sir William Norris, had his audience of Aurungzebe, in the month of April 1701 ; and, after being kept nearly six months in the camp, was dismissed. It "was recently in possession of the Mahrattas. Long. 74►► 57′ E., lat. 16►► 50′ N.

PANNICLE,orj ^ g^^ ^^1^^_

Pan NICK, n. s. S

The pannicle is a plant of the millet kind, differ- ing from that, by the disposition of the flowers and seeds, which, of this, grow in a close thick spike : it is sowed in several parts of Europe, in the fields, as corn, for the sustenance of the inhabitants ; it is fre- quently used in particular places of Germany to make bread. Miller.

September is drawn with a cheerful countenance ; and in his left hand a handful of millet, oats, and pannicle. Peacham.

Pannick affords a soft demulcent nourishment.

Arbuthnot.

Pannicle. See Pannicum.

PANNICULUS Carnosus, in zootomy, a ro- bust, fleshy tunic, situated in beasts between the skin and the fat ; by means of which they can move their skin in whole or in part. It is alto- gether wanting in mankind.

PANN'IER, n. s. Fr. punier. A basket ; par- ticularly a basket in which fruit, or other things, are carried on a beast of burden. The worthless brute

Now turns a mill, or drags a loaded life.

Beneath two panniers and a baker's wife. Dryden.

We have resolved to take away their whole club in a pair of panniers, and imprison them in a cup- board. Addison.

PANNIPUT, PAˆ-II'ATI. A town in the pro- vince of Delhi, fifty miles north by west from the city of Delhi. Lat. 29►► 23′ N., long. 76►► 50′ E. Famous for having been the scene of the two greatest battles ever fo\ight in India. Tlie first was in the year A T). 1525, between the army of sultan Baber and that of the Delhi Patau em-])eior Ibraliam Lodi, in which the latter was slain, and his army totally discomfited. The

second took place in 1761, between the combined Mahommedan army, commanded by Ahmed Shah Abdalli, the sovereign of Cabul, and that of the Mahrattas, commanded by the Bhow Seda- siva. lliis place is about four miles in circum- ference, and was formerly surrounded by a brick wall, which partly remains. In the centre is the shrine of a Mahommedan devotee, named Shah Shereef ud DeenAbu Ali CuUinder, whose death happened in the 724th year of the Hegira. The imports are salt, grain, and cotton cloth ; the surrounding country produces and exports coarse sugar.

PANNONIA, an extensive country of Europe, bounded on the east by

Upper Moesia, south by Dalmatia, west by Noricum, and north by the Danube. It was divided by the ancients into Upper and Lower, or Superior and Inferior Pan nonia. The boundary between these was the Arabo and Mount Cetina; the Upper Pannonia lying on the west, and the Lower on the east side. This division was made about the times of the Antonines. The inhabitants were of Cel- tic origin. Sirmium was the ancient capital of all Pannonia. Philip II. of Macedon, and his son Alexander, successively conquered the coun- try. It was again invaded by Julius Caesar, ahd conquered in the reign of Tiberius. It is now divided into the modern provinces of Bosnia, Carniola, Croatia, March, Sclavonia, and Win- d isch ; and part of it is contained in Austria, Hungary, and Servia. ••• Lucan. iii. 95, vi. 220. Plin. iii. Dion. Cass. 49. Strabo iv. vii. Ptol. Tibul.iv.el.l. 109. Suet. Aug. 20. Jornand. Lempriere.

PANOMPIIiEUS, from irav all, and o/xˆjj voice, in antiquity, a designation given to Jupi- ter, because he was said to be the original author of all sorts of divination, having the books of fiite, and out of them revealing either more or less, as he pleased, to inferior dsemons.

PANOPEUS, a son of Phocus and Asterodia, who accompanied Amphitryon in his war against the Teleboans. He was father of Epeus, who made the famous wooden horse by which Troy was taken.

PAN'OPLY, n. s. Gr. TravonXia. Com- plete armour.

In arms they stood Of golden panoply, refulgent host! Soon banded. Miltoii's Paradise Lost.

We had need to take the Christian panoply, to put on the whole armour of God. Rat/ on the Creation.

PANOPOLIS, Gr. Uav, and iroXig, i. e. the city of Pan, an ancient town of Egypt, called also Chemmis and Achmim. See Achmim. Pan had a temple in it, where he was worshipped, and represented in a statue, fascino longissirao e'. erecto. ••• Diod. v. Strubo, 17.

PANORAMA, from Gr. irav all, and opa/ua view, a word recently introduced, to express a painting in oil or water colors, wnich represents an entire view of any country, city, or other na- tural objects, as they appear to a person standing in any situation, and turning quite round. To pro

round, concluding his drawing by a connexnn with where he began.

PANORMITA (Anthony), a native of Paler- mo in Sicily, one of the most learned men of the fifteenth century. He was secretary to Alphonso, king of Naples, and was esteemed the best poet of his age. He sold an estate to purchase a copy of Livy. He died in 1471.

PANORMUS, an ancient city of Sicily, built by the Phoenicians, on the north-west coast be- tween Lilybaeus and Pelorus, with a capacious harbour. It was afterwards a principal town of the Carthagenians. and their strongest hold in the island. It was at last taken with difficulty by -he Romans. ˆThucyd. Polyb. Mela, ii. 7. Ital. xiv. 262. It is now called Palermo.

PANORPA, the scorpion fly, in zoology, a genus of insects belonging to the order of neu- roptera. The rostrum is horny and cylindrical ; there are two pappi, and three stemmata ; the feelers are longer than the thorax. The body is of a black brown color, yellow on the sides, with a few spots of the same on the top. Its tail, formed by the three last segments of the abdomen, is of a maroon color ; of these three segments, the last is the largest, almost round, and terminates in two hooks, which constitutes a tail like that of the scorpion. The wings, as long as the body, are diaphanous, reticulated with fibres and stripes of spots of a brown color. There are different varieties of this insect, con- sisting in the color of the wings. Some, instead of several stripes of spots upon their wings, have only a single black stripe, transverse and irre- gular, on the middle of the wing, the extremity whereof is also black ; others have their wings entirely white, excepting the extremity, which is black. Tlie forceps that is seen at the hinder part of this insect is used by the males to lay hold of their females in their amorous embraces : the threatening tail of the male does no mischief. This insect is found in meadows, by the sides of the ditches. There are four species, distin- guished by the color and shape of their wings. See plate CCLXVI.

PANSA (C. Vibius), a Roman consul, who, with his colleague, A. Ilirtius, pursued Caesar's murderers, and was killed in a battle near Mutina. Hirtius and Pansa were the two last consuls of the Roman republic, who enjoyed the dignity of chief magistrates with full power. The consular authority after this dwindled into a mere title.

PANT, i;. 71. & n. s.-\ Old Fr. panteler ;

Pant' ESS, n. s. fhRrh. hzt. pa7ithelo. To

Pant'ing, i palpitate ; beat widi

Pantingly, adv. J quick pulsations, as the heart in sudden terror, or after

hard labor ; heave the breast as for want of breath : hence to agi- tate, with intermission ; to desire earnestly, tak- ing after or for before the object : as a noun substantive, a palpitation or motion of the heart : pantess, in falconry, is the hawks ; difficulty of breathing : panting and pantingly follow the senses of pant.

They pant after the dust of the earth on the head of the poor. Amos ii. 7.

Yet might her piteous heart be seen to parit and quake. Spenser.

Leap thou, attire and all, Through proof of harness, to my heart, and there Ride on the pants triumphing. Shahspeare,

She heaved the name of father Pantingly forth, as if it prest her heart. Jd.

Below the bottom of the great abyss. There where one centre reconciles all things The world's profound heart pants. Crashaw.

Pluto pants for breath from out his cell, And opens wide the grinning jaws of hell. Dryden.

If 1 am to lose by sight the soft pan'ings, which I have always felt when I heard your voice, pull out these eyes before they lead me to be ungrateful.

Tatler. Miranda will never , ave her eyes swell with fat- ness, or pant under a heavy load of flesh, till she has changed her religion. Law.

The whispering breeze Pants on the leaves and dies upon the trees.

Pope. Who pants for glory, finds but short repose, A breath revives him, and a breath o'erthrows.

Id. PANTˆNUS, a stoic philosopher, bom in Sicily, in the reign of Commodus. He presided over the celebrated school of Alexandria, and was sent by Demetrius, bishop of Alexandriaˆ to instruct the Indians. He was succeeded in his catechetical school by the famous Clemens, usually called Clemens Alexandrinus (see that article), who, not long after his entering upon the office of catechist, wrote that celebrated work entitled. An Exhortation to the Gentiles, in which he exhibited the impiety and absurdity of heathenism, and the arguments in support of Christianity. Pantsenus published some com- mentaries upon the Bible, which are lost.

PANTALARIA, or the ancient Cosyra, is a small island in the Mediterranean, belonging to Sicily, and situated between that island and the African coast. It has a circumference of thirty- four miles, and has a considerable elevation in some parts. The principal products are corn,

olives, and cotton. The high grounds are co- vered with a species of bastard oak and caper trees ; and in one of them the remains of a vol- canic crater are apparent. The island is exposed to the incursions of the Barbary corsairs, who frequently land and carry oft" whole families. It belongs, under the title of a principality, to the house of Requisino, in Sicily. Inhabitants 6000. Sixty miles from Marsala, in Sicily, and about the same distance from Cape Bon, near Tunis. Long. 12►► 26′ 25″ E., lat. 36►► 45′ 40″ N.

PANTALOON', n. s. Fr. and Span, panfalon ; Ital. pantalone. Dr. Merrick says f om the I al. of plant the lion, an old Venetian war-cry. A species of long breeches, ' anciently worn,' says Dr. Johnson ; but modem times have converted them into a common garment. The sixth age shifts Into the lean and slippered pantaloon, With spectacles on nose, and pouch on side.

Shakspeare. The French we conquered once. Now give us laws for pantaloons, The length of breeches and the gathers.

Hudibras. Pantaloon, on the theatre, is a buffoon or masked person, who performs high and grotesque f'ances, and shows violent and extr v►►ˆnt

postures and airs. The word is likewise used for the liabit or dress these buffoons usually wear ; which is made precisely to the form of their body, and all of a piece from head to foot. Hence those who wear a habit of this kind under their other clothes are called pantaloons of Venice.

PANTARE, an island in the Eastern seas, about thirty miles in length by twelve in average breadth, separated from the coast of the island of Loniablen by the strait of Alvo, and from the west coast of Ombay by a channel called the strait of Panter. Long. 124" 30′ E., lat. 8►► 10′ S.

PANTARBE, in natural history, a name given to an imaginary stone, the effects of which upon gold were similar to those of the loadstone upon iron. The ancients, as well as some moderns, had an opinion that there was such a stone ; and the amphitane of Pliny is described as possessing this remarkable quality ; but there is no reason, from any experiment well ascertained, to be- lieve that there ever was such a stone.

PANTHEA, the beautiful and virtuous wife of Abradates, king of Susa. She was taken prisoner by Cyrus the Great, who treated her well, but would not visit her, lest he should be ensnared by her charms. Abradates, hearing of this, laid down his arms, joined Cyrus with all his forces, and fought for

him. Being after- wards killed in battle, Panthea killed herself on his body, and Cyrus raised a monument to their memory. ••• Xenopk. Cyrop.

Panthea, in antiquity, single statues com- posed of the figures or symbols of several different divinities together. F. Joubert, who calls them panthea, and who has remarked them sometimes on medals, says, their heads are most commonly adorned with the symbols or attributes belonging to several gods. An instance of this appears in a medal of Antoninus Pius ; which represents Serapis by the bushel it bears ; the sun, by the crown of rays ; Jupiter Amraon, by the ram's horns ; Pluto, by the large beard ; and jEscula- pius, l)y the serpent twisted in his hand. M. Boudelot, in a dissertation on the Lares, observes, ihat the panthea had their origin from the super- stition of those who, taking several gods for the protectors of their houses, united them all in the same statue, by adorning it with the several sym- bols proper to each of these deities.

PANTHEISM, a philosophical species of idolatry leading to atheism, in which the universe was considered as the supreme God. Who was the inventor of this absurd system is not known; but it was of early origin, and differeiitly modi- fied by different philosophers. Some held the universe to be one immense animal, of which the incorporeal soul was properly their god, and the heavens and earth the body of that god ; whilst others held but one substance, partly active and partly passive : and therefore looked upon the visible universe as the only Numen. The earliest Grecian pantheist of whom we read was Or- pheus, who called the world the body of God, and its several parts his members, making the whole universe one divine animal. According to C'udworth, Orpheus and his followers believed in the immaterial soul of the world ; therein agreeing with Aristotle, who certainly held that

God and matter are co-etemal ; and that there is some such union between them as subsists be- tween the souls and bodies of men. With re- spect to the universe being God, and all things divine and human being modifications of mere matter, the stoics undoubtedly agreed with Ana- ximander and his followers ; for the school of Zeno held but one substance. This impious doctrine, that all things are God, and that there is but one substance, was revived in modern times by Spinoza, an apostate Jew. See Pan and Spinoza.

PANTHEON, a beautiful edifice at Rome, an- ciently a temple dedicated to all the gods; but now converted into a church, and dedicated to the \ˆirgin and all the martyrs. It is generally thought to have been built by Agrippa, son-in- law to Augustus, because it has the following in- scription on the frieze of the portico : ••• ' M. Agrippa L. F. cos terlium fecit.' Several anti- quarians and artists, however, have supposed that the pantheon

existed in the time of the com- monwealth ; and that it was only embellished by Agrippa, who added the portico. Be this as it may, however, the pantheon, when perfected by Agrippa,was an exceedingly magnificent building, the form of whose body is round or cylindrical, and its roof or dome is spherical ; it is 144 feet diameter within ; and the height of it, from the pavement to the grand aperture on its top, through which it receives the light, is just as much. It is of the Corinthian order. The inner circumference is divided into seven grand niches, wrought in the thickness of the wall ; six of which are flat at the top ; but the seventh, oppo- site to the entrance, is arched. Before each nich are two columns of antique yellow marble fluted, and of one entire block, making in aR. fourteen, the finest in Rome. The whole wall of the temple, as high as the grand cornice, inclu- sive, is cased with divers sorts of precious marble in compartments. The frieze is entirely of por- phyry. Above the grand cornice arises an attic, in which were wrought, at equal distances, four- teen oblong square niches : between each nich were four marble pilasters, and between the pi- lasters marble tables of various kinds. This attic had a complete entablature ; but the cornice projected less than that of the grand order below. Immediately from the cornice springs the sphe- rical roof, divided by bands, which cross each other like the meridians and parallels of an arti- ficial terrestrial globe. The spaces between the bands decrease in size as they approach the top of the roof; to which, however, they do not reach, there being a considerable plain space between them and the great opening. That so bold a roof might be as light as possible, the architect formed the substance of the spaces between the bands of nothing but lime and pumice stones. The walls below were decorated with lead and brass, and works of carved silver over them ; and the roof was covered on the outside with plates of gilded bronze. There was an ascent from the springing of the roof to the very summit by a flight of seven stairs. The portico is composed of sixteen columns of granite, four feel in diame- ter, eight of which stand in front with an equal intercolumniation all along. Tlie ascent to the

portico is by eight or nine steps. Such was tlie pantheon, the richness of wliich induced Phny to rank it among the wonders of the world. The eruption of 'esuvius, in the reign of Tiberius, damaged the pantheon very considerably : it was repaired by Doriiitian and Adrian. But the pantheon is more indebted to Septimius Severus, than to any one since its erection. Septimius bestowed essential reparalions upon it, as appears fro-n an inscription upon the architrave. The temple subsisted in all its grandeur till the in- cursion of Alaric. Zozymus relates, that the Komans having engaged to furnish this barbarian prince with 3000 lbs. of gold, and 5000 lbs. of

silver, upon condition that he should depart from their walls, and it being impossible to raise those sums, they stripped the temples of their statues and ornaments of gold and silver. Gen- serick, king of the Vandals, thirty-nine years after, took away part of their marbles ; and loaded one of his ships with statues. On this occasion the inestimable works of Diogenes became the prey of this barbarian. Tlie Christian emperors had issued edicts for demolishing the pagan temples. But the Romans spared the pantheon, which s'oifered no damage from the zeal of the pontiffs, and other enemies of idolatry, before the first siege of Rome by Alaric. It remained so rich, till about A. U. 655, as to excite the avarice of Constantine II., who came from Constantinople and pillaged the pantheon of its brazen coverings, which he transported to Syracuse, where they soon after fell into the hands of the Saracens. About fifty years before this, pope Boniface IV. had obtained the pantheon of the emperor Pho- cas, to make a church of it. The artists of these days spoiled every thing they laid their hands upon. After the devastations committed by the barbarians, Rome was contracted within a nar- row compass. The pantheon, standing at the entrance of the Campus Martms, was surrounded with houses, which spoiled the fine prospect of it; and some of them were built close to its walls. Pedlars' sheds were built within its portico, and the intercolumniations were bricked up to the irreparable damage of the matchless pillars, of which some lost part of their capitals, and others were chisseled out six or seven inches deep, and as many feet high, to let in posts. This disorder continued till the pontificate of Eugene IV., who had all the houses cleared away, and so the miserable barracks in the portico were knocked down. Benedict II. covered it with lead, which Nicholas V. renewed in a better style. Raphael Urban, who had no equal as a painter, and as an architect no superior, left a considerable sum by his will for the reparation of the pantheon, where his tomb is placed. La Vagua, Udino, Hannibal Carracci, Flamingo Vacca, and Archangelo Corelli, did the same. Pope Urban VIII. was a protector or practiser of the arts. lie repaired it ; but while he built up with one hand, he pulled down with the other. He caused two belfries of a wretched taste to be erected on the ancient front work, and he divested the portico of all the remains of its ancient grandeur, viz. the brazen coverture of the cross beams, which amounted to a prodi- gious quantity. This pope, who was of the fa-

mily of Barbarini, presented as much of this metal to his nephew as was sufficient for the de- coration of his new palace ; on whicli occasion this pasquinade was stuck up : ***

Quod non fecerunt Barbari fecere Barbarini.

Alexander VII. did what Urban had neglected to do. He ordered search to be made for pillars to match those of the portico of the]:)antheon ; and

some were found of the very same model. He also caused all the old houses before the por- tico to be pulled down, and the rubbish to be cleared away which covered the steps, and the bases of the pillars. Clement IX. enclosed the portico with iron rails. Several later popes have added to its decorations, which were all in the taste of the times they were done in ; and the body of the edifice and its architecture gained nothing from them.

Pantheon, the name of another temple at Rome, dedicated to Minerva, as the goddess of medicine. It was in the form of a decagon, and the distance from one angle to another measured twenty-two feet and a half. Between the angles there were nine round chapels, each of which was designed for a deity ; and over the gate there was a statue of Minerva.

Pantheon. In the Escurial is a magnificent chapel, called pantheon, thirty-five feet in dia- meter, and thirty-eight feet high from the pave- ment, which is composed of marble and jasper inlaid. The whole inside of the chapel is of black marble, except the luthern, and some orna- ments of jasper and red marble. In this chapel are deposited the bodies of the kings and queens ; there are only places for twenty-six, and eight of them are already filled.

The Pantheon of Athens was in many re- spects little inferior to the Roman one built by Agrippa. The Greek Christians also converted it into a church, dedicated to the 'irgin, under the name of Panegia ; and the Turks changed it into a mosque.

The Pantheon of Nismes was a temple in that city, wherein were twelve niches or statues, supposed to hare been destined for the twelve great gods.

Pantheon, in literary history, a name assumed by a speculativesociety, established at Edinburgh for public debate upon various subjects, and car- ried on for above twenty years. It was first in- stituted in December 1770, or 1771,by a number of young gentlemen, mostly engaged in the stu- dies of law, physic, or divinity, under the name of the Debating Society, and held for upwards of two years in St. John's Lodge, Canongate. But, some differences having arisen among the members respecting it? management, a schism took place, and the principal speakers erected a new society under the name of Pantheon, in the end of 1773, which met weekly, first in St. Giles's Lodge, and afterwards in Mary's Chapel, for above eighteen years. The objects of the in- stitution were to ming'e the utile with the dulce; public improvement with public amusement, by accustoming the members and all visitors, who inclined to take part in the debates, to a facility in public speaking. Such an institution, it was sometimes remarked, had it been established la'

London, in the early years of the celebiatet/ M.. Addison, would, in all probability, have accus- tomed him to deliver himself witli ease, and have prevented his failure in the only public oration lie ever attempted to make. The subjects were extremely various ; ••• literary, speculative, philo- sophical, moral, historical, biographical, political, and sometimes religious. A subject, in the form of an alternative question, was announced from the chair at the one meeting, discussed at the next, and at the conclusion of the debate decided by a vote of the company. The society was for many years extremely popular, and often very much crowded by ladies and gentlemen of the first rank. Divines, physicians, writers to the signet, advocates, baronets, members of par- liament, and even peers, honored it with their attendance, and occasionally took part in the de- bates ; on which occasions they were admitted honorary members. On questions of public im- portance, very capital orations were delivered in it. Its popularity was not, a little increased by that part of its constitution which devoted its t \inds, after paying the necessary charges, to cha- rity ; jiarticularly to the relief of literary people. These funds arose chiefly from the weekly con- tribution of sixpence paid by each visitor for ad- mission. The chief cause of its being given up, and the debates suspended, was the political fer- ment that took place in the public mind, in 1791-2, in consequence of the French Revolu- tion. Accordingly, it was thought improper to continue a society, the laws of which authorising full freedom of debate, seditious or treasonable persons might have made an unjustifiable use of this privilege ; and no meeting has been held since 1791.

PANTHER, n. s. Fr. panthere ; Lat. panthe- ra ; Gr. iravOrip. A spotted wild beast : a pard.

An' it please your majesty, To huat the panther and the hart w.th me, W ith horn and hound. ShakspCLire.

Pan, or the universal, is painted with a goat's face, about his shoulders a panther's skin.

Peacham. The panther's speckled hide Flowed o'er his armour with an easy pride. Pope. Panther, in zoology. See Felis. PANTHOIDES, a patronymic of Euphorbus, the son of Panthous ; applied also to Pythago- ras, who pretended that the soul of that hero had iransmierated into his body. See Euphorbus. PANTICAPiEUM, an ancient town of Tau- rica Chersonesus, built by the Milesians, and go- verned by its own laws, till it was conquered by the kings of Bosphorus, and became their ca- pital. Mithridates the

Great died in it. (Pliny. Strabo.) It is now called Kerche.

PAN'TLER, n. s. Fr. panetier. An officer in a great family who keeps the bread.

W'hen my old wife lived.

She was both pantler, butler, cook. Shakspeare.

He would have made a good pantler, he would have chipped bread well. Id. Henry IV.

PAN'TOFLE, n. s. Fr. pantoujie ; Ital. pan- toj'ula. A slipper.

Melpomene has on her feet, her high cothurn or tragick pantojles of red velvet and gold, beset with peals. Peacham.

PANTOORAI'II, in the arts, the name given to an instrument for copying drawings, so con- trived that the copy may either he of the same, a greater, or a smaller size than the original. It consists of four moveable bars fixed together by four pivots, and forming a parallelogram. At the extremity of one of these bars is a point, which is drawn over the lines of the original plan, whilst a pencil fixed at the end of the opposite bar, traces on paper the lines of the copy. The pencil is placed in a hollow cylinder, with a weight on the top, by means of which, the point of the pencil is made to press on the paper. The improvements in the construction of different parts of the pantograph described in the Me- n.oires de I'Acaderaie des Sciences, 1743, have been generally adopted, but the instrument is now scarcely ever used, artists in general preferring the method of squaring the drawings to this tedious and inaccurate instrument.

*PANTOMIME, n.s. Fr. pantomime; Gr.
॥jrag and /it/xof, a mimic ; one who has the power of universal mimicry ; a buffoon ; a scene ; a tale exhibited in gesture or dumb show. Not that I think those pantomimei Who vary action with the times, Are less ingenious in their art, Than those who duly act one pan. U,.aibras,*

He put off the representation of pantomimes till late hours, on market-days. Arbuthnot.

Pantomimes made a part in the theatrical en- tertainments of the ancients : their chief em- ployment was to express, in gestures and action, whatever the chorus sung, changing their coun- tenance and behaviour aˆ the subject of the song varied. They were very ancient in Greece, being derived from the heroic times according to some ; but, however this may be, they were certainly known in Plato's time. In Rome it was as late as the time of

Augustus before they made their appearance. As to their dress it was various, being always suited as nearly as possible to that of the person they were to imitate. The crocota was much used among the Roman pantomimes, in which and other female dresses they personated w^omen.

PANTRY, n.s. Fr. paneterie; Ital. paria- tcriu ; barb. Lat. panarium. A room or closet in which bread and other provisions are kept.

The Italian artizans distribute the kitchen, pun fry, bakehouse under ground. Watson t Archit.

What work they make in the pantry and the larder. L' Estrange.

He sJiuts himself up in the pantry with an old gipsy, once in a twelvemonth Addison's Spectator.

PANUCO, a town and district of Mexico, in the intendancy of Vera Cruz, on the shore of the river Panuco. It consists of some very neat houses of stone, with roofs of palm leaves. 143 miles north, with a slight inclination east of Mexico. Long. 98►► 52′ W., lat. 22►► 48′ N.►►► A river of this name falls into the gulf of iNIexico.

PANWELL, a large town of the province of Aurungabad, Hindostan, twenty-seven miles east of Bombay. It is situated on the banks of the Pan, about seven miles from its mouth. About the year 1680 the Mahratta chief Sevajee built here a fort, part of which still remains, to protect the inhabitants against the incursions of the Siddees

or Ethiopians. Pan well now belongs to the British, and carries on a considerable trade. It is situated in long. 73►► 13′ E., lat. 19►► N'

PANY Isle, one of the Philippines, 110 miles in length, by thirty-eight in average breadth. Numerous villages are very regularly built on the declivity of the higher grounds, but the cli- mate is generally considered unhealthy, on ac- count of the morasses. Deer, hogs, buffaloes, and wild animals, are found in the interior, and the coast abounds with cocoa trees. Cattle and horses range at pleasure in the \mcultivated parts.

The island is said to contain mines of gold and silver, and the inhabitants manufacture cotton handkerchiefs and cloths. The establish- ment of the

Spaniards on this island are at Ilo- ilo and Antigua, on which coast there is good an- chorage ; but their government here is on a most wretched footing, and cannot defend its unfor- tunate subjects from the incursions of pirates, who plunder vessels in the harbours, and carry off their crews into slavery. Long. 122►► 33′ E., lat. 11►► 15′ N.

PANZACCHIA (Maria Helena), an Italian paintress, born at Bologna, in 1668, of a noble family. She learned design under Emilio Ta- rufh, and in a short time acquired great readiness in composition, correctness of outline, and a lovely lint of coloring. She also excelled in painting landscapes ; and her works were ex- ceedingly prized.

PAO, San Juan Baptista del, is a city of Venezuela, Colombia, situate at fifty leagues south-west of Caraccas, in 9►► 20′ N. lat.

The river Pao, which runs south of the town, formerly discharged itself into the Lake Taca- rigua ; but an earthquake and inundation have altered its course : it now flows into the Apura. San Juan consists of a church and several handsome streets on the Pao : and this city is remarkable in having only the proprietors of cattle for its inhabitants. 5400 persons form its population.

The heat would be intolerable here, if it were not tempered by the violence and frequency of the north-east wind : but the place is now very healthy ; and the pasturage of the neighbourhood excellent ; the settlements numerous, and stocked with mares, horses, mules, and horned beasts. Besides the emoluments arising from their sale, still further are derived from that of a quantity of cheese made here. If a canal were to be cut from the Tacarigua to the Pao, it would be easy to establish a communication from Caraccas to Guiana, and even as far as the Brasils. Art might, with so much the more ease, establish this navigation, as it would have only to deepen the bed of the Pao, for the first ten or twelve leagues from its source. The advantages which commerce would derive from it, are incalcula- ble ; because, in time of war especially, the province of Venezuela would preserve an inter- course with Guiana, in spite of the cruisers of the enemy. It does not require a very pene- trating genius to perceive that by this way, which the enemy could not impede, the most prompt assistance could be sent to Guiana, in case she should be threatened with an invasion.

PAOLI (Hyacinth), a Corsican of a good family. Having acquired reputation, he was elected one of the chief magistrates of the island in 1735. But tl e various revolutions Corsica underwent, and the oppressions of the Genoese, obliged him to retire to Naples with his family ; whence, in 1755, he sent his celebrated son, Pascal Paoli, then in his twenty-ninth

year, to assist his countrymen in regaining their liberty, who was appointed by them command- ant-general on his arrival.

Paoli (Pascal de), was born in the island of Corsica in 1726. His father Hyacinth Paoli, after laboring in vain to establish the freedom of his country,went to Naples, where Pascal was educated in the Jesuits' college. In his twenty- ninth year he was chosen generalissimo of Cor- sica, where he exerted himself in promoting the independence of the republic. The Genoese, however, having made a transfer of the island to France, that power sent such an overwhelming force into it as compelled Paoli to seek an asylum in England, where he obtained a pension of ––l500 per annum. On the breaking out of the French revolution, he returned to Corsica, and prevailed upon his countrymen to submit to the English government; after which, disagreeing with the viceroy, he returned to London, and died in 1807.

PAO-TING, a city of China, of the first rank, in the province of Pe-che-lee. Among the cities of this province, it ranks next to Pekin, and is the residence of a viceroy. It is very agreeably situated in a fertile and beautiful dis- trict, seventy-seven miles S. S. W. of Pekin.

PAP, rj.s. ˆ B\eg. pnppu ; It3i. papa ;

Papes'cent, adj. iLat. papa, papilla. The nipple or teat, particularly of the human female ; any hght food made for infants; the pulp of fruit : papescent is containing pap.

Some were so from their source endued. By great dame Nature, from whose fruitful pap Their well-heads spring. Spemer.

Out, sword, and wound The pap of Pyramus. ––– Ay, that left jyap, where heart doth hop.

Shakspeare. Sleep then a little, pap content is making. Sidney. The noble soul by age grows lustier ; We must not starve, nor hope to pamper her With women's milk and pap unto the end.

Dimne. Let the powder, after it has done boiling, be weli beaten up with fair water to the consistence of thin pap. Boyle.

An infant making to the paps would press And emets, instead of milk, a falling tear.

Dry den. In weaning young creatures, the best way is never to let them suck the paps.

Ray on the Creation. That Timothy Trim and Jack were the same per- son, was proved, particularly by a mole under the left pap. Arbulhnot.

PAPA', n. s. Lat. papa ; Gr. TraTnrag ; Per& baba ; Arab, baaba. A fond name for father in, many languages.

Where there are little masters and misses in a house, bribe them, that they may not tell tales to papa and mamma. Swift.

PAPAL STATE.

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Papa, in geography, a small but strong town of Lower Hungary, in the county of Vesprin. In 1596 the garrison revolted to the Turi

*Papa, or Papa Stour, i. e. Great Papa, an island of Scotland, in Shetland, a mile west of Main-land, in the parish of Walls and Sandness, about two miles long, and above one broad. The surface is level, the soil sandy ; but in a good season, when well manured with sea-ware, yields rich crops of barley, oats, and potatoes, as well as excellent grass. It has several small harbours,
ِ ِ ِwhich afford safe shelter for the fishing boats, and the beaches are convenient for drying the fish. These advantages have induced a great fishing company from Northumberland to erect drying houses upon it, and send vessels to the fishing. In 1792 it had 285 inhabitants. It has a singu- lar cave through which the sea flows far under the rocks.*

Papa, or Papa STR0NSAY,an island of Orkney, half a mile north-east of Stronsay, and three miles in circumference. The surface is level, and the soil so fertile that with little improvement it might be rendered one continued corn-field. There are ruins of two chapels on it, dedicated to St. Nicholas and St. Bridget. Mid-way between these is an eminence, called Earl's Know, which has many graves, containing uncommonly large human bodies.

Papa, or Papa Westray, an island of Ork- ney, three miles north-east of Westray, and twenty-five from Kirkwall ; four miles long, and one broad. Its form is oval ; and the soil is so very fertile that it is reckoned the best arable and pasture-land in the Orkneys. It is divided into twenty-four plough-gates, and contained 240 inhabitants in 1792. About seventy tons of kelp are manufactured annually.

PA'PACY, n. s.) Ital. papa, the pope. Po-

Pa'pal, adj. ˆ pedom ; the office, state, or dignity, of the pope, or bishop of Rome ; papal is relating to or taught by the pope or popery : agreeing with

the doctrine of the Romish church ; terms like papist, papistical, &c. are often used in unmeaning and unjustifiable reproach. See Roman Catholicism.

The pope released Philip from the oath, by which he was bound to maintain the privileges of the Ne- therlands ; this pupal indulgence hath been the cause of so many hundred thousands slain. Raleigh,

Now there is ascended to the papacy a personage, that though he loves the chair of the papacit well, yet he loveth the carpet above the chair. Bacon.

The Papal State, or States, State of the Church, or Ecclesiastical State, so called as form- ing the temporal dominion of the pope, com- prises a country of Italy 240 miles in length from north to south, but of very unequal breadth, being in the central part above 100 miles, and in other parts only twenty or thirty broad. Its superficial extent exceeds 17,000 square miles; but, for so fine a country, it is thinly peopled, containing less than 2,500,000 inhabitants. On

the north it is bounded by the Po, which sepa- rates it from the Austrian dominions ; on the west by the grand duchy of Tuscany ; the Adri- atic on the east, and the kingdom of Naples on the south. The congress of Vienna transferred to Austria the Ferrarese territory to the north of the Po, and the French revolution deprived the pope of the districts of Avignon and the 'enais- sin ; but these are the only territorial losses sus- tained for many years by the papal state.

By the following return, made in 1817, Rome, the capital, and its circuit, contain 241,500

I. The Legations and Delegations of

the first class.

Bologna, legation . . 286,426

I'errara, legation . . 174,155

Forli, district . . . 164,651

Ravenna, legation . . 143,199

Urbino and Pesaro, duchy . 196,424

II. Delegations of the second class. Ancona, Mark . . . 159,047 Fermo, Mark . . . 88,471 Frosinone and Pontecorvo, prin- cipality . . . 163,372

Macerata, province . . 181,003

Perugia, district . . 182,673

Spoleto, duchy . . 104,380

Viterbo, district . . 116,369

III. Delegations of the third class.

Ascoli, district . . 69,507

Benevento, duchy . . 20,184

Camerino, Mark . . 41,672

Civita Vecchia, district . . 23,845

Rieti, district . . . 68,345

Total 2,425,223

This territory is traversed from north-west to south-east by the Appennines, which moderate the violent heats of summer, and give rise to the Tiber and a number of minor streams. In the valleys, among the lower ranges of the Appen- nines, are several large lakes. The principal are those of Perugia, Bolsena, and Bracciano. On the south-west are the Pontine marshes, which corrupt the atmosphere for many miles round ; though for the last thirty years canals for drain- ing off these waters have been dug and slowly carried forward : if carefully kept up and ex- tended they would soon, it is thought, add a valuable agricultural tract to the state.

The upper part of the country, comprehending the Marca d'Ancona, the duchy of Spoleto, and part of the legations, enjoys a fine climate, and is we'll cultivated, producing all kinds of corn and pulse, with excellent wine, fruit, oil, silk, flax, and hemp. 'arious spots are also favorable to pasturage ; so that the rearing of cattle and sheep is prosecuted with success, and great quantities of wool produced. But the Maremna, or lower provinces, towards the INIediterranean, present a very difierent picture. Although the soil is rich, not a twentieth part is in any tolera- ble cultivation ; and the country is almost de- serted from the unwholesomeness of its air. The worst season begins about the middle of July, and continues till the rainy season in October.

Various reasons have been assigned for tliis, such as the scorching winds of the south, the large quantity of sea-weed thrown upon the coast, the collections of stagnated water, the sulphurous exhalations of the neighbourhood, &c. But a grand cause of evil is the troubles of former ages, and the recent course of weak and inefficient government. Lands are held by short and precarious leases ; the time of labor is abridged by endless holidays ; numbers of idlers subsist under the characters of monks and pilgrims ; and the government has the right of pre- emption in regard to corn and cattle. In conse- quence, the farm houses are thinly scattered and meanly built ; while the laboring people are wholly neglected as a class. However, the present pontiff, by the abolition of the remaining feudal usages, has made a considerable step in favor of this portion of the state.

The manufactures carried on here are gene- rally undertaken by public institutions, under Ihe direction of some ecclesiastic, and are often supported by an annual allowance from govern- ment. On this plan are several woollen manu- factories of coarse goods ; some silk manufactories, particularly at Bologna, the crapes and gauzes of which place are known throughout Europe. At Rome there is a considerable fabric of tapestry. Foreign leather being prohibited, several extensive tanneries have been established, and this manufacture is perhaps the most thriv- ing of any. In 1770 there was established, at the expense of the apostolic chamber, a manufac- tory of calicoes, and it has been prosecuted with success ; but the workmen are chiefly foreigners. Hats, coarse linens, and hardware, are likewise made in the papal dominions. The chief mineral products are marble, rock-salt, sulphur, and alum.

The little trade carried on in the papal har- bours is almost entirely in foreign hands. The chief article of export is wool, which is sent to France and Switzerland, and often returned in a manufactured state. Another large article of export is alum. The imports consist of foreign manufactures, fish, such as tunny from Sicily, cod from Newfoundland, and, above all, pilchards from England. The chief sea-ports are Ancona on the east coast, and Civita Vecchia on the west. Accounts are here kept in scudi, or Roman crowns of 45. 3d. sterling value, each con- taining ten paoli or 100 bajocchi.

The pope is invested here with absolute power, both spiritual and temporal, the government being considered a theocracy. The candidates for the tiara are necessarily members of the col- lege of cardmals, and for some time back they must be Italians by birth. The election, which rested for several centuries with the nobility, clergy, and citizens of Rome, was transferred in the year 1059 to the college of cardinals, the number of the latter being nominally seventy, but seldom complete. The chief ministers of state are the cardinal camerlingo, at the head of the apostolic chamber, and minister of

finance; the cardinal secretary of state for foreign aflairs ; and the cardinal datary, who has the patronage of vacant livings, the dispensations for marriages, and the charge of whatever relates to an-

nates or first fruits. To these are added thp cardinal vicar, who acts for his holiness as bishop of Rome; the cardinal chancellor, whose func- tions correspond to those of keeper of the great seal in England ; the cardinal auditor, or minis- ter of justice; and, finally, the cardinal secretary of briefs.

The consistory is an assembly of cardinals held under the personal presidency of the pope, and may be either private or public. The former is commonly held once a fortnight. A public consistory is a meeting of all the cardinals, held once a month, when his holiness gives audience to foreign ambassadors. The name of ' congre- gation' is given to a board or commission held under a cardinal or other prelate. The principal are the Congregation of Ecclesiastical Immuni- ties ; one for drawing bulls and dispensations ; another for superintending the different commu- nities or corporations ; the office of the inquisi- tion (whose powers have been greatly moderated of late); the Congregation of the Index, for aid- ing the inquisition in regard to proliibited books ; the Congregation of Rites, for the regulation of ceremonies throughout the Catholic church ; and that for the direction of foreign missions. In the different provinces magistrates hear cases in their first stage, and pass sentence in all ex- cept capital charges. Bologna, Ferrara, and Romagna, are the three legations, so called be- cause they are governed by a cardinal, deputed by the pope for three years at a time. In the other provinces, every place with the name of a city has a prelate sent from Rome as a governor. In small places the chief magistrates are some- times laymen. Generally speaking, the adminis- tration throughout the country is mild ; but the absurd idea of sacrificing the interests of the pro- vinces to those of the capital obtains every where.

The laws in force are the edicts and ordi- nances of the different pontiffs, the code of Jus- tinian, and the Pandects ; but the reigning pope may alter or annul the existing laws : and each minister acting as a judge, and having a court apart, increases greatly the number of law suits. The principal criminal tribunal for laymen is the sagra consulta, whose authority extends over the whole of the state except the city of Rome. The procedure of this, as of almost all other courts, is characterised by great tardiness and secrecy. Although of course the inhabitants of this state are almost all Catholics, in the large towns there are Protestants of foreign extraction, and many Jews. The number of bishops is about thirty. Literature cannot be called in a flourishing state, though there are numerous learned institutions in Rome, and all the princi- pal towns.

Before the late revolutions the papal revenue was about ––600,000 a year, chiefly derived from local taxes ; the produce of the annates and dispensations having done little more, in later times, than discharge the expenses of the boards ap- pointed to manage them. The concourse of pilgrims to Rome is said to be by no means productive of revenue. The taxes consist in duties on wine and brandy ; dues on bread and butchers' meat consumed in Rome ; customs on imports ; and, finally, in a lottery.

P A P A V E R.

M5

Tlie papal troops, including the militia, do not exceed 6000 or 7000. Rome is protected by the castle of St. Angelo. The other fortifications are Civita Vecchia, Urbino, and Perugia. The navy consists of a few galleys and armed vessels stationed at Civita Vecchia, and capable of re- pelling the inroad of a corsair, but of no use agamst men of war, and incapable in rough weather of keeping the sea.

The history of the papal see will more properly occupy a portion of our article Rome. It may suffice in this place to notice that in the middle of the eighth century the popes first began to acquire lands and temporal possessions. In 1073 the imperious Gregory VII. arrogated su- preme dominion both in church and state : from 1307 to 1377 the residence of the pope was at Avignon ; and, from 1379 to 1429, there existed a violent schism, during which there were two, and at one time three, dignitaries assuming the title of pope, and acknowledged by different states of Europe. Tliis considerably weakened the papal influence, and paved the way for the Reformation in 1517. Next came the wars of religion, which continued at repeated intervals until the peace of Westphalia in 1648. After this the business of the papal see was in a great measure confined to arrangements relative to particular orders, and to the formation of con- cordats with Catholic countries. Matters went on thus until the interests of the church were at- tacked by the measures of the emperor Joseph II., and the French revolution. The French convention proceeded to a total rejection of the papal autiiority in France ; the territory of the Holy See was invaded in 1796 and 1797, and tlie French were on the eve of entering Rome ; but peace was obtained by the payment, it is said, of ––1,500,000 sterling, and a great cession of territory. Still more serious oppression was exercised by the French directory in 1798 ; but Buonaparte, on attaining supreme power, af- fected to respect the pope, while he made him instrumental to his own views. He concluded a concordat for France in 1802; and two years after the pope repaired to Paris to crown him emperor. But this cordiality was of short dura- tion. The pope had too strong feelings of inde- pendence for the new king of Italy : Rome was occupied in 1808 by the French

troops, and the pope conveyed a prisoner, first to Savona, and afterwards into France, where he remained until 1814, when the success of the allies restored him to most of his former possessions and pre- rogatives. See Rome.

PAPAVER, the poppy. See Botany, Index. A genus of the monogynia order, and polyan- dria class, natural order twenty-seventh, rhoe- aedse : cor. is tetrapetalous : cal. diphyllous : CAPS, bilocular, opening at the pores below a persisting stigma.

1. P. album, or somniferum, the white, or somniferous garden poppy, rises with an upright smooth stalk, dividing or branching a yard or more high ; garnished with large, deeply jagged, amplexicaule, smooth leaves ; and terminated by large, spreading, dark purple, and other colored flowers, in the varieties, having smooth cups and capsules. There are many varieties, some of Vol. XVI

tliem extremely beautiful. The white officinal poppy is one of the varieties of this sort. It grows often to five or six feet, having large flowers, both singles and doubles, succeeded by capsules or heads as large as oranges, each con- taining about 8000 seeds. In the province of Bahar, in the East Indies, the poppy seeds are sown in (Jctober and November, at about eight inches distance, and well watered till the plants are about half a foot high, when a compost of dung, nitrous earth, and ashes, is spread over the areas ; and a little before the flowers appear they are again watered profusely till the capsules are half grown, at which time the opium is collected ; for when fully ripe they yield but little juice ; two longitudinal incisions from below upwards, without penetrating the cavity, are made at sun- set for three or four successive evenings ; in the morning the juice is scraped off" with an iron scoop, and worked in an iron pot in the sun's heat till it is of a consistence to be formed into thick cakes of about four pounds weight ; these are covered over with the leaves of poppy, to- bacco^ or some other vegetable, to prevent their sticking together, and in this situation they are dried. The somniferous quality of the poppy resides in the milky juice of the capsule. See Opium. It grows in England, generally in neg- lected gardens, or uncultivated rich grounds, and flowers in July and August. This species is said to have been named white poppy from the whiteness of its seeds ; a variety of it, however, is well known to produce black seeds ; the dou- ble-flowered white poppy is also another variety ; but, for medicinal purposes, any of these may be employed indiscriminately, as there is no differ- ence in their sensible qualities or effects. The seeds, according to some authors, possess a narcotic power, but there is no foundation for this opinion ; they consist of a simple farinaceous matter, united with a bland oil, and in many countries are eaten as food. As a medicine, they have been usually given in the form of emulsion, m catarrhs, stranguries, &c. The heads or

cap- sules of the poppy, which are directed for use in the pharmacopoeias, like the stalks and leaves, have an unpleasant smell, somewhat like that of opium, and an acrid bitterish taste. Both the smell and taste reside in a milky juice, which more especially abounds in the cortical part of the capsules, and in its concrete state constitutes the officinal opium. These capsules are power- fully narcotic or anodyne ; boiled in water, they impart to the menstruum their narcotic juice, to- gether with the other juices which they have in common with vegetable matters in general. The liquor, strongly pressed out, suffered to settle, clarified with whites of eggs, and evaporated to a due consistence, vields an extract which is about one-fifth or one-sixth of the weight of the heads This possesses the virtues of opium, but requires to be given in double its dose to answer the same intention, which it is said to perform without oc- casioning a nausea and giddiness, the usuai effects of opium. This extract was first recom- mended by Mr. Amot ; and a similar one is now received in the Edinburgh Pharmacopceia. It is found very convenient to prepare the sjTup from this extract, by dissolving one drachm in

two pounds and a half of simple syrup. The syrupus papaveris alhi, aˆ directed by both col- leges, is a useful anodyne, and often succeeds in procuring sleep, where opium fails ; it is more especially adapted to children. White poppy heads are also used externally in fomentations, either alone, or more frequently added to the decoction pro fomento.

2. P. Cambricum, the Welch poppy, has a perennial root, pinnated cut leaves, smooth, up- right, multiflorous stalkS; a foot and a half high ; garnished with small pinnated leaves, and termi- nated by many large yellow flowers, succeeded by smooth capsules. It flowers in June.

3. P. orientale, the oriental poppy, has a large, thick, perennial root ; long, pinnated, sawed leaves ; upright, rough, uniflorous stalks, terminated by one deep red flower, succeeded by oval, smootli capsules. Tlie flxjwers appear in May.

4. P. rhoeas, the wild globular-headed poppy, rises with an upright, hairy, multiflorous stalk, branching a foot and a half high; garnished with long, pinnatifid, deeply cut, hairy leaves ; the stalk terminated by many red and other colored flowers in the varieties, succeeded by globular smooth capsules. This plant is common in corn fields, and flowers in June and

July. It may be distinguished from the papaver dubium, to which it bears a general resemblance, by its urn-shaped capsules, and by the hairs upon the peduncles standing in a horizontal direction. The capsules of this species, like those of the somni- ferum, contain a milky juice, of a narcotic quality, but the quantity is very inconsiderable, and has not been applied to any medical purpose ; but an extract prepared from them has been successfully employed as a sedative. The flowers have somewhat of the smell of opium, and a mucilaginous taste, accompanied with a slight degree of bitterness. A syrup of these flowers is directed in the London Pharmacopoeia, which has been thought useful as an anodyne and pectoral, and is therefore prescribed in coughs and catarrhal affections ; but it seems valued rather for the beauty of its color than for its virtues as a medicine. All the kinds are hardy, and will prosper any where. The first and last species, being annual, are to be propagated only by seeds; but the others by parting the roots as well as by seeds.

PAPAVEROUS, adj. Lat. papavareus, from papaver, a poppy. Resembling poppies.

Mandrakes afford a papaverous and unpleasant odour, whether in the leaf or apple. Browne.

PAP AW, n. s. Ft. papaycr ; Hind, pupuey ; low Lat. papaya. A plant. The fair papaw,

Now but a seed, preventing Nature's law.

In half the circle of the hasty year.

Projects a shade, and lovely fruit does wear.

Waller,

Papaw, in botany. See Carica.

PAP-CASTLE, an ancient castle of England, in Bridekirk parish, Cumberland, which stood two miles from Cockermouth, on the other side of the Darvvent, whose Roman antiquity is proved by several monuments ; and a large green stone vessel found here, with little images upon it, is supposed to liave been formerly a Danish font

for dipping of infants ; and has been since used at Bridekirk in the neiglibourhood for sprinkling. The name of Pap-castle seems to be contracted from Pippard its owner ; it is said to have been demolished, and the materials employed to build Cockermouth Castle. Mr. Routh, in a letter to Mr. Gale, thus describes the ruins discovered at Pap-castle, January

IGth, 1743. ‘ The close in wliich they lay is a little to the south of the fort, on the declivity of the hill to the river, and bounded on the west by a narrow lane, probal)ly the via militaris continued ; and is usually shown to strangers as the most remarkable here for finding Roman coins. They are the largest ruins ever known to be discovered in these parts ; for they met with three walls, besides the pavement.’ Mr. Routh, in anotber letter to Mr. Gale, April I3th, 1743, describes a fibula, a coin of Trajan found it. Dr. Stukely says, the Roman castrum lies on the top of the hill above the village, and he traced its whole circumfe- rence, a bit of the Roman wall by the river side going to VVigton, and there the ditch is plainly visible, though half filled up with the rubbish of the wall. Coins of Claudius, Adrian, and a silver Geta, font. rev. princeps ivven- TVTis, were also found in it. He supposes its ancient name, Derventio, derived from the Der- went.

PA’PER, 71. s., adj. iiv. a.’\ Fr. papier ;

Pa’per-maker, tljAt. papyrus. A

Pa’per-m AKiNG, 1 well known sub-

Pa’per-mill. J stance used foi

writing and printing upon ; a portion of paper ; single sheet ; deed ; essay ; account, or state- ment ; used variously for what is contained on paper or on a sheet of paper: as an adjective, made of paper; hence slight or thin : to paper is, to register ; commit to, line, or adorn with paper : for paper-maker, paper-makmg, and paper-mill, see below.

He makes up the file Of all the gentry : and his own letter Must fetch in him he papers.

Shakspeare. Henry VIII.

What see you in those papers, that you lose So much complexion] look ye how they change ! Their cheeks are paper. Id. Henri/ V.

Thou hast caused printing to be used : and con- trary to the king, and his dignity, thou hast built a paper-mill. Shakspearc.

Nothing is of more credit or request than a petu- lant pUper, or scoffing verses. Ben Jonson.

He was so careless after bargains that he never received script of paper of any to whom he sent nor bond of any for performance of covenants.

Fell.

'Tis as impossible to draw regular characters on a trembling mind, as on a shaking paper. Locke.

There is but a thin paper wall between great dis- coveries and a perfect ignorance of them. Burnet. They brought a paper to me to be signed. Dryden.

Do the prints and papers lie? Swift.

I was in hopes that in coming to Leicester you would have had intelligence of your papers. As this is not t'-e ca .c you ought immediately to advertize them, &c. Warhwrton.

Sir, ••• In a literary performance, by a juvenile author, I. feared to find intermixed much of the com- mon trash of periodic.l] avers; stories of love ad- ventures Canning.

PAPER-HANGINGS.

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Paper, Ixcombustible. An incombustible paper is made of the lapis asbestos, or linum vi- vum. which will bear burning witliout being in- jured. Dr. Bruckman. professor at Brunswick, published a natural history of the asbestine, or incombustible paper ; and printed four copies of his book thereon. Vide Bibl. Germ. torn. xiv. p. 190.

The manner of making this paper is described by Mr. Lloyd (Phil. Trans. No. 166, p. 824), from an essay made by himself. lie pounded a quantity of the asbestos in a stone mortar, till it became a downy substance ; then sifted it in a fine searce, and by this means purged it indiffer- ently wˆell of its terrene parts ; because the earth or stones he could not pick out of it before, or at the pounding, being reduced to a powder, came through a searce, the linum remaining. This done, he brought it to the paper-mill : and, putting it in water, in a vessel just big enough to make a sheet with such a quantity, he stirred it pretty much, and desired the workmen to pro- ceed with it in the usual method, with their writing-paper mould; only to stir it about al- ways before they put their mould in ; consider- ing it as a far more ponderous substance than what they used ; and that consequently, if not immediately taken up after it was agitated, it would subside. The paper made of it proved but coarse, and was very apt to tear ; but this was the first trial, and the workmen did not doubt, but incase it were pounded in one of their mortars for twenty hours, it would make good writing-paper. See Asbestos.

Paper-hangings, in the arts, are of various kinds, and are used for the

covering of ceilings, walls, stair-cases, &c., and represent stucco- work, velvet, damask, brocades, chintzes, or such silks and stufis as are employed for hanging rooms : hence their name. The principal difference in the manufacture lies in the grounds. The com- mon grounds are laid in water, and made by mixing whitening with the common glovers' size, and laying it on the paper with a proper brush in the most even manner. This is all that is required where the ground is to be left white ; and the paper being then hung on a proper frame till it be dry is fit to be painted. When colored grounds are required, the same method must be pursued, and the ground of whiting first laid, except in pale colors, such as straw-colors or pink, where a second coating may sometimes be spared, by mixing some strong color with the whitening.

There are three methods by which paper- hangings are painted ; the first, by printing on the colors ; the second, by using the stencil; and the third, by laying them on with a pencil, as in other kinds of painting.

1 . When the colors are laid on by printing, the impression is made by wooden prints, cut in such a manner that the figure to be expressed is made to project from the surface ; and this being charged with the colors tempered with their pro- per vehicle, by letting it gently down on a block on which the color is previously spread, conveys it from thence to the ground of the paper on which it is made to fall by means of its weight, and the effort of the arm of the person

who uses the print. It is easy to conclude that there must be as many separate prints as there are colors to be printed. But, where there are more than one, great care must be taken after the first to let the print fall exactly in the same part of the paper as that which went before, otherwise the figure of the design would be brought into irregularity and confusion. In common paoer of low price it is usual, therefore, to print only the outUnes, and lay on the rest of the colors by stenciling, which both saves the expense of cut- ting more prints, and can be practised by com- mon workmen, not requiring the great care and dexterity necessary to the using several prints.

*In the finer paper, where several colors are laid on with the prints, the principal color is be- gun with : and the rest taken successively ; the print for the outline being laid on last. In cases where the pencil is to be used, the outline is ne- vertheless to be made before the colors are laid on by the pencil, if such outline is to be made at all ; because that is the guide to the persons who lay on the color; and confines them to a correctness. In paper printed with designs in chiaro-scuro, such as the imitation of stucco- workj and bas relievos, the order of printing must be, to lay on the ground color first ; after- wards the shades ; and lastly the lights ; and the same rule of succession must be observed where the colors are penciled. ***

Handmaid to the Arts, vol. ii. p. 445, &c.

2. The manner of stencilling the colors is this. The figure, which all the parts of any particular co- lor make in the design to be painted, is to be cut out in apiece of thin leather or oil-cloth, which pieces of leather or oil-cloth are called stencils ; and being flat on the sheets of paper to be printed, spread on a table or floor, are to be rubbed over with,the color properly tempered by means of a large brush. The color passing over the whole is con- sequently spread on those parts of the paper . where the cloth or leather is cut away, and gives the same effect as if laid on by a print. Tliis nevertheless is only practicable in parts where there are only detached masses or spots of colors ; for where there are small continued lines, or parts that run one into another, it is difiicult to preserve the connexion or continuity of the parts of the cloth, or to keep the smaller comers close down to the paper; and, therefore, in such cases, prints are preferable. Stencilling is indeed a cheaper method of accomplishing the work than printing ; but, without such extraordinary attention and trouble as render it equally difficult, it is far less beautiful and exact in the effect. For the outlines of the spots of color want that sharpness and regularity that are given by prints, besides the frequent extralineations or deviations from the just figure, which happen by the original misplacing of the stencils, or the shifting of the place of them during the operation.

3. Pencilling is only used in the case of nicer work, such as the better imitations of the Indian paper. It is performed in the same manner as other painting in water or varnish. It is sometimes used only to fill the outlines already formed by printing, where the price of the color, or the ex- actness of the manner in which it is required to be laid on, render the stencilling or printing it

less proper ; at other times it is used for forming or delineating some parts of tiie design, where a spirit of freedom and variety, not to be had in printed outlines, is desired to be had in the work.

The paper designed for receiving jiock is first prepared witli a varnish-ground with some pro- per color, or by that of the paper itself. It is frequently practised to print some mosaic or other small running figure in colors on the ground, be- fore the flock be laid on ; and it may be done with any pigment of the color desired, tempered with varnish, and laid on

by a print cut corres- pondently to that end.

The method of laying on the flock is this. A wooden print being cut, as is above described, for laying on the color in such manner that the part of the design which is intended for the flock may project beyond the rest of the surface, the varnish is put on a block covered with the lea- ther or oil-cloth, and the print is to be used also in the same manner, to lay the varnish on all the parts where the flock is to be fixed. The sheet thus prepared by the varnished impression is then to be removed to another block or table, and to be strewed over with flock, which is after- wards to be gently compressed by a board or some other flat body, to make the varnish take the better hold of it, and then the sheet is to be hung on a frame till the varnish be perfectly dry ; at which time the superfluous flock is to be brushed

off by a soft camel's-hair bnish ; and the proper flock will be found to adhere in a very strong manner. The method of preparing the flock is by cutting woollen rags or pieces of cloth with the hand, by means of a large bill or chopping- knife, or by means of a machine worked by i' horse-mill.

There is a kind of counterfeit flock-paper, whiuh when well managed has very much the same effect to the eye as the real, thougli done with less ex- pense. The manner of making this sort is, by laying a ground of varnish on the paper; and, having afterwards printed the design of the flock in varnish, in the same manner as for the true, instead of the flock some pigment or dry color of the same hue with the flock re- quired by the design, but somewhat of a darker shade, being well powdered, is strewed on the printed varnish, and produces nearly the same appearance.

Paper-hangings are sometimes spangled with that kind of talc called isinglass, which, being re- duced to a gross flaky powder, has a great re- semblance to thin silver scales or powder. It is laid on by strewing over the varnish, which forms the ground, before it begins to dry. When it is laid on in a figure, for the representation of em- broidery, the figure must be printed in varnish, and the talc strewed upon it, and treated like flock. Smalt n.ay also be used in the same manner as flock or spangles

PAPER-MAKING.

Paper-Making. The origin of this most useful art, like that of printing, to which it has proved so important an auxiliary, is involved in obscurity. The ancients, we are perhaps too ready to suppose, had comparatively little occa- sion for paper : important MSS. have always been committed to more durable substances ; civilisation must become permanent in a country before the frequent interchange of mind by writing is extensively practised, particularly on subjects of temporary importance ; and it is in the

temporary writings, and the books of the exixting generation, ratiier than those which are handed down to posterity, that the great con- sumption of paper takes place. Yet, in the an- nals of that country in which we find tlie earliest traces of the arts, we read much of paper ; which, according to Varro, was first made at Alexandria, in Egypt, from the rush papyrus. Pliny describes its root as of the thickness of a man's arm, and ten cubits long ; from this arise a great number of triangular stalks, six or seven cubits high, each thick enough to be easily spanned ; its leaves are long like those of the bull-rush; its flowers stamineous, I'anged in clusters at the ex- tremuies of the stalks ; its roots woody and knotty like those of rushes ; and its taste and smell akin to those of the cyperus, under which genus Linnanis has classed the papyrus. See Papyrus. Various other useful articles were made of this rush, as blankets, mats, garments, and shoes ; sails, ropes, and other naval rigging. Moses, according to the Septuagint, was exposed on the Nile, tv BifSij iraTrvpa, in a basket of tiiis material.

In the Roman writers we find various kinds of Egyptian paper described, as, i. Those de- nominated from the purposes to which they were applied. Such were (1.) The hieratica, the most ancient kind, and appropriated to religious services : this was afterwards called Augusta, after the emperor of that name, and sometimes Lavlnia, in compliment to his wife, who is said to have suggested improvements in bleaching it. This paper seems to have been made of about eleven inches in breadth. (2.) The emporica, or emporetica, a small and coarse paper used by shopkeepers : we perhaps should rank here (3.) The amphitheutrka, from its being used or made in the amphitheatre ; but it appears, according to Guilandinus, to have been known long before any building of this kind was erected; and he names it Arthrihitica, from Arthribus a city of the Delta. ††† ii. Various papers were called after tlie place in which they were manufactured, as, (1.) The 6'aj7ic††, from the city Sais; (2.) The Tceniotka, or Taitka, from a place now un- known. Most of the inland towns and cities of Eg;ypt are said to have had manufactories of this kind : and Vopiscus states that the tyrant Firmus who rebelled in Egypt, declared he would main- tain an army only with paper and glue, ' papyro et glufine,' which Casaubon understands as spoken of the produce and revenue of paper iii. Other papers were called, as in moderr times, after the names of celebrated makers : as, (1.) The Fanniana, from Rhem. Fannius False- mon, the grammarian, who owned a paper manU" factory. This kind was small, but finer than the uniphitheatrical paper; and at one time was first

wrought at. Alexandria, and finislied at Rome. (2.) Claudia, first made by

order of the empe- ror Claudius, and reputed the best of all the kinds made in his time.

The general mode of manufacturing the papy- rus was to begin by lopping off the head and root of tlie plant ; the remaining stem was then slit lengthwise into two equal parts, and from each of these they stripped the thin scaly coats or pellicles, of which it was composed, with a needle or the point of a knife. The innermost of those pellicles were looked on as the best, and those nearest the rind or bark the worst; tliey were kept apart accordingly, for different and inferior sorts of paper. Pliny calls these pellicles by the twelve different names of philura, ramentum, scheda, cutis, plagula, corium, tcenia, subtegmen, flatumen, pagina, tabula, and papyrus.

The pellicles being thus detached, and, accord- ing to the count de Caylus, dried in the sun, were stretched on a table, and two or more laid over each other transversely, so as that their fibres crossed in right angles. The Claudian paper, named above, consisted of three of these pellicles or layers. They were then glued to- gether with the slime of the Nile, or a flour paste ; afterwards pressed to get rid of the water ; and flatted and smoothed by being beaten with mallets. Sometimes a polish was added by means of a hemisphere of glass, ivory, or bone. The Romans seem to have used a size or gum, whereby they could enlarge or diminish the final volume of the paper, and they excelled in the bleaching and polishing of it.

Varro, who in common with many writers assigns the origin of the manufacture of papyrus to Alexandria, seems to have overlooked several important facts which prove it to have been known to tlie Greeks before the conquest of Egypt by Alexander. Thus Anacreon AIcjeus, Plato the comedian, Aristomenus, Plato the philosopher, Aristotle, and TEschylus, used the terms /3i/3\oe and /3t/3\tov : and Ilerodotus, Ilomer, and ilesiod, expressly mention the pa- pyrus. Pliny cites a passage from an ancient Roman annalist which speaks of paper books found in king Numa's tomb, who was buried above three centuries before Alexander. At the period of Alexander's conquests it seems, how- ever, to have become far more generally known ; and, so late as two centuries after, we find stems and barks of trees frequently used for writing vipon through the scarcity of paper. In the reign of Tiberius there was such a scarcity of this article that its use in contracts was dispensed with by public authority. In about the twelfth century its manufacture seems to have been en- tirely discontinued.

Montfaucon and others speak of an ancient Egyptian bark paper, which they distinguish from that made of the papyrus as thicker and more brittle, as well as more apt to part asunder, so that in some instances the bottom layer has been found to remain, and that on which the writing was made has peeled off. Matthei, however, thinks little of this distinction, and

contends that the only use of the tiliu or linden was for making the boards or tablets used for diptycha or pocket-books; and sometimes to be

written on, on both sides, which the ordinary Egyptian paper would not bear.

A paper made of cotton seems to have been working its way into Europe from the east as early as the tenth century, lliere are MSS. written on it in fact of tliis date in the French king's library : and in the twelftli century cotton MSS. became more frequent than those on skins. Tliis paper is that called charta bombyca.

Some anomalous kinds of ancient paper may be here alluded to, and close this part of our sketch. According to the Memoirs de Trev. (Sept. 1711), there are two papal bulls of the dates 891 and 895 (issued by the Anti-popes, Romanus, and Formosus), which are written on an unknown material of this description, two ells long and one broad : they consist of two leaves or pellicles glued together transversely, and are still legible in most places. The con- jectures of the French literati in regard to them are very various. Some consider them to be made of the leaves of the alga, or sea-wreck ; others of the leaves of a rush, called la boga, found in the marshes of Rousillon ; others of papyrus ; others of bark ; and others of cotton. There is also a MS. of this description in the abbey of St. Germains.

The oriental and other papers made direct from vegetable substances, seem next to require our attention : though all the published details of the mode of manufacturing them are vague and un- satisfactory. There are many palm trees of India and America to which botanists have given the name papyraceous, because the natives have written with bodkins either on the leaves or tlie bark. Such is the American palm, called tal by the Indians; and the guajaraba of New Spain, Every palm the bark of which is smooth, and the leaves large and thick, may be used for thi►► purpose.

But the art of making paper from vegetables reduced to stuff was known in Cliina long before it was practised in Europe; and the Chi- nese have carried it to a degree of perfection hitherto unparalleled in the western world.

Every province of their empire has its pecu- liar paper. That of Se-tchuen is made of hemp or of linen rags, as in Europe ; that of Fo-kien of the bamboo ; that of the northern provinces, of the interior bark of the mulberry ; that of the province of Kiang-nan of the skin found in the webs of the silk-worm ; other provinces use the cotton plant extensively, others the bark of the elm, and wheat or rice straw ; finally, in the province of llu-quang, the tre-chu, or ko-chu, furnishes the materials with which they

make paper.

“The method of flibricating paper with the bark of different trees is nearly the same with that which is followed in the bamboo, of which alone we shall speak. The second skin of the bamboo generally, but sometimes the whole substance, is reduced to pulp by steeping, boiling, and the mortar, and then beat together with the glutinous juice of a plant named ko-teng, till it becomes a tliick and viscous liquor. Tlie workmen plunge their forms into this liquor ; take out what is sufficient for a sheet of paper, which immediately becomes fiini and shining, and is detached from

the form by turning down the sheet on the heap of paper already made, without the interposition of pieces of woollen cloth, as in Europe. The Chinese paper must be dipped in a solution of alum before it can take either ink or colors.

In Japan they manufacture paper from the bark of trees of a prodigious strength. There is a kind of it fit for bed-hangings and wearing ap- parel ; resembling so much stuffs of wool and silk, that it is often taken for them. The follow- ing is Kempfer’s catalogue of trees used in Japan for the manufactory of paper: ††† 1. The true paper-tree, called in the Japanese language kaadsi, Kempfer characterises thus : papyrus fructu mori celsoe, sive morus sativa foliis urticae mortujE cortice papifero. 2. The false paper- tree, called by the Japanese katsi kadsire ; by Kempfer papyrus procumbens lactescens, folio iongo, lanceata cortice chartaceo. 3. The plant which the Japanese call oreni is named by Kempfer alva radice viscosa, flore ephemero magno punico. 4. The fourth tree used for paper is the futo-kadsura, named by Kempfer frutex viscosus procumbens folio telephii vulgaris asmulo fructu racemose.

When the bark they use has been cleansed and sorted, they boil it in clear lie ; keeping it from the time it begins to boil perpetually stirred with a strong reed, and pouring fiom time to time so much fresh lie in as is necessary to con- dense the evaporation, and to supply what has been lost by it ; this boiling is continued til] the matter is so tender that being but slightly touched with the finger it will dissolve and separate into fibres. The lie is made of wood ashes, in the following manner : two pieces of wood are laid across over a tub and covered with straw, on which they lay wet ashes, and then pour boiling water upon it, which, as it runs through the straw into the tub underneath, is imbued with the saline particles of the ashes.

After boiling follows the washing of the bark, which is generally performed in a river, and re- quires great judgment and attention. The bark is put into a sort of sieve, which will let the water run through, and stirred continually till it comes to be diluted into a delicate pulp. For the finer sort of paper the washing is repeated, and the bark put into a piece of linen, instead of a sieve, as the particles become very fine ; and the harder pieces or knots are now picked out. Now the bark is put upon a thick, smooth, wooden table, in order to its being beaten with 'ticks of the kusnoki wood, which is commonly done by two or three people, until it is so thin as to resemble a pulp of soaked paper ; and, being thus prepared, it is put into a narrow tub, with the fat slimy infusion of rice, and the infu- sion of the oreni root, which likewise is very slimy and mucilaginous. These ingredients be- ing put together are stirred with a thin clean reed, till they are thoroughly mixed and wrought into a uniform liquid substance, of good con- sistence, and out of this tub the leaves are taken off one by one, on proper patterns made of bul- rushes. These to dry them are laid up in heaps, upon a table covered with a double mat, and a small piece of reed is put between every leaf,

which serves, in time, to lif\ them up and take

them off singly.

At the beginning of the summer, when the oreni root is scarce, the paper-makers make use of a creeping shrub called sane kadsura, the leaves of which yield a mucilage in great plenty, though not altogether so good for this purpose. They also use the juncus sativus, which is culti- vated in Japan with great care.

The Siamese make a paper of the bark of the pleok-kloi tree, of which they have a black and a white kind : it is folded up in books, in the manner of fans, and will bear to be written on on both sides with a stylus which they make of clay.

The Cingalese also, according to Dr. Davy, write very neatly and expeditiously with a sharp-pointed style on the immense leaf of the talipot-palm : coloring ' their characters, when scratched by an ink made of lamp-black and gum.' Their numerous books are all formed of these leaves, cut into suitable pieces, and confined by boards : ' occasionally, but rarely,' he adds, ' these books are made of thin copper- plates.' All the nations on the other side of the Ganges seem to make use of the bark of trees and shrubs for these purposes ; the other Asiatic nations on this side the Ganges, the black mtTA- bitants of the most southern parts of India excepted, make their paper of old cotton rags and stuff, and their method differs little from ours in Europe, except that it is more simple, and the instruments less refined. Yet it is very remarkable that what is called India paper (used in

taking off our finest copper-plate impressions) cannot be manufactured in England.

We come now to the modern art of paper- making in Europe ; or the important and admi- rable process by which our worn-out clothes and linen are converted into an economical but most efficient, convenient, and often elegant substance, to receive the labors of the pen and the opera- tions of the press. Who first suggested this appropriation of linen rags it seems at this period hopeless to attempt to discover ; certainly he bestowed on mankind a service barely exceeded by that of the invention of printing. Various dates have been assigned for its origin. Ray and Milnes (in his Hortus Philosophicus) date it about the year 1470, when it first appeared in this part of the world, says the former, at Guern- sey; two persons, named Anthony and Michael, having brought it to Basil, from Galicia in Spain. It would seem most probable indeed that, like much of our other knowledge, this travelled from the east, soon after the taking of Constantinople. Rabelais, who died in 1553, mentions hempen cloth as having been known about 100 years be- fore his time : yet Mabellon and others find paper MSS. dated, they say, so far back as the middle of the fourteenth century ; and Dr. Pri- deaux affirms that he has seen a registration of some acts of John Cranden, prior of Ely, made on paper, which bears date in the four- teenth year of Edward II., i. e. Anno Domini 1320. He however considers that this manufac- ture was brought to us from the east, through " e Saracenic conquests in Spain.

In our own times we have seen, in tiie inven- tion of the new machinery applied to paper- making, the most important addition that has been made to the art ; and such an one as nearly equals in importance the original suggestion of making it from rags. At such a period we must indulge a smile at the standing definition of ' linen, or European paper' in the most extensive of our modern Encyclopedias, as ' cliiefly made of linen rags beaten to a pulp u-ith great ham- mers, and the soil carried off by a continual sup- ply of fresh water, conveyed among the pulp in little troughs, till it be rendered perfectly white.' The fact is hammers have been entirely discon- tinued in this country for these forty years, and long before the invention of the machine.

The modern process may be considered as divided into paper-making as conducted by the hand ??? and by the machine : the greater part of the best writing and printing papers taken toge- ther beine, perhaps, at length made by the latter; for so strong is the attachment to particular names,

with regard to writing papers, that though an article every way as perfect and beautiful can be manufactured by the machine, an equal quan- tity at least of that paper separately considered is made by the old method.

I. Of Paper-Making by the Hand. ??? Even this, as conducted in the more respectable establishments, will not fail to strike an intelli- gent stranger to the process as a surprisingly simple and beautiful art. lie may be first led into the rag-house, where a number of women and children will be found employed in cutting and sorting the washed rags.

Rags are sold to the paper-makers sorted into four or five different kinds: No. 1, sometimes called London superfine, being all linen, and re- served for the finest paper. No. 5 is generally the coarsest sort, and includes canvas ; a sixth sort called ‘ rag-bagging’ is, however, sometimes kept separate. ‘ Colored rags’ include cotton of all colors except blue, which is kept apart for making blue paper.

Some mills use a duster, made of wire net, in the form of a cylinder, four feet in diameter and five feet long. It is put in motion on pivots in connexion with some part of the general ma- chinery, and enclosed in a tight box, into which it casts off the dust. In different establishments very different degrees of care are exercised in the sorting : some separate cloth of liemp from cloth of flax; others keep hemps and seains apart ; and think that the coarseness of the cloth should be considered, and the degree of wear it has had at- tended to ; for, if rags which are almost new be mixed with those that are much worn, the one will not be reduced to a pulp in the mill, whilst the other will be so attenuated as to be carried away by the water, to the real loss of the manufac- turer, and the deterioration of the article made ; ‘or the particles carried off will be those which would give it a smooth and velvet-like softness. Nor is this all : a pulp of uneven tenuity pro- duces those cloudy papers in which are seen at intervals parts more or less clear, and more or less weak, occasioned by the flakes assembled on the mould not being sufficiently tempered and diluted toirether.

The general furniture of the rag-house is a number of chests or boxes divided into five or more separate cases for the different sorts of rags ; and in some cases having a large knife fixed on the top : each woman has a piece of paste- board hung from her girdle and extended on her knees, upon which, with the assistance of the knife, she unrips seams and stitches, and scrapes off all filth. Whatever can be used, after being well shaken, is distributed according to the de- gree of fineness, and the women throw the rest at their feet. The more exact manufacturers have six cases, i. e. for the superfine, the fine, the seams and stitches of the fine ; the middling, the seams and stitches of the middling ; and the coarse ; without including the very coarse parts, reserved for brown and other coarse papers.

Sometimes the rags are bleached in the first stage of the process, or immediately after they are sorted, and Mr. Campbell took out a patent for a method of performing this in 1792. It is similar to the process of bleaching cotton thread, lie directs that the rags should, before they are put into the receiver to be bleached, contain not more than their own weight of fair water. They should first be opened by a machine, called by the cotton manufacturers a devil, or some ma- chine of that nature, and they are to be distri- buted in the receivers, in layers spread on frames, so that they will not come in contact witli each other, or they may be placed in the body of the receiver, and have stirrers or agita- tors!ˆ provided to expose every part of them to the action of the bleaching gas. After the pro- cess, which must be concluded as soon as ever the rags are sufficiently bleached, lest the gas should act upon and injure their quality, they are to be washed in water, and will be ready for the mill.

Many manufacturers and printers consider that this mode of bleaching the rags makes them rotten ; that it injures the quality of the paper, which it doubtless does if carried too far; and that it enables makers to pass oft' an article of inferior staple. This is no doubt the case in some instances ; but, with all the just suspicion of bleached papers that obtains in many quarters, bleaching may clearly be delicately and judici- ously applied ; though whether in this stage or in the state of half-stuff \g will not here decide ; and it is certainly capable of making the same good materials into a better paper, when well managed. In many mills printing papers are bleached by muriate of lime inserted in the wash- inw engine.

We may now describe the paper-mill in its principal parts. This is represented in the engraved plates, Paper-Making, through which, for the convenience of arrangement, the figures run on. Fig. 1 is a front, and fig. 2 a side elevation of the mill ; the same letter ex- pressing the same part in both. A B is the great water-wheel, giving motion to the whole on its shaft or axis C ; a crown, or face wheel, D D is framed, and gives motion to the pinion G; this is fixed on the lower part of a vertical axis E F, which goes up into the upper room of the mill, and has two face wheels 1 and K fixed upon it ; these actuate two pinions L M, upon

the end of the spindles of the two engines N and O, where the rags are ground.

VV, fig. 1, is a wheel turned by the teeth of ►►he great wheel D D ; the axis of this wheel is tormed into a triple crank t", it?, a, which gives*

motion to two or three pumps, by means of levers or beams y, z, y, which cannot be fully seen in the figures, but may be easily imagined. These pumps raise up a constant stream of clean water, which is necessary to be kept running through the rags in the engine to wash away the dirt separated from them in the process. By the arrangement of the cog wheels, the pinions L M and cylinders of the engines are caused to revolve at the rate of 150 times per minute, when the water wheel moves with its proper ve- locity.

The internal construction of the engine is ex- plained by the remaining figures. Fig. 3 is a longitudinal section, showing the cylinder in ac- tion ; Fig. 4, a plan looking down upon it ; fig. 6, the cylinder separate ; N and O, in fig. 1, re- present a large cistern or vat of an oblong figure, with the angles removed, as shown by fig. 4 ; it is lined with lead inside, and divided in the middle by a partition ej\ figs. 3 and 4. On the front and back of the engine two short beams T T, figs. 2, 4, and 5, are bolted ; they have long mortises through them to receive tenons at the ends of two horizontal levers S S, which rise and fall in bolts in one of the beams T as centres ; the front one of these lieams, or that nearest to the cylinder R, is capable of being elevated or depressed by turning the nut of the screw r, which, as shown in fig. 5, is fixed to the tenon of S, and comes up through the top of the beam T, upon which the nut takes its bearing. Two brasses are let into the middle of the levers S, S, and form the bearing for the spindle of the engine to turn upon. R is the cylinder made of wood and fixed fast upon the spindle ; it has a number of knives or cutters fixed upon it, parallel to its axis, and projecting from its circumference about an inch : e, fig. 3 and 4, is a circular breasting, made of boards and covered with sheet lead, which fits the cy- linder very truly, and leaves but very little space between the teeth and breasting. An inclined plane leads regularly from the bottom of the engine trough to the top of the breasting, at the bottom of the breasting beneath. The axis of the cylinder, a block a, fig. 3, is fixed, and has cutters of the same size and exactly si.Tiilar to those in the cylinder, which at all times of the process pass very close to the teeth in the block, but do not touch. This block is fastened by a dove-tail fixed in the wooden bottom of the breasting; it comes through the woodwork of the chest, and projects a small distance on the outside of it, and is kept up to its place by a wedge, so that by withdrawing this wedge the block becomes loose, and can be removed to sharpen the cutters as occasion requires. The great velocity of the cylinder draws the rags, with which the engine trough is filled between the cylmder and the cutters in the block a, and by this they are cut in pieces ; then by the rapid Tiotior of the cylinder the rags are thrown over the top ,f the breasting, and tiiey run down the

inclined plane, and passing round the partition e f come to the cylinder again, so as to be re- peatedly cut till they are reduced to a pulp. This circulation or turning the rags over in the engine, causes them to present themselves to the cutters in a different direction every time; for as the cylinder cuts or clips in straight lines, in the same manner as a pair of shears, it is requi- site to cut the rags across in diff'erent directions, to reduce them to a pulp. The screw r is used to raise or lower the cylinder, and cause it to cut finer or coarser by enlarging or diminishing the space between the cutters in the block and those of the cylinder. These cutters act in the same manner as a pair of scissars cut, the teeth of the cylinder being

as before-mentioned parallel to the axis of the cylinder, and those of the block are placed rather inclined to them, so that the teeth of the cylinder come first in contact with the cutters of the block at one end, and then successively the contact proceeds along to the other end, so that any rags interposed be- tween them are cut in the same manner as they would be between the blades of a pair of shears. Sometimes the plates or cutters in the block are bent to an angle in the middle instead of being straight and inclined to the cylinder; in this case they are called elbow plates, and of course the two ends are both inclined to the axis of the cylinder in an opposite direction ; in either case the edges of the plates of the block cannot be straight lines, but must be curved to adapt themselves to the curve which an inclined line traced on the cylinder will of course have. The plates of the block are united by screwing them altogether, and their edges are bevelled away on one side only.

The cutters of the cylinder are fixed in, as shown in fig. 7 ; here R is the cylinder, formed of a solid piece of wood, and having grooves cut on its circumference parallel to its axis ; each of these grooves has two cutters put into it^ and a fillet of wood is driven fast in between them to hold them in ; the fillets are kept in by spikes driven into the solid wood of the cylinder. A cover is put over the cylinder to prevent the water or rags being thrown out of the engine by its great velocity ; it is a square box, g h k i, fig. 3, and marked P, figs. 1 and 2 ; it has two small troughs, k and i, coming through the sides of the box ; at m m are two hair or wire sieves sliding in grooves made in each side of the box. The cylinder as it turns throws a great quantity of water and rags up against these sieves ; the water goes through them and runs down into the troughs at k and i, and thence into the endj of the leaden pipes pp, fig. 2, by which it is conveyed away ; n, n, fig. 3, are grooves for two boards, which when down in their plaees cover the hair sieves and stop the water from going through them. A considerable part of the rags thus thrown up by the cylinder passes quite through it, and goes down under it again. The water is brought to the engine by a pipe from the pump; this pipe delivers it into a small cistern adjoin- ing and communicating witli the engine ; the pipe has a cock to stop the entrance of the water when required ; the exit of the foul water is, as before-mentioned, made by the cylinder throw-

ing it up into the troughs i and k. The two engines N and O are placed at different levels as shown by fig. 1, the bottom of N being higher than the top of O ; the latter is called the washer, where the rags are first worked coarsely with water running through them, to wash and open tlie fibres of

them, which after washing are called half-stuff', and are then let down into the beaten engine () ; here they are ground and re- duced to a finished pump, or prepared stuff, as it is called.

For making superfine paper, the following has been given as the established system of manu- facture for the London market : 1 cwt. of the best white rags, called No. 1 , is put into the washing engine, and the cock opened to let a consider- able stream of water run through it. The screw of the cylinder is adjusted to raise it up, so that its teeth do not actually touch the teeth of the block : the rags are not therefore cut, but rather rubbed in a violent manner, so as to open and exj)ose every fibre to the action of the water, that it may carry off all dirt; this gentle washing continues for a quarter of an hour or twenty minutes, when the cylinder is laid down, that is, tlie screw is turned iDack till the cylinder is let down upon the cutters of the block, and rests its weight upon them ; in this state they begin with a tremendous noise and vibration to cut the rags into pieces ; this is continued for about four hours, by which time the engine will come to work very steadily and with less noise, be- cause the rags are cut into pieces and chopped up very much, though not yet reduced to a pulp.

The bleaching now commences, if it has not been done in the first stage upon the rags. To bleach the stuff in the engine they stop the water from running in, and throw in a quantity of bleaching salt, or muriate of lime ; for fine rags, one or two pounds, more or less, are used ac- cording to circumstances ; the two sliders, n, n, fig. 3, are put down in the cover of the cylinder to prevent the water getting away, and in this state the engine is worked about an hour for the bleaching. During this time the rags lose their color, but this does not color the water, though it is rendered rather white and milky by the salt. The very best rags, when first put into the en- gine, are of a yellow and dirty color, but they be- come by the bleaching a very perfect snow white. The cylinder is usually raised up a very little during the bleaching ; which being concluded, the water-cock is opened again, the boards n, v, removed, and the washing continued about an hour to wash the salt away. This concludes the operation, and the half-stuff, as the rags are now called, is let off into a basket which suffers the water to drain through it : or if the manu- facture iis proceeding with despatch, and every thing is ready, it is let off into the beating engine at once ; here the stuff is worked for about five hours with a sufficient quantity of water to make a pulp ; in this affair great judgment is required, as it materially influences the quality of the paper ; the water is not sutl'ered to run tln-ougli the beater, as in the other engine. The only difference between the two engines is the firm- ness ot their teeth. The cylinder of the washer hits twenty grooves in it, each containing two

bars or teeth, as shown in fig. 7, but the beater has three in each, so as to

have sixty teeth in all. The beater is made to turn with a greater velocity than the other; the pinion L, fig. 1, which turns the beater, having only twenty teeth, while the other, M, has twenty-two. This greater velocity and number of teeth in the beater cause the strokes of the several knives passing by each other to be so rapid that they produce a coarse musical note or humming, which may be heard to a great distance from the mill ; but the washer, being coarser and less rapid, produces the most horrible growling that can be conceived, and is so violent as to shake the whole building. In small mills, and where perhaps there is a defi- ciency of water, they only use one engine boti for washing and beating, as it will do for either purpose ; but the mills near London, chiefly at Maidstone, in Kent, have two, three, or even five engines. These require an immense body of water to turn them, and the steam engine has been, of course, very successfully applied in some mills. The stuff when finished is con- veyed to a general receptacle called the stuff- chest, where it is kept till wanted to be made into paper ; for the engines work day and night, though the making the paper, as it requires many workmen, is of course only carried on in the day- time.

The implements employed in this depart- ment of the manufacture are as follows : the vat with its stirrer, sometimes called a frng, the moulds and deckles, the felts, the vat press, ano- ther similar press to it for giving the paper a second pressure, &c.

The vat is made of wood in the form of a tub, and generally about five feet in diameter and two and a half in depth. It is kept at a proper tem- perature by means of a grate introduced at a hole in the side, and surrounded on the inside of the vat with a case of copper. For fuel to this grate charcoal or wood is used, and frequently to pre- vent smoke the wall of the building comes in contact with one part of the vat, so that the fire has no communication with the place where the paper is made. Every vat is furnished on the upper part with planks, enclosed inwards, and even railed in with wood to prevent any of the stuff' from running over in the operation. Across the vat is a plank pierced with holes at one of the extremities, and resting on the planks which surround the vats. This is used to rest the mould upon when a sheet of paper has been made. In different mills two methods are made use of to mix up the stuff' and water with which the vat is filled, and keep it in such an agitation as will prevent any coagulation or subsidence of the pulp, which would render the paper flaky and the difl'erent sheets of unequal thickness ; in one, two instruments are employed to mix them, one of which is a simple pole, and the other a pole armed with a piece of board, rounded and full of holes. The operation of stirring is repeated as often as the stufl" falls to the bottom. In the principal paper mills for making writiiig paper, they use for this purpose what is called a hog ; which is a machine within the vat, that by means of a small wheel on the outside is made to turn constantly round, and keep the stuff ia

perpetual motion. Wlien the stuff and water are properly mixed it is easy to perceive whe- ther the previous operations have been complete; for, if the stuff floats close and in regular flakes, it is a proof that it has been well worked in the engine.

The mould is a square frame or box made of well seasoned mahogany, and covered at the top with wire. In the old way the wires were dis- posed in parallel rows, with others across to strengthen them ; this may be readily understood from the examination of a sheet of paper. But the modern paper is chiefly made on wool wire, which is exactly like cloth. The ware cloth is made larger than the intended sheet of paper, and turned down over the sides of the frame; the size of the sheet is determined by a square frame of mahogany bound with brass ; this, which is called the deckle, when placed upon the wire of the mould, forms a shallow dish or mould, in which a quantity of the pulp is taken up, and by the draining through of the water the pulp is left in a sheet upon the wire, therefore this frame is necessary to retain the stuff of which the paper is made on the cloth ; it must be exactly adapted to the wire cloth of the mould, otherwise the edges of the paper will be ragged and badly finished. The wire cloth of the form is varied in proportion to the fineness of the paper and the nature of the stuff. The deckle is moveable, and only held upon the mould by the workmen grasping the mould and deckle together in both hands at the opposite sides, so that the deckle being removed the sheet of paper may be taken np from the wire by applying the mould upon a piece of felt ; it is then pressed with a felt be- tween each sheet.

T\e felts are pieces of woollen cloth spread over every sheet of paper, and upon whicn the sheets are laid to detach them from the wire of the mould; they prevent them from adhering together and imbibe part of the water with wliich the stuff is charged, and transmit the whole of it when placed under the action of the press. The two sides of the felt are differently raised, that to which the hair is longest is applied to the sheets which are laid down, and any altera- tion of this disposition would produce a change in the texture of the paper. The stuff of which felts are made should be sufficiently strong, in order that it may be stretched exactly on the sheets without falling into folds, and at the same time sufficiently pliant to yield in any direction without injury to the wet paper. As the felts have to resist the reiterated efforts of the press, it appears necessary that the warp be made strong of combed wool and well twisted. On the other hand, as they have to imbibe a certain quantity of water and to retain it, it is necessary that the woof be of carded wool, and drawn out into a slack thread. Tliese are the

utensils to- gether with the presses which are used in the apartments where the sheets of paper are formed.

Three principal workmen are employed in the operation of making the paper, which they ma- nage thus: the first, called the dipper, stands in a nitch or hollow part of that kind of ledge or table which goes round the circumference of the \ at ; he holds a mould in both hands by the two

extremities with the deckle, applied exactly over the mould as if only one piece ; then inclining it a little towards him he dips it into the vat and brings it up again in a horizontal position. The superfluous part of the pulp flows over on all sides, and the quantity thought sufficient is shaken gently from the right to the left, and up and down horizontally until it is equally extended over the whole surface of the mould. These two motions are also accompanied by a slight shake, that serves to fix and stop the sheet as the water drains through the wire ; and then, the parts of the pulp uniting, the mould is immediately laid on the edge of the vat, the deckle taken off, and the mould made to slide along the board which is laid across the vat to the part where the sheet is to be laid or taken off. This board, which is but two inches in breadth where the sheet is laid, is nothing more than a deal board, which runs a.ong the length of the vat, and is pierced with several lioles at the broad extremity for letting the mould drain into the vat. The dipper, now taking the deckle off the first mould, places it immediately on the second which is given him for dipping it immediately in its turn, and the second workman, called the coucher, taking the mould on the board that runs across the vat, with the left hand i iˆes it gently and lays it in an inclined position against one or two small pins which are driven into the board on the edge of the vat. In this condition the mould remains two or three seconds of time for draining into the vat, whilst the coucher extends a felt on which he applies the mould to take off the sheet, which being done he returns the mould to the dipper. These operations are performed in so short a time, that seven or eight sheets of a middling size can be made in a minute; but it is advisable to proceed more slowly, as the paper is thus better made, and of a stronger con- sistence.

The dipper is attentive in distributing the matter on the mould to reinforce the corner he is to take hold of, in raising and extending the sheets ; for without this])recaution he would break a great many If he also take up too much matter with his mould, if he do not equally extend it, or if he strike his mould against tlie drainer, in all these cases, the matter is accumulated in certain parts of the mould, which produces something like ridges in the paper ; or if he let the matter rest on the mould, and do not distribute it immediately, there will be parts of unecpial thickness. N\ lien the vat is too hot, the stretching out of the sheet will be ill performed, because the water evapo- rates too soon over the mould. Add to this, that,

in letting the matter run towards one of the edges, by not giving his arm a regular motion, he may form a feather-edged paper, which may likewise happen if he do not extend his stuff sufficiently ; if the vat be too hot ; if the fecula of the pulp be too crude, and do not run v/ell ; if his arms be too stiff, and if he give an irre- gular shake, or if the mould be ill made. An indented sheet is made by not taking off the deckle properly, or by the felts having stitches, seams, and selvages in them. In examining is sheet of paper, before the light, a greater opacity

is sometimes seen on both sides of each brass wire than towards the midst of the space. This is occasioned by the pulp, which the motion of the mould could not distribute, being stopped by the wires, or the manicord, that serves to string them ; a defect, however, almost wholly reme- died by the improvement of weaving the wire of the mould like cloth. In order to avoid drops of water, which, if they fall upon the paper will make disagreeable spots, the mould is to be laid gently, and raised readily ; and, as often as the coucher returns his mould to the drainer, he ought to be careful to shake his hands behind him, for, without this precaution, his fingers, wliich are wet, would drip upon the sheet already laid, whilst he is covering it with the felt. If he is also too quick in laying, the air, detained and compressed under the sheet, occa- sions a blemish.

The coucher, having taken off the several sheets from the mould as fast as they are made, lays them one by one in a pile under the press, with the felt between each individual sheet, until they have in this manner made six quires of paper, called a. post, and containing 144 sheets. When the last sheet of the post is covered with the last felt, the workmen about the vat assist each other to submit the whole heap to the action of the press. They begin, at first, to press it with a middling lever, and afterwards with a lever fifteen feet in length ; this opera- tion expresses the water, and thus gives the paper a strength which it did not possess before. The vestiges of the protuberances made by the wires of the mould are altogether flattened, and, of consequence, the hollows opposite to them dis- appear also ; but the traces formed by the inter- stices of the wire, in consequence of their thick- ness, appear on both sides, and are rounded by the press.

The business of the third workman, called the lifter, begins after the operation of the press, and consists in taking the sheets off the felts (for they are caused to adhere to them by the action of the press), and making them up in a second neat and compact pile ; for this is very necessary to make the paper of a regular and equal thick- ness. It is now put under a

second press, with all the sheets in contact with each other : this expresses a great quantity of water from the paper, and gives the sheets a very considerable strength ; it also tends to take out those freckles in the surface which were occasioned by the im- pression of the felt ; though it is necessary to have felts in the first pressure, because the paper is then so wet that it would be pressed into a solid mass if the sheets touched each other. The paper remains in the second press until another pile is made ready by the lifter, when it is taken out and sometimes separated sheet from sheet, which is called parting the packs : at other times it is taken in small masses of six or seven sheets into the drying-house.

For when the sheets are very thin, and it is found after the second pressure that they are formed by a fecula which is still saturated with a great deal of water, so that they have little consistence, it is probable that the second press has so joined them to one another that it is dif-

ficult to separate thein ; and, indeed, they can- not well be taken off, one by one, without tearing a great number : this, however, generally shows improper management in the second pressing. But, happily, this separation, sheet by sheet, is not necessary for drying, so that seven or eight may be taken together, which is called forming the pages ; sometimes, also, a less number may do when the paper is of a large size, but never less than three sheets are hung up together. It is of more importance than we are at first aware of, that the sheets should remain, as it were, pasted several of them together; if they were single, and one by one, they could not resist the moisture of the size, yet this moisture is sufficient to facilitate their operation ; and to hinder their separating, when they are hung up to dry, they should be so placed that the pages may receive the wind in the surface and not in the sides and edges.

The drying-lofts are extensive apartments, usually the upper parts of all the buildings of the mill ; the sides are formed by loffer boards, which are a kind of lattice, or boarding, which can be opened and shut to admit more or less air at pleasure. The sheets are taken up upon a piece of wood like a T, and hung upon hair lines, stretched across large horizontal wooden frames, called tribbles ; and then, as they are filled, are lifted up between upright posts, to the top of the room, and retained by pegs put in the posts ; then another frame, being filled, is put up in its turn, and so on, till the loft is filled from top to bottom.

Mr. Bramah has suggested an improvement in this method, which enables women or children to perform the business of the drying-house in- stead of men, and adds considerable facility to the process of hanging and re-hanging the sheets. Instead of using tribbles, he has a proper num- ber of frames, made of wood, mounted with leaves, to represent so many frames

or clothes' horses, similar to those used by any common laundress, but of a length proportioned to the dimensions of the drying-house, which may be divided into tˆvo or more rows, so as to leave room and proper aisles or passages for the con- venience of the operators to hang and re-hang the sheets ; and the height of the frames may be equal, or nearly equal, to one half the story in which they are fixed. Tliey are stationed at proper distances from each other by means of upright posts w ith grooves fitted to the frames so that each may slide vertically up and down, by means of lines and pulleys affixed to each, just like sash windows that are double hung ; so that, while one of the frames is sliding up to touch the ceiling of the building with its upper edges, the alternate one may be depressed till its lower edge, or the paper which hangs upon it, may come nearly in contact with the floor. By this means children can reach to hang the paper, and can afterwards elevate the frames to their proper height in the loft.

Writing paper, when dry, is carried to an apartment where it is sized by dipping each page, that is, each bundle of thirty-four or thirty- five sheets, which have been dried together, into i> vat, containing a weak size. Prmting-papers

are more generally sized in the beating-engine. The best size is made from shreds and parings got from tanners, curriers, and parchment- makers ; all the putrefied parts and the lime are carefully separated from them, and they are enclosed in a kind of basket, and let down by a rope and pulley into the cauldron. This is a late invention, and serves two valuable purposes. It makes it easy to draw out the pieces of leather when the size is extracted from them by boiling, or easy to return them into the boiler if the operation is not complete. When the glutinous substance is sufficiently extracted it is allowed to settle for some time, and it is twice filtered before it is put into the vat where they dip the paper. Immediately before the operation, a cer- tain quantity of alum is added to the size. The workman takes a handful of the sheets, smoothed and rendered as supple as possible, in his left hand, dips them into tlie vat, and holds them separate with his right, tliat they equally imbibe the size. Afier holding them above the vessel for a space of time, he sizes on the other side with his right hand, and again dips them into tlie vessel. \ hen he has finished ten or a dozen of these handfuls, they are submitted to the action of the press, from which the superfluous size is carried back into the vat by means of a small pipe. The vessel in which the paper is sized is sometimes made of copper, and finished with a grate, to give the size, when necessary, a due temperature, and a piece of thin board or felt is placed between every handful as they

are laid on the table of the press. This is technically called ‘ tub-sizing.’

After the sheets are sized and pressed, they must be quickly separated from each other, to prevent their adhering together; but it is to be remembered that the size is an extremely weak solution, so that the sheets will be in no danger of adhering until they are dry. In some of the most improved mills the sizing is performed in a machine, consisting of a large square vat, or wooden cistern, containing the size ; in this a strong screw press is situated horizontally, the side beams of the press forming the outsides of the vat, and the screw works through a tight collar of leather. The press being open, the sheets of paper are suspended on lines, stretched in a frame, similar to those on which they are dried, and this is let down to immerse them in the size ; and, after remaining a proper time, the screw of the press is worked, and the sheets thus gathered up into a close parcel ; then, the lines being withdrawn, a strong pressure is given, and the paper, when taken out, is finished ready to be hung up again to dry. By this means the paper is sized very equally, whereas, in the old method of tub-sizing, some sheets drained oflf more size than others, and rendered them unequal as well as making marks in them.

The sizing of most printing-papers is however accomplished by throwing a small quantity of oil mixed with alum, pounded very fine, into the beating-engine towards the end of the process. About a pint and a half, or less, is sufficient to give the paper a proper quality for printing; powder-blue is also put into the engine to give a bloom to the paper.

When the paper is sufficiently dry, it is carried to the finishing room, called the Saul, where it is pressed, selected, and examined, by women, who remove all damaged and imperfect sheets ; it is then put into the dry press, and squeezed with an i.Timense force, to render the paper flat,ˆ and give it a good surface. The lever of this press is fifteen or eighteen feet Ion?, and ten or twenty people are employed at tlie last to work it, though they sometimes use the Sampson, as it is called ; thatis, a windlass like a crane, with which they move the lever of the screw. The dry press is generally large enough to hold two packs of ordinary paper side by side. The Saul is sur- rounded by these dry presses. The paper re- mains under pressure as long as the demand of the mill will admit; but while it is in this opera- tion it is parted, once, twice, or even three times : to do this, the heaps are carried back to the table, and the whole turned sheet by sheet, in such a manner that the surface of every sheet is exposed to a new one, and in this situation they are again brought under the press. It is in con- ducting these operations of parting and pressing sometimes four or five times, or as often as the nature of the paper requires, that much of the perfection and finish of the finest writing and drawing-paper consist. If the stuff is fine, or the paper slender, the parting is less frequently repeated. In this operation, it is

necessary to alter the situation of the heaps, with regard to one another, every time they are put under the press ; and, as the heaps are highest in the mid- dle, to place small pieces of felt, which will bring all parts of the pile to an equal pressure.

Bramah's hydrostatic-press has been found most admirably adapted for dry-pressing paper. This press has no screw, but, in lieu of it, a piston or plunger, fitted accurately into a cham- ber, or barrel of cast iron, by collars of leather ; a small force-pump is situated near to the press, and water is injected by it into the great cham- ber, and the piston is thus expelled from it ; and presses up the board, or follower of the press, with a power in proportion to the relative di- ameters of the pump and the piston. The bot- tom of the cylinder must be made sufficiently strong, with the other parts of the surface, to re- sist the greatest strain which can ever be applied to it : the pipe from the forcing-pump commu- nicates with the cylinder at the bottom, and the pump has, of course, valves to prevent ihe re- turn of the water.

In a screw-press, of a fine thread, it requires nearly as much labor to unscrew as to screw it down, an evidence of the enormous friction of a screw when acting against a great pressure; but the hydrostatic-press only requires a cock to be opened to let out the water from beneath the piston, which then descends quickly by its own gravity, or the elasticity of the substance under the pressure. The greatest convenience of the hydrostatic-press is, that the power can so easily be transmitted to it from any distance, and in any direction, by means of pipes conducted along in situations where all other means of conveying the motion would be complicated and expensive in the extreme. Thus, in a large paper-mill, an injecting pump may be kept lu

constant action by the water-mill, and inject water into an air vessel, from wliich pipes are conducted to presses in all parts of llie mill, and, by simply opening a cock at any press, the re- quired pressure will be instantly given by the elasticity of the confined air operating on the en- larged surface of the piston of any press. The air vessel has, of course, a safety-valve to allow the escape of the water, when the pressure be- comes so great as to endanger the rupture of any of the vessels ; for it is to be observed that the power of this principle is irresistible when the pump is worked by a mill, and will burst any vessels without the least appearances of strain on the

moving parts of the pump.

After dry-pressing, the paper is finished, and only requires to be assorted into different lots, according to its quality and faults; after which it is made up into quires.

II. Of Paper-Making by the Machine. The machine now generally used was originally suggested by a Frenchman, Louis Robert, who sold his model to M. Didot. This gentleman brought it to England, and prevailing on the Messrs. Fourdrinier's to join in perfecting it, a patent was taken out for the benefit of these parties by Mr. Gamble, the brother-in-law of M. Didot. Figs. 1 and 2, plate III. Paper- Making, exhibit a side view or elevation of the machine, with a plan annexed ; and the same letters of reference are employed in both figures. The pulp being prepared in the usual way is placed in the vat, and by the addition of water brought to the required con- sistency ; it is then suffered to run through certain apertures in the side or front of the vat at A, and conducted thence byaa inclined plane B B, in a uniform stream upon the sarface of the revolving web a a a, &c., which is so placed that its surface shall be as nearly level as possi- ble, and shall have its revolving motion in the direction in which the stream of pulp runs from the vat. This web is kept extended longitudi- nally by two principal or extreme rollers, C and E, upon which it revolves ; and the upper part thereof, upon which the paper is formed,' ;is sup- ported and kept level by a number of small rollers h, b, b, b, and other smaller ones after- wards described, placed parallel with the other two C and E, and at such distances from each other as to prevent the web from being pressed or weighed down by the pulp into the spaces between them, and also to cause the pulp to spread itself uniformly upon the surface of the web or sheet, thereby producing a sheet of paper of a uniform thickness. The width of the sheet of paper is determined by two pieces of wood set edgeways upon the web, exactly parallel with each other, and with the line of motion of the web. These pieces require no particular pre- cision as to their dimensions. Between, and in contact as well with the under edges of these pieces as with the upper surface of the web, tine patenteti place two endless straps of leather of a widtii ˆ►►"esponding to the thickness of the pieces ; and ca►►n them to revolve ujion pulleys with a velocity exnˆi f equal to the velocity of the revolving web. 'I'ley likewise place similar pieces and straps in contact with the under sur-

face of the web, and exactly opposite to those upon the upper surface; so that the web is pressed between the upper and under straps and pieces, and the liquid pulp is then prevented from running off towards the sides. These pieces and their straps are called dickies (F and G are the pieces, and H and I are the straps). Near that part of the web upon which the pulp falls from the inclined plane at C, and between it and the vat, is placed a flap of

oiled silk or other flexible material ; one edge on the web, the other being fastened to a piece of wood laid across the surface of the web, but not touching it, the length of the said piece corresponding to the width between, and being supported at each end by the dickies. The flap of oiled silk is to prevent the pulp from running back towards the vat. Between the two principal or extreme rollers C and E, upon which the web revolves, and abo.ut two feet and a half from E, and be- tween that and the vat, are placed two other rol- lers or cylinders J and K, one above the other, which cause the upper part of the web with the paper forming thereon to pass between them for the purpose of pressing out the water ; and, from this use of them, they are distinguished' by the denomination of the first or wet press C3ilinders or rollers. In order to guard the pulp, which before passing between the cylinders is yet in a soft state, from being dislodged or otherwise in- jured by the upper roller or cylinder J coming immediately in contact with it, the patentees use another revolving web of wove wire or other lit material, which in this case may be of felting, as at dd d d, of the same width as the one above- mentioned, but not so long, the first is called the under, and the second the upper web : the bottom part of the upper web-is caused to pass between the two cylinders J and K, so that its under surface falls upon the surface of the pulp or paper, and defends it from the action of the upper cylinder J. This upper web is kept ex- tended by, and made to revolve upon, two rol- lers L and M, placed one on each side of the wet press cylinders J and K, and at a convenient height above them. The wet press cylinders are provided with a compressing apparatus at each end, to give the necessary pressure to the paper.

It is evident then, that, if motion is given in the proper direction to the wet press cylinders J and K, having both the webs thus compressed between them, such webs will be drawn along by them, and caused to revolve upon their res- pective rollers ; and that as long as these webs continue so to revolve, and the pulp continues supplied and running upon the surface of the under web, so long will the machine continue making a sheet of paper of continually increas- ing length.

But as the paper, after having passed between the first press cylinders, has not obtained such a degree of consistency and strength as to allow of its being removed from the machine, and cut into sheets and laid in packs ; the patentees cause it to pass through a second pair of pressing cylinders N and O, which they denominate the second or dry press, where it receives such a fur- ther degree of pressure and consequent strength.

*as to fit it for all the subsequent operations neces- sary to tinisliing it for market. The second or flry press consists of a pair of cylinders adapted to strong pressure, and which is therefore made of hard metal (preferring brass as not liable to rust), which cylinders, N and O, are turned per- fectly true and smooth, and placed one above the other at a convenient distance from and exactly parallel with the first press cylinders. Between the second press cylinders, N and O, is placed the upper part of a revolving web of flannel or felt- ing, or other fit material (represented by the lines at ***, e,e,e ; and this is made to revolve upon and to be kept extended by two rollers P and Q, one on each side of the cylinders N and O ; and, by giving motion to those cylinders N and O, we cause the felting to revolve upon its rollers P and Q, in the same direction and with the same ve- locity as the under web. And the paper after it has passed the first press, and arrived at the ex- treme roller E, upon which the web revolves, is detached from the surface of the web, and de- posited upon the revolving felting, and with it made to pass between the second press cylinders. The paper is then collected and wound upon reels or rollers as at 11, which are successively removed and others applied as they become charged or filled with paper. The long sheets of paper thus obtained are, by a subsequent pro- cess, cut into others of the required dimensions. Another machine for the manufacture of paper has been invented by Mr. Dickinson. He makes use of a hollow brass cylinder or barrel closed at the ends, but having a large hollow tube for the axis. This cylinder is so contrived that the periphery of it is uniformly pervious to water, and covered with fine woven wire. It is made to revolve in a vat of very diluted pulp, in which it is about two-thirds immersed : during the re- volution of the cylinder the water of the pulp passes through the pervious surface into the inte- rior, and flows out through the hollow tube be- fore mentioned, each end of which passes through the sides of the vat in which the cylinder revolves. As the water of the pulp flows through the surface of the cylinder the fibres of rag floating in the vat are deposited on the wire, and thereby gra- dually form the paper on every part of the cylin- der during its immersion in the fluid pulp. An endless felt takes the paper off" the highest point of the cylinder, with which it is brought in con- tact by the pressure of a roller, called technically the couching roll. The hollow axis before men- tioned does not revolve with the cylinder, but is firmly fixed to the sides of the vat of pulp, through which it conveys the water from the in- terior of the cylinder, and it has attached to it troughs and other apparatus in the interior of the cylirtder from which it is the channel of communication to two double acting air pumps, by the working of which two distinct effects are produced, both of which are essential to the operation of the machine. In the first place by drawing air from the inside of the cylinder a partial exhaustion of the interior is produced, and the influx of the water and the adhesion of the rag to the surface are promoted ; in the next place the air so drawn away is*

forced into a re- ceiver, where it is condensed, and from which

it returns by a separate pipe to a long narrow trough in the inside of the cylinder parallel with the hollow axis, and under t1ie place vviiere the paper quits the cylinder and becomes attached to the endless felt which carries it away in a continued stream, the adhesion to this felt being produced by a continued blast of compressed air issuing from this trough, and which detaches the paper from the surface of the hollow cylinder on which it is made. The formation of the cy- linder is very selaborate, and the apparatus es- sential to the process so complicated that the machine has not been adopted by any manufac- turer except the original inventor Mr. Dickinson ; but in his management it works with great pre- cision and eff"ect, and produces paper of very good quality.

Tiie mode of pressing the paper on the endless felt and reeling it is the ►►,ame in this machine as in those already described.

Steam Drying. ►►► It was some years after the invention and perfecting of these machines before any other advance was made in the manufacture; but recently it has been carried another stage by drying the paper immediately as it comes from the pressing rolls of the machine. This is done by leading the paper over cylinders heated by steam, which are kept in motion in the same di- rection that the paper travels, and at the same rate.

The annexed diagram is a sketch of the appa- ratus most commonly in use for this purpose. A,

A, A, are three cylinders or steam rollers as they are technically called, about three feet diameter, which are made to revolve by wheel work in the direction shown, and to carry round an endless felt in close contact with a large por- tion of the surface of each, and the rate of movement is adjustable so that it may be made to correspond with the rate of the machine which makes the paper. The axis of each roll is a tube, at one end of which steam is introduced through a cock, by which the attendant adjusts the supply so as to regulate the temperature of the cylinders ; at the other end the water formed by the condensation of the steam is discharged through a pipe, which is made to oescend nearly to the bottom of the inside of the cylin- der, and the force of the steam drives the water up through it. The end of the paper, as it comes in a wet state from the pˆess rolls of the making machine, is led by the attendant over the top of the endless felt belonging to the steam rolls, and conducted between the felt and each of the rolls in succession ; and the water which the press rolls have left in it is, by the heat of the cylinders, converted into steam, and driven off", so that by the time it arrives at the roll B it is dry and fit for cutting into sheets, and sending out of the mill, after the usual pressure, in the dry state ; and

this process gives the paper a smoothness and gloss which is considered as an improvement of the article.

Paper Office, an office in thu palace of Whitehall, in which all the jjublic writings, matters of state and council, proclamations, let- ters, intelligences, negociations abroad, and ge- nerally all despatches that pass through the offices of the secretaries of state, are lodged, by way of library.

PAPIIIA, a surname of Venus, from Paphos.

PAPIILAGONES, or Papiilagonians, the inhabitants of Paphlagonia, who are mentioned by Homer as a brave people, but by Lucian as superstitious and silly. Bochart derives their name and descent from Phaleg or Peleg, the son of Heber.

PAPHLAGONIA, in ancient geography, a country of the Hither Asia, beginning at Par- thenius, a river of Bitliynia, on the west, and extending in length to the Halys east, with the Euxine on the north, Galatia on the south. Pliny enlarges the limits on the west side to the river Billis, on this side the Parthenius. It is called Pylaemenia by Pliny.

PAPHOS, in ancient geography, two adjoin- ing islands on the west side of the island of Cyprus ; the one called Halee Paphos (Strabo, Ptolemy, Pliny); the other Nea Paphos. When mentioned without an adjunct, this latter is always understood. Both were dedicated to Venus, hence suroamed Paphia, and left un- distinguished by the poets (Virgil, Horace). The town of Paphos was restored by Augustus, after a shock of an earthquake, and called Augusta (Dio). It is situated on the south side : it contained the celebrated temple of Venus ; which, together with the city, was de- stroyed by a second earthquake, so that the least vestige of it is not now to be seen. A lake in the neighbourhood, which in summer overflows with stagnant and corrupted water, renders the air unwholesome.

PAPHUS, in mythology, the son of Pygma- lion, by the ivory statue of a woman, which lie made, and to which Venus gave life. Ovid. Met. X. 297. See Pygmalion.

PAPIAS, bishop of Hieropolis, in Phrygia, a aisciple of St. John the Evangelist, and the companion of Polycarp, as St. Jerome observes. He composed a work in five books, entitled Expositions of the Discourses of

our Lord, of which there are only some fragments remaining.

PAPIER Mache', a substance made of white or brown paper, boiled in water, and beaten in a mortar, till reduced into a kind of paste, and then boiled with a solution of gum arable or of size, to give tenacity to the paste, which is after- wards formed into different toys, &c., by pressing it into oiled moulds. When dry, it is done over with a mixture of size and lamp-black, and afterwards varnished. The black varnish for these toys, according to Dr. Lewis, is prepared as follows : ??? Some colophony, or turpentine, boiled down till it becomes black and friable, is melted in a glazed earthen vessel, and thrice as much amber in fine powder sprinkled in by degrees, with the addition of a little spirit or oil of turpentine now and then ; when the amber is melted, sprinkle in the same quantity of sarco- colla, continuing to stir them, and to add more spirit of turpentine, till the whole becomes

fluid ; then strain out the c'.car through a coarse hair-bag, pressing it gently between hot boards. This varnish, mixed with ivory-black in fine powder, is applied, in a hot room, on the dried paper paste; which is then set in a gentlv heated oven, next day in a hotter oven, and the third day in a very hot one, and let stand each time till the oven grows cold. The paste thus varnished is hard, durable, glossy, and bears liquors hot or cold.

PAPIL'IO, 71. s. I Fr. papillon; Lat.

Papiliona'ceous, adj. ippi/jo. The butterfly. See below. -Papilionaceous is resembling the butterfly in shape.

Conjecture cannot estimate all the kinds of papilios, natives of this island, to fall short of three hundred.

Hay.

The flowers of some plants are called papiliona- ceous by botanists, which represent something of the figure of a butterfly with its wings displayed ; and here the petala, or flower leaves, are always of a di- form figure : they are four in number, but joined to- gether at the extremities ; one of these is usually larger than the rest, and is erected in the middle o the flower, and by some called vexillum ; the plants that have this flower are of the leguminous kind ; as pease, vetches, &:c. Quincif.

All leguminous plants are, as the learned say, pa- pilkmaeguu!,, or bear butterflied flowers. Harte.

And, though a worm, when he was lost,

Or caterpillar, at the most,

When next we see him, wings ne wears.

And in papilio-pounp appears ;

Becomes oviparous. Cmiper.

Papilio, the butterfly, in zoology; a genus of insects belonging to the order of lepidoptera. It has four wings, imbricated with a kind of downy scales ; the tongue is convoluted in a spiral form, and the body is hairy. The antennae grow thicker towards their extremity, and are m most subjects terminated by a kind of capitulura or head. The wings, when sitting, are erec insomuch that their extremities meet or touch one another above the body. They fly m tne day-time. The beauties of this elegant part of the creation are well known. The chrysalis is at once the tomb of the caterpillar and the cradle of the butterfly. It is within a silken cod, or under a transparent veil, that this great miracle of nature is daily wrought. Take one of their cods, make an aperture in it with a pair of scissors, fix it against a glass ; observe the insect, you will perceive the organs gradually displaying themselves ; follow his operations with your eye ; he struggles to break loose from his confinement. Observe the frothy liquor which it disgorges ; that liquor serves to soften the end of the cod, which at length yields to the butting insect's head. By degrees the bar is removed, and the butterfly springs forth ; the impression of the air acts upon its wings, slightly apparent at first, but which afterwards expand with re- markable rapidity. The display of them is sometimes checked by drought, in which case the insect is deprived of the faculty of flying. The rostrum, extended under the covering of the chrysalis, is in this las, state rolled up into a spiral, and lodged in a recess prepared for it. The fly is now perfectly formed ; it gently flutters; then takes its flight, plunging its rostrum*

into the cups of flowers. Tlie species are prin- cipally distinguished by the color of their wings. PAPILLARY, or 3 Oi Lat. papilla. Ilav- Pap'illous, a(/;. j ing einulgent vessels, or the resemblance of paps.

Nutritious materials that slip through the defective papillary strainers. Blackmore.

The papillous inward coat of the intestines is ex- tremely sensible.

Arhuthnut on Alhnents.

IMalphigi concludes, because the outward cover of the tongue is perforated, under which lie papillary parts, that in these the taste lieth. Derham.

PAPIN (Isaac), a French divine, born at Tjlois, in 1657. lie studied divinity and phi- losophy at Geneva, and Greek and Hebrew at Orleans. The university of Geneva being di- vided about the doctrine of grace, he wrote a treatise, entitled The Faith Reduced to its Just Bounds, recommending toleration ; but he met with so little that he took refuge in England, in 1687, where he was ordained by Dr. Turner, bishop of Ely. Yet, after all, he returned to France, joined the church of Rome, and died in Paris in 1709, while finishing a work on the Toleration of Protestants, and the Authority of the Church.

PAPINIAN, a celebrated Roman lawyer of the third century, under Severus ; who had so higli an opinion of his worth, that he recom- mended his sons Caracallaand Geta to his care. Caracalla, having murdered his brother, ordered Papinian to compose an oration, to excuse this iimrder to the senate and people. This he re- fused to undertake, and the brutal emperor therefore ordered him to be beheaded, and his body dragged through the streets of Rome. Papinian wrote several treatises in the line of Ids profession.

PA'PIST, n. s. "J Fr. papiste ; Lat. papis-

Pavi?,Yicai., adj. ˆta. A Roman Catholic:

Pa'pistry, n. s. j one that professes the doc- trines of the Church of Rome : papistical is popish ; adhering to or characteristic of po- pery : papistry is the system or doctrine of popery.

Papistry, as a standing pool, covered and over- flowed all England. Ascham's Schoolmaster.

A great number of parishes in England consist of rude and ignorant men, drowned in papistry.

Whitgifte.

There are some papistical practitioners among you.

Id.

Either let our papists suffer this vain opinion of infallibility to be pulled up by the very roots out of their breasts, or else there can be no hope so much

as of a consultation of peace, Bp. Hall.

The principal clergyman had frequent conferences with the prince, to persuade him to change his re- ligion, and become a papist. Clarendon.

Papists. See Roman Catholicism.

PAPPOUS,►►rf/. Barb. Lat.]5►►/)/30s?M. Downy; having a soft light down, growing out of the seeds of some plants ; and which can be blown any where with the wind.

Another thing argumentative of providence is, that pappous plumage growing upon the tops of some seeds, whereby they are wafted with the wind, and by tliat means disseminated far and wide.

Ray 071 t'ne Creation.

Dandelion, and most of the pappous kind, h?."e long numerous feathers, by which tisey are wafted every way. Derham.

PAPPUS, an eminent philosopher of Alex- andria, said by Suidas to have flourished under Theodosius the Great, who reigned from A. D. 379 to 395. His writings show him to have been a consummate mathematician : many ot them are lost; the rest continued long in MS. detached parts having only been occasionally published in the seventeenth century, until Charles Manolessius published his remains en- tire at Bologna, in 1660, in folio.

Pappus, in botany, a soft downy substance that grows on the seeds of certain plants, as thistles, hawkweed, &c., serving to buoy them up in the air.

PAPUA. The island of Papua, or The Papuan Archipelago (for whether more than one island has not been described under this name is un- certain), forms a natural division of the grand Eastern Archipelago, being separated on the west from the Molucca Islands by the channel named the Gilolo Passage; on the south from New Holland by Torres' Strait ; on the north it has the Papua Sea; and on the east is separated from Polynesia by the sea between the New Hebrides and the Friendly Islands. This archi- pelago possesses neither horned cattle, horses, nor sheep, the domestic animals being confined to hogs and dogs, and of their wild ones we have scarcely any knowledge.

An extent of coast has been traced here reach- ing in a south-west direction from the Sound of Gillolo about 1200 miles. It is indented by such deep bays that it resembles a chain of penin- sulas ; the coast, viewed from the

sea, rises gra- dually into hills of considerable elevation ; but there are no mountains of which the height is remarkable. The whole is covered with palm trees and timber of a large size, among which the cocoa nut, and the two species of the bread- fruit tree, are found, as also pine-apples and plantains. Nutmeg trees also grow in a wild state. The natives are particularly dexterous in the use of spears, and bows and arrows ; and discharge arrows six feet long with bows made of bamboo, having a string of split rattan. In the interior they practise gardening, and some sort of agriculture, supplying the inhabitants on the coast with food, in exchange for axes, knives, and cutlery. These the natives on the coast purchase from the Malays and the Chinese, par- ticularly the latter, from whom they also buy blue and red cloth. In exchange the Chinese carry back missoy bark, slaves, ambergris, sea slug (biche de mar), tortoise-shell, small pearls, black and red lories, birds of paradise, and many other species of birds.

(Jn the north-west coast of the island captain Forrest observed dwellings, built on posts, fixed several yards below water-mark, so that the tenement is always above the water ; a long stage, supported by posts, going from it to the land just at high water-mark. This tenement contains many families, who live in cabins on each side of a wide common hall that goe5 through the middle of it, and has doors opening to the stage towards the land and towards the

sea. These habitations seem constructed in tliis singular manner in order to give them facilities of escape either by sea or land. If attacked from the land, the inmates launcli their boats along the stage at any time of the tide ; if from the sea, they escape mto the woods. Their cabins are furnished only with a mat or two, a fire-place, an earthen pot, and perhaps a china plate or basin, together with some sago flour. As they cook in each cabin, the smoke issues at every part of the root', so that at a distance tlie whole seems to smoke. The natives wear their liair bushed out round their heads to the circum- ference of two and a half and three feet ; and, to make it more extensive, comb it out horizontally from their heads, adorning it with feathers. The men wear a thin stuff that comes from the cocoa- nut tree, and resembles a coars3 kind of cloth, tied forward round the middle, and up behind, between the thighs. The women wear blue Surat baftas, tucked up behind, like tlie men, so that the body and thigh are almost naked ; as boys and girls go entirely. They are fond of glass and china beads, which both sexes wear about the wrist, but the women only on the left ear. Forrest often saw the latter laboring hard in fixing posts in the ground for stages, in making mats, or in forming pieces of clay into earthen pots, while the men

were sauntering about.

Some of the horaforas of the interior are said to have long hair, and are of robust appearance ; but in the western extremity all the inhabitants seen by voyagers presented the mop head of the oriental negro. The inhabitants of the islands more westerly buy the Papuans for slaves, and the natives of the west coast of New Guinea make slaves of those of the east. The latter have the gristle between the nostrils pierced with tortoise-shell. About April and March the Papuans of New Guinea and Salwatty assemble in great numbers, and make war on Gilolo, Ce- ram, Amboyna, Ambloo, &c.

The British have had little intercourse with the Papuans. When the Panther, a Bombay cruiser, was in 1791 off their coast, the surgeon of the vessel was decoyed into the canoes of the natives, and murdered ; after which they made an attempt on the ship, on which they discharged a shower of arrows, wounding four of the crew, and did not disperse until a discharge of the great guns and small arras asserted her supe- riority.

PAPUDO, a port of the kingdom of Chili, on the coast of the South Sea. Lat. 32►► 36′ S.

PAPYRUS, the famous reed from which was made the far-famed paper of Egypt. There was an opinion generally received in P'urope that this plant was lost. But Mr. Bruce not only saw the papyrus growing both in Egypt and Abyssinia, but actuaMy made a paper of it in imitation of that of the ancients. He tells us, likewise, that, so far from any part of it being useless, the whole plant is at this day used in Abyssinia for making boats, a piece of the acacia tree being put m the bottom to serve as a keel, like the boats of ancient Egypt. From the scarcity of wood, which was very great in Egypt, this lower part was likewise used in making cups, moulds, and other necessary uten- VoL. XVI.

sils : one use of the woody part was to serve for what we call boards or covers for binding the leaves, which were made of the bark; we know that this was anciently one use of it, both from Alcttus and Anacreon. The papyrus grows in the marshes of Egyyjt, or in the stagnant places of the Nile. Its roots are tortuous, and in thick- ness about four or five inches ; its stem is trian- gular, rising to the height of ten cubits. 'I'hc stem tapers from the bottom, and terminates in a point. It carries a to|) or i)lume of small hairs, and its roots throw to the right and left a great number of small fibtes, which support the plants against the violence of the wind. Formerly it used to grow in immense quantities. The Egyptians made of this plant paper fit for writing, which the Greeks called /3i/3\oc or philuria, and also Kapn^g ; hence the Latin charta ; for in general charta is used for the paper of Egypt. The ancient botanists placed the papyrus among the

graminous plants or dog-grass ; ignorant of the particular kind to which it belonged, they were contented to specify it under the name of papy- rus, of which there were two kinds, that of Egypt, and that of Sicily. Modern botanists have endeavoured to show that these two plants are one and the same species of cyperus, found in the catalogues and descriptions of plants pub- lished since the edition of Morrison's work, where the papyrus is called cyperus Niloticus, vel Syriacus maximus papyraceus.

The papyrus of Sicily is a plant resembling the Egyptian papyrus, in Italy called papero, and, according to Caesalpin, pipero. This papy- rus of Sicily has been cultivated in the garden of Pisa ; and Csesalpin, who himself examine I the plant, says it is different from the papyrus of Egypt. The papyrus, says he, which is com- monly called pipero in Sicily, has a longer and thicker stem than the plant cyperus. It rises sometimes to four cubits ; the angles are obtuse, and the stem at the base is surrounded with leaves growing from the root ; tViere are no leaves on the stem even when the plant is at the greatest perfection, but it carries at the top a large plume, which resembles a great tuft of dishevelled hairs ; this is composed of a great number of triangular pedicles, in the form of reeds ; at the extremity of which are placed the flowers, between two small leaves of a reddish color like the cyperus. The roots are woody, about the thickness of reeds, jointed, and they throw out a great num- ber of branches, which extend themselves in an oblique direction. These are scented somewhat like the cyperus, but their color is a lighter brown : from the lower part issue many smavl fibres, and from the higher a number' of stems shoot up, which, in proportion as they are tender, contain a sweet juice. The plume of the papy- rus of Sicily is pretty well described in a short account of it in the second part of the Musa:um de Boccone. This plume is a tuft or asserablaQe of a great number of long slender pedicles, which grow from the same point of division, are dis- posed in the manner of a parasol, and which carry ˆt the top three long and narrow leaves, from which issue other pedicles, shorter than the former, and terminating in several knots ot flowers. Micheli, in his Nova Plantarum Ge-

nera, printed at Florence in 1728, has given an engraving of one of the long pedicles in its na- tural length : it is surrounded at the base with a case of about one inch and a half in height ; to- wards the extremity, it carries three long and narrow leaves, and four pedicles, to which are fixed the knots of flowers. Every pedicle has also a small case surrounding its base.

In short, we find in the Grosto-Graphia of Schenchzer, a very particular description of the plume of a kind of cyperus, which appears to be the Sicilian plant. From this account it appears that the papyrus of Sicily is well known to botanists. It were to be w ished that we had as particular a description of the papyrus of Fgypt ; but these two plants have a near affinity to one another ; they are confounded together by many authors. Theophrastus says, the sari and papyrus Nilotica have a decided character of resemblance, and only differ in this, that the papyrus sends forth thick and tall stems, which, being divided into slender plates, are fit for the fabrication of paper ; whereas the sari has small stems, considerably shorter, and altogether useless for any kind of paper. The papyrus, which served anciently to make paper, must not be confounded with the papyrus of Sicily, found also in Calabria; for, according to Strabon, the papyrus was to be found in no place excepting Egypt and India. The greatest part of botanists have believed that the Sicilian plant is the same with the sari of Theophrastus ; others have advanced that the papyrus of Egypt and the sari were the same plant in two diff'erent stages of its existences, or considered with respect to the greater or less height ; which, according to them, might depend on the qualities of the soil, the difference of the climate, or other accidental causes.

Among many dried plants collected in the East Indies by M. Poivre, there is a kind of papyrus very different from that of Sicily. It carries a plume composed of a considerable tuft of pedicles, very long, weak, slender, ind deli- cate, like single threads, terminating most fre- quently in two or three small narrow leaves, without any knot of flowers between them ; hence this plume must be altogether barren. Those pedicles or threads are furnished with a pretty long membranous case, in which they are inserted ; and they issue from the same point of direction, in the manner of a parasol. The plume, at its first appearance, is surrounded with leaves like the radii of a crown. The stem which supports it is about ten feet in height, where there are two feet under water ; it is of a triangular form, but the angles are rounded ; its thickness is about the size of a walking staff" which fills the hand. The interior substance, although soft and full of fibres, is solid, and of a white color. The stem possesses a certain degree of strength, and is capable of resistance. It bends without breaking; and, as it is extremely light, it serves for a cane. This stem is not of equal thickness in its whole length ; it tapers insensibly from the thickesi; part towards the top. It is without knots, and extremely smooth. When this plant grows out of the waters, in places simply moist, it is much smaller, the stems are lower, and the plume is compesed of shorter pedicles or threads, termi-

nating at the top in three narrow lerfves, a little longer than those at the plume, when the plant grows in the water. From the base of these leaves issue small knots of flowers, arranged as they are in the cyperus ; but these

knots are not elevated above the pedicles ; they occupy the centre of the three leaves, between which they are placed, and form themselves into a small head. The leaves, which spring from the root and the lower part of the stem, resemble exactly those in the cyperus. This plant, which the in- habitants call sanga-sanga, grows in great abun- dance in their rivers and on their banks, but particularly in the river Tartas, near the Foule- point in Madagascar. The inhabitants of these cantons use the bark of this plant for mats ; they make it also into sails, into cordage for their fishing-houses, and into cords for their nets. This kind of papyrus diff'erent from the papyrus of Sicily by the disposition of its flowers, shows that there are two kinds of the cyperus which might easily be confounded wth the papyrus of Egypt ; whether we consider, on the one hand, to what purposes the inhabitants of the places where they grow have made them subservient; or, on the other, compare their form, their man- ner of growth, and the points in which they re- semble each other. This comparison can be easily made from the accounts which Pliny and Theophrastus gave of the papyrus of Egypt, and by the figure and description given by Prosper Alpin, after having observed the plant on the banks of the Nile. But, as Strabo affirms that the papyrus is found no where but in Egypt and in India, it is possible that the papyrus of the isle of Madagascar, situated at the mouth of India, is the same with that of Egypt. Be that as it may, the inhabitants of this island have never derived from it those advantages which have immortalised the papyrus of Egypt.

PAQUASHE Lake, a lake of North America. Long. 93►► 30′ W., lat. 50►► 48′ N.

PAQUILIGASTA, a town of South America, in the province of Tucuman, forty miles S.S.W, of St. Miguel de Tucuman.

PAll, n. s. Lat. par ; Gr. irapa, nigh. State of equality, or equal value. This word is chiefly used as a term of commerce.

To estimate the par, it is necessar; to know how much silver is in the coins of the two countries, by which you charge the bill of exchange. Locke,*

Exchequer bills are below par. Swift.

My friend is the second after the treasurer ; the rest of the great officers are much upon a par. Id.

PARA, Gran, an extensive province of Bra- sil, bounded north by the kingdom of Granada, Guiana, and the great bay formed by the Atlan- tic at the entrance of the great river Amazons ; east by the province of Maranham ; south by the provinces of Goias and Matto Grosso ; and west

by Peru. Belem is the capital.

This province is fertile in sugar-canes, coffiee, and cocoa, ornamental and odoriferous woods, and other timber. Here is a peculiar species ot puchari, or precious fruit tree, not of so large a size as the common kind ; but the h'uit is more aromatic, and forms an excellent substitute for nutmegs. The real jalap tree abounds also in Para, as well as many other medicinal plants.

There is also abundance of gums, well calcu- lated to supply the place of gum arable : and one species adapted for making sealing-wax. Several parts of Para abound with yellow ochre, frequently intermixed with a red ochre of bril- liant color. The animals are similar to those in the other districts of Brasil. Formerly the sale of the flocks which grazed in the island of Ma- rajo was one of the great resources of this colony ; but at present the number of oxen is diminished. A large species of silk-worm, whose ball is three times the size of the common one, is found in great plenty in Para. It feeds on the leaves of the orange trees, but the silk obtained has not as yet proved a profitable article of commerce : but the numerous indigo plantations are in a very flourishing condition. The finest Brasil arnotto is brought from this district. The chief rivers are the Madera, the Topayos, the Zingu, the Araguay, and the Toccantins, which all come from the northern mountains of Brasil, and fall into the Amazons.

Para, Gran, the capital of the province of this name, is a handsome city standing on the banks of the river Toccantins, the navigation of wliich is difficult, except for very small craft : the Confidence sloop of war with great care sailed up it, however, and anchored near the town, several days previous to the British expedition against Cayenne. The commerce is of little consequence : the exports consisting only of a little rice and cocoa, and a few drugs, &c., to Maranham, whence they are embarked for Europe. Some small brigs were sent hither from Barbadoes, after the taking of Cayenne ; but the trade must be a bad one, as the inhabit- ants are in general too poor to purchase English manufactures, except those of necessity. The climate is hot, as may well be supposed ; and thunder, with lightning and rain, occur generally every afternoon. It has a citadel and castle, at the entrance of the bar upon the river, and con- tains about 8000 inhabitants. It is sixty miles from the mouth of the river.

Para, a river of the above province and king- dom, is, properly speaking, one of the mouths of the Amazons, formed by the island of Joannes. It is about forty miles wide at its mouth, and runs about 200 miles in a north-east direction. Lat. 20►► S.

PAR'ABLE, n. s. ^ Fr. parabole ; Gr. Parabol'ical, acy. >7rapa/3o\?). A com- Parabol'ically, udv. j parison or similitude; a relation under which something else is figured ; a mysterious speech or maxim: the adjective and adverb follow these senses. Parable, also, as an adjective, (from Lat. parabilis,) means easily procured.

And in manye suche parablis he pak to hem the "" WicUf. Mark iv.

►►►. ord.

Balaam took up his parable, and said.

Numbers. It is evident that some things are purposely couched in parabolical and mysterious ex;pression ; it is particularly the manner of prophetical instruction.

Barrow. They were not well wishers unto parable physic, or remedies easily acquired, who derived medicines from the phoenix. Browne.

Such from tlie text decry the pamboUcal exposition of Cajetan. Id. Vulgar Errours.

These words, notwithstanding parabolically in- tended, admit no literal inference. Browne. What is thy fulsome parable to me 1]\Iy body is from all diseases free. Drydert.

*The pellucid coat of the eye doth not lie in the same superficies with the white, but riseth up a hil- lock above its convexity, and is of an hyperbolical or ;wra/*o/ica/ figure, Jiaif.*

In the parable of the talents, our Saviour plainly teacheth us, that men are rewarded according to the improvements they make. Nelson.

The scheme of these words is figurative, as being a parabolical description of God's vouchsafing to the world the invaluable blessing of the gospel," bv the similitude of a king. ' South.

The incident ray will describe, in the refracting medium, the parabolick curve. Cheyne.

A Parable is a fable or allegorical instruc- tion, founded on something real

or apparent in nature or history, from which a moral is drawn by comparing it with something in which the people are more immediately concerned; such are the parables of Dives and Lazarus, of the Prodigal Son, of the Ten Virgins, &c. See Al- legory.

PARAB'OLA, n. s. Lat. parabole. A sec- tion of a cone.

The parabola is a conick section, arising from a cone's being cut by a plane parallel to one of its sides, or parallel to a plane that touches one side of the cone. Harris.

Had the velocities of the several planets been greater or less than they are now, at the same dis- tances from the sun, they would not have revolved in concentrick circles as they do, but have moved in hyperbolas or parabolas, oi in ellipses, very eccentrick.

Bentley.

Parabolic Pyramidoid, a solid figure, so named by Dr. Wallis from its formatiom Thus let all the squares of the ordinates of a parabola be so placed that the axis shall pass perpendi- cularly through all their centres, then the aggre- gate of all these planes will form the aggregate of the parabolic pyramidoid. It is equal to half its circumscribed parallelopipedon. The solid content is found by multiplying the base by the altitude, and taking half the product.

Parabolic Spiral, a curve arising from the supposition that the parabola is bent till the axis come into the periphery of a circle, the ordinates still retaining their places with respect to the circle.

PARAB'OLOID, n. s. Gr. 7rrtp►►/3oX?) and aiSog, form or appearance. A paraboliform curve, in geometry, whose ordinates are supposed to be in subtriplicate, subquadruplicate, &,c., ratio of their respective abscissoe. There is also ano ther species ; for if you suppose the parameter, multiplied into the square of the abscissa, to be equal to the cube of the ordinate ; then the curve is called a semi-cubical paraboloid. ►►► Harris.

PARACELSUS (Aurelius Philip Theophras- tus Bombastus, de Hohenheim), a famous physi- cian, born at Einsilden, in the canton of Schweitz. He was educated with great care by his father, who was the natural son of a German prince, and made a rapid progress in the study of phy- sic. He afterwards travelled into France, Spain, Italy, and Germany. In his return to Switzer-

land, he stopped at Basle, where he read lectures on physic in the German tongue. He was one of the first who made use of chemical remedies with success, by which he acquired great reputa- tion. See Medicine. He gloried in destroying the method established by Galen, and thus drew upon himself the hatred of the other physicians. It is said that he boasted of being able, by his remedies, to preserve the life of man for several generations; but he himself experienced the vanity of such boasting, by dying at Saltzburg, in 1504, at thirty-seven years of age according to some, or forty-eight according to others. The best edition of his works is that of Geneva in 1658, in 3 vols, folio.

PARACENTE'SIS, n. s. Fr. paracentese ; Greek irapaKevrTjais, of TrapaKsvTsw, to pierce. That operation whereby any of the venters are perforated to let out any matter ; as tapping, &c.

Paracentesis. See Surgery.

PARACENTRICAL, adj. } Gr. xapd, be-

Paracen'tric. S side,and Kcvrpoi',

a centre. Deviating from circularity.

Since the planets move in the elliptic orbits, in one of whose foci the sun is, and, by a radius from the sun describe equal areas in equal times, we must find out a law for the paracentrical motion, that may make the orbits elliptic. Cheiine.

Paracentric Motion, the motion or space by which a revolving planet approaches nearer to or recedes farther from the sun, or centre of attraction.

PARACHUTE, a large and strong kind of umbrella, invented by M. Blanchard, the French aeronaut, to break a person's fall from an air balloon, in case of any accident happening to it at a high elevation. See Aeronautics.

PARACLETE, the Comforter, a name given to the Holy Ghost.

PARADE', n. s. Fr. parade ; Ital. parada ; of Lat. paro, to contrive or go about a thing. Order; array; procession; show; pomp.

The cherubim stood armed To their night-watches in warlike parade. Milton.

Accustom him to make judgment of men by their inside, which often shews itself in little things, when they are not in parade, and upon their guard,

Locke on Education.

He is not led forth as to a review, but as to a battle ; nor adorned for parade, but execution.

Granville.

1 hate the camp,

I hate its noise and stiff parade, its blank

And empty forms, and stately courtesy.

Where between bows and blows, a smile and stab.

There's scarce a moment. Soldiers always live

7n idleness or peril : both are bad. Proctor.

Be rich ; but of your wealth make no parade. At least before your master's debts are paid. Swift.

Parade, in a military sense, is the place where troops assemble or draw together, to .nount guard, &c.

Parade, in fencing, implies the action of parrying or turning oif any thrust. See Fencing.

PARADIN (William), a French historian of ,he sixteenth century, born at Cuiseaux, near Chalons, was author of a great number of works; particularly the History of Aristaus respecting the version of the Pentateuch; and Memoralia insignmm Francia2 familiarum.

PARADIS (Paul), a learned Venetian, who first taught the Hebrew language in the Royal CoJege of Paris : and wrote some pieces on it.

PAR'ADISE, n. s. Fr. paradise ; Gr. irapa- SeiffOQ. The region in which the first pair were placed ; any happy region.

Consideration, like an angel, came, And whipt the' offending Adam out of him ; Leaving his body as a paradise. To envelope and contain celestial

spirits.

Shalispeare. If he should lead her into a fool's paradise. It were very gross behaviour.

Id. Romeo and Juliet, The earth Shall all be paradise, far happier place Than this of Eden, and far happier days.,

Milton. The ancients express the situation of the para- disiacal earth in reference to the sea. Burnet.

Sucii a mediocrity of heat would be so far from exalting the earth to a more happy and parudisiucal state, that it would turn it to a barren wilderness. TI'(i()f/ic►►)'J's Aˆatural History. The summer is a kind of heaven when we wander in a purudisiacal scene, among groves and gardens ; but, at this season, we are like our poor first parents, turned out of that agreeable, though solitary life, and forced to look about for more people to help to bear our labours, to get into warmer houses, and hive together in cities. Pope.

By Alia ! I would answer nay ; Though on Al-Sirat's arch I stood, Which totters o'er the fiery flood. With paradise within my view, And all his Houris beckoning through

Byron. PARADISEA, in ornithologyˆ, a genus of birds belonging to the order of picae. The beak is covered with a belt or collar of downy feathers at the base ; and the feathers on the sides are very long. ' Birds of this genus,' says Latham, ' have the bill slightly bending ; the base covered with velvet-like feathers. The nostrils are small, and concealed by the feathers. The tail consists of ten feathers ; the two middle ones, and some- times more in several of the species, are very long, and webbed only at the base and tips. The legs and feet are very large and strong : they have three toes forward, one backward, and the middle connected to the outer one as far as the first joint. The whole of this- genus have, till lately, been very imperfectly known ; few cabi- nets possessing more than one species, viz. tne greater, or what is called the common bird of Paradise ; nor has any set of birds given rise to more fables, the various tales concerning which are to be found in every author ; such as, their never touching the ground from their birth to death ; living wholly on the dew ; being pro- duced without legs ; and a hundred such stories, too ridiculous even to mention. This last error is hardly yet wholly eradicated. The Portuguese first found these birds on the island of Gilolo, the Papua Islands, and New Guinea ; and they were known by the name of birds of the sun. The inhabitants of Ternate call them manucc duwata, the bird of God ; whence the name manuco diata, used by some naturalists, is de- rived. The peculiar length and

structure of their scapular feathers hinders them from settling

in high winds, on trees; and, when they are thrown on the ground by these winds, they can- not rise again. When taken by the natives, they are immediately killed, and they defend them- selves with great courage with their formidable bills. Latham enumerates eight species, but there are many more.

1. P. alba, the white bird of Paradise, is the most rare, and has two varieties ; one quite white, and the other black and white. The former is very rare. The second has the fore part black, and the back part white; v.ith twelve crooked wiry shafts, which are almost naked, though, in some places, covered with hairs.

2. P. makima, the largest bird of Paradise, is commonly two feet four inches long ; the head is small ; the bill hard and long, of a pale color. The head and back part of the neck is lemon- colored, a little black about the eyes ; about the neck, of the brightest glossy emerald green, soft like velvet ; as is also the breast, which is black; the wings are large, and chestnut colored ; the back part of the body is covered with long, straight, narrow feathers, of a pale brown color, similar to the plumes of the ostrich. These feathers are spread when the bird is on the wing ; for which reason he can keep very long in the air. On both sides of the belly are two tufts of stiff and shorter feathers of a golden yel- low, and shining. From the rump proceed two long stiff shafts, which are feathered on their ex- tremities. These birds are found at the Aroo islands, fifteen Dutch miles east of Key, during the west or dry monsoon ; and they return to New Guinea as soon as the east or west mon- soon sets in. They come always in a flock of thirty or forty, and are led by a bird which the inhabitants of Aroo call the king. This leader is black, with red spots ; and constantly flies higher than the rest of the flock, which never forsake him, but settle as soon as he settles; a circumstance that frequently proves their ruin when the king lights on the ground, whence they are not able to rise on account of the singular structure and disposition of their plumaee. They are likewise unable to fly with the wind, which would ruin their loose plumage ; but take their flight constantly against it, cautious not to ven- ture out in hard blowing weather, as a strong wind frequently obliges them to come to the ground. During their flight they cry like star- lings. Their note, however, approaches more to the croaking of ravens ; which is heard very plainly when they are in distress from a fresh gale blowing on the back of their plumage. In Aroo, they settle on the highest trees, especially on the ficus benjamina of the

hortus malabaricus, commonly called the waringa tree. The natives catch them with bird-lime, or in nooses, or shoot them with blunt arrows ; dry and fumigate the bodies with sulphur or smoke, and sell them at Banda for half a rixdollar each ; but at Aroo they may be bought for a spike-nail or a piece of old iron. Flocks of these >birds are often seen flying from one island to the other agamst the wind. During the east monsQon their tads are moulted, so that they have them only during four months of the west monsoor..

3. P. minor, the smaller bird of Paradise is

about twenty-nine inches long. His beak is lead-colored, and paler at the point. The eyes are small, and enclosed in black about the neck. The head and back of the neck are of a dirty yellow ; the back of a srayish yellow ; the brea.st and belly of a dusky color; the wings small, and chestnut-colored. The long plumage is about a foot in length, and paler than in tlie large species ; as in general the colors of this species are less bright than the former; though in most other respects they are alike. They likewise follow a leader, who is blacker, with a purplish cast, and finer in color than the rest. The neck and bil are larger in the male than in the female. They roost on the tops of the highest trees, and do not migrate. The natives sear the birds with a hot iron, and put them in a tube of bamboo for pre- servation.

4. P. nigra Amboinensis, a species of the black bird of Paradise, seen in Amboyna in 1G89. This was only one foot in length, with a fine purple hue, a small head, and a straight bill. On its back, near the wings, are feathers of a blue and purple color, as on the other birds of Paradise ; but under the wings, and over all the belly, they are yellow-colored, as in the com- mon sort : on the back of the neck they are mouse-colored, mixed with green. Before the wings are two roundish tufts of feathers, which are green edged, and may be moved at pleasure by the bird, like wings. Instead of a tail, it has twelve or thirteen black, naked, wire-like shafts, hanging promiscuously like feathers. Its legs are strong, and have sharp claws. The head and eyes are remarkably small ; the latter are surrounded with black.

5. P. nigra major, the large black bird of Paradise, is brought without wings or legs for sale ; so that no accurate description of it has yet been given. Its figure, when stuffed, is narrow and round, but stretched in length to the extent of four spans. The plumage on the neck, head, and belly, is black and velvet-like, with a strong hue of purple and gold. The bill is blackish, and one inch long. On both sides are two bunches of feathers, which appear like wings. The plumage is soft, broad, similar to peacocks' feathers, with a glorious gloss and greenish hue. The feathers of the tail are of unequal length ; those next to the belly are narrow, like hair; the two uppermost are much longer, and pointed ; those immediately under them

are a span and a half longer than the upper ones ; they are stiff', on both sides fringed with a plumage like hair, black above, but glossy below. Birds of this species are brought only from one particular place of New Guinea.

6. P. nigra minor, the small black bird of Paradise, has plumage equal in length, but thin- ner in body, black above, and without any re- markable gloss, not having those shining pea- cock feathers which are found on the greater species. It wants likewise the three long

,)ointed feathers of the tail, which the larger

black species has.

7. P. regalis, or regis, the king's bird, is about seven inches long, and somewhat larger than a titmouse. Its head and eyes are small ; 'he bill sti- aight ; the eyes included in circles ot

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h\a.rik plumage ; the crown of the nead is flame- colored ; the back of the neck blood-colored ; the neck and breast of a chestnut-color, with a ring of the brightest emerald green. Its wings are in proportion strong; and the quill feathers dark, with red shining plumes, spots, and stripes. The tail is straight, short, and brown. Two long naked black shafts proceed from the rump, at least a hand-breadth beyond the tail ; having at their extremities semilunar twisted plumage, of the most glaring green color above, and dusky below. The belly is white and green sprinkled ; and on each side is a tuft of Ions plumage, feathered with a broad margin, being on one side green, and on the other dusky. The back is blood-red and brown, shining like silk. The legs are in size like those of a lark, three fore toes and one back toe. This bird associates not with any of the other birds of Paradise ; but flits solitary from bush to bush, wherever he sees red berries, without ever mounting on tall trees.

PA'ilADOX, n. s. ~\ Fr. paradoxe ;

Paradox'ical, adj. I Gr. TraQaSo'ioq. A

Paradox'ically, adv. \ tenet contrary to Paradox'icalness, n. s. i received opinion; Paradoxol'ogy. ˆ an assertion or po-

sition in appearance absurd : the derivatives fol- low this sense.

A glosse there is to colour that parado:r, and make it appear in shew not to be altogether unreasonable.

Hooker. You undergo too strict a paradox, Striving to make an ugly deed look fair.

Shakspeare. How worthy are they to smart that mar the har- mony of our peace, by the discordous jars of their new and paradoxical concerns ! Bp. Hall.

'Tis not possible for any man in his wits, though never so much addicted to paradoxes, to believe other- wise, but that the whole is greater than the part : that contradictions cannot be both true ; that three and three make six ; that four is more than three.

Wilkins. 'Tis an unnatural paradox in the doctrine of causes, that evil should proceed from goodness.

Holtjday. ˆVhat hath been every where opinioned by all men is more than paradoxical to dispute. Browne.

Perpend the difficulty, which obscurity, or una- voidable paradoxology, must put upon the attempter.

Id. These will seem strange and paradoxical to one that takes a prospect of the world. Norris.

In their love of God, men can never be too affec- tionate : it is as true, though it may seem a paradox, that in their hatred of sin, men may be sometimes too passionate. Sprat.

Mankind in the gross is a gaping monster, that loves to be deceived, and has seldom been disap- pointed ; nor is their vanity less fallacious to our philosophers, who adopt modes of truth to follow them throutrh the paths of error, and defend paradoxes merely to be singular in defending them.

Machenzie. If their vanity of appearing singular puts them upon advancing paradoxes, and proving them as pa- ra xoically, they are usually laught at. Collier.

Paradox. No science abounds more with paradoxes than geometry ; tlius, that a right line should continually approach to the liyperbola, and yet never reach it, is a true paradox ; and

in the same manner, a spiral may continually

approach to a point, and yet not reach it iii any number of revolutions, however great. See M'Laurin's Fluxions. See Logarithms.

PARADOXI, a sort of mimes or buffoons among the ancients, who entertained the people wit]i extempore effusions of drollery. They were also called Paradoxologi, Ordonari, Nean- icologi, and Aretalogi.

PARAGAUDiE, among the ancient Romans, wreaths of gold, or silk and gold, interwoven in, not sewed to, their garments. The garment was sometimes of one color, with one paragauda; sometimes of two colors with two paragaudse ; or three colors, with three, &c. They were worn both by men and women.

PARAGOANA, a peninsula of Venezuela, Colombia, which is united to the continent by a narrow isthmus, on which stands the city of Coro. The isthmus is about a league in width, and the peninsula stretches from south-west to north-west for twenty leagues. It is chiefly in- habited by people of color and Indians, who breed great quantities of cattle on it.

Paragoana, a craggy cape on the coast of Venezuela, thirteen leagues from the city of Coro. Lat. 11►►52'N.

PARAGO'GE, n. s.) Tt. paragogue ; Gr.

Paragog'ic. S TTapayuyT}. A figure

in rhetoric, whereby a letter or syllable is added to the end of a word without being essential to the meaning

In Hebrew, the H is frequently paragogic ; as in nOˆDK, for ^^3S, I will praise. The paragogic letters are the five following, viz. T ' 1 H it, to which some add the H- The use of paragogic letters is only to give a more full and agreeable sound to words, either for the sake of the verse, or the smoothness of the period. As in the Hebrew, letters are sometimes added 'euphonia3 gratia,' so likewise, the four fol lowing letters, viz. il JV, which, according to the grammatical rules, ought to be present, are omitted.

Dr. A. Rees.

PAR AGON, n. s. & v. a. French parangon ; Ital. paragone ; Gr. irapayiov. A pattern or mo- del ; to match ; compare ; parallel ; be equal to (as in a pattern).

The picture of Pamela, in little form, he wore in a tablet, purposing to paragon the little one with Arte- sia's length, not doubting but even, in that little quantity, the excellency of that would shine through the weakness of

the other. Sidney.

Alone he rode without his paragon. Spenser,

An angel ! or, if not, An earthly paragon. Shakspeare.

I will give thee bloody teeth. If thou with Caesar paragon again]\Iy man of men. Id,

We will wear our mortal state with her, Catharine our queen before, the primest creature That's paragon d i' th' world. Id. Henry Vlll. Proud seat Of Lucifer, so by allusion called Of that bright star to Satan paragon'd.

Milton.

PARAGONG, a town of the province of Bootan, North Hindostan, and caj^ital of a dis- trict of the same name. It is famous for its manufacture of swords, daggers, arrows, and

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images of Boodh. The residence of the gover- nor of the district, whose authority extends from the confines of Thibet to Bengal, has a palace well fortified. He is amenable to the Deb or Deveh rajah of Tassisudon, a tributary of the Grand Lama of Tliibet. Long. 89►► 21′ E., lat. '27►► 43′ N.

PAIl'AGRAPH, n. s. "l Fr. paragraph^, ;

Paragraph'ical, ►►f//. > Greek irapaypa^i].

Paragraph'ically, adv. J A distinct part of a discourse.

Of his last paragraph, I have transcribed the most important parts. Swift.

When one subject is continued to a considerable length, the larger divisions of it should be put into paragraphs. Murray.

A Paragraph is properly a section or division of a chapter, and in references is marked thus, %.

PAR AG U A, a river of New Granada, Colom- bia, in the province of Maracaibo, which runs S. S. E., and enters the Apure.

PARAGUAY, an extensive government of Buenos Ayres, bounded by

Chiquitos, Chacos, and Tucuman, on the north-west and west ; by the lake of Xarayes on the north ; on the north- east and east by the Portuguese territories ; and on the south-east and south by the Parana, which separates it from the missions of Guaira in Buenos Ayres, its jurisdiction ending in the south of the city of Assumption, in 26►► 48′ S. lat. ; and it is divided from Tucuman by the river Paraguay.

The great geographical features of this coun- try are its numerous rivers, lakes, swamps, plains, and woods. The most noted of its rivers are the Paraguay, the Parana, the Porudos, Mbotely, Tobati, Ipane, Piray, in the north ; and in the south the Canabe and the Tibiquari. These, in the rainy season, overflow their banks, the ground being flat to the extent of several hundred miles ; the inundation spreads into lakes which are of great superficial extent, but little depth. When it subsides large tracts which have been submerged become extremely fertile. The climate in general is moist and temperate, though in some parts it is cold, and white frosts are common in July and August. All kinds of grain, the sugar-cane, beans, peas, melons, cucumbers, and European vegetables, abound in the more fruitful parts ; asparagus is found wild, and there is a remarkably fine sort of vine, of which a good wine is made : tobacco and cinchona, or Jesuits' bark ; sarsaparilla; rhu- barl); jalap; sassafras; guaiacum; cupay, whose oil is used in medicine ; nux vomica; vanilla; cacao, the cedar ; the curi or pine, from whose red knots, which contain a varnish, the Indians make images ; the algarrobo, or carob tree, which is converted into bread ; and the Paraguay tea or matte, a plant which rises about a foot and a half high, with slender branches, and leaves like those of senna, are also found here. This last herb grows about 100 leagues from the capital. The gathering and preparing it consists in drying the leaves, which are scattered on shelves for the purpose over a fire, when they are crumbled into a rough dust, and then put up into packages of from seven to eight arrobas, each arroba weighing 25 lbs. The consumption

of this article, not only in these provinces, but in those of Peru and (Jhili, is incredible ; there is scarcely any person who does not take an in- fusion of it two or three times in the course o" the day, making an infusion of it like tea, with warm water and sugar ; the mines would stand still, it is said, if the owners were to neglect to supply the workmen with it. It is infused and made nearly in the same way as Chinese tea, excepting that the branches are put in with the leaves. T e pomegranate, fig, lemon, and orange, also flourish in Paraguay. The native fruits include the jujuba, chanar, yacani, qua- bira (from which candles are made for the churches), the delicious quembe, the mammon, resembling a melon, and growing on the tnmk of a tree ; the anguay, whose pips, of a rich violet color, and triangular shape, are used by the Indians for necklaces ; the bacoba, banana, anana, manioc, the cotton tree, which grows here to a great size, &c. &:c. ; indigo,*

cochineal, nacalic, whose beautiful yellow is much used by dyers ; and reeds of great size, besides a great number of other useful trees and plants ; and an immense variety of beautiful flowers. The largest bird is the cassowary or American ostrich, which is remarkable for its fine pVimage and swift motions. Of the humming bird there are nine species. In the woods are also hares, rabbits, partridges, wild boar, deer, &c. ; but from the great quantity of neat cattle, the flesh of which is preferred, none of these animals are hunted. In the lakes and shores of the river geese are taken in great numbers. They are en- livened likewise by nightingales, goldfinches, parrots of most beautiful plumage, peacocks, and birds of prey, amongst which there is one called tuca, resembling the crow, but having a beak the length of a hand, and beautifully varie- gated with red, yellow, and black streaks. The most ferocious animal of Paraguay is the jaguar or tiger, which commits great havoc amongst the cattle, and often attacks man. The pumacouga,or the jˆmerican lion, is a fierce animal, but not to be compared to the African lion ; and the black bear is also large and ferocious. Tim tapir or river cow, the water pig or capibara, the cavies, and various other amphibious animals, frequent the numerous streams ; and musquitoes, with an innumerable variety of insects and snakes, are the plague both of the waters and the land. It is estimated that there are twenty kinds of serpents, of which the rattle-snake is the most common. The great boa constrictor is also found adjoining the rivers. In some parts the vampire bat, seizing on a person asleep, sucks the blood, so as to endanger the life of its vic- tim. Tliere is also a species of butterfly whose bite causes a corroding humor to appear, whicli forms a nidus for a little worm, that leaves be- hind an unseemly wound, of tedious cure.

The commerce of this country, chiefly car- ried on by the river Paraguay, consists in the exjˆort of its tea, tobacco, cotton, sugar, tallow, wax, honey, hides, cattle, horses, mules, wool, and leather. The journey to Buenos Ayres by land is seldom performed except by couriers, who are exposed to the attacks of the wandering Indians, even the navigation of the Great rivei

uot being free from them : on the west are the Tobas and Moscobies, on the south the Abipones, on the north the Guaycurus or Mbayas, and the Panaguas; but the east is free from any close neighbours of this description, though on the distant mountains in this quarter called Yerva, are the Monteses, who give great trouble to the people employed to collect the matti. These unsubdued Indians frequently attack the settle- ments, which has obliged the inhabitants to form a militia to repel their aggressors ; there are also nineteen forts in Paraguay in number, generally near the river, which is furnished witli guitr i boats. Tbe number of Indian villages of tlie missions was of late considerable ; they consist >ˆ{ stone or mud houses,

covered with tiles, having a large square, in which is the priest's house, and a good church, the number of inha- bitants varying from 500 or 600 to 2000.

Paraguay, after being discovered by Sebastian Cabot in 1326, was governed by Juan de Ayalas, to whom Don Pedro de ISIendoza, the first governor of Buenos Ayres, gave a commis- sion, a body of troops, military stores, and other necessaries ; afterwards, by his orders, Juan de Salinas founded the city of Assumption, the ca|)itaJ. In subjugating this country the Span- iards, under Alvarez Nunes, exercised great cruelty on the inhabitants, and regularly par- celled them out as slaves. To supply workmen for the Spanish plantations, Parana was after- wards conquered; the city of Ciudad Real was founded ; and 40,000 Indians were reduced to slavery. In 1556 the Jesuits made their first appearance here, and succeeded by gentleness and policy in reducing many of the natives un- der the yoke of civilised life. Their success indeed in this benevolent work was astonishing ; and it is only to be regretted that the whole order has not been thus emjiloyed. Tliey es- tablished native towns and villages, which soon under their influence and direction spread over the wilderness : their principal missions were not, however, in Paraguay, but in Buenos Ayres, south of the Parana. Wlien the order was abolished, Spanish South America was divided into governments, and other })riests were ap- pointed to succeed them in their administration here. See America, South. The population of Paraguay was estimated some time since at 97,480 Indians, Spaniards, or whites, of which the latter do not form much more than a twen- tieth part. The only important towns are the capital Assumption, \ ilia-Rica, Curugauty, Con- ception, and Neembucu.

Paraguay, a river of South America, which ˆives name to the above province, and of which tiie sources are little known. Mr. Mawe fixes them in lat. 13►► S., after which it runs a course of about 1800 miles, and enters the ocean at the Rio de la Plata.

Paraguay, or Paraguay Tea Tree, in oota- ny, a tree which grows naturally in the above country, and is extremely useful both as food and medicine. It is a middle-sized tree, resembling an orange tree and tasting like mallows. The leaves a-e the part chiefly used. The natives make three gatherings annually ; first, of the buds, before they unfold into leaves : these are reckoned best, but

soonest decay : second, of the full grown leares, at their first expansion : and third, of the leaves, when they have remained on the tree for some time after they are fully blov/n. These leaves are roasted, and kept in pits under ground for sale. Quantities to the value of ►►100,000 are annually exported to Peru and Chili. These trees grow naturally in the morasses on

the east bank of the Paraguay ; but are now dispersed and cultivated all over the country. The leaves are thus used ; being dried and reduced almost to powder, they are put into a cup, with sugar and lemon juice ; boiling water is then poured on, and the infusion drunk. They are said to be of service in all disorders of the head, breast, and sto"hiach ; to allay hunger, and to purify all kinds of water ; to preserve the miners from the noxious effect of the minerals ; and to be a so- vereign remedy in scurvy and putrid fevers. Mr. Lee ranks this tree as a species of Ilex. See Ilex.

PARAIBA, a province of Brasil, bounded north by the river Grande, east by the Brasilian Sea, south by the province of Itamarca, and di- vided from it by the river Paraiba. The climate is mild, and the soil fertile ; and it abounds more than any other province in Brasil wood. The French took possession of it till the year 1584, when they were driven out by the Portu- guese. There are many sugar houses in this province.

Paraiba, the capital of the above province, is situated on the south bank of the river of the same name, about ten miles from the sea, the river being navigable for a considerable way above. It is a handsome and healthy town, de- fended by three forts. The cathedral is an ele- gant edifice. The exports consist chiefly of sugar, dyeing woods, and drugs. Population

4000.

Paraiba, a large river of the above province, which rises in the mountains of the interior, and at its mouth forms the great bay of Paraiba. Its shores are covered with villages and sugar houses. Also a large river of Brasil, in the province of Rio Janeiro, which has its source in the moun- tains of the province of St. Paul. After a very winding course of 150 miles it enters the pro- vince of Rio Janeiro, and, pursuing the same irregular direction, it enters the Atlantic in lat. 21►► 34′ 30″ S.

INIr. Caldcleugh gives us an amusing picture of the country on the banks of this river; and some valuable particulars of its productions. ‘ After many ascents and descents, over a soil of a deep brick-dust color, we arrived,’ says he, ‘ on the bank of the Rio Paraiba. Near it I observed many rounded waterwom masses of green- stone, but I could discover none in situ. Some gneiss appeared very considerably inclined. On the opposite, or left bank, the register-office is built, where all mules and passengers arriving from the mines are closely examined for dia- monds and gold dust, two articles strictly prohi- bited. The commandant had a guard of twelve soldiers, and an armed boat, which rowed up and down at night, to prevent any persons crossing the river, in this place about 100 yards across. The current is rapid, about seven miles an hour.

and the water cool, being twelve degrees under the temperature of the air, which was 80►►. After exhibiting my portaria, or license to travel, I left the registro of the Paraiba, and immediately commenced a long and painful ascent. The load was excessively bad, being extremely nar- row, with a gulley down the centre ; and the soil, being a red clay, was very insecure from the humidity. From the summit, the views on all sides were magnificent ; ˆut more particu- larly the one which extendea along the valley of the Paraiba. Here and there the eye caught a glimpseof the ri.er glistening amidst the deepest ani most luxuriant vegetation. My tropeiro brought me some pieces of the Quina or Bark, and pointed out many trees. It was extremely bitter, and is, I have no doubt, as good a febri- fuge as the Peruvian. All those who pass through these woods use it for the teeth and in cases of loss of appetite. This bark is of a higher color than the Jesuits', and I presume of a very dif- ferent species. The track now led down a de- scent, and afterwards ascended by a zigzag and most laborious road to nearly its former eleva- tion. The heat was intense, and the mules suffered considerably, and drank at every stream. Large masses of undecomposed feldspar rose in places out of the deep red earih. In other spots the soil was a stiff' red clay. The thick wood, al- though boasting of a large proportion of ever- greens, showed, at least the highest trees, a win- tery appearance.

' We had not long left the Paraiba, when an immense boa constrictor showed himself among the foliage over my head and the tropeiro's. He was playing about, and instantly retired ; he was so close to me that I had a good opportu- nity of examining his length and the dark brown spots with which he was marked, before my mule and the tropeiro's horse descried him, when the former sprung forward, and the latter turned round, and with great difficulty was brought up again to the spot, which he passed in a trembling state. Rosario and Adam were in advance with the mules and the gam, and had seen nothing of the monster. This was the largest boa I ever saw alive, and I should conceive measured six- teen or eighteen feet. Some skins I subse- quently measured were of much greater length. They were brought from the sertao, or country not at all traversed ; and when tanned formed an excellent Loot quite impervious to the wet. Many of the respectable miners wear boots of this description. The heat was so oppressive on this day that we saw few birds : they appeared to have retired to the very depths of the woods. The trees which we passed were of immense height : for, although in many instances they rose from a depth of forty feet below us', they towered as many over our heads. They were chiefly the tree which produces the gum copaiba. ' We proceeded onwards to a rancho called Payal, and thence over the summits of many serras,

ascending and descending continually, until seven o'clock in the evening, when we came in sight of and descended to the bank of the Puraibuna. The temperature of the water was 71►► and of the air 78►►. The distance completed this day was about six leagues, but the heat was

so oppressive, and the ti-ack, from the nˆpeated ascents and descents, so extremely latiguing, that the mules arrived at the river in a very ex- hausted state. After unloading them, we allowed them to lie down or wander about for an hour or two, before we attempted to feed them; but even then they would not touch the Indian com, and we were at last obliged to add some hand- fuls of salt, to get them to eat any. Our own chase had been very unfortunate : only one large bird had been killed ; but on 'aking off the skin, for the sake of the plumage, the body was evidently too small for supper A fortunate oc- currence obtained us, however, an excellent re- past. My man, previous to leaving Rio de Ja- neiro, bought the eld hat of a priest, which, from its very broad flaps, he conceived would be an effectual shelter from the sun. When we came down to the huts of the Paraibuna, one of the inhabitants thought he recognised in Rosario a priest who had once said mass there, and, know- ing he could procure nothing fit to eat, had a fowl instantly killed, dressed with rice, and sent it to us. In fact, there is little or nothing to be got in these villages; the mule drivers live on feijoes or beans and pork, which they carry with them, and the inhabitants have little more than is sufficient for their own consumption. The land which they take the trouble to cultivate is cropped with Indian corn, and is entirely con- sumed on the spot. The inhabitants are a mixed race of blacks and mulattoes, and occasionally with a dash of Indian blood. They are chiefly free ; they are excessively indolent, as it may be supposed, and do not appear stimulated even by the idea of gain. Their huts are formed of mud, with a covering of broad leaves ; the better description have a ceiling formed of split canes, called taquarra.

' The regisfo of the Paraibuna is built on the opposite side of the river, and about 100 small huts or houses surround it. The Paraibuna flows down from the back of the Serra da Man- tequeira, under the name of the Rio Preto, which is in fact a mere translation of the Indian word Paraibuna. Para, river, and ibuna, black. It is here about fifty yards across, and flows with a turbid but rapid current, half a degree farther to the east, where it joins the Paraiba, and their united streams enter the sea under the name of the Southern Paraiba. Its sand is eminently auriferous, and in front of the registio many ca- noes were at work. By means of a windlass and an iron scoop, the gold washers dredge up into the canoe a portion of the bed of the river, and, when they have procured as much as they can carrj', they move to their washing place, which is a kind of platform projecting over the river ; the cascallo or gravel and sand is then shovelled into a large trough, and upon it a neighbouring stream is conducted by means of large bamboos.

Tlie canoes are very large, and formed out of a single tree. There were usually three blacks in the canoe, and two on the plat- form, who received a patach (320 reis) per diem each, which for five amounted to 1600 reis ; and as the daily gain was generally equal to 2200, about ten shillings, there was a balance of 600 reis for the owners of the boat. One of th►► >

patraiis informed me that lie frequently collected with three boats five or six octavas of gold (seventy-two grains each) in the course of the day. The gold he showed me was fine grained and of good color. The gravel brought up with it con- sisted chiefly of quartz of a brilliant whiteness, appearing at first like white topazes, rounded cornelians of a yellowish tint with the red, some agates, and aquamarines of a muddy bad color. I obtained from the mass of refuse several spe- cimens of this description, and a few waterworn wine-yellow topazes. On the bank of the river I observed many large masses of ferruginous quartz, destined, perhaps, when the progress of decomposition is completed, to add a small stock of gold to the sands of the stream, from which large quantities have been already obtained.'

PAR'ALLAX, n. s. Greek TrapaXaˆif. The distance between the true and apparent place of the sun, or any star, viewed from the surface of the earth. See below.

By what strange -parallax or optick skill

Of vision multiply'd. Milton s Paradise Regained.

Light moves from the sun to us in about se- ven or eight minutes lime, which distance is about 70,000,000 Englisli miles, supposing the horizontal parallax of the sun to be about twelve seconds.

Newton's Opticks.

Parallax, in astronomy, is otherwise defined, the difference between the places of any celestial objects as seen from the surface, and from the centre of the earth at the same instant. See Astronomy. The whole effect of parallax is in a vertical direction : for the parallactic angle is in the plane passing through the observer and the earth's centre ; which plane is necessarily per- pendicular to the horizon, the earth being con- sidered as a sphere. The more elevated an object is above the horizon, the less is the

paral- lax, its distance from the earth's centre continuing the same. When the object is in the zenith, it lias no parallel ; but when in the horizon, its parallax is greatest. The horizontal parallax being given, the parallax at any given altitude may be found by the following rule : ††† To the logarithmic cosine of the given altitude, add the log. sine of the horizontal parallax ; the sum, rejecting ten from the index, will be the log. sine of the parallax, in altitude. The longitude, latitude, right ascension, and declination of an object, are affected by parallax. The difference between the true and apparent longitudes is called Ihe parallax in longitude ; in like manner, the dif- ferences between the true and apparent latitudes, right ascensions, and declinations, are called the parallax in latitude, right ascension, and declina- tion, respectively. ††† When the object is in the nonagesimal, the parallax in longitude is nothing, but that in latitude is greatest ; and, when the object is in the meridian, the parallax in right ascension vanishes, and that in declination is a maximum. The apparent longitude is greater than the true longitude, when the object is east of the nonagesimal, otherwise less ; and, when the object is in the eastern hemisphere, the ap- parent right ascension exceeds the true, but is less than the true right ascension when the ob- ject is in the western hemisphere. The apparent place of an object is more distant from the ele-

vated poles of the ecliptic and equator than the true place; hence, when the latitude of the place and elevated pole of the ecliptic are of the same name, the apparent latitude is less than the true latitude, otherwise greater; and the apparent declination will be less or greater than the true declination, according as the latitude of the place and declination of the object are of the same or of a contrary denomination. The parallaxes in longitude, latitude, right ascension, and declina- tion", in the spheroidat hypothesis, may be found by the following formulee; in which L represents the latitude of the place, diminished by the angle contained between the vertical and radius of the given place ; P the horizontal parallax for that place ; a the altitude of the nonagesimal at the given distance ; d the apparent distance oT the object from the nonagesimal; l\ the true and apparent latitudes of the object ; D S the true and apparent declinations respectively ; and m its apparent distance from the meridian. Then par. in long, ir P. sine a. sine d, secant /, to ra- dius unity ; and par. in lat. zz P. cosine ††. cosine a. cosine \ˆp- cosine d. sine a. sine . The sign ††† is used when the apparent distance of the object from the nonagesimal and from the elevated pole of the ecliptic are of the same affection, and the sign †††}- if of different afi'ection. If the greatest precision be required, the following quantity 0-00000121216. par. long. ˆ, sine 2 /, is to be applied to the parallax in latitude found as above, by addition or subtraction, as the true distance of the object from the elevated pole of the ecliptic is greater or less than 90††. Again, par. in right ascen. iz P. cosine L. sine m. secant D, to

radius unity ; and par. in declination zz. P. sine L. cosine 5 ^^ P. cosine L. sine d, cosine m. The upper or lower sign is to be used, according as the distance of the object from the meridian and from the elevated pole of the equator are of the same or different affection. Part second of par. in declination = 0-00000121216 par. in right ascen. ‘, sine 2 D ; which is additive to, or subtractive from part first of the parallax in declination, according as the true distance of the object from the elevated pole of the equator is greater or less than 90^.

Parallax is also used to denote the change of place in an object arising from viewing it obliquely with respect to another object. Thus the minute hand of a watch is said to have a parallax when it is viewed obliquely ; and the difference between the instants shown by it, when viewed directly and obliquely, is the quantity of parallax in time.

Parallax of the Earth’s Annual Orbit, is the difference between the places of a planet as seen from the sun and earth at the same in- stant. The difference between the longitudes of the planet as seen from the sun and earth is called the parallax in longitude ; and the dif- ference between its latitudes is the parallax in latitude.

PAR’ALLEL, adj., n. s. & } Fr. pjrullele ;

Par’allelism. [v. a. S Gr. irapaX\\;Xof.

Equidistant ; lineally extended in the same di- rection : hence, having the same tendency ; equal : like : parallelism is the state of being parallel, or an instance of it.

His life is paralleVd Ev’n with the stroke and line of his great justice.

Shakspeare. The -parallel holds in the gainlessness, as well as laboriousness of the work. Decay of Viety.

But the time and occasion call my thoughts home- ward, and invite me rather to spend the rest of my hours in paralleling Israel’s blessings, sins, and threats of judgment with our own. Bp, Hall.

Such a resemblance of all parts. Life, death, age, fortune, nature, arts ; She lights her torch at theirs to tell, And shew the world this parallel. Denham.

The foundation principle of peripateticism is ex- actly parallel to an acknowledged nothing.

Glanville. Distorting the order and theory of causes perpen- dicular to their effects, he draws them aside unto things whereto they run parallel, and their proper motions would never meet together. Browne.

The Azores having a middle situation between these continents and that vast tract of America, the needle seemeth equally distracted by both, and di- verting unto neither, doth parallel and place itself upon the true meridian. Id.

The loyal sufferers abroad became subjected to the worst effect of banishment, and even there expelled and driven from their flights ; so paralleling in their exigencies the most immediate objects of that mon- ster's fury. Fell.

The parallelism and due proportioned inclination of the axis of the earth. 3Iore's Divine Dialogues.

In the fire, the destruction was so swift, sudden, vast, and miserable, as nothing can parallel in story.

Dryden. I paralleled more than once our idea of substance with the Indian philosopher's he-knew-Hot-what, which supported the tortoise. Locke.

Speaking of the parallelism of the axis of the earth I demand, whether it be better to have the axis of the earth steady and perpetually parallel to itself, or to have it carelessly tumble this way and that way.

Ray on the Creation. That he stretched out the north over the empty places, seems to parallel the expression of David, he stretched out the earth upon the waters. Burnet.

Thou ungrateful brute, if thou wouldst find thy parallel, go to hell, which is both the region and the emblem of ingratitude. South.

Dissensions, like small streams, are first begun. Scarce seen they rise, but gather as they run ; So lines, that from their parallel decline, More they proceed, the more they still disjoin.

Garth. When honour runs parallel with the laws of God and our country, it cannot be too much cherished ; but, when the dictates of honour are contrary to those of religion and equity, they are the great deprivations of iiuman nature. Addison.

A reader cannot be more rationally entertained than by comparing and drawing a parallel between his own private character, and that of other persons.

Id.

In the parallel place before quoted. Lesley.

For works like these, let deathless journals tell.

None but thyself can be thy parallel. ⬛⬛ope,

\ ho made the spider parallels design,

Sure as De Moivre, without rule or line 1 Id.

'Twixt earthly females and the moon. All parallels exactly run. Swift's Miscellanies. Compare the words and phrases in one place of an author, with the same in other places of the same uuthor, which are generally called parallel ohires.

Watts.

Parallel, Ih geometrj. See Geometry.

Parallel Sphere, that situation of the sphere wherein the equator coincides with the horizon, and the poles with the zenith and nadir.

Parallels of Altitude, or Almucantars, are circles parallel to the horizon, imagined to pass through every degree and minute of the meridian between

the horizon and zenith, having their poles in the zenith.

Parallels of Declination, in astronomy, are the same with parallels of latitude in geo- graphy.

Parallels of Latitude, in astronomy, are lesser circles of the sphere parallel to the eclip- tic, imagined to pass through every degree and minute of the colures.

PARALLEL'OGKAM, n.s. Fr. parallelo- grame; Gr. TrapaWrjXog and ypaupa, a figure. In geometry, a right lined quadrilateral figure, whose opposite sides are parallel and equal.

The experiment we made in a loadstone of a pa- rallelogram, or long figure, wherein only inverting the extremes, as it came out of the fire, we altered the poles. Browne.

We may have a clear idea of the area of a parallel- ogram, without knowing what relation it bears to the area of a triangle. Watts.

PARALLELOPI-PED, n.s. Fr. parallelo- pipede. A solid figure contained under six pa- rallelograms, the opposite sides of which are equal and parallel ; or it is a prism, whose base is a parallelogram.

Two prisms alike in shape I tied, so that, their axes and opposite sides being parallel, they composed a parallelopiped. Newton.

Crystals that hold lead are yellowish, and of a cubic or parallelopiped figure. Woodward.

PARALLELOPIPE'DIA, in the old miner- alogy, a genus of spars, externally of a deter- minate and regular figure, always found loose, detached, and separate from all other bodies, and in form of an oblique parallelopiped, with six parallelogram sides, and eight solid angles; easily fissile either in an horizontal or perpendi- cular direction ; being composed of numbers of thin plates, and those very elegantly and re- gularly arranged bodies, each of the same form with the whole mass, except that they are thin- ner in proportion to their horizontal planes, and naturally fall into these and no other figures, on being broken with a slight blow.

PAR'ALOGISjM, or i Yt. paralogisme ; Gr.

PaRal'ogy, 7J.S. S irapa\oyi(TnoQ. A false

argument.

That because they have not a bladder of gall, like those we observe in others, they have no gall at all, is di paralogism not admittable, a fallacy that dwells not in a cloud, and needs not the sun to scatter it. Browne's I'ulgar Errours.

That Methuselah was the longest liver of all the posterity of Adam, we quietly believe ; but that he must needs be so, is perhaps below paralogy to deny.

Browne.

IModern writers, making the drachma less than the denarius, others equal, have been deceived by a double paralogum, in standing too nicely upon the bare words of the ancients, without examining the things. Arbttthnot.

If a syllogism agree with the rules given for the construction of it, it is called a true argument : if it

disagree with the?e rules, it is a paralogism, or false argument. Watts.

Paralogism, in logic, also implies a conse- quence drawn from principles that are false ; or, though true, are not proved ; or when a pro- position is passed over that should have been proved.

PARAL'YSIS, n. s. Fr. parali/sie ; Gt. ira- paXvaiQ. A palsy. See Medicine, Index.

PARALYT'ICAL, or i Palsied ; inclined

Paralyt'ic, adj. J to palsy.

Nought shall it profit, that the charming fair, Angelick, sol'test work of heaven, draws near To the cold shaking jtaralytkk hand, Senseless of beauty. Prior.

The difficulties of breathing and swallowing, without any tumor after long diseases, proceed com- monly from a resolution or pavatyticai disposition of the parts. Arbtithnot.

If a nerve be cut, or slraitly bound, that goes to any muscle, that muscle shall immediately lose its motion : which is the case of paralyticks.

Derham.

The temporary motion of a paralytic limb is likewise caused by passing the electric shock through it ; which would seem to indicate some analogy between the electric fluid and the nervous fluid, which is se- parated from the blood by the brain, and thence diffused along the nerves for the purposes of motion and sensation, Darwin.

PARAMARIBO, a handsome town of Guiana, the capital of the province of Surinam, is situated on the right bank of the Surinam river, about eighteen miles from its mouth. It is about a mile and a half in length, and about half as much in breadth, and built in the form of an ob- long square. The streets, which are straight, are lined with orange, shaddock, tamarind, and lemon trees, which appear in perpetual bloom. It is generally crowded with planters, sailors, soldiers, Jews, Indians, and negroes, while the river is constantly covered with barges and ca- noes. The town-hall, Protestant church, Lutheran chapel, and Jewish synagogue, are all respecta- ble buildings. Here is a citadel of some strength, separated by an esplanade from the town. In- habitants 5000.

PARAMATTA, a town of New Holland, situated above the head of Port Jackson harbour, and built along a small stream that falls into the river which terminates in that arm of the sea. Its distance from Sydney is about twelve miles by land, and eighteen by water ; but, for the last six or seven miles, the river can only be navi- gated by boats. The town consists principally of a sinole street, about a mile long, and is much inferior to Sydney in point of buildmg, though it contains several good houses. These, with the church, the government house, the new orphan house, and some gentlemen's seats situated on the surrounding eminences, give it a respectable appearance. There are likewise two good inns. Here is also a factory, where the female convicts who are found unfit for servants are employed in manufacturing coarse cloth. The population consists principally of inferior traders, publicans, artificers, and laborers; and, including the sol- diers stationed there, may be estimated at about 1200 individuals. Benevolence, too, has take-i up her residence there, and one of the institutions

that first claims the attention of the philanthro- pist, is the school that was established a fewˆ years since for the instruction of the aliorigines. It lately contained nearly twenty children of the natives, who had been voluntarily placed there by their parents, and whose progress in tiieir studies was found to be not inferior to that of liuropean children of the same age.

A superintendant receives wool fro'n the settlers, and gives them a certain portion of the manufactured article in exchange. What is re- served is only

a fair equivalent for the expense of making it, and is used in clothing the jail gang, the reconvicted culprits who are sent to the coal river, and the inmates of the factory. This town has made but a slow progress com- pared with the town of Sydney; and the value of land in its neighbourhood is consequently not so great by any means. In 1818 there were cleared in the district of this name 1 3,302 acres of land, containing 10,429 head of cattle, 33,67a sheep, 745 horses, and 3960 hogs.

PARAMITHIA, a considerable town of Al- bania, Greece, the capital of a district of nearly forty miles in circumference, inhabited by a rude tribe, mostly of the Mahometan religion ; but their language is Greek. They have hardly any regular government, but are a brave race, to which, joined to the mountainous and inaccessi- ble nature of their country, they owe the inde- pendence they enjoy. They are said to amount to 15,000. Nineteen miles south-west of Joan- nina.

*PARAMO (Lewis de), *i Spanish inquisitor who published at Madrid, in 1598, a curious work upon the tribunal called The Holy Office. He writes with candor, omits no fact, but enu- merates impartially all the victims of the In- quisition.*

PARAMOUNT', adj. Fr. parmnowit ; or par and mount. Superior ; having the highest jurisdiction : as, lord paramount, the chief of the seigniory : taking to before the object.

Leagues within the state are ever pernicious to monarchies ; for they raise an obligation, paruinouut to obligation of sovereignty, and make the king, tan- quam unus ex nobis. Bacon.

John a Ciiamber was hanged upon a gibbet raised a stage higher in the midst of a square gallows, as a traitor paramount ; and a number of his chief accom- plices were hanged upon the lower story round him.

Id. The dogmatist's oplnioned assurance is paramount to argument. Glanvdle.

In order came the grand infernal peers, 'Midst came their mighty paramount. Milton. If all power be derived from Adam, by divine in- stitution, this is a rit;ht antecedent and paramount to all government ; and therefore the positive laws of men cannot determine that which is itself the foundation of all law. Locke.

Mankind, seeing the apostles possessed of a power plainly paramount to the powers of all the known beings, whether angels or daemons, could not ques- tion their being inspired by God. West.

Paramount, in English law, the highest lord of the fee of lands, of tenements, and heredita- 'nents. As there may be a lord mesne where lands are held of an inferior lord, who holds them of a superior under certain services ; so this su-

inerior lord, is lord paramount. Also the king is tlie chief lord, or lord paramount, of all the lands in tlie kingdom. Cok. Lit. 1.

PAR'AMOUR, n.s. Fr. pur amour: par arnore. A lover or wooer.

For in this world n'is dogge for the bowe, That can hurt de re from an hole yknowe, \>tsi than tills Sompnour knew a slie lechour, Or an avoutrer or a paranwur.

Chancer, Cunt. Tales. Upon the floor A lovely bevy of fair ladies sat, Courted of many a jolly paramour, The which them did in modestwise amate, And each one souglit his lady to aggrate.

Spenser. Shall I believe That unsubstantial death is amorous, – And that the lean abhorred monster keeps Thee here in dark to be his paramour? Shakspeare. No season then for her To wanton with the sun her lusty paramour.

Milton.

PARANA, a river of South America, which rises in Brasil, in the province of Matto Grosso, and, after a long and winding course, falls into the Paraguay, in lat. 27►► 25′ S., when the united stream assumes the name of the Plata. In lat. 24►► it passes over a ledge of rocks that has been denominated a cataract, but it does not materially obstruct the navigation, as boats are hauled up it by means of ropes. The base of this fall is formed by a chain of rocks that rise in separate masses, and leave channels, like embrazures, for the stream. The Parana is here very wide, and, when swelled by the rains, very rapid. In the lower part of its course the Parana is covered with numerous islands, which conceal its im- mense breadth. Many of these islands are covered with trees ; but none are inhabited ex- cept by wild animals. The Parana has its greatest flood in December, January, and sometimes in February ; and there is another inundation in June and July. The river at these times rises from eighteen to twenty feet above the level of the islands ; and the animals with which they abound

then swim over to the main land. On some occasions the inhabitants of Santa Fe have contemplated forsaking their city, which is often wholly surrounded with water.

PARANAIBA, a large river of Brasil, which runs S.S.E. for many leagues, and enters the Parana near its source.

Paranaiba, a river of Guiana, an arm of the Amazons, running out from and returning t~ it, and enclosing the large island of Ramos.

PARANAPURAS, a river of Quito, vvUch rises in the Andes, and enters the Guallaga. Also the name of a settlement on this river.

PAR'ANYMPH, n. .►►. Fr. paratii/mphe; Gt. Tapa and vvp.(pri, a bride. A brideman ; one who leads the bride to marriage. The Timnian bride Had not so soon preferred Thy paranymph worthless to thee compared Successor in thy bed. Milton's Agonis^^-.

Sin hath got a paranymph and a solicitor, a warrant and an advocate. Taylor's Worthy Communicant .

Paranymph, among the ancients, the person who waited on the bridegroom, and directed the

nuptial solemnities ; called also pronubus and auspex, because the ceremonies began by taking auspicia. As the paranymph officiated only on the part of the bridegroom, a woman called pro- nuba officiated on the part of the bride.

PAR'APEGM, n. s. Gr. TrapoTrjjy^a, Trapa- Trriyvvfii. A brazen table fixed to a pillar, on which laws and proclamations were anciently engraved : also a public table, containing an ac- count of the movements of the heavenly bodies, seasons of the year, &c., whence the astrologers give this name to the tables on which they draw their figures.

Our forefathers, observing the course of the sun, and making certain mutations to happen in his pro- gress through the zodiack, set them down in their parapegms, or astronomical canons. Browne.

PAR'APET, n. s. Fr. parapet ; Ital. para- petto. A wall breast high.

There was a wall or parapet of teeth set in our mouth to restrain the petulancy of our words.

Ben Jonson.

The parapet of the covert-way is what covers that way from the si□□ht of the enemy ; which renders it the most darjoeious place for the besiegers, because of the neighbourhood of the faces, flanks, and cur- tains of the place. James.

Parapet, in fortification, an elevation of earth designed for covering the soldiers from the enemy's cannon or small shot. See Fortifica- tion.

PARAPH ERNA'LI A, n.s. Fr. parapher- naux ; Lat. paraphernalia. Goods in the wife'? disposal.

Paraphernalia, or parapherna, in the civil law, are those goods which a wife brought her husband, be- sides her dower, and which were still to remain at her disposal, excltisive of her husband, unless there was some provision made to the contrary in the mar- riage-contract. Dr. A. Rees.

PAR'APHRASE, n. s. & v. a.\ Fr. para

Par'aphrast, 71. s. t phrase ; Gr.

Paraphras'tic, or i napafpaatc-

Paraphras'tical, adj. J A free or lax

interpretation ; an explanation in many words : to paraphrase is, to interpret or translate loosely . a paraphrast, a lax interpreter : the adjectives follow these senses.

The fittest for public audience are such as, follow- ing a middle course between the rigor of literal translators and the liberty of paraphrasts, do, with gieat shortness and plainness, deliver the meaning.

Hooker.

The clearest and shortest way of explication is by paraphrase. Bp. Hall.

We are put to construe and paraphrase our own words, to free ourselves from the ignorance and ma- lice of our adversaries. Stillinyjieet.

In paraphrase, or translation with latitude, the au- thor's words are not so strictly followed as his sense, and that too amplified, but not altered □□□ such is Mr. Waller's translation of Virgil's fourth yEneid.

Diyden.

What needs he paraphrase on v.hat we mean 1 We were at worst but wanton ; he's obscene. Id.

All the laws of nations were but a paraphrase I'pon this standing rectitude of nature, that was ready to enlarge itself into suitable determinations, upon all emergent obiecls and occasions. South.

The Chaldean paraphrast renders Gerah by iMeath.

Arbnlhnot.

Where translation is impracticable, they may pa- raphrase. *But it is intolerable that, under a pretence of paraphrasing and translating, a way should be suf- fered of treating authors to a manifest disadvantage. Felton on the Classicks,*

PARAPHRENI'TIS, n. s. Fr. paraphrenesiv ; Gr. Trapa and ipˆiviTig, phrenzy.

Paraphrenitis is an inflammation of the diaphragm. The symptems are a violent fever, a most exquisite pain increased upon inspiration, by which it is dis- tinguished from a pleurisy, in which the greatest pain is in expiration. Arbuthnot.

PARAPHYMO'SIS disorders. See Medicine and Surgery.

PARARA, an Anglo-American word, used in the Northern United States, for what is called in tlie Southern States a savannah, i. e. an ex- tensive rich plain, without trees, but covered with grass. Some of these are forty miles broad, and several hundred miles long ; and exhibit fine prospects.

PAR'ASANG, n. .s. Barb. Lat. parmnnga. A Persian measure of length.

Since the mind is not able to frame an idea of any space without parts, instead thereof it makes use of the common measures, which, by familiar use, in each country, have imprinted themselves on the me- mory ; as inches and feet, or cubits and parasangs.

Locke.

The Parasang is an ancient measure, differing at different times, and in different places ; being usually thirty, sometimes forty, and sometimes fifty stadia, or furloiigs. The word, according to Littleton, has its rise from parasch angarias, q. d the space a postman rides from one station, an-

garia, to another.

PARASCENIUM, in the Grecian and Roman theatres, was a place behind the scenes whither the actors withdrew to dress and undress them- selves. The Romans more frequently called it Postcenium. See Theatre.

PARASELENE, in natural philosophy, a mock moon ; a meteor or phenomenon encom- passing or adjacent to the moon, in form of alu- minous ring; wherein are observed sometimes one and sometimes two or more images of the moon.

PARASEMON, WapaaipLov, among the Greeks, was the figure carved on tlie prow of the ships to distinguish them from each other. This figure was generally that of a bull, lion, or other animal ; sometimes the representation of a moun- tain, tree, flower, &c.

PAR'ASITE, n. s. ˆ Fr. parasite ??? Lat. para-

Parasit'ic, adj. >sita; Gr. Trapa and uitoq,

Parasit'ical. j bread. A flatterer at one's table ; one that earns his welcome at table by flattery.

He is a flatterer,

A parasite, a keeper back of death.

Who gently would dissolve the bands of life.

Which false hopes linger. Shakspeare.

Most smiling, smooth, detested parasites, Courteous destroyers, affable wolves, meek bears. You fools of fortune. Id.

Diogenes, when mice came about him, as he was eating, said, I see that even Diogenes nourisheth parasites. Bacon.

O, your parasite'

Is a roost gracious thing, dropped from above ;

Not bred 'mongst clods, and clod-polls here on earth

I mnse ; the mystery was not made a science,

It is so liberally profest. Ben Jonson.

Some parusitick preachers have dared to call those martyrs, who died fighting against me.

King Charles. The bishop received small thanks for his purasiiic/i presentation. Hakewell on Providence.

Thou, with trembling fear. Or like a fawning parasite, obeyed ; Then to thyself ascribest tlie truth foretold.

Milton. The people sweat not for their king's delight, T' enrich a pimp, or raise a parasite. Dryden.

Parasite, among the ancient Greeks, was originally a very reputable title ; the parasites being a kind of priests, at least ministers, of the gods, in the same manner as the epulones were at Rome. They took care of the sacred corn, or the corn destined for the service of the temples and the gods, viz. sacrifices, feasts, &c. They had even the intendance over sacrifices ; and took care that they were duly performed. At Athens there was a kind of college of twelve parasites ; each people of Attica furnishing one, who was always chosen out of the best families. Polybius adds, that a parasite was also an honorable title among the ancient Gauls, and was given to their poets.

PAR'ASOL, n. s. Fr. paraaol (from sol, the sun) ; Ital. parrusole. A small canopy or um- brella carried over the head, to shelter from rain and the heat of the sun.

It is made of leather, taftety. oil cloth, ►►>:cˆ mount- ed on a stick, and opened or shut at pleasure, by means of pieces of whalebone that sustain it. The Ejist Indians never stir without a parasol.

Dr. A. Rees.

PAR'BOIL, V. a. Fr. parbouiller. To half boil ; boil in part.

Parboil two large capons upon a soft fire, by the space of an hour, till, in effect, all the blood be gone.

Bacon. From the sea into the ship we turn, lA\e parboiled wretches, on the coals to burn.

Donne.

PAR'BREAK, v. n. & n. s. Belg. hrecker" Teut. verbrccke. To vomit. Obsolete.

Her filthy parbreak all the place defiled has.

Spenser.

PARBUNCLE, in a ship, a rope almost like a pair of slings ; it is seized both ends together, and then put almost double about any heavy thing that is to be hoisted in or out of the ship; having the hook of the runner hitched into it, to hoist it up by.

PARC/E, in heathen mythology, goddesses who were supposed to preside over the accidents and events, and to determine the date or period of human life. The Parens were three, Clotho, Lachesis, and Atropos. They spun the thread of men's lives ; Clotho held the distaflf and drew the thread; Lachesis twirled the spindle, and spun it ; and Atropos cut it. The ancients re- present the Parcae divers ways : Lucian, in the shape of three poor old women, having large locks of wool, mixed with daflbdils on their heads. Others represent Clotho in a long robe of divers colors, wearing a crown upon her head adorned with seven stars ; Lachesis in a robe

beset with stars; and Atroposclad in black. The ancients imagined that the Parca; used white wool for a long and happy life, and black for a short and unfortunate one.

PAIl'CEL, n. s. & V. a. Fr. parcellc ; Barb. Lat. particula. A small bundle ; small part of a whole ; any small quantity ; to parcel is, to divide out into parts or portions ; also (obsolete) to make up into a mass.

And they set themselves in the midst of that parcel, and delivered it, and slew the Philistines.

1 Chroii. xi. 14. This youthful parcel. Of noble batchelors stand at my bestowing.

Shakspearff. What a wounding shame, that mine own servant should parcel the sum of my disgraces by addition of his envy ! Id.

Women, Silvius, had they marked him In parcels, as I did, would have gone near To fall in love with him. Id.

An inventory thus importing The several parcels of his plate, his treasure.

Rich stuffs and ornaments of household. Id. This is to drive a wholesome trade, when all other petty merchants deal but for parcels.

Decay of Piety.

Those ghostly kings would parcel out my power.

And all the fatness of my land devour. Dryden.

Tliey came to this conclusion ; that unless they could, by a. parcel of fair words and pretences, en- gage them into a confederacy, there was no good to be done. L'Estrange.

With what face could such a great man have begged such a parcel of the crown lands, one a vast sum of money, another the forfeited estate 1

Davenant. If they allot and parcel out several perfections to several deities, do they not, by this, assert contra- dictions, making deity only to such a measure per- iect ? whereas a deity implies perfection beyond ail measure. South.

What can be rationally conceived in so transpa- rent a substance as water for the production of these colours, besides the various sizes of its fluid and globular parcels 1 Newton,

The same experiments succeed on two parcels of the white of an egg, only it grows somewhat thicker upon mixing with an acid. Arbuthnot.

I have known pensions given to particular persons, any one of which, if divided into smaller parcels, and distributed to those who distinguish themselves by wit or learning, would answer the end. Swift.

PARCELLES (John), Parcelled (Julius), two eminent Flemish painters of the seventeenth century, father and son, who excelled in painting sea-pieces.

PAR'CENER, n. s. } In common law.

Par'cenary. iWhen one dies pos-

sessed of an estate, and having issue only daugh- ters, or his sisters be his heirs ; so that the lands descend to those daughters or sisters ; these are called parceners, and are but as one heir : hence parcenary, from Fr. parsonier, is holding or oc- cupying of land by more persons pro indiviso, or by joint tenants, otherwise called co-parce- ners ; for if they refuse to divide their common inheritance, and choose rather to hold it jointly, they

are said to hold in parcinarie.

PARCH, V. a. From Gr. 7r►►pi(cai►►v, says Ju- nius ; from pcrcoquo (Skinner), ‘ perhaps,’ adds Dr. Johnson, ‘ from perustus, burnt, or from

parchment, the effect of fire upon parchment being almost proverbial.’ To scorch; bum, slightly or superficially ; dry up.

The parched ground shall become a pool.

Isaiah xxxv. 5. Hath thy fiery heart so parcht thine entrails. That not a tear can fall ? Sliahspeare.

Did he so often lodge in open field. In winter’s cold, and summer’s parching heat, To conquer France ? Id. Henry I V.

Torrid heat. And vapours as the Libyan air adust, Began to parch that temperate clime.

Milton. I’m stupified with sorrow, past relief Of tears ; parch’d up and withered with my grief,

Dryden. The Syrian star With his sultry breath infects the sky ; The ground below is parched, the heavens above us

f^y- ... ^’^►►►

Without this circular motion of our earth, one hemisphere would he condemned to perpetual coid and darkness, the other continually roasted and parched by the sun beams. Rai).

If, to prevent the acrospiring, it be thrown thin, many corns will dry and parch into barley.

Mortimer, Full fifty yjars I have endured the biting winter’s blast. And the severer heats of parching summer.

Rowe.

A man distressed with thirst in the parched places of the wilderness, searches every pit, but finds no water. Rogers.

The skin grows parched and dry, and the whole body lean and meagre. Blackmore.

PARCH’MENT, n. s. Yx.parchemin; Latin Pergamena, chaj-te. Skins dressed for writing. The skins of sheep are, in particular, called parch-

ment; those of calves vellum.

I have mo thingis to write to you. and 1 wolde not hi parchemyn and enke, for 1 hope I schal come to you and speke mouih to mouth that youre ioie be ful. Wiclif. 2 Jon.

Is not this a lamentable thing, that the skin of an innocent lamb should be ma.de parchment ; that ˆarcA- ment being scribbled over, should undo a man ?

Shakspeare. Henry VI.

In the coffin, that had the books, they were found as fresh as if newly written, being written in parch- ment, and covered with watch candles of wax.

Bacon.

Like flying shades before the clouds we shew. We shrink like parchment in consuming flame.

Dryden.

Parchment, the skins of sheep and goats pre- pared for writing upon, covering books, &c. The word comes from the Latin Pergamena, the ancient name of this manufacture, which is said to have been t;jken from the city of Pergamos, to Eumenes, the king of which, its invention is usually ascribed ; though, in reality, that prince appears rather to hare been the improver than the inventor of parchment. For the Persians of old, according to Diodorus, wrote all their records on skins ; and the ancient lonians, as we are told by Herodotus, made use of sheep skins and goat skins in writing. 'The manufacture of parchment is begun by the skinner, and finished by the parchment-maker. The skin being stripped of its wool and placed in the lime-pit,

the skinner stretches it on a frame, and pares off the flesh with an iron instrument ; this done, it is moistened with a rag ; and powdered chalk being spread over it, the skinner takes a large pumice- stone, flat at bottom, and rubs over the skin, and thus scours off the flesh ; he then goes over it again with the iron instrument, moistens it as before, and rubs it again with

the pumice-stone without any chalk underneath : this smooths and softens the flesh-side very considerably. He then drains it again, by passing over it the iron instrument as before. The flesh-side being thus drained, by scraping off the moisture, he in the same manner passes the iron over the wool or hair-side : then stretches it tight on a frame, and scrapes the flesh-side again : this finishes its draining ; and the more it is drained the whiter it becomes. The skinner now throws on more chalk, sweeping it over with a piece of lamb- skin that has the wool on ; and this smooths it still farther. It is now left to dry, and when dried, taken off the same frame by cutting it all round. The skin, thus far prepared by the skinner, is taken out of his hands by the parch- ment maker, who first, while it is dry, pares it on a summer (which is a calf skin stretched in a frame), with a Sharper instrument than that used by the skinner ; and, working with the arm from the top to the bottom of the skin, takes away about one-half of its thickness. The skin, thus equally pared on the flesh side, is again rendered smooth by being nibbed with the pumice-stone, on a bench covered with a sack stuffed with flocks ; which leaves the parchment in a con- dition fit for writing upon. The parings, thus taken off the leather, are used in making Glue, Size, &c. See these articles. What is called vellum is only parchment made of skins of abortives, or at most sucking calves. This has a much finer grain, and is whiter and smoother than parchment; but is prepared in the same manner, except its not being passed through the lime-pit. See Vellum.

PARCIEUX (Anthony de), an eminent French mathematician, born at Uzes in 1703. lie was a member of the Academies of Sciences of Paris, Sweden, and Berlin ; and was appointed censor royal. He published a correct and me- thodical treatise on Rectilinear and Spherical Trigonometry. He died in 1769.

PARD, n. s. \ Lat. parclus, pardalis. The Par'dale. S leopard ; in poetry, any of the spotted beasts.

The pardale swift, and the tiger cruel; Spenser.

As fox to lambs, as wolf to heifer's calf ; As pard to the hind, or step-dame to her son.

Shakspeare.

Ten brace of grey-hounds, snowy fair. And tall as stags, ran loose, and coursed around his

chair, A match for pards in flight, in grappling for the bear.

Drydeii.

PARDIES (Ignatius Gaston), an ingenious and learned French Jesuit, born at Paris in 1636. He was professor of rhetoric, and taught polite literature for several years. He also wrote several pieces in prose and verse. At length he devoted himself entirely to mathematics and natural philosophy. He died in 1673, of an in-

fectious disorder contracted by preaching to the prisoners in the Bicetre during the Easter holi— days. His Elements of Geometry are weL known. A translation of them has gone througti several editions. In 1672 he had a dispute with Sir Isaac Newton respecting his Theory of Light and Colors. ††† See Fhilosopkicul Transac- tions. 1672.

PARDO, a town of Spain in New Castile.

Paruo, Rio, a river of Brasil, which enters the Anhaudery, and finally the Parana, in lat, 21†† S. It is an insignificant stream, but of im- portance on account of the diamonds found in its bed, reputed to be the most valuable in Brasil. It is also the name of two other rivers in Brasil, one of them in the province of Cuy- aba, which enters the Parana.

PAR'DON, V. a. & Ji. s. ˆ Fr. pardonner ,

Par'donable, orf/. I hsitm perdono. To

Par'donableness, n. s.V forgive a crime or

Par'doxably, flt/y. k offence; excuse an

Par'doner, ††. s. J offender; remit the

penalty of a crime : pardon, as a noun substan- tive, is the act or instance of forgiveness or ˆe- mission ; forgiveness received ; warrant or in- strument of forgiveness or remission : pardonable is, excusable ; ve-aial ; that may be forgiven ; the noun substantive following and adverb corres- ponding : a pardoner, is one who forgives ; and, in ecclesiastical history, one of the retailers of papal indulgences.

I vf'ill pardon all their iniquities. Jeremiah.

He that pleaseth great men shall get pardon for iniquity. Ecclus. xx. 27.

Tliat which we do being evil, is notwithstanding by so much more pardonable, by how much the exi- gencies of so doing, or the difficulty of doing other- wise, is greater, unless this necessity or difficulty have originally risen from ourselves. Hooker.

That thou maj-est see the difference of our spirit, I pardon thee thy life before thou ask it. Shakspeare.

Sir, pardon me, it is a letter from my brother. Jd.

The battle done, and they within our power. Shall never see his pardon. Id. King Lear.

This is his pardon, purchased by such sin.

For which the p►►rrfo(ier himself is in. Stiakspeare.

A slight pamphlet, about the elements of archi- tecture, hath been entertained with some pardon among my friends. IVotton.

Saint John's word is, all sin is transgression of the law ; St. Paul's, the wages of sin is death : put these two together, and this conceit of the natural pardonubteness of sin vanishes away. Hall.

In a place called The Chappel of the Holy Cross of Seven Romans, are promised four score and ten thou- sand years of pardon from deadly sin. Jer. Taiilor.

But infinite in pardon is my judge. Milton.

There might you see Indulgences, dispenses, pardons, bulls. The sport of winds. W,

Forgivenness to the injured does belong.

But they ne'er pardon who commit the wrong.

Dryden.

What English readers, unacquainted with Greek or Latin, will believe me, when we confess we derive all that is pardonable in us from ancient fountains.

Id.

I may judge when I write more or less pardonably

A man may be safe as to his condition, but, in the mean time, dark and doubtful as to his apprehen- sions : secure in his pardon, but miserable in the ig-

PAR

Dorance of it ; and so passing all his days in the disconsolate, uneasy vicissitudes of hopes and fears, at length go out of the world, not knowing whither he goes. South.

A blind man sitting in the chimney corner is par- donable enough, but sitting at the helm, he is intole- rable. Id.

1 have sent you the history of my mind on this subject without any disguise : if it does not please you, pardon it at least, for it is the truth. Cnwper.

Pardon, in criminal law, is the remitting an offence committed against the king. His power of pardoning was said by our Saxon ancestors to be derived a lege suae diˆcnitatis : and it is de- clared in parliament, by slat. 27 Hen. VIII. c. 24, that no other person has power to pardon or remit any treason or felonies whatsoever ; but that the king hath the whole and sole power thereof united and knit to the imperial crown of this realm. In democracies there is no power of pardoning. The king may pardon all offences merely against the crown or tlie public ; except- ing, 1 . That, to preserve the liberty of the sub- ject, the committing any man to prison out of the realm, is by the habeas corpus act, 31 Car. II. c. 2, made a praemunire, unpardonable even to the king. Nor, 2, can the king pardon where private justice is principally concerned in the prosecution of offenders : Non potest rex gratiam facere cum injuria etdamnoaliorum. Therefore, in appeals of all kinds (which are the suit, not of the king, but of the party injured), the pro- secutor may release, but the king cannot pardon. Neither can he pardon a common nuisance, while it remains unredressed, or so as to prevent an abatement of it ; though afterwards he may re- mit the fine : because, though the prosecution is vested in the king to avoid the multiplicity of suits, yet (during its continuance) this offence .savours more of the nature of a private injury to each individual in the neighbourhood, than of a public wrong. Neither, lastly, can the king pardon an offence against a popular or penal sta- tute, after information brought ; for thereby the informer hath acquired a private property in his part of the penalty. There is also a restriction of a peculiar nature that affects the prerogative of pardoning, in case of parliamentary impeach- ments, viz. that the king's pardon cannot be pleaded to any such impeachment, so as to im- pede the enquiry and stop the prosecution of great and notorious offenders. In the reign of Charles II., when the earl of Danby pleaded the king's pardon, the commons voted, ' That a par- don is not pleadable in bar of an impeachment.' And it was enacted by the act of settlement, 1 2 & 13 W. III. 0. 2, ' that no pardon under the great seal of England shall be

pleadable to an impeachment by the commons in parliament.' But, after the impeachment has been solemnly heard and determined, it is not understood that the king's royal grace is farther restrained or abridged : for, after the impeachment and at- tainder of the six rebel lords in 1716, three of them were from time to time reprieved by the crown ; and at length received the king's most gracious pardon. "The effect of such pardon by the king is, to make the oflender a new man ; to acquit him of all corporal penalties and forfeitures annexed to that offence for which he obtains his Vol. XVI.

pardon ; and not so much to restore his former, as to give him new credit and capacity. But nothing can restore or purify the blood when once corrupted, if the pardon be not allowed till after attainder, but the high and transcendent power of parliament. Yet if a person attainted receives the kmg's pardon, and afterwards has a son, that son may be heir to his father ; be- cause the father, being made a new man, might transmit new inheritable blood ; though, had he been bom before the pardon, he could never have inherited at all. See King.

PARE, i;. 61. ˆ Fr. parer ; Lat. ;;oro. De- Pa'rinGjW. s.) duced by Skinner from the French 'purer les angles," to dress the horses' hoofs when they are shaved by the farrier : thus we first said, pare your nails ; and from thence transferred the word to general use. To cut off extremities ; to cut away by little and little ; diminish. If pare be used before the thing di- minished, it is followed immediately by its ac- cusative; if it precedes the thing taken away, or agrees in the passive voice with the thing taken away, as a nominative, it requires a particle, as awai/, off: a paring is that which is pared off; the rind.

And thou shalt bring her home to thine house ; and she shall shave her head and pare her nails.

Deut. xxi. 12. The creed of Athanasius, and that sacred hymn of glory, than which nothing doth sound more hea- venly in the ears of faithful men, are now reckoned as superfluities, which we must in any case pare away, lest we cloy God with too much serrice.

Hooker. I am a man, whom fortune hath cruelly scratched. ••• 'Tis too late to pare her nails now. Shakspeare.

I have not alone Imployed you where high profits might come home ; But pared my present havings to bestow My bounties upon you. Id. Henry VIII.

The lion moved with pity, did endure, To have his princely paws all pared away.

Shakspeare. Virginity breeds mites, much like a cheese ; and consumes

itself to the very paring. Id.

The king began to pare a little the privilege of clergy, ordaining that clerks convict should be burned in the hand. Bacon's Henry I II.

Pick out of tales the mirth, but not the sin. He pares his apple, that will cleanly feed.

Herbert. A hone and a parer, like sole of a boot. To pare away grasse, and to raise up the root.

Tusser. Whoever will partake of God's secrets must first look into his own, he must pare off whatsoever is amiss, and not without holiness approach to the holiest of all holies. Taylor.

The most poetical parts, which are description and images, were to be pared away, when the body was swoln into too large a bulk for the representa- tion of the stage. Dryden.

In IMay, after rain, pare off' the surface of the earth, and with the parings rane your hills high, and enlarge their breadth. Mm-timer.

All the mountains were pared off the earth, and the surface of it lay even, or in an equal convexity every where with the surface of the sea. Burnet.

The sword, as it was justly drawn by us, so can it scarce safely be sheathed, till the power of the great

troubler of our peace be so far pared and reduced, as that we may be under no apprehensions.

Atteibury. 'Twere well if she would pare her nails. Pope. To his guest, tho' no way sparing, He eat himself the rind and paring. Id.

Pare (Ambrose), an eminent French surgeon of the sixteenth century, born at Laval in Maine, lie was surgeon to several kings of France. Be- ing a Protestant he would have been involved in the massacre of St. Bartholemew's day, had not Charles IX. himself shut him up in his chamber, saying, ' a man so useful to all the world ought not to perish in

such a manner.' He died at an advanced age, in 1590.

Pare, or Parens (David), D. D., a celebrated Protestant divine, born in 1 548, at Francolstein, in Silesia. He studied at Hermsburg under the learned Christopher Schilling; afterwards at Heidelberg, under Zach. Ursin. He was much patronised by Albert Kindler, and prince Casi- mir ; was admitted minister of Schlettenbach in 1571; afterwards of Hemsbach, in Worms, where, in 1574, he married the sister of John Stibelius; in 1577 he became minister of Oger- sheim ; and in 1584 professor in the college of Heidelburg. In 1591 he was admitted D. D., and in 1602 succeeded Tossanus as professor of divinity. He published, 1 . The German Bible, with notes, at Neustadt, in 1589; 2. A Com- mentary on the Epistle to the Romans ; 3. Se- veral tracts against Bellarmin and the Jesuits : witli other polem ical pieces ; and died at Pareanum in 1622.

Pare (Philip), son of the preceding, was born at Hemsbach in 1576; studied at Neustadt and Heidelberg ; became eminent for grammatical erudition ; and, under the patronage of the elector palatine, visited the universities of Basil in 1599, and Geneva in 1600. He became rector of Neustadt College in 1612; principal of that of Hanau in 1645; published his father's life and exegetical works in 1647 ; several tracts on grammar; with commentaries on the Scriptures, and other theological works.

Pare (Daniel), son of Philip, was also emi- nent for classical learning, and particularly for his skill in the Greek language. He published many learned pieces ; particularly Musaeus's Hero and Leander, with notes ; Mellificium Atticum, a selection from Greek Authors, &c. He was murdered by robberS in 1645.

PAREJA (John), an eminent painter, bom in the West Indies, and originally a slave to Diego Velasquez, a celebrated painter. He acquired the art by studying it privately, without his mas- ter's knowledge. Philip IV. one day visiting Vˆelasquez's museum, discovered his merit and gave him his liberty ; yet his attachment to Ve- lasquez was so strong that he continued with him till his death. His portraits are equal to those of Velasquez. He died in 1670, aged sixty.

PAREIRA Frava, in the materia medica, a kind of oblong and large root brought from Bra- sil. ••• It is a diuretic of no mean character, and has done great service in nephritic cases. In pleuri- sies and quinsies it has been attended with more .success than almost any medicine we know of singly.

*PARELCON, in grammar, a figure by which a word or syllable is added *o the end of another.*

PAREMBOLE, in rhetoric, a figure wherein something relating to the subject is inserted in the middle of a period. All the difference be- tween the parembole and the parenthesis, ac- cording to 'ossius, is, that the former relates to the subject in hand, whereas the latter is foreign to it.

PARENCHYM'ATOUS, or) From paren-

Paren'chymous, adj. ˆ chyma. Greek

7rap►►y;ˆi;jua, a spongy or porous substance ; in physic, a part through which the blood is strained : relating to the parenchyma ; spongy.

Ten thousand seeds of the plant hart's-tongue, hardly make the bulk of a pepper-corn. Now the covers and true body of each seed, the pnrenchuma- toiis and ligneous parts of both moderately multi- plied, afford an hundred thousand millions of formed atoms in the space of a pepper-corn. Grew.

Those parts, formerly reckoned parenchymatous, are now found to be bundles of exceedingly small threads. Ckeune.

Parenchyma, in anatomy, isaterm introduced by Erisistratus signifying all that substance which is contained in the interstices betwixt the blood- vessels of the viscera, which he imagined to be extravasated and concreted blood.

Parenchyma of Plants. Grew applies this term to the pith or pulp, or ihat inner part of a fruit or plant through which the juice is supposed to be distributed.

PARENT (Anthony), as Dr. Watkins calls him, or Unsoine, according to others, a mathe- matician, born at Paris in 1666. He showed an early propensity to mathematics. At fouiteen he was put under a master, who taught rhetoric at Chartres. Here he saw a dodecahedron upon every face of which, except the lowest, was deli- neated a sun-dial. Struck with the curiosity of these dials, he attempted drawing one himself. He then undertook to write a Treatise upon Gno- monics, and a book of Geometry. His friends then sent for him to Paris to study the law ; but these studies were no sooner finished than he re- turned to mathematics. He then took pupils ; and, fortification having attracted particular no- tice, he turned his attention to it, and made two campaigns with the marquis of Aligre, by which he instructed himself in viewing fortified places ; of which he drew a number of plans. M. de Billettes, being admitted in the Academy of Sci- ences at Paris in 1699, as their mechanician, nominated, for his disciple. Parent, who excelled chiefly in this branch. Though his abilities were acknowledged, yet his impetuosity of tem- per provoked opposition ; and he rose no higher than assistant member for geometry. He enjoyed this

promotion but a short time ; for he wa.< taked off by the small pox the same year, 171G aged fifty. He was author of many pieces, chiefVy on mechanics and geometry.

PA'liENT, 7). s. ˆ Fr. parent ; 'La.i. paremi.

Par'entage, >A father or mother: pa

Paren'tal, adj. J rentage is birth; extraction condition by birth : parental, [)ertaining to, or becoming a parent.

All true virtues are to honour true religion as their parent, and all well ordered commonwcales to love her as their chiefest stay. Ilvoker.

PARENT AND CHILD.

57&

A gentleman of noble -parentage. Of fair (lenieasns, youthful and nobly allied.

Hhakspeare. Though men esteem thee low of parentufˆe, Thy father is the eternal king. Milton.

*It overthrows the careful course and ***parental pro- vision of nature, whereby the young ones, newly ex- cluded, are sustained by the dam. Browne.*

His custom was, during the warmer season of the year, to spend an hour before evening-prayer in catechising; whereat the parents and older sort were wont to be present. Fell,

As a public parent of the state, My justice, and thy crime, requires thy fate.

Dryden, To his levee go, And from himself your pirentage may know. Id,

In vain on the dissembled mother's tongue Had cunning art, and sly persuasion hung ; And real care in vain and native love In the true parent's panting breast had strove.

Prior, We find him not only boasting of his parentage, as an Israelite at large, but particularizing his descent from Benjamin. Atterbury.

These eggs hatched by the warmth of the sun into little worms, feed without any need of parental care,

Derham. Young ladies, on whom parental controul sits heavily, give a man

of intrigue room to think that they want to be parents. Clarissa.

So thou, sweet rose-bud, young and gay, Shalt beauteous blaze upon the day. And bless the parent's evening ray

That watched thy early morning. Burns.

Sorrow has, since they went, subdued and tamed The playful humor ; he could now endure (Himself grown sober in the vale of tears). And feel a parent's presence no restraint. Cowper, 'Tis the most asinine employ on earth. To hear them tell of parentage and birth. And echo conversations dull and dry, Embellished with ••• He said, and so said I. Id.

On cliff he hath been known to stand. And rave as to some bloody hand Fresh severed from its parent limb. Invisible to all but him. Which beckons onward to his grave. And lures to leap into the wave. Byron.

Parent and Child. The law of England on this subject may be divided into the duties and authority/ of parents, first, as to their legiti- mate children ; secondly, their illegitimate children ; and, lastly, the duties of children to tlieir parents, and their rights and incapacities.

Sect I. ••• Of the Duty of Parents to their Legitimate Children, and their Au- thority.

A legitimate child is he that is born in lawful wedlock, or within a competent time afterwards. Pater est quern nuptiae demonstrant is the rule of the civil law, and which holds whether the nuptials happen before or after the birth of the child. But in the English law the rule is nar- rowed; for the niiptials must be precedent to the birth, of which we shall further treat in the second section.

1. Maintenance. It is a principle of the English law that there is an obligation on every man to provide for his children, and the manner in which this obligation shall be performed is thus pointed out by various statutes. The father

and mother, grandfather and grandmother, of poor impotent persons shall maintain them at their own charge, if of suificient ability, according as the quarter sessions shall direct ; and, if a parent runs away and leaves his children, the church- wardens and overseers of the parish shall seize his rents, goods, and chattels, and dispose of them towards their relief. By the interpreta- tions which the courts of law have made upon these statutes, it is said by Blackstone that if a mother or grandmother marries again, and was before such second marriage of sufficient ability to keep the child, the husband should be charged to maintain it; for this, being a debt of hers

when single, should like others extend to charge the husband. But at her death, the relation being dissolved, the husband was under no further obligation. The statute upon which the construc- tion is here given is 43 Eliz. c. 2 ; but it has since been determined that this statute extends to relations by blood only, and not those by affi- nity, and that, therefore (contrary to the position in the commentaries), a man is not bound to maintain the children of his wife by a former husband. See Rex, v. Munden, 1 Stra. 190; Tubb, V. Harrison, 4 Term Rep. 118. No per- son is, however, bound to provide a maintenance for his issue, unless where the children are impotent and unable to work either through infancy, disease, or accident, and then is only obliged to find them necessaries, the penalty on refusals being no more than 20s. a month.

A late statute, the 5 Geo. IV. c. 83, provides that persons, being able but wilfully neglecting to work to support their families, whereby they become chargeable to the parish, shall be deemed idle and disorderly, and be punishable by im- prisonment and hard labor, not exceeding a month. Every person running away and leaving his wife or child chargeable shall also be deemed a rogte and vagabond. The wages of seamen and other persons in public employments who abscond from their families, as well as the allowance of Greenwich pensioners, are applica- ble for the maintenance of their children under the provisions of 59 Geo. III., c. 12.

2. Protection is a duty rather permitted than enjoined by any municipal laws, nature in this respect working so strongly as to need rather a check than a spur. A parent may, by our laws, maintain and uphold his children in their law- suits without being guilty of the legal crime of maintaining quarrels. A parent may also justify an assault and battery in defence of the persons of his children.

3. Education. The last duty of parents to their children is that of giving them an education suitable to their station in life : a duty pointed out by reason, and of far the greatest importance of any. Our laws, though defective in this par- ticular, have in one instance made a provision for training the rising generation : since the poor and laborious part of the community, when past the age of nurture, are taken out of the hands of tlieir parents by the statutes for apprenticing poor children. The rich, however, are left at their own option whether they will bveed up their children to be the ornamei^‘s or disgrace o. their family.

4. Tlie aulhority or power of parents over their cliildren is derived from the

former consi- i^leration, their duty : this authority being given tliem partly to enable the parent more effectually to perform his duty, and partly as a recompense for his care and trouble in the faithful discharge of it. He may lawfully correct his child, being under age, in a reasonable manner ; for this is for the benefit of his education. The consent or concurrence of the parent to the marriage of his child under age was also directed by our ancient law to be obtained, but now it is absolutely ne- cessary, for without it the contract is void. A father has no more power over his son's estate than as his trustee or guardian ; for though he may receive the profits during the child's mi- nority, yet he must account for ttiem wlien he comes of age. He may indeed have the benefit of his children's labor while they live with him ; but this is no more than he is entitled to from his apprentices or servants. The legal power of a father (for a mother as such is entitled to no power, but only to reverence and respect), over the persons of his legitimate children, ceases at the age of twenty- one, for tliey are then enfran- chised by arriving at years of discretion, or that point which the law has established (as some must necessarily be established), when the empire of the father or other guardian gives place to the empire of reason. Yet till that age arrives this empire of the father continues even after his death ; for he may by his will appoint a guardian to his children. He may also delegate part of his parental authority during his life to the tutor or schoolmaster of his child, who is then in loco parentis, and has such a portion of the power of the parent committed to his charge, viz. that of restraint and correction, as may be necessary to answer the purposes for which he is employed.

Sect. II. ❓❓❓ Of Illegitimate Children, and THE Liability and Authority of their Parents.

1. Who are deemed illegitimate. A bastard, by our English law, is one that is not only be- gotten but born out of lawful matrimony. The civil and canon laws do not allow a child to re- main a bastard if the parents afterwards inter- marry. But whether they are to be considered as legitimate from the time of the marriage of their parents only, or whether their legitimacy has relation back to' the time of their birth, is a point variously disputed by the civilians and canonists : the prevailing opinion seems to be that they are to be considered as legitimate from the time of tlieir birth to all purposes, but those in which to consider them as such would operate to the detriment of a third person (Co. Lit. 233, n. 1) ; and herein they differ most materially from our law, which, though not so strict as to require that the child shall be begotten, yet makes it an indispensable condition to make it legitimate that it shall be born after lawful wed- lock. All cliildren, therefore, born before matri- mony, are bastards by our law; and so it is of all children born so long after the death of the iiusband that, by the usual course of gestation, they could not be begotten by him. But,

this being a matter of some uncertainty, the law is not

exact to a few days. See Co. Lit. 123 n. (1 and 2). And this gave occasion to a proceeding at common law, where a widow is suspected to feign herself with child in order to produce a supposititious heir to the estate. In this case the heir presumptive may have a writ de ventre in- spiciendo to examine whether she be with child or not, and if she be to keep her under proper restraint till delivered ; but if the widow be, upon due examination, found not pregnant, the pre- sumptive heir siiall be admitted to tiie inherit- ance, though liable to lose it again on the birth of a child within forty weeks from the death of the husband ; but if a man dies and his widow soon after marries again, and a child is born within such a time as that by the cours- of nature it might have been the child of either hus- band, in this case he is said to be more than ordinarily legitimate; for he may, wheo he ar- rives at the years of discretion, choose which of the fathers he nleases. Co. Lit. 8. But this doctrine is questioned by Brooke, from which it seeiDs as if lie thought it reasonable that the cir- cumstances ofthe case, instead of the choice of the issue, should determine who is the father. Su- pra, n. (7); and see Co. Lit. 123, latter part of n. (1).

As bastards may be born before the coverture or marriage state is begun, or after it is deter- mined, so also children, born during wedlock, may in some circumstances be bastards. As if the husband be out of the kingdom of England (or, as the law somewhat loosely phrases it, extra quatuor mana) for above nine months, so that no access to his wife can be presumed, her issue during that period shall be bastards. But gene- rally during the coverture access of the husband, it is said, shall be presumed, unless the contrary can be shown, which is such a negative as can only be proved by showing him to be elsewhere. Subsequent decisions, however, have relaxed this rule ; and it is now held to be unnecessary that proof should be adduced of the non access of the husband ; the modern practice (if not the more ancient, see 1 Salk 123, Stra. 925, 3 P. Wms. 276) being to leave it to the jury to de- cide, under all the circumstances of the case, whether access may reasonably be presumed to have been had or not. 4 Term. Rep. 25. Ibid. 366. In a divorce, a raensa et thoro, if the wife breeds children they are bastards, for the law will presume the husband and wife confornfable to the sentence of separation, unless access be proved ; but, in a voluntary separation by agree- ment, the law will suppose access, unless the negative be shown. So also, if there be an ap- parent impossibility of procreation on the part of the husband, as if he be only eight years old, or the like, there the issue of the wife shall be bastard. Likewise in case of divorce in the spi- ritual court, a vinculo matrimonii, all the issue born during the coverture are bastards, because such divorce is always upon some cause that ren- dered the marriage unlawful and null from the beginning.

2. Of the liability of parents for their illegiti- mate children. ••• The method in which the English law provides maintenance for them is as follows : ••• When a woman is delivered, or declares herself

V, ith child, of a bastard, and will by oatb, before w justice of peace, cliarye any person as having V<'t her with child, the justice shall cause such person to be apprehended, or appear at tlie next rnar'ier sessions, to dispute and try the fact. But if liie woman dies, or is married before delivery, ' r miscarries, or proves not to have beeu with < hild, the person sha'l be discharged ; otherwise i!ie sessions, or two justices out of the sessions, upon original application to them, may take ••• rder for the keeping of the b; stard by charging the mother or the reputed fiti er with the pay- ment of money or other susientation, for that purpose. And if such putative fallier or lewd mother run away from the parish, the overseers, by direction of two justices, may seize their rents, goods, and chattels, in order to bring up the bastard child. Yet such is the humanity of our laws that no woman can be compulsively questioned concerning the father of her child till one month after delivery, wjiicii indulgence is, however, frequently a hardship upon parishes by giving the parents opportunity to escape.

Besides the expense of maintenance the father is liable, by 49 Geo. III. c. 68, to the expenses of the accouchement, with the costs of appre- h tiding, and order of filiation, not exceeding t'lO, and subject to the discretion of the magis- t ales or quarter sessions. The order must be made by two justices or more. By the same statute, a justice may commit the father to jail for three months, to hard labor, if he refuse to pay without sufficient cause. An appeal against the order of filiation must be made to the next sessions, and ten days previous notice given to the justices and overseers. If the father agree to indemnify the parish, the security given is vested in the overseers, who may sue as such. The parish however is only entitled to indemnify for actual expense; and if a sum be paid, in gross, as a discharge for the liability, and the child should die, or cease to be a burthen before the sum is expended, the father may recover back the difference ; the reason for%vhich is that other- wise it would be the interest of the parish to neglect the child, against which the law thus hu- manely provides.

3. Of' the power of the parents as to itlegiti- rnate children. ••• Though the father of a legitimate child is entitled to the custody of it, the mother is preferred to the putative father of an illegiti- mate child ; and if the putative father of a bastard obtain possession of it by fraud, the court will order it to be restored on the application of the mother. 5 Term Reports

Sect. III. ••• Of the Duties of Children: AND THEIR Rights and Incapacities.

1. The duties of children to th^ir parents arise flora a principle of natural justice and retribu- tion ; for to those who gave us existence we naturally owe subjection and obedience during our minority, and honor and reverence ever after. They who protected the weakness of our infancy are entitled to our protection in the infirmity of their age; they who, by sustenance and educa- tion, have enabled their offspring to prosper, ought in return to be supported by that offspring in case they stand in need of assistance. Upon

this principle proceed all the duties of children to their parents which are enjoined by positive laws. The law does not hold the tie of nature to be dissolved by any misbehaviour of the pa- rent, and therefore a child is equally justifiable in defending the person or maintaining the cause or suit of a bad parent as a good one ; and is equally compellable, if of sufficient ability, to maintain and provide for a wicked and unnatural progenitor as for one who has shown the greatest tenderness and parental duty. Dr. Brown, it seems, was inclined to think, contrary to the opinion of lord Holt, that a grandchild is not compellable to relieve an indigent grandfather ; but, according to professor Christian, there seems no doubt that the court of king's bench would determine the duty to be reciprocal, and would construe any ambiguous expression in favor of the discharge of such a natural and moral obligation.

2. Our law has made no provision to prevent the disinheriting of children by will : leaving every man's property in his own disposal upon a principle of liberty in this as well as every other action. Heirs, however, and children are favorites of our courts of justice, and cannot be disinherited by any dubious or ambiguous words, there being required the utmost certainty of the testator's intentions to take away the right of an heir.

3. Of the rights and incapacities of bastards. ••• The rights of a bastard are few, being only such as he can acquire ; for he can inherit nothinj, being looked upon as the son of nobody, and sometimes called filius nuUius, sometimes filius populi. Yet he may gain a surname by repu- tation, though he has none by inheritance. All other children have their primary settlement in their father's parish, but a bastard in the parish where born, for he has no father. However in cases of fraud, as if a woman be sent either by order of justices, or comes to beg as a vagrant to a parish which she does not belong to, and drops her bastard there, the bastard shall in th' first case be settled in the parish whence she was illegally moved, or

in the latter case in the mo- ther's own parish, if the mother be apprehended for her vagrancy. Bastards also born in any licensed hospital for pregnant women are settled in tlie parishes to which the mothers belong.

4. The incapacity of a bastard consists prin- cipally in this, that he cannot be heir to any one, neither can he have heirs but of his own bodv; for, being nullius tilius, he is therefore of kin to nobody, and has no ancestor from whom anv in- heritable blood can be derived. By the common law it is held that a bastard is incapable of hold- ing any ecclesiastical benefice.

In ail other respects there is no distinction between a bastard and another man. Abastaiu may lastly be made legitimate and capable of inheriting by the transcendent power of an act of parliament, and not otherwise, as was done in the case of John of Gaunt's bastard children by a statute of Richard II.

PARENTALIA, in antiquity, funeral obs6- quies, or the last duties paid by children to their deceased parents.

PARENTHESIS, n.s. Fr. parenthese; Gr.

****rapa tv riS'ij/ti. A sentence so included in another, as that it may be taken out, without injuring the sense of that which encloses it : and commonly marked thus, ( ).*

In vain is my person excepted by a parenthesis of words, when so many are armed against me with swords. King Charles.

But to return from my parenthesis. Barrow.

In his Indian relations are contained strange and incredible accounts ; he is seldom mentioned without a derogatory parenthesis, in any author.

Browne. Thou shalt be seen,

Tho' with some short parenthesis between,

High on the throne of wit. Dryden.

Don't suffer every occasional thought to carry you away into a long parenthesis^ and thus stretch out your discourse, and divert you from the

point in hand. Watts's Logick.

Parenthesis is defined by others, certain in- tercalary words inserted in a discourse, which interrupt the sense, but seem necessary for the better understanding of the subject. But this is not a definition of the parenthesis, but of the sentences included in it. Dr Johnson's is strictly accurate. The parentheses are often misapplied by authors and printers, by being made to en- close words at the end of a sentence, where they are quite unnecessary, and stdl more, when they are made to enclose clauses without which the sentence is incomplete.

PARENTIUM, an ancient sea-port town of Istria; {Plin. iii. c. 19).

PARER'GY, n.s. Gr. Trapa and tpyov, a work. Something unimportant ; something done by the bye.

Scripture being serious, and commonly omitting such parergies, it will be unreasonable to condemn all laughter. Browne.

PARESIS, in medicine, a palsy of the bladder, wherein the urine is either suppressed or dis- charged involuntarily.

PARETONEUM, in mineralogy, an earth found on the shores of Egypt, Cyrene, and Crete, used by the ancients in painting. It had its name either from a part of Egypt, near which it was gathered, or from a town in that kingdom, where it was usually sold. Vitruvius is of the first opinion, and Volaternus of the last. Of late it was thought to be lost; but it is still common on the shores of most of the islands of the Archi- pelago, though not observed or regarded ; and ts truly a very heavy and tough clay, of a fine vhite color, found in masses of different sizes, generally as soft as the softer clays within the strata ; and, by rolling about on the beach in this state, it gathers up the sand, small shells, and other foulnesses we always find about it. It is likely there are strata of it fine and pure in the cliffs there, and that the sea washes off masses of them in storms and high tides, which are what we find.

PARFAIT (Francis), a French dramatic writer, born at Paris in 1698. He wrote a tragedy en- titled Atree, and a comedy called Pan urge ; but his greatest work was a General History of the French Theatre, from its or-igin to his own time, in 15 vols. l2mo. He died in 1753, aged fifty- five.

PARFRE (John), an old dramatic writer of England, of whom nothintr is recorded, except

that he wrote a piece, entitled Candlemas Day or the Killing of the children of Israel ; a mys- tery ; 1512; republished in Mrs. Hawkins's Col- lection of

Old Plays, in 1773.

PARGA, a strong sea-port town on the coast of Albania, opposite the southern point of the island of Corfu. It was first built on the pre- sent rocky site on the decline of the Roman em- pire, near the Achem of ancient history, and has a double harbour, defended by a battery. The citadel commands a noble prospect. It has of- ten been independent.

In 1401 it iˆntered into an alliance with Ve- nice, which cv'.cinued to 1797. While inde- pendent of Ali Pacha it was an asylum to all the refugees of Albania and Greece : but in 1798 he reduced Bucintro, Prevesa, and the other forti- fied places on the adjacent coast. Parga alone bade defiance to him. In 1814 he marched against it with a military force : the Pargiots withstood the attack, but applied to the British in Corfu, and received a garrison from them, in the hope of being incorporated with the new repub- lic of the Ionian islands. To this, however, the British government did not give countenance ; and ultimately Ali, paying a pecuniary indem- nity to those of the inhabitants who should refuse to remain, obtained the transfer of the island. This compensation was so large (about ––200,000 sterling) that hardly any of the Pargiots chose to submit to the tyrant ; and the evacuation took place in 1819, most of them removing to the Io- nian Islands. Thirty miles south-west of Joan- nina.

PAR'GET, n. s. Fr. pargctte. Plaster laid upon roofs of rooms.

Gold was the parget, and the cieling bright Did shine all scaly with great plates of gold ; The floor with jasp and emerald was dight. Spenser,

There are not more arts of disguising our corpo- real blemishes than our moral ; and yet, while we thus paint and parget our own deformities, we cannot allow any the least imperfection of another's to re- main undetected. Government of the Tongue.

Of English talc, the coarser sort is called plaster or parget : the finer, spaad. Woodward.

Parget, in mineralogy, a name giving to se- veral kinds of gypsum, or plaster stone.

PARGETING, in building, is used for the plastering of walls, and sometimes for plaster itself. Pargeting is of various kinds: as, 1. White lime and hair-mortar laid on bare walls. 2. On bare laths, as in partitioning and plain ceiling. 3. Renewing the insides of the walls, or doubling partition walls. 4. Rough-casting on heart-laths. 5. Plastering on brick-work with finishing mortar, in imitation of stone-work ; and the like upon heart-laths.

PARHE'LION, n.s. Gr. Trapa and tjXiog. A mock sun. See below.

To neglect that supreme resplendency that shines in God for those dim representations of it, that we so doat on in the creature, is as absurd, as it were for a Persian to offer his sacrifice to a parhelion, in- stead of adoring the sun. Boyle.

PARHELIUM, or Parhelion, formed from irapa near, and i]Xiog, sun, in physiology, a mock sun or meteor, being a part of the heavens strongly illuminated by the image of the sun, and appearing like another sun, but often color-

ed and drawn out to a considerable length, in the form of a tail.

The pariielia usually accompany the coronse, or luminous circles, and are placed in the same circumference, and at the same height. Their colors resemble those of the rainbow; the red and yellow are on the side towards the sun, and tlie blue and violet on the other. Though there are coronae sometimes seen entire, without any parhelia; and sometimes parhelia without co- rona.

Tile apparent size of parhelia is the same as that of the true sun ; but they are not always round, nor always so bright as the sun ; and, when several appear, some are more bright than others. They are tinged externally with colors like the rainbow, and many of them have a long fiery tail opposite to the sun, but paler towards the extremity. Some parhelia have been ob- served with two, and others with three tails. These tails appear for the most part in a white horizontal circle, which generally passes through all the parhelia ; and, if it were entire, would go through the centre of the sun. Sometimes there are arcs of lesser circles, concentric to this, touching those colored circles which surround the sun. They are also tinged with colors, and con- tain other parhelia. Parhelia are generally si- tuated in the intersections of circles; but Cas- sini says that those which he saw, in 1683, were on the outside of the colored circle, though the tails were in the circle that was parallel to tiie horizon. M. iEpinus apprehends that parhelia with elliptical coronae are more frequent in the northern regions, and those with circular ones in the southern. They have been visible for one, two, three, and four hours together ; and in North America they are said to continue some days, and to be visible from sun-rise to sun-set. When the parhelia disappear, it sometimes rains, or there falls snow in the form of oblong spi-

culaE!, as Maraldi, VVeidler, Kraffl, and others, have observed ; and because the air in North America abounds with such frozen spiculse, which are even visible to the eye, according to Ellis and Middleton, such particles have been thought to be the cause of all corona and par- helia.*

Parhelia are sometimes double, triple, &c.

Aristotle observes that two were seen in the Bos- phorus from morning to evening; though in ge- neral, he observes, they are not seen, except when the sun is near the horizon. Pliny relates un- der what consuls this phenomenon was ever seen at Rome.

In the year 1629 was seen at Rome, by Scheiner, a parhelion of four suns, and the same number was seen by M. Muschenbroeck at Utrecht; Gassendi says that in 1635 and 163G he often saw one mock sim ; in 1661 lievelius observed at Dantzic one of seven suns ; and in 1666 another was seen at Aries, of six.

Phenomena of this kind have also been ob- served by M. de la Hire at Paris, in 1689, and by M. Cassini, in 1693; by Mr. Grey, in 1700; by Halley, in 1702; and Maraldi in 1721.

Aristotle (Meteor, cap. 3) was of opinion that rainbows, halos, and mock suns, were all occa- sioned by the reflection of the sun beams in dif-

ferent circumstances, by which an imperfect image of his body was produced, the color only being exhibited, and not his proper figure. The image, he says, is not single, as in a mirror ; for each drop of rain is too small to reflect a visible ima.fe; but the conjunction of all the images is visible. See Optics.

PARIA, a province of Buenos Ayres, former- ly included in Peru, is bounded on the north by .Pacajes, on the north-east by Oruro, east and south-east by Porco, south-west by Li pes, and west by Caranjas. It takes its name from a lake along the border of which it extends, and wliicn is also called Paria, though more commonly Chucuito. It is cold and produces little grain, but abundant pasturage, and cattle of all kinds are plentiful. It contains salt and silver mines, saline lakes, and hot springs. The cheese made of sheep's milk is esteemed a delicacy. Po- pulation 10,000.

Paria, the capital of the above province, is 210 miles north-west of La Plata.

Paria, Gulf of, a gulf of South America, in the Caraccas, which has on the east the island of Trinidad, and on the west the province of Cumana. From these two lands on the north, two points jut out, with two islands

intervening, which leave four openings, called the Mouths of the Dragon, by wliich the gulf communicates with the Carribbean Sea. This gulf is twenty-five leagues from east to west, and fifteen from north to south : there is anchorage in all that extent, but its depth varies from eight to thirty fathoms. Upon the coast of Paria its soundings are less. It has a muddy bottom, except near the coast of Terra Firma, where there are shoals and sand banks. It receives on the S. S. W. the different mouths of the Orinoco, which enters it with a velocity that very much incommodes the vessels which steer that way ; and they discharge themselves into the Carribbean Sea by the Mouths of the Dragon, which it is therefore im- possible to enter, especially the small ones, un- less highly favored by the winds : and it is at least as difficult to enter the gulf on the south as on the north. The wind must be south-east to be able to enter with any certain prospect of safety. The tide is not only perceptible, but even formidable in the gulf of Paria, where it discovers a violence not to be conceived by those who are not well acquainted with this sea. There are several ports and roads along the coast which greatly facilitate the communication with Tri- nidad.

Parian Chronicle. See Arundelian Mar- bles. Lender that article we have given the ar- guments for and against the authenticity of the Parian Chronicle as fully as the subject seemed to require, or as the nature of our work would admit. Such of our readers, however, as wish for fuither information on this subject, we must refer to Robertson's attack, and to Gough's Learned and .ludicious 'indication of their au- thenticity, published in Archseologia for 1789. The extent of his learning, and the solidity of his arguments, appear upon the wliole to outweigh the objections of his sensible and plausible oppo- nent, and the accession of persons to this side of the argumeut gives it no small additional weight.

Hewlett's book upon the same side of the ques- tion is also ingenious.

Parian Marble, in the natural history of the ancients, the white marble used then, and to tliis day, for carving statues, &c., and called by us at this time statuary marble. Too many of the later writers have confounded all the white mar- bles under the name of the Parian ; and, among the workmen, this and all the other white mar- bles have the common name of alabasters ; so that it is in general forgotten amoniˆ them, that there is such a thing as alabaster different from marble; which, however, is truly the case. Al- most all the world also have confounded the Carrara marble with this, though they are really very different; the Carrara kind being of a finer structure and clearer white than the Parian ; but less bright and splendid, harder to

cut, and not capable of so glittering a polish. The true Pa- rian marble has usually somewhat of a faint blu- isli tinge among the white, and often has blue veins in different parts of it. It is supposed by some to have had its name from the island Pa- ros (see Paros), where it was first found ; but others will have it to have been so called from Agoratritus Parius, a famous statuary, who en- nobled it by cutting a statue of Venus in it.

PARIAS, or Perreas, a degraded tribe of Hindoos, who live by themselves in the out- skirts of towns : and, in the country, build their , houses apart from the villages, or rather have villages of their own. They dare not in cities pass through the streets where the Brahmins live ; nor enter a temple of the su- perior castes. They get their bread by sowing, digging, and building the walls of mud houses ; most of those inhabited by the common people being raised by the Parias; who perform all kinds of menial work : their diet is also wretch- ed. One would scarcely imagine that conten- tions for precedency sliould ever occur among a people who seem to have renounced all cleanli- ness, and who are held in such utter contempt by the rest of the Hindoos; yet pride has di- vided the Parias into two classes : the first simply called Parias, the other Seriperes.

PARI'ETAL, adj. Lat. paries. Constituting the sides or walls.

The lower part of the parietal and upper part of the temporal bones were fractured. S/uirp.

PARIETALIA Ossa. See Anatomy.

PARIETARIA, pellitorj' of the wall; a ge- nus of the moncecia order, and polygamia class of plants : natural order fifty-third, scabridae : hermaphrodite cal. quadrifid : coR. none ; there are four stamina; one style ; and one seed, su- perior and elongated : female cal. quadrifid : COR. none : nor are there any stamina. There is one style ; aˆd one seed superior and elon- gated. Species six, of which the

P. ofiicinalis is used in medicine. This has a creeping root. The stalk grows erect, is rough to the touch, and" adhesive. The leaves are al- ternate, elliptical, lanceolate, veined, and a little rough. The flowers grow out of the alee of the leaves, in sessile, branched, verticillate clusters, of a greenish color tinged with red. The an- therae have a great degree of sensibility ; for, if irritated with the point of a pin, they fly from

the calyx with elastic force, and throw out their powder. The plant has a cooling and dmretic quality. Three ounces of the juice taken inter- nally, or a fomentation externally applied, have been found serviceable in the strangary. The plant, laid upon heaps of cotton infested with wee- vils, is

said to drive away those destructive insects.

PARIETES, in anatomy, a term used for the enclosures or membranes that stop up or close the hollow parts of the body ; especially those of the heart, the thorax, &c. The parietes of the two ventricles of the heart are of unequal strength and thickness ; the left exceeding the right, because of its office, which is to force the blood through all parts of the body; whereas the right only drives tt through the lungs.

PARIMA, a lake of Guiana, in the interior. It was formerly reported by travellers to be 100 miles long and fifty broad, with an island in the middle, of glittering mica, the celebrated seat of El Dorado, the imaginary city whose streets were paved with gold. It is now, however, said to be nothing more than an overflow of some of the head branches of the Parima or Brauco. Long. 45►► 20'W., lat. 3►► 40′ N.

Parima, or Branco, a river of South America, which rises in the above lake, and running south for above 400 miles, and collecting the waters of several other rivers, enters by four mouths the Rio Negro.

PARINA-COCHAS, a province of Peru, bounded on the north by the province of Aima- raes, north-west by that of Valcas-huaman, east by that of Chimbivilcas, south by that of Are- quipa, and west by that of Lucanas. It is thirty- five leagues long, and of irregular breadth. The situation is elevated and cold, with the exception of some hollows among the Andes. Here nu- merous breeds of cattle, particularly sheep, are found, and the mountains abound in mines of silver and gold, and herds of Guanucus or Pe- ruvian camels ; most of the inhabitants of this part, therefore, are drovers or woollen manufac- turers. It contains thirty settlements, and 11,000 inhabitants.

PARINA-COCHA, a lake in tlie above pro- vince, seven leagues long and one broad.

PARINI (Joseph), a modern Italian poet, was the son of a poor peasant, and born on the shores of Lake Pusiano, about seven leagues from Milan. The monks bestowed on him a gratuitous education, to fit him for a subordinate ecclesiastical office ; but i thirst for learning in duced him to acquire farther knowledge ; until his prospects of promotion in the church were blasted by an attack of paralysis in his nineteenth year. This rendered him i cripple for life. He at first was obliged to struggle through nearly twenty years of obscurity and indigence to pro- cure the means of support for himself and his widowed mother ; but a sudden change in his fortunes was produced by the appearance of his fine satirical work, II Giorno, intended to exhi- bit a humorous delineation of the Milanese no- bility. He

was also the author of several lyric compositions, which display the same strain of moral satire. Towards the close of his life he enjoyed a large share of popularity. Once when the democratic spirit ran high, and the people

were tumultuously assembling at Milan with cries of ‘ Viva la Ilepublica ! Morti ai Tiranni, ai Patrizii !’ Parini issuing forth from a hotel exclaimed, ‘ V’iva la Republica, e raorte a nes-

suno ; canaglia stolta !’ ‘ The republic for ever, and death to nobody, you stupid people.’ He lived much esteemed and respected to his seven- tieth year.

PARIS.

PARIS, Loutourezi, Lutetia, one of the largest, richest, and most flourishing cities of Europe, the capital of the kingdom of France, the seat of the government, and the residence of the king, royal family, and ministers of state. It is locally situated in the Isle of France, department of the Seine, of which it is the chief place. Here are held the meetings of the two chambers of depu- ties, of the court of cassation, the court of ac- counts, a royal court for the departments of the Aube, the Eure-et-Loire, the Marne, the Seine- et-Marne, and the Seine; an inferior court of judicature; and a chamber of commerce for twelve cantons and twelve mayoralties ; a gene- ral court for superintendence of the customs, of waters and forests, of bridges and highways, &c. ; a general administration of the post, of ex- changes and lotteries ; royal manufactories of to- bacco ; the archives of the kingdom ; a royal printing office ; a prefecture of the police ; the bank of France ; a university academy ; a school of medicine ; au academy of belles lettres ; a royal athenaeum ; a polytechnic school ; a mili- tary school; a school of the fine arts; an insti- tution for the deaf and dumb ; a court of longi- tude ; a society of music; and numerous other learned institutions. Its population is about

717,000.

This city is situated on the two banks of the Seine, in a pleasant valley, overlooked by lofty hills, on the sides of which part of it is built. The river crosses it from east to west, dividing it into two nearly equal parts ; it then divides itself into two branches, which unite again after forming three tolerably large islands. The com- munication between the two banks and the islands is effected by a great number of bridges, some of which are remarkable for the beauty of tlieir construction, and abut upon grand

quay?, bordered by elegant houses, which have a very imposing appearance. Most of the streets are wide, airy, watered by numerous fountains, and full of magnificent hotels, shops, and warehouses of every description. The pleasantness of the boulevards planted with trees, the numerous pub- lic squares adorned with triumphal arches, columns, and statues, the majestic architecture of the piiblic buildings, the beauty of the suburbs, the mildness of the climate, the various manu- factures carried on here, the celebrated artists and learned men that reside in it, and the multi- tude of establishments devoted to the sciences and arts, well combine with its political import- ance to render Paris a resort of foreigners from all parts of the globe. According to the most recent accounts there are twenty-eight royal roads that meet here, fifty-six barriers, some of them very elegant, eighteen boulevards, thirty-one quays, sixteen bridges, three islands, eighty

squares, 1085 streets, 26,801 houses, thirty-seven public markets, seven of which are under cover, eighty-five fountains, eight public libraries, twelve theatres, seven civil and military prisons, twelve parish churches, thirty-six chapels of ease, three protestant temples, three Jews' synagogues, twenty- four barracks, twenty-six civil hospitals, and four for the military, besides numerous in- firmaries. The outer circumference of the boulevards is about twenty-one miles, and the superficial extent 34, .396,800 square metres.

Paris was, at the lime of the Roman invasion, only a miserable township, built by the Gauls in the island called now the city. It was, how- ever, the capital of the Parisiaci, one of the ninety-eight tribes, of which, according to .lulius CfEsar, Celtic Gaul consisted. Struck with the advantages of its situation, Caesar made himself master of it after a very vicrorous resistance. .V city was soon raised on the yet smoking ruins < f the ancient habitations, which received the name of Lutetia. It considerably increased during the five centuries that the Romans were in pos session of it, was the seat of one of the prefec- tures of Gaul, and at different periods became the temporary residence of several of the Roman emperors, who here built an aqueduct and a palace, the remains of which are visible.

History assigns no date to the foundation of the Gaulish town. The form of government of the tribe settled here was republican : and there is reason to think that this was a numerous peo- ple, brave, and jealous of their independence, since they defeated Caesar's lieutenant Labienus, who was first sent against them ; in a second encounter, however, they were not so successful : the courage of their old general Camulogenes was of no avail ; he was slain, and thus spared the mortification of seeing his tribe subjugated by the enemy. They afterwards set fire to their capital : but Csesar caused it, as we have stated, to be rebuilt, surrounded it with walls, and for- tified with towers at short intervals. Some of these fortifications were in existence at the time of the siecje of the Normans in 885. Its

advan- tageous situation soon made it a place of great trade. About the year 350 a few churches were erected, and, a few years after, Julian, who re- sided at the palace of Thermes, was there pro- claimed emperor by the soldiers. In 380 it began to be called the city of the Parisii, or Paris. It was invaded in 451 by the Francs, under the conduct of Merovee, who drove out A.tius, the last of the Roman governors. At length Clovis, after having accomplished the conquest of the Gauls, fixed upon Paris as the capital of his states. Under Charlemagne learning and science began to flourish here. Left to its own resources, by the feeble successors of this monarch, it was

several times ravaged by the Normans, who be- gan their attacks in 845, set fire to it in 857, and besieged it for three months in 885-6, continued their ravages until the year 910, and finally de- stroyed even the remains of those monuments which the power of the Romans had erected.

The kings of the third race, wishing to render their capital worthy of a great kingdom, granted to it some important privileges, and executed some splendid works for its embellishment. Under Philip Augustus the foundations of Notre Dame were laid, the streets began to be paved, the city was surrounded with walls, flanked with 500 towers, and augmented by the addition of four new quarters. The establishment of the schools of surgery, and of the Three Hundred, and the enlargement of the Hotel Dieu, were the work of St. Louis. Under Philip the Fair the chamber of accounts and the exchange were established, and Charles the Good added eight new quarters, and built the bridges of St. Michael and Notre Dame. In 1420 Paris was taken by the English, who were forced to evacuate it fifteen years afterwards. The same year a great part of the population was carried off by cold and famine, and in 1438 more than 50,000 of the inhabitants died of famine and the plague ; so that troops of hungry wolves, after venting iheir rage in the country parts, entered the city by means of the river, and com- mitted dreadful devastation. So great was the mortality, owing to the heat of the weather, in 1466, that it was found necessary, we are told, to open an asylum to malefactors from all parts in order to repeople the capital ! Under Louis XI. the post office was established, and the city greatly extended. The foundation of the royal college was laid by Francis I., and this prince raised a noble palace on the site of the old towers of the Louvre. Streets were formed in different parts, edifices of Grecian architecture arose in the place of the old Gothic buildings, and several magnificent churches were built in the same reign. In the time of Henry IV, the faubourg of St. Germain was added, and a great number of streets were laid out in the quarter of the Marsh ; the Place Dauphine, the Place Royale, and the Pont

Neuf, were built, and several other public squares were made more regular. Under Louis XIII. were erected the gate of St. Gervais, the aqueduct of Arcueil, the quays and bridges of the island of St. Louis, the palace of the Lux- embourg, the Sorbonne, the college of Louis the Great, and the statue of Henry IV. At the same time the foundations of the Palais Royal were laid, and the botanical garden planted. Louis XIV. built the Hospital of Invalids, the Obser- vatory, the colonnade of the Louvre, the Place Vendome, and the gates of St. Martin and St. Denis. The military school, the schools of medicine and law, the gates of St. Sulpice and St. Eustathius, and the church of St. Genevieve, were the works of Louis XV. In the reign of Louis XVI. the fountain of the Innocents was re- paired for the first time ; the com market, the theatres of the Odeon, the Italians, and Feydeau, the Mont de Piete, and the bridge in the Place de Louis XVˆ were built, and the botanical gar- den was enlarged. In 1782 this monarch ordered

the farmers-general to erect new walls round the enclosure of the fauxbourgs, with openings at in- tervals for the admission of merchandise and pro- visions for the capital. The Place du Carousel, the triumphal arch which adorns it, the gallery parallel to that of the museum, some immense quays, several gates, the bridges of the Arts and of Austerlitz, the military school, a number of new streets, particularly those of Rivoli and la Paix, the column in the Place de Vendome, that of the Place du Chatelet, the triumphal arch of the Etoile, the wine-market, the granary, many of the markets and fountains in Paris, the front of the hall of the legislative body, the exchange, and the repair of the Louvre, the Luxembourg, and several other public edifices, were undertaken and nearly finished under the reign of Napoleon. Louis XVIII. erected the new equestrian statue of Henry IVˆ., and those of Louis XIII. and XVI., and finished the exchange and the Mag- dalen.

Situated nearly in the centre of France, this city has been the theatre of the greatest events of more than ten centuries. Under Charles IX., of hateful memory, a dreadful massacre of the Pro- testants took place here on the night of St. Bar- tholomew's day ; Henry III. and Henry IV. laid siege to this capital ; in the seventeenth century it was the theatre of the war of the Fronde, during which the court was obliged to leave the place. Towards the end of the eighteenth cen- tury the abuses and exactions, which the nation had for a long time endured, becoming intolera- ble, a terrible revolution broke out here, when Louis X\ˆI. was condemned and executed, the monarchy was abolished, and a republic decreed; after several years of anarchy Buonaparte, at first nominated consul, and afterwards emperor of the French under the title of Napoleon I., was crowned here by pope Pius VII. In 1814 the foreign powers took Paris by capitulation, and Louis XVIII. made his public entry ; Napoleon returned on the 20th March, 1815; but was obliged to abdicate the throne after three months. On the

30th July, 1830, Charles X. was vio- Jently expelled from Paris, after three days of sanguinary conflict, and shortly aftfr the duke of Orleans was chosen king of the French.

Among the numerous public buildings we can only particularise the following : 1 . The palace of the Louvre. In the leign of Dagobert it was a royal residence ; and, burnt by the Normans, it was rebuilt by Louis the Young; Philip I. re- paired and enlarged it ; but it was still only a pile of buildings of very simple construction and without any marks of symmetry, flanked with a great number of towers, and surrounded with broad and deep ditches. In the centre of these rose a great tower, called the tower of the Louvre, which was successively the residence of kings, an arsenal, and state prison. Philip Au- gustus and his successors made it their treasury. It was Francis I. who laid the foundation of what is now called the Old Louvre, which was completed in the reign of Henry II. The gal- lery on the side of the Seine was built by Henry III., and Henry IV. ; Louis XIV. built the princi- pal front, which is a fine specimen of architecture, executed by Claude Ilerault; but the construe-

►►ion of the gallery on the side of the Rue Si. Ilonore, and the completion of tlie Louvre, must be attributed to Napoleon. The form of tliis palace is square, with a square court in the cen- tre, surrounded with buildings three stories high, the principal of which is ornamented with co- lumns and the rest with bas-reliefs. Four spa- cious vestibules lead to the interior of the apart- ments and to the stair cases, the principal of which is very grand. The grand front is towards the church of St. Germain I'Auxerrois ; it is 850 feet long, and not inferior to the most beautiful monuments of antiquity. The chief gate is in the centre, adorned with double pillars and crowned with a pediment, the coping of which is formed of only two stones, fifty-four feet long and eight broad. A project was formed during the times of the empire, and is still carrying on, for joining the Louvre to the Thuilleries by a double gallery, one on the side of the Seine which is accomplished, and the other from the north-west pavilion.

2. The Thuilleries. ►►► This palace has taken its name from a place where there were several tile-kilns. It was commenced by Catherine de Medici in 1564, after the plans of Philibert de Lorme ; the building was continued by Henry IV. and Louis XIII., and finished by Louis XIV. The front consists of five pavilions and four more buildings in the same line, the length of the whole being about 1000 feet. It is composed of almost all the different orders of architecture. The vestibule has five openings, so well

*planned that through the arcades you have a view of the whole length of the garden, as far as the top of the Elysian fields, presenting ?. most magnificent perspective. The arrange-
ॢॢment and ornaments of the interior of this build- ing constitute it the finest palace in Europe. The apartments are decorated with splendid pieces of painting and sculpture, executed by the most celebrated artists, both Frenchmen and foreigners. Before the front of the carousel is a spacious court, separated from an immense square by an elegant breast high railing ; at the central gate is a triumphant arch, upon which were lately placed the four bronze horses which for 500 years adorned St. Mark's Square in Venice.*

3. The Luxembourg. ॢॢॢ This palace was com- menced in 1015 by Slary de Medici, and built in the space of six years, under tlie direction of Jean de Bresse, on tlie model of the palace of Fitti at Florence. It forms a rectangle of 300 feet in the front, and 360 feet in depth. The front, on the side of the Rue de Tournon, is composed of two pavilions, united by terraces supporting open galleries, in the middle of which rises a cupola united to the main building by two wings raised one story above it ; four great square pa- vilions, the roofs of which termindte in a point, are at the angles of the principal building. The decorations are of the Tuscan, the Doric, and the Ionic orders. On the front of the side to- wards the court is an alles^orical design, relative to commerce. Since the revolution this palace has received considerable additions and embel- lishments. The principal bodies of the state have successively lield their meetings here, and U IS at present the place of sitting for the cham-

ber of peers. It contains several vast galleries, in which are exhibited the masterpieces of the French living artists.

4. The palace of the chamber of deputies, built in 1721, may bear comparison with the finest pa- laces of Italy. The entrance in the square is very fine, and the great gateway is adorned on each side with a colonnade of the Corinthian or- der. In the centre is a portico decorated with eight columns, surmounted by an attic, on the front of which is represented, in basso-relievo, the law protecting innocence and punishing crime. The hall of the assembly is semicircular and arranged in the form of an amphitheatre, the partition walls are of stucco of antique green co- lor, and fringed with drapery ; six side niches contain statues of the most celebrated orators of Rome and Athens. The front on the side of the Seine was built between the years 1804 and 1807; it has twelve immense Corinthian columns, sup- porting an entablature and approaclied by a rast flight of steps, eighteen feet in height, divided by a balustrade, and about 100 feet broad.

5. The hall of justice is an edifice founded in the earliest times of the

French monarchy. St. Louis and Philip the Fair made great additions to it; Charles V. and Francis I. made it their residence ; in 1776 part of it was consumed by fire, and in the reign of Louis XVI. the grand front was raised, and the court enclosed by a fine railing. The entrance to it is in a semicir- cular spot, at the end of which runs the Rue de la Barillerie. It consists of a central building and two advanced wings, presenting fronts, each decorated with four Ionic columns. A flight of steps, sixty feet long and seventeen high, lead Vt the central building, which presents also four columns, with four colossal statues representing Power, Plenty, Justice, and Prudence. The two side wings of the court are pierced, level with the ground, with arcades, above which are rais- ed two floors of buildings. The space occupied by this edifice reaches from the Change Bridge to the Place Dauphine, and takes in the breadth of half of the island of the city. This palace, devoted to the administration of justice by Louis XII., is the seat of the court of cassation, tlie court of accounts, the royal court, and an inferior court of judicature.

6. The exchange is a superb edifice, situated at the end of the Rue ˆivienne, on the site of the ancient convent of the nuns of St. Thomas. It is a rectangle, the base of which is 206 feet long and 122 wide. Sixty-six columns support the entablature and an attic,- and form a covered gallery round the building. A raised flight of steps, the whole breadth of the western front, leads to this gallery and to the principal en- trance. The public saloon in the centre is 114 feet long by seventy-five broad, and receives its light from the cupola.

7. The palace of the legion of honor is an ele- gant structure, once intended for the residence of the prince of Salm Salm. At the entrance is a triumphal arch, decorated with pillars of the Ionic order ; from this two galleries lead to two pavilions, which stand forward in the building, of which the attic is covered with bas reliefs ; an Ionic peristyle runs round the court, forming a

continuous covered walk. The principal part of the edifice is at the end of the court ; its front is heightened by a set of columns of the Corin- thian order.

8. The palais royal was built in the year 1629 by cardinal Richelieu, after the designs of James Lemercier. At first it was called Hotel de Richelieu, then palais-cardinal. In 1639 that minister presented it to Louis XIII. The outer front, on the side of the Rue de St. Honore, pre- sents to ti>e view pavilions ornamented with Do- ric and Ionic columns, and crowned with a

pediment; it forms a terrace before the court, entered by tiiree fine gates. The main building at the bottom of the first court is pierced with three arches, of which the lowermost forms a vestibule decorated with columns, and leading to a grand flight of stairs. The second court is closed by galleries of wood, under which is the entrance to the garden, which is a rectangle planted with linden trees, in the midst of which are two grass plots, separated by a circular basin sixty feet in diameter, having in its centre a su- perb fountain. At the end of the garden are three buildings four stories high, the front of which presents 182 porticoes, separated by Co- rinthian pilasters supporting an entablature with a frieze pierced with windows. A balustrade with vases at intervals on the pedestals surmounts this building in all its extent. A narrow gallery runs quite round the garden, under which per- sons may walk conveniently, and which receives light through the arcades. These are furnished with' brilliant shops, exhibiting every species of merchandise.

9. The town-hull was commenced in the year 1533 under the reign of Francis I. It is a Go- thic building, very regular and rather harmoni- ous in its proportions ; but the bad taste of the age is manifest in all the details. A large flight of steps leads from the Place de Grave to the principal entrance ; above the gate is an eques- trian statue in bronze, demi-relievo, on a pedes- tal of black marble, representing Henry IV. The clock, which is considered as a masterpiece, is de- corated with an elegant enamelled dial, enlight- ened at night by a reflector. This edifice has been the theatre of several remarkable political events, and is now the public oflace of the prefecture of the department of the Seine.

10. The mint IS situated on the banks of the Seine, almost in the centre of Paris. The first stone of it was laid by the abbe Terrai, control- ler-general of the finances, in 1771. Six Ionic columns surmounted with a surbase of five ar- cades adorn the front, and a grand entablature crowns the whole. The principal building is surmounted with an attic, on which are the fi- gures of Prudence, Fortitude, Commerce, Plenty, and Peace, and the principal court is galleried.

*11. The hospital of invalids is a magnificent establishment, which was founded in 1 672 by Louis XIV., as a retreat for officers and soldiers that have been disabled in the service. It stands at the entrance of the plain on Grenelle, and co- vers a space of sixteen acres of a healthy spot near the Seine. A vast esplanade planted with trees, a grand railing, and a court surrounded *ith ditches lined with freestone and breast high,*

give this place a very imposin.; aspect. The front is 613 feet in extent. Above the gate is an equestrian statue of Louis. By this entrance you proceed into a large court, having four rows of buildings, in the front of

which are two rows of arcades one above the other, forming corridors or galleries. The middle of each front juts out before the rest of the building, and there are four stories of apartments very conveniently arranged. At the end of the royal court is the entrance to the church, which consists of a large nave and two aisles decorated with Corintiiian pilasters ; it is in the form of a Greek cross, and beyond it is the dome, one of the finest structures in France. Round its circumference are six chapels richly ornamented with paintings and sculpture; on the right side is the tomb of Turenne, and opposite to it that of Vˆauban. The entrance is at the back of the hospital, looking towards the Boulevards, elevated on a lofty flight of steps and decorated after the Ionic and Corinthian or- der, with a triangular front. A row of Corin- thian columns runs round the dome covering a cupola surmounted with a lantern, above which is a cross about ;300 feet from the ground. The dome is covered with lead and richly gilt. This hospital contains 7000 pensioners, wlio are all well lodged and maintained. The governor is always one of the marshals of France.

12. The military school was erected, in 1751, for the instruction of young men of iiobk fami- lies who are designed for the army. The princi- pal entrance is on the city side, and presents a vast court surrounded with extensive apartments and enclosed by a railing. The opposite front overlooks the Champ-de-Mars, originally design- ed as a place of exercise for the school.

13. The obseivatory was begun in 1667, and finished in 167‘2. There is neither iron nor wood employed in its construction. Its form is that of a rectangular par.illelopipedon, with four fronts towards the four cardinal points. Two octagonal towers are built at the two corners of the southern front, and a third, wliich is square, in the middle or entrance of that on the north The platform on the top of the edifice is eiglity- five feet from the ground ; and the under-ground apartments are of an equal depth below, and a flight of 360 steps leads to the top. ‘llie in- terior is divided into chambers, and saloons appropriated to astronomical and physical obser- vations. Six of these latter have openings cor- responding to the diff’erent points of the heavens. Under the platfomi are cabinets adapted for the use of the diflferent instruments. Here is a nse- ridian for observing the longitudes ; and, on the first floor of the western tower, a geographical chart, or planisphere, twenty-seven feet in dia- meter, traced with the utmost precision under the direction of Cassini.

14. The triumphal arch of the Carousel was raised in the year 1806, to commemorate tlie ex- ploits of the grand army : it is forty-five feet high, sixty broad, and twenty-one deep. Like those of the ancients, this arch consists of three arcades cutting three others in a transverse di- rection. It is built of hard freestone ; eight columns of red Laiiguedoc marble, with

chapiters of the Corinthian order executed in bronze, adorn the

two fronts, supporting an entablature willi frieze of Italian marble. On the top were placed the famous Corinthian horses which were brought from Vˆenice.

15. The triumphal arch of the Etoile was be- gun in 1806, but the building was interrupted in 1814. An ordonnance of Louis X'I1I., how- ever, issued in 1825, caused the works to be re- sumed. It will be 135 feet high ; its front is pierced with a single arch, eighty-seven feet high, and forty-seven in the span.

16. Thegute of St. Denis is a triumphal arch, and one of the finest monuments in Paris : it was erected in 1672. It is open like those of Titus and Constantine at Rome ; it is generally thought that neither Rome nor Greece possesses any thing more perfect in its kind. It is seventy- two feet high and as many broad ; the portico in the middle is an opening of fourteen feet by twenty-four ; within the arch are trophies of arms and two globes, with the arms of France, surmounted by a crown ; at the bottom stand two colossal statues, one representing Holland under the figure of a terrified woman sitting on a lion, which holds in one of its paws seven ar- rows, representing the seven united provinces ; the other representing the genius of the Rhine resting on a lion and holding a cornucopia.

17. St. Martins Gate, situated at the end of the street of the same name, was built in 1674, by the city of Paris, in honor of Louis XIV. It is fifty feet high by as many broad ; has three openings, of which that in the middle is the largest; and is adorned with four bas reliefs, re- presenting the taking of Besan90n, the breaking of the triple alliance, and the defeat of the Ger- mans by Louis, who is represented under the figure of Hercules, with a club in his hand, beating down an eagle.

18. The triumphal column of the Place Vendome, raised to the honor of the French victories in Germany, was commenced in 1806, and finished in 1810. It is 200 feet high and twelve feet in diameter ; the pedestal is twenty-two feet high and from seventeen to twenty feet broad. Tro- phies of arms and the dresses of Austrian and Russian officers cover the sides of this part of the monument; at each angle, above the cornice, is a colossal eagle supporting a crown of laurel. There are also the beginnings of a set of bas re- liefs commemorating the principal actions of the campaign of 1805. On the top of the chapiter is a gallery, to which there is a flight of 1 60

steps in the interior of the building; and in the midst of it is a little dome, designed at first to receive a statue of Charlemagne, but on whicii they had placed one of Napoleon ; in the place of which, in 1814, a fleur de lis was substituted. The railing round this column is distinguished for its beauty and elegance. This pillar was construct- ed out of the 200 pieces of cannon taken from the Russians and Austrians in a campaign of three months : the whole weight of the brass amounted to 1,800,000 lbs.

There are in Paris fifty-six churches, temples, or chapels, several of which are masterpieces of architecture; the chief of them are,

19. The metropolitan church of Notre Dame, a fine gotliic edifice, which presents a boldness of construction that constitutes the true beautv of

that style. The solidity and noble arrangements of all its parts are highly creditable to the skill of the architect. It is built in the form of a cross, and is 390 feet high, and 144 broad. The principal front is remarkable for its ele- vation, and its sculpture : it is terminated by two great square towers 280 feet high, ascended by 380 steps, and communicating by galleries within, which support several Gothic columns of astonishing delicacy. The whole of the interior of the nave and choir is supported by twelve pillars, and there are large galleries separated by columns of a single piece; in these the audience are placed to see the grand ceremonies. Behind the chief altar is a group of four figures in white marble, the principal of which are eight feet high ; itrepresents the descent from the cross, and is an admirable work, executed by Coustou iri

1723.

*20. The pantheon, or new church of St. Gene- vieve, erected after the designs of Soufflot, is one of the finest monuments that have been raised in France since the revival of the arts. It is in the form of a Greek cross, and its portico is similar to that of the pantheon at Rome. The exterior consists of four naves, in the middle of which rises the dome adorned with thirty-two Corin- thian columns ; the height is about 282 feet. The double cupola in the interior is a master- piece for its boldness and lightness. By a decree of the 4th of April, 1791, this church received the name of the pantheon, and was consecrated to the reception of the ashes of those who have deserved well of their country. On the front of the peristyle it until lately bore the following in- scription in French, ***

‘ A grateful country to its great men.’

In February 1806 the name of St. Genevieve was restored, and it was devoted to the sepulture of the great officers of the legion of honor, and

those citizens who had rendered eminent services to their country. Lastly, by an ordinance of the king in the month of December 1821, it was re- stored to the Catholic worship ; the French in- scription was changed for a Latin one ; and the remains of Voltaire and Rousseau were clandes- tinely removed to make way for the relics of St. Genevieve, which had been burned and dispers- ed during the revolution, but of which the new authorities had succeeded in procuring a fresh supply!

21. The church of St. Sulpice was begun in 1678 and finished in 1745. The portico is con- sidered a very fine piece of architecture : it is 384 feet in front, with a flight of fifteen steps as- cending to it, on the top of which is a grand platform. The towers are 210 feet high. Tht- choir contains the figures of Jesus Christ, St. Paul, and St. Peter, sculptured by the celebrated Bouchardon. The chapels are decorated witii paintings in fresco of great beauty, and the pul- pit, to which the ascent is by marble steps, ex- cites the attention of all connoisseurs.

22. The church of St. Germain C Auxorois, which was founded in the seventh century, hut destroyed by the Normans, and afterward? re- built and beautified at different epochs. The grand portico is the production of the fourteeuth centurv.

23. The building of new Magdalen church was commenced in 1764, by order of Louis XV^, and continued under the following reign; but owing to the revolution the work was stopped from 1789 to 1806, when Napoleon conceived the idea of making it a temple to glory, dedicated to the grand army. The works were accordingly recom- menced and a second time suspended. In 1816 a royal ordinance determined that this churcix should be finished on a new plan and devoted to the reception of the expiatory monuments of Louis XVL, and Marie Antoinette. The in- terior of the temple of glory was to have been a parallelogram decorated with pilasters ; its ulte- rior destination must make many changes in the plan and arrangement. Besides these, the churches of St. Roch, St. Eustalhius, St. Ger- vaise, le Val-de-Grace, the Sorbonne, the Holy chapel, St. Steven of the Mount, the Oratoire, &c., are well worthy of attention.

Seventeen bridges, twelve of which are of stone and very beautiful, communicate with the different parts of Paris. The bridge of Auster- litz, or of the botanical garden, connects the bo- tanic garden with the arsenal. It consists of five arches of cast-iron, supported on piles and abut- ments of freestone ; it is 400 feet long and thirty- seven wide, and cost 3,000,000 of

francs, which is defrayed by a toll on carriages and foot pas- sengers. The bridge of Grammont joins the arsenal to the isle Louvieres. St. Mary's bridge connects the Elms quay with the island of St. Louis. The bridge of the Tournelle, forms a communication between the quay of the same name, and the isle of St. Louis. The city bridge, built in 1804, joins the city to the island, the abutments are of stone, and its arch wood. The Pontau-Double connects the Rue de la Bucherie with the bishopric; it was built in 1634. The Little Iron Bridge, erected in 1606 over a small arm of the Seine, establishes a communication in the interior of the Hotel-Dieu. The Little Bridge, uniting the quarter of St. James's to the city, may be regarded as one of the most ancient in Paris; as it formed, with the Change Bridge, the two entrances of Parisii or Lutetia, in the time of the Romans. The latter, thrown over the grand arm of the river, is the largest in Pa- ris; it has seven arches. The Bridge of Notre Dame, remarkable for its solidity and elegance, forms the communication between the quay Le- pelletier, and Dessaix Quay. Here is an hy- draulic engine which furnishes water to several parts of Paris. St. Michael's bridge joins the Augustine's Quay with the New Market. Three bridges had been built on this spot, when in 1616 the present one was erected by a company, on the condition of being allowed to build houses ; of these there were thirty-two, but they were pulled down in 1804. Pont Neuf, consisting of twelve arches, was begun in 1578 and finished m 1604 under the reign of Henry IV. It is thrown over two arms of the river, in the middle of which is the island of the City ; and is 468 feet long by seventy-eight broad. The platform between is occupied by the statue of the good king Henry on horseback; the bronze group which composes this monument is fourteen feet high. The bridge of the arts is situated between

the palace of the Louvre and that of the fine arts, from which it takes its name. It consists of nine iron arches with stone abutments ; its length is 516 feet, and its breadth thirty; foot passen- gers pay a toll here. The Royal Bridge was built in 1685, by order of Louis XIV., and joins the Louvre Quay with Voltaire's Quay. It is 432 feet long, and fifty-two broad. From this bridge the passenger has a most delightful view over the capital, embracing the Thuilleries, the Louvre, the two arms of the Seine, &c. Ike. Louis XVI's. Bridge, commenced in 1787 and finished in 1791, joins the square of Louis XV. with the quays of Orsay and the Invalids. It was built by the architect Peyronnet, and is re- markable for the boldness of its arches, the vast extent of the square in which it abuts, and the elegant buildings of which it commands a view. The bridge of the Military School forms a line of communication between the Champ de Mars and the road to Versailles ; it is 460 feet long, by forty-two broad, and perfectly horizontal. The Suspension Bridge of the invalids, uniting the esplanade of that hospital with the Elysian Fields. It is supported by four columns ten

feet in diameter at their bases, and the chain, comprising the curve which it describes, is 240 metres in extent, formed of long links, and sus- tained by masonry imbedded thirty feet deep. The breadth of this bridge is forty-two feet.

The numerous fountains that embellish this capital, and contribute to the health and comfort of its numerous inhabitants, are supplied from three reservoirs, two steam pumps, and one hy- draulic machine. The reservoir of Cassini dis- tributes the waters, which are brought to it by the aqueduct of Arcueil ; the reservoir of St. Martin's boulevard is supplied from the canal of the Ourcq; and that of the Palais Royal receives the waters of the Seine and the Arcueil. The Fountain of the Innocents is the finest in Paris : it was built in 1551 afier the designs of Pierre Lescot. It is ornamented with basso-relievo and figures of great beauty ; the water issues from a large vase and falls in magnificent cas- cades. This monument is forty-two feet in height. The fountain of Crenelle is the work of the chisel of the celebrated Bouchardon; it is decorated with seven statues, the three principal of which are grouped and represent the city of Paris seated on a pedestal with the Seine on one side and the Marne on the other, rendering homage to her and bringing to her all the productions of the seasons, which are designed by four figures placed around the group. The fountain Dessaix was erected in 1801 to 1803, to the memory of general Dessaix, who was killed at the battle of Marengo. It represents a military genie crown- ing the figure of Dessaix ; two figures of Fame are inscribing on two rolls, one, Thebes and the pyramids, and the other Kel and Marengo ; on the front of the pedestal the name of the warrior is engraven in letters of gold. The Fountain of the Palm-tree, finished in 1808, is situated in the centre of the Place du Chatelet. It is of a quad- rilateral form, and in the midst of it rises, from a basin twenty feet in diameter, a column in the Egyptian style representing a palm-tree ; the jet which serves for a base rests on an elevated

platform, each angle of wliicli is adorned with a cornucopia, from which issues the water. Above the column is a ball, on whicii is a figure of Fame with spread wings and extended arms, and holding a civic crown in each hand. Below are four statues representing Justice, Fortitude, Vigi lance, and Prudence. The pillar is cut at equal intervals by bracelets, on which are inscribed in letters of brass the names of the principal battles gained by the French armies ; the chapiter is ornamented with feathers and palm-leaves, and the pedestal hasan eagle with outstretciied wings and is encircled with laurel. The fountain of the Medical School consists of a grotto formed by four fluted columns of the Doric order ; the waters fall from the arch

above, and are supplied from the Seine. Besides these there are several others very beautiful.

Paris contains several fine squares or public places, the most remarkable of which are, the Place du Carousel, between the Louvre and the Thuilleries, which is one of the largest in Europe. The principal ornament which it presents is the triumphal arch already mentioned. The Place Vendome, executed after the designs of Mansard was commenced in 1699 and finished in 1715. It is octagonal, with four long and four short sides. The centre was occupied by an eques- trian statue of Louis XIV., which was thrown down in 1792, and its place is now occupied by the triumphal column raised to the honor of the French armies. The Place des Victoires, of an oval form, was built in 1686, after the designs of Mansard. It is surrounded with beautiful build- ings ornamented with pilasters of the Ionic or- der. Before the revolution here stood the statue of Louis XIV., treading on a Cerberus, the sym- bol of the triple alliance over which he had triumphed, and behind him was the figure of Victory ; at the four corners were four slaves in bronze, chained and sitting on trophies, represent- ing the nations France had conquered. This was destroyed in 1792 and is now replaced by ano- ther of more recent execution. The Place Louis XVˆ., which has been successively called the Place de la Revolution and the Place de la Concorde, was finished in 1772. It is a paral- lelogram of 780 feet in length by 630 broad, surrounded by large ditches fenced with stone balustrades. Its four outlets present magnificent views of the Thuilleries, the Magdalen, the arch of the Etoile, and the palace of the legislative body. Here it was that Louis XVI. and Marie Antoinette were beheaded in 1793 ; an expiatory monument is now built on the spot in memory of this deplorable event. There are other pub- lic places which deserve mention, as the Place Royale with the statue of Louis XIII. ; the Place Dauphine, the centre of which is occupied by a fountain with the statue of general Dessaix; the Place du Chatelet, remarkable for the palm fountain ; the Place del'Hotel-de-Ville, surround- ed with very ancient houses; the Place St. An- toinp; the Place Maubert, &c. &c.

This city also contains a number of public es- tablishments, remarkable for the elegance of their construction, in its halls, markets, hospitals, pri- sons, cemeteries, &c. There are thirty-seven halls or markets, the principal of which are the follow-

ing : ??? The corn market, built in 1767 on the ancient site of the Hotel de Soissons, is a circular building isolated and open on all sides, being pierced with twenty-five arcades six feet and a half wide, answering to as many streets, which they front. It is of the Tuscan order of architecture. Above these are vast granaries, vaulted with brick and stone, with which two flights of staJLS commu- nicate. The cupola, which was considered

very fine, was consumed by fire in 1802 ; but in 1811 it was replaced by an iron one. The market of the Innocents is in the same quarter with several others in a vast area once occupied by the church and cemetery of the Innocents ; it is a great square, surrounded with large and convenient galleries ; in the centre is a superb fountain with four jets at the four angles. Here the wholesale market of fruits and vegetables commences at break of day, and closes between nine and ten o'clock ; then begins the retail trade, which lasts through the day. The cloth market was built in 1786 ; it is isolated on all sides, and surrounded witn a foot path enclosed within a railing ; it is 400 feet long and fifty feet broad. The roof is vaulted and covered with tinned copper. It is open every day for the sale of cloths, and three days in the month for linen. The poultry and game market, erected on the site of the old con- vent of the Great Augustines, was finished in 1811; it is built of free-stone, covered with slates, and consists of three galleries, separated by pillars supporting arches. It is 190 feet long and 141 feet broad. The calf market was built in 1774, and is surrounded by four streets. It is open every Wednesday and Saturday for tiie sale of calves, and on Fridays for the sale of tallow. Among the markets we might also men- tion the wine market, the flower and shrub market on Dessaix quay, the Jacobins market, &c. &c. Besides these there is the granary of reserve, a vast edifice begun in 1807, consisting of a long line of five square pavilions, .united by four principal buildings. Here are deposited about 25,000 sacks of flour, belonging to the bakers of Paris.

Of the several large and well conducted hos- pitals in this city we may particularise the Hotel Dieu for the reception of 4000 sick ; the general hospital de la Salpctriere, designed for women ; the Val de Grace, a military hospital ; the hos- pital of St. Louis ; the lying-in hospital ; the Foundling Hospital, &c. Sec. Paris contains ten prisons ; ??? the Conciergerie, where persons com- mitted for trial are confined ; the great and little Force ; the St. Pelagic, where are destined those who are arrested for debt, and persons convicted of political crimes; Les Madelonettes, a prison designed for women who are condemned for any crimes ; St. Lazare ; I'Abbaye, a prison for the military ; the Montaign ; tne Refuge ; and the Hotel de Bazancourt, a place of confinement for the national guard. Since the practice of bury- ing the dead within the cities has been abolished there hare been only five burial grounds : ??? the cemetery of Vaugirard, that of Mount Parnassus, of St. Catherine, of Mont Martre, and St. Louis, or the Pfere Lachaise. This last is the largest in Paris, containing an area of eighty acres, and a vast number of monuments, among which may

be mentioned tbose of Moliere, La Fontainp, Chenier, Monge, Foi, Massena, Parmentier, GrStry, Mehul, Girodet, Delille, and many others. The cemetery, which has several risinsj grounds, affords a picturesque walk, and is much frequented in fine weather. The catacombs are vast subterraneous caverns, in which, during the eighteenth century, the bones taken out of all the burial grounds of the city were deposited. These were formerly quarries, from which has been dug most of the stone for the churches, palaces, and other public buildings, and they now serve as a depository for the remains of past generations. They have three entrances, the first by the western pavilion of the barriere d' Enfer, the second at the tomb Isoire, and the third in the plain of Mount Souris. The first is most used, and visitors are admitted on pro- ducing a ticket from the inspector general, or any of the superintending engineers.

Among the public establishments of Paris should be noticed the baths, which have much increased in number within these few years past, and received considerable improvements in regard to neatness, convenience, and elegance. There is still wanting, however, an establishment of this kind where the working class could, for a small sum, or even gratuitously, enjoy this healthful ex- ercise. There are twenty-five public baths; the most frequented of which are those of St. Sau- veur, Montesquieu, Clunois, Turcs, Tiquetonne, Gˆures, and Vigur upon the Seine, near Pont Marie, Pont Neuf, and Pont Royal ; raised two or three stories high on elegant boats as large as great vessels, and containing 130 bathing boxes.

There are many fine gardens, among which the following are particularly worthy of notice: ??? The garden of the Thuilleries, planted by the celebrated Le Notre, consists of two parts, one near the palace, occupied by beds of flowers, the other by immense trees, and the whole en- rircled with spacious terraces. The different parterres are divided by grass plats, and among them are three circular pieces of water, stocked with fish and swans, and a fountain in the centre ; to these follow two masses of trees, equal in extent, and arranged on the right and left of the middle alley ; they are principally chestnuts and elms. At the extremity of these is an immense octagonal basin, with a fountain, beyond which is the railing of tlie Champs Elisees ; here the two principal terraces termi- nate, and the angle which they form is occupied by a platform of great length, planted with shrubs of various sorts ; these terraces are covered with avenues of trees. Besides the common plants here are found some most beautiful orange trees, and other exotics, which are brought out in the spring, and continue till the chill nights of autumn. Statues and groups, copies of the masterpieces of antiquity, or the work of skil- ful modern artists, add to the beauties of this delightful garden. The Luxembourg garden, which owes its origin to the duke of Luxembourg, but was almost entirely laid out afresh in 1806, rivals that of the Thuilleries in the thick clusters of its tf-ees and

the beauty of its parterres. Here also are scattered copies of a great number of antique statues, placed in sucli a manner as to

vary and embellish its whole extent. The bota- nical or king's garden, established in 1636, by Guy de la Brosse, physician to Louis XIIL, fo the cultivation of foreign plants, has received considerable additions since that period; but it is particularly to the celebrated Buffon that 1 owes its present splendor, being the finest of ihe kind in Europe. It consists of a garden of plants methodically arranged ; a menagerie, an amphi- theatre for the lectures, and a library. The garden, reaching to the banks of the Seine, pre- sents one of the largest, pleasantest, and most healthy walks in the neighbourhood of Paris ; here are found trees, shrubs, and vegetables from every country upon earth. In the upper pait, which is planted with evergreens, and called the Swiss valley, there is a little eminence, ascended by a spiral road, whence you enjoy a most delightful view. This hill is crowned with a pa- vilion in bronze very elevated, and surmounted by a sphere. One of the most interesting parts of this garden is the menagerie, where the animals range at liberty within greater or less enclosures, suited to their different natures. The Elysian fields, a fine promenade opposite the grand alley of the Thuilleries, of which it seems only a con- tinuation, was planned in the reign of Louis XIV., and partly replanted in 1770. In this place and the squares adjacent to the avenue of Neuilly the public rejoicings take place. The Champ de Mars is a vast rectangle 2700 feet long by 900 broad, and reaches from the military school to the Seine. It is surrounded with ditches coped with masonry and sloping terraces, and adorned both within and without widi four rows of trees, and five iron railings connected with the five gates. This place is capable of containing 400,000 persons, and it was here that, on the 14th of July 1790, Louis XVI. took the constitutional oath, and it was on that occasion that the idea was conceived of making slopes or steps'to accommodate the spectators ; but the work was advancing very slowly, though 12,000 work- men were employed in it, when the inhabitants of Paris spontaneously engaged in the undertak- ing, and it was finished with the greatest ardor and celerity. Here, during the same year, a funeral ceremony was performed in honor of the citizens who had fallen before Nancy; here were held the anniversaries of the 14th of July and the 10th of August, the festivals of reason and of the Su- preme Being ! Here the directory received the statues from Italy, and here in 1815 Napoleon reviewed the whole of the imperial guard, and about 60,000 of the national guard of Paris.*

This city is externally surrounded by boule- vards, forming three alleys bordered by four rows of trees ; the middle of the principal alley is occupied by a road ; the side alleys are gra- velled, and afford very pleasant walks. The old boulevard within the city was commenced in 1536, at the time that the English were ravaging Picardy and menacing the

capital; in 1668 they began to plant trees. It runs from the banks of the Seine, near St. Martm's lock, to the entrance of the Rue Royale, and is about 2400 feet iu extent. It is one of the most frequented walks in the capital, both on account of tiie fine view which it presents of gardens, hotels, shops, the-

atres, coffee-houses, and other public l)uil(Iinq;s, and tlie multitude of spectators met witli at every step. Some years before the rei-olution the farmers general, having obtained permission of Louis XVI. to extend the limits of Paris, built walls and constructed numerous barriers at all the issues from the city, some of which are models of taste and elegance.

Among the numerous public establishments of this metropolis the theatres undoubtedly hold a high rank. Of these there are five royal and eight secondary, for the most part extremely well filled, 10,000 persons at least daily frequenting them. The annual produce is about 72,000,000 francs, yielding 720,000 francs to the poor of Paris. The Opera house is the most celebrated in Europe for the magnificence of its decorations, the beauty of the scenes, the perfection of the dancing, the composition of the ballets, and the skill of the musical performers ; it contains seats for 1937 persons. It owes its origin to the abbe Perrin, was established at first as a tennis court, and was transferred from place to place, till at last the saloon of the palais royal was occujjied for the purpose. This place being consumed by fire, in 1781, the opera was again removed to several places, until it was fixed in the Rue de Richelieu ; but in 1820, the duke of Berri having been assassinated as he was coming out of this place, it was slmt up and soon after pulled down, a new house having been erected in the Rue Le- pelletier. The royal French theatre was opened in 1790 ; it is situated in the Rue de Richelieu, and has a front adorned with twelve Doric pil- lars, with Corinthian chapiters, and an entabla- ture. It is 166 feet long and 105 broad, the front of the stasje being thirty-eight feet wide; it will seat about 1500 spectators. In the middle of the vestibule is a statue of Voltaire. The the- atre for comic operas, built in 1791, has recently been pulled down in order to accomplish the projected improvements in the quarter of the exchange; it has since been rebuilt on a new site. The performances at this theatre are aided by the labors of some of the first composers of the day. The royal theatre of the Odeon was first built in 1782, but has been burned down twice, in 1799 and 1818; it was rebuilt in 1821, and constituted the second French theatre. The front IS in a simple and noble style of architecture, having a peristyle in advance, ornamented with eight Doric pillars ; under the porch three doors lead into a vestibule decorated after the

Tuscan style. The body of the building is en- tirely isolated, but joined by three galleries pierced with forty-six arcades. The interior is of an oval form, fifty-six feet long and forty-seven broad ; the king's box is in the middle, and is richly decorated. The royal Italian theatre is situated in the Rue de Louvois,and is open three times a week for serious and comic operas of the different Italian schools. The secondary thea- tres are the \ˆaudeville, Les X'arictcs, the Dra- matic Gymnasium, La Porte St. Martin, La Ga'itc, L'Ambigu-Comique, the Olympic Circus, and the Magic or Children's Theatre.

The French Academi/ holds the first rank among institutions for the encouragement of the arts and sciences. It was founded in 1635 by Vol. XVL

cirdinal Rohelieu, but suppressed by the con- vention in 1793; this same convention, after having overturned the tyranny of Robespierre, by a decree of the '28th of October, 1795, found- ed the Institute in the room of the Academy of Sciences, the French Academy, the Academy of Inscriptions and the Belles Lettres, and the Academy of Painting, Sculpture, and Architec- ture. In the year 1803 Buonaparte, who had been nominated a member of the Institute, on his being created consul made a fresh arrange- ment into four classes : that of natural philoso- phy and mathematics to consist of sixty members ; languages and French literature forty members ; history and ancient literature forty members ; and the fine arts thirty members, which has been since increased to forty. At the return of the king, in 1814, Lucien and Joseph Buonaparte, members of the second and third classes, were expelled. The year following M. Vaublanc gave a new constitution to the Institute ; the names of Regnault de St. Jean d'Angely, Cambaceres, Merlin, Maury, Gregoire, Lebreton, Arnaud, St. Etienne, the celebrated David, and others, were erased, and (a thing unheard of before) the king nominated to the vacant places. The sittings of the Institute are held at the Palais des Beaux Arts.

In no city in the world are scientific establish- ments, and the means' of instruction, so multi- plied as in Paris. There are thirty-six great institutions for public education, besides more than 300 private seminaries, where the diff'erent branches of science are taught. The university was suppressed in the year 1793, but re-establish- ed in 1808, and re-organised in 1821. The fa- culty is composed of five orders, and is under the direction of a minister of state, who super- intends the ecclesiastical business and the public instruction. The five orders are the faculties of theology, law, medicine, natural philosophy and mathematics, and belles lettres, and they consist of a grand master, a director of public instruc- tion, several inspectors general of the studies, honorary inspectors general, inspectors of acade- mies, rectors, provisors, &c. The principal establishments of education are the

Royal Col lege, the abovementioned faculties, the royal col- leges of Louis le Grand, Henry IV,, Bourbon, Charlemagne, and St. Louis ; the colleges of St. Barbe, Stanislas, and the British ; the royal polytechnic school ; the royal colleges of oriental languages, mines, bridges, and highways ; of charters, music, and riding; the institution for the deaf and dumb, &c.

Besides the establishments particularly devoted to instruction, Paris contains a number of socie- ties which have rendered great services to science, the arts, commerce, and industry ; the chief of them are, the Central Agricultural Society, the Society for the Encouragement of National In- dustry, the Royal Society of Antiquaries, the Geographical Society, the Society for Elementary Instruction, the Royal Academic Society of Sci- ences, the Athena:-um of Arts, the Polytechnic Society, the Royal Athenaeum, the Grammatical and Philomatical societies, the Literary Society, the Society of Friends of the Arts, the Academic Society of the Children of Apollo, the Writing

Society, the Linnsean Society, the Protestant Bible Society, the Asiatic Society, the Society of Animal Magnetism, the Lyric Society of Momus, and the Catholic Book Society.

There are numerous public libraries, some of them containing immense collections of books and manuscripts. These are open to the public and to men of letters almost the whole year, and present inexhaustible sources of instruction. Most of them have a large saloon, well warmed in the winter for the accommodation of the visitors. The king's library, the foundation of which goes as far back as the reign of Charles V., contains nearly 600,000 printed volumes, and 80,000 MSS. It consists of the library properly so called, a cabinet of antiquities and medals, a cabinet of prints, and the gallery of MSS. It is open every day from ten to two : the vacation commences on the 1st of September and closes on the 15th of October. Monsieur's library, or that of the arsenal, is the second in Paris for the number and value of the works it contains. There are about 200,000 volumes and 10,000 MSS ; but very few modern works. It is open from ten to two, except in the vacation from tlie 15th of September to the 3d of November. The city library is open every day from twelve to four, except on festivals and the days of the sit- tings of the medical and agricultural societies. It contains 42,000 volumes, among which are many modern works. Vacation from the 1st of September to the 15th of October. The

library of St. Genevieve, or the Pantheon, remarkable for the beauty of its architecture and decorations, as well as for the choice of books it contains, reckons about 112,000 volumes, and 3000 MSS. It is open every day from ten to two, and its va- cation continues from the 1st of September to the 12th of November. The Mazarine library, at the Institute, is open every day, except from the 15th of August to the 15th of October, and on Thursdays and Sundays. It contains 93,000 volumes and 4000 MSS. The library of the In- stitute is not public, but admission is easily pro- cured on the recommendation of a member. It contains about 70,000 volumes. The library of the king's garden, in the museum of natural his- tory, presents a rich and varied collection of works relative to the natural sciences, herbaries, designs of plants and flowers, and paintings of animals. It is open to the students on Mondays, Wednesdays, and Saturdays, from eleven to two, and to the public from four to seven during the spring and autumn, and from three till dark dur- ing the autumn and winter. The library of tiie medical school contains about 30,000 volumes, including all the treatises on medicine and che- mistry published since the time of Philip Augustus, down to the most modern works of this description. It is open on Mondays, Wed- nesdays, and Fridays, from eleven to two, and its vacation is from the 15th of August to the 1st of November.

The school of medicine is one of the finest establishments in Paris ; its amphitheatre, capa- ble of holding at least 12,000 persons, is adorned with paintings by Gibelin, and has the busts of Peyronie and Martiniere, the founders of the school. In a long gallery are seen skeletons of both sexes and all ages, from the skeleton of the

f(Etus, which presents scarcely any osseous fibres, to that of the old man, in which ossification is so far advanced that cavities and sutures are almost entirely effaced. Here are also many skeletons of animals, for the study of comparative anato- my. Opposite to this gallery are specimens of all sorts of diseases of the bones, and deformi- ties in their conformation ; a number of injected preparations exhibit the systems of the vessels, the blood, the arteries, the veins, and the lym- phatic organs ; here is likewise a collection of voided stones, and stony concretions formed in various sorts of animals ; also a number of monstrous productions and pieces of compara- tive anatomy, preserved in spirits of wine. A second room presents the whole apparatus of the surgery. In a third room are wax figures illus- trative of the nervous, vascular, sanguineous, and lymphatic systems. There are also repre- sentations in wax of a great number of patholo- gical cases. Two figures, in particular, surpass every thing of this kind that has ever been exe- cuted ; they exhibit the whole of the lymphatic system, external and internal. These master- pieces, as well as several others, were executed by M. Lavoisier, a surgeon of Rouen. A fourth room contains all the natural substances which the three kingdoms of nature furnish to the ma- teria

medica; and a fifth is devoted to demon- strations of the lectures on medical physics.

Besides the libraries already enumerated, there are those of the chamber of peers contaming 10,000 volumes, of the chamber of deputies 30,000, of the minister of the interior 7000, of the observatoiy 2000, of the school of bridges and Jiighways 4000, of the school of the mines 6000, the polytechnic school 24,000, of the col- lege of Louis the Great 30,000, the conservatory of arts and trades 10,000, the prefecture of the police 8000, the seminary of St. Sulpice 20,000, of the ministry for foreign affairs 15,000, the king's cabinet in the gallery of the Louvre 30,000 the museum of the Louvre 3000, the school for music and declamation 5000, the depot of charts and plans for the navy 12,000, that of the minis- ter of war 4000, the central depot of the artillery 6000, the depot for charts and plans of wars 10,000, the hospital of invalids 25,000, of the minister of justice 8000, of the royal printing of- fice 3000, of the court of cassation 30,000, and the lower court 20,000 volumes.

The royal museum of the Louvre is the greatest collection in Europe, and, notwithstanding the losses it has experienced, it contains many mas- terpieces of all the schools. It consists of three principal divisions, the first containing the statues, the second the pictures, and the third the de- signs. The museum of antiques is on the ground floor, that of the drawings on the first floor, and the paintings occupy the saloon and the grand gallery that unites the Louvre to the Thuillenes. The first three divisions of this gallery are devo- ted to the productions of the French school; the second three to the German, Flemish, and Dutch, schools, and the last three to the Italian. An exhibition of the pictures and sculptures of French living artists takes place every two years in the gallery of the Louvre. The museum is open to the public every Sunday from ten to four. The royal museum of the Luxembourg contains

several rooms devoted to the exhibition of the principal pictures of living artists, vvlien these pictures become the property of the government. It is open on the same days as the Louvre. The museum of Natural History consists of a bota- nical garden, with hot-iiouses and green-houses of several galleries, in which the productions of the three kingdoms are methodically arranged, a menagerie of living animals, a library of natural history, a cabinet of comparative anatomy, and an amphitheatre with laboratories for the courses of lectures.

The conservatory of arts and trades, for the re- ception of all the newly invented instruments and machines, contains a numerous collection of instruments, tools, models, drawings, descrip- tions, and books of every trade and art. It is open to the public on Sundays and Thursdays from twelve to four o'clock. The royal manu- factory of the Gobelins, or tapestry of the crown, was founded by Gilles Gobelin in the reign of Francis I.; but it is toColberlthat France partly owes the perfection of this fine establishment. Nothing can be richer or more wonderful than the tapestry fabricated here ; it will bear com- parison with the most celebrated printed linens, and often surpasses them in the splendor of its colors. The pictures wrought at the manufac- tory of the Gobelins represent subjects taken from history and are destined to adorn the palaces of kings and princes. The royal tapestry manufactory, called la Savonnerie ; here are manufactured foot carpets on the same style as at the Gobelins. The royal looking-glass manu- factory was founded in 1634, under the direc- tion of Colbert. Before tiiat time France had been supplied with glasses from Venice. Tliey cast glasses at St. Gobain, ten feet high by from four to five broad, and convey them by tlie Oise to Paris, where they are silvered and polished.

The manufactures of Paris consist of fine cloths, merino and cachemere tissues, shawls, gauzes, silks, crapes, ribands, blonds, prints, paper-hangings, gold and silver lace, mercery goods, caps, hats, embroidery, modes, straw silk and cotton hats, artificial flowers, saddles and harness, coaches, furniture, bronze and gdt arti- cles, polished steel, cutlery, goldsmiths' articles, clocks and watches, jewellery, gold and silver plating, metal buttons, files, tools, mathematical instruments, instruments for natural philosophy and astronomy, fine ironmongery, mock pearls, draught and chess boards, perfumery, chocolate, liqueurs, leather gloves, pasteboard, brushes, pencils, corks, catgut, shot, sheet-lead, printing types, nails, wax candles, glue, starch, oils of dif- ferent kinds, mineral acids, chemicals, saltpetre, soap, white-lead, leather, varnish, porcelain, and crystal. There are numerous silk, woollen, and cotton dye-houses, wax bleaching-houses, sugar and salt refineries, tan yards, curriers' shops, morocco leather factories, cotton, woollen,' and cachemere down spinning factories, gas works, royal manufactories of carpets, looking-glasses, and tobacco. A considerable trade is carried on in all the above articles, also in corn, flour, dry ve- getables, wines, brandies, vinegar, mineral waters, butter, cheese, and provisions of all sorts.

The new revolution, whicli lias placed tlit Due d'Orleans on tlie tlironc of France, has tended

very materially towards forwarding the various improvements suggested by Napoleon in Paris. Nearly all the public works had remained in abeyance during the reigns of Charles and his pre- decessor, Louis, and it is gratifying

to see the new life and vigor which has been infused into the second city of Europe by the change in its rulers, Moliere, D'Alembert, J. B. Rousseau, Helvetius Loubet, Segur, Arnaud, Cauchois le Maire, Dessault, Norvins, Perceval-Grahdmaison, 'ol- keimaer, Mercier, La Harpe, Jaucourt, Pougens, Villemain, and Cousin, men of letters; Bernard Marivalt, Destouches, Favart, La Mothe Beau marchais, Marsollier, and Picard, dramatic au- thors ; Madame de Sevigne, Santeuii the poet, Beranger, Kain, Talma, Mole, and Martin, cele- brated actors ; of Lavoisier, the great chemist, beheaded at Paris during the revolution in 1793, Gassecourt jun. the famous apothecary, the abbe I'Epee, the founder of the deaf and dumb asy- lum ; Rollin, Henault, and Le Beau, historians; Condamine, the traveller and astronomer ; of Le Maistre de Sacy and Anquetil, oriental scholars ; Millin, the learned antiquary ; of the celebrated painters David, le Sueur, le Brun, Drouais, Vouet, and Horace-Vernet ; of Perault and Man- sard, architects ; of Goujon, Pigale, Cartellier, and Moithe, sculptors ; of the geographers D'Anville, Buache, de Lisle, Lacroix, Robert de V'augondy, Barbier du Boccage, and Mentelle; of Arnaud, Trouchet, and Billococq, lawyers; of Dupont de Nemours, one of the most honorable characters of the revolution ; ofDuport-du-Fertre, one of the worthiest citizens who lost his life at that time ; of Herault de Sechelles, a member of the convention, beheaded in 1793; of Lepel- letier de St. Fargeau, presidentof the parliament, who was assassinated on the 20th of January the same year ; of the unfortunate Bailly, mayor of the city, beiieaded on the 9th of November ; of cardinal Richelieu ; Voyer d'Argenson and Me- chin, deputies ; Malesherbes, the advocate of Louis XVT., beheaded in 1794; of the great Conde ; of marshal Catinat, prince Eugene, the duke of Orleans; of Ninon d'Enclos, marshal Augereau, who gained the battles of the bridge of Lodi, Areola, &,c. ; of generals Canciaux, Baraquay, d'Hilliers, and Montholon ; of the navigator Bougainville, the traveller Chardin, the printers Anisson Duperron, Pankouque, and Boisle ; of .1 ohn Chalel, the pupil of the Jesuits, the assassin of Henry I'., &c. &c.

Paris is situated on the first meridian according to the French measurement, 20►► E. of the me- ridian of Ferro, and 2►► 15′ E. of London; in N. lat. 48►► .50'. It is 294 miles S. S. E. of Lon- don, 678 S. S. E. of Edinburgh, 654 south-east of Dublin, 222 south of Brussels, 342 south of Amsterdam, 735 south-west of Berlin, 81 6 S. S. W . of Copenhagen, 1170 S.S.W. of Stockholm, 1650 south-west of Petersburg, 795 west o" Dresden, 618N.N. W.of Vienna, 378 north-wes of Geneva, 1146 N. N. W. of Rome, 855 nortn west of 'enice, 1800 W.N.W. of Constanti- nople, 1362 N. N. W. of Naples, 960 N.N. E. of IMad nd, 1 320 north-east of Lisbon, 3900 E. N. E. of Washington, 13,563 E. N.E. of Acapuico, 7233 north-east of Lima, and 5556 W.N.W. of Pekin.*

PARIS.

Paris, in fabulous history, tlie son of Priam, king of Troy, by Hecuba, also named Alexander. lie was decreed, even before liis birth, to become the ruin of his country ; and when his mother, in the first months of her pregnancy, had dream- ed that she should bring forth a torch which would set fire to her palace, the soothsayers fore- told the calamities which were to be expected from the imprudence of her future son, and which would end in the ruin of Troy. Priam, to prevent so great a calamity, ordered his slave Archelaus to destroy the child as soon as he was born. The slave only exposed tlie child on Mount Ida, where the sheplierds of the place found him, and educated him as their own. Some say a she bear suckled him. Though edu- cated among shepherds and peasants, he gave very early proofs of courage and intrepidity ; and, fro7Ti his care in protecting the flocks ot Mount Ida from the rapacity of wild beails, he was named Alexander, a helper of men. He gained the esteem of all the sheplierds, and his manly deportment recommended him to ffinone, a nymph of Ida. whom he married, and with whom he lived with the most perfect tenderness. Tneir conjugal peace was, however, of no long duration. At the marriage of Peleus and Thetis, Ate, the goddess of discord, who had not been invited to partake of the entertainment, showed her displeasure, by throwing into the assembly of the gods who were at tiie celebration of tlie nuptials, a golden a])ple, on which were written the words. Let it be given to the faiiest. All the goddesses claimed it as their own ; the conten- tion at first became general ; but at last only three, Juno, Venus, and Minerva, wished to dis- pute their respctive right to beauty. The gods, unwilling to become arbiters in an afl^air so de- licate in its nature, appointed Paris to adjudge the prize. The goddesses appeared before their judge without covering or ornament, and each endeavoured by promises to influence his judg- ment. Juno promised him a kingdom ; Mi- nerva, wisdom and military glory ; and Venus the fairest woman in the world for his wife. (Ovid. Heroid. 17. v. 118). After hehad heard their several claims and promises, Paris adjudg- ed the prize to Venus, and gave her the golden apple. This decision drew upon the judge and his family the resentment of the two other god- desses. Soon after, Priam proposed a contest among his sons and other princes, and promised to reward the conqueror with one of the finest bulls of Mount Ida. His emissaries were sent to procure the animal, and it was found in the possession of Paris, who reluctantly yielded it. But he went to Troy and entered the lists of the combatants. He was received with applause, and obtained the victory over hi? rivals, Nestor the son of Neleus, Cycnus son of Neptune, Po- lites, Helenus, and Deiphobus, sons of Priam. He likewise obtained a superiority over Hector himself; who, enraged to see himself conquered by an unknown stranger, pursued him closely ; and Pari"^ must

have fallen a victim to his rage had he not tied to the altar of Jupiter. This sa- cred retreat preserved his life ; and Cassandra, the daughter of Priam, struck with the similarity of the features of Paris with those of her brothers,

enquired his birth and his age. From these circumstances she discovered that he was her brother, and as such introduced him to her father and to her brothers. Priam acknowledged Pa- ris as his son, and all jealousy ceased among the brothers. Paris did not long remain inactive; he equipped a fleet, as if willing to redeem He- sione, his fitiier's sister, whom Hercules had carried away, and obliged to marry Telamon the son of iEacus. Tliis was the pretended motive of his voyage, but the causes were far difl'erent. Helen was the fairest woman of the age, and Venus had promised her to him. He therefore went to Sparta, the residence of Helen, who had married JNlenelaus. He was received with great respect; but he abused the hospitality of Mene- laus, and, wiiile the husband was absent in Crete, persuaded Helen to elope with him, and to fly to Asia. Priam received her without difficulty, as liis sister was then detained in a foreign coun- try, and, as he wished to show himself as hostile as possible to the Greeks. This aff"air was soon productive of serious consequences. When Menelaus had married Helen, all her suitors had bound themselves by a solemn oath to defend her from every violence; and therefore he re- minded them of their engagements, and called upon them to recover her. Upon this all Greece took up arms ; Agamemnon was chosen general of the combined forces, and a regular war was begun. Paris, meanwhile, who had refused Helen to the petitions and embassies of the Greeks, armed himself, with his brotheis and subjects, to oppose the enemy ; but he fought with little courage, and at the very sight of Me- nelaus, whom he had so recently injured, his courage vanished, and he retired from the army. In a combat with Menelaus, Paris must have pe- rished, had not Venus interfered. He wounded, however, in another battle, Machaon, Euryphi- lus, and Diomedes; and, according to some, he killed with an arrow the great Achilles. The death of Paris is diff"erently related : some say he was mortally wounded by one of the poisoned arrows of Philoctetes ; and that when he found himself languid by his wounds, he ordered him- self to be carried to the feet of Gˆnone, whom he had basely abandoned, and who had foretold him that he would solicit her assistance in his dying moments. He expired before he came into the presence of (Enone, who threw herself upon his body, and stabbed herself to the heart. According to others, Paris did not immediately go to Troy when he left the Peloponnpsus, but he was driven on the coasts of Egypt, where Proteus, the king of the country, detained him. He died about 1188 B.C. See Troy.

Paris (Matthew), one of the best English his- torians, from William the Conqueror to the latter end of the reign of Henry III. Leland, his ori- ginal biographer, informs us that he was a monk of St. Alban's, and that he was

sent by pope In- nocent to reform the monks of the convent at Holm in Norway. Bishop Bale adds, that, on account of his extraordinary gifts, he was much esteemed by Henry III., who ordered him to write the history of his reign. Fuller makes him a native of Cambridgeshire, and says, he was sent by the pope to visit the monks in the dio-

cese of Norwich. Paris died in the monastery of St. Alban's in 1259. He was a man of extra- ordinary knowledge for the thirteenth century; of an excellent moral character, and, as an histo- rian, of strict intec;rity. His works are, 1. His- toria ab Adamo ad Conquestum Anolise, lib. i. MS. col. C. C. Cantab, c. ix. Most of this book is transcribed by Matthew of Westminster into the first part of his Florilegium. 2. Histo- ria Major, seu rerum Anglicanarum Historia a Gul. Conquestoris Adventu ad annum 43 Hen- rici III., &c., several times printed. 3. Vitas duoruni Oflarum, Mercia? regum, S. Albani fun- datorum. 4. Gesta 22 abbotum S. Albani. 5. Additamenta Chronicorum ad Hist. Majorem : printed. 6. Historia Minor, sive Epitome Ma- joris Historiae ; MS. Besides many other things in MS.

Paris, in botany, herb paris, or true-love, a genus of the order trigynia, and class octandria ; natural order eleventh, sarmentacea; : cal. tetra- phyllous; petals four, narrow in proportion ; the berry quadrilocular. There is but one species, growing naturally in woods and shady places both in Scotland and England. It has a single naked stem, greenish blossoms, and bluish black berries. The leaves and berries are said to par- take of the properties of opium ; and the juice of the berries is useful in inflammations of the eves. Linnaeus says that the root will serve as an emetic as well as ipecacuanha, but must be taken in double the quantity. Goats and sheep eat the plant ; cows, horses, and swine, refuse it.

Paris, Plaster of. See Plaster.

PA'RISH, n.s. &□□□□/;. J Fr. paroisse; Ital.,

Parish'ioxer, n.s. S Span., Port, and Barb. Lat. parochia ; Gr. TrapoiKia, i. e. Tropa near, and oiKOQ, a house. ' A multitude of neighbours pertaining to one church.' says Minsheu : hence the particular charge of ' a secular priest,' ac- cording to Dr. Johnson ; a particular district of land ; and, as an adjective, belonging to, ap- pointed over, oi maintained by, a parish : a pa- rishioner is one who belongs to a particular parish.

Dametas came piping and dancing, the merriest man in a parish. Sidney.

I praise the Lord for you, and so may my parishi- oners ; for their sons are well tutored by you.

Shakspearo. Hail, bishop \ alentine, whose day this is,

All the air is thy diocese ;

And all the chirping choristers

And other birds, a.Te thy parishioners. Donne.

At every point that concerns himself, the good tHirishioner turns down a leaf in his heart ; and re- joiceth that God's word hath pierced him, as hoping that whilst his soul smarts, it heals. Fuller.

In the greater oM-parishes, many of the parishioners, through neglect, do perish. Graunt.

By the Catholick church is meant no more than

the common church, into which all such persons as

belonged to that parish, in which it was built, were

wont to congregate. Pearson.

The tythes, his pansh freely paid, he took ;

But never sued, or cursed with bell or book.

Dry den . A parish priest was of the pilgrim train,

An awful, reverend, and religious man. Id.

I have deposited thirty marks, to be distributed among the ˆoor parishioners. Addison s Spectator.

The office of the church is performed by the parish priest, at the time of his interment. Aulije.

JS'ot parish clerk who calls the psalms so clear.

tfai/.

A man, after his natural death, was not capable of the least parish office. Arbuthuot and Pope.

The parish allowance to poor people is very seldom a comfortable maintenance. Law.

A Parish, in law, is the precinct of a pa- rochial church, or a circuit of ground inhabited by people who belong to one church, and are under the particular charge of its minister. The word comes from TrapoiKia, habitation ; or of Traoa, near, and oikoq, house. Du Cange observes that the name Traoomia was anciently given to the whole territory of a bishop, and derives it from neighbourhood ; because the primitive Christians, not daring to assemble openly in cities, were forced to meet secretly in neighbour houses. In the ancient church there was one large edifice in each city for the people to meet in ; and this they called parochia, parish. But the signification of the word was afterwards enlarged, and meant a diocese, or the jurisdiction of a bishop, consist- ing of several churches. Du Pin observes that country parishes had not their origin before the fourth century ; but those of cities are more ancient. Alexandria is said to have been divided into parishes. In the early ages of Christianity, in this island, parishes were unknown, or at least signified the same that a diocese now does. There was then no appropriation of ecclesiastical dues to any particular church ; but every man was at liberty to contribute his tithes to any priest or church he pleased, but he was obliged to do it to some ; or, if he made no special ap- propriation, they were paid to the bishop, to dis- tribute them among the clergy, and for other pious purposes. Sir Henry Hobart maintains that parishes were first erected by the council of Lateran, held A. D. 1179. But Selden proves that the clergy lived in common, without any division of parishes, long after the time men- tioned by Camden (A. D. 636) ; and it appears, from the Saxon laws, that parishes were in beinoˆ long before the council of Lateran in 1179. The distinction of parishes occurs in the laws of king Edˆar about 970. It seems pretty clear and cer- tain, says Blackstone, that the boundaries of parishes were first ascertained by those of a manor or manors ; because it very seldom hap- pens that a manor extends itself over more than one parish, though there are often many manors in one parish. The lords, he adds, as Christianity spread, began to build churches u]ion their own demesnes or wastes, to accommodate their tenants in one or two adjoining lordships ; and, that they might have divine service regularly performed therein, obliged all their tenants to appropriate their tithes to the maintenance of the one officiat- ing minister, instead of leaving tliem at liberty to distribute them among the clergy of the diocese in general ; and this tract of land, the tithes of which were so appropriated, formed a distinct parish ; and this accounts for the frequent inter- mixture of the parishes one with another. For if a lord had a parcel of land detached from the main of his estate, but not sufficient to fornˆ a parish of itself, it was natural for him to en

flow his newly erected church with the tithes of such lands. Extra-parochial wastes and marsh lands, when improved and drained, are by 17 Geo. II., cap. 37, to be assessed to all parochial rates in the parish next adjoining.

In every parish in England the parson has a parish-clerk under him, who is the lowest officer of the church. These were formerly clerks in orders, and their business at first was to officiate at the altar ; for which they had a competent maintenance by offerings ; but they are now lay- men, and have certain fees with the parson on christenings, marriages, burials, &c., besides wˆes for their maintenance. The law looks upon them as officers for life ; and they are chosen by the minister of the parish, unless there is a custom for the parishioners or church- wardens to choose them ; in which case the canon cannot abrogate such custom ; and, when chosen, it is to be signified, and they are to be sworn into their office by the archdeacon, for which the court of king's bench will grant a mandamus.

PARISI, ancient Britons, who inhabited the counties now called Durham, Westmoreland, and Cumberland.

PARISH, an ancient people of Gallia Celtica, who inhabited the country about the Sequana and Marona, since called the Isle of France.

PAR'ITOR, n. s. Corrupted from apparitor. A beadle; the summoner of a civil court.

You shall be summoned by an host of paritours ; you shall be sentenced in the spiritual court. Dryden.

PA R'lTY, n. s. French parit'c ; Lat. paritas. Equality : hence likeness ; resemblance.

That Christ or his apostles ever commanded to set up such a. parity of presbyters, and in such a way as those Scots endeavour, I think is not very disputable.

King Charles.

We may here justly tax the dishonesty and shame- fulness of the mouths, who have upbraided us with the opinion of a certain stoical parity of sins.

Hall.

Women could not live in that parity and equality of expense with their husbands, as now they do.

Graunt.

Those accidental occurrences, which excited So- crates to the discovery of such an invention, might fall in with that man that is of a perfect parity with Socrates. Hale.

Their agreement in essential characters makes ra- ther an identity than a parity. Glanville.

Survey the total set of animals, and we may, in their legs or organs of progression, observe an equa- lity of length and paritii of numeration ; not any to have an odd leg, or the movers of one side not ex- actly answered by the other. Browne.

By an exact parity of reason, we may argue, if a man has no sense of those kindnesses that pass upon him, from one like himself, whom he sees and knows, how much less shall his heart be affected with the grateful sense of his favours whom he converses with only by imperfect speculations, by the discourses of reason, or the discoveries of faith! South.

PARIUM, in ancient geography, a noble city of Mysia Minor, with a port on the Propontis ; called Adrastia by Homer, according to Pliny ; according to others, it is the Paestos of Homer. It was the birth place of Neoptolemus, surnamed Glossographus. ??? Strabo. Here stood a Cupid, equal in workmanship to the Cnidian 'enus.

PARK, n.s.ii.v.a. Sax. peappuc; Goth, and Swed. park; Fr. pare; Span, parque, of Latin parco, to preserve. An enclosure in which wild animals are preserved, ‘ which a man may have,’ in England, ‘ by prescription of the king’s grant,’ say the law authorities. See below. To park is to enclose as in a park.

How are we parked, and bounded in a pale ! A little herd of England’s tim’rous deer, Mazed with a yelping kennel of French curs.

Shakspeare.

We have parks and inclosures of all sorts of beasts and birds, which we use not only for view or rare- ness, but likewise for dissections and trials. Bacon. The man of wealth and pride

Takes up a place that many poor supply ‘d ;

Space for his lake, his park’s extended bounds,

Space for his horses, equipage, and hounds.

Goldsmith.

Park, an extent of ground enclosed with walls and palisades, and stored with beasts of chase. In their villas the ancient Romans were fond of possessing capabilities for enjoying the pleasures of the chase ; to which they were greatly ad- dicted, among other reasons, from the excellent effect produced by robust and manly exercise upon their bodies, and through that medium upon their minds likewise. For this purpose, then, parks were generally attached to their country houses. We find one represented in a painting on the ceiling of the tomb of the Pisones, near the Flaminian way. Originally hares con- stituted the only game placed therein, and hence they were denominated leporaria, from lepus, a hare. At length, however, other game were in- troduced ; such as stags, wild boars, wild goats, roebucks, &c. ; and the extent of the enclosures was proportionably enlarged. Fulvius Lupinus was one of the first Romans who greatly increased his domain in this w ay ; his park stretched over forty acres. Pompey and Hortensius followed this example, the latter establishing a park of upwards of fifty acres.

Mr. Loudon, in his Treatise on Country Resi- dences, observes that parks should be of two descriptions ; those attached to small houses, wherein regard should chiefly be directed to tiie value of the pasture, and where the pasturing animals are sheep, horses, oxen, &c. ; and, se- condly, such as, belonging to splendid mansions, demand more especially grandeur of character and distribution. In the former species, the surface of the ground should receive its princi- pal characteristic from groups of trees, or gentle walks, conducting the promenader from vista to vista, so as to produce as great a variety of ef- fects as the nature of the scenery around, and the contracted space the artist has to work in, will possibly admit. Indeed, by circuitous patlis, and skilful disposition of trees, this kind of park will often deceive the eye of the spectator with respect to its actual extent. A level and monoto- nous surface, such as we frequently are com- pelled to notice, containing a walk round, and dotted with sophisticated-looking clumps, at regular distances, can, it will be obvious, never appear larger than it really is ; but a very few acres, laid out in the manner hmted at by us above, may even be made to appear almost boundless : every step presenting a novel combi-

nation, arising from the judiciously planted masses of trees, and the sight of the cattle caught by the eye at different points through the inter- mediate foliage.

In the latter description of park another prin- ciple must be proposed and followed. Here that style of distribution and planting denomi- nated the forest style is in place. 1-ong avenues ; open glades stretching out in ample proportions ; broken ground, set with trees, shrubs, under- wood, furze, fern, &c., is admissible, and indeed desirable. The grazing animals, in a domain of this order, should be deer or horses, intermixed with a few wild cattle. It has been suggested that, as parks form the prominent features of many capital residences, were the appearance of wildness and forest scenery just alluded to given to them, the effect would be most grand and im- posintj, not only as regarded the actual domain of which they formed a part, but viewed with reference to the whole surrconding country. As it is, the seats of our principal men of rank and fortune possess many very noble specimens of enclosures of this kind ••• among which we will enumerate, by the way, those of Blenheim, Knole Stowe, Donnington, Bow Wood, &c. Sec. Among the royal demesnes, Windsor Park stands proudly pre-eminent, and is, indeed, one of the noblest in Europe, and every way worthy to encircle the castle of an English monarch.

In the metropolis there are several attached to tlie crown, but which are become, by pre- scription, almost the common property of the nation, contributing inestimably, not merely to the amusement and relaxation, but to the health and comfort of the immense population of the capital. Caroline, the queen of George II., once enquired of tiie first Mr. Pitt how much it would cost her to shut the parks. He replied, ‘ Three crowns, your majesty,’ and she took the hint. To Hyde Park, St. James’s Park, and the Green Park, there has, within these few years, been most munificently added the Regent’s Park. Thus a vast space, close by the metropolis, is not only preserved from the encroachment of mean buildings, but laid out with groves, lakes, and villas, with their separate pleasure grounds, while through the whole place there is a winding road, which commands at every turn some fresh features of an extensive country prospect. This is indeed a desirable appendage to so vast a town as London, more especially as the rage for building fills every pleasant outlet with bricks, mortar, rubbish, and eternal scaffold-poles, which, whether you walk east, west, north, or south, seem to be running after you.

‘ The noble appropriation of the district of which we are now speaking is not so much a change as a restoration. It was formerly a park, and had a royal palace in it, where, we believe, queen Elizabeth occasionally resided. It was disparked by Oliver Cromwell, who settled it on colonel Thomas Harrison’s regiment of dragoons for their pay ; but, at the restoration of Charles II., it passed into the hands of other possessors, from which tmie it has descended through dif- ferent proprietors, till, at length, it has reverted to the crown, by whose public spirit a magnifi- cent park is secured to the inhabitants of Lon-

don. The expense of its planting, &c., have been enormous ; but money cannot be better laid out than on purposes of this lasting benefit and national ornament.

‘ The plan and size of the park are in every res])ect worthy of the nation. It is larger than Hyde Park, St. James’s, and the Green Park together; and the trees planted in it about ten years ago are already becoming umbrageous. The water is very extensive. As you are rowed on it, the variety of views you come upon is ad- mirable : sometimes you are in a narrow stream, closely overhung by the branches of trees ; pre- sently you open upon a wide sheet of water, like a lake, with swans sunning themselves on its besom ; by and by your boat floats near the edge of a smooth lawn fronting one of the villas; and then again you catch the perspective of a range of superb edifices, the elevation of which is contrived to have the effect of one palace. The park, in fact, is to be belted with groups of these mansions, entirely excluding all sight of the streets. Many of them are finished, and give a satisfactory earnest of the splendid spirit in wliich the whole is to be accomplished. There will be notlun-j like it in Europe. The villas in the interior of tl.e park are planted out from the view of each other, so that the inhabitant of each seems, in his prospect, to be the sole lord of the surrounding picturesque scenery.’

No man can erect a park without license under the broad seal ; for the common law does not en- courage matter of pleasure which brings no profit to the commonwealth. But there may be a park in reputation erected without any lawful warrant; and the owner may bring his action against per- sons killing his deer. To a park, three things are required : ††† 1 . A grant thereof. 2. Enclosures by pale, wall, or hedge. 3. Beasts of a park; such as the buck, doe, &c. And, where all the deer are destroyed, it shall no more be counted a park ; for a park consists of vert, venison, and enclosure : and, if it is determined in any of them, it is a total disparking. Parks, as well as chases, are subject to the common law, and are not governed by the forest law. See Forest. Park or Artillery. See Artillery. Park of Provisions, in military affairs, the place where the sutlers pitch their tent in the rear, and sell their provisions to the soldiers. Likewise that place where the bread-waggons are drawn up, and where the troops receive their ammunition-biead, being the store of the army.

Park (Mungo), the celebrated traveller, was born at Fowlshiels, in the county of Selkirk, on the 10th of September, 1771. His father was a respectable yeoman, and held a farm under the duke of Buccleuch. At the grammar school of Selkirk, where he was educated, the son is said to have shown extraordinary application to study, and was always at the head of his class. This inspired his father with the design of educating him for the church; he himself, however, made choice of the medical pro- fession ; and,

at the age of fifteen, was bound apprentice to Mr. Thomas Anderson, a surgeon of Selkirk, with whom he spent three years. In 1789 he removed to Edinburgh, and attended three successive sessions the lectures delivered

at that great seminary of medical learning. Mr. Park pursued with assiduity all the studies sub- servient to his profession ; but his peculiar at- tachment was to the science of botany. For this he seems to have been in a great measure indebted to his intimacy with his brother-in-law, Mr. James Dickson, who became in London, under the patronage of Sir Joseph Banks, one of the most eminent English botanists. Park, having come to London to seek employment in his profession, found in Mr. Dickson a most valuable friend. He was at once introduced to Sir Joseph Banks, through whom he obtained the appointment of assistant surgeon to the Worcester East Indiaman, and made a voyage to Bencoolen in Sumatra, during which he col- lected a number of specimens in botany and natural history, an account of which is inserted in the Transactions of the Linnaan Society. On he 4th of November, 1794, he read a paper before the Society, containing a description of eight new species of fish from Sumatra. What Mr. Park's views now were does not certainly appear ; but the crisis had arrived which was to give a decisive turn to his future life. The as sociation for promoting discoveries in Africa had, in the course of a few years, made a num- ber of important researches in the interior of that great continent; and it became at this time their main object to ascertain the course of the Niger, and the present state of the great central emporium, Tombuctoo ; Sir Joseph Banks, who was one of the most active members of the as- sociation, fixed upon Park as the most proper person for entering upon this career of adven- ture ; and he was readily accepted. On the 22d of May, 1795, he set sail from Portsmouth, on board the Endeavour, an African trader, and arrived in the Gambia on the 21st of the follow- ing month. For the results of the expedition we refer our readers to the article Africa. After an absence from England of two years and seven months, Mr. Park arrived at Falmouth on the 22d of December, 1797, and reached London on the morning of the 25th. In June, 1798, he went down to reside with his mother and other relations at Fowlshiels, where he spent the summer and autumn in assiduous labor upon the interesting volume of Travels, which he afterwards published, and in which he was assisted by Mr. Bryan Edwards. It is needless to state how universally this volume was read. After its publication Mr. Park re- turned to Scotland, and formed a matrimonial connection with Miss Anderson, daughter of the gentleman with whom he had served his apprenticeship. With a character so active and adventurous, it will not appear surprising that Park should be ready to enter anew upon

the career in which he had already appeared so brilliantly On the signing of the preliminaries of peace, in 1801, he received a letter from Sir Joseph Bankes, intimating that the plan of pe- netrating into the interior of Africa would be revived ; that there were hopes of its receiving the support of government ; in which case the association would not hesitate to recommend him as the proper person for conducting it. He heard nothing farther till the autumn of 1803,

when he was invited to London to receive a proposition from lord Hobart to the above effect. Although he asked a short delay, and consulted some of his friends, he never seems, in his own mind, to have hesitated a moment as to the acceptance of the offer. Owing to changes in the ministry, however, and the visual delays of office, the expedition was delayed till the beginning of 1804, when, on the 30th of Janu- ary, he set sail from Portsmouth. On the Btli of March he arrived at St. Jago, one of the Cape de ^‘erd Islands ; and on the 28th arrived at Goree. Here he had received authority to enlist a detachment of the garrison, and take the command of them. The promise of double pay and discharge soon gave him the choice of the soldiery ; and he engaged upwards of forty to attend him in his expedition. He seems now to have been in the highest spirits, and looked for- ward to success with the utmost confidence. But, notwithstanding these fair promises of success, never, in fact, was an expedition undertaken under less fortunate auspices. Park’s hopes of reaching the Niger in safety depended entirely upon his doing so previous to the commence- ment of the rainy season, the effects of which are always fatal to Europeans. From unexpected delays, however, half his journey had not been completed when the rains began to be felt. Ln a few days twelve men were sick ; and every day added to the distress, till the whole party felt the influence of this destructive season. One after another, either stopped at the villages, or lay down on the road, refusing to proceed ; and, of forty-four men who left Goree, only nine ar- rived at the Niger, all sick, and several in a statj of mental derangement. Nothing, however, could shake Mr. Park’s resolution. He imme- diately began to negotiate with the king of Bum- barra, for permission to build a boat for the pur- pose of proceeding down the Niger. Having obtained this, he constructed the vessel chiefly with his own hands. Mr. Park accordingly set sail ; but Mr. Maxwell, the governor of Goree, in vain looked for any intelligence of his pro- gress. At length unfavorable reports began to come down to the coast ; and, these continually increasing, the governor felt the duty of making enquiry respecting his fate. He happened fortu- nately to engage Isaaco, the guide who had fol- lowed him to the Niger. This person, in the course of his mission, fell in with Amadi Fatouma, whom Mr. Park had taken with him down the river. From him he received a narrative purport- ing to contain the only particulars of the death of this distinguished traveller, which have ever transpired. It appears that Park

had deli- vered some presents to the chief of Yaour, to be transmitted to the king, who lived at a little dis- tance. The chief, having learned that iNIr. Park was not to return, conceived the treacherous de- sign of appropriating the presents to himself. Amadi Fatoumi then relates : ‘ I went to the king to pay my respects to him. On entering the house, I found two men who came on horse- back ; they were sent by the chief of Yaour. They said to the king, ‘ we are sent by the chief of Yaour to let you know that the white men went away without giving you or him (the chier

any thing ; they have a great many things witli them, and we have received nothing from them ; and this Amadi Fatcuma now before you is a bad man, and has likewise made a fool of you both.’ The king immediately ordered me to be put in irons ; which was accordingly done ; and every thing I had taken from me; some were for kill- ing me, and some for preserving my life. The next morning early, the king sent an army to a village called Boussa, near the river side. There is before this village a rock across the whole breadth of the river. One part of the rock is very high ; there rs a large opening in that rock in the form of a door, which is the only passage for the water to pass through ; the tide current is here veiy strong. This army went and took possession of the t-ˆp of this opening. Mr. Park came thither after the army had posted itself; he nevertheless attempted to pass. ITie people began to attack him, throwing lances, pikes, arrows, and stones. Mr. Park defended himself for a long time ; two of his slaves at the stern of the canoe were killed ; they threw every thing they had in the canoe into the river, and kept firing ; but being overpowered by numbers and fatigue, and unable to keep jup the canoe against the current, and there being no probabi- lity of escaping, JNIr. Park took hold of one of the white men, and jumped into the water; Martyn did the same, and they w ere drowned in the stream in attempting to escape. The only slave remaining in the boat, seeing the natives persist in throwmg weapons at the canoe, with- out ceasing, stood up ana said to them, ‘ Stop throwing now ; you see nothing in the canoe, and nobody but myself; therefore cease. Take me and the canoe, but don’t kill me.’ They took possession of the canoe and the man, and carried them to the king. I was kept in irons three months ; the king released me and gave me a slave (woman). I immediately went to the slave taken in the canoe, who told me in what manner Mr. Park and all of them had died, and what I have related above. I asked him if he was sure nothing had been found in the canoe after its capture ; he said that nothing remained in the canoe but himself and a sword-belt. I

asked him where the sword-belt was ;□□□ he said the king took it, and had made a girth for his horse with it.' Serious doubts have been raised concerning the authenticity of this narrative ; but no reason- able hope can now be entertained that Mr. Park has not, in some way or other, perished in his voyage down the Niˆer. An account of his second journey,, so far as his own narrative ex- tended, with a memoir of his life, by Mr. Wishaw, was published in 1815.

PAKKEIl (Henry), lord jNlorley, a noble au- thor, who flourished in the reign of Henry VIII., and wrote several works, a list of which may be seen in Mr. Walpole's Catalogue of Royal and Noble Authors, vol. i. He was one of the barons who signed the memorable letter to pope Clement VH., threatening him with the loss of his su- premacy in England, unless he proceeded to despatch the king's divorce against queen Catiia- rine.

Parker (Matthew), the second protestant archbishop of Canterbury, was born at Norwich

in 1504, in the reign of Henry VH. His father died when he was twelve years old ; but his mother, at the age of seventeen, sent him to Corpus-Christi College in Cambridge, where, in 1523, he took his degree of A. 15. In 1527 he was ordained, created A.M., and chosen fellow. In 1533 or 1534 he was made chaplain to queen Anne Boleyn, who obtained for him the deanery of Stoke-Clare in Suffolk, where he founded a grammar school. After her death Henry made him his own chaplain, and in 1541 prebend of Ely. In 1544 he was elected master of Corpus- Christi College; and, in 1555, vice-chancellor of the university. In 1547 he lost the deanery of Stoke, by the dissolution of the college ; and married the daughter of Robert Harlestone, a Norfolk gentleman. In 1552 he was nominated by Edward \T. dean of Lincoln, which enabled him to live in great affluence: but Mary I. was hardly seated on the throne before he was de- prived of every thing, and oblised to live in ob- scurity, often changing his place of abode to avoid the fate of the other reformers. Queen Elizabeth succeeded in 1558; and in 1559 Dr. Parker, from indigence and obscurity, was at once raised to the see of Canterbury; an honor which he neither solicited nor desired. He was consecrated December 17th, 1559, by the four surviving reformed bishops. In this high station he acted with spirit and propriety. He visited his cathedral and diocese in 1560, 1565, 1570, and 1573. He repaired and beautified his palaces at Lambeth and Canterbury, at an ex- pense of above □□l400 sterling, which is at least equal to ten times the sum now. He founded several scholarships in Corpus-Christi College in Cambridge, and gave large presents of plate to that and other colleges in this university. He gave 100 volumes to the public library. He likewise founded a free-school at Rochdale in Lancashire. He took care to have the sees filled with pious and learned men ; and, con- sidering the

great want of Bibles in many places, he, with the assistance of other learned men, im- proved the English translation, had it printed on a large paper, and dispersed through the kingdom. This worthy prelate .died in 1575, aged seventy – two, and wa.^ buried in his own chapel at Lam- beth. He wˆas pious without affectation or aus- terity, cheerful and contented in the midst of adversity, and beneficent beyond example. He wrote several works; and published those of four of our best historians ; Matthew of West- minster, i\Iatthew Paris. Asser's Life of King Alfred, and Thomas Walsingham. He also translated the Psalter. This version was printed, but without a name, which led the learned Wood to attribute it to an obscure poet of the" name oˆ Keeper.*

Parker (.lohn), an eminent laˆvyer of the seventeenth century, who practised at Nor- thampton about 1640. He was educated in the Temple; and, joining the party of the parlia- ment, was made a member of the high court of justice in 1649, where he gave sentence against the three lords, Capel, Holland, and Hamilton, who were beheaded. During Cromwell's usur- pation he was made an assistant committee-man for his count v. In 1630 he nublished a book in

defence of the new government, as a common- wealth, witliout a king or house of lords. In June 1635, when Cromwell was declared pro- tector, he was appointed a commissioner for re- moving obstructions at Worcester House in the Strand, and was sworn serjeant at law next day. In January 1659 he was appointed one of the barons of the exchequer by the rump parliament ; but, upon a complaint, was displaced. However, he was again regularly made serjeant at law, on the recommendation of chancellor Hyde, after the Restoration.

Parker (Samuel), D. D., an English clergy- man, son of the preceding, who became lˆishop of Oxford. He was born September 1640, at Northampton, and educated among the puritans in Northampton ; whence, being lit for the uni- versity, he was sent to VVadham College in Ox- ford, and admitted in 1659 under a presbyterian tutor. Here he led a strict and religious life, and took the degree of A. B. February 28th, 1660. Upon the Restoration he hesitated which party to join ; but, continuing publicly to speak against episcopacy, he was discountenanced by the new warden Dr. Blandford, who had been appointed to that office upon the dawn of the Restoration in 1659. Upon this he removed to Trinity Col- lege, where, by the advice of

Dr. Ralph Ruth- v/ell, then a senior fellow of that society, he was ‘ rescued from the prejudices of his education,’ which he pulilicly avowed in print. He then became a zealous Anti-puritan, and for many years acted the part of what was then called a true son of the church. In this temper, having taken the degree of M.A. in 1663, he entered into holy orders, went to London, and became chaplain to a nobleman, continuing to display his talents at the expense of his old friends the Presbyterians, Independents, &c. In 1665 he published some philosophical essays, and was elected F. U.S. These essays he dedicated to Sheldon, archbishop of Canterbury, who became his patron; and, in 1667, made him his chaplain. He now left Oxford, and resided at Lambeth with his patron; who, in 1670, made him arch- deacon of Canterbury. In November 1670 he joined the train of William prince of Orange, who visited Cambridge, and had the degree of D. D. conferred upon him there. In November 1672 he was installed a prebendary of Canter- bury ; and was made rector of Ickham and Chatham in Kent by the archbishop. He was very obsequious to the court during the reign of Charles II. ; and, upon the accession of James II., he continued the same servile complaisance; and soon reaped the fruits of it in the bishopric of Oxford, to which he was appointed by James II. in 1686, being allowed to hold the arch- deaconry of Canterbury in commendam. He was likewise made a privy counsellor; and, by a royal mandamus, president of Magdalen Col- lege in Oxford. He died in Magdalen College, March 20th, 1687. He sent a” Discourse to James, persuading him to embrace the Protes- tant religion, with a letter to the same purpose, which was printed in London in 1 690, 4to.

Parker (Richard), an English sailor, the leader of a dangerous mutiny which took place on board the squadron of lord Bridport, in the eventful

spring of 1707. He was born at Exeter about 1760, and, having received a decent education, entered into the navy, and served during the American war. On peace taking place he mar- ried a woman with some property, which he dis- sipated, and was imprisoned for debt at Edin- burgh. Being at length released, he entered on board tlie royal fleet at the Nore, as a common sailor, where lie soon diplayed a spirit of insub- ardination; but acquired the confidence of the men, and, on the mutiny arising, was appointed their ‘ admiral.’ When the revolt was suppressed, through the prudent management of lord Howe, Parker was put in confinement, and, being tried by a court martial at Sheerness, was hanged on board the Sandwich, to which ship he had be- longed. His body was afterwards exposed on the coast of the isle of Sheppey. He suflfered June 30th, 1795, displaying great calmness of mind.

PARKES (Samuel), a late ingenious professor of chemistry, was born at Stourbridge, in Wor- cestershire, in 1759, and educated under Dr.

Addington at Market Uarborough. In 1806 he first published his Chemical Catechism ; of which many editions have appeared, and was long eminent as a practical chemist. This work was followed in 1808 by an Essay on the Utility of Chemistry in the Arts and Manufactures; and in 1809 by Rudiments of Chemistry, illus- trated by examples ; an abridgment of his first treatise, which he was induced to publish, on ac- count of an attempt to pirate the work. His last production was. Chemical Essays, princi- pally relating to the Arts and Manufactures of the British dominions, printed in 1815, in eight vols. 8vo. Mr. Parkes was a fellow of the So- ciety of Arts, and of various other literary and pliilosophical associations. He died at his house in Mecklenburg Square, London, December 23d,

1815.

PARKHURST (John), a learned divine and lexicographer, born at London ; and educated at Clare-ilall, Cambridge; of which he was ad- mitted fellow in 1751, and took his degrees of B. A. and M. A. He settled at Epsom in Surry, was the intimate friend of bishop Home, and adopted the opinions of Hutchinson. He pub- lished, 1. A Greek and English Lexicon, 4to. ; 2. A Hebrew and English Lexicon, 4to. ; both of which are very useful ; 3. An Answer to Dr. Priestley on the pre-existence of Christ. He died in 1797.

PARKINSON (John), an eminent English botanist, born in 1567. He was the first who described and figured the subjects of the flower garden singly. His Theatrum Botanicum contained a more copious history of medicinal plants than any former publication.

PARKINSONIA, so called in honor of the above botanist ; a genus of the monogynia order and decandria class of plants : natural order thirty-third, lomentaceae : cal. quinnuefid : pe- tals five, all oval except the lowest, which is re- niform ; style none ; the legumen moniliform. We know b\it onespecies, which is very common in the Spanish West Indies, and has lately been introduced into the English settlements, for the Deauty and sweetness of its flowers. In the

countries where it grows naturally it rises to a tree of twenty or more feet high, and bears long- slender bunches of yellow flowers, which have a most agreeable sweet scent.

PAKLE, n. s.) Fr. purler. Conver-

Par'ley, v. a. &cn. s. i sation; negociation ;

talk ; oral treaty (obsolete) : to parley is to treat

or discuss a thing orally : as a substantive it is

a modern word for parle.

Seek rather by parlet/ to recover them than by the sword. Sidne-j.

A Turk desired the captain to send some, with whom they might more conveniently parley.

KnoUes's History. Of all the gentlemen, That every day with parle encounter me, In thy opinion, which is worthiest love 2

Shakspeare. Our trumpet called you to this general parle.

Id. Summon a parley, we will talk with him. Id.

The bishop, by a parle, is, with a show Of combination, cunningly betrayed. Daniel.

Parley and holding intelligence with guilt in the most trivial things, he pronounced as treason to our- selves, as well as unto God. Fell. No gentle means could be essayed ; 'Twas beyond parley when the siege was laid.

Dryden. Force never yet a generous heart did gain ; We yield on parley, but are stormed in vain. Id. Why meet we thus like wrangling advocates. To urge the justice of our cause with words 1 I hate this parle ; 'tis tame : if we must meet, Give me my arms. Rowe's Ambitious Step-mother. Yet when some better fated youth Shall with his am'rous parley move thee.

Reflect one moment on his truth, Who, dying thus, persists to love thee. Prior. Let us resolve never to have any parley with our lusts, but to make some considerable progress in our repentance. Catamy.

He parleys with her awhile, as imagining she would advise iiim to proceed. Broome.

Strange is thy form, but more thy words are strange ††† Fearful it seems to hold this pjrley with thee. Tell me thy race and country. Maturin.

Parley, in war, is a conference with an enemy. Hence to beat or sound a parley, is to give a signal for holding such a conference by beat of drum, or sound of trumpet.

PAR'LIAMENT, n. s. k adj. } Fr. parte- Parliamex'tary. S vient ; Ital. &

Span, purlamento ; Barb. Lat. parliamentum ; ' a parlare la mente, says Minsheu, after Coke, to speak judiciously his mind !' A high court of debate and appeal on public affairs ; in the United Kingdom it signifies the assembly of king, lords, and commons, ' the court of all others the highest, and of greatest authority' : parliamentary is, enacted by, pertaining to, or customary in, parliament.

A member o(parliament is originally to be tender of his own liberty, that other men may the better trust him with theirs. Saville.

The king is fled to London, To call a present court of parliament.

Shakspeare. Far be the thought of this from Henry's heart. To make a shambles of the parliament house. Id.

The true use of parliaments is very excellent ; and be often called, and continued as long as is neces- sary. Bacon.

To the three first titles of the two houses, or lines, and conquest, were added two more ; the authorities parliamentary and papal. Id.

I thought the right way of parliaments the most safe for my crown, as best pleasing to my people.

hing Charles.

Many things, that obtain as common law, had their original by parliamentary acts or constitutions, made in writings by the king, lords, and commons.

Hale.

These are mob readers : if Virgil and Martial stood for parliament men, we know who would carry it. Dryden.

Credit to run ten millions in debt, without parlia- mentary security, I think to be dangerous and illegal.

Sw^'t.

We assemble parliaments and councils, to have the benefit of their collected wisdom ; but we necessa- rdy have, at the same time, the inconveniencies of their collected passions, prejudices, and private in- terests. Franklin.

The Parliament is the grand assembly of the three states of this kingdom, summoned to- gether by the king's authority, to consider of matters relating to the public welfare, particularly to enact and repeal laws. The original or first institution of parliament lies so far hidden in the dark ages of antiquity, that the tracing of it out is equally difficult and uncertain. The word parliament is, comparatively, of modern date ; derived from the French parler, and signifying the place where they met and spoke, or conferred' together. It was first applied to general assem- blies of the states under Lou-is \ II. in France, about the middle of the twelfth centurj-. But it is certain that long before the Norman con- quest all matters of importance were debated and settled in the great councils of the realm ; a practice which seems to have been universal among the northern nations, particularly the Germans, and carried by them into all the countries of Europe, which they over-ran at the dissolution of the Roman empire. Relics of this constitution, under various modifications and changes, are still to be met with in the diets of Poland, Germany, and Sweden, and formerly in the assembly of the states in France ; for what was there lately called the parliament was only the supreme court of justice, consisting of the peers, certain dignified ecclesiastics, and judges ; which was neither in practice, nor supposed to be in theory, a general coimcil of the realm.

In England, this general council hath been held immemorially, under the several names of michel synotli, or great council; michel gemote, or great meeting ; and more frequently wit+ena gemote, or the meeting of wise men. It was also styled in Latin, commune concilium regni, mag- num concilium regis, curia magna, conventus magnatum vel procerum, assisa generalis, and sometimes communitas regni Angliae. We have instances of its meeting to order the affairs of the kingdom, to make new laws, and to amend the old ; or, as Fleta expresses it, novis injunis emersis nova constituere remedia, so early as the reign of Ina, king of the \'est Saxons; Ossa, king of the Mercians ; and Ethelbert, king of Kent, in the several kingdoms of the heptarchy.

And after their union, the Mirror informs us th;it king Alfred ordained, for a perpetual usage, that these councils should meet twice in the year, oi oftener, if need be, to treat of tlie government of (>od's people ; how they should keep themselves from sin, should live in quiet, and should receive right.' The subsequent Saxon and Danish mo- narchs held frequent councils of this sort, as ap- pears from their codes of laws ; the titles whereof usually speak them to be enacted, either by the king, with the advice of his wittena c:eniote, as Haec sunt instituta, quse Edgarus rex consilio

*sapientum suorum instituit : or to be enacted by those sages with the advice of the king ; as Msec sunt judicia qua; sapientes, consilio regis Ethel- stani, instituerunt ; or, lastly, to be enacted by them both together, as Hce sunt institutiones quas rex Edmundus et episcopi sui, cum sapi- entibus suis, instituerunt. These great councils
वे were also occasionally held under the first princes of the Norman line. Glanville, who wrote in the reign of Henry II., speaking of the particular amount of an amercement in the sherift"s court, says, it never yet had been ascer- tained by the general assize or assembly, but ववे was left to the custom of particular counties. Here the general assize is spoken of as a meet- ing well known, and its statutes or decisions are put in a manifest contradistinction to custom, or the common law. And in Edward III.'s time, an act of parliament, made in the reign of William I., was pleaded in the case of the abbey of St. Edmund's Bury, and judicially allowed by the court. Hence it indisputably appears that parliaments, or general councils, are coeval ववे with the kingdom itself. How those parliaments were constituted and composed has been matter of great dispute among our learned antiquarians; whether the commons were summoned at all ; or at what period they began to form a di.stinct as- sembly. But, waiving these controversies, it is generally agreed that, in the main, the constitu- tion of parliament, as it now stands, was marked out so long ago as the seventeenth year of king John, A. D. 1215, in the great charter granted by that prince ; wherein he promises to summon all arclibishops, bishops, abbots, earls, and greater barons, personally ; and all other tenants in cliief under the crown, by the sheriff and bailiffs ; to meet at a certain place, with forty days' notice, to assess aids and scutages when necessary. See M.\gna Ciiarta. And this constitution has subsisted in fact at least from 1266, 49 Henry III., there being still extant writs of that date, to summon knights, citizens, and burgesses to parliament.*

We proceed, therefore, to enquire, wherein consists this constitution of parliament, as it now stands, and has stood, for at least 500 years : 1 . As to the manner and time of its as- sembling : 2. Its constituent parts : 3. The laws and customs relating to parliament : 4. The methods of proceeding; and of making statutes, in both houses ; and, 5. The manner of the parlia- ment's adjournment, prorogation, and dissolution.

I. The parliament is regularly summoned by the king's writ or letter, issued out of chancery by advice of the privy council, at least forty days before it begins to sit. It is a branch of the

royal prerogative that no parliament can be con- vened by its own authority, or by the authority of any, except the king alone. And this prero- gative is founded upon very good reason, for, supposing it had a right to meet spontaneously, without being called together, it is impossible to

conceive that all the members of each of the houses would agree unanimously upon tlie pro- per time and place of meeting ; and if half of the members met, and half absented themselves, who shall determine which is really the legisla- tive body, the part assembled, or that which stays awav ? It is therefore necessary that the parliament should be called together at a deter- minate time and place ; and highly becoming its dignity and independence that it should be called together by none but one of its own con- stituent parts : and, of the tliree constituent parts, this office can only appertain to the king; as he is a single person, v.hose will may be uni- forni and steady ; the first person in the nation being superior to both houses in dignity, and the only Ijranch of the legislature that has a se- parate existence, and is capable of performing any act at a time when no parliament is in being. Nor is it any exception to this rule that, by some modern statutes, on the demise of a king or queen, if there be then r.o parliament in being, the last parliament revives, and is to sit again for six months, unless dissolved by the succes- sor ; for this revived parliament must have been originally summoned by tlie crown. It is true that the convention parliament which restored King Charles II. met above a month before his return ; the lords by their own authority, and the commons in pursuance of writs issued in the name of the keepers of the liberty of England by authority of parliament ; and that the said par- liament sat till the 29th of December, full seven months after the Restoration, and enacted many laws, several of which are still in force. But this was for the necessity of the thing, which supersedes all law ; for, if they had not so met, it was morally impossible that the kingdom should have been settled in peace. And tlie first thing done after the king's return was to pass an act declaring this to be a good parliament, notwith- standing the defect of the king's writ : so that, as the royal prerogative was chiefly wounded by their so meeting, and as the king himself, who alone had a right to object, consented to waive the objection, this cannot be drawn into an ex- ample in prejudice of the rights of the crown. Besides, it was at that time a great doubt among the lawyers, whether even this healing act made it a good parliament, and held by very many in the negative ; though it seems to have been too nice a scruyile. And yet, out of abundant cau- tion, it vvas thought necessary to confirm its acts in the next parliament by stat. 13 Car. II. c. 7 and c. 14. It is likewise true, at the time of the Revolution, A. D. 1 688, the lords and commons, by their own authority, and upon the summons of the prince of Orange (afterwards king Wil- liam III.), met in a convention, and therein dis- posed of the crown and kingdom. But this as- sembling was upon a like principle of necessity as at the Restoration ; that is, upon a full con- viction that king James II. had abdicated the

government, and that the throne was thereby vacant : which supposition of the individual members was confirmed by their concurrent re- solution, when they actually came together. And, in such a case as tlie palpable vacancy of a throne, it follows, ex necessitate rei, that the form of the royal writs must be laid aside, otherwise no parliament can ever meet again. For let us put another possible case, and suppose, for the sake of argument, that the whole royal line should at any time fail, and become extinct, which would indisputably vacate the throne : in this situation it seems reasonable to presume that the body of the nation, consisting of lords and commons, would have a right to meet and settle the government ; otherwise there must be no government at all. And upon this and no other principle did the convention in 1688 as- semble. The vacancy of the throne was prece- dent to their meeting without any royal sum- mons, not a consequence of it. They did not assemble without writ, and then make the tin-one vacant ; but the throne being previously vacant, by the king's abdication, they assembled without writ, as they must do if they assembled at all. Had the throne been full their meeting would not have been regular; but, as it was empty, such meeting became absolutely necessary. And accordingly it is declared by statute, 1 W. & M. Stat. I.e. 1, that this convention was really the two houses of parliament, notwithstanding the want of writs, or other defects of form. So that, notwithstanding these two capital exceptions, which were justifiable only on a principle of ne- cessity (and each of which, by the way, induced a revolution in the government), the rule laid down is in general certain, that the king only can convoke a parliament. And this, by the ancient statutes of the realm, he is bound to do ' every year, or oftener if need be.' Not that he is, or ever was, obliged by these statutes to call a new parliament every year; but only to per- mit a parliament annually for the redress of grievances, and despatch of business, if need be. These last words are so loose and vague, that such of our monarchs as were inclined to govern without parliaments neglected the convoking them, sometimes for a very considerable period, imder pretence that there was no need of them. I3ut, to remedy this, by stat. 16 Car. II. c. 1, it is enacted, that the sitting and holding of parlia- ments shall not be intermitted above three years at the most. And by stat. 1 W. & M., stat. 2, c. 2, it is declared to be one of the rights of the people, that for redress of all grievances, and for the amending, strengthening, and preserving the laws, parliaments ought to be held frequently. And this indefinite frequency is again reduced to a certainty by stat. 6 W. & M., c. 2, which enacts, as the statute of Charles II. had done before, that the new parliament shall be called within three years after the determination of the former.

II. These are the king's majesty, sitting there in his royal political capacity, and the three es- tates of the realm ; the lords spiritual, the lords temporal (who sit together with ihe king in one house) ; and the commons, who sit

by themselves in another. And the kin^ and these three estates

together form the great corporation or body poli- tic of the kmgdom, of which the king is said to be be caput, principium, et finis. lor upon their coming together the king meets them, either in person or by representation, without which there can be no beginning of a parliament ; and he also has alone the power of dissolving them. It is highly necessary, for preserving the balance of the constitution, that the executive power should be a branch, though not the whole, of the legislature. The total union of them, we have seen, would be productive of tyranny ; the total disjunction of them, for the present, would in the end produce the same effects, by causing thai union against which it seems to provide. The legislature would soon become tyrannical, by making continual encroachments, and gradually assuming to itself the rights of the executive power. Thus the long parliament of Charles I. while it acted in a constitutional manner, with the royal concurrence, redressed many heavy grievances, and established many salutar}' laws. But when the two houses assumed the power of legislation, in exclusion of the royal authority, they soon after assum.ed likewise the reins of ad- ministration ; and, in consequence of these united powers, overturned both church and state, and established a worse oppression than any they pretended to remedy. To hinder there- fore any such encroachments, the king is himself a part of the parliamen; and as this is the rea- son of his being so, very properly, therefore, the share of legislation which the constitution has placed in the crown consists in the power of rejecting rather than resolving; this being suf- ficient to answer the end proposed. For we may apply to the royal negative, in this instance, what Cicero observes of the negative of the Ro- man tribunes, that the crown has not any power of doing wrong, but merely of preventing wrong from being done. The crown cannot begin of itself any alterations in the present established law ; but it may approve or disapprove of the alterations suggested and consented to by the two houses. The legislature, therefore, cannot abridge the executive power of any rights which it now has by law, without its own consent; since the law must perpetually stand as it now does, unless all the powers will agree to alter it. And herein, indeed, consists the true excellence of the British government, that all the parts of it form a mutual check upon each other. In the legislature, the people are a check upon the nobility, and the nobility a check upon the peo- ple, by the mutual privilege of rejecting what the other has resolved ; while the king is a check upon both, which preserves the executive power from encroachments. And this very exe- cutive power is again checked and kept within due bounds by the two houses, through the pri- vilege they have of enquiring into, impeaching, and punishing the conduct (not indeed of the king, which would destroy his constitutional in- dependence ; but which is more beneficial to the public) of his evil and pernicious counsellors. Tiius every branch of our civil polity*

supports and is supported, regulates and is regulated, by the rest : for the two houses naturally drawing in two directions of opposite interest, and the

prerogative in another still different from them both, they mutually keep each other from ex- ceeding their proper limits ; while the whole is prevented from separation, and artificially con- nected together, by the mixed nature of the crown, which is a part of the legislative, and the sole executive magistrate. Like three distinct powers in mechanics, they jointly impel the ma- chine of government in a direction different from what either, acting by itself, would have done ; but at the same time in a direction partaking of each, and formed out of all ; a direction which constitutes the true line of the liberty and hap- piness of the community.

*' The power and jurisdiction of parliament,' says Sir Edward Coke,' is so transcendant and absolute, that it cannot be confined either for causes or persons within any bounds. And of this high court he adds, it may be truly said, Si antiquitatera spectes, est vetustissima ; si digni- tatem, est honoratissima ; si jurisdictionem, est capacissima. It has sovereign and uncontrol- lable authority in making, confirming, enlarging, '***eslraining, abrogating, repealing, reviving, and expounding all laws, concerning matters of all possible denominations, ecclesiastical or tempo- ral, civil, military, maritime, or criminal; this being the place where that absolute despotic power, which must in all governments reside somewhere, is entrusted by the constitution of *hese kingdoms. All mischiefs and grievances, operations and remedies, that transcend the ordinary course of the laws, are within the reach of this extraordinary tribunal. It can regulate or new-model the succession to the crown, as was done in the reigns of Henry VIII. and Wil- liam III. It can alter the established religion of the land ; as was done in a variety of instances in the reigns of king Henry VIII. and his three children. It can change and create afresh even the constitution of the kingdom and of parlia- ments themselves ; as was done by the act of union, and the several statutes for triennial and septennial elections. It can, in short, do every thing that is not naturally impossible ; and there- fore some have not scrupled to call its power, by a figure rather too bold, the omnipotence of parliament. True it is, that what the parliament doth, no authority upon earth can undo. So that it is a matter most essential to the liberties of this kingdom, that such members be delegated to this important trust as are most eminent for their probity, their fortitude, and knowledge ; for it was a known apophthegm of the great lord treasurer Burleigh, ' that England could never be ruined but by a parliament :' and, as Sir Matthew Hate observes, This being the highest and*

greatest court, over which none other can have jurisdiction in the kingdom, if by any means a misgovernment should anywise fall upon it, the subjects of this kingdom are left without all man- ner of remedy. Mr. Locke, and other theoretical writers, have held that ‘ there remains still m- herent in the people a supreme power to remove or alter the legislature, when they find the legis- lature act contrary to the trust reposed in them ; for, when such trust is abused, it is thereby for- feited, and devolves to those who gave it.’ But, however just this conclusion may be in theory, we

cannot adopt it, nor argue from it, under any dispensation of government at piesent actually existing. For this devolution of power to the people at large includes in it a dissolution of the whole form of government established Ijy that people ; reduces all the members to their origi- nal state of equality, and, by annihilating the sovereign power, repeals all positive laws what- soever before enacted. No human laws will, therefore, suppose a case, which at once must destroy all law, and compel men to build afresh upon a new foundation ; nor will they make pro- vision for so desperate an event as must render all legal provisions ineffectual. So long, therefore, as the English constitution lasts, we may venture to affirm, that the power of parliament is absolute, and without control. To prevent the mischiefs that might arise by placing this extensive au- thority in hands either incapable or improper to manage it, it is provided by the custom and law of parliament that no one shall sit or vote in either house unless he be twenty-one years of age. This is also expressly declared by stats. 7 and 8 W. III. c. 25 : yet, with regard to the house of commons, doubts have arisen from some contradictory abjudications, whether or not a minor was incapacitated from sitting in that house. It is also enacted by stat. 7 Jac. I. c. 6, that no member be permitted to enter the house of commons till he has taken the oath of alle- giance before the lord steward or his deputy : and by 30 Car. II. stat. 2, and 1 Geo. c. 13, that no member shall vote or sit in either house, till he has, in the presence of the house, taken the oaths of allegiance, supremacy, and abju- ration, and subscribed and repeated the decla- ration against transubstantiation, and invocation of saints, and the sacrifice of tlie mass. Aliens, unless naturalised, were likewise by the law of parliament incapable to serve therein: and now it is enacted by stat. 12 and 13 W. III. c. 2 that no alien, even though he be naturalised, shall be capable of being a member of either house of parliament. And there are not only these standing incapacities, but if any person is made a peer by the king, or elected to serve in the house of commons by the people, yet may the respective houses, upon complaint of any crime in such person, and proof thereof, adjudge him disabled and incapable to sit as a member : and this by the law and custom of parliament. For as every court of justice has laws and cus- toms for its direction, some the civil and canon, some the common law, others their own peculiar laws and customs; so the high court

of par- liament has also its own peculiar law called the lex et consiietudo parliamenti ; a law which Sir Edward Coke observes is ab omnibus quterenda, a multis ignorata, a paucis cognita. It will not therefore be expected that we should enter into the examination of this law with minuteness; since, as the same learned author assures us, it is much better to be learned out of the rolls of parliament and otner records, and by precedents and continual experience, than can be expressed by any one man. The whole of tne law and custom of parliament has its original from this one maxim, 'that whatever matter arises con- cerning either house of parliament, ought to be

examined, discussed, and adjudged in that house to whicli it relates, and not elsewhere.' Hence, for instance, the lords will not suffer the com- mons to interfere in settlin>ˆ the election of a peer of Scotland ; the commons will not allow the lords to judge of the election of a burgess; nor will either house permit the subordinate courts of law to examine the merits of either case. But the maxims upon which they proceed, together with the method of proceeding, rest entirely in the breast of the parliament itself; and are not defined and ascertained by any par- ticular stated laws. The privileges of parliament are likewise very large and indefinite ; and therefore, when, in 31 Henry VI., the house of lords propounded a question to the judges concerning them, the chief justice, Sir John For- tescue, in the name of his brethren, declared ' that they ought not to make answer to that question ; for it hath not been used aforetime, that the justices should in any wise determine the privileges of the high court of parliament; for it is so high and mighty in its nature that it may make law; and that which is law, it may make no law : and the determination and know- ledge of that privilege belongs to the lords of parliament, and not to the justices.' Privi- lege of parliament was principally established, in order to protect its members not only from being molested by their fellow-subjects, but also more especially from being oppressed by the power of the crown. If, therefore, all the privileges of parliam.ent were once to be set down and ascer- tained, and no privilege to be allowed but what was so defined and determined, it were easy for the executive power to devise some new case, not within the line of privilege, and under pre- tence thereof to harass any refractory member, and violate the freedom of parliament. The dig- nity and independence of the two houses are therefore in a great measure preserved by keep- ing their privileges indefinite. Some, however, of the more notorious privileges of the members of either house are, privilege of speech, of per- son, of their domestics, and of their lands and goods. As to the first, privilege of speech, it is declared by the statute 1 W. & M. stat. 2, c. 2, as one of the liberties

of the people : ‘ That the freedom of speech, and debates, and proceedings in parliament, ougiit not to be impeached or questioned in any court or place out of parlia- ment.’ And this freedom of speech is particu- larly demanded of the king in person, by the speaker of the house of commons, at the opening of every new parliament. So likewise are the other privileges of person, servants, lands, and goods ; which are immunities as ancient as Ed- ward the Confessor, in whose laws we find this precept, ad synodos venientibus, sive summoniti sint, sive per se quid agendum habuerint, sit summa pax ; and so, too, in the old Gothic con- stitutions, extenditur ha?c pax et securitas ad quatuordecim dies, convocato regni senatu. This included formerly not only privilege from illegal violence, but also from legal arrests and seizures by process from the courts of law. And still to assault by violence a member of either house, or his menial servants, is a high contempt of par- liament, and there pimished with the utmost

severity. It has likewise peculiar penalties an- nexed 1o it in the courts of law by stat. 5 Hen. IV. c. 6, and 11 Hen. VI. c. 11. Neither can any member of either house be arrested and taken into custody without a breach of the privi- lege of parliament. But all other privileges which derogate from the common law are now at an end, save only as to the freedom of the mem- ber’s person ; which in a peer (by the privilege of peerage) is for ever sacred and inviolable ; and in a commoner (by the privilege of parlia- ment) for forty days after every prorogation, and forty days before the next appointed meetinir ; which is now in effect as long as the parliament subsists : it seldom being prorogued for more than eighty days at a time. As to all other privileges, which obstruct the ordinary course of justice, they were restrained by the statutes 12 W. III. c. 3; 2 and 3 Ann. c. 18; and 11 Geo. II. c. 24 ; and are now totally abolished by statute 10 Geo. III. c. 50; whicli enacts that any suit may at any time be brought against any peer or member of parliament, their servants, or any other person entitled to privilege of parliament ; which shall not be impeached or delayed by pretence of any such privilege, except that the person of a member of the house of commons shall not thereby be subjected to any arrest or imprisonment. Likewise, for the benefit of commerce, it is provided, by statute 4 Geo. III. c. 43, that any trader, having privilege of par- liament, may be served with legal process for any just debt (to the amount of ►►lOO) : and, un- less he makes satisfaction within two months, it shall be deemed an act of bankruptcy ; and that commission of bankruptcy may be issued against such privileged traders in like manner as against any other. The only way by which courts of justice could anciently take cognisance of privi- lege of parliament was by writ of privilege, in the nature of supersedeas, to deliver the party out of custody when arrested in a civil suit. For when a letter was written by the speaker to the judges, to stay proceedings against a privileged person, they rejected it as contrary to

their oath of office. But since the statute 12 W. III. c. 3, which enacts that no privileged person shall be subject to arrest or imprisonment, it has been held that such arrest is irregular ab initio, and that the party may be discharged upon motion. It is to be observed that there is no precedent of any such writ of privilege, but only in civil suits ; and that the statute of 1 Jac. I. c. 13, and that of king William, which remedy some inconveniences arising from privilege of parliament, speak only of civil actions. And, therefore, the claim of privilege has been usually guarded with an exception as to the case of indictable crimes ; or, as it has been frequently expressed, of treason, felony, and breach of the peace. Whereby it seems to have been understood that no privilege was allowable to the members, their families, or servants, in any crime whatsoever ; for all crimes are treated by the law as being contra pacem domini regis. And instances have not been wantiiˆ, wherein privileged persons have been convicted of misdemeanors, and com- mitted, or prosecuted to outlawrj-, even in the middle of a session ; which proceeding has after-

wards received the sanction and approbation of parliament. To which may be added, that, about thirty years ago, the case of writing and publishing seditious libels was resolved by both houses not to be entitled to privilege ; and that the reasons upon which that case proceeded ex- tended equally to every indictable offence. So that the chief, if not the only privilege of parlia- ment, in such cases, seems to be the right of receiving immediate information of the imprison- ment or detention of any member, with the rea- son for which he is detained ; a practice that is daily used upon the slightest military accu- sations, preparatory to a trial by a court-martial, and which is recognised by the several temporary statutes for suspending the habeas corpus act : whereby it is provided that no member of either house shall be detained, till the matter of which he stands suspected be first communicated to the house of which he is a member, and the consent of the said house obtained for his commitment or detaining. But yet the usage has uniformly been, ever since the Revolution, that the com- munication has been subsequent to the arrest. See King, Lords, and Commons.

I'. The method of proceeding, in enacting laws, is much the same in both houses. But for this we refer the reader to the article Bill, and shall only observe in this place that, for despatch of business, each house of parliament has its speaker. The speaker of the house of lords, whose office it is to preside there, and manage the formality of business, is the lord chancellor, or keeper of the king's great seal, or any other appointed by the king's commission ; and, if none be so appointed, the house of lords, it is

said, may elect. The speaker of the house of com- mons is chosen by the house ; but must be ap- proved by the king. And herein the usage of the two. houses differs, that the speaker of the house of commons cannot give his opinion or argue any question in the house ; but the speaker of the house of lords, if a lord of parliament, may. In each house the act of the majority binds the whole ; and this majority is declared by votes openly and publicly given ; not, as formerly, at Venice, and many other senatorial assemblies, privately, or by ballot. This latter method may be serviceable to prevent intrigues and unconsti- tutional combinations ; but is impossible to be practised with us, at least in the house of com- mons, where every member's conduct is subject to the future censure of his constituents, and therefore should be openly submitted to their in- spection.

V. i. An adjournment is no more than a con- tinuance of the session from one day to another, as the word signifies ; and this is done by the authority of each house separately every day ; and sometimes for a fortnight or a month to- gether, as at Christmas or Easter, or upon other particular occasions. But the adjournment of one house is no adjournment of the other. It has also been usual, when his majesty has sig- nified his pleasure, that both or either of the houses should adjourn themselves to a certain day, to obey the king's pleasure so signified, and to adjourn accordingly. Otherwise, besides the indecorum of a refusal, a prorogation would as-

suredly follow ; which would often be very in- convenient to both public and private business. For prorogation puts an end to the session ; and then such bills as are only begun, and not per- fected, must be resumed de novo, if at all, in a sub- sequent session; whereas, after an adjournment, all things continue in the same state as at the time of adjourn ment made, and may be])roceeded on without any fresh commencement, ii. A proro- gation is the continuance of the parliament from one session to another ; as an adjournment is a continuance of the session from day to day. This is done oy the royal authority, expressed either by the lord chancellor in his majesty's presence, or by commission from the crown, or frequently by proclamation. Both houses are necessarily prorogued at the same time ; it not being a pro- rogation of the house of lords or commons, but of the parliament. The session is never under- stood to be at an end until a prorogation ; though, unless some act be passed, or some judgment given in parliament, it is in truth no session at all. And formerly the usage was for the king to giv,e the royal assent to all such bills as he approved at the end of every session, and then to prorogue the parliament, though sometimes only for a day or two ; after which all business then depending in the houses was not to be be- gim agam. Which custom obtained so strongly, that it once became a question. Whether giving the royal assent to a single bill did not of course put an end to the session ? And, though it was then resolved in the negative, yet the notion was so deeply rooted that the statute

1 Car. 1. c. 7 was passed to declare, that the king's assent to that and som.e other acts should not put an end to the session ; and even so late as the reign of Charles II. we find a proviso frequently tacked to a bill, that his majesty's assent thereto should not determine the session of parliament. But it now seems to be allowed that a proroga- tion must be expressly made, in order to deter- mine the session. And if at the time of an actual rebellion, or imminent danger of invasion, the parliament should be separated by adjournment or prorogation, the king is empowered to call them together by proclamation, with fourteen days' notice of the time appointed for their re- assembling, iii. A dissolution is the civil death of the parliament; and this may be effected three ways: 1. By the king's will, expressed either in person or by representation. For, as the king has the sole right of convening the par- liament, so also it is a branch of the royal pre- rogative, that he may (whenever he pleases) prorogue the parliament for a time, or put a final period to its existence. If nothing had a right to prorogue or dissolve a parliament but itself, it might become perpetual. And this would be extremely dangerous, if at any time it should attempt to encroach upon the executive power; as was fatally experienced by the unfortunate king Charles I. ; who, having unadvisedly passed an act to continue the parliament then in being till such time as it should please to dissolve it- self, at last fell a sacrifice to that inordinate power which he himself had consented to give them. It is therefore extremely necessary that the crown should be empowered to regTilate the

****ii:ration of these asserrililies, under the limita- Tions whicli the English constitution lias pre- scribed; so that, on the one hand, they may frequently and regularly come together for the despatch of business and redress of grievances, and may not, on the other, even with the consent of the crown, be continued to an inconvenient or unconstitutional length. 2. A parliament may be dissolved by the demise cf the crown. This dissolution formerly happened immediately upon the death of the reigning sovereign : for be being considered in law as the head of the parliament (caput, principium, et finis), that failing, the whole body was held to be extinct. But the calling a new parliament immediately on the inauguration of the successor being found inconvenient, and dangers being apprehended from ha\ iiig no parliament in being in case of a disputed succession, it was enacted by the sta- tutes 7 and 8 Will. III. c. 15, and 6 Ann. c. 7, that the parliament in being shall continue for six months after the death of any king or queen, unless sooner prorogued or dissolved by the suc- cessor; that if the parliament be. at the time of the king's death, separated by adjournment or prorogation, it shall notwithstanding assemble immediately:*

*and that, if no parliament is then in being, the members of the last parliament shall assemble, and be agam a parliament. 3. Lastly, a parliament may be dissolved or expire by length of time. For if either the legislative body were])erpetual, or might last for the life of the prince who convened them, as formerly, and
॥ were so to be supplied, by occasionally filling the vacancies with new representatives ; in these cases, if it were once corrupted, the evil would he past all remedy ; but. when different bodies succeed each other, if the people see cause to disapprove of the present, they may rectify its faults in the next. A legislative assembly also, ॥ which is sure to be separated again (whereby its members will themselves become private men, and subject to the full extent of the laws which they have enacted for others), will think them- selves bound, in interest as well as duty, to make only such laws as are good. The utmost extent of time that the same])arliament was al- lowed to sit, by the statute 6 \^'. & M. c' 3, was three years ; after the expiration of which. Beckoning from the return of the first summons, the parliament was to have no longer continuance. But by statute 1 Geo. I. st. 2, c. 38 (in order, professedly, to prevent the great and continued expences of frequent elections, and the violent heats and animosities consequent thereupon, and for the peace and security of the government then just recovering from the late rebellion), this term was prolonged to seven years ; and, what alone is an instance of the vast authority of parliament, the very same house that was chosen for three years enacted its own continu- ance for seven. So that, as our constitution now stands, the parliament must expire, or die a natural death, at the erd of every seventh year, if not sooner dissolved by the royal pre- rogative.*

In the house of lords, the princes of the blood sit by themselves on the sides of the throne ; at the wall, on the king's right hand, the two arch- VoL. XVI

bishops sit by themselves on a form. Below them the bishops of Loudon, Durham, and VV inchester, and all the other bishops, sit ac- cording to the priority of their consecration. On the king's left hand the lord treasurer, lord pre- sident, and lord privy-seal, sit upon forms above all dukes, except the royal blood; then the dukes, marquisses, and earls, acc

court in the kingdom, not only for the making;, but also for the execution, of laws, by the trial of great and enormous offenders, whether lords or

commoners, in the method of parliamentary impeachment. As for acts of parliament to attaint particular persons of treason or felony, or to inflict pains and penalties, beyond or contrary to the common law, to serve a special purpose, we speak not of them ; being to all intents and purposes new laws, made pro re nata, and by no means an execution of such as are already in being. But an impeachment before the lords by the commons of Great Britain, in parliament, is a prosecution of the already known and estab- lished law, and has been frequently put in prac- tice; being a presentment to the most high and supreme court of criminal jurisdiction by the most solemn grand inquest of the whole king- dom. A commoner cannot, however, be im- peached before the lords for any capital offence, but only for any high misdemeanors; a peer may be impeached for any crime. And they usually (in case of any impeachment of a peer for treason), address the crown to appoint a lord high steward, for the greater dignity and regula- rity of their proceedings ; which high steward was formerly elected by the peers themselves, though he was generally commissioned by the king ; but it has of late years been strenuously maintained that the appointment of a high steward in such cases is not indispensably neces- sary, but that the house may proceed without one. The articles of impeachment are a kind of bills of indictment, found by the house of com- mons, and afterwards tried by the lords : who are in cases of misdemeanors considered not only as their own peers, but as the peers of the whole nation. This is a custom derived to us from the constitution of the ancient Germans ; who in their great councils sometimes tried capital accusations relating to the public : Licet apud concilium accusare quoque, et discrimen capitis intendere. And it has a peculiar pro- priety in the English constitution ; which has much improved upon tlie ancient model im- ported hither from the Continent. For, though in general the union of the legislative and judi- cial powers ought to be most carefully avoided, yet it may happen that a subject, entrusted with the administration of public affairs, may infringe the rights of the people, and be guilty of such crimes as the ordinary magistrate either dares not or cannot punish. Of these the repre- sentatives of the people, or house of commons, cannot properly judge ; because their constituents are the parties injured, and can therefore only impeach. But before what court shall this im- peachment be tried? Not before the ordinary' tribunals, which would naturally be swayed by the authority of so powerful an accuser. Reason therefore will suggest that this branch of the legislature, which represents the people, must bring its charge before the other branch, which consists of the nobility, who have neither the Sam interests, nor the same passions, as popular assemblies. This is avast superiority which the constitution of this island enjoys over those of the Grecian or Roman republics; where the people were at the same time both judges and*

accusers. It is proper that the nobility should judge, to insure justice to the accused; as it is proper that the people should accuse, to insure justice to the commonwealth. And I'.ierefore, among other extraordinary circumstances attend- ing the authority of this court, there is one of a very singular nature, which was insisted on by the house of commons, in the case of the earl of Danby in the reign of Charles II., and is now enacted by statute 12 and 13 Wil. III., c. 2, that no pardon under the great seal shall be pleadable to an impeachment by the commons of Great Britain in parliament.

PAR'LOUR, n. s. Fr. parloir ; Ital. par- lutorio. A room in monasteries where the religious meet to converse ; a room in houses on the first floor furnished for the reception of com- pany ; one which, according to modern usage, belongs only to the middle classes of society, or to the old English farm-house.

Back again fair Alma led them right And soon into a goodly parlour brought.

Spenser. Can we judge it a thing seemly for a man to go about the building of an house to the God of heaven, with no other appearance than if his end were to rear up a kitchen or a parlour for his own use 1

Hooker. Roof and sides were like a parlour made A soft recess, and a cool summer shade.

Dryden, It would be infinitely more shameful, in the dress of the kitchen, to receive the entertainments of the parlour. South.

The first, forgive my verse if too diffuse, Performed the kitchen's and the parlour's use ; The second, better bolted and immured, From wolves his out-door family secured. Harte. T always admitted them into the parlour after supper, when, the carpet affording their feet a firm hold, they would frisk, and bound, and play a thou- sand gambols. Cowpcr. PAR'LOUS, adj. } Perhaps from French Par'lousness, 71. s. Sparler, to speak ; but Ju- nius derives it from perilous, in which it an- swers to the Latin improbus. Quick of temper ; sprightly ; keen.

Midas durst communicate To none but to his wife his ears of state ; One must be trusted, and he thought her fit, As passing prudent, and a. parlous wit.

Dryden. PARMA, a duchy of the north of Italy? bounded on the north by Lombardy, on the east by Modena, and on the south and west by Tus- cany. It extends from 9►► 28′ to 10►► 46′ of E. long, and from 44►► 1 4′ to 44►► 59′ of N. lat., and is di- vided into the districts of

Parma, Piacenza, Borgo San Domino, and Guastalla. Its surface is partly mountainous and stony ; but in the north are extensive and fertile plains : the south is traversed by several branches of the Apennines. The principal rivers are the Po, which separates it from Lombardy ; the Taro, the Trebia, the Lenza, and a number of smaller streams, all having a common origin in the Apennines, and discharging themselves into the Po. The pro- ducts are vines, wheat, maize ; vegetables and various fruits : hemp and saffron. The pastures are fine and the cattle numerous. The famous Par-

mesan cheese, originally a product of this country, IS now made chiefly in the district of Lodi. Bees and silk-worms are objects of considerable Attention, and silk articles constitute the chief manufacture. Iron, copper, and vitriol, are ob- tained in the mountains. Population 380,000. The government is absolute, the legislative and executive powers being wholly in tiie hands of the reigning prince.

The religion is Catholic ; the army about 2400 ; and the revenue of the state nearly ►►160,000 annually ; but it is encumbered with a public debt. The inhabitants are considered as frugal and industrious, and less addicted to sen- sual pleasures than in some of the other states. The other chief city of this duchy is Placentia, which see.

Parma, the capital of these dominions, is de- lightfully situated on a fertile plain, and watered by a small river of the same name. Though not so well built as many of the other large towns of Italy, it has a handsome square near the centre, surrounded with arcades. Its fortifica- tions are of little importance, but its pentagonal citadel is esteemed one of the strongest in Italy. The dome of the cathedral is noted for its paint- ings by Correggio ; and the cupola of St. John's was painted by this artist. The other public buildings present nothing remarkable. Its uni- versity is not numerously attended. It is the see of an archbishop and the seat of ducal ad- ministration. Its manufactures are principally silk and hats. Population about 30,000.

Parma, founded by the ancient Etrurians, has ever since retained its name. After the Etrurians it came into possession of the Boii,a tribe of Gauls, and subsequently into that of the Romans. On the decline of the empire it assumed a republican form, and asserted its liberty with great firmness ; but, falling a prey to faction, fell ultimately into the hands of tlie pope, and

Paul III. gave it to his son Luigi Farnese, whose descendants con- tinued to reign as dukes of Parma, till the ex- tinction of the male branch. Elizabeth Farnese, in 1714, married Philip V. of Spain, and brought him the duchy as a dowry. After this her son Don Carlos, being made king of the Two Sicilies, the duchy of Parma and Piacenza was ceded to the emperor, and governed by the house of Aus- tria till 1748, when they were ceded to Don Philip, the second son of Philip V. and I.liza- beth Farnese. By the peace of Luneville (1801) the duke of Parma was raised to the throne of Tuscany, with the title of king of Etruria, and in 1805 Parma and Piacenza were united to France. On the fall of Buonaparte they were taken possession of by the Austrians, and given by the treaty of Paris in 1814 to the ex- empress Maria Louisa, devolving on her death to Austria and Sardinia ; a provision modified by subse- quent arrangements, the latest of which, in 1818, stipulated, that, in return for certain equi- valents, this territory should finally devolve to Spain. Parma is thirty miles west of Modena, and seventy south-east of Milan.

PARMENIDES, an ancient Greek philoso- pher, born in Elis, about A. A. C. 50.'). lie studied under Xenophanes, or Anaximander. He taught that there svere only two- elements

fire and earth ; and that the first generation of men was produced from the sun. Along with these and otlier absurdities, he taught some phi- losophical truths. lie first discovered that the earth is round, but he placed it, like Ptolemy, in the centre of the solar system. He wrote his system in verse ; and fragments of it were collected by Henry Stephanus, and published under the title of De Poesi Philosophica.

PARMENIO, a celebrated and popular ge- neral, in the army of Alexander the Great, who long enjoyed that prince's confidence, and was much attached to him. Yet in a moment of suspicion, excited by false information, Alexan- der ordered this faithful friend to be put to death, in his seventieth year, with his son. Plutarch remarks that Parmenio gained many victories without Alexander, but Alexander not one without Parmenio.

PARMENTIER (John), a celebrated French navigator, born at Dieppe, in 1494. He was the first pilot who conducted vessels to Brasil, and the first Frenchman who sailed as far as Sumatra. He was a good astronomer, and laid down several excellent maps. He died at Su- matra in 1530.

PARMESAN Cheese, a sort of cheese much esteemed among the Italians ; so named from the duchy of Parma where it is made, and whence it is conveyed to various parts of Europe. Of this cheese there are three sorts ; the fromaggio di forma, about two palms in diameter, and seven or eight

inches thick ; and the formaggio di ribiole and di ribolini, which are not so large. It is of a saffron color ; and the best is kept three or four years.

PARMIGIANO, a celebrated painter, whose true name was Francis Mazzuoli; but named Parmigiano from Parma, where he was born in 1504. He was educated under his two uncles, and was an eminent painter when but sixteen years of age. He was celebrated all over Italy at nineteen ; and at the age of twenty-three, when the general of Charles V. took Rome by storm, some of the soldiers, having, in sacking the town, broken into his apartments, found him intent upon his work, and were so struck with the beauty of his pieces that, instead of in- volving him in the plunder and destruction in which they were then engaged, they protected him from all manner of violence. His works are distinguished by the beauty of the coloring, invention, and drawing. His figures are spirited and graceful, particularly with respect to atti- tude and dresses. His paintings in oil are few, but held in high esteem, as are also his drawings and etchings. At Rome he was employed by pope Clement \TI., who was highly pleased with his performances and rewarded him liberally. Parmigiano painted a circumcision, which he presented to the pope, who prized it as one of the most capital works in his palace. That picture was not only excellent for the compo- sition, coloring, and execution, but remarkable for the introduction of three diff"erent lights, without destroying the harmony of the whole. Tlie light diffused on the principal figure was from the irradiation of the Infant Jesus ; the second w-as illuminated by a torch carried 'v

one who attended the sacrifice; the others were in the open air, enlightened by the early dawn, which showed a lovely landscape, diversified with a number of cottages and villas. In the Houghton collection of pictures, now in posses- sion of the emperor of Russia, is one of his finest pictures, representing Christ laid in the sepulchre, for which he is said to have been knighted by the duke of Parma. The best of his performances was Moses breaking the Tables of the Law, at Parma, of which Sir Joshua Reynolds says, we are at a loss which to admire most, the correctness of drawing, or the grandeur of the conception. Parmigiano had a fine taste for music, and, if he did not invent etching, he was at least the first who practised Ihat art in Italy. He also engraved some of his designs; but it is to be regretted that,

with such talents, he should have wasted his time and pro- perty in the study of alchemy, with a view to the discovery of the philo.sopher's stone. lie died of a fever in 1540.

PARNASSIA, grass of Parnassus, in botanv, a genus of the tetragynia order, and pentandria class of plants: cal. quinquepartite ; petals five ; nectaria five, heart-shaped, and ciliated with globular tops : caps, quadrivahed : species one, having a stalk about a foot high, angular, and often a little twisted, bearing a single white flower at top. The flowers are very beautifully streaked with yellow; so that though it is a common plant, growing naturally in moist pas- tures, it is frequently admitted into gardens.

PARNASSUS, in ancient geography, a moun- tain of Phocis, near Delphi, and the mounts Cithaeron and Helicon, with two tops ; the one called Cirrha, sacred to Apollo ; and the other Nisa, sacred to Bacchus. It was covered with bay-trees, and originally called I.arnassus, from Deucalion's larnax or ark, thither conveyed by the flood ; after the flood Parnassus from liar Nahas, changing the h into /), the hill of divina- tion or augury; the oracle of Delphi standing at its foot. Dr. Chandler, \v!;o visited it, thus describes it in his Travels in Greece : ••• ' Par- nassus was the western boundary of Phocis, and, stretching north from about Delphi toward the Qitaean Mountains, separated the western Locri from those who possessed the sea-coast before Eubcea. It was a place of refuge to the Delphians in times of danger. In the deluge, which happened under Deucalion, the natives were saved on it. On the invasion of Xerxes, some transported their families to Achaia, but many concealed them in this mountain, and in Corycium, a grotto of the nymplis. AH Par- nassus was renowned for sanctity ; but Corycium was the most noted among the hallowed caves and places.' ' On the way to the summits of Parnassus,' says Pausanias, ' sixty stadia beyond Delphi, is a brazen image; and thence the ascent to Corycium is easier for a man on foot than for mules and horses. Of all the caves in 'vhich I have been, this appeared to me the best worth seeing. On the coasts and by the sea-side are more than can be numbered ; but some are very famous both in Greece and in other countries. The Corycian cave exceeds in magnitude those I have mentioned, and for the

most part may be passed without a light. The inhabitants of Parnassus esteem it sacred to tne Corycian nymphs and to Pan. From the cave to reach the summit of the mountain is difficult even to a man on foot. The summits are above the clouds, and the women called Thyades mad- den on them in the rites of Bacchus and Apollo.' Their frantic orgies were performed yearly.

PAR'NEL, 7i.s. The diminutive of patro- nella. ••• Skinner. A punk ; a slut. Obsolete.

PARNELL (Dr. Thomas), a celebrated divine and poet, born in Dublin in 1679. He was educated at Trinity College, and in 1700 took his degree of M.A. In 1706 he came to Eng- land, and was much respected by Gay, Swift, Arbuthnot, Sec. He was archdeacon of Clogher, and the intimate friend of Pope; who published his Hermit and other works, with recommenda- tory verses prefixed. He died in 1718, aged thirty-nine.

PARO'CHIAL, adj. Lat. parocliialis, from pcrochiu. Belonging to a parish. '

The married state ol parochial pastors hath given tliem the opportunity of setting a more exact and universal pattern of holy living to the people com- mitted to their charge. Atterbury.

PAR'ODY, 11. s. & V. a. Fr. purodie ; Gr. Trapolia. A mode of writing in which the words or thoughts of an author are taken, and by a slight change adapted to a new purpose : to pa- rody is, to copy or change in this way.

i he imitations of the ancients are added together with some of the parodies and allusions to the most excellent of the moderns. Pope's Dunciad.

1 have translated, or rather parodied, a poem of Horace, in which I introduce you advising me.

Pope.

Parodu is an ancient flower both of ancient and modern literature. It is a species of ludicrous com- position, which derives its wit from association : and never fails to produce admiration and deliglit, when it unites taste in selection with felicity of application.

Percival.

Parody, in poetry, consists in applying the verses written on one subject, by way of ridicule to another ; or in turning a serious work into a burlesque, by aff"ecting to observe as near as possible the same rhymes, words, and cadences. The parody was first attempted by the Greeks, from whom we borrow the nanr.e. It is the same with what some writers call travesty. Thus Cato exposed the inconstant disposition of Marcus F"ulvius Nobilior, by changing Nobilior into Mobilior. Another kind of parody consists in the mere application of some known verse, or part of a verse, of a writer, without making any change in it, with a view to expose it.

PAROIS'YjMOUS, adj. Gr. vapwvvˆog : ira- pa near, and ovofia a name. Resembling another word.

Shew your critical learning in the etvTnology ot terms, the synonjTnous

and the paronymous or kin- dred names. Watts.

PAROLE', n. s. & adj. Fr. parole, from pai- ler ; Ital. parola. Word given as an assurance ; verbal promise, particularly by a prisoner not to go away : the adjective is used in law for verbal ; by word of mouth.

Love's votaries enthral each other's soul, Till both of them live but upon parole. Cleaveland

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Be very tender of your honour, and not fall in love ; because I have a scruple whether you can keep your parole, if you become a prisoner to the ladies.

SaiJ'l. Parole, in a military sense, the promise made by a prisoner of war, when he has leave to go any where, of returning at a time appoint- ed, or not to take up arms, if not exchanged. Hence to put an officer on parole is to take his word, whether a prisoner of war or under arrest, that he will not exceed certain limits, and be always forthcoming when called for.

Parole means also a word given out every day in orders by the commanding officer, both in camp and garrison, in order to know friends from enemies.

PARONOMA'SIA, n. s. Gr. irapiavofiaaia; Lat. apicmiinotio : a rhetorical figure, in which, by the chantre of a letter or syllable, several things are alluded to.

PARONYCHIA, n. s. Yv. paronychk ; Gr. iTapwvv\ia. A preternatural swelling or sore under the root of the finger nail ; a whitlow.

Paronychia, the whitlow, in surgery, is an abscess at the end of the fingers. According as it is situated more or less deep, it is differently denominated. It begins with a slow heavy pain, attended with a slight pulsation, without swell- ing, redness, or heat ; but soon the pain, heat, and throbbinor, are intolerable ; the parts grow large and red, the adjoining fingers and the whole hand swell up ; in some cases a kind of red and inflated streak may be observed, which, begmnin':;- at the affected part, is continued almost to the elbow ; nor is it unusual for the patient to complain of a very sharp pain under the shoulder, and sometimes the whole arm is excessively inflamed and swelled ; the patient cannot sleep, the fever, Sec, increasing ;

and sometimes delirium or convulsions follow. When it is seated in the skin or fat, in the back or the fore part of the finger, or under or near the nail, the pain is severe, but ends well. When the periosteum is inflamed or corroded the pain is tormenting. When the nervous coats of the flexor tendons of the fingers or nerves near them are seized the worst sjonptoms attend. If the first kind suppurates, it must be opened, and treated as abscesses in general ; but the best method of treatinar the other two species is, on the first, or at furthest the second day, to cut the part where the pain is seated, quite to the bone; if this operation is lons;er deferred, a suppuration will come on ; in which case sup- puration should be speedily promoted, and as early a discharge given to the matter as possi- ble. As the pain is so considerable as to occa- sion a fever, and sometimes convulsions, the tinct. theb. may be added, the suppurating ap- plications, and also given in a draught at bed- time. The second kind proves very troublesome, and sometimes ends in a caries of the subjacent bone. The third is very tedious in the cure, and usually the phalanx on which it is seated is destroyed.

PAROPAMISUS, in ancient geography, a ridge of mountains and an extensive territory in the north of India, which took Alexander the Great and his army sixteen davs to cross it.

PAR'OQUET, w. .. Yv.perroquet. A small species of parrot.

The great, red, and blue, are parrots ; the middle- most, called popinjays ; and the lesser, paroquets ; in all above twenty sorts. Grew.

I would not give my paroquet For all the doves that ever flew. Prioi .

*Paroqiet. See Psittacus. PAROS, in ancient geography, an island of the iEgean Sea, one of the Cyclades, thirty- eight miles from Delos, anciently called Pactye and Minoa ; also Demetrius, Zacynthus, Hyria, Hylessea, and Cabarnis. It was *.he country of Archilochus, the Iambic poet, and famous for its white marble, called lychnites, because dug by the light of lamps. The name of Cabarnis is derived, according to Stephanus, from one Ca- barnus, who informed Ceres of the rape of her daughter Proserpine ; or, according to Hesy- chius, from the Cabarni, the priests of Ceres, sf- called by the Parians. The name of Minoa u, borrowed from Minos, king of Crete, who sub- dued this, as he did most of the other islands of the /Egean Sea. It was called Paros, which name it retains to this day, from Paros the son of Parrhasius, or of Jason the Argonaut. Paros, according to Pliny, is seven miles and a half from Naxos, and twenty-eight from Delos. It was a rich and powerful island, being reckoned the most wealthy of the Cyclades. It is pro- vided with several capacious and safe harbours, and was anciently much resorted to by traders. It was, according to Tliucydides, originally*

peopled by the Phoenicians, who were the first masters of the sea. Afterwards the Carians settled here. Thucydides says, the Carians were driven out by the Cretans under Minos ; but Diodorus writes, that the Carians did not settle here till after the Trojan war, when they found the Cretans in the island. Stephanus thinks that the Cretans, mixed with some Arcadians, were the only people that ever possessed this island. Minos himself, Pliny says, resided some time iu this island, and received here the news of the death of his son Androgens, who was killed in Attica after he had distinguished himself at the public games. The Parians assisted Darius in his expedition against Greece with a consider- able squadron ; but, after the victory obtained by Miltiades at Marathon, they were reduced to great straits by that general. However, after blocking up the city for twenty-six days, he was obliged to quit the enterprize, and return to Athens with disgrace. After the battle of Sala- mis, Themistocles subjected Paros and most of the neighbouring islands to Athens, exacting large sums from them for having favored the Persians. It appears from the famous monument of Adulas, which Cosmos of Egypt has described with great exactness, that Paros and the other Cy- clades were once subject to the Ptolemies of I'gypt. However, Paros fell again under the power of the Athenians, who continued masters of it till they were driven out by Mithridates the Great. But that prince being obliged to yield to Sylla, Lucullus, and Pompey, this and the other islands of the Archipelago submitted to the Pomans, who reduced them to a province witii Lydia, Phivgia, and Caria. During the

ˆvar in Candia, the 'enetians destroyed the olive plantations, which were still a source of prosperity to the islanders ; and finally the Rus- sians, who declared themselves the liberators of Greece, laid waste whatever the barbarous Turks and Venetians had spared. There are not more than about 2000 inhabitants in the whole island, which number certainly would not have been sufficient at one time for the single city of Paros. This ciy has now only the appearance of a village ; its name has been changed into that of Parecchia; but the numerous fragments of ancient sculpture employed for common purposes, and various ancient inscriptions, remind one of what it once was. Clarke has published a great number of these inscriptions ; but the most im- portant piece of sculpture, in the opinion of all, that has been found in Paros, was brought to England at the commencement of the seven- teenth century by the earl of Arundel, and is now preserved in the university of Oxford, under the name of the Aiundel marble. It contains a chronological table very useful in illustrating the history of Greece. At the castle of Parecchia there are several antique fragments built into the walls, among others some pieces of columns laid horizontally.

On leaving Parecchia, and crossing some olive plantations, you come to ˆNlount Capresso, where there is a quarry, once worked by the ancients for its beautiful white marble. These ancient quarries, abandoned since the fall of Greece, are partly stopped up ; the galleries, which are still open, remain in the same statie in which the ancient miners left them. You may discern by the engravings, which have been made on the rock near the entrance of the quarries, the famous bas relief, or rather sketch of bas re- lief, representing the festival of Silenus. It ap- pears that by a singular lusus naturae the head of this grotesque companion of Bacchus was found represented on the stone, and Onyses took occa- sion from this to surround it with a group of figures, and thus composed a beautiful picture. Paros has a magnificent port, called Naussa, ca- pable of containing a whole fleet. The island produces pretty good wine.

PAROTTD, adj. I ►►t. parotide ; Gr. Trapw-

Pa'rotis, n.s. S tiq, of -rraˆa and wra, the

ears. Salivary, so named because near the ears :

parotis is a tumor in the glandules behind and

about the ears.

Beasts and birds, having one common use of spit- tle, are furnished with the parotid glands, which help to supply the mouth with it. Grew.

Parotid Glands, or the Pauotids. See Anatomy.

PAR'OXYSM, n. s. Fr. paroxi/sme ; Gr. na- poKvfffiog. A fit ; periodical exacerbation of a disease.

Amorous girls, through the fury of an hysterick paroa-ynn, are cast into a trance for an hour.

Harvey.

I fancied to myself a kind of ease, in the change of the parovysm. Dryden.

The greater distance of time there is between the paroxysms, the fever is less dangerous, but more ob- stinate. Arhuthnot.

Paroxysm, Traooˆutruoc. in medicine, is the

fit, attack, or exacerbation of a disease that occurs at inte'"vals, or has decided remissions or intermissions. It is applicable to all febrile, spasmodic, convulsive, painful, or otherwise violent diseases, whether the

periods of remission be regular or irregular. Thus we speak of a pa- roxysm of ague, of gout, of colic, of epilepsy, of insanity, &c.

PARR (Catherine), was the eldest daughter of Sir Thomas Parr of Kendall. She was first married to John Nevil, I'ord Latimer; after whose death she so captivated king Henry VIII. that he raised her to the throne. The royal imp tials were solemnised at Hampton Court on the 12th of July, 1534. Being religiously disposed, she was, in the early part of her life, a zealous observer of the Romish rites and ceremonies ; but, in the dawning of the Reformation, she be- came as zealous a promoter of the Lutheran doc- trine ; yet with such prudence and circumspec- tion as her perilous situation required. In such danger was she at one time, that the king had actually signed a warrant' for committing her to the tower. She had, however, art enough to re- store herself to his good graces. The king died in January 1547, just three years and a half after his marriage with his third Catharine ; who, in a short time, was again espoused to Sir Thomas Seymour, lord-admiral of England : but in Sep- tember, 1548, she died in childbed. The his- torians of this period generally insinuate that she was poisoned by her husband, to make way for his marriage with the lady Elizabeth. She wrote, 1. Queen Catharine Parr's Lamentation of a Sinner, bewailing the ignorance of her blind life; London, 8vo. 1548, 1563; 2. Prayers or Meditations, wherein the mynd is stirred pa- tiently to suffre all afflictions here, to set at nought the vain prosperitee of this world, and always to long for the everlastynge felicitee. Collected out of holy workes, by the most virtuous and gracious princesse, Katharine queene of Englande, France, and Irelande. Printed by J. Wayland, 1543, 4to.,••• 1561, 12mo. ; 3. Other Meditations, Prayers, Letters, &c., unpublished.

Parr (Thomas), or Old Parr, a remarkable Englishman, who lived in the reigns of ten kings and queens. He was the son of John Parr, a husbandman of Winnington, in the parish of Alderbury, Salop. Following the profession of his father, he labored hard, and lived on coarse fare. Being taken up to London by the earl of Arundel, the journey proved fatal to him. Owing to the alteration in his diet, to the change of the air, and his general mode of life, he lived but a very short time ; though one Robert Sam- ber says, in his work entitled Long Livers, that Parr lived sixteen years after his presentation to Charles II. He was buried in Westminster Abbey. Though he had not the use of his eyes, nor much of his memory several years before he died, yet he had his hearing and apprehension very well; and was able, even to the 130th year of his age, to do any husbandman's work, even threshing of corn. The following summary of his life is from Oldys's MS. notes on Fuller's Worthies; ' Old Parr was born 1483 ; lived at home until 1500, at. seventeen, when he went

Gut to service. 1518, aet. thirty-five, returned home from his master. 1322, iet. thirty-nine, spent four years on the remainder of his father's lease. 1543, aet. sixty, ended the first lease he renewed of Mr. Lewis Porter. 1563, ffit. eighty, married Jane, daughter of John Taylor, a maiden ; by whom he had a son and a daugh- ter, who both died very young. 1564, aet. eighty-one, ended the second lease which he re- newed of Mr. John Porter. 1585, aet. 102, ended the third lease he had renewed of Mr. Hugh Porter. 1588, aet. 103, did penance in Alderbury church for lying with Katharine 3Iil- ton, and getting her with child. 1595, -xt. 112, he buried his wife Jane, after they had lived thirty-two years together. 1605, a:t. 122, having lived ten years a widower, he married Jane, widow of Anthony Adda, daughter of John Loyd of Gilsells, in Montgomeryshire, who sur- vived him. 1635, aet. 152 and nine months, he died ; after they had lived together thirty years, and after fifty years possession of his last lease.' Parr (Samuel), LL. D., a late learned critic, was the son of an apothecary of Harrow in Mid- dlesex, where he was born January 15th, 1747. Admitted into the school of his native place, at the age of six, he was at its head in his fourteenth year, and was soon after called upon, much against his inclination, to assist his father in his business. He was subsequently induced, how- ever, to send him to Emmanuel College, Cam- bridge ; but, unable to support a continuance of the expense, our young critic accepted the situation of an usher at Harrow under Dr. Sumner. In 1769 he entered into deacon's orders, and those of priest in 1777. In 1771 he was created A.M. at Cambridge, by royal mandate, for the purpose of qualifying him to succeed Dr. Sum- ner in the mastership of Harrow ; but, not suc- ceeding, he opened a school at Stanmore, where he was followed by no less than forty-five of his old pupils. At this time he married Miss Maule- vrier, a Yorkshire lady, by whom he had three sons and three daughters. In 1776, the estab- lishment at Stanmore failing, he became master of the grammar-school at Colchester, wlience, in 1778, he removed to a similar establishment at Norwich. In 1780 he was presented to the rectory of Asterly in Lincolnshire, and in 1781 received the degree of LL. D. He obtained in 1783 the perpetual curacy of Hatton in War- wickshire, where he ever afterwards resided, and was about the same time presented by bishop Lowth to a prebend in St. Paul's. In 1802 Sir Francis Burdett presented him, unsolicited, to the valuable living of Graff ham in the county of Huntingdon. The death of this distinguished scholar took place at Hatton, March 26th, 1825, in his seventy-ninth year. Dr. Parr's career as an author began in 1760, by the publication ot Two Sermons on Education ; he in the follow- ing year printed A Discourse on the late Fast, which excited great attention. In 1787 he as- sisted his friend the Rev. Henry Homer in a new edition of the learned Bellendenus, which he inscribed to

Messrs. Fox, Burke, and lord North, the character of whose oratory he drew with vmcommon felicity. Having now put an end to all hopes of preferment from government,

a subscription was made for him oy the Whig club, which secured him an annuity of ►►300 per annum. In 1789 he republished Tracts by Warburton and a Warburtonian, which he pre- faced with severe strictures on bishop Hurd. In 1790 he was engaged in the controversy respect- ing the autliorship of White's Bampton Lectures, from which it appeared that he had a considerable share in them. In 1791, his residence having been in dan;ˆer of destruction from the Birming- ham rioters, in consequence of his intimacy with Dr. Priestley, he published an eloquent tract, entitled A Letter from Irenopolis to the Inhabi- tants of Eleutheropoiis. Easter Tuesday, 1800, he preached his celebrated Spital sermon, which he soon after published, with a great number of notes ; and on the death of Mr. Fox his Charac- ters of the late Right Hon. Charles James Fox, selected and in part written by Philopatris 'ar- vicensis. In 1819 he reprinted Speeches by Roger Long, and John Taylor, of Cambridge, with a Critical Essay and Memoirs of the Au- thors ; and, towards the close of life, composed a pamphlet, which did not appear until after his death, defending bishop Halifax from the charge of having become a convert to the church of Rome. Like Dr. Johnson, Parr is said to have been astonishingly powerful in conversation, and, though possessed of much of the warmth of a political partizan, he was of disinterested and independent feelings, speaking generally : yet we cannot reconcile with strict integrity his final continuance in a church from some of whose principal doctrines he for many years dissented. Of all his family, two daughters survived him. and he left a widow, whom he married in an advanced period of life.

PARRA, in ornithology, a genus of birds be- longing to the order of grallae ; the characters of which are : the bill is tapering and a little ob- tuse ; the nostrils are oval, and situated in the middle of the bill ; the forehead is covered with fleshy caruncles which are lobated ; the wings are small and spinous. There are sixteen species : ►►►

1 . P. chavaria is about the size of a dung-hill cock, and stands a foot and a half from the ground. The bill is of a dirty white color ; the upper mandible similar to that in a dung-hill cock ; the nostrils are oblong, pervious : on both sides, at the base of the bill, is a red membrane, which extends to the temples. The irides are brown. On the hind head are about twelve blackish feathers, three inches long, forming a crest, and hanging downwards. The rest of the neck is covered with a thick black down. The body is brown, and the wings and tail inclined to black. On the bend of the wings are two or three spurs half an inch long. The belly is a light black. The thighs are half bare of feathers. The legs are very long, and of a yel-

low-red color. The toes are so long as to en- tangle one another in walking. ‘ This species,’ says Latham, ‘ inhabits the lakes, &:c., near the river Cinu, about thirty leagues fromCarlhagena, in South America, and feeds on vegetables. Its gait is solemn and siow ; but it flies easily and swiftly. It cannot run, unless , assisted by the wings at the same time. When any part of the

skin is touched by the hand, a crackling is felt, tiiough it is very downy beneath the feathers ; and, indeed, this down adheres so closely as to enable the bird at times to swim. The voice is clear and loud, but far from agreeable. The na- tives, who keep poultry in great numbers, have one of these tame, which goes along with the flock about the neighbourhood to feed during the day, when this faithful shepherd defends them against birds of prey ; being able, by means of the spurs on the wings, to drive off birds as big as the carrion vulture, and even that bird itself. It is so far of the greatest use, as it never deserts the charge committed to its care, bring- ing them all home safe at night. It is so tame as to suffer itself to be handled by a grown person, but will not permit children to attempt the same.’ For the above account we are in- debted to Linne, who seems to be the only one who has given any account of this wonderful bird.

2. P. Dominica, is about the size of the lap- wing. The bill is yellow, as are also the head and upper parts; the under are of a yellowish white, bordering on rose color. The legs are also yellow. This species inhabits several of the warmer parts of America and St. Domingo.

3. P. jacana, the spur-winged water-hen, is about the size of the water rail. The bill is in length about an inch and a quarter, of an orange color; and on the forehead is a membranous flap, half an inch long, and nearly as broad. ( )n each tide of the head also is another of the same, about a quarter of an inch broad, and both together they surround the base of the bill. The head, throat, neck, breast, and under parts, are black ; and sometimes the belly is mixed with white, &c. This species inhabit Brasil, Guiana, and Surinam ; but are equally common Rt St. Domingo, where they frequent the marshy places, sides of ponds, and streams, and wade quite up to the thighs in the water. They are also gene- rally seen in pairs; and, when separated, call each other continually till they join again. They are very shy, and most common in the rainy sea- sons in IMay and November. They are at all times very noisy; their cry sharp and shrill, and

may be heard a great way off. This is called by the French chirurgien. The flesh is accounted pretty good.

4. P. Senegalla, is about the same size witii the Dominica. Its bill is also yellow, tipped with black ; the forehead is covered with a yellow skin ; the chin and throat are black ; the head and upper parts of the body and lesser wing covers the gray-brown. The lower part of the belly, and the upper and under tail coverts, are dirty white. At the bend of the winu- is a black spur. It inhabits Senegal, and thence derives its name. The negroes call them uett uett, the French the squallers, because, when they see a man, they scieara and fly off. They generally fly in pairs.

5. P. variabilis, the spur-winged water-hen, is about nine mches lonˆ:. The bill is about four- teen inches in length, and in color oraoge-yellow. On the forehead is a flap of red skin; the crown of the head is brown, marked with spots of a darker co'or ; the hind part of tlie neck is much

the same, but of a deeper dye. Tlie sides of the head, throat, fore part of the neck, breast, belly, thighs, and under tail-coverts, are whitt, with a few red spots on the sides of the bellv and base of the thighs. On die fore part of the wing is a yellow spur, &c. The legs are furnished with long toes, as in all the others, the coloi of which is bluish ash. Latham says that one which came under his inspection from Cayenne was rather smaller. It had the upper parts much paler; over the eye was a streak of white passing no further, and unaccompanied by a black one. The hind part of the neck was dusky black. It had only the rudiment of a spur ; and the red caruncle on the forehead was less, and laid back on the forehead. From these differences, this learned ornithologist conceives it to have differed either in sex or age from the other. This species inhabits Brasil, and is said to be pretty common about Carthagena and in South America.

PARRELS, in a ship, are frames made of trunks, ribs, and ropes, which, having both their ends fastened to the yards, are so contrived as to go round about the mast, that the yards by their means may go up and down upon the mast. These also, with the breast-ropes, fasten the yards to the masts.

PARRET, or Pedued, a river of Somerset- shire, which rises in the south part of that county, on the borders of Dorsetshire. Near Langport it is joined by the Ordered, augmented by the Ivel ; and, about four miles from this junction, it is joined by the Tone or Thone, a pretty large river, rising among the hills in the western parts of this county. About two miles below the junction of the Tone, the Parret receives another considerable stream ; and, thus aug- mented, it passes by the town of Bridgewater, and falls into the Bristol Channel in Bridgewater Bay.

PARRHASIUS, a famous ancient painter of Ephesus, or, as some say, of Athens : he flou- rished about the time of Socrates, according to Xenophon. It is said that he was excelled by Timanthes, but excelled Zeuxis. His subjects were very licentiov. .

Parriiasius (Janus), a famous grammarian in Italy, who was born at Cosenza, in Naples, in 1470. He was intended for the law, the profes- sion of his ancestors ; but he preferred classical learning. His real name was John Paul Parisius ; but, according to the humor of the grammarians of that age, he called himself Janus Parrhasius. He taught at Milan with much reputation, being admired for a graceful delivery, in which he chiefly excelled other professors. He went to Rome when Alexander VI. was pope; but left it when in danger of being involved in the mis- fortunes of Cajetan and Savello, with whom he had some correspondence. Soon after, he was appointed professor of rhetoric at Milan ; but, presuming to censure the teachers there, they accused him of a criminal converse with his scholars, which obliged him to leave Milan. He went to Vicen/a, where he obtained a larger salary ; and he held this professorship till the \ enetian states were laid waste by the troops of the League ; upon which he returned to his na- tive country. By the recommendation of John

Lascarius, he was called to Rome by Leo X., who appointed him professor of polite literature. But, exhausted by his studies and labors, he became so afflicted with the trout that he was oblisred to return to Calabria, where he was taken ill of a fever, and died. Tliere are several books ascribed to him ; particularly Commentaries on Horace and Ovid.

PAR'RICIDE, n. s. \ Fr. /)►►mcic/e ; Latin

Par'ricidical, adj. S parricida, parricidium.

Par'ricidious. ' (7ne who destroys his

father : hence one who injures his country vi- tally, or his patron ; the murder of a father : the adjective corresponding.

I told him the revenging gods

'Gainst parricidei did all their thunder bend ;

Spoke with how manifold and strong a bond

The child was bound to the father. Shakspeare.

Although he were a prince in military virtue ap- proved, and likewise a good law-maker ; yet h's cruelties and parricides weighed dovra his virtues.

Bacon.

He is now paid in his own way, the parricidicns animal, and punishment of murtherers is upon him.

Bruwne. Morat was always bloody, now he's base ;

And has so far in usurpation gone.

He will by parricide secure the throne. Dryden.

Parricide is the murder of one's parents or children. By the Roman law it was punished in a severer manner than any other kind of homi- cide. After being scourged, the delinquents were sjwed up in a leathern sack, with a live dog, a cock, a viper, and an ape, and thus cast into the sea. Solon, it is true, in his laws, made none against parricide; apprehending it impossible that one should be guilty of so unnatural a bar- barity. And the Persians, according to Hero- dotus, entertained the same notion, when they adjudged all persons who killed their reputed])arents lo be bastards. Thus the English law treats it no otherwise than as simple murder, utdess the child was also the servant of the];arent. For, though the breach of natural rela- tion is imobserved, yet the breach of civil or ec- clesiastic connexions, when coupled with murder, denominates it a new offence ; no less than a species of treason, called parva proditio, or petit treason ; which, however, is nothing else but an aggravated degree of murder ; although, on ac- count of the violation of private allegiance, it is stigmatised as an inferior species of treason. And thus, in the ancient (iothic constitution, we hnd the breach, beth of natural and civil rela- tions, ranked in the same class with crimes against the state and sovereign.

PARROCEL, the name of three eminent French painters, of whom Joseph was born at Brienoles, in 1648; studied at Paris, and in Italy under Bourguij;non ; became eminent for painting battles, though he had never seen an army ; was elected a member of the academy of painting; and died in Paris in 1704. Charles, his son and pupil, became alao so eminent that he was appointed to paint the conquests of Louis XV. He died in Paris in 1752, aged sixty-tnree. Peter, born at Avignon, nephew to Joseph, was also his pupil, and performed many beautiful works at St. Germain, &c. His chief piece is at rˆJarseilles. He died in 1739, aged seventy-five.

PAR ROT, n. s. Fr. perroquet. A party- colored bird, remarkable for its imitation of the human voice.

Some will evermore peep through their eyes And laugh like parrots at a bag-piper. Shalupeare.

Who taught the parrot human notes to try '. 'Twas witty want, tierce hunger to appease.

Dryden.

Parrot. See Psittacus.

PAR'RY, V. n. Fr. purer. To fence, or put by thrusts.

A man of courage who cannot fence, and will put all upon one thrust, and not stand parrying, has the odds against a moderate fencer Locke

I could By dint of logick strike thee mute ; With learned skill, now push, now parry. From Darii to]5ocardo vary. Prior,

While Bigotry, with well-dissembled fears. His eyes shut fast, his fingers in his ears, Mighty to parry and push by God's word With senseless noise, his argument the sword, Pretends a zeal for godliness and grace. And spits abhorrence in the Christian's face.

Cowper.

Parry (Richard), D.D., a learned English divine, educated at Oxford, where he graduated in 1757. He was rector of W ichampton, and minister of Market Harborough, where he died in 1780. He wrote many useful religious trea- tises.

Parry (Caleb Hillier), M. D., F.R.S., an ingenious physician and natural historian of Bath, father of the celebrated captain Parry. Dr. Parry is known as the author of A Treatise on Wool, containing the result of a series of ex- periments on this staple commodity to whicn liis attention was originally directed by the cir- cumstance of king (ieorge IIL presenting two Merino rams to the Bath and West of England Society. But his principal work is the Elements ot Pathology, printed in 1816. He died March fUh, 1822, having been deprived of the use of his faculties by palsy in 1816.

PARSE, j>. a. Lat. pars, a part. To resolve a sentence into its elements or parts of speech.

Let him construe the letter into English, and parse over perfectly. Aschuin's

Schoolmaster.

Let scholars reduce the words to their original, to the first case of nouns, or first tense of verbs, and give an account of their formations and changes, their syntax and dependencies, whicli is called pars^ ing. Watts on the Mind.

The nature of the subject, as well as the adapta- tion of it to learners, requires that it should be divided into two parts, viz. parsing, as it respects etymology alone ; and parsing, as it respects both etymology and syntax. Murrnxi.

PARSIIOllE, a town of Worcestershire, seven miles from Worcester, and 102 from Lon- don, on the north side of the Avon, near its junction with the Bow, being a considerable thoroughfare in the lower road from Worcester to London. A religious house was founded here in 604, a small part of which now remains, and is used as the parish church of Holy Cross, the whole of which contained above ten acres. The abbey church was 250 feet long, and 120 broad. The parish of Parshore is of great ex- lent, and has within its limits many manors and chapelrics. At present it has two parishes.

Holy Cross and ^l. AndreV. In Holy Cross church are several very antique monuments. Its chief manufacture is stockings. Markets on Tuesday and Saturday.

PARSIMO'NIOUS, ad;. \ Lat. pursunonia,

Parsimo'niously, adv. fa parco, to save.

Parsimo'niousness, n. s. ^Frugal; saving;

Par'simony. J sparing : hence co-

vetous : the adverb and noun substantive follow these senses : parsimony is frugality ; disposition to save or spare ; niggardliness ; covetousness.

A prodigal king is nearer a tyrant, than a parsimo- nious : for store at home draweth not his contempla- tions abroad, but want supplieth itself of what is next. Bacon.

The ways to enrich are many ; parsimony is one of the best, and yet it is

not innocent ; for it withholdeth men from works of liberality. Id.

Parsimonious age and rigid wisdom. Uowe.

Extraordinary funds for one campaign may spare us the expense of many years, whereas a long parsi- monious war will drain us of more men and money.

Addison.

These people, by their extreme parsimony, soon grow into wealth from the smallest beginnings.

Swift.

Our ancestors acted parsbnonioiislii , because they only spent their own treasure for the good of their posterity ; whereas we squandered away the treasures of our posterity. Id.

To thrift and parsimony much inclined, She yet allows herself that boy behind ; The shivering urchin bending as he goes. With slip-shod heels, and dew-drop at his nose ; His predecessor's coat advanced to wear, Which future pages yet are doomed to share.

Cowper.

PARS'LEY, n. s. Fr. persil ; Wei. persli ; Belg. paterselay, of Lat. petroselinum (Gr. rrtrpa a rock, and ffeXtvov), a kind of parsley growing among rocks. An herb.

A wench married in the afternoon, as she went to the garden for parsley to stuff a rabbit. Shakspeare.

Green beds of parsley near the river grow.

Dry den.

Sempronia dug Titus out of the parsley-bed, as they use to tell children, and thereby became his mother. Locke.

Parsley, in botany. See Apium.

Parsley, Bastard. See Caucalis.

Parsley, Fool's. See ˆthusa.

Parsley, Mountain. See Athamakta.

PARS'NEP, n. s. Lai. pastinuca. A plant.

November is drawn in a garment of changeable green, and bunches of parsneps and turneps in his right hand. Peacham.

Parsnep, in botany. See Pastinaca.

Parsnep, Cow's. See Heracleum.

PAR'SON, n. s. } From Lat. persona, be-

Par'sonage.) cause the parson ' omnium personam in ecclesia sustinet.' The priest or clergyman of a parish ; one that has a parochial charge of souls ; also applied to the teachers of the Presbyterians and Dissenters ; and often in banter to all these parties.

Sometimes comes she with a tithe-pig's tail. Tickling the parson as he lies asleep ; Then dreams he of another benefice. Shakspeare.

Abbot was preferred by king James to the bishop- rick of Coventry and Litchfield, before he had been parson, vicar, or curate of any parish church.

Clarendon.

A Parson is one that has ftdl possession of all the rights of a parochial church. He is called parson, persona, because by his person the church is represented ; and he is in himself a body corporate, to protect and defend the rights of the church (which he personates) by a perpetual succession. He is sometimes called the rector or governor)f the church ; but the appellation of parson is the most legal and most honorable title that a parish priest can enjoy ; because such a one (Sir Edward Coke observes), and he only, is said vicem seu personam ecclesiae gerere. A parson has, during his life, the freehold in himself of the parsonage house, the glebe, the tithes, and other dues. But these are sometimes appropriated ; that is, the benefice is perpetually annexed to some spiritual corporation, either sole or aggregate, being the patron of the living; whom the law esteems equally capable of pro- viding for the service of the church as any single private clergyman. The appropriating corpora- tions, or religious houses, were wont to depute one of their own body to perform divine service, and administer the sacraments in those parishes of which the society was thus the parson. This officiating minister was in reality no more than a curate, deputy, ox vicegerent, of the appropria- tor, and therefore called vicarius, vicar. His stipend was at the discretion of the appropriatorˆ who was, however, bound of common right to find somebody, qui illi de temporalibus, epis- copo de spiritualibus, debeat respondere. But tliis was done in so scandalous a

manner, and the parishes suffered so much by the neglect of the appropriators, that the legislature was forced to interpose : and accordingly it is enacted, by statute 15 Rich. II. c. 6, that in all appropria- tions of churches the diocesan bishop shall ordain (in proportion to the value of the church) a competent sum to be distributed among the poor parishioners annually ; and that the vicarage shall be sufiiciently endowed. The parish fre- quently suffered, not only by the want of divine service, birl also by withholding those alms for which, among other purposes, the payment of tithes was originally imposed : and therefore in this act a pension is directed to be distributed among the poor parochians, as well as a suffi- cient stipend to the vicar. But he, being liable to be removed at the pleasure of the appropriator, was not likely to insist too rigidly on the legal sufficiency of the stipend ; and therefore, by statute 4 Hen. IV. c. 12, it is ordained that the vicar shall be a secular person, not a member of any religious house ; that he shall be vicar per- petual, not removeable at the caprice of the monastery; and that he should be canonically instituted and inducted, and be sufficiently en- dowed, at the discretion of the ordinary, for these three express purposes, to do divine service, to inform the people, and to keep hospitality. The endowments, in consequence of these sta- tutes, have usually been by a portion of the glebe or land belonging to the parsonage, and a particular share of the tithes, which the appro- priators found it most troublesome to collect, and which are tlierefore generally called petty or small tithes ; the greater, or praedial tithes, being still reserved to their own use. But one and

tne same rule was not observed in the endow- ment of all vicarages. Hence some are more liberally, and some more scantily endowed : and hence the tithes of many things, as wood in par- ticular, are in some parishes rectorial, and in some vicarial tithes. The distinction, therefore, of a parson and vicar is this : the parson has for the most part the whole right to all the ecclesiastical dues in his parish ; but a vicar has generally an appropriator over him, entitled to the best part of the profits, to whom he is in effect perpetual curate, with a .standing salary. Though in some places the vicarage has been considerably augmented by a large share of the great tithes ; which augmentations were greatly assisted by statute 27 Car. II. c. 8, enacted in favor of poor vicars and curates, which rendered such temporary augmentations (when made by the appropriators) perpetual. The method of becoming a parson or vicar is much the same. To both there are four re- quisites necessary ; holy orders, presentation, institution, and induction. By common law, a deacon, of any age, might be instituted and in- ducted to a parsonage or vicarage ; but it was ordained by statute 13

Eliz. c. 12, that no per- son rnder twenty-three years of age, and in dea- con's orders, should be presented to any bene- fice with cure ; and, if he were not ordained priest within one year after his induction, he should be ipso facto deprived : and now, by statutes 13 and 14 Car. II. c 4, no person is ca- pable to be admitted to any benefice, unless he has been first ordained a priest ; and then he is, in the language of the law, a clerk in orders. But if he obtain orders, or a license to preach, by money or corrupt practices (which seem to be the true, though not the common, notion of simony), the person giving such orders forfeits ––40, and the person receiving –– 10, and is incapa- ble of any ecclesiastical preferment for seven years after. Any clerk may be presented to a par- sonage or vicarage ; that is, the patron, to whom the advowson of the church belongs, may offer liis clerk to the bishop of the diocese to be in- stituted. But, when he is presented, the bishop may refuse him upon many accounts. As, 1. If the patron is excommunicated, and remains in contempt forty days ; or, 2. If the clerk be unfit ; which unfitness is of several kinds. First, with regard to his person ; as if he be a bastard, an outlaw, on excommunicate, an alien, under age, or the like. Next, with regard to his faith or morals ; as for any particular heresy, or vice that is malum in se ; but if the bishop alleges only in generals, as that he is schismaticus inve- teratus, or objects a fault that is malum prohi- bitum merely, as haunting taverns, playing at unlawful games, or the like, it is not good cause of refusal. Or, lastly, the clerk may be unfit to discharge the pastoral office for want of learning. In any of which cases the bishop may refuse the clerk. In case the refusal is for heresy, schism, inability of learning, or other matter of ecclesiastical cognizance, there the bishop must give notice to the patron of such his cause of refusal, who, being usually a layman, is not sup- posed to have knowledge of it ; else he cannot '?:esent by lapse; but, if the cause be temporal,

there he is not bound to give notice. If an ac- tion at law be brought by the patron against the bishop for refusing his clerk, the bishop must assign the cause. If the case be of a temporal nature, and the fact admitted (for instance, out- lawry), the judges of the king's courts must de- termine its validity, or whether it be sufficient cause of refusal : but, if the fact be denied, it must be determined by a jury. If the cause be of a spiritual nature (as heresy, particularly al- leged) the fact, if denied, shall also be deter- mined by a jury : and, if the fact be admitted or found, the court, upon consultation and advice of learned divines, shall decide its sufficiency. If the cause be want of learning, the bishop need not specify in what points the clerk is de- ficient, but only allege that he is deficient ; for statute 9 Edw. II. st. 1, c. 13, is express, that the examination of the fitness of a person pre- sented to a benefice belongs to the ecclesiastical judge. But because it would be nugatory in this case to demand the reason of refusal

from the ordinary, if the patron were bound to abide by his determination, who has already pro- nounced his clerk unfit : therefore, if the bishop returns the clerk to be minus suflficiens in lite- ratura, the court shall write to the metropolitan to re-examine him, and certify his qualifications ; which certificate of the archbishop is final. If the bishop has no objections, but admits the patron's presentation, the clerk so admitted is next to be instituted by him ; which is a kind of investiture of the spiritual part of the benefice ; for, by institution, the care of the souls of the parish is committed to the charge of the clerk. When a vicar is instituted, he (besides the usual forms) takes, if required by the bishop, an oath of perpetual residence ; for the maxim of law is, that vicarius non habet vicarium : and, as the non-residence of the appropriators was the cause of the perpetual establishment of vicar- ages, the law judges it very improper for them to defeat the end of their constitution, and by absence to create the very mischief which they were appointed to remedy ; especially as, if any profits are to arise from putting in a curate and living at a distance from the parish, the appro- priator, who is the real parson, has undoubtedly the elder title to them. When the ordinary is also the patron, and confers the living, the pre- sentation and institution are one and the same act, and are called a collation to a benefice. By institution or collation the church is full, so that there can be no fresh presentation till another vacancy, at least in the case of a common pa- tron ; but the church is not full against the king till induction : nay, even, if a clerk is instituted upon the king's presentation, the crown may re- voke it before induction, and present another clerk. Upon institution, also, the clerk may enter on the parsonage house and glebe, and take the tithes ; but he cannot grant or let them, or bring an action for them, till induction. See Induction. For the rights of a parson or vicar, in his tithes and ecclesiastical dues, see Tithes, As to his duties, they are so numerous that it is impracticable to recite them here with any toler- able conciseness or accuracy ; but the reader who has occasion may consult B. Gibson's

Codex, Johnson's Clergyman's Vade Mecum, and Bum's Ecclesiastical Law.

A Parsonage is a rectory, or parish church, endowed with a glebe, house, lands, tithes, &c., for the maintenance of a minister, with cure of souls within such parish.

PARSONS (James), M. D. and F. R. S.,a late eminent and learned

physician, born at Barn- staple, Devonshire, in 1705. lie was educated in Dublin, whence he went to Paris, and im- proved himself under Astruc, Lemery, Hunaud, Le Cat, Bouldue, and Jussieu. He graduated at Rheims in 1736, came to London, and was made F. R. S. in 1740. He was also a member of the Antiquarian, Medical, and Agricultural Societies. In 1751 he was admitted a licentiate of the Col- lege of Physicians, and appointed physician to St. Giles's infirmary. He also assisted Dr. James Douglas in anatomy. He died in 1770. He was much esteemed by the literati at home, and had an extensive correspondence with those abroad. His publications are numerous and valuable. Of these we shall only mention his Remains of Japhet ; being Historical Enquiries into the affinity and origin of the European Languages. Its object is to prove the antiquity of the first inhabitants of these islands.

Parsons (Robert), an eminent writer of the church of Rome, born at Nether Stowey, near Bridgewater, in 154G, and educated at Baliol College, Oxford, where he distinguished himself as a zealous Protestant and an acute disputant ; but, being charged by the society with inconti- nency and embezzling the college money, he went to Flanders, and declared himself a Catho- lic. After travelling to several other places, he effected the establishment of the English semi- nary at Rome, and procured father Allen to be chosen rector of it. He himself was appointed the head of the mission to England, to dethrone queen Elizabeth, and extirpate the Protestant religion. He accordingly came over in 1580ˆ and took some bold steps for that purpose, in which he concealed himself with great art, tra- velling about the country to gentlemen's houses, disguised in the habit, sometimes of a soldier, sometimes of a gentleman, and at other times like a minister or an apparitor ; but, fathei Cam- pion being seized and committed to prison, our author eloped, and went to Rome, where he was made rector of the English seminary. He had long entertained the most sanguine hopes of con verting to the popish faith the young king of Scots, which he considered as the most effectual means of bringing over his subjects to the same religious principles; but, finding this impossible, he p\iblished in 1594 his celebrated book, under the name of Doleman, to overthrow James's title to the crown of England. He died in Rome in 1610, and was buried in the chapel of the English College. He also wrote, 1. A Defence of the Catholic Hierarchy; 2. The Liturgy of the Sacrament of the Mass ; 3. A Memorial for the Reformation ; and several other tracts.

PART, n. s., V. a., v. n. Si, adv. '\ Fr. part ; Part'able, adj. I Italian, Spa-

Part'age, re. s. ˆnish. andPor-

Part'ible, adj. i tugueseparff ;

” ‘ J-”

Partly, adv.

Teuton, part

Belg. paert ; Heb. D’>3. A section or division of a whole ; a portion : hence, a membcE ; particu- lar ; ingredient ; quality or power ; region ; propor- tional quantity or share ; concern ; particular bu- siness or duty ; often a character ; side ; interest or faction ; reciprocal relation ; any thing relating or belonging; action , conduct; in ‘good or ill part,’ taken as a good or ill action : ‘ for the most part’ means, in most instances; commonly, to part : to divide ; separate ; share ; distribute ; break or keep asunder : as a neuter verb, to take share ; quit ; be separated ; take farewell ; go away : ‘ to part with’ is also to quit ; resign ; be separated from ; lose : partable and partible mean, divisible ; separable : partage [Fr. piirt- age], separation ; division ; act of dividing : partly, in part, degree, or measure.

The people stood at the nether part of the mount.

Exodus. Pari it in pieces, and pour oil thereon.

Lerjticus. Sheba said, we have no part in David; neither have we inheritance in the son of Jesse. 2 Samuel. Nought but death shall part thee and me.*

Buth. As his part is, that goeth down to the battle, so shall his part oe, that tcirrleth by the stuff; they shall part alike. Isaiah.

When he had gone over those parts, he came into Greece. Ads xx. 2.

All that believed, sold their goods, and parted them to all men, as every man had need. Acts ii.

Forasmuch as the children are partakers of flesh and blood, he also took part of the same. Hebrews.

The ungodly made a covenant with death, be- cause they are worthy to take part with it.

Wisdom i. 16. Thou marble hewest, ere long to part with breath. And houses rearest, unmindful of thy death.

Sandus. For Zelmane’s vart she would have been glad of the fall, which made her bear the sweet burden of Philoclea. but that she feared she might receive some hurc. Sidneii.

Who IS courteous, noble, liberal, but he that hath the example before his eyes of Amphialus ; where are all heroical parts, but in Amphialus? Id.

Although no man was, in our parts, spoken of but he, for his manhood ; yet, as though therein he ex- celled himself, he was called the courteous .Amphia- lus. Id.

Such licentious varts tend, for the most part, to the hurt of the English, or maintenance of their own lewd liberty. Spenser.

God accepteth it in good part, at the hands of faithful men. Hooker.

That part, whicn, since the coming of Christ,- partly hath embraced, and partlp shall hereafter em- brace the Christian religion, we term, as by a more proper name, the church of Christ. Id.

The citizens were for the most part slain or taken.

Kriolles. Helen's cheeks, but not her heart ; Atalanta's better part. Shakspeare,

Michael Cassio, When I have spoken of you dispraisingly, Hath ta'en your part. Id.

Tnat part Was aptly fitted, and naturally performed. Id. Find him, my lord, And chide him hither straight : this part of his Conjoins with iny disease. Id.

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I conjure thee, by all the parts of man Which honour does acknowledge. Id.

In the narrow seas, that part The French and English, there miscarried A vessel of our country. Id.

He wrung Bassanio's hand, and so they parted.

Id. Ere I could Give him that parting kiss, which I had set Betwixt two charming words, comes in my father.

Id. For her sake I do rear up her boy ; And for her sake 1 will not part with him. Id. His hot love was partable among three other of his mistresses. Camden's Remains.

Let them be so furnished and instructed for the military part, as they may defend themselves.

Bacon. The pneumatical part, wnich is in all tangible bodies, and hath some affinity with the air, per- Ibrmeth the parts of the air : as, when you knock upon an empty barrel, the sound is, in part, created by the air in the outside, and, in part, by the air in the inside. Id.

This law wanted not parts of prudent and deep foresight ; for it took away occasion to pry into the king's title. Id.

Make the mou ds partible, glued or cemented toge- ther, tnat you may open them, when you take out the fruit. Id.

Let not thy divine heart Forethinkme any ill ;

Destiny may take thy part. And may thy fears fulfil. Donne.

It was so strong, that nevei any filled A cup, where that was but by drops instilled. And drunke it oif ; but 'twas before allaid AVith twenty purls in water. Chapman.

For my part, I have no servile end in my labour, which may restrain or embase the freedom of my judgment. Wotton.

Henry had divided The person of himself into four parts.

Daniel. And that he might on many props repose. He strengths his own, and who his part did take.

id. Store of plants, the effects of nature ; and where the people did their part, such increase of maize.

Heplin. Of a plain and honest nature, for the most part they were found to be. Id.

(jod is the master of the scenes: we must not chuse which part we shall act ; it concerns us only to be careful that we do it well. Taylor.

Inquire not whether the sacraments confer grace by their own excellency, because they, who affirm they do, require so much duty on our parts, as they also do, who attribute the effect to our moral dispo- sition. Id.

An affectionate wife, when in fear of parting with her'beloved husband, heartily desired of God his life or society, upon any conditions that wefe not sinful.

Id. The same body, in one circumstance, is more weighty, and, in another, is more partible. Dighy.

Besides his abilities as a soldier, which were emi- nent, he had very great parts of breeding, being a very great scholar in the political parts of learning.

Clarendon. Accuse not Nature, she hath done her pari ; Do thou but thine. Milton's Faradise Lost.

Powerful hands will not part Easily from possession won with arms. Id.

So parted they ; the angel up to heaven From the thick shade, and Adam to his bower.

Id. Call up . their eyes, and fix them on your exam- ple ; that so natural ambition might take part with reason and their interest to encourage imitation.

GUijiville. These conclude that to happen often, which hap- peneth but sometimes ; that never, wiiifh happeneth but seldom ; and that always, which happeneth for the most part. Browne.

Celia, for thy sake, I part With all that grew so near my heart ; And, that I may successful prove, Transform myself to what you love. Waller. A brand preserved to warm some prince's heart, And make whole kingdoms take her brother's part.

Id. .love did both hosts survey. And, when he pleased to thunder, part the frav.

id. Lixiviate salts, though, by piercing the bodies of vegetables, they dispose them to part readily with their tincture, yet some tinctures they do not only draw out, but likewise alter. Boijle

The Scripture tells us the terms of this covenant of God's part and our's ; namely, that he will be our God, and we shall be his people. Tillotson.

When your judgment shall grow stronger, it will be necessary to examine, part by part, those works which have given reputation to the masters.

Dryden. Of heavenly part, and part of earthly blood ; A mortal woman mixing with a god. Id.

Go not without thy wife, but let me bear My part of danger, with an equal share. Id.

All parts resound with tumults, plaints, and fears. And grisly death, in sundry shapes, appears. Id. All the world. As 'twere the bus'ness of mankind to part us. Is armed against my love. Id.

Thy father Embraced me, parting for the' Etrurian land.

Id. Our ideas of extension and number, do they not contain a secret relation of the parts ? Locke.

This was the design of a people that were at li- berty to part asunder, but desired to keep in one body.

Id. The ideas of hunger and warmth are some of the first that children have, and which they scarce ever part uith. Id.

I\Ien have agreed to a disproportionate and un- equal possession of the earth, having found out a way, how a man may fairly possess more land than he himself can use the product of, by receiving in exchange for the overplus, gold and silver ; this purtage of things, in an equality of private posses- sions, men have made practicable out of the bounds of society, without compact, only by putting a value on gold and silver, and tacitly agreeing in the use of money. Id.

What! part, for ever part ? unkind Ismena ; Oh ! can you think that death is half so dreadful. As it would be to live without thee ? Smith.

They thought it reasonable to do all possible ho nour to their memories ; partly that others might be encouraged to the same patience and fortitude, and partly that virtue, even in this world, might not lose its reward. AWsim.

For my part, 1 think there is nothing so secret that shall not be brought to light, within the world.

Burnet. Solomon was a prince adorned with such parts of

mind, and exalted by such a concurrence of all prosperous events to make him magnificent.

South. What a despicable figure must mock-patnots make, who venture to be hanged for the ruin of those civil rights which their ancestors, rather than part with, chose to be cut to pieces in the field of battle !

Addison's Freeholder. The inhabitants of Naples have been always very notorious for leading a lite of laziness aad pleasure, which I take to arise out of the wonderful plenty of their country, that does not make labour so neces- sary to them, and partly out of the temper of their climate, that relaxes the fibres of their bodies, and disposes the people to such an idle indolent humour.

Id. on Italy. The arm thus waits upon the heart. So quick to take the bully's part ;

'J'hat one, tho' warm, decides more slow Than t'other executes the blow. Prior.

The liver minds his own affairs, And parts and strains the vital juices. Id. ###Many irregular and degeneiate parts, by the de- fective oeconomy of nature, continue complicated with the blood. Blackmore.

1 he good things of this world so delight in, as remember, that we are to part with them, to ex- cliange them for mOre durable enjoyments.

Atterbury.

The Indian princes discover fine parts and excel

lent endowments, without improvement. Felton.

Agamemnon provokes Apollo, whom he was will- ing to appease afterwards at the cost of Achilles, who had no part in liis fault. Pope.

Jove himself no less content would be To part his throne, and share his heaven with thee.

Id. If it pleases God to restore me to my health, I shall make a third journey ; if not, we must part, as all human creatures have parted. Swift.

As for riches and power, our Saviour plainly de- termines, that the best way to make them blessings, is to part with them. Id.

Any employment of our talents, whether of our parts, our time, or money, that is not strictly accord- ing to the will of God, that is not for such ends as are suitable to his glory, are as great absurdities and failings. Lau.

Eusebia brings them up to all kinds of labour that are proper for women, as sewing, knitting, spinning, and all other parts of housewifery. Id.

May such success attend the pious plan, I\Iay Mercury once more embellish man, Grace him again with long forgotten arts, Reclaim his taste, and brighten up hispnrts.

Cowper, Friends meet to part ; Love laughs at faith ; True foes, once met, are joined till death !

*Byron, Part, Aliquant, is a quantity which, being ***repeated any number of times, becomes always either greater or less than the whole. Thus 5 is an aliquant part of 17, and 9 an aliquant part of 10, &c. Tlie aliquant part is resolvable into aliquot parts. Thus 15, an aliquant part of 20, is resolvable into 10 one half, and 5 a fourth part of the same.*

Part, Aliquot, is a quantity which, being repeated any number of times, becomes equal to an integer. Thus 6 is an aliquot part of 24, and 5 an aliquot part of 30, &c.

Parts of Speech, in grammar. See Gram- mar under English Language.

PARTAKE , V. n. Scv. a. f From part and Pai'.tak'er. 5 take. To take part

or share with or (as Mr. Locke uses it) in ; to participate; have property in or claim to; be admitted to combine or conspire ; as a verb ac- tive, to share ; have part m ; admit to part (obso- lete): partaker follows all these senses, and is used with iyi, with, and of.

Thou consentedst, and hast been partaker with adulterers. Psalms.

If we had been in the days of our fathers, we would not have been partakers with them in the blood of the prophets. Matthew.

My friend, hight Philemon, I did partake Of all my love, and all my privity. Who greatly joyous seemed for my sake. Spenser. They whom earnest lets

hinder from being par- takers uf the whole, have yet, through length of divine service, opportunity for access unto some rea- sonable part theieof. Hooker, You may partake (ˆ any thing we say ; We speak no treason. Shakspeare. Richard III, liy and by, thy bosom shall partake The secrets of my heart. Shakspeare, Your exultation partake to every one. Id. Didst thou JMake us partakers of a little gain ; I'hat now our loss might be ten times as much ? Id, Wish me partaker in thy happiness. When thou do'st meet good hap. Id, The attorney of the dutchy of Lancaster partakes partly nf a judge, and partly of an attorney- general.

Bacon. He took upon him the person of the duke of York, and drew with him complices and partakers. Id.

At season fit Let her with thee partake what thou hast heard.

Milton. As it prevents factions and partakings, so it keeps the rule and administration of the laws uniform.

Hale, Partake and use my kingdom as your own. And shall be yours while 1 command the crown.

Dryden, My royal father lives ! Let every one partake the general joy. Id. How far brutes partake in this faculty is not easy to determine. Locke.

Truth and falsehood have no other trial but reason and proof, which they made use of to make them- selves knowing, and so must others too that will par- take in their knowledge. Id

With such she must return at setting light. Though not partaker, witness of their night. Prior.

His bitterest enemies were partakers of his kind- ness, and he still continued to entreat them to accept of life from him, and, with tears, bewailed their in- fidelity. Calamy.

PARTANICO, a pleasant town in the Val' di Mazzara, Sicily, situated at the base of the Pa- lermo Mountains. The neighbouring country, though fertile, is subject to the Mal-aria. From this to Palermo, a distance of twenty-four miles, there is an excellent carriage-road across the mountains, formed with great labor. Inhabitants

5000.

PARTERRE, n. s. Fr. parterre, of Lat. par terra. A level part or division of ground, that, for the most part, faces the best front of a house.

The vast parterres a thousand hands shall make ; Lo ! Cobham comes, and floats them with a lake.

Pope. There are as many kinds of gardening as of poetry ;

your makers of parterres and flower gardens are epi- grainmatists and sonneteers. Spectator.

This civil bickering and debate The goddess chanced to hear, And flew to save, ere yet too late. The pride of the parterre. Cowper.

Pahterres, in gardening;, are of two kinds; the plain, and parterres of embroidery. Plain parterres are most valuable in England, because of the firmness of the English grass turf, which is superior to tliat of any other part of the world : and the parterres of embroidery are cut into shell and scroll work, with alleys between them. An oblong, or long square, is accounted the most proper figure for a parterre ; and a parterre should indeed be always twice as long as it is broad, because, according to the laws of per- spective, a long square always sinks to a square; and an exact square always appears less than it really is. As to the breadth of a parterre, it is to be proportionable to the front of the house ; but less than 100 feet in breadth is too little. There should be on each side the parterre a ter- race walk raised for a view, and the flat of the parterre between the terraces should never be more than 300 feet at the utmost in breadth, and about 140 feet in width, with twice and a half that in length, is esteemed a very good size and proportion.

Mr. Loudon observes that in ornamental gar- dens, and parterres of every kind, the soil should be unmanured, and rather poor than otherwise ; but tlie situation and exposure should be good, and the surface of the ground beautifully varied. Tlie extent of them must be in proportion to the nature of the place to which they belong. In general they need not be large. In almost every kind a few trees and shrubs should be introduced, to remove from the general view the appearance of insipidity, and to break it into separate scenes; one of which alone should be seen at a time, that, the extent of vision being circumscribed, the spectator may thus be induced to examine or admire the minute beauties of single objects, or small compositions. And it is observed that, where parterres are intermingled with lawns, those disgusting ines of separation at the edges of walks, or round groups and dug patches of flowers or shrubs, which abound every where,

sliould not be introduced ; the gravel of the walk, and the earth at the edges of the dug patches or groups, ought to be kept nearly on a level with the grass on the lawn. Where much culture is requisite in the groups, the line of se- paration should be delicate and graceful ; and where this is not necessary, or not much attended to, both the lines of the walk, and the lines of the dug group, or patch, should blend and harmo- nise, and, in a natural easy manner, glide insen- sibly into each other.

PARTHAON, in fabulous historj-, the son of Neptune, or of Agenor and Epicaste, and father of Oeneus, Sterope, &:c., by his wife Euryte.

PARTIIENAY (John de), lord of Soubise, an eminent French commander, born in 1512. He commanded the troops in Italy in 1550; and supported the Protestant cause till his death in 1566. He left one daughter.

Parthenay (Catharine de), niece to the pre-

ceding, and lady of Soubise, was married in 1568 to the baron de Pons, and in 1575 tollen6 'isc. llohan, l)y whom she had the famous duke of Rohan, who so bravely defended the Protes- tant cause during the civil wars under Louis XIII. She published poems, comedies, and tragedies. Her daughter Catharine was eminent for virtue, and married the duke of Deux Fonts. She died in 1607, and her mother in 1631.

PARTHEMA, in literature, is the title of a curious thin folio book of lessons for the \ irgi- nal, that was engraved on copper, and published in the reign of king James I. The full title is, Parthenia, or the Maidenhead of the first Mu- sicke that ever was printed for the Virginalls. Composed by three famous masters : William Byrd, Dr. John Bull, and Orlando Gibbons, C/ entlemen of his Majesties most illustrious Chappel. Bird being called ‘ gentleman of his majesties chappel,’ seems here to imply that he was living when it was published. King James died in 1525, and Bird in 1523. The first three movements in this collection, consisting of a preludium ; pavana; Sir William Peder; and a galiardo ; are in G minor, and may be called a suite of lessons. The fourth and fifth move- ments, preludium; and galiardo, Mrs. Maryc Brownlo, in C ; and the sixth, seventh, and eˆth, pavana, the earl of Salisbury; galiardo primo; and galiardo secundo. Mrs. Marje Brownlo, in A minor, constitute what msy like- wise be regarded as two other suites de pieces, or sets of lessons.

Parthenia, or Parthenos, in mythology, an epithet of Minerva, because she is said to have preserved her virginity. When the Rhodians neglected her worship, and the cultivation of the fine arts, the Athenians began to distinguisb themselves in this respect, and took her for their patroness. Accordingly they dedicated to her a magnificent temple under the name of

Parthenos, the virgin. Phidias adorned it with a statue of gold and ivory, which was a master-piece ; and the Athenians also celebrated to her honor a fes- tival, which was afterwards called ‘ panathenaia.’ Parthenos was also a name given to Juno, from a notion that this goddess, by bathing herself every year in the fountain called Canathos, which was at Nauplia, recovered her virginity.

PARTHENII, citizens of ancient Sparta, who owed their existence to a singular circumstance. During the Messenian war the Spartans had been ten years absent from their city ; and ‘ they had bound themselves by a solemn oath not to return till they had subdued iNlessenia. The magistrates as well as the women of Sparta were alarmed at the danger of such long absence de- populating the country. A law^ was therefore enacted, that all the young men who had not taken the oath should have free access to the unmarried women. The fruits of this promiscu- ous intercourse were named UapOtvioi, Parthenii. i. e. sons of virgins. When they grew up, know- ing they had no legitimate fathers, and of course no inheritance, they conspired with the Helots to massacre the other citizens, and seize their possessions. The conspiracy was discovered, but the Spartans, instead of punishing them, permitted them toemigrate to Italy, where, un-

del their leader Phalantus, they settled in Magna Groscia, and built Tarentum, A.A. C. 707. .Tus- tin, Strabo, Pans. Plut.

PARTHENIUM, in botany, bastard fever- few, or kiu-hoa of the Chinese, a genus of the pentandria order, belonging to the raoncecia class of plants ; and in the natural method rank- ing under the forty-ninth order, composite. The MALE CAL. is common and pentaphyllous ; the florets of the disk monopetalous : the female has five florets of the radius, each with two male florets behind it : the intermediate female supe- rior; the seed is naked. It has been much neg- lected in Europe, having on account of its smell been banished from our parterres. It is therefore indebted for its culture to the distinguished rank it holds among the Chinese flowers. The skill of the florists, and their continual care, have brought this plant to so great perfection that liuropeans scarcely know it. The elegance and lightness of its branches, the beautiful indent- ation of its leaves, the splendor and duration of its flowers, seem indeed to justify the florimania of the Chinese for this plant. They have, by their attention to its culture, procured more than 300 species or varieties of it : every year pro- duces a

new one. Parthenium is propagated in China by seeds, and by suckers, grafts, and slips. When the florists have a fine plant, they suffer the seeds to ripen, and about the end of autumn sow them in well-prepared earth. Some keep them in this manner auring winter, others sow them in spring. Provided they are watered after the winter, they shoot forth, and grow rapidly. After the parthenium is flowered, all its branches are cut three inches from the root, the earth is hoed around, and a little dung is mixed with it ; and, when the cold becomes severe, the plant is covered with straw, or an inverted pot. Those that are in vases are transported to the green- house, where they are uncovered and w-atered, and they shoot forth a number of stems ; of these some florists leave only two or three, others pull up the stalk, together with the whole root, and divide it into several portions, which they trans- plant elsewhere. Some join two slips of different colors, in each of which, towards the bottom, they make a long notch, almost to the pith, and afterwards tie them together with packthread, that they may remain closely united : by these means they obtain beautiful flowers, variegated with whatever colors they choose. Parthenium requires a good e.xposure, and fresh moist air that circulates freely : when shut up closely, it soon languishes. The earth in which it is planted ought to be rich, moist, and loamy, and prepared ⬚⬚⬚with great care. For refreshing it, the Chinese use only rain or river water ; and in spring they mix with this water the excrements of silk- worms, or the dung of poultry ; in summer they leave the feathers of ducks or fowls to infuse in it for several vlays, after having thrown into it a little saltpetre ; but in autumn they mix with the water a greater or smaller quantity of dried ex- crement reduced to powder, according as the plant appears more or less vigorous. During the great heats of summer, they water it morning and evening; but they moisten the leaves only in the morning : they also place small fragments

of brick round its root, to prevent the wafer from pressing down the earth too much.

Partiienius, in geography, a mountain of Arcadia, where Telephus had a temple, ai.l on which Atalantis was exposed. Pans. viii. 54. JElian 13.

PARTHENON, napOtvof, a virgin, in ancient architecture, the appellation given to tlie cele- brated Grecian temple of Minerva, wlio was often herself designated JlaˆQtvoQ, or virgin, and wor- shipped with the most profound adoration in tiie citadel of Athens. The temple thus called was built during the splendid era of Pericles ; and the expenses of its erection were estimated at 6000 talents. It was built upon a spot elevated on all sides alcove the town and citadel ; of the Doric order ; constructed of Pentelican marble ; and from its breadth (100 Greek feet) was de- nominated by the ancients Hecatompedon.

The Parthenon was 220 Greek feet in length, and about sixty ni'^^e in height. Its portico was double at the two fronts, and single at the sides. On the exterior facade of the nave was repre sented a procession in honor of Minerva. Tlie two arcliitects employed by Pericles in the building of this suoerb and elegant edifice were Callicrates and Ictinus. This magnificent tem- ple had resisted all the outrages of time ; had been in turn converted into a Christian church and a Turkish mosque ; but still subsisted en- tire when Spon and Wheeler visited Attica in 1676. It was in the year 1687 that the Vene- tians besieged the citadel of Athens under tlie command of General Koeniˆsmarck. A bomb fell most unluckily on the devoted Parthenon, set fire to the powder which the Turks had shut up therein, and thus the roof was entirely de- stroyed, and the whole building almost reduced to ruin. The Venetian general, being aftei'wards desirous of carrying off the statue of Minerva which had adornedthe pediment, had it removed, thereby assisting in the defacement of the place without any good result to himself ××× for the group fell to the ground and was shattered to pieces. Since this period every man of taste must have deplored the demolition of this noble structure, and the enlightened travellers who have visited the spot have successively published engravings of its remains. One of the first of these was Le Roy, in his Ruins of Greece ; after him came Stuart, who, possessing greater pecuniary means, surpassed his predecessor in producing a beau- tiful and interesting work on the Athenian Ari- tiquities. Chandler, and other travvpers in Greece, have also described what came under their eye of the remains of the Parthenon, of which many models have likewise been executed. M. Cassas (says Millin) has a very fine one in his valuable cabinet of models of antique tem- ples and other monuments. There is another in the Galerie d'Architecture au Palais des Arts, a Paris, &c. &c.*

But, not content with these artistical labors and publications, more recent travellers have en- riched their country and themselves with the actual spoils of the Parthenon. The foremost of these is our fellow-countryman lord Elgin, who, about the year 1800, removed a variety of the matchless friezes, statues, &c., which were pur-

chased of liim by parliament on the part of tlie nation, and now form tlie most valuable and in- terestnig portion of tlie British- Museum. See Ei IN Marbles. A part of his lordship's pre- cious treasure was, however, to the regret of all lovers of the fine arts, lost in the passage to England. '

PARTIIIA, a celebrated empire of antiquity, bounded on the west by Media,

nortli by llyr- cania, east by Aria, south by Carmania the desert ; surrounded on every side by mountains, wiiicli still serve as a boundary, though its name is now changed to Eyrac or Irac ; and, to distinguish it from Chaldea, to thatof Irac Agemi. By Ptolemy it is divided into five districts, viz. Caminsine or Gamisene, Karthyene, Choroane, Atticene, and Tabiene. Tlie ancient geographers enumerate many cities in this country. Ptolemy reckons twenty-five large cities; and it certainly must have been very populous, since we have accounts of 2000 villages, besides a number of cities in this district being destroyed by earthquakes. Its capital was named Hecatompolis, from the cir- cumstance of its having 100 gates. It was a noble and magnificent place; and, according to some, it still remains under the name of Ispahan, the capital of the present Persian empire.

Parthia is by some sup])osed to have been first peopled by the Phetri or Pathri, often mentioned in Scripture, and will have the Parthians to be descended from Pathrusim the son of Misraim. But however true tiiis may be with regard to the ancient inhabitants, yet it is certain that those Parthians who were so famous in history descend- ed from the Scythians, though from what tribe we are not informed. The history of the ancient Parthians is totally lost. All we know is, that they were first subject to the Medes, afterwards to the Persians, and lastly to Alexander the Great. After his death the province fell to Seleucus Nicator, and was held by him and his successors till the reign of Antiochus Theos, about A. A. C. 250. At this time the Parthians revolted, and chose one Arsaces for their king. The immediate cause of this revolt was the lewd- ness of Agathocles, to whom Antiochus had com- mitted the care of all the provinces beyond the Euphrates. This man made an infamous attempt on Tiridates, a youth of great beauty ; which so enraged his brother Arsaces that he excited his countrymen to revolt ; and, before Antiochus had leisure to attend to the rebellion, it became too powerful ta be crushed. Seleucus Callinicus, the successor of Antiochus Theos, attempted to reduce A a'ces ; but the latter, having had so much time to strengthen himself, defeated and drove him out of the country. Seleucus soon after undertook another expedition against Arsa- ces, but was still more unfortunate ; being not only defeated in a great battle, but taken prisoner ; and he died in captivity. The day on which Arsaces gained this victory was ever after ob- served among the Parthians as an extraordinary festival. Arsaces being thus fully established in his new kingdom, reduced Hyrcania and some other provinces under his power ; and was at last killed in a battle against Ariarathes IV. king of Cappadocia.

Arsaces I. was succeeded by his son Arsaces Vol. XVI.

II., who, entering Media, made himself master of that country, while Antiochus the Great was engaged in a war with Antiochus Euergetes king of

Egypt. Antiochus, however, was no sooner disengaged from that war than he marched with all his forces against Arsaces, and at first drove him quite out of Media. But he soon returned with an army of 100,000 foot and 20,000 horse, with which he put a stop to the further progress of Antiochus ; and a treaty was soon after con- cluded, in which it was agreed that Arsaces should remain master of Parihia and Hyrcania, upon condition of his assisting him in his wars with other nations. Arsaces II. was succeeded by his son Priapatius, who reigned fifteen years, and left three sons, Phrahates, Mithridates, and Artabanus. Phrahates, the eldest, succeeded lo the throne, and reduced under his subjection the Mardi, who had never been conquered by any but Alexander the Great. After him, his bro- ther Mithridates was invested with the regal dignity. He reduced the Bactrians, Medes, Per- sians, Elymeans, and over-ran all the east, pe- netrating beyond the boundaries of Alexander's conquests. Demetrius Nicator, who then reigned in Syria, endeavoured to recover these provinces, but his army was entirely destroyed, and himself taken prisoner, and kept captive till his death ; after which Mithridates made himself master of Babylonia and Mesopotamia, so that he now commanded all the provinces between the Eu- phrates and the Ganges. Mithridates died in the thirty-seventh year of his reign, and left the throne to his son Phrahates II. who was scarcely settled in his kingdom when Antiochus Zidetes marched against him at the head of a numerous army, under pretence of delivering his brother Demetrius, who was still in captivity. Phra- hates was defeated in three pitched battles; in consequence of which he lost all the countries conquered by his father, and was reduced witliin the limits of the ancient Parthian kingdom. An- tiochus did not, however, long enjoy his good fortune ; for his army, on account of their num- ber, amounting to no fewer than 400,000, being obliged to separate to such distances as prevented them, in case of any sudden attack, from joining together, the inhabitants, whom they had most cruelly oppressed, taking advantage of this sejia- ration, conspired with the Parthians to destroy them. This was accordingly executed ; and the vast army of Antiochus, with the monarch himself, were slaughtered in one day, scarcely a single person escaping to carry the news to Syria.

Elated with his success, Phrahates now pro- posed to invade Syria ; but in the mean time, happening to quarrel with the Scythians, he was by them cut off with his whole army, and was succeeded by his uncle Artabanus ; who enjoyed his dignity but a very short time, being, a few days after his accession, killed in another battle with the Scythians. He was succeeded by Pa- corus I., who entered into an alliance with the Romans; and he by Phrahates III. This mo- narch took under his protection Tigranes the son of Tigranes the Great, king of Armenia, gave him his daughter in marriage, and invaded the kingdom with a design to place the son on tlie throne of

Armenia ; but, on the approach o’

Pompey, lie retired, and soˆn after renewed the treaty witli tlie Romans. Plnaliates was mur- dered by his sons Mithridates and Orodes ; and soon after the former was put to death by his brother, who thus became sole master of the Par- thian empire. In his reign happened tiie memo- rable war with the Romans under Crassns. This was occasioned, not by any breach of treaty on the side of the Parthians, but through the shame- ful avarice of Crassus. The whole Roman em- pire had been divided between C

proof against the Roman darts, and their offensive weapons so sharp tliat no buckler was proof against them, Sec. Crassus looked upon all this only as the effects of cowardice ; but the soldiers, and even many of the officers, were so disheart- ened, that Cassius, the same wlio afterwards con- spired against Caesar, and most of the legionary tribunes, advised Crassus to suspend his march, and consider better of the enterprise before lie proceeded farther in it. But Crassus obstinately persisted in his former resolution, being encou- raged by the arrival of Artabazus king of Arme- nia, who brought with him 6000 horse, and pro- mised to send 10,000 cuirassiers and 30,000 foot whenever he should stand in need of them. At the same time he advised him not to march his army through the plains of Mesopotamia, but to take his route over the mountains of Armenia, as in every respect much safer. This salutary ad- vice, however, was rejected, and Crassus entered Mesopotamia with an army of about 40,000 men. The Romans had no sooner crossed the Euphrates than Cassius advised Crassus to ad- vance to some of those towns in which the garri- sons yet remained, to halt and refresh his troops; or to march along the Euphrates to Seleucia; and thus to prevent the Parthians from surrounding him, at the same time that he would be plenti- fully supplied with provisions. Of this advice Crassus approved, but was dissuaded by Abga- rus king of Edessa, whom the Romans took for an ally, but who was in reality a traitor sent by Surenas to bring about their destruction. Under this faithless guide the Romans entered a vast green plain divided by many rivulets. Their march proved at first very easy, but the farther they advanced the worse the ‘□□□oads became, inso- much that they were at last obliged to climb up rocky mountains, which brought them to a dry and sandy plain, where they could neither find food nor water. Abgarus then began to be sus- pected by the tribunes and other officers, who earnestly intreated Crassus not to follow him any longer, but to retreat to the mountains; at the samie time an

express arrived from Artabazus, acquainting the Roman general that Orodes had invaded his dominions with a great army, and that he was obliged to keep his troops at home, to defend his own dominions. The same mes- senger advised Crassus to avoid by all means the barren plains, where his army would certainly perish with hunger and fatigue, and to approach Armenia, that they might join their forces against the common enemy. But Crassus, instead uf hearkening either to the advice of the king or his own officers, first fiew into a violent passion with the messengers of Arta'bazus, and then told his troops that they were not to expect the delights of Campania in the most remote parts of the world. Thus they continued their march across a desert, the very sight of which was sufficient to throw them into despair ; for they could not perceive the least tree, plant, or brook, not so much as a single blade of grass ; nothing all around them but huge heaps of burning sand. Ine Romans had scarcely got through this desert wnen word was brought them by their scouts that a numerous army of Parthians was adTancing full speed to attack them ; for Abgarus, under

pretence of going out on parties, liad often con- ferred with Surenas, and concerted raeasures with him for destroying the Roman army. Upon this advice, which occasioned great confusio i in the camp, the Romans being quite exliausted with their long march, Crassus drew up his men in battalia, following at first the advice of Cas- sius, who was for extending the infantry as wide as possible, that they might take up the more ground, and thus prevent the enemy from sur rounding them ; but, Abgarus assuring the pro- consul that the Parthian forces were not so nu- merous as was represented, he changed this dis- position, and drew up his troops in a square, which faced every way, and had on each side twelve cohorts in front. Near each cohort he placed a troop of horse to support them, that they might charge with the greater security and boldness. Thus the whole army looked more like one phalanx than troops drawn up in raani- puli, with spaces between them, after the Roman roanner. The general himself commanded in the centre, his son in the left wing, and Cassius in the right. In this order they advanced to the hanks of the Balissus, the sight of which was very pleasing to the soldiers, who were mucli harassed with drought and heat. Most of the officers were for encamping on the banks of this river, to give the troops time to refresh them- selves ; but Crassus, hurried on by the inconsi- derate ardor of his son, only allowed the legions to take a meal standing, and, before this could be done by all, he ordered them to advance, not slowly, and halting now and then after the Ro- man manner, but as fast as they could move, till they came in sight of the enemy, who, con- trary to their expectation, did not appear either so numerous or so

terrible as they had been re- presented ; but this was a stratagem of Surenas, who had concealed his men in convenient places, ordering them to cover their arms, lest their brightness should betray them, and starting up at the first signal to attack the enemy on all sides. The stratagem had the desired effect ; 'for Surenas no sooner gave the signal than the Par- thians, rising as it were out of the ground with dreadful cries and a most frightful noise, ad- vanced against the Romans, who were greatly surprised and dismayed at that sight ; and much more so when the Parthians, throwing off the covering of their arms, appeared in shining cuirasses, and helmets of burnished steel, finely mounted on horses covered all over with armour of the same metal. At their head appeared young Surenas, in a rich dress, who was the first who charged the enemy, endeavouring with his pikemen to break through the first ranks of the Roman army; but finding it too close and impe- netrable, the cohorts supporting each other, he fell back, and retired in a seeming confusion ; but the Romans were much surprised when they saw themselves suddenly surrounded on all sides, and galled with continual showers of arrows. Crassus ordered his light-armed foot and archers to advance, and charge the enemy ; but they were soon repulsed, and forced to cover them- selves behind the heavy armed foot. Then the Parthian horse, advancing near the Romans, dis- charged showers of arrows upon them, which

did great execution, the legionaries being drawn up in such close order that it was impossible for the enemy to miss their aim. As their arrows were of an extraordinary weight, and discharged witi> incredible force and impetuosity, nothing- was proof against them. The two wings advanced in good order to repulse tiiem, but to no effect; for the Parthians shot their arrows with as gieat dexterity when their backs were turned as when they faced the enemy ; so that the Romans, whe- ther they kept their ground or pursued the flying enemy, were equally annoyed with their fatal arrows. The Romans, as long as they had any hopes that the Parthians, after having spent their arrows, would either betake themselves to flight, or engage them hand to hand, stood their ground with great resolution and intrepidity; but wlien they observed that tliere were many camels in their rear loaded with arrows, and that those who emptied their quivers wheeled about to fill them anew, they began to lose courage, and to com- plain of their general for suffering them thus to stand still, and serve only as a butt to the ene- my's arrows. Hereupon Crassus ordered his son to advance, and to attack the enemy with 1300 horse, 500 archers, and eight cohorts. But the Parthians no sooner saw this choice body (for it was the flower of the army) marching up against them, than they wheeled about, and be- took themselves, according to their custom, to flight. Hereupon young Crassus, crying out, They fly before us, pushed on full speed after them, not doubting but he should gain a com- plete victory ; but when he was at a

great distance from the main body of the Roman army, he per- ceived his mistake ; for those who before had tied, facing about, charged him with incredible fury. Young Crassus ordered his troops to halt, hoping that the enemy, upon seeing their small number, would not be afraid to come to a close fight : but herein he was likewise greatly disappointed; for the Parthians, contenting themselves to oppose his front with their heavy armed horse, surround- ed him on all sides, and, keeping at a distance, discharged incessant showers of arrows upon the unfortunate Romans, thus surrounded and pent up. The Parthian cavalry, in wheeling about, raised so thick a dust that the Romans could scarcely see one another, far less the enemy. In a short time the place where they stood was covered with dead bodies. Some of the unhappy Ro- mans finding their entrails torn, and many over- come by the exquisite torments they suflered, rolled themselves in the sand and expired. Others endeavouring to tear out by force the bearded points of the arrows, only inci eased their pain. Most of them died in this manner; and those who outlived their companions were no more in a condition to act ; for when young Crassus ex- horted them to march up to the enemy, some showed him their wounded bodies, others their hands nailed to their bucklers, and some their feet pierced through and pinned to the ground ; so that it was equally impossible for them to at- tack the enemy or defend themselves. The young commander, therefore, leaving his infantry to the mercy of the enemy, advanced at the head of the cavalry against their heavy armed horse. The thousand Gauls whom he had brought with him

from the west charpfed the enemy with incredible boldness and vigor; but their lances did little execution on men armed with cuirasses, and liorses covered with tried armour: however they behaved with great resolution ; for some of them taking hold o, the enemy's spears, and closing with them, threw them oif their horses on the ground, wliere they lay without being able to stir by the great weight of their armor; others, dismounting, crept under the enemy's horses, and, thrusting their swords into their bellies, made them throw their riders. Thus the brave Gauls fought, though greatly harassed with heat and thirst, which they were not accustomed to bear, till most of their horses were killed, and their commander dangerously wounded. They then thought it advisable to retire to their in- fantry, which they no sooner joined than the Parthians invested them anew, making a most dreadful havock of them with their arrows. In this desperate condition Crassus, spying arising ground at a small distance, led the remains of his

detachment thither, with a design to defend himself in the best manner he could, till suc- cours should be sent him from his father. The "arthians pursued him ; and, having surrounded him in his new post, continued showering arrows upon his men, till most of them were either killed or disabled, without being able to make use of their arms, or give the enemy proofs of their valor. Young Crassus had two Greeks with him, who had settled in the city of Carrhse. These, touched with compassion at seeing so brave a man reduced to suc^i straits, pressed him to retire with them to the city of Ischnes, which had declared for the Romans ; but the young Roman rejected their proposal, saying that lie would rather die a thousand times than abandon so many valiant men, who sacrificed their lives for his sake. He then embraced and dismissed them, giving them leave to retire and shift for themselves. As for himself, having now lost all hopes of being relieved, and seeing most of his men and friends killed around him, he gave way to his grief; and, not being able to make use of his arm, which was shot through with a large barbed arrow, he presented his side to one of iiis attendants, and ordered him to put an end to his unhappy life. His example was followed bv Censorius a senator, by Megabaccus an expe rienced and brave officer, and by most of the nobility who served under him : 500 soldiers were taken prisoners, and the rest cut in pieces. The Parthians. having thus cut off or taken the whole detachment commanded by young Crassus, marched without delay against his father, who, upon the first advice that the enemy fled before his son, and were closely pursued by him, had taken heart, the more because those who had remained to make head against him seemed to abate much of their ardor, the greater part of them having marched with the rest against his son. Wherefore, having encouraged his troops, he had ret. led to a small hill in liis rear, to wait there till his son returned from the pursuit. Young Crassus had despatched frequent expresses to his father, to acquaint him with the danger he was in : but they had fallen into the enemy's hands, and been by them put to the sword :

only the last, who had escaped with great diffi- culty, arrived safe, and informed him that Ins son was lost if he did not send him an immediate and powerful reinforcement. This news threw Crassus into the utmost consternation ; but tiie desire he had of saving his son and so many brave Romans who were under his command, made him immediately decamp, and march to their assistance. He was not gone far before he was met by the Parthians, who, with loud shouts, and songs of victory, gave, at a distance, the unhappy father notice of his misfortune. They had cut off young Crassus's head, and, having fixed it on the point of a lance, were advancing full speed to fall on the father. As they drew near Crassus was struck with the dis- mal sight, but behaved like a hero ; for he had the presence of mind to stifle his grief, and to cry out to his dismayed troops, '

This misfortune is entirely mine ; the loss of one man cannot affect the victory : Let us charge, let us fitiht like Romans : If you have any compassion for a father who has lost a son whose valor you ad- mired, let it appear in your rage and resentment against these insulting barbarians.' Thus Cras- sus strove to reanimate his troops; but their courage was quite sunk, as appeared from the faint and languishing shout which they raised, according to custom, before tlie action. When the signal was given, the Parthians, keeping to their old way of fighting, discharged clouds of arrows on the legionaries, without drawing near them ; which did such dreadful execution that many of the Romans, to avoid the arrows, which occasioned a long and painful death, threw themselves in despair on the enemy's heavy- armed horse, seeking from their spears a more speedy death. Thus the Parthiafis continued plying them incessantly with their arrows till night, when they left the field of battle, crying out that they would allow the father one night to lament the death of his son. This was a melancholy night for the Romans. Crassus kept himself concealed from the soldiers, lying nut in the oeneral's tent, but in the open air, and on the bare ground, with his head wrapped up in his military cloak; and was, in that forlorn con- dition, says Plutarch, a great example to the vul- gar of the instability of fortune; to the wise, a still greater, of the pernicious eff'ects of avarice, temerity, and ambition. Octavius, one of his lieutenants, and Cassius, endeavoured to raise him up and console him : but seeing him quite sunk under his affliction, and deaf to all comfort, they summoned a council of war, composed of all the chief officers ; in which it was unani- mously resolved that they should decamp before day-break, and retire to Carrhse, which was held by a Roman garrison. Agreeably to this reso- lution they began to march as soon as the coun- cil broke up ; which produced dreadful outcries among the sick and wounded, who, perceiving that they were to be abandoned to the mercy of the enemy, filled the camp with their complaints and lamentations : but their cries did not stop the march of the others, which indeed was very slow to give the stragglers time to come up. There were only 300 light horse, under the com- mand of one iF.gnatius, who pursued their march

wiihout stopping. These arriving at Carriiae about midnight, /Egnalius calling to the seminels oil the walls, desired them to acquaint Coponius, governor of the place, that Crassus had fought a great battle with the Parthians; and, without letting liiem know who he was, continued iiis march to the bridge of Zeugma, which he])iissed, and thus saved his troops; but was much blamed for abandoning his general. However, the mes- sage he sent to Coponius was of some temporary service to Crassus ;

for that commander, wisely conjecturing, from the manner in which the un- known person had given him that intelligence, that some misfortune liad befallen Crassus, im- mediately ordered his garrison to stand to their arms, and, marching out, met Crassus, and con- ducted him and his army to the city ; for the Parthians, though informed of his flight, did not offer to pursue him ; but when it was day they entered the Roman camp, and having put all the wounded, to the number of 4000, to the sword, dispersed their cavalry all over the plain, in pur- suit of the fugitives. One of Crassus's Jieute- nants, named N'argunteius, having separated in t!ie night from the main body of the army, with four cohorts, missed his way, and was overtaken by the enemy; at whose approach he withdrew to a neighbouring hill, where he defended him- self witii great valor, till all iiis men were killed except twenty, who made their way through the enemy, sword in hand, and got safe to Carrhas : but Varsiunteius himself was killed. In the mean time Surenas, not knowing whether Crassus and Cassius had retired to Carrha;, or chosen a different route, in order to be informed of the truth, despatched a messenger, who spoke the iloman language, to the city of Carrhse, enjoin- ing him to approach the walls, and acquaint Crassus himself, or Cassius, that the Parthian general was inclined to enter into a treaty with them, and demanded a conference. BoUi the proconsul and his quaestor Cassius spoke from the walls with the messenger; and, accepting the proposal with great joy, desired that the time and place for an interview might be immediately agreed upon. The messenger withdrew, pro- mising to return quickly with an answer from Surenas : but that general no sooner understood that Crassus and Cassius were in Carrhas, than he marched thither with his whole army ; and, having invested the place, acquainted the llo- raans that, if they expected any favorable terms, they must deliver up Crassus and Cassius to him in chains. Hereupon, a council of the chief offi- cers being summoned, it was thought expedient to retire from Carrhse that very night, and seek for another asylum. It was of the utmost import- ance that none of the inhabitants of Carrhs should be acquainted with their design till its execution ; but Crassus, whose conduct was in- fatuated, imparted the whole matter in contid- ence to one Andromachus, choosing him for his guide, and relying on the fidelity of a man whom he scarcely knew. Andromachus imme- diately acquainted Surenas with the design of the Romans ; promising at the same time, as the Parthians did not engage in the night, to manage matters so that they should not get out of his reach before day-break. Pursuant to

his prom, se, he led them through many windings and turnings till he brought them into deep marshy grounds, where the infantry were up to the knees in rnire. Then Cassius, suspecting that their guide had led them into those bogs with no good design, refused to follow him any lou'^er ; and, returning to Carrhae, took his route towards Syria, which he reaciied with

500 horse. Octavius, with 5000 men under his command, being conducted by trusty guides, gained the mountains called by Plutarch and Ap- pian Sinnaci, and there intrenched himself before break of day. As for Crassus, he was still en- tangled in the marshes, when Surenas, at the ris- ing of the sun, overtook him and invested him with his cavalry. The proconsul had wiili him four cohorts, and a small body of horse; and with these he gained, in spite of all opposition, the summit of another hill within twelve furlongs of Octavius; who, seeing the danger that threat- ened his general, flew to his assistance, first with a small number of his men, but was soon followed by all the rest, wbcˆquitted their post, though very safe, and, charging the Parthians with great fury, disengaged Crassus, and obliged the ene- my to abandon the hill. Upon tiie retreat of the enemy, they formed themselves into a hollow square; and, placing Crassus in the middle, made a kind of rampart round him with their bucklers, resolutely protesting, that none of the enemy's arrows should touch their general's body till they were all killed fighting in his defence. Surenas, loth to let so fine a prey escape, sur rounded the hill, as if he designed to make anew attack : but finding his Parthians very-backward, and not doubting but the Romans, when mcht came on, would pursue their march, and get out of his reach, he had recourse again to artifice ; and declared before some prisoners, whom he soon after set at liberty, that he was inclined to treat with the proconsul of a peace ; and that it was better to come to reconciliation with Rome, than to sow the seed of an eternal war, by sheil- ding the blood of one of her generals. Agreea- bly to this declaration, Surenas advanced towards the hill where the Romans were posted, attend- ed otdy by some of his officers, and, with his bow unbent, and open arms, invited Crassus to an in- terview. So sudden a change seemed very suspi- cious to the proconsul ; who therefore declined the interview, till he was forced, by his own soldiers, to entrust his life with an enemy whose treachery they had all experienced; for the legionaries, flocking round him, not only abused him in an outrageous manner, but even menaced him if he did not accept of the proposals made him by the Parthian general. Seeing, therefore, that his troops were ready to mutiny, he began to advance without arms or guards, towards the enemy, af- ter having called the gods and his officers to wit- ness the violence his troops oft'ereii him ; and entreated all who were present, 1 ut especially Octavius and Petronius, two of the chief com- manders, for the honor of Rome, their common mother, not to mention, after his death, the shameful behaviour of the Roman legionaries. Octavius and Petronius could not resolve to let him go alone; but attended him down the hill, as did likewise some legionaries, keeping at '.

distance. Crassus was met at the foot of the hill by two Greeks; who, dismounting from their horses, saluted him with great respect; and de- sired him, in the Greek tongue, to send some of his attendants, who miˆht satisfy iiim, that Su- renas, and those who were witli him, came with- out arms. Hereupon Crassus sent two brotliers of the Roscian family; but Surenas, having caused them to be seized, advanced to the foot of the hill, mounted on a fine horse, and attend- ed by the chief officers of the army. Crassus, who waited for the return of his two messengers, was surprised to see himself prevented by Su- renas in person, when he least expected it. The Parthian general, perceiving, as he approached Crassus, that he was on foot, cried out in a seem- ing surprise, 'What do I see? a Roman general on foot, and we on horseback ! Let a horse be brought for him immediately. You need not be surprised,' replied Crassus, ' we are come only to an interview, each after the custom of his country.' ' Very well,' answered Surenas, ' there shall be henceforth a lastmg peace between king Orodes and the people of Rome : but we must sign the articles of it on the banks of the Euph- rates ; for you Romans do not always remember your conventions.' Crassus would have sent for a horse : but a very stately one, with a golden bit, and richly caparisoned, was brought to him by a Parthian ; which Surenas presenting to him, 'Accept this horse from my hands,' said he, ' which I give you in the name of my master king Orodes.' He had scarce uttered these words, when some of the king's officers, taking Crassus by the mid- dle, set him upon the horse, which they began to whip with great violence before them in order to make him quicken his pace. Octavius, offended at this insult, took tiie horse by the bridle ; Pe- tronius, and the few Romans who were present, seconded him, and flocking all around Crassus stopped his horse. The Parthians endeavoured to repulse them, and clear the way for the pro- consul; whereupon they began to justle and push one another with great tumult and disorder. At last, Octavius, drawing liis sword, killed one of the king's grooms ; but at the same time ano- ther, coming behind Octavius with a blow laid him d-ead at his feet. Both parties fought with greˆt. resolution, the Parthians striving to carry off Crassus, and the Romans to rescue him out of their hands. In this- scuffle most of the Ro- mans who came to the conference were killed ; and among the rest Crassus himself, but whe- ther by a Roman or a Parthian is uncertain. Upon his death, the rest of the army either sur- rendered to the enemy, or, dispersing in the night, were pursued, and put to the sword. The Romans lost in this campaign at least 30,000 men; of whom 20,000 were killed, and 10,000 taken prisoners.

When the battle of Cavrhae was fought, king Orodes was in Armenia, where he had made peace with Artabazus. While the two kings were solemnising their new alliance with expen- sive and public feasts, Syllaces, a Parthian officer, whom Surenas had sent with the news of his late

victory, and the head of Crassus as a proof of it, arrived in the capital of Armenia. The trans- ports of joy which Orodes felt at tliis sight, and

these news are not to be expressed ; and ilie lords of both kingdoms, who attended their so- vereigns, raised loud and repeated shouts of joy. Syllaces was ordered to give a more particular and distinct account of that memorable action ; which when he had done, Orodes commanded melted gold to be poured into Crassus's mouth ; reproaching him thereby with avarice, which had been always his predominant passion. Surenas did not long enjoy the pleasure of his victory ; for Orodes, jealous of his power and authority among the Parthians, soon after caused him to be put to death. Pacorus, the king's favorite son, was put at the iiead of the army ; and, agreeably to his father's directions, invaded Sy- ria ; but he was driven out with great loss by Cicero and Cassius, the only general who sur- vived the death of Crassus. After this we find no mention of the Parthians, till the time of the civil war between Caesar and Pompey, when the latter sent ambassadors to solicit succor against his rival. This Orodes was willing to grant, upon condition that Syria was delivered up to him ; but, as Pompey would not consent to such a proposal, the succors were not only denied, but, after the battle of Pharsalia, he put Lucius Hirtius in irons, whom Pompey had again sent to ask assistance, or at least to desire leave to shelter himself in the Parthian, dominions. Caesar is said to have meditated a war against the Parthians, which in all probability would have proved fatal to them. His death delivered thera from this danger. But, not long after, the eastern provinces, being grievously oppressed by Marc Antony, rose up in arms; and, having killed the tax-gatherers, invited the Parthians to join them, and drive out the Romans. They very readily accejited the invitation, and crossed the Euphrates with a powerful army, under the command of Pacorus, and Labienus a Roman general of Pompey 's party. At first they met with great success, over-ran all Asia Minor, and reduced all the countries as far as the Hellespont and jˆEgean Sea, subduing likewise Phoenicia, Syria, and even Judea. They did not, however, long enjoy their new conquestˆ for being elated with their victories, and despising the enemy, they engaged Ventidius, Antony's lieutenant, before Labienus had time to join them, and were utterly defeated. Tiiis so disheartened Labienus's army that they all abandoned him.; and he him- self, being thus obliged to wander from place to place in disguise, was at last taken and put to death at Cyprus. 'entidius, pursuing his ad- vantage, gained several other victories ; and at last entirely defeated the Parthian army under Pacorus, cutting almost the whole of them in pieces, and the prince himself among the rest. He did not, liowever, pursue, this last victory as he might have done ; being afraid of giving um- brage to Antony, who had already becomejealous of the great honor gained by his heutenant. He therefore contented himself with reducing those places in Syria and

Phoenicia which the Par- thians had taken in the beginning of the war, until Antony arrived to take the command of the army upon himself. Orodes was almost distract- ed vvitii grief, on receiving the dreadful news of the loss of his army and the death of his favorite

son. However, when time Inicl restored the use of liis faculties, he appointei.! Phrahates, the eldest, but the most wicked, of all his cliildren, to succeed him in the kingdom, admitting him at the same time to a share of tiie sovereign au- thority with himself. The consequence of tii.is was, that Phrahates very soon attempted to poi- son his father with hemlock. But this, contrary to expectation, proving a cure for the dropsy, which an excess of grief had brought upon the king, the unnatural son had him stifled in bed ; and soon after not only murdered all hiso%vn brethren, who were thirty in number, but cut off all the rest of the royal family, not sparing even his own eldest son, lest the discontented Parthians should place him, as he was already of age, on the throne.

Many of the chief lords of Parthia, being in- timidated by the cruelty of Phrahates, retired into foreign countries ; and among these was one Monceses, a person of great distinction, as well as skill and experience in war. Tiiis man, having fled to Antony, soon gained his confidence, and was by him easily prevailed upon to engage in a war against his countrymen. But Phrahates, justly dreading the consequences of such a per- son's defection, sent a solemn embassy to invite him home on such terms as he should tliink fit to accept : which greatly provoked Antony ; though he did not hinder him from returning, lest others should thereby be discouraged from coming over {o him. He therefore dismissed him with great civility, sending ambassadors at the same time to Phrahates to treat of a peace. Thus, he hoped to divert the Parthian monarch's attention from making the necessary preparations for war, and that he should be able to fall upon him in the spring when he was in no condition to make resistance. But herein he was greatly disappointed ; for on his arrival at the Euphrates, which he intended to pass, and enter the Par- thian dominions on that side, he found all the passes so well guarded that he thought])roper to enter Media, with a design first to reduce that country, and then to enter Parthia. This plan had been sugfrested to him by Artabazus king of Armenia, who in the end betrayed him ; for in- stead of conducting the army the straight way from Zeugma on the Euphrates to the Araxes, which parted Media from Armenia, and which was about 500 miles distant from the place whence he first set out, Artabazus led them over rocks and mountains so far about that the army marched above 1000 miles before they reached the borders

of Media, where they intended to begin the war. Thus tiiey were not only greatly fatigued, but had not sufficient time, the year being far spent, to put in execution the design on which they had come. However, as Antony was impatient to get back to Cleopatra, he left behind him most of the baggage of the army, and 300 waggons loaded with battering rams and other military engines for sieges ; appointing Statianus, one of his lieutenants, with a body of 10,000 men, to guard them, and to bring them, by slower marciies, after the army. With the rest of the forces lie marched more than 300 miles before tlie rest, without aliowmg his men any respite till he arrived at Praaspa or Phrahata, the ca-

pital of Media, which he immediately invested. But the Parthians, well knowing that he could not make any progress without his military machines, passed by his army, in order to attack Statianus : which they did with such succes-. that the body commanded by iiim were all to a man cutoff, and all their military engines taken, among which was a battering ram eighty feet long. Antony, notwithstanding this disaster, continued the siege of Praaspa; but was daily harassed by sallies of the garrison from within, and the enemy's army without. At last he began to think of a retreat, when his provisions were almost exliausted, finding it impossible to become master of the city. But, as he was to march 300 miles through the enemy's country, lie thought propc" first to send ambassadors to the Parthian monarch, acquainting him that the Romans were willing to allow him a peace, provided he would restore the standards and prisoners taken at Carrhae. Phrahates received the ambassadors, sitting on a golden throne ; and, after having bit- terly inveighed against the avarice and unbound- ed ambition of the Romans, told them that he would not part witii tlie standards and prisoners; but, that if Antony would immediately raise the siege of Praaspa, lie would suff'er him to retire unmolested. Antony, who was reduced to great straits, no sooner received this answer than he broke up the siege, and marched towards Arrac nia. However, Plirahates was not so good as his word ; for the Romans were attacked by the enemy no fewer than eighteen times on their march, and were thrice in the utmost danger of being cut off". A famine also raged in the Roman army ; upon which they began to desert to the enemy ; and indeed Antony would probably have been left by himself, had not the Parthians, in a very cruel as well as impolitic manner, mur- dered all those who fled to them in sight of the rest. At last, after having lost 32,000 men, and being reduced to such despair that he was with difficulty prevented from laying violent hands on himself, he reached the river Araxes ; when his men, finding themselves out of the reach of the enemy, fell on the ground, and kissed it with tears of joy.

Antony was no sooner gone than the kings of Media and Parthia quarrelled about the booty they had taken ; and, after various contests, Phrahates reduced all Media and Armenia. After this, beinir elated with his

conquests, he oppress- ed his subjects in such a cruel and tyrannical manner that a civil war took place; in which the competitors were alternately driven out and restored, till A. D. 50, when one A'ologeses, the son of Gortazes, a former king, became peaceable possessor of the throne. He carried on some wars with the Romans, but with very indifferent success, and at last gladly consented to a renewal of the ancient treaties vvith that powerful people. From this time the Parthian history affords no- thing remarkable till the reign of the emperor Trajan ; when the Parthian king, Cosroes, in- fringed the treaty with Rome, by driving out the king of Armenia. U])on this Trajan, who was glad of any pretence to quarrel with the Par- thians, immediately hastened into Armenia. His arrival there was so sudden and unexpected that

lie reduced almost the whole country without opposition ; and took prisoner Parthamasiris, the king whom the Parthians had set up. After this he entered Mesopotamia, took the city of Nisibis, and reduced to a Roman province the whole, of that wealthy country. Early in the spring of the following year, Trajan, who had kept his winter quarters in Syria, took the field a2;ain but was warmly opposed by C>osroes. He found him encamped on the banks of the Eu- phrates, with a design to dispute his passage ; which he did with such vigor that the emperor, after having several times attempted to ford that river, and been always repulsed with great slaughter, was obliged to cause boats to be built on the Tieighbouring mountains, which he pri- vately conveyed from thence on carriages to the water side; and having, in the night time, form- ed a bridge with them, he passed his army the next day ; but not without great loss and danger, the Parthians harassing his men the vk-hole time with incessant showers of arrows, which did great execution. Having gained the opposite bank, he advanced boldly into Assyria, the Parthians flying every where before him, and made himself master of Arbela. Thence he pursued his march ; subduing, with incredible rapidity, countries where the Roman standard had never been dis- played before. Babylonia voluntarily submitted to him. The city of Babylon was, after a vigor- ous resistance, taken by storm ; by v/hich means he became master of all Chaldea and Assyria, the two richest provinces of the Parthian empire. From Babylon he marched to Ctesiphon, the metropolis of the Parthian monarchy; which he besieged and at last reduced. But as to the particulars of these great conquests we are quite in the dark : this expedition, however glorious to the Roman name, being rather hinted at than described, by the writers of those times.

While Trajan was thus making war in the heart of the enemy's country,

Cosroes, having recruited his army, marched into Mesopotamia, with a design to recover that country, and cut off all communication betvv'een the Roman army Piir) Syria. On his arrival in that province the inhabitants flocked to him from all parts ; and most of the cities, driving out the garrisons left by Trajan, opened their gates to him. Hereupon the emperor detached Lucius and Maximus, two of his chief commanders, into Mesopotaimia, to keep such cities in awe as had not revolted, and to open a communication with Syria. Maximus was met by Cosroes ; and, having ventured a battle, his army was entirely defeated, and him- self killed. But Lucius being joined by Euri- cius and Clarius, two other commanders sent by Trajan with fresh supplies, gained considei'able advantages over the enemy, and retook the cities of Nisibis and Seleucia, which had revolted. And now Trajan seeing himself possessed of all the best and most fruitful provinces of the Par- thian empire, but at the same time being well apprised that he could not without a vast expense maintain his conquests, nor keep in subjection so fierce and warlike a people, at such a distance from Italy, resolved to set over them a king of his own choosing, who should hold the crown of him and his successors, and acknowledge them

*as his lords and sovereigns. With this view he repaired to Ctesiphon; and, having there assem- bled the chief men of the nation, he crowned one of the royal family, named Parthanaspates, king of i*arthia, obliging all who were present to pay him their allegiance. He chose Parthanaspates, because that prince had joined him at his first entering the Parthian dommions, conducted him- self with great fidelity, and shown on all occasions an extraordinary attachment to the Romans. Thus the Parthians were at last subdued, and their kingdom made tributary to Rome.*

The Parthians did not long continue in this state of subjection : for they no sooner heard of Trajan's death, than, taking up arms, they drove Parthanaspates from the throne ; and recalling Cosroes, who had retired into the country of the Hyrcanians, openly revolted from Rome. Adrian, who was then commander-in-chief of all the forces in the east, and soon after acknowledged emperor by the army, did not care, though he was at that time in Syria with a numerous army, to engage in a new war with the Parthians ; but contented himself with preserving the ancient limits of the empire, without any ambitious pros- pects of further conquests. Therefore, in the beginning of his reign, he abandoned those pro- vinces beyond the Euphrates which Trajan had conquered ; withdrew the Roman garrisons from Mesopotamia; and, for the greater safety of other places, made the Euphrates the boundary of and barrier in those parts, posting his legions along the banks of the river. Cosroes died after a long reign, and was succeeded by his eldest son Vo- logeses IL : in whose reign the Alani breaking into Media, then subject to the Parthians, com- mitted there great devastations ; but were pre- vailed upon, with rich presents sent them by

Vologeses, to abandon that kingdom, and return home. Upon their retreat, Vologeses, having no enemy to contend with at home, fell unexpected- ly upon Armenia ; surprised the legions there ; and, having cut them all in pieces to a man, en- tered Syria; defeated with great slaughter Ati- iius Cornelianus, governor of that province ; and advanced without opposition to the neigh- bourhood of Aiitioch ; putting every where the Romans and those who favored them to the sword. Hereupon the emperor Verus, by the advice of his colleague Antoninus surnamed the philosopher, leaving Rome, hastened into Syria ; and, having driven the Parthians out of that province, ordered Statins Priscus to invade Armenia, and Cassius, and Martius Verus, to enter the Parthian territories, and carry the war into the enemy's country. Priscus made him- self master of Artaxata; and in one campaign drove the Parthians, though not without great loss on his side, quite out of Armenia. Cas- sius, on the other hand, havmg in several en- counters defeated Vologeses, though he had an arr.ˆy of 400,000 men under his command, re- duced, in four years time, all those provinces which had formerly submitted to Trajan, took Seleucia, burnt and plundered the famous cities ofBabylona-:idCte5iphon,with the stately palaces of the Parthian monarclis, and struck terror into the most remote provinces of that great empire. On his return, he lost above half the number of

liis forces by sickness and famine; so that, after all, the Romans, as Spartianus observes, had no great reason to boast of their victories and conquests.

Verus, however, who liad never stirred during the whole time of the war from Antioch and Daphne, took upon him the lofty titles of Parlhicus and Armenicus, as if he had acciuired them in the midst of his pleasures and debaucheries. After the revolt and death of Cassius, Antoninus the Philosojjher repaired into Syria to settle the riffairs of that province. On his arrival tiiere, he was met by ambassadors from Vologeses ; who, having recovered most of the provinces subdued by Cassius, and being unwilling either to part with them or engage in a new war, solicited tlie emperor to confirm him in the possessioa of them, promising to hold them of him, and tˆac- knowledge the sovereignty of Rome. To these terms Antoninus readily agreed, and a peace was accordingly concluded between the two empires ; which Vologeses did not long enjoy, being soon after carried off by a distemper, and not murder- ed by his own subjects, as we read in Constan- tinus Manasses, who calls him Belegeses. Upon his death, Vologeses III., the son of his brother Sanatruces, and grandson of Cosroes, was raised to the throne. He sided with Niger against the emperor Severus : who, thereupon

having settled matters at home, marched with all his forces against him ; and advancing to the city of Cte- siphon, whither he had retired, laid close siege to that metropolis. Vologeses made a most gal- lant defence ; but the city, after a long siege, and nuicii bloodshed on both sides, was at length taken by assault. The king's treasures, with his wives and children, fell into the emperor's hands : but Vologeses himself had the good luck to make his escape ; which was a great disap- pointment to Severus, who immediately de- spatched an express to acquaint the senate with the success that had attended him in his expe- dition against the only nation that was then so formidable to Rome.

He had no sooner crossed the Euphrates than 'ologeses recovered all the provinces, except INIesopotamia, which he had reduced. These expeditions were chargeable to the Romans, and cost them much blood, without reaping any advantages from them ; for, as they had not suf- ficient forces to keep in awe the provinces they had subdued, the inhabitants, greatly attached to the family of Arsaces, never failed to return to their ancient obedience as soon as the Roman armies were withdrawn. Vologeses was soon af- ter engaged in a war still more troublesome and destructive, with his brother Artabanus, who, encouraged by some of the discontented nobles, attempted to rob him of the crown, and place it oil his own head. Vologeses gained several vic- tories over his brother and rebellious subjects ; but died before he could restore the empire toils former tiauquiliity. Artabanus, who had a numerous army at iiis devotion, did not meet with any opposition in seizing the throne, vacant by the death of his brother, though Tiridates had a better title to it, as being his eldest brother. He had scarce settled the af- Jairs of the kingdom, when the emperor Cara- calla, desirous to signalise himself, as several

of his predecessors Iiad done, by some memora- ble exploit against the Parihians, sent a solemn embassy to him, desiring his daughter in mar- riage. Artabanus, overjoyed at this proposal, which he thought would be attended with a last- ing peace between the two empires, received the ambassadors with all possible marks of honor, and readily complied with their request. Soon after Caracalla sent a second embassy to acquaint the king that he was coming to solemnise the nup- tials ; whereupon Artabanus went to meet him, attended by the chief of his nobility and his best troops, all unarmed and in most pompous habits : but this peaceaˆDle train no sooner approached the Roman army than the soldiers, on a signal given them, falling upon the king's retinue, made a most terrible slaugiiter of the unarmed multitude, Artabanus himself escaping with great difficulty. The treacherous Caracalla, having gained by this exploit great booty, and, as he thought, no less glory, wrote a long and boasting letter to the senate ; and assumed the title of Parthicus, for this piece of treachery, as he had before that of Germanicus, for murdering, in like manner, some of the German

nobility. Artaba- nus, resolving to make the Romans pay dear for their inhuman and barbarous treachery, raised the most numerous army that had ever been known in Parthia, crossed the Euphrates, and entered Syria, putting all to fire and sword. But, Caracalla being murdered before this invasion, Macrinus, who had succeeded him, met tiie Par- thians at the head of a mighty army, composed of many legions, and all the auxiliaries of the states of Asia. The two armies no sooner came in sight of each other than they engaged with tiie utmost fury. The battle continued two days, both the Romans and Parthians fighting so ob- stinately that night only parted them, without any apparent advantage on either side ; though both retired, when niglit had put an end to the contest, crying. Victory ! Victory ! The field of battle was covered all over with dead bodies, there being already above 40,000 killed, includ- ing both Romans and Parthians : nevertheless Artabanus was heard to say tbat the battle was only begun, and that he would continue it till either the Parthians or Ro.nians were all to a man cut in pieces. But Macrinus, being well apprised that the king came highly enraged against Caracalla in particular, and dread- ing the consequences which would attend the destruction of his army, sent a herald to Artaba- nus, acquainting him with the death of Cara- calla, and proposing an alliance between the two^empires. The king, understanding that his great enemy was dead, readily embraced the proposals of peace and amity, upon condition that all the prisoners who had been taken by the treachery of Caracalla should be immediately restored, and a large sum of money paid him to defray the expenses of the war. These being performed, without delay, Artabanus returned into Parthia, and Macrinus to Antioch. As Ar- tabanus lost on this occasion the flower of his army, Artaxerxes, a Persian of mean descent, but of great courage and experience in war, re- volting from tlie Parthians, prevailed on his countrymen to join him and attempt the recovery

of the sovereign power, of which he said they had been unjustly deprived, first by the Macedo- nians and afterwards by the Parthians their vassals. Artabanus, upon tlie news of this revolt, marched with the whole strencrth of his kingdom to suppress it; but bein^:; met by Artaxerxes, at the head of a no less powerful army, a bloody battle ensued, which is said to have lasted three days. At length the Parthians, thou2,h they be- haved with the utmost bravery and foushl like men in despair, were forced to yield to the Per- sians, who were commanded by a more experi- enced leader. Most of their troops were cut off in the flight ; and the king himself was taken

prisoner, and soon after put to death by Artax- erxes's order. The Parthians, having lost in this fatal engagement both their king and their army, were forced to submit to the conqueror, and be- come vassals to a nation which had been subject to them for 475 years.

PARTHICUS, a title absurdly assumed by the emperors 'erus and Caracalla, upon their pre- tended conquest of Parthia. See Parthia.

PARTI, Partie, Party, or Parted, in he- raldry, is applied to a shield or escutcheon, de- noting it divided or marked out into partitions. Thus,

1. Parti per Bend Dexter is when the di- vision comes from the upper corner of the shield on the right hand, and descends obliquely to the opposite lower corner.

2. Parti per Bend Sinister is when the di- vision, coming from the upper left corner, descends across to the opposite lower one.

3. Parti per Fess is when the division is across the middle from side to side.

4. Parti per Pale is when the shield is divided perpendicularly into two halves. All these partitions, according to INI. de la Colom- biere, have their origin from the cuts and bruises ti'.at have appeared on shields after engagements; and, being proofs of the dangers to which the bearers had been exposed, they were transinitted to posterity, and became arms and marks of ho- nor to their future families. See Heraldry.

PARTIAL, adj. ‘\ Fr. partial. Inclined to Parti al'ity, n. s. (ˆ one part or party; dis- Par'tializEjV. a. ˆ posed to favor without Par'tially, adv. J reason ; affecting one part; not total or general : partiality is, bias of judg- ment to one side ; prejudice in favor of a party : to partialize (used l3y Shakspeare, after the Fr. purtialiser) is, to make partial : partially follows tlie senses of partial.

Ye have not kept my ways, but have been partial in the law. Mulacln ii. .9.

Then would the Irish party cry out partinlity, and complain he is not used as a suoject, he is not suffered lo have the free benefit of the law. Spenser. Such neigbo'kir-nearness to our sacred blood Should nothing privilege liim, nor partialize The' unstooping firmness of my upright soul.

SItah}>eare. That stole into a total verity, which was but par- iiatlu true in its covert sense. Browne.

Self-love will make men partial to themselves and \riends, and il', passion, and revenge, will carry them too far m punishing others ; and hence (jod

oath appointed governments to restrain the par liuhli and violence of men Locke.

Thus kings heretofore who showed themselves /wr- tial to a party, had the service only of the worst part of their people. Daoenant.

If we compare these partial dissolutions of the earth, with an universal dissolution, we may as easily conceive an universal deluge from an universal dissolution, as a partial deluge from a partial.

Burnet's Theory. That vˆfhich weakens religion, will at length de- stroy it ; for the weakening of a thing is only a par- tial destruction of it. Simth.

Partiality is properly the understanding's judg- ing according to the inclination of the will and affections, and not according to the exact truth of thinsjs, or the merits of the cause. Id. Sermons.

The message he brought opened a clear prospect of eternal salvation, which had been but obscurely and partially figured in the shadows of the law.

Rogers. Authors are partial to their wit, 'tis true, But are not cruicks to their judgment tool

Pope. All discord, harmony, not understood ; All partial evil, universal good. Id.

jVor any partial, private end,

Such reverence to the public hears ; Aˆor any passion, Virtue's friend.

So like the virtue's self appears. Akenside.

PARTIC'IPABLE, adj. -ˆ Fr. partkiper ;

Partic'ipant, ►►. .s. (ˆ Latin, participo.

Pariic'ipate, v. n. & v. a. (Divisible ; such

Participa'tion. J as may be shared:

participant is, having a share or part of: partici- pate, to partake; have share; have part of more things than one ; have a reciprocated part ; taking of, in, and icith : as an active verb, to partake ; share ; receive part of: participation is, the act or state of participating : also (in an obsolete sense) division or distribution into parts.

As Christ's incarnation and passion can be avail- able to no man's good,

which is not made partaker of Christ, neither can we participate him without his presence. Hooker.

Civil society doth more content the nature of man, than any private kind of solitary living ; because, in society, this good of mutual participation is so much larger. Id.

The' other instruments

Did see, and hear, devise, instruct, walk, feel ;

And mutually participate. Shakspeare.

Their spirits are so married in conjunction, with the participation of society, that they flock together in consent, like so many wild geese. Id.

It sufficeth not, that the country hath wherewith to sustain even more tlian live upon it, if means he wanting whereby to drive convenient participalion of the general store into a great number of well-de- servers. Tialeigh.

The French seldom atchieved any honourable acts without Scottish hands, who therefore are to partici- pate the glory with them. ' Camden.

During the parliament, he published his procla- mation, offering pardon to all such as had taken arras, or been purticipani of any attempts against him ; so as they submittetl themselves. Bacon.

The species of audibles seem to participate more with local motion, like percussions made upon the air. Id.

Few creatures participate of the nature of plants and metals both. Ij'.

A joint coronation of himself and his queen might give any countenance of participation of tit-le. fd.

An aged citizen brought forth all his provisions.

rnd said, that as he did communicate unto them his biore, so would he participate 0/ their wants.

Ilayward. The prince saw he should confer with one partici- pant 0/ more

than monkish speculations. Wotton. God, when heaven and earth he did create. Formed man, who should of both participate.

Denham, His delivery, and thy joy thereon, In both which we, cLS next, participate.

Milton. Fellowship, Such as I seek, fit to participate All rational delight ! wherein the brute Cannot be human consort. Td.

If any part of my body be so mortified, as it be- comes like a rotten branch of a tree, it putrefies, and is not participant of influence derived from my soul, because it is now no longer in it to quicken it.

Hale. Those deities are so hy participation, and subordi- nate to the supreme. Stillingfeet.

Those bodies, which are under a light, which is extended and distributed equally through all, should participate of each others' colours. Dryden.

Plato, by his ideas, means only the divine es- sence with this connotation, as it is variously irai- table or participable by created beings.

Norris's l\Hscellanies. \Vhat an honour, that God should admit us into such a blessed participation of himself! Atterbury.

Convince them that brutes have the least partici- pation of thought, and they retract. Bentley.

Your genius should mount above that mist, in which its participation and neighbourhood with earth long involved it. Pope.

PAIl'TICIPLE, K. s. -^ La.t. participiu7?i. A

Particip'ial, ►►^'. Mvord partaking of the .

Particip'i ALLY, adv. J qualities both of a noun and verb : participial, and participially, corre- sponding.

The participles or confiners between plants and living creatures, are such as are fixed, though they have a motion in their parts : such as oysters and cockles. Bacon.

A participle is a particular sort of adjective, formed from a verb, and, together with its signification of action, passion, or some other manner of existence, signifying the time thereof. Clarke.

As the perfect participle, and the imperfect tense, are sometimes different in

their form, care must be taken that they be not indiscriminately used.

Murray.

PAR'TICLE, n.s. IjaX. particultt. A diminu- tive of part ; an indivisible part; hence a word unvaried by inflexions.

Till Arianism had made it a matter of sharpness and subtilty of wit to be a sound believing Christian, men were not curious what syllables or particles of speech they used. Hooker.

From any of the other unreasonable demands, the houses had not given their commissioners authority in the least particle to recede. Clarendon.

With particles of heavenly fire, The God of nature did his soul inspire.

Dryden.

There is not one grain in the universe, either too much or 100 little, nothing to be added, nothing to be spared : nor so much as any one particle of it, that mankind may not be either the better or tiie worse for, according as 'tis applied. L'Estrange.

In the Hebrew tongue there is a part

Particles are the words whereby the mind signifies what connection it gives to the several aflirmations and negations that it unites in one continued reason- ing or narration. Id.

It is not impossible but that microscopes may at length be improved to the discovery of the particles of bodies, on which their colours depend.

Keivton's Opticks. Curious wits. With rapture, with astonishment, reflect On the small size of atoms, which unite To make the smallest particle of light.

Blackmore. Blest with more particles of heavenly flame.

Granville.

A Particle, in physiology, is the minute part of a body, an assemblage of which constitutes all natural bodies. Particle is often used in the same sense as atom in the ancient Epicurean philosophy. Some writers, however, distinguish them ; making particle an assemblage or com- position of two or more primitive and physically indivisible corpuscles or atoms ; and corpuscle or little body, an assemblage or mass of secon- dary particles or secondary corpuscles. The distinction, however, is of little moment. Par-

ticles are then the elements of bodies ; it is the various arrangement and texture of these, with the difference of the cohesion, &c., that consti- tute the various kinds of bodies, hard, soft, liquid, dry, heavy, light, &c. The smallest particles or corpuscles cohere with the strongest attractions, and always compose larger particles of weaker cohesion ; and many of these cohering compose larger particles whose vigor is still weaker; and thus on for divers successions, till the progression ends in the largest particles, whereon the opera- tions in chemistry, and the colors of natural bodies depend, and which, by cohering, compose bodies of sensible bulks. Tlie cohesion of the par- ticles of matter, according to the Epicureans, was effected by hooked atoms ; theAristotelians thought it managed by rest, that is, by nothing. But Sir Isaac Newton maintains it to be by means of a cer- tain power, whereby the particles mutually at- tract or tend towards each other, which is still, perhaps, giving a fact without the cause. By this attraction of the particles, he shows that most of the phenomena of the lesser bodies are affected, as those of the heavenly bodies are by the attrac- tion of gravity. See Attraction and Cohe- sion.

Particle, in grammar, is a denomination for all those words that unite or disjoin others ; or that express the modes or manners of words or things. It comprehends all those parts of speech divided by grammarians into articles, adverbs, prepositions, interjections, and con- junctions.

Particle, in theologj', is used in the Latin church for the crumbs, or small pieces of conse- crated bread, called in the Greek church nipiScg. The Greeks have a particular ceremony, called ru)v fitpiˆwv, of tlie particles, wherein certain crumbs of bread, not consecrated, are offered up in honor of the Virgin, St. John the Baptist, and several other saints. They also give them the name of Trpocrˆopa, oblation. Gabriel, archbishop of I'liiiadelphia, wrote a treatise express irript Twr puncuv. \ herein he endeavours to show the

antiquity of this ceremony, in tlial it is mentioned in the liturgies of St. Chrysostom and Basil. There has been much controversy on this head between the reformed and catholic divines. Au- berton and Blondel explain a passage in the theory of Germanus, patriarch of Constantinople, where he mentions the ceremony of the particles as in use in his time, in favor of tlie former; Messieurs de Port Royal contest the explanation ; but M. Simon, in his notes on Gabriel of Phila- delphia, endeavours to show that the passage itself is an interpolation, not being found in the an- cient copies of Germanus, and consequently that the dispute is very ill grounded.

PARTICULAR, arfj.-N Fr. ⬜⬜⬜partlculier ; Sp.

Particular'ity, n. s. / and Port, particultr;

Jtal. purticulare ; Lat. particularis, a pars, a part. Relating to a

Partic'ularize, v. a

Partic'ularly, adv.

Partic'ulate, v. a. part or to a single thing ; individual ; odd ; at- tention to distinct or minute things : as a noun substantive, a single instance ; a detail of single things or items ; interest or state of an individual ; single self; ' in particular' means peculiarly ; dis- tinctly : particularity is distinct notice or ac- count ; individuality ; petty or detailed account ; something belonging to a single person, thing, or occasion ; something peculiar ; oddity ; scrupu- lousness : to particularise, or particulate (the latter obsolete), means to mention or narrate in detail ; show minutely : particularly is, singly ; distinctly; extraordinarily.

He, as well with general orations as particular dealing with men of most credit, made them see how necessary it was. Sidneii.

Rather performing his general commandment, which had ever been, to embrace virtue, than any new partictdar, sprung out of passion, and contrifry to the former. Id.

So did the boldness of their affirmation accompany the greatness of what they did affirm, even descending to particularities, what kingdoms he should overcome.

Id.

As well for particular application to special occa- sions, as also in other manifold respects, infinite trea- sures of wisdom are abundantly to be found in the holy scripture. Hovker.

Our wisdom must be such, as doth not propose to itself TO iS/91′ our own partictdar, the partial and im- moderate desire whereof poisoneth wheresoever it taketh place ; but the scope and mark, which we are to aim at, is the publick and common good. Id.

Knowledge imprinted in the minds of all men, whereby both general principles for directing of hu- man actions are comprehended, and conclusions de- rived from them, upon which conclusions groweth, in particularity, the choice of good and evil. Id. His general loved him In a

most dear particular. Shakspeare.

For his particular, Pll receive him gladly ;

But not one follower. Id.

Let the general trumpet blow in Particularities, and petty sounds To cease. Id. Heiirij VI.

The leanness that afflicts us, is an inventory to particularize their abundance. Id. Coriolunus.

I may not particulate of Alexander Hales, the irre- fragable doctor. Camden's Remains.

Wheresoever one plant draweth such a particular juice out of the earth, as it qualifieth the earth, so as that juice which remaineth is fit for the other plant, there the neighbourhood doth good. Bacon. ,

Of this prince there is little particular memory ; only that he was very studious and learned. Id.

1 must reserve some particulars, which it is not lawful for me to reveal. Id.

Artists, who propose only the imitation of such a particular person, without election of ideas, have often been reproached for that omission. Drvden.

Invention is called a muse ; authors ascribe to each of then? in particular the sciences which they have invented. Id.

This exact propriety of Virgil I particularly re- garded as a great part of his character. Id.

It is the greatest interest of particulars to advance the good of the community. L' Estrange.

1 have been particular in examining the reason of children's inheriting the property of their fathers, because it will give us farther light in the inheritance of power. Locke.

Having the idea of an elephant or an angle in my mind, the first and natural enquiry is, whether such a thing does exist? and this knowledge is only of particulars. Id.

This is true of actions considered in their general nature or kind, but not considered in their particular individual instances. Suuth.

Those notions are universal, and what is universal must needs proceed from some universal constant principle ; the same in all particulars, which can be nothing else but human nature. Id.

Providence, that universally casts its eye over all the creation, is yet pleased more particulariii to fasten it upon some. Id. Sermuus.

The reader has a particular of the books, wherein this law was written. Aylijje's Farergim.

We are likewise to give thanks for temporal bles- sings, whether such as concern the publick, as the prosperity of the church, or nation, and all remark- able deliverances afforded to either ; or else such as concern our particular. Uutij of Man.

The master could hardly sit on his horse for laughing, all the whde he was giving me the parti- culars of this story. Addison.

To see the titles that were most agreeable to such an emperor, the flatteries that he lay most open to, with the like particularities only to be met with on medals, are certainly not a little pleasing. Id.

It is in the power of more particular persons in this kingdom, than in any other, to distress the government, when they are disobliged.

Id. Freeholder. This in partictdar happens to the lungs.

Bluchmere.

He not only boasts of his parentage as an Israelite, but particularizes his descent from Benjamin.

Atterbiirq, Vespasian he resembled in many particulars.

Swift.

Adversity has ever been considered as the state in which a man most easily becomes acquainted yvilb himself, particularly being free from flatterers.

Johnson. PARTING, in chemistry, an operation by which gold and silver are separated from each other. As these two metals resist equally well the action of fire and of lead, they must therefore be separat;"d by otiier methods. This separation could not be effected if they were not soluble by different menstruums. Nitrous acid, marine acid, and sulphur, which cannot dissolve gold, attack sil- ver very easily ; and therefore these three agents furnish metiiods of separating silver from gold, or of the operation

called parting.

Although parting by aquafortis be easy, it can- not be very exact, unless we attend to some t'-.

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sential circumstances. I. The gold and silver must be in a proper proportion : for, if the gold be in too great quantity, the silver will be cover- ed and guarded by it from the action of the acid. Therefore, when tiie essayers do not know the proportion of these two metals in the mass to be operated upon, they discover it by tlie following method : ••• Tiiey have a certain number of needles composed of gold and silver allayed togetiier in graduated proportions, and the allay of each needle is known by a mark upon it. These are called proof needles. When essayers want to know early the proportion of gold and silver in a mass, they rub this mass upon a touclistone, so as to leave a mark upon it. They then make marks upon the touchstone with some of tlie needles, the color of which they think comes nearest to that of tiie mass. By comparing the marks of these needles with the markof tl>e mass, tliey discover nearly the proportion of the gold and silver in the mass. If tins trial shows tliat in any given mass the silver is not to the gold as three to one, this mass is improper for the opera- tion of parting by aquafortis. In this case, the quantity of silver necessary to make an allay of tliat proportion must be added. This operation is called r^uartation, probably because it reduces tlie gold to a fourth part of the whole mass. II. Tiiat the parting may be exact, the nitrous acid or aquafortis employed must be very pure, and especially free from mixture of vitriolic and ma- rine acids. lor, if this be not attended to, a quantity of silver proportionable to these two foreign acids will be separated during the solu- tion ; and this portion of silver, reduced by these acids to vitriol of silver and to luna cornea, will remain mingled with the gold, which conse- quently will not be entirely purified by the ope- ration. When the metallic mass is properly allayed, it is to be reduced to plates, rolled up spirally, called cornets ; or to grains. These are to be put into a matrass, and upon them a quantity of aquafortis is to be poured, the weio;ht of which is to that of the silver as three to two : and, as the nitrous acid employed for this opera- tion is rather weak, the solution is assisted, es- pecially at first, by the heat of a sand bath, in which the matrass is to be placed. When, not- withstanding the heat, no further mark of solution appears, the aquafortis charged with silver is to be decanted. Fresh nitrous acid is to be poured into the matrass, stronger than the former, and in less quantity, which must be boiled on the rcsi- duous mass and decanted as the former. Aqua- fortis must even be boiled a third time on the remaining gold, that all the silver

may be cer- tainly dissolved. The gold is then to be washed with boiling water. This gold is very pure if the operation has been performed with due attention. It is called gold of parting. See As- saying. The gold and silver thus operated up- on ought to have been previously refined by lead, and freed from all allay of other metallic matters, so that the gold which remains should be as pure as is possible.

Concentrated parting is performed by cemen- tation, and may be used when the quantity of gold is so great in proportion to the silver that it cannot be separated by aquafortis. A cement

must be first prepared, composed of four parts of bricks powdered and sifted, of one part of green vitriol calcined till it becomes red, and of one part of common salt. The whole is very ac- curately mixed together, and a firm paste is made of it by moistening it with a little water or urine. The gold to be cemented is to be reduced to thin plates, as thin as small pieces of money. At the bottom ofthecriicibleorcemeuting pot, a stratum of cement, of the thickness of a finger, is to be put, which is to be covered with plates of gold ; upon these another stratum of cement is to be laid, and then more plates of gold, till the cruci- ble IS filled with these alternate strata of cement and of gold. The whole is then to be covered with a lid, which is to be luted with a mixture of clay and sand. This pot is to be placed in a furnace or oven, and heated by degrees till it is moderately red, which heat is to be continued during twenty-four hours. The heat must not be so great as to melt the gold. The pot is then left to cool, and the gold is to be carefully sepa- rated from the cement, and boiled at different times in a large quantity of pure walcr. This gold is to be assayed upon a touchstone or other- wise ; and, if it be found not sufficiently puri- fied, it IS to be cemented a second time in the same manner. The sulphuric acid of the bricks and of the calcined vitriol disengages the muriatic acid of the common salt during this cementation ; and this last acid dissolves the silver allayed with the gold, and separates it by that means. Instead of sea-salt, nitre may be used with equal success ; because the nitrous acid is then put in a state to attack the silver, notwithstanding the quantity of gold which covers it.

Parting by fusion, or dry parting, is perform- ed by sulphur, which has the property of uniting easily with silver, while it does not attack gold. This method of separating these two metals would be the cheapest, the most expeditious, and convenient of any, if the sulphur could dissolve the silver, and separate it from the gold as well and as easily as nitrous acid does : but, on the contrary, we are obliged to employ a particular treatment, and a kind of concentration, to begin the union of the sulphur allayed with gold. The most advantageous method of separating a small portion of gold from a large one of silver ap- pears to be by sulphur, which unites with and

scorifies the silver widiout affecting the gold ; but as sulphuretted siher does not flow thin enough to suffer the small particles of gold dif- fused through it to reunite and settle at the botˆ torn, some addition is necessary for collecting ani carrying them down. In order to the commix- ture with the sulpluir, fifty or sixty pounds of the mixed metal, or as much as a large crucible will receive, are melted at once, and reduced into grains, by taking out the fluid matter with a small crucible made red hot, and pouring it in- to cold water stirred with a rapid circular mo- tion. From one-fifth to one-eighth of the granu- lated metal, according as it is richer or poorer in gold, is reserved, and the rest well mingled with one-eighth of powdered sulphur. The grains enveloped with the sulphur are again put into the crucible, and the fire kept gentle for some time, that die silver, before it melts may be

tlioroug Vily penetrated by the sulphur : if the fire be hastily urged, great part of the sulphur will be dissipated, without acting upon tlie metal. If to sulphureted silver infusion pure silver be added, the latter falls to the bottom, and forms there a distinct fluid not miscible to the other. The particles of gold, having no affinity with the sulphureted silver, join themselves with the pure silver, wherever they come in contact with it, and are thus transferred from the former into the latter, more or less perfectly, according as the pure silver was more or less thoroughly diffused throuoh the mixed. It is for this use tiiat a part of the granulated metal was reserved. The sul- phureted mass being brought into perfect fusion and kept melted for near an hour in a close covered crucible, one-third of the reversed grains is thrown in ; and, as soon as this is melted, tlie whole is well stirred, that the fresh silver may be distributed through the mixed to collect the gold from it. The stirring is performed with a wooden rod; an iron one would be corroded by the sul- phur, so as to deprive the mixed of its due quan- tity of sulphur, and likewise render the subsequent purification of the silver more troublesome The fusion being continued an hour longer, another third of the unsulphureted grains is added, and an hour after this the remainder ; after which the fusion is further continued for some time, the matter being stirred at least every half hour from the beginning to the end, and the crucible kept closely covered in the intervals. The sulphureted silver appears in fusion of a dark brown color ; after it has been kept melted for a certain time, a part of the sulphur havmg escaped from the top, the surface becomes white, and some bright drops of silver, about the size of peas, are perceived on it. When this happens, which is commonly in about three hours after the last addition of the reserved

grains, sooner or later, according as the crucible has been more or less closely covered, the process is disconti- nued ; for otherwise more and more of the silver, thus losing its sulphur, would subside, and min- gle with the part at the bottom in which the gold is collected ; the whole is poured out into an iron mortar greased and duly heated ; or, if the quantity is too large to be safely lifted at once, a part is first taken out from the top with a small crucible, and the rest poured into the mortar. The gold diffused at fir^t through the whole mass is now found collected into a part of it at the bottom, amounting only to about as much as was reserved unsulphureted. This part may be separated from the sulphureted silver above it by a chisel and hammer; or, more perfectly, the surface of the lower mass being generally rugged and unequal, by placing the whole mass with its bottom upwards in a crucible : the sul- phureted part quickly melts, leaving unmelted that which contains the gold, which may thus be completely separated from the other. The sul- phureted silver is assayed by keeping a portion of it in fusion in an open crucible till the sul- phur is dissipated, and then dissolving it in aqua- fortis. If it should still be found to contain any gold, it is to be melted again ; as much more un- sulphureted silver is to be added as was em- ployed in each of the former injections, and the

fusion continued about an hour and a half. The gold thus collected into a part of the silver may be further concentrated into a smaller part, by granulating the mass and repeating the whole process. The operation may be again and again repeated, till so much of the silver is separated that the remainder may be parted without much expense.

Parting Glasses. Glass vessels used for parting gold and silver. They have the form of truncated cones, the bottom being commonly about seven inches wide, the aperture about one or two inches wide, and the height about twelve inches. These vessels ought to have been well ainiealed, and chosen free from flaws; as one of the chief inconveniences attending the operation is, that the glasses are apt to crack by exposure to cold, and even when touched by the ham Some operators secure their glasses by a coating. For this purpose they spread a mixture of quick lime, slaked with beer and whites of eggs, upon linen cloth, which they wrap round the lower part of the vessel, leaving the upper part unco- vered, that they may see the progress of the operation ; and over this cloth they apply a composition of clay and hair. Schlutter advises to put the parting glasses into copper vessels, containing some water, and supported by trevets with fire under them. When the heat commu- nicated by the water is too great, it may be di- minished by adding cold water ; which must be done very carefully by pouring against the sides of the pan, to prevent too sudden an application of cold to the parting glass. The intention of this contrivance is, that the contents of the glasses, if these should break, may be received by the cop])er vessel. Into a glass fifteen inches high, and ten or twelve inches

wide at bottom, placed in a copper pan twelve inches wide at bottom, fifteen inches wide at top, and ten inches iiigli, he usually put about eighty ounces of metal, with twice as much aquafortis.

PARTISAN, n. s. Yr. partisnn ; '[Xci. piiiti- sario. An adherent to or head of a party ; also (Fr. pcrtuisane) a kind of pike or halbert.

Let us Find out the prettiest dazied plot we can, And make him with our pikes and partisans A grave. Shakspeare. Hamlet.

Some of these partisans concluded, the govern- ment had hired men to be bound and pinioned.

Addison.

I would be glad any partisan would help me to a tolerable reason, that, because Clodius and Curio agree with me in a few singular notions, 1 must blindly follow them in all. Swift.

PARTITION, n. s. 8c v. a. From Part. Division ; the act of dividing or division made ; that by which a whole is separated into parts ; the point or time of separation.

For he is our peace, who hath made both one ; and hath broken down the middle wall of partition be- tween us. Ephes. ii. 14.

It doth not follow, that God, without respect, doth teach us to erect between us and ihem a /w- tition wall of difference, in such things indifferent as have been disputed of. Houker.

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We grew together, Like to a double cherry, seeming parted. But yet an union in partition. Shakspeare.

Can we not Partition make with spectacles so precious 'Twixt fair and t'oul ? Id. Cymbetine.

Make partitions of wood in a hogshead, with holes in them, and mark the difference of their sound from that of an hogshead without such partitions.

Bdcon . The sides are uniform without, though severally partitioned within. Id.

Enclosures our factions have made in the church, become a great partition

wall to keep others out of it.

Decay of Piety. Partition firm and sure. The waters underneath from those above Dividing. Milton's Paradise Lost.

Lodged in a small partitio)i ; and the rest Ordained for uses to his Lord best known.

Milton. The day, month, and year, measured by them, are used as standard measures, as likely others arbitra- rily deduced from them by partition or collection.

Holder on Time. The mound was newly made, no sight could pass Betwixt the nice partitions of the grass. The well united sods so closely lay. Dryden.

At one end of it is a great partition, designed for an opera. Addison.

The partition between good and evil is broken down ; where one sin has entered legions will force their way. Rogers.

PAllT'LET, n. s. ItaL pareta and lattucca (a nurse's dress-). A ruflT for the neck ; hence a hen -with a natural ruff on the neck.

Thou dotard, thou art woman tired ; unroosted By thy dame partlet here. Shakspeare.

Tired with pinned ruffs, and fans, and partlet strips. HalL

Dame partlet was the sovereign of his heart ; He feathered her. Dryden s Fables.

PARTNER, n. s. icv.a-l From Part. He Part'xership. S who shares or par-

takes with another ; particularly a joint sharer in a business or trade ; one who dances with another : to join in partnership : partnership is, joint interest or property ; union for such in- terest. See below. '

My noble partnei You greet with present grace.

Shakspeare. Macbeth. Lead in your ladies eveiy one ; sweet partner, I must not yet forsake you. Id. Henry VIIl.

A lady who So fair, and fastened to an empery, Would make the greatest king double to be jmrt-

nered With tomboys, hired with self-exhibition, "Which your own coffers yield. Shakspeare.

Sapor, king of Persia, had an heaven of glass, which silting in his estate, he trod upon, calling himself brother to the sun and moon, ˆnd partner with the stars. Peucham.

Those of the race of Sem were no partners in the unbelieving work of the tower. Raleigh's History. To undergo IMyself the total crime ; or to accuse]My other self, the partner of my life.

Milton. He does possession keep And is too wise to hazard partnership.

Dryden .

'Tis a necessary rule in alliances, parlnersJiips. and all manner of civil dealings, to have a strict re- gard to the disposition of those we have to do withal.

L'Estrunge.

The soul continues in her action, till her partner is again qualified to bear her company. Addison.

An admission made by one of the two partners, after the dissolution of the partnership, is competent evidence to charge the other partner.

Taunton s Reports.

Partnership, in English law. The law on this important subject we purpose to arrange under the foUowins; heads : ††† 1. The nature and forma- tion of a partnersiiip. 2. The riijhts and powers of partners amongst themselves. 3. Their lia- bilities to third persons. 4. The exceptions to such liability. 5. The means of dissolution.

Sect. I. ††† Of the Nature of a Partnership AND ITS Formation.

In order to constitute a partnership it is es- sential that there should be a communion of profit and loss. This is the criterion by which to determine the question whether persons are partners or not. An agent who is paid by a proportion of the profits of an adventure does not thereby become a partner in the property, though it may render him liable as a partner to third persons. 5 Taunt. 74. 2 Barn. 401.

If a person make himself responsible to the vendor for a purchase, upon an agreement with the purchaser, that if any profit arise from the sale he shall have one-half for his trouble; t!iis does not constitute a partnership between the parties. 4 East 141. A partnership may be limited to a particular concern, without extend- ing to all the concerns in which another member

of the firm is engaged, 4 Esp. 182. It was ruled by lord Ellenborough that, if there be a partnership as to third persons, the presumption of law is that there is a partnership between the parties. 2 Camp 45.

The cases in which the courts have determined what particular circumstances constitute a part- nership will best explain the legal definition of its nature. We proceed therefore to state some of the principal decisions on this point. A, having neither money nor credit, offers to B, that, if he will order with him certain goods to be shipped upon an adventure, if any profit should arise from them B should have half for liis trouble. B having lent his credit on this contract and ordered the goods on their joint account, which were furnished accordingly, and afterwards paid for by B alone : held that he was entitled to recover back such payment in as- sumpsit against A, who had not accounted to him for the profits, such contract not constituting a partnership as between themselves, but only an agreement for a compensation for trouble and credit, though B were liable as a partner to third persons, creditors. 4 East 144.

A and B, general partners in trade, being in- debted to C for advances paid by him on ihe joint account of the three in the purchase of tobacco which had been sent out on a special joint adventure to Spain, with a view to liquidate that balance, C agreed with A and B to join with them in another adventure to Lisbon, of which he was to have one moiety ; and it was

agreed that A and B should purchase goods for the adventure, to be shipped on board a certain vessel, and pay for them, and the returns of such adventure were to be made to C to go in liqui- dation of his demand on them ; but C was to bear his proportion of the loss if any ; and also to receive his share of tlie profits if any after re- imbursing himself out of t!ie returns the amount of his advances previously made to A and B. Tl-e court of king's bench held that this agree- ment constituted a partnersliip between the three in the adventure, at and from the time of the purchase of the goods for the adventure by A and B, althougli C did not go witii them to make the purchase nor authorize them to purchase on the joint account, but A and B alone, in fact, made the purchase ; and although C also pur- chased in his own name, and paid for goods to be sent out at the same time in which 13 was to siiare the profit or loss, and these goods were consigned for sales and returns to the same per- sons who went out as supercargo on the joint account of the three. 12 East 421 .

Sect. II. ❖❖❖ Of the Rights and Power of Partners among themselves.

If there is no express stipulation as to tlie management of partnership properly, the ma- jority must decide as to the disposition and ma- nagement of the partnership concerns. One partner cannot bind the other partners by deed, except in bankruptcy. 7. Term Rep. 207, But he may by drawing or accepting bills of ex- change. 7 Term Rep. 210. And, it is said that, if tlie partners agree that one member of the firm may bind it by deed, such agreement is valid. 7 T. R. 207. So if one partner in the presence of the other, and by his authority, ex- ecute a deed for both of them in a transaction in which they are botli interested, it is a valid execution by both, although there is but one seal. 4 T. R. 313. And it is undoubted that the execution of a deed is valid, as the separate act of the person by whom it is actually executed. 2 B and B 338. So if a partnership, indebted on simple contract, intend that a bond shall be given, and by mistake it is executed by the senior partner only in the partnership Tirm, the creditor is entitled to rank as a special creditor against the estate of any of the partners. 3 Vesey, 73.

If the partners' life effects are taken and sold under an execution against one partner only, the sheriff is to pay over to the other partners a share of the produce proportioned to their shares in the partnership effects. As a general rule one partner cannot sue another in a court of law ; but must seek relief in equity. Thus a number of persons agreeing to subscribe sums of money for the purpose of obtaining a bill in parliament to make a railway are partners in the undertak- ing; and, therefore, a subscriber who acted as their surveyor cannot maintain an action for \vork done by 'him in that character, on account of his partnership, against all or any of the other subscribers. 1 Barn, and Cress. 74. So also, the partners in one bouse of trade cannot maintain an action against the partners in another house of trade, of whjch one of the partners in the

plaintiff's house is also a member, for transactions which took place while he was partner in both houses ; and that whether tlie action be brought in the life time of the common partner or after his decease : but after his decease the surviving partners of the one house may sue the surviving partners of the other house upon transactions subsequent to the decease ofthe common partner. 6 W, P. Taunt. 597.

To this general rule, that one partner cannot maintain an action at law against his co-partner, there are however several exceptions. For in- stance, if partners covenant to account, and a balance is struck, and the indebted partner pro- mises to pay, an action of assumpsit may be maintained. 2 T. Rep. 483. And, if two per- sons agree to share in profit or loss upon goods bought by one of tliem on joint account, an ac- tion will lie against the other for the payment of his share. 13 East 7. So one partner may maintain an action against the otiier for money received to the separate use

of the former and wrongfully carried to the partnership account. 2 Term. Rep. 476.

The following cases are also explanatory ofthe principle which regulates this exception to the general rule. The defendant agreed in writmg to take one half share of certain goods bought by the plaintiff on their joint account, half in the profit or loss, and to furnish the plaintiff with half the amount in time for the payment thereof, the goods being to be paid for by bills. The court of king's bench held, that the plaintiff having paid the whole price of the goods which were to constitute the partnership stock to which both parties were to contribute equally, an action lay against the defendant for his moiety of the price wliich was to be furnished by him in the first in- stance, although there might be an account to be taken between them as partners upon the subse- quent disposal of the joint stock. 13 East 7. ^\ here money is owing to two partners, and af- ter the death of one it is paid to a third person, the surviving partner may maintain an action for money had and received in his own right and not as survivor. 2 Term Rep. 140.

On the suˆject ofthe expenses of conducting a partnership concern, the following case may be material : ••• If, after two partners have lived in the same house where the business is carried on, one of them take and live in a separate house for his dwelling, and the remaining partner manage the whole business, and is at considerable- ex- pense in treating the customers, and such treat- ing is necessary and usual, but not universal in the trade ; and a balance of profits and expenses is struck every year without any demand for the expenses of such treating ; and it is usual for ar- ticles of partnership to contain a covenant for such expenses, the remaining partner is not en- titled to an allowance for such expenses. 1 Ans. 94. In some respects an individual partner, or a particular partnership consisting of two or more such persons as are partners in some larger partnership, may be considered as third persons in transactions in which the general partnership may happen to be engaged with a correspondent. Per Eyre C. J. 1 Bos. and Pull. 546, 547. If partners by deed assign ail

their partnership effects, &c., to trustees for the benefit of their creditors, and some of the sepa- rate creditors of one partner do not assent to it, the assignment is fraudulent and void. 8 Term Rep. 140. An admission by one of the two partners, after the dissolution of the partnership, IS competent evidence to charoje the other part- ner. 1 W. P. Taunt. 104. If the names of two partners in trade appear (among others) on the certificate of registry as owners of a ship, the re- gistry acts do not prevent the showing how and in what proportions the several owners are re- spectively entitled, and the

partners may derive title under different conveyances; yet if their shares were purchased with the partnership funds and treated by them as partnership property, and the partners become bankrupt, these shares will be considered as the joint property. Term Rep. Hil. 56 Geo. III. To prevent the ends of jus- tice from being defeated in criminal prosecutions by the difficulty of ascertaining the names of every ownerof property, the 7th George IV. cap. 64, sec. 14, enacts that, ‘ m any indictment or information for felony or misdemeanor, when it shall be necessary to state the ownership of pro- perty, it shall be sufficient to name one owner;’ and this extends to all partners in trade, joint tenants, parceners, or tenants in common as well as to trustees and joint stock companies.

Sect. III. ??? Of the Liabilities of Partkers TO THIRD Persons.

Where there is a share of profits there shall also be a share of losses ; for whoever takes a part of the capital, or of the profits of it, takes a part of that fund to which the public have given credit, and to which they look for payment. Dormant partners are liable when discovered, because they would otherwise receive usurious interest and without a risk. Another, and perhaps a better, reason is, that the act of the partner binds all his co-partners, on account of the com- munion of profit and loss. The following cases will explain the nature of the liabilities incurred by the several persons who compose a partner- ship.

Where the consignee of goods (to whom the bill of lading was indorsed in blank) assigned it over as a security for acceptance given by the assignee not amounting to the value of the goods, and afterwards they became partners in the goods by an agreement between them that the profits and loss should be equally divided, but liie first was to stand guarantee to the other for the solidity of the factors by whom the goods were to be sold ; and it appeared by the agree- ment that the consignor had not been paid for the goods; the assignee of the bill of lading cannot maintain trover against the consignor if he siop the goods in transitu on the insolvency of the consignee ; for one partner cannot recover those goods which the other could not. 2 Term. Rep. 674. An action cannot be maintained by several partners for goods sold by one of them living in Guernsey, and packed by him in a particular manner for the purpose of smuggling, though the other partners who resided in England knew nothing of the sale ; for the act of one is, in this respect, the act of all ; and as it is a contract by Vol. XVI.

subjects of this country, made in contraven- tion of the laws, this case must be considered in the same light as if all the partners resided in England. 3. Term. Rep. 454. 5 Term Rep. 599. 4 Term Rep. 466. If one partner draw or indorse a bill in the partnership firm, it will prima facie bind the linn, although passed by the one partner to a separate creditor in dis- charge of

his own debt, unless there be evidence of covin between such separate debtor and creditor, or at least of the want of authority either express or implied in the debtor partner to give the joint security of the firm for his separate debt. But the court of king's bench held that no sufficient circumstance appeared in this case to raise any presumption adverse to the separate creditor taking such joint security in a case where the bill appeared to have been drawn in tlie name of the firm to their own order, eighteen days before the delivery of it to the separate creditor, and to have been accepted and indorsed before such delivery, and to have been drawn for a larger amount than the particular debt, and where, though the indorsement was in fact made by the hand of the debtor partner, yet it did not appear that that fact was known to the separate creditor at the time, and this too in a case where direct evidence might have been given of the covm or want of authority if it existed. 13 East 175.

A and B, ship agents at different ports, enter into an agreement to share in certain propor- tions the profits of their respective commissions, and the discount on tradesmen's bills employed by them in repairing the ships consigned to them, &c. By this agreement they were held to become liable as agent : though the agreement provided that neither should be answerable for the acts or losses of the other, but each for his own. 2 H. Blacks. 235. Where A, B, and C, were engaged in a cotton trade under the firm of A and B (C not being known to the world as a partner), and A and B traded under the same firm as grocers, and a bill given to them in the cotton business was indorsed in the firm common to partnerships, and given in payment by A and C for goods received in their grocery business ; the court of king's bench held that C was liu'ble to pay the bill to the holders, althougli the in- dorsement was unknown to C, of whom the indorsee had no knowledge- at the time of the indorsement. 7 East 209. One of two partners applied trust money in the- trade with the privity of the other partners; afterward they separated, and the partnership effects were assigned over to the first who took on him. the debts ; this was held to be no payment in discharge of the other partner, but both 'were liable to make good the trust money. 5 Term Rep. 601. A contract made by two partners to pay a certain sum of money to a third, person equally out of their own private cash is a joint contract, and they must be jointly sued upon it. 1 H. Blacks. 236.

If three partners (two of whom reside abroad and one in England) be sued for a partnership debt, and the partner resident in England appear to the action, but refuses to appear for the part- ners resident abroad, the sheriff under a distrin- gas against the two partners may take partnership

effects, though pnid for by the partner resident in England alone, to whom the partnership was le- gally indebted ; and the court will not relieve him against such distress. 3 Bos. and Pull. 254. In assumpsit against one of several partners for not delivering goods, with account for money had and received, to which defendant pleaded that the promises were jointly made with A and B, made the contract individually though in the name of the partnership, and for the sale of parnership property; and that in fraud of his partners he received the money to his own use : though the bill drawn by him for the money was in the partnership name. Held that plaintifT might recover the money so r.eceived under the common court. Term Rep. Hil. 56. Geo. III.

Where one of three partners, after a dissolu- tion of partnership, undertook by deed to pay a particular partnership debt on two bills of ex- change, and that was communicated to the holder, who consented to take the separate notes of the one partner for the amount, strictly re- serving his right against all three, and retained possession of the original bills. Held that the separate notes having proved unproductive he might still resort to his remedy against the other partners, and that the taking under these circum- stances the separate notes, and even afterwards renewing them several times successively, did not amount to satisfaction of the joint debt Term Rep. Mich. 53, Geo. III.

It has been said (but it does not appear con- clusively settled) that if one partner sign a letter of credit or guarantee in the name of all the partners, it binds the firm. But that there is a material difference between one partner pledging the guarantee of the firm for his separate debt, and his negociating bills in the partnership firm. 1 East 48. After a general partnership between two conveyancers in the country ; if money be received partly by one of the firm, and partly by the other, to be laid out upon a mortgage, which is forged by one of the partners without the knowledge of the other, the innocent partner is liable to repay the money. 2 Cowp. 814.

It is sometimes the case that although no con- tract of partnership has been actually entered into between persons acting or dealing together, so as to bind each other among themselves, yet a partnership is held to be subsisting, and a consequent liability to be incurred to third persons. So also a previous partnership, which has ceased as between the partners, may be held to continue as regards the world. Thus if a person suffer his name to be used as a partner he is liable to third persons.

If an outgoing partner is to receive an annuity and a per centage upon all sales to his old cus- tomers, and to new customers by him recom- mended, it seems that the partnership as to third persons continues. 2 H. Blackst. 242. It has been said that the liability of the outgoing part- ner is to be determined by considering whether the payment is certain and defined, or depend- ing upon the casualties of trade. So, also, the liability is said to depend upon his agreeing to share the profits, or only relying upon the profits as a fund for payment. 2 Blackst. 998.

In partnerships not incorporated, the indivi-

dual partners are liable for the debts of the joint trade without limitation. The members of in- corporated societies are liable for their respective shares, or, according to 6 Geo. IV. cap. 91, in such other degree as the charter of incorporation may prescribe.

Sect. IV, ××× Of the Exceptions to the Liabi- lity OF Partners.

A joint purchase without any communion oi profit does not constitute a liability to third per- sons. Thus, if a purchase be made upon an agreement that one of the parties shall be osten- sible buyer, and each party have a distinct share of the whole ; and the ostensible purchaser is the only party known to the vender, the other parties are not liable for payment. 1. H. Blackst. 37. A communion of subsequent profits, without any joint interest at the time of the purchase, does not constitute a joint liability. 4 T. R. 724. As a general rule, it may be ob- served, that the liability of one partner for the acts of another e.Ktends only, to debts contracted in the course of the partnership concern.

A dormant partner is not responsible for a bill of exchange, accepted by the acting partners in their names, unless such bill relate to the busi- ness of the partnership ××× the sleeping partner having no privity of interest in the bill. 2 Car. and Pay. 138. A member of a firm who re- tires from the partnership, is not liable on account of the remaining members continuing his name without his consent. And if the remaining part- ners continue the trade in the style of the old firm, after due notice of the dissolution, it seems that there is not any necessity for the protection of the outgoing partner that he should apply to a court of equity to restrain the remaining part- ners from the use of the style of the old firm. 2 Camp. 617. This, however, supposes that all the measures of precaution by advertisement, notice, &c., have been adopted.

An agreement by the remaining members of a firm to pay to an outgoing partner an annuity for his interest at the time of the dissolution in the profits and good will does not constitute a lia- bility as partners to third

persons. A share in a ship or other specific object does not constitute a general partnership ; and therefore the re- sponsibility is limited to that particular object.

If the proprietor of cattle agree with the owner of land that the cattle shall be pastured upon the land, and that the profit after they are fatted above a certain sum at which the cattle are esti- mated, shall be equally divided between the pro- prietor of the cattle and the owner of the land ; this is merely a mode of paying for the pasture, and does not constitute a joint liability. 1 Camp. 331, in notes.

If the contract is for an antecedent debt, due from the partner to the contracting party, the presumption seems to be that the firm is not lia- ble. 1 East. 48.

If there be any speculation of which one of the partners should disapprove, he may avoid re- sponsibility by giving notice, to those with whom the other partners are about to contract, that he will not be concerned in it. Two (of three) partners who had contracted a debt prior to the

admission of the third partner into the firm can- not bind him, without he assent by accepting a bill drawn by the creditor in their joint names ; but such security is fraudulent and void as against the third partner, and cannot be recover- ed in an action against the three, wherein one only of the original partners plead to the action. 1 East. 48, 49. Where A and C had entered into an agreement to purchase goods in the name of A only, and to take aliquot shares of the purchase, but it did not appear that they were jointly to resell the goods, the court of common pleas (Wilson J. Diss.) held that on failure of A, the ostensible buyer, B and C were not answer- able as partners with him. 1 H. Blackst. 37.

Acts subsequent to the time of delivering goods on a contract may be admitted as evidence to show that the goods were delivered on a part- nership account, if it were doubtful at the time of the contract ; but, if it clearly appear that no partnership existed at the time of llie contract, no subsequent act, by any person who may afterwards become a partner (not even an ac- knowledgment that he is liable on Lis accepting a bill of exchange drawn on them as partners for the very goods), will make him liable in an ac- tion for goods sold and delivered, though he will be liable in an action on the bill of exchange. 4 Term Rep. 720. On the dissolution of a part- nership between A, B, and C, a power given to A, to receive all debts

owing to, and to pay all those owing from the late partnership, does not authorise him to indorse a bill of exchange in the name of the partnership, though drawn by him in that name and accepted by a debtor to the partnership after the dissolution. The person therefore to whom he so indorses it cannot maintain an action on it against A, B, and C, as partners. 1 H. Blackst. 155. Neither can such indorsee maintain an action against A, B, and C, for money paid to the use of the partnership, though in fact the money advanced by him in discounting the bill be applied by A to the pay- ment of a debt due from the partnership. 1 H. Blackst. 155.

The authority of one partner to bind another, by signing bills of exchange and promissory notes in their joint names, is only an implied authority, and may be rebutted by express pre- vious notice to the party taking such security from one of them, that the other would not be liable for it ; and this though it were represented to the holder, by the partner signing such se- curity, that the money advanced on it was raised for the purpose of being applied to the payment of partnership debts and though the greater part of it were in fact so applied. Nor can he re- cover against the other partner to the amount of the sums so applied to the payment of the partner- ship debts against such notice. 10 East. 264. If several persons horse, with horses their several property, the several stages of a coach in the general profits of which they are partners, they are not jointly liable for goods furnished to one partner for the use of the horses drawing the coach along his part of the road. 2 W. P. Taunt. 49. In an action on the case, upon a ⁂delivery of goods to several joint owners of a ship to be carried to A for freight alleging a

deviation if the plaintiff fail in proving all the defendants to be owners he cannot recover, even against those whom he proves o be owners. 2 New Rep. C. P. 454.

A bond was given to the several persons con- stituting the firm of a banking house, condi- tioned for the repayment of the balance of an account, and of such further sums as the bankers might advance to the obligor; one of the part- ners dies, and a new partner is taken into the firm : at that time a considerable balance is due from the obligor to the firm, advances are after- wards made by the bankers, and payments made to them on account by the obligor; the latter is credited by the new firm with the several pay- ments, and charged with the original debt and subsequent advances, as constituting items iu one entire account, and the balance due at the time of the partner's death is considerably re- duced ; and that reduced balance, by order of the obliˆor, is transferred by the bankers to the account of another customer, who, with his as- sent, is charged with the then debt of the obligor. The person so charged having become insolvent, the surviving partners of the original firm brought their action upon the bond. Held tliat

as they had not originally treated it as a distinct account, but had blended it in the general ac- count with other transactions, they were not at liberty so to treat it at a subsequent period, and, having received in different payments a sum more than sufficient to discharge the debt due upon the bond, was to be considered as paid. Term. Rep. Mich. 59 Geo. III.

Sect. V. ??? Of the Dissolution of Partner- ships.

A general partnership, entered into for an un- limited time, may be put an end to, at any time, by either of the parties, so that he does not break off with some sinister view. It may be dissolved also by the award of arbitrators, by the insanity of one of the firm, or by the gross misconduct of a partner; on which a court of equity may annul the contract.

The death of one partner dissolves the part- nership, unless there be an express agreement to transmit the interest in the business to the family of the deceased partner, or his executor, or ad- ministrator. It is dissolved also by the bank- ruptcy, outlawry, or attaint for treason or felony of either partner.

If a partnership for a limited time, with a right to dissolve upon giving a year's notice, be con- tinued, without any new agreement after the ex- piration of the limited time, such new partner- nership is dissoluble at the will of either party. 17 Vesey 298. The taking, by a partnership, of a lease which is unexpired, or their entering into contracts which are unexecuted, does not deprive either party of his right to dissolve at will. Ibid. If a partnership be formed for carrying into effect a new invention, which, after repeated trials, is found impracticable, it seems that the partnership is dissoluble. Baring, v. Dix, at the Rolls, 1786.

A firm may be bound, after the dissolution of the partnership, by a contract, made l)y one partner in the name of the firm, with a person who con- 2 T 2

traded on the faith of the partnership, and had not notice of the dissolution. 1 Esp. 371. It seems that an advertisement in the Gazette is suf- ficient notice to all persons who had not previous dealings with the house. 3 Esp. 248. But it is necessary, as to all persons with whom the firm had dealings, to send to each notice of the dissolution.

PARTRIDGE, n. s. Fr. perdrix ; Wei. per- tris ; Lat. perdix ; Gr. niˆhl. A well known species of game bird.

The king is come out to seek a flea, as when one doth hunt a partridge \n the mountains.

1 Sarmtel xxvi. 20, Enough for me To boast the gentle spar-hawk on my fist, Or fly the partridge from the bristly field. Reprieve the covey with my busy train. Or with my soaring hobby dare the lark.

Sotnervile. This may lead to the right interpretation of Eccle- siasticus xi. 30, which we render ‘ like as a partridge taken (or kept) in a cage, so is the heart of the proud,’ but should be ‘ like a decoy partridge in a cage.’

Dr. Shaw. Partridge, in ornithology. See Tetrad. The places partridges delight in most are corn fields, especially whilst the corn grows ; for under that cover they shelter and breed ; and they are frequented by them when the corn is cur down, for the grain. In the furrows, amongst the clods, branches, and long grass, they hide both them- selves and coveys, which are sometimes twenty in number, nay thirty in a covey. When winter is arrived, and the stubble fields are ploughed up, or over-soiled with cattle, partridges resort into the upland meadows, and lodge in the dead- grass, or fog under hedges, amongst mole-hills, or under the roots of trees ; sometimes they re- sort to coppices and under-woods, especially if any corn-fields are adjacent, or where there is grown broom, brakes, fern, &c. In harvest, when every field is full of men and cattle, in the day they are found in fallow fields adjoining to corn-fields, where they lie lurking till evening or morning, and feed among the sheaves of corn. This bird contributes so much to the pleasures of the table that many experiments were for- merly in use to take them alive. Having deceived the timid creatures by a happy imitation of their notes, it was easy to entice them into the snare ; but their destruction is now almost entirely re- served for the shot of the sportsman, or the net of the poacher. The partridges of Abyssinia are said to be as large as capons.

PARTURITION, n. s.) Lat. parturio. The Partu’rient, adj. S state of being about

to bring forth.

Conformation of parts is required, not only under

the previous conditions of birth, but also unto the

parturition or very birth. Browne.

Parturition. See Midwifery.

PARTY, n. s. ⬛⬛⬛\ Fr. pnrtie. Or from

Par'ty-colored, adj. f Part. An individual

Par'ty-jury, n. s. ^ or distinct person; a

Par'ty-wall. ' side ; hence a faction;

number of persons combined ; or the adherents

i) a cause taken collectively ; a military detach-

.⬛⬛⬛nent ; a select assembly : party-colored means,

having various colors: party-jury, a jury half

foreigners and half natives : party-wall, a parti- tion wall between two houses.

The cause of both parties shall come before the judges. Exodus.

As she paced on, she was stopped with a number of trees, so thickly placed together that she was afraid she should, with rushing through, stop the speech of the lamentable party, which she was so desirous to understand. Sidney.

Men in a partif have liberty only for their motto ; in reality they are greater slaves than any body else would care to make them. Savile.

The minister of justice may, for public example, virtuously will the execution of that partii, whose pardon another, for consanguinity's sake, as virtu- ously may desire. Hooker.

When you are hearing a matter between party and part II, if pinched with the cholick, you make faces like mummers, and dismiss the controversy more entangled by your hearing : all the peace you make in their cause is calling both parties knaves.

Shukspeare. How shall this be compast 1 canst thou bring me to the party ? Id. Tempest.

The fulsome ewes, Then conceiving, did, in yearning time Fall party-coloured lambs. Shakspeare.

The child was prisoner to the womb, and is Freed and enfranchised ; not a

party to The anger of the king, nor guilty of The trespass of the queen. Id.

The imagination of the party to be cured is not needful to concur ; for it may be done without the knowledge of the party wounded. Bacon.

If the jury found that the party slain was of English race, it had been adjudged felony.

Davies. The smoke received into the nostril causes the party to lie as if he were drunk. Abbot.

He that confesses his sin, and prays for pardon, hath punished his fault : and then there is nothing left to be done by the offended party , but to return to charity. Taylor.

When princes idly lead about. Those of their party follow suit, Till others trump upon their play, And turn the cards another way. Butlei: The peace, both parties want, is like to last.

Dry den.

JEgle came in, to make their party good. Id.

Constrained him in a bird, and made him fly

With party-coloured plumes a chattering pie. Id.

The leopard was valuing himself upon the lustre

of his party-coloured skin. L' Estrange.

When any of these combatants strips his terms of ambiguity I shall think him a champion for truth, and not the slave of vain glory and a party. Locke.

Tis an ill custom among bricklayers to work up a whole story of the party-walls, before they work up the fronts. . . Moxon.

As he never leads the conversation into the vio- lence and rage of party disputes, I listened to him with pleasure. latter.

Party writers are so sensible of the secret virtue of an innuendo, that they never mention the q ⬛⬛⬛ n at length. Spectator.

I looked with as much pleasure upon the little party-coloured assembly, as upon a bed of tulips.

Addison's Spectator. This account of party patches will appear impro- bable to those who live' at a distance from the fa- shionable world. Addison.

There is nothing so bad for a face as party zeal. It gives an ill-natured cast to the eyes, and a dis-

agreeable sourness to the look : besides that it makes .he hues too strong, and fluslies them worse than brandy. Id.

W a bishop be a party to a suit, and excommuni- cates his adversary ; such excommunication shall not bar his adversary from his action. Aijlijj'e.

Though there is a real difference between one man and another, yet the party who has the advantage usually magnifies the inequality. Collier.

]\or is it hard to beautify each month With files of party-coloured fruits. Philips,

Let me extol a cat on oysters fed, I'll have a party at the Bedford-head. Pove.

Four knaves in garb succinct, a trusty band. And party-coloured troops, a shining train. Draw forth to combat on the velvet plain. Id.

Division between those of the same party exposes them to their enemies. Id.

There never was any party, faction, seat, &r cabal whatsoever, in which the most ignorant were not the most violent ; for a bee is not a busier animal than a blockhead. Jd.

If the clergy would a little study the arts of con- versation, they might be welcome at every party,. where there was the least regard for politeness or good sense. Suift.

The most violent party men are such, as, in the conduct of their lives, have discovered least sense of religion or morality. Id.

PAR"IS, n. s. Fr. parvis. A church or cliurch-porch : applied to the mootings or law- disputes among young students in the inns of courts, and also to that disputation at Oxford called disputatio in parvis.

PAR'VITUDE, or > Lat. parvus. Little-

Par'vity, 71. s. Jness; minuteness. Not

used.

The little ones of parvitude cannot reach to the same floor with them. Glnnville.

What are these for fineness and parvity, to those minute animalcula discovered in pepper-water !

Hay.

PARULIDES, in surgery, tumors and in- flammations of the gums, commonly called gum- boils. They are to be treated v\ith discutients like other inflammatory tumors.

PARUS, the titmouse, in ornithology, a genus belonging to the order of passeres. The bill is very entire, covered at the basis with hairs ; the tongue is truncated and hairy. There are fourteen species, of which the most remarkable are these : ⍰⍰⍰

1. P. biarmicus, the bearded titmouse, has a short, strong, and very convex bill, of box color ; the head of a fine gray ; the chin and throat white ; the middle of the breast flesh-colored ; the sides and thighs of a pale orange ; the hind part of the neck and back of orange bay ; the tail is two inches and three quarters long; the legs of a deep shining black. The female wants the flesh-color on the breast, and a triangular tuft of black feathers on each side the bill which adorn the male. They are found in marshy places.

2. P. cjeruleus, the blue titmouse, is a very beautiful bird. The bill is short and dusky ; the crown of tlie head a fine blue, from the bill to the eyes is a black line; the forehead and cheek white ; the back of a yellowish green ; the lower side of the body yellow ; the wings and tail blue, the former marked transversely with a

white bar; the legs of a lead color. They fippuent gardens; and do great injury to fruii trees, by bruising the tender buds m search of the insects which lie under them. They breed in holes of walls, and lay twelve or fourteen eggs-

3. P. caudatus, the long-tailed titmouse, is about five inches and a quarter long, and seven inches broad. The bill is black, very thick, and convex, differing from all others of this genus. The top of the. head, from the bill to the hind part, is white, mixed with a few dark gray fea- thers : this bed of

white is entirely surrounded with a broad stroke of black ; which, risinsc on each side of the upper mandible, passes over each eye, unites at the hind part of the head, and continues along the middle of the back to the rump. The feathers on each side of this black stroke ".re of a purplish red, as are those immediately incumbent on the tail. The tail is the longest, in proportion to the bulk, of any British bird, being in length three inches, the form not unlike that of a magpie, consisting of twelve feathers of unequal lengths, the middle- most the longest, those on each side growing gradually shorter. These birds are often seen passing through our gardens, going from one tree to ano- ther, as if in their road to some other place, never making any halt. They make their nests with great elegance, of an oval shape, and about eight inches deep, having near the upper end a hole for ad- mission. The external materials are mosses and lichens curiously interwoven with wool. On the inside it is very warmly lined with a thick bed of feathers. The female lays from ten to seven- teen eggs. The young follow their parents the vvholewinter; and from the slimness of their bodies, and great length of tail, appear, while flying, like darts cutting the air.

4. P. cristatus, the crested titmouse, weighs thirteen pennyweights; the bill is black, with a spot of the same color above it ; all the upper part of the body gray ; the neck aixl under parts are white, vvith a faint tincture of red, which is deepest just below the wings. The legs are of a lead color. It erects its crown feathers into a crest. They inhabit the warm parts of IVorth America ; and frequent forest-trees, feeding upon insects.

5. P. major, the great titmouse, has the head and throat black, the cheeks white, the back green; the belly yellowish green, divided in the middle by a line of black which extends to the vent ; the rump a bluish gray, the legs of a lead color, the toes divided to the very origin, and the back toe very large and strong. This species sometimes visit our gardens ; but for the most part inhabit woods, where they build in hollow trees, laying about ten eggs. They feed on in- sects, which they find in the bark of trees. In spring, tiiey do a ereat deal of mischief by picking oft" the tender buds of the fruit trees. Like woodpeckers, they are perpetually running up and down the bodies of trees in quest of food. These birds have three cheerful notes which they begin to utter in February.

6. P. pendulinus, the remiz, or small titmouse. It is often found in Lithuania. JNlr. Coxe, in his Travels through Poland, gives the following

account of this Httle animal : ❖❖❖ ‘ They are the smallest species of titmice. The head is of a pale bluish ash color ; the fore part of the neck and the breast tinged with red ; the belly white ; wings black ; back and rump of a yellowish rust color ; quill feathers cinereous, with the exterior sides white ; the tail rust-colored. The male is singularly distinguished from the female by a pair of black pointed whiskers. Its nest is in the shape of a long purse, which it forms with amazing art, by interweaving down, gossamer, and minute fibres, in a close and compact man- ner, and then lining the inside with down alone, so as to make a snug and warm lodge for its young brood. The entrance is at the side, small, and round, with its edge more strongly marked than the rest of this curious fabric : the bird, at- tentive to the preservation of its eggs or little ones from noxious animals, suspends it at the lesser end to the extremity of the slender twigs of a willow, or some other tree, over a river. Contrary to the custom of titmice, it lays only four or five eggs : possibly Providence has ordained this scantiness of eggs to the remiz, because, by the singular instinct imparted to it, it is enabled to secure its young much more effectually from destruction than the other spe- cies, which are very prolific’

PARUTA (Paul), a noble 'enetian, born in] 540 ; distinguished for his learning, and know- ledge as a statesman. He filled several high offices ; was sent on several embassies ; was ap- pointed governor of Brescia, and procurator of St. Mark : in all which stations he showed great talent and probity. He wrote. Notes upon Ta- citus ; Political Discourses ; A Treatise of the Perfection of the Political Life ; A History of Venice, from 1513 to 1572, with the War of Cyprus; all in Italian. He died in 1598.

PARYSATIS, an infamous Persian queen, wife of Darius Nothus, and mother of Artaxerxes Mnemon and Cyrus the younger. Her partiality for Cyrus led her to commit the greatest .injus- tice and barbarities ; and she poisoned Statira, the wife of Artaxerxes. See Persia.

PAS, n. s. Fr. pus. Precedence ; right of going foremost ; a Gallicism.

In her poor circHinstances, she still preserved the mien of a gentlewoman ; when she came into any full assembly, she would not yield the pas to the best of them. ArbiUhnot.

PASARGADA, a town of Persia, near Cara- mania, founded by Cyrus the Great, on the spot where he conquered Astyages. The kings of Persia were afterwards crowned in it.

PASCAL (Stephen), a French gentleman of an ancient family, born in 1588. lie was presi- dent of the court of aids in Auvergne ; he was a very learned man, an able mathematician, and a friend of Descartes. In 1631

he quitted his office in his province, and went and settled at Paris, that he might be quite at leisure for the instruction of his only son.

I'ascal (Blaise), one of the finest mathemati- cians France has produced. He was born at Clermont in Auvergne in 1623. His father had kept all mathematical books out of his way, lest they should interrupt his study of the languages ; but nevertheless he advanced considerably in

the knowledge of mathematics, without ever hearing a single term. He understood Euclid's Elements as soon as he cast his eyes upon them. At sixteen years of age he wrote A Treatise on Conic Sections ; and, at nineteen, contrived an admirable arithmetical machine, which would have done credit to any man versed in science. About this time his health became impaired, and he was in consequence obliged to suspend his labors for four years. In his twenty-third year, having seen Torricelli's experiment respecting a vacuum and the weight of the air, he turned his attention towards these objects ; and he pub- lished the result of a variety of experiments, in two small treatises, the one entitled A Disser- tation on the Equilibrium of Liquors ; and the other. An Essay on the Weight of the Atmo- sphere. These labors procured him so much re- putation, that the greatest mathematicians and philosophers of the age consulted him about such diificulties as they could not solve. But his career, though brilliant, was ordained to be but short. His health declined so rapidly that he renounced all severe study, and, in mistaken de- votion, inflicted on himself the most severe tor- tures. He died in Paris 1662, aged thirty-nine years. Besides the works above-mentioned, he wrote Lettres Provinciales, satirising the Jesuits, and some religious pieces. His works were collected by Bossu, in 5 vols. 8vo.

PASCIIE', n. s. ˆ Ft. pascal ; Lat. paschalis.

Pas'chal, adj. S The passover : relating to the passover : hence relating to Easter.

Neither would God have cast the Christian Easter upon the just time of the Jewish Fasch, and their Whitsuntide upon the Jewish Pentecost. Bp. Hall.

PAS-DE-CALAIS, Department of the, France, is formed out of the former province of Artois, and takes its name from its situation, being near the strait that separates France from England, called the Pas-de-Calais, and by the English the Straits of Dover. The principal place of this prefecture is Arras ; it is divided into six arrondissements : Arras, containing 165,864 inhabitants, Bethune 123,247, Bou- logne 85,141, Montreuil 75,983, St. Omer 98,274, and St. Pol 78,075 ; being a total popu- lation of 626,584 souls, on an area of 2932 square miles, yielding a territorial revenue of

32,305,000 francs. It is subdivided into forty three cantons and 953 communes, forming part of the sixteenth military division, having a royal court at Douay and a bishopric at Arras, and con- sisting of four electoral arrondissements which send seven members to the chamber of deputies. This department is bounded on the north-east and east by that of the North, on the south by tliat of the Somme, and on the west by the ocean.

The surface presents a very flat country, gra- dually declining from the side of Belgium; there is, however, a chain of small mountains, which, stretching from Abbeville beyond Bou- logEb, contains the sources of several rivers. The sea-coast is bordered by sandy hills, called the Downs, which are yet uncultivated. The soil is very fruitful, and produces in abundance all sorts of grain, vegetables and fruit for cyder. The artificial meadows are very numerous. The low country presents but little running

water ; there are marshes, fens, and some fine meadows, fat pastures, fruitful fields, and turf- pits. Cattle of all kinds are fed here, and horses of excellent quality. There are but few thickets, and not one forest of any size, on which accoxmt the people burn chiefly turf and coal. The vine is not cultivated here ; the climate is very variable. The soil is chiefly cultivated with horses, and yields more than suflicient for its in- habitants, prod\icing on an average forty-six francs forty-three centimes from every hectare of arable land. There is much small game ; also vfresh and salt water fish, asses, milch cows, me- rino sheep, pigs, and great quantities of poultry. There are quarries of marble, gray paving-stone, flint, lime-stone, pipe-clay, potter's-clay, and sand. At Arras and at (ˆourset there are bota- nical gardens, and mineral waters of a chalybeate quality at Boulogne.

The manufactures of this department consist of common cloths, caps of thread, cotton and wool, cotton velvet, lace, soap, bright iron goods, plate-iron, candles, gingerbread, fishing-nets, and baskets. There are linen and cotton spin- ning-factories, numerous oil-mills, sugar and salt refining-houses, brandy and hoUands distil- leries, forges, powder-mills, bleaching grounds, starch manufactories, paper-mills, bark-mills, and considerable tan-yards. A great trade is carried on in grain, wine, brandy, oil, honey, salt, cattle, linen, lace, thread, leather, earthen- ware for the colonies, coal, &c. There are also cod, herring, and mackerel fisheries, and a coast- ing trade. This country is watered by the Lys, the Scarpe, the Canche, the Aa, the Auty, the Lawe, and other rivers and rivulets ; the canals of Calais, St.

Omer, Ardres, and Marck, intersect it, and it is crossed by the great roads of Mons, Lille, Dunkirk, Montreuil, Abbeville, and St. Quentin.

PASH, n. s. Span, paz, a kiss ; Scot, push, t! e head. A face.

Tliou want'st a rough pash, and the shoots that I have, To l)u full like me. Shakspeare. Winter s Tale.

Pash, v. a. Lat. pango. To strike ; crush. With my armed fist I'll pash him o'er the face. Sliahspeare.

Thy cunning engines have with labour raised My heavy hanger, I'ke a mighty weight, To fall and pash thee dead. Dryden.

PASIPHAE, in fabulous history, daughter of Apollo, by Perseis, and wife of Minos, king of Crete, and mother of the Minotaur. See D^da- Lus, Minos, and Minotaur.

PASOR (Matthias), a learned German divine of the seventeenth century, born at Herborne, in Westphalia. He became professor of divinity at Groningen, and afterwards of mathematics at Heidelburg. On the invasion of the Palatinate he came over to England, and read lectures at Oxford on Hebrew and mathematics ; and was afterwards appointed professor of oriental lan- guages in that university. He died in 1658.

PASQUIER (Stephen), a learned French lawyer, poet, and historian, born in Paris in 1528. He became an advocate in parliament, afterwards counsellor, and at last advocate gene- ral, under Henry HI., all of which stations he

filled with ability and reputation. His works, which were published together, consist of Letters, Enquiries, Poems, Portraits, Epigrams, Epitaphs, &c. His poem entitled Puce, occasioned by his observing a flea on the breast of the learned Catharine De Roches, excited considerable at- tention. He died in Paris, August 31st, 1615, aged eighty-seven.

PAS'QUIL, ?►►. J. "J From Itai. pasquino, a Pas'quin, ^statue at Rome, to which

Pasquinade'. j they affix any lampoon or satirical paper. A lampoon.

He never valued any pasquiis that were dropped up and down, to think them worthy of his revenge.

H(rweL

The ptisquils, lampoons, and libels, we meet with now-a-days, are a sort of playing with the four-and- twenty letters, without sense, truth, or wit. Tatler.

PASQUIN (pasquino, Italian). By this name is designated a group, or rather a torso, in white marble, now in a corner of the Ursini palace in Rome, and which has been regarded by some as the figure of a wrestler, by others as that of Mars, or some earthly warrior, by others again as a gladiator, &c. M. de Ramdohr, in consi- dering the merits of this relic of ancient art, observes that its very mutilated state prevents the connoisseur from arriving at any satisfactory conclusion respecting them. He himself seems to be of opinion that it is the representation of a warrior carrying from the scene of battle his wounded comrade.

The history of this sculpture is remarkable enough. It derives its present name from an Italian cobbler, so called, who lived in Rome, and was notorious for the bitterness of his gibes and the raciness of his jokes. His shop became, consequently, the rendezvous for a quantity of splenetic and idle persons, who diverted them- selves by bantering all the passers by.

After Pasquin's decease, in digging the pave- ment up in front of his shop or stall, the frag- ments of a statue were exhumed, well chiseled; but, as has been already observed, maimed ar I half spoiled.

To this statue, by common consent, was affix- ed the narse of the jocular cobbler, in the ne'gli- bourhood of whose nest it was discovered, and immediately set up on the same spot; and from that time and circumstance arose the well known term of pasquinade, all lampoons and fˆtireˆ having been, in Rome, ascribed to this figure, being put in its mouth or pasted against it as if the bona fide lucubrations of Pasquin redivivus. The usual method is, to make Pasquin address himself to Marfiorio (another statue in the same town) or the latter to Pasquin, who never fails to make reply, the one being often made to assist the other, when either is assailed.

PASS, V. n., V. a. & n s.") Fr. passer ; Ital.

Pass'able, adj.

Pas'sage, n. s. Pass'er, Pas'senger, n. s- Pas'sible, adj. Pas'sibleness, v. s. Pass'ing, paj-t. &c adj. Pass'ing-bell.

passare ; Span, and I I'ort. passu?- ; of I Lat. pussus,d. step.)'To move progres- sively or from stej) to step; go; change by regulai" grada- J tion ; go through

rcgidar stages or vessels of the body ; go away ;

omit ; vanish ; die; be lost; be spent ; be at an end or crisis : progress to or beyond the final stage : hence to be enacted, as a bill in parlia- ment ; be effected ; be determined ; be supremely excellent ; become current ; be practised shrewdly or artfully ; occur ; heed or regard (obsolete) ; thrust ; be in a tolerable state : taking ‘ away’ (intens.) when it signifies to be completely lost; vanish or glide off: as an active verb, to go be- yond or through ; hence surpass or excel ; spend ; live through; carry over; transfer; strain (a li- quid) ; pronounce ; admit or allow ; enact ; im- pose or practise upon : ‘ to pass away’ is, to spend or waste : ‘ pass by’, excuse or forgive ; also neglect ; disregard : ‘ to pass over’ is, to omit ; leave unregarded : a pass is an entrance or avenue ; road ; order or permission to travel or to go from place to place ; a push or thrust ; state arrived at; condition or disposition : pas- sable is, that can be passed or travelled through or over; tolerable; popular: passible is, im- pressible : passage, the act or course of pass- ing; journey; voyage; road or way; avenue; state of decay ; occurrence or hap (obsolete m both these last senses) ; aptness to pass ; unset- tled state ; incident ; conduct ; single part or plan of a book or writing : a passer is, he who passes, or is upon a road : passenger, a traveller ; wayfarer; one who passes: passing is, supreme ; eminent ; exceeding : passing-bell, a bell rung to obtain prayers for a passing or dying soul ; also the bell rung immediately after a death.

If I have found favour in thy sight, pass not away from thy servant. Geriesii.

This heap and this pillar be witness, that I will not pass over to thee, and that thou shall not pass over it and this pillar unto me for harm. Id.

While my glory passeth by, I will put thee in a f lift of the rock, and will cover thee, while I pass hy. Exodus xxxiii. 22.

The money of every one that passeth the account, let the priests take. 2 Kings xii. 4.

Why sayest thou. My way is hid from the Lord, and my judgment is passed over from my God 1

Isaiah xl. 27. Whom do’st thou pass in beauty 1 Ezekiel.

Thus will I cut off him that passeth out, and him that returneth. Id. xxxv.

7.

The father waketh for the daughter, lest she pass away the flower of her age. Ecclus. xlii. 9.

Antiochus departed in all haste, weening in his pride to make the laud navigable, and the sea pass- tihie by foot. 2 Maccabees.

To what a pass are our minds brought, that from the right line of virtue, are wryed to these crooked shifts ? Sidney.

The diligent pilot in a dangerous tempest doth attend the unskilful words of a passenger. Id.

She, more sweet than any bird on bough,

Would oftentimes amongst them bear a part. And strive to pass, as she could well enough.

Their native musick by her skilful art. Spenser.

They shall protect all that come in, and send them to the lord deputy, with their safe-conduct or pas?, to be at his disposition. Id. on Ireland.

I have heard it enquired, how it might be brought to pass that the church should every where have able preachers to instruct the people. Hooker.

Theodoret disputeth with great earnestness, that God cannot be said to suffer ; but he thereby mean- eth Christ's divine nature against Apollinarius, which held even deity itself passible. Id.

It drew after it the heresy of the passiUeneat of tlie deity ; the deity of Christ was become, in their con- ceits, the same nature with the humanity that was passible. Brerewood.

The pangs of death do make him grin ; Disturb him not, let him pass peaceably.

*Sliakspeare. Why this passes, Mr. Ford : ***you are not to go loose any longer, you must be pinioned. Id.*

Tell him his long trouble in passing Out of this world. Id. Henry VIII.

This practice hath most shrewdly past upon thee ; But, when we know the grounds and authors of it. Thou shalt be both the plaintiff and the judge.

Shakspeare. As for these silken-coated slaves, I pass not , It is to you, good

people, that I speak, O'er whom, in time to come, I hope to reien.

Id. Though well we may not pass upon his life, Without the form of justice; yet our power Shall do a court'sy to our wrath. Id.

This night We'll pass the business privately and well.

Id. To see thee fight, to see thee pass thy puncto.

Id. Let me o'erleap that custom ; for I cannot Put on the gown, stand naked, and entreat them ; Please you that I may pass this doing. Id.

We bid this be done. When evil deeds have their permissive pass. And not the punishment. /

'Tis dangerous when the baser nature comes Between the pass and fell incensed points Of mighty opposites. Id. Hamlet.

The king hath laid, that in a dozen passes between you and him, he shall not exceed you three hits.

Sliakspeare. His body is a passable carkass, if he be not hurt. It is a thoroughfare for steel. Id.

What, are my doors opposed against my passage?

Id. Would some part ef my young years Might but redeem the vassaije of your age ! Id.

It is no act of common passage, but A strain of rareness. Id.

Thou do'st in thy passages of life Make me believe that thou art only marked For the hot vengeance of heaven. Id.

What hollowing, and what stir is this? These are my mates that make their wills their law, Have some unhappy passenger in chase. Id.

Oberon is passing fell and wroth. Id

'i'he Tyrians had no pass to the Red Sea, but through the territory of Solomon, and by his suffer- ance. Raleigh.

The story of such a passage was true, and Jason, with the rest, went indeed to rob Colchos, to which they might arrive by boat. Raleigh's History.

When the case required dissimulation, if they used it, it came to pass that the former opinion of their good faith made them almost invisible. Bacon.

They speak of severing wine from water, passing it through ivy wood. Id. Natural History.

How far ought this enterprize to wait upon these other matters, to be mingled with them, or to pass by them, and give law to them, as inferior unto itself!

Bacon . Where there is no eminent odds in sufficiency, it is better to take with the more passable, than with the more able. Id.

Human actions are so uncertain, as that seemeth the lest course which hath most passages out of it.

Id.

PAS

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PAS

The land enterprize of Panama was grounded upon a false account, that the passages towards it were no better fortified than Drake had left them. Id.

After king Henry united the roses, they laboured to reduce both English and Irish, which work, to what pass and perfection it was brought in queen Elizabeth's reign, hath been declared.

Davies's State of Ireland. Upon consideration of the conduct and passaiˆe of affairs in former times, the state of Enˆ'land ought to be cleared of an imputation cast upon it. IJuvies.

As it is advantageable to a physician to be called to the cure of a declining disease, so it is for a com- mander to suppress a sedition which has passed the height ; for, in both, the noxious humour doth first weaken, and afterwards waste to nothing.

Hal/ ward. This business, as it is a very high passage of state, so it is worthy of serious consideration. Id.

Those loving papers Thicken on you now, as prayers ascend To heaven in troops at a good man's passingbetl.

Donne. No strength of arms shall win this noble fort. Or shake this puissant wall, such passing might Have spells and charms, if they be said aright.

Fairfax. My friends remembered me of home ; and said, If ever fate would signe my pass, delaid It should be now no more. Chapman.

In my feare of hospitable Jove, Thou did'st to this passe my affections move. Id. You shall furnish me With cloake, and coate, and make my passage free For loved Dulichius. Id.

Passing many know it ; and so many, That of all nations there abides not any, From where the morning rises, and the sun. To where even and night their courses run ! Id. Martial, thou gavest far nobler epigrams To thy Domitian, than I can my James; 13ut in my royal subject I pass thee. Thou flatteredst thine, mine cannot flattered be.

Ben Jonson. Under you ride the home and foreign shipping in so near a distance, that, without troubling the passer, or borrowing Stentor's voice, you may confer with any in the town. Carew.

He that will pass his land, As I have mine, may set his hand And heart unto this deed, when he hath read ; And make the purchase spread. Herbert.

The last doubt, touching the pussibilitii of the mat- ter of the heavens, is drawn from the eclipses of the sun and moon. HukeiviU.

A talk of tumult, and a breath. Would serve him as his passingbell to death.

Dajiiel. I would render this treatise intelligible to every rational man, however little versed in scholastick learning, among whom 1 expect it will have a fairer passage than among those deeply imbued with other principles. I^'g^!/-

It conduces much to our content, if we pass by those things which happen to our trouble, and con- sider that which is prosperous ; that, by the repre- sentation of the better, the worse may be blotted out. Taylor's Holy Living. Zeal may be- let loose in matters of direct duty, as in prayers, provided that no indirect act pass upon them to defile them. Taylor .

They are crafty, and of a passible reach of under- standfng. Howel.

Many of the nobility spoke in parliament against those things which were most grateful to his majesty,

and which still passed, notwitiistanding their contra- diction. Clarendon.

Many nf the lords, and some of the commons, passed some compliments to

the two lords. Id.

Waller passed over five thousand horse and foot by Newbridge. Id.

It would be easy to defend the passes into the whole country, that the king's army should never be able to enter. Id.

A gentleman had a pass to go beyond the seas.

Id iSo shall thou best prepared endure Thy mortal passage when it comes. Milten.

Against which opened from beneath A passage down to the' earth, a passage wide. Id.

The nodding horror of whose shady brows Threats the forlorn and wandering passenger. Id. I\Iany in each region passing fair As the noon sky ; more like to goddesses Than mortal creatures. Id. Paradise Lust.

That trick, said she, will not pass twice.

Hudibras. All have liberty to lake fish, which they do by standing in the water by the holes, and so intercept- ing their passage take great plenty of ihein, which otherwise would follow the water under ground.

Browne's Traiels. To bleed to death was one of the most desirable passages out of this world. Fell.

However God may pass by single sinners in this world, yet, when a nation combines against him, the wicked shall not go unpunished. Tillotsan.

Others, dissatisfied with what they have, and not trusting to those innocent ways of getting more, fall to others, and pass from just to unjust. Temple.

Traders in Ireland are but factors ; the cause must be rather an ill opinion of security than of gain : the last intices the poorer traders, young beginners, or those of passage ; but, without the first, the rich will never settle in the country. Id.

When the passage is open, land will be turned most to great cattle ; when shut, to sheep. Id.

Her face, her hands were torn With passing through the brakes. Dryden. Trust not too much to that enchanting face ; Beauty's a charm, but soon the charm will pass.

Id. Their excellencies will not pass for such in the opinion of the learned,

but only as things which have less of error in them. Id.

Both advance

Against each other, and with sword and lance

They lash, they foin, they pass, they strive to bore

Their corslets. irf.

You know in what deluding joys we past

The night that was by heaven decreed our last.

Id. I pass their warlike pomp, their proud array. Id. Among the laws that passed, it was decreed, That conquered Thebes from bondage should be freed. Id.

Better to pass him o'er, than to relate The cause I have your mighty sire to hate. Id,

Pity tempts the pass ; But the tough metal of my heart resists. Id.

Lay by Virgil, my version will appear a pasaable beauty when the original muse is absent. Id.

The passage made by many a winding way. Reached e'en the room in which the tyrant lay.

Id. Apelles, when he had finished any work, exposed it to tlie sight of all passengers, and concealed himself to hear the censure of his faults. Id.

She WIS not only passing fair. But was. withal discreet and debonnair. Id.

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Though frauds may pass upon men, they are as open as the light to him that searcheth the heart.

L' Estrange.

A middling sort of man was left well enough to pass by his father, but could never think he had enough, so long as any had more. Id.

He passed his promise, and was as good as his word.

Id.

Time lays open frauds, and after that discovery there is no passing the san<" trick upon the mice.

Id.

I could see plate, hangings, and paintings about my house till you had the ordering of me, but I am now brought to such pass, that I ca" see nothing at all. Id-

In counterfeits, it is with men as with false money ; one piece is more or less passable than another. Id.

An idea of motion not passing on, is not better than idea of motion at rest. Locke.

We see, that one who fixes his thoughts very in- tently on one thing, so as to take but little notice of the succession of ideas that pass in his mind, vhilst he is taken up with that earnest contemplation, lets slip out of his account a good part of that duration, and thinks that time shorter than it is. /(/.

Defining the soul to be a substance that a'ways thinks, can serve but to make many men suspect that they have no souls at all, since they ..nd a good part of their lives pass away without thinking.

Id.

They did pass those bounds, and did return since that time. Burnet's Theory of the Earth.

Certain passages of Scripture we cannot, without injury to iruth, pass by here in silence. Burnet.

How does that man know, but the decree may be already passed against him, and his allowance of mercy spent 1 South.

Truth is a strong hold fortified by God and nature, and diligence is properly the understanding's laying siege to it ; so that it must be perpetually observing all the avenues and passes to it, and accordingly making its approaches. Id.

Matters have been brought to this pass, that if one among a man's sons had any blemish, he laid him aside for the ministry, and such an one was

presently approved. Id.

The Persian army had advanced into the straight passages of Cilicia, by which means Alexander with his small army was able to fight and conquer them.

Id. Have we so soon forgot.

When, like a matron, butchered by her sons.

And cast beside some common way a spectacle

Of horror and affright to passers by,

Our groaning country bled at every vein ? Rowe. The people, free from cares serene and gay.

Pass all their mild untroubled hours away.

Addison.

I had only time to pass my eye over the medals, which are great in number. Id. on Italij.

I wish for the wings of an eagle, to fly away to those happy seats ; but the genius told me there was no passage to them, except through the gates of death.

Addison.

A critick who has no taste nor learning seldom ventures to praise any passage in an author who has not been before recerved by the publick. Id.

He affirmed that no good law passed since king William's accession, except the act for preserving the game. Id.

Full soon by bonfire and by bell. We learnt our liege was passi7}g well. Gay. Full piteous seems young Alma's case,

As in a luckless gamester's place.

She would not play, yet must not pass. Prior.

Were I not assured he was removed to advantage, I should pass my time extremely ill without hini.

Colliei.

These stage advocates are not only without truth, but without colour ; could they have made the slander passable, we should have heard farther. Id.

He rejected the authority of councils, and so do all the reformed ; so that this wont pass for a fault in him, till 'tis proved one in us. Atterbuiy.

Live like those who look upon themselves as being- only on their passage through this state, but as be- longing to that which is to come. Id.

Inflammations are translated from other parts to the lungs ; a pleurisy easily passeth into a peripneu- mony. Arbuthnot.

Substances hard cannot be dissolved, but they will pass ; but such, whose tenacity exceeds the powers of digestion, will neither pass, nor be converted into aliment. Id.

When the gravel is separated from the kidney, oily substances relax the passages. Id.

Dr. Thurston thinks the principal use of inspira- tion to be, to move, or pass the blood, from the right to the left ventricle of the heart. Derham.

If the cause be visible, we stop at the instrument, and seldom pass on to him that directed it.

Wake's Preparation for Death.

Though the passag-e be troublesome, yet it is secure, and shall in a little time bring us ease and peace at the last. Wake.

False eloquence passeth only where true is not understood, and no body will commend bad writers, that is acquainted with good.

Feltnit on the Classics.

Heedless of those cares, with anguish stung. He felt their fleeces as they passed along. Pope.

In man the judgment shoots at flying game; A bird of passage ! lost as soon as found ; Now in the moon perhaps, now under ground. Id.

As to the cantos, all the passages are as fabulous as the vision at the beginning. Id.

Neither of these bills have yet passed the house of commons, and some think they may be rejected.

Swift.

The grossest suppositions pass upon them, that the wild Irish were taken in toyls ; but that, in some time, they would grow tame. Id.

Could the same parliament, which addressed with so much zeal and earnestness against this evil, pass it into a law? Id.

Before the passingbell begun, The news through half the town has run. Id.

The queen asked him, who he was ; but he passes over this without any reply, and reserves the greatest part of his story to a time of more leisure.

Broome.

If we would judge of the nature of spirits, we must have recourse to our own consciousness of what passes within our own mind. Watts.

How many thousands lake upon them to pass their censures on the personal actions of others, and pro' nounce boldly on the affairs of the publick ? /(/.

It does not belong to this place to have that point debated, nor will it hinder our pursuit to pass it over in silence. Id.

How commentators each dark passage shun. And hold their farthing candle to the sun. Yotmg. In souls prepared, the passage is a breath

From time t' eternity, from life to death. Harte, Sir Hudibras's passing worth. The manner how he sallied forth. Underwood. Green as the bay tree, ever green.

With its new foliage on. The gay, the thoughtless, have I seenˆ I passed ††† and they vvgre gone.

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Time moveth not ! ††† our being 'tis that moves- Aad we, swift gliding down life's rapid stream, IJreara of swift ages and revolving years. Ordained to chronicle our passing days.

Kirke White.

PASSADE, in the manege, is a turn or course of a horse backwards or forwards on the same spot of ground. Hence there are several sorts of

passades, according to tlie different ways of turning, in order to part or return upon the same tread, which is called closing the passade ; as the passade of one time, the passade of five times, and the raised or high passades, into which the demivolts are made into curvets.

PASSA'DO, n. s. Italian. A push; a thrust.

A duellist, a gentleman of the very first house ; ah ! the immortal passade. Shakspeare.

Pass A no. Pass, or Passade, in fencing, an advance or leap forward upon the enemy. Of these there are several kinds ; as passes within, above, beneath, to the right, the left, and passes under the line, &c. The measure of the pass is when the swords are so near as that they may touch one another.

I'assage, Right or, in commerce, is a duty exacted by some princes, either by land or sea, in certain close and narrow places in their terri- tories, on all vessels and carriages, and even somedaies on persons or passengers, coming in or going out of ports, &c. The most celebrated passage of this kind in Europe is the Sound ; The dues for passing which strait belong to the king of Denmark, and are paid at Elsinore or Cronenburg.

PASSAIC^ a river of New Jersey, which flows south into Newark Bay. It is navigable ten miles fo: small vessels. At Paterson this river has a fall of sixty or seventy fee: perpen- dicular, presenting a scene of singular beauty and grandeur. It is much visited as a natural curiosity

PASSAMAQUODDY Bay, a bay of North America, which forms a part of the boundary between Maine and New Brunswick. It is about six miles from north to south, and twelve from east to west. It contains a number of islands, as Campo Bello, Deer, Mouse, Dudley, Frederick, &c.

PASSAMAN, a province in the north of the island of Sumatra, formerly part of the king- dom of Achin. It is subdivided into other provinces, and was once a place of great trade in gold and nepper. It is nearly under the equi- noctial line.

PASSANT, in heraldry, a term applied to a lion or other animal in a shield, appearing to walk leisurely ; for most beasts, except lions, the trippant is frequently used instead of passant.

PASSARON, in ancient geography, a town of Epirus, where, after sacrificing to Jupiter, the kings swore to govern according to law, and the people to obey and defend the country.

PASSAU, a considerable town of 13avaria, at the confluence of the Inn and Danube, was for- , merly the capital of a bishopric, and is still a bishop's see, and the chief town of the circle of the Lower Danube. The Inn here is full as large, if not larger tlian the Danube, and the

two rivers divide the town into three parts, Pas- Kau Proper, situated on the peninsula between them; the Innstadt, standing on the south side of 6he Inn ; and the Ilzstadt, on the north side of the Danube. The three parts are connected by two long wooden bridges. The fortifications are of considerable strength, and include three large forts. Passau Proper contains several fine public edifices, such as the cathedral, the bi- shop's palace, and the gymnasium, originally the Jesuits College. The Ilzstadt is "inhabited chiefly by fishermen and laborers. The Innstadt is somewhat better. Passau has a tobacco ma- nufactory, some large breweries, and, from its command of river navigation, a tolerable general trade. Here was concluded, in 1552, the famous peace of Passau, considered by the German Pro- testants as the charter of their liberties : in 1G52 the greatest part of the town was burnt down ; and in 1800, 1805, and 1809, it suffered gready from military contributions, and the passage of troops. Population of the whole place 10,000. Eighty-six miles E.N. E, of Munich, and 138 west by north of Vienna.

The bishopric of Passau formerly comprised a track of country between Bavaria, Bohemia, and Upper Austria, of 470 square miles super- ficial extent ; population 60,000. It was secu- larised in 1803; and since 1815 the part lying west of the Inn belongs to Bavaria, and the rest to Austria.

PASSERAT (John), a celebrated professor of eloquence in the royal college of Paris, and one of the most elegant writers of his time, was born at Troyes, in Champagne, in 1534. He studied the law under the famous Cujacius at Bourges, where he became professor of elo- quence in 1572. H"? was an indefatigable stu- dent, and gained the esteem of Charles IX., Ilejry III., and all the men of wit and learning in his time. He died in 1602, and left several admired works behind him.

PASSERES, in ornithology, the sixth order of birds according to the Linnaan system, are distinguished by a conical and pointed bill ; the nostrils are oval, pervious, and naked ; the legs are formed for hopping; the toes are slender, and divided ; the bodies of those that feed on grain are pure, but of those that feed on insects impure ; the nest is formed with much art. They live chiefly in trees and hedges, are mono- gamous, and feed their young by thrusting the food down their throats. Tliis order includes all the singing birds ; the males are the song- sters. They are divided into four sections, see Ornithologv, and include the following genera.

Sect. I. Colius. Emberiza. Fringilla. Loxia. Phytotoma.

Sect. III. Ampelis. Muscicapa. Tanagra. Turdus.

Sect. II.

Caprimulgus.

Pipra.

Hirundo.

Sect. IV. Alauda. Columba. i\lotaciila. Parus. Sturnus

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*'PASSERI, a learned antiquary and philologer, born at Gubio in Urbino, in 1694. Having entered into orders he became apostolic protonotary and vicar general of Pesara. He published many books, particularly Picturae Etruscorum in Vasculis, nunc primum in unum collectse, explicationibus et dissertationibus il- lustratae, Rome, 1767, 3 tom. fol. Being over- turned in his carriage, he received a bruise of
॥ which he died in 1780.*

Passer I (John Baptist), a painter and poet of Italy, born in 1609. He vvas a disciple of Do- minichino, but had more merit as an author than as a painter. He wrote the Lives of the Paint- ers, Sculptors, and Architects, of his own time. He died at Rome in 1679, aged seventy.

PASSIENUS (Paulus), a Roman knight, nephew of the poet Propertius, whose elegiac poetry he imitated. He also attempted Lyric poetry with success.

PASSIFLORA, the passion-flower; a genus of the pentandria order and gynandria class of plants ; natural order thirty-fourth, cucurbitaceae : CAL. pentaphyllous ; petals five ; the nectarium a crown; the berry is pedicillated. There are nearly thirty different species ; all natives of warm foreign countries, only one of which is sufficiently hardy to succeed well in the open ground here ; all the others requiring the shelter of a green-house or stove, but chiefly the latter. The most remarkable are : ॥॥॥

1. P. caerulea, the blue-rayed common pal- mated passion-flower, has long, slender, shrubby, purplish-green stalks, branchy, and ascending, upon support by their claspers, thirty or forty feet high ; with one large pal mated

leaf at each joint, and at the axillas large spreading flowers, with whitish-green petals, and a blue radiated nectarium ; succeeded by a .large, oval, yellow- ish fruit. It flowers from July until October; the flowers are very large, conspicuous, and their composition is exceedingly curious and beautiful. They come out at the axillas on pedun- culi about three inches long, which they termi- nate, each flower having, just close under the calyx, a three-lobed invoJucrum-like appendage; a five-lobed calyx, and a five-petalous corolla, the size, figure, and color of the calyx, &c., the petals arranging alternately with the calycinal lobes ; and within the corolla is the nectarium, composed of a multitude of thread-like fibres, of a blue and purple color, disposed in circular rays round the column of the fructification ; the outer ray is the longest, flat, and spreading on the petals : the inner is short, erect, and narrows towards the centre ; in the middle is an erect cylindric club-shaped column or pillar, crowned with the roundish germen, having at its base five horizontal spreading filaments, crowned with incumbent yellow antherse, and that move about every way ; and from the side of the germen arise three slendei spreading styles, terminated by headed stigmas ; the green afterwards gradu- ally becomes a large oval fleshy fruit, ripening to a yellowish color. These wonderful flowers are only of one day's duration, generally opening about 11 or 12 o'clock, and frequently in hot sunny weather burst open with elasticity, and continue fully expanded all that day ; and the

next they gradually close, assuming a decayed like appearance, and never open any more ; the evening puts a period to their existence, but they are succeeded by new ones daily on tlie same plant. This plant and flowers are held in great veneration in some foreign Catholic countries, where the religious make the leaves, tendrils, and diff'erent parts of the flower, to represent the instruments of our blessed Saviour's passion ; hence the name passiflora.

2. P. incarnata, the incarnated, or flesh-co- lored Italian passion flower, has a strong peren- nial root ; slender, herbaceous stalks, rising, upon support, four or five feet high ; leaves composed of three sawed lobes, each leaf attend- ed by a twining tendril ; and at the axillas long slender pedunculi, terminated each by one whitish flower, having a greenish calyx, and a reddish or purple radiated nectarium, surround- ing the column of the fructification, which suc- ceed to a large, round, fleshy fruit, ripenmg to a beautiful orange-color. The flowers of this species are also very beautiful, though of short duration, opening in the morning and night puts a period to their beauty ; but they are succeeded by a daily supply of new ones. The fruit of this sort is also very ornamental, as ripening to a fine reddish orange-color ; but these rarely attain perfection here, unless the plants are placed in the stove ; therefore, when there is such accommodation, it highly merits that in- dulgence, where it will exhibit both flowers and green and

ripe fruit ; all at the same time in a beautiful manner.

3. P. vespertilio, the bat's wing passion-flow- er, has slender, striated, branchy stalks ; large, bilobate, or two-lobed leaves, tlie base roundish and glandular, the lobes acute, widely divari- cated like a bat's wings, and dotted underneath ; the axillary flowers having white petals and rays. The leaves of this species have a singular appearance, the two lobes being expanded six or seven inches, resembling the wings of a bat upon flight; hence the name vespertilio. All the species in this country are of a tender quali- ty, except the first, which succeeds very we'l in the full ground, in a warm situation ; only their young branches are sometimes killed in very severe winters; but plenty of new ones gene- rally rise again in spring following : the others denominated stove kinds, must always be retain- ed in that repository.

PASSINELLI (Laurence), an eminent histo- rical painter, born in 1 629, at Bologna ; in which city there are some of his best pieces. He died in 1 700, aged seventy-one.

PAS'SION, n. s. Ikv.n.ˆ Fr. and-Span.pss- PAs'siONATE,a□□/;. &cv.a.i sion ; Ital. passione ; Pas'sionately, adv. > Lat. passio. An ef- Pas'sionateness,ˆ. s. i feet produced by ex- Pas'siox-week. ' temal agency ; sus-

ceptibility of such effect, particularly mental susceptibility; emotion or commotion of mind; eagerness ; a particular kind of mental emotion, as anger, zeal, &c. Used emphatically, in the- ology, for the last sufferings of the Redeemer of mankind : hence the compound, passion-week, the week in which his sufferings have been com- memorated : to passion is used by Shakspeare

for to be agitated extremely : passionate is, moved, or apt to be moved, by passion ; soon angry: to passionate, to affect with or to express passion: passionately and passionateness follow the senses of passionate.

He shewed himself alive after his passion, hy many infallible proofs. Acta i. 3.

Great, pleasure, mixed with pitiful regard, That godly king and queen did passionate. Whilst they his pitiful adventures heard, That oft they did

lament his luckless state.

Spenser. My whole endeavour is to resolve the conscience, and to shew what, in this controversy, the heart is to think, if it will follow thˆ light of sound and sincere judgment, without either cloud of prejudice or mist of passionate affection. Hooker.

All the other passions fleet to air, As doubtful thoughts and rash embraced despair.

Hfuiktspeare. I am doubtful, lest You break into some merry passion, And so offend him : If you should smile, he grows impatient. Id.

'Twas Ariadne passioning For Theseus' perjury and unjust flight. Id.

Thy niece and I want hands, And cannot passionate our tenfold grief With folded arms. Id. Titus Andronicus,

The differences of mouldable and not mouldable, scissible and not scissible, and many other passions of matter, are plebeian notions, applied to the instruments men ordinarily practise. Bacon.

Envy is a gadding passion, and walketh the streets, and doth not keep at home. Id.

Thucydides observes that men are much more passionate for injustice than for violence ; because the one, coming as from an equal, seems rapine ; when the other, proceeding from one stronger, is but the effect of necessity. Clarendon.

In his prayers, as his attention was fixt and steady, so was it inflamed with passionate fervors. Felt.

To love with some passionateness the person you would marry is not only allowable but expedient.

Boyle. Passion s too fierce to be in fetters bound, And nature flies him like enchanted ground.

Dri/den. I made Melesinda, in opposition to Nourmahal, a woman passionatelu loving of her husband, patient of injuries and contempt, and constant in her kindness.

Id. For your love, You killed her father : you confessed you drew A mighty argument to prove your passion for the daughter. Id. and Lee's Oedipus.

Whoever passionately covets any thing he has not, has lost his hold.

L'Estrange.

A body at rest affords us no idea of any active power to move, and, when set in motion, it is rather a passion than an action in it. Locke.

They lay the bl'.me on the poor little ones some times passionately enough, to divert it from themselves.

Id. Good angels looked upon this ship of Noah's with a passionate concern for its safety. Burnet.

If sorrow expresses itself never so loudly and pas- sionately, and discharges itself in never so many tears, yet it will no more purge a man's heart, than the washing of his hands can cleanse the rottenness of his bones. Sough's Sermons.

He, to grate me more, Fublickly owned his passion foi- Amestris.

Rowe,

Where statesmen are ruled by faction and interest, they can have no passion for tiie glory of their cour; try, nor any concern for the figure it will make.

Addison on Medals. Homer's Achilles is haughty and passionate, impa- tient of any restraint by laws, and arrogant in arrai

Prior. Men, upon the near approach of death, have been roused up into such a lively sense of their guilt, such a pussionate degree of concern and remorse, that, if ten thousand ghosts had appeared to them, they scarce could have had a fuller conviction of their danger. Atterbury.

Survey yourself, and then forgive your slave, Think what a. passion such a foim must have.

Granville. Abate a little of that violent passion for finecloaths, so predominant in your sex. Swift.

'I'he word passion signifies the receiving any action, in a large philosophical sense ; in a more limited philosophical sense, it signifies any of the affections of human nature ; as love, fear, joy, sorrow : but the common people confine it only to anger. Watts.

Would a man know himself, he must study his natural temper ; his constitutional inclinations and favourite passions. Mason.

Self-knowledge will be a good ballast to the mind under any accidental

hurry or disorder of the passions.

Id. 0 Liberty ! the prisoner's pleasing dream, The poet's Muse, his passion, and his theme ; Genius is thine, and thou art Fancy's nurse.

Cowper, Hence all that is in man, pride, passion, art. Powers of the mind, and feelings of the heart. Insensible of Truth's almighty charms. Starts at her first approach, and sounds to arms !

Id. But from his visage little could we guess. So unrepentant, dark, and passionless. Save that when struggling nearer to his last, Upon that page his eye was kindly cast. Byron.

Passion is a word of which, as Dr. Keid observes, the meaning is not precisely ascer- tained, either in common discourse or in the writings of philosophers. In its original im- port it denotes every feeling of the mind occa- sioned by an extrinsic cause ; but it is generally used to signify some agitation of mind, opposed to that state of tranquillity in which a man is most master of himself. That it was thus used by the Greeks and Romans is evident from Cicero's rendering n-aOof, the word by which the philosophers of Greece expressed it, by pertur- batio in Latin. In this sense of the word, pas- sion cannot be itself a distinct and independent principle of action ; but only an occasional de- gree of vehemence given to those dispositions, desires, and affections, which are at all times pre- sent to the mind of man; and that this is its proper sense, we need no other proof, than that passion has always been conceived to bear ana- logy to a storm at sea, or to a tempest in the air. With respect to the number of passions of which the mind is susceptible,'different opinions have been held by different authors. Le Brun, a French writer on painting, justly considering the expression of the passions as a very im- portant as well as difficult branch of his art, has enumerated no fewer than twenty, of which the signs may be expressed by the pencil on can- vas. That there are so many different states of

mind producing different effects which are visible on the features and the gestures, and that tliose features and gestures ought to be diligently stu- died by the artist, are truths which cannot be denied ; but it is absurd to consider all these different states of mind as passions, since tran quillity is one of them, which is the reverse of passion.

A question of considerable importance in the philosophy of the human

*mind has been dis- cussed at no small length, by several eminent authors, whether the different passions be each a degree of an original and innate disposition, distinct from those dispositions which are re- spectively the foundations of the other passions, or only different modifications of one or two general dispositions common to the whole race ? The former opinion is held by all who build their system of metaphysics upon a number of dis- tinct internal senses; and the latter by those, who, with Locke and Hartley, resolvˆ what is commonly called instinct into an early associa- tion of ideas. See Instinct and Metaphysics. This question also involves in it the arguments respecting the disinterestedness of our most be- nevolent passions. But as it would swell this article beyond all due bounds to give even an abridged view of the arguments on both sides, we shall refer the
읍읍읍읍읍읍ader to the writings of Messrs. Locke and Hartley, lord Kames, Reid's Enquiry into the Human Mind, and Dr. Sayer's Disquisitions Metaphysical and Literary, where they will find the question amply discussed.*

PASSIONEI (Dominic), an Italian ecclesi- astic, born at Fossombrone, in Urbino, in 1682, studied in the Clementine College at Rome, after which he went to Paris with Gualterio, the papal nuncio. In 1708 he was employed as secret agent of the court of Rome in Holland, and subsequently in Switzerland. Innocent XIII. made him titular archbishop of Ephesus, and Clement XII. a cardinal and secretary of the briefs. Finally he became keeper of the Vatican library, where he was distinguished by the en- couragement he gave to the collation of MSS. of the Old Testament, for the use of Dr. Ken- nicott, &c. He died in 1761. He published an account of his negociations in Switzerland, under the title of Acta Legationis Helvetica, folio ; and formed a library at the Clementine College. Benedict Passionei, his nephew, pub- lished a collection of ancient inscriptions, with annotations, folio, 1763.

PASS I R, a town and district of the south- east coasts of Borneo. The town is situated about fifty miles from the mouth of the river of this name, near the bottom of a large bay ; it has sixteen reaches, and five other rivers joining it. Near the town it is very rapid : the tide rises nine feet, and ascends above the town. Over a bar at the mouth of the river is two fa- thoms water, with a muddy bottom.

The town consists of 300 wood houses, situ- ated on the north side of the river, most of them inhabited by Buggess merchants. The house or palace of the sultan is on the south side, a short distance from the river. The neighbourhood, though flat and unhealthy, produces rice in great abundance; musk, benzoin, aloes, pepper, cassia,

and long nutmegs ; also mastic and other gums, particularly dragon's blood

; honey, nold dust, camphor, and various fruits. The imports are similar to those of the other Malay ports. The inhabitants are fraudulent, and have cut off many ships by treachery. This was formerly a place of considerable trade. The East India Company about 1772 attempted to settle a fac- tory here for the sale of opium, piece-goods, &c., and for the purchase of the many valuable arti- cles brought thither by the Buggesses from Celebes, Sooloo, &c. But the plan was frus- trated by a commotion amongst the natives, at which the English commander took an alarm, and quitted the country, much against the wishes of the principal inhabitants. Since that period Passir has been seldom visited by Europeans. A few Chinese are settled here, who are in pos- session of the chief trade.

PAS'S I VE, adj. \ Fr. passif; Lat. passi Pas'sively, aiˆj;. fvus. This is, strictly, the Pas'siveness, n. s. ˆadjective of passion in its Passiv'ity. J first sense, and meims re-

ceptive of impressions from an external agent ; suffering without resistance ; in grammar, a par- ticular form of the verb : passively and passive- ness correspond with these senses : passivity is an innovation of Cheyne's, see below ; and pas- siveness is sometimes used to express calmness; patience of suffering.

We shall lose our passiveness with our being, and be as incapable of suffering as heaven can make us.

Decay of Piety, High above the ground

Their march was, and the passive air upbore

Their nimble tread. Milton's Paradise Lost.

Gravity and passiveness in children is not from dis- cretion but phlegme. Fell.

A man may not only passively and involuntarily be rejected, but also may, by an act of his own, cast out or reject himself. Pearson.

Though some are passively inclined,

The greater part degenerate from their kind.

Dry den.

As the mind is wholly passive in the reception of all its simple ideas, so it exerts several acts of its own, whereby out of its simple idea the other is formed. Locke.

The active information of the intellect, filling the passive reception of the will, like form closing with matter, grew actuate into a third and distinct perfection of practice. South.

The vis inertiae is a passive principle by which bo- dies persist in their motion or rest, receive motion in proportion to the force impressing it, and resist as much as they are resisted : by this principle alone there never could have been any motion in the world. 'Newton's Opticks.

A verb passive is that which signifies passion or the effect of action : as doceor, I am taught.

Clarke's Latin Grammar.

There being no mean between penetrability and iMpenetrability, between passivity and activity, these being contrary and opposite, tlie infinite rarefaction of the one quality is the position of its contrary.

Cheyne's Philosophical Principles.

Not those alone, who passive own her laws, But who, weak rebels, more advance her cause.

Pope.

It will almost always produce a puMiue compliance with the wickedness of others, and there are few who

do not learn by degrees to practise those crimes which they cease to censure. JuLumu.

I'ASS'OVEll, n. s. Pass and over. A feast instituted among the Jews in commemoration of the time when God, smiting the first born of the Egyptians, passed over the habitations of tlie Hebrews ; the sacrifice killed at this time. Take a lamb, and kill the jmssover.

Exodus. ThCvTews passover wrs at hand, and Jesus went up.

John ii. 13. The lamb was the remembrance of the passover, as the blessed eucharist is of the death of Christ.

Jer. Ta-ˆlor. The Lord's passover, commonly called Eastei, was ordered by the common law to be celebrated every year on a Sunday. AjˆliJle.

*The Passover was called pascha by the old Greeks and Romans ; not we presume from
ن-aixw, I suffer, as Chrysostom, Irenaus, and TertuUian, suppose, but from the Hebrew word nDi3, passage, leap. The institution of this solemn festival, the reason of it, the alteration of the Hebrew calendar, and its other conse- quences, with all the peculiar ceremonies ob- served in the celebration of it, are particularly related in the twelfth chapter of Exodus. The obligation of keeping the passover was so strict that whosoever neglected to do it was con- demned to death. Numb. ix. 13. But those who had any lawful impediment, as a journey, sickness, or any uncleanness, voluntary or invo- luntary : those that had been present at a funeral, or by any other accident had been defiled, were to defer the celebration of the passover till the second month of the ecclesiastical year, or to the 14th day of the month Jiar, which answers to April and May. See 2 Chron. xxx. 1,2, &c. The modern Jews observe in general the same ceremonies that were practised by their ances- tors, in the celebration of the passover ; but add thereto very many superstitious observances. See Whitby's Dissertation in an appendix to the fourteenth chapter of St. Mark.*

PASS'PORT, 71..S. ववv. passport. Permission of passage ; a public certificate of leave to travel. Under that pretext, fain she would have given a secret passport to her affection. Sidtiey.

Giving his reason passport for to pass Whither it would, so it would let him die. Id.

Let him depart ; his passport shall be made, And crowns for convoy put into his purse.

f>hakspeare. Having used extreme caution in granting ywssporfs to Ireland, he conceived that paper not to have been delivered. Clarendon.

Admitted in the shining throng He shows the passport which he brought along ; His passport is his innocence and grace. Well known to all the natives of the place.

Drydeii. At our meeting in another world ; For thou hast drunk thy passport out of this. Id. The gospel has then only a free admission into the assent of the understanding, when it brings a pass- fort from a rightly disposed will, as being the faculty of dominion, that commands all, that shuts out, and lets in, what objects it pleases. South.

Dame nature gave him comeliness and health, And fortune, for a passport

gave him wealth.

Harte.

A Passport, or Pass, is a license or writing obtained from a government granting permission and a safe conduct to pass through the country without molestation : also a permission granted by any state to navigate in some particular sea, without molestation. It contains the name of the vessel, and that of the master, together with her tonnage, and the number of her crew, certi- fying that she belongs to the subjects of a par- ticular state, and requiring all persons at peace with that state to suffer her to proceed on her voyage without interruption. The violation of passports expressly granted by the king, or by his ambassadors, to the subjects of a foreign power in time of mutual war, or committing acts of hostility against such as are in amity, league, or truce with us, who are here under a general im- plied safe conduct, are breaches of the public faith, without which there can be no intercourse or commerce between one nation and another ; and such ofi'ences may, according to the writers upon the law of nations, be a proper ground of a national war. Balzac mentions a very honor- able passport given by an emperor to a philoso- pher in these terms : ' If there be any one on land or sea hardy enough to molest Potamon, let him consider whether he be strong enough to wage war with Caesar.'

Passport is used likewise for a license granted by a prince for the importing or exporting mer- chandises, moveables, &:c., without paying the duties. Merchants procure such passports for certain kinds of commodities ; and they are al- ways given to ambassadors and ministers for their baggage, equipage, &c.

Passport is also a license obtained for the importing or exporting of merchandises deemed contraband, and declared such by tariffs, &c., as gold, silver, precious stones, ammunition of war, horses, com, wool, Sec, upon paying duties.

PASSUMAH, a district of Sumatra, on the south-west coast, bordering south on Rejang, and north by Lamattang. It is governed by four nearly independent chiefs, and is part of the ter- ritory of the sultan of Palembang.

PASSUS, among the ancient Romans, a mea- sure of length, being about four feet ten inches, or the 1000th part of a Roman mile. The word properly signifies the space betwixt the feet of a man walking at an ordinary rate. See Measure. PAST, adj. (part.), n. s., & prep. From Pass. Gone over ; gone through or spent ; undergone ; not present nor to come : as a noun substantive, the past time : as a preposition, beyond in point of time ; out of reach ; above or more than ; in- capable of.

We will go by the king's highway, until we be past thy borders. Numbers xxi. 22.

Sarah was delivered of a child, when she was past age. Heltrews xi. 11.

The northern Irish Scots have bows not past three quarters of a yard long, with a string of wreathed hemp, and their arrows not much above an ell.

Spenser on Ireland. Past, and to come, seem best ; things present worst. Shakspeare.

We must not Prostitute our past cure malady To empiricks.

Id. All's Well That Ends Well

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What's gone, and what's past help, Should be past grief. Id. Winter's Tale.

The same inundation was not deep, not past forty foot from the ground. Bacon.

That France and Spain were taught the use of shipping by the Greeks and Phoenicians is a thing pas< questioning. HeijHn.

Past hope of conquest, 'twas his latest care Like falling Caesar decently to die. Dryden.

Her life she might have had ; but the despair Of saving his had put it past her care. Id.

I'm stupified with sorrow, past relief Of tears. Id.

Love, when once past government, is consequently past shame. L'Estramre.

That he means paternal power is past doubt from the inference he makes. Locke.

That the bare receiving a sum should sink a man into a servile state is past my comprehension.

Collier on Pride. The past is all by death possest. And frugal fate that guards the rest. By giving bids us live to-day. Fenton.

Many men have not yet sinned themselves past all sense of feeling, but have

some regrets ; and, when their spirits are at any time disturbed with the sense of their guilt, they are for a little time more watch- ful over their ways ; but they are soon disheartened. Calami^'s Sermons. This not alone has shone on ages past, But lights the present, and shall warm the last.

Pope. A life of glorious labours past. Id.

For several months past papers have been written upon the best publick principle, the love of our country. Swift.

PASTE, n. s. k, V. a. } Fr. paste, paster ;

Paste'board, 71. s. & at/;, i Ital. pasta; Lat. pastum. A thin cement of flour and water ; dough; an artificial mixture in imitation of precious stones : to fasten or spread with paste : pasteboard is, a kind of paper board made by pasting together layers of paper, or the macerated and coarser materials of paper.

Except you could bray Christendom in a mortar, and mould it in a new paste, there is no possibility of an holy war. Bacon.

With particles of heavenly fire The God of nature did his soul inspire; Which wise Prometheus tempered into paste, And mixt with living streams, the godlike image cast. Dryden.

When the gods moulded up the paste of man. Some of their dough was left upon their hands. Id.

Tintoret made chambers of board and pasteboard, proportioned to his models, with doors and windows, through which he distributed on his figures artificial lights. Id.

By pasting the vowels and consonants on the sides of dice, his eldest son played himself into spelling.

I.ucke.

Put silk worms on whited brown paper in a paste- board box. Mortimer.

He has the whitest hand that ever you saw, and raises paste better than any woman.

Addison s Spectator.

I would not make myself merry even with a piece of pasteboard, that is invested with a publick charac- ter. Addison.

Young creatures have learned their letters and syl- lables by having them pasted upon little flat tablets.

Watts.

Paste is likewise used for a preparation of wheaten flour, boiled up and incorporated with water, used by various artificers, as upholsterers, saddlers, bookbinders, &c., instead of glue or size, to fasten or cement their cloth, leathers, papers, &.c. When paste is used by bookbinders, or for paper hangings to rooms, they mix a fourth, fifth, or sixth of the weight of the flour of powdered resin ; and, where it is wanted still more tenacious, gum arable or any kind of size may be added. Paste may be preserved from vermin by dissolving a little sublimate, in the proportion of a drachm to a quart, in the water employed for making it, which will prevent them from preying upon it.

Pastes used in the imitation or counterfeitmg of gems in glass. Gems made of pastes are no way inferior to the native stones, when carefully made and well polished, in brightness or trans- parence, but want their hardness.

To make paste of extreme hardness, and ca- pable of taking the colors of the gems. Take of prepared crystal 10 lbs., salt of pulverine 6 lbs., sulphur of lead 2 lbs. ; mix all these well into a fine powder : make the whole with common water in a hard paste, and make this paste into small cakes of about 3 oz. each, with a hole in their middle; dry them in the sun, and after- wards calcine them in the straitest part of a potter's furnace. After this, powder them, and levigate them to a perfect fineness on a porphyry stone, and set this powder in pots in a glass furnace to purify for three days ; then cast the whole into water, and afterwards return it into the furnace, where let it stand fifteen days, in which time all foulness and blisters will disappear, and the paste will greatly resemble the natural jewels. To give this the color of the emerald, add to it brass thrice calcined ; for a sea-green, brass simply calcined to a redness ; for a sapphire, add zaffer, with manganese; and for a topaz, manganese and tartar. The color of the coun- terfeit gems may be made deeper or lighter ac- cording to the work for which the stones are designed; and small stones for rings, &c., re- quire a deeper color, and large ones a paler. Besides the colors made from manganese, verdi- gris, and zaffer, which are the ingredients com- monly used, there are other very fine ones which care and skill may prepare. A very fine red may be made from gold, and one not much in- ferior to that from iron ; a very fine green from brass or copper; a sky-color from silver, and a much finer one from the garnets of Bohemia. Another way of making the paste to imitate the colored gems is this : Take a quantity of sugar of lead ; set it in sand, in a glass body well luted from the neck downwards ; leave the mouth of the glass open, and continue the fire twenty-four hours ;

then take out the salt, and, if it be not red but yellowish, powder it fine, and return it into the vessel, and keep it in the sand heat twenty- four hours more, till it becomes as red as cinna- bar. The fire must not be made so strong as to melt it; for then all the process is spoiled. Pour distilled vinegar on this calcined salt, and sepa- rate the solution from the dregs; let the decanted liquor stand six days in an earthen vessel, to give time for the finer sediment to subside

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filter this liquor and evaporate it in a o;lass body, and there will remain a most pure salt of lead ; dry this well, then dissolve it in fair water; let the solution stand six days in a glazed pan ; let it subside, then filter the clear solution, and eva- porate it to a yet more pure white and sweet salt ; repeat this operation three times ; put the now perfectly pure salt into a glass vessel, set it in a sand heat for several days, and it will be calcined to a fine impalpable powder of a lively red. Take all the ingredients as in tlie common composition of the pastes of the several colors, only, instead of red lead, use this powder; and the produce will well reward the trouble of the operation. A paste proper for receiving colors may be readily made by pounding and mixing 6 lbs. of white sand cleansed, 3 lbs. of red lead, 2 lbs. of purified pearl-ashes, and 1 lb. of nitre. A softer paste may be made in the same manner, of 6 lbs. of white sand cleansed ; red lead, and purified pearl-ashes, of each 3 lbs ; 1 lb. of nitre, half a pound of borax, and 3 ozs. of arsenic. For common use, 1 lb. of common salt may be sub- stituted for the borax. This glass will be very soft, and will not bear much wear if employed for rings, buckles, or such imitations of stones as are exposed to much rubbing ; but for ear-rings, ornaments worn on the breast, and those little used, it may last a considerable time. See Glass- Making.

To make doublet pastes, let the crystal or glass be first cut by the lapidaries in the manner of a brilliant, except that, in this case, the figure must be composed from two separate stones, or parts of stones, formed in the manner of the upper and under parts of a brilliant, if it was divided in a horizontal direction, a little lower than the middle. After the two plates of the in- tended stone are thus cut, and fitted so exactly that no division can appear when they are laid together, the upper part must be polished ready for setting ; and then the color must be put be- twixt the two plates by this method. Take of 'enice or Cyprus turpentine two scruples ; and add to it one scruple of the grains of mas- tich chosen perfectly pure, free from foulness, and previously powdered. Melt them together in a small silver or brass spoon ladle, or other vessel, and put to them gradually any of the colored substances below mentioned, being first ⁂well powdered ; stirring them together as the color is put in that they may be thoroughly com- mixed. Warm then the doublets to the same degree of heat as the

melted mixture ; and paint the upper surface of the lower part, and put the upper one instantly upon it, pressing them to each other, but taking care that they may be conjoined in the most perfectly even manner. When the cement or paint is quite cold and set, the redundant part of it, which has been pressed out of the joint of the two pieces, should be gently scraped off the side, till there be no ap- pearance of any color on the outside of the doublets : and they should then be skilfully set ; observing to carry the mounting over the joint, that the upper piece may be well secured from separating from the under one. The color of the ruby may be best imitated, by mixing a fourth part of carmine with some of the finest crimson Vol. XVI.

lake th.it can be procured. The sapphire may be counterfeited by very bright Prussian blue, mixed with a little of the above mentioned crim- son lake, to give it a cast of the purple. The Prussian blue should not be very deep-colored, or but little of it should be used : for otherwise it will give a black shade that will be injurious to the lustre of the doublets. The emerald may be counterfeited by distilled verdigris, with a little powdered aloes. But the mixture should not be strongly heated, nor kept long over the fire after the verdigris is added : for liie color will be soon impaired by it. The resemblance of the garnet may be made by dragon's blood ; which, if it cannot be procured of sufficient brightness, may be improved by a very small quantity of carmine. ITie amethyst may be imi- tated by the mixture of some Prussian blue with the crimson lake ; but the proportions can only be well regulated by direction, as different parcels of the lake and Prussian blue vary extremely in the degree of strength of the color. The yellow topazes may be counterfeited by mixing the powdered aloes with a little dragon's blood, or by good Spanish anotto ; but the color jnust be very sparingly used, or the tinge will be too strong for the appearance of that stone. The chrysolite, hyacinth, vinegar garnet, eagle marine, and other such weaker or more diluted colors, may be formed in the same manner, by lessening the proportions of the colors, or by compound- ing them together correˆpondently to the hue of the stone to be imitated; to which end it is proper to have an original stone, or an exact imitation of one, at hand when the mixture is made, in order to the more certain adapting the colors to the effect desired : and when these pre- cautions are taken, and the operation well con- ducted, it is practicable to bring the doublets to so near a resemblance of the true stones, that even the best judges cannot distinguish them, when well set, without inspecting them betwixt the eye and light, in such position that the light may pass through the upper part and corners of the stone ; when it will easily be per- ceived that there is no color in the body of the stone.

M. Fontaineu, of the Royal Academy of Sci- ences at Paris, proposed the following processes for imitation pastes, which were approved : Al- though

the different calces of lead are all adapted to produce the same effect in vitrifica- tion ; yet M. Fontaineu prefers lead in scales, and next to that minium, as being the most con- stantly pure. Sift through a silk sieve the prepa- rations of lead to be used in the vitrification, to separate the grosser parts ; as also the lead in a metallic state when white lead in scales is em- ployed. The base of factitious gems is calx of lead and rock-crystal. Pure sand, flint, and the transparent pebbles of rivers, are substances equally fit to make glass ; but as it is first ne- cessary to break masses of crystal, stones, or pebbles, into smaller parts ; so by this operation particles of iron or copper are frequently intro- duced, and to these dust or greasy matters are also apt to adhere. Our author therefore begins by putting the pounded crystal or pebbles into a crucible, which he places iu a degree of heat ea-

paVile of makino- tlif: mass red hot ; he tlien pours it into a wooden bowl filled with very clear water ; and, shaking the bowl from time to time, the small portions of coals furnished by the ex- traneous bodies swim on the surface of the water, and tlie vitrifiable earth, with the iron, ike, rests on die bottom. He then decants the water; and, having dried the mass, pounds it, sifts the powder through the finest silk sieve ; then di- gests the powder four or five hours with mu- riati-c acid, shaking the mixture eveny hour. After having decanted the acid from the verifi- able earth, he washes the latter until the water no longer reddens tlie tincture of turnsol. The earth, being dried, is passed through a silk sieve, and is then fit for use. Nitre, salt of tartar, and borax, are the three species of salts that enter with quartz and the calces of lead into M. Fontaineu's vitrifications. The success depends much on the accurate proportion of the substances made use of to form the crystal which serves as a base. After having tried a great variety of receipts, our au- thor recommends the following: 1. Take two parts and a half of lead in scales, one part and a half of rock crystal or prepared flints, half a pint of nitre, as much borax, and a quarter part of glass of arsenic. These, being well pulverised and mixed together, are put into a Hessian cru- cible and submitted to the fire. When the mix- ture is well melted, pour it into cold water; then melt it again a second and a third time, taking care after each melting to throw it into fresh cold water, and to separate from it the lead that may be revived. The same crucible should not be used a second time, as the glass of lead is apt to penetrate it, and lose the contents. Cover the crucible well, to prevent any coals getting into it, which would spoil the composition. 2. Take two parts and a half of white ceruse, one part of prepared flints, half a part of salt of tartar, and a

quarter part of calcined borax : melt the mixture in a Hessian crucible, and then pour it into cold w ater ; then melt it again and wash it a second and a third time, the same pre- cautions being observed. 3. Take two parts minium, one part rock-crystal, half a part of nitre, and as much salt of tartar : this mixture, being melted, must be treated as the former. 4. Take three parts of calcined borax, one part of prepared rock-crystal, and one part of salt of tartar; these, being well mixed and melted to- gether, must be poured into warm water ; the water being decanted, and the mass dried, an equal quantity of minium must be added to it ; it is then to be melted and washed several times as directed aˆˆove. 5. That called by our au- thor the Mayence base, and which he considers as one of the finest crystalline compositions hi- therto known, is thus composed : Take three parts of fixed alkali of tartar, one part of rock- crystal or flint pulverised : the mixture to be well baked together, and then left to cool. It is afterwards poured into a cnicible of hot water to dissolve the fritt ; the solution of the fritt is then received into a stone-ware pan, and aquafortis added gradually till it no longer effervesces : this water being decanted, the fritt must be washed in warm water till it has no longer any taste: the fritt is then dried, and mixed with one part

and a half of fine ceruse or white lead in scales; and this mixture must be well levigated with a little distilled water. To one part and a half of this powder dried add an ounce of calcined borax : let the whole be well mixed in a marble mortar, then melted and poured into cold water. These fusions and washings having been repeated, and the mixture dried and powdered, a twelfth part of nitre must be added, and then melted for the last time ; when a very fine crystal will be found in the crucible. 6. For very fine white stones : take 8ozs. of ceruse, 3 ozs. of rock-crystal pulverised, 2 ozs. of borax finely powdered, and half a grain of manganese ; havi.ig melted and washed this mixture as above, it produces a very fine white crystal.

There are three degrees of heat prope: for pastes very diffierent in their energy. The fire kept up in the wind-furnaces in the laboratories of che- mists is less active than that whose ett'ect is ac- celerated by the means of bellows ; and a fire supported by wood, and kept up during sixty hours without interruption, produces singular effect in vitrification, and renders the glass finer and less alterable. When recourse is had to the forge, in order to operate a vitrification, it is ne- cessary to turn about the crucible from time to time, that the mass may melt equally. Somˆe coal also should be replaced, in proportion as it consumes towards the nozel of the bellows ; for, without this precaution, we should run the risk of cooling the crucible opposite to the flame, and probably of cracking it, when all the melted mass, running among the coals, would be totally lost. Though this is the readiest way of melting, it should not be employed out of choice ; for the crucible often breaks, or coals get into it, and reduce the calx of lead to a

metallic state. The wind-furnace is either square or round. A small cake of baked clay or brick, of the thickness of an inch, is placed upon the grate ; and upon this cake is placed the crucible, surrounded with coals.

The following are some of the receipts recom- mended by M. Fontaineu : ††† 1. For the white diamond : ††† Take the base of Mayence. This crystal is very pure and has no color. 2. For the yellow diamond : ††† To an ounce of the fourth base, add for color 25 grains of luna cornea, or 1 0 grains of glass of antimony. 3. For the eme- rald : ††† l.To 15 ozs. of either of the bases, add for color 1 dr. of mountain-blue and 6 grs. of glass of antimony ; or, 2. To 1 oz. of the second base add 20 grs. of glass of antimony, and 3 grs. of calx of cobalt. 4. For the sapphire : ††† To 24 ozs. of the Mayence base add 2 drs. 64 grs. of the calx of cobalt. 5. For the amethyst : ††† To 24 ozs. of the Mayence base add 4 drs. of prepared manganese and 4 grs. of precipitate of cassius. 6. For the beryl : ††† To 24 ozs. of the third base add 96 grs. of glass of antimony, and 4 grs. of calx of cobalt. 7. For the black agate: ††† To 24 ozs. of either of the bases add 2 ozs. of the mixture di- rected above in par. f. 8. For the opal : ††† To 1 oz. of the third base add 10 grs. of luna cornea, 2 grs. of magnet, and 26 grs. of absorbent earth. 9. For the oriental topaz: ††† To 24 ozs. of the first or third base add 5 drs. of glass of anti- mony. 10. For the topaz of Saxony : ††† To 24

ozs. of the same base, add G drs. of ttie glass of antimony. 1 1 . For the topaz of Brazil : ††† To 24 ozs. of the second or third base, add 1 oz. 24 grs. of the glass of antimony, and 8 grs. of precipitate of cassius. 12. For the hyacinth : ††† To 24 ozs. of the base made with rock-crystal add 2 drs. 48 grs. of glass of antimony. 13. For the oriental ruby: ††† 1. To 16 ozs. of the Mayence base, add a mixture of 2 drs. 48 grs. of the precipitate of cassius, tlie same quantity of crocus Martis prepared in arjuafortis, the same of golden sulphur of antimony and of fusible man- ganese, with 2 ozs. of mineral crystal ; or, 2. To 20 ozs. of the base made with flint, add half an ounce of fusible manganese, and 2 ozs. of mme- ral crystal. 14. For thebalass ruby: ††† 1. To)G ozs. of the Mayence base, add the above coloring powder, but diminished one-fourth part ; or. 2. To 20 ozs. of the base made with flints, add the same coloring powder, but with one-fourth less of the manganese. The factitious gems are easily distinguished from the natural, by their softness and fusibility; by their solubility in acids; by their causing only a single refraction of the rays of light ; and, in many cases, by their specific gravity, which exceeds 2-76 in all precious gems of the first order, as the diamond, ruby, sapphire, &c.

A prize having been offered by the Society for the Encouragement of the Arts in France for the best memoir on the fabrication of imitation stones, it was decreed to M. D. Wieland.

The base of all these imitations is Strass, or white crystal. The materials employed are melted in Hessian crucibles, and a porcelain furnace ; or, what is preferable, a potter's furnace is after- wards used. The more tranquil and prolonged that the fusion is, the more hardness and beauty does the strass acquire.

Struss. ††† The following three mixtures give a very fine strass : †††

Rock crystal . 0-3i8 0-3170 0-300 Minium . . 0-490 04855 0-565 Potassa, pure . 0-170 0-1770 0-105 Borax . . 0-021 0-0200 0-030 Arsenic, oxide of 0-001 0-0005

1-000 1-0000 1-000

M. Lancon recommends the following mix- ture for a pure strass : †††

Litharge . 0-540

White lead . 0-406

White tartar, or potash 0-054

Topaz.††† The imitation of topaz is difficult. It passes from the white of strass to sulphur yel- low, violet and red purple, according to circum- stances which are not determine-J. The following are two of M. W ieland's recipes : †††

White strass . 0-95816 0-99

Glass of antimony 004089

Purple of cassius 0-00095

Oxide of iron . 001

its weight of strass, and keeping the mixture in fusion 'or thirty hours in a potter's furnace, the result is a fine yellowish crj'stal. This crystal, re- melted by the blow-pipe, produces the finest imitation of eastern ruby.

Ruby. ††† A ruby less beautiful, and of a differ- ent tint, may be made thus : †††

Strass . 0-9755

Oxide of manganese 0-0245

1-00000

1-00

1-0000

Sapphire. ††† The composition for this paste is ††† Strass, very white . 0-9855

Oxide of cobalt, very pure 0-0145

1-0000

This mixture must be put into a Hessian cru- cible, carefully luted, and remain thirty hours in the fire. If the process is well conducted, the result will be a very hard glass.

Amethyst. ††† Very deep amethyst may be ob- tained from †††

Strass . . 0-9870

Oxide of manganese 0-0078 Oxide of cobalt . 0-0050 ˆurple of cassius . 0-0002

These mixtures sometimes yield an opaque mass, translucent at the edges, and of a red co- lor in thin plates. By mixing it with eight times

M. Lancon uses ††† Strass

Oxide of manganese Oxide of cobalt

1-0000

0-9977 0-0022 00001

1-0000

Beryl, or aquamarine, is made with †††

Strass . . 0-9926

Glass of antimony 0 0070

Oxide of cobalt . 0-0004

1-0000

*The following is M. Lanf on's recipe for eme- rald :***

Strass . . 0-9904

Acetate of copper 00080 Peroxide of iron . 000 16

1-0000

*Peridot. *** By augmenting the proportion of ox- ide of chrome and oxide of copper in the first com- position of emerald, and adding oxide of iron, we may vary the green shades, and imitate the pe- ridot and deep-colored emerald.*

There has been at different times a method practised by particular persons of taking the impressions and figures of antique gems, with their engravings, in glass of the color of the original gem. This has always been esteemed a very valuable art, and greatly preferable to the ordinary method of doing it on sealing-w-ax or brimstone ; but being a secret in the hands of particular persons, who obtained their bread by it, it died with them, and every new artist was obliged to re-invent the method ; till at length M. Homberg, having carried it to great perfection, gave the whole process to the world. M. Hom- berg was favored in his attempts with all the en- graved gems of the king's cabinet ; and took such

elegant impressions, and made such exact resem- blances of the originals, and that in glasses so artfully tinged to the color of the gems them- selves, that the nicest judges were deceived in them, and often took them for the true antique stones. The chief care in the operation is to take that impression of the gem in a very fine earth, and to press down upon this a piece of proper glass, softened or half melted at the fire, so that the figures of tlie impression made in the earth may be nicely and perfectly e'pressed upon the glass. All earths run more or less easily in the fire as they are more or less mixed with saline particles. As all salts make earths run into glass, and as it is necessary to use an earth on this occasion for the making a mould, it being also necessary, to the perfection of the experiment, that this earth should not melt or run, some earth must be got which naturally contains very little salt. Of all the earths which M. Homberg ex- amined, none proved so fit for the purpose as the common Tripoli, used to polish glass and stones. Of this earth there are two common kinds : the one reddish, and composed of several tlakes or strata ; the other yellowish, and

of a simple structure. The yellowish kind, commonly called Venetian tripoli, is the best. It receives the im- pressions very beautifully ; and never mixes with the glass in the operation, which the red kind sometimes does. When the tripolis are sepa- rately powdered, the red kind must be mixed with so much water as will bring it to the con- sistence of paste, so that it may be moulded like a lump of dough between the fingers ; this paste must be put into a small crucible of aflat shape, and about half an inch or a little more in depth, and of such a breadth at the surface as is a lit- tle more than that of the stone whose impres- sion is to be taken. The crucible is to be nicely filled with this paste lightly pressed down into it, and the surface of the paste must be strewed thickly over with the fine powder of the yellow tripoli not wetted. When this is done, the stone, of wliicli the impression is to be taken, must be laid upon the surface, and pressed evenly down into the paste with a finger and thumb, so as to make it give a strong and perfect impression ; the tripoli is then to be pressed nicely even to its sides with the fingers, or with an ivory knife. The stone must be thus left a few moments, for the humidity of the]jaste to moisten the dry powder of the yellow tripoli which is strewed over it : then the stone is to be carefully raised by the point of a needle fixed in a handle of wood ; and, the cru- cible being then turned bottom upwards, it will fall out, and tlie impression will reinain very beautifully on the tripoli. If the sides of the C'iv ivy have been injured in the falling out of the stone, they may be repaired ; and the crucible must then be set, for the paste to dry, in a place where it will not be incommoded by the dust, 'ihc red tripoli, being the more common and the cheaper kind, is here made to f?ll the crucible only to save the other, which alone is the sub- stance fit for taking the impression. When the stone is taken out, it must be examined, to see whether any thing be lodged in any part of the engraving, because if there be any of the tripoli left there, tliere will certainly be so much want-

ing in the impression. W'hen the crucible and paste are dry, a piece of glass must be chosen of a proper color, and cut to a size proper for the figure ; this must be laid over the mould, but in such a manner that it does not touch the figures, otherwise it would spoil them. The crucible is then to be brought near the furnace by degrees, and gradually heated till it cannot be touched without burning the fingers; then it is to be placed in the furnace under a muffle, surrounded with charcoal. Several of these small crucibles may be placed under one muffle; and, when tliey are properly disposed, the aper- ture of the muffle should have a large piece of burning charcoal put to it, and then the operator is to watch the process, and see when the glass begins to look bright : this is the signal of its bemg fit to receive the impression. The crucible is then to be taken out of the fire ; and the hot glass must be pressed down upon the mould with an iron instrument, to make it receive the regular impression : as soon as this is done, the crucible

is to be set at the side of the furnace out of the way of the wind, that it may cool gradually without breaking. When it is cold^ the glass is to be taken out, and its edges should be grated round with pincers, which will prevent its flying afterwards, which is an accident that sometimes happens when this caution has been omitted, especially when the glass is naturally brittle. The different colored glasses are of dif- ferent degrees of hardness, according to their composition ; but the hardest to melt are always the best for this purpose, and this is known by a few trials. If it be desired to copy a stone in relief which is naturally in creux, or to take one in creux which is naturally in relief, there needs no more than to take an impression first in wax or sulphur, and to mould that upon the paste of tripoli instead of the stoue itself: then, proceed- incr in the manner before directed, the process will liave the desired success. The application of paste to multiply and preserve the impres- sions of cameos and intaglios is an object very interesting to artists and to antiquaries, as well as to men of learning and taste in the fine arts. This art, though not long restored to any degree of perfection, is of very considerable; antiquity. The great prices which the ancients paid for the elegant gems engraved by the celebrated CJreek artists, could not but suggest to them the idea of multiplying their numbers, by taking off' their impressions in wax, in sulphur, in plaster, or in clay ; but more particularly in colored glass, or that vitrified substance commonly called paste. As the impressions on paste are durable, and imitate the colors and brilliancy of the original stones, they mostly serve the same purposes as the gems themselves. This art was therefore practised, not only by the Greeks, but by all the nations who cultivated Grecian taste. Many of the finest gems of antiquity are now lost, and their impressions are to be found only on ancient pastes. Numerous collections of them have been formed by the curious. Instances of this are fo.und in the Florentine Museum, in Stosch's work on ancient gems with inscriptions, and in ^Vinckelman's description of Stosch's cabinet. The art of taking impressions of gems seems not

to have been altogether lost even in the Gothic ages ; for Heraclius, who probably lived in the ninth century, and wrote a book De coloribus et artibus Komanorum, teaches in very plain terms how to make them. Indeed, some of the few who then possessed this art, taking advan- tage of the ignorance of the times, sold pastes for the original gems. Thus the famous emerald of the abbey of Keichnaw near Constance, al- though a present made by Charlemagne, is now found to be a piece of glass. And thus the celebrated emerald vase in the cathedral of Genoa is likewise found to be a paste. The Genoese received this vase at the taking of Ce-

sarea, in 1101, as an equivalent for a large sum of money ; nor was any imposition then sus- pected, for in 1.319 they pawned it for 1200 marcs of gold. But this ingenious art, revived indeed in Italy, in the time of Laurence De Medicis, and Pope Leo X., was not cultivated in an extensive manner till the beginning of the eighteenth century, when M. Homberk restored it. In this he is said to have been greatly assisted and encouraged by the then duke of Orleans regent of France, who amused himself with that celebrated chemist, in taking oft' impressions in paste for the king of France's, his own, and other collections of gems. According to the French Encyclopedists, M. Clachant the elder, an en- graver of some note, who died in Paris in 1781, learned this art from his royal highness, to whose household, his father or he, seems to have be- longed. Mad. Feloix next cultivated this art. .She had been taught by her father, who, in qua- lity of garˆ-on de chambre to the regent, had often assisted in the laboratory of his master, where he acquired this knowledge. Baron Stosch, a Prussian, who travelled over Europe in quest of original engraved stones and impressions of an- cient gems, for the elegant work which he pub- lished and Picart engraved, entitled Gemmae antiquse coloratae, was well acquainted with this art. He had taught it to his servant Christian Dehn, who settled in Rome, where he made and sold his well known sulphur impressions and pastes. The difficulties in taking oft' the cameos arising from their size and form, and from the various nature of the diff'erent sorts of glass, which do not well unite into dift'erent strata, are very numerous : nor could the completest success in the chemical and mechanical branch of the art produce a tolerable cameo. Impressions or imitations, if unassisted by the tool of the en- graver, do not succeed : because the undercutting and deep work of most of the originals require to be filled up with clay or wax, that the moulds may come oflf safe without injuring them. Hence the impressions from these moulds come off' hard, and destitute of delicacy, sharpness, and precision of outline, till the underworking of the moulder is cut away. But Mr. Reiff'enstein of Rome, by perseverance, and the assistance of able artists, overcame most of these difficulties ; and had the satisfaction of producing variegated cameos which can hardly be distinguished from the originals. But, of all the artists who have taken impressions of engraved gems in sul]>hur and in paste, no one seems to have carried that V… to greater perfection than Mr.JamesTas.se, a

native of Glasgow, who resided in London. The

great demand for his pastes was perhaps owing in the beginning to the London jewellers, who introduced them into fashion, by setting them in rings, seals, bracelets, necklaces, and other trin- kets. The reputation of these impressions having reached the empress Catharine II. of Russia, she ordered a complete set ; which, being ac- cordingly executed in the best and most durable manner, were arranged in elegant cabinets, and placed in the

apartments of her superb palace at Czarsko Zelo. The impressions were taken in a beautiful white enamel composition, which is not subject to shrink or form air-bladders ; which emits fire when struck with steel, and takes a fine polish ; and which shows every stroke and touch of the artist in higher j)erfection than any other substance. It was the learned Mr. Raspe who arranged this great collection, and made out the descriptive catalogue, from which this account is taken.

Pastes for fishing are variously compounded, almost according to the angler's own fancy ; but there should always be a little cotton wool, shaved lint, or fine flax, to keep the parts of it together, that it may not fall off' the hook. W hite bread and honey will make a proper paste for carp or tench. Fine white bread alone, w'th a little water, will serve for roach and dace ; and mutton suet and soft new cheese for barbels. Strong cheese with a little butter, and colored yellow with saft'ron, will make a good winter paste for a chub.

But, among all the variety of pastes, there is none so often used as the simple and plain one made with white bread and milk, which requires only clean hands.

In September, and all the winter months, when you angle for chub, carp, and bream, with paste, let the bait be as big: as a large hazle nut : but for roach and dace, the bigness of an ordinary bean is sufficient.

PAS'TERN, 71. s. YT.pasturon; lial. pasˆstitoin, from Lat. pussus. That part of the leg of a horse between the fetlock and the hoof.

I will not change my horse with any that treads on four pasterns. .'ihuksjieare. Henry I .

The colt that for a stallion is designed,

Upright he walks on pasterns firm and straight,

His raotioHS easy, prancing in his gait. Dryden.

Being heavy, he should not tread stiff, but have a pastern made him to break the force of his weight ††† his body thus hangs on the hoof, as a coach doth by the leathers. Grew.

PAS'TIL, n. s. Fr. pastille ; Ital. paatigUa ; Lat. pustilliis. A roll of paste.

To draw with dry colors, make long pastils, by grinding red lead with strong wort, and so roll them up like pencils drying them in the sun.

Peacham un Drawinfj.

P.\STiL, in pharmacy, is a dry composition of sweet-smelling resins, aromatic woods, &c. sometimes burnt to clear and scent the air of a chamber

I'ASTIME, n. s. Pass and time. Sport; amusement ; something to pass time away ; di- version.

It was moie requisite for Zelmane's hurt fo rest, th;in sit up at those jastimes ; but she that felt no

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wound but one, earnestly aesired to have the pasto- rals. Sidney.

I'll be as patient as a gentle stream, And make a pustime of each weary step. Till the last step has brought me to my love.

Shakspeare. With these

Find pastime, and bear rule ; thy realm is large.

Miltcn.

A man much addicted to luxury, recreation, and pastime, should never pretend to devote himself en- tirely to the sciences, unless his soul be so refined that he can taste these entertainments eminently in his closet. " Watts.

While many a pastime circled in the shade, The young contending as the old surveyed ; And many a gambol frolicked o'er the ground, And slights of art, and feats of strength went round.

Goldsmith. Even in his pastimes he requires a friend,

To warn, and teach him safely to unbend.

O'er all his pleasures gently to preside.

Watch his emotions, and control their tide.

Cowper.

Pastimes, Ancient British. Most of the recreations of our ancestors are resolvable into the public defence of the state against the attacks of a foreign enemy. ‘ Every Friday in Lent,’ says Fitz-Stepben, ‘ a company of young men comes into the field on horseback, attended and conducted by the best horsemen : then march forth the sons of the citizens, and other young men with disarmed lances and shields ; and there practise feats of war. Many courtiers likewise, wlien the king is near the spot, and attendants upon noblemen, do repair to these exercises ; and, while the hope of victory does inflame their minds, they show by good proof how serviceable they would be in martial affairs.’ This evidently is of Roman descent, and brings to our recollec- tion the Ludus Trojae, supposed to be the inven- tion, as it was the common exercise, of Asca- nius. In the vacant intervals of industry and labor, commonly called the holy-days, indolence and inactivity, which now mark this portion of time, were found only in those who were dis- tempered with age or infirmity. Fitz-Stephen says, ‘ In Easter holydays they fight battles upon the water. A shield is hanged upon a pole, fixed in the middle of the stream. A boat is prepared without oars, to be borne along by the violence of the water; and in the forepart thereof standeth a young man, ready to give cliarge upon the shield with his lance. If so be that he break his lance against the shield, and floth not fall, he is thought to have performed a woithy deed. If without breaking his lance he runs strongly against the shielo, down he falleth into the water; for the boat is violently forced with the tide : but on each side of the shield ride two boats, furnished with young men, who re- cover him who falleth soon as they may. In the holydays all the summer the youths are exercised in leaping, dancinsr, shooting, wrestling, casting the stone, and practising their shields ; and the maidens trip with their timbrels, and dance as long as they can well see. In winter, every holyday before dinner, the boars prepared for brawn are set to figllt, or else bulls or bears are baited.’ Such were the pursuits to which leisure was devoted by our forefathers so far back as

1130. Their immediate successors breathed the same spirit. In 1222, the sixth year of Henry III., certain masters in exercises of this kind made a public profession of their instructions and discipline, which they imparted to those who were desirous of attaining excellence and victory in these honorable achievements. About this period, persons of rank and family introduced the game of Tennis ; and erected courts or ob- long edifices for the performance of it. In the reign of Henry III. the Quintain was a sport much in fashion in almost every part of the king- dom. This contrivance consisted of an upright post firmly fixed in the ground, upon the top of which was a cross piece of wood, moveable upon a spindle ; one end of which was broad like the flat part of a halberd, while at the other end was hung a bag of sand. The exercise was per- formed on horseback. The masterly performance was, when, upon the broad part being struck with a

lance, which sometimes broke it, the as- sailant rode swiftly on, so as to avoid being struck on the back by the bag of sand, which turned round instantly upon the stroke given, with a very swift motion. He who executed this feat in the most dexterous manner was de- clared victor. But if, upon the aim taken, the contender miscarried in striking at the broad- side, his want of skill became the ridicule and contempt of the spectators. Dr. Plott, in his Natural Flistory of Oxfordshire, tells us, that this pastime was in practice in his time at Ded- dington. He and Matthew Paris give similar accounts. But all the manly pastimes seem to have given place to one indeed no less manly, which was Archery. This continued till the reign of Charles I. It appears from 33 Hen. VIII. that, by the intrusion of other pernicious games, archery had been for a long time dis- used ; to revive which a statute was made, to- wards the beginning of James I.'s reign. He, to gratify the importunity of the common people, published a book of sports, in which the people had been some time before indulged on Sunday evenings, but which had been lately prohibited. These sports consisted of dancing, singing, wrestling, church ales, and other profanations ot that day. Charles, his successor, in the very entrance of his reign, abolished these sports.

PASTINACA, the parsnep, a genus of the digynia order and pentandria class of plants ; natural order forty-fifth, umbellatae : fruit an el- liptical compressed plane ; petals involuted and entire ; species three.

1. P. panax : the root is perennial, thick, fleshy, tapering like the garden parsnep ; the stalk is strong, branched, rough towards the bot- tom, and rises seven or eight feet in height ; the leaves are pinnated, consisting of several pairs of pinrae, which are oblong, serrated, veined, and towards the base appear unformed on the upper side: the flowers are small, of a yellowish color, and terminate the stem and branches in flat um- bels ; the general and partial umbels are com- posed of many radii ; the general and partial involucra are commonly both wanting ; all the florets are fertile, and have a uniform appear- ance; the petals are five, lance-shaped, and curled inwards ; the five filaments are spreading,

curved, longer than the petals, and furnished with roundish antherse ; the germen is placed below the corolla, supporting two reflexed styles, which are supplied with blunt stigmata ; the fruit is elliptical, compressed, divided into two parts, containing two flat seeds, encompassed with a narrow

border. It is a native of the south of Europe, and flowers in June and July. It bears the cold of our climate very well, and commonly matures its seeds; and its juice here manifests some of those qualities which are dis- covered in the officinal opoponax ; but it is only iu the warm re^^ions of the east, and where this jjjant is a native, that its juice concretes into t'.iis gummy resinous drug. Opoponax is ob- tained by means of incisions made at the bottom of the stalk of the plant, whence the juice gra- dually exudes; and by undergoing spontaneous concretion, assumes the appearance und(;r which we have it imported from Turkey and the East Indies. It readily mingles with water, by triture, into a milky liquor, which, on standing, deposits a portion of resinous matter, and becomes yel- lowish : to rectified spirit it yields a gold-colored tmcture, which tastes and smells strongly of opoponax. Water distilled from it is impregnated with its smell, but no essential oil is obtained on committing moderate quantities to the opera- tion. See Opoponax.

2. P. sativa, garden parsnep, is an exceedingly fine esculent root. It is propagated by seeds sown in February or March, in a rich mellow soil, which must be deep dug, that the roots may be able to run deep without hindrance. It is common to sow carrots at the same time, upon the same ground with the parsneps ; and, if the carrots are designed to be drawn young, there is no harm in it. The parsneps, when they are grown up a little, must be thinned to a foot distant, and kept clear of weeds. They are finest tasted just at the season when the leaves are decayed : and such as are desirous to eat them in spring should have them taken up in autumn, and preserved in sand. When the seeds are to be saved, some very strong and fine plants should be left four feet distant; and to- wards the end of August, or beginning of Sep- tember, the seeds will be ripe : they must then be gathered, and dried on a coarse cloth. They should always be sown the spring following ; for they do not keep well. Hints have been given, and experiments made, by agricultural societies, respecting parsneps, to raise them for winter food to cattle. It has long been a custom in some parts of Brittany to sow parsneps in the open field for the food of cattle. Hogs have no other food in all tliat season, and bullocks and oxen thrive well upon it. Cows fed with pars- neps give more milk than with any other winter fodder, and that milk yields better butter than the milk of cow? nourished with any other sub- stance. Cattle eat these roots raw, at first sliced lengthwise ; and when they begin to tire of them they are cut in pieces, put into a large copper, pressed down there, and boiled with only so much water as fills up the chasms between them. They then eat them very greedily, and continue to like them.

PASTOPIIORI. Gr. Tracoe, a couch, and

ipipb), to bring or bear. In archaiology, priests of an inferior order among

the ancients, who, in solemn processions, carried the statues of the gods. Pocock speaks of two antique monu- ments extracted from the ruins of Thebes, on one of which are represented t\ elve pastophori, carrymg on their shoulders a vessel, in the mid- dle of which is a little chapel, closed : on the other eight priests of a similar order, bearing in like manner, a ship wherein a god, in human guise, appears seated upon a kind of shrine. It IS to be regretted that this traveller cites from memory only, having neglected to procure a drawing of the figures.

Sometimes, also, these pastophori bore in their hands the images of the gods. Caylus has given a drawing of a priest bearing the idol of a divinity enclosed in a sort of little tabernacle.

Clemens Alexandrinus, describing the temples of the Egyptians, says, that, after having passed through magnificent courts, you are conducted to a temple, which is at the farther end of these courts, and then a pastophorus gravely lifts up the veil, which is the door, to show you the deity within ; which is nothing but a dog or a cat, or some other animal. Apuleius speaks of the pas- tophori that carried the Syrian goddess. The Greeks had a college of priests of this descrip- tion in the timeof Sylla. Some antiquaries have affirmed that the name of pastophori was ap- plied to this class by the Greeks from the cir- cumstance of their wearing long mantles, or from the couch or bed {irarog) of \ enus, which was carried by them in certain ceremonies, or, again, from the veil which covered the divinities, and which was lifted up by the pastophori, to exhi- bit them to the view of the people.

PASTOPtiOKIA, the cells or apartments near the temples, where the pastophori lived. There were several lodging rooms for the priests of a similar kind in the temple of Jerusalem.

PAS'T)R, n. s. ˆ Fr. pusteur, pas-*

Pas'toral, ►►rf;. k. n. s. S toral; Latin pastor, pastoralh. A shepherd ; hence the settled mi- nister of a spiritual flock: pastoral is, shepherd- like ; rural ; relating to the care of souls : as a noun substantive, a poem representing a country or rural life ; a bucolic.

Woe be unto the pastm-s that destroy and scatter the sheep of my pasture, saith the Lord.

Jer. xxiii. L In those pastoral pastimes, a great many days were sont to follow tlieir flying predecessors.

Sidney All b;shops are pastort of the common flock.

Leaky. The pastor maketh suits of the people, and they with one voice testify a general assent thereunto, or he joyfully beginneth, and they with like ala- crity follow, dividing between them the sentences wherewith they strive which shall most shew his own, and stir up others zeal to the glory of God.

Hooker. Their lord and master taught concerning the pas- toral care he had over his own flock. Id

The best actors in the world, for tragedy, comedy, history, pastoral. fihakspeare. Hamlet.

Receive this present by the muses made. The pipe on which the Ascra;an pastor playerl.

Dry den.

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PASTURE.

The bishop of Salisbury recommendeth the tenth satire of Juvenal, in his pastimd letter, to the serious perusal of the divines of his diocese. Id.

There ought to be the same difference between pastorals and elegies as between the life of the country and the court ; the latter should be smooth, clean, tender, and passionate : the thoughts may be bold, more gay, and more elevated than in pastoral.

Walsh.

The first branch of the great work belonging to a pastor of the church was tj vaA. Soulh.

Pastoral is an imitation oˆ the action of a shep- herd ; the form of this imit'j..ion is dramatick or nar- rative, or mixed of both, the fable simple, the man- ners not too polite nor too ruslick. Pope.

A breach in the general form of worship was reckoned too unpopular to be attempted, neither was the expedient then found out of maintaining sepa- rate pusfors out of private purses. Sit;, (.

‘Tis now become a liistory little known, That once we called the pastoral house our own.

Cowper.

PA’STRY, n. s. } Fr. pastisserie, from paste.

Pas’try-cook. i Baked paste; paste designed to be baked : pastry-cook is, one whose trade is to make and sell things baked in paste.

Remember The seed cake, the pasteries, and the furmenty pot.

Tusicr. They call for dates and quinces in the pastry,

Shakspeare. Beasts of chase, or fowls of game. In pastry built, or from the spit, or boiled, Gris amber steamed.

Milton’s Paradise Peijained. Let never fresh machines your paslrii try, Unless grandees or magistrates are by. Then you may put a dwarf into a pie. King.

I wish you knew what my husband has paid to the pastrycooks and confectioners. Arbuthnot.

PASTURE, n. s., v. a., & v. n. \ Fr. pasture, Pas’turable, ffflf/. S pastuiuˆe.

Pas’ttjrage, 97. s. 1 Food for

cattle ; food of any kind ; culture of the mind : to pasture is, both to place in, and eraze on pas- ture ground: pasturable, fit for pasture : pastur-
* 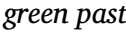 ˆe, the art of using or managing pastures ; lands grazed by cattle.*

He maketh me to lie down in green pasturps : he leadeth me beside the still waters. Psa. xxiii. 2.

I wish there were ordinances, that whosoever keepeth twenty kine, should keep a plough going ; for otherwise all men would fall to pasturaqe, and none to husbandry. Spenser.

A careless herd Full of the ;j((i(re jumps along by him. And never stays.

Shakspeare. As Yon Like it. The inhabitants each pasture and each plain Destroyed have, each field to waste is laid ; In fenced towers bestowed is their grain, Before thou earnest this kingdom to invade.

FairJ’ar. The cattle in the fields and meadows green. Those rare and

solitary ; these in flocks Pasturing at once, and in broad herds up sprung.

Mitton. Unto the conservation is required a solid pasttire, and a food congenerous unto nature. Brounf.

From the first pastnres of our infant age, To elder cares and man's severer page We lash the pupil. Vryden.

When there was not room for their herds to fted together, they, by consent, sepaiated and enliir; ea their pasture where it best liked them. Locke.

France has a sheep by her to show that the riches of tha country consisted chiefly in flocks and pasturage. Addison.

Cattle fatted by good pasturage after violent mo- tion, die suddenly. Arbuthnot on Aliments, The pastures smile in gree i array j

There lambs and larger cattle play. Watts. The new tribes look abroad

On nature's common, far as they can see

Or wing their range and pasture.

Thomson's Spring. Pasture, or Pasture Land, is that reserved for feeding cattle. Pasture land is of such ad- vantage to husbandry that many prefer its culti- vation even to corn land, because of the small hazard and labor that attend it, and as it lays the foundation for most of the profit that is ex- pected from arable land, because of the manure afforded by the cattle which are fed upon it. Pasture ground is of two sorts ; the one is mea- dow land, which is often overflowed ; and the other upland, which lies high and dry. The first of these will produce a much greater quantity of hay than the latter, and will not require manur- ing or dressing so often : but then the hay pro- duced on the upland is much preferable to the other ; as is also the meat which is fed in the upland more valued tlian that which is fatted in rich meadows ; though the latter will make the fatter and larger cattle, as is seen by those which are brought from the low rich lands in Lincoln- shire. But, where people are nice in their meat, they will give a much larger price for such as has been fed on the downs, or in short upland pasture, than for the other, which is much larger. Besides this, dry pastures have an advantage over the meadows, that they may be fed all the winter, and are not so subject to be boggy in wet weather ; nor will there be so many weeds produced ; which are great advantages, and in a great measure recompense for the smallness of the crop. We shall here only mention some nT^thods for improving upland pasture.

The first improvement of upland pasture is by fencing it, and dividing it

into small fields of four, five, six, eight, or ten, acres each, planting timber trees in the hedge rows, which will screen the grass from the dry pinching winds of March, which will prevent the grass from growing in large open lands ; so that if April proves a dry month, the land produces very little hay ; whereas, in the sheltered fields, the grass will begin to grow early in March, and will cover the ground, and prevent the sun from parching the roots of the grass, whereby it will keep growing, so as to af- ford a tolerable crop, if the spring should prove dry. But in fencing land the enclosure must not be made too small, especially where the hedge- rows are planted with trees ; because, when the trees are advanced to a considerable height, they will spread over the land : and, where they are close, w ill render the grass sour ; so that, in- stead of being of an advantage, it will greatly in- jure the pasture. The next improvement of up- land pasture is to make turf good, where, either from the badness of the soil or want of proper care, the grass has been destroyed by rushes,

bushes, or mole-hills. Where the surface of the land is clayey and cold, it may be imj>roved by paring it off, and burning it ; but if it is a hot sandy land, then chalk, lime, marl, or clay, are very proper manures to lay upon it ; but this should be laid in pretty good quantities, other- wise it will be of little service to the land. If the ground is over-run with bushes or rushes, it will be of great advantage to the land to grub them up towards the latter part of summer, and, after they are dried, to burn them, and spread the ashes over the ground just before tlie autum- nal rains ; at which time the surface of the land should be levelled, and sown with grass-seed, which will come up in a short time, and make good grass the following spring. So, also, when the land is full of mole-liills, these should be pared off, and either burnt for the ashes, or spread immediately on the ground where they are pared off, observing to sow the bare patches with grass-seed just as the autumnal rains begin. Where the land has been thus managed, it will be of great service to roll the turf in the months of February and March with a heavy wood roller ; always observing to do it in moist weather, that the roller may make an impression ; this will render the surface level, and make it much easier to mow the grass than when the ground lies in hills ; and will also cause the turf to thicken, so as to have what the people usually term a good bottom. The grass likewise will be the sweeter for this husbandry, and it will be a great help to destroy weeds. Another improve- ment of upland pastures is the feeding of them ; for, where this is not practised, the land must be manured at least every third year ; and, where a farmer has much arable land in his possession, he will not care to part with his manure to the pasture. Therefore every farmer should endea- vour

to proportion his pasture to his arable land, especially where manure is scarce, otherwise he will soon find his error; for the pasture is the foundation of all the profit which may arise from the arable land. Whenever the upland pastures are mended by manure, there should be a regard had to the nature of the soil, and a proper sort of manure applied : as, for instance, all hot simdy land should have a cold manure ; neat's dung and swine's dimg are very proper for such lands ; but, for cold lands, horse dung, ashes, and other warm manures, are proper. And, when these are applied, it should be done in autumn, before the rains have soaked the ground, and rendered it too soft to cart on ; and it should be carefully spread, breaking all the clods as small as possible, and then harrowed with bushes, to let it down to the roots of the grass. When the manure is laid on at this sea- son, the rains in winter will wash down the salts, so that the following spring the grass will receive the advantage of it. There should also be great care taken to destroy the weeds in the pasture every spring and autumn : for, where this is not practised, the vveeds will ripen their seeds, which will spread over the ground, and thereby fill it with such a crop of weeds as will soon overbear the grass, and destroy it ; and it will be very difficult to root them out afterwards ; espe- cially ragwort, and such other weeds as have

down adhering to their seeds. The grasses sown in these upland pastures .seldom degenerate, if the land is tolerably good : whereas the low meadows, which are overflowed in winter, in a few years turn to a harsh rushy grass, though the upland will continue a fine sweet grass for many years without renewing. There is no part of husbandry of which the farmers are in general more ignorant than that of the pasture : most of them suppose that, when old pasture is ploughed up, it can never be brought to have a good sward again; so their common method of manag- ing their land after ploughing is to sow with their crop of barley some grass seeds as they call them ; that is, either the red clover, which they intend to stand two years after the corn is taken off the ground, or rye-grass mixed with trefoil ; but as all these are at most but biennial plants, whose roots decay soon after their seeds are perfected, so the ground, having no crop up- on it, is again ploughed for corn ; and this is the constant round which the lands are employed in by the better sort of fstrmers. But, whatever may have been the practice of these people, it is cer- tainly possible to lay down lands which have been in tillage with grass, in such a manner as that the sward shall be as good, if not better, than any natural grass, and of as long duration. But this is never to be expected in the common method of sowing a crop of corn with the grass seeds ; for, wherever this has been practised, if the corn has succeeded well, the grass has been very poor and weak ; so that, if the land has not been very good, the grass has scarcely been worth saving ; for the f^ollowing year it lias pro- duced but little hay, and the year

after the crop is worth little, either to mow or feed. Nor can it be expected to be otherwise ; for the ground cannot nourish two crops ; and if there were no deficiency in the land, yet the corn, being the first and most vigorous of growth, will keep tlie grass from making any considerable progress ; so that the plants will be extremely weak, and but very thin, many of them which come up in the spring being destroyed by the corn ; for, when- ever there are roots of corn, it cannot be ex- pected there should be any grass. Therefore the grass must be thin ; and if the land is not in good heart to supply the grass with nourislunent, that the roots may branch out after the corn is gone, there cannot be any considerable crop of clover; and, as their roots are biennial, many of the strongest plants will perish soon after they are cut ; and the weak plants, which had made but little progress before, will be the principal part of the crop for the succeeding year ; wliich is many times not worth standing. Therefore, when ground is laid dow n for grass, there should be no crop of any kii\d sown with the seeds ; or at least the crop should be sown very thin, and the land should be well ploughed and cleaned from weeds, otherwise the weeds will come up first, and grow so strong as to overbear the grass, and, if they are not pulled up, will entirely spoil it. The best season to sow the grass seeds upon dry land, when no other crop is sown with them, is about the middle of September, or sooner if there is an appearance of rain : for l!ie ground being then warm, if there happen son.e good

sbovvers of rain after the seed is sown, the grass will soon make its appearance, and get sufficient rooting in the ground before winter : so will not be in danger of having the roots turned out of the ground by frost especially if the ground is well rolled before the frost comes on, wiiich will press it down, and fix the earth close to the roots. Where this has not been practised, the frost has often loosened the ground so much as to let in the air to the roots of the grass, and done it great damage; and this has been brought as an objection to the autumnal sowing of grass ; but it will be found to have no weight if the above direction is practised : noi is there any hazard of sowing the grass at this season, but that of dry weather after the seeds are sown ; for if the grass comes up well, and the ground is well rolled in the end of October, or the beginning of November, and repeated again the beginning of March, the sward will be closely joined at bottom, and a good crop of hay may be expected the same summer. But where the ground can- not be prepared for sowing at that season, it may be performed in the middle or end of March, according as the season is early or late ; for, in backward springs, and in cold land, we have often sowed the grass in the middle of April with success ; but there is danger, in sowing late, of

dry weather, and especially if the land is light and dry ; for we have seen many times the whole surface of the ground removed by strong winds at that season ; so that the seeds have been driven in heaps to one side of the field. Tlierefore, whenever the seeds are sown late in the spring, it will be proper to roll the ground well soon after the seeds are sown, to settle the surface, and prevent its being removed. The sorts of seeds which are the best for this purpose, are, the best sort of upland hay seeds, taken from the cleanest pastures, where there are no bad weeds ; if this seed is sifted,. to clean it from rub- bish, three bushels will be sufficient to sow an acre of land. The other sort is the trifoliura pratense album, commonly called white Dutch clover, or white honeysuckle grass. Of this seed eight pounds will be enough for one acre. The grass seed should be sown first, and then the Dutch clover seed may be afterwards sown ; but they should not be mixed, because the clover-seeds being the heaviest vviU fall to the bottom, and consequently the ground will be unequally sown. When the seeds are come up, if the land should produce many weeds, these should be drawn out befort they grow so tall as to overbear the grass ; for where this has 6een neglected, the weeds have taken such pos- session of the ground as to keep down the grass, and starve it; and, when these weeds have been suffered to remain until they have shed their seeds, the land has been so plentifully stocked with them as entirely to destroy the grass ; there- fore it is a principal care in husbandry never to suffei weeds to grow on the land. If the ground is rolled two or three times at proper distances after the grass is up, it will press down the grass, and cause it to make a thicker bottom : for, as the Dutch clover will put out roots from every joint of the branches which are near the ground, so, by pressing down of the stalks, the roots will iiiat so closely together as to form a sward

so thick as to cover the whole surface of the ground, and form a green carpet, and will better resist the drought. For if we examine the com- mon pastures in summer, in most of which there are patches of this white honeysuckle grass grow- ing naturally, we shall find these patches to be the only verdure remaining in the fields. And this the farmers in general acknowledge is the sweetest feed for all sorts of cattle; yet they never thought of propagating it by seeds, nor has this been long practised in England. As the white. clover is an abiding plant, so it is certainly the very best sort to sow, where pastures are laid dow n to remain ; for as the hay-seeds which are taken from the best pastures will be composed of various sorts of grass, some of which may be but annual, and others biennial ; so, when these go off, there will be many and large patches of ground left bare and naked, if there is not a sufficient quantity of the white clover to spread over and cover the land. Therefore a good sward can never be expected where this is not sown ; for in most of the natural pastures we find this plant makes no small share of the sward ; and it is equally good for wet

and dry land, growing naturally upon gravel and clay in most parts of P>ngland : which is a plain indica- tion how easily this plant may be cultivated to great advantage in most sorts of land through- out this kingdom. Therefore the true cause why the land which has been in tillage is not brought to a good turf again, in the usual method of husbandry, is, from the fanners not distin- guishing which grasses are annual from those which are perennial ; for, if annual or biennial grasses are sown, these will of course soon decay ; so that, unless where some of their seeds may have ripened and fallen, nothing can be expected on the la□□d but what will naturally come up. Therefore this, with the covetous method of laying down the ground with a crop of corn, has occasioned the geneial failure of increasing the pasture in many parts of Britain, where it is now much more valuable than any arable land. After the ground has been sown in the manner before directed, and brought to a good sward, the way to preserve it good is, by constantly rolling ihe ground with a heavy roller, every spring and autumn, as has been before directed. This piece of husbandly is rarely practised by farmers ; but those who do, find their account in it, for it is of great benefit to the grass. Another thing should also be carefully performed, which is, to cut up docks, dandelion, knapweed, and all such weeds, by their roots, every spring and autumn ; this will increase the quantity of good grass, and presen'e the pastures in beauty. Dressing of these pastures every third year is also a good piece of husbandry ; for otherwise it cannot be expected the ground should continue to produce good crops. Be- sides this, it will be necessary to change the seasons of mowing, and not to mow the same ground every year, but to mow one season and feed the next : for, where the ground is every year mown, it must be constantly dressed, as are most of the grass grounds in the environs of London, otherwise the ground will be soon ex- hausted.

PATAGONIA.

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PASTY, n. s. Ft. paste. A pie of crust without a dish.

Of the paste a coffin will I rear, And make two pasties of your shameful heads.

Shakspeare. I will confess what I know ; if ye pinch me like a pasty I can say no more. Id.

If you'd fright an alderman and mayor, Within a pasty lodge a living hare. A'"o'

A man of sober life, Not quite a madman though a paslii fell. And much

too wise to walk into a well. Pope. What say you ??? a past;/, it shall, and it must, And my wife little Kitty is famous for crust.

Goldsmith.

PAT, adj.,n.s.,ˆ v. a.) Belg. pas. (Skinner.) Patly, adv. S F)r- Johnson says Fr.

patte, is a foot, and thence pat may be a blow with the foot. Smart; fit ; convenient; suited : hence a smart, quick blow ; a tap : to strike lightly or smartly : patly is, suitably, with exact fitness.

Pat, pat ; and here's a marvellous convenient place for our rehearsal.

Shakspeare. Midsummer Night's Dream. Now I might do it pat, now he is praying.

Sha/tspeare. Children prove, whether they can rub upon the breast with one hand, and pat upon the forehead with another, and straighlways they put with both. Bacon's Natural History. They never saw two things so pat, In all respects as this and that. Hudibras.

If we do search about for a case to that which we do now commemorate, we should, perhaps, hardly find one more patlij such, than is that which is im- plied in this psalm. Barrow.

The least noise is enough to disturb the operation of his brain ; the pat of a shuttlecock, or the creak- ing of a jack will do. Collier.

Zuingllus dreamed of a text, which he found very pat to his doctrine of the Eucharist. Atterbury. Gdiy pats my shoulder, and you vanish quite.

Pope. He was sorely put to it at the end of a verse. Because he could find no word to come pat in.

Sicift.

PAT .'EC I, in mythology, images of gods which the Phoenicians carried on the prows of their galleys. Herodotus, lib. iv., calls them iraTojixoi. The word is Phoenician, and derived from pethica, i. e. titulas, a title, or mark of dig- nity. See Bochart's Chanaan, lib. ii. cap. 3. But Scaliger derives it from Ileb. putuch, to engrave. Morin derives it from iriOriKOQ, monkey, this ani- mal having been an object of worship among the Egyptians, and hence might have been honored by their neighbours. Mr. Eisner has observed, that Herodotus does not call the patseci gods, but that they obtained this dignity from the libe- rality of Hesychius and Suidas, and

other ancient lexicographers, who place them at the stern of ships ; whereas Herodotus placed them at the prow. Scaliger, Bochart, and Selden, have taken some pains about this subject.]\Ir. Morm has also given us a learned dissertation on this head in the INIeuioires de I'Acad. des Inscript. et Belles Lettres, torn. i.

PATAGONIA, a name given to that part of South America which extends from Chili and Paraguay to the extremity of this continent south-wost, tha' is, from 35►► almost to oA^ of

latitude : being surrounded by Chili, Paraguay, the South and North Seas, and the Straits of Magellan, which separate it from Terra del Fuego, and extend about 116 leagues in length from sea to sea, but only from half a league to three or four in breadth. This country had the name of Terra ^lagellanica, from Magellan. The lofty mountains of Andes, which are covered with snow a great part of the year, crossing the country from north to south, the air is much colder than in the north, under the same latitude. Towards the north it is covered with wood, but on the south not a single tree fit for any mecha- nical purpose is to be seen : yet there is good pasture, and incredible numbers of wild horned cattle and horses. The east coast is mostly low land, with few or no good harbours ; one of the best is Port St. Julian. Patagonia is inhabited by a variety of Indian tribes, as the Patagons, from which the country takes its name ; the Pam- pas, the Cossares,

Bougainville, who sailed along the coast in 1 767, says, ' the natives have a good shape, of those we saw, as to broadness of their shoul- ders, the size of their head, and the thickness of their limbs ; they are robust and well-fed ; their nerves are braced, and their muscles are strong and sufficiently hard. ►►► They are men left entirely to nature, and supplied with food abounding in nutritive juice, by which means they are come to the full growth they are capable of. Their figure is not coarse or disagreeable ; on the contrary, many of them are handsome. Their face is round, and somewhat fiattish; their eyes are very fiery ; their teeth white, and are somewhat too large. At Paris they have long black hair, tied uj) on the top of their heads. I have seen some of them with long but thin whis- kers. Their color is bronzed, as it is in all the Americans without exception, both in those who inhabit the torrid zone, and those who are born in the temperate and frii;id zones. Some of them had their cheeks painted red. llieir language seemed very delicate ; and nothing gave us reason to fear any ferocity from them. The dress of these Patagonians is very nearly the

.lame with that of the Indians of Rio de la Plata. They have merely a piece of leather which covers their natural parts, and a great cloak of guanaco, or sorillos skins, which is fastened round the body with a girdle. This cloak hangs down to their heels, and they generally suffer that part which is intended to cover the shoulders to fall back ; so that, notwithstanding the rigor of the climate, they are almost always naked from the girdle upward. Habit has certainly made them insensible to cold; for, though we were here in summer, Reaumur's thermometer was only one day risen to 10►► above the freezing point. These men have a kind of half-boots, of horse-leather, open behind ; and two or three of them had on the thigh a copper ring about two inches broad. Some of my officers likewise ob- served that two of the youngest among them had such beads as are employed for making neck- laces. The only arms which we observed among them are two round pebbles fastened to the two ends of a twisted gut, like those which are made use of in all this part of America. They had likewise little iron knives, of which the blade was about an inch and a half broad ; these knives were of an English manufacture, and were cer- tainly given to them by Mr. Byron. Their horses, which are small and very lean, were bridled and saddled in the same manner as those belonging to the inhabitants of Rio de la Plata. One of the Patagonians had at his saddle gilt nails, wooden stirrups, covered with plates of copper, a bridle of twisted leather, and a white Spanish harness. The principal food of the Patagonians seems to be the marrow and flesh of guanacos and vicunnas ; many of them had quarters of this flesh fastened on their horses, and we saw them eat pieces of it quite raw. They had likewise little nasty dogs with them, which, like their horses, drink sea-water ; it being a very scarce thing to get fresh water on this coast, or even in the country. None of them had any apparent superiority over the rest; nor did they show any kind of esteem for two or three old men who were in the troop. It is remark- able that several of them pronounced the Spanish words manano, muchacha, bueno, chico, capitan. I believe this nation leads the life of Tartars. Besides rambling through the immense plains of South America, men, women, and children, being constantly on horseback pursuing the game or the wild beasts with which those plains abound, dressing and covering themselves with skins, they bear probably yet this resemblance with the Tartars, that they pillage the caravans of travel- lers. I shall conclude this article by adding, that we have once since found a nation in the South Pacific Ocean, which is taller than the Patagonians. The soil in the place we landed at ts very dry, and in that particular bears great resemblance with tliat of the Malouines. The botanists have likewise found almost all the same plants in both places. The sea shore was sur- rounded v.'ith the same sea-weed, and covered A'ith small shells. Here are no woods, but only some shrubs.'

These tribes have been described by Falkner, a South American missionary,

who represents ihe Puelches as divided into three or four tribes,

the most southern of which are the Tehuels. who extend on the east to the strait, as the Huilliches do on the west. The Tehuels are the proper Patagonians, who are a warlike tribe, but courte- ous and humane. According to this writer, their complexion is a copper-color, like the othc American Indians. Their hair is straight, black, and coarse, and tied back with a string; but neither sex wear any covering on tlieir heads. They are well made, robust, bony, and very strong ; though their hands and feet are small in proportion to their size. They are generally clad in the skins of the guanaco, sewed together into pieces of about six feet long and five broad, which are wrapped round their bodies with the hairy side inwards, and which forms a kind of cloak, fastened round the wais'. with a girdle. Some of them wear the puncho, which is made of the wool of the guanaco, and all have a kind of tight drawers, with buskins that reach from the middle of the leg to the instep, and pass under tlie heel, while the rest of the foot is un- covered. 'This cloak hangs down to tlieir heels, and they generally suffer that part which is intended to cover the shoulders to fall back ; so that, notwithstanding the rigor of the climate, they are always naked from the girdle upward. Habit has certainly made tliem insensible to cold ; for, though we were here in summer, Reau- mur's thermometer was only 10►► above the freez- ing point.'

PATAGONULA, in botany, a genus of the raonogynia order, and pentandria class of plants : natural order forty-first, asperifoliae. The cha- racters are these : the cup is an extremely small perianth, divided into five segments, and remains after the flower is fallen ; the flower consists of a single petal, with almost no tube, the margin of which is divided into five acute oval segments; the stamina are five filaments of the length of the flower ; the antheree simple ; the germen of the pistil is oval and pointed ; the style is slender and slightly bifid, its ramifications are also bifid ; this is of the same length with the stamina, and remain when the flower is fallen ; the stigmata are simple ; the fruit is an oval and pointed capsule standing on a large cup, made up of five long segments emarginated or rimmed round their edges ; the seeds of this plant are yet unknown ; but the construction of the cup, in which the capsule stands, is alone a sufficient distinction for this genus. There is but one species.

PATAN, a town of Hindostan, in the dis- trict of Harowty, Ajmeer. It is situated on the south side of the Chambul, and is the capital of a district of thirty-two vil'ages, belonging to the Mahrattas. It contains a handsome temple, dedicated to Vishnu, and a palace belonging to the rajah. Long. 75►► 50′ E., lat. 25►► 17′ N.

PATANY, a port on the eastern coast of the peninsula of Malacca, near the

mouth of the gulf of Siam. It is situated about six miles up a river falling into a good roadstead. The Eng- li!;,h established a factory here in iblO, where they imported Surat and Coromandel cloths, to the value of 10,000 dollars; but they withdrew it in 1623. The trade is now in the hands of the Chinese. European goods are received frcn

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PAT

Batavia; the exports consist of gold dust, canes, rattans, dragon's blood, Sec. Long. 101►► 40′ E., lat. 6►► 60′ N.

PATAPSCO, a river of Maryland, which runs south-east into Ciiesapeake Bay, between North Point and Hodkin's Point. It is naviga- ble to Fell's Point, in Baltimore, fourteen miles, for sliips drawing eighteen feet water. '

PATARA, the capital of Lycia, east of the mouth of the Xanthus ; famous for a temple and oracle of Apollo. Livy, Mela. For the six winter months, ApoUo gave answers at Pa- tara; and for the six summer at Delos (Virgil, Servius); these are the LyciiE Sortes of Virgil. The town was situated in a peninsula, called Lyciorum, Chersonesus. Stephanus. There is still a place on the sea-coast of Caraniania, the supposed Patara of history. The theatre con- tains thirty-four rows of marble seats entire, and is distinguished also by the superior preserva- tion of its proscenium. The circuit of the walls may be traced, and temples, altars, pedestals, and fragments of sculpture, are in profusion. It is almost deserted, however, as a habitation of men.

PATAVIUM, a town of Gallia Transpadana, on the left or north bank of the Medoacus Mi- nor ; founded by Antenor tlie Trojan Mela, Virgil, Seneca. Now called Padua.

PATCH,i).n.&?j. s."\ Ital. pezza ; Span.

Patch'er, n. s. fpieza, or, as Minshieu

Patcu'ery, /ˆsuggests, more probably

Patch'work. 3 a corruption of Botch,

which see. To mend or cover with new pieces; hence make up of different pieces or shreds; mend clumsily ; as tiie ladies formerly endea- voured 10 do widi respect to their faces, by de- corating them with small spots of black silk; a patch is, a piece sewed on or inverted with a view to mending

or variegating a portion of work ; a small spot of black silk stuck on the face ; a small piece of ground : a patcher, he or she who patches : patchery, botchery ; bungling work ; forgery : patchwork is work made by in- serting pieces of different colors or patterns in the same design.

PATCIIOVV Islands, a group of islands on the coast of China, the eastern extremity of which is formed by Typinsan, a large island, having on its north side a reef, on which the Providence, captain Broughton, was wrecked in 1797, in long. 125►► 11′ K., lat. 25►► 6′ N. These islands are tributary to the great Liquejo.

PATE, 71. s. I)erived by Skinner from Fr, tete, more probably from the Ital. or Span, pa- tena, a skull. The head. Now commonly used in contempt or ridicule ; but anciently in serious language.

PATELLA, in anatomy (from patina, a dish, so named from its shape). Rotula. The knee- pan. A small flat-bone, somewhat resembling the common figure of the heart, with its point downwards, and which is placed at the fore-part of the joint of the knee. Anteriorly it is a little convex, and rough for the insertion of muscles and ligaments ; posteriorly it is smooth, covered with cartilage, and divided by a middle longitu- dinal ridge mto two slightly concave surfaces, of which the external one is the largest and

deepest. It is tlms exactly adapted to the pul- ley of the OS femoris. The edges of this poste- rior surface are rough and prominent where the capsular ligament is attached, and below is a roughness at the point of the bone, where the upper extremity of a strung tendinous ligament is fixed, which joins this bone to the tuberosity at the upper end of the tibia. This ligament is of considerable thickness, about an inch in breadth, and upwards cf two inches in length. See Anatomy.

Patella, in zoology, the limpet, a genus belonging to the order of vermes lestacea ; the animal is of tlie snail kmd. The shells are of that class which is called univalves ; they have no contour, and are in the form of little pointed cones. They are always attached to some hard body. Their summit is sometimes acute, some- times obtuse, flatted, turned back, or perforated. The rock, or other hard body to which they are always found adhering, serves as a kind of second or under shell to preserve them from injury ; and for this reason Aldrovandus and Rondelet have classed them among the bivalves; but in this they have not been followed. There are very many species of this genus, which are principally distinguished by peculiarities in their shells. Dr. Rees gives 250 in his Cyclo- pedia.

Patella, in entomology, is also a name given by Lister and others to a little husk or shell, found on the barks of the cherry, plum, rose, and other trees,

containing an animal withm, and useful in coloring. These patella are of the form of globes, except when they adhere to the tree, and are for the most part of a shining chesnut color. The husk itself strikes a very fine crimson color on paper, and within it is found a white maggot, which is of no value : this in time, hatches into a very small but beau- tiful bee. The size of this bee is about half that of an ant. They have a sting like bees, and three spots in a triangle on the forehead, supposed to be eyes. They are black, and iiave a large round whitish or pale yellow spot on the back. The upper pair of wings are shaded and spotted, but the under pair are clear. It might be worth while to try vvhether the color Ihey yield might not be useful. The deepest colored husks afford the finest and deepest purple; they must be used while the animal in them is in tiie maggot form ; for when it is changed into the bee state the shell is dry and colorless, Lister, who first observed these patellce, went so far on comparing them with the common kermes as to assert tliat they were of the same nature with that production ; but his account of their being the workmanship of a bee, to preserve her young magijot in, is not agreeible to the true history of the kermes ; for that is an insect of a very pecu- liar kind. It is possible that tlieˆe patella may be the same genus of animals with the kermes, but then it produces its young within this shell or husk, which- is no other than the skin of the body of the mother animal; but as there are many flies whose worms or maggots are lodged in the bodies of other animals, perhaps this little bee may lay its egg in the body of the proper insect, and the maggot hatched from that*

egg may eat up the proper progeny, and, under- going its own natural changes there, issue out at length in form of the bee. This may have been the case in some few which Dr. Lister examined ; and he may have been misled by this to sup- pose it the natural change of the insect.

PATENT, adj. kn.s. } Fr. patent ; Lat. pa- Patentee, n. s. i tens {opened). Open

to all ; as letters patent : hence a writ or order conferring a privilege or exclusive right : patentee is one who is possessed of such right by public law or orders.

Patent, in law, i►► the exclusive right of using and vending a certain composition or combina- tion of matter, as a medicine or machine. This right is not derived from the law of nature, as the whole field of inventions and improvements is open to ail men, and one cannot monopolize a part of it by prior discoveries. In Miller verstts Tay or, 4 Burrow's Reports, 2387,

Mr. Justice Yates says that the mere labor and study of the inventor will establish no property in the invention, and no right to exclude others from making the same instrument, and that it is well known that no such property can exist after the invention is published. By the common law of England, monopolies were declared to be gene- rally void, and patents for new inventions, being a species of monopolies, would, according to this doctrine, be void by that law. But they seem to form an exception to this rule ; for it was held that the king could confer on the in- ventor of any useful manufacture or art the power of using it for a reasonable time. But the law of patents, as it now stands in England, rests upon a statute of 21 Jac. I, c. iii, and in the United States on statute February 21, 1793, and April 17, 1800. In France, until 1790, inventors were generally obliged to keep their discoveries secret, in order to secure to them- selves a small part of the benefit of them. In an early period of the French revolution, a law was passed in favor of new inventions, formed on the basis of the English statute. The French law of January 7, 1810, declares that every dis- covery or new invention, in every species of use- ful industry, is the property of its author. ††† Bt/ what Authority granted. In the United States, by the constitution, congress is authorized to promote the progress of tlie useful arts, by se- curing, for limited times, to inventors the exclu- sive right to their discoveries. Letters patent are made out by the secretary of state in the name of the United States, bearing teste of the president. In England, patents are now, as they were before the statute of James I., granted by the crown. ††† What is patentable? In general, any invention of a new and useful art, machine, manufacture, or composition of matter not known or used before, or any new and useful improvement in any art, machine, or manufac- ture, or composition of matter. Tlie invention must be new. In England, a manufacture newly brought into the kingdom from beyond sea, though not new there, is allowed by the statute of James; because that statute allows a patent for any new manufacture within this realm. By the patent law of the United States, if the thing patented was not originally discovered by the

patentee, but had been in use, or had been de- scribed in some public work anterior to the supposed discovery by the patentee, or if he has surreptitiously obtained a patent for the dis- covery of another person, the patent is void. In France, by the law of January 7, 1810, whoever introduces into that kingdom a foreign discovery shall enjoy the same advantages as if he were the inventor. In England, the publisher of an invention is entitled to a patent, whether he be the inventor or not. Tlie subject of a patent must be vendable, in contradistinction to any thing that is learned by practice. The invention must be ?††a/fna/ and useful ; thus the substitu- tion of one material for another is insufficient to support a patent ; as of brass hoops ii a barrel instead of wooden ones. So there

cannot be a patent for making in one piece what before was made in two. But if one elementary thing be substituted for another, as if that be done by a tube which was before done by a ring, a patent for the improvement would be good. It must not be hurtful to trade, nor generally incon- venient, nor mischievous, nor immoral, as an invention to poison people, or to promote de- bauchery. Patents for improvements are valid, as for an improved steam-engine ; but if the improvements cannot be used witiiout the en- gine which is protected by a patent, they must wait the expiration of the patent. But a new patent may be taken out for the improvement by itself. In Jessop's case. Godson, p. 72, a patent was held to be void because it was taken out for a whole watch, when the invention consisted of a single movement. A combination of old ma- terials, by which a new effect is produced, may be the subject of a patent. The effect may con- sist either in the production of a new article, or in making an old one in a better manner, in a shorter time, or at a cheaper rate. A patent may be obtained for a method or process by which something new or beneficial is done, when it is connected with corporeal substances, and is carried into effect by tangible mˆans, as in the case of Watt's steam-engine, which was de- scribed to be a method of lessening the con- sumption of fuel in a steam-engine. So a chemical discovery, when it gives to the com- munity some new, vendable and beneficial substance, or compound articles, is a subject of a patent, as medicines, &c. But a patent for a mere curiosity is void. If the manu- facture in its new state merely answers as well as before, the alteration is not the subject of a patent : nor is a mere philosophical abstract principle, nor the application or practice of a principle the subject of a patent. No patent can be obtained for the expansive operation of steam ; but only for a new mode or appli- cation of machinery in employing it. ••• Right how lost. The inventor may lose his right to a patent by using, or allowmg others to use, his invention publicly. It was considered that doctor Hall had not lost the rit-ht to a patent for his discovery of the object-glasses, because he had not made it known to others, though it was not immediately patented. If the secret of an invention is known only to a few persons, and one of them puts it in practice, then a patent

afterwards obtained by any one of them is void ••• This liapjjened to Mr. Tennaiit, because a bleacher, who liad not divulged the secret to any other person but his two servants, had used the sanae kind of bleaching-liquor for several years anterior to the dale of Tennani's patent. Where a person who sought a patent for making spec- tacles incautiously told an accjuaintance of the principle of the invention, by v\hich means a person of

the same trade made a similar pair, and the inventor, seeing them in a shop window, employed a friend to purchase them for him, and the patent was afterwards granted, it was said to be secure. The question does not, however, appear to have been brought before a court, and Mr. Godson thinks that the patent was void, A patent for British imperial verdigris was de- clared to be void, because the inventor had, four months prior to the sealing of the grant, sold the article under a different name. Whether experiments made with a view to try the efficacy of an invention, or the extent of discovery, are a using and dedicating the invention to the public, within the statute of James, has not been decided ; but it would be difficult to say how much a substance or machine might be used without running great risk of invalidating the right to a patent. In France, if the inventor do not, within two years, put his discovery into activity, or do not justify his inaction, the patent is annulled.

Duration of the Patent. ††† In England and the U. States, patents are granted for a term not ex- ceeding fourteen years. The time in England may be prolonged by a private act, and in the U. States, by act of congress. In France, by the law already mentioned, patents are given for five, ten, or fifteen years, at the option of the inventor; but this last term is never to be pro- longed without a particular decree of the legis- lature. The duration for imported discoveries is not to extend beyond the term fixed for the privilege of the original inventor in his own coun- try. In France, if the inventor obtains a patent in a foreign country after having obtained one in France, the patentis annulled. ††† Caveat. In En- gland, a caveat is an instrument by which notice is requested to be given to the person who enters it, whenever any application is made for a patent for a certain invention, which is therein described in general terms. It must be re- newed annually. It is simply a request that, if any other person should apply for a patent for the same thing, the preference may be given to him who entered it. In the U. States, in case of in- terfering applications for a patent, they are sub- mitted to the arbitration of three persons, ap- pointed one by each applicant, and one by the secretary of state.

Specification. ††† The invention for which a patent is granted must be accurafely ascertained and particularly described. The disclosure of the secret is the price of the monopoly. The specification must be such that mechanics may be able to make the machine by following the directions of the specification, without any new inventions of theit own. The patent and spe- cification are linked together by the title given to the invention in the patent, and the descrip-

tion of it in the specification. The specification must support the title of the patent : thus a pa- tent taken out for a tupering-brush is not sup- ported by the specification of a brush in which the bristles are of unequal lengths. It

must point out what parts are new and what old. It must not cover too much : if it does so, it is not effectual, even to the extent to which the paten- tee would be otherwise entitled ; as, if there be a patent for a machine and for an improvement upon it which cannot be sustained for the ma- chine, although the improvement is new and useful, yet the grant altogether is invalid, on ac- count of its attempting to cover too much. A patent for a new method of drying and prepar- ing malt is not sustained by a specification in which is described a method for heating. Sec, ready-made malt : so a patent for an invention founded on a principle already known, for lift- ing fuel into the fire-grate from below the grate, in the specification whereof was described a new apparatus, was held to be bad for not claiming the new instrument as the thing invented : so when a patent was " for a new method of com- pletely lighting cities, towns, and villages," and the specification described improvements upon lamps, the patent was held to be void. The subject must be given to the public in the most improved state known to the inventor. A pa- tent (in England) for steel trusses was held to be void, because the inventor omitted to mention that, in tempering the steel, he rubbed it with tallow, which was of some use in .the operation. The specification must not contain a description of more than the improvement or addition. If there be several things specified that may be produced, and one of them is not new, the whole patent is void. In England, if any considerable part of a manufacture be unnecessary to produce the desired effect, it will be presumed that it was inserted with a view to perplex and embarrass the inquirer : thus in 1 Term Keports, 602, in Turner's patent for producing a yellow color, among other things, minium is directed to be used, which, it appeared, would not produce the desired effect, and, for this reason, the validity of the patent might be impeached. In the spe- cification of Winter's patent, 1 Term Reports, 602, a great number of salts were mentioned, by which it appeared that either might be used to make the subject of the patent, but only one would, in fact, produce the effect; and, for this reason, the patent was held to be void. If the patentee makes the article of cheaper materials than those which he iias enumerated in his spe- cification, although the latter answer equally as well, the patent is void. In England, if the im- proved manner of using the invention be unin- tentionally left undescnbed, still the patent is void. In the U. States, it has been held by Mr. justice Story that the patent is not avoided, un- less the defect arose from an intention to deceive the public. {Maaons Reports, 189.) In France, the general rules, in these respects, are similar.

Enrolment. ❖❖❖ In England, a patent is void unless it is enrolled. The time allowed for the enrolment is now generally confined to one month. Enrolment cannot be dispensed with, though it be to keep the specification secret

After a patent has passed, the time for enrol- ment cannot be enlarged without an act of par- liament. In the U. States, the patent, after the seal of the U. States is affixed, is recorded in a book kept for the purpose. ††† Infringement. Whe- ther any act is really an infringement of the pa- tent, is a question for the jury. The using the least part of the manufacture is an infringement. In Manton v. Manton, the infringement con- sisted in making a perforation in the hammer of a gun, in a direction a little different from that in the patent article. If the article manufactured be of a different form, or made with slight and immaterial alterations or additions, if the manu- factures are really and substantially the same, the patentee is entitled to a remedy, as where the position of tlie different parts of a steam- engine were reversed. Where several independ- ent improvements are made in the same ma- chine, and a patent is procured for them in the aggregate, the patentee is entitled to recover against any person who shall use any one of the improvements so patented, notwithstanding there shall have been no violation of the other im- provements.††† Remedy for Infringement. The remedies for infringement, in England, are by an action at law for the damages, or by pro- ceedings in equity for an injunction and account. The remedy sought in equity is for instant re- lief, and it is often pieferable to proceed in equity before a suit is commenced at law. In the U. States, the circuit court has original cognizance, as well in equity as in law, in regard to pat*ˆnts, and may grant injunctions. The damages for a breach of the patent right, in the U. States, are three times the actual damage sustained by the patentee: the jury are to find sin. le damages, the cou:t are to treble them. In France, the patentee, in case of infringement, sliall recover the damage he may sustain, and a penalty for the benefit of the poor, not to exceed 3000 francs, and double in case of a second offence. ††† Hepeul. If a patent be void, in England, the king may have a scire facias to repeal his own grant. All persons are injured by the existence of an illegal patent for an invention, and every one is there- fore entitled to petition for a scire facias to have it cancelled. Patents are repealed, in the U. States, by a process in the nature of a scire fa- cias.††† Who may obtain a Patent. Aliens who have resided two years in the U. States are al- lowed to obtain patents under the act of 180C, on their making oath that the invention has not, to the best of their knowledge or belief, been used in this or any other country. Tiie English law has no restrictions on this head, and it is every day's practice to grant patents for new inventions to Americans and other foreigners. (See Literari/ Property).

PATER (Paul), a learned Hungarian, born at Menersdorf, in 1659; and driven from his country, when young, on account of his being a Protestant. The duke of Wolfenbuttel made him his librarian, and he became professor of mathematics in the college of Dantzic ; where he died in 1724. He published many works on literature and philosophy.

Pater Patratus, the first and principal per- son in the ancient college of heralds called

Feciales. Some say he was a constant officer and perpetual chief of that body; and others suppose him to have been a temporary minister, elected upon account of making peace or de- nouncing war, which were both done by him. See Feciales.

PATERCULUS (Caius Velleius), an ancient Roman historian, who flourished in the reign of Tiberius Csesar, was bom A. U. C. 735. His grandfather espoused tlie party of Tiberius Nero, the emperor's father; but being old and infirm, and not being able to accompany Nero when he retired from Naples, he killed iiimself. His father was a soldier of rank, and Paterculus was a military tribune when Caius Ctesar, a grand- son of Augustus, had an interview with the king of the Partliians, in an island of the Euphrates, in 753. He commanded the cavalry in Ger- many under Tiberius, and accompanied that prince for nine years successively in ail his ex- peditions. He received honorable rewards from him; but was preferred to no higher dignity than the prsetorship. The praises he bestows upon Sejanus make it probable that he was a friend of this favorite, and was involved in his ruin. He died A. U. C. 784, when in his fiftieth year. He wrote an abridgement of the Roman History in two books, in which many particulars are related that are nowhere else to be found. It was first published from the MS. of Morhac, by Rhenanus, at Basil, in 1520; afterwards by Lipsius at Leyden in 1581 ; by Gerard \ˆossius in 1639; by Boeclerus at Strasburg in 1642; by Thysius and others ; and lastly, by Peter Burman at Leyden, 1719, in Bvo. To the Ox- ford edition in 1693, Bvo., were prefixed the Annales V'elleiani of Mr. Dodwell, which show a great knowledge of antiquity. Lipsius cen. sures him severely for his praise of Tiberius.

PATER'NAL, flc//. I Vt. paternel ; Lat. pa-

Pater'nity, 71. s. S ternus. Like a father; having the relation of, pertaining to, or received from a father : paternity, is the relation or qua- lity of a father.

PATERSUN (Samuel), was born in 1725. His father died when he was very young, and his guardian failing, he lost his fortune. Being lame, and

not having been brought up to any profession, he chose that of a bookseller, in which he was unsuccessful. He then commenced auctioneer, and, after struggling with much dis- tress, was appointed librarian to the marquis of Lansdown. He died 29th of October, 1802. He wrote and published, 1. A Dissertation on the equestrian figure of the George and Garter; by Dr. Pertingall, 1733. 2. The Travels of Caiat Junior, 1767. 3. Jaiieriana, or a Book of Scraps. 4. The Templar, a weekly paper; and 5. Speculations on Law and Lawyers. But what rendered him chiefly famous was his talent at drawing up catalogues. The catalogues which he made of many valuable libraries sell at high prices.

PATH, ra.,y. -j Sax. pa ; Wei. p►►J*

Path'i.ess. adj. \ Way : road ; track, particu-

Path'way, n. s. J lariy a foot road or track ; passage : pathless is, untrodden ; unmarked by paths; desert: path-way, a road part cuiarly for foot passengers; any passage.

PATIIF/TIC, arf;. -. Yv. pathetlqve ; Greek

Pathet'icaL, f TTaˆijriKog. Affecting tlie

Pathet'ically, (C passions; passionate;

Pathet'icalness. ˆ moving : the adjective anJ noun sub-tantive correspond.

PATHOGNOMOIS'ICK, mlj. Or. naBoy- vunoviKOQ, waˆoQ, and yivojCKdt, to know. Sucli signs of a disease as are inseparable, or indicate tlie essence or real nature of it ; not symptoma- tic.

PATHOLOGY. See Medicine.

PATtlllOS, a city and canton of Egypt, whicJi the prophets Jeremiah and Fzekiel men- tion; Jer. xliv. 1, 15. Ezek. xxix. 14, xxx. 14. We are uncertain of its situation. Pliny and Ptolemy call it Phatuns ; and it appears to have been in Upper Egypt. Isaiah (xii. 2) calls it Palhros; and it is the country of the Pathrusim, the posterity of Mizraim, mentioned by Moses, Gen. X. 14. Ezekiel threatens them with an entire rujn. The Jews retired thither, notwith- standing the remonstrances of Jeremiah; but Isaiah

foretold their return.

PATIENT, adj., n. s. 4- v.a.ˆ I r. patient ;

Pa'tiently, ˆ\.&. patitnza;

'Lsx. patiens. Enduring; with 0/ before the thing endured; calm; meek; the adjective cor- responding.

PATIG'JMO (a corruption of the words pate de guimauve), a sort of lozenge much used on the continent, as an agreeable and useful remedy for catarrhal defluxions, and supposed by Ur. Percival to consist of gum arable com- bined with sugar and the whites of eggs. But it is said that the powdered substance of the marshmallow is the chief ingredient of the com- position.

PATIN (Charles), M. D., a celebrated French author who excelled in the knowledge of medals. He was bom in Paris in 1633. He studied physic, took his degrees, and practised with great success. In 1 676 he was appointed pro- fessor of physic in Padua ; and in 1 579 was created a knight of St. Mark. He died in that city in 1694. His works are numerous. See NVmismatolooy.

PATIN, or Patina, aerugo, or the green rust of copper, so much valued by antiquarians, as an evidence of the genuineness of ancient cop- per coins. Instead of corroding the metal, as the rust of iron does, patina is the best preser- vative of ancient copper coins. This rust is sometimes counterfeited, and a false patina substituted for that which is true. The false varnish is black, greasy, and shining, and is besides very tender when touched with a burin or needle. The ancient, on the contrary, has none of these qualities, and is as hard as the coin itself. Mr. Pinkerton observes, that some- times a light green, coally-like varnish is produced, spotted with a kind of iron marks. This is made of sulphur, verdigris, and vinegar ; and is to be often distinguished, among other marks, by hair strokes of the brush with which it was laid on. The following hints are given by 'ico, whom Pinkerton cites, respecting false patina. He describes it as green, black, russet or brown, gray, and iron color. The green is made with verdigris ; the black is smoke of sulphur ; the*

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gray is formed of chalk steeped in urina, in which the coin is left for some days. The russet most nearly approaches the natural patina, being a kind of froth formed by the fire from ancient coins ; but when false it is too shining. The large brass coins of the Ptolemies are often em- ployed in producing it, since they are frequently corroded : these are made red hot,

and, the metals being put in them, a fine rust adheres. 'ico does not explain the process of iron color. Sometimes, he says, they take an old defaced coin, covered with real ancient patina, and stamp it afresh ; but the patina is then too bright in the cavities and too dull in the protuberances. It may be observed, in conclusion, that the trial of brass coins with the tongue is often service- able ; for, if modern, the patina tastes pungent or bitter ; while^ if ancient, it is perfectly taste- less.

PATIZITHES, one of the Persian Magi, whose brother having a strong resemblance ta Smerdis, the second son of Cyrus the Great, he raised him to the throne on the death of Cam- byses, pretending that he was prince Smerdis. See Persia.

PATlvL L (John Reinhold, Count), a brave and accomplished nobleman, bom in Livonia. He was employed to represent the grievances of that province to Charles XL of Sweden; which he did vvith intrepidity and freedom. For this the king caused him to be prosecuted for high treason ; when he was condemned to lose his head. Patkul, however, escaped, and entered into the service of Peter the Great ; but, while acting as the czar's ambassador to Augustus, king of Poland, whom he had formerly served, he was most ungratefully delivered up a prison- er, by that monarch, to Charles XII. ; who caused him to be broken alive on the wheel, with every circumstance of ignominy and ag- gravated cmelty, on the 30th of September, 1 707.

PATMOS, an island of the Grecian archipe- lago, situated in N. lat. 37►► 20', E. long. 26►► 35', consists of two portions of an island united by an isthmus. It is encompassed with porphyry- rocks, black and porous, full of crystals of feld- spar. On a hill at the junction of the two parts of the island the Greeks once built a fort, the remains of which are still visible ; they consist of walls flanked with towers, of very solid ma- sonry and of 'the porphyry found in the coun- try. On a mountain elevated above the rest is the monastery of St. John the Evangelist ; it was in a grotto excavated in the rock that the apostle, banished into Patmos, is said to have written the book of the Revelation. From this heiffht an extensive and delightful view all round strikes the eye ; few spectacles in nature have equal beauty. Tlie monastery on the summit, which is fortified like a castle, is the residence of a hermit, renowned for his devotions and pretended revelations ; and the island is tilled with little churches and chapels, which here occupy the place of houses ; there are about 240 of these churches, while the houses do not exceed 600. The monastery itself contains about 500 monks, and has a revenue of 200 purses. The caloyers or priests are very igno- rant ; M. de Choiseul found only three anIio

could read tolerably ; and neither he nor Sonini thought they had any library ; later travellers liave found some books and MSS. here. The priests, however, did not appear to make use of them ; and Dr. Clarke persuaded them without much difficulty to sell him their most valuable MSS., which are yet to be seen in the university library at Cambridge. One traveller, who visited the monastery of St. John in 1817, found a monk who was acquainted with the ancient Greek, and who had a library with a few MSS. There is a hermitage built on the grotto, where John received his revelations.

The disastrous effects of monachism are im- printed on the very soil of Patmos ; there is no agriculture, no industry, no population. The Caloyers are the most considerable inhabitants in the island, there is but one town, or rather village, built on the side of the mountain on which the convent stands. The land is over- grown with weeds and in many places bare and very wild in its appearance ; misery indeed weighs heavily on this island ; the soil is naturally fruit- ful and needs only the cultivation of the hand of m.an ; but he has chosen rather to cover it with churches than harvests. The little agriculture that is attended to is the work of the women ; the men, during the fine season, go to seek their livino elsewhere, especially by transporting the productions of one island of the Archipelago, or of one sea port of the Levant, to another. They go as far as the Black Sea for the corn they want. Notwithstanding the hard laVior that they undergo, the women of Patmos excite the atten- tion of foreigners by their beauty ; in the time of Tonrnefort they used to load themselves with heavy burdens, without being sensible that it affected their sliape ; but they now carry lighter loads and with much more address. At that time they thought every foreigner who accosted them was looking for a woman, because a Mar- seillese had married one for her beauty; but foreigners so often abused their easy access, that after some time the women fled at their approach to hide themselves in the deserts, especially when their husbands were absent. With the very fine red and shining cotton thread, culti- vated in Scio, and spun in the convents, the women of this island, as well as those of Seri- pho, make caps, net-work, purses, stockings, &c. A German author supposes this silky cotton is the byssus, so much esteemed in ancient times as one of the most precious articles for luxurious clothing. Great neatness prevails in their dwell- ings, and they have a peculiar custom of raising their beds to the height of ten feet above the ground.

PATNA, Padmavati. A large city of Hin- dostan, the capital of the province of Bahar, and standing in lat. 25►► 37′ N., long. 85►► 15′ E. It is situated on the south side of the Ganges, which is here live miles wide during the rainy season. The town is one continued street for many miles along the river ; the houses of the natives being generally of mud ; but those of the Europeans of brick, and of handsome appear- ance. There are also several large old buildings of brick. It was formerly fortified after the na- tive manner, with a wall and small citadel. The

surrounding country is perfectly flat. This town is prosperous and populous ; but the number of inhabitants has never been correctly ascertained ; they cannot, however, be estimated, says Mr. Hamilton, at less than 150,000. Every article of food is remarkably cheap.

Chintzes and dimities are manufactured here, and also cloths resembling diaper and damask linen. In the vicinity flannels well, wove, but ill fulled, are made, and also a sort of canvas from cotton. A large quantity of salt- petre is annually despatched to Calcutta.

Patna is a city of great antiquity, and sup- posed by some to be the site of the ancient Pa- libothra. By the modern Mahometans it is named Azimabad, and by the Hiiidoos Sri Nagur. Many years since the East India (ˆ.ompany erected a depot here to contain rice. It is a building of stone in the shape of a bee-hive, with two winding staircases on the outside, which have been ascended on horseback. The gram is poured in at the top, there being a small door at the bottom to take it out. The walls at the bottom, although twenty-one feet thick, have given way ►►► a circumstance of very little conse- quence, as were it filled (which it never was) it would not contain one day's consumption for the inhabitants of the province. It originally cost 120,000 rupees. Here are also the remains of the British factory, where the massacre of 200 prisoners was perpetrated in 1763 by a German adventurer, Somro (Summers), in the service of Meer Cossim; immediately after which the city was captured by the British troops under major Adams, and has ever since remained in oui pos- session. A monument, but without inscription, is erected to the memory of the sufferers. In Bankipoor, one of the suburbs of Patna, the East India Company's civil servants reside. The provincial court of appeal and circuit, its registers and clerks, the district and city court, with the commercial resident, collector, and other agents of the Company, compose a nume- rous establishment. The Patna division of the court of circuit comprehends the following dis- tricts, viz. 1. Ramgur; 2. Bahar; 3. Tirhoot; 4. Sarum ; 5. Shahabad ; 6. The city of Patna.

Travelling distance from Patna to Calcutta, by Moorshedabad, 400 miles ; by Birbhoom 340 ; from Benares, by Buxar, 135; from Delhi 661; from

Agra 544; and from Lucknow 316 miles.

PATRTIi, a city of Achaia, at the north-west of the Peloponnesus, which assisted the iEtolians when invaded by the Gauls under Brennus. It was afterwards reduced to extreme poverty, till Augustus reunited the scattered citizens, and made it a Roman colony, settling a portion of the troops which obtained the victory of Actium, with other inhabitants from the adjacent places. Patrae reflourished and enjoyed dominion over Naupactus, Qlanthea, and several cities of Achaia. In the time of Pausanias it was adorned with temples and porticoes, a theatre, and an odeum which was superior to any in Greece, but that of Atticus Herodes at Athens. In the lower part of the city was a temple oi Bacchus iEsymnetes, in which was an image preserved in a chest, and conveyed from Troy by

Eurypylus. By the port were teniplei ; and by the sea, one of Ceres, with a pleasant grove and a prophetic fountain of unerring veracity in determining the event of any illness. After suppli- cating the goddess with incense, the sick person appeared, dead or living, in a mirror suspended so as to touch the surface of the water. In the citadel of Patrae was a temple of Diana Laphria, with her statue in the haoit of a huntress, of ivory and gold, given by Augustus Ca;sar, when he laid waste Calydon and the cities of yEtolia to people Nicopolis. The Patrensians honored her with a yearly festival, which is described by Pausanias v\ho was a spectator. They formed a circle round the altar witli pieces of green wood, each sixteen cubits long, and within heaped dry fuel. The solemnity began with a most magnifi- cent procession, which was closed by the virgin priestess in a chariot drawn by stags. On the following day, the city and private persons offered at the altar fruits, and birds, and all kinds of victims, wild boars, stags, deer, young wolves, and beasts full grown ; after which t!ie fire was kindled. It was not remembered that any wound had ever been received at this cere- mony, though the spectacle and sacrifice were as dangerous as savage. The number of women at Patrae was double that of the men. They were employed chiefly in a manufacture of flax which grew in Elis, weaving garments, and attire for the head.'

For the state of the modern town of Patras, see our article Greece, Vol. X. p. 630.

PA'TRIAilCH, jz.s. -X ►►t. putriarclie;L3it.

Patriar'chal, o(//. i patriurcltu ; Greek,

Patriar'chate, n. s. V Tzarˆiaˆx'nQ- The

Pa'triarchship i father and ruler of a

Pa'triarchy. j family; one who

governs by a paternal right; applied to eccle- siastical superiors : patriarchal is the correspond- ing adjective: and patriarchate, patriarchship, and patriarchy, all express the state or quality of a patriarch.

Calabria pertained to the patriarch of Constanti nople, as appeareth in the novel of Leo Soplius, touching the precedence of metropolitans belonging to that patriarchy. Brei-ewood.

The patriarchs for an hundred years had been of one house, to the prejudice of the church, and there yet remained one bishop of the same kindred. Raleigh.

The good Patriarch was the same in Potiphar's dungeon, and on Pharaoh's bench. Hull.

Between ecclesiastical, the questions are as ancient as the differences between Rome and any other of the old patriarchats. Selden.

So spake the patriarch of mankind ; but Eve Persisted, yet submits. Milton's Paradise Lost.

The monarch oak, the patriarch of the trees,' Shoots rising up, and spreads by slow degrees, Three centuries he grows, and three he stays Supreme in state ; and in three more decays.

Dry den .

Nimrod enjoyed this patriarchal power ; but he against right enlarged his empire, by seizing vio- lently on the rights of other lords. Locke. Such drowsy sedentary souls have they,

Who would to patriarchal jears live on, Fixed to hereditary clay.

And know no clhnate but their own. Korris.

Where secular primates were heretofore given, the ecclesiastical laws have ordered pa/riarr/i and eccle- siastical prhnates to be placed. Aylife's Parergon.*

Archbishops or metropolitans in France are imme- diately subject to the

pope's jurisdiction; and in other places they are immediately subject to the pa- triarchal sees. Aijlilfe.

Prelacies may be termed the greater benefices ; as that of the pontificate, a patriarchihip and archbishop- rick. Jd.

Patrtarchs, the name given to those fathers who lived towards the beginning of the world, and who became famous by their long lines of descendants. Abraham, Isaac, and Jacob, and his twelve sons, are the patriarchs of the Old Testament ; Adam, Seth, Enoch, is:c., were ante- diluvian patriarchs. T!ie autliority of patriarchal government existed in the fathers of families, and their first-born after them, exercising all kinds of ecclesiastical and civil autliority in their respec- tive households ; and to this government, which lasted till the time of the Israelites dwelling in Egj'pt, some have ascribed an absolute and des- potic power, extending even to the punishment by death.

Patriarchs, Christian, are ecclesiastical dignitaries, or bishops, so called from their pa- ternal authority in the church. The power of patriarchs was not the same in all, but differed according to the customs of countries, or the pleasure of kings and councils. Thus the patri- arch of Constantinople became in course of time patriarch over the patriarchs of Ephesus and Caesarea, and was called the ecumenical and universal patriarch ; and the patriarch of Alex- andria had some prerogatives which no other patriarch but himself enjoyed, such as the right of consecrating and approving every single bi

thereof. Nor is the term patriarch found in the decree of the council of Chalcedon, whereby the fifth place is assigned to the bishop of Jerusa- lem ; nor did these five patriarchs govern all the cliurches. There were l)esides many indepen- dent chiefs of dioceses, who, far from owning the jurisdiction of the grand patriarchs, called them- selves patriarchs ; such as that of Aquileia ; nor was Carthaze ever subject to the patriarch of Alexandria. Mosheim imagines that tlie bishops, who enjoyed a certain degree of pre-eminence over the rest of their order, were distinguished by the Jewish title of patriarchs in the 'fourth century. The authority of the patriarchs gra- dually increased, till, about the close of the fifth century, all affairs of moment within their patri- archate came before them. They consecrated bishops ; assembled yearly in council the clergy of their

respective districts ; pronounced a deci- sive judgment in those cases where accusations were brought against bishops ; and appointed vicars or deputies, clothed with their authority, for the preservation of order in the remote pro- vinces. In short, nothing was done without con- sulting them ; and their decrees were executed with the same respect as those of the princes. But the authority of the patriarchs was not acknowledged through all the provinces. Several districts, both in the eastern and western em- pires, were exempted from their jurisdiction The Latin church had no patriarchs till the sixth century ; and the churches of Gaul, Britain, Sec, were never subject to the authority of any patri- arch. There was no primacy, no archate nor patriarchate, owned here ; but the bishops, with the metropolitans, governed the church in com- mon. Du Cange says that some abbots have borne the title of patriarchs.

Patriarchs, Jewish, a dignity respecting the origin of which there is a variety of opinions. Tlie learned authors of the Universal History think, that the first appearance and institution of those patriarchs happened under Nerva the suc- cessor of Domitian. It seems probable that the patriarchs were of the Aaronic or Levitical race ; the tribe of Judah being ac that time too much depressed, and too obnoxious to the Romans, to be able to assume any external power. But, of whatever tribe they were, their authority came to be very considerable. Their principal busi- ness was to instruct the people; and for this pur- pose they instituted schools in several cities. And by this means having gained great reputa- tion for tlieir learning, zeal, and piety, they ven- tured at length to levy a kind of tribute from their brethren, to defray the charges of their dig- nity, and of the apostoli, or legati, under them, whose business it was to carry their orders and decisions through the other provinces of their dispersion, and to see them punctually executed by all, that some shadow of union might be kept up among the western Jews. They likewise no- minated the doctors who were to preside over their schools and academies ; and tliese were in process of time styled chiefs and princes, in Prder to ra'se the credit of that dignity, or to im- ply the great regard which their disciples were lo pay to thein. These chiefs became at length rivals of the patriarchs; and some of them pos- sessed both dijrnities at once ; a usurpation which

caused not only great confusion amongst them but oftentimes violent and bloody contests. How- ever, the Jewish rabbis iiave contended for a much older era for this patriarchal dignity, and have given us a succession of them down to the fifth century, in which it was abolished. According to them, the first patriarch was ilillel. surnamed the Babylonian, because he was sent for from Babylon to Jerusalem, about 100 years before the ruin of their capital, or thirty before the birth of Christ, to decide a dispute about keep- ing the Passover, which on that year fell out on the Sabbath day; and it was on account of his wise decision that he was raised to that dignity,*

*which continued in his family till the fifth cen- tury. He was likewise looked upon as a second Moses, because he lived like him forty years in obscurity, forty more in great reputation for learning and sanctity, and forty more in posses- sion of this patriarchal dignity. They make him little inferior to that lawgiver in other of his ex- cellencies, as well as in the great authority he gained over the whole Jewish nation. The won- der is, how Herod the Great, who was so jealous of his power, could suffer a stranger to be raised to such a height of it, barely for having decided a dispute of little importance. Ilillel was suc- ceeded by his son Simeon, whom many Christ- ians pretend to have been the venerable old per- son of that name, who received the divine infant in his arms. The Jews give him but a very ob- scure patriarchate ; though the Christian authors make him chief of the sanhedrim ; and Epipha- nius says, that the priestly tribe hated him so much, for giving so ample a testimony to the di- vine child, that they denied him common burial. But it is hardly credible that St. Luke should have so carelessly passed over his two-fold dig- nity, if he had been really possessed of them. He was succeeded by Jochanan, not in right of descent, but of his extraordinary merit, which the rabbis describe in terms of the most extrava- gant hyperboles. He enjoyed his dignity but two years, or at most five years, and is said to have foretold to Titus that he was ordained to destroy the temple ; on which account they pre- tend that general gave him leave to remove the sanhedrim to Japhne. The Jewish writers add that he erected an academy there, which sub- sisted till the death of Akiba ; was the seat of the patriarch ; and consisted of 300 schools ; and another at Lydda, near Japhne, and where the famed St. George is buried. He lived 120 years; and, being asked what he had done to prolong his life ? he gave this answer : I have taken care to celebrate all festivals : and my mother even sold my head ornaments to buy wine to make me merry on such days ; and left me at her death 300 hogsheads of it, to sanctify the sab- bath ! The doctors that flourished in his time were no less considerable, particularly the famed rabbi Chanina of whom the Bath Col was heard to sav, that the world was preserved for the sake of him ; and R. Nicodemus, who, they pretend, stopped the course of the sun, like Joshua. He was succeeded by Gamaliel, a man of insufferable pride ; and yet of so universal authority over all the Jews, not only in the west but over the whole world, that the very monarchs sufl'ered his laws to be obeyed in their dominions. In his day**

flourished Samuel the Less, who composed a prayer full of the bitterest curses against heretics, by which they mean the Christians ; and which are still in use. Gamaliel was no less an enemy to them ; and yet both have

been challenged, the former as the celebrated master of our great apos- tle, the other as his disciple in his unconverted state. Simon II., his son and successor, died during the siege of Jerusalem. The people so regretted his deatli that an order was given, in- stead of ten bumpers of wine, which were usually drank at the funeral of a saint, to drink thirteen at his. These are the patriarchs who, the rabbis tell us, preceded the destruction of the temple ; and we need no farther confutation of this pre- tended dignity than the silence of the sacr>;d historians, who not only make not the least men- tion of it, biy. assure us all along that the high- priests presided in the sanhedrim ; before whom all cases relating to the Jewish religion were brought and decided. It was the high-priest who condemned our Saviour and St. Steplien ; who forbad tlie apostles to preach in Christ's name; and who sat as judge on St. Paul. The same may be urged from Josephus, who must have known and mentioned this pretended dig- nity, if any such there had been ; and yet is so far from taking the least notice of it, that he places the pontiffs alone at the head of all the Jewish affairs ; and names the high-priest Ananus as having the care and direction of the war against the Romans; whicli is an evident proof that there were then no such patriarchs in being. If there had been any such remarkable succession, the Talmudists would have preserved it ; whereas, neither they, nor any of the ancient authors of the Jewish church, make any mention of it ; but only some of their doctors, who have written a considerable time after them, to whom little cre- dit can be given, as there are such insurmount- able contradictions between them, as no authors either Jewish or Christian have been able to re- concile. Their succession, according to those rabbles, stands as follows : 1. Hillel the Babylo- nian. 2. Simeon, the son of Hillel. 3. Gamaliel, the son of Simeon. 4. Simeon II., the son of Gamaliel. 5. Gamaliel II., the son of Simeon 11. 6. Suneon III., the son of Gamaliel II. 7. Judah, the son of Simeon III. 8. Gamaliel III., the son of Judah. 9. Judah II., the sou of Gamaliel III. 10. Hillel II., .son of Judah II. 11. Judah III., son of Hillel II. 12. Hillel III., son of Judah III. 13. Gamaliel IV'., son of Hillel III. But Gants Tzemach David has reduced them to ten. On the whole, it cannot be doubted but that their first rise was in Nerva's time, however much Jewish pride may have prompted them to assert their origin to have been more ancient than it really was. In time, how- ever, they certainly imposed upon the people ; and what power they did possess (which the Komans only allowed to be in religious matters, or in such as were connected with religion) they exercised with great rigor. Their pecuniary de- mands became very exorbitant ; and were the cause of their suppression in the year 429.

Patriarchal Cross, in heraldry, is that where the shaft is twice crossed ; the lower arms being- lower than the upper ones.

PATRICTAN, (/(//. & /(. s. fr, puhicun ;

hdit.patricius. Senatorial ; noble; not plebeian: a nobleman, or m;in of high rank.

ISolAa patricia Its, paticns of my right,

Defend the justice of my cause with arras.

S/iaftipeare.

You'll find Gracchus, from patrician grown A fencer and the scandal of the town. Dryden.

I see The insulting tyrant prancing o'er the field, His horse's hoofs wet with putricini blood. Addison.

Your daughters are all married to wealthy patri- cians. Swift.

Patrician was a title given, among the anci- ent Romans, to the descendants of the 100 or 200 first senators chosen by Romulus ; and by him called patres, fathers. Romulus established this order after the example of the Athenians ; who were divided into two classes, viz. thetuTra- ypiSac, patricios, and crjpoyiKovg, populares. Patricians, therefore, were originally the nobility ; in opposition to the plebeians. Tliey were the only persons whom Romulus allowed to aspire to the magistracy ; and they exercised all the functions of the priesthood till A. U.C. 495. But the cognizance and character of these ancient families being almost lost by a long course of years, and frequent changes in the empire, a new kind of patricians were afterwards set on foot, who had no pretensions from birth, but whose title depended entirely on the emperor's favor. This new patriciate, Zozimus tells us. was erected by Constantine, who conferred the quality on his counsellors, not because they were descended from the ancient fathers of tiie senate, but because they were the fathers of the republic or of the empire. This dignity in time became the highest ot the empire. Justinian calls it summam dignitatem.

*Patrician was also a title of honor oft►► *n con- ferred on men of the first quality in l".ng!and, in the time of the Anglo-Saxon kings. See Thane.*

Patrician Deities, Patricii Dii, i:i my- thology, vvere Janus, Saturn, the Genius, Pluto. Bacchus, the sun, the moon, and the eari'.i.

Patricians, in ecclesiastical writers, v.ere an- cient sectaries, who disturbed the peace of the church in the beginning of the third century : thus called from their founder Patricius, precep- tor of a Marcionite called Symraachus. His dis- tinguishing tenet was, that the substance of the flesh is not the work of God, but that of the devil ; on which account his

adherents bore aa implacable iiatred to their own flesh ; which sometimes carried them so far as to kill them- selves. They were also called Tatianites, and made a branch of the Encratitae.

PATRICK (Peter), a native of Thessalonica, who was sent by the emperor Justinian I. am- bassador to Amalasuntha, queen of t e Goths, A. D. 534 ; and in 550 to Chosroes, king of Per- sia, to conclude a peace. On his return he was appointed mayor of the palace. He wrote a work, entitled The History of Ambassadors, part of which is extant, and was published in the Collection of Byzantine Historians; in 1648, folio.

Patrick (Simon), I). D., a learned English bishop, born at Gainsborough in Lincolnshire in 1626. In 1644 he was admitted into Queen's College, Cambridge, and entered into holy orders. After being for some time chaplain to Sir V, ahcr

St. John, and vicar of Batt.ersea, in Surry, he ⬜⬜⬜was riade rector of St. Paul's, Covent Garden, London. In 1678 he was made dean of Peter- borough where he was much beloved. During the reign of king James II. he boldly preached and wrote against the church of Rome. In 1689 he was appointed bishop of Chichester, and was employed with others of the new bishops to set- tle the affairs of tlie church in Ireland. In 1691 he was translated to the see of Ely. He died in 1707, after having published various works ; among which the most distinguished are Para- phrases and Commentaries on the Holy Scrip- tures, 3 vols, folio. 2. Tracts against Popery ; 3. Sermons ; 4. History of the Church of Peter- borough.

Patrick (St.), commonly styled the apostle of Ireland, and second bishop of that country. lie was born A. D. 373, at Kirk-Patrick, near Dumbarton, now in Scotland, but then compre- hended under Britain. His baptismal name^ Suceath, signifies, in the British language, valiant in war. On some inroad of certain exiles from Ireland, he was taken prisonei, and carried into that kingdom, where he continued six years in the service of Milcho, who had bouoht him, when Patrick acquired the new name of Cothraig, or Ceathur-Tigh, i. e. four families. In this time he made himself master of the Irish language, and at last made his escape, and returned home on board a ship. About two years after he formed a design of converting the Irish. To qualify himself for this, he travelled to the con- tinent, where he continued thirty-five years, pur- suing his studies under his mother's uncle, St.

JVlartin, bis-hop of Tours, who had ordained him deacon ; and after his death with St. Germain, bisliop of Auxerre, who ordained him priest, and gave hnˆi his third name,]\Iawnor Maginim. Pope Celestine consecrated him bishop, and gave him his most familiar name, Patricius, expressive of liis honorable descent, and to give lustre and weight to the commission which he now charged him with to convert the Irish. Patrick land- ed in the country of the Evolein, or at ˆˆ ick- low, A. D. 441. His first convert was Sinell, the eighth in descent from Connac king of Lein- ster. He then proceeded to Dublin, and thence to Ulster, where he founded a church (afterwards the famous abbey of Saul, in the county of Down),remarkable for its position, and being made out of a barn . After laboring seven years indefatiga- bly in his great work, he returned to Britain, which he is said to have delivered from the heresies of Pelauius and Arius ; ensaged several eminent persons to assist him ; visited the Isle of Man, which he converted in 440, when the bishopric was founded; and, A. D. 448, returned to the see of Armagh, which he had founded in 445 ; and in thir- teen years more completed the conversion of the whole island. After giving an account of his com- mission at Rome, he once more returned to Ire- land, and spent the remainder of his life between the monasteries of Armagh and Saul, superintend- ing and enforcing the doctrine and discipline which he had established. After having established schools, he died at Saul abbey, aged 120, ˆlarch 17, A. D. 493, and was afterwards buried at P□□”.\ II, in the same gi-ave with St. Bridget and St.

Columb. His genuine works were collected and printed by Sir Janies Ware, 1656. His im- mediate successor in this see was St. Binen or Begnus.

Patrick, St., Order of, an institution which took place in Ireland in 1783. On the 5th of February, 1783, the king ordered letters patent to be passed under the great seal of the kingdom of Irefand, for creating a society or brotherhood, to be called knights of the illustrious order of St. Patrick, of which his majesty, his heirs, and successors, shall perpetually be sovereigns, and his majesty's lieutenant-general and general governor of Ireland, &;c., for the time being, shall officiate as grand-masters ; and also for appointing prince Edward, and several of the chief nobility of Ireland, knights companions of the said illustrious order.

Patrick, a county of Virginia, bounded north by Franklin county, east by Henry county, south by North Carolina, and north-west by Gravson and Montgomery county.

PATRIMONIOdi S. Pietro, the name of a province in the west of Italy, belonging to the Papal states. It lies to the north-west of Rome, and is in length about forty-five miles ; in breadth thirty-five. Its chief towns are Civita ˆ‘ecchia on the coast ; 'iterbo in the interior ; and Bolsena towards its

northern limit. It is in general fertile, and was the earliest possession of the bishop of Rome, the grant of it having been originally made by the emperor Constan- tine.

PATRIMONY, n. s. Fr. patrlmoine ; Lat. patrimonium. An estate possessed by inheri- tance.

Inclosures they would not forbid, for that had been to forbid the improvement of the patrimony of the kingdom. Bacon.

So might the heir, whose father hath, in play, Wasted a thousand pounds of ancient rent.

By painful earning of one groat a day, Hope to restore the patrimony spent. Davies.

In me all Posterity stands cursed ! fair patrimonii That I must leave ye, sons.

Milton's Paradise Lost. For his redemption, all my patrimony I am ready to forego, and quit. Id. Agonistes.

The expense of the duke of Ormond's own great Mtrimonial estate, that came over at that time, is of 10 small consideration in the stock of this kingdom.

Temple.

Their patrimonial sloth the Spaniards keep, And Philip first taught Philip how to sleep.

Dryden.

Their ships like wasted patrimonies shew ; Where the thin scattering trees admit the light And shun each other's shadows as they grow. Id.

The shepherd last appears, And with him all his patrimony bears ; His house, and household gods the trade of war, His bow and quiver, and his trusty cur. Id.

Good princes have not only made a distinction be- tween what was their own patrimuHiallt/, as the civil law hooks term it, and what the state had an interest in. Davenant.

Patrimony has been also applied to church estates or revenues ; in which sense authors say, the patrimony of the church of Rimini, Milan, &c. The church of Rome had patrimonies ir.

France, Africa, Sicily, and man}' other countries. To create the greater respect to the estates be- longing to the church, it was usual to give their patrimonies the names of the saints they held in the highest veneration : thus the estate of tlie church of Ravenna was called the patrimony of St. ApoUinarius ; that of Milan the patrimony of St. Ambrose; and the estates of the Roman church were called the patrimony of St. Peter in Abruzzo, the patrimony of St. Peter in Sicily, and the like.

PATRIOT, n. s. \ Fr. patriate ; Gr. irarpiw- Pa'tiuotism. S TtjQ- One who loves his

country : the love of one's country.

The firm patriot there. Who made the welfare of mankind his care, Shall know he conquered. Addison's Catn.

Patriots who for sacred freedom stood.

Tickel. Here tears shall flow from a more generous cause, Such tears as patriots shed for dying laws. Pope.

A man who is a spendthrift, and will not pay a just debt, may have his injustice transformed into liberality ; cowardice may be metamorphosed into prudence ; intemperance into good nature and good- fellowship ; corruption into pa(rwtis/□□. Id.

But living princes have a claim to his attachment and respect ; upon these terms there is no danger in being a patriot. Junius.

I'o be suspected, thwarted, and withstood. Even when he labors for his country's good ; To see a band call'd patriot for no cause, But that they catch at popular applause, Careless of all the anxiety he feels, Hook disappointment on the public v/heels.

Couper.

PATRIPASSIANI, Patripassians, a sect of Christians, who appeared about the end of the second century, so called from their ascrib- ing passion or suifering to the Father; for they asserted the unity of God in such a manner as to destroy all distinction of persons, and to make the Father and Son

precisely the same. The author of this heresy was Praxeas, a philosopher of Phrygia. Swedenborg and his followers seem to hold a similar faith.

PATRIX (Peter), a French poet, born at Caen in 1585. Several of his poems are on re- ligious subjects ; but one of them, entitled The Dream, has been often translated and imitated. He died at Parisui 1673, aged eishty-eight.

PATRIZI (Francis), a learned Italian, born in 1530, at Cherso, in Istria; who taught philo- sophy at Rome, Ferrara, and Padua, with great reputation. He was an opponent of the Peri- patetics. He wrote many works ; but his Pa- ralleli Militari, or Parallel of the Ancient Mili- tary Art with the Modern, Rome, 1594, folio, is esteemed his best piece. He died in 1597, aged sixty-seven. "^ PATROCLUS, a Grecian chief at the Trojan war. He was the son of Mencetius, king of Opus, by Sthenele, Philomela, or Polimela. Accidentally killing Clysonymus, the son of Amphidama;, in his youth, he was compelled to fly from Opus. He went to the court of Peleus, king of PuThia; was cordially received, and contracted \he most intimate friendship with Achilles, the king's son. When the Greeks went to the Trojan war, Patroclus went with them, at*

the express desire of his father, and embarked with ten ships from Phthia. He was the con- stant companion of Achilles ; lodged in the same tent ; and when lie refused to appear in the field of battle, on account of Agamemnon's injustice, Patroclus imitated his example, and his absence was the cause of much loss to the Greeks. At last Nestor prevailed upon him to return to the war, and Achilles permitted him to appear in his armour. The bravery of Patro- clus, with the terror which the sight of the arms of Achilles inspired, soon routed the Trojans, and obliged them to fly to the city. He would have broken down the walls ; but Apollo op- posed him ; and Hector, at the instigation of that god, dismounted from his chariot to attack him as he attempted to strip a Trojan whom he had slain. This engagement was obstinate; but Patroclus was at length overpowered by Hector, with the aid of Apollo. His body was at last recovered, and carried to the Grecian camp, where Achilles received it with the loudest lamentations. His funeral rites were ob- served with the greatest solemnity. Achilles sacrificed near the burning pile twelve young Trojans, four of his horses, and two of his dogs ; and the whole was concluded by the exhibi- tion of funeral games, in which the conquerors were liberally rewarded by Achilles. Achilles, laying aside his resentment against Agamemnon, entered the field to avenge the fall of his friend ; and his anger was gratified only by the slaugh- ter of Hector, who had kindled his wrath by appearing at the head of the Trojan armies in the armour taken from Patroclus. The patro- nymic of Actorides is applied to Patroclus, be- cause Actor was father to Mencetius.

PATROL', n. s., & v. n. Fr. patrouille, pa- trouiUitr ; Span, patrula. The act of going the rounds of a camp or garrison; those who go rounds : as a verb, to go the rounds.

These outguards of the mind are sent abroad. And still patrolling beat the neighbouring road ; Or to the parts remote obedient fly. Keep posts advanced, and on the frontier lie.

Blackmore.

0 thou ! by whose almighty nod the scale Of empire rises, or alternate falls, Sena forth the saving virtues round the land In bright ;ja(ro/. Thomson's Summer.

The Patrol, in war, generally consists of five or six men, detached Irom a body on guard, and commanded by a serjeant. They go every hour of the night, from the beating of the tattoo until the reveille : they walk in the streets in garrisons, all over the camp in the field, to pre- vent disorders, or any number of people from assembling together ; they are to see the lights in the soldiers' barracks put out, and to take up all the soldiers they find out of their quarters. Sometimes patrols consist of an officer and thirty or forty men, as well infantry as cavalry ; but then the enemy is generally near at hand, and consequently the danger greater.

PATRON, n.s. -\ Fr. patron; Lat.

'P.\j'R0ii.\GE,7i. s.Scv. a. i patronns. One who Pai'roxal, ►►rf;. ►►► > supports or counte-

Pa'troness,►►i.s. /tw. i nances; an advocate; Pat'ronise, v. It. J defender ; guardian:

hence a guardian saint ; and one who has the donation of a church living: patronage is the quality or state of being a patron ; protection or support; guardianship; donation of, or right of presentation to, a benefice : to patronage is used by Shakspeare for to patronise : patronal is, guardian; protecting; supporting: patroness, the feminine of patron: patronise, to support; protect; countenance.

Lady, most worthy of all duty, how falls it out that you, in whom all virtue

shines, will take the patronage of fortune, the only rebellious handmaid against virtue? Sidney.

Thou amongst those saints, whom thou do'st see. Shall be a saiut, and thine own nation's friend And patron. Spenser.

We are no patrons of those things ; the best defence whereof is speedy redress and amendment. Hooker. An out-law in a castle keeps, And uses it to patronage his theft.

Shakspeare.

I'll plead for you, as for my patron. Id.

All things sliould be guided by her direction, as the sovereign patroness and protectress of the enter- prise. Bacon.

Churchmen are to be had in due respect for their work sake, and protected from scorn ; but, if a clergy- man be loose and scandalous, he must not be patro- nised nor winked at. Id,

Of close escapes the aged patroness. Blacker than earst, her sable mantle spred.

When with two trusty maids in great distress, Both from mine uncle and my realm I fled.

Fairfax.

Where art is encouraged it will soon rise high, and go far ; and not suffer a channel of the sea to stay it from the presence of a more bountiful patronage.

Bp. Hall.

Here's patronage, and here our heart descries What breaks its bonds, what draws the closer ties. Shows what rewards our services may gain. And how too often we may court in vain. Creech. Befriend me, night, best patroness of grief,

Over the pole thy thickest mantle throw. Milton.

The name of the city being discovered unto their enemies, their penates and patronal gods might be called forth by charms. Browne.

I have been esteemed and patronised by the grand- father, the father, and the son. Dryden.

St. Michael is mentioned as the patron of the .Tews, and is now taken by the Christians as the protector general of our religion. Id.

He petitioned his patroness, who gave him for answer, that providence had assigned every bird its proportion. L' Estrange.

Whether the minds of men have naturally im- printed on them the ideas of extension and number, I leave to those who are the patrons of innate princi- ples. Locke.

All tenderness of conscience against good laws is hypocrisy, and patronised by none but men of de- sign, who look upon it as the fittest engine to get into power. , South.

From certain passages of the poets, several ships made choice of some god or other for their guardians, as among the Roman Catholicks every vessel is recommended to the patronage of some particular saint. Addison.

Ne'er let me pass in silence Dorset's name ;

Ne'er cease to mention the continued debt.

Which the great patron only would forget.

Prior.

It was taken iito the protection of my pa'ronesses 1 court. Suif't.*

Far more the patrons than the clerks inflame, Patrons of sense afraid, but not of vice. Or swoln with pride, or sunk in avarice. Wesley. Patron of all those luckless brains. That, to the wrong side leaning. Indite much metre with much pains.

And little or no meaning. Cowper,

Patron, among the ancient Romans, was an appellation given to a master who had freed his slave. As soon as the relation of master expired, that of patron began : for the Romans, in giving their slaves their freedom, did not despoil them- selves of all rights and privileges in them ; the law still subjected them to considerable services and duties towards their patrons, the neglect of which was very severely punished. Patron was also a name which the ancient Romans gave to some great man, under whose protection they usually put themselves ; paying him all kinds of honor and respect, and denominating themselves his clients ; while the patron, on his side, granted them his credit and protection. They were therefore mutually attached and m>itually obliged to each other; and thus, in consequence of

re- ciprocal ties, all those seditions, jealousies, and animosities, which are sometimes the effect of a difference of rank, were prudently avoided ; for it was the duty of the patron to advise his clients in points of law, to manage their suits, to take care of them as of his own children, and secure their peace and happiness. The clients were to assist their patrons with money on several occa- sions ; to ransom them or their children when taken in war ; to contribute to the portions of their daughters ; and to defray, in part, the charges of their public employments. They were never to accuse each other, or take contrary sides : and, if either of them was convicted of havint," violated this law, tlie crime was equal to that of treason, and any one was allowed to kill the offender with impunity. This patronage was a tie as effectual as any consanguinity or alli- ance, and had a wonderful effect towards main- taining union and concord among the people for the space of 600 years ; during which time we find no dissensions nor jealousies between the patrons and their clients, even in the times of the republic, when the populace frequently mu- tinied against those who were most powerful in the city.

Patron, in the church of Rome, a saint whose name a person bears, or under whose pro- tection he is put, and whom he takes particular care to invoke ; or a saint in whose name a church or order is founded.

Patron, in the canon or common law, a per- son who, having the advowson of a parsonage, vicarage, or the like spiritual promotion, belong- ing to his manor, has on that account the gift and disposition of the benefice, and may present to it vvhenever it becomes vacant. The patron's riglit of disposing of a benefice originally arises either from the patron or his ancestors, &cc., be- ing the founders or builders of the church ; from their having given lands for the maintenance thereof; or from the church's being built on their ground.

Patron at, E, Lat. patronatus, or advowson, is a sort of incorporeal hereditament, consisting in

the right of presentation to a church or ecclesi- astical benefice. Advowson, advocatio, signifies the taking into protection ; and therefore is sy- nonymous with patronage, and he who lias the right of advowson is called the patron of the church. For when lords of manors first built churches in their own demesnes, and appointed the tithes of those manors to be paid to

the offi- ciating ministers, which before were given to the clergy in common, the lord who thus built a church, and endowed it with a glebe or land, had, of common right, a power annexed of no- minating such minister as he pleased (provided he were canonically qualified) to officiate in that church of which he was the founder, endower, maintainer, and patron. Advowsons are either ad- vowsons appendant, or advowsons in gross. They are also either presentative, coUative, or donative. See Advowson. As the law now stands, if the true patron once waives his privilege of dona- tion, and presents to the bishop, and his clerk is admitted and instituted, the advowson becomes for ever presentative, and shall never become donative any more. For these exceptions to general rules and common right are ever looked upon by the law in an unfavorable view, and construed as strictly as possible. If therefore the patron, in whom such peculiar right resides, does once give up that right, the law, which loves uniformity, will interpret it to be done with an intention of giving it up for ever ; and will therefore reduce it to the standard of other ecclesiastical livings. See Law.

Patronage, Arms of, in heraldry, are those on the top of which are some marks of subjec tion and de];7endence ; thus the city of Paris lately bore the fleuT-de-lis in chief to show her subjection to the king; and the cardinals, on the top of their arms, bear those of the pope, wlio gave them the hat, to show that they are his sub- jects.

PATRONYMIC, n. s. Fr. patronymigtie ; Gr. TTaTˆovvjxiKOQ. Name expressing that of a father or ancestor : as, Tydides the son of Ty- deus.

It ought to be rendered the son, Tectonides being a pairoiit/mick. Broome.

Patronymics, among grammarians, are de- rived, 1. From the name of the father; as Peli- des, i. e. Achilles the son of Peleus. 2. From the mother; as Philyrides, i. e. Chiron the son of Philyra. 3. From the grandfather on the father's side ; as ;Facides, i. e. Achilles the grandson of iEacus. 4. From the grandfather by the mother's side ; as Atlantiades, i. e. Mer- cury the grandson of Atlas. And 5. Irom the kings and founders of nations ; as Romulidce, i.e. the Romans, from their founder king l{o- mulus. The terminations of Greek and Latin patronymics are chiefly four, viz. dcs, of which we have examples above ; ►►.s, Thaumantias, i. e. Iris, the daughter of Thaumas ; is, as At- lantis, i. e. Electra the daughter of Atlas ; and ne, as Nerine the daughter of Nereus. Of these terminations, des is masculine ; and as, is, and ne, feminine : des and ne are of the first de- clension, as and is of the third. Tlie Russians, in their usual mode of address, never prefix any title or appellation of respect to their names :

but persons of all ranks, even those of the first distinction, call each other by their Christian names, to wliich they add a patronymic. These

patronymics are formed in some cases by adding vitch to tiie Christian name of the father; in others by of or ef ; the former is applied only to persons of condition, the latter to those of in- ferior rank. Thus, Ivan Ivanovitch, Ivan Ivanof. is Ivan the son of Ivan, Peter A^lexivich, Peter Alexiof, Peter the son of Alexis. The female patronymic is Efna, (Jfna, or Gwna, as Sophia Alexeefna or Alexiowna, Sophia the daughter of Alexis; Maria Ivanofna or Ivanowna, Mary the daughter of John.

PATROS, a country mentioned by Jeremiah and Ezekiel, appears from the context to mean a part of Egypt. Bocchart thinks it denotes the Higher Egypt : the Septuagint translate it the country of Pathure, Pliny mentions Nomos Phaturites in the Thebais ; and Ptolemy, Pathyris, probably the metropolis.

PATRU (Oliver), a counsellor in parliament, and dean of the French Academy, born at Paris, in 1604. Upon his admission into the French academy, in 1640, he made an oration of thanks, which gave rise to the custom of admissory speeches. He died very poor, on the 16th of January, 1681. The great exactness with which he finished every thing he wrote did not permit him to publish much. His miscellaneous works were printed at Paris in 1670, 4to. ; the third edition in 1714, 4to., was augmented with several pieces. They consist of Pleadings, Orations, Letters, Lives of some of his Friends, Remarks upon the French Language, &:c.

PATTAN, or Puttun, a Mahratta district of Hindostan, province of Gujerat-, situated aljout 24►► N. lat. The country is thinly nihabited and poorly cultivated. It contains the remains of an ancient capital, called also Puttun or Nehrwalla.

Pattan, a town of Hindostan, province of Aurungabad, belonging to the Nizam. Long. 75►► 33′ E., lat. 19►► 29′ N.

Pattan, or Putn, a town of the province of Nepaul, Northern Hindostan. It is situated at the distance of one mile and a half from Cat- mandoo, on the banks of the Bhagmutty River. It is a neat town, and contains a number of good stone houses. Long. 83►► 40′ E., lat. 27►► 31′ N. There are other places of this name in Hindos- tan.

PATTEEALAII, a city of the province of Delhi, Hindostan, now the residence of one of the seik chiefs. It is said to have been founded by Rai Ram Deo, about the year 1465. It is surrounded with a strong mud wall, and has in the centre of it a square citadel, which contains the palace of the rajah. For a long period it was the residence of the collectors of the district, many of whom expended large sums of money in temples, mosques, and gardens, for which it was much celebrated. It also contains

the tombs of a number of devout Mahometans, and is still the most flourishing town in the district of Sir- hind. Long. 75►► 33. E., lat. 30►► 18′ N.

PAT”TEN, n. s. Fr. patin ; Ital. pattino. A shoe of wood with an iron ruig, worn under the common shoe by women, to keep them from the dirt.

Their shoes and pattens are snouted and piked more than a finger long, crooking upwards, which they call crackowes, which were fastened to the knees with chains of gold and silver. Camden.

Good housewives Underneath the umbrella's oily shed, Safe through the wet on clinking pattens tread.

Gay.

PAT'TER, V. n. Dr. Johnson says from Fr. patte, the foot ; but more probably a frequen- tative of Pat. To make a quick repeated noise like the quick steps of many feet.

Patt'iing hail comes pouring on the main, When Jupiter descends in hardened rain.

Drijden. The stealing shower is scarce to patter heard By such as wander through the forest walks.

Thomson .

PATTERN, n. s. & v. a. Fr. and Span, pa- tron, of Lat. pairo. An exemplar or example ; archetype ; copy designed to be followed ; spe- cimen ; instance : to pattern is used by Shaks- peare, after the Fr. patronner, for to make a copy as well as for to serve as a copy or example. As though your desire were that the churches of old should be patterns for us to follow, and even glasses wherein we might see the practice of that Which by you is gathered out of scripture. Hooker.

They hold that from the very apostles' time till this present age, wherein yourselves imagine ye have found out a right pattern of sound discipline, there never was any time safe to be followed. Id.

Ay, such a place there is, where we did hunt, Patterned by that the poet here describes.

Shakspeare. When I that censure him do so offend. Let mine own judgment pattern out my death, And nothing come in partial. Id.

I will be the pattern of all patience ; I will say nothing. Id. King Lear.

The example and pattern of the church of Rome.

Clarendon. Lose not the honour you have early won, But stand the blameless pattern of a son.

Dry den. Measure the excellency of a virtuous mind ; not as it is the copy, but the pattern of regal power.

Grew. Patterns to rule by are to be sought for out of good, not loose reigns. Davenant.

Christianity commands us to act after a nobler pattern than the virtues even of the most perfect men. Rogers.

This pattern should be our guide, in our present state of pilgrimage. Atterhury.

Take pattern by our sister star. Delude at once and bless our sight ;

When you are seen, be seen from far, And chiefly chuse to shine by night. Swift.

PATTI, a beautiful town in the north-west of Sicily, situated on an eminence, near a bay of the same name. Its streets terminate in a piazza or square ; and the principal building is the ca- thedral. An earthen-ware manufacture here supplies a great part of the island. The sur- rounding country displays the greatest beauty and fertility. Inhabitants 5000. Thirty-three miles west of Messina.

PATTRINGTON, a market town and parish, of Yorkshire, seated on a branch of the Humber, ten miles south-east from lledon, and 191 north of London. The church is well built, and has a

lofty spire, which serves as a landmark for enter- ing the Humber. This town had formerly the advantage of a commodious harbour, and was much more populous, but its haven, a mile dis- tant, will now only admit vessels of very small burden. Market on Saturday.

PATTUR. Pattugotta, or the Stone Quay, a town of the district of Boglipore, Bengal, plea- santly situated at the foot of a range of hills, on the eastern bank of the Ganges, which here is very dangerous for boats, containing many large stones. Near this place, also, there is a rock in the river, on which are carved representations of the Hindoo deities. It is situated seven, miles below Colgong. There are several other places of tliis name in Hindostan.

PATH (Claudius Peter), a French dramatist, born at Paris in 1729. In 1754 he published a comedy, entitled Adieux du Gout, which had a great run. He came to England, and trans- lated several English comedies with great taste and accuracy. He went with M. Palissot to Ge- neva, to see Voltaire, who received him with great kindness. He afterwards went to Naples and Rome, but died of a consumption in 1757, soon after his return to Paris, aged twenty-eight.

PATUKET Falls, on the Merrimack, be- tween Chelmsford and Dracut, a little above the mouth of Concord River, one mile and a half below the head of Middlesex Canal, ten miles west of Andover. The perpendicular descent is twenty-eight feet. A canal, one mile and a half long, is constructed around the falls, and a bridge is built across the river at the principal descent. Here is a small village in the township of Chelmsford, with a post-office and two cotton manufactories.

PATUXENT, a river of Maryland, which runs south-east into Chesapeake Bay, eighteen miles north of the Potomac. It is navigable for ves- sels of 250 tons to Nottingham, fifty miles.

PAU, an island of the South Pacific Ocean, one of the Tefee group. It is famous for sandal wood, particularly a part of it called Vooiha. Vessels repairing hither can obtain several ions at a time. The natives have curled hair, and are fierce and warlike, and occasionally treacherous. It seems that they are among the principal can- nibals now existing in the world. Their dress is very scanty, and their skins coarse and unoiled ; and on the whole, both in personal appearance and manners, they are inferior to the Friendly Islanders. Some Englishmen have of late been resident here.

Pau, an ancient and very pretty town, and the principal place of the department of the Lower Pyrenees, or the Beam, in the south-west part of I ranee. It has a royal court for the de- partments of the Lower and Upper Pyrenees and the Landes, a lower court of justice, a chamber of commerce, an agricultural society, a university, academy, and a royal college. It is a post town, containing about 11,500 inliabi- tants. This town is situated at the extremity of a vast plain, overlooking a delightful valley, through which flows the Gave de Pau, and sur- rounded with country nouses, nne garuens. and charming groves, that present a ravishing pros- pect. It is large, very well built, airy, Hlcrrt-i

vi'.th a beautiful public fountain, encompassed with agreeable walks, and crossed by the rivulets of Iledas and the Ousse, which unite at the Gaue de Pau. The chateau, where Henry IV. was born, since made a royal residence, stands at the northern extremity on the peak of a rock, the bottom of which is washed by the river, and forms one of the finest ornaments of the town, overlooking it and the surrounding country. A superb bridge crosses the stream, supported by seven arches, and remarkable for its loftiness. The view from this point is magnificent ; the eye wanders with delight over the valley, the river in the bottom, the meadows with wiiich it is covered, and the surrounding hills, beyond which rises, in the form of an amphitheatre, the cliain of the Pyrenees, capped by the majestic Pie-du-Midi, whose top is lost in the clouds. This is the native place not only of Henry IV., but of Goston de Foix, the viscount Orthez, ###who spared the lives of the Protestants of Bayonne, at the time of the massacre of St. Bartholemew's dayj and general Bernadotte, now king of Sweden.

Here are manufactures of handkerchiefs, table linen, and carpets, with paper-mills,- tan-yard.s, and dye-houses. A considerable trade is carried on in Jurancon wines, Bayoime hams, goose legs, excellent chestnuts, spun and dyed cotton, iron, and limestone. There is a royal stud here. Some delightful walks are in the neighbourhood. Pau is sixty miles south of Mont de Marsan ; thirty west of Tarbes ; seventy-eight E. S. E. of Bayonne, and 615 south-west of Paris, in long. 2## 43′ W. from that city, lat. 43## 19′ N.

PA VAN, or Pavane, a grave dance used among the Spaniards, and borrowed from them, wherein the performers formed a kind of wheel or tail before each other, like that of a peacock, pavo, from whence the name is derived. The pavane was formerly in great repute ; and was danced by gentlemen with cap and sword ; by those of the long robe in their gowns, by princes with their mantles, and by tlie ladies with their gown-tails trailing on the ground. It was called the grand ball, from the solemnity with which it was performed. To moderate its gravity, it was usual to introduce several flourishes, passades, capers, &c., by way of episodes. Its tablature or score is given at large by Thoinot Arbeau in his Orchesoffraphia.

PAUCAROLLA, a province of Peru, boimded by the lake of Titicaca on the north-east, on the east by the lake and the provinces of Chucuito, north by that of Lampa, west by that of Mo- queha, and south by the province of Arica and Pacajes. It is eighty-six leagues long, and twenty-eight broad, and is watered by several streams. The climate is cold ; in the parts bor- dering on Lake Titicaca are found Peruvian bark, papas, barley, &;c. Cattle, sheep, pigs, and la- mas, nourish here ; and there are many vicunas, deer, partridges, and lake fowl, which are largely caught by the natives.

The lake also supplies fish, and transports the dressed hides, thread, gum, &c., of the district, which are given in exchange for wines, brandies-, and other commodities, from the adjacent parts. The natives fabricate also f!;e wool of the Peruvian camel, and carry on a

considerable traffic in that article. Here are also rich mines of gold and silver. Population

26,000.

Paucarolla, formerly the capital of the above province, has fallen off in population, and lost this distinction. It is situate on the shore of the lake Titicaca.

PAUCARTAMBO, a province of Peru, bounded north-west and west by Galea and Lares, north-east and east by the frontier of the Indians, and south by that of (ˆuispicanchi. It is a large ravine or valley, terminating in the Andes ; twenty-six leagues from north to south, and from six to seven in breadth. Gn the heights its temperature is cold ; but in the low parts warm. It produces wheat, barley, maize, seeds, and various fruits in abundance. Population 8000, dispersed in eleven settlements.

PAU'CITY, n. s. Lat. paucitas, from paucus. Fewness ; smallness in number or quantity.

The multitude of parishes, and paucitii of schools.

Hooker.

This paucity of blood is agreeable to many other animals, as lizards, frogs, and other fishes.

Browne s Vulgar Errours.

In such slender corpuscles as those of colour, may easily be conceived a greater paucity of protuberant corpuscles. Boyle.

Socrates well understood what he said touching the rarity and paucity of friends. L'Estrange.

PAUCTIGN (Alexis John Peter), a learned mathematician, born near Lussan, in 1732. His principal work was his Metrologie, first published in 17bO, wliich contains a collection of the mea- sures of all countries. The astronomer Lalande assisted him in the foreign department. This ex- cellen work contains also calculations of the an- cient measures, with dissertations on population, agriculture, &c. He also published A Theory of*

the laws of Nature, in 1781, wherein he attempts to refute the systems of Newton and NoUet. He died in 1799.

PAV-'E, V. a. \ Fr. paver ; Lat.

Pave'ment, 71.S. &t7. a. >pf(uJo (to beat). To

Pa'vior, n. s. J lay with hard or

beaten materials ; floor with stone or brick ; pavement is the material, so laid or consoli- dated : Bishop Hall makes a fine use of pave- ment as a verb : a pavior is one who makes or mends pavement.

Should she kneel down, Her brother's ghost his paved bed would break, vVnd take her hence in horrour. Shakspea'^e.

The marble pavement closes, he is entered Into his radiant roof. Id. Cymheline.

Let not the court be paved ; for that striketh up a great heat in summer, and much cold in winter.

Bacon. it might open and pave a prepared way to his own title. ' Id.

Whether thou meanest to termmate this miracle in thy body, or in the waves which thou troddest upon ; whether so lightening the one that it should make no impression in the liquid waters, or wlvether so consolidating the other that the pavemented waves yielded a firm causeway to thy sacied feet to walk on, I neither determine nor enquire. Bp. Hall.

A b.oad and ample road, whose dust is gold, And pavement stars seen in the galaxy. Milton.

From this chyniic fiame I see a city of more precious mold, With silver paved, and all divine with gold.

Dryden.

The streets are paved with brick or freestone.

Addison.

The long laborious pavement here he treads, That to proud Rome the

admiring nations leads.

/(/.

For thee the sturdy paver thumps the ground. Whilst every stroke his lab'ring lungs resound.

Gay.

The foundation of Roman ways was made of rough stone joined together with cement ; upon this was laid another layer, consisting of small stones and cement, to plane the inequalities of the lower stratum in which the stones of the upper pavement were fixed : for there can be no very durable pave- ment, but a double one. Arbuihnot.

From these their politics our quidnuncs seek. And Saturday's the learning of the wetk : These labouring wits, like paviors, mend our ways With heavy, huge, repeated, flat, essays ; Ram their coarse nonsense down, though ne'er so

dull. And hem at every thump upon your scull. Young.

Pavement, I.at. pavimentum, from pavio, to beat, the construction of streets, liighways, or ground-floors in such a way as that they may be conveniently walked upon, &c.

According to Isidorus the Carthaginians were the first people who paved their towns with stones. 188 years after the expulsion of the kings Appius Claudius Caecus paved the greater part of the city of Rome, and constructed the Via Appia. At length all the high roads leading from the city were laid with stone, and, by de- grees, continued throughout tlie whole empire; and the remains of them are found, in a greater or less degree of preservation, in the different pro- vinces of which that immense empire was com- posed. Several of these public roads, besides the Appian, received their names from those of the parties who had dictated their construction. Aurelius Cotta founded, in the year 512, after the foundation of Rome, the Aurelian way; Flaminius the Flaminian way ; and the ^"Emilian way was executed by the command of ^T.milius. The censors superintended the forming of these highways, and directed their situations, &c.

Witl) retiard to the pavements in the interior of the Roman edifices, they styled such as were constructed upon stages of timber work contig- nata pavimenta ; and those made of oaken plank were denominated by them coassationes. The opulent Romans appear to have had portable pavements carried about to pave their tents in time of war, as by Julius Caesar. These

were chiefly of m.osaic.

In Great Britain the pavement of the principal streets, &c., is generally of flint or rubble-stone, while churches, courts, stables, domestic offices, Sec, are paved with tiles, bricks, flags, or fire stone ; sometimes widi a kind of free stone or rag stone. In some continental churches the pavement is of marble, and sometimes of mo- saic, as in the catliedral of St. Mark at Venice, Sec.

In France the public roads, in common with the streets, courts, &c., are all paved with gris Or gritt (a kind of free stone), and the elegance iiid convenience arising from the use of flag

stones in the streets of English towns are unknown even in Paris, where the pedestrian is in constant danger of being run down by the pole of a car- riage.

At Amsterdam and the chief cities of Holland they call their brick pavement the burgher-mas- ter's pavement, to distinguish it from the stone or flint pavement, which usually takes up the middle of the street, and which serves for car- riages; the brick which borders it being destined for the passage of people on foot. Pavements of free stone, flint, and flags, in streets, &c., are laid dry, i. e. in a bed of sand ; those of courts, stables, ground-rooms, Sec, are laid in a mortar of lime and sand ; or in lime and cement, espe- cially if there be vaults or cellars underneath. Some masons, after laying a floor dry, especially of brick, spread a thin mortar over it; sweeping it backwards and forwards to fill up the joints. The several kinds of pavement are as various as the materials of which they are composed, and whence they derive the name by which they are distinguished.

PAVETTA, in botany, a genus of the mono- gynia order, and tetrandria class of plants ; natural order forty-seventh, slellatas : cor. mono- petalous and funnel-shaped above : the stigma carved : the berry dispermous. Species seven, natives of China and of India.

PAVIA, a province or delegation of Austrian Italy, surrounded by those of Milan, Lodi, and Parma; and in the government of Milan. Its surface, for tiie most part level, is so fertile as to have procured for it the name of the Garden of the Milanese. It contains 320 square miles, and is watered by the Po, the Ficino, and the Olana. The vine and rice are the chief objects of cul- ture. Silk is. likewise raised in large quantities ; the pastures feed fine cattle, and the cheese of the district forms an important branch of export. The trade of the province is carried on by the Po and the Ticino, and greatly facilitated by the canal, which forms a communication between Milan and Pavia. The climate is mild and salu- brious, but has been

rendered somewhat un- htalthy by the irrigation connected with the ex- tended cultivation of rice.

Pavia, the ancient Ticinum or Papia, a large town of Austrian Italy, the capital of the dele- gation of the same name, in the government of Milan. It is situated on an eminence on the banks of the Ticino, four miles above its conflu- ence with the Po. The streets are broad and straight, and most of them contain respectable edifices; but, with the exception of the churches, nothing of splendid or imposing architecture appears. Its length, from east to west, is about a mile. In the Strada Nuova, or principal street, are the mouldering palaces of the Pavian nobility, minoled with shops, churches, colleges, caft'es, theatres, and hospitals. ' In the morning this long but not spacious avenue (though the centre of the city, and indeed the city itself, for the lateral streets are few and inferior), is still life- less,' says lady Morgan, ' and exhibits but little of the bustle of trade, which, we are assured, was ruined under the late changes. In the evening the Strada Nuova is the Corso, not only for the few old carriages with the few old no'oles

who occupy them, but the lounge of all tiie youni,' before gunpowder or artillery was known. But students of the university, whom we at first look this primitive design soon degenerated into a for military a demi-soide. Nothin", indeed, can spirit of rivalry and a'.nbition ; and a tower ad be more military than tlieir air and step, set off joining to a nobleman's house became a necessary by spruce large cocked hats; for the university appendage to his grandeur••• a distinctive proof

of Pavia has not yet resumed the monkish frock, and the youtii have still the air of the eleves of the polytechnic schools of Paris. Mixed with the carriages of the nobles are the pedestrians of all classes and ages, all coming forth 'per pigliar il fresco,' as they call swallowing dust, and per- spiring between rows of heated walls, which render the street an oven. Meantime the Aus- trian officers lounge on benches under the ex

of his rank and consequence ; ••• in a word, the landmark of the most puerile vanity. In one of these towers (now no more), in tiie time of Theodoric, king of the Goths, the celebrated Boethius was shut up, and there he composed his treatise De Consolatione Philosophije. The tower, as long as it existed, bore his name. On the site where it stood now stands the Casa Ma- laspina, whose very enlightened lord has placed

Podesta of Pavia. It is 300 feet long by twelve wide; and is covered by a curious roof, sup- ported by 100 columns of granite. When we saw the Ponte del Ticino it was crowded with little oratories and temporary chapels, mostly

tended awnings of the cafl'es, smoke their cigars at the entrance to his palace a marble monu-

iii the faces of the passengers, and talk German, inent and bust of the illustrious philosopher, with

' The Strada Nuova terminates the length of an appropriate inscription, by the abb(' Morcelli.

the city at the sate and bridge of tiie Ticino. This It is well known than the Roman consul only

bridge is one of the most curious objects in left this tower to be executed on the space near

Italy, and one of the most strikins; monuments the church of St. Peter in ciel d'oro. Another

of the energy and activity of the Italians of the of these towers, now fortunately laid low, was

middle age in all works of public utility. It was called Torre del Pizzo in Giu, from its being a

raised in 1351, when Giovanni di Mandello was reversed pyramid.'

Joseph II. suppressed many of the forty-six convents once seen here; and the government of the kingdom of Italy put down the few that re- mained. The churches, however, though half shut up and unfit for service, were seldom abso- consecrated to the Virgin, but raised equally for lutely destroyed. Near the site of the palace of exciting piety and extorting charity ; as each the Lombard kings stands the ancient Basilicum shrine was guarded by a very noisy solicitor, in of St. Michael. History asserts it to be contera- a pilgrim's habit, demanding 'carita' in the name porary with the grim king, Grimoaldi of the of the Madonna, and of all the saints who had, sixth century. Contrary to the Lombard man- since the Restoration, taken the structure under ner, it is not built in pietra-cotta. but in marble, their special protection. A curious circumstance Its curious and ponderous facade is covered with was that, while one end of the bridge was bas-reliefs that are of infinite value, for the man- guarded by Austrian soldiers, Doganieri, police, ners they record. In one compartment the ano-el &c. &c.

&c., the other was protected by the Gabriel, a most dolorous figure, with a face□□as forces of his Sardinian majesty : the Ticino being long as if he belonged to the houss of Austria the actual limit between the legitimate posses- is playing the fiddle. In another there is a re- sions of these respective autocrats. How long presentation of the Annunciation, which savours it will please Heaven to preserve this partition of the Arianism at that time predominant among of its ‘ divine grace,’ seems at present very the Lombards. The angelic messenger is seen doubtful.’

From the main street others of greater anti- quity branch off at right angles, where all is sad, desolate, and silent; some terminate in piazze or squares, opening before vast and cumbrous palaces, with windows half sashed, doors hang- ing from their hinges, balconies mouldering over

beautiful but fallen porticoes, and the grass

presenting a large full grown bambino to the Virgin Mary, who smiles most terribly upon him. Every where monsters, the most strangely deformed, obtrude themselves among Christian seraphim and cherubim. With this barbarous architecture are combined some fine arches of pure Gothic, introduced at a later period into Italy, and called by the Italians, when thus em-

ahooting up every where between the pavement, ployed, stilo misto. The dark, dank entrance,

In one of these by-streets is shown the site of or portico, of this very ancient building, is paint-

the imperial palace when Pavia was a royal capi- ed in fresco, in forms so terrible, as greatly to

tal. This was a palace of Theodoric, often cited add to its awful gloom. They are by Andrino

in the story of various barbarous invasions. It D’Edesia, a contemporary of Giotto’s ; thouo-h

was standing in all its Gothic grandeur in the one might well suppose them coeval with the

eleventh century, when a popular insurrection church’s foundation. The interior of this temple

against the tyranny of the emperor Henry II. is equally gloomy, and almost as barbarous, as

levelled it to the ground. the exterior. There is one spot curiously paved

‘ Of the extraordinary edifices which gave to with ancient Mosaic, where, it is said, the Lom-

Pavia the name of ‘citta delle cento torre,’ the bard kings were crowned, when Pavia, the grave

number now is considerably diminished. Of of two dynasties, was tiie capital and royal city

those that still remain, one is most fearfully at- of the kingdom of Italy.

tached to the Casa Belcrede, and has an eleva- The cathedral of Pavia is a vast and ugly edi- tion of fifty-six metres ; another belongs to the fice, begun under the episcopal sway of cardinal f’asa Maino ००० and both are considered as marks Visconti, brother to the then reigning duke of of great distinction and nobility. The original Milan, Giovanni Galeazzo 'isconti, in the fif- intention of these turrets was internal defence, teenth century, and lately repaired extensively.

*The church of San Pietm in ciel d’om, or of the Augustinians, though suppressed by the em- peror Joseph II., contained the tomb of Boe- thius, and the body of St. Augustin : ००० history at least states that king Luitprand had his precious remains conveyed thither from Africa ; but Mr. Eustace chills the reverence with which it would naturally be approached, by his fears, that * in- stead of the dust of the Christian Plato, the tri- bute we wish to offer to virtue and wisdom should be erroneously paid to the putrid dust of some Northern invader, or half-savage Lombard.’*

San Pietro in ciel d’oro is the scene of one of the pleasant adventures of Boccacio’s Pavese hero, Messer Torrello d’Istria di Pavia ; and the lovers of Boccacio in Pavia, according to the lively traveller we have already quoted, numerous there as throughout Italy, point out the spot where they suppose that humorous and most phi- losophical genius to have placed the sumptuous bed of Torrello, where he was found by the monks, the victim or rather the protege of necro- mancy.

The university of Pavia, to which it owes its title of the Insubrian Athens, has the testimony of the imperial diploma of Charles IVˆ to its importance in the fouiteenth century, but is .said to have been founded by Charlemagne. To Pa- via, through the long course of the middle ages, all

the learned of Europe occasionally came ; wrestlers in metaphysics, and gladiators in pole- mics, from all parts of France and Italy in par- ticular; while the Alciati and Baldus's drew disciples to their schools, from the most opposite quarters of the world. At one period, in the time of Giasone Maino, Pavia contained 3000 students ; but it declined in numbers and reputa- tion, like every thing else in Italy,under theSpanish and Austrian influence ; until, towards the end of the eighteenth century, it was so fallen, that even its former repiutation was almost forgotten ; and this splendid establishment was without a library, a museum, collections, or any means of affording assistance to public education. The wise and excellent count Firmin, minister pleni- potentiary in Lom-bardy, was the tirst to revive institutions once the glory of northern Italy ; and with the assistance of Boscovich, Spallan- zani, Tissot, Frank, Volta, Scarpa, &c. Jcc, he restored to the university much of its ancient consequence.

When Buonaparte became emperor, he visited Pavia (1805) on his way to his coronation at Milan, and particularly noticed the university. The pomp of this journey, and the manner of his reception in the capital of Lombard kinas, left far behind the recorded visitations of Charle- magne and Charles V. The rector, at tlie head of its members, received and harangued him at the gates ; terminating his oration with the fol- lowing words : ❑❑❑ ' Da Carlo il Grande ebbe questo celebre Archiginnasio li suoi primi prin- cipj ; da Napoleone il Grande abbia la perfetta sua gloria ed eterna stabilla !' Napoleon is said scarcely to have permitted the eloquent Rettore to conclude his oratorical elou;e, when, rushing by the learned corps, he ran with his natural viva- city, petulance, and curiosity, from class room to class-roora, while his splendid mjUtary suite

' toiled after him in vain.' Even the attendant professors found his celerity of movement and enquiry too much ; and could scarcely find time, or breath, to follow and answer him. ' Che scuola e questa ?' ❑❑❑ he asked of the first school he entered. It was the class of metaphysics, lie sneered and took snuff; then, turning to one of the boys, he asked ' Qual e la differenza fra la somiglia e la morte?' meaning thereby, 'What is the difference between sleep and death V This naturalization of the French word ' sommeil' was too much for the boy ; and he turned for assist- ance to his learned master, who was as much at a loss as his pupil to comprehend the mystery of these royal metaphysics. ' The case, however, was urgent : for a professor to confess ignorance would never do ; but not to understand the em- peror was still v/orse ; so down he plunged into a mortal disquisition on death, till Napoleon, perceiving he was not understood, and that the metaphysician was talking nonsense on a non-sensical subject, turned from him petulantly, uttering the word ' Betise !' too well pronounced to be misunderstood by any present ! ❑❑❑ H❑❑ then hurried to another class-room, with his usual question of ' Che Scuola

!' &c. &c. It was the class of iits favorite mathematics, and his eyes sparkled at the intelligence! He looked round him for a moment with great satisfaction, then snatching a book from one of the >oiinˆ students' hands, he gave him a problem to work. When the boy had finished the task assigned him by the imperial mathematician, his majesty looked it over, and said, ' Non fe cosi.' ' You are wrong.' The boy boldly persisted that it was ' cosi,' and that he was right. Napoleon snatched the book and pencil out of his hand; and the master coming in to the emperor's assistance, endeavour- ed to convince him his pupil was not mistaken ; to the infinite (and not concealed) satisfaction of the rest of the class. The emperor then took the slate ; and, while marshal Jourdain and others stood yawning behind him, he began to work the problem himself; till, self-convinced of his error he returned the slate, with a ' Si si, e bene;' but with the sulky air of a school-boy, who had lost his place at the head of his class. He then proceeded to another school : ??? It was the school of Volta, the Newton of Electricity. Napoleon ran up to him with open arms, and begged his class might be drawn out. To every proof of their extraordinary progress, the emperor clapped thevenerable professor familiarly on the shoulder, exclaiming' 'Bravo, Volta! bravo! vous etes digne d' elcver la jeunesse !' ' You are worthy to bring up youth.' It was in this class that the emperor perceiving a little boy gazing on him with all the fearless curiosity of childhood, took him by the hand, and asked his name. The animated countenance and ready answers of tlie boy pleased him ; he wrote down his name in his tablets. Shortly after he sent for the lad to Milan ; and, until his own fortunes fell, he never lost sight of him. This youth became one of the most distinguished officers in the Italian service.' The University of Pavia was now an object of munificent protection to the new government of the kingdom of Italy; the imperial visit of 'Na- poleone il grande,' being not among the least

causes of its aggrandizement.' As a building, the exterior of tlie university is remarkable for its elegant simplicity : its courts and colonnades are antiquated, and have a cloistral air that suits well with the whole. Its porticoes are spacious ; and are encrusted with monuments, raised to the honor of the most illustrious of its deceased mem- bers. The cabinet of natural history is described as magnificent. The gallery of animals is near 200 feet long, and the subjects are raised in suc- cessive tiers or sta2;es along the walls ; an ele[)hant, and some other of the larger races, occupy the centre of the room. The library was founded in the last years of Maria Theresa's reign, under count Firmin : but it owes its prmcipal wealth to Joseph II., and to the additions made to it by the Italian government. To

the activity and li- berality of this government, the university is also indebted for its fine botanical garden, the hot- houses, and a collection of exotics from New Holland. The corso, the opera, the church, in- clude all the occupation and amusement of Pavia. Its great attraction is its university ; and the youth who compose it, like the students of Turin and Bologna, all seem to belong to Europe.

The far-famed Certosa of Pavia, an abbey for Carthusian monks, is four Italian miles from the city, and was built and endowed for the express purpose of expiating the death of his uncle, or, as the Italian chronicle has it, ' ad espiazione delle sue colpe, e redenzione dell' anima' ××× by Galeazzo Veranti. Galeazzo was one of the most pious sovereigns of the fourteenth century. He made pilgrimages to the shrine of the Virgin at the head of 2000 armed men (his ordinary guard, says the historian) ; and though such acts of piety were always followed by some terrible crime, yet he was the special favorite of all the bishops of Lombardy ; and when he laid the first stone of the Certosa, in 1396, he issued forth from his castle of Pavia, attended by the bishops of Pavia, of Novarro, of Feltre, and of Vicenza, with a body of the principal ecclesias- tics of his dominions. The church and monas- tery rose with incredible speed and splendor ; and in three years it was sufficiently advanced to receive the prior and twenty-four monks of the or- der of the Chartreuse. The immense estates grant- ed by its founder rendered it one of the richest convents in Italy ; and a codicil to his will, in- timating that the monks should lay by a sum annually for its decoration and improvement, added to its beauty and richness. Successive donations still further increased the wealth of the house; the genius and talent of ages contributed to its ultimate perfection, and the cloisters of the Certosa became the studio of Luino, Giacomo della Porta, Procaccini, Sacchi, Guercino, and others of equal note and ability. Commenced in the fourteenth century, the artists of Italy were still working at it in the eighteenth ; yet the la- bor of 400 years scarcely accounts for the im- mensity of its details, its sculptures, its carvings, its statuary, its works in gold, bronze, ivory, and ebony, its accumulations of precious stones, of mosaics, of pictures, of frescoes, and all the won- ders of wealth and art. which go to the perfect- ino- its chapels, its choirs, and its sacristies, its ahars, monuments, and mausoleums. Even the

Lavatojo, the washing-room of the monks, is in crusted with basso-relievo, with busts and gems of the most exquisite workmanship ; and its magnificent window of stained glass employed for years the genius of Christoforo Matteis, who finished it in 1477. In the midst of its silent and overpowering magnificence rises the mau- soleum of its founder. This superb monument was raised by the monks, a century after his death ; to give a hint perhaps, to his successors, the Sfoizas, to go and do likewise ! It was begun by Pellegrini in 1490, and was finished by Giacomo della Porta

in 1.562 ; its arabesque foliage and delicate ornaments were by Christoforo Romano; and the whole is of the most precious Parian marble.

The cloisters of the Certosa, where every thing is simple and solemn, contrast finely with the splendor of the temple. They are found behind a noble fabric, once occupied by the prior, and reserved for the reception of strangers and pil- grims of rank ; and are encrusted with tracery and relievoes in terra-cotta,. serving as a portico to twenty-four isolated houses. These were the cells of the monks ; each cell has two rooms, a little garden, with a fountain and marble seat. A wheel, on the outside, turned to receive their food ; for there was no communication between the brethren, except in the church. The prior's apartments are spacious and princely ; a vast room in the attic was said to have been the tem- porary prison of Francis I., aft-er the memorable battle of Pavia. One of the first acts of the re- forming system of Joseph II. was the suppres- sion of this convent. The prior and monks were pensioned off, and obliged to return to that so- ciety which they had vowed to abandon for ever. Four priests were appointed to officiate in the church on Sundays and holidays ; a sacristan was named to watch over and keep it in order. Except a few pictures removed by the emperor to Vienna, and a few by the French, the church and convent remain rich and picturesque, as in the days of their greatest prosperity.

The trade of Pavia is insignificant, and con- sists principally in silk and wine. It is the see of a bishop, and eighteen miles south of Milan and eighty west of Mantua,

*PAVI'LION, n. s. & v. a. Fr. pavilion. A tent ; a temporary or moveable house ; to furnish with tents. **

For in the time of trouble he shall hide me in his pavilion. ^^^a. xxvu. 5.

He, only he, heaven's blue pavilion spreads

And on the ocean's dancing billows treads.

Haiidys.

Flowers being under the trees, the trees were to them a pavilion, and the flowers to the trees a mosa- ical floor. Sidney.

She did lie In her pavilion, cloth of gold, of tissue.

Shakspenre. Jacob in iNlahanaim saw The field pavilioned with his guardians bright.

Milton.

Tt was usual for the enemy, when there was a king in the field, to demand in what part ot the camp he resided that they might avoid firing upon the royal jmiiUon. Adiiiˆ oH.

God has a strong pavilion, where He makes my soul abide. Watts.

Pavilion at Brighton, one of the palaces, and a favorite residence of the king of England, It was erected in 1784 for the occupation of the prince of Wales, who subsequently enlarged, beautified, and constantly occupied it after he became king (George IVˆ) See Brighton.

Pavilion, in architecture, signifies a kind of turret or building, usually insulated, and con- tained under a single roof; sometimes square, and sometimes in form of a dome : thus called from the resemblance of its roof to a tent. Pavi- lions are sometimes also projecting places, in the front of a building, marking the middle thereof; sometimes the pavilion flanks a corner, in which case it is called an angular pavilion. The Louvre is flanked with four pavilions : the pavilions are usually higher than the rest of the building. There are pavilions built in gardens, commonly called summer-houses, pleasure-houses, &c. Some castles or forts consist only of a single pavilion. Pavilion, in heraldry, denotes a covering in form of a tent, which invests or wraps up the armories of divers independent kings and sove- reigns. The pavilion consists of two parts ; the top, which is the chapeau, or coronet ; and the curtain, which makes the mantle. None but sovereign monarchs, according to the old French heralds, may bear the pavilion entire, and in all its parts. Those who are elective, or have any dependence, say the heralds, must take off the head, and retain nothing but the curtains.

PAUL, previously named Saul, was of the tribe of Benjamin, a native of Tarsus in Cilicia, a Pharisee by profession ; first a persecutor of the church, and afterwards a disciple of Jesus Christ, and apostle of the Gentiles. lie was a Roman citizen, because Augustus had given the freedom of the city to all the freemen of Tarsus, in consideration of their firm adherence to his interests. His parents sent him early to Jerusa- lem, where he studied the law at the feet of Ga- maliel, a celebrated doctor. He made great progress in his studies, was very zealous for the observation of the whole law of Moses. But he persecuted the church of Christ ; and, when the protomartyr St. Stephen was stoned, Saul was not only consenting to his death, but he even took care of the clothes of those that stoned him. This happened A. D. 33, a short time after our Saviour's death. After the death of St. Stephen, Saul showed the utmost violence against the Christians ; and having

*obtained credentials from the high priest Caiaphas, and the elders of the Jews, to the chief Jews of Damascus, with power to bring to Jerusalem all the Christians he should find there, he went to seize all of that profes- sion he could find. But as he was upon the road, and drawing near to Damascus, on a sud- den, about noon, he perceived a great light to come from heaven, which encompassed him and all those that were with him. They fell suddenly to the ground, and Saul heard a voice saying to him, * Saul, Saul, why persecutest thou me / ' His an- swer,with his blindness, the cure, and the other sur- prising circumstances that followed and ended in his conversion, are recorded in the ninth chapter of the Acts. That Saul, from being a zealous*

persecutor of the disciples of Christ, became all at once a disciple himself, is a fact which cannot be controverted without overturning the credit of all history. He must therefore have been con- verted in the miraculous manner in which he him- self said he was, and of course the Christian reli- gion be a divine revelation, or he must have been either an impostor and enthusiast, or a dupe to the fraud of others. There is not another alternative possible. If he was an impostor, who declared what he knew to be false, he must have been induced to act that part by some motive : but the only conceivable motives for religious impostures are, the hope of advancing one's temporal interest, credit, or power ; or the prospect of gratifying some passion or appetite under the authority of the new religion. That none of these could be St. Paul's motive, for professing the faith of Christ crucified is plain from the state of Judaism and Christianity at the period of his forsaking the former and embracing the latter faith. Those whom he left were the disposers of wealth, of dignity, of power in Judea : those to whom he went were indigent oppressed men. As to credit or reputation, could the scholar of Gamaliel hope to gain either by becoming a teacher in a college of fishermen ? Could he flatter himself that the doctrines which he taught would, either in or out of Judea, do him honor, when he knew that ' they were to the Jews a stumbling block, and to the Greeks foolishness ? ' Was it then the love of power that induced him to make this great change ? Power ! over whom ? over a flock of sheep whoni he himself had assisted to destroy, and whose very Shepherd had lately been murdered 1 See lord Lyttleton's Observa- tions on the Conversion of St. Paul ; a treatise to which it has been truly said, that infidelity has never been able to fabricate a specious answer. The escape of St. Paul from Damascus, where the Jews had influenced the governor to seize him ; his meeting at Jerusalem with the disci- ples, who were still afraid of him ; the plot of the Jews to kill him ; his journey to Csesarea, and thence to Tarsus, where he continued from A. D. 37 to 43 ; his journey thence with Barna- bas to Antioch, and from that city to Jerusalem, with supplies to the disciples during the famine, A. D. 44, when he met with the prophets Si-

meon, Lucius, and iNIanaen, and when he is supposed to have had his ineffable vision of heaven (2 Cor. xii. 2-4) ; his journey with Bar- nabas to Cyprus ; the opposition of Barjesus ; his "blindness ; the conversion of Sergius Pauhis, A. D. 45 ; the change of Saul's name into Paul ; his journey to Perga, and preaching in the syna- gogues there, as well as at Antioch, Iconium, Lys- tra,.and Derbe ; the miracles he wrought, and per- secutions he suffered at these places ; his recovery after his being stoned, and supposed to be dead ; the dissension about cirumcision at Antioch ; his mission with Barnabas to Jerusalem for the opi- nion of the other apostles on this subject, with their decision ; his censure of St. Peter for his dissimulation : his separation from Barriabas, and junction with Silas ; their journey through Lycaonia, Phrygia, Galatia, Mysia, and Troas, to Macedonia ; their imprisonment, &c., at Philippi ; the conversion of Lydia and the jailor, and their

spirited expostulation with the magistrates ; their journey through Amphipolis and ApoUonia, to Thessalonica and Berea ; the tumults raised by the Jews atˆinst them in these cities ; Paul's voyage to Athens, A. D. 52 ; his disputes there with the philosophers ; his defence before the Areopagus; the conversion of Dionysius and Damaris ; his Journey to Corin'h, where he con- tinued eight months, and whence, or from Athens, he wrote his two epistles to the Thessa- lonians ; his accusation before Gallio, and ac- quittal ; his voyage to Ephesus, CiEsarea, and Jerusalem ; his journey through Antioch, Galatia, Phrygia, and the higher provinces of Asia; his return to Ephesus, where he continued three years, from A. D. 54 to 57, wrote his epistle to the Galatians, and performed many miracles ; and where he says, he also fought with beasts, but whether literally in the amphitheatre, in con- sequence of a sentence of the heathen magis- trates, or whether the expression is only a me- taphorical allusion to the trouble he had with Demetrius and the silver-smiths, commentators are not agreed ; his journey after this to Philippi in Macedonia, along with Timothy, whence he wrote his two epistles to the Corinthians; thence lo Achaia, Corinth, Assos, Mitylene, Miletus, Coos, Rhodes, Patara, Tyre, Ptolemais, and Ca- sarea, where he met with Philip the evangelist, and the prophet Agabus, who foretold his future sufferings ; his journey thence to Jerusalem, where, by the advice of St. James, he took the vow of a Nazarite ; the riot raised in the tem- ple against him by the Jews; his rescue from their fury by Lysias ; his unjust treatment by Ananias the high priest ; the division between the Pharisees and Sadducees respecting him ; the Vˆloody vow of the Jewish assassins to murder him ; his transmission to Felix by Lysias; his ac- cusation by Tertullus, and his animated defence; the injustice of Felix; Paul's spirited oration be- fore Festus and Agrippa ; its effect upon the latter ; Paul's appeal to Ccesar, and consequent voyage from Adramyttium

over the seas of Cili- cia and Pamphylia, to Myra, and thence to Crete; the storm of fourteen days; the ship- wreck on the coast of Malta; the cure of Pub- lius, &c. ; Paul's re-embarkation and voyage to Syracuse, Rhegium, and Puteoli, with his final arrival at Rome, and reception there by his countrymen, are all fully recorded by St. Luke, in the Acts of the Apostles, from chap. ix. to xxviii. Paul dwelt for two whole years at Rome, from A.D. 61 to 63, in a hired lodging; where he received all that came to him, preaching the religion of Jesus Christ without intermission- His captivity contributed greatly to the advancement of religion : for he converted several persons even of the emperor's court. ††† Philip, i. 12-18, and iv. 22. The Christians of Philippi, hearing that St. Paul was a prisoner at Rome, sent Epa- phroditus to him, with money, to assist him in their name- ††† Phil. ii. 25. Epaphroditus fell sick at Rome ; and when he went back to Ma- cedonia the apostle sent by him his Epistle to the Philippians. It is not known by what means St. Paul was delivered from prison, but it is certain that he was set at liberty, after having be(n two years a prisoner at Rome. He wrote Vol. XVL

also, during this imprisonment, his Epistles to Philemon and the Colossians. He travelled over Italy ; and, according to some of the fathers, passed into Spain ; then into Judea ; went to Ephesus, and there left Timothy (Heb. xiii. 24, and 1 Tim. i. 3); preached in Crete, and there fixed Titus, to cultivate the cliurch in that place. Probably he might also visit the Philippians (Phil. i. 23, 26, and ii. 24); and it is believed that it was from Macedonia that he wrote the First Epistle to Timothy. Some time after he wrote to Titus, whom he had left at Crete; de- siring him to come to Nicopolis, whence pro- bably he sent this letter. The year following, that is, A. D. 65, he went into Asia, and came to Troas (2 Tim. iv. 13). Thence he went to visit Timothy at Ephesus, and from that to Miletus. (2 Tim. iv. 20.) Lastly, he went to Rome; and St. Chrysostom says that it was reported, that having converted a cup-bearer and a concubine of Nero, this so provoked the emperor that he caused St. Paul to be apprehended and put in prison. It was in this last place of confinement that he wrote his Second Epistle to Timothy, which Chrysostom looks upon as the apostle's last testament. This great apostle is said to have at last consummated his martyrdom, the 29th of June, A. D. 66, by having his head cut off, at a place called the Salvian Waters. He was buried on the Via Ostia.

Paul, first bishop of Narbonne, or Sergius Paulus the proconsul, converted and made bishop by St. Paul, was descended from one of the best families of Rome. The Spaniards venerate him as their apostle; and say that he died a martyr at Narbonne.

Paul III. (Pope), whose original name was Alexander Farnese, was born in 1467, and elect- ed pope in 1534. He established the inquisition, approved

of the society of the Jesuits, and acted with great violence against Henry VIII. of Eng- land. The famous council of Trent was held in his reign. He died in 1549, aged eighty-two.

Paul IV. (Pope), whose original name was John Peter CarafTa, was born in 1475. He was a learned man, and wrote on the Creed, and other subjects ; but was very violent against the reformers. He was elected pope in 1555, when he was eighty, and died in 1559.

Paul V. (Pope), was born in 1552, in Rome; was first clerk of the chamber, and afterwards nuncio to Clement VIII. in Spain, who made him a cardinal. He was elected pope on the 16th May, 1605, after Leo. XI. The ancient quarrel between the secular and ecclesiastical jurisdic- tions, which formerly had occasioned much bloodshed, revived in his reign. The senate of \ enice had condemned by two decrees, The new foundations of monasteries made without their concurrence ; and, The alienation of the estates both ecclesiastical and secular. The first decree passed in 1603, and the second in 1605. About this time a canon and abbot, accused ot rapine and murder, were arrested by order of the senate, and delivered over to the secular court; which gave great offence to the court of Rome. Cle- ment VIII. took no notice of the affair; but Paul W, who had managed the Genoese upon a similar occasion, hoped that the Venetians would

be equally pliant. But the senate maintained that they held their power to make laws of God rixily ; and therefore refused to revoke their de- crees, and deliver up the ecclesiastical prisoners 1o the nuncio. Paul, provoked at this beliaviour, excommunicated the doge and senate ; and threatened to put' the whole state under an inter- dict if satisfaction was not given him within twenty-four hours. The senate protested against this menace, and forbad the publication of it in their dominions. A number of pamphlets,were published on both sides. The Capuchins, The- atins, and Jesuits, were the only religious orders who observed the interdict. The senate ship]ied them all off for Rome, and banished the Jesuits for ever. Meantime Paul was preparing to make the refractory republic submit to his tyranny by force of arms. He levied troops against the Venetians ; but at length had recourse to Henry IV. to settle the differences ; who soon brought about a reconciliation. His ambassadors at Rome and Venice began the negociation, and cardinal de Joyeuse finished it in 1607. Paul was strongly solicited to make the immaculate conception of the holy virgin

an article of faith, but he only prohibited the contrary doctrine to be publicly taught. He afterwards embellished Rome, and collected the works of the most emi- nent painters and engravers. He brought water into the city by an aqueduct thirty-five miles long. He completed the frontispiece of St. Peter, and the magnificent palace of iMount Cavallo. He also restored and repaired seviral ancient monuments. His pontificate was honored with several illustrious embassies. The kings of Ja- pan, and otlier Indian princes, sent ambassadors to him; and he sent missionaries, and founded bishoprics in their countries. He showed tlie same attention to the Maronites and other eastern Christians. He also sent legates to different or- thodox princes. He died 28tb January 1621, aged sixty-nine ; after having confirmed the French oratory, the Ursulines, the Order of Charity, and some other institutions. He en- joined all the religious in the prosecution of their studies to have regular professors for Latin, Greek, Hebrew, and Arabic.

Pai L (Father), whose name, before he entered into the monastic life, was Peter Sarpi, was born at Vienna, August 14lh, 1552. His father was a merchant, who died leaving his family unpro- vided for, but the son's abilities rendered him, under the tuition of a maternal uncle, master of languages and science at a very early age. At fourteen he took the habit of the order of the Servites, and at twenty-two was made a priest. After passing successively through the dignities of his order, he was chosen provincial for'enice at twenty-six years of age; and discharged this post with such honor, that in 1579 he was ap- pointed, with two others, to draw up new regula- tions and statutes. This he executed \Yith great success; and, when his office of provincial was expired, he retired to the study of experimental philosophy and anatomy, in which he is said to have made some useful discoveries. In the dis- pute between the pope and the senate of 'enice, his controversial writings irritated the papal court so highly, that they hired assassins to mur-

der him, but he escaped with severe wounds. This, and other attempts upon his life, obliged him to confine himself to his convent, where he engaged in writing the History of the Council of Trent, on which, and other works of hss con- sequence, he spent the remaining part of his life. He died on the 14th of January, 1623. He was buried witli great pomp at the public expense; and a magnificent monument was erected to his memory.

PAt:L, in naval affairs, is a short bar of wood or iron, fixed close to the capstern or windlass of a ship, to prevent those engines from rolling back or giving way, when they are employed to heave in the cable, or otherwise charged with any great effort.

PAUL'S (St.), a town and district of Brasil, about twelve leagues from the

sea, and 190 miles west of Rio Janeiro. The town stands on an eminence of about two miles in extent, sur- rounded on three sides by meadow land, and washed at the base by rivulets, which in rainy weather insulate it, except on the narrow ridge by which it is connected with the high land. The rivu- lets flow intoalarge stream called the Tieti, which runs within a mile of the town, and are crossed south-west by several bridges of stone and wood. The streets are in general remarkably clean, and the material with which they are paved is said literally to contain particles of gold, that are found in the chinks and hollows after heavy rains. Here are several squares, two convents, three monasteries, and eight churches, the greater part of which, as well as of the whole town, is built of clay beaten into a frame-work of wood. The piincipal houses are two or three stories high, and stuccoed in various colors. Mr. Mawe mentions that he saw some of these clay houses that had lasted 200 years. He speaks highly of this capital and its inhabitants.

A little coarse cotton is spun by the hand, and woven into cloth for wearing apparel, sheets, &c. ; but here are few manufactures of consequence. They also make a beautiful net- work for hammocks, which are fringed with lace, and form, being slung low, an elegant piece of furniture : the making of lace is a general em- ployment for females. Here are many apothe- caries and small dealers who make large sums of money ; silver-smiths, whose articles are equally indifferent both in metal and workmanship ; tailors and shoemakers in great numbers ; and joiners, who manufacture very beautiful wood at high prices. In the outskirts live a number of Creoles, who manufacture earthenware for culi- nary purposes, large jars, &c. The greatest pro- portion of the inhabitants, however, consist of agriculturalists, who cultivate small portions of land, on which they breed large stocks of pigs and poultry. The markets are also w□□ll supplied with fruit, and a profusion of esculenˆ plants. The gardens in the vicinity are laid out with great taste and elegance. The jasmine is every where a favorite tree, and in this fine climate bears flowers perennially : carnations, pinks, passion- flowers, cocks-combs, fee, are also in great plenty

The town is said to have been founded in the year 1570, by some malefactors who were trans- ported from Portugal. This, however, is not the

case. It was founded by a colony of Jesuits, and chosen more from the gold wliieh abounded in the neighbourhood, than from the salubrity of the air and climate. The country around, however, has for more than a century

been ex- hausted of this metal. The inhabitants, accord- ing to Mr. Mawe, amount to 20,000; the clergy, including all religious orders, to 500. They are in general free from bigotry; so that no stranger would be molested here on account of his re- ligious opinions : the climate is also mild and temperate, the thermometer ranging from 50►► to 80►►. In the morning it may be observed at 48►►; and it is lower in the winter months. Mr. Mawe was obliged to exhibit his license twice in the course of his journey to this place; the city being seldom visited by foreigners, and the passes being guarded with soldiers, who have authority to stop and search all passengers, in order to prevent them from carrying off gold or diamonds. His appearance excited considerable curiosity among all classes : but he was well re- ceived and hospitably entertained. 190 miles west of Rio Janeiro.

The province of St. Paul stretches along tlie coast about 400 miles, and is about 500 in depth. It is connected, as well as the above city, with the history of the singular republic of this name; and is bounded to the west by the great river Parana, which separates it from the Spanish pro- vince of Paraguay ; on the south by the Iguazu, and a line drawn from this river to the small river St. Francisco, and down to its mouth. It is one of the most fertile and delightful provinces of South America. The great range of moun- tains which here runs along the coast on the western side,, is a vast inclined plain, down which some of the largest branches of the Parana flow into that immense river. The western slope is so gentle as scarcely to be perceptible, and, although not level, it can hardly be considered hilly or mountainous. On the eastern side the ascent is very steep ; the road from Santos to St. Paul ascends a mountain 6000 feet high, and is perhaps the most considerable work of this de- scription in Brasil. From this point, however, in following the mountains to the southward, they gradually retire from the coast, leaving a broken country between them and the sea, through which the Paraiba of the south takes its course. Between these mountains and the coast an extraordinary number of cataracts and cas- cades are formed, by the waters which are pre- cipitated down the eastern side. The navigation of the rivers on the western side is also impeded by a great number- of falls and rapids ;ˆ but the intervals between the portages are navigated by large perogues, such as are used on our western waters, made out of the single trunks of trees, of which there is an abundance on their banks, of a prodigious she. The river Tiete, whicli rises rear the city of St. Paul, is generally used as the channel of communication to the mines of Matto Grosso. After descending to the Parana, they continue down its stream to the mouth of the Pardo, which enters from the west, and up this river to the foot of a chain of mountains, which they cross to the river Taquari, which flows into the river Paraguay, above the Spanish

possessions. The inhabitants of St. Paul took advantage of this route at an

early period, for the purpose of committing depredations on the numerous Indian tribes settled on that river.

Tlie climate is probably the most plaasant in Brasil. Though nearer the equator than the provinces of La Plata, the disadvantage is more than counterbalanced by its height ; the commencement of the slope is GOOO feet above the sea, and 2000 feet above the inferiov limit for the cultivation of European grain. The ther- mometer descends as low as 40►►, though it rarely rises above 80►►. In the evenings it is sometimes so cold as to render necessary a change of clothes, and to make use of brazeros (a kind of pan filled with embers, used by S])a niards and Portuguese, instead of fire-places and chimneys). In the vicinity of the capital the tropical fruits are not in as great perfection as they are on the sea coast, but, in lieu of these, all the European fruits, apples, grapes, peaches, are uncommonly fine. This delightful country may be considered as still in a state of wilderness, and inhabited by a number of savage tribes towards the Parana, who are continually at war with the Portuguese, and retain the same ferocity as when the country was first settled. They must finally disappear before the march of civilisation. The principal port of Santo is said to be safe and commodious ; but bemg merely the entrepot to St. Paul, as Laguira is to Caraccas, the town is inconsiderable.

The history of the inhabitants of St. Paul oc- cupies one of the most conspicuous pages in American annals ; their character has been variously represented, and generally little to their advantage. Charlevoix, and all the Jesuits, re- present them in the most unfavorable light, and they have been spoken of by most writers as barbarians, possessing enough of civilisation to render them formidable, as well as mischievous. They have been also represented as forming a kind of military republic, like that of early Rome, composed of outcasts and adventurers from all countries, under a nominal subjection to the Portuguese, in virtue of which they paid a small tribute of gold and diamonds. A Por- tuguese writer has undertaken to vindicate thpir character from these imputations. Mr. Mawe places them above all the people he saw in Brasil, for their highly polished manners, and manly frankness of character, traits by which they are every where distinguished ; but he does not reflect, that a century, or even half a century, might produce a very material change in their character. The accounts given of these people, as well as of their enemies the Jesuits, by Dr. Southey, is certainly the most fair and satisfac- tory. We abstract the substance of it.

The celebrated republic of St. Paul, as it is usually denominated, had its rise about the year 1531, from a very inconsiderable beginning. A mariner of the name of Ramalho, having been shipwrecked on this part of the coast, was re- ceived among a small Indian tribe called the Piratininga, after the

name of their chief. Here he was found by De Sousa, some years after- wards, and, contrary to the established policy, of permitting no settlement excepting immedi-

ately on the sea coast, he allowed this man to remain, on account of his having intermarried and having a family. The advantages of this establishment were such that permission was soon after given to others to settle here, and, as the adventurers intermarried with the natives, their numbers increased rapidly. Rom;ilho also allied hmiself with one of the chief of the Goay- nazes by marrying his daughter ; for it seems he had conformed to the Indian custom of poly- gamy. A mixed race was formed, possessing a compound of civilised and uncivilised manners and customs. The Jesuits soon after establisiied themselves with a number of Indians they had reclaimed, and exerted a salutary influence in softening and humanising the growing colony. In 1581 the seat of government was removed from St. Vincent on the coast to St. Paul's ; but its subjection to Portugal was little more than nominal; cutoff from all communication, and almost inaccessible, but little notice was taken of it. The mixture produced an improved race ;

- *the European spirit of enterprise,' says Southey,*
- *developed itself in constitutions adapted to the country.' But it is much more likely that the free and popular government which they en- joyed produced the same fruits here as in every other country; a restless spirit of enterprise and emulation among each other ; the mother of great qualities, but, without a well ordered go- vernment, the good was not likely tˆ) outweigh the bad. They soon quarrelled with the Jesuits, on account of the Indians whom they had re- duced to slavery. The Jesuits declaimed against the practice; but as there were now many wealthy families among the Paulistas, the greater pait of whose fortunes consisted in their Indians, it was not heard with patience. Tlie Paulistas first engaged in war against the enemies of their allies, and afterwards on their own account, on finding it advantageous. They established a re- gular trade witli the other provinces whom they supplied with Indian slaves. They by this time acquired the name of Mamelukes, from the pe- culiar military discipline they adopted, bearing some resemblance to the Mamelukes of Ecvpt. The revolution in Portugal, when Philip II. of Spain placed*

himself on its throne, cast the Pau- listas in a state of independence, as they were the only settlement of Brasil, which did not ac- knowledge the new dynasty. From the year 1580, until the middle of the following century, they may be regarded as a republic, and it was during this period they displayed that active and enterprising character for which they were so much celebrated. They discovered and worked the gold mines of Jaragua near St. Paul's; they established colonies in the interior at the nume- rous mines which they discovered ; and their exploring parties were sometimes absent for years, engaged in wandering over this vast country. While a Spanish king occupied the throne of Portugal, they attacked the Spanish settlements on the Paragtiay, alleging that the Spaniards were encroaching on their territory, and destroyed the Spanish towns of Villa Rica, Ciudad Real, and Villa de Xerez, Ivesides a number of small settlements. They attacked the Jesuit missions, which by the most extraordinary perseverance; after repeated trials during 100 years, had been at last established. As they had fixed tiiemselves east of the Parana, the Paulistas laid liold of this as a pretext. They carried away upwards of 2000 of their Indians into captivity, the greater' part of whom were sold and dis- tributed as slaves. The Jesuits complained to tlie king of Spain and to the pope; the latter fuhninated his excommunication. Tlie Paulistas attacked the Jesuits in their college, and put their principal to death, expelled the remainder, and set up a religion of their own ; at least no longer acknowledged the supremacy of the pope. In consequence of the interruption of the African trade during the Dutch war, the demand for Indian slaves was very much increased. The Paulistas redoubled their exertions, and traversed every part of the Brasils in armed troops, to the great terror of the Indians ; who were on some of the principal rivers numerous, and established in villages, nie foundation was laid of enmity to the Portuguese, which continues to this day, although a complete stop was put to the infa- mous practice in the year 1756.

This little republic, like all others, was continu- ally distracted by internal factions. Two families, the Piratiningo and the Ttiaubatenos, were con- tinually struggling for a monopoly of power, and at one time actually engaged in a civil war; but a reconciliation was brought about by tiie interpo- sition of some ecclesiastics, who proposed that the governor should be alternately elected from the members of the rival families. This con- tinued for nearly a century. When the house of Braganza, in 1640, ascended the throne, the Pau- listas, instead of acknowledging him, conceived the idea of electing a king for themselves. They actually elected a distinguished citizen of the name of Bueno, who persisted in refusing to ac- cept, upon which, they were induced to acknow- ledge Joam IV. It was not until long after- wards, that they came under the Portuguese government.

Paul's, Bay of St., on the northern shore of the St. Lawrence, runs about three miles inland, and is thirty-five miles below the island of Or- leans. From the capes Corbeau and LaBaire, which form the exterior points of the bay, the ridges of high lands describe a circuit before they close upon the river. Their lofty and craggy summits form a grand back ground, in the form of an am- phitheatre, where is situated the St. Paul's Bay settlement.

Paul's Island (St.), an island in the strait between Newfoundland and Cape Breton. It is about fifteen miles north-east of North Cape, in Cape Breton. Long. 60►► 2′ W., lat. 47►► 13′ N.

PAULA, a learned Roman lady, who flou- rished in the fourth century. She was descended from the Scipios and the Gracchi, and added to the brightest qualities of the mind the virtues of Christianity. She was well versed in the Hebrew Scriptures, and was the intimate friend of St. Jerome. She died A. D. 407.

PAULEE, a town of the province of Ajmeer, one of the greatest commercial marts in Hindos- tan. Here the merchants exchange the commo- dities of Europe, Persia, and the Dekkan, for those of the Cashmere and the eastern and northern parts of Hindostan.

Paulee, Paulelgur, or Surgnsgur, a fortress

and town of Hindostan, in the province of Au- 'ungabad, situated on the south-east side of the Nagootan River, about twenty miles inland from Bombay. It is said to liave been built in the seventeenth century by the celebrated Mahralta chief Sevagee; but is probably even of older date. It is erected on the top of a mountain, about 1500 feet high, and inaccessible except on the north side. There are several reservoirs of water in it ; and store-rooms and other places dug out of the solid rock. In 1681 Akbar, fourth son of Aurungzebe, having absconded from his father, took refuge at this place, and was well received by tiie Mahratta chief Sambajee. This strong fortress was taken by the British troops in February 1818, after a three days' siege.

PAULIAN IS l\t, Pauliani>,"ts, a sect of heretics, so called from their founder, Faulus Samosatenus, a native of Samosata, elected patri- arch of Antioch in 262. tils doctrine amounted to this : that the Son and the Holy Ghost exist in God in the same manner as reason and acti- vity do in man ;

that Christ was born a mere man ; but that the reason or wisdom of the Father descended into him, and by him wrought miracles upon earth, and instructed the nations; and, finally, that, on account of this union of the divine word with the man Jesus, Christ might, though improperly, be called God. He did not baptise in the name of the Fat.ier and the Son, &c. ; for which reason the council of Nice or- dered those baptised by him to be rebaptised. Being condemned by Dionysius Alexandrinus in a council, he abjured his errors to avoid depo- sition ; but soon after resumed them, and was deposed by another council in 269. His errors are severely condemned by the council of Nice, whose creed differs but little from that now used, under the same name, in the church of England.

PAULICIANS, a branch of the ancient Mani- chees, so called from their founder, one Paulus, an Armenian, of the seventh century; who, with his brother John, both of Samosata, formed this sect : though others are of opinion that they were thus called from another Paulus, an Arme- nian by birth, who lived in the rei.;n of Justinian II. In the seventh century a zealot called Con- stantine revived this drooping sect, which was ready to expire under the severity of the imperial ⬜⬜diets. The Paulicians, however, by their num- bers, and the countenance of the emperor Nice- phorus, became formidable to all the east. But the cruel rage of persecution, which had for some years been suspended, broke forth with re- doubled violence in the reigns of Michael Curo- palatps and Leo the Armenian, who inflicted capital punishment on such of the Paulicians as refused to return into the bosom of the church. Under the empress Theodora, tutoress of the emperor Michael, in 84.'), several of them were put t(7 death, and more retired among the Sara- cens. Upon this they entered into a league with the Saracens ; and choosing for their chief an officer of the greatest resolution and valor, whose name was Carbeas, tliey declared a war against the Greeks, which was carried on for fifty years with the greatest vehemence and fury. During these commotions some Paulicians, towards the

conclusion of this century, spread abroad their doctrines among the Bulgarians : many of them, either from zeal, or to avoid persecution, retired, about the close of the eleventh century, from Bulgaria and Thrace, and formed settlements in other countries. Their first migration was into Italy ; whence they sent colonies into most of the other provinces of Europe, and formed gra- dually a considerable number of religious as- semblies, who adhered to their doctrine, and who were afterwards persecuted with the utmost vehemence by the Roman pontiffs. In Italy they were called Patarini, from Pataria, in Milan, where they held their assemblies ; and Gothari or Gazari, from Gazaria, or the Lesser Tartary. In France they were called Albigenses, though their faith differed widely from that of the Albi- genses whom Protestant writers generally vindi- cate. See Albigenses. The first religious iissembly the Paulicians formed in Europe was at Orleans

in 1017, in the reign of Robert, when many of them were burnt alive. The ancient Paulicians, according to Photiu-;, expressed the utmost abhorrence of Manes and his doctrine. Greek writers comprise their errors under the six following particulars: ††† 1. They denied that this inferior and visible world is the production of the Supreme Being; and they distinguish the Creator of the world and of human bodies from the most high God who dwells in the heavens ; and hence some think that they were a branch of the Gnostics rather than of the Manichaeans. 2. They refused to worship the Virgin Mary. 3. They refused to celebrate the institution of the Lord's supper. 4. They refused to follow the practice of the Greeks, who paid to the pretended wood of the cross a sort of religious homage. 5. They rejected the books of the Old Testament ; and looked upon the writers of that sacred history as inspired by the creator of this world, and not by the supreme God. 6. They excluded pres- byters and elders from all part in the adminis- tration of the church.

PAULINA, a Roman lady, wife of Satur- ninus, governor of Syria, in the reign of the em- peror Tiberius. Her conjugal peace was dis- turbed, and violence was offered to her person, by a young man named Mundus, who fell in love with her, and had caused her to come to the temple of Isis by means of the])riests of that goddess, who declared that Anubis wished to communicate to her something of moment. Sa- turninus complained to the emperor of the vio- lence which had been offered to his wife ; and the temple of Isis was overturned, and Mundus banished.

PAULINIA, in botany, a genus of the trigy- nia order, and octandria class of plants ; natural order twenty-third, trihilata'. Its characters are these : the flower has a permanent empalement, composed of four small oval leaves; it has four oblong oval petals, twice the size of the empale- ment, and eight short stamina with a turbinated germen, having three short slender styles crowned by spreading stigmas ; the germen turns to a large three-cornered capsule with three cells, eadi containing one almost oval seed. Linn††; reckons seven, and Miller nine species, natives of the West Indies

PAULINUS, bishop of Nola, was borit at Bourdeaux, about A. D. 353. He was consul of Rome, and married Therasia, who converted him to Christianity. He was made bishop of Nola, where ne continued till it was taken and sacked by tlie Goths, in 410. He wrote Letters iind Poems with elegance, and died in 431.

Paulinus, an English bishop, who flourished in the early part of the seventh century. He was the first archbishop of York, about A. D. 626. He built a church at Almonbury, and dedicated it to St. Alban, where he converted the Brigantes. Camden mentions a cross at Dewsborough, which had been erected by him, with this inscription, Paulinus hie praedicavit et celebravit. York was so small about this time that there was not so much as a small cimrch in it, in which king Edwin could be baptised. Constantius made it a bishopric. Pope Honorius made it a metro- politan see. At Walstone, in Northumberland, he baptised Seghert, king of the East Saxons. Bede says ' Paulinus, coming with the king and queen to the royal manor called Ad-Gebrin, staid there thirty-six days with them, employed in the duties of catechising, instructing, and bap- tising the people in the neigiibouring river Glen.' He adds, that ' he preached the word in the pro- vince of Lindissi, and converted the governor of the city of Lindocollina, whose name was Blecca, with all his family. In this city he built a stone church of exquisite workmanship, whose roof being ruined, only the walls are now standing.' He also founded a collegiate church of prebends near Southwell, in Nottinghamshire, dedicated to the Virgin Mary, when he baptised the Cori-tani in the Trent.

PAULO (Mark), a celebrated traveller, son of Nicolas Paulo, a Venetian, who went with his brother Matthew, about 1255, to Constantinople, in the reign of Baldwin IL Li the course of their mercantile travels, having been favorably received at the court of Kublai, grand khan of the Tartars, they returned thither with two mis- sionaries from Rome, and young Mark. This young man, having learned the different dialects of Tartary, was employed in embassies which gave him the opportunity of traversing Tartary, China, and other eastern countries. At length, after a residence of seventeen years at the court of the grand khan, the three Venetians returned to their own country, in 1295, with immense fortunes. A short time after his return, Mark serving his country at sea against the Genoese, his galley, in a great naval engagement, was sunk, and himself taken prisoner and carried into Genoa. He remained there many years in confinement; and composed the history of his own and his father's voyages, under this title, Delle Maraviglie del mondo da lui vidute, &c. ; printed first at Venice in 8vo., 1496.

PAULOVASELO, a town of the Russsian government of Niznei-Novgorod, on the Oka, with 6000 inhabitants. Most of them are lock- smiths or hardware manufacturers. The town and district are the property of a rich nobleman.

PAVLOVSK, a well built town of the south of Russia, in the government of Voronez, on the Don, with 2000 inhabitants. Seveuty-six miles S. S. E. of Veronez.

PAULUS Samosatems, the founder of the-

sect of Paulianists. Zeiiobia, queen of Palmyra, had a great esteem for him, on account of his eloquence ; and he is said to have framed his heresy chiefly with a view to make a convert of her; but she adhered to her prejudices in favor of Judaism.

PAUNCH, n. s. & v. a. French pause ; ItaL pancio ; Span, pcmga ; L,3Lt.panttx. The stomach ; the region of the guts ; particularly of a beast ; to take out the paunch.

Batter his skull, or paunch him with a stake.

Shakspeare.

Demades, the orator, was talkative, and would eat hard : Antipater would say of him, that he was like a sacrifice, that nothing was left of it but the tongue and the paur.ch. Bacon.

Pleading iVIatho borne abroad for air, With his fat paunch fills his new fashioned chair.

Dry den,

Chiron attacked Talthibius with such might, One pass had paunched the huge hydropick knight.

Garth.

PAVO, in astronomy, the peacock, a constel- lation in the southern hemisphere, unknown to the ancients, and not visible in our latitude. See Astronomy.

Pavo, in ichthyology. See Peacock Fish.

Pavo, the peacock, in ornithology, a genus belonging to the order of gallinae. The head is covered with feathers which bend backwards ; the feathers of the tail are very long and beau- tifully variegated with eyes of different colors. Latham enumerates eight species.

1. P. albus, the white peacock, is, as its name imports, entirely white, not excepting even the eyes of the train, which are nevertheless easily traced out. This variety is, in Latham's opi- nion, more common in England than elsewhere. He met with two instances of the females of this species having the external marks of the plumage of the male.

2. P. bicalcaratus is larger than the common pheasant. The bill is black,

but from the nos- trils to the tip of the wpper mandible red. The i rides are yellow. The feathers on the crown of the head are sufficiently long to form a crest, of a brown dull color. The space between the bill and eyes is naked, with a few scattered hairs : the sides of the head are white; the neck is bright brown, striated across with dusky brown : the upper parts of the back, scapulars, and wing co- verts, are dull brown, dotted with paler brown and yellowish ; besides which each feather is marked near the end with a roundish large spot of a gilded purple color, changing into blue and green in different lights ; the lower part of the back and rump are dotted with white : all the under parts are brown, striated transversely with black : the quills are dusky, the secondaries are marked with the same spot as the rest of the wing : the upper tail coverts are longer than the tail, and each marked at the end with a spot like the wing feathers, each of which is surrounded, first with a circle of black, and ultimately with an orange one : the legs and claws are brown, and on the back part of each leg are two spurs, one above the other. The female is a third smaller than the male. The head, neck, and un- der parts are brown; the head smooth; the up- per parts are also brown, and the feathers mark-

ed with a dull blue spot, surrounded with dirty oran<;e : the feathers which cover the tail are si- milar; but marked at the end with an obscure dull oval spot of blue : the legs have no spurs. This species is of Chinese origin, and some of them have been brought from China to England alive.

3. P. cristatus, the common peacock of En- glish authors, has a compressed crest and solitary spurs. ??? It is about the size of a turkey ; the length from the top of tlie bill to the end of the tail being three feet eight inches. The bill is nearly two inches long, and is of a brown color. The irides are yellow. On the crown there is a sort of crest, composed of twenty-four feathers, which are not webbed, except at the ends, whirh are gilded green. The shafts are of a whitish co- lor ; and tlie head, neck, and breast, are of a green gold color. Over the eye there is a streak of white, and beneath there is the same. The back and rump are of a green gold color, glossed over with copper : the feathers are distinct, and lie over each other like shells. Above the tail springs an inimitable set of long beautiful feathers, adorned with a variegated eye at the end of each; these reach considerably beyond the tail ; and the longest of them in many birds are four feet and a half long. This beautiful train, or tad as it is improperly called, may be expanded up- wards to a perpendicular at the will of the bird. The true tail is hid beneath this group of feathers, and consists of eighteen gray brown feathers, one foot and a hˆlf long, marked on the sides with rufous gray :

the scapulars and lesser wing co- verts are reddish cream color, variegated with black; the middle coverts deep blue, glossed with green gold : the greatest and bastard wing rufous : the quills are also rufous ; some of them variegated with rufous, blackish, and green : the belly and vent are greenish black: the thighs yellowish : the legs stout ; tliose of the male fur- nished witii a strong spur three quarters of an inch in length; the color of them gray brown. The female is rather less than the male. The tail is very short, being much shorter than the train, and scarcely longer than its coverts ; nei- ther are the feathers furnished with eyes. The crest on the head is similar to that on the head of the male : the sides of the head have a greater portion of wliite : the throat and neck are green : the rest of the body and wings are cinereous brown: the breast is fringed with white: the bill is the same : the irides are lead-colored : tiie legs are as in the male ; but the spur is generally >vanting, though in some birds a rudiment of one is seen. In some male birds all the wing co- verts and scapulars are of a fine deep blue green, very glossy ; but the outer edge of the wing and quills are of the common color. These birds, row so common in Europe, are of eastern origin. They are found wild in tlie islands of Ceylon and Java in the East Tnrlies; and at St. Helena, Barbuda, and other West India islands. They are not natural to China; but they are found in many places of Asia and Africa. They are, however, nowhere so large or so fine as in India, in the neighbourhood of the Ganges, whence they have spread into all parts, increasing in a wild state in the warmer climes ; but requiring

*care in the colder regions. In ours, this species does not come to its full plumage tdl the thin! year. The female lays five or six grayish-white eggs ; in hot climates twenty, the size of those of a turkey. These she lays in some secret place, at a distance from the usual resort, to prevent their being broken by the male, vi'hich he is apt to do if he find them. The time of sitting is from twenty-seven to thirty days. Tlie young may be fed witii curd, chopped leeks, barley- meal, &c., moistened ; and are fond of grass-hoppers, and some other insects. In five or six months they will feed as the old ones, on whrrit and barley, with what else they can pick up in *lie circuit of their confinement. They seem t.) l^.'efer tiie most elevated places to roost on durin:^ night; such as high trees, tops of houses, and the like. Their cry is loud and inharmonious ; a perfect contrast to their external beauty. They are caught in India, by carrying lights to the trees where they roost, and having painted represen- tations of the bird presented to them at the same time ; when they put out the neck to look at the figure, the sportsman slips a noose overthehead, and secures his game. In most ages they have been estee-ned a salutary food. Hortensius set the example at Rome, where it was carried to the highest luxury, and sold dear : and a young peacock is thought a dainty even in the present times. The life of these birds is reckoned by some at about twenty-five years; by others 100.*

So beautiful a species of birds as the peacock could not long remain unknown ; so early as ti.e days of Solomon, we find, amongthe articles imported in his Tarshisli navies, apes and peacocks. yElian relates that they were brought into Greece from some barbarous country ; and that they were held in such high esteem that a male an I female were valued at Athens at 1000 drachma;, or ►►32 5s. lOo'. At Samos they were preserved about the temple of Juno, being sacred to that goddess ; and Gellius, in his Noctes Attica:, commends the excellency of the Samian peacocks. When Alexander was in India he found vast numbers of wild ones on the banks of the Hya- rotis ; and was so struck with their beauty a — to appoint a severe punishment on any person iliiit killed them. Peacocks' crests, in ancient tint s, weie among the ornaments of the kings of Eug- lani. Ernald de Aclent was fined to king John in ' 140 palfries, with sack-buts, lorains, gilt spurs, and peacocks' crests, such as would be for his credit"

4. P. muticus is about the size of the crested peacock : but the bill is larger and ash-colored ; the irides are yellow, round the eyes red ; on the top of the head is an upright crest four inches long, and shaped somewhat like an ear of corn. The color is green mixed with blue. The top of the neck and head are greenish, marked with spots of blue, which have a streak of wbite down tlie middle of each : the back is greenish blue : the breast is blue and green gold mixed : ti.e bony, sides, and thighs are ash-color, marked wiiii black spots, streaked with white on t'.ie belly ; the wing coverts and secondaries are not unlike the back : the greater quills are green, transversely barred with black lines, but growing yellowisli towards the ends, where they are

olack : the upper tail coverts are fewer than those of the common peacock, but much longer than the tail ; they are chestnut brown, with white shafts, and have at the end of each a large spot gilded in the middle, then blue, and surrounded with green : the legs are ash-colorod, and not furnished with spurs, or they have been over- looked by those who have seen them. The fe- male is smaller than the male ; and has the belly quite black, and the upper tad coverts much shorter ; the tad is green, edged with blue and white shafts. It inhabits Japan,

5. P. Tibetanus is about the size of a pintado, being about two feet and nearly two inches long. The bill is above an inch and a half long, and

cinereous: the irides are yellow : the head, neck, and under parts, are ash-colored, marked with blackish lines: the wing covert, back, and rump, are gray, with small white dots ; besides which, on the wing covert and back, are large round spots of a fine blue, changing in different lights to violet and green gold; the quills and upper tail coverts are also gray, marked with blackish lines ; the quills have two round blue spots on each, like those of the coverts : on the outer webs, and on each tail feather, there are four of the same, two on each side the web ; the middle coverts are the longest, the others shorten by de- grees : the legs are gray, furnished with two spurs behind : the claws are blackish. This species inhabits the kingdom of Thibet.

PAVOR, Metus, or Timor, Fear, a Roman deity, whose worship was introduced by Tullus Hostilius, who, in a panic, vowed a shrine to him, and one to Pallor, Paleness ; and therefore they are found on the coins of that family. The Ephori of Sparta erected a temple to Fear, near their tribunal, to strike an awe to those who ap- proached it. Fear was likewise worshipped at Corinth. The poets did not forget this imaginary deity. Virgil places him in the entrance of hell, in company with diseases, old age, &c. Mn. vi. 273. Ovid places him in the retinue of Tisiphone, one of the furies. Met. iv. 485.

PA'UPER, n. s. Lat. pauper. A poor per- son ; one who receives parish assistance.

For distressed objects, who of necessity must have the whole of their support from the parish, there should be a sufficient number of small cottages built, each cottage having a piece of ground for the pro- duction of potatoes, turnips, 6cc. ; if vi'idely dis- persed over several parts of the same parish , so much the better ; they should be made to hold two persons, and one or two children, or, in lieu of the children, one or two of those paupers who should be found the most infirm. Middlelon's Hurvey of Middlese.r.

PAUSANIA, in Grecian antiquity, a festival in which were solemn games, wherein nobody contended but free-born Spartans ; in honor of Pausanias the Spartan general. See Pausanias.

PAUSA'NIAS, a Spartan king and general, who signalised himself at the battle of Platsea against the Persians. The Greeks, sensible of his services, rewarded his merit with a tenth of the spoils taken from the Persians. He was af- terwards appointed to command the Spartan armies, and he extended his conquests in Asia; but the haughtiness of his behaviovr created him raany enemies, and the Athenians soon obtain-

ed a superiority in the affairs of Greece. ??? Pau-?? sanias, dissatisfied with his countrymen, offered to betray Greece to the Persians if

he received in marriage, as the reward of his perfidy, the daughter of their king. His intrigues were dis- covered by a young man who was entrusted with his letters to Persia, and who refused to go, on recollecting that such as had been employed in that office before had never returned. The let- ters were given to the Ephori of Sparta, and the perfidy of Pausanias was thus discovered. He fled for safety to a temple of Minerva; and, as the sanctity of the place screened him from the violence of his pursuers, the sacred building was surrounded with heaps of stones, the first of which was carried thither by the indignant mother of the unhappy man. He was starved to death in the temple, and died about A. A. C. 474, There was a festival instituted to his honor, and an oration annually spoken ' in his praise, in which his actions were celebrated, particularly the battle of PlatEea and the death of Mardonius. See Pausania.

Pausanias, a learned Greek historian and orator, in the second century, under Antoninus the philosopher. He was the disciple of Herodes Atticus ; he lived for a long time in Greece; and afterwards went to Rome, where he died at a great age. He wrote an excellent description of Greece, in ten books, of which abbe Gedoin has given a French translation in 2 vols. 4to.

PAUSE, 71. s. &c V. n.'i Fi. pause ; barb. Lat.

Pau'see, n. s. S pousa. Gr. Travu). A

break or stop in point of time ; an intermission ; hence suspense ; doubt ; break ; paragraph or sign marking a break : to pause and pauser follow these senses.

Neither could we ever come to any pause, whereon to rest our assurance this way. Hooker.

Solyman, pausing a little upon the matter, the heat of his fury being over, suffered himself to be intreated .

KnoUei, Comes a fellow crying out for help,

And Cassio following with determined sword.

To execute upon him ; this gentleman

Steps in to Cassio and entieats his pause.

Shakspeare. Like a man to double business bound,

I stand in pause where I shall first begin.

And both neglect. Id. Hamlet.

Give me leave to read philosophy,

And, while I pause, serve in your harmony.

Shahspeare. The expedition of my violent love Outruns the pauser, reason. Id. Macbeth.

Some paM.se and respite only I require. Till with my tears I shall have quenched my fire.

Denham.

As one who in his journey baits at noon, Though bent on speed, so here the archangel paused Between a world destroyed and world .estored.

Milton.

The punishment must always be rigorously ex- acted, and the blows hy patises laid on till they reach the mind, and you perceive the signs of true sorrow.

Locke.

He writes with warmth, which usually neglects method, and those partitions and pauses which men, educated in the schools, observe. Id.

Our discourse is not kept up in conversation, but falls into more pauses and intervals than in our neigh- bouring countries. Addison.

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Whilst those exalted to primeval light. Only perceive some little -pause of joys, In those great moments when their god employs Their ministry. Prior.

What awe did the slow solemn knell inspire. The pealing organ, and the pausing choir. And the last words that dust to dust conveyed !

Tickel. Creation sleeps ! 'Tis as the general pulse

Of life stood still, and nature made a pause

An awful pause ! prophetic of its end. Young.

PAUSIAS, a famous ancient painter, the in- ventor of encaustic p.ainting, was a native of Sicyon. He was a disciple of Pamphilus, and flourished about A.A. C. 352. He drew a beautiful picture of his mistress Glycere, for which LucuUus gave two talents. The Sicyo- nians being obliged to sell his pictures, to clear an enormous debt, they were all purchased by M. Scaurus, the Roman.

PAUTE, a large river of Quito, io the pro- vince of Cuencˆa, which rises in the Tarqui Mountains, to the south of that city. It finally assumes the name of the Mayer and enters the Santiago in S. lat. 4►► 7'.

PAUW (Cornelius de), a learned German canon, was bom at Amsterdam in 1739, and died in 1799, at Xantem, near Aix-la-Chapelle ; he was uncle to Anarcharsis Clootz, of the French revolution. His principal works are, Recherches Philosophiques sur les Americains, les Egyptiens, et les Chinois, 7 vols. 1768; and Recherches Philosophiques sur les Grecs, 2 vols. 8vo. 1787.

PAW, 11. s., V. 71., & V. a. W'el. pawen ; Tout, and Belg. powt ; Qu. the Pers. and Hind, pa t The foot of a wild beast ; in contempt, the hand : to draw the fore foot on the ground ; strike with the fore foot.

The Lord that delivered me out of the paw of the lion, and out of the pair of the bear ; he will deliver me out of the hand of this Philistine.

1 Sam. xvii. 37. He paweth in the valley, and rejoiceth in his strength. Job xxxix. 21.

One chose his ground. Whence rushing he might surest seize them both, Griped in each paw. Milton's Paradise Lost.

The bee and serpent know their stings, and the bear the use of his paus. More against Atheism.

Each claims possession, For both their paws are fastened on the prey.

Dryden. Re civil to the wretch imploring, And lay your paws upon hira without roaring. Id.

The fiery courser, when he hears from far The sprightly trumpets and the shouts of war, Pricks up his ears, and trembling with delight Shifts place, and paws, and hopes the promised fight.

Id. If lions had been brought up to painting, wtiere you have one lion under

the feet of a man, you should have had twenty men under the paw of a lion.

LˆEstraiige. The bear, that tears the prey, and when pursued, lest he become a prey, goes backward into his den that the hunter rather mistakes, than finds the way of his paw. Holuday.

His hot courser pawed the Hungarian plain, Aud adverse legions stood tiie shock in vain.

Ticlcl.

The' mipatient courser pants in every vein.

And pawing, seems to beat the distant plain ;

Hills, vales, and floods appear already crossed.

And, ere he starts, a thousand steps are lost.

Pope.

Once, a fiery horse, pawing with his hoof, struck a hole in my handkerchief. Swift.

PAWLET, a river which rises in Vermont, and runs north-west into Wood Creek, in New York.

Pawlet, a post town of Rutland county, Vermont, thirty-three miles north of Benning- ton. Population 2233. This is a considerable agricultural township, and has a village contain- ing some manufactures and trade. Haystack Mountain is in this township.

PAWLING, a post town of Dutchess county. New York, twenty miles south-east of Pough- keepsie, 105 south of Albany. Population 1756.

PAWN, n. s. Pers. pacm. A common man at chess.

Here I a pawn admire, That still advancing higher, At top of all became Another thing and name. Cowley.

Pawn, n. s. k, v. a. > Fr. and Swed. pan ;

Pawn-broker. j Belg. pand ; Lat. pig-

nus. A pledge given as security for money : the state of being pledged : a pawnbroker is one who lends money upon pledges.

Her oath for love, her honour's /)atcn.

Shalispeare. Sweet wife, my honour is at pawn. And, but my going, nothing can redeem it. /(/. Redeem from broken pawn the blemished crown, Wipe off the dust that hides our sc^ptie's guilt Id. I hold it cowardice To rest mistrustful, where a noble heart Hath pawned an open hand in sign of love. Id. Let's lead him on with a fine baited delay, till he h.2Li\i pawned his horses. Id.

I dare pawn down my life for him, that he hatb writ this to feel my affection to your honour. Id. Will you thus break your faith ? ††† I pawned you none :

I promised you redress. Id. Henry I/,

I'll pawn the little blood which I have left. To save the innocent. Id. Winter's Tale.

As for mortgaging and pawning, men will not take pawns without use ; or they will look for the for- feiture. Buam.

He retains so much of his primitive esteem, that abroad his verv word will countervail the bond or pawn of another. Howel.

If any thought annoys the gallant youth, 'Tis dear remembrance of that fatal glance, For which he lately pawned his heart. Waller.

She who before had mortgaged her estate. And pawned the last remaining piece of plate.

Dryden. Here's the very heart, and soul, and life-blood of Gomez ; pawns in abundance, till the nest bribe helps their husbands to redeem them.

Id, Spavsh Fryar. The usurers or money-changers were a sort of a scandalous employment at Rome ; those money- scriveners seem to have been little better than our pawnbrokers. Arbuthnot.

One part of the nation is pawned to the other, with hardly a possibility of being ever redeemed. Swift.

No man can mortgage his injustice as a †††'awn for his fidelitv hurkt.

PAWNBROKERS.

There shall he learn, ere sixteen winters old, That authors are most useful pawned, or sold ; That pedantry is all that schools impart, But taverns teach the knowledge of the heart.

Coivper.

Pawn. According to our law, the party who pawns goods, hath a general property in them ; they cannot be forfeited by the pawnee, or party who hath them in pawn, for any offence of his ; nor be taken in execution for his debt, neither may they otherwise be put in execution, till the debt for which they are pawned is satisfied. Litt. Rep. 332. For the absolute property is in another ; therefore they are not alienable, nor, by consequence, forfeitable; because they cannot be forfeited without loss and danger to the abso- lute owner ; and all qualified possessors do take the property under the restriction to preserve the property of the right owner. And if a man pawns goods for money, and afterwards a judg- ment is had against the pawner at the suit of one of the creditors ; the goods in the hands of the pawnee shall not be taken in execution, until the money is paid to the pawnee : because he had a qualified property in them, and the judgment creditor only an interest. 3 Bulst. 17. And when a person hath jewels in pawn for a certain sum, and he who pawned them is attainted, the king shall not have the jewels unless he pay the money. For the alteration of the general pro- perty doth not alter the special property in the pawnee. On this principle he may assign the pawn over to another, subject to the same con- ditions : and, if the pawnee die before redeemed, his executors shall have it upon the like terms as he had it.

*If goods pawned are perishable, and, no day being set for payment of the money, they lie in pawn till spoiled, without any default in him who hath them in keeping; the party who pawned them shall bear the damage ; for it shall be adjudged his fault that he did not redeem them sooner : and he to whom pawned may have action of debt for his money. ^^ here goods are pawned for money borrowed, wiiliout a day set for redemption, they are redeemable at any time during the life of the borrower. They may be redeemed after the death of him to whom pawned; but not after the death of him who pawned the goods. 2 Cro. 245; Noy 137; 1 Bulst. 9. Where a day is appointed, and the pawner dieth before the day, his executors may redeem the pawn at the day, and this shall be assets in their hands. If goods are redeemable at a day certain, it must be strictly observed ; and the pawnee, in case of failure of payment at the day, may sell them. 1 Rol. Rep. 181, 215. But still the right owner, as in case of a mort- gage, has his redemption in equity. ***

Where a broker or pawnee refuses (upon ten- der of the money) to redeliver the goods in pawn, lie may be indicted ; because, being secretly pawned, it may be impossible to prove a delivery for want of witnesses, if trover should be brought for them. If goods are lost, after the tender of money, the pawnee is liable to make them good to the owner ; for, after tender, he is a wrongful detainer; and he who keeps goods wrongfully must answer for them at all events. But if they

are lost before a tender, it is otherwise; the pawnee is not liable, if his care of keeping them was exact ; and the law requires nothing of him, but only that he should use an ordinary care in keeping the goods, that they may be restored on payment of the money for which they were deposited ; and in such case, if the goods are lost, the pawnee hath still his remedy against the pawner for the money lent.

If the pawnee be robbed, he is not in general answerable ; though if he useth the thing as a jewel, watch, &c., that will not be the worse for wearing, which he may do, it is at his peril ; and if he is robbed, he is answerable to the owner, as the using occasioned the loss, &c. If the pawn is of such a nature, that the keeping is a charge to the pawnee, as a cow, or a horse, &c., he may milk the one, or ride the other ; and this shall go in recompense for his keeping. Things, which grow the worse by usage, he may not use.

If the vender of a leasehold estate deliver the conveyance as an escrow, to take effect on pay- ment of the residue of the purchase-money , the property in the title-deeds of the estate is so vested in the vendee, that the vendor obtaining possession of those, and pawning them, does not confer on the pawnee a right to detain them, after tender of the purchase-money. 6 W. P. Taunton, 12. A factor cannot pawn the goods of his principal : he to whom goods are delivered for safe custody cannot pawn them : and there can be no market-overt for pawning. Where money is lent on a pledge, the borrower is per- sonally liable to the payment, unless there be an agre-ement to the contrary. ††† Strange, 919.

PAWNBROKERS. By the stamp acts, pawn- brokers are annually to take out a license.

By Stat. 39, 40 Geo. III. c. 99, rates of profit are allowed to pawnbrokers, and regulations are made to prevent oppression by them, viz. (as given in Tomlin's Dictionary), for every pledge upon which there shall have been lent not exceeding 2s. 6(1. one halfpenny is allowed as interest, &:c., for any time during which tlie said pledge shall remain in pawn, not exceeding one calendar month ; and the same for every month afterwards, including the current month in which such pledge shall be redeemed, although such

month shall not be expired. For 5s. one penny; 7s. 6d. one penny halfpenny; lO.s. two-pence; 12.S'. 6d. two-pence halfpenny; 15s. threepence; 17s. 6d. three-pence halfpenny ; ††l. four-pence; and so on progressively, and in proportion for any sum not exceeding 40s. ; and for any inter- mediate sum between 2s. 6d. and 40s. at the rate of four-pence for 20s. : and for every sum ex- ceeding 40s., and not exceeding 42s. eight-pence; and for every sum exceeding 42s. and not exceed- ing ††10, at the rate of three-pence, and no more for the loan of every 20s. of such money lent by the calendar month ; and so in proportion for any fractional sum. †† 1, 3.

A party applying for the redemption of goods pawned, within seven days after the expiration of any month, may redeem them without paying any thing for the seven days, and applying after seven, and within fourteen days, pays the profit for one month and a half of another month ; but after the expiration of the first fourteen days the

pawnbroker may take for the whole month. †† 5. Entries to be made and duplicates given. †† 6, 7. Any person fraudulently pawning the goods of another, and convicted before a justice, shall for- feit from ††5 to 20s., and also the value of the goods pawned, &c., to be ascertained by the justice ; and, on failure of payment, may be committed to the house of correction, for not more than three months, and be publicly whipped ; the forfeit- ures, when paid, to be applied towards making satisfaction to the party injured, and defraying the costs ; the overplus, if any, to the poor of the parish. †† 8. Any person counterfeiting or altermg a duplicate, may be seized and taken before a justice ; who is to commit the party to the house of correction for not more than three months, nor less than one. †† 9.

If any person shall offer to pawn any goods, refusing to give a satisfactory account of himself and the goods; or if there shall be reason to suspect that such goods are stolen ; or if any person not entitled shall attempt to redeem goods pawned, they may be taken before a jus- tice, who shall commit them for further exami- nation: and if it appear that the goods were stolen, or illegally obtained, or that the person offering to redeem the same has no title or pre- tence to them, the justice is to commit him to be dealt with according to law, where the nature of the offence shall authorise such commitment by any other law ; or otherwise, for not more than three months. †† 10. Persons buying or taking in pledge unfinished goods, or any linen, &c., en- trusted to be washed, .††hall forfeit double the sum

lent, and restore the goods. ►► 11.

A justice may grant a search-warrant, in exe- cuting which, a peace-officer may break open doors, and the goods, if found, shall be restored to the owner. ►► 12, 13. Pawnbrokers refusing to deliver up goods pledged within one year, on tender of the money lent, and interest, on convic- tion, a justice is empowered to commit the offender till the goods be delivered up, or rea- sonable satisfaction made. ►► 14.

Persons producing notes are not to be deemed owners, unless on notice to the contrary from the real owner. ►► 15. Duplicates being lost, the owners, on oath before a justice, shall be entitled to another from the pawnbroker. ►► 16.

Goods to be sold by public auction after the expi- ration of one year, being exposed to public view, and catalogues thereof published, and two adver- tisements of sale by the pawnbroker to be insert- ed in some newspaper two days at least before the first day's sale, under penalty of ►►lO to 40.s. to the owner. ►► 17. Pictures, prints, books, statues, &c., shall be sold only four times in a year. ►► 18. Pawnbrokers receiving notice from the owners of goods before the expiration of a year, shall not dispose of them, until after the expiration of three months from the end of the said year. $ 19.

Pawnbrokers to enter an account of sales in their books of all goods pawned for upwards of lOi. ; and in case of any overplus by the sale, upon demand within three years, it shall be paid to the owner, the necessary costs, princi]ial and interest being deducted ; persons possessing du- plicates entitled to the inspecting of the book;

and in case the goods shall have sold for more than the sum entered, or the further entries not made, or the overplus is refused to be paid, the offender shall forfeit ►►lO and treble the sum lent, to be levied by distress. ►► 20. Pawn- brokers shall not purchase goods whilst in their custody, or suffer them to be redeemed for that purpose; nor lend money to any person appear- ing to be under twelve years of age, or intoxi- cated, or purchase duplicates of other pawn- brokers, or buy any goods before eight in the forenoon, and after seven in the evening; nor receive any goods in pawn before eight in the forenoon, or after eight at night, between Mi- chaelmas and Lady-day, and before seven o'clock in the forenoon, and after nine at night, during the remainder of the year; except till eleven o'clock on the evenings of Satuiday, and that preceding Good Friday and Christmas-day; nor carry on the trade on any Sunday, Good Friday, or Christmas-day, or any fast or thanksgiving- day. ►► 20.

Pawnbrokers are to place in their shops a table of rates allowed by this act. ►► 21. Pawnbro- ker's Christian and surname, and business, to be written over the door, under a penalty of ►►lO, half to the informer and half to the poor. ►► 2.3. Pawnbrokers having sold goods illegally, or having embezzled or injured goods, justices may award reasonable satisfaction to the owners, in case the same shall not amount to the principal and profit ; or, if it does, the goods shall be de- livered to the owner, without paying any thing, under a penalty of ►►lO. ►► 24. They are to produce their books before any justice, if re- quired, on a penalty of ►►lO to ►►5. ►► 25.

Penalty on pawnbrokers' nesflecting to make entry ►►lO, and for every offence against this act, where no penalty is provided, 40s. to ►►lO, half to the informer, the remainder to the poor. ►► 26. But complaint shall, in all cases, be made within twelve months ►► 27.

No person convicted of a fraud or felony may be an informer under this act. ►► 29. Church- wardens to prosecute for every offence at the expense of the parish, on notice from a justice. ►► 28. This act does not extend to persons lend- ing money upon goods at 5 per cent, interest. But to extend to the executors, &c., of pawn- brokers and pawners. ►► 31. The form of con- viction is settled by ►► 33 ; and an appeal given to the quarter sessions. ►► 35.

PAWNEES, native Indians of Louisiani, on, and west of, the Platte. Population 5500.

PAWTUCKET, a post town, partly in North Providence, Rhode Island, and partly in Seek- honk, Massachusetts, on the Pawtucket : four miles north east of Providence. Population about 2000. It is finely situated on the beauti- ful and interesting Falls of Pawtucket, and has very extensive and flourishing manufactures. It contains two houses of public worship, one for Episcopalians, and one for Baptists ; two banks, nine cotton manufactories, containing about 10,000 spindles ; two screw manufactories, two furnaces, one nail manufactory, one oil mill, one rolling mill, one fulling mill, and two corn mills. P.iVVTucKKT, a river of Rhode Island, which rises in Massachusetts, where it is called th(i>

Blackstone, passes through the north-east part of Rhode Island ; and flows into Narraganset Bay, just below Providence. Below the falls it is called the

Seekhonk. The descent at the falls is aboit fifty feet.

FA VVTUXET, another river of Rhode Island, which runs into Narraganset Bay, four miles below Providence.

FAX, the goddess of peace, among the an- cients. The Athenians erected a statue of her, representing her as holding Flutus, the god of wealth, in her lap. They first erected an altar to her, after Cimon's victory over the Persians ; (Flutarch :) or after that of Timotheus over the Spartans. Nepos. The Romans represented her with an olive branch in the one hand, and the horn of plenty in the other.

PAXO (the ancient Ericusa), a small island of the Mediterranean, seven miles south of Corfu : it is five miles long and two broad, rocky, and generally barren, but affords some oil, wine, and fruits, in small quantity. It has three good ports, of which that named Porto Gai, perhaps the best, contains a chapel on the site of the supposed residence of St. Faul. The absence of any venomous or hideous reptile in this island is ascribed to this saint ; and, according to the popular belief, he has even bestowed greater benefits on the island than he himself experienced ; for a person of the neighbouring countries, where such reptiles are found, being bitten, has only to ascend a hill, and get a sight of Faxo, to be cured! San Nicholo, the only town of the island is on the east. Anti-Paxo, a league south of Paxo, is un- inhabited and uncultivated.

PAY, V. a. & n. s. ~\ Fr. payer ; Ital. pagere ;

Pay'able, adj. a Span, and Port, pagar, a

Pay'-day,m. s. V Lat. pacare. To satisfy;

Pay'er, ►► discharge a debt: hence

Pay'-master, 1 reward; chasten; atone;

Pay'ment. y discharge any obligation :

as a noun substantive, hire ; wages ; a servant's or soldier's reward : payable is, due; to be paid ; possible to be paid : pay-day, payer, and pay-master, seem obvious in their meaning : payment is, the act of paying ; thing paid ; or any reward.

An hundred talents of silver did the children of Ammon pay. 2 Chronicles xxvii. 5.

The wicked borroweth, and payeth not again.

Psalms.

I have peace-offerings with me ; this day have I paid my vows. Proverbs vii. 14.

She does what she will, say what she will, take all, pay all. Shakspeare. Merry Wives of Windsor.

If this prove true, they'll pay for't. Shakspeare.

You have done enough, and have performed A saint-like, sorrow ; and indeed paid down More penitence, than done trespass. Id.

I followed me close, and, with a thought, seven of the eleven I paid. Id. Henry IV.

Come on, brave soldiers, doubt not of the day ; And, that once gotten, doubt not of large]>ut/.

Shakspeare. Thy husband commits his body To painful labour both by sea and land. And craves no other tribute at thy hands But love, fair looks, and true obedience ; Too littlft nnvment for so creat a debt. Id

Give her an hundred marks. ••• An hundred marks ! by this light I'll ha' more. An ordinary groom is for such payment. Id.

The marriage-money the princess brought, was payable ten days after the solemnization. Bacon.

Persons of eminent virtue, when advanced, are less envied, for their fortune seemeth but due unto them ; and no man envieth the payment of a debt.

Id. Howsoever they may bear sail for a time, yet are they so sure paymasters in the end, that few have held out their lives safely. Haijward.

Forty things more, my friends, which you know true. For which, or pay me quickly, or I'll pay you.

Ben Jonson. If we desire that God should approve us, it is a sign we do his work, and expect him our paymaster.

Taylor. Bold Prometheus, whose untamed desire Rivalled the sun with his own heavenly fire, j'ow doomed the Scythian vulture's endless prey. Severely pays for animating clay. Roscummnn.

JMoney, instead of coming over for the pay of the anuy, has been transmitted thither for the pay of those forces called from thence. Temple.

The king and prince Then paid their offerings in a sacred grove To Hercules. Dryden.

She I love, or laughs at all my pain, Or knows her worth too well ; and pays me with dis- dain. Id. Knighfs Tale. The soldier is willing to be converted, for there is neither pay nor plunder to be got. L'Estrange.

Men of parts, who were to act according to the result of their debates, and often pay for their mis- takes with their heads, found those scholastick forms of little use to discover truth. Locke.

Riches are got by consuming less of foreign com- modities, than what by commodities or labour is paid for. Id.

Labourers pay away all their wages, and live upon trust till next payday. Id.

To repay by a return equivalent is not in every one's power ; but thanks are a tribute payable by the poorest. South.

The wages that sin bargains with the sinner are life, pleasure, and profit ; but the wages it pays hiro with are death, torment, and destruction : he that would understand the falsehood and deceit of sin thoroughly, must compare its promises and its puˆ- ments together. Id,

Here only merit constant pay receives. Is blest in what it takes, and what it gives. Pope.

It is very possible for a man that lives by cheating to be very punctual in paying for what he buys ; but then every one is assured that he does not do so out of any principle of true honesty. Law.

For then the farmers come jog, jog. Along the miry road,

Each heart as heavy as a log, To make their payments good. Coicper.

PAYNE (Nevil), an English dramatic writer, who flourished under Charles II. 'He published three plays, viz.: ††† 1. The Fatal Jealousy; a tragedy, 4to. 1673. 2. The Morning Ramble, or the Town Humors; a comedy; 4to. 1673. 3. The siege of Constantinople ; a tragedy ; 4to,

1675.

PAYSE, V. n. } Used by Spenser for poise. Pays'er, n. s. 3 To balance : one who weighs.

Ne was it island then, ne was it paysed Amid the ocean waves, but all was

desolate.

Si)enM,r,

PEA

701

VEA

To manage this “oinage, porters bear the tin, pai/:ers weigli it, a steward, comptroller, and receiver, keep the account. Carew.

PAZ, a town of Mexico, in the intendancy of Valladolid: 120 miles N. N. W. of Mexico. Population about 3000.- It is also the name of several msisniticcint settlements.

Paz. La, a district formerly included in Peru, but now in the state of Buenos Ayres, north of Sicasica, and cxinsisting only of a small district round the city of the same name, in the vicinity of the western cordillera of the Andes. Tiie surface is muoh and its temperature cold. The adjacent cordillera, only twelve leagues distant, is high: one of its summits, called Illimani, is covered with perpetual snow, but the city is not subject to extreme cold, enjoying a salubrious and rather warm air. The snow-clad mountains, the fertile valleys, and the fi.ne river of the neighbourhood, give charms to its scenery rarely equalled. The higher grounds are covered with forests, which afford shelter to bears, jaguars, pumas, Sec. Some gold is found in the river, when it is increased by the melting of the snow. In 1730 an Indian discovered in this stream a lump of gold of such a size that it was bought for 12,000 piastres. The country is fertile in grain and fruits.

Paz, La, a city, the capital of the above dis- trict, founded in 1548, and so called in memory of the public tranquillity being settled, by the defeat of Gonzalo Pizarro. Beside the cathe- dral, the city has four churches, five convents, and three nunneries. According to Helms, it suffered considerably by the revolt of the In- dians ; but it had in his time 20,000 inhabitants. One great article of trade here is Paraguay tea. The bishop has very considerable revenues : 120 miles E. S. E. of Arequipa, 288 south-east of Cuzco, and 612 south-east of Lima.

PEA, n. s. ⬜⬜⬜\ Sax. piy-a; Yr.poii;; Lat. pj-

Pease, (sum. When it is mentioned as

Pe ase’cod, i the plural of a single body, makes

Pea’-siiell.) peas; but, when collectively, as

food, or a species, it is called pease, anciently

peason : the peascod and pea-shell are the husk

of peas.

A pea hath a papilionaceous flower, and out of his empalement rises the pointal, which becomes a long pod full of roundish seeds ; the stalks are fistulous and weak, and seem to perforate the leaves by which they are embraced ; the other leaves grow by pairs along the midrib, ending in a tendril. The species are sixteen. 1. The greater garden pea, with white flowers and fruit. 2. Hotspur pia. 3. Dwarf pea. 4. French dwarf peo. 5. Pea with an esculent husk. 6. Sickle pea. 7. Common white pea. 8. Green rouncival pea. 9. Grey pea. 10. iˆIaple rouncival pea. 11. Rose pea. 12. Spanish moretto pea. 13. Marrowfat or Dutch admiral pea. 14. Union pea. 15. Sea pea. 16. Pig pea. Milter.

Sowe peason and beans in the wane of the moon ; Who soweth them sooner, he sowetli too soone.

Tusser.

Thou art a shealed peascod.

Shakspeare. King Lear.

I saw a green caterpillar as big as a small peascod.

Walton.

As peascods once I plucked, I chanced to see One that was closely filled with three times three, I o’er the door the spell in secret laid. Gay.

Pease, deprived of any aromatic parts, ae irild and demulcen’u ; but, being full of at-nal particies, are flatulent. Arbuthnot,

Calces o’ fossils, earth, and trees; Tiue sal-marinum o’ the seas; The farina of beans and pease.

He has ‘t in plenty ; Aqua-fortis, what you please,

He can content ye. Burns. Pea, in botany. See Pislm. Pea Chick, See Cicer. PEACE, n. s. & interj.] Fr.pair ; Ital. pace ; Peace’able, orf/’. 1 Span. Port, and Lat.

Peace'ableness, 71. s. \pax. Quiet; stillness;

Peace'ably, adv. Peace'ful, adj. Peace'fully, adv.

Peace'fulness, Peace'-maker, Peace'-parted.

rest ; respite from war, \^ disturbance, or terror ; reconciliation of dif- ferences ; state of agreement or unity. J In law, the general

security and quiet which the king warrants to his subjects, and of which he therefore avenges the violation ; every forcible injury is a breach of ' the king's peace :' as an interjection, a word commanding silence: peaceable is, quiet; undis- turbed ; free from war or tumult ; of quiet dispo- sition : peaceably and peaceableness the corre- sponding adverb and noun substantive : peaceful is a poetical synonyme of peaceable : peace- maker, one who reconciles differences, or disa- greeing parties : peace-parted, dismissed in peace. These men are peaceable, therefore let them dwell in the land and trade. Genesis xxxiv. 21.

A sacrifice of peace-offering offer without blemish.

Lev. iii. 1. Peace be unto thee, fear not, thou shalt not die.

Judges vi. 21^. If I have rewarded evil unto him that was at peace with me, let the enemy persecute my soul.

Fsalm vii. 4. Blessed are the peace-makers, for they shall be called the children of God. Matt. v. 9.

The God of hope fill you with all joy and peace in believing, that ye may abound in hope. Romans.

Peace! fear, thou comest too late, when already the arm is taken. Sidneif.

The laws were first intended for the reforraalioa of abuses and peaceable continuance of the subject.

Spencer, To his crown she him restored, In which he died, made ripe for death by eld.

And after willed it should to her remain. Who peaceably the same long time did weld.

Spenser. All assembled here in arms against God's peace and the king's, we charge you to repair to your dwelling places. Shakspeare.

Shallow, you have yourself been a great fighter, though now a man o(

] > eace. Id.

Well, peace be with him that hath made us heavy ! ••• Peace be with us, lest we be heavier! Id.

'Twill out ; ••• I peace ! No, I will speak as liberal as the air. Id.

The pangs of Death do make him grin ; Disturb him not, let him pass peaceably. Id.

Think us Those we profess, peacemakers, friends, and servants.

Shakspeare. We should profane the service of the dead. To sing a refjuiem, and such rest to her As to peaceparted souls. Id. Hamlet.

There be two false peaces or unities : the one grounded upon an implicit ignorance. Baxn.

n an examination, a freed servant, who had much power with Claudius, very saucily had almost all the •••words : and, amongst other things, he asked in scorn one of the examinates, who was a freed servant of Scriboiiianus ; I pray, Sir, if Scrihonianus had been emperor, what would you have done ? he an- swered, 1 would have stood behind his chair and held my -peace. Id.

The king gave judgment against Warren, and commanded that Sherborn should hold his land in peace. Da vies.

Peace, good reader, do not weep; Peace, the lovers are asleep. Crashaw.

Plant in us all those precious fruits of piety, jus- tice, and charity, and peaceableness, and bowels of mercy toward all others. HammoniVs Fundamentals.

Preserve us in peace, so preserve us in peace, that war may be always more odious to us than necessity.

Holyday.

But peace, I must not quarrel with the will Of highest dispensation. Milton's Agunistes.

Silence, ye troubled waves, and thou deep, peace! Said then tire omnific word. Milton.

As one disarmed, his anger all he lost ; And thus with peaceful words upraised her soon.

Id.

The Chaldeans flattered both Cssar and Pompey jvith long lives and a happy and peaceable death ; both which fell out extremely contrary. Hale.

Religion directs us rather to secure inward peace than outward ease, to be more careful to avoid ever- lasting torment than light afflictions. Tillotson. I prythee peace !

Perhaps she thinks they are too near of blood.

IJryden.

She said, and held her peace : ˆEneas went Sad from the cave. Id.

The peaceful power that governs love repairs To feast upon soft vows and silent prayers. Id.

Our loved earth ; where peacefully we slept, And far from heaven quiet possession kept. Id.

The Dane and Swede, roused up to fierce alarms, Bless the wise conduct of her pious arms ; Soon as her fleets appear, their terrour cease. And all the northern world lies hushed in peace.

Addison.

Lie, Philo, untouched on my peaceable shelf, Nor take it amiss, that so little I heed thee ;

I've no envy to thee, and some love to myself, Then why should I answer ; since first I must read thee 1 Prior.

Succeeding monarchs heard the subject's cries. Nor saw displeased the peaceful cottage rise. Pope.

The reformation of England was introduced in a peaceable manner, by the supreme power in parlia- ment. Siij/i.

The balance of power was provided for, else Pi- sistratus could never have governed so peaceably, without changing any of Solon's laws. Id.

Farewell my friends ! Farewell my foes !

*My peace with these, my love with those ***

The bursting tears my heart declare.

Farewell the bonny banks of Ayr ! Burns.

But what have these done, their far

Remote descendants, who have lived in peace.

The peace of heaven, and in her sunshine of

*Piety ***? Byron.*

Peace, Temple of, a celebrated temple at Rome, which was consumed by fire A. D. 191 ; which Dio Cassius supposes began in the ad- joining houses. Be that as it may, the temple, with all the surrounding buildings, was reduced to ashes. That magnificent structure had been raised by Vespasian after the destruction of Je-

rusalem, and enriched with the spoils and orna ments of the temple of the Jews. The ancients speak of it as one of the most stately buildings in Rome. There men of learning used to hold their assemblies, and lodge their writings, as many others deposited their jewels, and what- ever else they esteemed of great value. It was likewise made use of as a kmd of magazine for the spices brough by the Roman mercliants out of Egypt and Arabia ; so that many rich persons were reduced to beggary, all their valuable ef- fects and treasures being consumed in one night, with the temple.*

*Peace River, or Unijah River, a river of North America, which has its rise, according to Mackenzie, in the Rocky Mountains, lat. 34** 24′ N., and long. 121** W., or only a few miles from that of the Columbia, which, taking an opposite direction, falls into the Pacific Ocean. After a long winding course, during which it is increased by many large streams, it passes the Lake of the Iliils, and is called Slave River. It now runs through Slave Lake, and afterwards receiving the name of Mackenzie's River, emptying itself into the frozen Ocean, in 70** N. lat. and about 135** W. long. Its stream is from 200 to 800 yards wide, generally navigable, except within the Rocky Mountains, when its course is much interrupted by rapids. Where it falls into the Slave River it is upwards of a mile broad ; and the country between this and the Lake of the Hills is frequently inundated by it.*

PEACH, V. a. Corrupted from Impeach. A slang term for to accuse of a

crime.

If you talk of peaching, I'll peach first, and see whose oath will be believed ; 111 trounce you.

Dryden.

Peach, n. s. ? French pesche ; Ital.

Peach-colored, adj. 5 persio, pesco ; Port. pessigo ; Span, persiga ; Lat. persica. (Evi- dently from Persia.) A tree and fruit. See below.

One Mr. Caper comes to jail at the suit of Mr. Threepile the mercer, for some four suits of peach- coloured sattin, which now peaches him a beggar.

Shakspeare. Measure for Bleasure,

September is drawn with a cheerful countenance : in his left hand a handful of millet, withal carrying a cornucopia of ripe peaches, pears, and pomegra- nates. Peacham. The sunny wall Presents the downy peach.

Thomson's Aut^^.m7^.

While glossy and smooth, and as soft as the skin Of a delicate peach, is the down of her chin ; But nothing unpleasant, or sad, or severe. Or that indicates life in its winter ××× is here.

Cowper

Peach. See Amygdalus.

PEACHAM, a post town of Caledonia county, \ erraont ; six miles south of Danville, fifty-one north of Dartmouth College. Popula- tion 1301. This is a pleasant and valuable agricultural town, and it has a small village containing an academy, and a Congregational meeting-house.

PEA'CHICK, n. s. Pea and chick. The chicken of a peacock.

Does the snivelling peachick think to make a cuckold of me ? Southern.

PEA'COCK, n. s. > Sax. pajja; Lat. pavo.

Pea'hen. > Perhaps, originally, peak

cock, says Dr. Johnson, from tiie tuft of featliers on its head ; the peak of women being an ancient ornament ; if it be not ratlier a corruption of Fr. beaucoq, from the more striking lustre of its spangled train. A bird remarkable for the beauty of his feathers, and particularly of his tail.

The peacock, not at thy command, assumes

His glorious train ; nor ostrich her rare plumes.

Sandys. Let frantick Talbot triumph for a while ;

And, like a. peacock, sweep along his tail.

Shakspeare.

The birds that are hardest to be drawn are the tame birds ; as cock, turkey-cock and peacock.

Peac)ium.

*The peacock's plumes thy tackle must not fail. Nor the dear purchase of the sable's tail. Gay. The self-applauding bird the peacock see ***

Mark what a sumptuous Pharisee is he !

Meridian sunbeams tempt him to unfold

His radiant glories, azure, green, and gold.

Cowper.

Peacock, in ornithology. See Pavo.

Peacock Fish, in ichthyology. Pinna ani radiis 55, caudali falcati. The body is of va- rious colors ; the fin of the anus has fifty-five streaks, and its tail is in the form of a crescent. The head is without scales ; it is brown upon the upper part, yellow above the eyes, and of a sil- ver color on the sides. The back is round, and adorned with beautiful blue streaks in a serpen- tine form, and the belly bright as silver. The fins of the breast are round, and, like those of the belly, have a yellow ground with a gray border; that of the back is of a violet color; that of the anus is straw colored ; and, lastly, that of the tail is yellow on the sides, red to- wards the middle, and bordered with a deep blue. Its length is not known. There is a variety of this fish found only in the Indian seas, and therefore called the Indian peacock fish ; which is thus described in the language of Linnaeus : Pavo pinna

caudali forcipata : spinis dorsalibus 14: ocello caeruleo pone oculos. It has the fin of its tail forked ; fourteen sharp points or prickles on the back, with a round blue streak behind the eyes. The body of this fish is of an elliptical form ; the head is covered with scales to the tip of the snout ; the two jaws are armed with long and sharp teeth ; the ball of the eye is black, and the iris of a white color with a mixture of green. At the insertion of the fins of the belly is found a bony substance. The head, back, and sides, are of a yellow color, more or less deep, and covered with lines or streaks of sky blue. These colors are so agree- ably mixed that they resemble the elegance of the peacock's tail.

PEAK, n. s. &. V. n. Sax. I^eac ; Fr. pique, pic, pica. The pointed top of a hill or emi- nence. See Beak. As a verb, to look sickly or sharp featured ; hence, look mean.

Weary se'ennights, nine times nine. Shall he dwindle, peak, and pine.

Shakspeare. Macbeth. I, a dull and muddy mettled rascal, peak.

Like John a dreams, unpregnant of my cause.

Shaksveare..

The peaking cornuto her husband, dwelling in a continual larum of jealousy, comes in the instant of our encounter. Id.

Thy sister seek. Or on Meander's bank or Latraus' peak.

Prior.

Peak of DERiiYsuiuE, a chain of very high mountains in that county, famous for the mines they contain, and for their remarkable caverns. The most remarkable of these are Pool's Hole and Elden Ilole. The former is a cave at the foot of a high hill called Coitraoss, so narrow at the entrance that passengers are obliged to creep on all-fours ; but it soon opens to a considerable height, extending to above a quarter of a mile, with a roof somewhat resembling that of an an- cient cathedral. By the petrifying water conti- nually dropping in many parts of the cave are formed a variety of curious figures and repre- sentations of the works both of nature and art. There is a column here as clear as alabaster, which is called The Queen of Scots' Pillar, be- cause queen Mary is said to have proceeded thus far when she visited the cavern. After sliding down the rock a little way, is found the dreary cavity turned upwards : following its course, and climbing from crag to crag, the traveller arrives at a great height, till the rock, closing over his head on all sides, puts an end to any further subterraneous journey. Just at turning to de- scend, the attention is caught by a chasm, in which is seen a

candle glimmering at a vast depth underneath. The guides say that the light is at a place near Mary queen of Scots' pillar, and no less than eighty yards below. It appears frightfully deep indeed to look down ; but perhaps does not measure any thing like what it is said to do. If a pistol be fired by the queen of Scots' pillar, it would make a report as loud as a cannon. Near the extremity there is a hollow in the roof, called the Needle's Eye; in which if a candle is placed it will represent a star in the firmament to those who are below. At a little distance from this cave is a small clear stream consisting of hot and cold water, so near each other, that the finger and thumb of the same hand may be put, the one into the hot water and the other into the cold. Elden Hole is a dreadful chasm in the side of a mountain ; which, before the end of the seventeenth century, was thought to be altogether unfathom- able. In 1699 captain Sturmy descended by ropes fixed at the top of an old lead-ore pit, four fathoms almost perpendicular, and thence three fathoms more obliquely, between two great rocks. At the bottom of this he found an entrance into a very spacious cavern, whence he descended along with a miner for twenty-five fat'>oms perpendicular. At last they came to p. great water, which he found to be twenty fathoms broad and eight deep. As they walked by the side of this water, they observed a hollow in the rock some feet above them. The miner went into this place, which %\as the mouth of another cavern; and walked for about seventy paces in it. The floor of these caverns is a kind of white s'one enamelled with lead ore, and the roofs are encrusted with shining spar. On his return from this subterraneous journey.

captain Sturmy was seized with a violent head- ach, which, after continuing four days, termi- nated in a fever, of which he died in a short time. See Dr.iiBYSHiRE.

Peak of Teneriffe. See Teneriffe.

*Peak's Hole, and Pool's Hole, two remark- able horizontal springs under mountains; the one near Castletown, the other just by Buxton. They seem to have owed their origin to the springs which have their current through them ;
वhen the water had forced its way through the horizontal fissures of the strata, and had carried the loose earth away with it, the loose stones must fall down of course : and, where the strata had few or no fissures, they remained entire ; and so formed these very irregular arches, which are now so much wondered at. The water which passes through*

Pool's Hole is impregnated with particles of lime-stone, and has incrusted the whole cavern in such a manner that it appears as one solid rock.

PEAKS, a range of mountains in New Hamp- shire, extending from Strafford to the White Mountains. 2500 feet high.

Peaks of Otter, in Bedford county, Vir- ginia; thirty miles west by north of Lynchburg. Lat. 37►► 33′ N. They are summits of the Blue Ridge, and are considered the most elevated points of land in Virginia. The altitude of the eabtern peak is 3104 feet; that of the western 2946. According to another statement, the ele- vation is 3955 feet. The summits are com- posed of granite.

PEAL, n. s. & V. a. Belg. helvi ; Dan. biecl. (The noise of bells.) A succession of loud noises ; to assail with loud noise.

Ere to black Hecate's summons The shard-born beetle with his drowsy hums Hath rung night's yawning peal, there shall be done A deed of dreadful note. Shakspeare. Macbeth.

The breach of faith cannot be so highly expressed, as in that it shall be the last peal to call the judg- ments of God upon men. Bacon's Essays.

They were saluted by the way, with a fair peal of artillery from the tower. Hay ward.

I myself Vanquished with a peal of words, O weakness ! Give up my fort of silence to a woman. Milton.

Nor was his ear less pealed With noises loud and ruinous, than when Bellona

storms, With all her battering engines, bent to rase Some capital city. Id. Paradise Lost.

Let the pealing organ blow To the full-voiced quire below, In service high and anthems clear. As may, with sweetness drown mine ear. Dissolve me into extasies. And bring all heaven before mine eyes.

Milton.

From the Moor's camp the noise grows louder still ; Peals of shouts that rend the heavens. Bryden.

Oh ! for a peal of thunder that would make Earth, sea, and air, and heaven and Cato tremble.

Addison. The pealing organ, and the pausing choir ;

And the last words that dust to dust conveyed.

Tickel. Peal upon peal redoubling all around,

Shakes it again and faster to the ground :

Now flashing wide, now glancing as in play.

Swift beyond thought the lightnings dart away.

Cowper.

PEAR, n. .s."^ Fr. poire; Lat. pi/rum. A

Pearmain', J- well known tree and fruit. See

Pear'-tree, ^ Pyrus. Of which the apple pearmain is also a species.

They would whip me with their fine wits, till I were as crest fallen as a dried pear. Shakspeare.

*The peartree criticks will have to borrow his name of ***TriJp, fire. Bacon.*

August shall bear the form of a young man, of a choleric aspect, upon his arm a basket oi pears, plums, and apples. Peacham,

Pearmain is an excellent and well known fruit.

Mortimer, The juicy pear

Lies in a soft profusion scattered round.

Thomson,

PEARCE (Dr. Zachary), bishop of Roches- ter, was the son of a distiller in High Holborn. He was born in 1690, and educated at W^est- minster, where he was distinguished by his merit, and elected one of the king's scholars. In 1710, when he was twenty years old, he was elected to Trinity College, Cambridge. During the first years of his residence at the university he wrote Essays, some of which are inserted in the Guar- dian and Spectator. Tn 1716 he published his edition of Cicero de Oratore, and dedicated it to lord chief justice Parker (afterwards earl of Macclesfield), to whom he was a stranger. This laid the foundation of his future fortune ; for lord Parker recommended him to Dr. Bentley, master of Trinity, to be

made one of the fellows. In 1717 Mr. Pearce was ordained, at the age of twenty seven. In 1718 lord Parker was ap pointed chancellor, and invited Mr. Pearce to live with him as chaplain. In 1719 he was in- stituted rector of Stapleford Abbots, in Essex : in 1720 of St. Bartholomew, worth ►►400 per annum. In 1722 he was presented to St. Mar- tin's in the Fields. In 1723 he married Miss Adams, the daughter of a distiller, with a consi- derable fortune ; and in 1724 the degree of D. D. was conferred on him by archbishop Wake. The same year be dedicated to the earl of Maccles- field his edition of Longinus on the Sublime, with a new Latin version and notes. W hen the church of St. Martin's was rebuilt, Dr. Pearce preached a sermon at the consecration, which he printed, and accompanied with an Essay on the Origin and Progress of Temples, traced from the rude stones which were first used for altars to the noble structure of Solomon, which he consi- ders as the first temple completely covered. Dr. Pearce was appointed dean of Winchester in 1739; and in 1744 he was elected prolocutor of the lower house of convocation for Canterbury, He was consecrated bishop of Bangor, February 12th, 1748. Upon the death of bishop Wilcocks he was promoted to the see of Rochester and deanery of Westminster in 1756. In 1768 he resigned the deanery; in 1773 he lost his lady ; and, after some months of lingering decay, he died at Little Ealing, June 29th, 1774, aged eighty-five. This eminent prelate distinguished himself in every part of his life by the virtues proper to his station. His literary abilities, and application to sacred and philological learning,

appear by his works ; the principal of which are, 1. A Letter to the clergy of the Church of Eng- land, on occasion of the Bishop of Rocliester's commitment to the Tower; second edition, 1722. 2. Miracles of Jesus Vindicated, 1727 and 1728. 3. A Review of the Text of Milton, 1733. 4. Two Letters against Dr. Middleton, occasioned by the Doctor's Letter to Waterland, on the pub 'ication of his treatise, entitled Scripture Vindi- cated; third edition, 1752. And, 5, since his death, A Commentary with Notes on the Four Evangelists and the Acts of the Apostles, with a n-ew translation of St. Paul's First Epistle to the Corinthians, with a paraphrase and notes, have been published, with his life prefixed, from original MSS. in 2 vols. 4to.

Fearce (Nathaniel), a late African traveller, was born of resjiectable parents at East Acton, in Middlesex. At an early ace he went to i;ea, and landed on the shore of the Red Sea; whence he found his way to Abyssinia, where he was much caressed. After residing there some years, he went to Cairo, with the intention of revisiting his native land. But having, at tlie

latter end of May, 1820, taken charge of some an- tiquities for the British Museum, as well as for individuals, he proceeded to Alexandria, and was about to embark, when a bilious fever car- ried him off suddenly, on the 12th of August. He was buried the same evening in the Greek convent, his body being carried by six English sailors. He left all his manuscripts to his friend and patron Mr. Salt, our consul in Eppt.

PEARCII, in ichthyology. SeePERCA. The pearch affords good sport for the angler. The iDCSt time for their biting is when the spring is over, and before the heats of summer come on. At this time they are very greedy ; and the angler, with good management, may take at one standing all that are in a hole, be they ever so many. The proper baits are minnows or young frogs ; but the worm called the brandling, well scoured, is also excellent at all times of the year. When the pearch bites, he should always have a great deal of time allowed him to swallow the bait. The pearch will bite all day if the weather be cloudy ; but the best time is from eight to ten A.M., and from three to six P.M. The peaich is very absfemiovs in winter, and will seldom bite in this season : if he does at all, it is in the middle of the day ; at which time in- deed all fish bite best. If the bait be a minnow, which is the bait that affords most diversion to the angler, it must be fastened to the hook alive, by putting the hook through the upper lip or back-fill ; it must be kept at about mid-water, and the float must be a quill and a cork, that the minnow alone may not be able to sink it. The line must be of silk, and strong ; and the hook armed with a small and fine wire, that if a pike should take the bait, as is not unfrequently the case, he may be taken. The way to carry the minnows or small gudgeons alive for baits is tliis : a tin pot is to be provided, with holes in the lid, and filled with water ; and, the fish being put in this, the water is to be changed once in a quarter of an hour by the holes, without taking off the lid at any time, except when the bait is Jo be taken out. A small casting net, made for Vol. XVI.

these little fish, should be taken out with the pearch-tackle ; and one or two casts of this will take baits enough for the day without ar-y farther trouble. When tlie bait is a frog, the book is to be fastened to the upper part of the log. The best place for the fishing for pearch is in the turn of the water near some gravelly scour. A place of this kind being pitched upon, it should be baited over-night with lobworms chopped to pieces; and in the morning, on going to it, the depth is to be regularly plumbed, and then the hook is to be baited with the worm or other bait ; and, as it drags along, the pearch will soon seize upon it.

PEARL, n. s. Fr. per/e ; Span, perla. Sup- posed by Salnaasius to come from Lat. spherula ; but there is an Arab para, loo loo (jewel of the sea).

The kingdom oi heaven is like unto a merchant- man seeking goodly pearls,

who, when he had fouLd one pearl of great price, sold all that he had and bought it. Mutt. xiii. 45, 46.

Flow'rs purfled, blue and white,

Like saphire, pearl, in rich embroidery

Buckled below fair knighthood's bending knee.

Shakspeare, Dropping liquid pearl,

Before the cruel queen, the lady and the girl

Upon their tender knees begged mercy. Drayton. Which when she heard, full pearly floods

I in her eyes might view. Id.

This (moderation) is the centre wherein all, both divine and moral philosophy meet; the rule of life; the governess of manners ; the silken string, that runs through the pear/-chain of all virtues.

Bp. Hall. The water nymphs

Held up their pearled wrists, and took her in,

Bearing her straight to aged Nereus' hall.

Milton.

Some in their pearly shells at ease, attend Moist nutriment. Id. Paradise Lost.

For what the day devours, the nightly dew

Shall to the morn in pearly drops renew.

Dryden.

A'ii the.' -as Invested with a pearlt/ shell, having tie sutures finely displayed upon iu surface.

Wiicdimrd.

A pearl julep was made of a distilled milk.

Wiseman.

Cataracts pearl coloured, and those of the colour of burnished iron, are esteemed proper to endure the needle. Shai-p.

A Pearl, in natural history, is a hard, white, shining body, usually roundish, found in a testa- ceous fish resembling an oyster. See Mya. The fish in which these are usually produced is the East Indian pearl oyster. Besides this shell there are many others that are found to produce pearls ; as the common oyster, the mussel, and several others, the pearls of which are often very good ; but those of the true Indian berberi, or pearl oyster, are in general superior to all. The small or seed pearls, also called ounce pearls, from their being sold by tlie ounce and not by tale, are vastly the most numerous and common. We have Scotch pearls frequently as big as a little tare, some as big as a large pea, and some few of the size of a horse-bean ; but these are usually of a bad shape, and of bttle value in iiroportion to their weight. Philip II. of Spain

had a pearl perfect in its shape and color, and of the size of a pigeon's eg

Very little is known of the natural history of the pearl fish. The general belief is that the mussel is constantly stationary in a state of re- pose, and cannot transfer itself from place to place. This is a vulgar prejudice, and one of those facts that are mistaken for want of sufficient pains or opportunity to make more critical ob- servations. Others, finding the first opinion a false one, and that they are endowed with power of changing place like other animals, have, upon the same foundation, gone into the contrary ex- treme, so far as to attribute swiftness to them, a property surely inconsistent with their being fixed to rocks. Mr. Bruce says that the mussels four:d in the salt springs of Nubia likewise travel far from home, and are sometimes surprised, by tlie ceasing of the rains, at a greater distance from their beds than they have strength and moisture 'o carry them. From the shells a judgment may be formed whether they contain pearls. Those which have a thick calcareous crust on them, to which serpulae, tubuli marini, cristagalli, madre- pores, millipores, spongice, and other zoophites, adhere, coiruaonly contain the best pearls; the smooth ones either none or very small ones.

The colors of pearls are different according to the shells in which they are found. There are three kinds of bivalve shells chiefly sought after by the pearl fishers. The first is a kind of mus- sel chiefly found in the north end

of the lied Sea. It produces pearls of a fine shape and excellent lustre, but seldom of that very fine color whic't enhances their price. The second kind, called pinna, is broad and semicircular at the top, and sharp at the hinge, the outside rough and red, tlie inside lined with mother of pearl. It produces pearls having the reddish cast of the inner shell of the pinna called mother of pearl ; which confirms the opinion of Reaumur, that the pearls are formed from the glutinous fluid which makes the first rudiments of the shell ; and this kind of pearl is found to be more red as it is formed nearer the broad part of the shell, which is redder than the other end. The third sort of shell re- sembles the oyster, and produces pearls of ex- treme whiteness. The value of these commodi- ties depends upon their size, regularity of form, whether round or not, weight, smoothness, color, and the different shades of that color. The pearl fishers say that, when the shell is smooth and perfect, they never expect to find any pearls, but always do so when it has beauii to be deformpd and distorted. Hence M. Reaumur supposes that, as the fish becomes older, the vessels con- taining the juice for forming the shell, and keep-

ing it in its vigor, grow weak and ruptured ; and thence, from this juice accumulating in the fish, the pearl is formed, and the shell brought to decay.

He observes that pearls are formed like other stones in the animals; as those, e. gr. in the bladder, kidneys, Sec, and that they are appa- rently the effects of a disease of the fish. In ef- fect, they are all formed of a juice extravasated out of some broken vessels, and detained, and fixed among the membranes. To evince the possibility of this, M. Reaumur shows that the shells of sea-fish, as well as those of snails, &c., are wholly formed of a glutinous stony matter, oozing out of the body of the animal. Now it is no wonder that an animal which has vessels wlierein circulates a sufficient quantity of stony juice to build, thicken, and extend a shell, should have enough to form stones also, in case the juice, destined for the growth of the shell, shall chance to overflow, and burst forth in any cavity of the body, or among the membranes.

To confirm this system, he observes, that the inner surface of the common pearl-mussel, found on the coasts of Provence, is of a pearl, or mother- of-pearl color, from one part of its extent, which he determines, to another; after which it be- comes reddish : now there are pearls of two co- lors found in the shell ; and the colors of the pearls are precisely the same with those of the shell ; nay, more, each kind of colored pearl is found in the corresponding colored part of the shell; which shows that, in the same place wherein the transpiration of a certain juice had formed, and would have continued to form a coat or layer of shell of a certain color ; the ves- sels which conveyed that juice being broken, there is formed a little mass or

collection of the juice, which, hardening, becomes a pearl of the same color with the part of the shell to which it corresponds.

Add to this, that the silver, or pearl-colored part of the shell, is formed of strata, or layers, over one another, like an onion ; and thf reddish part of little cylindrical short fibres applied asainst one another. The pearls of the two co- lors have also this difference of texture ; not but they are both composed of concentric couches ; but those of the reddish pearls are much less sensible ; and, besides, they have threads, which, like radii, proceed from their centre to their cir- cumference. These circumstances seem effectu- ally to determine the formation of pearls.

The extravasations above-mentioned may be caused by heterogeneous bodies, such as sand coming in with the food, which the animal covers with its glutinous matter, to prevent disagreeable friction, and which, as it is successively secreted, forms many regular lamellae, in the manner of the coats of an onion, or like different strata of bezoars, only much thinner; this is probable, for if we cut through the centre of a pearl, we often find a foreign particle, which ought to be consi- dered as the nucleus, or primary cause of its formation. The loose {.

travasaiion, occasioned by the friction of some roughness on the inside of the shell. These and the pearl-like nodes have a different aspect from the pearls, and are of a darker and bluer color. The art of forcing shell-iish to produce pearls was known, in the first centuries of the Christian era, to the inhabitants of the coasts of the Red Sea, as we are told by the philosopher Apollo- nius (Philostrat. in Vita ApoUon. lib. iii. c. .57, edit. Olearii, p. 139), who thought ttiat circum- stance worthy of particular notice. The process employed by the Chinese at present, to cause a certain kind of mussels to form pearls, seems to confirm tiie account given by Pliilostratus. In the beginning of the suninier, at tlie time when the mussels re])air to the surface oi' the water and open their shells, five or six small beads, made of mother-of-pearl, and strung on a thread, are thrown into each of them. At the end of two years when the mussels are drawn up and opened, tiie beads are found covered with a pearly crust, in such a manner that they have a perfect resem- blance to real pearls. The truth of this informa- tion cannot be doubted, though some experi- ments made in Bohemia for the same purpose were not attended with success. It has been con- firmed by various persons, and it is very proba- ble, that some operations and secrets, without which the process would prove fruitless even in China, may be unknown to the Europeans. Professor Fabricius says, that he saw in the pos- session of

Sir Joseph Bankes, in London, large chama;, brought from China, in which there were several bits of iron wire, incrusted with a sub- stance of a perfect pearly nature. These bits of wire, he said, had been sharp, and it appeared as if the mussels, to secure themselves against the points of the wire, had covered them with this substance, by which means they had been rendered blunt.

The celebrated Linne informed the king and council of Sweden, in the year 1761, that he had discovered an art by which mussels might be made to produce pearls, and he offered to dis- close the method for the benefit of the kingdom. This however was not done, but he disposed of his secret to one Bagge, a merchant at Gotten- burg, for the sum of 18,000 copper dollars, which make about 500 ducats.

The most complete account of the artificial formation of pearls with which we have met was furnished by a gentleman to the Edinburgh Philosophical Journal, and from which our limits will allow but a short extract.

' Pearls, in general,' says our author, 'take the color of the shell in which they are formed, being nothing else than the substance of the shell di.s- posed in concentric layers, and tending tuore or less to a spherical form. From the great num- ber of small pearls which I have frequently col- lected from the small sea-mussel (Mytilus edulis) so common in the streets of London, I find that there is no part of the flesh of this animal in which pearls do not occur. The natural expen- diture of the substance which forms the pearl is only for the purpose of producing the shell or testaceous covering of the shell-fish ; but various causes producing wounds in the animal, or other- wise irritating it, will produce a secretion of tlio

shelly matter to defend the injured yjart ; and however sharp or angular the offend mg substance may be, it by degrees assumes a round form, in proportion as it is covered by a greater number of coats. The assertion advanced by Linne, and repeated in some works, that the Chinese have a mode of producing by art real pearls in the living shell-fijh, though in general little credited, seem- ed to me so feasible, that I was led to attempt a similar experiment, which I tried upon the large mussel of our ponds (anodonta cygnea), being the only convenient shell-fish which I could com- mand in the central parts of England. I pro- cured, therefore, the largest of these, from five to six inches long, from the duke of Marlborough's water of Blenheim ; but, although the vigor of the animals promised mc success, several of them died. I shall only relate what happened in the surviving ones.

I drilled several holes in the most convex part of these shells, and introduced brass wires of two-thirds of a line in diameter. These wires had

a sharp point, and were fixed in the shell ui the way of cramps ; some were disposed in strait lines, and others in such artificial forms as to show plainly that the pearls so produced, if the experiment should succeed, were the work of de- sign, and not the unmolested operation of nature. One of these which, I believe, is still preserved in the Anatomical School at Christ Church in Oxford is an indisputable proof of this, the points forming the initial letters of my name. I let them down in a wooden box, perforated with holes, and loaded with a weight, into the River Isis ; and, on examining them a few months after, I found some of them dead, and, it is probable, they died very soon after the operation, as the brass-points remained perfectly naked. I re- turned the living ones into the water, and took them up at the expiration of eighteen months from the operation. I then killed the animal, in order to examine the shell, and I found, in one instance, the points of the wires fairly covered with a calcareous substance, rather coarser than the inside of the shell, which circumstance was probably owing to the more hasty deposition of the earthy matter, which, therefore, wanted the compactness and the pearly color of the inner layer of the shell. Instead of points, the wires were now terminated by a round head, and the fish having sur^'ived is a proof that it was suffi- ciently defended from the injury which it must at first have received. On examining other shells, I found the points of the wires, which projected at least two lines within the shell, covered only with a mucous substance, which, however, pre- served a rounded form ; so that these, also, re- sembled the heads of large pins.

These experiments I made many years ago, and, more lately, I commenced others of a simi- lar nature, but better planned, introducing, in place of pointed wires, round beads of different materials, through holes in the shell. These beads were of glass, steel, 8cc., and, from their form, I supposed would produce less irritation, and afford a fairer surfece for the adventitious earthy matter. What I here attempted by art is not unfrequently produced by nature herself. I have two scallop-shells (the flat shell), the inner

surface of which is very thick, and set with ex- tremely minute points of the substance of the sliell, which, it appears, the animal had, in this instance, also produced in its own defence in or- der to guard itself against the invasion of a spe- cies of boring molluscous animal, which had made its way through the outer layers of the shell, and was proceeding inwards, so

as to oblige the animal to secure in many points its inner wall against the invader.

In tlie museum of the College of Surgeons are some artificial pearls of a very fine water, and nearly orbicular ; their base is supported by a small process, which separates at the end into short diverging processes, which stand off at right angles to the central rib. On more minute exa- mination, it appeared that these pearls were pro- duced by there being introduced between the mantle of the animal (while yet alive) and the shell, a small piece of silver wire, bent into a pe- culiar form, that is to say, so as to form a right angle, with one arm ending in two diverging pro- cesses, so as to make the simple end always to keep its erect position. These wires must be introduced in the same manner as the semi-orbi- cular pieces of mother-of-pearl in the other me- thod of forming artificial pearls, as there is no appearance of any external injury. The pearls are solid, and nearly orbicular, with a small pe- dicle, which is continued so as to entirely cover the wire.

In the British Museum there is, or was, a fa- mous pink pearl, of a respectable size, and of an oval form: probably produced by one of tlie large West India conchs. In the waters in Scot- land between Perth and Auchtermuchty the mussels afford green pearls : the blue pearls from Montrose are also radiated in their texture, though extremely dense, so that the radii are in- visible to the naked eye.

*That pearls are calcareous is inferred from Cleopatra's having been able to dissolve hers in vinegar, and by these means to gain a wager from her lover, as we are told by Pliny and Ma- crobius. She must, however, have employed stronger vinegar than that which we use for our tables, as the pearls, on account of their hardness and tlieir natural enamel, cannot be easily dis- solved by a weak acid. Cleopatra, perhaps, broke and pounded the pearls ; and it is proba- ble that she afterwards diluted the vinegar with water, tiiat she might be able to drink it; though lissolved calx destroys acids and renders them imperceptible to the tongue. We are told that the dissipated Clodius gave to each of his guests a pearl dissolved in vinegar to drink; * ut expe- riretur in gloria palati,' says Pliny, ' quid sape- rent margaritas ; atque utmire placuere, ne solus ioc sciret, sirigulosuniones convivisabsorbendos 'Jedit.' Horace says the same. The entertain- nent we should imagine to have been more iosiiy than agreeable. Caligula, also, ' marfja- itas pretiossissimas aceto liquefactas sorbebat.' That pearls are soluble in vinegar is remarked by Pausanias and Vitruvius.*

The oriental pearls are the finest, on account 01 their largeness, color, and beauty, being of a silver white ; whereas the occidental pearls sel- d'ini exceed the color of milk. In Europe pearls

are sold by the carat-weight, the carat containing four grains. In Asia the weights used for pearls are different states. The value of pearls in- creases as the square of their weight.

Pearl Fisiiekies. There are many rivers, great and small, in Eastern Tartary, considerable for pearl fishery ; but these pearls, thougli much esteemed by the Tartars, would be little valued by Europeans, on account of tlieir defects in shape and color. The emperor Kang-hi had several chaplets or strings of these pearls, each containing 100, which were very large, and ex- actly matched. There are many rivulets in Li- vonia which produce pearls almost equal in size and clearness to the oriental ones. There are sereral fisheries both on the east and west coasts of Africa; the most considerable of which lie round some small islands near Sofala ; but the people thus employed, instead of exposing the oysters to the warmth of the sun, which would induce them to open, lay them upon the embers ; by which absurd method those pearls which they catch contract a dull kind of redness, which robs them of their natural lustre as well as of their value. In the sea of California also there are very rich pearl fisheries. The most esteemed pearls are those of Asia and the east coast of Africa. In Japan likwise there are found pearls of great price. Pearls are met with in all parts of the Red Sea, in the Indian Ocean, on the low part of the coast of Arabia Felix named Baharen, adjoining to Lhe Persian Gulf. They are like- wise found on the low coast about Gombroon east of the Persian Gulf; and many of the finest kind are met with on the coast of Ceylon. They are most plentiful in the Baharen, between the coast of Arabia Felix and Ormus, whence they are transported to Aleppo, then sent to Leghorn, and then circulated through Europe. In Scot- land, especially to the northward, in all rivers running from lakes, there are found mussels that have pearls though seldom of large size.

In Ceylon the first business, previous to the commencement of the fishery, is to survey the diflTerent oyster banks, to ascertain the state of the oysters, and to make a report on the subject to government. If the quantity is found to be sufficient, and in a proper state of maturity, the particular banks to be fished that year are put up for sale to the highest bidder, and are usually purchased by a black merchant. Sometimes the government deems it more advantageous to fish tlve banks on its own account, and to dispose of the pearls afterwards to the merchants. When this plan is adopted, boats are hired for the season on account of government from different quarters, at a variable price, but usually from 500 to 800 pagodas for each boat. As it would not be expedient to fish the whole of the banks in one year, they are divided into three or four different portions, one portion of which is fished annually in succession. By this contrivance sufficient interval is allowed for the oysters fer attain their proper growth ; and as the portioj- first used generally recovers its maturity by the time the last portion has been fished,

the fishery becomes almost regularly annual. The oysters are supposed to attain their highest state of maturity in seven years ; for, if they be left too

long, tlie pearls become so large and so disa- greeable to the fishes, that they vomit and throw them out of the shell.

The fishing season commences in February, and ends about the beginning of April. The period allowed the merchant for fishin'^ the banks is six weeks, or at the most two months ; but the interruptions that occur prevent the fishing days from exceeding more than about thirty. In a bad season, the purchaser of the fishery is al- lowed a few days more as a favor. There are two seasons for pearl-fishing : the first is in March and April, and the last in August and September ; and the more rain there falls in the year, the more plentiful are these fisheries. At the beginning of the season there are sometimes 250 harks on the banks : the larger barks have two divers; and the smaller, one. As soon as the barks arrive at the place where the fish lie, and have cast anchor, each diver binds a large stone under his body; which serves him as ballast, presents his being driven away by the motion of the water, and enables him to walk more steadily und►►^r the waves. They also tie another very heavy stone to one foot, by which they are very speedily sent to tiie bottom of the sea; and as the oysters are usually firmly fastened to the rocks, they arm their hands with leather mittens, to prevent their being wounded in pulling them violently off"; but this task some perform with an iron rake. Each diver carries down with him a large net in the manner of a sack, tied to his neck by a long cord, the other end of which is fastened to the side of the bark. This net is to hold the oysters gathered from the rock, and the cord is to pull up the diver when his bag is full, or when he wants air. In this equipage he sometimes precipitates himself sixty feet under water ; and, as he has no time to lose, he no sooner arrives at the bottom, than he begins to run from side to side, tearing up all the oysters he meets with, and cramming them into his budget. The exertion undergone during this pro- cess is so violent, that, upon being brought into the boat, the divers discharge water from their mouths, ears, and nostrils, and frequently even blood. But this does not hinder them from g0]ng down again in their turn. They will often make from forty to fifty plunges in one day ; and at each plunge bring up about 100 oysters. Some rub their bodies over with oil, and stuff their ears and noses to prevent the water from entering ; while others use no precaution what- ever. Although the usual time for remaining under water does not much exceed two minutes, yet there are instances known of divers who could remain four and even five minutes. The longest instance ever known was that of a diver who came

from Anjanga in 1797, and who ab- solutely remained under water full six minutes.

The appearance of a single shark is sufficient 10 spread dismay among the whole body of il.' ••• IS ; for as soon as one of them sees a shark li•• > instantly gives the alarm to his companions, who as quickly communicate it to the other boats; a panic speedily seizes the whole, and they often return to the bay without fishing any more for that day. The sharks which create all tli'3 alarm sometimes turn out to be nothing

more than a sharp stone on which the divers happen to alight. As false alarms excited in this manner prove very injurious to the progress of the fishery, every means is employed to ascer- tain whether they are well or ill founded ; and, if the latter be tie case, the authors of them are punished. Wher. they find themselves straitened, they pull the rope to which the bag is fastened, and hold fast by it with both hands; when those in the bark, taking the signal, heave them up into the air, and unload them of their fish ; which is sometimes 500 oysters, and sometimes not above fifty. Most of the divers need a short respite to recover breath ; others jump in again instantly, continuing this violent exercise for several hours. On the shore they unload their barks, and lay their oysters in a vast number of li'itle pits dug in the sand, four or five feet square, raising heaps of sand over them to the height of a man ; and in this condition they are left till the rain, wind, and sun, have obliged them to open, which soon kills them : upon this the flesh rots and dries, and the pearls, thus disengaged, fall into the pit on their taking out the shells. After clearing the pits of the grosser filth, they sift the sand several times in order to find the pearl : but, whatever care they take, they always lose some. After cleaning and drying the pearls, they are passed through a kind of sieve, accord- ing to their sizes ; the smallest are then sold by weight as seed-pearls, and the rest put up to auction, and sold to the highest bidder. The divers are paid difi^erently according to their pri- vate agreement with the boat-owners. They are paid either in money, or vvith a proportion of the oysters caught, which they take the chance of opening on their own account; the latter is the method most commonly adopted. The agree- ment with the people who hire out the boats is conducted much in the same manner. They contract either to receive a certain sum for the use of their boats, or pay the chief farmer of the banks a certain sum for permission to fish on their own account. Some of those who pursue the latter plan are very successful and become rich ; while others are great losers by the specu- lation. Oyster lotteries are carried on here to a great extent; they consist of purchasing a quan- tity of the oysters unopened, and running the chance of either finding or not finding pearls in them. The European officers and gentlemen, who attend here upon duty or through curiosity, are particularly fond of these lotteries, and very frequently make purchases of this sort.

Pearls, Method or Making Autifkial. Attempts have been made to take out stains from pearls, and to render the foul opaque colored ones equal in lustre to the oriental. Abundance of processes are given for this purpose \n books of secrets and travels ; but they are very far from answering what is expected from them. Pearls may be cleaned indeed from any external foulnesses by washing and rubbing them with a little 'enice soap and warm water, or with ground rice and salt, with starch and powder blue, plas- ter of Paris, coral, white vitriol and tartar, cut- ler-bone, pumice-stone, and other similar sub- stances ; but a stain that reaches deep into the substance of pearls is impossible to be takei

out. Nor can a number of small pearls be united inio a mass similar to an entire natural one, as some pretend. There are, however, methods of making artificial pearls, in such a manner as to be with difficulty distinguished from the oriental. The ingredient used for this purpose was long kept a secret ; but it is now discovered to be a fine silver-like substance found upon the under side of the scales of the blay or bleak-fish. The scales, taken off in the usual manner, are washed and mbbed with fresh parcels of fair water, and the several liquors suffered to settle : the water being then poured oft', the pearly matter remains at the bottom, of the consistence of oil. A little of this is dropped into a hollow bead of bluish glass, and shaken about so as to line the internal surface ; after which the cavity is filled up with wax, to give solidity and weight. Pearls made in this manner are distinguishable from the na- tural only by their having fewer blemishes.

Pearl- Ash, a kind of fixed alkaline salt, pre- pared chiefly in America, Germany, Russia, and Poland, by melting the salts out of the ashes of burnt wood ; and, having reduced them again to dryness, evaporating the moisture, and calcining them for a considerable time in a furnace mode- rately hot. The goodness of pearl ashes must he distinguished by the uniform and white ap- pearance of them: they are nevertheless subject to a common adulteration, not easy to be dis- tinguished by the mere appearance, which is done by the addition of common salt. In order to find out this fraud, take a small quantity of the suspected salt : and after it has been softened by lying in the air, put it over the fire in a shovel: if it contains any common salt, a crack- ling and a kind of slight explosion will take place as the salt grows hot. Pearl-ashes are much used in the manufacture of glass, and require no preparation, except where very great

transpa- rency is required, as in the case of looking-glass, and the best kind of window-glass. For this purpose dissolve them in four times their weight of boiling water : when they are dissolved, let the solution be put into a clean tub, and suf- fered to remain there twenty-four hours or more. Let the clear part of the fluid be then decanted off from the sediment, and put back into the iron pot in which the solution was made; in this let the water be evaporated till the salts be left perfectly dry. Keep those that are not designed for immediate use in stone jars, well secured from moisture and air. Mr. Kirwan, who tried a course of experiments on the alkaline sub- stances used in bleaching, &c., tells us, that in 100 parts of the Dantzic pearl-ash, the vegetable alkali amounted to somewhat above sixty-three. His pearl-ash he prepared by calcining a lie of vegetable ashes dried into a salt to whiteness. In this operation, he says, ' particular care should be taken that it should not melt, as the extrac- tive matter would not be thoroughly consumed, and the alkali would form such a union with the earthy parts as could not easily be dissolved.' Pearl, Moth F.ii of, the shell, not of the pearl oyster, but of the mytilus margaritiferus. The most beautiful shell of this kind is that of the pinna: but it is too brittle to be employed in any large pieces of workmanship ; whence that

kind named dora is most usually employed ; and great quantities of this are daily brought from the Red Sea to Jerusalem.

Pearl Islands, small islands of the gulf of Panama, where there was formerly a pearl fishery ; the slaves belonging to Panama being employed to dive for pearls. This fishery is now of little importance ; but the islands produce abundance of maize, plaintains, fish, and game. Forty-five miles from the city of Panama.

Pearl Island, a small island of the West Indies, in long. 79►► 13′ W., and lat. 14►► 53′ N.

PEARSON (Margaret Eglington), an inge- nious lady, was the daughter of Mr. Samuel Paterson, so well known as a literary auctioneer, and an author of no little merit. She married an artist by the name of Pearson, and resided at Hampstead, where they carried on the art of painting on glass to a high degree of perfection. Mrs. Pearson excelled all her contemporaries in this line, and the two sets from the cartoons of Raphael, executed by her for the late marquis of Lansdowne, and Sir Gregory Page Turner, are full evidence of her extraordinary merit. She died February 14th 1823.

Pearson (Edward), D. D., a learned and amiable divine, was born on the 25th of October, 1756, in the city of Norwich. He was never placed at any piiblic school, but derived all early education from private instruction, and his own assiduity. In 1778 he was entered at Sidney Sussex College,

Cambridge ; and proceeded to the degree of B.A. 1782 ; and M.A., 1785. In 1786 he obtained the Norrisian prize, for an Essay on the Goodness of God, as manifested in the jVIission of Jesus Christ, which was soon afterwards published, in conformity to the will of the founder. In 1792 he took the degree of B.D., and during a considerable period Mr. Pearson filled the situation of tutor to the col- lege. In 1797 he was presented by his kind and esteemed friend, Dr. Elliston, the master, to the rectory of Rempstone, Nottinghamshire. In the same year he married Susan, the daughter of Richard Johnson, Esq., of Henrietta-Street, Covent Garden. In 1807 he was chosen, by the trustees, to preach the Warburtonian lectures at Lincoln's Inn, which he completed early in 1811. In 1808, on the death of Dr. Elliston, he was elected master of Sidney Sussex College, on which occasion he received, by royal man- date, the degree of D.D., and in the same year was appointed vice-chancellor. In 1810 he was elected by the university to the office of Christian advocate. The arduous duties connected with these various and important appointments had visibly affected his health, and whilst taking his customary walk in the garden of his parsonage, at Rempstone, he was suddenly attacked with an apoplectic seizure, from which he never recovered sufficiently Inarticulate; but expired on the 17th of August, 1811. The works of Dr. Pearson, besides that already mentioned, are the following : Discourses to Academic Youth ; a Letter to a Member of the Senate of the University of Cam- bridge ; and Remarks on the Theory of Morals. The Warburtonian Letters were also published, as well as several family prayers, written by him.

Pearson (John), a learned English bishop, born at Snoring, in 1613. He was educated at Eton and CaTnbridge ; entered into orders in 1639; and was made prebendary of Nether- haven in tlie church of Sarum. In 1640 he was appointed chaplain to the lord keeper Finch, and by him presented to Torrin;j;ton in Suffolk. In 1650 he was made minister of St. Clement's, East Cheap, London. About 1660 he published in London An Exposition of the Creed, in folio; also The Golden Remains of Mr. John Hales of Eton ; with a preface. In 1G60 he was pre- sented, by Juxon, bishop of London, to the rec- tory of St. Christopher's in that city ; created D.D. at Cambridc;e ; installed prebendary of Ely ; archdeacon of Surry ; and made master of Jesus College, Cambridge. March 25th 1661 he was appointed Margaret professor of divinity, and in 1662 one of the commissioners for the re- view of the liturgy. April 14th 1662 he was made master of Trinity College, Camljridge; and, in August, resigned his rectory of St. Christopher's and

prebend of Sarum. In 1667 he was admitted F. R. S. In 1672 he published at Cambridge, in 4to., Vindicife Epistolarum S. Ignatii, in an- swer to M. Daille ; to which is subjoined, Isaaci Vossii epistolae duae adversus Davidem Blondel- lum. Pearson was appointed successor to bishop Wilkins in the see of Chester, February 9th 1672-3. In 1632 his Annales Cyprianici, sive tredecim annorum, quibus S. Cyprian, inter Christianos versatus est, historia chronologica, was published at Oxford, with Fell's edition of that Father's works. He died at Chester, July 16th 1686.

Pear Tree. See Ptrus.

PEAS' ANT, n. s. \ Ft. paUan ; ItdH.pa'Xuno ;

Peas'antry. S Lat. pugus. A rustic ;

one whose business is rural labor : peasantry, a collective name for rustics ; country people.

He holJeth himself a gentleman, and scorneth to work, which, he saith, is the life of a peasant or churl. Speiiser.

1 had rather coin my heart, than wring From the hard hands of peasants their vile trash.

Shakspeare.

How many then should cover, that stand bare ! How much low peasantry would then be gleaned From the true seed of honour ! how much honour Pickt from the chaff !

Shakspeare. Merchant of Ve)iice.

The poor peasants in the Alpine countries diver- tised themselves in tlie fields, and after their labour would be lively and brisk. Brown s Travels.

The peasantry in France, under a much heavier pressure of want and poverty than the day-labourers of England of the reformed religion, understood it much better than those of a higher condition among us. Locke.

'Tis difhcult for us, who are bred up with the same infirmities about us with which we were born, to raise our thoughts and imaginations to those in- tellectual perfections that attended our nature in the time of innocence, as it is for a peasant bred up in the obscurities of a cottage to fancy in his mind the unseen splendours of a court. South.

The citizens being two thousand men, with which they could make head against twelve thousand pea- sants. Addison. Pfas, in botany. See Pisu.m.

PEAT, n. s. Ft. petit. A fondling ; a dar- ling; a dear plaything; now commonly written pet.

A pretty peat ! It is best but finger in the eye, An she knew why.

Shakspeare. Taming of the Sltrew. A citizen and his wife

Both riding on one horse, upon the way

I overlook ; the wench a pretty peat. Donne.

Peat, n. s. Isl. pyt. A species of turf used for fuel.

Turf and peat, and cowsheards, are cheap fuels and last long. Bacon's Xatiiral History.

Carew, in his survey of Cornwall, mentions nuts found in peat earth two miles east of St. JMichael's.

H'uoduard.

Peat is a well-known inflammable substance, used in many parts of the world as fuel. There are two species, viz. 1. A yellowish brown or black peat, found in moorish grounds in Scot- land, Holland, and (iermany. When fresh it is of a viscid consistence, but hardens by exposure to the air. While soft, it is formed into oblong pieces for fuel, after the stony matters are sepa- rated. By distillation it yields water, acid, oil, and volatile alkali ; the ashes containing a small proportion of fixed alkali ; and being either white or red, according to the proportion of pyrites contained in the substance. The oil obtained from peat has a very pungent taste ; and an empyreumatic smell, less fetid than that of ani- mal substances, more so than that of mineral bitumens : it congeals in the cold into a pitchy mass, which liquefies in a small heat ; it readily catches fire from a candle, but burns less vehe- mently than other oils, and immediately goes out upon removing the external flame ; it dis- sotves almost totally in rectified spirit of wine into a dark brownish-red liquor. 2. The second species is found near Newbury in Berkshire. In the Philosophical Transactions we have the following accounting of this species : ••• Peat is a composition of the branches, twigs, leaves, and roots of trees, with grass, straw, plants, and weeds, which, having lain long in water, is formed into a mass so soft as to be cut through with a sharp spade. The color is a blackish brown, and it is used in many places for firing. There is a stratum of this peat on each side the Rennet, near Newbury in Berks, which is from a quar- ter to half a mile

wide, and many miles long. The depth below the surface of the ground is from one foot to eight. Great numbers of entire trees are found lying irregularly in the true peat. They are chiefly oaks, alders, willows, and firs, and appear to have been torn up by the roots ; many horses' heads, and bones of several kinds of deer, the horns of the antelope, the heads and tusks of boars, and the heads of beavers are also found in it. Some years ago an urn, of a light brown color, was found in the peat-pit in Speen Moor, near Newbury, at about ten feet from the river, and four feet below the level of the neighbouring ground. Just over the spot where the urn was found an artificial hill was raised about eight feet high; and, as this hill consisted both of peat and earth, it is evident that ihe peat was older than the urn. I'rom the sides of the river, seve- ral semicircular ridges are dra \Nn round th.e hill,

with trenches between them. The urn was broken to shivers by the peat-diggers who found it, so that it could not be critically examined. \V'ith peat also may be classed that substance called in England stone-turf; which hardens after its first exposure to the air, but afterwards crum- bles down. The other common turf consists only of mould interwoven with the roots of vegetables ; but when these roots are of the bulbous kind, or in large proportion, they form the worst kind of turf. ' Although it may appear incredible,' says M. Magellan, ' it is nevertheless a real fact, that, in England, peat turf is advantageously era- ployed in Lancashire to smelt the iron ore of that county. Mr. Wilkinson, brother-in-law to Dr. Priestley, makes use of peat turf in his large smelting furnaces. I have seen in the possession of Mr. S. jNIore, secretary to the Society of Arts, a kind of black tallow, extracted by the said Mr. Wilkinson from peat tUrf. It was very soft, and nearly of the same consistence with butter. It burnt very rapidly, with a smoaky flame, in the fire; but the smell was very disagreeable, like that of peat.' The great cause of the dif- ferences of peat most likely arises from the different mineral admixtures. Some sorts of peat yield, in burning, a very disagreeable smell, which extends to a great distance ; whilst others are inoffensive. Some burn into gray or white, and others into red ferruginous ashes. The ashes yield, on elixation, a small quantity of alkaline salt, with sometimes one, and sometimes another salt of the neutral kind. The smoke of peats does not preserve or harden flesh like that of wood ; and the soot into which it condenses is more disposed to liquefy in moist weather.

Peat Ashes, properly burnt for a manure, are very useful both on corn and ►►:rass land ; but the substance from which they should be got is an

under stratum of the peat, where the fibres and roots of the earth, &c., are well decayed. Indeed the very best are procured from the lowest stra- tum of all. This will yield a large quantity of very strong ashes, in color (when first burnt) like vermilion, and in taste very salt and pungent. Great care and caution should be used in burning these ashes, and also in preserving them after- wards. The method of burning them is much the same as burning charcoal. The peat must be collected into a large heap, and covered so as not to flame out, but suffered to consume slowly, till the whole substance is burnt to an ash. The ashes thus burnt are held in most esteem ; but the peat-ashes burnt in common firing, are in many places used for the same purposes. Peat ashes are excellent in sweetening sour meadow- land, destr-)ying rushes, and other bad kinds of grass. They burn great quantities of peat-ashes in some parts of Berkshire, and Lancashire, and esteem them one of the best dressings for their spring crops. The sulphureous and saline par- ticles, with which the ashes abound, have a most happy eil'ect in promoting vegetation ; and, if used with discretion, the increase procured by them is truly wonderful. All ashes are of a hot, fiery, causHc nature ; they must, therefore, be used with caution. With respect to peat-ashe?, almost the only danger proceeds from laying them on in too great quantities at improper seasons.

On wheat crops these ashes are of the greatest service, but they must be laid en with the ut- most discretion. Were they to be spread in any quantity before winter, after the sowinp the corn, they would make the wheat too rank, and do more harm than good ; were the spreading this manure, on the contrary, deferred till spring, the corn could not possibly during the winter season be benefited by it. The beginning of November, before the hard frosts set in, seems to be the pro- per season for this purpose ; and it is necessary to sow on every acre of heavy clayey wheat- land, about eight Winchester bushels of these ashes ; on lighter warmer lands in wheat, four will be sufficient foi this season. The winter dressing is thought by practical farmers to be of great service; trifling as the quantity may seem, it warms the root of the plant, brings it mode- rately forward, and preserves its verdure. About the end of February, or the beginning of March, on heavy lands in wheat, another dressing of ashes, by sowing of the .u on every acre eight bushels more will do much good ; on light lands, in the second dressing, six bushels may be allowed. These ashes laid on in the spring are of the greatest service, without any probability of dan- ger; if rain falls a few days after the dressing is laid on it is washed in, and has a happy effect on the succeeding crop, co-operating with the manure that was laid on in November ; if, on the contrary, dry weather for a long continuance succeeds, the first winter dressing has its full ef- fect, and the quantity laid on in the spring is in fact so small, that there is very little probability of its burning or hurting the crop. This excellent manure is also of great use in

the turnip hus- bandry, particularly as it much contributes to preserve the young crop from being devoured by the fly. Bat one of the principal advantages derived from these ashes is the very great service they are of to every kind of artificial pasture Saintfoin receives great benefit from this manure, and so does clover, rye-grass, and trefoil, pro- vided it is laid on with discretion : the proper season is about February. The quantity must be regulated by the nature of the crop and soil ; but it ought scarcely in any instance to exceed thirty Winchester bushels. Clover, with the help of this manure, grows with great luxuriance, insomuch that there have often been two large crops of hay from the same field in a year, and good autumn seed afterwards. They have an excellent efi'ect on tares or vetches : to peas they seem to be hurtful. The effects of this manure will be visible at least three years ; nor does it leave the land in an impoverished state, when its virtues are exhausted and spent. Peat- ashes are not, however, so certain a manure for barley and oats as for winter corn ; for, as these are quick growers, and occupy the land but a few mbnths, this warm manure is often apt to push them forward too fast, and make them run too much to coarse straw, yielding only a lean immature grain. Oats, however, are not so apt to be damaged by it as barley. Peat-ashes ap- proach, in their effects on the several crops on which they are laid, to coal soot ; but two-thirds of the quantity that is used of soot will be suffi- cient oi the ashes, as they are in a much strocgft:

degree impregnated with a vepretative power; and they are besides in most yjlaces easier pro- cured in quantities, and at a cheaper rate.

PEBBLE, n. s."\ Sax. jjtebol, pabolj-tana,

Peb'blestoxe. fas Mr. Thomson suggests

Peb'bled, arf;. ˆfrom Goth. boll. A hard,

Peb'bly. j small, and generally round

stone, found among flints, in a homogeneous mass, thougli sometimes of many colors. Po- pularly, any small stone : pebbled and pebbly, abounding in pebbles.

Through the midst of it ran a sweet brook, which did both hold the eye open with her azure streams, and yet seek to close the eye with the purling

noise it made upon the pebble-stones it ran over.

Sidney. The bishop and the duke of Glo'ster's men.

Forbidden late to carry any weapon.

Have filled their pockets full of pebble-st(mes.

Shakspeare.

Suddenly a file of boys delivered such a shower of pebbles loose shot, that I was fain to draw mine ho- nour in. Id.

You may see pebbles gathered together, and a crust of cement between them, as hard as the pebbles.

Bacon . Collecting toys, As children gath'ring pe66/es on the shore. Milton.

Winds murmured through the leaves your long delay ; And fountains o'er the pebbles chid your stay.

Dryden.

Another body, that hath only the resemblance of an ordinary pebble, shall yield a metallic and valua- ble matter. Woodward.

The crystal, in form of nodules, is found lodged in the earthy strata left in a train by the water de- parting at the conclusion of the deluge : this sort, called by the lapidaries pebbles-crystal, is in shape irregular. Id.

This bank fair spreading in a. pebbled shore.

Thomson. Strewed bibulous above I see the sands,

The pebbly gravel next. Id.

Once more, O Trent ! along thy pebbli/ marge,

A pensive invalid, reduced and pale. From the close sick-room newly let at large,

W cos .to his wan-worn cheek the pleasant gale.

Kirk White.

Pebbles, in mineralogy, are a genus of fossils, distinguished from the flints by their having a variety of colors. These are defined to be stones composed

of a crystalline matter debased by earths of various kmds in the same species, and then subject to veins, clouds, and other variega- tions, usually formed by mcrustation round a central nucleus, but sometimes the eff'ect of a simple concretion; and veined like the agates, by the disposition which the motion of the fluid they were formed in save their dift'erently-colored substances. The variety of pebbles is so great that a hasty describer would be apt to make al- most as many species as he saw specimens. A careful examination will teach us, however, to distinguish them into a certain number of essen- tially different species, to wliich all the rest may be referred as accidental varieties. In all the strata of pebbles there are constantly found some which are broken, and of which the pieces lie very near one another ; but, as bodies of such hardness could not be broken without some con- siderable violence, their present situation seems

to indicate that they have suffiered that great vio- lence in or near the places where they now lie. Several of these broken pebbles have their edges and corners so sharp and even that it seems evi- dent they never can have been tossed about or removed since the fracture was made ; and others have their sides and comers so rounded, blunted, and worn away, that they seem to have been roughly moved and rolled about among other hard bodies, either with great violence, or for a very long continuance ; since such hard bodies could not have been reduced to the condition in which we now see them without long friction. See Mineralogy and Geology.

PECCABLE, udj.ˆ All from Lat. pecco.

Peccabil'ity, n. s.y Liable to sin or error:

Peccadil'lo, y peccability, state of be-

Pec'cancy, i ing so liable : peccadillo

Pec'cant, adj. J (Span, peccaditle) a

small or slight fault or crime : peccancy, faulti-

ness ; criminality ; bad quality : peccant, faulty ;

guilty; deficient; ill-disposed.

Where the common peccabilitu of mankind is urged to induce commiseration towards the oflTenders : if this be of force in sin, where the concurrence of the will renders the person more inexcusable, it will surely hold much more in bare error which is purely involuntary. Decay of Piety.

The wicked are only in the body of the church, as peccant humours, and

excrements, and hair, and pu- trefaction. Jer. Taylor. From them I will not hide

My judgments, how with mankind I proceed ;

As how with peccant angels late they saw.

Milton.

He means those little vices which we call follies and the defects of the human understanding, or at most the peccadillos of life, rather than the tragical vices to which men are hurried by their unruly pas- sions. Dryden. With laxatives preserve your body sound.

And purge the peccant humours that abound. Id.

That such a peccant creature should disapprove and repent of every violation of the rules of just and honest, this right reason could not but infer.

South's Sermons.

Nor is the party cited bound to appear, if the cita- tion be peccant in form or matter. Ayliffe.

'Tis low ebb with his accusers, when such pec^^r- dillos as these are put in to swell the charge.

Atterbiiry.

Such as have the bile p-cant or de cient are re- lieved by bitters, which are a sort of subsidiary gall.

Arbuthnot.

Apply refrigerants without any preceding evacua- tion, because the disease took its original merely from the disaffection of the part, and not from the peccancy of the humours. Wisenian.

PECHANTRE (Nicholas), a French poet, the son of a surgeon at T^oulouse, where he was bom in 1638. He wrote poems in Latin and French, for which he was thrice crowned by the academy des Jeux Floraux. He also wrote a tragedy entitled Geta, which was acted at Paris in 1687, with great applause. He died in 1708.

PECK, n. s. From pocca, or perhaps from par, a vessel. Skinner. Rather from Arm. peck (a fourth part) from pechwar, four. A measure containing

the fourth part of a bushel.

Her finger was so small, the ring Would not stav on which thev did bring ;

PEC

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PEC

It was too wide a prck : It looked the great collar just About our young colt's neck. Suckling.

Burn our vessels, like a new Sealed peck or bushel, for being true. Hudibras. To every hill of ashes, some put a peck of un- slacked lime, which they cover with the ashes till rain slacks the lime and then they spread them.

3I(irtinier's Husbandry. He drove about his turnips in a cart ; And from the same machine sold pecks of pease.

King. Peck, v. a. 1 Fr. hecquer ; Belg. bicken ; Pecker, n. s. S Span, pecan ; Port, bicar ; or from Sax. becca, a Beak, which see. To strike with the beak ; to pick up food as with the beak ; strike with any pointed instrument; pick up slanderous tales.

With a pick axe of iron about sixteen inches long, sharpened at the one end to peek, and flat-headed at the other to drive little iron wedges to cleave rocks. Carew's Suriei) of Cornwall. She was his only joy, and he her pride, She, when he walked, v/ent pecking by his side.

Drydeii. The titmouse and the peckers hungry brood. And Progne with her bosom stained in blood. Id.

They will make head against a common enemy, ⁂whereas mankind lie pecking at one another till they are torn to pieces. VEstrange.

Two country factions, both inveterate enemies of our church, which they are perpetually pecking and striking at with the same malice. South.

Can any thing be more surprising than to consi- der Cicero observing, with a religious attention, after what manner the chickens pecked the grains of corn thrown them 1 Addisnn.

The worthiest people are most injured by slander, as we usually find that to be the best fruit which the birds have been pecking at. Swift.

The worm, more expensively fed.

The pride of the garden devours ; And birds peck the seed from the bed, Still less to be spared than the flowers.

Cowper.

Peck (Francis), was born at Stamford, in Lincolnshire, May 4th, 1692, and educated at Cambridge where he took the degrees of B. A. and M. A. He was appointed rector of Godeby, near Melton in Leicestershire. He was the author of many works, viz.: ••• I. A Poem, en- titled Sighs on the Death of Queen Anne ; 1714. 2. TO Y^02 'AFION, or an Exercise on the Creation, and a Hymn to the Creator of the World; 1716, 8vo. 3. In 1721, being then curate of King's Cliff in Northamptonshire, he issued proposals for printing the History and Antiquities of his native town, which was pub- lished in 1727, in folio, under the title of Aca- demia tertia Anglicana; or the Antiquarian Annals of Stamford in Lincoln, Rutland, and Northampton shires ; containing the History of the university, monasteries, guilds, churches, chapels, hospitals, and schools there, kc, in- scribed to John duke of Rutland. 4. The His- tory of the Stamford Bull-running. 5. In 1732 he published vol. I. of Desiderata Curiosa ; or a Collection of divers scarce and curious Pieces, relating chiefly to matters of English History ; consisting of choice tracts, memoirs, letters, &c., transcribed, many of them from tiie originals, and the rest from divers ancient MS.*

copies, or the MS. collations of sundry famous antiquaries, &c. This volume was dedicated to lord William Manners, and was followed, in 1735, by a second volume, dedicated to Dr. Reynolds, bishop of Lincoln. 6. A Complete Catalogue of all the Discourses written both for and against popery in the time of king James II., containing an account of 437 books and pamphlets, &c., 4to. 1735. 7. Nineteen Letters of the Rev. Henry Hammond, D. D., to Mr. Peter Stainnough and Dr. Nathaniel Angelo, on curious subjects, ficc, 1739. 8. Memoirs of the Life and Actions of Oliver Cromwell, as de- livered in three panegyrics of him written in Latin, supposed by Mr. John INIilton ; with an English version ; illustrated with a large histori- cal preface and notes, ike, 1740, 4to. 9. New Memoirs of the Life and Poetical Works of Mr. John Milton.

PECK'LED, adj. Corrupted from speckled. Spotted ; varied with spots.

Some are peckled, some greenish.

Walton's Angler.

PECKWELL (Henry), D. D., a divine of the church of England, born in 1747. He was chaplain to the marchioness of Lothian, and rector of

Bloxham in Lincolnshire ; but attached himself to the Calvinistic Methodists, among whom he was very popular. He patronised the Humane Society, and the society for the relief of persons imprisoned for small debts. He studied physic, and founded a society for visit- ing the sick at their own houses ; but fell a sacrifice to his philanthropy, by wounding him- self in the hand, while opening the body of a patient who had died of a putrid fever. The part mortified, and he died August 18th 1787. He printed several sermons.

PECORA, in zoology, the fifth order of the class mammalia, in the Linnsean system. See Zoology.

PECQUET (Anthony), a celebrated French philosopher, born in 1704. He was appointed grand master of the water-works and forests of Rouen. His writings on philosophy, politics, and morals, are numerous. His Spirit of Law? and of Political Maxims, and his Thoughts on]Man, are most esteemed. He died in 1762.

Pecquet (John), a celebrated physician born in Dieppe. He was physician in ordinary lo the celebrated Fouquet, whom he entertained with experiments in natural philosophy. He acquired immortal honor by the discovery of a lacteal veirˆ, which conveys the chyle to the heart ; and which from him is called le Reser- voir de Pecquet. This discovery was a fresh proof of the truth of the circulation of the blood ; though it was opposed by many of the learned, particularly the famous Riolau, who wrote a treatise against the author of it, with this title : Adversus Pecquetum et Pecquetianos. Pecquet's works are, 1. Experimenta nova Anatomica; Paris, 1654. 2. A Dissertation, De Thoracis Lacteis ; Amsterdam, 1661. He was a man of a lively and active genius. He recommended, as a remedy for many diseases, the use of brandy. The use of this remedy, however, contributed to shorten his own days. He died at Paris, in 1674.

PECTEN, the scallop, a genus of shell-fish. The characters are these : *the animal is a tethys; the shell bivalve and unequal; the hinge toothless, having a small ovated hollow. This shell fish is one of the spinners, having the power of spinning threads like the mussels ; but they are n.uch shorter and coarser than those of that fish. The use of the threads which are spun upon the scallop is to fix the creature to any solid body near its shell. All these proceed, as in the mussel, from one com- mon tree.*

It is an evident proof that the fish has a power of fixing itself at pleasure to any solid body by means of these threads, that after storms the scallops are often found tossed upon rocks where there were none the day before ; and yet these are fixed by their threads, as well as those which had remained long in their place. They form their threads in the same manner with the mussel ; only their organ for spinning is shorter, and has a wider hollow, whence the threads are necessarily thicker and shorter. The pectens, such as the sole pecten, the ducal man- tle pecten, the knotted, and others, seem to be in general inhabitants of the Indian Seas ; some of them frequent those of Africa and the South Seas. The name pecten seems to have been given to these animals from the longitudinal striae with which their surface is covered, which resemble somewhat the teeth of a comb ; and hence also the Greek name KTug. By the gene- ral character of this shell, it evidently includes cockles as well as scallops, which are the pec- tens without ears, and having less flat or elated shells. Cockles are called by all authors by a name which is only a diminutive of pecten, pectunculus. The having ears indeed is the common mark of distinction between the pec- tens and the cockles, which last usually have none. The pectens by some are esteemed as delicious a food as the oyster. They differ very materially in a variety of circumstances. The pectens sail on the surface of the water ; and, if attacked by a foe, they let down the membrane which nature has provided them for a sail, and drop to the bottom. ' Behold,' says Barbut, ' the splendor of the pectines, which rival the glowing colors of the papilionaceous tribe, as numerous as they are beautiful, flirting from place to place, and may well be called the pa- piliones of the ocean. What superior qualities does not the pecten enjoy above the ostrea edu- lis, which, constantly confined to its native bed, seems wholly destined to afford food for other creatures, not having any means of defence but its shelly castle, which is often attacked and stormed by its numerous enemies '.' The grand mark of distinction between the pectens and oyster seems to be the locomotive faculty. It was long supposed that the oyster possessed no power of motion, that it always remained in the place in which nature or accident had placed it, and that its life diff'ered little from that of vege- tables. Experience, however, has taught us to reject these premature conclusions. See Os- ti:ea. The most remarkable species is, the

P. maximus, or great scallop, being the same with what Barbut calls the ducal-mantle pecten. It has fourteen rays, very prominent and broad.

and striated both above and below. They are rugged and imbricated with scales. They grow to a large size, and are found in beds by them- selves ; are dredged up and barrelled for sale. The ancients say that they have a power of removing themselves from place to place by vast springs or leaps. The fish was used both by the Greeks and Latins as a food. When dressed with pepper and cummin, it was taken medicin- ally. The scallop was

formerly worn by pil- grims on their hat, or the cape of their coat, as a mark that they had crossed the sea in their way to the Holy Land, or some distant object of devotion.

PEC'TINAL, n. s. "^ Lat. pecten. A comb :

Pec'tinated, at//. > comb-like: state of be-

Pectina'tion, n. s.j ing pectinated.

There are other fishes whose eyes regard the hea- vens, as plain and cartilaginous fishes, as pectinals, or such ais have their bones made laterally like a comb. Browne.

The complication or pectination of the fingers was an hieroglyphic of impediment. Id.

To sit cross-legged or with our fingers pectinated, is accounted bad. Id, Vulgar Errours.

PECTIS, in botany, a genus of the polyga- mia superflua order, and syngenesia class of plants; natural order forty-ninth, compositae.

PECTORAL, adj. & n. s. Lat. pectoralis. Belonging to the brea.st : forming the name of a breast-plate.

Being troubled with a cough, pectorals were pre- scribed, and he was thereby relieved. Wiseman.

Pectoral, a sacerdotal vestment, worn by the Jewish high-priest. The Jews call it Hhos- chen, the Greeks Xoyiov, the Latins rationale and pectorale, and in our version of the Bible it is called breast-plate. It was about a span sqtiare.

PECTORALE, a breast-plate of thin brass, about twelve fingers square, worn by the poorer soldiers in the Roman army, who were rated under 1000 drachma. See Lorica.

Peculation, or Peculate, in civil law, the crime of embezzling the public money, by a per- son intrusted with the receipt, management, or custody thereof.

PECU'LIAR, adj. k n. s. ^ ►►t. penile ; Lat.

Peculiar'ity, n. s. \ pecuUaris, pecu-

Pecl'liarly. j Hum. Appro-

priate; belonging exclusively to one ; particular; sole : as a noun substantive the exclusive pro- perty of one ; something exempt from ordinary jurisdiction : peculiarity is, particularity ; that which is'found only in one ; oddity : peculiarly follows the senses of peculiar as an adjective.

Some peculiars exempt from the jurisdiction of the bishops. Lesleu.

The only sacred hymns they are that Christianity hath peculiar unto itself, the other being songs too of praise and of thanksgiving, but songs wherewith as we serve God, so the Jews likewise. Hooker.

Thus Tivy boasts this beast peculiarly her own.

Drayton.

Certain peculiars there are, some appertaining to the digaities of the cathedral church at Kxon.

Carchˆ'. One peculiar nation to select From all the rest, of whom to be invoked.

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By tincture on reflection, they aup;ment

Their sma.\l peculiar. Id, Paradise Lost.

1 neither fear, nor will provoke the war ;

IMy fate is Juno's most peculiar care. Dryden.

When his danger encreased, he then thought fit to pray peculiarly for him. Fell.

Space and duration being ideas that have some- thing very abstruse and peculiar in their nature, the comparin<ˆ them one with another may be of use for their illustration. Locke.

Revenge is so absolutely the peculiar of Heaven, that no consideration whatever can impower even the best men to assume the execution of it. South.

That is peculiarly the effect of the sun's variation.

Woodward.

I agree with Sir William Temple, that the word humour is peculiar to our English tongue ; but not that tlie thing itself is pfru/wr to the English, because the contrary may be found in many Spanish, Italian, and French productions. Swift.

If an author possessed any distinguishing marks of style, or peculiarity of thinking, there would remain in his least successful writings some few tokens whereby to discover him. Id.

Every man hath something peculiar in the turn or cast of his mind, which distinguishes him as much as the particular constitution of his body. Mason.

Peculiar, in the canon law, signifies a parti- cular parish or church that has jurisdiction within itself for granting probates of wills and administrations, exempt from the ordinary or bishop's court. The king's chapel is a royal peculiar, exempt from all spiritual jurisdiction, and re- served to the visitation and immediate govern- ment of the king himself. There is likewise the archbishop's peculiar : for it is an ancient privi- lege of the see of Canterbury, that wherever any manors or advowsons belong to it, they forthwith become exempt from the ordinary, and are re- puted peculiars : there are fifty-seven such pecu- liars in the see of Canterbury. Besides these, there are some peculiars belonging to deans, chapters, and prebendaries, which are only ex- empted from the jurisdiction of the archdeacon : these are derived from the bishop, who may visit them, and to whom there lies an appeal.

Peculiars, Court of, is a branch of, and an- nexed to, the court of arches. It has a jurisdic- tion over all those parishes dispersed through the province of Canterbury in the midst of other dioceses, which are exempt from the ordinary's jurisdiction, and subject to the metropolitan only. All ecclesiastical causes, arising within these pe- culiar or exempt jurisdictions, are originally cognizable by this court : from which an appeal lay formerly to the pope, but now, by the statute 25 Henry VIII. c. 19, to the king in chancery.

PECULIUM, in law, the stock or estate which a person, in the power of another, whether male or female, either as his or her slave, may acquire by his industry. Roman slaves frequently amassed considerable sums in this way. The word properly signifies the advanced price which a slave could get for his master's cattle, &c., above the price fixed upon them by his

master, which was the slave's own property.

PECUNIA, in mythology, a goddess among the Romans, whom they invoked with a view of procuring money in abundance. But as the specie was coined of different metals, especially

of gold, silver, and brass, and as one divinity had too much occupation in taking care of the dif- ferent coinages, a particular one was appointed for each. Three goddesses represented upon some medals of the emperor Commodus and his successors, with a pair of scales, the cornu- copia, and a heap of money by them, prove that there was at least that number, and the antiqua- ries agree that they presided over the coinage of three metals, tes, aurum, argenlum.

PECU'NIARY, adj. ►►t. pecuniaire ; Lat.;)e- cuniarius, pecimia. Relating to money ; consist- ing of money.

Pain of infamy is a severer punishment upon inge- nuous natures than a. pecuniary mulct. Bacon.

Their impostures delude not only unto pecuniary defraudations, but the irreparable deceit of death.

Browne.

The injured person might take a pecuniary mulct by way of atonement. Broome.

PED, n. s. From pad, a road. Commonly pronounced pad. A small pack- saddle, basketˆ or hamper.

A pannel and wanty, packsaddle and ped.

Ttisser.

A hask is a wicker jmd, wherein they use to carry fish. Spenser.

PED'AGOGUE, w. s. & v. a.) Lat. pada-

Pedagogy, flf/y. S gogus ; Gr.

TTatˆaywyof, Traif, a boy, and ayu), to teach. One who teaches boys ; a school master : a pe- dant : to pedagogue is to teach with supercili- ous airs : pedagogy, early or first discipline. Few pedagogues but curse the barren chair.

Like him who hanged himself for mere despair

And poverty. Dryden.

In time the reason of men ripening to such a pitch, as to be above the pedagogy of jNloses's rod and the discipline of types, God thought fit to display the substance without the shadow. South"s Sermons. This may confine their younger stiles, Whom Dryden pedagogues at \V ill's : But never could be meant to tie, Authentic wits, like you and I. Prior.

The old sabbath appertained to the pedagogy and rudiments of the law ; and therefore when the great master came and fulfilled all that was prefigured by it, it then ceased. White.

A Pedagogue, or Pedagogue, is an instruc- tor in grammar and other arts. The word is formed from the Greek iraiˆMv aynyyoQ, puerorum ductor, i. e. a leader of boys. M. Fleury ob- serves, that the Greeks gave this name to slaves appointed to attend their children, lead them, and teach them to walk, &:c. The Romans gave the same denomination to the slaves who were intrusted with the care and instruction of their children.

PED'ALS, n. s. Lat. pedalU ; Fr. pedales. The large pipes of an organ : so called because played upon and stopt with the foot.

The organ which Dr. Kemp exhibited in his lec- tures at t'ne Russel Institution, for which Mr. Loesch- man has a patent (see the Philosophical Magazine, vol. xxxvii. p. 326, and vol. xxxviii. p. 47), has twenty-four sounds, and as many pipes in each oc- tave. By the help of six pedals, and the twelve usual finger-keys, the performer is enabled to execute the mean-tone system correctlv, or any other, in the twenty-four usual keys. Dr. A. liees

PED

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PEEKANT, n. s. ˆ Fr. pedant ; of Gr. Pedan'tical, adj. IvaiStvu). A school Pedant'ically, adv. master; a man vain of Ped'antry, n. s. ' his learninj : the deri- vatives all follow this sense.

A pedant treads in a rule ; while one hand scans verses, and the other holds his sceptre ; he dares not think a thought that the nominative case governs not the verb. To be brief he is a heteroclite ; tor he wants the plural number, having only the single qua- lity of words. Sir T. Uieibuiy. A pedant that keeps a school i' the church.

Slwksj)e(ire.]\Ir. Cheecke had eloquence in the Latin and Greek tongues; but for other sufficiences /fw/ii/ific/f enough. llauicaid.

Horace has enticed me into this pedantry oi quota- tion. Cvwley.

The pedant can hear nothing but in favour of the conceits he is amorous of. Glanville.

'Tis a practice that savours much of pedanlru, a reserve of puerility we have not shaken off from school. lirvwiie.

The last maim given to learning has been by the scorn of pedantrii, which the shallow, the superfi- cial, and the sufficient among scholars first drew upon themselves, and very justly, by pretending to more than they had. Temple.

The boy who scarce has paid his entrance down To his proud pedant, cr declined a noun. Dryden.

The earl of Roscommon has excellently rendered it ; too faithfully, is, indeed, pedanliculin, 'tis a faith like that which proceeds from superstition. Id.

The preface has so much of the pedant, and so little of the conversation of men in it, that I shall pass it over. Addison.

When we see any thing in an old satyrist that looks forced and pedantic, we ought to consider how it appeared in the time the poet writ. Id.

]\Iake us believe it if you can : it is in Latin, if I may be allowed the pedantrii of a quotation, non persuadebis, etiamsi persuaseris. Id.

The obscurity is brought over them by ignorance, and age, made yet more obscure by their pedantick elucidators. Felton.

We now believe the Copernican system ; yet we shall still use the popular terms of sun-rise and sun- set, and not introduce a new pedantick description of them from the motion of the earth. Benttey.

In learning let a nymph delight, The pedant gets a mistress by't. Swift.

A spirit of contradiction is so pedantivk and hate- ful, that a man should watch against every instance of it. Watts.

To say a person writes a good style, is originally as pedantic an expression, as to say he plays a good riddle. Shenstone.

Pursuit of fame with pedants fills our schools. And into coxcombs burnishes our fools. Young.

Pedant is used for a rough, unpolished, man of letters, who makes an impertinent use of the sciences, and abounds in unseasonable criticisms and observations. Madam Dacier defines a pe- dant, a person who has more reading than good sense. Malebranche describes a pedant as a man full of false erudition, who makes a parade of his knowledge, and is ever quoting some Greek or Latin author, or hunting back to a re- mote etymology. Lord Chesterfield justly and successfully ridiculed this species of pedantry, but set the example, which has been since very much followed, of what may be styled modern pedan- try, by constantly interlarding his letters and

other works with French, Spanish, and Italian quotations. St. Evremont says, that to paint the folly of a pedant, we must represent him as turn- ing all conversation to some one science or sub- ject he is best acquainted with. There are pedants of all conditions, and all robes. Wic- quefort says, an ambassador always attentive to formalities and decorums is nothing else but a political pedant.

PEDAllIANS, in Roman antiquity, a name anciently given to such of the Roman senators as by merely walking over to their party sig- nified their opinion with their feet. According to Dr. Middleton, though the magistrates of Rome had a right to a place and vote in the se- nate both during their office and after it, and before they were put upon the roll by the cen- sors, yet they had not probably a right to speak or debate there on any question, at least in the earlier ages of the republic. For this seems to have been the original distinction between them and the ancient senators, as it is plainly inti- mated in the formule of the consular edict sent abroad to summon the senate, which was ad- dressed to all senators, and to all those who had a right to vote in the senate. From this distinc- tinction, those who had only a right to vote were called in ridicule pedarian ; because they sig- nified their votes by their feet, not their tongu□□s, and, upon every division of the senate, went over to the side of those whose opinion they approved. It was in allusion to this old custom, which seems to have been wholly dropt in the latter ages of the republic, that the mute part of the senate continued still to be called by the name pedarians, as Cicero informs us, who, in giving an account to Atticus of a certain debate and decree of the senate upon it, says that it was made with the eager and general concurrence of the pedarians, though against the authority of all the consulars.

PEDDABALABARAM, or Great Bali- pooR, a large trading tow n and fortress of My- sore, south of India. The latter, although entirely built of mud, is strong, as the shot buries itself in the rampart. The town is fortified likewise by a wall and hedge. On the dissolution of the Hindoo kingdom of Bijanagur, the polygar, or chief of Balipoor, kept possession of this fortress,

and it was not taken from his successor until about the middle of the last centur)-, by the ni- zam. It was then conferred as a jagire on a Mogul named Abdool Russoul, from whose family it was taken in 1761, by Hyder Aly ; since which period it has been subject to the ruler of Mysore. Long. 77►► 47′ E.,'lat. 13►► 17′ N. Fourteen miles to the eastward is Little Balipoor, the capital of a small district.

PE'DESTAL, n. s. Fr. picdestul. The lower member of a pillar ; the basis of a statue. The poet bawls, And shakes the statues and the pedestals.

Drvden. In the centre of it was a grim idol ; the forepart of the pedestal was curiously embossed with a tri- umph. Addison. So stiff, so mute '. some statue would you swear Stept from its pedestal to take the air. J'ope. View him at Paris in his last career, Surrounding throngs the demigod revere,

Exalted on his pedestal of pride, And fumed with frankincense on every side, He begs their flattery with his latest breath, And smothered in't at last is praised to death.

Cowper.

PEDESTRIAN, adj. & n. s. } Lat. pedes-

Pede'strious, urf;. Stris. On foot;

or going on foot : this is the meaning of both ad- jectives : a pedestrian is a traveller on foot.

Men conceive they never lie down, and enjoy not the position of rest, ordained unto all pedestiious ani- mals. Browne.

Statue, Pedestrian [is], a statue standing on foot ; as that of king Charles II. in the Royal Exchange ; and that of king James II. in the Privy Gardens.

Br. A. Rees.

PEDIACI, or Pedleans, in Grecian anti- quity. The city of Athens was anciently divided into three different parts ; one on the descent of a hill ; another on the sea shore ; and a third in a plain between the other two. The inhabitants of the middle region were called Ilt^iafft, Pe- diseans; or, as Aristotle will have it, Pediaci; formed from irtSiov, plain or flat : those of the hill, Diacrians ; and those of the shore, Paralians. These quarters

usually composed so many dif- ferent factions. Pisistratus made use of the Pediaeans against the Diacrians. In the time of Solon, when a form of government was to be chosen, the Diacrians chose the democratic ; the Pediffians demanded an aristocracy, and the Pa- ralians a mixed government.

PED'ICLE, n. s. Fr. pedicule ; Lat. pedis. The footstalk, that by which a leaf or fruit is fixed to the tree.

The cause of the holding green, is the close and compact substance of their leaves and pedicles.

Bacon.

PEDICULARIS, in botany, rattle coxcomb, or louse-wort, a genus of the angiospermia order and didynamia class of plants ; natural order fortieth, personatae. Species thirty-four, all European plants.

PEDICULUS, the louse, in entomology, a genus of insects belonging to the order of aptera. It has six feet, two eyes, and a sort of sting in the mouth : the feelers are as long as the thorax ; and the belly is depressed and sublobated. It is an oviparous animal, not peculiar to man, but infesting other animals, as quadru- peds and birds, and even fishes, insects, and vegetables ; but these are of peculiar species on each animal, according to the particular nature of each. Nay, even insects are infected with vermin which feed on and torment them. Several kinds of beetles are subject to lice ; but parti- cularly that kind called the lousy beetle. The lice on this are very numerous, and cannot be shaken off. The earwig is often infested with lice, just at the setting on of its head ; these are white, and shining like mites, but they are much smaller; they are round-backed, flat-bellied, and have long legs, particularly the foremost pair. Snails of all kinds, but especially the large naked sorts, are very subject to lice ; which an; conti- nually seen running about them and devouring them. Numbers of little red lice, with a very small head, and in shape resembling a tortoise, are often seen about the legs of spiders, and they

*never leave the animal while he lives; but, if h** IS killed, they almost instantly forsake him. A species of whitish lice are found on humble bees ; they are also found upon ants ; and fishes are not less subject to them than other animals. Kircher tells us that he found lice also on flies. The louse which infests the human body makes a very curious appearance through a microscope. It has naturally three divisions, the head, the breast, and the tail part. In the head appear two fine black eyes, with a horn that has five joints, and is surrounded with hairs standing before each eye ; and from the end of the nose or snout there is a pointed projecting part, which serves*

as a sheath or case to a piercer or sucker, which the creature thrusts into the skin to draw out the blood and humors which are its destined food; for it has no mouth. This piercer or sucker is said to be 700 times smaller than a hair, and is contained in another case within the first, and can be drawn in or thrust out at plea- sure. The breast is very beautifully marked in the middle ; the skin is transparent, and full of little pits ; and from the under part of it proceed six legs, each having five joints, and their skin all the way resembling shagreen, except at the end, where it is smoother. Each leg is termi- nated by two claws, which are hooked, and are of an unequal length and size. These it uses as we would a thumb and middle finger; and there are hairs between these claws as well as all over the legs. On the back part of the tail there may be discovered some ring-like divisions, and a sort of marks which look like the strokes of a rod on the human skin ; the belly looks like shagreen, and towards the lower end it is very clear, and full of pits ; at the extremity of the tail there are two semicircular parts all covered with hairs, which serve to conceal the anus. When the louse moves its legs, the motion of the muscles, which all unite in an oblong dark spot in the middle of the breast, may be distin- guished perfectly, and so may the motion of the muscles of the head when it moves its horns. We may likewise see the various ramificatioru of the veins and arteries out. But the most sur prising of all is the peristaltic motion of the en- trails, which is continued all the way from the stomach down to the anus. If one of these creatures, when hungry, be placed on the back of the hand, it will thrust its sucker into the skin, and the blood which it sucks may be seen passing in a fine stream to the fore part of the head; where, falling into a roundish cavity, it passes again in a fine stream to another circular receptacle in the middle of the head ; thence it runs through a small vessel to the breast, and then to a vessel which reaches to the hinder part of the body, where, in a curve, it turns again a little upward; in the breast and entrails the blood is moved without intermission, with a great force ; especially in the latter, where it oc- casions such a contraction as is very surprising. In the upper part the propelled blood stands still, and seems to undergo a separation, some of it becoming clear and waterish, wliile other black particles are pushed forward to the anus. If a louse be placed on its back, two bloody darkish spots aunear; the larger in ihe ii:.auie

of the body, the lesser towauJs the tail ; the mo- tions of which are followed by the jiulsation of the dark bloody spot, in or over w hich the white bladder seems to lie. This motion of the systole and diastole is best seen when the creature be- gins to grow weak; and on pricking the white bladder, which seems to be the heart, the crea- ture instantly dies. The lower dark spot is sup- posed to be the excrement in the gut.

Lice have been supposed to be hermaphro- dites: but this is erroneous; for Mr. Lieuwen- hoeck observed, that the males have stings in their tails, which the females have not. And he supposes the smarting pain which those creatures sometimes give, to be owing to their stinging when made uneasy by pressure or otherwise, lie says that he felt little or no pain from their suckers, though six of them were feeding on his hand at once. To know the true history and manner of breeding of these creatures, Mr. Lieu- w enhoeck put two female lice into a black stock- ing, which he wore night and day. He found, or examination, that in six days one of them had laid above fifty eggs; and, upon dissecting it, he found as many yet remaining in the ovary : whence he concludes that in twelve days it would have laid 100 eggs. These eggs naturally hatch in six days, and would then probably have pro- duced fifty males, and as many females; and these females, coming to their full growth in eighteen days, might each of them be supposed after twelve days more to lay 100 eggs ; which eggs, in six days more, might produce a young brood of 5000 : so that in eight weeks, one louse may see 5000 of its own descendants. Signior Ilhedi, who has more attentively observed these animals than any other author, has given several engravings of the different species of lice found on different animals. Men, he observes, are sub- ject to two kinds ; the common and the crab- louse. He observes, also, that the size of the lice is not at all proportioned to that of the animal which they infest ; since the starling has them as large as the swan. Some kinds of con- stitutions are more apt to breed lice than others; and in some places of different degrees of heat, they are certain to be destroyed upon people who in other climates are over-nm with them. Cleanliness is doubtless the grand secret by which to keep clear from them, especially in wearing woollen clothes. Monkeys and some Hottentots, vve are told, eat lice; and are thence denominated phthirophages. On the coast of the Ked Sea it is reported that there is a nation, of small stature and of a black color, who use lo- custs for the greatest part of their food, prepared only with salt. On such food these men live till forty, and then die of a pedicular or lousy disease. It is also a fact that the negroes on the west coast of Africa take great delight in making their women clear their bodies of lice, and the latter devour them with greediness. In ancient medicine lice were esteemed aperient, febrifuge, and proper for cviring a pale complex- ion. The natural repugnance to those ugly creatures (says Leniery) perhaps contributed more to banish the fever than the remedy itself. In the jaundice five or six were swallowed in a soft egg. In the suppression of urine, which

PED

happens frequently to children at their birth, a living louse is introduced into the urethra, which, by the tickling it occasions in the canal, forces the sphincter to relax, and permits the urine to flow. A bug produces the same effect. Farriers have also a custom (says M. Bourgeois) of introducing one

or two lice into the urethra of horses when ihey are seized with a retention of urine, a disease pretty common among them. But, according to the Continuation of the Mate- ria Medica, to use the pedicular medicine with the greatest advantage, one would need to be in Africa, where those insects are carefully sought after and swallowed as a delicious morsel. The great distinction between those which infest man- kind is into the head and body louse. The former is hard and high colored, and the latter less compact and more of ashen color. If it were possible to give a reason why some fami- lies of the same species stick to the head and others to the clothes, &c., it would also, in all probability, be possible to understand the nature of many contagious diseases.

PEDTGREE, n. s. Per and degre. Skinner. Rather from Fr. pied; Lat. pes, a stem or root and degre. Genealogy ; lineage ; account of descent.

I am no herald to enquire of mtn's pedigrees ; it sufficeth me if I know their virtues. Sidneu.

You tell a pedigree Of threescore and two years, a silly time.

Shakfpeare. Alterations of sirnames, which in former ages have been very common, have obscured the truth of our pedigrees, that it will be no little labour to deduce many of them. Camden

To the old heroes hence was given A pedigree which reached to heaven. Waller. The Jews preserved the pedigrees of their several tribes with a more scrupulous exactness than anv other nation. Atterbury.

The sportive wind blows wide Their fluttering rags, and shows a tawny skin The vellum of the pedigree they claim. Cotcper. And he would gaze upon his store. And o'er \us pedigree would pore, Until by some confusion led. Which almost looked like want of head. He thought their merits were his own. Bqroii. PEDILUVIUM, bathing of the feet." The uses of warm bathmg in general, and of the pe- diluvium in particular, are so little understood, that they are often preposterously used, and sometimes as injudiciously abstained from. \Varm bathing is of no service where there is an irre- soluble obstruction, though, by its taking off from a spasm in general, it may seem to give a moment's ease; nor does it draw from the dis- tant parts, but often hurts by pushing against matter that will not yield with a stronger impe- tus of circulation than the stretched and diseased vessel can bear : so that, where there is any sus- picion of scirrhus, warm bathing of any sort should never be used. On the other hand, whrre obstructions are not of long standing, and the impacted matter is not obstinate, warm baths may be of great use to resolve them quickly. In recent colds, with slight humoral peripneu- monies, they are frequently an immediate cure. This

they effect by increasing the force of the

circulation, openincr the skin, and driving freely through the lungs that lentor which stagnated or moved slowly in them. As thus conducing to the resolution of obstructions, they may be con- sidered as short and safe fevers ; and in using them we imitate nature, which by a fever often carries off an obstructing cause of a chronical ailment. Borelli, Boerhaave, and Hoffman, are all of opinion, that the warm pediluvium acts by driving a large quantity of blood into the parts immersed. But arguments must give way to fact: the experiments related in the Medical Essays seem to prove to a demonstration, that the warm pediluvium acts by rarifying the blood. A warm pediluvium, when rightly tempered, may be used as a safe cordial, by which circula- tion can be roused, or a gentle fever raised ; with this advantage over the cordials and sudorifics, that the effect of them may be taken off at plea- sure. See Bathing.

PEDIR, a town on the west coast of Sumatra. The principal trade of this place is in pepper, betel nut, gold dust, canes, rattans, bees'wax, camphor, and benzoin. The soil is fertile, and well watered with rivulets ; though the low lands next the sea are bogs, which produce only reeds, and bamboo canes, the ,soil is in general fertile. The animals found are horses of a small breed, oxen, buffaloes, goats, and hog deer. Wild ani mals abound in the woods and mountains ; there are also alligators, guanas, porcupines, serpents, and other venomous animals, together witli abundance of poultry.

PED'LER, n. s.ˆ A petty dealer. ' A Pedlerv, > contraction produced by

Peddling. j frequent use,' says Dr.

Johnson. Minsheu more probably from French pied uller, to go on foot. One who travels the country with small wares : pedlery, the wares of a pedler: peddling, his habit of dealing.

All as a poor pedler he did wend, Bearing a trusse of trifles at his backe ; As belles and babies and glasses in his packe.

Spetisir. If you did but hear the pedler at the door, you would never dance again after a tabor and a pipe.

Shakspeuve. He is wit's pedler, and retails his v/ares At wakes, and

wassails, meetings, markets, fairs.

Id. So slight a pleasure I may part with, and find no miss ; this peddliug profit I in:iy resign, and 'twill be no breach in my estate. Decay of Piety,

Had sly Ulysses at the sack Of Troy brought thee his pedler's pack.

Cleaveland, Atlas was so exceeding strong. He bore the skies upon his back, Just as a jtedler does his pack. Swift.

The sufferings of those of my rank are trifles in comparison of what all those are who travel with fish, poultry, pedlery ware, to sell. Id.

Pedler, or Pedi-.ˆr, a travelling foot trader. See Hawker. In Britain (and formerly in France) pedlars are despised ; but it is otlier- wise in other countries. In Spanish America the business has been so profitable that it is thought by no means dishonorable; and there have been gentlemen in Old Spain, who, when their circumstances were declining, sent their

sons to the Indies to retrieve their fortunes in this way. In Poland, where there are few or no ma- nufactures, almost all the merchandise is carried on by pedlars, who are said some time since to have been generally Scotsmen,and who, in tlie reign of Charles II., amounted to no fewer than 50,000.

PEDOMETER, or Podometer, from Greek TTsc, pes, foot, and jierpov, measure, a mechanical instrument, in form of a watch, consisting of various wheels with teeth, catching in one ano- ther, all disposed in the same plane ; which by means of a chain or string fastened to a man's foot, or to the wheel of a chariot, advance a notch each step, or each revolution of the wheel ; so that the numbei being marked on the edge of each wheel, one may number the paces, or mea- sure exactly the distance from one place to ano- ther. There are some of them which mark the time on a dial-plate, and are in every respect much like a watch, and are accordingly worn in the pocket like a watch.

PEEBLES, a royal burgh and county town of the shire in Scotland to winch it gives its name. It is situate on a fine plain on the north bank of the Tweed, over which there is a bridge of five arclies, and is wholly surrounded with high hills. It is twenty-one miles south of Edinburgh. The town is well built, and is di- vided into the Old and New Town by the Eddle- stone-Water. In the Old Town are the ruins of two ancient churches. The New consists chiefly of one street, which is broad and spacious, and the houses are neat and tolerably well built. At the west end stands the church, on a small eminence, where formerly the castle stood, and beside it is the county-jail. Besides these it has apartments for the sheriffs' and town-

courts, and a hall wiiere the business of the county is trans- acted ; together with an elegant inn and assembly- rooms. Peebles has an excellent grammar-school, and another for English, arithmetic, &c. It ma- nufactures stockings, and a great deal of weaving is carried on here. Here is also an extensive brewery, famous for its excellent ale. The town is governed by a council of eighteen persons, of which a provost and two bailies make a part. It joins with Lanark, Linlithgow, and Selkirk, in sending a member to parliament. It has a weekly market on Tuesday, and eight annual fairs, viz. second Tuesday in January, first Tuesday in March, second Wednesday in May, first Tues- day in July, Tuesday before August 24th, first Tuesday in September, 17th of October, and first Tuesday before November 12th.

Peebles, a small river in the above parish, which runs through the north par; of the town into the Tweed, called also Eddlestone Water.

PEEBLESHIRE, or Tweedale, a county of Scotland, bounded on the east and south-east by the shires of Berwick and Selkirk, on the south by Dumfries, on the west by Lanark, and on the north by Mid-Lothian, being about thirty-six miles in length, and about ten in breadth. It contains one royal borough, Peebles ; and is di- vided into sixteen parochial districts. It is a hilly country, watered by the rivers Tweed, Yar- row, and Leithen, and several smaller streams ; on the banks of which the soil is fertile, and adapted to every kind of husbandry; but the

greater portion is in pasturage, and the hills are covered with innumerable flocks of sheep, fa- mous for the excellence of their wool. All the rivers and waters contain salmon and trout. Being an agreeable country, it is adorned with numerous seats of the nobility and gentry, and contains some esteemed mineral springs. It abounds with coal and lime-stone, and iron and lead ores are found in many of the parishes.

PEEK, in the sea-l►►nguage, a word used in various senses. The anchor is said to be a-peek, when the ship being about to weigh comes over her anchor in such a manner that the cable hangs perpendicularly between the hause and tiie an- chor. To heave a-peek- is to bring the peek so that the anchor may hang a-peek. A ship is said to ride a-peek, when, lying with her main and fore yards hoisted up, one end of her yards is brousht down to the shrouds, and the other raised up on end; which is chiefly done when she lies in rivers, lest other sliips falling foul of the yards should break

them. Hiding a broad peek denotes much the same, excepting that the yards are only raised to half the height. Peek is also used for a room in the hold, extending from the bitts forwards to the stern : in this room men of war keep their powder, and merchant- men their victuals.

FEEL,n.s.&LV.a.} Yt. pelure, peler ; Lat.

Peel'er. S pcllis. Skin or rind; to

strip off the skin or rind : a peel'er is one who performs this operation ; and, metaphorically, a robber or plunderer.

Yet otes with her sucking a peeler is found, Both ill to the maister and worse to some ground.

Tusser.

Peel, (Sir Robert), a manufacturer of im- mense wealth, who raised Tamworth, in Staf- fordshire, which had fallen into decay, to a flourishing state, by the erection of extensive cotton works. The number of persons em- ployed in his manufactories was not less than 15,000, and he paid upwards of ►►40,000 an- nually to the excise office on printed goods alone. He became proprietor of several estates of great magnitude, sat in parliament for some time, where he was a frequent speaker on com- mercial and manufacturing subjects, received a baronetage in 1801, and died ni 1830, and was said to have left ►►2,500,000. His eldest son, also named Robert, succeeded to his title and estates; and in the year 1834 became prime minister of Great Britain.

PEELE (fji-merly Holm), a small town in the Isle of Man, situat^ on the west side of the island, twelve miles w^st of Douglas, it is a straggling place on the sea-shore; the harbour is neglected, the pier destroyed, and the trade of the town has recently much declii>ed ; but it has a very spacious and commodious bay. The church is dedicated to St. Peter ; but here are the remains of two other churches, one dedicated to St. Patrick, and the other called St. Germain's.*

The castle and the cathedral of St. Germain stand on Peele-Island, encircled by the sea. Near the ruins of St. Patrick's church, are the armoury, the episcopal palace, and the lord's mansion. The channel which divides this island from the main land, is very deep at high water, Vol. XVI.

but at low water it is fordable, and was formerly joined to the main land by a strong quay. The walls of the castle enclose an area of about two acres.

Peele (Francis), a dramatic writer, who flou- rished in the reign of queen Elizabeth. He was born in Devonshire ; studied at Oxford in 1573; and took his degree of M. A. in 1579. lie was a good pastoral poet, and his plays were acted, says Wood, with great applause.

PEEPjV. w.&-rt.s."\ Dr. Johnson has cu- Peep'er, n. s. f^riously encumbered the Peep'hole, i etymology of th's word

Peep'ino-iiole. J with learning. 'It has no etymology,' he says, ' except that of Skinner, who derives it from Dut. opfiessen, to lift up; and of Casaubon, who derives it from oTrnrtvrrip, a spy : perhaps it may come from Lat. pip, pipio, to cry as young birds : when the chickens first broke the shell and cried, they were said to begin to pip or peep; and the word that expressed the act of crying was, by mistake, applied to the act of appearing that was at the same time: this is offered till something better may be found.' But Minsheu findsaTeut. pipen, to peer or look up; and old Ft. pipper, Ita. pipire, of the same sig- nification. To look up ; look slily ; make a first appearance; pry: peep is, first appearance ; sly or prying look: peeper, applied particulirly to young chickens breaking tlie shell ; and, by Ad- dison, to the unfledged young ladies of his day : peep-hole and peeping- hoie, a hole through which one may peep unobserved.

Them that have familiar spirits, and wizards that peep and that mutter. Isaiah viii. 19.

A fool will peep in at the door. Ecclus. xxi, 23.

She, lier gay painted plumes disordered, Seeing at last herself from danger rid, Peeps forth, and soon renews her native pride.

Spenser.

Who is the same which at my window peeps. Id. Your youth And the true blood, which peeps forth fairly through

it, Do plainly give you out an unstained shepherd.

Shakspedre. I can see his pride Peep through each part of him. Id.

Come, thick night ! That my keen knife see not the wound it makes; Ivor heaven peep through the blanket of the dark. To cry hold ! /-/. Macbeth.

The timorous maiden-blossoms on each hough Peept forth from their first blushes ; so that now A thousand ruddy hopes smiled in each bud, And flattered every greedy eye that stood. Crashaw.

The trembling leaves through which he played, Dappling the walk with light and shade, Like lattice-windows, give the spy Room but to peep with half an eye. Cltaveland.

With words not hers, and more than human sound.

She makes the obedient ghosts peep trembling througa

the ground. Roscommon.

Fair as the face of nature did appear, i

When flowers first peeped, and trees did blossoms >

hear, 3

And winter had not yet deformed the inverted year.

Diyden All doors are shut, no servant peeps abroad, While others outward went on quick dispatch. Id,

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PEE

The daring flames peept in, and saw from far The awful beauties of the sacred quire ;

But since it was prophaned by civil war, Heaven thought it fit to have it purged by fire. Id.

The fox spied him through a peepinghole he had found out to see what news. L'Estrange.

A peeper works with her hands, eyes, and fan ; one of which is continually in motion, while she thinks she is not actually the admiration of some ogler in the congregation. Spectator.

O, my muse, just distance keep ; Thou art a maid, and must not peep. Prior.

By the peepholes in his crest. Is it not virtually confest, That there his eyes took distant aim ? Id.

Printing and letters had just peeped abroad in the world ; and the restorers of learning wrote very eagerly against one another. Atterburi).

Those remote and vast bodies were formed not merely to be peept at through an optic glass.

Bentley's Sermons. Most souls but peep out once an age, Dull sullen prisoners in the body's cage. Pope. Would not one think, the almanack-maker was crept out of his grave to take t'other peep at the stars 2

Swift. In vain his little children peeping out Into the mingling storm, demand their sire.

Thomson, Dishes I chuse, though little, yet genteel ; Snails the first course, and peepers crown the meal.

Bramst. Though but the very white end of the sprout peep out in the out-vard part of the couch, break it open, you will find the sprout of a greater largeness.

Mortimer's Husbandry.

PEER, V. n. A contraction of Appear. To come first into sight ; Peep, which see.

Now for a clod-like hare in form they peer Now bolt and cudgel squirrels leap do move, Now the ambitious lark with mirrour clear They catch, while

he, fool! to himself makes love.

Sidney. As the sun breaks through the darkest clouds. So honour peereth in the meanest habit. Shakspeare. Yet many of your horsemen peer, And gallop o'er the field. Id. Henry V.

Even through the hollow eyes of death I spy life peering. Shakspeare.

See how his gorget peers above his gown. To tell the people in what danger he was.

Ben Jonson. Hell itself will pass away, And leave her dolorous mansion to the peering day.

Milton. And, when some curious rare idea peered Upon his mind, he dipped his hasty pen. And by the glimmering lamp, or moon light-beam. That through his lattice peeped, wrote fondly down What seemed in truth imperishable scng. Pollok.

Peer, n. s. '\ Fr. pair ; of Lat. par.

Peer'age, i Equal ; of the same rank ;

Peeress, ˆcompanion: hence a noble,

Perr'less, adj. J as equal in the highest de- gree : peeress is the female of peer : peerage, the dignity of a peer, or body of peers : peerless, unequalled.

He all his peers in beauty did surpass. Spenser. His peers upon this evidence Have found him guilty of high treason. Shakspeare. I see thee compast with thy kingdom's peers,

That speak my salutation in their minds :

Hail, king of Scotland! /(/. Macbeth.

King Henry's peers and chief nobility Destroyed themselves, and lost the realm of France.

Shakspeare, Her peerless feature, joined with her birth, Approves her fit for none but for a king. Id.

Amongst a man's peers, a man shall be sure of familiarity : and therefore it is good a little to keep state. Bacon.

Oh ! what is man, great maker of mankind ! That thou to him so great respect do'st bear !

That thou adorn'st him with so bright a mind, Mak'st him a king, and ev'n an angel's peej-.

Davies. All these did wise Ulysses lead, in counsel pe►►rto Jove. Chapman.

If you did move to night. In the dances, with what spright Of your peers you were beheld, That at every motion swelled. Ben Jonson. Hesperus, that led The starry host, rode brightest ; till the moon, Rising in cloudy maje'^ty, at length, Apparent queen, unveiled her peerless light.

Milton In song he never had his peer. From sweet Cecilia down to chanticleer.

Dryden. Who bear the bows were knights in Arthur's reign. Twelve they, and twelve the peers ef Charlemagne.

Id. Be just in all you say, and all you do ; Whatever be your birth, you're sure to be A peer of the first magnitude to me. Id.

Not only the penal laws are in force against pa- pists, and their number is contemptible, but also the peerage and commons are excluded from parliament.

Id. Her dress, her shape, her matchless grace. Were all observed, as well as heav'nly face ; With such a peerless majesty she stands, As in that day she took the crown. Id.

Statesman and patriot ply alike the stocks ; Peeress and butler share alike the box. Pope,

His friendships he to few confined ; No fools of rank or mongrel breed, Who fain would pass for lords indeed j Where titles give no right or power. And peerage is a withered flower. Swift.

Peer was anciently applied to the vassals or tenants of the same lord, who were called peers, because they were all equal in condition, and obliged to serve and attend him in his courts, and peers in fiefs, because they all held fiefs of the same lord. The term peers is now applied to those who are impannelled in an inquest upon a person, for convicting or acquitting him of any offence laid to his charge ; and the reason why the jury is so called is because, by the common law and custom of this kingdom, every person is to be tried by his peers or equals ; a lord by the lords, and a commoner by commoners. See Jury.

A peeress may be noble by descent, creation, or marriage. If a peeress by

descent or creation, marries a person under the degree of nobility, she still continues noble ; but, if she obtains that dignity only by marriage,she loses it on her afterwards mar- rying a commoner ; yet by courtesy she generally retains the title of her nobility. A countess or baroness may not be arrested for debt or trespass ; for though, in respect of their sex, they cannot sit in parliament, they are nevertheless peers of

the realm, and shall be tried by their peers, &c. Peer of the Realm, a noble lord who has a seat and vote in the house of lords or peers. These lords are called peers, because though there is a distinction of degrees in our nobility, yet in public actions they are equal, as in their votes in parliament, and in trying any nobleman or other person impeached by the commons, &c. See Parliament. In a judicial capacity the house of peers is the supreme court of the kingdom, hav- ing at present no original jurisdiction over causes, but only upon appeals and writs of error ; to rec- tify any injustice or mistake of the law committed by the courts below. To this authority they succeeded of course, upon the dissolution of the Aula Regia. For as the barons of parliament were constituent members of that court, and the rest of its jurisdiction was dealt out to two other tribunals, over which the great officers who accom- panied those barons were respectively delegated to preside, it followed that the right of receiving appeals, and superintending all other jurisdic- tions, still remained in that noble assembly, from which every other great court was derived. They are, therefore, in all cases the last resort, from whose judgment no farther appeal is permitted ; but every subordinate tribunal must conform to their determination.

Peer, a town of the Netherlands, thirty miles north of Liege, and thirty north-east of Louvain.

PEERGAUM, in geography, a town of Hin- dostan, in the province of Aurungabad, between PooNAH, and Perrainda. It is situated at the confluence of the Sursutty and the Beemah, and belongs to the Mahrattas. Long. 79►► 59′ E. Lat. 18►► 23′ N.

PEE'VISH, adj. "^ Supposed by Junius

Pee'vishly, adv. >to be formed by corrup-

Pee'vishness, ra. s. 3 tion from perverse; Skinner rather derives it from beeish, as we say waspish ; Minsheu from the Teut. vietrisch i. e. pecuinus ; ' quod similis sit bruto.' Petulant ; fretful ; querulous ; waspish ; the adverb and noun-substantive corresponding.

For what can breed more peevish incongruities. Than man to yield to female lamentations ? Sidney, She is peevish, sullen, froward,

Proud, disobedient, stubborn, lacking duty.

Shakspeare.

If thou hast the mettle of a king, Being wronged as we are by this]>eevish town. Turn thou the mouth of thy artillery, As we will ours against these saucy walls. Id.

1 will not presume To send such peevish tokens to a king. Id.

He was so peevishly opinionative and proud that he would neither ask nor hear the advice of any.

Ihufward,

Some miscarriages in government miˆjlit escape through the peevishness of others ; envying the pub- lick should be managed without them.

King Charles.

Those deserve to be doubly laughed at, that are peevish and angry for nothing to no purpose.

U Estrange.

It will be an unpardonable, as well as childish peevishness, if we undervalue the advantages of our knowledge, and neglect to improve it. I.ocke.

Neither will it be satire or peevish invective to affirm, that infidelity and vice are not much dimi- nished. Swift.

You may find Nothing but acid left behind . From passion you may then be freed. When peevishness and spleen succeed. Id. The jjeevish youth, wlio ne'er had found before

A rival of his skill, indignant heard. And soon (for various was his tuneful store) In loftier tones defied the simple bird. Coivpe'-.

PEG, n. s. & V. a. Teut. pegghe ; Dan. pege ; Swed. pigg. A wooden pin ; to fasten with a peg; ' to take down a peg,' or ' a peg lower,' is to depress, degrade in some given or supposed degree

You are well tun'd now ; but I'll let down The peijs that make this musick.

Biakspeare.

1 will rend an oak. And peg thee in his knotty entrails, till Thou'st howl'd away twelre winters. Id.

Solid bodies foreshew rain ; as boxes and pegs of wood, when they draw and wind hard. Bacon.

Remember how in arms and politicks. We still have worsted all your holy tricks Trepanned your party with intrigue, And took your grandees down a peg.

Hndibras. Taking the shoots of the past spring, and pegging them down in very rich earth, by that time twelve- month they will be ready to remove. Evelyn.

The teeth are about thirty in each jaw : all of them claviculares or peg teeth, not much unlike the tusks of a mastiff. Grew.

If he be cholerick, we shall treat him like his little friend, and hang him upon a peg till he comes to himself. Addison.

l'he/3i?/7sand nails in a great building, though tiiey are but little valued in themselves, are absolutely necessary to keep the whole frame together.

Id. Spectator. A finer petticoat can neither make you richer, more virtuous, or wise, than if it hung upon a peg.

Swift. PEGANUM, in botany, wild Syrian rue, a genus of the monogynia order, belonging to the dodecandria class of plants ; and in the natural method ranking under the twenty-sixth order, multisiliqnae.

PEGASIDES, a name of the Muses, from Pegasus.

PEGASUS, among the poets, a horse imagined to have wings, and fabled to have sprung from the blood of Medusa : being that whereon Bellero- phon was fabled to be mounted when he engaged the Chimaera. See ChimjEra. He was also mounted by Perseus when he destroyed the sea- monster that was to devour Andromeda. ••• Ovid. The opening of the fountain Hippocrene, on mount Helicon, is ascribed to a blow of Pegasus's hoof. He was feigned to have flown away to hea\en, where he became a constellation. Hence Pegasls, in astronomy, the name of a con- stellation of the northern hemisphere, in form of a flying horse. See Astronomy.

PEGU, or Pegie, formerly a considerable kingdom of Asia, beyond the Ganges, but now a province of the Burmhan empire.

The ori2;inal inhabitants call themselves INIon , by the Chinese and Burmese they are termed Taleing ; and by the Siamese, INlingmon. The province of Pegu extends along the mouths of the two great rivers, Irrawaddy and Thualayn, (or of Ava and Martaban), and occupies the sea-

coast from the frontiers of Aracan to those of Siam. The town of Prome was its northern frontier.

The river Pegu, which was supposed to come from China, rises among the hills about 100 miles from the sea, which form the boundaries between the Burmhan and Pegu countries. Its communication with the sea is by the Rangoon, and in the fair season it is almost dry. The country inland from the river is clear of trees and brushwood ; but on the banks of the river there are thickets which abound with the domes- tic fowl in a wild state, and peacocks, but is also infested with tigers. About a day's journey to the south of the town of Pegu the inhabitants are much molested by wild elephants, that oc- cupy in great numbers a forest to the north-east. These powerful animals, allured by the early crops of rice and sugar-cane, make predatory in- cursions in large troops, and do a great deal of mischief, devastating much more than they de- vour. This province appears to be the favorite abode of the elephant, and one of his Burmhan majesty's titles is, ' lord of the white elephant, and of all the elephants m the world.'

Pegu having long been subject to the Burmhan empire of Ava, the history of its conquest and other particulars will be found under the article Burmhan Empire. When the Burmese had completed its subjugation, they subdivided it into thirty-two districts, and named ˆt Henza- wuddy, which is the Sanscrit name for the whole province. Minderajee Praw, the fifth king of the present dynasty, abrogated many severe penal laws imposed by his predecessors upon the native Peguers. Justice is now distributed with consi- derable impartiality, and the only distinction at present between a Burmhan and a Peguer consists m the exclusion of the latter from places of public trust and power. In Pegu there are no brick buildings allowed, except such as belong to the king, or are dedicated to their divinity Gaudma, his majesty having prohibited the use of brick and stone in private buildings.

From the plenty of teak with which the Pegu forests abound tiiis province has long been fa- mous for ship-building. So early as 1707 the Arabs of Muscat, a considerable maritime poMˆer, were accustomed to build ships here, some of which carried from thirty to fifty guns. For the procuring of

this valuatale timber a great inter- course subsists between Pegia and all the British provinces, particularly Bengal, where the vessels are almost wholly fabricated from Pegu teak, with the assistance of the country timber.

The inhabitants of Pegu appear to have at- tained civilisation at a more early period than the Burmese ; and, though now reduced, formerly to have been a great and potent nation. In the early Portuguese histories they are denominated ihe Pandalus of Mon, and they are supposed to have founded the ancient Kalaminham empire. The name Kalaminham, mentioned by the Por- tuguese, is probably connected with the Siamese name of the nation, Mingmon. The Mon lan- giiage is still used by the inhabitants of Pegue, and appears quite original. It is said by the Burmese and Siamese to have no affinity to either of their languages.

Owmgto the long and sanguinary wars carried on between the Burmese and Peguers, the greater part of this province, although one of the most productive in India, remains desolate and un- cultivated.

Pegxj, the capital of the foregoing province, is situated ninety miles by water above Rangoon. Its ancient extent may be traced by the ruins of the ditch and wall that surround it. From these it appears to have been a quadrangle, each side measuring one mile and a lialf; the breadth of the ditch was about sixty yards, and the depth ten or twelve feet. When in repair, even in the dry season, the ditch had seldom less than four feet of water. The wall was composed of brick badly cemented with clay mortar, about thirty- five feet thick, with small equidistant bastions about 300 yards asunder; but the whole in a most ruinous state. The Burmhan monarch, Alom- pra, when he acquired possession of the city in 1757, razed every building to the gjound, and dispersed or led into captivity all the inhabitants. The temples, or praws, which are very numerous, were the only buildings that escaped his fury, and and of these the great pyramid of Shoemadoo has alone been kept in repair. This temple is composed of brick and mortar, without excava- tion or aperture of any sort, octagonal at the base, and spiral at the top ; each side of the base measuring 162 feet. The great breadth di- minishes abruptly in the shape of a speaking trumpet. The extreme height of the building, above the level of the country, is 361 feet. On the top is an iron tee or umbrella, fifty-six feet in circumference, which is gilt, and it is the intention of the king to gild the whole building. On the north side of the building are three large bells of good workmanship, suspended near the ground, to announce to the spirit of Guadma the approach of a suppliant, who places his offering, consist- ing of boiled rice, a plate of sweetmeats, or a cocoa-nut fried in oil, on abench near the foot of the temple. After it is offered the devoter seems indifferent what becomes of it, and it is often de- voured in his presence by the crows or dogs, whom he never attempts to disturb during their repast. Numberless images of

Guadma lie in- discriminately scattered about.

About 1790 the reigning monarch of Ava, to conciliate the natives, issued orders to rebuild Pegu, and invited the scattered families of for- mer inhabitants to repeople their deserted city. At the same time he ordered the viceroy to quit Rangoon, and make Pegu his future residence. The present inhabitants, who have been induced to return, consist chiefly of rhahaans, or priests, the followers of the court, and a few poor Pegu families. The men of business continue to re- side at Rangoon, and the whole number of inha- bitants of this town do not as yet exceed 7000. A great proportion of the former inhabitants are either extinct or scattered over the provinces of Tongho, Martahan, and Talowmeon. The city, in its renovated state, is fenced round with a stockade from ten to twelve feet high. Tliere is one main street running east and west, crossed at right angles by two smaller streets. At each ex- tremity of the principal street there is a gate de- fended by a wretched piece of ordnance, and a

few musketeers, who never post sentinels, and are generally asleep in a neighbouring shed. The streets of Pegu are spacious, and paved with brick, which the ruins of the old town plentifully supply. The houses are all made of mats, or of sheathing boards, supported on bamboos or posts, and extremely combustible. As a precau- tion against fire, at each door there stands a long bamboo, with an iron hook to pull down the thatch ; and there is also another pole adapted to suppress flame by pressure. Almost every house has earthen pots filled with water on the roof, and a particular class of people, whose bu- siness is to prevent and extinguish fires, walk the street during the night. The only article of con- sequence manufactured here is silk and cotton, which the females weave for domestic use. The thread is well spun, and the texture of the web close and strong, being chequered like tartan.

PEGUNTIUM, in ancient geography, ac- cording to Ptolemy, or Peguntiae, as Pliny has it, a town or citadel of Dalmatia, on the Adriatic, opposite to the island Brattia, five miles off, and forty east of Salonae. According to Fortis, a mountain, a large hollow, and submarine springs are seen here.

PEINE Fort et Dure, Lat. psena fortis et dura, signifies a special punishment formerly in- flicted on those who, being arraigned of felony, refuse to put themselves on the ordinary trial, but stubbornly stand mute.

PEIiN'GHEE, a town of the Burmhan empire, situated on the west side of the Irrawaddy, in lat. 18►► 31′ N., long 94►► 50′ E. In the vi- cmity a great quantity of teak timber is pro- cured, which is carried to Rangoon, and thence exported to the British territories. The forests are in sight from the river : the trees are felled in the dry season, and when t: e monsoon sets in carried down the Irrawaddy. Here also ships of 300 or 400 tons are frequently built.

PEIRCE (James), an eminent dissenting minister, was i)orn at Wapping, in London, in 1664, and was educated at Utrecht and Leyden ; after which he spent some time at Oxford, for the benefit of the Bodleian library. He then for two years preached the Sunday evening lec- ture at the meeting-house in Miles Lane, Lon- don, and afterwards settled at Cambridge. In 1713 he was removed to a congregation at Exeter, where he continued till 1718 : when he was ejected for refusing to sign the Calvinistic articles of faith. Upon this a new meeting was opened at Exeter, of which I\lr. Peirce con- tinued minister till his death, in 1726. He was a man of the strictest virtue, exemplary piety, and great learning. He wrote, 1. Exercitatio philosophica de Homsemeria Anaxagorea. 3. Thirteen pieces on the Controversy between the Church of England and the Dissenters. 3.' Ten pieces on the Controversy about the Ejectment at Exeter. 4. Six pieces on the Doctrine of the Trinity. .S. A Paraphrase and Notes on the Epistles of St. Paul to the Colossians, Philip- pians, and Hebrews. 6. An Essay in favor of giving the Eucharist to Children. 7. Fourteen Sermons.

PEIRESC (Nicolas Claude Fabri), an emi- nent antiquarian, born in 1580, was descended

from an ancient and noble family, seated origi nally at Pisa in Italy. At ten years of age he was sent to Avignon, whre he spent five vear-; in the Jesuits' College, in the study of the' Ian guages. In 1595 he removed to Aix, and en tered upon philosophy. In 1596 he was sent to finish his course under the Jesuits at Touw non, where he turned his attention to cosmog- raphy. Being recalled by his uncle, in 1597, he returned to Aix, and entered there upon the study of the law. In 1598 he went again to Avignon, to carry on his course of law under one Peter David ; who was also well skilled in antiquities. He returned in 1603 to Aix, at the earnest request of his uncle, who resigned to him his senatorial dignity, for which the degree of LL.D, was a necessary qualification. Peiresc, therefore, took that degree January 18th 1604. In 1618 he was nominated by Louis XIII. abbot of Sancta Maria Aquestriensis. He died the 24th of June 1637 in his fifty- seventh year. His works are, 1. Historia provincial Galliae Narbonensis; 2. Nobilium ejusdem provincite familiarum Origines, et separatim Fabriciae ; 3. Commentarii rerum omnium memoria dignarum sua aetate gestarum ; 4. Liber de ludicris naturae operibus ; :►►►>. Mathematica et astronomica

varia ; 6. Observationes matheraaticae ; 7. Epistola? ad S. P. Urbanum \TII., cardinales Barbarinos, &c. ; 7. Authores antiqui Graeci et Latini de ponderibus et mensuris : 9. Eulogia et epita- phia; 10. Inscriptiones antiquae et novae; 11. Genealogia domus Austriacae ; 12. Cataiogus librorum biblioth. reg; 13. Poemata varia; 14. Nummi Gallici, Saxonici, Britannica, &c. ; 15. Linguae Orientales, Hebraea, Samaritana, Ara- bica, Egyptiaca, et Indices librorum harum lin- guarum ; 16. Observationes in varios auctores.

PEKAN, in zoology. See Mustela.

PEKIN, or Peking, the capital of China, where the emperor generally resides ; it is situated in a very fertile plain, twenty leagues from the great wˆall. This name, which signifies the northern court, is gi\en it to distinguish it from the city Nankin, or the southern court. The emperor formerly resided in the latter, but the Tartars, a restless and warlike people, obliged him to remove his court to the northern pro- vinces, that he might more effectually repel their incursions. It is an exact square, and divided into two parts ; namely, that which contains the emperor's palace, which is in the new city, or, as it is called, the Tartars' city, because it is in- habited by Tartars ever since they conquered this empire ; the other, called the Old City, is inhabited by the Chinese. The circuit of both these together is fifty-two Chinese lys, each of which contains 240 geometrical paces ; being, without the suburbs, full six leagues in circum- ference, according to the most accurate measure- ment made by order of the emperor The popu- lation is generally estimated at 2,000,000, but others state it at double that number. See our articles China, and Observatory.

PELAGIANS, a Christian sect who appeared about the fifth, or end of the fourth century. They maintained, it is said, the following doc- trines : 1. That Adam was by nature mortal, and, whetiier he had sinned or not, would cer-

fciinly have died. 2. That the consequences of Adam's sin were confined to his own person. 3. That new born infants are in the same situa- tion with Adam before the fall. 4. That the law qualified men for the kingdom of heaven, and was founded upon equal promises with the gospel. 5. Tliat the general resurrection of the dead does not follow in virtue of our Saviour's resurrection. 6. That the grace of God is given according to our merits. 7.

That this grace is not granted for the performance of every moral act ; the liberty of the will, and information in points of duty, bemg sufficient, &:c. The founder of this sect was

PELAGIUS, a native of Great Britain ; but whether of England, Scotland, or Wales, is un- certain. Dr. Henry says, he was born in North Wales November 13th, 354; and that his real name was Morgan, of which Pelagius is a trans- lation. He was educated in the monastery of Banchor, in Wales, of which he became a monk, and afterwards abbot. In the early part of his life he went over to France, and thence to Rome, where he promulgated opinions different from those of the church. His morals being ir- reproachable, he gained many disciples; and the heresy made so rapid a progress that it be- came necessary for the pope to exert his power. Pelagius, to avoid the danger, in 409 passed over to Sicily, attended by his friend and pupil Celestius. In 4U they landed in Africa, con- tinued som.e time at Hippo, and wˆere present at the famous conference between the Catholics and Donatists, held at Carthage in 412. Thence they travelled to Egypt ; and from Egypt, in 415, to Palestine, where they were graciously received by John, bishop of Jerusalem. In the same year Pelagius was cited to appear before a council of seventeen bishops, held at Diospolis. They were satisfied with his creed, and absolved him of heresy. The African bishops, however, being displeased with their proceedings, appealed to the Roman pontiff: he first approved, and afterwards condemned, the opinions of Pelagius, who, with his pupil Celestius, was publicly ex- communicated; and all the bishops who refused to subscribe the condemnation of the Pelagian heresy were immediately deprived. What be- came of him after this period is unknown ; but it is probable that he retired to Bangor, and died abbot of that monastery. He wrote, 1. Expositionum in epist. Paulinas, lib. xiv. 2. Epistola ad Demetriadem de virginitate. 3. Explanationes symboli ad Damasum. 4. Epis- tolie ad viduam duse. 5. De libero arbitrio. These and many other fragments are scattered among the works of St. Jerome. They are also collected by Garnerius, and published in Ap- pend, op. Rlercatoris, p. 373. Cave.

*Pelagius I., pope of Rome, was born in Rome, and elected pope in 555. He endea- voured to reform the clergy ; and, when Rome
॥was besieged by the Goths, obtained many con- cessions from Totila, in favor of the citizens. He died in 560.*

Pelagius II. (pope), svxcceeded Benedict I. in 578. He labored much to reconcile the bishops of Istria and Venice to the Roman see, but without success, and he opposed John, pa-

triarch of Constantinople. He died of the plague in 590.

PELAGOSA, an island in the Adriatic, near Dalmatia, which, together with several rocks that appear above water near it, are the remains of an ancient volcano. Fortis, in his Travels into Dalmatia, says, ‘ The lava which forms the substance of this island is perfectly like the lava of \ˆesuvius. If a naturalist should land there, and visit on purpose the highest parts of the island, perhaps we might then know whether it has been thrown up by a submarine volcano, as the island near Santerini was in our age ; or if we ought to believe it the top of some ancient vol- canic mountain, of which the roots and sides liave been covered by the waters which divided Africa from Spain, forming the straits of Gibral- tar ; an invasion that no one can doubt of who has examined the bottoms and shores of our sea. The Lissan fishermen say that Pelagosa is sub- ject to frequent and violent earthquakes ; and the aspect of the island proves, at first sight, that it has suffered many revolutions ; for it is rugged, ruinous, and subverted.’ It is sixteen miles south-west of Agosta, and thirty from the Dio- mede Isles.

PELAIAH, a Levite, one of the chiefs of those who returned from captivity, and who signed the covenant that Nehemiah renewed with the Lord. Neh. viii. 7, x. 10.

PELASGI, Pelasgians, a very ancient peo- ple of Greece, originally of Arcadia, according to Hesiod ; so named from Pelasgus, their first king, though others derive the name from IltXaff- yog, a stork, on account of their wandering manner of life. ††† Strabo. They first inhab- ited Argolis, in Peloponnesus, which from them was called Pelasgia. Thence, about A.A.C. 1883, they emigrated into iEmonia, and were aftenvards dispersed into various parts of Greece ; particularly Epirus, Crete, Lemnos, Lesbos, and Argos. Some of them settled in Magna Graecia, in Italy : others occupied a third part of Thessaly, hence called Pelasgiotis. In short, they spread through so many parts of Greece that the poets gave their name to the Greeks in general, and name the whole country from them. ††† Homer, Hesiod.

PELASGIA, a name given to Greece, from the Pelasgi. See the last article.

Pelasgia, 1. The ancient name of Lesbos; so called from the Pelasgi. ††† Diodorus Siculus, Pliny. 2. The ancient name of Peloponnesus, from Pelasgus, a native of the country. ††† Nico- laus Damascenus, Ephorus. 4, 5. Pelasgia was also an ancient name of Epirus and Pelo- ponnesus.

PELASGICUM, the north wall of Athens ; so called from the builders, the Pelasgji. ††† Pau- sanias, Pliny. There was an execration pro- nounced on any that should build houses under this wall ; because the Pelasgi, while dwelling tliere, entered into a conspiracy against the Athenians. ††† Thucydides.

PELASGIOTtE. See Pelasgi.

PELASGIOTIS, a third part of Thessaly, situated between Pieria and Macedonia on the north and west, Thessaliotis on the south, and Rlagnesia on the east, ††† Strabo, Pliny.

PELASGUS, in fabulous history, a son of Jupiter and Niobe, who reigned in Sicyon, and from whom his subjects, the Pelasgi, derived their name.

PELATIE, free-born citizens, among the Athe- nians, who by poverty were reduced to the na- cessity of serving for wages. During their ser- vitude they had no vote in the management of public affairs, as having no estate to qualify them ; but this restriction was removed, when- ever they had released themselves from their servile situation, which they were allowed to do when able to support themselves. \ hile they continued servants, they had a right to change their masters. They were often called Thetse.

PELATIAII, son of Hananiah, and father of Ishi, of the tribe of Simeon. He subdued the Amalekites upon the mountain of Seir. 1 Chron. iv. 42.

Pelatiah, the son of Benaiah, a prince of the Jews, who lived in the time of Zedekiah king of Judah, and opposed the wholesome ad- vice given by Jeremiah, to submit to king Ne- buchadnezzar (See Jerem. xxxviii. 15 ††† 20, and Ezek. xi. 1 ††† 4). Ezekiel's vision, while he was a captive in Mesopotamia, against Pelatiah, Jaazaniah, and twenty-three other princes who joined with them, is recorded in Ezek. xi. 5 ††† 13, with the immediate death of Pelatiah, while Ezekiel was delivering his prophecy.

PELE, two ancient tov.ns of Thessaly ; the one subject to Eurypylus, the other to Achil- les ; both extinct. Peleus was the gentilitious name. Steph.

PELEG, son of Eber, the fifth in descent from Noah, was born in A.M. 1737. He was named Peleg, which signifies division, because in his time the earth began to be divided (Gen. x. 25, xi. 16). Whether Noah had begun to divide the earth among his descendants, some years before the building of Babel ; or Peleg came into the world the same year that Babel was begun, and at the confusion of languages ; or whether Eber, by a spirit of prop'hecy, gave his son the name of Peleg before the tower of Babel was begun, is not certain. That which here perplexes the in- terpreters is, first,

that Peleg came into the world not above 100 years after the deluge. But it should seem that the number of men was not then sufficient for such an undertaking as that of Babel ; second, Joktan, the brother of Peleg, had already thirteen sons at the time of this disper- sion, which happened after the confusion of Babel, Gen. x. 26 ००० -29. Peleg being born in the thirty-fourth year of Eber (Gen. xi. 16), it is im- possible that Joktan should have had such a number of children at the birth of Peleg. It seems therefore probable that he was not born at the time of the dispersion. To this may be answered, that Moses has there enumerated the names of the thirteen sons of Joktan by way of anticipation, though they were not born till a good while after the confusion at Babel ; but, as they possessed a very large country, it was pro- per to take notice of them among the other de- scendants of Noah, who divided the provinces of the east among themselves. However this may have been, at the age of thirty Peleg begat Reu ; and he died at the age of 239.

PELETHITES, and Cherethites, men famous in the reign of king David. They were the most valiant men in the army of that prince, and had the guard of his person. See 2 Sam. XV. 18, XX. 7; Patrick's Commentaries, Pool's Annotations, and Delany's History of David.

PELETHRANII, a name given to the Lapi- thae, either from their town of Pelethronium, or from their leader Pelethronius. To them man- kind are indebted for the invention of the bit with which they tamed their horses.

PELEtHRONIUM, a town of Thessaly, in a flowery part of mount Pelios ; so named from Pelios, and Spova, flowers. ००० Nicander. Lucan says the Centaurs were natives of that place; to whom 'irgil assigns mount Othrys. See Cen- taurs, Lai'ith.e, and Lapithus.

PELEUS, in fabulous history, a king of Thes- saly, son of iEacus and Endeis, the daughter of Chiron. He was the only mortal man who ever married an immortal. He was concerned in the murder of his brother Phocus, and was there- fore obliged to leave his father's dominions, and he fled to the court of Eurytus the son of Actor, who reigned at Phthia; or, according to Ovid, to Ceyx, king of Trachinia. He was purified of his murder by Eurytus, who gave him his daughter Antigone in marriage. As Peleus and Eurytus went to the chase of the Calydonian boar, the father-in-law was accidentally killed by an arrow, which his son-in-law had aimed at the beast. This obliged him to banish himself from Phthia, and he went to lolchos, where he was purified of this homicide by Acastus, the king of the country. His residence at lolchos was short : Astydamia, the wife of Acastus, fell in love with him ; but, when she found him insen- sible to her passion, she accused him of attempts upon her vii-tue. The king partly believed the accusation ; but not willing to violate the laws of hospitality,

by putting him to death, he ordered his officers to conduct him to Mount Pelion, and there tie him to a tree, and leave him to the wild beasts. The order of Acastus was obeyed; but Jupiter, knowing the innocence of his grand- son Peleus, ordered Vulcan to set him at liberty. Peleus then assembled his friends to punish Acastus. He took lolchos, drove the king from his possessions, and put to death the wicked As- tydamia. On the death of Antigone, Peleus made love to Thetis, but the goddess fled from him ; and, the more effectually to evade his pur- suit, she assumed the shape of a bird, a tree, or a tygress. Peleus offiered a sacrifice to the gods; and Proteus informed him, that, to obtain Thetis, he must surprise her while she was asleep in her grotto, near the shores of Thessaly. This advice was followed, and Thetis, unable to escape, at last consented to marry him. Their nuptials were celebrated with extraordinary solemnity, all the gods attending and making them valuable presents. Ate, the goddess of Discord, was the only one who was not invited, and she punished this neglect by throwing an apple into the midst of the assembly, with this inscription, Detur pul- chriori. The celebrated Achilles was the fruit of this marriage, whose education was early en- trusted to his greatgrandfather Chiron, and after- wards to Phoenix, the son of Amyntor. His death

\vas the source of great grief to Peleus ; but Thetis, to comfort her husband, promised him immortality, and ordered him to retire into the grottos of the island of Leuce, where he should see and converse with the manes of las son. Peleus had a daughter called Polydora, by Anti- gone.

The PELEW, or Palaos Islands, so called by the Spaniards, who discovered them, were made known to the rest of the world chiefly by the shipwreck of the East India Company's packet Antelope in 1783, captain Wilson, the relation of which, composed by i\Ir. Keate, has given to ihese islands an interest much beyond what they would have excited under any other circumstances ; none of them being above a league in circuit, and the whole surrounded by a coral reef, which extends from them six leagues to the west. They are moderately elevated, covered with trees, amongst which are the ebony, the bread fruit, and cocoa palm. The sugar-cane is indigenous here, and the natives make a con- fection of its juice. The woods abound in fowls, which were allowed to remain unmolested until the English taught the natives that they might be taken for food.

The natives are described by Mr. Keate in terms of the warmest eulogy, as

a hospitable, gay, and innocent race. They are well-made, of a deep copper-color, with long hair ; the men go naked, but the women wear two pieces of fringe made of the fibres of the cocoa-nut husk ; both sexes are tatooed, and stain their teeth black. Their houses are elevated off the ground three feet on stones, and are constructed of planks and bamboos ; they have besides large halls for the holding public assemblies. Their utensils, instruments, and canoes, are similar to those of the Society Islands, and they make pots of clay. Fish is their principal food. The government is composed of a king, and rupacks, or nobles, whose insignia of dignity is a bracelet of bone on the wrist : to the king belongs the whole territorial property of the islands, the sub- jects having no other riches than their canoes, their arms, and utensils. Their only idea of religion consists in the belief of the soul's sur- viving the body. Their language is the Poly- nesian, or dialect of the Malay. The geographi- cal position of these islands is lat. 6ˆ 10′ N., 134►► to 1351►► E.

The Pelevv Islands may be considered as the western limit of the great chain of New Philip- pines, or Carolinas, which extend between lat. 5►► and 12►►, and long. 134►► and 170►►. This great chain is very little known, but it seems to be formed of a number of groups, whose particu- lar direction is north and south, like most of the chains of the Grand Ocean.

The king of Pelew imbibed so great an esteem for captain Wilson that he entrusted his second son, Lee Boo, to his care, to accompany him to England. The prince was of a most amiable disposition, and of good capacity : he died of the small-pox at captain Wilson's house in London, in the year 1 784, at about twenty years of age. In return for the kindness shown by AbbaThulle, the prince of Pelew, t(i the crew of the Antelope, the East India Company in the year 1791 sent

him a number of cattle and other handsome presents. The stock left in the Pelew Islands, with tlie exception of the sheep, had greatly in- creased in 1802. At that time several Europeans resided on the islands, for the purpose of collect- ing biche de mar, tortoise-shell, and shark's fins. The Jesuits of Manilla, in the Philippines, en- deavoured in lfi96 to reduce these islands, and effected a landing in 1710. But those who landed were never more heard of; and the ship which transported them was compelled to depart, leav- ing them to their fate.

PELF, m. s. Barb. Lat. pelfra. Money; riches.

The thought of this doth pass all worldly pelf.

Sidney. Hardy elf. Thou darest view my direful countenance ; I read thee rash and heedless of thyself, To trouble my still seat and heaps of precious

pelf,

Speiiser. Immortal gods, I crave no pelf, I pray for no man but myself. Shakspeare.

Of traffic or return she never taketh care ; Not provident of pelf, as many islands are.

Drayton. He called his money in ; But the prevailing love of pelf Soon split him on the former shelf : He put it out again. Dryden's Horace.

To the poor if he refused his pelf, He used them full as kindly as himself. Swift.

PELIADES, the daughters of Pelias, were Alceste, Pisidice, Pelopea, and Ilippothoe, to whom Hyginus adds Medusa. Their mother's name was Anaxibia, the daughter of Bias and Philomache, the daughter of Amphion. After their parricide (see Pelias) the Peliades fled to the ccnirt of Admetus,where Acastus, the son-in- law of Pelias, pursued them, an.d took their pro- tector prisoner. The Peliades died, and were buried in Arcadia.

PELIAS, in fabulous history, the twin-brother of Neleus, was son of Neptune by Tyro, daugh- ter of Salmoneus. Their birth was concealed by their mother, who wished their father to be igno- rant of her incontinence. They were exposed in the woods, but were preserved by shepherds ; and Pelias received his name from a spot of the color of lead m his face. Some time after Tyro married Cretheus, son of /Eolus, king of lolchos, and became mother of three chi.ldren, of whom j-Eson was the eldest. Pelias visited his mother, and was received in her family ; and, after the death of Cretheus, he unjustly seized the king- dom, which belonged to the children of Tyro by Cretheus. To strengthen himself in his usurp- ation, Pdias consulted the oracle ; and when he was told to beware of one of the descendants of ili'.olus, who should come to his court with one foot shod and the other bare, he privately removed the son of "iLson, and declared that he was dead. These precautions proved vain. Jason, the son of /Eson, who had been educated by Chiron, returned to lolchos, when come to years of ma- turity; and, having lost one of his shoes in cross- ing theAnaurus or the Evenus, Pelias perceived that this was the person whom he had so much dreaded, lie was unwilling to act with violence

to a stranger, who had excited the admiration of the people. But when Jason arrived at his palace with his friends, and boldly demanded the

kingdom, Pelias said that he would voluntarily resign the crown to him, if he would go to Col- chis to avenge the death of Phryxus, the son of Athamas, wliom iEetes had cruelly murdered ; adding that the expedition would be a tended with the greatest glory, and that nothing but the infirmities of age had prevented himself from punishing the assassin. This patriotic proposal was accepted by the young hero, and his intended expedition was made known all over Greece. See Argonauts, Jason, and Medea. Accord- ing to Ovid, jEson was still living when the Argonauts returned, and was restored to youth by the magic of ˆledea. This change in the vigor and the constitution of iEson astonished all the inhabitants of lolchos ; and the daughters of Pelias expressed their desire to see their father's infirmities vanish by the same powerful magic. Medea, who wished to avenge the injuries which her husband Jason had received from Pelias, raised the desires of the Peliades, by cutting an old ram to pieces, and boiling the flesh in a cauldron, and then turning it into a fine young lamb. After they had seen this successful ex- periment, the Peliades cut their father's body to pieces, after they had drawn all the blood from his veins, on the assurance that Medea would replenish them by her wonderful power. The limbs were immediately put into a cauldron of boiling water ; but Medea suffered the flesh to be totally consumed, and refused to give the promised assistance, and the bones of Pelias did not even receive a burial.

PE'LICAN, re. s. Fr. pelUcan ; L,zt.pclicanus. A bird of the anseres order. See below. I am like a pelican of the wilderness.

Psalm cii. 6. Should discarded fathers

Have this little mercy on their flesh ;

'Twas this flesh begot those pelican daughters.

Shakspeare.

The pelican hath a beak, broad and flat, like the slice of apothecaries. Hakewill on Providence.

There are two sorts of pelicans ; one lives upon the water and feeds upon fish ; the other keeps in deserts, and feeds upon serpents and other reptiles : the pelican has a peculiar tenderness for its young ; it generally places its nest upon a craggy rock ; the pelican is supposed to admit its young to suck blood from its breast. Calmet.

Pelican, in ornithology. See Pelican us.

Pelican, in chemistry, is a glass alembic, consisting of one piece. It has a tubulated capi- tal, from which two opposite and crooked beaks pass out,

and enter again at the belly of the cu- curbit. This vessel has been contrived for a continual distillation and cohobation►► which che- mists call circidation. The volatile parts of substances put into this vessel rise into the capi- tal, and are obliged to return through the crooked beaks into the cucurbit ; and this without inter- ruption, or luting and unluting the vessels. Although the pelican seems to be a very conve- nient instrument, it is now little used ; either because the modern chemists have not so much patience as the ancient chemists had for making long experiments ; or because they find that two

matresses, the mouth of one of which is inserted in the mouth of the other, produce the same eff"ect.

PELICANUS, in ornithology, a genus belong- ing to the order of anseres. The bill is straight, without teeth, and crooked at the point ; the face is naked, and the feet are palmated. Mr. Latham enumerates no fewer than thirty diffierent species, besides varieties. The most remarkable are : ►►►

1. P. aquilus, or the man-of-war bird, in the body about the size of a large fowl ; in length three feet, and in breadth fourteen The bill is slender, five inches long, and much curved at the point ; the color is dusky ; from the base a red- dish -dark-colored skin spreads on each side of the head, taking in the eyes : from the under mandible hangs a large membranaceous bag attached some way down the throat, as in the pelican, and applied to the same uses ; the color of this is a fine deep red, sprinkled on the sides with a few scattered feathers : the whole plumage is brownish black, except the wing coverts, which have a rufous tinge : the tail is long, and much forked ; the outer feathers are eighteen inches or more in length, the middle ones from seven to eight : the legs are small, all the toes are webbed together, and the webs are deeply indented ; the color of them is dusky-red. The female differs in wanting the membranaceous pouch under the chin, and in having the belly white : in other things it is like the male. The frigate pelican, or man-of-war bird, is chiefly, if not wholly, met with between the tropics, and ever out at sea, being only seen on the wing. It is usual with other birds, when fatigued with fly- ing, to rest on the surface of the water; but nature, from the exceeding length of wing or- dained to this, has made the rising therefrom utterly impossible; though perhaps this is no defect, as it scarcely seems to require much rest. From the length of winsr, and its apparent easy gliding motion (much like that of the kite), it appears capable of sustaining very long flights, and it is often seen above 100, and sometimes above 200, leagues from land. It also attacks gulls and other birds which have caugiit a fish, when it obliges them to disgorge it, and then seizes it before it falls into the water. They make nests on trees, and on the rocks. They lay one or two eggs of a flesh-color marked with crimson spots. The young birds are covered with grayish-white down : the

legs are of the same color, and the bill is white. There is a variety of this species, w Inch is less, measuring only two feet nine inches in length ; the extent from wing to wing is five feet and a half. Tlie bill is five inches long, and red ; the base of it and bare space round the eye are of the same color ; the nostrils are sufticlently apparent, and appear near the base ; the shape of the bill is as in the larger one: the head, hind part of the neck, and upper part.s of the body and wings are ferruginous brown ; the throat, fore part of the neck, and breast, are white ; the tail is greatly forked as in the other ; the legs are of a dirty- yellow. Some suppose that the greater and lesser frigates are the same birds, in diff"erent periods of age.

2. P. bassanus, the gannet, or solan goose.

weighs seven pounds ; the length is three feet one inch ; the breadth six feet two inches. The bill is six inches long, stnught almost to the point, where it inclines down ; and the sides are irregularly jagged, that it may hold its prey with more security : about an inch from the base of the upper mandible is a sharp process pointing forward ; it has no nostrils, but in tlieir place a long furrow, that reaches almost to the end of the bill ; the whole is of a dirty white, tinge 1 with ash color. The tongue is very small, and placed low in the mouth ; a naked skin of a fine blue surrounds the eyes, which are of a pale yellow, and are full of vivacity : this bird is remarkable for the cjuickness of its sight. Martin tells us that solan is derived from an Irish word expressive of that quality. From the corner of the mouth is a narrow slip of black bare skin, that extends to the hind part of the head ; be- neath the chin is another that, like the pouch of the pelican, is dilatable, and of size sufficient to contain six entire herrings; which in the breeding season it carries at once to its mate or young. The young birds, during the first year, differ greatly in color from the old ones ; being of a dusky hue, speckled with numerous trian- guIarˆjWhite spots ; and at that time resemble in colors the speckled diver. Each bird, if left undisturbed, would only lay one egg in the year, but if that be taken away they will lay another, if that is also taken then a third, but never more that season. Their egg is white and rather less than that of the common goose; the nest is large, and formed of any thing the bird finds floating on the water, such as grass, sea-plants, shavings, &c. These birds frequent the Isle of Ailsa, in the Frith of Clyde ; the rocks adjacent to St. Kilda ; the Stalks of Souliskerry, near the Orkneys ; the Skelig Isles, off the coasts of Kerry, Ireland ; and the Bass Isle, in the Frith of Forth : the multitudes that inhabit these places are prodigious. These birds are well known on most of the coasts of England, but not by tlie name of the solan geese. In Corn- wall and in Ireland they

are called gannets; by the Welsh gan. We are uncertain whether the gannet breeds in any other parts of Europe besides our own islands ; except, as Mr. Ray suspects, the sula (described in Clusius's Exot- ics, which breeds in Feroe Isles) be the same bird.

3. P. carbo, the corvorant, sometimes exceeds seven pounds in weight; the length three feet four inches ; the extent four feet two inches ; the bill dusky, five inches long, destitute of nostrils ; the base of the lower mandible is covered with a naked yellow skin, that extends under the chin, and forms a sort of pouch; a loose skin of the same color reaches from the upper mandible round the eyes and angles of the mouth ; the head and neck are of a sooty blackness, but tmder the chin of the male the feathers are wliite ; and the head in that sex is adorned with a short, loose, pendant crest; in some both the crest and hind part of the head are streaked with white. The coverts of the wings, the scapulars, and the back, are of a deep green, edged with black, and glossed with blue ; the quill feathers and tail dusky ; the legs are

short, strong, and black ; the middle claw ser- rated on the inside ; the irides are of a light ash-color. These birds occupy the highest parts of the cliffs that impend over the sea ; they make their nests of sticks, sea-tang, grass, &c., and lay six or seven white eggs of an oblong form. In winter they disperse along the shores, and visit the fresh waters, where they make great havoc among the fish. They are remark- ably voracious, having a most sudden digestion, promoted by the vast quantity of small worms that fill their intestines. The corvorant has the rankest and most disagreeable smell of any bird, even when alive. Its form is disagreeable ; its voice hoarse and croaking, and its qualities base. The Chinese make great use of these birds, or a congenerous sort, in fishing ; not for amusement, bat profit.

4. P. graculus, the shag, called in the north of England the crane, is much inferior in size to the corvorant ; the length is twenty-seven inches ; the breadth three feet six inches ; the weight three pounds and three quarters. The bill is four inches long, and more slender than that of the preceding ; the head is adorned with a crest two inches long, pointing backward ; the whole plumage of the upper part of this bird is of a fine and very shining green ; the edge of the feathers a purplish black ; but the lower part of the back, the head, and neck, wholly green ; the belly is dusky ; the tail of a dusky hue, tinged with green ; the legs are black, and like those of the corvorant. Both these kinds agree in their manners, and breed in the same places ; and, what is very strange in web-footed birds, will perch and build in trees : both swim with their head quite erect, and are very difficult to be shot ; for, like the grebes and divers, as soon as they see the flash of the gun, they pop under water,, and never rise but at a considerable dis- tance.

5. P. onocrotalus, or the pelican of Asia, Africa, and America ; though Linnceus thinks that the pelican of America may be a distinct variety. This creature, in Africa, is much larger in the body than a swan, and somewhat of the same shape and color. Its four toes are all webbed together ; and its neck in some measure resembles that of a swan ; but the singularity in which it differs from all other birds is in the bill and the great pouch underneath. This enor- mous bill is fifteen inches from the point to the opening of the mouth, which is a good way back behind the eyes. At the base the bill is some- what greenish, but varies towards the end, whei-e it hooks downwards. The under chap is still more extraordinary ; for to the lower edges of it hang a bag, reaching the whole length of the bill to the neck, which is said to be capable of containing fifteen quarts of water. This bag the bird has a power of wrinkling up into the hollow of the under chap ; but by opening the bill, and putting one's hand down into the bag, it may be distended at pleasure. The skin of which it is formed will then be seen of a bluish ash-color, with many fibres and veins running over its surface. It is not covered with feathers, but with a short downy substance, as smooth and as soft as sattin, and is attached all along to

the under edges of the chap, is fixed backward to the neck of the bird by proper lij^aments, and readies nearly half way down. When this bag is empty it is not seen ; but, when the bird has fished with success, it is then incredible to what an extent it is often seen dilated. For the first thing the pelican does in fishing is to fill up the bag ; and then it returns to digest its bur- den at leisure. When the bill is opened to its widest extent, a person may run his head into the bird's mouth, and conceal it in his monstrous pouch, tlius adapted for very singular purposes. Tertre affirms that it will hide as many fish as will serve sixty hungry men for a meal. This pelican was once also known in Europe, parti- cularly in Russia ; but it seems to have deserted our coasts. This is the bird of which so many fabulous accounts have been propagated ; such as its feeding its young with its own blood, and its carrying a provision of water for them in its great reservoir in the desert. But the absurdity of the first account answers itself; and, as for the latter, the pelican uses its bag for very dif- ferent purposes than that of filling it with water. Clavigero, in his History of Mexico, says that, ' there are two species, or rather varieties, of this bird in Mexico ; the one having a smooth bill, the other a notched one.' The pelican, says Labat, has strong wings, furnished with thick plumage of an ash-color, as are the rest of the feathers over the whole body. Its eyes are very small, when compared with the size of its head ; there is a sadness in its countenance, and its whole air is melancholy. It is slow of flight, and, when it rises to fly,

performs it with diffi- culty and labor; but, when it perceives a fish sufficiently near the surface, it darts down upon it with the swiftness of an arrow, seizes it with unerring certainty, and stores it up in the pouch. It reposes for the night, and often spends a great part of the day, sitting in dismal solemnity, and, as it would seem, half asleep on a tree. The same indolence attends them even in pre- paring for incubation, and defending their young when excluded. The native Americans kill vast numbers ; not to eat, for they are not fit even for the banquet of a savage, but to convert their large bags into purses and tobacco pouches. Some authors say the pelican lives sixty or seventy years. Captain Keeling, in his voyage to Sierra Leone, says the pelicans there are as large as swans, of a white color, with exceeding long bills ; and M. Thevenot, in his Travels 1o the Levant, observes that the pelicans about some parts of the Nile near the Ked Sea .swim by the bank side like geese, in such great num- bers that they cannot be counted. F. Morrolla, in his Voyage to Congo, says, pelicans are often met with in the road to Singa, and are all over black, except on their breast, which is of a flesh color like the neck of a turkey, lie adds that father Francis de Pavia informed him that on his journey to Singia he observed certain large white birds, with long beaks, necks, and feet, which, whenever they heard the sound of an in- strument; began immediately to dance and leap about t'.ie rivers, where they always reside, and whereof they were great lovers ; this, he said, he took a great pleasure to contemplate, and conti-

nued often upon the banks of the rivers to ob- serve.

6. P. pussus, or the great booby, called by Linnaeus pelicani bassani pussus, frequents the rivers and sea coasts of Florida, pursuing and devouring fishes. Mr. Catesby informs us, that he has several times found them disabled, and sometimes dead, on the shore ; whence he thinks that they meet with sharks or other vora- cious fishes, which destroy them. The bird is about the size of a goose ; the head and neck remarkably prominent ; the back of a brown color ; the belly dusky white ; the feet black, and shaped like those of a corvorant ; the head elegantly spotted with white ; the wings extend six feet when spread. Both this species and the sula have a joint in the upper mandible of the bill, by which they can raise it considerably from the lov/er one without opening the mouth.

7. P. sula, the booby, is somewhat less than a goose ; the basis of the bill yellow, and of bare feathers; the eyes of a light gray color; the lower part of the bill of a light brown. The colors of the body are brown and white; but varied so in diff'erent individuals that they can- not be described by them. Their wings are very long ; their legs and feet pale yellow, shaped like those of corvorants. They frequent the Bahama Islands, where they breed all months in the year, laying one, two, or three eggs, on the bare

rock. While young, they are covered with a white down, and continue so till they are almost ready to fly. They feed on fish, but have a very troublesome enemy in the man-of-war bird, which lives on the spoils obtained from other sea-birds, particularly the booby. Such readers as desire further information respecting this numerous genus may consult Edwards's History of Birds ; Natural History of Jamaica; Mem. de I'Academie Iloyale des Sciences, depuis 1666 jusqu' a 1699, tom. 3, p. 186; Willoughby ; Pennant's British and Arctic Zoology; and Latham's Synopsis of Birds.

PELIDES, a patronymic of Achilles and Pyrrhus, as descended of Peleus.

PELIGNI, an ancient nation of Italy, who dwelt near the Sabines and the Marsi. Their chief towns were Cortinium and Sulmo. Liv. viii. 6, 29. Strabo 5.

PELINNA, or Pelinn.i:um, an ancient town of Macedonia. Strabo. xiv. Liv. xxxvi. 10, and 14.

PELION, or Pelios, a mountain of Thes- saly, near Ossa, hanging over the Sinus Pelasgi- ciis, or Pegasicus ; its top covered with pines, the sides with oaks, and wild ;ish. (Diod. Sic. Mela. Virg. Hor. Ovid. Sen. '. Flac.) From this mountain was cut the spear of Achilles, called pelias, which none but himself could wield. (Homer.) Dicearchus, Aristotle's sclio- lar, found this mountain 1250 paces higher than any other of Thessaly. (Pliny.) Pelius, and Pe- liacus, the epithets. (Cic. Catul.)

PELIUM, a town of Macedonia. Liv. 31,40.

PELL (John), D. D., an eminent mathemati- cian, of an ancient family in Lincolnshire, bom at Southwyke in Sussex, March, 1st, 1610, and educated at Cambridge, where he. took his de- gree of M.A. in 1630. In 1629 he drew up

the Description and Use of the Quadrant. In 1643 he Nvas chosen professor of mathematics at Amsterdam. In 1646 the prince of Orange ap- pointed him professor of that at Breda. He re- turned to England in 1652; and, in 1654, was sent by Oliver Cromwell as agent to the pro- testant Swiss Cantons. He resided at Zurich four years, with the title of Ablegatus, and returned on the 23d of June, 1658. After the Restoration, which he

contributed to promote, he entered into orders ; was created D. D., ordained deacon in 1661, and rector of Laingdon, in Essex, in 1663. He published a work on Algebra, and on the tenth of Euclid, with other tracts. He died at London, December 12th, 1685.

PELLA, in ancient geography, a town of Macedonia on the confines of Emathia. (Pto- lemy.) Herodotus allots it to Bottiaea, a mari- time district on the Sinus Tliermaicus. It was the royal residence, situated on an eminence, on the south-west, encompassed with unpassable marshes summer and winter : in which, next the town, a citadel rose like an island, placed on a bank or dam, a prodigious work, both support- ing the wall and securing it from hurt by the circumfluent water. At a distance, it seemed close to the town, but was separated from it by the Ludias, running by the walls, and jointed to it by a bridge, 120 stadia from the sea, the Ludias being so far navigable. (Liv. Strab.) Mela calls it Pelle. It was the birth-place of Philip, who enlarged it ; and afterwards of Alexander (Strabo, Mela) ; and continued to be the royal residence down to Perseus. (Livy.) It is called Pella Colonia, by Pliny, and Colonia Julia Augusta upon coin. It afterwards declined, and had but few and mean inhabitants. (Lucian.) It is now called UaXanma, Palatisia, i. e. the little Palace. (Holstenius.) Pellaeus, the gentili- tious name and epithet. Lucian, Juv. Mart.

Pella, a town of the Decapolis, on the other side the Jordan ; abounding in water. (Poly. Plin.) built by the Macedonians (Strabo) ; or by Seleucus (Eusebius) ; anciently called Butis (Stephanus) ; and Apamea (Strabo) ; thirty-five miles north-east of Gerasa. (Ptol.) Thither the Christians, just before the siege of Jerusalem by Titus, were divinely admonished to fly. (Euse- bius.) It was the utmost boundary of the PerEea, or Transjordan country, on the north. (Josephus.)

PELLˆUS, a title of Alexander.

PELLANE, a town of Laconia. Pans. iii. 21.

PELLE. See Pella.

PELLEGRIN (Simon Joseph), a learned French writer, bom at Versailles, in 1663. He entered into the order of Servites ; and wrote on various subjects, some spiritual, others dramatic, poetical, &:c. In 1704 he obtained the Aca- demy's prize, for his Epistle to Louis XI\ . on the success of his arms. He wrote also some comedies and operas. By the influence of madame Maintenon, he was translated to the or- der of Cluny. He died in 1745, aged eighty-two.

PELLEGRINI (Antony), an eminent histori- cal painter, born at Padua, in 1674. He stu- died at 'enice under Paul Pagani. The duke of Manchester brought him over to England, where he performed several capital works for the nobility. He died in 1741.

PELLEGRINO (Tibaldi, or Theobald), aa eminent Italian painter and sculptor, born at Bologna, in 1522. He was employed by Charles V. to ornament the Escurial ; for which he was rewarded with 100,000 crowns and the title of marquis. He died in 1592, aˆred seventy.

Pellegrino of Modena, an eminent Italian painter, born in that city in 1511. He studied under Raphael, and was employed in the paint- ings of the Vatican. He died of a wound re- ceived in the street in attempting to rescue his son, who had committed murder.

PELLERIN (Joseph), an eminent French antiquarian, born in 1683. He was commissary general, and clerk of the French marine. He became famous for a capital collection of medals, which Louis XIV. enabled him to purchase ; and he enriched the science with a valuable work on the subject, in nine vols. 4to. with nu- merous elegant plates. He died in 1782, aged ninety-nine.

PEL'LET, n. s.) Fr. pelote ; a diminutive

Pel'leted, adj. S of Lat. pila. A little ball ; a bullet : pellated is consisting of bullets.

That which is sold to the merchants is made into little pellets and sealed. Sandys.

My brave Egyptians all,

By the discandying of this pelleted storm,

Lie graveless. Shakspeare.

A cube or jtellet of yellow wax as much as half the spirit of wine, burnt only eighty-seven pulses.

Bacon.

The force of gunpowder hath been ascribed to rarefaction of the earthy substance into flame, and so followetli a dilatation : and therefore, lest two bodies should be in one place, there must needs also follow an expulsion of the pellet or blowing up of the mine ; but these are ignorant speculations ; for flame, if there were nothmg else, will be suffocated with any hard body,

such as a pellet is, or the barrel of a gun ; so as the hard body would kill the flame.

Id.

How shall they reach us in the air with those pellets they can hardly roll upon the ground ?

L' Estrange.

I9 a shooting trunk, the longer it is to a certain limit, the more forcibly the air passes and drives the pellet. Hay.

I dressed with little pellets of lint. Wisemari.

Pellets, in heraldry, those roundles that are black ; called also otrresses and gunstones, and by the French heralds toteaux de salsle.

PELLETIER (Claude), a learned French lawyer, born at Paris, in 1630. He was coun- sellor of the Chatelet, and president of the Merchants ; in which office he constructed the celebrated quay which bears his name. He suc- ceeded M. Colbert, as comptroller general of the finances. He wrote several books on Law ; also Comes Tlieologus, Comes Rusticus, &c.

Pelletier (James), M. D., and an eminent mathematician, born at Mans in 1517. He was an excellent Latin and French poet, a good ora- tor, physician, and grammarian. He wrote Oeuvres Poetiques, Commentaires Latins sur Euclide, and a Treatise on Orthography. He died at Paris in 1683.

Pelletier (Bertraud), a late eminent French ';heniist, bom at Bavonne in 1761. He was ad-

mitted a pupil in the chemical laboratory of the French college, when very youn^, and gave early proofs of genius. He studied five years under the celebrated professor Darcet, and at twenty- one years of age published Observations on the Arsenical Acid. After this his discoveries and publications liecame numerous : on the crystal- lisation of sulphur, cinnabar and the deliques- cent salts; on zeolites; on the oxygenated muriatic acid ; on a-thers, phosphorus, the phos- plioric acid, &c. But

during his operations on that most astonishing production of chemistry, phosphorus, he burned himself so danjierously, that he was confined to bed for six months. On his recovery, lie began his analysis of the plum- bagos of various countries : and, during his t-nalysis of the carbonate of barytes, discovered Dy experiments on various animals that this earth is a true poison. He also analysed strontian, verditer, &:c. Sec, and was going on successfully with his chemical experiments, when he at last fell a sacrifice to his thirst after science, by respiring the oxygenated muriatic gas till it had almost killed him instantaneously ; but, though he recovered for the moment, it induced a convulsive asthma, and pulmonary consump- tion, which cut him off in the flower of his age; and he died at Paris, July 21st, 1797. He was a member of the Academy of Sciences at Paris.

*PELLEVV'S (Sir Edward), Islands, a group of islands on the north coast of New Holland, and west shore of the gulf of Carpentaria. They extend thirty-four*miles east and west, by twenty- two north and south : the five principal islands being from seven to seventeen miles in length. They are of a hard close-grained sand-stone, with a small mi.xture of quartz, slightly impreg- nated with iron. \ here the surface is not bare rock, it IS sand, with a small proportion of ve- getable soil, in no case approaching to fertility. The larger islands are, however, covered with trees, bushes, and in some low places with grass. In the larger islands traces of the kangaroo and turtle tracks are to be seen. The names of them are Vanderlin's, North-West, South-west, and Centre Islands. Lat. of Centre Island 15►► 39′ south.*

Pellew, Cape, the northern point of an is- land ot Sir Edward Pellew's group, in the gulf of Carpentaria, called North Island. Long. 137►► 2′ E., lat. 16►► 30′ 30″ S.

Pellew, Ednnund (Viscount Exmouth), a gal- lant British admiral, who, by a life of service and danger, crowned by useful as well as brilliant victories, arduously and honourably earned both name and rank. He was born at Dover in 1757, and entered the navy before the age of fourteen, and made his first cruize in the Juno with cap- tain Stott, to take possession of the Falkland Islands. After several events which would have damped the ardor of a less vigorous mind, he obtained and embraced the opportunity of dis-. tinguishing himself in the battle on lake Cham- plain. After the convention of Saratoga he obtained a lieutenancy. He next participated in the dangers of the Flushing expedition, when his captain being killed at his side, he com- manded, and had he lived, his valor and spirit could not have exceeded what Pellew dis-

played in continuing the attack. In 1782 he was made post captain, and took the command of the Salisbury, off the Newfoundland coast. The

desperate action with the Cleopatra, never exceeded in the annals of naval heroism, ob- tained for captain Pellew the honor of knight- hood. On the renewal of hostilities with the French, he was appointed to the command of the Tenant, and raised to the rank of vice- admiral. In 1814 he was raised to the peerage, and became admiral of the blue ; after which he assisted in restoring Joachim, king of Naples, and concluded treaties with Algiers, Tunis, and Trijioli, for the abolition of Christian slavery. The bombardment of Algiers is an epoch in British naval history. After one of the most obstinate and bloody defences, the dey was compelled to submit, and to liberate all Christian captives, but strangely enough permitted to retain pos- session of his government, notwithstanding his well known perfidy. For this glorious exploit he received the thanks of both houses of par- liament, and was raised to the rank of viscount. Thus ended his acts of heroism, but not of bene- volence, which ceased only with his honorable life. This was terminated in the year 1833, in the seventy-sixth year of his age.

PEL'LICLE, n. s Lat. pellicula. A thin skin or film.

Pellicle, among physicians, denotes a thin film or fragment of a membrane.

PELLISON, orPELissox Fontaniep. (Paul), an author of the seventeenth century, was born at Beziers in 1624, and educated in the Protes- tant religion. In 1652 he purchased the post of secretary to the king, and in 1657 became first deputy to JM. Fouquet. He suffered by the dis- grace of that minister; and in 1661 was confined in the Bastile, whence he was not discharged till 1665. During his confinement he applied himself to the study of controversy ; and in 1670 abjured the Protestant religion. Louis XIV. re- warded him with an annual pension of 2000 crowns, and several posts. In 1676 he had the abbey of Giment, and some years after the priory of St. Orens at Auch. He died at Versailles in

1693.

Pellttory, Bastard, Pellitort, Dovble. Two species of achillaea.

Pellitory of Spain. SeeANTHEMis.

Pellitory of Spain, False, a species of chrysanthemum.

Pellitory, Tree. See Zaxtiioxylcm.

PE'LLxMELL, adv. Fr. pelle melle. ; Lat. pello and miscella. Confusedly ; tumultuously ; with confused violence.

PELLS, n. s. Lat. pellis, pell, a record. Rolls or records of the Exchequer.

PEL'LUCID, adj. Lsit. pellucidus. Clear; transparent ; not opaque.

PELOPIA, a festival observed by the Eleans in honor of Pelops. A ram was sacrificed on the occasion, which both priests and people were prohibited from partaking of, on pain of excommunication from Jupiter's temple ###, the neck only was allotted to the officer who pro- vided wood for the sacrifice. This officer was called SvXive ; and white poplar was the only wood made use of at this solemnity.

PELOPIDAS, the son of Hippoclus, a cele- brated general of Thebes, in Boeotia. He was descended of an illustrious family, and had im- mense riches, which he distributed with uncom- mon liberality among the poor citizens. He was the intimate friend of Epaminondas ; and these two patriots, by their valor and public spirit, raised their country to a degree of im- portance and glory, that it never enjoyed before or after them. Thebes had been for some time under the government of Spartan tyrants, who exiled Pelopidas and the other friends of Theban independence; but Pelopidas returned from Athens, with a chosen band of twelve other exiled Thebans, who killed the Spartan tyrants, and restored liberty to their country. The The- bans then elected him governor of Boeotia, and associated Epaminondas with him; and these two great men immortalised their names by the decisive victory at Leuctra. In a war which the Thebans afterwards carried on against Alexan- der, tyrant of Pheree, Pelopidas was appointed commander, but had nearly lost his life, by trusting himself unarmed in the tyrant's camp. Though in the character of an ambassador, he was seized as a prisoner, but rescued by Epa- minondas. He was afterwards killed in a battle with the same tyrant, though his troops obtained the victory, A.A.C. 364; but his death was amply revenged by the Thebans, who took Phera?, and killed the tyrant. Statues of brass were erected, and every other mark of respect paid to the memory of Pelopidas ; and his children were endowed with a large territory of land. ### Xenoph. Plut. C. Nep. Diod. Polyb.

PELOPONNESIAN War, Peloponnesiacum bellum, a famous war, which lasted twenty-seven years between the Athenians and the inhabitants of Peloponnesus, with their respective allies, and which ended in the overthrow of the Athenian republic, and its subjection to thirty tyrants. It is the most interesting of all the wars which happened among the inhabitants of ancient Greece. See Attica.

PELOPONNESUS, a large peninsula in the south of Greece ; so called, from Pelopis vtaoQ, or insula, though properly not an island, but a peninsula ; yet wanting but little to be one, viz. the isthmus of Corinth, ending in a point. ††† Dionysius. It was anciently called Apia and Pelasgia; and is situated between the iEgean and Ionian Seas, and resembles a plantain leaf, by its angular recesses or bays. ††† Plin, Strabo, Mela. Strabo adds, from Homer, that one of its ancient names was Argos, with the epithet Achaicum, to distinguish it fromThessaly, called Pelasgium. It was divided into six parts; viz. Argolis, Laconica, Messenia, Elis, Achaia, and Arcadia. ††† Mela. It is now called the Morea. It comprehended the most southern parts of Greece ; and was 200 miles long, and 140 broad.

PELOPS, in fabulous history, the son of Tantalus king of Phrygia. In his infancy he was murdered by his father, cut in pieces, and served up as a feast to the gods, to try their di- vine omniscience. None of them however eat of him, but Ceres, who eat one of his shoulders. Ju]>iter restored him to life, and gave him an

ivory shoulder, which had the miraculous power of healing all diseases by its touch ; and he pu- nished the impiety of Tantalus, by condemning him to eternal hunger and thirst, in the view of excellent food and drink in hell. Pelops after- wards went into Elis, where he became a suitor of Hippodamia, the daughter of Oenomaus, king of Pisa, who, being warned by an oracle that he would perish by the hands of his son-in-law, and being himself an excellent charioteer, re- fused to marry her to any person but the man who should overcome him in a chariot race. The previous condition being that those whom he defeated were to forfeit their lives, thirteen young princes had already perished. Pelops, however, ventured to compete with him, and having previously bribed Myrtilus, his chario- teer, to mount him on an insufficient chariot, Oenomaus was killed in the course, but, with his last breath, requested Pelops to avenge him on Myrtilus ; which he accordingly did, by throwing him into the sea, from him named Myrtoum Mare. Pelops then married Hippo- damia, by whom he had Atreus, Thyestes, Pit- theus, Troezen, &:c. He afterwards became so powerful that all the territory of Greece beyond the isthmus of Corinth was from him named Pe- loponnesus. After his death he received divine honors, and was revered above all the other he- roes of Greece. He had a temple at Olympia, erected by Hercules near that of Jupiter.

PELORIAS, Peloris, or Pelorus, in an- cient geography, one of the three capes of Sicily, now called Faro. It is said to have been so named from Pelorus, the pilot of the ship which carried Hannibal out of Italy, whom that gene- ral, when he found the tide driving the vessel into the straits of Charybdis, killed, on the sup- position that he was going to betray him to the Romans; and therefore, to gratify his name, he named the cape after

him.

PELT, 71. s. Teut. peltze ; Lat. pellis. Skin ; hide.

The camers hair is taken for the skin or pelt with the hair upon it. Brownie's Vulgar Errours.

A scabby tetter on their pelts will stick, When the raw rain has pierced them to the quick.

Dry den.

Pelt, v. a. } Fr. peloter ; from German Pelti'ng, adj. S poltern. Skinner. More pro- bably as Lye suggests contracted from Pellet. To throw at ; strike with something thrown ; hence to annoy : pelting, therefore, is used by Shakspeare for paltry annoyance.

Poor naked viTetches, wheresoe'er you are, That bide the pelting of this pitiless storm ! How shall your houseless heads and unfed sides, Your looped and windowed raggedness defend you ?

Shakspeare. Do but stand upon the foaming shore, The chiding billows seem to pelt the clouds. Id. Could great men thunder, Jove could ne'er be quiet ; For every pelting petty officer Would use his heaven for diunder. Id,

Fogs, falling in the land, Have every pelting river made so proud, That they have overborn their continents. Id. A tenement or pelting farm. Id.

PEMBROKESHIRE.

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No zealous brother there would want a stone To maul us cardinals, and pelt pope Joan. Dryden. J\ly Phillis me with pelted apples plies,

Then tripping to the woods the wanton hies. Id.

Obscure persons have insulted men of great worth, and pelted them from coverts with little objections.

Atlerburij.

The whole empire could hardly subdue me, and I might easily with stones pelt the metropolis to pieces.

Swift,

No learned disputants would take the field, Sure not to conquer, and sure not to yield : Both sides deceived, if rightly understood, Peltini; each other for the public good. Cowper.

PELTA, a small, light, manageable buckler, used by the ancients. It was worn by the Ama- zons. It is said to have resembled an ivy leaf in form; by others, it is compared to the leaf of an Indian fig-tree, and, by Servius, to the moon in her first quarter.

PELTARIA, in botany, a genus of the silicu- losa order, belonging to the tetradynamia class of plants ; and in the natural method ranking under the thirty-ninth order, siliquosae. The si- licula is entire, and nearly orbiculated, com- pressed plane, and not opening.

PELV'IS. (Gr. TTtXvc, a basin ; because it is shaped like a basin used in former times). The cavity below the belly. It contains the rectum and urinary bladder, the internal organs of gene- ration, and has its muscles and bones.

The pelvis consists, in the child, of many pieces, but, in the adult, it is formed of four bones ; of the os sacrum behind, the ossa inno- minata on either side, and the oscoccygis below. It is wide and expanded at its upper part, and contracted at its inferior aperture. The upper part of the pelvis, properly so called, is bounded by an oval ring, which parts the cavity of the pelvis from the cavity of the abdomen. This circle is denominated the brim of the pelvis ; it is formed by a continued and prominent line along the upper part of the sacrum, the middle of the ilium, and the upper part, or crest, of the OS pubis. The circle of the brim supports the impregnated womb ; keeps it up against the pressure of labor pains ; and sometimes this line has been ' as sharp as a paper-folder, and has cut across the segment of the womb ;' and so by separating the womb from the vagina, has ren- dered delivery impossible; and the child escap- ing into the abdomen the woman has died. The lower part of the pelvis is denominated the out- let. It is composed by the arch of the ossa pu- bis, and by the sciatic ligaments ; it is wide and dilateable, to permit the delivery of the child ; but being sometimes too wide, it permits the child's head to press so suddenly, and with such violence upon the soft parts, that the perinoeum is torn.

Marks of the female skeleton have been sought for in the skull, as in the continuation of sagittal suture; but the truest marks are those which relate to that great function by which chiefly the sexes are distinguished; for while the male pel- vis is large and strong, with a small cavity, nar- row openings, and bones of greater strength, the female pelvis is very shallow and wide, with a large cavity and slender bones, and every peculiarity which mav conduce to the easy passage of the

child. Tlie office of the pelvis is to give a steady bearing to the trunk, and to connect it with the lower extremities, by a sure and firm joining, to form the centre of all the great motions of the body.

PELUSIUM, in ancient geography, a noble and strong city of Egj'pt, without the Delta, twenty stadia from the sea; situated amidst marshes ; and hence its name and its strength. It is called the key or inlet of Egypt, by Diodorus and Ilirtius ; which being taken, the rest of Egypt lay quite exposed to an enemy. It is called Sin by Ezekiel. Pelusiacus the epi- thet. (Virgil, Diodorus.) From its ruins arose Damietta. Pelusium was often taken and pil- laged during the wars of the Romans, the (Greeks, and the Arabs. But in spite of so many dis- asters she preserved to the time of the Crusades her riches and her commerce. The Christian princes, having taken it by storm, sacked it. It never again rose from its ruins ; and the inhabi- tants went to Damietta. See Damietta.

PEMBROKE, a borough and market town of South Wales, consisting of the two parishes in Castle JMartin hundred, Pembrokeshire, and situate on a branch of Milford Haven, ten miles south by east from Haverfordwest, and 256 west from London. It consists principally of one long street, and has two churches, St. .Mary's and St. Michael's, and a third, St. Nicholas', in the suburbs. It has a strong resemblance to Edinburgh and Sterling, but on a much smaller scale. It has a town-hall and a free-school, and is watered by two small rivers, over which are handsome bridges. It was anciently surrounded by walls, of which a large portion remain, and had a magnificent castle, seated en a rock, at the west end of the town, supposed to have been founded in 1092 by Arnulph de Montgomery, son of the earl of Shrewsbury, on the site of a more ancient British work. During the Welsh wars it was frequently besieged ; but always considered impregnable. It was reduced by Oliver Cromwell. It is now entirely ruinous. Of the town gates that facing the north is the only one now standing; the other two having been long since destroyed. The east gate, which re- mained in Leland's time, is described by him as consisting of solid iron, and as being highly or- namented.

PEMBROKESHIRE, a county of Wales, takes its name from Pembroke, its principal town, and is seated on the south-west extremity of the principality, being bounded on all sides by the sea, except o i the east, where it joins to Caer- narvonshire, it being washed on the south by the Bristol Channel, and on the west and north by St. George's Channel or the Irish Sea. Its ex- tent from north to south is about thirty-five miles, and from east to west twenty-nine miles, comprehending about 368,000 acres. It is di- vided into seven hundreds, containing seven towns, and 144 parishes.

This county is in the province of Canterbury and diocese of St. David's. The surface is for the most part composed of swells or easy slopes, but not mountainous, except a ridge of hills which runs from the coast, near Fisgard, to the borders of Caernarvonshire. These bills are

called the mountains; and the people distinguish the country with reference to the hills, the north side being called above the mountains, and the south side below. A considerable tract, consisting of the country which lies west of Miiford Haven, and between that bay and St. George's Channel, is called by the Welsh Rhos, which signifies a green field. In this district a colony of Flemings settled, by the permission of Henry I., at the time when the sea had broke through the dykes of their own country, and had done incredible damage. This district was, in Camden's time, called Little England beyond Wales. Giraldus, speaking of the Flemish settled here, says, they are a stout resolute nation, very offensive to the Welsh by their frequent skirmishes : and ob- serves that they were much inured to the cloth- ing trade, and to merchandise ; and ready to in- crease their stock by any labor and hazard, both by sea and land. The Flemings' Way or Road, a work performed by them, may be still seen extending through a long tract of ground. The Welsh, who were not well pleased with this colony, frequently attempted to drive them out by ravaging and spoiling their borders, but with- out success. The annotator upon Camde in- forms us, that all Wales with their united force have several times invaded their country, but the Flemings maintained their ground; and Rhos is still inhabited by their descendants, who may yet be distinguished by their speech and cus- toms. Mr. Malkin observes that Pembrokeshire has a very great extent of coast ; and indeed it seems almost as if it were appended to the main land on the eastern side. The instances of lon- gevity are numerous and remarkable, so that persons living to the age of nmety are by no means of rare occurrence. The country is much subject to rain, in which nature seems kindly to have provided for the dryness of the soil. Snow in ordinary seasons is seldom known to lie longer than a day near the coast. The mountains, how- ever, in the north of the county have their full share. It is a circumstance which has been often noticed, but may be worth repeating, how curi- ously the woods, exposed to the south and west, are shorn by the winds from the sea. With the exception of a small tract towards the north, this is the most level part of Wales, and seems to bear a resemblance to the general face of English country, as close as the affinity of its inhabitants to the English people ; so that it has been called Little England beyond Wales, as before observed. The practice of using surnames always prevailed here as in England ; at least in the southern hundreds. The style of building in the towns is little if

at all superior to that of Wales in general ; but the cottages are good and comfort- able. Animal food is much more in use than among the common people in the neighbouring counties, who live very much on the produce of the dairy. The churches of the English or Fle- mish hundreds afford a very pleasing contrast to those whose external meanness and internal ueformity has been so frequently noticed : here they are never seen without tower or spire, and are in general well kept, and adorned with de- cent monuments. In the places near the coast the deiklcation from the simp.ictty of the Welsh

character is very apparent ; and indeed there are {aw parts of the country where more dissolute manners seem to prevail than about Fisgard, Newport, and St. Dogmaels.

The great division of the county is into Eng- lisii and Welsh. There are about 144 parishes : of these seveiity-four are inhabited by the English, and sixty-four by the Welsh. The rest speak both languages, or rather neither. The country west of Kilgernow, Remais, and Dewis Land hundreds, is esteemed equal in purity to that of any other district. The English hundreds, four out of the seven, are those of Ross, Castle- Martin, Narberth, and Dangleddy. In these two last, and in the western and northern parts of Ross hundred, the English and Welsh are mixed. It is far from being the fact that these two de- scriptions of people are so estranged from each other as never to intermarry. In all the English towns and villages of Pembrokeshire we find in- stances enough of English husbands and Welsh wives, or the reverse, to contradict at least the universality of a separation, in itself so highly unnatural. It is one of those strange tales which, having once gone abroad, is inadvertently ban- died about by the very people of whom it is told. In former ages, when great animosities prevailed between the old and new settlers, they might probably stand aloof from each other ; but after the tranquillity of centuries, that so unaccounta- ble a reserve should continue among the inha- bitants of a little district, not exceeding a square of thirty miles, under the same government and laws, frequenting the same weekly markets for the sale of their agricultural produce, and united by the same interests, is in itself improbable, and will be found to be a mistake, to the extent in which it is asserted. This mistaken idea derives its origin from Giraldus, when these puny rivals were continually at war. No doubt it was then true : and from this source the notion was scat- tered abroad in popular opinions and tales, which still keep their ground ; while the original facts and circumstances that occasioned them have been vanishing gradually away. The result of more recent inquiries into the actual state of the two parties is, that tliough doubtless the subsist- ing diversity of language prevents that unre- strained interdourse which would otherwise be natural to near neighbours, and tends to perpe- tuate the recollection of national rivalship, the accounts of absolute and unconquerable aliena- tion, contained in many writers, are by far too highly colored. A similar but

equally mistaken idea prevails respecting the difference of lan- guage in North and South Wales. It has been said that those who speak one dialect cannot un- derstand the other. In truth they differ not so much from each other as the vulgar English dia- lects of Kent and Somersetshire. Their prin- cipal repugnance consists in the difi'erent idio- matic acceptations of words, referable to common roots. The same literary dialect is used by all writers, and is equally understood in all parts of Wales.

The principal rivers of this county are the Teify, Cleddy, and Dougledge : the less consi- derable ones are the Gwain, Biran, Nefren, and Rudford. The Teify rises at Liyn Teife, in the

north-east part of Cardiganshire ; and, running south-west, passes the towns of Tregaron, Llam- beter, and Newcaslle-in-l-Lmhn ; at the latter town, turning north-west, it soon afterwards enters this county at Maen, or Defy, and, form- ing its boundary on the north, passes the town of Cardigan, and unites with St. George's Channel at Kemmaes Head. The Cleddy rises in the north part of the county, in the Prescles Mountains, near Rlonachlogdu, and, running nearly south, passes within a sliort distance of Narberth ; and, gently winding to the S. S. W., meets the West Cleddy at Llandshipping, and both united flow into Milford Haven, near Law- renny. The Dougledge River rises in the west part of the county, to the north of Walwy's Cas- tle, and running east is augmented by the waters of the Hiog, about a mile below Haverfordwest ; here it turns to the south-east, and unites with the Cleddy opposite Llandshipping.

The sea coast is in general hilly, with steep or perpendicular cliflfs. On tracujg it from its north-east point, at the mouth of tiie Teify, the most remarkable place is Aberkibor Bay, formed by Cammaes Head on the nortli, and Pendrowry Head on the south, having in its centre the small fishing town of Penyrallt. jSext succeeds New- port Bay, near which are the town of Newport and tishing-village of Eglwys Dinas. Fishguard Bay, forming a much better harbour than either of the above, next presents itself, which has near its centre the town of Fishguard, noted for its trade in herrings. Hence the coast running south-west winds round Stumble Head to that of St. David's, off which lies Ramsey Island, with a group of rocks called the Bishop and his Clerks, which are frequented in the breeding season by vast multitudes of sea-fowl, many of which are unknown in every other part of the is'and. The large bay of St. Bride's succeeds,

forming a safe retreat for vessels in all winds but the west and south-west ; and beyond some islands on its south side is the entrance to the celebrated Milford Haven and its branches. This justly admired harbour, indenting deeply the southern coast of this county, occupies a large space of it With its great basin and the va- rious curving branches that contribute to form it, which are fed by some inconsiderable streams from the interior of the country. Few of these are dignified with any certain appellation, except the Hiog, though most of them suddenly iDCcome great estuaries from mere rivulets, united with the main basin as tlie claws are with the body of a crab, and equally sinuous. The Hiog rises near the village of St. Catherine, in the north- western part of the county, not far from Fish- guard, passing through the centre of the county, and forming a romantic dell for many miles be- fore it reaches the capital town of Haverfordwest in its way to the south. It then becomes navi- gable, and, widening in its course, meets another branch of the Haven at Llandshipping Ferry, wtiich, fed also by its creative stream, descends from the north-east beneath the groves of Sle- batch and Picton Castle. A long winding course succeeds, till a third branch from Loveston in the north-east, and a fourth from the noble ruin of Carew Castle in the south-east, unite beneath Vol. XVL*

the elevated mansion, fine park, and rich woods of Lourenny, and form a second junction with this great body of water beneath their impending shades. Swelling into various bays, and studded with sails, this increased estuary inclines towards the west, being soon afterwards joined by a fifth branch, flowing from the ancient town and ma- jestic bastions of Pembroke Castle. Here the grand basin opens, inclining chiefly to the west, but turning abruptly southward near its mouth, and appearing perfectly land-locked when viewed from within. The ports of Hubberston, Haikin, and Milford, occupy one of the many bays near the centre of this great slieet of water, which un- doubtedly constitutes the most spacious harbour in the British Island.

The chief manufactures of this county consist of a cotton-mill, near Haverfordwest, which em- ploys about loO persons ; an iron forge at Black- pool ; and some iron and tin works on the Teify. This county sends three members to the imperial parliament, viz. one for the shire, one for the town of Pembroke, and one for the town of Haver- fordwest. Pembroke, the county town, gives the title of earl to the family of Herbert: Haver- fordwest the title of baron to the family of De- la-Poer-Beresford : and Castle Martin the title of baron to the family of Campbell.

PEN, V. a. & n. s. (pret. and part. pass. pent). Sax. pennan and pin'oan. To coop; shut up; incage : a fenced or shut up place.

Away with her, and j)en her up. Sliakspeare.

i\Iy heavy son Private in his chamber jiens himself. Id.

My father stole two geese out of a pen. Id.

The plaister alone would -pen the humour already contained in the part, and forbid new humour.

Bacon.

The prevention of mischief is prescribed by the Jewish custom ; they pen up their daughters, and permit them to be acquainted with none. Harvey.

Their armour helped their harm, crushed in and bruised Into their substance pent. Milton.

As when a prowling wolf, Whom hunger drives to seek new haunts for prey. Watching where shepherds pen their flocks at eve In hurdled cotes, amid the field secure. Leaps o'er the fence with ease into the fold. Id.

The glass, wherein it is penned up, hinders it to deliver itself by an expansion of its parts. Boyle, Ah ! that your business had been mine.

To pen the sheep. Dryden,

She in pefw his flocks will fold. Id. Horace,

The cook was ordered to dress capons for supper, and take the best in the pen. L' Estrange.

Ducks in thy ponds, and chickens in thy pens. And be thy turkeys numerous as thy hens. King.

PEN,n. s. & v. a. "J Lat. penna. An instru-

Pen'-knife, >ment of writing: to write:

Pen'-men. J the knife used for making

or mending pens : penmen, those who write, or

largely use the pen.

I hadde many thingis to write to thee, but I woM►► not write to thee bi enke and penne, for I iiope soc to see thee. Wiclif Jon. ii

No longe'' might he in this wise endure. Hut privelj' a penner gan he borwe, And in a lettre wrote he all his sorwe.

Chaucer. Cant. Tales. 3 B

PEN

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PEN

For prey these shepherds two he took, Whose metal stiff he knew he could not bend

With hearsay pictures, or a window look. With one good dance, or letter finely penned.

Sidney. The pens that did his pinions bind. Were like main-yards with flying canvas lined.

Spenser. Never durst poet touch a pen to write, Until his ink were tempered with love's sighs.

Shakˆpeare. I would be loath to cast away my speech ; for, be- sides that it is excellently well penned, I have taken great pains to con it. Id.

Read this challenge, mark but the penning of it.

Id. A sentence spoken by him in English, and peinied out of his mouth by four good secretaries, for trial of our orthography, was set down by them.

Camden's Remains. Some schoolmen, fitter to guide penlaiiveˆ than swords, precisely stand upon it. Bacon.

He frequented sermons, and penned notes with his own hand. Haiiwcivd on Edwanl VI.

We might as soon fell an oak with a penknife.

Hot n day. The digesting my thoughts into order, and the setting them down in writing, was necessary ; for, without such strict examination as the penning them affords, they would haVe been disjointed and roving ones. Digliii on the Soul.

Almost condemned, he moved the judges thus: Hear, but instead of me, my Oedipus ; The judges, hearing with applause, at the' end Freed him, and said, no fool such lines had penned.

Denham. Feathered soon and fledged. They summed their pens ; and, soaring the' air sub- lime, With clang despised the ground.

Miltoiis Paradise Lost. He remembers not that he took oS pen from paper till he had done. Fell.

Eternal deities ! Who write whatever time shall bring to pass. With pens of adamant on plates of brass.

Dry den. He takes the papers, lays them down again ; And, with unwilling fingers, tries the pen. Id.

I can, by designing the letters, tell what new idea it shall exhibit the next moment, barely by drawing my pen over it, which will neither appear if my hands stand still, or, though I move my pen, if my eyes be shut. Locke.

Gentlemen should extempore, or, after a little meditation, speak to some subject without penning of any thing. Id.

The four evangelists, within fifty years after our Saviour's death, consigned to writing that history, which had been published only by the apostles and disciples ; the further consideration of these holy penmen will fall under another part of this discourse.

Addison. Should I publish the praises that are so well penned, they would do honour to the persons who write them. Id.

The precepts penned, or preached by the holy Apostles, were as divine and as perpetual in respect of obligation. White.

The descriptions which the evangelists give shew that both our blessed Lord and the holy penmen of his story were deeply affected. Atierbury.

Twenty fools 1 never saw Come with petitions fairly penned. Desiring I should stand their friend. Su-ift.

A Pen is usually formed of a goose's quill. Pens are also sometimes made of silver, brass, or iron. Dutch pens are made of quills that have passed through hot ashes, to take off the grosser fat and moisture, and render them more transparent.

Pen, or Penstock. See Penstock.

Pen, Fountain, is a pen made of silver, brass, &c., which has been contrived to contain a considerable quantity of ink, and let it flow out by gentle degrees, so as to supply the writer a long time without being under the necessity of taking fresh ink.

Pen, Geometric, an instrument in which, by a circular motion, a right line,

a circle, an ellipse, and other mathematical figures, may be described. It was first invented and explained by John Baptist Suardi, in a work entitled Nouvo Istro- menti per la Descrizzione di diverse Curve An- tichi e Moderne, &c. Several writers had ob- served the curves arising from the compound motion of two circles, one moving round the other; but Suardi first realised the principle, and first reduced it to practice. It has been lately introduced with success into the steam- engine by Watt and Bolton.

Pen, Sea. See Pennatula.

PENiEA, in botany, a genus of the monogy- nia order, and tetrandria class of plants; and in the natural method ranking with those of which the order is doubtful; cal. diphyllous; cor. campanulated ; the style quadrangular ; caps. tetragonal, quadrilocular, and octospermous.

PE'NAL, adj.) Fr. penal, from Lat. pana.

Pen'alty,?!. s. S Denouncing, or enactmg, or used for, punishment : penalty is the punish- ment incurred or denounced.

Lend this money, not as to thy friend. But lend it rather to thine enemy. Who, if he break, thou mayest with better face Exact the jienalty. Shakspeare. Merchant of Venice.

Adamantine chains and penal fires. Milton.

Many of the ancients denied the Antipodes, and some unto the penalty of contrary affirmations ; but the experience of navigations can now assert them beyond all dubitation. Browne.

Political power is a right of making laws with penalties of death, and consequently all less penalties, for preserving property, and employing the force of the community in the execution of laws. Locke.

Gratitude plants such generosity in the heart of man as shall more eftectiially incline him to what is brave and becoming than the terror of any penal law.

South.

Beneath her footstool science groans in chains, And wit dreads exile, penalties, and pains.

Dunciad.

PEN'ANCE, or) Old Fr. penence. Public Pen'nance. S or private infliction

or dis- cipline for sin.

And bitter pennance, with an iron whip. Was wont him once to disciple every day.

Spenser. Mew her up. And make her bear the pennance of her tongue.

Shakspeare. No penitentiary, though he had enjoined him never so straight pennance to expiate his first of- fence, would have counselled him to have given ovei the pursuit of his right. Bacon.

Coming now to the vaults of Popery, I ask for their penances and purgatory ; those Popish penances which presumptuous confessors enjoined as satisfac- tory, and meritorious upon their bold absolutions.

Bp. Hall. Penance is only the punishment inflicted ; not penitence, which is the right word : a man comes not to do penance, because he repents him of his sin, but because he is compelled to it. The old canons wisely enjoined tliree years' penance, sometimes more, because in that time a man got a habit of virtue, and so committed that sin no more for which he did penance. Seldtii.

The scourge Inexorable, and the torturing hour Calls us to pennance.

Miltons Paradise Lost. A Lorain surgeon, who whipped the naked part with a great rod of nettles till all over blistered, per- suaded hira to perform this pennance in a sharp fit he had. Temple.

Penance is a punishment, either voluntary or imposed by authority, for the faults a person has committed. Penance is one of the seven sacra- ments of the Romish church. Besides fasting, alms, abstinence, and the like, which are the ge- neral conditions of penance, there are others of a more particular kind ; as the repeating a cer- tain number of ave-mary's, paternosters, and credos, wearing a hair shn-t, and giving one's self a certain number of stripes. In Italy and Spain it is usual to see Roman Catholics almost naked, loaded w ith chains and a cross, and lash- ing themselves at every step.

PENATES, in Roman antiquity, a kind of tutelar deities, either of countries or particular houses; in which last sense they differed in no- thing from the

lares. See Lares. They were praperly the tutelar gods of the Trojans, and were adopted by the Romans, who gave them the title of penates.

PENCARROVV, a cape of Cornwall, on the south coast of the English Channel ; two miles east of the mouth of the Fowey.

PE'NCIL, 71. s. Lat. penkiUnm. A small brush of hair which painters dip in their colors : an instrument for writing with black lead.

Painting is almost the natural man ; For since dishonour trafficks with men's nature, He is but outside : pencil'd figures are Even such as they give out. Shakspeare.

The Indians will perfectly represent in feathers whatsoever they see drawn with pencils. Heylyn. Pencils can by one slight touch restore

Smiles to that changed face, that wept before.

Dry den. For thee the groves green liveries wear,

For thee the graces lead the dancing hours.

And nature's ready pencil paints the flowers. Id.

A sort of pictures there is, wherein the colours, as laid by the pencil on the table, mark out very odd figures. Locke.

The faithful pencil has designed Some bright idea of the master's mind, A'V here a new world leaps out at his command. And ready nature waits upon his hand. Pope.

Mark with a pen or pencil the most considerable things in the books you desire to remember.

Watts.

Pulse of all kinds diffused their od'rous powers, Where nature pencils butterflies on flowers. Harte.

One spirit ••• His Who wore the platted tiiorns with bleeding brows, Rules universal nature. Not a flower But shows some touch, in freckle, streak, or stain. Of his unrivalled yj^nci/. Couper.

Pencils are of various kinds, and made of various materials ; the largest sorts are made of boars' bristles, the thick ends of which are bound to a stick, bigger or less according to the uses they are designed for: these, when large, are called brushes. The finer sorts of pencils are made of camels,

badgers, and squirrels' hair, and of the down of swans ; these are tied at the up- per end with a piece of strong thread, and en- closed in the barrel of a quill. All good pencils, on being drawn between the lips, come to a fine point.

Pencils, for drawing, are made of long pieces of black-lead or red chalk, placed in a groove cut in a slip of cedar ; on which other pieces of cedar being glued, the whole is planed round, and, one of the ends being cut to a point, it is fit for use.

PENCKUM, a town of Germany, in Anterior Pomerania ; thirteen miles south-west of Old Stettin, and forty-four N.N.W. of Custrin. Long. 31►► 59′ E. Ferro, lat. 53►► 15′ N.

PENDA, the first king of Mercia, founded that kingdom, A.D. 626. He was killed by Oswy, king of Northumberland, A. D. 655. See Mercia.

Penda. See Pemba. PENDALIUM, a promontory of Cyprus. ►►► PEN'DANT, n. s. -) Fr. pendant of Lat. Pen'dence, { pendens, pcndeo. A

Pen'dency, jewel or any thing sus-

Pen'dent, adj. [pended ; a pendulum ;

Pen'ding, f a small flag : pendence,

Pen'dulous, I pendency, or pendulo-

Pen'dulosity, n. s. \ sity and pendulous- Pen'dulousness. J ness all mean suspen- sion ; the state of being pendent or hanging : pending is depending ; hence undecided : pen- dulous, synonymous with pendent.

Quaint in green she shall be loose enrobed With ribbons pendent, flaring about her head.

Shakspeare. A pendent rock, A forked mountain, or blue promontory With trees upon't, that nod unto the world, And mock her eyes with air. Id.

All the plagues, that in the pendulous air Hang fated o'er men's faults, light on thy daughters.

Id. The Italians give the cover a graceful pendence or slopeness, dividing the whole breadth into nine parts, whereof two shall sene for the elevation of the high- est top or ridge from the lowest. U'ollon.

To make the same pendant go twice as fast as it did, or make every undulation of it in half the time it did, make the line, at which it hangs,

double in geometrical proportion to the line at which it hanged before. Digby on the Soul.

They brought by wond'rous art Pontifical, a ridge of pendent rock Over the vexed abyss.

Milton's Paradise Lost. His slender legs he increased by riding, that is, the humours descended upon their pendulosity, having no support or suppedaneous stability.

Browne's Vulgar Erroti'-s. 3 B2

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PENDULUM.

BelleropVion's horse, framed of iron, and placed >)etween two loadstones witli wings expanded, hung pendulous in the air. Browne.

Unripe fruit, whose verdant stalks do cleave Close to the tree, which grieves no less to leave The smiling pendent which adorns her so, And until autumn on the bough should grow.

U'aller.

The grinders are furnished with three roots, and in the upper jaw often four, because these are pendulous.

Ray.

I sometimes mournful verse indite, and sing Of desperate lady near a purling stream, Or lover pendent on a willow tree. Philips.

A person pending suit with the diocesan, shall be defended in the possession. Ayliffe.

The judge shall pronounce in the principal cause, nor can the appellant alledge pendencii of suit. Id. The spirits

Some thrid the mazy ringlets of her hair.

Some hang upon the pendents of her ear. Pope.

Pendants are often composed of diamonds, pearls, and other jewels.

Pendants, in heraldry, parts hanging down from the label, to the number of three, four, five, or six, at most, resembling the drops in the Do- ric freeze.

When they are more than three, they must be specified in blazoning.

Pendants of a Ship are those streamers, or long colors, which are split and divided into two parts, ending in points, and hung at the head of masts, or at the yard-arm ends.

PENDENNIS, a peninsula of Cornwall, at the mouth of Falmouth haven, a mile and a half in compass. On this Henry VIIL erected a castle, opposite to that of St. Maw's, which he likewise built. It was fortified by queen Eliza- beth, and served them for the governor's house. It is one of the largest castles in Britain, and is built on a high rock. It is stronger by land than St. Maw's, being regularly fortified, and having good outworks.

PE'NDULUM, n. s. Fr. penduk ; Lat pen- dulus. Any weight hung so that it may easily swing backwards and forwards. See below. Upon the bench I will so handle 'em,

That the vibration of this pendulum

Shall make all taylors yards of one

Unanimous opinion. Hudibras.

A Pendulum is a vibrating body suspended from a fixed point. I"or the history of this in- vention, see Clock. The theory of the pendu- lum depends on that of the inclined plane. Hence, to understand the nature of the pendu- lum, it will be necessary to premise some of the properties of this plane. I. Let AC, fig. 1, Plate Pendulum, be an inclined plane, A B its perpendicular height, and D any heavy body : then the force which impels the body D to de- scend along the inchned plane A C is to the ab- solute force of gravity as the height of the plane A B is to its length A C ; and the motion of the body will be uniformly accelerated. II. The ve- locity acquired in any given time by a body descending on an inclined plane, A C, is to the ve- locity acquired in the same time, by a body fall- ing freely and perpendicularly, as the height of the plane A B to its length A C. The final velocities will be theiiime ; the spaces described will be in the sarae ratio; and the times of description are

as the space? described. III. If a body descend along several contiguous planes, A B, B C, C D (fig. 2), the final velocity, namely, that at the point D, will be equal to the final velocity in descending through the perpendicular A E, the perpendicular heights being equal. Hence, if these planes be supposed indefinitely short and numerous, they may be conceived to form a curve ; and therefore the final \ elocity acquired by a body in descend- ing througli any curve AF, will be equal to the final velocity acquired in descending through the planes A B, B C, CD, or to that in

descending through AE, the perpendicular heights being equal. IV. If, from the upper or lower extre- mity of the vertical diameter of a circle, a cord be drawn, the time of descent along this cord will be equal to the time of descent through tlie vertical diameter ; and therefore the times of descent through all cords in the same circle, drawn from the extremity of the vertical diame- ter, will be equal. V. The times of descent of two bodies through two planes equally elevated will be in the subduplicate ratio of the lengths of the planes. If, instead of one plane, each be composed of several contiguous planes similarly placed, the times of descent along these planes will be in the same ratio. Hence, also, the times of describing similar arches of circles similarly placed will be in the subduplicate ratio of the lengths of the arches. \1. The same things hold good with regard to bodies projected upward, whether they ascend upon inclined planes or along the arches of circles. The point or axis of suspension of a pendulum is that point about which it performs its vibrations, or from which it is suspended. The centre of oscillation is a point in which, if all the matter in a pendulum were collected, any force applied at this centre would generate the same angular velocity in a given time as the same force when applied at the centre of gravity. The length of a pendulum is equal to the distance between the axis of sus- pension and centre of oscillation. Let P N (fig. 3) represent a pendulum suspended from the point P ; if the lower part N of the pendulum be raised to A, and let fall, it will by its own gravity descend through the circular arch A N, and will have acquired the same velocity at the point N that a body would acquire in falling perpendicularly from C to N, and will endeavour to go off with that velocity in the tangent N D ; but, being prevented by the rod or cord, will move through the arch N B to B, where, losing all its velocity, it will by its gravity descend through the arch B N, and, having acquired the same velocity as before, will ascend to A. In this manner it will continue its motion forward and backward along the arch A N B, which is called an oscillatory or vibratory motion; and each swing is called a vibration. Prop. I. If a pendulum vibrates in very small circular arches, the times of vibration may be considered as equal, whatever be the proportion of the arches. Let PN (fig. 4) be a pendulum; the time of describing the arch A B will be equal to the time of describing C D ; these arches being supposed very small. Join AN, CN; then since the times of descents along all cords in the same circles, drawn from one extremity of

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PENDULUM.

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the vertical diameter, are equal ; therefore, the cords AN, C N, and consequent4y their doubles, will be described in the same time; but the arches A N, C N, being supposed very small, will therefore be nearly equal to their cords : hence the times of vibrations in these arches will be nearly equal.

Pkop. II. Pendulums which are of tlie same length vibrate in the same time, whatever be the proportion of their weights. This follows from the property of gravity, which is always propor- tional to the quantity of matter, or to its inertia. AV'hen the vibrations of pendulums are compared, it is always understood that they describe either similar finite arcs, or arcs of evanescent magnitude, unless tlie contrary is mentioned.

Prop. III. If a pendulum vibrates in the small arc of a circle, the time of one vibration is to the time of a body's falling perpendicularly through half the length of the pendulum as the circumference of a circle is to its diameter. Let P E (fig. 5) be the pendulum which describes the arch A N C in the time of one vibration ; let P N be perpendicular to the horizon, and druw the cords A C, AN ; take the arc Ee infinitely small, and draw EFG, efg, perpendicular to P N, or parallel to A C ; describe the semicircle B G N, and draw er, gs, perpendicular to E G ; now let i :^ time of descending through the di- ameter 2 P N, or through the cord A N ; then the velocities gained by falling through 2 P N, and by the pendulum's descending tlirough the arch AE, will be as ^~VN and a/bT'; and the space described in the time t, after the fall through 2 PN, is 4 P N, But the times are as the spaces divided by the velocities.

n^, r 4PN Ee

Therefore or 2 ,7 2 P N : t : : :

V 2 P N ^\/ ii f.

time of describing E e :^

t X

2 ^ ⬚⬚⬚Zi'^S X BF' But in the similar triangles P E F, E e r, and KGF, Ggs,AsPEzi PN : EF : : Ee : er = F F

X Ee; And K G = K D : F G : : Gg :

PN

Gs =

EF PN ^ PN X

FG KD

X Gg. But erzz Gs; therefore X G^. Hence E e zz

Ee :zi

IvD

FG

K n V F~i^ ^ ^S- And, by substituting this va- lue of E e in the former equation, v,e have the time ^ X PN X FG X Gg

of describing E err ⬚⬚⬚

2KDxEFXv/BFx2PN

But by the nature of the circle FG=: y/BF x FN,

and E F =: v' PN j P F x F N- Hence, by

substitution we obtain the time ofdescribing E e rz

^X PN X ^/'B F X F N X Gg

2 KD X V PN -H PF X FN x V BF x 2 PN =

tx ^/~PNxGg ^X x/2PN x Gg

2 KD X VPN + PF X V'2'" 4KD x ^PN-fPF

_ tx^TFN n.^v

X G g. But N F,

in its mean quantity for all the arches Gg, is nearly equal to N K ; for if the semicircle de- scribed on the diameter BN, which corresponds to the whole arch AN, be divided into an inde- finite number of ef|ual arches Gg, &c., thesum of all the lines N F will be equal to as many times N K as there are arches in the same circle equal to Gg, Therefore the time of describing Ee=:

^X VXPN ^.

❖❖❖ X Gg. N\ hence the

2BN X v‘2PN❖❖❖ NK

time of describmg the arch AE D =z

it X -v/ 2 P N

X BGN; and the

2BN X x/2PN❖❖❖ NK

time ofdescribing the whole arch ABC,

the time of one vibration, is rz

t X ^ -H’N

X 2 BGN. But, when

2 BN X V2BN❖❖❖ NK

the arch A N C is very small, N K vanishes, and

then the time of vibration in a very small arc is

_ t X V2PN

X 2BGNzzi

2 BGN HiNT”

2BN X ^/2PN ❖❖❖ NF

2BN X V2PN Now, if t be tiie time of descent through 2 PN; then, since the

spaces described are as the squares of the t4ines, ˆ t will be the time of descent through i" P N : therefore the diameter B N is to the circumference, 2 BGN, as the time of falling through half the length of the pendulum is to the time of one vibration.

Prop. IV. ††† The length of a pendulum vi- brating seconds is to twice the space through which a body falls in one second as the square of the diameter of a circle is to the square of its circumference. Let d :zz diameter of a circle zn 1, c zz circumference zz 3-14159, &c., t to the time of one vibration, and p the length of the corresponding pendulum ; then by last pro- position c : d : : 1″ : †††iz; time of falling through

half the length of the pendulum. Let s zz space described by a body falling perpendicularly in the first second : then, since the spaces described are in the subduplicate ratio of the times of de-

scription, therefore 1 ††† -†††. : ˆ s : ˆ ˆ p. Hence

cˆ : cP : : 2 s : /). It has been found by experi- ment that in latitude 51ˆ†† a body falls about 16-11 feet in the first second : hence the length of a pendulum vibrating seconds in that latitude

32-22

is zz 2 zz 3 feet 3-174 inches.

31415 < > Prop. V. ††† The times of the vibrations of town pendulums in similar arcs of circles are in a subduplicate ratio of the lengths of the pendu- lums. Let PN, PO (fig. 6), be two pendu- lums vibrating in the similar arcs A B, C D ; the time of a vibration of the pendulum P N is to the time of a vibration of the pendulum P O in subduplicate ratio of PN to PO. Since the arcs A N, CO, are similar and similarly placed, the time of descent through A N will be to the time of descent through C O in the siibdujilicate ratio of AN to C O : but the times of descent through the arcs AN and CO are equal to half the times of vibration of the pendulums PN, P O, lespectively. Hetice t!ie time of /ibratioa

of the pendulum P N, in the arch A B, is to the time of vibration of the pendulum P O in tlie similar arc C D in the subduplicate ratio of A N to C O : and since the radii PN, PO, are pro- portional to the similar arcs AN, C O, therefore the time of vibration of the pendulum P N will be to the time of vibration of the pendulum PO in a subduplicate ratio of P N to P O. If

the length of a pendulum vibrating seconds be 39′ 174 inches, then the length of a pendulum vibrating half seconds will be 9‘793 inches. For 1″ : i” : : ˆ 39-174 : ˆ~, and 1 : a : : 39-174

: X. Hence x ††† ††† ††† 9-793.

4

Prop. VI.††† The length of pendulums vi- brating in the same time, in different places, will be as the forces of gravity. For the ve- .ocity generated in any given time is directly as the force of gravity, and inverseiy as the quan- tity of matter. Now, the matter being supposed the same in both pendulums, the velocity is as the force of gravity ; and the space passed through in a given time will be as the velocity ; that is, as the gravity. Cor. Since the length of pendulums vibrating in the same time in small ares are as the gravitating forces, and as gravity increases with the latitude on account of the spheroidal figure of the earth and its rotation about its axis; hence Uie length of a pendulum vibrating in a given time will be variable with the latitude, and the same pendulum will vi- brate slower the nearer it is carried to the equator.

Prop. V’II. ††† The time of vibrations of pen- dulums of the same length, acted upon by dif- ferent forces of gravity, are reciprocally as the square roots of the forces. For, when the matter is given, the velocity is as the force and time ; and the space described by any given force, is as the force and square of the time. Hence the lengths of pendulums are as the forces and the squares of the times of falling through them. But these times are in a given ratio to the times of vibration ; whence the lengths of pendulums are as the forces and the squares of the times of vibration. Therefore, when the lengths are given, the forces will be reciprocally as the square of the times, and the times of vibration reciprocally as the square roots of the forces. Cor. Letˆ =r ength of pendulum, g rr force of gravity, and t ††† =. time of vibration. Then since pjˆ g x fˆ.

1 / i

Hence g-ˆ.p -/. †††; and t z=. \/ p X ††† . That

is, the forces in different places are directly as the lengths of the pendulums, and inversely as the square roots of the times of vibration ; and the times of vibration are directly as the square roots of the lengths of the pendulums, and in- versely as the square roots of the gravitating forces.

Prop. VHI. ††† A pendulum which vibrates in the arch of a cycloid describes the greatest and least vibrations in the same time. This property is demonstrated only on a supposition that the whole mass of the pendulum is

concentrated in a point : but this cannot take place in any really vibrating body ; and, when the pendulum is of finite magnitude, there is no point given in posi-

tion which determines the length of the pendu- lum ; on the contrary the centre of oscillation will not occupy the same place in the giveu body, when describing different parts of tlie tract it moves through, but will continually be moved ia respect of the pendulum itself during its vibra- tion. This circumstance lias prevented any ge- neral determination of the time of vibration in a cycloidal arc, except in the imaginary case re- ferred to. There are many other obstacles which concur in rendering the application of this curve to the vibration of pendulums designed for the measures of time the source of errors far greater than those which by its peculiar property it is intended to obviate ; and it is now wholly dis- used in practice. Although the times of vibra- tion of a pendulum in different arches be nearly equal, yet, from what has been said, it will ap- pear that, if the ratio of the least of these arches to the greatest be considerable, the vibrations will be performed in diflerent times; and the difference, though small, will become sensible in the course of one or more days. In clocks used for astronomical purposes it will therefore be necessary to observe the arc of vibration ; which if different from that described by the pendulum when the clock keeps time, there a correction must be applied to vhe time shown by the clock. This correction, expressed in seconds of time, will be equal to the half of three times the differ- ence of the square of the given arc, and of that of the arc described by the pendulum when the clock keeps time, these arcs being expressed in degrees ; and so mucii will the clock gain or lose according as the first of these arches is less or greater than the second. Thus, if the clock keeps time when the pendulum vibrates in an arch of 3□□, it will lose 10 J" daily in an arch of 4□□. For 4□□□ 3ˆ X a = 7 X i = 101". The length of a pendulum rod iuOTeases with heat ; and the quantity of expansion answering to any given degree of heat is experimentally found by means of a pyrometer (see Pyrometer) ; but the de- gree of heat at any given time is shown by a thermometer : hence that instrument should be placed within the clock-case at a height nearly equal to that of the middle of the pendulum ; and its height, for this purpose, should be exa- mined at least once a day. Now, by a table con- structed to exhibit the daily quantity of accele- ration or retardation of the clock, answering to every probable height of the thermometer, the corresponding correction may be obtained. It is also necessary to observe that the mean height of the thermometer during the interval ought to be used. In Six's thermometer this height may be easily obtained ; but in the thermometers of the common construction it will be more difficult to find this mean. It has been found, by re- peated experiments, that a brass rod equal in length to a second pendulum will expand or contract one 1000th part of an inch by a*

change of temperature of 1►► in Fahrenheit's thermome- ter; and, since the times of vibration are in a subduplicate ratio of the lengths of the pendulum, hence an expansion or contraction of one lOOOdth part of an inch will answer nearly to l" daily ; therefore a change of 1►► in the thermometer will occasion a difference in the rate of the clock

equal to 1″ daily. Whence, if the clock be so adjusted as to keep time when tlie thermometer is at 55►►, it will lose 10″ daily when the thermo- meter is at 65", and gain as much when it is at 45►►. Hence the daily variation of the rate of the clock from summer to winter will be very consi- derable. It is true indeed that most pendulums have a nut or regulator at the lower end, by which tiie bob may be raised or lowered a de- terminate quantity : and therefore, while the height of the thermometer is the same, the rate of the clock will be uniform. But since the state of the weather is ever variable, and as it is impossi- ble to be raising or lowering the bob of the pen- dulum at every change of the thermometer, there- fore the correction formerly mentioned is to be applied. This correction, however, is in some measure liable to a small degree of uncertainty ; and, in order to avoid it altogether, several con- trivances have been proposed, by constructing a pendulum of different materials, and so disposing them that their effects may be in opposite direc- tions, and thereby counterbalance each other ; and thus the pendulum will continue of the same length. PENr ULUM, Angular, is formed of two pieces or legs like a sector, and is suspended by the an- gular point. This pendulum was invented with a view to diminish the length of the common pendulum, but at the same time to preserve or even increase the time of vibration. In this pen- dulum, the time of vibration depends on the length of the legs, and on the angle contained between them conjointly, the duration of the time of vibration increasing with the angle. Hence a pendulum of this construction may be made to oscillate in any given time. At the lower extremity of each leg of the pendulum is a ball or bob as usual. It may be easily shown, that, in this kind of a pendulum, the squares of the times of vibration are as the secants of half the angle contained by the legs : hence, if a pen- dulum of this construction vibrates half seconds when its legs are close, it will vibrate whole se- conds when the legs are opened, so as to contain an angle equal to 151" 2′ 30".

Pendulum, Conical, or circular, is so call- ed from the figure described by the string or ball of the pendulum. This pendulum was invented by Mr. Huygens, and also claimed by Dr. Hook. To understand its principles it will be necessary to premise the following lemma, viz. the times of all the circular revolutions of a heavy globular body, revolving within an inverted

hol- low paraboloid, will be equal, whatever be the radii of the circles described by that body. To construct the pendulum, therefore, so that its ball may always describe its revolutions in a parabo- loid surface, it will be necessary that tlie rod of the pendulum be tlexible, and that it be suspended in such a manner as to form tlie evolute of the given parabola. Hence, let K II (fig. 9) be an axis perpendicular to the horizon, having a pi- nion at K moved by the last wheel in the train of the clock ; and a hardened steel point at H moving in an agate pivot, to render the motion as free as possible. Now, let it be required that the pendulum shall perform each revolution in a second ; then the paraboloid surface it moves in must !)e such whose latus rectum is double the

length of the common half second pendulum' Let O be the focus of the parabola M E C, and M C the latus rectum ; and make A E zz M O :r i- M C zz the length of a common half se- cond pendulum. At the point A of the vero-e let a tiim plate A B be fixed at one end, and at the other end B let it be fastened to a bar or arm B D perpendicular to D H, and to which it is fixed at the point D. The figure of the plate A B is that of the evolute of the given parabola M ►► C. The equation of this evolute, being also

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that of the semicubical parabola, is ►►►rpr'·y.

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►►►Let ►►► p ►►► P ; then P x- =.y', and in the focus

P=:2y. In thiscase2x=:y"=z iP*: hence*

►►► , 27 _

x' := iF% and X := P ^ ^ =z j-^p ^i = the

distance of the focus from the vertex A. ►►► By as- suming the value o{ x, the ordinates of the curve may be found ; and hence it may be easily drawn. The string of the pendulum must be of such a length that, when one end is fixed at B, it may l,e over the plate A B, and then hang per- pendicular from it, so that the centre of the bob may be at E when at rest. Now, the verge K H being put in motion, the ball of the pendulum will begin to gyrate, and thereby contrive a cen- trifugal force which will carry it out from the axis to some point F, where it will circulate se- conds or half seconds, according as the line A E is 9'8 inches, or two inches and a quarter, and A B answerable to it. One advantage pos- sessed by a clock having a pendulum of this con- struction is, that the second hand moves in a regular and uniform manner, without being sub- ject to those jerks or

starts as in common clocks ; and the pendulum is entirely silent.

Pendulum, Fir. The expansion or contrac- tion of straight-grained fir wood lengthwise, by change of temperature, is so small that it is found to make very good pendulum rods. The wood called sapadillo is said to be still better. There is good reason to believe that the previ- ous baking, varnishing, gilding, or soaking of these woods in any melted matter, only tends to impair the property that renders them valuable. They should be simply rubbed on the outside with wax and a cloth. In pendulums of this construction the error is greatly diminished, but not taken away.

Pendulum, Gridiron, or Harrison's, is an ingenious contrivance for the purpose above- mentioned. Instead of one rod, this pendulum is composed of any convenient odd number of rods, as five, seven, or nine ; being so connected that the effect of one set of them counteracts that . of the other set ; and therefore, if they are pro- perly adjusted to each other, the centres of sus- pension and oscillation will always be equidistant. Fig. 7 represents a gridiron pendulum composed of nine rods, steel and brass alternately. The two outer rods, A B,C D, which are 'i steel, are fastened to the cross pieces A C, B D, '^y means of pins. The next two rods, E F, G il, are of brass, and are fastened to the lower bar B D, and to the second upper bar E G. The two follow- ing rods are of steel, and are fastened to the cress

bars E G and I K. The two rods adjacent to the central rod, being of brass, are fastened to the cross pieces I K and L M ; and the central rod, to which the ball of the pendulum is attached, is suspended from the cross piece L M, and passes freely through a perforation in each of the cross bars I K, B D. From this disposition of the rods, it is evident that, by the expansion of the extreme rods, the cross piece B D, and the two rods attached to it, will descend : but, since these rods are expanded by the same heat, the cross piece E G will consequently be raised, and there- fore also the two next rods; but, because these rods are also expanded, the cross bar I K will descend ; and, by the expansion of the two next rods, the piece L M will be raised a quantity suf- ficient to counteract the expansion of the central rod. Whence it is obvious that the effect of the steel rods is to increase the length of the pendu- lum in hot weather, and to diminish it in cold weather, and that the brass rods have a contrary effect upon the pendulum. The effect of the brass rods must, however, be equivalent, not only to that of the steel rods, but also to the part above the frame and spring, which connects it with the clock, and to that part between the lower part of the frame and the centre of the ball.

Pendulum, Mercurial, was invented by the celebrated Mr. George Graham,

and is con- sidered as the compensating pendulum. In this the rod of the pendulum is a hollow tube, in which a sufficient quantity of mercury is put. Mr. Graham first used a glass tube, and the clock to which it was applied was placed in the most exposed part of the house. It was kept constant- ly going, without having the hands or pendulum altered, from the 9th of June 1722 to the 14th of Octolier 172.5, and its rate was determined by transits of fixed stars. Another clock made with extraordinary care, having a pendulum about sixty pounds weight, and not vibrating above 1►► 30′ from the perpendicular, was placed beside the former, the more readily to compare them with each other, and that they might both be equally exposed. The result of all the observa- tions was this, that the irregularity of the clock with the quicksilver pendulum exceeded not, when greatest, a sixth part of that of the other clock with the common pendulum, but for the greatest part of the year not above an eighth or ninth part ; and even this quantity would have been lessened, had the column of mercury been a little shorter: for it differed a little the contrary way from the other clock, going faster with heat and slower with cold. To confirm this experi- ment more, about the beginning of July 1723 Mr. Graham took off the heavy pendulum from the other clock, and made another with mercury, but with this difference, that instead of a glass tube he used a brass one, and varnished the in- side to secure it from being injured by the mer- cury. This pendulum he used afterwards, and found it about the same degree of exactness as the other.

JVr. Thioufs Pendulum. ►►► Another excellent contrivance for the same purpose is described by M.Thiout, a French author on clock-making. Of this pendulum, somewhat improved by Mr. Crosthwaite, watch and clock maker, Dublin, we

have the following description in the Transactions of the Royal Irish Academy, 1788:►►►' A and B, fig. 8, are two rods of steel forged out of the same bar, at the same time, of the same temper, and in every respect similar. On the top of B is formed a gibbet C ; this rod is firmly sup- ported by a steel bracket D, fixed on a large piece of marble E, firmly set into the wall F, and having liberty to move freely upwards be- tween cross staples of brass, 1, 2, 3, 4, which touch only in a point in front and rear (the sta- ples having been carefully formed for that pur- pose) ; to the other rod is firmly fixed by its centre the lens G, of twenty-four pounds weight, although it should in strictness be a little below it. This pendulum is suspended by a short steel spring on the gibbet at C ; all which is entirely independent of the clock. To the back of the clock-plate I are firmly screwed two cheeks nearly cycloidal at K, exactly in a line with the centre of the verge L. The maintaining power is applied by a cylindrical steel stud, in the usual way of regulators, at M. Now it is very evi- dent that any expansion or contraction that takes place in either of these exactly similar

rods is instantly counteracted by the other ; whereas in all compensation pendulums composed of dif- ferent materials, however just calculation may seem to be, that can never be the case, as not only different metals, but also different bars of the same metal that are not manufactured at the same time, and exactly in the same manner, are found by a good pyrometer to differ materially in their degrees of expansion and contraction, a very small change affecting one and not the other.' Theory has pointed out several other pendulums, known by the names of elliptic, ho- rizontal, rotulary, Sec, pendulums. We can only select two or three of the more modern inven- tions of this kind.

Elliott's compensating pendulum. ••• The adjust- ment of the rods for the temperature in the Grid- iron pendulum of Harrison being found in convenient, and accompanied sometimes by a considerable change in the rate : in the pendu lum of Elliott two levers are adopted instead o. one, and they are applied at the bob instead of at the superior end of the verge.

Fig. 1, plate II., Pekdulums, represents this pendulum ; a 6 is a bar of brass made quite fast at the upper end by pins, and held contiguous at several equal distances, by the screws, 1, 2, &c., to the rod of the pendulum, which is a bar of iron ; and, so far as the brass bar reaches, is filed of the same size and shape, though it does not appear so in the figure, but, a little below the end of the brass, the iron is left broader, as at dd, for the conveniency of fixing the work to it, and is made of a sufficient length to pass quite through the ball of the pendulum to c. The holes 1,2, &c., in the brass, through which the screws pass into the iron rod of the pendulum, are filed of a sufficient length to suffer the brass to contract and dilate freely by heat and cold under the heads of the screws : eeee represent the ball of the pendulum ;f,f, two strong pieces of steel, or levers, whose inner centres, or pivots, turn in two holes drilled in the broad part of the pendulum rod, and their outer ones in a strong

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PENDULUM.

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bridge, or cock, screwed upon the same part of the rod, but omitted in the figure, to show the mechanism : g, g, are two screws enterino’ at the edges, and reaching into the cavity near the cen- tre of the ball. The ends of the screws next the centre are turned into the form seen in the figure, which, pressing with the weight of the ball against the longer arms of the levers, cause the short ends to press against the brass bar at b. Let us now suppose that tlie rod of the pendu- lum, and the brass annexed to it, grow longer by heal, and that the brass lengthens more than the iron of the same length ; then the brass, by the excess of its dilation, will press the short ends of the levers downwards at b, and at the same time necessarily lilt up the ball, which rests on the long ends of the same lever, at /’/”, to any proportion necessary for due compensa- tions. The calculated proportion of the short arms of the levers must be to the long ones as the excess in the expansioo of brass is to that of the whole length of iron ; and, if this calculation be found on trial not perfectly accurate, the side screws g, g, will produce the exact compensation at a few adjustments. At i k, the inferior end of the iron verge, a strong double spring is fixed to bear the major part of the ball’s weight, by its pressure upwards against two points of the ball, equidistant from the vertical line. This is the description of the first pendulum made in this ►►►way ; and the only alteration that the inventor made afterwards was placing the side screws in the body of the ball. Gumming pro])Oses, in his Elements of Clock and Watch-work, that the brass bar should elongate between two iron bars, in order to keep it straight, and to prevent the jerks to which he conceives the foregoing con- struction liable : he proposes also to alter the structure of the short arms of the levers, by making them turn each on an axis of motion, and to change

their places of pressure mutually, in order that their united action may be applied in the same point, at the centre of the brass bar, in direct opposition to the line of downward ex- pansion. See his Elements, p. 106, and plate xi. INIr. Hardy of Clerkenwell has also improved considerably Elliott's pendulum.

jMr. Troughtons mercurial pendulum. ??? This is an improvement on Graham's mercurial pendu- lum. About the year 1790 Mr. Edward Trough- ton, with a view of doing away the most mate- rial prejudice against this useful instrument, contrived a modification of the mercurial pen- dulum, which must be considered as a distinct invention ; the materials being differently ar- ranged both as to quality, quantity, and situation. The prejudice alluded to was that the metallic rod of Graham, and tlie vessel of mercury, would not be affected Ity changes of temperature in a contemporaneous manner, but that the mercury being below the rod, and having on that account a quicker motion, would cool sooner than the metallic rod, and be liable to more frequent changes from its greater susceptibility. Mr. Troughton therefore substituted a strong glass tube with a bulb at the lower extremity, to be filled to a certain height with mercury, which should rise and fall precisely as in a thermome- which instrument, in fact, his tube is; and.

to make it useful as such, it carries a graduated scale. The tube in question is about the si/e of a barometer tube, and the bulb large enough to contain forty-five ounces of pure mercury by the aid of one-half the tube. Fig. 2 of plate II. exhibits Mr. Troughton's arrangement. A B is the mercurial rod filled with mercury to the mid- dle point of the rod ; C D the bulb guarded by the surrounding lenticular bob of brass and lead made in the usual way, except that it is hollow in the centre: the metallic parts of the pendulum weigh about nine pounds exclusively of the mer- cury ; the rim that surrounds the bulb, and by which the weight of the lenticular bob is sup- ported, projects into two notches cut in the in- terior edges of the metallic lens, at each side of the cavity, and the nice fitting of the bulb to its rim renders the glass capable of bearing the weight of metal supported by it. The compen- sation of this pendulum is effected entirely by the ascent and descent, alternately, of the mer- cury up and down the glass tube as the heat varies; and as the expansion of glass varies much less than that of any of the metals, the small column of mercury contained in the tube is found sufficient to answer its purpose completely after a trial of more than twenty years.

Ward's compensation pendulum. ??? This is an in- vention of Mr. Henry Ward, of Blandford in Dor- setshire, who, in March 1806, communicated it to the Society of Arts, accompanied by a model, which gained him the silver medal of the society. It consists of three bars, twb of

iron and one of zinc, arranged in a manner very similar to De- parcieux's improvement of llegnauld's old French pendulum, but without the adjustment lever. The instrument appears in fig. 3, plate II., where // h and i i are two flat rods of iron or steel, about half an inch wide and an eighth of an inch thick each ; and k k is a rod of zinc, of nearly a quarter of an inch thick, interposed ; the two ex- treme or iron rods are cranked, one at the top to receive the suspension spring, and the other at the bottom to hold the ball in the same ver- tical line with the zinc rod. These three parallel rods are united by four screws, /,/,/,/, which, passing through oblong holes in the bars h h and k k, screw into the rod i i, while the rod h h is fastened to the zinc one k k, by the single screw 7n near its lower extremity, which screw is the screw of adjustment for temperature, and re- quires several holes to be made in the bar h h, and also in k k, that the length of the zinc bar may be limited to its due proportion for exact compensation. The iron bar i i rests by a chin- piece on the upper end of the zinc bar, and therefore the ball supported by its lower tapped end stretches all the bars equally. If the zinc bar had rested on the crank at the bottom of the bar h h, instead of being held by the screw /H,the arrangement would have been the same as in Deparcieux's, but with zinc substituted for brass, which consequently does not require the aid of a lever to increaseits effect. The proportional expansions of zinc and iron were taken for this pendulum from Smeaton's table in the forty- eighth volume of the Phil. Trans, of London, and were made for hammered zinc as 373 : 151 ; but subsequent observations on the rate of the clock.

to which the pendulum was applied, proved that the expansion of the hammered zinc was greater than Smeaton's table gives it, though the quan- tity was within the reach of the adjustment.

Reid's compensation pendulum. ••• Another com- pensation pendulum by Mr. Adam Reid of Woolwich was also presented to the Society of Arts in April 1809, and the inventor was reward- ed with fifteen guineas for his contrivance. This is given in fig. 4, plate II., and has its compen- sation of a tube of zmc acting on the ball from the lower end of the steel verge thus : A B is the steel verge, made a little thicker where it enters the ball C, and also of a lozenge shape, to pre- vent the ball's turning, but above and below it is cylindrical ; near the centre of the ball is a shoulder in the verge, against which the upper end of the zinc tube D presses the cross piece of the ball when the nut E is turned up close to its lower extremity, but when the nut is turned back, in adjusting for rate, the tube descends a little, and the ball with it, while it rests on the upper extremity of the tube. When the com-

pensation is too much the tube may be short- ened till it is found of the exact length, by a trial of the rate in extremes of temperature. In the figure the length of the zinc tube does not ap- pear sufficiently long to compensate an entire verge of steel. The inventor observes that pk- tina might be substituted for steel, and steel for zinc, for the formation of this kind of pendulum, but that the expense would be enhanced by the dearness of platina.

*Ritchie's and JSicholsons compensation pendu- lum.***In March 1812 Mr. David Ritchie, of Clerkenwell, laid before the society a model of a compensation pendulum, for which he received twenty guineas. The compensation was effected by the flexure of two compound horizontal bars interposed between the verge and the ball, which act on the same principle as the compound bars in the ordinary compensation balances of a chro- nometer. Fig. 5 represents the pendulum, in which A is the spring of suspension, B the ball, and C the steel verge as usual, with the nut of adjustment for rate at E, below the ball. The compensating bars are F and G, the upper part of F and the lower part of G being steel, and the other parts brass ; so that any additional heat may bring the bars nearer together by the con- vexity of the brass faces of the compound bars being contiguous.. These compound bars have each a sliding piece above and below, and ˆ re- spectively, by the sliding of which the bars may have their effective lengths altered, in the adjust- ment for temperature; and are connected by the slender springs e andj', which bear a portion of the ball's weight ; the remainder being borne by the springs / and in attached by screws at h, one to the verge piece d and the other to the ball piece h, while they themselves are united by screws at I and m. The compensation frame, so constructed, is adjusted by sliding the com- pound bars, before they are fixed, till the centre of the ball falls in th" vertical line of the verge, where the screws at h fix it for trial. It has been feared that when the crutch of the clock urges the verge the ball will not move with it till the springs e and /are bent a little; for when the*

ball is heavy, as is now customary in seconds pendulums, its weight will place a great stress on the slender springs that connect it with the verge, and produce, probably, a vacillation, as in Doughty 's, that must be very unfavorable to isochronism, allowing even that the compensa- tion is nerfect. To avoid this evil Mr. Mchol- son placed a similar compensation bar on the cock of suspension above the verge of his pen- dulum, and also above the cock of limitation, as seen in fig. 6, but without any spring, and in this situation the varying curvature of the hori- zontal compound bar, E E, altering the length of the suspension spring, produced the alternate rising and falling of tiie ball, as the verge carried it in an opposite direction, so that the centre of oscillation was comparatively stationary. Sec Phil. Journal, vol. i. 4to. ed., plate V'. fig. 3. The same author also contrived a

compensation pendulum composed of four rods of steel and one of a compound, or alloy, of zinc and silver, which is described in vol. ii. of his 4to. Phil. Journal, p. 205

PENELOPE, in fabulous history, the daughter of Icarus, who married Ulysses, by whom she had Telemachus. During the absence of Ulys- ses, who was gone to the siege of Troy, and who staid twenty years from his dominions, several princes, charmed with Penelope's beauty, told her that Ulysses was dead, offered to marry her, and pressed her to declare in their favor. She promised compliance on condition they would give her time to finish a piece of tapestry she was weaving ; but at the same time she undid in the night what she had done in the day, and thus eluded their importunity until Ulysses's return.

Penelope, in ornithology, a genus of birds of the order of gallinae, the characters of which are these : The beak is bare at the base ; the head is covered with feathers ; the neck is quite bare ; the tail consists of twelve principal feathers; and the feet are for the most part bare. Linne, in his Systema Naturae, enumerates six species.

1. P. crax cumanensis, called by Latham, &c., yacou. It is bigger than a common fowl. The bill is black ; the head feathers are long, pointed, and form a crest, which can be erected at pleasure. The irides are of a pale rufous color; the space round the eye is naked, similar to that of a turkey. It has also a naked mem- brane or kind of wattle, of a dull black color. The blue skin comes forward on the bill, but is not liable to change color like that of the turkey. The plumage has not much variation ; it is chiefly brown, with some white markings on the neck, breast, wing coverts, and belly ; the tail is com- posed of twelve feathers, pretty long, and even ;.t the end ;. the legs are red. This species inha- bits Cayenne, but is a very rare bird, being met with only in the inner parts, or about the Ama- zons country, though in much greater plenty up the river Oyapoc, especially towards Camoupi ; and indeed those which are seen at Cayenne are mostly tame ones; for it is a familiar bird, and will breed in that state, and mix with other poultry. It makes the nest on the ground, and hatches the young there, but is at other times mostly seen on trees. It frequently erects the

crest, when pleased or taken notice of, and like- wise spreads the tail upright like a fan, in the manner of the turkey. It has two kinds of cry ; one like that of a young turkey, the other lower and more plaintive; the first of these is thought by the Indians to express the word couyovoit, the other

yacou.

2. P. maralia, the marail, about the size of a fowl, and shaped somewhat like if. The bill and irides are blackish; the space round the eye is bare, and of a pale red ; the chin, throat, and fore part of the neck are scarcely covered with feathers; but the throat itself is bare, and the membrane elongated to half an inch or more ; both this and the skin round the eyes change color, and become deeper and thicker when the bird is irritated. The head feathers are longish, so as to appear like a crest when raised up, which the bird often does when agitated ; at which time it also erects those of tiie whole body; and so disfigures itself as to be scarcely known. The general color of the plumage is a greenish black ; the fore part of the neck is tipped with white ; the wings are short ; the tail is long, consisting of twelve feathers, which are even at the end, and commonly pendent, but can be lifted up, and spread out like that of tlie turkey ; the legs and toes are of a bright red ; the claws are crooked, and somewhat sharp. In a collection, says Latham, from Cayenne was a bird, I believe, of this very species. It was twenty-eight inches long ; the bill is like that of a fowl, brown, and rather hooked; round the eyes bare; the head is crest- ed ; the feathers of the fore part of the neck are tipped with white ; the breast and belly are rufous brown; the rest of the plumage is greenish brown ; the tail is eleven inches long, and rounded at the end ; the quills just reach beyond the rump ; the legs are brown, and the claws hooked. This species is common in the woods of Guiana, at a distance from the sea, though it is less known than could be imagined ; and generally found in small flocks, except in breeding time, when it is only seen by pairs, and then frequently on the ground, or on low shrubs; at other times on high trees, where it roosts at night. The female makes her nest on some low bushy trees as near the trunk as possible, and lays three or four eggs. When the young are hatched, they descend with their mother, after ten or twelve days. The mo- ther acts as other fowls, scratching on the ground like a hen, and brooding the young, which quit their nurse the moment they can shift for them- selves. They have two broods in a year ; one in December or January, the other in May or June. The best time of finding these birds is morning or evening, being then met with on such high trees whose fruit they feed on, and are discover- ed by some of it falling to the ground. The young birds are easily tamed, and seldom forsake the places where they have been brought up : they need not be housed, as they prefer the roost- ing on tall trees to any other place. Their cry is inharmonious, except when irritated or wounded, when it is harsh and loud. Their flesh is much esteemed. Buffon supposes this bird to be the female of the yacou, or at least a variety; but that this cannot be, the anatomical inspection will af once determine. The windpipe of this

bird has a singular construction, passing along the neck to the entrance of

the breast, where it arises on the outside of the flesh, and after going a little way downwards, returns, and, then passes into the cavity of the lungs. It is kept in its place on the outside by a muscular ligament, which is perceivable quite to the breast bone. This is found to be the case in both male and female, and plainly proves that it differs from the yacou, whose wind-pipe has no such circumvolution in either sex. If this be the bird mentioned by Fermin, ia his History of Guiana, p. 176, he says that the crest is cuneiform, and of a black and white color; and observes that they are scarce at Surinam ; but it does not seem quite certain whether he means this species or the yacou. Bancroft mentions a bird of Guiana by the name of marrodee, which he says is wholly of a brown- ish-black : the bill the same ; and the legs gray. These he says are common, and make a noise not unlike the name given it, perching on trees. The Indians imitate their cr)' so exactly as to lead to the discovery of the place the birds are in, by their answering it. The flesh of them is like that of a fowl : it is therefore most likely the marail.

3. P. meleagris cristata, called by Ray pene- lope jacupeme, and by Edwards the guan, or quan, is about the size of a fowl, being about two feet six inches long. The bill is two inches long, and of a black color ; the irides are of a dirty orange color ; the sides of the head are covered with a naked purplish blue skin, in which the eyes are placed : beneath the throat, for an inch and a half, the skin is loose, of a fine red color, and covered only with a few hairs. The top of the head is furnished with long fea- thers, which the bird can erect as a crest at plea- sure ; the general color of the plumage is brown- ish black, glossed over with copper in some lights; but the wing coverts have a greenish and violet gloss. The quills mostly inclineto a pur- ple color ; the fore part of the neck, breast, and belly, are marked with white spots ; the thighs, under tail coverts, and the tail itself, are brownish black ; the legs are red ; the claws black. Some of these birds have little or no crest, and are thence supposed to be females. They inhabit Brasil and Guiana, where they are often made tame. They frequently make a noise not unlike the word jacu. Their flesh is much esteemed.

4. P. meleagris satyra, the horned pheasant. Latham calls it the horned turkey. This species is larger than a fowl, and smaller than a turkey. The color of the bill is brown ; the nostrils, fore- head, and space round the eyes are covertd with slender black hairy feathers ; the top of the head is red. Behind each eye there is a fleshy callous blue substance like a horn, which tends back- ward. On the fore part of the neck and throat there is a loose flap of a fine blue color, marked with orange spots, the lower part of whicli is be- set with a few hairs ; down the middle it is somewhat looser than on the sides, being wrinkled. The breast and upper part of the back are of a full red color. The neck and breast are inclined to yellow. The other parts of the plumage and tail are of a rufous brown, marked all over with white

spots, encompassed with black. The legs

are somewhat white, anrJ furnished with a spur behind each. A head of this bird, Mr. Latham tells us, was sent to Dr. Mead from Bengal, to- gether with a drawing of the bird, which was called anpaul pheasant. It is a native of Bengal.

5. P. pipile, or craxpipile, black in the belly, and the back brown, stained with black The flesh on the neck is of a green color. It is about the bigness of the yacou, and has a hissing noise. The head is partly black and partly white, and is adorned with a short crest. The space about the eyes, which are black, is white ; the feet are red. It inhabits Guiana.

6. P. vociferans, the vociferating penelope. The bill of this bird is of a greenish color : the back is brown, the breast green, and the belly is of a whitish brown. Latham calls it tlie crying curassaw. It is about the bigness of a crow.

PENESTICA, a town of the Helvetii, between Lacus Lausonius and Salodurum ; called Pete- nisca by Peutinger; thought now to be Biel, the capital of a small territory in Switzerland. ••• An- tonine. Cluverius.

PENETRALE, a sacred room or chapel in private houses, which was set apart for the wor- ship of the household gods among the ancient Romans. In temples also there were penetralia, or apartments of distinguished sanctity, where the images of the gods were kept, and certain solemn ceremonies performed.

PEN'ETRATE, v. a. & v. n."l Fv.penetrer, Pek'etrable, adj. penetrable, pe-

Penetrabil'ity, n. s. \ rietr-ajtt of La.t.

Pen'etrails, Ipenetro. To

Pen'etrakcy, '^pierce; enter

Pen'etrant, arf;. a body; enter

Penetra'tion, n. s. beyond the

Pen'etrative, adj. J surface: hence

to affect the mind or feelings; to make way mentally or otherwise: penetrable is, susceptible of being pierced, or of mental impression ; sympathetic : penetrability, the corresponding noun- substantive : penetrails, an obsolete word for the interior parts of the body : penetrant, having power to pierce or enter; sharp, subtle, pre- vailing: penetrative is synonymous with pene- trant : penetration, the act of entering a body ; mental entrance, acuteness, or subtlety. Peace ! And let me wring your heart, for so I shall, If it be made of penetrable stuff. Shakspeare.

Wouldst thou see Thy master thus with pleacht arms, bending down His corrigible neck, his face subdued To penetrative shame 1 Id.

Let not air be too gross, nor too penetrative, nor subject to any foggy noisomeness from fens.

Wotton.

It warms

The universe, and to each inward part,

With gentle penetration, though unseen,

Shoots invisible virtue even to the deep.

Milton, If the operation of these salts be in convenient glasses promoted by warmth, the ascending steams may easily be caught and reduced into a penetrant spirit. Boyle.

Let him try thy dart. And pierce his only penetrable part.

l)r"dcn.

If we reach no farther than metaphor, we

rather fancy than know, and are not yet penetrated into the inside and reality of the thing. Locke.

The subtilty, activity, and lenetrancq of its effluvia no obstacle can stop or repel, but they will make their way through all bodies. Hay

The food, mingled with some dissolvent juices, is evacuated into the intestines, where it is further sub- tilized and rendered so fluid and penetrant that the finer part finds its way in at the streight orifices of the lacteous veins. Id.

There shall we clearly see the uses of these things which here were too

subtile for us to pene- trating. , Id.

INIarrow is of all other oily substances, the most;je- nelrate. Arbuthnot on Aliments.

There being no mean between penetrability and impenetrability, passivity and activity, they being contrary ; therefore the infinite rarefaction of the one quality is the position of its contrary. Cheyne.

Court virtues bear, like gems, the highest rate, Born where heaven's influence scarce can penetrate : Though the same sun with all diffusive rays Smile in the rose, and in the diamond blaze. We praise the stronger effort of his power. And always set the gem above the flower. Pope.

O thou, whose penetrative wisdom found The south sea rocks and shelves, where thousands drowned. SwijVs Misreilauies.

The heart resists purulent fumes, into whose pe- netrails to msinuate some time must be allowed.

Harveit.

A penetration into the abstruse difficulties and depths of modern algebra and fluxions is not worth thi; labor of those who design either of the three learned professions. Watts.

PEN'GUIN, n. s. See Pinguin A bird. This bird was found with this name, as is sup- posed, by the first discoverers of America; and penguin signifying in Welsh a white head, and the head of this fowl being white, it has been imagined that America was peopled from W'ales ; whence Iludibras:
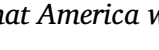

British Indians named from penguins. Also a fruit.

The penguin is so called from his extraordinary fatness: for, though he he no higher than a large goose, yet he weighs sometimes sixteen pounds ; his wings are extremely short and little, altogether un- useful for flight, but by the help whereof he swims very swiftly. Crew's ^/useum.

The penguin is very common in the West Indies, where the juice of its fruit is often put into pu ch, being of a sharp acid flavour : there is also a wine made of the juice of this fruit, but it will not keep good long. Miller.

Penguin, in botany (sect. I. Def. 2), or wild ananas, is a species of bromelia. SeeBROMELiA.

PENICHE, a fortified town of Portugal, on a peninsula in the Atlantic, surrounded by rocks. It has a harbour defended by a fort. In 1589 this town was taken by the English under Sir Francis Drake. Inhabitants 2800. Fortv-eight miles N. N. W. of Lisbon. Long. 9►► 23′ 56″ W^, lat. 39►► 21′ 48″ N.

PENICILLUS, among surgeons, is used for a tent to be put into wounds or ulcers.

PENIEL, or Penuel, a city beyond Jordan, near the ford or brook Jabbok, where Jacob wrestled with an angel. See Gen. xxxii. 24, &c. The city built afterwards in this place was given to the tribe of Gad. Gideon, returning from the

pursuit of the Midianites, overthrew the tower of Peniel (Judges viii. 17), and put all the men of the city to death, for having refused bread to him and his people, and having answered him in a very insulting manner. Jeroboam I. rebuilt Peniel (1 Kings xii. 25); and Josephus says that he built a palace in it.

PENJINSKAIA, a gulf of Eastern Siberia, forming the northern part of the bay of Okhotsk. It extends a considerable distance inland, and receives the Penjine River.

PENINGTON (Isaac), a celebrated English Quaker, born in 1617. He was an early convert of George Fox ; and both preached and wrote in defence of his system. Under the persecuting spirit of that age, he was several times im- prisoned, although he was of a meek, quiet, and philanthropic spirit, and very much beloved, lie died at Goodnestone in Sussex in 1679.

PENINNAII,the second wife of Elkanah, the father of Samuel. Iler fertility, and Hannah's barrenness, are recorded in 1 Sam. i., with seve- ral interesting circumstances, which show the folly and inconvenience of polygamy.

PENIN'SULA, 7i.s. ^ Fr. peninsule ; Lat.

Penin'sulated, arf;. S pene insula. A piece of land almost surrounded by the sea.

Aside of Milbrook lieth l\t peninsula of Inswork, on whose neckland staadeth an ancient house.

Careio.

PEN'ITENCE,7t.s. ˆx Yx. penitence, peni-

Pen'itext, adj. &: n. s. I tent, penitentiel, of

PENiTEN'TiALjflt//'. &)j.s. > Lat. penitcntiu.

Peniten'tiarv, ?2. s. i Repentance; con-

Pen'itently, adj. 'trition; sorrow for

sin; repentant course of action: penitent is, sor- rowful for sin ; reforming or reformed ; a person thus sorrowful and reformed ; also one under a course of church penance or censure : penitential is expressing penitence, or enjoined as a course of discipline for sin ; also a book directing such a course : penitentiary is, one who prescribes penitential rules ; one who observes thera ; or a place where they are observed. Much it joys rae To see you become so penitent. Shakspeare.

1 have done pennance for contemning love, Whose high imperious thoughts have punished me With bitter fasts and penitential groans. Irl.

Concealed treasures shall be brought into use by the industry of converted penitents, whose carcases the impartial laws shall dedicate to the worms of the earth. Bacon.

Upon the loss of Urbin, the duke's undoubted right, no penitential-]) , though he had enjoined him never so straight pennance to expiate his first offence, would have counselled him to have given over pursuit of his right, which he prosperously re-obtained. Id.

A prison restraihed John Northampton's liberty, who, for abusing the same in his unruly mayoralty of London, was condemned hither as a perpetual penitentiary. Carew.

To maintain a painful fight against the law of sin is the work of the penitentiari/. Hammond.

Nor in the land of their captivity Humbled themselves, or penitent besought The God of their forefathers. Milton.

Provoking God to raise them enemies ; From whom as oft lie saves tiiem penitent. Id. The counterfeit Dionysius describes the practice of the church, that tlie catechumens and penitents were

admitted to the lessons and psalms, and then ex- cluded. Stillingjieet . Death is deferred, and penitence has room

To mitigate, if not reverse the doom. Dryden.

'I'he proud he tamed, the penitent he cheared, Nor to rebuke the rich offender feared ; His preaching much, but more his practice wrought, A living sermon of the truths he taught. Id.

Is it not strange, that a rational man should adore leeks and garlick, and shed penitential tears at the smell of a deified onicn 1 Sottth.

The penitentials, or book of pennance, contained such matters as related to the imposing of pennance, and the reconciliation of the person that suflTered pennance. Ai/liffe.

The great penitentiary with his counsellors pre- scribes the measure of pennance.

Ayliffe's Parergon.

The repentance, which is formed by a grateful sense of the divine goodness towards him, is resolved on while all the appetites are in their strength . the penitent conquers the temptations of sin in their full force. Rogert.

His frown was full of terror, and his voice

Shook the delinquent with such fits of awe

As left him not, till penitence had won

Lost favour back again, and closed the breach.

Cowper,

Penitence is sometimes used for ►► state of repentance, and sometimes for the act of le- penting. See Repentance. It is also used for a discipline or punishment attending repentance, more usually called penance. It also gives title to several religious orders, consisting either of converted debauchees and reformed prostitutes, or of persons who devote themselves to the office of reclaiming them. Of this latter kind are these:

Penitence of St. Magdalen, at Paris, Congregation of, owed its rise to the preach- ing of F. Tisseran, a Franciscan, who converted a number of courtezans about the year 1492. Louis, duke of Orleans, gave them his house for a monastery, or rather, as appears by their con- stitutions, Charles \III. gave them the hotel called the Bochaigne, whence they were removed to St. George's chapel in 1572. By virtue of a brief of pope Alexander, Simon, bishop of Paris, in 1497, drew them up a body of

statutes, and gave them the rule of St. Augustine. None were admitted who were above thirty-five years of age, and, till the beginning of the last centun,, none but penitents ; but after its reformation by Mary Alvequin in 161 6, none were admitted but maids, who, however, still retain the ancient name peni tents.

Penitence of St. Magdalen, Order or, established about the year 1272 by one Bernard, a citizen of Marseilles, who devoted himself to the work of converting the courtezans of that city. Bernard was seconded by several others, who, forming a kind of society, were at lengtli erected intoa religious order by pope Nicholas III., under the rule of St. Ausustine. F. Gesnay says, that they also made a religious order of tl.e penitents, or women they converted, giving their the same rules and observances which they them ††† selves kept.

Penitents, an appellation given to certain fraternities of penitents, distinguished by the dif- ferent shape and color of their habits. These are secular societies, who have their rules, statutes.

and churches, and make public processions under their particular crosses or banners. Of these there are more than 100 ; the chief of which are, 1. The white penitents, of which there are several different sorts at Rome, the most ancient of which was constituted in 1264 : the brethren of this fraternity every year give portions to a certain number of young girls, in order to their being married : their habit is a kind of white sack- cloth, and on the shoulder is a circle, in the middle of which is a red and white cross. 2. Black penitents, the chief of which are the bre- thren of mercy, instituted in 1488 by some Flo- rentines, to assist criminals during their imprison- ment, and at their death : on the day of execution they walk in procession before them, singing the seven penitential psalms and the litanies ; and after they are dead they take them down from the gibbet and bury tliem : their habit is black sackcloth. There are others wliose business it is to bury such persons as are found dead in the streets : these wear a death's head on one side of their habit. There are also blue, gray, red, green, and violet penitents, remarkable for little else but the different colors of their habits. Mabillon tells us that at Turin there are a set of penitents kept in pay to walk through the streets in proces- sion, and cut their shoulders with whips, &c.

Penitents, or Converts of the Name of Jesus, a congregation of religious at Seville in Spain, consisting of women who had led a licen- tious life,

founded in 1350. Tliis monastery is divided into three quarters : one for professed religious ; another for novices ; a third for those who are under correction. When these last give signs of a real repentance, they are removed into the quarter of the novices, where, if they do not behave themselves well, they are remanded to their correction. They observe the rules of St. Augustine.

Penitents of Orvieto are an order of nuns, instituted by Antony Simoncelli, a gentleman of Orvieto in Italy. The monastery he built was at first designed for the reception of poor girls, abandoned by their parents, and in danger of losing their virtue. In 1662 it was erected into a monastery, for the reception of such as, having abandoned themselves to impurity, were willing to consecrate themselves to God by solemn vows. Their rule is that of the Carmelites. These religious undergo no noviciate. All required is, that they continue a few months in the monas- tery in a secular habit, after which they are admitted to the vows.

Penitentiary, in the ancient Christian church, a name given to certain presbyters or priests, appointed in every church to receive the private confessions of the people, in order to facilitate public discipline, by acquainting them what sins were to be expiated by public penance, and to appoint private penance for such private crimes as were not proper to be publicly censured.

Penitentiary, at the court of Rome, is an office in which are examined and delivered out the secret bulls, graces, or dispensations, relating to cases of conscience, confessions, &c.

Penite:>jtiary is also an officer in some cathedrals, vested with power from the bishop to absolve, in cases reserved to him. The pope has

his grand penitentiary, who is a cardinal, and the chief of the other penitentiary priests establishpd in the church of Rome, who consult him in all difficult cases. He presides in the penitentiar)', despatches dispensations, absolutions, &c., arid has under him a regent and four proctors, or ad- vocates of the sacred penitentiary.

PENK, a river of Staffordshire, which runs into the Sow, a mile below Staff'ord.

PENREMAS, a cape on the west coast of Wales, and north point of Pembrokeshire, at the mouth of the Tivy, four miles below Cardigan.

PENKRIDGE, a market-town and parish of Staff'ordshire, situate on the river Penk, over which it has a stone bridge ; four miles north- east from Brewood, and 129 north-west from London. Tlie town is ancient, and

supposed to have been the Pennocruciura of the Romans. The church has a square tower, containing five bells. Here is a charity-scliool for twelve boys and eight girls. Market on Tuesday. Fairs April 30th, and a great horse fair October 10th.

PENMAEN Mawr, a noted mountain of Caer- narvonshire, Wales, rises abruptly from the sea to the height of 1 540 feet, and its passage, on the road from Chester to Bangor and Holyhead, was extremely dangerous, until 1772, when those im- provements were undertaken which have now rendered it safe, and at the same time one of the most striking and romantic roads in the king- dom. It is secured from the sea by a wall breast-high. On the summit is Braich-y-Ddinas, or the arm of the city, an ancient fortification encompassed with a strong treble wall.

PENN (Sir William), was born at Bristol in 1621, and inclined from his youth to maritime affairs. He was made captain at twenty-one years of age, rear-admiral of Ireland at twenty- three, vice-admiral of Ireland at twenty-five, admiral to the Straits at twenty-nine, vice-ad- miral of England at thirty-one, and general in the first Dutch war at thirty-two. Returning in 1655, he was chosen representative for the town of Weymouth ; and in 1660 was made commissioner of the admiralty and navy, governor of the town and fort of Kinsale, vice-admiral of Munster, and a member of that provincial council. In 1664 he was chosen great captain commander under the duke of York, and distinguished him- self in an engagement against the Dutch fleet; after which he took leave of the sea, but conti- nued in his other employments till 1669. He died in 1670.

*Penn (William), an eminent writer among the Quakers, and the founder and legislator of Pennsylvania, was the son of Sir WilUam Penn, and was born at London in 1644. In 1660 he was entered a commoner at Christ Church in Oxford ; but, having previously received an im- pression from the preaching of one Thomas Loe a Quaker, withdrew with some other students from the national worship, and held private meetings, where they preached and prayed among themselves. This giving great off'ence to the heads of the college, Mr. Penn, though but six- teen years of age, was fined for non-conformity; and, continuing his religious exercises, was at length expelled his college. Upon his return home, he was treated with great severity by his**

father, who at last turned him out of doors; but, his resentment abating, he sent him to France in company with some persons of quality ; where he

continued a considerable time, and returned not only well skilled in the French language, but a po- lite and accomplished gentleman. About 1666 his father committed to his care a considerable estate in Ireland. But being found in one of the Quakers' meetings in Cork, he, with many others, was thrown into prison : on his writing to the earl of Orrery, however, he was discharged. But his father, being informed that he still adhered to his opmions, sent for him to England, and find- ing him inflexible to all his arguments, turned him out of doors a second time. About 1668 he became a preacher among the Quakers ; and that year was committed close prisoner to the Tower, where he wrote several treatises. Being discharged, after seven months' imprisonment, he went to Ireland, where he also preached amongst the Quakers. Returning to England, he was in 1670 committed to Newgate, for preaching in Gracechurch-street meeting-house; but, being tried at the sessions-house in tlie Old Bailey, he was acquitted. In September 1670 his father died; and, being perfectly reconciled to him, left him his paternal blessing and a plentiful estate. But his persecutions were not yet at an end ; for, in 1671, he was committed to Newgate for preaching at a meeting-house in Wheeler-street ; and during his imprisonment, which continued six months, he wrote several treatises. After his discharge, he went into Holland and Germany, and in the beginning of 1672 married, and settled with his family at Rickmansworth in Hertford- shire. The same year he published several pieces ; particularly one against Reeves and Muggleton. In 1677 he again travelled into Holland and Germany to propagate his o})inions ; and had frequent conversations with the princess Elizabeth, daughter to the queen of Bohemia, and sister to the princess Sophia, mother to king George I. In 16B1 king Charles II., in consi- deration of the admiral's services, and several debts due to him from the crown at his decease, granted William Penn and his heirs the province lying on the west side of the Delaware, which thence obtained the name of Pennsylvania. Upon this Penn published a brief account of that province, with the king's patent ; and proposing an easy purchase of lands, and good terms of settlement for such as were inclined to remove thitlier, many went over. But Penn, justly con- sidering that no European smereign had a right to dispose of the property of other nations, however savage, without some compensation, appointed commissioners to purchase the land he had received from the king of the native In- dians, and concluded a treaty with them. The city of Philadelphia was planned and built ; and he himself drew up the fundamental constitutions of Pennsylvania in twenty-four articles. In 1681 he was elected F. R."S., and in 1682 he embarked for Pennsylvania, where he continued about two years, and returned in England in Au- gust 1684. Upon the accession of king James II. he was taken into a great degree of favor, which exposed him to the imputation of being a Papist ; but from which he fully vindicated him-

self. However, upon the Revolution, he was ex- amined before the council in 1688, and obliged to give security for his appearance on the first day of the next term, which was afterwards con- tinued. He was several times discharged and examined ; and at length, warrants being issued out against him, he was obliged to conceal him- self for two or three years. Being at last per- mitted to appear before the king and council, he represented his innocence so effectually that he was acquitted. In August 1699 he, with his wife and family, embarked for Pennsylvania; whence he returned in 1701, to vindicate his pro- prietary right. Upon queen Anne's accession, he was in great favor, and was often at court. But, in 1707, he was involved in a law-suit with the executors of a person who had been formerly his steward ; and, though many thought him ag- grieved, the court of chancery did not relieve him; upon which account he was obliged to live within the rules of the Fleet for several months, till the matter was accommodated. He died in 1718. Penn's friendly and pacific manner of treating the Indians produced in them an extra- ordinary love for him and his people ; so that they have maintained a perfect amity with the Anglo-Americans in Pennsylvania ever since. He was the greatest bulwark of the Quakers; in whose defence he wrote numberless pieces. Besides the above works, he wrote a great num- ber of others, the most esteemed of which are : ××× 1. Primitive Christianity revived. 2. Defence of a paper, entitled Gospel Truths, against the Exceptions of the Bishop of Cork. 3. Persua- sive to Moderation. 4. Good Advice to the Church of England, Roman Catholic, and Pro- testant Dissenters. 5. The Sandy Foundation shaken. 6. No Cross, no Crown. 7. The great Case of Liberty of Conscience debated. 8. The Christian Quaker, and his Testimony stated and vindicated. 9. A Discourse of the general Rule of Faith and Practice, and Judge of controversy. 10. England's present Interest considered. 11. An Address to Protestants. 12. Reflections and Maxims. 13. Advice to his Children. 14. Rise and Progress of the People called Quakers. 15. A Treatise on Oaths. Most of these have passed through several editions, some of them many. The letters between \'illiam Penn and Dr. Tillotson, and William Penn and William Popple, Esq., together with Penn's letters to the princess Elizabeth of the Rhine, and the coun tess of Homes, as also one to his wife on his going to Pennsylvania, are inserted in his works, which were first collected and published in 2 vols, folio ; and the parts since selected and abridged into 1 vol. fol. are very much and de- servedly admired.

Penn's Neck, Lower, a towm of Salem coun- ty. New Jersey. Population 1163.

PENNA, in zoology. See Pinna.

PE'NNACHED, adj. Fr. pennache. Ap- plied to flowers when the ground of the natural color of their leaves is radiated and diversified neatly without

any confusion.

Carefully protect from violent rain your pennached tulips, covering them with mattresses. Evelyn.

PENNANT, n. s. Fr. pennmi. A small flag

or ensign : also tackle for hoisting things on board ships.

PENNANT (Thomas), Esq., LL. D., F. R. S.,

&c., a late eminent English naturalist, born in Flintshire, in 1726, and descended of a race of ancient Britons, who had settled in that country for many centuries. He was educated succes- sively at Wrexham, Fulham, and Oxford, where he graduated ; and, having made considerable proficiency in the classics, for some time studied law. About this time a present of Willough- by's Ornithology gave hira an attachment to natural history, which continued through life. After making a tour through Wales, Cornwall, and other parts of England, he travelled to the continent, and established a correspondence with several of the greatest men of the age, par- ticularly count Buftbn, Dr. Pallas, Dr. Haller, Linnaeus, and Voltaire. On his return he married, and had two children ; but did not succeed to the family fortune till his thirty- seventii year, when he settled at Downing. His wife dying, he made another tour to the conti- nent ; where his reputation as a man of science was now established by his British Zoology ; which was published in 4 vols. 4to. so early as 1750. About 1770 he set out on his travels through Scotland ; and in 1771 published a most entertaining account of that tour, in 3 vols. 4to., which passed through several editions. After this tour he penetrated to the Hebrides, and visited Man. In 1776 he married his second wife. Miss INIostyn, sister of Sir Roger Mostyn. In 1778 he commenced the publica- tion of his Welsh Tour, in 2 vols. 4to. In 1782 he published his Journey from Chester to Lon- don, in 1 vol. 4to. ; and in 1784 his Arctic Zoology, an admirable work. In 1790 he pub- lished another 4to. vol. entitled Of London; and with it a Farewell Address to the public ; notwithstanding which soon after appeared his Natural History of the Parishes of Holywell and Downing; in 1 vol. 4to. And even so late as 1797, his seventy-first year, he published The View of Hindostan, a splendid work in 2 vols. 4to., with twenty-three plates, admirably en- graved. From his apology in the preface, these 2 vols, appear to be only part of a work of which the remaining toIs. were promised to be published. He also published the following papers in the Philosophical Transactions :

1. A Letter on an Earthquake felt at Downing in 1753. 2. Another on Coralloid Bodies {Kopa\oHSt]g), collected by him : and 3. Synopsis of Quadru- peds, 1771. 4. A Pamphlet on the Militia. 5. A paper on the Turkey : and 6. A volume of Miscellanies. Besides being F. R. S. of London, he was a Member of the Society of Anti- quaries : F. R. S. of Upsal, in Sweden : a mem- ber of the American Philosophical Society, and of the Anglo-Linna;an Society, Sec. His ample fortune enabled him to keep a hospitable table; and to dedicate the profits of several of his works to charitable institutions ; particularly the Welsh charity school. He died at Down- ing in 1 798, aged seventy-two. He left several works in MS. entitled Outlines of the Globe, of which the View of Hindostan composed the fourteenth and fifteenth volumes. He was en-

dued with a healthy frame of body, an open and intelligent aspect, an active and cheerful disposition, and great vivacity. His heart was kind, benevolent, and charitable. He was also extremely candid and free from prejudices.

PEN NATED, adj. Lat. pennatus. Winged ; among botanists pennated are those leaves of plants which grow directly one against another on the same rib or stalk; as those of the ash and walnut-tree.

PENNATULA, the sea-pen, m natural histo- ry, a genus of zoophyte, which, though it swims about freely in the sea, approaches near to the gorgonia. This genus has a bone along the mid- dle of the inside, which is its chief support; and this bone receives the supply of its osseous mat- ter by the same polype mouths that furnish it with nourishment. Linnaeus reckons seven spe- cies. See Zoophytes. It partakes both of the animal and vegetable nature; but some suppose it to be nothing but a fucus or sea-plant. It is certainly an animal, however, and as such is locomotive. Its body generally expands into processes on the upper parts, and these processes or branches are furnished with rows of tubular denticles ; they have a polype head proceeding from each tube. The sea-pen is distinguished from the corallines by this specific difference ; corals, corallines, alcyonia, and all that order of beings, adhere firmly by their bases to submarine substances; but the sea-pen either swims about in the water, or floats ujjon the surface. But there are other kinds of sea-pens, or species of this animal, which have no resemblance to a pen : as

1. P. digitalis, or digiti-formis, the finger- shaped sea-pen.

2. P. filota of Linnaeus.

3. P. mirabilis.

4. P. pavonis piscis, the feather of the pea- cock fish.

5. P. phosphorea. Dr. Code Molesworlh sent one of these animals to the ingenious Mr. Ellis, the author of many curious papers on the nature of corallines, which was taken in a trawl in seventy-two fathoms water, near the harbour of Brest, in France ; the same species are frequent- ly found in the ocean, from the coast of Norway to the Mediterranean Sea, sometimes at consi- derable depths, and sometimes floating on the surface. Mr. Ellis describes that sent him as follows : ••• Its general appearance greatly resem- bles that of a quill feather of a bird's wing; it is about four inches long, and of a reddish color; along the back there is a groove from the quill part to the extremity of the feathered part, as there is in a pen; the feathered part consists of fins proceeding from the stem. The fins move the animal backward and forward in the water, and are furnished with suckers or mouths armed with filaments. There is no perforation at the bottom, and therefore Mr. Ellis is of opinion that the exuviae of the animals upon which it feeds are discharged by the same apertures at which the food is taken in ; and in this it is not singular, the same economy being observed in the Greenland polype, described by Mr. Ellis in his Essay on Corallines. Each sucker has eight filaments, which are protruded when prey

is to be caught; but at other times they are drawn back into their cases, which are furnished at the end with spiculae that close together round the entrance, and defend this tender pari from external injuries. Dr. Bohadsch of Prague ha-l an opportunity of observing one of those animals alive m the water, and he gives the following account of what he saw : ••• ' A portion of the stern contracted, and became of a strong purple color, so as to have the appearance of a ligature round it ; this apparent ligature, or zone, moved upwards and downwards successively through the whole length of the stem, as well the fea- thered as the naked part ; it began at the bottom, and moving upwards to the other extremity, it there disappeared, and at the same instant ap- peared again at the bottom, and ascended as be- fore ; but as it ascended through the feathered or pinnated part it became paler. When this zone is mucli constricted, the trunk above it swells, and acquires the form of an onion ; the constriction of the trunk gives the color to the zone, for the intermediate parts are paler in proportion as the zone becomes deeper. The end of the naked trunk is sometimes curved like a hook ; and at its extremity there is a sinus or chink, which grows deeper whde the purple ring is ascending, and shallower

as it is coming down. The fins liave four motions, upward and dow-nward, backward and forward, from right to left, and from left to right. The fleshy filaments or claws move in all directions ; and, with the cylindrical part from which they proceed, are sometimes protruded from the fins, and sometimes hidden with them. Upon dissecting this animal, the following phenomena were discovered : ••• When the trunk was opened lengthwise, a saltish liquor flowed out of it, so viscid as to hang down an inch. The whole trunk of the stem was hollow, the outward membrane being very strong, and about a tenth part of an inch thick ; within this membrane appeared another much thinner ; and between these two membranes, in the pinnated part of the trunk, innumerable little yellowish eggs, about the size of a white poppy seed, were seen floating in a whitish liquor ; about three parts of the cavity within the inner membrane is filled by a kind of yellowish bone ; this bone is about two inches and a half long, and one-twentieth of an inch thick; in the middle it is four square, but towards the ends it grows round and very taper, that end being finest which is next the pinnated part of the trunk. This bone is covered in its whole length with a clear yellowish skin, which at each end runs out into a ligament ; one is inserted in the top of the pinnated trunk, and the other in the top of the naked trunk : by the help of the upper ligament, the end of the bone is either bent into an arch, or disposed into a straight line. The fins are composed of two .skins ; the outward one is strong and leathery, and covered over with a vast number of crimson streaks ; the inner skin is thin and transparent : the suckers are also in the same manner com- posed of two skins, but the outer skin is some- thing softer. Both the fins and suckers are hollow, so that the cavity of the suckers may communicate with those of the fins, as the cavity of the fins does with that of the trunk. Ur. Vol. XVI.

Shaw, in his History of Algiers, says, these ani- mals are so luminous in the w-ater that in the night fishermen discover fishes swimming about in various depths of tlie sea by the light they give. From this extraordinary quality Linnaeus calls this species of the sea pen pennatula phos- phorea, and remarks, after giving the synonymes of other authors, Habitat in oceano fundum illu- minans. Of all the pennatulae yet known, this feather-shaped one, or, as it is called by others, the silver sea pen, is the largest, as well as the most specious in its appearance. It is of a beau- tiful silvery white, elegantly striated on each of the feather like processes with lines or streaks of the deepest black. It is very rare, and is a na- tive of the Indian seas. There is a very fine specimen of this species in the British Museum.

6. P. reniformis, the kidney-shaped sea pen. The kidney-shaped sea pen was discovered some time ago on the coast of South Carolina, and sent to Mr. Ellis by John Gregg, esq., of Charles- town. It is of a fine puq-)le color ; the kidney part is about an inch from end to end, and about half an inch

wide in the narrowest part ; a tail proceeds from the middle of the body, which is roundish, and about an inch long ; is also full of rings like an earth worm, and along the middle both of the upper and under part of it there is a small groove which runs from one end to the other, but there is no perforation at either extre- mity. The upper part of the body is convex, and about an inch thick ; the whole surface is covered with small yellow starry openings, through which little suckers are protruded, each furnished with six tentacula, or filaments, like what are observed on some corals; the under part of the body is quite flat, and is full of rami- fications of fleshy fibres, which proceeding from the insertion of the tail, as a common centre, branch out so as to communicate with the starry openings on the exterior edge and upper surface of the animal.

7. P. sagitta, the arrow pennatula. PENNELHEUGH, a hill of Roxburghshire,

in Crailing parish ; on the top of which are relics of a strong camp.

PENNI (John Francis), born at Florence in 1488, was the disciple of Raphael, who, observing his genius and integrity, intrusted his domestic concerns entirely to his management ; by which means he got the appellation of il fatore, or the steward. His genius was universal ; but his greatest pleasure was in painting landscapes and buildings ; he was an excellent designer, and colored well in oil, distemper, and fresco. He painted portraits exquisitely, and had such happy talents that Raphael left him heir to his fortune, in partnership with Romano his fellow disciple. Penni died at Naples in 1528.

Pen XI (Luke), brother of the above, worked at Genoa and other parts of Italy, with Del ˆ“aga, who married his sister ; he went thence to Eng- land, where he worked for Henry VIII., and was employed by Francis I. at Fontainbleau ; but at last devoted himself to engraving.

PENNI-N.E Alpes, a division of the Alps.❓❓❓ Liv. xxi. 38. See Alps.

PEN’NON, n.s. Yt. pennon. A small flag or color.

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PENNSYLVANIA.

Her yellow locks crisped like golden wire, About her shoulders weren loosely shed.

And, when the wind among them did inspire. They waved like a. pennon wide dispred. Spenser.

High on his pointed lance his pennon bore. His Cretan fight, the conquered Minotaur. Dryden.

*PENNSYLVANIA, one of the United States of North Anneiica, bounded north by New York ; east by the river Delaware, which separates it from New Jersey; south by i3elaware, Maryland, and Virginia; and west by \ irginia and Ohio. It is 307 miles long, and 160 broad ; containing about 44,000 square miles. Population, in 1790, 434,373; in 1800 602,545; and in 1810 810,091, of whom 795 were slaves, and 22,492 free blacks. The number of militia in 1817 amounted to 118,016. The counties, and chief towns are exhibited in the following table : ***

Eastern District.

Counties.

County Towns,

Adams

Gettysburg.

Berks

Reading.

ri 1 < Doylestown. 2"^^^ \ Bristol.

Chester

West Chester.

Cumberland

Carlisle.

Delaware

Chester.

Dauphin

Harrisburg.

Franklin

Chambersburg.

Lehigh

AUentown.

Lancaster

Lancaster.

Lebanon

Lebanon.

Montgomery

Norristown.

Northampton

Easton.

Perry

New Bloomfield,

Philadelphia Philadelphia city

ˆ Philadelphia.

Pike

Milford.

Schuylkill

Orwigsburg.

Wayne

Bethany.

York

York.

Western District.

Alleghany Pittsburg city

5 Pittsburg.

Armstrong

Kittaning.

Beaver

Beaver.

Bedford

Bedford.

Bradford

Towanda.

Butler

Butler.

Cambria

Ebensburg.

Centre

Bellefonte.

Clearfield

Clearfield.

Columbia

Danville.

Crawford

Meadville.

Erie

Erie.

Fayette

Uniontown.

Greene

Waynesburg.

Huntingdon

Huntingdon.

Indiana

Indiana.

Luzerne

Wilkesbarre.

Lycoming

Williamsport,

M'Kean

Smithport.

Mercer

Mercer.

Mifflin

Lewistown.

Northumberland

Sunbury.

Potter

Cowdersport.

Somerset

Susquehannah

Tioga

Union

Venango

Warren

Washington

Westmoreland

Somerset.

Montrose.

Wellsborough.

New Berlin.

Warren.

Washington

FrankUn.

Greensburg.

There are three incorporated cities in this state, Philadelphia, Pittsburg, and Lancaster. Harrisburg is the seat of government. The other most considerable towns are Reading, Easton, Bethlehem, Carlisle, York, Germantown, Cham- bersburg, Columbia, Sunbury, Brownsville, Washington, &c. There are about fifty banks in this state, of which ten are at Philadelphia. Here is also a university, and colleges have been established" at Carlisle, Lancaster, Canons- burg, Washington, and Meadville. There are respectable and flourishing Moravian schools at Bethlehem, Nazarete, and Litiz ; and academies have been established at AUenstown, Beaver- town, Bellefont, Bustletown, Chambersburg, Easton, Erie, Germantown, Greensburg, Griers- burg, Meadville, Newtown, Norriston, Northum- berland, Pittsburg, Union, Waterford, Wilkes- barre, York, and some other places. Provision has been made by the legislature for establishing an academy in every county.

The congregations of the different denomina- tions of Christians in Pennsylvania were stated, in 1816, to be in the following proportions :

* Presbyterians 186 ; German Calvinists ninety- four, German Lutherans seventy-four; Friends fifty-five. Episcopalians twenty-six. Baptists fif- teen, Roman Catholics fourteen, Scotch Presby- terians eight, Universalists one. Covenanters two, Methodists many, and two Jews' synagogues ; amounting in all to about 500 religious societies. Some of these numbers are doubtless stated too low. From a statement made by the society of Friends, it appears that they have ninety-seven meetings in this state; and, according to the Baptist report, the number of Baptist churches is sixty.*

The inhabitants are principally descendants of the Welsh, English, Irish, Germans, and some Scotch, French, Swedes, and a few Dutch. The Germans are numerous ; they consist of Luthe- rans, Calvinists, Moravians, Catholics, Meno- nists, &,c.; and are distinguished for temperance, industry, and economy. The Swedish language is almost extinct, but the German prevails to a very considerable extent. There are now pub- lished in Pennsylvania eighty-four newspapers, of which fifteen are in German.

Sir Walter Raleigh was the first adventurer that attempted to plant colonies on these shores, in the reign of queen Elizabeth. Mr. Hudson, an Englishman, sailing to that part of the coast which lies between Virginia and New England, in the reign of James I., and being about to make a settlement at the mouth of Hudson's River, the Dutch gave him a sum of money to dispose of his interest in this country to them. In 1608 they began to plant it ; and, by virtue of this purchase, laid cfaim to all those countries which are now denominated New York, New Jerseyi

PENNSYLVANIA.

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and Pennsylvania; but, there remaining some part of this coast which was not planted by the Hollanders, tlie Swedes sent a fleet of sliips thi- ther, and took possession of it for that crown ; but the Dutch, having; a superior force in the neighbourhood, compelled the Swedes to submit to their dominion,allowing them, however,to en joy the yjlantations they had settled. The English, not admitting that either the Dutch or Swedes had any right to countries first discovered and jilanted by a subject of England, and part of them at that time possessed by English subjects, under charter from queen Elizabeth and king James I. : king Charles IL during the first Dutch war in 1664, granted New York, Jersey, and Pennsylvania, of which the Dutch had usurped the possession, to his brotlier James duke of York : and Sir Robert Carr being sent over with a squadron of men of war and land forces, and summoning the Dutch governor of the city of New Amsterdam, now New York, to surrender, he yielded that capital to the English : and

the rest of the places in the possession of the Dutch and Swedes followed his example; and these countries were confirmed to the English by the Dutch, at the next treaty of peace between the two nations. The duke of York afterwards parcelled tiiem out to under proprietors ; selling in particular, to William Penn the elder, in 1683, the town of Newcastle, alias Delaware, and a district of twelve miles round the same; to whom his heirs, and assigns, by another deed of the same date, he made over all that tract of land from twelve miles south of Newcastle to the Whorehills, otherwise called Cape llenlopen, now known by the name of the Three Lower Counties upon Delaware River. All 'the rest of the under-proprietors, some time after, sur- rendered their charters to the crown ; whereby New York and the Jerseys became royal govern- rnents ; but Penn retained that part of the coun- try which had been sold to him by the duke of York, together with what had been granted to him before, in 1680, 1681, which now consti- tutes the State of Pennsylvania. As soon as Penn had got his patent, he began to plant the country. Those who went over from England were generally Dissenters and Quakers, whose religion is established by law here, but with full liberty to all other Protestant sects. The Dutch and Swedes, who were settled before Mr. Penn became proprietor, choosing still to reside in this country, as they did in New York and the Jer- seys, obtained the same privileges as the rest of the king's subjects ; and their descendants are now the same people, speaking their language and being governed by the same laws. Mv. Penn, liovvever, not satisfied with the title granted him by king Charles IL and his brother, bought the lands also of the Indians for a valuable considera- tion, or what they esteemed such, paying them in cloth, tools, and utensils, to their entire satis- faction ; for they had not hands to cultivate the 100th part of their lands, and, if they could have raised a product, there was nobody to buy : the purchase, therefore, was all clear gain to them ; and, by the coming of the English, their paltry trade became so profitable, that they soon found their condition much altered for the better. The

Indian council at Onondago, however, disap- proved of their deputies parting wiih so muth land; and, in 1755, obliged the proprietaries to reconvey great part of the same to the Indians. A dispute subsisted a long time between the pro- prietaries of the province and lord Baltimore, proprietary of Maryland, about the right to cer- tain lands ; which was at last amicably adjusted, greatly in favor of the Penns. About 1704 there happened some alteration in the constitution of the province. The establishment that took place, and subsisted till the American war broke out, consisted of a governor, council, and assembly, each with much the same power and privileges as in the neighbouring colony of New York. The lieutenant-governor and council were ap- pointed by the proprietors Thomas and Richaid Penn, with his majesty's approbation ; but, if the laws

enacted here were not repealed witiiin six months after they had been presented to the king for his approbation or disallowance, they were not repealable by the crown after that time. A state of peace and happiness affords few ma- terials for the historian. On the breaking out of the American war, the citizens of Philadelphia took an early and active part. In September 1776 they established a new constitution ; which was considerably altered and improved in June 1792. In 1793 this state, but particularly the capital, was visited by the yellow fever, which, in the short space of three months, carried off about 5000 people. In 1794 an alarming insur- rection took place in the western counties, the ostensible cause of which was an excise upon whisky, but an incendiary letter, afterwards dis- covered, showed that a deep scheme had been laid to excite a rebellion in the state. But by the wise and decisive measures adopted by the executive government, supported by the great body of the citizens, the insurrection was quelled and tranquillity restored almost without blood- shed.

The legislature at this period consists of a se- nate and a house of representatives. The repre- sentatives, whose number cannot be less thai, sixty nor more than 100, are chosen annually. The senators are chosen for four years, one quar- ter of them being elected every year. Their number cannot be less than one-fourth, nor more than one-third of the representatives. The gover- nor is elected for three years by the people, but cannot hold the oflfice more than nine years in twelve. The elections are made on the second Tuesday in October and the legislature meets in December. This state sends twenty-three repre- sentatives to congress.

The principal rivers are the Delaware, Schuyl- kill, Lehigh, Susquehanna, Juniatta, Alleghany, Mononofahela, Ohio, and Youghiogeny.

Pennsylvania is intersected by various moun- tains. The principal ridges of the Alleghany Mountains, comprehended in Pennsylvania, are the Kittatinny, or the Blue Mountains. Behind these, and nearly parallel to them, are Peters, Tuscarora, and Nescopeck mountains, on the east side of the Susquehanna ; on the west Share- man's Hill, Sideling Hill, Ragged, Great, War- rior's Evit's and Will's mountains ; then the great Alleghany ridge, which, being the largest,

gives name to the whole ; and west of this are the Chestnut Ridges. Between

the Juniatta and the west branch of the Susquehanna, are Jacks, Tussys, Nittiny, and Bald Ea^rle mountains. The valleys between these mountains are often of a rich, black soil, suited to the various kinds of grass and grain. Some of the mountains admit of cultivation almost to their summits. The other parts of the state are generally level, or agreeably diversified with hills and valleys.

The soil of Pennsylvania is various ; a small part of it is barren, but a great proportion of it fertile, and a considerable part very excellent. It is generally better adapted to tillage than grazing ; and much of it, particularly the south- east part, is under excellent cultivation. The two best tracts of land are, one in the south-east part, along the Susquehanna, the other in the north- west part, between Lake Erie and Alleghany River. Wheat is the most important article of produce. The next in value is Indian corn. Buck wheat, rye, barley, oats, flax, hemp, beans, peas, and potatoes, are extensively cultivated. Cherries, peaches, apples, and cider, are abundant. There are large dairies in many parts. Pennsylvania has an excellent breed of horses. The number of domestic animals in the state, according to the returns of 1810, was as follows : horses 255,645, neat cattle 612,998, sheep 619,223. Of the sheep 4128 were Merinos, and breeds mixed with Merinos.

Iron ore is distributed in large quantities in many parts of the state ; and in some places cop- per, lead, and alum are found. Here are also numerous lime-stone quarries, and various kinds of marble ; and in the middle and western parts there is an abundance of coal.

The general style of architecture in this state is neat and solid. Stone buildings are most com- mon in old settlements; brick houses are fre- quent ; log and frame houses abound in the new country. In the towns there is a considerable proportion of brick houses. Many turnpike roads of the most durable materials, and be?t construction, are made in various parts of the state. That from Philadelphia to Lancaster is sixty-two miles in length, twenty-four feet wide, and covered eighteen inches deep with powdered stone. Numerous bridges, of great strength and beauty, are constructed over the rivers.

*Pennsylvania exceeds all tlie other states in the variety and extent of her manufactures, some of which are of superior excellence. In 1810 there were sixty-four cotton-manufactories, forty- four blastfurnaces, six air furnaces, four bloome- ries, seventy-eight forges, fifty trip-hammers, eighteen rolling and slitting mills, 175 naileries, sixty-four paper-mills, eight glass works, thirty- five rope-walks, and 108 printing-oflSces. The total amount of the manufactures, embracing 220 articles, was 44,194*740 dollars. The ex- ports in 1816 amounted to 7,196,246 dollars. They*

consist of flour, grain, iron, and various manufactured articles.

PEN'NY, 71. s. V Plural pence. Sax. Pen 'ny LESS, arf;. / penig. A small coin, of Pen'nvweight, \ which twelve make a shil PEN'jsiywiSE, iling; the radical denomi- Pen'ny WORTH, J nation from which English

coin is numbered. See below. Pennyless i►► without pence or money ; poor : pennyweight, a weight of twenty-four grains troy : pennywise, wise only in pence ; saving in small sums, and careless of greater : pennyworth, as much as a penny, or any given portion of money, will buy ; hence a bargain; a purchase ; a good bargain.

And whanne the covenaunt was maad with werk- men of a peny for the day he sente hem into his vyne- yerd. Widif. Matt. xx.

And they say unto him, Shall we go and buy two hundred /)►►'/;hv"""""""" of bread? Mark \i. 37.

The same servant found one of his fellow-servants, which owed him an hundred pence, and took him by the throat. Matthew.

As for corn it is nothing natural, save only {(' barley and oats, and some places for rye ; and there- fore the larger pennyworths may be allowed to them. Spenser on Ireland . You shall hear

The legions, now in Gallia, sooner landed

In our not fearing Britain, than have tidings

Of any penny tribute paid.

Shakspeare. Cymbellne.

We will not lend thee a penny, Shakspeare.

Pirates may make cheap pennyworths of their pil- lage, And purchase friends. Id. Henry VI.

Be not pennywise ; riches have wings and fly away of themselves. Bacon.

Lucian affirms that the souls of usurers after their death are translated iqto the bodies of asses, and there remain certain days for poor men to take their pennyworths out of their bones and sides by cudgel and spur. Peacham.

Because there is a latitude of gain in buying and selling, take not the utmost penny that is lawful, for although it be lawful, yet it is not safe.

Taylor.

She sighs and shakes her empty shoes in vain. No silver penny to reward her pain. Dryden.

Pepper and Sabean incense take ; And with post-haste thy running markets make; Be sure to turn the penny. Id.

For fame he prayed, but let the event declare He had no mighty penn'worth of his pray'r. Id.

Though in purchases of church lands men have usually the cheapest pennyworths, yet they have not always the best bargains. South.

It may be a contrivance of some printer, who hath a mind to make a penny. Swift's Miscellany.

My friendship I distribute in pennyworths to those about me wjio displease me least. Sivift.

The Seville piece of eight is Ig pennyweight in the pound worse than the English standard ; weighs four- teen pennyweight ; contains thirteen pennyweight, twenty-one grains, and fifteen mites, of which there are twenty in the grain of sterling silver ; and is in value forty-thiee English pence, and eleven hundredths of a penny. Arbuthnot,

Penny, or Peny, in commerce, an ancient English coin, which had formerly considerable course ; but, till of late, was dwindled into an imaginary money, or money of account, con- taining the twelfth part of a shilling, or 240th of a pound. Camden derives the word from the Latin pecunia, money. The ancient English penny, penig, or pening, was the first silver coin struck in England ; and the only one current among the Anglo-Saxons : according to Camden, Spelman, Dr. Hicks, &c. The penny was equal in weight to our three-pence : five of them made one shilling, or scilling Saxon ; thirty a mark or

mancuse,' equal to our seven shillings and six- pence. Till the time of king Edward I. the penny was struck with a cross, so deeply in- dented in it that it might be easily broke, and parted, on occasion, into two parts, thence called half-pennies ; or into four, thence called four- things, or farthings.

But that prince coined it without indenture ; in lieu of which he first struck round halfpence and farthings, lie also reduced the weight of the penny to a standard ; ordering that it should weigh thirty-two grains of wheat, taken out of the middle of the ear. This penny was called the penny sterling. Twenty of these pence were to weigh an ounce ; when the penny became a weight as well as a coin. See Coins. The silver penny is now disused.

Penny, in ancient statutes, is used for all silver money : and hence the ward-penny, aver- penny, hundred-penny, tithing-penny, and bro- thal-penny.

PENNYCUICK (Alexander), JVI.D., a Scot- tish poet and physician, who published a small volume of humorous poems in the Scottish dia- lect, in the seventeenth centuiy. He was pro- prietor of New Hall and Romanno.

PENNY-ROYAL, in botany. See Mentha.

Penny-royal, Virginian. See Satureia.

The Penny-weight is a Troy weight, con- taining twenty-four grains ; each grain weighing a grain of wheat gathered out of the middle of the ear, well dried. The name took its rise hence, that this was formerly the weight of one of our ancient silver pennies. See Penny. Twenty of these penny-weights make an ounce Troy.

PENNY-WORT, Marsh. See Hydroco-

STYLE.

Penny-wort, Wall. See Cotyledon.

Penny-wort, Water. See Hydrocotyle.

PENOBSCOT, a county of Maine, North America, bounded on the east by Washington and Hancock counties, on the south by Hancock county, and on the w est by Kennebeck and So- merset counties. It is watered by the Penobs- cot, formed from the north part of Hancock county. Chief town Bangor.

Penobscot, a sea-port and post town of Han- cock county, Maine, on the east side of i'enobs- cot Bay ; four miles north of Castine ; and 240 north-east of Boston. Population 1302. It is a place of considerable trade. The shipping be- longing to this port, in 1816, amounted to 18,611 tons.

Penobscot, the largest river in Maine. The western and principal branch rises in the western part of the state, some of its sources being near the

head waters of the Chaudiere, and others near those of St. John's. It flows east by south through Chesuncook and Pemmidumpkok lakes, and unites with the eastern brancli, fifty-four miles in a right line, north by east of Bangor. The eastern branch rises near the sources of the Aroostic. After the junction it holds a general course south by west, till it flows into the bead of Penobscot Bay, between the towns of Penobs- cot and Prospect. It is navigable for ships to Bangor, where the navigation and tide terminate, fiftv-two miles north of OwPs 'Head, at the en-

trance of the bay. The towns on the west side of the river and bay, beginning at the head of navigation, are Bangor, Hampden, Frankfort, Prospect, Belfast, Northport, Lincolnville, Cam- den, and Thomastown ; on the east side. Brewer, Orington, Bucksport, Orland, Penobscot, Cas- tine, Sedgewick, and Deer Isle.

Penobscot Bay, a large bay of the Atlantic, on the south coast of Maine. It embosoms Long Island, on which is the town of Islesborough, the Fox Islands, containing the town of Vinal- haven, and several smaller islands. It is a very fine bay, affords great advantages of navigation, and presents a variety of beautiful landscapes. Its entrance between the Isl►► of Holt and Owl's Head, is eighteen miles vvide, and its length from north to south is about thirty. Long. 68►► 40′ to 68►► 56′ W., lat. 44►► to 44►► 30′ N.

Penobscot Hills, mountains of Maine, on the west coast of Penobscot Bay.

PENRITH, a market town and parish of Cumberland, seventeen miles south from Car- lisle, and 283i N.N.W. from London. Checks, hats, and fancy waist-coat-pieces, are the manu- factures of tliis place. The town was originally claimed, and continued a long time in the pos- session of the Scots; but it being disputed by the English, it was twice burnt in the reigns of Edward III. and Richard II., when it had a castle. It consists of several irregular streets, but some of the houses are handsome and com- modious, and extensive improvements have been made of late. The church is a large and hand- some modern structure. It has a good free- school, a charity-school, and two Sunday-schools, with several meeting-houses for Presbyterians and Quakers, a museum for natural curiosities, and an assembly-room. On the north bank of the Emont are two caves or grottos, dug out of the solid rock, and very extensive. This town suffered greatly by the plague in 1380 and 1598. Markets on Tuesday and Saturday. Fairs, June 8th, and August 5th.

PENROSE (Thomas), was the son of the Rer! Mr. Penrose, rector of Newbury, Berks, a man of great abilities, descended from an ancient Cornish family. Mr. Penrose, jun., being in- tended for the church, pursued

his studies with success, at Christ Church, Oxford, until summer 1 762 ; when, his eager inclination to the naval and military service overpowering his attach- ment to his real interest, he left college, and em- barked in the unfortunate expedition against Nova Colonia, in South America, under captain IMacnamara. The issue was fatal. The Clive (the largest vessel) was burnt ; and though the Ambuscade escaped (on board of which Mr. Penrose, acting as lieutennnt of marines, was wounded), yet the hardships which he after- wards sustained in a prize sloop, in which he was stationed, utterly ruined his constitution. Returning to England with ample testimonials of his gallantry and good behaviour, he finished, at Hertford College, Oxford, his course of stu- dies ; and, having taken orders, accepted the curacy of Newbury, the income of which, by the voluntary subscription of the inhabitants, was considerably augmented. After lie had conti- nued in that station alout nine years, he wa?

presented by a friend to a living worth nearly ►►500 per annum. It came, however, too late; for Mr. Penrose's health was now in a deep de- cline, and he died at Bristol in 1779, aged thirty-six. In 1768 he married Miss Mary Slo- cock, of Newbury, by whom he had one child, Thomas, who was educated at Winton College. Mr. Penrose was respected for his extensive eru- dition, admired for his eloquence, and esteemed for his social qualities. By the poor, to whom he was liberal, he was venerated. To his poeti- cal abilities, the public, by their reception of his Flights of Fancy, &c., have given a favorable testimony.

PENRYN, a borough and market-town of Cornwall, situate on an eminence at the mouth of the King's lload River, that runs into Fal- mouth harbour, three miles north-west from Fal- mouth, and 266ˆ- W.S.W. from London. Its principal business is in the pilchard and New- foundland fisheries. It is a large town, consist- ing of one main street, and several smaller ones. Formerly it had a collegiate church. Here is a market-house, town-hall, assembly-room, and a good custom-house. The town is extremely well watered, having streams running through the streets ; on which are four grist-mills, and one paper-mill. Here are several good breweries, which supply the Falmouth shipping; and it is reckoned the granary of the south- western part of the county. It was anciently surrounded by a wall, and defended by a castle. It is governed by a corporate body, consisting of twelve alder- men, twelve common-councilraen, a recorder, steward, and other officers, and sends two mem- bers to parliament, who are elected by

the mayor, portreeve, aldermen, and mhabitants at large, payiiia; scot and lot. Falmouth is included in the borough. The manor of Penryn-Forryn has a court of record, and the steward holds pleas to any amount, and proceeds by bailable capias in all cases above ––lO. Market on Wednesday, Friday, and Saturday. Fairs, 1st of May, 7th of July, and 21st of December.

PENSAj a government in the east part of European Russia, lying between Niznei-Nov- gorod and Saratov. Its area is 16,500 square miles ; the number of its circles or districts ten. Lying between 53–– and 54–– N. lat., its climate is mild, and the soil fertile; but it is as backward in cultivation as the rest of this vast empire. The corn raised, however, is more than is wanted for consumption ; part of the overplus is distilled, and the rest exported. Here are Tartars of various tribes, such as Morduans, Baschkirs, Calmucs, and some Circassians. These retain their pastoral habits; and the Morduans, in par- ticular, attach themselves to the rearing of bees. ^\ ith tlie exception of distilled spirits and soap, the manufactures are insignificant ; and the ex- ports are limited to spirits and raw produce, i. e. corn, wax, honey, and wool. Population 800,000.

Pensa, the capital of the above goverment, is situated on an eminence at the confluence of the Pensa and Sura, on a height. Jt contains twelve churches, and two monasteries. The high church is a fine building. The manufactures are leather and soap, and the inhabitants carry on a brisk traffic in corn and foreign wines. Inhabitants 10,000. 460 miles south-east of Moscow.

PENSACOLA, a town of West Florida, on the gulf of jMexico, at the head of a bay or basin, formed by several rivers. This harbour is safe from every wind, and has from seven to eio-ht fathoms water ; so that vessels drawing twenty- one feet may enter. Pensacola is in 30–– 28′ N. lat., and 87–– 12′ W. long. The city is of an ob- long form, about a mile in length, and a quarter of a mile in breadth, delightfully situated. The entrance into the bay is fortified by a fort on Rosa Island, and a battery on the opposite shore. When it was in the hands of the English it ex- ported, in skins, furs, logwood, and dyeing stuffs, to England to the amount of ––63,000 annually ; and its imports from this country were valued at ––97,000. After the Spaniards took it in 1781 it gradually declined. In 1794 the total population did not exceed 400. When the town was attacked by the Spaniards, in 1781, the defence was spirited, and the progress of the siege slow; but, unfortunately, a shell, bursting at the door of a magazine in one of the advanced works, set fire to the powder, which in an instant blew up the whole redoubt : seventy-six of the garrison were killed, and twenty-four badly wounded. In 1818 Pensacola was occupied by an American force, in virtue, as was supposed, of a treaty be- tween Spain and the United States

for the ces- sion of Ihe Floridas. The forces were, however, recalled. Long. 87►► 12′ W., lat. 30►► 28′ N.

PE’NSILE, adj. f Lat. pensilis. Hanging;

Pen’sileness, n.s. 5 suspended.

Two trepidations ; the one manifest and local, aS of the bell when it is pensile ; the other, secret of the minute parts. Bacon.

This ethereal space,

Yielding to earth and sea-the middle space.

Anxious I ask you, how the pensile ball

Should never strive to rise, nor never fear to fall.

Prior.

PEN’SION, n.s. &?;. fl.-^ Fr. Span. Belg.

►►►PEN’sioNARY,a(/;. & w.s. >and Teut. pension;

Pensioner, w.s. 3 of h&t. pensio. A

stipend paid without equivalent : to pension is to support by a gratuitous stipend : pensionary iieans supported by or connected with a pension : pensioner, a person thus supported.

Prices of things necessary for sustentation, grew excessive to the hurt of pensioners, soldiers, and all hired servants. Camden.

Scorn his household politics.

His silly plots and pensionary spies. Donne.

They were devoted by pensionary obligations to the olive. Howel,

Hovering dreams,

The fickle p►►►►►►siiwie)►► of Morpheus’ train. Milton.

Those persons whom he trusted with his greatest secret and greatest business, his charity, seldom had recourse to him, Lut he would make enquiry for new pensioners. Felt.

A charity bestowed on the education of her young subjects has more merit

than a thousand pensions to those of a higher fortune. Addison.

One might expect to see medals of France in the highest perfection, when there is a society pensioned and set apart for the designing of them.

Id. on Medals.

The rector is maintained by the perquisites of the curate's office, and therefore is a kind of pensiontr te him. Collier.

The hero VVilliam, and the martyr Charles, One knighted Blackmore, and one])ensioned Quarles.

Pope. He has lived with the great without flattery, and been a friend to men in power without pensions. Id. In Britain's senate he a seat obtains. And one more pensioner St. Stephen gains. Id.

Chremes, for airy pensions of renown, Devotes his service to the state and crown.

Yonng. A pension given as a reward for service to the state :s surely as good a ground of property as any security br money advanced to the state. Burke.

Arrived, the pensionary band. Hopping and chirping, close at hand. Solicit what they soon receive, The sprinkled plenteous donative. Couper.

A Pension is, or ought to be, a sum of money paid annually for actual services, or considera- tions already past. The yearly payment of each member to the houses of the inns of courts are likewise named pensions ; and the yearly assem- bly of the society of Gray's Inn, to consult on the affairs of the house, is also called a pension.

Pensionary, or Pensioner, a person who has an appointment or yearly sum, payable during life, by way of acknowledgment, charged on the estate of a prince, company, or particular person.

Pensionary, in the former government of the United Provinces, was the first minister of the regency of each city in Holland. His office was to give his advice in aff"airs relating to the government, either of the state in general, or of the city in particular ; and, in assemblies of the states of the province,

he was speaker in behalf of his city. The function, however, of these pensionaries was not every where alike : in some cities they only gave their advice, and were never found in assemblies of the magistrates, except when expressly called thither; in others they at- tended constantly; and, in others, they made the propositions on the part of the burgomasters, drew up their conclusions, &c. They were called pensionaries, because they received an ap- pointment or pension.

Pensionary, Grand, an appellation given to the first minister of the states of Holland. The grand pensionary was chairman in the assemblies of the states of that province : he proposed the matters to be consulted on ; collected the votes ; formed and pronounced the resolutions of the states ; opened letters ; conferred with foreign ministers, &c. His business was also to inspect the finances, to maintain the authority of the states, and to see that the laws were observed ; and he was perpetual deputy of the states-general of the United Provinces. His commission was, however, given him only for five years; after which it was deliberated whether or not it should be renewed ; but there is no instance of its being revoked ; therefore death only put an end to the functions of this important minister.

Pensioner, in the university of Cambridge, and in that of Dublin, has a very peculiar mean- ing; for those students, either under-graduates or bachelors of arts, are called pensioners who live wholly at their own expense, and who receive no emolument whatever from the college of which ?ifiv are members. Thev are divided into two

kinds, the greater and the less ; the former of whom are generally called fellow-commoners, because they eat with the fellows of their college; the latter are always called pensioners, and eat with the scholars, who are those students of the college, either under-graduates or bachelors, who are upon the foundation, who receive emolu- ments from the society, and who are capable of being elected fellows. See Servitor and Sizar.

Pensioner, in general, denotes a person who receives a pension, yearly salary, or allowance from government. Hence

Pensioners, the band of Gentlemen, a sort of guard to the king's person, consisting of forty gentlemen, who receive a yearly pension of ►►100, and are supposed to wait in his bed- chamber. This band was first instituted by king Henry VII., and their office is to attend the king's person, with their battle-axes, to and from his chapel-royal, and to receive him in the presence-chamber, or coming out of his privy lodgings : they are also to attend at all great solemnities, as coronations, St. George's feast, public audiences of ambassadors, ?X the SO";" reign's going to parliament, &c. They likewise carry up the sovereign's dinner on the coronation day and St.

George's feast ; at which times the king or queen often confers the honor of knight- hood on two such gentlemen of the band as their captain presents. Tlieir arms are gilt battle- axes ; and their weapons on horse-back, in time of war, are cuirassiers' arms, with sword and pistols. Their standard, in time of war, is ar- gent, a cross gules. Their captain is a noble- man, who has under him a lieutenant, a standard- bearer, a clerk of the check, secretary, paymaster, and harbinger.

PE'NSIVE, arf;. Pr. pensif; llaX. pensivo ; from Latin, penso. Sorrowfully serious or thoughtful; melancholy.

So fair a lady did I spy. On herbs and flowers she walked pensiveli/]\Iild, but yet love she proudly did forsake

Spenser. Think it still a good work, which they in their pensive care for the well bestowing of time account waste. Hooker.

Concerning the blessings of God, whether they tend unto this fife or the life to come, there is great cause why we should delight more in giving thanks than in making requests for them, inasmuch as the one hath pensiveness and fear, the other always joy annexed. W.

Are you at leisure, holy father 1 ••• My leisure serves me, pensive daughter, now.

Shakspeare. Would'st thou unlock the door To cold despairs and gnawing pensiveness ?

Herbert.

We at the sad approach of death shall know The truth, which from these pensive numbers flow That we pursue false joy, and sufi'er real woe.

Prior-

Anxious cares the pensive nymph opprest, And secret passions laboured in her breast.

Pope.

PENSTOCK, a sluice or flood-gate, serving to retain or let go the water of a mill-pond, or the like.

PENTAGRAPH-

PEK□□, part. pass. }ˆ Shut up. A small shed

Pent'house, n. s. S hanging out from a main wall : written corruptly pentice.

The Turks lurking under their penthouse, laboured with mattocks to dig up the foundation of the wall.

KiioUes. The son of Clarence have I pent up close.

Shakspeare. Close pent up guilts, Rive your concealing continents. Id.

This is the venthnuse under which Lorenzo de- sired us to make a stand. Id. Merchant nf Venice. Sleep shall neither night nor day

Hang upon his penthouse lid. Shakspeare.

Climes that fear the falling and lying of much snow, ought to provide more incVminˆ pentices.

Wot ton.

Those defensive engines, made by the Komans into the form of penthouses, to cover the assailants from the weapons of tlie besieged, would be pre- sently battered in pieces with stones and blocks.

Wiikins,

My penthoiiae eye-brows and my shaggy beard Offend your sight ; but these are manly signs.

Dry den.

The soul pure fire, like ours, of equal force ; But pent in flesh, must issue by discourse. Id,

Pent up in Utica'he vainly forms A poor epitome of Roman greatness.

Addison.

Yet man, fool man ! here buries all his thoughts, Inters celestial hopes without one sigh. Prisoner of earth, and pent beneath the moon. Here pinions all his wishes. Young.

PENTA, a town of the French empire, in the island and department of Corsica, seven miles north-east of Porta.

PENTACEllOS, in natural history, a name given by Linkius and some other authors to a Jiind of Stella marina, or sea-star fish, composed of five principal rays, with several transverse hairv or downy processes.

The PENTACHORD, of Gr. 7r►►j/r►► five, xopˆ>; string, was an ancient musical instrument. The invention of the pentachord is referred to the Scythians; the strings were of bullock's leather; and they were struck with a plectrum made of goat's horn.

PENTACROSTIC, in poetry, a set of verses so disposed as that there are always five acros- tics of the same name, in five divisions of each verse. See Acrostic

PENTACTINODOS, in natural history, a name given by some authors to those species of star-fish which are composed of a body divided into five rays.

PENTADACTYLON, five fingers, in botany, a name given by some authors to the ricinus or palma Christi, from the figure of its leaf. ˆ PENTADACTYLOS Piscis, the five-fingered fish, in ichthyology, the name of a fish common in all the seas about the East Indies, and called by the Dutch there viif vinger visch. It has this name from five black streaks which it has on each side, resembling the prints of five fingers. Its head is flat, convex at the bottom, plain in the sides, and inclined in the fore part. The snout is thick, obtuse, and round ; the lower jaw at its extremity bent and rounded ; the nostrils are double ; the balls of the eye oval ; the iris of a silver color; the first fin of the back is small,

the sefˆond is more elevated ; those of the breast are inserted obliquely, that of the anus is greatly extended, and that of the tail much sloped. The V. hole body is covered with scales of a moderate size, thin, flexible, and slightly indented on their hinder edge ; the back is reddish, the sides of a silver color, and the fins white. The fish is de- scribed by some as about nine inches long ; by others as a foot and a half. It is a dry but not ill-tasted fish.

PENTAEDROSTYLA, in the old system of mineralogy, a genus of spars. The bodies of this genus are spars in form of pentagonal co- lumns, terminated by pentangular pyramids at one end, and regularly affixed at the other to some solid body.

PENTAE'DROUS,"crfj. Gr. Trtvn, five, and eˆpa, scat, or sides. Having five sides.

The pentaedrous columnar coralloid bodies are composed of plates set lengthways, and passing from the surface to the axis. Woodward.

PE NTAGON, n. s. } Fr. pentagon ; Gr.

Pentag'onal, adj. S rnvTi, five, and yiovia, an angle. A figure with, five angles : pentago nal, quinquangular ; having five angles.

I know of that famous piece at Capralora, cast by Barocchio into the form of a pentagon with a circle inscribed. Wotton.

The body being cut transversely, its surface ap- pears like a net made up of pentagonal meshes, with a pentagonal star in each mesh. Woodward.

Pentagon, in geometry, is a figure of five sides and five angles. See Geometry.

Pentagon, in fortification, denotes a fort with five bastions.

PENTAGONOTHECA, in botany, the name given by Vaillant to the plant called by Linnaeus, Plumier, Houston, and others, pisonia.

PENTAGRAPH, an instrument designed for copying figures in any given proportion without any general skill in the art of drawing. See Miniature. The instrument is otherwise called a parallelo- gram. The common pentagraph of the diagram

consists of four brass or wooden rulers, two of them from fifteen to eighteen inches long, the other two half that length. At the ends, and in the middle, of the longer rulers, as also at the ends of the shorter, are holes, upon the exact fixing of which the perfection of the instrument chiefly depends. Those in the middle of the long rulers are to be at the same distance from those at the end of the long ones, and those of the short ones ; so that when put together they may always make a parallelogram. The instrument is fitted toge- ther for use by several little pieces, particularly a little pillar, No. 1, having at one end a screw and nut, whereby the two long rulers are joined; and at the other a little knot for the instrument to slide on. The piece, No. 2, is a rivet with a screw and nut, wherewith each short ruler is fastened to the middle of each long one. The piece, No. 3, is a pillar, one end whereof, being hollowed into a screw, has a nut fitted to it. At the other end is a worm to screw into the table ; when the instrument is to be used, it joins the end of the two short rulers. The piece. No. 4, is a pen, portcrayon, or pencil, scren-ed into a little pillar. The piece. No. 5, is

a brass point, moderately blunt, screwed likewise into a little pillar.

I. To copy a design in the same scale or big- ness as the original : screw the worm No. 3 into the table ; lay a paper under the pencil No. 4, and the design under the point No. 5. This done, conducting the point over the several lines and parts of the design, the pencil will draw or re- peat the same on the paper. II. If the design be to be reduced, e. g. into half the space, the worm must be placed at the end of the long tuler. No. 4, and the paper and pencil in the middle. In this situation, conduct the brass point over the several lines of the design, as be- fore ; and the pencil at the same time will draw its copy in the proportion required ; the pencil here only moving half the lengths that the point moves. Hence, on the contrary, if the design be to be enlarged by one-half, the brass point, with the design, must be placed in the middle, at No. 3, the pencil and paper at the end of the long ruler, and the worm at the other. III. To en- large or reduce in other proportions, there are holes drilled at equal distances on each ruler, viz. all along the short ones, and half way of the long ones, in order for placing the brass point, pencil, and worm, in a right line therein; i. e. if the piece carrying the point be put in the third hole, the two other pieces must be put in its third hole. If, then, the point and design be placed at any hole of tlie great rulers, and the pencil with the paper at any hole of the short ruler, which forms the angle therewith, the copy will be less than half the original, (la the contrary, if it be placed at one of the holes of that short ruler, which is parallel to the long ruler, the copy will be greater than half the original.

The construction of this instrument requires a degree of accuracy which most of our instrument- makers are strangers to ; for which reason there are very few of the instruments that succeed. Few will do any thing tolerably but straight lines ; and many of them not even these. To prove tl'.at the figure described by a pentagraph

is similar to the given figure ; let C, of the fill- lowing diagram, be the fixed centre of motion ;

*P the pencil for tracing the given figure P P, and p the pencil which traces the other figure/)/); p, &c., must be so adjusted, that p, C, and P, may lie in one straight line ; then, since B/) : A p :'. B P : A C, whatever be the situation of the pentagraph, the angles P C P and pCp, are ver- tical : and therefore, PCp will in every position of the instrument be a right line ; but F C ipC '.'. B A : A p, in each of the two positions in the figure, and consequently the triangles PCP, p C p, are similar ; and P P : pp (; ; P C ; C p) ; * BA : Ap, or in a given ratio. Hence it ap- pears, that, by moving the pencil p, A p may be equal to B A, or less in any proi:>ortion ; and consequently pp maybe equal to P P, or less in the same proportion.*

PENTAGYNIA,from Gr. Trtvrs five, and yvvn, a woman, or wife, in the Linnrean system of bo- tany, an order in the classes pentandria, decan- dria, dodecandria, icosandria, and polyandria; consisting of plants which have hermaphrodite flowers, with five female organs. See Botaxy.

PENTAM'ETER, n. s. Fr. pentametre ; Lat. pentametrum. A Latin verse of five feet.

Mr. Distich may probably play some penlameters. upon us, but he shall be answered in Alexandrines.

Addison.

PENTANDRIA, from Gr. Tnvn five, anc^ avjjp, a man, or husband, the fifth class in Lin- naeus's sexual method, consisting of plants which have hermaphrodite flowers, with five stamina or male organs. See Bol-vny.

Pextasdria is also the name of an order in the classes monadelphia, diadelphia, polyadelphia, gynandria, monoecia, and dicecia. See Botany.

PENTAN'GULAR, adj. Gr. invTe and an- gular. Five cornered.

His thick and bony scales stand in rows, so as to make the flesh almost j entangnlur. Grew.

PENTAPETES, in botany, a genus of the do- decandria order, belonging to the monadelphia class of plants ; and in the natural method rank- ine under the thirty seventh order, columniferae. The calyx is quinquepartite ; the stamina are twenty in number, of which five are castrated and long ; the capsule quinquelocular and poly spermous. Tliere is but one species knowTi. -h. P.

Phoenicia, with halbert-pointed, spear-shaped, sawed leaves. It is an annual plant, a native of India, and rises to two or three feet, adorned with fine scarlet flowers, consisting of one petal cut into five segments. In the centre of the flower arises a short thick column, to which adhere fif- teen short stamina. It is a tender plant, and must be brought up in the hot- house.

PENTAPULIS, a district of Cyrenaica, situ- ated on the Mediterranean;

denominated from its five cities ; namely, Berenice, Arsinoe, Ptole- mais, Cyrene, and Apollonia. ††† Ptol.

Pentapolis of the Philistines, the five cities of the Philistines, Gaza, Gath, Ascalon, Azotus, and Ekron.

PENTATEUCH, n. s. Fr. penfateuque ; Gr. irevre and tsvxoc. The five books of Moses.

The author in the ensuing part of the pentateuch makeii not unfrequent mention of the angels.

Bentley.

Hesiod in his commerce with the daughters of me- mory had recourse to foreign correspondents, and often drew bills at sight on the pentateuch,

Whyte's Poems, PreUminary Essay.

Pentateuch is derived from the Greek Hevrartvxoe, from Tnvre, five, and Tivxog, an in- strument or volume; and signifies the collection of the five instruments or books of Moses, viz. Genesis, Exodus, Leviticus, Numbers, and Deuteronomy. See these articles.

PENTATHLON, or Pentathlum, in an- tiquity, a general name for the five exercises performed at the Grecian games, viz. wrestling, boxing, leaping, running, and playing at the discus.

PENTECOST, n. s. I Gr. TrevrsKoˆ,, ; Fr.

Pen'tecostal, adj. S pentacoste, i. e. the fiftieth, because kept fifty days after the pass- over. A feast among the Jews : pertaining to pentecost or Whitsuntide.

And whanne the dales of pentecoste weren filled all his disciplis wereen togedre in the same place.

Wiclif. Dedis 2. But I will tarry at Ephesus until pentecost.

1 Cor. xvi. 8. 'Tis since the nuptial of Lucentio, Come pentecost as quickly as it will. Some five-and-twenty years. Shakspeare.

This was a feast, the feast of pentecost, but for the estate of these Jews it was a day of contrition, a day of deep hunger and thirst after righteou.sness.

Bp. Hall.

I have composed sundry collects, made up out of the church collects, with some little variation ; as the collects adventual, quadregesimal, paschal, or pente- costal. Sanderson.

At the time of Pentecost, when tlie Jews were obliged to rejoice before the Lord, rendering thanks unto him for the harvest newly gathered in ††† did God bountifully impart the first fruits of his Holy Spirit.

Earrow.

Pentecost signifies the fiftieth, because this feast was celebrated the fiftieth day after the sixteenth of Nisan, which was the second day of the feast of the passover ; the Hebrews call it the feast of weeks, be- cause it was kept seven weeks after the passover : they then offered the first fruits of the wheat harvest, which then was completed : it was instituted to oblige the Israelites to repair to the temple, there to acknowledge the Lord's dominion, and also to ren- der thaaks to God for the law he had given thpui from Mount Sinai, on the fiftieth day after their com- ing out of Egypt. Cahnet.

Pentecost. At this feast the Jews presented at the temple seven lambs of that year, one calf, and two rams, for a burnt off'ering ; two lambs for a peace ofli'ering; and a goat for a sin offering : Levit. xxiii. 15, 16; Exod. xxxiv. 22, and Deut. xvi. 9, 10. The modern Jews celebrate the pentecost for two days. They deck the synago- gue and their own houses with garlands of flow- ers. They hear a sermon in praise of the law, which they suppose to have been delivered on this day. The Jews of Germany make a very thick cake, consisting of seven layers of paste, which they call Sinai. Tlie seven layers repre- sent the seven heavens, which they think God reascended from the top of this mountain. See Leo de Modena and Buxtorfii synag. Jud. It was on the feast of pentecost that the Holy Ghost miraculously descended on the apostles. Acts ii.

Pentecost, an island in the Archipelago of the Great Cyclades. It was discovered by Bou- gainville on Pentecost day, 22d May, 1768. It is six miles from Aurora Island.

PENTELICUS, a mountain of Attica, famous for beautiful marble.

PENTHESILIA, a queen of the Amazons, succeeded Orylhia, and gave proofs of her cou- rage at the siege of Troy, where she was killed by Achilles. Pliny says that she invented the battle-axe.

PENTHEUS, in fabulous history, the son of Ethion and Agave, king of Thebes in Bceotia. He was murdered by the Bacchanalian women, for opposing the worship of Bacchus, then newly introduced ; thougli others say it was for prying into the mysteries of the new deity. His mother and

his aunts, Ino and Autonoe, were the first to tear him to pieces. Ovid. Met. iii. fab. 7, 8, 9. Virg. Mn. iv. 469. See Mysteries.

PENTHILUS, a son of Orestes and Erigone, the daughter of ˆEgysthus ; who reigned con- junctly with his brother Tisamenes at Argos, till they were expelled by the Heraclidae. He then went to Achaia, and thence to Lesbos, where he planted a colony. ††† Paus. 4. Paterc. I.e. 1.

PENTHORUM, in botany, a genus of the pentagynia order and pentandria class of plants : CAL. quinquefid ; there are either five petals or none : caps, five-pointed and quinquelocular.

PENTHYLUS, a king of Paphos, who assist- ed Xerxes with twelve ships. Being seized by the Greeks he gave them much useful informa- tion as to the situation of the Persians. ††† Herod, vii. 195.

PE'NTILE, n. s. Pent and tile. A tile formed to cover the sloping part of the roof : often called pantiles.

Penfiles are thirteen inches long, with a button to hang on the laths ; they are hollow and circular.

Moxon,

PENTLAND Frith, or Pictland Frith, a narrow strait of twelve miles between the main land of Scotland and the Orkney Isles. This strait is the great thoroughfare for shipping be- tween Hie east and west seas, the terror of the boldest mariners, and the grave of thousands. By the meeting of many different tides, the sea runs with such impetuosity that no vessel ean

withstand it. The spray is often driven several miles on land. These storms however, afford many natives on the opposite sliores a better livelihood than they could obtain by fishing or husbandry. They search from place to place, and from one cavern to another, in the hopes of finding timber, casks, and othei floating ar- ticles of the wrecked vessels. The naviga- tion of this pass is rendered more danger- ous by the island of Stroma, and two rocks called the Skerries, lying near the middle of it. It may be crossed and sailed through, however, without danger, at particular times, known to the pilots on that coast.

Pentland Hills, a ridge of hills which begin about four miles south by west of Edinburgh, and extend ten miles west towards the west bor- ders of Mid Lothian. They are mostly green to the top, and afford excellent pasture to numerous flocks of sheep. The valleys between them are watered by several romantic streams ; particu- larly the North Esk, Glencross, and Logan Wa- ter. Some of the hills are very high. Carketan Craig, the most northern, is 1450 feet above the sea level; Capelaw, west of it, is 1-550; and Logan House hill is 1700. In this last is found the stone called Petunse Pentlandica, from its resemblance to the materials used in China for making china wares. The hills of Braid and Blackford are a continuation of this ridge.

Pkntland Skerries, three islands in the east end of Pentland Frith ; on the largest of which two light-houses were erected in 1794; four miles north-east of Duncan's-bay Head.

PENUCONDA, or Bilconda, an old town and fortress of the Mysore, south of India. On the defeat of the Hindoo sovereign of Bijanagur, in 1564, he fixed his residence here for some time, but finding it inconvenient removed back to Chandgherry. In 1575 Penuconda was besieged by the Mahometans, but nobly defended by Jug 1)eo, a relation of the Maha rajah, in recompense for which he received the government of an ex- tensive district, which remained in his family, till dispossessed by the rajah of Mysore ; since this period it has fallen to decay. It is now included in the British territories. Long. 77►► 40′ E., lat. 14►► 1′ N.

Pf^NULA, among the ancient Romans, was a coarse garment or cloak worn in cold or rainy weather. It was shorter than the lacema, and therefore more proper for travellers. It was ge- nerally brown, and succeeded the toga after the state became monarchical. Augustus abolished the custom of wearing the penula over the toga, considering it as too effeminate for Romans; and the Kdiles had orders to suffer none to appear in the circus or forum with the lacerna or penula. Writers are not agreed as to the precise differ- ence between these two articles of dress ; but we are told that they were chiefly worn by the lower orders of people.

PENULTIMA, or Penultimate Syllable, in grammar, the last syllable but one of a word.

PENUM'BRA, a. s. Lat. pcne and umbra. An imperfect shadow ; that part of the shadow which is half enlightened.

The breadth of this image answered to the sun's diameter, and was about two inches and the eighth part of an inch, including the jiennmbni. Kewlon.

Penumbra, in astronomy, is a partial shade observed between the perfect shadow and the full light in an eclipse. It arises from the magnitude of the sun's body : for were he only a luminous point, the shadow would be all perfect ; but, by reason of the diameter of the sun, it happens, that a place which is not illuminated by the whole body of the sun does yet receive rays from a part thereof.

PEN'URY, n. s. ~\ Lat. penuria. Po-

Penu'rious, a

Penu'riously, arff. ˆ want : penurious is,

Penu'riousness, 71. s. J in the manner of one indigent, hence parsimonious ; mean; niggardly; the adverb and noun substantive corresponding : penurious, niggardly ; sparing ; sordid.

Who can perfectly declare The wondrous cradle of thy infancy ? When thy great mother Venus first thee bare. Begot of plenty and of penury. Spenser.

The penury of the ecclesiastical state.

Hooker. Sometimes am I a king

Then treason makes me wish myself a beggar ;

And so I am : then crushing penury

Persuades me I was better when a king ;

Then I am kinged again.

Shakspeare. Richard III. Let them not still be obstinately blind.

Still to divert the good designed.

Or with malignant penury

To starve the royal virtues of his mind. Dryden.

All innocent they were exposed to hardship and penury, which, without you, they could never have escaped. Sprat.

Some penuriem spring by chance appeared

Scanty of water. Addison.

If we consider the infinite industry and penurious- ness of that people, it is no wonder that, notwith- standing they furnish as great taxes as their neigh- bours, they make abetter figure. Id.

What more can our penurious reason grant To the large whale or castled elephant ? Prior.

May they not justly to our climes upbraid Shortness of night, and penury of shade ? Id.

O blessed effect of penury and want.

The seed sown there, how vigorous is the plant !

No soil like poverty for growth divine.

As leanest land supplies the richest wine.

Cowper.

PENZANCE, a sea-port and market-town of Penwith hundred, Cornwall, on the north-west side of Mount's Bay, three miles from Marazion, and 280 W. S. W. from London. Tlie town is well built, and is formed principally of four streets. Several ships belong to the port, al- though the harbour %vill not admit large vessels. The pier, which was first erected nearly fifty years since, was considerably extended in 1 8 1 3, and was improved in 1816 by the erection of a light-house. It has several meeting houses for dissenters, a Jews' synagogue : a gram- mar school, dispensary, geological society, an agricultural institution, &;c. Tlie surrounding country abounds with metallic ore, and it is said that at low water veins of lead, copper, and tin, are to be discovered in the sea. 'Hie tin mines furnish considerable traffic and employment here, and hot and cold baths have been established for tlˆ accommodation of invalids. The toˆTi is governed by a mayor, recorder, twelve aldermen, and twentj'-four common- councilmen. In 1595

PEO

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PEP

it was burnt by the Spaniards, but it was soon after rebuilt, and made a coinage town. High water, spring tides, at 5 o'clock. Market on Thursday. Fairs, Trinity Thursday and Holy Thursday.

PEON, in the language of Hindostan, a foot soldier, armed with sword and target. In com- mon use, it is a footman, so armed, employed to run before a palanquin. Piada is the proper word, of which peon is a corruption.

PE'ONY, n. s. Lat. paonia. A flower.

A physician had often tried the peony root unsea- sonably gathered without success ; but having ga- thered it when the decreasing moon passes under Aries, and tied the slit root about the neck of his patients, he had freed more than one from epileptical fits. Boyle,

PE'OPLE, n. s. Fr. peuple ; Lat. populus. A nation; in this sense it admits the plural, fre- quent in Scripture, ' peoples ;' the multitude ; the commonalty or vulgar ; men in general : to people is to stock with people.

For myn yghen han seyn thin helth : which thou hast maad redy before the face of alle peeplis.

Wiclif. Luk. i. Ants are a people not strong, yet they prepare their meat in summer. Proverbs xxx. 25,

Prophesy again before many peoples and nations and tongues. Revelations x, 11.

What is the city, but the people 1 ??? True, the people are the city.

Shakspeare. Coriolanus. Suppose that Brute, or whosoever else that first peopled this island, had arrived upon Thames, and called the island after his name Britannia. Raleigh.

If a man temper his actions to content every com- bination of people, the muslck will be the fuller.

Bacon. A small red flower in the stubble field country people call the wincopipe. Id.

1 must like beasts or common people dye, Unless you write my elegy. Cowley.

The knowing artist may Judge better than the people, but a play Made for delight, If you approve it not, has no excuse. Waller.

He would not be alone, who all things can : But peopled heaven with angels, earth with man.

Dryden. The frogs petitioning for a king, bids people have a care of struggling with heaven. U Estrange,

Myself shall mount the rostrum in his favour. And strive to gain his pardon from the people.

Addison. Imperious death directs his ebon lance ; Peoples great Henry's tombs, and leads up Holben's dance. Prior.

Watery liquors will keep an animal from starving by diluting the fluids ; for people have lived twenty – four days upon nothing but water. Arbuthnot.

People were tempted to lend by great premiums and large interest. Svift's Miscellanies.

People in adversity should preserve laudable cus- toms. Clarissa.

By solemn, awful ceremony, he Was set apart to speak the truth entire. By action and by word ; and round him stood The people, from his lips expecting knowledge.

Pollok.

PEOR, a famous mountain beyond Jordan, which Eusebius places between Heshbon and Livias. The mountains Nebo, Pisgah, and Peor, were near one another, and probably made the

same chain. It is very likely that Peor took its name from some deity, for Peor, Phegor, or Baal-Peor, was worshipped in this country. See Numb. XXV. 3 ; Deut. iv. 3 ; Psal. cv. 28 ; and Baal-Peor.

Peor, a city of Judah, which is not mention- ed in the Hebrew, nor in the Vulgate, but only in the Greek of the Septuagint. Josh. xv. 60. Eusebius says it was near Bethlehem, and Je- rome adds, that in his time it was called Paora.

PEPAKETHOS,an island in the iEgean Sea, on the coast of Macedonia, twenty miles in cir- cumference ; famous for excellent wine and olives. Plin. iv. 12 ; Ovid. Met. vii. 470 ; Liv. xxviii. 5.

PEPIN DE Heristal, or Le Gros, mayor of the palace under Clovis III., Childebert, and Dagobert III. The power of these mayors in France was so great that they left the sovereign only the empty title, and in the end seized on the throne itself

Pepin le Petit, or le Brief (i. e. the short), grandson to Pepin le Gros, and first king of the second race of French monarchs, was mayor of the palace to Childeric III., a weak prince : he contrived to confine him and his son Theodoric in different monasteries ; and then with the as- sistance of pope

Stephen III. he usurped the sovereign power. He died in 768, aged fifty-four. See France.

PEPLIS, in botany, a genus of the monogy- nia order, and hexandria class of plants : natural order seventeenth, calycantheniiE. The pcrian- thium is campanulated ; the mouth cleft in twelve parts ; there are six petals inserted into the calyx : CAPS, bilocular.

PEPLUS, a long robe worn by the women in ancient times, reaching down to the feet, without sleeves, and so very fine that the shape of the body might be seen through it. The Athenians used much ceremony m making the peplus, and dressing the statue of Minerva in it. Homer makes frequent mention of the peplus of that goddess.

PEPOZIANS, a sect of Christian heretics, who sprung up in the second century ; a branch of the Montanists.

PEP'PER, w. s. Yr.poivre: Lat. piper ; Ital. pepen ; Gr. TreTrtpi. A pungent spice.

We have three kinds of pepper ; the black, the white, and the long, which are three diflerent fruits produced by three distinct plants : black pepper is a dried fruit of the size of a vetch and roundish, but rather of a deep brown than a black colour : with this we are supplied from Java, IMalabar, and Sumatra, and the plant has the same heat arid fiery taste that we find in the pepper : white pepper is com- monly factitious, and prepared from the black, by taking ofi' the outer bark ; .but there is a rarer sort, which is a genuine fruit, naturally wliite ; long pepper is a fruit gathered while unripe and dried, of an inch or an inch and half in length, and of the tlickness of a large goose quill. HM-

I have peppered two of them; two I have paid, two rogues in buckram suits.

Shakspeare. Henrv IV.

1 will now take the leacher ; he cannot creep into a halfpenny purse nor into a pepper-hox.

Shakspeare.

Our performances, though dues, are like those

peppercorns which freeholders Div ile'r landlord to acknowledge that they hold all from him. Bui/le. Folks from mud-walled tenement Bring landlords peppercorn for rent. Prior.

Scatter o'er the blooms the p'lngent dust Of pepper, fatal to the frosty tribe. Thomson.

Pepper, piper, in natural history, an aroma- tic berry of a hot dry quality, chiefly used in seasoning. Pepper is principally used by us in food, to assist digestion : but the people in the East Indies esteem it as a stomachic, and drink a strong infusion of it in water by way of giving them an appetite ; they have also a way of mak- ing a fiery spirit of fermented fresh pepper with water, which they use for the same purposes. They have also a way of preserving the common and long pepper in vinegar, and eating them af- terwards at meals. There are three kinds of pepper at present used in the shops, the black, the white, and the long pepper.

I. Pepper, Black, is the fruit of the piper, and is brought from the Dutch settlements m the East Indies.

II. Pepper, Long, is a dried fruit, of an inch or an inch and a half in length, and about the thickness of a large goose quill : it is of a brown- ish gray color, cylindrical in figure, and produced on a plant of the same genus.

III. Pepper, White, is factitious, being pre- pared from the black in the following manner : ††† they steep this in sea-water, exposed to the heat of the sun for several days, till the rind or outer bark loosens ; they then take it out, and, when it is half dry, rub it till the rind falls off; then they dry the white fruit, and the remains of the rind blow away like chaff. A great deal of the heat of the pepper is taken off by this process, so that the white kind is more fit for many purposes than the black. However, there is a sort of na- tive white pepper produced on a species of the same plant ; which is much better than the fac- titious, and indeed little inferior to the black.

Pepper, Barbary. See Capsicum.

Pepper, Guinea. See Capsicum.

Pepper, Jamaica. See Myrtus and Pr- mexto.

Pepper, Poor Man's. See Lepidium.

Pepper, Water, a liquor prepared by putting common black pepper, grossly

powdered, into an open vessel of water. In a few days it ac- quires a pellicle or thin surface, which is com- posed entirely of animalcules excellently adapted for microscopical observation.

Pepper Grass. See Pilularia.

PEPPER-MINT. See Mentha.

Pepper-mint tree, in botany, the eucalyptus piperita. In a journal of a voyage to New South Wales, by John White, esq., we have a plate of this tree, with the following account of it : ❓❓❓ ‘ This tree grows to the height of more than 1 00 feet, and is above thirty feet in circumference. The bark is very smooth, like that of the poplar. The younger branches are long and slender, an- gulated near the top ; but as they grow older the angles disappear. Their bark is smooth, and of a reddish brown. The leaves are alternate, lanceoh te, pointed, very entire, smooth on both sides, and remarkably unequal or oblique at their base ; the veins alternate, and not verv con-

spicuous. The whole surface of both sides of the leaves is marked with numerous minute re- sinous spots, in which the essential oil resides. The foot-stalks are about half an inch in length, round on the under side, angular above, quite smooth. The flowers we have not seen. What Mr. White has sent as the ripe capsules of this tree (although not attached to the specimens of the leaves) grow in clusters, from six to eight in each, sessile and conglomerated. ‘ITiese clusters are supported on angular alternate footstalks, which form a kind of panicle. Each capsule is about the size of a hawthorn berry, globular, but as it were cut off at the top, rugged on the outside, hard and woody, and of a dark brown color. At the top is a large orifice, which shows the internal part of the capsule divided into four cells, and having a square column in the centre, from which the partitions of the cell arise. These partitions extend to the rim of the capsule, and terminate in four small projections, which look like the teeth of a, calyx. The seeds are numerous, small, and angular. The name of pepper-mint tree has been given to this plant by Mr. White, on account of the very great resem- blance between the essential oil drawn from its leaves and that obtained from the pepper-mint (mentha piperita) which grows in England. This oil was found by Mr. \‘hite to be much more efficacious in removing all cholicky complaints than that of the English peppermint, which he attributes to its being less pungent and more aro- matic. A quart of the oil had been sent by him to Mr. ˆVjlson. The tree appears to be undoubt- edly of the same genus with that cultivated in some greenhouses in England, which M. L’He- ritier has described in tiis Sertum Anglicura by the name of eucalyptus obliqua, though it is commonly called in the gardens metrosideros obliqua; but we dare not assert it to be the same species, nor

can this point be determined till the flowers and every part of both be seen and compared : we have compared the best specimens we could procure of each, and find no specific difference. The eucalyptus obliqua has, when dried, an aromatic flavor, somewhat similar to our plant. We have remarked, indeed, innu- merable minute white spots, besides the resinous ones, on both surfaces of the leaves in some spe- cimens of the garden plant, which are not to be seen in ours ; and the branches of the former are – rough, with small scaly tubercles. But how far these are constant we cannot tell. The ob- liquity in the leaves, one side being shorter at the base than the other, as well as somewhat narrower all the way up, as in the Begonia nitida of the Ilortus Kewensis, is remarkable in both plants. Mr.White's figure represents abranch of the pepper-mint tree in leaf : on one side of it part of a leaf separate, bearing the gall of some insect ; on the other the fruit above described.'

PEPPER-POT. See Capsicum.

PEPPER-WORT. See Lepidium.

PEPUSCH (John Christopher), Mus. D., and F. R. S., one of the greatest theoretic or scientific musicians of modern times, was born at Berlin in 1667. In 1680, when not fifteen, he had made such proficiency on the harpsichord that he was appointed to teach music to the prince royal of

Prussia. About 1700 he came over to England, and was engaged at Drury Lane. The popularity of Handel kept him in the secondary rank ; but Pepusch chose a new track for himself, and taught music in the full sense of the word ; i. e. the principles of harmony and the science of composition, ††† not to children or novices, but to professors of music themselves, who attended him ; so much were his talents and judgment respected. In 1713 the University of Oxford admitted him Doctor of Music. In 1724 he accepted an offer from Dr. Berkeley to go with him to Bermudas, as professor of music in his intended college ; but the ship being wrecked he returned to London, and married Frances Mar- garet De L'Epine, who had made a fortune of 10,000 guineas by her voice. His fortune and reputation were now at their height. At the desire of Messrs. Gay and Rich he composed the mu- sic for the Beggar's Opera. In 1737 he was chosen organist for the Charter House. In 1740 his wife died, and a short time after their only son. He wrote An Account of the Ancient Genera of Music,

which was read before the Iloyal Society, and published in the Phil. Trans. for October, November, and December, 1736; and was soon after chosen F. R. S. He died July 20th, 1752, aged eighty-five.

PEPYS (Samuel), F. R. S., secretary to the admiralty in the reigns of Charles II. and James 11., was born at Brampton in Huntingdonshire, of an ancient family of the same name, of Cot- tenham in Cambridgeshire, and educated at St. Paul's school, London, whence he was removed to Magdalen College, Cambridge. He early acquired the patronage of the earl of Sandwich, who employed him as secretary in the expedition for bringing Charles II. from Holland. On his return he was appointed one of the principal officers of the navy, which post he maintained during the plague, the fire of London, and the Dutch war. In 1673, when the king took the admiialty into his own hands, he appointed Mr. Pepys secretary. In 1684 he was accused of being a papist, without a shadow of proof; and soon after, the admiralty being put into commis- sion, he lost his place. He was still, however, employed under lord Dartmouth, in the expe- dition against Tangier, and often accompanied the duke of York to Scotland, and in his cruises. When Charles II. resumed the office of lord high admiral he was once more appointed secre- tary, and held the office until the Revolution. On the accession of William and Mary he re- signed, and published his ' Memoirs,' relating to the navy. He led a very retired life from this time ; and, having survived his lady, retired for two years before his death to the seat of a naval friend at Clapham, where he died May 26th, 1703. Such indeed was his literary and scien- tific reputation that in 1684 he was elected pre- sident of the Royal Society, which office he held for ten years. He left a large collection of MSS. to Magdalen College, Oxford, and five large folio volumes of ancient English poetry, begun by Selden, and carried down to 1700, from which the Reliques of Ancient English Poetry, by Dr. Percy, are chiefly selected. Mr. Pepys nas lately become more known by the publica-

tion of his very interesting Diary, by lord Bray- brooke.

Pepys' Islands, a name given to Falkland Islands.

PERA, one of the suburbs of Constantinople, where ambassadors and Christians usually reside. See Constantinople.

PERACUTE', adj. Lat. peracutus. Very sharp or violent.

Malign, continual peracute fevers, after most dan- gerous attacks, suddenly remit of the ardent heat.

Harvey.

PERADVEN'TURE, adv. & n. s. Fr. par aventure. Perhaps ; may be ; by chance ; as a noun-substantive, doubt or question.

For a good man peradventui-e summan dar die.

WicliJ. Rom. 5.

Peradveiiture there be fifty righteous within the city ; wilt thou also destroy and not spare the place for the fifty righteous that are therein ?

GeTiesis xviii. 24.

That wherein they might not be like unto either, was such peradventure as had been no whit less un- lawful. Hooker.

As you return, visit my house ; let our old ac- quaintance be renewed ; peradventure I will with you to court. Shakspeare.

ˆVhat peradventure may appear very full to me, may appear very crude and maimed to a strang.er.

Dighy.

Though men's persons ought not to be hated, yet without all peradventure their practices justl.y may.

South.

PERAGRA'TION n. s. Lat. peragro. Ihe act of passing through any state or space. Ob- solete.

A month of peragraiion is the time of the moon's revolution from any part of the zodiack unto the same again, and this containeth but twenty-seven days and eight hours. Browne.

The moon has two accounts which are her months or years of revolution ; one her periodick month, or month of peragration, which chiefly respects her own proper motion or place in the zodiack, by which she like the sun performs her revolution round the zo- diack from any one point to the same again.

Holder on Time.

PERAMBAUCAM, a town of tlie south of India, Carnatic. This, though a small place, is memorable for the defeat and destruction of a fine British army, commanded by the gallant colonel Bailie, in the month of September 1780, by Hyder Aly. Of eighty -six British officeis present, thirty-six were

killed, thirty-four wound- ed, and the remaining sixteen taken prisoners ; the greater part of them dying in captivity. In August 1781 a second battle was fought here be- tween Hyder and the army commanded by Sir Eyre Coote. On this occasion the British were victorious. It is situated on the south side of the Coortelier, fourteen miles north-east of Co- nieveram,

PERAM'BULATE, v.fl. i Lat. peramhulo.

Perambula'tion, n. s. S To walk, or pass through ; survey by passing through : perambu- lation is, the act of passing through ; survey made, or districts perambulated.

The duke looked still for the coming back of the Armada, even when they were wandering and making their perambulation of the northern seas.

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Persons the lord deputy should nominate to view and perambulate Irish territories, and there- upon to divide and limit the same.

Davies on Ireland.

It might in point of conscience be demanded, by what authority a private person can extend a per- sonal correction beyond the persons and bounds of his own perambulation ? Holyday.

France is a square of five hundred and fifty miles traverse, thronging with such multitudes that the general calcul, made in the last perambulation, ex- ceeded eighteen millions. Hoael.

PflKAMBULATOR, in surveying, an instru- ment for measuring distances, called also pedo- meter, way-wiser, and surveying-wheel. It con- sists of a wheel A A two feet seven inches and a

half in diameter; consequently half a pole, or eight feet three inches, in circumference. On one end of the axis is a nut, three quarters of an inch in diameter, and divided into eight teeth ; which, upon moving the wheel round, fall into the eight teeth of another nut c, fixe.d on one end of an iron rod Q, and thus turn the rod once round in the time the wheel makes one revolu- tion. This rod, laying along a groove in the side of the carriage

of the instrument, has at its other end a square hole, into which is fitted the end b of a small cylinder P. This cylinder is disposed under the dial-plate of a movement, at the end of the carriage B, in such a manner as to be moveable about its axis ; its end a is cut into a perixjtual screw, which falling into the thirty-two teeth of a wheel perpendicular to it, upon driving the instrument forward, that wheel makes a revo- lution each sixteenth pole. On the axis of this wheel is a pinion with six teeth, which, falling into the teeth of another wheel of sixty teeth, carries it round every 160th pole, or half a mile. This last wheel, carrying a hand or index round with it over the divisions of a dial-plate, whose outer limb is divided into 160 parts, cor- responding to the 160 poles, points out the immbei of poles passed over. Again, on the axis of this last wheel is a pinion, containing twenty teeth, which, falling into the teeth of a third wheel which has forty teeth, drives it once round in 320 poles, or a mile. (Jn the axis of this wheel is a pinion of twelve teeth, which, falling into the teeth of a fourth wheel having seventy-two teeth, drives it once round in twelve miles. This fourth wheel, carrying another index over tire inner limb of the dral-plate, divided into twelve for miles, and each mile subdivided into halves, cjuarters, and furlongs, serves to register the revolutions of the other hand, and to keep account of the miles and half miles

passed over, as far as twelve miles. The use of this instrument is obvious from its construction. Its proper office is the surveying of roads and large distances, where a great deal of expedition, and not much accuracy, is required. It if evi- dent that driving it along and observing the hands has the same effect as dragging the chain and taking account of the chains and links. Its advantages are its hardness and expedition : its contrivance is such that it may be fitted to the wheel of a coach, in which state it performs its office, and measures the road without any trouble.

PERAMES,in geography, a town of America, in Bergen county, New Jersey, lying on the point of land formed by the branches of Saddle River, a north branch of the Passaick ; about eighteen miles north of Bergen.

*PERCA, the perch, a genus of fishes belong- ing to the order of thoracici. The head is fur- nished with scaly and serrated opercula ; there are seven rays in the membrane of the gills ; and the fins on the back are prickly. There are thirty-eight species, principally distinguished by peculiarities in the back fin. The most re- markable are ***

1 . P. cernua, the pope, or ruflfe, is found in several English streams : it is gregarious, assem- bling in large shoals, and keeping in the deepest part of the water. It is of a much more slender form than the perch, and seldom exceeds six inches in length. The teeth are very small, and disposed in rows. It has only one dorsal fin, extending along the greatest part of the

back ; the first rays, like those of the perch, are strong, sharp, and spiny ; the others soft. The body is covered with rough compact scales. The back and sides are of a dirty green, the last inclining to yellow but both spotted with black. The dorsal fin is spotted with black ; the tail marked with transverse bars.

2. P. fluviatilis, or common perch, has a deep body, very rough scales, and the back much arched. The colors are beautiful ; the back and part of the sides being of a deep green, marked with five broad black bars pointing downwards ; the belly is white, tinged with red ; the ventral fins of a fine scarlet ; the anal fins and tail of the same color, but rather paler. In a lake called Llyn Raithlyn, in Merionethshiie in Wales, is a very singular variety of this fish : the back part is quite hunched, and the h- wer part of the back-bone next the tail strangely distorted; in color and other respects it resembles the common perch, which are as numerous in this lake as the deformed fish. They are not peculiar to this water; for Linnseus takes notice of them in a lake at Fahlun in his country. It is said that they are also met with in the Thames near Mar- low. The perch was much esteemed as food by the Romans ; nor is it less admired at present as a firm and delicate fish ; and the Dutch are par- ticularly fond of it w hen made into a dish called water-souchy. It is a gregarious fish, and loves deep holes and gentle streams ; is exceedingly voracious, and an Wer biter : if the angler meets with a shoal of them he is sure of taking every one. The. perch is very tenacious of life, and has been known to survive a journey of sixty

miles in dry strav^. It seldom grows to a large size, though Mr. Pennant mentions one that weighed nine pounds; but this is very uncom- mon.

3. P. labrax, the basse, is a very voracious, strong, and active tish. Ovid calls them rabidi lupi, a name continued to them by after writers; and they are said to grow to the weight of 15 lbs. Tlie irides are silvery ; the mouth large ; the teeth are situated in the jaws, and are very small ; in the roof of the mouth is a triangular rough space, and just at the gullet are two others of a roundish form. The scales are of a mid- dling size, are very thick set, and adhere closely. The body is formed somewhat like that of a salmon. The color of the back is dusky, tinged with blue. The belly is white. In young fish the space above the side line is marked with small black spots. It is esteemed a very delicate fish.

4. P. marina, the sea-perch, is about a foot long : the head large and deformed ; eyes great ; teeth small and numerous. On the head and covers of the gills are strong spines. The color red, with a black spot on the covers of the gills, and some transverse dusky lifies on the sides. It is a fish held in some esteem at the table.

5. P. Nilotica, the perch of the Nile, is taken about Cairo. The flesh has a sweet and exqui- site flavor, and is not hard, but very white. It is one of the best fishes in the Nile ; and, a3 it is of the largest size in Egypt, it adorns a tilde if brought upon it entire and well fried. See Pilot-fish.

PERCA'SE, adv. Par and case. Perchiiiice; perhaps. Not used.

A virtuous man will be virtuous in solitudine, and not only in theado, though -percale it will be more strong by glory and fame, as an heat which is doubled by reflection. Bacon.

PE'RCEANT, adj. Fr. pergant. Piercing; penetrating. Obsolete.

Wond'rous quick and perceant was his spright As eagles' eyes that can behold the sun. Spenser.

PERCEIVE', V. a. ˆ Latin percipio.

Perceiv'able, adj. To discover by

Perceiv'ably, adv. some effect ; to

Percep'tible, ►►f//. know; be affected

Percep'tibly, ►►afu. rˆy; observe: per-

Perceptibil'itv, n. s. ceivable and per- Percep'tion, n. s. ceptible mean, dis-

Percep'tive, o(/;, coverable ; such as

Percip'ient, adj. & n. s.J may be observed; the adverbs corresponding : perceptibility, state of being an object of perception ; power of per- ceiving; for which, however, perception is the better word : perceptive, having the power of perceiving : perception is perceiving : perci- pient is perceiving , one who has the power of perception.

His sons come to honour, and he knoweth it not and they are brought luw, but he perceiveth it not.

Job xiv. 21.

Jesus perceived in h'.s spirit, that they so reasoned within themselves. 3Iark ii. 8.

Consider, When you above perceive me like a crow, That it is place which lessens and sets off.

Shakspeare.

The upper regions of the air perceive the collection of the matter of tempests before the air here below.

Bacon,

No sound is produced but with a perceptible blast of the air, and with some resistance of the air strucken. Id.

Great mountains have a perception of the disposition of the air to tempests sooner than the valleys below ; and therefore they say in Wales, when certam hills have their night caps on, they mean mischief.

Id.

Answer to this dimness of their perception, was the whole system and body of their religion.

Decaxj of Piety.

It perceives them immediately, as being immedi- ately objected to and perceptible to the sense ; as I perceive the sun by my sight. Hale.

By the inventors and their followers that would seem not to come too short of the perceptions of the leaders, they are magnified.

Id. Origin of Mankind.

There is a difficulty that pincheth ; the soul is awake and solicited by external motions, for some of them reach the perceptive region in the most silent repose and obscurity of night : what is it then that prevents our sensations'! GlanviUe.

The soul is the sole percipient, which hath ani- madversion and sense properly so called, and the body is only the receiver of corporeal impressions.

Id. Scepsis.

The illumination is not so bright and fulgent, at to obscure or extinguish all

perceptibility of the rea- son. More.

Whatever the least real point of the essence of the perceptive part of the soul does perceive, every real point of the perceptive must perceive at once.

Id. Divine Dialogues.

The body, though it really moves, yet not chang- ing perceivable distance with some other bodies, as fast as the ideas of our own mind will follow one another, seems to stand stUl ;. as the hands of clocks.

Locke.

Sensation and perception aire not inherent in mat- ter as such ; for, if it were so, every stock or stone would be a percipient and rational creature.

Bent ley.

In the anatomy of the mind, as of the body, more good will accrue to mankind by attending to the large, open, and perceptible parts, than by studying too much finer nerves. Pope.

I'he woman decays perceptibly every week. Id.

IMatler hath no life nor perception, and is not con- scious of its own existence. Bentley's Sermons.

Perception is that act of the mind, or rather a passion or impression, whereby the mind becomes conscious of any thing ; as when I feel hunger, thirst, cold, or heat. Watti.

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LONDON ENCYCLOPEDIA.

PERCEPTION is a word which is so well under- stood that it is difficult for the lexicographer to give any explanation of it. It has been called the first and most simple act of the mind, by which it is conscious of its own ideas. This definition, however, is improper, as it confounds perception with consciousness ; although the objects of the former faculty are things without us, those of the latter the energies of our own minds. Percep- tion is that power or faculty, by which, through the medium of the senses, we have the cogni- zance of objects distinct and apart from ourselves, and learn that we are but a small part in the system of nature. By what process the senses give us this information is one of the most in- teresting enquiries in metaphysics. See META-PHYSICS.

PERCEVAL (Spencer), second son of John, second earl of Egrhont, was born in 1762, and received his education at Harrow, and Trinity College, Cambridge, of which he became a mem- ber about the year 1775. On quitting the uni- versity he entered of Lincoln's Inn, with the view of following the profession of the law at the Chancery bar. In this pursuit he soon distin- guished himself, and obtained a silk gown. In 1796 he represented Northampton in parliament, and, five years after, his legal abilities and family influence raised him to the office of solicitor- general. In 1802 he was made attorney-general, and filled that situation till 1807, when, on the death of Mr. Fox, he was appointed chancellor of the exchequer. In this high post he continued till fhe 1 1th of May, 1812, when, while approach- ing the door of the house of commons, a person named Bellingham discharged a pistol at him in the lobby, the bullet of which, entering his breast, deprived him almost instantly of life. The assassin avowed that he had been waiting with the view of destroying lord Leveson Gower, late

ambassador to the court of St. Petersburg!), for some alleged negligence of his mercantile in- terests, and was brought to trial on the 15th. Although a plea of insanity was set up by his counsel, he was found guilty, and executed on the 18th of the same month.

PERCH, n. s., v. n., & v. a. Fr. perc/ie, percher ; Lat. pertica. A rod ; measure ; that on which birds sit and roost : to sit or roost; place on a perch.

He percheth on some branch thereby,

To weather him and his moist wings to dry.

Spenser.

The world is grown so bad,

That wrens make prey where eagles dare not perch.

Shakspeare.

The morning muses perch like birds and sing Among his branches. Crailiaw.

An evening dragon came, Assailant on the perched roosts, VOL. XV1L — PAUT 1.

And nests in order ranged Of some villatic fowl. Milton's Agoniiles.

Glory, like the dazzling eagle, stood Perched on my beaver in the Granic flood ; When fortune's self my standard trembling bore And the pale fates stood frighted on the shore.

Lee.

For the narrow perch I cannot ride. Dry den. They winged their flight aloft, then, stooping low, Perched on the double tree, that bears the golden

bough. Id.

Let owls keep close within the tree, and not perch upon the upper boughs. South.

PERCH, n.s. Fr. perche ; Lat. perca. A fish. The perch is one of the fishes of prey, that, like the pike and trout, carries his teeth in his mouth : he dare venture to kill and destroy several other kinds of fish :

he has a hooked or hog-back, which is armed with stifP bristles, and all his skin armed with thick hard scales, and hath two fins on his back: he spawns but once a year, and is held very nutritive.

Walton's Angler.

PERCH, in ichthyology. See PERCA. PERCHANCE', adv. Per and chance. Per- haps ; peradventure.

How long within this wood intend you stay ? — Perchance till after Theseus' wedding day.

Shakspeare.

Finding him by nature little studious, she chose rather to endue him with ornaments of youth ; as dancing and fencing, not without aim then perchance at a courtier's life. Wotlon.

Only Smithfield ballad perchance to embalm the memory of the other. U Estrange.

Stranger, I sent for thee, for that I deemed Some wound was thine, that yon free band might

chafe, —

Perchance thy worldly wealth sunk with yon wreck — Such wound my gold can heal. Maturin.

PERCIVAL (Thomas), M. D., a physician, born at Warrington, Lancashire, in 1740, studied medicine at the universities of Edinburgh and Leyden, and returning to England, in 1765, settled at Manchester. He was the author of a variety of numerous able tracts on scientific sub- jects, especially Observations on the Deleterious Qualities of Lead «ud Medical Ethics ; A Fa- ther's Instructions to his Children ; Moral and Literary Dissertations, &c. ; and papers in the Transactions of the Manchester Philosophical Society, of which ae *vas the founder and first president. He also attempted to establish public lectures on mathei aatics, the fine arts, and com- merce, in that town ; and sought to obtain sup- port for dissenting academies at Warrington and Manchester, but was in both these last attempts unsuccessful. Dr. Percival died, highly re- spected both for talents and conduct, on the 30th of August, 1804. His works were puolished in 1807, in 4 vols. 8vo. by his son.

B

PERCLOSE’, n. s. Per and close. Conclu- sion ; last part. Obsolete.

PER’COLATE, v. a. Lat. percolo. To stain through.

PERCUSS’, v. a. \ Lat. percussio. To

PERCUSS’ION, n. s. V strike : the act of strik-

PERCU’TIENT, adj. ‘ ing ; effect of sounds striking the ear : percutient being the corre- sponding adjective.

PERCUSSION, in mechanics, the impression a body makes in falling or striking upon another ; or the shock of two bodies in motion.

PERCUSSION LOCKS ; a late and useful inven- tion. . The percussion lock has no pan. In place of the pan, a small tube projects horizon- tally from the side of the gun. In this tube another small tube stands perpendicularly. The cock, instead of being formed to hold a flint, is shaped somewhat like a hammer, with a hollow to fit upon the tube last mentioned. On this tube a little cap of copper is placed, in the bottom of which is a chemical mixture that kindles by percussion. This percussion is produced by the cock, which therefore requires a very strong spring. The powder is made in various ways, and of different materials ; among others, of mercury, purified nitric acid, and spirit of wine freed from water. The copper caps in which this chemical powder is placed are two and a half lines long, and two lines wide. Sometimes the powder is also formed in pills, and then a somewhat different con- trivance is required to place the pills, covered with a little wax, to protect them from moisture. in the small tube. The advantages of a percus- sion lock are great: 1. Provided the spring of the cock is strong, and the chemical powder good, the gun cannot miss fire ; while common locks are exposed to miss fire from many causes — bad flints, bad steel, bad priming, and weak springs. 2. The chemical powder explodes much more rapidly and forcibly than common powder, and therefore explodes the powder in the gun itself more forcibly, so as to produce a prompter and more effectual discharge. 3. The moisture of the air has hardly any influence : in a violent rain, the lock is as sure to give fire as in the driest day. 4. The danger of an unin- tentional discharge is avoided : as long as the copper cap is not placed on the little tube, the gun cannot go off, even if the cock is snapped by mistake ; while, with other guns, there is always danger, even when no priming has been put in the pan,

because some grains may always escape through the touchhole, and the cock may always be accidentally snapped. The caps or pills are not dangerous, because it requires a strong percussion to explode the powder.

PERCY (Thomas), a learned prelate, related to the family of Northumberland, was born at Bridgenorth in Shropshire in 1728, and educated at Christ Church, Oxford, where he took his master's degree in 1753, and on entering into orders, was presented to the vicarage of Easton Mauduit in Northamptonshire, which he held with the rectory of Wilby. In 1769 he was made chaplain to the king, in 1778 promoted to the deanery of Carlisle, and in 1782 advanced to the bishopric of Dromore in Ireland, where he

died in 1811. His works are, 1. Han Kiou Chouan, a translation from the Chinese. 2. Chi- nese Miscellanies. 3. Five Pieces of Runic Poetry, translated from the Icelandic Language.

4. A new Translation of the Song of Solomon.

5. Reliques of Ancient English Poetry, 3 vols.

6. A Key to the New Testament. 7. The Nor- thumberland Household Book. 8. The Hermit of Warkworth, a poem, in the ballad style. 9. A Translation of Mallet's Northern Antiquities.

PERCY ISLES, a chain of islands in the South Pacific,near the north-east coast of New Holland. They extend from about lat. 21° 32′ to 21° 45′ S., and are distant about thirty miles from the main land. They were visited by Flinders in 1802, who laid down their bearings, and gave them this name of Percy Islands. The largest is about thirteen miles in circuit, and 1000 feet high. They are only occasionally visited by the Indians from the main land for turtle. Tne large vam- pyre bat was frequent!) found hanging by the claws, with its head downwards, under the palm trees.

PERDICCAS I., II., and III., kings of Ma- cedonia. See MACEDON.

PERDICIUM, in botany, a genus of the polygamia superflua order, belonging to the syn- genesia class of plants ; and in the natural method ranking under the forty-ninth order compositse. The receptacle is naked ; the pap- pus is simple ; the florets bilabiate.

PERDITION, n. s. Fr. perdition ; Lat. perditio. Destruction ; death :

ruin ; eternal death.

Upon tidings now arrived, importing the meer perdition of the Turkish fleet, every man puts himself in triurrph. Shakspeare.

Quick let us part ! Perdition's in thy presence, And horror dwells about thee ! Addison's Cato.

PERDIX, in ornithology, a genus of birds, belonging to the order of gallinae, ranked by Lin- naeus along with the genus tetrao, or grous ; but now very properly disjoined by Dr. Latham, and classed as a distinct genus, of which he describes the following characters : — The bill is convex, strong, and short ; the nostrils are covered above with a callous prominent rim : the orbits are papillose ; the feet naked ; and most of the genus are furnished with spurs. There are forty- eight species, of which the two principal are the partridge and quail.

1. P. communis, the common partridge, is so well known, that a description of it is unneces- sary, and we have not room to describe the foreign species. We refer those who wish com- plete information to Dr. Latham's valuable Sys- tem of Ornithology. Partridges are found in every country and in every climate ; as well in the frozen regions about the pole, as the torrid tracts under the equator. In; Greenland, the partridge, which is brown in summer, as soon as the icy winter sets in, is clothed with a warm down beneath ; and its outward plumage assumes the color of the snow among which it seeks its food. Those of Barakonda, on the other hand, are longer legged, much swifter of foot, and choose the highest rocks and precipices to reside in. They all, however, agree in one cha- racter, of being immoderately addicted to venery.

P. coturnix, or common quail, is not above half the size of the partridge. The feathers of the head are black, edged with rusty brown ; the breast is of a pale yellowish red, spotted with black ; the feathers on the back are marked with lines of pale yellow, and the legs are of a pale hue. Except in the colors thus described, and the size, it every way resembles a partridge in shape, and, except that it is a bird of passage, it is like all others of the poultry kind in its habits and nature. The quail seems to be an inhabitant of every climate. It is observed to shift quarters according to the season, coming north in spring, and departing in autumn, and in vast flocks. On the west coast of Naples, within four or five miles, 100,000 have been taken in a day. In England they are not numerous at any time. They feed like the

partridge, and make no nest, except a few dry leaves or stalks scraped together ; and sometimes a hollow on the bare ground suffices. In this the female lays six or seven eggs, of a whitish color, marked with irregular rust-colored spots : the young follow the mother as soon as hatched, like young partridges. They have but one brood in a year. Quail- fighting was a favorite amusement among the Athenians. They abstained from the flesh of this bird, deeming it unwholesome, as supposing that it fed upon the white hellebore : but they reared great numbers of them for the pleasure of seeing them fight, and staked sums of money, as we do with regard to cocks, upon the success of the combat. With us its flesh is considered as a very great delicacy. Quails are easily caught by a call.

PERDUE', adv. From the French perdue or forlorn hope : as perdue or advanced sentinel. Close ; in ambush.

Few minutes he had lain perdue, To guard his desp'rate avenue. Hudibras.

PERDUE BAY, a bay on the south-west coast of St. Vincent ; a mile north-west of Kingston Bay.

PER'DULOUS, adj. Lat. perdo. Lost; thrown away.

There may be some wandering perdulous wishes of known impossibilities ; as a man who hath com- mitted an offence, may wish he had not committed it ; but to chuse efficaciously and impossibly is as impossible as an impossibility. Bramhall.

PER D U RABLE, adj. Fr. perdurable ; Lat. perduro. Lasting; long continued. A word not in use.

Confess me knit to thy deserving with cables of perdurable toughness. Shakspeare. Othello.

O perdurable shame ! let's stab ourselves.

Shakspeare. Why should he, for the momentary trick,

Be perdurably fined. Id. Measure for Measure.

The vig'rous sweat

Doth lend the lively springs their perdurable heat.

Drayton.

PERECOP, an ancient fortress in the south of the isthmus which joins the peninsula of the Crimea to the continent. It is the ancient Taph-rse. In the neighbourhood are lakes, on the surface of which a great quantity of salt crystal- lises naturally, in May, June, and July. This salt is collected and sold to the average amount of 20,000 waggon loads yearly.

PER

PER'EGAL, adj. Fr.percgal. Equal. Ob- solete.

Whilom thou wast peregal to the best,

And wont to make the jolly shepherds glad ;

With piping and dancing did pass the rest.

Spenser.

PEREGRINATION, n. s. } Old Fr. pere-

PE'REGRINE, adj. S grin ; Lat./wre-

grinus. Travel ; abode abroad : peregrine, foreign ; not native ; not domestic.

The received opinion, that putrefaction is caused by cold or peregrine and preternatural heat, is but nugation. Bacon.

It was agreed between them, what account he should give of his peregrination abroad. Id.

It is not amiss to observe the heads of doctrine, which the apostles agreed to publish in all their peregrinations. Hammond.

That we do not contend to have the earth pass for a paradise, we reckon it only as the land of our peregrination, and aspire after a better country.

Bentley.

PEREMPT, v. a.) Lat. peremptus. To

PEREMP'TION, n. s.) kill; to crush. A law term.

Nor is it any objection, that the cause of appeal is perempted by the desertion of an appeal ; because the office of the judge continues after

sucli instance is perempted. Ayliffe.

This peremptwn of instance was introduced in favour of the public, lest suits should be rendered perpetual. Id.

PEREMPTORY, adj. ˆ Fr. peremptoire ;

PER’EMPTORILY, adv. > barb. Lat. peremp-

PER’EMPTORINESS, n. s. j torius, from peremp- tus, killed. Dogmatical ; absolute ; such as destroys expostulation : the adverb and noun- substantive corresponding.

He may have fifty-six exceptions peremptorily against the jurors, of which he shall show no cause.

Spenser.

‘ As touching the apostle, wherein he was so resolute

and peremptory, our Lord Jesus Christ made manifest

unto him, even by intuitive revelation, wherein there

was no possibility of error. Hooker.

Not death himself

In mortal fury is half so peremptory,

As we to keep this city. Shakspeare. King John.

Not to speak peremptorily or conclusively, touching the point of possibility, till they have heard me de- duce the means of the execution. Bacon.

If I entertaine

As peremptorie a desire, to levell with the plaine A citie, where they loved to live ; stand not betwixt

my ire And what it aims at. Chapman.

Norfolk denies them peremptorily. Daniel.

In all conferences it was insisted peremptorily, that the king must yield to what power was required.

Clarendon.

Self-conceit and peremptoriness in a man's own opinions are not commonly reputed vices. Tiltotson.

God's laws peremptorily injoin us, and the things therein implied do straitly oblige us to partake of the holy sacrament. KettlewelL.

Though the text and the doctrine run peremptory and absolute, whosoever denies Christ shall assuredly be denied by him ; yet still there is a tacit condition, unless repentance intervene. South.

He would never talk in such a peremptory and dis- couraging manner, were he not assured that he was able to subdue the most powerful opposition against the doctrine which he taught. Addison.

Peremptorincss is of two sorts ; the one a magiste- rialness in matters of opinion ; the other a positive- ness in relating matters of fact.

Government of the Tongue.

The more modest confess, that learning was to give us a fuller discovery of our ignorance, and to keep us from being peremptory and dogmatical in our determinations. Collier.

Some talk of letters before the deluge ; but that is a matter of mere conjecture, and nothing can be peremptorily determined either the one way or the other. Woodward.

Never judge peremptorily on first appearances.

Clarissa.

PEREN'NIAL, utlj. 3 Lat. perennis. Last-

PEREN'NITY, n. s. $ing through the year: quality of lasting through all seasons.

The matter wherewith these perennial clouds are raised, is the sea that surrounds them. Harvey.

If the quantity were precisely the same in these perennial fountains the difficulty would be greater.

Cheyne.

That springs have their origin from the sea, and not from rains and vapours, I conclude from the pe- rennity of diveis springs.

Derham's Physico-Theologif.

PERENNIALS, or PERENNIAL FLOWERS, in bo- tany, a term applied to those plants whose roots will abide many years, whether they retain their leaves in winter or not. Those which retain their leaves are called evergreens ; but such as cast their leaves are named deciduous, or per- difols.

PERTECT, adj. & v . a. S Fr. parfait ;

PER'FECTER, n. s. Latin, perfectus.

PERFECTION, Complete ; full ;

PERFEC'TIONATE, v. a. ˆconsummate; cerr

PERFEC'TIVE, adj. tain ; due ; not

PERFEC'TIVELY, adv. defective or re-

PER'FECTNESS, n. s. J dundant; blame-

less ; pure : to perfect is to finish ; make com- plete ; conclude ; make skilful, or fully to in- struct: a perfecter is he who makes perfect: perfection and perfectness mean completeness ; goodness ; virtue ; supreme excellence : to per- fectionate, a word only used by Dryden for to advance to perfection : perfective is having the tendency to make perfect : perfectively, in such manner as brings to perfection.

If perfeccioun was bi the preesthood of leuy, for undir hym the peple took the lawe, what ghit was it nedeful another preest to rise bi the ordre of Melchi- sedech 1 Wiclif. Ebrewis vii.

Put on charity, which is the bond of perfectnets.

Col. iii. 14.

Thou shall be perfect with the Lord thy God.

Deut. xviii.

If we love one another, God dwelleth in us, and nis love is perfected in

us. 1 John iv. 12.

What tongue can her perfections tell,

In whose each part all pens may dwell ? Sidney.

We count those things perfect which want nothing requisite for the end whereto they were instituted.

Hooker.

Man doth seek a triple perfection; first, a sensual, consisting in those things which very life itself re- quireth, either as necessary supplements or as orna- naments thereof ; then an intellectual, consisting in those things which none underneath man is capable of; lastly, a spiritual and divine, consisting in those things whereunto we tend by supernatural means kere, but cannot here attain. Id

PER

Within a ken our army lies ; Our men more perfect in the use of arms, Our armour all as strong, our cause the best ; Then reason wills our hearts will be as good.

Sluikspeare.

Is this your perfectness? Id,

My parts, my title, and my perfect soul Shall manifest me rightly. Id. Othello.

It is a judgment maimed and most imperfect, That will confess perfection so could err Against all rules of nature. Id.

Thou art perfect then, our ship hath touched upon The deserts of Bohemia. Shakspeare. Winter's Tale.

Her cause and yours

I'll perfect him withal, and he shall bring you Before the duke. Id. Measure for Measure.

I do not take myself to be so perfect in the privi- leges of Bohemia as to handle that part ; and will not offer at that I cannot master. Bacon.

There is no variety in that which is perfect, because there is but one perfection ; and so much shall we grow nearer to perfectness, by how

much we draw nearer to unity and uniformity. Bp. Hall.

And they, so perfect in their misery, Not once perceive their foul disfigurement

Milton's Comus.

Uriel, no wonder if thy perfect sight See far and wide. Milton.

True virtue being united to the heavenly grace of faith makes up the highest perfection. Id.

Beauty now must perfect my renown ; With that 1 governed him that rules this isle.

Waller.

Praise and adoration are actions perfective of our souls. More.

Chawing little sponges dipt in oil, when perfectly under water, he could longer support the want of re- spiration. Boyle.

No human understanding being absolutely secured from mistake by the perfection of its own nature, it follows that no man can be infallible but by super- natural assistance. Tiltotsjn.

An heroick poem requires, as its last perfection, the accomplishment of some extraordinary under- taking, which requires more of the active virtue than the suffering. Dryden.

Painters and sculptors, chusing the most elegant natural beauties, peifectionate the idea, and advance their art above nature itself in her individual produc- tion ; the utmost mastery of human performance.

Id.

He has founded an academy for the progress and perfectionating of painting. Id.

Endeavour not to settle too many habits at once, lest by variety you confound them, and so perfect none. Locke.

We knowbodies'and their properties mosiperfectly.

Id.

Eternal life shall not consist in endless love ; the other faculties shall

be employed in actions suit- able to, and perfective of their nature.

Ray on the Creation. What toil did honest Curio take To get one medal wanting yet, And perfect all his Roman set ? Prior.

As virtue is seated fundamentally in the intellect, so perffctively in the fancy ; so that virtue is the force of reason in the conduct of our actions and passions to a good end. Grew.

Too few, or of an improper figure and dimension, to do their duty in perfection. Bladanore.

If God be infinitely holy, just, and good, he must take delight in those creatures that resemble him most in these perfections. Atterbury.

PER i.

“Whoever thinks a perfect work to see, Thinks what ne’er was, nor is, nor e’er shall be.

Pope.

This practice was altered ; they offered not to Mercury, but to Jupiter the perfecter. Broome.

The question is, not whether gospel perfection can be fully attained, but whether you come as near it as a sincere intention and careful diligence can carry you. L,aw.

PERFECTIBILITY, a word which we owe to the new philosophy, which made so great a noise in the first stages of the French revolution. As far as we understand, the word perfectibility is pretended, in the writings of that disastrous period, to mean the ultimate and absolute per- fection to which man and society have a natural and necessary tendency; and which, we were told, neither the tyranny of kings nor the bigotry of priests could eventually restrain.

PERFECTION is divided, according to some writers, into physical, moral, and metaphysical.

1. PERFECTION, METAPHYSICAL, TRANSCEN- DENTAL, or ESSENTIAL, is the possession of all the essential attributes, or of all the parts ne- cessary to the integrity of a substance : or it is that whereby a thing has or is provided of every thing belonging to its nature. This is either ab- solute, where all imperfection is excluded, such as the perfection of God ; or secundum quid, and in its kind.

2. PERFECTION, MORALES an eminent degree of virtue or moral goodness, to which men ar- rive by repeated acts of piety, beneficence, &c. This is usually subdivided into absolute or in- herent, which is actually in him to whom we attribute it ; and imputative, which exists in some other, and not in him it is attributed to.

3. PERFECTION, PHYSICAL, or NATURAL, is that whereby a thing has all its powers and fa- culties, and those too in full vigor ; and all its parts both principal and secondary, and those in their due proportion, constitution, &c., in which sense man is said to be perfect when he has a sound mind in a sound body. This perfection is by the schools frequently termed svtpyijn/cfj, because a thing is enabled thereby to perform all its operations.

PE'RFIDY, n. s. \ Fr. perfidie ; Lat. PERFID'IOUS, adj. Iperfidia. Treachery ;

PERFID'IOUSLY, adv. f want of faith ; breach PERFID'IOUSNESS, n. s.) of faith: perfidious is treacherous ; false to trust.

Perfidiously •

He has betrayed your business, and given up, For certain drops of salt, your city Rome.

Shakspeare.

O Judas, how happy had it been for thee, if thou hadst never done what thou perfidiously intendedst !

Bp. Hall. O spirit accursed,

Forsaken of all good, I see thy fal I Determined, and thy hapless crew involved In this perfidious fraud. Milton.

Tell me, perfidious, was it fit, To make my cream a perquisite, And steal to mend your wages'!

Widow and Cat.

They eat perfidiously their words, And swear their ears through two inch boards.

Hudibras.

Some things have a natural deformity in their , as perjury, perfidiousness, and ingratitude.

Tillotson.

Can he not deliver us possession of such places as would put him in a worse condition, whenever he should perfidiously renew the war!

Swift's Miscellany.

PER'FLATE, v. a. Lat. perfto. To blow through.

If eastern winds did perflate our climates more frequently, they would clarify and refresh our air.

Harvey.

Miners, by perflations with large bellows, give mo- tion to the air, which ventilates and cools the mines.

Woodward.

The first consideration in building of cities is to make them open, airy, and well perflated.

Arbuthntt on Air.

PER'FORATE, v. a.) Lat. per faro. To PERFORATION, n. s. 5 pierce with a tool; bore ; act of boring or piercing.

Draw the bough of a low fruit tree newly budded without twisting, into an earthen pot perforate at the bottom, and then cover the pot with earth ; it will yield a very large fruit.

Bacon's Natural History.

The likeliest way is the perforation of the body of the tree in several places one above another, and the filling of the holes. Bacon.

The industrious perforation of the tendons of the second joints of fingers and toes, and the drawing the tendons of the third joints through them.

More's Divine Dialogues.

A perforated bladder does not swell. Boyle.

That the nipples should be made spongy, and with such perforations as to admit passage to the milk, are arguments of providence.

Ray on the Creation.

The aperture was limited by an opaque circle placed between the eye-glass and the eye, and per- forated in the middle with a little round hole for the rays to pass through to the eye. Newton.

The laboured chyle pervades the pores, In all the arterial perforated shores. Blackmore. Worms perforate the guts. Arbuthnot.

The patient, placed in a convenient chair, dipping the trocar in oil, stab it suddenly through the tegu- ments, and, withdrawing the perforator, leave the waters to empty by the canula. Sharp.

And such in ancient halls and mansions drear May still be seen ; but perforated sore, And drilled in holes, the solid oak is found, By worms voracious eaten through and through.

Coutper.

PERFORCE’, adv. Per and force. By vio- lence; violently.

Guyon to him leaping, staid His hand, that trembled as one terrified ; And though himself were at the sight dismayed, Yet him perforce restrained. Spenser.

Jealous Oberon would have the child, But she perforce withholds the loved boy.

Shakspeare.

She amaz’d, her cheeks All trembling and arising, full of spots, And pale with death at hand, perforce she breaks Into the inmost rooms. Peacham on Poetry.

PERFORM’, v. a. &v.n.\ Ital. perfor PERFOR’MABLE, adj. tmare, of Lat. per

PERFOR’MANCE, {and formo. To

PERFOR’MER, n. s. 3 execute; do;

achieve ; accomplish ; discharge : to succeed : performableis practicable : performance, accom-

plishment of a design or promise ; completion ; composition; work; action: performer, he who performs ; particularly, he who publickly dis- plays his skill or ability.

I will cry unto God who performeth all things for roe. Psalms.

Perform the doing of it ; that as there was a rea- diness to will, so there may be a performance.

2 Car. viii. 11.

Let all things be performed after the law of God diligently. 1 Esdras viii. 21.

All three set among the foremost ranks of fame for great minds to attempt, and great force to perform what they did attempt. Sidney.

Hast thou, spirit, *

Performed to point the tempest that I bad thee ?

Shakspeare.

Promising is the very air o' th* time ; it opens the eyes of expectation : performance is ever the duller for his act, and, but in the plainer kind of people, the deed is quite out of use. Id.

In this slumbery agitation, besides her walking and other actual performances, what have you heard her say 1 Id.

The merit of service is seldom attributed to the true and exact performer. Id.

Men forget the relations of history, affirming that elephants have no joints, whereas (heir actions are not performuble without them. Browne.

Thou, my love, Perform his funerals with paternal care.

Driftlen.

In the good poems of other men, I can only be sure, that 'tis the hand of a good master ; but in your performances 'tis scarcely possible for to be de- ceived. Id.

The only means to make him successful .n the per- formance of these great works was to be above con- tempt. South.

He effectually performed his part, with great inte- grity, learning, and acuteness ; with the exactness of a scholar, and the judgment of a complete divine.

Waterland.

“When a poet has performed admirably in several il- lustrious places, we sometimes also admire his very errors. Watts.

Men may, and must differ in their employments ; but yet they must all act for the same ends, as du- tiful servants of God, in the right and pious perform- ance of their several callings. Law.

Few of our comick performances give good exam- ples. Clarissa.

PERFUME’, n. s. &u. a.) French parfume.

PERFU’MER, ji Strong odor of

sweetness ; pleasant scent : to give or impregnate with such scent : a perfumer is a dealer in per- fumes.

Why rather, sleep, liest thou in srnoky cribs, And husht with buzzing night-flies to thy slumber, Than in the perfumed chambers of the great, Under the canopies of costly state, And lulled with sounds of sweetest melody ?

Shakspeare.

Pomanders and knots of powders for drying rheums are not so strong as perfumes ; you may have them continually in your hand, whereas perfumes you can take but at times. Bacon.

Smells adhere to hard bodies ; as in perfuming of gloves, which showeth them corporeal. Id.

A moss the perfumers have out of apple trees, that hath an excellent scent. Id. Natural History.

Perfumet, though gross bodies that may be sensi- bly wasted, yet fill the air, so that we can put our

nose in no part of the room where a perfume is burned but we smell it. Digo

Even the rough rocks with tender myrtle bloom, And trodden weeds send out a rich perfume.

Addison.

Pinks and roses bloom, And every bramble sheds perfume. Gay.

The pains she takes are vainly meant To hide her amorous heart,

'Tis like perfuming an ill scent, The smell's too strong for art. GranvUle*

No rich perfumes refresh the fruitful field, Nor fragrant herbs their native incense yield.

Pope.

See spicy clouds from lowly Sharon rise, And Carmel's flowery top perfumes the skies. Id.

First issued from perfumers shops A crowd of fashionable fops. Swift.

PERFUME, denotes either the volatile effluvia from any body affecting the organ of smelling, or the substance emitting those effluvia ; in which last sense the word is most commonly used. The generality of perfumes are made up of musk, ambergris, civet, rose and cedar woods, orange flowers, jessamines, jonquils, tuberoses, and other odoriferous flowers. Those drugs commonly called aromatics, such as storax, frankincense, benzoin, cloves, mace, &c., enter the composition of a perfume ; some are also composed of aromatic herbs, or leaves, as laven- der, marjoram, sage, thyme, hyssop, &c. The use of perfumes was frequent among the He- brews, and among the orientals in general, before it was known to the Greeks and Romans. They came to be very common among the Greeks and Romans, especially those composed of musk, ambergris, and civet. The nardus and maloba- thrum were held in much estimation, and were imported from Syria. The unguentum nardiruim was variously prepared, and contained many in- gredients. Malobathrum was an Indian plant. Perfumes were also used at sacrifices to regale the gods ; at feasts, to increase the pleasures of sensation ; at funerals, to overpower cadaverous smells, and please the manes of the dead ; and in the theatres, to prevent the offensive effluvia pro- ceeding from a crowd from being perceived.

PERFUNCTORILY, adv. Lat. perfunctoric. Carelessly ; negligently ; so as merely to satisfy external form.

His majesty casting his eye perfunctorily upon it, and believing it had been drawn by mature advice, no sooner received it, than he delivered it to the lord- keeper. Clarendon.

Lay seriously to heart the clearness and evidence of these proofs, and not perfunctorily pass over all the passages of the gospel, which are written on pur- pose that we may believe, without weighing them.

1 ucas.

A transient and perfunctory examination of things leads men into considerable mistakes, which a morfc correct and rigorous scrutiny would have detected.

Wood'ward.

Whereas all logic is reducible to the four princi-

Eal operations of the mind, the two first of these ave been handled by Aristotle very perfunctorily ; of the fourth he has said nothing at all. Baker.

PERFUSE', v. a. Lat. perfusus. To tinc- ture ; overspread. Not used.

These dregs immediately perfuse the blood with melancholy, and cause obstructions. Ifurvey.

PER

PERGAMA, the citadel of Troy ; which, be- cause of its extraordinary height, gave name to all high buildings (Servius, Virg.) Others say the walls of Troy were called Pergama.

PERGAMEA, PERGAMIA, names given by Virgil and Plutarch to Pergamum.

PERGAMO, or PERG AMOS, the modern name of Pergamum, and Pergamus.

PERGAMUM, PERGAMEA, or PERGAMIA, a town of Crete, built by Agamemnon in memory of his victory (Plut. Virg. Velleius). Here was the burying-place of Lycurgus (Aristoxenus). It was situated near Cydonia (Servius); but Scylax helps him out, who places the Dactyn- nean temple of Diana, which stood near Cy- donia (Strabo), to the

north of the territory of Pergamia.

PERGAMUM, a town of Mysia, situated on the Caicus, which runs by it (Plin. Strabo). It was the royal residence of Eumenes, and of the kings of the race of the Attali (Livy). It had an ancient temple of ./ Esculapius (Tacitus). The ornament of Pergamum was the royal library, vying with that of Alexandria in Egypt ; the kings of Pergamum and Egypt rivalling each other in this respect (Pliny). Strabo ascribes this rivalry to Eumenes. Plutarch mentions 200,000 volumes in the library at Pergamum. Here the membranse Pergamenae, whence the name parchment, were invented for the use of books (Varro, Pliny). It was the country of Galen, and of Oribasius, physician to Julian (Euna- pius). Here P. Scipio died (Cicero). Attalus, son of Eumenes, dying without issue, bequeathed his kingdom to the Roman people, who reduced it to a province (Strabo). Here was one of the nine conventus juridici, or assemblies of the Asia Romana, called Pergamenus, and the ninth in order, which Pliny also calls jurisdictio Per- gamena.

PERGAMUS, an ancient kingdom of Asia, formed out of the ruins of the empire of Alex- ander the Great. It commenced about the year 283. The first sovereign was one Philetserus a eunuch, by birth a Paphlagonian, of a mean de- scent, and in his youth a menial servant to Anti- gonus, one of Alexander's captains. Philetaerus left the city of Pergamus to his brother, or, ac- cording to some, to his brother's son Eumenes I., who obtained possession of the greater part of the province of Asia. Eumenes was suc- ceeded by Attalus I., nephew of Philetaerus, who, during a reign of forty-three years, was engaged in many successful wars with the Gauls, Philip of Macedon, and others. He was a man of great generosity, and such an enthusiast in favor of genius that he caused a grammarian named Daphidas to be thrown into the sea from the top of a high rock, because .he spoke disre- spectfully of Homer. Attalus was succeeded by his eldest son Eumenes II. He was exceed- ingly attached to the Romans, and assisted them in conquering Antiochus the Great, for which they rewarded him by adding to his dominions all the countries on this side of Mount Taurus, which belonged to that monarch. He continued Tong a faithful ally of that powerful people, but, having entered into a secret treaty with Perseus king of Macedon, he excited their resentment ;

and, although he sought to deprecate their ven- geance, it would have fallen on him, but for his death, which happened in the thirty-ninth year of his reign. He left one son, but, as he was an infant, he

nominated his brother to succeed him. Attalus II., in the beginning of his reign, was routed in a pitched battle by Prussias king of Bithynia; but the intervention of the Romans procured him complete redress. The latter part of his life he devoted to ease and luxury. He died in his eighty-second year, about 138 B. C. He was succeeded by Attalus III. the son of Eumenes, whose reign was one continued horrid scene of madness and tyranny. On his death a will was found, by which he left the Roman people heirs of all his goods ; upon which they seized on the kingdom, and reduced it to a pro- vince of their empire by the name of Asia Pro- per. Aristonicus, a son of Eumenes by an Ephesian courtesan, endeavoured to wrest it from them, but although he gained several battles he could not attain his object, but died in prison. The country remained subject to the Romans while their empire lasted, but is now in the hands of the Turks. The city is half ruined, and is still known by the name of Pergamo.

PERGUNNAH, in the language of Hindos- tan, means the largest subdivision of a province, whereof the revenues are brought to one par- ticular head cutchery, whence the accounts and cash are transmitted to the general cutchery of the province.

PERHAPS', adv. Per and hap. Perad- venture ; it may be ; mayhap.

Perhaps the good old man that kissed his son, And left a blessing on his head, His arms about him spread,

Hopes yet to see him ere his glass be run.

Flatman.

Somewhat excellent may be invented, perhaps more excellent than the first design, though Virgil must be still excepted, when that pertiaps takes place.

Dry den.

His thoughts inspired his tongue, And all his soul received a real love ; Perhaps new graces darted from her eyes, Perhaps soft pity charmed his yielding soul, Perhaps her love, perhaps her kingdom charmed him.

Smith.

It is not his intent to live in such ways as, for ought we know, God may perhaps pardon, but to be diligent in such ways, as we know that God will infallibly reward. Law.

A dejection of mind, which perhaps may be re- moved by to-morrow, rather disqualifies me for writing. Cowper's Private Correspondence.

PERIAGOGUE, in rhetoric, is used where many things are accumulated into one period which might have been divided into several.

PERIAGUA, a sort of large canoe made use of in the Leeward Islands, South America, and the Gulf of Mexico. It is composed of the trunks of two trees hollowed and united toge- ther ; and thus differs from the canoe, which is formed of one tree.

PERIANDER, tyrant of Corinth and Corcyra, was reckoned among the seven wise men of Greece; though he might rather have been reckoned among the most wicked men, since he changed the government of his country, deprived

his countrymen of their liberty, usurped the sovereignty, and committed the most shocking crimes. He committed incest with his mother, and kicked to death his wife Melissa. Yet he passed for one of the greatest politicians of his time ; and Heraclides tells us that he forbad voluptuousness ; that he imposed no taxes ; caused all pimps to be drowned ; and established a senate. He died A. A. C. 585.

PERIANTHIUM, from Trtpt, round, and avOog, the flower, the flower cup properly so called, the most common species of calyx, placed immediately under the flower, which is contained in it as in a cup.

PERIAPATAM, PRIYA PATANA, or THE CHOSEN CITY, a town and domain in the Rajah's territories, Mysore, towards the borders of the Coorg country, thirty-one miles west by south from Seringapatam. This domain formerly belonged to a polygar family, named Nandirax. About 1 60 years ago the chief was attacked by Chica Deva Raya, the Curtur of the Mysoxe ; and, finding himself unable to resist so powerful an enemy, he killed his wives and children, and then rushed into the midst of his enemies, where he died also. On the approach of general Aber- crombie's army, in 1790, Tippoo ordered both the town and fort to be destroyed. The fortifi- cations are now a mere ruin. The surrounding country is beautiful, but at the time it was con- quered by the British did not contain one-fourth the number of inhabitants necessary for its culti- vation. The natives declare they have never seen ice or snow on the top even of the highest hills. There is at Bettadapoor a hill about 4000 feet above the level of the sea. Periapatam, in lime of Peace, is an entrepot of trade between •.'he

Coorg and Mysore sovereignties. Sandal wood grows in the skirts of the forests. In twelve years it attains, in a strong soil, the most suitable size for being cut. The Periapatam district produces about 2000 cwt., and the whole sandal wood of India is now in the possession of the East. India Company and the rajah of Mysore. The woods are much infested, and the crops in- iured, by wild elephants, which are more nume- rous on the borders of the Coorg country than either at Chittagong or in Pegu. Among the trees is abundance also of teak.

To prepare the sandal wood, the billets are here buried in dry ground for two months, dur- ing which time the white ants eat up all the outer wood without touching the heart, which is the sandal. The deeper the color the higher the perfume, but the root sandal is the best. The large billets are sent to China, and the middle sized used. The chops, fragments, and smaller assortments, are best for the Ara- bian market, and from them the sandal oil is distilled.

PER'IAPT, n. s. Gr. ircpiairrbt. Amulet; charm worn as a preservative against disease or mischief.

Tire Regent conquers, and the frenchmen fly : Now help, ye charming spells and periapts.

Shakspeare.

PERICAIl'DIVM, n.s. Fr. pericarde ; Gr. trspt and KapEia, the heart. The membrane that contains the lie.irt.

The pericardium is a thin membrane of a conic figure, that resembles a purse, and contains the heart in its cavity : its basis is pierced in five places, for the passage of the vessels which enter and come out of the heart : the use of the pericardium is to contain a small quantity of clear water, which is separated by small glands in it, that the surface of the heart may not grow dry by its continual motion.

Quiiicy.

PERICAR'PIUM, n. s. FT. pericarpe ; Gr. Trtpt and Kapirog, fruit. In botany, a pellicle or thin membrane encompassing the fruit or grain of a plant, or that part of a fruit that envelopes the seed.

Besides this use of the pulp or pericarpium for the guard of the seed, it serves also for the sustenance of animals. Kay.

PERICIIORUS, in antiquity, a name given by the Greeks to those games or combats that' were not consecrated to any of the gods.

PERICLES was one of the greatest men that ever flourished in Greece. He was very brave; and so eloquent that he gained almost as great an authority under the republican government of Athens as if he had been a monarch. His fond- ness for women was one of his chief vices. He married the celebrated Aspasia, and died the third year of the Peloponnesian war. See AT- TICA.

PERICRA'NIUM, n. s. Fr. pericrane ; from Trtpt and cranium, the skull.

The pericranium is the membrane that covers the skull : it is a very thin and nervous membrane of an exquisite sense, such as covers immediately not only the cranium, but all the bones of the body ; except the teeth ; for which reason it is also called the peri- osteum. Quincy.

Having divided the pericranium, I saw a fissure running the whole length of the wound. Wiseman.

PERPC'ULOUS,«$. Lat. periculosus. Dan- gerous ; hazardous. A word not in use.

As the moon every seventh day arriveth unto a contrary sign, so Saturn, which remaineth about as many years in one sign, and holdeth the same con- sideration in years as the moon in days, doth cause the periculous periods. Browne.

PERIGEE', n. s. > FT. perigee; Gr. vrtpi

PERIGE'UM. 5 and yrj, the earth. A

point in the heavens wherein a planet is said to be in its nearest distance possible from the earth.

By the proportion of its motion it was at the creation, at the beginning of Aries, and the periyeum or nearest point in Libra. Browne.

PERIGORD STONF, a v ore of manganese, of a dark gray color, like the basaltes or trapp. It may be scraped with a knife, but is extremely difficult to be broken. It is found of no regular figure, is very compact, heavy, and as black as charcoal. Its appearance is glittering and striated, like the ore of antimony; its particles being dis- posed in the form of needles, ciossing one ano- ther without any agglutination, insomuch that some are loose as iron filings when stuck to a loadstone

; resembling the scoria from a black- smith's furnace. By calcination it becomes harder, and of a reddish brown color, but is not magnetic. It has a considerable specific gra- vity, does not melt per sc, but with borax runs

into an amethyst-colored glass. It is scarcely affected by nitrous acid without the addition of sugar. It seems also to contain some argil and iron. It is met with in the ci-devant provinces of Gascony and Dauphiny in France, and in some parts of England. It is employed by the French potters and enamellers in the glassy var- nish of their earthen wares.

PEltlGRAPHE, a word used to express a careless or inaccurate delineation of any thing.

PEIUGRAPHE, in anatomy, is used by Vesalius to express the white lines or impressions that appear on the musculus rectus of the abdomen.

PERIGUEUX, VESUNNA, an ancient and pretty city, the chief place of the department of Dordogne, France, having an inferior court of justice, under the royal court of Bourdeaux, a chamber of commerce, and an agricultural so- ciety. It is a bishopric, the principal place of the twentieth military division, and a post town, with 8500 inhabitants. This city stands in a fine valley, on the right bank of the isle, near the confluence of that river with the Vezere. It is encompassed with freestone walls tolerably well built, and contains several remains of ancient monuments, which show its splendor in the time of the Romans. There are some very pleasant walks round the town, and the neighbourhood abounds in excellent game and delicious truffles ; Perigueux pies are also highly esteemed, and form a considerable branch of the commerce of the place. The manufactures consist of hand- kerchiefs, caps, fine liqueurs, Sec., and the trade is chiefly in the pates, or pies, and truffles, just mentioned, together with wood, iron, grocery, brandy, game, poultry, and cattle. Here is a public library of 11,000 volumes; the prefect's house of modern construction ; a botanical gar- den ; the cathedral ; the tower of Vesunna, a cir- cular edifice, 100 feet high, without either door or window (thought to have been anciently the temple of Venus) ; several remains of antiquity, as an aqueduct, public baths, and several arcades of a large amphitheatre. This is the native place of Boetius and La Grange-Chancelle, celebrated authors. It is seventy-two miles S.S.W. of Li- moges, ninety-six E. N. E. of Bourdeaux, fifty- seven

south-east of Angoulfeme, and 364 S. S.W, of Paris; in long. 1° 37′ W., lat. 45° 11′ N.

PERIHE'LIUM, n. s. Fr. periAe/ie ; Gr. Trtpi and ;jXtoc, the sun. That point of a planet's orbit wherein it is nearest the sun.

Sir. Isaac Newton has made it probable that the comet which appeared in 1608, by approaching to the sun in its perihelium, acquired such a degree of heat as to be 50,000 years a cooling.

Cheyne's Philosophical Principles.

PERIL, n. s. ~\ Fr. peril ; Ital. peri-

PER'ILOUS, adj. (gko; Lat. periculum.

PERILOUSLY, adv. 4 Danger; jeopardy;

PER'ILOUSNESS, n. s. J risk ; danger de- nounced ; denunciation : perilous is, hazardous ; dangerous ; and Shakspeare uses ' parlous' more than once for shrewd or witty, as Dr. Johnson thinks because of the opinion 'that children eminently forward do not live :' but query, Is it not a corruption of peerless? perilously and porilousness follow these senses.

Dear Piracies, be liberal unto me of those things

I PER

which have made you indeed precious to the world, and now doubt not to tell of your perils. Sidney.

How many perils do unfold The righteous man to make him daily fall !

Spenser.

Alterations in the service of God, for that the/ impair the credit of religion, are therefore perilous in common-weals, which have no continuance longer than religion hath all reverence done unto it.

Hooker. I told her,

On your displeasure's peril, She should not visit you.

Shukspeare's Winter's Tale A parlous boy, go to you are too shrewd.

Id. King Richard III In the act what perils shall we find, If either place,

or time, or other course, Cause us to alter the order now assigned.

Daniel

Her guard is chastity ; She that has that is clad in complete steel, And like a quivered nymph with arrows keen May trace huge forests and unharboured heaths, Infamous hills and sandy perilous wilds. Milton.

Thus was the accomplished squire endued With gifts and knowledge per'lous shrewd.

Hudibras.

The love and pious duty which you pay Have passed the perils of so hard a way.

Dry den.

Strong, healthy, and young people are more in peril by pestilential fevers than the weak and old.

Arbuthnot.

Dictate propitious to my duteous ear, What arts can captivate the changeful seer : For perilous the assay, unheard the toil T' elude the prescience of a God by guile. Pope.

Soldiers always live In idleness or peril : both are bad. Proctor.

PERTM'ETER, n.s. Fr. perimetre ; Gr. irtpi and jwrptw. The compass or sum of all the sides which bound a figure.

By compressing the glasses still more, the diame- ter of this ring would increase, and the breadth of its orbit or perimeter decrease, until another new colour emerged in the centre of the last. Newton.

PERINEUM, or PERINEUM, in anatomy, the space between the anus and the parts of ge- neration, divided into two equal lateral divisions by a very distinct line, which is longer in males than females.

PERINSKIOLD (John), a learned Swedish writer, born at Stregnesia in Sudermania, in 1654. He was made professor at Upsal, secre- tary antiquary of the king of Sweden, and coun- sellor of the chancery of antiquities. He died in 1720. His principal works are, 1. A History of the Kings of Norway. 2. A History of the Kings of the North. 3. An edition of John Messenius on the Kings of Sweden, Norway, and Denmark, in 14 vols, folio, &c.

PE’RIOD, n. s. & v. a.~\ Fr. periode ; Gr.

PERIOD’IC, adj. [TrspioSog. A circuit ;

PERIODICAL, i time during which

PERIODICALLY, adv. J any thing is per- formed that is continued in series’; course of events ; a given number of years ; length of time; a complete sentence; particularly the end or conclusion of a series ; the point or state at which a thing terminates : as a verb to put an end to : periodic and periodical mean circular;

regular ; returning at a given period or length of time ; relating to periods : periodically, at stated periods.

If my death might make this island happy, And prove the period of their tyranny, I would expend it with all willingness ; But mine is made the prologue to their play.

Skakspeare.

Your letter he desires

To those have shut him up, which failing to him, Periods his comfort. Id. Timon.

Some experiments would be made how by art to make plants more lasting than their ordinary period, as to make a stalk of wheat last a whole year.

Bacon’s Natural History.

Periodt are beautiful, when they are not too long : for so they hare their strength too as in a pike or javelin. Ben Jonson.

Beauty’s empires, like to greater states, Have certain periods set, and hidden fates.

Suckling.

Light-conserving stones must be set in the sun before they retain light,

and the light will appear greater or lesser, until they come to their utmost period. Digby.

Is this the conhdence you gave me 1 Lean on it safely, not a period Shall be unsaid for me. Milton,

It is implicitly denied by Aristotle in his politics, in that discourse against Plato, who measured the vicissitude and mutation of states by a periodical fatality of number. Browne.

We stile a lesser space a cycle, and a greater by the name of period, and you may not improperly call the beginning of a large period the epocha thereof.

Holder on Time.

Syllogism is made use of to discover a fallacy cunningly wrapt up in a smooth period. Locke.

There is nothing so secret that shall not be brought to light within the compass of our world ; whatso- ever concerns this sublunary world in the whole ex- tent of its duration, from the chaos the last period.

Burnet's Theory.

What anxious moments pass between The birth of plots and their last fatal periods ! Oh ! 'tis a dreadful interval of tims. Addison. The confusion of mountains and hollows furnished me with a probable reason for those periodical foun- tains in Switzerland which flow only at such parti- cular hours of the day. Id.

Was the earth's periodic motion always in the same plane with that of the diurnal, we should miss of those kindly increases of day and night.

Derham.

Astrological undertakers would raise men out of some slimy soil, impregnated with the influence of the stars upon some remarkable and periodical con- junctions. Bentley.

The three tides ought to be understood of the space of the night and day, then there will be a regular flux and reflux thrice in that time every eight hours periodically. Broome.

From the tongue

The unfinished period falls. Thornton. Spring. Tell these, that the sun

is fixed in the centre, that the earth with all the planets roll round the sun in their several periods ; they cannot admit a syllable of this new doctrine. Watts.

For the assistance of memories, the first words of every period in every page may be written in distinct colours. Id.

Four moons perpetually roll round the planet Jupiter, and are carried along with him in his periodi- cal circuit round the sun. Watts on the Mind.

PERIOD, in astronomy. See ASTRONOMY.

PERIOD, in chronology, denotes a revolution of a certain number of years, or a series of years, whereby, in different nations, and on different occasions, time is measured; such are the fol- lowing :

. 1. PERIOD, CALIPPIC, a system of seventy- six years.

2. PERIOD, DIONYSIAN, or Victorian period, a system of 532 luna-solar and Julian years ; which being elapsed, the characters of the moon fall again upon the same day and feria, and revolve in the same order, according to the opinion of the ancients. This period is otherwise called the great paschal cycle, because the Chris- tian church first used it to find the true time of the pascha or Easter. The sum of these years arise by multiplying together the cycles of the sun and moon.

3. PERIOD, HIPPARCHUS'S, is a series of 304 solar years, returning in a constant round, and restoring the new and full moons to the same day of the solar year, according to the sentiment of Hipparchus. This period arises by multiply- ing the Calippic period by four. Hipparchus assumed the quantity of the solar year to be 365 d. 5/i. 55m. 12s.; and hence concluded that in 104 years Calippus's period would err a whole day. He therefore multiplied the period by four, and from the product cast away an en- tire day. But even this does not restore the new and full moons to the same day throughout the whole period ; but they are sometimes anticipated Id. 8 h. 23m. 29Js.

4. PERIOD, JULIAN. See JULIAN.

PERIOD, in grammar, denotes a small com- pass of discourse, containing a perfect sentence, and distinguished at the end by a point, or full stop, thus (.) ; and in members or divisions marked by commas, colons (:), &c. Rhetori- cians consider period, which treats of the struc- ture of sentences, as one of the four parts of composition.

The periods allowed in oratory are three : a period of two members, called by the Greeks dicolos, and by the Latins bimem- bris ; a period of three members, tricols, tri- membris ; and a period of four, quadrimembris, tetracolos. See PUNCTUATION.

PERIOD, in medicine, is applied in certain diseases which have intervals and returns, to denote an entire course or circle of such disease ; or its progress from any state through all the rest till it return to the same again. Galen de- scribes period as a time composed of an inten- tion and remission ; whence it is usually divided into two parts, the paroxysm, or exacerbation, and remission. In intermitting fevers, the pe- riods are usually stated and regular; in other diseases, as the epilepsy, gout, &c., they are vague or irregular.

PERIOECI, Trtpioiicoi, in geography, such in- habitants of the earth as have the same latitudes, but opposite longitudes, or live under the same parallel and the same meridian, but in different semicircles of that meridian, or in opposite points of the parallel. These have the same common seasons throughout the year, and the same phe- nomena of the heavenly bodies ; but, when it is noon-day with the one, it is midnight with the

otner, there being twelve hours in an east and west direction. These are found on the globe by the hour index, or by turning tha globe half round, that is, 180° either way.

PERIOSTEUM, n. s. Fr. perioste ; Gr. irepi and oTfov, a boae.

All the bones are covered with a very sensible membrane, called the periosteum. Cheyne.

PERIPATETICS, philosophers, followers of Aristotle, and maintainers of the peripatetic phi- losophy ; called also Aristotelians. They were called Peripatetics, from irtpiiraTtw, I walk; be- cause they disputed walking in the Lyceum. A reformed system of the Peripatetic philosophy was first introduced into the schools in the University of Paris, whence it soon spread throughout Europe : and has subsisted in some universities to this day, under the name of school philosophy. The foundation of this is Aristotle's doctrine, often misunderstood, but oftener mis- applied : whence the retainers may be denomi- nated Reformed Peripatetics. Out of these have sprung, at various times, several branches ; the chief are the Thomists, Scotists, and Nomina- lists. The Peripatetic system, after having pre- vailed with great and

extensive dominion for many centuries, began rapidly to decline towards the close of the seventeenth, when the disciples of Ramus attacked it on the one hand, and it had still more formidable adversaries to encounter in Descartes, Gassendi, and Newton. See PHILO- SOPHY.

PERIPATON, in antiquity, the name of that walk in the Lyceum where Aristotle taught, and whence the name of Peripatetics was given to his followers.

PERIPETIA, in the drama, that part of a tragedy wherein the action is turned, the plot unravelled, and the whole concludes. See CA- TASTROPHE.

PERIPH'ERY, M.S. Fr. peripherie; Gr. Trtpiˆtpw. Circumference.

Neither is this sole vital faculty sufficient to exter- minate noxious humours to the periphery or outward parts. Harvey.

PERIPHERY. See GEOMETRY.

PE'RIPHRASE, v. a. ? Gr. Trspiˆpaene ; Fr.

PERIPH'RASIS, n. s. §perip fir user. To ex- press one word by many ; circumlocution : use of many words to express the sense of one. She contains all bliss,

And makes the world but her periphrasis.

Cleaveland.

They make the gates of Thebes and the mouths of this river a constant periphrasis for this number seven.

Browne.

The periphrasis and circumlocutions by which Homer expresses the single act of dying, have sup- plied succeeding poets with all their manners of phrasing it. Pope.

They shew their learning uselessly, and make a long periphrasis on every word of the book they ex- plain. Watts.

PERIPLOCA, Virginian silk, in botany, a genus of the digynia order and pentandria class of plants ; natural order thirtieth, contorts. The nectarium surrounds the genitals, and sends out five filaments. There are five species, four of which are natives of warm climates, and can

only be raised there. The fifth, however, is suf-

ficiently hardy for this climate. The periploca is a fine climbing plant, that will wind itself with its ligneous branches about whatever tree, hedge, pale, or pole is near it ; and will arise, by the assistance of such support, to the height of about thirty feet; and where no tree or support is at hand to wind about, it will knit or entangle itself together in a most complicated manner. The stalks of the older branches, which are most woody, are covered with a dark brown bark, whilst the younger shoots are more mottled with the different colors of brown and gray, and the ends of the youngest shoots are often of a light green. The stalks are round, and the bark is smooth. The leaves are the greatest ornament to this plant; for they are tolerably large, and of a good shining green color on their upper surface,, and cause a variety by exhibiting their under surface of a hoary cast. Their figure is oblong, or rather more inclined to the shape of a spear, as their ends are pointed, and they stand opposite by pairs on short foot-stalks. Their flowers have a star-like appearance ; for, though they are composed of one petal only, yet the rim is divided into segments, which expand in such a manner as to form that figure. Their in- side is hairy, as is also the nectarium which sur- rounds the petal. Four or five of the flowers grow together, forming a kind of umbel. They are of a chocolate color, are small, and are in blow in July and August, and sometimes in September. In the country where this genus grows naturally they are succeeded by a long taper pod, with compressed seeds having down to their tops. The propagation of this climber is very easy; for if the cuttings are planted in a light moist soil, in the autumn or in the spring, they will refadily strike root. Three joints at least should be allowed to each cutting; they should be the bottom of the preceding summer's shoot; and two of the joints should be planted deeply in the soil. Another, and a never-failing method, is by layers ; for if they are laid down in the ground, or a little soil only loosely thrown over the young preceding summer's shoots, they will strike root at the joints, and be good plants for removing the winter following.

PERIPNEU'MONY, n. s. \ Gr. ™pi and

PERIPNEUMO'NIA, n. s. i Trvtvpuv, the lungs ; Fr. peripneumonie. Inflammation of the lungs.

Lungs oft imbibing phlegmatick and melancholick humours are now and then deprehended schirrous by dissipation of the subtiler parts,

and lapidifica- tion of the grosser that may be left indurated, through the gross reliques of peripneumonia or inflammation of the lungs. Harvey.

A peripneumony is the last fatal symptom of every disease ; for nobody dies without a stagnation of the blood in the lungs, which is the total extinction of breath. Arbuthnot.

PERIPNEUMONY, a disease attended with an acute fever, and a difficulty of breathing. See MEDICINE.

PERIRRHANTERIUM, a vessel of stone or brass, which was filled with holy water, and with which all those were sprinkled who were ad- mitted by the ancients to their sacrifices. Beyond this vessel no profane person was allowed to

pass. It was used both by Greeks and Romans, and has been evidently borrowed by the church of Rome. The Hebrews also had a vessel for purification.

PERISCII, in geography, the inhabitants of either frigid zone, between the polar circles and the poles, where the sun, when in the summer signs, moves only round about them, without setting; and consequently their shadows in the same day turn to all the points of the horizon.

PER'ISII, v. n. & v. a. } Fr. perir ; Port.

PER'ISH*BLE, adj. > and Span, pe.recer ;

PER'ISHABLENESS, n. s. * Lat. pereo. To die; be destroyed; come to nothing; be lost; be in a state of constant decay ; be eternally lost : as an active verb (obsolete) to destroy ; cause to de- cay : perishable and perishableness follow the senses of the verb neuter, which generally takes for or with before a cause, and by before an in- strument.

They perish quickly from off the good land.

Deut. xi. 18.

If I have seen any perish for want of cloathing, then let mine arm fall from my shoulder blade.

Job xxxi. 29. I perish with hunger. Luke xv. 17.

These, as natural brute beasts made to he destroyed, speak evil of the things they understand not, and shall utterly perish. 2 Peter.

I burn, I pine, I perish,

If I atchieve not this young modest girl.

Shakspeare.

The splitting rocks cowered in the sinking sands, And would not dash me with their ragged sides ; Because thy flinty heart, more hard than they, Might in thy palace perish Margaret. Id.

We derogate from his eternal power to ascribe to them the same dominion over our immortal souls, which they have over all bodily substances and perishable natures. . Raleigh.

Rise, prepared in black, to mourn thy perished lord. Dryden.

Characters drawn on dust, that the first breath of wind effaces, are altogether as useful as the thoughts of a soul that perish in thinking. Locke.

Exposing their children, and leaving them in the fields to perish by want, has been the practice.

Id.

Duration, and time which is a part of it, is the idea we have of perishing distance, of which no two parts exist together, but follow in succession ; as ex- pansion is the idea of lasting distance, all whose parts exist together. Id.

Suppose an island separate from all commerce but having nothing because of its commonness and perish- ableness fit to supply the place of money : what rea- son could any have to enlarge possessions beyond the use of his family ? Id.

To these purposes nothing can so much contribute as medals of undoubted authority not perishable by time, nor confined to any certain place. Addison.

He was so reserved, that he would impart his secrets to nobody ; whereupon this closeness did a little perish his understanding. Collier.

Human nature could not sustain the reflection of having all its schemes and expectations to determine with this frail and perishable

composition of flesh and blood. Rogers.

So when the lust of tyrant power succeeds, Some Athens perishes, or some Tully bleeds. Pope. Familiar now with grief your ears refrain,

And in the public woe forget your own,

You weep not for a perished lord alone. Id.

PER

Thrice has he seen the perishable kind

Of men decay. Id. Odyssey.

It is a prince's greatest present felicity to reign in their subjects' hearts ; but these are too perisJiabte to preserve their memories, which can only be done by the pens of faithful historians. Swift.

PERISTALTIC, adj. Gr. «Pi«XX«, to contract ; Fr. periataltique. Contractile in the particular manner described below.

Peristaltick motion is that vermicular motion of the guts, which is made by the contraction of the spiral fibres, whereby the excrements are pressed down- wards and voided. Quincij.

The peristaltick motion of the guts, and the conti- nual expression of the fluids, will not suffer the least matter to be applied to one point the least instant.

Arbuthnot.

PERISYSTOLE, n. s. Gr. *Epi and Kv?o\,,. In medicine, the pause or interval betwixt the two motions of the heart or pulse ; namely, that of the systole or contraction of the heart, and that of diastole or dilatation.

PERISTYLE, n. s. Fr. peristUe. A circu- lar range of pillars.

The Villa Gordiana had a peristyle of two hundred pillars. Arbuthnoi on Coins.

PERITONE'UM, n. s. Fr. peritoine; Gr. irtpiTovatov. A membrane that lies immediately under the muscles of the lower belly, and which encloses all the bowels there contained.

Wounds penetrating into the belly are such as reach no farther inward

than to the peritoneum.

Wiseman.

PERITONEUM. See ANATOMY, Index.

PERITONIUM, a town of Egypt, on the west bank of the Nile, reckoned one of the keys of the country. Marc Antony was defeated near it by Cornelius Callus, a lieutenant of Augustus.

PERITROCHIUM, in mechanics, denotes a wheel or circle, concentric with the base of a cylinder, and moveable together with it about its axis.

PER/JURE, v. a. Zcn.s.ˆ Lat. perjuro. To

PER'JURER, n. s. > forswear; swear

PER'JURY. j falsely ; taint with

perjury, used with the reciprocal pronoun : it is used as a noun substantive by Shakspeare, and for perjurer, which signifies one who swears falsely: perjury is false swearing; a false oath.

The law is not made for a righteous man, but for the lawless and disobedient, for peijured persons.

1 Tim. i. 10.

The common oath of the Scythians was by the sword and fire ; for that they accounted those two special divine powers, which should work vengeance on the perjurers. Spenser.

Hide thee, thou bloody hand, Thou perjure, thou similar of virtue, Thou art incestuous. Shahspeare. King Lear. Who should be trusted now, when their right

hand Is perjured to the bosom ? Shakspeare.

My great father-in-law, renowned Warwick, Cried aloud — Wrhat scourge for perjury Can this dark monarchy afford false Clarence? And so he vanished. Id. Richard III.

Let us consider, that rash and vain swearing is. very apt often to bring the practiser of it into that most horrible sin of perjury. Barrow.

PERJURE, by the common law of England, is a crime committed by one who, being lawfully required to depose the truth in any judicial pro- ceeding, wilfully swears falsely in a point mate- rial to the question in dispute. It has, however, been held, that a man may be indicted for per- jury for swearing that he believed a fact to be true, which he knew to be false. The common law takes no notice of any false swearing, but sue!) as is committed in some court of justice, having power to administer the oath, or before some officer or magistrate invested with similar authority, in some proceeding relative to a civil suit or criminal prosecution ; for the law es- teems all other oaths unnecessary, at least, and hence will not punish the breach of them. Thus, if a person swears falsely in a voluntary affidavit in any extrajudicial matter, he is not liable to any punishment. By numerous statutes in En- gland and America, the penalties of perjury have been extended to false oaths by electors, bank- rupts, insolvent debtors, &c. By the English law, the evidence of one witness alone is not sufficient to convict on an indictment for per- jury; in such case, there would be only one oath against another ; but it is sufficient if corro- borated by other independent evidence. Subor- nation of perjury is the offence of procuring a man to commit perjury. By the law of Moses {Deuteronomy xix. 19), if a man testify falsely against his brother, it shall be done unto him as he had thought to do against his brother. And this is the principle adopted in the laws of many of the states of modern Europe. By the law of the Twelve Tables, “perjurii pcena divina,exitium; humana, dedecus.” Gellius, xx. 1, mentions, that some persons who had perjured themselves, by giving false testimony, were thrown from the Tarpeian rock. The civil law punished perjury committed in swearing by the name of God, in civil cases, by infamy (Digest, lib. ii, tit. 4; Code, lib. xii. tit. 1); but the punishment of perjury committed in swearing by the safety of the emperor, was death (Code, iv. 1:2); by the genius of the prince, beating and scourging (Dig. lib. xii. tit. 2, 13). The punishment of perjury, by the common law in England, was, anciently, death ; afterwards banishment, or cutting out the tongue ; then forfeiture of goods. At the present time, it is fine, imprisonment, and pillory, at the discretion of the court, to which the statute Geo. II, c. 25, adds a power in the court to order the offender to be sent to the House of Correction for a term not exceeding seven years, or to be transported for the same period. The offender is incapacitated from giv- ing evidence in a court of justice; but a pardon will restore his competency.- By the law of the U. States, the punishment on conviction for per- jury committed in any cause depending in any of

the courts of the U. States, or in any deposi- tion taken in pursuance of the laws of the U. States, is imprisonment not above th'ee years, and fine not exceeding £200, pillory one hour, and disqualification for being a witness until the judgment is reversed. By the capitularies of Charlemagne and Louis le Debonnaire, perjury was punished by cutting off the hand. By the Napoleon code, perjury in criminal cases is pun-

ishable by confinement at hard labor for a limited time. If the party accused is sentenced to a se- verer punishment, the perjurer is to suffer the like. In cases of correctional or police jurisdic- tion, it is punishable by confinement. Perjury in civil suits, is punishable by civic degradation. By the Prussian code, promulgated by Frederic William in 1794, whoever, whether he appears as a party or as a witness, perjures himself, is to be excluded for ever from his employments, rights and civil profession, to undergo an igno- minious exposition as a perjured person, or to be publicly declared such, and, in addition thereto; to be condemned to confinement from one to three years. If the perjury be with a view to profit the perjurer, he is to forfeit a sum quadruple of that which he endeavoured to ob- tain. If the perjury is committed in a capital case, and an innocent person is, in consequence, condemned, the punishment of the perjurer is death; and in cases not capital, the punishment of the perjurer is to be proportioned to the crime of which the innocent person was accused and convicted. By the law of Spain (in 1804}, per- jury, in civil causes, is punishable with ten years' condemnation to the galleys; and in criminal cases, in which the punishment for the offence charged does not extend to death, public infamy , and perpetual condemnation to the galleys.

PER'IWIG, n. s. & v. a. Fr.perruque. False hair worn by way of ornament or concealment of baldness : to dress in false hair.

PERIWINKLE, n.s. Barb. Lat. pervinca (from its winding shape.) A small shell-fish ; a fish snail ; also a winding plant, the clematis.

PERIZONIUS (James), a learned and labo- rious writer, born at Dam in 1651. He became professor 6f history and eloquence at the univer- sity of Franekir, when, by his merit and learn- ing, he made that university flourish. How- ever, in 1693, he went to Leyden, where he was made professor of history, eloquence, and Greek; in which employment he continued till his death, in 1715. He wrote many learned and curious works, particularly Origines Babylonicae et Egyptiacag, 2 vols. 8vo.

&c. But his work most generally known is the Notes upon Sancta Minerva.

PERIZZITES, ancient inhabitants of Pales- tine, mingled with the Canaanites. They did not inhabit any certain portion of the land of Canaan ; there were some of them on both sides the river Jordan, in the mountains, and the plains.

PERK, v. n., v. a. & adj. From perch, Skin- ner. To hold up the head with affected brisk- ness ; assume airs ; dress smartly or proudly : pert ; brisk ; proud.

PERKINISM, in medicine, is a late and already exploded method of curing head-aches, rheumatisms, quinsies, gouts, lumbagos, cramps, contusions, sprains, tumors, burns, scalds, ery- sipelas, palsies, and various other diseases and pains in all parts of the body, by drawing me- tallic tractors over the parts affected ; invented by a Dr. Perkins of America. These tractors were made of silver, brass, copper, iron, lead, or zinc ; and even of ivory or ebony ; and sup- posed to act as mechanical stimuli, or as galvanic

conductors of electricity. Experiments are said to have been made with success in this way by other physicians and surgeons, particularly Dr. J. C. Tode, physician to the king of Denmark, and professors Herholdt and Kafn, of Copen- hagen, who published a Treatise on Perkinism, and first made use of the term.

PER'LOUS, adj. Corrupted from perilous Dangerous ; hazardous.

PERM, an extensive government, situated chiefly in European, but partly in Asiatic Rus- sia, adjacent to that of Viatka on the west, and Tobolsk on the east ; extending from 56° to 62° of N. lat. Its area is 116,000 square miles, or double that of England, while its population does not exceed 1,100,000. It is intersected from north to south by a part of the great Ural chain, and is in general hilly, covered with vast and impenetrable forests. It is divided into twelve districts or circles. Those situated in the south-east are tolerably cultivated, but the rest of the country is fit only for pasture ; and an annual import of corn is generally necessary. The exports are cattle, and the copper, iron, and salt of the mines. The inhabitants are a mixed race, paitly Russian, and

partly Finnish and Tartar. The annual export of metal is computed at 2000 tons of copper, and 70,000 tons of iron. The sea being remote both on the north and south of the rivers ; those on the west side of the Ural chain flow into the Kama, which joins the Wolga ; those on the east side fall, for the most part, into the Oby, the outlet of which is in the Frozen Ocean. The forests contain various animals, which are hunted for their furs. The inhabitants are partly Christians, partly Maho- metans, and, in no inconsiderable degree, Pagans. The ancestors of those of the country between the White Sea and the Ural Mountains are de- scribed as a wealthy and powerful nation ; but after falling, in the middle ages, under the sway of the republic of Novgorod, they were gradu- ally incorporated into the Russian empire.

PERM, the chief place of the preceding go- vernment, is situated on the river Kama, and has some neat public buildings, a public school, and an hospital. It carries on an active traffic with the provinces both to east and west, in the metals of the surrounding country. Population 3800 : 910 miles east by south of St. Petersburg, and 720 E. N. E. of Moscow.

PERMACOIL, a town and fortress of the Carnatic, south of India. The fort is situated on a rock from 200 to 300 feet high, and from 400 to 500 yards in breadth. It was first taken by the British in 1760, then made over to the nabob of Aicot, and in the year 1782 was cap- tured by the united forces of Hyder Aly and the French. It remained with them till the end of the war, when it was dismantled, and the forti- fications blown up. Long. 79° 52′ E., lat. 12° 13′ N.

PER’MANENCE, cr > v Lat. permanent, per- PER’MAUENCY, n. s. i maneo. Duration; PER’MANENT, adj. \ abidance ; consis- PER’MANFNTLY, adv. i tency ; continuity of PER’MAKSION, n, s. J state; permanent is lasting ; durable ; unchanged ; the adverb cor- responding : permansion (obsolete), continuance.

Such a punctum to our conceptions is almost equivalent to permanency and rest. Bentleii.

PER’MEABLE, adj. \ Lat. permeo. Such

PERMEA’TION, n. s. J as may be passed through.

It entereth not the veins, but taketh leave of the permeant parts at the mouth of the meseraicks.

Browne.

The pores of a bladder are not easily permeable by air. Boyle.

This heat evaporates and elevates the water of the abyss, pervading not only the fissures, but the very bodies of the strata, permeating the interstices of the sand, or other matters whereof they consist.

I Vood ward's Natural History.

PERMISSIBLE, adj. ˆ Latin, permisceo PERMIS'TION, n. s. > Capable of being

PERMIX'TION. j mingled or mixed :

permistion and permixtion mean the act of mix- ing or mingling; state of being mingled.

They fell into the opposite extremity of one nature in Christ, the divine and human natures in Christ, in their conceits, by permixtion and confusion of sub- stances, and of pioperties growing into one upon their adunat.ion. Brerewood.

PERMIT, v. a. & n. s. "} Fr. permetlre ;

PERMISSIBLE, adj. j Ital. parmettere ;

PERMISSION, n. s. ! Lat. permitto. To

PERMIS'SIVE, adj. (yield ; allow ; suffer;

PERMIS'SIVELY, adv. I resign; let; nothin-

PERMIT'TANCE, n. s. } der : a permit is a legal excise ticket of sufferance, or allowance for goods to pass from a place, having paid the duty imposed on them : permissible is allowable ; what may be permitted : permission and per- mittance, allowance ; forbearance of opposition ; grant of liberty : permissive, granting liberty ; not hindering ; allowing without upbraiding : permissively, by way of allowance or forbearance to hinder ; by bare allowance.

Women keep silence in the churches, for it is not permitted unto them to speak. 1 Cor. xiv. 34.

What things God doth neither command nor for- bid, the same he permitteth'with approbation either to be done or left undone. Hooker.

We bid this be done,

When evil deeds have their permissive pass,

And not the punishment. Shakspeare.

As to a war for the propagation of the Christian faith, I would be glad to hear spoken concerning the lawfulness, not only permissive ly , but whether it be not obligatory to Christian princes to design it.

Bacon's Holy War.

If this doth authorise usury, which before was but permissive, it is better to mitigate usury by decla- ration, than to suffer it to rage by connivance.

Id. Essays. Clad

With what permissive glory since his fall

Was left him, or false glitter.

Milton's Paradise Lost.

With thy permission then, and thus forewarned, The willinger I go. Milton.

Hypocrisy, the only evil that walks

Invisible, except to God alone

By his permissive will, through heaven and earth.

Id.

Nor love thy life, nor hate ; but what thou livest, Live well ; how long, how short, permit to heaven.

Id.

If the course of truth be permitted unto itself, it cannot escape many errours.

Browne's Vulgar Errtmrs.

You have given me your permission for this address, and encouraged me by your perusal and approbation.

Druden. Ye gilded ghosts, permit me to relate

The mystick wonders of your silent state. Id.

To the gods permit the rest. Id.

Whate'er can urge ambitious youth to fight, She pompously displays before their sight ; Laws, empire, all permitted to the sword. Id.

We should not permit an allowed, possible, great anfl weighty good to slip out of our thoughts, with- out leaving any relish, any desire of itself there.

Locke. Let us not aggravate our sorrows,

But to the gods permit the events of things.

Addison.

When this system of air comes, by divine permit- tance, to be corrupted by poisonous acrimonious steams, what havock is made in all living creatures ! Derham's Physico- Theology.

After men have acquired as much as the laws per- mit them, they have nothing to do but to take care of the publick. Swift.

The officers, in their permits for removing excisea- ble goods, shall express as well the time for which they shall be in force for removing such goods, as the time within which they shall be received into stoct by the person to whom they are sent ; and if not re- moved within the time limited (unavoidable accidents excepted), or, in default of such removing, if the per- mit shall not be returned to the officer who granted the same, the person procuring the permit shall forfeit treble value of the goods : and if not received into stock, within the time limited, by the person to whom they were permitted to be sent, they shall be deemed goods removed without a permit.

21 Geo. III. c. 55.

PERMUTATION, n. s. Fr. permutation ; Lat. permutatio. Exchange of one for another.

Gold and silver, by theii rarity, are wonderfully fitted for the use of permutation for all sorts of com- modities. Ray.

A permutation of number is frequent in languages.

Bentley.

PERNAMBUCO, a province of Brasil, bounded by the Atlantic Ocean north and east, south by Bahia, and east by a desert territory. It is about 470 miles in extent from north to south, and about 370 from east to west ; abound- ing in sugar-cane, cotton, and Brasil wood. The climate is in the interior hot and moist. Hides, cocoa-nuts, ipecacuanha, and a few other drugs, are sent hence ; but its chief exports are cotton and sugar. The imports are manufac- tured goods, earthenware, and other articles of necessity among civilised people. Vessels from the United States arrive at Recife annually, bringing flour, of which great quantities are now consumed, furniture for dwelling houses, and other kinds of lumber ; and carrying awˆajr sugar, molasses, and rum. The trade to the coast of Africa for slaves is also considerable. During the war between the United States and England, which interrupted this trade, Recife was sometimes distressed for wheat-flour, but a supply was received from Rio Grande.

PERNAMBUCO, or St. Antonio do Recife, a town of Brasil, capital of the province of this name. It consist? of three divisions, Recife, St. Antonio,

and Boa Vista ; the first two of which are situated on two sand-banks, surrounded by the sea, and connected together by a bridge of stone and wood lined with shops ; this renders it so nar- row that two carriages cannot pass abreast.

The harbour of Recife, called the Mosqueiro, situated on the outward bank, is formed by a reef of rocks which runs parallel with the town, at a small distance. The lower harbour, for vessels of 400 tons and upwards, called the Poco, is dangerous, as it is open to the sea ; and the beach opposite is very steep. The port has two entrances : the tide does not rise more than five feet and a half. The principal defence of the town consists in the forts Do Buraco and Do Brum, both built of stone, and situated upon the sands opposite to the two entrances. There is likewise the small fort of Bom Jezus, near to the archway and church of the same name; and upon the south-east point of the sand-bank of St. Antonio stands the large stone fort of Cinco Pontas, but they all are said to be out of order.

The division of Recife, which is that nearest the sea, stands on a long narrow neck of land, which stretches southward from the foot .of the hill on which the town of Olinda, about a league distant, is built. In

front of this bank runs a reef of rocks. At full tide the waves roll over it ; but, being checked by this barrier, they strike the quays and buildings of the town with di- minished strength. The second sand-bank, on which is placed the division called St. Antonio, is connected with Boa Vista, situated on the continent, by a narrow wooden bridge. Build- ings have only been raised within the protection of the reef. The tide enters between the bridges, and encircles the middle compartment. The view from the houses that look on these waters is very extensive and beautiful; the opposite banks being covered with trees and white-wash- ed cottages, varied by small open spaces and lofty cocoa trees. The Recife division of the town is composed of brick houses, of from three to five stories in height ; most of the streets are narrow, but they are paved. In the square is the custom house, a low and shabby building ; the sugar-inspection house ; a large church, and a coffee-house, in which the merchants assemble to transact commercial affairs. There are two churches in use, one of which is built over the stone arch-way leading from the town to Olinda. Near to this is a small fort, close to the water side, which commands it. To the north is the residence of the port-admiral, with the govern- ment timber-yards. The cotton-market, ware- houses, &c., are also in this part of the town.

St. Antonio, or the middle town, is composed chiefly of large lofty houses and broad streets. The ground floors are appropriated to shops, warehouses, &c., without windows, the only light they have being admitted from the door ; and there exists very little distinction of trades. Here is the governor's palace, once the Jesuits' convent ; the treasury ; town-hall, and prison ; the barracks ; the Franciscan, Carmelite, and Penha convents, and several churches, hand- somely ornamented. The principal street of Boa Vista is broad and handsome. The rest of this third division consists chiefly of small

PER 1C

houses, extending at intervals to some distance. A long embankment has been made, which con- nects the sand-bank and town of St. Antonio with the main land to the south and west of Boa Vista. The river Capibaribe discharges its wafers into the channel between.

Pernambuco, since the ports of Brasil were thrown open to foreign commerce, has been con- stantly increasing in opulence. The three divi- sions of the town contain together about 25,000 inhabitants.

PERNICIOUS, adj. ˆ Fr.pernicieM.r; Lat.

PERNIC’IOUSLY, adv. > perniciosus. Mis-

PERNIC’IOUSNESS, n. s. J chievous ; destruc- tive ; ruinous ; the adverb and noun substantive corresponding.

Some wilful wits wilfully against their own know- ledge, perniciously against their own conscience, have taught. Ascham.

To remove all out of the church, whereat they shew themselves to be sorrowful, would be, as we are persuaded, hurtful, if not pernicious thereunto.

Hooker. I call you servile ministers,

That have with two pernicious daughters joined

Your high engendered battles, ‘gainst a head

So old and white as this.

Shakspeure. King Lear. All the commons

Hate him perniciously, and wish him

Ten fathom deep. Id. Henry VIII.

Now, if we were to judge of the several kinds of science by this rule, we should find, 1. Some of them to be very hurtful and pernicious. Mason.

PERNI’CIOUS, adj. \ Lat. pernix. Quick ; PERNIX, £ swift : quickness ; cele-

PERNIX’ITY, n. s. j rity. Dr. Johnson says, ‘ A use which I have found only in Milton, and which, as it produces an ambiguity, ought not to be imitated ;’ yet he supplies the example of the noun substantive from Ray. Part incentive reed Provide, pernicious with one touch to fire.

Milton.

Others armed with hard shells, others with prickles, the rest that have no such armature endued with great swiftness or pernicitii. Ray on the Creation.

PERNIO, a kibe or chilblain, is a little ulcer, occasioned by cold in the hands, feet, heels, nose, and lips. It will come on when warm parts are

too suddenly exposed to cold, or when parts from being too cool are suddenly exposed to a considerable warmth ; and has always a tendency to gangrene, in which it frequently terminates. It most commonly attacks children of a sanguine habit and delicate constitution ; and may be prevented or removed by such re- medies as invigorate the system, and are capable of removing any tendency to gangrene in the constitution.

PE RONES, a sort of high shoes which in early times were worn even by senators ; but at last were confined to ploughmen and laborers. They were very rudely formed, consisting only of hides undressed, and reaching to the middle of the leg. Virgil mentions the perones as worn by a company of rustic soldiers on one foot only.

PERORATION, n. s. Lat. peroratio. The conclusion of an oration.

PER

What means this passionate discourse? This peroration with such circumstances ?

Sftakspeare.

True women to the last — my peroration, I come to speak in spite of suffocation. Smart.

PERORATION, In rhetoric, cnr sists of two parts. 1 . Recapitulation ; wherein the substance of what was diffused throughout the whole speech is collected briefly and cursorily, and summed up with new force and weight. 2. The moving the passions ; which is so peculiar to the perora- tion that the masters of the art call this part sedes affectuum. See ORATORY.

PEROTIS, in botany, a genus of the digynia order, belonging to the triandria class of plants ; and in the natural method ranking under the fourth order, gramina. There is no calyx : the corolla consists of a bivalvular glume; the valves are oblong, acute, somewhat unequal, and ter- minating in a sharp beard : it has three capillary stamina ; the antherte incumbent ; the style capil- lary, and shorter than the corolla; the stigma feathery and divaricated. The corolla serves as a perianthium, including a single seed of an ob- long linear shape. Of this there is only one species ; viz. P. plumosus, a native of America.
PEROUSE (John Francis Galaup, de la) a French navigator, distinguished for his mysterious fate, was born at Albi, in Languedoc, in 1741, and entered at an early age into the naval service. During the American war he had the command of an expedition to Hudson's Bay ;

and, on the restoration of peace, the French government having determined on a voyage of discovery, M. de la Perouse was fixed on to command it. Two vessels, the Boussole and the Astrolabe, were placed under his direction; and, leaving France in 1785, proceeded to the South Sea. Having visited the coast of California, he crossed the Pacific, to continue his researches on the coasts and islands of Asia. In April, 1787, he sailed from Manilla towards the north ; and at length, on the 6th of September, arrived at the harbour of St. Peter and St. Paul, Kamtschatcha. Here he stayed to refit the ships, and experienced the utmost hospitality from the local authorities. Ths commander had also the satisfaction to re- ceive letters from France, informing him that he had been promoted to the rank of commodore, which event the governor of Kamtschatcha cele- brated by a salute of artillery. From St. Peter and St. Paul Perouse sent copies of his journals, &c., to France, by M. de Lesseps, who proceeded over land across Siberia ; and on the 30th of September the vessels sailed. They crossed the equinoctial line, without meeting with any land till the 6th of December, when they saw the Navigators' Islands, and a few days after landed at Maouna. Here M. de Langle, the captain of tlie Astrolabe, Lamanon, the naturalist attached to the expedition, and ten other persons, were killed in an unprovoked attack of the natives. After this Perouse visited Oyolava, and then steered for the coast of New Holland ; and, on the 26th January, 1788, anchored in Botany Bay, at the time governor Philip, with the whole of the colonists, was sailing out to Port Jackson. The French did not leave Botany Bay until March, when the commodore wrote, stating his

intention to continue his researches till Decem- ber, when he expected to arrive at the Isle of France. This was the latest direct intelligence received of him : and M. d'Entrecasleaux, who was despatched by the French government, ii- 1791, in search of Perouse, was unable to trace the course he had taken. Subsequently, however, a notice has been published by the French mi- nister of marine, purporting that an American captain had declared that he had seen, in- the hands of one of the natives of an island between Louisiade and New Caledonia, a cross of the order of St. Louis, and some medals, which ap- peared to have been procured from La Perouse's vessels. In consequence of this information, the commander of a vessel which sailed from Toulon, in April 1826, received orders to make researches in the quarter specified. Other intelligence, relative to the wreck of two large vessels, on two different islands of the New Hebrides, was obtained by our captain Dillon at Tucopia, in his passage from Valparaiso to Pondicherry, in May 1826, in consequence of which that officer was

despatched to the New Hebrides to ascertain the authenticity of the report he received. Many memorials of Perouse have since been discovered, which plainly prove the loss of the navigator and his vessel. The voyage of La Perouse was pub- lished at Paris, 1797, in 4 vols. 4to.

PERPEND', v. a. Lat. perpendo. To weigh exactly ; weigh in the mind ; consider attentively. Thus it remains and the remainder thus ;

Perpend. Shakspeare. Hamlet.

Perpend, my princess, and give ear. Shakspeare.

Consider the different conceits of men, and duly perpend the imperfection o/ their discoveries. Browne.

Unto reasonable perpensions it hath no place in some sciences. Browne's Vulgar Errours.

PERPENDIC'ULAR, adj. } Fr. perpendi-

PERPENDIC'ULARLY, adv. > culaire ; Lat.

PERPENDICULARITY, n. s. J perpendicular is. Crossing at right angles ; particularly crossing the horizon at right angles : perpendicularity is the state of being perpendicular.

Ten masts attacht make not the altitude,

Which thou hast perpendicularly fallen.

Shakspeare.

Some define the perpendicular altitude of the high- est mountains to be four miles. Browne.

Irons refrigerated north and south, not only ac- quire a directive faculty, but if cooled upright and perpendicularly, they will also obtain the same.

Browne's Vulgar Errours.

Shoot up an arrow perpendicularly from the earth, the arrow will return to your foot again. More.

All weights naturally move perpendicularly down- ward. Ray.

The angle of incidence, is that angle which the line, described by the incident ray, contains with the perpendicular to the reflecting or refracting surface at the point of incidence. Newton's Opticks.

Though the quantity of water thus rising and fall- ing, be nearly constant as to the whole, yet. it varies in the several parts of the globe ; by reason that the vapours float in the atmosphere, and are not restored down again in a perpendicular upon the same precise tract of land. Woodward.

The meeting of two lines is the primary essential mode or difference of an angle ; the perpendicularity of these lines is the difference of a right angle.

Watts' s logic. VOL. XVII.

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ll in a line oblique their atoms rove, Or in a perpendicular they move ; If some advance not slower in their race, And some more swift, how could they be entan- gled ? Blackmure.

PE'RPETRATE, v. a. \ Fr. perpetrer ; Lat PERPETRA'TION, n. s. S perpetro. To com- mit ; act : almost always used in an ill sense : but see the extract from Butler.

A desperate discontented assassinate, would, after the perpetration, have honested a mere private re- venge. Wottm.

Success, the mark no mortal wit, Or surest hand can always hit ; For whatsoe'er we perpetrate, We do but row, we're steered by fate.

Hudibras.

My tender infants or my careful sire, These they returning will to death require, Will perpetrate on them the first design, And take the forfeit of their heads for mine.

Dry den.

The forest, which, in after times, Fierce Romulus, for perpetrated crimes, A sacred refuge made. Id.

Hear of such a crime As tragick poets, since the birth of time, Ne'er feigned a thronging audience to amaze ; But true, and perpetrated in our days.

Tate’s Juvenal.

A woman who lends an ear to a seducer may be insensibly drawn into the perpetration of the most violent acts. Clarissa.

PERPETUAL, adj.\ Fr. perpetud, perpe PERPET’CALLY, adv. ttuer; Ital., Span., and PEKPET’UATE, v.a. £ Lat. perpetuo. Inces- PERPETTJ’ITY, n. s. J sant ; uninterrupted ; eternal, with respect to futurity : always operat- ing : perpetually, the corresponding adverb : to perpetuate is to preserve from extinction or de- cay ; to eternise ; continue without cessation : per- petuation, the act of making, and perpetuity, the state of being, perpetual.

For men to alter those laws, which God for per- petuity hath established, were presumption most into- lerable. Hooker.

Yet am I better

Than one that’s sick o’ the gout, since he had rather Groan so in perpetuity, than be cured By the sure physician, death.

Shakspeare. Oymbclinc. Time as long again Would be filled up with our thanks ; And yet we should, for perpetuity, Go hence in debt. Id. Winter’s Talc.

Nothing wanted to his noble and heroical intentions, but only to give perpetuity to that which was in his time so happily established. Bacon.

The strokes of divine vengeance, or of men’s own consciences, always attend injurious perpetrations.

King Charles.

A perpetual screw hath the motion of a wheel and the force of a screw, being both infinite.

Wilkins’j Mathematical Magick. Within those banks rivers now Stream, and perpetual draw their humid train.

Milton.

Nourishing hair upon the moles of the face is the perpetuation of a very ancient custom. Browne.

There can be no other assurance of the perpetuity of this church, but what we have from him that built it Pearson.

c

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What is it, but a continued “perpetuated voice from heaven, resounding for ever in our ears 1 to give men no rest in their sins, no quiet from Christ’s im- portunity, till they awake from their lethargick sleep, and arise from so mortiferous a state, and permit him to give them life. Hammond.

Under the same moral, and therefore under the same perpetual law. Holyday.

A cycle or period begins again as often as it ends, and so obtains a perpetuity. Holder.

Mine is a love, which must perpetual be,

If you can be so just as I am true. Dryden.

This verse is every where sounding the very thing in your ears ; yet the numbers are perpetually varied, so that the same sounds are never repeated twice. Id.

What the gospel enjoins is a constant disposition of mind to practise all Christian virtues, as often as time and opportunity require ; and not a perpetuity of exercise and action ; it being impossible at one and the same time to discharge variety of duties.

Nelson.

The ennobling property of the pleasure, that ac- crues to a man from religion, is, that he that has the property, may be also sure of the perpetuity. South.

Medals, that are at present only mere curiosities, may be of use in the ordinary commerce of life, and at the same time perpetuate the glories of her majesty’s reign. Addismi.

In passing from them to great distances, doth it not grow denser and denser perpetually ; and thereby cause the gravity of those great bodies towards one another 1 Newton’s Optia.

The laws of God as well as of the land Abhor a perpetuity should stand ; Estates- have wings, and hang on fortune’s power.

Pope.

The bible and common prayer-book in the vulgar tongue, being perpetually read in churches, have proved a kind of standard for language, especially to the common people. Swift.

Man cannot devise any other method so likely to preserve and perpetuate the knowledge and belief of a revelation so necessary to mankind. Forbes.

O ye blest scenes of permanent delight !

Full above measure ! lasting beyond bound !

A perpetuity of bliss is bliss. Young.

PERPIGNAN, Ruscino, an ancient, large, and strong post town, and the principal place of the department of the Eastern Pyrenees, France, containing 15,800 inhabitants. It has an infe- rior court of judicature, under the royal court of Montpellier, a chamber of commerce, a mint, a superintendency of the customs, an agricultural society, a society of arts, a communal college, and a school for drawing architectural. This town is pleasantly situated on the right bank of the Tel, at its junction with the Baisse. It is built at the foot and on the declivity of a hill, which overlooks a magnificent plain, to the west of which rises the Canigon, one of the highest of the Pyrenean mountains; to the north the Corbieres mountains; to the east the sea, hidden by a range of verdant hills, and to the south the road to Catalonia. The temperature is quite warm : at a few leagues from the town the orange grows in the open field, and even in the valley, in which it stands ; the olive trees form immense orchards, extending to the foot of the Canigou ; so that while this mountain rears its peak, co- vered with snow, its base is clothed with the richest produce of the south. The town, though

not well built, presents an agreeable aspect ; there are seveial fine public buildings in it, and some fine walks recently planted.

This place is of the greatest importance, as it forms the pass from Itoussillon into Catalonia. Its fortifications, considerably augmented by Vauban, were almost entirely renewed in 1823; and the citadel, so situated as to command the town, has been rendered very strong, and capable of resisting successive attacks. At different periods Perpignan has sustained sieges, which put the constancy and courage of its inhabitants to the severest trial. The most memorable of these was in 1475, under Louis XL, which has been compared to those of Saguntum and Numantia; for eight months the people suffered all the hor- rors of

famine, and at last the place was taken by storm. It was besieged without success in 1542, in the reign of Francis I., by an army of 400,000 men. In 1642 Louis XIII. took it after a siege of three months. This is the native town of Carrere, the celebrated physician, and the painter Rigaud.

Here are manufactures of cloth, woollen stuffs, lace, cork, and leather ; and a trade is carried on in Rivesalses wines, brandy, grain, oil, fine wool, iron, silk, corks, &c. There is a very nourishing fold here, in which are 150 Thibetian goats. The public places are the library, containing 13,000 volumes, the cabinets of natural history and philosophy, the place d'armes, a grand rect- angle, one side of which is occupied by barracks capable of containing 5000 men ; the royal square, the town-hall, the justice-hall, the beautiful walk between the glacis of the town and the watering canal, the bridge over the Tet and the citadel, where there is a very deep well to which you de- scend by a flight of stairs ; it is supplied by a fountain, inexhaustible in the greatest droughts. Perpignan is eighty-one miles south-east of Car- cassone, forty-five south of Narbonne, thirty-three east of Prades, twenty-four north-west of Port- Vendre, and 705 south of Paris, in long. 0° 34′ E., lat. 42° 42′ N.

PERPLEX', v. a. & adj.ˆ Fr. perplex; Ital.

PERPLEX'EDLY, adv. tperplesso ; Lat. per-

PERPLEX'EDNESS, n. s. t plexus. To embar- Y. J

rass; entangle; dis-

tract; torment; vex; involve; make intricate; complicate: as an adjective, intricate; compli- cated; difficult; but perplexed is the modern and better word : perplexedly and perplexed ness follow the senses of the adjective : perplexedness and perplexity mean embarrasment ; intrication ; involution of affairs or of mind.

Being greatly perplexed in his mind, he deter- mined to go into Persia. 1 Mac. lii. 31.

The fear of him ever since hath put me into such perplexity, as now you found me. Sidney.

The royal virgin, which beheld from far, In pensive plight and sad perplexity,

The whole atchievement of this doubtful war, Came running fast to

greet his victory. Spenser

Perplexity not suffering them to be idle, they think and do, as it were, in a phrensy. Hooker.

Themselves with doubts the day and night perpler.

Dennam. Their way

Lies through the perplexed paths of the drear wood.

Milton.

PER

How the soul directs the spirits for the motion of the body, according to the several animal exigents, is perplex in the theory. Glaimille's Scepsis.

Let him look for the labyrinth ; for I cannot dis- cern any, unless in the perplexity of his own thoughts.

Stlllingfleet.

He perplexes the ininds of the fair sex with n-ce speculations of philosophy, when he should engage their hearts. Dryden.

PERRIER, M. Cassimir, prime minister of France, was born at Grenoble on the 12-th of October, 1777. His father was an eminent and wealthy merchant, and at an early age his son entered the army, and served in the Italian cam- paigns of 1799 and 1800; on the death of his father he retired from the army, and devoted himself to commercial pursuits. In 1802 he established a bank at Paris, and speculated in manufactures for cotton-spinning, sugar-refining, and grinding flour by steam. By these means he acquired an immense fortune, and being chosen a deputy, continued the resolute and un- compromising enemy of every ministry from that period to the revolution of 1830. At the latter crisis he avowed himself the friend of popular measures, and opened his house as a rendezvous for the deputies who protested against the ille- gality of the proceedings of the crown. On the dissolution of the Lafitte administration, he was called to the head of the government, and pursued his favourite policy to the termination of his career. He died of cholera morbus, on the third of April, 1832, and was interred with the highest demonstration of respect in the ce- metery of Pere le Chaise.

PER’QUISITE, n.s. > Lat. perquisitus.

PER’QTJISITED, adj. $ Something above re- gular wages or gains : supplied with perquisites.

But what avails the pride of gardens rare,

However royal, or however fair,

If perquisited varlets frequent stand,

And each new walk must a new tax demand ?

Savage.

Tell me, perfidious, was it fit To make my cream a perquisite, And steal to mend your wages ? Widow and Cat.

To an honest mind, the best perquisites of a place are the advantages it gives a man of doing good. Addison.

PERQUISITE, in law, is any thing gotten by a man’s own industry, or purchased with his mo- ney; in contradistinction to what descends to him from his father or other ancestor.

PERRAULT (Charles), son of an advocate in parliament, was born at Paris, in 1626. Col- bert chose him first clerk of the buildings, of which he was superintendant, and afterwards made him comptroller-general of the finances under him. He was one of the first members of the academy of belles lettres and inscriptions, and was received into the French academy in 1671. His poems La Peinture, and La siecle de Louis le Grand, are well known. He drew up elegies of great men of the seventeenth cen- tury, with portraits, and produced other esteemed works.

PERRAULT (Claude), brother of Charles, was born at Paris in 1613; and was bred a physician, though he never practised but among his rela- tions, friends, and the poor. lie excelled in architecture, painting, sculpture, mathematics,

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physics, and all those arts that relate to design- ing and mechanics. When the academy of sciences was established, he was one of its first members, and was chiefly depended on for me- chanics and natural philosophy. His works are, A French translation of Vitruvius ;

Mernoires pour servir ii 1′ Ilistoire Naturelle des Animaux, fol. 1676, with figures; Essais de Phisique, 4 vols. 12mo, 1688; Recueil des Plusieurs Ma- chines de nouvelle Invention, 4to. 1700, &c. He died in 1688.

PERRAULT (Nicholas and Peter), brothers of the two last, made themselves also known in the literary world.

PERRON (James Davy Du), a cardinal dis- tinguished by his abilities and learning, born in Bern, in 1556; and educated by Julian Davy, his father, a very learned Calvinist. Philip Des- portes, abbot of Tyron, made him known to Henry III. king of France, who conceived a great esteem for him. Some time after Du Per- ron abjured Calvinism, and embraced the eccle- siastical function. After the murder of Henry If I. he retired to the house of cardinal de Bour- bon, and«took great pains in bringing back the Protestants to the church of Rome. He chiefly contributed to engage Henry IV. to change his religion : and that prince sent him to negociate his reconciliation to the holy see, in which he succeeded. Du Perron was consecrated bishop of Evreux while he resided at Rome. He was made cardinal in 1604 by pope Clement VIII. at the solicitation of Henry IV. who afterwards nominated him to the archbishopric of Sens. He also sent him to Rome with cardinal Joyense, in order to terminate the disputes between Paul V. and the Venetians. He died at Paris in 1618. His works were collected after his death, and published at Paris in 3 vols. folio.

PERROT (Nicholas), lord of Ablancourt, a man of uncommon genius, born at Chalons in 1606. After studying philosophy about three years he was sent to Paris to follow the law. At eighteen years of age he was admitted advocate of parliament, but soon discontinued his prac- tice. In 1637 he was admitted a member of the French academy; he died in 1664. His works are mostly translations.

PERRUKE, PERUKE, or PERIWIG, was an- ciently a name for a long head of natural hair ; such, particularly, as there was care taken in the adjusting and trimming of. The Latins called it coma ; whence part of Gaul took the denomina- tion of Gallia Comata, from the long hair which the inhabitants wore as a sign of freedom. The word is now used for a set of false hair, curled, buckled, and sewed together on a frame or cawl ; anciently called capillamentum or ‘ false peruke.’ The ancients used false hair, but the use of pe- rukes, in their present mode, has not existed two centuries.

PERRY, n. s. Fr. poire, from poire ; Belg. peerdranck. Cyder made of pears.

Perry is the next liquor in esteem after cyder, in the ordering of which, let not your pears be over ripe before you grind them ; and with some sorts of pears, the mixing of a few crabs in the grinding is of great advantage, making perry equal to the redstreak cyder.

Mortimer. C2

PERRY, the best pears for perry are those which are most tart and harsh. Of these the Bosbury pear, the Bareland pear, and the horse pear, are the most esteemed for perry in Worces- tershire, and the squash pear in Gloucestershire.

PERRY (Captain John), an engineer, who resided long in Russia, having been recom- mended to the czar Peter, while in England, as a person capable of serving him on a variety of occasions relating to his new design of establish- ing a fleet, making his rivers navigable, &c. He was author of The State of Russia, 1716, 8vo., and An Account of the stopping of Dagueham Breach, 1721, 8vo. He died February llth,

1733.

PERRY (James), an English journalist, was born at Aberdeen,. OctoBer 30th, 1756. After receiving his education in the high school of that place, he was entered of the Marischal College, with a view to the law; but the failure of his father, who was a builder, put an end to that design, and in 1774 he went successively to Edinburgh and to Manchester, as a mercantile clerk; but in 1777 he pushed on in quest of for- tune to London. Here he became a writer in The General Advertiser, which paper prospered well under his management. In 1782 he became the first editor of The European Magazine, in which he had Dr. William Thomson for a coadjutor, though the work did not answer till Mr. Isaac Reed undertook the management. Mr. Perry now engaged in conducting The Gazetteer, and was also the editor of Debrett's Parliamentary Debates. At length he purchased The Morning Chronicle, which paper made his fortune. He died at Brighton, December 4th, 1821. He was twice the object of a public prosecution, once for publishing the Resolutions of the Derby Meet- ing ; and secondly, for a paragraph respecting his late majesty then prince of Wales. On the former occasion he was defended by lord Erskine ; on the latter he pleaded his own cause with great ability, and both times obtained a verdict of acquittal. For many years the Morning Chronicle,

under the management of Mr. Perry, might be deemed a sort of official organ of the Whig opposition, a feature which it immediately lost on his death.

PER'SECUTE, v. a. -) Fr. persecuter, of PERSECUTION, n. s. >Lat. persecutus; Ital. PERSECUTOR. j persequire ; Span, and

Port, persequir ; of barb. Lat. persegui. To pur- sue intently ; hence malignantly ; harass with penalties ; importune : the nouns follow these senses.

Our necks are under persecution ; we labour and. have no rest. Lamentations v. 5.

The Jews raised persecution against Paul and Bar- nabas, and expelled them. Acts xiii. 50.

I persecuted this way unto the death. Id. xxii.

They might have fallen down, being persecuted of vengeance, and scattered abroad. Wisdom xi. 20. Heavy persecution shall arise

On all, who in the worship severe

Of spirit and truth. Milton.

What man can do against them not afraid,

Though to the death ; against such cruelties

With inward consolations recompensed ;

And oft supported so, as shall amaze

Their proudest persecutors. Id. Paradise Lost.

He endeavoured to prepare his charge for the re- ception of the impending persecution ; that they might adorn their profession, and not at the same time suffer for a cause of righteousness, and as evil doers. Fell.

Relate,

For what offence the queen of heaven began To persecute so brave, so just a man. Dryden. Christian fortitude and patience had their oppor- tunity in times of affliction and persecution. Sprat.

The deaths and sufferings of the primitive Christians had a great share in the conversion of those learned Pagans, who lived in the ages of persecution.

Addison.

Henry rejected the pope's supremacy, but retained every corruption besides, and became a cruel perse- cutor. Swift.

PERSECUTION, in a more restrained sense, is the sufferings of Christians on account of their religion. Historians usually reckon ten general persecutions, the first of which was under the emperor Nero, thirty-one years after our Lord's ascension ; when that emperor, having set fire to the city of Rome, threw the odium of that exe- crable action on the Christians, who under that pretence were wrapped up in the skins of wild beasts and worried and devoured by dogs ; others were crucified, and others burnt alive. The se- cond was under Domitian, in the year 95. In this persecution, St. John the apostle was sent to the isle of Patmos, in order to be employed in digging in the mines. The third began in the third year of Trajan, in the year 100, and was carried on with great violence for several years. The fourth was under Antoninus the philosopher, when the Christians were banished from their houses, forbidden to show their heads, reproached, beaten, hurried from place to place, plundered, imprisoned, and stoned. The fifth began in the year 197, under the emperor Severus. The sixth began with the reign of the emperor Maximinus in 235. The seventh, which was the most dread- ful persecution that had ever been known in the church, began in the year 250, in the reign of the emperor Decius, when the Christians were in all places driven from their habitations, stripped of their estates, tormented with racks, &c. The eighth began in the year 257; in the fourth year of the reign of Valerian. The ninth was under the emperor Aurelian, A. D. 274 ; but this was very inconsiderable ; and the tenth began in the nine- teenth year of Dioclesian, A. D. 303. In this dreadful persecution, which lasted ten years, houses filled with Christians were set on fire, and whole droves were tied together with ropes, and thrown into the sea.

PERSEPOLIS, formerly the capital of Per- sia, situated in N, lat. 30° 30′ E., long. 84° ; now in ruins, but still remarkable for the most magnificent remains of a palace or temple that are now perhaps to be found in the world. This city stood in one of the finest plains in Persia, being eighteen or nineteen leagues in length, and in different places, two, four, or six leagues in breadth. It is watered by the great river Araxes, now Bendemir, and by a multitude of rivulets besides. Within

the compass of this plain are between 1000 and 1 500 villages, all adorned with pleasant gardens, and planted with shady trees. The entrance of this plain on the west side has received as much grandeur from

nature, as the city it covers could do from in- dustry or art. It consists of a range of moun- tains steep and high, four leagues in length, and about two miles broad, forming two flat banks, with a rising terrace in the middle, the summit of which is perfectly plain and even, all of native rock. In this there are such openings, and the terraces are so fine and so even, that one would be te v-pted to think the whole the work of art, if th great extent, and prodigious eleva- tion thereof, did not convince one that it is a wonder too great for aught but nature to produce. Undoubtedly these banks were the very place where the advanced guards from Persepolis took post, and from which Alexander found it so dif- ficult to dislodge them. One cannot from hence descry the ruins of the city, because the banks are too high to be overlooked : but one can per- ceive on every side the ruins of walls and of edifices, which heretofore adorned the range of mountains of which we are speaking. On the west and on the north this city is defended in the like manner : so that, considering the height and evenness of these banks, one may safely say that there is not in the world a place so fortified by nature.

The mountain Rehumut, in the form of an amphitheatre, encircles the palace, which is one of the noblest and most beautiful pieces of ar- chitecture remaining of all antiquity. Authors and travellers have been exceedingly minute in their descriptions of these ruins ; and yet some of them have expressed themselves so differently from others, that, had they not agreed with re- spect to the latitude and longitude of the place, one would be tempted to suspect that they had visited different spots. These ruins have been described by Garcias de Silva Figueroa, Pietro de la Valle, Chardin, Le Brun, and Mr. Frank- lin. We shall adopt the description of the lat- ter, as being exceedingly distinct, and given by a traveller intelligent and unassuming.

The ascent to the columns is by a grand stair- case of blue stone containing 104 steps. The first objects that strike the beholder on his en- trance are two portals of stone, about fifty feet in height each ; the sides are embellished with two sphinxes of an immense size, dressed out with a profusion of bead work, and, contrary to the usual method,

they are represented standing. On the sides above are inscriptions in an ancient character, the meaning of which no one hitherto has been able to decipher.

At a small distance from these portals you as- cend another flight of steps, which lead to the grand hall of columns. The sides of this staircase are ornamented with a variety of figures in basso- relievo ; most of them have vessels in their hands ; here and there a camel appears, and at other times a kind of triumphal car, made after the Roman fashion ; besides these are several led horses, oxen, and rams, that at times intervene and diversify the procession. At the head of the staircase is another basso-relievo, representing a lion seizing a bull ; and close to this are other inscriptions in ancient characters. On getting to the top of this staircase, you enter what was formerly a most magnificent hall ; the natives have given this the name of chehul minar, or

forty pillars ; and, though this name is often used to express the whole of the building, it is more particularly appropriated to this part of it. Al- though a vast number of ages have elapsed since the foundation, fifteen of the columns yet remain entire ; they are from seventy to eighty feet in height, and are masterly pieces of masonry : their pedestals are curiously worked, and appear little injured by the hand of time. The shafts are enfluted up to the top, and the capitals are adorn- ed with a profusion of fret-work. From this hall you proceed along eastward, until you arrive at the remains of a large square building, to which you enter through a door of granite. Most of the doors and windows of this apartment are still standing ; they are of black marble, and po- lished like a mirror : on the sides of the doors, at the entrance, are bassi-relievi of two figures at full length ; they represent a man in the atti- tude of stabbing a goat : with onfc. hand he seizes hold of the animal by the horn, and thrusts a dagger into his belly with the other ; one of the goat's feet rests upon the breast of the man, and the other upon his right arm. This device is common throughout the palace. Over another door of the same apartment is a representation of two men at full length ; behind them stands a domestic holding a spread umbrella : they are supported by large round staffs, appear to be in years, have long beards, and a profusion of hair upon their heads. At the south-west en- trance of this apartment are two large pillars of stone, upon which are carved four figures ; they are dressed in long garments, and hold in their hands spears ten feet in length. At this entrance also the remains of a staircase of blue stone are still visible. Vast numbers of broken pieces of pillars, shafts, and capitals are scattered over a considerable extent of ground, some of them of such enormous size that it is wonderful to

think how they could have been brought whole and set up together. Indeed, all the remains of these noble ruins indicate their former grandeur and magnificence, truly worthy of being the resi- dence of a great and powerful monarch.

These noble ruins are now the shelter of beasts, and birds of prey. Besides the inscription above- mentioned, there are others in Arabic, Persian, and Greek. Dr. Hyde observes that the inscrip- tions are very rude and artless ; and that some, if not all of them, are in praise of Alexander the Great ; and therefore are later than that conqueror. PERSES, the last king of Macedonia. See MACEDON.

PERSEVERE', v. n. } Fr perseverer ; Ital.

PERSEVE'RANCE, n. s. \perseverare ; Span, and

PERSEVE'RANT, adj. j Port, perseverar ; Lat.

persevero. To persist ; continue ; be constant in

a design or attempt : perseverance is persistence ;

continuance ; constancy in good or ill : persever-

ant, constant; persisting.

But my rude musick, which was wont to please Some dainty ears, cannot with any skill

The dreadful tempest of her wrath appease, Nor move the dauphin from her stubborn will ; But in her pride she doth persevere still. Spenstr.

The king-becoming graces Bounty, perseverance, mercy, lowliness ; 1 have no relish of them. Shakspeare. Hacbe-th.

They hate repentance more than perseverance in a fault. King Ctiarles.

We place the grace of God in the throne, to rule and reign in the whole work of conversion, persever- ance, and salvation. Hammond. Thrice happy, if they know

Their happiness, and persevere upright ! Milton. Thus beginning thus

we persevere ;

Our passions yet continue what they were.

Driiden.

Wait the seasons of Providence with patience and perseverance in the duties of our calling, what difficul- ties soever we may encounter. L' Estrange.

To persevere in any evil course makes you unhappy in this life, and will certainly throw you into ever- lasting torments in the next. Wake.

Patience and perseverance overcome the greatest difficulties. Clarissa.

And perseverance with his battered shield. Brooke.

PERSEVERANCE, in theology, a continuance in a state of grace to a state of glory. About this subject there has been much controversy in the Christian church. All divines, except Unitari- ans, admit that no man can ever be in a state of grace without the co-operation of the Spirit of God ; but the Calvinists and Arminians differ widely as to the nature of this co-operation. The former, at least such as call themselves the true disciples of Calvin, believe that those who are once under the influence of divine grace can never fall totally from it, or die in mortal sin. The Arminians, on the other hand, contend that the whole of this life is a state of probation ; that without the grace of God we can do no- thing that is good ; that the Holy Spirit assists, but does not overpower our natural faculties ; and that a man, at any period of his life, may resist, grieve, and even quench the Spirit. See THEOLOGY.

PERSEUS, in fabulous history, the son of Jupiter by Danae, the daughter of king Acrisius. See AcRisirs and DANAE. Many miracles are related of this hero by the poets. Having en- gaged to bring the head of Medusa to Polydectes king of Seriphos, who had educated him, Mi- nerva gave him her shield, Mercury lent him his wings and caduceus, with his dagger made of diamonds called herpe ; and Pluto lent him his helmet, which rendered him invisible. Thus equipped, Perseus flew through the air, visited the Graiae, and their sisters the Gorgons ; killed Medusa, and brought away her head ; gave birth to Pegasus and Chrysaor from her blood ; turn- ed the giant Atlas into a mountain by a sight of her head ; killed the sea monster that was going to devour Andromeda ; married that princess ; changed her uncle Phineus and his troops, who were going to carry her off from him, into stones ; and made the same metamorphosis upon Polydectes when he was going to

ravish Da- nae. Having afterwards killed his grandfather Acrisius accidentally, by throwing a quoit, he refused to succeed him in the throne of Argos, and exchanged it for that of Tirynthus ; after , which he founded the city of Mycenae, of which he became king, and where he and his posterity reigned for 100 years. He flourished, according to most chronologists, in 1348 B.C.; but ac- cording to Sir Isaac Newton only in 1028.

PERSEUS, in astronomy. See ASTRONOMY.

PERSEUS. See MACEDON. This unfortunate monarch left a daughter and two sons, Philip and Alexander. The latter was bred a carpenter, but, having acquired some learning, became secretary to the senate of Home.

PERSHOltE, or PEARSHORE, an ancient market town of Worcestershire, is situated on the north side of the river Avon, 103 miles north- west by west from London, on the direct road to Worcester. It consists of two parochial divi- sions ; viz. the vicarage of St. Andrew, and the chapelry of Holy Cross. Pershore is a town of great antiquity, and is said to have derived its name from the number of pear-trees which grow in its vicinity, According to bishop Tanner, Oswald, a nephew of Ethelred, king of Mercia, founded a monastery here in 689 ; but William of Malmsbury asserts that Egelward, duke of Dorset, in the reign of Edgar, was the first foun- der. Gough, in his additions to Camden, only accounts for the discrepancy, by stating that it was considerably enlarged and increased in its endowments by Egelward. It became an abbey of Benedictine monks, dedicated at first to the blessed Virgin and the apostles Peter and Paul, but afterwards to St. Edburga. Belonging to the abbey was a large church, called the Holy Cross, 280 feet in length, and 120 broad. Of the abbey itself there are but few vestiges ; but the church has been repaired, and used for paro- chial purposes. It has a lofty square tower, and contains several old monuments. In ancient times, the principal approach to the abbey was through Lice Street, a Saxon appellation derived from the corpses for interment being carried along that street. A small part of the gateway on the north side is still in existence ; near it was the chapel of St. Edburga, a daughter of king Edward the Elder. Pershore has at pre- sent two churches, that of Holy Cross above- mentioned, and All Saints, which is small, but neat, and has a square tower. The town consists principally of one street, about three-quarters of a mile in length, and has many respectable houses. The manufacture of stockings is the chief pursuit of the inhabitants. It formerly sent members to parliament, but none have been returned since the 23d of Edward I. It has a market on Tuesday, and three annual fairs.

PERSIA, a most ancient and celebrated em- pire of Asia, the limits of which have been vari- ously stated. At present, according to Sir Wil- liam Jones, Persia is the name of only one province of this extensive empire, which, by the natives, and all the learned Mussulmans in In- dia, is called Iran. The same learned writer is confident that Iran, or Persia in its largest ex- tent, formerly comprehended within its outline the lower Asia.

OF ANCIENT PERSIA. — The most ancient name of this country was Elam, or .ZElam, from Elam the son of Shem, from whom its first in- habitants are descended. Herodotus calls its inhabitants Cephenes ; and in very ancient times the people are said to have called themselves Artaei, and the country where they dwelt Artasa. In the books of Daniel, Esdras, See., it is called by the names of Pars, Pharas, or Fars, whence the modern name of Persia ; but whence those

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names have been derived is now uncertain. That Persia was originally peopled by Elam, the son of Shem, has been very generally admitted; but the ancient history of this distinguished em- pire is very little known. The first Persian monarch of whom any thing is known with tole- rable accuracy was the great Cyrus, although it is evident that a powerful monarchy had subsist- ed in Iran for ages before the accession of that hero ; that this monarchy was called the Mahe- be”dian dynasty ; and that it was in fact the oldest monarchy in the world.

Cyrus is celebrated both by sacred and profane historians ; but the latter are at no small variance concerning his birth and accession to the throne. The stories told by Herodotus of Astyages, the last king of the Medes, being alarmed by his dreams ; of his endeavouring to prevent their fulfilment by marrying his daughter, Mandane, to a mean Persian ; of his afterwards ordering his grandson Cyrus to be

murdered ; of his pre- servation By Harpagus, and of Astyages's barbarous revenge by murdering Ilarpagus's son, and serving up his mangled limbs to Harpagus at a dinner ; and of Ilarpagus's conspiring with Cyrus to dethrone his grandfather ; with Asty- ages's deposition and imprisonment ; have all very much the air of a fable. According to Xenophon, Cyrus was the son of Cambyses, king of Persia, and Mandane the daughter of Asty- ages king of Media. He was born a year after his uncle Cyaxares, the brother of Mandane. He lived till the age of twelve with his parents in Persia, being educated after the manner of the country, and inured to fatigues and military ex- ercises. At this age he was taken to the court of Astyages, where he resided four years, when the revolt of the Medes and Persians from the Babylonians happened. See BABYLONIA. While Cyrus was employed in the Babylonish war, be- fore he attacked the metropolis itself, he reduced all the nations of Asia Minor. The most for- midable of these were the Lydians, whose king Croesus assembled a very numerous army, com- posed of all the other nations in that part of Asia, as well as of Egyptians, Greeks, and Thracians. This vast army, consisting of 420,000 men, Cyrus routed at the battle of Thymbra, and next day took Sardis, the capital of Lydia. See CROZSUS, and LYDIA. After the conquest of Sardis, Cyrus turned his arms against Baby- lon, which he reduced, as related under BABY- LONIA. Having settled the civil government of the conquered kingdoms, and restored the Jews to their own land, Cyrus took a review of all his forces, which he found to consist of 600,000 foot, 120,000 horse, and 2000 chariots armed with scythes. With these he extended his dominion all over the nations to the confines of Ethiopia, and to the Red Sea ; after which he continued to reign peaceably over his vast empire till his death, which happened about A. A. C. 529. In the time .of Cyrus the Persian empire extended from the Indus to the TEgean Sea. On the north it was bounded by'the Euxine and Caspian Seas, and on the south by Ethiopia and Arabia. That monarch kept his residence for the seven cold months at Babylon, by reason of the warmth of that climate ; three months in the spring he spent

at Susa, and two at Ecbatana during the heat of summer.

On his death-bed Cyrus appointed his son Cambyses to succeed him in the empire ; and to his other son Smerdis he gave several consi- derable governments. The new monarch imme- diately set about the conquest of EGYPT, which he accomplished in the manner related in the history of that country. Having reduced Egypt, Cambyses next resolved to turn his arms against the Carthaginians, Hammonians, and Ethiopians. But he was obliged to drop the first of these en terprises for want of ships : and in attempting to cross the Desert against the

latter he lost the greater part of an immense army, and was obliged to return to Thebes. Through jealousy of his brother Smerdis he had caused him to be murdered, but, during his absence on this expedition, a magian, who greatly resembled Smerdis in looks, assumed the name of the deceased prince, and raised a rebellion against Cambyses, who was generally hated for his cruelty. Hasten- ing home to suppress this revolt, his sword acci- cidentally wounded him in the thigh, which occasioned his death.

Though he had on his death-bed informed the nobles of the murder of his brother, and that the person who had usurped the government was an impostor, yet they gave no credit to his as surances : Smerdis the magian was allowed to take possession of the throne in peace, and com- menced his reign very popularly. The impo- sition was, however, soon detected, the false Smerdis having formerly lost his ears ; the person who had killed the true Smerdis publicl1." confessed his crime ; a confederacy of sever, principal lords was formed against the usurper, and he and his brother Patizithes were slain, after a reign of only eight months. Nor were' they the only sufferers. The mob fell upon the magi, and made a general "massacre of them ; the me- mory of which was kept up long after by an anniversary festival, called Magophonia. Six of the most noble conspirators having determined to choose a king from among themselves, by re- pairing on horseback to a particular spot, and bestowing the crown on him whose horse first neighed, Darius, the son of Hystaspes, governor tof Susa, was put in possession of this dignity by the sagacity of his groom. He was elected king of Persia in the year 522 B. C. Immediately after his accession he promoted the other six conspirators to the first employments in the kingdom, married the two daughters of Cyrus, Atossa and Artystona, Parmys the daughter of the true Smerdis, and Phedyma the daughter of Otanes, who had detected the imposture of the magi. He then divided the whole empire into twenty satrapies or governments, and appointed a governor over each division, ordering them to pay him an annual tribute. Under Darius the tuilding of the temple of Jerusalem, w;iich had been obstructed by Cambyses and Smerdis, went on successfully, and the Jewish state was entirely restored. The most remarkable of Darius's other transactions were his expeditions against Baby- lon ; against Scythia, India, and Greece. The expedition against Babylon took place A. A. C. 517. The inhabitants of that city, having-
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up a stock of provisions for several years, and strangled all the old people and children, and those whom they considered unnecessary, shut themselves up, and withstood the siege of Darius and all his forces for a year and eight months, and would most probably have succeeded in tiring them out ; but Zopyrus, one of Darius's generals, having cut off his own nose and ears, persuaded them he had been thus barbarously treated by the monarch, and was desirous of revenge ; so they intrusted to him the guard of the city, which he delivered up to the Persians. Darius beat down the walls o'f that metropolis to the height of fifty cubits ; 3000 of the most active in the rebellion were impaled ; the rest pardoned. After the reduction of Babylon Da- rius undertook a Scythian expedition, directed against those nations which lie between the Danube and the Tanais. In this, however, he •was not so fortunate. He led 700,000 men into Scythia, but the inhabitants, too wise to oppose so vast an army in the field, retreated before him, wasting the country as they fled. Seeing the imminent danger his army were in of perish- ing for want, he began his retreat, which he effected with the loss of the old and sick, whom he left behind him. India, however, felt and submitted to his prowess. He reduced that large country, and made it a province of the Per- sian empire, drawing from thence an annual tribute of 360 talents of gold. lie also under- took an unfortunate expedition into Greece. The ill success which attended him here, how- ever, was so far from making him drop the enterprise that it only made him the more intent on reducing the Grecians ; and he resolved to head his army in person, having attributed his former bad success to the inexperience of his generals. But, while he was making the neces- sary preparations for this purpose, he received intelligence that the Egyptians had revolted, so that he was obliged to make preparations for re- ducing them also ; and before this could be done the king died, after having reigned thirty-six years, leaving the throne to his son Xerxes.

This prince ascended the throne of Persia in the year 485 B. C. ; and his first enterprise was to reduce the Egyptians, which he effectually did, bringing them into a worse state of slavery than they ever had experienced. After this he also resolved on an expedition into Greece; the unfortunate event of which made him at last so dispirited that he henceforth abandoned all thoughts of war and conquests ; but growing tyrannical, and oppressing his subjects, he was murdered in his bed, A. A. C. 464, and twenty- first of his reign ; and was succeeded by his third son Artaxerxes, surnamed Longimanus on account of the great length of his arms. This prince is named Ahasuerus in Scripture, and is the same who married Esther, and during the whole of his reign

showed the greatest kindness to the Jewish nation. In the beginning of his reign he was opposed by Hystaspes the second son of Xerxes, whom, however, he overcame, though not without considerable difficulty. After this he settled the affairs of government, and reformed many abuses which had crept in ; and then, being fully estab- lished on the throne, he appointed feasts and re-

joicings to be made for 180 days in the city of Susa ; at one of which he resolved to divorce his queen for disobedience ; and afterwards married the Jewess Esther, as recorded Est. ii. 1 — 18. In the fifth year of his reign the Egyptians revolted anew, and, being assisted by the Athenians, held out for six years ; but were again obliged to sub- mit, and continued in subjection during the whole of his reign. Nothing else remarkable happened during the life of Artaxerxes Longimanus, who died in the forty -first year of his reign ; and was succeeded by Xerxes II., the only son he had by his queen, though by his concubines he had seventeen.

Xerxes II., having drunk immoderately at an entertainment immediately after his accession, retired to a chamber to refresh himself with sleep ; but here he was murdered by Sogdianus, the son of Artaxerxes by one of his concubines, after he had reigned forty-five days. Sogdianus was scarcely seated on the throne when he put to death Bagorazus, the most faithful of all his father's eunuchs ; by which, and the murder of his sovereign, he became generally odious. lie next sent for his brother Ochus, intending to murder him ; but the latter, having collected a great army under pretence of avenging the death of Xerxes, and being joined by many of the no- bles and governors of provinces, Sogdianus pro- posed an accommodation. Ochus, however, no sooner had him in his power than he caused him to be suffocated among ashes. Being settled on the throne, Ochus changed his name to Darius ; and is by historians commonly called Darius Nothus, or The Bastard. But Arsites, another of the brothers, seeing how Sogdianus had got the better of Xerxes, and Ochus of him, revolted. He was not, however, successful ; for being de- feated in an engagement he surrendered, and was immediately put to death by suffocation. Several other persons were executed : but these severi- ties did not procure Ochus repose; for his whole reign was disturbed with violent commotions. One of the most dangerous was raised by Pi- suthnes governor of Lydia ; but he, being de- serted by his Greek mercenaries, was overcome, and put to death. His son Amorgas continued to infest the maritime provinces of Asia Minor for two years ; till he also was taken and put to death by Tissaphernes, governor of Lydia. Other insurrections quickly followed ; particularly that of the Egyptians, who could not be reduced. Before his death Darius invested

Cyrus his youngest son with the supreme government of all Asia Minor. This was done through the persuasion of his mother Parysatis,who had an absolute sway over her husband ; and she procured this com- mand for him, that he might thereby be enabled to contend for the kingdom after his father's death. lie died A. A. C. 405, and was succeeded by his son Artaxerxes, by the Greeks surnamed Mnemon, on account of his extraordinary me- mory.

The most remarkable transaction during the . reign of this prince was the revolt of his brother Cyrus. He began with gaining over the cities under Tissaphernes ; which quickly produced a war with that governor. Cyrus then began to assemble troops, which he pretended were de-

signed only against Tissaphernes. As he had given great assistance to the Spartans in their wars against the Athenians, he now demanded assistance from them ; which they very readily granted. Cyrus, having thus collected an army of 13,000 Greek mercenaries and 100,000 regu- lar troops of other nations, set out from Sardis, towards Upper Asia. Having arrived at Cunaxa, in Babylon, Cyrus found his brother with 900,000 men ready to engage him. Clearchus, the commander of the Peloponnesian troops, ad- vised Cyrus not to charge in person, but to re- main in the rear of the Greek battalions ; but he replied that he should thus render himself un- worthy of the crown for which he was fighting. As the king's army drew near, the Greeks fell upon them with such fury that they routed the wing opposite to them almost at the first onset; upon which Cyrus was with loud shouts pro- claimed king by those next to him. But he, perceiving that Artaxerxes was wheeling about to attack him in flank, advanced against him with 600 chosen horse, killed Artageses, captain of the king's guards, with his own hand, and put the whole body to flight. In this encounter, dis- covering his brother, he spurred on his horse, and, coming up to him, engaged him with great fury. Cyrus killed his brother's horse, and wounded him on the ground ; but he imme- diately mounted another, when Cyrus attacked him again, and gave him a second wound ; until the guards, perceiving the king's danger, dis- charged their arrows against Cyrus, who at the same time was pierced through by his brother's javelin. He fell dead upon the spot ; and all the chief lords of his court were slain with him. In the mean time, the Greeks having defeated the enemy's left wing, commanded by Tissaphernes, and the king's right wing having put to flight Cyrus's left, both parties

imagined that they had gained the victory. But Tissaphernes acquaint- ing the king that his men had been put to flight by the Greeks, he immediately rallied his troops. The Greeks under Clearchus easily repulsed them, and pursued them to the foot of the neighbouring hills. As night was drawing near, they returned to their camp, but found that the greatest part of their baggage had been plundered, and all their provisions taken. The next morn- ing t' ey received the news of Cyrus's death, and the defeat of the army under him. Whereupon they sent deputies to Ariaeus, commander in chief of all the other forces of Cyrus, offering him the crown of Persia. Ariaus rejected the offer, and, acquainting them that he intended to set out on his return to Ionia, advised them to join him in the night. They followed his direc- tions, and, under Clearchus, arrived at his carnp about midnight, whence they set out on their return to Greece. They were at a vast distance from their own country, in the very heart of the Persian empire, surrounded by a victorious and numerous army, and had no way to return again, but by forcing their way through an immense track of the enemy's country. But their valor and resolution mastered all these difficulties ; and in spite of a powerful army, which pursued and harassed them all the way, they made good their retreat for 2325 miles through the provinces

belonging to the enemy, and got safe to the Greek cities on the Euxine Sea. This retreat, the longest that ever was made through an ene- my's country, was conducted at first by Clear- chus ; but he being cut off, through the treachery of Tissaphernes, Xenophon was chosen in his room. See XENOPHON. The war with Cyrus was scarcely ended, when another broke out with the Spartans, on the following account: — Tissaphernes being appointed to succeed Cyrus in all his power, to which was added all which he himself possessed formerly, began to oppress the Greek cities in Asia in a most cruel manner. On this they sent ambassadors to Sparta, desiring assistance. The Spartans, having ended their long war with the Athenians, willingly laid hold of this opportunity of breaking with the Persians, and therefore sent against them an army under the command of Thimbro, who, being strengthened by the forces which returned under Xenophon, ' took the field against Tissaphernes. But, Thimbro being recalled, Dercyllidas, a brave olficer, was appointed to succeed him ; and he carried on the war to much more advantage. Finding that Tis- saphernes was at variance with another goveinor named Pharnabazus, he concluded a truce with the former, and, marching against Pharnabazus, drove him quite out of ./Eolis, and took several cities in other parts. The latter repaired to the Persian court, complained against Tissaphernes, and advised the king to equip a powerful fleet, and give the command of it

to Conon the Athe- nian, by which he would obstruct the passage of further recruits from Greece ; and thus soon put an end to the power of the Spartans in Asia. The king accordingly ordered 500 talents for the equipment of a fleet, and appointed Conon com- mander of it. The Spartans, hearing of this, sent over Agesilaus, one of their kings, and a most experienced commander, into Asia. This was done with such secrecy that Agesilaus arrived at Ephesus before the Persians had the least notice of his designs. He took the field with 10,000 foot and 4000 horse, and, falling upon the enemy while totally unprepared, carried every thing be- fore him. Tissaphernes deceived him into a truce till he got his troops assembled, but gained little by his treachery ; for Agesilaus deceived him in his turn, and, while Tissaphernes marched his troops into Caria, the Greeks invaded and plundered Phrygia. After various deceptive manoeuvres on each side, Agesilaus led his troops against Sardis; and Tissaphernes having de- spatched a body of horse to its relief, Agesilaus fell upon them before the foot could come to their assistance. The Persians were routed at the first onset ; after which Agesilaus over-ran the whole country, enriching his army with the spoils. By this continued ill fortune Artaxerxes was so much provoked against Tissaphernes that he caused him to be put to death. Tithraustus, who was appointed to succeed him, sent large presents to Agesilaus, to bribe him to abandon his con- quests ; but, finding him determined not to re- linquish the war, he sent Timocrates of Rhodes into Greece, with money to bribe the leading men in the cities, and rekindle a war against the Spartans. Accordingly the cities of Thebes, Ar- gos, Corinth, &c., entering into a confederacy,

obliged them to recall Agesilaus to defend Sparta. After his departure, which happened A. A. C. 354, the Spartan power received a severe blow at Cnidos, where their fleet was entirely defeated by that of Artaxerxes under Conon, fifty of their ships being taken in the engagement ; after which Conon and Pharnabazus, being masters of the sea, sailed round the islands and coasts of Aski, taking the cities there which had been reduced by the Spartans. Sestos and Abydos only held out, and resisted the utmost efforts of the enemy, though they had been besieged both by sea and land. Next year Conon, having assembled a powerful fleet, again took Pharnabazus on board, and reduced the island of Melos, whence he made a descent on the coasts of Lycaonia, pil- laging all the maritime provinces, and loading his fleet with an immense booty. After this Conon obtained leave to return to Athens, with eighty ships and fifty talents, to rebuild the walls of that city. Having a great number of hands, the work was soon completed, and the city not only restored to its former splendor, but

rendered more formidable than ever. The Spartans were soon reduced to the necessity of making peace. The terms were, that all the Greek cities in Asia should be subject to the king of Persia, also the islands of Cyprus and Clazomena; that Scyros, Lemnos, and Imbros, should be restored to the Athenians, and all the cities of Greece declared free.

Artaxerxes engaged to join those who accepted these terms, and to assist them against such as should reject them. Being now disengaged from the Grecian war, he turned his arms against Evagoras, king of Cyprus, who was descended jrom the ancient kings of Salamine, the capital of Cyprus. His ancestors had reigned there for many ages, but were at last driven out by the Persians, who reduced the island to a Persian province. Evagoras, however, being a man of an enterprising genius, drove out the Persian governor. Artaxerxes therefore attempted to ex- pel him ; but Conon, by means of Ctesias, chief physician to Artaxerxes, got all differences accom- modated. Evagoras then gradually reduced un- der his subjection almost the whole of the island. Some towns, however, held out, and applied to Artaxerxes for assistance ; who, as soon as the war was at an end, bent all his force against Evagoras. The Athenians, notwithstanding the favors conferred upon them by Artaxerxes, could not forbear assisting their old ally in his emer- gency, and sent ten men of war under Philo- crates; but the fleet commanded by Talentias, brother to Agesilaus, falling in with them near Rhodes, surrounded them so that not one ship escaped. The Athenians sent Chabrias with another fleet and body of land forces, with which he quickly reduced the whole island. But the Athenians being soon after obliged, by a treaty concluded with the Persians, to recall Chabrias, Artaxerxes attacked the island with 300,000 men and 300 ships. Evagoras applied to the Egyp- tians, Lybians, Arabians, Tyrians, and other nations, from whom he received supplies both of men and money ; and fitted out a fleet, with which he \entured an engagement with that of Artaxerxe? But being defeated, and obliged

to shut himself up in Salamine, he was closely besieged, and at last was obliged to capitulate, and give up the whole island except Salamine, which he held as a king tributary to Artaxerxes. The Cyprian war being ended, Artaxerxes turned his arms against the Cadusians, whose country lay between the Euxine and Caspian Seas, but was obliged to abandon the project, after having lost a great number of troops and all his horses. In his Egyptian expedition, which happened immediately after the Cadusian war, he was attended with little better success, owing to the bad conduct of Pharnabazus. This commander sent an ambassador to Athens, demanding Iphi- crates, the best general of his time, to command the Greek mercenaries in the Persian service. This the Athenians complied with; and Iphi- crates

having mustered his troops, so exercised them in all the arts of war, that they became famous among the Greeks under the name of Iphicratesian soldiers. But the Persians were so slow in their preparations that two whole years elapsed before they were ready to take the field. Artaxerxes, that he might draw the more mercenaries out of Greece, sent ambassadors to the different states in it, en- joining them to live at peace with each other, on the terms of the treaty lately concluded. The troops were mustered at the city then called Ace, and since called Ptolemais ; where they amounted to 200,000 Persians under Pharnabazus, and 20,000 Greeks led by Iphicrates. The fleet consisted of 300 galleys, besides a vast number of other ves- sels which followed with provisions. The fleet and army began to move at the same time ; and separated as little as possible. Having made a descent at one of the mouths of the Nile, they took a fortress, and put all the Egyptians in it to the sword. Iphicrates then proposed embarking the troops without loss of time, and attacking Memphis, the capital, which would have ren- dered it easy to reduce the whole country ; but Pharnabazus would undertake nothing before the rest of the forces were come up : neither would he permit Iphicrates to attack the place with the Greek mercenaries only, from a mean jealousy of the honor which he might acquire ; and thus the Egyptians recovered courage to put them- selves in such a posture of defence that they could not be attacked with any probability of success; and the Nile, overflowing its banks, obliged them to return to Phoenice. The expe- dition was again undertaken twelve years after, but without success. The last years of Artax- erxes were greatly disturbed by dissensions in his family ; and he died in the ninety-fourth year of his age, and forty-sixth of his reign.

He was succeeded by one of his sons named Artaxerxes Ochus, who behaved with such cruelty that almost one half of his dominions revolted as soon as he came to the throne. But, by the dissensions of the rebels among themselves, all of them were reduced one after another ; and the Sidonians, finding themselves betrayed, burnt themselves, to the number of 40,000, together with their wives and children. Artaxerxes Ochus, having quelled all the insurgents, immediately set himself about reducing Egypt, and for this purpose procured a reinforcement of other 10,000 mercenaries from Greece. On this march he lost

a great number of hi? men in the lake Serbonis. When the south wind

blows this lake is said to have been covered with sand in such a manner that no one could distinguish it from the firm land. Several parties of Ochus's army were lost in it for want of proper guides ; and whole ar- mies have sometimes perished in it. When he arrived in Egypt he detached three bodies to in- vade ti'.e country ; each commanded by a Persian and a Greek. The first was led by Lachares- the Theban, and Rosaces governor of Lydia and Ionia; The second by Nicostratus the Theban and Aris- tazanes ; the third by Mentor the Rhodianand Ba- goas an eunuch. The main body of the army he kept with himself, and encamped near Pelusium, to watch the events of the war. The event was suc- cessful, andOchus, having reduced the whole coun- try, dismantled their strong holds, plundered the temples, and returned to Babylon loaded with booty ; where he conferred high rewards on those who had distinguished themselves. To Mentor the Rhodian he gave 100 talents, and other pre- sents ; appointed him governor of all the coasts of Asia, and committed to his care the whole management of the war \hich he was still car- rying on, and, either by stratagem or by force, he at last reduced all the provinces that had re- volted. Ochus then gave his attention to nothing but his pleasures, leaving the administration of affairs entirely to Bagoas the eunuch, and to Mentor- These two agreeing to share the power between them, the former had Upper Asia, and the latter all the rest. Bagoas, being an Egyp- tian, had a great zeal for the religion of his country, and endeavoured, on the conquest cf Egypt, to influence the king in favor of the Egyptian ceremonies ; but Ochus not only re- fused to comply, but killed the sacred bull, the emblem of Apis, plundered the temples, and carried away their sacred records. Bagoas in revenge poisoned his master and benefactor in the twenty-first year of his reign ; kept the king's body, causing another to be buried in its stead ; and, because the king had caused his attendants to eat the flesh of Apis, Bagoas cut his body in pieces, and gave it so mangled to be devoured by cats, making handles for swords of his bones. lie then placed Arses the youngest of the de- ceased king's sons on the throne, that he might the more easily preserve the whole power to himself.

Arses did not long enjoy even the shadow of power which Bagoas allowed him, being mur- dered in the second year of his reign by that treacherous eunucn, who now conferred the crown on Darius Codomanus, a relation of the royal family. Bu;. finding that lie would not suffer himself to be guided by him in all things, Bagoas brought him also a poisonous potion ; when Darius practised upon him his own arti- fice, causing him to drink the poison which he brought. This established Darius in the throne as far as security from internal enemies could do so; but in a very little time his dominions were

invaded, and soon conquered, by Alexander the Great. The particulars of that hero's conquests are related under MACEDON : we shall therefore here only take notice of the fate of Darius him- self, with which the Persian empire concluded

for many ages. After the battle of Arbela, Alex- ander took and plundered Persepolis, whence he marched into Media, in pursuit of Darius, who had fled to Ecbatana the capital. This prince had still an army of 30,000 foot, among whom were 4000 Greeks, who continued faithful to the last. Besides these he had 4000 slingers and 3000 horse, most of them Bactrians, com- manded by Bessus. When Darius heard that Alexander had marched to Ecbatana, he retired into Bactria, with a design to raise another *rray ; but soon after he determined to venture a Dattie with the forces he still had left. On this Bessus, governor of Bactria, and Nabar- zanes, a Persian lord, formed a conspiracy to seize his person, and, if Alexander pursued them, to gain his friendship by betraying their master into his hands; but if they escaped, their design was to murder him, and usurp the crown. The troops were easily gained over ; but Darius himself, when informed of their proceed- ings, and solicited to trust his person among the Greeks, could not give ciedit to the report. The consequence was that he was in a few days seized by the traitors; who bound him with golden chains, and, shutting him. up in a covered cart, fled with him towards Bactria. The cart was covered with skins, and strangers appointed to drive it without knowing who the prisoner was. Bessus was proclaimed commander and chief by the Bactrian horse ; but Artabazus and his sons, with the forces they commanded, and the Greeks, under one patron, retired from the army under Bessus, and marched over the moun- tains towards Parthiene. Alexander, arriving at Ecbatana, was told that Darius had left the place five days before. He then despatched orders to Clitus, who had fallen sick at Susa, to repair, as soon as he recovered, to Ecbatana, and thence to follow him into Parthia with the cavalry and 6000 Macedonians, who were left in Ecbatana. Alexander himself, with the rest of the army,

Kirsued Darius; and the eleventh day arrived at hages, having marched in that time 3300 fur- longs. Most of those who accompanied him died through fatigue ; insomuch that, on his ar- rival at Rhages, he could scarcely muster sixty horsemen. Finding that he could not come up with Darius, who "had passed the Caspian straits, he staid five days at Rhages, to refresh his army, and settle the affairs of Media. Thence he marched into Parthia, and encamped near the Caspian straits, which he passed next day with- out opposition. He had scarcely entered Parthia, when he was informed that Bessus and Nabar- zanes had conspired against Darius, and de- signed to seize

him. Hereupon, leaving the main body of the army with Craterus, he ad- vanced with a small troop of horse, and, having marched day and night, he came on the third day to a village where Bessus with his Bactrians had encamped the day before. At this place he learnt that Darius had been seized by the trai- tors ; that Bessus had caused him to be shut up in a close cart, and that the whole army, except Artabazus and the Greeks, obeyed Bessus. At last Alexander came in sight of the barbarians, who were marching in great confusion. His unexpected appearance struck them, though far

superior in number, with such terror, that they immediately fled ; and, because Darius refused to follow them, Bessus, and those who were about him, discharged their darts at the unfortunate prince, leaving him wallowing in his blood. After this they all fled different ways, and were pursued by the Macedonians with great slaughter. In the mean time the horses that drew the cart in which Darius was, stopped ; for the drivers had been killed by Bessus, near a village about four furlongs from the highway ; and Polystratus, a Macedonian, being pressed with thirst, was di- rected by the inhabitants to a fountain near the place. As he was filling his helmet with water, he heard the groans of a dying man; and, looking round him, discovered a cart with a team of wounded horses, unable to move. Ap- proaching it, he perceived Darius lying in the cart, having several darts in his body. He had enough of strength however, left to call for some water, •which Polystratus brought him ; and after drink- ing, turned to the Macedonian, and with a faint voice told him, that, in the deplorable state to which he was reduced, it was no small com- fort to him that his last words would not be lost : he then charged him to return his hearty thanks to Alexander for the kindness he had shown to his wife and family, and to acquaint him, that, with his last breath, he besought the ‘gods to prosper him, and make him sole monarch of the world. He added, that it did not so much concern him as Alexander to pursue and bring to condign punishment those traitors who had treated their lawful sovereign with such cruelty. Then taking Polystratus by the hand, ‘ Give Alex- ander your hand,’ says he, ‘as I give you mine, and carry him, in my name, the only pledge I am able to give, in this condition, of my grati- tude and affection.’ Having uttered these words, he expired in the arms of Polystratus. Alexander coming up, a few minutes after, bewailed his death, and caused his body to be interred with the highest honors. The traitor Bessus, being at last reduced to extreme difficulties, was delivered up by his own

men, naked and bound, into the hands of the Macedonians ; on which Alexander gave him to Oxyathres the brother of Darius, to suffer what punishment he should think proper. Plutarch tells us that he was executed in the fol- lowing manner : — Several trees being by main force bent down to the ground, and one of the traitor's limbs tied to each of them, the trees, as they were suffered to return to their natural position, flew back with such violence that each carried with it a limb. Thus ended the ancient empire of Persia, 209~years after it had been founded by Cyrus.

After the death of Alexander, the Persian dominions became subject to Seleucus Nicator, and his successors, for sixty-two years, when the Parthians revolted, and conquered the greatest part of them. To the Parthians they continued subject for 475 years, when the sovereignty was again restored to the Persians, as related under PARTHIA. The restorer of the Persian monarchy was Artaxerxes, or Artaxares, who was not only a private person, but of spurious birth. How- ever, he possessed great talents, and took the pompous title of king of kings. He gave notice

to the Roman governors of the provinces border- ing on his dominions, that he had a just right, as the successor of Cyrus, to all the Lesser Asia ; which he commanded them immediately to quit, as well as those on the frontiers of the ancient Parthian kingdom. The consequence of this was a war with Alexander Severus, the Roman emperor. Of the event of this war there are very different accounts. It is certain, however, that on account of his exploits against Artaxares, Severus took the titles of Parthicus and Persicus; though, it would seem with no great reason, as the Persian monarch lost none of his dominions, and his successors were equally ready with him- self to invade the Roman territory.

Artaxares dying, after a reign of twelve or fif- teen years, was succeeded by his son Sapor, a prince also of great abilities, but fierce, haughty, and untractable. He was no sooner seated on the throne than he began a new war with the Romans, in which at the beginning he was un- successful, being obliged byGordian to withdraw from the Roman dominions, and even invaded in his turn; but, in a short time, Gordian being murdered by Philip, the new emperor made peace with him upon terms very advantageous to the Persians. Sapor now renewed his incur- sions, and made such alarming progress that the emperor Valerian, at the age of seventy, marched against him in person with a numerous army. An engagement ensued, in which the imperial troops %vere defeated, and Valerian taken prisoner. Sapor pursued his advantages with such cruelty that the people of the

provinces took arms, first under Callistus, a Roman general, and then under Odenatus, prince of Palmyrene. The re- sult was that they not only protected themselves from the insults of the Persians, but even gained many victories over them, and drove Sapor with disgrace into his own territory. In his march he is said to have made use of the bodies of his unfortunate prisoners to fill up the hollow roads, and to facilitate the passage of his carriages over several rivers. On his return to Persia, he was solicited, but in vain, by several neighbouring princes, to set Valerian at liberty. On the con- trary he treated him daily with studied indig- nities ; set his foot upon his neck when he mounted his horse, and finally, after some years confinement, flayed him alive; and caused his skin to be tanned, and preserved as a trophy of his victory over the Romans. This extreme in- solence and cruelty was followed by an uninter- rupted course of misfortune. Odenatus defeated him in every engagement, and even seemed ready to overthrow his empire : after him Aurelian took ample vengeance for the captivity of Vale- rian. Sapor died A. D. 273, after having reigned thirty-one years : and was succeeded by his son Hormisdas, and he by Varanes I. The formei reigned a year and ten days, and the latter three years ; after which he left the crown to Varanes II., who seems to have been so much awed by the Roman power that he durst undertake nothing. The rest of the Persian history, to the overthrow of the empire by the Saracens, affords nothing but an account of their continued inva- sions of the empire, which more properly belongs to the history of ROME and CONSTANTINOPLE,

and to which we therefore refer. The last of the Persian monarchs, of the line of Artaxares, was Isdigertes, or lezdegerd, who was contemporary with Omar, the second caliph after Mahomet. He was scarcely seated on the throne when he found himself attacked by a powerful army of Saracens under the command of one Sad, who invaded the country through Chaldea. The Per- sian general made every effort to harass the Arabs on their march; and, having an army superior to them in numbers, employed them continually in skirmishes : but Sad, perceiving that this lingering war would destroy his army, determined to force the enemy to a general engagement; which he at last accomplished with complete success, after a battle that lasted three days and three sights. Thus the capital, and the greatest part of the dominions of Persia, fell into the hands of the Arabs; along with the king’s treasures, which were immense; A. D. 643.

After this battle Jezdegerd retired into Cho- rassan, where he reigned as king, over it and the two provinces of Rerman and Segestan. But, after about nineteen years, the governor of Me- rou betrayed it to the Turks. Jezdegerd imme- diately marched against the rebels and their allies, but was defeated ; and, having with much difficulty reached the river, while he was bargain- ing with the ferryman about his fare, a party of the rebel horse came up, and killed him. This was in 652. Jezdegerd left behind him a son named Firouz, and a daughter, Dara. The latter espoused Bostenay, whom the rabbinical writers entitle the head of the captivity ; and who, in fact, was the prince of the Jews settled in Chal- dea. As for Firouz, he still preserved a little principality ; and, when he died, left a daughter named Mali Afrid, who married Walid, the son of the caliph Abdalmalek, by whom she had a son named Yezid, who became caliph, and sovereign of Persia ; and who, claiming the title derived from his mother, constantly styled him- self the son of Khosrou, king of Persia, the descendant of caliph Maroan, and among whose ancestors on the side of the mother were the Ro- man emperor and the khacan. Persia con- tinued to be subject to the Arabs till the decline of the Saracen empire ; being governed by depu- ties, entitled sultans, under the grand khalifs. But in process of time the sultans of Persia, Babylon, &c., quarrelled among themselves, and occasioned several revolutions, and fluctuations of power, the consequence of which was the coming in of the Turks. Tangrolopix, their leader, conquered the sultan of Persia in 1030, and assumed the government. He was succeeded by a race of Turkish princes for about 100 years, when the Tartars invaded Persia, drove out the Turks, and a new dynasty of Tartarian princes succeeded : after which it was seized by various usurpers, till the time of Jenghiz Khan, who conquered it, with almost all the rest of Asia.

After the death of Jenghiz Khan, which hap- pened in 1227, Persia and the neighbouring countries were governed by officers appointed by his successors, who reigned at Kerakorom, in the eastern parts of Tartary, till 1253, when it became once more the seat of a considerable em- pire under Haalen, or Hulaku the Mogul, who,

in 1256, abolished the khalifat, by taking Bagdad After the death of Hulaku his son Abaka suc- ceeded to his extensive dominions ; who, in the very beginning of his reign, was invaded by Barkan Khan, of the race of Jagatay, the son of Jenghiz Khan, from Great Bukharia, with an army of 300,000 men ; but, happily for Abaka, Barkan died before the armies came to an en- gagement, upon which the invaders returned to Tartary. In 1264 Armenia and Anatolia were ravaged by the Mamelukes from Egypt, but they were obliged to fly from Abaka; who thus seemed to be established in an empire almost as exten- sive

as that of the ancient Persian kings. But in 1268 his dominions were invaded by Borak Khan, another descendant of Jagatay, with an army of 100,000 men. He quickly reduced the province of Chorassan, and in 1269 advanced as far as Aderbijan, where Abaka had the bulk of his forces. A bloody battle ensued, in which Abaka was victorious, and Borak obliged to fly into Tartary, with the loss of all his baggage, and great part of his army. Abaka died in 1282, after a glorious reign of seventeen years, and was succeeded by his brother Achmed Khan. He was the first of the family of Jenghiz Khan who embraced Mahometanism ; but neither he nor his successors appear to have been much versed in the arts of government; for the Persian his- tory, from this period, becomes only an account of insurrections, murders, and rebellions, till the year 1337; when, upon the death of Abusaid, it split to pieces, and was possessed by a great number of petty princes ; all of whom were at perpetual war with each other till the time of Timur Beg, or Tamerlane, who once more, about A. D. 1400, reduced them under one jurisdiction. After the death of Tamerlane Persia continued to be governed by his son Shah Rukh, or Mirza, a wise and valiant prince : but it did not remain in the family above six short reigns : after con- tinual dissensions among themselves, the last of them was defeated and slain in 1472, by Usum Cassan, an Armenian prince. There were five princes of this line ; after which the empire was held by a great number of petty tyrants, till the beginning of the sixteenth century, when it was conquered by Shah Ismael Safi, Sofi, or Sophi ; whose father was Sheykh Hayder, the nineteenth in a direct line from Ali the son-in-law of Ma- homet. When Tamerlane returned from the de- feat of Bajazet, the Turkish sultan, he carried with him a great number of captives out of Kara- mania and Anatolia, intending to- put them to death ; and with this intent he entered Ardebil, a city of Arderbijan, twenty-five miles east of Taurus, where he continued for some days. At this time lived in that city the Sheykh Sesi, re- puted by the inhabitants to be a saint ; and as such was much reverenced by them. From the fame of his sanctity, Tamerlane paid him fre- quent visits ; and, when he was about to depart, promised to grant whatever favor he should ask ; Sesi requested that he would spare the lives of his captives. Tamerlane granted this request ; upon which the Sheykh furnished them with clothes and other necessaries, and sent them home. The people were so much affected wilh this extraordinary instance of virtue that they

afterwards repaired in great numbers to Sesi, bringing with them

considerable presents. Thus \he descendants of the Sheykh made a con- spicuous figure till 1486, when they were all destroyed by the Turks except Ismael, who fled to Ghilan ; where he lived for some time under the protection of the king of that country. There was at that time a vast number of different sects of Mahometans dispersed over Asia; and, among these, a party who followed Hayder, the father of Ismael. Ismael, therefore, finding that Persia was in confusion, and hearing that there was a great number of the Hayderian sect in Ka- ramania, removed thither, and collected 7000 of his party, by whose aid he conquered Shirwan. After this he pursued his conquests ; and, as his antagonists never united to oppose him, had conquered the greatest part of Persia, and re- duced the city of Bagdad in 1510. But in 1511 he received a great defeat from Selim I., who took Tauris, and would probably have crushed the new Persian empire in its infancy, had he not thought the conquest of Egypt more impor- tant.

MODERN PERSIA. — Ismael died in 1523, leaving the crown to his eldest son Thamasp I., a man of very limited abilities, and who was invaded by the Turks on his accession to the throne. However, they were obliged to retreat by an inundation, which overflowed their camp. Thamasp then re- duced Georgia to a province of the empire, which had previously been divided among a number of petty princes. The reigns of the succeeding princes afford nothing remarkable till the time of Shah Abbas I., surnamed the Great. He as- cended the throne in 1584 ; and began with de- claring war against the Tartars, who had seized the finest part of Chorassan. Having raised a powerful army, he entered that province, where he was met by Abdallah Khan, the chief of the Usbeck Tartars, whom he attacked and defeated. Here he continued three years; and, on leaving Chorassan, fixed the seat of government at Ispa- han, where it has continued ever since. His next expedition was against the Turks, from whom he took the city of Tauris, after defeating the garrison; on which most of the other adjacent places submitted. One city only, called Orumi, being strongly situated, resisted all the efforts of Abbas ; but was at last taken by the assistance of the Curds, whom he gained over by promising to share the plunder with them. Instead of this, however, he invited their chiefs to dine with him ; and, having brought them to a tent, the entrance to which had several turnings, he stationed on the inside two executioners, who cut off the heads of the guests as soon as they entered. After this barbarous piece of treachery, Abbas considerably enlarged his dominions, and re- pelled two dangerous invasions of the Turks. He attempted also to promote commerce, and civilise his subjects; but stained all his great ac- tions by abominable cruelties. He took the isle of Ormus from the Portuguese, who had kept it since

1507, by the assistance of some English ships in 1622; and died six years after, aged seventy.

The princes who succeeded Abbas were re- markable only for those cruelties and de-

baucheries which occasioned a revolution in 1716, when Shah Hussein was dethroned by the Afghauns or Pattans ; who, being oppressed by the ministers, revolted, under the conduct of one Mereweis. The princes of the Afghaun race en- joyed the sovereignty only sixteen years, when Ashraff, the reigning shah, was dethroned by one of his officers. On this Thamasp, otherwise called Thamas, the only survivor of the family of Abbas, assembling an army, invited into his service Nadir Khan, who had obtained great reputation for his valor and conduct. No sooner had Nadir got the command of the Persian army than he attacked and defeated the usurper Esriff, put him to death, and recovered all the places the Turks and Russians had taken during the rebellion, when prince Thamas seemed to be established on the throne : but Nadir, to whom Thamas had given the name of Thamas Kouli, that is, the Slave of Thamas, thinking his ser- vices not sufficiently rewarded, and pretending that the king had a design against his life, con- spired against his sovereign, put him to death, and usurped the throne, styling himself Shah Nadir. He afterwards laid siege to Candahar, of which a son of Mereweis had possessed him- self. While at this siege, the court of the Great Mogul being distracted with factions, one of the parties invited Shah Nadir to come to their as- sistance, and betrayed the Mogul into his hands. He thereupon marched to Delhi, the capital of India, summoning all the viceroys and governors of provinces to attend him, and bring with them all the treasures they could raise : those that did not bring as much as he expected he tortured and put to death. Having thus amassed an im- mense treasure, he returned to Persia, giving the Mogul his liberty on condition of his resigning the provinces on the west side of the Indus to Persia. He afterwards made a conquest of Us- beck Tartary, and plundered Bochara the capital. Then he marched against the Dagistan Tartars ; but lost great part of his army in their moun- tains. He defeated the Turks in several engage- ments ; but, laying siege to Bagdad, was twice compelled to raise it. He proceeded to change the religion of Persia to that of Omar, hanged up the chief priests, put his own son to death, and was guilty of such cruelty that he was at length assassinated by his own relations in 1747.

Upon the death of Shah Nadir a contest en- sued among his relations for the crown, which rendered Persia a scene of the most horrible confusion for upwards of forty years. The reader will form some

notion of the troubles of this unhappy country from the following series of pretenders to the throne, between the death of Nadir and the accession of Kerim Khan: — Their reigns, or more properly the length of time they respectively governed with their party, were as follows; — 1. Ad il Shah, nine months. 2. Ibra- him Shah, six months. 3. Shah Rokh Shah, af- ter a variety of revolutions, at length regained the city of Meschid ; he was alive in 1787, and above eighty years of age, reigning in Khorasan, under the direction of his son Nussir Ullah Meerza. 4. Suleeman Shah, and 5 Ismael Shah, in about forty days were both cut off, almost as soon as they were elevated. 6. Azad Khan

Afghan, one of Kerim Khan's most formidable rivals and competitors, was subdued by him, brought prisoner to Shirauz, and died there a na- tural death. 7. Hussun Khan Kejar, another- of Kerim Khan's competitors, was besieging Shi- rauz, when his army suddenly mutinied and de- serted him. The mutiny was attributed to their want of pay. A party sent by Kerim Khan took him prisoner ; his head was instantly cut off, and presented to Kerim Khan. His family were brought captives to Shirauz ; they were well treated, and had their liberty given them soon after, under an obligation not to quit the city. 8. Ali Merdan Khan was killed by a musket- shot, as he was walking on the ramparts of Mas- chid encouraging his men. 9. Kerim Khan Zund, by birth a Curdistan, was a favorite officer of Nadir Shah, and at the time of his death was in the southern provinces. Shirauz and other places had declared for him. After various en- counters, he completely subdued all his rivals, and finally established himself ruler of all Persia. He was in power about thirty years ; the latter part of which he governed Persia under the ap- pellation of vakeel or regent, for he never would take the title of shah. He made Shirauz the chief city of his residence, in gratitude for the assistance he had received from its inhabitants and those of the southern provinces. He died in 1779, regretted by all his subjects, who es- teemed and honored him as the glory of Persia. When the death of Kerim Khan was announced in that city much confusion arose ; twenty-two principal officers of the army, men of high rank, took possession of the citadel, with a resolution to acknowledge Abul Futtah Khan (the eldest son of the late vakeel) as their sovereign, upon which Zikea Khan, a relation of the late vakeel by the mother's side, possessed of immense wealth, enlisted a great part of the army into his pay. Zikea Khan was of the tribe of Zund (or the Lackeries), a man remarkably proud, cruel, and unrelenting. Having assembled a large body of troops, he marched to the citadel,

and laid close siege to it for three days ; at the expi- ration of which, finding he could not take it by force, he had recourse to treachery. To each of the principal khans he sent a written paper, by which he swore upon the Koran, that if they would come out and submit to him, not a hair of their heads should be touched, and, they should have their effects secured to them. Upon this a consultation was held by them ; and as they could not subsist many days longer, they agreed to surrender, relying on Zikea's promises. Zikea, in the mean time, gave private orders for the khans to be seized, and brought separately before him as they came out of the citadel. His orders were strictly obeyed, and these deluded men were all massacred in his presence. Zikea Khan's tyranny became soon intolerable, and he was cut off by his own body-guard, when Abul Futtah Khan, who was then in the camp, was proclaimed king by the unanimous voice of the troops, whom he immediately led back to Shirauz. On his ar- rival he was acknowledged as sovereign by all Tanks of people, and took quiet possession of the government.

Mahomed Sadick Khan, only brother of the late Kerim Khan, who had during that prince's life filled the high office of beglerbeg of Fars, and had been appointed guardian of his son Abul Futtah Khan, was at this period governor of Bussora, which had been taken by the Per- sians, previous to the vakeel's death. Upon hearing of his brother's decease he began to form schemes for the destruction of his nephew ; but, as it was necessary for him to be on the spot, he withdrew the Persian garrison from Bussora, who were all devoted to his interest; evacuated the place, and marched immediately for Shirauz. The news of Sadick Khan's approach threw the inhabitants of this city into the greatest conster- nation; some, from his public character, ex- pected he would fulfil the commands of his deceased brother ; others expected he would set up for himself, which proved to be the case ; for, having entered Shirauz a very few days after, he caused Abul Futtah Khan to be deprived of sight, and put into close confinement. After this Sadick Khan openly assumed the government. As soon as the intelligence reached AH Murad Khan, who was at Ispahan, he instantly rebelled ; deeming himself to have an equal right to. the government with Sadick Khan. Persia was thus again involved in all the horrors of a civil war. Ali Murad Khan indeed took possession of Shi- rauz, assumed the government, and gave to the empire the flattering prospect of being settled under the government of one man; but this prospect was soon obscured by the power and credit acquired by Akau Mahomed. On the night following Kerim Khan's death this man found means to make his escape from Shirauz, and fled to the northward, where, collecting some troops, he soon made himself master of

Mazanderan and Ghilan, and was proclaimed nearly about the time that Ali Murad Khan had taken Shirauz. Ali Murad, hearing of his success, determined to go against him ; but, as he was previously proceeding to Ispahan to suppress a rebellion, he fell suddenly from his horse and expired. At this period Jaafar Khan, the eldest and only surviving son of Sadick, was governor of Khums : he deemed this a favorable opportunity to assert his. pretensions to the government, and immediately marched with what few troops he had to Ispahan; where, soon after his arrival, he was joined by the greater part of the malcontents who were then in arms. In this situation he re- mained some time ; but, Akau Mahomed coming down upon him with his army, he was obliged to risk his fate in a battle, and, being defeated, fled to Shirauz. Soon after he ventured a second en- gagement with his opponent ; and for this pur- pose inarched with his arrny towards Ispahan ; the two armies met near Yezdekhast, when a battle ensued ; and, Akau Mahomed's superior fortune again prevailing, Jaafer was defeated, and retired to Shirauz, which he quitted on the 25th of June, 1787, and shortly after marched his army to th northward.

Akau, or Aga Mahomet's fortunes finally prevailed ; and he transmitted the throne of Per- sia to his nephew, the present shah, Futtah Ali, who is described as an accomplished prince; his

eldest son is also said to be an able chieftain, and has distinguished himself in the late contests with Russia.

MODERN STATISTICS OF PERSIA. — On the em- pire once of this name the great modern en- croachments have been those of the Afghauns on the east (see AFGHAUNISTAUN), the Turks on the

west, or in the direction of the rivers Euphrates and Tigris, and the Russians in Georgia. Va- rious tribes have also rendered themselves inde- pendent in the great Caucasian chain. Mr. Kenneir, one of the ablest modern writers on the geography of Persia, includes the following pro- vinces as forming its present dominion : —

Provinces. Fars, or Fasistan Irak, or Irakadjemi . Lar, or Laristan .. . Kuzistan

Kurdistan (part of) . Azerbijan Ghilan Mazanderan Khorassan Kerman (western part)

Ancient Names. Persis, or Persia Proper Media .

Susiana , . •

Assyria Proper . . ..

Gela . . • . Hyrcania (part of) Margiana and Aria t . Caramania

Chief Towns.

Shiraz.

Ispahan

Lar.

Shuster.

Tabreez.

Resht.

Sari.

Meshed.

Kerman.

One of the most prominent geographical fea- tures of this empire is the grand Caucasian chain, which some writers consider as the root of all its ranges of mountains. It belongs, however, itself rather to the frontier than the interior, es- pecially of late years, and since the success of the Russian arms in this quarter. Southwards from this chain spread the mountains of Arme- nia and Koordistan, which connect themselves with Mount Taurus ; also frontier and debate- able ground, i. e. between the Persian and Turkish empires. From the highest part of them, a great chain, under the name of Elwand or Elbruz, makes a circuit round the southern shore of the Caspian, leaving between itself and that sea a fertile plain. Mount Demavend, its loftiest peak, here rises to upwards of 10,000 feet ; and near it is supposed to be that remarkable pass to which the ancients gave the name of the Cas- pian Gates, which for twenty-eight miles allowed only a narrow road between high rocks for a sin- gle chariot. The Elbruz is continued along the southern frontier of Khorassan, and, though there lost sight of, is thought to unite with the moun- tains of Parapomisus, and through them with the Hindoo Cooash and Himmaleh. Chains of in- ferior height traverse the provinces of

Khusistan and Parisian, on the south.

Nearly the whole empire may be said to be traversed by a table land, composed of succes- sive ranges of mountains, with narrow plains at their bases, some of which exceed 100 miles in length. The distinguishing feature perhaps is the great deserts which occupy all the wide- spread tracts. The most noted is that called the Great Salt Desert, extending from the vicinity of Koom and Kashan, to the sea of Durra, termed also the Lake of Zerrah ; and from the province of Kerman to that of Mazanderan. Its length is therefore about 400 miles, and its breadth more than 200. This may be said to join the deserts of Kerman and Seistan, which stretch further to the east, and, like those of Arabia, are all impregnated with nitre. The precise nature of these wastes is scarcely known, but they are interspersed with salt lakes; and in many parts the surface is covered with a crust of brittle earth, or a succession of hills, consist- ing of particles of the finest red sand, so light as to be almost impalpable, which the violent winds

of the desert often raise into a moving cloud, destructive to all life. Smaller deserts occupy other parts.

Modern Persia is singularly poor in rivers, for the Indus, Oxus, Euphrates, and Tigris, as well as the Heirmund, which feeds the lake of Zerrah, are now all beyond her frontier. None that remain are navigable for above three or four miles. We may mention the Karoon, the Kerah, and the Arras or Araxes, as the principal. Various smaller streams descend from the mountains, but are generally soon lost in the dry sandy plains : some few reach the southern shores of the Cas- pian. On the banks of these streams, however, are some of the most beautiful and fertile plains of the world.

Persia contains several extensive salt lakes. The largest is that of Urumea, near the city of that name, between the Caspian and the western frontier. Its circumference is computed at 300 miles. The shape of this lake is oval, and the waters very salt and clear, emitting a disagree- able sulphureous smell. Mr. Kinneir did not, however, find them encrusted with salt, as some writers have asserted. It contains numerous islands, one of which forms a peninsula when the water is low, and is about twenty-five miles in circuit, inhabited by wild asses, and deer, and other game. Another of these salt lakes is Bak- tegan, ten miles south-east of Shiraz, and noted for the purity of its salt. Its shape is long and narrow, and its circuit about seventy-five miles. It is nearly dry in summer, when the people who live on its borders collect the salt from the bottom. It is the final receptacle of the river that passes Ispahan. The great lake of Zerrah is at present chiefly included

in the dominions of Cabul, and only touches the eastern confines of Persia. The PERSIAN GULF will be found no- ticed by us distinctly.

The climate partakes of a variety similar, though arising from very different causes, to that of our own country, and the order of the seasons is very similar to ours. From the end of May to that of September, the heat in the low grounds and sandy deserts of the interior is frequently ex- treme; but on. the sides of the mountains and elevated plains, though the higher peaks are still covered with snow, the summer is mild and agreeable. At Teheran, the present metropolis,

the heat of summer is so intense that the king generally quits the capital, and encamps on the adjacent plains ; but the winters, to the north of Shiraz, and in higher latitudes, are often severe. Such is their severity at Teheran and Tabreez, that all communication between these towns and the neighbouring villages is frequently suspended for several weeks. The winds that blow over the hot deserts often raise the temperature of the adjacent districts. At Kashan, the heat has been found to exceed that at the village of Kohrood, about twenty-five miles distant, by 20° of Fah- renheit ; a difference which can only be ac- counted for by the proximity to the former place of the Great Salt Desert. From a meteorological journal, kept by Dr. Jukes at Bushire, a port in the upper part of the Persian Gulf, in 1807, it appears that in June, July, August, and Sep- tember, Fahrenheit's thermometer often rose to 96°, and was never lower than 80°. Throughout the whole of October it did not sink below 72°, but sometimes rose above 90°. On the 29th of December, 1808, the thermometer fell to 30°, but during nearly the whole of the month it had ranged from 40° to upwards of 72°. The place where the observations were made was on a peninsula, exposed to the cooling breezes of the sea. In most places the difference between the temperature of the day and night is great ; and a cool wind often springs up in the evening which lasts nearly the whole night, and diffuses such a freshness that warm clothing is sometimes necessary. Sir John Malcolm says, 'In the year 1810, when encamped on the plain of Kubatoo, in Kurdistan, the water in my tent froze to nearly half an inch thick on the 17th of August. The lat. was 36° N., and Fahrenheit's thermometer, at six A. M., stood at 34°.' The transition from heat to cold is sometimes very sudden. Rain seldom falls except in the pro- vinces of Ghilan and Mazanderan. On the whole the air is dry, the atmosphere almost always clear, and the country, perhaps, the most healthy in the east. As so little rain falls,

the dews are less copious than in Hindostan.

The soil partakes the diversity of the climate : the centre and south are arid in a high degree, and entirely destitute of trees ; while, on the shore of the Caspian, timber is abundant. The well watered plains of Ghilan and Mazanderan yield the sugar-cane in considerable plenty ; but even the grains of the temperate climates can only be raised southward by artificial watering, a process to which the indolence of the Persian farmer does not allow him to apply. A vast ex- tent of the empire is therefore abandoned to pas- ture, and tenanted by nomade tribes, like those of Tartary and Arabia. This portion has un- fortunately acquired a great extension, in conse- quence of the political calamities and internal feuds to which this country has been long ex- posed.

Of the most favored districts a traveller above cited remarks : — ‘ The valleys of the central pro- vinces of Persia abound with all the rarest and most valuable vegetable productions, and might be cultivated to any extent. The pasture grounds of that country are not surpassed by any lands in the world. Trees are seldom found except VOL. XVII.

near towns and villages ; but the luxuriance with which they grow, wherever planted, shows that the climate is congenial to them. The orchards of Persia produce all the fruits of the temperate zone, and its wilds abound with flowers that can only be reared by care and cultivation in the gardens of Europe.’ The plain of Schiraz is the boast of Persia, and indeed of the eastern world ; that of Ispahan is only second to it. The fruit every where may be said to be most excellent, and the gardens are cultivated with the greatest care. The vine flourishes in several provinces. The wine of Schiraz is considered superior to any other in Asia ; that produced on the sides of the Caucasian mountains is also highly esteemed. Cotton, indigo, and tobacco, are also raised in various parts. Among the common vegetables are peas, beans, carrots, turnips, and cucumbers : and the potato has been lately introduced. Rhubarb, opium, senna, saffron, assafoetida, and other drugs, are also found.

In the northern provinces the mulberry is so extremely abundant as to render silk the staple produce of the empire. In these provinces con- siderable traces of the superior culture of former times abound. Throughout the country the husbandman, ruined by war or oppression, has often deserted his fields, and wandering tribes have descended from the mountains to occupy his place. Territories therefore formerly dis- tinguished for fertility are now rendered wholly unfit for culture. The artificial canals, which supplied them

with the necessary moisture, have been suffered to dry up : and the salt, with which the soil and waters are every where impregnated, has often accumulated and formed a species of crust on the surface of the ground, so as to ren- der it capable of producing only soda and saline plants. Scarcely any where does the husbandman enjoy a moment's security from cheepaos or the forays of freebooters. Mr. Morier, being at- tacked by a predatory chief, in the plain of Shuster, defeated and carried him prisoner to Ram Hormuz. The governor of that place, how- ever, assured him that he could not with safety take any violent measures against so powerful an individual. He even advised Mr. M. to take advantage of the incident, by engaging this per- son to conduct him safely through the rest of his journey, on condition of regaining his liberty ; and this was found in fact the only safe measure.

Persia is noted both for its horses and dogs : the former, although neither so swift nor so beau- tiful as those of Arabia, excel them in size and strength. The most .valuable are of the Turco- man breed ; and a chupper or courier has been known to travel from Teheran to Bushire, a dis- tance of 700 miles, on the same horse, in ten days. Superior mules, asses, and camels, are also used. The mules are small, but well shaped and strong. The camels equal those of Arabia, and are much used in all the eastern and desert part of the country ; but the western regions are too mountainous for this animal. Buffaloes are found, together with large flocks of goats and sheep, in the uplands : lions, tigers, and bears, in the forests of Ghezan and Mazanderan ; while beautiful zebras roam wild over many of the plains of the interior. They are extremely diffi-

cult to take. Most of the poultry of Europe is also bred in Persia, except the turkey. Insects abound in the damp and marshy places on the borders of the Caspian, near the shores of the Persian gulf, and towards the banks of the Ti- gris ; and locusts, snakes, and scorpions, visit the southern parts.

The most extraordinary mineral production of Persia is that of naphtha or bitumen, found in pits three feet in diameter, and ten or twelve deep, which fill of themselves after a certain period. This forms a most excellent substitute for pitch. The bottoms of most of the vessels which navigate the Euphrates and Tigris are covered with it ;

and it is used by the natives, instead of oil, for lamps. There is also a white naphtha, which, however, is suspected to be a different substance. It is found floating, like a crust, on the surface of the water, does not pos- sess the qualities of pitch, but affords a more agreeable light. A black and liquid petroleum, of an agreeable odor, flows in small quantity from a mountain in Kerman. The king reserves it for himself to be used in presents ; and the mines are carefully sealed and guarded. The turquoise, a precious stone peculiar to Persia, is found in the mountains of Khorassan. Here also the king demands a choice of all that the mine produces; but the merchants have found the secret of evading this monopoly, and of car- rying off the jewels. Silver, lead, iron, and copper, are met with in the provinces of Ker- man and Mazanderan. The mineral waters of the country are entirely neglected.

The existing government of Persia is entirely absolute : the reigning king being judged the vicegerent of the prophet, and entitled to the most implicit obedience. He is absolute master of the lives and properties of his subjects ; and the first man in the empire who disputes or neg- lects his commands may instantly be stript of his dignities, and publicly bastinadoed. The grand vizier and lord high treasurer exercise generally the executive power ; but in the capi- tal the king sits daily to administer justice. The punishments are very severe ; and the barbarous system of mutilation frequent. Many of the wandering tribes, however, are ruled by their own khans, who merely pay occasional military ser- vice to the state. At a former period all the provinces were thus ruled by hereditary rulers who felt a solid interest in the welfare of the people ; but these have been removed, and the new officers study only to enrich themselves. The weakness thus induced has probably been one main cause of that series of destructive revo- lutions to which Persia has been subject, since the reign of Shah Sophi, who made this change. The khans who still retain hereditary sway, hav- ing at their command the most warlike part of the population, are much courted by the monarch.

Persia has at the present time scarcely any thing like a regular army. The most efficient consists of the royal slaves, as they are termed with great propriety, 3000 in number, a con- siderable part of whom have been disciplined after xhe European manner. The royal guards, amounting to 10,000, have lands assigned them

round the capital, and compose only a body of militia. The defence of Persia rests mainly upon the wandering tribes, who are alike excited by loyalty and the desire of plunder, to join the standard of the shah, but who often revolt to the enemy. This force, consisting entirely of cavalry, may, it is said, by a great effort, be raised to 150,000 or

200,000 men. The Persians have no idea of tactics. In their reviews the soldiers pass along one by one, and have their arms ex- amined. In making war, they fly round the enemy, and endeavour to cut off his provisions and water; seeing him thoroughly exhausted, they make a sudden onset, and overwhelm him. Persia is always to be easily conquered, but is retained with difficulty. The Russians, like their ancient enemies, notwithstanding their .superiority in the field, have never been able to extend their frontier much beyond the Araxes.

The people, though oppressed on every side, are gay, lively, and active. Their dress is much lighter than that of their Turkish neighbours, and profusely adorned with ornaments : ostentation is indeed a reigning principle. A sabre will often be made worth from 1 5,000 to 30,000 pias- tres. There is no country where the beard is regarded with equal veneration. During the day it is washed, repeatedly combed, and adjust- ed, for which purposes a pocket-mirror is con- stantly in use : the rich even adorn it with jewellery.

The Persians are the most learned and polite nation of the east. They employ in their con- versation the most extravagant hyperboles : and, to make their sincerity appear the greater, they contrive, when a traveller is passing, to be over- heard expatiating in his praise to a third person. Their whole conduct consists principally, we are told, of a train of fraud and artifice ; and they never return to fair dealing till they find a man able to detect their impostures. Presents are looked for with great avidity.

There are two regular classes of poets, one whose theme is philosophy, and the other whose lyre is devoted to love. At the head of the for- mer is Sadi, of the latter Ilafiz. They dwell chiefly of course upon the beauties of the beloved object, which are treated in the utmost detail, upon the miseries of absence, &c. Rigid Ma- hometans scarcely consider it lawful to peruse the works of Hafiz. Morality is taught by pro- verb, apologue, and fables, usually clothed in verse. The following is their circle of sciences, according to the order in which they are studied : grammar and syntax, theology, philosophy, ma- thematics, and finally medicine and astrology. Their diligence in study is said to be extraordi-. nary, and the greatest attention is paid to edu- cation. The three ranks of wise men bear the titles of Taleb, Mollah, and Moushtehed.

The whole nation are Mahometans, of the sect of Sunnites, or Ali, who, on that ground, are viewed by the Turks with greater abhorrence than Christians. The Persians, however, are not intolerant, but listen without anger to the profes- sions or arguments of those who hold a

different belief. The exception, perhaps, is in the case of the Guebres, or worshippers of fire, who are now almost extirpated ; a remnant only of about 4000

being found in Yezd, and other towns of Ker- man. The Persians generally have the utmost confidence in charms, talismans, sentences of AH written upon parchment, lucky and unlucky days, &c.

To a considerable extent they are a manu- facturing people, and in the brilliancy of their dyes and colors surpass the Turks, and perhaps even Europeans. To the latter they have com- municated that exquisite blue tint called ultra marine. The wool produced here is manufactured into stufTs of various form and fineness ; and those unrivalled carpets, to which we give the name of Turkey, are in fact wrought principally by fe- males of the Persian tribes. The wool produced by the goats of Kerman is also made into shawls of considerable fineness. Silk is a great staple, either by itself, or mixed with cotton and wool ; and the Persians excel in brocade, embroidery, and tapestry of all kinds. Muskets, pistols, and carabines, are made and mounted in most of the great towns: and Khorassan contains a manufactory of sword blades, the founders of which were, it is said, transported from Damas- cus by Timur. Leather, paper, and porcelain, nearly equal to that of China, are also among the manufactures. Bushire is now the only Per- sian port in the gulf, the chief commerce of which is carried on by way of Bussora. The commercial intercourse of Persia is, therefore, chiefly carried on by caravans with Turkey, Tartary, and India.

The PERSIAN GULF.— The Gulf of Persia (Sinus Persicus) is entered from the Gulf of Muscat through the Strait of Ormus, eleven leagues wide, between Cape Mussendom and Cape Bambaruck on the Persian shore. This gulf diifers from the Red Sea in being almost entirely free from coral reefs, though it has many islands. It is beyond the limits of the monsoons, but the position and nature of the neighbouring countries produce periodical winds, which blow up and down the gulf as in the Red Sea, north- west winds prevailing for nine months, from October to July, and south-east the other three months. The former is called by the Arabs shi- maul, and the latter shurquee. For about forty days, commencing at the middle of June, the north-west wind blows with great violence, and is called the grand shimaul. In March and April these winds also blow very strong for about twenty days without intermission ; and at this time the current sets strong up the gulf

against the wind. During the period of the prevailing south-east winds, hard but transient gales from the south-west are sometimes experienced towards the entrance of the gulf. The currents are observed to run into the gulf from May to September ; and out during the rest of the year. In the middle of the gvllf the current generally sets down, but is weak : along the shores small tides prevail. The prevailing winds seem to depend on the nature of the neighbour- ing countries, and the position of the gulf north- west and south-east. To the south-east and east are the Arabian Sea and the sandy deserts of Persia, the atmosphere of which must be more rarified for a greater part of the year than that to the north and north-west, where are the Black

and Caspian Seas and the cold Caucasus : hence north-west winds prevail the greater part of the year, and are strongest in the summer months, when the air to the south is most rarified by the sea being vertical, and by the melting of the northern snows and ices, producing a stream of condensed air. In the gulf are many springs of fresh water in the sea, particularly one near the Isles of Bahrein.

The Persian Gulf receives at its head the united waters of the two great rivers, Tigris and Euphrates, which have both their sources in the mountains of Caucasus, between the Caspian and Black Seas. Their junction takes place at Korna, thirty leagues above Bussora, and the united waters take the name of the Shat-al-Arab (River of the Arabs) to the sea, into which they empty themselves, amongst banks, by several mouths ; of which the western one alone is na- vigable by ships, and is distinguished from the others by the branches of date trees floating out of it with the stream : its greatest depth is twenty feet, and for twenty-five leagues from its mouth it is free from banks. The other branches are only navigable by boats. The land at the mouth of the river is so low that the date trees are the first objects seen, and in general these trees cover the banks up to Bus- sora, with a few interspersed patches of rice ground. Vessels of seventy tons go from Bus- sora to Bagdad ; these vessels, from the scarcity of wood, are composed of pieces of every size and species, from the size of a barrel stave up- wards, and the whole is covered with dammer, a species of resin used in India instead of pitch, an inch thick, which keeps them from leaking.

The Arabian coast of the gulf, from the Strait of Ormus to Aftan River, 400 miles, is occupied by the Jochassim pirates, whose chief places of rendezvous are Ejmaum, a small town and good port, and Noseilkam, ten leagues from Ejmaum. The sheik of Julfar, whose territory is outside the gulf, on the west of Cape Mussendom, has also a number of pirate dows, mounting four to eighteen guns ; but the most

powerful of these piratical chiefs is the Chaub, whose capital is Durac (thought to be the Siwa of Alexander), on the east bank of the Euphrates.

The west shore of the Persian Gulf is always avoided by European ships, and consequently is little known. For a distance of sixty leagues from Cape Mussendom there is not known to be any place of shelter. Ras-el-Khima is a large pirate town, on a sandy peninsula, and is, comparatively with other Arab towns, strongly for- tified with batteries and towers. In 1809 the British Indian government determined to chastise those pirates, who had long committed depreda- tions on the English trade, and even captured some of the Company's vessels of war, treating the crews with great cruelty ; an expedition was consequently sent from Bombay, and their capital, El Khima, was taken by assault, and the fortifi- tions destroyed, together with seventy of their piratical dows. A considerable plunder fell into the hands of the captors, whose loss was only one officer killed, and four men wounded. In latitude about 25° is a place called Seer, with the island Zare to the west; the Pearl Bank is

thought to commence here, and extends along the coast to latitude about 27°. There are many insignificant towns on the coast, from which the pearl fishery is carried on. The most consider- able are Lahsa, on Aftan River ; Farut, celebrated for its grapes ; El-Katif, supposed to be the ancient Gerra, built of salt stone, and where the ruins of a Portuguese fort are seen ; Grain, Gran, or Koueit, is forty leagues from El Kalif; the coast between is desert, and with many islands. Gran is a town of mats and poles, with 10,000 inhabitants, engaged in the pearl fishery to a considerable extent. Here the East India Company's packets usually wait for the over-land despatches from England.

Bussora, Bassora, Basra or Busra, called by the Arabs Al Sure, or the rocky, from the nature of the surrounding country, is a straggling Arab town, ninety miles from the sea, and one mile and a half from the west bank of the river of the Arabs. A creek runs from the river to the town, by which vessels of seventy tons ascend to the latter. The houses

are of sun-dried bricks, with terraced clay roofs, and of a mean appearance. The country round is a level plain, and, except on the immediate banks of the river, without tree or shrub. The climate is not con- sidered healthy ; the summers are extremely hot, and the winters cold and wet : the extremes of the thermometer are 110° to 50°. The trade of Bussora is very considerable, it being the prin- cipal emporium of the commerce between India and the Turkish dominions. The English East India Company have a factory here.

Cape Jasques, which forms the eastern side of the Strait of Ormus, has a square white perforated cliff, like a tower, projecting into the sea. East of the cape a river empties itself into the north- west angle of Jasques Bay. Its mouth is crossed by a bar, with but seven or eight feet high-water, and four fathoms and a half within. The Per- sian shore of the gulf, towards its entrance, is occupied by Arabs, generally independent of the Persian dominion, who subsist by navigation, fishing, and piracy. Ascending the Persian shore of the gulf, the places of any note, in succession, are Mina, on the River Ibrahim. Gombroon, or Bender Abassi (Port of Abbas), was formerly .a celebrated mart, but at present is nearly de- serted, and in ruins. It is situated at the foot of a hill opposite Kismish Island, is unhealthy, and without water, but what is preserved in cis- terns from the rains. Kongon, or Kungoon, is a considerable town, with some trade ; the coast is here lined with stupendous mountains, rugged and barren. Cape Verdistan, or Burdistan, has a shoal running out from it three leagues to the south.

Bushire (Bender Abou-scher), the principal fort of the Persians in the gulf, is an ill-built town of 1200 houses, of white stone or sun- burnt bricks, surrounded by a wall with some bastions, merely sufficient to protect it from the insults of the Arabs. It is built on a point of land which is insulated in high tides. Vessels of ten feet draft run up the river to the town, but those of burden cannot approach the river's mouth nearer than five miles. The water pro- cured here is extremely brackish, though brought

ten miles from the town. The remains of the Portuguese factory and castle are still to be seen, as are the ruins of Reeshire, a large town in the time of their power, four miles south of Bushire. The English East India Company have a resident here. Its trade is considerable, being properly the seaport of Schiraz, with which it has a constant commercial communication by caravans, and from it Persia is principally supplied with India merchandise, for which it pays in specie.

The Gulf of Persia has, as we have said, several islands of note, of

which the first to- wards the entrance is the celebrated Ormus, six miles long, and two leagues from Bender- Abassi. It is a totally barren rock, the low parts of which are covered with a crust of salt resembling snow. Its inhabitants are few, and chiefly subsist by collecting sulphur, of which they furnish cargoes to some small vessels. They are dependent for fresh water on what is preserved in cisterns in the rains.

Larak Isle, a league south-west of Ormus. Kishmish (Oaracta), the largest island in the gulf, is twenty leagues long east and west, but not two broad ; it is populous and well cultivated, producing wheat and other grain. On the east side is a good port named Congo, but fit only for small vessels ; it has however a spring of ex- cellent water, almost the only one in the gulf. Near the middle of the south side is Angar Isle, three miles long, occupied by wild sheep and hogs. Mamouth and Selim, also called Mamet and Salamet, Kaze and Nabajou, and by English seamen the tombs, the ancient Aradus, are two small isles three leagues from the west side of Kismish.

Poliore and Knobflore, also called Souri and Abou-mousa, are barren islets. Souri looks like a two masted vessel.

Kyen, or Keish Island, is low, fruitful, and inhabited.

Busheab, or Sheik-Saib, is of considerable size, well inhabited, and covered with date trees. On the east side is a town occupied by pirates- Karek, or Kharedje (Icarah), north of Bushire, is three leagues long and two broad, has 1500 inhabitants, and is tolerably cultivated, producing wheat, rice, and barley ; it abounds with goats, but has few other animals. On the north are the ruins of a Dutch factory, established between 1750 and 1765. The island at present is sub- ject to the sheik of Bushire ; on its south side is fresh water, convenient for shipping. Pilots are usually taken here for Bussora. In the centre of the island is a hill, with coral and sea shells on its summit, and courses of lava are ob- served on its sides. The isles Bahrein, Baha- rei'n, are, as their name signifies, two in number ; they lie before Aftan River, five leagues from the main. The largest, named Anal by the Arabs, the ancient Tylos, is level, covered with date trees, and has a fortified town. The south- east, and smallest, is called Samak ; they are celebrated for the great pearl fishery carried on near them ; they are subject to the sheik of Bu- shire.

PERSIAN LANGUAGE. The claims and cha- racters of this important dialect of human speech have been so well illustrated and enforced in mo-

dern times, and especially by Sir W. Jones, that •we cannot withhold an abridged view of them in this place.

The history of the Persian language, according to Sir W. Jones, may be divided into four pe- riods, like that of the empire; under each dy- nasty there was an apparent change in the dialect of the kingdom, especially under the two last, viz. the ‘ Sassanian’ and < Mahometan' dynasties; and these are the only periods of which any cer- tain records remain.

In the infancy of the empire, under Cayuma- ras and his descendants, it cannot be supposed that any great pains were taken to polish the lan- guage. Herodotus assures us that, even after the reign of Cyrus, the whole education of the Per- sian youth, from the age of five years to twenty, consisted in only three points, riding, throwing the javelin, and the practice of moral virtue ; which account is also confirmed by Xenophon. It ought not, however, to be imagined, that the ancient Persians, especially those of the second period, were entire strangers to the art of com- position either in verse or prose; but what their language was, what were their rules of versifica- tion, or what was the course of their studies, no mortal can pretend to know with any shadow of exactness. The Greeks can give us no assistance, nor are we much enlightened by the writers after Alexander ; it is necessary therefore to consult the Persians themselves. From the great travel- ler Chardin, we learn, that the old Persian is a language entirely lost, in whicfa no books are ex- tant. We have therefore no account of the Persian language till the time of the Sassanian kings, who flourished from the opening of the third century to the middle of the seventh, during which period an academy of physic was founded at Gandisapor, a eity of Korosan, and, as it gradually declined from its original institution, it became a school of poetry, rhetoric, dialectics, and the abstract sciences. In this seminary the Persian tongue must have been much refined, and the rusticity of the old idiom was succeeded by a pure and elegant dialect, which being constantly spoken at the court of Beharam Gur in the year 351, ac- quired the name of Deri, or courtly, to distin- guish it from the pehlavi, pahlavi, or language of the country. This idiom did not, however, su- persede the ancient dialect ; for several compo- sitions in Pahlavi were extant even after Mahomet, which appear to have been written by order of the Sassanian princes. Anushirvan, surnamed the Just, who reigned at the close of the sixth century, when Mahomet was born, obtained

from India a collection of fables, translated by his chief physician from the Sanscrit language, which he acquired for this purpose; this collection he translated into the Pahlavian dialect; about 140 years after it was turned from Pehlavi into Ara- bic, by order of Almansor, second caliph of the Abassides ; and this is the volume now found in every language of Europe,under the name of Calila waDemma, or the fables of Pilpay. In the reign of Anashirvan Mahomet polished the language of his country ; and, when the battle of Cadessia gave the last blow to the Persian monarchy, the whole empire of Iran was reduced under the power of the first Blahometan dynasty : the ancient litera-

ture of Persia, which had been promoted by the family of Sassan, was immediately discouraged by the successors of Mahomet ; because some Persian romances, brought into Arabia, were ex- tolled to the disparagement of the Koran, the people to whom they were read alleging, that ‘ the stories of griffons and giants were more amusing to them than the moral lessons of Maho- met.’ Accordingly a chapter of the Koran was immediately written to stop the progress of these opinions, and other meas\ires were taken to check their diffusion. This is supposed to have been the moving cause of that enthusiasm of the Ma- hometans which induced them to burn the fa- mous library of Alexandria, and the records of the Persian empire. It was a long time before the native Persians could recover from the shock of this violent revolution ; and their language seems to have been little cultivated under the caliphs, who gave greater encouragement to the literature of the Arabians ; but when the power of the Abassides began to decline, and a number of independent princes arose in the different provinces of their empire, the arts of elegance, and chiefly poetry, revived in Persia ; .and there was hardly a prince, or governor of a city, who had not several poets and men of letters in his train. The Persian tongue was consequently restored in the tenth century ; but it was very different from the Deri or Pehlavi of the anci- ents ; it was mixed with the words of the Koran, and with expressions from the Arabian poets, whom the Persians considered as their masters, and affected to imitate in their poetical measures, and the turn of their verses.

The oldest Persian poems, of which Sir W. Jones obtained any knowledge, are those of Fer- dusi, and which, in his account of them, are ex- hibited as a glorious monument of eastern genius and learning ; and of which he further says, that if it should be generally understo’od in its original language, will contest the merit of invention with Homer himself, whatever be thought of its subject, or the arrangement of its incidents. He has furnished an extract from this

poem, and adds, that it will exhibit a specimen of the Persian tongue very little adulterated by a mixture with the Arabic, and in all probability approaching nearly to the dialect used in Persia in the time of Mahomet, who admired it for its extreme softness, and was heard to say, ‘ that it would be spoken on that account in the gardens of Paradise.’ Of these two languages was form- ed the modern dialect of Persia, which being spoken in its greatest purity by the natives of Pars or Farsistan, acquired the name of Parsi ; though it is even called Deri by Hafiz. Nearly in the same age, viz. at the close of the tenth and beginning of the eleventh centuries, the great Aleul Ola, surnamed Alami from his blindness, published his excellent odes in Arabic, in which he professedly imitated the poets before Maho- met. At this time, and soon after, the Persian language became altogether mixed with Arabic. At Shiraz, called the Athens of Persia, flourished in the thirteenth century, Sadi, a native of this city; who wrote several pieces, both in prose and verse ; and by means of an extract from his Gulistan, or Bed of Roses, Sir W. Jones has

shown us how the Persian and Arabic languages were mixed together in his age. The same city had the honor of producing, in the fourteenth century, the most elegant lyric poet of Asia, Shemseddin, surnamed Hafiz ; of whose produc- tions Sir W. Jones has transcribed two Gazals or anacreontic odes, with a translation. There is nothing, says our author, which affords a stronger proof of the excellence of the Persian tongue than that it remained uncorrupted after the irrup- tion of the Tartars, who at different times, and under various leaders, made themselves masters of Persia ; for the Tartarian princes, and chiefly Tamerlane, who was a patron of Hafiz, were so far from discouraging polite literature, like the Goths and Huns, that they adopted even the lan- guage and religion of the conquered country, and promoted the fine arts with a boundless munificence ; and one of them, who founded the Mogul empire in Hindostan, introduced the Persian literature into his dominions, where it flourishes to this day ; and all the letters from the Indian governors are written in the language of Sadi. The Turks themselves improved their harsh dialect by mixing it with the Persian ; and Mahomet II., who took Constantinople in the middle of the fifteenth century, was a protector of the Persian poets, among whom was Noured- din Jami, whose poem On the Loves of Joseph and Zelikha is very highly extolled by our author, who has given a specimen of his elegant style. In the sixteenth and seventeenth centuries, under the family of Sesi, the Persian language began to lose

its ancient purity, and even to borrow some of its terms from the Turkish, which was com- monly spoken at court.

The characters of the Persian language are written from right to left, and the language con- sists of thirty-two letters, which vary in their form as they are initials and medials, or finals, both connected and unconnected. For the pro- nunciation both of the consonants and vowels, we refer to Sir William Jones's Grammar, from which we make the following extracts.

The short vowels are seldom written in the Persian books, and the omission of them occa- sions a perplexity to the learner of the language. He will soon perceive with pleasure a great re- semblance between the Persian and English lan- guages, in the facility and simplicity of their form and construction. The former, as well as the latter, has no difference of termination to mark the gender, either in substantives or adjec- tives : all inanimate things are neuter, and ani- mals of different sexes either have different names, or are distinguished by certain words, denoting male and female.

The Persian substantives, like ours, have but one variation of case, which is formed by adding a certain syllable to the nominative in both num- bers; and answers often to the dative, but gene- rally to the accusative case in other languages. When the accusative is used indefinitely, this syllable is omitted ; but when the noun is defi- nite or limited, that syllable is added to it. In Persian there is no genitive case ; but when two substantives of different meanings come together, a hesra, or short e, is added in reading to the for- mer of them, and the latter remains unaltered.

The same rule must he observed before a pro- noun possessive, and before an adjective. The other cases are expressed, for the most part, as in our language, by particles placed before the nominative. Our article a is supplied in Persian by adding the letter ya, or as it is sounded ee, to a noun, which restrains it to the singular number.

The Persian plural is formed by adding cer- tain characters for syllables to the singular: but these terminations are not, as in many languages, wholly arbitrary ; on the contrary, they are re- gulated with the utmost precision. It must not be omitted that the Arabic substantives fre- quently have two sorts of plurals: one formed according to the analogy of the Persian nouns, and another after the irregular manner of the Arabians ; and this circumstance, besides several others, proves the impossibility of learning the Persian language accurately, without a moderate knowledge of the Arabic :

and Sir William Jones advises the learner to peruse with attention the Arabic grammar of Erpenius, of which there are two fine editions, one by Golius, and ano- ther by Albert Schultens, before he attempts to translate a Persian manuscript.

The Psrsian adjectives admit of no variation, but in the degrees of comparison. The positive is made comparative by adding to it one charac- ter for a syllable, and superlative by means of another. An adjective is sometimes used sub- stantively, and forms its plural like a noun ; if it be a compound adjective, the syllables denot- ing the plural number and the oblique case are placed at the end of it.

The personal pronouns are, 1, men, I : thus, sing. men. I ; plur. ma, we ; obi. merd, me, mara, us. 2. To, thou : thus, sing, to, thou ; plur. shumd, you or ye ; obi. tura, thee; shumurd, you. 3. O, he : thus, sing, o, he, she, or it ; plur. isftdn, they; obi. bra, him, her, or it; ish&nra, them. The possessives are the same with the personals, and are distinguished by being added to their substantives. Our reciprocal pronouns, own and self, are expressed in Persian by certain words, which are applicable to all persons and sexes. For the demonstrative pronouns this, these,, that, those, in the several cases singular, plural, and oblique, there are appropriate characters or ex- pressions. Certain syllables prefixed to pro- nouns personal change them into possessive.ˆ, and are read with a short vowel. The relatives and interrogatives are supplied by the invariable pronouns ke and the ; of which the former usu- ally relates to persons, and the latter to things.

The Persians have active and neuter verbs, like other nations ; but many of their verbs have both an. active and neuter sense, which can be determined only by the construction. These verbs have properly but one conjugation, and but three changes of tense, the imperative, the aorist, and the preterite : all the other tenses being formed by the help of certain particles, or of the auxiliary verbs signifying to be, and to be willing. The passive voice is formed by adding the tenses of the verb substantive to the partici-

Ele preterite of the active. Our author has ex- ibited the inflexions of the auxiliary verbs, and an analysis of all the tenses of a Persian verb, showing in what manner they are deduced from

the infinitive, which is properly considered by the oriental grammarians as the spring and foun- tain of all the moods and tenses, and which, therefore, in Arabic is called the masdar, or the source. The Persians are very fond of the par- ticiple preterite ; and it is very often used by their elegant writers to connect the members of a sentence, and to suspend the sense till the close of a long period. In poetry it sometimes is used like the third person preterite of a verb. Our author has subjoined a table of the moods and tenses, as they answer to those of European lan- guages.

In the ancient language of Persia there were very few or no irregularities : the imperative, which is often irregular in the modem Persian, was anciently formed from the infinitive, by re- jecting the termination eedcn ; for originally all infinitives ended in den, till the Arabs introduced their harsh consonants before that syllable, which obliged the Persians, who always affected a sweetness of pronunciation, to change the old termination of some verbs into ten, and by de- grees the original infinitives grew quite obsolete; yet they still retain the ancient inperatives, and the aorists which are formed from them. This little irregularity is the only anomalous part of the Persian language, which, nevertheless, far surpasses in simplicity all other languages, as Sir William Jones says, ancient or modern, of which he has any knowledge.

One of the chief beauties of the Persian lan- guage is the frequent use of compound adjectives; in the variety and elegance of which it surpasses not only the German and English but even the Greek. These compounds are thought so beau- tiful by their poets that they sometimes fill a distich with them.

The construction of the Persian tongue is very easy, and may be reduced to a few rules, most of which it has' in common with other languages. The nominative is usually placed before the verb, with which it agrees in number and person. It is remarked, however, that many Arabic plurals are considered in Persian as nouns of the singu- lar number, and agree as such with verbs and adjectives. Another irregularity in the Persian syntax is, that the cardinal numbers are usually joined to nouns and verbs in the singular. The adjective is placed after its substantive, and the governing noun is prefixed to that which it go- verns. Conjunctions which express conjecture, condition, will, motive, &c., require the conjunc- tive or potential mood. Prepositions and inter- jections are fixed to nouns in the nominative case. The modern Persians borrowed their poetical measures from the Arabs, and they are very various and complicated.

The Persian elegy differs only in its length from the ode, except that the cassideh often turns upon lofty subjects, and the gazal comprises for the most part the praises of love and merriment, like the lighter odes of Horace and Anacreon. Sir William Jones, among other numerous trans- lations, has given us a translation in verse of a beautiful Persian songby Hafiz. Butwemustnow content ourselves with referring to the close of Sir William Jones's Persian Grammar, or to his

Works, vol. 5, for further information on these interesting topics.

PERSIAN WHEEL. See HYDROSTATICS.

PERSIC A, the peach, is by Linnaeus referred to the same class and genus with amygdalus ; however, as they are reckoned different genera, by Tournefort and others, we shall here mention the three principal species of the persica most remarkable for the beauty of their flowers. 1. P. Africana, the double-flowering dwarf almond.

2. P. humilis, the dwarf almond. These two reach not above the height of three or four feet, though their flowers are of equal beauty with the

3. P. vulgaris, the common peach tree, with double flowers. It is a very great ornament in gardens, producing very large double flowers of a beautiful red or purple color, and growing to a considerable size. Numerous other species of peach trees, with their culture, uses, &c., are de- scribed under AMYGDALUS.

PERSICARIA, in botany. See POLYGONUM.

PERSICUM MARE, or PERSICUS SINUS, in ancient geography, a part of the sea which the Romans called Mare Rubrum, and the Greeks Mare Erythrstum; washing Arabia Felix on the east, between which and Carmania, entering into the land, it washes Persia on the south. Its large mouth consists of straight sides, like a neck, and then the land retiring equally a vast way, and the sea surrounding it in a large compass of shore, there is exhibited the figure of a human head (Mela). Theophrastus calls this bay Sinus Arabicus.

PERSIMON. See DIOSPYROS. From the persimon is made a very palatable liquor in the following manner: — As soon as the fruit is ripe a sufficient quantity is gathered, which is very easy, as each tree is well stocked with them. These persimon apples are put into a dough of wheat or other flour, formed into cakes ; and put into an . oven, in which they continue till they are quite baked and sufficiently dry, when they are taken out again : then, in order to brew the liquor, a pot full of water is put on the fire, and some of the cakes are put in :

these become soft by degrees as the water grows warm, and crumble in pieces at last ; the pot is then taken from the fire, and the water in it well stirred about, that the cakes may mix with it : this is then poured into another vessel, and they con- tinue to steep and break as many cakes as are necessary for a brewing : the malt is then in- fused, and they proceed as usual with the brew- ing. Beer thus prepared is reckoned much pre- ferable to other beer. They likewise make brandy of this fruit in the following manner : Having collected a sufficient quantity of persi- mons in autumn they are altogether put into a vessel, where they lie for a week till they are quite soft ; then they pour water on them, and in that state they are left to ferment of them- selves, without any addition. The brandy is then made in the common way, and is said to be very good, especially if grapes (in particular of the sweet sort), which are wild in the woods, be mixed with the persimon fruit. Some persi- mons are ripe at the end of September, but most of them later, and some not before Novem-

ber and December, when the cold first over- comes their acrimony. The wood of this tree is very good for joiners' instruments, such as planes, handles to chisels, &c., but if after being cut down it lies exposed to sunshine and rain, it is the first wood which rots, and in a year's time there is nothing left but what is useless. When the persimon trees get once into a field, they are not easily got out of it again, as they spread greatly.

PERSIS, a Roman lady, whom St. Paul sa- lutes in his epistle to the Romans (xvi. 12), and calls his beloved sister. She is not honored by any church, which is something singular.

PERSIS, in ancient geography, a province of Persia, bounded by Media, Carmania, Susiana, and the Persian Gulf. It is used by some au- thors for Persia itself.

PERSIST', v. n. -\ Lat. persisto ; l-i.per- PERSIST'ANCE, n. s. (sister. To persevere ; PERSISTENCY, {"continue firm; not to

PERSIST'IVE, adj. J desist : the noun sub- stantive and adjective follow these senses.

Thou tbinkest me as far in the devil's book, as thou and Falstaff, for

obduracy and persistency.

Shakspeare.

The protractive tryals of great Jove, To find persistive constancy in men. Id.

The love of God better can consist with the inde- liberate commissions of many sins, than with an al- lowed persistance in any one.

Government of the Tongue.

If they persist in pointing their batteries against particular persons, no laws of war forbid the making reprisals . A ddison .

Nothing can make a man happy but that which shall last as long as he lasts : for an immortal soul shall persist in being, not only when profit, pleasure, and honour, but when time itself shall cease.

South.

PERSIUS FLACCUS (Aulus), a Latin poet in the reign of Nero, celebrated for his satires. He was born, according to some, at Volterra in Tus- cany ; and, according to others, at Tigulia, in the gulf of Specia, in the year 34. He was educated till twelve years old at Volterra; and afterwards at Rome, under Palsemon the gram- marian, Virginius the rhetorician, and Cornutus the stoic, who contracted a friendship for him. Persius consulted that illustrious friend in the composition of his verses. Lucian also studied with him under Cornutus ; and was so charmed with his verses that he was incessantly breaking out into acclamations at the beautiful passages in his satires. He was a steady friend, a good son, an affectionate bfother and parent. He was chaste, meek, and modest : which shows how wrong it is to judge of a man merely by his writings ; for the satires of Persius are not only licentious, but sharp and acrimonious. Persius was of a weak constitution, and troubled with a weak stomach, which was the cause of his death in the thirtieth year of his age. Six of his sa- tires remain; in their judgments of which the critics have been much divided, excepting as to their obscurity. Yet his style is grand, figura- tive, poetical, and suitable to the dignity of the stoic philosophy : and hence he shines most in recommending virtue.

PER’SON, n. s. PER’SONABLE, adj. PER’SONAGE, n. s. PER’SON A L, adj.

Fr. personne; Ital, Span, and Lat. persona. An individual human being;

see the extracts

PERSONALITY, n. s. '"from Locke; a man or PERSONA'TION, woman considered as

PERSONIFICA'TION, opposed to, or distinct PERSON'IFY, v. a. J from, things; or consi- dered as present ; one's own self, appearance, character, or office ; in grammar, a quality of the noun which modifies the verb : personable means of good or handsome person ; graceful : personage (Fr. personage}, a considerable or eminent per- son ; exterior: character or appearance ; stature : personal belonging to a human being; proper to an individual ; present ; real ; corporeal ; ex- ternal ; in law, that which is moveable or sup- posed appendant to the person ; not real ; not land : in grammar, a personal verb is that which has all the regular modifications of the three per- sons ; opposed to an impersonal one, that has only the third : personality is individuality ; in- dividual existence ; it is also used in modern parlance for personal reflection or remark : per- sonally follows the senses of personal : to per- sonate is represent; pass for a given or supposed person ; hence pretend ; counterfeit ; represent as in a picture ; describe : but the last senses are disused : personation is used by Bacon for coun- terfeiting another's person : personification is, in rhetoric, prosopopoeia, the change of things to persons, as ' Confusion heard his voice :' to per- sonify is, thus to change a thing, or give it per- sonal attributes.

Him that accepteth not the persons of princes, nor regardeth the rich more than the poor. Job.

Dorus the more blushed at her smiling, and she the more smiled at his blushing ; because he had, with the remembrance of that plight he was in, forgot in speaking of himself the third person .

Sidney.

It was a new sight fortune had prepared to those woods, to see these great personages thus run one after the other. Id.

All things are lawful unto me, saith the apostle, speaking, as it seemeth, in the person of the Christian gentile for the maintenance of liberty in things in- different. Hooker.

Every man so termed by way of personal difference only. Id.

Approbation not only they give, who personally declare their assent by voice, sign, or act, but also when others do it in their names. Id.

If I am traduced by tongues which neither know My faculties nor person ; Tis but the fate of place, and the rough brake That virtue must go through. Shakspeare.

For her own person,

It beggared all description. Id.

I then did use the person of your father ; The image of his power lay then in me : And in the administration of his law, While I was busy for the commonwealth, Your highness pleased to forget my place. Jd.

She hath made compare

Between our statures, she hath urged his height And with her personage, her tall personage, She hath prevailed with him. Id»

For my part,

1 know no personal cause to spurn at him ; But for the general. Id. Julius Ctesar.

Th« fav'rites that the absent king In deputation left, When he was personal in the Irish war.

Shakspeare.

I could not personally deliver to her What you commanded me, but by her woman I sent your message. Id. Henry VIII.

The lofty cedar personates thee. Shakspeare.

1 am thinking what 1 shall say ; it must be a per- sonating of himself ; a satire against the softness of prosperity. Id.

Were it true that her son Ninias had such a sta- ture, as that Semiramis, who was very personab'e, could be taken for him ; yet it is unlikely that she could have held the empire forty-two years after by any such subtilty. Raleigh.

The rebels maintained the fight for a small time, and for their persons

shewed no want of courage.

Bacon.

When I purposed to make a war by my lieute- nant, I made declaration thereof to you by my chan- cellor ; but now that I mean to make a war upon France in person, I will declare it to you myself.

Id. Henry VII.

From his first appearance upon the stage, in his new person of a sycophant or juggler instead of his former person of a prince, he was exposed to the derision of the courtiers and the common people.

Bacon.

She bore a mortal hatred to the house of Lancas- ter, and personally to the king. Id.

This lad was not to personate one, that had been long before taken out of his cradle, but a youth that had been brought up in a court, where infinite eyes had been upon him. Id.

This being one of the strongest examples of a personation that ever was, itdeserveth to be discovered and related at the full. Id.

This sin of kind not personal, But real and hereditary was. Davies.

He hath put on the person not of a robber and murtherer, but of a traitor to the state. Hayward.

The lord Sudley was fierce in courage, courtly in fashion, in personage stately, in voice magnificent, but somewhat empty of matter. Id.

It is not easy to research the actions of eminent personages, how much they have blemished by the envy of others, and what was corrupted by their own felicity. Wotton.

Herself a while she lays aside, and makes Ready to personate a mortal part. Crashaw.

Piety is opposed to that personated devotion un- der which any kind of impiety is disguised. Hamm.

Thus have I played with the dogmatist in a per- sonated scepticism. Glanville's Scepsis.

This was then the church which was daily in- creased by the addition of other persons received into it. Pearson.

It is hard to personate and act a part long ; for, where truth is not at the bottom, nature will always be endeavouring to return, and will peep out and betray herself one time or other. Tiltotson.

Tis in her heart alone that you must reign ; You'll find her person difficult to gain. Dryden.

The king in person visits all around, Comforts the sick, congratulates the sound, And holds for thrice three days a royal feast. Id. A person is a thinking intelligent being, that has reason and reflection, and can consider itself as it- seii, the same thinking thing in different times and places. Locke.

If speaking of himself in the first person singular has so various meanings, his use of the first person plural is with greater latitude. Id.

It could not mean, that Cain as elder had a na- tural dominion over Abel, for tho words are condi- tional ; if thou doest well : and so personal to Cain.

Id.

Person belongs only to intelligent agents, capable of a law, and happiness and misery : this personality extends itself beyond present existence to what is past, only by consciousness, whereby it imputes to itself past actions, just upon the same ground that it does the present. Id.

A zeal for persons is far more easy to be perverted, than a zeal for things. Sprat.

How different is the same man from himself, as he sustains the person of a magistrate and that of a friend ! Smith.

The great diversion is masking ; the Venetians, naturally grave, love to give into the follies of such seasons, when disguised in a false personage.

Addison.

This heroic constancy determined him to desire in marriage a princess, whose personal charms were now become the least part of her character. Id.

Our Saviour in his own person, during the time of his humiliation, duly observed the Sabbath of the fourth commandment, and all other legal rites and observations. White.

This immediate and personal speaking of God Al- mighty to Abraham, Job, and Moses, made not all his precepts and dictates, delivered in this manner, simply and eternally moral ; for some of them were personal, and many of them ceremonial and judicial.

Id.

Public reproofs of sin are general, though by this they lose a great deal of their effect ; but in private conversations the applications may be more personal, and the proofs when so directed come home.

Rogers.

The converted man is personally the same he was before, and is neither born nor created a-new in a proper literal sense. Id.

To that we owe the safety of our persons and the propriety of our possessions. Atterbary.

It has been the constant practice of the Jesuits to send over emissaries, with instructions to personate themselves members of the several sects amongst us.

Swift.

Some persons must be found out, already known by history, whom we may make the actors and per- sonages of this fable. Broome.

Be a person's attainments ever so great, he should always remember that he is God's creature. Clarissa.

If he imagines there may be no personal pride, vain fondness of themselves, in those that are patched and dressed out with so much glitter of art or orna- ment, let him only make the experiment. Law.

These fables Cicero pronounced, under the per- son of Crassus, were of more use and authority than all the books of the philosopher. Baiter on Learning.

Sir Robert Walpole rewarded him with twenty guineas ; a much greater sum than he afterwards obtained from a person of yet higher rank. Johnson.

His works are such as a writer bustling in the world, showing himself in public, and emerging occasion- ally from time to time into notice, might keep alive by his personal influence. Id.

Is it possible, gentlemen, that persons of so acute understandings as those who were arrayed against me to-day, should not see, that if a minister ought not to be a member of parliament, the converse would be equally true, that the crown ought not to choose a member of parliament for its minister 1 And what would be the consequence ? Canning.

PERSON, in grammar, is applied to such nouns or pronouns as, being either prefixed or urukr

stood, are the nominatives in all inflections of a verb ; or it is the agent or patient in all finite or personal verbs. See ENGLISH LANGUAGE.

PERSONAL ACTION, in law, is an action levied directly and solely against the person ; in oppo- sition to a real or mixed action. See ACTION.

PERSONAL GOODS or CHATTELS, in law, sig- nifies any moveable thing belonging to a person, whether alive or dead. See CHATTELS.

PERSONATE, the fortieth order in Lin- naeus's Fragments of Natural Method, consisting of plants whose flowers are furnished with an irregular gaping or grinning petal, which in figure somewhat resembles the snout of an animal (see BOTANY, Index). Most of the genera of this order are arranged under the class and order didynarnia angiospermia. The rest, although they cannot enter into that artificial class and order, for want of the classic character, the ine- quality of the stamina ; yet, in a natural method, which admits of greater latitude, may be arranged with those plants which they resemble in their habit and general appearance, and particularly in the circumstances expressed in that title.

PERSONIFICATION, PERSONIFYING, or PERSO- NALISING, the giving an inanimate being the figure, sentiments, and language of a person. See ORATORY. Dr. Blair, in his Lectures on Rhetoric, gives this account of personification. ' It is a figure the use of which is very exten- sive, and its foundation laid deep in human nature. At first view, and when considered abstractedly, it would appear to be a figure of the utmost boldness, and to border on the extrava- gant and ridiculous. For what can seem more remote from the tract of reasonable thought than to speak of stones and trees, and fields and rivers, as if they were living creatures, and to attribute to them thought and sensation, affections and actions ? One might imagine this to be no more than childish conceit, which no person of taste could relish. In fact, however, the case is very different. No such ridiculous effect is produced

by personification when properly employed; on the contrary, it is found to be natural and agree- able, nor is any very uncommon degree of pas- sion required in order to make us relish it. All poetry, even in its most gentle and humble forms, abounds with it. From prose it is far from be- ing excluded ; nay, in common conversation, very frequent approaches are made to it. When we say, the ground thirsts for rain, or the earth smiles with plenty ; when we speak of ambition's being restless, or a disease being deceitful ; such expressions show the facility with which the mind can accommodate the properties of living creatures to things that are inanimate, or to ab- stract conceptions of its own forming.' The Doctor goes on to investigate the nature of per-

sonification at considerable length. And he adds a very proper caution respecting the use of it in prose compositions, in which this figure requires to be used with great moderation and delicacy. The same liberty is not allowed to the imagina- tion there as in poetry. The same assistances cannot be obtained for raising passion to its proper height by the force of numbers and the glow of style. However, addresses to inanimate objects are not excluded from prose ; but have their place only in the higher species of oratory. A public speaker may on some occasions very properly address religion or virtue ; or his na- tive country, or some city or province, which has suffered perhaps great calamities, or has been the scene of some memorable action. But we must remember that, as such addresses are among the highest efforts of eloquence, they should never be attempted unless by persons of more than ordinary genius : for if the orator fails in his design of moving our passions by them, he is sure of being laughed at. Of ail frigid things, the most frigid are the awkward and unseasonable attempts sometimes made to- wards such kinds of personification, especially if they be long continued.'

PERSPECTIVE.

PERSPECTIVE, n. s. Fr. perspectif; Lat. perspicio. A glass through which objects are viewed; the view taken; the science of delineat- ing objects on a plane.

We have perfective houses, where we make de- monstrations of all lights and radiations ; and out of things uncoloured and transparent, we can represent unto you all separate colours. Bacon.

If it tend to danger, they turn about the perspective and show it so little, that he can scarce discern it.

Denham.

It may import us in this claim, to hearken to the storms rising ahroad ; and by the best perspectives, to discover from what coast they break. Temple. You hold the glass, but turn the perspective,

And farther off the lessened object drive.

Dryden, Lofty trees, with sacred shades,

And perspectives of pleasant glades,

Where nymphs of brightest form appear. Id.

Medals have represented their buildings according to the rules of perspective. Addison on Medals.

Faith for reason's glimmering light shall give Her immortal perspective. Prior.

How richly were my noon-tide trances hung With gorgeous tapestries of pictured joys ! Joy behind joy, in endless perspective ! Young.

PERSPECTIVE is a branch of the science of optics which teaches how to represent the ob- jects of vision on a plane surface.

Vitruvius says that the first who wrote a trea- tise on this subject was Agathareus, a disciple of JEschylus, and that subsequently his principles were elucidated and improved by Democritus and Anaxagoras. None of these treatises of the ancients, however, have come down to modern times. It is to the revival of painting in Italy that we must trace the existing art; and it seems to have owed its reviviscence particularly to that branch of painting which was employed in the decorations of the theatres.

The Arabian optician Alhazen, who flourished about the year 1100, should not be omitted,

however, in our catalogue of writers. Roger Bacon cites his work, and treats himself on the subject with creditable accuracy.

The earliest writer whose rules of perspec- tive survive is Peter del Borgo, an Italian, who died in 1443. He supposed objects to be placed beyond a transparent tablet, and endeavoured to trace the images which rays of light, emitted from them, would make upon it. What success he had in this attempt we know not, as his book on this subject has perished. It is, however, very much commended by the famous Ignatius Dante ; and, upon the principles of Borgo, Al- bert Durer constructed a machine, by which he could trace the perspective appearance of ob- jects. Balthazar Perussi studied the writings of Borgo, and endeavoured to make them more intelligible. To him we owe the discovery of points of distance, to which all lines that make an angle of 45° with the ground line are drawn. Not long after, another Italian, Guido Ulbaldi, observed that all the lines that are parallel to one another, if they be inclined to the ground line, converge to some point in the horizontal line, and that through this point also a line drawn from the eye, parallel to them, will pass. These principles put together enabled him to make out a pretty complete

theory of perspective.

His work was published at Pesaro in 1600, and may be said to have contained the funda- mental principles of the system of Gravesande and Dr. Brook Taylor ; the outline, in fact, of the only system worth the student's attention. For, while this is a science of the first importance to a painter, he is not, at the same time, to be too strictly confined to its rules. Nothing, indeed, should be permitted to tie up his hands or cramp his genius ; on the contrary, he should be left fully at liberty to express his idea with one stroke of his pencil ; and, as Fresnoy advises, ' let the compasses be rather in his eyes than in his hands;' in that way let him measure dis- tinctly every object by comparison — the princi- pal talent which he should own. If he is well acquainted with the principles of his art, he will not stop at the dry rules of geometry, while his fancy is sketching all the chief parts of his pic- ture ; but proceed with the whole, and, when the design is arranged, then correct all those portions which require it by the laws of per- spective.

But while, on the one hand, we are anxious to guard the student against dwelling too much on the more mechanical parts of his interesting art, we must, on the other, strive to impress on his mind that a thorough knowledge and an un- deviating attention to this important branch of it is not only eligible but indispensable. The study of it should, indeed, go hand in hand with that of anatomy, as not less fundamental and necessary.

The contour of an object drawn upon paper or canvas represents nothing more than such an intersection of the visual rays sent from the extremities of it to the eye as would arise on a glass put in the place of the paper or canvas. Now, the situation of an object at the ether side of a glass being given, the delineation of it in the glass itself depends entirely on the situation

of the eye on this side of the glass ; in other words, on the rules of perspective.

To understand these, suppose a person at a window looks through an upright pane of glass at any object beyond it, and keeping his head steady, draws the figure of the object upon the glass with a black lead pencil, as if the point of the pencil touched the object itself; he would then have a true representation of the object in perspective as it appears to his eye.

To do this, let the glass be laid over with strong gum water, which,

when dry, will be fit for drawing upon, and will retain the traces of the pencil ; and then let the student look through a small hole in a thin plate of metal, fixed about a foot from the glass, between it and his eye, and keep his eye close to the hole ; otherwise he might shift the position of his head, and con- sequently make a false delineation of the object.

After tracing out the figure of the object, he may go over it again with pen and ink ; and, when that is dry, put a sheet of paper upon it, and trace it thereon with a pencil ; then taking away the paper and laying it on a table, he may finish the picture by giving it the colors, lights, and shades, as he sees them in the object, of which he will now have a true resemblance.

To such as have a general knowledge of the principles of optics, this must be self-evident : for as vision is occasioned by pencils of rays coming in straight lines to the eye from every point of the visible object, it is plain that, by joining the points in the transparent plane, through which all those pencils respectively pass, an ex- act representation must be formed of the object as it appears to the eye in that particular position, and at that determined distance ; and could pic- tures of things be always first drawn on trans- parent planes, this simple operation, with the principle on which it is founded, would comprise the whole theory and practice of perspective. As this, however, is far from being the case, rules must be deduced from the sciences of optics and geometry for drawing representations of vi- sible objects on opaque planes ; and the applica- tion of these rules constitutes what is properly called the art of perspective.

Before we lay down the further principles of this art, it is proper to observe, that when a per- son stands directly opposite to the middle of one end of a long avenue, which is straight and equally broad throughout, the sides thereof seem to ap- proach nearer to each other in proportion as they are farther from his eye ; or the angles, under which their different parts are seen become gra- dually less, according as the distance from his eye increases ; and, if the avenue be very long, the sides of it at the farthest end seem to meet : and there an object that would cover the whole breadth of the avenue, and be of a height equal to that breadth, would appear only to be a mere point.

Having made these preliminary observations, we now proceed to

SECT. I. — DEFINITIONS OF THE TERMS USED IN PERSPECTIVE.

1. The horizontal line is that line supposed to be drawn parallel to the

horizon through the tye

of the spectator ; or rather, it is a line which separates the heaven from the earth, and which limits the sight. Thus A and B, plate PERSPEC- TIVE, fig. 1, are two pillars below the horizontal line C D, because the eye is elevated above them ; in fig. 2 they are said to be equal with it; and in fig. 3 raised above it. Thus, according to the different points of view, the objects will be either higher or lower than the horizontal line.

2. The point of sight A, fig. 4, is that which makes the centrical ray on the horizontal line a b ; or it is the point where all the other visual rays D, D, unite.

3. The points of distance C, C, fig. 4, are points set off in the horizontal line at equal dis- tances on each side of the point of sight A.

4. And in the same figure B B represents the base line or fundamental line.

5. E E is the abridgment of the square, of which D, D, are the sides.

6. F, F, the diagonal lines which go to the points of distance C, C.

7. Accidental points are those where the objects end ; these may be cast negligently, because nei- ther drawn to the point of sight, nor to those of distance, but meeting each other in the horizontal line. For example, two pieces of square timber, G and H, fig. 5, make the points I, I, I, I, on the horizontal line ; but go neither to the point of sight K, nor to the points of distance C, C ; these accidental points serve likewise for case- ments, doors, windows, tables, chairs, &c.

8. The point of direct view, or of the front, is when we have the object directly before us ; in which case it shows only the fore side ; and, if below the horizon, a little of the top ; but nothing of the sides, unless the object be polygonous.

9. The point of oblique view is when we see an object aside of us and as it were aslant, or with the corner of our eye ; the eye, however, being all the while opposite to the point of sight ; in which case we see the object laterally, and it presents to us two sides or faces. The practice is the same in the side points as in the front points ; a point of

sight, points of distance, &c., being laid down in the one as well as in the other.

10. Projection delineates objects in piano by means of right lines called rays, supposed to be drawn from every angle of the subject, to par- ticular points. When the objects are angular, these rays necessarily form pyramids, having the plane or superficies whence they proceed for their basis; but, when drawn from or to circular ob- jects, they form a cone.

11. Ichnography, or ichnographic projection, is described by right lines parallel among them- selves and perpendicular to the horizon from every angle of every object, on a plane parallel to the horizon : the points where the perpendicu- lar lines or rays cut that plane being joined by right lines. The figure projected on the horizontal plane is likewise called the plan or seat of that object on the ground plane. The points are the sites, or seats, of the angles of the object. The lines are the seats of the sides. By this we are to understand how the basis of figures represented as superstructures stand or are supported ; and we are further enabled to judge of, indeed to measure, their several parts and their areas.

12. Orthography represents the vertical posi- tion and appearance of an object ; and hence or- thographic projection is called the elevation. When we see the front of a house represented, we give it that term ; when the side, we denomi- nate it the profile. If we suppose a house, or other object, to be divided by a plane passing perpendicularly through it in a line at right angles with the point, we call it the lateral sec- tion ; but, if the plane pass in a direction parallel with the front, it is termed a longitudinal section. If the plane passes in neither of the former di- rections (not however deviating from the vertical), it is said to be an oblique section.

1 3. These afford us the means of laying down plans, of showing the parts and the manner in which the interiors of edifices are arranged, con- sequently are indispensable to the architect or surveyor, and indeed should be understood by every individual connected any way whh de- signing or building. Nor should the following be neglected ; — namely, scenography, which shows us how to direct the visual rays to every point or part of a picture ; and stereography, which enables us to represent solids on a plane, from geometri- cal projection ; whence their several dimensions, viz. length, breadth, and thickness, may all be represented, and correctly understood at sight.

14. An original object is that which becomes the subject of the picture,

and is the parent of the design.

15. Original planes or lines are the surfaces of the objects to be drawn; or they are any lines of those surfaces ; or they are the surfaces on which those objects stand.

16. Perspective plane is the picture itself which is supposed to be a transparent plane, through which we view the objects represented thereon.

17. Vanishing planes are those points which are marked upon the picture by supposing lines to be drawn from the spectator's eye parallel to any original lines, and produced until they touch the picture.

18. Ground plane is the surface of the earth, or plane of the horizon, on which the picture is imagined to stand.

1 9. The ground line is that formed by the in- tersection of the picture in the ground plane.

20. Vanishing points are the points marked down in the picture by supposing lines to be drawn from the spectator's eye parallel to any original lines, and produced until they touch the picture.

21. The centre of a picture is that point on the perspective plane where a line drawn from the eye perpendicular to the picture would cut it ; consequently it is that part of the picture which is nearest to the eye of the spectator.

22. The distance of the picture is that from the eye to the centre of the picture. The distance of a vanishing point is the distance from the eye of the spectator to that point where the converg- ing lines meet, and, after gradually diminishing all the objects which come within their direction and proportion, are reduced so as, in fact, to terminate in nothing. All parallel lines have the same vanishing points; that is to say, all such as are, in building, parallel to each other,

when not represented precisely opposite to, and parallel with, the eye, will appear to converge towards some remote point, i. e. their vanishing point. Circles, when retiring in such manner, are represented by ellipses, proportioned to their distances : their

dimensions in perspective are ascertained by enclosing them, or the nearest of them, where a regular succession is to be por- trayed, within a square, which, being divided into any number of equal parts or chequers, will exhibit all the proportions of those more remote.

23*. A bird's eye view is supposed to be taken from some elevated spot which commands a prospect nearly resembling the plane or ichno- graphy of the places seen. Thus the view from a high tower, or from a mountain, whence the altitudes of the various objects on the plane be- low appear much diminished, gives nearly the same representation as is offered to a bird flying over them — and hence the term. Some idea of this may be obtained by standing on any height, and observing how low those objects which are near thereto will appear when compared with those more distant ; taking however the perspec- tive diminution of the latter into consideration.

When a painter has formed a scene in his mind, and supposed, as is customary, that the principal figures of this scene lie close, or almost close, to the back of his canvas, he is, in the next place, to fix on some point on this side of the canvas from which he would choose his piece should be seen. But in choosing this point, which is called the point of sight, regard should be had to its situation to the right or left of the middle of the canvas ; but, above all things, to its distance and height with respect to the lower edge of the canvas ; which edge is called the base line, and is parallel with the horizontal line which passes through the eye. For by assuming the point of sight, and conse- quently the horizontal line, too low, the planes upon which the figures stand will appear a great deal too shallow; as, by assuming it too high, they will appear too steep, so as to render the piece far less light and airy than it ought to be. In like manner, if the point of sight is taken at too great a distance from the canvas, the figures will not admit of degradation enough to be seen with sufficient distinctness : and, if taken too near it, the degradation will be too quick and precipitate to have an agreeable effect. Thus, then, it is evident that no small attention is requisite in the choice of this point.

When a picture is to be placed on high, the point of sight should be assumed low, and vice versa: in order that the horizontal line of the picture may be, as near as possible, in the same horizontal plane with that of the spectator ; for this disposition has a surprising effect. When a picture is to be placed very high, as, amongst many others, that of the Purification, by Paolo Veronese, it will be proper to assume the point of sight so low that it may lie quite under the picture, no part of whose ground is in that case to be visible ; for, were the point of sight to be taken above the picture, the horizontal ground of it would

appear sloping to the eye, and both figures and buildings as ready to tumble head- foremost It is true, indeed, that there is seldom

a necessity for such extraordinary exactness; and that, unless in some particular cases, the point of sight had better be high rather than low : as a reason for which we may observe that, as we are more accustomed to behold people on the same plane with ourselves than either higher or lower, the figures of a piece must strike us most when standing on a plane nearly level with that on which we ourselves stand. To this it may be added that by placing the eye low, and greatly shortening the plane, the heels of the back figures will seem to bear against the heads of the foremost, so as to render the distance be- tween them far less perceptible than it would otherwise be. The point of sight being fixed, according to the situation in which the picture is to be placed, the point of' distance is next to be determined. In doing this a painter'should carefully attend to three things: — first, that the spectator may be able to take in, at one glance, the whole and every part of the composition ; secondly, that he may see it distinctly; and, thirdly, that the degradation of the figures and other objects of the picture be sufficiently sen- sible.

SECT. II. — GENERAL RULES.

1. Let every line which in the object or geo- metrical figure is straight, perpendicular, or pa- rallel to its base, be so also in its scenographic delineations, or in the description, in. all its di- mensions, such as it appears to the eye ; and let the lines which in the object return at right an- gles from the fore right side, be drawn in like manner scenographically from the point of sight.

2. Let all straight lines which in the object return from the fore right side, run in a sceno- graphic figure, into the horizontal line.

3. Let the object you' intend to delineate, standing on the right hand, be placed also on the right hand of the point of sight ; that on the left hand, on that hand of the same point ; and that which is just before, in the middle of it.

4. Let those lines which, in the object, are equidistant from the returning line, be drawn in the scenographic figure from that poiat found in the horizon.

5. In setting off the altitude of columns, pe- destals, Sec., measure the height from the base line upward in the front or fore right side ; and a visual ray down that point in the front shall limit the altitude of the

column, or pillar, all the way behind the front side, or orthographic ap- pearance, even to the point of sight. This rule must be observed in all figures, as well where there is a front, or fore right side, as where there is none.

6. In delineating ovals, circles, arches, crosses, spirals, and cross arches, or any other figure in the roof of a room, first draw ichnographically, and so, with perpendiculars from the principal points thereof, carry it up to the ceiling, from which several points carry on the figure.

7. The centre in any scenographic regular figure is found by drawing cross lines from the opposite angles ; for the point where the diago- nals cross is the centre.

8. A ground plane of squares is alike, both abo^e and below the horizontal line; only the

more it is distant either above or below the hori- zon, the squares will be so much the larger or wider.

9. In drawing a perspective figure where many lines come together, to direct your eye, draw the diagonals in red, the visual lines in black, the perpendiculars in green, or any other color different from that which you intend the figure shall be.

10. Having considered the height, distance, and position of the figure, and drawn it accord- ingly, with its side or angle against the base, raise perpendiculars from the several angles or designed points, from the figure to the base, and transfer the length of each perpendicular, from the place where it touches the base, to the base on the side opposite to the point of distance. Thus the diametrals to the perpendiculars in the base, by intersection with the diagonals drawn to the several transferred distances, will give the angles of the figures ; and so lines drawn from one point to another will circumscribe the sce- nographic figure.

11. If in a landscape there be any standing waters, as rivers, ponds, &c., place the horizontal line level with the farthest sight or appearance of it.

12. If there be houses, churches, castles, towers, mountains, ruins, &c., in the land- scape, consider their position, that you may find from what point in the horizontal lines to draw the front and sides of them

in the picture.

13. In drawing objects at a great distance, observe the proportions, both in magnitude and distance, in the draught, which appear from the object to the eye.

14. In coloring and shadowing near objects, you must make the same colors and shades in your picture which you observe with your eye in the landscape ; but, according as the distance be- comes greater, the colors must be fainter, till at last they are gradually lost in a darkish sky-color.

SECT. III. — MECHANICAL ILLUSTRATIONS OF DRAWING IN PERSPECTIVE.

1. Suppose LLD BA, fig. 6, plate PERSPEC- TIVE, a square piece of pavement, consisting of twenty-five pieces of marble, each a foot square : it must be measured exactly, and laid regularly down upon paper ; and for the sake of a more distinct notion how every particular square will appear when you have a true perspective view of them, mark every other stone or marble black ; or else number each of them as in the figure, which is divided into squares, every other one of which may be made to appear black, like the three at the bottom marked JB C D : or 1, 2, 3, 4, answering to those which are marked in the per- spective with the* same numbers. To lay your plan in perspective, fix your point of sight as you ob- serve in the figure ; or more or less to the right or left ; then draw the line K K parallel to, and at what distance you will from L L ; and raise a line on each side from L to K, to form the figure you see, as a frame ; then draw a line from the corner K, which is the point of distance, to the opposite corner L ; and this line will regulate your work. Now draw lines from the squares of your plan to the point of sight, as exact as possible ; and,

wherever your line of distance cuts those lines, draw* lines parallel to the line L L, which will give you the squares in perspective, or the true figure of every square. Thus D, in the perspec- tive plan, answers to B in the measured plan, and 1, 2, 3, and 4, answer to their corresponding squares in the same plan.

To raise either pillars, trees, houses, or any other bodies, according to their respective heights, at different distances and proportions, on the plan laid down, measure them out in perspective into squares of a foot or any other measure. Let one of these squares, 1, 4, in fig. 7, serve for the base of a pillar a foot thick. Mark the line L K, by the scale of the

ground plan, into equal pro- portions or feet; a, b, c, d ; which being so many feet high, and standing on the base, are uprights, not in perspective. Then draw a line, 4 5, pa- rallel to 1 c . Join c and 5, and then you have the front of a body three feet high and one foot wide, which is the object you were to raise. From 4 draw a line with a black lead pencil, to the point of sight ; and from 3 raise a line pa- rallel to 4 5, till it touches the pencilled line pas- sing from 5 to the point of sight, which will give you the side appearance of the column or body, as you will see it from the place where you stand. Then, with a pencil, from c draw a line to the point of sight, which will determine the line 6 7 that bounds the perspective view of the column a-top. Afterwards from 2 raise a pencilled line parallel to a c or 1 c, till it touches the line drawn from c to the point of sight ; then draw 6 7 parallel to c 5, and you will have the square of the top of the column as' observed from A, which is supposed to be the place where you stand. It is to be observed that the line drawn from 2 to 6 is only imaginary, and in consequence is to be rubbed out, because, not being seen from the place where you stand, it must not appear in the drawing. The same may be understood of the line drawn from 1 to 2 ; but it is necessary that they appear in the draught, as they direct you how to regulate the top of your column, and to place it with certainty upon its base.

Lastly, finish your column with lines only, that is, from 1 to c, from 4 to 3, from 3 to 7, from c to 5, from 6 to 7, and from 1 to 4, whereby you will have the true representation of the co- lumn, as in fig. 8.

When this is done, you may erect other columns on the other squares in the same manner, observ- ing to fling your shades all on one side, and be- ing master of these few examples, which will cost very little trouble, you will find the princi- ple of them apply to various objects.

For the construction of a camera obscura, 1. Darken the room EF, fig. 10, leaving only an aperture open in the window at V, on the side I K, facing the prospect A B C I). 2. In this aper- ture fit a lens, either plano-convex, or convex on both sides. 3. At a due distance, to be deter- mined by experience, spread a paper or white cloth, unless there be a white wall ; then on this, G H, the desired objects A B C D will be deline- ated invertedly. 4. If you would have them appear erect, place a concave lens between the centre and the focus of the first lens, or receive the image on a plane speculum inclined to the

horizon under an angle of 45°, or have two lenses included in a draw-tube instead of one. If the aperture do not exceed the bigness of a pea, the objects will be represented without any lens at all. And thus the objects may be drawn or copied to the greatest degree of accu- racy. The student will adopt any of these methods which he finds will be most suitable to his purpose ; but the camera obscura is that which is most generally used by painters. This method has also the additional advantage of giv- ing the student a correct idea of coloring from nature.

SSCT. IV. — RULES AND EXAMPLES IN SCENO- GRAPHIC PERSPECTIVE, &c.

1 . Suppose the pentagon A B D E F, fig. 1 , plate II., required to be represented by the rules of perspective on the transparent plane VP, placed perpendicularly on the horizontal plane H R, dotted lines are imagined to pass from the eye C to each point of the pentagon C A, C B, C D, &c., which are supposed, in their passage through the plane P V, to leave their traces or vestiges in the points a, b, d, &c., on the plane, and thereby to delineate the pentagon a b d ef; which, as it strikes the eye by the same rays that the original pentagon A B D E F does, will be a true perspective representation of it.

2. To find the perspective appearance of a tri- angle, H B C, fig. 2, between the eye and the triangle, draw the line D E, which is called the fundamental line ; from 2 draw 2 V, representing the perpendicular distance of the eye above the fundamental line, be it what it will ; and through V draw, at right angles to 2 V, H K parallel to D E ; then will the plane D H K E represent the transparent plane, on which the perspective re- presentation is to be made. Next, to find the perspective points of the angles of the triangle, let fall perpendiculars A 1, C 2, B 3, from the angles to the fundamental D E ; set off these perpendiculars upon the fundamental, opposite to the point of distance K, to B, A,C. From 1, 2, 3, draw lines to the principal point V; and from the points A, B, and C, in the fundamental line, draw the right lines A K, B K, C K to the point of distance K ; which is so called, because the spectator ought to be so far removed from the figure or painting, as it is distant from the principal point V. The points a, b, and c, where the visual lines V 1, V 2, V 3, intersect the lines of distance A K, B K, C K, will be angular points of the triangle a b c, the true representation of AB C. By proceeding in this manner with the angular points of any right-lined figure, whether regular or irregular, it will be very easy to represent it in perspective.

3. If the seen ographic appearance of any solid were to be represented,

suppose of a triangular prism, the base of which is the triangle m n o, fig. 3, you need only find the upper surface of it, in the same manner as you found the lower, or base ; and then, joining the corresponding points by right lines, you will have the true representa- tion of the solid in perspective. So that the work is the same as before ; only you take a new fundamental line, as much higher than the for- mer as is the altitude of that solid the sceno^ra-

phic representation of which you would delineate. 4 There is still a more commodious way, which is this : having found, as above, the base or ichnographic plate m n o, let perpendiculars be erected to the fundamental line from the three' angular points, which will express the altitudes of those points. But because these altitudes, though equal in the body or solid itself, will ap- pear unequal in the scenographic view, the farthest off' appearing less than those nearer the eye, their true proportional heights may be thus determined. Any where in the fundamental line, let A B be erected perpendicularly, and equal to the true altitude ; or, if the figure have different altitudes, let them be transferred into the per- pendicular AB; and from the points A and B, and from all the points of intermediate altitudes, if there be any such, draw right lines to the point of sight V : those lines AV, B V, will constitute a triangle with A B, within which all the points of altitude will be contained. Through the points o n m, draw parallels to the fundamental line ; and from the points a, a, &c.. erect perpen- diculars to those parallels ; and the points where they intersect the lines AV, BV, as in o a, b b, &c., will determine the apparent height of the solid in the scenographic position to the eye in V. In practice, these parallels and perpendicu- lars are easily drawn, by means of a good draw- ing board, or table, fitted for the purpose.

5. To exhibit the perspective of a pavement, consisting of square stones, viewed directly : divide the side A B, fig. 4, transferred to the fun- damental line D E, into as many equal parts as there are square stones in one row. From the several points of division draw right lines to the principal point V, and from A to the point of distance K draw a right line A K, and from B to the other point of distance L draw another L B. Through the points of the intersections of the cor- responding lines draw right lines on each side, to be produced to the right lines AV and B V. Then will afg b be the appearance of the pave- ment A FOB.

6. To show the perspective appearance of a square A B D C, fig. 5, seen obliquely, and hav- ing one of its sides A B in the fundamental line. The square being viewed obliquely, assume the principal point V, in the horizontal line H R, in such a manner, as that a perpendicular

to the fundamental line may fall without the side of the square A B, or at least may not bisect it ; and make V K the distance of the eye. Transfer the perpendiculars A C and B D to the fundamental line D E ; and draw the right lines KB, K D ; as also A V and V C : then will A and B be their own appearances, and c and d the appearances of the points C and D : consequently AcdB is the appearance of the square AB DC.

7. If the square A C B D be at a distance from the fundamental line D E, which rarely happens in practice, the distances of the angles A and B must likewise be transferred to the fundamental line ; and even the oblique view itself is not very common. The reason why objects appear smaller as they are at a greater distance, is, that they appear according to the angle of the eye, wherein they are seen ; and this angle is taken at the eye where the lines terminating the objects meet.

8. For example, the eye A, fig. 6, viewing the object BC, will draw the rays AB and AC, which give the angle BAC; so that an object viewed under a greater angle will appear larger, and another under a less angle smaller. That, among equal objects, those at the greatest distance appear smallest, and consequently, that in all perspective the remotest objects must be made the smallest, will be manifest from the figure: the objects BC, DE, FG, III, and KL, being all equal, but at different distances from the eye, it is evident that the angle D A E is less than the angle BAC, that F A G is less than DAE, that HAI is less than FAG, and that KAL is less than H A I. Hence, the second, third, fourth, and fifth objects will appear smaller, though really all equal, inasmuch as the angles diminish in proportion as the objects recede. If the eye, on the other hand, wrere removed to M, KL •would appear the largest, and B C no bigger than NO.

9. It follows that, as objects appear such as is the angle they are seen under, if several lines be drawn between the sides of the same triangle, they will all appear equal : thus all the lines comprised between the sides O N and O P, fig. 7, of the triangle NOP, will appear equal to each other : and, as objects comprehended under the same angle seem equal, so all comprehended under a greater angle must seem greater, and all under a smaller angle less.

10. This being premised, if there be a number of columns or pilasters to be ranged in perspec- tive on each side of a hall, church, or the like,

they must of necessity be all made under the same angle, and all tend to one common point in the horizon O, fig. 8. P'or instance, if from the points D, E, the eye being placed at A, and viewing the first object D E, you draw the visual rays D O and E O, they will make the triangle D O E, which will include the columns D E, F G, II I, K L, M N, so as they will all appear equal.

11. What has been said of the sides is like- wise to H understood of the ceilings and pave- ments ; the diminutions of the angles of remote objects, placed either above or below, following the same rule as those placed laterally. Trees, being ranged by the same law, have the same ef- fect as the columns, &c. ; for being all compre- hended in the same angle, and the two rays hav- ing each its own angle, and all the angles meeting in a point, they form a third, which is the earth, and a fourth, which may be supposed the air, and thus afford an elegant prospect.

12. To exhibit the perspective of a circle, if it be small, circumscribe a square about it : draw diagonals and diameters ha and de, fig. 9, inter- secting each other at right angles ; and draw the right lines fg and I c parallel to the diameter de through b and/; as also through f and g draw right lines meeting the fundamental line in the points 3 and 4. To the principal point V draw right lines V 1 , V 3, V 4, V 2 ; and to the points of distance L and K draw the right lines L 2 and K 1 . Lastly, connect the points of in- tersection, a b, d, f, h, g, e, c, with the arches a b, bd, d f, &c. Thus will a b dfhge c He the appearance of the circle.

13. If the circle be large, on the middle of the

fundamental AB, fig. 10, describe a semicircle, and from the several points of the periphery C, F, G, II, I, &c., to the fundamental line, let fall perpendiculars Cl, F 2, G 3, 114, 1 5, &c. From the points A, 1, 2, 3, 4, 5, &c., draw right lines to the principal point V ; as also a right line from B to the point of distance L, and an- other from A to the point of distance K. Through the common intersection draw right lines, as in the preceding case : thus we shall have the points e,f, g, h, c, which are the representations of these, A, C, F, G, H, I, which being con- nected as before give the projection of the cir- cle. Hence it appears not only how any curvi- linear figure may be projected on a plane, but also how any pavement consisting of any kind of stones may be delineated in perspective. If any complicated figure be proposed, it may not be easy to apply the practical rules to the de- scription of every minute part; but by enclosing that figure in a regular one properly subdivided, and reduced into perspective, a person skilled in drawing may with ease describe the object pro- posed.

Upon the whole, where the boundaries of the proposed object consist of straight lines and plain surfaces, they may be described directly by the rules of perspective : but when they are cur- vilinear, either in their sides or surfaces, the practical rules can only serve for the description of such right-lined cases as may conveniently en- close the objects, and which will enable the stu- dent to draw them within those known bounds with a sufficient degree of exactness. It would indeed be a fruitless task, to seek, by the practi- cal rules of perspective, to describe all the little hollows and prominences of objects ; the different lights and shades of their parts, or their smaller windings and turnings; the infinite variety of the folds in drapery ; of the boughs and leaves of trees ; or the features and limbs of men and ani- mals ; much less to give them that roundness and softness, that force and spirit, that eagerness and freedom of posture, that expression and grace, which are requisite to a good picture.

It may appear a bold assertion to say that the very short sketch now given of the art of per- spective is a sufficient foundation of the whole practice, and includes all the rules peculiar to the problems which most generally occur. But, the scientific foundation being simple, the struc- ture need not be complex, nor swell into such volumes as have been published on the subject : volumes which, by their size, deter from the perusal, and give this simple art the appearance of mystery. Thus narrowing instead of enlarg- ing the knowledge of the art ; until the student, tired of the bulk of the volume, in which a single maxim is tediously spread out, and the principle on which it is founded kept out of sight, contents himself with a remembrance of the maxim, and rarely ascends to first principles.

We subjoin, however, for the information of those who would wish farther to pursue the sub- ject an ample list of approved authors.

In the Latin language we find : — Johannis Cantuariensis, Perspectiva, I'isa, 1508, folio; an Italian translation of which, with notes was

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published, by Galucci, at Venice, 1593, folio. C. Vittellionis, De Natura, Ratione, et Projec- tione Radiorum Visus, Luminum, Colorum, atque Formarum, quam vulgo Perspectivam vocant, libri x. Norimb. 1551, folio, with plates. Joa. Fr. Niceroni, Taumaturgus Opticus Stu- diosissimus Perspective, Paris, 1638, folio; a French translation of this appeared also at Paris, under the title of Perspective Curieuse, 1663,

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In Italian: — Trattato di Prospettiva di Bern. Zenale da Trevigi, Milan, 1524, folio. Prattica della Prospettiva, di M. Dan Barbaro, Venice, 1559, 1568, 1669, folio, with plates— a very ser- viceable publication. Dispareri in materia d' Architettura e di Prospettiva, Bresc. 1572, 4to. Le Due Regole della Prospettiva prattica, di Giac. Barozzi di Vignola, con i Comment, del P. Egn. Danti, Rome, 1583, 1611, 1644, folio, Bol. 1682, folio, Venice, 1743, fol. La Prattica di Prospettiva, del Car. Lor. Sirigati, Venice, 1596, 1626, folio. Discorso Intorno al Disegno con gl' Inganni del Occhio, Prospett. Prat, dl P. Accolti, Firenza, 1625, folio. Prospettiva Prattica, di Bern. Contino, Venice, 1645, 1684. folio. Paradossi per Praticar la Prospettiva, Senza Saperla, da Giul. Troili, Bol. 1672, 1683, folio. Nuova Prattica di Prospettiva, da Paolo Amato, Pal. 1736, folio. Trattato Teoretico Prattico di Prospettiva, di Eust. Zanotti, Bol. 1766, 4to. with engravings. Della Geometrie e Prospettiva Prattica, di Bald. Orsini, Rome, 1774, 3 vols. 12mo.

In Dutch : — Het Perspectiv Conste van John Friess Vredemann, London, 1559, folio, Amst. 1633, 2 vols. folio. Marolois has given a French translation of this work, entitled La Perspective, Contenant tant la Theorie que la Pratique, Amst. 1662, folio. Onderwysinge in der Perspectiv Conste, door Henr. liondius, La Hague, 1622, 1647, folio, of which a Latin translation was published at the same place, 1647, folio.

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1778, 8vo. Practice of Perspective, by J. Highmore, 1784, 4to. Theory of Perspective in a Method Entirely New, by

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PERSPECTIVE.

J. L. Cowley, London, 1766, 2 vols. 4to. Fa- miliar Introduction to the Theory and Practice of Perspective, by J. Priestley, London, 1770, 8vo. The Elements of Linear Perspective de- monstrated by Geometrical Principles, by Ed- ward Noble, London, 1771, 8vo. A Complete Treatise on Perspective, in Theory and Practice, on the Principles of Dr. Brook Taylor, by T. Malton, London, 1776, folio. Ware's Complete Body of Architecture contains a Treatise on Perspective, 1760, folio. A Practical Treatise of Perspective on the Principles of Dr. Brook Taylor, by Edward Edwards, second edition, 1806. A thin 4to., without the author's name, entitled A New Treatise on Perspective, Founded on the Simplest Principles, containing Universal Rules for Drawing the Representation of any Ob- ject on a Vertical Plane, 1810. The work of D. Cresswell, A.M, 1811, 8vo. Milne, in his Ele- ments of Architecture, 1812, 4to., and Mr. Hay- ter's work, 1813, 8vo. Martin, Muller, and Emerson, have also given treatises in their mathematical courses.

Works on this subject, under the following denominations, have appeared in the German language : — Of Perspective, as it regards the Arts, 1509, folio, with thirty-seven wood-cuts. Gualt. Henr. Rivius, New Perspective, or The True Foundation of the Arts of Design, Nurem- berg, 1547, folio. John Lautensak, Instructions on the Use of the Compass and Rule, particu- larly in Perspective, Franckf. 1567, folio. Per- spectivum Corporum Regularium, &c., par Jarnitzer, Nuremberg, 1564, folio. Lud Brans. Practice of Perspective, &c., Leipsic, 1 615, folio, Lenkart, Treatise on Perspective, Augs. 1616, folio. Albert! on Perspective and Shading, Niirnb. 1623-7, folio. Schubler, Instructions on Perspective, &c., Niirnb. 1719-20, 2 vols. folio, with fifty engravings. Lucidum Pro- spective Speculum, by P. Heinecken, Augs. 1727, folio, with ninety-three engravings. Ibid. 1753, folio, with 126 engravings. Summary Instructions on Perspective, by John Christo- pher Bischof, Halle, 1741, 8vo. Instructions on the manner of tracing all Elevations in Per- spective, without having regard to a plan, by J. H- Lambert, Zurich, 1759, 8vo., and 1774, 8vo. A French translation appeared in 1759, 8vo. Manner of learning to draw by means of Geo- metry ami Perspective, by Werner, Erfort, 1764, 8vo. Detailed Instructions on Perspect- .ve, after an easy and clear method, by C. Phil. Jacobz, Amst. 1767, 8vo., with sixty plates. Treatise on Perspective, by Luc. Voch, Augs. 1780, 8vo.

Elements of Perspective for the use of Painters, by Burja, Berlin, 1793, 8vo.

The reader may also turn with advantage to Lecons de Perspective, par L. le Bicheur, Lu- dovico Cigoli, on Perspective. Perspectiva Practica, by Franc. De Breuil. The work of Albert Durer on the Proportions of the Human Body, Niirnberg, 1528, folio. The second book of the Architettura of Seb. Serliq, Paris, 1545, folio. The fifth book of Trattato dell' Arte della Pittura, of Lomazzo, Milan, 1585, 4to. Museo Pittorico, by Velasco, Madrid, 1715, folio. Re- marques sur les Tableaux en jeu d'Optique, in the French Mercury for the year 1763, &c. &c.

PERSPECTIVE, AERIAL, is the art of giving a due diminution or degradation to the strength of the light, shade, and colors of objects, ac- cording to their different distances, the quantity of light which falls on them, and the medium through which they are seen.

As the eye does not judge of the distance of objects entirely by their apparent size, but also by their strength of color, and distinction of parts ; so it is not sufficient to give an object its due apparent bulk according to the rules of stereography, unless at the same time it be ex- pressed with that proper faintness and degrada- tion of color which the distance requires. Thus if the figure of a man, at a distance, were painted of a proper magnitude for the place, but with too great a distinction of parts, or too strong colors, it would appear to stand for- ward, and seem proportionally less, so as to represent a dwarf situated nearer the eye, and out of the plane on which the painter intended it should stand. By the original color of an object is meant that color which it exhibits to the eye when duly exposed to it in a full open uniform light, at such a moderate distance as to be clearly and distinctly seen.

This color receives an alteration from many causes, the principal of which are the following : 1. From the object's being removed to a greater distance from the eye, whereby the rays of light which it reflects are less vivid, and the color becomes more diluted and tinged in some mea- sure, by the faint bluish cast, or with the dim- ness or haziness of the body of air through which the rays pass. 2. From the greater or less degree of light with which the object is en- lightened ; the same original color having a dif- ferent appearance in the shade, from what it has in the light, although at an equal distance from the eye, and so in proportion to the strength of the light or shade. 3. From the color of the light itself which falls upon it, whether it be from the reflection of colored light from any adjacent object, or by its passage

through a colored medium, which will exhibit a color compounded of the original color of the object, and the other accidental colors which the light brings with it. 4. From the position of the surface of the object, or of its several parts with respect to the eye ; such parts of it appear- ing more lively and distinct than those which are seen obliquely. 5. From the closeness or openness of the place where the object is situ- ated ; the light being much more variously di- rected and reflected within a room than in the open air. 6. Some original colors naturally reflect light in a greater proportion than others, though equally exposed to the same degrees of it; whereby their degradation at several dis- tances will be different from that of other colors which reflect less light.

PERSPECTIVE MACHINES, or contrivances for designing or drawing in perspective, are of various kinds. We have described the con- struction of the camera obscura, and shall here add only the machine suggested originally by Dr. Bevis, and another by Mr. Kirby.

The plane of the former machine is repre- sented fig. 1, PERSPECTIVE. Plate III. fig. 2 is a representation of it when made use of in draw-

ing distant objects in perspective, a be f, fig. 1, is an oblong square board, represented by A B EF in fig. 2 ; x and y (X and Y) are two hinges on which the part c Id (C L D) is move- able. This part consists of two arches or por- lions of circles c I m (C L M) and d n I (D N L), joined together at the top / (L), and at bottom to the cross bar dc (D C), to which one part of of each hinge is fixed, and the other part to aflat board, half the length of the board abef (ABEF), and glued to its uppermost side. The centre of the arch c m I is at d, and the centre of the arch dn I is at c. On the outer side of the arch dnl is a sliding piece n (much like the nut of the quadrant of altitude belonging to a com- mon globe), which may be moved to any part of the arch between d and I : and there is such another slider, o, on the arch cm I, which may be set to any part between c and /. A thread cpn (C P N) is stretched tight from the centre « (C) to the slider n (N), and such another thread is stretched from the centre d (D) to the slider o (O) ; the ends of the threads being fas- tened to these centres and sliders.

Now it is plain that, by moving these sliders on their respective arches, the intersection p (P) of the threads may be brought to any point of the open space within the arches. In the groove k (K) is a straight sliding bar i (I), which may be drawn farther out, or pushed farther in, at pleasure. To the outer end of this bar I, fig. 2, is fixed the

upright piece H Z, in which is a groove for receiving the sliding piece Q, In this slider is a small hole r for the eye to look through in using the machine : and there is a long slit in H Z,to let the hole r be seen through when the eye is placed behind it any height of the hole above the level of the bar I.

In delineating a representation, i. e. of the house q s rp, a great way off, place the machine on a steady table, with the end E F of the horizontal board, ABEF, toward the house, so that when the Gothic-like arch D L C is set upright, the middle part of the open space (about P) within it may be even with the house when you place your eye on Z, and look at the house through the small hole r. Then fix the corners of a square piece of paper with four wafers on the surface of that half of the horizontal board which is nearest the house ; and all is ready for drawing. Now set the arch upright, as in the figure ; which it will be when it comes to the perpendicular side t of the upright piece st, fixed to the horizontal board behind D. Then place your eye at Z, and look through the hole r at any point of the house, as q, and move the sliders N and O till you bring the intersection of the threads at P directly between your eye and the point q : then put down the arch flat upon tne paper on the board, as at S T, and the intersection of the threads will be at W. Mark the point W on the paper with the dot of a black lead pencil, and set the arch upright again, as before : then look through the hole r, and move the sliders N and O till the intersection of the threads comes be- tween your eye and any other point of the house, as p : then put down the arch again to the paper, and make a pencil mark thereon at the intersec- tion of the threads, and draw a line from that

mark to the former one at W; which line will be a true perspective representation of the corner pq of the house. Proceed in the same manner by bringing the intersection of the threads suc- cessively between your eye and the other points of the outlines of the house, as r, s, &c., and put down the arch to mark the points on the paper at the intersection of the threads : then connect these points by straight lines, which will be the perspective outlines of the house. In like manner find the points of the comers of the door and windows, top of the house, chimneys, &c., and draw the finishing lines from point to poir.t : then shade the whole, making the lights and shades as you see them on the house itself, and you will have a true perspective figure of it. Great care must be taken, during the whole time, that the position of the machine be not shifted on the table ; and, to prevent such an inconve- nience, the table should be very strong and steady, and the machine fixed to it, either by screws or clamps.

In the same way a landscape, or any number of objects within the field of a view through the arch, may be delineated, by finding a sufficient number of perspective points on the paper, arid connecting them by straight or curved lines as they appear to the eye. The arch ought to be at least a foot wide at bottom, that the eye at Z may have a large field of view through it ; and the eye should then be, at least, ten inches and *. half from the intersection of the threads at P when the arch is set upright. For if it be nearer the boundaries of view at the sides near the foot of the arch will subtend an angle at Z of more than sixty degrees, which will not only strain the eye, but will also cause the outermost parts of the drawing to have a disagreeable appearance. To avoid this, it will be proper to draw back the sliding bar I, till Z be fourteen inches and a half distant from P ; and then the whole field of view, through the foot wide arch, will not sub- tend an angle to the eye at Z of more than forty— five degrees; which will give a more

Mr. Kirby's instrument is seen in figs. 4, 5, 6. The ruler A B, fig 3, nineteen inches long, is graduated into nineteen equal parts ; it has a dovetail groove on its upper edge to receive the perpendicular ruler G, which has one end fitted to it, so as to slide very easily ; this ruler is four- teen inches long, and is divided into fourteen equal parts, and upon the back side of it F is a line drawn exactly in the middle, to which is fixed a silken line with a small plummet at the end. The ruler AB is fixed by two screws a, c,

to two pieces of thin brass ; and these pieces of brass are fixed at the other ends by two screws d,e, to a stronger piece of brass bj\ which goes close to the ruler A B, and has a joint at X turning upon a screw ; below this joint is a piece of round brass about six inches long, which goes into a hole made in the top of the staff, and may be raised higher or lower, by means of a screw S : C D E represents part of this staff, the whole length of which is about three feet, and at the bottom is a rank screw made of iron and fixed to the staff. H I is a wire twenty- two inches long, with a screw at h to go into the hole b ; the piece of brass wire bent into the form i k is fixed to the wire H I by the screw k ; and the part i goes into the hole /in the brass piece bf. The small wire K L is about twelve inches long, and flatted at K, at which place is a little hole above one-eighth of an inch in diameter ; this wire K L is fitted to the holes I, m, n, o, which are made in the larger wire H I,

and it may be placed higher or lower by means of a small screw. This instrument is used in the following manner : fix a paper upon a drawing board, as in fig. 4, and divide the paper lengthways into nineteen equal parts, and perpendicularly into fourteen equal parts; making these divisions greater or smaller according to your design. Then take the staff, and fix it strongly in the ground by means of a screw at bottom, and at a convenient distance from the prospect which you intend to take.

Now put the instrument together as in fig. 5, and fix the ruler A B exactly horizontal by means of the plummet on the perpendicular ruler and

the brass joint X ; then fix the wire K L, so as to have the eye-hole exactly level with the horizon or equal to the height of the eye, and take care to have the greatest distance of the eye-hole from the ruler equal to the whole length of the longest ruler A B, and never less than the distance hi. Having thus fixed the instrument, proceed to make the drawing ; look through the eye-hole, and then more the perpendicular ruler in the groove, till you get one edge exactly against some principal object; then will the parts upon the ruler show how high the object is from the bottom of the ruler, i. e. from the bottom of the picture, and you will also know its apparent height ; therefore transfer this to the paper in those squares which correspond with the divisions upon the rulers. For the breadth of objects, move the perpendicular ruler so as to be even with the sides of an object, and the divisions upon the lower ruler will show their apparent breadths. After the same manner, get the places and apparent sizes of as many principal objects as are necessary for assisting you, in completing the whole drawing, which may be done by this method with great exactness. When the draw- ing is finished, the instrument may be taken to pieces and put into a box, which may serve as a drawing board ; the top M may be screwed into the staff, which will serve as a walking-stick, and the stool to sit on may be made very portable ; so that every part of this apparatus may be car- ried by one person without any inconvenience. Kirby, b. ii. p. 65, &c. This last instrument has been found particularly convenient in taking views of extensive landscapes, or buildings.

PERSPICA'CIOUS, adj. i Lat. perspicax. PERSPICAC'ITY, n. s. $ Quicksighted ;

sharp of sight : quickness of sight.

He that laid the foundations of the earth cannot be excluded the

secrecy of the mountains ; nor can there any thing escape the perspicacity of those eyes which were before light, and in whose optics there is no opacity. Browne.

It is as nice and tender in feeling as it can be perspicacious and quick in seeing. South.

PE’RSPICIL, n. s. Lat. perspicillum. A glass through which things are viewed ; an optic glass. Not used.

Let truth be

Ne’er so, far distant, yet chronology, Sharp-sighted as the eagle’s e.ye, that can Out-stare the broad-beamed day’s meridian, Will have a perspicil to find her out, And through the night of error and dark doubt, Discern the dawn of truth’s eternal ray, As when the rosy morn buds into day. Crashaw. The perspicil, as well as the needle, hath enlarged the habitable world. Glanville’s Scepsis.

PERSPIC’UOUS, adj. ˆ Fr. perspecuite ;

PERSPIC’UOCSLY, adv. f Lat. perspicuus.

PERSPIC’UOUSNESS, n. s. I Clear; translucent;

PERSPICU’ITY. J transparent ; such

as may be seen through ; the adverb and noun substantive corresponding : perspicuity is more commonly used for clearness to the mind ; and hence for precision of expression or language.

The purpose is perspicuous even as substance, Whose grossness little characters sum up.

Shakspeare.

The case is no sooner made than resolved ; if it be made not enwrapped, but plainly and perspicuously.

Bacon .

As contrary causes produce the like effects, so even the same proceed from black and white ; for the clear and perspicuous body effecteth white, and that white a black. Peacham.

As for diaphaneity and perspicuity, it enjoyeth that most eminently, as having its earthy and salinous parts so exactly resolved that its body is

left impor- ous. Browne.

The verses containing precepts have not so much need of ornament as of perspicuity. Dry den.

Perspicuity consists in the using of proper terms for the thoughts, which a man would have pass from his own mind into that of another. Locke.

All this is so perspicuous, so undeniable, that 1 need not be over industrious in the proof of it.

Sprat.

PERSPIRE', v. n. Lat. perspiro. To per- form excretion by the cuticular pores.

Hair cometh not upon the palms of the hands or soles of the feet, which are parts more perspirable ; and children are not hairy, for that their skins are most perspirable. Bacon.

That this attraction is performed by effluviums, is plain and granted by most ; for electricks will not commonly attract, unless they become perspirable.

Broicne,

PERSPIRATION.

Water, milk, whey, taken without much exercise ; so as to make them perspire, relax the belly.

Arbuthnot.

In an animal under a course of hard labour, ali- ment too vaporous or perspirable will subject it to too strong a perspiration, debility, and sudden death.

Id. on Aliments.

Insensible perspiration is the last and most perfect action of animal digestion. Id.

How much more considerate this, than if the poet had, from an affected accuracy of description, thrown us into an unmannerly

perspiration by the heat of the atmosphere ; forced us into a landscape of his own planning, with perhaps a paltry good-for-nothing zephyr or two, and a limited quantity of wood and water. Canning.

PERSPIRATION, in medicine, is the evacuation of the juices of the body through the pores of the skin. Perspiration is distinguished into sensible and insensible ; and here sensible perspiration is the same with sweating, and insensible perspi- ration that which escapes the notice of the senses. This last is the idea affixed to the word perspi- ration when used alone. The secretory organ is composed of the extremities of the cutaneous arteries. – The smell of the perspirable fluid, in a healthy man, is fatuous and animal ; its taste manifestly salt and ammoniacal. In consistence it is vaporous or aqueous; and its specific gra- vity in the latter state is greater than that of water. For the most part it is yellowish, from the passage of the subcutaneous oil, and sebace- ous matter of the subcutaneous glands. What- ever form it takes, the liquid that escapes from the skin is composed, according to Thenard, of a great deal of water, a small quantity of acetic acid, of muriate of soda and potassa, a small quantity of earthy phosphate, an atom of oxide of iron, and a trace of animal matter. Berzelius considers the acid of sweat not the same as acetic acid, but like the lactic acid of Scheel. The skin exhales besides an oily matter, and some carbonic acid.

Experiments have been made to determine the quantity of transpiration which is formed in a given time, and the variations that this quantity undergoes according to circumstances. The first were those of Sanctorius, who, during thirty years, weighed every day, with extreme care, and an indefatigable patience, his food and his drink, his solid and liquid excretions, and even himself. Sanctorius arrived at no exact results. Since his time several philosophers and physicians have been employed on the same subject with more success ; but the most remarkable labor in this way is that of Lavoisier and Seguin. These philosophers were the first who distinguished the loss that takes place by pulmonary transpiration from that of the skin.

; Seguin shut himself up in a bag of gummed silk, tied above his head, and presenting an opening, the edges of which were fixed round his mouth by a mixture of turpentine and pitch. In this manner only the humor of the pulmonary trans- piration passed into the air. In order to know the quantity, it was sufficient to weigh himself, •with the bag, at the beginning and end of the ex- periment, in a very fine balance. By repeating the experiment out of the bag, he determined the whole quantity of humor transpired ; so that, by

deducting from this the quantity that he knew had passed out from the lungs, he had the quan- tity of humor exhaled by the skin. Besides, he took into account the food that he had used, his excretions solid and liquid, and generally all the causes that could have any influence upon the transpiration. By following this plan, the results of Lavoisier and Seguin are these : — 1. The greatest quantity of insensible transpiration (the pulmonary included) is 25‘6 grs. troy per minute ; consequently 3 ozs. 1 drm. 36 grs. per hour ; and 6 Ibs. 4 ozs. 6 drms. 24 grs. in twenty- four hours. 2. The least considerable loss is 8-8 grs. per minute ; consequently 2 Ibs. 2 ozs. 3 drms. in twenty-four hours. 3. It is during the digestion that the loss of weight occasioned by insensible transpiration is at its minimum. 4. The transpiration is at its maximum imme- diately after dinner. 5. The mean of the insen- sible transpiration is 14-4 grs. per minute ; in the mean 14-4 grs. 8-8 depend on cutaneous transpi- ration, and 5‘6 upon the pulmonary. 6. The cutaneous transpiration alone varies during and after repasts. 7. Whatever quantity of food is taken, or whatever are the variations of the atmosphere, the same individual, after having augmented in weight by all the food that he has taken, returns, in twenty-four hours, to the same weight nearly that he was the day before, pro- vided he is not growing, or has not eaten to excess.

The cutaneous transpiration has various uses. It keeps up the suppleness of the epidermis, and thus favors the exercise of the tact and the touch. It is by evaporation along with that of the lungs, the principal means of cooling, by which the body maintains itself within certain limits of temperature ; also its expulsion from the econo- my appears very important, for every time that it is diminished or suspended, derangements of more or less consequence follow, and many dis- eases are not arrested until a considerable quan- tity of sweat is expelled.

It cannot be doubted that carbon is emitted from the skin ; but in what state, the experiments hitherto made do not enable us to decide. Cruick- shanks found that the air of the glass vessel in which his hand and foot had been confined for an hour, contained carbonic acid gas ; for a candle burned dimly in it, and it rendered lime-water turbid. And Jurine, that air which had remained for some time in contact with the skin consisted almost entirely of carbonic acid gas. The same conclusion may be drawn from the experiments of Ingenhousz and Milly. Trousset has lately observed that air was separated copiously from a patient of his, while bathing.

The skin emits also a particular odorous sub- stance. That every animal has a peculiar smell is well known : the dog can discover his

master, and even trace him to a distance by the scent. Cruickshanks has made it probable that this matter is an oity substance, or at least that there is an oily substance emitted by the skin. He wore repeatedly, night and day, for a month, the same under waistcoat of fleecy hosiery, during the hottest part of the summer. At the end of this time he always found an oily substance accumulated in considerable masses on the nap

of the inner surface of the waistcoat, in the form of black tears. When rubbed on paper, it ren- dered it transparent, and hardened on it like grease. It burned with a white flame, and left behind it a charry residuum.

Berthollet has concluded that the acid which is present is the phosphoric ; but this has not been proved. Fourcroy and Vauquelin have as- certained that the scurf which collects upon the skins of horses consists chiefly of phosphate of ‘ime, and urea is even sometimes mixed with it. According to Thenard, however, the acid con- tained in sweat is the acetous; which, he like- wise observes, is the only free acid contained in urine and in milk, this acid existing in both of them when quite fresh.

His account of his examination of it is as fol- lows : — The sweat is more or less copious in dif- ferent individuals ; and its quantity is percep- tibly in the inverse ratio of that of the urine. All other circumstances being similar, much more is produced during digestion than during repose. The maximum of its production appears to be twenty-six grains and two-thirds in a minute; the minimum nine grains, troy weight. It is much inferior, however, to the pulmonary trans- piration ; and there is likewise a great difference between their nature and manner of formation. The one is a product of a particular secretion, similar in some sort to that of the urine ; the other, composed of a great deal of water and car- bonic acid, is the product of a combustion gradually effected by the atmospheric air. The sweat, in a healthy state, very sensibly reddens litmus paper or infusion. In certain diseases, and particularly in putrid fevers, it is alkaline ; yet its taste is always rather saline, and more similar to that of salt than acid. Though color- less, it stains linen. Its smell is peculiar, and insupportable when it is concentrated, which is the case in particular

during distillation. But before he speaks of the trials to which he subjected it, and of which he had occasion for a great quantity, he describes the method he adopted for procuring it, which was similar to that of Cruickshanks. Human sweat, according to Thenard, is formed of a great deal of water, free acetous acid, muriate of soda, an atom of phosphate of lime and oxide of iron, and an inappreciable quantity of animal matter, which approaches much nearer to gelatin than to any other substance.

Perspiration varies in respect to, 1. The tem- perature of the atmosphere. — Thus men have a more copious, viscid, and higher-colored sweat in summer than in winter, and in warm countries, than in colder regions. 2. Sex. — The sweat of a man is said to smell more acrid than that of a woman. 3. Age. — The young are more sub- ject to sweat than the aged, who, during the ex- cessive heat of the summer, scarcely sweat at all. 4. Ingesta. — An alliacious sweat is perceived from eating garlick ; a leguminous from peas ; an acid from acids ; a fetid from animal food only ; and a rancid sweat from fat foods, as is observed in Greenland. A long abstinence from drink causes a more acrid and colored sweat; and the drinking a great quantity of cold waitr in summer a limpid and thin sweat. 5.

Medicines. — The sweat of those who have taken musk, even moderately, and assafoetida, or sul- phur, smells of their respective natures. 6. Re- gion'of the body. — The sweat of the head is greasy ; on the forehead it is more aqueous ; un- der the axillae very unguinous ; and in the inter- stices of the toes it is very fetid, forming in the most healthy man blackish sordes. 7. Diseases. In this respect it varies very much in regard to quantity, smell, and color; for the sweat of gouty persons is said to turn blue vegetable juices to a red color. Some men also have a lucid sweat, others a sweat tinging their linen of a cerulean color.

Fr. perswtder ; Span, and Port. persuadir ; Ital. and La.t.persuadere,per- ˆsuadeo. To induce ; bring to an opinion ; influence by expos- tulation or argu- ment; inculcate by

PERSUADE', v. a.

PERSUA'DER, n. s.

PERSUA'SIBLE, adj.

PERSUA'SIBLENESS, n. s.

PERSUA'SION, n. s.

PERSUA’SIVE, adj.

PERSUA’SIVELY, adv.

PERSUA’SIVENESS, n. s.

PERSUA’SORY, adj.

argument. Dr. Johnson says, ‘ persuasion seems rather applicable to the passions, and argument to the reason ;’ but this is not always observed : in an obsolete sense, to treat by persuasion : a persuader is one who thus treats or influences another ; an officious adviser or importuner : per- suasible is to be persuaded ; the noun substan- tive that follows corresponding : persuasion is the act of persuading ; state of being persuaded, or opinion to which one is persuaded : persuasive and persuasory, having the power to persuade or influence by argument; the adverb and noun substantive corresponding.

Let every man be fully persuaded in his own mind.

Romans,

We are persuaded better things of you, and things that accompany salvation. Hebrews vi. 9.

Joy over them that are persuaded to salvation.

Esdras vii.

They that were with Simon, being led with covet- ousness, were persuaded for money. 2 Mac. x.

Philoclea’s beauty not only persuaded, but so per- suaded as all hearts must yield : Pamela’s beauty used violence, and such as no heart could resist.

Sidney.

In prayer, we do not so much respect what pre- cepts art delivereth, touching the method of persua- sive utterance in the presence of great men, as what doth most avail to our own edification in piety and godly zeal. Hooker.

The most certain token of evident goodness is, if the general persuasion of all men does so account it.

Id.

Twenty merchants have all persuaded with him : But none can drive him from the envious plea Of forfeiture. Shakspeare.

You are abused in too bold a persuasion. Id.

The earl, speaking in that imperious language wherein the king had written, did not irritate the people, but made them conceive, by the haughtiness of delivery of the king's errand, that himself was the author or principal persuader of that counsel. Bacon.

Let Martius resume his farther discourse, as well for the persuasive as for the consult, touching ttu means that may conduce unto the enterprize. •/

By such persuaders as are held upright. Da

PERTH.

An opinion of the successfulness of the work being as necessary to found a purpose of undertaking it, as either the authority of commands, or the persuasive- ness of promises, or pungency of menaces can be. Hammond's Fundamental!.

To children, afraid of vain images, we persuade confidence by making them handle and look nearer such things. Taylor.

How incongruous would it be for a mathematician to persuade with eloquence, to use all imaginable in- sinuations and intreaties, that he might prevail with his hearers to believe that three and three make six !

Wilkins. Hunger and thirst at once,

Powerful persuaders! quickened at the scent

Of that alluring fruit, urged me so keen. Milton. The serpent with me

Persuasively hath so prevailed, that I

Have also tasted. Id.

To sit cross-legged, or with our fingers pectinated, is accounted bad, and friends will persuade us from it.

Browne.

Neither is this persuasory. Id.

IPt prove thy fortune, Polydore, to conquer, For thou hast all the arts of fine persuasion, Trust me, and let me know thy love's success.

Otway.

I should be glad, if I could persuade him to write such another critick on any thing of mine ; for when he condemns any of my poems, he makes the world have a better opinion of them. Dryden.

Let a man be ever so well persuaded of the advan- tages of virtue, yet, till he hungers and thirsts after righteousness, his will will not be determined to any action in pursuit of this confessed great good.

Locke.

Many who live upon their estates cannot so much as tell a story, much less speak clearly and persua- sively in any business. Id.

The obedient and the men of practice shall ride upon those clouds, and triumph over their present imperfections ; till persuasion pass into knowledge, and knowledge advance into assurance, and all come at length to be completed in the beatific vision.

South.

Notwithstanding the weight and fitness of the ar- guments to persuade, and the light of man's intellect to meet this persuasive evidence with a suitable as- sent, no assent followed, nor were men thereby ac- tually persuaded. Id.

It makes us apprehend our own interest in that obedience, makes us tractable and persuasible, con- trary to that brutish stubbornness of the horse and mule, which the Psalmist reproaches.

Government of the Tongue.

When we have no other certainty of being in the right, but our own persuasions that we are so ; this may often be but making one error the gage for an- other. Id.

Men should seriously persuade themselves, that they have here no abiding place, but are only in their passage to the heavenly Jerusalem. Wake.

Thus, a tune, a proverb, a scrap of poetry, or some other trivial object, will steal into the thoughts, and continue to possess them long after it

ceases to be amusing. Persuasives to dismiss a guest that proves so troublesome, can hardly be necessary ; and bodily exertion is generally the best remedy for this mental infirmity. Percival.

PERT, adj. -i Welsh, pert ; Belg. pert ; Fr.

PERT'LY, > appert ; Qu. "Lat.paratus, ready ?

PERT'NESS. j Lively ; brisk ; smart ; dapper :

trie adverb and noun substantive corresponding.

Awake the pert and nimble spirit of mirth ;

Turn melancholy forth to funerals. S/iakspeare.

Yonder walls, that pertly front your town, Yond towers, whose wanton tops do buss the clouds, Must kiss their own feet. Id.

On the tawny sands and shelves,

Tript the pert fairies and the dapper elves.

Milton. From pert to stupid sinks supinely down,

In youth a coxcomb, and in age a clown.

Spectator.

A lady bids me in a very pert manner mind my own affairs, and not pretend to meddle with their linen. Addison.

All servants might challenge the same liberty, and grow pert upon their masters ; and, when this sauci- ness became universal, what less mischief could be expected than an old Scythian rebellion 1 When yon pertly raise your snout, Fleer, and gibe, and laugh, and flout; This, among Hibernian asses, For sheer wit and humour passes. Swift.

There is in Shaftesbury's works a lively pertnest and a parade of literature ; but it is hard that we should be bound to admire the reveries. Watts.

PERTAIN, v. n. Lat. pertineo. To belong ; to relate; appertain.

As men hate those that affect that .honour by am- bition, which pertaineth not to them ; so are they more odious, who through fear betray the glory which they have. Hayward.

A cheveron or rafter of an house, a very honour- able bearing, is never seen in the coat of a king, be- cause it pertaineth to a mechanical profession.

Peacham.

PERTH, a town in Van Dieman's-land in Austral Asia, agreeably situated upon the banks of the South Esk river, twelve miles from Laun- ceston. It is a military station, and in the vicin- ity are many excellent farms and substantial dwellings.

PERTH, a town of Austral Asia, in the divi- sion of New Holland. It is the chief town of the county of Perth, is situated upon the estuary of the Swan river, above the afflux of the Can- ning river, and in the capital of the district usu- ally called the Swan river settlement.

PERTH, an ancient and celebrated city of Scotland, the capital of Perthshire, and formerly of the whole kingdom, is situated in a fine but low plain on the west bank of the Tay, which takes a bend to the east about a mile below the city. The waters of the Almond are also brought to the town by a canal. Portions of the plain north and south are called the North and South Inches, each of which is about a mile and a half in circumference, and is used both for the profit and pleasure of the inhabitants. On the north Inch is a good race ground.

The old part of the town is uniform in its plan, consisting of four streets from east to west, crossed by others at right angles. At the east end of High Street stood the old town house, county hall and prison, now rebuilding after a design by Smirke, on the site of the former palace of the Gowrie family. In the High Street is the guildhall, a plain building, and at the west end of it a modern church, with a steeple 140 feet high. In George Street is the public coffee room, also a handsome modern building. There are several other good halls in the city.

particularly that of the royal arch mason lodge, on the site of the ancient parliament house of Scotland. A little to the south and west of the new church is an old hospital, founded by James VI., now used as warehouses. Between the High Street and the South Street stands the church of St. John the Baptist, a building of very great antiquity, with a high spire, and is fitted up for three places of worship called the East, Middle, and West kirks. Chapels for the dissenters are also

numerous. The episcopal chapel in Prince's Street is a very elegant build- ing.

The whole of the Blackfriars ground on the north, and a considerable space of ground on the south side of the town, have within these twenty years been laid out for buildings, and a New Town may be then said to have arisen, containing a considerable number of streets, with many noble houses. Adjoining the North Inch is a crescent, place, and terrace, the latter a row of very fine buildings, in the centre of which is the Seminaries, a handsome fabric, where the various branches of education are taught. An elegant new theatre forms the western termination of the crescent, and a fine barrack terminates Athol Street in the same di- rection. At the extremity of South Inch stands a depot, built by government for the reception of prisoners of war, now used for military stores. It is considered one of the most complete and well arranged establishments of this kind in Great Britain. Two banking companies belong to the town, and there is also a branch of the bank of Scotland, and another of the British Linen Company, established here. The grammar- school of Perth has long been accounted one of the best in Scotland, and has produced many eminent statesmen and scholars. A literary and antiquarian society has also been established.

Perth was only provided formerly with a wooden bridge over the Tay. This gave place in 1772 to a new one of stone, designed by Mr. Smeaton, and begun in 1766. It consists of ten arches, is 906 feet in length, and twenty- two in breadth, and was built at an expense of about £30,000. At the east end of the bridge is the bridge end or burgh of Rinnoul.

The salmon fishery on the Tay is very exten- sive, and the annual rent may be estimated at about £7000, of which Perth shares about £l 000. The salmon are sent to London, packed in ice or pickled ; a smack sailing every third or fourth day during the season. The staple manufacture of Perth is linen; but of late the cotton manu- facture has greatly rivalled it. There are up- wards of 2500 looms employed in the town, which manufacture linen and cotton goods, be- sides extensive manufactures of leather articles of all kinds. In the neighbourhood are various manufacturing villages, of which Tulloch, Crai- gee-mill, and Muirtoun of Dalhousie, are in the parish of Perth.

Perth is a royal borough, and joined with Dundee, Forfar, Cupar of Fife, and St. Andrews, in electing a representative in the British impe- rial parliament. It had a royal charter from king David I., who died in 1153, and which was renewed and confirmed by another from

king William I. in 1210, which is still extant. It is governed by a provost, four lailies (viz. three merchants and one tradesman), a dean of guild, treasurer, and nineteen counsellors. It gave formerly the title of earl to the Drummond family, and the fourth earl was created duke of Perth, by James II. By clause 4, of the Scotch Reform Act, Perth alone is privileged to re- turn one member to parliament.

Various accounts are given of the origin and ancient history of this place : some writers as- cribing its first foundation to the Roman general Agricola; who is said to have fixed his camp here about A. D. 70, from the resemblance ot the scenery to that of Rome. The soldiers when they first saw the river Tay, and the adja cent plain, are recorded to have exclaimed ‘ Ecce Tiber ! Ecce Campus Martius ‘.’ Behol the Tiber! Behold the field of Mars ! Hence th Tay, we are told, was called New Tiber, by the Italians ; and Fordun, a Scottish historian, gives the name of Tyber-Mere, to an extensive moor west of the town. An aqueduct, said to have been constructed here by Agricola, is still in existence. When the town was fortified it sup- plied the ditches.

Necham, an English writer, who gave lectures on history at Paris in 1 1 80, describes Perth as a place of opulence; and, in 1210, according to the Scottish historians, it was strongly fortified by king William, who renewed its charter, and granted many additional privileges to the city. At this time, and indeed until the reign of the Stuart family, Perth was reckoned the capital city of Scotland, when kings were crowned at Scone. Between the years 1201 and 1459 no fewer than fourteen parliaments were held here. It was then likewise, as it is still, an extensive commercial town. Fordun says that the mer- chants of Perth visited, in their own ships, the Hanse Towns.

The Flemings of this and the following cen- tury also frequented the port of Perth, and indi- viduals of that nation connected with the linen and woollen manufactures appear to have fixed their abode in the town. King William, how- ever, put the foreign merchants of Perth under restrictions ; and, to prevent the settlement of foreign manufacturers there, granted in his char- ter that the burgesses might have a merchant guild of their own, ‘ fullers and weavers ex- cepted.’ Edward I. of England made it the residence of his deputies : Robert Bruce attacked this town in 1306 and 1311, but was repulsed on the former occasion by the earl of Pembroke ; on the latter, after an obstinate siege of six weeks, he succeeded in storming the fortifications, which he levelled with the ground. After the battle of Duplin these were rebuilt by Edward Baliol. In 1335 our Edward III. took possession of Perth, and resided in it. John, earl of Corn- wall,

brother to that monarch, is said to have died here in October 1336; receiving, according to Fordun, his mortal wound from the king's own dagger. In 1339 Perth endured a long siege by the regent Robert, and wis only taken by draining the ditch. In 1437 James I. of Scotland was murdered at the Black Friars' mo- nastery by Robert Graham, who wounded him

in twenty-eight different places, and the queen twice. The king's wardrobe was long preserved in this town. At this period the town walls seem to have been in a state of demolition ; as we find them repaired, at a very considerable expense, by James II. In his reign the earl of Cowrie's p.ouse here was the scene of one of the most re- markable events in Scottish history, i. e. the ' Cowrie conspiracy,' by John earl Ruthven, and his brother Alexander. These young men, according to the published account of the royal party, having prevailed upon the king to visit Perth (on the pretence of bringing to him a traitor whom they had taken), attempted to mur- der him ; when his attendants slew them both ; upon which the inhabitants of the town assem- bled round the house, threatening revenge, and they were with difficulty diverted from the pur- pose. In 1545 five men and a woman were burnt here for heresy. On the llth of May, 1559, John Knox preached a sermon in the kirk against idolatry ; and, by the indiscretion of a priest, a mob was raised, which destroyed all the monasteries and religious houses in the town. This year a select band of 300 reformers marched out of Perth to Stirling, with ropes about their necks, to hang the first that fled : and hence arose the phrase, ' St. Johnston's ribands.'

Perth, after the battle of Tibbermoor, was seized by the marquis of Montrose ; and in 1651 was taken by Cromwell, who built a cita- del on the South Inch. In 1715 the earl of Marr obtained possession of it, and occupied it for the Stuarts, till after the battle of Dunblane, on Sheriff-muir, when they were dislodged by the duke of Argyle. In 1745, also, prince Charles was proclaimed here, and appointed new ma- gistrates.

Since this period Perth has greatly risen in importance : the civil wars were of considerable benefit to it, by inducing a number of the Com- monwealth's soldiery to settle here ; and the re- sort of the various respectable families who so long adhered to the Stuart race, and the pas- sage of the conflicting forces, contributed also to increase and

establish its trade.

PERTH, or PERTHSHIRE, a county of Scotland, has the shire of Inverness and Aberdeen on the north; Angus or Forfar, Fife, and Kinross, on the east ; Clackmannan and Stirling on the south ; and Dunbarton and Argyle on the west ; con- taining about 2638 square miles, of which fifty are occupied by lakes; or, in all, 1,688,320 English acres ; being, next to Inverness-shire, the largest county of the mainland of Scotland. Its greatest extent, from east to west, is about seventy-seven miles, and from north to south sixty-eight.

Anciently it was divided into eight districts, containing seventy-nine parishes; Atholl, Stor- mont, Perth Proper, Cowrie, Strathearn, Mon- teith, Breadalbane, and Rannoch; and is under the jurisdiction of a sheriff, who has substitutes in the towns of Perth and Dunblane. The Highlands occupy about two-thirds of the sur- face: the Lowlands being chiefly situated on the easten- and southern extremities, which con- tain some of the richest tracts in Great Britain ; and tu the west, where the Crampians first rise,

for almost the whole breadth of the county the high grounds are penetrated by straths and glens, of considerable extent, each traversed by its own streams, and diversified by numerous lakes. At least seven of these mountains are upwards of 3000 feet high : the highest being Benlawers, on the west side of Loch Tay ; Benmore, south-west ; and Schehallion, north-east. The following is a table of the principal elevations : —

Elevation. Feet.

Dunsinnan Hill . . . 1040 Kinseat Hill . . .1179

Demyet 1345

Tortum 1400

Birnam Hill . . . 1580

Ben Clach (Ochil) . . 2420

Tarragon .... 2584 Ben Chenzie (Strathearn) . 2922 Ben Vorlich . . . 3300

Ben Doig .... 3550 Ben Ledi .... 3009 Schichallion . . . .3564 Ben Gload .... 3724 Ben More .... 3903 Ben Lawers 4015

The most considerable lakes are — Loch Tay, in the centre of the Highland district, about fif- teen miles long, and one broad, with a depth varying from fifteen to 100 fathoms ; Loch Ericht, on the north-west, extending into Inverness-shire, still longer, but not so broad ; Loch Rannoch, south-east of the former, twelve miles long; Loch Earn, south from Loch Tay ; and Lochs Vennachar, Achray, and Katrine, on the south- west. Most of the streams have their source in these lochs, or receive their waters as they pass them. The rivers are the Tay, Forth, Earn, Teath, and Isla ; of which the two first are by far the largest. The Tay, the largest river in Scot- land, has its source on the western border of Perthshire (to which county it is confined), under the name of the Dochart, and, soon after entering Loch Dochart, flows thence north-east till it falls into Loch Tay. Leaving Loch Tay, from which it now takes its name, it pursues first a north- easterly and then a southerly course to Dunkeld, from which it proceeds eastward, and then south, through a rich country, till it falls into the Frith of that name, a little below Perth ; having been joined by the Almond and other streams in its course, which is not less than ninety miles. South of Loch Tay is Loch Earn, where the river of that name rises, and which, flowing east and south, through Strathearn and by the town of Crieff, after a course of twenty-four miles, falls, at Rhind, into the Frith of Tay. On the banks of this rirer, near its confluence with the Tay, is Pitcaithly, long celebrated for its mineral springs. There are also springs at DUNBLANE, which see.

In the central parts of this county the winters are stormy and severe ; and, on the banks of the rivers, hoar-frosts are frequently very injurious in summer. On the east the climate is mild ; and the thermometer, on an average of twelve years, has stood at 50°.

Perthshire has coal-mines at Culross, a small detached tract on the Forth ; but, from the gene-

ral want of coal, limestone, which is found in many parts of the county, is of little value. Some years ago a machine was erected for pounding limestone for manure; but the experi- ment failed. In the higher grounds the prevail- ing rock is granite, and in the lower sandstone. On the southern ridges, or skirts of the moun- tains, both slate and freestone are found in abundance ; but here the great sandstone stratum of Scotland terminates, in like manner as the coal field does to the southward of the Ochils. Hence it may be remarked that Perthshire con- tains Vvithin itself the boundary between the sandstone and the granite; for the former is only discovered in small

patches to the north, and the latter seldom shows itself to the south, except in Galloway. What is curious, the secondary minerals on the ridges of the Grampians, such as slate, limestone, and even sandstone, seem to be affected in their properties by the proximity, or intermixture, of the primary rocks. Thus, below Murphy, in the parish of Little Dunkeld, is an inexhaustible body of a very fine grained free-stone, which is of a light livid ash color, and so hard as to resist the action of the atmosphere for many centuries. The cathedral of Dunkeld was built of stones from this district, and fully cor- roborates the above assertion. In the hills of Birnam the slate is of a very deep blue color, bordering on violet; and the same is nearly the character of the limestone found at Rannoch, Glenlyon, Breadalbane, and the head of Stra- thearn. In Monteath is also a quarry of the same mineral, resembling- marble, of a blue ground, with streaks of white. Iron stone ap- pears in some parts ; but no mines of that metal have ever been opened, except on the southern side of the Ochils, about Culross. A lead mine was wrought for many years near Tyndrum, in Breadalbane, as was likewise one in Glenlyon, but these are now both abandoned. Some lead ore was also discovered, about twenty years back, in the mountain of Ben-Ledi. One vein, on the north-east side of the mountain, was found to be extremely rich in silver, but its dimensions were too small to admit of its being wrought. In the hill of Birnam also several pieces of lead ore have been dug up. This ore was encrusted with a white sparry, or rather quartzose, sub- stance ; one piece, about six pounds in weight, consisted of unmixed compact ore, which pro- duced a considerable portion of pure lead. It was found at the base of the hill.

Slates are abundant in different parts of the county. The principal stratum commences on the borders of Loch Lomond, in Dunbartonshire, and seems to terminate near Dunkeld. They are of two kinds, the blue and the gray slate. The former, which are by far the most valuable, are plentiful in Monteath, and along the north side of the Ochils. Gray slates also are found in vast quantities in the same districts, as well as in Strathallan and Strathearn. They consist of sandstone, which may be split into thin layers, six feet square ; and are, since the intro- duction of blue slates in roofing, chiefly used for malt-kilns, floors, and pavement. In the parish of Wester Foulis is a blue slate quarry of great value; but it is not wrought to any very con-

siderable extent, on account of its distance from water carriage. The best freestone quarries are those in the parish of Tulliallan on the Forth, and on the estate of Milnfield, in the south- eastern corner of the county. Shell-marl abounds in Stormont and Strathearn.

The alluvial soil on the banks of the rivers is in many parts of the richest quality, and of considerable extent. The Carse of Cowrie is a tract of about 18,000 acres, situated on the north and north-west banks of the Frith of Tay, and has long been celebrated for its orchards, of all sizes. Perthshire has red and fallow deer, and roes, rabbits, pigeons, and poultry; and abun- dance of the other game of the Highlands. It is much ornamented by the numerous seats of its proprietors, and has two royal burghs, Perth and Culross. Perth is a place of great antiquity, formerly the usual residence of the Scottish sovereigns, who were crowned at Scone in its vicinity, and the seat of parliaments and courts of justice. Some of the most important events in Scottish history, both of a religious and mili- tary description, occurred here. It is now a well built thriving town, containing, in 1831, about 25,000 inhabitants. About seventy other towns and villages are scattered over the county, the most considerable of which have been already described in the Encyclopaedia.

The chief manufactures are linen, cotton, leather, and paper. As well as extensive bleach- fields, print-fields, and cotton-mills, it has mills for extracting oil from seed, and for the spinning of flax and wool. The exports are corn, linen and linen-yarn, cottons, boots and shoes, salmon, and coals ; and it imports lime in great quanti- ties, some of the materials of its manufactures, and many domestic articles.

PERTH, ARTICLES OF. The Jive articles of Perth, so called because they were carried by the influence of the court and bishops at a conven- tion or assembly summoned to meet at Perth, August 25th, 1618, are as follow:—!. That the holy sacrament should be received kneeling. 2. That ministers should be obliged to administer the sacrament in private houses to the sick, if they desired it. 3. That ministers might bap- tise children privately at home, in cases of necessity, only certifying it to the congregation the next Lord’s day. 4. That ministers should bring such children of their parish as could say their catechism, and repeat the Lord’s prayer, creed, and ten commandments, to the bishops, that they might confirm them and give them their blessing. 5. That the festivals of Christ- mas, Easter, Whitsuntide, and the Ascension of our Saviour, should for the future be commemo- rated in the church of Scotland. The king ordered these articles to be published at the market-crosses of the several boroughs, and the ministers to read them in their pulpits ; but most of the ministers refused, as they were sanc- tioned by no penalty except the king’s displea- sure. The king, however, determining to obtain the ratification of parliament, issued a procla- mation, commanding all ministers who opposec. them, and who were preparing a supplication against them, to leave the city of Edinburgh within twenty hours. The

ministers obeyed,

leaving behind them a protestation against the articles, and an admonition to the members of parliament not to ratify them, as they would answer it in the day of judgment. The court interest prevailed, and the articles were rati- fied, contrary to the sense of the kirk and nation. This measure occasioned a persecu- tion through the kingdom, and many of the Presbyterian ministers were fined, imprisoned, and banished by the high commission. Thus far the arbitrary and erudite James I. proceeded towards the restitution of episcopacy in Scot- land ; but there was still wanting for the com- pletion of the work a public liturgy, or book of common prayer. An insurrection through the whole kingdom being apprehended, he desisted from enfbrcing this unwise measure, and left it to be finished by his son, whose imposition of it upon the kirk, without consent of parliament or general assembly, set fire to the discontents of the people, which had been gathering for so many years.

PERTINA'CIOUS, adj.\ Latin, pertmax. PERTINA'CIOUSLY, adv. I Obstinate ; stub PERTINA'CIOUSNESS, n. s\ born ; stickling ; PERTINAC'ITY, i used, however, in

PER'TINACY. Ja good sense by

South, or as meaning resolute ; firm ; con- stant : the adverb and noun substantive follow these senses : pertinacity and pertinacy also mean obstinacy ; stubbornness ; steadiness ; see the extract from Taylor.

They deny that freedom to me which they perti- naciously challenge to themselves. King Charles.

Their pertinacity is such, that when you drive them out of one form, they assume another. Dupva.

St. Gorgonia prayed with passion and pertinacy, till she obtained relief. Taylor.

It (harsh speech) maketh them indocile and intrac- table, averse from better instruction, pertinacious in their opinions, and refractory in their ways.

Barrow.

In this reply was included a very gross mistake, and, if with pertinacity maintained, a capital errour.

Browne.

One of the dissenters appeared to Dr. Sanderson to be so bold, so troublesome and illogical in the dis- pute, as forced him to say, that he had never met with a man of more pertinacious confidence and less abilities. Walton.

Others have sought to ease themselves of all the evil of affliction by disputing subtily against it, and pertinaciously maintaining that afflictions are no real evils, hut only in imagination. Tillatson.

It holds forth the pertinacy of ill fortune, in pur- suing people into their graves. L'Estrange.

Metals pertinaciously resist all transmutation ; and though one would think they were turned into a dif- ferent substance, yet they do but as it were lurk un- der a vizard. Ray.

Diligence is a steady, constant, and pertinacious study, that naturally leads the soul into the know- ledge of that which at first semed locked up from it.

South.

PERTINENT, adj. PER'TINENCE, n. *. PER'TINENCY, PER'TINENTLY, adv.

-\ Fr. pertinent ; Lat. / pertinens, pertineo. . Relative ; apposite ; i exactly to purpose ;

PER'TINENTNESS, n. s. J relating Concerning: pertinence, pertinency, and pertinentness, mean appositeness ; relevancy; justness of relation.

Men shall have just cause, when any thing perti- nent unto faith and religion is doubted of, the more willing to incline their minds towards that which the sentence of so grave, wise and learned in that faculty shall judge most sound. Hooker.

My caution was more pertinent

Than the rebuke you give it.

Shakspeare. Coriolanus.

I set down, out of experience in business, and con- versation in books, what I thought pertinent to this business. Bacon.

Here I shall seem a little to digress, but you will by and by find it pertinent. Id.

Be modest and reserved in the presence of thy bet- ters, speaking little, answering pertinently, not inter- posing without leave or reason. Taylor.

Modest, sober, and pertinent discourse would ap- pear far more generous and masculine, than such mad hectoring the Almighty, such boisterous insult- ing over the received laws and general notions of mankind. Burrow on Vain Swearing.

If he could find pertinent treatises of it in books, that would reach all the particulars of a man's beha- viour ; his own ill-fashioned example would spoil all.

Locke.

I have shewn the fitness and' pertinency of the apostle's discourse to the persons he addressed to, whereby it appeareth that he was no babbler, and did not talk at random. Bentley.

PERTINAX, an illustrious Roman emperor, who flourished about A.D. 170. He was de- scended of a mean family ; and like his father, who was either a slave or the son of a slave, he for some time followed the employment of mak- ing charcoal. His poverty did • not, however, prevent him from receiving a liberal education. For some iime he was employed in teaching the Greek and the Roman languages in Etruria. He next became a soldier, and by his valor rose to the highest offices in the army, and was made consul by M. Aurelius. He was afterwards made governor of Mcesia, and at length of Rome itself. When Commodus was murdered, Per- tinax was universally chosen to succeed to the imperial dignity. He complied with reluctance; but his mildness, his economy, and popularity, convinced the senate and people of the propriety of their choice. He forbad his name to be in- scribed on any part of the imperial domains, insisting that they belonged not to him but to the public. He melted the silver statues which liad been raised to Commodus, and sold all his concubines, horses, arms, and other instru- ments of his pleasure. With the money thus raised, he abolished all the taxes which that prince had imposed. These patriotic actions gained him the affection of the worthiest of his

subjects ; but, when he attempted to introduce among the pretorian guards proper discipline, the minds of the soldiers were totally alienated. Pertinax was apprized of their mutinying ; but, instead of flying, he boldly addressed them; and they had begun to retire, when one of the most seditious advanced, and darting a javelin at his breast, exclaiming, ‘ The soldiers send you this.’ The rest followed the bloody example; and Pertinax, muffling up his head, and calling upon Jupiter to avenge his death, was imme- diately despatched. This abominable murder happened A. D. 103. It was no sooner known than the enraged populace flocked from all

quarters, and uttering dreadful menaces against the authors of his death, ran up and down the streets in quest of them ; but the senate had not the courage to avenge it. Such was the lamented end of Pertinax, after he had lived sixty-six years, seven months, and twenty-six days ; and reigned, according to Dio Cassius, only eighty- seven days. His remains were interred with great pomp by Didius Julianus, his successor. Septimius Severus assumed the name of Perti- uax, and punished with great severity all who had been accessory to his death ; disbanded the Praetorian guards, pronounced his panegyric, and caused him to be ranked among the gods, ap- pointing his son chief priest. The day of his accession and his birthday were celebrated for many years.

PERTUIS, in military affairs, a narrow pas- sage which is made in the shallow parts of a river, for the facility of navigation. This passage is sometimes confined with flood-gates, in order to raise or lower the waters according to circum- stances.

PERTUISANE, a halbert which has a longer and broader iron at the end than the common halberts have. They have been disused since the close of the seventh century.

PERTURB’, v. a. i Lat. perturbo. To

PKRTUR’BATE, v. a. > disquiet; to disturb;

PERTURBA’TION, n. s. j disorder ; deprive of tranquillity : perturbation is disturbance ; rest- lessness ; disquiet ; cause of disquiet. But we only find it in Shakspeare in this last sense.

His wasting flesh with anguish burns, And his perturbed soul within

him mourns. Sandys.

Rest, rest, perturbed spirit. Shakspeare.

O polished perturbation ! golden care !

That keep’st the ports of slumber open wide,

To many a watchful night : sleep with it now,

Yet not so sound, and half so deeply sweet,

As be, whose brow with homely biggen bound,

Sleeps out the watch of night. Id. Henry IV.

Natures that have much heat, and great and vio- lent desires and perturbations, are not ripe for action, Ul! they have passed the meridian of their years.

Baron’s Essays,

Restore yourselves unto your temper, fathers ; And, without perturbation, hear me speak.

Ben Jonson.

They are content to suffer the penalties annexed, rather than perturb the public peace. King Charles. Love was not in their looks, either to God,

Nor to each other ; but apparent guilt,

And shame, and perturbation, and despair.

Milton.

The inservient and brutal faculties controuled the suggestions of truth ; pleasure and profit oversway- ing the instructions of honesty, and sensuality per- turbing the reasonable commands of virtue. Browne.

The soul, as it is more immediately and strongly affected by this part, so doth it manifest all its pas- sions and perturbations by it. Bay.

PERTU’SION, n. s. Lat. pertusus. The act of piercing or punching.

An empty pot without earth in it, may be put over

fruit the better, if some few pertusiona be made in tie pot. Bacon.

The manner of opening a vein in Hippocrates's time, was by stabbing or pertusion, as it is performed in horses. Arbuthnot.

PERTUSIS,chincough. See MEDICINE, Index.

PERU, once the largest of the Spanisli vice- royalties in South America, is at present a small independent state, whose natural features, and much of whose political history we have already given in the article AMERICA, SOUTH.

We need only observe here that it is now gene- rally considered as situated between 3° 25′ and 21° 30′ S. lat., and 65° and 81° 10′ W. long. It is bounded on the north by the republic of Columbia ; east by Brasil ; south by the desert of Atacama, which separates it from Chili, and by the United Provinces of South America; and west by the Pacific Ocean. Its mean length from north to south is about 750 miles, and its mean breadth about 660, the area being about 495,000. But the sinuosities of the shore are so considerable as to give a course of upwards of 1000 miles.

The Andes penetrate this territory from south- east to north-west nearly parallel with the coast, in three principal ridges or cordilleras, which con- tinue till about 6° of S. lat., where they unite into a single chain. Along the whole coast or water side is a narrow plain, from thirty-five to seventy miles wide, called the country of Valles, con- sisting of a succession of barren sandy deserts. Immediately east of this is the lower or western ridge of the Andes, reaching the whole length of Peru ; not in one unbroken elevation, like the cordillera of Mexico, but composed of succes- sive summits of immense height, between which the eastern inhabitants find a laborious passage to the country of Valles. Between the western and central ridges there is a series of plains, varying in width from 100 to 170 miles, elevated generally 8000 or 10,000 feet above the level of the ocean, and separated from each other by deep valleys, The central cordillera consists also of separate summits, less broken than the western, and has an average height of 15,000 feet. Beyond the eastern cordillera there are immense unexplored plains, which reach into Brasil, and traversed from south to north by the principal mountain tributaries of the Amazon.

So far as the cultivation of the coast district has extended, it is powerfully aided by a species of manure peculiar to this part of Peru, and whose qualities seem to be derived from the singular

circumstance of no rain falling here. On the islands, the resting-places of millions of aquatic birds, their dung has accumulated in the course of ages, so as to form hills of more than 100 feet in height, close to the shore, whence it is conveyed by small vessels to the main-land. The dung thus collected, not having its salts diluted by rain, and being but slightly affected by the sun, has retained, according to the analy- sis of Sir Humphry Davy, a greater proportion of ammonia than any substance that has yet been applied to land as manure. In this dis- trict most of the tropical fruits can be reared on the banks of the small streams, or assisted by artificial irrigation.

The sides of the Andes nearest the Pacific Ocean are covered with forests, made almost impenetrable by the numerous parasitical plants which twine round the trees. These forests yield acacias, mangle trees, arborescent brooms, and ferns ; aloes and other succulent plants ;

cedars, cotton, or Cuba trees of gigantic magni- tude, and many kinds of ebony, and other use- ful woods.

The lofty plains between the Andes are perpe- tually verdant ; and the grains, the vegetables, and fine fruits of Europe, flourish here amidst those of the torrid zone. Wine, oil, and sugar, are the most valuable productions of the coast ; and corn, wheat, Peruvian bark, and cacao, of the high country.

The rivers on the west side of the Andes are mere mountain streams of short course ; on the eastern side rise the Arragon and its tributaries.

The mountainous districts are of far-famed metallic wealth. Recently the number of gold mines and washings worked in Peru was sixty-nine, the number of silver mines 784, of quick- silver four, of copper four, and of lead twelve. The annual produce of the whole is valued at 4,500,000 dollars, of which silver constitutes seven-eighths. These rich mines, however, have always been under bad management, and their produce is hence very inferior to what it might be made. Those that are most productive are the mines of Pasco, in the province of Tarma. They are situated on a high table land, which rises more than 13,000 feet above the level of the sea, and were discovered in 1630, by Huari Ca- pac, an Indian. The metalliferous bed is not far from the surface, as the pits are only from ninety to 400 feet deep. Water is then met

with, and either occasions great expense to remove it, or causes the works to be abandoned. This mine was lately 15,747 feet long, and 721 7 broad ; and if worked by steam-engines, and according to the improved methods practised in Europe, it would be as productive as the celebrated mines of Guanaxuato in Mexico. The annual produce exceeds 131,000 Ibs. troy. The mountain of Lauricocha, in which these mines are situated, is about six miles from Pasco, and contains an immense mass of fine porous brown iron-stone, which is interspersed throughout with pure sil- ver, and yields eight or nine marks of the metal for every fifty hundred weight of the ore. There is also a rich vein of friable white metallic argil, which produces from two to ten pounds of silver for every hundred weight. The mines of Choco, in Truxillo, were discovered by Don Rodrigues de Ocano, a European, in 1771 ; but in the time of the incas the Peruvians obtained metal from this district. The mines in the Partido of Choco, which are included under the appellation of Gualgayoc, have sometimes supplied the pro- vincial treasury of Truxillo with more than 44,000 Ibs. troy of pure silver annually. These mines are richer than those of Potosi, and are si- tuated at the height of 1 3,385 feet above the level of the Pacific Ocean. The mines of Huantajaya, in the partido of Arica, in a desert near the small port of Iquique, are famed for their large portion of native silver. Two pieces were not long since found, the one weighing two, and the other eight quintals. These mines are also sur- rounded by beds of rock-salt, and their whole annual produce of silver is from 42,000 Ibs. to 52,000 Ibs. troy. Immense wealth has likewise been discovered in several other places. At Pampa de Navar, wherever the turf is turned up,

for more than half a square league, filaments of silver are found adhering to the roots of the grass, and sometimes large pieces of native metal ap- pear. At present most of the Peruvian gold comes from Pataz and Huilies, in Tarmar, where it is met with in veins of quartz, traversing the primitive rock, and from the banks of the Maranon Alto, or higher Maranon, where it is procured by washing the alluvial soil. Emeralds and other precious stones are obtained in various places in this viceroyalty. The annual produce, as esti- mated from the royal revenues, between 1708 and 1789, was £768,424. The coinage of gold and silver in the royal mint at Lima, from 1791 to 1801, amounted to £1,113,000 per annum, of which 1726 Ibs. were gold, and 285,000 Ibs. silver.

Among the most valuable animals of these elevated regions are the llama, the guanuco, the vicuna, and the alpaco ; which are considered as the camels of America, and are of great use both as beasts of burden, and for their wool.

In the country of Valles, included between the western cordillera and the coast, rain, thun der and lightning are entirely unknown. During the winter, however, which lasts from July to November, the ground is almost constantly co- vered with a thick fog, which, towards the close of the day, generally dissolves into a very small mist, or dew, and moistens the earth equably. During the summer the sun's rays occasion an intense heat throughout all this region ; the more so as they are received upon a sandy soil, whence they are strongly reflected. This low region is far from being healthy ; malignant, intermittent, and catarrhal fevers, pleurisies, and constipations, are the most common diseases, and rage con- stantly at Lima. A great part of Peru, between the western coast of the Andes and the shores of the Pacific, supplies one of the most perfect ex- amples of what is called a hot and dry climate ; as for the space of about 400 leagues along the coast, rain is wholly unknown. The Andes in- tercept the clouds, which pour their contents on the mountain districts, often accompanied by tre- mendous thunder and lightning, while near the sea not a drop falls to moisten the parched soil. The air in all this tract is, therefore, uniformly hot. During the winter at Lima, Fahrenheit's thermometer never sinks below 60°, and seldom rises above 85°. Vegetation flourishes to the height of 10,000 feet.

The elevated plains between the western and central cordillera, called by Humboldt the high table-land of Peru, has scarcely any variation of temperature throughout the year ; the mercury of Fahrenheit's thermometer always standing at about 65° or 66° ; the climate is here mild and genial. The only distinction of seasons arises from the rains, which prevail from November till May. The highest Andes are perpetually co- vered with snow, and experience an uninterrupted winter between the tropics. Here are also many volcanoes which are flaming within, while their summits and all their apertures are clothed with ice.

Peru labors under great disadvantages in re- gard to inland communication. The deep valle) s which separate the elevated plains, and the lofty mountains which rise between the table-land au J

rhe coast, render travelling difficult. In many parts there is a total want of roads as well as bridges, and in others the paths lie along the edges of steep and rugged precipices, so narrow that mules alone pass in security. In the most mountainous districts it is customary for those who can afford it to travel on the backs of Indians ; in this way they are carried for fifteen or twenty days together. Nor is the Pacific

Ocean here favorable to commerce. On the whole extent of its western coast there is no har- bour except that of Callao, the port of Lima, which can be entered by a vessel of such a size as is fit for the navigation round Cape Horn. The wind blows constantly from the southward, varying only as the coast tends ; wherever, therefore, there is a high projecting headland there is shelter, and sometimes good anchorage to the northward, as at Ylo, Iqueque, &c. But on every part of the shore the swell from the sea causes such a tremendous surf that no commu- nication can be had with the shore by the boats of European ships. The natives pass this surf, on what is called a balsa, constructed of two skins of the largest sized seals, inflated and lashed side by side. The native sits on a small plat- form fixed between them, with a pipe made of the entrails of the seal, communicating air to each of the inflated skins as he finds it necessary. On these contrivances the natives fear no waves or breakers, and frequently proceed to such a distance as to lose sight of land : sometimes they add a paddle, and occasionally a small sail. Other vessels of this name are used for longer voyages, and consist of an unequal number of trees of light wood, squared, and lashed toge- ther, but so loosely as to admit the action of the waves between them. The centre tree is longer than the others, and serves the purpose of a prow. Some of these vessels are more than 1 00 feet in length, have huts constructed upon them for the crew, and pass with security from the shores of Peru to the ports of Guyaquil and Panama.

The native manufactures of Peru consist of homely articles, such as woollen and cotton loths of inferior texture. But in dyeing the cloths, whether of woollen or cotton, the natives show ingenuity, and make use of plants scarce- ly known in Europe. They have a root called reilbon, resembling madder, but with a smaller leaf, an infusion of which makes a fine red. A plant called poquel, a kind of female south- ern-wood, with green chequered leaves, is used for yellow colors, as is also the stem for dyeing green. A wild indigo yields them a blue dye, and the panqu'e a black. The dress of the natives is simple, consisting of a square cloth, with a hole in the centre, through which the head is thrust, and which falls before and behind. The head is generally covered with a large hat made of the straw of the maize.

The Peruvians were taught oy their celebrated Manco to adore the Creator, whom they denomi- nated Paca Camac, that intelligence which ani- mated the world. They seldom built temples, or offered sacrifices to him. One temple, how- ever, dedicated to a kind of unknown god, the Spaniards found at their arrival, erected in a val-

ley, thence named the valley of Paca Camac. The sacrifices instituted

in honor of the sun con- sisted chiefly of lambs ; besides which they offered all sorts of cattle, fowls, and corn, and even burnt their finest cloths on the altar by way of incense. They had drink offerings made of maize, steeped in water. They also paid some kind of veneration to the images of several ani- mals and vegetables that had a place in their temples. Besides the solemnities at every full moon, four grand festivals were celebrated annu- ally. The first, called Raymi, was held in June, not only in honor of the sun, but of their first inca, Manca Capac, and Coya Mama Ocla, his wife and sister, whom the incas considered as their first parents, descended immediately from the sun. At this festival all the viceroys, gene- rals, governors, and nobility, assembled at Cuzco, and the inca officiated in person as high-priest ; though on other occasions the regular pontiff who was usually the uncle or brother of the inca, officiated. On the morning of the festival, the inca, accompanied by his near relations, in order of their seniority, went barefoot in procession, at day-break, to the market-place, where they re mained looking attentively towards the east. The luminary no sooner appeared than they fell prostrate on their faces in the most profound veneration, and acknowledged it to be their god and father. The vaisal princes and nobility, that were not of the blood royal, did the same in another square. The priests then offered a black lamb, in sacrifice, first turning its head towards the east. From the entrails of the victim they drew prognostics of peace and war, &c. The Peruvians believed in the immortality of the soul. The incas taught them that, on leaving this world, they should enter into a state of hap- piness, provided for them by their god and father the sun.

Before the arrival of the Spaniards the natives were acquainted with some points of astromomy. They had observed the various motions of the planet Venus, and the different phases of the moon. The people divided the year by the sea- sons ; but the incas, who had discovered the re- volution of the sun, marked out the summer and winter solstices by high towers, which they erected on the east and west of Cuzco. When the sun rose directly opposite to four of those towers, on the east side of the city, and set against those of the west, it was then the summer solstice ; when it rose and set against the towers, it was the winter solstice. They had also erected marble pillars on the great court before the temple of the sun, by which they observed the equinoxes, under the equator, when the sun being vertical, the pillars cast no shade. At those times they crowned the pillars with garlands of flowers and odoriferous herbs, and celebrated a festival to the sun. They distinguished the months by the moon, and their weeks were called quarters of the moon ; the days of the week they distinguished, as first, second, &c. When the sun was eclipsed, they concluded it was

on account of their sins, imagining that this phenomenon por- tended famine, war, and pestilence, or some othi.” terrible calamity. In a similar state of the moon, they apprehended that she was sick and dying.

They had philosophers, who taught morals, cul- tivated poetry, and composed plays, which were acted before the king by the great men of the court, officers, &c. They were acquainted with painting and statuary ; but in all the implements * of mechanic arts they were extremely deficient. Though many goldsmiths were constantly em- ployed, they had never invented an anvil of any metal, but used a hard stone, and beat their plate with round pieces of copper instead of hammers ; nor had they any files or graving tools. Their carpenters had no other tools than hatchets of copper or flint ; nor had they learned the use of iron; though the country affords mines of it. Their knives were also made of flint or copper.

This country was first made known to Europe by the Spanish governor of Santa Maria, in Da- rien, Nunez de Balboa, who accidentally learned from a young cacique that there was a country abounding with gold about six days’ journey to the south. Balboa set out, therefore, on the 1 st day of September, 1513, about the time that the periodical rains began to abate. He had only 190 Spaniards along with him; but all of them were veterans, inured to the climate of America, and very much attached to their leader : 1000 Indians attended them, with their fierce dogs, to carry their provisions and other necessaries. After a painful journey of twenty-five days, Bal- boa arrived at the South Sea; when he went into it up to the middle, and took possession of the coast and ocean in the name of the king of Spain. That part of the South Sea he called the Gulf of St. Michael ; a name it still retains. From some of the caciques he extorted provisions and gold ; others sent him presents voluntarily. He now led back his followers to Santa Maria, to refresh them, and sent an account to the court of Spain of the important discovery he had made, demanding 1000 men to conquer the new country he had discovered. But the king appointed Pedrarias Davila to supersede him, with the command of fifteen stout vessels and 1200 soldiers. Balboa submitted to the king’s plea- sure, yet the new governor tried him for some pretended irregularities committed before his ar- rival, and fined him of almost all he was worth. In the mean time, the Spaniards, paying no re- gard to the treaties concluded by Balboa with the natives, plundered and

destroyed them indis- criminately, from the gulf of Darien to lake Nicaragua. The new comers had also arrived about the middle of the wet season, when the excessive rains produced the most fatal diseases. To this was joined an extreme scarcity of provi- sions ; so that in a month above 600 Spaniards perished. Balboa sent remonstrances to Spain against the new governor; on which the king appointed Balboa to supersede him with very extensive authority ; enjoining Pedrarias to sup- port him in all his enterprises. But though a reconciliation took place in appearance, so far that Pedrarias agreed to give his daughter in marriage to Balboa, he soon after had him con- demned and executed on pretence of disloyalty. On the death of Balboa, further discoveries were laid aside for some time ; but there were three persons at Panama who determined to go in

quest of this country. These were Francis Pi- zarro, Diego de Almagro, and Hernand Luque. We have adverted already to the general history of their proceedings here, but some further par- ticulars will gratify such of our readers as wish to understand the spirit of the Spanish conquests. Pizarro and Almagro were soldiers of fortune, and Luque was an ecclesiastic, who acted at Pa- nama as a priest and schoolmaster. Their con- federacy was authorised by Pedrarias ; and each engaged to employ his whole fortune in the ad- venture. Pizano, being the least wealthy, en- gaged to take upon himself the greatest share of the fatigue and danger, and to command the ar- mament. Almagro offered to conduct the sup- plies of provisions and reinforcements; and Luque was to remain at Panama, to superintend their general interests. In 1524 Pizarro set sail from Panama with a single vessel of small burden, and 1 12 men, selecting the most impro- per season of the whole year, i. e. when the pe- riodical winds, which were then set in, were directly opposed to his course. The consequence was, that, after beating about for seventy days, with much danger and fatigue, he had advanced scarcely as far to the south-east as a skilful na- vigator will now make in three days. He touched at several places of Terra Firma, however, and at the Pearl Islands, where he was found by Al- magro, who had set out in quest of him with a reinforcement of seventy men, and had suffered similar distresses. But the country of Popayan, showing a better aspect, and the inhabitants be- ing more friendly, they determined not to aban- don their scheme. Almagro returned to Panama, but the bad accounts of the service gave his countrymen such an unfavorable idea of it, that Almagro could levy only eighty men. The dis- asters and disappointments they met with, in this new attempt, were scarcely inferior to those they had already experienced, when part of the armament at last reached the bay of St. Matthew on the coast of

Quito, and landed at Tacamez, where they met with a more fertile country than any they had yet seen; the natives also being more civilised, and clothed in cotton or woollen stuffs, adorned with gold and silver. But some of the adventurers had informed their friends of their many dangers and losses, which weighed so much with Peter de los Rios, the successor of Pedrarias, that he prohibited the raising of new recruits, and even despatched a vessel to bring home Pizarro and his companions from Gallo. Almagro and Luque advised Pizarro not to relin- quish an enterprise on which they had built all their hopes. He therefore refused to obey the governor's orders, and entreated his men not to abandon him. But the calamities to which they had been exposed had such an effect, that when he drew a line upon the sand with his sword, telling such as wished to return, that they might pass over it, only thirteen remained with him. Pizarro with his little troop now fixed their resi- dence on the island of Gorgona, where they con- tinued five months, in the most unwholesome climate, when a vessel arrived from Panama, Al- magro and Luque having prevailed on the gover- nor to send them relief. He now therefore sailed to the south-east, and in twenty days landed on

the coast of Peru, at Tumbez, remarkable for its stately temple, and a palace of the incas or sovereigns of the country. Here they found the reports concerning the riches of the country were true ; not only ornaments and sacred vessels being made of gold and silver, but even such as were for common use. Yet to attempt the con- quest of this opulent empire with their slender force would have been madness ; they contented themselves with viewing it, procuring two of the beasts called Llamas, some vessels of gold and silver, and two young men, whom they instructed in the Castilian language. With these Pizarro arrived at Panama in 1527.

Huana Capac, the twelfth monarch from the founder of the native empire, was at this time on the throne; a prince no less conspicuous for his abilities in war than for his pacific virtues. By him the kingdom of Quito was subdued, which almost doubled the extent of the Peruvian empire. Huana married the daughter of the conquered monarch, by whom he had a son named Ata- Imalpa, or Atabalipa, to whom, at his death in 1529, he left the kingdom of Quito, bestowing the rest of his dominions on Huascar, his eldest son, by a mother of the royal race. This pro- duced a ciril war, in which Atabalipa proved victorious, and afterwards, to secure himself on the throne, put to

death all the descendants of Manco ; but he spared the life of his rival Huascar, who was taken prisoner, that, by is- suing orders in his name, he might establish his own authority. This contest had now so much engaged the attention of the Peruvians, that, on the return of the Spaniards, they never attempted to check their progress. The first intelligence Pizarro received of it was a message from Huascar, asking his assistance against Atabalipa. Pizarro, therefore, determined to push forward, while intestine discord put it out of the power of the Peruvians to attack him with their whole force. Leaving a garrison in St. Michael, he be°an his march with only sixty-two horsemen, and 102 foot. He proceeded to Caxamalca, where Atabalipa was encamped, and was met by an officer with a valuable present from the Jnca, accompanied with a proffer of his alliance. Pizarro pretended to come as the ambassador of a very powerful monarch, who wished to aid him against his enemies. As the object of the Spaniards in entering their country was other- wise altogether incomprehensible, the Peruvians had formed various conjectures concerning it. Pizarro's declarations of his pacific intentions, now, therefore, removed all the Inca's fears. The Spaniards were thus allowed to march across the sandy desert between St. Michael and Mo- tupe, and through a defile in the mountains so narrow and inaccessible that a few men might have defended it. As they approached to Cax- amalca, Atabalipa sent them presents of still greater value. On entering Caxamalca, Pizarro took possession of a large court, on one side of which was a palace of the Inca, and on the other a temple of the sun, surrounded with a strong rampart. When he had posted his troops in this advantageous station, he despatched Her- nando Soto, and his brother Ferdinand, to the camp of the Inoa, to desire an interview. Here

they were treated with respectful hospitality, and Atabalipa promised to visit the Spanish com- mander next day. The decent deportment of the Peruvian monarch, the order of his court, and the reverence with which his subjects obeyed his commands, astonished the Spaniards. But their eyes were more powerfully attracted by the vast profusion of wealth which they observed. On their return to Caxamalca, they gave such a description of it as confirmed Pizarro in a reso- lution which he had already taken, as daring as it was perfidious. He determined to avail him- self of Atabalipa's unsuspicious simplicity, to seize his person. Dividing his cavalry, therefore, into three squadrons, under his brothers Ferdin- and, Soto, and Benalcazzar; and forming the infantry into one body, except twenty of most tried courage, whom he kept near his own per- son ; he placed his artillery, consisting of two field-pieces, and the cross-bow men, opposite to the avenue by which Atabalipa was to approach. Early in the morning, the Peruvian camp

was in motion. But as Atabalipa was solicitous to ap- pear with the greatest splendor and magnifi- cence in his first interview with the strangers, the day was far advanced before he began his march. At length the inca approached. First appeared 400 men in uniform, as harbingers. He himself sitting on a throne, almost covered with gold, silver, and precious stones, was carried on the shoulders of his principal attendants. Behind him came his chief officers. Several bands of singers and dancers accompanied the cavalcade; and the whole plain was covered with troops, amounting to about 30,000 men. As the inca drew near the Spanish quarters, father Vincent Valverede, chaplain to the expedition, advanced with a crucifix in one hand, and a breviary in the other, and in a long discourse pretended to announce the true doctrine of the creation, the fall of Adam, the incarnation, the sufferings and resurrection of Jesus Christ, the appoint- ment of St. Peter as God's vicegerent on earth, the transmission of his apostolic power by suc- cession to the popes, and the donation made to the king of Castile by pope Alexander of all the regions in the New World. In conclusion he required Atabalipa to embrace the Christian faith, to acknowledge the jurisdiction of the pope, and to submit to the king of Castile as his lawful sovereign ; promising, if he complied, that the Castilian monarch would protect his dominions, and permit him to continue in his authority ; but, if he should impiously refuse to obey this summons, he denounced war against him in his master's name. This strange ha- rangue, unfolding deep mysteries, and alluding to unknown facts, of which no power of elo- quence could have conveyed a distinct idea to an American, was so lamely translated by an unskilful interpreter, that it was incomprehensi- ble to Atabalipa. But some parts in it, of ob- vious meaning, filled him with astonishment and indignation. His reply, however, was temperate. He said that he was lord of his own dominions by hereditary right ; that he could not conceive how a foreign priest should pretend to dispose of territories which did not belong to him : that he, being the rightful possessor, refused to con-

firm it ; that he would not forsake the service of the Sun, the immortal divinity whom he revered, to worship the God of the Spaniards, who was subject to death ; that with respect to other mat- te/3, as he had never heard of them before, he desired to know where he had learned things so extraordinary. (In this book,' answered Val- verede, reaching out to him his breviary. The inca opened it, and turning over the leaves, lifted it to his ear : ' This,' says he, ' is silent; it tells me

nothing ;' and threw it with disdain to the ground. The enraged monk, running to his countrymen, cried out, ' To arms, Christians, to arms ! the word of God is insulted ! avenge this profanation on these impious dogs.' Pizarro immediately gave the signal of assault. At once the martial music struck up, the cannon and muskets began to fire, the horse sallied out fiercely, the infantry rushed on, sword in hand. The Peruvians, astonished at the unexpected at- tack, fled with universal consternation, without attempting to defend themselves. Pizarro, at the head of his chosen band, advanced directly towards the inca; and though his nobles crowded around him with zeal, and fell in numbers at his feet, the Spaniards soon penetrated to the royal seat ; and Pizarro, seizing the inca by the arm, dragged him to the ground, and carried him a prisoner to his quarters. The fate of the mo- narch increased the precipitate flight of his fol- lowers. The Spaniards pursued them towards every quarter, and, with deliberate and unrelent- ing barbarity, continued to slaughter the wretched unresisting fugitives. Above 4000 Peruvians were killed. Not a single Spaniard fell, we are told, nor was one wounded but Pizarro himself slightly. The plunder taken was immense, but the Spaniards were still unsatisfied; which being observed by the inca, he endeavoured to apply himself to their ruling passion, avarice, to obtain his liberty ; and, therefore, offered such a ransom as quite astonished them. The apartment in which he was confined was twenty-two feet in length, and sixteen in breadth ; all this space he engaged to fill with vessels of gold as high as he could reach. The proposal was eagerly caught by Pizzaro, and a line was drawn upon the walls to mark the stipulated height.

Atabalipa, anxious for his liberty, immediately despatched messengers into all parts of the em- pire, to collect the quantity of gold which he had promised ; and, though the unfortunate mo- narch was now in the hands of his enemies, such was the veneration which his subjects had for him, that his orders were obeyed with as great ala- crity as if hˆ had been at full liberty. In a short time PizarrVOL. XVII.

fell to the share of each horseman 8000 pesos, worth as many pounds sterling, and half as much to each foot soldier, Pizarro and his offi- cers receiving shares proportionable to their dig- nity. A fifth part was reserved for the emperor, together with some vessels of curious workman- ship. After this, Atabalipa was very importunate with Pizarro to recover his liberty ; but the Spaniard, with unparalleled treachery and cruelty, had now determined to put him to death. But, to give some show of justice to this detestable action, Pizarro instituted a court of judicature for trying him. He appointed himself and Al- magro, with two assistants, as judges ; an attor- ney-general to

carry on the prosecution in the king's name ; counsellors to assist the prisoner in his defence ; and clerks to record the pro- ceedings. Before this strange tribunal, a charge was exhibited still more amazing. That Ataba- lipa, though a bastard, had usurped the royal power ; that he had put his brother and lawful sovereign to death ; that he was an idolater, and had offered up human sacrifices ; that he had a great number of concubines, &c. On these heads they proceeded to try the sovereign of a great empire, over whom they had no jurisdiction. To all these charges the inca pleaded not guilty. He called heaven and earth to witness the inte- grity of his conduct, and how faithfully he per- formed his engagements, and the perfidity of his accusers. He desired to be sent over to Spain, to take his trial before the emperor ; but no regard was paid to his entreaties. He was condemned to be burnt alive ; which cruel sentence was miti- gated to strangling; and the unhappy monarch was executed without mercy. Hideous cries were set up by his women as the funeral proces- sion passed by their apartment; many offered to bury themselves alive with him ; and, on being hindered, strangled themselves out of grief. The whole town of Caxamalca was filled with la- mentations, which quickly extended over the whole kingdom.

Yet this murder of Atabalipa did no service to the Spaniards. Friends and enemies accused them of inhumanity and treachery. Loads of gold that were coming to Caxamalca by order of the deceased inca were now stopped ; this was the first consequence of their late iniquitous conduct. The two factions of Indians also united against Pizarro ; and many of the Spa- niards not only exclaimed against the cruelty of the judges, but would even have mutinied, had not a sense of the impending danger kept them quiet. At Cuzco the friends of Huascar pro- claimed Mango Capac, the legitimate brother of the late inca : on which Pizarro set up Taparpa, the son of Atabalipa. Immediately he set out for Cuzco. An army of Indians opposed his progress, but the Spanish cavalry bore down every thing before them. The conquerors gained a great booty; and Pizarro despatched Almagro to reduce Cuzco, while he himself founded a new colony in Xauna. Ferdinand Soto was de- tached with sixty horse to Cuzco, to clear the road for the remainder of the army. Meantime Taparpa died ; and, as the Spaniards set up no person in his room, the title of Manco Capac

•was universally acknowledged. A new supply of soldiers arriving from Spain, Benalcazar, go- vernor of St. Michael, undertook an expedition

against Quito, where Atabalipa had left the greatest part of his treasure. He accomplished his purpose with difficulty, but found that the inhabitants had carried off all their gold and silver. About the same time Alvarado, governor of Guatimala, invaded Chili. In this expedition his troops endured such hardships, and suffered so much from the cold among the Andes, that a fifth part of the men and all the horses died, and the rest were so much dispirited and ema- ciated that they became quite unfit for service. Alvarado then returned to his government, but most of his followers enlisted under Pizarro. In the mean time Ferdinand Pizarro had landed in Spain, where he produced such immense quan- tities of gold and silver as astonished the court. The general's authority was confirmed with new powers ; Almagro had the title of governor con- ferred upon him, with jurisdiction over 200 leagues of a country lying south of the province allotted to Pizarro. Pizarro then settled the in- ternal policy of his province, and removed the seat of government from Cuzco to Lima.

Meantime Almagro had set out on his expe- dition to Chili. Pizarro encouraged his most distinguished officers to invade those provinces which had not yet been visited by the Spaniards. No sooner did Manco Capac perceive the Spa- niards thus dividing their forces, than he seized the opportunity of making one vigorous effort to redress the wrongs of his countrymen, and expel the cruel invaders. Though strictly guarded by the Spaniards, he found means to communicate his intentions to the chief men of his nation, whom he joined in 1536, under pretence of cele- brating a festival which he had obtained liberty from Pizarro to attend. Upon this an army of 200,000 men collected. Many Spaniards were massacred, and several detachments cut off: while this vast army laid siege to Cuzco, another formidable body invested Lima, and kept the governor shut up. The greatest effort, however, was made agaist Cuzco, which was defended by Pizarro and his two brothers, with only 170 men. The siege lasted nine months; many Spa- niards were killed ; among whom was John Pizarro, the general's brother. The rest were reduced to the most desperate situation, when Almagro appeared near Cuzco. He had now received the royal patent, creating him governor of Chili. On his arrival, his assistance was so- licited by both parties. The inca made many advantageous proposals ; but at length attacked him in the night by surprise. But the Spanish valor and discipline prevailed, and the Peru- vians were repulsed with such slaughter that the remainder dispersed, and Almagro advanced to Cuzco. Pizarro's brother took measures to oppose his entrance; but, while prudence re- strained both parties from entering into a civil war, each leader endeavoured to corrupt the fol- lowers of his antagonist. In this Almagro had the

advantage ; and so many of Pizarro's troops deserted in the night that Almagro was en- couraged to adranoe towards the city, where he surprised the sentinels ; and, investing the

house where the two brothers were lodged, he compelled them, after an obstinate defence, to surrender. Almagro's authority over Cuzco was now immediately recognised. But Francis Pizarro having dispersed the Peruvians who invested Lima, and received considerable rein- forcements from other provinces, ordered 500 men, under Alonso de Alvarado, to march to Cuzco to relieve his brothers. Almagro attacked him by surprise, defeated and dispersed his army, taking himself and some of his principal officers prisoners. This victory seemed decisive ; and Almagro was advised to make it so by put- ting to death Gonzalo and Ferdinand Pizarro, and Alvarado. This advice, however, he declined from humanity ; and, instead of marching directly against Pizarro, he retired to Cuzco, which gave his adversary time to recollect himself, and Al- magro again suffered himself to be deceived by pretended offers of pacification. The negocia- tions were protracted for several months ; Gon- zalo Pizarro and Alvarado bribed the soldiers who guarded them, and escaped with sixty of Almagro's men. The general next proposed that all disputes should be submitted to their sovereign ; and, on this principle, Almagro re- leased those whom Pizarro wanted ; which he had no sooner done, than the latter set out for Cuzco with an army of 700 men, to which Al- magro had only 500 to oppose. He advanced without obstruction, and an engagement soon followed, in which Almagro was defeated and taken prisoner. The conquerors behaved with great cruelty, massacring a great number of of- ficers. The Indians had assembled in great numbers to see the battle, with an intention to join the vanquished; but were so much over- awed by the Spaniards that they retired after the battle was over, and thus lost the only op- portunity they ever had of expelling their tyrants. Almagro was at length tried and condemned by Pizarro ; and he was first strangled in pri- son, and then beheaded. He left one son by an Indian woman, whom he appointed his succes- sor. As during these dissensions all intercourse with Spain ceased, it was some time before the accounts of the civil war were received at court. The first intelligence was given by some of Al- magro's soldiers, who had left America on the ruin of their cause ; and they did not fail to re- present the injustice and violence of Pizarro in their proper colors, which strongly prejudiced the emperor against him. In a short time, how- ever, Ferdinand Pizarro arrived, and endea- voured to give matters a new turn. The empe- ror was uncertain which of them to believe, but resolved to send over one he could trust to in- vestigate the matter.

Meantime Ferdinand was arrested at Madrid, and confined to prison, where he remained twenty years. The person nominated to this important trust was Christo- pher Vaca Di Castro. While Di Castro was preparing for his voyage, Pizarro, considering himself as the unrivalled master of Peru, proceed- ed to parcel out its territories among the conque- rors; and, had this, division been made with any degree of impartiality, the extent of country which he had to bestow was sufficient to have gratified his friends, and to have gained his ene-

mies. But Pizarro conducted this transaction with the illiberal spirit of a party-leader. Large districts, in parts of the country most cultivated and populous, were set apart as his own pro- perty, or granted to his brothers, his adherents and favorites. To others, lots less valuable and inviting were assigned. The followers of Alma- gro, amongst whom were many of the original adventurers to whose valor Pizarro was indebted for his success, were totally excluded. They there- fore murmured in secret, and meditated revenge. Rapid as the progress of the Spaniards in South America had been since Pizarro landed in Peru, their avidity of dominion was not yet satiated. The officers to whom Ferdinand Pi- zarro gave the command of different detach- ments penetrated into several new provinces ; and though exposed to great hardships in the cold regions of the Andes, and amidst the woods and marshes, they made considerable discoveries and conquests. Peter de Valdivia re-assumed Almagro's scheme of invading Chili; and made such progress in the conquest of the country, hat he founded the city of St. Jago. But the enterprise of Gonzales Pizarro was the most re- markable. He set out from Quito at the head of 340 soldiers, nearly one-half of whom were horsemen, with 4000 Indians. Excess of cold and fatigue proved fatal to the greater part of these last. The Spaniards, though more robust, suffered considerably ; but, when they descended into the low country, their distress increased. During two months it rained incessantly, with- out any interval of fair weather to dry their clothes. The vast plains upon which they were novr entering, either without inhabitants, or oc- cupied by the rudest and least industrious tribes in the New World, yielded little subsistence. They could not advance a step but through woods or marches. Such incessant toil, and scarcity of food, would have dispirited any trcops. But the fortitude and perseverance of the Spaniards were insuperable. They per- sisted in struggling on, until they reached the oanks of the Napo, one of the large rivers which run into the Maragnon. There, with infinite labor, they built a bark, which was manned with fifty

soldiers, under Francis Orellana. The stream carried them down with such rapidity that they were soon far a-head of their country- men, who followed slowly by land. At this distance from his commander, Orellana formed the scheme of distinguishing himself, by follow- ing the course of the Maragnon until it joined the ocean, and by surveying the vast regions through which it flows. This scheme was as bold as it was treacherous. For, if he violated his duty to his commander, and abandoned his fellow soldiers in a pathless desert, his crime is somewhat balanced by the glory of having ven- tured upon a navigation of nearly 2000 leagues, through unknown nations, in a vessel hastily constructed with green timber, and by very un- skilful hands, without provisons, without a com- pass, or a pilot. But his courage and alacrity supplied every defect. Committing himself fearlessly to the guidance of the stream, the Napo bore him along to the south until he reached the great channel of the Maragnon. He

sometimes seized by force the provisions of the fierce savages seated on its banks, and sometimes procured a supply of food by a friendly inter- course. After a long series of dangers and dis- tresses, which he encountered with amazing magnanimity, he reached the ocean, where new perils awaited him. These he likewise sur- mounted, and got safe to the Spanish settle- ments in the island of Cubagua; whence he sailed to Spain.

The vanity natural to travellers who visit re- gions unknown to the rest of mankind prompted him to mingle an extraordinary proportion of the marvellous in the narrative of his voyage. He pretended to have discovered nations so rich that the roofs of their temples were covered with plates of gold ; and described a republic of Amazons so warlike and powerful as to have ex- tended their dominion over a considerable tract of the fertile plains which he had visited ; fables hardly yet exploded. The voyage, however, de- serves to be recorded, not only as one of the most memorable occurrences in that adventurous age, but as the first event that led to any certain knowledge of those immense regions that stretch east from the Andes to the ocean. No words can describe the consternation of Pizarro, when he did not find the bark at the confluence of the Napo and Maragnon, where he had ordered Orellana to wait for him. But, imputing his ab- sense from the place of rendezvous to some un- known accident, he advanced above fifty leagues along the banks of the Maragnon, expecting every moment to see the bark appear with a supply of provisions. At length he came up with an officer whom Orellana had left to perish in the desert, because he had remonstrated against his perfidy. From him he learned the extent of Orellana's crime ; and his followers perceived at once their own desperate situation. The spirit of the stoutest hearted veteran

sank within him; and all de- manded to be led back instantly. Pizarro was now 1200 miles from Quito; and in that long march the Spaniards encountered hardships greater than those they had endured in their pro- gress outward. Hunger compelled them to feed on roots and berries, to eat all their dogs and horses, to devour the most loathsome reptiles, and even to gnaw the leather of their saddles and sword belts: 4000 Indians, and 210 Spaniards, perished in this wild and disastrous expedition, which continued nearly two years ; and, as fifty men were aboard the bark with Orellana, only eighty got back to Quito. These were naked like savages, and so emaciated with famine or worn out with fatigue, that they had more the appearance of spectres than of men. But Pizarro, on entering Quito, received accounts of a state of things that threatened calamities more dread- ful than those through which he had passed. From the time that his brother made the partial division of his conquests above-mentioned, the adherents of Almagro no longer entertained any hope of bettering their condition. Great num- bers in despair resorted to Lima, where the house of young Almagro was always open to them : and the slender portion of his father's fortune, which he enjoyed, was spent in affording them subsistence. The warm attachment with which

every person who had served under the elder Al- magro devoted himself to his interests, was trans- ferred to his son, who was now grown up to manhood, and possessed all the qualities which captivate the affections of soldiers. Of a grace- ful appearance, dexterous at all martial exercises, bold, open, generous, he seemed to be formed for command ; and the accomplishments he had acquired heightened the respect of his followers. The Almagrians, looking up to him as their head, were ready to undertake any thing for his advancement. Nor was affection for Almagro their only incitement; they were urged on by their own distresses. Many of them, destitute of common necessaries, and weary of loitering away life, a burden to their chief, began to deliberate how they might be avenged on the author of all their misery. Their frequent cabals did not pass unobserved ; and the governor was warned to be on his guard against men who medjtated some desperate deed, and had resolution to execute it. But either from his native intrepidity, or from contempt of persons whose poverty rendered their machinations of little consequence, he dis- regarded the admonitions of his friends. This gave the Almagrians full leisure to

digest and ripen their scheme ; and John de Herrada, an officer of great abilities, who had the charge of Almagro's education, took the lead in their con- sultations. On Sunday the 26th of June, at mid-day, Herrada, at the head of eighteen of the most determined conspirators, sallied out of Al- magro's house in armour; and drawing their swords, as they advanced hastily towards the governor's palace, cried out, ' Long live the king, but let the tyrant die.' Though Pizarro was usually surrounded by a numerous train of atten- dants, yet, as he was just risen from table, and most of his domestics had retired to their own apartments, the conspirators were at the bottom of the staircase before a page in waiting could give the alarm. The governor, whom no form of danger could appal, starting up, called for arms, and commanded Francis de Chaves to make fast the door. But that officer, running to the top of the staircase, wildly asked the conspirators what they meant? Instead of answering, they stabbed him to the heart, and burst into the hall. A few, drawing their swords, followed Pizarro into an inner apartment. The conspirators rushed for- ward after them. Pizarro, with no other arms than his sword and buckler, defended the entry, and, supported by his half-brother Alcantara and his friends, maintained the unequal contest with the vigor of a youthful combatant. But the armor of the conspirators protected them, while every thrust they made took effect. Alcantara fell dead at his brother's feet ; his other defen- dants were mortally wounded ; and the governor, no longer able to parry the many weapons furi- ously aimed at him, received a deadly thrust full in his throat, sunk, and expired. As soon as he was slain, the assassins ran out into the streets, and waving their bloody swords, proclaimed the death of the tyrant. Above 200 of their associates having joined them, they conducted young Almagro in solemn procession through the city ; and, assem- bling the magistrates and principal citizens, com- pelled them to acknowledge him as lawful suc-

cessor to his father in his government. The palace of Pizarro, and the houses of his adherents, were pillaged by the soldiers. The new governor marched into the heart of the empire to reduce such places as refused to acknowledge his autho- rity. A multitude of ruffians joined him on his march. His army breathed nothing but vengeance and plunder ; every thing gave way before it. If the military talents of the general had equalled the ardor of his troops, the war had ended here. Unhappily for Almagro, he had lost his conductor John de Herrada. His inexperience made him fall into the snares that were laid for him by Peter Alvares, who had put himself at the head of the opposite party. In the mean time, V'aca Di Castro, who had been sent from Europe to try the murderers of old Almagro, arrived at Peru. As

he was appointed to assume the go- vernment in case Pizarro was no more, all who had not sold themselves to the tyrant, hastened to acknowledge him. Castro instantly led them against the enemy. The armies engaged at Chapas on the 16th of September, 1542, and fought with inexpressible obstinacy. Victory decided in favor of Castro. Those among the rebels who were most guilty, dreading tortures, provoked the conquerors to murder them, crying out, It was 1 who killed Pizarro. Their chief was taken prisoner and died on the scaffold.

While these scenes of horror were transacting in America, the Spaniards in Europe were em- ployed in finding out expedients to terminate them ; though no measures had been taken to prevent them. Peru had only been made sub- ject to the audience of Panama, which was too remote. A supreme tribunal was established at Lima for the dispensation of justice, with autho- rity to enforce and reward a due obedience to the laws. Blasco Nunez Vela, who presided in it as viceroy, arrived in 1544, attended by his subordinates in office, and found every thing in the most dreadful disorder. To put an end to the tumults which how subsisted would have re- quired a profound genius, and many other qua- lities which are seldom united. Nunez had none of these advantages. He indeed possessed pro- bity, firmness, and ardor. With these virtues, which were almost defects in his situation, he began to fulfil his commission, without regard to places, persons, or circumstances. Contrary to the opinion of all intelligent persons, who wished that he should wait for fresh instructions from Europe, he published ordinances, which declared that the lands the conquerors had seized should not pass to their descendants, and which dis- possessed those who had taken part in the civil commotions. All the Peruvians who had been enslaved by monks, bishops, and persons belong- ing to the government were declared free. Other tyrannical establishments also would soon have been proscribed ; and the conquered people were on the eve of being sheltered under the pro- tection of laws which would at least have tem- pered the rigors of the right of conquest, if ever; they had not entirely repaired the injustice of them ; but the Spanish government was to be unfortunate even in the good it attempted to effect. A change so unexpected filled those with consternation who saw their fortunes thus

wrested from them. From astonishment they proceeded to indignation, murmuring, and sedi- tion. The viceroy was degraded, put in irons, and banished to a desert island, till he could be conveyed to Spain.

Gonzales Pizarro was then returned from his hazardous expedition, which had employed him long enough to prevent him from taking a part in those revolutions which had so rapidly succeeded – each other. The anarchy he found prevailing at his return in- spired him with the idea of seizing the supreme authority. His fame and his forces made it im- possible that this should be refused him ; but his usurpation was marked with so many enormities that Nunez was regretted. He was recalled from exile, and soon collected a sufficient number of forces to enable him to take the field. Civil com- motions were then renewed with extreme fury by both parties. No quarter was asked or given on either side. The Indians took part in this as they had done in the preceding wars ; some ranged themselves under the standard of the viceroy, others under the banners of Gonzales. From 15,000 to 20,000 of these unhappy wretches, who were scattered about in each army, dragged up the artillery, levelled the roads, carried the bag- gage, and destroyed one another. Their con- querors had taught them to be sanguinary. After a variety of advantages for a long time alternate- ly obtained, fortune at length favored the re- bellion under the walls of Quito, in January, 1545 ; and Nunez with the greatest part of his men were massacred. Pizarro took the road of Lima, where they were deliberating on the cere- monies with which they should receive him. Gon- zales contented himself with making his entrance on horseback, preceded by his lieutenant, who marched on foot. Four bishops and the magis- trates accompanied him. The streets were strewn with flowers, and the air resounded with music. This homage totally turned the head of a man naturally haughty, and of confined ideas. Had Gonzales possessed both judgment and modera- tion, he might have rendered himself indepen- dent. The principal persons of his party wished it. Instead of this, he acted with blind cruelty, insatiable avarice, and unbounded pride. Even they whose interests were connected with those of the tyrant wished for a deliverer. Such a deliverer arrived from Europe in the person of Peter Di la Gasca. The squadron and the pro- vinces of the mountains immediately declared for a person who was invested with a lawful au- thority to govern them. Those who had lived concealed in deserts, caverns, and forests, joined him. Gonzales met the royal army, and attacked it in the spring of 1548. One of his lieutenants, seeing him abandoned at the first charge by his best soldiers, advised him to throw himself inta the enemy's battalions, and perish like a Roman ; but this weak man chose rather to surrender, and end his life on a scaffold ; Carvajal, a more able warrior, and more ferocious than himself, was quartered. This man, when he was expiring, boasted that he had massacred with his own hands 1400 Spaniards and 20,000 Indians. Such was the last scene of a tragedy of which every act had been marked with blood.

The govern- ment was moderate enough not to continue the

proscriptions ; and the remembrance of the horrid calamities they had suffered kept the Spaniards in subjection. The commotion insen- sibly sunk into a calm; and the country re- mained quiet from this time for three centunes With regard to the Peruvians, the most cruel measures were taken to render it impossible for them to rebel. Tupac Amaru, the heir of their last king, had taken refuge in some remote mountains, where he lived in peace. There he was so closely surrounded by the troops sent out against him that he was forced to surrender. The viceroy Francis de Toledo caused him to be ac- cused of several pretended crimes, and he was beheaded in 1571. All the other descendants of the incas shared a similar fate. The horror of these enormities excited so universal an indigna- tion, both in the Old and the New World, that Phiiip II. disavowed them ; but the infamous policy of this prince was so notorious that no credit was given to this pretence to justice and humanity. Only one attempt was after- wards made by the Peruvians to recover their independence, and throw off the Spanish yoke : that which we have noticed as taking place in

1782.

PERU, a township of the United States, in Bennington county, Vermont. — 2. A township of the United States, in Berks county, Massa- chusetts.— 3. A township of the United States, inj Clinton county, New York, on Lake Cham- plain, 140 miles north of Albany.

PERU, BALSAM OF. A substance obtained from the myroxylon peruiferum, which grows in the warm parts of South America. The tree is full of resin, and the balsam is obtained by boil- ing the twigs in water. It has the consistency of honey, a brown color, an agreeable smell, and a hot acrid taste.

PERVADE’, v. a. \ Lat. pervado. To pass

PERVA’SION, n. s. $ through an aperture j to permeate : the act of passing through.

If fusion be made rather by the ingress and trans- cursions of the atoms of fire, than by the bare propa- gation of that motion, with which fire beats upon the outsides of the vessels, that contain the matter to be melted ; both those kinds of fluidity, ascribed to salt- petre, will appear to be caused by the pervasion of a foreign body. Boyle.

Paper dipped in water or oil, the oculus mundi stone steeped in water,

linen cloth oiled or varnished, and many other substances soaked in such liquors as will intimately pervade their little pores, become by that means more transparent than otherwise.

Newton. The laboured chyle pervades the pores

In all the arterial perforated shores. Blackmore.

Matter, once bereaved of motion, cannot of itself acquire it again, nor till it be struck by some other body from without, or be intrinsically moved by an immaterial self-active substance, that can penetrate and pervade it. Bentley.

What but God,

Pervades, adjusts and agitates the whole ?

Thomson.

PERVENCHERES, a town in the north of France, department of the Orne, with 800 inha- bitants. Nine miles south-west of Mortagne,. and fourteen north-e%si of Al nˆ-o .

PERVERSE’, adj. ~] Fr. pervers; Ital. PERVERSE LY, adv. Span, and Pers. per- PERVERSE’NESS, n. s. verso ; Lat. pcrversus. PERVER’SION, ˆ Distorted ; froward ;

PERVER’SITY, ˆuntractable ; petulant ;

PERVERT’, v. a. obstinate : perversely

PERVER’TER, n. s. and perverseness fol-

PERVER’TIBLE, adj. J low these senses : per- version is used for both the act of perverting and the state of being perverted : perversity is syno- nymous with perverseness : to pervert is to dis- tort ; corrupt ; turn from the right ; opposed to convert, which is to turn from the wrong : per- vertible is apt or easy to be perverted.

Perverse lips put far from thee. Prov. iv. 24. If thou seest the oppression of the poor, and vio- lent penerting of justice in a province,

marvel not.

Ecclus. v. 8.

Will thou not cease to pervert the right ways of the Lord 1 Acts. xiri. 10.

Instead of good they may work ill, and pervert justice to extreme injustice.

Spenser's State of Ireland. O gentle Romeo,

If thou dost love, pronounce it faithfully ; Or if you think I am too quickly won, I'll frown and be perverse, and say thee nay, So thou wilt wooe : but else not for the world.

Shakspeare.

Neither can this be meant of evil governours or tyrants ; for they are often established as lawful po- tentates ; but of some perverseness and defection ifi the nation itself. Bacon.

Women to govern men, slaves freemen, are much in the same degree ; all being total violations and perversions of the laws of nature and nations. Id.

Virtue hath some perverseness ; for she will Neither believe her good, nor others ill. Donne. Men perversely take up piques and displeasures at others, and then every opinion of the disliked person must partake of his fate. Decay of Piety.

And nature breeds Perverse, all monstrous, all prodigious things.

Milton.

If then his providence Out of our evil seek to bring forth good, Our labour mast be to pervert that end, And out of good still to find means of evil. Id. Her whom he wishes most, shall seldom gain Through her perverseness ; but shall see her gained By a far worse. Id. Paradise Lost.

The heinous and despiteful act Of Satan, done in Paradise, and how He in the serpent had perverted Eve, Her husband she, to taste the fatal fruit, Was known in heaven. Id.

The apostles, who sometimes inveigh so zealously against the opposers and perverters of truth, did in their private conversation and demeanour strictly ob- serve their own rules of abstinence from reproach.

Barrow.

He that reads a prohibition in a divine law, had need be well satisfied about the sense he gives it, lest he incur the wrath of God, and be found a perverter of his law. Stillingfleet.

To so perverse a sex all grace is vain, It gives them courage to offend again. Dryden.

The perverseness of my fate is such, That he’s not mine, because he’s mine too much.

Id.

He has perverted my meaning by his glosses ; and interpreted my words into blasphemy, of which they were not guilty. Id.

Men that do not perversely use their words, or on purpose set themselves to cavil, seldom mistake the signification of the names of simple ideas. Locke.

What strange perversity is this of man ! When ‘twas a crime to taste the’ enlight’ning tree, He could not then his hand refrain. Norris.

Where a child finds his own parents his perverters, he cannot be so properly born, as damned into the world. South.

The subtle practices of Eudoxius, bishop of Con- stantinople, in perverting and corrupting the most pious emperor Valens. Waterlund.

A patriot is a dangerous post, When wanted by his country most,

Perversely comes in evil times, Where virtues are imputed crimes. Swift.

He supposes that whole reverend body are so far from disliking popery, that the hopes of enjoying the abbey lands would be an effectual incitement to their perversion. Id.

Porphyry has wrote a volume to explain this cave of the nymphs with more piety than judgment ; and another person has perverted it into obscenity ; and both allegorically. Broome.

We cannot charge any thing upon their nature, till we take care that it is perverted by their education.

Law.

PERUGIA, the ancient Lacus Thrasymenus, one of the most considerable lakes in the central part of Italy,, remarkable for the victory gained by Hannibal over the Romans, commanded by Flaminius. The scenery of its banks is very picturesque.

PERUGIA, a province of Italy, in the States of the Church, includes the ci-devant Perugino, and contains 182,000 inhabitants. It is a dis- trict of great fertility, and is watered by the Tiber and some smaller streams, together with the lake of this name.

PERUGIA, a large town of the central part of Italy, in the States of the Church, the capital of the province of this name, stands on the sum- mit of a high hill near the Tiber ; about eighty- five miles north of Rome, and thirty N. N. W. of Spoleto. It has a citadel and fortifications, but is a place of far more beauty than strength. It is the see of a bishop, and contains 16,000 inhabitants. The cathedral is an indifferent building, both in its architecture and decora- tions ; but some of the churches, particularly that of St. Peter, belonging to a Benedictine abbey, are splendidly ornamented. This is sup- ported by eighteen pillars of fine marble, and adorned with rich marble altars. The most interesting objects in the town are a number of valuable paintings in the churches and private collections by the celebrated Pietro Perugino (a native of this place), and by his more cele- brated pupil Raphael. Here is a town-house, a small university, and several hospitals. The gate of the Piazza Grimani is of the Roman architecture. The town has also manufactures of velvet, silks, oil, and brandy.

PERUGINO (Pietro Vanmicci, II), was born at Citta della Pieve, near Perugia, in 1446. His parents, being in low circumstances, placed him at first with an inferior painter, who, however, had discretion enough

to animate his pupil with an enthusiastic attachment to his profession. At this period the fine arts were cultivated, and flourished eminently at Florence; which induced

Perugino to seek for instruction in that city, where, according to the most common accounts, he had Andrea Verocchio for his instructor, but others allege, that he never had any other master than Benedetto Bonfigli of Perugia. His first work of reputation was a picture of St. Jerom contemplating a crucifix ; in which the figure of the saint appeared so mortified and emaciated, as if designed after a living model. His next was a Descent from the Cross, painted for the church of St. Chiara, at Florence. In this pic- ture the coloring is beautiful, and the air of the Virgin eminently distinguished. In one part of the design, he introduced an admirable landscape. A Florentine merchant offered treble the sum that had been paid" for it, but the proposal was rejected, because Perugino declared himself in- capable of finishing another so Veil. The cele- brity he thus acquired procured him an invita- tion from pope Sixtus IV7. to visit Rome, where he executed several works for that pontiff's chapel. On his return to Florence, where Michel Angelo Buonaroti was at that time in high esteem, he quarrelled with that great man, and was so severely satirised by the poets as to be obliged to retire to his native place. Peru- gino's pencil is .light, and he finished his pictures highly; but his manner was dry and stiff, and his outline often incorrect. His highest honor consisted in being the instructor of Raffaelle ; who, with his father Giovanni, assisted him in many of his works. Vasari recites the following story of this artist : — The monks of a monastery at Florence had engaged Perugino to paint in fresco a piece of sacred history ; and the prior, who had agreed to supply the ultramarine for the work, being of a suspicious disposition, always attended while it was used, lest some of it should be embezzled. When Perugino per- ceived that the prior's constant inspection of the work was only occasioned by this distrust, he placed a pot of water near him, in which he often dipped his pencil, after he had loaded it with ultramarine ; and the color, by its weight, instantly fell to the bottom. The prior observ- ing the repid consumption of his color, expressed his astonishment; but Perugino desired him neither to torment his own mind, nor indulge an unjust opinion of artists, who generally acted upon principles of honor ; then pouring off the water gently, he restored to him the ultramarine which

had subsided. Perugino, however, is said to have been avaricious, and that his being robbed of a box of gold was the principal cause of his death, which toot place in 1524. His capital piece is thought Jo be an altar-piece in the church of St. Peter, at Perugia, of which the subject is the Ascension of Christ, with the disciples in different attitudes. The design is excellent, and the whole well executed. In a chapel belonging to the church of St. Giovanni in Monte is a picture of a virgin, attended by several saints, which is also esteemed one of his best perform- ances.

PERVICA'CIOUS, adj. ˆ Latin, pervicax.

PERVICA'CIOUSLY, adv. I Spitefully obsti-

PERVICA'CIOUSNESS, n. s. vnate ; peevish ;

PERVICAC'ITY, I contumacious.

PER'VICACY. j Rarely used.

But in case of the pervicacy of a peerish heretic who would not submit to the power of the church, &C. Taylor.

Gondibert was in fight audacious, But in his ale most pervicacious. Denham.

May private devotions be efficacious upon the mind of one of the most pervicacious young creatures !

Clarissa.

PER'VIOUS, adj.) LaLpervius. Admit-

PER'VIOUSNESS, n. s. 5 ting passage; capable of being permeated : quality of admitting a pas- sage.

The Egyptians used to say, that unknown dark- ness is the first principle of the world ; by darkness they mean God, whose secrets are pervious to no eye.

Taylor.

The perviousness of our receiver to a body much more subtle than air, proceeded partly from the looser texture of that glass the receiver was made of, and partly from the enormous heat, which opened the pores of the glass. Boyle.

There will be found another difference besides that of perviousness. Holder's Elements of Speech.

Leda's twins,

Conspicuous both, and both in act to throw Their trembling lances brandished at the foe, Nor had they missed ; but he to thickets fled, Concealed from aiming spears, nor pervious to the

steed. Dry den.

What is this little, agile, pervious fire,

This fluttering motion which we call the mind ?

Prior.

Those lodged in other earth, more lax and pervi- ous, decayed in tract of time, and rotted at length.

Woodward.

PERVISSE, a town of France, in the de- partment of Lys, and late province of Austrian Flanders ; six miles W. N. W. of Dixmude.

PERUKE', n. s. & v. a. 3 Fr.peruque; Ital.

PERUKE'-MAKEU, n. s. $perucca. A cap of false hair ; a periwig : to dress in false hair.

I put him on a linen cap, and his peruke over that.

Wiseman.

PERUSE', v. a. ~\ Lat. per and use, or per-

PERU'SALS, n. s. fvisus. To read ; observe;

PERU'SER. j examine : perusal is the

act of reading or examining : peruser, a reader ; examiner.

Peruse this writing here, and thou shalt know The treason. Shakspeare. Richard 77.

I hear the enemy ; Out some light horsemen, and peruse their wings.

Shakspeare. I've perused her well ;

Beauty and honour in her are so mingled,

That they have caught the king. Id.

The petitions being thus prepared, do you con- stantly set apart an hour in a day to peruse those pe- titions. .Bacon. Myself I then perused, and limb by limb

Surveyed. Milton's Paradise Lost.

Carefully observe, whether he tastes the distin- guishing perfections or the specific qualities of the author whom he peruses. Addison.

As pieces of miniature must be allowed a closer in- spection, so this treatise requires application in the perusal. Woodward.

The difficulties and hesitations of every one will be according to the capacity of each peruser, and as his penetration into nature is greater or less. Id.

If upon a new perusal you think it is written in the very spirit of the ancients, it deserves your care, and is capable of being improved. Atterbury.

Mr. Pope told him, that he read it once over, and was not displeased with it ; that it gave him more pleasure at the second perusal, and delighted him still more at the third. Johnson.

PERUSIA, an ancient town of Etruria, on the Tiber, built by Oenus ; where L. Antonius was besieged by Augustus, till he surrendered. (Strabo.) It is now called Perugia.

PERUVIAN BARK, or JESUITS' BARK, the bark of the cinchona officinalis, a well known me- dicine. See CINCHONA. The pale and the red are chiefly used in Britain. The pale is brought to us in pieces of different sizes, either flat or quilled, and the powder is rather of a lighter color than that of cinnamon. The red is ge- nerally in much larger, thicker, flattish pieces, but sometimes also in the form of quills, and its powder is reddish like that of Armenian bole. It is much more resinous, and possesses the sen- sible qualities of the cinchona in a

much higher degree than the other sorts ; and the more nearly the other kinds resemble the red bark, the better they are now considered. The red bark is heavy, firm, sound, and dry ; friable between the teeth; does not separate into fibres ; and breaks, not shivery, but short, close, and smooth. It has three layers ; the outer is thin, rugged, of a red- dish brown color, but frequently covered with mossy matter: the middle is thicker, more com- pact, darker colored, very resinous, brittle, and yields first to the pestle ; the inmost is more woody, fibrous, and of a brighter red. The Peruvian bark yields its virtues both to cold and boiling water ; but the decoction is thicker, gives out its taste more readily, and forms an ink with a chalybeate more suddenly than the fresh cold infusion. This infusion, however, contains at least as much extractive matter, but more in a state of solution ; and its color, on standing some time with the chalybeate, becomes darker, while that of the decoction becomes more faint. When they are of a certain age, the ad- dition of a chalybeate renders them green ; and, when this is the case, they are in a state of fer- mentation, and effete. Mild or caustic alkalies, or lime, precipitate the extractive matter, which in the case of the caustic alkali is re-dissolved by a farther addition of the alkali. Lime-water precipitates less from a fresh infusion than from a fresh decoction ; and in the precipitate of this last some mild earth is perceptible. The infusion is by age reduced to the same state with the fresh decoction, and then they deposit nearly an equal quantity of mild earth and extractive matter ; so that lime-water, as well as a chaly- beate, may be used as a test of the relative strength and perishable nature of the different preparations, and of different barks. Accord- ingly cold infusions are found by experiments to be less perishable than decoctions ; infusions and decoction of the red bark than those of the pale ; those of the red bark, however, are found by length of time to separate more mild earth with the lime-water, and more extracted matter. Lime-water, as precipitating the extracted matter, appears an equally improper and disagreeable menstruum. Water suspends the resin by means of much le«s gurr. than has been supposed. Rec- tified ipirit of wine extracts a bitterness, but no

astringency, from a residuum of twenty affusions of cold water ; and water extracts astringency, but no bitterness, from the residuum of as many affusions of rectified spirit. The residua in both are insipid. From many ingenious experiments made on the Peruvian bark by Dr. Irvine, pub- lished in a dissertation which gained the prize- medal given by the Harveian Society of Edin- burgh for 1783, the power of different menstrua, as acting upon Peruvian bark, is ascertained with greater accuracy than had before been done : and, with respect to

comparative power, the fluids after mentioned act in the order in which they are placed : — 1. Dulcified spirit of vitriol. 2. Caustic ley. 3. French brandy. 4. Rhenish wine. 5. Soft water. 6. Vinegar and water. 7. Dulcified spirit of nitre. 8. Mild volatile alkali. 9. Rectified spirit of wine. 10. Mild vegetable alkali. 11. Lime-water. The antiseptic powers of vinegar and bark united are double the sum of those taken separately. The astringent power of the bark is increased by acid of vitriol ; the bitter taste is destroyed by it. The officinal preparations of the bark are, 1 . The powder : of this the first parcel that passes the sieve, being the most resinous and brittle layer, is the strongest. 2. The extract : the watery and spirituous extract conjoined form the most pro- per preparations of this kind. 3. The resin : this cannot perhaps be obtained separate from the gummy part, nor would it be desirable. 4. Spi- rituous tincture : this is best made with proof- spirit. 5. The decoction : this preparation, though frequently employed, is yet in many respects in- ferior even to a simple watery infusion. The best form is that of powder; in which the con- stituent parts are in the most effectual proportion. The cold infusion, which can be made in a few minutes by agitation, the spirituous tincture, and the extract, are likewise proper in this respect. For covering the taste, different patients require different vehicles; liquorice, aromatics, acids, port wine, small beer, porter, milk, butter-milk, &c., are frequently employed; and it may be given in form of electuary with currant jelly, with brandy, or with rum.

PERUVIAN CAMEL. See CAMELUS.

PERUVIAN HARE. See LEPUS.

PERUVIAN SHEEP. See CAMELUS.

PERUZZI (Balthasar), an historical painter and architect, born in 1481. He went to Rome, and was employed by Alexander VI., Julius II., and Leo X. He was so perfect in chiaro ob- scuro and perspective that Titian himself beheld his works with astonishment. He was in Rome in 1527, when Charles V. sacked it; but pro- cured his liberty by painting a portrait of the constable, Bourbon. He died in 1556, aged fifty-five.

PERWANNAH, in the language of Bengal, an order of government, or a letter from a man in authority.

PERWUTTAM, a small town of Hindostan, situated on the south bank of the River Krishna, in a wild tract of country almost uninhabited, except by the Chinsuars, 118 miles south from Hyderabad. Red granite abounds here, and diamonds are found in the mountains ; but the

labor is so great, and the chance of meeting with

PES i

the veins so unceiiain, that the digging for them has been abandoned.

At this place is a remarkable pagoda dedicated to the deity called Mallecarjee, in showing of whom a great deal of mystery is observed. He is exhibited in the back part of a building, by the reflected light of a brass speculum, and of course can only be seen as the flashes fall on him. ‘ The idol is probably nothing more,’ says Mr. Hamilton, ‘ than the Lingam so much reverenced by the votaries of Siva. The reve- nues derived from the resort of pilgrims are collected by a manager, who resides within the enclosure. There is a goddess also worshipped here, named Brahma Rumbo. The several pa- godas, choultries, courts, &c., are enclosed by a wall 660 feet long, by 510 broad, the walls of which are covered by an infinite variety of sculpture.’

PES, in antiquities, a foot or measure of length among the Romans, equal to eleven inches 604 decimal parts. The 7r£e> or foot of the Grecians, was equal to one foot and 875 decimal parts of an inch.

PES MON’ETJE, in archaeology, a true and rea- sonable adjustment of the value of all coin.

PESADE’, n. s.

Petade is a motion a horse makes in raising or lift- ing up his forequarters, keeping his hind legs upon the ground without stirring. Farrier’s Dictionary.

PESANTE, in music, slow, dragging.

PESARO, a town of Italy in the States of the Church and province of Urbino, is situated near the Foglia, between the Adriatic and a range of cultivated hills. It is surrounded with fortifica- tions and well built, the streets being clean and airy. Its market-place is ornamented with a fountain and marble statue of Urban VIII. : some of the churches are also remarkable for their paintings and architecture. The latter are San Giovanni, La Misericordia, and San Carolo. The inhabitants have little trade, but cultivate the surrounding country in wine, olives, figs, and silk. The climate was once very unhealthy in summer on account of the marshes, which are now drained. Pesaro is the see of a bishop. Population 10,000. Eighteen miles E. N. E. of Urbino, and thirty-four north-west of Cincona.

PESCE (Nicholas), a famous Sicilian diver, who, according to Kircher, was, from his amazing skill in swimming, and his perseverance under water, surnamed the fish. This man had from his infancy been used to the sea ; and earned his scanty subsistence by diving for corals and oys- ters, which he sold to villagers on shore. His long acquaintance with the water, at last, brought it to be almost his natural element. Kircher says, ‘ He was frequently known to spend five days in the midst of the waves, without any other provisions than the fish which he caught there and ate raw. He often swam over from Sicily into Calabria, a tempestuous and dangerous pas- sage, carrying letters from the king. He was frequently known to swim among the gulfs of the Lipari Islands, no way apprehensive of danger. Some mariners out at sea, one day ob- served something at some distance from them, which they regarded as a sea-monster ; but, upon its approach, it was known to be Nicholas,

whom they took into their ship. When they asked him whither he was going in so stormy and rough a sea, and at such a distance from land, he showed them a packet of letters, which he was carrying to one of the towns of Italy. He kept them thus company for some time in their voyage, conversing, and asking questions ; and, after eating a hearty meal with them, took his leave, and, jumping into the sea, pursued his voyage alone. In order to aid these powers of enduring in the deep, nature seemed to have as- sisted him in a very extraordinary manner; for his fingers and toes were webbed, and his chest became very capacious. The account of so ex- traordinary a person did not fail to reach the king himself; who commanded Nicholas to be brought before him. The curiosity of this mo- narch had been long excited by the accounts he had heard of the bottom of the Gulf of Charyb- dis, which he now therefore commanded our poor diver to examine ; and, as an incitement to his obedience, ordered a golden cup to be flung into it. Nicholas was not insensible of the danger to which he was exposed, and he pre- sumed to remonstrate : but the hope of the re- ward, the desire of pleasing the king, and the pleasure of showing his skill, at last prevailed. He instantly jumped into the gulf, and con- tinued for three-quarters of an hour below; during which time the king and his attendants became very anxious for his fate ; but he at last appeared, holding the cup in triumph in one hand, and making his way good among the waves with the other. Having refreshed himself by sleeping, there were four things, he said, which rendered the gulf dreadful, not only to men, but to fish. l. The force of the water bursting up from the bottom, which required great strength to resist. 2. The abruptness of the rocks that on every side threatened destruc-

tion. 3. The force of the whirlpool dashing against those rocks. And, 4. The number and magnitude of the polypous fish, some of which appeared as large as a man ; and which, every where sticking against the rocks, projected their fibrous arms. Being asked how he was able so readily to find the cup that had been thrown in, he replied that it happened to be flung by the waves into the cavity of a rock against which he himself was urged in his descent. This account, however, did not satisfy the king's curiosity. Being requested to venture once more into the gulf for further discoveries, he at first refused : but the king repeated his solicitations ; and, to give them still greater weight, produced a larger cup than the former, and added also a purse of gold. With these inducements, says Kircher, the unfortunate diver once again plunged into the whirlpool, and was never heard of more.'

PESHAWUR, PESHOUR, or PEISHORE, a city and district of Afghaunistaun. in the province of Cabul, formerly Bekram. It is watered by the Kameh or Cabul River, and surrounded on all sides except the east by a range of mountains, which defend it from the blasts of winter, but render it very hot during the summer solstice. The soil is a rich black mould, watered by an innumerable number of mountain streams. It is inhabited by five tribes of Afghauns, the prin

cipal of whom are the Mohammed Zyes and the Momends ; and is said to contain 300,000 in- habitants. It is the favorite residence of the Afghaun court in winter, is celebrated for its ex- tensive gardens and fruit, particularly melons, and is without doubt one of the finest spots in the king's dominions. The revenue is estimated at £100,000 sterling.

PESHAWUR, the ancient capital of the above mentioned district, stands on an uneven surface, is upwards of five miles in circumference. The houses are of unburnt brick, in wooden frames, and are mostly three stories high. The streets are narrow, but paved, with a kennel in the middle. Two or three brooks which run through the town, are crossed by bridges, which fall into the Kameh or Cabul River, which passes some miles north of the city. There are many mosques in the town, but none of them are worthy of notice, except a fine caravanserai, and the Bala Hissar or citadel, situated on a hill to the north, which contains some fine halls, and is adorned with some spacious gardens. It is the occasional residence of the king. Some other of the palaces are splendid. The city is inhabited by persons

from all parts of the east, but the common languages are the Pushtoo and Hindostany. Peshawur is mentioned in the tenth century, but was much improved by the emperor Akber, and has long been the residence of a brave tribe, called the Hazarees, of Tartar origin.

PESSARY, n. s. Fr. pessaire ; Gr. iriaoapiov. An oblong form of medicine, made to thrust up into the uterus.

Of canthai ides he prescribes five in a pessary, .cut- ting off their heads and feet, mixt with myrrh.

ArbuthnQt.

PESSARY, in medicine, is also a solid substance composed of wool, lint, or linen, mixed with powder, oil, wax, &c., made round and long like a finger, in order to be introduced in the ex- terior neck of the matrix, for the cure of uterine disorders.

PESSIERE, French, in fortification, a dam that is raised for the purpose of confining a suf- ficient quantity of water in a reservoir, by which any machine may be worked, or kept in motion. The overflowing of the river may run over this dam without doing any injury to it.

PEST', re. s. } Fr. peste ; Lat. pestis.

PEST'HOUSE, > Plague ; pestilence ; mor

PESTIF'EROUS, adj. j tal or destructive disease ; any thing mischievous or destructive : pest-house, a hospital ; particularly for those infected with the plague : pestiferous is destructive ; malig- nant; infectious.

Such is thy audacious wickedness, Thy leud, pestiferous, and dissentious pranks, The very infants prattle of thy pride. Shakspeare.

At her words the hellish pest Forbore. Milton's Paradise Loit.

In a bodily contagion, we hold it not safe to suffer the sick persons to converse with the whole ; but re- move them to a pest-house remote from the vicinity of others. Bp. Hall.

Of all virtues justice is the best ; Valour without it is a common pest. Waller.

Let fierce Achilles The god propitiate, and the pest assuage. Pope.

The pest a virgin's face and bosom bears, High on her crown a rising

snake appears, Guards her black front, and hisses in her hairs.

Id.

It is easy to conceive how the steams of pestiferous bodies taint the air, while they are alive and hot.

Arbuthnot. Stand aloof,

And let the pest's triumphal chariot Have open way advancing to the tomb. See how he mocks the pomp and pageantry Of earthly kings ! Wilson.

PEST, or PESTH, a palatinate of Hungary, lying chiefly along the east bank of the Danube, from the point where it begins to flow southward to the borders of the palatinate of Batsch. It is composed of three counties, which were formerly distinct, viz. Pest, Pellsh, or Pilis, and Solt. That of Pilis lies to the west of the Danube, and contains the town of Buda. These counties supply the chief branch of the revenue of the pa- latine of Hungary. Their area is 4050 square miles, and their population 362,000. The inha- bitants are a mixed race, being partly Magyars, partly Sclavonians, Germans, Walachians, gyp- sies and Jews. The surface is generally level, and the heath of Ketskemet (see KETSKEMET) is one of the most remarkable tracks in the king- dom; yet in the north there are several moun- tains. The country is laid out in tillage and pasturage. Wine of good quality is made at Buda. Near Pest is the plain of Rakos, where the Hungarian diet used to meet.

PEST, or PESTH, a considerable city of Hun- gary, is situated on the bank of the Danube ; the course of the river being from north to south ; and Pesth standing on the east bank, opposite to Buda. It is only separated from that place by a bridge of boats, three-quarters .of a mile in length. Buda is the residence of the viceroy, and ac- counted consequently the capital of the country ; but Pest is the seat of the high courts of justice, and the place of meeting for the diet. It is also considerably larger, having 42,000 inhabitants. It consists of the Old and New Towns ; through- out the whole, the streets are tolerably spacious and regular, and the houses respectable. Of the public buildings, the principal are the hospital of invalids, the barracks, and a quadrangular mi- litary edifice, begun in 1786 by Joseph II. Of the churches, the Catholics have four ; the Lu- therans, the Calvinists, and the followers of the Greek faith, one each. The university, the only one in Hungary, is richly endowed : the profes- sors are forty in number ; the students between 700 and 800. The observatory is on the Buda side of the river. The manufactures here comprise silks, cotton,

jewellery, leather, and musical instru- ments; also tobacco, which is a government mo- nopoly. The Danube affords means of inter- course with a large track of country, and the fairs of Pesth are numerously attended. Here is a theatre, erected in 1808 ; public walks neat the Danube, and public gardens ; on the Buda side of the river are hot springs. The city is not of remote origin, but has often been be- sieged. It is 130 miles E. S. E, of Vienna.

PESTALOZZI, or PESTALUZ (Henry), a practi- cal philosopher of the Seven Cantons, famous as the inventor of a modern mode of instruction.

He was born of a good family at Zurich, January 12th, 1745, acquired early habits of industry, and adopted from inclination the employment of a teacher. He first developed his very original ideas in a fictitious narrative, entitled Lienhard and Gertrude, printed at Leipsic in 1781-1787, which has been translated into most European languages. Pestalozzi was powerfully seconded in his philanthropic projects by Tscharner, bailli of Wildenstein, a rich Swiss proprietor, the Arner of his romance. He composed many other works, with a view to the same object ; and amongst others a weekly paper, the numbers of which were republished in 2 vols. 8vo. ; Letters on the Education of the Children of Indigent Parents ; Reflections on the Progress of Nature in the development of the Human Species ; Images for my Abecedary, or Elements of Logic for my Use. In 1799 the Helvetic government appointed him director of the orphan-house at Stantz, in the canton of Underwald ; and, on the dissolution of that establishment, the chateau of Burgdorf, four leagues from Berne, was granted him. The number of pupils which now flocked to him induced him to remove his seminary to the castle of Yverdun. In 1803 the canton of Zurich nominated him a member of the Helvetic Consulta, summoned by Buonaparte to Paris ; and he subsequently received from the emperor of Russia the order of St. Wladimir. He closed a long and philanthropic life on the 1 7th of Fe- bruary, 1827, at Brugg, in Switzerland.

adj. J encumber : a pesterer is one who harasses or disturbs : pesterous, cumber- ous ; annoying.

Fitches and pease For peitering too much on a hovel they lay.

Tusser.

Who then shall blame His pestered senses to recoil and start, When all that is within him does condemn Itself for being there 1 Shaksveare. Macbeth.

He hath not failed to pester us with message, Importing the surrender of those lands. Shakspeare.

In the statute against vagabonds note the dislike the parliament had of gaoling them, as that which was chargeable, pesterous, and of no open example. Bacon's Henrif I'll.

Confined and pestered in this pinfold here, Strive to keep up a frail and feverish being.

Milton.

We are pestered with mice and rats, and to this end the cat is very serviceable.

More ayahist Atheism.

A multitude of scribblers daily pester the world with their insufferable stuff. Dri/den.

They did so much pester the church and delude the people, that contradictions themselves asserted by Rabbles were equally revered by them as the in- fallible will of God. South.

At home he was pursued with noise ; Abroad was pestered by the boys. Swift.

I am positive I have a soul ; nor can all the books with which materialists have pestered the world ever convince me to the contrary. Sterne.

PESTILENCE, n. s. -\ Fr. pestilence ; Lat. PES'TILENT, adj. 9 pestilentia. Pest ;

PESTILEN'TIAL, £ plague; mortal or in-

PES'TILENTLY, adv.) fectious distemper :

pestilent and pestilential mean, partaking of the nature of pestilence ; contagious ; producing plague or disease ; malignant : pestilently is mischievously ; destructively.

We have found this man a pestilent fellow, and a mover of sedition among all the Jews. Acts xxiv. 5.

There is nothing more contagious and pestilent than some kinds of harmony ; than some nothing more strong and potent unto good. hooker.

Hoary moulded bread the soldiers thrusting upon their spears railed against king Ferdinand, who with such corrupt and pestilent bread would feed them.

Knolles.

The red pestilence strike all trades in Rome, And occupations perish. Shakspeare.

Great ringing of bells in populous cities dissipated pestilent air, which may be from the concussion of the air, and not from the sound. ‘Bacon.

One pestilent fine,

His beard no bigger though than thine,

Walked on before the rest. Suckling.

Which precedent, of pestilent import, Against thee, Henry, had been brought.

Daniel.

If government depends upon religion, then this shews the pestilential design of those that attempt to disjoin the civil and ecclesiastical interests. South. Fire involved

In pestilential vapours, stench, and smoak.

Addison.

These with the air passing into the lungs, infect the mass of blood, and lay the foundation of pestilen- tial fevers. Woodward.

To those people that dwell under or near the equa- tor a perpetual spring would be a most pestilent and insupportable summer. Bentley.

The world abounds with pestilent books, written against this doctrine. Swift’t Miscellanies.

PESTILLATION, n. s.] Lat. pistillum;

PES’TLE. $ Ital. pestello, pis-

telle. The act of pounding or breaking in a mortar: the instrument with which things are broke in a mortar.

The best diamonds are comminuble, and so far from breaking hammers, that they submit unto pes- tillation, and resist not any ordinary pestle. Browne.

What real alteration can the beating of the pestle make in any body, but of the texture of it ? Locke.

Upon our vegetable food the teeth and jaws act as the pestle and mortar. Arbuthnot.

PESTIS, the plague. See MEDICINE, Index- PET’, n. s. ~\ Ital. petto ; Lat. pectus,

PET’TISH, adj. Mhe breast? A slight pas- PET’TISHNESS, n. s. 5 sion or grief: pettish is fretful ; peevish : pettishness, peevishness.

Nor doth their childhood prove their innocence ; They’re froward, pettish, and unused to smile.

Creech.

If all the world

Should in a pet of temperance feed on pulse, Drink the clear stream and nothing wear but frieze, The all-giver would be unthankt, would be unpraised.

Milton.

If we cannot obtain every vain thing we ask, our next business is to take pet at the refusal.

L’E»lrange.

Life, given for noble purposes, must not be thrown up in a pet, nor whined away in love. Collier.

Like children, when we lose our favorite plaything, we throw away the rest in a *t of pettishness. Id.

They cause the proud tueir visits to delay, And send the godly in a pet to pray. Pope

PET, n. s. Probably from petit, little. See PEAT. A lamb taken into the house, and brought up by hand : a cade lamb.

PETAL, n. s.) Lat. petalum. The leaf of

PET'ALOUS. J a flower : having petals.

Petal is a term in botany, signifying those fine coloured leaves that compose the flowers of all plants : whence plants are distinguished into monopetalous, whose flower is one continued leaf ; tripetalous, pen- tapetalo'is, and polypetalous, when they consist of three, five, or many leaves. Quincy.

PETAL, in botany. See BOTANY.

PETALIFORME. See BOTANY.

PETALISM, a mode of deciding on the guilt of citizens, similar to the Athenian Ostracism. It was introduced in Syracuse about A. A. C. 460, to prevent the tyranny of the richer citizens, who had often about that time aimed at the dia- dem. To prevent, therefore, the evils daily arising from thence, and to bring down the as- piring minds of the wealthy citizens, the Syra- cusans were obliged to make a law like that of the Athenian ostracism ; differing only in this, that every citizen at Syracuse should write on a leaf, instead of a shell, the names of such as they apprehended powerful enough to usurp the so- vereignty. When the leaves were counted, he who had the most suffrages against him was, without farther enquiry, banished for five years. This method of weakening the interest of the overgrowing citizens was called petalism, from TrsraXov, a leaf. This law was attended with many evil consequences ; for those who were most capable of governing the commonwealth were driven out, and the administration of pub- lic affairs committed to the meanest of the peo- ple ; nay, many of the chief citizens, who were able to render their country great service, fearing to fall under the penalties of this law, withdrew from the city, and lived private in the country, not concerning themselves with public affairs : whence, all the employments being filled with men of no merit or experience, the republic was on the brink of ruin, and ready to fall into a state of anarchy and confusion. The law, there- fore, of petalism, upon more mature deliberation, was repealed soon after it had been enacted, and the reins of government

were again put into the hands of men who knew how to manage them.

PETALITE, a mineral discovered in the mine of Uto in Sweden by M. D'Andrada, in- teresting, from its analysis by M. Arfredson having led to the knowledge of a new alkali.

This rare mineral occurs in masses, which have a foliated structure, and are divisible in direc- tions parallel to the planes of a four-sided prism, whose bases are elongated rhombs, or parallelo- grams with angles of 137° 08′ and 42° 52', ac- cording to Haiiy. The laminae are sometimes scaly, undulated, or interlaced. It scratches glass, and has nearly the hardness of feldspar. Its lustre is usually glistening, and somewhat pearly ; the planes, produced by mechanical di- vision in one direction, have however a higher lustre. It is translucent in different degrees; and its color is white, either milk white, or with shades of gray, red, or green ; the red sometimes appears as a slight tinge of pink. Its specific gravity is between 2-4 and 2'6.

Chemical characters. — When strongly heated by the blow-pipe it melts, according to Arfvedson into a transparent porous glass. Unless the frag- ment be very minute, its surface only will be fused. It contains, accoiding to a mean of three analyses by Arfvedson, sil«x 79-2, alumine 17'2, lithia 5-7 ; = 100-1. Professor Clarke's analysis gives silex 80-0, alumine 15-0, lithia 1-75, oxide of manganese 2-5, water 0-75. An analysis by Vauquelin gives silex 78, aluraine 13, lithia 7;

= 98.

The new alkali, lithia, was first discovered in the petalite by Arfvedson. It sometimes re- sembles white quartz, but is easily distinguished by the foregoing characters : — It has been found only in Sweden, at Uto, Sahla, and Finngrufan, and is usually associated with quartz, feldspar, spodumen, &c.

This interesting mineral has been lately said by Dr. Brewster to have a perfect crystalline structure, and to possess two axes of double re- fraction.

PETAR', n. s.) Fr. petard ; Ital. petardo ;

PETARD', n. s. \ of Lat. pedo. An explod- ing engine of warfare, used formerly in sieges. See below.

Tis the sport to have the engineer Hoist with his own petard.
Shakspeare. Hamlet.

Find all his having and his holding, Reduced t' eternal noise and scolding ; The conjugal petard that tears Down all portcullices of ears.
Hudibras.

A petard is an engine of metal, almost in the shape of a hat, about seven inches deep, and about five inches over at the mouth ; when charged with fine powder well beaten, it is covered with a madrier or plank, bound down fast with ropes, running through handles, which are round the rim near the mouth of it : this petard is applied to gates or barriers of such places as are designed to be surprised, to blow them up : they are also used in countermines to break through into the enemy's galleries.

Military Dictionary.

PETAR, or PETARD. Fr. petard, Italian pe- tardo. A petard is an engine of metal, almost in the shape of a hat, about seven inches deep, and about five inches over at the mouth ; when charged with fine powder, well beaten, it is co- vered with a madrier or plank, bound down fast with ropes, running through handles, which are round the rim, near the mouth of it. The petard is applied to gates or barriers of such places as are designed to be surprised, to blow them up ; they are also used in countermines, to break through into the enemy's galleries. Its invention is ascribed to the French Huguenots in 1579, who by means of petards took Cahors, in the same year. Petards are of four different sizes : the first contains 12lbs. 13ozs. ; second lOlbs. llozs.; third 1 Ib. 10 ozs. ; fourth 1 Ib. The blind fuse composition for them is of mealed powder 7 Ibs., wood ashes 3 ozs.

PETAU (Denis), or PETAVIUS (Dionysius), a French Jesuit of great erudition, born at Orleans in 1583. He was but nineteen years of age when he was made professor of philosophy in the University of Bourges. He joined the Jesuits in 1605, and did great credit to them by his eru- dition. He became a zealous advocate for the church of Rome ; and criticised and abused its

adversaries. His chief work, which is still in great repute, he entitled RationariumTemporum. It is an abridgment of universal history, from the earliest times to 1632, with authorities. He died at Paris in 1652.

PETAURI, in zoology, flying squirrels; a subdivision in the genus sciurus. They have a hairy membrane extended from the fore to the hind legs, adapted for flying. They are styled by Linnaeus and Gmelin sciuri volantes, flying squirrels, in distinction from the sciuri scandentes, or climbling squirrels; but Dr. Shaw styles them petauri, wherein he is followed by Mr. Kerr, who enumerates eight species. See SCIURUS.

PETAURIST./E, in antiquity, those who ex- hibited their feats on the petaurum.

PETAURUM. Gr. irtravpov, or irtrtvpov, a ledge fixed to a wall, on which birds used to roost.— Varro de Re Rust, 1. 3, c. 9 ; Poll. Onom. 1. 10, segm. 156. The petaurum was also a ma chine hung high in the air, from which the petau- ristoe threw themselves, and descended to the earth by means of a rope.— Juv. Sat. 14, v. 265.

PETCHELEE, a large and flat province of the Chinese empire, in which Pekin is situated. The sea is the western boundary of the province, and, with the river Peiho, enables it to carry on a considerable trade with Corea and Japan. Its prosperity is chiefly supported by the communi- cation maintained by its rivers with the imperial canal. By it the tribute of all the provinces, paid chiefly in kind, is conveyed, and vast num- bers of persons who live entirely on the water, subsisting by fishing or breeding of ducks. The population was stated to Sir George Staunton at 38,000,000 ; but this there can be no doubt is a good deal exaggerated. Rice, wheat, and barley, are raised here.

PETECHIˆE, in medicine, a name given to those spots, whether red or of any other color, which appear in malignant fevers.

PETE CHIAL, adj. Lat. petecfucc. Pestilen- tially spotted. Obsolete.

In London are many fevers with buboes and car- buncles, and many petechial or spotted fevers.

Arbuthnot.

PETER (St.), the apostle, born at Bethsaida, was son of Jonas, and brother of St. Andrew. — John i. 42, 43. His first name was Simon ; but, -when our Saviour called him to the apostleship, he changed his name into Cephas, that is, in Syriac, a stone, or a rock ; in Latin petra, whence Peter. He was a married man ; and had his house, his mother-in-law, and his wife, at Caper- naum, upon the lake of Gennesareth.— Mark i. 29 ; Mat. viii. 14»; Luke iv. 38. St. Andrew, having been first called by Jesus Christ, met his brother Simon, and told him (John i.

41), ‘ we have seen the Messiah,’ and then brought him_to Jesus. After having passed one day with our Saviour, they returned to their ordinary iKa’oa- tion, fishing. But it is thought they were present with him at the marriage of Cana in Galilee This happened A. D. 30. St. Peter’s miraculous draught of fishes ; the cure of his wife’s mother ; his walking upon the waters ; his answers to our Saviour’s important questions ; his presence at the transfiguration ; his payment of the tribute ;

PET

his questions respecting forgiveness, and the de- struction of the temple ; his vain self-confidence that he would stand by his Lord ; his triple de- nial of him soon after, with his consequent repentance ; his meeting wi’th him after his resur- rection ; his second miraculous draught of fishes ; our Saviour’s trying questions to him ; his meet- ing with the other apostles ; the miraculous gift of tongues ; his sermon, or address to the peo- ple ; the consequent conversion of 3000 persons ; his miraculous cure of the lame beggar, and con- version of other 5000 ; his imprisonment by the priests and sadducees, and his boldness on that occasion ; his annunciation of death to Ananias and Sapphira; his second imprisonment and li- beration by an angel ; his boldness before the Jewish rulers ; his sufferings and dismission ; his preaching at Samaria ; his reproof to Simon the magician; his cure of ˆneas at Lydda; hi* raising up Tabitha from death; his vision at Joppa, the message to him from Cornelius, and his conversion ; Peter’s visit to him, and the con- sequences; his return to Jerusalem; with his imprisonment by Herod Agrippa, A. D. 44; are all recorded, with many other interesting particu- lars, in the Gospels and Acts of the Apostles. After his delivery from prison by the angel, ho left Jerusalem ; but we are not told what became of him till the council held at Jerusalem in the year 51. It is thought that before this time he made his second journey to Rome, whence he wrote his first epistle. St. Peter was obliged to leave Rome in the year 51, by order of the em- peror Claudius, who had banished all Jews from thence. The particulars of St. Peter’s life are little known from A. D. 51, in which the council of Jerusalem was held, till his last journey to Rome, which was some time before his death. Then, being acquainted by revelation that the time of his death was not far off (2 Pet. i. 14), he wrote to the faithful his second epistle. St. Peter and St. Paul came to Rome, it is said, about the same time, A. D. 65, where they per- formed many miracles, and made many converts. Simon Magus, by his tricks, continued here to deceive the people, pretending himself to be the Messiah, and even attempting to ascend into heaven. See SIMON MAGUS. Soon after this St. Peter was thrown into prison, where he

con- tinued, we are told, for nine months ; at last he was crucified in the Via Ostia, with his head downwards, as he himself had desired of his ex- ecutioners. This he did out of a sense of hu- mility, lest it should be thought, as St. Ambrose says, that he affected the glory of Jesus Christ. It is said that his body was at first buried in the catacombs, two miles from Rome, from whence it was afterwards transported to the Vatican, where it has lain ever since. His festival is ce- lebrated with that of St. Paul, on the 29th of June. St. Peter died A. D. 66, after having been bishop of Rome, according to the general account, about twenty-four or twenty-five years. His age was about seventy-four or seventy-five. It is agreed that St. Linus was his successor. St. Peter has been made the author of several books ; such vere his Acts, his Gospel, his Revelation, his work about preaching, and another about Judgment. There is extant a large history ot

St. Peter, called The Recognition, ascribed to St. Clement.

PETER OF BLOIS, a learned man of the twelfth century, born about 1120, at Blois, in France. He was the first person who employed the famous word transubstantiation. He was appointed pre- ceptor to William II. king of Sicily, in 1167, and obtained the custody of the privy seal. In 1168 he left Sicily and returned into France. He was soon after invited into England by Henry II., who employed him as his private secretary, made him archdeacon of Bath, and gave him some other benefices. When he had spent a few years at court, he retired into the family of Ri- chard archbishop of Canterbury, who had made him his secretary and chancellor about 1176. In this station he continued to the death of the archbishop in 1183, enjoying the highest degree of favor with that prelate. Our author remained in the same station with archbishop Baldwin, who succeeded Richard. He was also sent by that prelate to plead his cause before pope Urban III. After the departure of Baldwin for the Holy Land, in 1192, our author was involved in various troubles in his old age ; and died about the end of the twelfth century. He appears from his works, which may be justly reckoned among the most valuable monuments of the age in which he flourished, to have been a man of great integrity and sincere piety, as well as of a lively inventive genius and uncommon erudition. His printed works consist of 134 letters, which he collected at the desire of Henry II. ; of sixty- five sermons ; and of seventeen tracts on different subjects.

PETER THE HERMIT. See CRUSADES, vol. iv. p. 680.

PETER I., styled the Great, czar, and after- wards emperor of Russia, founder of the Russian empire ; for though the country was well known, and of great antiquity, yet it had no extent of power, of political influence, or of general com- merce, in Europe, till his time. He was born in 1672 ; and was proclaimed czar when but ten years of age, iia exclusion of John his elder bro- ther, who was of a sickly constitution and weak mind. The princess Sophia, his half sister, made an insurrection in favor of John; and, to put an end to the civil war, it was at last agreed that the two brothers should jointly share the imperial dignity. Peter had been very negligently educated, not only through the general defects of the Russian system, but likewise through the arts of the Princess Sophia, who surrounded him with every thimg that might stifle his natural de- sire of knowledge, and deprave his mind. Not- withstanding this, his inclination for military exercises discovered itself in his tenderest years. He formed a company of fifty men, commanded by foreign officers, clothed and exercised after the German manner ; he entered himself into the lowest post, that of a drummer ; and never rose otherwise than as a soldier of fortune. He now reinfo reed his company with several others, till at last he had got together a consider- able body of soldiers, and by this means gra- dually secured a body of well disciplined troops. The sight of a Dutch vessel which he had met with on a lake belonging to one of his pleasure-

houses, made such an impression on his mind, that he conceived the almost impracticable design of forming a navy. His first care was to get some Hollanders to build some small vessels at Moscow ; and he passed two successive summers on board English or Dutch ships, which set out from Archangel, that he might instruct himself in every branch of naval affairs. In 1696 czar John died, and Peter was now sole master of the empire. In 1698 he sent an embassy to Holland; and went incognito in the retinue, visiting England as well as Holland, to inform himself fully in the art of ship-building. At Amsterdam he worked in the yard as a pri- vate ship-carpenter, under the name of Peter Michaelof ; but he has been often heard to say, that if he had never gone to England, he had remained ignorant of that art. In 1700 he had got together a body of standing forces, consist- ing of 30,000 foot ; and now the vast project he had formed displayed itself in all its parts. He opened his dominions to all intelligent travellers, having first sent the chief nobility of his empire into foreign countries to improve themselves in knowledge and learning, and invited into Russia all the foreigners he could meet with, who were capable of instructing his subjects. This raised many discontents ; and the despotic authority he

exerted on that occasion was scarcely power- ful enough to suppress them. In 1700, being strengthened by the alliance of Augustus king of Poland, he made war on Charles XII. king of Sweden. His first ill success did not deter him ; for he used to say, ‘ my armies must be over- come, but this will at last teach them to con- quer.’ He afterwards gained considerable ad- vantages; and founded Petersburg in 1703. In 1709 he gained a complete victory over the Swedes at Pultowa. Being in 1712 enclosed by the Turks on the banks of the Pruth, he seemed inevitably lost; and, had not the czarina Catha- rine bribed the grand vizier, even the czar’s pru- dence could not have effected his deliverance. In 1716 he made a tour through Germany and H olland, and visited the royal academy of sciences at Paris. It would be endless to enumerate all the various establishments for which the Russians are obliged to him. He formed an army on the model of the most military nations : he fitted out fleets in all the four seas which border upon Russia : he caused many strong fortresses to be raised after the best plans ; and made conve- nient harbours : he introduced arts and sciences into his dominions, and freed religion from many superstitious abuses; he built cities, cut canals, &c.; was generous in rewarding, impartial in punishing; faithful, laborious, and humble: yet was he not free from roughness of temper. He had indeed cured himself of excess in drinking; but he has been branded with other vices, particu- larly cruelty. He certainly caused his unfortunate son prince Alexis to be executed, and was equally severe to his son’s friends. He beheaded his own brother-in-law count Lapuchin, brother to his wife Ottokessa Lapuchin whom he had divorced, and uncle to prince Alexis. The prince’s con- fes or also forfeited his head. The remainder of the czar’s life was a series of grand projects, la- bors, and exploits, that seemed to efface the

memory of his excessive severities. He made frequent speeches to his court and to his council. In one he told them that he had sacrificed his son to the welfare of his dominions. He died of the strangary in 1725, and left the world at least with the magnanimity of a hero, if not with the piety of a Christian. Peter was tall of stature, and of a bold and majestic aspect, though some- times disfigured by convulsions, which altered his features. He conversed with persons in all stations ; loved women ; and valued himself on drinking large draughts, rather than sipping de- licious wines. For a minuter account of his improvements, &c. see RUSSIA, PETERSBURG, &c.

PETER II. emperor of Russia, the son of the unfortunate prince Alexis, was born in 1715; and in 1727 succeeded the empress Catharine I.,

who had declared him grand duke in 1 726. The most remarkable event of his reign was the disgrace of prince Menzikoff. See MENZIKOFF. He died in 1730, aged fifteen.

PETER III., emperor of Russia, was the son of Charles Frederick, duke of Holstein Gottorp, by the princess Anne, daughter of Peter the Great, and was born in 1728. On the death of the empress Elizabeth, in 1762, he succeeded to the throne, but did not long enjoy it ; being dethroned the same year by his wife, Catharine II. He died in confinement seven days after wards, and, as is generally believed, was mur- dered in a barbarous manner.

PETER III., king of Arragon, succeeded his father James I. in 1276, and turned his arms against Navarre, to which kingdom he laid claim ; but failed in the conquest of it. He married the daughter of Manfred king of Sicily ; and, to effect the conquest of that island, contrived the horrible massacre of the French, called the Sici- lian Vespers. See SICILY. For this crime he and the Sicilians were excommunicated by pope Martin IV. He died at Villefranche in 1282.

PETER THE CRUEL, king of Castile, succeeded his father Alphonsus XI. in 1350, in his six- teenth year, and proved a most barbarous and bloody tyrant ; which provoked his subjects to rebel and expel him ; but, little to the honor of the English, was restored by their assistance under the command of the brave Black Prince Edward. He was afterwards, however, aban- doned by him, and met his just fate from his brother Henry, count of Trastamara, who killed him with his own hand. See SPAIN.

PETER was also the name of four kings of Portugal. See PORTUGAL.

PETER, or DON PEDRO, of Portugal, duke of Coimbra, was the second son of John, king of Portugal, and born 4th March, 1394. He was one of the most accomplished princes of his age; was himself very learned, and was a patron of all learned men. To increase his knowledge, he travelled through the principal countries of Eu- rope, Asia, and Africa, with a train suitable to his quality ; of which travels an account was published, but, according to the spirit of the times, loaded with romantic fables. On his re- turn he married Isabel, daughter of count Urgel, and grand-daughter of king Peter IV. He vi- sited England, and was made a knight of the garter, April 22nd, 1417, bv his cousin Henry

V., who was grandson of John of Gaunt by the father, as Don Pedro was by the mother. In 1440 he was appointed regent of Portugal,

during the minority of his cousin Alphonsus V. His regency was so mild as well as just, that the people of Lisbon asked leave to erect a statue to him, which this great prince declined. He governed the kingdom with so much propriety that Portugal was never more respected by the other powers of Europe. He diminished the taxes, maintained the laws in their vigor, and gave the young king an excellent education ; who, when he came of age, was so pleased with his conduct, that he married and raised to the throne, the duke's daughter, Donna Isabella, in 1 446. Yet all his merits did not prevent the envy of some courtiers, who at last got so much the ear of the monarch as to persuade him that the duke was a traitor : but, upon an inspection of his papers, Alphonsus became convinced of his innocence; and, as the only amends he could now make, ordered his body to be in- terred with every mark of honor in his own se- pulchre.

PETER, THE WILD BOY, a savage, found in the woods near Hamelen, a town in the electo- rate of Hanover, when king George I. with a party of friends was hunting in the forest of Hertswold. He was supposed to be then about twelve years of age, and had subsisted in those woods, upon leaves, berries, wild plants, bark of trees, &c., from his infancy. In 1726 he was brought over to England, and put under the care of Dr. Arbuthnot, with proper teachers. But though there appeared no natural defect in his organs of speech, he could never be brought to articulate a syllable distinctly. He was after- wards committed to the care of different persons, but never acquired any degree of improvement. He died the 22nd of February, 1785, when he was supposed to be seventy-two years old. He was well made ; middle-sized ; had no appear- ance of an idiot, nor any thing particular in his form, except two of his fingers united by a web up to the middle joint. „• He was delighted with music, and learned to hum a tune. He had a fore-knowledge of bad weather. Lord Mon- boddo gives a particular description of him, as an instance of his favorite hypothesis, that ' man in a state of nature is a mere animal.'

PETER LE PORT (St.), a market town of Guernsey, situated on the south-eastern part of the island, consists of one long narrow street. It is defended by the Old castle and Castle Cor- net. The latter, which commands both the town and harbour, is situated on a rock, separated from the land by an arm of the sea, 600 yards wide, and fordable only at low water. The harbour has a good road for shipping. The pier, a fine work, formed of stones joined together with great regu- larity, affords not only security to vessels, but being paved on the top, and guarded by parapets, is a pleasant and extensive parade, with a fine prospect of the sea and the neighbouring islands.

PETERBOROUGH, a city of Nassaburgh hundred, Northamptonshire, six miles and a half north by east from Stilton, and eighty-one north from London, is situate on the border of Hunts, on the northern side of the river Nen, which runs

hence through Wisbeach, and is navigable up to the city. It is supposed to have taken its name from a monastery erected about the year 660, dedicated to St. Peter. After the monastery had flourished about 200 years it was totally destroyed by the Danes, and continued in ruins during a century, when Ethelwold., bishop of Winchester, with the assistance of Edgar and his chancellor Adulf, who was afterwards abbot, rebuilt this abbey in the most magnificent and stately man- ner : the abbots were mitred afterwards, and sat in parliament. At the dissolution of religious houses it was converted into a cathedral, for a bishop, dean, and six canons, eight choristers, a master, two schoolmasters, twenty scholars, six almsmen, and other officers. The cathedral suf- fered much during the civil war, but was thoroughly repaired some years ago. It is a noble structure, 409 feet long, and 203 broad. Amongst other monuments is one to the memory of the unfortunate Catharine of Arragon, wife of Henry VIII., and another to the memory of Mary Queen of Scots, both of whom were buried here. There is only one parish church, St. John's, besides the cathedral. The streets of Pe- terborough are regular, but the town has a dull appearance : near the cathedral is a good market- house, over which are held the sessions for the hundred. It has also a well endowed charity school for twenty boys and forty girls, a free- school, and a Sunday School. The trade in coal, corn, and timber, is considerable, aud the stock- ing manufacture is carried on to some extent. On the whole this is the least city, and the poorest bishopric in England ; but the jurisdic- tion called Peterborough Soke or Liberty ex- tends over thirty-two towns and hamlets in the neighbourhood, in all which places the civil magistrates hold their quarter sessions of the peace, &c. The city is governed by a mayor, recorder, six aldermen, and eight common coun- cil, and sends two members to parliament. They are chosen by the inhabitants paying scot and lot, in number about 450 ; nnd the dean and chapter, who are lords of the manor, appoint the returning officers. Near the city is Caerdyke, an ancient foss made by the Romans for drain- ing the fens. Market on Saturday. Fairs July 10th : October 2d and 3d.

PETERBOROUGH, a post-town in Hillsborough county, New Hampshire, watered by the Con- toocook, eighteen miles west of Aniherst, thirty- eight south-west of Concord, and sixty-four north

west of Boston. This is one of the most con- siderable manufacturing towns in the state, and contains an oil mill, a paper mill, a woollen manufactory, and five cotton manufactories.

PETERBOROUGH, a town of Ireland, in Mona- ghan county, and province of Ulster.

PETERHEAD a town of Scotland, in the county of Aberdeen, about thirty-three miles north-east of that city. It stands on the most easterly point in Scotland, and from thence due west that kingdom is broadest. It is the nearest land to the northern continent of Europe, and lies within 300 miles of the cape, which is called the Naze of Norway. Through this channel the grand body of the herrings pass in their annual migrations from Shetland and the north seas to

the more southern latitudes, attended with the all-devouring cod and ling. The peninsula on which the town is built is connected with the main land on the north-west by an isthmus not more than 800 yards wide. Few harbours in Great Britain are of more importance to navi- gation than Peterhead, as, in case of violent storms from the easterly points, large vessels em- bayed betwixt this and the mouth of the Forth have not a port that they can safely take at every time of the tide, that of Aberdeen excepted. If, therefore, they cannot make their way to sea in the teeth of a strong easterly wind, or double this headland that they may gain the Murray frith, they must inevitably come on shore. This harbour lies in a spacious bay, where vessels of any burden may ride in all other winds, and is therefore a frequent rendezvous of shipping which frequent the northern seas. It is defended by a good battery. A considerable trade is car- ried on directly to the Baltic for deals, iron, hemp, tar, and other articles. There are also manufactures of sewing thread, woollen cloth, and cotton. A mineral well gives, in summer, considerable gaiety to the place; its salutary vir- tues have long, and very justly, been celebrated. An analysis of this water has been given by Dr. Laing ; who found that one pound avoirdupois contains grs. 30 J muriate of iron ; grs. 7 muriate of lime ; grs. 3£ carbonate of iron ; grs. 2 sili- ceous earth ; grs. 2 sulphate of lime; grs. 13£ sulphate of soda; grs. 7\ muriate of soda; and 83J cubic inches of carbonic acid gas. This water has long been in great repute for disorders of the stomach and bowels, gravel, dropsy, ner- vous affections, female complaints, scrofula, leucophlegmasia, and diseases of general debility. The town is in the form of a cross, and is divided into four districts. The town house is an elegant building at the head of the principal street ; sixty feet long,

forty broad, with a fine clock, and a spire 100 feet high. It cost about £2000. The late improvements of the piers have cost several thousand pounds. The Keith Inch divides the harbour into north and south, and the pier here has never been overflowed. The south is consi- dered the more convenient harbour. The com- missioners for highland roads and bridges are expending large sums of money in forming a communication between the north and south har- bours, and in effecting other great and valuable improvements. Ship-building is carried on to a great extent, and the fisheries are beginning to be much more attended to than formerly. It has many elegant houses on its borders. Near it is a fort and a guard house, with a battery of four twelve-pounders, and four eighteen pound ers. Peterhead is a burgh of barony, governed by a bailie and eight councillors. There are many convenient houses for the accommodation of strangers. There is a ball-room, under which there are two salt-water baths. The church, episcopal chapel, and burgher and antiburgher meetings, are also respectable. Owing to the open and peninsulated situation, the air of this place is esteemed peculiarly pure and healthful ; even the fogs rising from the sea are thought to be medicinal : the town is therefore much en- livened by the concourse of company.

PETERSBURG.

PETER-PENCE was an annual tribute of f>ne penny, paid at Rome out of every family at the feast of St. Peter. This Ina, the Saxon king, when he went in pilgrimage to Rome about the year 740, gave to the pope, partly as alms, and partly in recompence of a house erected in Rome for English pilgrims : and this continued to be paid generally until the time of king Henry VIII., when it was enacted that, from hence- forth, no persons shall pay any pensions, Peterr pence, or other impositions, to the use of the bishop or see of Rome.

PETERS (Father), a Jesuit, was confessor and counsellor to James II. king of England. This prince dismissed him in 1688, because he was considered as the author of those troubles in %vhich the kingdom was then involved.

PETERS (William), was a native of the west of England, and, after a liberal education, be- came a student of Exeter College, Oxford ; where, in 1788, he took the degree of bachelor of civil law. Previous to this, he studied paint- ing with great assiduity, and obtained a place in the Royal Academy. But, on taking orders, he relinquished the pencil, except by way of amuse- ment, and to oblige some particular

friends. He painted historical subjects and portraits with great credit; among the latter was a whole length portrait of George IV. when prince of Wales, for Free-Masons' Hall, in Great Queen Street. Several engravings have been published from his paintings, particularly one of the Soul of an In- fant carried to Heaven by Angels. Mr. Peters was presented by the late duke of Rutland, his patron, to a valuable living, and the bishop of Lincoln gave him a prebendal stall in his cathe- dral. He died at Brasted Place, in Kent, in April, 1814. Before the revolution in France he visited the continent, and while at Paris our ambassador requested the unfortunate Maria Antoinette to allow Mr. Peters to paint the por- trait of the dauphin. A council was held upon it, but it was seriously decided that the effluvia of the paint would be injurious to the royal in- fant, and a refusal, assigning that as a reason, was communicated to his excellency.

PETERS (Charles), author of a Critical Disser- tation on the Book of Job, was presented by Elizabeth, lady Mohan, to the living of Bocon- noc, in Cornwall, in 1715, and resided there till 1727, when he obtained that of St. Mabyn, in the same county, where he resided till his death in 1777. He was the friend and corre- spondent of bishop Lowth, who, in his letter to Warburton, speaks highly of him.

PETERS (Hugh), a fanatic in the reign of Charles I., was the son of a merchant of Fowey, Cornwall, and educated at Trinity College, Cam- bridge. He took the degree of M.A. in 1622; but, it is said, was ultimately expelled his col- lege for bad conduct. He then went on the stage, but afterwards took orders, and was lec- turer of St. Sepulchre's, in London. Being here prosecuted for an intrigue with a married female, he absconded to Rotterdam, and became pastor of the English church. He subsequently went to America, where he remained seven years, and then returned to England. He was one of the most useful tools of Cromwell, owing to his Vol.. XVII.

talent for the burlesque, and extreme popularity with the soldiers and lower classes. When the king was brought to London for trial, Peters, says Sir Philip Warwick, was ' really and truly his jailor.' He was vehement for the execution of Charles, and suffered, after the Restoration, as a regicide. Some of his Discourses, and his Last Legacy to his Daughter, have been printed.

PETER'S ISLAND (St.), in the lake of Bienne in the Helvetic republic, lemarkable for being one of the retreats of Rousseau ; whence it has also got the name of Rousseau's Island. It lies towards the south side of the lake, and commands very delightful views. There is only one farm- house on the island, in an apartment of which Rousseau was

lodged.

PETER'S LAKE (St.), a lake of Canada, twenty miles in length and about fifteen in breadth, is formed by the waters of the St. Laurence, aided by several considerable rivers, expanding over a level country. The lake is in general shallow, and in the ship channel there is not usually found more than from eleven to twelve feet water. Ves- sels of a considerable draught, instead of taking in their whole cargo at Montreal, take in only such part of it as they can carry across this lake, and take the remainder below the lake from river craft.

PETERSBURG, or ST. PETERSBURG, a city of Russia, in the province of Ingria, and capital of the empire. It was founded in 1703 by Czar Peter the Great, whose ambition it was to have a fleet on the Baltic ; for which reason he deter- mined to found a city which might become the centre of trade throughout all his dominions. The spot he pitched upon was a low, fenny, un- cultivated island, formed by the branches of the Neva, before they fall into the gulf of Finland. In the summer this island was covered with mud ; and in winter became a frozen pool, ren- dered almost inaccessible by dreary forests and deep morasses, the haunts of bears, wolves, and other savage animals. Having taken the fort of Nattebourg, and the town of Neischanz, in 1703, Peter assembled in Ingria above 300,000 men, Russians, Tartars, Cossacs, Livonians, and others, even from the most distant parts of his empire, and laid the foundation of the citadel and fortifications, which were finished in four months, almost in despite of nature. He was obliged to open ways through forests, drain bogs, raise dikes, and lay causeways, before he could found the new city. The workmen were ill-pro- vided with necessary tools and implements : they were even obliged to fetch the earth from a great distance in the skirts of their garments, or in bags made of old mats and rags sewed toge- ther. They had neither huts nor houses to shelter them from the severity of the weather : the country, which had been desolated by war, could not accommodate such a multitude with provi- sions ; and the supplies by the lake Ladoga were often retarded by contrary winds. In con- sequence of these hardships above 100,000 men are said to have perished ; nevertheless the work proceeded with incredible vigor and expedition ; while Peter, for the security of his workmen, formed a great carnp, in such a manner that his infantry continued in Finland, and his cavalry

•were quartered in Ingria. The buildings of the city kept pace with the fortress, which is the centre of the town, surrounded on all sides by the Neva; and in little more than a year above 30,000 houses were erected. To people this city Peter invited merchants, artificers, mechanics, and seamen from all the different countries of Europe : he demolished the town of Nieus- chants, and brought hither not only the materials of the houses, but the inhabitants themselves. A thousand families were drawn from Moscow ; he obliged his nobility to quit their palaces and their villas in and about Moscow, and take up their residence at Petersburg, in a much more cold and comfortless climate. Finally, resolving to remove hither the trade of Archangel, he issued an ordonnance, importing that all such merchandise as had been conveyed to Archangel, to be sold to foreigners, should now be sent to Petersburg, where they should pay no more than the usual duties.

At first many houses were built of timber; but, these being subject to sudden conflagrations, the czar, in 1714, issued an order that all new houses should be walled with brick and covered with tiles. The fort is an irregular hexagon, with opposite bastions. This, together with all the rest of the fortifications, was in the beginning- formed of earth only ; but in the sequel they were faced with strong walls, and provided with bomb-proof casemates. In the curtain of the fort, on the right hand side, is a noble dispen- sary. The most remarkable building within the fort is the cathedral, built by the direction of an Italian architect. Petersburg is partly built on little islands, some of which are connected by draw-bridges ; and partly on the continent. In the highest part, on the bank of the Neva, the czar fixed his habitation, built of freestone, and situated so as to command a prospect of the greater part of the city. Here likewise is a royal foundry ; together with the houses of many noblemen. On the other side of a branch of the Neva stands the czar's summer palace, with a fine garden and orangery. Petersburg is very much subject to dangerous inundations. In 1715 all the bastions and drawbridges were either overwhelmed or carried away.

It was found extremely difficult, if not im- practicable, to join the islands and the continent by bridges : and the adjacent country is so bar- ren that the town must be supplied with provi- sions from a great distance ; consequently they are extremely dear. In winter the weather is extremely cold, and hot in the summer. Peter the Great established in the neighbourhood manufactures of linen, paper, saltpetre, sulphur, gunpowder, and bricks, together with mills for sawing timber. He instituted also a marine aca- demy, and obliged every considerable

family in Russia to send at least one son or kinsman, between the ages of ten and eighteen, to this seminary. To crown his other plans of reform- ation, he granted letters patent for founding an academy, upon a very liberal endowment; and, though he did not live to execute this scheme, his empress, who survived him, brought it to perfection. It was modelled on the plans of the Royal Society in London, and the academy of

France. The whole city is, at present, divided into four parts : 1. The Admiralty quarter ; 2. The Vassali Ostroff, or island ; 3. The Island of St. Petersburg ; 4. The district of Wiburgh and 5. The Foundry district. These are subdivided into eleven smaller divisions, over each of which is placed a major of police.

Mr. Wraxall calls St. Petersburg in his time ‘ only an immense outline, which will require future empresses, and almost future ages, to com- plete.’ The streets in general, says Mr. Coxe, are broad and spacious ; and three of the prin- cipal ones, which meet in a point at the admi- ralty, and reach to the extremities of the suburbs, are at least two miles in length. Most of them are paved ; but a few of them are still suffered to remain floored with planks. In several parts of the metropolis, particularly in the Vassili Ostrof, wooden houses’ and habitations, scarcely superior to common cottages, are blended with the public buildings ; but this motley mixture is far less common than at Moscow, where alone can be formed any idea of an ancient Russian city. The brick houses are ornamented with a white stucco, which has led several travellers to say that they are built with stone ; whereas, unless I am greatly mistaken, there are only two stone structures in all Petersburg. The one is a palace, building by the empress upon the banks of the Neva, called the marble palace ; it is of hewn granite, with marble columns and ornaments ; the other is the church of St. Isaac, constructed with the same materials, but not yet finished. The mansions of the nobility are many of them vast piles of building ; they are fur- nished with great cost, and in the same elegant style as at Paris or London. They are situated chiefly on the south side of the Neva, either in the admiralty quarter, or in the suburbs of Livonia and Moscow, which are the finest parts of the city.’ Mr. Coxe calculates the number of inhabitants in Petersburg at 130,000. An equestrian statue of Peter I. in bronze, of a colossal size, the work of M. Falconet, the celebrated French statuary, was cast at the expense of Catharine II. in honor of her great predecessor. Mr. C. gives a particular description of it. The statue was erected on the 27th of August, 1782, upon a pedestal of a most prodigious magnitude ; the stone when landed (a labor of six months) being forty-two feet long at the base, thirty-six at the top, twenty-one thick, and seventeen high ; a bulk greatly

surpassing in weight the most boasted monuments of Roman grandeur. ‘ The weather,’ he adds, ‘ is extremely changeable in this capi- tal, and the cold is at times extreme. It some- times happens that coachmen or servants, while they are waiting for their masters, are frozen to death. To prevent these dreadful accidents great fires of whole trees, piled one upon ano- ther, are kindled in the court-yard of the palace and the most frequented parts of the town.’

The first Admiralty quarter, is the smallest but most elegant division of Petersburgh. Within its circuit are twenty-three structures of the first magnitude. The Imperial Winter Palace is the most celebrated. It is 450 feet lone, 380 broad, and seventy high ; and in it is deposited an immense variety of curious and costly works of

all descriptions. Connected with it, by means of a covered gallery, is the hermitage, a spacious edifice, so railed from its being the scene of imperial retirement; it was built by Catharine II., and contains a valuable collection of paint- ings, including the original collection of Hough- on house, Norfolk, and a cabinet of natural nistory. The next building in this quarter of 1he town worthy of notice is the marble palace already noticed. Few buildings in any part of Europe surpass this in magnificence ; it is three stories high, the lowermost of granite, the super- structure of gray marble, decorated with co- lumns and pilasters of a reddish marble. No- thing in the exterior presents itself to the eye but stone or metal ; the window-frames are of brass highly polished ; the roof rests on iron bars, and is covered with sheet copper. The whole forms an oblong quadrangle. It is situ- ated on the quay of the- Neva. It was built originally for Gregory Orloff, one of the favorites of Catharine II., and at his death reverted to that empress. In this quarter are the admiralty, the office for foreign affairs, the post-offices, the senate-house and the loan-bank.

The church of St. Isaac in this quarter was begun by Catharine II. Like the marble palace, the basement is granite, and the super- structure of marble, jasper, and porphyry, both within and without. It was one of the freaks of Paul to finish it with brick. The three straight, long, and beautiful streets of this quarter are called perspectives, because from each may be seen the gilded spire of the admiralty. Of these, the Nevski perspective is the most re- markable : there is in it only one little turn, and it is at least half as wide again as Oxford Street in London. ‘The numerous hotels and the shops,’ says Storch, ‘ which are

mostly placed together in this street, occasion such a confluence of people, and such a constant bustle, that give it a consequence that is wanting to most parts of St. Petersburg. But, though the Nevski perspective is so remarkable for all these advantages, it becomes infinitely more so in the sight of the philosophical spectator, as the monument of a wise and enlightened toleration. One church here is concatenated with another : Protestants, Catholics, Lutherans, Armenians, and Greeks, have in this street their several churches beside and facing each other.' The equestrian statue of Peter the Great is in this quarter.

The public edifices of the second Admiralty quarter are, the new court stables, the college of medicine, and the opera-house. Two of the most considerable Greek churches are also within this quarter ; that of Notre Dame of Cazan, and St. Nicholas. The former merits a particular description. It was originally built in 1734 by the empress Anne; the dome being then of wood, and its architecture ill corresponding to that of the more modern edifices near it. Here the Russian sovereigns, however, returned thanks for the prosperous events of their reigns, and it was determined to rebuild it. The emperor Paul, accordingly, in 1800, ordered plans for this purpose to be submitted to him ; but, the death of that emperor occurring, the execution devolved on the late autocrat. It was conse-

crated 15th of September 1811. In every re spect it is magnificent and rich : the door before the principal altar, and the balustrade around it, are of massy silver. The jaspers and marbles of Olonetz and Siberia are employed in great profusion, both in the mosaic and other ornaments. Its exterior is very rich : there is a colonnade of 150 columns of the Corinthian order; their bases and chapiters of cast iron. The portico is adorned with two bronze statues of the archangels, Gabriel and Michael. The principal external door is also of bronze : a per- fect copy of the famous door of the cathedral of Florence. Every material employed in the construction and ornamenting of this church is the production of the empire; and almost all the artists, architects, painters, and sculptors were Russians. It is very rich in precious stones, and gold and silver vessels.

Of the third Admiralty quarter, the new bank, perhaps the most elegant building in St. Peters- burg, is the chief ornament. Its architecture is simple, but the workmanship of the very first order: its roof is covered with plates of iron. It consists of three distinct compartments : two covered corridors connecting the main building with the sides.

The Vassili Ostroff, the largest island in the Neva, is only inhabited on the eastern or smaller part; the rest is covered with gardens, trees, and morass. Three principal streets traverse it from east to west, intersected at right angles by twelve smallerones. This division is the seat of commerce and of learning, the exchange and the Academy of Sciences being in it. The building in which the meetings of the latter are held is an elegant structure. The edifices of the land-cadet corps are also in this island. Towards the isle of St. Petersburgh are the custom-house and the new exchange ; the latter was finished in the reign of Alexander. The Lutheran church of St. Catha- rine, designed partly from the model of the temple of Concord, is the most remarkable in this division of the city.

The Petersburg!! quarter consists of several islands, little built upon : it contains the first wooden cottage of Peter the Great.

The Wiburg quarter contains, beside the street along the right bank of the Neva, the cottages of the peasantry; there are also two grand man- sions within its precincts, besides the great mi- litary hospital founded by Peter the Great, and some other public buildings of less magnitude. It also contains a wharf for merchant-ships.

The division of the Foundry is so called from a foundry established there : the most remark- able edifices and establishments in it are, the institute of Catharine for the education of young ladies, the convent of the resurrection for the same purpose, the great magazine for spirituous liquors and salt, the arsenal, and the Taurida palace. This, originally the pantheon of prince Potemkin, was purchased on his death by Catha- rine for her autumnal palace : it is remarkable for its vast galleries, its winter garden, its Eng- lish garden, and its grotto formed of mirrors. The convent of St. Alexander Newsky adorns this quarter : it has, without its precincts, a large dwelling for the archbishop of Petersburg, a

seminary, five churches, a cemetery, and a garden. The mechanism of the bridges over the Neva is so simple that they can be taken to pieces in less than two hours, and this is done as soon as the floating ice at the beginning of the winter comes down : when the ice is fixed, they are again put up ; and are taken down a second time at the breaking

up of the ice in spring. But the ice, which continues firm, and capable of sup- porting any weight for five or six months, forms the principal communication in winter between the different quarters. Several plans have been formed for the erection of a permanent bridge across the Neva, but the practicability of such a measure seems doubtful. A wall, parapet, and pavement of hewn granite, stretch along the south bank of the river for three miles. This, which forms the quay, is one of the most striking and stupendous works by which this city is cha racterised. The triangle of edifices on the left side of the Neva is intersected by three principal canals, forming irregular semicircles, one within another. The Moika forms the smallest semicir- cle ; the Katarina Canal embraces this ; and the Fontanka includes both.

The waters of the Neva seem, after the first foundation of the city, to have risen usually every five years. On the 1st of November, 1726, they rose eight feet two inches ; on the 2d of October, 1752, eight feet five inches. On September 10th, 1777, there was a dreadful inundation following a violent storm of wind from the west and south-west. In several streets, the torrent was four feet and a half deep, and so powerful that it carried away various buildings and bridges : the Vassili Ostroff and the Island of St. Petersburg parti- cularly suffered. For a short time the river rose ten feet above its general level. After this in- undation precautionary measures were taken to warn the inhabitants of the approaching evil. The height of the water is regularly marked : whenever it rises above its banks, at the mouth of the great Neva, notice is given by firings of cannon, repeated at intervals as the danger in- creases: five cannon are also fired at the Admi- ralty battery : and from its steeple, by day, flags are displayed, and lanterns by night, the bells of the churches tolling at the same time. These precautions, however, bqt ill prepared this great city for another calamity of this kind, November 1824. On the night of the 10th, a strong west- erly wind impeded the current from the Ladoga Lake ; the Neva and the canals rose to an unu- sual height, and lamps were hung out around the the admiralty steeple to warn the inhabitants not to sleep in their lowest apartments. It was soon apparent that all the admonitions prescribed •were necessary; the Neva rose so as to inundate the whole city, and the confusion and destruction became indescribable. ‘Vehicles of all descrip- tions,’ says a private letter, ‘ were now seen hurry- ing homewards, or to the bridges, or to some rising ground, with the water over the wheels ; people were also seen wading through it up to their waists ; in a short time, only a courier here and there appeared on horseback, their horses scarcely able to keep their heads above the water. At one o’clock on the 19th nothing was to be seen on the Grand Place and in

the streets, but

wooden barks, empty boats, sentry-boxes, tim- ber, furniture washed from the houses, bread, and various kinds of provisions, all floating in confused masses on the surface ; wooden houses were seen floating up the river, most of the inha- bitants of which had perished ! Even the churchyards experienced an additional desola- tion. In the Smolensko quarter of the town, the coffins were washed out of their graves, and the dead bodies were cast up from their quiet habitations. Numbers had struggled up pillars, to the tops of the trees, and on the highest emi- nences, and were gradually saved from the fate of their companions by a few boats, which liter- ally plied above the roofs of many of the houses ! An eye-witness says, ‘ On Saturday the 20th, at day-break, I went out to view the effects of this catastrophe. I found the quay of the Neva block- ed up with timber, broken barges, galliots, and vessels of various descriptions, which had carried with them the pillars and lamp- posts of the houses and had broken in the windows, and otherwise damaged the edifices on the quay. The large blocks of granite, of which the parapet is com- posed, were thrown over. The St. Isaac’s, the Toochkoff, and summer garden bridges, were broken away from their anchors, and dispersed and destroyed. Many of the streets were so choked up with their timber as to be almost im- passable. In the Vassili Ostroff quarter, where most of the houses are of wood, the destruction was immense ; whole dwellings were hurled from their foundations, some of which were found at a considerable distance from the spot on which they stood, with the dead bodies of their unfor- tunate inhabitants witlfin ; others were broken into pieces on the spot, and some of them have been so totally destroyed that not a fragment of them remains.’ Wooden barracks with many of their inmates were totally overwhelmed : an en- tire regiment of carabineers who had climbed up the roofs of one of them all perished ! Eight thousand dead bodies had been already found, and multitudes were carried by the retreating waters down the gulf of Finland ; many, also, were supposed to remain buried in the ruins of their habitations. Of course many instances of individual affliction, during the rapidity of the inundation, must have occurred; the following seems to us particularly affecting: — A lady and child in a carriage were in a dangerous situation, when a Cossac riding by observed her distress, and stopped ; she entreated him at all hazards to save the child ; he took it from the carriage win- dow, but in a few minutes his horse slipped, and they both perished ; soon afterwards the lady, with her servants, horses, and baggage, were overwhelmed in the waters. When we state the loss of human beings as already ascertained to have amounted to upwards of 8000, it may seem almost unfeeling to think

of estimating the destruction of property ; but many of those who have escaped the flood are doomed, in the wreck of their all, to combat the more tedious mortality of famine. All the provi- sions in the city had been more or less damaged, and the frost had set in so severely that any sup- ply from sea was considered almost hopeless. The exchange had been fitted up to receive

4000 persons ; and such of the public buildings as escaped were opened for the reception of the horseless The number of tliese is beyond all present calculation. Our readers may, however, form some faint idea of it from the fact that whole villages in the neighbourhood of the city had almost entirely disappeared : of Emilianow- ka not a trace remained ! The imperial establish- ments at Cronstadt suffered greatly, and the fleet sustained irreparable damage : a ship of 100 guns was left in the middle of one of the prin- cipal streets ! In the imperial iron manufactory at Catharinoff 200 workmen perished ; and out of eighteen barracks no less than fifteen were washed away. Such are a few, and but a few, of the results of this dreadful calamity. Alex- ander was a helpless witness of the scene from his palace windows : what a lessen for human ambition! A few years before an emperor, as powerful and as seemingly secure, found the grave of his fortune in the ruins of the other capital. To do him justice he seems to have been deeply afflicted at the spectacle ; but indeed what indifferent sojourner would not ? A million of roubles have been subscribed from the impe- rial purse, and a committee appointed for their immediate distribution; the reigning family have personally visited and succoured the miserablesur- vivers; and all that human charity can do, under such a visitation, is in active progress.' The loss of commercial property was immense : of sugar alone 10,800,000 Ibs. were damaged.

On an average of ten years, it is calculated, that there are here annually ninety-seven bright days, 104 rainy, seventy-two of snow, and ninety- three unsettled and changeable. The storms are frequent and violent. The greatest heat expe- rienced during the latter sixty years of the eighteenth century was 27°, and the greatest cold 33°, of Reaumur. The spring is very short ; the ice of the Neva never breaks up before the 25th of March, nor later than the 27th of April. The earliest time of its freezing is the 20th of October; the latest the 1st of December. It is not till May, however, that winter departs alto- gether;

then the scene suddenly changes, and in a very few days the fields and the trees are green. The summer, in general, is as mild and agreeable as in the south of France, but much more variable and rainy. It is also very short. To it succeeds the most unpleasant season of the year, in no respect resembling the delightful au- tumns of most of the other countries of Europe. Dark heavy clouds conceal the sun for several weeks; incessant rains render the streets almost impassable ; and storms frequently occur.

The population of St. Petersburgh amounted, in 1817, to 285,000 souls; but in 1832, was in- creased to 479,993 : of these 55,000 were connected with the land and sea service, and 25,000 were fo- reigners. There are no important manufactures as yet established ; but the commerce is principally in British hands. The imports are English manu- factures and colonial produce; wines, fruit, and oils of the south of Europe ; fine linens of Hol- land and Silesia; and the silks, watches, toys, &c., of France. The exports consist chiefly of iron, hemp, potash, flax, tallow, sail cloth, cord- age, hog's bristles, furs, tars, isinglass, &c. By

means of the canals of Ladoga and Vyshnei Voloshok, which unite the Baltic and the Cas- pian, goods are conveyed to the capital through a tract of 1434 miles without once landing them. This navigation begins at St. Petersburg!) by the Neva, which issues from lake Ladoga. By a canal uniting the Volchof, which falls into the same lake, with the Tvertza, which falls into the Volga, the communication between the Baltic and the Caspian is effected. The canals of La- doga and Vyshnei Voloshok likewise enable St. Petersburgh to receive the produce of China and Siberia. Petersburgh is 300 miles north-east of Stockholm, 355 north-west of Moscow, 540 N. N. E. of Warsaw, 525 north-east of Copen- hagen, and 750 north-east of Vienna.

PETERSBURG, a borough and port of entry, Dinwiddie county, Virginia, on the south bank of the Appomatox, just below the falls, twelve mites above its junction with James River, at City Point, twenty-five miles south by east of Richmond. It contains a court house, a jail, a masonic hall, two banks, one insurance office, an academy which had, in 1818, upwards of 100 students; twelve or fourteen tobacco warehouses, eight flour mills, and five houses of public wor- ship, one for Presbyterians, one for Episcopa- lians, one for Methodists, and two for Baptists. It is one of the handsomest and most commer- cial towns in the state, and has a large trade in tobacco and flour. The shipping owned here, in 1816, amounted to 5754 tons. The Appoma- tox is navigable as far as the town for vessels carrying 100 tons. The borough contains, be- sides the town of Petersburg, the

village of Bland- ford in Prince George county, and Pocahoubar in Chesterford county.

PETERSFIELD, a borough and market- town of Hampshire, on the Loddon, seventeen miles north-east of Portsmouth, and fifty-five south-west of London. It sends one member to parliament. The town was incorporated by queen Elizabeth, and there is a good market on Saturdays.

PETHERTON, NORTH, a parish in the hun- dred of the same name, Somerset, three miles south from Bridgewater, and 141 from London. It consists principally of one long street, of which many of the houses are well built; the parish is very extensive, including seventeen vil- lages, and formerly had a considerable corn market on Saturday. Fair 1st May.

PETHERTON, SOUTH, a market town and parish, situate on the river Ferret, over which there is a good stone bridge, twelve miles south- east from North Petherton, and 137 from Lon- don. The chief manufacture is that of dowlas. Market on Thursday. Fair 5th July.

PETHION DE VILLENEUVE (Jerome), a French revolutionary leader, was originally an advocate at Chartres, and deputy from the Tiers Etat of the bailliage of that city to the States General. In the early part of his public career he acted with Mirabeau, but did not join in all the measures .of that demagogue. October, 1 789, he was appointed a member of the first Com- mittee of General Safety; and on the 4th of De- cember, 1790, president of the National Assem- bly. In June following he became president of

the Criminal Tribunal of Paris ; and was, together with Barnave and Latour Maubourg, a commis- sioner to attend the return of Louis XVI. from Varennes. On this occasion Pethion is said to have behaved with little attention to his captives. He was elected to the office of mayor of Paris, November 14th, 1791 ; and, in consequence of his supposed implication in the riotous attack of the Parisian mob on the Tuilleries on the 20th of June, 1792, was suspended from his functions by the king on the 6th of July, but restored by the Assembly on the 13th. His behaviour on the 10th of August has by some been interpreted as the result of irresolution, and by others as the effect of design, to avoid betraying his real cha- racter as an abettor of violence. He now took an active part in the imprisonment of the royal family, and other measures of the ruling party, and became the first president of the

Convention. After the death of the king, Pethion was accused of having contributed to the massacres of the Septembrizers ; but against this charge he de- fended himself: he became, however, the peculiar object of jealousy to Robespierre; and, being in- cluded in the proscription of the Girondists, was confined in his own house, in the custody of a gendarme, from which he contrived to make his escape, with some other deputies of the same party. He took refuge in the department of Calvados, where they in vain endeavoured to avail themselves of the insurrections against the terrorists: some time after his body, with that of Buzot, one of his confederates, was found in a field half devoured by wolves ! He is supposed to have perished with hunger. His works, 4 vols. 8vo., were printed in 1793.

PETIOLE, in botany, the slender stalks that support the leaves of a plant.

PETIOLUS. See BOTANY, Index.

PETION (Alexander Sabes), the late presi- dent of the black republic of liayti, was born at Port-au-Prince, April 2d, 1770. Being the son of a colonist who possessed considerable pro- perty, he received a liberal education ; and he was scarcely twenty years old when the revolu- tionary commotions broke out in the island. He was one of the first who took arms ; was made an officer of artillery ; and obtained the rank of adjutant-general during the civil wars. After the English had left the island, Petion joined Rigaud, a man of color like himself, in opposing the projects of Toussaint L'Ouverture. Rigaud, being unsuccessful, embarked for France with Petion. They both returned to Hayti, however, with general Leclerc, under whom Petion held a colonel's commission. The violent measures adopted by Leclerc and Rochambeau induced Petion to quit the French service ; and, forming a union with the negro general Dessalines, as- sisted by the English, they succeeded in estab- lishing the independence of Hayti in 1804. Petion obtained the government of the western district, while Dessalines, becoming chief of the republic, assumed the title of emperor; until, his conduct having given offence, he was assassinated in 1806. Christophe, his lieutenant, was elected president of Hayti by the senate, but he chose r ,ther to take the title of king, and, behaving in a tyrannical manner, he was obliged to submit ' to a partition of his dominions. All the southern

and western part of the island acknowledged the authority of the senate, by whom Petion was elected president, January 27th, 1807. A

civil war now took place between the rivals, but Petion retained his office till his death in 1818, when he was succeeded by his lieutenant, gene- ral Boyer.

PETIS DE LA CROIX (Francis), a learned French writer, who was sent into Turkey and Persia, at the age of sixteen, to learn the oriental languages ; and became interpreter to Louis XIV., by whom he was employed in various ne- gociations. He wrote part of the life of Louis XIV. in Arabic, a work much esteemed in the east. He died in 1713. He is mentioned with approbation by Voltaire. He understood the Arabic, Turkish, Persian, Tartarian, Ethiopian, and Armenian languages.

PE'TIT, adj. French, petit. Small ; inconsi- derable.

By what small petit hints does the mmd recover a vanishing motion ! South.

PETIT TREASON. See TREASON.

PETIT (John), a doctor of the Sorbonne, who very early gained a high character by his eloquent orations pronounced before the univer- sity of Paris. He was employed in the famous embassy which was sent from France to Rome, for the purpose of healing the schism in 1407 : but what chiefly procured him notoriety was his defence of the murder of Louis, duke of Orleans, only brother to Charles VI.; maintaining, in a public disputation at Paris, the 8th of March 1408, that the murder was lawful, and that ' it is allowable to employ fraud, treason, and every other method, however base, to get rid of a ty- rant.' Petit died in 1511, at Hesdin.

PETIT (John Louis), an eminent surgeon, born at Paris in 1674. He acquired such reputation, that in 1726 the king of Poland sent for him to his court, and in 1734 the king of Spain pre- vailed on him to go into that kingdom. He re- stored the health of those princes ; and they en- deavoured to detain him by offering him great advantages, but he chose rather to return to France. He was received into the academy of sciences in 1715; became director of the royal academy of surgery ; made several important discoveries ; and invented new instruments for the improvement of surgery. He died at Paris in 1750. He wrote an excellent Treatise on the Diseases of the Bones, the best edition of which is that of 1723; and many learned dissertations in the Memoirs of the Academy of Sciences, and in the Memoirs of Surgery, vol. i.

PETIT (Peter), an eminent French mathema tician, born at Montlucon

in 1589. By Riche- lieu's influence he became engineer to the king, and intendant of fortifications ; and was sent into Italy on the king's business. He wrote several works upon physical and astronomical subjects, and died in 1667.

PETIT (Peter), M. D., a learned French phy- sician, born at Paris in 1617. He graduated at Montpelier; but, preferring literary pursuits to medicine, he became preceptor to the sons of the president Lamoignon. He wrote many pieces in Latin prose and verst ; and was deeply versed in Greek and Roman literature and philosophy. He died in 1687, aged seventy.

PETIT (Samuel), a learned Frenchman, born at Nismes in 1564. He studied at Geneva, where he became professor of Greek, Hebrew, and theology. He published Leges Atticae, Paris, 1615 and 1633.

PETITE GUERRE denotes the operations of detached parties, and the war of posts. See WAR. .• PETITIO PRINCIPII, in logic the taking a thing for true, and drawing conclusions from it as such, when it is really false, or at least wants to be proved before any inferences can be drawn from it.

PETITION, n. s. & v. a.\ Lat. petitio. Re

PETIT'IONARILY, adv. (quest; prayer; in-

PETIT'IONARY, adj. £ treaty: to suppli-

PETIT'IONER, n. s. J cate ; request ; in-

treat : petitionarily is an aukward adverb, used by Browne, to signify by way of begging the question : petitionary, supplicatory ; containing petitions : petitioner, one who supplicates, or offers a petition.

Let my life be given at my petition, and my people at my request. Esther vii. 3.

Thou didst choose this house to be called by thy name, and to be a house of prayer and petition for thy people. 1 Mac. vii.

We must propose unto all men certain petitions in- cident and very

material in causes of this* nature.

Hooker.

Petitionary prayer belongeth only to such as are in themselves impotent, and stand in need of relief from others. Id.

My next poor petition

Is, that his noble grace would have some pity

Upon my wretched women. Shakspeare.

Pardon thy petitionary countrymen. Id.

You have petitioned all the gods

For my prosperity. Id. Coriolanus.

When you have received the petitions, and it will please the petitioners well to deliver them into your own hand, let your secretary first read them, and draw lines under the material parts. Bacon.

It is our base petitionary breath That blows ‘em to this greatness. Ben Jonson.

This doth but petitionarily infer a dextrality in the heavens, and we may as reasonably conclude a right and left laterally in the ark of Noah. Browne.

It was no wonder that they, who at such a time could be corrupted to frame and deliver such a peti- tion, would not be reformed by such an answer.

Dry den. His woes broke out, and begged relief

With tears, the dumb petitioners of grief. Id.

Their prayers are to the reproach of the petitioners, and to the confusion of vain desires. L’ Estrange.

What pleasure can it be to be encumbered with dependencies, thronged and surrounded with peti- tioners ? South.

The Roman matrons presented a petition to the fathers ; this raised so much raillery upon the peti- tioners that the ladies never after offered to direct the lawgivers of their country. Addison.

1 return only yes or no to questionary and peti- tionary epistles of half a yard long. Swift.

We must not only send up petitions and thoughts now and then to heaven, but must go through all our worldly business with a heavenly spirit. Law.

Methods had been taken to persuade the queen so strongly of the truth of it, that she for a long time refused to hear any one of those who petitioned for his life. Johnson.

The Hampshire petition arose out of the election occasioned by the dissolution. Canning.

x, in law, is a supplication made by

an inferior to a superior, and especially to one having jurisdiction. It is used for that remedy which the subject has to help a wrong done by the king, who hath a prerogative not to be sued by writ : In which sense it is either general, that the king do him right; whereupon follows a ge- neral indorsement upon the same, Let right be done the party : Or it is special, when the con- clusion and indorsement are special for this or that to be done, ?cc. By statute, the soliciting, laboring, or procuring the putting the hands or consent of above twenty persons to any pe- tition to the king or either house of parliament, for alterations in church or state, unless by assent of three or more justices of the peace of the county, or a majority of the grand jury at the assizes or sessions, &c., and repairing to the king or parliament to deliver such petition with above the number of ten persons, is subject to a fine of £100 and three months' imprisonment, being proved by two witnesses within six months, in the court of B. R. or at the assizes, &c. And, if what is required by this statute be observed, care must be taken that petitions to the king con- tain nothing which may be interpreted to reflect on the administration ; for, if they do, it may come under the denomination of a libel : and it is remarkable that the petition of the city of London for the sitting of a parliament was deemed libellous, because it suggested that the king's dissolving a late parliament was an ob- struction of justice; also the petition of the seven bishops sent to the Tower by James II. was called a libel, &c. To subscribe a petition to the king, to frighten him into a change of his measures, intimating that if it be denied many thousands of his subjects will be discontented, &c., is included among the contempts against the king's person and government, tending to weaken the same, and is punishable by fine and impri- sonment.

PETITION OF RIGHT was a celebrated parlia- mentary declaration of the liberties of the people assented to by king Charles I., in the beginning of his reign : in which it is enacted that none should be compelled to make or yield any gift, loan, benevolence, tax, and such like charge, without consent by act of parliament ; nor, upon refusal so to do, be called to make answer, take any oath not warranted by law, give attendance, or be confined, or otherwise molested concerning the same, &c. And that the subject should not be burdened by the quartering of soldiers or mariners ; and all commissions for proceeding by martial law to be annulled, and none of like na- ture issued thereafter, lest the subject (by color thereof) be destroyed or put to death, contrary to the laws of the land, &c. See stat. 3 Car. I. cap. 1.

PETITOT (John), a curious painter in enamel born at Geneva in 1609. He arrived to a degree of perfection that may almost be accounted inimi- table. He, however, only painted the heads and hands of the figures; the hair, grounds, and dra- pery, being executed by Bordier, his brother-in- law. These two artistshad the credit of laboring together for fifty years in the greatest harmony. He painted the portraits of Charles I. and his family. He then went to Paris, where he was highly favored by Louis XIV. and acquired an

nmple fortune. Being a Protestant, the revoca- tion of the edict of Nantes obliged him to retire to Geneva ; but, settling soon after at Veray in Hern, he passed the remainder of his life in affluence. He died in 1691, and had seventeen children ; of whom one took to painting, and settled at London, where he gained reputation ; but was much inferior to his father. Petitot may be called the inventor of painting portraits in enamel. lie made use of gold and silver plates, and seldom enamelled on copper. His price was twenty louises a head, which he soon raised to forty.

PETITPIERRE (Ferdinand Oliver), an emi- nent Protestant French divine, who flourished about the beginning of the eighteenth century. He was minister of a church in Chaux De Fond, and published a work entitled Thoughts on the Divine Goodness ; divided into three chapters, containing the definition, proofs, and conse- quences, of the infinite goodness of God. This work has gone through many editions,

and has been translated into English and other languages. But one of the chief tenets included in it, being, that the state of future punishment (which, however, he places in a most terrific point of view) is not eternal, and that all men will be finally happy, he was first prohibited from preaching, and afterwards deposed. A translation of this work was published at Edinburgh in 1799,.l2mo.

PETIVER (James), F. R.S., an eminent English botanist, contemporary with Plukenet. He was bred an apothecary with Mr. Feltham, of St. Bartholomew's hospital ; settled in Alders- gate Street, and became apothecary to the Char- ier House. He made a collection in natural his- tory, so valuable that Sir Hans Sloane offered him £4000 for it before his death, and purchased it afterwards. He was elected F. R. S. and as- sisted Ray in the second volume of his History of Plants. He engaged the captains and surgeons of ships to bring him home specimens of foreign plants ; and enabled them to select proper objects by printed directions. He wrote 1. Musiei Pctiveriani centuriae decem ; 1692 — 1703 ; 8vo. 2. Gazophylacii Naturae et Artis decades decem ; fol. 1702, with 100 plates. 3. A Catalogue of Mr. Ray's English Herbal; fol. 1713 to 1715. 4. Many small tracts enumerated in Dr. Pult- ney's book. 5. Many papers in the Philosophical Transactions. 6. Plantse rariores Chinenses, Madraspatanae, et Africanse, &c., in Ray's 3rd vol. His works were reprinted in 1764, in 2 vols. fol. and 1 vol. 8vo. He died the 20th of April 1718; and his funeral was honored by the literati.

PET1VERIA, in botany, Guinea-hen weed, a etuius of the tetragynia order and hexandria class of plants ; and in the natural method ranking under the twelfth order, holoraceae : CAL. te- traphyllous : COR. none, and but one SEED, with reflexed awns at the top.

PETLAD, a town in the province of Gujrat, Hindostan, sixteen miles E. N. E. from Cambay. Lat. 22° 27′ N., long. 73° E. The caste of Dhers are here exempt from the general duty imposed on them in the rest of the province, of serving as guides; but a stranger may here seize

on the first parson he meets and compel him to act as such.

PETUA, a town of Greece, on the coast of Illyricum near Dyrrhachium and the mouth of the Panyasus. Ctes. Lucian.

PETUA, a town of Msedica, a districtof Thrace, lying towards Macedonia ; but in what part of Macedonia Livy does not say.

PETRA, PETKˆA, or PETRINA (urbs being un- derstood), an inland

town of Sicily, south-west of Enijyum ; now called Petraglia. Cluverius. Ptol. Sil. Ital.

PETUA was also the name of four other ancient towns: viz. . in Pieria in Macedon — Liv. Cic. 2. Near Dyrrliachium. — Lucan. Caes. 3. In Elis : and, 4. Near Corinth.

PETUA JECKTAEI., a town of the Amalekites, near the Adscensus Scorpionis, and the valley of Salt in the south of Judea; afterwards in the possession of the Edomites, after destroying the Amalekites. 2 Kings xiv. ; Judges i.

PETUA RECEM, or REKEM, so called from Rekem king of the Midianites, slain by the Israelites, Numb, xxxi., a town of Arabia, formerly called Arce or Petra : the capital of Ara- bia Petraea. — Josephus. Ptolemy places it in long. 66° 45′ from the Fortunate Islands, and lat. 30° 20’. It declines eighty miles to the south of the parallel of Jerusalem, and thirty-six miles, more or less, from its meridian to the east; Jo- sephus says that the mountain on which Aaron died stood near Petra; which Strabo calls the capital of the Nabatei ; at the distance of three or four days’ journey from Jericho. This Petra seems to be the Sela of Isaiah xvi. 1, and xlii. 11, from the Hebrew name, Petra, a rock, bat some imagine Petra to be no older than the time of the Macedonians.

PETRARCH (Francis), a celebrated Italian poet, born at Arezzo in 1304. He studied gram- mar, rhetoric, and philosophy, four years atCar- pentras; whence he went to Monlpelier, where he studied the law. His father and mother dying of the plague at Avignon, he returned to that city, when twenty-two years of age, to settle his domestic affairs, and purchased a country house in a very solitary but agreeable situation, called Vaucluse; where he first saw the beautiful Laura, of whom he became enamoured, and whom he has immortalised in his poems, lie travelled into France, the Netherlands, and Germany ; and, at his return to Avignon, en- tered into the service of pope John XXII., who employed him in several important affairs. Pe- trarch expected some considerable posts ; but, being disappointed, he applied himself entirely to poetry ; in which he met with such applause, that in the same day he received letters from Rome and Paris inviting him to receive the poetic crown. He preferred Rome, and received that crown from the senate and people on the 8th of April 1341. His love of solitude at length induced him to return to Vaucluse; but, after the death of the beautiful Laura, Provence became insupportable to him, and he returned to Italy iu 1352; when, being at Milan, Galeas Viceconti made him counsellor of state. Petrarch spent

almost all the rest of his life in travelling to and from the different cities in Italy. He

was archdeacon of Parma, and canon of Padua ; but never received the order of priesthood. All the princes and great men of his time gave him public marks of their esteem ; and while he lived at Arcqua, three miles from Padua, the Florentines sent Boccace to him with letters, inviting him to Florence, and informing him that they restored to him all the estate of which his father arid mother had been deprived during the dissensions between the Guelphs and the Gibe- lines. He died a few years after at Arcqua, in 1374. He wrote many works that have rendered his memory immortal ; printed in four vols. folio. His life has been written by several au- thors ; particularly by Mrs. Dobson, in 2 vols. 8vo. 'The works of Petrarch,' says Mr. Tytler, bear evidence of his abilities as a politician, theologian, and philosopher, and it is in these characters that he appears to have been chiefly distinguished by his contemporaries ; but it is not on these foundations that the lasting structure of his fame has been reared. It is to those incom- parable verses, in which he has celebrated the accomplishments and bewailed the fate of the beautiful Laura, that Petrarch has been indebted for his permanent reputation. The history of the poet's passion for his lovely mistress must ever be regarded as forming the most interesting portion of his annals. His character, in fact, took its tone from that predominant affection, which influenced his studies, his habits of life, and all his pursuits and occupations. A love so pure, so ardent, .and so lasting, is difficult to be paralleled in the history of human nature. Pe- trarch was the passionate admirer of Laura for twenty-one years while she was in life, and with unabated ardor of affection he is said to have bewailed her loss for twenty-six years after her death .'

PETRASTRUMIA, a town of Naples in Prin- cipato Ultra; nine miles south of Benevento.

PETRATSCHliN, a town of Prussian Lithu- ania, four miles W. S. W. of Kagnitz.

PETRE, n. s. Lat. petra, a stone. Nitre; salt-petre Not of modern use.

Powder, made of impure and greasy petre, hath but a weak emission,

and gives but a faint report.

Browne.

PETRE, or SALTPETRE, in chemistry. See CHEMISTRY, Index, and NITRE.

PETREA, in botany, a genus of theangiosper- mia order and didynamia class of plants ; na- tural order fortieth, personatse : CAL. quinque- partite ; very large and colored : COR. rotaceous ; CAPS- bilocular, and situated in the bottom of the calyx : SEED solitary. There is only one spe- cies, a native of New Spain. It rises to fifteen or sixteen feet, with a woody stalk covered with gray bark, sending out several long branches. These have a whiter bark than the stem, and are garnished with leaves at each joint, which, on the lower part of the branches, are placed by three round them; but higher up they are rough, and have a rough surface. The flowers are pro- duced at the ends of the branches, in loose bunches nine or ten inches long, each flower standing on a slender flower-stalk about an inch long : the empalement of the flower is composed of five narrosv obtuse leaves about an incli long,

which are of a fine blue color, and much more conspicuous than the petals, which are white, an'! not more than half the length of the empalement. The plant is propagated by seeds procured from the places where they are natives, and of which very few are good. The seeds must be sown in a good hot-bed ; and, when the plants come up, they should all be planted in a separate small pot filled with light loamy earth, and plunged into a hot-bed of tanners' bark, where they should afterwards constantly remain.

PETREL (thalatsidroma) ; a genius of oceanic birds, well known to seamen by the name of Mother Carey's chickens. They are found in every part of the world, on the ocean, at great distances from land, generally at twilight, or in stormy weather. They feed on small marine animals, and seeds of sea-weeds, and appear ex- ceedingly fond of fat or grease, for which, and for the animals put in motion, they will follow in the wake of ships for great distances. They breed in rocks adjoining the spa, forming their nests in cavities ; the "K.ˆ.C Jays two eggs. They fly rapidly, and generally close to the water; and, when in pursuit of food, they sus- pend themselves by extending their wings, and appear to run on the surface of the water. Buf- fon says it is from this circumstance that they are called petrels, after the apostle Peter, who walked on the water. The appearance of these birds is considered by seamen to presage a storm, and it is thought peculiarly unlucky to kill one of them. There are four species, which are so closely allied to

each other as to be gene- rally confounded. C. Bonaparte, who paid much attention to this genus, designates them as follows: — T. Wilsonii (stormy petrel); deep sooty black; tail even; wings reaching a little beyond its tip ; tube of the nostrils recurved ; tarsus one and a half inch long. T. Leachii (fork-tailed petrel); brownish black ; tail forked; wings not reaching beyond the tip ; tube of the nostrils straight ; tarsus one inch long. T. pela- yica ; sroty black; tail even; wings reaching a little beyond it ; tube of the nostrils almost straight ; tarsus seven-eighths of an inch long. T.oceanica; brownish black; tail slightly emar- ginate ; wings reaching more than an inch be- yond it ; tube of the nostrils recurved ; tarsus nearly one and three-fourths of an inch long. See PUFFIN.

PETRES'CENT, adj.ˆ Lat. petrescens, pe-

PETRIFAC'TION, n. s. trifw. Growing or be-

PETRIFAC'TIVE, adj. { coming stone ; petri-

PETRIFICA'TION, n.s. ffaction,the actofturn-

PETRIF'IC, adj. \ ing to stone, or state

PET'RJFY, v. a. & v. a. J of being so turned :

petrifactive and petrific mean having the power

of changing into stone or to form stone : petrifi-

cation, the body formed by the change of matter

into stone : to petrify is to convert into stone:

hence to make hard or callous ; stupify : as a

verb neuter, to become stone.

PETRIDIA, in the old system of mineralogy, a genus of scrupi, of a plain uniform texture ; of no great variety of colors, and emulating the external form of pebbles.

PETRIFACTION, in physiology, denotes the con version of wood, bones, and other substances

principally animal or vegetable, into stone. These bodies are more or less altered from their original state, according to the different substances they have lain buried among in the earth ; some of them have suffered very little change, and others being so highly impregnated with crystalline, sparry, pyritical, or other extraneous matter, as to appear mere masses of stone, or lumps of the matter of the common pyrites ; but they are ge- nerally of the external dimensions, and retain more or less of the internal figure, of the bodies into the pores of which this matter has made its way. The animal substances thus found petrified are chiefly sea-shells ; the teeth, bony palates, and bones of fish ; the bones of land animals, &c. These are found variously altered, by the insinu- ation of stony and mineral matter into their pores ; and the substance of some of them is now wholly gone, there being only stony, sparry, or other mineial matter remaining in their shape and form.

Respecting the manner in which petrifaction is accomplished we know little. It has been thought by many philosophers that this was one of the rare processes of nature ; and accordingly such places as afforded a view of it have been looked upon as great curiosities. However, it is now discovered that petrifaction is exceedingly common ; and that every kind of water carries in it some earthy particles, which, being preci- pitated from it, become stone of a greater or less degree of hardness ; and this quality is most remarkable in those waters which are much impregnated with selenitic matter. Of late, it has also been found that iron contributes greatly to the process ; and this it may do by its preci- pitation of any aluminous earth which happens to be dissolved in the water by means of an acid. The calcareous kinds of earth, also, by being soluble in water without any acid, must contribute very much to the process of petrifac- tion, as they are capable of a great degree of hardness by means of being joined with fix°d air, on which depends the solidity of our com- mon cement or mortar used in building houses. The name petrifaction belongs only to bodies of vegetable or animal origin ; and to determine their class and genus, or even species, it is neces- sary that their texture, their primitive form, and in some measure their organisation, be still dis- cernible. Thus we ought not to place the stony kernels, moulded in the cavity of some shell, or other organised body, in the rank of petrifac- tions properly so called.

Petrifactions of the vegetable kingdom are al- most all either gravelly or siliceous ; and are found in gullies, trenches, &c. Those which strike fire with steel are principally found in sandy fissures ; those which effervesce in acids are generally of animal origin, and are found in the horizontal beds of calcareous earth, and sometimes in beds of clay or

gravel; in which case the nature of the petrifaction is different. As to the substances which are found in gypsum, they seldom undergo any alteration, either with respect to figure or composition, and they are very rare. Organised bodies, in a state of petri- faction, generally acquire a degree of solidity of which they were not possessed before they were

buried in the sarth ; and some of them are often full as hard as the stones or matrices in which they are enveloped. When the stones are broken, the fragments of petrifications are easily found, and easily distinguished. There are some organised bodies, however, so changed by petri- faction as to render it impossible to discover their origin. That there is a matter more or less agitated, and adapted for penetrating bodies, which crumbles and separates their parts, draws them along with it, and disperses them here and there in the fluid which surrounds them, is a fact of which nobody seems to entertain any doubt. Indeed we see almost every substance, whether solid or liquid, insensibly consume, diminish in bulk, and at last, in the lapse of time, vanish and disappear. A petrified substance, strictly speaking, is nothing more than the skeleton, or perhaps image of a body which has once had life, either animal or vegetable, combined with some mineral. Thus petrified wood is not in that state wood alone. One part of the compound or mass of wood, having been destroyed by local causes, has been compensated by earthy and sandy substances, diluted and extremely minute, which the waters surrounding them had deposited while they themselves evaporated. These earthy substances, being then moulded in the skeleton, will be more or less indurated, and will appear to have its figure, its structure, its size, in a word, the same general characters, the same specific at- tributes, and the same individual differences. Farther, in petrified wood, no vestige of ligneous matter appears to exist. We know that common wood is a body in which the volume of solid parts is greatly exceeded by that of the pores. When wood is buried in certain places, lapidinc fluids, extremely divided and sometimes colored, insi- nuate themselves into its pores and fill them up. These fluids are afterwards moulded and con- densed. The solid part of the wood is decom- posed and reduced into- powder, which is ex- pelled without the mass by aqueous nitrations. In this manner the places which were formerly occupied by the wood are now left empty in the form of pores. This operation of nature pro- duces no apparent difference, either of the size or of the shape ; but it occasions, both at the surface and in the inside, a change of substance, and the ligneous texture is inverted ; that is to say, that which was pore in the natural wood, becomes solid in that which is petrified ; and that which was solid or full in the first state becomes

porous in the second. In this way, says M. Musard, petrified wood is much less extended in pores than solid parts, and at the same time forms a body much .more dense and heavy than the first. As the pores communicate from the circumference to the centre, the petri- faction ought to begin at the centre, and end with the circumference of the organic body subjected to the action of the lapidific fluids. Such is the origin of petrifactions. They are organised bo- dies which have undergone changes at the bottom of the sea or the surface of the earth, and which have been buried by various accidents at different depths under the ground. To understand properly the detail of the formation of petrified bodies it is necessary to be well acquainted with all their

constituent parts. Let us take wood for an ex- ample. Wood is partly solid and partly porous. The solid parts consist of a substance, hard, lig- neous, and compact, which forms the support of the vegetable ; the porous parts consist of vessels or interstices which run vertically and horizon- tally across the ligneous fibres, and which serve for conducting air, lymph, and other fluids. Among these vessels, the trachiae, which rise in spiral forms, and which contain only air, are easily distinguished. The cylindric vessels, some of which contain lymph and others the succus proprius, are full only during the life of the ve- getable. After its death they become vacant by the evaporation and absence of the fluids with which they were formerly filled. All these vessels, whether ascending or descending, unite with one another, and form great cavities in the wood and in the bark. According to Malphigi and Duhamel, the ligneous fibres are themselves tubular, and afford a passage to certain liquors ; in short, the wood and bark are interspersed with utriculi of different shapes and sizes. The augmentation of the trunk in thickness, accord- ing to Malpighi, is accomplished by the annual addition of a new exterior covering of fibres and of trachiae. Others think that a concentric layer of sap wood is every year hardened, whilst a new one is formed from the bark. But it is on all sides agreed, that the concentric layers of wood are distinct from one another, because, at the point of contact betwixt any two of them, the new vessels, as well as new fibres, are more apparent and perceptible than they are in any other place.

In order, says M. Bertrand, in his Diction- naire des Fossiles, that a body should become petrified, it is necessary that it be — 1. Capable of preservation under ground : 2. That it be sheltered from the air and

running water (the ruins of Herculaneurn prove that bodies which have no connexion with free air preserve them- selves untouched and entire). 3. That it be se- cured from corrosive exhalations. 4. That it be in a place where there are vapors or liquids, loaded either with metallic or stony particles in a state of dissolution, and which, without de- stroying the body, penetrate it, impregnate it, and unite with it, in proportion as its parts are dissipated by evaporation.

M. Mongez explains the petrifaction of vege- tables as follows : — In proportion to the tender- ness and bad quality of wood, it imbibes the greater quantity of water ; therefore this sort will unquestionably petrify more easily than that which is hard. It is thought that all the petrified wood so often found in Hungary has been origi- nally soft, such as firs or poplars. Suppose a piece of wood buried in the earth : if it be very dry it will suck up the moisture which surrounds it like a spunge. This moisture, by penetrating it, will dilate all the parts of which it is com- posed. The trachiae, or air vessels, will be filled first, and then the lymphatic vessels, and those which contain the succus proprius, as they are likewise empty. The water which forms this moisture keeps in dissolution a greater or a less quantity of earth ; and this earth, detached, and carried along in its course, is reduced to such an

attenuated state, that it escapes our eyes and keeps itself suspended, whether by the medium of fixed air or by the motion of the water. Such is the lapidific fluid. Upon evaporation, or the departure of the menstruum, this earth, sand, or metal, again appears in the form of precipi- tate or sediment in the cavities of the vessels, which by degrees are filled with it. This earth is there moulded with exactness : the lapse of time, the simultaneous and partial attraction of the particles, make them adhere to one another ; the lateral suction of the surrounding fibres, the obstruction of the moulds, and the hardening of the moulded earth, become general ; and there consists nothing but an earthy substance which prevents the sinking of the neighbouring parts. If the deposit is formed of a matter in general pretty pure, it preserves a whiter and clearer color than the rest of the wood; and as the con- centric layers are only perceptible and distinct in the wood, because the vessels are there more apparent on account of their size, the little earthy cylinders, in the state of petrified wood, must be there a little larger, and consequently must represent exactly the turnings and separa- tions of these layers. At the places of the utri- culi globules are observed, of which the shapes are as various as the moulds in which they are formed. The anastomoses of the proper and lymphatic vessels form, besides, points of sup- port or reunion for this stony substance. With regard to holes formed by worms in any bits of

wood before they had been buried in the earth, the lapidific fluid, in penetrating these great cavities, deposits there as easily the earthy sedi- ment, which is exactly moulded in them. These vermiform cylinders are somewhat less in bulk than the holes in which they are found, which is owing to the retreat of the more refined earth, and to its drying up. Let any one represent to himself this collection of little cylinders, verti- cal, horizontal, inclined in different directions, the stony masses of utriculi and of anastomoses, and he will have an idea of the stony substance which forms the ground work of petrifaction. Hitherto not a single ligneous part is destroyed ; they are all existing, but surrounded on every side with earthy deposite ; and that body which, during life, was composed of solid and of empty parts, is now entirely solid ; its destruction and decomposition do not take place till after the formation of these little deposits. In proportion as the water abandons them it penetrates the ligneous substance, and destroys it by an insen- sible fermentation. The woody fibres, being de- composed, form in their turn voids and interstices, and there remains in the whole piece nothing but little stony cylinders. But in proportion as these woody fibres disappear, the surrounding moisture, loaded with earth in the state of dis- solution, does not fail to penetrate the piece of wood, and to remain in its new cavities. The new deposit assumes exactly the form of the de- composed fibres ; it envelopes in its turn the little cylinders which were formed in their cavi- ties, and ends by incorporating with them. We may suppose here that, in proportion as it de- composes, there is a reaction of the ligneous part against the lapidific fluid : from this reaction a

color arises which stains more or less the new deposit; and this color will make it easily distin- guishable from that which has been laid in the inside of the vessels. In all petrified wood this shade is generally perceptible. We have then, says M. Mongez, four different epochs in the process by which nature converts a piece of wood into stone, or, to speak more justly, by which she substitutes a stony deposit in its place : — 1 . Perfect vegetable wood, that is to say, wood composed of solid and of empty parts, of ligne- ous fibres, and of vessels. 2. Wood having its vessels obstructed and choked up by an earthy deposit, while its solid parts remain unaltered. 3. The solid parts, attacked and decomposed, forming new cavities betwixt the stony cylinders, which remain in the same state, and which sup- port the whole mass. 4. These new cavities filled with new deposits, which incorporate with the cylinders, and compose nothing else but one general earthy mass

representing exactly the piece of wood. Among the petrifactions of vegetables called dendrolites are found parts of shrubs, stems, roots, portions of the trunk, some fruits, &c. We must not, however, confound the impressions of mosses, ferns, and.leaves, nor incrustations, with petrifactions. Among the petrifactions of animals, we find shells, crusta- ceous animals, polyparii, some worms, the bony parts of fishes and of amphibious animals, few or no real insects, rarely birds and quadrupeds, together with the bony portions of the human body. The cornua ammonis are petrified ser- pents; and with regard to figured and accidental bodies, these are lusus naturae.

It is a question of great importance among naturalists to know the time which nature em- ploys in petrifying bodies of an ordinary size. M. le Chevalier de Baillu, director of the cabinet of natural history of his imperial majesty of Austria, and some other naturalists, had, several years ago, the idea of making a research which might throw some light upon it. His majesty being informed by the unanimous observations of modern historians and geographers that cer- tain pillars which are seen in the Danube in Gervia, near Belgrade, are remains of the bridge which Trajan constructed over the river, pre- sumed that these pillars were petrified, and that they would furnish some information with regard to the time which nature employs in changing wood into stone. He therefore ordered his am- bassador at the court of Constantinople to ask permission to take up from the Danube one of the pillars of Trajan's bridge. The petition was granted, and one of the pillars was accordingly taken up; from which it appeared that the pe- trifaction had only advanced three-fourths of an inch in the space of 1500 years. There are, how- ever, certain waters in which this transmutation is more readily accomplished. Petrifactions ap- pear to be formed more slowly in earths that are porous and in a slight degree moist, than in water itself. When the foundations of the city of Quebec in Canada were dug up, a petrified savage was found among the last beds to which they proceeded. There was no idea of the time at which this man had been buried under the ruins, but his quiver and arrows were still well pre-

served. In digging a lead mine in Derbyshire, in 1 744, a human skeleton was found among stags' horns. It is impossible to say how many ages this carcase had lair there. In 1695 the entire skeleton of an elephant was dug up near Tonne in Thuringia. Some time before this epoch the petrified skeleton of a crocodile was found in the mines of that country. We might cite another fact equally curious, which hap- pened at the beginning of the last century. John Munte, curate of Slsegarp in Scania, and several of his parishioners, wishing to procure turf from a drained marshy soil, found, some feet below ground, an

entire cart, with the skele- tons of the horses and carter. It is presumed that there had formerly been a lake in that place, and the carter, attempting to pass over on the ice, had by that means probably perished. In fine, wood, partly fossil and partly coally, has been found at a great depth, in the clay of which tile was made for the abbey of Fontenay. Fossil wood was also discovered in the middle of the last century, at the depth of seventy-five feet in a well betwixt Issi and Vauvres near Paris. This wood was in sand betwixt a bed of clay and py- rites, and water was found four feet lower than the pyrites. M. de Laumont, inspector-general of the mines, says (Journal de Physique, Mai 1736) that in the lead mine at Pontpean near Rennes, is a fissure, perhaps the only one of its kind. In this fissure sea-shells, rounded peb- bles, and an entire beech, have been found 240 feet deep. This beech was laid horizontally in the direction of the fissure. Its bark was con- verted into pyrites, the sap-wood into jet, and the centre into coal. Many pieces of petrified wood are found in different departments of France, and particularly in that of Mont Blanc, the ci-devant Savoy. In Cobourg in Saxony, and in the mountains of Misnia, trees of a con- siderable thickness have been taken from the earth, which were entirely changed into a very fine agate, as also their branches and their roots. In sawing them the annual circles of their growth have been distinguished. Pieces have been taken up, on which it was distinctly seen that they had been gnawed by worms; others bear visible marks of the hatchet. In fine, pieces have been found which were petrified at one end, while the other still remained in the state of wood fit for being burned. It appears then that petrified wood is a great deal less rare in nature than is commonly imagined.

Mr. Sinclair of Ulbster, M. P., lately tians- mitted to professor Jameson, for the Edinburgh College Museum, a collection of petrified fakes, found by him in the old red sandstone formation in the neighbourhood of Thurso ; and the minister of South Ilonaldshay, one of the Ork- neys, lately deposited in the College Museum specimens of the same description, collected by himself in the old red sandstone of that island. These fishes are also found in a variety of sand- stone flag now extensively imported into Edin- burgh from Caithness.

Cronstedt has excluded petrifactions from any place in the body of his system of mineralogy, but takes notice of them in his appendix. He distinguishes them by the name of mineralia

larvata, and defines them to be ‘ mineral bodies in the form of animals or vegetables.’ The most remarkable observations concerning them, accord- ing to Kirwan, who differs in some particulars from Mongez, are as follow : — 1. Those of shells are found on or near the surface of the earth; those of fish deeper ; and those of wood deeper still. Shells in substance are found in vast quan- tities, and at considerable depths. 2. The sub- stances most susceptible of petrifaction are those which most resist the putrefactive process ; of which kind are shells, the harder kinds of wood, &c. ; while the softer parts of animals, which easily putrefy, are seldom met with in a petri- fied state. 3. They are most commonly found in strata of marl, chalk, lime-stone, or clay ; seldom in sandstone ; still more seldom in gypsum ; and never in gneiss, granite, basaltes, or schoerl. Sometimes they are found in pyrites, and ores of iron, copper, and silver; consisting almost al- ways of that kind of earth or other mineral which surrounds them ; sometimes of silex, agate, or cornelian. 4. They are found in climates where the animals themselves could not have existed. 5. Those found in slate or clay are compressed and flattened

The different species of petrifactions, accord- ing to Cronstedt, are, I. Terra larvatae ; extra- neous bodies changed into a limy substance, or calcareous changes. These are, 1. Loose or fri- able; 2. Indurated. The former are of a chalky nature, in form of vegetables or animals ; the second filled with solid limestone in the same forms. Some are found entirely changed into a calcareous spar. All of them are found in France, Sweden, and other countries in great plenty. On these petrifactions Cronstedt observes, that shells and corals are composed of limy mat- ter even when still inhabited by their animals, but they are classed among the petrifactions as soon as the calcareous particles have obtained a new arrangement ; for example, when they have become sparry; filled with calcareous earth either hardened or loose, or when they lie in the strata of the earth. ‘ These,’ says he, ‘ form the greatest part of the fossil collections which are so industriously made, often without any re- gard to the principal and only use they can be of, viz. that of enriching zoology. Mineralogists are satisfied with seeing the possibility of the changes the limestone undergoes in regard to its particles ; and also with receiving some insight into the alteration which the earth has been subject to, from the state of the strata which are now found in it.’ The calcined shells, where the petrifac- tions are of a limy or chalky nature, answer ex- tremely well as a manure; but the indurated kind serve only for making grottoes. Gypseous petrifactions are extremely rare : however, Char- din informs us, that he had seen a lizard enclosed in a stone of that kind in Persia. II. Larvse, or bodies changed into a flinty substance. These

are all indurated, and are of the following spe- cies : \ . Cornelians in form of shells from the river Tomm in Siberia. 2. Agate in form of wood : a piece of which is said to be in the col- lection of the count de Tessin. 3. Coralloids of white flint (millepora) found in Sweden. 4. Wood of yellow flint found in Italy, in Turkey

near Adrianople, and produced by the waters of Lough-neagh in Ireland. III. Larvae argilla- cese; where the bodies appear to be changed into clay. These are found either loose and friable, or indurated. Of the former kind is a piece of porcelain clay, met with in a certain collection, with all the marks of the root of a tree upon it. Of the latter kind is the osteocolla ; which is said to be roots of the poplar tree changed, and not to consist of any calcareous substance. A sort of fossile ivory, with all the properties of clay, is said likewise to be found in some places. IV. Larvae insalitae ; where the substances are im- pregnated with great quantities of salts. Hu- man bodies have been twice found impregnated with vitriol of iron in the mine of Fahlun, in the province of Dalarne in Sweden. One of them was kept for several years in a glass case, but at last began to moulder and fall to pieces. Turf and roots of trees are likewise found in water strongly impregnated with vitriol. They do not flame, but look like a coal in a strong fire ; neither do they decay in the air. V. Bodies pe- netrated by mineral inflammable substances. 1. By pit-coal, such as wood ; whence some have imagined coal to have been originally produced from wood. Some of these substances are fully saturated with the coally matter ; others not. Among the former Cronstedt reckons jet ; among the latter the substance called mumia vegetabilis, which is of a loose texture, resembling amber, and may be used as such. 2. Those penetrated by asphaltum or rock-oil. The only example of these given by our author is a kind of turf in the province of Skone in Sweden. The Egyp- tian mummies, he observes, cannot have any place among this species, as they are impregnated artificially with asphaltum, in a mannej similar to what happens naturally with the wood and coally matter in the last species. 3. Those impregnated with sulphur which has dissolved iron, or with pyrites. Human bodies, bivalve and univalve shells, and insects, have been all found in this state ; and the last are found in the alum state at Andrarum, in the province of Skone in Sweden. VI. Larvse metalliferse ; where the bodies are im- pregnated with metals. These are, 1. Covered with native silver; which is found on the sur- face of shells in England. 2. Where the metal is mineralised with copper and sulphur. Of this kind is the Fahletz, or gray silver ore, in the shape of ears of corn, and supposed to be vege- tables, found in argillaceous slate at Franken- berg and Tahlitteren in Hesse. 3. Larvae cupri- ferae, where the bodies are impregnated with

copper. To this species principally belong the turquoise or Turkey stones, improperly so called ; being ivory and bones of the elephant or other animals impregnated with copper. See TUR- QUOISE. At Simore, in the ci-devant Languedoc, there are bones of animals dug up, which, dur- ing calcination, assume a blue color ; but, ac- cording lo Cronstedt, it is not probable that these owe their color to copper. 3. With mineralised copper. Of these our author gives two examples. One is where the copper is mineralised with sulphur and iron, forming a yellow marcasitical ore. With this some shells are impregnated which lie upon a bed of loadstone in Norway

Other petrifactions of this kind are found in the form of fish in different parts of Germany. The other kind is where the copper is impregnated with sulphur and silver. Of this kind is the gray silver ore, like ears of corn, found in the slate quarries at Hesse. 4. Larva; ferrifera, with iron in form of a calx, which has assumed the place or shape of extraneous bodies. These are either loose or indurated. Of the loose kind are some roots of trees found at the lake Algelma in Finland. The indurated kinds are exemplified in some wood found at Orbissan in Bohemia. 5. Where the iron is mineralised, as in the pyrita- ceous larvae. VII. Where the bodies are tend- ing to decomposition, or in a way of destruction. Among these, our author enumerates mould and turf.

There has been lately published at Leipzic, a work in folio, with numerous plates, entitled Geognostical Flora of a former world, by Graf Kasper von Sternberg. The drawings appear to be faithfully executed, and many of the objects represented are of the same description with those so abundantly distributed in our coal-fields. The well-known geologist baron Von Schlotheim has also completed an extensive work on pe- trifactions, and, judging from the accuracy and extensive knowledge of the author, it cannot fail to prove a valuable addition to this interesting branch of natural history. Emmerling, the mine- ralogist, has also announced a work on the fossil organic remains met with in brown coal, and other new formations of the same description. A part of this is published.

PETRIFYING WATERS. The river of Ayr, in Ayrshire, has been long said to possess a strong petrifying power ; and the water of Ayr stones,

which are nothing but wood petrified in that river, are universally known, as substances for making hones for razors. There are also several springs of this kind in Roxburgh-shire. ‘One is found,’ says the Rev. J. Arkle, ‘on the Tweeden, exceedingly powerful, and containing a great quantity of water, where large masses of petrified matter appear on every side converted into solid stone. The progress of the petrifac- tion is distinct and beautiful. The fog, which grows on the edge of the spring, and is sprinkled with water, is about eight inches high ; the lower part is converted into solid stone; the middle appears as if half frozen, and the top is green and flourishing. The petrified matter, when burnt, is resolved into very fine lime. The spring itself, when led over the fields in little rills, fertilises them exceedingly.’ — Sir. J. Sin- clair’s Statistical Accounts, Vol. XVI.

PETRINAL, PETRONEL, or POITRINAL, a species of fire-arm between the arquebuse and the pistol, which was used among the French during the reign of Francis I. There is mention made of it in an account of the siege of Rouen, which was undertaken by Henry IV. in 1592. It was shorter than the musket, but of a heavier calibre, and not unlike our blunderbuss ; being slung in a cross-belt so as to rest upon the chest of the person who discharged it. From this circumstance it obtained the name of Poitrinal.

PETROBRUSSIANS, a religious sect, which had its rise in France and the Netherlands about

A. D. 1110. The name is derived from Peter Bruys, a Provencal, who attempted to reform the abuses of the church. His followers were numerous : and for twenty years he labored in the ministry with great zeal. He was, however, burnt in 1130, by an enraged populace set on by the clergy. The chief of Bruys’s followers was a monk named Henry ; from whom the Petrobrussians were also called Henricians. They held, 1. That children before the age of reason cannot be justified by baptism. 2. That no churches should be built, but that those that already are should be pulled down. 3. That the cross ought to be pulled down and burnt, because we ought to abhor the instrument of our Saviour’s passion. 4. That the real body and blood of Christ are not exhibited in the eucha- rist, but merely represented by their figures and symbols. 5. That sacrifices, alms, prayers, &c. do not avail the dead.

PETROCORII, the ancient inhabitants of that part of Gaul which was called Perigord be- fore the revolution. CJES. de Bell. Gall. vii. c. 7.fi.

PETROJOANNITES, followers of Peter John, or Peter Joannes, i. e.

Peter the son of John, who flourished in the twelfth century. His doctrine was not known till after his death, when his body was taken out of his grave and burnt. His chief opinions were, that he alone had the knowledge of the true sense wherein the apostles preached the gospel ; that the reasonable soul is not the form of man, and that there is no grace infused by baptism.

PETROL, or > Fr. petrole. Liquid;

PETRO'LEUM, n. s. j bitumen.

Petrol or petroleum is a liquid bitumen, black, floating on the water of springs. Woodward.

PETROLEUM, or rock oil, a thick oily sub- stance exuding out of the earth, and collected on the surface of wells in many parts of the world. See CHEMISTRY, Index. It is found in various wells of Italy, in many parts of the late Modenese, France, Switzerland, Germany, and Scotland, as well as in Asia. It is also found mixed with earth and sand, whence it may be separated by infusion in water. It is of a pungent and acrid taste, and smells like the oil of amber, but more agreeable. It is very light and pellucid ; but, though equally bright and clear under all circumstances, it is liable to a very great variety in its color. Naturally it is almost colorless, and greatly resembles the purest oil of turpentine ; this is called white pe- troleum, though it is as colorless as water. It is sometimes tinged of brownish, reddish, yellowish, or faint greenish color ; but its most frequent color is a mixture of reddish and blackish, ia such a degree that it looks black when viewed behind the light, but purple when placed between the eye and the light. It is rendered thinner by distillation with water, and leaves a resinous re- siduum ; when distilled with a volatile alkali, the latter acquires the properties of succinated ammoniac, and contains the acid of amber. It is the most frequent of all the liquid bitumens, and is perhaps the most valuable of them all in medicine. It is to be chosen the purest, lightest, and most pellucid that can be had ; of the most penetrating smell and most inflammable. Mon-

net says that some kinds of it are of the density of nut oil. It is insoluble in spirit of wine ; which, though it be the great dissolvent of sul- phur, has no effect upon petroleum, not even with ever so long a digestion. It will not take fire with the dephlegmatic acid spirits ; and in distillation, either by balneum marise or in sand, it will neither yield phlegm nor acid spirit ; but the oil itself rises in its own form,

leaving in the retort only a little matter, thick as honey, and of a brownish color. The finer kinds resemble naphtha. Mr. Bouldoc made several experi- ments with the white petroleum of Modena ; an account of which he gave to the Paris academy. It easily took fire on being brought near a can- dle, and that without immediately touching the flame ; and when heated in any vessel it will attract the flame of a candle, though placed at a great height above the vessel ; and, the vapor it sends up taking fire, the flame will be commu- nicated to the vessel of heated liquor, and the whole will be consumed. Alonso Barba gives a melancholy instance of the power of petroleum of taking fire at a distance. A certain well yielding petroleum on the surface of its water being to be repaired, the workman took down into the well with him a lantern and a candle in it; there were some holes in the lantern, through which the petroleum at a considerable distance sucked out the flame of the candle, and, taking fire, burst up with the noise of a cannon, and tore the man to pieces. It burns in the water; and when mixed with any liquor swims on the surface of it, even of the highest rectified spirit of wine, which is one-seventh heavier than pure petroleum. It readily mixes with all the essential oils of vegetables, as oil of lavender, turpentine, &c., and seems very much of their nature. The distinguishing characteristic of the petroleum is its thickness, resembling inspis- sated oil ; when pure it is lighter than spirit of wine ; but, though ever so well rectified, it be- comes in time thick and black as before. Pe- troleum, when shaken, yields a few bubbles ; but they sooner subside than in almost ‘any other liquor, and the liquor resumes its clear state again almost immediately. This seems owing to the air in this fluid being very equally distri- buted to all its parts, and the liquor being com- posed of particles very evenly and nicely ar- ranged. The extensibility of the oil is also amazing. A drop of it will spread over several feet of water, and in this condition it gives a great variety of colors ; that is, the several parts of which this thin film is composed act as so many prisms. The most severe frost never con- geals petroleum into ice ; and paper wetted with it becomes transparent as when wetted with oil ; but it does not continue so, the paper becoming opaque again in a few minutes as the oil dries away. There are three varieties according to Mongez : 1. The yellow, found at Modena in Italy ; very light and volatile. 2. The reddish, or yellowish red ; some of which is collected at Gabian in Languedoc and in Alsace. 3. The heavy black or brown kind, which is the most common, and met with in England, France, Germany, and some other countries. It gene- rally runs out either from chinks or gaps of

rocks, or is mixed with the earth, and gushes out of it ; or swims on the water of some foun- tains. According to Dr. Lippert, a kind of re-

sin is produced by mixing petroleum with smoking nitrous acid. The taste of this sub- stance is very bitter, but the smell resembles that of musk. The vitriolic acid, according to Lippert, produces a resin still more bitter, but without any aromatic smell. Cronstedt enume- rates the following species : —

I. PETROLEUM BARBADENSE, Malcha or Bar- badoes tar, a thick substance resembling soft pitch. It is found in several parts of Europe and Asia ; particularly Sweden, Germany, and Switzerland ; on the coast of the Dead Sea in Palestine ; in Persia, in the chinks of rocks, and in strata of gypsum and limestone, or floating upon water. It is found also in America, and at Colebrook-dale in England. It melts easily and burns with much smoke and soot, leaving either ashes or a slag according to the hetero- geneous matter it contains. It contains a por- tion of the acid of amber. It gives a bitter salt with mineral alkali, more difficult of solution than common salt, and which, when treated with charcoal, does not yield any sulphur.

II. PETROLEUM ELASTICUM, elastic bitumen, or mineral caoutchouc.

III. PETROLEUM INDURATUM, hardened rock- oil, or fossile pitch, an inflammable substance dug out of the ground in many parts of the world, and known by the names of petroleum induratum, pix montana, indenpech, berghartz, &c. There are two species : 1. The asphaltum or pure fossile pitch, found on the shores of the Dead Sea, and of the Red Sea ; also in Sweden, Germany, and France. See ASPHALTUM. It is likewise found in great quantities in a bitumin- ous lake in the isle of Trinidad. See TRINIDAD. It is a smooth, hard, brittle, inodorous substance, of a black or brown color when looked at ; but, on holding it up betwixt the eye and the light, appears of a deep red. It swims in water ; breaks with a smooth and shining surface ; melts easily,and when pure burns without leaving any ashes ; but if im- pure, leaves ashes, or a slag. M.Monnet asserts that it contains sulphur, or at least the vitriolic acid. It is slightly and partially acted upon by spirits of wine and ether. Brunnich says, the asphal- tum comes from Porto Principe in the island of Cuba in the West Indies. It is likewise found, according to Fourcroy, in many parts of China; and is used for a covering to ships by Arabs and Indians. 2. The pix montana impura con- tains a great quantity of earthy matter, which is left in the retort after distillation, or upon the charcoal if burnt in the open fire. It coheres like a slag, and is of the color of black lead ; but, in a strong heat, this earth is soon vola- tilised, so that its nature is not yet well known. During the distillation a liquid substance falls into the receiver, which is found to be of the same nature with rock-oil. The substance itself is found in Sweden and several other countries. The

pissasphaltum is of a mean consistence, be- tween the asphaltum and the common petroleum. Mongez says that it is the same with the bitu- men collected from a well named De la Pege, near Clermont Ferrand in France.. The people

of Mount Ciaro, in Italy, several years ago, dis- covered an easier way of finding petroleum than that to which they formerly had been used. This mountain abounds with a sort of grayish salt, which lies in large horizontal beds, mingled with strata of clay, and large quantities of a spar of that kind called by the Germans selenites ; which is the common sort, that ferments with acids, and readily dissolves in them, and calcines in a small fire. They pierce these slates in a perpendicular direction till they find water ; and the petroleum which had been dispersed among the cracks of those slates is then washed out by the water, and brought from all the neighbouring places to the hole or well which they have dug, on the surface of the water of which it swims after eight or ten days. When there is enough of it got together, they lade it from the top of the water with brass basins ; and it is then easily separated from what little water is taken up with it. These wells or holes continue to furnish the oil in different quantities for a con- siderable time ; and, when they will yield no more, they pierce the slates in some other place. It is never used among us as a medicine ; but the French give it internally in hysteric com- plaints, and to their children for worms ; some also give it from ten to fifteen drops in wine for suppressions of the menses. This, however, is rather the practice of the common people than of the faculty.

PETROMYZON, the lamprey, in ichthyo- logy, a genus of fishes belonging to the class of amphibia nantes. It has seven spiracula at the side of the neck, no gills, a fistula on the top of the head, and no breast or belly fins. There are three species, distinguished by peculiarities in their back fins.

1. P. bronchialis, or lampern, is sometimes found of the length of eight inches, and about the thickness of a swan’s quill ; but they are ge- nerally much smaller. The body is marked with numbers of transverse lines, that pass cross the sides from the back to the bottom of the belly, which is divided from the mouth to the anus by a straight line. The back fin is not angular, but of an equal breadth. The tail is lanceolated, and short at the end. They are frequent in the rivers near Oxford, particularly the Isis ; but not peculiar to that county, being found in other English rivers, where, instead of concealing themselves under the stones, they lodge in the mud, and are never observed to

adhere to any thing like other lampreys.

2. P. fluviatilis, the river or lesser lamprey, sometimes grows to the length of ten inches. The mouth is formed like that of the preceding. On the upper part is a large bifurcated tooth : on each side are three rows of very minute ones : on the lower part are seven teeth, the exterior of which on one side is the largest. The irides are yellow. As in all the other species, between the eyes on the top of the head is a small orifice, of great use to clear its mouth of the water that remains on adhering to the stones ; for through that orifice it ejects the water in the same manner as cetaceous fish. On the lower part of the back is a narrow fin ; beneath that rises another, which at the beginning is high and angular, then

grows narrow, surrounds the tail, and end.s nonr the anus. The color of the back is brown or dusky, sometimes mixed with blue ; the whole underside silvery. These are found in the Thames, Severn, and Dee; are potted with the larger kind; and are by some preferred to it, as being milder tasted. Vast quantities are taken about Mortlake, and sold to the Dutch for bait for their cod fishery. Above 430,000 have been sold in a season at 40s. per 1000 ; and, of late, about 100,000 have been sent to Harwich for the same purpose. It is said that the Dutch have the secret of preserving them till the tur- bot fisher .

3. P. marinus, the sea lamprey, is sometimes found so large as to weigh four or five pounds. It greatly resembles the eel in shape; but its body is larger, and its snout longer, narrower, and sharper, at the termination. The opening of the throat is very wide ; each jaw is furnish'ed with a single row of very small teeth ; in the middle of the palate are situated one or two other teeth, which are longer, stronger, and moveable towards the inside of the throat ; the inferior part of the palate presents moreover a row of very small teeth, which reaches to the bottom of the throat, where are four long notched bones ; two short fistulous processes are observ- able at the extremity of the snout, and there are two others thicker, but still shorter, above the eyes. Willoughby supposes that the latter are the organ of hearing, and the former the organ of smell. His opinion with regard to the audi- tory faculty of this fish is founded on what we read in ancient authors, that the fishermen at- tracted the lampreys by whistling, and that Crassus had tamed one of them to such a degree that it knew his voice and obeyed his call. The eyes of the lamprey are small, and covered with a transparent light blue membrane ; the pupil is bordered with a circle of a color resembling gold ; near the gills, which are four, there is a round hole on both sides, through which it dis- charges the water. The lamprey has no fins on his belly or breast; on the back we observe a

fin, which begins pretty near the head, extends to the tail which it. turns round, and is after- wards continued to the anus ; this fin is covered by the skin of the body, to which it adheres but loosely ; the skin is smooth, of a red blackish color, and streaked with yellow, the lamprey advances in the water with winding motions, like those of a serpent, which is common to it, with all the anguilliform fishes. The lamprey lives on fish. During the cold it lies concealed in the crevices of sea rocks, and consequently is fished for only at certain seasons. It lives in a state of hostility with the poulpe, a kind of sea polypus, which shuns the combat as long as it can ; but, when it finds the impossibility o. escape, it endeavours to surround the lamprey with its long arms. The latter slips away, and the poulpe becomes its prey. The lobster, we are told, avenges the poulpe, and destroys the lamprey in its turn. See CANCER. Rondelet says that the fishermen consider the bite of the lamprey as venomous and dangerous, and nevei touch it while alive but with pincers. They beat it on the jaws with a stick, and cut off its

nead. He adds, that its ashes are a cure for its bite, and for the king's evil. When any one has been bitten by a lamprey, the most effectual . method is to cut out the part affected. Lam- preys are very dexterous in saving themselves ; when taken with a hook, they cut the line with their teeth ; and, when they perceive themselves caught in a net, . they attempt to pass through the meshes. They fish for lampreys only on the pebbly edges of sea rocks ; some of these peb- bles are drawn together to make a pit as far as the water's edge, or a little blood is thrown in, and the lamprey immediately puts forth its head between two rocks. As soon as the hook, which is baited with a crab or some other fish, is presented to it, it swallows greedily, and drags it into its hole. There is then occasion for great dexterity to pull it out suddenly ; for if it is al- lowed time to attach itself by the tail, the jaw would be torn away before the fish could be taken. This shows that its strength resides in the end of its tail ; for the great bone of this fish is reversed, so that the bones, which in all other fishes are bent towards the tail, are here turned in a contrary direction, and ascend towards the head. After the lamprey is taken out of the water, it is not killed without a great deal of trouble ; the best way is to cut the end of its tail, or to crush it with repeated blows on the spine, to prevent it from leaping ; as its animal life extends to the end of the spinal marrow. M. De Querhoent denies the supposed poison of the lamprey. This species, he says, abounds on the coasts of Africa, at the Antilles, on the coast of Brasil, at Surinam, and in the East In- dies. When taken with a hook, the fisher must kill it before he takes it off, otherwise it darts upon

him, and wounds him severely. Its wounds, however, are not venomous, M. de Querhoent having seen several sailors who were bitten by it, but experienced no disagreeable con- sequences. Lampreys are likewise found in great abundance at Ascension Island, but parti- cularly in the seas of Italy : their flesh when dried is excellent; and boiling gives to the ver- tebrae the color of gridelin. The flesh of the lamprey is white, fat, soft, and tender; it is pretty agreeable to the taste, and almost as nou- rishing as that of the eel ; those of a large size are greatly superior to the small ones. Mr. Pen- nant is of opinion that the ancients were un- acquainted with this fish.

PE'TRONEL, n. s. Fr. petrinal. A pistol ; a small gun used by a horseman.

And he with petronel upheaved, Instead of shield the blow received, The gun recoiled as well it might.

Hudibras.

PETRONEL. SeePiSToi, AND PETRINEL. PETRONIUS, a renowned Roman senator. When governor of Egypt, he permitted Herod, king of the Jews, to purchase in Alexandria a large quantity of corn for the supply of his sub- jects, who were afflicted with a severe famine. When Tiberius died, Caius Caligula, who suc- ceeded him, took from Vitellius the government of Syria, and gave it to Petronius, who dis- charged the duties of his office with dignity and honor. From his favoring the Jews, he ran the VOL. XVII.

risk of losing the emperor's friendship and his own life ; for when that prince gave orders to have his statue deposited in the temple of Jeru salem, Petronius, finding that the Jews would rather suffer death than see that sacred place profaned, was unwilling to have recourse to vio- lent measures ; and therefore preferred modera- tion to cruel measures to enforce obedience. In his voyage to Africa, of which country he had been appointed quaestor, the ship in which In- sailed was taken by Scipio, who caused all tin- soldiers to be put to the sword, and promised to save the quaestor's life, provided he would re- nounce Ceesar's party. Petronius replied that ' Caesar's officers were accustomed to grant lifc to others, and not to receive it ; ' and, at the same time, he stabbed himself with his own sword.

PETRONIUS ARBITER (Titus), a great critic and polite writer, the favorite of Nero, supposed to be the same mentioned by Tacitus in his

Annals, lib. xvi. He was proconsul of Bithynia, and afterwards consul, and appeared capable of the greatest employments. He was one of Nero's principal confidants, and the superintendant of his pleasures. The great favor shown him drew upon him the envy of Tigellinus, another of Nero's favorites, who accused him of being con- cerned in a conspiracy against the emperor : on which Petronius was seized, and was sentenced to die. He met death with a striking indifference, and seems to have tasted it nearly as he had done his pleasures. He would sometimes open a vein, and sometimes close it, conversing with his friends in the meanwhile, not on the immor- tality of the soul, which was no part of his creed, but on topics which pleased his fancy, as of love-verses, agreeable and passionate airs. €)f this disciple of Epicurus, Tacitus gives the following character : — ' He was,' says he, ' nei- ther a spendthrift nor a debauchee ; but a refined voluptuary, who devoted the day to sleep, and the night to the duties of his office, and to plea- sure.' He is much distinguished by a satire which he wrote, and secretly conveyed to Nero ; in which he ingeniously describes, under bor- rowed names, the character of this prince. Peter Petit discovered at Traw in Dalmatia, in 1665, a considerable fragment containing the sequel of Petronius's Trimalcion's Feast. This fragment, which was printed in 1666 at Padua and Paris, produced a paper war among the learned. While some affirmed that it was the work of Petronius, and others denied it to be so, Petit sent it to Rome. The French critics, who had attacked its authenticity, were silent after it was deposited in the royal library. It is now generally attri- buted to Petronius. The public did not form the same favorable opinion of some other frag- ments, which were extracted from a MS. found at Belgrade in 1688, and printed at Paris by Nodot in 1694, though they are ascribed by the editor Charpentier, and other learned men, to Petronius. His genuine works are, 1. A Poem on the Civil War between Caesar and Pompey, translated into prose by Marolles, and into French verse by Bouhier, 1737, in 4to. Petro- nius, disgusted with Lucan's flowery language, opposed a Pharsalia to his Pharsalia ; but his

work, though superior to Lucan's in some re- spects, is not in the true style of epic poetry. 2. A Poem on the Education of the Roman Youth. 3. Two Treatises upon the corruption of Eloquence, and the Decay of Arts and Sciences, 4. A Poem on Dreams. 5. The Shipwreck of Licas. 6. On the Inconstancy of Human Life. And, 7. Trimalcion's Banquet. This last per- formance is a description of the pleasures of a corrupted court ; and the painter is rather an in- genious courtier than a person

whose aim is to reform abuses. The best editions of Petronius are those published at Venice, 1499, in 4to. ; at Amsterdam, 1669, in 8vo. ; cum notis Var. Ibid, with Boschius's notes, 1677, in24to. ; and 1700, 2 vols. in 24mo. The edition variorum was re- printed in 1743, in 2 vols. 4mo., with Peter Burman s commentaries. Petronius died in 65 or 66.

PETRONIUS GRANIUS, a centurion in the eighth legion, who served with reputation under Caesar in the Gallic war.

PETRONIUS MAXIMUS was born A.D. 395, of an illustrious family, being at first a senator and consul of Rome. He put on the imperial purple in 455, after having effected the assassination of Valentinian III. To establish himself upon the throne, he married Eudoxia, the widow of that prince ; and, as she was ignorant of his villany, he confessed to her, in a transport of love, that the strong desire he had of being her husband had made him commit this atrocious crime. Whereupon Eudoxia privately applied to Gense- ric, king of the Vandals, who, coming into Italy with a very powerful army, entered Rome, where the usurper then was. Petronius endeavoured to escape; but the soldiers and people, enraged at his cowardice, fell upon him, and overwhelmed him with a shower of stones. His body was dragged through the streets for three days ; and, after every other mark of disgrace, thrown into the Tiber, the 12th of June, 455. He reigned only seventy-seven days. Yet he had some good qualities. He loved and cultivated the sciences. He was prudent in council, circumspect in his actions, equitable in his judgments, a facetious companion, and steady friend. He had gained the affections of every body, while he remained in a private station.

PETROSA OSSA, in anatomy, a name given to the fourth and fifth bones of the cranium, called also ossa tempomm and ossa squamosa ; the substance whereof, as their first and last names express, is squamose and very hard.

PETROSELINUM (apium petroselinum, Lin.), parsley. See APIUM. This plant is com- monly cultivated for culinary purposes. The seeds have an aromatic flavor, and are occasionally used as carminatives, &c. The root is one of the five aperient roo s, and with this intention is some- times made an ingredient in apozems and diet- drinks ; if liberally used, it is apt to occasion flatulencies ; and thus, by distending the viscera, produces a contrary effect to that intended by it ; the taste of this root is somewhat sweetish, with a light degree of warmth and aromatic flavor.

PETROSILEX, in mineralogy, compact fels- Bpar. See MINERALOGY.

PETSCHORA, a large river of European

Russia, which rises in the Ural Mountains, flows to the northward through the governments of Perm and Archangel, and falls into the Arctic Ocean, near Pustoserskoe, after a course of above 600 miles. It receives the Lialsa, Ukscha, and Elima, and is navigable during summer. The steppes of Petschora form an immense plain, lying between the Dwina and Petschora, in which there is a number of lakes. The north part of the steppes is covered whh nothing but moss and stunted shrubs ; but in the south there are large forests. The surface on the east side is rocky. The inhabitants are wandering Samojedes.

PETTEIA, in the ancient music, a term to which we have no one corresponding in our lan- guage. The melopceia, or the art of arranging sounds in succession so as to make melody, is divided into three parts, which the Greeks call lepsis, mixis, and chresis; the Latins sumptio, mixtio, and usus; and the Italians presa, mes- colamento, and uso. The last of these is called by the Greeks irtrrua, and by the Italians pettia; which therefore means the art of making a just discernment of all the manners of ranging or combining sounds among themselves, so that they may produce their effect, i. e. may express the several passions intended to be raised. Thus it shows what sounds are to be used, and what not ; how often they are severally to be repeated ; with which to begin, and with which to end ; whether with a grave sound to rise, or an acute one to fall, &c. The petteia constitutes the manner of the music ; chooses out this or that passion, this or that motion of the soul, to be awakened ; and determines whether it be proper to excite it on this or that occasion. The petteia, therefore, is in music much what the manners are in poetry , It is not easy to discover whence the denomina- tion should have been taken by the Greeks, un- less from viTTtta, their game of chess ; the musical petteia being a sort of combination and arrangement of sounds, as chess is of pieces called Trtrnoi calculi, or chess-men.

PET'TICOAT, n. s. Fr. petit and coat. The lower part of a woman's dress.

What trade art thou, Feeble ? — A woman's taylor, Sir. — \V ilt thou make as many holes in an enemy's battle, as thou hast done in a woman's petticoat 1

Shakspeare.

Her feet beneath her petticoat, Like little mice, stole in and out, As if they fear'd the light. Suckling.

It is a great compliment to the sex, that the vir- tues are generally shewn in petticoats. Addison.

To fifty chosen sylphs, of special note, We trust the important charge, the petticoat ; Oft have we known that sevenfold fence to fail, Though stiff with hoops, and armed with ribs of whale. Pope.

As we were in the midst of the service a lady who is the chief woman of the place, and had passed the winter at London with her husband, entered the congregation in a little head-dress, and a hooped petticoat. Spectator.

PETTIFOGGER, n.s. From Fr. pettivo- guer ; petit and voguer. A petty lawyer ; a ' trouble-town,' says Minsheu, ' haying neither law nor conscience.'

The worst conditioned and least cliented peti- voguers get, under the sweet bait of revenge, more plentiful prosecution of actions.

Carew's Survey of Cornwall. Your pettifoggers damn their souls To share with knaves in cheating fools.

Hiidibras.

Consider, my dear, how indecent it is to abandon your shop and follow pettifoggers : there is hardly a plea between two country esquires about a barren acre, but you draw yourself in as bail, surety, or so- licitor. Arbuthnot's John Bull.

Physicians are apt to despise empyrics ; lawyers, pettifoggers ; and merchants, pedlars. Swift.

PETTITOES, n.s. Petty and toe. The feet of a sucking pig : human feet, in contempt.

My good clown grew so in love with the wenches' song, that he would not stir his pettitoes, till he had both tune and words. Shakspeare. Winter's Tale.

PETTO, n. s. Ital. and Belg. The breast ; figuratively, privacy. Thus we

say, ‘ en petto.’

PETTY, adj.) Fr. petit. Small; in-

PET’TINESS, re. s. } ferior ; inconsiderable; paltry : pettiness is littleness of matter or charac- ter ; meanness.

The losses we have borne, the subjects we Have lost, and the disgrace we have digested ; To answer which his pettiness would bow under.

Shakspeare.

When he had no power, But was a petty servant to the state, He was your enemy. Id. Coriolantu.

It is a common experience, that dogs know the dog-killer ; when, as in time of infection, some petty fellow is sent out to kill the dogs. Bacon.

It importeth not much, some petty alteration or difference it may make. Id.

From thence a thousand lesser poets sprung, Like petty princes from the fall of Rome. Denham.

Will God incense his ire For such a petty trespass ? Id.

Common reason directed even Pagan wise men wholly to interdict swearing in ordinary conversa- tion, or about petty matters, as an irrational and im- moral practice, unworthy of sober and discreet per- sons. Barrow.

They believe one only chief and great God, which hath been from all eternity ; who, when he proposed to make the world, made first other gods of a princi- pal order ; and after, the sun, moon, and stars, as petty gods. Stillingfleet.

13 o Ionia watered by the petty Rhine.

Addison.

By all I have read of petty commonwealths, as well as the great ones, it seems to me that a free people do of themselves divide into three powers.

Sivift.

Can an example be given, in the whole course of this war, where we

have treated the pettiest prince, with whom we have had to deal, in so contemptuous a manner 1 Id.

PETTY (Sir William), son of Anthony Petty, a clothier, was born at Romsey, a small market town in Hampshire, in 1623. It is difficult to determine, whether the course of his education was directed more by his father or himself; for being taken when a child to view the common mechanics at work, he soon, by the bent of genius and inclination, took up the tools, and learned to handle them with such dexterity, that at twelve he had attained a skill in various trades, not much inferior to that of the ordinary workman.

At fifteen he was master of the Latin, Greek, and French tongues, and of arithmetic and those parts of geometry and astronomy useful to navigation. Soon after he went to Caen and Paris, where he studied anatomy with Mr. Hobbes. Upon his return to England, he was preferred in the king's navy. In 1643, when the war occurred between the king and parliament, he went into the Nether- lands and France for three years ; and having prosecuted his studies in physic at Utrecht, Ley- den, Amsterdam, and Paris, he retured home 'o Rumsey. In 1647 he obtained a patent to teach the art of double writing for seventeen years. In 1648 he published at London, Advice to Mr. Samuel Hartlib, for the advancement of some particular parts of learning. At this time he adhered to the prevailing party of the kingdom : and went to Oxford, where he taught anatomy and chemistry, and was created M. D. In 1650 he was made professor of anatomy there ; and soon after a member of the college of physicians in London, and physician to the army in Ireland ; where he continued till 1659, and acquired a great fortune. After the Restoration he was intro- duced to king Charles II., who knighted him in 1661. In 1662 he published A Treatise of Taxes and Contributions. In 1663 he invented a dou- ble-bottomed ship. He died at London of a gan- grene in the foot, occasioned by a swelling of the gout, in 1687. The character of his genius is sufficiently seen in his writings, which are very numerous. Amongst these he wrote the History of his own Life. He died possessed of a fortune of about £l 5,000 a-year.

PETTY (William), marquis of Lansdown, was descended from the above Sir William Petty, and born in 1737. He succeeded to the Irish title of earl of Shelburne, on the death of his father in 1761 ; and in 1763 was president of the board of trade, an office which he resigned to join the train of opposition led by Mr. Pitt (lord Chatham), with whom he returned to office in 1766. When a change of ministry took

place, in 1768, he became an antagonist of ministers till 1782, when he was nominated secretary of state for the foreign department. On the death of the marquis of Rockingham he was succeeded by lord Shelburne ; but he was soon obliged to give way to the coalition between lord North and Mr. Fox. In 1784 his lordship became an English peer, by the titles of marquis of Lansdown and earl of Wycombe ; and employed himself in the cultivation of science and literature at Bow Wood, his seat in Wiltshire. He collected a valuable library, the MSS. belonging to which were, after his death, purchased by the British Museum. His death took place in 1805.

PETTY BAG, an office in chancery, the three clerks of which record the return of all inquisi- tions out of every county, and make all patents of comptrollers, gaugers, customers, &c.

PETTY LARCENY. See LARCENY.

PETTY SINGLES, among falconers, the toes of a hawk.

PETTY TALLY, in the sea language, a compe- tent allowance of victuals, according to the num- ber of the ship's company.

PETTY TREASON. See TREASON.

PETTY WHIN, a species of on on is.

PETULANCE, n. s.ˆ Yi. petulance; Lat.

PET’ULANCY, {petuluntia. Peevish-

PET’ULANT, adj.* i ness ; pertness ; wan-

PET’ULANTLY, adv. Jtonness: petulant and petulantly follow these senses.

It was excellently said of that philosopher that there was a wall or parapet of teeth set in our mouth, to restrain the petutancy of our words.

Ben Janson.

Such was others petitioner, that they joyed to see their betters shamefully outraged and abused.

King Charles.

Wise men knew, that which looked like pride in some, and lifce petulance in others, would, by expe- rience in affairs and conversation amongst men, be in time wrought off. Clarendon.

The tongue of a man is so petulant, and his thoughts so variable, that one should not lay too great stress upon any present speeches and opinions.

Spectator.

However their numbers, as well as their insolence and perverseness increased, many instances of petu- lancy and scurrility ˆre to be seen in their pamphlets.

Swift.

There appears in our age a pride and petulancy in youth, zealous to cast off the sentiments of their fathers and teachers. Watts.

If the opponent sees victory to incline to his side, let him shew the force of his argument, without too importunate and petulant demands of an answer.

Id.

To be humane, generous and candid, is a very high degree of merit in any case ; but those qualifications deserve still greater praise, when they are found in that condition which makes almost every other man,

for whatever reason, contemptuous, insolent, petulant, selfish, and “brutal. Johnson.

PETUNSE, in natural history, one of the substances whereof porcelain or china-ware is made. The petunse is a coarse kind of flint or pebble, the surface of which is not so smooth •when broken as that of our common flint. See PORCELAIN. According to Chaptal, the petunse is that species of silex known by the names of feldspar, rhomboidal quartz, and spathum scin- tillans. It very frequently forms one of the principles of granite, and the crystals which are found separate arise from the decomposition of this primitive rock. The texture of feldspar is close, lamellated, and it is less hard than quartz. It fuses, without addition, into a whitish glass. The specific gravity of white feldspar is 25-946 : 1 00 parts of white feldspar contain about 67 silex, 14 alumine, 11 barytes, and 8 magnesia.

PETWORTH, a market-town and parish in Sussex, near the river Arun, twelve miles from Arundel, and fifty south-west from London. In this place is the magnificent seat of the earl of Egremont. The streets of the town are irregular, but the houses are well built. In the centre is a market-house, in one of the rooms over which the quarter sessions are held. Here are also a charity-school, alms-house, hospital, and a bride-well, on Howard’s plan. The church is a neat building, and has several monuments of the Percy family. Market on Saturday. Fairs, Holy-Thursday, and November 20th.

PEUCEDANUM, or sulphur-wort, a genus of the digynia order, belonging to the pentandria class of plants ; and in the natural method rank- ing under the forty-fifth order, umbellatae. The

fruit is lobated, striated on both sides, and sur- rounded by a membrane ; the involucra are very short. There are three species, none of which have any remarkable properties, excepting the P. officinale, or common hog’s fennel, growing naturally in the English salt marshes, and rising to the height of two feet, with channelled stalks, which divide into two or three branches, each crowned with an umbel of yellow flowers, com- posed of several small circular umbels. Tne roots, when bruised, have a strong fcetid scent like sulphur, and an acrid, bitterish, unctuous taste. Wounded in the spring, they yield a con- siderable quantity of yellow juice, which dries into a gummy resin, and retains the strong smell of the root. The expressed juice was used by the ancients in lethargic disorders.

PEUCER (Caspar), professor of medicine at Wirtemberg, was born at Bautzen in Lusatia. He married a daughter of Melancthon, whose

works he published in 1601, in 5 vols. Being a Protestant, and being closely imprisoned for ten years for his opinions, he wrote his thoughts on the margins of old books, with ink made of burnt crusts soaked in wine. He died in 1602.

PEUCESTES, a brave general under Alexan- der the Great, who bestowed on him a crown of gold. See MACEDON.

PEVENSEY, a town of Sussex, on a river which runs into a bay in the English Channel, and forms Pevensey Harbour. It has an ancient castle, originally belonging to Robert earl of Moreton, brother to William the Conqueror, and thought a fine specimen of Roman architec- ture. Sueno the Dane landed at it in 1049, carried off his cousin Beorn, and murdered him. It was afterwards ravaged by earl Godwin and his son Harold, who carried off many ships. The church is also an ancient structure. The castle belongs at present to the Cavendish family. Here William the Conqueror landed previous to the battle of Hastings. It is four- teen miles W. S. W. of Hastings, and sixty-three south of London.

PEUTEMAN (Peter), a Dutch painter, bora at Rotterdam in 1650. His subjects were either allegorical or emblematical allusions to the shortness and misery of human life. He died in consequence of a fright in 1692.

PEUTINGER (Conrad), a learned German, born at Augsburg in 1465. He became secretary to the senate of Augsburg ; and published an ancient itinerary, called Tabula Peutingerina, marking the roads by which the Roman armies passed to the greater part of the empire. He died in 1574.

PEW, n.s. Belg. pity ; Ital. posgio. A seat enclosed in a church.

When Sir Thomas More was lord chancellor, he did use admass, to sit in the chancel, and his lady in a pew. Bacon.

How. I foresee in many ages past, When Lolioe’s caytive name is quite defaced, Thine heyre, thine heyre’s heyre, and his heire

again,

From out the loynes of careful Lolian, Shall climbe up to the chancell pewes on hie, And rule and raigne in their rich tenancie.

Hall’t Satirn.

Should our sex take it into their heads to wear trunk, breeches at church, a man and his wife would fill a whole pew. Addison.

She decently, in form, pays heaven its due ; And makes a civil visit to her pew. Young.

PEWS, in a church, are somewhat in the na- ture of an heir-loom ; and may descend by im- memorial custom, without any ecclesiastical concurrence, from tne ancestor to the heir. The right to sit in a particular pew in the church arises either from prescription as appurtenant to a messuage ; or from a faculty or grant from the ordinary; for he has the disposition of all pews which are not claimed by prescription. Gibs. Cod. 221. In an action for a disturbance of the enjoyment of a pew, if the plaintiff claims it by prescription, he must state it in the declaration as appurtenant to a messuage in the parish ; and then such prescription may be supported by an enjoyment for thirty-six years ; and perhaps for any time above twenty years. 1 Term. Rep. 428. So uninterrupted possession of a pew in the church for thirty years, unexplained, is presump- tive evidence of a prescriptive right to the pew in an action against a wrong doer: but may be rebutted by proof that prior to that time the pew had no existence. 5 Term. Rep. K. B. 297.

PE’WET, n. s. Teut. piewit ; Belg. kiewit. A water fowl.

We reckon the dip-chick, so named of his diving and littleness, puffins, pewets, meawes. Carew.

PEWTER, n.s.) Fr. epeutre ; Ital. and PEW’TERER. \ Span, pellre. An artificial metal, principally made of tin ; the pewter vessels of a house : a worker of pewter.

He shall charge you and discharge you with the motion of a pewterer’s hammer. Shakspeare.

Coarse pewter is made of fine tin and lead.

Bacon.

The pewter, into which no water could enter, be- came more white,

and liker to silver, and less flexi- ble. W-

Pewter dishes, with water in them, will not melt easily, but without it they will ; nay, butter or oil, in themselves inflammable, yet, by their moisture, will hinder melting. Id.

We caused a skilful pewterer to close the vessel in our presence with soder exquisitely. B/tyle.

The eye of the mistress was wont to make her pewter shine. Addison.

Nine parts or more of tin, with one of rejrulus of antimony compose pewter. Pemberton.

PEWTER, in French called etaln, and often confounded thus with pure tin, is a factitious metal used in making domestic utensils, as plates, dishes, &c. The basis is tin, which is converted into pewter by mixing at the rate of 1 cwt. of tin with fifteen pounds of lead and six pounds of brass. Besides this composition, which makes the common pewter, there are other kinds, compounded of tin, antimony, bismuth, and copper, in several proportions.

‘ Blocks of tin are often melted by the pewterers into small rods. I found that a cubic foot of the specimen I examined,’ says Dr. Watson, ‘ weighed 7246 ounces : but even this sort exceeds in purity any of the kinds examined by some authors. Chemistry affords certain methods of discovering the quantity of lead with which tin is’alloyed ; but these methods are often troublesome in the

application. Pewterers, and other dealers in tin, use not so accurate a method of judging of its purity, but one founded on the same principle ; for the specific gravities of bodies being nothing but the weights of equal bulks of them, they cast a bullet of pure tin, and another of the mixture of tin and lead, which they want to examine, in the same mould ; and the more the bullet of the mixture exceeds the bullet of pure tin in weight, the more lead they conclude it contains.

‘ Pewter is a mixed metal ; it consists of tin united to small portions of other metallic sub- stances, such as lead, zinc, bismuth, and the me- tallic part, commonly called regulus of antimony. We have three sorts of pewter in common use; they are distinguished by the names of plate, trifle, ley. The plate pewter is used for plates and dishes ; the trifle chiefly for pints and quarts ; and the ley-metal for wine measures, &c. Our very best sort of pewter is said to consist of 1 00 parts of tin and of seventeen of regulus of antimony, though others allow only ten parts of regulus to 100 of tin; to this composition the

French add a little copper. Crude antimony, which consists of nearly equal portions of sul- phur and of a metallic substance, may be taken inwardly with great safety ; but the metallic part, or regulus, when separated from the sulphur, is held to be very poisonous. Yet plate-pewter may be a. very innocent metal ; the tin may lessen or annihilate the noxious qualities of the metallic part of the antimony. We have an instance somewhat similar to this in standard silver, the use of which has never been esteemed unwholesome notwithstanding it contains nearly one-twelfth of its weight of copper. Though standard silver has always been considered as a safe metal, when used for culinary purposes, yet it is not alto- gether so ; the copper it contains is liable to be corroded by saline substances into verdigris. This is frequently seen, when common salt is suffered to stay a few days in silver saltsellers, which have not a gold gilding ; and even saline draughts, made with volatile salt and juice of lemons, have been observed to corrode a silver tea-spoon which had been left a week in the mixture.'

The weight of a cubic fool of each of these sorts of pewter is :

Plate 7248

Trifle 7359

Ley 7963

If the plate-pewter be composed of tin and regulus of antimony there is no reason to ex- pect that a cubic foot of it should be heavier than it appears to be ; since regulus of antimony, according to the different ways in which it is made, is heavier or lighter than pure tin. A very fine silver-looking metal is said to be composed of 100 pounds of tin, eight of regulus of antimony, one of bismuth, and four of copper. The ley pewter, if we may judge of its composition by comparing its weight with the weights of the mixtures of tin and lead mentioned in the table, contains not so much as a third, but more than a fifth, part of its weight of lead : this quantity of lead is far too much, considering one of the uses to which this sort of pewter is applied ; for acid

wines will readily corrode the lead of the flagons in which they are measured into sugar of lead ; this danger is not so great with us,

where wine is seldom sold by the measure, as it is in other countries where it is generally sold so; and their wine measures contain, probably, more lead than ours do. Our English pewterers have at all times made a mystery of their art; and their caution was formerly so much encouraged by the legislature that an act of parliament was passed, rendering it unlawful for any master- pewterer to take an apprentice, or to employ a journeyman, who was a foreigner. In the present improved state of chemistry this caution is useless ; since any one tolerably skilled in that science would be able to discover the quality and quantity of the metallic substances used in any particular sort of pewter ; and it is not only useless now, but one would have thought it must have been always so ; whilst tin, the principal ingredient, is found in England in the purest state, as well as largest quantity, bee CHEMISTRY

Pewter has occasionally served for money. In the Philosophical Transactions, M. Putland states that king James II. turned all the pewter vessels, &c., of the Protestants in Ireland he could seize, into money ; half-crowns were some- what bigger than halfpence, and other pieces in proportion. He ordered it to be current in all payments : whence, our author observes, people absconded for fear of being paid their debts : he also mentions crown pieces of this metal, with this legend on the rim, 'melioris tessera fati.'

PEYER (J. Conrad), a learned German phy- sician, born at Schaffhausen. He published Exercitatio Anatomica Medica de Glandulis In- testinorum, at Schaffhausen, in 1677.

PEYRERE (Isaac la), was born at Bourdeaux, of Protestant parents. He entered into the ser- vice of the prince of Conde, who was much pleased with the singularity of his genius. From the perusal of St. Paul's writings he took into his head to aver that Adam was not the first of the human race; and to prove this extravagant opinion, he published in 1655 a book, printed in Holland in 4to. and in 12mo., with this title, Praeadamitffi, sive exercitatio super versibus 12, 13, 14, cap. 15, Epistolse Pauli ad Romanos. This was burnt at Paris, and the author impri- soned at Brussels. The prince of Conde having obtained his liberty, he travelled to Rome in 1656, and there gave in to pope Alexander VII. 'A solemn renunciation both of Calvinism and Preadamism. His conversion was not thought to be sincere, at least with regard to this last heresy. His desire to be the head of a new sect is evident; and in his book he pays many com- pliments to the Jews, and invites them to attend his lectures. Upon his return to Paris he went again into the prince of Conde's service as his Jibrarian. Some time after he retired to the seminary des Vertus, where he died

January 30th, 1676, aged eighty-two. He left behind him, 1. A treatise, as singular as it is scarce, en- titled Du rappel des Juifs, 1643, in 8vo. The ˆecal of the Israelites, in the opinion of this writ- er, will be not only of a spiritual nature, but they will be reinstated in the temporal blessings which they enjoyed before their rejection. They

will again take possession of the Holy Land, which will resume its former fertility ; and their restorer will be a king of France. 2. A curious and entertaining account of Greenland, 8vo. 1647; 3. An equally interesting account of Ice- land, 1663, 8vo.; 4. A letter to Philotimus, 1658, in 8vo. in which he explains the reasons of his recantation, &c.

PEYRONIUS (Francis de la), an eminent French surgeon, who practised at Paris with such eclat that he was appointed first surgeon to Louis XV. He improved this favorable situation, and procured to his profession those establishments which contributed to extend its benefits. The Royal College of Surgery at Paris was founded by his means in 1731, was enlightened by his knowledge, and encouraged by his munificence. At his death, which happened at Versailles, 24th of April 1747, he bequeathed to the society of surgeons in Paris two-thirds of his effects, his estate of Marigni, which was sold to the king for 200,000 livres, and his library. He also left to the society of surgeons at Montpelier two houses, with 100,000 livres, to erect there a chirurgical amphitheatre. He was a philosopher without ostentation ; his understanding was acute, his natural vivacity rendered his conversation agree- able ; and he possessed an uncommon degree of sympathy for those in distress.

PEYROUSE. SeePEROusE.

PEYTAHN, a mountainous irregular district and town in Northern Hindostan, tributary to the Ghoorkhali rajah of Nepaul ; situated about 29° of N. lat. It is covered with jungle, and intersected by numerous streams from the hills. The cultivated valleys are very productive, but they are not many. The town stands in lat. 29° 4′ N., long. 82° 15′ E.

PEZAY (N. Masson), marquis of, a native of Paris, was a captain of dragoons ; and gave some lessons on tactics to Louis XVI. He died in the beginning of 1778. He left behind him, 1. A Translation of Catullus; 2. Les Soirees Helvetiennes, Alsaciennes, et Franc Comtoises, in 8vo. 1770; 3. Les Soirees Provencales, in MS. ; 4. La Rosiere de Salency, a pastoral, in three acts, which has been performed with suc- cess on the Italian theatres ; 5. Les Campagnes de Maillebois, in 3 vols.

4to., and a volume of maps.

PEZENAS (Esprit), a learned Jesuit, born at Avignon in 1692. He became professor of medicine at Marseilles. His works and translations are numerous, and esteemed for their perspicuity.

PEZENAS, or PESENAS, Piscenna, an ancient town of the department of Herault, France, the chief place of a canton in the arrondissement of Beziers. It is a post-town, with 8300 inhabi- tants, having a board of trade, an exchange, and a communal college. It is pleasantly situated at the confluence of the Peine and the Herault, in a rich and fertile valley, where cultivated fields, orchards, gardens, and verdant shrubberies meet you on every side. From the platform of its ancient castle there is a most delightful prospect over the little river Peine, which flows under the walls, and, crossing some smiling meadows, falls into the Herault. Pezenas is renowned for the

salubrity of its air; the surrounding country, formerly laid waste by subterraneous fires, pre- sents, in an extent of more than eighteen miles dia- meter, craters and large masses of basaltic rock.

The manufactures of handkerchiefs, linens, muslins, flannels, woollen and cotton counter- panes ; hats, soap, wet and dry verdigris ; chemicals, and grape sugar, are carried on here ; there are likewise cotton and silk spinning- mills ; brandy distilleries ; wool-washing houses, &c. The trade consists in wheat, rye, oats, yel- low grain, red tartar, dyers' weed, olive oil, pre- served olives, dry raisins, and figs, capers, fruit, silk, wool, &c. Every Saturday there is a con- siderable market for wines, brandy, and other spirits. There is a beautiful assembly-room in the town, and charming walks in the neighbour- hood, overlooked by rising grounds covered with almond-trees, olives, and vines. Pezenas is eighteen miles north-east of Beziers, and thirty- three south-west of Montpelier.

PEZIZA, cup mushroom, in botany, a genus of the natural order of fungi, belonging to the cryptogamia class of plants. The fungus campanulated and sessile. Linnaeus enumerates eight species.

PEZRON (Paul), a very learned and ingeni- ous Frenchman, born at llennebon in Brittany in 1639, and admitted into the order of Citeaux in 1660. He was a great antiquary, and was author of The Antiquity of Time restored and defended against the Jews and Modern Chrono-

logers. He went through several promotions, the last of which was to the abbey of Charmoye, and died in 1706.

PFEFFEL (Christian Frederick), a modern diplomatist, was born at Colmar in 1726. He studied first under Schoefflin, whom he assisted in his Alsatia Illustrata; and became secretary to the count de Loss, ambassador from Saxony to France. He was then the friend of the count de Bruhl, and employed in several negociations. In 1758 he was sent to Ilatisbon, during the diet, as counsellor of state and charge-d'affaires : thence he proceeded to the court of Bavaria, where he remained until 1768, when he was re- called to Versailles, and became juris-consult to the king. He also obtained, in conjunction with his son, the charge of stett-mestre of Col- mar; and was sent by the French ministry to Deux Ponts, to treat of the indemnities of the duke, and other German princes: he was still there when he received the order for his retire- ment from his public functions ; his property was confiscated, and he was placed on the list of emigrants. He died in 1807. His principal works are, Abrege Chronologique de I'llistoire, et du Droit publique d'Allemagne ; Recherches Historiques concernant les Droits du Pape sur la Ville et 1'Etat d'Avignon, avec des Pieces jus-tificatives; Etat de la Pologne; Dissertations Historiques.

PFEFFERCORN (John), a learned Jew, who was converted to Christianity. He was the author of De Abolendis Judaeonim scriptis ; and, consistently with the title of that work, endea- voured to persuade the emperor Maximilian to burn all the Hebrew books, except the Bible. He wrote some other tracts also in Latin.

PFIFFER, or PFEIFFER (Augustas), a learned German, born at Lawenburg. lie was eight years superintendaht of the churches in Lubec, and became professor of oriental languages at Leipsic; where he died in 1698.

PFIFFER (Lewis), a brave Swiss general, in the service of France under Charles IX. With 8000 rnen, drawn up in a hollow square, he preserved the life of that monarch, in the famous retreat of Meaux, against all the efforts of the prince of Conde. But his chief merit lay in his mecha- nical and topographical exertions. He made a model of Switzerland, the most extraordinary thing of the kind ever executed. He was elected advoyer, or chief magistrate of Lucerne, and died in that city and office in 1594.

PFINS AND Exz, a circle of the grand duchy of Baden, lying along the two rivers Pfinz and Enz, from the Rhine to the frontier of Wirtem-berg. It includes the north part of the old mar- graviate, with part of

the bishopric of Spire and the Creichgau. Population about 132,000. It is divided into two jurisdictions, including tea bailiwics. The chief town is Bruchsal.

PFORTZHEIM, a town of the west of Ger- many, in Baden, at the junction of the Wurm and Nagold. It is surrounded with a wall and ditch, and consists of the Town, Old Town, the Aue, and the suburb of Brozingen. The inhabi- tants manufacture linen, trinkets, and hardware articles. They carry on also a brisk traffic in wood, from the neigbouring forest of Hagens- chiess, sent to Holland by the Rhine. Popula- tion 5400. Seventeen miles E.S.E. of Carl- shrue, and twenty-two W. N.W. of Stutgard.

PH$1A, a famous sow which infested the neighbourhood of Cromyon. Theseus destroyed it as he was travelling from Trcezene to Athens to make himself known to his father. Some imagine that the boar of Calydon sprang fron- this sow. According to some authors Phaea was a woman who prostituted herself to strangers, whom she murdered, and afterwards plundered.

PH/EACES, the PHSAGIANS, the people of Pliseacia. They first inhabited Hyperia. See HYPERIA. They were noted for their indolence and luxury : hence Horace uses Phaeax for a person indolent and sleek ; and hence arose their indolence and pride. — Aristotle.

PHALACIA, one of the names of the island Corcyra. See CORCYRA. This island was famous for producing large quantities of the finest flavored apples. Ovid, Juvenal, Propertius. Alcinous was king of it, who rendered his name famous by his gardens and his hospitality to Ulysses. It is now called Corfu. See ALCINOUS, CORCYRA, and CORFU.

PHˆECASIA, one of the Sporades Isles.

PH/EDON, a disciple of Socrates, who had been seized by pirates in his youth ; and the philosopher, who seemed to discover something uncommon and promising in his countenance, bought his liberty for a sum of money, and ever after esteemed him. Phsedon, after Socrates's death, returned to Elis his native country, where he founded a sect of philosophers, who composed what was called the Eliac school. The name of Phaedon is affixed to one of Plato's dialogues.

PHAEDRA, in fabulous history, a daughter of

Minos ami Pasiphae ; s'.ie married Theseus, by whom she was the mother of Acamas arid Demo- phoon. They had lived for some time in conju- gal felicity when Venus, who hated all the de- scendants of Apollo, because he had discovered her amours with Mars, inspired Phaedra with the strongest passion for Hippolytus, the son of Theseus, by the amazon Hippolyte. This passion she long attempted to stifle, but in vain ; and therefore, in the absence of Theseus, she ad- dressed Hippolytus with all the impatience of desponding love. He rejected her with horror and disdain. She, to punish his coldness and refusal, at the return of Theseus, accused Hippo- lytus of attempts upon her virtue. lie, without hearing Hippolvtus s defence, banished him from his kingdom, and implored Neptune, who had prorrvsed to grant three of his requests, to punish him in an exemplary manner. As Hippolytus fled from Athens, his horses were suddenly terri- fied by a sea monster, whi :h Neptune had sent on tha shore ; and he was t aus dragged through precipices and over rockfc, trampled under the feet of his horses, and crushed under the wheels of his chariot. When his tragical end was known at Athens, Phsedra confessed her crime, and hung herself in despair. She was buried at Troezene, where her tomb was still to be seen in the age of Pausanias, near the temple of Venus, which she had built to render the goddess pro- pitious.

PH/EDRIA, a small town of Arcadia. — Pans. "PILED RUS, an ancient Latin writer, who composed five books of fables, in Iambic verse. He was aThracian; and his being called Augus- tus's freedman, in the title of the book, shows that he had been that emperor's slave. The fables of Phsedrus remained buried in libraries, altogether unknown to the public, until the close of the sixteenth century.

PHˆDRUS (Thomas), a professor of eloquence at Rome, early in the sixteenth century. He was canon of Lateran, and keeper of the library in the Vatican. He owed his rise to the acting of Seneca's Hippolytus, in which he performed the part of Phaedra ; whence he got the name of Phaedrus. He died under the age of fifty. Janus Parrhasius gives a list of several of his works which were almost ready for public view.

PK/EDYMA, the daughter of Otanes, one of the seven Persian conspirators, who, being mar- ried to the false Smerdis, discovered his impos- ture to her father, by his want of ears, which had been cut off by Cambyses. See PERSIA.

PHyENARETE, the mother of Socrates the philosopher. She was a midwife by profession.

PH/ENIAS, a peripatetic philosopher, a dis- ciple of Aristotle. He wrote a History of Ty- rants.— Diog. Laert.

PH7ENNA, one of the Graces.— Paus. ix. 35.

PHJENOM'ENON, n. s. See PHENOMENON. This has phaenomena in the plural ; Gr. 0aivo/u- vov. An appearance in the works of nature ; a remarkable appearance.

The paper was black, and the colors intense and thick, that the phaenomenon might be conspicuous.

. Kewton.

PHENOMENON, in philosophy, denotes any re- markable appearance, whether in the heavens or

earth, and whether discovered by observation or experiment.

PHAER (Thomas,) M. D., an English phy- sician, born in Pembrokeshire. He graduated at Oxford in 1539. He published several tracts on diseases and their remedies; and was also cele- brated as a poet. He translated nine books and part of the tenth into English verse ; and died in

1560.

PH7ESANA, an ancient town of Arcadia. PHyESTUM, in ancient geography: 1. A town of Crete; 2. A town of Macedonia. — Liv. 36, c. 13.

PHAETON, in fabulous history, the son of Phffibus and Clymene, one of the Oceanides. Venus became enamoured of him, and, entrusted him with the care of one of her temples. This rendered him vain and aspiring ; and, having ob- tained from his father the direction of the cha- riot of the sun for one day, he was . unable to guide the fiery steeds ; and, loosing the reins, Jupiter, to prevent his consuming the heavens and earth struck him with a thunderbolt, and hurled him from his seat into the river Eridanus or Po. His sisters Phaetusa, Lampetia, and Phoebe, lamenting his loss upon its banks, were changed by the gods into black poplar trees, and their tears into amber; and Cycnus, king of Liguria, also grieving at his fate, was transformed into a swan. The poets say that, while Phaeton was

driving the chariot of his father, the blood of the Ethiopians was dried up ; and their skin became black. The territories of Libya were also parched up ; and ever since Africa, unable to recover her original verdure and fruitfulness, has exhibited a sandy desert. Some explain this poetical fable thus : — Phaeton was a Ligurian prince, who studied astronomy, and in whose age the neighbourhood of the Po was visited with uncommon heats.

PHAETON, in ornithology, a genus of birds be- longing to the order of anseres ; the characters of which are : — The bill is sharp, straight, and pointed ; Vhe nostrils are oblong, and the hinder toe is turned forward. There are two species, viz. —

1. P. aethereus, the tropic bird, is about the size of a partridge, and has very long wings.. The bill is red, with an angle under the lower mandible. The eyes are encompassed with black, which ends in a point towards the back of the head. Three or four of the larger quill-feathers, towards their ends, are black, tipped with white ; all the rest of the bird is white, ex- cept the back, which is variegated with curved lines of black. The legs and feet are of a ver- milion-red. The toes are webbed. The tail consists of two long straight narrow feathers, almost of equal breadth from their quills to their points. ‘ The name tropic bird,’ says Latham, ‘ given to this genus, arises from its being chiefly found within the tropic circles ; but we are not to conclude that they never stray voluntarily, or are driven beyond them ; for we have met with instances to prove the contrary.’ There are several varieties : — 1. One called by Latham the white tropic bird. It is less than the preceding, and is found in as many places. The plumage is, in general a silvery white. 2. The yellow tropic

bird is another variety, the plumage being a yel- lowish white. These differences, Mr. Latham thinks, arise merely from age, if they are not the distinguishing mark of sex. 3. The black-billed tropic bird is smaller than any of the former. The bill is black ; the plumage on the upper part of the body and wings is striated, partly black and partly white : before the eye there is a large crescent of black ; behi nd it is a streak of the same ; the forehead and all the under parts of the body are of a pure white color ; the quills and tail are marked as the upper parts, but the ends of the first are white, and most of the feathers of

the last are marked with dusky black at the tips ; the sides over the thighs are striated with black and white ; the legs are black. 4. The red-tailed tropic bird is in length about two feet ten inches, of which the two tail feathers alone measure one foot nine inches. The bill is red ; the plumage white, tinged with an elegant pale rose-color; the crescent over the eyes is somewhat abrupt in the middle ; the ends of the scapulars are marked with black. This variety is distinguished by two middle long tailed feathers, which are of a beautiful deep red color, except the shafts and base, which are black : the sides over the thighs are dusky ; and the legs are black.

2. P. demersus, the red footed penguin, has a thick, arched, red bill ; the head, back part of the neck, and the back, of a dusky purplish hue, and breast and belly white ; brown wings, with the tips of the feathers white ; instead of a tail, a few black bristles ; and red legs. It is found on Penguin Isle, near the Cape of Good Hope, is common all over the South Seas, and is about the size of a goose.

PHAETONTIADES, the sisters of Phaeton. See PHAETON.

PHAETUSA. See PHAETON.

PHJRUS, a town of Peloponnesus.

lent ulcer: phagedenic and phagedenous mean corrosive ; eating into the flesh.

A bubo, according to its malignancy, either proves easily curable, or terminates in a phugedenous ulcer with jagged lips. Wiseman.

When they are very putrid and corrosive, which circumstances give them the name of foul pl/ageilenick ulcers, some spirits of wine should be added to the fomentation. Sharp.

Phagedenick medicines are those which eat away fungous or proud flesh. . Diet.

PHAGEDEXIC MEDICINES are those used to eat off proud or fungous flesh ; such as are all the caustics.

PHAGEDENIC WATER, in chemistry, denotes a water made from quicklime and sublimate, effi- cacious in the cure of phagedenic ulcers.

PHAGESIA, an ancient festival among the Greeks ; observed during the celebration of the Dionysia ; so called from the Qaytty, good

eating, that then universally prevailed.

PHALACRINE, an ancient village of the Sabines, where Vespasian was born. — Seut.

PHAUENA, in entomology, the moth, a ge- nus of insects of the order lepidoptera, having the antennae gradually tapering from the base to the

tips ; tongue spiral ; jaws none ; wings, when at rest, generally deflected.

The caterpillars of this genus vary much as to size, and considerably as to their shape and number of feet. It is remarkable that caterpil- lars of almost every species of this genus are found with ten, twelve, fourteen, and sixteen feet. The last are the most common. See ENTOMO- LOGY.

Moths fly abroad only in the evening, and during the night, and obtain their food from the nectar of flowers. The larva is active and quick in motion, mostly smooth, more or less cylindri- cal, and it preys voraciously on the leaves of plants. The pupa is torpid or quiescent, more or less cylindrical, pointed at the tip or at btrth ends ; and is generally enclosed in a follicle. The following are the principal divisions of this tribe, according to the Linnaean system. Of the species there are upwards of 1500 : — •

1. Bombyx. Antennae filiform; two feelers, which are compressed and reflected ; tongue short, membranaceous, obtuse, and bifid ; the larva is sixteen-footed, often hairy ; the pupa is pointed at the tip.

r a. Wings expanded. \ b. reversed.

Subdivisions < c.

r

\e.

— deflected.

— incumbent

— convolute.

Dr. STraw and Others have divided the section bombyx into two

sections, viz. attaci, and bom byces properly so called.

2. Geametra. Antennae filiform ; feelers cy- lindrical ; tongue projected, membranaceous, setaceous, bifid ; the larva is from eight to ten- footed, six of which are pectoral, two caudal, and sometimes two sub-caudal ; the pupa is pointed at the tip.

fa. Antennae pectinate.

Subdivisions. < b. setaceous.

v.c. Wings forked.

3. Noctua. Antennsa setaceous ; feelers com- pressed, hairy ; the tip cylindrical and naked ; tongue projectins, horny, setaceous, bifid; larva sixteen-footed ; pupa pointed at the tip.

ra. Wings expanded. >•< 4

e i,j- \b. — – — flat incumbent, thorax smooth. Subdi- /

< c. , crested.

s- i d. deflected, thorax smooth.

ve. , crested.

4. Hyblea. Antennas setaceous ; feelers pro- jecting, compressed, dilated in the middle ; the lip is projecting and acute.

5. Hepialus. Antennae moniliform ; feelers two, reflected, hairy, between which is the rudi- ment of a bifid tongue ; the larva is sixteen-footed, feeding on the roots of plants ; the pupa is folli- culate, cylindrical, and pointed at the tip.

6. Cossus. Antennae short, filiform ; two feelers, very short, cylindrical, reflected.

7. Pyralis. Antennae filiform ; the insects of this division have likewise two feelers, which are equal and almost naked ; they are cylindrical at the base, the middle is dilated into an oval, and subulate at the tip ; the tongue is projected, se- taceous, and bifid ; the wings are very obtuse, and slightly curved at the exterior margin ; the

larva is sixteen-footed, and rolling up the leaves to which it attaches itself.

8. Tinea. Antennae setaceous ; four feelers, which are unequal ; the larva is found in houses among linen and woollen cloths, and furniture, in which it eats holes, and to which it is very de- structive.

9. Alucita. Antennae setaceous ; two feelers, that are divided as far as the middle ; the inner division is very acute.

10. Pteroplimiis. Antennse setaceous ; two feelers, that are linear and naked ; the tongue is excerted, membranaceous, and bifid ; the wings are fan-shaped, divided down to the base, and generally subdivided as far as the middle ; the larva is sixteen-footed, ovate, and hairy ; the pupa is naked, and subulate at the tip.

To describe the species would be impossible; but we shall mention a few.

1. P. alucita pentadactyla. The eyes of this species are black ; the body is of a pale yellow. The wings are snow white, and the insect keeps them stretched asunder when at rest. The su- perior are divided in two, or rather appeai; com- posed of two stumps of birds' feathers united at the base. The inferior ones are likewise divided into three threads or bristles, which are furnish- ed on both sides with fine fringes. The cater- pillar is of a green color, dotted with black, and charged with a few hairs. It feeds upon grass, changes to a chrysalis about September, and ap- pears a moth in August, frequenting woods.

2. P. attaca pavonia minor. The wings of this insect, says Barbut, are brown, undulated, and variegated, having some gray in the middle, and a margin one line broad ; in its color yel- lowish-gray. The under part has more of the gray cast, but the extremities of the wings be- fore the margin have a broad band of brown. The four wings, both above and beneath, have each a large eye, which eyes are black, encom- passed with a dun-colored circle, and above that with a semicircle of white, then another of red, and lastly the eye is terminated by a whole cir- cle of black. Across the middle of the eye is drawn transversely a small whitish line. The caterpillar is green, has sixteen feet with rose color tubercula, charged with long hairs termi- nated by a small knob; besides which it has dun-color or reddish rings. It is found upon fruit-trees.

3. P. noctua elinguis humuli. In this species the wings of the male are

of a snowy white ; of' the female yellowish, with streaks of a deeper hue ; the shoulders, abdomen, &c., in both sexes are deep yellow. The antennae are pectinated and shorter than the thorax. The caterpillar feeds upon the roots of burdock, hops, &c., changes into a chrysalis in May, appears in the winged state in June, frequenting low marshy grounds where hops grow.

4. P. noctua pronuba spirilinguis. The tho- rax, head, antennae, feetj and upper wings, are of a brown color, more or less dark, sometimes so deep as to be nearly black, but often of a bluish cast. The upper wings are moreover somewhat clouded, and have two black spots on the middle, the other towards the outward angle of the lower part of the wing. The under

ones are of a beautiful orange color, with a broad black band near the lower edge of the whig, of which it follows the direction. The caterpillar is smooth ; to be found on several plants, but par- ticularly upon the thlaspi and some other crucifer- ous plants. It keeps in concealment during the day, and only feeds by night. Its metamorpho- sis is performed under ground, and some varie- ties of color are observable amongst these cater- pillars ; some being green, others brown ; which latter yield males, the former females.

5. P. pentadactyla. Body and wings snowy; upper pair bifid, lower ones three parted. The larva of this species is sixteen-footed, hairy, green, with black dots, and a white dorsal line ; the pupa is hairy, green, dotted with black. It appears in August. Its larva feeds on nettles.

6. P. hexadactyla. Wings cleft, cinereous, spotted with brown ; all of them are six-parted This species is found on the lonicera xylosteum, or honey-suckle ; it is a very elegant and beau- tiful insect, and often flies into the house in the evening; it makes its appearance in the month of September. It has been called by English collectors the twenty-plumed moth.

PHAL#,SIA, a town of Arcadia. Paus. 8.

PHALANGIUM, in zoology, a genus of in- sects belonging to the order of aptera. They have eight feet, two eyes on the top of the head placed very near each other, and other two on the sides of the head : the feelers resemble legs, and the belly is round. There are nine species ; we submit the following, viz. : — •

P. opilis of Linnaeus. Its body is roundish, of a dusky brown on the

back, with a duskier spot of a rhomboidal figure near the middle of it. The belly is whitish ; the legs are extremely long and slender. On the back part of the head there stands a little eminence, which has on it a kind of double crest, formed as it were of a number of minute spines; the eyes are small and black, and are two in number. It is com- monly called the shepherd spider. This species of spider multiplies singularly. They are great spinners. In autumn the stubble is quite co- vered with the threads of these spiders, by means of which they travel with ease, and en- snare their prey. However, those threads are thought rather to be the produce of a species of tick called autumnal weaver. A small degree of attention discovers an amazing multitude of those ticks almost imperceptible, and that is their work. The threads, when united, appear of a beautiful white, wave about in the air, and are known in the country by the name of virgin's threads. Some naturalists think that the threads floating in the air serve the insect as sails to waft it through the air, and as a net to entrap insects on the wing ; for remnants of prey, say they, are discoverable in them. As to those parcels in which nothing is seen, they are only essays rejected by those travelling insects. The analogy -between the phalangium and the crab, and the facility with which it parts with its legs to save the rest of the body, has raised a presumption that its legs might grow again as do those of the crabs and lobsters.

PHALANGOSIS, in surgery, a tumor and relaxation of the eye-lids, often so great as to

deform the eye, and considerably to impede vision. Sometimes the eye-lid when in this state subsides or sinks down, occasioned per- haps either by a palsy of the muscle which sus- tains and elevates the eye-lid, or else from a relaxation of the cutis above, from various causes. Sometimes an cedematous or aqueous tumor is formed on the eye-lids, so as almost entirely to exclude vision ; but this last case should be distinguished from the other, and may be easily remedied by the use of internal and topical medicines, such as purges and diuretics given inwardly, and a compress dipped in warm spirit of wine and lime water. But in the paralytic or relaxed case, the use of cordial and nervous medicines must be proposed internally; and outwardly balsam of Peru and Hungary water are to be employed. If all these fail, the remaining method of cure is to extirpate a suf- ficient quantity of the

relaxed cutis ; and then, after healing up the wound, the remainder will be sufficiently shortened.

PHALANNA, a town of Thessaly. Liv. 42. c. 54.

PHALANTHUS, a Spartan, the son of Ara- cus, and leader of the Parthenii, who founded Tarentum, in Italy. He was shipwrecked on the coast, but was carried ashore by a dolphin.

PHALANTHUS, a town and mountain of Arca- dia. Paus. viii. 35.

PHA'LANX, n. s. Fr. phalange ; Lat. pha- lanx. A troop of closely embodied men.

Here Tilus found an extreme difficult piece of work. For this phalanx, being a great square battle of armed pikes, was not to be resisted by the Roman targetiers, as long as the phalanx itself held together undissolved. Raleigh.

Far otherwise the inviolable saints, In cubic phalanx firm, advanced entire, •

Invulnerable, impenetrably armed. Milton.

The Grecian phalanx, moveless as a tower, On all sides battered, yet resists his power. Pope.

A stately superstructure, that nor wind, Nor wave, nor shock of falling years could move ; Majestic and indissolubly firm ! As ranks of veteran warriors in the field, Each by himself alone and singly seen, A tower of strength ; in massy phalanx knit, And in embattled squadron rushing on, A sea of valour, dread, invincible. Pollok.

PHALANX, in Grecian antiquity, a square battalion of soldiers, with their shields joined, and pikes crossing each other, so that it was next to impossible to break it. The Macedonian pha- lanx is supposed to have had the advantage in valor and strength over the Roman legion. It consisted of 16.000 men, of whom 1000 marched abreast, and thus was sixteen men deep, each of •whom carried a kind of pike twenty-three feet long. The soldiers stood so close that the pikes of the fifth rank reached their points beyond the front of the battle. The hindermost ranks lean- ed their pikes on the shoulders of those who went before them, and, locking them fast, press- ed briskly against them when they made the charge ; so that the first five ranks had the im- petus of the whole phalanx, which was the reason why the shock was generally irresist- ible. But the word phalanx was also used for a

party of twenty-eight, and several other num- bers ; and even sometimes for the whole body of foot. See LEGION.

PHALANX is applied by anatomists to the three rows of small bones which form the fingers.

PHALANX, in natural history, is a term which Dr. Woodward and some other writers of fossils have used to express an arrangement of the columns of that sort of fossil coralloid body found frequently in Wales, and called lithostro- tion. In the great variety of specimens we find of this, some have the whole phalanx of columns cracked through, and others only a few of the external ones; but these cracks never remain empty, but are found filled up with a white spar, as the smaller cracks of stone usually are. This is not wonderful, as there is much spar in the composition of this fossil ; and it is easily wash- ed out of the general mass to fill up these cracks, and is then always found pure, and therefore of its natural color, white. The lithos- tration, or general congeries of these phalanges of columns, is commonly found immersed in a gray stone, and found on the tops of the rocky cliffs about Milford in Wales. It is usually erect, though somewhat inclining in some spe- cimens, but never lies horizontal. It seems to have been all white at first, but to have been since gradually tinctured with the matter of the stone in which it lies. The single columns, which form each phalanx, are usually round or cylindric, though sometimes flatted and bent; some of them are also naturally of an angular figure; these, however, are not regular in the number of their angles, some consisting of three sides, some of five, and some of seven; some are hexangular also, but these are scarce. They are from five or six to sixteen inches in length; and the largest are nearly half an inch over, the least about a quarter of an inch ; the greater number are very equal to one another in size; but, the sides of the columns being une- qual, the same column measures of a different thickness when measured different ways; the phalanges or congeries of these are sometimes of a foot or more in diameter. The columns are often burst, as if they had been affected by external injuries; and it is evident that they were not formed before several other of the ex- traneous fossils ; for there are found sometimes shells of sea fishes and entrochi immersed and bedded in the bodies of the columns. It ap- pears plainly hence that when these bodies were washed out of the sea, and tossed about in the waters which then covered the tops of these cliffs, this elegant fossil, together with the stony bed in which it is contained, were so soft that those other bodies found entrance into their very substance, and they were formed as it were upon them. This fossil takes an elegant polish, and makes in that state a very beautiful appearance, being of the hardness of the common white marble, and

carrying the elegant structure visi- ble in the smallest lineaments.

PHALARICA, in ancient warfare, was a javelin or long dart, of a particular construction, used by the inhabitants of Saguntum, when they so valiantly stood the siege of it. It was very thick, and had a sharp piec2 of iron, four feet

long attached to it. It was used either as a weapon of close attack and defence, or as a fire- arm ; being, in the latter case, wrapped up in tow and pitch, and, when set fire to, cast out of the balista against the enemy's wooden towers and other machines, for the purpose of con- suming them. They were sent with so much force that they pierced through armed bodies of men.

PHALARIS, a remarkable tyrant, born at Crete, where his ambitious designs occasioned his banishment ; he took refuge in Agrigentum, a free city of Sicily, and there obtained the supreme power by stratagem. What has chiefly contributed to preserve his name is his cruelty ; in one act of which, however, he acted with strict justice. Perillus, a brass founder at Athens, knowing his disposition, invented a new mode of torture. He made a brazen bull, hollow within, bigger than the life, with a door in the side to admit the victims ; who being shut up in it, a fire was kindled under it, to roast them to death ; and the throat was so contrived that their dying groans resembled the roaring of a bull. The artist brought it to the tyrant, in hopes of a great reward. Phalaris admired the invention, but ordered the inventor to be put into it, to make the first trial. The end of this detestable tyrant is differently related ; but it is very gene- rally believed, with Cicero, that he fell by the hands of the Agrigentines ; and, as some sup- pose, at the instigation of Pythagoras. Ovid tells us that his tongue was cut out ; and that he was then put into the brazen bull. He reigned, Eusebius says, twenty-eight years.

PHALARIS, Canary grass, in botany, a genus of the trigynia order, belonging to the triandria class of plants : CAL. bivalved, carinated, and equal in length, containing the corolla. There are ten species, of which the most remarkable are,

1. P. arundinacea, the reed Canary grass ; and

2. P. Canariensis, the manured Canary grass. These are both natives of Britain. The first grows by the road sides; and is frequently cul- tivated for the sake of the seeds, which are found to be the best food for the Canary and other small birds. The second grows on the banks of rivers. It is used for thatching ricks or cot- tages, and endures much longer than straw. In Scandinavia they mow it twice a-year, and their cattle eat it. There is a variety of this cultivated in our gardens with beautifully striped leaves. The stripes are generally green and white; but sometimes they have a purplish cast. This is commonly called painted lady grass, er ladies' tresses.

PHALARIUM, a citadel of Syracuse, where Phalaris's bull was kept.

PHALARUS, a river of Boeotia, running into the Cephisus.

PHALERJE, among the ancient Romans, were military rewards bestowed for some signal act of bravery. Authors do not agree whether the Phalerae were a suit of rich trappings for a horse, or golden chains something like the torques, but so formed as to hang down to the breast and display a greater profusion of orna- ment. The last opinion prevails, but perhaps both are true.

PHALEREUS, a village and port of Athens; this last is neither large nor commodious, for which reason Themistocles put the Athenians on building the Piraeus ; both joined to Athens by long walls (Nepos). The Phalareus lay nearer the city (Pausanias). Demetrius Phalereus was of this place. See DEMETRIUS.

PIIALERIA, a town of Thessaly.

PIIALERON, PHALERUM, names given the Phalereus Portus of Athens. See PHALEREUS.

PHALEUCIAN VERSE, in ancient poetry, a kind of verse consisting of five feet; the first of which is a spondee, the second a dactyl, and the last three trochees.

PHALEUCUS, a Roman poet, who invented the phaleucian verse.

PHALL1CA, festivals observed by the Egyp- tians in honor of Osiris, the name is derived from $a\Xoe, simulacrum ligneum membri viri- lis. See PHALLUS.

PHALLOPHORI, persons who carried the phallus at the end of a long pole, at the festivals of the PH ALLICA. See last article, and PHALLUS. They appeared among the Greeks, besmeared with the dregs of wine,

covered with the skins of lambs, and wearing a crown of ivy.

PHALLUS, the morel, in botany, a genus of the order of fungi, belonging to the cryptogamia class of plants. The fungus is reticulated above, and smooth below. There are two species.

1. P. esculentus, the esculent morel, is a na- tive of Britain, growing in woods, groves, mea- dows, pastures, &cc. The substance, when recent, is wax-like and friable ; the color a whitish yel- low, turning brownish in decay ; the height of the whole fungus about four or five inches. The stalk is thick and clumsy, somewhat tuberous at the base, and hollow in the middle. The pileus is either round or conical ; at a medium, about the size of an egg, often much larger ; hollow within ; its base united to the stalk ; and its sur- face cellular, or latticed with irregular sinuses. The magnified seeds are oval. It is much esteemed at table both recent and dried, being commonly used as an ingredient to heighten the flavor of ragouts. We are informed by Gleditsch that morels are observed to grow in the woods of Germany in the greatest plenty in those places where charcoal has been made. Hence the good women who collect them to sell, receiving a hint how to encourage their growth, have been accustomed to make fires in certain places of the woods, with heath, broom, vaccinium, and other materials, in order to obtain a more plentiful crop. This strange method of cultivating morels being however sometimes attended with dreadful consequences, large woods having been set on fire and destroyed by it, the magistrate thought fit to interpose his authority, and the practice is now interdicted.

2. P. impudicus, stinking morel, or stinkhorn, is also a native of Britain, and found in woods and on banks. It arises from the earth under a veil or volva, shaped exactly like a hen’s egg, and of the same color, having a long fibrous ra- dicle at its base. This egg-like volva is composed of two coats or membranes, the space between which is full of a thick, viscid, transparent mat- ter, which, when dry, glues the coats together,.

and shines like varnish. In the next stage of growth, the volva suddenly bursts into several lacerated permanent segments, from the centre of which arises an erect, white, cellular hollow stalk, about five

or six inches high, and one thick, of a wax-like friable substance, and most fetid cadaverous smell, conical at each end, the base inserted in a white, concave, membranaceous turbinated cup, and the summit capped with a hollow, conical pileus, an inch long, having a reticulated cellular surface ; its base detached from the stalk, and its summit umbilicated, the umbilicus sometimes perforated, and sometimes closed. The under side of this pileus is covered with a clear, viscid, gelatinous matter, similar to that found between the membranes of the volva ; and under this viscid matter, concealed in reti- culated receptacles, are found the seeds, which •when magnified appear spherical. As soon as the volva bursts, the plant begins to diffuse its intolerable odors, which are so powerful and widely expanded, that the fungus may be readily discovered by the scent only, before it appears to the sight. At this time the viscid matter be- tween the coats of the volva grows turbid and fuscous ; and, when the plant attains its full ma- turity, the clear viscid substance in the pileus becomes gradually discolored, putrid, and ex- tremely fetid, and soon afterwards turns black- ish, and, together with the seeds and internal part of the pileus itself, melts away. The fetid smell then begins to remit, the fungus fades, and continues for a short time sapless and coriaceous, and at last becomes the food of worms. The cadaverous scent of this fungus greatly allures the Hies ; which, lighting upon the pileus, are entrapped in the viscid matter, and perish. We .ire informed by Gleditsch, that the people in Thuringia call the unopened volvae by the ridi- culous name of ghosts and daemon's eggs ; and that they collect and dry them either in the smoke or open air, and, when reduced to powder, use them in a glass of spirits as an aphrodisiac.

PHALLUS, among the Egyptians, was the em- blem of fecundity. It was very fervently wor- shipped by women, especially by those who were barren. This custom was introduced among the Greeks, and festivals in honor of it were called phallica, or phaluca. See MYSTERIES. Among the Hindoos a similar emblem called lingam is used, and for similar purposes. See HINDOOS.

PHALOS, a term sometimes applied to an ornament placed at the head of the casque of ancient warriors. The Greek Xoˆog, and the Latin words crista and juba, have each been applied to ornaments of this description.

PHAN./EUS, a promontory of Chios, famous for its wines. Liv. xxxvi. c. 43.

PHANAR, a suburb of Constantinople, north- east of the city, towards the sea. Here reside a number of respectable Greek families, the Greek

patriarch, &c.

. PHAN ES, a native of Halicarnassus, who was commander of the Grecian auxiliaries, sent to assist Amasis king of Egypt, whom he deserted. See EGYPT.

PHANETA, a town of Epirus. Liv. xxxii. e 28.

PHANOCLES, an ancient elegiac poet of

Greece, who wrote a poem upon an unnatural crime, wherein he supposes that Orpheus was the first who practised it. Some fragments of his poems are extant.

PHANODEMUS, an ancient Greek historian, who wrote on the antiquities of Attica

PliANTASIA, the daughter of Nicarchus of Memphis, in Egypt. It has been said that she wrote a poem on the Trojan war, and another on the return of Ulysses to Ithaca, from which com- positions Homer copied the greatest part of his Iliad and Odyssey, when he visited Memphis, where they were deposited.

PHANTASM, n. s.\ Fr. phantasme, plian PHAITTAS'MA, ttasie; Gr. ˆavraaˆa,

PHANTAS'TICAL, ?PHANTAS'TIC. J pearance ; something

appearing only to the imagination. See FAN- TASTICAL.

All the interim is Like a phantasm or a hideous dream.

Shakspeare. This Armado is a Spaniard that keeps here in

court

A phantasm, a monarcho, and one that makes sport To the prince and his book-mates. Id.

They believe, and they believe amiss, because they be but phantasms or apparitions.

Raleigh's History.

If the great ones were in forwardness, the people were in fury, entertaining this airy body or phantasm with incredible affection; partly out of their great devotion to the house of York, partly out of

proud humour. Bacon’s Henry VII.

Why,

In this infernal vale first met, thou callest Me father, and that phantasm callest my son.

Milton.

Assaying, by his devilish art, to reach The organs of her fancy, and with them forge Illusions, as he list, phantasms and dreams. Id. Jesus, in performing his cures and other miracu- lous works, did never use any profane, silly phantas- tic ceremonies. Barrow.

PHANTASM is also sometimes used in a synony- mous sense with idea, or notion retained in the mind, of an external object. Locke, who uses this word frequently, tells us that he means the same thing by it as is commonly meant by spe- cies or phantasm. Gassendi, from whom Locke borrowed more than from any other author, says the same. The words species and phantasm are terms of art in the Peripatetic system, and from this we are to learn the meaning of them.

PHANTASY, or FANCY, the imagination, sometimes called the second of the powers or faculties of the soul, by which the species of objects received by the external organs of sense are retained, recalled, further examined, and either compounded or divided. See IMAGINA- TION. Others define the phantasy to be that internal sense or power whereby the ideas of absent things are formed, and represented to the mind as if they were present.

PHANTOM, n. s. Fr. phuntome. A spectre ; an apparition ; visionary appearance.

If he cannot help believing that such things he saw and heard, he may still have room to believe that what this airy phantrm said is not absolutely to be relied on. Jtt-rbury.

PHA

As Pallas will’d, along the sable skies, To calm the queen, the phantom sister flies.

no

PHA

Pope. A constant vapour o'er the palace, flies ;

Strange phantoms rising as the mists arise ;

Dreadful as hermits' dreams in haunted shades,

Or bright as visions of expiring maids. Id.

Restless and impatient to try every overture of present happiness, he hunts a phantom he can never overtake. Rogers.

Bliss ! sublunary bliss — proud words, and vain ! Implicit treason to divine decree ! A bold invasion of the rights of heaven ! I clasped the phantoms, and I found them air.

Young.

Then grace the bony phantom in their stead With the king's shoulderknot and gay cockade ; Clothe the twin brethren in each other's dress, The same their occupation and success. Covper.

PHANUEL, of the tribe of Asher, the father of the prophetess Anna. See ANNA, and Luke ii. 36—38.

PilAON, in fabulous history, a young man of Mytilene, in the island of Lesbos, who received from Venus an alabaster vase filled with an essence which had the virtue of conferring beauty. Ke had no sooner anointed his body with it than he became the most beautiful of men. The ladies of Mytilene fell desperately in love with him ; and the celebrated Sappho threw herself down a. precipice, because he would not encou- rage her passion. He is said to have been killed by a husband who surprised him with his wife. Ovid, in his Epistles, gives a letter from Sappho to Phaon, which Pope has translated into Eng lish verse.

PHARA, in ancient geography, a village be- tween Egypt and Arabia Petraea; or, according to Ptolemy, at a promontory situated between the Sinus Heroopolites and Elaniticus of the Red Sea ; where Ishmael is said to have dwelt. In Hebrew it is Paran, and in most interpreters ; Pharan in the Septuagint and Vulgate.

PHARACYDES, a commander of the Spar- tan fleet, who assisted Dionysius, tyrant of Syra- cuse, against the Carthaginians. — Polyaen. 2.

PHAR/E, in ancient geography, three towns, viz. 1. A town of Achaia,

in Peloponnesus, on the Pierus, seventy stadia from the sea, and 1 50 south of Patrae. 2. In Crete (Pliny), a colony from the Pharae of Messenia. — 2-tejphanus. 3. Pharae, or Pherae (Strabo, Ptolemy), or.Phara (Polybius), a town of Messenia, on the Nedo (Strabo), on the north side of the Sinus Messe- nius, and north-west of Abea ; anciently read Pharis in Homer (Pausanias, Statius), though now read Phare.

PHARAMOND, the first king of France. He is said to have reigned at Treves, and over a part of France, about A. D. 420, and to have been succeeded by his son Clodio. See FRANCE. The institution of the famous Salique law is generally attributed to him.

PHARAN, or PARAN, the name of the wil- derness in the neighbourhood of Phara, adjoining to Kadesh. Also a town of Arabia Petraea, o-i the Gulf of Suez, formerly a bishop's see, but now much decayed ; forty miles north of Tor.

PHARANim, the natives of Pharae.— Pto- lemy.

PHARAOH, Heb. njr>£>, i. e. making bare, * common name of the kings of Egypt. Josephus says that in the Egyptian language the word Pharaoh signifies a king ; and that those princes did not assume this name till they ascended the throne, when they quitted also their former name. There are ten monarchs of this name mentioned in Scripture, viz.

1. PHARAOH, in whose time Abraham went down to Egypt, when Sarah, who passed only for Abraham's sister, was, by the command of Pharaoh, brought to his palace to become his wife. See ABRAHAM and SARAH.

2. PHARAOH, who reigned when Joseph ar- rived in Egypt. See JOSEPH and JACOB.

3. PHARAOH, who persecuted the Israelites, and published a decree that all the male children born of Hebrew women should be thrown into the Nile.

4. PHARAOH, before whom Moses performed many miracles, and in whose sight Egypt was visited with ten dreadful plagues. Exod. vii — x. This Pharaoh having at last been compelled to send away the Hebrews, and to suffer them to go out of Egypt, repented of the leave he had given, and pursued them at the head of his army with his chariots. But he was drowned in the Red Sea, wherein he had rashly entered in the eagerness of his pursuit. Exod. xiv. Some historians give us the name of this Pharaoh: Appion calls him Amasis ; Eusebius calls

him Chenchris ; Usher calls him Amenophis.

5. PHARAOH, who gave protection to Hadad, son of the king of Edom, who gave him to wife the sister of his own queen, enriched him with lands, and brought up his son Genubah in his own court. 1 Kings xi. 17 — 22.

6. PHARAOH, who gave his daughter in mar- riage to Solomon (1 Kings iii. 1) : having taken Gezer, set it on fire, drove the Canaanites out of it, and gave it for a present to Solomon, in lieu of a dowry for his daughter. 1 Kings ix. 16.

7. PHARAOH, or Shishak, who entertained Je- roboam in his dominions when he fled from Solomon. He also declared war against Reho- boam, besieged and took Jerusalem, carried away the king's treasures, and those of the house of God, particularly the golden bucklers that Solomon had made. Some think he was the brother of Solomon's queen, and did this to avenge the neglect of his sister by Solomon. See EGYPT, SHISHAK, aand 1 Kings xiv. 25 — 29.

8. PHARAOH, with whom Hezekiah made a league against Sennacherib, king of Assyria, A. M. 3290. See SENNACHERIB. He is proba- bly the same whom Herodotus names Sethon, priest of Vulcan, who came to meet Sennacherib before Pelusium, and to whose assistance Vulcan was believed to have sent an army of rats, which gnawed the bow-strings and the thongs of the bucklers of Sennacherib's soldiers. See EGYPT.

9. PHARAOH NECHO, or Nechos, son of Psam- miticus, who made war with Josiah, and sub- dued him. See 2 Chron. xxxv. 20 — 24. Hero- dotus also mentions this prince. See EGYPT and NECHO II.

10. PHARAOH HOPHRAH, who entered into an alliance with Zedekiah king of Judah, and at- tempted to assist him against Nebuchadnezzar

king of Chaldea. Against this Pharaoh Ezekiel pronounced several of his prophecies. See Ezek.. xxix. xxx. He is called Apries in Hero- dotus, I. ii. c. 161. He is also mentioned in Habakkuk ii. 15, 16. See also Isaiah xix. 11, and Jeremiah xlvi, 16, &c. See APRIES and EGYPT.

PHARAON, or FARO, is the name of a game of chance, the principal rules of which are : the banker holds a pack consisting of fifty- two cards ; he draws all the cards one after the other, and lays them down alternately at his right and left hand ; then the ponte may at his pleasure set one or more stakes upon one or more cards, either before the banker has begun to draw the cards, or after he has drawn any number of couples. The banker wins the stake of the ponte when the card of the ponte comes out in an odd place on his right hand, but loses as much to the ponte when it comes out in an even place on his left hand. The banker wins half the ponte's stake when it happens to be twice in one couple. When the card of the ponte, being but once in the stock, happens to be last, the ponte neither wins nor loses ; and the card of the ponte being but twice in the stock, and the last couple con- taining his card twice, he then loses his whole stake.

De Moivre has shown how to find the gain of the banker in any circumstance of cards remain- ing in the stock, and of the number of times that the ponte's card is contained in it. Of this problem he enumerates four cases, viz. when the ponte's card is once, twice, three, or four times in the stock. In the first case, the gain of the banker

is — , n being the number of cards in the stock.

In the second case his gain is 2 \n x 1

(ft _ 2) x

-f

n X (n—\)' n x (n— 1) In the third case his gain is –

»(n— 1) supposing _y~ J

3*

or

supposing y

• , X (ji — 1)

In the fourth

- -,

71 X \^ *)

case the gain of the bamter, or the loss of the

2n — 5 2n — 5

P°nte > 1S („_!) x (n-3f °r2x(n-l)X(«-3) supposing y — £ . De Moivre has calculated a table, exhibiting this gain or loss for any particu- lar circumstances of the play ; and he observes that at this play the least disadvantage of the ponte, under the same circumstances of cards remaining in the stock, is when the card of the ponte is but twice in it ; the next greater when three times, the next when once, and the greatest when four times. He has also demonstrated that the whole gain per cent, of the banker, upon all the money that is adventured at this game, is £2 19s. lOd. See Le Moivre's Doctrine of Chances, page 77, &c.

PHAREZ, son of Judah and Tamar (Gen. xxxviii. 27, 28, &c.), so named from the circum- stance attending his birth, by his mother Pharez, i. e.one breaking forth. His sons are mentioned in Numb. xxvi. 20, 21 ; and his posterity down to Joseph and Mary, in Matt, i., and Luke iii.

PHAREZITES, the descendants of Pharez.

PHARL A valley and fortress in the southern part of Tibet, near the Bootan frontier, named also Parry Jeungh and Parisdong. Lat. 27° 58° N., long. 89° 1′ E.

The valley of Phari is extensive ; and tne sta- tion of the Phari lama, who is here a sort of prince, being superintendant of a goombah or monastery, and governor of an extensive tract of rocks and deserts, which yield verdure only dur- ing the mildest season of the year; at which time this neighbourhood is frequented by large herds of long haired cattle. The musk-deer are also found in great abundance here. There are also partridges, pheasants, quails, and a great multi- tude of foxes. Winter may be said perpetually to reign in this fortress; the mountain Chumu- lari is for ever clothed with snow, and from its remarkable form is probably that which is occa- sionally visible from Phurneah and Rajemall. In the vicinity wheat does not ripen, yet it is some- times cultivated as forage for cattle. Such is the intensity of the coldliere, although in so low a latitude as 28° N., that animals exposed in the open fields are sometimes found dead with their heads split open by frost. In 1792 the Chinese established a military post at this place. The fortress is of an irregular form, but deemed of great strength. On the north-west is an extensive suburb, and on the south a large basin of water. .

PHARIS, a town of Laconia. — Paus. iii. c. 10.

PHARISAICAL, adj.) From Pharisee;

PHARISAISM, n. s. $ Heb. 0~\s to sepa- rate. Ritual ; externally religious.

The causes of superstition are pleasing and sen- sual rites, excess of outward and pharisaicul holine , over-great reverence of traditions, which cannot but load the church. Bacon.

.Suffer us not to be deluded with pharisaical wash- ings instead of Christian reformings. King Charles.

St. Jerome, whom they fondly term their cardinal, compares some popish fashions pf his time with the Pharisaical. Bp. Hull.

To some, Pharisaism seems rather a several order thana sect. /^

PHARISAISM. Serrarius places the origin of Pharisaism about the time of Ezra; Maldonat makes it only to have arisen a short time before our Saviour's birth. Others, with more probabi- lity than either, refer it to the time of the Mac- cabees.

PHARISEES, a famous sect of the Jews, who distinguished themselves by their zeal for the traditions of the elders, which, they pre- tended, were delivered to Moses from Mount Sinai along with the law, and therefore both were of equal authority. From their rigorous observ- ance of these traditions, they looked upon them- selves as more holy than other men, and therefore separated themselves from those whom they thought sinners or profane, so as not to eat o'r drink with them; and hence from the Hebrew word 013, i. e. to separate, they had the name of Pharisees or Separatists. This sect was one of the most ancient and most considerable among the Jews ; but its original is not well known. Ser- rarius places their rise about the time of Esdras, because it was then that the Jews first began to have interpreters of their traditions. Maldonet,

on the other hand, thinks it cannot have arisen among the Jews till a little before the time of Christ. Others, perhaps with more probability,

refer the origin of the Pharisees to the time of the Maccabees. Dr. Lightfoot contends, that Pharisaism rose up gradually, from a period which he does not assign, to the maturity of a sect ; and it is certain from Josephus, that in the time of John Hyrcanus, the high-priest and prince of the Asmonean line, about 108 years before Christ, this sect was not only formed, but made a considerable figure ; as also that it had ad- vanced to a high degree of popularity and power about eighty years before Christ. Calmet places their origin about A. M. 3820, B. C. 184. Ac- cording to Basnage, Aristobulus, an Alexandrian Jew, and a Peripatetic philosopher, who flou- rished about 125 years before Christ, and wrote some allegorical commentaries on the Scripture, •was the author of those traditions, by an ad- herence to which the Pharisees were principally distinguished.

This sect was in great repute in the time of our Saviour. They held a resurrection of the body, and supposed a certain bone to remain uncorrupted, to furnish the matter of which the resurrection body was to be formed. They did not, how- ever, believe that all mankind were to be raised from the dead. A resurrection was the privilege of the children of Abraham alone, who were all to rise on Mount Zion ; their incorruptible bones, wherever they might be buried, being carried to that mountain below the surface of the earth. The state of future felicity in which the Phari- sees believed was very gross : they imagined that men in the next world, as well as in the present, were to eat and drink, and enjoy the pleasures of love, each being re-united to his former wife. Hence the objection stated by the Sadducees, which our Saviour so satisfactorily refuted. — See Matt. xxii. 23 — 33. The Pharisees seem to have had some confused notions, probably derived from the Chaldeans and Persians, respecting the pre-existence of souls ; and hence Christ's dis- ciples asked hLn concerning the blind man. — See John ix. 2. \Vith the Essenes, they held abso- lute predestination ; and with the Sadducees, free-will ; but how they reconciled these seem- ingly incompatible doctrines is no where ex- plained. The sect of the Pharisees was not extinguished by the ruin of the Jewish common- wealth. The greatest part of the modern Jews

are still of this sect ; being as much devoted to traditions or the oral law as their ancestors were. See KARAITES, ESSENES, SADDUCEES, &c.

PHARHVE, people of Pharis. See PHARJE.

PHARMACA, among the ancients, meant me- dicated or enchanted compositions of herbs, mi- nerals, &c., some of which, when taken inwardly, were supposed to cause blindness, madness, love, &c. ;

others infected by touch ; such was the garment sent by Medea to Creusa, prepared se- cundum artem ; and others operated upon persons at a distance. Pharmaca soteria were employed as antidotes against these mischievous compositions : thus the herb moly preserved Ulysses from the magical influence of Circe. The laurel, the rhamnus, the flea-bane, the jasper- stone, were used for similar purposes. See Potter's Graec. Ant.

PHARMACI, in antiquity, were two persons who were employed in the lustration or purifica- tion of cities. Some say they were both men ; but others maintain that a man to represent the males, and a woman to represent the females, performed this office. They performed sacrifice, and wore figs about their necks called oXicaˆjjc ; those of the man were blackish, and those of the woman white. Figs were an emblem of fertility.

PHARMACITIS. See AMPELITES.

PHARMACO-CHEMIA, a branch of the chemical art, which treats of the preparation of medicines. It is so named by way of distinction from Spagarico-chemia, a species of chemistry wholly employed about the transmutation of me- tals by the philosopher's stone.

PHARMACOPCEIA, (from Greek ˆJUIKOV remedy, and TTOUIV to make), means a treatise de- scribing the preparations of medicines, with their uses, manner of application, &c. We have va- rious pharmacopoeias, as those of Bauderon, Quercetan, Zwelfer, Charas, Bates, Salmon, Le- mery, Lewis, &c. The latest and most in esteem are the Edinburgh and London dispensatories. See PHARMACY.

PHARMACOPCEIUS, or PHARMACOPOLA, an apothecary ; or a person who prepares and sells medicines. See APOTHECARY. The word is seldom used but by way of ridicule. It is from Greek ˆapˆaicov and iru\uv to sell. See Horace, Satire 2, lib. i. ver. i.

PHARMACUM. Greek 0ap/zaicov. A me- dicament or medicine ; whether of a salutary or poisonous (uality

PHARMACEUTIC, adj.ˆ Or. PHARMACEU'TICAL, rt/coe,

PHARMACOL'OGIST, n. s. ˆ and Xtyo ; apfia- PHARMACOPCE'IA, j KOV and iroiiut

PHARMACOP’OLIST, ! (Yr.pharmacopie)

PHAR’MACY. J Qappcueov and

tw, appa.Kov (Fr. pharmacie). All from 0ap- fiaKov, a medicine. Pharmaceutic and pharma- ceutical are, relating to the knowledge or prepara- tion of medicines : pharmacologist, one who •writes upon drugs or medicines : pharmacopoeia, a dispensatory or book containing rules for mak- ing or compounding medicines : pharmacopolist, one who sells them : pharmacy, the art or prac- tice of preparing medicines. See below.

Each dose the goddess weighs with watchful eye, So nice her art in impious pharmacy. Garth.

The osteocolla is recommended by the pharmacolo- gists as an absorbent and conglutinator of broken bones. Woodward on Fossils.

PART I.

PHARMACY may be denned the art of pre- paring, combining, compounding, and preserv- ing, those substances which are employed in medicine.

Authors who treat of it usually commence their disquisition by engaging in the considera- tion of chemical principles. Thus the table of arrangement presented by one of the most mo- dern and able writers on the science in question is as follows : —

SECT. I. — Of the more general agents influ- encing pharmaceutical combinations, including 1. Attraction; a. attraction of aggregation ; b. chemical attraction or affinity ; 2. Repulsion. Powers by which it is produced : caloric, light, electricity, and galvanism.

SECT. II. — Of the constitution and combinations of substances. 1. Of solids. 2. Of fluids. 3. Of aeriform substances or gases.

SECT. III. — Of pharmaceutical operations, and the description of the apparatus.

This arrangement of Dr. Thomson is exceed- ingly perspicuous, and calculated to convey just notions of the principles of the science ; but, as the subjects of the two first sections have been considered under the head of CHEMISTRY, we refer our readers to that article, and proceed di- rectly to the more immediate objects of pharma- ceutical science : viz. that of effecting changes of an artificial kind in medicinal

substances which are presented simple by the hand of nature.

Pharmaceutical operations may be said to be either ‘mechanical or chemical ; the first apply- ing to alteration of mode ; the second effecting a change of essence. Thus pulverisation, tritu- ration, levigation, granulation, are instances of the mechanical division of bodies ; while sifting, washing, filtration, are modes of mechanical sepa- ration of their parts ; the former being the ap- plication of a power or powers to overcome the cohesive force by which the particles of bodies are held together, the bodies still retaining their VOL. XVII.

identity as to quantity, the latter consisting of modes of taking one portion of a mass from another.

The chemical changes effected in substances by pharmaceutical processes are arranged in three classes: 1. Operations which produce changes by a separation of their constituent parts without any manifest decomposition. (it is sometimes difficult to say where mechanical change ceases and chemical change commences, and it is in this link of combination between for- mative and essential change that the operations in this first division are to be arranged.) 2. Operations in which bodies acting upon eacli other produce obvious decomposition, or essen- tially change the nature of such bodies. 3. Operations in which combinations of bodies with oxygen are effected by means of augmented tem- perature.

MECHANICAL OPERATIONS.

1. Pulverisation. — This consists in reducing substances to powder by beating, or forcibly overcoming the aggregative attraction by which the particles of bodies cohere. It is usually per- formed in mortars, which are made of various materials according to the substances acted upon, for in some cases the materials of the mortar would enter into chemical combination with the matter employed, and thus the process would be interfered with. Mortars are principally made of marble, iron, brass, glass, porcelain, 01 Wedgewood’s ware. Of whatever materials mortars are made, they should be internally at bottom of the form of a hollow hemisphere, and their sides should have such a degree of inclina- tion as to make the substances fall back to the bottom every time the pestle is lifted. The ope- ration, however, is retarded when too great a por- tion of the ingredients falls under the pestle ; hence a large quantity of any substance should not be put into the mortar at a time, and thfc finer parts should from time to time be removed.

Vegetable matters require to be dried before they can be pulverised; and woods, roots, and barks should be previously cut, chipped, or rasped. When roots are very fibrous, as those of ginger for example, it is advisable to cut them diagonally, which prevents the powder from being full of hair-like filaments. Resins, and gum resins, which soften in a moderate temperature, or in warm weather, should be powdered in cold weather, and only gently beaten to prevent them from running into a paste instead of forming a powder; and when the powdered substance is intended to be dissolved in any menstruum ex- cept a pure alkali, the pulverisation is much facilitated by mixing them with a portion of clean well washed white sand. The pulverisa- tion of camphor is assisted by the addition of a few drops of alcohol ; sugar is the best addition to aromatic oily substances as nutmegs, mace, &c. ; and to the emulsive seeds some dry pow- der must be added, without which they cannot

be reduced to powder. Metals which are scarcely brittle enough to be powdered, and yet are too soft to be filed, as zinc for instance, ‘ may be powdered while hot in a heated iron mortar ; or metals may be rendered brittle by alloying them with a small quantity of mercury; but as metals are not required to be reduced to the state of very fine powder for pharmaceutical pur- poses, those processes are seldom performed.’

Trituration as to effect is the same as pulveri- sation by beating; it is produced by a rotatory motion of the pestle, or upon a large scale by rollers. Dr. Thomson remarks that the fine powders kept in the shops are generallˆ ground in this manner; but there appears to be an error in reducing vegetable matters to the state of im- palpable powder ; for in this state, both during the process of grinding and afterwards, the air and light act powerfully upon them, and produce changes which, although they are not well under- stood, yet appear to alter the medicinal virtues of the substances.

Levigution is in fact trituration assisted by the addition of a fluid, which does not act chemi- cally, or as a solvent, upon the material. This process is usually performed upon a flat stone, and the rubbing is effected by a muller of the same material with the stone. Earths are thus prepared for pharmaceutical purposes, and also some of the metals. \Vater or spirits of wine, or some unctuous material, are usually employed in levigation, and the substances used in the

operation are for the most part previously pul- verised.

Granulation is used for the mechanical divi- sion of some of the metals. The substance is melted or beaten into fine leaves, and then stirred briskly until it cools; or it is poured in its melt- ed state into water, and stirred or agitated till it cools. The process is called granulation, on account of the metallic particles being separated by it in the form of small grains.

Rasping and filing scarcely need be men- tioned as modes of dividing substances.

Sifting consists in separating the finer from the coarser parts of substances, by causing the former to pass through apertures in sieves formed of iron wire, hair cloth, or gauze. For very light and valuable powders it is necessary to employ close sieves, otherwise a great deal of the matter would be lost in the agitation.

Washing or elutriation consists in agitating the material in a fluid which does not act upon it as a solvent, but merely suspends it. The liquor containing thus the finer particles of the material is poured off from the sediment, and suffered to remain at rest for some time, when these fine and washed particles gradually settle, and the supernatant water is poured off, or drawn from the material by a syphon.

Filtration is a species of fluid sifting; filters are generally made of fine close flannel, or linen, or unsized paper, called filtering paper. When these are large it is usual to form them into a conical bag, and suspend this bag from a hoop or frame. When paper is employed it is doubled up in the shape of a cone, and inserted into a funnel : it is often requisite to introduce glass rods between the paper and the funnel, in order

to prevent the sides of the paper and funnel from ‘being so closely in contact as to interfere with the percolation. When very acrid liquors, such as the strong acids and alkalis, require fil- tration, the glass funnel that is employed is partly filled with powdered quartz, and some- times sand placed over this, so arranged that the coarser materials shall be at the bottom of the funnel, and the finer on the surface. The sub- stance to be filtered is poured on the surface of the sand slowly, which it passes through, as also the lower substrata, and thus are the impurities of the liquor left behind.

Expression is a species of filtration : but in this last case force is employed. Expression is principally employed to obtain the juices of

fresh vegetables, and the unctuous vegetable oils. The material is first beaten or bruised, then enclosed in a bag, not completely filled, and subjected to pressure between the plates of a screw press. The pressure should be applied gradually.

Vegetables treated in this manner ought to be perfectly fresh ; and they should for . the most part be subjected to the pressure immediately upon being bruised, for the bruising disposes them to ferment. But subacid fruits yield more juice, and of a better quality, when they are per- mitted to stand a few days in a wooden or earthen vessel previous to pressure. Sometimes, when the vegetable matter to be expressed is not very juicy, the addition of a little water is necessary. It is proper to peel oranges and lemons before they are pressed, in order to prevent the essential oil of the rind from mixing with the expressed juice. For unctuous seeds iron plates are used in expression, and the bruised seeds may be previously subjected in a bag to the steam of hot water.

Despumation is employed in the instance of fluids being so thick and clammy as not to pass with facility through a filter. The liquor is heated, and thus throws up a scum, whic”h is to be carefully removed ; or more generally whites of eggs are employed in the process of despuma- tion ; this entangles the impurities of the fluid, and rises up with them to the surface. In the case of clarifying spirituous liquors isinglass may be employed, for the process which coagulates in the spirit without the assistance of heat, and forms a scum which descends to the bottom of the vessel, and carries the impurities with it.

‘ Besides the above methods of mechanically separating the parts of substances from one ano- ther, fluids of different specific gravities, mixed together, are separated by means of the separatory funnel. It is chiefly used for separating the essential oils from the water with which they are entangled during their distillation. The funnel is first stopped at the bottom, and then filled with the mixed fluids, the heaviest of which gradually subsides into the narrow part below ; and when the cork at the bottom is taken out, and the stopper above a little loosened, it flows out; by which means the lighter is easily obtained in a separate state. Some of the essential oils are heavier, others lighter than water ; but both can be thus separated with equal facility.’

The above quotation is from Dr. Thomson; and in what follows respecting the chemical

PHARMACY.

operations of pharmacy we shall be principally indebted to the publication of that author.

The changes of which we have above spoken, as in some sort holding an intermediate place between mere formative and absolutely essential alteration, are effected by 1st, Caloric, inducing liquefaction, fusion, evaporation, exsiccation, distillation, rectification, dephlegmation, subli- mation; by 2d, Water, and other fluids, causing solution, lixiviation, maceration, digestion, infu- sion, decoction, extraction ; 3d, By other chemi- cal agents inducing coagulation.

Calorific changes. Liquefaction. — This term is applied to that operation by which certain bodies, when exposed to a moderate heat, are rendered fluid after passing through several in- termediate states of softness. Fat, lard, wax, resin, and many other similar bodies, undergo liquefaction ; which is therefore employed in pharmacy to facilitate the combination of these bodies in the formation of ointment. The best vessels for conducting the process of liquefaction are earthenware pans.

Fusion differs fron? liquefaction in the sudden change from the solid to the fluid state, which those bodies which are liable to it suffer on ex- posure to heat. There are no intermediate states of softness ; but the fusible body, when heated to a certain point, immediately assumes the fluid form. This point differs very considerably in different solids ; but in general simple sub- stances are less fusible than compounds ; and some of the simple earths cannot be fused with- out the addition of some other substances to pro- mote their fusion. These are generally saline bodies, and are denominated fluxes. Fusion is usually performed in crucibles, the best of which are made of very pure clay or potter's earth. They are made of various forms, three cornered, or round, and fitted with covers.

Crucibles are also made of cast-iron, of fine silver, and of platina. The first, however, are destroyed when saline substances are melted in them ; and when made red hot in a current of air are apt to suffer oxidation ; but in other respects they are durable, and can sustain sud- den alternations of heat and cold without crack- ing. Some of the metallic crucibles combine many of the best qualities necessary for this set of instruments ; particularly those of platina : which, however, are too expensive for ordinary use.

Evaporation is the dissipation of a liquid by means of heat, and is

employed in pharmacy generally with the view of obtaining in a separate state any fixed substance which may be combined with water or some other evaporable fluid. Thus, by exposing an aqueous solution of a salt to a certain degree of heat, the caloric •which combines with the water renders it vola- tile, and disperses it in the form of an elastic aeriform fluid; while the particles of the salt, being brought nearer to each other, and within the sphere of their mutual attraction, reunite, and the salt is obtained in its concrete state. In spontaneous evaporation the air is the principal agent, the dissipation being independent on artificial caloric or increased temperature. It is easy to conceive that the process of evaporation

is only had recourse .o when the part of the body which is thus dissipated is of little value; when a solid is to be separated from a more valuable fluid, such as alcohol, distillation and not eva- poration is employed.

Evaporating dishes are made of different ma- terials ; the best are those of biscuit porcelain made by Wedgewood, When glass or earthen- ware dishes are employed the heat is best applied through the medium of sand ; or, if a still more moderate heat be necessary, by means of boiling water over which the evaporating dish should be placed. The first is named a sand-bath ; the second a water-bath. Evaporating dishes in the general way should be flat-bottomed and shallow, so as to expose a large surface to the action of the applied heat.

Exsiccation is a variety of evaporation. It is generally employed for depriving salts of their water of crystallisation. The bodies to be exsiccated are heated in an iron ladle or pot, and un- dergo first what is called the watery fusion, that is, are heated and dissolved in their own fluid ; this fluid, by continuing the process, is evaporat- ed, and the body is left in the form of a dry mass. When the substances to be exsiccated are liable to decomposition in a temperature above 212°, as is the case with some of the com- pound oxides, the process must be conducted by the heat of a water-bath.

Distillation is also a species of evaporation, differing from it only in this, that the vapor of volatile matter, instead of being dissipated and lost in the air, is collected and condensed in close vessels. Some of the vessels used in this process will be found in the plates appended to the article CHEMISTRY. The simplest is the re- tort and receiver. The common still is a well known apparatus. It consists of two parts, the boiler, and the head or capital. The boiler, which is the part to which the fire is applied and contains the materials, is of a cylindrical shape,

and may be sunk in a furnace or immersed in a water-bath when the temperature requires to be nicely regulated. The head or capital is a large hollow globe, the upper part of which is drawn out into a tapering pipe bent to a curve or arch, and terminating in the serpentine or worm. These parts are generally made of copper ; but the worm is a long pewter pipe of a decreasing diameter which winds in a spiral direction obliquely through a deep tub filled with cold water. The body, head, and worm require to be luted together; but in general slips of paper dipped in flour, paste, or pieces of wet bladder, are sufficient for this purpose. In this apparatus the vapors are raised into the head, whence they pass into the worm, where they are condensed and issue in drops from the lower end of the pipe. By degrees the water in the refrigeratory becomes warmed and requires to be renewed, and thence the necessity of the tube being fur- nished with a stop-cock, by which the heated water may be drawn off without disturbing the apparatus. As in this species of distillation tht vapor ascends before it is condensed, it is named distillation per ascensum. The distillation bv the retort or cucurbit is named distillation per latus.

In some cases, as in tlie distillation of several essential oils, the vapor, instead of passing late- rally or ascending, is forced to descend. To produce this effect a plate of tinned iron is fixed within any convenient vessel so as to leave a space beneatli it ; and, the materials to be distilled be- ing laid upon this, they are covered by another plate, accurately fitted to the sides of the vessel, and strong enough to support the fuel which is burnt upon it. By this means the volatilised matter of the materials under the fire is forced into the lower cavity of the vessel and there con- densed. This mode of distillation is denominated distillation per descensum. For an account of Woulfe's apparatus, and its modifications, see plates of CHEMISTRY.

Rectification is the repeated distillation of any product obtained by distillation, when it is not perfectly pure. This second operation is carried on at a lower temperature, so that the more vo- latile parts only are raised and pass over into the receiver, leaving the impurities behind. When the fluid is simply rendered stronger, as in the case of alcohol, by bringing over the spirit and leaving behind the superfluous water, the opera- tion is named dephlegmation, or concentration. When the liquid is distilled off from any sub- stance the process is called abstraction ; and co- hobation if the product be redistilled from

the same materials, or from a fresh parcel of the same materials.

Sublimation is a species of distillation in which the product of volatilisation is condensed in a solid form ; but, as this condensation takes place at a higher temperature than that of watery va- por, a much more simple apparatus is required. The process is conducted sometimes in a cruci- ble, with a cone of paper or another crucible in- verted over it, in which the product is condensed ; and, as in this case it is light and spongy, it was formerly denominated flowers. For other mat- ters which are less volatile a cucurbit and capital, or a flask and phial, are employed, and sunk about two-thirds in a sand-bath. In these cases the product is a solid, and is denominated a sub- limate.

CHANGES BY THE ACTION OF FLUIDS.

Solution. — For an account of the laws and circumstances of this process, see the article CHEMISTRY.

Lixiviation. — When a saline body consists of both soluble and insoluble ingredients, the solv- ent of the former, acting upon the salt, produces lixiviation, which process, when conducted on a great scale, is generally performed in large tubs or vats having a hole near the bottom containing a wooden spigot and faucet. A layer of straw is placed at the bottom of the tub, over which the substance is spread, and covered by a cloth ; af- ter which tot or cold water, according as the salt is more or less soluble, is poured on. The water, which soon takes up some of the soluble parts of the saline body, is after a little while drawn off by the spigot ; and a fresh portion of water is successively added and drawn off until the whole of the soluble matter is dissolved. The straw in this operation acts as a filter, and the cloth pre- vents the water from making a hollow in the in-

gredients when it is poured on, by which it might escape without acting on the whole of the ingredients.

In smaller operations lixiviation may be con- ducted in glass matrasses, and the lie, which is the name given to the solution, filtered through paper in a glass funnel.

By maceration soluble portions of substances, chiefly of a vegetable nature, are obtained in so- lution ; these substances being immersed in cold water or in spirituous fluids for a sufficient length of time. It is frequently employed as a prepara- tion for infusion and decoction, which are always rendered more effective by the previous macera- tion of the materials.

Digestion is similar to maceration, except that in this last case the power of the fluid is assisted by a gentle heat. It is usually performed in a glass matrass, and the evaporation of the liquid impeded by stopping the mouth of the matrass slightly with a plug of tow, or tying over it a piece of wet bladder perforated with small holes. When the menstruum is valuable, as alcohol for instance, another matrass with a smaller mouth may be inverted over the former and the joinings secured by a piece of wet bladder ; or, what is perhaps preferable, a long open glass tube may be luted to the mouth of the matrass which con- tains the materials. By these means any part of the liquor which is resolved into steam by the heat is condensed and conveyed back upon the materials. The matrass may be either heated by a common fire, or a lamp, a water- bath, or a sand-bath ; and, when either of the latter is used, the matrass should not be sunk deeper in the water or the sand than the portion that is filled. The process has been denominat- ed circulation, when the condensed vapors are returned upon the ingredients.

Infusion is intended chiefly to extract the vo- latile and aromatic principle of vegetables, which would be dissipated by decoction or di- gestion; and also those parts of vegetables which are more readily soluble in water, as gum, sugar, extract, tannin, the salts and part of the resin from the insoluble parts. The water is poured boiling hot on the materials, sliced, or reduced to a coarse powder, and kept in a closely covered vessel till they are cold, when the infusion or liquor is decanted off for use. Infu- sions are sometimes effected with cold water; but for the most part these though more grateful are weaker than the infusions by heat.

Decoction, or boiling, is employed with ad- vantage to extract the mucilaginous parts of plants, as well as their bitterness and several other vegetable principles which do not easily yield to mere infusion. It is generally performed in slightly covered vessels ; but when the menstru- um is valuable, as alcohol for instance, a retort and receiver, or the common still may be used, in the body of which the decoction is prepared, while the vapors, which otherwise would escape, are condensed and preserved.

Extraction. — If the liquor obtained by either infusion or decoction be subjected to evaporation the watery part is dissipated, and the part which is extracted by it is obtained in the solid form, and is denominated an extract. It is obvious

enough that extract of some materials will not contain the whole of the principles of those ma- terials.

CHANGES BY CHEMICAL AGENTS. Coagulation — This is the conversion of a fluid into a solid of more or less consistency. The means employed to effect this are increase of temperature, alcohol, acids, and runnels. The effect appears to arise from a new arrangement of particles produced by the affinity exerted be- tween the solid particles contained in the fluid and the coagulating substance.

CHANGES PRODUCED BY THE CHEMICAL ACTION OF ONE SET OF BODIES ON ANOTHER.

Decomposition. — This implies the separation of the component parts of bodies from one an- other. It is produced in some cases by heat so as to overcome the affinity of aggregation. Elec- tricity or Galvanism may also effect decomposi- tion ; but in the greater number of instances it is the result of a superior affinity that holds the principles of the substance about to be decom- posed in union, and produces new compounds.

In pharmaceutical operations decomposition is very frequent, and it is of the utmost importance for the prescribers of medicine to be acquainted with its general circumstances.

Dissolution. — This differs from mere solution by its being necessarily accompanied by some change in the nature of the dissolved body. In general effervescence is caused by the process, the disengaged materials becoming extracted in a gaseous form. The making a common saline draught is an instance of dissolution.

Precipitation. — Here also decomposition oc- curs, but the substance extricated is thrown down instead of otherwise separating itself. The material used to produce this separation is called the precipitant, and the separated substance the precipitate. It is necessary for the prescriber to be acquainted with those substances which, when mixed with others, produce precipitation, other- wise he will often be foiled in attempting the combination of incompatible principles. The following table of precipitants is extracted by Dr. A. T. Thomson, from the System of Chemis- try by Dr. Thomas Thomson ; all the substances not employed in pharmacy being omitted : —

Zinc Antimony

Arsenic 5. ACIDS. Sulphuric Carbonic

Boracic

Nitric

Acetic

Benzoic

Succinic

Oxalic

Tartaric

Citric

1. ALKALIES.

Potash

Soda

Ammonia

2. ALKALINE EARTHS. Barytes

Lime Magnesia

3. EARTHS PROPER. Alumina

4. METALLIC OXIDES. Silver

Mercury

Copper

Iron

Lead

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0 alkaline carbonates ? Water, hydro-sulphuret

of potassa. Nitrate of lead.

Muriate of barytes. Muriate of an alkaline

earth.

Sulphuric acid.

0 0

Muriatic acid. Sulphate of iron. Muriate of lime. Potassa. Acetate of lime.

PRECIPITANTS. Tartaric acid.

0

Fixed alkalies.

Sulphuric acid, sulphates. Oxalic acid, oxalates. Phosphoric acid, phosphate of soda (not direct).

Ammonia, hydro-sulphu- ret of potassa.

Muriate of soda.

Muriate of soda.

Iron.

Succinate of soda, benzo-

ate of soda. Sulphate of soda.

In some cases where decomposition is effected by the addition of another substance, the sepa- rated body is not precipitated, but rises to the surface, and is thence denominated a cream : thus, by the addition of any acid to a solution of soap, the alkali unites with the acid, while the oil is separated and swims on the surface of the liquor.

Crystallisation. — See CHEMISTRY.

Fermentation. — For an account of those changes which vegetable substances undergo when separated from the living plant, and placed under certain circumstances so as to act upon one another ; and for the different compounds and principles which are severally the results of the vinous, acetous, and putrefactive fermenta- tions, whether naturally occurring or artificially produced, see also the article CHEMISTRY.

Having thus premised an account of the ge- neral principles of

pharmaceutic science, with its application .to medicinal purposes, we now proceed to detail the several processes ordered in the London and Edinburgh Pharmacopoeias ; and in this, the main part of the present article, we shall follow the plan adopted by Dr. A. T. Thom- son, giving first the translations of the directions ordered by the colleges, and then some few re- marks on the qualities of the composition. In respect to that portion qf the treatise which re- lates to the incompatibility of one substance with another, Dr. Thomson will be wholly our guide. It should, however, be premised that chemical niceties may in some few instances suc- cumb before actual observations on the effects of compounds.

We do not include the articles of the Dublin Pharmacopoeia, fearing too great extension of the paper ; and we may here take occasion to say that it is much to be lamented that one ge neral prescription is not adopted throughout the whole of the united kingdom. In an appendix, however, will be found some of the more recent remedies, principally of the French school, which the Dublin college ha” recently adopted.

PART II. ACIDS.

In the article CHEMISTRY, and under the word ACID, will be found remarks on the principle of acidification and the composition of acids. It will there be seen that all acids having been sup- posed compounds of oxygen with certain bases, the name of the particular acid was taken from

the base, and the terminations ic and ous were employed to indicate the degree of oxidation, or rather of acidification ; thus sulphur combined with a particular measure of oxygen was named sulphureous acid, with a greater quantity, or to a saturating point, sulphuric. The recent changes which chemistry has undergone have materially modified these the Lavoisierean principles of composition and nomenclature ; but they are to a certain extent correct, and have been received by the framers of the Pharmacopeias.

In the following account of the acids, the alphabetical arrangement will be adopted accord- ing to the London Pharmacopeia ; but it may be right in the first place to copy Dr. Thomson’s table of arrangement, according to their radicals or bases : —

1. ACIDS COMPOSED OF A SIMPLE RADICAL AND OXYGEN.

Sulphur Azote .

1. Sulphuric acid.

2. Nitrous acid.

3. Nitric acid.

. ACIDS COMPOSED OF A COMPOUND RADI- CAL AND OXYOEN.

Carbon and hydrogen

f 1. Acetic acid.) 2. Citric acid. J3

C4.

Benzoic acid. Succinic acid.

3. ACIDS COMPOSED OF A SIMPLE RADICAL

AND CHLORINE. Hydrogen . 1. Muriatic acid.

Acidum aceticum dilutum. London. — Diluted acetic acid.

Let dilute acetic acid be distilled from a glass retort into a glass receiver kept cool ; let the first pint be thrown away, and preserve the six succeeding pints.

Acidum aceticum tenue. Edinburgh. — Weak acetic acid.

Distil eight pounds of vinegar in a glass vessel with a gentle heat. Throw away the pound which first comes OTer; and the five pounds which follow will be the weak acetic acid. The distillation may be continued so long as a color- less acid comes over ; but this, being too much burnt and unfit for internal use, may be mixed with the pound that first conies over, and kept for various chemical purposes.

Of the appellations given to this preparation Dr. Thomson considers that of the Edinburgh College the only unobjectionable one ; the pre- paration being the acetic acid in a more diluted state than that in which it exists in vinegar, but purer, being freed in a great degree from the mucilage, extractive, supertartrateof potassa, and other extraneous matters which vinegar contains.

Qualities. — Distilled vinegar ought to be color- less and transparent, and of a specific gravity from 1-007 to 1-0095. Its taste is pungent, and purely acid. It is sometimes adulterated with sulphuric acid; but

the adulteration may be detected by a precipitate being produced when acetate of barytes in solution is added. When lead and tin are the adulterating materials, the addition of a solution of sulphureted hydrogen throws down a dark-colored precipitate ; if cop- per have been employed in the adulteration, the

acid will become blue by being supersaturated with ammonia.

Medical properties. — It is fitter for pharmaceu- tical purposes than common vinegar, on account of its greater purity, and from not being liable to decomposition. Its medical uses are the same.

Acidum aceticum forte. Edinburgh. — Strong acetic acid.

Take of sulphate of iron dried one pound, superacetate of lead ten ounces. Having rubbed them together, put them into a retort, and distil in a sand-bath with a moderate heat, so long as any acid comes over.

This acid differs from distilled vinegar only in being stronger and purer. Acetic acid may also be prepared by applying a decomposing tempera- ture to the metallic acetates, which was formerly ordered to be done by the London College, or by mixing the sulphuric acid with the acetate, or by mixing the acetates and sulphates together.

Qualities. — Acetic acid is very pungent to the taste ; it has a grateful odor ; it is very volatile ; its specific gravity is 1-063. It unites with water in any proportion ; and, during the mix- ture, heat is evolved.

Medical properties. — It is rubefacient when applied to the skin, and may be employed to produce speedy vesication ; but it is principally used for correcting impurities in the air, and as a refreshing scent in cases of faintness or hys- teric affection.

Acidum benzoicum. London. — Benzoic acid. Take of benzoin one pound ; put it into a glass vessel placed in a sand-bath, and subjected to a heat of 300° gradually augmented; sublime until nothing more ascends ; press the matter sublimed between bibulous paper, that the oil may be separated ; then sublime again with a heat not raised above 400°.

Edinburgh. — Take of benzoin twenty-four ounces, subcarbonate of soda eight ounces, water sixteen pounds. Triturate the balsam with the subcarbonate ; then boil them in water for half an hour, constantly agitating them. Strain. Repeat the boiling with' other six pounds of water, and strain. Mix the strained liquors and evaporate them to two

pounds. Again filter, and drop into it diluted sulphuric acid so long as any precipitation is produced.

Dissolve the precipitated benzoic acid in boiling water ; strain the solution, while still hot, through linen, and set it aside to crystallise. Wash the crystals with cold water; ihen dry and preserve them.

Qualities. — Benzoic acid possesses an agree- able taste, rather pungent, and a fragrant smell. It appears in the form of feathery rlocculent crys- tals, quite white, and of a silky character. Its specific gravity is 0-657. When heated it gives out a strong suffocating vapor. It is soluble in twenty-four times its weight of boiling water. Cold alcohol takes about one half its weight; boiling alcohol its own weight.

Medical properties. — Not much used in medi- cine, although retained in the pharmacopoeias ; its medicinal efficacy is indeed questionable ; it forms an ingredient in the compound tincture of camphor of the London, and of the ammoniated tincture of opium of the Edinburgh College.

Acldum cilricum. London. — Citric acid. Take, of lemon juice a pint ; prepared chalk an ounce, or sufficient to saturate the juice; diluted sulphuric acid nine fluid ounces. Add the chalk gradually to the lemon juice heated, and mix them ; then pour off the liquor. Wash the citrate of lime which remains in repeated quantities of warm water, and then dry it. Pour on the dried powder the diluted sulphuric acid, and boil for ten minutes ; then strain the liquor through a linen cloth by strong pressure, and filter it through paper. Evaporate the filtered liquor with a gentle heat, so that crystals may form in cooling. In order that the crystals may be ob- tained pure, let them be dissolved in water a second and a third time, filtered each time, and set apart for crystallisation.

In this process it is obvious enough that the lime of the chalk unites with the citric acid existing in the lemon juice, and forms an insolu- ble citrate of lime, which is decomposed by the sulphuric acid, leaving the citric acid free.

Qualities. — The crystals should be white and transparent ; they are without smell, but are of a caustic sharp taste. They are soluble in water. W hen adulterated with tartaric acid, the adultera- tion may be detected by addition to the solution of them of nitrate, sulphate, or

muriate of potassa, or saturating it with carbonate of potassa, when, if the tartaric acid be present, an insoluble super-tartrate of potassa will appear in small bright crystals ; should citrate of lime still re- main among the crystals, it is detected by dis- solving them in water, saturating the solution with ammonia, and adding to it some oxalate of ammonia, which will precipitate the lime. If sulphate of potassa be present, it will be dis- covered by the solution yielding a precipitate with muriate of barytes, this being insoluble in muriatic acid.

Medical properties. — The same as lemon juice; in some particulars being superior, in others inferior. It wants the freshness of the acid immediately from the fruit, but it is much more convenient for extemporaneous use than common lemon juice. It is said to equal this last in strength when dissolved in eight waters. Nine drachms and a half of the crystals to a pint of water is the proportion that Dr. Thomson gives for the formation of lemon juice, and we copy from him the following table, shpwing the quantity of citric acid required to decompose one scruple of the alkaline salts mentioned in it.

ALKALINE SALTS.

CITRIC ACID.

Carbonate of soda . . . Subcarbonate of soda . . Carbonate of potassa . . Subcarbonate of potassa . Subcarbonate of ammonia

gr. x.

gr- xij. gr. xv. gr. xviij. gr. xx vj.

A solution of one scruple in a pint of water, sweetened with sugar that has been rubbed on fresh lemon peel, forms a grateful refrigerant beverage, resembling lemonade, and which is

equally useful in febrile and inflammatory com. plaints.

Acidum muriaticum. London. — Muriatic acid.

Take of dried muriate of soda two pounds, sulphuric acid twenty ounces by weight, distilled water a pint and a half. First mix the acid with half a pint of the water in a glass retort, and add the muriate of soda after the mixture is cold. Pour the rest of the water into the receiver ; then having fitted on the retort placed in a sand bath, distil the muriatic acid over into this water with the heat gradually raised to redness.

The specific gravity of this acid is 1-160, and 100 grains of it are saturated by 124 grains of the Subcarbonate of soda in crystals.

Edinburgh. — Take of muriate of soda which has been previously exposed to a red heat, sul- phuric acid and water of each two pounds. Pour the acid mixed with eight ounces of the water and cooled upon the muriate of soda in a glass retort, to which a receiver is to be adapted con- taining the remainder of the water ; then distil from a sand-bath with a moderate fire. In a short time the vessels may be luted together, and the distillation continued to dryness. The specific gravity of this acid is 1-170.

‘ These processes were formerly explained by saying that the decomposition of the muriate of soda is affected by the superior affinity of sul- phuric acid for soda, aided by the affinity of the muriatic acid for soda being weakened by the heat, which favors its tendency to assume the elastic form, in which state it passes over into the receiver, and is there condensed by the water. But, as the doctrine of chlorine is now admitted, we must adopt the following explana- tion of Sir Humphry Davy, who regards dry common salt as a compound of thirty-six parts of chlorine and twenty-four of sodium, and con- sequently containing neither muriatic acid nor soda. In the processes of the Pharmacopoeias, therefore, for obtaining muriatic acid, the water of the sulphuric acid is decomposed, its oxygen unites to the sodium, and forms soda, which, combining with the sulphuric acid, produces a sulphate of soda; while the hydrogen of the de- composed water combines with the chlorine and forms hydrochloric acid, or muriatic acid gas : a gaseous fluid consisting of equal volumes of hy- drogen and chlorine, or by weight, of hydrogen 2-7, chlorine 97‘3, in 100 parts, which dissolving in the water contained in the receiver consdtutes the liquid acid. The residue of the process is sulphate of soda with an excess of acid; to separate which, without breaking the retort, boiling water may be poured into the retort after its contents have cooled down to 212°.’ See CHEMISTRY and ACID.

Qualities. — The liquid acid thus obtained is nearly colorless, with a very caustic taste and a pungent odor. ‘ According to the new nomen- clature the muriatic acid of the shops is hydro- chloric acid, or, to retain the common name, hydro-muriatic acid. The real acid contained in the liquid acid is a compound of equal vo- lumes of chlorine and of hydrogen. The fluid muriatic acid found in the shops often contains sulphuric acid with small portions of iron and sometimes copper ; the first is diluted by di-

luting the acid with five or six parts of distilled water, and adding a few drops of muriate of barytes, which is precipitated white if sulphuric acid be present; iron is discovered by saturating the diluted acid with carbonate of soda, and adding prussiate of potassa ; if a blue precipitate be formed, it may be concluded that iron is pre- sent. A blue color being produced by super- saturating the acid with ammonia detects copper.'

Medical properties. — ' This acid is tonic and antiseptic. It has been efficaciously used in typhus fevers, and in some cutaneous eruptions. It is a common and useful adjunct to gargles in the proportion of from f. 3ft. to 3ij. in f. ˆvi. of any fluid in ulcerated sore throats and scarlatina maligna; and in a very highly diluted state, viz. ttˆviij. in f. Jiv. of water, it has been recom- mended as an injection in gonorrhea.

This acid has even been regarded as an anti- dote in general syphilitic affections ; but the ob- servations of Mr. Pearson have shown this opinion to be erroneous ; yet, by its salutary effects on the stomach and general health, it is a medicine capable of ameliorating the appear- ance of venereal ulcers, and restraining for a time the progress of the disease, where it is de- sirable to gain a little time previously to enter- ing on a mercurial course. The dose is from tt|,x. to n\ xx., in a sufficient quantity of water, or in any bland fluid. It is incompatible in prescriptions with alkalies, most of the earths, oxides, and their carbonates ; sulphuret and tar- trate of potassa, tartarised antimony and iron, nitrate of silver, and acetate of lead. In typhus, and fevers of a typhoid type, ' I have,' says the author whom we are now quoting, ' generally given it in the infusion of cinchona or cusparia bark. Dr. Paris states that he has found it a preventive of the generation of worms, when given after copious evacuations of the bowels. Largely diluted in any mucilaginous fluid, and sweetened, it is a useful remedy in calculous cases, de- pending on an excess of the phosphates.

' When muriatic acid is taken as a poison it may be detected by its sensible qualities ; but, if mixed with wine or other fluids, let a portion of it be distilled from a small retort over a candle into a phial containing a solution of nitrate of silver. The precipitation of muriate of silver, which is soluble in ammonia, but not in nitric acid, will take place if the poison contain mu- riatic acid. The best antidotes if exhibited in time are soap and calcined magnesia suspended in water.

' A very important property of muriatic acid in the state of gas is the power it possesses of neutralising putrid miasmata, discovered by

Morveau in 1773. It is therefore used as an agent for destroying infection in sick rooms and hos- pitals disengaged by pouring sulphuric acid on common salt.' Thomson. See the article MEDICINE.

Aeidumnitricum. London. — Nitric acid. Take of nitrate of potassa dried, and sulphuric acid, each by weight two pounds ; mix them in a glass retort, and distil the nitric acid from a sand bath until red vapors are produced. Then, having added an ounce of dry nitrate of potassa, redistil the acid in a similar manner.

The specific gravity of this acid is 1-500. 100 grains are saturated by 212 grains of crystals of subcarbonate of soda.

Edinburgh. — Take of nitrous acid any quan- tity, put it into a retort ; and, having fitted a re- ceiver which must be kept cold, apply a very-gentle heat, until the reddest part shall have passed over, and the acid which remains in the retort, already almost free from color, have become nitric acid.

Acidum nitrosum. Edinburgh. — Nitrous acid. Take of nitrate of potassa bruised two pounds, sul- phuric acid sixteen ounces. Pour the acid upon the nitrate of potassa in a glass retort, and distil from a sand-bath with a gradually increased heat until the iron pot become of an obscurely red heat.

The specific gravity of this acid is 1*520.

These processes do not always ensure the ab- solute purity of nitric or nitrous acid, inasmuch as the nitrate of potassa itself may not be quite free from contamination ; but the medicinal pro- perties of the materials are not affected by these slight impurities.

Qualities'. — The nitrous acid of the Edinburgh Pharmacopoeia is orange-colored and fuming ; it consists of nitrous gas in a state of loose combi- nation with nitric acid and water.

The liquid nitric acid is of an exceedingly pale yellow color, nearly indeed colorless. It is vo- latilised by heat, and light decomposes it. Its constituents, independent of water which gives it its fluid form, are stated to be 25-93 azote, and 74-07 oxygen, in 100 parts; or one volume of azotic gas and two volumes and a half of oxygen gas. The strongest fluid acid contains twenty- five per cent, of water, and seventy-five of dry acid.

Acidum nitricum dilutum. London. — Diluted nitric acid.

Take of nitric acid a fluid ounce; distilled water nine fluid ounces. Mix.

Acidum nitrosum dilutum. Edinburgh. — Di- luted nitrous acid.

Take of nitrous acid and of water equal weights. Mix, avoiding the noxious vapors.

' These processes are intended for the more convenient apportionment of the dose in the exhi- bition of this acid. In the former editions of the London Pharmacopseia, the proportions of acid and water were equal by weight; but the altera- tion in the present edition makes a very import- ant difference of strength in a given measure of the diluted acid, prepared after the first and the last of the above formulae.'

When prepared, according to the directions of the London College f. Jj contains about grs. 68 of nitric acid, of 1-500 specific gravity, and will saturate 144 grains of crystallised subcarbonate of soda; while the

same measure of the same acid, prepared after the Edinburgh and Dublin, and the former London formulae, contains grs. 390‘5 of the same acid ; a difference which may lead to errors in practice ; and is therefore to be regretted, particularly as no reason is assigned for the change.

Medical properties. — Nitric acid is tonic and antiseptic. When very largely diluted with wa- ter it forms an agreeable and very useful beverage

in fevers, particularly of the typhoid type. In larger doses, less diluted, it has been efficaciously administered in chronic hepatitis, even when dropsy has supervened, and has also been found serviceable in restraining violent sickness in dys- pepsia, asthmas, and the majority of the cachexia?. From some observations of Dr. Scott, published at Bombay, in 1796, this acid excited considera- ble attention as a remedy for syphilis ; but after the most ample trials, by almost every practitioner of any eminence in the country, its antisyphilitic powers have not been foiHid by any means to answer the accounts of them transmitted from India. The subsequent publications of Dr. Scott, however, have shown that he did not employ nitric acid, but a mixture of three parts of mu- riatic and two of nitric. It checks for a time the progress of the disease, but does not permanent- ly remove the symptoms ; and, as Mr. Pearson justly observes ‘ it would by no means be war- rantable to substitute the nitrous (or nitric) acid in the place of mercury for the cure of venereal complaints.’ It is, however, in many cases, of much benefit during a mercurial course or prior to its commencement, when the constitution is impaired and inadequate to support the effects of mercury ; as by its tonic powers it promotes the general health, and lessens the action of the mercurial remedy on the mouth and fauces ; yet when it is pushed too far, it affects the mouth and produces ptyalism. When dropsy supervenes on reiterated courses of mercury, which is not un- frequent in broken-down constitutions, this acid Mr. Carmichael observes, given in as large doses as the stomach will permit conjoined with digi- talis, is productive of the utmost benefit. We have found it of considerable service, given at the same time with mercury in old obstinate ul- ceration of the legs, although no venereal taint could be suspected ; and it is employed with benefit as a local stimulant in the form of lotion, in the proportion of f. 3ij of the diluted acid to Oj of water, to fetid ulcers attended with a thin ichorous discharge, and in caries of

the bones. In India, and in this country for some years past, nitric acid has been used combined with muriatic in the form of a bath (see MEDICINE), and in this state produces a slight excitement of the skin, a peculiar taste in the mouth, and in other respects merely the same effects as when it is taken internally ; but the chief perceptible effect of the mixed acid is on the bowels, which it keeps moderately open. Diluted nitric acid has often been employed as a poison. It is detected by the orange colored spots which are observed on the lips, chin, and hands of the patient ; and, if death be the result, by the same color being found in a large portion of the alimentary canal, the mucous membrane of which is converted into a fatty substance, and the stomach often perfora- ted. If any of the fluid can be obtained, the ex- trication of orange colored fumes on boiling it over copper filings is a certain testof aqua-fortis. Soap and calcined magnesia suspended in water are the best antidotes.

The dose of the diluted acid is from tit*, to nˆxxx. in f. Jiij. of water, given three dr four times a day. When used as a bath, the mixed acid should be added to the water, until it is

about as sour as weak vinegar. — Nitric acid, even (.vlien diluted, is incompatible in prescriptions with oxides, earths, alkalies, the sulphurets and the acetates of potassa, and of lead. It decom- poses the two last named salts, and forms nitrates of lead and potass. We have thus been copious in our accounts of the acids — of the muriatic and nitric, — and have extracted largely from Dr. Thomson, for the reasons intimated above in re- spect to the first; and because the last (as we have seen) has been proposed, and extensively and mis- takenly, but at the same time usefully, adminis- tered, as a counteractive of the syphilitic poison, and of the constitutional affections which that poison at different times engenders.

Acidum succinicum. Edinburgh. — Succinic acid.

Take of powdered amber and pure sand, each of equal parts; mix them together and put them into a glass retort, of which they may fill one half. Having adapted a large receiver, distil from a sand-bath with a gradually increased heat, A watery liquor with a little yellow oil will first come over, then a yellow oil and an acid salt ; and lastly, a reddish and black oil. Pour the li- quor out of the receiver, and let the oil be sepa- rated from the water. Press the acid salt col- lected in the neck of the retort and on the sides of the receiver between folds of bibulous paper, that it may be freed from the adhering oil ; then purify it by solution in hot water and crystallisa- tion.

Sand is ordered to be used in these prepara- tions, to prevent the amber which swells much from passing over into the receiver.

Qualities. — When the crystals of the acid are pure they are white and shining ; they have an acid taste, and are highly volatile. They are partly soluble in cold water, but more readily in hot water, and in alcohol. The sulphuric and nitric acids also dissolve them without producing decomposition.

When succinic acid is adulterated with tar- taric acid, the adulteration may be detected by carbonate of potass. Nitrate of silver detects muriate of ammonia, and the sulphate of potassa would-be found by barytic water.

Medical properties. — Very little use is at pre- sent made of this acid in medicine, although it would seem to possess stimulating and probably expectorant virtues.

Acidum sulphuricum dilutum. London. — Di- luted sulphuric acid.

Take of sulphuric acid a fluid ounce and a half, distilled water fourteen fluid ounces and a half. Let the acid in mixing be gradually added to the water.

Edinburgh. — Take of sulphuric acid one part, water seven parts; mix them.

Dr. Thomson expresses his regret that when the London College in the last edition of the Pharmacopeia altered the proportion of the acid and water, they did not adopt those of Edin- burgh and Dublin, so that there might have been a standard strength for the whole kingdom; at present one fluid ounce of the London contains eighty grains of the strong acid, while in the Edinburgh and Dublin pharmacopoeias it consti tutes an eighth part.

The heat generated during the mixture of the acid and water is guarded against by the gradual admixture ; and the diluted acid being purer than the strong from the circumstance of not being able to hold in solution some sulphates which the latter contains, the Dublin College have very properly ordered the decanting of the clear liquor from the sediment.

Medical Properties. — Tonic, refrigerant, anti- septic, and in some cases astringent. It is a very useful medicine in some chronic disorders of the skin ; and in haemorrhagic affections it is often highly beneficial. Dose from m.x. to

1H.XXX.

Acidum mlphuricum aromaticum. Edinburgh. — Aromatic sulphuric acid.

Take of alcohol two pounds, sulphuric acid six ounces. Drop the acid gradually into the alcohol. Digest the mixture in a covered vessel with a very gentle heat for three days; then add one ounce and a half of bruised cinnamon bark, and one ounce of bruised ginger root. Digest again in a close vessel for six days ; then filter through paper placed in a glass funnel.

This seems but little more than a simple solu- tion of ginger and cinnamon in alcohol and sul- phuric acid, very little of the ethereal principle being generated from the admixture of the al- cohol and acid.

Qualities. — The odor is aromatic^ taste a grate- ful acid, and color rather brown.

Medical properties. — Aromatic as well as tonic, and therefore especially applicable to stomach affections. We should have liked to have seen it adopted by the London College, inasmuch as the sulphuric acid is very often highly serviceable in dyspeptic disorders, and the aromatic ad- ditions make it more applicable in these com- plaints.

Acidum tartaricum. London. — Tartaric acid.

Take of supertartrate of potassa two pounds and a half, distilled water three gallons, prepared chalk one pound, sulphuric acid one pound. Let the supertartrate of potassa be boiled with two gallons of distilled water and the prepared chalk be gradually added until bubbles cease to be produced. Let the mixture be set apart that the tartrate of lime may subside; pour off the fluid and wash repeatedly the tartrate of lime with distilled water until it come off taste- less. Then pour upon the tartrate the sulphuric acid diluted with a gallon of the boiling distilled water, and set the whole apart for twenty-four hours, occasionally stirring it. Filter the liquor and evaporate it in a water-bath to obtain the crystals.

The lime in this preparation separates the tar- taric acid from the potassa, and then agp.in yields it up to combine with the sulphuric acid. If a little acetate of lead is dropped into a small portion of the liquor, before it is set aside for crystallising, a precipitate will be nroduced if any sulphuric acid still remains, and then a little more of the tartrate of lime should be added.

Qualities. — The crystals are white, without smell, and exceedingly acid. It is readily soluble in water. It forms tartrates with alkalies and earths.

Medical properties.— Refrigerant; when added

in solution to a solution of carbonate of soda, a good substitute for common soda water is formed.

APPENDIX TO THE ACIDS.

We shall here use the freedom of extracting the whole of what Dr. Thomson has introduced into his valuable Dispensatory under the above title.

‘ In the following appendix,’ says Dr. T., ‘ I propose to give a short account of two acids, which although they have not a place in any of the British Pharmacopoeias, yet are of great im- portance ; the one being a remedy of considera- ble efficacy in a certain class of diseases, and the other demanding the attention of the medi- cal practitioner from the frequent employment of it as a poison.

1. Acidum hydrocyanicum. Hydrocyanic (Prussic) acid. — This acid is found in many ve- getable productions, such as the bark of the prunus padus, or bird cherry ; the leaves of the peach and nectarine trees, bitter almonds, and the kernels of many fruits ; but for the purposes of medicine it is artificially prepared.

Preparation. — The best method of preparing hydrocyanic acid for medicinal use is the fol- lowing, which was first employed by Scheele.

Mix two ounces of Prussian blue with six ounces of red precipitate of mercury, and add six ounces of water. Boil the mixture for some minutes, constantly agitating it, when the blue liquor will disappear, and the mass assume a yellowish gray hue. Pour the whole on a filter, and wash the residuum with a little hot water, which is to be added to the filtered liquor. Pour this upon an ounce and a half of clean iron filings, and add three drachms of strong sul- phuric acid. Shake this mixture well, and, after the powder subsides, pour the fluid into a

retort, and distil one-fourth part of it over into a well luted receiver. This is the hydrocyanic acid containing an admixture of a little sulphuric acid which is readily separated by means of barytic water. La Planche recommends one- sixth only to be distilled over, and this to be rectified by means of a gentle fire over ˆ of car- bonate of lime, drawing off afterwards three- fourths only of the one-sixth of the whole thus treated, by a second distillation. The acid is obtained of a uniform strength by this method.

In the above process the iron filings and the sulphuric acid, added to the solution obtained from boiling the mixture of Prussian-blue and red precipitate of mercury in water, decompose the water, and the reduced mercury combines with the cyanogen, the base of the acids of the Prussian-blue, and forms a cyanuret of mercury. This new combination is again destroyed by heat, and the cyanogen acting upon the nascent hy- drogen of the decomposing water forms hydro- cyanic vapors, which are absorbed by the water in the receiver, and constitute the hydrocyanic acid.

Physical and chemical properties. — Hydrocy- anic acid prepared in the above described man- ner is a colorless, transparent liquid, with a peculiar odor not unlike that of bitter almonds. It is at first bland and sweet to the taste, but ultimately impresses a oungent acrimony on the

palate. It is very volatile ; and owing to this property crystallises if a drop of it fall upon paper. Its specific gravity is 0-996.

It is decomposed by a high temperature and by light, being resolved into carbonic acid, am- monia and carbureted hydrogen gas, which are dissipated, and leave behind a carbonaceous de- posit. It should therefore be kept in an opaque stoppered bottle. It is very inflammable, burn- ing with a blue flame, and is soluble both in water and in alcohol. According to Gay Lussac it consists of a peculiar base which he has named cyanogen, acidified by hydrogen. Cya- nogen is a compound consisting of two propor- tionals of carbon and one of nitrogen. But the acid employed in medicine contains one part only of the acid referred to by Gay Lussac, and eight parts and a half of water.

Medical properties and uses. — Hydrocyanic acid when taken into the stomach in large doses acts as an instantaneous and most powerful se- dative, destroying completely the nervous energy and the irritability

of the body, and conse- quently extinguishing life; but in an animal thus killed the action of the heart continues for some time after the animal has apparently ceased to live. The observation of this curious fact led professor Bern, in 1809, to administer prussic acid as a remedy in pulmonary inflammation, and he found that it quickly subdued the vio- lence of the disease ‘ without having any re- course to more than preliminary bleeding.’ British practitioners, however, were altogether unacquainted with this remedy until after Dr. Majendie published his first essay on this sub- ject in 1815; when Dr. Granville, through the medium of the London Medical Repository di- rected their attention to its powers ; and I refer those who are desirous of tracing the introduction of prussic acid into use, as a medical agent, to his work (Dr. T. here refers to a Treatise on the Internal use of hydrocyanic acid, second edition, London, 1820).

Prussic acid, internally exhibited, is a remedy of great efficacy in spasmodic coughs of every description, particularly asthma, chronic ca- tarrh, and hooping cough. It has also been employed with success in palpitations of the heart. (London Medical and Physical Journal, November 1823.) In my own practice I have witnessed its powers in that affection of the trachea which is often mistaken for phthisis pulmonalis, and is not less fatal. In true tuber- cular phthisis my own experience does not ena- ble me to say much in favor of prussic acid ; but the mass of evidence brought forward in testimony of its beneficial influence in this disease by Dr. Granville should not be over- looked ; and, as I have stated in another place (vide Dr. Granville’s Treatise, second edition, p. 376), the judicious exhibition of prussic acid in the early stages of pulmonary consump- tion, may do much to bring that disease under the control of art. Prussic acid has been found extremely useful in the treatment of those epi- demic catarrhs with which this country is occa- sionally visited ; and no remedy is so well adapted as an adjunct to tonics for removing those dyspeptic affections which are attended

with acidity of the stomach, and accompanied with heat and soreness of the tongue. In these cases it reduces the morbid irritability of the stomach, and thereby enables the juices of that organ to be more slowly secreted, and of a more healthy character. [Here Dr. Thomson intro- duces the following note : — Dr. Elliotson has published a small volume containing the result of his practice with prussic acid in dyspepsia, and has stated that accident led him to try the powers of the medicine in this class of diseases. Respect for my own character obliges me to say that nothing could surprise me more than this statement of Dr. Elliotson, as he acknowledges having read the first edition of Dr. Granville’s treatise, which contains a letter from me,

dated the 20th of February, 1819, stating my senti- ments of the utility of prussic acid in dyspep- sia, and the modus operandi of the remedy pre- viously to his having employed it.]

Its beneficial effects in asthma and in hooping cough are also well established. M. Haller recommends it in aneurism of the heart and aorta. (Vide Traite" de la necessite de ne point insister sur 1'usage interieur des excitans dans 1'empoisonnement par 1'acide hydrocyanique. Par. H. S. Haller, Paris, 1824.) Cases are also on record in which this acid has proved service- able in the treatment of painful and difficult menstruation, flooding?, haemoptysis, and ner- vous diseases. It certainly is a very powerful sedative, and may be employed in all cases in which sedatives and narcotics are indicated with decided advantage.

As a local remedy, prussic acid is the only application which can be depended on for allay- ing the itching and tingling which are so dis- tressing in impetiginous affections. I have lately employed it with unvarying success in these complaints; and having published my observations (vide Medical and Physical Jour- nal, February 1822), I am in hopes of having its value determined in the hands of others. I have found it useful also in combination with small doses of oxymuriate of mercury in acute rosacea, and several other cutaneous diseases.

The dose of prussic acid is from nˆij. to ttiviij. It may be administered in distilled water, or in almond emulsion, or in infusion of cinchona bark, as circumstances may require. When an over dose has been taken, its deleterious effects are best counteracted by hot brandy and water, and the ammoniated tincture of iron M. Haller recommends bleeding, ammoniacal frictions, and acidulated drink ; but more reli- ance is to be placed on stimulants. As a local application it may be used in the form of lotion, in the proportion of a fluid drachm to a fluid ounce and a half of distilled or of rose water, or as a cataplasm, composed of crumbs of bread, soaked in a solution of a f. 3ifi of the acid in f. 3j. of distilled water. It is incompatible in prescriptions with nitrate of silver, the salts of iron, and the mineral acids.

Although the instantaneous power of prussic acid, in destroying animal life, when it is taken in doses sufficiently large to operate as a poison, may perhaps always prevent medical art from proving beneficial in such cases; yet it is of

importance to be able to ascertain, in judicial enquiries relative to suicide or to murder, that prussic acid has been administered as a poison. This may be done if the animal be opened from eighteen to forty-eight hours after death. The following means pointed out by Dr. Granville for detecting its presence in the animal system after death should be known : — Collect the blood contained in the ventricles of the heart, a portion of the contents of the stomach, and any fluid that may be found in the head, the chest, or the abdomen ; agitate the mixture for some time with distilled water, and filter the liquid, taking care to preserve the whole at a low temperature. To a small quantity of the filtered liquid add a few drops of a solution of pure potassa in alco- hol ; then add a few drops of a solution of sul- phate of iron, and if a reddish precipitate of the color of burnt terra siena now fall down, which, on the addition of a little sulphuric acid, changes to a bluish-green, and gradually on ex- posure to the atmosphere becomes a beautiful blue, we may conclude that the death of the individual has been occasioned by prussic acid. The stomach is first to be examined entire, to ascertain whether the odor of that acid is per- ceptible in it ; after which it is to be cut in pieces under distilled water, and a portion of it distilled with an equivalent portion of the water until one-eighth of the liquid has passed into the receiver. That liquid is to be rendered slightly alkaline with potassa ; then a few drops of a solution of sulphate of copper is to be. added to a small portion of it, and afterwards a sufficient quantity of muriatic acid to redissolve the excess of the oxide of copper. The liquid will appear more or less milky according to the quantity of hydrocyanic acid present. This test will detect 55ˆ5 of hydrocyanic acid in solution in water.

[In addition to the statement of the medical virtues possessed by this acid as above made by Dr. Thomson, we may add that it will in some cases of pain from a carious tooth be found ex- ceedingly useful. In its application care must be taken to convey a drop or two of the acid or a less limited quantity of the solution recom- mended by Dr. T. into the hollow of the tooth, and its good effects will sometimes prove in- stantaneous.]

2. Acidum oxalicum. — Oxalic acid.

Oxalic acid exists ready formed in many vegetable and some animal bodies. Combined with potassa it is found in the leaves of the oxalis acetosella, and corniculata, rumex ace- tosa, and geranium acidum, and with lime in the roots of rhubarb, valerian, and many other plants. Berthollet procured it from honey, hair, tendons, albumen, and

some other plants ; but that which is found in the shops manufactured for th« purposes of art is produced artifi- cially by the action of nitric acid on sugar. The following process, which was first described by Bergman, is still adopted for the production of oxalic acid.

Into a tubulated retort put one ounce of white sugar, pour over it three ounces of strong nitric acid of specific gravity 1 -567. When the whole

is dissolved boil the liquor until it ceases to afford nitrous fumes and acquires a reddish brown color; then add three ounces more of nitric acid, and continue the boiling until the fumes cease, and the color of the fluid disap- pear. Empty the cortents of the retort into a wide vessel, and upon cooling a crystallisation will take place, which is oxalic acid. On boil- ing the lixivium with two ounces of nitric acid in the retort until the red fumes almost disap- pear, a second supply of crystals will be obtain- ed. 100 grains of sugar, when properly treated, yield fifty-eight grains of crystallised oxalic acid. The rationale of the process is very ob- vious, the nitric acid is partially decomposed, and yields up a portion of oxygen which is one of its components to the sugar, which is a com- pound of oxygen, carbon, and hydrogen, and by this addition of oxygen is converted into oxalic acid. The relative proportions of these com- ponents of sugar is oxygen 49-4, carbon 44-5, and hydrogen 6-1, in 100 parts; that of oxalic acid, oxygen 64, carbon 32, and hydrogen 4, in 100 parts.

Qualities. — The crystals of oxalic acid when they are properly prepared are four sided prisms with the sides alternately larger, terminated at their extremities by dihedral prisms. They are white, transparent, inodorous, have a very acrid sour taste, and redden all the vegetable blues ex- cept indigo. One grain of oxalic acid communicates a sensible acidity to 2633 grains of water. The crystals dissolve in twice their weight of water at 65°, and in their own weight of boiling water. Alcohol at a mean temperature dissolves forty parts of them, and boiling alcohol fifty-six parts. They are sparingly soluble in ether. The crystals are in a state of a hydrate, 100 grains containing fifty-two only of acid, and forty-eight of water.

Oxalic acid combines with alkalies, earths, and metallic oxides, forming oxalates. Muriatic and acetic acids dissolve it without alteration ; but it is decomposed both by sulphuric and nitric acids aided by heat.

Medical properties and uses. — Oxalic acid in small doses, when it is dissolved in a large quantity of water sweetened with sugar, forms an

agreeable cooling beverage, which may be used in febrile diseases in the same manner, and with the same intention, as lemonade. It may also be employed to check an external hsemor- rhagy, which it appears to do by charring the blood as it issues from the wound, and thereby mechanically stopping its flow. It is a virulent poison when swallowed in large doses, and, from the resemblance of its crystals to those of sulphate of magnesia, many fatal accidents have occurred for mistaking oxalic acid for that purgative salt. The acid taste of the one salt and the bitter taste of the other would always prevent such accidents, were individuals to taste their medicines before swallowing them ; but, besides the occurrence of accidents, oxalic acid has of late been too fre- quently employed by the wretched suicide for the purpose of self-destruction. It is, therefore, important that every medical practitioner should be acquainted with the qualities of oxalic acid, its effects on the animal economy, and the means

of counteracting these when it has been taken in a sufficient dose to operate as a poison.

The exact extent of oxalic acid which may be taken with impunity has not been determined ; but its poisonous properties are more or less virulent according to the degree of dilution of the dose. From some experiments on animals which I made ten years since, and the published details of the appearances in dissection of several fatal cases of poisoning by oxalic acid, I was led to form an opinion that ‘the primary morbid ac- tion of this poison is on the stomach itself, on the coats of which its chemical action occasions the organised animal solid to enter into new combinations, and thence produces a decompo- sition, both of the acid and the part to which it is applied ;’ that the acid, however, also enters into the circulation by absorption ; but, ‘ that the proximate cause of death by oxalic acid is the suspension of the functions of the heart and brain, which are sympathetically affected by the local injury done to the stomach.’ (London Medical Repository, vol. iii. p. 386.) The sub- ject has since been investigated with much care and great ingenuity by Dr. Christison and Dr. Coindet, and their observations published in the Edinburgh Medical Journal, vol. xix. p. 163. From the labors of these gentlemen lam induced to change my opinion as to the extent of the in- jury done to the living stomach, and to believe that the pultaceous state of that organ which was found by me in my experiments on dogs, is to be attributed to the action of the acid on its coats after death. I am, however, still of opinion, that death is less to be attributed to the sedative power of the poison acting on the brain and spine, to which it is carried by

absorption, than, to the sympathetic action on the nervous system from the local injury of the stomach, an opinion according with their first conclusions, that ‘oxa- lic acid when introduced into the stomach in large doses and highly concentrated irritates it, or corrodes it, by dissolving the gelatine of its coats ; and death takes place by a sympathetic injury of the nervous system.’

The general symptoms attending poison by oxalic acid are, burning pain in the stomach ; violent and incessant vomiting, the matter ejected being commonly dark colored, and sometimes bloody ; in some cases there have been violent gripings and purgings; the pulse soon sinks and becomes almost imperceptible, and this state is followed by deadly coldness of the limbs, at- tended with lividity of the fingers, and nails, and clammy sweats ; convulsions, but not in every instance, and insensibility, precede death. With regard to appearances after death, no particular change in the external state of the body has been noticed. On opening the body, the stomach is found generally to contain a quantity of dark colored fluid, which is probably extravasated blood charred by the poison ; in some instances the coats of the stomach have been found greatly injured, presenting appearances of great vascula- rity, thickening of the mucous coat, the rugae pultaceous and easily wiped off, and in some cases the other membranes have been found ten- der and even perforated, so that the contents of the organ have escaped into the cavity of the

abdomen. The lungs and heari hare not been often examined ; but, in the lower animals killed by oxalic acid, both have presented indications of inflammation having existed in them, par- ticularly the lungs. The vessels of the brain have been found turgid.

The fatal effects of poisoning by oxalic acid are so rapid that little opportunity is afforded of counteracting them by medical art. The first ob- ject certainly, in every case, is to evacuate the poison from the stomach, and when the stomach pump is at hand it should be instantly employed. The vomiting which usually supervenes precludes the necessity of employing emetics ; and copious dilution, which in other cases of corrosive poi- son is advisable, is more likely to promote the absorption of the arid, and consequently increase its powers. Before, therefore, emetics are em- ployed, if they should be deemed necessary, the activity of the poison should be weakened by al- tering its nature by some substance with which, in chemically combining, its solubility is dimi- nished. That chalk produces this effect I dis- covered in making the experiments already alluded to, and several instances have since oc- curred in which its administration has saved the lives of individuals poisoned by oxalic acid. The lime of the chalk unites with

the oxalic acid, and forms an oxalite which is perfectly inert. Magnesia may be employed instead of chalk, and it has the advantage of not inconveniencing the patient by the extrication of carbonic acid gas, which is copiously evolved when the chalk unites with the acid ; but as the oxalate of lime is more insoluble than the oxalate of magnesia, and con- sequently more inert, it may be questioned whether the inconveniences of the gas may be equivalent to the greater security from the em- ployment of chalk. A mixture of chalk and water, or of magnesia and water, should there- fore be instantly given when oxalic acid has been taken in a large dose ; and, after the local effects of the poison have been counteracted, the system should be supported by cordials combined witi» opium, and the oxalate afterwards be carried out of the system by the aid of purgatives.

To obtain legal evidence in cases of poisoning by oxalic acid when none of the poison is found, we may be guided to suspect the nature of the poison by the symptoms and the post mortem ap- pearances ; but a correct opinion can be formed only by an analysis of the vomited matter, the contents of the stomach and its coats. For this purpose, the vomited matter and the contents of the stomach should be separately diluted with distilled water, and the coats of the organ itself boiled in distilled water. These solutions should then be separately filtered and decolorised with chlorine, and subjected to the following tests. If oxalic acid be present, hydrochlorate (muriate) of lime will occasion a precipitate which is solu- ble in a small quantity of nitric acid, but not in muriatic, unless a very large quantity of the acid be used. Sulphate of copper throws down a bluish-white precipitate in any fluid containing free oxalic acid, which is insoluble in hydro- chloric acid ; and nitrate of silver occasions a heavy white precipitate, which, when dried and heated over the flame of a candle on- the point of

a spatula, becomes brown at the edge, then sud- denly fulminates, and is all dissipated in white fumes. This is a very delicate test; for Dr. Christison informs us that, from a quarter of a grain of oxalic acid dissolved in 4000 parts of water, he and Dr. Coindet procured enough of the oxalate of silver to show its fulmination twice. (Edinburgh Medical Journal, vol. xix. p. 198.) ALKALIES AND SALTS.

Under the word ALKALI, and in the article CHEMISTRY, will be found definitions of alkalies and statements of those recent discoveries, more especially of Sir H. Davy, which have thrown new light on their composition. We may here repeat that the general properties of these

bodies are those of combining with acids forming neutral salts in which the qualities of both the compo- nents are lost, of changing the blue colors of ve- getables to green, and of combining with oil into a soapy matter which thus occasions, to a certain extent, the union of oil and water. Alkalies also have an acrid urinous taste ; are exceedingly caustic, so much so as to corrode or dissolve animal matter ; they have a great affinity for water, which, in some cases, they abstract so rapidly and readily even from the atmosphere, that it is necessary to keep them in well-stopped glass bottles, and they are susceptible of fusion or volatilisation by strong heat.

Of the alkalies, the potassa, soda, and ammo- nia, only are used in pharmacy in an uncom- bined state.

The London College, adopting the alphabetical order of arrangement, first speak of the prepa- rations of ammonia, then of potassa, and lastly of soda.

PREPARATIONS OF AMMONIA.

Ammonia subcarbonas. London, (formerly called ammonia praeparata, and sal cornu cervi .) — Subcarbonate of ammonia.

Take of muriate of ammonia a pound, pre- pared chalk dried, one pound and a half. Let them be powdered separately, then mix them and sublime with a gradually increased heat until the retort become red hot.

Subcarbonas ammonia;. Edinburgh. — Subcar- bonate of ammonia.

Take of muriate of ammonia one part, the softer carbonate of lime, dried, two parts. Let them be separately pulverised, then mixed, and sublimed from a retort into a receiver kept cold.

In this formation a double decomposition takes place. The muriatic acid of the muriate of ammonia is attracted by the lime, and the carbonic acid by the ammonia. The subcarbo- nate of ammonia which is formed sublimes, while the muriate of lime remains in the retort.

Qualities. — The salt is commonly seen in a white, hard, semi-transparent mass. It is solu- ble in water, but when warm water is used it is in some measure decomposed. It is not soluble in alcohol. It is decomposed by the acids and alkalies as well as by their subcarbonates. Mag- nesia also partially decomposes it. The super-tartrate of potassa, sulphate of magnesia, the metallic salts, and some of the earths, also decom- pose this salt. Its specific gravity is 0-966.

Medical properties. — Subcarbonate of ammo-

nia is one of the most useful stimulants which the pharmacopoeias afford. It may be adminis- tered in several cases, where, in consequence of the inflammatory diathesis which prevails, other excitants would be inadmissible ; as in some instances of erysipelatous inflammation, febrile debility, and also in childrens' complaints, part of its virtues being dependent upon its power of neutralising acidity in the first passages. In atonic gout it is an excellent remedy, as it is in some forms of dyspepsia and hysteria. ' One part,' says Dr. Thomson, ' of pulverised subcar- bonate of ammonia, and three parts of extract of belladonna spread on leather in the form of a plaster, is an excellent application for allaying rheumatic pains. Dose for internal administia- tion from six grains to fifteen. It may be con- veniently rubbed down with a scruple of aro- matic confection.

Liquor ammonite. London. — Solution of am- monia.

Take of muriate of ammonia eight ounces, lime newly burnt six ounces, water four pints. Pour one pint of the water upon the lime ; then cover the vessel and set it aside for an hour. Dissolve the muriate of ammonia in the re- mainder of the water previously heated ; add to it the former^ mixture, and again cover the vessel ; after the liquor has become cold strain it and distil twelve fluid ounces of solution of ammo- nia into a receiver whose temperature does not exceed 50°. The specific gravity of this solution is 0-960.

Aqua ammonia. Edinburgh. — Water of am- monia.

Take of muriate of ammonia one pound, lime newly burnt one pound and a half, distilled water one pound, water nine ounces. Upon the lime broken to pieces pour the water in an iron or earthen vessel, cover it up until the lime have fallen into powder and become cold ; then rub the muriate to a fine powder, and triturate it with lime in a mortar, after which put them directly into a bottle glass retort. Place the retort in a sand-bath and adapt to it a receiver furnished with a tube passing into a phial containing the distilled water ; the phial, however, being suffi- ciently large to hold double the quantity of water. Then apply the fire, gradually raising it until the bottom of the iron pot be red hot, and so long as gas and vapor are produced. The spe- cific gravity of this solution is 0'939.

The muriate of ammonia in these processes is decomposed by the lime, this last having a greater affinity for the acid than has the ammo- nia; the ammonia is consequently disengaged and passes over,

and the product is an aqueous solution of it.

Qualities. — Ammonia in this liquid form is a colorless fluid, very pungent in its odor, i,nd having an extremely acid taste. It unites w.in all the acids and forms with them neutral salts. It soon becomes carbonated by mere exposure to the atmosphere. Acids and metallic salts and alum are incompatible with it in prescriptions. When it is at all carbonated the presence of the carbonic acid may be detected by adding to some of the solution muriate of lime, which will form a precipitate ; if indeed it at all effervesce with

acids the presence of carbonic acid may be in- ferred.

Medical properties. — Stimulant, antacid, and rubefacient. Dose from n\x to m,xx. If taken as a poison and death does not immediately ensue considerable quantities of vinegar should be poured down the throat.

Aqua ammonia diluta. Edinburgh. — Distilled water of ammonia.

Take of water of ammonia one pa’rt, distilled water two parts. Mix them.

As extemporaneous dilution is always suffici- ently easy, this preparation might have been dis- pensed with.

Liquor ammonia acetatis. London. — Solution of acetate of ammonia.

Take of subcarbonate of ammonia two ounces, diluted acetic acid four pints or a sufficient quan- tity. Add the acid to the subcarbonate of am- monia until the effervescence cease.

Aqua acetatis ammonia. Edinburgh. — Water of acetate of ammonia.

Take of carbonate of ammonia in powder any quantity, pour upon it so much weak acid as will exactly saturate the ammonia.

It is better, perhaps, that the saturation be made by guess and taste, and then tasted as in the Dublin College ; for the distilled vinegar is always of varied strength.

Qualities. — This liquor is limpid and nearly without color. Strong acids and fixed alkalies decompose it, as do alum, magnesia, lime

water, sulphate of magnesia, oxymuriate of mercury, and nitrate of silver, which are all of course in- compatible with it in prescription. The sulphates of metals and acetate of lead are also decom- posed by it.

Medical properties.— An exceedingly useful refrigerant and diaphoretic in disorders accom- panied by much febrile heat. It is also diuretic, especially when taken while the patient is not in bed. It is useful as a cooling lotion to the head in cases of phrenitic affection, and Dr. Thomson tells us that he has employed it with the best effect, as a lotion in porrigo affecting the scalp. Dose from f. 3iij to f. 3j-

Liquor ammonia subcarbonatis. London. — Solution of subcarbonate of ammonia.

Take of subcarbonate of ammonia four ounces, distilled water a pint. Dissolve the subcarbo- nate of ammonia in water, and filter through paper.

Solutio subcarbonatis ammonite. Edinburgh. — Solution of subcarbonate of ammonia.

Take of subcarbonate of ammonia one part, distilled water four parts. Dissolve the sub- carbonate in the water, and filter through paper.

Qualities. — Limpid and colorless ; it forms a coagulum, when shaken with twice its bulk of alcohol.

Medicalproperties. — Stimulant and diaphoretic.

Dose from nˆxxv. to f. 3j. in any fluid that does not decompose it.

PREPARATIONS OF POTASSA.

Liquor potassa. London. — Solution of potassa.

Take of subcarbonate of potassa a pound ; lime fresh burnt half a pound ; boiling distilled water a gallon. Dissolve the subcarbonate of

potassa in two pints of the water. Add the re- mainder of the water to the lime; mix the hot liquors together; then set the mixture aside in a covered vessel; and, when it is cold, let it be strained through a cotton bag. If, on the addi- tion of any diluted acid, effervescence be excited, more lime must be added, and the filtration re- peated. A pint of this solution ought to weigh sixteen ounces.

Aqua potussa. Edinburgh. — Water of potassa.

Take of lime fresh burnt eight ounces; sub- carbonate of potassa six ounces ; boiling water twenty-eight ounces. Let the lime be put into an iron or earthen vessel with twenty ounces of the water. When the ebullition ceases, imme- diately add the salt dissolved in the remaining eight ounces of the water; and, having thoroughly mixed the whole, cover the vessel till the mixture cool. The mixture being cooled, agitate it well, and pour it into a glass funnel, the tube of which is obstructed with a piece of clean linen. Cover the upper orifice of the funnel, while its tube is inserted into another glass vessel, that the solu- tion of potassa may gradually drop through the linen of the lower vessel. When it first ceases to drop, pour a few ounces of water into the funnel ; but cautiously, so that the fluid may swim above the matter. The water of potassa will again begin to drop. The affusion of water, however, must be repeated until three pounds have filtered, which will be in the space of two or three days; then let the upper part of the solution be mixed with the lower by agitation, and preserve it in a well stopped vessel.

In this separation the lime, attracting the car- bonic acid of the subcarbonate of potassa, leaves the alkali in a state of purity, or causticity. The liquid should be kept in closely stopped bottles, otherwise it will become carbonated by exposure to the air.

Qualities. — Solution of potassa is exceedingly caustic, scarcely admitting of being put on the tongue. It is without color, and has an oily ap- pearance when shaken. If muriates be present in it they may be detected by saturating a por- tion of the liquid with nitric acid, then adding nitrate of barytes to precipitate the sulphates if any ; and lastly adding a solution of nitrate of silver, which is precipitated if any muriate be present. Sulphates are detected by saturating the liquor with muriatic acid, and adding mur- riate of barytes ; and if lime be present blowing into a liquor through a tube, by adding carbo-<- nic acid, will render it turbid. It is always more or less impure, as ordered by the pharmacopoeias, but not to the extent of interfering with its medU cinal virtues. The specific gravity of the solution ought to be 1'056. It is a solvent of gum, ex- tractive and resin, and it forms soap when mixed with oils or fat.

Medical properties. — Diuretic, antacid, and lifhontriptic. Dr. Willan speaks highly of it in lepra; and Dr. Thomson says that it may be al- most regarded as a specific in the various species of psoriasis which depend altogether upon acidity in the primae vise, and a hasty and consequently imperfect formation of the juices of the stomach.

Dose m.x- to f. 3j. or f. 3ij in some of the cutar neous affections.

Liquor potassa subcarbonatis. London. — So- lution of carbonate of potassa.

Take of subcarbonate of potassa a pound ; distilled water twelve fluid ounces. Dissolve the subcarbonate of potassa in the water, and filter the solution through paper.

Qualities. — This solution ought to be quite clear, and without color or smell. It is of course incompatible in prescription with sulphate of magnesia and the metallic salts. It is likewise improper to mix with lime water, or magnesia, or substances containing much of the tannin principle.

Medical properties. — The same as the salt it- self. Dose from n\v. to f. 3ij.

Potassa cum calce. London. — Potassa with lime. Take of solution of potassa three pints ; lime fresh burnt a pound. Boil the solution of potassa down to a pint; then add the lime, pre- viously slaked by the water, and intimately mix them.

Potassa cum calce. Olim, Causticum commune mitius. Edinburgh. — Potassa with lime; for- merly, milder common caustic.

Take of the water of potassa any quantity. Evaporate it to one-third part in a covered iron vessel ; then mix with it as much newly slaked lime as will bring it to the consistence of a solid paste, which is to be preserved in a well stopped vessel. The lime makes the alkali less deliquescent, and consequently more manageable as an escharotic.

Potassa fusa. London. — Fused potassa.

Take of solution of potassa a gallon. Eva- porate the water in a clean iron vessel over the fire until, the ebullition having ceased, the po- tassa melts ; then pour it out upon a clean iron plate into pieces of proper form.

Potassa. Olim. Causticum commune acerri- nmm. Edinburgh. — Potassa; formerly stronger common caustic.

Take of solution of potassa any quantity. Evaporate it in a covered very clean iron vessel until, the ebullition being over, the saline matter flows smoothly like oil, which happens before the vessel becomes red hot. Then pour it out upon a clean iron plate, cut it into small masses before it hardens, and let it be preserved in well stopped phials.

‘ The concrete potassa procured by these pro- cesses is a hydrate sufficiently pure for medical purposes ; but it still contains the same foreign ingredients as the solution. To procure it as free as possible from carbonic acid, the evapora- tion should be performed in a silver vessel very quickly; the vessel should be deep, so that the watery vapor which arises may exclude the at- mospheric air. It is generally run into moulds, and formed into solid cylinders, which are covered with paper, and kept in well stopped bottles. The method of Berthollet for obtaining it in perfect purity, which is usually described in chemical and pharmaceutical works, is too trou- blesome and expensive to be generally adopted. The following method, proposed by Lowitz, is more economical ; —

A solution of potassa must be evaporated till a pellicle forms on its surface, then allowed to cool ; and the saline deposit, which consists

cniefly of the foreign salts, carefully separated The evaporation is then to be renewed, skimming off the pellicles that form on the surface of tne fluid, which, as soon as these cease to be pro- duced, and the ebullition is ended, must be re- moved from the fire, and constantly stirred till it is cold. The mass is next to be dissolved in twice its weight of distilled cold water, the so- lution filtered and evaporated in a clean iron or silver basin until crystals are deposited. If the heated fluid consolidate into a mass in any de- gree, a small portion of water must be added, and the mass again heated to fluidity. The supernatant liquor is left of a brown color, which, after being kept for some time at rest in well-stopped phials, deposits the coloring matter, and may again be evaporated and crystallised as before. The crystals obtained in the various evaporations are colorless, pure potassa.’ — Thomson.

Qualities. — When made properly, potassa is in the form of a white brittle substance, smelling like quicklime when being slaked, and too caus- tic to be tasted. It is soluble in water and alcohol, and attracts humidity from the air. It is fused and volatilised by heat; and it combines with sulphur, the fixed oils, and the metallic oxides.

Medical properties. — Escharotic. Employed usefully in strictures requiring caustic.

Potassa; acetas. London. — Acetate of potassa.

Take of subcarbonate of potassa a pound and a half ; of the stronger acetic acid two pints ; boiling distilled water two pints. Mix the acid with the water, and pour it upon the subcarbonate of potassa till all ebullition cease, after which filter. First evaporate the solution in a water- bath until no more bubbles rise ; then expose it to gradually increased heat, and continue the evaporation till a pellicle form, which should be removed and dried on blotting paper. Re- peat the evaporation again and again, removing the pellicles as they form, and drying them in the manner already described.

Acetas potassa. Edinburgh. — Acetate of po tassa.

Take of very pure carbonate of potassa one pound ; weak acetic acid a sufficient quantity. Boil the subcarbonate in five pounds of the acid, and add more acid at different times, until, the watery part of the former portion being nearly dissipated by evaporation, the acid newly added occasions no effervescence, which will be the case when about twenty pounds of it have been con- sumed ; then evaporate slowly to dryness. Li- quefy this impure salt with a gentle heat for a short time ; then dissolve it in water, and filter through paper. If the liquefaction have been properly performed, the filtered fluid will be limpid, but otherwise of a brown color. After- wards evaporate this fluid in a shallow glass vessel, so that, when removed from the fire, it may pass into a crystalline mass. Finally, the acetate of potassa ought to be preserved in closely shut vessels.

Qualities. — This salt possesses a peculiar odor and a sharp taste. It is deliquescent, and it changes into a subcarbonate by exposure to a red heat. It is soluble in water and alcohol.

When adulterated with tartrate of potassa a pre- cipitate will be occasioned by the addition of tar- taric acid in solution ; and acetate of lead will produce a precipitate soluble in acetic acid, sul- phates may be diluted by nitrate of barytes, and muriates by nitrate of silver.

Medical properties. — Aperient and diuretic. Principally employed in dropsical affections. Dose as an aperient two or three drachms — as a diuretic, from half a drachm to a drachm often repeated.

Potassˆ carbonas. London. — Carbonate of potassa.

Take of the solution of subcarbonate of potassa a gallon. By means of a proper apparatus transmit carbonic acid through the solution until it is saturated. Then filter. Evaporate until crystals form, being careful not to increase the lieat above 120°, separate the crystals from the fluid and dry them on blotting paper.

Carbonic acid is easily obtained from white marble and diluted sulphuric acid.

Carbonas potassa. Edinburgh. — Carbonate of potassa.

Take of pure carbonate of potassa two parts, water three parts. Dissolve the salt in the wa- ter, and by means of a proper apparatus throw into it a stream of carbonic acid gas. Filter the solution when it ceases to absorb the acid, and then evaporate it by a heat not exceeding 180°, that crystals may form.

The carbonic acid is easily obtained by pour- ing diluted sulphuric acid on pulverised car- bonate of lime.

It has been recommended by some that muri- atic acid be used to evolve the carbonic acid from the marble.

Qualities. — ‘ This salt, prepared by these for- mulce, is, properly speaking, a bicarbonate; the subcarbonate of the pharmacopoeias being really a carbonate.’ It is without odor, has a taste slightly alkalescent, and mild. It is not soluble in alco- hol. It is incompatible in prescriptions with the acidulous salts, with the metallic salts, with borax, muriate of ammonia, lime water, sulphate of magnesia, and alum.

Medical properties. — Useful in the preparation of the effervescing draught. Dose of the salt from 9ft to 3j.

Potasste subcarbonas. London. — Subcarbonate of potassa.

Take of impure potassa (pearl ashes), reduced to a powder, three pounds, boiling water three pints and a half. Dissolve the potassa in the water and filter; then- pour the solution into a clean iron pot and evaporate with a gentle heat until the liquor thicken ; lastly, being taken from the fire, stir assiduously with an iron spatula un- til the salt concrete in small grains.

A purer subcarbonate of potassa may be pre- pared in a similar manner from tartar, previously burnt until it be of an ash color.

Subcarbonas potassa. Edinburgh. — Subcarbo- nate of potassa.

Let impure carbonate of potassa be put into a crucible and exposed to a red heat. Then tri- turate it with an equal weight of water. Pour the solution after the impurities have subsided into a clean iron pot. and boil it to dryness: VOL. XVII

stirring the salt constantly towards the end of the boiling, to prevent it from adhering to the vessel.

This salt, as above intimated, is rather a carbo- nate than a subcarbonate, ‘ being composed of one atom of each of its components.’ See CHE- MISTRY.

Subcarbonas potasses purissimus. Edinburgh. — Pure subcarbonate of potassa.

Take of impure supertartrate of potassa any quantity, wrap it up in moist bibulous paper, or put it into a crucible ; and, having placed it among live coals, let it be burnt to a black mass; which, after having reduced it to powder, expose in an open crucible to a moderate fire, until it become white, or at least ash-colored, taking care that it be not melted. Then dissolve it in warm water; strain the solution through a linen cloth, and evaporate it in a clean iron vessel, stirring constantly towards the end of the process with an iron spoon, lest any of it should adhere to the bottom of the vessel. A very white salt will re- main, which is to be left a little longer on the fire till the bottom of the vessel become red hot. Finally, when it is cold let it be preserved in well-stopped glass vessels.

Qualities. — The same as those obtained from the potassa of commerce, with fewer impurities. The impurities of this salt we are directed to ascertain in the following manner : — ‘ If one part of- it be dissolved in eight parts of distilled water, and saturated with pure nitric acid, the presence of siliceous earth will be indicated by the solution becoming turbid, and, by weighing the precipitate, its quantity may be ascertained. A precipitate being formed on the addition of muriate of barytes indicates the presence of the sulphates ; a white precipitate turning bluish on exposure to the light, on adding nitrate of silver, proves the presence of muriatic salts ; and caU careous earth is rendered evident by dropping into a solution of the subcarbonate a few drops of a solution of oxalic acid or oxalate of ammo- nia.’

Medical properties. — Antacid and diuretic ; principally employed in

the composition of the saline draught, in the proportion of a scrupre to a table spoonful of lemon juice, or fifteen grains of the concrete tartaric acid.

Potassa sulphas. London. — Sulphate of po- tassa.

Take of the salt which remains after the dis- tillation of the nitric acid two pounds, boiling water two gallons. Mix them so as to dissolve the salt, and then add as much subcarbonate of potassa as may be sufficient to saturate the acid. Next boil till a pellicle be formed on the surface, and after filtering the liquor set it aside to crys- tallise. Pour off the water, and dry the crystals on bibulous paper.

Sulphas potas&te. Edinburgh. — Sulphate of po- tassa.

Dissolve the acidulous salt which remains *f- ter the distillation of the nitrous acid in hot water, and add so much carbonate of lime in powder as will saturate the superfluous acid, and leave the whole at rest until the faeces subside, Having poured off the fluid filter it through pa- per, and evaporate until crystals form. K.

Dr. Thomson prefers the Edinburgh process as being quite equal to the others with less ex- pense.

Qualities. — The taste is nauseous and rather bitter. The crystals decrepitate when heated, but they are not efflorescent. They are soluble to a certain extent in water. The nitric, muri- atic, and tartaric acids partially decompose it : its solution is also incompatible in prescription with muriate of barytes, muriate of lime, oxymu- riate of mercury, nitrate of silver, and acetate of lead.

Medical properties. — Cathartic and deobstru- ent. It is often combined with rhubarb and given in the form of powder, on account of its being less soluble and deliquescent than some other of the saline purgatives. Some practitioners, as Dr. Yeats, have much lauded it in complaints of children. Dr. Y. recommends it to be very fine- ly powdered. Dose for an adult from 15 grs. to 3j.

Potassa super sulpfias. London. — Supersulphate of potassa.

Take of the salt which remains after the dis- tillation of the nitric acid two pounds, boiling water four pints. Mix them so that the salt may be

dissolved, and filter. Then let the solution be boiled till one half is evaporated, and let it be set aside to crystallise. Pour off the water, and let the crystals be dried on bibulous paper.

Qualities. — The crystals are acid and bitterish, soluble in water, and reducible to simple sulphate of potassa by exposure to a red heat.

Medical properties. — It has been introduced into the pharmacopoeia from an idea that it will afford a useful means of producing the sulphuric acid in combination with an aperient salt. Dose 10 sits, to 3ij.

Sulphas potassa: cum sulphure. Edinburgh. — Sulphate of potassa with sulphur.

Take of nitrate of potassa in powder, and of sublimed sulphur equal weights. Mix them well together, and throw the mixture in small quantities at a time into a red hot crucible. The deflagra- tion being finished, let the salt cool, and preserve it in a well-stopped glass vessel.

This preparation was originally known under the name of sal polychrest. In the process of making it both sulphuric and sulphurous acids are formed from the sulphur, but the oxygen which is evolved by the heat is not sufficient to acidify all the sulphur employed, so that part of the latter goes into combination with the potassa of the nitre as sulphur. Thus, sulphate and su- persulphate of potassa are formed together with a sulphuret of the same.

Qualities.— The salt tastes acid, and reddens an infusion of litmus. It is soluble in water, and by exposure to air converted into sulphate of potassa.

Medical properties. — Cathartic, like the sul- phate of potassa, by which last it is almost su- perseded.

Potassa tartras. London. — Tartrate of potassa.

Take of subcarbonate of potassa sixteen ounces, supertartrate of potassa three pounds, boiling water a gallon. Dissolve the subcarbo- nate of potassa in the water, and add the super- tartrate of potassa reduced to powder, till the

effervescence cease. Filter the solution through paper; then boil it until a pellicle appear on the surface, and set it aside to crystallise. The water being poured off from the crystals let them be dried on

bibulous paper.

Tartras potassa. Edinburgh. — Tartrate of po- tassa:

Take of subcarbonate of potassa one part, su- pertartrate of potassa three parts, or a sufficient quantity, boiling water fifteen parts. To the subcarbonate dissolved in the water add in small portions the supertartrate of potassa reduced to fine powder so long as it excites effervescence; which gradually ceases before three times the weight of the subcarbonate of potassa be added. Let the solution when it is cool be filtered, eva- porated, and set aside to form crystals.

Qualities. — This salt is bitierish to the taste; it is soluble in water, and deliquescent. The weaker acids partially decompose it ; and lime water, magnesia, muriate of barytes, nitrate of silver, and acetate of lead completely.

Medical properties. — A useful purgative, ope- rating without griping. Dose from f. 3ij. to f. 3J.

Aqua supercarbonatis potassee. Edinburgh. — Water of supercarbonate of potassa.

Take of water ten pounds, pure subcarbonate of potassa one ounce. Dissolve and expose the solution to acurrent of carbonic acid gas, arising from carbonate of lime in powder three ounces, sulphuric acid three ounces, and water .three pounds, gradually and cautiously mixed. The chemical apparatus of Dr. Nooth is well suited for this preparation. But, if a large quantity of the solution be wanted, an apparatus which will admit of a sufficiently great pressure should be employed. The solution must be preserved in well stopped vessels.

Qualities. — Taste pungent and acidulous, vio- lently effervescing with all acids.

Medical properties. — Antacid, diuretic, and lithontriptic. It is better for the saline draught in effervescence, than that prepared with the car- bonate. Dose incalculous disorders f. ˆviij. two or three times a day.

PREPARATIONS OF SODA.

SodcB carbonas. London. — Carbonate of soda.

Take of subcarbonate of soda a pound, dis- tilled water three pints. Dissolve the subcar- bonate of soda in the distilled water. Then let

carbonic acid be transmitted through the solution by means of a proper apparatus until it be satu- rated, and set it apart to crystallise. Dry the crystals by compressing them in blotting paper. Let the remainder of the solution be evaporated by a heat not exceeding 120°, in order that more crystals may be procured. These are to be compressed and dried in the same manner as before.

Carbonas sodee. Edinburgh. — Carbonate of soda.

Take of subcarbonate of soda two parts, water three parts. Dissolve the salt in the water and subject it to a stream of carbonic acid gas, until the acid be no longer absorbed. Then let the fluid be filtered and evaporated in a heat not ex- ceeding 18°, so that crystals may form. The car- bonic acid is easily obtained from equal weights

i > f pulverised carbonate of lime and of sulphu- ric acid largely diluted witli water.

This is a bicarbonate. Dose from 15 grs. to 9ij.

Pkosphas sodtz. Edinburgh. — Phosphate of soda.

Take of bones burnt to whiteness and reduced to powder ten pounds, sulphuric acid six pounds, subcarbonate of soda a sufficient quantity. Let the powdered bones be mixed with the sul- phuric acid in an earthen vessel ; then add nine pounds of water, and mix again ; keep the vessel in a vapor bath for three days ; after which di- lute the matter with nine pounds more of boiling water, and strain through a strong linen cloth, pouring boiling water gradually over it until the whole of the phosphoric acid be washed out. Set the strained liquor apart that the im- purities may subside, from which pour it off, and evaporate to nine pounds. To this liquor, sepa- rated from its impurities and heated in an earthen vessel, add a warm solution of subcarbo- nate of soda until the effervescence cease. Then strain, and set the liquor aside for the formation of crystals. These being removed add to the liquor, if necessary, a little subcarbonate of soda, that the phosphoric acid may be accurately saturated ; and dispose it by evaporation again to yield crystals so long as these shall be pro- duced. Finally let the crystals be kept in a well closed vessel.

Qualities. — This salt resembles in taste the common culinary salt. It effloresces on expo- sure to the air, is soluble, and undergoes the

watery effusion when exposed to a sufficient heat. Muriate of lime, barytes, and magnesia, decompose it, and the strong acids convert it into a biphosphate.

Medical properties. — A mild and gentle ca- thartic. Dose from 3vj. to Jift.

Sodce subcarbonas. London. — Subcarbonate of soda.

Take of impure soda (barilla) in powder a pound, boiling distilled water four pints. Boil the soda in the water for half an hour, and filter the solution. Evaporate it to two pints and set it apart that crystals may form. Throw away the remaining liquor.

Subcarbonas sodce. Edinburgh. — Subcarbonate of soda.

Take of impure carbonate of soda any quan- tity. Bruise it, and then boil it in water until all the saline matter be dissolved. Filter the solu- tion through paper, and evaporate it in an iron vessel, so that when cold crystals may form.

Qualities. — Taste mildly alkalescent. It is soluble in water, and fusible at 150° of Fahren- heit. For detecting impurities use the methods described under subcarbonate of potassa. If tartaric acid be added to the solution of the sub- carbonate of soda, and potassa be present, this matter will form a precipitate of supertartrate.

Medical properties. — Antacid, lithontriptic, and deobstruent. Dose from 9ft. to 3j.

Soda subcarbonas exsiccata. London. — Dried subcarbonate of soda.

Take of subcarbonate of soda a pound, ex- pose it to a boiling heat in a clean iron vessel until it become perfectly dry, and stir it at the same time diligently with an iron spatula. Lastly rub it into a powder.

Medical properties. — The same as the subca— bonate but stronger, being deprived of the water of crystallisation ; on this account also it is much fitter to form into pills.

Soda sulphas. London. — Sulphate of soda.

Take of the salt which remains after the dis- tillation of muriatic acid two pounds, boiling water two pints and a half. Dissolve the salt in the water; then gradually add so much carbonate of soda as will saturate the acid. Boil the so- lution until a pellicle appear ; and, after having

filtered it, set it apart to crystallise. Pour the water off from the crystals, and dry them on bi- bulous paper.

Sulphas sodce. Edinburgh. — Sulphate of soda.

Dissolve in water the acidulous salt which re- mains after the distillation of muriatic acid ; and having mixed chalk with it in powder, to remove the superfluous acid, set it apart until the subsi- dence of the impurities. Then, having poured off the liquor, filter it through paper, and reduce it by evaporation, so as to form crystals.

Qualities. — This salt is bitter as well as saline to the taste. It is soluble in water, and effloresces when exposed to the air. It also undergoes watery fusion when exposed to a sufficient heat.

Medical properties. — Purgative. Not so much used as formerly, on account of its bitter taste. Dose from ˆj to |ij.

Aqua supercarbonatis sodce. Edinburgh. — Water of supercarbonate of soda.

Take of water ten pounds, subcarbonate of soda two ounces. Dissolve and subject the so- lution to a stream of carbonic acid gas, procured from three ounces of carbonate of lime, and the same quantity of sulphuric acid, with three pounds of water, gradually and cautiously mixed together. It may be prepared conveniently in Nooth's apparatus. But, if a large quantity of it be required, an apparatus will be requisite that is capable of affording a greater pressure. The fluid must be preserved in well corked bottles.

Soda tartarizata. London. — Tartarised soda.

Take of subcarbonate of soda twenty ounces, supertartrate of potassa powdered two pounds, boiling water ten pints. Dissolve the subcarbo- nate of soda in the water, and add gradually the supertartrate of potassa. Filter the solution through paper, then boil it till a pellicle forms on the surface, and set it aside to crystallise. Pour the water away from the crystals, and dry them on bibulous paper.

Tartras sodce et potassce. Edinburgh. — Tar- trate of soda and potassa.

Take of subcarbonate of soda one part, super- tartrate of potassa three parts, or a sufficient quantity, boiling water fifteen parts. To the sub- carbonate, dissolved in the water gradually, add the supertartrate rubbed to a fine powder, so long as effervescence may be excited,

which generally occurs before three times the weight of the sub-carbonate is added ; when the fluid is cold filter it through paper, and after a proper degree of evaporation set it aside that crystals may form.

This is a triple salt, formed by the saturation of the superabundant acid of the supertartrate by the soda of the subcarbonate, the dissipation of the carbonic acid from the latter, and the union of the two alkaline bases. j£ 2

PHARMACY.

Take of sulphate of zinc sixteen grains, water eight ounces, diluted sulphuric acid sixteen drops. Dissolve the sulphate of zinc in the water, and, after adding the acid, filter the solution through paper.

Solutio acetatis zinci. Edinburgh. — Solution of acetate of zinc.

Take of sulphate of zinc one drachm, acetate of lead four scruples, distilled water twenty ounces. Dissolve. Let the salts be mixed separately in ten ounces of the water ; then mix the solutions, and, after the precipitate has sub- sided, filter.

Here there is a double decomposition ; the sulphate of zinc gives out its sulphuric acid to . the oxide of lead contained in the acetate, and the zinc, reduced to the state of oxide, combines with the acid of the acetate of lead ; the acetate of zinc remains in solution and is thus easily separated from the sulphate of lead by filtering.

Medical properties. — Employed principally as a collyrium? and in gonorrhoea after the inflam- mation has subsided.

SULPHUREA. — Preparations of sulphur.

Oleum sulphwatum .London. — Sulphureted oil.

Take of washed sulphur two ounces, olive oil a pint. Add the sulphur to the oil gradually, the oil being heated in a very large iron pot ; stir the mixture after each addition till union is produced.

Qualities. — Smell fetid and taste acrid, color of a reddish brown ; it emits sulphureted hydro- gen when subjected to heat.

Medical properties. — Stimulant ; and, when employed externally, cleansing or detergent. It was formerly much employed in chronic affec- tions of the chest, under the notion of its healing nature, in

doses of from n_ v. to trˆ xxx.

PotasstE sulphuretum. London. — Sulphuret of potassa.

Take of washed sulphur an ounce, subcarbon- ate of potassa two ounces. Rub them together and place the mixture in a covered crucible over the fire until they unite.

Sulphuretum potasstz. Edinburgh. — Sulphuret of potassa.

Take of subcarbonate of potassa two parts, sublimed sulphur one part. Rub them together and put them into a large covered crucible, to which, a cover being adapted, apply the fire cautiously until they melt. Preserve the mass in a well closed vessel.

We are told that in order to effect a complete combination the subcarbonate should be ex- posed in a crucible to a red heat previously to its being nibbed with the sulphur ; the water of the subcarbonate would thus be dissipated, and at the same time a portion of the carbonic acid expelled, both of which, when not driven off, alter the product. So that the directions of the -colleges for the preparation are defective.

Qualities. — Without much odor when dry, but emitting sulphureted hydrogen when moist- ened. Taste acrid, texture brittle, breaking with a glassy fracture of a brown color. It attracts moisture fiom the air, thereby becomes green, and gradually changed into a hydrogureted - ulphuret of potassa, combined with a small

portion of sulphate of potassa. It is decom- posed by acids, and its sulphur sublimes when the mass is exposed to a violent heat.

Medical properties. — Alterative and in some degree diaphoretic. It has been much used to allay the extreme irritation of prurigo, and also employed in other cutaneous, as also in rheu- matic and pulmonary disorders. Dose from gr. v. to gr. x.

Sulphur lotum. London. — Washed sulphur.

Take of sublimed sulphur a pound. Pour boiling water upon it, so that the acid, if there be any, may be washed away; then dry it.

Sulphur sublimatum lotum. Edinburgh. — Wash- ed sublimed sulphur.

Take of sublimed sulphur one part, water four parts. Boil the sulphur for a short time in the water ; then pour off this water, and by

repeated affusions of cold water, let all the acid be washed away. Lastly, dry the sulphur.

Sulphur pr&cipitatum. London. — Precipitated sulphur.

Take of sublimed sulphur a pound, fresh burnt lime two pounds, water four gallons. Boil the sulphur and the lime together in the water, then filter the liquor through paper, and let as much muriatic acid be dropped into it as may be sufficient to precipitate the sulphur. Lastly, wash this with repeated affusions of water until it lose all taste.

‘ In the first part of this process a hydro- gureted sulphuret of lime is produced, by the combination of the lime and sulphur occasion- ing a decomposition of part of the water, the hydrogen of which unites with a portion of the sulphur, and forms a hydrosulphuret, while the oxygen with another portion forms sulphuric acid that combines with part of the lime ; and thus the solution contains a small portion of sulphate of lime, and a sulphuret of lime, or rather the base of lime, calcium, combined with, sulphureted hydrogen. This hydrogureted sul- phuret is then decomposed by the muriatic acid, which unites with the lime, and forms a soluble muriate while the sulphur is precipitated, and sulphureted hydrogen gas is disengaged.’ — Thom- son.

Qualities. — Color white, inclining to green ; not materially differing from sublimed sulphur.

Hydrosulphuretum ammonee. Edinburgh. — Hy- drosulphuret of ammonia.

Take of water of ammonia, sulphuret of iron, of each four ounces, muriatic acid eight ounces, water two pounds and a half. Pour the acid previously mixed with the water on the sulphu- ret, and transmit the evolved gas through the water of ammonia. Preserve the solution in well-stopped phials. ,

Qualities. — Color of a dark green, odor fetid, and taste acrid. Acids decompose it.

Medical properties. — Sedative. It has been principally employed in diabetes. Dose from H\v. gradually increased.

VEGETABILIA. — Vegetables.

For collecting vegetables we have the follow- ing directions given by the London college.

Vegetables are to be gathered from the soil and place where they grow spontaneously, in a

Sme is formed by the decomposition of the water.

Qualities. — Taste pungent and bitter. De- composible by the sulphuric, nitric, phosphoric, fluoric, and boracic acids, and by their neutral salts, as well as by the alkalies.

Medical properties. — Recommended by some in scrofulous and glandular affections. Dose from TH.XX. to f. 3j.

Crela pmparata. London. — Prepared chalk.

Take of chalk a pound ; add a little water to it, and triturate to a fine powder. Throw this into a large vessel of water ; stir it ; and, after a short time, pour off the supernatant turbid water into another vessel, and let it be set apart that the powder may subside ; finally, let the water be poured off and the powder dried.

Carbonas calcis prgparatus. Edinburgh. — Prepared carbonate of lime.

Let carbonate of lime, rubbed to a powder in an iron mortar, and levigated with a little water on a porphyry stone, be put into a large vessel ; then pour water upon it, which, after frequently shaking the vessel, is to be decanted off, laden with the fine powder. The subtile powder which subsides when the water remains at rest is 1o be dried. Let the coarse powder which could not be suspended in the water be again levigated, and treated in the same manner.

Qualities. — Very white, soft, and light. It is a pure carbonate of lime.

Medical properties. — Antacid, and absorbent. Dose from grs xv. to 9ij. or 3j.

Marias baryta. Edinburgh. — Muriate of ba- rytes.

Take of carbonate of barytes, and muriatic acid, of each one part ; water three parts. To the water and the acid, mixed together, let the carbonate of barytes be added, broken into small pieces. The effervescence being finished, digest for an hour ; then filter, and, after due evapora- tion, let the solution be set apart for the formation of

crystals. Repeat the evaporation so long as any crystals are formed.

The college order a muriate of barytes to be prepared from the sulphate by a more compli- cated process ; but we do not give the process, for the first is sufficient, and the carbonate is a mineral which can always be procured. The mu- riate of barytes is, more strictly speaking, a chloride of barium.

Qualities. — Muriate of barytes (chloride of barium) is disagreeable and bitter to the taste. It is soluble in water, but not in alcohol. It decrepitates and ultimately melts by heat. It is only employed in the following solution : —

Solutio muriatis baryta. Edinburgh. — Solu- tion of muriate of barytes.

Take of muriate of barytes one part; distilled water three parts. Dissolve.

Qualities. — Limpid, and without color. De- composible by the sulphates and nitrates of the earths and metals.

Medical properties. — Stimulant, and deob- struent. It has been employed both in scrofula and syphilis, but it is not at present much thought of. Dose from n\v- to xx. or more very gradually increased,

Mngnesia. London. — Magnesia.

Take of subcarbonate of magnesia four ounces. Burn it in a very strong fire for two hours, or until no effervescence be excited by the dropping of acetic acid into it.

Edinburgh. — Let carbonate of magnesia be subjected to a strong heat in a crucible for two hours, after which keep it in closely stopped bottles.

The heat dissipates the carbonic acid, and leaves the magnesia pure.

Qualities. — White and very soft powder. Not fusible, and requiring for solution an exceedingly large proportion of water.

Medical properties. — See under subcarbonate of magnesia.

Magnesite subcarbonas. London. — Subcarbo- nate of magnesia.

Take of sulphate of magnesia a pound ; sub- carbonate of potassa nine ounces ; water three gallons. Let the subcarbonate of potassa be dissolved in three pints of water, and the sul- phate of magnesia in

five pints, and filter ; then let the rest of the water be added to the solution of sulphate of magnesia, and boil it, adding to it, while boiling, the solution of the subcarbonate of potassa, with constant stirring. Strain through linen, and lastly let the powder be repeatedly washed with boiling water, and dried upon bibulous paper, with a heat of 200°.

Carbonas magnesia. Edinburgh. — Carbonate of magnesia.

Take of sulphate of magnesia four parts ; sub- carbonate of potassa three parts ; boiling water a sufficient quantity. Dissolve the salts separately in twice their weight of water, and strain, or otherwise free from impurities ; then mix them, and immediately add eight times their weight of boiling water. Boil the liquor for a short time, stirring it; then let it continue at rest till the heat be a little diminished, and strained through linen, upon which the carbonate of magnesia will remain. This, after being well washed with pure water, is to be dried with a gentle heat.

In these processes there is obviously a double decomposition ; the sulphuric acid leaves the magnesia to unite with the potassa, while the consequently disengaged carbonic acid of the latter attaches itself to the magnesia.

Qualities. — Inodorous, perfectly white, and without much taste; it is exceedingly smooth to the touch, and nearly insoluble in water. It is decomposed by the acids, the alkalies, and neutral salts. A strong heat will also dissipate its carbonic acid, as shown in the preparation of burning magnesia.

Medical properties. — An excellent antacid, stomachic, aperient, and lithontriptic. Only, how- ever, aperient when it encounters an acid in the stomach, so as to form a neutral salt. Dose from grs. xv. to Sift, or more.

METALLIC PREPARATIONS. For an account of the properties and habits of metals see CHEMISTRY. The metals which are employed in medicine are antimony, arsenic, bismuth, copper, iron, lead, mercury, silver, tin, zinc. Mercury and tin are used in their metallic state, but not very commonly. Most of

the medicinal articles from this class of bodies are combinations with

different mixtures of oxy- gen, or of acid. Some of sulphur, and other substances. ,

PREPARATIONS OF ANTIMONY.

Sulphuretum antimonii praparatum. Edin- burgh.— Prepared sulphuret of antimony.

Put sulphuret of antimony, rubbed to powder, in an iron mortar, and levigated on a porphyry stone, with a small quantity of water, into a large vessel ; then pour water on it, and, after having frequently agitated the vessel, pour it off laden with the fine powder.

The coarse powder, which the water is not able to suspend, is to be levigated again, and again treated in the same manner.

Qualities. — This powder is of a leaden gray color, is without much smell or taste, and is not soluble in water.

Medical properties. — Alterative. Not very much employed. Dose from grs. v. to 9j.

Antimonii sulphuretum pr&cipitatum. London. — Precipitated sulphuret of antimony.

Take of sulphuret of antimony, in powder, two pounds ; solution of potassa four pints ; dis- tilled water three pints. Mix them, and let the mixture be boiled over a gentle fire for three hours, assiduously stirring it, and occasionally adding distilled water, so as to keep up the same measure. Strain the solution through a double linen cloth directly, and, while it is still hot, drop in gradually so much sulphuric acid as may be necessary to precipitate the powder. Then wash away the sulphate of potassa with hot water, dry the precipitated sulphuret of antimony, and rub it to a fine powder.

Sulphuretum antimonii praparatum. Edinburgh. — Precipitated sulphuret of antimony.

Take of solution of potassa four parts ; water three parts ; prepared sulphuret of antimony two parts ; diluted sulphuric acid a sufficient quantity. Mix the sulphuret with the solution of potassa and the water ; then boil them in a covered iron pot over a gentle fire during three hours, frequently stirring with an iron spatula, and adding water as it may be requisite. Let the hot liquor be strained through a double linen cloth; and, when strained, let there be added to it so much sulphuric acid as may be necessary to precipitate the sulphuret, which must be

well washed with warm water.

The product of these proceses is a sulphu- reted hydrosulphuret of oxide of antimony. The following is given as the theory of its formation : ‘ During the boiling the potassa combines with the sulphur of the sulphuret of antimony, and forms sulphuret of potassa, which, decomposing part of the water, and attracting its disengaged hydrogen, is partly converted into a sulphureted hydrosulphuret of potassa, while its oxygen, aided by the sulphuretted hydrogen, oxidizes the antimony, which is dissolved by the sulphu- retted hydrosulphuret of potassa. The sulphuric acid which is now added to the strained solution while it is hot, and which in part contains po- tassa, oxide of antimony, sulphur, and hydrogen, combines with the potassa, disengaging sulphu- reted hydrogen gas, and the oxide of antimony

is precipitated, combined with the disengaged sulphur, and the remaining sulphureted hy- drogen.’

Qualities. — This precipitate is of an orange color ; it is without odor, is slightly styptic in taste, and is insoluble. When pure it does not effervesce with acid, so that if adulterated with chalk it may be easily tested.

Medical properties. — Alterative, diaphoretic, and slighly expectorant. Not so much employed as formerly. Dose from gr. i. to grs. iv.

Antimonium tartarizatum. London. — Tartar- ised antimony.

Take of glass of antimony (see CHEMISTRY) finely powdered, supertartrate of potassa in powder, of each one pound ; boiling distilled water one gallon. Mix the glass of antimony and the supertartrate of potassa. and add them gra- dually to the boiling distilled water, constantly stirring the mixture with a spatula; then boil for a quarter of an hour, and set it aside. When the solution is cold let it be filtered, and evapo- rate so as to form crystals.

Tartras antimonii. Edinburgh. Olim, Tartras emeticus. — Tartrate of antimony : formerly, tar- tar emetic.

Take of sulphuret of antimony, and nitrate of potassa, of each an equal weight ; supertarfrate of potassa a sufficient quantity. Filtrate separately the sulphuret and nitre ; and, having well mixed them together, throw them into a red hot crucible. When the deflagration is over, let the red matter be separated from the white crust, and rubbed down to a very fine powder, which must be washed with several

effusions of warm water, and subsequently dried.

This powder is now to be rubbed together with an equal weight of supertartrate of potassa, and the mixture boiled in a glass vessel with four times its weight of distilled water during an hour ; then strained through paper, and the strained solution set aside in order that crystals may form by evaporation.

In the process of the London College the ex- cess of acid in the supertartrate of potassa acts upon the glass of antimony in such a manner as to leave its sulphur untouched ; the tartrate which remains is held in solution with the antimonial tartrate ; thence the product is a double salt, the tartrate of potassa and antimony ; the same salt is also formed in the other process by the super- abundant acid of the supertartrate of potassa combining with antimonial oxides. ‘ Tartrate of antimony and potassa,’ says Dr. Thomson , ‘ ought, on the principles of the reformed nomenclature, to be the name of this salt ;’ and he very pro- perly regrets that ‘ all the colleges have not con- curred in adopting the same preparation of anti- mony for the formation of this important salt.’

Qualities. — Tartar emetic is white, without smell, and has a slightly metallic taste. It i» soluble in water; but when kept in solution long is spontaneously decomposed. It is often, we are told, adulterated with supertartrate of po- tassa and tartrate of lime. When the former is the case it is precipitated from us aqueous solu- tion by the addition of spirit. If the crystals deliquesce its purity is to be suspected. ‘ It is decomposed by heat, the strong acids, the alka-

lies, and alkaline carbonates, the earths, hydro- sulphurets, some of the metals and their oxides, lime-water, muriate of lime, and acetate of lead, and by the decoctions or infusions of many bitter and astringent vegetables, as those of cinchona bark, rhubarb, galls and catechu ; with which therefore it ought never to be conjoined in prescriptions/’ We think, however, in the face of this chemical objection to the combi- nation of bark and antimony, that we have seen the union attended with advantage in some cases where both remedies have been simultane- ously indicated.

Medical properties. — Emetic, sudorific, dia- phoretic, and alterative, according to the dose in which it is given. It is one of the very best

preparations of antimony, and may, by a due apportionment of dose to the circumstances of the case, be made almost to supersede the other preparations of antimony. Indeed the facility by which it may be minutely divided consti- tutes one of its advantages. Dose, as an emetic, from one to two grains, as a diaphoretic one-sixth or eighth of a grain. The continental physicians, especially the Italians, administer it in doses of from four to twelve grains in violent inflammations.

V'mum antimonii tartarizati. London. — So- lution of tartarised antimony.

Take of tartarised antimony a scruple, boil- ing distilled water eight fluid ounces, rectified spirit two fluid ounces. Dissolve the tartarised antimony in the boiling distilled water; then let the spirit be added to the filtered solution.

Vinum tartratis antimonii. Edinburgh. — Wine of tartrate of antimony.

Take of tartrate of antimony twenty-four grains, Spanish white wine one pound. Mix, and dissolve the tartrate of antimony.

Wine is not a good menstruum for dividing the tartrate of antimony, as it occasions a slow decomposition of it, occasioning it is said a pre- cipitate of oxide of antimony with a portion of supertartrate of potassa. Dr. Paris remarks ' that, when good sherry wine is employed, no decomposition of the salt takes place ; and, if any precipitate occurs, it is tartrate of lime, arising from an accidental impurity in the bitartrate of potassa in the preparation.'

Medical properties. — The same as the salt. Dose ti| xv. to f. 3i. From 3ij. to %-R as an emetic.

Pulvis antimonialis. London. — Antimonial powder.

Take of sulphuret of antimony in powder a pound, hartshorn shavings two pounds. Mix, and throw them into a broad iron pot that has been heated to whiteness, assiduously stirring till vapors cease to rise. Let what remains be rubbed to powder; and, having put it into a proper crucible, expose it to a fire which is to be gradually raised so as that a white heat be kept up for two hours. Let the residue be rubbed down into very fine powder.

Qxidum antimonii cuni phosphate calcis, olim pulvis antimonialis. Edinburgh. — Oxide of an- timony with phosphate of lime, formerly anti- monial powder.

Take of sulphuret of antimony in coarse

powder and hartshorn shavings, each equal parts. Mix, and throw them into a wide iron pot heated to redness, and let them be assiduously stirred until they are burnt into a gray colored matter, whioh is to be removed from the fire, rubbed to powder, and put into a coated crucible; over which another crucible, having a small hole in its bottom, is to be inverted ai.d luted; then apply the fire, gradually raising it to a white heat, which is to be kept at this heat for two hours. Lastly, reduce the matter when it is cold to a very fine powder.

Sulphur, by the action of heat, is .expelled in this process from the sulphuret of antimony, and the metal becomes partially oxidised ; this oxide is partially rectified by the subsequent applica- tion of heat, and the phosphate of lime of the hartshorn shavings mixes with the antimonial oxide; but whether the mixture be mechanical, or the lime yields part of its phosphoric acid so as to form a phosphate of antimony as well of lime, seems not ascertained. The preparation is uncertain as to strength. It was proposed by Dr. G. Pearson as a close imitation of the cele- brated empirical composition which is sold under the name of James's powder.

Qualities. — This powder was formerly much employed as a powerful sudorific at the com- mencement of fevers ; it is at present in much less use than formerly, and perhaps justly so on account of the uncertainty of its dose and operation. It is now principally employed as a rriild and alterative diaphoretic, and given in conjunction with guaiacum, calomel, &c. Dose from grs. ij. to grs. vj.

PR.&PARATUM EX ARGENTO. — Preparation of

silver.

Argentinitras. London. — Nitrate of silver.

Take of silver an ounce, nitric acid one fluid ounce., distilled water two fluid ounces. Let the nitric, acid and water be mixed together, and the silver dissolved in the mixture on a sand- bath. Then let the heat be gradually increased that the nitrate of silver may be dried. Melt this in a crucible on a gentle fire until, the water having evaporated, the ebullition cease; then pour it directly into proper moulds.

Nitras argenti. Edinburgh. — Nitrate of silver.

Take of pure silver flatted into plates and cut one part, nitric acid diluted two parts, distilled water one part. Dissolve the silver in the

acid and water previously mixed together, in a phial with a gentle heat, and let the solution be eva- porated to dryness. Then put the mass into a large crucible and place it on the fire, which must be at first gentle and gradually increased till the mass flow in the manner of oil; then pour it into iron pipes previously heated and rubbed with grease. Lastly, the preparation is to be preserved in a well stopped glass vessel.

The silver in this process partly decomposes the acid, it becomes oxidised, and as it oxidises it is dissolved in the remaining acid. The quantity of acid ordered by the colleges is un- necessarily large : ten fluid drachms being amply sufficient for the solution of two ounces of silver.

Qualities. — Nitrate of silver is of a dark gray color, without any smell, but exceedingly

pungent and caustic to the taste. It does not deliquesce when properly prepared and con- stituted. It is soluble in water and alcohol. ‘ It is blackened and reduced by exposure to light or a strong heat, by phosphorus, hydrogen gas, and the hydrosulphurets; is precipitated from its aqueous solution by mercury, copper, and some other metals; and is decomposed by the alkalies with the exception of ammonia, by the alkaline earths, sulphureted hydrogen, the hydrosulphurets, the sulphuric, muriatic, and arsenious acids, the majority of the neutral salts, 3nd by astringent vegetables, solutions, and hard ivater.’

Medical properties. — Tonic and antispasmodic internally; escharotic when employed externally. It has been used in chorea and other spasmodic affections, but more especially in epilepsy. Dose from one-sixth of a grain to three or four grains. Orfila regards salt as one of its best antidotes when taken in too larˆe a quantity. Dr. Uwins, in his Treatise on Disorders con- nected with Indigestion, suggests whether the copious use of salt while the patient is taking this medicine might not prevent that discolora- tion of the skin which is sometimes the result of the continued employment of the nitrate as an internal remedy.

PREPARATA EX ARSENICO. — Preparations of arsenic.

Arsenicum album sublimatum. London. — Sub- limed white arsenic.

Rub white arsenic to powder; then put it into a crucible, and applying heat, let it be sub- limed in another crucible inverted over the first. A superfluous process.

Liquor arsenicalis. London. — Arsenical solu- tion.

Take of sublimed white arsenic reduced to a very fine powder, subcarbonate of potassa from tartar, of each sixty-four grains, compound spirit of lavender four fluid drachms, distilled water a pint. Let them be boiled together in a glass vessel until the arsenic be entirely dis- solved. Add to the solution when it is cold the compound spirit of lavender, and lastly so much distilled water as will make up the whole to a pint.

Solutio arsenicalis. Edinburgh. — Arsenical so- lution.

Take of oxide of arsenic rubbed to a very fine powder, very pure subcarbonate of potassa, of each sixty-four grains, distilled water fourteen ounces. Boil them together in a glass vessel until all the oxide be dissolved ; add to the so- lution when it is cold half an ounce of the com- pound spirit of lavender, and so much distilled water as will make the whole sixteen ounces.

Qualities. — In appearance like the compound spirit of lavender. Decornposible by ‘ lime water, hydrosulphuret of potassa, nitrate of silver, the salts of copper, and instantly forms a copious precipitate when dropped into an infu- sion or decoction of cinchona bark.’

Medical properties. — Tonic ; principally em- ployed in intermittents, and in asthenic head- aches. Dr. Thomson tells us that he has given it with decided advantage after cupping and

purging in threatened apoplexy, when the strength has been little and the complexion pale. Dose n\v. gradually increased to nˆxxv or x.sx.

PREPARATUM E BISMUTHO. — Preparation ot bismuth.

Bismulhi subnitras. London. — Subnitrate of bisiriuth.

Take of bismuth one ounce, nitric acid one fluid ounce and a half, distilled water three pints. Mix six fluid drachms of the distilled water with the nitric acid, and dissolve the bismuth in the diluted acid; then let the solution be filtered ; add the remainder of the water to the filtered solution, and set it apart that the powder may subside. Next, the super- natant fluid having been poured off, wash the subnitrate of bismuth with distilled water, and, having wrapped it in bibulous

paper, let it be dried with a gentle heat.

In this process a hydrated oxide of bismuth is formed, combined with a small proportion of nitric acid.

Qualities. — White, without much smell or taste. Insoluble in water. Sulphureted hydro- gen, and all the hydrosulphurets blacken it. Reducible by charcoal.

Medical properties. — Antispasmodic and tonic. Exceedingly useful in those painful affections of the stomach which go under the name of gas- trodynia. It is highly lauded by Dr. Yeats and Dr. Uwins. Dose from five grains to eight or ten.

PREPARATA E CUPRO. — Preparations of copper.

Mrugo prgparata. Dublin. — Prepared ver- digris.

Let the verdigris be reduced to powder and the more subtile parts separated in the manner directed for the preparation of chalk.

Cuprum ammoniacum. London. — Ammoniated copper.

Take of sulphate of copper half an ounce, subcarbonate of ammonia six drachms. Rub them together in a glass mortar till the effer- vescence cease ; then wrap up the ammoniated copper in bibulous paper and let it be dried with a gentle heat.

Ainmoniaretum cupri. Edinburgh. — Ammo- niaret of copper.

Take of pure sulphate of copper two parts, subcarbonate of ammonia three parts. Let them be thoroughly rubbed together in a glass mortar until all effervescence cease, and they form a violet-colored mass, which wrap up in bibulous paper and dry, first on a chalk stone, and subsequently with a gentle heat. Let it be preserved in a well stopped glass phial.

During these processes part of the acid of the sulphate of copper is given to the ammonia. It seems not quite certain whe- ther the resulting compound be ‘ a subsul- phate of oxide of copper and ammonia, or a mixture only of subsnlphate of copper and sulphate of ammonia.’

Qualities. — The salt is of a rich blue color; it smells like ammonia and is exceedingly styptic.

Medical properties. — Tonic and antispasmodic. Administered in chorea and epilepsy. Dose a

quarter of a grain, gradually increased to four or five grains.

Liquor cupri ammoniat. London. — Solution of ammoniated copper.

Take of ammoniated copper a drachm, distilled water a pint. Dissolve the ammoniated copper in the water, and let the solution be filtered through paper.

The quantity of water used by the London college is stated to be too much, ‘it being a cu- rious fact that the salt is more soluble in a smaller quantity of water, owing to the larger quantity decomposing the subsulphate of copper and leaving an insoluble oxide of copper, which is precipitated.’

Medical properties. — Principally used as a de- tergent to foul ulcers.

Solatia sulpliatls cupri composita. Edinburgh. — Compound solution of sulphate of copper.

Take of sulphate of copper, sulphate of alumina, each three ounces; water two pounds; sulphuric acid one ounce and a half. Let the sulphates be boiled in the water in order to dis- solve them, and then add the acid to the liquor filtered through paper.

A mere solution of the sulphates.

Medical properties. — Principally employed in ophthalmic affections, largely diluted.

PR/EPARATA E FERRO. — Preparations of iron.

Liaiatura Jerri purificata. Edinburgh. — Puri- fied tilings of iron.

Having placed a sieve over the filings, let a magnet be applied so that it may draw the filings upwards through the sieve.

Oxydum nigrum purification. Edinburgh. — Purified black oxide of iron.

Purify the scales of the black oxide of iron that are found at the anvil

of the blacksmith, by the application of the magnet ; for the magnet attracts the thinner and purer scales only, and leaves the larger and less pure.

Medical properties. — These imperfect oxides are principally used as anthelmintics. Dose from grs. v. to 9j.

Ferrum ammoniatum. London. — Ammoniat- ed iron.

Take of subcarbonate of iron, muriatic acid, muriate of ammonia, each a pound. Pour the muriatic acid upon the subcarbonate of iron, and set it aside until bubbles cease to arise. Let the solution be filtered through paper and boiled to dryness. Mix intimately the residuum with the muriate of ammonia; then directly sublime by the application of a strong heat: lastly reduce the sublimed matter to powder.

Murias ammonia et ferri. Edinburgh. — Mu- riate of ammonia and of iron.

Take of red oxide of iron washed and again dried, muriate of ammonia, each equal parts by weight. Mix them well together, and let them be sublimed by a quick fire. Reduce the sub- limation to powder, and preserve it in a well stopped phial.

In the process ordered by the London college

we are told that a mixture of muriate of ammo-

‘nia and permuriate of iron is produced: the

whole of the subcarbonate of iron employed is

not dissolved in the acid.

Qualities. — The color of ferrum ammoniacum is of an orange yellow : it has an odor of saffron and rather a styptic taste. It is soluble and de- liquescent.

Medical properties. — Tonic and emmenagogue. From being somewhat aperient it is occasionally admissible in cases where other forms of the me- tal would disagree. We have found it very useful when the combination is required of a deobstruent and tonic. Dose from grs. iij. to 9ft or more.

Subcarbonas ferri preeparatus. Edinburgh. — Prepared subcarbonate of iron.

Let purified filings of iron be frequently moistened with water till they fall into rust, which rust is to be rubbed into powder.

Qualities. — Color of a reddish brown; taste styptic ; very little smell.

Medical properties — Rust of iron has lately been used for tic douleureux. As a tonic and emmena- gogue, and vermifuge, in ordinary cases, the dose is from grs. v. to grs. xv.

Ferri subcarbonas. London. — Subcatbonate of iron.

Take of sulphate of iron eight ounces, sub- carbonate of soda six ounces, boiling water a gal- lon. Let the sulphate of iron and subcarbonate of soda be dissolved separately in four pints of water ; then mix the solutions together, and set the mixture aside in order that the powder may subside ; then decant off the supernatant fluid ; wash the subcarbonate of iron in hot water, and let it be dried, wrapped up in bibulous paper, with a gentle heat.

Carbonas ferri prtecipitatus. Edinburgh. — Pre- cipitated carbonate of iron.

Take of sulphate of iron four ounces, subcarbo- nate of soda five ounces, water ten pounds. Let the sulphate be dissolved in the water; then add the subcarbonate previously dissolved in the wa- ter, and mix them together. Wash the carbon- ate of iron which is precipitated with tepid water, and afterwards dry it.

Here a double decomposition is effected : the sulphuric acid of the sulphate of iron unites with the soda, and the carbonic acid is attracted by the iron.

Qualities. — Taste but slightly styptic. Color brown. No smell Insoluble in water. Decom- posible by heat.

Medical properties. — Nearly the same as the last. When given fortic douleureux the dose is sometimes a drachm frequently repeated.

Ferri sulphas. London. — Sulphate of iron. Take of iron, sulphuric acid, each eight ounces, water four pints. Mix the acid with the water in a glass vessel, and to these add the iron ; then, when the effervescence is over, let the solution be filtered through paper ; and, after due evapo- ration, set it apart for crystals to form. Having poured off the liquor, let the crystals be dried on bibulous paper.

Sulphas Jerri. Edinburgh. — Sulphate of iron.

Take of iron and sulphuric acid of each by weight eight ounces, water four pints. Mix the sulphuric acid with the water in a glass vessel, and put the iron to them. When the effervescence is over, filter the solution through paper, and after due evaporation set it apart that crystals may

form. The liquor being poured off, dry the crystals on bibulous paper.

In these processes a sulphate of oxide of iron is formed, the oxygen of part of the water com- bining with the metal, and its hydrogen being sent off in a gaseous form. The oxide thus produced unites with the sulphuric acid, and a sulphate is formed, which is dissolved in that part of the water which has not undergone decomposition.

Qualities. — Color green, taste styptic, very little odor. Soluble in water and fusible by heat. Decomposed by the following substances, ‘ the earths, the alkalies and their carbonates ; lime water, borate of soda, phosphate of soda, muriate of barytes, nitrate of silver, acetate of lead, and every salt the base of which forms an insoluble compound with sulphuric acid and soaps. It is also decomposed by all infusions of vegetable astringents.’

Medical properties. — Tonic, deobstruent, an- thelmintic, and emmenagogue. A very useful preparation. Dose from gr. i. to gr. v.

Sulphas ferri exsiccatus. Edinburgh. — Dried sulphate of iron.

Take of sulphate of iron any quantity. Heat it in an unglazed earthen vessel on a moderate fire, until it become quite dry and white.

This process merely deprives the salt of the water of crystallisation.

Oxidum ferri rubrum. Edinburgh. — Red oxide of iron.

Let dried sulphate of iron be exposed to a violent heat so as to convert it into a red colored matter.

The Dublin college properly order this oxide to be washed in order to separate a portion which still remains of the red sulphate.

Ferrum tartarizatum. London.— Tartarised iron.

Take of iron a pound, supertartrate of potassa in powder two pounds,

water five pints, or a sufficient quantity. Let the iron and the super- tartrate be rubbed together, and subject the mix- ture in an open glass vessel with a pint of water to the action of the air for twenty days, daily stirring them and preserving a moisture in the mass by additions of distilled water. Then boil it in four pints of distilled water during fifteen minutes, and filter the solution. Evaporate in a water-bath until the tartarised iron be quite dry. Let it be reduced to powder, and pre- served in a stopped bottle.

Tartras potasses et ferri. Edinburgh. — Tar- trate of potassa and of iron.

Take of purified filings of iron one part, supertartrate of potassa in powder two parts, water one part. Rub them together and expose them to the air in a shallow earthen vessel for fifteen days, stirring the mass daily with a spa- tula, and keeping it moist by frequent additions of water. Then let the whole be/ boiled for a short time in four times its weight of water, and pour off the solution from the other faeces. Eva- porate the solution to dryness in a water-bath ; and, having rubbed the mass into powder, let it be kept in a well stopped bottle.

It is suggested by Dr. Thomson that the pro- portion of supertartrate of potassa employed in these preparations may not be sufficient for the

quantity of metal ; the intention is first to oxidize the iron by a partial decomposition of the water employed, and then to combine this oxide with the superabundant acid of the supertartrate of potassa.

Qualities. — The color of this preparation is of a brownish green ; it is without smell, and has but a slightly styptic taste. ‘ The strong acids, lime water, hydrosulphuret of potassa, and in- fusions of astringent vegetables decompose it, and are therefore incompatible in formulae with it.’

Medical properties. — This form of iron has been supposed particularly applicable in dropsy, as combining a diuretic with a tonic quality. Dose 9ft to 3ft.

Liquor ferri alkalini. London. — Solution of alkaline iron.

Take of iron two drachms and a half, nitric acid two fluid ounces, distilled water six fluid ounces, solution of subcarbonate of potassa six fluid ounces. Mix the acid and the water toge- ther, pour the mixture over the iron ; and when the effervescence shall have ceased pour off the acid and solution. Add this gradually and at intervals to the solution of subcarbonate of po- tassa frequently agitating until it

become of a brownish red color and no further effervescence be excited. Finally, set it aside for six hours, and pour off the liquor.

In this preparation the diluted acid first oxi- dises the iron, and, when the subcarbonate of potassa, is added, carbonic acid is extracted and a red precipitate formed, which is ultimately dis- solved by the excess of potassa.

Qualities. — Taste slightly styptic and alkaline, exciting a sensation of coldness in the mouth. Water precipitates the alkaline iron, leaving a clear fluid supernatant, which yields, upon eva- poration, crystals of nitrate of potassa.

Medical properties. — The same with the other preparations of iron ; but scarcely at all em- ployed on account of the uncertainty of its com- position and strength.

Tinctura ferri ammoniati. London. — Tinc- ture of ammoniated iron.

Take of ammoniated iron four ounces, proof spirit a pint. Digest and filter.

Tinctura ferri muriatis. London. — Tincture of muriate of iron.

Take of carbonate of iron half a pound, mu- riatic acid a pint, rectified spirit three pints. Let the acid be poured over the carbonate of iron in a glass vessel, and let the mixture be occasionally shaken for three days. Set it apart that the faeces, if there be any, may subside ; then pour off the solution and add to it the spirit.

Edinburgh. — Take of black oxide of iron pu- rified and reduced to powder three ounces, mu- riatic acid about ten ounces, or sufficient to dis- solve the powder. Digest with a gentle heat, and, the powder being dissolved, let so much alcohol be added as will make the whole liquor amount to two pounds and a half.

The London preparation is of a more uniform strength than the Edinburgh formula.

Qualities. — This tincture has a very styptic taste, and is of a yellowish brown color. ‘ It contains the iron in the state of a chlorate, and

when it. is distilled a black oxide of iron remains in the retort. With

the alkalies and the:r car- bonates it gives a red precipitate, strikes a black color with infusions of astringent vegetables, and forms with mucilage of acacia gum an orange colored jelly. Hence these substances cannot enter into compositions with this tincture.'

Medical properties. — A useful preparation of iron. It has been given in large doses under some circumstances of suppression of urine. Dose generally from n\xv. to f. 3ft.

Vinumferri. London. — Wine of iron.

Take of iron one drachm, supertartrate of potassa in powder six drachms, distilled water two pints or so much as will be necessary, proof spirit twenty fluid ounces. Rub the iron and the supertartrate of potassa together, and expose them in an open glass vessel with one fluid ounce of water to the air for six weeks, stirring daily with a spatula, and frequently adding so much distilled water as may be necessary to keep a moisture in the mass. Then dry it with a gentle heat, rub it to powder, and mix it with thirty fluid ounces of distilled water. Let the solution be filtered and then add the spirit.

Qualities. — This is ' a solution of tartrate of iron and potassa, with an excess of supertartrate of potassa,' the iron being being oxidised and dissolved in the acid of the supertartrate.

Medical properties. — A pleasant preparation of iron. Dose from f. 3j. to f. Jft-

PREPARATA EX HYDKARGYRO. — Preparations of mercury.

Hydrargyrum cum creta. London. — Mercury with chalk.

Take of purified mercury (by weight) three ounces ; prepared chalk five ounces. Let them be rubbed together until the globules entirely disappear.

In this preparation something seems to be ef- fected between oxidisement and merely mecha- nical division of the mercury.

Medical proper ties. — A most excellent alterative, especially in complaints of children that are marked by lymphatic weakness and mesenteric obstruction. Dose for an adult from grs. vi. to9j.

Hydrargyri nitrico oxydum. London. — Nitric oxide of mercury.

Take of purified mercury (by weight) three pounds, nitric acid by

weight a pound and a half, distilled water two pints. Mix them in a glass vessel and boil until the mercury be dis- solved, and a white mass remain after the water is evaporated. Rub this into powder, and put it into another very shallow vessel ; then expose it to a gentle heat, and let the fire be gradually raised until red vapors no longer be emitted.

Oxydum hydrargyri rubrum per acidum nitri- cum. Edinburgh. — Red oxide of mercury by nitric acid.

Take of purified mercury three parts, diluted nitrous acid four parts. Dissolve the mercury, and evaporate the solution over a gentle fire to a white dry mass, which, being reduced to pow- der, is to be put into a glass cucurbit, and covered with a thick plate of glass. Then adapt a capital to the vessel, and having placed it in a sand-b,ath let the contained matter be roasted with a fire

gradually raised until small red scales be formed.

Qualities. — ‘ When properly prepared this is a peroxide mixed with some nitrate of mercury.’ It appears in the form of bright red scales which are corrosive and acrid ; they are insoluble in water but totally soluble in nitric acid, and de- composible by a red heat. ‘ It is sometimes adulterated with red oxide of lead, which may be detected by dissolving one part of the oxide in four of acetic acid ; if lead be present the solu- tion has a sweetish taste ; and, when sulphureted water is dropped into it, a dirty dark precipitate is thrown down. When pure it is perfectly volatilised when thrown on a red hot iron. ‘

Medical properties. — This, the red precipitate of common language, is only used as an external application in cases of chronic, inflammatory, and old sores.

Acetas hydrargyri. Edinburgh. — Acetate of mercury.

Take of purified mercury three ounces, diluted nitrous acid four ounces and a half, or a little more than is necessary to dissolve the mercury, acetate of potassa three ounces, boiling water eight pounds. Mix the mercury with the acid ; and towards the cessation of the effervescence digest, if necessary, until the mercury be com- pletely disolved. Then dissolve the acetate of potassa in the boiling water, and immediately to this solution, still hot, add the former, and mix them together by agitation. Set the mixture aside to crystallise ; then wash the crystals placed in a funnel with cold distilled water, and finally dry them with a very gentle heat.

In preparing the acetate of mercury it is ne- cessary that all the vessels which are used, and the funnel, be of glass.

In this preparation a nitrate of mercury is first procured by the action of the nitrous acid upon the metal, which nitrate is decomposed by the potassa of the acetate uniting with the acid of the salt ; in this way a nitrate of potassa is procured which remains dissolved; and the acetic acid of the acetate combines with oxidated metal, and thus forms the acetate of mercury.

Qualities. — This salt should appear in small flat crystals of a silvery whiteness : it is acrid to the taste ; soluble in hot water, but not in alco- hol, and decomposed by alkalies and heat.

Medical properties. — It is a form of mercury not much used ; in the proportion of grs. ii. to f. Jij. of rose water, some have recommended it as a wash in certain cutaneous disorders. Dose gr. i. twice a day.

Hydrargyri oxydum cinereum. London. — Gray oxide of mercury.

Take of submuriate of mercury an ounce, lime-water a gallon. Boil the submuriate of mercury in the lime-water, stirring it assiduously until the gray oxide of mercury subside. Let it be washed with distilled water, and then dried.

Oxidum hydrargyri cinereum. Edinburgh. — Gray oxide of mercury.

Take of submuriate of mercury half an ounce, lime-water five pounds. Boil the submuriate ia the solution for a quarter of an hour in a slightly covered vessel. Pour off the supernatant fluid, and let the oxide be washed with distilled water and dried.

,The lime water decomposes the submuriate, and the gray precipitate is a protoxide. If ca- lomel be considered a proto-chloride of mercury, we must admit (says Dr. Thomson) that the wa- ter of the lime-water is decomposed, and its hydrogen, uniting with the chlorine, forms muri- atic acid, which converts the lime into a muriate, while its oxygen changes the mercury into the protoxide.

-Qualities. — Color gray. Insipid, without smell, and insoluble in water.

Medical properties. — Some have considered this preparation as an exceedingly useful form of mercury, partly on account of the uniformity of its strength. Dose from gr. i. to grs. iij.

Hydrargyri oxydum rubrum. London. — Red oxide of mercury.

Take of purified mercury (by weight) a pound. Put the mercury into a tall glass vessel with a narrow mouth and broad at the bottom. Subject this vessel open to a heat of 600° until the mer- cury be converted into red scales, which are the« to be rubbed into a fine powder.

The heat in this process volatilises the mercury, and the metal in this state attracts oxygen from the air and is thus converted into a red oxide.

Qualities. — This preparation produces spark- ling deep red scales, which are small and ex- ceedingly brilliant, without odor, but of a sharp caustic taste.

Medical properties. — Formerly it was consi- dered an excellent form of mercury for syphilis, but is at present very little employed. Dose from one-sixth or eighth of a grain to one grain. It is apt to affect the bowels, and is therefore usually combined with opium. It rs employed by some externally as an escharotic.

Hydrargyri oxymurias. London. — Oxymuriate of mercury.

Take of purified mercury (by weight) two pounds, sulphuric acid thirty ounces (by weight), dried muriate of soda four pounds. Boil the mercury with the sulphuric acid in a glass vessel until the sulphate of mercury become dry ; rub this when cold with the muriate of soda in a mortar of earthenware ; then sublime it in a glass cucurbit, with a heat gradually raised.

Murias hydrargyri corrosivus. Edinburgh. — Corrosive muriate of mercury.

Take of purified mercury two pounds, sul- phuric acid two pounds and a half, dried muriate of soda four pounds. Boil the mercury with the sulphuric acid in a glass vessel placed in a sand bath until the material become dry. Mix this when cold in a glass vessel with the muriate of soda; then sublime in a glass cucurbit with a heat gradually raised. Separate the matter sub limed from the scoriae.

‘ According to the latest doctrines, the chlorine of the common salt leaves the sodium and uniting with the mercury of the hypersulphate

forms a bichloride of mercury which sublimes, while the oxygen of the oxide of mercury combining with the sodium converts it into soda, which unites with the sulphuric acid, and forms sulphate of soda which remains in the bottom of the cu- curbit.'

Qualities. — Corrosive sublimate, as it was for- merly called, appears in the form of very small

shining white crystals, which have a very acrid taste, and are without smell ; they effloresce by exposure to the air. It is soluble in water, alco- hol, and the acids. Alkalies and oils precipitate and reduce it. ‘ It is also decomposed by solu- tions of tartrate, of potassa, and antimony, ni- trate of silver and acetate of lead, and forms pre- cipitates in infusions and decoctions of the following vegetable substauces. Camomile flow- ers, horse radish root, columba root, catechu, cin- chona-bark, rhubarb root, senna leaves, sim- aruba bark, oak bark, tea, and in the almond mixture, consequently it is incompatible in ex- temporaneous formulae with these substances.

Medical properties. — Formerly very much < >m- ployed in syphilitic affections; and still consti- tuting the main ingredient of several patent medicinals which profess to contain no mercury in their composition. At present it is more used in chronic affections of the skin than in any other disorder, whether these have or have not a syphilitic origin and character. Dose from one- tenth of a grain to a fourth, two or three times a day.

Liquor hydrargyri oxymuriatis. London. — Solution of oxymuriate of mercury.

Take of oxymuriate of mercury eight grain, distilled water fifteen fluid ounces, rectified spi- rit a fluid ounce. Let the oxymuriate of mercu- ry be dissolved in the water and the spirit added.

The dose of this solution is from f. 3ft. to f. 3ij. each fluid ounce containing half a grain of the salt. The solution should not be kept long nor exposed to a strong light, as it thus becomes de- composed and throws down calomel. This so- lution is externally useful in tetters diluted with half its measure of water.

Hydrargyrum prgcipitatum album. London. — White precipitated mercury.

Take of oxymuriate of mercury half a pound, muriate of ammonia four ounces, solution of sub- carbonate of potassa half a pint, distilled water four pints. Dissolve first the muriate of ammo- nia, then the oxymuriate of mercury in the dis- tilled water, and add to the mixed solution the solution of subcarbonate of potassa. Let the precipitated powder be washed until it become tasteless, then it is to be dried.

The Dublin College order the precipitate to be made by an addition to the fluid poured off from the precipitated submuriate of a quantity of water of ammonia, which Dr. Thomson remarks’ is a more simple and

a more economical mode of obtaining the product. The corrosive muriate, it will be recollected, is held in solution by the fluid in question, and is precipitated by the am- monia.

Qualities. — Muriate of mercury and ammonia (so Dr. Thomson names it) is without smell or taste; it is a smooth white insoluble powder. When adulterated with white lead the fraud may be detected ‘ by digesting one part of it in four parts of acetic acid, and adding to the solution a small quantity of sulphuret of ammonia; a black precipitate, insoluble in sulphuric acid, in- dicates the presence of lead. Chalk and starch, are also sometimes mixed with it, and may be detected by heating the preparation in an iron spoon ; if pure it is completely volatilised, but if

adulterated with starch a black coal is left ; or if with chalk a white powder at the bottom of the spoon.

Medical properties. — Used only as an oint- ment in psora and other affections of the skin.

Hydrargyrum purification. London. — Purified mercury.

Pour mercury into an iron retort, and having applied heat distil the purified mercury.

Hydrargyrus purijicatus. Edinburgh. — Purifi- ed mercury.

Take of mercury sis parts, filings of iron one part. Hub them together and distil from an iron retort.

Hydrargyri submurias. London. — Submuriate of mercury.

Take of purified, mercury (by weight) four pounds, sulphuric acid (by weight) thirty ounces, muriate of soda one pound and a half, muriate of ammonia eight ounces. Boil two pounds of the mercury with the sulphuric acid in a glass vessel until the sulphate of mercury be dry ; when this is cold let it be triturated with two pounds of mercury in an earthen mortar, that they may be pepfectly mixed. Then add the muriate of soda, and rub them together till all globules disappear; afterwards sublime. Reduce the sublimed mat- ter to a very fine powder; pass it through a sieve, and mix it carefully with the muriate of ammonia previously dissolved in a gallon of boiling distilled water.

Set it aside that the powder may subside. Pour off the solution, and wash the powder repeatedly with distilled water, boiling until solution of ammonia dropped into it throw nothing down. Finally, reduce it to a very fine powder in the manner directed for the preparation of chalk.

Submurias hydrargyri mltis sive calomelas. Edinburgh. — Mild submuriate of mercury or calomel.

Take of muriate of mercury four parts, puri- fied mercury three parts. Rub the muriate in a glass mortar with a little water in order to pre- vent the acrid powder from rising; then add the mercury, and again triturate until it be extin- guished. Put the dried mass into an oblong phial, one-third only of which it shall fill, and sublime it in a sand-bath. Again let the sublimed powder be triturated, and again sublimed ; then reduce it to a fine powder, which is lastly to be well washed with boiling distilled water.

This very important preparation is a proto- chloride of mercury (and not a submuriute). In the process of the London College, following the old doctrines, the mercury is first formed into a persulphate, which is mixed with the common salt, and converted into corrosive sublimate, but which, at the moment of its formation, is again decomposed by the ammonia of the muriate of ammonia, and converted into calomel. But supposing, as is actually the case, that the cor- rosive sublimate which is formed is a perchloride, this is changed into calomel by one-half of the chlorine uniting with the additional portion of mercury and forming a protochloride. By tritu- rating metallic mercury, as directed by the two other colleges, with the corrosive muriate the whole mass assumes a gray color. The sublima- tions render the combination of the mercury with

the chloride and its reduction to the state of pro- tochloride complete ; but this is not the case in the first sublimation, for both metallic mercury and corrosive muriate are found unchanged in the sublimed mass ; and thence the necessity of the second trituration and subsequent sublimations By repeating, however, the sublimation too often the product is injured, as corrosive muriate is formed in each sublimation. The final tritura- tion and levigation are intended to separate any corrosive muriate that may have been formed. In performing the process, the addition of a little water during the trituration of the ingredients in the first instance is very necessary; as otherwise the operator is apt to suffer extremely from the acrid powder of t’he corrosive muriate which is elevated .! — Thomson.

Qualities. — Calomel is of a dull white appear- ance, without odor or taste ; it is insoluble. It is rendered black by trituration with lime-water and the alkalies, and it is also decomposed by sulphureted hydrogen and the hydrosulphurets, by antimony, iron, lead, copper, and soap.

Medical properties. — This preparation in dif- ferent doses, according to circumstances, is in greater use than any other form of mercury. It is employed as a purgative, alterative, and de- obstruent, and antispasmodic, and, indeed, as a diuretic and sedative, when combined with other substances and duly proportioned as to dose, which varies from the sixth of a grain to many grains and even scruples.

Submurias hydrargyri pracipitatus. Edin- burgh.— Precipitated submuriate of mercury.

Take of diluted nitrous acid, purified mercury, of each eight ounces, muriate of soda four ounces and a half, boiling water eight pounds. Mix the mercury with the diluted nitrous acid, and towards the termination of the effervescence digest with a gentle heat, frequently shaking the vessel. It is necessary for more mercury to be mixed with the acid than it can dissolve, so that a completely saturated solution be obtained.

Dissolve at the same time the muriate of soda in the boiling water ; then to this add the other solution while it is yet warm, and mix them very quickly together. After the precipitate has sub- sided pour off the saline fluid, and wash the submuriate of mercury by frequent affusions of warm water, which are to be poured off each time after the precipitate subsides, until the water come off tasteless.

In this process the mild muriate is mixed with the subnitrate of mercury, by which its powers are modified ; for the metal is oxydised to a maxi- mum by solution in nitric acid with heat, and a subnitrate is precipitated by the addition of water. Heat, therefore, ought not to be employed, in the process.

Qualities. — Calomel prepared in the above way is smoother arid not so heavy as that ob- tained by sublimation, but otherwise is similar, with the exception of its containing the subni- trate if prepared with heat according to the di- rection of the college.

Medical properties. — Essentially the same with common calomel.

Hydrargyri sulphuretum itgrum. Lcndon.— Black sulphuret of

mercury.

Take of purified mercury (by weight) one pound, sublimed sulphur a pound. Let them be rubbed together till the globules disappear.

Sulphuretum hydrargyrinigi'um. Edinburgh. — Black sulphuret of mercury.

Take of purified mercury, sublimed sulphur, of each equal weights. Let them be triturated together in a glass mortar with a glass pestle, until the globules of mercury altogether disap- pear. It may also be made with double the quantity of mercury.

It seems that some chemical combination is effected by the trituration of the mercury with the sulphur, but that the metal is not, as it had been supposed by Fourcroy, at all oxidated.

Qualities. — The black sulphuret of mercury is without taste or smell. The application of heat occasions it to emit sulphurous acid gas. When adulterated with ivory black, which is not seldom the case, the fraud may be de- tected by throwing the mass on a red hot iron, when ashes will be left if there had been any ad- mixture of the ivory black.

Medical properties. — It has been chiefly em- ployed as an alterative in cutaneous affections, and as a remedy against worms. Dose from gr. v. to 3ft.

Hydrargyri sulphuretum rubrum. London. — • Red sulphuret of mercury.

Take of purified mercury (by weight) forty ounces, sublimed sulphur eight ounces. Having melted the sulphur over the fire, mix the mer- cury, and immediately upon the swelling of the mass remove the vessel from the fire, and cover it with force in order to prevent it from catching fire ; then rub it into powder and sublime.

Qualities. — This preparation (cinnabar) is of a bright vivid red color, without taste and inso- luble. * It is sometimes adulterated with red lead, dragon's blood, and chalk : the first is dis- covered by the same process as was described for discovering it in the red oxide; spirit of wine detects the second by extracting the color- ing matter; and the last is discovered by an effervescence being excited by muriatic acid,

and the production of sulphate of lime on add- ing sulphuric acid.

Medical properties. — Deobstruent and altera- tive. Not at present much employed. Dose for internal use gr. x. to 3ft. Factitious cinna- bar, as" it has been called, is used by some for fumigating venereal ulcers in the throat.

Submlphas hydrargyri Jlavus. Edinburgh. — Yellow subsulphate of mercury.

Take of purified mercury two parts, sulphuric acid three parts. Put them into a glass cucur- bit, placed in a sand-bath, and boil them to dry- ness. Pulverise the white mass left at the bot- tom of the vessel, and throw it into boiling water. It will be immediately changed into a yellow powder, which is to be washed with frequent affusions of warm water.

In this process a supersulphate of mercury is first formed ; but the continued application of heat expels and partly decomposes a portion of the acid, the metal becomes more oxidised, and a subsulphate is produced.

Qualities. — This preparation is of a fine bright yellow; it is without smell, but of an acrid

taste. It is changed by rubbing it with mer- cury into the black oxide ; and a red heat re- duces it to its metallic state by expelling its oxygen.

Medical properties. — Principally used as an errhine. It has been found extremely useful in chronic ophthalmia, and diseases of the head ; but even for this purpose its acrimony requires to be sheathed with some bland powder, as starch or liquorice root, powder in the proportion of grs. v. to gr. j. of subsulphate. In doses of grs. v. it operates as a powerful emetic.

PIUEPARATA E PLUMBO. — Preparations of lead.

Plwnbi acetas. London. — Acetate of lead.

Take of subcarbonate of lead a pound, strong acetic acid one pint, boiling distilled water one pint and a half. Mix the acid with the water. To these add the subcarbonate of lead, gradually ; then filter the solution through paper, and, having evaporated it until a pellicle appear on the sur- face, set it apart for the formation of crystals. Pour off the fluid, and let the crystals be dried upon bibulous paper.

Acetas plumbi. Edinburgh. — Acetate of lead.

Take of white oxide of lead any quantity, weaker acetic acid a sufficient quantity. Put the oxide into a cucurbit, and pour over it ten times its weight of the acid. Let the mixture stand upon a warm sand-bath until the acid becomes sweet ; then pour it off, and add fresh acid in successive portions, until no more sweetness is communicated. Evaporate all the fluid freed from impurities in a glass vessel to the consis- tence of thin honey, and set it aside in a cold place for crystals to form, which are to be dried in the shade. Again evaporate the residuary liquor that new crystals may be obtained, and repeat the evaporation until no more be formed.

These processes are seldom employed, the acetate of the shops being generally that which is obtained on a large scale by treating sheets of lead with distilled vinegar.

Qualities. — Acetate of lead (sugar of lead) is possessed of an astringent and sweet taste ; it is in the form of white crystals. It is slightly efflorescent, and is soluble. It is decomposed by the alkalies and their carbonates, most of the acids and neutral salts, lime, magnesia, and all the sulphurets; but it is not affected by a solu- tion of gum.

Medical properties. — Powerfully astringent and sedative. Dose from a quarter of a grain to a grain. It is in the general way best to com- bine it with about half its quantity of opium. Externally it is much used as a collyrium in the proportions of fifteen grains or a scruple to half a pint of water.

Liquor plumbi subacetatis. London. — Solution of suhacetate of lead.

Take of semivitrified oxide of lead two pounds, acetic acid (distilled vinegar) a gallon. Mix them, and boil them down to six pints, stirring assiduously ; then set the solution aside that the impurities may subside, and strain it.

Qualities. — This solution is of a greenish- straw color, with a sweetish and rather caustic taste. ‘ It is partially decomposed when largely diluted with distilled water ; and with pump

•water a heavy precipitate immediately takes place ; it is also

precipitated in the form of a \vhite subsalt by the alkalies and their carbonates ; and a black precipitate is produced by the alka- line sulphurets. It is indeed the best test for diluting sulphureted hydrogen in any compound. This solution is also incompatible with solutions of mucilage, the gum of which it coagulates; and it is the most delicate test for mucilage with which we are acquainted.

Medical properties. — Only employed exter- nally. It is called Goulard's extract from having been introduced into practice by a surgeon of Montpelier of that name.

Liquor pluinbi subacetatis dilutus. London. — Diluted solution of subacetate of lead.

Take of solution of subacetate of lead a fluid drachm, distilled water a pint, proof spirit afluid drachm. Mix them.

A superfluous preparation, .inasmuch as the dilution is easily made extemporaneously, and of strength according to circumstances.

PRJEPARATA E ZINCO. — Preparations of zinc.

Calaminaprtzparata. London. — Prepared cala- mine.

Calcine the calamine and beat it to powder ; then bring it into a state of very fine powder, in the manner directed for preparing chalk.

Carbonas zinci impurus prgparatus. Edin- burgh.— Prepared impure carbonate of zinc.

Having rubbed to powder, in an iron mortar, impure carbonate of zinc roasted by those who make brass ; and having levigated it with a little water on a porphyry, it is to be put into a large vessel and water poured over it, which, after frequently agitating the vessel, is to be poured off loaded with the powder. The fine powder which subsides after the water has re- mained at rest is then to be dried. The coarse which the water cannot suspend is again to be levigated and treated as before.

Medical properties. — Calamine is principally employed in the form of a dry powder to the excoriations to which infants are subject, and is an exceedingly useful application.

Oxidum zinci impurum praparutum. Edin- burgh.— Prepared impure oxide of zinc.

It is prepared in the same manner as the im- pure carbonate of zinc.

Zinci oxidum. London. — Oxide of zinc.

Take of sulphate of zinc one pound,, solution of ammonia one pint, or so much as may be re- quired, distilled water one pint. Dissolve the sulphate of zinc in the distilled water, and add so much solution of ammonia as may be neces- sary entirely to precipitate the oxide of zinc. Pour off the solution, wash the powder repeat- edly with distilled water, and dry it upon a sand- bath.

Oxidum zinci. Edinburgh. — Oxide of zinc.

Let a large crucible be placed in a furnace filled with burning coals in such a manner as to be somewhat inclined to its mouth, and when the bottom of it is heated to a moderate degree of redness throw into it a piece of zinc of about a drachm weight. The zinc is soon inflamed and converted into white flocculi, which are oc- casionally to be removed from the surface of the

metal by means of an iron spatula, for the com – pletion of the combustion ; when the inflamma- tion is over, let the oxide of zinc be removed from the crucible. Then throw in another piece, and let the operation be repeated as often as necessary. Finally, let the oxide of zinc be pre- pared in the same manner as the impure car- bonate of zinc.

The quantity of water ordered by the London College is said to be too small. Mr. Brande as quoted by Dr. Thomson says the word congium should be substituted for octarium.

Qualities. — Insipid, of a pure white color and infusible, insoluble in water and alcohol, but soluble in acids. It is often adulterated with chalk, and sometimes contains white lead. By pouring sulphuric acid on the specimen, the first is discovered by the effervescence which is ex- cited, the second by an insoluble sulphate of lead being formed.

Medical properties. — Tonic and antispasmodic. Considerably employed in chorea and epilepsy. Dose gr. i. to grs. v.

Zinci sulphas, London. — Sulphate of zinc.

Take of zinc broken into small pieces four ounces, sulphuric acid by weight six ounces, water four pints. Mix them in a glass vessel, and, when the effervescence is over, filter the so- lution through paper ; then boil it until a pellicle begin to form on the surface, and set it

aside to crystallise.

Edinburgh. — Take of zinc cut into small pieces three parts, sulphuric acid five parts, water twenty parts. Mix, and the effervescence being over digest for a short time on hot sand. Then filter the decanted solution through paper, and after due evaporation set it apart tor the for- mation of crystals.

In these processes the zinc decomposes the water by the aid of the acid, and the oxygen of the water being attracted by the metal hydrogen becomes disengaged with effervescence. The greatest portion of the sulphate of zinc which is used in the shops is prepared by exposing blende in such a way that white vitriol, as it is called, results. This white vitriol is purified by solu- tion in water, the solution being allowed to eva- porate slowly in an open vessel containing some granulated zinc; by this process any sulphate of lead that may be mixed with the sulphate of zinc is caused to subside, and the other salts are decomposed by the metallic zinc.

Qualities. — The preparation is probably a su- persulphate; its taste is acidulous and metallic, it is without smell. ‘ It is decomposed by the alkalies, earths, and hydrosulphurets ; and throws down a dirty looking precipitate, from astringent vegetable infusions, with which there- fore it is incompatible’ in prescriptions.’

Medical properties. — Tonic, antispasmodic, and astringent. In scruple or half drachm doses it is emetic. It is also employed in ex- ternal affections, especially in ophthalmic com- plaints accompanied by a laxity of vessel. Dose as a colly rium 9j. to half a pint of rose water. Dose for internal administration from one grain to three or four.

Solutio sulphatis zinci. Edinburgh. — Solution of sulphate of zinc.

PHARMACY.

Qualities.— Saline and bitter. Soluble, and slightly effervescent. It is decomposed by a nigh heat and strong acids, and muriates of lime and barytes.

Medical properties. — A mild cathartic, and slightly diuretic. Dose 3vj. to Jift.

EARTHS AND EARTHY SALTS.

The earths are, as it has been stated in the article CHEMISTRY, metallic oxides : some of them being alkalescent, and some not. Of the

former, lime, magnesia, and barytes, are those em- ployed medicinally, the last indeed only in com- bination. Of the earths that do not possess alkaline properties one only is introduced into medicine, viz. alumina, and this, like barytes, is only used when combined ; for alum itself is a sulphate. See CHEMISTRY.

PREPARATIONS OF ALUMINA.

Alumen exsiccatum. London. — Dried alum.

Melt the alum in an earthen vessel over the fire, and let the heat be increased till the ebulli- tion ceases.

Edinburgh. — Melt the alum in an earthen or iron vessel, and keep it over the fire until the boiling ceases : then let it be rubbed into a powder.

In this process the water of crystallisation is expelled, and the aluminous principle of course more concentrated ; but if the heat be too great, or not sufficiently gradual, its sulphuric acid is partly expelled and decomposed.

Liquor aluminis compositus. London. — Com- pound solution of alum.

Take of alum and sulphate of zinc each half an ounce, boiling water two pints. Let the alum and the sulphate of zinc be boiled in water, and then filtered through paper.

‘ Half an ounce of this solution, and six ounces and a half of rose water, form an excellent collyrium in ophthalmia, after local bleeding.’

PREPARATIONS OF LIME.

Calx. London. — Lime.

Take of white marble a pound ; break it into small pieces, and expose these in a crucible to a very strong fire during an hour, or until the car- bonic acid be so thoroughly expelled that no air bubbles will be extricated on the addition of acetic acid.

Calx e testis. London. — Lime from shells.

In the same manner lime is also prepared from shells.

In order to obtain lime quite pure, these pro- cesses are not sufficient. See CHEMISTRY, article Lime.

Liquor calcis. London. — Lime water.

Take of lime half a pound, boiling distilled water twelve pints. Pour the water upon the lime, and let them be agitated together; cover the vessel directly, and set it apart three hours. The solution must be preserved over the undis- solved portion of the lime in well stopped glass bottles, and the clear fluid poured off when it is wanted for use.

Solutio calcis, sive aqua calcis. Edinburgh. — Solution of lime, or lime water.

Take of lime fresh burnt half a pound. Put

it into an earthen vessel, and sprinkle upon it four ounces of water, keeping the vessel covered until the lime become hot and fall into powder ; then let twelve pounds more of water be poured on it, and mix, by agitation, the water with the lime. After the lime shall have subsided, let the agitation be repeated ; and do this about ten times, the vessel being kept shut in order to pre- vent the access of air. Lastly, let. the water be filtered through paper, interposing glass rods be- tween the paper and the funnel, that the water may pass through as quickly as possible. The solution is to be preserved in well stopped bottles.

The mode of the London college is preferred by Dr. Thomson.

Qualities. — Lime water is without smell or color ; its taste is styptic. It speedily attracts carbonic acid from the air, and therefore requires to be kept in well stopped bottles.

Medical properties. — Antacid and anthelmintic. Dose from f. 3 ft. to Oft. It is generally best to give it combined with an equal quantity of milk.

Murias calcis. London. — Muriate of lime.

Take of the salt which remains after the subli- mation of the subcarbonate of ammonia two pounds ; water a pint. Mix them, and let the solution be filtered through paper ; then eva- porate it till the salt becomes dry. The salt is to be preserved in well stopped bottles.

‘ This preparation is a chloride of calcium. Muriate of lime can only exist in a state of solu- tion in water; and, in evaporating to dryness, the muriatic acid is decomposed and resolved into chlorine and hydrogen ; while at the same time the oxide of calcium, forming part of the muri- ate, parts with its oxygen ; the chlorine attaches itself to

the calcium, forming a chloride of cal- cium, which is obtained as a dry salt; and the oxygen to the hydrogen, forming water, which is evaporated.' — Thomson.

Qualities.— A. pungent bitter salt, inodorous, soluble in water and alcohol, producing cold during solution.

Medical properties. — Proposed by some in scrofulous disorders but very little used. Dose from gr. j. to grs. iv.

Liquor muriatis calcis. London. — Solution of muriate of lime.

Take of muriate of lime two ounces ; distilled water three fluid ounces. Dissolve the muriate of lime in the water, and let the solution be fil- tered through paper.

Solutio muriatis calcis. Edinburgh. — Solution of muriate of lime.

Take of the harder variety of carbonate of lime (white marble), broken into small pieces, nine ounces ; muriatic acid sixteen ounces ; water eight ounces. Mix the acid with the water, and gradually add the pieces of carbonate of lime. The effervescence being finished, digest for an hour. Pour off the fluid, and reduce it, by eva- poration, to dryness. Let the residue be dissolved in its weight and a half of water, and the solu- tion be filtered.

The chemistry of the preparation ordered by the Edinburgh College is sufficiently obvious. In the solution ordered by the London College, of the chloride of calcium, an actual muriate of

dry season, and when no dew is found upon them; they are to be collected yearly, and any that shall have been kept for more than a year are to be thrown away.

Roots are for the most part to be dug up before the shooting out of their stems or leaves.

Barks are to be collected at that season in •which a separation from the wood is more easily effected.

Leaves are to be gathered after the expansion of the flowers, and before the seeds have come to maturity.

Flowers are to be gathered when they are just open.

Seeds are to be collected when ripe, and be- fore they drop from the plant. They ought to be preserved in their seed vessels.

Vcgetabilium prceparatio. London. — Prepara- tion of vegetables.

Vegetables soon after being gathered, except those which are to be used in a recent state, are to be lightly spread out and dried as quickly as may be, with a gentle heat, so that their color shall not be altered ; they are then to be pre- served in proper situation? or vessels where light and moisture are excluded.

Roots which we desire to be preserved fresh are to be buried in dry sand. The squill root, before drying, is to be denuded of its arid coats, and transversely cut into thin slices.

Pulpy fruits if they be not ripe, or if they be ripe and dried, are to be placed in a damp situ- ation that they may become soft ; then the pulp must be pressed out through a hair sieve ; then boiled with a gentle heat, frequently stirring; and lastly the water evaporated in a water bath until the pulp acquire a due consistence.

Over the bruised pods of cassia pour boiling water so as to wash out the pulp, which is first to be pressed through a sieve with large holes, and afterwards through a hair sieve; then the water is to be dissipated in a water-bath, until the pulp acquire a due consistence.

The pulp or juice of ripe and fresh fruits is to be pressed through a sieve without boiling.

Vegetabilium exsiccutio. Edinburgh. — The drying of herbs and flowers.

Herbs and flowers should be dried by the gentle heat of a stove or a common fire in such quantity at once as will admit of the operation being very speedily finished ; for thus are their powers better preserved, the indication of which is the complete preservation of their natural color.

The leaves of hemlock, and of other plants containing a subtile volatile matter, are imme- diately upon being dried to be reduced to pow- der, and kept in well stopped glass vessels.

The root of the sea-quill freed from its outer coat is to be transversely cut into thin slices. The indication of its being properly dried is the

retention of its bitterness and acrimony after it has become friable.

Pulparum extractio. Edinburgh. — Extraction of pulps.

Fruits which afford a pulp, if unripe, or if ripe and dry, are to be boiled in a small quan- tity of water till they become soft; then the pulp should be pressed through a hair sieve, VOL. XVII

and afterwards boiled with a gentle heat in an earthen vessel, stirring frequently in order to prevent it from burning, until it acquire the consistence of honey.

In like manner the pulp of cassia fistula is to be boiled out from the bruised pod, and then brought to a due consistence by the evaporation of the water. The pulps of fresh and ripe fruits are to be pressed through a sieve without previous boiling.

Sued spissati. Edinburgh. — Inspissated juices.

Beat the fresh substance and press it strongly through a canvas bag so as to obtain the juice, which being put into a wide and shallow vessel, and heated by means of boiling water saturated with sea salt, is to be reduced to the consistence of honey. The mass when cold is to be put into glazed earthen vessels, and moistened with strong alcohol.

Gummi resinte. London. — Gum-resins.

Separate opium very carefully from all extra- neous matter, particularly from that on its out- side. Let it be preserved in a soft state proper for forming pills, and in a state of hardness such as can be produced by drying it in the heat of a water-bath, so that it may be reducible to powder.

Those gum resins are to be considered the best which can be selected so free from impurity as to require no purifying operation. If, however, they appear less pure, boil them in water until they soften, and squeeze them by a press through a hempen bag: then set them apart that the resinous matter may subside. Pour off the supernatant fluid, and evaporate it by a water- bath heat, adding the resinous portion towards the end of the operation, that it may combine with the gummy part.

Those gum resins which liquify readily are to be purified by putting them into an ox bladder, and holding them in boiling water until they become sufficiently soft to be freed from impuri- ties by pressing them through a hempen bag.

Dissolve the balsam of storax in rectified spirii and strain ; then distil off the spirit by a gentle heat, until the balsam acquire a due consistence.

OLEA EXPRESSA — Expressed oils.

Oleum amygdalarum. London. — Oil of al- monds.

Macerate almonds either bitter or sweet in cold water for twelve hours, and bruise them ; then express the oil without heat.

Oleum amygdali communis. Edinburgh. — Oil of the almond.

Take fresh almonds and bruise them in a stone mortar; then put them into a hempen bag, and express the oil by a press without heat.

Medical properties. — Demulcent and emol- lient. Dose from f. ˆft to f. ˆj-

Oleum lini. London. — Oil of linseed.

Bruise the seeds of common flax, and then express the oil without heat.

Medical properties. — Laxative as well as de- mulcent and emollient. It has been much re- commended by some in hsemorrhoidal affections ; but it is principally used either as an external application in cases of burns and scalds, or m

the form of enemata. Dose by the mouth from f- Jft to f. 3J. as an enema from f. 5iij. to f. jvj.

Oleum ricini. London. — Castor oil.

Bruise the seeds of castor, first deprived of their pellicles, and express the oil without heat.

OLEA DISTILLATA. — Distilled or volatile oils.

Olea distillata. London. — Distilled oils. The seeds of anise and carraway, the flowers of chamomile and lavender, the berries of juni- per and all-spice, the tops of rosemary, and the whole plants of the other articles are to be used. Any one of these is to be put into an

alembic, and so much water is to be added as will cover it, the oil is then to be distilled in a large refri- geratory.

The water which distils over with the carra- way, peppermint, spearmint, all-spice, and pen- nyroyal is to be kept for use.

Olea volatilia, Edinburgh. — Volatile oils. So much water only is to be used as will pre- vent empyreuma during distillation. The dis- tillation may be immediately commenced after due maceration, and the oil afterwards separated from the water.

It is also necessary to observe in preparing these oils and the distilled waters, that the quality of the materials, their texture, the time of the year, and other circumstances may occasion so many differences, that it is hardly possible to give any certain and general rules which shall strictly apply in all cases. Many things, there- fore, which must be regulated by the judgment of the operator, are omitted, and the more gene- ral only given.

Oleum anisi. London. Oleum volatile pimpi- nelles anisi. Edinburgh. — Oil of aniseed.

This is sometimes adulterated with water, spermaceti, or camphor ; but the fraud is easily detected, for, on moderately warming the genuine oil, the crystals dissolve, which is not the case with sophisticated. The greater part of the oil of aniseed consumed in this country is prepared in Spain.

Medical properties. — Carminative. Dose \[\.

Oleum anthemidis. London. Oleum volatile anthemidis nobilis. London. — Oil of chamomile.

Medical properties. — Stomachic and carmina- tive. Dose n\v.

Oleum carui. London. — Oil of carraway.

Medical properties. — Stimulant and carmina- tive. Dose from n\j- to n\v

Oleum juniperi. London. Oleum volatile ju- niperi communis. Edinburgh. — Oil of juniper.

This when genuine is soluble in alcohol.

Medical properties.— -Diuretic and carminative. Dose ntiij.

Oleum lavandults. London. Oleum volatile Lavendul < £ spica. Edinburgh. — Oil of lavender.

Medical properties. — Stimulant and cordial. Dose from m.i. to 1T|.V- on sugar.

Oleum volatile lauri sassafras. Edinburgh. — Oil of sassafras.

Medical propertiet. — Sudorific, diuretic, and stimulant. Not much employed. Dose ttlij. to

ttlvJ-

Oleum wentlue piperita. London. — Oleum volatile Mentha piperita. Edinburgh. — Oil of peppermint.

Medical properties. — Stimulant and carmina- tive. Dose wjj. to tltiij-

Oleum mcnthtz viridis. London. — Oil of spear- mint.

Medical properties. — The same as the pepper- mint, but less pungent.

Oleum origani. London. Oleum volatile ori- gani marjorams. — Oil of common marjoram.

Medical properties. — Not used internally. Oc- casionally applied to a carious tooth to ease the pain, two or three drops being put on a piece of cotton and inserted into the tooth.

Oleum pimento. London. Oleum volatile myrti pimentte. Edinburgh. — Oil of pimento.

Medical properties. — Stomachic and stimu- lant. Dose from ttxiijˆ to wlv- m su§ar or any proper vehicle.

Oleum pulegii. London. — Oil of pennyroyal.

Medical properties. — Stimulant, but not in much use. Dose m.ij- to tttv.

Oleum rosmarini. London. Oleum volatile rorismarini. Edinburgh. — Oil of rosemaiy.

This when long kept deposits crystals of cam- phor.

Medical properties. — Stimulant. It is used externally in combination with other materials as a liniment. Dose for internal use m,ij. to trivj.

Oleum herba juniperi sabinte. Edinburgh. — Oil of savine.

Medical properties. — Savine is supposed by some to possess specifically emmenagogue pro- perties. Dose of the oil from jj|jj. to* n \iv.

Oleum succini. London. — Oil of amber.

Put the amber into an alembic, and distil from a sand-bath, with a gradually raised heat, an acid liquor, the oil, and a salt impregnated with oil. Then redistil the oil a second time and a third time.

Oleum succini. Edinburgh. — Oil of amber.

Take of amber in powder, and of pure sand equal parts. Mix them together in a glass re- tort, the capacity of which the mixture only half fills ; and, having adapted a large receiver to it, distil in a sand-bath with a gradually increased heat. An aqueous fluid tinged with a little yellow oil will come over first ; then a yellow oil with an acid salt; and lastly a black and reddish oil. Pour the fluid from the receiver, and separate the oil from the water.

Oleum succini purissimum. Edinburgh. — Pure oil of amber.

Distil the oil of amber mixed with six times its quantity of water, from a glass retort, until two- thirds of the water pass into tnt receiver. Then separate this purified oil from the water and preserve it in well stopped phials.

Qualities. — Exceedingly strong and ui. plea- sant odor. Insoluble in water and only pai- tially soluble in alcohol.

Medical properties. — Stimulant and rubefaci- ent. Occasionally it has been used internally in cases of obstructed menstruation, and in some hysteric and spasmodic complaints. Dose n\y. to Tfl.x- Externally it is used in combination with opium in hooping cough and rheumatic affections, and tic douleureux.

Oleum t ere bint hina: rectification. London. — Rectified oil of turpentine. Take of oil of tur- pentine a pint, water four pints : distil.

Oleum volatile pini purissimum. Edinburgh. — Purified oil of

turpentine.

Take of oil of turpentine one part, water four parts. Distil so long as any oil comes over.

Medical properties. — Anthelmintic, antispas- modic, and antirheumatic. Dose for worms f. Jj. ; for epilepsy rrˆxxx. ; for rheumatism f. 3j. Its effects on the kidneys may be guarded against by combining it with acacia mucilage, or giving this mucilage for drink in combination with barley water.

AQUJE DISTILLATE. — Distilled waters.

The London college gives the following di- rection for the preparation of distilled waters.

Waters are to be distilled from dry plants unless it be otherwise ordered; because fresh plants cannot be procured at all times of the year. When fresh plants are employed, the weight of them ordered is to be doubled.

To every gallon of these waters let five fluid ounces of proof spirit be added, in order to pre- serve them from spoiling.

Aqua distillate. London. — Distilled water. Take of water ten gallons. First distil four pints which are to be thrown away, and then distil four gallons. Keep the distilled water in a glass bottle.

Aqua distillata. Edinburgh. — Distilled water. Let water be distilled in clean vessels until two-thirds of the quantity employed have passed over.

‘ Distilled water is necessary in formulas con- taining any of the following substances : aci- dum sulphuricum, acidum citricum, antimonium tartarizatum, argenti nitras, cuprum ammonia- turn, ferrum tartarizatum, hydrargyri oxymurias, liquor ammonia?, liqtfbr plumbi acetatis, liquor potassae, plumbi superacetas, solutio muriatis barytae, vinum ferri, zinci sulphas, ferri sulphas.’ Thomson,

Aqua anethi. London. — Dill water. Take of dill seeds bruised a pound, pour upon them so much water as during the distillation may be sufficient to prevent empyreuma. Let a gallon be distilled.

Aqua carui. London. — Carraway water. Take of bruised carraway seeds a pound, pour on them water enough to prevent empy- reuma duringdistillation. Let a gallon be distilled. Aqua citri aurantii.

Edinburgh. — Water of orange peel.

Take of fresh orange peel two pounds. Add so much water that, when ten pounds have been distilled off, there shall remain sufficient to prevent empyreuma. After due maceration distil ten pounds, to which add five ounces of diluted alcohol.

Aqua citri mediae. Edinburgh. — Water of lemon peel, prepared in the same manner as the last.

Aqua cinnamomi. London. Aqua laura cin~ namomi. Edinburgh. — Cinnamon water.

Take of bruised cinnamon bark a pound, or of oil of cinnamon by weight five scruples.

Macerate the oil or the bark in water for four- and-twenty hours, then add a sufficient quantity of water to prevent empyreuma after the distil- lation. Let a gallon be distilled.

Aqua law i cassite. Edinburgh. — Water of Cas- sia bark. Prepared in the same manner as the last.

Aquafaniculi. London. — Fennel water.

Take of fennel seeds bruised a pound. Pour on them a sufficient quantity of water to prevent empyreuma. Let a gallon be distilled.

Aqua menthiz piperita:. London. Edinburgh. — Peppermint water.

Take of peppermint a pound and a half, or double the quantity of the fresh herb. Pour upon it so much water as will prevent empyreu- ma. Let a gallon be distilled.

Aqua menthfs viridis. London. — Spearmint water.

Take of spearmint a pound and a half, or double the quantity if the fresh herb be em- ployed. Distil a gallon in the same manner as above.

Aqua pimentee. London. — Aqua myrti pimentte. Edinburgh. — Pimento water.

Take of pimento berries bruised half a pint, •water a pint. Macerate the berries in the water for four-and -twenty hours, and distil a gallon (ten pounds, Edinburgh) in the same manner as above.

Aqua pulegii. London. — Aqua mentfus pulegiL Edinburgh. —

Pennyroyal water

Take of pennyroyal a pound and a half, or double the quantity if the fresh herb be used. Distil a gallon (ten pints, Edinburgh) in the same manner as above.

Aqua roste. London. — Aqua rosee centifolia. Edinburgh. — Rose water.

Take of the petals of the hundred leaved rose, eight pounds (six pounds, Edinburgh), let a gal- lon (ten pints, Edinburgh) be distilled as above.

INFUSA. — Infusions.

‘ The substances which water without the aid of boiling can extract from vegetable matter sub- mitted to its action are gum, mucus, extractive tannin, the bitter and narcotic principles, gum resin, volatile oil, acids, and’ alkalies, a range which includes most of the principles on which the medical properties of plants depend. These principles also are less liable to be altered by infusion than by decoction, and consequently this form of preparation is to be preferred in every instance to which it is applicable. The strength and quality of the infusions are varied by the degree of temperature of the water ; those made with hot water being necessarily stronger, but particularly in the case of bitters ; cold infu- sions are more grateful. _ _

‘ Infusions, like decoctions, ar?liable to undergo spontaneous decomposition, if kept even for a few days, and therefore the London college has properly directed half a pint only to be made at one time, thus regarding them as extemporaneous prescriptions.’ Thomson,

Infusum anthemidis. London.— Infusum anthe- midis nobiiis. Edinburgh. — Infusion of chamo- mile.

Take of chatnomile flowers two drachms, boil- ing water half a pint. Macerate for ten minutes (twenty-four hours, Edinburgh) in a slightly co- vered vessel, and strain.

- This infusion precipitates solution of isinglass

whitish; infusion of yellow cinchona bark, white; solution of sulphate of iron, and of tincture of muriate of iron, black ; solution of nitrate of silver, white ; of oxymuriate of mercury, pale brown ; and of acetate and superacetate of lead, yellowish- white. These substances, therefore, are incom- patible in prescription with this infusion.'

Medical properties. — Stomachic and tonic. Dose from f. Jj. to f. ˆij.

Infusum urmoraciaE compositum. London. — Compound infusion of horse radish.

Take of fresh horse radish root sliced, of mus- tard seed bruised, of each one ounce, boiling water a pint. Macerate for two hours in a slightly covered vessel, and strain; then add one fluid ounce of compound spirit of horse radish.

'This infusion precipitates infusion of galls, yellowish, and infusion of yellow cinchona bark, white. The solutions of the pure alkalies do not affect it, but with their carbonates whitish preci- pitates are produced, as is also the case with so- lution of oxymuriate of mercury; while nitrate of silver produces a precipitate of a brown color. Hence all those substances, except the pure al- kalies, are incompatible in formula with this in- fusion.'

Medical properties. — Stimulant. Useful in pa- ralysis. Dose from f. 1j. to f. ˆiij. •

Infusum aurantii compositum. London. — Com- pound infusion of orange peel.

Take of dried orange peel two drachms, fresh lemon peel one drachm, bruised cloves half a drachm, boiling water half a pint. Macerate for fif- teen minutes in a vessel lightly covered, and strain.

' This infusion precipitates sulphate of iron, black ; and also produces precipitates with su- peracetate of lead, infusion of yellow cinchona bark, and lime water.'

Medical properties. — Stomachic. Dose f. ˆift.

Infusum calumb(E. London. Infusum Colombo,. Edinburgh. — Infusion of calumba.

Take of calumba root sliced one drachm, boil- ing water half a pint. Macerate in a slightly covered vessel for two hours, and strain.

‘This affords precipitates with infusion of yel- low cinchona bark, lime-water, and solution of oxymuriate of mercury.’

Medical properties. — Stomachic. Dose f. 3ift.

Infusum caryophyllorum. London. — Infusion of cloves.

Take of bruised cloves a drachm, boiling wa- ter half a pint. Macerate for two hours in a light- ly covered vessel, and strain.

‘ This affords precipitates with infusion of yel- low cinchona bark, the strong acids, and lime- water. Solution also of sulphate of iron occa- sions a copious black precipitate ; sulphate of zinc, superacetate of lead, and nitrate of silver, brown precipitates. It also decomposes tartar- ised antimony.’

Medical properties.— A. warm stomachic. Dose f. Jifi.

Infusum cascarilltE. London. — Infusion of cas- carilla.

Take of cascarilla bruised half an ounce, boil- ing water half a pint. Macerate for two hours in a vessel lightly covered, and strain.

‘ This is incompatible in formulae with the following substances, which it precipitates : lime-

water, infusion of galls, infusion of yellow cin- chona bark, solution of nitrate of silver, acetate and superacetate of lead, sulphate of zinc, and sulphate of iron, which is slowly thrown down of a pale olive color.’

Medical properties. — Tonic, stimulant, and perhaps expectorant. Dose f. jifi.

Infusum catechu compositum. London. — Com- pound infusion of catechu.

Take of extract of catechu two drachms and a half, bruised cinnamon bark half a drachm, boiling water half a pint. Macerate for an hour in a vessel lightly covered, and then strain.

Infusum acacia catechu. Edinburgh. — Infusion of catechu.

Take of extract of catechu pulverised two drachms and a half, cinnamon bark bruised half a drachm, boiling water seven ounces, simple syrup one ounce. Macerate the extract and the bark with the water for two hours, in a covered vessel ; then strain and add the syrup.

‘The following substances precipitate the tannin of this infusion or otherwise alter its pro- perties, and therefore ought not to be ordered in formulas with it : — Solution of isinglass, infusion of yellow cinchona bark, the strong acids, sul- phate of iron, sulphate of zinc, oxymuriate of mercury, tartarised antimony, and superacetate of lead.’

Medical properties. — Astringent. Dose f. 3

Infusum cinchona. London. — Infusion of cin- chona bark.

Take of lanced-leaved cinchona bark bruised half an ounce, boiling water half a pint. Mace- rate for two hours in a lightly covered vessel, and strain.

Infusum cinchona lancifflia. Edinburgh. — In- fusion of cinchona.

Take of cinchona bark bruised one ounce, wa- ter one pound. Macerate for twenty-four hours, agitating frequently, and strain.

‘ These infusions afford precipitates with the following substances: the strong acids, the alka- line carbonates, lime-water, solutions of sulphate of iron, sulphate of zinc, nitrate of silver, oxymu- riate of mercury, oxide of arsenic, subcarbonate of potassa, and tartarised antimony ; the aque- ous infusions and decoctions of chamomile flowers, calumba, cascarilla, horse-radish, cloves, catechu, orange peel, foxglove, senna, rhubarb, valerian, simaruba, and elm-bark.’

Medical properties. — Tonic. Dose f. ˆift.

Infusum cusparia. London. — Infusion of cus- paria.

Take of cusparia bark bruised two drachms, boiling water half a pint. Macerate for two hours in a lightly covered vessel, and strain.

‘ The solution of sulphate of iron throws down a greenish-yellow precipitate, and sulphate of zinc a yellowish one ; nitrate of silver, oxymu- riate of mercury, superacetate of lead, infusions of galls and of catechu, also produce precipitates in it. Tartarised antimony is slowly decomposed, and therefore cannot properly be ordered in for- mulae with this infusion.’

Medical properties. — Tonic and stimulant. Dosef. ˆift.

Infusum digitalis. London. — Infusion of fox- glove.

Take of the dried leaves of foxglove a drachm, boiling water half a pint. Macerate in a lightly covered vessel for two hours, and strain ; then add of spirit of cinnamon half a fluid ounce.

Infusum digitalis purpurea. Edinburgh. — In- fusion of foxglove.

Take of dried foxglove leaves one drachm, boiling water eight ounces, spirit of cinnamon one ounce. Macerate the leaves with the water during two hours in a vessel lightly covered ; then, the spirit being added, strain.

‘ The solution of sulphate of iron slowly throws down a pale precipitate from these infu- sions; superacetate of lead, and infusion or de- coction of yellow cinchona bark, produce instan- taneous and copious precipitates.’

Medical properties. — Diuretic, &c. Dose from f.3ij. tof. 3j.

Infusum gentianee compositum. London. — Com- pound infusion of gentian.

Take of gentian root sliced, orange peel dried of each a drachm, fresh lemon peel two drachms, boiling water twelve fluid ounces. Macerate for an hour in a vessel lightly covered, and strain.

Edinburgh. — Take of gentian root sliced half an ounce, dried orange peel bruised, coriander seeds bruised, of each a drachm, diluted alcohol four ounces, water one pound. First pour on the alcohol, and after three hours the water ; then macerate for twelve hours without heat, and strain.

‘ The solution of acetate of lead throws down a copious precipitate in this infusion, and sul- phate of iron strikes a brown color, but no pre- cipitate takes place for twelve hours.’

Medical properties. — Tonic and stomachic. Dose f.Jift.

Infusum lini compositum. London. — Com- pound infusion of linseed.

Take of linseed bruised one ounce, liquorice root sliced half an ounce, boiling water two pints. Macerate for four hours in a vessel lightly co- vered, and strain. Let the vessel stand near the fire.

Infusum lini usitatissimi. Edinburgh. — Infu- sion of linseed.

Take of linseed an ounce, bruised liquorice root two drachms, boiling water two pounds. Digest during four hours in a lightly covered vessel, and strain.

‘This infusion is a solution of mucus nearly in its pure state. It is clear, colorless, inodor- ous, and nearly insipid. Alcohol precipitates the mucus in white flocculi, and precipitates are also produced by subacetate and acetate of lead, and the tincture of muriated iron ; hence these substances are incompatible in formulae with this infusion.’

Medical properties. — Demulcent. Dose f. Jij.

Infusum quassia. London. — Infusion of quas- sia.

Take of quassia wood, chipped, a scruple, boiling water half a pint. Macerate for two hours in a lightly covered vessel, and strain.

Infusum quassi

Take of quassia wood, rasped, half a drachm, boiling water eight ounces. Macerate in a lightly covered vessel for two hours, and strain.

‘ These infusions are not altered by any of the substances usually employed as adjuncts to bit- ters, and by two only of the metallic suits. Ni- trate of silver slowly throws down soft yellow flakes, and acetate of lead a white precipitate. ‘ Medical properties. — Tonic. Dose f. 51^.

Infusum rtuei. London. — Infusion of rhubarb.

Take of rhubarb, sliced, a drachm, boiling water half a pint. Macerate for two hours in a vessel lightly covered, and strain.

Edinburgh. — Take of rhubarb root, bruised, hal»? an ounce, boiling water eight ounces, spirit of cinnamon one ounce. Macerate the root with the water in a covered vessel during twelve hours; then add the spirit, and strain.

‘ The following substances either occasion pre- cipitates in these infusions, or otherwise alter their properties, and are therefore incompatible in formulae with them : the strong acids and lime-water, solutions of sulphate of iron, sulphate of zinc, nitrate of silver, oxymuriate of mercury, acetate of lead, tartarised antimony, and infusions of catechu, cinchona, and cusparia.’

Medical properties. — Tonic and aperient. Dose of the London formula from f.jj to f. Jiij, half the quantity of the Edinburgh.

Infusum rosa compositum. London. — Com- pound infusion of roses.

Take of the dried petals of the red rose half an ounce, boiling water two pints and a half, diluted sulphuric acid three fluid drachms, double refined sugar an ounce and a half. Pour the water on the rose petals in a corered glass vessel ; then drop in the acid, and macerate for half an hour; lastly, strain the liquor and add the sugar.

Infusum ros

Take of the dried petals of the red rose one ounce, boiling water two pounds and a half, sul- phuric acid diluted half an ounce, refined sugar one ounce. Macerate the petals with the water in an earthen vessel which has riot been glazed with lead for four hours ; then pour in the acid, strain the liquor, and add the sugar.

‘ The incompatible substances with these infu- sions are those which are decomposed by the sulphuric acid. The sulphates of iron and zinc, although they do not immediately alter it, yet slowly produce dark-colored precipitates after some hours.’

Medical properties. — Refrigerant and astrin- gent. Dose f. ˆift.

Infusum sennte compositum. London. — Corn- pound infusion of senna.

Take of senna leaves an ounce and a half, ginger root sliced a drachm, boiling water a pint. Macerate during an hour in a lightly covered vessel, and strain the liquor.

Infusum cassia senna. Edinburgh. — Infusion of senna.

Take of senna leaves six drachms, ginger rcot bruised a scruple, boiling water nine ounces. Macerate in a lightly covered vessel for an hour, and strain.

‘ These infusions are precipitated by the strong acids, the alkaline carbonates, lime-water, solutions of nitrate of silver, oxymuriate of mer- cury, superacetate of lead, tartarised antimony,

and infusion of yellow cinchona bark, which are consequently incompatible in formulae with them.'

Medical properties. — -Aperient. Dose, when given alone, from f. ˆiij. to f. Jiv.

Infusum senna: composition. Edinburgh. — In fusion of tamarinds and senna.

Take of preserved tamarinds one ounce, senna leaves one drachm, coriander seeds bruised half a drachm, raw sugar half an ounce, boiling water eight ounces. Macerate in a covered ear- then vessel which is not glazed with lead, fre- quently shaking, and at the end of two hours strain.

Tamarinds considerably cover the nauseous flavor of the senna.

Infusum simaroub(E. London — Infusion of Sin>aruba.

Take of Simaruba bark bruised half a drachm, boiling water half a pint. Macerate for two hours in a lightly covered vessel and strain.

' The alkaline carbonates and lime water render this infusion milky, and the following substances occasion precipitates. Nitrate of silver, oxymu- riate of mercury, superacetate of lead, infusion of galls, catechu, and yellow cinchona bark.'

Medical properties. Tonic and antidysenteric. Dose f. ?ift

Infusum tabaci. London. — Infusion of to- bacco.

Take of tobacco leaves a drachm, boiling water a pint. Macerate in a lightly covered vessel during an hour and strain.

Medical properties. Used as an enema in stran- gulated hernia, in ileus and other obstinate de- rangements of the bowels.

MUCILAGINES. — Mucilages.

In pharmacy mucilage implies, as well as a sim- ple solution of gum or mucus in water, any solution of a thick and adhesive nature resembling in its appearance the solutions of gum.

Mucilago acacia. London. — Mucilage of acacia.

Take of acacia gum in powder four ounces, boiling water half a pint. Rub the gum with the water gradually adding the latter until a mu-

cilage be formed.

Mucilago acacite arabica. Edinburgh. — Muci- lage of gum arabic.

Take of gum arabic in powder one part, boiling water two parts. Digest with occasional agitation until the gum be dissolved ; then strain the mucilage through linen.

‘The strong acids act on mucilage as they do on gum, but when diluted they do not alter mu- cilage. Alcohol converts it into a white curd, but proof spirit produces scarcely any alteration; no change is produced by spirit of nitric ether, but sulphuric ether, and compound spirit of ether, precipitate a thick, white, tenacious curd. Tincture of muriate of iron, even when diluted, converts mucilage into a brownish or orange-colored insoluble jelly ; and sabacetate of lead gives a copious, dense, flaky, precipitate, which is a compound of gum and oxide of lead, while no change is produced by the following metallic substances : superacetate of lead, green sulphate of iron, sulphate of zinc, oxymuriate of mercury,

and tartarised antimony ; nor by the alkalies, or the neutral salts.’

Medical properties. — Demulcent. Dose from f. 3ft. to 5ift.

Mucilago astragali tragacanthg. Edinburgh.— Mucilage of tragacanth.

Take of gum tragacanth in powder two drachms, boiling water eight ounces. Macerate for four-and-twenty hours, and triturate the gum carefully that it may be dissolved; then strain the mucilage through linen.

Medical properties — The same as the acacia.

Mucilago amyli. London. Edinburgh. Mu- cilage of starch.

Take of starch three drachms, water a pint. Rub the starrh, gradually adding the water ; then boil until a mucilage be formed.

Medical properties. — Demulcent. It is a com- mon and good vehicle for giving anodynes in enemata.

DF.COCTA. — Decoctions.

Decoctum aloes compositum. London. — Com- pound decoction of aloes.

Take of extract of liquorice half an ounce j subcarbonate of potassa

two scruples ; powdered extract of spiked aloes, powdered myrrh, and saffron, of each a drachm : water a pint. Boil down to twelve fluid ounces ; then add compound tincture of cardamoms four fluid ounces.

‘This decoction is decomposed by all the strong acids ; corrosive muriate of mercury pro- duces a pale brown precipitate ; while tartarised antimony, sulphate of zinc, and superacetate of lead produce white curdy precipitates.’

Medical properties. — Cathartic and emmena- gogue. It is somewhat similar to the well known beaume de vie. Dose from f. ˆft. to

Decoctum althate compositum. Edinburgh. Decoction of marsh mallows.

Take of marsh mallow root dried and bruised four ounces, raisins stoned two ounces, water se- ven pounds. Boil down to five pounds. Set aside the strained liquor, and when the dregs have subsided decant it.

Medical properties. — Demulcent. Dose ad libitum.

Decoctum anthemidis nobilis. Edinburgh.— Decoction of chamomile. ,

Take of chamomile flowers dried one ounce, carraway seeds bruised half an ounce, water five pounds. Boil during a quarter of an hour, and strain.

Decoctum cinchona. London. — Decoction of cinchona bark.

Take of lance-leaved cinchona bark bruised an ounce, water a pint. Boil for ten minutes in a vessel lightly covered, and strain the liquor while it is hot.

Decoctum cinchona, lancifolite. Edinburgh. — Decoction of lance-leaved cinchona bark.

Take of cinchona bark in powder one ouncer water one pound and a half. Boil during ten minutes in a covered vessel, and strain the liquor while it is hot.

For medical properties) and incompatibles, see infusion of cinchona.

Decoctum cydonite. London. — Deceetion of quince seeds.

Take of quince seeds two drachms, water a pint. Boil them over a gentle fire during ten minutes ; then strain.

‘This is coagulated by alcohol, acids, and most of the metallic salts, which therefore are incompatible in formulae with it : it must be used as soon as it is made.’

Medical properties. — Demulcent: ad libitum. Decoctum daphnes mezerii. Edinburgh. — De- coction of mezereon.

Take of the bark of mezereon root two drachms, liquorice root bruised half an ounce, water three pounds. Boil down to two pounds with a gentle heat, and strain.

Medical properties. — Alterative. It has been employed in old syphilitic affections, and in chronic rheumatism ; and in several forms of cu- taneous disorder.

Decoctum dulcamara. London. — Decoction of woody nightshade.

Take of the stalks of woody nightshade sliced one ounce, water a pint and a half. Boil down to a pint, and strain.

Medical properties. — Diuretic and narcotic. It has been used in some chronic disorders of the skin. Dose f. Jfs to f. 3!.

Decoctum Geoffroya, inermis. Edinburgh — Decoction of cabbage-tree bark.

Take of cabbage-tree bark in powder one ounce, water two pounds. Boil with a gentle heat down to one pound, and strain. Not much used in this country. Decoctum guiaiaci compositum. Edinburgh. — Compound decoction of guaiacum.

Take of guaiacum wood rasped three ounces; raisins two ounces ; sliced sassafras root, bruised liquorice root, of each one ounce ; water ten pounds. Boil the guaiacum wood and the raisins in the water over a gentle fire to five pounds, adding the roots towards the end of the boiling; then strain.

Medical properties. — Alterative and antirheu- matic. Dose f. Jiv. to f. 3v”j-

Decoctum hordei. London, (distichi, Edin- burgh).— Decoction of

barley.

Take of pearl barley two ounces, water four pints and a half (five pounds Edinburgh). First wash any extraneous substances away that may be adhering to the barley ; then, having poured on it half a pint of water, boil for a few minutes. This water being thrown away, let the remainder be added boiling ; then boil it to two pints and strain.

Decoctum hordei compositum. London. — Com- pound decoction of barley.

Take of decoction of barley two pints, figs sliced two ounces, liquorice root sliced and bruised half an ounce, raisins stoned two ounces, water a pint. Boil to two pints, and strain. Medical properties. — Demulcent: ad libitum. Decoctum lichinis. London (Islandici, Edin- burgh).— Decoction of liverwort.

Take of liverwort one ounce, water a pint and a half (two pounds Edinburgh). Boil to a pint, and strain.

Medical properties. — Demulcent and tonic. Dose from f. Jij. to f. Jiij.

Decoctum malva: compositum. London. — Com- pound decoction of mallows.

Take of mallows dried an ounce, chamomile- flowers dried half an ounce, water a pint. Boil during a quarter of an hour, and strain.

Medical properties. — Demulcent. Used for fomentations and enemas.

Decoctum papaveris. London. — Decoction of

poppy- Take of the white poppy capsules bruised four ounces, water four pints. Boil for a quarter of an hour, and strain.

Medical properties. — Anodyne. Used for fo- mentations.

Decoctum quercus. London (roboris, Edin- burgh).— Decoction of oak bark.

Take of oak bark one ounce, water two pints (two pounds and a half Edinburgh). Boil to a pint, and strain.

1 Tliis decoction is precipitated by solutions of isinglass, infusion of yellow cinchona bark, the carbonates of the alkalies, the aromatic spirit of ammonia, lime-water, and solutions of sulphate of iron, acetate of lead, oxymuriate of mercury, and sulphate of zinc, which

are therefore incom- patible in formulae with it.'

Medical properties. — Astringent and tonic. It is useful as a gargle in cases of relaxed tonsils or uvula, and as a wash in procidentia ani et uteri.

Decoctum sarsaparilla . London. — Decoction of sarsaparilla.

Take of sarsaparilla root sliced four ounces, boiling water four pints. Macerate during four hours in a vessel lightly covered and placed near the fire; then take the sarsaparilla out and bruise it. Return it to the liquor and macerate in the same way for two more hours ; then boil it down to two pints, and strain.

Decoctum smilaris sarsaparilla. Edinburgh. — Decoction of sarsaparilla.

Take of sarsaparilla sliced six ounces, water eight pounds. Digest during two hours in a temperature of about 195° ; then take the root out and bruise it ; in this state return it to the liquor, and boil down to two pounds, over a gentle fire ; then express and strain.

'These bruisings and macerations,' Dr. Thom- son tells us, 'are rather worse than superfluous. The entire root, merely bruised and macerated in water at 180° of Fahrenheit, will yield up all its medicinal properties. It affords precipitates with lime-water, solution of muriate of barytes and of acetate of lead, which are therefore in- compatible in formulae with it.'

Decoctum sarsaparillce compositum. London. — Compound decoction of sarsaparilla.

Take of sarsaparilla decoction boiling four pints ; sassafras root sliced, guaiacum root rasp- ed, liquorice root bruised, of each an ounce; bark of mezereon root three drachms. Boil for a quarter of an hour ; then strain.

Medical properties — Sarsaparilla decoction is employed as an alterative and an adjunct to mercury. The compound decoction is likewise used for the same purpose, as well as for several cutaneous disorders and rheumatic affections. Dose f. JIT.

Decoctum senega. London. — Decoctum poly- gala senega. Edinburgh. — Decoction of seneka. Take of seneka root an ounce, water two pints

Boil to a pint, and strain. Dose f. Jift. to f. Jiij. Sen MATERIA MEDICA,

Decoctum veratri. London. — Decoction of white hellebore.

Take of white hellebore root bruised one ounce, water two pints, rectified spirit two fluid ounces. Boil the root with the water down to a pint, and strain ; then, when the decoction is cold, let the spirit be added.

Medical proper-ties.— Principally employed as a lotion in cutaneous eruptions.

EXTRACTA. — Extracts.

These are preparations obtained by evaporating solutions of vegetable matter to the consistence of a firm mass. The London college gives the following directions respecting them : —

‘In preparing all kinds of extracts evaporate the fluid as quickly as possible in a broad shal- low dish, placed in a water-bath, until the ex- tract acquire a consistence proper for forming pills, and towards the end of the operation stir assiduously with a spatula.

‘Sprinkle a small quantity of rectified spirit upon all the softer extracts.’

Extractum aconiti. London. — Extract of aco- nite or wolfsbane.

Take of the fresh leaves of aconite a pound. Bruise them in a stone mortar, sprinkling over them a little water; then express the juice, and without any depuration, let the water be evapo- rated so that a mass is left of proper consistence.

Succus spissutus aconiti napelli. Edinburgh. — Inspissated juice of aconite.

Let the fresh leaves of aconite be bruised, and enclosed in a hempen bag ; press them strongly until they yield their juice which is to be evapo- rated in flat vessels, heated with boiling water, saturated with common salt, and immediately re- duced to the consistence of thick honey.

Medical properties. — See MATERIA MEDICA. Dose half a grain gradually increased to grs. iv. or grs. v.

Extractum aloes purificatum. London. — Ex- tract of aloes.

Take of extract of spiked aloes powdered a pound, boiling water a gallon. Macerate for three days in a gentle heat ; then strain the solution and set it aside for the dregs to subside. Pour off the clear liquor and evaporate to a due consistence.

An unnecessary preparation. Dose from gr. x. to gr. xv.

Extractum anthemidis. London. — Extractum unthemidis nobitis. Edinburgh. — Extract of cha- momile.

Take of chamomile flowers dried a pound, water a gallon. Boil down to four pints and strain the liquor while it is hot; then evaporate to a due consistence.

The aroma and volatile oil are dissipated, and very little more than a simple bitter left by this process. Dose 9ft. to 9j.

Extractum belladonn

Take of fresh leaves of belladonna a pound. Bruise them in a stone mortar, sprinkling over them a little water; then express the juice, and

without any separation of the sediment let it be evaporated to a due consistence.

Medical properties. — Antispasmodic and se- dative. Dose from gr. i. very gradually increas- ed to grs. v. It requires great caution in its administration. As a remedy for hooping cough in conjunction with soda Dr. Thomson speaks highly cf it.

Extractum cinchona. London. — Extract of cin- chona bark.

Take of lanced-leaved cinchona bark bruised a pound, water a gallon. Boil to six pints and strain the liquor while it is warm. Boil it down again in the same manner for four times in suc- cession in an equal quantity of water, and strain. Lastly, mix the solutions together, and evaporate the mixture to a due consistence.

This extract ought to be kept in a soft state proper for making pills, and in a hard state for reduction to powder. Dose from 9ft to 3ft.

Extractum cinchona resinosum. London. — Re- sinous extract of bark.

Take of lanced-leaved cinchona bark bruised a pound, rectified spirits four pints. Macerate during four days, and strain. Let the tincture be

distilled in a water-bath until the extract have acquired a proper consistence.

Extractum cinchona lancifolitz. Edinburgh. — Extract of officinal cinchona bark.

Take of lance-leaved cinchona bark in pow- der one pound, alcohol four pounds. Digest for four days, and pour off the tincture. Boil the residue in five pounds of distilled water for fif- teen minutes, and strain the decoction while it is hot through a linen cloth. Repeat this boiling with an equal quantity of distilled water, strain again, and evaporate the liquor to the consistence of thin honey. Distil the alcohol from the tinc- ture until it be reduced to a similar consistence. Then mix the inspissated liquors, and evaporate them to a proper consistence in a bath of boiling water, saturated with muriate of soda.

These are preferable preparations to the wa- tery extracts, as the active principles of the baric are better taken up by the separate action of the water and spirits than by water alone. Dose from 9ft. to 3ft.

Extractum colocynthidis. London. — Extract of colocynth.

Take of the pulp of colocynth a pound, water a gallon. Boil down to four pints and strain the liquor while it is hot; then evaporate to a pro- per consistence.

Medical properties. — A mild purgative. Dose from 9ft. to 3ft.

Extractum colocynthidis compositum. London. — Compound extract of colocynth.

Take of colocynth pulp sliced six ounces, ex- tract of the spiked aloe powdered twelve ounces, scammony powdered four oxinces, cardamom seeds powdered one ounce, hard soap three ounces, proof spirit one gallon. Let the colo- cynth pulp be macerated in the spirit, with a gentle heat for four days. Strain the liquor, and add the scammony, the aloes, and the soap ; then evaporate it to a due consistence, and towards the end of the inspissation mix in the cardamom seeds.

Medical properties. — Combined with calomel

an excellent purgative. Dose from 3ft. to 5ft.

Extraction conii. London. — Succus spissatus coniimaculati. Edinburgh, — Extract of hemlock.

Take of fresh hemlock a pound. Bruise it in a stone mortar, sprinkling a little water over it ; then express the juice, and without separating the sediment evaporate to a proper consistence.

Medical properties. — The same as the powder. See MATERJA MEDICA. Dose gr. ii. gradually increased to 3j.

Extractum elaterii. London. — Extract of ela- terium.

Slice ripe cucumbers, express the juice very gently, and pass it through a very fine hair sieve into a glass vessel ; then put it aside for some hours unfil the thicker part has subsided ; reject the thinner supernatant part, and let the thicker part be dried with a gentle heat.

This process gives the fsecula of the plant, combined with elaterium, which, according to the experiments of Dr. Clutterbuck, is only contained in the proportion of six grains to forty of the plant, so that the pure elaterium would be very much stronger than this improperly called extract of elaterium.

Medical properties. — A most powerful and useful hydragogue. Dose from a quarter of a grain to gr. ij.

Extractum gentians. London. — Extract of gentian.

Take of gentian root sliced a pound, boiling water a gallon. Macerate during twenty-four hours; then boil down to four pints; let the li- quor be strained while it is hot, and evaporated to a proper consistence.

Extractum gentians lutete. Edinburgh. — Ex- tract of gentian.

Take of gentian root any quantity. Having sliced and bruised it, pour eight times its weight of boiling water upon it. Boil down to one-half, express the liquor strongly, and strain it. Eva- porate the decoction immediately to the consist- ence of thick honey in a bath of boiling water, saturated with common salt. Dose from 3ft. to 3ft.

Extractum glycyrrhizte. London. — Extract of liquorice.

Take of liquorice root sliced a pound, boiling water a gallon. Macerate for twenty-four hours ; then boil crown to four pints ; let the hot

solution be strained, and then evaporate to a due consist- ence.

What is called the refined liquorice of the shops is the impure extract of commerce dissolv- ed and strained.

Extractum hamatoxyli. London. — Extractum fitematoxyli campechiana. Edinburgh. — Extract of logwood.

Take of logwood rasped a pound, boiling wa- ter a gallon. Macerate for twenty-four hours ; then boil to four pints, strain the hot liquor and then evaporate to a proper consistence. Dose from 3ft. to 3ft.

Extractum radicis hellebori nigri. Edinburgh. — Extract of black hellebore root.

Prepare in the same manner as the extract of gentian.

Extractum humuli. London. — Extract of hop.

Take of the strobiles of hop four ounces, water

a gallon. Boil to four pints, strain the hot li- quor, and evaporate to a due consistence. Dose from 3ft. to 3j.

Extractum hyoscyami. London. — Succus spis- salus hyoscyami nigri. Edinburgh. — Extract of henbane.

Take of fresh leaves of henbane a pound. Bruise them in a stone mortar, sprinkling a little water on them ; then press out the juice, and without separating the sediment evaporate to a due consistence.

Medical properties. — A substitute for opium when it is desirable to avoid costiveness. Dose from gr. ij. gradually increased to 9j.

Extractum jalaps. London. — Extract of jalap.

Take of jalap root powdered a pound, rectified spirit four pints, water one gallon. Macerate the root in the spirit for four days, and decant the tincture. Boil the residue in the water to two pints. Then strain the tincture and decoc- tion separately ; distil the former and evaporate the latter until both begin to thicken. Lastly, mix the extract with the resin, and evaporate the liquor to a due consistence.

This extract should be preserved in a soft state fit for forming pills, and in a hard state so that it may be reduced to powder.

Extractum convolvula jalapte. Edinburgh. — Extract of jalap.

This is ordered to be prepared in the same manner as the extract of cinchona. Dose from 3ft, to 3ft.

Extractum lactucee. London. — Extract of let- tuce.

Take of fresh lettuce leaves one pound. Bruise them in a stone mortar, sprinkling over them a little water; then express the juice and evaporate it unstrained, until it acquire a due consistence.

Succus spissatus lactuca sativte. Edinburgh. — Inspissated juice of garden lettuce.

Succus spissatus lactuca virosa. Edinourgh. — Inspissated juice of the wild lettuce.

To be prepared as other inspissated juices.

Medical properties. — Substitutes for opium. Dose gr. vj. increased.

Extractum opii. London. — Extract of opium.

Take of opium sliced sixteen ounces, water one gallon. Pour upon the opium a small quan- tity of the water and macerate for twelve hours that it may become soft; then, gradually adding the remaining water, rub them together until they be well mixed, and set the mixture apart for the faeculencies to subside. Lastly, strain the liquor and evaporate to a due consistence. This wa- tery solution contains less of the resinous than the gummy part of the drug, and also ‘contains more of morphia on which depends the remedial quality of opium.’

Its incompatibles are ‘ solutions of astringent vegetables, the alkaline carbonates, corrosive muriate of mercury, sulphate of copper, sulphate of zinc, acetate of lead, and nitrate of silver.’

Medical properties. — It is said to possess the virtues without the deranging influence of opium. Dose from gr. i. to gr. v.

Extractum papaveris. London. — Extractum papaveris somniferi. Edinburgh. — Extract of pop pies.

Take of the capsules o i the poppy, freed from the seeds and bruised, a pound ; boiling water a gallon. Macerate during twenty-four hours, then boil to four pints ; strain the liquor while hot, and let it be

evaporated to a proper consistence.

Medical properties. — !

Extractum rhaci. London. — Extract of rhu- barb.

Take of powdered rhubarb root a pound, proof spirit a pint, water seven pints. Mace- rate in a gentle heat during four days ; then strain the solution, and set it apart for the sub- siding of the faeculencies. Pour off the clear liquor, and evaporate it to a due consistence. An objectionable preparation. Dose grs. x. to 3ft.

Extractum rutte graveolentis. Edinburgh. — Extract of rue.

To be prepared in the same manner as the gentian extract.

Medical properties. — Very little more than a mere bitter. Dose from grs. xv. to 3ft.

Succus spissatus sambuci nigrte. Edinburgh. — The inspissated juice of the black elder.

Take of the ripe berries of the black elder five parts; purified sugar one part. Boil with a gentle heat to the consistence of thick honey. An apparently useless preparation.

Extractum sarsaparillce. London. — Extract of sarsaparilla.

Take of sliced sarsaparilla root a pound ; boiling water a gallon. Macerate during twenty- four hours ; then boil down to four pints ; strain the solution while hot, and evaporate it to a due consistence.

‘ It appears from .Mr, Pope’s experiments that by submitting the root, cut transversely, to the action of steam or distilled water, at a tempera- ture somewhat below boiling, an elegant soluble extract may be obtained, containing all the vir- tues of the plant, not liable to decomposition, and applicable to the various purposes of extem- poraneous prescription ; whilst by the method ordered in the above formula of the college an insoluble inefficacious extract only is obtained ‘ — Thomson. Dose from 9ft. to 3j.

Extractum stramonii. London. — Extract of thorn-apple.

Take of the seeds of thorn apple one pound, boiling water one gallon. Macerate during four hours in a covered vessel near the fire, then take out the seeds, bruise them in a stone mor- tar, and put them again into

the liquor. Lastly, evaporate until the mass become of a due consistence.

Medical properties. — Narcotic, and antispas- modic. Dose from gr. ft. to grs. ij. Particu- larly applicable to spasmodic asthma.

Extractum taraxaci. London. — Extract of dandelion.

Take of fresh dandelion root bruised a pound, boiling water a gallon. Macerate during twenty-four hours ; then boil down to four pints, strain the liquor while hot, and evaporate it to a due consistence.

Medical, properties. — Deobstruent. Useful in chronic obstructions of the liver. Dose from 9ft. to3i.

MISTURJE. — Mixtures.

These, in the London college,? include what used to be called emulsions. They are to be formed extemporaneously.

Misturaammoniuci. London. — Mixture of am- moniacum.

Take of ammoniacum two drachms ; water half a pint. Triturate the ammonia gradually, adding the water until a union be thoroughly formed.

This preparation ‘ is coagulated by distilled vinegar, the oxymels, ether, spirit of nitric ether, supertartrate of potassa, and oxymuriate of mer- cury ; which are, therefore, incompatible in prescription with mixture of ammoniacum.’

Medical properties. — Expectorant. Dose from f. ˆft. to f. 3j.

Mistura amygdalarum. London. — Almond mixture.

Take of almond confection two ounces, dis- tilled water a pint. Add the water gradually to the almond confection during trituration, and then strain.

Emulsio amygdala communis. Edinburgh. — Almond emulsion.

Take of sweet almonds an ounce ; refined sugar half an ounce ; water two pounds and a, half. Let the blanched almonds be beaten dili- gently in a stone mortar, and the water added gradually ; then strain.

Emulsio acacia: arabicte. Edinburgh. — Emul- sion of gum arabic.

Take of mucilage of gum arabic two ounces, almonds one ounce, refined sugar half an ounce, water two pounds and a half. Blanch the al- monds, and then let them be beaten in a stone mortar with the sugar and the mucilage, gradu- ally adding the water. Then strain through linen.

‘ These emulsions are decomposed by acids, oxymel and syrup of squills, spirits and tinctures (unless these be in small quantities), tartrate and supertartrate of potassa, supersulphate of po- tassa, nitrate of potassa, oxymuriate of mercury, acetate of lead, and spirit of nitric ether, which are therefore incompatible in prescriptions with almond emulsions.’

Medical properties. — Demulcent and diluent. Dose f. Jij.

Mistura assaj’&tida. — Mixture of assafsetida.

Take of assafaetida two drachms, water half a pint. Triturate the assafa3tida, adding gradually the water to it until a thorough union be formed.

Medical properties. — Antispasmodic. Used principally in enemas. Dose when taken into the stomach from f. 3ft. to f. 3

Mistura campliora. London. — Mixture of camphor.

Take of camphor half a drachm, rectified spirits ten minims ; water a pint. Rub the camphor with the spirit first, then gradually add the water ; strain. Dose from f. 3ft- to 3y-

Emulsio camphora. Edinburgh. — Camphor emulsion.

Take of camphor a scruple : sweet almonds blanched, refined sugar, of each half an ounce ; water a pint and a half. To be made in the same manner as the common almond emulsion.

A more powerful, and therefore better pre- paration than that of the London college. Dose from f. Jft. to f. 3ij-

Mistura cornu usti. London. — Mixture of 1/uint hartshorn.

Take of burnt hartshorn two ounces ; acacia gum, in powder, one ounce; water three pints. Boil down to two pints, continually stirring,

and strain. A useless preparation.

Mistura crette. London. — Mixture of chalk.

Take of prepared chalk half an ounce ; re- fined sugar three drachms ; acacia gum, in powder, half an ounce ; water a pint. Mix by triturating.

Potto carbonatis calcis. Edinburgh. — Chalk potion.

Take of prepared carbonate of lime (chalk) one ounce, refined sugar half an ounce, muci- lage of gum arabic two ounces. Rub them to- gether, gradually adding of water two pounds and a half, spirit of cinnamon two ounces. Mix.

Medical properties. — Antacid, and astringent. Dose from f. Jj. to f. Jij.

‘ ‘Mistura ferri composita. London. — Compound mixture of iron.

Take of myrrh, powdered, a drachm; sub- carbonate of potassa twenty-five grains ; rose- water seven fluid ounces and a half; sulphate of iron, in powder, a scruple; spirit of nutmeg half a fluid ounce; refined sugar a drachm. Rub the myrrh, the subcarbonate of potassa, and the sugar together; and, during trituration, add first the rose-water and the spirit of nutmeg, and afterwards the sulphate of iron. Put the mixture immediately into a proper glass vessel, and keep it closely stopped.

In this preparation a sulphate of potassa is formed, and a subcarbonate of iron, the last of which is not dissolved, but merely diffused and suspended.

Medical properties. — Tonic and deobstruent. Dose from f. 3″ ft to f. ˆij.

Mistura guaiaci. London. — Mixture of guai- acum.

Take of guaiacum a drachm and a half, refined sugar two drachms, mucilage of gum acacia two fluid drachms, cinnamon water eight fluid ounces. Rub the guaiacum with the sugar, then with the mucilage, and while triturating gradual- ly add the cinnamon water. Dose from 3ft tof.Sij.

Mistura moschi. London. — Mixture of musk.

Take of musk, acacia gum in powder, refined sugar, of each a drachm ; rose water six fluid ounces. Rub the musk first with the sugar, then with the gum, and gradually add the rose water. Medical properties. — Antispasmodic, and sti- mulant. Dose from f. ˆft. to f. ˆij.

SPJRITUS. — Spirits.

Alcohol. London. See CHEMISTRY.

Spiritus ammonia. London. — Spirit of am- monia.

Take of rectified spirit three pints, muriate of ammonia four ounces, subcarbonate of potassa six ounces. Mix them, and distil with a gentle heat a pint and a half of spirit of ammonia into a receiver which is kept cold.

Alcohol ammoniatum. Edinburgh. — Ammoni- ated alcohol.

Take of alcohol thirty-two ounces, lime re- cently burnt twelve ounces, muriate of ammonia eight ounces, water six ounces. From these am-

moniated alcohol is to be prepared precisely in the same manner as water of ammonia.

The decompositions in the above processes are sufficiently obvious.

Spiritus ammonia aromaticus. London. — Aro- matic spirit of ammonia.

Take of bark of cinnamon bruised, cloves bruised, of each two drachms, lemon peel four ounces, subcarbonate of potassa half a pound, muriate of ammonia five ounces, rectified spirit four pints, water a gallon. Mix them, and distil over six pints.

Alcohol ammoniatum aromalicum. Edinburgh. — Aromatic ammoniated tincture.

Take of ammoniated alcohol eight ounces, volatile oil of rosemary a drachm and a half, volatile oil of lemons a drachm. Mix them so as that the oils shall be dissolved.

Medical properties. — Stimulant, and aromatic. Dose from f. 3ft to f. 3j.

Spiritus ammonite fatidus. London. — Fetid spirit of ammonia.

Take of spirit of ammonia two pints,assafaetida two ounces. Macerate

during twelve hours; then by a gentle fire distil over one pint and a half into a cold receiver.

Tinctura assaf&tidee ammoniata. Edinburgh. — • Ammoniated tincture of assafoetida.

Take of ammoniated alcohol eight ounces, assafsetida half an ounce. Digest in a close vessel during twelve hours, then distil over eight ounces by the heat of boiling water.

Medical properties, and dose, the same as the preceding.

Spirits ammonite succinatus. London. Suc- cinated spirit of ammonia.

Take of mastich three drachms, alcohol nine fluid ounces, oil of lavender fourteen minims, oil of amber four minims, solution of ammonia ten fluid ounces. Macerate the mastich in the alcohol so as to dissolve it, and pour off the clear tincture; then add the other ingredients, and mix them by agitation.

Medical properties. — Stimulant and antispas- modic. Dose from m*. to *• 3ft- It nas been successfully used as an antidote to the bite of the rattle snake.

Spiritus anisi. London. — Spirit of aniseed.

Take of bruised aniseeds half a pound, proof spirit a gallon, water sufficient to prevent empy- reuma. Distil one gallon.

Medical properties. — Carminative. Dose from f. 3j. to f. 3ft.

Spiritus armoracitecompositus. London. — Com- pound spirit of horse radish.

Take of fresh horse radish sliced, orange peel dried, of each a pound ; nutmegs bruised half an ounce ; proof spirit a gallon ; water sufficient to prevent empyreuma. Macerate during twenty-four hours, and distil over a gallon by a gentle heat.

Medical properties. — Principally employed in dropsies. Dose f. 3j. to f. Jft.

Spiritus camphora. London. — Spirit of cam- phor.

Take of camphor four ounces, rectified spirit two pints. Mix so as to dissolve the camphor.

Tincture camphora. Edinburgh. — Tincture of camphor.

Take of camphor one ounce, alcohol a pound. Mix so as to dissolve the camphor. It may be made with double or treble the quantity of camphor.

Medical properties. — Only fit for external use.

Spiritus carui. London. — Spirit of carraway.

Take of carraway seeds bruised a pound and a half, proof spirit a gallon, water sufficient to pre- vent empyreuma. Macerate during twenty- four hours; then distil over a gallon by a gentle fire.

Spiritus cari carui. Edinburgh. — Spirit of car- raway.

Take of carraway seeds bruised half a pound, proof spirit nine pounds. Macerate in a close vessel during two days'; then add water sufficient to prevent empyreuma, and distil over nine pounds.

Medicalproperties. — Carminative. Dose from f. 3j. tof. 3ij.

Spiritus cinnamomi. London. — Spirit of cinna- mon.

Take of oil of cinnamon by weight five scru- ples, rectified spirit four pints and a half. Add the spirit to the oil with the addition of so much water as will be sufficient to prevent empyreuma; then distil a gallon over by a slow fire.

Spiritus zauri cinnamomi. Edinburgh. — Spirit of cinnamon.

To be prepared in the same manner as the spirit of carraway : using a pound of cinnamon bark.

Medical properties, — Cardiac. Dose f. 3j. to 3ij.

Spv-itut colchici ammoniatus. London. — Am- moniated spirit of colchicum.

Take of colchicum seeds bruised two ounces, aromatic spirit of ammonia a pint. Macerate for fourteen days, and strain.

Medicalproperties. — Dr. Williams of Ipswich suggested the use of the

seeds of colchicum as containing the virtues without the deleterious qualities of the plant. Others have questioned their power. Dose of this preparation f. 3j.

Spiritus juniperi compositus. London. Edin- burgh.— Compound spirit of juniper.

Take ot' juniper berries bruised a pound, car- raway seeds bruised, fennel seeds bruised, of each an ounce and a half, proof spirit a gallon, water a sufficient quantity to prevent empyreuma. Macerate during twenty-four hours ; then distil over a gallon by a gentle heat.

Medical properties. — Diuretic. Dose f. 3j. to f. |ft.

Spiritut lavandula. London. — Spirit of laven- der.

Take of fresh [lavender flowers two pounds, rectified spirit a gallon, water sufficient to pre- vent empyreuma. Macerate during twenty-four hours ; then distil over a gallon by a gentle heat.

Spiritus lavandulte spica:. Edinburgh. — Spirit of lavender.

Take of fresh flowers of lavender two pounds, alcohol eight pounds. Distil over seven pounds •with the heat of a water-bath.

Principally employed as a perfume.

Spi~it us lav andults compositus. London. — Com • pound spirit of lavender.

Take of spirit of lavender three pints, spirit

of rosemary a pint, cinnamon bark bruised, nut- megs bruised, of each half an ounce, red saun- ders wood chipped one ounce. Macerate during fourteen days, and strain.

Edinburgh. — Take of spirit of lavender three pounds, spirit of rosemary one pound, cinchona bark bruised one ounce, nutmegs bruised two drachms, red saunders wood rasped three drachms. Macerate during seven days, and strain.

Medical properties. — Stimulant and aromatic. Dose from f. 3ft. to f. 3ij.

Spiritus mentk&piperitte. London. Edinburgh. Spirit of peppermint.

Take of dried peppermint a pound and a half, proof spirit a gallon,

water a sufficient quantity to prevent empyreuma. Macerate during twen- ty-four hours; then distil over a gallon by a gentle heat.

Medical properties. — Carminative. Dose f. 3ft. to f. 3ij.

Spiritus menthce viridis. London. — Spirit of spearmint.

Take of spearmint dried a pound and a half, proof spirit a gallon, water sufficient to prevent empyreuma. Macerate during twenty-four hours ; then by a gentle heat distil over a gallon.

Medicalproperties. — Like the last.

Spiritus myristicte. London. — Spiritus myristicee moschata. Edinburgh. — Spirit of nutmeg.

Take of nutmegs bruised two ounces, proof spirit a gallon, water sufficient to prevent empy- reuma. Macerate during twenty-four hours ; then distil a gallon by a gentle heat.

Spiritus pimenta. London. — Spirit of pimento.

Take of pimento berries bruised two ounces, proof spirit a gallon, water a sufficient quantity to prevent empyreuma. Macerate during twenty-four hours ; then by a gentle heat distil over a gallon.

Spiritus myrti pimentce. Edinburgh. Spirit of pimenta.

To be prepared with half a pound of bruised pimento berries in the same manner as the carra- way spirit.

Medical properties. — Carminative. Dose f. 3ij.

Spiritus pulegii. London. — Spirit of penny- royal.

Take of pennyroyal dried a pound and a half, proof spirit a gallon, water sufficient to prevent empyreuma. Macerate during twenty-four hours ; then, by a gentle fire, distil over a gallon.

Medical properties. — Like spearmint.

Spiritus rosmarini. London. — Spirit of rose- mary.

Take of fresh rosemary tops two pounds, proof spirit a gallon, water sufficient to prevent empyreuma. Macerate during twenty-four hours ; then distil a gallon with a gentle heat.

Spiritus rorismarini officinal;:. Edinburgh. — Spirit of rosemary.

Take of tresh rosemary tops two pounds, alco- hol eight pounds. Draw off by distillation in a water-bath seven pounds.

TINCTUHJE. — Tinctures.

Tinctura aloes. London. — Tincture of aloes. Take of extract of spiked aloes powdered half an ounce, extract of liquorice an ounce and

a half, water a pint, rectified spirit four fluid ounces. Macerate in a sand-bain until the ex- tracts be dissolved ; then strain.

Tinctura aloes socotorine. Edinburgh. — Tinc- ture of socotorine aloes.

Take of socotorine aloes hi powder half an ounce, extract of liquorice one ounce and a half, alcohol four ounces, water a pound. Digest during seven days with a gentle heat in a close vessel, which is to be shaken frequently (a cir- cumstance to be attended to in the preparation of tinctures generally) ; then pour off the clear tincture. Dose from f. jft. to f. ^‘ft-

Tinctura aloes atherea. Edinburgh. — Etherial tincture of aloes.

Take of socotorine aloes, myrrh, of each pow- dered an ounce and a half, English saffron cut one ounce, sulphuric ether with alcohol one pound. Digest the myrrh for four days with the ether in a closed bottle; then add the saffron, and the aloes. Again digest for four days ; and, when the dregs have subsided, let the tincture be poured off.

Medical properties. — Stimulant and stomachic. Dose f. 3ij. to f. 3iij.

Tinctura aloes composita. London. — Compound tincture of aloes.

Take of extract of spiked aloes, powdered saf- fron, of each three ounces, tincture of myrrh two pints. Macerate during fourteen days, and strain.

Tinctura aloes et myrrhs. Edinburgh. — Tinc- ture of aloes and myrrh.

Take of myrrh in powder two ounces, alco- hol a pound and a half, water half a pound. Mix the alcohol with the water; then add the myrrh. Digest during four days ; and lastly add of soco- torine aloes in

powder one ounce and a half, English saffron cut in pieces one ounce. Digest again during three days, and pour off the clear tincture. Dose from f. 3j. to f. 3iij.

Tinctura assuftztidce. London. — Tincture of assafaetida.

Take of assafaetida four ounces, rectified spirit of wine two pints, water eight fluid ounces. Add the spirit to the assafaetida previously triturated with water; then digest during seven days, and strain.

Tincturaass(ifatid(£. Edinburgh. — Tincture of assafaetida.

Take of assafaetida four ounces, alcohol two pounds and a half. Digest during seven days, and filter through paper. Dose from f. 3j. to f. 3iij.

Tinctwra aurantii. London. — Tincture of orang« peel.

Take of fresh orange peel three ounces, proof spirit two pints. Macerate during fourteen days, and filter. Dose from f. 5j. to f. 3ij.

Tinctura benzoini composita. London. — Com- pound tincture of benzoin.

Take of benzoin three ounces, storax balsam strained two ounces, tolu balsam one ounce, ex- tract of spiked aloes half an ounce, rectified spirit two pints. Macerate during fourteen days, and filter.

Tinctura benzoini composita. Edinburgh. — Compound tincture of benzoin.

Take of benzoin in powder three ounces,

balsam of Peru two ounces, hepatic aloes powder- ed half an ounce, alcohol two pounds. Digest during seven days, and filter through paper.

Medical properties. — Expectorant. Dose fron. f. 3j. to f. 3ij.

Tinctura bonplandiee trifoliata. Edinburgh.

Tincture of bonplandia, or augustina.

Take of the bark of trifoliate bonplandia bruis- ed two ounces, proof spirit two pounds and a half. Digest during seven days, arid filter through paper. Dose f. 3j. to f. 3ij.

Tinctura calumba. London. — Tincture of ca- lumba.

Take of sliced calumba root two ounces and a half, proof spirit two pints. Macerate during fourteen days, and filter.

Tinctura colombte. Edinburgh. — Tincture of calumba.

Take of columba root in powder two ounces, proof spirit two pounds. Digest during seven days, and filter through paper. Dose f. 3j. to f. 3ft.

Tinctura camphors composita. London. — Com- pound tincture of camphor.

Take of camphor two scruples ; hard opium powdered, acid of benzoin, of each one drachm ; proof spirit two pints. Macerate during fourteen days, and filter.

Tinctura opii camphorata sive elixir paregori- cum Anglorum. Edinburgh. — Camphorated tinc- ture of opium or paregoric elixir.

Take of camphor two scruples; hard purified opium powdered, benzoic acid, of each a drachm ; proof spirit two pints. Digest during seven days, and filter.

Medical properties. — Anodyne and expecto- rant, after inflammatory symptoms have some- what subsided. Dose from f. 3ft. to f. 3ij.

Tinctura cantharidis. London. — Tincture of blistering fly.

Take of blistering flies bruised three drachms, proof spirit two pints. Macerate during fourteen days, and filter.

Tinctura cantharidis vesicatoria. Edinburgh. — Tincture of blistering-fly

Take of blistering-flies bruised a drachm, proof spirit a pound. Digest for seven days, and filter through paper.

Medical proper ties. — Stimulant : useful in gleets and leucorrhoea. Dose from tt|x. to f. 3j.

Tinctura capsici. London. — Tincture of capsi- cum.

Take of capsicum berries one ounce, proof spirit two pints. Macerate during fourteen days, and filter.

Medical properties. — Stimulant. Dose from Tfyxij.to f. 3ft : f.3ij. to a pint of water for a gargle.

Tinctura cardamomi. London. — Tincture of cardamoms.

Take of cardamom seeds husked and bruised three ounces, proof spirit two pints. Macerate during fourteen days, and filter.

Tinctura amomi repentis. Edinburgh. — Tinc- ture of cardamoms.

Take of lesser cardamom seeds bruised four ounces, proof spirit two pounds and a half. Digest during seven days, and filter through paper.

Tinctura cardamomi composita. London.—— Compound tincture of cardamoms.

Take of cardamom seeds, carraway seeds, co- chineal, of each powdered two drachms, cinna- mon bark bruised half an ounce, raisins stoned four ounces, proof spirit two pints. Macerate during fourteen days, and filter.

Medical properties. — Cordial. Dose f. 3ij.

Tinctura cascarilla;. London. — Tincture of cascarilla.

Take of cascarilia bark powdered four ounces, proof spirit two pints. Macerate during fourteen days, and filter.

Tinctura crotonis eleutheria. Edinburgh. — Tincture of croton eleutheria or cascarilla.

Take of croton eleutheria bruised four ounces, proof spirit two pounds and a half. Digest dur- ing seven days, and filter through paper. Scarce- ly at all used.

Tinctura castorei. London. — Tincture of cas- tor.

Take of castor powdered two ounces, rectified spirit two pints. Macerate during seven days, and filter.

Edinburgh. — Take of castor powdered an ounce and a half, alcohol a pound. Macerate during seven days, and filter through paper.

Tinctura castorei composita. Edinburgh. — Compound tincture of castor.

Take of Russian castor in powder one ounce, assafcetida half an ounce, ammoniated alcohol one pound. Digest during seven days, and filter through paper.

Medical properties. — These tinctures are given in drachm and two drachm doses, in hysteria and spasmodic flatulencies.

Tinctura catechu. London. — Tincture of ca- techu.

Take of extract of catechu three ounces, cin- namon bark bruised two ounces, proof spirit two pints. Macerate during fourteen days, and filter.

Tinctura catechu acacia. Edinburgh. — Tinc- ture of catechu.

Take of extract of catechu powdered three ounces, cinnamon bark bruised two ounces, proof spirit two pounds and a half. Digest during seven days, and filter through paper. Dose f. 3j. to f. 3iij.

Tinctura cinchona. London. — Tincture of cin- chona.

Take of lance-leaved cinchona bark powdered seven ounces, proof spirit two pints. Macerate for fourteen days, and filter.

Tinctura cinchona. Edinburgh. — Tincture of cinchona.

Take of cinchona bark powdered four ounces, proof spirit two pounds and a half. Digest dur- ing seven days, and filter through paper. Dose from f. 3ij. tof.Jft.

Tinctura cinchona ammoniata. London. — Am- rnoniated tincture of cinchona. \

Take of lance-leaved cinchona bark in pow- der four ounces, aromatic spirit of ammonia two pints. Macerate during two days, and filter. Dose f. 3ij. to f. 3iij.

Tinctura cinchona composita. London. — Com- pound tincture of cinchona.

Take of lance-leaved cinchona bark in pow- der two ounces, dried orange peel one ounce and a half, Virginian snake root bruised three drachms,

saffron a drachm, cochineal powdered two scru- ples, proof spirit twenty fluid ounces. Macerate during fourteen days, and filter.

Huxham's tincture. Dose from f. 3j. to f. 3iij.

Tinctura cinnamomi. London. — Tinctura lauri cinnamonii. Edinburgh. — Tincture of cinnamon.

Take of cinnamon bark bruised three ounces, proof spirit two pints. Macerate during fourteen days, and filter. Dose from f. 3j. to f. 3iij.

Tinctura cinnamomi composita. London. — Compound tincture of cinnamon.

Take of cinnamon bark bruised six drachms, cardamom seeds bruised three drachms, long pepper powdered, ginger root sliced, of each two drachms, proof spirit two pints. Macerate dur- ing fourteen days, and filter.

Tinctura cinnamomi composita. Edinburgh. — Compound tincture of cinnamon.

Take of cinnamon bark bruised, lesser carda- mom seeds bruised, of each one ounce ; long pep- per in powder two drachms ; proof spirit two pounds and a half. Digest during seven days, and filter through paper. Dose f. 3j. to f. Siij.

Tinctura conii maculati. Edinburgh. — Tinc- ture of hemlock.

Take of dried leaves of hemlock two ounces, cardamom seeds bruised half an ounce, proof spirit sixteen ounces. Digest during seven days, and filter through paper. Dose f. 3ft.

Tinctura croci sativi. Edinburgh. — Tincture of saffron.

Take of English saffron cut in shreds one ounce, proof spirit fifteen ounces. Digest for seven days, and filter through paper. Nearly inert. Used for its color.

Tinctura digitalis. London. — Tincture of fox- glove.

Take of foxglove leaves dried four ounces, proof spirit two pints. Macerate during four- teen days, and filter.

Tinctura digitalis purpurea. Edinburgh.— Tincture of foxglove.

Take of foxglove leaves dried one ounce, proof spirit eight ounces. Digest during seven days, and filter through paper. Dose Tt].x., gra- dually, but carefully, increased to a f. 3j.

Tinctura gallarum. Edinburgh. — Tincture of galls.

Take of galls powdered two ounces, proof spirit sixteen ounces. Macerate during seven days, then filter through paper. Dose f. 3j. to f. Siij.

Tinctura gentiana composita. London. — Com- pound tincture of gentian.

Take of gentian root cut two ounces, orange peel dried one ounce, cardamom seeds bruised half an ounce, proof spirit two pints. Macerate during fourteen days, and filter.

Tinctura gentiana, compotita. Edinburgh. — Compound tincture of gentian.

Take of yellow gentian root sliced and bruised two ounces, orange peel dried and bruised one ounce, canella alba bruised half an ounce, cochi- neal in powder half a drachm, proof spirit two pints and a half. Digest during seven days, and filter through paper. Dose f. 3ij. to Jft.

Tinctura guaiuci. London. — Tincture of guai- acum.

Take of guaiacum powdered half a pound,

proof spirit two pints. Macerate during four- teen days and filter.

Tinctura guaiaci officinalis. Edinburgh. — Tincture of guaiacum.

Take of guaiacum in powder six ounces, al- cohol two pounds and a half. Digest during seven days, and filter through paper. Dose f. 3j. to 3iij.

Tinctura guoiaci ammoniata. London. Edin- burgh.— Ammoniated tincture o? guaiacum.

Take of guaiacum in powder Tour ounces, aromatic spirit of ammonia one pint and a half. Macerate during fourteen (seven days Edin- burgh), and filter. A good preparation. Dose f. 3j. to f. 3ij.

Tinctura hcllebori nigri. London. — Tincture of black hellebore.

Take of the root of black hellebore sliced four ounces, proof spirit two

pints. Macerate during fourteen days, and filter.

Edinburgl). — Take of black hellebore root bruised two ounces, cochineal in powder fifteen grains, proof spirit fifteen ounces. Digestduring seven days; then filter through paper.

Medical properties. — Emmenagogue. Dose from f. 5ft. to 3j.

Tincturuhumuli. London. Edinburgh. — Tinc- ture of hops.

Take of hops five ounces, proof spirit two pints. Macerate during fourteen days, and strain seven day*. Let the tincture be expressed, and filtered through paper.

Medical properties. — Efficacy doubtful. Dose f. 5j. to 3ij.

Tinctura hyoscyami, London. — Tincture of henbane.

Take of the dried leaves of henbane four ounces, proof spirit two pints. Macerate during fourteen days, and filter.

Tinctura hyoscyami nigri. Edinburgh. — Tinc- ture of black henbane.

Take of the dried leaves of black henbane an ounce, proof spirit eight ounces. Digestduring seven days, and filter through paper. Substitute for opium. Dose tlˆxv. to f. 3j.

Tinctura jalaps. London. — Tincture of jalap.

Take of jalap root powdered eight ounces, proof spirit two pints. Digest during fourteen days, and filter.

Tinctura convolvuli jalapce. Edinburgh. — Tincture of jalap.

Take of jalap root in powder three ounces, proof spirit fifteen ounces. Digest during seven days, and filter through paper. Dose f. 3j. to f. 3iij.

Tinctura kino. London. — Tincture of kino.

Take of kino in powder three ounces, proof spirit two pints. Macerate during fourteen days and strain. Dose from f. 3j. to f. 3ij.

Tinctura myrrha. London. — Tincture of myrrh.

Take of myrrh bruised four ounces, rectified spirit three pints. Macerate during fourteen days, and filter.

Edinburgh. — Take of myrrh in powder three ounces, alcohol twenty ounces, water ten ounces. Digest during seven days, and filter through paper. Principally employed as a wash to the mouth in cases of spongy gums.

Tinctura opii. London. — Tincture of opium.

Take of hard opium powdered two ounces and a half, proof spirit two pints. Macerate during fourteen days, and strain.

Tinctura opii. Edinburgh. — Tincture of opium, commonly called liquid laudanum.

Take of opium two ounces, proof spirit two pounds. Macerate during twelve days, and filter through proper. Dose from tfl.vj. to f. 3j. or more.

Tinctura opii ammoniata. Edinburgh. — Olim Elixir paregoricum. Ammoniated tincture of opium.

Take of opium two drachms, Benzoic acid, saffron cut in shreds, of each three drachms; volatile oil of aniseed half a drachm; ammoniated alcohol sixteen ounces. Digest during seven days, and filter through paper. Dose from f. 5ft. to 3j.

Tinctura quassia excelsa. Edinburgh. — Tinc- ture of quassia.

Take of quassia wood rasped one ounce, proof spirit two pounds and a half. Digest during seven days, and filter through paper. Dose f. 3ij.

Tinctura rluei. London. — Tincture of rhu- barb.

Take of rhubarb root sliced two ounces, car- damom seeds bruised one ounce and a half, saffron two drachms, proof spirit two pints. Macerate during fourteen days in a gentle heat, and filter.

Tinctura rhai. Edinburgh. — Tincture of rhu- barb.

Take of rhubarb sliced three ounces, lesser cardamom seeds bruised half an ounce, proof spirit two pounds and a half. Digest during seven days, and filter through paper.

Tinctura rhcei composita. London. — Com- pound tincture of rhubarb.

Take of rhubarb root sliced two ounces, liquorice root bruised half an ounce, ginger root sliced, saffron, of each two drachms, proof spirit a pint, water twelve fluid ounces. Macerate with a gentle heat during

fourteen days, and filter.

Tinctura rhesi et aloes. Edinburgh. — Tincture of rhubarb and aloes. Formerly sacred elixir.

Take of rhubarb root sliced ten drachms, so- cotorine aloes powdered six drachms, lesser car- damom seeds bruised half an ounce, proof spirit two pounds and a half. Digest during seven days, and filter through paper.

Tinctura rhtei et gentianee. Edinburgh. — Tinc- ture of rhubarb and gentian.

Take of rhubarb root sliced two ounces, gen- tian root sliced half an ounce, proof spirit two pounds and a half. Digest during seven days, and filter through paper. Dose of the above tinc- tures, as a purgative, from f. 3ft. to Jj. ; for a sto- machic, f. 3j. to f. 3iij.

Tinctura scilla. London. Edinburgh.— Tinc- ture of squills.

Take of recent squill root four ounces (two ounces Edinburgh), proof spirit two pints (six- teen ounces Edinburgh). Macerate during four- teen days, and filter. Dose from trjxv. to ˆ 3ft.

Tinctura. sennas. London. — Tincture of senna.

Take of senna leaves three ounces, carraway seeds bruised three drachms, cardamom seeds bruised a drachm, stoned raisins four ounces, proof spirit two pints. Macerate with a gentle heat during fourteen days, and filter.

Tinctura senna composita. Edinburgh — Com- pound tincture of senna.

Take of the leaves of senna two ounces, jalap bruised one ounce, coriander seeds bruised half an ounce, proof spirit three pounds and a half. Digest during seven days, and add four ounces of refined sugar to the tincture when filtered. Dose from f. 3ij. to f. 3vj.

Tinctura serpentariee. London. — Tincture of snake root.

Take of snake root three.ounces, proof spirit two pints. Macerate during fourteen days, and filter.

Tinctura aristolochite serpentarits. Edinburgh. Tincture of snake root.

Take of snake root bruised two ounces, cochineal in powder a drachm, proof spirit two pounds and a half. Digest during seven days, and filter through paper. Dose from f. 3ft; to f. 3ij.

Tinctura toluifera balsami. Edinburgh. — Tinc- ture of tolu.

Take of balsam of tolu one ounce and a half, alcohol a pound. Digest until the balsam be dissolved, and filter through paper. Very little used.

Tinctura valerians. London. — Tincture of va- lerian.

Take of valerian root in powder four ounces, proof spirit two pints. Macerate during four- teen days, and filter. Dose f. 3j. to f. 3ij.

Tinctura valeriana ammoniata. London. — Ammoniated tincture of valerian.

Take of valerian root four ounces, aromatic spirit of ammonia two pints. Macerate during fourteen days, and filter. Dose f. 3j.

Tinctura veratri albi. Edinburgh. — Tincture of white hellebore.

Take of white hellebore root bruised eight ounces, proof spirit one pound and a half. Di- gest during seven days, and filter through paper. But little used. Dose tflv to Hlx-

Tinctura zingiberis. London. Tinctura amo- mi zingiberis. Edinburgh. — Tincture of ginger.

Take of ginger root sliced two ounces, recti- fied spirit two pints. Macerate during fourteen days (seven days Edinburgh), and filter. Dose f. 3j. to 3ij.

Preparations of ether.

JEther sulphuricus. — Sulphuric ether.

For the modes of preparing sulphuric ether, and the theory of its composition, see CHE- MISTRY.

Spiritus atheris aromaticus. London. — Aro- matic spirit of ether

Take of cinnamon bark bruised three drachms, cardamom seeds powdered a drachm and a half, long pepper powdered, ginger root

sliced, of each a drachm, spirit of sulphuric ether a pint. Macerate during fourteen days in a stopped glass bottle, and strain.

JEther sulphuricus cum alcoholi aromaticus. Edinburgh. — Aromatic sulphuric ether with al- cohol.

Take of cinnamon bark bruised, cardamom seeds bruised, each an ounce ; long pepper bruised two drachms ; sulphuric ether with alcohol two pounds and a half. Digest during ssven days, and filter through paper.

Spiritus <£theri$ nitrici. London. — Spirit of nitric ether.

Take of rectified spirit two pints, nitric acid (by weight) three ounces. Add the acid gradu ally to the spirit, and mix them, taking care that the temperature during the mixture does not exceed 120°; then distil over by a gentle heat twenty-four fluid ounces.

Spiritus atheris nitrosi. Edinburgh. — Spirit of nitrous ether.

Take of alcohol three pounds, nitrous acid one pound. Pour the alcohol into a large phial placed in a vessel filled with cold water, and gradually add the acid with frequent agitation. Let the phial be slightly corked, and placed in a cool place during seven days ; then distil the liquor by the heat of boiling water, into a re- ceiver kept cool with snow or water, so long as any spirit comes over.

Medical properties. — Refrigerant, diuretic, and antispasmodic. Dose fromf. 3ft. to f. 3j.

Spiritus tztheris sulphurici. London. — Spirit of sulphuric ether.

Take of sulphuric ether half a pint, rectified spirit a pint. Mix them.

JEAhtr sulphuricus cum alcohole. Edinburgh. — • Sulphuric ether with alcohol.

Take of sulphuric ether one part, alcohol two parts. Mix them.

Medical properties. — Stimulant, antispasmo- dic, and narcotic. Dose of the ether itself from f: 3ft. to f. 3ij., of the spirit from f. 3j. to f. 3iij.

Spiritus (etheris sulphurici compositus. London. — Compound spirit of ether.

Take of spirit of sulphuric ether a pint, ethereal oil two fluid drachms. Mix. A sub- stitute for Hoffman's anodyne. Dose from f. 3ft. to f. 3ij.

Vinum aloes. London. — Wine of aloes.

fake of extract of spiked aloes eightˆ ounces, canella bark two ounces, proof spirit, ‘distilled water, of each four pints. Rub the extract to powder with white sand previously freed from impurities ; rub also the canella bark into pow- der, and on these mixed together let the water and spirits be poured ; then digest with frequent agitation, during fourteen days, and strain.

Vinum aloes socotorinas. Edinburgh. — Wine of socotorine aloes.

Take of socotorine aloes in powder one ounct, lesser cardamom seeds bruised, ginger root bruised, of each a drachm, Spanish white wine two pounds. Digest for seven days, agitating the mixture frequently and strain. The for- mula of the London college is absurdly termed a wine.

Medical properties. — Stomachic and purga- tive. Dose from f. 3j. to f. 3iij. for the first intention, from f. Jft. to f.Jift. for the second.

Vinum colchici. London. — Wine ofcolchicum.

Take of the fresh root of colchicum bruised

two ounces, proof spirit twelve fluid ounces, distilled water twenty fluid ounces. Macerate during fourteen days, and filter. Sherry wine is a better solvent for the colchicura than spirit. (Thomson).

Medical properties. — Sedative, purgative, and antiartharitic. Dose from nˆxv. to f. 3j.: in in- creasing its dose its effects should be carefully watched.

Vinum gentiante compositum. Edinburgh. — Compound wine of gentian.

Take of gentian root half an ounce, cinchona bark one ounce, orange peel dried two drachms, canella one drachm, proof spirit four ounces, Spanish white wine two pounds and a half. Pour first the proof spirit on the root and the bark sliced and bruised, and at the end of twen- ty-four hours add the wine; then macerate dur- ing seven days, and

strain. Dose f. 3ft.

Vinum ipecacuanha. London.— Wine of ipeca- cuanha.

Take of ipecacuanha root bruised two ounces, proof spirit twelve fluid ounces, distilled water twenty fluid ounces. Macerate during fourteen days, and filter.

Edinburgh. — Take of the root of ipecacuanha bruised two ounces, Spanish white wine two pints. Digest during seven days, then filter. Dose as an emetic from f. 3ij. to f. jj. for an adult. As an expectorant, &c., ttixij. to f. 5ft.

Vinum nicotians tabaci. Edinburgh. — Wine of tobacco.

Take of tobacco leaves one part, Spanish white wine twelve parts. Macerate during seven days, and filter through paper.

Medical properties. — Diuretic and antispas- modic. Dose from n\. to f. 3ft.

Vinum opii. London. Edinburgh. — Wine of opium.

Take of extract of opium an ounce, cinnamon bark bruised, clove bruised, of each a drachm, proof spirit six fluid ounces, distilled water ten fluid ounces. Macerate during eight days (seven Edinburgh), and filter.

Medical properties. — Useful where opium in substance or mere tincture is objectionable. Dose Ttixij. to f.3ft. or 3j.

Vinum rhai. Edinburgh. — Wine of rhubarb. Take of sliced rhubarb root two ounces, canella bark bruised a drachm, proof spirit two ounces, Spanish white wine fifteen ounces. Macerate during seven days, and filter through paper. Dose, from f. gft. to f. gift.

Vinum veratri. London. — Wine of white helle- bore.

Take of white hellebore root bruised eight ounces, proof spirit a pint, distilled water a pint and a half. Macerate during fourteen days, and filler. Seldom employed. Dose nix. to f. 3ft.

ACETIC*. — Preparations with vinegar.

Acidum icetlcum aromaticum. Edinburgh. — Aromatic vinegar.

Take of rosemary tops dried, sage leaves dried, of each one ounce;

lavender flowers dried half an ounce; cloves bruised half a drachm ; dis- tilled vinegar two pounds. Macerate during seven days, and filter the expressed liquor through paper.

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Medical properties. — Chiefly employed to correct the odor of sick rooms. Dose internallx as a stimulant from f. 5ft- to f. 5j.

Acidum aceticum camplwratum. Edinburgh. — Camphorated acetic acid.

Take of acetic acid six ounces, camphor half an ounce. Rub the camphor to powder by the assistance of a small quantity of alcohol ; then dis- solve it in the acid.

Medical properties.— -Snuffed up the nostrils in faintings and languors.

Acetumcolchici. London. — Vinegar of meadow saffron (colchicura).

Take of fresh meadow saffron root sliced an ounce, distilled vinegar a pint, proof spirit ;i fluid ounce. Macerate the meadow saffron root with the vinegar in a covered glass vessel during twenty-four hours ; then express, and set the li- quor aside for the subsidence of the faeculencies. Lastly, add the spirit to the clear liquor.

Medical properties. — Diuretic, sedative, and antiarthritic. Dose from f. 3ft. to f. 5j.

Acetum scillce. London. — Vinegar of squill.

Take of fresh squill root dried a pound, dis- tilled vinegar six pints, proof spirit half a pint. Macerate the squill root in the vinegar with a gentle heat and in a covered vessel duringlwen- ty-four hours ; then express the liquor, and set it aside for the subsidence of the faeculencies. Lastly add the spirit to the clear liquor.

Acidum aceticum scilliticum. Edinburgh. — Vi- negar of squill.

Take of squill root dried one ounce, distilled vinegar fifteen ounces, alcohol one ounce and a half. Macerate the squill with the acid during seven days ; then express the liquor, and add the alcohol to it. When the faeculencies have subsided pour off the clear liquor. Dose from f. 3ft. to f. 3ij.

MELLITA. — Preparations with honey.

Mel dispumatum. London. — Clarified honey.

Melt the honey in a water-bath; then separate the scum.

Mel boracis. London. — Honey of borax.

Take of subborate ofsoda powdered a drachm, clarified honey one ounce. Mix them.

Medical properties. — Useful in apthous affec- tions of the fauces as a local detergent.

Mel rosa. London. — Rose honey.

Take of the petals of the red rose dried four ounces, boiling water three pints, clarified honey five pounds. Macerate the petals in the water during six hours, and boil it down by means of a water-bath to a proper consistence. This is chiefly employed as an adjunct to gargles.

Oxymel simplex. London. — Simple oxymel.

Take of clarified honey two pounds, distilled vinegar one pound. Boil them in a glass vessel by a gentle heat to due consistence. A cooling beverage in fevers. Dose f. 3j. or f. 3ij. dissolv- ed in water or barley water.

Oxymel scilltz. London. — Oxymel of squill.

Take of clarified honey three pounds, vinegar of squill two pints. Boil in a glass vessel over a gentle fire to a due consistence.

Medical properties. — Expectorant. Dose f. 3ft to f.3ij.

SYRUPI. — Syrups.

These with a very few exceptions might be banished from the pharmacopoeias and disused in extemporaneous prescription.

Syrupus simplex. London. — Syrup.

Take of refined sugar two pounds and a half, water a pint. Dissolve the sugar in the water by means of a water-bath ; then set it aside for twenty-four hours ; separate the scum, and if there be any faeces, pour off the clear part from them.

Syrupus simplex. Edinburgh.— Simple syrup.

Take of purified sugar fifteen parts, water eight parts. Dissolve the sugar in the water by a gentle heat, and boil it a little so as to form syrup.

Syrupus aceti. Edinburgh. — Syrup of vinegar.

Take of vinegar five parts, refined sugar seven parts. Boil so as to form syrup. Useful in mixing with barley water in febrile and inflammatory disorders.

Syrupus alttnea. London. — Syrup of marsh mallows.

Take of fresh marsh mallow root bruised half a pound, refined sugar two pounds, water four pints. Boil the water with the root down to one half, and express the liquor when it is cold ; set it aside for twenty-four hours for the subsi- dence of the faeces, then decant off the clear li- quor, and, having added the sugar to it, boil down to a due consistence.

Syrupus altheete officinalis. Edinburgh. — Syrup of marsh mallows.

Take of fresh root of marsh mallows sliced one part, water ten parts, refined sugar four parts. Boil the water with the root down to one half, and strain by strong expression. Put aside the strained liquor, and when the faeces have sub- sided add the sugar to it ; then boil so as to form a syrup. A useless preparation, only slightly demulcent.

Syrupus aurantiomm. London. — Syrup of oranges.

. Take of fresh orange peel two ounces, boiling water a pint, refined sugar three pounds. Macerate the peel in the water during twelve hours in a covered vessel; then pour the li- quor off, and add the sugar to it.

Syrupus citri aurantii. Edinburgh. — Syrup of orange.

Take of the fresh peel of Seville oranges three ounces, boiling water one pound and a half, re- fined sugar three pounds. Macerate the peel with the water in a covered vessel during twelve hours ; then add the

sugar to the strained liquor, and subject it to a gentle heat so as to form a syrup.

Syrupus colchici autumnalis. Edinburgh. — Sy- rup of meadow saffron.

Take of fresh meadow saffron root cut into thin slices one ounce, distilled vinegar sixteen ounces, refined sugar twenty-six ounces. Mace- rate the root in the acid during two days, occa- sionally shaking the vessel; then expressing gently, strain the liquor, and add the sugar to it. Lastly, boil a little so as to form syrup. Dose f. 3ft. to f. 3vj. gradually increased.

Syrupus croci. London. — Syrup of saffron.

Take of saffron one ounce, boiling water one pint, refined sugar two pounds and a half. Mace-

rate the saffron in the water during twelve hours in a slightly covered vessel ; then filter the liquor, and add to it the sugar.

Syrupus diunthi caryophylli. Edinburgh. — Syrup of the clove July flower.

Take of recent petals of the clove July flower freed from their claws one part, boiling water four parts, refined sugar seven parts. Macerate the petals in the water during twelve hours; then, to the liquor being strained add the sugar, and dissolve it with a gentle heat.

Syrupus lemonum. London. — Syrup of lemon.'

Take of strained lemon juice a pint, refined sugar two pounds. Dissolve the sugar in the juice in the manner ordered for syrup.

Syrupus citri medic

Take of lemon juice strained, after the faeces have subsided, three parts ; refined sugar five parts. Dissolve the sugar. An agreeable syrup for acidulating drinks.

Syrupus mori. London. — Syrup of mulberry.

Take of strained mulberry juice a pint, refined sugar two pounds. Let the sugar be dissolved in the juice in the manner directed for syrup.

Syrupus papaver is. London. — Syrup of poppy.

Take of the dried capsules of the poppy bruis- ed and freed from seeds fourteen ounces, prepared sugar two pounds, boiling water two gallons and a half. Macerate the capsules in the water dur- ing twelve hours ; then boil the whole in a water- bath down to one gallon, and strongly express. Boil the liquor again down to two pounds, and strain it while it is hot. Set it aside twelve hours for the subsidence of the faeces ; then boil the clear liquor down to one pint, and add the sugar in the manner directed for making syrup.

Syrupus papaveris somniferi. Edinburgh. — Sy- rup of white poppy.

Take of the capsules of the white poppy dried and freed from the seeds one part, boiling water fifteen parts, refined sugar two parts. Macerate the sliced capsules in the water during twelve hours ; then boil until a third part only of the li- quor remains, and strain the decoction by strong expression. Boil the strained liquor down to one-half, and strain it again. Lastly, having add- ed the sugar boil for a short time so as to form syrup. A useful anodyne. Dose from f. 3j. tof.Sj.

Syrupus rhaados. London. — Syrup of the red

poppy- Take of the recent petals of the red poppy a pound, boiling water a pint and two fluid ounces, refined sugar a pound and a half. To the water heated in a water-bath gradually add the petals of the red poppy, stirring them occasionally ; then, having removed the vessel, macerate during twelve hours, press out the liquor, and set it aside for the subsidence of the impurities. Lastly, add the sugar in the manner ordered for making sy- rup. A mere coloring syrup.

Syrupus rhamni. London. — Syrup of buck- thorn.

Take of the fresh juice of buckthorn berries four pints, ginger root sliced, pimento berries bruised, of each an ounce, refined sugar three pounds and a half. Set apart the juice three days for the subsidence of the faeces ; then strain.

To a pint of the cleared juice add the ginger root and pimento berries ; then macerate with a gentle heat during four hours, and strain. Boil the re- mainder of the juice down to a pint and a half; mix the liquors, and add the sugar in the manner ordered for making syrup.

Syrupusrhamni cuthartici. Edinourgh. — Syrup of buckthorn.

Take of the clarified juice of ripe buckthorn berries two parts, refined sugar one part. Boil so as to form syrup. The London formula the best. A brisk cathartic. Dose from f. 3ij. to f. Jj- : not much used excepting in veterinary practice.

Syrupus roste. London. — Syrup of the rose.

Take of the petals of the hundred-leaved rose dried seven ounces, refined sugar six pounds, boiling water four pints. Macerate the rose pe- tals in the water for twelve hours, and strain. Evaporate the strained liquor in a water-bath down to two pints and a half; then add the su- gar so as to form syrup.

Syrupus rosa centifolia. Edinburgh. — Syrup of damask roses.

Take of the fresh petals of the damask rose one part, boiling water four parts, refined sugar three parts. Macerate the petals in the water during twelve hours ; then add the sugar to the strained liquor, and boil so as to form syrup. A gentle laxative. Dose from f. 3ij. to f. Jift.

Syrupus ros& gaUicte. Edinburgh. Syrup of red roses.

Take of the petals of the red rose dried one part, boiling water nine parts, refined sugar ten parts. Macerate the petals in the water duiing twelve hours ; then boil a little and strain. Add the sugar to the strained liquor, and again boil a little so as to form a syrup. A weak astringent.

Syrupus sarsaparillte. London. Syrup of sar- saparilla.

Take of sarsaparilla root one pound, boiling water one gallon, refined sugar one pound. Macerate the root in the water during twenty-four hours, then boil down to four pints, and strain the liquor while hot ; lastly, add the sugar and eva- porate to a due consistence. A useless preparation.

Syrupus scilla maritime. Edinburgh. Syrup of squill.

Take of vinegar of squill four parts, refined sugar in powder seven parts. Dissolve the sugar by a gentle heat so as to form syrup. Dose from f. 3j. to f. 3ij.

Syrupus senna. London. — Syrup of senna.

Take of senna leaves two ounces, fennel seeds bruised one ounce, manna three ounces, refined sugar a pound, boiling water a pint. Macerate the senna leaves and the fennel seeds in the •water in a gentle heat during twelve hours; strain the liquor ; mix with it the manna and sugar, and boil down to a due consistence.

Syrupus cassia senna. Edinburgh. — Syrup of senna.

Take of senna leaves two ounces, boiling •water a pound and a half, burnt syrup eight ounces. Macerate the leaves in the water in a covered vessel during four hours and strain ; then add the syrup, and boil with a gentle heat until the whole acquire the consistence of the burnt syrup. Chiefly employed for children. Dose from 5ij. tof.

Sunipus tolutanus. London. — Syrup of tolu.

Take of balsam of tolu an ounce, boiling water a pint, refined sugar two pounds. Boil the balsam in the water during half an hour in a close vessel, frequently stirring it, and strain the liquor when cold ; then add the sugar so as to form syrup.

Syrupus toluifereE balsami. Edinburgh. — Syrup of tolu.

Take of simple syrup two pounds, tincture of balsam of tolu one ounce. To the syrup, im- mediately upon its being made and before it is quite cold, add gradually the tincture, frequently stirring.

Syrupus viola odoratts. Edinburgh. — Syrup of violet.

Take of the flowers of the odorous violet two parts, boiling water eight parts, refined sugar fifteen parts. Macerate the flowers in the water during twenty-four hours in a covered glass or glazed earthen ware vessel : then strain without expression, and add a sufficient quantity of sugar to make syrup. This syrup is principally employed as a test of acids and alkalies; but it is an agreeable laxative for young children.

Syrupus zingiberis. London. — Syrup of ginjjer.

Take of ginger roots sliced two ounces, boil- ing water a pint, refined sugar two pounds. Macerate the ginger root in the water during four hours and strain ; then add the sugar so as to form syrup.

Syrupus amomi zingiberis. Edinburgh. — Syrup of ginger.

Take of ginger root powdered six drachms, boiling water one pound,

refined sugar twenty- two ounces. Macerate the root in the watei, the vessel being covered, for twenty-four hours ; then add the sugar to the strained infusion and dissolve by a gentle heat. Carminative. Dose f. 3ij-

CONFECTION ES. — Confections.

Conserves and electuaries are included under this head in the last edition of the London Pharmacopoeia.

Confectio amygdalarum. London. — Confec- tion of almonds.

Take of sweet almonds an ounce, acacia gum in powder a drachm, refined sugar half an ounce. Macerate the almonds in water to separate the cuticle ; then beat all the ingredients together, until they be completely incorporated. Used for forming the almond mixture.

Confectio aromatica. London. — Aromatic con- fection.

Take of cinnamon bark, nutmegs, of each two ounces ; cloves one ounce; cardamom seeds half an ounce; saffron dried two ounces; pre- pared shells sixteen ounces; refined sugar in powder two pounds ; water a pint. Rub the dry substances mixed together into a very fine powder ; then gradually add the water, and mix until the whole be thoroughly incorporated.

Electuarium aromaticum. Edinburgh. — Aro- matic electuary.

Take of the aromatic powder one part, syrup of orange two parts. Mix, and beat them well together so as to make an electuary. An excel- lent form of giving cordials and aromatics. Dose from 9fi to 3ft or more.

Confectio aurantiorum. London. — Confection of oranges.

Take of the outer rind of the fresh orange separated by rasping a pound, refined sugar three pounds. Beat the rind in a stone mortar with a wooden pestle ; then add the sugar and continue the beating until they be completely incorporated.

Conserva citri aurantii. Edinburgh. — Con- serve of oranges.

Grate off the outer rind of Seville oranges, beat it into a pulp, and while beating it add gradually three times its weight of refined sugar. Stomachic. Dose 3j. to 3 ft

Confectio cassiee. London. — Confection of cas- sia.

Take of fresh cassia pulp half a pound, man- na two ounces, tamarind pulp one ounce, syrup of roses half a pound. Bruise the manna ; then dissolve it in the syrup by the heat of a water- bath, and, having mixed in the pulp, evaporate to a due consistence.

Electuarium cassias Jistulte. Edinburgh. — Elec- tuary of cassia.

Take of cassia puip four parts, tamarind pulp, manna, of each one part, syrup of damask roses our parts. Bruise the manna in a mortar, and dissolve it in the syrup by means of a gentle heat ; then add the pulps, and by a continued heat reduce the mixture to a due consistence. Gently laxative. Dose 3j. to 3vj.

Confectio opii. London. — Confection of opium.

Take of hard opium in powder six drachms, long pepper an ounce, ginger root two ounces, carraway seeds three ounces, syrup a pint. Rub the opium with the syrup made hot ; then add the remaining articles reduced to powder and mix them.

Electuarium opiatum. Edinburgh. — Olim elec- tuaruim thebaicum. — Opiate electuary, formerly thebaic electuary.

Take of aromatic powder six ounces, Virgi- nian snake root in fine powder three ounces, opium diffused in a sufficient quantity of Spa- nish white wine half an ounce, syrup of ginger a pound. Mix so as to form an electuary.

Medical proper ties. — Excellent forms of giving opium in chronic affections of the bowels, &c. Dose from gr. vj. to 9ij.

Confectio piperis nigri. London. — Confection of black pepper.

Take of black pepper, elecampane root, of each one pound ; fennel seeds three pounds ; honey, refined sugar, of each three pounds. Rub the dry ingredients together into a fine powder; then add the honey and beat the whole into a mass. A substitute for Ward's paste. Dose 3j. to 3ij.

Electuarium catechu compositum. Edinburgh. — Compound electuary

of catechu.

Take of extract of catechu four ounces, kino three ounces, cinnamon bark, nutmegs, of each one ounce, opium diffused in a sufficient quantity of Spanish white wine a drachm and a half, syrup of red roses boiled to the thickness of honey, two pounds and a quarter. Reduce the solid ingredients to powder ; then mix them with the opium and honey so as to make an electuary. Dose 3ft to 3ij.

Confectio rosa canina. London. — Confection of the dog-rose.

Take of the pulp of the dog-rose a pound, refined sugar in powder twenty ounces. Rub them together so as completely to incorporate them.

Confectio roste gallica. London. — Confection of the red rose.

Take of the unblown petals of the red rose freed from the claws a pound, refined sugar three pounds. Beat the petals in a stone mor- tar; then add the sugar, and beat again until the whole be completely incorporated.

Edinburgh. — Beat the unblown petals of the red rose to a pulp, and add, during the beating, three times their weight of refined sugar.

Confectio rut&. London. — Confection of rue.

Take of rue leaves dried, carraway seeds, laurel berries, of each an ounce and a half; saga- penum half an ounce; black pepper two drachms ; clarified honey sixteen ounces. Let the dry articles be rubbed together into a very fine pow- der; then add the honey, and mix the whole together. Used principally rubbed down with gruel in enemeta for childrens' convulsions ; one or two scruples being employed as a dose.

Confectio scammonia:. London. — Confection of scammony.

Take of scammony in powder an ounce and a half; bruised cloves, powdered ginger root, of each six drachms ; oil of carraway half a drachm ; syrup of roses a sufficient quantity. Rub the dry substances into a very fine powder; then gra- dually add the syrup, and rub them again; lastly, after adding the oil of carraway, mix the whole.

Confectio sennte. London. — Confection of senna.

Take of senna leaves eight ounces; figs a pound ; tamarind pulp, cassia

pulp, the pulp of prunes, of each half a pound; coriander seeds four ounces; liquorice root three ounces; refined sugar two pounds and a half. Powder the senna leaves with the coriander seeds, and sepa- rate ten ounces of the mixed powder by sifting. Boil the residue with the figs and liquorice root in four pints of water until it be reduced one half; then press out and strain the liquor. Eva- porate the strained liquor in a water-bath until of the whole only a pint and a half remain ; then the sugar being added make a syrup ; final- ly mix the pulps gradually with the syrup, and having added the sifted powder let the whole be mixed together.

Electuarium senna compositum. Edinburgh. — Compound electuary of senna.

Take of senna leaves eight ounces, coriander seeds four ounces, liquorice root bruised three ounces, figs, pulp of prunes, of each a pound, pulp of tamarinds half a pound, refined sugar two pounds and a half, water four pounds. Rub the senna with the coriander, and separate ten ounces of the mixed powder by sifting. Boil the residue with the figs and liquorice root in the water down to one half; then express and strain. Evaporate the strained liquor to about a pound and a half; add the sugar, and gradually the pulps ; and lastly mix in the powder.

Medical properties. — Mild and efficacious purgatives, similar to the old lenitive electuary. Dose 3ij. to ,3ft.

PULVERES. — Powders.

Pulvis aloes compositus. London. — Compound powder of aloes.

Take of extract of spiked aloes an ounce and a half, guaiacum gum resin an ounce, compound powder of cinnamon half an ounce. Let the extract of aloes and the guaiacum be powdered separately, then mix them with the compound powder of cinnamon.

Medical properties. — Warm cathartics. Dose 9ft to 9j.

Pulvis asari compositus. Edinburgh. — Com- pound powder of asarabacca.

Take of the leaves of asarabacca three parts, the leaves of majoram,

and flowers of lavender, of each one part. Let them be rubbed together into a powder.

Principally used in tooth ache, snuffed up the nostrils.

Pulvis cinnamomi compositus. London. — Com- pound powder of cinnamon.

Take of cinnamon bark two ounces, carda- mom seeds one ounce and a half, ginger root one ounce, long pepper half an ounce. Rub them together into a very fine powder.

Pulvis aromaticus. Edinburgh. — Aromatic powder.

Take of cinnamon bark, cardamom seeds, ginger root, of each equal parts. Rub them to a very fine powder, which must be preserved in a well stopped phial.

Medical properties. — Aromatic and carmina- tive. Dose 3ft to 9j.

Pulvis contrayerva compositus. London. — Compound powder of contrayerva.

Take of contrayerva root in powder five ounces, prepared shells a pound and a half. Let them be mixed.

Medical properties. — Sudorific and stimulant, not so much used as formerly. Dose 9ft to 3ft.

Pulvis cornu usti cum opio. London. — Powder of burnt hartshorn with opium.

Take of hard opium in powder a drachm, hartshorn burnt and prepared an ounce, cochi- neal powder a drachm. Let them be mixed.

Pulvis opiatus. Edinburgh. — Opiate powder.

Take of opium one part, prepared carbonate of lime nine parts. Let them be rubbed toge- ther into a fine powder. Dose of these powders gr. v. to 9j.

Pulv creta compositus. London. — Compound powder of chalk.

Take of prepared chalk half a pound, cinna- mon bark four ounces, tormentil root and acacia gum of each three ounces, long pepper half an ounce. Let them separately be rubbed into fine powder, and then the whole mixed.

Pulvis carbonatis calcis compositus. Edinburgh. — Compound powder of carbonate of lime.

Take of prepared carbonate of lime four ounces, cinnamon bark a drachm and a half, nutmeg half a drachm. Rub them together into a powder.

Medical properties. — Astringent and antacid ; the London preparation the most efficacious. Dose gr. v. to 9j.

Pulv. crete compositus cum opio. London. — Compound powder of chalk with opium.

Take of compound powder of chalk six ounces

and a half; hard opium four scruples. Let them be mixed.

Medical properties. — Anodyne as well as as- tringent. Dose from gr. xv. to 9ij.

Pulvis jalapa compositus. Edinburgh. — Com- pound powder of jalap.

Take of powder of jalap root one part, super- tartrate of potassa two parts. Let them be rubbed together into a fine powder.

Medical properties. — Deobstruent, and purga- tive. Dose 9j. to 9ij.

Pulvis ipecacuanha compositus. London. — Compound powder of ipecacuanha.

Take of ipecacuanha root powdered, hard opium in powder, of each a drachm; sulphate of potassa powdered one ounce. Mix them.

Pulvis ipecacuanha et opii. Edinburgh.— Pow- der of ipecacuanha and opium.

Take of ipecacuanha root powdered, opium, of each one part ; sulphate of potassa eight parts. Rub them together into a fine powder

Medical properties. — Sudorific. A substitute for the old Dover's powder. Dose grs. v. to 9j.

Pulvis kino compositus. London. — Compound powder of kino

Take of kino fifteen drachms, cinnamon bark half an ounce, hard opium a drachm. E.ub them separately into a very fine powder, and mix them.

Medical properties. — Astringent. Dose 9ft. to9j.

Pulvis salinus compositus. Edinburgh. — Com- pound saline powder.

Take of pure muriate of soda, sulphate of mag- nesia, of each four parts ; sulphate of potassa three parts. Dry the salts with a gentle heat ; then powder them separately, and afterwards rub them together. Let the powder be preserved in a well stopped vial.

Medical properties. — Purgative. Dose from

Sfl.tofa-

Pulvis scammonia compositus . London. — Com- pound powder of scammony.

Take of scammony, hard extract of jalap, of each two ounces; ginger root half an ounce. Rub them separately into a very fine powder, and mix them.

Pulvis scammonice compositus. Edinburgh. — Compound powder of scammony.

Take of scammony, supertartrate of potassa, of each equal parts. Let them be rubbed toge- ther to a very fine powder.

Medical properties. — Cathartic, and vermifuge. Dose of the first from grs. x. to 9j., of the second from 9ft. to 3ft.

Pulvis senna compositus. London. — Com- pound powder of senna.

Take of senna leaves, supertartrate of potassa, of each two ounces ; scammony half an ounce ; ginger root two drachms. Reduce the scammony to a very fine powder by itself, and the other in- gredients together ; then mix the whole.

Pulvis aluminis compositus. Edinburgh.— Compound powder of alum.

Take of sulphate of alum four parts, kino one part. Let them be rubbed together to a fine powder.

Medical properties. — Astringent. Dose 9ft. to be taken dry.

Pulvis tragacanthte compositus. London. — Compound powder of tragacanth.

Take of tragacanth powder, acacia gum pow- dered, starch, of each one ounce and a half; re- fined sugar three ounces. Let the starch and the sugar be rubbed together to a powder ; then add the tragacanth and the acacia gum ; and mix the whole together.

Medical properties. — Demulcent. Dose 9ij. to Sift.

PILULE. — Pills.

Pilules aloes composite. London. — Compound aloetic pills.

Take of extract of spiked aloes powdered an ounce, extract of gentian half an ounce, oil of carraway forty minims, syrup a sufficient quan- tity. Beat them together until they combine into a uniform mass.

Pilules aloetices. Edinburgh. — Aloetic pills.

Take of socotorine aloes in powder, soap, of each equal parts. Beat them with simple syrup so as to form a mass proper for making into pills.

Medical properties. — Purgative and stomachic. Dose 9ft. to 9j.

Pilul.ee aloes et assafestidee. Edinburgh. — Pills of aloes and assafaetida.

Take of socotorine aloes in powder, assafcetida soap, of each equal parts. Let them be beat into a mass with mucilage of gum arabic.

Medical properties. — Stomachic and aperient. Dose 9ft.

Pilules aloes cum myrrha. London. — Pills of aloes with myrrh.

Take of extract of spiked aloes two ounces, saffron, myrrh, of each one ounce, syrup a suffi- cient quantity. Rub the aloes and myrrh sepa- rately to powder ; and beat the whole into a mass.

Pilules aloes et myrrhee. Edinburgh. — Pills of aloes and myrrh.

Take of socotorine aloes four parts, myrrh two parts, saffron one part. Beat them into a mass with simple syrup. Deobstruent, and cathartic. Dose 9ft. to 9j.

Pilules ammoniareti cupri. Edinburgh. — Pills of ammoniaret of copper.

Take of ammoniaret of copper rubbed to fine powder sixteen grains, crumb of bread four scru- ples, water of carbonate of ammonia a sufficient quantity. Let them be beaten into a mass and formed into thirty-two equal pills.

Medical properties. — Antiepileptic. Dose one pill twice a day, gradually increased.

Pilules cambogiee composites. London. Edin- burgh.— Compound pills of gamboge.

Take of gamboge in powder a drachm, extract of spiked aloes a drachm and a half, ginger in powder half a drachm, soap two drachms. Mix the powders together ; then add the soap, and beat the whole into a mass.

Pilules colocynthidis composites. Edinburgh. — Compound colocynth pills.

Take of socotorine aloes, scammony, of each eight parts, colocynth pulp four parts, sulphate of potassa, oil of cloves, of each one part. Beat together the extract, gum resin, and sulphate, into powder, then with the colocynth pulp rubbed to fine powder. Mix them with ,the oil, and finally beat the whole into a mass with mucilage of gum.

Pilules ferri composites. London. — Pills of iron with myrrh.

Take of myrrh in powder two drachms, sub- carbonate of soda, sulphate of iron, sugar, of each a drachm. Rub the myrrh with the subcar- bonate of soda, then having added the sulphate of iron rub again, and lastly beat the whole into one mass.

Pilules galbani composita. London. — Com- pound pills of galbanum.

Take of galbanum an ounce, myrrh, sagape- num, of each an ounce and a half, assafcetida half an ounce, syrup a sufficient quantity. Beat them together into a mass.

Pilules assafestidee composites. Edinburgh. — Compound assafcetida

pills.

Take of assafcetida, galbanum, myrrh, of each eight parts, purified oil of amber one part. Beat them with simple syrup into a mass.

Medical properties. — Emmenagogue, and an- tispasmodic. Dose 9ft. to 9j.

Pilules hydrargyri. London.

Take of purified mercury two drachms, con- fection of red roses three drachms, liquorice root in powder a drachm. Rub the mercury with the confection until globules no longer are seen ; then add the liquorice root, and beat the whole into one mass.

Edinburgh. — Take of purified mercury, con- serve of the red rose, of each one ounce, starch two ounces. Rub the mercury with the conserve in a glass mortar until the globules entirely dis- appear, adding if necessary a little mucilage of gum arabic ; then add the starch, and beat the whole into a mass with a little water, which is to be immediately divided into 480 equally sized pills. It is undetermined whether, in these pre- parations, the mercury is merely divided me- chanically or whether it undergoes oxidation.

Medical properties. — Alterative, antisyphilitic, and stimulant. Dose from grs. v. to 9i. or more, accordingly as it may be desirable or not to produce the specific action of the mercury.

Pilules hydrargyri submuriatis compositee. Lon- don. Edinburgh. — Pills of submuriate of mercury.

Take of submuriate of mercury, precipitated sulphuret of antimony, of each two drachms, guaiacum gum resin rubbed down, half an ounce, rectified spirit half a drachm. Rub the submu- riate with the precipitated sulphuret of antimony, then with the guaiacum, and add a sufficient quantity of spirit (mucilage Edin.) to give them a proper consistence.

Medical properties. — A useful alterative and deobstruent. Dose grs. v. to 9i. It is the Plummer's pill of the old pharmacopoeias.

Pilules rhesi compositee. Edinburgh. — Com- pound rhubarb pills.

Take of rhubarb root in powder one ounce, socotorine aloes six drachms, myrrh half an ounce, volatile oil of peppermint half a drachm. Beat them into a mass with syrup of orange- peel.

Medical properties. — Stomachic and carmina- tive. Dose 9ft. to 9j.

Pilules saponis cum opio. London. — Pills of soap and opium.

Take of hard opium powdered half an ounce, hard soap two ounces. Beat them together till they become a mass.

Pilulte opiates. Olim pilules thebaicee. Edin- burgh.— Opiate pills, formerly thebaic pills.

Take of opium one part, extract of liquorice seven parts, pimento berries two parts. Mix separately the opium and the extract, softened with diluted alcohol, and beat them into a pulp ; then add the Jamaica pepper rubbed to powder, and let the whole be beaten into a mass. Dose of the London formula grs. v.; of the Edinburgh 9ft.

Pilule scilles composite. London. — Compound squill pills.

Take of fresh squill root dried and powdered one drachm, ginger root powdered and hard soap of each three drachms, ammoniacum pow- dered two drachms. Mix the powders together ; then beat them with the soap, adding so much syrup as will give a proper consistence.

Pilules scillitices. Edinburgh. — Squill pills.

Take of squill root dried and rubbed to a fine powder one scruple, ammoniacum, cardamom seeds powdered, extract of liquorice, one drachm. Beat them into a mass with syrup.

Medical properties. — Expectorant, and diure- tic. Dose 9ft. to grs. xv.

Pilules subcarbonatis sodes. Edinburgh. — Pills of subcarbonate of soda.

Take of exsiccated subcarbonate of soda four parts, hard soap three parts. Beat into a mass with simple syrup.

Medical properties. — Lithontriptic and diuretic. Dose grs. xv. to 3j.

Pilules sulphatisferri composites. Edinburgh. — Compound pills of sulphate of iron.

Take of sulphate of iron reduced to powder one ounce, extract of

chamomile flowers one ounce and a half, oil of peppermint a drachm. Beat, with simple syrup, into a mass. Dose grs. v.

TROCHISCI. — Troches.

The London and the -Dublin colleges have rejected these preparations.

Trochisci carbonatis calcis. Edinburgh. — Tro- ches of carbonate of lime.

Take of prepared carbonate of lime four ounces, acacia gum one ounce, nutmegs one drachm, refined sugar six ounces. Rub them into powder, and form them into a mass fit for making troches by means of water.

Medical properties. — Antacid : but their effects are in some measure counteracted by the sugar.

Trochisci carbonatis magnesiee. Edinburgh. — Troches of carbonate of magnesia.

Take of carbonate of magnesia six ounces, refined sugar three ounces, nutmegs a scruple. Beat them into a powder, and make them up into troches with tragacanth mucilage.

Medical properties. — Antacid and aperient.

Trochisci glycyrrhizas glabrte. Edinburgh. — Troches of liquorice.

Take of extract of liquorice, gum arable, of each one part, refined sugar two parts, boiling water a sufficient quantity. Dissolve and strain ; then evaporate the solution by a gentle heat to a consistence proper for making troches.

Medical properties. — Demulcent.

Trochisci glycyrrhizes cum opio. Edinburgh. — Liquorice troches with opium.

Take of opium two drachms, tincture of balsam of Tolu half an ounce, simple syrup eight ounces, extract of liquorice softened by hot water, gum arabic in powder, of each five ounces. First rub well the opium with the tincture ; then gradually add the syrup and the extract ; afterwards sprinkle in the powder of gum arabic; Lastly, the mass is to be dried and formed into troches of ten grains weight.

Medical properties. — The same as the last.

Trochisci gummosi. Edinburgh. — Gum tro- ches.

Take of gum arabic four parts, starch one part, refined sugar twelve parts. Rub the whole into powder, and with rose make it up into a mass proper for forming troches.

Trochisci nitratis potasses. Edinburgh. — Tro- ches of nitrate of potassa.

Take of nitrate of potassa one part, refined sugar three parts. Beat them into powder, and form a mass fit for making troches, by means of tragacanth mucilage.

Medical properties. — Refrigerant. Dose two or three troches.

PREPARATA EX ANIMALIBUS. — Preparations from animals.

Adeps preeparata. London. — Prepared fat.

Cut the fat into small fragments ; then melt it with a gentle heat, and press it through linen.

Sevum preepuratum. London. — Prepared suet.

Cut the suet into pieces ; then melt it with a gentle heat, and press it through linen.

Cornu ustum. London. — Burnt hartshorn.

Burn pieces of hartshorn in an open fire un- til they become thoroughly white; then powder them, and prepare them in the manner ordered for the preparation of chalk.

Medical properties. — Exceedingly question- able.

Spongia usta. London. — Burnt sponge.

Cut sponge into small pieces, and bruise it in order to free it from any adhering extraneous substances ; then burn it in a covered iron vessel till it become black and friable. Finally, let it be rubbed into a very fine powder.

Iodine and subcarbonate of soda are the active ingredients in burnt sponge.

Medical properties. — Deobstruent and tonic. Used especially in bronchocele. Dose from 3j. to 3ij. or more, mixed with honey or other

mate- rials in the way of an electuary.

Testee presparatee. London. — Prepared shells.

Wash the shells with boiling water, having first freed them from extraneous matters ; then prepare them in the manner directed for the pre- peration of chalk.

This preparation is superfluous.

EMPLASTRA. — Plasters.

Emplastrumammoniaci. London. Edinburgh. — Ammoniacum plaster.

Take of purified ammoniacum five ounces, diluted acetic acid half a pint. Dissolve the ammoniacum in the vinegar ; then evaporate the solution in an iron vessel, assiduously stirring it until it become of a due consistence.

Medical properties. Resolvent. Useful in in- dolent tumors.

Emplastrum ammoniaci cum hydrargyro. Lon- don— Ammoniacal plaster with mercury.

Take of purified ammoniacurn a pound, puri- fied mercury three ounces, sulphureted oil a fluid drachm. Rub the mercury with the sul- pliureted oil until the globules no longer appear; then gradually add the ammoniacurn previously melted, and mix the whole together.

Medical proper ties. — Resolvent and discutient. Applicable to indolent swellings.

Emplastrum assa fat idee. Edinburgh. — Assafce- tida plaster.

Take of plaster of semivitreous oxide of lead, assafoetida, of each two parts ; galbarmm, yellow wax, of each one part.

Medical properties. — Antispasmodic and stimu- lant.

Eir/ptastrum cent. London. — Wax plaster.

Take of yellow wax, prepared suet, of each three pounds ; yellow resin a pound. Let them be melted together and strained.

Emplastrum simplex. Edinburgh. — Simple plaster.

Take of yellow wax three parts ; mutton suet and white resin, of each two parts. Seldom em- ployed.

Emplaslrum cumini. London. Cumin plaster.

Take of cumin seeds, carraway seeds, laurel berries, of each three ounces ; dried pitch three pounds; yellow wax three ounces. Let the pitch and the wax be melted together; then add the dry ingredients in powder so as to form a proper consistence.

Emplastrum galbani compositum. London. — Compound galbanurn plaster.

Take of purified galbanum eight ounces, lead plaster three pounds, common turpentine ten drachms, resin of the spruced fir powdered three ounces. The galbanum and the turpentine hav- ing been mixed together, add first the resin and then the lead plaster previously melted by a slow fire, and mix the whole together.

Emplastrum gummosum. Edinburgh. — Gum plaster.

Take of plaster of semivitreons oxide of lead eight parts; ammnniacum, gum resin, galbanum, yellow wax, of each one part. Add the gum re- sin to the plaster and way while melted, and mix.

Emplastrum hydrargyri. London. — Mercurial plaster.

Take of purified mercury three ounces, sulphu- reted oil a fluid drachm, lead plaster a pound. Rub the mercury with the sulphureted oil until globules no longer appear ; then by degrees add the lead plaster, and mix the whole.

Edinburgh. — Take of olive oil, resin, of each one part ; mercury three parts ; plaster of semi- vitreous oxide of lead six parts. Rub the mer- cury with the oil and resin previously melted together and cooled until the globules disappear ; then gradually add the plaster of semivitreous oxide of lead melted, and carefully mix the %vhole together.

Medical properties. — Discutient. Especially applicable to old syphilitic affections.

Emplaslrum cantharidis. London. — Blistering plaster.

Take of blistering flies rubbed to a very fine pcwder a pound, wax plaster a pound and a

half, prepared lard a pound. Melt the plaster and the lard together ; and, having removed them from the fire just before they become solid, sprinkle in the blistering flies, and mix the whole together.

Emplitstrum cantharidis vesicatoriec. Edin- burgh.— Blistering plaster.

Take of mutton suet, wax, white resin blister- ing plaster rubbed to a very fine powder, of each equal weights. Mix the powder with the other articles previously melted together and removed from the fire ; then stir till the mixture stiffens in cooling.

Emplastrum cantharidis veiicatorite composi- tum. Edinburgh. — Compound plaster of Spanish flies.

Take of Venice turpentine eighteen parts; Bur- gundy pitch, blistering flies, of each twelve parts, yellow wax four parts ; subacetate of cop- per two parts ; white mustard seed, black pepper, of each one part. Melt the Burgundy pitch and the wax. and add the turpentine to them. While these remain warm after being melted, sprinkle in the other ingredients reduced to fine powder, and mix, constantly stirring, so as to form a plaster. More active and immediate in its operation than the common blistering plaster.

Emplastrum opii. London. Edinburgh. — Plaster of opium.

Take of hard opium powdered half an ounce, resin of the spruce fir powdered three ounces, lead plaster a pound. Melt the plaster and the resin together, then let the opium be added, and the whole mixed.

Medical properties. — Anodyne and antirheu- niatic.

Emplastrum oxidi ferri rubri. Edinburgh. — Plaster of red oxide of iron.

Take of plaster of semivitreous oxide of lead twenty-four parts, white resin six parts, yellow wax, olive oil, of each three parts, red oxide of iron eight parts. Rub the red oxide of iron with the oil, and adding the other ingredients melted, let the whole be well mixed.

Medicalproperties. — Supposed tonic.

Emplastrum picis compositum. London. — Com- pound pitch plaster.

Take of Burgundy pitch two pounds ; resin of the spruce fir a pound ; yellow resin, yellow wax, of each four ounces ; expressed oil of nutmeg an ounce ; olive oil, water, of each two fluid ounces. To the pitch, resin, and wax, melted together, first add the resin of the spruce fir, then the oil of nutmeg, the olive oil, and the water. Mix the whole and reduce it to a due consistence.

Medical properties. — Stimulant and rubefa- cient.

Emplastrum plumbi. London. — Lead plaster.

Take of semivitreous oxide of lead rubbed to a very fine powder five pounds, olive oil a gallon, water two pints. Boil them together over a slow fire, constantly stirring, until the oil and oxide unite into the consistence of a plaster. It will, however, be necessary to add a little boiling water, if that which was employed in the begin- ning shall have been consumed before the com- pletion of the process.

Emplastrum oxidi plumbi semivitrei. Edinburgh. — Plaster of semivitreous oxide of lead.

Take of the seniivitreous oxide of lead one part, olive oil two parts, water a sufficient quantity. Boil them, constantly stirring, until the oil and the oxide combine into a plaster.

Medical properties. — Principally employed for mechanical support and defence.

Emplastrum resirue. London. — Resin plaster.

Take of yellow resin half a pound, lead plaster three pounds. Melt the lead plaster with a gentle heat, then add the resin powdered and mix.

Emplastrum resinosum. Edinburgh. — Resinous plaster.

Take of plaster of semivitreous oxide of lead five parts, resin one part. Melt them with a gentle heat; then continue stirring the liquor until it become stiff in cooling.

Medical properties. — Principally adhesive.

Emplastrum saponis. London. — Soap plaster.

Take of hard soap sliced half a pound, lead plaster three pounds. Mix the soap with the melted plaster ; then boil it down to a due consistence.

Emplastrum saponaceum. Edinburgh. — Soap plaster.

Take of semivitreous oxide of lead four parts, gum plaster two parts, soap sliced one part. Mix the soap with the plasters melted together ; then boil them a little so as to form plaster.

Medical properties. — Discutient, but less effi- cacious than the mercurial plaster.

CEEATA. — Cerates.

Substances intermediate between plasters and ointments.

Ceratum simplex. London. — Cerate.

Take of olive oil four fluid ounces, yellow wax four ounces. Add the oil to the melted wax, arid mix.

Medical properties. — Emollient : used for ex- coriations.

Ceratum calamintz. London. — Calamine ce- rate.

Take of prepared calamine, yellow wax, of each half a pound, olive oil a pint. Mix the oil with the melted wax ; then let the mixture be taken from the fire, and so soon as it begins to thicken add the calamine, constantly stirring, until it be cold.

Ceratum carbonatis zinci irnpuri. Edinburgh. — Cerate of impure carbonate of zinc.

Take of simple cerate five parts, prepared impure carbonate of zinc one part. Mix.

Medical properties. — Useful for excoriations, burns, &c. They have been called Turner's ce- rate.

Ceratum cetacei. London. — Spermaceti cerate.

Take of spermaceti half an ounce, white wax two ounces, olive oil four fluid ounces. Let the spermaceti and the wax be melted together ; then add the oil and stir them until they are cold.

Ceratum simplex. Edinburgh. — Simple cerate.

Take of olive oil six parts, white wax three parts, spermaceti one part. Let the wax and the spermaceti be melted in the oil with a gentle heat; then constantly stir until the mixture stiffen in cooling.

Ceratum cantlwridis. London. — Cerate of blis- tering flies.

Take of spermaceti cerate six drachms, blister- ing flies rubbed to a very fine powder a drachm. Add the blistering flies to the cerate softened by the fire, and mix them together.

Medical properties. — Employed to keep opuu blistered surfaces.

Ceratum plumbi acetatis. London. — Cerate of acetate of lead.

Take of acetate of lead in powder two drachms, white wax two ounces, olive oil half a pint. Melt the wax in seven fluid ounces of the oil ; then add gradually the acetate, separately rubbed down with the remaining oil, and stir with a wooden spatula until the mass be thoroughly formed.

Medical properties. — Exceedingly useful for burns and excoriations.

Ceratum plumbi compositum. London. — Com- pound cerate of lead.

Take of solution of acetate of lead two fluid ounces and a half, yellow wax four ounces, olive oil nine fluid ounces, camphor half a drachm. Melt the wax and mix it with eight fluid ounces of the oil ; then let them be removed from the fire, and as soon as they begin to thicken add gradually the solution of acetate of lead, and stir assiduously with a wooden spatula until they be cold. Lastly, mix the camphor dissolved in the remainder of the oil.

Medical properties. — The same as the last. It is called Goulard's cerate.

Ceratum resinte. London. — Resin cerate.

Take of yellow resin, yellow wax, of each a pound, olive oil a pint. Melt together the resin and the wax by a slow fire ; then add the oil and strain the cerate while it is hot through a linen cloth.

Unguentum resinosum. Edinburgh. — Resinous ointment.

Take of hogs' lard eight parts, resin five parts, yellow wax two parts. Melt the whole by a gentle heat, and stir the mixture until it become stiff in cooling.

Medical properties. — Stimulant and detergent.

Ceratum sabime. London. — Cerate of savine.

Take of the fresh leaves of savine bruised a pound, yellow wax half a pound, prepared lard two pounds. Melt together the lard and the wax and boil the savine leaves in the mixture ; then strain through a linen cloth.

Medical properties. — Stimulant. It is used to keep open blisters when the cantharides are thought too stimulating.

Ceratum saponis. London. — Soap cerate.

Take of hard soap eight ounces, yellow wax ten ounces, semivitreous oxide of lead powdered a pound, olive oil a pint, vinegar a gallon. Boil the vinegar or the oxide of lead over a slow fire, gently stirring until they incorporate ; then add the soap and boil again in the same manner until the moisture be entirely evaporated ; lastly, let the wax previously melted be mixed with the oil.

Medical properties. — This is properly a cerate of acetate of lead. It is a cooling dressing to inflamed surfaces.

UNGUENTA. — Ointments. Unguentum acidi nitrosi. Edinburgh. — Oint- ment of nitrous acid.

Take of hogs' lard one pound, nitrous acid six drachms. Mix gradually the acid with the melted lard, and assiduously as it cools beat the mixture.

Medical properties. — It has been employed in ulcers of a syphilitic and herpetic kind.

Unguentum cetacei. London. — Spermaceti ointment.

Take of spermaceti six drachms, white wax two drachms, olive oil three fluid ounces. Melt them together over a gentle fire, and stir them constantly until they be cold.

Medical properties. — Healing and emollient.

Unguentum elemi comporitum. London. — Compound ointment of

elemi.

Take of elemi a pound, common turpentine ten ounces, prepared suet two pounds, olive oil two fluid ounces. Melt the elemi with the suet, then let it be taken from the fire, and immedi- ately mix in the turpentine and the oil. Lastly, strain the liquor through a linen cloth.

Medical properties. — Stimulant and digestive.

Unguentum hydrargyri fortius. London. — Strong mercurial ointment.

Take of purified mercury two pounds, pre- pared lard twenty-three ounces, prepared suet one ounce. First rub the mercury with the suet and a little of the lard until there be no appear- ance of globules, then add the remainder of the fat and mix.

Unguentum hydrargyri. Edinburgh. — Mercu- rial ointment.

Take of mercury, mutton suet, of each one part, hogs' lard three parts. Rub the mercury diligently in a mortar with a little of the hogs' lard, until there be no appearance of globules ; then. add the remainder of the lard* It may also be made with double or triple the quantity of mercury.

Unguentum hydrargyri mitius. London. — Milder mercurial ointment.

Take of the stronger mercurial ointment a pound, prepared lard two pounds. Mix them.

Medical properties. — It is used in friction for the same purposes with which mercury is given by the mouth when specific effects are required. Quantity for friction 3j. night and morning. As in the case of the pilulae hydrargyri so even here there are doubts whether the mercury is in a degree oxidised, or only mechanically divided.

Unguentum oxidi hydrargyri cinerei. Edin- burgh.— Ointment of gray oxide of mercury.

Take of gray oxide of mercury one part, hog's lard three parts. Mix. Not much employed.

Unguentum hydrargyri nitratis. London. — Ointment of nitrate of mercury.

Take of purified mercury one ounce, nitric acid eleven fluid drachms, prepared lard six ounces, olive oil four fluid ounces. First dissolve the

mercury in the acid ; then while it is hot mix the solution with the lard and oil melted toge- ther.

Unguentum nitratis hydrargyri fortius, vulgo Unguentum citrinum. Edinburgh. — Stronger ointment of nitrate of mercury.

Take of purified mercury one part, nitrous acid two parts, olive oil nine parts, hogs' lard three parts. Dissolve the mercury in the acid ; then beat up the solution strongly in a glass

mortar, with the lard and oil previously melted together and nearly cold, so as to make an oint- ment.

Unguentum nitratis hydrargyri mitius. Edin- burgh.— Milder ointment of nitrate of mercury.

It is made in the same way as the stronger with a triple portion of oil and lard.

Medical properties. — These ointments are sti- mulant and detergent. They are useful in se- veral chronic eruptions of the skin and in scro- fulous affections of the eyelids.

Unguentum galla. London. — Ointment of galls.

Take of galls in fine powder one part, lard eight parts. Mix.

Medical properties. — Useful in piles.

Unguentum hydrargyri nitrico-oxydi. London. — Ointment of nitric oxide of mercury.

Take of nitric oxide of mercury one ounce, white wax two ounces, prepared lard six ounces. Melt the wax and the lard together ; then add the nitric oxide of mercury in very fine powder, and mix.

Unguentum oxidi hydrargyri rubri. Edinburgh. — Ointment of red oxide of mercury.

Take of red oxide of mercury by nitric acid in fine powder one part, hogs' lard eight parts. Mix.

Medical properties. — Stimulant and detergent.

Unguentum hydrargyri pracipitati albi. Lon- don.— Ointment of white precipitate of mer- cury.

Take of white precipitate of mercury a drachm, prepared lard an ounce and a half. Add the precipitated mercury to the lard previously melted with a gentle heat, and mix.

Medical properties. — Useful in itch and other cutaneous affections, where sulphur is objected to.

Unguentum cantharidis. London. — Blistering ointment.

Take of blistering flies finely powdered two ounces, distilled water eight fluid ounces, resin cerate eight ounces. Boil the water with the blistering flies down to half its quantity, and strain. Mix the .cerate with the strained liquor and evaporate to a due consistence.

Unguentum infusi cantharidis vesicatoria. Edinburgh. — Ointment of infusion of blistering flies.

Take of blistering flies, resin, yellow wax, of each one part ; Venice turpentine, hogs' lard, of each two parts ; boiling water four parts. Macerate the flies in the water during one night, and strain the liquor with strong expression; add the liquor to the fat, and boil until the water be evaporated ; then add the wax and resin, and these being melted remove the liquor from the fire; add the Venice turpentine, and mix. These are injudicious preparations.

Unguentum juniperi sabinte. Edinburgh. — Ointment of savine.

Take of fresh leaves of savine two parts, yellow wax one part, lard four parts. Melt the wax and lard together, then boil the leaves in the mixture, and express through a cloth. Used for keeping blistered surfaces open.

Unguentum carbonatis plumbi. Edinburgh. — Ointment of carbonate of lead.

Take of simple ointment five parts, carbonate of lead one part. Mix.

Medical properties. — A cooling desiccative ointment.

Unguentum oxidi zinci impuri. Edinburgh. — Ointment of impure oxide of zinc.

Take of simple liniment five parts, prepared impure oxide of zinc one

part. Mix. Not at present much employed.

Unguentum picis liquids, London. — Tar oint- ment.

Take of tar, prepared suet, of each a pound. Melt them together, and strain the mixture through a linen cloth.

Edinburgh. — Take of tar five parts, yellow wax two parts. Melt the wax with a gentle heat ; then add the tar, and stir until the mixture be- come stiff in cooling.

Medical properties. — Detergent and stimulant.

Unguenlum picis nigra. London. — Ointment of black pitch.

Take of black pitch, yellow resin, of each nine ounces ; olive oil one pint. Let them be melted together and strained through black cloth.

Medical properties. — Digestive and stimulant.

Unguentum pulveris cantharidis vesicatoria. Edinburgh. — Ointment of the powder of blister- ing flies.

Take of resinous ointment seven parts, pow- dered blistering flies one part. Sprinkle the powder into the melted ointment, and stir the mixture until it stiffen in cooling.

Medical properties. — Used to keep blistered surfaces open.

Unguentum resin&nigne. London. — Black re- sin ointment.

Take of black resin, yellow wax, yellow resin, of each nine ounces ; olive oil a pint. Melt them together, and strain through a linen cloth.

Unguentum sambuci. London. — Elder oint- ment.

Take of elder flowers, prepared lard, of each two ounces. Boil the elder flowers in the lard until they become crisp; then let the ointment be strained through a linen cloth.

Merely simple ointments, and therefore useless preparations.

Unguentum simplex. Edinburgh. — Simple oint- ment.

Take of olive oil five parts, white wax two parts. Melt the wax in the oil ; then stir the mixture until it become stiff in cooling.

Unguentum subacetatis cupri. Edinburgh. — Ointment of subacetate of copper.

Take of resinous ointment fifteen parts, sub- acetate of copper one part. Sprinkle the sub- acetate into the melted ointment, and stir until the mixture become stiff in cooling.

Medical properties. — Detergent and escharotic.

Unguentum sulphuris. London. — Sulphur oint- ment.

Take of sublimed sulphur three ounces, pre- pared lard half a pound. Mix.

Edinburgh. — Take of hog's lard four parts, sublimed sulphur one part. Mix.

Medical properties. — Specific in itch.

Unguentum sulphuris compositum. London. — Compound ointment of sulphur.

Take of sublimed sulphur half a pound, white

hellebore root in powder two ounces, nitrate of potassa a drachm, soft soap half a pound, pre- pared lard a pound and a half. Mix.

Medical properties. — The same but more sti- mulant than the last.

Unguentum veratri. London. — Ointment of white hellebore.

Take of white hellebore root in powder two ounces, prepared lard eight ounces, oil of lemon twenty minims. Mix.

Medical properties. — Less certain for the cure of itch than the sulphur ointment.

Unguentum zinci. London — Zinc ointment.

Take of oxide of zinc one ounce, prepared lard six ounces. Mix.

Unguentum oiidizinci. Edinburgh. — Ointment of oxide of zinc.

Take of simple liniment six parts, oxide of zinc one part. Mix.

Medical properties. — Astringent and healing,

LINIMENTA. — Liniments.

Linimentum tzruginis. London. Liniment of verdigris.

Take of verdigris powdered an ounce, vinegja seven fluid ounces, clarified honey fourteeu ounces. Let the verdigris be dissolved in the vinegar, and the solution strained through a linen cloth ; then, having added the honey, boil the mix- ture to a due consistence.

Medical properties. Detergent and escharotic, not much used.

Linimentum ammonia fortius. London. Stronger liniment of ammonia.

Take of solution of ammonia a fluid ounce, olive oil two fluid ounces. Shake them together until a union is formed.

Oleum arnmoniatum. Edinburgh. Ammoniat- ed oil.

Take of olive oil eight parts, water of ammonia one part. Mix.

Medical properties. Rubefacient. Useful in chronic rheumatism.

Linimentum ammonia subcarbonatis. London.

Liniment of subcarbonate of ammonia.

Take of solution of subcarbonate of ammonia i fluid ounce, olive oil three fluid ounces. Shake them together so as to form a union.

Linimentum aqucz calcis, sive oleum- lini cum calce. Edinburgh. Liniment of lime water.

Take of linseed oil, lime-water, of each equal parts. Mix.

Medical properties. — Useful for burns and scalds.

Linimentum camphors. London. — Liniment of camphor.

Take of camphor half an ounce, olive oil two fluid ounces. Dissolve the camphor in the oil.

Oleum camphor atum. Edinburgh. — Camphora- ted oil.

Take of olive oil four parts, camphor one part. Mix so as to dissolve the camphor.

Medical properties. — Useful in glandular swell- ings and in chronic

rheumatism. In cases of deafness arising from hardened wax it will be often useful to put some of this oil at night into the ear by means of cotton or lint.

Linimentum camphora composition. London. — Compound liniment of camphor.

Take of camphor two ounces, solution of am- monia six fluid ounces, spirit of lavender a pint. Mix the solution with the spirit; then distil a pint with a gentle heat from a glass retort. Lastly, dissolve the camphor in this distilled li- quor.

Medical properties. — Stimulant and rubefa- cient.

Linimentum hydrargyri. London. — Liniment of mercury.

Take of the stronger mercurial ointment, pre- pared lard, of each four ounces ; camphor an ounce ; rectified spirit fifteen minims ; solution of ammonia four fluid ounces. First rub the cam- phor with the spirit, then witli the lard and mer- curial ointment. Lastly, drop gradually in the solution of ammonia and let the whole be mixed.

Medical properties. — Stimulant and discutient, especially of chronic affections of the syphilitic kind.

Linimentum saponis compositum. London. — Compound soap liniment.

Take of hard soap three ounces, camphor one ounce, spirit of rosemary a pint. Dissolve the camphor in the spirit ; then add the soap, and macerate in the heat of a sand-bath, till a solu- tion be effected.

Tinctura saponis camphorata, vulgo linimentum saponaceum. Edinburgh. — Camphorated tincture of soap, commonly called liniment of soap.

Take of hard soap sliced four ounces, camphor two ounces, volatile oil of rosemary half an ounce, alcohol two pounds. Let the soap be digested in the alcohol during three days ; then add the camphor and the oil, frequently shaking the mixture.

Medical properties. — Stimulant and anodyne.

Tinctura saponis et opii, vulgo linimentum ano- dynurn. Edinburgh. — Tincture of soap and opium, commonly called anodyne liniment.

Take of hard soap sliced four ounces, opium one ounce, camphor two ounces, oil of rosemary halff an ounce, alcohol two pounds. Let the soap be digested in the alcohol for three days ; then to the strained solution add the camphor and the oil, frequently shaking the mixture.

Medical properties. — Stimulant and anodyne.

Linimentum terebinthines. London. — Turpen- tine liniment.

Take of cerate of resin a pound, oil of turpen- tine half a pint. Melt the cerate ; then add the oil of turpentine, and mix.

Medical properties. — An excellent application to recent burns and scalds.

CATAPLASMATA.— Cataplasms.

Cataplasma fermenti. London. — Yeast cata- plasm.

Take of flour a pound, yeast of beer half a pint. Mix, and expose the mixture to a gentle neat till it begin to swell.

Medical properties. — A corrector of foul ulcers, by virtue of the carbonic acid gas that is evolved.

Cataplasma sinapis. London. — Cataplasm of mustard.

Take of mustard seed, linseed, of each in pow- der half a pound ; hot vinegar a sufficient quan- tity. Mix them to the consistence of a cata- plasm.

Medical properties. — Stimulant, rubefacient and often vesicatory.

PART III.

The principal FoRMuutof MAGENDIE and others, and some which have been recently introduced into the PHARMACOPOEIA of the DUBLIN COL- LEGE, and others employed in the UNITED STATES OF AMERICA.

In the application of chemistry to pharmaceutic and medical purposes much has recently been done towards ascertaining the precise

principles upon which medicinal efficacy manifests itself; and many new remedies have been proposed and brought into practice, more especially among the French chemists by separating one portion from another, of a particular substance,— this separated portion being in several instances con- ceived to be that upon which the whole virtue of the material had depended. Concentration, elegance, and increase of effect, have thus been occasionally introduced into medicine, and much consequent good has resulted ; in some instances, indeed, we may consider the proposed improve- ments to be questionable ; for fact it is, as well pointed out by Dr. Paris in his Pharmacologia, that even the inert woody fibre of many vegeta- bles when in combination with other of their principles becomes active, so that we may be misled in supposing that by an extraction and separation of a medicinal principle we extract and separate the whole of medicinal property.

Another objection may be taken against the new medicinals as it refers to their nomenclature ; for in some instances the concentrated principles are named from their medicinal effects, as in the case of narcotine, while in others botanic, or chemical, or natural history principles regulate the appellation, — but the science of extraction, in the way now referred to, may be regarded in its infancy, and time with more mature consider- ation will doubtless effect still more improvement of it.

The principal of the medicinal substances thus introduced are the following :

Strychnine and brucine, two peculiar vegetable alkalies, discovered by Messrs. Pelletier and Ca- ventou, which exist in a state of combination with an acid called the igazuric, in the nux vomica, St. Ignatius's bean ; the upas tieute of Java, and the snake wood, which separately and toge- ther are described as possessing the remarkable property of exciting strongly the spinal marrow without affecting, excepting indirectly, the func- tions of the brain, and as therefore being highly efficacious in some species of paralysis.

Morphine, a principle afforded by opium, and which, as well as by other means, may be ob- tained by treating opium with caustic ammonia, which is said to be the narcotic principle of the drug, and the salts of which are alleged to pos- sess all the good properties of opium without its inconveniences.

Narcotine, one of the immediate principles likewise of opium, possessed of properties like those of morphine, but less powerful.

Emetine. ‘ M. M. Pelletier, and Magendie presented a memoir to the Academic des Sciences

in 1817, in which it was announced as the result of a course of experiments, that the power of the various species of ipecacuanha depended on a peculiar principle denominated emetine, and that this substance being much more active than the ipecacuanha itself, without possessing either its disagreeable taste or nauseous smell, might on all occasions be substituted for it with advantage/ Pure emetine appears to be a new vegetable alkali.

Quinine and cinchonine. — The gray bark was found to yield cinchonine, a peculiar alkaline principle, while ‘ the yellow bark furnished an alkali, which, though in many respects resem- bling the other, differed in certain properties too remarkable to admit of their being confounded ; this latter, therefore, its discoverers denominated quinine.’

Veratrine. — { We owe our knowledge of this substance also to M. M. Pelletier and Caventou. These indefatigable chemists had remarked that in the veratrican tribe, almost all the individuals besides the botanical characters possessed a dis- tinctive and very acrid taste, while they produced a similar action on the animal economy. They accordingly conceived that it would be interesting to ascertain whether such properties did not re- side in some particular substance common to all these plants. These conjectures were confirmed by an analysis of the seeds of the veratrum sa- badilla, by which they separated the acrid prin- ciple, recognising in it all the alkaline proper- ties. They afterwards detected it in the bulb of the colchicum autumnale, in that of the vera- trum commune, or white hellebore ; and named it veratrine from the family denomination be- longing to the plant.’

Solanine. — The discoverer of this principle in two plants of the family of the solaneae, the sola- num nigrum and the solanum dulcamara, was M. Desfosse’s, at Besanˆon. This principle possesses both narcotic and emetic powers, but the latter more decidedly and conspicuously than the former.

Delphine. — This alkali was detected in 1819 in the seeds of the delphinium staphisagria by M. M. Feneulle and Lassaigne, who thus

named it from a belief that the acrid properties of the whole family depended upon this principle — an opinion, however, which has not been con- firmed by the analysis of other plants belonging to it. The medicinal properties of delphine have not been much tried.

Gentianine. — ‘ A very singular circumstance is connected with the discovery of this principle. M. M. Henry and Caventou were both employed at the same time, and without any knowledge of each other’s proceedings, upon the analysis of gentian ; and arrived at results so perfectly iden- tical that, upon comparing notes, they found the appearance of co-operation so striking that they resolved to promulgate their labors together.” The principle obtained from the gentian and its action is that of a highly concentrated bitter, es- pecially, it is said, applicable to scrofulous affections.

Iodine. — For an account of the discovery of this substance see the article CHEMISTRY. Its physical and medicinal properties are conspicu- ously directed to the glandular organisation jmd

lymphatic system, and it has been employed in scrofula with reputed success.

Lupuline. — Dr. Ives of New York has the cre- dit of discovering this principle as resident in the humulus lupulus. It is said to be aromatic, tonic, and narcotic. Some, however, have doubt- ed its pretensions.

Piperine. — ‘ This substance was discovered in the black pepper by M. JErstaedt/ by whom it was supposed to be a vegetable alkali, but other ex- periments have tended to disprove this. It has lately been employed in Italy as a febrifuge.

Besides these principles, and time may proba- bly add to their number rapidly, several new sub- stances and combinations of substances have been introduced into the more recent pharmacopoeias ; and Dr. Thomson has availed himself of these additions in a very useful work he has published under the name of a Conspectus of the Pharma- copoeias : what follows will be principally com- piled from that publication ; the articles to which the letter D is attached are from the last edition of the Dublin Pharmacopoeia; those to which U. S. are added are from the order of the United States ; and the others are French preparations.

Acetum opii. U. S. — Vinegar of opium.

Opium half a pound, vinegar three pints, bruised nutmeg one ounce and a half, saffron half an ounce, sugar four ounces, yeast a fluid

ounce. Boil the first mentioned articles to a proper con- sistence ; then add the sugar and yeast. Digest for seven weeks, and then decant, filter, and bot- tle up, adding a little sugar to each bottle.

Medical properties. — Anodyne. Dose from

triv. to m,xx.

Cinchonina (cinchonine). — Cinchonia. Dr. T. prefers the termination of these words in a.

Take any quantity of powder of cinchonia lancifolia; boil it in alcohol until it lose all bitterness, and distil the tincture to dryness. Dis- solve the residue in boiling water acidulated with muriatic acid ; then add an excess of magnesia, and boil for some minutes. Filtrate when cold, wash the magnesian residue with cold water, and dry it in a stove ; then digest repeatedly iu boil- ing alcohol, and mix the alcoholic liquors, which in cooling will yield crystals of cinchonia.

Medical properties. — In all cases in which bark is useful. Dose from gr. ij. to 9ft.

Cyanuretum hydrargyri. D. — Cyanuret of mercury.

Take of the cyanuret of iron six parts, nitric oxide of mercury five parts, distilled water forty parts. Let the cyanuret of iron and oxide of mer- cury be mixed together, then add the hot water. Let the mixture be boiled for half an hour stirring it all the time, and then filter through blotting paper. Let the residue be well washed with dis- tilled water. Finally evaporate the filtered solu- tions, and crystallise in cooling.

Medical properties. — The same as those of hy- drocyanic acid, but more fitted for external ap- plication.

Decoctum calumbte compositum. U. S. — Com- pound decoction of Calumba.

Take of bruised Calumba root, quassia shavings, of each two drachms, orange peel one drachm, powdered rhubarb a scruple, carbonate of potassa half a drachm, water twenty fluid

ounces. Boil down to a pint, and add half a fluid ounce of tincture of lavender.

Medical properties. A tonic in convalescence from fever. Dose f. 3.

Decoctum pyrolae. D. — Decoction of winter green.

Take of pyrola umbellata one ounce, water by measure two pounds. Macerate for six hours, then bruise and return the pyrola to the liquor, and reduce the mixture by evaporation, when strained and expressed, to a pound by measure.

Medical properties. — Highly diuretic. Dose from f. 3j. to f. §ij.

Decoctum scille. U. S. — Decoction of squill.

Take of squill three drachms, juniper berry four ounces, seneka root three ounces, water four pints. Boil to one-half, then strain, and add spirit of nitric ether four fluid ounces.

Medical properties. — Diuretic. Dose from f- 3J- to f. 3ij.

Emetina. — Emetine.

Take of powdered root of ipecacuanha any quantity : digest it several times in ether at 60° Fahrenheit, and then in alcohol. Evaporate the alcoholic tincture in a water-bath, and disolve the residue in cold water; then add magnesia and macerate ; and, after drying the magnesian pre- cipitate, digest it in pure alcohol, and evaporate the solution to dryness.

Medical properties. Emetic, narcotic, purga- tive. Dose from one third of a grain to grs.iij. in any bland fluid.

Incompatibles. Preparations of mitgalls, and all vegetable astringent infusions or decoctions.

Extraction nucis vomicte. D. — Extract of nux vomica.

Take of rasped nux vomica eight ounces, proof spirit of wine by measure two pounds. Digest in a covered vessel for three days, strain the liquor, and express what remains in a press ; to this residue add a pound and a half of proof spirit, digest for three days, and express the re- sidue. Consume the mixed liquors by distilla- tion, and reduce to a proper consistence.

Medical properties. — Antiparalytic. Dose gr. itogr.ift.

Ferri prussias. U. S. — Prussiate of iron. Prus- sian blue, composed of Prussic acid 35‘1, red oxide of iron 53, water 11-9 in 100 parts.

Medical properties — Tonic and antispasmodic. In intermittents, scrofula, chorea, and epilepsy. Dose grs. iij. to grs. viij. in syrup thrice a day.

Hydriodas potassa. D. — Hydriodate of po- tassa.

Take of iodine one part, sulphuret of iron in coarse powder five parts, sulphuric acid seven parts, distilled water forty-eight parts, water of carbonate or potassa as much as necessary, recti- fied spirits six parts. Mix the iodine by aid of friction with sixteen parts of the water, and pour the mixture into a glass vessel. Pour the acid diluted with thirty-two parts of the water upon the sulphuret, put into a matrass, and by a tube fitted to the neck of the matrass, and reaching to the bottom of the vessel containing the iodine and water, let the gas pass through the mixture until the iodine altogether disappears. Evaporate the strained liquor immediately with a greater heat, and strain it again. Then add

enough of the solution of carbonate of potassa to saturate the. acid, which is known by the effer- vescence ceasing. Then expose the mixture to a gentle heat until the residuary salt become dry and of a white color : pour the spirit upon this, and dissolve with heat. Finally evaporate the liqour poured off from the residuary salt, and having evaporated it to dryness let it be preserved in a stopped bottle.

Medical properties. — The same as iodine. Dose from gr. i. to grs. iij. of the dried salt; from ttl vj. to nixx. of the saturated solution. See

T T

Iodine.

Jnfusum cinchona cum succo limonum. U. S. — Infusion of cinchona with lemon juice. . Take of cinchona in powder one ounce, lemon juice two fluid ounces, compound tincture of camphor three fluid drachms, cold water a pint. Macerate for twelve hours in a covered vessel, and strain.

Medical properties. — Tonic when the stomach is too irritable to bear bark in the common way. Dose from f. 3j. to f. §iij.

Infusum eupatorii. — Infusion of thorough wort.

Take of eupatorium one ounce, hot water a pint. Infuse for two hours in a covered vessel, and strain.

Medical properties. — Emetic, diaphoretic ; tonic when given cold.

lodinium. — Iodine. D. See CHEMISTRY. Medical properties. — Stimulant, absorbent, and emmenagogue. Useful in bronchocele and other glandular swellings not of a schirrhous na- ture ; to bring on menstruation in young females in whom it has not occurred ; to assist the cica- trization of venereal ulcers. Dose from one-sixth of a grain to grs. iv. in pills, with crumb of bread.

liinimentum tabaci. U.S. — Liniment of tobacco.

Take of cut tobacco one ounce, lard one pound. Simmer the tobacco in the lard over a gentle fire until it become crisp, and strain.

Medical properties. — Useful in tinea, scabies, and in hemorrhoids.

Ligieur labarraquii chloro-sodaicus. — Chloro- sodaic solution of labarraque.

Dissolve grs. 2187‘5 of pure crystallised car- bonate of soda in f. ˆxx. of distilled water, and saturate the solution with chlorine gas.

Medical properties. — Antiseptic, astringent, tonic, used for disinfecting foul air, destroying animal putrefaction ; an excellent lotion for chil- blains, fetid ulcers, and gangrenous sores, and the best lotion in ptyalism yet discovered. In- ternally in dysentery. Dose from nˆxx. to f. 3j. in a cupful of water ; for a lotion or a gargle f. 3xij. in f.ˆvj. of distilled water.

Liquor morphine acetous.— Solution of acetate of morphia.

Take of acetate of morphia sixteen grains, distilled water six fluid drachms, dilute acetic acid f. 3ij ; mix.

Medical properties. — See Morphine acetas. Dose from njvj. to mxxxvj. in any bland vehicle.

Mistura strychnine. — Mixture of strychnia.

Take of strychnia gr. i., white sugar two drachms, distilled water two fluid ounces; mix.

Medical properties. — See Strychnine. Dose

a dessert spoonful f. 3ij. every morning and evening.

Morphina (morphium). Morphia. Morphine.

Take a concentrated solution of opium, and boil it with magnesia in the proportion of ten grains for each pound of opium used. Filtrate and wash the deposit on the filter with cold rain or distilled water, and when it is dried digest it in a heat under 212° with weak alcohol. Filtrate and wash this deposit with a little cold alcohol ; then boil it in a large quantity of rectified alco- hol, and filtrate while the liquor is hot. The crystals are deposited as the liquor cools, and may be purified by repeated solutions and crys- tallisations. Robiquet's method.

Medical properties. — Sedative. Chiefly em- ployed to prepare the salts of morphium. Dis- solved in oil and rubbed on the skin it produces narcotic effects.

Morphias acetas. — Acetate of morphia.

Take of morphia four parts, distilled water eight parts. Mix them in a porcelain dish, and then add acetic acid, specific gravity 1-075, until lit- mus paper is slightly reddened. Evaporate slowly to dryness and reduce to powder (Codex Medicamentarius). It must be kept in a ground stoppered phial.

Medical properties. — Narcotic and sedative. Dose from gr. £ to gr. iij.

Morphia sulphas. — Sulphate of morphia.

Take of morphia six parts, distilled water twelve parts, sulphuric acid diluted with twice its bulk of water a sufficient quantity to saturate the morphia. Evaporate slowly and crystallise (Codex Medicamentarius). To be kept in a stoppered phial.

Medical properties. See Morphia. Dose from gr. r. to grs. iij.

Oleum chenopiedii. U. S. — Oil of wormseed. Distil from the seed.

Medical properties. — Anthelmintic. Dose

m,v. to n\x.

Oleum succini oxidatum. U. S. — Oxidated oil of amber.

Take oil of amber a fluid drachm, nitric acid three fluid drachms and a half. Put the oil of amber in a glass vessel, and gradually drop the acid into it, at the same time stirring the mixture with a glass rod. Let it stand for thirty-six hours, then separate the supernatant resinous matter from the acid fluid beneath, and wash it repeatedly first with cold and lastly with hot water, till the acid taste be removed.

Medical properties. — Aˆ substitute for musk.

Opii extractum narcotine, privatum. — Extract of opium freed from narcotine.

Macerate coarsely powdered opium in cold water, filtrate and evaporate to the consistence of syrup; then digest in rectified ether, and repeat this as long as any crystals of narcotine appear in the residue of the distilled ether. Lastly, evaporate the solution which has been thus treated to an extract.

Medical properties. — Anodyne; without being stimulating. Dose gr. i. to gr. vj.

Quinine sulphas. D. — Sulphate of quinine.

Take of the yellow bark (heart leaved) in coarse powder four pounds, distilled water by measure eight pounds, diluted sulphuric acid two ounces. Mix in a proper vessel and in a

high temperature, agitating frequently ; digest for four hours, then strain ; the residue of the bark is then to be again mixed with an equal quantity of water and strained ; this should be done three times. To the mixed solutions add a quantity of fresh burnt lime sufficient to saturate the acid. Separate the precipitate by means of blotting paper, and add to it three pints of rec- tified spirit, then digest with frequent agitation for six hours and strain ; again digest the residuary powder with an equal quantity of rectified spirit and strain. Let this be done three times. Mix the spirituous solutions, and evaporate to dryness in a water-bath. To the residue add gradually as much diluted sulphuric acid as will make it just sensibly acid ; then evaporate and crystallise.

Medical properties. — Powerfully tonic ; espe- cially useful in intermittent fever. Dose gr. i. to 3ft.

Sulphas quinine. See Quinine sulphas, above.

Strychnina, strychnium. — Strychnia.

To a solution of extract of nux vomica in water add a solution of subacetate of lead as long as any precipitate is formed. Filtrate and separate any excess of the subacetate of lead from the solution by sulphureted hydrogen ; then filtrate again and boil the solution with magne- sia ; wash the precipitate with cold distilled water, redissolve it in alcohol, and evaporate. The residue of the evaporation is strychnia, which may be purified by dissolving it in mu- riatic acid, and precipitating by means of mag- nesia.

Medical properties. — Antiparalytic in cases of paraplegia. Dose gr. -^ to gr. |, made into pills with crumb of bread.

Syrupus cinchonina;. — Syrup of cinchona.

Take of sulphate of cinchonia gr. xxxix. sim- ple syrup sixteen fluid ounces. Dose f. 3j. to f. Jj.

Syrupus emetirue. — Syrup of emeta.

Take of pure emeta gr. iv., simple syrup a pound; mix.

Medical properties, — In catarrh, hooping cough, and all cases in which ipecacuanha is useful.

Syrupus morphia acetatis. — Syrup of acetate of morphia.

Take of clarified syrup one pound, acetate of morphia four grains. Dose f. 3j. to f. 3ij.

Syrupus morphia sulphatis. — Syrup of sulphate of morphia.

Take of clarified syrup one pound, sulphate of morphia four grains. Make into a syrup. Dosef. 3j. tof. 3iv.

Syrupus quinirue. — Syrup of quinine.

Take of sulphate of quinine forty-four grains, simple syrup two pounds, mix. Dose f. 3ij. to f. 3iv.

Tinctura capsici et cantharidum. U. S. — Tinc- ture of Cayenne pepper and blistering flies.

Take of cantharides bruised ten drachms, cap- sicum one drachm ; diluted alcohol a pint. Digest for ten days and filter.

Medical properties. — Stimulant and rubefa- cient.

Tinctura cinchonina. — Tincture of cinchonia.

Take of sulphate of cinchonia eight grains; alcohol a fluid ounce. Dose f. 3j. to f. 3if.

Tinctura iodinii. D. — Tincture of iodine.

Take of iodine two scruples ; rectified spirit

a fluid ounce. Mix and dissolve the iodine by heat. Dose n\it. to nˆxx.

Tinctura lobelia. U. S. — Tincture of Indian tobacco.

Take of Indian tobacco two fluid ounces, diluted alcohol a pint. Digest for ten days and filter.

Medical properties. — Emetic and expectorant. Dose f. 3j. to f. 3iij.

Tinctura nucis vomicte. D.— Tincture of mix vomica.

Take of the fruit of the strychnus nux vo- mica rasped two fluid ounces, rectified spirit eight fluid ounces. Macerate for seven days, then strain.

Tinctura quinine. — Tincture of quinia. Take of sulphate of quinia six grains, alcohol (spe- cific gravity -847) a fluid ounce. Dose f. 3j. to f. 3iij.

Tinctura sanguinaria. U. S. — Tincture of blood root.

Take of bruised blood root two fluid ounces, alcohol a pint. Digest for ten days, and filter.

Medical properties. — Expectorant and tonic, and in large doses emetic. Dose nˆx. to f. Sift.

Tinctura strychnine. — Tincture of strychnia.

Take of strychnia three grains, alcohol (spe- cific gravity -837) a fluid ounce. Dose JT].vi. to tlj_xxiv.

Unguentum iodinii. D. — Ointment of iodine.

Take of iodine one scruple, prepared lard one ounce. Rub them together into an ointment.

Vinum c'mchoninx. — Wine of cinchonia.

Take of cinchonia fourteen grains, Madeira wine thirty-one fluid ounces. Dosef. 3ij. to f. 3ij.

Vinum quinine. — Wine of quinia.

Take of sulphate of quinia nine grains, Ma- deira wine two pounds. Dose from f, 3iv. to f. 5iv-

APPENDIX I.

An account of the constituent parts of some of the most popular among PATENT and other MEDICINES, extracted from Dr. PARIS'S PHAR- MACOLOGIA.

Andersons pills are formed principally of aloes, with a portion of jalap and oil of aniseed.

Anodyne necklaces. — The roots of henbane are commonly strung in the form of beads, and sold under this name, to be tied round the necks of children to facilitate the growth of their teeth, and allay the irritation of teething.

Antivenereal drops, so famous at Amsterdam, were analysed by Scheele, who found that they were composed of muriate of iron, with a small portion of corrosive sublimate.

Aromatic vinegar (Henry's) is merely a solu- tion of camphor and some essential oil. A pre- paration of this kind may be extemporaneously made by putting one drachm of acetate of po- tassa into a phial, with a few drops of some fragrant oil, and tlixx. of concentrated sulphuric acid.

Balsam of honey, or pectoral balsam, is the tincture of benzoin, or that of Tolu.

Balsam of liquorice. (Pectoral). The proprie- tor of this nostrum gravely affirms, that f. Jift. contains the virtues of a whole pound of liquo-

rice root; but, upon investigation, it will be found to consist

principally of paregoric elixir, very strongly impregnated with the oil of ani- seed.

Barclay's antibilious pills. Take of the extract of colocynth two drachms, resin of jalap one drachm, almond soap a drachm and a half, guai- acum three drachms, tartarised antimony eight grains, essential oils of juniper, carraway, and rosemary, of each four drops, of syrup of buck- thorn, as much as will be sufficient to form a mass to be divided into sixty-four pills.

Batemans pectoral drops consist principally of the tincture of castor, with portions of cam- phor and opium, flavored by aniseed and colored by cochineal.

Battley's sedative liquor (liquor opii sedativus). Under this name Mr. Battley, of Fore-street, London, has introduced a narcotic preparation, which it is generally supposed owes its efficacy to the acetate of morphia ; on being kept, how- ever, I found that it underwent some important change, during which so much air was disen- gaged as to blow out the cork from the bottle with violence. This is a great objection to its admission into practice. [We think it, however, right to state that this preparation has been used by us and very many of our friends with decided advantage over the common tincture of opium. — Ed.]

Black drop, or the Lancaster or Quaker's black drop. This preparation, which has long been known and esteemed as being more powerful in its operation, and less distressing in its effects, than any tincture of opium, has until lately been involved in much obscurity ; the papers, how- ever, of the late Edward Walton, of Sunderland, one of the near relations of the original proprie- tor, having fallen into the hands of Dr. Arm- strong, that gentleman has obliged the profession by publishing the manner in which it is pre- pared, and is as follows : — ' Take half a pound of opium sliced, three pints of good verjuice (juice of the wild crab), and one and a half ounce of nutmegs, and half an ounce of saffron. Boil them to a proper thickness ; then add a quarter of a pound of sugar, and two spoonsful of yeast. Set the whole in a warm place near the fire for six or eight weeks ; then place it in the open air until it become a syrup. Lastly, decant, filter, and bottle it up, adding a little sugar to each bottle. One drop of this preparation is con- sidered about equal to three of the tincture of opium. — Ph. L. It would appear that an ace- tate of morphia is formed, which is more active and less distressing in its effects than any other narcotic combination.

The French Codex contains directions for pre- paring a compound very similar to the black drop, viz. Vinum opiatum ferment atione parat um, or Gutta, sen laudanum dbbatis Rousseau. Take of white honey twelve ounces, warm water three pounds. Dissolve the honey in the water, pour it into a matrass and set it aside in a warm place ; as soon as fermentation has commenced, add four ounces of good opium, having previously dis- solved, or rather diffused it in twelve ounces of water. Allow them to ferment together for a month ; then evaporate until ten ounces only re-

main. Filter, and add four ounces and a half of alcohol

Broau,i,t nervous cordial consists of the tinc- tures of gentium, calumba, cardamom, and bark, with the compound spirit of lavender and wine of iron.

Ching's worm lozenges. — These consist of yel- *.ow and brown lozenges; the former are taken in the evening, the latter the succeeding morning.

The yellow lozenges. Saffron half an ounce, water a pint, boil and strain ; add of white pa- nacea of mercury (calomel washed in spirit of wine) a pound, white sugar twenty-eight pounds, mucilage of tragacanth as much as maybe suffi- cient to make a mass, which roll out of an exact thickness, so that each lozenge may contain one grain of panacea. Dose from one to six.

The brown lozenges. Panacea seven ounces, resin of jalap three pounds and a half, white sugar nine pounds, mucilage of tragacanth enough for each lozenge to contain half a grain of pa- nacea.

C»ugh drops. — Under this word, Dr. Paris says, Opium is the quack's sheet anchor. The various nostrums advertised as cougli drops for the cure of colcis, asthmas, catarrhs, Sec., are preparations of opium very similar to paregoric elixir. Pec- toral balsam of liquorice, and essence of colts- foot, ar? combinations of this kind. Grindle's cough drops are a preparation of this kind, made with rectified spirit instead of proof spirit, and consequently more highly charged with stimulant materials. 'The mischief,' observes Dr. Fother- gill, ' that has proceeded from the healing ano- dynes of quacks can scarcely be imagined ; for in coughs arising from suppressed perspiration, or an inflammatory diathesis, opiates generally do harm.'

Court plaster. Sticking plaster. — Black silk is strained and brushed over ten or twelve times with the following preparation : Dissolve half an ounce of gum benzoin in six fluid ounces of rectified spirit ; in a separate vessel dissolve an ounce of isinglass in half a pint of water; strain each solution : mix them; and let them rest, so that the grosser parts may subside. When the clear liquor is cold it will form a jelly, which must be warmed before it is applied. When dry, in order to prevent its cracking, it is finished off with a solution of four ounces of Chio turpen- tine in six ounces of tincture of benzoin.

Crespigny (Lady) her pills, or lady Webster's pills. These popular pills are the pilulse stoma- chicae, vulgo pilulae antecibumof the Codex Me- dicamentarius Parisiensis. Editio quinta, A. D. 1758: viz. Take of best aloes six drachms, mastich and red rose of each two drachms, syrup of wormwood as much as will be sufficient to make a mass. The mass is divided into pills of three grains each.

Daffy's elirir. This is the tinctura sennae oomposita, with the substitution of treacle for sugar candy, and the addition of aniseeds. Dif- ferent kinds of this nostrum are sold under the names of Dicey's ; but they differ principally in some subordinate minutiae or unimportant addi- tions.

Dolby's carminative. This consists of carbo- nate of magnesia two scruples oil of prppermint Vor.. XVII.

one drop, of nutmeg two drops, of an i 'seed three drops, of the tinctures of castor thirty drops, of assafcetida fifteen drops, spirit of pennyroyal rif- teen drops, of the compound tincture of carda- moms thirty drops, peppermint water two fluid ounces.

Dinner pills. See Lady Crespigny' s pilla.

Dixon's antibillous pills. Aloes, scammony, rhubarb, and tartarised antimony.

Dutch drops. The basis of this nostr-.m co;i sists of the residue of a redistillation of oil of turpentine, which is a thick, red, resinous matter, to which the name of balsam of turpentine has been given : a preparation however is frequently vended as ' Dutch Drops', which is a mixture of oil of turpentine, tincture of guaiacum, spirit of nitric ether, with small portions of the oil of amber and cloves.

Eau medicinale. After various attempts to discover the active ingredients of this Parisian remedy, it is at length determined to be the col- chicum autumnale, which several ancient authors, under the

name of hermodactyls, have recom- mended in the cure of gout. The following is the receipt for preparing this medicine : — Take two ounces of the root of colchicum cut into slices, macerate it in four fluid ounces of proof spirit, and filter.

Essente of coffee. The pulp of cassia is said to form the basis of this article.

Essence of coltsfoot. This preparation con- sists of equal parts of the balsam of tolu and the compound tincture of benzoin, to which is added double the quantity of rectified spirit cf wine.

Essence of mustard. (Whitehead.) This con- sists of oil of turpentine, camphor, and a portion of spirit of rosemary ; to which is added a small quantity of flour of mustard.

Essence of mustard pills. Balsam of tolu with resin !

Essence of spruce. A fluid extract by decoc- tion from the twigs of the species of fir called the pinus larix, producing the Venice turpentine, is the well known essence of spruce, which, when fermented with molasses, forms the popular beverage called spruce beer.

Essential salt of lemons. The preparation sold under this name for the purpose of removing iron moulds from linen consists of cream of tar- tar and superoxalate of potassa, or salt of sorrel, in equal proportions.

Friar's balsam is nothing more than the com- pound tincture of benzoin of the pharmacopoeias.

Godfrey's cordial. The following receipt for this nostrum was obtained from a wholesale druggist, who makes and sells many hundred dozen bottles in the course of the year. There are, however, several other formulae for its pre- paration, but not essentially different. Infuse nine ounces of sassafras, and of the seeds of carraway, coriander, and anise, of earb one ounce, in six pints of water; simmer the mixture until it is reduced to four pints ; then add six pounds of treacle, and boil the whole for a few minutes ; when it is cold add three fluid ounces of the tincture of opium.

Golden ointment. Under this name is sold a preparation which consists of sulphuret of arsenic [orpiment] with lard or spermaceti ointment.

N

The unguentum hydrargyri nitrico-oxydi of the London college is also sold under the same title.

Gout tincture (Wilson's). This is merely an infusion of colchicum, as Dr. Williams of Ips- wich has satisfactorily shown.

Gotland's lotion is a solution of sublimate in an emulsion formed of bitter almonds in the pro- portion of about a grain and a half to a fluid ounce.

Hooper's pills. Compound aloetic pill with myrrh (pil. rufi), sulphate of iron, and Canella bark.

James's powder. See the present article under the word Pulvis antimonialis.

James's analeptic pills. These consist of James's powder, gum ammoniacum, and the pill of aloes with myrrh (pil. rufi), equal parts, with a sufficient quantity of the tincture of castor to make a mass.

Norton's drops. A disguised solution of cor- rosive sublimate.

Opodeldoc (Steers's). Castile soap one ounce, rectified spirit eight ounces, camphor three ounces and a half, oil of rosemary half a fluid drachm, oil of origanum one fluid drachm, solu- tion of ammonia six fluid drachms.

Oxley's concentrated essence of Jamaica ginger. A mere solution of ginger in rectified spirit.

Portland powder. Equal quantities of the roots of gentian and birthwort, the tops and leaves of germander, ground pine, and lesser centaury powdered and mixed together.

Riga balsam. From the shoots of the pinus cembra previously bruised, and macerated for a month in water. This same fir also affords Brianf on turpentine.

Roche's embrocation. Olive oil mixed with about half its quantity of the oil of cloves and amber.

Ruspini's tincture. This consists of the root of the florentine iris eight ounces, cloves one ounce, rectified spirit two pints, ambergris one scruple.

Seidlitz powders. These consist of two dif- ferent powders ; the one contained in a white paper consists of two drachms of tartarised soda and two scruples of carbonate of soda ; that in the blue paper of thirty-five grains of tartaric acid. The contents of the white paper are to be dissolved in half a pint of spring water, to which those of the blue paper are to be added ; the draught is to be taken in a state of effervescence. The acid, being in excess, renders it more grateful and no less efficacious as a purgative.

Singleton's ointment. See Golden ointment.

Sodaic powders. Contained in two distinct papers, one of which is blue, the other white ; that in the former consists of half a drachm of the carbonate of soda ; that in the latter of twenty-five grains of tartaric acid. These pow- ders require half a pint of water. It is very evi- dent that a solution of these powders is by no means similar to soda water, which it is intended to emulate ; for in this latter preparation the soda is in combination only with carbonic acid, whereas the solution of the sodaic powders is that of a neutral salt with a portion of fixed air diffused through it.

Spilsbury's antiscorbutic drops. — Of corrosive sublimate two drachms, prepared sulphuret of

antimony one drachm, gentian root and orange peel equal parts two drachms, shavings of red sanders one drachm, made into a tincture with a pint of proof spirit. Digest and strain.

Stephens (Mrs.), remedy for the stone con- sisted of lime in conjunction with an alkali.

Velno's vegetable syrup. — There is a great ob- scurity with respect to the genuine composition of this nostrum : it is supposed to consist of sub- limate rubbed up with honey and mucilage. I have reason, howerer, to believe that it contains antimony, and the syrup of marsh mallows. Swediaur says that the volatile alkali enters into it as an ingredient : this alkali was proposed by Dr. Peyrile as a substitute for mercury, and it constitutes the active ingredient of a compo- sition, proposed by Mr. Besnard, physician to the king of Bavaria.

Virgins milk. A spirituous solution of ben- zoin, mixed with about twenty parts of rose water, forms a cosmetic long known by this name. A sulphate of lead is also sold under this name, which is prepared as follows : — To a saturated solution of alum add of Goulard's ex- tract one third part. Shake them together.

Ward's paste for fistulas, piles, &c. Take of black pepper and elecampane, powdered, equal parts, half a pound ; of the seeds of fennel a pound and a half; of honey and sugar equal parts, one pound ; beat and well mix together all the ingredients in a mortar. Dose the size of a nutmeg three times a day.

Worm cakes (Storey's). — Calomel and jalap made into cakes and colored by cinnabar.

APPENDIX II.

TABLE. — Showing the proportions in which OPIUM, ANTIMONY, ARSENIC, and MERCURY, are contained in some compound medicines. From THOMSON'S DISPENSATORY.

OPIUM.

Confectio opii. London. — Confection of opium. Thirty-six grains contain one grain of opium.

Electuarium opiatum. Edinburgh. — Opiate electuary contains in each drachm about one grain and a half of opium.

Pilula saponis cum opio. London. — Pills of soap and opium. Five grains contain one grain of opium.

Pilule opiate. Edinburgh, — Opiate (formerly Thebaic) pills. Each drachm contains six grains of opium. A pill of five grains contains half a grain of opium.

Pulvis cornu usti cum opio. London. — Powder of burnt hartshorn with opium. Ten grains con- tain one grain of opium.

Pulvis ere toe, compositus cum opio. London. — Compound powder of chalk with opium. Two scruples contain one grain of opium.

Pulvis ipecacuanha compositus. 1 ondon. — Compound powder of ipecacuanha. Ten grains contain one grain of opium.

Pulvis kino compositus. London — Compound powder of kino. Each scruple contains one grain of opium.

Tinctura opii. London.— Tincture of opiuni. Nineteen minims contain one grain of opium

PHARMACY.

Tinctura opii. Edinburgh.— Tincture of opium is made with two scruples of opium i,i each ounce of liquid, or each drachm should contain five grains. But one drachm of the tincture when evaporated yields only three grains and a half of opium.

Tinctura camphors composita. London. — Com- pound tincture of camphor. Tinctura opii cam- phorata. Edinburgh. — Half a fluid ounce con- tains nearly one grain of opium.

Tinctura opii ammoniata. Edinburgh. — Am- moniated tincture of opium is made with about eight grains of opium in each ounce of liquid, or each drachm should contain nearly one grain of opium.

Tinctura saponis et opii. Edinburgh. — Tinc- ture of soap and opium is made with one scruple of opium in each ounce of the liquid.

Trochisci glycyrrhizcc cum opio. Edinburgh. — Troches of liquorice with opium. Each drachm contains nearly one grain of opium.

ANTIMONY. .

Vinum antimonii tartarizati. London. — So- lution of tartarised antimony, contains in each fluid ounce two grains of tartarised antimony.

Vinum tartritis antimonii. Edinburgh. — Wine of tartrate of antimony contains in each ounce two grains of tartrate of antimony.

MERCURY.

Emplastrum hydrargyri. Edinburgh. — Mer- curial plaster. Each drachm contains about sixteen grains of mercury (fifteen London).

Hydrargyrum cum cretd. London. — Mercury with chalk. Three grains contain one grain of mercury.

Liquor hydrargyri oxymuriatis. London. — Solution of oxymuriate of mercury. Two fluid ounces contain half a grain of oxymuriate of mercury.

Linimentum hydrargyri. London. — Mercurial ointment. Six drachms contain one drachm of mercury.

Pilula hydrargyri. London. — Mercurial pills. Three grains contain one grain of mercury.

Pilulte hydrargyri. Edinburgh. — Mercurial pills. Each drachm contains fifteen grains of mer- cury. Each five grain pill contains one and one-fourth grain of mercury.

Pilule hydrargyri submuriatis composite. London. Edinburgh. — Pills of submuriate of mercury. About four grains contain one grain of submuriate of mercury.

Unguentum hydrargyri fortius. London. — Stronger mercurial ointment. Two drachms con- tain one drachm of mercury.

Unguentum hydrargyri mitius. London. — Weaker mercurial ointment. Six drachms con- tain one drachm of mercury.

Unguentum hydrargyri. Edinburgh. — Mer- curial ointment. Each drachm contains twelve grains of mercury: made with double the quan- tity of mercury, each drachm contains twenty grains.

Unguentum nitratis hydrargyri fortius. Edin- burgh.— Stronger ointment of nitrate of mer- cury. Each drachm contains four grains of mer- cury.

Unguentum nitratis hydrargyi mitius. Edin

burgh. — Milder ointment of nitrate of mercury. Each scruple contains half a grain of mercury.

Unguentum oxidi hydrargyri cinerei. Edin- burgh.— Ointment of the gray oxide of mer- cury. Each drachm contains fifteen grains of the oxide.

Unguentum oxidi hydrargyri rubri. Edinburgh. — Ointment of red oxide of mercury. Each drachm contains seven grains of the oxide.
ARSENIC.

Liqitor arsenicalis. London. — Solutio arseni- calis. Edinburgh. — Arsenical solution. One fluid ounce contains four grains of white sublimed arsenic.

APPENDIX III.

WEIGHTS AND MEASURES.

(Extracted from Mr. Gray's Supplement to the Pharmacopoeia, a most useful work, and from which we had contemplated much extract ; but our limits being already trespassed upon, and not being able to do

justice to our original de- sign in reference to this work without very con- siderable enlargement of the article, we must content ourselves with recommending the pos- session of this book to such of our readers as are curious to learn, not only the drugs and compounds which are used by practitioners of medicine, but also ‘ most of those which are used in the chemical arts, or which undergo chemical preparation,’ &c. Many of these have of course, and will further fall under notice in the prosecution of our own labors ; but we think Mr. Gray has been most meritoriously employed in collecting a mass of information into one volume, of which we repeat our recommendation).

Medicines, except a few hereafter mentioned, were formerly sold, and the prescriptions of phy- sicians made up, by the common English weight, called avoirdupois. The ounce of that weight being then, as appears by all the old authors on arithmetic, subdivided into eight drachms, twenty-four scruples, and 480 English grains ; the medical pound differing from the common by its containing only twelve ounces, four ounces a pound ; a smaller weight, the Spanish adarme, equal t0 the sixteenth part of the avoirdupois ounce, was used under the name of a dram, for weighing silk, and this has now become an established fraction of this ounce, but it is scarcely used by any other persons than haberdashers, and, for all weights less than the quarter of an ounce troy, apothecaries’ weights are employed, although as the avoirdupois pound is established by statute at 7000 troy grains, the quarter ounce containing 109 grs. 375, and the drachm 27, gr. 34375, arc most inconvenient numbers fo reduction.

1 pound .

15 ounces .

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P H A R M A C Y.

TABLE OF AVOIRDUPOIS WEIGHT.

Troy Grains. Decimal Fraction*

7000- .,. _ . . „-,’• . 1-0000

6562-50 0-9375

6125-00 0-8750

5687-50 0-8125

5250-00 0-7500

4812-50 0-6875

4375-00 0-6250

3937-50 0-5625

3500-00 0-5000

3062-50 . . ‘ . . 0-4375

2625-00 0-3750

2187-50 . .- .- v < ' 0-3125

1750-00 . . . ” . 0-2500

1312-50 . 1 ... . ‘ . 0-1875

875-00 . . ••• ‘..-‘« . Q‘1250

437-50 . . ,”. -... 0-0625 = 1-0000

410-16 .... 0-0586 = 0-9375

382-81 .... 0-0547 = 0-8750

355-47 . . . . 0‘0508 = 0-8125

328-13 . . ‘ . 0-0469 = 0-7500

300-78

273-44 .... 0-0391 = 0-6250

246-09 .... 0-0352 = 0-5625

218-75 .... 0-0313 = 0-5000

191-41 .... 0-0273 = 0-4375

164-06 .... 0-0234 = 0-3750

136-72 .... 0-0195 = 0-3125

109-35 .... 0-0156 = 0-2500

82-03 .... 0-0117 = 0-1875

54-69 .... 0-0078 = 0-1250

27-34 .... 0-0039 = 0-0625

13-67 . 0-0019 = 0-0313

APOTHECARIES’ WEIGHT. A few choice articles of the Materia Medica, as lapis bezoar, seed pearl, white amber, balm of Mecca, oil of cinnamon, and some electuaries, high in popular estimation, and imported from Italy, as Venice treacle and orvietan, were al- ways weighed by the troy ounce, and its subdi- visions into pennyweights and grains, and still pay duties at the custom-house by that weight, as may be seen in the hook of rates. But it was not until the directions given in the London Pharmacopoeia, edition of 1720, that the troy ounce was divided into the same fractions of drachms, scruples, and grains, as the avoirdupois, for the purpose of dispensing all such drugs

as

were ordered by weight. This alteration must have been and is still productive of very great confusion, by obliging the same person to have two sets of weights, — one for buying and selling, the other for preparing the officinal preparations and compounds, and for making up prescrip- tions. It does not clearly appear why this alteration was made in respect only to drugs ordered by weight, by which their proportion in the officinal preparations and compositions was increased one-tenth ; as the avoirdupois ounce, with its old divisions into eight drachms, and drops, sixty of which were presumed equal to the drachm, was, and is still retained, in respect to drugs that are dispensed by measure.

Usual Fractions.

1 pound .

11 ounces .

.

10 .

9

9 .

or | Ib.

g

. .

^_

6 .

or £ Ib.

5 .

. ..

4 T .

3 .

or i Ib.

2 .

TABLE OF APOTHECARIES' WEIGHT.

Troy Grains. Decimal Fractions.

5760 1-0000

. 5280 0-9167

4800 . 0-8333

., 4320 . . . 0-7500

. 3840 0-6667

3360 0-5833

2880 0-5000

2400 0-4167

. 1920 0-3333

1440 0-2500

960 0-1667

480 .... 0-0833 = 1-0000

420 .... 0-0729 = 0-8750

360 .... 0-0625 = 0-7500

300 .... 0-0521 = 0-6250

or A ounce . 240 .... 0-0417 = 0-5000

PHARMACY.

181

Usual fractions. Troy Grains.

3 .... 180 .

2 .... 120 .

1 .... 60 .

2 scruples .... 40 £ dram .... 30 1 scruple .... 20 J scruple 10

5 . 3 . 2 . 1

As apothecaries or chemists seldom keep troy weight beyond four or eight ounces, the relation between the apothecary or troy pounds and ounces and the common weight is often required in preparing the officinal preparations, and is here given ; the quarter ounce being used instead of the avoirdupois drachm, as the latter weight is seldom or never kept by chemists or dispensers.

Troy or

— J

Apothecary Pounds.

Ib.

Avoirdupois, oz. qr. grains.

100 =

82

4

2

31-250

50 =

41

2

1

15-625

30 =

24

10

3

96-875

20 =

16

7

1

28-125

10 =

8

3

2

68-749

5 =

4

1

3

34-375

3 =

2

7

1

108-125

2 =

1

10

1

35-625

1 =

13

0

72-500

Apothecary Weight.

oz.

Avoirdupois, qr. grains.

Sˆ-

— :

9

3

54-375

|vj, or Ibft

=

6

2

36-250

3’\j

— :

o

1

18.125

gij

—

2

0

85-000

3i

—

1

0

42-500

3iv, or 3ft

=

2 1

21-250 10-625

Decimal Fractions.

. 0-0315 = 0-3750

. 0-0208 = 0-2500

. 0-0104 = 0-1250

‘.”- . . . 0-0070 = 0-0833

“.”” . . . 0-0052 = 0-0625

.”’• . . . 0-0035 = 0-0416

“;”” . . . 0-0017 = 0-0212

. . . . 0-0008 = 0-0106

. . . . 0-0005 = 0-0062

‘ .‘J . . . 0-0003 = 0-0041

. 0-0002 = 0-0021

The Cyathus, or cup . . for 1 ozj Hemina, or cotyle . . — 9 oz Libra, or pint . . . — 12 oz Sextarius, or J of a congius — 18 oz Congius, or gallon . . — 108 oz In 1720, when the Pharmacopoeia was im- proved by Sir Hans Sloane and Dr. Quincy, the liquids were ordered by measure, and the gallon adopted by the London College was that just enacted for wine and spirituous liquors, containing 231 cubic inches, divided into eight pints; they divided the pint, which holds six- teen avoirdupois ounces, ten drachms, seven- teen grains of water, into sixteen ounces, and these into eight drachms. Smaller quantities were ordered by drops, supposed to be equal to grains; but now the dram measure is di- vided into sixty minims, and graduated, tubes used to measure them, so that the old divisions of the avoirdupois ounce were, and are still re- tained in respect to liquids.

Aeriform fluids are measured by cubic inches. The relation between wine measure, with the college divisions, and cubic inches, is thus ex- pressed.

Although the quarter ounce is only 109 grains •375, it will be convenient in adding two or more of these reductions together to take the even 110 grains as its value.

The Scotch pound trone is equal to 9600 grains Scotch troy weight, or 9527 grains English -25 : the Scotch Dutch troy pound is equal to 7680 Scotch grains, or 7620 grains English -8 : both pounds are divided into sixteen ounces, the ounce Dutch equal to 476 grains English -3.

Besides the regular weights, articles are some- times quoted by the weight of seeds or kernels, as the weight of a nutmeg, or of so many black pepper corns. In India they use the paddy weight, or that of the grains of rough rice, each of which is equal to about 2-5ths of a grain ; the gulivindum weight, or that of a jumble bead, equal to about one grain ˆ; the retti weight, equal to about two grains fs. Gold coins are sometimes used, as the gold fanam weight equal to eight grains ; the star pagoda weight equal to about eighty-four grains.

MEASURES.

In the old editions of the London Pharmaco- poeia the liquids were compounded by avoirdu- pois weight; and the following terms were used for expressing a determinate number of ounces.

Wine and Medical Cubic 1000th

Measure. inches, parts. 10 gallons 2310-000

5 . . . , ... 1155-000

3 . ....

693-000

2 — — — I

462-000 231-000 115-500 57-750 28-875

21-645

14-437 7-218 3-609

% gallon, or four pints 2 pints . . ... 1 pint .... £ pint, or twelve ounces a medical measure 5 £ pint, or eight ounces £ pint, or four ounces 2 ounces

1 ounce ....

1-804

6 drachms

^

1-353 0-902 0-451

2 drachms

1 drachm

0-225

| drachm, or thirty minims 20 minims

0-112 0-056

10 .

0-037

5 — — —

0-018

3 ^_

0-011

a ....

0-007

1 ....

0-003

Scotch gill .... mutch ken

6-462 25-85

choppen

51-7 103-4 206-8 827-28

quart

- o-nllnn

The Scotch pint is equal to forty-one ‘ounces trone of Tay water, or fifty-five ounces troy of Leith water; specific gravity of Tay water 100, of Leith water 103.

Ale and beer measure is seldom mentioned by medical or chemical writers; the gallon con- tains 282 cubic inches ; thirty-two gallons are a London barrel of ale, thirty-four a country barrel of either ale or beer, and thirty-six a London barrel of “beer. Nor is dry measure often used ; the Winchester bushel, of eight gal- Jons, measures 2150 cubic inches -4, or one cubic foot -822, and the quarter eight bushels.

The imperial gallon, lately added to the others in use, is established by the weight of distilled water it will hold at 62° Fahrenheit, the

barome- ter standing at thirty inches.

The gallon is to hold ten avoirdupois pounds of water, and must consequently measure 277 cubic inches -274.

The pint is to hold twenty avoirdupois ounces, and should of course measure thirty-four cubic inches ‘659*

The avoirdupois ounce measure of water is therefore one cubic inch -73298.

Ad gr. acid. — Ad gratam aciditatem, to anagreeablt acidity.

Ad iibit. — Ad libitum, at pleasure.

Add. — Adde, add ; addantur, let them be added ; ad- dendus, to be added.

Admov. — Admoveatur, let it be applied ; admovean- tur, let them be applied.

Adst. febre — Adstante febre, the fever being present.

Aggred. febre — Aggrediente febre, the fever coming on.

Altern. horis — Alternis horis, at every other hour.

Alvo adst. — Alvo adstricto, the belly or bowels being bound.

Aq. bull. — Aqua bullions, boiling water.

Aq.ferv. — Aqua fervens, boiling water.

His ind. — Bis indies, twice daily.

BB. Bbds. — Barbadensis, Barbadoes.

Bull. — Bulllat, let it boil; bulliant, let them boil.

Caerul. — Caeruleus, blue.

Cap. or Capt. — Capiat, let him take, [i. e. let the pa- tient take.]

C. m. — Cras mane, to-morrow morning.

Coch. ampl. — Cochleare amplum, a large spoonful.

Coch. infant. — Cochleare infantis, a child’s spoonful.

Coch. magn. — Cochleare magnum, a large spoonful.

Coch. mod. — Cochleare modicum, a middling -sized spoonful, i. e. a dessert spoonful.

The troy ounce of water measures one cubic Coch- Pa™-— Cochleare parvum, a little spoonful, or

inch -9013214.

The weight of a cubic inch of water is 252 grains -456 ; and that of a cubic foot is sixty-two avoirdupois pounds -3206.

A cubic foot of air, or 1728 cubic inches, weighs 528 troy grains -367, or one avoirdupois ounce, three drachms, eight grains -23.

Besides these measures, other irregular mea-

tea-tpoonful. Col. — Colatus, strained. Colat. — Colatur, let it be strained. Colat. — Colaturae, of or to the strained [liquor.] Colent. — Colentur, let them be strained. Cfmp. — Compositus, compound. Cont. rem. — Continuentur remedia, let the medicines

be continued. Coq. — Coque, boil ; or, coquantur, let them [i. e. the

ingredients] be boiled.

sures of uncertain content, are used : —

A table spoonful, cochlearium magnum, of Crast- — Crastfnus, of to-morrow.

syrup ˆft. C»y.— Cujus, of which.

of distilled waters 3iijft to 3ft. Ciyurf.— Cujuslibet, of any.

of spirits and tinctures 3ij to 3iij. ˆf *&*?° theaBi Y1 ° CM? 0/ teB' –

A dessert spoonful, cochlearium mediocre, of e6′ f'V KYˆ sPlsslt"do' a ^^ COTSiS(ence

Uecub. — Decubitus, lying down.

water 3iJ. j)e d in d — De die in diem, /row day to day.

A tea or coffee spoonful, cochlearium parvum, – of syrup 3j to 3ij

of distilled waters 9jft to 9ij.

of spirit and tinctures 9j to 9jft.

of a light powder, as magnesia,

9ft to9j.

of a heavy powder, as sulphur, ®im- — Dimidius, one half.

alvi — Dejectlones alvi, throwings down of the

bowels, — stools. Det. — Detur, let it be given; dentur, let them be

given.

Dieb. alt. — Diebus alternis, every other day. Dieb. tert. — Diebus tertiis, every third day

9jft to 9ij. of a metallic oxide 3j to 9iiij. A thimbleful, clypeola metallica pro digitis, is usually the same as a tea spoonful. A tea-cup, vasculum pro the&, ˆiij to Jiv.

Dir. prop. — Directione proprT&, with a proper direc- tion.

Donee alv. bis dej. — Donee alvus bis dejiciatur, until the bowels are twice moved.

Donee alv. sol.fuer. — Donee alvus soluta fuSrit, until the bowels shall have become relaxed.

A wine glass, scyphus pro vino, cyathus, Jjft. Ejusd.- Ejusdem, of the same.

APPENDIX IV.

A List of ABBREVIATIONS taken from the PUPIL'S PHARMACOPOEIA by MR. MAUGHAM. An exceedingly useful publication for medical students whose knowledge of Latin is not ex- tensive.

A. or aa. — a»a, ana, signifies of each. It is placed after two or more substances, thus : — R. Tincturse lavandulae,

cinnamon! , aa 3ij«

i. e. take of tincture of lavender, ana of tinc- ture of cinnamon, of each two drachms.

Abdom. — Abdomen, the belly.

Abs.febr. — Absente febre, the fever being absent.

Ad 2 vie. — Adduas vices, at two takings.

Enem. — Enema, a clyster ; plural, enemSta, clysters.

It is deyved from the Greek •>«>!/«, to inject, and

is of the neuter gender. Ext. sup. alut. — Extende super alutam, spread upon

leather.

F. pil. xij. — Fac piliilas duodecim, make twelve pills Feb. dur. — Febre durante, during the fever. Fern, intern. — Femortbusinternis, to the inner part of

the thighs. Ft. embrocat. — Fiat embrocatlo, let an embrocation be

made.

Ft.gargar. — Fiat gargarismus, let a gargle be made. Ft. haust. — Fiat haustus, let a draught be made. Ft. mist. — Fiat mistnra, let a mixture be made. •- Ft. pit. xij. — Fiant pilulae duodecim, let twelve pUla

be made.

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Ft* pulv. — Fiat pulvis, let a powder be made.

Ft. or F. venaes. — Fiat venassectio, let bleeding be performed.

Fist. arm. — Fistula armata, a prepared pipe, i. e. a clyster-pipe and bladder prepared for use.

Fl. — Fluidus, liquid.

Gel. quav. — Gelatinˆ quavis, in any sort of jelly.

G. G. G. — Gummi guttae Gamblae, Gamboge drops.

Gr. — Granum, a grain ; or grana, grains.

Gtt. — Gutta, a drop ; or guttae, drops.

Gutt. quibusd. — Guttis quibusdam, with a few drops.

Har. pit. sum. iij. — Harumpilularum sumantur ties, let three of these pills be taken.

Hor. decub. — Hora decubltus, at the hour of lying down, i. e. at going to bed.

Hor. som. — Hor& somni, at the hour of sleep, i. e. at bed-time.

Hor. un. spatio — Horas unius spatio, at the eipirati»n of in hour.

Hor. interm. — Horls intennedlis, at intermediate hours.

Ind. — Indies, daily.

In pulm. — In puimento, in gruel.

Inj. enem. — Injiciatur en£ma, let a clyster be given.

Lot. dol. — LatSri dolenti, to the affected side.

M. — Misce, mix ; also mensura, by measure ; and manipiilus, a handful.

Mane pr. — Mane primo, early in the morning.

Min. — Minimum, the sixtieth part of a fluid drachm.

Mitt. — Mitte, send ; mittatur let it be sent ; mittan- tur, let them be sent.

Mitt. sang, ad 3xvj- saltern. — Mittatur sanguis ad unclas sedecim saltern, let blood be taken away to sixteen ounces at least.

Mod. prcesc. — Modo praescripto, in the manner pre- scribed.

Mor. sol. — More sollto, in the usual manner.

N. — Numero, in number.

N. M. — Nux moschata, a nutmeg.

O. — Octarius, a wine pini.

Ol. lini s. i. — Olgum lini sine igne, linseed oil without fire, [i. e. cold

drawn.]

Omn. bid. — Omni biduo, every two days.

Omn. bih. — Omni bihorio, every two hours.

Omn. hor. — Omni hor£, every hour.

Omn. man. — Omni mane, evefy morning.

Omn. noct. — Omni nocte, every night.

Omn. quadr. hor. — Omni quadrante horae, every quar- ter of an hour.

Oz. — The ounce avoirdupois weight.

P. — Pondo by weight.

P. M. — Partes aequales, equal parts.

P. D. — Pharmacopoeia Dublinensis, pharmacopoiia of Dublin.

P. E. — Pharmacopoeia Edinensis, pharmacopoeia of Edinburgh.

P. L. — Pharmacopoeia Londinensis, pharmacopoeia of London.

Part, vie. — Partltis viclbus, in divided doses.

Per. op. emet. — Peracta operatlone emetlci, the ope- ration of the emetic being finished.

Post sing. sed. liq. — Post singulas sedes liquidas, after each liquid or loose stool.

P. r. n. — Pro re nata, occasionally [i. e. according to circumstances.]

P. rat. eet. — Pro ratlone aetatis, according to the state of age [i. e. according to the age of a person.]

P. or Pug. — Pugillus . This word in Pliny signifies a handful, but it is intended to denote a gripe be- tween the finger and thumb.

Q. P. — Quantum placet, as much as you please.

Q. s. — Quantum sufficiat, as much as may be sufficient.

Qqe. hor. — Quaque hor&, at every hour. Quor — Quorum, of which.

R. — Recipe, take.

Red. in milv. — Redactus in pulve'rem, leduced to

powder.

Redig. in pulv. — Redigatur in pulverem, let it le re- duced to powder Reg. umbil. — Regio umbilici, the region of the navel

[i. e. the parts about the navel.] Repel. — Repetatur, let it be continued ; or repetan-

tur, let them be continued. S. A. — Secundum artem, according to art. Semidr. — Semidrachrna, half a drachm. Semih. — Semihora, half an hour. Sesunc. — Sesuncla, an ounce and a half. Sesquih. — Sesquihora, an hour and a half. Si n. vol. — Si non valeat, if it should not answer. Si op. sit — Si opus sit, if there should be occasion. Si vir. perm. — Si vires permittaat, if the strength

permit. Sign. n. pr. — Signetur nomine proprlo, let it be marked

with the proper name ; as, Tincture of lavender, in- stead of Tinctura lavandulte, &c. Sis. —Semi, half.

St. — Stet, let it stand ; or stent, let them stand. Sub Jin. coct. — Sub finem coctiSnis, towards the end

of boiling [i. e. when boiling is just fmvshed.] Sum. tal. — Sumat talem, let him [i. e. the patient]

take such as this.

S. V. — Spirltus vinosus, ardenttspirit . S. V. R. — Spirltus vin5sus rectificatus, rectified spirit

of wine. S. V. T. — Spirltus vinosus tenuis, weak spirit of

wine [i. e. proof spirit ; half spirit of wine, and

half water.]

Temp. dext. — Tempori dextro, to the right temple. Temp, sinist. — Tempori sinistro, to the left temple. T. 0. — Tinctura opii, tincture of opium. T. 0. C. — Tinctura opii camphorata, camphorated

tincture of opium — paregoric.

Ult. prcesc. — Ultimo praescriptus, the last prescribed. V. O. S. — Vitello ovi solutus, dissolved in the yolk of

Vom. urg. — Vomitione urgente, the vomiting taking

place [i. e. when the vomiting begins, j Zs. — Zinziber, ginger.

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As the articles in the Pharmacopoeia, like those in the Materia Medica, are all arranged alphabetically, it would be a useless repetition to add an alphabetic index ; we merely, therefore, present a list of the or- der in which the subjects are treated.

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PHARMECUSA, an island in the .Sgean Sea, where Julius Caesar was seized by pirates. PIIARMUTHI, in the ancient Egyptian chro- nology, one of the months of their year, answer- ing to April in the Roman kalendar.

PHARNABAZUS, the son of Pharnabazus, a satrap of Persia, and a general under Artaxerxes Longimanus. See PERSIA. He betrayed the celebrated Alcibiades to his enemies. He flou- rished about A. A. C. 409.

PHARNACE, a town of Pontus. PHARNACES, the favorite son of Mithridates the Great, king of Pontus, who ungratefully re- belled against him, and caused him to kill him- self. He was defeated by Caesar, in the expedi- tious battle of which he wrote home to Rome, Veni, Vidi, Vici. Pharnaces was afterwards killed in another battle with the Romans. See PONTUS.

PHARNACEUM, in botany, a genus of the trigynia order, belonging to the pentandria class of plants; and in the natural method ranking under the twenty-second order, caryophyllere.

PHARNAPATES, a general of the Parthians, under Orodes, who was killed in battle by the Romans.

PHARNUS, a king of Media, who was con- quered by Ninus king of Assyria. PHA'ROS, n. s. ? From Pharos in Egypt. PHARE. j A light-house ; a lantern on

the shore to direct ships.

He augmented and repaired the port of Ostia, buili a pharos or light-house. Arbuthnot on Coins.

PHAROS is a pile or erection raised near a port, where fire is kept burning in the night, to direct vessels near at hand. The Pharos of Alexandria, built in the island of Pharos at the mouth of the Nile, was anciently very famous, insomuch as to communicate its name to all the rest. This most magnificent tower consisted of several stories and galleries, with a lantern at '.<•>>>, in v,bich a light being continually burning,

might be seen 100 miles off. It was accounted one of the seven wonders of the world. It was built by the architect Sostrates, a native of Cnidos, or, according to some, Deiphanes, the father of Soctrates ; and cost Ptolemy Philadel- phus 800 talents. The several stories were adorned with columns, balustrades, and gal- leries of the finest marble and workmanship ; to which some add, that the architect had con- trived to fasten some looking-glasses so arti- ficially against the highest galleries that one could see in them all the ships that sailed on the sea for a great way. Instead of this noble structure, there is now only an irregular castle, without ditches or outworks of any strength, out of which rises a towef, which serves for a light- house, but has nothing of the beauty and gran- deur of the old one. The Colossus of Rhodes also served as a pharos.

PHAROS, in ancient geography, a small ob- long island adjoining the

continent of Egypt, over against Alexandria. On account of the port of Alexandria, the entrance to which was difficult and dangerous, the Pharos was called the key of Egypt, or of the Egyptian sea (Lucan) ; and Pharos, from being a proper name, is be- come an appellative to denote all light-houses from the magnificent building of that description on the island. It stood upon four crabs of glass.

PHAROS, an island on the coast of Illyricum, now Lesina.

PHARPAR, or PHARPHAR, one of the rivers of Damascus, or rather an arm of the Barrady or Chrysorrhoas, which waters Damascus and the country about it. 2 Kings v. 12. The river of Damascus has its fountain in the moun- tains of Lebanus. At its approach to the city it is divided into three arms, one of which passe* through Darr.ascus. The other two water the gardens round about, and then, reuniting, they lose themselves at four or five leagues from the

city, towards the north. See Maundrell's Travels from Aleppo to Jerusalem ; also the articles ABANA and DAMASCUS.

PHARSALIA, an epic poem, composed by Lucan on the civil war between Pompey and Caesar, and particularly on the victory of the latter over the former. It is a poem universally acknowledged to have both great beauties and great defects ; but we are the less capable of esti- mating its merit as a whole, that either time has deprived us of the last books, or its author has left it incomplete. <

PHARSALIA or PHARSALIUM, PHARSALOS or PHARSALUS, a town of Phthiotis, a district of Thessaly, near Pheras and Larissa, now Farsa, to which last place Pompey fled from the plains of Pharsalus. It is watered by the Enipeus, which falls into the Apidanus, and both into the Peneus. Between Pharsalus and Enipeus Pom- pey drew up his men at the fatal battle of Phar- salia. At the commencement of this battle the whole plain was covered, from Pharsalia to the Enipeus, with two armies, dressed and armed after the same manner, and bearing the same en- signs. At first both kept a mournful silence ; but at length the trumpets sounded, and Caesar's army advanced to begin the attack, when Caius Crastinus, a centurion, at the head of 120 men, threw himself upon the enemy's first line with incredible fury, and made a great slaughter of them. But while he was still pressing

forward, forcing his way through the first line, one of Pompey's men ran at him with such violence that the point of his sword, piercing him in the mouth, came out at the hind part of his neck. Pompey's soldiers then took courage, and stood the enemy's onset. While the foot were thus sharply engaged in the centre, Pompey's horse in the left wing marched up, and, having widened their ranks with a design to surround Caesar's right wing, charged his cavalry, and forced them to give ground. Hereupon Caesar ordered his horse to retreat a little, and give way to the six cohorts, which he had posted in the rear as a body of reserve. These, upon a signal, coming up, charged the enemy's horse with determined resolution, aiming only at the faces of the enemy. This new manner of fighting had the desired ef- fect. For the young patricians, whom Caesar called the young dancers, not willing to have their faces deformed with scars, turned their backs, and fled in the utmost confusion, leaving the foot at the mercy of the enemy. Caesar's men did not pursue them; but, charging the foot, now naked and unguarded, surrounded them, and cut most of them to pieces. Pompey was so transported with rage at seeing the flower of his forces thus cut in pieces, that he left his army, and retired slowly to his tent, without speaking a word, and continued there, like one distracted, till his whole army was defeated. Caesar no sooner saw himself master of the field than he marched to attack Pompey in his en- trenchments ; upon which the latter stole out at the decuman gate, and took the road to Larissa, which city had hitherto shown great attachment to him, but where he was now murdered; though some say this happened at Pelusium. (See POM- 1'iy.1) In the mem time Caesar began the attack

on the enemy's camp, which was vigorously de- fended by the cohorts Pompey had left to guard it; but they were at length forced to yield. Caesar was not a little surprised when, after having forced the entrenchments, he found the enemy had made preparations beforehand for a festival after the victory, which they thought cer- tain. In Pompty's tent Caesar found the box in which he kept his letters; but, with a magna- nimity worthy of himself, he burnt them all, without reading one; saying that he had rather be ignorant of crimes than obliged to punish them. The next day, when the dead were num- bered, it appeared that Caesar had scarcely lost 200 men; among whom were about thirty cen- turions, whom he caused to be buried with great solemnity. He paid particular honors to the body of Crastinus, and ordered his ashes to be deposited in a tomb. On Pompey's side the number of the dead amounted to 15,000 accord- ing, to some, and to 25,000 according to others. Caesar took 24,000 prisoners, eight eagles, and 180 ensigns.

PHARSALUS, or PHARSALIA, an extensive plain of Thessaly, between the above town and the Enipeus, in which the decisive battle above-mentioned was fought.

PHARUS, in botany, a genus of thehexandria order, belonging to the moncecia class of plants ; and in the natural method ranking under the fourth order, gramina. The male calyx is a bi- valved uniflorous glume; the corolla a bivalved glume ; the female calyx the same with the male; the corolla* a uniflorous, long, and wrapping glume. There is but one seed.

PIIARUSII, or PHAURUSII, an ancient nation of Africa, beyond Mauritania.

PHARYBUS, a river of Macedonia, which runs into the ./Egean Sea; by some called Baphyrus.

PHARYCADON, an ancient town of Mace- donia, on the Peneus.

PIIARYGE, an ancient town of Locris.

PHARYNGOTOMY, n. s. Gr. 0apn£ and Ttfivd), to cut. An incision into the pharynx or wind pipe, made when some tumor in the throat hinders respiration.

PHARNYX. See ANATOMY, Index.

PHARZA, or FARSA, a town of European Turkey in Janna, the ancie”nt Thessaly, anciently called Pharsalia, fourteen miles south of Larissa. See FARSA and PHARSALIA.

PHASCUM, in botany, a genus of the order of musci, belonging to the cryptogamia class of plants. The anthera is operculated, with a ciliated mouth ; the calyptrae are -minute.

PHASE, or PHASJS. See PHASIS.

PHASELIS, an ancient town of Pamphylia, much frequented by pirates.

PHASELS. Lat. phaseoli. French beans. — Ainsworth. See PHASEOLUS.

PHASEOLUS, the kidney-bean ; a gsnus of the decandria order, belonging to the diadelphia class of plants, and in the natural method rank- ing under the thirty-second order, papilionaceae. Linnaeus enumerates fifteen species. Of these, one comprehends many varieties. Those princi- pally cultivated for the table are, 1. The com- mon

white, or Dutch kidney-bean; 2. The

smaller kidney-bean, called the Battersea kid- ney-bean ; and, 3. The upright sort, called the tree kidney bean. 1. The first sort was some time ago propagated in England, and is still in Holland ; it grows very tall, and requires long stakes and poles to climb on, and its beans are considerably broad ; this makes them less saleable in the markets, people supposing them to be old because they are broad ; and they are hence grown into disuse, though a much more valuable kind for eating than any other. 2. The Battersea bean is what is more universally cultivated : it never grows very tall, nor rambles far, and the air can easily pass between the rows, because of its moderate growth; this makes it bear plenti- fully, and ripen well for the table. It is the best tasted bean, except the last. 3. The tree kidney-bean is also a plentiful bearer, and never rambles, but grows up in form of a shrub ; but its beans are broader than the Battersea kind, and are not so well tasted. They are all propa- gated from seeds, which are to be put into the ground in the end of March or beginning of April for an early crop; but they should have a war.ru situation and a dry soil ; and be planted in a dry season. The manner of planting them is to draw lines with a bough over the bed, at three feet and a half distance, into which the seeds are to be dropped about two inches asunder; and the earth is to be drawn over them with the head of a rake, to cover them about an inch deep. In a week after sowing the plants will appear, and the earth should be drawn up about their stalks as they rise up ; for a few days after this they will require no farther care ex- cept to be kept clear from weeds, and, when the beans appear, to hare them gathered twice a-week ; for, if the beans are suffered to hang on too long, they not only become of no value, but they weaken the plant. The first crop of “kidney- beans will continue a month in good order ; and, to supply the table afterwards, there should be fresh sowings in March, April, May, and June; the last of which will continue till the frosts come to destroy them. Some raise their early crops on hot beds ; and this is to be done exactly in the same manner as the raising the early cu- cumbers.

PHASEOLUS, a species of phaseolus, apparently a very useful one, has been discovered by M. Moraney, ‘an inhabitant of Morne- Rouge, de- pendent on the Cape ;’ we suppose Cape Fran- cois of the island of St. Domingo. It requires no peculiar management : its roots are in season when the pods blacken, and its fibres run in every direction, searching

for nourishment through the clefts of rocks, and receiving the impression of the strata without injury. If the principal root is left, the plant shoots again and flourishes as before ; but it is not yet ascertained whether it puts forth any new roots. The seeds are not alimentary when dressed, as if nature designed them only for propagating other plants. Every use which a farinaceous plant can supply this new phaseolus has successfully answered.

PHASIANIA, in ancient geography, a coun- try of Asia, seated on the banks of the PHASIS.

PIIASIANI, the people of Phasiana. They were originally from Egypt.

PHASIANUS, in ornithology, a genus of birds belonging to the order of gallina?. The cheeks are covered with a smooth naked skin. Gibbon, in his Roman History, tells us that the name phasianus is derived from the river Phasis, the banks of which are the native habitation of the pheasant. There are many species and va- rieties.

1. P. argus is yellowish, with black spots, a red face, and a blue crest on the back of the head. It is found in Chinese Tartary. 'The Argus,' says Latham, ' though it be a native in China, is very commonly found in the woods of Sumatra, where it is called coo-ow. It is found extremely difficult to be kept alive for any con- siderable time after catching it in the woods; never for more than a month. It seems to have an antipathy to the light, being quite inanimate in the open day ; but, when kept in a dark place, it appears perfectly at ease, and sometimes makes its note or call, from which it takes its name ; and which is rather plaintive, and not harshjike that of a peacock. The flesh resembles that of the common pheasant.'

2. P. colchicus, red, with a blue head, a wedge-shaped tail, and papillous cheeks. It is a native of Africa and Asia.

3. P. gallus, the common dunghill cock and hen, with a compressed caruncle or fleshy comb on the top of the head, and a couple of caruncles or wattles under the chin. The ears are naked, and the tail is compressed and erected. Of all birds perhaps this species affords the greatest number of varieties ; there beinˆ scarcely two to be found that exactly resemble each other in plumage and form. The tail, which makes such a beautiful figure in most of these birds, is en- tirely wanting in others ; and in some even the rump also. The toes, which are usually four in all animals of the poultry kind, yet in one species amount to five. The feathers, which lie so sleek and in such beautiful order in most of those we are acquainted with, are in a peculiar

species all inverted, and stand staring the wrong way. Nay, there is a variety that comes from Japan, which, instead of feathers, seems to be covered over with hair. It is not well ascertained when the cock was first made domestic in Europe; but it is generally agreed that he was first brought to Europe from Persia. Aristophanes calls the cock the Persian bird; and tells us he enjoyed that kingdom before some of its earliest monarchs. This animal was known so early even in the most savage parts of Europe that the cock was one of the forbidden foods among the ancient Britons. Indeed the domestic fowl seems to have banished the wild one. Persia itself seems no longer to know it in its natural form. But the cock is still found in the islands of Tinian, in many others of the Indian Ocean, and in the woods on the coast of Malabar, in its ancient state of inde- pendence. In his wild condition his plumage is black and yellow, and his comb and wattles yel- low and purple. There is another peculiarity also in those of the Indian woods; their bones, which, when boiled, with us are white, in those are as black as ebony. No animal has greater courage than the cock when opposed to one of his own species ; and in every part of the world

where refinement and polished manners have not entirely taken place, cock-fighting is a principal diversion. In China, India, the Philippine Islands, and all over the east, cock-fighting is the sport and amusement even of kings and. princes. With us it is declining every day; and it is to be hoped it will in time be abolished even among the vulgar. The cock claps his wings before he sings or crows. His sight is very piercing ; and he never fails to cry in a pe- culiar manner when he discovers any bird of prey in the air. His extraordinary courage is thought to proceed from his being the most sala- cious of all birds. A single cock suffices for ten or a dozen hens ; and it is said that he is the only animal whose spirits are not abated by in- dulgence. But he soon grows old ; the radical moisture is exhausted ; and in three or four years he becomes utterly unfit for impregnation. ‘ Hens also,’ says VVilloughby, ‘ as they for the greatest part of the year daily lay eggs, cannot suffice for so many births, but for the most part after three years become barren.’ The hen sel- dom clutches a brood of chickens above once a season, though instances have been known in which they have produced two. The number ofi eggs a domestic hen will lay in the year are above 200, provided she be well fed and supplied with water and liberty. It matters not much whether she be trodden by the cock or not ; she will continue to lay, although the eggs of this kind

can never by hatching be brought to produce a living animal. Her nest is made without any care, if left to herself; a hole scratched in the ground, among a few bushes, is the only preparation she makes for this season of patient expectation. Nature, almost exhausted by its own fecundity, seems to inform her of the proper time for hatching, which she herself testi- fies by a clucking note, and by discontinuing to lay. The good housewives, who often get more by their hens' eggs than by their chickens, often artificially protract this clucking season, and sometimes entirely remove it. As soon as a hen begins to cluck, they stint her in her provisions; when, if that fails, they plunge her into cold water ; this, for the time, effectually puts back her hatching; but then it often kills the poor bird, who takes cold and dies under the operation. If left entirely to herself, the hen would seldom lay above twenty eggs in the same nest, without attempting to hatch them. In the wild state the hen seldom lays above fifteen eggs. When the hen has hatched her chickens, her affection seems to alter her very nature, and correct her imper- fections. No longer voracious or cowardly, she abstains from all food that her young can swal- low, and flies boldly at every creature that she thinks is likely to do them mischief. Capons may very easily be taught to clutch chickens. To effect this they pluck the feathers off his breast, and rub the bare skin with nettles ; they then put the chickens to him, which presently run under his breast and belly, and probably rubbing his bare skin gently with their heads, allay the stinging pain which the nettles had just produced. This is repeated for two or three nights, till the animal takes an affection to the chickens that have thus given him relief, and

continues to give them the protection they seek for. He from that lime brings up a brood of chickens like a hen, clutching them, feeding them, clucking and performing all the functions of the tenderest parent. A capon once accus- tomed to this service will not give over ; but when one brood is grown up, he may have another nearly hatched put under him, which he will treat with the same tenderness he did the former. The cock, from his salaciousness, is a short lived animal in a domestic state ; but how long these birds live, if left to themselves, is not yet well ascertained. Aldrovandus hints their age to be ten years ; and it is probable that this may be its extent. They are subject to some- disorders ; and as for poisons, besides nux vo- mica, which is fatal to most animals except man, they are injured, as Linnaeus asserts, by elder- berries, of which they are not a little fond. Of this species Mr. Latham enumerates no less than thirteen varieties, beginning with the wild cock, which is a third less in the body than the domes- tic cock. This variety he imagines to be the original stock whence all our domestic va- rieties have sprung. They appear to be

natives of the forests of India. There are but few places, however, as he observes, where the different voyagers have not met with cocks and hens eithei wild or tame. Those of Pulo Condore are very much like our own, but considerably less, being only of the size of a crow. Damp. Voy. vol. I. p. 392. Those of Sumatra and Java are remark- ably large, and are called the St. Jago breed. The cock is so tall as to peck off a common dining-table. When fatigued, he sits down on the first joint of the leg. Hist. Sumatra, p. 98. They are found in New Guinea, but not in great plenty. For. Voy. p. 105. Forster observes that they are numerous at Easter, Society, and Friendly Isles ; at the two last they are of a prodigious size. They are not uncommon at the Marquesas, Hebrides, and New Caledonia; but the Low Isles are quite destitute of them. See Obs. p. 193. Ducks and poultry are numerous in the Sandwich Isles. Cook's Journal, p. 229. They are not found to breed in the northern parts of Siberia, and in Greenland are only kept as rarities. Faun. Groen.

4. P. Guineensis, the motmot, or Guinea pheasant, is brownish, somewhat red below, with a wedge-like tail, and wants spurs.

5. P. necthemerus is white, with a black crest and belly, and a wedge-shaped tail. It is a native of China.

6. P. pictus has a yellowish crest, a red breast, and a wedge-shaped tail. It is a native of China.

PHA'SIS, n. s. In the plural phases. Fr. phase; Gr. QaaiQ. Appearance; particular ap- pearance of a heavenly body, as the moon, &c.

All the hypotheses yet contrived, were built upon too narrow an inspection of the phases of the uni- verse. Glanmlle.

He o'er the seas shall love, or fame pursue ; And other months, another phasis view ; Fixt to the rudder, he shall boldly steer, And pass those rocks which Tiphys used to fear.

Creech. Such alas ! Are the illusions of this Proteus life ;

All, all is false : through every phusis still Tis shadowy and deceitful. Kirk White.

PHASIS, in ancient geography, a river which falls into the Euxine, about 700 miles from Con- stantinople. ‘ From the Iberian Caucasus,’ says Gibbon, ‘ the most lofty and craggy mountains of Asia, that river descends with such oblique vehe- mence that in a short space it is traversed by 120 bridges. Nor does the stream become placid and navigable till it reaches the town of Sarapana, five days’ journey from the Cyrus, which flows from the same hills, but in a contrary direction, to the Caspian Lake. The proximity of these rivers has suggested the practice, or at least the idea, of wafting the precious merchan- dise of India down the Oxus, over the Caspian, up the Cyrus, and with the current of the Phasis into the Euxine and Mediterranean Sea. As it successively collects the streams of the plain of Colchos, the Phasis moves with diminished speed, though accumulated weight. At the mouth it is sixty fathoms deep, and half a league broad ; but a small woody island is interposed in the midst of the channel : the water, so soon as it has deposited an earthy or metallic sedi- ment, floats on the surface of the waves, and is no longer susceptible of corruption. In a course of 100 miles, forty of which are navigable for large vessels, the Phasis divides the celebrated region of Colchos, or Mingrelia, which, on three sides, is fortified by the Iberian and Armenian mountains, and whose maritime coast extends about 200 miles, from the neighbourhood of Tre- bizond to Dioicurias, and the confines of Circas- sia. Both the soil and climate are relaxed by excessive moisture ; twenty-eight rivers, besides the Phasis and his dependent streams, convey their waters to the sea ; and the hollowness of the ground appears to indicate the subter- raneous channels between the Euxine and the Caspian.’

PHASIS, an ancient city of Colchis, so named from the above river.

PHASM, n. x. Gr. tyaapa. Appearance; phantom; fancied apparition.

Thence proceed many aereal fictions and phasms and chym;eras created by the vanity of our own hearts or seductions of evil spirits, and not planted in them by God. Hammond.

PHASM AT A, PHASMS, in physiology, are certain appearances arising from the various tinctures of the clouds by the rays of the heavenly bodies, especially the sun and moon. These are infinitely diversified by the different figures and situations of the clouds, and the appulses of the rays of light ; and, together with the occasional flashings and shootings of different meteors, they have, no doubt, occasioned those prodigies of armies fighting in the air, &c., of which we have such frequent accounts in most ancient authors. See 2 Maccab. xi. 8 ; Melancth. Meteor; 2 Shel. de Comet, ann. 1618 ; Josephus.

PHASSAC HATES, in lithology, a species of agate, which the ancients, in its various appear- ances, sometimes called leucachates and peri- leucos.

PHAUSINGES, in medicine, Gr. ˆawffiyyfc, red circles in the leg, produced by the heat of the fire.

PHAVORINUS, an ancient lexicographer, author of a Greek Lexicon, still extant ; the best edition of which is that in fol. Venet. 1712. Lempriere. Perhaps he is the same with Favo- rinus, a native of Aries in Gaul. See FAVORINUS.

PHAYLLUS, tyrant of Ambracia, brother of the celebrated Onomarchus of Phocis. See PHO- cis. Pans. x. c. 2.

PHEA, or PHEIA, an ancient town of Elis. Homer's Iliad, vii.

PHEAS'ANT, n. s. Fr. faisan; Lat. phasi- anus, from Phasis a river of Colchis. A kind of wild cock.

The hardest to draw are tame birds ; as the cock, peacock, and pheasant. Peacham on Drawing.

Preach as 1 please, I doubt our curious men Will chuse a pheasant still before a hen. Pope.

Not so the pheasant on his charms presumes, Though he too has a glory in his plumes. He, christian-like, retreats with modest mien To the close copse, or far sequestered green, And shines without desiring to be seen. Cowper.

PHEASANT, in ornithology. See PHASIANUS. Mr. Latham enumerates nine different species of pheasant, and six varieties of the common ; but as he gives them no distinctive, trivial, or classi- cal names, we reserved a description of several of them to this article.

1. PHEASANT, COMMON. Latham observes that the common pheasant is now found in a state of nature in almost the whole of the old continent. They sometimes, he says, come into farm-yards near woods, and produce cross breeds with common hens. ' M. Salerne,' he adds, ' re- marks that the hen pheasant, when done laying and sitting, will get the plumage of the male, and after that become so little respected by him, as to be treated with the same incivility as he would show to one of his own sex. Pheasants were originally brought into Europe from the banks of the Phasis, a river of Colchis, in Asia Minor; and from whence they still retain their name. Next to the peacock, they

are the most beautiful of birds, as well for the vivid color of their plumes as for their happy mixtures and va- riety. These birds, so beautiful to the eye, are not less delicate when served up to the table. Their flesh is considered as the greatest dainty. A spirit of independence seems to attend the pheasant even in captivity. In the woods, the hen pheasant lays from eighteen to twenty eggs in a season ; but, in a domestic state, she seldom lays above ten. In the same manner, when wild, she hatches and leads up her brood with patience, vigilance, and courage ; but when kept tame, she never sits well, so that a hen is generally her substitute upon such occasions : and, as for lead- ing her young to their food, she is utterly igno- rant of where it is to be found ; and the young birds starve, if left solely to her protection. The pheasant, therefore, on every account, seems bet- ter left at large in the woods than reclaimed to pristine captivity. Its fecundity when wild is sufficient to stock the forest ; its beautiful plumage adorns it; and its flesh retains a higher flavor from its unlimited freedom. At night they roost upon the highest trees of the wood ; and by day they come down into the lower brakes and bushes, where their food is chiefly found. They

generally make a kind of flapping noise when they are with the females ; and this often apprises the sportsman of their retreats. At other times he traces them in the snow, and frequently takes them in springs. But of all birds they are shot most easily ; as they always make a whirring noise when they rise, by which they alarm the gunner, and being a large mark, and flying very slow, there is little chance of missing them. When these birds are taken young into keeping, they become as familiar as chickens. For her nest dry grass and leaves must be laid for her in the pheasantry. The young ones are very diffi- cult to be reared, and they must be supplied with ants' eggs, which is the food the old one leads them to gather when wild in the woods. To make these go the farther, they are to be chopped up with curds or other meat : and the young ones are to be fed with great exactness, both as to the quantity and the time of their supply. This food is sometimes also to be varied; and wood-lice, earwigs, and other insects, are to make a variety. The place where they are reared must be kept extremely clean ; their wa- ter must be changed twice or thrice a day ; they must not be exposed till the dew is off the ground in the morning, and they should always be taken in before sunset. When they become adult, they can very well shift for themselves; but they are particularly fond of oats and barley. The pheasant, when full

grown, seems to feed indifferently upon every thing that offers. A French writer asserts that they regale even upon carrion.

2. PHEASANT, COURIER. The courier phea- sant is but very imperfectly described by Fer- nandez ; and is said to be eighteen inches long. The general color of the plumage is white, in- clined to fulvous ; about the tail they are black, mixed with some spots of white ; the tail itself is long, and of a green color, reflecting in some lights like the feathers of a peacock : the wings are short. This species inhabits the hotter parts of Mexico ; flies slow ; but is recorded to outrun the swiftest horse.

3. PHEASANT, HYBRIDAL, a name given by Latham to a species or variety which is a mixed breed between the pheasant and cock; one of which was in the Leverian Museum.

4. PHEASANT, PAR KARA. The parraka is about the size of a small fowl, resembling it in the bill, legs, and body. Its length is twenty-three inches. The color of the bill is dark ru- fous ; the eyes are brown ; the general color of the plumage is a deep brown on the back, and fulvous under the belly : the top of the head is fulvous, and the feathers are somewhat long, but not so much as to form a real crest ; the wings are short ; the webs of some of the quills are somewhat rufous ; the tail consists of twelve fea- thers, is even at the end, about a foot in length, and is, for the most part, carried pendent; the legs are of a dark rufous, inclining to black; the claws are like those of a fowl. It is pecu- liar (says Mr. Latham) in its internal structure in respect to the windpipe; which, instead of entering directly the breast, ‘as in most birds, passes over the side of the left clavicle, and on the outside of the fleshy part of the breast, being

covered only by the skin ; then, taking a turn upwards, passes over the right clavicle into the breast, and is distributed through the lungs in the usual way. The female has not this circum- volution of the windpipe. The hannequaw, men- tioned by Bancroft, is probably the same bird. He says that it is black, roosts in trees, and may be heard early in the morning, distinctly but hoarsely, repeating the word hannequaw (easily mistaken for parraquaw) very loud. These are found in the unfrequented woods of the inter- nal parts of Cayenne, Guiana, and many parts of South America. At sun-rise they set up a very loud cry, which is thought to be the loudest of all birds in the New World ; at which time the eyes appear red, as does a small skin under the breast, which is not at all seen, except when the bird makes such exertions, or is angry. This cry is very like the word parraquaw; and is repeated many times together ; and often many cry at once, or

answer one another, but most in breeding time, which is twice in the year; at each time laying from four to six eggs ; making the nest in low branches or stumps of trees, and behaving with their chickens in the same manner as hens. They feed on grain, seeds, and herbs ; but feed the young in the nest with worms and small insects. These, with many other birds, in- habit the woods by day, coming out into the open savannas morning and evening to feed ; at which times they are chiefly killed by the natives and near inhabitants. They may be brought up tame •. and their flesh is much esteemed.

5. PHEASANT, SUPERB. This bird Linnaeus describes from the various representations of it painted on paper hangings, and China-ware; and farther confirmed by a figure and descrip- tion in a Chinese book which came under his inspection.

In stocking a pheasantry, says Mr. Loudon, the general mode is to procure eggs from some establishment of this sort or otherwise. The fol- lowing are the directions of Castang, as given in Mowbray's Treatise on Poultry : — Eggs being provided, put them under a hen that has kept the nest three or four days ; and, if you set two or three hens on the same day, you will have the advantage of shifting the good eggs. At the end of ten or twelve days throw away those that are bad, and set the same hen or hens again, it' sitting hens should not be plenty. The hens having sat their full time, such of the young pheasants as are already hatched put into a basket, with a piece of flannel, till the hen has done hatching. The brood now come, put under a frame with a net over it, and a place for the hen, that she cannot get to the young pheasants, but that they may go to her : and feed them with boiled egg cut small, boiled milk and bread, alum curd, ants' eggs, a little of each sort and often. After two or three days they will be ac- quainted with the call of the hen that hatched them, may have their liberty to run on the grass plat, or elsewhere, observing to shift them with the sun, and out of the cold winds ; they need not have their liberty in the morning till the sun is up ; and they must be shut in with the hen in good time in the evening. Every thing now going on properly, you must be very careful (in

order to guard against the distemper to which they are liable) in your choice of a situation for breeding the birds up ; and be less afraid of foxes, dogs, polecats, and all sorts of vermin, than the distemper. Castang had rather en- counter all the former than the latter ; for

those with care may be prevented, but the distemper once got in is like the plague, and destroys all your hopes. What he means by a good situation is nothing more than a place where no poultry, pheasants, or turkeys, &c., have ever been kept; such as the warm side of a field, orchard, plea- sure-ground, or garden, or even on a common, or a good green lane, under circumstances of this kind; or by a wood side; but then it is proper for a man to keep with them, under a temporary hovel, and to have two or three dogs chained at a proper distance, with a lamp or two at night. He has known a great number of pheasants bred up in this manner in the most exposed situations. It is proper for the man always to have a gun, that he may keep off the hawks, owls, jays, magpies, &c. The dogs and lamps shy the foxes more than any thing ; and the dogs will give tongue for the man to be on his guard if smaller vermin are near, or when strollers make their appearance. The birds going on as before mentioned, should so conti nue till September, or (if very early bred) the middle of August. Before they begin to shift the long feathers in the tail, they are to be shut up in the basket with the hen regularly every night; and when they begin to shift their tail the birds are large, and begin to lie out, that is, they are not willing to come to be shut up in the basket : those that are intended to be turned out wild, should be taught to perch (a situation they have never been used to) ; this is done by tying a string to the hen's leg, and obliging her to sit in a tree all night : be sure you put her in the tree before sun-set ; and, if she falls down, you must persevere in putting her up again till she is contented with her situation ; then the young birds will follow the hen, and perch with her. This being done, and the coun- try now covered with corn, fruits, and shrubs, &c., they will shift for themselves. For such young pheasants as you make choice of for your breeding-stock at home, and likewise to turn out in the spring following, provide a new piece of ground, large and roomy for two pens, where no pheasants, &c., have been kept, and there put your young birds in as they begin to shift their tails. Such of them as you intend to turn out at a future time, or in another place, put into one pen netted over, and leave their wings as they are ; and those you wish to keep for breed- ing put into the other pen, cutting one wing of each bird. The gold and silver pheasants you must pen earlier, or they will be off. Cut the wing often ; and when first penned feed all your young birds with barley-meal, dough, corn, and plenty of green turnips.

Strict cleanliness is to be observed in feeding pheasants : the meat must not be tainted with dung, and the water to be pure and often re- newed. Ants' eggs being scarce, hog-lice, ear- wigs, or any insect may be given ; or artificial ants' eggs substituted, composed of flour beaten

up with an egg and shell together, the pellets rubbed between the fingers to the proper size. After the first three weˆks, in a scarcity of ants' eggs, Castang gives a few gentles, procured from a good liver tied up, the gentles, when ready, dropping into a pan or box of bran ; to be given sparingly, and not considered as common food. Food for grown pheasants, barley or wheat ; ge- nerally the same as for other poultry. In a cold spring hemp seed, or other warming seeds, are comfortable, and will forward the breeding- stock.

PHEASANT-POUTS. Young pheasants; for the driving and taking of which within nets, when you have found out an eye of them, place your nets cross the little paths and ways they have made, which are much like sheep tracks; and, if possible, you should find out one of their prin- cipal haunts, which may be easily known by the barrenness of the ground, their mutings, and the feathers which lie scattered about ; and always take the wind with you, for it is their custom to run down the wind ; place the nets hollow, loose, and circular-wise ; the nether-part must be fas- tened to the ground, and the upper side lie hollow, so that when any thing rushes in, it may fall and entangle it. Having so fixed the net, go to the haunts, and if you find the eye scattered, with your call draw them together,'and when you find them begin fo cluck and pipe to one another, then forbear calling, and take an instrument, by some called a driver ; which is made of strong white wands, or osiers, such as basket-makers use, which must be set in a handle : in two or three places it must be twisted or bound about with small osiers, according to the figure. With this driver, as soon as you see the pheasants gathered together, make a great noise on the boughs and bushes about you, which will so frighten them that they will all get close together, and run away a little distance, and stand to hearken ; then make the same noise a second time, which will make them run again, and continue the same till you have driven them into your nets, for they may be driven like sheep ; but, if it hap- pens that they take a contrary way, then make a croaking noise, as it were, in their faces, which will presently turn them the right way, as you would have them ; but, in using the driver, first observe secrecy, in keeping yourself out of their sight; for if they espy you they will run and hide themselves in holes, under shrubs, and will not stir till night. Secondly, take time and leisure, for rashness and over-haste spoil the sport.

PHEASANT-SHOOTING. This is now the only method (as hawking is disused) by which phea- sants are taken by the fair sportsman. See the article SHOOTING.

PHEASANT'S EYE, in botany. See ADOXIS.

PHEASANTS, ISLE OF, or ISLE DE FAISANS, or the ISLE OF CONFERENCE, an island between France and Spain, formed by the Bidassoa, abounding with pheasants. The Bidassoa had long been a subject of dispute between France and Spain, each country laying claim to it ex- clusively ; until the fifteenth century, when it was agreed between Louis XII. of France, and Ferdinand V. of Spain, that the river should be common to both nations. This island was after-

wards the scene where another treaty, called the Treaty of the Pyrenees, was concluded between France and Spain, in 1 699 ; and it was also the scene of an interview between the monarchs of these kingdoms, on the marriage of Louis XIV. whence its latter name. It lies about two miles from Fontarabia.

PHEBE, a deaconess of the port of Corinth, called Cenchrea. St. Paul had a particular esteem for her; and Theodoret thinks he lodged at her house while he continued at Corinth. She brought to Rome the epistle he wrote to the Romans, wherein she is commended in so advan- tageous a manner. See Rom. xvi. 1, 2.

PHEESE, v. a. Perhaps to feaze. To comb; fleece ; curry. Obsolete.

An he be proud with me, I'll pheese his pride.

Shakspeare,

PHECADUM, an ancient inland town of Macedonia.

PHEGOR, or PEOR, a deity worshipped at a very early period by the Midianites and Moab- ites, and probably by all the other tribes which then inhabited Syria. Phegor, or Peor, is the same with the Hebrew word pechor, which sig- nifies aperuit, and probably refers to the poetic influence always attributed to the solar deity, by which he opened or discovered things to come. Accordingly we find Phegor or Peor ge- nerally joined to Baal, which was the Syrian and Chaldean name of the sun after he became an object of worship; hence Baal-Phegor must have been the sun worshipped by some particu- lar rites, or under some particular character. See BAAL PEOR.

PHELLANDRIUM, water hemlock ; a genus of the digynia order and

pentandria class of plants : natural order forty-fifth, umbellatoe. There are two species, one of which, viz.

P. aquaticum, is a native of Britain. This grows in ditches and ponds, but is not very common. The stalk is remarkably thick and dichotomous, and grows in the water. It is a poison to horses, bringing upon them, as Lin- nasus informs us, a kind of palsy; which, how-ever, he supposes to be owing not so much to the noxious qualities of the plant itself, as to those of an insect which feeds upon it, breeding within the stalks, and which he calls curculio paraplecticus. The Swede give swines' dung for the cure. The seeds are sometimes given in in termittent fevers, and the leaves are by some added to discutient cataplasms. In the winter the roots and stem, dissected by the influence of the weather, afford a very curious skeleton or network. Horses, sheep, and goats, eat the plant ; swine are not fond of it ; cows refuse it.

PHELLIA, a river of Laconia.

PHELLOE, an ancient town of Achaia.

PHELLUS, two ancient towns of Greece : one in Attica; and the other in Elis, near Olympia.

PHEMIUS, an ancient musician, who taught Homer music.

PHEMONOE, a priestess of Apollo, who is said to have been the invent ress of heroic verses.

PHENEATˆ, the people of Pheneum.

PHENEUM, an ancient town of Arcadia, where Mercury had a temple.

PHENEUS, a town and lake of Arcadia.

PIIENGITES, among the ancients, the name of a beautiful species of alabaster. It was a rude irregular mass, very shattery and friable, but of a brightness superior to that of most other marbles, and excelling them all in transparence. The color an agreeable pale yellowish, white, or honey color; the yellow being more intense in some places than others, and sometimes making an obscure resemblance of veins. It is still found, and is very weak and brittle in the mass; when reduced to small pieces, it may be easily crumbled between the fingers into loose, but considerably large, angular pieces, some perfect, others complex, irregular, or mutilated, and all approaching to a flat shape. The ancients were very fond of this species in public buildings ; and

the temple of Fortune, built entirely of it, has been long celebrated. Nero's golden house was constructed mainly of this marble : and Domitian is said to have had a portico built wholly of it, in which he promenaded enclosed. Its great beauty is its transparence, from which alone the above temple was perfectly light when the doors were shut, though it was built without a window, and had no other light but what was transmitted through the stone its walls were built with. It was anciently found in Cappadocia, and is still plentiful there : we have it also in Germany and France, and in Derbyshire and some other English counties. It takes an excel- lent polish, and is very fit for ornamental works, where there is no great strength required, ˆee AMETHYST.

PHENICE, a port of the island of Crete, on the west coast of the island. St. Paul having anchored at Phenice, in his voyage to Rome (Acts xxvii. 12), advised the ship's crew to spend the winter there, because the season was too far advanced.

PHENICfA. See PHOENICIA.

PHENICOP'TER, n.s. Gr. 0o«/iK07rr£poc ; Lat. phccnicopterus. A kind of bird described by Martial.

He blended together the livers of giltheads, the brains of pheasants and peacocks, tongues of pheni- copters, and the melts of lampreys. Hakewill.

PHE'NIX, n.s. Gr. fotvi't; Lat. phoenix. A bird supposed to exist single, and to rise again from its own ashes.

There is one tree, the phenix throne ; one phenix At this hour reigning there. Shakspeare. Tempest.

To all the fowls he seems a phenix. Milton.

Having the idea of a phenix in my mind, the first enquiry is, whether such a thing does exist. Locke.

PHENOM'ENON, n. s. French phenomene ; Gr. Qaivofitvov, often written phenomenon. It has the original plural termination phenomena : appearance; visible quality: remarkable ap- pearance.

Short-sighted minds are unfit to make philoso- phers, whose business it is to describe, in compre- hensive theories, the phenomena of the world and their causes. Burnt t.

These are curiosities of little or no moment to the understanding the plitt-nomena of nature.

New ttirt.

The most considerable phenomenon, belonging ta

terrestrial bodies, is gravitation, whereby all bodies in the vicinity of the earth press Towards its centre. Jientley's Sermons.

PHEONS, in heraldry, the barbed heads of darts, arrows, or other weapons, frequently borne in court ar- mours, and termed a Pheon's Head, in Latin Ferrum Jaculi, in French Fer de Dard ; as ' He beareth azure, a chevron between three pheons.'

PHEOS, in botany, a name which Theophras- tus, Uioscorides, and ethers, give to a plant used by fuljers in dressing their cloths, and of which there were two kinds, a smaller called simply pheos, and a larger called hippopheos. This plant is sometimes called phleos ; and is thus confounded with a kind of marsh cudweed, or gnaphalium, called also by that name ; but it may always be discovered which of the two plants an author means, by observing the sense in which the word is used, and the use to which the plant was put. The phleos, properly so called, that is, the cudweed, was used to stuff beds and other such things, and to pack up with earthen vessels to prevent their breaking ; but the pheos, improperly called phleos, only about cloths : this was, however, also called stsebe and cnaphon.

PHER./E, an ancient town of Thessaly, where the tyrant Alexander reigned, hence named Pherams. Strabo 8. Cic. de Off. 2.

PHERˆ,US, a surname of Jason and Alex- ander.

PHERECRATES, a Greek comic poet, who was contemporary with Plato and Aristophanes. After the example of the ancient comedians, who never introduced upon the theatre imaginary but living characters, he acted his contempo- raries. But he did not abuse the liberty which at that time prevailed upon the stage. He laid it. down as a rule to himself never to hurt the reputation of any person. Twenty-one come- dies are attributed to him, of which there now only remain some fragments collected by Herte- lius and Grotius. From these, however, it is easy to discern that Pherecrates wrote the purest

Greek, and possessed that ingenious and delicate raillery which is called attic urbanity. He was author of a work on Music, and a kind qf verse called Pherecratic.

PHERECRATIC VERSE. The last three feet were in hexameter verse, and the first of those three feet was always a spondee. This verse of Horace, for example, Quamvis pontica pinus, is a Pherecratic verse.

PHERECYDES, a native of Scyros, who flourished about A. A. C. 560, and was disciple of Pittacus. See PITTACUS. He is said to have been the first philosopher who wrote on natural subjects and the essence of the gods. He was also the first who held the ridiculous opinion, ‘ that animals were mere machines.’ He was Pythagoras’s master, who loved him as his own father : he lived to the age of eighty five, and was one of the first prose writers among the Greeks. It is difficult to give an accurate ac count of the doctrines of Pherecydes. It is most probable that he taught those opinions con-

cerning the gods and the origin of the world which the ancient Grecian theogomsts bor- rowed from Egypt. See EGYPT, MYSTERIES, MYTHOLOGY, and POLYTHEISM.

PHERES, in fabulous history, the son of Cretheus and Tyro, who built Pherue, in Thes- saly, where he reigned. He married Clymene, by whom he had Admetus. Apollod.

PHERETIMA, the wife of Battus, king of Cyrone, and the mother of Arcesilaus. After her son’s death she recovered the kingdom by the aid of Amasis king of Egypt, and, to avenge the murder of Arcesilaus, she caused all his as- sassins to be crucified round the walls of Cyrene, and she cut off the breasts of their wives, and hung them up near the bodies of their husbands. It is said that she was devoured alive by worms ; a punishment from heaven for her unparalleled cruelties.

PIIERON, a king of Egypt, who succeeded Sesostris. He was blind ; and recovered his sight by washing his eyes, according to the di- rections of the oracle, in the urine of a woman who had never had any xmlawful connexions. He tried his wife first, but she appeared to have been faithless to his bed, and was burnt with all those whose virtue would not abide the test pre- scribed : he married the woman who thus cured him. Herodot. ii. c. 111.

PHETRI. See PARTHIA.

PIII’AL, n.s. Or. ia\ri ; Fr. phiole ; Lat. phiala. A small bottle.

Upon my secure hour thy uncle stole With juice of cursed hebenon in a phial. Shakspeare. • He proves his explications by experiments made with a phial of water, and with globes of glass filled with water. Newton.

Nor less inspire my conduct than my song ; Teach my best reason reason ; my best will Teach rectitude ; and fix my firm resolve Wisdom to wed, and pay her long arrear : Nor let the phial of thy vengeance, poured On this devoted head, be poured in vain. Young.

PHIALIA, a town of Arcadia. Paus. viii.3.

PHICORES, an ancient nation who inhabited the banks of the Palus Maeotis. Mela i. 19.

PHIDIAS, the most famous sculptor of anti- quity, was an Athenian, and nourished in the eighty-third Olympiad. This wonderful artist was not only skilled in the use of his tools, but accomplished, we are told, in history, poetry, fable, geometry, optics, &c. He first taught the Greeks to imitate nature perfectly, and all his works were received with admiration. They were also incredibly numerous ; for it was al- most peculiar to Phidias that he united the greatest facility with the greatest perfection. His Nemesis, one of his first pieces, was carved out of a block of marble, found in the Persian carnp, after the battle of Marathon. He made an excellent statue of Minerva for the Plateans ; but the statue of this goddess in her magnificent temple at Athens, of which there are still some relics, was an astonishing production. Pericles ordered Phidias to make a statue of the goddess ; and Phidias formed a most admirable figure of ivory and gold, thirty-nine feet high. But what rendered his name immortal proved at that time his ruin. He had carved upon the shield of the goddess his own portrait and that of Pericles ;

imd this was made a crime. Upon this he with- drew to Elis, and made for the Elians the Olym- pic Jupiter ; a prodigy of art which was ranked among the seven wonders of the world. It was of ivory and gold ; sixty feet high, and every way proportioned. Phidias concluded his la- bors with this masterpiece ; and the Elians, to do honor to his memory, appropriated to his de- scendants the office of keeping clean this mag- nificent image. The remains of the statue of the Eleusinian Ceres were purchased by the late Dr. E. D. Clarke and Mr. Cripps of

Jesus College, Cambridge, and after being removed at considerable labor and expense, from Greece to England, are now now fixed in the public library of that university.

PHIDIPPIDES, a celebrated courier, who ran from Athens to Lacedaemon, about 152 En- glish miles in two days, to ask of the Lacedae- monians assistance against the Persians. The Athenians raised a temple to his memory.

PFIIDITIA, in Grecian antiquity, feasts cele- brated with great frugality at Sparta. They were held in the public places and in the open air. Rich and poor assisted at them equally, and on the same footing ; their design being to keep up peace, friendship, good understanding, and equality among the citizens great and small. It is said that those who attended this feast brought each a bushel of flour, eight measures of wine named chorus, five mince of cheese, and as many figs.

PHIGALEI, an ancient people of Pelopon- nesus, who inhabited the country near Messenia. Paus.

PHILA, from 0i\«v, to love, in mythology, one of the attributes of Venus, which distin- guishes her as the mother of love.

PHILA, an ancient town of Macedonia.

PHILADELPHIA, in antiquity, were games instituted at Sard is to celebrate the union of Caracalla and Geta, the sons of Septimius Se- verus.

PHILADELPHIA, in ancient geography, the name of four towns; 1. In Arabia. 2. In Cicilia. 3. In Syria. (Lempr.) 4. In Lydia, now called Alah- sher. Plin. v. c. 29.

PHILADELPHIA, an ancient town of Natolia, seated at the foot of mount Tmolus, by the river Cogamus, whence there is a fine view over an extensive plain. It was founded by Attalus Philadelphus, brother of Eumenes, and very liable to earthquakes, which, perhaps, arose from its vicinity to the region called Catakekan- mene. So severe were those earthquakes that even the city walls were not secure ; and so fre- quent were they that these experienced daily concussions. The inhabitants, therefore, who were not numerous, lived in perpetual appre- hension, and their constant employment was in repairs. In fact, so great were their fears, that their chief residence was in the country, the soil of which was very fertile. Such is Strabo's ac- count of this place. In 1097 it was taken by assault by John Ducas the Greek general. It was without difficulty reduced also in 1106, under the

same emperor. The Turks marched from the east with a design to plunder it and the maritime towns. The emperor Manuel in 1175 VOL. XVII.

retired for protection from the Turks to this place. In 1300 it fell by lot to Karaman. In 1 306 it was besieged by Alisaras, and consi- derably harassed; but was not taken. In 1391 this place alone refused to admit Bajazet ; but it was at length forced to capitulate for want of provisions. It has been matter of surprise that this town was not totally abandoned ; and yet it has survived many cities less liable to incon- veniencies, and is still an extensive place, though in appearance it is poor and mean. The mate- rials of the walls appear to have been small stones strongly cemented : they were thick, lofty, and had round towers. Among the mountains near, is a spring of a purgative quality ; and many people resort to it in the hot months. The fa- mous wall which credulity has believed to be made of human bones, stands beyond this and the town. Dr. Chandler, who visited it, says, ‘ the number of churches is twenty-four, mostly in ruins, decorated with painted saints. Only six are in a better condition. The episcopal church is large, and ornamented with gilding, carving, and holy portraits. The Greeks are about 300 families, and live in a friendly inter- course with the Turks. The clergy and laity in general are ignorant of Greek, yet the liturgies and offices of the church are read in that lan- guage. The Philadelphians are a civil people. One of the Greeks sent us a small earthen vessel full of choice wine. Philadelphia pos- sessing waters excellent in dyeing, and being si- tuated on one of the most capital roads to Smyrna, is much frequented, especially by Armenian merchants. The Greeks still call this place by its ancient name, but the Turks call it Allahijur. The number of inhabitants is about 8000 ; of whom 2000 are supposed to be Christians.’ It is about forty miles E.S. E. of Smyrna.

PHILADELPHIA, a county of Pennsylvania, bounded north by Bucks County, south-east by Delaware River, south-west by Delaware county, west and north-west by Montgomery county.

PHILADELPHIA, a city and port of entry, Penn- sylvania, in a county of the same name, on the west bank of the Delaware ; ninety miles south- west of New York, 100 north-east of Baltimore, 321 south-west of Boston, 137 of Washington. Long. 75° 10′ W., lat. 3Q° 57′ N. Population of the city and liberties, in 1790, 43,525 ; in 1802 62,000; in 1810 92,247; and in 1830 estimated at 168,000. In 1810 there were, within the city and suburbs, 22,764 buirdings, of all kinds, for residence, business, worship, &c.

It is 126 miles from the. Atlantic, by the course of the river and bay, and is situated on the narrowest part of an isthmus between the Delaware and the Schuylkill rivers, about six miles above their confluence. The situation is very pleasant and healthy. It was originally laid out by William Penn, in 1683. — The ground plot of the city, distinct from the liberties, is an oblong, about one mile from north to south, and two from east to west. But the buildings now occupy a space upwards of three miles long, from north to south, and they extend from the Delaware to the Schuylkill. There were originally nine streets extending from one river to the other, which were intersected at right angles

by twenty-three running north and south. The number of squares in the original plan was 184, but, as several of these have been intersected by new streets, their number now amounts to 304 ; and several of these are again intersected by lanes and alleys. Broad Street is 1 13 feet wide ; High or Market Street 100; Mulberry Street sixty ; and the other streets, in the original plan, fifty feet wide. The greatest part of the city is well paved with stones in the middle, with neat side walks of brick ; furnished with common sewers and gutters, so that the streets are in general kept very clean.

The public buildings are the late state house and offices, two city court houses, a county house, a state penitentiary, a bridewell or jail, a university, the Philosophical Society's hall, the hall for the Academy of Natural Sciences, the Washington Hall, a public library, a hospital, the Friends' alms-house, three dispensaries, an alms-house;, two dramatic theatres, a medical theatre, a laboratory, an amphitheatre, a masonic hall, ten incorporated banks, and fifty-nine houses of public worship, nine for General As- sembly Presbyterians, two for Associate Reformed Presbyterians, two for Dutch Reformed Pres- byterians, two for Reformed Presbyterians, one for Associate Presbyterians, one for German Presbyterians, eleven for Methodists, six for Episcopalians, six for Friends, five for Baptists, four for Roman Catholics, two for German Lu- therans, one for English Lutherans, one for Swedes, one for Moravians, one for Universalists, one for Unitarians, one for Dunkers, a New Jerusalem church, and a Jews' Synagogue.

Several of the churches are very spacious and elegant edifices. Each of

the Episcopal, the German, and two of the Roman Catholic churches are furnished with organs ; and one of the Epis- copal churches is ornamented with a steeple. The state house was erected in 1753, and its architecture is much admired. It is now ap- propriated as a museum, and contains the largest collection of curiosities in America. Adjoining to it is an enclosed square, which is ornamented with rows" of trees, and forms a pleasant public walk. The bank of Pennsylvania is a remark- ably elegant edifice of marble. The masonic hall is an elegant Gothic edifice, with a hand- some steeple. The houses of the city are gene- rally constructed of brick, without much orna- ment, but have a striking appearance of convenience, comfort, neatness, and opulence. The city contains five different markets, the principal of which is in Market, or High Street, and extends from the Delaware through six squares. The market houses are well supplied with various provisions, which are exposed to sale daily, and most abundantly every Wednesday and Saturday. The United States' bank is in this city ; and here is the mint of the United States, in which the national money is coined.

Philadelphia exceeds all other towns in the United States in the variety, extent, and excel- lence of its manufactures. In 1810 the city and county contained eight cotton manufactories, twenty nail manufactories, eighteen distilleries, seventeen breweries, fifty-nine tanneries, seven paper-mills, fifteen rope walks, three glass works,

fourteen marble yards, fifty-four printing offices and numerous other manufacturing establish- ments. The total amount of the manufactures of the city and county in 1810 was 16,103,869 dollars. Printing is carried on here more ex- tensively than in any other place in America. This city is celebrated for its excellent porter brewery.

Philadelphia is a place of great opulence, and its trade is extensive and nourishing. Turnpike roads of the best construction diverge from it in various directions. Over the Delaware, Schuyl- kill, and Susquehanna, in the approaches to the city, there are ten excellent bridges. The Dela- ware is navigable to this place for a seventy-four gun ship, and for sloops to Trenton. The ship- ping belonging to this port in 1816 amounted to 101,830 tons. — The environs of the city are pleasant and well cultivated.

The literary and benevolent institutions are numerous, and highly honorable to the inhabi- tants. The Philadelphia library originated with Dr. Franklin, and was incorporated in 1742. The building belonging to the library company is an elegant edifice, and in its front is a statue of Dr. Franklin, of white marble. It contains a museum, a

philosophical apparatus, the Phila- delphia library, and the Loganian library, which, together, have about 22,000 volumes. The American Philosophical Society was established here in 1769, and has a library of 4000 volumes. The Philadelphia Society for Promoting Agricul- ture was instituted in 1785, and has a small library, a cabinet of minerals, and a repository for agricultural ˆimplements. The Athenaeum of Philadelphia was incorporated in 1815, and has a library of 2000 volumes, a cabinet of minerals and medals, and upon its tables are to be found the principal newspapers published in the United States, and a numerous collection of the American and EuropeanMagazines. The Academy of Natural Sciences was founded in 1812, and incorporated in 1817, and has a library of 2000 volumes, and handsome collections on natural history. The library of the Society of Friends contains about 2000 volumes. The oldest seminary of learning in Pennsylvania is that incorporated by William Penn, by the title of Friends Public Schools. This corporation has considerable funds, and supports a number of schools; and under its directions the Latin and Greek Languages, the mathematics, and natural and experimental phi- losophy, are taught. The astronomical observa- tory in the city belongs to this institution, and it likewise possesses an extensive philosophical apparatus.

The Pennsylvania Hospital was established in 1752, and is the most respectable institution of the kind in the union. The whole extent of the buildings from east to west is 278 feet, and de- tached from the hospital is another building of three stories, calculated to accommodate forty or fifty patients. The number of patients is usually from 190 to 220, including ninety lunatics. There are belonging to the hospital a valuable anatomical museum, and a library of about 4500 volumes. In 1817 a handsome building was erected for the accommodation of the cele- brated painting of Mr. West, representing Christ

healing the sick. This painting is a source of a handsome income to the hospital.

The university of Pennsylvania was erected into a university, upon the foundation of what was denominated the Academy and Charity School, and it is chartered as a complete uni- versity. The board of trustees, who are twenty- four in number, have the power of

appointing professors in all the branches of science. The establishment consists at present of four depart- ments of arts, medicine, natural science, and law, in each of which lectures are given, and a system of instruction is established. Connected with the university are the academy, in which youth are instructed in the learned languages, preparatory to college, and a charity school for the education of poor children.

A large edifice, built for the accommodation of the president of the United States, is occupied by the university. The building devoted to the faculty of arts has excellent lecture rooms, and a large hall for public exercises. The apparatus belonging to the college is said not to be sur- passed by any other of the kind in the country. The library contains 3000 or 4000 volumes. The offices in the department of arts are a pro- vost, who is also a professor of moral philosophy and belles lettres ; a vice provost, who is also a professor of mathematics and natural philosophy, and a professor of languages. The number of undergraduates is about forty. The course of education is completed in three years.

PHILADELPHIA STONES, a name which some authors have given to what are otherwise called Christian bones found in the walls of the Nato- lian city of this name. It is a vulgar error that these walls are built of bones ; the tradition of the country being that when the Turks took the place they fortified it for themselves, and built their walls of the bones of the Christians whom they killed there. This idle opinion gained cre- dit merely from a loose and porous stone of the sparry kind being found in an old aqueduct in the wall. Sir Paul Rycaut brought home pieces of these stones, which he supposed to have been bones; but they proved on examination to be various bodies, chiefly vegetable, incrusted over and preserved in a spar of the nature of that which forms incrustations in Knaresborough spring, and other places with us. These bodies are often cemented together in considerable num- bers by this matter, and their true shape lost in the congeries.

PUILADELPHIAN SOCIETY, in ecclesiastical history, an obscure and inconsiderable society of mystics, formed about the end of the seventeenth century by an English female fanatic, whose name was Lead ley. This woman induced by her visions, predictions, and doctrine, several per- sons of learning to become her disciples. She believed that all dissensions among Christians would cease, and the kingdom of the Redeemer become a scene of charity and felicity, if Chris- tians, disregarding the forms of doctrine or disci- pline of their several communions, would all join in committing their souls to the care of the internal guide, to be instructed, governed, and formed by

his divine impulse and suggestions.

But she went farther: and pretended a divine commission to proclaim the approach of this . glorious communion of saints. One of her leading doctrines was that of the final restoration of all intelligent beings to perfection and happiness.

PHILADELPHUS, in antiquity, from the Greek (piXoc, lover, and afoXˆog, brother; a title or surname of several ancient kings. See PTOLEMY and EGYPT.

PHILADELPHUS, in botany, the pipe-tree, or mock orange ; a genus of the monogynia order, and icosandria class of plants; natural order nineteenth, hesperideae.

1. P. coronarius, white syringa, or mock orange, has been long cultivated in the gardens of this country as a flowering shrub : it is not well known in what country it is to be found native. It rises seven or eight feet high, sending up a great number of slender stalks from their root. These have a gray bark, branch out from their sides, and are garnished with oval spear- shaped leaves. These last have deep indentures on their edges ; their upper surface being of a deep green, but the under surface pale, with the taste of a fresh cucumber. The flowers are white, and come out from the sides and at the ends of the branches in loose bunches, each standing on a distinct foot-stalk : they have four oval petals, which spread open, with a great number of stamina within, surrounding the style. This shrub, by its flowers, makes a fine figure in May and June ; for they are produced in clusters both at the end and from the sides of the branches. They are of a fine white color, and exceedingly fragrant. The petals of which each is composed are large, and spread open like those of the orange ; and then forming branches, which stand each on its own separate foot-stalk,, and being produced in plenty all over the shrub, feast at once both the eye and the smell. These flowers, however, are very improper for chimneys, water-glasses, &c., in rooms, as their scent will be too strong. The double-flowering syringa is a variety seldom rising above a yard high. The leaves and branches are also proportionally smal- ler and more numerous, and the bark of the shoots of a lighter brown, than in the other. It sometimes produces flowers with three or four rows of petals; whence the name. They are much smaller than those of the other, and flourish only once in five years, which makes it hardly worth propagating. The dwarf syringa is still of lower growth, seldom arising to more than two feet in height ; and the branches and leaves are smaller and more numerous, and the bark is of a lighter brown. It never produces flowers.

2. P. inodorus, the Carolina syringa, with entire leaves, is a native of Carolina, and as yet but little known in Europe. It rises with a shrubby stalk of about sixteen feet in height, sending out slender branches from the sides op- posite, garnished with smooth leaves shaped like those of the pear-tree, and standing on pretty long foot-stalks. The flowers are produced at the ends of the branches ; and are large, white, spreading open, with a great number of short stamina with yellow summits. This is the tall- est grower by far of the species, and makes the

grandest show when in blow, though the flowers have no smell.

3. P. nanus, with oval leaves somewhat in- dented, and double flowers, seldom rises above three feet ; the flowers come out singly from the sides of the branches, and have a double or tre- ple row of petals, of the same size and form, as well as the same scent, with No. 1 ; but it flowers very rarely. The propagation of all the sorts is very easy. 1. The most certain method is by layers ; for the young twigs, being laid in th

PHILZE, a town and island of Egypt, above the smaller cataract, but placed opposite Syene, by Pliny ; v. c. 9.

PHIL.E, one of the Sporades Isles.

PHILˆLNI, two brothers, citizens of Carthage, who sacrificed their lives for the good of their country. When the Carthaginians ruled over the greatest part of Africa, the Cyrenians were also a great and wealthy people. The country between them was sandy, and of a uniform ap- pearance. There was neither river nor moun- tain to distinguish their limits, which engaged the two nations in terrible and tedious wars. At last they agreed, ‘ that, upon a day appointed, deputies should set out from their respective homes, and the place where they met one an- other should be accounted the common boundary of both nations.’ Accordingly, the Philaeni, sent from Carthage, made all despatch to perform their journey. The Cyrenians proceeded more slowly. These last, perceiving themselves be- hind, charged the Carthaginians with setting out before the time; and made a mighty bustle upon it. The

Carthaginians then desired any other terms ; on which the Greeks made this proposal to the Carthaginians, ‘ either to be buried alive in the place which they claimed as the boundary to their nation, or that they would advance for- ward to what place they chose upon the same condition.’ The Philaeni, accepting the offer, made a sacrifice of their lives to their country, And were buried alive. The- Carthaginians dedi- riled altars in that place to the memory of th«

two brothers. These altars, called Arae Phileno- rum, served as a boundary to the empire of the Carthaginians, which extended from this monu- ment to Hercules’s Pillars, which is about 2000 miles, or, according to the accurate observations of the moderns, only 1420 geographical miles. Sallust. de Bell. Jug.

PHILˆEUS, the son of Ajax by Lyside, daughter of Coronus, one of the Lapithse; and a lineal ancestor of Miltiades. ‘

PIIIL.EUS, the son of Augeas, king of Elis, whom Hercules placed on the throne after killing his father.

PHILANTIIROPOS, from 0iXew, . to love, and aj/0pw7rof, a man ; so called from its uses. 1. A medicine which relieves the pain of the stone. 2. The herb goose-grass, because it sticks to the garments of those who touch it.

PHILANTHROPY, ra. s. j Gr. 0t\£W and

PHILANTHROPIST. J av0pw7roc. Love

of mankind; good nature : a lover of mankind.

Such a transient temporary good nature is not that philanthropy, that love of mankind, which deserves the title of a moral virtue. Addison.

The sufferings which he underwent, and was wit- ness to, on this occasion, made an impression upon his mind that probably was a principal cause of the philanthropical exertions which afterwards employed so great a portion of his life. Aikin.

PHILANTHROPHY is of nearly the same import with benevolence; and differs from friendship, as this last affection subsists only between in- dividuals, whilst philanthropy comprehends the whole human species. Whether man has an in- stinctive propensity to love his species, which makes him incapable of happiness but in the midst of society, and impels him to do all the good that he can to others, feeling their felicity an addition to his own, is a question that has been warmly

debated among philosophers. Among the philosophers of the seventeenth century, Hobbes took the unpopular side of this question ; insist- ing that man is naturally a selfish animal, inca- pable of any generous principle. Lord Shaftes- bury adopted the opposite side, and has been since followed by bishop Butler, Hutchinson, lord Kames, Dr. Beattie, Dr. Ileid, &c., who in- sist that the whole duty of man results from an intuitive principle called the moral sense, from which philanthropy is inseparable. See MORAL PHILOSOPHY.

PHILATES, or FILATES, a town of Albania, pachalic of Delvino, on the ascent of Mount Montzkeli, near the small river Calamas. It is the chief place of a canton of this name. Popu- lation 2000. Twenty-five miles west by south of Joannina.

PHILBERT DE GRAND-LIEU, a village in the west of France, on the northern bank of the lake of Grand Lieu. Population 2000. Fifteen miles south by west of Nantes.

PHILELPHUS (Francis), professor of elo- quence at Padua, was born in 1398. In 1429 he was sent by the republic of Venice to Con- stantinople, where he married the daughter of the learned Emmanuel Chrysoloras. The em- peror John Paleologus sent him to the emperor Sigismund to ask assistance against the Turks. He was very learned. He died at Florence, in

1481. His works were printed at Basil, in 1739, folio.

PHILEMON, a Greek comic poet, son to Damon, and contemporary with Menander. Any advantage he had over this poet was owing less to his own merit than to the intrigues of his friends. Plautus has imitated his comedy of the Merchant. He is reported to have died laugh- ing on seeing his ass eat figs. He was then about ninety-seven years of age.

PHILEMON the younger, son of the above, was also the author of fifty-four comedies, of which there are still extant considerable fragments collected by Grotius. These prove that he was not a poet of the first rank. He flourished about A. A. C. 274.

PUT LEMON, a rich citizen of Colossee in Phrygia, who was converted

to the Christian faith, with Appia his wife, by Epaphras the disciple of St. Paul. Coloss. ii. 1. Perhaps we should have known nothing of Philemon had it not been on account of his slave Onesimus, who, having robbed and run away from him, came to Rome, where he found St. Paul, and was very service- able to him. St. Paul converted and baptised him, and sent him back to his master Philemon ; to whom he wrote a letter, still extant, which passes for a masterpiece of pathetic eloquence, and is at once natural, lively, and strong. Philemon (1, 2), had convened a church in his house; and all his domestics, as well as himself, were members. His charity, liberality, and compassion, were a sure refuge to all that were in dis- tress. The Apostolical Constitutions say that St. Paul made him bishop of Colossae ; but the Menzea insinuate that he went to Gaza in Pales- tine, of which he was the apostle and first bishop. Thence he returned to Colossae, where he suffered martyrdom, with his wife, in the time of Nero.

PHILENE, a town of Attica, between Athens and Tangara. — Stat. Theb. iv. 102.

PHILEROS, a town of Macedonia.— Pliny. PHILETˆRUS, a eunuch, who was made governor of Pergamus by Lysimachus, whom he afterwards quarrelled with, and made himself king of that country, A.A.C. 283. See PERGA- MUS. He reigned twenty years, and was succeeded by his nephew Eumenes I.

PHILETAS, a Greek poet and grammarian, of the island of Cos, who flourished under Philip and Alexander the Great, and was preceptor of Ptolemy Philadelphus. He was the author of some Elegies, Epigrams, and other works, which are not extant. He is celebrated by Ovid and Propertius, as one of the best poets of his as;e.

PHILETUS, a man mentioned by St. Paul, in his second epistle to Timothy, ii. 16, 17, 18, along with Hymenaeus, as persons who had erred, and denied the resurrection. We have nothing very certain concerning Philetus, but a fabulous story by Abdias, in the life of St. James major, which attributes his conversion to that apostle.
PHILIATRA, PHILATREA, or FILATRA, a small town in the south-west of the Morea, in Messenia, about two miles from the sea. It is situated in a district interspersed with olives and fruit trees ; the houses being scattered, but beau- tifully intermixed with gardens and vineyards. Six miles south-west of Arcadia.

PHILIBEG, a little plaid, called also a kilt, is a sort of short petticoat reaching nearly to the knees, worn by the Scotch Highlanders. It h i modern substitute for the lower part of the plaid, being found to be

less cumbersome, especially in time of action, when the Highlanders used to tuck their brechdan into their girdle. Almost all of them have a great pouch of badger and other skins, with tassels dangling before, in which they keep their tobacco and money.

PHILIDAS, a friend of Pelopidas, one of those who joined in the conspiracy to expel the Spartans from Thebes, and in whose house they met.

PHILIDOR (Andre), a musician of Dreux, in France, was the son of Michael Danican, chamber musician to Louis XIII., and changed his name to Philidor, from a compliment paid him by that monarch, who once called him so after a famous hautbois player. He procured his son, who was born in 1726, the situation of a page, and he composed a successful mottet, with full choruses, in his twelfth year. As he grew up, his passion for the game of chess discovered itself, and in order to indulge it he travelled over great part of Europe, but by no means abandoning his musical studies. About the year 1753 he came to London, when he set to music Dryden's Alex- ander's Feast, an attempt which is said to have elicited the approbation of Handel. He continued in England some time, and here first printed his Analysis of Chess, a book still considered a standard work. On his return to France he be- came chapel-master to the queen, and devoted his attention to the comic opera. There are twenty- one operatic pieces all of his composition, one of which, Le Marechal, in 1761, ran more than 100 nights. Philidor afterwards returned to England, and set the Carmen Seculare, esteemed the best of his works. His death took place in London in 1795. A short time previously he played two games of chess at the same time, blindfold, against two of the most distinguished amateurs, one of which he won ; and the other was a drawn game.

PHILINUS, a native of Agrigentum, who fought along with Hannibal against the Romans. He wrote a history of the Punic wars. — C. Nep. Polyb.

PHILIP, the apostle, a native of Bethsaida in Galilee. It is supposed that he and Nathanael were present at the marriage at Cana. In the Upper Asia this apostle took great pains in plant- ing the gospel, and by his preaching and miracles made many converts. In the latter part of his life, we are told, he came to Hierapolis in Phry- gia, a city addicted to idolatry, and particularly to the worship of an immense serpent. St. Phi- lip by his prayers procured the death of this monster, and convinced its worshippers of the absurdity of paying divine honors to creatures. But the magistrates, enraged at Philip's success, imprisoned him, and ordered him to be severely scourged, and then

put to death, which some say, was by crucifixion ; others, by hanging him up against a pillar. St. Philip is generally reckoned among the married apostles ; and it is said he had three daughters, two of whom preserved their virginity, and died at Hierapolis ; the third died at Ephesus. The pretended gospel, under

his name was forged by the Gnostics, to counte- nance their bad principles and worse practices. The Christian church observes his festival, with that of St. James, on the first day of May. — Euseb. lib. iii. c. 30.

PHILIP, the second of the seven deacons, was chosen by the apostles after our Saviour's resur- rection.— Acts vi. 5. This deacon, they say, was of CiEsarea in Palestine. It is certain that his daughters lived in this city. — Acts xxi. 8, 9. The modern Greeks say, that he went to Tralles in Asia, where he founded a church, of which he was the apostle and bishop ; and where he rested in peace, after performing many miracles. The Latins, on the contrary, state that he died at Caesa- rea, and that three ,of his daughters were there buried with him. It is thought that the eunuch converted by St. Philip was the first apostle of the Ethiopians ; and the Abyssinians boast of having received the Christian faith from him.

PHILIP I., king of Macedonia. See MACEDON.

PHILIP II., king of Macedon, was the fourth son of Amyntas II. He was sent to Thebes as an hostage by his father, where he learned the art of war under Epaminondas, aud studied the manners and pursuits of the Greeks. He disco- vered, from his earliest years, that quickness of genius and greatness of courage which after- wards procured him so great a name. On the death of his brother Perdiccas III. he ascended the throne as guardian of his nephew Amyntas III., whom he got deposed, and succeeded about A. A. C. 360. The principal transactions of his life and reign being related under MACE- DON, it is only necessary here to add a few cha- racteristical anecdotes of him. — He was the first who caused gold to be coined in his name ; and is said to have employed his wealth in procuring spies and partisans in all the great cities of Greece ; thus making conquests without the aid of arms. At the siege of Methone, in Thrace, he received a wound in his right eye by an arrow ; which was inscribed with the words, ' For Phi- lip's right eye.' After the archer, who had shot it, had offered his services to

Philip, boasting that he could hit the swiftest bird on the wing, Philip ridiculed his art by saying, ‘ that he would be of use, if they were to make war with starlings ; ‘ which made Aster join the enemy, and take this method of revenge. By assuming the mask of a moderator and peace-maker, he gained confidence ; in attempting to protect the Peloponnesians against the encroaching power of Sparta, he rendered his cause popular ; and, by ridiculing the insults offered to his person as he passed through Corinth, he displayed his mode- ration and philosophic virtues. In his attempts to make himself master of Euboea, he was un- successful ; and Phocion, who despised his gold as well as his meanness, obliged him to evacuate an island whose inhabitants were as insensible to the charms of money as they were unmoved at the horrors of war, and the bold efforts of a vi- gilant enemy. From Euboea he turned his arms against the Scythians ; but the advantages he obtained over that indigent nation were inconsi- derable, and he again made Greece an object of plunder and rapine. His behaviour after the battle of Chseronea reflects great disgrace upon

him as u man and as a monarch. In the ho’ir of festivity, and during the entertainment he had given to celebrate his victories, Philip suihed from his camp, and with the inhumanity of a brute, insulted the bodies of the slain, and exulted over the calamities of the prisoners. His inso- lence, however, was checked, when Demades, one of the Athenian captives, exclaimed, ‘ Why do you, O king, act the part of a Thersites, when you can represent with so much dignity the ele- vated character of an Agamemnon (‘ The re- proof was felt ; Demades received his liberty ; and Philip learned to gain popularity even among his fallen enemies, by relieving their wants and easing their distresses. At the battle of Chaeronea the independence of Greece was ex- tinguished; and Philip formed new enterprises, and meditated new conquests, being appointed general of the Greeks against the Persians. But he was stopped in the midst of his warlike pre- parations, being stabbed by Pausanias as he en- tered the theatre at the celebration of the nuptials of his daughter Cleopatra. This murder has given rise to many conjectures. Many consider the repudiation of Olympias and the resentment of Alexander as the causes. The ridiculous honors which Olympias paid to her husband’s murderer strengthened the suspicions against the queen; but Alexander declared that he invaded Persia to revenge his father’s death upon the Persian princes, by whose intrigues the assassi- nation had been committed. The character of Philip was that of a sagacious, artful, prudent, and intriguing monarch : he was brave in the field, eloquent and dissimulating at home, and he possessed the art of changing his conduct accord- ing to the caprices of mankind, without ever altering his purpose, or losing sight

of his am- bitious aims. He possessed much perseverance, and in the execution of his plans he was always vigorous. He had that eloquence which is in- spired by strong passions. His assassination prevented him from achieving the greatest of his undertakings ; otherwise he might have acquired as many laurels, and conquered as many nations, as his son Alexander did ; and Persia might have been added lo the Macedonian empire, perhaps with greater moderation, with more glory, and with more lasting advantages. The private character of Philip raises indignation. The admirer of his virtues is disgusted to find him disgracing himself among the most aban- doned prostitutes, as well as by the most unna- tural crimes and lascivious indulgences. He was murdered in the forty-seventh year of his age, and the twenty-fourth of his reign, about 336 years before the Christian era. His reign is interest- ing, and his administration a matter of instruc- tion. He is the first monarch whose life and actions are described with accuracy and historical faithfulness. Philip was the father of Alexander the Great and of Cleopatra by Olympias ; he had also by Audaca an Illyrian, Cyna, who mar- ried Amyntas, the son of Perdiccas. Philip's elder brother; by Nicasipolis aThessalian, Nicaea, who married Cassander ; by Philaena, a Larissaean dancer, Aridaeus, or Philip III., who reigned some time after Alexander's death ; by Cleopatra, the niece of Attalus, Caranus and Europa, who

were both murdered by Olympias ; and Ptolemy, the first king of Egypt, by Arsinoe, who in the first month of her pregnancy was married to Lagus. Of the many memorable sayings re- ported by Plutarch of this prince, the following are the most remarkable : — A poor woman had often importuned him to do her justice, but was told that he had no time to attend to her peti- tion ; whereupon she said with some warmth, ' Cease then to be a king.' Philip felt the force of this reproof, and immediately gave her satis- faction. Another woman came to ask justice from him as he was going out from a great enter- tainment, and was condemned : ' I appeal,' ex- claimed she — ' And to whom do you appeal ? ' said the king, 'To Philip fasting.' This answer opened the eyes of the monarch, who retracted his sentence. If he possessed any virtue it was that of suffering injuries with patience. Having learned that some Athenian ambassadors charged him, in full assembly, with atrocious calumnies : ' I am under great obligations,' said he, ' to those gentlemen, for I shall henceforwards be so cir- cumspect in my words and actions, that I shall convict them of falsehood.' One saying of Philip, however, does him less honor than those above mentioned, viz. — ' Let us amuse children with playthings, and men with oaths.' This abomina- ble maxim gave rise

to the observation, ‘ That he was in full length, what Louis XI. afterwards was in miniature.’ It is well known that Philip had a person about him, who called out at times, ‘ Philip, remember that thou art mortal ; ‘ but whether we should place this to the account of his pride or his humility it is difficult to deter- mine.

PHILIP III. and IV. two short-lived monarchs of Macedonia. See MACEDON.

PHILIP V., king of Macedon, was the son of Demetrius. His infancy, at the death o£ his father, was protected by Antigonus, one of his friends, who ascended the throne, and reigned for twelve years with the title of independent monarch. When Antigonus died, Philip recovered his father’s throne, though only fifteen years of age, and he early distinguished himself by his boldness and hit ambitious views. He came to the throne in the year 220 before our Saviour, and the begin- ning of his reign was rendered glorious by the conquests of Aratus ; a general who was as emi- nent for his love of justice as his skill in war. But so virtuous a character could hardly fail to be disagreeable to a prince who indulged himself in every species of dissipation and vice; and his cruelty to him soon displayed his character in its true light ; for, to the gratification of every vice, he had the meanness to sacrifice this faithful and virtuous Athenian. Not satisfied with Ma- cedonia, Philip aspired to become the friend of Annibal, to share with him the spoils which the distresses of the Romans seemed to promise. But his expectations were frustrated; the Ro- mans discovered his intrigues ; and, though •weakened by the valor of the Carthaginians, they were soon enabled to meet him in the field of battle. The consul Laevinus entered Macedonia; obtained a victory over him near Apollonia, re- duced his fleet to ashes, and compelled him to sue for peace. This was not permanent ; and

when the Romans discovered that he had assisted their formidable enemy Annibal with men and money, they appointed T. Q. Flaminius to pu- nish his perfidy. The Roman consul, in a gene- ral engagement, fought nearCynocephale, totally defeated the monarch, who saved his life by flight, and was obliged to demand peace by his ambassadors, which was granted with difficulty. In the midst of these public calamities the peace of his family was disturbed ; and Perseus, the eldest of his sons by a concubine, raised suspi- cions of his brother Demetrius, whose conde- scension and humanity had gained popularity among the Macedonians, and who, from his resi- dence at Rome as an hostage, had gained the good graces of the senate. Philip listened to the false accusations of Perseus, that Demetrius wished to rob him of his crown. But, no sooner was Demetrius sacrificed to

credulity, than Philip became convinced of his rashness ; and, to punish the perfidy of Perseus, he attempted to make Antigonus, another son, his successor. B>U he was prevented by death, in the foJt$>-secon«. year of his reign, A. A. C. 178.

PHILIP, a native of Acarnania, physician to Alexander the Great. When that monarch had been suddenly taken ill, after bathing in the Cydnus, Philip undertook to remove the com- plaint, when the rest of the physicians believed that all medical assistance would be ineffectual. But, as he was preparing his medicine, Alexander received a letter from Parmenio, in which he was advised to beware of his physician Philip, as he had conspired against, his life. The monarch was alarmed ; and, when Philip presented him the medicine, he gave him Parmenio's letter to peruse, and began to drink the potion. The serenity and composure of Philip's countenance, as he read the letter, removed every suspicion from Alexander's breast ; he pursued the direc- tions of hisj physician, and in a few days reco- vered.

PHILIP, foster-brother of Antiochus Epiphanes (1 Mace. vi. 14. and 55; 2 Mace. ix. 29), was a Phrygian by birth, and very much in Anti- ochus's favor. This prince made him governor of Jerusalem (2 Mace. viii. 8 ; v. 22), where he treated the Jews very cruelly, to force them to forsake their religion. Seeing that Apollonius and Seron were defeated by Judas Maccabaeus, he sent for new succours to Ptolemy governor of Ccelo-Syria, who sent him Gorgias and Nica- nor with a powerful army. Some time after, Antiochus going beyond the Euphrates, to ex- tort money from the people, Philip went along with him ; and Antiochus finding himself near his end (1 Mace. vi. 14) made him regent of the kingdom, put his diadem into his hands, his royal cloak, and his ring, that he might render them to his son the young Antiochus Eupator. But Lysias having taken possession of the govern- ment in the name of the young Eupator, who was but a child, Philip not being able to cope with him, durst not return into Syria ; but he went into Egypt, carrying the body of Epiphanes along with him, to implore assistance from Pto- lemy Philometor against Lysias the usurper of the government of Syria. The year following, while Lysias was busy in the war carrying on

against the Jews, Philip got into Syria, and took possession of Antioch : but Lysias returning into the country, with great diligence, retook An- tioch, and put Philip to death, who was taken in the city.

PHILIP (M. Julius), a Roman emperor, of an obscure family in Arabia, whence he was sur- named the Arabian. From the lowest rank in the army he gradually rose to the highest of- fices ; and, when he was made general of the pretorian guards, he assassinated Gordian to make himself emperor. To secure himself on the throne, he left Mesopotamia a prey to the continual invasions of the Persians, and hurried to Rome, where his election was approved by the senate and people. Philip rendered his cause popular by his liberality and profusion ; parti- cularly on occasion of the centenary commemo- ration of the foundation of the city ; which was celebrated with more magnificence than under the preceding reigns. His usurpation, however, was short. He was defeated by Decius, who had proclaimed himself emperor in Pannonia ; and was assassinated by his own soldiers near Vero- na, in the forty-fifth year of his age, and fifth of his reign. His son, who had shared with him the imperial dignity, was also massacred in the arms of his mother. Young Philip was then in the twelfth year of his age, and the Romans la- mented in him the loss of rising talents, of na- tural humanity, and endearing virtues.

PHILIP I., king of France, succeeded his father Henry I. in 1060, when only eight years of age, under the guardianship of Baldwin V. count of Flanders, who discharged his trust with zeal and fidelity. He defeated the Gascons who were in- clined to revolt, and died leaving his pupil fif- teen years of age. This young prince made war in Flanders against Robert, Baldwin's younger son, who had invaded Flanders, which belonged to the children of his elder brother. Philip marched against him with a numerous army, which was cut to pieces near Mount Cassel : and the conqueror enjoyed his usurpation. Phi- lip, after this, tired of his wife Bertha, and fond of Bertrade, wife of Folques count of Anjou, carried her off from her husband. Having, in 1093, annulled his own marriage, as well as Bertrade's with the count of Anjou, both under pretext of barrenness, Philip and she were mar- ried by the bishop of Beauvais. This union was declared void by pope Urban II., a Frenchman by birth, who pronounced the sentence in France, to which he had come for an asylum. Philip, fearing the pope's anathemas might excite his subjects to rebel, sent deputies to the pope, who obtained a delay, with permission to use the crown. This delay was not of long duration. Philip was excommunicated anew in a council held at Poictiers in 1100; but, in 1104, Lam- bert bishop of Arras, legate of pope Pascal II., at last brought him his absolution to Paris, after having made him promise never to see Bertrade more; a promise which he did not keep. It would appear that the pope afterwards approved their marriage ; for their sons were declared ca- pable of succeeding. Philip died at Melun the 29th of July, 1108, aged

fifty-seven. See FRANCE.

PHILIP II., surnamed Augustus, with other vain titles (see FRANCE), son of Louis VII. and of Alix his third wife, daughter of Thibault count of Champagne, was born the 22d of Au- gust, 1165. lie came to the crown after his father's death in 1180, at the age of fifteen. The king of England seemed willing to take advan- tage of his minority, and to seize upon a part of his dominions. But Philip marched against him, and compelled him, sword in hand, to con- firm the ancient treaties between the two king- doms. As soon as the war was ended, he made his people enjoy the blessings of peace. He gave a check to the oppressions of the great lords, banished the comedians, punished blasphemies, caused the streets and public places at Paris to be paved, and annexed to that capital a part of the adjacent villages. It was enclosed by walls with towers ; and the inhabitants of other cities were equally proud to fortify and embellish theirs. The Jews having for a long time practised the most shameful frauds in France, Philip expelled them from his kingdom, and declared all debts- due to them cancelled. The tranquillity of France was disturbed by a difference with the count of Flanders, which was terminated in 1184. Some time after he declared war against Henry II. of England, and took from him the towns of Issou- dun, Tours, Mans, and other places. The epi- demical madness of the crusades then agitated all Europe; and Philip caught the infection. He embarked in 1 1 90 with Richard I., king of Eng- land, for the relief of the Christians in Palestine, who were oppressed by Saladin. These two monarchs now sat down before Acre, the ancient Ptolemais ; as did almost all the Christians of the east, while Saladin was engaged in a civil war on the banks of the Euphrates. Their forces, joined to those of the Asiatic Christians, were above 300,000 fighting men. Acre surrendered the 13th of July, 1191; but the disagreement, which took place between Philip and Richard, did more mischief than could be compensated by 300,000 heroes. Philip returned to France, with a languishing disorder, which was attributed to poison, but which might have been occasioned merely by the scorching heat of a climate so dif- ferent from that of France. He lost his hair, his beard, and his nails ; his very flesh came off. The year after he obliged Baldwin VIII., count of Flanders, to leave him the county of Artois. He next turned his arms against Richard king of England, from whom he took Evreux and Vexin ; though he had promised upon the gospels never , to take any advantage of his rival during his ab- sence. Philip, repulsed from Rouen with loss, made a truce for six months ; during which he married Ingelburga, princess of Denmark, whose beauty could only be equalled by her virtue. The divorcing of this lady, whom he quitted to marry Agnes daughter of

the duke of Merania, embroiled him with the court of Rome. The pope excommunicated him, but restored him upon his promising to take back his former wife.

John succeeded to the crown of England in 1199, to the prejudice of his nephew Arthur, to whom of right it belonged. The nephew, supported by Philip, took arms against the uncle,

but was defeated in Poitou, where he was taken prisoner, and afterwards murdered. The mur- derer, king John, being summoned before the peers of France, not having appeared, was de- clared guilty of his nephew's death, and con- demned to lose his life, in 1203. His lands, situated in France, were forfeited to the crown. Philip seized upon Normandy, carried his vic- torious arms into Maine, Anjou, Touraine, Poi- tou, and united those provinces once more to the crown of France. The English had no other part of France but the province of Guienne. To crown his good fortune, John was embroiled with the court of Rome. This ecclesiastical thun- der was very favorable for Philip. Innocent II. transferred to him a perpetual right to the king- dom of England. To give the greater force to the sentence, he employed a whole year in build- ing ships, and in preparing the finest army that was ever seen in France. Europe was in expec- tation of a decisive battle between the two kings, when the pope laughed at both, and artfully took to himself what he had bestowed upon Philip. A legate persuaded John to give his crown to the court of Rome. Then Philip was expressly for- bid by the pope to make any attempt upon Eng- land, now become a see of the Roman church, or against John, who was under her protec- tion. Meanwhile Philip's great preparations had alarmed all Europe; Germany, England, and the Netherlands were united against him. Ferrand, count of Flanders, Philip's vassal, joined the emperor. Philip was not disconcerted ; his valor was conspicuous at the battle of Bouvines, on the 27th of July, 1214, which lasted from noon till night. Before the engagement, he had made even some of his nobles, who followed him with reluctance, zealous in his cause. The enemy had an army of 150,000 fighting men; that of Philip was not half so numerous; but it was composed of the flower of his nobility. The king run great hazard of his life; for he was thrown down under the horses' feet, and wounded in the neck. It is said 30,000 Germans were killed. The counts of Flanders and Bou- logne were led to Paris in irons. The French king made no conquests on the side of Germany after this ever memorable action ; but it gained him an additional

power over his vassals. Philip conqueror of Germany, and possessor of almost all the English dominions in France, was in- vited to the crown of England by the subjects of king John, who were grown weary of his tyranny. Upon this occasion he acted like an able politician. He persuaded the English to ask his son Louis for their king. Louis made a descent upon England, was crowned at London, and excom- municated at Rome, in 1216. See ENGLAND. King John's death extinguished the resentment of the English, who, having declared themselves for his son Henry III., forced Louis to leave England. Philip died at Nantes, the 14th of July, 1223, aged fifty-nine, after a reign of forty- three years. Of all the kings of the third race, lie made the greatest accession to the crown lands, and transmitted the greatest power to his successors. He reunited to his dominions Nor- mandy, Anjou, Maine, Touraine, Poitou, &c. After having subdued John he humbled the

great lords, and by the overthrow of foreign and domestic enemies took away the counter- poise which balanced his authority. He was more than a conqueror ; he was a great king and an excellent politician ; fond of splendor on pub- lic occasions, but frugal in private life ; exact in the administration of justice: skilful in employ- ing alternately flattery and threatenings, rewards and punishments ; zealous in the defence of reli- gion and the church ; but he knew well how to procure frdm her succours for the state. The enterprises of Philip were almost always suc- cessful; he formed his projects with deliberation, and executed them with dispatch. He began by rendering the French happy, and in the end formidable ; and though he was more inclined to punish than to pardon, he was regretted by his subjects, as a great monarch, and as the father of his country.

PHILIP VI., the first king of France of the collateral branch of Valois, was son to Charles count of Valois, brother of Philip IV. He mounted the throne in 1328, on the death of his cousin Charles IV., after having held the regency. France was much divided in the beginning of his reign by disputes about the succession. Edward III. of England laid claim to it as grandson of Philip IV. by his mother; but Philip of Valois took possession of it as first prince of the blood. He marched to the relief of his vassal the count of Flanders, whose subjects, on account of bad usage, had taken up arms against him. He en- gaged the rebels at Cassel, performed prodigies of valor, and gained a signal victory on the 24th of August 1328. Having made all quiet, he devoted the time of peace to the internal regula- tions of his kingdom. The financiers were called to an account, and some of them condemned to death; among others Peter Remi, general of the finances, who left behind him nearly £20,000,000. He afterwards enacted various laws respecting

freeholds, the appeal comme d'abus, &c., the principles of which are more ancient than the name. The year 1329 was distinguished by a solemn homage paid to Philip, by Edward III. of England, for the duchy of Guienne, upon his knees, and with his head uncovered. The in- terior peace of the kingdom was disturbed by disputes about the distinction of the church and state. This controversy laid the foundation of all the disputes afterwards agitated about the au- thority of the two powers ; which contributed to confine the ecclesiastical jurisdiction within nar- rower limits. Soon after, Edward III. declaring war against France, he recovered those parts of Guienne of which Philip was in possession. The Flemings, having again revolted from France, joined the standard of Edward ; and required that he would assume the title of king of France, in consequence of his claim to the crown ; as then, agreeably to the letter of their treaty, they only followed the king of France. From this period is dated the union of the fleur-de-lis and leopards in the arms of England. Philip's arms were at first attended with some success; but those advantages were far from compensating the loss of the battle of S'.uys or Ecluse, in which the French fleet, consisting of 120 large ships, and manned by 40,000 seamen, v as beat by that of

England in 1340. This war, which had been alternately discontinued and renewed, began again with fury in 1345. The two armies having come to an engagement the 26th of August, 1346, near Crecy, in Ponthieu, the English gained a signal victory. See CRESSY. The loss of Calais, and several other places, was the fruit of this defeat. Some time before, Edward had challenged Philip of Valois to a single combat ; which he refused, not from cowardice, but from the idea that it was improper for a sovereign prince to accept a challenge from a king who was his vassal. At length, in 1347, a truce for six months was concluded between France and England, and afterwards prolonged at different times. Philip died 23d August, 1350. He had, however, reunited Dauphiny to France. See DAUPHINY. Philip likewise added to his do- main Rousillon, and a part of Cerdagne, by lending some money to the king of Majorca, who gave him those provinces as a security ; provinces which Charles VIII. afterwards re- stored without any reimbursement. The fic- titious and ideal value of the coin was also raised, and a great deal of bad money was issued from the mint. The officers of the mint were sworn upon the gospels to keep the secret ; but Philip was a fool to think that so gross a fraud would not be discovered.

PHILIP I., king of Spain, was the son of the emperor Maximilian I. In 1490 he married Jane, or Joan, queen of Spain, in whose right he obtained that crown. He died in 1506, aged twenty-eight ; and was succeeded by his son Charles V. See SPAIN.

PHILIP II., son of Charles V. and Isabella of Portugal, was born at Valladolid on the 21st of May 1527, and became king of Naples and Sicily by his father's abdication in 1554. He ascended the throne of Spain on the 17th of January 1556. Charles had made a truce with the French, but his son broke it ; and, having formed an alliance with England, poured into Picardy an army of 40,000 men. The French were cut to pieces at the battle of St. Quintin, on the 20th of August 1557. That town was taken by assault, and the day on which the breach was mounted Philip appeared armed cap-a-pie to animate the soldiers. It was the first and last time that he ever wore this military dress. His terror was so great during the action that he made two vows ; one, that he would never again be present in a battle ; and the other, to build a magnificent monastery to St. Lawrence, to whom he attributed the success of his arms, which he executed at Escurial, about seven leagues from Madrid. The taking of Chatelet, Ham, and Noyon, were the only advantages de- rived from a battle which might have proved the ruin of France. The duke of Guise repaired the disgrace of his country by the taking of Calais and Thionville. While he was animating the French, Philip gained a battle against marshal de Thermes, near Gravelines. His army was commanded by count Egmont, whom he after- wards caused to be beheaded. He made no better use of the victory of Gravelines than he had done of that of St. Quintin ; but he reaped advantage from the peace of Chateau Cambresis,

the master-piece of his politics. By that treaty, concluded the 13th April, 1559, he gained pos- session of Thionville, Marienbourg, Montmedi, Hesdin, and the county of Charolois. This war, so terrible, and attended with so much cruelty, was terminated, like many others, by a marriage. Philip took for his third wife Elizabeth, daughter of Henry II., who had been promised to his own son, prince Charles, and returned in triumph to Spain, without having drawn a sword. His first care, upon his arrival at Valladolid, was to demand of the grand inquisitor an auto da fe. This was immediately granted to him ; forty vic- tims were strangled and burnt. One of them, Don Carlos de Seza, ventured to draw near to the king, and said to him, ' How, Sir, can you suffer so many wretches to be committed to the flames? Can you be witness of such barbarity without weeping?' To this Philip replied, 'If my own son were suspected of heresy, I would myself give him up to the severity of the inqui- sition. If an executioner were wanting, I

would supply his place myself.' On other occasions he conducted himself agreeably to this intolerant spirit. At length the Flemings, no longer able to bear so hard a yoke, revolted. The revolution began with the large provinces of the continent ; but the maritime provinces only obtained their liberty. In 1579 they formed themselves into a republic, under the title of the UNITED PRO- VINCES, which see.

Philip sent the duke of Alba to reduce them; but the cruelty of that general only served to exasperate the insurgents. Never did opposing parties fight with more courage or fury. Haer- lem having surrendered at discretion, the con- querors caused all the magistrates, all the pastors, and above 1500 citizens, to be hanged. The duke of Alba being at length recalled, the grand commander of the Requesnes was sent in his place, and after his death Don John of Austria; but neither of those generals could restore tran- quillity in the Lower Countries. To this son of Charles V. succeeded a grandson no less illus- trious, namely, Alexander Farnese duke of Par- ma, the greatest man of his time; but he could neither prevent the independence of the United Provinces, nor the progress of that republic. Philip, always at his ease in Spain, instead of coming to reduce the rebels in Flanders, pro- scribed the prince of Orange, and set 25,000 crowns upon his head. William, superior to Philip, disdained to make use of that kind of vengeance, and trusted to his sword for his pre- servation. In the mean time the king of Spain succeeded to the crown of Portugal, to which he had a right by his mother Isabella. This king- dom was subjected to him by the duke of Alba, in three weeks, in 1580. Antony, prior of Crato, being proclaimed, king by the populace of Lisbon, had the resolution to come to an engagement ; but he was vanquished, pursued, and obliged to fly for his life. A cowardly assassin, Balthazar Gerard, by a pistol-shot killed the prince of Orange, and thereby delivered Philip from his most implacable and dangerous enemy. Philip was charged with this crime without reason ; though, when the news was communicated to him, he was imprudent enough to exclaim, 4 If

this Vtlow had been given two years ago, the Catnolic religion and I should have gained a great deal by it.' But this murder did not re- store to Philip the Seven United Provinces. That republic, already powerful by sea, assisted England against him. Philip, having resolved to distress Elizabeth, fitted out, in 1588, a fleet of 150 ships, which were partly captured, partly burnt, and partly shipwrecked ; and of

which very few returned. See ARMADA. This enter- prise cost Spain 40,000,000 of ducats, 20,000 men, and 100 ships. While Philip attacked England, he was encouraging in France the Holy League : the object of which was to overturn the throne and divide the state. The leaguers con- ferred upon him the title of protector of their as- sociation ; which he eagerly accepted, from a per- suasion that their exertions would soon conduct him, or one of his family, to the throne of France. But Henry IV. embraced the Catholic religion, and made his rival lose France in a quarter of an hour. Philip, at length, exhausted by the de- baucheries of his youth, and the toils of govern- ment, drew near his last hour. A slow fever, the most painful gout, and a complication of other disorders, could not disengage him from business, nor draw from him the least complaint. At last, exhausted by a complication of distempers, and being eaten up of lice, he expired the 13th of September, 1598, aged seventy-two, after a reign of forty-three years and eight months. No cha- racter was ever drawn by different historians in more opposite colors than that of Philip. From the facts recorded in history, we cannot doubt that he possessed, in an eminent degree, penetra- tion, vigilance, and a capacity for government. He entered into every branch of administration ; watched over the conduct of his ministers with unwearied attention; and in his choice both of them and of his generals discovered considerable sagacity. He never appeared to be either elated or depressed. His temper was the most im- perious, and his looks and demeanor were haughty and severe ; yet, among his Spanish subjects, he was of easy access, listened patiently to their complaints, and, where his bigotry did not interfere, was willing to redress their griev- ances. It is impossible to suppose that he was insincere in his zeal for religion. But, as his re- ligion was of the most corrupt kind, it served only to increase the depravity of his disposition ; and prompted him to commit the most odious and shocking crimes. Of the triumph of honor and humanity over the dictates of superstition, there occurs not a single instance in the whole reign of Philip ; who violated the most sacred obligations as often as religion afforded him a I retence, and exercised for many years the most unrelenting cruelty, without reluctance or re- morse. His ambition, which was exorbitant; his resentment, which was implacable ; his arbi- trary temper, which would submit to no control, c< ncurred with his bigoted zeal for the Catholic religion to carry a sanguinary spirit to as great a height in Philip as it ever attained. Though of a small size, he had an agreeable person. His countenance was grave, his air tranquil, and one could not discover from his looks either joy in

prosperity or chagrin in adversity. The wars against Holland, France,

and England, cost Philip 664,000,000 of ducats ; but America furnished him with more than the half of that sum. His revenues, after the junction of Portugal, are said to have amounted to 25.000,000 of ducats, of which he only laid out 100,000 for the sup- port of his own household. Few princes have been more dreaded, or more abhorred. He had successively, if not all at once, war to maintain against Turkey, France, England, Holland, and almost all the Protestants of the empire, without a single ally. Notwithstanding so many mil- lions employed against the enemies of Spain, Philip found in his economy and his resources wherewith to build thirty citadels, sixty-four fortified places, nine seaports, twenty-five arsenals, and as many palaces, without including the es- curial. His debts amounted to 140,000,000 of ducats, of which, after having paid 7,000,000 of interest, the greatest part was due to the Genoese. He had sold or alienated a capital stock of 1 00,000,000 of ducats in Italy. He affected to be more than commonly devout ; he ate often at the refectory with the monks ; never entered their churches without kissing all the relics ; caused his bread to be kneaded with the water of a foun- tain which was thought to possess a miraculous virtue; and boasted of never having danced. One great event of his domestic life is the death of his son Don Carlos. The manner of this prince's death is not known. His body, which lies in the monument of the escurial, is separated from his head. All that we know of the matter is, that in 1568, his father having discovered, or pretending to have discovered, that he had some correspondence with the Hollanders, his enemies, arrested him himself. He wrote at the same time to pope Pius V. an account of his son's imprison- ment ; and in his letter to this pontiff, the 20th of January, 1568, says, 'that from his earliest years, the strength of a wicked nature has stifled in Don Carlos every paternal instruction.' Philip

II. caused to be printed at Anvers, between 1569 and 1572, in 8 vols. folio, the fine Polyglot Bible which bears his name ; and he subjected the islands afterwards called the Philippines. He married successively, 1 . Mary, daughter of John

III. king of Portugal ; 2. Mary, daughter of Henry VIII., queen of England; 3. Elizabeth of France, daughter of Henry II.; 4. Anne, daughter of the emperor Maximilian II. Don Carlos was the son of his first wife.

PHILIP, an island in Lake Superior, belonging to the United States. It lies towards the south side of the lake, and south-east of Isle Royal.

PHILIP, FORT ST., a lately celebrated fortress of the island of Minorca, at the entrance of Port Mahon. The works were levelled by the Spa-

niards in 1805, but the houses still form a neat town.

PHILIP (ST.), a village of Mexico, on the Rio del Norte, celebrated for a bridge of eight arches, curiously constructed. The pillars are made of neat wood work, something similar to a crate, and in the form of a keel boat, the sharp end to the current. This crate is filled with stone, in which the river has lodged sand, clay, &c., until

it has become of a tolerably firm consistence. On the top of the pillars are pine logs laid lengthways, squared on two sides and joined pretty close ; the whole makes a tolerable bridge for horses.

PHILIP ISLANDS, two islands in the South Pacific Ocean, discovered by captain Hunter in 1791, on his return from New South Wales. They are nearly joined together by a long sandy spit above water. Round the largest island is a sand-bank above water, which extends above half a mile into the sea. These islands are danger- ous in the night to ships, on account of the sandy spits which abound here, and the land is low and barren. Long. 140° 3′ E., lat. 8° 6′ S.

PHILIP ISLAND, an island in the South Paci- fic Ocean, about six miles south of Norfolk Is- land. Also another in the South Pacific, dis- covered by captain Turnbull, and so named in honor of Sir Richard Philips. It is in long. 143° 57′ W., lat. 16° 24′ S. There are also two islands of this name in the south and east coast of New Holland.

PHILIPPEAU, or PHILYPEAUX (John Fre- derick), count of Maurepas, a French statesman, born in 1701, and in 1715, at the age of only fourteen, appointed secretary at court. In 1728 he became superintendant of the marine, and in 1738 minister of state; but in 1749 he was banished to Bourges, by the intrigues of a lady at court. In 1774 he was recalled to the minis- try by Louis XVI., who placed great confidence in him. He was a man of profound learning, and great liberality; but has been blamed by the friends of the unfortunate house of Bourbon, for the advice he gave the king, to assist the Ame- rican republicans to throw off their dependence on Great Britain. He did not live to see the consequences, as he died in 1781 .

PHILIPPEVILLE, a town of France, in the department of the Ardennes, anciently called Corbigny, till Mary of Austria fortified it in 1577, and

named it Philippeville, in honor of Philip II. of Spain. Its fortifications were re- newed by Louis XIV. It is thirty-six miles north of Charleville.

PHILIPPI, in ancient geography, a town of Macedonia, in the territory of the Edones, on the confines of Thrace, situated on the side of a steep eminence; anciently called Datum and Drenides (Appian), though Strabo seems to dis- tinguish them. This town was famous on seve- ral accounts ; not only as taking its name from the celebrated Philip II. of Macedon, who con- sidered it as a fit place for carrying on the war against the Thracians ; but also on account of two battles fought in its neighbourhood between Au- gustus and the republican party. In the first of these battles Brutus and Cassius had the command of the republican army ; while Octavianus, after- wards Augustus, and Marc Antony, had the com- mand of their adversaries. The army of Brutus and Cassius consisted of nineteen legions and 20,000 horse ; the imperial forces of an equal number of legions, but more complete, and 13,000 horse ; so that the numbers on both sides were pretty equal. The troops of Brutus were richly dressed, most of them having their armour adorned with gold and silver ; for Brutus, though very frugal

in other respects, was thus extravagant with res- pect to his men, thinking that the riches that they had about them would make them exert themselves the more, to prevent these from fall- ing into the enemy's hands. Both the republi- can generals appear to have been inferior in skill to Marc Antony ; for as to Octavianus, he is allowed never to have conquered but by the valor of others. A little before the first engage- ment, Octavianus, who had been indisposed, was carried out of the camp at the persuasion of Artorius, his physician, who had dreamed that he saw a vision directing him to be removed. Brutus's men, who opposed the wing commanded by Octavianus, charged without order, which caused great confusion. However, they werp successful ; for part of them, taking a compass about, fell upon the enemy's rear : after which they took and plundered the camp, making a great slaughter of such as were in it, and among the rest putting 2000 Lacedemonians to the sword, who had newly come to the assistance of Octavianus. The emperor himself was sought for, but in vain, having been conveyed away for the reasons above-mentioned ; and, as the soldiers pierced the litter in which he was usually car- ried, it was thence reported that he had been killed. This threw that whole part of the army into such consternation, that, when Brutus at- tacked them in front, they were most completely routed ; three whole legions being cut in pieces, and a prodigious slaughter made among the fugi- tives. But, by the imprudence of the general in pursuing too far, the wing of the republican army commanded by Cassius was left

naked and separated from the rest of the army ; on which they were attacked at once in front and in flank, and thus they were defeated, and their camp taken, while Brutus imagined that he had gained a complete victory. Cassius himself retired to an eminence at a small distance from Philippi; whence he sent one of his greatest intimates to procure intelligence concerning the fate of Bru- tus. That general was on his way, and already in view, when the messenger set out. He soon met his friends ; but they surrounding him to en- quire the news, Cassius, who beheld what passed, imagined that he was taken prisoner by the enemy, retired to his tent, and in despair caused one of his freed men to cut off his head. Or at least thus far is certain, that he went into the tent with a freed man, and that his head was found sepa- rated from his body when Brutus entered. The man, we are told, was never afterwards seen. The second engagement was pretty similar to the first. Brutus again opposed Octavianus, and met with the same success ; but in the mean time Antony, to whom he ought undoubtedly to have opposed himself, having to do only with the lieutenants of Cassius, gained a complete victory over them. What was worst, the fugitives, in- stead of leaving the field of battle altogether, fled for protection to Brutus's army; where, crowding in among the ranks, they carried des- pair and confusion wherever they went, so that a total defeat ensued, and the republican army was almost entirely cut in pieces. After tne bat- tle. Brutus put an end to his own life. See IioML\ The city of Philippi is likewise remarks-

bie on account of an epistle written by St. Paul to the church in that place. It was a Roman colony. LuKe, Pliny, Coin, Inscription. It is also remarkable for being the birth-place of Adrastus, the peripatetic philosopher, and disci- ple of Aristotle. The town is still in being, but greatly decayed. However, there is an old am- phitheatre, and several other monuments of its ancient grandeur.

PHILIPPIANS, EPISTLE OF PAUL TO THE, a canonical epistle of the New Testament, is ge- nerally agreed to have been written by St. Paul in the second year of his imprisonment at Rome, about A. D. 62. The Christian church was first planted at Philippi about the year of our Lord 51, by St. Paul ; who, having made a progress through Galatia and Phrygia (Acts xvi.) and in- tending to pursue his tour through Bithynia, was admonished by the Spirit to go over to Macedo- nia. Being arrived at Philippi, he, with Timothy, Luke, and Silas, spent some days there in preach- ing the gospel. Though the apostle soon

after left the city, Luke and Timothy continued there some time longer to carry on the work ; and this was one reason why he fixed on the latter to visit the Philippians in his absence. Philip ii. 19 — 22. It appears from Acts xx. 6, that St. Paul made the Philippians a second visit.

This epistle, which is quite of the practical kind, seems to be designed to comfort the Philip- pians, under the concern they had expressed at the news of his imprisonment ; to check a party spirit, that appears to have broken out among them, and to promote on the contrary an en- tire union and harmony of affection ; to guard them against being seduced from the purity of the Christian faith by Judaizing teachers ; to sup- port them under the trials with which they strug- gled ; and, above all, to inspire them with a con- cern to adorn their profession by the most exalted attainments in the divine life.

PHILIPPIC, from the invectives of Demos- thenes against Philip of Macedon. Any invective declamation.

PHILIPPICS, Gr. StXiTrrrucoi Xoyoi, in litera- ture, a name which is given to the orations of Demosthenes against Philip II., king of Mace- don. The philippics are reckoned the master pieces of that great orator : Longinus quotes many instances of the sublime in them ; and points out a thousand latent beauties. Indeed that pathetic eloquence in which Demosthenes excelled, the frequent interrogations and apos- trophes wherewith he attacked the indolence of the Athenians, could be no where better em- ployed. Whatever delicacy be in the oration against Leptines, the philippics have the advan- tage over it, were it only on account of the sub- ject, which gives Demosthenes so fair a field to display his chief talent, that of moving and as- tonishing. Dionysius Halicarnasseus ranks the oration on the Halonese among the philippics, and places it the eighth in order : but though his authority be great, yet that force and majesty wherein Cicero characterises the philippics of Demosthenes, seem to exclude the oration on ihe Halonese : and authorise the almost universal opinion of the learned, who reject it as spurious. Libanius, Photius, and others, but above all the

languid ness of the style, and the lowness of the expressions, which reign throughout the whole, seem to assign it to Hegesippus.

PHILIPPICS is a term likewise applied to the fourteen orations of Cicero against Al arc Antony. Cicero himself gave them this title in his epistles to Brutus ; and posterity have found it so just, that it has been continued. Juvenal, Sat. x. calls the second the divine philippic, and

styles it Conspicuae divina Philippica famse. That ora- tor's entitling his last and most valued orations after the philippics of Demosthenes shows the high opinion he had of them. Cicero's philip- pics cost him his life; Marc Antony having been so irritated with them, that when he arrived at the triumvirate, he procured Cicero's murder, cut off his head, and stuck it up in the very place whence the orator had delivered them.

The PHILIPPINE ISLANDS, the best denned division of the Malay Archipelago, extending between the latitudes 5° and 20° N., or from Borneo nearly to Formosa: their number has been estimated at above 10,000, but 500 or 600 only are of any consequence ; the remainder being merely rocks, and many not half a mile in circuit. The largest of the group is Lucon, or Luconia; to the south of which the principal islands are Mindoro, Panay, Marindique, Negros, Masbate,Zebu,Bohol, Leyte, Samar, and Magin- danao : the aggregate of the whole being denomi- nated Bisayas ; also Islas de Pintados, or Painted Islands, the inhabitants having been accustomed to paint their bodies before the arrival of the Spaniards. All these islands are nominally sub- ordinate to the Spanish government at Manilla, and some of them partially colonised, paying a tribute, collected by the corregidores, or alcaides • mayores, of the provinces into which they are subdivided. Into other places, however, the Spaniards have never been able to penetrate ; and the inhabitants, having escaped from their yoke into the fastnesses and inaccessible parts, wage an inveterate war against them.

These islands offer a terribly magnificent spectacle. The mountains which cross them in every direction lose their heads in the clouds, while their sides are covered with basaltes, lava, scoria, and other volcanic matter, and in many places are seen boiling springs and wells of liquid burning sulphur. All these appearances and phenomena are the work of extinct volca- noes, of those still in ignition, or of fires con- cealed in the bowels of the earth, which produce frequent and terrible earthquakes. The sur- face of the islands is almost universally furrowed by innumerable ravines, and has many large tracts of marsh and turf and some consider- able lakes.

The same variety of seasons is found here as on the coasts of Hindostan, and proceeds from a similar cause, the chain of mountains that run through the Archipelago from north to south. During the monsoon from May to September, the rain is continual on the west coasts, and all the plains are transformed into lakes. Violent storms are also experienced at this season ; while towards the north and east the winter is serene and dry. The north-east monsoon in October,

however, brings similar rains and storms on these

coasts. This constant humidity of the atmo- sphere renders these islands supereminently fer- tile, and preserves a perpetual verdure, not only in the trees, but on the meadows, which produce a luxuriant herbage, and are throughout the year enamelled with flowers of the most beautiful tints.

The Philippine Islands are capable of pro- ducing all colonial commodities ; and their situa- tion is most advantageous for the commerce of India, China, and America. Rice is their chief production, and the best food of the natives, who appear to have cultivated it in large quantities before the arrival of the Spaniards. The other products are different sorts of pulse, such as mongos, patani, kidney beans, and millet. The pith of the palm, the young shoots of the sugar cane, green withes, and other succulents, serve also as food, and the natives cultivate, the bread fruit, beans, the cacavata, &c. They take parti- cular care of the palm tree, as from it they pro- cure both a spirit and an oil, together with a species of sweetmeat, named by them chanaca. The fruit trees are few in number, and of an in- different quality, except the plantain, to which may be added the orange and mango. The areca, or betel nut, is also cultivated, and used profusely under the name of itmo. Manilla likewise produces indigo. Cotton is also raised for clothing ; and dyed with indigo, log-wood, and the seed of the achiste tree. Wax, wild honey, amber, marble, tar, brimstone, and many other lesser objects, may also be named among the commercial produce.

In the interior there are mines of gold and iron, but they are little attended to ; gold is also • procured by washing the sand which flows in the small streams from the mountains. At Pa- racale the gold mines are worked, but very in- dolently, and scarcely so as to defray the charges. In the mountains there is excellent timber both for ship and house building, and the bamboos are very long and thick. Of these the natives construct their houses, covering them with palm leaves.

The Spaniards introduced here horses and horned cattle, which have multiplied so as to run wild among the mountains. They also intro- duced sheep, geese, grapes, figs, wheat, pepper, coffee, cocoa, sugar, tobacco, and various Euro- pean plants, which have thriven remarkably well. Among the birds found here are the swallows, which

form the edible nests so highly esteemed by the Chinese ; the biche de mar, another Chi- nese delicacy, is also procured on the coast. On the shores are a great variety of shells and shell fish : among the rest are cowries and the enormous Kima cockle, some of which will hold a gallon, and are used for vessels of holy water in the churches.

The sloth both of the Indians and the Spa- niards are here great obstacles to improvement; add to these the hurricanes which sweep away and destroy the plantations, and the destruction caused by insects, rats, and other vermin with which the country teems.

The natives carry on among themselves a bar- ter in which gold is the medium of exchange : they carry on likewise a small trade with the

Chinese and Malays of Borneo for flag-stones, copper, and articles of furniture. As to cloth- ing, they go almost naked ; their rice they cook in a joint of the bamboo, and eat it off a plan- tain leaf.

The early Spanish visitors of the Philippines seriously speak of the natives as divided into three classes ; satyrs, men with tails, and sea monsters. It is probable they mean the various tribes of Bisayan Indians, and the strange race of oriental negroes, who still occupy the Papuan Isle ; the latter roaming the mountains almost in a state of nature, and subsisting on roots and such animals as they could kill with the bow and arrow. The Spaniards are of opinion that these are the original inhabitants of the Philippines, and that the Bisayans were intruders. At pre- sent the Papuas are few, and their power limited ; but their hatred to the Bisayans flourishes in such perfection, that, when the latter kill a ne- gro, it is customary for another to bind himself to his countrymen by oath that he will disap- pear, and will not return among them until he has killed three or four Bisayans. The Tagala tribe is principally found in the Island of Lu- con ; but there are several other races who in- habit these islands, who differ considerably in features and language. Such are the Pampangos, who reside to the north of Manilla, and the painted races.

Among the Bisayans, the rajah, or chief, with the assistance of elders, regulates civil affairs ; but in criminal cases the relations are accus- tomed to compound with the aggressor in gold, unless in cases of murder, when the law of reta- liation is sanctioned. If the perpetrator happen to be of a different village or tribe, all the com- munity of which the deceased was a member make it a common cause, and numbers are, in consequence, killed and made slaves on both sides. A person suspected of theft is obliged to undergo the ordeal of drawing a stone from the bottom of a cauldron of boiling water, and if he fails is

fined a certain quantity of gold. Adul- tery is also punished by a mulct. Polygamy is not allowed ; but concubines are freely kept by the principal persons.

Among certain tribes the bridegroom pur- chases his bride by a previous service of several years. During this probation it is incumbent on all the relations of the suitor to behave respect- fully to the bride and her family, as if any in- sult be offered the marriage is annulled, and the female is to be disposed of a second time. The bridegroom, to console himself for his sufferings, as soon as his term of service ends, treats his wife as a slave. The marriage, ceremony is performed by the immolation of a hog, which is slain by a priestess with much grimace.

Of the Ta-gala, or Gala language, there are six dialects in the island of Lucon, and two in Atton. Some of these are current in several is- lands, but the most general are the Tagala and Bisaya ; the last of which is very barbarous, but the other more refined and polished. The al- phabet consists of seventeen letters ; three of these being vowels and fourteen consonants. The Tagala characters are used in Comintan, and in general among the Tagalas, who have embraced

Christianity. The idioms of this language are very complex, and it often becomes quite impos- sible for a person who understands all the words of a sentence to comprehend the meaning of the whole. The religious traditions of the Tagala race, their genealogies, and the feats of their gods and heroes, are carefully preserved in historical poems and songs.

In their religious ceremonies the Bisayans use neither idols nor temples, their sacrifices being offered in arbours, which they raise for that pur- pose; nor have they any external address to their gods. They have priestesses, whom they term babailonas or catalonas : and the sacrifices are offered alike to evil spirits and to the manes of their ancestors. They have many supersti- tions, one of which is respecting the Patianac, a spirit or ideal being, whose employment they state consists in preventing, by a method peculiar to itself, the delivery of a woman in labor. To counteract the malignity of this demon, the hus- band, having made fast the door, strips off his clothes, lights a fire, and, arming himself with a sword, flourishes it furiously about until the wo- man is delivered. The Tigbalang is another ob- ject of their apprehension, and is described as a phantom which assumes a variety

of uncouth shapes, and interposes its authority to prevent the converted Indians from performing the du- ties of religion. They do not believe in any future state of reward or punishment ; but they acknowledge the immortality of the soul, and suppose it to retain in the next world all the wants incident to that on earth. For this rea- son they place on the tomb clothes, arms, and food ; and, on the fourth day, when the funeral ceremony is performed, a vacant seat is left at the table for the deceased, whom they believe to be present, although not perceptible.

These islands were discovered by Magellan in 1521 ; but it was not till the year 1565 that they were taken possession of by a fleet from Mexico, which first anchored off the island of Zebu, and subdued it. In 1570 a settlement was effected at the mouth of the Manilla River, and in the following year the town of that name constituted the capital of the Spanish posses- sions here. In 1574 the colony Nvas attacked by a fleet of Chinese pirates, who were with difficulty repulsed.

The Spaniards in 1590 attacked the island of Sooloo or Jolo, but were in their turn repulsed with great slaughter ; nor could they make any impression on the Sooloo pirates, who have for nearly three centuries been the scourge of the Philippines. The Dutch having established themselves in India, a war commenced in this neighbourhood between them and the Spaniards, which lasted nearly half a century. By A. D. 1639 the number of Chinese on these islands had increased to 30,000. In 1639 the Spaniards commenced a war against them, and made so dreadful-a havock, that in a short time they were reduced to 7000, who surrendered at discretion. During this period the native Indians remained neuter, having a greater hatred to the Chinese than to' the Spaniards.

In 1757 the viceroy of the Philippines expelled all the Chinese ; and, in order to prevent their

future establishment in the archipelago, appro- priated the quarter of St. Fernando for the re ception of such as should come in future on commercial pursuits.

In 1762 Manilla was taken by the English. They arrived in the bay 23rd of September, and found the Spaniards quite unprepared to receive them. On the morning of the 24th a summons was sent to the town ; the troops and stores were then landed, and the city invested. On the 4th of October the batteries were opened, and the following day a practicable breach was effected. on the 6th, at day-light, the storming party mounted the breach, and the governor and prin- cipal

officers were glad to surrender at discretion. At the peace in 1764 \t was, however, relin- quished.

Since this period the Spanish colonies in these islands have not been disturbed by European enemies, although frequently threatened with in- vasion from the British settlements. Besides Manilla, and the larger establishments on Lucon, they have many settlements scattered over the islands to the south, but such is the weakness of the colonial government that they have never been able to protect them against the attacks of a few despicable pirates. In February, 1809, the Spanish government of the Philippines pub- lished a declaration of their adherence to Fer- dinand VII. and opened their ports to the Bri- tish ; after which a brisk trade arose which has been considerably injured by the revolutionary warfare in Mexico.

All kinds of India piece goods may be im- ported here with advantage, especially ordinary long cloth, white, blue, and red ; handkerchiefs of all kinds ; chintz, principally dark grounds ; Surat goods of most sorts, and all kinds of cut- lery and iron. The exports are birds' nests, cassia, gold dust, pepper, rattans, sago, tortoise shell, wax, wild honey, amber, marble, tar, brimstone, and many inferior articles. From 1802 to 1806 there were imported into Manilla, from the British settlements in India, goods and treasure to the amount of 2,859,822 rupees, equal to about £286,000 ; the exports during the same period amounted to 5,163,564, equal to about £516,356. Junks also come to these islands from China, bringing various articles for the consumption of the resident Chinese, silk goods, lackered ware, teas, China ware, &c., for the Acapulco ships. Their returns are principally in dollars, cochineal, or black wood.

PHILIPPINES, a religious society of young women at Rome, so called from their taking St. Philip de Neri for their protector. It consists of 100 poor girls, who are brought up till they are of age to be married, or become nuns, under the direction of religious women. They wear a white veil, and black cross.

PHILIPPISTS, a temporary sect among the Lutherans ; the followers of Melancthon. He had strenuously opposed the Ubiquists, who arose in his time ; and, the dispute growing still hotter after his death, the university of Wittem- berg, who espoused Melancthon's opinion, were called by the Flacians, who attacked it, Philip- pists.

PHILIPPOPOLI, or FILIBE, a considerable

town of Greece, in Macedon, situated on a small island formed by the Marizza, which is here na- vigable. It was founded by Philip, the father of Alexander the Great ; and, before the earthquake which took place here in 1818, was a thriving place, containing 30,000 inhabitants, a consider- able number of whom were Greek Christians, and had an archbishop. It had several hand- some baths and mosques, but the above calamity greatly reduced the place. The chief existing manufactures are woollens and cotton yarn ; rice is also largely cultivated in the neighbourhood. Ninety-five miles W. N. W. of Adrianople, and 225 W. N. W. of Constantinople.

PHILIPPON DE LA MADELEINE (Louis), born at Lyons in 1734, studied the law at Be- sancon, where he settled, and filled several public offices. In 1795 he was created librarian of the ministry of the interior, and on the Restoration, in 1814, received a pension from monsieur, now Charles X. He died in 1818, having published the following works : — Jeux d'un Enfant du Vaudeville ; Choix de Chansons de M. Philip- pon de la Madeleine ; L'Eleve d' Epicure; Dis- cours sur la Necessite et les Moyens de suppri- mer les Peines Capitales ; Manuel et nouveaux Guide du promeneur aux Tuilleries ; Grammaire des Gens du Monde ; Dictionnaire portatif des Poetes Fran9aises morts depuis 1050, jusqu'en 1 804, preceded by an abridged history of French poetry ; Dictionnaire portatif des Rimes ; Voy- ages de Cyrus, par Ramsay ; Morceaux choisis des Caracteres de la Bruyere, with a notice on the author. Philippon also wrote several come- dies, in conjunction with MM. Leger, Therigny, viscount Segur, and the prevost d'Iray.

PHILIPS (Ambrose), an English poet, de- scended from a very ancient family in Leicester- shire, was educated at St. John's College, Cam- bridge, where he wrote his pastorals, which acquired him at the time so high a repuation. His next performance was the Life of Archbishop V» illiams, written, according to Gibber, to make known his political principles, the archbishop, who is the hero of his work, being a strong oppo- nent to the high church measures. When he quitted the university, and came to London, he lecame a constant attendant at Button's coffee- house, where he became intimate with the most celebrated geniuses of that age, particularly with Sir Richard Steele, who, in the first volume of his Tatler, inserted a poem of Mr. Philips's, called a Winter Piece, dated from Copenhagen, on which he bestows the highest encomiums ; and, indeed, so much justice is in these his

com- mendations, that even Pope himself, who had a fixed aversion for the author, while he affected to despise his other works, used always to except this. He wrote several dramatical pieces : The Briton ; Distressed Mother ; and Humphrey Duke of Gloucester, all of which met with suc- cess, and one of them is still a standard of enter- tainment at the theatres, being generally repeated several times every season. Mr. Philips's cir- cumstances were in general, not only easy, but affluent, from his being connected, by his politi- cal principles, with persons of great consequence. He was concerned with Dr. Hugh Boulter, after- wards archbishop of Armagh, the right honorable

Richard West, esq., lord chancellor of Ireland, bishop Burnet, and the Rev. Henry Stephens, in writing a series of papers called the Free Thinker, which were all published together by Mr. Phi- lips, in 3 vols. 12mo. In the end of queen Anne's reign he was secretary to the Hanover club, a set of noblemen and gentlemen who had formed an association in honor of that succession, and for the support of its interests. Mr. Philips's station in this club, with the zeal shown in his writings, recommended him to the favor of the new government. He was, soon after the acces- sion of king George I., put into the commission of the peace, and appointed a commissioner of the lottery. And, on Dr. Boulter's being made pri- mate of Ireland, he accompanied that prelate across St. George's Channel, where he got con- siderable preferments, and was elected a mem- ber of the house of commons for Armagh. At length, having purchased an annuity for life of £400 per annum, he came over to England some time in 1748, but died soon after, at his lodgings near Vauxhall in Surrey. ' Of his per- sonal character,' says Dr. Johnson, ' all I have heard is, that he was eminent for bravery, and skill in the sword, and that in conversation he was solemn and pompous.'

PHILIPS (Catharine), an ingenious lady, daugh- ter of Mr. John Fowler, merchant, born at Lon- don in January, 1631, and educated at Hackney. She married James Philips of the priory of Car- digan, esq., and went with the viscountess of Dungannon into Ireland, where she translated Corneille's tragedy of Pompey into English, which was several times acted there with great applause. She translated also the four first acts of Horace, another tragedy of Corneille, the fifth being done by Sir John Denham. This lady died of the small-pox in London, 22d June, 1664, much and justly regretted ; ' having not left,' says Langbaine, 'any of her sex her equal in poetry.'

PHILIPS (Fabian), author of several books re- lating to the ancient customs and privileges in England, was born at Prestbury in Gloucester- shire, September 28th, 1601. He studied in the inns of

Chancery, and the Middle Temple, where he became learned in the law. In the civil wars he was a bold assertor of the king's prerogative ; and, two days before Charles I. was beheaded, he wrote a protestation against the intended murder, and caused it to be printed, and affixed to posts in all public places. He likewise published in 1649, 4to., a pamphlet entitled Veritas Incon- cussa; or King Charles I. no Man of Blood, but a Martyr for his People ; which was reprinted in 1660, 8vo. In 1653, when the courts of justice at Westminster, especially the Chancery, were voted down by Oliver's parliament, he published Considerations against the dissolving and taking them away ; for which he received the thanks of William Lenthal, esq., speaker of parliament. He was for some time filazer for London, Mid- dlesex, Cambridgeshire, and Huntingdonshire ; and spent much money in searching records, and writing in favor of the royal prerogative. The only reward he received was the place of one of the commissioners for regulating the law, worth £200 per annum, which lasted two years. Affpr

the Restoration, when the bill for taking away the tenures was depending in parliament, he wrote and published a book to show the neces- sity of preserving them, entitled Tenenda non tollenda; or the Necessity of preserving Tenures in capite, and by Knight's-service, which were a great part of the salus populi, &c., 1660, 4to. In 1663 he published The Antiquity, Legality, Reason, Duty, and Necessity of Preemption and Pourveyance for the King, 4to. ; and afterwards many other pieces upon similar subjects. He assisted Dr. Bates in his Elenchus Motuum. He died November 17th, 1690, in his eighty-ninth year, and was buried at Twyford in Middlesex. His manner of writing is neither close nor well digested. He published a political pamphlet in 1681, entitled Ursa Major et Minor, showing that there is no such Fear, as is factiously pre- tended, of Popery, and arbitrary Power.

PHILIPS (John), an eminent English poet, was born in 1676, He was educated at Winchester and Oxford. The first poem which distinguished him was his Splendid Shilling, published in 1705. His next was Blenheim. In 1706 he finished another poem upon Cyder. He also wrote a Latin ode to Henry St. John, esq., which is esteemed a masterpiece. He was contriving greater things ; but, his health failing, he was obliged to drop every thing but the care of it. This care, however, did not save him ; for, after lingering a long time, he died at Hereford, Feb- ruary 15th, 1708, of a consumption and asthma, before

he had reached his thirty-third year. He was interred in the cathedral of that city, and had a monument erected to his memory in West-minster Abbey, by Sir Simon Harcourt, afterwards lord chancellor, with an epitaph written by Dr. Atterbury.

PHILIPS (Thomas), a learned English Catholic, born at Ickford in Buckinghamshire, in 1708, and educated at Louvain. He was afterwards sent over as a missionary to England, where he published a Letter to a Student in Divinity, and other tracts. But the work for which he is most celebrated is his Life of Cardinal Pole, in 2vols. 8vo., wherein he endeavoured to soften the harsh features of popery, and to wash his church from her stains of blood and tyranny. Several English divines published answers to this work, particu- larly Dr. Neve, Dr. Gloster Ridley, &c. Philips died at Liege in 1774.

PHILIPSBURG, a town of Baden, about half a mile from the Rhine. It was long fortified, and one of the strongest places in Germany ; but was at last allowed to go to decay, and in the wars of the French revolution completely dis- mantled. Its situation is in the midst of marshes, which make it unhealthy. The celebrated duke of Berwick, son of James II. of England, was killed by a cannon ball, while visiting the trenches before this place, 12th June, 1734. Population 1100. Five miles south of Spire, and fourteen north of Carlsruhe.

PHILIPSBURGII, a rising settlement of Lower Canada, on the eastern coast of Missiqui Bay, about one mile from the boundary line between Lower Canada and the territories of the United States. It is a neat place, but chiefly built of wood.

PIIILIST./EA, in ancient geography, the country of the Philistines : which lay along the Mediterranean, from Joppa to the boundary of Egypt, and extending to inland places not far from the coast. It is also called Palestina (Jo- sephus), a name afterwards applied to the whole of the Holy Land. See PALESTINE.

PHILISTVEI, or PHILISTIM, the people of Philistsea, called also Caphtorim and Philistini, originally from Egypt, and descendants of Ham. Moses. They expelled and destroyed the Hi- vites the ancient inhabitants, and occupied their country ; that is, the regions which retained the name of Philistim, in which that of Caphtorim was swallowed up.

PHILISTINES, PHILISTINI, the ancient inhabitants of Palestine, well

known in sacred history. The people are sometimes called in Scripture Cherethites and Caphtorims. The earlier part of their history is, like that of most other nations, very obscure and uncertain. The authors of the Universal History tell us that they were descended partly from the Casluhim, and partly from the Caphtorim, both from Mizraim, the son of Ham, the son of Noah. Moses tells us (Deut. xi. 23) that they drove out the Avim, or Avites, even to Azzah, or Gazah, where they settled ; but when this happened cannot be de- termined. But our learned authors are clearly of opinion that the Casluhim and Caphtorim, from whom the Philistines are descended, came originally from Egypt, and called the country which they had conquered by their own name. See PALESTINE. Many interpreters, however, think that Caphtor was but another name for Cappadocia, which they imagine to have been the original country of the Philistines. But father Calmet, in a particular dissertation prefixed to the first book of Samuel, endeavours to show that they were originally of the Isle of Crete. The reasons which led him to think that Caphtor is the Isle of Crete are as follow : — The Philis- tines were strangers in Palestine, as appears in various parts of Scripture, such as Gen. x. 14 ; Deut. ii. 23; Jer. xlvii. 4; and Amos ix. 7, whence the Septuagint always translate this name strangers. Their proper name was Cherethims. See Ezekiel xxv. 16; Zephaniah ii. 5; and 1 Samuel xxx. 14. The kings of Judah had foreign guards, called the Cherethites and Peleth^ ites, who were of the number of the Philistines. 2 Sam. xv. 18. The Septuagint, under the name Cherethites, understood the Cretans; and by Chereth they understood Crete. Besides, the Scripture says that the Philistines came from the Isle of Caphtor. Now we see no island in the Mediterranean, wherein the marks whereby the Scripture describes Caphtor and Cherethim, agree better than in the Isle of Crete. The name Cretim or Cherethim is the same with that of Cretenses. The Cretans are one of the most ancient and celebrated people who inhabited the islands of the Mediterranean. They pretended to have been produced originally out of their own soil. This island was well peopled in the time of the Trojan war. Homer calls it the island with 100 cities. The city of Gaza in Par lestine went by the name of Minoa (Steph, Byzant. in Gaza) because Minos, king of Crete,

coming into that country, called this ancient city by his own name. Herodotus acknowledges that the Cretans were originally all

barbarians, and did not come from Greece. Homer says that a different language was spoken in the Isle of Crete ; that there were Greeks there, true, or ancient Cretans, Pelasgians, &c. The ancient Cretans are the same as the Cherethites, the Pe- lasgians as the Philistines or Pelethites of the Scripture: their language was the same with that of the Canaanites or Phoenicians, that is, Hebrew : they were descended, as well as Canaan, from Ham, by Mizraim (Gen. x. 6, 13, 14). The manners, arms, religion, and gods of the Cretans and Philistines were the same. The arms of both were bows and arrows. Dagon, the god of the Philistines, was the same as the Dictynna of the Cretans. But Mr. Wells does not think these arguments convincing. He is of the same opinion with the authors of the Universal His- tory, who say that Coptus, the name of an old city of Egypt, is a corruption of the ancient Caphtor. But whether they came from Crete, from Cappadocia, or from Egypt, they had cer- tainly been a considerable time in the land of Canaan when Abraham arrived there, in the year of the world 2083. They were then a very pow- erful people, were governed by kings, and in possession of several considerable cities. Several of their kings then in power were named Abime- lech. This race, however, was but of short du- ration, for their monarchy was changed to an aristocracy of five lords, who were partly inde- pendent of each other, though they acted in con- cert for the common cause. This form of govern- ment was again succeeded by another race of kings, among whom the prevailing names were Achish and Abimelech. They were not com- prehended in the number of nations devoted to extermination, and whose territory the Lord had promised to the Hebrews; nor were they of the cursed seed of Canaan. However, Joshua gave their lands to the Hebrews. Josh. xv. 45, 47; and xiii. 2, 3. But these conquests of Joshua must have been ill maintained, since under the Judges, under Saul, and at the beginning of the reign of David, the Philistines oppressed the Israelites. Shamgar, Samson, Samuel, and Saul, indeed made head against them, but did not re- duce their power; and they continued inde- pendent down to the reign of David, who con- quered them. They continued in subjection to the kings of Judah down to the reign of Jeho- ram, son of Jehoshaphat, that is, for about 246 years. However, Jehoram made war against them, and probably reduced them to his obe- dience again ; as they revolted again from Uzziah, who kept them in subjection during his reign. 2 Chr. xxi. 16, and xxvi. 6, 7. During the un- fortunate reign of Ahaz, the Philistines made great havock in the territories of Judah ; but his son Hezekiah subdued them. 2 Chr. xxviii. 18, and 2 Kings xviii. 8. Lastly, they regained their full liberty under the later kings of Judah ; and we find from the vengeance denounced against them by the prophets Isaiah, Amos, Zephaniah, Jeremiah, and Ezekiel, that

they brought many hardships and calamities upon the children of Israel : for which cruelties God threatened to

punish them. Esarhaddon besieged As! idod, and took it. Isa. xx. 1. And according to Herod- otus, Psammeticus, king of Egypt, took the same city, after a siege of twenty-nine years. There is great probability that Nebuchadnezzar, when he subdued the Ammonites, Moabites, Egyptians, and other nations, bordering upon the Jews, re- duced also the Philistines. After this they fell under the dominion of the Persians ; then under that of Alexander the Great, who destroyed Gaza, the only city of Phoenicia that durst oppose him. After the persecution of Antiochus Epiphanes, the Asmonaeans subjected under their obedience several cities of the Philistines; and Tryphon gave to Jonathan Maccabeus the government of the whole coast of the Mediterranean, from Tyre as far as Egypt, which included all the country of the Philistines.

PHILISTIS, an ancient queen, whose coin is still extant, but of whose life, reign, country, and government, nothing is recorded, or can now be ascertained. Her coin is also mentioned by He- rodotus, which shows that she must have nou- rished before the time of that ancient historian, but nothing else is recorded by him respecting her. Mr. Pinkerton thinks she reigned in Sicily, and as a confirmation of this conjecture mentions some inscriptions of BA2IAISSAS *IAISTIAOS on the Graedini of the theatre at Syracuse; but which do not appear to be older than the times of the Romans. Some authors think she reigned in Malta or Cossara, but Mr. Pinkerton does not think this probable.

PHILISTUS, an ancient historian, born in Syracuse. He enjoyed the friendship of Diony- sius; but, being afterwards exiled, he wrote a History of Sicily, in twelve books, which was much admired. He was afterwards recalled, and sent against the Syracusans by Dionysius the younger, but, being defeated, killed himself, A.A.C. 356.

PHILLIP, a county of New South Wales, bounded on the north by the river Goulburn; on the north-west by a line extending across the Cud- jeegony; river ; on the south-west by the Cudjee- gons; river to its source ; on the south-east by the north-western boundary of the county of Hun- ter.

PHILLYREA, mock privet; a genus of the monogynia order and diandria class of plants ; natural order forty -fourth, sepiariae. Each flower contains two males and one female. Some say there are seven species, all shrubby plants, and natives of France or Italy. Others reckon only three species, viz.

1 . P. angustifolia, the narrow-leaved phillyrea, or mock privet, a deciduous shrub, native of Spain and Italy. This is of low growth, seldom rising higher than eight or ten feet. The branches are few and slender, but they are beautifully spotted with gray spots. The leaves stand op- posite by pairs. They are long and narrow spear-shaped, and undivided, of a deep green color, and of a thick consistence. The edges are entire, and they stand on short foot-stalks. The flowers make no show. They are whitish, and grow in clusters from the wings of the branches, in March, and are succeeded by small round black berries. The varieties of this species

are, the rosemary phillyrea, launder phillyrea, striped phillyrea, &c.

2. P. latifolia, the broad leaved phyllyrea, or mock privet, a tall evergreen shrub, a native of the south of Europe. It will grow to about twelve feet high. The branches are strong and up- right. The bark is of a gray color, spotted with white, which has a pretty effect ; and the leaves grow opposite by pairs. They are of a heart- shaped oval figure, of a thick consistence, and a strong dark green color. Their edges are sharply serrated, and they stand on short strong foot- stalks. The flowers grow from the wings of the leaves in clusters, in March. They are of a kind of greenish-white color, make no show, and are succeeded by small round black berries. There are three varieties, viz. the ilex-leaved phillyrea, the prickly phillyrea, and the olive phillyrea with slightly serrated edges.

3. P. media, the oval-leaved phillyrea, or mock privet, or the medial-leaved phillyrea, a tall ever- green shrub, native of the South of Europe. It has also three varieties, viz. 1. the common smooth-leaved phillyrea. This plant grows* to twelve or fourteen feet high, and the branches are very numerous. The older branches are co- vered with a dark brown bark, but the bark on the young shoots is of a fine green color. They are oval, spear-shaped, and grow opposite, by pairs, on strong short foot-stalks. The flowers are produced in clusters from the wings of the young branches. They are small, and of a green- ish-white color; they appear in March, and are succeeded by berries, which are first green, then red, and black in autumn when ripe. 2. The privet-leaved phillyrea grows to ten or twelve feet high, and the branches are covered with a brown bark. The leaves a little resemble the privet ;

they are of a fine green color, and grow by pairs on the branches. They are of a lan- ceolate figure, and their edges are entire, or nearly so; for some signs of serratures some- times appear. The flowers grow in clusters in March. They are whitish, and are succeeded by small black berries. 3. The olive-leaved phil- lyrea is the most beautiful of all the sorts. It will grow to about ten or twelve feet high ; and the branches, which are not numerous, spread abroad in a free easy manner, which give the tree a fine air. They are long and slender, co- vered with a light brown bark ; and on these the leaves stand opposite by pairs at proper intervals, on short foot-stalks. They resemble those of the olive-tree, and are of a delightful green. Their surface is exceedingly smooth, their edges are entire, and the membrane of a thickish consistence. The flowers are small and white, and like the other sorts make no show. They are succeeded by single roundish berries. All these species may be either propagated by seeds or layers. 1 . By seeds. These ripen in autumn, and should be sown soon after. The mould must be made fine; and, if it is not naturally sandy, if some drift sand be added it will be so much the better. The seeds for the most part remain until the second spring before they come up ; and, if they are not sown soon after they are ripe, some will come up even the third spring after. They must be sown about an inch deep ;

and during the following summer should be kept clean from weeds. After they are come up, the same care must be observed, and also watering in dry weather ; and if the beds are hooped, and the plants shaded in the hottest season, so much the better. But at the approach of winter they must be hooped, and the beds covered with mats in the hardest frosts, otherwise there will be danger of losing the whole crop ; for these trees, though they are very hardy when grown tolerably large, are rather tender whilst seedlings. They should remain in the seed beds with this ma- nagement for two summers; and then waiting for the first autumnal rains in September or October (and having prepared a spot of ground), they should at that juncture be planted out, on which they will immediately strike root. The distance from each other need not be more than a foot, if they are not designed to remain long in the nursery. If there is a probability of their not being wanted for some years, they should be allowed nearly double that distance; and every winter the ground in the rows should be well dug, to break their roots, and cause them to put out fresh fibres, otherwise they will be in danger of being lost when brought into the shrubbery quarters. 2. By layers they will easily grow. The autumn is the best time for this operation, and the young shoots are fit for the purpose. The best way of layering them is by making a slit at the joint; though they will often grow well by a twist being only made. When the

gardener chooses the method of twisting a young branch for the layers, he must be careful to twist it about a joint so as only to break the bark; for, if it be too much twisted it will die. But, if it be gently twisted, it will, at the twisted parts, strike root, and by autumn following, as well as those layers that had been slit, will have good root ; the strongest of which will be fit for planting where they are wanted to remain, whilst the weaker and worst rooted layers may be planted in the nursery ground like the seedlings, and treated accordingly.

PHILLYREASTRUM, a genus of plants in Vaillant's system of botany ; called morinda by Linnaeus.

PHILO, an ancient Greek writer, who was of a noble family among the Jews, and flourished at Alexandria during the reign of Caligula ; to whom he was sent at the head of an embassy from the Jews, to defend them against Appion, A. D. 42. The best edition of his works was published at London in 1742 by Dr. Mangey, in 2 vols. folio. For farther particulars respecting this celebrated man, see Josephus's Antiq. ; Euse- bius's Eccl. Hist. ; St. Jerome De Script. Eccles. Fabr. Bibl. Graec- ; Cave Hist. Liter, and Mon. of the Greek Church, vol. 2.

PHILO, a native of By bios, a grammarian, who flourished in the first century, and acquired cele- brity by his works ; the chief of which is San- choniathon's History of Phoenicia, which he translated into Greek. Some fragments are extant.

PHILO, a celebrated architect and writer of Byzantium, who flourished about A. A. C. 300. He wrote a treatise on Machines used in War, which is extant, in the Mathematici Veteres,

1693, folio, There is also ascribed to him, but on dubious grounds, a work, entitled De vii. Orbis Spectaculis; Ilomae, 1640.

PHILOBCEOTUS, a mountain of Boeotia.

PHILOCHORUS, an ancient Greek histo- rian, who wrote a history of Athens in seventeen books, which has not come down to us. He died

A.A.C. 222.

PHILOCLES, an admiral of the Athenian fleet during the Peloponnesianwar. He recom- mended to his countrymen to cut off the right hand of such of the enemies as were taken, that they might be rendered unfit for service. His plan was adopted by all the ten admirals except one ; but their expectations were frustrated, and, instead of being conquerors, they were totally defeated at ./ Egospotamos by Lysander, and Phi- locles was put to death with the rest of his col- leagues.

PHILOCRATES, an ancient author, who wrote a History of Thessaly.

PHILOCTETES, in fabulous history, the son of Paean, was the faithful companion of Hercu- les : who, at his death, obliged him to swear not to discover the place where his ashes were in- terred, and presented him with his arrows dipped in the Hydra's blood. The Greeks at *.he siege of Troy being informed by an oracle that they could never take that city without those fatal arrows, went to Philoctetes, and insisted upon his discovering where he had left his friend; when Philoctetes, to evade the guilt of perjury, let them know where Hercules was entombed, by stamping upon the place ; but he was pu- nished for the violation of his oath, by dropping an arrow upon that foot ; which, after giving him great agony, was at length cured by Machaon. He was afterwards taken by Ulysses to the siege of Troy, where he killed Paris with one of his arrows.

PHILOCYPRUS, a king of Cyprus in the age of Solon, by whose advice he changed the situation of a city, which, in gratitude to the Athenian legislator, he named Soli.

PHILOLAUS, of Crotona, a celebrated phi- losopher of antiquity, of the school of Pythago- ras, to whom that philosopher's Golden Verses have been ascribed. * He was,' says Dr. Enfield, ' a disciple of Archytas, and flourished in the time of Plato. It was from him that Plato purchased the written records of the Pythagorean system. Interfering in affairs of state, he fell a sacrifice to political jealousy. Philolaus treated the doc- trine of nature with great subtlety, but with great obscurity; referring every thing that exists to ma- thematical principles. He taught that reason, improved by mathematical learning, is alone ca- pable of judging concerning the nature of things ; that the whole world consists of infinite and finite ; that number subsists by itself, and is the chain which by its power sustains the eternal frame of things ; that the Monad is not the sole principle of all things, but that the Binary is ne- cessary to furnish materials, from which all sub-

sequent numbers may be produced ; that the world is one whole, which has a fiery centre, about which the ten celestial spheres revolve, heaven, the sun, the planets, the earth, and the moon; and the sun has a vitreous surface,

whence the fire diffused throi.p;li the world is reflected, rendering the mirror from which it is reflected visible; that all tilings are preserved in harmony by the law of necessity ; ar..l that the world is liable to destruction both by fire and by water. From this summary of the doctrine of Philolaus it appears probable that, following Timaeus, whose writings lie possessed, he so far departed from the Pythagorean system as to conceive two independent principles in nature, God and matter, and that it was from the same source that Plato derived his doctrine upon this subject.'

PHILOL'OGER, n. s. } Gr. ˆiXoXoyec . One

PHILOL'OGY, £ whose chief study is

PHILOLOG'ICAL, adj. j language ; the study of languages.

It is not good to look too long upon these turning wheels of vicissitude, lest we become giddy : as for the philology of them, that is but a circle of tales.

Bacon.

Philologers and critical discoursers, who look be- yond the shell and obvious exteriors of things, will not be angry with our narrower explorations.

Browne.

You expect that I should discourse of this matter like a naturalist, not a philologer. Boyle.

The best philologers say, that the original word does not only signify domestick, as opposed to fo- reign, but also private, as opposed to common.

Sprat's Sermons.

Temper all discourses of philology with intersper- sions of morality. Walker.

Studies, called philological, are history, language, grammar, rhetorick,

poesy, and criticism. Watts.

PHILOLOGY is composed of 0«\oc, a lover, and Xoyoc, a word, and imports the desire of investigating the properties and relations of words, or language ; yet it has often been used in a more extensive signification : and has com- prehended the study of grammar, criticism, ety- mology, the interpretation of ancient authors, antiquities ; and, in a word, every thing relating to ancient manners, laws, religion, government, language, &c.

This seems any thing but an adherence to pre- cision in matters which particularly require it. Returning to the proper signification of the term, our article GRAMMAR may be referred to as con- taining some original and comprehensive observa- tions on the first principles of written or spoken language, i. e. of philology: the article LAN- GUAGE supplies, after Adelung, a complete sketch of the * General History of Languages.' We need here only add,

Languages, in general, may be divided into,

1. Ancient languages; which are those that have become extinct with the people who spoke them, or have been so altered and disfigured that they no longer resemble the languages which were spoken by those people.

2. Oriental languages ; the study of which is necessary in order to the understanding of the text of the Holy Scriptures, especially the Old Testament.

3. Learned languages; which are those that are indispensably necessary in the study of po- lite literature; and the critical knowledge of any of the modern tongues : which, while there were people in the world who made them their com-

mon language, were called living ; but, as no nation now makes use of them, they are called dead languages, and are therefore to be learned from books or in schools.

4. Modern languages ; in which are distin- guished, first, the common languages of the Eu- ropean nations ; and, secondly, the languages of

the people who inhabit the other parts of the world. See LANGUAGE.

PHILOMATHES, a lover of learning or science.

PHILOMBROTUS, an archon of Athens, during whose government, the republic being distracted by factions, the regulation of the state was entrusted to Solon, who, by his wisdom and integrity, brought the citizens to a right under- standing.

PHIL'OMEL, n. s.) From Philomela.

PHILOME'LA.) Changed into a bird.

The nightingale.

Time drives the flocks from field to fold,

When rivers rage, and rocks grow cold,

And philomel becometh dumb. Sliakspeare.

j Admires the jay the insects gilded wings,

Or hears the hawk, when philomela sings ? Pope.

The shepherd touched his reed ; sweet Philomel Essayed, and oft essayed, to catch the strain,

And treasuring, as on her ear they fell, The numbers, echoed note for note again.

Cowper.

PHILOMELA, in fabulous history, a daughter of Pandion king of Athens, and sister to Procne, who had married Tereus king of Thrace. Procne, being much attached to Philomela, became me- lancholy till she prevailed upon her husband to go to Athens and bring her sister to Thrace. Tereus obeyed ; but had no sooner obtained Pan- dion's permission to conduct Philomela to Thrace, than he fell in love with her, dismissed the guards, offered violence to Philomela, and cut out her tongue that she might not discover his barbarity and villany. He then confined her in a lonely castle ; and, returning to Thrace, told Procne that Philomela had died by the way. On this Procne put on mourning for Philomela ; but a year had scarcely elapsed before Philomela, having de- scribed on a piece of tapestry her misfortunes and the brutality of Tereus, privately conveyed it to Procne, who hastened to deliver her sister from confinement, and concerted with

her mea- sures for punishing Tereus. During the festival of Bacchus she murdered her son Itylus, then in the sixth year of his age, and served him up as food before her husband. Tereus, in the midst of his repast, called for Itylus ; when Procne in- formed him that he was then feasting on his flesh, and Philomela, throwing on the table the head of Itylus, convinced him of the reality of the story. He now drew his sword to punish the parricidal sisters, but was changed, we are told, into a hoopoe, Philomela into a nightingale, Procne into a swallow, and Itylus into a phea- sant. This tragedy happened at Daulis in Phocis ; but Pausanias and Strabo, who mention the story, are silent about the transformation ; and the for- mer observes that Tereus, after this bloody re- past, fled to Megara, where he killed himself. The inhabitants raised a monument to his memory, where they offered yearly sacrifices, and placed pebbles instead of barley. On this monument

the hoopoes were first observed. Procne and Philomela died through excess of grief; and, as the voices of the nightingale and swallow are peculiarly mournful, the poets embellished the fable by the supposed metamorphoses.

PHILOMELUM, a town of Phrygia.

PHILOMELUS, or, as Plutarch calls him, PHILOMEDES, a general of Phocis, who plundered the temple of Apollo at Delphi. See PHOCIS. He died A. A. C. 354.

PHIL'OMOT, adj. Corrupted from French feuille morte. A dead leaf. Colored like a dead 'leaf.

One of them was blue, another yellow, and another philomot ; the fourth was of a pink color, and the fifth of a pale green. Addlson.

PHILONIUM, in pharmacy, a kind of somni- ferous anodyne opiate, taking its name from Philo the inventor.

PHILONIZE. Lat. philonizo. To imitate the style and sentiments of Philo. This verb, and its companion Platonize, owe their derivation and existence to the circumstance of Philo, the Alexandrian Jewish philosopher, having imbibed the philosophical principles of Plato so thoroughly, and imitated his manner so closely, that in read- ing Philo's works it became a proverbial saying, ' Aut Plato Philonizat, aut Philo Platonizat,' i.e. ' Either Plato Philonizes, or Philo Platonizes.' See PHILO.

PHILONUS, a village of Egypt.

PHILO PATER, a surname of the fourth Pto- lemy. See EGYPT and PIOLEMY.

PHILOPCEMEN, a celebrated general of the Achaean league, born in Megalopolis, in Pelopon- nesus. He was no sooner able to bear arms than he entered among the troops which Megalopolis sent against Laconia. When Cleomenes III., king of Sparta, attacked Megalopolis, Philopce- men displayed much courage. He signalised himself no less in the battle of Sellasia, where Antigonus defeated Cleomenes. Antigonus made very advantageous offers to gain him over to his interest ; but he rejected them. He went to Crete, then engaged in war, and served several years as a volunteer, till he acquired a complete knowledge of the military art. On his return home he was appointed general of the horse ; in which command he behaved so well, that the Achaean horse became famous all over Greece. He was soon after appointed general of all the Achaean forces, when he applied himself to re- establish military discipline among the troops of the republic, which he found in a very low con- dition. For eight months he exercised his troops daily, when news was brought him that Machani- das was advancing, at the head of a numerous army, to invade his country. He accordingly, taking the field, met the enemy in the territories of Mantinea, where a battle was fought, in which he completely routed the Lacedaemonians, and killed their leader with his own hand; this hap- pened about A. A.C. 204. But what most of all raised the fame and reputation of Philopcemen was his joining the powerful state of Lacedsemon to the Achaean commonwealth ; by which means the Achaeans came to eclipse all the other states of Greece. This memorable event happened in the year 191. The Lacedaemonians, overjoyed

to se« themselves delivered from the oppressions they had long groaned under, ordered the palace and furniture of their tyrant Nabis to be sold ; and the sum accruing thence, to the amount of 120 talents, to be presented to Philopce- men, as a token of their gratitude. On this oc- casion, so great was the opinion which the Spar- tans had of his disinterestedness, that no one could be found who would take upon him to offer the present, until Timolaus was compelled by a decree. The money however he rejected, declaring he would always be their friend with- out expense. About two years after this, the city of

Messene withdrew itself from the Achaean eague. Philopoemen attacked them ; but was wounded, fell from his horse, was taken prisoner, and poisoned by Dinocrates, the Messenian gene- ral, in his seventieth year, A.A.C. 183. Philo- poemen drank the cup with pleasure, when he heard from the jailor that his countrymen were victors. The Achaeans, to revenge his murder, marched up to Messene, where Dinocrates, to avoid their vengeance, killed himself. The rest concerned in his murder were sacrificed on his tomb, and annual sacrifices were held to his memory by the Megalopolitans. To the valor and prudence of Philopoemen Achaia owed her glory, which upon his death declined ; whence Philopcemen was called the last of the Greeks, as Brutus was afterwards styled the last of the Romans.

PHILOPONUS (John), a learned grammarian and philologist of the seventh century, born in Alexandria. He was of so studious a disposition that he was styled the Lover of Labor. He pub- lished many of Aristotle's tracts, with learned commentaries.

PHILOS'OPHEME, n.

PHILOS'OPHER,

PHILOSOPH'IC, adj.

PHILOSOPHICAL,

PH i LOSOPH'IC ALLY, adv.

PHILOS'OPHISE, v. a.

PHILOS'OPHY, n. s.

research in natural or moral knowledge : philo- sophic and philosophical, belonging to, or skilled in philosophy ; rational ; wise ; temperate ; the adverb corresponding : to philosophise is to act or reason as a philosopher : philosophy, natural or moral knowledge; system of knowledge or reasoning ; argumentation.

I had never read, heard, nor seen any thing, I had never any taste of philosophy nor inward feeling in myself, which for a while I did not call to my suc- cour. Sidney.

Many sound in belief have been also great vhiloso- phers. Hooker.

A drunkard is a good philosopher ; for he thinks aright ; the world goes round. Overbury.

We have our philosophical persons to make modern and familiar things supernatural and causeless.

Shakspeare. Hang up philosophy ; Unless philosophy can make a Juliet, Displant a town, reverse a prince's doom, It helps not. Id.

The progress you have made in philosophy, hath enabled you to benefit yourself with what I have written. Digby.

The philosopher hath long ago told us, that, ac- cording to the divers natures of things, so must the

ˆ\ Gr.

I Fr. philosophic ;

Lat. phitosophus.

ˆ-Principle of rea-

soning ; theorem :

a philosopher is a

J man of profound

evidences for them be ; and that 'tis an argument ot" an undisciplined wit not to acknowledge this.

WiMnt. That stone Philosophers in vain so long have sought.

Milton Others in virtue placed felicity :

The stoick last in philosophick pride

By him called virtue ; and his virtuous man,

Wise, perfect in himself, and all possessing. la. Of good and evil much they argued then,

Vain wisdom all and false philosophy. Id.

Qualities occult to Aristotle, must be so to us ; and we must not philosophise beyond sympathy and antipathy. Glanville.

The law of commonweals that cut off the right hand of malefactors, if philosophically executed, is impartial ; otherwise the amputation not equally pun- isheth all. Browne.

That part, of chemistry, which is applied to the transmutation of metals, and the search of the phi- losopher's-stone, has enchanted, not to say turned the brains of many. Temple.

They all our famed philosophers defie,

And would our faith by force of reason try.

Dry den.

This is what nature's wants may well suffice : But, since among mankind so few there are Who will conform to philosophick fare, I'll mingle something of our times to please. Id.

No man has ever treated the passion of love with so much delicacy of thought and of expression, or searched into the nature of it more philosophically than Ovid. Id.

Some of our philosophizing divines have too much exalted the faculties of our souls, when they have maintained that by their force mankind has been able to find out God. Id.

Two doctors of the schools were philosophizing upon the advantages of mankind above all other creatures.

L'Estrange.

If the philosophers by fire had been so wary in their observations and

sincere in their reports, as> those, who call themselves philosophers, ought to have been, our acquaintance with the bodies here about us had been yet much greater. Lockt.

We shall in vain interpret their words by the no- tions of our philosophy, and the doctrines in our schools. Id.

Adam, in the state of innocence, came into the world a philosopher, which sufficiently appeared by his writing the natures of things upon their names ; he could view essences in themselves, and read forms without the comment of their respective properties.

South.

When the safety of the publick is endangered, the appearance of a philosophical or affected indo- lence must arise either from stupidity or perfidious- ness. Addison's freeholder. How could our chymick friends go on

To find the philosophick stone 1 Prior.

His decisions are the judgment of his passions, not of his reason, the philosophy of the sinner not of the man. Rogers.

Acquaintance with God is not a speculative know- ledge, built on abstracted reasonings about his na- ture and essence, such as philosophical minds often, busy themselves in, without reaping from thence any advantage towards regulating their passions, but practical knowledge. Atterbury.

If natural laws were once settled, they are never to be reversed ; to violate and infringe them is the same as what we call miracle, and doth not sound very philosophically out of the mouth of an atheist. Bentley't Sermotu.

PHILOSOPHY.

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You will learn how to address yourself to children for their benefit, and derive some usual philosophemes for your own entertainment. Watts.

What does philosophy impart to man But undiscovered wonders 1 Let her soar Even to her proudest heights ; to where she caught The soul of Newton and of Socrates, She but extends her scope of wild amaze

And admiration. K. White.

The PHILOSOPHER'S STONE was the greatest object of alchemy, a long sought for preparation, which, when found, was expected to convert all the true mercurial part of metal into pure gold, better than any that is dug out of mines, or per- fected by the refiner's art. Some Greek writers in the fourth and fifth centuries speak of this art as being then known ; and towards the end of the thirteenth, when the learning of the east had been brought hither by the Arabians, the same pretensions began to spread through Europe. See ALCHEMY, CHEMISTRY, and TRANSMUTA- TION. Alchemists attempted to arrive at the

making of gold by three methods : the first by separation ; for every metal known, it was af- firmed, contains some quantity of gold; only, in most, the quantity is so little as not to defray the expense of getting it out. The second by matu- ration; for they thought mercury the base and matter of all metals ; that quicksilver purged from all heterogeneous bodies would be much heavier, denser, and simpler, than the native quicksilver, &c. ; and that by subtilising, purify- ing, and digesting it with much labor, it was possible to convert it into pure gold. The third method was by transmutation, or turning other metals into pure gold, by melting them in the fire, and casting a quantity of a certain prepara- tion into the fused matter. That which was to work the desired change in the metals was called the philosopher's stone. This pretended secret was encouraged by four licenses, granted to dif ferent projectors during the reign of Henry VI. and in succeeding times was patronised all over Europe.

PHILOSOPHY.

PHILOSOPHY, Gr. 0i\o, to love, and aotyia, is thus stated by Cicero to owe its origin to the modesty of Pythagoras : — ' Every one knows that among the Greeks there were seven eminent men, who have since been uni- versally denominated the ' seven wise men' of Greece : that, at a still earlier period, Lycurgus, and, even in the heroic ages, Ulysses and Nestor, were called wise men ; in short, that this appel- lation has, from the most ancient times, been given to those who have devoted themselves to the contemplation of nature. This title con- tinued in use till the time of Pythagoras. It happened, while this great man was at Phlius, that Leon, the chief of the Phliusians, was ex- ceedingly charmed with the ingenuity and elo- quence with which he discoursed upon various topics, and asked him in what art he principally excelled; to which Pythagoras replied that he did not profess himself master of any art, but that he was a ' philosopher.' Leon, struck with

the novelty of the term, asked Pythagoras who were philosophers, and in what they differed from other men? Pythagoras replied that, as in the public games, while some are contending for glory, and others are buying and selling in pursuit of gain, there is always a third class of persons, who attend merely as spectators ; so, in human life, amidst the various characters of men, there is a select number of those who, despising all other pursuits, assiduously apply themselves to the study of nature, and the search after wis- dom : these, added Pythagoras, are the persons whom I call philosophers.' Cicero Tuscul. Disp. 1. v. c. 3.

Happy had it been for science and for man- kind had this ambition to be considered ' searchers after wisdom' rather than ' wise men' been per- petuated : but those who adopted the new term soon evinced equal vanity with their predeces- sors ; and, according to Quintilian, ' despising the occupation of the orator (no very decisive

proof of folly, however), employed themselves in prescribing rules for the conduct of life, and in- solently assumed the title of the sole professors of wisdom.' In its usual acceptation the term philosophy has been taken to denote a science, or collection of sciences, of which the universe is the object. Pythagoras has defined it as tiriff- rr\pt\ rotv OVTWV, ' the knowledge of things exist- ing :' Cicero, after Plato, ' scientia rerum divi- narum et humanarum cum causis ;' and Bacon, ' interpretatio naturae.' M. Chauvin, deriving the word from ˆiXta, desire or study, and ffotyta, un- derstands it to mean the desire or study of wis- dom ; for, says he, ' Pythagoras, conceiving that the application of the human mind ought rather to be called study than science, set aside the ap- pellation of wise as too assuming.' Whether any of these definitions be sufficiently precise, and at the same time sufficiently comprehensive, may be questioned ; but if philosophy, in its ut- most extent, be capable of being adequately de- fined, it is not here that the definition would be given. ' Explanation,' says an acute writer, ' is the first office of a teacher ; definition, if it be good, is the last of the enquirer after truth ; but explanation is one thing, and definition quite another.'

The principal objects of philosophy, taken in its most general sense, are God, nature, and man. That part of it which treats of God is called theology ; that which treats of nature physics and metaphysics ; and that which treats of man logic and ethics.

An ingenious contemporary says, ' By phi- losophy we mean the knowledge of the reasons of things, in opposition to history, which is the bare knowledge of facts : or to mathematics, which is the knowledge of the quantity of things or their measures ; and well

observes,

‘ These three kinds of knowledge ought to be joined together as much as possible. History furnishes matter, principles, and practical exa-

minations, and mathematics complete the evi- dence. Philosophy being the knowledge of the reason of things, all arts must have their pe- culiar philosophy, which constitutes their theory : not only law and physic, but the lowest and most abject arts are not destitute of their rea- sons, which might usefully employ the time of the studious ; and the advantages result- ing from this kind of employment have been am- ply manifested in the discoveries of modern times. One great obstacle to the progress of arts and sciences has been the neglect of practice in speculative men, and the ignorance and contempt of theory in mere practical men. What chimeras and absurdities the neglect of experience and practice has produced need not be mentioned ; the mischiefs arising from a neglected theory are not so obvious ; yet certainly it retards the pro- gress of arts. All invention or improvement must be either casual or rational, including ana- logy or inference from similar cases, under the term rational. Now, although the foundations of arts have often been owing to some casual discovery, as gunpowder, or the loadstone, yet is this not to be trusted to alone. Improvements do not always flow from this source, but rather from the reflections of artists ; and if these re- flections were rendered more distinct, more com- municable, and easier to be retained, by the pro- per use of signs and other philosophical helps, great advantages might be expected : it being certain that philosophical knowledge is more extensive, and more sure in the application ; and besides gives a pleasure to the mind not to be expected from that which is merely historical. The bare intelligence and memory of philoso- phical propositions, without any ability to de- monstrate them, is not philosophy, but history only. However, where such propositions are determinate and true, they may be usefully ap- plied in practice, even by those who are ignorant of their demonstrations. Of this we see daily- instances in the rules of arithmetic, practical geometry, and navigation ; the reasons of which are often not understood by those who practise them with success. And this success in the ap- plication produces a conviction of mind, which is a kind of medium between philosophical, or scientifical, and historical knowledge.’

We are of opinion that this is a term of such immensely wide and

general import as to be ca- pable of little satisfactory treatment in a compen- dium of science. Our aim has been to treat fully and philosophically of each of the great branches of human knowledge, as they succes- sively present themselves in our alphabet ; not neglecting that of the science of mind itself; or the best account we could obtain of the spe- culations of our ablest predecessors on the nature and operations of human thought. See the articles LOGIC and METAPHYSICS. Nor have we neglected to present the reader with the substance of the most important doctrines of ancient and modern times on the subjects ordinarily embraced un- der the term ETHICS, or MORAL PHILOSOPHY. See the last of these articles. We refer also to the-article THEOLOGY, as suggesting the leading points and influences in which all true mental and moral philosophy will terminate. The arti-

cle PHYSICS, in this volume, will dispose of almost every other principal branch of philoso- phy, taken in its widest sense. This paper will be occupied chiefly with an historical sketch of certain principal philosophical systems ; and of the claims of experimental philosophy.

SECT. I. — ANCIENT AND EXPLODED SYSTEMS.

Of the Chaldean philosophy much has been said, but very little is known. Astronomy seems to have been their favorite study ; and notwith- standing their extravagant assertions of the anti- quity of that science, which they pretend their ancestors had continued through a period of 470,000 years, Callisthenes, upon the most mi- nute enquiry, which he made at the desire of Aristotle, found that their observations reached no farther back than 1903 years, or A. A. C. 2234. Even this is a more early period than Ptolemy allows their science ; for he mentions no Chal- dean observations prior to the era of Nabonas- sor, or 747 years before Christ. That they cul- tivated something which they called philosophy, at a much earlier period than this, cannot be questioned ; for Aristotle, on the credit of the most, ancient recoids, speaks of the Chaldean magi as prior to the Egyptian priests, who were certainly men of learning, before the time of Moses. For any other science than that of the stars we do not read that the Chaldeans were famous ; and this seems to have been cultivated by them chiefly as the foundation of judicial astrology. If any credit be due to Plutarch and Vitruvius, who quote Berosus (see BEROSUS), it was the opinion of the Chaldean wise men that an eclipse of the moon happens when that part of its body which is destitute of tire is turned to- wards the earth. Their cosmogony, as given by Berosus, and preserved by Syncellus, seems to be this, that all things in the beginning consisted of darkness and water; that a divine power, divid- ing this humid

mass, formed the world ; and that the human mind is an emanation from the Di- vine nature.

The claim of the Egyptians to an early know- ledge of nature is certainly well-founded ; but, as their science was the immediate source of that of the Greeks, we shall defer our notice of it for the present, and turn our attention to the Indian philosophy, as it was cultivated from a very early period by the brachmans and gymnosophists. We pass over Persia, because we know of no science peculiar to that kingdom, except the doc- trines of the magi, which were religious rather than philosophical ; and of them the reader will find an account under the words MAGI, POLY- THEISM, and ZOROASTER.

We are certain that the Indian philosophers, from whatever quarter they received their philo- sophy, were held in high repute at a period of very remote antiquity, since they were visited by Pythagoras and other sages of ancient Greece. Yet they seem to have been in that early age, as well as at present, more distinguished for the severity of their manners than for the acquisi- tion of science. The philosophy of the Indians has indeed from the beginning been engrafted on their religious dogmas, and seems to be a compound of extravagant metaphysics and sa-

perslition, with a very slight mixture of the knowledge of nature. The pundits of Hindos- tan allow no powers whatever to matter, but introduce the Supreme Being as the imme- diate cause of every effect, however trivial. 4 Brehm, the spirit of God,' says one of their most revered authorities, ' is absorbed in self- contemplation. The same is the mighty Lord, who is present in every part of space, whose omnipresence, as expressed in the Reig-Beid, or Itigveda, I shall now explain. Brehm is one, and to him there is no second ; such is truly Brehm. His omniscience is self-inspired or self-intelligent, and its comprehension includes every possible species. To illustrate this as far as I am able ; the most comprehensive of all comprehensive faculties is omniscience : and, being self-inspired, it is subject to none of the accidents of mortality, conception, birth, growth, decay, or death ; neither is it subject to passion or vice. To it the three distinctions of time, past, present, and future, are not. To it the three modes of being are not (to be awake, to sleep, and to be unconscious). It is separated from the universe, and independent of all. This omniscience is named

Brehm. By this omnis- cient spirit the operations of God are enlivened. By this Spirit also the twenty-four powers of nature are animated. How is this ? As the eye by the sun, as the pot by the fire, as iron by the magnet, as variety of imitations by the mimic, as fire by the fuel, as the shadow by the man, as dust by the wind, as the arrow by the spring of the bow, and as the shade by the tree ; so by this Spirit the world is endued with the powers of intellect, the powers of the will, and the powers of action : so that if it emanates from the heart by the channel of the ear, it causes the perception of sounds ; if it emanates from the heart by the channel of the skin, it causes the perception of touch ; if it emanates from the heart by the channel of the eye, it causes the perception of visible objects ; if it emanates from the heart by the channel of the tongue, it causes the perception of taste ; if it emanates from the heart by the channel of the nose, it causes the perception of smell. This also invi- gorating the five members of action, the five members of perception, the five elements, the five senses, and the three dispositions of the mind, &c., causes the creation or the annihilation of the universe, while itself beholds every thing as an indifferent spectator.' From this quota- tion, it is plain that all the motions in the uni- verse, and all the perceptions of man, are, ac- cording to the brahmins, caused by the imme- diate agency of the Spirit of God, which seems to be here considered as the soul of the world. And it appears from some papers in the Asiatic Researches, that the most profound of these Orien- tal philosophers, and even the authors of their sacred books, believe not in the existence of mat- ter as a separate substance. Sir W. Jones says they hold an opinion respecting it similar to that of the celebrated Berkeley.

We have shown elsewhere that the metaphy- sical doctrines of the brahmins respecting the human soul differ not from those of Pythagoras and Plato; and that they believe it to be an

emanation from the great soul of the world, which, after many transmigrations, will be finally absorbed in its parent substance. From the brahmins believing in the soul of the world, not only as the agent, but as the immediate cause of every motion in nature, we can hardly suppose them to have made any great progress in that science which in Europe is cultivated under the name of physics. They have no inducement to investigate the laws of nature ; because, accord- ing to the first principles of their philosophy, which, together with their religion, they believe to have been revealed from heaven, every phe- nomenon, however regular, or however anoma- lous, is produced by the voluntary act of an intelligent mind. Yet in astronomy, geometry, and chronology, they appear to have made some proficiency at a very early period (see ASTRO- NOMY, Index). Their chronology and

astronomy are indeed full of those extravagant fictions ; but their calculations of eclipses, and ‘their computa- tions of time, are conducted upon scientific principles. ‘ They suppose,’ says Mr. Halhed, ‘ that there are fourteen spheres, seven below and six above the earth. The seven inferior worlds are said to be altogether inhabited by an infinite variety of serpents, described in every monstrous figure that the imagination can sug- gest. The first sphere above the earth is the immediate vault of the visible heavens, in which the sun, moon, and stars are placed. The se- cond is the first paradise and general receptacle of those who merit a removal from the lower earth. The third and fourth are inhabited by the souls of those men who, by the practice of virtue and dint of prayer, have acquired an ex- traordinary degree of sanctity. The fifth is the reward of those who have all their lives per- formed some wonderful act of penance and mor- tification, or who have died martyrs for their religion. The highest sphere is the residence of Brahma and his particular favorites, such as those men who have never uttered a falsehood during their whole lives, and those women who have voluntarily burned themselves with thfir husbands. All these are absorbed in the divine essence.’ On ethics, the Hindoos have nothin- that can be called philosophy. Their duties, moral, civil, and religious, are all laid down in their Vedas and Shasters, and enjoined by what they believe to be divine authority ; which su- persedes all reasoning concerning their fitness or utility.

Respecting the ancient philosophy of the Ara- bians and Chinese, the narrow limits of such an abstract as this hardly admit of our mentioning the conjectures of the learned. There is indeed sufficient evidence that both nations were, at a very early period, observers of the stars ; and that the Chinese had even a theory by which they foretold eclipses ; but there is reason to be- lieve that the Arabians, like other people in their circumstances, were little more than judicial astrologers. Pliny makes mention of their magi, whilst later writers tell us that they were fa- mous for their ingenuity in solving enigmatica questions, and for their skill in the arts of divi- nation : but the authors of Greece are silent cot- cerning their philosophy ; and there is no work

of greater antiquity than the Koran extant among them.

We pass, therefore, to the Phoenicians, whose commercial celebrity has induced many learned men to allow them great credit for early

science. If it be true indeed, as it seems probable, that the ships of this nation had doubled the Cape of Good Hope, and almost encompassed the penin- sula of Africa long before the era of Solomon, we cannot doubt that the Phoenicians had made great proficiency in navigation and astro- nomy, at a very remote period. Nor were these the only sciences cultivated by that ancient peo- ple: Moschus or Mochus, a Phoenician, who, according to Strabo, flourished before the Trojan war, was the author of the atomic philosophy, afterwards adopted by Leucippus, Democritus, and others among the Greeks ; and it was with some of the successors of this sage that Pytha- goras, as Jamblicus tells us, conversed at Sidon, and from them received his doctrine of Monads. Another proof of the early progress of the Phoe- nicians in philosophy may be found in the frag- ments of their historian Sanchoniatho, which have been preserved by Eusebius. This ancient writer teaches that, according to the wise men of his country, all things arose at first from the necessary agency of an active principle, upon a passive chaotic mass, which he calls ‘ mot. This chaos, Cudworth thinks, was the same with the elementary water of Thales, who was also of Phoenician extraction ; but Mosheim justly ob- serves, that it was rather dark air, since Philo translates it atpa £opu£i). Besides Mochus and Sanchoniatho, Cadmus, who introduced letters into Greece, may undoubtedly be reckoned a philosopher. Several other Phoenician philoso- phers are mentioned by Strabo; but as they flourished at a later period, and philosophiseˆ after the systematic mode of the Greeks, they fall not properly under our notice. We pass on therefore to the philosophy of Egypt.

The Greeks confess that all their learning was derived from the Egyptians, either imported im- mediately by their own philosophers, or brought through Phoenicia by the sages of the east; and we know from higher authority that, at a period so remote as the birth of Moses, ‘ the wisdom of the Egyptians was famous.’ Yet the history of Egyptian learning and philosophy, though men of the first eminence, both ancient and modern, have bestowed much pains in attempts to eluci- date it, still remains involved in clouds of doubt and hieroglyphics. That they had some know ledge of physiology, arithmetic, geometry, and astronomy, are facts which cannot be questioned ; but there is reason to believe that even these sciences were in Egypt pushed no farther than to the uses of life. That they believed in the existence of incorporeal substances is certain ; because Herodotus assures us that they were the first asserters of the immortality, pre-exist- ence, and transmigration of human souls, which they could not have been without believing the soul to be at least incorporeal, if not immaterial. Plato says that Thoth, Theut,

orTaaut, called by the Greeks Hermes, and by the Romans Mer- cuiy, was the inventor of letters; and, lest we should suppose that by those letters nothing

more is meant than picture writing or symboli- cal hieroglyphics, it is added, that he distin- guished between vowels and consonants, determining the number of each. The same philosopher attributes to Thoth the invention of arithmetic, geometry, astronomy, and hieroglyphic learning. The art of alchymy also has been said to have been professed by the ancient Egyptians ; and from Hermes, their celebrated philosopher, it has been called the Hermetic art.

When the intercourse between the Egyptians and Greeks first commenced, the wisdom of the former people consisted chiefly in the science of legislation and civil policy, and the philosopher, the divine, the legislator, and the poet, were united in the same person. Their cosmogony differed little from that of the Phoenicians. They held that the world was produced from chaos by the energy of an intelligent principle ; and they likewise conceived that there is in nature a continual tendency towards dissolution. In Plato's Timaeus, an Egyptian priest is introduced de- scribing the destruction of the world, and assert- ing that it will be effected by means of water and fire. They conceived that the universe under- goes a periodical conflagration; after which all things are restored to their original form, to pass again through a similar succession of changes.

- Of preceptive doctrine' says Dr. Enfield, in his History of Philosophy, ' the Egyptians had two kinds, the one sacred, the other vulgar. The former, which respected the ceremonies of reli- gion and the duties of the priests, was doubtless written in the sacred books of Hermes, but was too carefully concealed to pass down to posterity. The latter consisted of maxims and rules of vir- tue, prudence, or policy. It is in vain to look for accurate principles of ethics among an igno- rant and superstitious people. And that the ancient Egyptians merited this character is evi- dent from this single circumstance, that they suffered themselves to be deceived by impos- tors, particularly by the professors of the fanciful art of astrology.'

Phoroneus, Cecrops, Cadmus, and Orpheus, were among the earliest instructors of the Greeks ; and they inculcated Egyptian and Phoenician doctrines in detached maxims, and enforced them, not by strength of argument, but by the authority of tradition. Their cosmogonies were wholly Phoenician or Egyptian, disguised under Grecian names ; and they taught a future state of rewards and

punishments. The planets and the moon, Orpheus conceived to be habitable worlds, and the stars to be fiery bodies like the sun : but he taught that they are all animated by divinities ; an opinion which prevailed both in Egypt and the east : and it does not appear that he gave any other proof of his doctrines, than a confident assertion that they were derived from some god. Among the Greeks, an ingenious and penetrating people, philosophy soon assumed the form of profound speculation. Two eminent philosophers arose nearly at the same period, who may be considered as the parents not only of Grecian science, but of almost all the scirnce cultivated in Europe, prior to the era of lord Bacon : these were Thales and Pythagoras ; of whom the former founded the Ionic school, and

the latter the Italic : from which two sprung the various sects into which the Greek philosophers were afterwards divided. A bare enumeration of these sects is all that our limits will afford ; and we shall give it in the perspicuous language of Dr. Enfield, referring our readers for a fuller account than we can give of their respective merits to his translation of Brucker's history.

I. ' Of the Ionic school were, 1. The Ionic sect proper, whose founder Thales had as his successors Anaximenes, Anaxagoras, Diogenes, Apolloniates, and Archelaus. 2. The Socratic school, founded by Socrates, the principal of whose disciples were Xenophon, ./Eschines, Cimon, Cebes, Aristippus, Phaedo, Euclid, Plato, Antisthenes, Critias, and Alcibiades. 3. The Cyrenaic sect, of which Aristippus was the author ; his followers were, his daughter Arete, Hegesias, Aniceris, Theodorus, and Bion. 4. The Megaric or Eristic sect, formed by Euclid of Megara : to whom succeeded Eubulides, Dio- dorus, and Stilpo, famous for their logical sub- tlety. 5. The Eliac or Eretriac school, raised by Phaedo of Elis, who, though he closely ad- hered to the doctrine of Socrates, gave name to his school. His successors were Plistanus and JVIenedemus ; the latter of whom, being a native of Eretria, transferred the school and name to his own country. 6. The Academic sect, of which Plato was the founder. After his death, many of his disciples deviating from his doctrine, the school was divided into the old, new, and middle academies. 7. The Peripatetic sect, founded by Aristotle, whose successors in the Lyceum were Theophrastus, Strabo, Lycon, Aristo, Critolaus, and Diodorus. Among the Peripatetics, besides those who occupied the chair, were also Dicaearchus, Eudemus, and De- metrius Phalereus. 8. The Cynic sect,

of which the author was Antisthenes, whom Diogenes, Onesicritus, Crates, Metrocles, Menippus, and Menedemus, succeeded. In the list of Cynic philosophers must also be reckoned Hipparchis, the wife of Crates. 9. The Stoic sect, of which Zeno was the founder. His successors in the porch were Persaeus, Aristo of Chios, Herillus, Sphaerus, Cleanthes, Chrysippus, Zeno of Tarsus, Diogenes the Babylonian, Antipater, Panaetius, and Posidonius.

II. ‘ Of the Italic school were, 1. The Italic sect proper: it was founded by Pythagoras, a disciple of Pherecydes. The followers of Pytha- goras were Aristaeus, Mnesarchus, Alcmaeon, Ecphantus, Hippo, Empedocles, Epicharmus, Ocellus, Timaeus, Archytas, Hippasus, Philolaus, and Eudoxus. 2. The Eleatic sect, of which Xenophanes was the author : his successors, Parmenides, Melissus, Zeno, belonged to the me- taphysical class of this sect ; Leucippus, Demo- critus, Protagoras, Diagoras, and Anaxarchus, to the physical. 3. The Heraclitean sect, which was founded by Heraclitus, and soon afterwards expired : Zeno and Hippocrates philosophised after the manner of Heraclitus, and other philo- sophers borrowed freely from this system. 4. The Epicurean sect, a branch of the Eleatic, had Epicurus for its author ; among whose followers were Metrodorus, Polyaenus, Hermachus, Poly- stratus, Basilides, and Protarchus. 5. The Pyrr-

honic or Sceptic sect, the parent of which was Pyrrho ; his doctrine was taught by Timon the Phliasian; and after some interval was conti- nued by Ptolemy, a Cyrenean, and at Alexan- dria by^/Enesidemus.’ Of the peculiar doctrines of these sects, the reader will in this work find a short account, either in the lives of their respec- tive founders, or under the names of the sects themselves.

All the systematic philosophers pursued their inquiries into nature by nearly the same method. They established certain definite arrangements or classes, to some of which every thing past, pre- sent, or to come, might be referred ; and having ascertained, as they thought, all that could be affirmed or denied of these classes, they proved, by a short process of syllogistic reasoning, that what is true of the class must be true of every individual comprehended under it. The most celebrated of these arrangements is that which is known by the name of categories ; which Mr. Harris thinks at least as old as the era of Pytha- goras. These categories are, substance, quality, quantity, relation, action, passion, when, where, position, and habit ; which, according to the sys- tematic philosophy of the Greeks comprehend every human science and every subject of hu- man thought. ‘ History, natural and civil, springs,’ says Mr. Harris, ‘ out of substance ;

mathematics out of quantity ; optics out of qua- lity and quantity ; medicine out of the same ; astronomy out of quantity and motion ; music and mechanics out of the same ; painting out of quality and site ; ethics out of relation ; chrono- logy out of when (or time) ; geography out of where (or place); electricity, magnetism, and attraction, out of action and passion ; and so in other instances.

‘ This mode of philophising spread from Greece over the whole civilised world. It was carried by Alexander into Asia, by his successors into Egypt ; and it found its way to Rome after the conquest of Greece. It was adopted by the Jews, by the Christian fathers, by the Maho- metan Arabs during the caliphate, and by the schoolmen through all Europe, till its futility was exposed by lord Bacon. Its professors often displayed great acuteness ; but their sys- tems were built on mere hypotheses, and sup- ported by syllogistic wrangling. Now and then indeed a superior genius, such as Alhazen and our countryman Roger Bacon, broke through the trammels of the schools, and, regardless of the authority of the Stagyrite, made real discoveries in physical science, by experiments judiciously conducted on individual substances; but the science in repute still continued to be that of Generals.’

From the eighth to the fourteenth century of the Christian era, the whole circle of instruction, or the liberal arts, as they were called, consisted of two branches, the trivium and the quadri- vium ; of whi.ch the former comprehended gram- mar, rhetoric:, and dialectics; the latter music, arithmetic, geometry, and astronomy, to which was added, a. bout the end of the eleventh cen- tury, the study of a number of metaphysical subtleties eq ually useless and unintelligible. The works of th e ancient Greek philosophers had

been hitherto read only in imperfect Latin trans- lations ; and, before the scholastic system was completely established, Plato and Aristotle had been alternately looked up to as oracles in science. The rigid schoolmen, however, uni- versally gave the preference to Aristotle ; be- cause his analysis of body into matter and form is peculiarly calculated to keep in countenance that most incredible doctrine of the Romish church (transubstantiation) ; and, upon the re- vival of Greek learning, this preference was continued after the school philosophy had be- gun to fall into contempt.

At last Luther and his associates set the minds of men free from the tyranny of ancient names, both in science and theology ; and many philo- sophers sprung up in different countries of Eu- rope, who professed to study nature, regardless of every authority but that of reason. Of these the most eminent beyond all comparison was Francis Bacon, lord Verulam. This illustrious man, having read with attention the writings of the most celebrated ancients, and made himself master of the sciences which were then cultivated, soon discovered the absurdity of pretending to account for the phenomena of nature by syllo- gistic reasoning from hypothetical principles ; and, with a boldness becoming a genius of the first order, undertook to give a new chart of hu man knowledge. This he did in his two admi- rable works, entitled 1 . De Dignitate et Aug- mentis Scientiarum; and 2. Novum Organum Scientiarum, sive Judicia vera de Interpretatione Nature. In the former of these works he takes a very minute survey of the whole circle of hu- man science, which he divides into three great branches, history, poetry, and philosophy, cor- responding to the three faculties of the mind, memory, imagination, and reason. Each of these general heads is subdivided into minuter branches, and reflections are made upon the whole, though we can neither copy nor abridge here. The purpose of the Novum Organum is to point out the proper method of interpreting nature ; which the author shows can never be done by the logic which was then in fashion, but only by a painful and fair induction. This great man was no less an enemy to hypotheses and preconceived opinions, which he calls idola theatri, than to syllogisms ; and since his days almost every philosopher of eminence, except Descartes and his followers (see CARTES), has professed to study nature according to the me- thod so accurately laid down in the Novum Organum. Of this mode of philosophising we shall now give a short but accurate view, by stating its objects, comparing it with that which it superseded, explaining its rules, and pointing out its uses.

SECT. II. — VIEW OF LORD BACON’S PHILO- SOPHY.

That unbounded object of the contemplation, curiosity, and researches of man, the universe, may be considered in various important points of view. It may be considered merely as a collection of existences, related to each other by means of resemblances and distinctions ; situa- tion, succession, and derivation, as making parts

of a whole. In this view it is the subject of pure description: and, in order to acquire a knowledge of the universe in this point of view, we must enumerate all the beings in it, mention their sensible qualities, and mark all the relations for each. But this would be labor immense ; and, when done, an undistinguishable chaos. A book containing every

word of a language would only give us the materials of this lan- guage. To make it comprehensible, it must be put into some form, which will comprehend the whole in a small compass, and enable the mind to pass easily from one word to another. Of all relations among words, the most obvious are those of resemblance and derivation. An ety- mological dictionary, therefore, in which words are classed in consequence of their resemblances, and arranged by means of their derivative dis- tinctions, will greatly facilitate the acquisition of the language.

Thus, too, the objects of nature around us may be classed according to their resemblance, and then arranged in those classes by particular dis- tinctions. In this classification we proceed by our faculty of abstracting our attention from the circumstances in which things differ, and turning it to those only in which they agree. By this faculty we can not only distribute the indivi- duals into classes, but also subdivide those classes into orders, genera, and species. Thus a vast number of individuals resembling each other in the single circumstance of life, com- poses the most extensive kingdom of animals. If it be required that they shall further resemble in the circumstance of having feathers, a prodi- gious number of animals are excluded, and we form the inferior class of birds. We exclude a great number of birds by requiring a further similarity of web feet, and have the order of anseres. If we add lingua citiata, we confine attention to the genus of anates. In this man- ner may the whole objects of the universe be arranged, divided, and subdivided, into king- doms, classes, orders, genera, and species.

This classification and arrangement is called natural history, and is the only foundation of any extensive knowledge of nature. To the natural historian, therefore, the world is a col- lection of existences, the subject of descriptive arrangement. His aim is threefold : 1 . To ob- serve with care, and describe with accuracy, the various objects of the universe. 2. To determine and enumerate all the great classes of objects ; to distribute and arrange them into all their sub- ordinate classes, through all degrees of subordin- ation, till he arrive at what are only accidental varieties, which are susceptible of no farther distribution ; and to mark with precision the principles of this distribution and arrangement, and the characteristics of the various assem- blages. 3. To determine with certainty the par- ticular group to which any proposed individual belongs.

Description, therefore, arrangement, and re- ference, constitute the whole of his employment ; and in this consists all his science.

Were the universe to continue unchanged, this would constitute the whole of our knowledge of nature ; but we are witnesses of an uninterrupted

succession of changes, and our attention is con- tinually called to the events which are inces- santly happening around us. These form a set of objects vastly more interesting to us than the former ; being the sources of almost all the plea- sures or pains we receive from external objects. The study of the events which happen around us becomes highly interesting, and we are strongly incited to prosecute it; but they are so nume- rous and so multifarious that the labor would be immense, without some contrivance for ab- breviating and facilitating it. The same help offers itself here as in the study of what may be called quiescent nature. Events, like existences, are susceptible of classification, in consequence of resemblances and distinction ; and, by atten- tion to these, we can acquire a very extensive acquaintance with active nature. Our attention must be chiefly directed to those circumstances in which many events resemble each other, while they differ perhaps in a thousand others. Then we must attend to their most general distinctions, then to distinctions of smaller extent, and so on. In this way, accordingly, we have advanced in our knowledge of active nature, and are gra- dually and by no means slowly, forming assem- blages of events more and more extensive, and distributing these with greater and greater pre- cision into their different classes.

In describing those circumstances of similarity among events, and in distributing them accord- ing to those similarities, it is impossible to over- look that constancy which is observed in the changes of nature, in the events which are the objects of our contemplation. Events which have once been observed to accompany each other are observed always to do so. The rising of the sun is always accompanied by the light of day, and his setting by the darkness of night. Sound argument is accompanied by conviction, impulse by motion, kindness by a feeling of gratitude, and the perception of good by desire. The uniform experience of mankind informs us that the events of nature go on in certain regular trains ; and, if sometimes exceptions seem to contradict this general affirmation, more attentive observation never fails to remove the exception. Most of the spontaneous events of nature are very complicated ; and it frequently requires great attention and penetration to discover the simple event amidst a crowd of unessential cir- cumstances which are at once exhibited to our

view. But, when we succeed in this discovery, we never fail to acknowledge the perfect unifor- mity of the event to what has been formerly observed. Hence we firmly believe that this uniformity will still continue ; that fire will melt wax, will burn paper, will harden clay, as we have formerly observed it to do ; and whenever we have undoubted proofs that the circumstances and situation are precisely the same as in some former case, though but once observed, we ex- pect with confidence that the event will also be the same.

Many proofs of the universality of this law of human thought are not necessary. The whole language and actions of men are instances of the fact. In all languages there is a mode of con- struction used to express this relation as distinct

from all others, and the conversation of the most illiterate never confounds them. The general employment of the active and passive verb is regulated by it. 'The tower was demolished by the soldiers ; the town was overthrown by an earthquake ;' are sentences that express two re- lations, and no school-boy will mistake them. The distinction therefore is perceived or felt by all. Nor is any language without general terms to express this relation, cause and effect. Nay, even brutes show that they expect the same uses of every subject which they formerly made of it ; and, without this, animals would be incapable of subsistence, and man incapable of all improve- ment. From this alone memory derives all its value ; and even the constancy or natural opera- tion would be useless, if not matched or adapted to our purposes by this expectation of and confi- dence in that constancy.

The result of all the enquiries of ingenious men, to discover the foundation of this irresisti- ble expectation, is, 'such is the constitution of the human mind.' It is a universal fact in human thought ; and it appears to be an ultimate fact, not included in any other still more general. This is sufficient for making it the foundation of true human knowledge ; all of which must in like manner be reduced to ultimate facts in the human thought.

This persuasion of the constancy of nature we must consider as an instinctive anticipation of events similar to those which we have already experienced. The general analogy of nature should have disposed philosophers to acquiesce in this. In no instance of importance to our safety or well-being are we left to the guidance of our boasted reason : God has given us the surer conduct of natural instincts. No case is so important as this; in none do we so much stand in need of a guide, which shall be pow- erful, infallible, and rapid in its decisions. Without it we should remain incapable of all in-

struction from experience, and therefore of all im- provement.

Our sensations are no doubt feelings of our mind. But those feelings are accompanied by an instinctive reference to something distinct from the feelings themselves. Hence arise our per- ceptions of external objects, and our very notions of this externeity, if we may use the term. In like manner, this anticipation of events, this irre- sistible connexion of the idea of fire with the idea of burning, is also a feeling of the mind ; and this feeling is by a law of human nature re- ferred, without reasoning, to something external as its cause; and, like our sensation, it is con- sidered as a sign of that external something. It is like the connexion of the truth of a mathema- tical proposition. The conviction is the sign or indication of this relation by which it is brought to our view. In the same manner, the irresisti- ble connexion of ideas is interpreted as the sen- sation or sign of a necessary connexion of ex- ternal tilings or events. These are supposed to include something in their nature which renders tihem inseparable companions. To this bond of connexion between external things we give the name of causation. All our knowledge of this relation of cause and effect is the knowledge of

consciousness of what passes in our own minds, during the contemplation of the phenomena of nature. If we adhere to this view of it, and put this branch of knowledge on the same footing with those called the abstract sciences, consider- ing only the relations of ideas, we shall acquire demonstrative science. Any other view of the matter will lead us into inextricable mazes of uncertainty and error.

We thus, then, perceive that the natural pro- cedure of our faculty of abstraction and arrange- ments in order to acquire a more speedy and comprehensive knowledge of natural events, pre- sents them to our view in another form. We not only see them as similar events, but as events naturally and necessarily conjoined. And the expression of resemblance among events is also an expression of concomitancy ; and this arrangement of events in consequence of their resemblance is in fact the discovery of those ac- companiments. The trains of natural appear- ance being considered as the appointments of the Author of Nature, has occasioned them to be considered also as consequences of laws im- posed on his works by their great Author, and every thing is said to be regulated by fixed laws.

There is a great resemblance between the ex- pression natural law, and grammatical rule. Rule in grammar expresses merely a generality of fact, whether of flexion or construction. In like manner, a law of nature is to the philosopher nothing, but the expression of a generality of fact. A natural or physical law is a generally observed fact ; and, whenever we treat any sub- ject as a generally observed fact, we treat it phy- sically. It is a physical law of the understand- ing, that argument is accompanied by conviction ; it is a physical law of the affection that distress is accompanied by pity ; it is a physical law of the material world that impulse is accompanied by motion. And thus we see that the arrange- ment of events, or the discovery of those ge- neral points of resemblance, is in fact the dis- covery of the laws of nature; and one of the greatest and most important is, that the laws of nature are constant. This view of the universe is incomparably more interesting and important than that which is taken by the natural historian; contemplating every thing that is of value to us, and, in short, the whole life and movement of the universe. This study, therefore, has been dignified with the name of philosophy and of science ; and natural history has been consi- dered as of importance only in so far as it is conducive to the successful prosecution of philo- sophy.

The philosopher claims a superiority on ano- ther account : he considers himself as employed in the discovery of causes, and that it is by the discovery of these relations that he communicates to the world such important knowledge. Philo- sophy, he says, is the science of causes. The vulgar are contented to consider the prior of two inseparably conjoined events as the cause of the other ; the stroke on a bell, for instance, as the cause of sound. But it has been clearly disco- yered by the philosopher that between the blow on the bell and the sensation of sound, there are interposed a long train of events. The blow sets

the bell a trembling; this agitates the wr in con- tact with the bell ; that the air immediately be- yond it ; and thus between the bell and the ear may be interposed a numberless series of events, and as many more between the first impression on the ear and that last impression on the nerve by which the mind is affected. He can no longer therefore follow the nomenclature of the vulgar. Which of the events of this train therefore is the cause of the sensation ? None of them : It is that something, which inseparably connects any two of them, and constitutes their bond of union. These causes he considers as residing in one or both of the connected objects : diversities in this respect must therefore constitute the most im- portant distinctions between them. They are therefore with great propriety called the quali- ties,

the properties, of these respective subjects. As the events, from which we infer the existence of these qualities of things, resemble in many respects such events as are the consequences of the exertion of our own powers, these qualities are frequently denominated powers, forces, energies. Thus, from the instance of the sound of a bell, we infer the powers of impulse, elas- ticity, nervous irritability, and animal sensibility.

From this necessary connexion between the objects around us we not only infer the posterior event from the prior, or, in common language, the effect from the cause, but we also infer the prior from the posterior, the cause from the effect. We not only expect that the presence of a magnet will be followed by certain motions in iron filings, but, when we observe such motions, we infer the presence and agency of a magnet. Joy is inferred from merriment, poison from sudden or unaccountable death, fire from smoke, and impulse from motion. And thus the ap- pearances of the universe are the indications of the powers of the objects in it. As all our know- ledge of the sentiments of others is derived from our confidence in their veracity ; so all our knowledge of nature is derived from our confi- dence in the constancy of her operations. A credulity in our neighbour's veracity, resulting from that law of our mental constitution by which we speak, conducts us in the one case ; and the constancy of nature, by which we infer general laws from particular facts, conducts us in the other. It is by the successful study of this language of nature that we derive useful know- ledge. The knowledge of the influence of mo- tives on the mind of man enables the statesman to govern kingdoms, and the knowledge of the powers of magnetism enables the mariner to pilot a ship through the pathless ocean.

Such are the high pretensions of philosophy. It is to be wished that they be well founded; for we may be persuaded that a mistake in this par- ticular will be fatal to the advancement of know- ledge. An author of great reputation gives us an opportunity of deciding this question in the way of experiment. Ha says that the ancients were philosophers, employed in the discovery of causes, and that the moderns are only natural historians, contenting themselves with observing the laws of nature, but paying no attention to the causes of things. If he speaks of their pro- fessed aim, we apprehend that the assertion is

pretty just in general. With very few exceptions, mdeed, it may be affirmed of his favorite Aris- totle, the philosopher Kar1 tˆoˆv, and of Sir Isaac Newton. We select these two instances, both because they are set in continual opposi- tion by this author, and because it will be al- lowed that they were the most eminent students of nature (for we must not call them philoso- phers), in ancient and modern times.

Aristotle's professed aim, in his most cele- brated writings, is the investigation of causes ; and, in the opinion of this author, he has been so •successful that he has hardly left any employ- ment for his successors beside that of comment- ing upon his works. We must) on the other hand, acknowledge that Newton makes no such pretensions, at least in that work which has im- mortalised his name, and that his professed aim is merely to investigate the general laws of the planetary motions, and to apply these to the ex- planation of particular phenomena. Nor will we say that he has left no employment for succeed- ing enquirers; but, on the contrary, confess that he has only begun the study, has discovered but one law, and has enabled us to explain only the phenomena comprehended in it. But his inves- tigation has been complete : he has discovered, beyond all possibility of contradiction, a fact which is uniform through the whole extent of the solar system ; namely, that every body, nay that «very particle in it, is continually deflected tow- ards every other body ; and that this deflection is, in every instance, proportional to the quantity of matter in that body towards which the deflec- tion is directed, and to the reciprocal of the square of the distance from it. He has therefore dis- covered a physical law of immense extent. Nor has he been less successful in the explanation of particular phenomena. Of this there cannot be given a better instance than the explanation of the lunar motions from the theory of gravity be- gun by Newton, Mathesi sua facem prseferente ; and now brought to such a degree of perfection, that if the moon's place be computed from it for «ny moment within the period of 2000 years back, it will not be found to differ from the place on which she was actually observed by the 100th part of her own breadth.

We may challenge the Aristotelians to name any one cause which has really been discovered by their great master, whether in the operations of mind or of body. They must not adduce the investigation of any natural law in which he has sometimes succeeded. With still greater confi- dence may we challenge them to produce any remarkable instance of the explanation of natural phenomena either of mind or body. By expla- nation, we mean an account of the production, and an appreciation of all the circumstances, sus- ceptible of a scrupulous comparison with fact, and perfectly consistent with it.

It is here that the weakness of this philosopher's hypothesis is most conspicuous ; and his followers acknowledge, that, in the enquiries which proceed by experi- ment, they have not derived great assistance from Aristotle's philosophy. But this, say they, does not derogate from the pre-eminence of his phi- losophy, because he has shown that the particu- lar fields of observation are to be cultivated only

by means of experiment. But surely every field of observation is particular. There id no ab- stract object of philosophical research, the study of which shall terminate in the philosophy of universals. There is therefore great room for suspecting that Aristotle and his followers have not aimed at the discovery of causes, but only at the discovery of natural laws, and have failed in the attempt.

Into the previous question, Is it possible to discover a philosophical cause, that something which is neither the prior nor the posterior of the two immediately adjoining events, but their bond of union and this distinct from the union itself? we are not disposed to enter at length.

Much has been written on this subject. The most acute observation and sound judgment have been employed in the study : but, in all these researches, no phenomena have occurred which look like the perception or contemplation of a philosophical cause, or this power in abstracto. No philosopher has ever pretended to state such an object of the mind's observation. Those causes, those bonds of necessary union between the naturally conjoined events or objects, are not only perceived by means of the events alone, but are perceived solely in the events, and cannot be distinguished from the conjunctions themselves. They are neither the objects of separate observa- tion, nor the productions of memory, nor in- ferences drawn from reflection on the laws by which the operations of our own minds are regu- lated ; nor can they be derived from other per- ceptions in the way of argumentative inference. We cannot infer the paroxysm of terror from the appearance of impending destruction, nor the fall of a stone when not supported, as we infer the incommensurability of the diagonal and side of a square. This last is implied in the very conception or notion of a square ; not as a con- sequence of its other properties, but as one of its essential attributes : and the contrary proposi- tion is not only false, but incapable of being distinctly conceived. This is not the case with the other phenomenon, nor any matter of fact. The proofs which are brought of a mathematical pro- position are not the reason of its being true, but the steps by which this truth is brought into our view ; and frequently, as in the instance now given, this truth is perceived, not directly, but consequentially, by the inconceivableness of the

contrary proposition.

Hume derives this irresistible expectation of events from the known effect of custom, and the association of ideas ; an explanation which begs the very thing to be proved, when it ascribes to custom a power of any kind. Besides, on the genuine principles of scepticism, this custom involves an acknowledgment of past events, of a something different from present impressions, which, in this doctrine, are the only certain ex- istences in nature.

Leibnitz and Malebranche deny that there is any such connexion, and assert that the events of the universe go on in corresponding trains, but without any causal connexion, just as a well regulated clock will keep time with the motions of the heavens without any kind of dependence on them ; that this harmony of events was pre-

established by the Author of the Universe, in subserviency to the purposes he had in view in its formation, &c. But, without insisting on the fantastic wildness of this ingenious whim, it is enough to observe that it also is a begging of the question, because it supposes causation when it ascribes all to the agency of the Deity.

That we do perceive the relation of causation as distinct from all others, and in particular as distinct from the relation of contiguity in time and place — or the relation of agent, action, and patient, must be concluded from the uniformity of language, which never confounds them except on purpose, and when it is perceived. But even here we shall find that none of the terms used for expressing those powers of substance, which are conceived as the causes of their characteristic phenomena, really express any thing different from the phenomena themselves. Let any person try to define the terms gravity, elasticity, sensi- bility, and the like, and he will find that the de- finition is nothing but a description of the phe- nomenon itself. The words are all derivatives, most of them verbal derivatives, implying action, gravitation, &c. As the general resemblances in shape, color, &c., are expressed by the natural historian by generic terms, so the general resem- blances in event are expressed by the philoso- pher in generic propositions, which, in the pro- gress of cultivation, are also abbreviated into generic terms. This abundantly explains the consistency of our language on this subject, both with itself, and with the operations of nature, without however affording any argument for

the truth of the assumption, that causes are the ob- jects of philosophic research as separate exist- ences ; or that this supposed necessary connexion is a necessary truth, whether supreme or subor- dinate. But since the perception of it has its foundation in the constitution of the human mind, it seems entitled to the name of a first principle. We are hardly allowed to doubt of this when we consider the importance of it, and the care of nature to secure us, in all things essential to our safety and well-being, from all danger, from inattention, ignorance, or indolence, by an instinct infallible in its information, and instantaneous in its decisions.

Causes, therefore, say some of our ablest writ- ers on this subject, are no more cogniscible by our intellectual powers than colors by a man born blind : nay, whoever will be at the pains to consider this matter will find that necessary connexion, or bond of causation, can no more be the subject of philosophical discussion by man than the ultimate nature of truth. It is precisely the same absurdity or congruity as to propose to examine light with a microscope. All that we can say is that their existence is probable, but by no means certain. But all this is indifferent to the real occupation of the philosopher, and does not affect either the certainty, the extent, or the utility of the knowledge which he may acquire.

We are now able to appreciate the high pre- tensions of the philosophy of lord Bacon, and its claim to scientific superiority. The true object of the philosopher is not causes: his discoveries are nothing' but the discovery of general facts and physical laws ; and his employment is the same

with that of the descriptive historian. He ob- serves and describes with care and accuracy the events of nature ; and then he groups them into classes, from resembling circumstances, detected in the midst of many others which are dissimilar and occasional. By gradually throwing out more circumstances of resemblance, he renders his classes more extensive; by carefully marking those circumstances in which the resemblance is observed, he characterises all the different classes; and by a comparison of these with each other, in respect to the number of resembling circum. stances, he distributes his classes according to their generality and subordination : thus exhaust- ing the whole assemblage, and leaving nothing unarranged but accidental varieties. In this procedure every grouping of similar events is, ipso facto, discovering a physical law ; and the expression of this assemblage is the expression of that law. And, as every observation of this constancy of fact affords an opportunity for ex- erting the instinctive inference of natural con- nexion between the related subjects, every such

observation is the discovery of a power, property, or quality, of natural substance. This observa- tion of event is all we know of the connexion, all we know of the natural power. When the philosopher proceeds further to the arrangement of events, according to their various degrees of complication, he is making an arrangement of all natural powers according to their various de- grees of subordinate influence. And thus his occupation is similar to that of the descriptive historian, classification and arrangement ; and this seems to constitute all the science attainable by both.

SECT. III. — THE PHILOSOPHY AND RULES OF KEPLER, SIR ISAAC NEWTON, &c.

In the above view philosophy may be defined the study of the phenomena of the universe, to discover the general laws which indicate the powers of natural substances, to explain subor- dinate phenomena, and to improve art : or philosophy is the study of the phenomena of the universe, with a view to discover their causes, to explain subordinate phenomena, and to improve art. The task is undoubtedly difficult, and will exercise our noblest powers. The employment is manly, and the result important. It therefore justly merits the appellation of philosophy, al- though its objects are nowise different from those which occupy the attention of other men.

A philosophical history of nature consists in a complete or copious enumeration and narration of facts, properly selected, cleared of all extra- neous circumstances, and accurately narrated. This constitutes the materials of philosophy. We cannot give a better example of this branch ot philosophical occupation than astronomy. From the beginning of the Alexandrian school to this day astronomers have been at immense pains in observing the heavenly bodies, to detect their true motions. This has been a work of prodi- gious difficulty : for the appearances are such as might have been exhibited although the real mo- tion had been extremely different. Not that our senses give us false information ; but we form hasty, and frequently false judgments, from these

informations; and call those things deceptions of sense, which are in fact errors of judgment. But the true motions have at last been discovered, and described with sucli accuracy that the his- tory may be considered as nearly complete. This is to be found in the usual

systems of astronomy, where the tables contain a most accurate and synoptical account of the motion ; so that we can tell with precision in what point of the heavens a planet has been seen at any instant that can be named. Sir Isaac Newton's Optics is such ano- ther perfect model of philosophical history, as far as it goes. This part of philosophy may be called phenomenology.

other body ; and that the simultaneous deflec- tions were proportional to the quantity of matter in the body towards which they were directed, and to the reciprocal of the square of the distance from it. Thus was the law made still more ge- neral. He compared the deflection of the moon in her orbit with the simultaneous deflection of a stone thrown from the hand, and describing a parabola ; and he found that they followed the same law, that is, that the deflection of the moon in a second was to that of the stone in the same time as the square of the stone's distance from the centre of the earth to the square of the moon's distance from it. Hence he concluded

A general knowledge of the universe may thus that the deflection of a stone from a straight

be easily acquired and firmly retained, by classi- fication and arrangement ; which must proceed on resemblances observed in the events ; the sub- sequent arrangement must be regulated by the distinctions of which those resemblances are still susceptible. This assemblage of events into groups must be expressed. They are facts; there- fore the expression must be in propositions, which form, taken together, natural or physical laws. This observation of physical laws is always

line was just a particular instance of the deflec- tions which took place through the whole solar system.

The deflection of a stone is one of the indica- tions it gives of its being heavy ; whence he calls it gravitation. He therefore expresses the physi- cal law which obtains through the whole solar sys- tem, by saying that ' every body gravitates to every other body ; and the gravitations are proportional to the quantity of matter in that other body, and in-

accompanied by a reference of that uniformity of versely proportional to the square of the distance

event to a natural bond of union between the from it.' Thus we see how the arrangement of the

concomitant facts, which is conceived by us as celestial phenomena terminated in the discovery of

the cause of this concomitancy ; and therefore physical laws ; and that the expression of this ar-

this procedure of the philosopher is considered rangement is the law itself. Since the fall of a

as the discovery of those causes, or powers of heavy body is one instance of the physical law,

natural substances, which constitute their phy- and since this fall is considered by all as the ef- sical relations, and may justly be called their

distinguishing qualities or properties. This view of the matter gives rise to a new nomenclature. We give to those powers generic names, such as sensibility, intelligence, irritability, gravity, elas- ticity, fluidity, magnetism, &c. These terms mark resembling circumstances of events ; and no other definition can be given of them but a description of these circumstances. In a few cases which have been the subjects of more pain- ful or refined discussion, we have proceeded far- ther in this abbreviation of language. Want of attention to the pure meaning of the words thus originated, has frequently occasioned very great mistakes in philosophical science. We shall give an instance of its most successful application to the class of events already adduced.

Kepler, the celebrated Prussian astronomer, having maturely considered the phenomena re- corded in the tables and observations of his pre- decessors, discovered, amidst all the varieties of the planetary motions, three circumstances of re- semblance, which are now known by the name of Kepler's laws. See ASTRONOMY, Index ; and KEPLER. Long after this discovery of Kep- ler, Sir Isaac Newton found that these laws of Kepler were only particular cases of a fact or law still more general. He found that the de- flections of the planets from uniform rectilineal motion were all directed to the sun ; and that the simultaneous deflections were inversely pro- portional to the squares of the distances from him. Thus was established a physical law of vast extent: but further observation showed him, that the motion of every body of the solar system •was compounded of an original motion of pro- tection, combined with a deflection towards everv VOL. XVII.

feet of its weight, and this weight is considered as the cause of the fall,

the same cause is assign- ed for all the deflections observed in the solar system ; and all the matter in it is found to be under the influence of this cause, or to be heavy; and thus his doctrine has been denominated the system of universal gravitation. Philosophers have gone farther, and have supposed that gra- vity is a power, property, or quality, residing in all the bodies of the solar system. Sir Isaac Newton does not say so. He contents himself with the immediate consequence of the first axiom in natural philosophy, viz. that every body remains in a state of rest, or of uniform rectili- neal motion, unless affected by some moving force. Since the bodies of the solar system are neither in a state of rest, nor of uniform rectili- neal motion, they must be considered as so af- fected ; that is, that there operates on every one of them a moving force, directed towards all the others, and having the proportions observed in the deflection.

It is to our present purpose to show how the observation and arrangement of phenomena ter- minate in the discovery of their causes, or of the powers or properties of natural substances. This is a task of great difficulty, as it is of great im- portance. Of this difficulty there are two chief causes :

1. In most of the spontaneous phenomena of nature there is a complication of many events, and some of them escape our observation. At- tending only to the most remarkable, we conjoin these only in our imagination, and are apt to think these the concomitant events in nature, the proper indication of the cause, and the subjects of this philosophical relation, and to suppose that

they are always conjoined by nature. Thus it was thought that there resided in a vibrating chord a power by which the sensation of sound was excited, or that a chord had a sounding qua- lity. But late observations have shown clearly that there is an inconceivable number of events interposed between the vibration of the chord and the sensitive affection of our ear ; and, there- fore, that sound is not the effect of the vibration of the chord, but of the very last event of this se- ries : and this is completely demonstrated by showing that the vibration and the sound are not necessarily connected, because they are not al- ways connected, but require the interposition of air or of some other elastic body. These obser- vations show the necessity of

the most accurate and minute observations of the phenomena, .that none of those intermediate events may escape us, and we be thus exposed to the chance of imagi- nary connexions between events which are far asunder in the procedure of nature. As the study has improved, mistakes of this kind have been corrected ; and philosophers are careful to make their trains of events under one name as short as possible. Thus, in medicine, a drug is no longer considered as a specific remedy for the disease which is sometimes cured when it has been used, but is denominated by its most im- mediate operation on the animal frame : it is no longer called a febrifuge, but a sudorific.

2. When many natural powers combine their influence in a spontaneous phenomenon of nature, it is frequently very difficult to discover what part of the complicated effect is the effect of each, and to state those circumstances of simi- larity which are the foundation of a physical law, or entitle us to infer the agency of any na- tural power. The most likely method for insur- ing success in such cases is to get rid of this complication of events, by putting the subject into such a situation that the operation of all the known powers of nature shall be suspended, or so modified as we may perfectly understand their effects. We can thus appreciate the effects of such as we could neither modify nor suspend, or we can discover the existence of a new law, the operation of a new power. This is called mak- ing an experiment ; and is the most effectual way of advancing in the knowledge of nature, and has been called experimental philosophy. See Sect. 5.

It seems, however, at first sight, in direct op- Pfosition to the procedure of nature in forming general laws. These are formed by induction from multitudes of individual facts, and must be affirmed to no greater extent than the induction on which they are founded. Yet it is a matter of fact, a physical law of human thought, that one simple, clear, and unequivocal experiment gives us the most complete confidence in the truth of a general conclusion from it to every si- milar case. Whence this anomaly ? It is not an anomaly or contradiction of the general maxim of philosophical investigation, but the most re- fined application of it. There is no law more general than this, that ‘ Nature is constant in all her operations.’ The judicious and simple form of our experiment insures us (we imagine) in the complete knowledge of all the circumstances of

the event. Upon this supposition, and this alone, we consider the experiment as the faithful representative of every possible case of the con- junction.

The last branch of philosophic occupation is the explanation of

subordinate phenomena. This is nothing more than the referring any par- ticular phenomenon to that class in which it is included ; or pointing out the general law, or that general fact, of which the phenomenon is a particular instance. Thus the feeling of the obliga- tions of virtue is thought to be explained, when it is shown to be a particular case of that regard which every person has for his dearest interests. The rise of water in pumps is explained, when we show it to be a particular case of the pressure of fluids, or of the air. The general law under which we show it to be properly arranged is called the principle of the explanation, and the explanation itself is called the theory of the phe- nomenon. Thus Euler's explanation of the lu- nar irregularities is called the theory of the lunar motions on the principle of gravitation. This may be done either to advance our own know- ledge of nature, or to communicate it to others. If done with the first view, we must examine the phenomenon minutely, and endeavour to detect every circumstance in it, and thus discover all the known laws of nature which concur in its production ; we then appreciate the operation of each according to the circumstances of its exertion ; we then combine all these, and compare the re- sult with the phenomenon. If they are similar, we have explained the phenomenon. We can- not give a better example than Franklin's expla- nation of the phenomena of thunder and light- ning.

' If we explain a phenomenon from known principles, we proceed synthetically from the general law already established, and known to exert its influence in the present instance. We state this influence both in kind and degree according to the circumstances of the case ; and, having combined them, we compare the result with the phenomenon, and show their agree- ment. Thus, because all the bodies of the solar system mutually gravitate, the moon gravitates to the sun as well as to the earth, and is continu- ally, and in a certain determinate manner, de- flected from that path which she would describe did she gravitate only to the earth. Her motion round the earth will be retarded during the first and third quarters of her orbit, and accelerated during the second and fourth. Her orbit and her period will be increased during our winter, and diminished during our summer. Her apo- gee will advance, and her nodes will recede ; and the inclination of her orbit will be greatest when the nodes are in syzigee, and least when they are in quadrature. And all these varia- tions will be in certain precise degrees. Then we show that all these things actually obtain in the lunar motions, and they are considered as explained. This summary account of the object and employment in all philosophical discussion is sufficient for pointing out its place in the circle of the sciences, and will serve to direct us to the proper methods of prosecuting it with

success. Events are its object; and they are

considered as connected with each other by causation, which may therefore be called the philosophical relation of things. The following may be adopted as the fundamental proposition on which all philosophical discussion proceeds, and under which every philosophical discussion or discovery may be arranged : — Every change that we observe in the state or condition of things is considered by us as an effect, indicating the agency, characterising the kind, and determining the degree of its inferred cause.'

What have the philosophers of all ages been employed about, but the discovery of the causes of those changes that are incessantly going on ? Human curiosity has been directed to nothing so powerfully and so constantly as to this. Many absurd causes have been assigned for the phenomena of the universe ; but no set of men have ever said that they happened with- out a cause. This is so repugnant to all our propensities and instincts, that even the atheis- tical sect, who, of all others, would have profited most by the doctrine, have never thought of advancing it. To avoid so shocking an absur- dity, they haˆe rather allowed that chance, and the concourse of atoms, are the causes of the beautiful arrangements of nature. The thought- less vulgar are no less solicitous than the philo- sophers to discover the causes of things. Had men never speculated, their conduct alone gives sufficient evidence of the universality of the opinion. The whole conduct of man is regu- lated by it, nay almost wholly proceeds upon it, in the most important matters, and where expe- rience seems to leave us in doubt ; and to act otherwise, as if any thing whatever happened without a cause, would be a declaration of in- sanity. Dr. Reid has beautifully illustrated this trutn, by observing, that even a child will laugh at you if you try to persuade him that the top, which he misses from the place where he left it, was taken away by nobody. You may persuade him that it was taken away by a fairy or a spirit, but he believes no more about this nobody, than the master of the house, when he is told that nobody was the author of a piece of theft or mischief. What opinion would be formed, says Dr. Reid, of the intellects of the juryman, on a trial for murder by persons unknown, who should say that the fractured skull, the watch and money gone, and other like circumstances, might possibly have no cause? he would be pro- nounced insane or corrupted.

The rules of philosophising which Newton premises to his account of the planetary mo- tions, which he so scrupulously followed, and with a success which gives them great authority, are all in strict conformity to the view we have now given of the subject. The chief rule is, that similar causes are to be assigned to similar phenomena. This is indeed the source of all our knowledge of connected nature; and without it the universe would only present to us an in- comprehensible chaos. It is by no means, how- ever, necessary to enjoin this as a maxim for our procedure : it is an instinctive propensity of the human mind. It is absolutely necessary, on the contrary, to caution us in the application of this propensity. We must be extremely confident

in the certainly of the resemblance before we venture to make any inference. We are prom; to reason from analogy ; the very employment is agreeable ; and we are ever disposed to em- brace opportunities of engaging in it. For this reason we are satisfied with very slight resem- blances, and eagerly run over the consequences, as if the resemblances were complete ; and thus our researches frequently terminate in falsehood. This propensity to analogical reasoning is aided by another equally strong, and equally useful, when properly directed ; we mean the propensity to form general laws : it is in fact a propensity to discover causes, which is equiva- lent to the establishing of general laws. It ap- pears in another form, and is called a love of, or taste for, simplicity ; and this is encouraged or justified, as agreeable to the uniformity and sim- plicity of nature. ‘ Natura semper sibi est similis et cousona,’ says Newton : ‘ Frustra fit per plura quod fieri potest per pauciora,’ says another. The beautiful, the wise economy of nature, are phrases in every body’s mouth ; and Newton enjoins us to adopt no more causes than are sufficient to explain the phenomena. All this is very well, and is true in its own degree ; but it is too frequently the subterfuge of human vanity and self-love. This inordinate admiration of the economy and simplicity of nature is generally enjoined with a manifest love of system, and with the actual production of some new system, where, from one general principle, some exten- sive theory or explanation is deduced or offered to the world. The author sees a sort of resem- blance between a certain series of phenomena and the consequences of some principle, and thinks the principle adequate to their explana- tion. Then, on the authority of the acknow- ledged simplicity of nature, he roundly excludes all other principles of explanation ; because, says he, this principle is sufficient, et frustra fit per plura, &c. We could point out many in- stances of this kind in the writings of perhaps the first mathematician, and the poorest philoso- pher of the last century; where extensive then- ries are thus cavalierly exhibited, which a few years examination hare

shown to be nothing but analogies, indistinctly observed, and, what is worse, inaccurately applied.

To regulate these hazardous propensities, and keep philosophers in the right path, Newton in- culcates another rule, or rather gives a modifica- tion of this injunction of simplicity. He enjoins that * no causes shall be admitted but such as are true, and sufficient to account for the pheno- mena.' See our article NEWTONIAN PHILOSO- PHY, § 6. The meaning of this rule has been mistaken by many philosophers, who imagine that by true he means causes which really exist in nature, and are not mere creatures of the imagination. We have met with some who would boggle at the doctrines of Aristotle re- specting the planetary motions, viz. that they are carried along by conducting intelligent minds, because we know of none such in the universe ; and who would nevertheless think the doctrine of the Cartesian vortices deserving of at least ai > examination, because we see such vortices exist, and produce effects which have some resfijjj-

olance to the planetary motions, and have justly rejected them, solely because this resemblance has been very imperfect. We apprehend New- ton's meaning is, that no cause of any event shall be admitted, or even considered, which we do not know to be actually concurring or exert- ing some influence in that very event. If this be his meaning he would reject the Cartesian vortices, and the conducting spirits of Aristotle for one and the same reason ; not because they were not adequate to the explanation, nor be- cause such causes did not exist in nature, but because we did not see them any how concerned in the phenomenon under consideration. We neither see a spirit nor a vortex, and therefore need not trouble ourselves with enquiring what effects they would produce. This was his con- duct, and has distinguished him from all philo- sophers who preceded him, though many, by following his example, have been rewarded by similar success. This has procured to Newton the character of the modest philosopher ; and modest his procedure may be called, because the contrary procedure of others did not origin- ate so much from ignorance as from vanity. Newton's conductor in this was not modesty, but sagacity, prudence, caution, and, in a word, sound judgment.

For the bonds of nature the supposed philo- sophical causes are not

observed; they are in- ferred from the phenomena. When two sub- stances are observed, and only when they are observed, to be connected in any series of events, we infer that they are connected by a natural power ; but when one of the substances is not seen but fancied, no law of human thought produces any inference whatever. For this reason, Newton stopped short at the last fact which he could discover in the solar system, that all bodies were deflected to all other bodies, according to certain regulations of distance and quantity of matter. When told that he had done nothing in philosophy, that he had dis- covered no cause, and that to merit any praise he must show how this deflection was produced: he said that he knew no more than he had told them ; that he saw nothing causing this deflec- tion ; and was contented with having described it so exactly that a good mathematician could now make tables of the planetary motions as accurate as he pleased, and with hoping, in a few years, to have every purpose of navigation and of philosophical curiosity completely an- swered. He was not disappointed. When philosophers were contriving hypothetical fluids, and vortices, which would produce these deflec- tions, he contented himself with showing the total inconsistency of these explanations with the mechanical principles acknowledged by their authors ; and that their causes were neither real, nor sufficient for explaining the phenomenon. A cause is sufficient for explaining a phenome- non only when its legitimate consequences are perfectly agreeable to these phenomena. New- ton's discoveries remain without diminution or change: no philosopher has yet advanced a step further. But let not the authority, or even the success of Newton be our guide, farther than they are supported by experiment. If philoso-

phy be only the interpretation of nature's Ian* guage, the inference of causes from the pheno- mena, a fancied or hypothetical phenomenon can produce nothing but a fanciful cause, and can make no addition to our knowledge of real nature.

' It is in experimental philosophy alone that hypotheses can have any just claim to admission ; and here they are not admitted as explanations, but as conjectures serving to direct our line of experiments. Effects only appear ; and by their appearance, and the previous information of ex- experience, causes are immediately ascertained by the perfect similarity of the whole train of events to other trains formerly observed. Or they are suggested by more imperfect resem- blances of the phenomena; and these sugges- tions are made with stronger or fainter evidence, according as the resemblance is more or less perfect. These suggestions do not amount to a confidential inference, but only raise a conjec- ture. Washing to verify or overturn this conjec- ture, we have recourse to experiment,

and we put the subject under consideration in such a situation that we can say what will be the et feet of the conjectural cause if real. In this way conjectures have their use, and are the or- dinary means by which experimental philosophy is improved. But conjectural systems are worse than nonsense, filling the mind with false notions of nature, and generally leading us into a course of improper conduct, when they become principles of action. This is acknowledged even by the abettors of hypothetical systems themselves, when employed in overturning those of their prede- cessors, and establishing their own ; witness the successive maintainers of the many hypothetical systems in medicine, which have had their short- lived course within these last two centuries. Let every person, therefore, who calls himself a phi- losopher, resolutely determine to reject all temp- tations to this kind of system-making, and let him never consider any composition of this kind as any thing better than the amusement of an idle hour.'

SECT. IV. — OF THE SYNTHETIC MODE OF PRO- SECUTING PHILOSOPHICAL INVESTIGATIONS.

The sphere of our intuitive knowledge is very limited ; we must be indebted for the greatest part of our intellectual attainments to our ra- tional powers, and it must be deductive. In the spontaneous phenomena of nature, whether of mind or body, it seldom happens that the energy of that natural power which is the principle of explanation is so immediately connected with the phenomenon that we see the connexion at once. Its exertions are frequently concealed, and in all cases modified, by the joint exertions of other natural powers ; the particular exertion of each must be considered apart, and their mutual connexion traced out. It is only in this way that we can discover the train of intermediate operations, and see in what manner and degree the real principle of explanation concurs in the ostensible process of nature.

' In all such cases it is evident that our inves- tigation must proceed by steps, conducted by the sure hand of logical method. To take aa in-

stance, let us listen to Galileo, while be is teach- ing his friends the cause of the rise of water in a pump. He says that it is owing to the pres- sure of the air. This is his principle ; and he announces it in all its extent. 'All matter, says he, is heavy, and in particular air is heavy. He then points out the connexion of this general principle with the

phenomenon.

‘ The rise of the water in the pump is shown to be a particular case of the general fact in hydros- tatics, that fluids in communicating vessels will stand at heights which are inversely as their den- sities, or that columns of equal weights are in equilihrio.

‘ This way of proceeding is called arguing & priori, or the synthetic method. It is founded on just principles ; and the great progress made in the mathematical sciences, by this mode of reasoning, shows to what length it may be carried with irresistible evidence. It has long been considered as the only inlet to true knowledge ; and nothing was allowed to be known with cer- tainty which could not be demonstrated in this way to be true. Accordingly logic, or the art of reasoning, was nothing but a set of rules for successfully conducting this argument.

‘ Under the direction of this infallible guide, philosophy has made sure progress towards per- fection. The explanation of an appearance in nature is nothing but the arrangement of it into that general class in which it is comprehended. The class has its distinguishing mark, which, when it is found in the phenomenon, fixes it in its class, there to remain for ever an addition to our stock of knowledge. Nothing can be lost any other way but by forgetting it; and the doctrines of philosophers become stable as the laws of nature.’

The Aristotelian logic, the syllogistic art, that art so much boasted of, as the only inlet to true knowledge, the only means of discovery, was in direct opposition to the procedure of nature, by which we acquire knowledge and discover truth. The ancient logic supposed that all the first principles are already known, and that no- thing is wanted but the application of them to particular facts. But, were this true, the appli- cation of them can hardly be called a discovery ; but it is false, and the fact is that the first prin- ciples are generally the chief objects of our re- search, and that they have come into view only now and then as it were by accident, and never by the labors of the logician. But curiosity was awakened, and men of genius were fretted as well as disgusted with the disquisitions of the schools, which one moment raised expectations by the symmetry of composition, and the next moment blasted them by their inconsistency with expe- rience. They saw that the best way was to begin anew, to throw away the first principles altoge- ther, without exception, and endeavour to find out new ones, which should in every case be agreeable to fact. * Philosophers began to re- flect that under the unnoticed tuition of nature men had acquired much useful knowledge. Ttie exercise of the

inductive principle, by which nature prompts us to infer general laws from the observation of particular facts, gives a species of logic new in the schools, but old as human

nature. It is a just and rational logic ; for it is founded on, and indeed is the only habitual ap- pellation of, this maxim, ‘ That whatever is true with respect to every individual of a class of events is true of the whole class.’ This is just the inverse of the maxim on which the Aristote- lian logic proceeded.

This has given a new turn to the whole track of philosophical investigation. To discover first principles we must make extensive and accurate observations, so as to have copious inductions of facts, that we may not be deceived as to the ex- tent of the principle inferred from them. We must extend our acquaintance with the pheno- mena, paying a minute attention to what is going on all around us ; and we must study na- ture, not shut up in our closet, drawing the pic- ture from our own fancy, but in the world, copying our lines from her own features. To delineate human nature we must see how men act. To gire the philosophy of the material world we must notice its phenomena. This method of studying nature has been prosecuted during these last two centuries with great eagerness and suc- cess. Philosophers have made accurate obser- vations of facts, and copious collections of them. Men of genius have discovered many general powers both of mind and body ; and resem- blances among these have suggested powers still more general. By these efforts investigation be- came familiar ; hypotheses were banished, and nothing was admitted as a principle which was not inferred from the most evident inductions. Conclusions from such principles became every day more conformable to experience. Mistakes sometimes happened ; but, recourse being had to more accurate observation or more certain in- duction, the mistakes were corrected. In the present study of nature, our steps are more slow, hesitating, and painful ; our conclusions are more limited and modest ; but our discoveries are more certain and progressive, and the results are more applicable to the purposes of life. This pre-eminence of modern philosophy over the ancient is seen in every path of enquiry. It was, first remarkable in the study of the material world ; and there it still continues to be most conspicuous. But it is no less to be seen in the later enquiries of philosophers in metaphysics and ethics, where the mode of investigation by analysis and experiment has been greatly adopt- ed ; and this has restored philosophers to the world and to society. They are no longer to be found only in the academies of the sophists and the cloisters of the convent, but in the discharge of public and private duty.

Not to expatiate on the great variety of corpo- real pleasures, which the present state of human ex- istence affords, man has improved this anxious desire of the knowledge of the objects around him, so as to derive from them not only the means of subsistence and comfort, but the most elegant and pleasing of all gratifications, the accumula- tion of intellectual knowledge, independent of all consideration of its advantages. It is there- fore not only lawful but highly commendable, in such as possess the means of intellectual im- provement, without relinquishing the indispen-. sable social duties, to push this advantage as fat

as it will go : and in all ages and countries it has been considered as forming the best and highest distinction between man and man.

SECT. V. — OF EXPERIMENTAL PHILOSOPHY.

Kxperimental philosophy is that which has its foundation in experience, wherein nothing is as- sumed as a truth but what is founded upon ocu- lar demonstration, or which cannot be denied without violating the common sense and percep- tions of mankind. It proceeds entirely on experiments ; deduces the laws of nature, and the powers and properties of bodies, with their effects on each other, from experiments and ob- servations.

Philosophers in former times, when reasoning upon the appearances and operations of nature, instead of following this method, assumed such principles as they imagined sufficient for explain- ing the phenomena. Hence for a great number of ages experiment was abandoned ; no progress was made in science ; but systems were heaped upon systems, having neither consistency with one another nor with themselves.

The first who deviated from this method of philosophising was the celebrated Roger Bacon, who lived in the thirteenth century, and who is said to have spent £2000 (an immense sum in those days) in making experiments. The ad- mirable Crichton, who flourished about the year 1580, not only disputed against the philosophy of Aristotle, which had for so long been in vogue, but wrote a book against it. Contemporary with this celebrated person was Francis lord Bacon, to whom we have so largely referred, and who was in truth the founder of the experimental philo- sophy of modern times. In this luminous path

followed sir Isaac Newton ; but, unfortunately, neither Bacon nor Newton had an opportunity of becoming acquainted with many important facts which have since been brought to light. Their experimental philosophy was merely me- chanical, or derived from the visible operations of solid bodies, or of the grosser fluids. A remarkable instance of the errors into which they were thus betrayed we have in the doctrine of projectiles, in which the most enormous deviations from truth were sanctified by the greatest names in the seventeenth century, merely by reasoning from the resistance of the air to bodies moving slowly and visibly, to its resistence to the same bodies when moved with high degrees of velocity. See PROJECTILES. In other cases they were reduced to make use of words to ex- press immechanical powers, as attraction, repul- sion, refraction, &c., which have since tended in no small degree to embarrass and confound science by the disputes that have taken place con- cerning them.

The great foundations of the present system of experimental philosophy may be thus exhibited :

1. All the material substances of which the universe is composed are called natural bodies. What we perceive uniform and invariable in these substances we call their properties. Some of these are general and common to all matter, as extension; others are proper to particular sub- stances, as for instance fluidity ; while some appear to ! e compounded of the general and

particular properties, and thus belong to a stif . smaller number ; as the properties of air, which are derived from the general property of exten- sion, combined with fluidity, elasticity, &c.

2. In taking a particular review of the pro- perties of bodies we naturally begin with that of extension. This manifests itself in the three di- mensions of length, breadth, and thickness. Hence proceeds the divisibility of matter, which our modern system supposes to reach even to in- finity ; but, though this proposition be supported by mathematical demonstrations, it is impossible we can either have any distinct idea of it, or of the opposite doctrine, which teaches that matter is composed of excessively minute particles called atoms, which cannot be divided into smaller ones. The subtilty indeed to which solid bodies may be reduced by mechanical means is surprising ; and in some cases is so great, that we might be tempted to suppose that a farther di- vision is impossible. Thus, in grinding a specu- lum, the inequalities of its surface are so effec- tually worn off, that the whole becomes in a cer- tain degree invisible, showing not itself by the light which falls upon it, but the image of other bodies ; but the

smallest scratch which disturbs the equality of the surface is at once distinctly visible.

3. From the arrangement of these ultimate particles of matter, whatever we suppose them to be, arises the various figures of bodies : and hence figure is a property of all bodies no less universal than extension, unless we speak of the ultimate particles of matter, which, as they are supposed to be destitute of parts, must conse- quently be equally destitute of figure ; and the same consequence will follow whether we adopt this supposition or the other. The figures of bodies are so extremely various and dissimilar that it is impossible to find any two perfectly alike. In most indeed the dissimilarity may be perceived by the naked eye ; but the microscope quickly discovers new varieties of figure, and the imbecility of our senses in this respect. So- lidity is another property essential to all matter. By this we mean that property which one quan- tity of matter has of excluding all other from the space which itself occupies at that time. Hence arises what we call resistance, which is always an indication of solidity; and no less so in those bodies which we call fluid than in those which are the most solid. This may at first seem to be a contradiction ; but fluids yield only when they can get away from the pressure ; in all other cases they resist as violently as the most solid bodies. Thus water confined in a tube will as effectually resist the impression of a piston thrust down upon it as though it were the most solid substance.

4. The distance of the parts of bodies from each other is called their porosity, and was for- merly supposed to be owing to a vacuum inter- spersed between them ; it is now chiefly regarded in a comparative point of view. The porosity of bodies with regard to one another, may be thus explained : — Wood, or a sponge, is porous with regard to water; but water itself is porous with regard to air, which it absorbs in consider- able quantity. Both air and water again are po-

rous with regard to heat, which produces very considerable changes upon them, according to the quantity of it they contain, or the manner it acts in their pores. Vacuities of this kind indeed are supposed to be absolutely necessary to mo- tion : for though we may say, matter being divi- sible almost ad infinitum, that a body or substance more solid may move in another substance that is more subtle, and that will give way to its motion, we must nevertheless have recourse to a last resort, and admit of an ultimate vacuum, which will give room

sufficient to the least cor- puscle, that its part A may take the place of its part B without the least resistance ; besides, it is not to be imagined that nature, in fact, admits of that infinite divisibility which our imagination can conceive, and that every thing, which is pos- sible in idea, is at all times practicable. All that exists is possible, but all that is possible does not however exist. By density is understood the proportion between the extension and solidity of a body ; one body, therefore, is more dense than another, when, under the same degree of exten- sion, it contains more solid matter : and this quality arises from condensation and compres- sion. Elasticity is nothing more than that effort by which certain bodies, when compressed, endea- vour to restore themselves to their former state; and this property supposes them compressible. As all these natural properties of bodies are of great utility in explaining the principles of phy- sics, and in applying them to all the arts, expe- rimental philpsophy proves their reality by a thousand examples.

5. We discover still other properties in bodies ; such as mobility, which we must not here con- found with motion : for mobility arises from cer- tain dispositions which are not in an equal degree in all bodies ; whence it comes that some are more easily moved than others: and this proceeds from the resistance to motion which is perceived in all bodies having regard merely to their masses ; and this resistance is called vis inertia, or inert force. A body is said to be in motion when it is actually moving from one place to another ; or whenever a body changes its situation with regard to the objects that sur- round it, either nearly or remotely, it is said to be in motion. There are three principal matters to be considered in a moving body: its direction, its velocity, and the quantity of its motion ; and here physics explain the force of moving power ; they likewise distinguish between simple and compound motion. Simple motion is that which arises from only one force, or which tends to only one point. It describes the laws, and explains the resistance of mediums; the resistance of friction ; the difficulties of a perpetual motion ; the alteration of direction occasioned by the opposition of a fluid matter ; reflected or re- verberated motion; the communication of mo- tion by the shock of bodies, &c. Compound motion is that of a body impelled to move by several causes or powers which act accord- ing to their different directions. Physics here likewise investigates the laws of motion; and is particularly applied to the explaining, under this Lead, what are called the central forces, which produce a motion that is either circular or in a

curve line, and which incessantly urge the mov~ ing body either to approach or recede from the centre. To distinguish thiˆse from each

o.ther, the former is called the centripetal force, and the latter the centrifugal force.

6. The powers of attraction and repulsion seem to be common to all matter, and the component parts of all substances are kept in their places by the due balance of these opposite powers. If, by any means, the particles of any substance be removed beyond their sphere of mutual attrac- tion, they repel one another, as those of water when it becomes steam. Of the different kinds of attraction, that of gravitation seems to extend to the greatest possible distance ; but that which keeps together the parts of the same substance, thence called the attraction' of cohesion, and the different kinds of chemical attractions called affinities, only act at a small distance. Of the causes of these attractions we are entirely igno- rant. See ATTRACTION, AKD ELECTRICITY.

7. By gravity, or ponderosity, is to be under- stood that force which occasions bodies to pass from a higher to a lower place, when nothing op- poses their course, or when the obstacles are not sufficient to stop them. Speculative philosophy investigates its cause, and perhaps in vain. Ex- perimental philosophy contents itself with de- scribing the phenomena, and teaching the laws of gravity, which are thoroughly established by a thousand reiterated experiments. In order pro- perly to understand this subject, we must take care not to confound the term gravity with that of weight. By the former we understand that force which urges bodies to descend through a certain space in a given time. By the latter is meant the quantity of a heavy body that is con- tained under the same bulk. The phenomena are explained by the experiments themselves, and by inferences deduced from them. Hydro- statics is a science of which the object is the gravity and equilibrium of fluids in particular. Though the gravity of these bodies is the same with that of others, and is subject to the same laws, yet their state of fluidity gives rise to par- ticular phenomena, which it is of consequence to know. But, as hydrostatics cannot be success- fully treated on without the assistance of calcu- lation, it has been ranked among the mathemati- cal sciences. See HYDROSTATICS. We say the same with regard to mechanics, which is the art of employing, by the aid of machines, the motion of bodies, in conformity to its properties and laws, as well with regard to solids as fluids, either more commodiously or more advantageously.

After it has made the most accurate experi- ments and observations on the general properties of bodies, experimental philosophy passes to the examination of the air, water, heat, light, colors, &c. The air is a fluid with which we are sur- rounded from the instant of our birth,

and with- out which we cannot exist. It is by the properties and the influences of the air, that nature gives increase and perfection to all that it produces for our wants and conveniencies ; it is the spi- rit of navigation : sound, voice, speech itself, are nothing more than percussions of the air ; this globe that we inhabit is completely sur- rounded by air; and this kind of coverture,

commonly called the atmosphere, has that variety of remarkable functions which perpetually stimu- lates and rewards the most diligent research. Experimental physics, therefore, considers the air, 1 . Of itself, independently of its bulk, and the figure of its whole body ; it examines its essential properties ; as its gravity, density, elas- ticity, &c. The air-pump is here of indispensa- ble use ; and examines in what manner space, or a vacuum, is made ; demonstrates the necessity »f air to the preservation of animal life ; the ef- fect it has on sound, fire, and gunpowder, in vacuo ; and a hundred other facts of various de- grees of curiosity. 2. It considers the air of the terrestrial atmosphere, sometimes as a fluid at rest, and sometimes as in motion. And by these means it accounts for the variation of the mer-

cury in the barometer, and why it sinks in pro- portion as the height of the atmosphere diminishes ; as also for its figure, extent, and weight; it shows the method of determining the height of moun- tains, the nature of sound in general, of its pro- pagation, and of sonorous bodies. 3. Its chemical qualities and properties, in which are to be traced some of the most splendid discoveries of modern science. See AEROLOGY, AIR, ATMOS- PHERE, PNEUMATICS, &c.

But we cannot further particularise. It will suffice to remark here that the best tendency of modern philosophy is to reduce to experiment every part of natural science ; to break up and away from system ; and to make every part of what is taught for philosophy only a more en- larged index of nature.

PHILOSTORGIUS, an ecclesiastical his- torian of the fourth century, born in Cappadocia, who wrote an abridgment of ecclesiastical his- tory, in which he treats Athanasius with severity. This work contains many curious and interesting particulars. The best edition is that of Henry de Valois in Greek and Latin. There is also at- tributed to him a

book against Porphyry.

PHILOSTRATUS (Flavius), an ancient Greek author, who flourished between A. D. 190 and 244. He wrote The Life of Apollonius Tyanaeus, and some other tracts still extant. Eusebius calls him an Athenian, because he taught at Athens ; but Eunapius and Suidas always speak of him as a Lemnian : and he himself hints as much in his Life of •Apollonius. He frequented the schools of the sophists, particularly Damia- mus of Ephesus, Proclus Naucratitas, and Hip- podromus of Larissa. He was one of those learned men whom the philosophic empress Julia Augusta, wife of Severus, had continually about her. By her command he wrote the Life of Apollonius, as he himself informs us. Suidas and Hesychius say that he was a teacher of rhe- toric, first at Athens, and then at Rome, from the reign of Severus to that of Philip, who obtained the empire in 244. Phjjostratus's Life of Apol- lonius has erroneously been attributed to Lucian, because it has been printed with some of that author's pieces. Philostratus endeavours, as Cyril observes, to represent Apollonius as a wonderful and extraordinary person. The so- phistical and affected style of Philostratus, the sources whence his materials have been drawn, and the absurdities and contradictions with which he abounds, plainly show his history to be nothing but a collection of fables. His works, however, have engaged the attention of critics of the first class. A very exact and beau- tiful edition was published at Leipsic, 1709, in folio, by Olearius, professor of Greek and Latin : and a translation into English has been pub- lished by Blount, At the end of Apollonius's Life there are ninety-five letters which go under his name. They are not, however, believed to be his. Some of them, though it is not easy to determine which, were written by his nephew ; as were also the last eighteen in the Book of Images. This is the reason why the title runs

not Philostrati, but Philostratorum qua: super- sunt omnia.

PHILOSTRATUS, nephew of the preceding, flou- rished in the reign of Heliogabalus, and wrote an Account of the Lives of the Sophists, which is extant, and contains many particulars which are to be met with no where else. There were other two Philostrati, both philosophers, who flourished, the one under Augustus, the other under Nero.

PHILOTAS, the name of two generals, who fought under Alexander the Great. To one of them Cilicia was allotted, on his death. A third, who also fought bravely under Alexander, was the son of Parmenio ; but was put to death for conspiring against that monarch; A.A.C. 330.

PHILOTIS, a servant maid at Rome, who saved her countrymen from destruction. After the siege of Rome by the Gauls, the Fidenates assembled an army, and marched against the capital, demanding all the wives and daughters in the city as the only conditions of peace. The demand astonished the senators ; and, when they refused to comply, Philotis advised them to send all their female slaves disguised in matron's clothes, and she offered to march herself at their head. Her advice was followed : and when the Fidenates had feasted late in the evening, and were quite intoxicated and fallen asleep, Philotis lighted a torch as a signal for her countrymen to attack the enemy. The whole was successful ; the Fidenates were conquered ; and the senate, to reward the fidelity of the female slaves, per- mitted them to appear in the dress of the Roman matrons.

PHILOXENUS, a dithyrambic poet of Cy- thera. He enjoyed the favor of Dionysius, ty- rant of Sicily, for some time, till he offended him by seducing one of his female singers. During his confinement he wrote an allegorical poem, called Cyclops; in which he delineated the character of the tyrant under the name of Poly- phemus, and represented his mistress under that of Galataea, and himself under that of Ulysses. Trie tyrant, who was fond of poetry and ap- plause, liberated Philoxenus ; but the poet re- fused to purchase his liberty by saying things unworthy of himself, and applauding the wretched verses of Dionysius, who therefore sent him to

the quarries. Being set at liberty, he some time after was asked his opinion at a feast about some verses which Dionysius had repeated, and which the courtiers had received with the greatest ap- plause. Philoxenus gave no answer, but ordered the guards that surrounded the tyrant's table to take him back to the quarries. Dionysius was pleased with his humor and firmness, and for- gave him. Philoxenus died at Ephesus about A.A.C. 380.

PHILOXENUS. 1. An officer of Alexander, who received Cilicia at the general division of the provinces. He seems to be confounded with Philotas. 2. A son of Ptolemy, who was given to Pelopidas as a hostage.

PHILTER, n. s. & v. a. Fr. philtre ; Greek i\rpov. Something to cause love ; to charm or induce to love.

The melting kiss that sips The jellied philtre of her lips. Cleavehnd. This cup a cure for both our ills has brought, You need not fear a

philter in the draught. Dryden.

Let not those that have repudiated the more invit- ing sins, shew themselves philtred and bewitched by this. Government of the Tongue.

On high, where no hoarse winds nor clouds resort, The hood' winked goddess keeps her partial court ; Upon a wheel of amethyst she sits. Gives, and resumes, and smiles, and frowns by fits. In this still labyrinth around her lie Spells, philtres, globes, and schemes of palmistry.

Garth's Dispensary.

A philter that has neither drug nor enchantment in it, love if you would raise love. Addison.

PHILTER is derived from the Greek i\tu, I love, or iXoc, a lover. Philters are distinguished into true and spurious, and were given by the Greeks and Romans to excite lore. The spurious are spells or charms, supposed to have an effect beyond the ordinary laws of nature by some magic virtue. Many grave authors have believed the reality of these philters, and alleged facts in confirmation of their sentiments ; among the rest, VAN HELMONT.

PHILTER, or PIIILTRE. Lat. philtrum. In pharmacy, &c., a strainer.

PIIILYRA, in fabulous history, one of the Oceanides, whom Saturn met in Thrace. The god, to escape from the vigilance of Rhea, changed himself into a horse, to enjoy the com- pany of Philyra, by whom he had a son, half a man and half a horse, called Chiron. Philyra was so ashamed of giving birth to such a mons- ter, that she entreated the gods to change her na- ture. She was accordingly metamorphosed into a tree, called by her name among the Greeks.

PHIMOSIS, or rather PIIYMOSIS, in medicine, Gr. (j>ifid>ffif, a disorder in the glans penis, when it is bound too tight by the praeputium and can- not be uncovered : also a firm carnosity of the anus.

PHINEAS, or PHINEHAS, or, as the Jews pro- nounce it, Pinchas, the son of Eleazar, and grandson of Aaron. He was the third high priest of the Jews, and discharged this office from A. M. 2571 till 2590. He was particularly com- mended in Scripture for the zeal he showed for the preservation of his countrymen from idolatry, on two different occasions; Num. xxv. 7 — 15, and Josh. xxii. 13—34. The dignity of

the

high priesthood continued in the race of Phineas, from Aaron down to the high priest Eli, for about 335 years ; when it was forfeited by the wickedness of Eli's sons. It returned, however, again into the family of Eleazar in the rei

PHINEUS, in fabulous history, was son of Agenor, king of Phoenicia, or, according to some, of Neptune. He became king of Thrace or Bi- thynia. He married Cleopatra or Cleobula, the daughter of Boreas, by whom he had Plexippus and Pandion. After her death, he married Idsea or Idothaea, the daughter of Dardanus. Idaea, jealous of his former wife's children, accused them of attempts upon their father's life and crown, or, as others assert, of attempts upon her virtue ; on which they were condemned by Phi- neus to be deprived of their eyes. This cruelty was soon after punished by the gods ; for Phi- neus suddenly became blind, and the harpies were sent by Jupiter to keep him in continual alarm, and to spoil the meats on his table. He • was afterwards delivered from these monsters by his brothers-in-law Zetes and Calais, who pur- sued them as far as the Strophades. He like- wise recovered his sight by means of the Argo- nauts, whom he had received with great hospi- tality, and whom he instructed in the easiest and speediest way of arriving at Colchis. He was killed by Hercules.

PIIINTIA, an ancient town of Sicily, at the mouth of the Chimera. — Cicero, in Verr.

PHIPPS (Constantine John), lord Mulgrave, F.R.S., a late celebrated British navigator, born in 1 746. He was great grandson of Constantine Phipps, lord chancellor of Ireland in 1714, and son of Constantine, the first lord Mulgrave, by Catharine, daughter of the earl of Anglesea. He succeeded his father in 1775. He entered young into the naval service, under his uncle, the earl of Bristol. He was elected M P. for Lincoln, and became an able speaker. He was also emi- nent as a naval commander, and made a voyage to the North Pole, from June 4th, to September 24th, 1773, to determine how far navigation was practicable to the north pole ; an account of

which he published in 1774. He is also said to have written the masterly Introduction to Cap- tain Cook's last Voyage. He married Anne Elizabeth, daughter of Nathaniel Cholmondeley, esq. of Honsham, in Yorkshire, a rich heiress, who died in 1780, leaving a daughter. He was created a British peer June 17th, 1790; and died at Liege, OcUber 10th, 1792; leaving a large fortune, and one of the completest libraries in England, for works on naval science.

PHIZ, ra. s. A ridiculous contraction of physiognomy ; the face, in a sense of contempt.

His air was too proud, and his features amiss, As if being a traitor had altered his phix. Stepney.

The emphatic speaker dearly loves to oppose, In contact inconvenient, nose to nose ; As if the gnomon on his neighbour's phiz Touched with the magnet had attracted his. Cowper.

PHLEBOTOMIZE, n. s. & v. a.) Fr. phle-

PllLEBor'oMY,n. s. > botomie ;

Gr. 0\£]3oTO/t«a, \e/, ^>\£/3oc, vena, and rtfivu, to cut. Bloodletting; the act or practice of opening a vein for medical intentions; to let blood.

Pains for the spending of the spirits, come nearest to the copious and swift loss of spirits by phlebotomy.

Harvey.

Phlebotomy is not cure, but mischief ; the blood so flowing as if the body were all vein. Holyday.

The frail bodies of men must have an evacuation for their humours, and be phlebotomised.

Howel's England's Tears.

Although, in indispositions of the liver or spleen, considerations are made in phlebotomy to their situa- tion, yet, when the heart is affected, it is thought as effectual to bleed on the right as the left.

Browne.

PHLEGETHON, Gr. 0\£y£0w, i. e. burning, in mythology, a river of Hell, whose waters flamed.— Virg. JEu. vi. 550. PHLEGM, n.s. ~\ Fr.

phlegme ; Greek PHLEG'MAGOGUES, £0X.ty/ia. A watery ani- PHLEGMAT'IC, adj.) mal humor, formerly sup- posed to produce sluggishness; phlemagogues are purges to evacuate phlegm : phlegmatic is, abounding in phlegm ; dull.

A neat's foot, I fear, is too phlegmatick a meat.

Shakspeare.

• The putrid vapours, though exciting a fever, do colliquate the phlegmatick humours of the body.

Harvey.

Negroes, transplanted into cold and 'phlegmatick habitations, continue their hue in themselves and generations. Browne.

Make the proper use of each extreme,

And write with fury, but correct with phlegm.

Roscommon.

A linen cloth, dipped in common spirit of wine, is not burnt by the flame, because the phlegm of the liquor defends the cloth. Boyle.

The pituitous temper of the stomachick ferment must be corrected, and the phlegmagogues must eva- cuate it. Flayer.

As the inhabitants are of a heavy phlegmatick tem- per, if any leading member has more fire than comes to his share, it is quickly tempered by the coldness of the rest. Addison.

Spirit of wine is inflammable by means of its oily parts, and, being distilled often from salt of tartar, grows by every distillation more and more aqueous and phlegmatick. Newton.

Chewing and smoking of tobacco is only proper for phlegmatick people. Arbuthnot on Aliments,

He who supreme in judgment, as in wit, Might boldly censure, as he boldly writ, Yet judged with coolness, though he sung with firej His precepts teach but what his works inspire. Our critics take a contrary extreme, They judge with fury, but they write with phlegm.

Pope.

Let melancholy rule supreme, Choler preside, or blood or phlegm, It makes no difference in the case, Nor is complexion honour's place. Swift. Who but a husband ever could persuade His heart to leave the bosom of thy love, For any phlegmatick design of state ! Southern. PHLEGM, in the animal economy, was one of the four humors whereof the ancients supposed the blood to be composed. The chemists make phlegm or water an elementary body ; the cha- racters of which are fluidity, insipidity, and vo- latility.

PHLEGMASIA, an order of diseases, in Dr. Cullen's system of physic. See MEDICINE, In- dex.

PHLEG'MON, n. s.) Gr. ˆy/m/ij. An PHLEG'MONOUS, adj. J inflammation; burning tumor; inflammatory.

Phlegmon, or inflammation, is the first degeneration from good blood, and nearest of kin to it.

Wiseman.

It is generated secondarily out of the dregs and re- mainder of a phlegmonous or oedematic tumour.

Harvey.

PHLEGON, surnamed Trallianus, was born in Trallis, a city of Lydia. He was the emperor Hadrian's freed man, and lived to the eighteenth year of Antoninus Pius. He wrote several works of great erudition, of which we have nothing left but fragments. Among these was a History of the Olympiads, A Treatise of Long-lived Persons, and another of Wonderful Things. The titles of part of the rest of Phlegon's writings are preserved by Suidas. It has been supposed that the History of Hadrian, published under Phlegon's name, was written by Hadrian himself. A pas- sage quoted by Eusebius from one of his works, respecting an extraordinary eclipse of the sun attended by an earthquake, has been supposed to allude to the darkness and earthquake that happened at our Saviour's passion. But this has been disputed among the learned ; Whiston and others taking the affirmative, and Sykes the negative.

PHLEGYjE, an ancient people of Thessaly, who, under their leader Phlegyas, plundered and burnt the temple of Apollo at Delphi. A few of them afterwards settled at Phocis. — Paus. ix. 36, Horn. II. 13.

PHLEGYAS, in fabulous history, a son of Mars, king of the Lapithae in Thessaly, and father of Ixion, and of Coronis, the mother of TEscula- pius by Apollo. Phlegyas, in revenge for his daughter's disgrace, collected an army of the Phlegyae, and plundered and burnt Apollo's temple; for which Apollo killed him and placed him in hell, with a large stone ready to fall on his head. — Paus. ix. 36, Ovid. Met. v. 87.

PHLEME, n. s. Lat. phl

the vein, and driven into it with a blow ; parti- cularly in bleeding of horses.

PHLEILM, in botany, cat's-tail grass, a genus of the digynia order, and triandria class of plants ; natural order fourth, gramina.

PHLIAS, the son of Bacchus and Ariadne, one of the Argonauts. —

Paus. ii. 12.

PHLOGISTIC, from phlogiston. Inflamma- tory ; of or belonging to phlogiston, or inflam- mability. In this sense it is used by Dr. Cul- len of inflammatory diseases. Dr. Brown, also, in his first edition of his Elementa Medicine, used this word in a sense somewhat similar, and the opposite term antiphlogistic for diseases of debility ; but he afterwards changed these terms to sthenic and asthenic as more proper to express diseases of strength and weakness.

PHLOGISTICATED, in chemistry, impreg- nated with the imaginary principle of phlogiston ; a term and doctrine now nearly obsolete.

PHLOGISTON was formerly used by chemists to express a principle which was supposed to enter the composition of various bodies, but which is now exploded. The bodies which were thought to contain it in the largest quantity are the inflammable substances ; and the pro- perty which these substances possess of being susceptible of inflammation was thought to de- pend on this principle ; and hence it was some- times called the principle of inflammability. In- flammation, according to this doctrine, was the separation of this principle, or phlogiston, from the other matter which composed the combustible body. As the emission of light and heat always attended its separation, the chemists concluded that it was light and heat combined with other matter in a peculiar manner, or that it was some highly elastic and very subtile matter, on certain modifications of which heat and light depended. But its existence, as a chemical principle in the composition of bodies, is now fully proved to be false. Sir Isaac Newton was the first who established chemistry on scientific ground. From his time till the middle of the eighteenth century no real improvement was made. The progress this science has made since that period is owing to the important dis- covery of the existence of heat in a state of com- position with other matter. Heat, thus combined, loses its activity, or becomes insensible, just as acids, or any other active substance, lose their apparent qualities in composition. Heat, in this combined state, was called by its ingenious dis- coverer, Dr. Black, latent heat, and it was found to be very abundant in the atmosphere, which owes its existence as an elastic fluid to the quan- tity of latent heat that it contains. After this dis- covery, Crawford, considering that air was ab- sorbed by a bu rning body, concluded that the heat which appears in the combustion of a combustible body is the heat that had before existed in the air which was consumed by the burning body. La- voisier and others, prosecuting this enquiry, found that the combustible body, while it is burning, unites with the basis of the air, and that the heat which the air contained, and which was the cause of

the air existing in the state of air, is expelled. See, however, this theory more fully elucidated under CHEMISTRY, HEAT, OXYGEN Sue.

PHLOGOTICA. Phlogoticus; from 0A£7W> to burn. The name of the second order of the class hamatica, in Good's Nosology. Inflammations. Its genera are apostema, phlegmone, phyma, ionthus, phlysis, erythema, empresma, ophthalmia, catarrhus, dysenteria, bucnemia arthrosia.

PHLOMIS, the sage-tree, or Jerusalem sage; a genus of the gymnospermia order, and didy- namia class of plants : natural order forty-second, verticillatae. There are fourteen species, all of which have perennial roots, and of many the stalks also are perennial. The latter rise from two to five or six feet high; and are adorned with yellow, blue, or purple flowers in whorls. They are all ornamental plants ; and deserve a place in gardens, as they are sufficiently hardy to endure the ordinary winters in this climate : they require, however, a pretty warm situation. There are two species peculiarly adapted to the shrubbery, viz.

1. P. fructicosa, a native of Spain and Sicily. Of this there are three varieties, 1. The broad- leaved Jerusalem sage-tree is now very common in our gardens. Its beauty is great, and its culture very easy. It grows to about five feet high, and spreads its branches without order all around. The old branches are covered with a dirty, greenish, dead, falling, ill-looking bark ; and this is the worst property of this shrub ; but the younger shoots are white and beautiful ; they are four-cornered, woolly, and soft to the touch. The leaves are roundish, oblong, and moderately large ; these grow opposite at the joints of the shrub on long foot-stalks. They are hoary to a degree of winteness, and their foot- stalks are woolly, white, tough, and strong. The flowers are produced in June, July, and August, at the top joints of the young shoots, in large whorled bunches. They are labiated, each con- sisting of two lips, the upper end forked, and bending over the other. The color is a most beautiful yellow, and, being large, they exhibit their golden flowers at a great distance. 2. The narrow leaved Jerusalem sage-tree is of lower growth than the other, seldom rising higher than a yard or four feet. This shrub is in every re- spect like the other; only the shoots have a more upright tendency. The leaves also are narrower, and more inclined to a lanceolate form : they are numerous in both sorts, and hide the defor- mity of the bark on the older stems. In short, these sorts are qualified for shrubberies of all kinds, or to be set in borders of flower-gardens, where they will flower, and be exceeded by very few shrubs. 3. The Cretan sage-tree is still of lower growth than either of the former, seldom arising to a yard in height.

The leaves are of the* same white hoary nature; they are very broad, and stand on long foot-stalks. The flowers are of a delightful yellow color, very large, and grow in large whorls, which give the plant great beauty.

2. P. purpurea, purple phlomis, or Portugal sage, four feet high ; the stalks woody, and send- ing forth several angular branches, which are covered with a white bark. The leaves are spear-shaped, oblong, woolly underneath, cre- nated, and grow on short foot-stalks. The flowers

are produced in whorls from the joints of the branches. They are of a deep purple color, and have narrow involucra. They appear in June and July, but are not succeeded by ripe seeds in England. There is a variety of this species with iron-colored flowers, and another with flowers of a bright purple. There are some other shrubby sorts of phlomis, of great beauty; but these not only often lose their leaves, and even brandies, from the first frost, but are fre- quently wholly destroyed, if it happen to be severe. They are low shrubs, very beautiful, and “look well among perennial flowers, where they will not only class as to size with many of that sort, but, being rather tender, may with them have such extraordinary care as the owner may think proper to allow them. The propagation of the above sorts is very easy, and is accomplished either by layers or cuttings. 1 . If a little earth be thrown upon the branches any time in the winter, they will strike root and be good plants by the autumn following, fit for any place. Thus easy is the culture by that method. 2. The cut- tings will also grow, if planted any time of the year. Those planted in winter should be the woody shoots of the former summer : these may be set close in a shady border ; and, being watered in dry weather, will often grow. This shrub may be propagated by young slips also, in any of the summer months. These should be planted in a shady border, like sage, and well watered. If the border is not naturally shady, the beds must be hooped, and covered with mat- ting in hot weather. Watering must be con- stantly afforded them ; and with this care and management many of them will grow.

PHLOX, the lychnidea, or bastard lychnis ; a genus of the monogynia order, and pentandria class of plants, natural order twentieth, rotacece. There are seven species, all natives of North America. They have perennial roots, from which rise herbaceous stalks, from nine

inches to two feet in height, adorned with tubulated flowers of a purple color. They are propagated by offsets, and will bear the winters in this country. They require a moist, rich soil, in which they thrive better, and grow faster than in any other.

PHLYCTEN&, in medicine, small eruptions on the skin.

PHOBETOR, from ˆo/fcw, to terrify, in my- thology, one of the sons of Somnus, and his prime minister. His office was to terrify men during sleep, by appearing to them in the form of a wild beast or serpent.—Ovid. Met. xi. 640. PHOCA, in zoology, a genus of quadrupeds of the order ferae. There are six sharp-pointed fore-teeth in the upper jaw, the two outermost being larger ; and four blunt, parallel, distiifct, equal fore teeth in the under jaw. There is but one dog-tooth, and five or six three-pointed grinders ; and the hind legs are united so as to resemble a sheep's tail; are stretched much backwards, and bound together. Mr. Kerr enu- merates nineteen species, and five varieties.

1. P. Australis, the Falkland seal, has short pointed external ears, and inhabits the Falkland Isles. The color is cinereous; the hairs tipt with a dirty white; the nose is short, and beset

with strong black bristles ; the fore feet have no claws ; the hind paws have four long claws. The animal measures four feet.

2. P. barbata, the great seal, has long white whiskers with curled points. The back is arched, black, very deciduous, and very thinly dispersed over a thick skin, which is almost naked in sum- mer. The teeth of this species are like those of the common seal (No. 18); the fore feet are like the human hand, the middle toe being the long- est, and the thumb short. They are upwards of twelve feet long. The Greenlanders cut out of the skin of this species thongs and lines, a finger thick, for the seal fishery. Its flesh is as white as veal, and is esteemed the most delicate of any. They produce plenty of lard, but very little oil. The skins of the young are sometimes used to lie on. They inhabit the high sea about Green- land, are very timid, and commonly rest on the floating ice. The females breed about March, and bring forth each a single young one on the ice, generally among the islands. The old ones swim very slowly. On the north coast of Scot- land is found a species twelve feet long. A young one, seven feet and a half long, was shown in London some years ago, which was so far from maturity as to have scarcely any teeth : yet the common seals have them complete before they attain the size of six feet, their utmost growth. One of this species, larger than an ox, was found in the Kamtschatkan seas, from 56° to 64° lat. N., called by the natives lach-

tak. They weighed 800lbs. and were eaten by Behring's crew ; but their flesh was loathsome. The cubs are entirely black.

3. P. Chilensis, the Chilese seal, has alongish snout, external ears, and five toes to each foot. It inhabits the coasts of Chili and Juan Fernandez.

4. P. cristata, the klapmus, or hooded seal of Pennant, has a crest on the fore part of the head ; the body is of a gray color, having a thick coat of black wool, interspersed with white hairs. It is a large animal, and has a strong folded skin on its forehead, falling over its eyes and nose. This species inhabits the south coast of Greenland, west of Iceland and Newfoundland.

5. P. fasciata, the harnessed seal, or rubbon seal of Pennant, is of a blackish color, and marked with yellow stripes resembling harness across the neck, along the sides, and haunches. They inhabit the Kurile Isles. "

6. i. P. greenlandica, the swartside, of Erxle- ben, the attarsoak of Crautz, or harp seal of Pen- nant, has a smooth head, no external ears, the body gray, with a black semilunar mark on the side. Both fore and hind paws have distinct nails ; the head is black and pointed ; the tail short and horizontal. The animal is nine feet long. They inhabit Greenland, Newfoundland, Iceland, the Whale Sea, the Frozen Ocean and Kamtschatka. The skin is good and the oil much valued.

ii. P. groenlandica nigra, the bedlemer, is a blackish variety of the above.

7. i. P. hespida, or P. fcetida, the neitsek, or rough seal, is distinguished by a short nose and short round head ; a body almost elliptical, covered with lard almost to the hind feet. This

species seldom exceeds four feet in length. Their hairs are closely set together, soft, long, and somewhat erect, intermixed with curls. They are of a dusky color ; mixed with white, which sometimes varies to white, with a dusky dorsal line. They never frequent the high seas, but keep on the fixed ice in the remote bays near the frozen land ; and, when old, never forsake their haunts. They couple in June, and bring forth in January on the ice. In that cold situation they have a hole for fishing ; near which they generally remain solitary, being rarely found

in pairs. They often sleep on the surface of the water, and thus become an easy prey to the eagle. They feed on small fish, shrimps, &c. The skin, tendons, and lard, are used in the same way with those of other seals. The flesh is reo. and foetid, especially in males, which is nauseated even by the Greenlanders.

ii. P. hispidaquadrata, or Newfoundland seal, is a larger variety of the above, called by the seal-hunters in Newfoundland, the square phipper. It weighs 500 Ibs. Its coat is like that of a water-dog ; so that it appears by the length of its hair to be allied to this species; but the vast difference in size admits not of that decision.

8. P. jubata, the maned seal of Schreber, or leonine seal of Pennant, inhabits the coast of the North Pacific Ocean, west coast of America, Falkland Islands, Patagonia, Kamtschatka, and the Kurile Isles. The color is reddish; the males are sometimes twenty-five feet long, weigh 15 or 1600 Ibs., and have a long flowing mane on their necks. Their voice is like that of a bull ; the head is large ; nose short and turned up ; with large strong whiskers ; the eyes are large ; the fore feet black, resembling fins, with- out toes ; the hind feet very broad, with small nails, and very short tails. They live in families, each male having many females, about which they often quarrel and fight.

9. P. laniger, or phoca leporina, the leporine seal of Pennant, has hair of a dirty white color, tinged with yellow, but never spotted. The hairs are erect, interwoven, and soft like those of a hare, especially in those of the young. The head is long, the upper lip swelling and thick ; the whiskers very strong and very thick, ranged in fifteen rows, covering the whole front of the lip, so that it appears bearded ; the eyes are blue, and the pupil black; the teeth are strong; the fore-feet short ; the membranes of the hind feet even and not waved ; the tail is short and thick, it being four inches two lines in length ; the cubs are of a milk-white color. The length of this species is about six feet six inches, and the circumference where greatest five feet two. This species inhabit the White Sea in the summer time, and ascend and descend the rivers with the tide in quest of prey. They are likewise found on the coast of Iceland, and within the polar circle from Spitzbergen to Tchutki Noss, and thence south about Kamtschatka.

10. P. leonina, the sea-lion of Anson, the sea- wolf of Pernetty, or the bottle-nose of Pennant, is found near the south pole. One variety of this species is described at some length by the publisher of Anson's voyage. Of these we have the following account in Pernetty's Historical

Journal : — ‘ The hair that covers the back part of the head, neck, and shoulders, is at least as long as the hair of a goat. It gives this amphibious animal an air of resemblance to the com- mon lion of the forest, excepting the difference of size. These sea-lions are twenty-five feet in length, and from nineteen to twenty in circumfe- rence. Those of the small kind have a head re- sembling a mastiff’s with close cropt ears. The teeth of those which have manes are much larger and more solid than those of the rest. In these all the teeth in the jaw-bone are hollow. They have only four large ones, two in the lower and two in the upper jaw. The rest are not even so large as those of a horse. They inhabit the coasts of Chili, New Zealand, Juan Fernandez, Falkland Isles, and New Georgia. These sea- lions that have manes are not more mischievous or formidable than the others. They are equally unwieldy and heavy in their motions ; and are rather disposed to avoid than to fall upon those who at- tack them. Both kinds live upon fish and water fowls, which they catch by surprise. They bring forth and suckle their young ones among the corn flags, where they retire at night, and conti- nue to give them suck till they are large enough to go to sea. In the evening they assemble in herds upon the shore, and call their dams in cries so much like lambs, calves, and goats, that, unless apprised of it, one would easily be deceived. The tongues of these animals are very good eat- ing. The oil which is extracted from their grease is of great use. It is preferred to that of the whale ; it is always clear, and leaves no se- diment. The skins of the sea-lions are chiefly used in making portmanteaus, and in covering trunks. When they are tanned they have a grain almost like Morocco. They are not so fine, but are less liable to tear, and keep fresh a longer time. They make good shoes and boots, which, when well seasoned, are water-proof.

11. P. maculata, the spotted seal of Pennant, inhabits the Kurile Isles, and the seas of Kamt- schatka. The body is spotted with brown.

12. P. monachus, the hooded seal, or Medi- terranean seal of Pennant, inhabits chiefly the coast of Dalmatia. It has no external ears ; only four cutting teeth in each jaw; the fore paws are not divided ; the hinder paws have no nails. The skin of it folds like a monk’s hood, whence the names. The body is eight feet seven inches long, and five feet round.

13. P. mutica, the long-necked seal of Pen- nant, has a slender body, and no claws on the fore feet, which resemble fins.

14. P. nigra, the black seal of Pennant, has a peculiar, but undescribed, conformation of the hind legs. They inhabit the coast of the Kurile Isles.

15. P. punctata, the speckled seal of Pennant, is elegantly speckled all over the body, head, and limbs. They inhabit the seas of Kamts-chatka and the Kurile Isles.

16. P. pusilla, the little seal of Schreber, Pen- nant, and Buffon ; the ˆOKJJ of Aristotle ; the vitulus marinus of Pliny, and the sea-calf of Dam pier ; has a smooth head, and the rudiments of external ears ; the body is brown, and mea- sures two feet two inches.

17. P, testudo, the tortoise-headed seal of Pennant, has a head like that of a tortoise, a slender neck, and feet like those of the common seal. It is found on the coasts of many places of Europe.

18. i. P. vitulina, the sea-calf, or common seal, inhabits the European ocean. It has a smooth head, without external ears ; and the common length is from five to six feet. The fore legs are deeply immersed in the skin of the body. The hind legs are placed in such a manner as to point directly backwards ; every foot has five toes, connected by a strong and broad web, co- vered on both sides with short hair. The toes are furnished with strong claws, well adapted for climbing the rocks; the claws on the hind feet are slender and straight ; but at the ends a little incurvated. The head and nose are broad and flat,_like those of the otter ; the neck short and thick ; the eyes large and black ; in lieu of exter- nal ears, it has two small orifices ; the nostrils* are oblong ; on each side the nose are several long stiff hairs ; and above each eye are a few of the same kind. The form of the tongue is very singular, being forked or slit at the end. The cutting teeth are six in the upper jaw, and only four in the lower. It has two canine teeth above and below, and on each side of the jaw are five grinders ; in all thirty-four. The whole body is covered with short hair, very closely set together : the color of that on the body is generally dusky, spotted irregularly with white ; on the belly white ; but seals vary greatly in their colors : some have been found entirely white. The seal is common on most of the rocky shores of Great Britain and Ireland, especially on the north coasts. In Wales it frequents the coasts of Caer-narvonshire and Anglesey. They inhabit all the European seas, even to the extreme north; are found far within the arctic circle, in the seas both of Europe and Asia, and even those of Kamts- chatka. They prey entirely on fish, and never molest the sea-fowls; for numbers of each are often seen floating on the waves, as if in com- pany. Seals eat their prey beneath the water ; and, when devouring any very oily fish, the

place is known by the smoothness of the waves imme- diately above. They are excellent swimmers, ready divers, and very bold when in the sea, swimming carelessly about boats. Their dens are in caverns near the sea, but out of the reach of the tide; in summer they will come out of the water, to bask in the sun on large rocks ; and that is the opportunity our countrymen take of shoot- ing them : if they chance to escape, they hasten towards their proper element, flinging stones and dirt behind them as they scramble along : and expressing their fears by piteous moans ; but, if they be overtaken, they will make a vigorous defence with their feet and teeth till they are killed. They are taken for the. sake of their skins, and for the oil their fat yields.

The flesh of these animals, and even of por- poises, formerly found a place at the tables of the great, as appears from the bill of fare of the vast feast that archbishop Nevill gave in the reign of Edward IV. They couple about April, on small islands near the shore ; and bring forth in those vast caverns that are numerous on our coasts :

they commonly bring two at a time, which in .their infant state are covered with a whitish down or woolly substance. In October and Novem- ber the seal-hunters of Caithness enter the mouth of the caverns about midnight, and, rowing up as far as they can, land ; each of them being pro- vided with a bludgeon, and properly stationed, they now light their torches, and make a great noise, which brings down the seals from the fur- ther end, in a confused body, with fearful shrieks and cries : at first the men are obliged to give way for fear of being overborne ; but when the first crowd is past, they kill as many as straggle behind, chiefly the young, by striking them on the nose, where a very slight blow despatches them. Seals are seen in the greatest plenty on the shores oc Cornwall, in May, June, and July. Their heads in swimming are always above water. They sleep on rocks surrounded by the sea, or on the less accessible parts of our cliffs left dry by the ebb of the tide ; and, if disturbed by any thing, take care to tumble over the rocks into the sea. They are extremely watchful, and never sleep long without moving ; then raise their heads, and lie down again, and so on, raising their heads and reclining them alternately in about a rni- nute. They use this precaution, as being un- provided with external ears ; and consequently not hearing very quick, nor from any great dis- tance. These animals are so very useful to the inhabitants of Greenland, and other arctic people, that they may be called their flocks. ‘ Seals,’ says Crantz, ‘ are more needful to them than sheep are to us, though they furnish us with food and raiment ; or than the cocoa-tree is to the Indians. The seal’s flesh, with that of the rein- deer, supplies the natives with their most sub- stantial food. Their fat furnishes them with oil for lamp-light, chamber, and kitchen fire.

They also mollify their dry food, mostly fish, in the train ; and they barter it for all kinds of necessa- ries with the factor. They can sew better with the fibres of the seal's sinews than with thread or silk. Of the skins of the entrails they make their windows, curtains for their tents, shirts, and part of the bladders they use at their harpoons ; and they make train bottles of the maw. Formerly, for want of iron, they made all manner of instru- ments and working tools of their bones. Neither is the blood wasted, but boiled with other ingre- dients, and eaten as soup. Of the skin of the seal they stand in the greatest need ; as they cover over with it their boats in which they seek their provisions. They also cut their straps out of them, and cover their tents with them ; without which they could not subsist in summer. This is their chief business and la- bor from their childhood. The Greenlanders have four ways of catching seals : either singly, with the bladder ; or in company, tby the clapper- hunt ; or in winter on the ice ; or by shooting them with a gun. The principal and most com- mon way is the taking them with a bladder. When the Greenlander sets out equipped, and spies a seal, he tries to surprise and strike it with his harpoon. The moment the seal is pierced, the Greenlander must throw the bladder, tied to the end of the string, into the water, on the same side as the seal runs and dives ; for that he does

instantly like a dart. The seal often drags the bladder under water, but so wearies itself with it, that it must corre up again in fifteen minutes to breathe. The Greenlander hastens to the spot, smites the seal with a long lance, and kills it, but stops the wound directly to preserve the blood ; and, lastly, he blows it up like a bladder, to make it swim after him, fastened to the left side of his boat. In this exercise the Greenlander is exposed to the most imminent danger of his life, which is probably the reason that they call this hunt or fishery kamavock, i. e. the extinction, viz. of life. For if the line should entangle itself, or catch hold of thekajak or boat, or twine round the oar, hand, or neck, or if the seal should turn sud- denly to the other side of the boat, the kajak must be overturned by the string, and drawn down un- der water. Nay, sometimes the seal will bite him in the face or hand, or bite a hole in his kajak, so that he must sink. Several in company must

fursue the cautious kassigiak by the clapper- unt. In the same manner they also surround and kill the attersoak in great numbers at certain seasons of the year, for in autumn they retire into the creeks or inlets in stormy weather, as in the Nepiset Sound in Ball's River, between

the main land and the island Kangek, which is full two leagues long, but very narrow. There the Greenlanders cut off their retreat, and frighten them under water by shouting, clapping, and throwing stones ; but, as they must come up again to draw breath, they kill them with darts. This is a very profitable diversion for the Green- landers, for often one man will have eight or ten seals for his share. The third method of killing seals upon the ice is mostly practised in Disko, where th,e bays are frozen over in the winter. The seals make sometimes holes in the ice, where they breathe ; near such a hole a Greenlander places himself, and, when the seal puts his nose to the hole, he pierces it instantly with his har- poon ; then breaks the hole larger, draws it out, and kills it.'

ii. P. vitulina Bothnica is a variety differing in having a broader nose, longer nails, and a darker color. They inhabit the Gulf of Bothnia.

iii. P. vitulina Caspica, the Caspian seal, is of a mixed color, and inhabits the Caspian Sea.

iv. P. vitulina Siberica, the Siberian seal, is of a silver white color, and inhabits the lakes Baikal and Orom, in Siberia.

19. P. ursina, the sea bear, or ursine seal, has external ears. The male is greatly superior in size to the female. The bodies of each are of a conic form, very thick before, and taper to the tail. The length of a large one is eight feet ; the greatest circumference five feet; near the tail twenty inches ; and the weight is about 800 Ibs. The nose projects like that of a pug-dog, but the head rises suddenly; the teeth lock into one another when the mouth is shxit ; the tongue is large ; the eyes are large and prominent, and may be covered at pleasure by a fleshy mem- brane. The length of the fore legs is twenty- four inches ; they are like those of other quadru- peds, not immersed in the body like those of seals ; the feet are formed with toes like those of other animals, but are covered with a naked skin, so that externally they seem to be a shape-

less mass ; the hind legs are fixed to the body quite behind, like those of common seals ; but are capable of being brought forward, so that the animal makes use of them to scratch its head. These animals are found in the northern seas, and in amazing quantities between Kamtschatka and America; but are scarcely known to land on the Asiatic shore : nor are they ever taken, except in the three Kurilian Islands; and thence in the Bobrowoie More, or Beaver Sea, as far as the Kronski headland, off the river Kamtschatka, which comprehends only from 50° to 56° lat. N. It is observable that they never double the

southern cape of the peninsula, or are found on the western side in the Pen- schinska Sea; but their great resort has been observed to be to Bhering's Islands. They are regularly migratory. They first appear off the three Kurile Islands and Kamtschatka in the earliest spring. There is not one female which does not come pregnant. Such as are then taken are opened, the young taken out and skinned. They are found in Bhering's Island only on the western shore, being the part opposite to Asia, where they first appear on their migration from the south. Ursine seals are also found in the southern hemisphere, from under the line in the isle of Gallipagos, to New Georgia, in lat. 54° 15′ S., and long. 37° 15′ W. In the intermediate parts they are met with in New Zealand, in the isle of Juan Fernandez, and Massa Fuera, and along the coasts of Chili to Terra del Fuego and Staten Land. In Juan Fernandez, Staten Land, and New Georgia, they swarm ; as they do at the northern extremity of this vast ocean. Those of the southern hemisphere also migrate. Alex- ander Selkirk, who passed four lonely years on the isle of Juan Fernandez, remarked that they come ashore in June, and stay till September. Captain Cook found them again in their place of emigration in equal abundance, on Staten Land and New Georgia, in December and Ja- nuary ; and Don Pemetty found them on the Falkland Islands in February. According to the Greenlanders, this species inhabit the south- ern parts of their country. They call it auve-kejak, and say it is very fierce, and tears to pieces whatsoever it meets ; that it lives on land as well as in water, and is greatly dreaded by the hunters. During the three months of summer they lead a most indolent life ; they arrive at the islands vastly fat ; but during that time they are scarcely ever in motion, confine themselves for whole weeks to one spot, sleep a great part of the time, eat nothing, and, except the employ- ment the females have in suckling their younsr, are totally inactive. They live in families : each male has from eight to fifty females, whom he guards with the jealousy of an eastern monarch ; and, though they lie by thousands on the shores, each family keeps itself separate from the rest, and sometimes, with the young and unmarried ones, amount to 120. The males are very iras- cible, and often fight about the females. They swim very swiftly, at the rate of seven miles an hour. If wounded, they will seize on the boat, and carry it along with vast impetuosity, and oftentimes sink it. They can continue a long time under water. When they want to climb

the rocks, they fasten with their fore paws, and draw themselves up. They are very tenacious of life, and will live for a fortnight after receiv- ing such wounds as would immediately destroy any other animal. The Kamtschatkans take them by harpooning, for they never land on their shore. To the harpoon is fastened a long line, by which they draw the animal to the boat after it is spent with fatigue ; but, in the chace, the hunters are afraid of too near an approach, lest the animal should fasten on and sink their vessel. Their emigration is in September, when they depart excessively lean, and take their young with them. On their return they gene- rally frequent the same places which they did in the spring. Their winter retreats are unknown ; but are supposed to be the islands between Ku- rili and Japan, called Campagna Land, Staten Land, Jeso Gasima, and which were discovered by Martin Uriel in 1642. They arrive along the shores of the Kurile Islands, and part of those of Kamtschatka, from the south. They inhabit only the west side of Bhering's Isle which faces Kamtschatka; and, when they return in Septem- ber, their route is due south, pointing towards the discoveries of Uriel.

PHOC/EA, the last town of Ionia, and of IS.o- lis, because situated on the right or north side of the Hermus, which he makes the boundary of YEolis to the south (Mela, Plin. Ptol.). It stood far in the land, on a bay or arm of the sea; had two very safe harbours, the one called Lampter, the other Naustathmos (Livy). It was a colony of lonians, situated in the territory of TEolis (Herod). Massilia in Gaul was a colony from it. It was one of the twelve cities which assem- bled in the Panionium, or general council of Ionia. Some writers tell us that, while the foundations of this city were laying, there appeared near the shore a great shoal of sea-calves ; whence it was called Phocaea, from Quiet], a sea-calf. Ptolemy, •who makes the Hermus the boundary between Jf.olia. and Ionia, places Phocaea in YEolis ; but all other geopraphers reckon it among the cities of Ionia. It stood on the sea-coast, between Cuma on the north, and Smyrna on the south, near Hermus ; and was anciently one of the most wealthy and powerful cities of all Asia; but is now a poor village, though the see of a bishop.

The Phocseans were expert mariners, and the first among the Greeks that undertook long voy- ages ; which they performed in galleys of fifty oars. As they applied themselves to trade and navigation, they became acquainted pretty early with the coasts and islands of Europe, where they are said to have founded several cities, viz. Velia, in Italy; Alalia, or Aleria, in Corsica; and Massilia (now Marseilles), in Gaul. Neither were they unacquainted with Spain ; for Hero- dotus tells us that, in the time of Cyrus the Great, the Phocseans arriving at Sartessus, a city in the Bay of Cadiz, were treated with extraor- dinary

kindness by Argathonius king of that country, who, hearing that they were under ap- prehension of the growing power of Cyrus, invited them to settle in his kingdom. The Phocaeans could not be prevailed upon to for- sake their country; but accepted a large sum of

money, which that prince generously gave th*m, to defray the expense of building a strong wall round their city. This wall they built on their return ; but it was unable to resist the power of Cyrus, whose general, Harpagus, investing the city with a numerous army, soon reduced it to the utmost extremities. The Phocseans offered to capitulate, but, the conditions offered by Har- pagus seeming severe, they begged he would allow them three days to deliberate, and, in the mean time, withdraw his forces. Harpagus com- plied with their request, and the Phocaans put their wives, children, and most valuable effects on board several vessels, and conveyed them to the island of Chios. Their design was to purchase the (Enessian islands, which belonged to the Chians, and settle there. But the Chians, jea- lous of losing their trade, refused : so they put to sea again, and having taken Phocaea by sur- prise, put all the Persians in it to the sword. They next went to Corsica, but great part of them returned very soon. They then lived in subjection either to the Persians, or tyrants of their own. Among the latter we find mention made of Laodamus, who attended Darius Hystaspis in his expedition against the Scythians; and of Dionysiu-s, who, joining Aristagoras, tyrant of Miletus, and chief author of the Ionian rebellion, retired, after the defeat of his countrymen, to Phoenicia, where he made an immense booty, seizing on all the ships he met with trading to that country. From Phoe- nicia he sailed to Sicily, where he committed great depredations on the Carthaginians and Tuscans ; but is said never to have molested the Greeks. In the Roman times the city of Pho- caea sided with Antiochus the Great; whereupon it was besieged, taken, and plundered* by the Roman general, but allowed to be governed by its own laws. In the war which Aristonicus, brother to Attalus, king of Pergamus, raised against the Romans, they assisted the former to the utmost of their power ; which so highly dis- pleased the senate that they commanded the town to be demolished, and the whole race of the Phocaeans to be exterminated. But the Massilienses interposed, and, with difficulty, assuaged the anger of the senate. Pompey declared Phocaea a free city, and restored the inhabitants to all their privileges ; whence, under the first emperors, it was reckoned one of the most flourishing cities of all Asia Minor. It is now called Fochia.

PHOCAICUS, a name given to Marcellus. Lucan.

PHOCAS, a Roman centurion, who was made emperor by the army,

and crowned at Constan- tinople about A. D. 603. The emperor Mauritius deserted, fled to Chalcedon with his five children, whom Phocas caused to be inhumanly murdered before his eyes, and then he murdered Mauritius himself, his brother, and several others who were attached to him. Phocas now sent his own image, and that of his wife Leontia, to Rome. Gregory the Great, then bishop of Rome, caused the images to be lodged in the oratory of the martyr CBesarius, and wrote congratulatory letters to the usurper. As soon as the murder of Mauritius was known, however, Narses, who

commanded the troops on the frontiers of Persia, revolted. Yet Phocas managed matters so as to gain him over to his interest, and then treacherously burnt him alive. By his cruelty Pho- cas soon became generally hated ; for he spared neither sex nor age ; amongst others he mur- dered Constantina the widow of Mauritius, and her daughters. In 609 a conspiracy was formed against him, but was discovered, and the persons concerned in it put to death. In 610, however, he was overtaken by the fate he had so long deserved. Heraclius, the son of lieraclius governor of Africa, being acknowledged as emperor by the people of Africa, sailed thence with a formidable fleet, and a powerful army, for Constantinople, where he defeated the tyrant's fleet. Phocas took refuge in the palace; but one Photinus, whose wife he had debauched, pursuing him, forced the gates, dragged the cowardly emperor from the throne, and having stripped him of the imperial robes, and clothed him with a black vest, carried him in chains to lieraclius, who commanded his hands and feet, then his arms, and at last his head, to be cut off; his body was then delivered to the soldiers, who burnt it in the forum. Such was the end of this cruel ty- rant, after he had reigned seven years and some months.

PHOCENIC ACID, in chemistry, according to M. Chevreul, the principle of the soap of se- veral fish oils. Its specific grarity is 0-932 ; it is colorless, and takes 100 parts of water to dis- solve 5-5 parts of it. It is soluble in alcohol in every proportion. Its constituents are in vol. 3 of oxygen; 10 of carbon; and 14 of hydrogen. 100 of phocenic acid neutralise 82'77 of barytes, forming a salt soluble in its own weight of water at 6,8° of Fahrenheit. The smell of leather dressed with fish oil is ascribed to the decompo- sition of this acid with the oil.

PHOCIUM, in architecture, the name of an edifice in which were held assemblies of the deputies from all the Phocaean towns. It was situated near the city of Daulis in Phocis. Pau- sanias gives a description of this building in the fifth chapter of his tenth book. It was a vast structure, the two longest sides of which were ornamented interiorly with porticoes, which served to support the roof as well as to embellish the building. Under these porticoes were benches elevated a little above the level of the floor, and destined for the accommodation of the de- puties. The side immediately fronting the en- trance was adorned with statues of Jupiter, Juno, and Minerva; the former seated on his throne, the two latter each on one side of him.

PHOCICUM BELLTJM, thePhocianor sacred war carried on by the Thebans and Philip II. against the Phocians, for plundering the temple of Apollo at Delphi. See MACEDON and PHO- CIS.

PHOCION, a distinguished Athenian general and orator in the time of Philip II. of Macedon. He was too modest to solicit command, though, either as a soldier, orator, statesman, or general, he was by far the most eminent Athenian of his time. As a most disinterested patriot, he could entertain no affection for Philip ; but as he knew the disposition of his countrymen, and how un- VOL. XVII.

likely they were to support measures necessary to humble the Macedonian power, he chose ra- ther to cultivate the esteem which Philip showed for the state of Athens, as a means of preserving her, when she should be reduced to that situation which he conceived they wanted virtue to pre- vent. See MACEDON. He was, however, ap- pointed to command the army which was sent to assist the Byzantines against Philip, whom lie obliged to return to his own dominions. This truly great man, whom (though extremely poor) no sum offered by Philip or Alexander could bribe to betray his country, and who on all occa- sions gave them sound advice, was at length ac- cused by his ungrateful countrymen. He was sent to Athens by Polyperchon, head of a faction in Macedonia, with his friends, chained, in carts, with this message, ‘That though he was con- vinced they were traitors, yet he left them to be judged by the Athenians as a free people.’ This happened A. A. C. 318. They were all in a sum- mary manner condemned to death, viz. Phocion, Nicocles, Aheudippus, Agamon, and Pythocles, who were present : Demetrius Phalereus, Calli- medon, Charicles, and others, were condemned in their absence. The spleen of his enemies was not extinguished with his life ; they decreed that his corpse should be banished the Athenian territories. When the Athenians, however, be- gan to cool, and remember the many services they had received from Phocion, they decreed him a statue of brass,

ordered his bones to be brought back at the public “expense, and decreed that his accusers should be put to death.

PHOCIS, a country of Greece, between Boeo- tia on the east, and Locris on the west, extend- ing from the Sinus Corinthiacus on the south, to the sea of Euboea on the north ; and, according to Dionysius, as far as Thermopylae; but re- duced afterwards to narrower bounds (Demost. Strab. Paus.). Its greatest length was from north to south between 38° 45′ and 39° 20’, about thirty-five miles; but not extending thirty miles from east to west, i. e. from 23° 10′ to 23° 40′ at the widest, but about twenty-three miles towards the Corinthian bay, and much narrower still towards the north. It was named from Phocus the son of Ornytion, a native of Corinth ; but was soon after invaded by the TEginetae, under Phocus, the son of ˆEacus king of ˆEgina. In Phocis there were many celebrated mountains, particularly Cythaeron, Helicon, and Parnassus. Cythaeron was consecrated to the Muses, as well as these, and was equally celebrated by the poets. The chief river was the Cephisus, run- ning from the foot of Parnassus, northward, and falling into the Pindus, near the boundary of that kingdom. It had several considerable cities : such as Cyrra, Crissa, and Antecyra, which, ac- cording to Ptolemy, were on the sea coasts ; and Pythia, Delphia, Daulis, Elatia, Ergosthenia, and Baulia, which were inland towns. Elatia was the largest and richest after Delphi. Daulis was remarkable for the stature and prowess of its inhabitants ; and for the tragical events said to have happened in it. See PHILOMELA. Deu- calion was king of that part of Phocis which lies about Parnassus at the time that Cecrops I. flourished in Attica; but the Phocians afterward*

formed themselves into a commonwealth, go- verned by general assemblies chosen from among themselves, and changed frequently. Of the history of the Phocians little is known till the time of the holy war, of which the following was the origin : — The Phocians having presumed to plough the territories of the city of Cyrra, con- secrated to the Delphic god, were summoned by the other Grecian states before the court of the Amphictyons, where a considerable fine was imposed upon them for their sacrilege. They refused to pay it, and at the next assembly their dominions were adjudged confiscated to the use of the temple. This exasperated the Phocians still more ; who, at the

instigation of one Philo- melus, seized upon the temple, plundered it of its treasure, and held the sacred depositum for a considerable time. This gave rise to the Pho- cian or holy war, wherein Athens, Sparta, and some others of the Peloponnesian states declared for the Phocians ; and the Thebans, Thessalians, Locrians, and others, against them. The war being ended, the grand council assembled, and imposed an annual fine of sixty talents upon the Phocians, to be paid to the temple, and conti- nued till they had fully repaired the damage it had sustained, and, till this reparation should be made, they were excluded from dwelling in walled towns, and from having any vote in the grand assembly. They did not, however, continue long under this heavy sentence : their known bravery made their assistance so necessary to the rest that they were glad to remit it ; after which re- mission they continued to behave with their usual courage and resolution, and soon oblite- rated their former guilt.

PHOCUS, the name of three ancient Grecians : 1. The founder; and, 2. the first invader of Pho- cis ; which last was the son of ˆEacus by Psama- the, one of the Nereids, and brother of Peleus and Telamon ; who killed him : 3. The son of the celebrated Phocion, who avenged his father's death, but never did any other memorable ac- tion.

PHCEBE, in mythology, 1. A name of Diana : 2. A daughter of Leucippus, brother of Tyndarus, king of Sparta, by Philodice, the daughter of Inachus. She and her sister Hilaria, were betrothed to their cousins Lynceus and Idas but were carried off and married by their other cousins, Castor and Pollux.

PHCEBEUM, a town of Laconiar, near Sparta.

PH(EBIDAS, a Spartan general sent to assist the Macedonians against the Thracians. He seized the citadel of Thebes, for which act of perfidy the Spartans, instead of rewarding, dis- graced and banished him, though they sull re- tained the citadel. (C. Nepos.) He died A. A. C.

377.

PH CEBITS, one of the names given by ancient mythologists to the Sun, Sol, or Apollo. See APOLLO.

PHCEMOS, a lake of Arcadia. Lempr. |

PHCENICE, an ancient town of Epirus. Livy, xxix. c. 12.

PHCEMCE, or PHOENICIA, the ancient name of a country lying between 34° and 36° of N. laL; bounded by Syria on the north and

east,

by Judeaon the south, and by the Mediterrar ean on the west. Some derive the name from one Phoenix; others from 0ow$, the palm or date, as these trees abounded in this country. Some suppose that Phoenice is originally a translation of the Hebrew word Edom, from the Edomites who fled thither in the days of David. By the contraction of Canaan it was also called Cana, and anciently Raabothin and Colpitis. The Jews commonly called it Canaan ; though some part of it they knew by the name of Syrophcenice Bochart tells us that the most probable etymo- logy is Phene Anak, i. e. ‘ the descendants of Anak.’ Such were the names peculiar to this small country ; though Phcenice was sometimes extended to all the maritime countries of Syria, Judea, and Canaan, to the Philistines, and even to the Amalekites. But these two names, and the rest, were most generally swallowed up by those of Palestine and Syria. There is some disagreement among authors with respect to the- northern limits of this country. Ptolemy makes the river Eleutherus the boundary of Phoenice on the north ; but Pliny, Mela, and Stephanus, place it in the island of Aradus, north of that river. Strabo observes that some will have the river Eleutherus to be the boundary of Seleucis, on the side of Phcenice and Ccelosyria. On the coast of Phcenice, and south of the Eleutherus, stood the following cities:— Simyra, Orthosia, Tripolis, Botrys, Byblus, Palsebyblus, Berytus, Sidon, Sarepta, Tyrus, Palaetyrus. Phcenice extended, according to Ptolemy, even beyond mount Carmel; for that geographer places in Phcenice, not only Ecdippa and Ptolemais, but Sycaminum and Daera, which stand south of that mountain. These however, properly speak- ing, belonged to Palestine. We will n«t attempt to mark out the bounds of the midland Phce- nice. Ptolemy reckons in it the following towns: — Area, Palaebyblus (Old Byblus), Ga- bala, and Caesaria Paniae. This province was considerably extended in the times of Christ- ianity : when, being considered as a province of Syria, it included both Damascus and Palmyra. The soil is good, and productive of many neces- saries for food and clothing. The air is whole- some and the climate agreeable. It is plentifully watered by small rivers ; which, running down from mount Libanus, sometimes swell to an im- moderate degree, either increased by the melting of the snows on that mountain, or by heavy rains. Upon these occasions they overflow, to the great danger and hinderance of the traveller and damage of the country. Among these rivers is that of Adonis.

Of their civil laws we have no system. With regard to religion, the Phoenicians were the most gross and abominable idolaters. Baal- berith, Baalzebub, Baalsamen, &c., mentioned in Scrip- ture, were some of the Phoenician gods ; as were also Moloch, Ashtaroth, and

Thammuz. The chief deity was named Baal, or Baal-samen; whom the Hebrews called Baal-shemim, or the god of heaven. See BAAL. Diodorus Siculus says, their chief deity was that of Carthage, Chronus, or Saturn. The sacrifices offered up to him were children of the best families. Our author also tells us that the Carthaginians had a

brazen statue or colossus of this god, the hands of which were extended in act to receive, and bent downwards in such a manner, that the child laid thereon immediately fell down into a hollow where there was a fiery furnace. He adds, also, that this inhuman practice seemed to confirm a tradition handed down to the Greeks from very early antiquity, viz. that Saturn devoured his own children. The goddess Ccelestis, or Urania, was held in the highest veneration by the Car- thaginians. She is thought to have been the same with the queen of heaven mentioned in Je- remiah, the Juno Olympia of the Greeks. Be- sides these, there were several other deities of later dates, who were worshipped among the Phoenicians, particularly those of Tyre, and con- sequently among the Carthaginians also. These •were Jupiter, Apollo, Mars, and Bacchus. Ju- piter was worshipped under the name of Belus or Baal. To him they addressed their oaths. The same name was also given to the other two, whence they were frequently mistaken for one another. Apollo, or the sun, went either by this name simply, or by others of which Baal made a part. Astarte, or Ashtaroth, was also a chief goddess of the Phoenicians. See ASHTAROTH, and POLYTHEISM. Herodotus supposes the Phoenicians to have been circumcised ; but Jo- sephus asserts that none of the nations included under the vague name of Palestine and Syria used that rite, the Jews excepted. They ab- stained, however, from the flesh of swine. Much is said of their arts, sciences, and manufac- tures; but in general terms only. The Sidonians, who were a branch of the Phoenicians, were of most happy genius. They were early addicted to philosophical exercises ; insomuch that Mos- chus, a Sidonian, taught the doctrine of atoms before the Trojan war : and Abomenus of Tyre puzzled Solomon by his questions.

Phcenice continued to be one of the seats of learning, and both Tyre and Sidon produced their philosophers of later ages ; namely, Boe- thus and Diodatus and Sidon, Antipater and Apollonius of Tyre, who gave an account of the writings and disciples of Zeno. As to their ma- nufactures, the glass of Sidon, the purple of Tyre, and the exceedingly fine linen they wove, were the produce of their own country, and their

own invention ; and for their extraordinary skill in working metals, in hewing timber and stone ; in a word, for their perfect knowledge of what was solid, great, and ornamental in architecture — we need only mention the large share they had in erecting and decorating the temple of Solo- mon at Jerusalem. Their fame for taste, design, and ingenious invention, was such, that whatever was elegant, great, or pleasing in apparel, vessels, or toys, was distinguished by the epithet of Si- donian. The Phoenicians were likewise cele- brated as merchants, navigators, and planters of colonies in foreign parts. As merchants, they may be said to have engrossed all the commerce of the western world : as navigators, they were the boldest, the most experienced, and greatest discoverers of the ancient times : they had for many ages no rival. In planting colonies they exerted themselves so much, that, considering *heir habitation was little more than the slip of

ground between Mount Libanus and the sea, if is surprising how they could furnish such sun plies of people, and not wholly depopulate their own country. It is generally supposed that the Phoenicians were induced to deal in foreign com- modities by their neighbourhood with the Sy- rians ; and that, from their example, they turned their thought to trade and navigation, and by an uncommon application soon eclipsed their mas- ters in that art. The whole thoughts of the Phoenicians were employed on schemes to ad- vance their commerce. They affected no em- pire but that of the sea ; and seemed to aim at nothing but the peaceable enjoyment of their trade. This they extended to all the known parts they could reach ; to the British isles, com- monly understood by the Cassiterides ; to Spain and other places in the ocean, both within and without the Straits of Gibraltar ; and, in general, to all the ports of the Mediterranean, the Black Sea, and the Lake Maeotis. In all these parts they had settlements and correspondents, from which they drew what was useful to themselves, or might be so to others ; and thus they exer- cised the three great branches of trade ; impor- tation, exportation, and transportation. Such was their trade by sea ; and for that which they carried on by land in Syria, Mesopotamia, Assyria, Babylonia, Persia, Arabia, and India, it was of no less extent, and may give us an idea of what this people once was, how rich, and how deservedly their merchants are mentioned in Scripture as equal to princes. Their country was at that time the great warehouse where every thing that might either administer to the necessities or luxury of mankind was to be found ; which they distributed as they judged would be best for their own interest. As to their navigation, their larger embarkations were of two sorts; they divided them into round ships or gauli ; and long ships,

galleys, or triremes. When they drew up in line of battle, the gauli were disposed at a small distance from each other in the wings, or in the van and the rear ; their triremes were contracted together in the centre. To discourage other nations from en- gaging in commerce, they practised piracy, and thus grasped at the whole commerce of the then known world. They also very early applied astronomy to navigation.

PHCENICOPTERUS (probably from 0oiv < £, red), the flamingo, in ornithology, a genus of birds belonging to the order of grallae. The beak is naked, teethed, and bent as if it were broken ; the nostrils are linear ; the feet are pal- mated, and four-toed. There is but one species, viz.

P. Bahamensis of Catesby, a native of Africa and America. This species resembles the heron in shape, excepting the bill, which is of a very singular form. It is two years old before it ar- rives at its perfect color ; and then it is entirely red, excepting the quill feathers, which are black. A full grown one ns of equal weight with a wild duck ; and when it stands erect it is five feet high. The feet are webbed. The flesh is deli- cate, and mostly resembles that, of a partridge in taste. The tongue, above any other part, was in the highest esteem with the luxurious Romajia.

Dat mihi rubens penna nomcn, set! lingua gulosis Nostra sapit. Mart. 1. IS.epig. 66.

These birds make their nests on hillocks in shallow water ; on which they sit with their legs extended down, like a man sitting on a stool. They breed on the coast of Cuba and the Ba- hama islands, and frequent salt water only. By the particular shape of its bill, this bird, in eat- ing, twists its neck from side to side, and makes the upper mandible touch the ground. They are very stupid, and will not rise at the report of a gun ; nor is it any warning to those who sur- vive that they see others killed by their side ; so that, by keeping himself out of sight, a fowler may kill as many as he pleases. In the old con- tinent they are not often met with beyond lat. 40° N. or S. But they are found every where on the African coast and adjacent isles, to the Cape of Good Hope ; and sometimes on the coast of Spain, Italy, and those of

France, lying on the Mediterranean ; at Marseilles, and for some way to the Rhone. In some seasons they frequent Aleppo and the parts adjacent. They are seen also on the Persian side of the Caspian Sea, and thence along the west coast as far as the Wolga; though this is at uncertain times, and chiefly in considerable flocks coming from the north-east mostly in October and November: but, so soon as the wind changes, they totally disappear. They breed in the Cape Verd Isles, particularly in that of Sal. They are also common in the warm parts of America, as Peru, Chili, Cayenne, Brasil, and the various islands of the West Indies. Sloane found them in Jamaica, at the Bahama Islands, and Cuba, where they breed. Their food chiefly consists of small fish or their eggs ; and of water insects, which they search after, by plunging in the bill and part of the head. Whilst feeding, one of them is said to stand sen- tinel, and the moment he sounds the alarm, the whole flock takes wing. This bird, when at rest, stands on one leg, the other being drawn up close to the body, with the head placed under the wing on that side of the body it stands on. They are sometimes caught young, and are brought up tame ; but are always impatient of cold ; and seldom live in this state.

PHCENICUSA, one of the ˆEolian Islands ; now called Felicudi.

PHCENIGMUS (from oiViK, red), in medi- dicine, 1. A redness of the skin, such as is pro- duced by stimulating substances. 2. That which reddens the skin when applied to it.

‘HCENISSA, a patronymic of Dido. Virg.

PHCENIX, son of Amyntor, king of Argos, by Cleobule or Hippodamia, was preceptor to young Achilles. His father having proved faith- less to his wife, through fondness for a concu- bine called Clytia, Cleobule persuaded her son Phoenix to ingratiate himsolf with his father’s mistress. Phoenix easily succeeded ; but Amyn- tor, discovering his intrigues, pronounced a curse upon him, and the son was soon after deprived •of his sight by divine vengeance. Some say that Amyntor himself put 6ut his son’s eyes, •which so provoked him that he meditated the death of his father. Piety, however, prevailed over passion ; and, that he might not become a parricide, Phoenix fled from Argos to the court

of Peleus, king of Phthia. Here he was treated with tenderness ; Peleus carried him to Chiron, who restored him to his eye-sight ; soon after which he was made preceptor to Achilles, his benefactor’s son. He was also presented with the government of many cities. He went with his pupil to the Trojan war. After the death of Achilles, Phoenix, with

others, was commissioned by the Greeks to return into Greece, to bring to the war young Pyrrhus. This commission he successfully performed ; and, after the fall of Troy, he returned with Pyrrhus, and died in Thrace. He was buried, according to Strabo, near Trachinia, where a small river in the neigh- bourhood received the name of Phoenix.

PHCENIX, the son of Agenor, by a nymph, who was called Telephassa, according to Apollo- dorus and Moschus, or, according to others, Epimidusa, Perimeda, or Agriope. He was, like his brother Cadmus, and Ciux, sent by his father in pursuit of his sister Europa, whom Ju- piter under the form of a bull had carried away ; and, when his enquiries proved un- successful, he settled in a country, which was from him called Phoenicia. From him also the Carthaginians were called Poeni.

PHCENIX, in astronomy, one of the new southern constellations. See ASTRONOMY.

PHCENIX, in botany, the great palm, or date tree ; a genus of plants belonging to the order of palmae. There is only one species, viz.

P. dactylifera, the date tree, a native of Africa and the eastern countries, where it grows to fifty, sixty, and 100 feet high. The trunk is round, upright, and studded with protuberances, which are the vestiges of the decayed leaves. From the top issues forth a cluster of leaves or branches eight or nine feet long, extending all round like an umbrella, and bending a little towards the earth. The bottom part produces a number of stalks like those of the middle, but seldom shoot- ing so high as four or five feet. These stalks, says Adanson, diffuse the tree very considerably ; so that, wherever it naturally grows in forests, it is extremely difficult to open a passage through its prickly leaves. The date tree was introduced into Jamaica soon after the conquest of the island by the Spaniards. There are, however, but few of them there at this time. The fruit is some- what in the shape of an acorn. It is composed of a thin, light, and glossy membrane, rather pellucid and yellowish ; which contains a fine pulpy fruit, which is firm, sweet, and somewhat vinous to the taste, esculent, and wholesome ; within this is enclosed a solid, tough, and hard kernel, of a pale gray color on the outside, and finely marbled within like the nutmeg. For me- dicinal use dates are to be chosen large, full, fresh, yellow on the surface, soft and tender, not too much wrinkled ; such as have a vinous taste, and do not rattle when shaken. They are pro- duced in many parts of Europe, but never ripen perfectly there. The best are brought from Tu- nis ; they are also very fine and good in

Egypt, and in many parts of the east. Those of Spain and France look well ; but are never perfectly ripe, and very subject to decay. They are pre- served three different ways; some pressed and dry ; others pressed more moderately, and agaiu

moistened with their own juice ; and others not pressed at all, but moistened with the juice of other dates, as they are packed up, which is done in baskets or skins. Those preserved in this last way are much the best. Dates have always been esteemed moderately strengthening and astrin- gent. Though the date tree grows every where indiscriminately on the northern coasts of Africa, it is not cultivated with care, except beyond Mount Atlas ; because the heat is not sufficiently powerful along the coasts to bring the fruits to maturity. Still even here the date tree supplies the deficiency of corn to the inhabitants of these countries, and furnishes them with almost the whole of their subsistence. They have flocks of sheep; but, as they are not numerous, they pre- serve them rather for the sake of their wool than their flesh, which is very unwholesome food in countries that are excessively warm.

The date trees are planted without order, twelve feet distant from each other, near rivulets and streams. Forests of them may be seen here and there of several leagues in circumference ; their extent depending upon the quantity of water which can be procured to water them. These forests are intermixed with orange, al- mond, and pomegranate trees, and with vines which twist round the trunks of the dates; the heat is strong enough to ripen the fruit, though they are never exposed to the sun. Care is taken to till the earth well, and to raise, in many cases, a circular border around the root of each tree, that the water may remain longer and in larger quantity. The trees are watered at all seasons, but more particularly during the heats of sum- mer. In winter, new plantations are formed. For this purpose, those who cultivate them take shoots of those which produce the best dates, and plant them at a small distance one from the other. At the end of three or four years these shoots begin to bear fruit : but this is as yet dry, without sweetness, and even without kernels ; they never reach the highest degree of perfection of which they are susceptible till they are about fifteen or twenty years old. These plants are, however, produced from the seeds taken out of the fruit, provided they are fresh. They should be sown in pots filled with light rich earth, and plunged into a moderate hot-bed of tanners' bark, which should be kept in a moderate temperature of heat, and frequently watered. When the plants are come up to a proper size, they should be each

planted in a separate small pot, filled with the same light earth, and plunged into a hot-bed again, observing to refresh them with water, as also to let them have air in proportion to the warmth of the season and the bed in which they are placed. During the summer they should remain in the same hot-bed ; but, in the begin- ning of August, they should have a great share of air to harden them against the approach of winter; for, if they are too much forced, they will be so tender as not to be preserved through the winter without much difficulty, especially if there is not a bark stove to keep them in. The soil in which these plants should be placed must be composed in the following manner; viz. half of light fresh earth taken from a pasture ground, We other half sea-sand and rotten dung, or tan-

ners' bark in equal proportion ; these should be carefully mixed, and laid in a heap three or four months at least before it is used; but should be often turned over to prevent the growth of weeds, and to sweeten the earth The trees, however, which spring from seed, never produce so good dates as those that are raised from shoots; they being always poor and ill tasted. It is undoubtedly by force of cultivation, and after several generations, that they acquire a good quality. The date trees which have been originally sown grow rapidly, and bear fruit in the fourth or fifth year. Care is taken to cut the inferior branches of the date tree in proportion as they rise ; and a piece of the root is always left, of some inches in length, which affords the easy means of climbing to the summit. These trees live a long time, according to the account of the Arabs ; who say that, when they have at- tained to their full growth, no change is observed in them for the space of three generations.

The number of females which are cultivated is much superior to that of the males, because they are much more profitable. The sexual organs of the date tree grow upon different stalks, and these trees flower in April and May, when the Arabs cut the male branches to impregnate the females. For this purpose they make an incision in the trunk of each branch which they wish to produce fruit, and place in it a stalk of male flowers; without this precaution the date tree would produce only abortive fruit. In some districts the male branches are only shaken over the female. This practice of impregnating the date tree is very ancient. Pliny describes it ac- curately in that part of his work where he treats of the palm. There is scarcely any part of the date tree which is not useful. The wood, though of a spongy texture, lasts such a number of years that the inhabitants of the country say it is incorruptible. They employ it for making beams and instruments of husbandry ; it burns slowly, but the coals which result from its cornbustiori are very strong, and produce a great heat. The Arabs strip

the bark and fibrous parts from the young date trees, and eat the substance, which is in the centre ; it is very nourishing, and has a sweet taste; it is known by the name of the marrow of the date tree. They eat also the leaves, when they are young and tender, with lemon juice ; the old ones are laid out to dry, and are employed for making mats, and other works of the same kind, which are much used, and with which they carry on a considerable trade in the interior parts of the country. From the sides of the stumps of the branches which have been left arise a great number of delicate filaments, of which they make ropes, and which might serve to fabricate cloth. Of the fresh dates and sugar, says Hasselquist, the Egyptians make .a conserve, which has a very pleasant taste. In Egypt they use the leaves as fly-flaps, for driving away the numerous insects which prove so troublesome in hot countries. The hard boughs are used for fences and other purposes of husbandry ; the principal stem for building. The fruit, before it is ripe, is somewhat astrin- gent ; but, when thoroughly mature, is of the na- txire of the fig. The Senegal dates are shorter

than those of Egypt, but much thicker in the pulp, which is said to have a sugary agreeable taste, superior to that of the best dates of the Le- vant. A white liquor, known by the name of milk, is drawn also from the date tree. To ob- tain it, all the branches are cut from the summit of one of these trees, and, after several incisions have been made in it, they are covered with leaves, in order that the heat of the sun may not dry it. The sap drops down into a vessel placed to receive it, at the bottom of a circular groove, made below the incisions. The milk of the date tree has a sweet and agreeable taste when it is new; it is veiy refreshing, and it is even given to sick people to drink, but it generally turns sour in twenty-four hours. Old trees are chosen for this operation, because the cutting of the branches, and the large quantity of sap which flows from them, greatly exhaust them, and often cause them to decay. The male flowers of the date tree are also useful. They are eaten when still tender, mixed up with a little lemon juice. They are reckoned to be very provocative : the odor which they exhale is probably the cause of this property being ascribed to them. These date trees are very lucrative to the inhabitants of the desert. Some of them produce twenty bunches of dates; but care is always taken to lop off a part of them, that those which remain may be- come larger ; ten or twelve bunches only are left on the most vigorous trees. It is reckoned that a good tree produces, one year with another, about the value of ten or twelve shillings to the proprietor. A pretty considerable trade is

carried on with dates in the interior part of the country, and large quantities of them are exported to France and Italy. The crop is gathered towards the end of November. When the bunches are taken from the tree, they are hung up in some very dry place, where they may be sheltered and secure from insects. Dates afford wholesome nourishment, and have a very agreeable taste when they are fresh. The Arabs eat them with- out seasoning. They dry and harden them in the sun, to reduce them to a kind of meal, which they lay up in store to supply themselves with food during the long journeys which they often undertake across their deserts. This simple food is sufficient to nourish them for a long time. The inhabitants of the Zaara procure also from their dates a kind of honey which is exceedingly sweet. For this purpose they choose those which have the softest pulp; and, having put them into a large jar with a hole in the bottom, they squeeze them by placing over them a weight of eight or ten pounds. The most fluid part of the substance, which drops through the hole, is what they call the honey of the date. Even the stones, though very hard, are not thrown away. They give them to their camels and sheep as food, after they have bruised them, or laid them to soften in water. The date, as well as other trees which are cultivated, exhibits great variety in its fruit, with respect to shape, size, quality, and even color. There are reckoned to be at least twenty different varieties. Dates are very liable to be pierced by worms, and they soon corrupt in moist or rainy weather.

PIUENIX, in ornithology, a fabulous bird of

antiquity. The ancients speak of this bird a* single, or the only one of its kind; they describe it as of the size of an eagle; its head finely crested with a beautiful plumage, its neck covered with feathers of a gold color, and the rest of its body purple, only the tail white, and the eyes sparkling like stars ; they say that it lives above 500 years in the wilderness; that, when thus advanced in age, it builds itself a pile of sweet wood and aromatic gums, and fires it with the wafting of its wings, and thus burns it- self; and that from its ashes arises a worm, which in time grows up to be a phoenix. Hence the Phoenicians gave the name of phcenix to the palm tree ; because, when burnt down to the root, it rises again fairer than ever. In the sixth book of the Annals of Tacitus, sect. 28, it is observed that, in the year of Rome 787, the phoinix revisited Egypt; which occasioned among the learned much speculation. This bird is sacred to the sun. Of its longevity the accounts are various. The common persuasion is that it lives 500 years ; though by some the period is extended to 1461. But Ausonius makes it no less than 69,984 years! Eidyl. 18. The several eras when the phoenix has been seen are fixed by tradition. The first was in the reign

of Sesostris ; the second in that of Amasis ; and, in the period when Ptolemy III. was on the throne of Egypt, another phoenix directed its flight towards Heliopolis. When to these circumstances are added the brilliant appearance of the phoenix, and the tale that it makes frequent excursions with a load on its back, and that when, by having made the experiment through a long tract of air, it gains sufficient confidence in its own vigor, it takes up the body of its father and flies with it to the altar of the sun to be there consumed, it seems probable that the learned of Egypt had enveloped under this allegory the philosophy of comets.

PHCENIX, a river in Trachina.

PHOLAS, a genus of insects belonging to the order of vermes testacea. The shell is double- valved and divaricated; the cardo is turned backwards, and connected by a cartilage. There are six species, distinguished by the figures of their shells. The name pholas is derived from the Greek, and signifies something which lies hid. This name they derive from their property of making themselves holes in the earth, sand, wood, or stone, and living in them. The means of their getting there, however, is unknown. They must have penetrated these substances when very small; because the entrance of the hole in which the pholas lodges is always much less than the inner part of it, and indeed than the shell of the pholas itself. Hence some have sup- posed that they were hatched in holes accident- ally formed in stones, and that they naturally grew of such a shape as was necessary to fill the cavity. The holes in which the pholades lodge are usually twice as deep, at least, as the shells themselves are long. The openings of these holes are what betray the pholas being in the stone ; but they are always very small in propor- tion to the size of the fish. There seems to be no progressive motion of any animal in nature so slow as that of the pholas ; it is immersed in

the hole, and lias no increment except a small one towards the centre of the earth ; and this is only proportioned to the growth of the animal. Its work is very difficult in its motion ; but it has great time to perform it in, as it only moves downward, sinking itself deeper in the stone as it increases in bulk. That part by means of which it performs this is a fleshy substance placed near the lower extremity of the shell ; it is of the shapp of a lozenge, and is considerably large in proportion to the size of the animal ; and, though it be of a soft substance, it is

not to be wondered at that in so long a time it is able, by constant work, to burrow into a hard stone. How they perform this may be seen by taking one of them out of the stone, and placing it upon clay ; for they will immediately get to work in bending and extending that part allotted to dig for them, and in a few hours they will bury themselves in the mud in as large a hole as they had taken many years to make in the stone. They find little resistance in so soft a substance ; and the necessity of their hiding themselves evi- dently makes them hasten their work. The ani- mal is lodged in the lower half of the hole in the stone, and the upper half is filled up by a pipe of a fleshy substance and conic figure, truncated at the end : this they usually extend to the ori- fice of the hole, and place on a level with the surface of the stone ; but they seldom extend it any farther than this. The pipe, though it ap- pears single, is in reality double, or at least it is composed of two parts separated by a membrane. The use of this pipe or proboscis is the same with that of the proboscis of other shell-fish, to take in sea-water into their bodies, and afterwards to throw it out again. In the middle of their bodies they have a small green vessel, the use of which has not yet been discovered. This, when plunged in spirit of wine, becomes of a purple co- lor; but its color on linen will not become pur- ple in the sun like that of the murex ; and, even if it would, its quantity is too small to make it worth preserving.

The pholas is remarkable for its luminous quality, which was noticed by Pliny, who ob- serves that it shines in the mouth of the person who eats it; if it touch his hands or clothes it makes them luminous ; and that its light depends upon its moisture. Reaumur observes, that whereas other fishes give light when they tend to putrescence, this is more luminous in propor- tion to its being fresh; that when dried, its light will revive if it be moistened either with fresh or salt water, but that brandy immediately extin- guishes it. He endeavoured to make this light permanent, but none of his schemes succeeded. The attention of the Bolognian academicians was engaged to this subject by M. F. Marsilius in 1724, who brought a number of these fishes, and the stones in which they were enclosed, to Bo- logna, on purpose for their examination. Boc- carius observed, that though this fish ceased to shine when it became putrid, yet that in its most putrid state it would shine, and make the water in which it was immersed luminous when it was agitated. Galeatius and Montius found that wine or vinegar extinguished this light ; that in common oil it continued some days, but in rec-

tified spirit of wine or urine hardly a minute. To discover in what manner this light was affected by different degrees of heat, they made use of a Reaumur's thermometer, and found that water rendered

luminous by these fishes increased in light till the heat arrived at 45°, but that it then became suddenly extinct, and could not be re- vived again. In the experiments of Beccarius,a solution of sea-salt increased the light of the lu- minous water ; a solution of nitre did not increase it quite so much. Sal ammoniac diminished it a little, oil of tartar per deliquium nearly extin- guished it, and the acids entirely.' This water poured upon fresh calcined gypsum, rock crys- tal, ceruse, or sugar, became more luminous. He also tried the effects of it when poured upon various other substances, but there was nothing very remarkable in them. Afterwards, using lu- minous milk, he found that oil of vitriol extin- guished the light, but that of tartar increased it. He had the curiosity to try how differently co- lored substances were affected by this kind of light; and having, for this purpose, dipped se- veral ribands in it, the white came out the bright- est, next to this was the yellow, and then the green ; the other colors could hardly be perceiv- ed. It was not, however, any particular color, but only light, that was perceived in this case. He then dipped boards painted with the different colors, and also glass tubes filled with substances of different colors, in water rendered luminous by the fishes. In both these cases, the red was hardly visible, the yellow was the brightest, and the violet the dullest. But, on the boards, the blue was nearly equal to the yellow, and the green more languid ; whereas in the glasses the blue was inferior to the green. Of all the liquors into which he put the pholades, milk was ren- dered the most luminous. A single pholas made seven ounces of milk so luminous that the faces of persons might be distinguished by it, and it locked as if transparent. Air appeared to be necessary to this light ; for, when Beccarius put the luminous milk into glass tubes, no agitation would make it shine unless bubbles of air were mixed with it. Montius and Galeatius found, that, in an exhausted receiver, the pholas, lost its light, but the water was sometimes made more luminous ; which they ascribed to the rising of bubbles of air through it. Beccarius, as well as Reaumur, tried many schemes to render the light of these pholades permanent. For this purpose he kneaded the juice into a kind of paste with flour, and found that it would give light when it was immersed in warm water ; but it answer- ed best to preserve the fish in honey. In any other method of preservation, the property of becoming luminous would not continue longer than six months, but in honey it had lasted above a year ; and then it would, when plunged in warm water, give as much light as ever. See Barbut's Genera Verminum, p. 14, &c.

The Memoirs of the Academy of Sciences (Savans Etrang. torn. iii. p. 267) contain the observations of Godeheu de Riville on two mi- nute marine animals, which Latreille regards as falling under the genus

lynceus of Muller, one of the many generic branches of the Linnaean monoculus ; but whose habits are so similar to

those of the pholas that a description of them will be interesting here.

‘ Among the various phenomena,’ says the au- thor alluded to, ‘ of wh- ich the causes are still almost unknown, that starry brightness, which we so often perceive in the slightly agitated waters of the ocean, greatly merits the attention of those who have a taste for physics ; but I have not yet read any thing satisfactory on the subject, as writers seem to have satisfied themselves rather with conjectural reasons, than by making expe- riments to ascertain the real origin of this natural phosphorus/ In a voyage made by our author to the East Indies, he was enabled to make the following observations : — ‘About nine in the even- ing of the 14th of July 1754, being in N. lat. 8° 47’, and E. long. 73°, from Paris, he was in- formed that the sea appeared like a sheet of fire. Every portion of its surface, when gently agitat- ed, broke into a thousand stars. Each wave which coursed along the side of the vessel spread out a pure, shining, silvery light. The more distant swelling of the waters presented the appearance of a moving plain covered with snow and the wake of the vessel was of a clear and luminous white, sprinkled over with brilliant spots of azure light (azures),

‘ Anxious/ he continues, ‘ to consider a spec- tacle, to me alike novel and interesting, I was struck by the light shed by certain small bodies, which frequently remained attached to the helm, •vhen the sea for a moment retired ; and, without jstening to all that was said regarding the sup- posed cause of the phenomenon, I ordered a bucket of water to be drawn up, and filtered into a basin through a fine linen handkerchief. After this operation, I observed that the filtered water was no longer luminous, but that the handker- chief was covered with many brilliant points. Some of these I raised on the end of my finger, and found that they had a certain consistence as animal bodies ; being thus exposed, they gradu- ally lost their brightness, and as they resembled the eggs or spawn of fishes, in form and dimen- sions, I at first yielded to the belief, which was pressed upon me, that they actually were so. Being anxious to examine one in a clear light, and placed under a strong magnifying glass, I was surprised to observe a sensible movement in its interior. Being doubtful of what I saw, I turned it in many directions, placing it on my nail in the centre of a

drop of water. But what was my surprise when I perceived it became surrounded by a brilliant fluid, perceptible to all those who were in the cabin, as well as to my- self. On this I did not fail to pursue my obser- vations, and, having drawn up a greater quantity of water, I caused it to be filtered as before, ami immersed the handkerchief, which had served for that purpose, into a basin of the pure sea water. I then instantly perceived a consi- derable number of small insects swimming about with celerity, which, at first sight, bore a resemblance to those commonly called in France puces d'eau, or water-fleas. In spite of their agility, I succeeded in arresting one, by entang- ling it in a hair pencil, fixed against the sides of the goblet : this pressure, though slight, seemed too strong for so delicate a being, it suffered from

it, and, notwithstanding the light of two candles', by which we were pursuing our examination, we could perceive issuing from its body a luminous and bluish colored liquid, of which the traces extended in the water to the distance of two or three lines. This accident did not induce me to leave my hold : I raised it up on the point of the pencil, and scarcely was it placed under the mi- croscope, than it again shed forth a quantity of that cerulean liquid. I expected that so great an exertion would have weakened it extremely, but I had again the satisfaction to see it apparently full of life, and stirring about with vivacity.

' It was not in consequence of the examination of a single specimen that I ventured to give its figure under a variety of aspects. The abundance with which I was then surrounded, enabled me to sa- crifice many, that I might be assured of all the parts of which they are composed ; and I exa- mined several which I found next day rather in a languishing state, but which a change of water reanimated. The brilliant liquid of which they have so ample a reservoir was not even altered ; for, having left, during some time, attached to the pencil, one of those which I had destined for examination by the microscope, it spread out a brightness which lasted seven or eight minutes, and was visible, even in full day, to various per- sons, at the distance of several feet.'

Many of the most lively specimens of these animals having been put into fresh water, very clear, and freed from all disagreeable intermix- ture, they were immediately precipitated to the bottom, became strongly agitated or convulsed, and died in about six seconds Many of them, while expiring, gave out a quantity of their bright phosphoric fluid. It seemed absolutely necessary, m order that the insect might exert this power, that it should be in a state of humidity. When the

moisture was absorbed, none shone even when bruised. Those which Godeheu had withdrawn from the sea, and placed in the same water in which he had found them, died one after another ; but the water in which they had been preserved shone with a very lively light. A phosphoric matter, collect- ed in consequence of this observation, did not, however, last for any time. Three days were sufficient to make it lose its luminous property.

This little animal appeared to be enclosed in, or protected by, a scaly covering, or shell. Its general contour might be said to resemble an al- mond split down one side, and a little sloped at its superior part. The posterior extremity of its body presented many globules, in the form of a moveable group or cluster. These globules are of a bluish-green, which becomes of a tarnished yellow, in proportion as the animal approaches its end. Godeheu perceived in these grains the phosphoric matter with which it is provided. We can scarcely doubt that these minute corpus- cles are the eggs, and thence their luminous pro- perty is the less surprising, since the eggs of many fishes and of several insects present us with a similar phenomenon. Its superior part is fur- nished with four moyeable antennae or horns, formed of many articulations, and terminated by tufts of very fine hair. Thehead is placed in the centre, and armed with some small hooks. Be- neath it are two feet, bent, and furnished witQ

hooks, and lower down there occur other organs of movement.

PHOLIS, in ichthyology, the name of a small anguilliform fish. The back is brown, the belly •white, the whole back and sides are spotted, and the skin is soft, free of scales, but with a tough mucilaginous matter like the eel. This species most of all approaches to the alauda; and, though usually larger, yet Hay doubts whether it- really differs from it in any thing essential ; the distinc- tion is in color, which though a very obvious, is certainly a very precarious one.

PHOLOE, . A mountain of Arcadia, near Pisa, so named from Pholus, who was buried in it; 2. Another in Thessaly, near mount Othrys. Plin. iv. 6 ; Lucan 3.

PHOLUS, in fabulous history, one of the Cen- laurs, who entertained Hercules, when going against the Eryma.nth.iafl boar. — Paus. 3,

\rirg- .Kn. 8, 294.

PHONAGOGUS, in music, the principal part or subject of a fugue.

PHONASCUS, among the ancient Greeks, but more particularly the Romans, was a person whose office was, by a certain signal, to admonish the singer or speaker when he was in danger of losing the natural tone of the voice, by over- straining it through the rapidity of his utterance. The emperor IMero ordered a phonascus, without whose presence he neither spoke nor sung, first, to check him when he sung or spoke too loud ; and, if his admonition was neglected, to stop his mouth.

PHONICA, from 0wv»j, the voice. The name of the first order of the class pneumatica, in Good's Nosology. Diseases affecting the vocal avenues. It has six genera, viz. coryza, polypus, rhonchus, aphonia, dysphonia, psellismus.

PHO'NICS, n. s.) Gr. 0wv»/, sound :

PHONOCAMP'TIC, adj. \ The doctrine of sounds; having the power to inflect or turn a sound.

The magnifying the sound by the polyphonisms or repercussions of the rocks, and other phonocamptick objects. Derham.

PHONICS, is otherwise called ACOUSTICS. See that article and SOUND.

PHOHCUS, or PHORCYS, in mythology, the son of Neptune by Thoossa, who married his sister Ceto, by whom he had the Gorgons, the dragon that kept the gardens of the Hesperides, and other monsters. — Hesiod.

PHORMIO, an Athenian general, who re- duced himself to poverty to maintain the dignity of his army. The Athenians paid his debts, and offered to make him head general, which he de- clined.

PIIORMIUM, ki botany, a genus of the mo- nogynia order and hexandria class of plants. The most remarkable species is,

P. tenax (of Forster), the flax plant, a plant that serves the inhabitants of New Zealand instead of hemp and flax. Of this plant there are two sorts ; the leaves of both resemble those of flags, but the flowers are smaller, and their clusters more numerous; in one kind they are yellow, and in the other a deep red. Of these leaves, with very little

preparation, they make common apparel, and their strings, lines, and cordage, for every pur- pose ; said to be much stronger than any thing

we make with hemp. From the same plant, by another preparation, they draw long slender fibres, which shine like silk, and are as white as snow : of these, which are very strong, they make their finest cloths; and of the leaves, without any other preparation than splitting them into proper breadths, and tyirg the strips together, they make their fishing nets, some of which are of an enormous size.

PHORONEUS, in fabulous history, the son of Inachus by Melissa, brother of lo, and the second king of Argos. He married the nymph Laodice, by whom he had Apis and Niobe ; ci- vilised his subjects ; built a temple to Juno, Sec., and after death was worshipped as the god of the river of the same name.

PHORONIS, a patronymic of lo, or Isis.

PHORONIUM, a town of Argolis.

PHOSGENE GAS, so called by its discoverer Dr. John Davy, from its mode of production. Chloro-carbonaceous acid, a combination of car- bonic oxide and chlorine, made by exposing a mixture of equal volumes of chlorine and car- bonic oxide to the action of light. It has a pe- culiar pungent odor, is soluble in water, and is resolved into carbonic and muriatic acid yases. See CHEMISTRY, Index.

PHOS'PHOR, n. s. } Lat. phosphorus. The

PHOS'PHORUS, £ morning star; an in-

PHOSPHOR'JC, adj. J flammable substance.

Of lambent flame you have wliole sheets in a hand- ful of phosphor. Addison.

Liquid and solid phosphorus show their flames more conspicuously, when exposed to the air.

Cheyne.

Why sit we sad when phosphorus shines so clear 1

Pope.

Phosphorus is obtained by distillation from urine putrified, by the force of a very vehement and long- continued fire. Pemberton.

When air's pure essence joins the vital flood, And with phosphoric acid dyes the blood, Your virgin trains the transient heat dispart, And lead the soft combustion round the heart.

Darwin.

PHOSPHAS, PHOSPHAT, or PHOSPHATE, in chemistry, is a name that has been given to the combination of phosphoric acid with different bases. See PHOSPHATIC, and PHOSPHORIC ACID, and CHEMISTRY, Index.

PHOSPHATE OF YTTRIA is a mineral found in the neighbourhood of Lindenas, Norway, by M. Tank. Its color is yellowish-brown. Specific gravity 4-5577. It is scratched by steel. Fracture foliated in several directions. Externally dull ; foliated fracture resinous lustre; transverse, greasy. In minute fragments, semitransparent and yellowish. At the blow-pipe it resembles phosphate of lime. With borax it affords a co- lorless bead, which becomes milky by cooling. The acids, even when concentrated, do not dis- solve it. Its constituents are, by the analysis of Berzelius,

Yttria 62-58

Phosphoric acid, with a little fluoric 33-49

Subphosphate of iron . . . 3-93

100-00

PHOSPHATIC ACID, in chercistry, is ob- tained by the slow combustion of cylinders of

phosphorus in the air. For which purpose it is necessary that the air be renewed to support the combustion; that it be humid, otherwise the dry coat of phosphatic acid would screen the phos- phorus from farther action of the oxygen ; and that the different cylinders of phosphorus be in- sulated, to prevent the heat from becoming too high, which would melt or inflame them, so as to produce phosphoric acid. The acid, as it is formed, must be^collected in a vessel, so as to lose as little of it as possible. All these con- ditions maybe thus

fulfilled : — We take a parcel of glass tubes which are drawn out to a point at one end; we introduce into each a cylinder of phosphorus a little shorter than the tube ; we dispose of these tubes along-side of one another, to the amount of thirty or forty in a glass funnel, the beak of which passes into a bottle placed on a plate covered with water. We then cover the bottle and its funnel with a large bell-glass, having a small hole in its top, and another in its side. A film of phosphorus first evaporates, then combines with the oxygen and the water of the air, giving birth to phosphatic acid, which collects in small drops at the end of the glass tubes, and falls through the funnel into the bottle. A little phosphatic acid is also found on the sides of the bell-glass, and in the water of the plate. The process is a very slow one. The phosphatic acid thus collected is very dilute. We reduce it to a viscid consistence, says Dr. Ure, by heating it gently ; and better still by putting it, at the ordinary temperature, into a capsule over another capsule full of concentrated sulphuric acid, under the receiver of an air-pump, from which we exhaust the air.

The acid thus formed is a viscid liquid, with- out color, having a faint smell of phosphorus, a strong taste, reddening strongly the tincture of litmus, and denser than water in a proportion not well determined. Every thing leads to the belief that this acid would be solid, could we de- prive it of water. When it is heated in a retort, phosphureted hydrogen gas is evolved, and phosphoric acid remains. The oxygen and hy- drogen of the water concur to this transforma- tion. Phosphatic acid has no action, either on oxygen gas, or on the atmospheric air at ordi- nary temperatures. In combining with water, a slight degree of heat is occasioned.

From the experiments of M. Thenard, this acid seems to consist (exclusive of water) of 100 phosphorus united to about 110 oxygen, which is nearly the proportion of three primes phosphorus — (3 x 1‘5) 4-5 + 5 oxygen — 5.

But 2 prim, phosphorus + 4 ox. — 4 phosphoric acid. And 1 + 1 ~ 1 phosphorous acid.

Hence the phosphatic acid would seem to result from the union of 2 primes of phosphoric acid with 1 of phosphoric acid. Now, M. Dulong has shown that the phosphatic acid in its action on the salifiable bases is transformed into phos- phorous and phosphoric acids, whence proceed phosphites and phosphates.

PHOSPHORESCENCE. See LIGHT. In that article we have referred to Dr. Brewster’s very complete account of marine phosphorescence in

the Edinburgh Philosophical Journal. We may

here add : — While examining the* distribution of the aggregated groups of the carbonate of lime which forms a great portion of these plants, and which are essential and integral parts of their constitution, Dr. Brewster found that the plants were phosphorescent, when laid upon heated iron so as to display their entire outlines in the dark. He ascertained that each group or mass of the calcareous matter consisted of minute aggregated particles, which possessed double refraction, and had regular neutral and depolarising axes. They are held to the stem of the plant by a very fine transparent membrane. It is surprising that some of our most eminent botanists should have been so much misled as to suppose the calcareous matter to be an accidental deposit from the wa- ter in which they vegetate.

Phosphorescence of the sulphates of quinina and cinchonina. — M. Callaude has found that this substance becomes luminous when exposed to a gentle heat. M. Pelletier has likewise discovered that sulphate of cinchonina, both alone and when mixed with the sulphate of quinina, becomes lu- minous when exposed to the steam of boiling water; but that neither quinina nor cinchonina by themselves, nor their acetates, possess the pro- perty of being phosphorescent by heat. Journ. de Pharmacie, Sept. 1821.

Phosphorescence of potatoes. — Lichtenberg tells us that an officer on guard at Strasburgh, in pass- ing the barracks, was alarmed not long since on observing a light in one of the barrack rooms. As this was strictly prohibited, fire was suspect ed, and he hurried forward to the apartment. On entering it he found the soldiers sitting up in bed admiring a beautiful light, which proceeded from potatoes in an incipient state of putrefac- tion. The light was so vivid that the soldiers could see to read by it ; it gradually became less and less vivid, and entirely disappeared by the night of the 10th of the month.

On the phosphorescence of marine animals. — During a voyage to the Shetland and Orkney Islands, in 1821, Dr. M'Culloch had various op- portunities of investigating the phenomena of marine luminous animals. In proceeding from the Mull of Cantyre to Shetland, and in almost all the harbours of Shetland and Orkney, he found the water filled with a species of animal which he considers to have been undescribed. A cubic inch of water did not contain fewer than 100 of these animals. In the same view, and nearly at all times, the water was found filled with several different species, resembling in size some of the infusoria. Other animals of larger dimensions, and of many species, were equally constant, and, if less numerous, yet ten or

twenty were always to be found within the space of a common tumbler glass. In all these cases the water was luminous. The light of the whole of these species disappeared when they died, either from keeping the water too long, from warming it, or from the addition of spirits. Dr. M'Cul- loch has added upwards of 190 species to the list of luminous marine animals. The most conspi- cuous among these are about twenty small spe- cies of medusa, in addition to those alr<;;,

also found possessed of phosphorescence, In the genera scolopendra and nereis five or six were luminous, which were all the species ob- served by Dr. M'Culloch. The other known genera in which luminous species were observed were phalangium, monoculus, oniscus, iulus, vorticella, cercaria, vibrio, volvox. To these Dr. M'Culloch adds, among the fishes, a new species of leptocephalus. The remaining luminous animals consisted of new genera, or at least of animals which could not be referred to any as yet to be found in authors. Dr. M'Culloch seems to think that the ling and other fish which inhabit the submarine valleys, at depths to which the light of day cannot penetrate, must perceive their food, and pursue their avocations, by the phosphorescence of their prey, or of the animals which abound in the sea, or by phosphorescence elicited from their own bodies. Dr. M'Culloch's observations were generally made in harbours, but never at a distance exceeding eight or ten miles from land. See the Journal of Science, Literature, &c., vol. xi. p. 248.

On the phosphorescence of the lampiris noctiluca and splcndidula. In a curious paper on the phos- phorescence of the lampyris noctiluca and splen- didula, published in the Bibliotheque Universelle for May 1821, p. 52, M. Macaire has drawn the following conclusions from numerous observa- tions : 1. A certain degree of heat is necessary to the voluntary phosphorescence of these ani- mals. 2. Their phosphorescence is excited by a degree of heat superior to the first, and is irreco- verably destroyed by 'a higher temperature. 3. All bodies capable of coagulating albumen take away from phosphorising matter its power of phosphorescence. 4. The phosphorescence can- not take place but in a gas which contains oxy- gen. 5. It is excited by the galvanic pile, but no effect is produced upon it by electricity. 6. The phosphorescent matter is composed princi- pally of albumen. But see our article LIGHT.

PHOSPHORIC ACID. Bones of beef, mut- ton, or veal, being calcined to whiteness in an open fire, lose almost half of their weight. These must be pounded, and sifted ; or the trouble may be spared by buying the powder that is sold to make cupels for the assayt-rs, and is, in fact, the powder of burned bones ready sifted. To three pounds of the powder there may be added about two pounds of concentrated sulphuric acid. Four or five pounds of water must be also added to assist the action of the acid. The whole may be then left on a gentle sand heat for two or three days, taking care to supply the loss of water which happens by evaporation. A large quantity of water must then be added, the whole strained through a sieve, and the residual matter, which is sulphate of lime, must be edulcorated by re- peated affusions of hot water, till it passes taste- less. The waters contain phosphoric acid with a little lime ; and by evaporation, first in glazed earthen, and then in glass vessels, or rather in vessels of platina or silver (for the hot acid acts upon glass) afford the impure acid in a concen- trated state, which, by the force of a strong heat in a crucible, may be made to acquire the form of a transparent consistent glass, though, indeed, it is usually of a milky opaque appearance. Yor

making phosphorus, it is not necessary to eva- porate the water further than to bring it to the consistence of a syrup ; and the small portion of lime it contains is not an impediment worth the trouble of removing, as it affects the ••produce very little. But, when the acid is required in a purer state, it is proper to add a quantity of car- bonate of ammonia, which, by double elective attraction, precipitates the liMe that was held in solution by the phosphoric acid. The fluid, being then evaporated, affords a crystallised ammonia- cal salt, which may be melted in a silver vessel, as the acid acts upon glass or earthen vessels. The ammonia is driven off by the heat, and the acid acquires the form of a compact glass as transparent as rock-crystal, acid to the taste, so- luble in water, and deliquescent in the air. This acid is commonly pure, but nevertheless may contain a small quantity of soda, originally ex- isting in the bones, and not capable of being taken away by this process, ingenious as it is. The only unequivocal method of obtaining a pure acid appears to consist in first converting it into phosphorus by distillation of the materials with charcoal, and then converting this again into acid by rapid combustion, at a high temperature, either in oxygen or atmospheric air, or some other equivalent process.

Phosphorus may also be converted into the acid state by treating it with nitric acid. In this operation, a tubulated retort, with a ground stopper, must be half filled with nitric acid, and a gentle heat applied. A small piece of phos- phorus, being then introduced through the

tube, will be dissolved with effervescence, produced by the escape of a large quantity of nitric oxide. The addition of phosphorus must be continued until the last piece remains undissolved. The fire being then raised, to drive over the re- mainder of the nitric acid, the phosphoric acid will be found in the retort, partly in the concrete and partly in the liquid form. When phospho- rus is burned by a strong heat, sufficient to cause it to flame rapidly, it is almost perfectly converted into dry acid, some of which is thrown up by the force of the combustion, and the rest remains upon the supporter.

This substance has also been acidified by the direct application of oxygen gas passed through hot water, in which the phosphorus was liquefied or fused.

The general characters of phosphoric acid are : — 1 . It is soluble in water in all proportions, producing a specific gravity which increases as the quantity of acid is greater, but does not ex- ceed 2‘687, which is that of the glacial acid. 2. It produces heat when mixed with water, though not very considerable. 3. It has no smell when pure, and its taste is sour but not corrosive. 4. When perfectly dry, it sublimes in close vessels : but loses this property by the addition of water; in which circumstance it greatly differs from the boracic acid, which is fixed when dry, but rises by the help of water. 5. When considerably diluted with water, and evaporated, the aqueous vapor carries up a small portion of the acid. 6. With charcoal or inflammable matter, in a strong heat, it loses its oxygen, and becomes convened into phosphorus.

Phosphoric acid is difficult of crystallising.

Though the phosphoric acid is scarcely corro- sive, yet, when concentrated, it acts upon oils, which it discolors and at length blackens, pro- ducing heat, and a strong smell like that of ether and oil of turpentine; but does not form a true acid soap. It has most effect on essential oils, .ess on drying oils,ˆnd least of all on fat oils. From the syntheses of the phosphates of soda, barytes, and lead, Berzelius deduces the prime equivalent of phosphoric acid to be 4-5. But the experiments of Berzelius on the synthesis of the acid itself show it to be a compound of about 100 phosphorus + 133 oxygen. Lavoisier’s synthesis gave 2 oxygen + 1‘33 phosphorus. So did that of Sir. H. Davy by rapid combustion in oxygen gas, as published in the

Philosophical Transactions for 1812. M. Dulong in an elabo- rate paper published in the third volume of the Memoires D'Arceuil, gives, as the result of diver- sified experiments, nearly the proportions of 100 phosphorus to 123 oxygen; or of 5 oxygen + 4 phosphorus ~ 9 for the acid equivalent.

Sir H. Davy, with his well known sagacity, invented a new method of research, to elude the former sources of error. He burned the vapor of phosphorus as it issues from a small tube, contained in a retort filled with oxygen gas. By adopting this process, he determined the compo- sition of phosphoric acid to be 100 phosphorus j 134-5 oxygen; whence its equivalent comes out 3-500. Phosphorous acid he then shows to consist of 1 oxygen + 1'SOO phosphorus —

2-500.

M. Dumas in an elaborate memoir on Phos- phureted Hydrogen (Ann. de Chim. et de Phys. xxxi.) endeavours to show that phosphoric acid consists of 1 atom of phosphorus, 4'0 + 5 atoms of oxygen, 5 ~ 9 ; while phosphorous acid consists of 1 atom of phosphorus 4 + 3 atoms of oxygen, 3 = 7. See PHOSPHURETED HYDROGEN.

By the above atomic weights 1-5 phosphorus combines with 1-125 oxygen (instead of 1) to constitute phosphorous acid; and with 1-875 oxygen to constitute phosphoric acid. If phos- phoric acid be made 9, then in the phosphates of soda, barytes, and lead, we must admit 2 atoms of base ; thus giving them the characters of sub- salts, which that of soda manifestly possesses.

PHOSPHORITE, in mineralogy, a subspe- cies of apatite. Common phosphorite is of a yellowish-white color, when rubbed in an iron mortar, or thrown on red hot coals. It emits a green-colored phosphoric light. It is found in Estremadura in Spain. Earthy phosphorite is of a grayish-white color, and consists of dull dusty particles, which phosphoresce on glowing coals. It is found in Hungary.

PHOSPHORUS, Or. 0wf, light, and 0£pw, to carry. An assumed simple substance which has never been found pure in nature. It is always met with united to oxygen, and in this state very plentiful. If phosphoric acid be mixed with one- fifth of its weight of powdered charcoal, and the mixture distilled at a moderate red heat, in a coated earthen retort, whose beak is partially immersed in a basin of water, drops of a waxy- looking substance will pass over, and, falling into

the water, will concrete into the solid called phosphorus.

M. Javal finds that the subphosphate of lime, obtained by digesting five parts of calcined bone powder with two parts of sulphuric acid, is better adapted to yield phosphorus by ignition with charcoal in a retort than pure phosphoric acid. The latter sublimes in a great measure undecomposed. Ann. deChim. et de Physique, June, 1820.

It must be purified by straining it through a piece of chamois leather, under warm water. It is yellow and semi-transparent. It is as soft as wax, but fully more cohesive and ductile. Its specific gravity is 1-77. It melts at 90° Fahren- heit, and boils at 550°. In the atmosphere, at common temperatures, it emits a white smoke, which, in the dark, appears luminous. This smoke is acidulous, and results from the slow oxygenation of the phosphorus. In air perfectly dry, however, phosphorus does not smoke, be- cause the acid which is formed is solid, and, closely incasing the combustible, screens it from the atmospherical oxygen.

When phosphorus is heated, in the air to about 148° it takes fire, and burns with a splendid white light, and a copious dense smoke. If the combustion take place within a large glass re- ceiver, the smoke becomes condensed into snowy looking particles, which fall in a succes- sive shower, coating the bottom plate with a spongy white efflorescence of phosphoric acid. This acid snow soon liquefies by the absorption of aqueous vapor from the air. When it is inflamed in oxygen the light and heat are in- comparably more intense ; the former dazzling the eye, and the latter cracking the glass vessel. Solid phosphoric acid results ; consisting of 4 phosphorus + 5-0 oxygen, or 1 atom of phosphorus + 5 of oxygen.

Phosphorus, heated in highly rarefied air, forms three products : one is phosphoric acid ; one a volatile white powder; and the third a red solid of comparative fixity, requiring a heat above that of boiling water for its fusion. The volatile substance is soluble in water, imparting acid properties to it. It seems to be phosphorous acid. The red substance is probably an oxide of phosphorus, since for its conversion into phosphoric acid it requires less oxygen than phosphorus does. See PHOSPHORIC. PHOSPHO- ROUS, and HYDROPHOSPHOROUS ACIDS.

Phosphorous acid is composed of 1 atom phosphorus + 3 oxygen — 4 + 3 — 7.

Phosphorus and chlorine combine with great facility, when brought in

contact with each other at common temperatures. When chlorine is introduced into a retort exhausted of air, and containing phosphorus, the phosphorus takes fire, and burns with a pale flame, throwing ofT sparks ; while a white substance rises and con- denses on the sides of the vessel. If the chlorine be in considerable quantity, as much as twelve cubic inches to a grain of phosphorus, the latter will entirely disappear, and nothing but the white powder will be formed, into which about nine cubic inches of the chlorine will be condensed. No new gaseous matter is pro- duced. The powder is a compound of phos-

pliorus and chlorine, first described as a pecu- liar body by Sir II. Davy in 1810 ; and various analytical and synthetical experimpnts which he made with it prove that it consists of about 1 phosphorus, and 6‘8 chlorine in weight. The equivalent ratio of 1 prime of the first j 6 of the second constituent, gives 4 to 27, or 1 to 6-75. It is the bichloride of phosphorus. This case shows the necessity in chemistry of abiding by experiment; for Sir H. Davy’s untrirnmed result, which had been called in question or lightly esteemed by the ultra-atomists, who pitched on 1‘5 for the prime equivalent of phos- phorus, is now seen to accord perfectly with the corrected prime equivalent of Dumas.

Its properties are very peculiar. It is snow- white, extremely •volatile, rising in a gaseous form at a temperature much below that of boil- ing water. Under pneumatic pressure it may be fused, and then it crystallises in transparent prisms. It acts violently on water, decomposing it, whence result phosphoric and muriatic acids ; the former from the combination of the phos- phorus with the oxygen, and the latter from that of the chlorine with the hydrogen of the water. It produces flame when exposed to a lighted taper. If it be transmitted through an ignited glass tube along with oxygen, it is decomposed, and phosphoric acid and chlorine are obtained. The superior fixity of the acid above the chloride seems to give that ascendancy of attraction to the oxygen here, which the chlorine possesses in most other cases. Dry litmus paper exposed to its vapor in a vessel exhausted of air is reddened. When introduced into a vessel containing am- monia, a combination takes place, accompanied with much heat, and there results a compound, insoluble in water, undecomposable by acid or alkaline solutions, and possessing characters ana- logous to earths.

The protochloride of phosphorus was first obtained in a pure state by

Sir H. Davy, in the year 1809. If phosphorus be sublimed through corrosive sublimate, in powder in a glass tube, a limpid fluid comes over as clear as water, and having a specific gravity of 1‘45. It emits acid fumes when exposed to the air, by decomposing the aqueous vapor. If paper imbued with it be exposed to the air, it becomes acid without inflammation. It does not redden dry litmus paper plunged into it. Its vapor burns in the flame of a candle. When mixed with water, and heated, muriatic acid flies off, and phosphorous acid remains. See PHOSPHOROUS ACID. If it be introduced into a vessel containing chlorine, it is converted into the bichloride; and, if made to act upon ammonia, phosphorus is produced, and the same earthy-like compound results as that formed by the bichloride and ammonia.

When phosphorus is gently heated in the protochloride, a part of it dissolves, and the fluid, on exposure to air, gives off acid fumes, from its action on atmospheric moisture, while a thin film of phosphorus is left behind, which usually inflames by the heat generated from the decomposition of the vapor. The first com- pound of this kind was obtained by M. M. Gay Lussac and Thenard, by distilling phosphorus and calomel together, in 1808; and they ima-

gined it to be a peculiar combination of phos- phorus, oxygen, and muriatic acid. No ex- periments have yet ascertained the quantity of phosphorus which the protochloride will dissolve. Probably, says Sir II. Davy, a definite combination may be obtained, in which the proportion of chlorine will correspond to the proportion of oxygen in the oxide of phospho- rus.

The compounds of iodine and phosphorus have been examined by Sir H. Davy and M. Gay Lussac. Phosphorus unites to iodine with the disengagement of heat, but no light. One part of phosphorus and eight of iodine form a compound of a red orange-brown color, fusible at about 212°, and volatile at a higher tempera- ture. When brought in contact with water, pnosphureted hydrogen gas is disengaged, flocks of phosphorus are precipitated, and the water, which is colorless, contains in solution phos- phorous andhydriodic acids. One part of phos- phorus and sixteen of iodine produce a crystal- line matter of a grayish-black color, fusible at 84°. The hydriodic acid produced by bringing it in contact with water is colorless, and no phosphureted hydrogen gas is disengaged. One part of phosphorus and twenty-four of iodine produce a black substance partially fusible at 115°. Water dissolves it, producing a strong heat, and the solution has a very deep brown color, which is not removed by keeping it for some time in a gentle heat. With 1 phos- phorus and 4 iodine, two compounds, very different from each other, are obtained. One of them has the same

color as that formed of 1 phosphorus + 8 iodine, and seems to be the same with it. It melts at 217-5°, and, when dissolved in water, yields colorless hydriodic acid, phosphureted hydrogen, and phosphorus ; which last precipitates in orange-yellow flocks. The other compound is a reddish-brown, does not melt at 212°, nor at a considerably higher temperature. Wrater has no sensible action on it. Potassa dissolves it with the disengagement of phosphureted hydrogen gas; and, when aque- ous chlorine is poured into the solution, it shows only traces of iodine. When heated in the open air, it takes fire and burns like phosphorus, emitting white vapors, without any iodine. When these vapors were condensed in a glass jar by M. Gay Lussac he could perceive no iodine among them. This red substance is always obtained when the phosphorus is in the proportion of 1 to 4 of iodine. M. Gay Lus- sac is inclined to consider it as identical with the red matter which phosphorus so often fur- nishes, and which is at present considered as an oxide. In whatever proportions the iodide of phosphorus has been made, it exhales acid va- pors, as soon as it is moistened, owing to the hydriodic acid formed by the decomposition of the water. Such is the account of the iodide of phosphorus given by M. Gay Lussac. The combining ratios are somewhat uncertain.

PHOSPHOROUS ACID was discovered in 1812 by Sir H. Davy. When phosphorus and corro- sive sublimate act on each other, at an elevated temperature, a liquid called protochloride ot phosphorus is formed. Water, added to this, re-

solves it into muriatic and phosphorous acids. A moderate heat suffices to expel the former, and the latter remains, associated with water. It has a very sour taste, reddens vegetable blues, and neutralises bases. When heated strongly, in open vessels, it inflames. Phosphurtrted hydrogen flies off, and phosphoric acid remains. Ten parts of it heated in close vessels give off one- half of a phosphureted hydrogen, and leave 8£ of phosphoric acid. Hence the liquid acid con- sists of 80-7 acid + 19-3 water. Its prime equi- valent is either 2-5 or 7. See PHOSPHURETED HYDROGEN.

A hypophosphorousacid was lately discovered by Dulong. Pour water on the phosphuret of barytes, and wait till all the phosphureted hydro- gen be disengaged. Add cautiously to the filtered liquid dilute sulphuric acid, till the barytes be all precipitated in the state of sulphate. The su- pernatant liquid is hypophosphorous acid, which

should be passed through a filter. This liquid may be concentrated by evaporation, till it be- come viscid. It has a very sour taste, reddens vegetable blues, aud does not crystallise. It is probably composed of 2 primes of phosphorus ~ 3 + 1 of oxygen* Dulong's analysis ap- proaches to this proportion. He assigns, but from rather precarious data, 100 phosphorus to 37-44 oxygen. The hypophosphites have the remark- able property of being all soluble in water ; •while many of the phosphates and phosphites are insoluble.

Thenard succeeded in oxygenising phosphoric acid by the method described under NITRIC and MURIATIC ACIDS in CHEMTSTRY.

With regard to the phosphates and phosphites, we have many discrepancies in our latest publi- cations. Sir H. Davy says, in his last memoir on some of the combinations of phosphorus, that new researches are required to explain the ano- malies presented by the phosphates.

Phosphoric acid, united with barytes, produces an insoluble salt, in the form of a heavy white powder, fusible at a high temperature into a gray enamel. The best mode of preparing it is by adding an alkaline phosphate to the nitrate or muriate of barytes.

By mixing phosphate of ammonia with nitrate of barytes, Berzelius found that 68-2 parts of ba- rytes, and 31-8 of phosphorus, composed 100 of the phosphate. Hence it is a subphosphate, and consists of,

Phosphoric acid 1 atom — 9‘0 68-42

Barytes 2 = 19-5 31-58

100-0

He made a phosphate by dissolving the above in dilute phosphoric acid, and evaporating, when crystals were obtained composed, in 100 parts, of acid, 42-54 ; barytes 46-46 ; water 11. But by theory we have,

Acid 2 atoms 18 42-857)

Base 2 19-5 46-430 > 100-000

Water 4 4-5 10-713.)

By pouring a solution of the preceding salt into alcohol, a sesquiphosphate is obtained, in the form of a light white powder, containing 1£ times as much acid as the subphosphate.

The phosphate of strontian differs from the preceding in being soluble in an excess of its acid.

Phosphate of lime is very abundant in the native state. See APATITE. It likewise consti- tutes the chief part of the bones of all animals.

Phosphate of lime is very difficult to fuse, but in a glass-house furnace it softens, and acquires the semi transparency and grain of porcelain. It is insoluble in water ; but, when well calcined, forms a kind of paste with it, as in making- cupels. Besides this use of it, it is employed for

polishing gems and metals, for absorbing grease from cloth, linen, or paper, and for pre- paring phosphorus. In medicine it has been strongly recommended against the rickets by Dr. Bonhomme of Avignon, either alone or combined with phosphate of soda. The burnt hartshorn of the shops is a phosphate of lime.

An acidulous phosphate of lime is found in human urine, and may be crystallised in small silky filaments, or shining scales, which unite together into something like the consistence of honey, and have a perceptibly acid taste. It may be prepared by partially decomposing the calcareous phosphate of bones by the sulphuric, nitric, or muriatic acid, or by dissolving that phosphate in phosphoric acid. It is soluble in water, and crystallisable. Exposed to the action of heat, it softens, liquefies, swells up, becomes dry, and may be fused into a transparent glass, which is insipid, insoluble, and unalterable in the air. In these characters it differs from the glacial acid of phosphorus. It is partly de- composable by charcoal, so as to afford phos- phorus.

By pouring phosphate of soda into muriate of lime, Berzelius obtained a phosphate of lime consisting of acid 100, lime 84-53. The exact proportions are,

Phosphuric acid — 9 m 100 f Lime 3-5 × 2 = 7— 78 nearly.

The phosphate of potassa is very deliquescent, and not crystallisable, but condensing intoakind of jelly. Like the preceding species, it first un- dergoes the aqueous fusion, swells, dries, and may be fused into a glass ; but this glass deli- quesces. It has a sweetish saline taste. The phosphate of soda is now commonly prepared by adding to the acidulous phosphate of lime as much carbonate of soda in solution as will fully saturate the acid. The carbonate of lime which precipitates, being separated by filtration, the liquid is duly evaporated so as to crystallise the phosphate of soda ; but, if there be not a slight excess of alkali, the crystals will not be large and regular. The crystals are rhomboidal prisms of different shapes; efflorescent; soluble in three parts of cold and one and a half of hot water. They are capable of being fused into an opaque white glass, which may be again dissolved and crystallised. It may be converted in an acidu- lous phosphate by an addition of acid, or by either of the strong acids, which partially, but not wholly, decompose it. As its taste is simply saline, without any thing disagreeable, it is much used as a purgative, chiefly in broth, in which it is not distinguishable from common salt. For this elegant addition to our pharmaceutical pre-

parations we are indebted to Dr. Pearson. la assays with the blow-pipe it is of great utility ; and it has been used instead of borax for soldering.

In crystals, this salt is composed, according to Berzel us, of phosphoric acid 20-33, soda 17-67, water 62-00 : and, in the dry state, of acid 53-48, soda 46-52. If it be represented by 1 atom of acid — 9 + 2 atoms soda — 8, then 100 of the dry salt will consist of acid 53, base 47; and, in the crystallised state, of

Water 24 atoms 27 61-4 Acid 1 9 20-4

Soda 8 18-2

100-0

which presents a good accordance with the expe- rimental results of the accurate Berzelius.

The phosphate of ammonia crystallises in prisms with four regular sides, terminating in pyramids, and sometimes in bundles of small needles. its taste is cool, saline, pungent, and urinous. On the fire it comports itself like the preceding species, except that the whole of its base may be driven off by a continuance of the heat, leaving only the arid behind. It is but little more soluble in hot water than in cold, which takes up a fourth of its weight. It is pretty abundant in human urine. It is an excellent flux both for assays and the blow-pipe, and in the fabrication of colored glass and artificial gems.

Phosphate of magnesia crystallises in irre- gular hexahedral prisms, obliquely truncated ; but is commonly pulverulent, as it effloresces very quickly. It requires fifty parts of water to dissolve it. Its taste is cool and sweetish. This salt too is found in urine. Fourcroy and Vauquelin have discovered it likewise in small quan- tity in the bones of various an.mals, though not in those of man. The best way of preparing it' is by mixing equal parts of the solutions of phosphate of soda and sulphate of magnesia, and leaving them some time at rest, when the phos- phate of magnesia will crystallise, and leave the sulphate of soda dissolved.

An amifloniaco-magnesian phosphate has been discovered in an intestinal calculus of a horse by Fourcroy, and since by Bartholdi, and likewise by the former in some human urinary calculi. See CALCULUS. Notwithstanding the solubility of the phosphate of ammonia, this

triple salt is far less soluble than the phosphate of mag- nesia. It is partially decomposable into phos- phorus by charcoal, in consequence of its am- monia.

The phosphate of glucine has been examined “Dy Vauquelin, who informs us that it is a white powder, or mucilaginous mass, without any per- ceptible taste ; fusible, but not decomposable by heat; unalterable in the air, and insoluble unless in an excess of its acid.

It has been observed that the phosphoric acid, aided by heat, acts upon silex ; and we may add, that it enters into many artificial gems in the st?te of a siliceous phosphate. See SALT.

PHOSPHORUS (of Baldwin), a name for ignited muriate of lime.

PHOSPHORUS (of Canton). Oyster shells cal- cined with sulphur.

PHOSPHORUS (of Bologna). See LIGHT. Sul phate of barytes.

PHOSPHURET. A compound of.phospim- rus with a combustible or metallic oxide.

PHOSPHURETED HYDROGEN. Of this com- pound there are two varieties ; one of which may be called perphosphureted hydrogen; another protophosphuretecl hydrogen.

1. Perphosphureted hydrogen. Into a small retort filled with milk of lime, or pot’ssa water, let some fragments of phosphorus be introduced, and let the heat of an Argand flame be applied to the bottom of the retort, while its beak is im- mersed in the water of a pneumatic trough. Bubbles of gas will come over, which explode spontaneously with contact of air. It may also be procured by the action of dilute muriatic acid on phosphuret of lime. In order to obtain the gas pure,, however, we must receive it over mercury. Its smell is very disagreeable. Its specific gravity is 0-9022. 100 cubic inches weigh 27-5 grains. In oxygen it inflames with a brilliant white light. In common air, when the gaseous bubble bursts the film of water and explodes, there rises up a ring of white smoke, luminous in the dark. Water absorbs about one-fortieth of its bulk of this gas, and acquires a yellow color, a bitter taste, and the character- istic smell of the gas. When brought in con- tact with chlorine it detonates with a brilliant green light; but the products have never been particularly examined. By transmitting a series of electric explosions through phosphureted hy- drogen, the phosphorus is precipitated, and hy- drogen of the original gaseous volume remains. Hence the composition of the gas may be de- duced from a comparison of its specific gravity with that

of hydrogen.

Phosphureted hydrogen 0-9022

Hydrogen 0-0694

Phos. r= difference of weight, 0-8328

Thus we perceive that this compound consists of 0-8328 phosphorus + 0-0694 hydrogen ; or 12 + 1; or 1-5 + 0-125 — 1-625, which is the weight of the sum of the primes, commonly called the weight of its atom. The gas may be likewise conveniently analysed by nitrous gas, nitrous oxide, or oxygen. The preceding den- sities and proportions are those currently given by British writers, and are probably incorrect. See these numbers corrected by M. Dumas fur- ther on, and also in the general TABLE of GASES.

2. Protophosphureted hydrogen. It was dis- covered by Sir H. Davy in 1812. When the crystalline hydrate of phosphorous acid is heated in a retort out of the contact of air, solid phos- phoric acid is formed, and a large quantity of subphosphureted hydrjgen is evolved. Its smell is fetid, but not so disagreeably so as that of the preceding gas. It does not spontaneously explode like it with oxygen; but at a temperature of 300° a violent detonation takes place. In chlo- rine it explodes with a white flame. Water absorbs one-eighth of its volume of this gas. When potassium is heated in it its volume is doubled, and the resulting gas is pure hydrogen. When sulphur is sublimed in one volume of it

a sulphuret of phosphorus is formed, and nearly two volumes of sulphureted hydrogen are pro- duced.

Such is the constitution of these two com- pounds of phosphorus and hydrogen as taught by our systematise, and confirmed to apparent demonstration by Dr. Thomson in his First Principles of Chemistry, I. 203. But it is to be feared that the atomic theory, misapplied, has here acted as a false light merely to mislead from the straight path of experiment. For M. Dumas in an able memoir has adduced very decisive evidence of the inaccuracy of the above views, and has been led to conclude that proto- phosphureted and perphosphureted hydrogen con- tain each the same bulk of hydrogen, that is, 1£ time their own volume ; that the quantities of phosphorus with which that hydrogen is com- bined in the two gases are not in the ratio of 1 to 2,

but of 2 to 3 ; that the ratio of 3 to 5 instead of 1 to 2, holds with regard to the oxygen in phos- phorous and phosphoric acids, agreeably to the well known determination of Berzelius ; and finally that the gases obtained by heating phos- phorous acid, or by leaving perphosphureted hy- drogen over water or mercury for a few days, are not different in their nature, but truly iden- tical. We therefore present the results of M. Dumas in a supplementary form, whence they may be compared with those latterly adopted in this country.

1 . Protophosphureted hydrogen. This gas may be obtained perfectly pure by heating the phos- phatic, phosphorous, or hypophosphorous acids, or by admitting fragments of phosphuret of lime or barytes to concentrated muriatic acid. But the gas disengaged from phosphuret of lime by water alone, or by muriatic acid diluted with ten times its weight of water, consists in the former case of perphosphureted hydrogen 87 + hydro gen 13; and in the latter of perphosphureted hydrogen 97 + water 7. Protophosphureted hydrogen is not spontaneously combustible in air, as the other gas is. 100 measures of protophos- phureted hydrogen, heated with bichloride of mercury, afford 300 measures of muriatic acid gas, which contain 150 of hydrogen. But, when 100 measures of that phosphureted gas are heated in contact with sulphur, only 135 mea- sures of sulphureted hydrogen are obtained in- stead of 150 ; because 100 of sulphureted hy- drogen become ninety by being heated with sulphur; and 90 : 100 :: 135 : 150. From in- attention to this important fact, several analytical errors have arisen. The detonation of proto- phosphureted hydrogen mixed with oxygen is elegantly effected by a slight difference of pres- sure : by raising for instance the eudiometer tube a few inches above the level of the mercury. If this circumstance be not adverted to, unex- pected explosions may occur.

One volume of protophosphureted hydrogen gas absorbs in explosion two vclumes of oxygen; and, as the volume and a half of hydrogen which it contains requires three-fourths of a volume of oxygen, the remaining five-fourths of a volume of oxygen must go to the phospho- rus. One volume of this phosphureted gas may also combine with a volume and a half of

oxygen, in which case phosphorous acid is form- ed with the three-fourths of oxygen ; whereas phosphoric acid was the former product with the five-fourths of oxygen. Thus it would appear that the quantities of oxygen in phosphorous and phosphoric acids are to each other in the pro- portion of 3 to 5. The perphosphureted hydro- gen procured by the action of phosphorus on milk of lime is spontaneously transformed by keeping over water to the protophosphureted gas,

without experiencing any alteration in its volume, simply by depositing phosphorus. The proportion of pure hydrogen which is always present in the perphosphureted gas, and which of course remains mixed with the protophos- phureted, is easily ascertained by solution of sulphate of copper, which speedily absorbs the phosphureted gas. Protophosphureted gas thus prepared and examined was weighed with all the requisite precautions, and found to have a specific gravity of 1-214, air being 1000. De- ducting from 1-214, 0-104 (= 0-0694 -f

0-0694. .

), being a volume and a half ot hydrogen,

«

the remainder 1-110 is the weight of phosphorus combined in this gas with the 0-104 of hydrogen. Now this is nearly the ratio of 10 to 1 ; whence, if we were to consider it a compound of one atom of each constituent, the prime equivalent of phosphorus would come out 10*78 on the hydrogen scale, or 1-4 on the oxygen. M. Du- mas, who adopts, with Berzelius, 0-0623 as the atom of hydrogen and the radix of atomic weights, supposes that in the protophosphureted gas six atoms of hydrogen are combined with one of phosphorus, and infers the equivalent of phosphorus to be 402-3 : for,

0-103 : 1-111 ; : 37-4 (— 6 H) : 402-3.

The number of Berzelius is 392-3; therefore M. Dumas proposes to assume 400, the same as M. Dulong fixed on from the analyses of perchlc- ride of phosphorus and phosphuret of copper.

2. Perphosphureted hydrogen. This gas, ob- tained by acting on phosphorus in a retort, with a boiling-hot solution of caustic potassa, consists very uniformly of thirty-seven and a half of perphosphureted gas, mixed with sixty-two and a half of pure hydrogen ; or of three of the former to five of the latter. The phosphureted gas is easily abstracted by a solution of sulphate or nitrate of copper, or of corrosive sublimate. Phosphuret of barytes disengages from distilled water a mixed gas, consisting of forty-three of pure hydrogen, and fifty-seven of the perphos- phureted gas. Phosphuret of lime, acted on by a little water over mercury, affords a similar mixture of gases, of which eighty-seven are perphosphureted, and thirteen pure hydrogen. The same substance, acted on by strong muri- atic acid, affords protophosphureted hydrogen with deposition of phosphorus. The

perphos- phureted hydrogen obtained by boiling milk of lime on phosphorus is most variable in its pro- portion of intermingled hydrogen ; this being near the beginning of the process about thirty per cent., and towards the end so high as eighty- six. Yet ill these gases are equally inflamma- ble in the an.

Corrosive sublimate acts on the above mixed gases as it does on protophosphureted hydrogen, and the hydrogen gas intermingled remains pure, without combining with the chlorine, at least at the heat of the alcohol flame. The action of the corrosive sublimate becomes energetic whenever it melts. The gas enlarges much in volume, and an orange-brown matter is produced. Se- venty-six parts of the mixed gas, containing forty-seven and a half of pure hydrogen and twenty-eight and a half of perphosphureted gas, afforded eighty-six of muriatic acid gas, con- taining forty-three of hydrogen; whence per- phosphureted hydrogen evidently contains a volume and a half of pure hydrogen condensed into one volume, just like the protophosphureted gas. The gas from phosphuret of lime and water, which is the purest that can be obtained, afforded also, by a similar treatment, three volumes of muriatic acid gas for every volume of the pure perphosphureted hydrogen, indicat- ing one volume and a half of pure hydrogen con- densed in that single volume. The mixed gas from phosphuret of lime and water contains from eleven to twelve per cent, of uncombined hydrogen. Such mixed gas, heated by a spirit flame, in contact with fine iron or copper wire in a glass vessel, affords out of every volume of the perphosphureted gas one volume and a half of pure hydrogen.

In order to effect the analysis of the perphos-

phureted gas by oxygen, M. Dumas prepared absolutely pure carbonic acid. Some of it he mixed with its own volume of pure oxygen ; and some witli variable proportions of perphos- phureted hydrogen obtained from potassa w ter and phosphorus. lie then heated the mixture of carbonic acid gas and oxygen to 212° or 230° Fahrenheit, and introduced into it by bubble after bubble the mixture of carbonic acid and perphosphureted hydrogen. With these precau- tions the experiment proceeded quietly; each bubble exploded on entering, however minute it might be. The light was faint and yellowish, without the lustre and vivacity observed in the ordinary combustions of this kind. When the operation was completed, he absorbed the car-

bonic acid by moist fragments of caustic potassa used in excess, and measured carefully the resi- duum, ascertaining the purity of the residual oxygen by explosion with hydrogen in the eudi- ometer over mercury. From the mean of these experiments, it results that 151 measures of perphosphureted hydrogen, produced by the action of phosphorus on water of potassa, con- sume 152 measures of oxygen; which maybe regarded as the ratio of volume to volume. But this ratio, so simple in appearance, becomes somewhat complex when we come to consign, to each of the bodies that the perphosphureted hy- drogen contains, the portion of oxygen due to it. In fact,

8 measures of the above gas — 5 hydrogen + 3 perphosphnreted hydrogen 8 oxygen = 2-5 + 5-5.

That is to say, three volumes of pure perphos- oxygen ; or eight volumes consume 14-6 of oxy- phureted hydrogen consume 5‘5 volumes of gen ; but

8 perphosphureted hydrogen pure — 12 hydrogen -f x phosphorus 14-6 oxygen ~ 6 + 8‘6 phosphorus.

It is therefore evident that, in the combustion of perphosphureted hydrogen made under the above specified conditions, the hydrogen takes two volumes of oxygen and the phosphorus three, to form water and phosphorous acid.

Perphosphureted hydrogen gas, left to itself for some days, loses a third of the phosphorus that it contains, passing to the state of protophos- phureted hydrogen without any change of vo- lume. When the perphosphureted hydrogen is decomposed by the protoxide of azote, eight volumes of the former consume twenty-one of the oxygen of the latter, six of which go to the twelve of hydrogen in the eight of the per- phosphureted gas, and fifteen to the phosphorus. In this case phosphoric acid is formed. Hence the same quantity of phosphorus takes either nine or fifteen volumes of oxygen ; which gives the relation of three to five, formerly noticed. The explosion of protoxide of azote and perphosphu- reted hydrogen is extremely violent, and ought on this account to be performed on small quantities.

The specific gravity of perphosphureted hy- drogen, determined by M. Dumas with much care, was found to be . . . . 1*761 from which if we deduct 1 J vol. of hydr. 0-104 we shall have the remainder . . — 1-G57 for phosphorus. Here the proportion reduced to hydrogen as unity is sixteen to one. M. Du- mas, supposing the hydrogen and the phosphorus VOL. XVII.

to be combined in the ratio of four atoms of the former to two atoms of the ktter, states the fol- lowing proportion : —

0-103 : 1-658 : ‘. 24‘37 (= 4 II) : 400‘33; which would be the atomic weight of phospho- rus on the scale of Berzelius, where oxygen ~

12‘5

100, and hydrogen ~ 6‘217o, ornearly -.

In this ingenious and elaborate research of M. Dumas, nothing is more striking than the differ- ence between his specific gravities of these two gases and the densities assigned to the same gases in Dr. Thomson’s First Principles, where every number, by a process of logical legerde- main, is made to tally with his atomic notions to the third or fourth place of decimals. Thus his gas (perphosphureted hydrogen) from phosphu- ret of lime and water has a specific gravity of 0.90277; and is thus made up: — Hydrogen, 1 volume 0.06944 or 1 atom 0-125 Phosphorus, 1 do. 0-83333 1 1-5 !

0-90277

Bihydroguret of phosphorus (protophosphureted hydrogen of Dumas).

Hydrogen, 2 vols. . . 0-1388 Phosph. 1 do. . . . 0-8333

Here this gas is nade to contain two volumes of hydrogen, and have a density ~ 0-9722.

Phosphorus and sulphur are capable of com- bining. They may be united by melting them together in a tube exhausted of air, or under water. In this last case they must be used in small quantities ; as, at the moment of their ac- tion, water is decomposed, sometimes with ex- plosions. They unite in many proportions. The most fusible compound is that of one and a half of sulphur to two of phosphorus. This remains liquid at 40° Fahrenheit. When solid, its color is yellowish-white. It is more combustible than phosphorus, and distils undecompounded at a strong heat. Had it consisted of 2 sulphur + 4 phosphorus, we should have had a definite com- pound of 1 prime of the first + 1 of the second constituent. This proportion forms the best

com- position for phosphoric fire-matches or bottles. A particle of it attached to abrimstone match inflames when gently rubbed against a surface of cork or wood. An oxide made by heating phosphorus in a narrow-mouthed phial with an ignited wire an- swers the same purpose. The phial must be kept closely corked, otherwise phosphorous acid is speedily formed.

Phosphorus is soluble in oils, and communi- cates to them the property of appearing luminous in the dark. Alcohol and ether also dissolve it, but more sparingly.

When swallowed in the quantity of a grain it acts as a poison. Azote dissolves a little of it, and has its volume enlarged by about one-for- tieth.

PHOTINIANS, in ecclesiastical history, a sect of heretics in the fourth century, who denied the divinity of our Lord. They derive their name from

PHOTINUS, their founder, who was bishop of Sirmium, and a disciple of Marcellus. Pho- tinus published, in the year 343, his notions re- specting the Deity, which were repugnant both to the orthodox and Arian systems. He asserted that Jesus Christ was born of the Holy Ghost and the Virgin Mary ; that a certain divine emanation, which he called the Word, descended upon him ; and that because of the union of the divine word with his human nature he was called the Son of God, and even God himself: that the Holy Ghost was not a person, but merely a celestial virtue proceeding from the Deity. Both parties condemned the bishop in the councils of Antioch and Milan, held in the years 345 and 347. He was condemned also by the council at Sirmium in 351, and was afterwards degraded from the episcopal dignity, and at last died in exile in the year 372 or 375. His opinions were afterwards revived by Socinus.

PHOTIUS, patriarch of Constantinople, was one of the finest geniuses of his time. He was born in Constantinople, and descended of a noble family. His merit raised him to the patriarchate ; for, Bardas having driven Ignatius from the see, Photius was consecrated by Asbestus in 859. He condemned Ignatius in a synod, whereupon the pope excommunicated him, and he, to balance the account, anathematised the pope. Basilius of Macedon, the emperor whom Photius had reproved for the murder of Michael, ex-

pelled him, and restored Ignatius; but afterward* re-established Photius upon Ignatius's death, in 878. At last being wrongfully

accused of a conspiracy against Leo the philosopher, son and successor to Basilius, he was expelled by him in 886, and died soon after. He wrote a Biblio- theca, which contains an examen of 280 authors; also 253 epistles ; the Nomacanon under four- teen titles ; an abridgment of the acts of several councils, &c. His natural abilities were very great. There was no branch of art or science in which he was not versed. He was first raised to the chief dignities of the empire, being made principal secretary of state, captain of the guards, and a senator ; and in all these stations acquitted himself well. His rise to the patriarchate was very quick ; for, being a layman, he was made monk the first day, reader the next, and the fol- lowing day sub-deacon, deacon, and priest. So that in six days he attained to the highest office in the church. But his unbounded ambition made him commit excesses which rendered him a scourge to those about him. Fabricius calls his Bibliotheca, non liber, sed insignis thesaurus, ‘ not a book, but an illustrious treasure/ in which are contained many curious things no where else to be found. It was brought to light by Andrew Schotus, and communicated by him to David Hoeschelius, who caused it to be printed in 1601. Schottus translated it into Latin, and printed his translation alone in 1606. The Greek text and translation were printed at Ge- neva in 1611. The last and best edition was printed at Rouen in 1653, folio.

PHOTOCITE, a mixture of the silicate and carbo silicate of manganese.

PHOTOMETER, an apparatus for mea- suring the intensity of light, and the transparency of the medium through which it passes. Instru- ments for this purpose have been invented by count Rumford, M. de Saussure, Mr. Leslie, and others. Mr. Leslie’s is the simplest instrument of the kind, but it only measures the momentary intensities of light ; and a description of all of them would take up too much room. We therefore refer the inquisitive reader to Nicholson’s Philo- sophical Journal, vol. iii. De Saussure’s photo- meter is also called a diaphanometer. Mr. Leslie’s photometer may be considered as a differential thermometer, having one of its balls of colorless glass, the other of black glass. The light pro- duces no effect upon the transparent ball, but it heats the black ball according to its intensity ; and this heat, by depressing the liquid in the tube, marks the intensity of the light.

PHOTOPSIA (from 0wC, light, and oˆig, vision), lucid vision. An affection of the eye in which the patient perceives luminous rays, ignited lines, or coruscations.

PHOXUS, a general of the Phocaans, who burnt Lampsacus.

PHRAGAND./E, an ancient people of Thrace. Livy, xxvi. c. 25.

PHRAORTES, the son of Dejoces, and the second king of the Medes, succeeded his father about A. A. C. 657, and reigned twenty-two years. He was killed in a fruitless attempt on Nineveh, and was succeeded by his son Cyax- ares I.

PHRENOLOGY.

PHRASE, n. s. &u. a. ˆ (jr. fyoaaii;. Idiom ;

PHRASEOL'OGY, n. s. $ peculiar expression ; mode of speech : to phrase is to term, style, call : phraseology, diction ; style.

Thou speak'st In better phrase and matter than thou didst.

Shukspeare. These suns,

For so they phrase them, hy their heralds challenged The noble spirits to arms. Id. Henry VL1I.

To fear the Lord, and depart from evil, are phrases which the Scripture useth to express the sum of reli-

gion.

Tillotson.

Now mince the sin, And mollify damnation with a phrase : Say you consented not to Sancho's death, But barely not forbad it. Dryden.

The scholars of Ireland seem not to have the least conception of a stile, but run on in a flat phraseology, often mingled with barbarous terms. Swift.

Precision is the third requisite of perspicuity with respect to words and phrases. Murray.

PHRASE is sometimes used for a short sentence or small set or circuit of words constructed toge- ther. In this sense father Buffier divides phrases into complete and incomplete. Phrases are com- plete where there is a noun and a verb, each in its proper function ; i. e. where the noun ex- presses a subject, and the verb the thing affirmed of it. Incomplete phrases are those where the noun and the verb together only do the office of a noun ; consisting of several words without

affirming any thing, and which might be ex- pressed in a single word. Thus, ‘ that which is true,’ is an incomplete phrase, which might be expressed in one word, truth ; as, ‘ that which is true satisfies the mind,’ i. e. ‘ truth satisfies the mind.’

PHRASE, in music, means a complete sense composed of one or more musical propositions, terminated by a cadence more or less complete. In a phrase there may be various significations or ideas, viz. the principal, which commences and terminates the phrase, the expletives, inci- dents, oblique or subordinate. To phrase is to round, as in discourse, the different phrases of a musical period. Music, without phrases, called

also hemistics, is sound without sense, whether in its composition or performance.

PHRASE, or PHRASED, a musical composition performed upon the principle of hemistics, or whose melodic phrases are rounded off.

PHRASEOLOGY is also used for a collection of the phrases or elegant expressions in any lan- guage.

PHREAS (John), M. D., aa English phy- sician, born at London in the end of the four- teenth century. He was educated at Oxford, and became fellow of Baliol College. He trans- lated from the Greek into Latin Diodorus Siculus, and other ancient works. He read lectures on medicine at Ferrara, Florence, and Padua, at which last university he was presented with his degree. He died in 1465.

PHREATIS, or PHREATIUM, in Grecian anti- quity, was a court belonging to the civil govern- ment of Athens, situated upon the sea-shore in the Piraeus. The name is derived from awo ra ˆptaroc, because it stood in a pit ; or, as others suppose, from the hero Phreatus. This court heard such causes as concerned persons who had fled out of their own country for murder, or those who fled for involuntary homicide, and who had afterwards committed a deliberate and wilful murder. The first who was tried in this place was Teucer, on a groundless suspicion that he had been accessory to the death of Ajax. The accused was not allowed to come to land, or so much as to cast anchor, but pleaded his cause in his bark ; and if found guilty was com- mitted to the mercy of the winds and waves, or, as some say, suffered more condign punish- ment ; if innocent he was only cleared of the second fact, and, according to custom, under- went a twelvemonth’s banishment for the former. See Potter’s Gr. Antiquities, vol. i.

PHRENETIC is used of those who, without being absolutely mad, are subject to such strong sallies of imagination as iusome measure pervert their judgment and cause them to act in a way different from the more rational part of mankind.

PHRENITIS is the same with phrenzy ; an in- flammation of the brain, attended with an acute fever and delirium. See MEDICINE.

PHRENOLOGY.

PHRENOLOGY (of Gr. «4p»ji/ the mind, and Xoyoc, a discourse), denotes strictly the science of mind, and has recently been applied to a new theory of philosophy, which teaches —

1. That the brain is a congeries of so many distinct parts, each of which is the organ of some innate special faculty.

2. That the power of manifesting each faculty is always proportionate to the size and activity of that organ or part of the brain with which it is supposed to be in immediate connexion.

3. That it is possible to ascertain, during life, the relative sizes of these organs by the corres- ponding protuberances or enlargements on the external surface of the cranium.

In our article BRAIN it is suggested that the term phrenology, in application to the hypothesis,

the legitimacy of which is now to be discussed, ‘ seems too presumptive and too restrictive — too presumptive in implying or taking for granted that this is the true science of mind ; and too re- strictive, because the phrenic or mental part of the argument does not comprehend its whole scope and bearing ; the system of Gall and Spurzheim (the principal founders and promul- gators of it), constituting, when taken in its full stretch of latitude, in some sort a new system of neurology in general.’ But Dr. Spurzheim, who we believe was the first to propose the present denomination, might have been guided in his choice by an anxiety which he and his original master, Gall, have ever manifested to scout the idea of their doctrines being, as some have sup- posed them to be, merely a new system of phy-

siognomy. ‘ Denude,’ says Dr. S., ‘ the whole of the brain, and present it to me without any cranial covering, and I will pledge myself to as correct an opinion of its phrenological character, as had I to judge of the same brain, surrounded and encompassed by its membraneous and bony in- vestments.’ Craniology, therefore, is an impro- per appellation to give to our science ; and cra- nioscopy is obviously as bad, since they both suppose a knowledge only of the exterior, while our investigations and our inferences have to do with what is within much more than what is merely on the surface, or manifest to every beholder. Our anatomy is new, our physiology is new, our metaphysics are new ; or rather, in reference to the last, we should say, that meta- physics has hitherto been a science merely in name, since it has abandoned physicology, and taught to satisfy itself with mere abstractions.

Our present duty is that of historians and nar- rators. If in the course of the present article a bearing to one side of the argument be disco- vered, let the reader be told that some twelve or fourteen years since, when Dr. Spurzheim’s book first made its appearance, the individual who principally supplies this article furnished a review of Dr. S.‘s volume, which all would agree in pronouncing rather condemnatory than in support of the doctrine. See Eclectic Review, 1815. Whether he still preserve his originally hostile ‘feeling to the cause, or whether he be completely indifferent respecting the subject, and pretended science, is for any reader to deter- mine who may think it worth his while to bestow an hour’s consideration on the topic. All that we think it right further to say in the way of preface is this, that impartiality shall at any rate be aimed at, and that failure shall not be legiti- mately chargeable upon design or intention. It may be proper to remind the reader too, that, although the plural pronoun is used in the con- struction of the paper, as is usual in all articles admitted into a miscellaneous collection, neither the editor, or other contributors, are responsible for the opinions of individual writers on subjects open to controversy.

We cannot perhaps give a more convincing proof of our impartial feeling than by freely ex- tracting from able writers, who have taken dif- ferent estimates of the validity of this doctrine. The first of them, an acute reasoner, is decidedly hostile to its claims.

‘ Neither in man nor in animals,’ says Mr. Stone, ‘ is it possible to ascertain during life the relative positions and sizes of those organs to which each of the more favored faculties has been assigned ‘» local

habitation and a name.' Dr. Spurzheim has lately observed, ' We do not judge by the particular elevations and lumps upon the skull, but by its general development. Our ad- versaries are the bumpists — but no, look at the general appearance— judge for yourselves (MS. notes of lectures on the anatomy, physiology, and pathology of the brain, delivered in Edin- burgh. 1828). < What.' continues Mr. Stone, ' Dr. Spurzheim would have us to understand by this declaration, it is impossible to comprehend ; for in the same course, nay, in the same lecture, he proceeded to demonstrate the individual bumps and protuberances which in fact consti-

tute the system. Have not the phrenologists like the aspiring giants of the olden time, who piled Mount Ossa on Pelion, and Pelion on Olympus, crowded organ upon organ from tne base to the vertex of the head ? Have not the supposed relative positions and dimensions of these, as indicated by isolated protuberances, been taught in books, lectures, and delineated on all the phrenological busts ? Have they not pretended to measure them severally and indi- vidually in living characters even to the eighth of an inch ? But this is not all. In adverting to the custom which different nations have of compress- ing and otherwise changing the form of the head, Dr. Spurzheim remarked — ' The instrument that is worn for this purpose has been brought to England ; I know not exactly how long it has been used, but have heard about two years. It is curious and worthy investigation, and I would have you, should any of you have the opportunity, make this enquiry, see, when the bone is com- pressed, whether the brain underneath it ceases to increase in she. You rnay try it in animals; for, if it be the case, then we could in infants compress the head in its different parts, so us to give a direction and development to the best and noblest facts of the human mind.' — MS. notes of lectures, delivered in Edinburgh in 1828. –

' How beautiful,' says Mr. S., ' is this sugges- tion ! How characteristic of the philosophy of all the phrenological speculations ! When this annus mirabilis comes to pass it will be the millennium of phrenology. We shall then, in- deed, hear no more of ' little lumps and protu- berances,' but shall speak of the mountain of veneration being bounded on the south by the valley of amativeness, and on the east and west by the caverns of destructiveness. The ideal re- public of Plato, the Atalantis of Harrison, the Utopia of More, were all only dim and faint conceptions of that state of perfectibility of which the human mind and heart are thus supposed susceptible/

In another part of the pamphlet from which we have borrowed this spirited extract we find a most eloquent appeal against the

phrenological tenets grounded on the assumption that national circumstances, the force of example, and the varieties of creeds, have much more to do with the excitement and manifestation of passion than have the physical construction, whether of the head or any other part of the frame. We regret that we can only extract a part of this passage.

‘ The organ of destructiveness, originally termed that of murder, is considered by the phre- nologists as having been completely established ; yet the manifestation of the feelings attributed to this faculty will invariably be found to result from those external circumstanqes and moral causes which alone appear to determine all the darker, as well as the brighter, traits of human character.’ —

‘ The duty of vengeance is held to be impera- tive among the North American Indians. The instance is related by a traveller of a young Choc- taw, who, having been reproved by his mother, ‘ took it so ill as, in the fury of his shame, to re- solve on his own death.’ He committed suicide, and his sister, being his nearest relation and thinking herself bound to revenge his loss, told

her mother she had caused her brother’s death, and must pay for his life. ‘ Whereupon the old woman resigned herself to her fate, and died by the hands of her daughter.’ — Roman’s Natural History of Florida. Among the Japanese the spirit of vengeance is carried so far that even the females, as well as the men, carry a dagger in their girdle, and employ it with the utmost cool- ness in their personal quarrels, not only against enemies and strangers, but even against their own brothers, husbands, and nearest relatives. — Taverner’s Relation of Japan; Homberg’s Voyages in Japan. Among the Karatschai, or black Cir- cassians, a similar principle prevails. When one man has been killed by another, the relatives of the deceased consider it necessary to avenge his death by the blood of the murderer, which they conceive can alone give rest to his and their souls. — Klaproth’s Travels in the Caucasus and Georgia. The superstitious notions and habits of such people, without any reference to the pe- culiarities of cerebral development, invariably give rise to and determine their individual dis- positions. And as nations, therefore, emerge from a state of barbarity, different circumstances operating on the same constitution excite feel- ings and principles of an opposite description, and produce in every respect a striking revolu- tion of character. Thus the Goths on

their first invasion massacred indiscriminately rnan, woman, and child, and every where betrayed the most furious cruelty ; but, after their intercourse with the Europeans, the same people became remarkable for their humanity.' The delight which it gave the Romans to witness the combats of the gladiators, and the cruel sports of the circus, that soil prolific in crimes which gave rise to a Nero, a Domitian, a Caligula, is afterwards ad- verted to, as well as those ' European sove- reigns of Christian countries, over the record of whose actions the veil of humanity might well be drawn.'

' Whether at such calamitous eras, we con- template,' says the writer, ' the demon-like Ro- bespierre, Murat, or Carrere, resting amidst the anarchy of cruel and licentious passions; or whether we turn our eyes to the horrors of the Sicilian vespers, or the massacre of Bartholomew, and see the infuriated enthusiast committing outrageous murder within the sanctuary of the church itself; the desire and propensity to de- stroy will be found in every instance to be a feel- ing suggested and excited by the influence of in- cidental circumstances, and the prevailing spirit and temper of the times, rather than the result of a particular configuration and development of a certain part of the brain, urging the indivi- dual by its mechanical activity to the commission of the most atrocious crimes.'

We now proceed to extract from a writer whose opinions and sentiments will always com- mand respect, as resulting from a mind at once highly gifted with the power of judging on ab- stract questions, and proverbially free from bias in favor of established principles, merely because they are established.

- While,' says Mr. Abernethy, l I must readily concede to what is demanded in this system of crganology, that the variety of effects produced

may be the result of modifications of vital actions, transmitted through diversities of structure, I must strongly protest against the opinion that the organs themselves are perceptive; or, in- deed, against any opinion which impugns the belief of the unity of that which is perceptive, rational, and intelligent. Many of our actions are the results of complicated thoughts and feelings, each seeming to have yielded a portion of its peculiar interests so as to produce a mo- dified result. But how, may I ask, has this compromise been made? A gentleman once humorously answered this question by saying that it was done by committees of the several organs, and a board of control. But if an intelligent, discretionary, and controlling power be granted, I feel no disposition to demand any more.'

‘ I had great gratification,’ Mr. A. remarks in another part of his pamphlet, ‘ in being intimate with Dr. Spurzheim whilst he remained in Lon- don ; and in a kind of badinage I proposed to him questions which he answered with facility, and in a manner that showed a perfect know- ledge of human nature. For instance, I en- quired whether he had discovered any organ of common sense ; and he replied in the negative. I then demanded in what that quality consisted ? and he answered, in the balance of power be- tween other organs. This answer shows why a quality so peculiarly useful is common to all, and rare in any ; for there are but few who have not prejudices or partialities, hopes or fears, or predominant feelings which prevent them from pursuing that middle and equal course of thought and conduct which unbiassed consideration or common sense indicates and directs. I enquired of Dr. Spurzheim if there was any organ of self-control, or, if not, whence that power ori- ginated ? He said ‘ it is the result of a predo- minating motive; thus justice may control avarice, and avarice sensuality.’ In short, I readily acknowledge my inability to offer any rational objection to Gall’s and Spurzheim’s system of phrenology, as affording a satisfactory explanation of the motives of human actions.’

From the avowed enemy, in the first instance, and the qualified friend in the second, to the tenets under dispute, we now turn to an article published in No. 3, of the Foreign Quarterly Review ; which we regard as one of the most able expositions of the doctrine of phrenologists that ever demanded the public attention.

‘The metaphysics,’ says the Reviewer of phrenology, ‘ pretend to greater validity than all other systems, yet it is not thus that we, its votaries, maintain it, but by the relation of cere- bral developement to mental manifestations. It is upon facts confirming this relation that we proceed, and the number which we have collected exceeds all belief. The collection of Dr. Gall, that of Dr. Spurzheim, of Mr. Deville, whose zeal and activity in promoting the practical part of the science cannot be sufficiently commended ; those of the phrenological societies of London, Edinburgh, and many other places, contain many thousands of facts which are incontrovertible. It is not in the power of any phrenologist to irregister all living examples, but we build our

pretensions upon every age of the world, and call not only moderns but ancients to our aid. As this is one of the most curious parts of our

pretensions it must be briefly noticed. Every head which has been handed down to us from antiquity is in as exact conformity with our doctrine as if we ourselves had moulded it for our own purposes. The bad Roman emperors, Caligula, Nero, Caracalla, have the regions where the inferior faculties reside very much developed, while the antagonist faculties are small. The Antonines have heads that would do honor to any man. Vitellius is a mass of sensuality, de- prived of all elevation. The Roman Gladiator most powerful in the basilary region has a nar- row and contracted forehead, where little reason could reside. In Homer the development of ideality is immense, and still greater perhaps in the rapturous Pindar. In Demosthenes there is a fine show of the superior faculties, but the organ of language is not the most prominent,

, neither were the natural command and flow of words the characteristics of his eloquence. His desire of gain too is largely developed The head of Socrates is such as Urs.Gall and Spurz- heim would model to demonstrate the organ of marvellousness, and a mind of visions ; and so is a head more modern, that of Torquato Tasso. The head of Zeno is that of a profound and moral thinker, as he was. That of Seneca has much bad but more good, so balanced that a struggle between them will be necessary, but the latter will generally prevail. The head of Cicero, larger on one side than the other, has more lan- guage than Demosthenes, with large reflecting faculties, vanity, the desire of gain and of fame, and cautiousness, great with little hope, and little courage. In short, the example of antique statues in our favor are innumerable. Now, either these heads are genuine casts, or they are not. If casts, their perfect coincidence with the respective characters most phrenologically pro- claims, what all men, indeed, long since have known, that nature has acted in atl ages by im- mutable laws. If they are not casts, but ideal heads, then the ancients had observed the fact that a certain form of head regularly accom- panied such a power of mind ; and their sculp- tors, without accounting for it, registered it in their works.'

We now proceed to a more regular develop- ment of the subject before us ; and the order we intend to pursue is, first to give a brief history of the circumstances which led to the conception of the organological hypothesis, then describe the present condition of the assumed science, engage in an investigation of the arguments for, and objections against, its becoming substantively as a body of legitimate doctrine ; and conclude with a few corollaries containing our own infer-

. once.

‘ In the ninth year of my age,’ says Dr. Gall, ‘ my parents sent me to one of my uncles, who was a clergyman in the Black Forest, and who, in order to inspire me with emulation, gave me a companion in my studies. I was, however, frequently reproached for not learning my lesson so well as he did, particularly as more was ex- pected from me than from him. From my

uncle we were both put to school at Baden, nea; Rastadt, and there, whenever our task was U learn by heart, I was always surpassed by boys who, in their other exercises, were much my inferiors. As every one of those who were re- markable for this talent had large and prominent eyes, we gave them the nick-name of ox-eyed. Three years after this we went to school at Bruchsa, and there again the ox-eyed scholars mortified me as before. Two years later I went to Strasburgh, and still found that, however mo- derate their abilities in other respects, the pupils with prominent eyes all learnt by heart with the greatest ease.

‘ Although,’ continues our author, ‘ I was ut- terly destitute of previous knowledge, I could not help concluding that prominent eyes were the mark of a good memory ; and the connexion between this external sign and the mental faculty occured to me. It was not, however, till some time afterwards that, led on from observation to observation, from reflection to reflection, I began to conceive that since memory has its external sign the other faculties might very well have theirs. From that moment every person remarkable for any talent, or for any quality, became the subject of new attention, and all my thoughts were directed to a minute study of the form of their heads. Little by little I ventured to flatter myself that I could perceive one constant shape in the head of every great painter, of every great musician, of every great mechanic, severally denoting a decided predisposition in the individual to one or other of these arts. In the mean time I had begun the study of medicine, where I heard much about the functions of the muscles, of the viscera, &c., but not a word about the functions of the brain. My former observations then re- curred to me, and led me to suspect, what I afterwards proved, that the form of the skull is entirely due to the form of the viscus which is contained in it. From that instant I conceived the hope of being able one day to determine the moral and the intellectual faculties of man, by means of his cerebral organisation, and of establishing a physiology of the brain. I therefore resolved to continue my researches until I should obtain my object or find it impossible. The task would have been less difficult had I abandoned myself entirely to nature. But I had already learned too much of the errors and prejudices then taught upon those subjects not to be biased by them, and I was still farther entangled by the

doctrines of metaphysicians, who teach that all our ideas come by our senses ; that all men are born alike, that education and accident alone make them differ. If this be true, said I, no faculty can have an external sign, and to study the brain in parts and its functions is absolute madness. Still I remembered my former obser- vations ; I knew that the circumstances in which my brothers and sisters, my school-fellows, my playmates, had from their infancy been placed were all alike. I saw that education was be- stowed in vain on some persons, that others had talents without it. I observed a proportionate variety in the disposition of animals. Some dogs are born hunters, while others of the same litter cannot be taught ; some are peaceful, some

ill-tempered. In birds there is a similar diver- sity. The whole animal kingdom spoke then in favor of my strong surmises, and I resolved to prosecute my plan. It was not till thirty years had- been spent in uninterrupted study in ob- serving men of every description, and in many countries, men remarkable for some talent or some defect, for some vice or some virtue, in studying inferior animals, domestic or wild, the inhabitants of air or of earth, that I ventured to embody my observations, and publish them in one comprehensive work.'

In Dr. Spurzheim's physiognomical work, pub- lished several years since, we find a collection of facts, some almost exceeding belief, illustrative of the principles both of the variety and incon- sistency of the human character — by inconsistency we mean, that talents and virtues are manifested by some individuals, accompanied by the nega- tion of other faculties, which, a priori, we should suppose to be their accompaniments ; or the dis- play of opposite qualities which renders the totality still more remarkable. We are told, for instance, of a virtuous, and humane, and bene- volent individual, delighting in the murderous horrors of war, and becoming chaplain to a regi- ment in order to give him the chance of witnes- sing these sanguinary spectacles. Of another person we read, who at the same time was gifted with such high religious impressions and such thievish propensities that, in the voluntary act of confessing and deploring to his spiritual di- rector ' his natural tendencies,' he was found in the actof stealing the confessor's watch ! Suchand many more marvellous inconsistencies of character and conduct will be found interspersed among the writings of Spurzheim and other of the phrenolo- gists ; but any man of the most slender observa- tion, and who has the smallest

correspondence with the world, will have constantly before him examples enough of this variety and inconsistency.

It would be out of place to enter minutely into the very curious process of organic evolu- tion from the primordial germ. Under the word BRAIN we have already adverted to it, and shall have occasion to treat of it more fully when writing the article PHYSIOLOGY. It may suffice here to state that, although much remains to be known on the growth of brain, nerve, and bone, it is sufficiently manifest that nervous and mem- braneous matter take the precedence of osseous formations, and that the evolution of brain is not interfered with by bony casement, but that the os- sific deposit waits to be directed by cerebral expansion ; and that the hardening of the skull is subsequent to, and, as we have said, directed by, the organisation of the nervous system ; of which system even the brain itself is the last to be fully formed. It may here, however, be fur- ther just intimated, that the bony envelopment of the brain, or, as we commonly express our- selves, the skull, consists of two layers, and that the outer and inner surface are not in all in- stances and at every part completely in corre- spondence. This fact has, indeed, been brought forward in disproof of craniological pretension ; but, as we are not yet on the head of objections to the system, we must for the present defer any other remarks in reference to this particular.

It is now time that we state what we have just called the topography of this system of organ- ology, or in other words mention the different localities of the different powers which have been determined on by the two great promulp-ers of the doctrine. Here we extract from one of the reviews before us ; but the reader may de- pend upon the accuracy of the statements ; and we rather prefer borrowing from the later publi- cations than extracting from the original works themselves, on account of the somewhat fluc- tuating state of the pretended science (we must not assume its validity), and the consequent variations of nomenclature and position that are occasionally introduced into its terminology, Indeed we shall find that Gall and Spurzheim do not entirely agree in all particulars, either as to place or name.

To the list given by Dr. Spurzheim, we shall add from the work of this author, which the re- viewer has neglected to do, the part of the brain in which the faculties are supposed to reside.

DR. GALL'S DIAGRAM, WITH THE GERMAN NAMES TRANSLATED.

No. 1. Zeugungstrich. The instinct of genera- tion.

2. Jungerliebe, Kinderliebe. The love of

offspring.

3. Archanglichkeit. Friendship, attachment ,

4. Muth, Raussinu. Courage, self-defence,

5. Wurgsinu. Murder, the wish to destroy ,

6. List, Schlauheit, Klugheit. Cunning.

7. Eigenthumsinn. The sentiment of pro-

perty.

8. Stolz, Hochmuth, Horschsucht. Pride

self-esteem, haughtiness.

9. Eitelkeit) Rhummcht, Ehrgeitz. Vanity,

ambition.

‘10. Rehutsamkeit, Vorsicht, Vorsichtigkeit. Cautiousness, foresight, prudence.

11. Sachgedachtniss, Erziehungs, fdhigeit.

The memory of things, educability.

12. Ortsinn, Raumsinn. Local memory.

13. Personcnsinn. The memory of persons.

14. Wortgeddcthniss. Verbal memory.

‘15. Sprachforschungssinn. Memory for lan- guages.

16. Farbensinn. Colors.

1 7. Tousinn. Music.

18. Zahlensinn. Number.

19. Kunstsinn. Aptitude for the mechanical

arts.

20. Vergleichender Scharfsinn. Comparative

sagacity, aptitude for drawing com- parisons.

21. Metaphysicher Tiessin. Metaphysical

depth of thought; aptitude for draw- ing conclusions.

22. Witz. Wit.

23. Dichtergeist. Poetry.

24. Gutmuthigkeit, Mitleiden. Goodnature.

25. Darstellungssinn. Mimicry.

26. Theosophie. Theosophy, religion.

27. Festigkeit. Firmness of character.

Dr. Spurzheim's arrangement of faculties is comprised in orders, genera, &c. ; they are : —

Order I. — FEELINGS, OR AFFECTIVE FACULTIES.

Genus i. PROPENSITIES. No. 1 . Amativeness. Situated in the neck. Discover the mastoid pro- cess behind the ear, and the protuberance of the occipital spine above the middle of the neck, the space between these two elevations indicates the extent of this organ. No. 2. Philoprogenitiveness. Protuberance upon the posterior part of the skull. No. 3. Infiabitiveness. No. 4. Adhesiveness. Ly- ing on the lateral and back part of the head. No. 5. Combativeness. On that part of the head which corresponds to the posterior inferior angle of the parietal bone, behind the mastoid process. No. 6. Destructiveness. On the side of the head, immediately above the ears. No. 7. Secretive- ness. In the middle of the side of the head, above the organ of the propensity to destroy. No. 8. Acquisitiveness. At the temples, on the anterior inferior ang'le of the parietal bone. No. 9. Con- structiveness. Development of the brain at the temples.

Genus ii. SENTIMENTS. No. 10. Self-esteem. An elevation in the midst of the upper posterior part of the head. No. 11. Approbativeness. f Development of the upper posterior and lateral part of the head is

observed in persons who are very fond of being caressed, honored, and ap- plauded; in short, who are ambitious.' No. 12. Cautiousness. Cautious persons are extremely large on the upper posterior part of both sides of the head.

Genus iii. SUPERIOR SENTIMENTS. No. 13. Benevolence. Superior middle part of the fore- head elevated and prominent. No. 14. Venera- tion. Head generally elevated in the middle of its upper part. No. 15. Firmness. 'Dr. Gall observes that persons of a firm and constant character have the top of the brain much de- veloped.' No. 16. Conscientiousness. On the side of the organ of firmness. No. 1 7. Hope. On the side of veneration; as is No. 18. Marvellousness. No. 19. Ideality. An enlargement above the tem- ples in an arched direction. No. 20. Mirthful- ness, or gayness. No. 21. Imitation. An eleva- tion of a semiglobular form at the upper part of the forehead.

Order II. UNDERSTANDING OR INTELLECT. EX- TERNAL SENSES, FEELING, TASTE, SMELL, HEARING, SIGHT.

Genus ii. PERCEPTIVE FACULTIES. The in~ tellectual faculties which perceive the existence of external objects, and their physical qualities. No. 22. Individuality. Lower part of the fore- head very prominent, indicating a development of the anterior inferior part of the brain. No. 23. Configuration. 'The organ of form seems to be placed in the internal angle of the orbit.' No. 24. Size. Near the former. No. 25. Weight. In the neighbourhood of form and size. No. 26. Color. 'The external sign of a great development of the organ of this faculty is a vaulted and round arch of the eyebrows.

Genus iii. INTELLECTUAL FACULTIES which perceive the relations of external objects and their physical qualites. No. 27. Locality. 'At the eyebrows, toward the middle line of the fore- head, a protuberance on each side reaching to the midd'e of the forehead.' No. 28. Calculation.

f In calculating individuals the arch of the eye- brows is much depressed or elevated at the ex- ternal angle of the orbits, proving a greater development of brain behind this place.' No. 29. Order. ' Its organ is probably situated out- ward, not far distant from the organs of size and space.' No. 30. Eventuality. No. 31. Time. Be- tween the organs of individuality, space, order, time, and cause. No. 32. Melody. ' A great de- velopment of this organ enlarges the lateral parts of the forehead .' No. 33. Language. Prominence of the eyes.

Genus iv. REFLECTIVE FACULTIES. No. 34. Comparison. An elevation in the middle of the upper part of the forehead, presenting the form of

a reversed pyramid. No. 35. Causality. ‘The superior part of the forehead much developed, and prominent in a hemispherical form.’

As an apology for his nomenclature Dr. Spurz- heim introduces the following remarks in the preface to his physiognomical system. ‘ Having formed new names, it is my duty to state my reasons for so doing. The English language presents very few single words which express uiy conception of the peculiar faculties of the mind. Hence I was obliged to speak either by circumlocution, or to make new names. Now I think, with Locke, that in this respect we have the same right with our predecessors, and I therefore propose new single names, which I have formed as much as possible conformably to the spirit of the language. Having established different propensities as peculiar faculties of the mind, in order to designate propensity I have taken the termination ive as indicating the quality of producing, and ness as indicating the abstract state; I have therefore joined iveness to different roots, among which I have given the preference to English words generally admitted. When I could not find such, I chose Latin par- ticiples, which in English are so common, even in expressions which denote a meaning similar to that which I look for, as destructiveness, pro- ductiveness, &c.’

We shall conclude this part of the subject by extracting the following remarks of Dr. Elliotson on the general and relative localities of the organs and faculties : —

‘ The exact situation of the organs,’ says Dr. E., ‘can be learned from drawings or marked heads only. I shall therefore confine myself to remarking, 1. That the organs of the faculties or .qualities common to man and brutes are placed in parts of the brain common to man and brutes, at the inferior posterior, the posterior inferior, and inferior anterior parts of the brain, i. e. of the instinct of propagation, the love of offspring, the instinct of self-defence, of appropriating, of stra- tagem, &c. 2. Those which belong to man ex- clusively, and form the barrier between man and brutes, are placed in parts of the brain not pos- sessed by brutes, viz. the anterior superior, and superior of the front, i. e. of comparative sagacity, causality, wit, poetic talent, and the disposition to religious feelings. 3. The more indispensable a quality or faculty, the nearer are its organs placed to the base of the brain, or medium line. The first and most indispensable, the instinct of propagation, lies nearest the base ; that of the

love of offspring follows. The organ of the sense of localities is more indispensable than that of the sense of tones or numbers; accordingly the former is situated nearer the medium line than the two latter. 4. The organs of fundamental qualities and faculties which mutually assist each other are placed near to each other, i. e. the love of propagation and of offspring, of self-defence, and the instinct to destroy life, of tones and num- bers. 5. The organs of analogous fundamental qualities and faculties are equally placed near each other ; i. e. the organs of the relations of places, colors, tones and numbers, are placed in the same line as well as the organs of the supe- rior faculties, and the organs of the inferior pro- pensities.'

'Although,' continues Dr. E., 'the arrangement of the organs is so beautiful, we must not ima- gine that Gall mapped out the head at pleasure, according to preconceived notions. He dis- covered one organ after another, just as it might happen, and often one became known to him situated very remotely from the organ last dis- covered. The set of organs discovered by him turned out as it is, and a strong argument is thus afforded to the truth of his system.' • I defy,' says he, ' those who attribute my determination of the fundamental faculties and of the seat of their organs, to caprice or arbitrary choice to possess a tenth part of the talent necessary for the most obscure presentiment of this beautiful arrangement, once discovered, it displays the hand of God, whom we cannot cease to adore with wonder increasing as his works become more disclosed to our eyes.'

In the allusion we have above made to the anatomical or physiological part of the organic system of Gall and Spurzheim, it was stated that although the gradual evolution of the brain regu- lated the form and size of its bony covering, the skull, this same skull consists of two layers or tables, as anatomists express themselves, which are separated from each other by a reticular net- work, which is interposed between them. Now, were these two tables always in complete paral- lelism, the circumstance of there being two would not affect cranioscopical inference, but as this is not precisely the case, even by the confession of the organists, the objectors to the doctrine think themselves entitled to be heard when they ad- vance the want of correspondence between the outer and internal layer of bone, in proof that the exterior elevation, or depression, or expan- sion, cannot be taken as a correct index of the direction and form of the brain immediately un- der the protuberance.

In reply to objections of this kind, and in allusion to the two bony layers of which we are now speaking, Dr. Spurzheim expresses himself in the following manner : — ' These two tables are scarcely

perceptible in children, they are distinct in adults, but their distance one from the other is not very considerable. In general, from birth to the period when the brain begins to diminish in size, it is possible and easy to distinguish the size of the brain by considering the size of the skull. For there never is an empty space be- tween the skull and the brain, and both tables are not distant enough to invalidate our assertion.

It is objected that both tables are not parallel, and that for this reason it is impossible to mea- sure the size of the brain and its parts, accord in«- to the size and form of the skull. This objection falls to the ground as soon as our method is known. It is not necessary to appreciate the minute difference of size, in order to distinguish the development of the organs. These occupy a large surface, and they present a very different size from the lowest to the highest degree of de- velopment.' It is also to be considered that we only intend to distinguish the size of organs, and that it is essential not to confound this idea with that of protuberances. If one organ be much developed, and the neighbouring organs very little, the developed organ presents an elevation or protuberance ; but, if the neighbouring organs are developed in proportion, no protuberance can be perceived, the surface is smooth. Now this may happen if the organs are much or little developed. Every individual has all organs ; and it is only to be determined whether the whole brain, or one, or several parts, are more or less developed.

There is another anatomical difficulty, whicl: we believe in the general way is considered more formidable than the one above announced, we mean that of the frontal sinuses.

' It is of considerable importance to ascertain how far these sinuses generally extend, and how many of the phrenological organs they generally af- fect. This question is easily determined by an ap- peal to fact. A considerable number of crania have lately been opened with this view, and it appears that the frontal sinuses extend over a greater sur- face than has hitherto been supposed. Sir Wil- liam Hamilton, in a lecture at the Edinburgh University, exhibited the open crania belonging to that museum, with a number of other speci- mens, and thereby demonstrated that these si- nuses, which are very unequal in their extent and depth, affect frequently as many and often more than one-third of the principal phrenolo- gical organs ; and that the retirement of the in- ternal table, from the irregularities and protru- sions on the external, is so considerable as to render it impossible to discover by any external manipulation the general size and development of the particular parts of th* brain.'

Mr. Combe, perceiving it necessary to make some reply, delivered a lecture on the same sub- ject in the Edinburgh Assembly Rooms, producing all the counter specimens he could find. As this question is one which must be ultimately decided by the number of facts brought forward, and as Sir William Hamilton's collection of cra- nia was so very extensive, it was incumbent on the phrenologists to bring into the arena, not only the select specimens which they have been gathering in their own museum, but as many other examples as they could possibly collect. Mr. Combe, aware of this fact, has announced to the public that he triumphantly refuted Sir Wil- liam Hamilton's demonstration, not simply by the collection of skulls from the Clyde Street Hall, but by the whole of the open crania from a pri- vate museum.

We suspect there must be some misunder- standing or misrepresentation in reference to

the particulars of this lecture ; for Mr. Stone declares the additional skulls to have consisted only of that of an infant two years old, and two of full grown persons. Mr. Combe (who beside the guarantee which general respectability of character gives against any unmanly subterfuge, is proverbially a candid and impartial advocate) would never, we should conceive, have been de- sirous of deceiving the public by intimating that he was speaking of a considerable collection, which only in point of fact consisted of two and a half.

With respect to the objection itself of the frontal sinus, we shall allow Dr. Spurzheim again to speak. ' Our adversaries say that, on account of the frontal sinuses, the organ of space cannot be distinguished. The development of this organ, however, and the frontal sinuses, present quite different forms ; the frontal sinuses only form a bony crest, and the isolated protube- rance which indicates the particular develop- ment of the organ of space is round and large. Sometimes the organ of space is very consider- able, and at the same time there are frontal sinuses; then the bony crest is perceived, and at the same time this part of the forehead is prominent.' He has subsequently said, as re- ported by Mr. Stone, that ' the frontal sinuses are generally wanting in children and young persons, and adults, and that they occur only in old persons, or after chronic insanity.' ' The absence of the sinuses,' Mr. S. replies, 'in young and adult persons is, on the contrary, exceed- ingly rare ; so much so as to have escaped the observations of Palfin,

Berlin, Portal, Soemme- ring, Caldani, and other anatomists.'

Another anatomical objection has been urged against the system, inasmuch as the organs are not confined to the surface of the brain, but ex- tend allowedly through its whole mass. To this objection Dr. S. replies, ' true it is the organs are not confined to the surface of the brain; they extend from the surface to the great swel- ling of the occipital bole (medulla oblongata), and probably to the commissures ; but, as the peripheric expansions of the five senses indicate the development of the respective nerves, so the convolutions of the brain denote a larger or smaller development of the whole cerebral mass. This will be understood by analogy. Animals which have a large external apparatus of smell, large nostrils, large turbinated bones, a large ex- pansion of the pituitary membranes, conse- quently a very considerable nervous expansion, have the whole olfactory nerve very much deve- loped ; and it is possible to measure the deve- lopment of the nerve in general according to its peripheric expansion.'

Comparative anatomy has been brought to bear against cranioscopical pretence. Allowing it is urged that the less complicated organisa- tion of the cranium in man than in animals, and its less dependence upon the facial bones, may give room for supposing that the size and form of the brain can be judged of from the external configuration of the skull ; yet this cannot be the case in the inferior animals, since their crania are often so formed that the greatest promi- nences of bone are answerable to those very

parts in which the brain is the least developed. ' In the lion, tiger, wolf, &c., the temporal bone is externally most depressed over the part where the subjacent brain is most fully developed ; and the zygoma of the bone is prominent in those animals, and extends over the part where it is least developed.' Granting, say the phrenolo- gists in reply, that such is the case, conceding that the cranioscopical difficulties may be greater in one race of animals than in another, yet wp find the argument good in all so far as it does extend, and where the brain's development i& displayed by the exterior shape and size of parts, thus will the doctrine be found illustrated even among the brute creation. The courageous ani- mals, Dr. Spurzheim tells us, even without re- ference to their size or kind, ' have the head be- tween and behind the ears very large.' This is an unfailing sign to distinguish or recognise if a horse be shy and timid, or bold and sure. The same difference is observed in game cocks and game hens in comparison with the domestic cock. ' Fighting cocks,' he adds, in another place, ' are less than dunghill cocks, and hares are stronger than rabbits, though less courage- ous ;' so that courage does not depend upon, or

show itself necessarily connected with, magnitude and strength.

The pathological weapons with which phreno- logy has been combated appear to be of the most formidable kind. How is it possible, consistently with your tenets of an organ for this and an or- gan for that faculty, that the brain should some- times be wounded, part of it torn away, exten- sively diseased, occasionally ossified throughout its whole extent, or dissolved in water, as in cases of chronic hydrocephalus ? How is it possible, the anti-phrenologists say, that all these things should occur and the manifestation of fa- culties continue through life, as if nothing had happened to one or several of your assumed or- gans, while upon your own principles these should not only be injured but actually de- stroyed ?

Your arguments, say their opponents, prove too much, and you must give up your own notion of the brain being at all necessary in the mani- festation of mind, before you can ground any valid objection to the phrenological doctrine, on the principle that morbid conditions of the cere- bral organ may exist without the lesion being always manifest by those marks which one should suppose must of course stamp the nature of the received injury. And in truth the pathologist and medical practitioner meet with a great deal in this way which is exceedingly mysterious and puzzling upon any hypothesis of cerebral condi- tion. Nor is it in the brain alone that these pa- thological puzzles are often presenting themselves ; and we have just popped upon a paragraph, in turning over the pages of Spurzheim's book, which we may as well extract as express the same thing in our own words — ' It is true,' says he, ' that very considerable injuries of the brain produce sometimes very slight perturbations in the manifestation of the mind, and that very slight injuries of the brain are accompanied often with the most violent accidents. But this also happens in other parts of the body. Some-

times very considerable abscesses are found in the lungs without a considerable preceding de- rangement in the respiration. Are not the lungs, therefore, the organ of respiration ? Sometimes ossifications are observed in the heart without any remarkable disturbance of circulation ; is not, therefore, the heart the organ of circulation ? Hence it is wrong to attribute to the wound, or to its seat, what must be attributed to the particular irritability of the sick person. Thus we may explain why often no accident results from a very considerable

wound of the brain ; namely, in patients whose irritability is very weak; while in very irritable persons, very slight wounds produce the most serious consequences.”

Then, again, the organologists urge the vague and marvellous way in which most of the tales of morbid condition of brajn are told.

‘ If,’ say Drs. Gall and Spurzheim, and their associates, ‘ all these observations were as correct as their authors state them to be, not only phre- nology would be subverted ab imo fundo, but it would be impossible to maintain that the brain performed any intellectual functions, or indeed any functions except that of terminating the columnar structure of man with a round nob, on which Quakers hang broad brimmed hats. Were the mass, said to be fibrous, converted to bone without a loss of any faculty, vital, animal, intel- lectual; were it really liquid and addled as it then might be, and no thought or action weakened, this surely is the irresistible consequence. But the vague and indefinite manner in which all these examples are produced save the head and its contents from the imputation of being useless appendages, and give phrenology a chance of a little longer life than its opponents wish. In or- der to ascertain whether an injury done to any material organ is followed by the disease of any function, the direct method is, to observe whether the function attached to that organ is diseased or not. Thus let loco-motion be supposed to de- pend upon the soleus maximus muscle ; to as- certain this we should observe whether, when this muscle is injured, the power of loco-motion be impaired or not. The same process should be followed with the brain ; if an ounce or two of the organ of cautiousness be carried away, as in one case it seemed to have been, we should not examine whether the faculty of music, or even- tuality, had been diminished or increased, but whether the poor patient were more or less cau- tious than he was before. What we do maintain is that our predecessors and opponents did not possess the due means of observing the facts which they have stated ; for, instead of looking to the faculties which we attach to the injured part above quoted, they endeavour to find there Hot merely powers which do not belong to those parts, but powers which we do not allow to exist in man as simple fundamental faculties, percep- tion, memory, judgment, imagination, 8cc. These indeed, as understood by the doctors of the old school, may very well survive a partial lesion of the brain.’

Another loop-hole, as it would be called by their enemies, do the phrenologists employ in endeavouring to get through the difficulties of cerebral lesion, unattended with corresponding

injury, namely, the duplicity of the nervous system with the brain at its head. Let the whole side, they say, of the head be involved in disorder, yet, if the opposite side maintain its integrity, the individual may continue to pre- serve and manifest the faculties of the parts without much observable difference in power, just as the faculty of vision is maintained after the loss of one eye. We are told, indeed, by Spurzheim some rather curious tales in illustra- tion of this principle, and such as, were we de- cidedly friendly to one side of the argument in the way of partizanship, we should be rather inclined to keep in the back ground of the phrenological picture. However, one of them which strikes us, and will strike our readers, as the most marvellous, is not given by Spurzheim himself, but by another anatomist of celebrity who knew nothing of the doctrine now can- vassed. Spurzheim says 'it is evident that both hemispheres of the brain may be in a quite dif- ferent or even opposite state. Tiedeman relates the example of one Moser who was insane on one side, and who observed his madness with the other. Gall attended a minister who had a similar disease for three years. He heard con- stantly on his left side reproaches and injuries ; he turned his head on this side and looked at the persons. With his right side he commonly judged the madness of his left side; but some- times in a fit of fever he could not rectify his peculiar state. Long after being cured, if he happened to be angry, or had drunk more than he was accustomed to, he observed in his left side a tendency to his former alienation.' ' Every organ, every member of the human body,' says our reviewer, ' is double, and has long been acknowledged to be so. The fact has been doubted only since it became necessary to oppose phrenology.'

In the few words we have to spare on the metaphysical part of the argument, we must get the reader to revert to some of the quotations which have been introduced at the threshold of the present disquisition, and call his attention es- pecially to that extract from Dr. Gall which traces the first conception of the phrenological scheme from the difficulty he (Gall) found in explaining the fact, that some boys whom he knew to be his inferiors in many things, were vastly his supe- riors in others ; these instances are presenting themselves in abundance every day before per- sons who take the smallest pains to make any observation on character, and as long as we ourselves can recollect thinking on the subject of our own consciousness, its modes and mani- festations, we remember to have been impressed with this difficulty on the hypothesis of general powers and leading fundamental faculties.

Were memory, general memory, a simple fun- damental faculty, these partialities, if we may so say, which so frequently occur in the

manifesta- tion of its power would not be perceived ; for be it observed it is not only those things which highly gifted individuals do not care about that they do not remember ; but the very impotency of the attempt to recollect seems sometimes proportioned to the desire in persons to recal the impression originally made, while other

things, respecting which they are comparatively indifferent, rush upon the attention, become parcel of the mind, and are susceptible of recal by the slightest effort. ‘ How is it,’ said Gall when a young boy to one of his school-fellows, ‘ that you contrive to find your way so easily through intricate places, through which you have only once been * ‘ How is it,’ retorted his companion, with the same feelings of surprise, * that you contrive not to find yours V

In respect to judgment the diversity is pre- cisely the same, and even perception itself shall differ in a measure quite inconsistent with the assumption of general quantum of intellect in the perceiving person. To talk of accidental circumstances directing or creating an ear for sounds were surely to talk at random, and there is now living a prelate whose perception of music is of the nicest and most critical kind, but who is so deficient in the faculty of distin- guishing colors that it constituted one of the pastimes of his children, when they were young, to place bodies before his eyes of different hues, that they might be amused with his mistakes ; and yet this individual has, or had at the time we are speaking of, strong and correct vision. We recollect the late Dr. Gregory used to sur- prise his pupils by saying in his lectures, that what seemed evident to all others almost, was far from being so to him : viz. the fluctuation in abdominal dropsy ; and, were we to add one instance to another as they occur to our recollec- tion, we might fill page after page with recitals of what after all would but confirm a principle, or rather establish a fact, that stands in no need of confirmation or substantiating.

What do they prove ? is the only matter that becomes a question ; and to this it is difficult to give a reply that shall satisfy the enquirer whose object in putting the question is to find the truth at any rate ; the phrenologists urge that the facts are inconsistent with those theories of mind which suppose perception, memory, judgment, imagination, are abstract and simple and funda- mental faculties ; and it is a curious fact that one of the most able reasoners who ever ven- tured into the regions of metaphysics has been successfully engaged

almost simultaneously with the labors of the phrenologists in opposing these assumptions and abstractions even of the com- mon sense school of metaphysics. Dr. Brown, versus Reid and Dugald Stewart, is almost the same thing as Drs. Gall and Spurzheim, versus the old metaphysico-physiologists, only that in the former case organology is not adverted to, while in the latter it is fons et origo omnium.

The unity of consciousness and the necessity of some pervading principle to insure personal identity are the principles which the anti-phre- nologists assume to be quite inconsistent with the exercise of those several perceptibilities which are assumed on the other side ; and they con- tend that perception, and judgment, and memory, must be regulated by certain laws, without refer- ence immediately to the thing perceived, or judged of, or recollected, otherwise man would indeed be a bundle of inconsistencies, and no to- tality of thought, of feeling, of consciousness, could ever have place. Something like a state-

ment of this kind will be found in an extract which we have already submitted from Mr. Abernethy's pamphlet.

Insanity has been urged both by the phrenolo- logists and the anti-phrenologists as decisive in favor of their respective causes. How, will the latter set of men urge, can you make tally with your wild assumptions of separate organs for separate faculties the fact that the most trifling circumstance of excitation, that is trifling in it- self and only formidable in its connexion and consequences, will prove sufficiently potent to drag steady reason, precipitately and in a mo- ment, from its seat, and place in its stead the wildest, vagaries, and most unstable principles of thought and action. 'II ne faut', says a French writer, ' qu'un atome deplace pour te ravir cette intelligence dont tu parois si fier;' and even this displacement of an atom as a primary cause does not seem to be in all cases necessary ; for mere mental circumstances will at times avail for the production of the highest and most perma- nent derangement.

Dr. Reid relates the case of a young lady who was one morning requested by her mother to stay at home ; notwithstanding which she was tempted to go out. Upon her return to her do- mestic roof, she found that the parent whom she had so recently disobliged had expired in her absence. The awful spectacle of her mother's corpse, connected with the filial disobedience which had almost immediately preceded, shook her reason from her seat, and she continued ever afterwards in a state of mental derangement. Hill, in his treatise on insanity, speaks of a young lady, who, on her way to the post-office to

enquire for letters from her lover, heard of his having suddenly died or fallen in battle (we quote from memory, and without much of the fa- culty of memory for things) : but the consequence was confirmed insanity, and for years to come she went daily to the same post-office with the same fruitless enquiry.

Now, in what way can these sudden impulses with all their dread and complicated results be brought to harmonize with the position that as- sumes one organ for one faculty, and another for another, to a very large amount? Here is a blow hitting merely the thoughts and affections, but at the same time hurling to the dust all your twenty, or thirty, or forty organs, with all their appurtenancies and peculiarities.

Stop, say the phrenologists in reply, while we argue for the existence and operation of the several organs and faculties, we maintain that, for harmony of intellect and consistency of cha- racter, there must be an harmonious relation the one to the other, and that the temporary or per- manent abolition of one or another will set all going wrong, just as the taking away a part or piece of complicated machinery shall necessarily interfere with the adjusted and regular motion of the whole. That he who says the organ of ama- tiveness, must be sliced, or cut, or torn, or in- flamed, or even excited or depressed before a person can go mad from love, assumes some- thing which our theories do not permit him to assume. It is quite enough that any other organ or organs be deranged, either in their structure

or functions for this effect to to be produced ; but the turn that the madnesss shall take will most likely be directed by that passion or senti- ment which happened to be uppermost in the mind or brain of the individual at the moment when the impulse that overturned the reason made its rush upon the frame. It is further main- tained by many of the phrenological school, and they assert that actual observation both before and after death shows the organ in many cases to be the seat of the morbid action; whose healthy workings give a character to the indivi- dual, but whose disordered condition imparts a character to the insanity.

With respect to the objections on the score of morality which have been propounded, the organ- ological advocate enquires, Will you, can you deny, that in two individuals, virtuous inclina- tions, or vicious propensities are greater ab ori- gine, and that consequently the vice of

the one, and the virtue of the other, are in some measure constitutional ? and whether does it matter that such inherent quality be traceable to brain for- mation, or be in some other inexplicable way connected and interwoven with the body and mind of the individual ? It matters, rejoins the anti-phrenologist, in this way ; that in one case, though the disposition or natural tendency to vice be great, there is connected with it a per- ception and allowance of virtue, and a freedom of will in choosing or refusing to listen to the commands of virtue ; while, on the other, neces- sity and organisation are the commands to be obeyed, and if the organ of murder be of a given magnitude and strength it is that, and not the man, that plunges the dagger of death into the bosom of man. No such consequence by any means follows from our doctrine, say the sup- porters of phrenology; for besides that it is form- ing an erroneous estimate of our principles to suppose that magnitude of one organ determines the character, unchecked and unmodified by other sentiments and motives, the murderous act should be no more charged upon the organ of murder in our system, than it should be placed to the account of tendency or disposition in yours. All things flow from the will of the Almighty, so that, at least, without it nothing can be- Now, whether his pleasure be that good and evil, that the mingled nature of man, should be inherent in human organisation, or should exist independently of it, the fact of their exis- tence is constant; the means alone are different. Whether it be by the fibres of his brain, or by his essential nature, that the created being be- comes the perpetrator of harm, harm is not more or less his act — his lot. Whatever is, is by the will of God. If the will of God be fate ; every doctrine which admits a God, endowed with will, as ruler of the universe, is fatalism ; and divines and moralists are fatalists as we are. If too the influence of the Creator over human thoughts and actions be fatalism, it is fatalism whether exercised by spirit or by matter.

Whether then the system of phrenology leaves the doctrines of fate and necessity just as it found them, we leave for others to determine ; we shall merely add, that alV systems which endeavour to

reconcile the necessity of actions with the free will and responsibility of man are necessarily in thrir nature nugatory. All men sufficiently know the fact, whether they be materialists or immaterial ists, organologists or mentalists ; but all ought at the same time to know that every other appeal than that to ‘ the man within the breast,’ to the con- sciousness and conscience of the individual, is worse than nothing. No organic or anti-organic speculations will do; no fearful presentiments of the consequences of truth being ascertained in any way, and to any extent, will avail ; no immaterial physiology, forced

from an university professor, by virtue of his office, will answer ; no, it must be by alarming the conscience, and resorting to the motives of love and of fear, by letting the physiological champions fight their own battles, and by wielding other weapons than those with which an earthly warfare is waged, that the individual or individuals can expect to succeed who stand as messengers of peace or of woe between man and his Maker. ‘ All theory,’ says Dr. Johnson, ‘ is against the freedom of the will ; all experience for it. We know that we are free, and there’s an end of it.’ Without pro- fessing to advocate phrenology on this, or indeed on any other ground, we have thought it right to say thus much on the score of alleged conse- quences ; and we think it right further to state, that, whether consistently or not with their posi- tions and tenets, the phrenological writers and teachers all along urge the vast importance of aiming to correct and to combat vicious specula- tions.

We will add, although not ourselves unquali- fiedly disciples of the cerebral philosophy in question, most of our friends who are so, are at the same time men who as unhesitatingly avow their respect for, and confidence in religion as a source of morality. We recollect a near rela- tion returning from Scotland some time since with a simultaneous conviction that the doctrines taught by the phrenologists, and the doctrines taught by Dr. Chalmers, were, the former founded in nature and truth — the latter, the truth itself. By this association of inferior and higher things, it will be sufficiently evident that we mean nothing disrespectful ; our only aim and wish being that of freeing a system, which may or may not be correct, from the unmerited obloquy of some who malignantly, and therefore improperly, oppose it.

But it is time to come to our last particular, that of the collocation of facts ; and here one might imagine the matter would end. By this appeal one should suppose the question would speedily be set at rest, and the examiner would it might be thought succumb to testimony who should refuse to be convinced by argument. Unfortunately however, facts in philosophy, that is in disputed philosophical creeds, are like facts in medical science, convincing or not, according to the con- ceptions and belief of the persons who are called upon to witness them. It will be amusing, and we should hope instructive, to the reader to have presented before him the same example from an enemy and a friend to the cause of craniology, in the instance of an individual whose history

and fate made but a very short time ago consi- derable noise in the world : we mean Thurtell, the murderer of VVeare.

‘ It is really impossible to look at the deve- lopment of Thurtell,’ says Mr. Stone taunting- ly, * and seriously believe he murdered Weare ; the poor man must surely have been innocent, and executed by mistake, for he possesses the organ of adhesiveness, which disposes to ‘ fer- vour and constancy of affection ‘ very large, and it is unlikely, with such a development, that he would have murdered his friend ; that of ve- neration which gives rise to ‘ religious senti- ments,’ and ‘ respect and deference to persons ‘ large ; and benevolence, the source of every ge- nerous feeling, very large. How is it possible, therefore, to reconcile these indications with his real character ? The difficulty is solved by the phrenological report, which shall speak for it- self. ‘ The murder committed by Thurtell was a predetermined cold-blooded deed ; nothing can justify it. Revenge against Weare for having gambled too successfully, and, as he imagined, unfairly with him, prompted it ; but there is every probability that Thurtell laid the unwar- rantable unction to his soul, that he would do a service to others by destroying Weare. He con- sidered Weare as a complete rascal, one who had robbed many as well as himself, and one who, if he lived, would have robbed many more.’ Thus the organ, continues Mr. S., is made to excite the organ of murder, and the phrenological deduc- tion is characteristic of all the beauty, excellence, and purity of its philosophy.’

Now let us hear what the reviewer in the fo- reign journal advances on this same fact of Weare s murder, and the phrenological circum- stances connected with its perpetrator.

‘ Our adversaries,’ he says, ‘ have brought this incident forward to overwhelm us under the many weights of phrenological, moral, and reli- gious perverseness. Our doctrine has been re- proached with finding in the head of the assassin Thurtell a large development of benevolence, and thus making him out to be a harmless, good-na- tured person, and not the atrocious, cool-blooded murderer, who could brood for days and nights over iniquity.’

‘ Surely the persons who make such an alle- gation as this must have been scared by their dread of phrenology out of all they ever knew of human nature, if they cannot perceive that the same man does at one moment an act of kind- ness and at another an act of cruelty ; that he is at one moment just, at another unjust. What was Augustus persecuting and proscribing, and Augustus emperor? What was Nero a stripling, and Nero when he saw the city blaz- ing ? What is every

man whom we have ever known ? Is there not a true but common cant about the mingled nature of the human species ; about the good and evil of our hearts, which shows the inordinate absurdity of such a remark, and might dispense us from all further answer? But let us examine facts, and see, not from his head but from his biography, what Thurtell was :

‘ Thurtell being applied to in behalf of a friend »n distress, drew out from his pocket his last re-

maining half sovereign, and said ‘ give him the half of this ; but no, he wants it more than I do, he is sick, give it him all.’ He once incautiously caused a quarrel between two friends, and shed tears of tenderness over their reconciliation. His kindness to Hunt excited as much gratitude as Hunt was capable of feeling. His affection towards all his family was extreme, and his at- tachment to his friends inviolable ; his general character when lieutenant on board the Adamant in the Leith roads, was that of a dashing, thought- less, good-hearted officer. Yet from his early youth he was irascible, and what was called a murderous shot, a very dare-devil, a kind of prize-fighter, a notorious liar, a dupe of all his gambling associates ; and he became a pre-deter- mined cold-blooded murderer. These are facts ; and let us now put different systems to the test by endeavouring to explain them : — Unity of mind, its indivisibility into various faculties, feelings, and propensities, can do it nearly as well as the indivisibility of the solar ray can explain the prismatic spectrum and the rainbow. This system needs not then much examination, and re- course must be had to some which admit a plu- rality of faculties. But which of these must be preferred ? One that is hypothetical, or one which is founded in fact ? All are subject to the same objection of admitting contradictory sentiments in man ; and if phrenology falls by this objection all the rest must fall ; and so indeed must facts. Whatever system does not admit a sentiment, or a combination of sentiments, to account for Thurtell’s irascibility, his benevolence, his pug- nacity, his attachment, his lying, his firmness, his tenderness, his cruelty, is defective. Let those who have leisure examine whether phrenology does not effect this more completely than all the others put together, and better than any that could be fabricated by this means. In truth no meta- physics but those of phrenology could account for the apparent contradictions in that man’s mind ; none which reject, as fundamental princi- ples of human nature, benevolence, combative- ness, attachment, destructiveness, secretiveness, firmness, can explain the facts of his life and character. If his charitable, generous acts be not totally denied, how would unity of mind recon- cile them with the murder he committed ? But the doctrine of the phrenologist says he had large

benevolence, and this was sometimes very active ; he had large combativeness, large de- structiveness, and, when circumstances roused these into action, they were the more imperious because they were aided by a strong development of all the inferior propensities. The cerebral organisation of Thurtell, compared with his life, testifies as strongly in favor of phrenology as facts can do ; and if the world had been told by any other tongue but that of our science that he, or any other murderer, had often done kind actions, the thing would have appeared quite simple, quite in conformity with daily observa- tions. But the subterfuges which men take to evade conviction, when they are resolved that they will not be convinced, are wonderful.'

Such are the opposite accounts and opinions respecting the same fact or occurrence, as na—

rated by an enemy and a friend to the philoso- phy of cerebral organisation ; and, if we extend our collection and contrast from one into many instances, we shall still find the same discre- pancy of sentiment, the same variation of feeling, as to the strength of facts, in aid of the cause. Non nos componere lites. Let the reader again read and judge for himself.

' Viewing phrenology,' says Mr. Stone, ' sim- ply as ' a science of facts,' it is quite obvious that the facts which indeed constitute its very existence should be numerous, striking, and unequivocal; they should not be ' few and far between,' with ever and anon a confusion and doubt as to their identity ; they should form a strong and irresistible body of evidence, sufficient to stifle the objections of the most scrupulous of sceptics. The doctrines of phrenology having been for many years industriously promulgated, in 1828 six gentlemen of the modern Athens, who, professing themselves of the phrenological system of Drs. Gall and Spurzheim, resolved themselves into a society for the purpose of ' col- lecting facts and preserving views that might enlarge the boundaries of the science.' Let us therefore enquire what has been their success? After the example of other more ancient and learned bodies, they proposed publishing their transactions ; — a work which, if there had been the slightest truth in phrenology, would have been undoubtedly very interesting and valuable. Not so, however : the ' Transactions of the Phre- nological Society,' ushered into existence beneath the auspices of the most zealous and sanguine of its enthusiasts, arrived only at the conclusion of the first volume, which

soon floated down the red sea of literature, to the trunkmaker's warehouse, unnoticed, unreviewed, unlamented ! Whether it sunk into oblivion from the heaviness of its metaphysical disquisitions, or whether it was discontinued in consequence of the edi- tors having been gravelled for lack of matter, may yet be a problem to the publisher ; but, certain it is, this work, of upwards of 400 pages, contains only eight phrenological facts, which, by the date of the institution and its transac- tions, appear to have been four years in accu- mulating. Thus died, in the first years of its existence, the ' Transactions of the Phrenological Society;' and the proceedings of this learned association have since only been transmitted in ' shreds and patches' to the phrenological jour- nal, within the sybilline leaves of which we find only a heterogenous mixture of the most inco- herent intellectual wanderings, and the coarsest personal abuse. This work has been published quarterly for the last five years. It has lately been supported by the principal phrenologists, and, after all, contains only twenty reports of cranial measurements ; so that notwithstanding the great outcry that has been raised of the many evidences in favor of phrenology — notwithstanding the zeal of its advocates and their united perseverance — they have in this country only been enabled to concentrate within the pages of their leading works twenty-eight facts in support of their thirty-five organs.' ' And even these,' our pamphleteer adds, ' being selected partially, and measured only by the phrenologists themselves,

cannot be admitted as, strictly speaking, i:npa: tial evidence.'

Now let us have an extract from the phreno- logical champion we have so repeatedly quoted in reference to this question, of whether facts speak for or against the system ?

' If the Edinburgh Review,' says the foreign quarterly reviewer, ' has not been able to prevent the public attention from being directed to phre- nology, and convinced by truth, still less has ir. been able to arrest the accumulation of facts ; and the fifteenth number of the Phrenological Jour- nal (page 467) contains, what in a certain slang dialect would be called such a plumper, that no- thing softer than the reviewer's fact-proof cra- nium could resist it : Mr. Deville's visit to the convict ship England, bound with 148 prisoners for New South Wales. This zealous practitioner, after examining the convicts, gave a memoran- dum of the inferred character of each individual, and of the manner in which the propensities of each were likely to manifest themselves. The most desperate were accurately pointed out, and one man in particular, Robert Hughes, was noted as most dangerous on account of his ferocity and dissimulation. A mutiny, at the head of

which was Hughes, was on the point of breaking out, and the conduct of every prisoner coincided most accurately with Mr. Deville's predictions. The records of the whole transaction are now officially in the victualling office, and the following is extracted from a letter of Mr. Thomson, surgeon to the ship, to whose care the convicts were committed.

' I have to thank you for your introduction to Deville and phrenology. Deville is right in every case but one, Thomas Jones, but this man can neither read nor write ; and, being a sailor, he was induced to join the conspiracy to rise and seize the ship and carry her to South Ame- rica, being informed by Hughes that he would then get his liberty. Observe how Deville has hit the real character of Hughes, and I will be grateful to Deville all my life, for his report en- abled me to shut up in close custody the mal- contents, and arrive here not a head minus, which, without the report, it is more tharv, pro- bable I could not have done. All the authorities here are become phrenologists.'

' Now,' continues our reviewer, ' the man who does not admit that to be a science which only errs but once in 148 cases, must have little ex- perience of what human science is.'

And thus stands the pro and con of fact, with the comments on either side, as far as our pages can afford space to follow them. The contra- diction you constantly hear in the narration of private circumstances is also conspicuous. The writer not long since heard a violent enemy to the cranioscopical scheme — a man of celebrity in literature — state that Dr. Gall, in taking a gauge of his cranium, discovered the manifesta- tion of almost the only two dispositions he was conscious of being entirely destitute of, namely, the love of order, and the love of music. We lately heard that an individual, whose propensities have been proverbially amative, was declared by Mr. Deville to be without the organ of amative- ness ; and, in turning over the pages of a Trea-

tise on Insanity, which has been sent to us, while writing this article, from our friend Dr. Burrows, we rind the following note.

' When Dr. Gall was in this country he went, in company with Dr. II . to visit the study of the eminent sculptor Chantrey. Mr. C. being at the moment engaged, they amused themselves in viewing the various efforts of his skill. Dr. Gall was requested to say, from the organs ex-

hibited in a certain bust, what was the predomi- nant propensity or faculty of the individual. He pronounced the original must be a great poet. His attention was directed to a second bust; he declared the latter to be a great mathematician. The first was the bust of Troughton, the eminent mathematician ; and the second that of Sir Walter Scott!'

Coincidences hare indeed, in our own obser- vation, been confessedly much more common than seeming exceptions to the rules of judging, and the phrenologist would say that the cranios- copists might err, or that the totality of the de- velopment in the instances of apparent error had not been sufficiently taken into the account. Notable examples, too, have been given of the well known principle that men say and think sometimes with regard even to supposed facts, without being themselves always quite conscious of it, greatly according to their desires and presentiments, and no one can expect to come to a satisfactory conclusion without judging, observing, and feeling for himself. There is one difficulty which always appeared to the writer to be great in reference to the full reception of the craniological creed, and, if he recollects right, he stated it in his former article on the subject. But Dr. Spurzheim and Mr. Deville assure him the objection is without validity. It is this, that suppose an individual from accident, or any other cause, were to alter the whole course of his feelings, and change thoroughly the modes in which he exercised his intellect, ought not the manifestation of such moral and mental revolution to be evinced by the form of his cranium, or would not cranioscopy, in respect to this person, be necessarily and woefully defective ? We have since, we say, been told, and we have had skulls measured before us, or rather casts of skulls, proving that the alteration in habit and study comes at length to bring with it an actual change of cerebral form, as displayed by the exterior. Casts of crania have been taken of the same in- dividuals under these different circumstances of time and pursuit, and the shape has come to vary with these varying circumstances.

Upon the whole, then, the writer of this paper is compelled, and the reader may if he pleases suppose reluctantly, to confess, to a certain ex- tent, his conversion to phrenological doctrine. Our belief, however, we care not to avow, has a little of the Abernethyan cast about it ; we think that the cranioscopical < mode of judging of one another to be unjust, and likely to be frequently productive of erroneous and injurious conclusions.' In this feeling we may indeed be somewhat borne out by those phre- nologists themselves who are the most legi- timate and scientific ; for they complain that they are much misunderstood by those who talk

of this man having the order of murder, and that of amativeness, in the way that they would talk of the color of his horse being bay or brown.

Let us further be permitted to say, that in spite of our concessions as to the unity and indi- visibility of faculty, we must with the candid and acute individual just mentioned suppose a something in the manifestation of mind, and in the workings of moral feeling, beside percep- tion in the organs themselves ; or rather we must suppose a general perception, or a general some- thing, giving direction, and excitation, and union, to the organic masses, each of which, under some such governing principles, acts, and is manifested, according to its own peculiarities. How all this takes place we do not pretend for one moment to divine, nor do we think it easy to say how- much of cause and how much of consequence there is in the power assumed ; but without a cerebral base for the organs to rest upon, or rather without a connecting link of the whole frame under which their several and specific functions are subordinated, sanity could in no instance be predicated of any individual ; but the world would indeed be one vast Bicetre for the wander- ings and visions of maniacs !

We recollect while pursuing our antiphreno- logical argument to have stated that the orga- nists are in some sort wrong by assuming that an individual gets relief after being fatigued with one species of study, by changing it for another, giving thus a proof of separate organs being called into play exclusively when the mind is applied to one particular object. It was there said that on this principle the transition of one language to another could not afford that relief which experience proves it does; but that the student would bring with him the same jaded attention to the new as he had given to the for- mer language. No, there is something general and leading beside particular and subordinate, and organology would appear to be wrong if it refuses to recognise that something.

We think it right just to state that the point is very nice in regard to practical judgment and conduct, founded on early manifestation of cere- bral development. Education is both morally and intellectually exceedingly powerful in breaking down the strong holds of constitutional tenden- cies to vice and idleness; and, where the bias by nature is bad, there it behoves the guardian of destiny, in the instance of any individual, to be particularly alert; but let us not think too presumptively or largely of the power we possess in the counteraction now implied; and let us, while we are urging on one faculty or propensity, or repressing another, be careful that we do not give unnecessary pain to a sensitive mind on the one side, by constantly

reminding him of talent of which he is deficient, and drawing from the example of partial dulness the inference that the whole character is dull. Then, again, let us be careful on the other hand, against yielding to or- ganic manifestations ; for some degree of power exists even in the least developed of the organs, and the phrenologists, as we have seen, assume, and admit, the vast power of particular exercise in altering even constructive peculiarities.

One great good of th« principles, as it *p-

pears to our conception, is that of making us juAge more charitably, and therefore more fairly, respecting the vices and deficiencies of those with whom we associate. We are too apt to make our own condition the measure by which we judge of others, not taking into account the maxim of the Great Teacher, to ‘ pluck out first the mote which is in our own eye, and then we shall see correctly that which is in our brother’s.’ This feeling and false conception of character and disposition extends itself mischievously even into minute concerns. The writer while riding, for instance, through beautiful scenery, or called to admire the magnificence of architectural structure, or engaged with interest in the obser- vation of human character, has often been irri- tated almost to anger at the want of coincidence of feeling which he has found expressed with reference to the same circumstances and objects by those who are nearest and dearest to him, and he candidly avows that, since he has been more in the practice of employing the phrenological medium through which to view things, he has been less disposed either to wonder at, or be ir- ritated by, want of unison in those tastes and perceptions which he was formerly too much in the practice of considering in manifestation or absence, as implying the manifestation or ab- sence of sentiment and feeling generally.

We did not, it will be said, require a phreno- logical messenger from heaven to tell us that diversity of character exists and is displayed by diversity of persons; this was before sufficiently evident to every one who had the power of ob- serving— true; but there is a wide difference be- tween the reception of a truth as a general principle, and that truth being forced upon the attention by mediate and positive evidence ; be- sides, we do not know whether the mode in which the phrenologists explain character does .tot more directly and demonstratively, and ad rum, apply to the purpose of excuse and

pallia- tion ; but we should be fearful of stretching the argument too far in this direction, lest we give room for the adversaries of the doctrine to reiter- ate their charge of fate and necessity. We hold, and whether we are phrenologists or not in this holding let others say, that no organic tendencies could palliate the crime for which Thurtell died ; and we further hold that all the ship's crew re- cently examined by Deville were culpable in yielding to vicious propensities, and might have been made, for the most part, good members of society by a due inculcation of correct principles, and a steady determination to resist the force of habit and example. But after a certain time, and after yielding to bad feelings to a certain extent, the awful sentence comes out, with dreadful application to individual cases, ' He that is filthy let him be filthy still.'

As it regards the anatomical, and physiologi- cal, and metaphysical pretensions to novelty and correctness which the framers of the phrenologi- cal creed put forth, we are neither among those who either think every thing has been done by Gall and Spurzheim, or those on the other side who maintain that their pretensions are totally without foundation. A celebrated physiologist on the continent is said to have avowed that ' he VOL. XVII.

found nothing in the system new that was true, and nothing true that was new ;' but it appears to us that the rery anxiety evinced by its op- posers to prove that the fibrous condition of the brain, and the best mode of unravelling and displaying its several parts, had been anticipated by others, is proof that the plan itself is based on correctness; at the same time we think both Gall and Spurzheim may have erred in assuming discovery and novelty too largely, and in talking rather too contemptuously of their contempora- ries and predecessors. On the metaphysico- physiological creed of these men we have alreadj had occasion to express our sentiments in several parts of the present discussion, and many of oui readers will think we go to a sufficient length, although we might a little stop short of the sweeping eulogium of Dr. Elliotson, that no metaphysics are worth a moment's attention ex- cepting what are found in the works of Dr. Gall and Dr. Thomas Brown.

We cannot, by the way, but regard those alle- gations as false and idle which charge the phre- nologists with plagiary. The intimations which are found in the writings, whether ancient or modern, respecting locality of faculty, are of the most vague and unmeaning kind ; and it is of importance to recollect that the suggestions which passed first across the conception of Dr. Gall did so at the time almost of his infancy. The curious, however, may feel a gratification in seeing some

Italian lines pointing out three di- visions of the brain, which are to be met with in the Tuboretto of Brunette Latini, the preceptor of Dante; but, if this is an anticipation of phre- nology, then Servetus certainly was robbed of the credit due to him by our countryman Her- vey, and the doctrine of gravitation was taught in the mythological reveries of the ancient Hindos- tan priesthood.

Vel capo son tre celle Ed io diro di quelle Davanti e lo intelleto E la forza d'apprendere Quello clie puote intendiae. In mezzo e la ragione E la discuzione Che scheme buono e male. E lo terno e Piguale Dirietro sta congloria La valente memoria Che ricorda e retien6 Quello ch' in essa viene.

Phrenological physiology, it may be finally said, such as it is, is obnoxious to no condem- natory comment on the score of cruelty. On this head our sentiments are likewise perti- naciously and provokingly intermediate. We feel no disposition to join in the chorus of those who indiscriminately cry shame at hearing of any thing like experiments on animals, who shudder with horror at the idea of becoming ' learned in physiology at the expense of hu- manity,' and, while they dwell with gout upon the delicacies of game, and talk with delight on the tenderness of a hunted hare, oppose their feelings and their virtues to all examinations ou points of physiology which imply the infliction of a moment's pain on the inferior animals ; but

we must consider that some of these trials have been of rather too wanton a nature, and that tor- ture and immolation have too frequently been resorted to for proving what is insusceptible of proof in this way, and, if proved, of little avail.

Cordially therefore do we join in the senti- ments and statements contained in the following paragraph from our much admired, and so much quoted, reviewer, and with this extract do we at once take leave both of him and our readers.

' One claim at least is to be made in favor of our science, and this distinguishes it from all the branches of physiology which have been culti- vated to this day ; it has cost no blood : not a single act of cruelty has dishonored it. While Messrs. Magendie, Flourens, and others, have been torturing animals to teach their pupils but

little, and repeating their tortures to learn that little over and over again, our masters have not mutilated a single insect while alive, or shortened the existence of a single being, to have its brains a few days sooner under their scalpel. Yet phre- nologists might feel as much interest in scraping away a piece of cautiousness, and then observing how dauntless the animal would become; or of excavating an organ of locality, to make him lose his way, as any physiological butcher could do ; or they might be as curious as Vesalius was, to take a peep into the living organs of some human subject. But they have abstained from every act of cruelty, and shown that anatomy and physiology may receive some of its best ad- ditions without becoming inhuman.'

PHREN'SY, n. s. \ FT. phrenesie ; Gr.

PHRENET'IC, adj. & n. s. J 0p£vmc. Madness ; franticness : often written frenzy. See FRENZY. Phrenetic is mad ; frantic : as a noun substan- tive a mad person.

Many never think on God, but in extremity of fear, and then, perplexity not suffering them to be idle, they think and do as it were in a phrensy. Hooker. Demoniack phrensy, moping melancholy.

Milton.

Would they only please themselves in the delusion, the phrensy were more innocent ; but lunaticks will needs be kings. Decay of Piety.

I see so many kinds of phrensies in the world, and so many seemingly wise brains taken with them, that I much doubt whom I may be sure to account free, from either the touch, or at least the danger of this indisposition. Bp. Hall.

Phreneticks imagine they see that without, which their imagination is affected with within. Harvey.

What cestrum, what phrenetic mood, Makes you thus lavish of your blood 1

Hudibrat.

The world was little better than a common fold of phreniticks and bedlams. Woodward's Nat. Hist.

Phreruy or inflammation of the brain, profuse hamorrhages from the nose resolve, and copious bleeding in the temporal arteries.

Arbuthnot on Aliments.

PHRICIUM, an ancient town near Thermo- pylae. Livy, xxxvi. c. 13.

PHRONIM A, the daughter of Elearchus king of Crete, wife of Polymnestus, and mother of Battus, the founder of Cyrene.

PHRYGANEA, a genus of insects having the following characters : — The mouth is without teeth, but furnished with four palpi: the stem- mata are three in number ; the antennae are fili- form, and longer than the thorax. The wings are incumbent ; the under ones are folded. The genus has been divided into two sections ; the first of which is characterised by having two truncated setae at the extremity of the abdomen, resembling the beard of an ear of corn ; while the second has the abdomen simple, or without appendices. The tarsi of the feet of the first family consist of three articulations ; those of the second are composed of five. The wings of this section decline from the inner margin towards the sides, so as to resemble the ridge of a house.

and are curved or turned upwards at their ex- tremity. ‘ This insect/ says Barbut, ‘ before it becomes an inhabitant of the air, has lived under water, lodged in a kind of tube or sheath, the inward texture of which is silk ; outwardly co- vered with sand, straws, bits of wood, shells, &c. When the hexapod worm is about to change to a chrysalis, he stops up the opening of his tube with threads of a loose texture, through which the water makes its way, but prevents the ap- proach of voracious insects. The crysalis is covered with a thin gauze, through which the new form of the insect is easily discerned. The phryganea, on the point of changing its element, rises to the surface of the water, leaves its tube, rises into the air, and enjoys the sweets of the country, flutters upon flowers and trees, but is soon called away to the water- side to deposit its eggs : whence proceed its posterity. These aquatic larvae are often found in stagnating wa- ters, where they wrap themselves up in the water-lentil, cut out into regular squares, and fitted one to another. Trouts are very greedy of these larvae, which is the reason that in some countries, after stripping them of their coats, they make use of them for fishing-baits.’ There are various different species of the phryganea; but, except the phryganea bicauda and striata, they do not materially differ from one another, except in size and color.

1 . P. bicauda is of a deep dark brown color, having a single yellow longitudinal band running across the head and thorax. The legs are of a brown color, as are the antennae ; which are also long and filiform. Two brown threads, almost as long as the antennae, terminate the

abdomen ; whence the name bicauda, or two-tailed. The wings, which are about a third longer than the body, are veined with brown fibres, are narrow at the top, broad below, and are as it were stuck upon the body ; which they infold, crossing one over the other. This insect, which is met with on the bank of rivers and standing waters, car- ries its eggs in a cluster at its abdomen, like some spiders.

2. P. striata is a large species, of a dun color except the eyes, which are black, and has a con- siderable resemblance to the phalaena in the car- riage of its wings. The antennae are as long as

the body, and are borne straight forward. The wings are a third larger than the body, having veins of a color rather deeper than the rest. The feet are large, long, and somewhat finny. Mr. Yeats tells us that the perlse of Geoffrey, and phryganeae of Linnaeus, do not differ generically. It appears, however, from Yeats's experiments, that the phryganeae remain longer in the chrysa- lis than the perls.

PHRYGANE.&, THE LESSER, very much resem- ble the tineae ; but, upon examining them with a glass, the former will be found to be covered with small hairs instead of the scales which adorn the wings of the latter.

PHRYGES, a river in Asia Minor, dividing Phrygia from Caria, and falling into the Hermus. — Paus.

PHRYGIA, a country of Asia. Whence it derived its name is not certain ; some say it was from the river Phryx (now Sarabat), which divides Phrygia from Caria, and falls into the Hermus ; others from Phrygia, the daughter of Asopus and Europa. The Greek writers tell us that the country took its name from the inhabit- ants, and these from the town of Brygium in Macedonia, whence they first passed into Asia, and gave the name of Phrygia or Brygia to the country where they settled. Bochart is of opi- nion that this tract was called Phrygia from the Greek verb typvytiv, to burn or parch ; which, according to him, is a translation of its Hebrew name, derived from a verb of the same signifi- cation. No less various are the opinions of authors as to the exact boundaries of this country ; an uncertainty which gave rise to an observation made by Strabo ; viz. that the Phry- gians and Mysians had distinct boundaries, but that it was scarcely possible to ascertain them. The same writer adds that the Trojans, Mysians, and Lydians, are, by the poets, all blended under the common name of Phrygians, which Claudian extends to the Esidians, Bithynians, and lonians.

PHRYGIA MAJOR, and indeed all Asia Minor, as lying in the fifth and sixth northern climates, was, in ancient times, greatly celebrated for its fertility. It abounded in all sorts of grain ; being for the most part a plain country covered with a deep rich soil, and plentifully watered by small rivers. It was in some parts productive of bitu- men and other combustible substances. It was well stocked with cattle, having large plains and pasture grounds. The air was anciently deemed most pure and wholesome, though it is now in some parts thought extremely gross, great part of the country lying uncultivated. In Phrygia Major were anciently several cities of great cele- brity, such as Apamea, Laodicea, Hierapolis, Gordium, &c. There were also some famous rivers, such as Marsyas, Meander, &c., now called Madre or Mindre. See MJEANDER. The Phrygians accounted themselves the most ancient people in the world. Their origin, however, is extremely dark and uncertain. Josephus and St. Jerome say that they were descended from Togarmah, one of Comer's sons ; and that they were known to the Hebrews under the name of Tigrammanes. The heathen authors derive them from the Brygians, a people of Macedonia. But

this is a conjecture totally unsupported, except by the similarity of names. Bochart thinks that the Phrygians were the ofi'spring of Gomer, the eldest son of Japhet ; the word Phrygia being the Greek translation of his name. Jost-phus makes Gomer the father of the Galatians ; but he, by the Galatians, must necessarily mean the Phrygians inhabiting that part of Phrygia which the Galatians had made themselves masters of; the descendants of Gomer being placed by Eze- kiel northward of Judea, near Togarmah (which Bochart takes to be Cappadociu) long before the Gauls passed over into Asia. The ancient Phry- gians are described as superstitious, volup- tuous, and effeminate, without any prudence or forecast, and of such a servile temper that no- thing but stripes and ill-usage could make them comply with their duty ; which gave rise to several trite and well known proverbs. They are said to have been the first inventors of divination by the singing, flying, and feeding of birds. Their music, commonly called the Phrygian mode, is alleged by some as an argument of their effeminacy. Their government was monarchical; and all Phrygia was, during the reigns of some kings, subject to one prince. Ninnacus, Midas, Manis, Gordius, and his descendants, were un- doubtedly sovereigns of all Phrygia. But, some time before the Trojan war, this country was di- vided into several petty kingdoms, and we read of divers princes reigning at the same time. Apollodorus mentions a king of Phrygia contem- porary with Ilus, king of Troy. Cedrenus and others speak of one Teuthras, king of a small country in Phrygia, whose territories were ravaged by Ajax, himself slain in

single combat, his royal seat laid in ashes, and his daughter, Tecmessa, carried away captive by the conqueror. Homer mentions Phorcys and Ascanius, both princes and leaders of the Phrygian auxiliaries that came to the relief of Troy. Tantalus was king of Sipylus only, and its district : a prince no less famous for his great wealth than infamous for his covetousness and other detestable vices. That Phrygia was subdued either by Ninus, as Diodorus Siculus informs us, or by the Ama- zons, as we read in Suidas, is not sufficiently warranted. Most authors who mention Gordius tell us that the Phrygians, having sent to consult an oracle, to know how they might put an end to the intestine broils which rent their country into many factions and parties, received for answer that the most effectual means to deliver them- selves and their country from the calamities they groaned under was to commit the government to a king. This advice they followed, and placed Gordius on the throne. As to their commerce, all we know is, that Apamea was the chief em- porium of all Asia Minor. Thither resorted merchants and traders from all parts of Greece, Italy, and the neighbouring islands. Syncellus says that the Phrygians were for some time mas- ters of the sea; and none but trading nations ever prevailed on that element. The country produced many choice and useful commodities, which afforded considerable exports. They had a safe coast, and convenient harbours. The Phrygian idols were very numerous. The chief of these was Cybele, who went by a variety o?

names. They also worshipped Bacchus under the name of Sabazios; and his priests they called Sabbi. The history of their kings is uncertain, and the dates of their several reigns and actions cannot now be fixed ; we shall refer such of our readers, therefore, as wish to know what is cer- tain respecting them to the Ancient Universal History, already quoted more than once in the present article. See also GORDIUS, MIDAS, &c.

PHRYGIA MINOR. See TROY.

PauYGiA PROPER, according to Ptolemy, was bounded on the north by Pontus and Bithynia ; on the west by Mysia, Troas, the TEgean Sea, Lydia, Maeonia, and Caria; on the south by Lycia ; on the east by

Pamphylia and Galatia. It lies between 37° and 41° N. lat., extending in long, from 57° to 62°. The inhabitants of this country, mentioned by Ptolemy, are the Ly- caones and Anthemisenii, towards Lycia; and Moccadelis or Moccadine, the Cydesses or Cy- disses towards Bithynia ; and between these the Peltini or Speltini, the Moxiani, Phylacen- ses, and Hierapolitae. To these we may add the Berecyntes mentioned by Strabo. Phrygia is commonly divided into the Greater and Lesser Phrygia, called also Troas. But this division did not take place till Troas was subdued by the Phrygians ; and hence it is more considered by some Roman writers as a part of Phrygia than Bithynia, Cappadocia, or any other of the ad- jacent provinces. In after ages the Greater Phrygia was divided into two districts or govern- ments, called, 1. Phrygia Pacatiana, from Pa- catianus, who, under Constantine, bore the great office of the praefectus prsetorio of the east ; and 2. Phrygia Salutaris, from some miraculous cures supposed to have been performed there by the archangel Michael.

PHRYGIAN STONE, in natural history, is the name of a stone described by the ancients, and used by them in dyeing ; perhaps from some vitriolic or aluminous salt contained in it, which served to enliven or fix the colors used by the dyers. It was light and spongy, resembling a pumice; and the whitest and lightest were reckoned the best. Pliny gives an account of the method of preparing it for the purpose of dyeing, which was by moistening it with urine, and then heating it red hot, and suffering it to cool. This calcination was repeated three times, and the stone was then fit for use. Dioscorides recommends it in medicine after burning; he says it was drying and astringent.

PHRYMA, in botany, a genus of the gymno- spermia order, and didynamia class of plants ; in the natural method, ranking in the sixtieth order, personate.

PHRYNE, a courtezan of Athens who flou- rished about A. A. C. 328. She was mistress of Praxiteles, who drew her picture, which was one of his best pieces, and was placed in the temple of Apollo at Delphi. Phryne became so very rich, by the liberality of her lovers, that she of- fered to rebuild Thebes at her own expense, which Alexander had destroyed, provided this iuscription was placed on the walls, Alexander diruit, sed meretrix Phryne refecit; which was refused. See Plin. xxxiv. c. 8.

PHRINICUS. 1. A general of Samos, who

endeavoured to betray his country : 2. A flatterer at Athens : 3. A

tragic poet of Athens, disciple to Thespis. He was the first who introduced a female character on the stage.

PHRYNIS. 1. A musician of Mitylene. He was the first who obtained a musical prize at the Panathensea at Athens. He added two strings to the lyre, which had always been used with seven by all his predecessors. He flou- rished about A. A. C. 438, and was originally a cook at the house of Hiero king of Sicily : 2. A writer in the reign of Commodus, who made a collection, in thirty-six books, of phrases and sentences from the best Greek authors, &c.

PHRYNO, a celebrated general of Athens, who flourished about A. A. C. 590.

PHRYXUS, in fabulous history, a son of Athamus, king of Thebes, by Nephele. When his mother was repudiated, he was persecuted with the most inveterate fury by his slep-mother Ino, because he was to sit on the throne of Atha- mas, in preference to her children. His mother apprized him of Ino's intentions upon his life ; or, according to others, his preceptor; and, the better to make his escape, he secured part of his father's treasures, and privately left Boeotia with his sister Helle, to go to their relation ˆEetes, king of Colchis. They embarked on board a ship, or, as we are informed by the poets and mythologists, they mounted on the back of a ram, whose fleece was of gold, and proceeded on their journey through the air. The height to which they were carried made Helle giddy, and she fell into the sea. Phryxus gave his sister a decent burial on the sea-shore, and after he had called the place Hellespont, from her name, he continued his flight, and arrived safely in the king- dom of jEetes, where he offered the ram on the altar of Mars. The king received him kindly, and gave him Chalciope his daughter in mar- riage. She had by him Phrontis, Melas, Argos, and Cylindrus, whom some call Cytorus. He was afterwards murdered by his father-in-law, who envied him the possession of the golden fleece ; and Chalciope, to prevent her children from sharing their father's fate, sent them pri- vately from Colchis to Boeotia, as Ino was then dead. The fable of the flight of Phryxus to Col- chis on a ram has been explained by some, that the ship on which he embarked was either called by that name, or carried on her prow a figure of that animal. The fleece of gold is accounted for by observing, that Phryxus carried away immense treasures from Thebes. Phryxus was placed among the constellations of heaven after death. The ram which carried him to Asia is said to have been the fruit of Neptune's amour with Theophane the daughter of Atlas This ram the gods had given to Athamas to reward his piety and religious life : and Nephele pro- cured it for her children, just as they were going to be sacrificed to the

jealousy of Ino. Phryx- us's murder was some time after amply revenged by the Greeks ; it having occasioned the famous expedition achieved under Jason and many of the princes of Greece, which had for its object the recovery of the golden fleece, and the punish- ment of the king of Colchis for his cruelty to the son of Athamas.

PHTHISIS.

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PHTHIA, an ancient town of Thessaly, in Phthiotis, east of Mount Othrys, famous for being the birth-place of Achilles, hence called Pthius heros.

PHTHIOTIS, in ancient geography, a pro- vince of Thessaly, between the Sinus Pelasgicus and Sinus Maliacus, Magnesia, and Mount Oeta; also called Achaia. Paus. x. c. 8.

PHTHIRIASIS (Gr. 00£ip, the louse), or morbus pediculosus, a disease in which several parts of the body generate lice, which often puncture the skin, and produce little sordid ul- cers. There are two principal species of lice which infest the human body, i. e. the pediculus humanus, and the morpiones or crab lice. Re- specting that variety of the former which we call body-lice Linnaeus observes, ' varietas capitis durior, coloratior, vestimentorum laxior, magis cinerea.' They breed abundantly among the inhabitants of sordid dwellings, chiefly work- houses, gaols, &c., and in such situations prey upon persons of all ages. There is also a pecu- liar state of skin in people advanced in years, and connected with the disease, which has been denominated prurigo senilis by Dr. Willan, in which they are generated, and multiply rapidly notwithstanding every attention to cleanliness or regimen. The nits or eggs are deposited on the small hairs of the skin ; and the pediculi are found on the skin or linen. Many marvellous stories are related by Forestus, Schenckius, and others, respecting lice bred under the skin, and discharged in swarms from abscesses, strumous ulcers, and vesications , and many individuals of great note are staled to hare died in conse- quence in ancient times. Plutarch relates of Sylla : ' It was long before he perceived that he had an ulcer within his body ; but at last the flesh putrefied, and produced such a quantity of lice, that, though many persons were employed day and night in destroying them, yet they in- creased much faster than they could be removed ; and to such a degree did the distemper prevail, that his clothes, baths, basins, and food, were polluted with that perpetual flux of corruption and vermin. He went many times in the day into the water, to scour and cleanse his body, but all in vain ; the

vermin multiplied so fast as to baffle every attempt to destroy them.' Our biographer adds, ' it is said that, among the an- cients, there died of this disease Acastus the son of Pelias, and nearer our own times Alcmason the poet, Pherecydes the philosopher, Callis- thenes the Olynthian, during the time of his im- prisonment, and Mutius the lawyer: and, if it be proper to add to these a person not distin- tinguished by any merit or virtue, Eunus, a fu- gitive slave, who was author of the war in Sicily, called the ' servile war,' and who was taken and carried prisoner to Rome, died likwise of this sickness.' Herod, Ennius, and by some Plato is said also to have been destroyed by lice. In more recent times, Amatus Lusitanus states that he was witness to the case of a gentleman, who perished in this way ; < so universally did these insects swarm over his body, that two negro ser- vants were entirely employed in collecting bas- kets full from his person, and carrying them to the sea.'

It appears probable that in the ancient ac- counts cases of ulceration which afforded a nidus for the breeding of maggots or flies have been mistaken for instances of the morbus pedicularis. In warm climates, flies are so numerous about the persons of the sick, that the utmost care is requisite to prevent the generation of larvae froi. the eggs which they deposit, not only in super- ficial wounds, but in the nostrils, mouth, gums, and even in the brain. Even the black beetle (senebrio molipor) has been known to breed in the body in this way. But the generation of lice, in connexion with the prurigo of elderly people, is frequently a very troublesome malady in modern times ; and the destruction of them is commonly a mere alleviation ; since their repro- duction is so very rapid. A decoction of the seeds of stavesacre, or of the coccnlus indicus, or the powder of either of these substances, alone or mixed with lard in the form of an ointment, are effectual destroyers of the pediculi of the head, and even of the body-lice, as are the mercurial ointments, such as that of the white precipitated oxide. The morpiones, or crab-lice, which fix themselves firmly in the skin, about the pubes, axillje, and in fact on every part of the trunk and extremities where there is hair, are com- pletely destroyed either by inunction with the common blue mercurial ointment, or spike-oil, i. e. the essential oil of lavender mixed with oil of turpentine. A solution of the corrosive mu- riate of mercury in spirit is also often efficacious in the pedicular prurigo of the body, and tends to remove the pruriginous affection, which seems to give rise to the tendency to generate lice. But none of these pungent substances can be applied, except when the skin is unbroken.

PHTHI'SIC, n.s. } Fr.phthisie; Gr. 4610*. PHTHISICAL, adj. > Consumption. This is PHTHISIS, n. s. j the sense of both nouns :

phthisical is wasting; pining.

A collection of purulent matter in the capacity of the breast, if not suddenly cured, doth undoubtedly impel the patient into a phthisical consumption.

Harvey on Consumptions.

His disease was a phthisick or asthma, oft incurring to an orthopnea. Id.

If the lungs be wounded deep, though they escape the first nine days, yet they terminate in a phthisis or fistula. Wiseman.

We next inquire, but softly and by stealth, Like conservators of the public health, Of epidemic throats, if such there are, And coughs, and rheums, andphthisic, and catarrh

Cowper.

PHTHISIS is a species of consumption, oc- casioned by an ulcer in the lungs. ‘See MEDI- CINE, Index. Dr. Beddoes suggested a new theory of phthisis, founded on the pneumatic doctrine. He fixed on the effect of pregnancy in suspending the progress of phthisis as a fact which, by its mode of operation, might suggest a method of diminishing the havoc occasioned by this distemper. ‘ The foetus, says he, has its blood oxygenated by the blood of the mother through the placenta. During pregnancy there seems to be no provision for the reception of an unusual quantity of oxygen. On the contrary, in consequence of the impeded action of the diaphragm, less and less should be continually

taken in by the lungs. If, therefore, a somewhat diminished proportion of oxygen be the effect of pregnancy, may not this be the way in which it arrests the progress of phthisis? and, if so, is there not an excess of oxygen in the system of consumptive persons ? and may we not, by pur- suing this idea, discover a cure for this fatal dis- order ?’ Dr. Beddoes thinks that this suppo- sition is also countenanced by the deficiency of oxygen in the blood of asthmatic patients, and of those who labor under sea-scurvy; and by the super-abundance of it in the blood of phthi- sical persons, indicated by its color, by the ag- gravation of the symptoms of consumption by breathing oxygen, and by the relief from inspiring atmospheric air mixed with carbonic acid

gas ; and, lastly ..from the small proportion of deaths among sea-faring people. From these facts Dr. Beddoes concludes, that ‘I. The phthisical inflammation may so alter the structure of the lungs as to cause them to transmit a more than ordinary portion of oxygen to the blood; or, 2. Some unknown cause having enabled them to transmit, or the blood itself to attract, more oxygen, an inflammation of the lungs might en- sue.’ Our author, in a letter to Dr. Darwin, gives an account of his treating with success several cases of phthisis according to the principles of this theory.

Dr. Hooper thus enumerates the species of this important disorder : —

1. Phthisis incipiens, incipient without an ex- pectoration of pus.

2. Phthisis humida, with an expectoration of pus.

3. Phthisis scrophulosa, from scrofulous tu bercles in the lungs, &c.

4. Phthisis hsemoptoica, from haemoptysis.

5. Phthisis exanthematica, from exanthemata.

6. Phthisis chlorotica, from chlorosis.

7. Phthisis syphilitica, from a venereal ulcer in the lungs.

The causes which predispose to this disease, says this last writer, are very numerous. The following are, however, the most general : here-ditary disposition ; particular formation of body, obvious by a long neck, prominent shoulders, and narrow chest; scrofulous diathesis, indi- cated by a fine clear skin, fair hair, delicate rosy complexion, large veins, thick upper lip, a weak voice, and great sensibility ; certain dis- eases, such as syphilis, scrofula, the small-pox, and measles ; particular employments exposing artificers to dust, such as needle-pointers, stone- cutters, millers, &c., or to the fumes of metals or minerals under a confined and unwholesome air; violent passions, exertions, or affections of the mind, as grief, disappointment, anxiety, or close application to study, without using proper exercise ; frequent and excessive debaucheries, late watching, and drinking freely of strong liquors : great evacuations, as diarrhoea, diabetes ; excessive venery ; fluor albus ; immoderate dis- charge of the menstrual flux, and the continuing to suckle too long under a debilitated state ; and, lastly, the application of cold, either by too sudden a change of apparel, keeping on wet clothes, lying in damp beds, or exposing the body too suddenly to cold air, when heated by exer-

cise; in short, by any thing that gives a con- siderable check to the perspiration. The more immediate or occasional causes of phthisis are, haemoptysis, pneumonic inflammation proceed- ing to suppuration, catarrh, asthma, and tuber- cles, the last of which is by far the most ge- neral.

‘The incipient symptoms usually vary with the cause of the disease ; but, when it arises from tubercles, it is usually thus marked : it begins with a short dry cough, that at length becomes habitual, but from which nothing is spit up for some time, except a frothy mucus that seems to proceed from the fauces. The breathing is at the same time somewhat impeded, and upon the least bodily motion is much hurried : a sense of straitness, with oppression at the chest, is expe- rienced : the body becomes gradually leaner, and great languor, with indolence, dejection of spirits, and loss of appetite, prevail. In this state the patient frequently continues a consider- able length of time, during which he is, how- ever, more readily affected than usual by slight colds, and upon one or other of these occasions the cough becomes more troublesome and severe, particularly by night, and it is at length attended with an expectoration, which towards morning is more free and copious. By degrees the matter which is expectorated becomes more viscid and opaque, and now assumes a greenish color and purulent appearance, being on many occasions streaked with blood. In some cases, a more se- vere degree of haemoptysis attends, and the patient spits up a considerable quantity of florid, frothy blood. The breathing at length becomes more difficult, and the emaciation and weakness go on increasing. With these, the person be- gins to be sensible of pain in some part of the thorax, which, however, is usually felt at first under the sternum, particularly on coughing. At a more advanced period of the disease a •pain is sometimes felt on one side, and at times prevails in so high a degree as to prevent the person from lying easily on that side; but it more frequently happens that it is felt only on making a full inspiration, or coughing. Even where no pain is felt, it often happens that those who labor under phthisis cannot lie easily on one or other of their sides, without a fit of coughing being excited, or the difficulty of breathing being- much increased. At the commencement of the disease, the pulse is often natural, or perhaps is soft, small, and a little quicker than usual ; but, when the symptoms which have been enu- merated have subsisted for any length of time, it then becomes full, hard, and frequent. At the same time the face flushes, particularly after eating, the palms of the hands and soles of the feet are affected with burning heat; the respira- tion is difficult and laborious; evening exacer- bations become obvious, and, by degrees, the fever assumes the hectic form. This species of fever is

evidently of the remittent kind, and has exacerbations twice every day. The first occurs usually about noon, and a slight remission ensues about five in the afternoon. This last is, however, soon succeeded by another exacerba- tion, which increases gradually until after midnight ; but about two o'clock in the morning a

remission takes place, and this becomes more apparent as the morning advances. During the exacerbations the patient is very sensible to any coolness of the air, and often complains of a sense of cold when his skin is, at the same time, preternaturally warm. Of these exacerbations, that of the evening is by far the most consider- able. From the first appearance of the hectic symptoms, the urine is high colored, and depo- sites a copious branny red sediment. The ap- petite, however, is not greatly impaired, the tongue appears clean, the mouth is usually moist, and the thirst is inconsiderable. As the disease advances, the fauces put on rather an in- flamed appearance, and are beset with aphthae, and the red vessels of the tunica adnata become of a pearly white. During the exacerbations, a florid circumscribed redness appears on each cheek ; but at other times the face is pale, and the countenance somewhat dejected, At the commencement of hectic fever, the belly is usually costive ; but, in the more advanced stages of it, a diarrhoea often comes on, and this continues to recur frequently during the re- mainder of the disease ; colliquative sweats like- wise break out, and these alternate with each other, and induce vast debility. In the last stage of the disease the emaciation is so great that the patient has the appearance of a walking skeleton ; his countenance is altered, his cheeks are prominent, his eyes look hollow and lan- guid, his hair falls off, his nails are of a livid color, and much incurvated, and his feet are af- fected with oedematous swellings. To the end of the disease the senses remain entire, and the mind is confident and full of hope. It is, in- deed, a happy circumstance attendant on phthisis, that those who labor under it are seldom ap- prehensive or aware of any danger ; and it is no uncommon occurrence to meet with persons laboring under its most advanced stage, flatter- ing themselves with a speedy recovery, and form- ing distant projects under that vain hope. Some days before death the extremities become cold. In some cases a delirium precedes that event, and continues until life is extinguished.

‘ As an expectoration of mucus from the lungs may possibly be mistaken for purulent matter, and may thereby give us reason to suspect that the patient labors under a confirmed phthisis, it may not be amiss to point out a sure criterion, by which we shall always be able to distinguish the one from the other. The medical world are indebted to the late Mr. Charles Darwin for the discovery, who has directed the experiment to be made in the following mannr : — Let the expec- torated matter be dissolved in vitriolic acid, and in caustic lixivium, and add pure water to both solutions. If there is a fair precipitation in each, it is a certain sign of the presence of pus ; but, if there is not a precipitate in either, it is certainly mucus.’

Sir Everard Home, in his dissertation on the properties of pus, states a curious, but not de- cisive mode of distinguishing accurately between pus and animal mucus. The property, he ob- serves, which characterises pus, and distinguishes it from most other substances, is, its being com- posed of globules, which are visible when viewed

through a microscope ; whereas animal mucus, and all chemical combinations of animal sub- stances, appear in the microscope to be made up of flakes. This property was first noticed by the late Mr. John Hunter. See MEDICINE, Index.

PHUL, or PUL, king of Assyria, is by some historians said to be Ninus under another name, and the first founder of that monarchy : a re- nowned warrior. He invaded Israel in the reign of Menahem, who became tributary to him, and paid him 1000 talents of silver for a peace. A.A.C. 771.

PHUT, or PHUTH, the third son of Ham. Gen. x. 6. Calmet is of opinion that Phut peopled either the canton of Phtemphu, Phtemphuti, or Phtembuti, set down in Pliny and Ptolemy, whose capital wasTharia in Lower Egypt, inclin- ing towards Libya; orsthe canton called Phte- notes, of which Buthus was the capital. The prophets often speak of Phut. In the time of Jeremiah, Phut was under the obedience of Ne- cho, king of Egypt. Nahum (iii. 9) reckons up his people in the number of those who ought to have come to the assistance of No-ammon, or Diospolis.

PHYCUS (untis.) a promontory near Cyrene, now called Ras el Sem. — Lucan. ix.

PHYLACTERY, n. s. Fr. phylactere ; Gr. 0vXa/erjjpto*’. An ancient bandage on which was inscribed some memorable sentence.

Lest, when they had been abroad, they should have been touched by any, contrary to the warning of their phylacteries, they scoured themselves at their return. Bp. Hall.

The philacteries on their wrists and foreheads were looked on as spells, which would yield them impunity for their disobedience. Hammond.

Golden sayings,

On large phylacteries expressive writ, Were to the foreheads of the Rabbins tied.

Prior.

PHYLACTERY, in general, was a name given by the ancients to all kinds of charms, spells, or characters, which they wore about them, as amu- lets, to preserve them from dangers or diseases.

PHYLACTERY also denoted a slip of parchment, whereon was written some text of Holy Scripture, particularly of the decalogue, which the devout people among the Jews wore on the forehead, the breast, or the neck, as a mark of their religion. The primitive Christians also gave the name phylacteries to the cases wherein they enclosed the relics of their dead. Phylacteries are often mentioned in the New Testament, and appear to have been very common among the Pharisees in our Lord's time.

PHYLACUS, the son of Deion, king of Pho- cis, and founder of Phylace in Thessaly. He married Clymene, the daughter of Mynias, by whom he had Iphiclus, the father of Protesilaus. PHYLARCHUS, an ancient Grecian biogra- pher, who flourished A. A. C. 220.

PHYLAS, an ancient town of Thessaly, built by Phylacus. Protesilaus reigned in it, hence called Phylacides. Lucan. vi. 252.

PHYLE, a well fortified village of Attica, near Athens. Cor. Nep.

PHYLICA, bastard alaternus ; a genus of the monogynia order, and pentandria class of plants :

in the natural method ranking under the forty- third order, dumosae. There are six species, of which three are kept in the gardens of this country ; but, by reason of their being natives of warm climates, they require to be kept in pots, and housed in winter. They are all shrubby plants, rising from three to five feet high, and adorned with beautiful clusters of white flowers. They are propagated by cuttings.

PHYLLACHNE, in botany, a genus of the monandria order, and moncecia class of plants.

PHYLLALIA, 1. A district of Arcadia; 2. A town of Thessaly.

PHYLLANTHUS,in botany, sea-side laurel; a genus of the triandria order, and moncecia class of plants : in the natural method ranking in the thirty-eighth order, tricoccse. There are six species, all natives of warm climates ; and rise from twelve to fourteen feet to the height of middling trees. They are tender and cannot be propagated in this country without artificial heat.

PHYLLEIUS, a mountain and country of Macedonia. Apol. Arg.

PHYLLIS, in fabulous history, a daughter of Sithon, or, according to others, of Lycurgus, king of Thrace, who received Demophoon, the son of Theseus, who, at his return from the Trojan war, had stopped on her coasts. She became ena- moured of him, and did not find him insensible to her passion. After some months of mutual tenderness and affection, Demophoon set sail for Athens, where his domestic affairs recalled him. He promised faithfully to return within a month ; but either his dislike for Phyllis, or the irrepara- ble situation of his affairs, obliged him to violate his engagement : and the queen, grown desperate on account of his absence, hanged herself, or, ac- cording to others, threw herself down a precipice into the sea and perished. Her friends raised a tomb over her body, where there grew up certain trees, whose leaves, at a particular season of the year, suddenly became wet, as if shedding tears for the death of Phyllis. According to an old tradition mentioned by Servh.s, Virgil's com- mentator, Phyllis was changed by the gods into an almond-tree, called phylla by the Greeks. Some days after this metamorphosis, Demophoon revisited Thrace ; and, when he heard of the fate of Phyllis, be ran and clasped the tree, which, though at that time stripped of its leaves, sud- denly shot forth, and blossomed, as if still sensi- ble of tenderness and love. The absence of Demophoon from the house of Phyllis has given rise to a beautiful epistle of Ovid, supposed to have been written by the Thracian queen about the fourth month after her lover's departure.

PHTTLLIS, in botany, bastard hare's-ear, a genus of the digynia order, and pentanclria class of plants : in the natural method ranking under the forty-seventh order, stellatse.

PHYLLIS, in geography, a country of Thrace, near Mount Pangasus.

PHYSALIS, the winter cherry, a genus of the monogynia order, and pentandria class of plants ; in the natural method ranking under the twenty- eighth order, luridae. There are sixteen species, of which the most remarkable is the

P. alkekengi, or common winter cherry. This grows natunilly in Spain and Italy. The roots

are perennial, and creep in the ground to a great distance if they are not confined. These, in the spring, shoot up many stalks, which rise to the height of a foot or more, garnished with leaves of various sorts, some of which are angular and obtuse, some oblong and sharp-pointed, with long foot-stalks. The flowers are produced from the wings, standing upon slender foot-stalks ; are of a white color, and have but one petal. They are succeeded by round berries about the size of small cherries, enclosed in an inflated bladder, which turns red in autumn, when the top opens and discloses the red berry, which is soft, pulpy, and filled with flat kidney-shaped seeds. Soon after the fruit is ripe, the stalks decay to the root. The plant is easily propagated, either by seeds, or parting the roots.

P1IYSAL1TE, or PYROPHYSALITE, in mine- ralogy, a sub-species of prismatic topaz. Color greenish-white. Massive. In granular concre- tions. Splendent in the cleavage, which is per- fect, and as in topaz. Fracture uneven. Trans- lucent on the edges. As hard as topaz. Specific- gravity 3-451. It whitens with the blow-pipe. Its constituents are, alumina 57-74, silica 34-36, fluoric acid 7-77. It is found in granite at Finbo, in Sweden. Jameson.

PHYSALUS. See SCOLOPENDRA.

PHYSION, a cape or rock of Boeotia, famous for being the residence of the Sphynx.

PHYSCON, fvffKov, i. e. big-bellied. A nick- name of a tyrant of Egypt. See EGYPT.

PHYSCONIA, Gr. V<TKUV, a big-bellied fel- low. Hyposarca ; hypersarchidios. Enlarge- ment of the abdomen. A genus of disease in the class cachexiae, and order intumescentise, of Cul- len ; known by a

tumor occupying chiefly one part of the abdomen, increasing slowly, and nei- ther sonorous nor fluctuating. Species : — 1 . He- patica; 2. Splenica; 3. Renalis; 4. Uterina ; 5. Abovario; 6. Mesenterica; 7. Omentalis ; 8. Visceralis.

PHYSCOS, a town of Caria, opposite Rhodes. Strabo, 14.

PHYSCUS, a river of Asia, running into the Tigris. Xenophon crossed it with his 10,000 Greeks, in their famous retreat from Cunaxa.

PHYSETER, the spermaceti fish, in zoology, a genus of mammalia, belonging to the order of cete. There are four species, according to Mr. Kerr : —

1. P. catodon, the round headed cachalot, with a fistula in the snout, and having no back fin. Of this species 102 of different sizes were cast ashore at one time on one of the Orkney Isles, the largest twenty-four feet in length. The head is round, the opening of the mouth small. Sib- bald says it has no spout-hole, but only nostrils : but Mr. Pennant is of opinion that the former being placed at the extremity of the nose, has been mistaken by him for the latter. Some teeth of this species are an inch and a quarter long, and in the largest part of the thickness of one's thumb. The top is quite flat, and marked with concentric lines ; the bottom is more slender than the top, and pierced with a small orifice : instead of a back fin, there was a rough space. For the method of extracting the spermaceti from the brain of these creatures, see SPERMACETI.

2. P. macrocephalus, the blunt-nosed cachalot, the blunt-headed cachalot of Pennant, or sper- maceti whale of Dudley, has no fin on the back; and the blowing-pipe is situated on the nape of the neck. Of this species Mr. Kerr enumerates three varieties, viz. : —

i. P. macr. albicans, the white blunt-nosed cachalot, of a white color with a smooth back. This is about fifteen or sixteen feet long, and "Jesembles the common whale.

ii. P. macr. cinereus, the gray blunt- nosed cachalot ; of a blackish ash color, with a hump on the back. This variety grows to sixty and even seventy feet long, by thirty or forty in cir- cumference ; has a very

large head, with very small eyes ; the lower jaw is much narrower than the upper, and is furnished with a considerable number of teeth, which are received into sockets of the upper jaw when the mouth is shut. It has a hump on the back, about a foot above the general surface. It is found in Davis's Straits.

iii. P. macr. niger, is black cblored, and has a hump on the back twelve inches high. This va- riety is found in the European seas ; it grows to about sixty feet long, and thirty-six in circumfe- rence : the head is exceedingly thick, and the lower jaw, which is smaller than the upper, has forty-six teeth in two rows, which rise two inches and a half above the gums, and are received into sockets in the upper jaw. The female teats are retractile. The substance improperly named spermaceti is procured from this species ; and the spermaceti, or white oil, is extracted from it. It is found in the South coasts of Brasil, Pata- gonia, and the Pacific Ocean. Dr. Schwediaur says that ambergris is ejected from this ani- mal. It feeds on the sepia octopodia.

3. P. microps, the black headed cachalot, with a long fin on the back, and the upper jaw con- siderably longer than the under one. A fish of this kind was cast ashore on Cramond Isle, near Edinburgh, December 22d, 1769 ; its length was fifty-four feet ; the greatest circumference, which was just beyond the eyes, thirty ; the upper jaw was fifteen feet ; the lower ten.' The head was of a most enormous size, very thick, and above one- third the size of the fish : the end of the upper jaw was quite blunt, and nearly nine feet high ; the spout-hole was placed near the end of it. The teeth were placed in the lower jaw, twenty- three on each side, all pointing outwards ; in the upper jaw, opposite to them, were an equal num- ber of cavities, in which the ends of the teeth lodged when the mouth was closed. One of the teeth measured eight inches long, the greatest circumference the same. It was hollow within- side for the depth of three inches, and the mouth of the cavity very wide : it was thickest at the bottom, and very small at the point, bending very much ; but in some the flexure is more than in others. These, as well as the teeth of all other whales, are very hard, and cut like ivory. The eyes are very small, and remote from the nose. The pectoral fins were placed near" the corners of the mouth, and were only three feet long ; it had no other fin, only a large protuberance on the middle of the back. The tail was a little forked, and fourteen feet from tip to tip. The penis seven fee* and a ha'f Icng. Linnaeus informs us that

this species pursues and terrifies the porpoises to such a degree as often to drive them on shore.

4. P. tursio, the high-finned cachalot, has a very long fin on the back, and the ends of the teeth are flat. It inhabits the Northern Ocean, and grows sometimes to 100 feet long ; the back fin is very long, sharp-pointed, and erect, like a ship's mast, and the blowing-pipe is placed flat on the forehead : the teeth are slightly bent and have their ends flattened.

PHYS'IC, n. s. & v. a.\ Gr. QvffiKt]. Natu- PHYS'ICAL, adj. ˆral philosophy; par-

PHYS'ICALLY, adv. i ticularly and more PHYSIC'IAN, n. s. J commonly the science of healing or curing diseases ; remedies ; medi- cines : to physic is to treat with medicine ; and. sometimes, to cure: physical means relating to nature ; helpful to health ; natural as distinct from moral ; medicinal : the adverb follow- ing these senses : a physician is one who pro- fesses the healing or medical art; one who pre- scribes medicines.

Use physick or ever thou be sick. Ecclus. xviii. 19.

In itself we desire health, physick only for health's sake. Hooker.

The labour we delight in physicks pain.

Shakspeare.

It is a gallant child ; one that indeed physicks the subject, makes old hearts fresh. Id.

Is Brutus sick, and is it physical

To walk unbraced, and suck up the humours

Of the dank morning 1 Id. Julius C&sar.

Trust not the physician, His antidotes are poison, and he slays More than you rob. Id. Timon of Atltens.

Some physicians are so conformable to the humour of the patient, as they press not the true cure of the disease ; and others are so regular, as they respect not sufficiently the condition of the patient.

Bacon's Essays.

Prayer is the best physic for many melancholy diseases. Peacham.

His gratulatory verse to king Henry is not more witty than the

epigram upon the name of Nicolaus, an ignorant physician, who had been the death of thou- sands. Id. of Poetry.

The people use physick to purge themselves of hu- mours. Abbot.

It is worth observing how nature hath taught all living creatures to be their own physicians ; the same power that gave them a being hath led them to the means of their own preservation. Up. Hall.

The physical notion of necessity, that without which the work cannot possibly be done ; it cannot he affirmed of all the articles of the creed, that they are thus necessary. Hammond.

To poore people the good physician prescribes cheap but wholesome medicines ; not removing the con- sumption out of their bodies into their purses. Fuller.

I call that physical certainty which doth depend upon the evidence of sense, which is the first and highest kind of evidence of which human nature is capable. Wilkins.

Time, measuring out their motion, informs us of the periods and terms of their duration, rather than ef- fecteth or physically produceth the same. Browne.

The outward act of worship may be considered physically and abstractedly from any law, and so it depends upon the nature of the intention, and mo- rally, as good or evil : and so it receives its denomi- nation from the law. Stillingfleet

He ‘scapes the best, who nature to repair Draws physick from the fields in draughts of vital air.

Dryden.

In rirtue and in health we love to be instructed, as well as physicked, with pleasure. L’Estrange.

Were it my business to understand physick, would not the safer way be to consult nature herself in the history of diseases and their cures, than espouse the principles of the dogmatists, methodists, or chymists

Locke.

I do not say, that the nature of light consists in small round globules, for I am not now treating phy- sically of light or colors. Id.

As all seasons are not proper for physick, so all times are not fit for purging the body politick.

Davenant.

Though the act of the will commanding, and the act of any other faculty executing that which is so commanded, be physically and in the precise nature of things distinct, yet morally as they proceed from one entire, free, moral agent, may pass for one and the same action. South's Sermons.

Taught by thy art divine, the sage phyririm Eludes the urn ; and chains, or exiles death.

Prior.

Charity, in its origin, is a physical and necessary consequence of the principle of re-union. Cheyne.

He that lives physically, must live miserably. Id.

To reflect on those innumerable secrets of nature and physical philosophy, which Homer wrought in his al- legories, what a new scene of wonder may this afford us ! Pope.

PHYSIC, or PHYSICK, the art of healing, properly called medicine. The word is formed from the Gr. tpvaig, nature ; either because medi- cine consists principally in the observation of nature, or that the most important natural obser- vations first took this direction. See MEDICINE, PHYSIC, and PHYSICS.

PHYSICAL, something belonging to, or really existing in nature. In this sense we say a phy- sical point in opposition to a mathematical one, which only exists in the imagination ; a physi- cal substance or body, in opposition to spirit, or metaphysical substance, &c.

PHYSICIAN OF THE FLEET, in the royal navy, is a person appointed by the Admiralty with the medical superintendence of a fleet or squadron of ships employed on any particular station, as the Channel,

Mediterranean, West Indies, &c., and is under the immediate orders of the com- mander-in-chief : if an hospital ship is with the fleet, his residence is generally on board her ; if not, it is usual for him to be in the flag-ship with the commander-in-chief.

The arrangement of every thing appropriated to the reception of the sick, sent on board the hospital ship for cure, shall be under his direc- tion ; and the surgeon, and all other persons ap- pointed to attend them. He is to propose to the commander-in-chief every thing which he may think likely to be of service to the sick, to in- crease their comforts, or to accelerate their cure. He is also to visit the different ships of a squa- dron frequently ; to enquire into the health of the ships' companies, and the treatment of the sick ; and, if any unusual sickness prevails on board, he is to represent the same to the commander-

in-chief, with the nature of the disease, and the necessary means which he deems requisite for eradicating and putting a stop to the progress of the malady. He is also authorised to examine the journals of the medical officers, to enquire into the practice of the surgeon of any ship he visits, and his manner of treating the diseases of the men under ms care, and to give him such directions as he may deem necessary. He is also to enquire into the conduct and abilities of the assistant-surgeons, that he may be able to point out to the sick and hurt board, or to the commander- in-chief, those who may he best qualified for any particular service, or for promotion. And, whenever he shall think it necessary, he is to examine the instruments, medicines, and neces- saries, on board any ship.

PHYSICIAN OF A NAVAL HOSPITAL, is a per- son appointed by the admiralty to one of his majesty's naval hospitals, to superintend and prescribe medicine for the inward complaints of the sick and wounded seamen ; and to attend such physical patients every day, or as often as circumstances may require.

PHYSICIANS. According to an ancient statute no person within London, or seven miles thereof, shall practise as a physician or surgeon, without license from the bishop of London, or dean of St. Paul's ; who are to call to their assistance four doc- tors of physic, on examination of the persons, be- fore granted : and in the country, without license from 'the bishop of the diocese, on pain of for- feiting £5 a month. Stat. 3 Hen. VIII. c. 11. By the charter for incorporating the College of Physicians, they have power to choose a president, and have a perpetual succession, a common seal, ability to purchase lands, &c. Eight of the chiefs of the college are to be called elects, who from

among themselves shall choose a president yearly : and if any practise physic in the said city, or within seven miles of it, without license of the college under their seal, he shall forfeit £5. Also persons practising physic in other parts of England are to have letters testimonial from the president and three elects, unless they be graduate physicians of Oxford or Cambridge, &c. Stat. 14 and 15 Hen. VIII. c. 5, confirmed and enlarged by stat. 1 Mary, stat. 2, c. 9. 32 Hen. VIII. c. 40, ordains that four physicians, called censors, shall be yearly chosen by the college, to search apothecaries' wares, and have an oath given them for that purpose by the pre- sident ; apothecaries denying them entrance into their houses, &c., incur a forfeiture of £5. And physicians refusing to make the search are liable to a penalty of 40*. And every member of the College of Physicians is authorised to practise surgery.

PHYSICIANS, COLLEGE OF. See LONDON.

PHYSICO-MATHEMATics, a science which in- cludes those branches of physic, which, uniting observation and experiment to mathematical cal- culation, undertake to explain the phenomena of nature.

PHYSICO-THEOLOGY, from physic and theology. Divinity enforced or illustrated by natural phi- losophy.

PHYSICS, Lat. physica, of Gr. tyvaic nature, is a term that has been used as synonymous both with PHYSIOLOGY, which see, and natural philoso- phy. It has, therefore, been made to embrace the entire doctrine of the bodies and existences of the universe ; their phenomena, causes, and ef- fects.

Mr. Locke would include God, angels, and spirits, under this term; but these are more usu- ally referred to metaphysics. The more imme- diate and proper objects of physics are said to be body, space, and motion.

The origin of physics, thus considered, is re- ferred, by the Greeks, to the barbarians, viz. the brachmans, magi, and the Hebrew and Egyptian priests.

From these it was derived to the Greek sages or sophi, particularly to Thales, who is said to have first professed the study of nature in Greece. Hence it descended into the Pythagoric, Plato- nic, and

Peripatetic schools ; whence it was pro- pagated into Italy, and thence through the rest of Europe : though it is clear that the Druids, Bards, Sec., had a system of physics of their own.

PART I.

HISTORY OF PHYSICAL SYSTEMS.

Treatises upon this subject have usually em- braced, therefore, an account of the ancient sys- tems of the universe, replete as they are with exploded errors. We know no writer who has placed the folly of, this spirit of system, the idola tribus, specus, fori et theatri of lord Bacon in a more lively manner before his readers than the abbe le Pluche.

Though we commonly, he says, give the appel- lation of systems to the different suppositions by which Ptolemy, Copernicus, and Tycho Brahe, have endeavoured to account for the course of the heavens, it is not what we now mean by general and systematical physics. We are now supposed to be considering a philosophy which undertakes to explain the profound construction of the whole universe. The project is noble : various celebrated philosophers have employed them- selves iu it ; they have made numerous parties, and many disputes. The history of their preten- sions may either determine us in the choice of the best side, or in remaining entirely neuter.

Epicurus, reviving the ideas of Leucippus and Democritus, thought he very well comprehended that particles of matter different in form, having subsisted from all eternity, had, after a certain time, linked themselves to one another in the vacuum ; that some proceeding in straight lines, and others in curved, fell into different clusters, and formed bodies and spirits; that the free agency of man was, above all, the work of atoms which moved in a declining line ; thus chance made the sun, peopled the earth, established the order which subsists in it ; and framed, out of oue and the same paste, the world, and the intelligent being which is the spectator of it ; that we are not to imagine the sun was made to light us, or

our eyes to see ; but we having perceived that the sun might serve to light us, and that our eyes might serve to see with, we made use both of the sun and our eyes to that purpose.

Aristotle, and his partisans, believed the world was composed of a first matter, which, they say, had no form, but is capable of all forms ; out of which the four elements issued, composing all bodies, and into

which they are all resolved, or return in their last analysis. There is, indeed, some difference between this first matter and the atoms ; but Epicurus and Aristotle agree in this, that they admit, at setting out, a first fund of in- determinate matter, capable of entering into all sorts of conditions and compositions.

Gassendi resumes these atoms and this vacuum of Epicurus for the construction of his world, with this difference, that he put them all into the hands of God, to give them motion according to the wise designs of his Providence.

Descartes rejects the vacuum, and will have every thing in his world full ; though we can hardly reconcile the liberty of motion with a thorough exactness of plenitude. It is thus that he conceives of the creation of the world: — God, in the first place, formed an immense mass of homogeneous matter; all the different parts of which were cubical, or at least angular. He af- terwards impressed on these particles a double motion. He makes the greater part of them turn on their centre, and several clusters among them round their common centre, which he names vor- tices. This being done, according to him, all is done ; and by the friction of the angles of these parcels, from thence was formed a very fine dust, which he calls the first element or subtile matter; next a globulous matter, which he calls the se- cond element or light; and lastly, a massive dust striped and branched, which he names the third element, from which he formed all sorts of mas- sive bodies. This chaos, coming out of the hand of God, disposed itself in order, according to Descartes, by virtue of the two motions impress • ed upon it by God, and of itself became a worl> I like ours ; ‘ in the which, though that God placea no order or proportion,’ these are his own terms ‘one may see all things, as well general as particular, which appears in the real world.’

The alchymists, to be in a condition to make gold, and to prepare a restorative which immor- talizes, or at least greatly prolongs life, were obliged to search to the profound of nature, and found they imagined, that salt, sulphur, and mercury, with some other ingredients, respecting which they could not agree upon among them- selves, were certainly the immediate elements of metals, and all bodies ; but yet there was really a first matter susceptible of all sorts of forms, as all the sages of Egypt and Greece, and all the philosophers of all ages averred : wherefore they had nothing to do but to work upon this first matter, to mould it different ways, and to give it a certain turn, to be possessed of gold, jewels, and the vivifying elixir.

Hitherto, then, we see a perfect agreement

among all these sects of philosophers upon the principal point. They all; though under differ- ent terms, go back to a chaos of the first matter, and numberless particles which are neither gold, silver, salt, bud, fruit, or any thing determinate : but which will serve for a composition of all things, by their mixtures; and into which all things may at last be resolved. The only differ- ence we find between them in this point is, that the alchymists have more wit than the others, and make a better use of wisdom. The Aristo- telians and the Corpusculists are always ready to enter into the lists about a plenum and va- cuum, matter and form, the principles of bodies, and the last term of their dissolutions, and all this to no purpose. They are all battling among themselves about the best method of disposing of matter, as if the world was now to be made or governed. But, alas, it is already made, and goes on in its course without them ! According to Aristotle, Epicurus, Gassendi, and Descartes, gold and sand are originally the same matter. Descartes, by breaking his cubes, saw sun, gold, and light itself, arise. Let us put the sand into motion by force of fire and friction, break its an- gles, deprive it of that accidental form which makes it sand, and by a proper manuduction transmute it into gold. What riches ! what fe- licity and assistance to human society ! should we once arrive to this point.

The alchemists, therefore, labored far more to the purpose apparently. If the systematical philosophers think rightly on the article of a first matter, in which they all agree, the .latter think still better in reducing these speculations to practice, and attempting to change this matter so as to produce gold and immortality. But here, unluckily for the honor of this sort of philo- sophy, alchemists die; and not only so, but they sooner than others. The greater number of them are parched among their furnaces and pestiferous exhalations; and this is certain, they all ruin themselves. Their fruitless attempts prove the falsity of the principle which they had from the philosophers, and dispense with our entering into a tedious examination of this imaginary phi- losophy.

As it is but loss of time for us to stir the atoms of Gassendi, or to whirl about the angular bo- dies of Descartes, continues our lively abbe, we shall possibly find the attractive, centripetal, and centrifugal philosophers of the north turn to bet- ter account.

The difference between M. Descartes and Sir Isaac Newton is, that the

former undertakes to account for every thing ; and the other, modestly acknowledging that we are ignorant of the secrets of nature, pretends only to evince one matter of fact (see our article PHILOSOPHY) without un- dertaking to explain the cause ; but as this one point extends, according to him, to all nature, his system for that reason becomes a kind of uni- versal philosophy. According to M. Descartes, that gravity which causes bodies to fall is nothing different from the action of the fluids in which the planets are carried away ; because all bodies moved and impelled by the bodies surrounding them, to describe a circular instead of a straight line, incessantly endeavour to recede from the

centre ; whence it happens that when the parts of the vortex meet with the bodies which have no centrifugal force, or which have less, they are compelled to fly to the centre ; so that the precipitation of heavy bodies towards the centre is nothing but the action of more active bodies which have a tendency to avoid it.

Sir Isaac Newton at first thinks with M. Des- cartes, from whom he had learned it, that all bodies continue in a state of inaction, or repose, till drawn out of it or interrupted. But again, Sir Isaac Newton imagines that he has observed throughout all nature, and it is the distinguishing point of his system, that all bodies attract one another in proportion to their distance and bulk ; that they have a certain tendency towards, and press upon another ; that the sun tends towards the earth, and the earth towards the sun ; but that, the latter being incomparably larger, we per- ceive only the approaches of the former towards it: that in like manner the earth tends towards the stone which is separated from it by projection, as the stone tends towards the earth, or rather that, the stone attracts the earth to it, as the earth attracts the stone; but the earth, by reason of its bulk, having a stronger attraction than a small stone, it happens from thence that the earth does not quit its place, and that the stone approaches or is drawn to it by the attractive power which the earth exercises upon it.

This action, which Newton imagines he every where perceives between bodies and bodies, throughout all nature, he calls attraction, and gives it out as an effect residing in every part of the universe, without being able to assign other cause than the will of God to put all nature in motion. Thus, the earth moving round the sun, if it was only moved, and not drawn towards it, would infinitely recede from it. The moon, if it obeyed without obstacle the law of motion which carries it away, would avoid the earth, and at length disappear. In the same manner, if the earth obeyed only the law of attraction, that law by which the sun draws the earth to it, it would draw near to, and

precipitate into the sun ; the moon, being only attracted, would fall upon the earth : but the earth being moved and cast off from the sun, is at the same time drawn toward it ; instead of receding from it in a straight line, this line will be curved by the attraction which brings it back to the sun : being always under the in- fluence of two powers, one of which always re- moves it from the sun, and the other draws it back, it describes round the sun a curved line, which Newton demonstrates ought to be an ellip- sis, or near to an oval. The moon, in like man- ner, obeying two powers, one which makes it fly from, the other which makes it tend towards the earth, revolves round it ; the centrifugal and the centripetal forces are checks one upon the other; and the moon, instead of being carried far from us by the first power, or precipitated upon our earth by virtue of the second, is, by the impres- sion of both, kept within its orbit.

‘ Sir Isaac Newton afterwards examines what would be the measures of motion of the moon beginning to fall towards the earth, from the height of its orbit, after it had lost its centrifugal force, and was freed from all attraction of the

earth. The distance of the moon from the earth is known, also the duration of its revolution; one may then know what is the portion of the orbit in a minute. Geometry teaches us what space the moon runs through in a right line fall- ing towards the earth, by virtue of the force which makes it pass through its arch, or portion of its orbit. Afterwards, having laid it down that the attraction diminishes as the square of the distance increases, Newton finds by his calcula- tions that the moon, in falling from its station, would at first fall fifteen feet in a minute ; and that near the earth, by virtue of the same law, it would in a minute pass through 3600 times fif- teen feet. Lastly, examining the spaces which a body of wood or stone let fall would pass through near the earth, he concludes, from the experience gained by the fall of bodies, that a stone runs in one minute, near our globe, through 3600 times fifteen feet. The moon, being loosed from its or- bit, would therefore obey the same law which precipitates the stone. By a necessary conse- quence, if the stone was carried as high as the orbit of the moon, being there let fall, it would run through fifteen feet in a minute. Attraction and gravity are then one and the same thing.

‘ M. Privat de Molieres, of the Academy of Sciences, has retained, in his Philosophical Lec- tures, the ground-work of Newton’s observations. He admits all the proofs which show that the same cause which makes a stone gravitate upon the earth makes the earth gravitate upon the sun and the moon upon the earth ; but he attributes this effect to a cause very different from that which Newton has imagined. The French aca- demician, at the same time that he extols the exactness of the geometrical system of the learn- ed Englishman, finds it incompatible with the plan of nature. He is not reconciled to a prin- ciple which makes of our world, one All, whose parts are as naked, and less united than those of a skeleton. All the ideas which we have of me- chanics seem to him to be overthrown by this imaginary attraction, which, according to the partisans of the English geometrician, recipro- cally acts between bodies separated by a great vacuum, and makes them move in a void, with- out uniting by any intermediate bond. M. Mo- lieres resumes the vortex of M. Descartes; the existence of which seems to him to be almost palpably nature. He corrects it in the whole; and, making all the effects which Newton had observed to flow from the very structure of the rortex, he in some measure reconciles the two contending schools. This vortex is no longer composed, as Descartes has imagined, of hard in- flexible globules, but of small vortices, the parti- cles of which are incessantly inclining to recede from their peculiar centre, while the whole tends to remove from the common centre. A solid body, as the moon or earth, cast into this vortex, ought immediately to be moved by it, and car- ried the same way with it ; but the parts of this unwieldy body being strictly united, and at rest among themselves, make no effort for motion, and have no other impulsion than what the whole body of the planet receives from the vortex in which it floats ; whereas the globules of the vor- tex have a double motion, and make a double ef-

fort ; all of them tend to remove from the com- mon centre, the moment they are forced, by the surrounding vortices, to move in n circular line. Moreover, all the particles of these globules per- form that in little, round their centre, which the great ones do in general round their common centre. From this double tendency results a double force, which more powerfully removes them from the centre than the motion impress- ed on the planet removes it from the centre of the sphere. The planet cast into this vortex has indeed received a centrifugal force, in receiving a circular motion ; but, its parts’ being at rest, it has less centrifugal force than the vortex, in which this force is double, as well from the mo- tion of the little vortices which fly from the com- mon centre, as their particles, which all at the same time avoid their respective centres. Thus the centrifugal force in the

matter of the vortex, exceeding the centrifugal force of the planet, ought to prevail : and, the planet tending less to recede from the centre than the matter which pushed it on, it must follow, that the earth will by degrees draw nearer to the sun, and the moon fall upon the earth. In a word, De Molieres makes use but of one action, or same cause, to produce the centrifugal force of the vortex, and to make the planets, and all solid bodies, gravi- tate to one and the same centre : instead of which Newton adds a motion impressed on all these bodies ; another power and another law, which he names attraction, and which disposes them all to draw near to one another, with more or less ve- locity, in proportion to their solidity, or their distances ; while, indeed, the second power » useless and inconceivable.

‘ M. de Molieres, after having given us this assistance, by his ingenious explanation of gra- vity, to comprehend the double centrifugal force of vortices, and the advance of solid bodies to- wards the centre, as a simple effect of this force, left us at first in doubt of the power he would make use of to sustain the planets in their orbit, and to prevent their falling upon the centre. But it was easy to perceive, at the same time, that he would be compelled to make use of different vortices, at least of different atmospheres, cast round the planets, to make them roll over one an- other, without falling, like the globules of different matter, which, crowding together, flatten a little by their pressure upon each other; while, ih the interim, the centres which tend one towards ano- ther, by the impulsion of the encompassing vor- tices, can never approximate. This explanation of M. de Molieres is so much the more ingenious as it is not made use of for the creation of a world, but to give an idea of its motion and support, as it may be employed in the particular explanation of a number of phenomena, and of particular cases; such, for example, as the flux and reflux of the sea, by the pressure of the sphere of the moon on that of the earth ; the shifting of the satellites of Jupiter, by the pres- sure of the sphere of Saturn on that of Jupiter ; the attractions and repulsions of electric bodies, by the small atmospheres which they acquire or lose, according to the different manner they are touched ; the dissolutions and fermentations in chemistry, by the different powers of the little

vortices which compose liquids, and which can only appear at rest when they are put in equili- brio, after a long agitation, occasioned by inequa- lity of efforts.

‘ I shall not here touch upon the systems which M. Huygens, Bulfinger, Bernoulli, and many others have imagined respecting gravity; it is but a point of the mechanics of the universe. Should we ask fifty philosophers an explanation of them, there is not one of them but would believe that he gave you a philosophy that was to be esteem- ed in proportion to the geometry and calculations he had employed in it. Even all these indefati- gable calculations will often, setting out with the same principles, lead you to as many different sums, different mechanisms, and to as many sys- tems, as there are different persons whom you consult. What will be the consequence, when, from this point, we go on to an explanation of the bolsters of the axis, and the profound struc- ture of the other parts of the universe. Entering into these systematical opinions will be quitting a view of nature, and losing sight of the certain use which we may make of it, and in which con- sists our true philosophy. Another reason to keep us upon our guard with relation to systems is, that, however beautiful they may appear at first sight, the application we may make of them to different effects generally turns out unlucky and ridiculous. Make use, for example, of the sys- tem of attraction, for the phenomenon of the load- otone, where one would think it ought to be of great use ; or for electricity ; or for what is called fermentation; you will find that your principle will leave you in the lurch, and will inform you in nothing , they are obliged to vary their attrac- tions like their effects. Here, it is an attraction which acts through the whole depth of the mass: there, it is an attraction which only acts on the slightest superficies of the body, let them be thin or thick ; there, a certain attraction is the same, while another attraction varies, as do the diver- sities of the bodies.

‘ I shall here end the history of systematical philosophy, because it is of little use to give a more full knowledge of it, and perhaps may be dangerous to young people, by busying their minds upon systems, which cannot fail, in spite of all our exertions, to present some phenomena to our thoughts, which is a very great prejudice to the progress of true philosophy ; either be- cause it is not easy to get rid of certain generali- ties, or that we see every thing conformable to our prejudices. Experimental philosophy is the only one which has been of use to human so- ciety; and, as we have shown that the advantages flowing from it are innumerable, so we cannot recommend for the study of philosophy a more prudent method than that which the members of the Royal Academy have followed for cur in- struction. They have never, as a collective body, given their approbation to any one general sys- tem. They are fully persuaded that, if man be al- lowed to arrive at a thorough knowledge of nature, it can be only by treasuring up experiments and facts for a great length of years ; and,

should even this thorough knowledge be denied to our condition, experiments at least, and the know- ledge of most minute things, will procure, as is

daily experienced, various benefits to public SP- ciety. This very judicious principle, which they have always looked upon as a rule, and the na- ture of the different functions which these learn- ed men have divided among themselves, are ac- curately founded on the necessaries of life, and the extent of our capacities. They go farther : the experimental philosophy which they have brought into esteem is the only useful one, be- cause it is the only one conformable to our condition : which, without offence, we may name, The System of Providence.

‘ The experience of 6000 years is certainly sufficient to teach us what is possible and what is forbidden. While man, in his enquiries, was busied in things submitted to his government, his endeavours were always rewarded by new disco- veries. Whenever he would pry into the inte- rior structure of the parts of the universe, the motion of which is not submitted to his care, his ideas have been fantastical and uncertain. Let him study the measures of magnitudes, and the laws of motions ; not to pace out the heavens, or to weigh the solid bodies of the planets, but to know the order of his days ; let him observe the relation of the aspects of the heavens to his habi- tation, the progression of light in the modification in which it is presented to him ; the use he may make of the equilibrium of liquids, of the weights and velocities of the bodies of which he is master, of all the experiments which come within his view, and especially under his hand ; in a word, let him apply experiments to the necessaries of life, and he will have an unerring philosophy, replete with great advantages. But to undertake to determine the cause which governs the motion of the universe, and to penetrate into the univer- sal structure, and the particular parts of which it is composed, is to forfeit the honor of improving his patrimony in order to run after shadows. It is neglecting treasures which are open to us, and obstinately persisting to knock at a door which has been shut against us these 6000 years.

‘ It is no conjectural opinion, but a visible truth of experience, that God has given us great facility and intelligence in things which we ought to manage ; and, on the contrary, that those to which God himself gives motion and action, without entrusting the conduct to our care, he has concealed from our knowledge. For example, we are ignorant of the structure of our stomach, because God has eased us of the care of its di- gestion. In vain would the most able anatomist direct his digestion ; all very often goes contrary to his wishes. On the

other hand, we have in our senses many watchful and faithful moni- tors, opportunely to direct what nourishment is proper for us. Why then have we so many me- thods to be acquainted with our nutriment, if it is not that the care of seeking and choosing it is committed to us ? And why, on the contrary, do we not know how to digest, if it be not that God has evidently willed our digestion to be perform- ed in us without our direction ? God, who has spared us that trouble, has denied us the knowledge of the mechanism which forms the flesh and the fruits that we eat, as well as the mechanism which extracts the juices from *hem for our nourishment. This knowledge would

have distracted us. We attain the age of four- score and ten, without knowing what digestion is, or what is the action of the muscles. We have been served without any care on our part. Had we thoroughly known the structure of our sto- mach, we should have been for directing its func- tions. God has not allowed this knowledge to man. He ordained him to be otherwise employ- ed. If then this mechanism be hid from him, lest it should multiply his cares, will he acquaint him with the structure of the world, the motion of which is not committed to his charge ?

‘ The common sailor knows nothing more of the loadstone than what his senses inform him, viz. its tendency towards the North Pole. This is the sum of his knowledge. The philosopher would know the cause of this phenomenon ; he employs the effluvia of its pores in spiral lines, the attractions, the repulsions ; and after using his mechanics, his geometries, and calculations for several years, he either acknowledges that he himself knows nothing of the matter, or else has the mortification to find that nobody approves of his system. The systematical philosopher, who thinks himself ignorant if he know not the cause of what he sees, passes his whole life in the pur- suit of possibilities, and becomes useless to the rest of mankind by .being buried alive in his clo- set. The sailor makes use of what his senses inform him of, the direction of the loadstone to- wards the North, and by its assistance voyages to the end of the world. Make choice of ten thou- sand other informations of fact, and you / will hardly find one of them but what is of service. Our fortunes will be better in proportion to this sort of knowledge. Would you seek after the causes of these effects ? You will meet with no- thing of certainty or use. Can we, after this, mis- take the intention of God, in the measure of understanding which he affords us for our pre- sent instruction ? — It

is evident that we have no universal knowledge. The objects of our pursuit are scattered round us upon the earth and in the heavens. God has given us, together with eyes and understanding, a fund of curiosity which sti- mulates us from one object to another, that new experiments may enable us to procure new con- veniencies for our brethren ; and that every thing upon earth may, by degrees, be put to the best use for the profit of mankind. But, though a man can go on a stretch from Brest to Pekin, it does not follow that he can go to the moon ; or though he have a principle of power in his hands that enables him to support piles of oak, and great blocks of marble in the air, this affords no rea- son why he should attempt with his levers to make the moon fly off from her orbit, or to fix his pul- leys to the body of Jupiter, to rob him of one of his satellites. As man's strength is limited, so likewise is his knowledge, and these bounds are suited to his wants. He meets with opposition every where, when he enters upon idle specula- tions. But he proceeds from discovery to disco- very, which discoveries work miracles, when he employs himself in making the best use of that which is about him. Our reason is always at- tended with success in uniting the truths of ex- perience with the necessities of life, in making a prudent use of the benevolence of the Creator,

and in giving him the glory. This is the sum total of human knowledge.'

We have inserted the above, not because we either go along with the writer in some of his ob- jections to endeavouring after a complete know- ledge of the universe, or because we approve with him M. de Moliere's qualified doctrine of the vortices : but because it contains a fair view of many theories of physics, and some excellent practical remarks on the general subject of form- ing them.

Let us hear the more discriminating but equally humbling account of professor Playfair, respecting the ancient physics: — 'A resemblance between the events with which the observer was most familiar and those to which he was less ac- customed, and which had excited his wonder, was the first object of enquiry, and produced the first advances towards generalisation and philo- sophy. This principle, which it were easy to trace from tribes the most rude and barbarous to nations the most highly refined, was what yielded the first attempts towards classification and arrangement, and enabled man, out of indi- viduals subject to perpetual change, to form cer- tain fixed and permanent objects of knowledge — the species, genera, orders, and classes, into which he has distributed these individuals. By this effort of mental abstraction he has created to himself a new and intellectual

world, free from those changes and vicissitudes to which all mate- rial things are destined.

‘ Another great branch of knowledge is occu- pied, not about the mere arrangement and classi- fication of objects, but about events or changes, the laws which those changes observe, and the causes by which they are produced. In a science which treated of events and of changes, the nature and properties of motion came of course to be studied, and the ancient philosophers naturally enough began their enquiries with the definition of motion, or the determination of that in which it consists, Aristotle’s definition is highly cha- racteristical of the vagueness and obscurity of his physical speculations. He calls motion ‘ the act of a being in power, as far as in power,’ — words to which it is impossible that any distinct idea can ever have beerrannexed. The truth is however, that the best definition of motion can be of very little service in physics. Epicurus defined it to be the ‘ change of place,’ which is no doubt the simplest and best definition that can be given ; but it must, at the same time, be confessed that neither he, nor the moderns who have retained his definition, have derived the least advantage from it in their subsequent researches. The pro- perties, or, as they are called, the laws of motion, cannot be derived from mere definition ; they must be sought for in experience and observation, and are not to be found without a diligent com- parison and scrupulous examination of facts. Of such an examination neither Aristotle nor any other of the ancients ever conceived the neces- sity, and hence those laws remained quite un- known throughout all antiquity.

‘ Instead of conceiving that there resides in body a natural and universal tendency to perse- vere in the same state, whether of rest or of mo- . tion, they believed that terrestrial bodies tended

naturally either to fall to the ground or to ascend from it, till they attained their own place ; hut that, if they were impelled by an oblique force, then their motion became unnatural or violent, and tended continually to decay. With the heavenly bodies, again, the natural motion was circular and uniform, eternal in its course, but perpetually rarying in its direction. Thus, by the distinction between natural and violent mo- tion among the bodies of the earth, and the dis- tinction between what we may call the laws of motion in terrestrial and celestial bodies, the an- cients threw into all their

reasonings upon this fundamental subject a confusion and perplexity from which their philosophy never was deli- vered.

‘There was, however, one part of physical knowledge in which their endeavours were at- tended with much better success, and in which they made important discoveries. This was in the branch of mechanics which treats of the action of forces in equilibria, and producing not motion but rest ; — a subject, which may be understood, though the laws of motion are unknown. The first writer on this subject is Archimedes. He treated of the lever, and of the centre of gravity, and has shown that there will be an equilibrium between two heavy bodies connected by an in- flexible rod or lever, when the point in which the lever is supported is so placed between the bo- dies that their distances from it are inversely as their weights. Great ingenuity is displayed in this demonstration; and it is remarkable that the author borrows no principle from experiment, but establishes his conclusion entirely by reason- ing a priori. He assumes, indeed, that equal bo- dies, at the ends of the equal arms of a lever, will balance one another; and also that a cylin- der, or parallelepiped, of homogeneous matter, will be balanced about its centre of magnitude. These, however, are not inferences from experi- ence ; they are, properly speaking, conclusions deduced from the principle of the sufficient rea- son. The same great geometer gave a beginning to the science of hydrostatics, and discovered the law which determines the loss of weight sustain- ed by a body on being immersed in water or in any other fluid. His demonstration rests on a principle which he lays down as a postulatum, tint, in water, the parts which are less pressed are always ready to yield in any direction to those that are more pressed, and from this, by the application of mathematical reasoning, the whale theory of floating bodies is derived. The above is the same principle on which the mo- dern writers on hydrostatics proceed; they give it not as a postulatum, but as constituting the de- finition of a fluid. Archimedes, therefore, is the person who first made the application of mathe- matics to natural philosophy.

‘ The mechanical enquiries, begun by the geometer of Syracuse, were extended by Ctesi- bius and Hero; by Anthemius of Tralles; and, lastly, by Pappus Alexandrinus. Ctesibius and Hero were the first who analysed mechanical en- gines, reducing them all to combinations of five simple mechanical contrivances, to which they gave the name of SwafitiQ, or powers, the same which they retain at the present moment. Even

in mechanics, however, the success of these in- vestigations was limited ; and failed in those cases where the resolution of forces is

necessary, that principle being then entirely unknown. Hence the force necessary to sustain a body on an inclined plane is incorrectly determined by Pappus, and serves to mark a point to which the mechanical theories of antiquity did not extend.

‘ In another department of physical know- ledge, astronomy, the endeavours of the ancients were also accompanied with success. I do not here speak of their astronomical theories, which were indeed very defective, but of their disco- very of the apparent motions of the heavenly bodies, from the observations begun by Ilippar- chus and continued by Ptolemy. In this their success was great; and while the earth was sup- posed to be at rest, and while the instruments of observation had but a very limited degree of ac- curacy, a nearer approach to the truth was pro- bably not within the power of human ingenuity. Mathematical reasoning was very skilfully applied, and no men whatever, in the same circumstances, are likely to have performed more than the an- cient astronomers. They succeeded, because they were observers, and examined carefully the motions of which they treated. The philoso- phers, again, who studied the motion of terres- trial bodies, either did not observe at all, or ob- served so slightly that they could obtain no ac- curate knowledge, and in general they knew just enough of the facts to be misled by them/

‘ Though, on account of this inattention to ex- periment,’ says our philosopher afterwards, ‘ no- thing like the true system of natural philosophy was known to the ancients, there are nevertheless to be found in their writings many brilliant con- ceptions, several fortunate conjectures, and gleams of the light which was afterwards to be so generally diffused. Anaxagoras and Empe- docles, for example, taught that the moon shines by light borrowed from the sun, and were led to that opinion, not only from the phases of the moon, but from its light being weak and unac- companied by heat. That it was a habitable bo- dy, like the earth, appears to be a doctrine as old as Orpheus ; some lines, ascribed to that poet, representing the moon as an earth, with moun- tains and cities on its surface. Democritus sup- posed the spots on the face of the moon to arise from the inequalities of the surface, and from the shadows of the more elevated parts projected on the plains. Every one knows how conformable this is to the discoveries made by the telescope. Plutarch considers the velocity ot the moon’s motion as the cause which prevents that body from falling to the earth, just as the motion of a stone in a sling prevents it from falling to the ground. The comparison is in a certain degree just, and clearly implies the notion of centrifugal force ; and gravity may also be considered as pointed at for the cause which gives the moon a tendency to the earth. Here, therefore, a foundation was laid for the

true phi- losophy of the celestial motions ; but it was laid without effect. It was merely the conjecture ol an ingenious rnind, wandpring through the re- gions of possibility, guided by no evidence, and having no principle which could give stability U

its opinions. Democritus, and the authors of that physical system which Lucretius has so beauti- hilly illustrated, were still more fortunate in some of their conjectures. They taught thai the Milky Way is the light of a great number of small stars, very close to one another ; a magni- ficent conception, which the latest improvements of the telescope have fully verified. Yet, as if to convince us that they derived this knowledge from no pure or certain source, the same philo- sophers maintained that the sun and the moon are bodies no larger than they appear to us to be. Very just notions concerning comets were also entertained by some of the ancients.

‘ It was, however, often the fate of such truths to give way to error. The cornets, which these ancient philosophers had ranked so justly with the stars, were degraded by Aristotle into meteors floating in the earth’s atmosphere ; and this was the opinion concerning them which ultimately prevailed. But, notwithstanding the above, and a few other splendid conceptions which shine through the obscurity of the ancient physics, the system, taken on the whole, was full of error and inconsistency. Truth and falsehood met almost on terms of equality ; the former separated from its root, experience, found no prefereuce above the latter ; to the latter, in fact, it was generally forced to give way, and the dominion of error was finally established.

‘ One ought to listen, therefore, with caution to the encomiums sometimes bestowed on the phi- losophy of those early ages. If these encomiums respected only the talents, the genius, the taste, of the great masters of antiquity, we would sub- scribe to them without any apprehension of go- ing beyond the truth. But if they extend to the methods of philosophising, and the discoveries actually made, we must be excused for entering our dissent, and exchanging the language of pa- negyric for that of apology. The infancy of science could not be the time when its attain- ments were the highest; and, before we suffer ourselves to be guided by the veneration of antiquity, we ought to consider in what real an- tiquity consists. With regard to the progress of knowledge and improvement, ‘ we are more an- cient than those who went before us.’ The human race has now more experience than in the genera- tions that are past, and of course may be ex- pected to have made higher attainments in science and

philosophy. Compared with natural philo- sophy, as it now exists, the ancient physics are rude and imperfect. The speculations contained in them are vague and unsatisfactory, and of little value, but as they elucidate the history of the errors and illusions to which the human mind is subject. Science was not merely stationary, but often retrograde ; the earliest opinions were fre- quently the best ; and the reasonings of Demo- critus and Anaxagoras were in many instances more solid than those of Plato and Aristotle. Extreme credulity disgraced the speculations of men who, however ingenious, were little ac- quainted with the laws of nature, and unprovid- ed with the great criterion by which the evidence of testimony can alone be examined. Though observations were sometimes made, experiments were never instituted ; and philosophers, who Vol. XVII.

were little attentive to the facts which spontane- ously offered, did not seek to increase their num- ber by artificial combinations. Experience, in those ages, was a light which darted a few tre- mulous and uncertain rays on some small portions of the field of science, but men had not acquir- ed the power over that light which now enables them to concentrate its beams, and to fix them steadily on whatever object they wish to examine. This power is what distinguishes the modern physics, and is the cause why later philosophers, without being more ingenious than their prede- cessors, have been infinitely more successful in the study of nature.'

PART IT. THE CLAIMS OF MODERN PHYSICAL SCIENCE

After all, there is a general connexion between the various parts of the universe, and a general division of its objects. All things on this globe are connected with each other by the laws of mo- tion and of mind. Our globe is connected with the whole of the solar system : Sir Isaac Newton has clearly proved, by gravitation. If we extend our observations to the fixed stars, the connexion by no means fails. Their inconceivable distance, indeed, renders it impossible for us to acquire any extensive knowledge of their nature. But they are evidently connected with the solar sys- tem by the identity of the light which they emit with that emitted by our sun, by their periodical niotions, &c.

In this great and unbounded scene of contem- plation, our attention is naturally directed to the different classes of objects in proportion to the interest we take in them. There is nothing in which we are so much interested as our fellow- men ; and therefore we study their distinctive nature by attending to their characteristic ap- pearances. But we extend this inference to a great number of beings besides our

fellow-men, namely, to the whole animal creation ; for in all we observe the same subserviency to the ends of the agent, in the changes which we find then: continually producing in the objects around them. These changes are all adjusted to their own well-being. In all such cases, therefore, w? are forced, by the constitution of our own minds, to infer the existence of design or intention in these beings also.

But, in numberless changes produced by ex- ternal objects on each other, we observe no such fitness in the effects, no such subserviency to the well-being of the agent. In such cases, there- fore, we make no such inference of thought or design.

Thus, then, there is presented to our observa- tion an important distinction, by which we arrange all external objects into two classes. The first resembles ourselves, in giving external marks of that thought or intention of which we are con- scious ; and we suppose in them the other pro- perties which we discover in ourselves, viz. thought, perception, memory, foresight, and all that collection of faculties which we feel in our- selves, and which constitute the animal. The other class ‘of objects exhibit no such appear- ances, and we make no such inference. Thus

we divide the whole objects of external nature into the classes of thinking and unthinking beings. Our first judgments about these classes, how- ever, must be very inaccurate. But, when an animal dies, we observe that it no longer gives the former marks of thought and intention, and that it now resembles the class of unthinking beings, although it still retains all that fitness of organical structure which it had before. This leads us to conclude that the distinction does not arise from a difference in organical structure, but from a distinct substance common to all thinking beings, but separable from their organi- cal frame. To this substance we ascribe thought, intention, contrivance, and all that collection of faculties which we feel in ourselves. To this substance, in ourselves, we refer all sensations, pleasures, pains, remembrances, desires, pur- poses; and to this aggregate, however imper- fectly understood, we give the name of mind. Our organical frame, which seems to be only the instrument of information and operation to the mind, we call our body. But, as the animating principle is not like our body the immediate object of the

senses, we naturally conceive it to be a substance essentially different from those which are the objects of our senses. The most savage nations have shown a disposition to form this conclusion. Observing that animal life was connected with breathing, it was natural to imagine that breathing was living, and that breath was life. It is a remarkable fact that in most languages the term for breath is one of the terms for the soul : nn, irviv\ia, spiritus, in the He- brew, Greek, and Latin, express both ; gheist or ghost, in the Teutonic, comes from gheisen, to breathe or sigh ; diicha or duba, the soul, in Scla- vonic, comes from duichat,to breathe ; and so in many other languages.

Very little refinement, however, is necessary to convince us that air or breath cannot be the substance which thinks, wishes, and designs ; and that the properties of this substance, what- ever it is, must be totally different from, and in- compatible with, any thing that we know among the immediate objects of our senses. Hence we are led to conclude that there are two kinds of sub- stances in nature : one which is the principle of sensation, and therefore cannot be the object of our senses, more than light can be the object of the microscope. This substance only can feel, think, desire, and propose, and is the object of re- flection alone. The objects of our senses compose *he other class, and therefore can have none of the other properties, which are not cognoscible ,by the senses. These have all the properties which our senses can discover : and we canhave no evidence of their having any other, nor indeed any conception of their having them. This class is not confined, to the unorganised masses of matter ; for we see that the bodies of animals lose after death that organical form, and are assimilated to all the rest of unthinking beings.

From such viewp as these, while all nations have agreed to call this class of objects by the name body, which originally expresses our organical frame, some nations, farther advanced in cultivation or refinement, have contrived an ab- stract term, to exoress this general substance of

which all inanimate beings are composed. Such terms we have in the words materia, v\q, matter,

arc.

Matter is that substance which is immediately and obviously cognoscible by our senses. What- ever is not thus cognoscible by our senses is im- material ; hence mind is said to be immaterial. It is of importance to keep in mind this distinc- tion, which is more than merely grammatical. Little more is necessary for detecting the sophism

of Helvetius, Mirabeau, and other sages of the Gallic school, who had endeavoured to remove the ties of moral and religious obligation by lowering our conceptions of our intellectual na- ture. It also shows how hastily they have formed their opinions who have ascribed to the imme- diate agency of mind all those relations which are observed in the actions of bodies on each other at a distance. The characteristic pheno- menon, or distinguishing quality, of mind is in- vention. The phenomenon by which this quality is suggested to us is art, or the employment of means to gain ends ; and the mark of art is the supposed conduciveness of these ends to the well being of the agent. Where this train is not evi- dent, design or intention is never thought of. We have, and can have, no motion of mind different from those of our own minds, and we discover the existence of other minds as we discover the ex- istence of bodies, by means of phenomena, which are characteristics of minds, and which resem- ble those phenomena that follow the exertion of our own mental faculties, by the employment of means to attain desired ends ; and, where such appearances are not observed, no existence of a mind is inferred. When we see a man fall from the top of a house, and dash out his brains on the pavement, we never ascribe this motion to his mind. Although the fitness of many of the ce- lestial motions for most important purposes makes us suppose design and contrivance some- where, and therefore a Supreme Mind, we no more think of inferring a mind in the earth, from the fitness of its motions for purposes most beneficial to its inhabitants, than of inferring a mind in a bit of bread from its fitness for nou- rishing our bodies.

The term mind, therefore, in the ordinary lan- guage of all men, is applied to what desires and wills, at the same time that it perceives and un- derstands. If we call that mind which produces motion, we must derive our notions of its quali- ties or attributes from observing their effects. We must, therefore, discover the general laws by which agents act, that is, the general laws observed in those motions which we consider as their effects. Now these are the general laws of mo- tion ; and in none of these can we find the least coincidence with what we are accustomed to call the laws of mind. Nay, it has been the total want of similarity which has given rise to the distinction which all men, in all ages and coun- tries, have made between mind and matter. This distinction is found in all languages; and it is an unpardonable liberty which men take with languages' when they use a term of distinc- tion, a specific term, to express things of a dif- ferent species. What some modern authors have been pleased to call mind, the whole world be-

sides have called by another name, force ; which, though borrowed from our own exertions, is yet sufficiently distinctive, and never leads us to con- found things that are different, except in the lan- guage of some modern philosophers, who apply it to the laws of agency of mind ; and, when speaking of the force of motives, &c., commit the same mistakes which the followers of Aristotle commit in the use of the term mind. Force, in the language of these philosophers, means what connects the operations of mind ; as mind, in the language of lord Monboddo, is that which con nects the operations of body. The doctrine of elemental minds, therefore, as the immediate causes of the phenomena of the material world, is an abuse of language. It is a jargon and a frivolous abuse, for it offers no explanation whatever. Of all mistakes that the naturalist can fall into, there is none more fatal to his progress in knowledge than the confounding things which are essentially different ; and of all the distinc- tion? which can be made among the objects of our contemplation, there is none of equal philo- sophical importance with this between mind and matter. When we consider the consequences which naturally follow from this confusion of ideas, and particularly those which follow from sinking the mental faculties of man to a level with the operations of mechanics or chemistry — consequences which the experience of the present day shows to be destructive of all that is noble or desirable in human nature, and of all that is comfortable in this life, and which blasts every hope of future excellence — we cannot be too an- xious to have this capital distinction put in the plainest point of view. Such, then, are fairly the objects of this science, the subjects of phi- losophical study. The extent of the science is almost unbounded, reaching from an atom to God himself. It is necessary, for the successful cultivation of this immense field of knowledge, that it be committed to different cultivators, and that its various portions be treated in different ways.

Accordingly, the various tastes of men have given this curiosity different directions ; and the study, like all other tasks, has been promoted by this division of labor. Some ingenious natu- ralists have attended only to the appearances of fitness, which are exhibited in every quarter of the universe ; and by arranging these into dif- ferent classes, and interpreting them as indica- cations of thought and intention, have acquired the knowledge of many classes of sentient and intelligent beings, actuated by propensities, and directed by degrees of reason. While the con- templation of these appearances indicates thought and design in any individual of one of these classes, and brings its propensities and purposes of action, and the ends gained by these actions, into view, the contemplation of these propensities,

purposes, and ends, itself occasions an inference of a much more general kind.

All these sentient beings give indications of knowledge and of power; but their knowledge bears no proportion to their powers of action and of attaining important ends; and their power is neither always, nor often, the consequence of their knowleuge. Where the effects of thdr ac-

tions are most eminently conducive to their interests, the power of attaining these ends is generally independent on any attention to the fitness of the me;ms, and their exertion is often made without their even knowing the end. The well-being of the individual is secured against danger by an instinctive propensity, which leads it to the performance of the neces- sary action, which is thus made immediately and ultimately desirable, without regard to its ultimate and important end. Thus, in our own nature, the support of animal life, and the im- provement of the means of subsistence by a knowledge of the objects which surround us, are not entrusted to our apprehensions of the impor- tance of these ends, but are committed to the surer guides of hunger and curiosity.

There is also a connexion between the indi- viduals of a class, different from that which arises from the mere resemblance of their external ap- pearance, or even of their propensities and pur- suits. These propensities are such that, while each individual seeks only its own enjoyment, these enjoyments are in general such as contri- bute to the support of the species and the enjoy- ment of other individuals. Thus, in the classes of animals, and in human nature, the continu- ance of the race, and the enjoyment of the whole, are not entrusted to the apprehension we entertain of the importance of these ends, but are produced by the operation of sexual love and the love of society.

Even the different classes of sentient beings are connected together ; and, while the whole of each class aim only at their own enjoyment, they contribute also to the well-being of the other classes. Man, the selfish lord of this sublunary world, is not the unconnected inhabitant of it. He cannot reap all the fruits of his situation, without contributing to the enjoyment of thou- sands of the brute creation. Nay, it has even been proved thai while one race of animals, in consequence of its peculiar propensities, subsists by the destruction of another, the sum total of animal life and enjoyment is prodigiously in- creased. See a judicious dissertation on thiscuri- and puzzling subject, entitled A Philosophical Survey of the Animal Creation ; where it appears that the increase of animal life and enjoyment which is

produced by these means, beyond what could possibly obtain without it, is beyond all conception. See likewise King's Origin of Evil, edited by Dr. Law.

Thus the whole assemblage seems connected, and jointly employed in increasing the sum total of possible happiness. This fitness of the various propensities of sentient and intelligent beings, this subserviency to a general purpose, strikes these observers as a mark of intention, evidently distinct from, and independent of, all the particular intentions, and superior to them all ; and thus it irresistibly leads them to infer the exist- ence of a Supreme Mind, directing the whole of this intellectual system, while the individuals of which it consists appear the unconscious instru- ments in the hand of a great artist, with which he executes his grand and beneficent purposes.

But the obsenation goes yet further : — The bo- dies of the inanimate creation are not only con-

nected with each other by a mutual dependence of properties, and the relation of causation, but they are also connected with the sentient beings by a subserviency to their purposes of enjoyment. The philosopher observes that this connexion is admirably kept up by the constancy of natural operations, and the expectations of intelligent beings. Had either of these circumstances been wanting, had either the operations of nature been without rule, or had sentient beings no percep- tion or expectation of their uniformity, the sub- serviency would be totally at an end. This ad- justment, this fitness, of which the effect is the enjoyment of the sentient inhabitants of the universe, appears to be the effect of an intention of which this enjoyment is the final cause. This constancy therefore in the operations of nature, both in the intellectual and material world, and the concomitant expectation of sentient beings, appear the effects of laws imposed on the dif- ferent parts of the universe by the Supreme Mind, who has formed both these classes of beings so admirably suited to each other.

To such observers the world appears a work of art, a system of means employed for gaining certain proposed ends, and it carries the thoughts forward to an artist ; and we infer a degree of skill, power, and good intention in this artist, proportioned to the ingenuity, extent,

and happy effect which we are able to discern in his works. Such a contemplation of nature, therefore, termi- nates in natural theology, or the discovery of the existence and attributes of God.

Our notions of the Supreme Mind are formed from the indications of design which we observe, and which we interpret in the same way as in the actions of men. These notions, therefore, will differ from our notions of other minds only in the degrees which we are able to observe, and which we assign to these faculties ; for the phe- nomenon or the effect is not only the mark, but also the measure of its supposed cause. These degrees must be ascertained by our own capacity of appreciating the extent, the multiplicity, and the variety of contrivance. Accordingly, the at- tributes of the Supreme Mind, in the theological creed of a rude Indian, are much more limited than in that of a European philosopher. In pro- portion as our understandings are enlarged, and as our acquaintance with the operations of nature around us is extended, we shall perceive higher degrees of power, of skill, and of kind intention: and, since we find that the scene of observation is unbounded, we cannot affix any boundaries to these attributes in our own imagination, and we are ready to suppose that they are infinite or un- bounded in their own nature. When our atten- tive survey of this universe, and a careful com- parison of all its parts as far as we can understand or appreciate them, have made us conclude that it is one design, the work of one artist ; we are under the necessity of inferring that, with respect to this universe, his power, wisdom, arid benevo- lence, are indeed infinite.

When men have been led to draw this conclu- sion from the appearances which are observed every where around them, they consider that constancy which they observe in natural opera- tions, whether in the material or the intellectual

system, and that expectation of, and confidence in, this constancy, which renders the universe a source of enjoyment to its sentient inhabitants, as the consequences of laws imposed by the Al- mighty artist on his works, in the same manner as they would consider the constancy in the con- duct of any people as the consequences of laws promulgated and enforced by the supreme magis- ‘ trate. There can be no doubt of this view of nature being extremely captivating, and likely to engage the curiosity of speculative men ; and it is not surprising that the phenomena of mind have been keenly studied in all ages.

The occupations, however, of ordinary life have oftener directed our efforts towards material objects, and engaged our attention on their pro- perties and relations ; and as all sciences have arisen from arts,

and were originally implied in the maxims and precepts of those arts, till sepa- rated from them by the curious speculatist, the knowledge of the material system of nature was possessed in detached scraps by the practitioners in the various arts of life long before the natural philosopher thought of collecting them into a body of scientific doctrines. But there have not been wanting in all ages men of curiosity who have been struck by the uniformity of the opera- tions of nature in the material world, and were eager to discover their causes.

Accordingly, while the moralists and metaphy- sicians turned their whole attention to the phe- nomena of the mind, and have produced the sciences of pneumatology, logic, ethics, jurispru- dence, and natural theology, these observers of nature have found sufficient employment in con- sidering the phenomena of the material world.

The bodies of which it consists are evidently connected by means of those properties by which we observe that they produce changes in each other's situation. This assemblage of objects may therefore be justly called a system. We may call it the material system. It is frequently termed nature ; and the terms natural appearances, natural causes, natural laws, have been generally "estricted to those which take place in the mate- rial system. This restriction, however, is im- proper, because there is no difference in the manner in which we form our notions of these laws, and reason from them, both with respect to mind and body. Or if there is to be any re- striction, and if any part of the study of the uni- verse is to be excluded in the application of these terms, it is that part only which considers moral obligation, and rather treats of what ought to be than of what is. As has been already observed, there is a considerable difference in the language which must be employed ; but still there is none in the principles of investigation. We have no proof of the extent of any moral law but an ap- peal to the feelings of the hearts of men, indicated by the general laws or facts which are observed in their actions. But this is only a question of the propriety of language. And no great incon- venience would arise from the restriction now mentioned if it were scrupulously adhered to ; but unfortunately this is not always the case. Some authors use the term natural law to express every coincidence of fact ; and this is certainly the proper use of the term.

The French writers generally use the term lol physique in this enlarged sense. But many au- thors, misled by, or taking advantage of,

the am- biguity of language, after having established a law founded on a copious and perhaps unex- pected induction of the phenomena of the mate- rial system (in which case it must be considered in its restricted sense), have, in their explanation of phenomena, extended their principle much farther than the induction on which they had founded the existence of the physical law. They have extended it to the phenomena of mind, and have led their followers into great and dangerous mistakes.

Physics, then, is with us the study of the mate- rial system, including both natural history and philosophy. The term is not indeed very fami- liar in our language ; and, in place of physicus and disciplina physica, we more generally use the terms naturalist and natural knowledge. The term natural philosophy, in its common accept- ation, is of less extent. The field of physical investigation is still of prodigious extent ; and its different quarters require very different treat- ments, make very different returns, and accord- ingly have engaged in their particular cultivation persons of very different talents and tastes. It is of some importance to perceive the distinctions, and to see how the wants and propensities of men have led them into the different paths of in- vestigation ; for, as has been more than once ob- served, all sciences have sprung from the humble arts of life, and both go on improving by means of a close and constant correspondence.

All the phenomena of the material system may l»e arranged into two classes, distinguished both by their objects and by the proper manner of treating them. The first class comprehends all the appearances which are exhibited in the sen- siblfc motions of bodies, and their actions on each other, producing sensible motion. The second class comprehends the appearances which are exhibited in the insensible motions and ac- tions of the invisible particles of matter.

Of the phenomena of the first class we have examples in the planetary motions, the motions of heavy bodies, the phenomena of impulse, the motions and actions of machines, the pressure and motions of fluids, the sensible actions of magnetical and electrical bodies, and the motions of light.

We have examples of the second class in the phenomena of heat and mixture, and those exhi- bited in the growth of animals and vegetables, and many phenomena of solid, fluid, magnetical, electrical, and luminous bodies, in which no change of place can be observed.

Thus it appears that there is a distinction in the phenomena

sufficiently great to warrant a division of the study, and to make us expect a more rapid improvement by this division. Nay, the division has been made by nature herself, in the acquaintance which men have attained with her operations without study, before science ap- peared, and while art constituted all our know- ledge.

In the phenomena of the first class, again, we see the immediate exertion of the connecting principle between the concomitant events, what-

ever it maybe; we can observe the exertion with accuracy; we can determine its kind and de- gree : and this exertion, being always some modi- fication of motion, allows us to call in the aid of mathematical knowledge, and thus to ascertain with precision the energy of the cause ; judging of the tendency and quantity by the tendency and the quantity of the observed effect.

But in the second class of phenomena the case is very different. In the operations of chemistry, for instance, the immediate exertion of the cause is not perceived : all that we observe is the assem- blage of particles which obtains before mixture, and that which takes place when it is completed, and which we consider as its result. The pro- cedure of nature in producing the change is un- seen and unknown. The steps are hid from our observation. We are not only ignorant of the cause which determines one particle of our food to become a part of our body, while others are rejected, but we do not see the operation. We are not only ignorant of the cause which deter- mines a particle of vitriolic acid to quit the fossil alkali with which it is united in Glauber's salt, and to attach itself to a particle of magnesia al- ready united with the muriatic acid, which also quits it to unite with the alkali, but we do not see the operation. The particles and their mo- tions are not the objects of our senses ; and all that we see is the Epsom salt and common salt separate from the water in which we had formerly dissolved the sal mirabileand themuriated mag- nesia. The motions, which are the immediate effects of the changing causes, and therefore their only indications, characteristics, and measures, fitted to show their nature, are hid from our view.

Our knowledge therefore of these phenomena must be less perfect than that of the phenomena of the former class ; and we must here content ourselves with the discovery of more remote re- lations and remote causes, and with our igno- rance of the very powers of nature by which these changes are brought about, and which are cognoscible only by their immediate effects, viz. the motions which they produce unseen. The knowledge which we do really acquire is some- what

similar to what the mechanical philosopher has acquired when he has discovered, by many experiments and investigations, that magnets attract each other by their dissimilar poles, and repel each other by their similar poles, and do not act at all on any bodies but loadstones and iron. Here we leave undiscovered all that is most curious in the phenomenon, viz. how these attractions and repulsions are produced ; and even here the magnetical philosopher has the ad- vantage of seeing the agents and the operation.

This distinction in the nature of the phenome- na, and this difference in the nature of the know- ledge which is to be acquired, and the means which are to be employed for the successful pro- secution of these two branches of general physics, has occasioned a still further restriction (at least in Britain) of the term natural philosophy. It is particularly applied to the study of the pheno- mena of the first class, while those of the second have produced the sciences of chemistry and.. physiology.

Natural philosophy and chemistry have gene- rally been made particular institutions in our seminaries of learning, but physiology has more commonly been taught in conjunction with ana- tomy, medicine, and botany.

The phenomena of the first class have been usually called mechanical, in order to distinguish them from those observed in the operations of chemistry, and in the animal and vegetable eco- nomy ; and the explanations which have been attempted of some of the last, by applying the laws observed in the phenomena of the first class, have been called mechanical explanations.

As this first class is evidently but a part of general physics, there is some impropriety in giving the name natural philosophy to a course of doctrines which is confined to these alone. Indeed, at the first institution of universities, the lectures given in the Schola Physica were much more extensive, comprehending almost all the phenomena of the material world : but, as all arts and sciences have improved most where the labor has been most divided, it was found more conducive to the advancement of knowledge that separate institutions should be founded for the studies of natural history, chemistry, physiology, &c. ; and thus the phenomena, purely mechani- cal, and a few others in magnetism, electricity, and optics, which either were

susceptible of ma- thematical treatment, or had little connexion with the studies of chemistry and physiology, were left to the care of the professor of natural philosophy.

As the terms chemistry and physiology have been applied to two very important branches of general physics, we think that a more specific or characteristic name might be appropriated to the other, and that it might very properly be termed mechanical philosophy.

It only remains to make a few observations on the distinctive means of prosecuting these studies with success, and to point out some of the ad- vantages which may reasonably be expected from a careful prosecution of them ; and as the second branch is fully treated under the several articles of CHEMISTRY, PHYSIOLOGY, &c., we shall confine ourselves to what is usually called natural philosophy.

Mechanical philosophy may, in conformity with the foregoing observations, be defined, ‘ the study of the sensible motions of the bodies of the universe, and of their actions producing sensible (notions with a view to discover their causes, to explain subordinate phenomena, and to improve art.’

The principle upon which all philosophical discussion proceeds is, that every change which we observe in the condition of things is consider- ed by us as an effect, indicating the agency, cha- racterising the kind, and measuring the degree of its cause. In the language of mechanical phi- losophy, the cause of any change of motion is called a moving or changing force. The disqui- sitions of natural philosophy must therefore begin with the consideration of motion, carefully noticing every affection or quality of it, so as to establish marks and measures of every change of which it is susceptible ; for these are the only narks and measures of the changing forces. This

being done, it only remains to apply them to tlie motions which we observe in the universe.

From the general principle of philosophical discussion already mentioned, there flow directly two axioms. 1. Every body perseveres in a state of rest or of uniform rectilineal motion, unless af- fected by some moving force. 2. Every change of motion is in the direction aad in the degree of the force impressed.

These are usually called the laws of motion. They are more properly laws of human judgment with respect to motion. Perhaps they are neces- sary truths, unless it be alleged that the general principle, of

which they are necessary conse- quences, is itself a contingent though universal truth. By these two axioms, applied in abstracto to every variety of motion, we establish a system of general doctrines concerning motions, accord- ing as they are simple or compounded, accele- rated, retarded, rectilineal, curvilineal, in single bodies, or in systems of connected bodies; and we obtain corresponding characteristics and measures of accelerating or retarding forces, centripetal or centrifugal, simple or compound. We have an illustrious example of this abstract sys- tem of motion and moving forces in the first book of Sir Isaac Newton's Mathematical Principles of Natural Philosophy. Euler's Mechanica sive Scientia Motiis, Herman's Photonomiasive de Ve- ribus Corporum, and D'Alembert's Traite de Dy- namique, are also excellent works of the same kind. In this abstract system no regard is paid to the casual differences of moving forces, or the sources from which they arise. It is enough to characterise a double accelerating force, for in- stance, that it produces a double acceleration. It may be a weight, a stream of water, the pressure of a man ; and the force, of which it is said to be double, may be the attraction of a magnet, a. current of air, or the action of a spring. Having established these general doctrines, the philoso- pher now applies them to the general phenome- na of the universe, in order to discover the nature of the forces which really exist, and the laws by which their operations are regulated, and to explain interesting but subordinate pheno- mena. This is the chief business of the mecha- nical philosopher ; and it may with some pro- priety be called the mechanical history of nature.

Some method must be followed in this history of mechanical nature. The phenomena must be classed by means of their resemblances, which infer a resemblance in their causes, and these classes must be arranged according to some principle. We have seen no method which appears to us less exceptionable than the follow- ing : — The principle of arrangement is the gene- rality of the phenomena ; and the propriety of adopting this principle arises from the probabi- lity which it gives us of more readily discover- ing the most general actuating forces, whose agency is implicated in all other phenomena of less extent ; and therefore should be previously discussed, that we may detect the discriminating circumstances which serve to characterise the subordinate phenomena, and are thus the marks of the distinguishing and inferior natural powers.

The most general of all phenomena is the cur- vilineal motion of bodies in free space; it is ob-

served through the whole extent of the solar system.

The mechanical history of nature begins there- fore with astronomy. Here, from the general phenomena of the planetary motions, is evinced the fact of the mutual deflection of every body towards every other body, and this in the inverse proportion of the squares of the distance, and the direct proportion of the quantity of matter. This is the fact of universal gravitation, indicating the agency, and measuring the intensity, of the universal force of mutual gravity. Having esta- blished this as a universal fact, the natural phi- losopher proceeds to point out all the particular facts which are comprehended under it, and whose peculiarities characterise the different movements of the solar system. ‘ That is, in the language of philosophy, he gives a theory or ex- planation of the subordinate phenomena ; the elliptical motions of the planets and comets, their mutual disturbances; the lunar irregulari- ties ; the oblate figure of the planets ; the nuta- tion of the earth’s axis ; the precession of the equinoxes; and the phenomena of the tides and trade winds ; and he concludes with the theory of the parabolic motions of bodies projected on the surface of this globe, and the motion of pendu- lums. As he goes along, he takes notice of the applications which may be made to the arts of life of the various doctrines which are succes- sively established, such as chronology, astrono- mical calculation, dialling, navigation, gunnery, and the measuring of time. If a square parcel of sand be lying on the table, and the finger be applied to any part of it to push it along the table, that part is removed where you will, but the rest remains in its place ; but if it is a piece of sand-stone of the same materials and shape, and the finger is applied as before, the whole is moved ; the other parts accompany the part im- pelled by the finger in all its motions.

From the moon’s accompanying the earth in all its motions round the sun we infer a moving force which connects the moon and earth. In like manner, we must conclude that a moving force connects the particles of the stone ; for we give the name force to every thing which pro- duces motion ; we call it the force of cohesion ; a term which, like gravitation, expresses merely a fact. This seems to be the next phenomenon of the universe in point of extent.

Having, from the general phenomenon, esta- blished the existence of this force, the philoso- pher proceeds to ascertain the laws by which its exertions are regulated ; which is the ascertain- ing its distinctive nature and properties. This he does in the same way that he ascertained the nature of planetary gravitation, viz. by observing more particularly the various phenomena. And here is opened a most

extensive and varied field of observation, in which it must be acknowledged that very little regular and marked progress has been made. The variety in the phenomena, and the consequent variety in the nature of the con- necting forces, appear as yet inconceivably great ; and there seems little probability of our being able to detect in them all any sameness, com- bined with the other distinguishing circum- stances, as we have done in the case of gravity. Yet we should not despair.

Boscovich has shown, in the most unexcep- tionable manner, that although we shall suppose that every atom of matter is endued with a per- fectly similar force, acting in a certain deter- mined ratio of the small and imperceptible dis- tances at which the particles of matter are arranged with respect to each other, the external or sensible appearances may, and must, have all that variety which we observe. He also shows very distinctly, how, from the operation of this force, must arise some of the most general and important phenomena which characterise the different forms of tangible bodies. We observe the chief varieties of the action of this corpus- cular force on the bodies which we denominate hard, soft, solid, fluid, vaporous, brittle, ductile, elastic. We see instances where the parts of bodies avoid each other, and require external force to keep them together, or at certain small distances from each other. This is familiar in air, vapors, and all compressible and elastic bo- dies. This is evidently a most curious and in- teresting subject of investigation. On the nature and action of these corpuscular forces depend the strength or firmness of solids, their elasticity, their power of communicating motion, the pres- sure, and motion, and impulse of fluids ; nay, on the same actions depend all the chemical and physiological phenomena of expansion, fusion, congelation, vaporisation, condensation, solution, precipitation, absorption, secretion, fermentation, and animal and vegetable concoction and assi- milation.

Out of this immense store of phenomena, this inexhaustible fund of employment for our powers of investigation, the natural philosopher selects those which lead directly to the production or modification of sensible motion.

He will therefore consider.

1. The communication of motion among de- tached and free bodies, establishing the laws of impulse or collision. This has always been con- sidered as the elementary doctrine of mechanical philosophy, and as the most familiar fact observed in the material world ; amd in all ages philoso- phers have been anxious to reduce all actions of bodies

on each other to impulse, and have never thought a phenomenon completely explained or accounted for till it has been shown to be a case of impulse. This it is which has given rise to the hypotheses of vortices, ethers, magnetic and elec- tric fluids, animal spirits, and a multitude of fancied intermediums between the sensible mass- es of matter, which are said in common lan- guage to act on each other. A heavy body is supposed to fall, because it is impelled by a stream of an invisible fluid moving according to certain conditions suited to the case. The filings of iron are supposed to be arranged round a magnet by means of a stream of magnetic fluid issuing from one pole, circulating perpetually round the magnet, and entering at the other pole, in the same manner as we observe the floating grass arranged by the current of a brook. But the philosopher who has begun the mechanical study of nature by the doctrine of dynamics, and made its first application to the celestial phenomena,, and who has attended carefully to the many ana- logies between the phenomena of gravitation and

cohesion will be at least ready to entertain very different notions of this matter. He will be so far from thinking that the production of motion by impulse is the most familiar fact in nature, that he will acknowledge it to be comparatively very rare ; nay, there are some appearances, in the facts which are usually considered as instances of impulsion, which will lead him to doubt, and almost to deny, that there has ever been observed an instance of one body putting another in mo- tion by coming into absolute contact with it, and striking it ; and lie will be disposed to think that the production of motion in this case is pre- cisely similar to what we observe when we gently push one floating magnet towards another, with their similar poles fronting each other. There will be the same production of motion in the one and diminution of it in the other, and the same uniform motion of the common centre of gra- vity : and, in this case of the magnets, he sees completely the necessity of a law of motion, which is not an axiom, but is observed through the whole of nature, and which receives no ex- planation from any hypothesis of an intervening fluid, but is even totally inconsistent with them. We mean, that every action of one body on ano- ther is accompanied by an equal and opposite action of that other on the first. This is usually called the equality of action and reaction : it is not intuitive, but it is universal ; and it is a ne- cessary consequence of the perfect similarity of the corpuscular forces of the same kinds of matter. This general fact, unaccountable on the

hypothesis of impelling fluids, is considered in the planetary motions as the unequivocal indica- tion of the sameness of that gravity which regu- lates them all. The rules of good reasoning should make us draw the same conclusion here, that the particles of tangible matter are connected by equal and mutual forces, which arethe imme- diate causes of all their sensible actions, and that these forces, like gravitation, vary with every change of distance and situation. The laws of collision and impulsion being now esta- blished, either as original facts or as consequences of the agency of equal and mutual force, which connect the particles of matter, the philosopher considers, <

2. The production of motion by the interven- tion of solid bodies, where, by reason of the co- hesion of matter, some of the motions are neces- sarily confined to certain determinate paths or directions. This is the case in all motions round fixed points or axes, or along planes or curves which are oblique to the action of the forces. This part of the study contains the theory of ma- chines, pointing out the principles on which their energy depends, and consequently furnishing maxims for their construction and improvement. But these observations do not complete the dis- cussion of the mechanism of solid bodies: they are not only solid and inert, but they are also heavy ; therefore the action of gravity must be combined with the consequences of solidity. This will lead to discussion about the centre of gra- vity, the theory and construction of arches and roofs, the principles of stability and equilibrium, the attitudes of animals, and many particulars of this kind.

3. The philosopher will now turn his attention to another form, in which tangible matter exhi- bits many interesting phenomena, viz. fluidity. The first thing to be attended to here is, What is that particular form of existence ". What is the precise phenomenon which characterises fluidity ? What is the definition of a fluid? This is by no means an easy question, and considerable objec- tions may be stated against any definition that has been given of it. Sir Isaac Newton says that a fluid is a body whose particles yield to the smallest impression, and by so yielding are easily moved among themselves. It may be doubted whether this be sufficiently precise ; what is meant by the smallest impression (and what is easily moving? Is there any precise degree of impression to which they do not yield ; and do they oppose any resistance to motion? And a stronger objection may be made. It is not clear that a body so constituted will exhibit all the appearances which a body acknowledged to be fluid does really exhibit. Euler offers some very plausible reasons for doubting whether it will ac- count for the horizontal surface, and the com- plete propagation of

pressure through the fluid in every direction ; and therefore prefers select- ing this last phenomenon, the propagation of pressure quaqua versum, as the characteristic of fluidity, because a body having this constitution (on whatever circumstances it may depend) will have every other observed property of a fluid. But this definition is hardly simple or perspi- cuous enough ; an-d we think that the objections against Newton's more simple and intelligible definition are not unanswerable. Boscovich de- fines a fluid to be a body whose particles exert the same mutual forces in all directions; and shows that such particles must be indifferent, as to any position with respect to each other. If no external force act on them, they will remain in every position, and will have no tendency to ar- range themselves in one position rather than another ; differing in this respect from the par- ticles of solid, or soft, or viscid bodies ; which require some force to change their respective positions, and which recover these positions again when but gently disturbed. He illustrates this distinction very beautifully, by comparing a parcel of balls thrown on quicksilver, and at- tracting each other with a parcel of magnets in the same situation. The balls will stick toge- ther, but in any position ; whereas the magnets will always affect a particular arrangement.

When the characteristic phenomenon of fluidity has been selected, the philosopher pro- ceeds to combine this property with gravity, and establishes the doctrines of hydrostatics, or of the pressure, and equilibrium of heavy fluids, the propagation of this pressure in every direction ; and demonstrates the horizontally of surface as- sumed by all perfect fluids. These doctrines and principles enable us to determine several very interesting circumstances respecting the mu- tual pressure of solids and fluids on each other; the pressures exerted on the bottoms and sides of vessels ; the support and mechanism of floating bodies, &c.

He then considers how fluids will move when their equilibrium of pressure is destroyed ; and

establishes the doctrines of hydraulics, containing all the modifications of this motion, arising from the form of the vessels, or from the intensity or direction of the pressure which occasions it. And this subject is completed by the consideration of the resistance which fluids oppose to the motion of solid bodies through them, and their impulse on bodies opposed to their action. These are very important

matters, being the foundations of many mechanical arts, and furnishing us with some of our most convenient and efficacious powers for impelling machines. They are also of very difficult discussion, and are by no means completely investigated or established, it is evident that on these doctrines depend the knowledge of the motions of rivers and of waves ; the buoyancy, equilibrium, and stability of ships ; the motion of ships through the waters ; the action of the winds on the sails ; and the whole arts of marine construction and seaman- ship.

There is another general form of tangible matter which exhibits very different phenomena, which are also extremely interesting ; we mean that of vapor. A vapor is a fluid ; and all the vapors that we know are heavy fluids : they are therefore subject to all the laws of pressure and impulse which have been considered under the articles HYDROSTATICS and HYDRAULICS. But they are susceptible of great compression by the action of external forces, and expand again when these forces are removed. In consequence' of this compression and expansion, the general phe- nomena of fluidity receive great and important modifications ; and this class of fluids requires a particular consideration. As air is a familiar instance, this branch of mechanical philosophy has been called PNEUMATICS.

The philosopher examines the law of compres- sibility of air and other elastic fluids: and thus obtains the knowledge of the constitution of the atmosphere, and of the actions of those fluids when employed to impel solid bodies. Gunpow- der contains an immense quantity of permanently elastic air, which may be set at liberty by in- flammation. When this is done at the bottom of a piece of ordnance, it will impel a ball along the barrel and discharge it from the muzzle in the same way that an arrow is impelled by a bow. And thus, having discovered in what degree this air presses in proportion to its expansion, we discover its action on the ball through the whole length of the piece, and the velocity which it will finally communicate to it. Here then is contained a theory of artillery and of mines.

Chemistry teaches us that most bodies can be converted by fire into elastic fluids, which can be employed to act on other bodies in the way of pressure or impulse. Thus they come under the review of the mechanical philosopher; and they have become interesting by being employed as moving forces in some very powerful machines. These discussions will nearly exhaust all the general mechanical phenomena. There remain some which are much more limited, but furnish very curious and important subjects of investi- gation.

The phenomena exhibited between loadstones or magnets and iron have long attracted atten-

tion ; and the use to which the polarity of the loadstone has been applied, namely, the direct- ing the course of a ship through the pathless ocean, has rendered these phenomena extremely interesting. They are specified by the term magnetism. Considerable progress has been made in the arrangement and generalisation of them ; but we have by no means been able hi- therto to bring them all under one simple fact. The attention has been too much turned to the discovery of the ultimate cause of magnetism ; whereas we should rather have employed our in- genuity in discovering all the general laws, in the same manner as Kepler and Newton did with respect to the celestial phenomena, without troubling themselves with the cause of gravita- tion. Dr. Gilbert of Colchester was the first who considered the magnetical phenomena in the truly philosophical matter ; and his treatise De Magnete may be considered as the first and one of the most perfect specimens of the Baconian or inductive logic. It is indeed an excellent performance ; and when we consider its date, 1580, it is a wonder. Mr. Barlow is one of the latest successful experimenters in this depart- ment, and the important practical use to which his discoveries have been already put will be seen in our article MAGNETISM.

There is another class of mechanical pheno- mena which has a considerable affinity with the magnetical; we mean the phenomena called electrical. Certain bodies, when rubbed or otherwise treated, attract and repel other bodies, and occasion a great variety of sensible motions in the neighbouring bodies. Philosophers have paid much attention to these appearances, and established many general laws concerning them. But we have not been more successful in bring- ing them all under the fact, and thus establish- ing a complete theory of them, than in the case of magnetism.

And there are many phenomena of electricity which cannot oe called mechanical, but are still of the most curious and interesting kind. As these have little connexion with any of the other great branches of physical science, they have ge- nerally been considered in treatises of natural philosophy ; and, along with enquiries into the original cause of electricity in general, con- tinue to engage much attention. See ELECTRI- CITY.

The appearances which are presented to us by our sense of seeing form another class, which have always been considered as making a branch of natural philosophy in all seminaries of learn- ing. It does

not, however, obviously appear, that they are mechanical phenomena. The nature of light is still a secret. Fortunately it is not necessary to be known to give us a very perfect theory of the chief phenomena. The general laws oi optics are so few, so simple, and so pre- cise, that our theories are perhaps more perfect here than in any other branch of physics; but these theories are as yet far removed from the rank of primary facts. Many unknown events happen before the phenomenon comes under the hands of the ordinary optician, s-o as to become the subjects of the simple laws of reflection and refraction. It may even be doubted, and has

been doubted, whether the phenomena of optics are cases of body in motion ; or whether all the lines which the optician draws are any thing but the directions along which certain qualities are exerted. See OPTICS and VISION.

The questions about the activity or inactivity of matter are not physical, but metaphysical. Natural philosophy, it is true, commonly takes it for granted that matter is wholly inactive ; but it is not of any moment in physics whether this opinion is true or false : whether matter is acted

on according to certain laws, or whether it acts of itself according to the same laws, makes no dif- ference to the natural philosopher. It is his bu- siness to discover the laws which really obtain, and to apply these to the solution of subordinate phenomena : but whether these laws arise from the nature of some agent external to matter, or whether matter itself is the agent, are questions which may be above his comprehension, and do not immediately concern his proper business.

PHYSIOGNOMY.

)Fr. physiono- miste, physionomie ; fGr.. } One

PHYSIOG’NOMER,

PHYSIOG’NOMIST, n. s.

PHYSIOGNOM’IC, adj. . . .

PHYSIOG NOMY, n. s. J One who professes to know the temper or

disposition by the look or features : relating to the face or cast of countenance : the act or art of knowing the cha- racter or fortune by the face. See below.

In all physiognomy, the lineaments of the body will discover those natural inclinations of the mind which dissimulation will conceal, or discipline will suppress. Bacon's Nat. Hist.

Digonius, when he should have been put to death by the Turk, a physiognomer wished he might not die, because he would sow much dissention among the Christians. Peacham.

The astrologer, who spells the stars,

Mistakes his globes, and in her brighter eye

Interprets heaven's physiognomy. Cleaveland.

They'll find i' th' physiognomies O' th' planets all men's destinies. Hudibras.

There is surely a physiognomy which master mendi- cants observe ; whereby they instantly discover a merciful aspect, and will single out a face wherein they spy the signatures and marks of mercy.

Sir S. Browne.

The end of portraits consists in expressing the true temper of those persons which it represents, and to make known their physiognomy.

Dryden's Dufresnoy.

Apelles made his pictures so very like, that a phy- siognomist and fortune-teller foretold, by looking on them, the time of their deaths whom those pictures represented. Dryden.

The distinguishing characters of the face, and the lineaments of the body, grow more plain and visible with time and age ; but the peculiar physiognomy of the mind is most discernible in children. Locke.

Let the physiognomists examine his features.

Arbuthnot and Pope.

PHYSIOGNOMY, Gr. ˆwcrwyvw/ua of vffig, na- ture, and yvwfficw, has been called the science by which the dispositions of mankind are disco- verable from the bodily form, and particularly from the features

of the countenance. The term seems to have been introduced by Aristotle who thus lays down the leading principles of this study : — A peculiar form of body, he says, is in- variably accompanied by a peculiar disposition of mind; a human intellect is never found in the corporeal form of a beast. The mind and body reciprocally affect each other : thus in in- toxication and mania the mind exhibits the af-

fections of the body ; and, in fear, joy, &c., the body displays the affections of the mind. Hence, he argues, when in man a particular bodily character appears, which by prior experience and observation has been found uniformly ac- companied by a certain mental disposition (with which therefore it must have been necessarily connected), we are entitled in all such cases to infer the disposition from the appearance. Our observations, he conceives, may be drawn from other animals as well as from men : for as a lion possesses one bodily form and mental character, a hare another, the corporeal characteristics of the lion, such as strong hair, deep voice, large ex- tremities, discernible in a human creature, denote the strength and courage of that noble animal ; while the slender extremities, soft down, and other features of the hare, visible in a man, be- tray the mental character of that pusillanimous creature. Upon this principle Aristotle treats of the corporeal features of man, and the correspondent dispositions, so far as observed : he illustrates them by the analogy just mentioned, and at- tempts also to account for them physiologically ; distinctly noticing individual, national, and com- parative physiognomy.

After Aristotle, his disciple and successor Theophrastus deserves to be mentioned as a writer on this subject. Polemon of Athens, Adamantius the sophist, and several others, wrote on the subject about the same period. Indeed from a modern collection of the Greek authors on physiognomy (Physiognomic veteris Scrip- tores Graeci, Gr. et Lat. a Franzio Altenb. 1780, 8vo.), it would appear that the science was much cultivated in Greece ; but the professors seem always to have connected with it much of the marvellous.

In the works of Hippocrates and Galen many physiognomical observations occur; and Cicero appears to have been attached to the science. In his oration against Piso, as well as in that in favor of Roscius, the classical reader will re- member how the orator adapts physiogno- my to his purpose. Physiognomical remarks are also to be found in the writings of Sallust, Suetonius, Seneca, Pliny, Aulus Gellius, Pe- tronius, Plutarch, &c. It seems that in the Roman empire this science was even practised as a profession. Suetonius, for instance, in his life of Titus, states that Narcissus employed a

physiognomist to examine the features of Bri-

tannicus, who predicted that he would not suc- ceed, but that the empire would devolve on Titus.

From the beginning of the sixteenth century until the close of the seventeenth this was a very fashionable study. Within that period appeared almost all the approved modern authors on the sub- ject, prior to Lavater. They are Bartholom . Codes, Baptista Porta, Honoratus Nuqueties, Jacobus de Indagine, Alstedius, Michael Scottus, Caspar Schottus, Cardan Taishierus, Fludd, Behmen, Barclay, Claromontius, Conringius, the commen- taries of Auguslin Niphus, and Camillus Balbus on the Physiognomica of Aristotle, — Spontanus, Andreas Henricus, Joannes Digander, Rud. Go- clenius, Alex. Achillinus, Joh. Praetorius, Jo. Belot, Guliel. Gratalorus, &c. See Polyhistor. Morhoff. vol. I. lib. i. cap. 15. § 4, and vol. II. lib. iii. cap. 1. § 4.

During every period in which this pursuit has been in vogue, alchemy, magic, judicial astro- logy, the doctrine of signatures, and sympathies, or some other of the occult sciences has flou- rished. The first respectable writer on the subject in the eighteenth century was Dr. Gwy- ther. His remarks are published in the Philo- sophical Transactions, vol. xviii. Dr. Parsons, next chose it for the subject of the Croonian lectures, published at first in the second supple- ment to the forty-fourth volume of the Philo- sophical Transactions, and afterwards (1747) in a separate treatise. The observations, however, of these writers, as well as of Lancisius, Haller, and Buffon, relate rather to the momentary ex- pression of the passions by the features than to any permanent system respecting them. The characters of Le Brun were illustrative of the same kind of transient physiognomy.

In the Berlin Transactions of the last century essays by Pernetty and Le Cat first drew the at- tention of the public to the modern system ; and soon after the controversy between these parties Lavater's celebrated work appeared.

Accident, we are told, led him to the study of physiognomy; standing at a window with the celebrated Zimmerman, he was led to make such remarks on the singular countenance of a soldier who was passing as induced his friend to urge him to pursue his ideas. He

accordingly began his work, and in process of time, with the na- tural progress of an enthusiasticalmind, acquired not only a fondness for the study, but a full con- viction of the reality of the physiognomical science, and of his own great discoveries in it. In 1776 he published the first fruits of his la- bors in a quarto volume, entitled Fragments. He took in them a wide range of enquiry, and carried his ideas beyond the observation of those parts of the countenance which exhibit to a common eye the impressions of mental qualities and affections ; maintaining, as a leading po- sition, ‘ that the powers and faculties of the mind have representative signs in the solid parts of the countenance.’ Two more volumes appeared in succession, which presented a most extraordinary assemblage of subtle and refined reasoning, de- licate feeling, and philanthropical and pious sen- timent, together with a large admixture of mys- ticism, paradox, and extravagance. The whole

work was illustrated with engravings ; many of which were highly finished and expressive. It was soon translated into the French and English languages, and became the favorite topic of literary discussion.

In pointing out the distinguishing traits of different nations, Lavater observes, that the placing of several persons together, selected from nations remotely situated from each other, gives at one glance their great varieties of visage ; yet he acknowledges that to point out those varia- tions is a task of considerable difficulty. The French, he thinks, do not possess equally com- manding traits with the English, nor are they so minute as those of the Germans, and it is to the peculiarities of their teeth, and manner of laugh- ing, that he attributed his power of deciding on their origin. The Italians he appropriated by the form of their noses, their diminutive eyes, and projecting chins. The eye-brows and fore- heads are the criterion by which to judge of the natives of England. The Dutch possess a par- ticular rotundity of the head, and have weak, thin hair : the Germans, numerous angles and wrinkles about the eyes and in the cheeks ; and the Russians are remarkable for black and light colored hair, and flat noses. Judging from the ladies he had seen of our country, and from nu- merous portraits of others, Lavater was led to say, they appeared to him wholly composed of nerve and marrow, tall and slender in their forms, gentle, and as distant from coarseness and harshness as earth from heaven.

Our author commences his analysis of the human face with the forehead ; and, anticipating the discoveries of our phrenological friends, he here observes that the general form, proportion, arch, obliquity, and position of the skull of the forehead, denote the degree

of thought, sensibility, mental vigor, and prepensities of the man : at the same time the skin of this part of the head ex- plains, by its hue, tension, or wrinkles, the state of the mind at the moment of observation, and the passions which influence it : he seems to have been the first who attended to the peculiar turns of the position and outline of the forehead, which he considered the most important part presented for the study of the physiognomist. This he divides into three classes, the perpendicular, the projecting, and the retreating forehead, each possessing a number of variations : the principal, however, are rectilinear, ‘ half round, half recti- linear, flowing into each other ; half round, half rectilnear, interrupted ; curve-lined, simple ; the curve-lined double and triple.’ A long fore- head indicates capacity of comprehension, and less activity ; a compressed, short, and firm, fore- head, more compression, stabifity, and little vo- latility ; severity and pertinacity belong to the rectilinear ; and the more curved than angular portends flexibility and tenderness of character : deficiency of understanding is discoverable in those whose foreheads are perpendicular from the hair to the eye-brows ; but the perfectly per- pendicular, gently arched at the top, signifies that the possessor thinks coolly and profoundly. The projecting forehead indicates stupidity and men- tal weakness ; the retreating, exactly the reverse ; the circular, and prominent above, with straight

lines below, and nearly • perpendicular, shows sensibility, ardor, and good understanding ; the rectilinear oblique forehead has the same pro- perties ; arched foreheads are considered as femi- nine ; a union of curved and straight lines, hap- pily disposed, with a similar position of the’ forehead, gives the character of consummate wisdom. ‘ Right lines, considered as such, and curves, considered as such, are relaxed, as power aad weakness, obstinacy and flexibility, under- standing and sensation.’ When the bones sur- rounding the eye project, and are sharp, the person thus formed possesses strong mental energy. Perpendicular foreheads, which, how- ever, project so as not to rest on the nose, and which are short, small, shining, and full of wrinkles, give undoubted indications of weak- ness ; perseverance and oppressive violent ac- tivity, united with harshness, belong to the fore- head composed of various confused protuberances ; and, on the other hand, when the profile of this part of the head affords two well- proportioned arches, the lowest projecting, it is a certain sign of a good temperament and a sound understand- ing. All great and excellent men, we are assured, have been found to have their eye-

bones firmly arched, and well denned; and circumspection, followed by stability, attends square foreheads, •with spacious temples, and eye-bones of the above description. Deep indentures in the bones of the forehead, between the eye-brows, and extending in a perpendicular direction, mark the happy few who possess generous and noble minds, connected with excellence of understanding.

Lavater afterwards describes the characteristics which, he asserts, give ‘ the indubitable signs of an excellent, a perfectly beautiful and significant, intelligent, and noble forehead.’ It must be one third of the face in length, or that of the nose, and from the nose to the chin ; the upper part must be oval, ‘ in the manner of the great men of England,’ or nearly square; the skin must be smooth, and wrinkled only when the mind is roused to just indignation, or deeply im- mersed in thought, and during the paroxysm of pain ; the upper part must recede, and the lower project ; the eye-bones must be horizontal, and present a perfect curve upon being observed from above ; an intersecting cavity should divide the forehead into four distinct parts, but with that slight effect as to be only visible with a clear descending light: and all the outlines should be composed of such, that, if the section of one- third only is observed, it would be difficult to decide whether they were circular or straight. To conclude this portrait of a transcendant forehead, the skin must be more transparent, and of a finer tint than the remainder of the face. Should an infant, or relative, who possesses a forehead of the above description, seriously err, our physiog- nomist is assured that ‘ the latent seeds of virtue’ may still be roused to growth, and will produce sooner or later the desired harvest. We have, at the ‘ azard of prolixity, followed him through this doctrine of the forehead, that it may be duly compared with the discoveries so ably advo- cated in a portion of our article on PHRENOLOGY. We are quite captivated with the additional ad- vantage of the discriminating ‘ wrinkles.’

Blue eyes are considered by Lavater to indi- cate weakness and effeminacy of character, yet he acknowledged that many eminent men have had blue eyes ; still he was convinced that strength and manhood belong more particularly to the brown. Benevolence, tenderness, timidity, and weakness, are said to be exhibited by the per- fectly semi-circular arch formed by the under part of the upper eye-lid ; persons of acute and solid understandings have a generous open eye, composing a long and acute angle with the nose ; and, when the eye- lid forms a horizontal line over the pupil, it is a strong indication that he who possesses it is subtle and penetrating. The compressed firm eye-brow, formed of parallel hairs, is a certain proof of profound wisdom, true perception, and a manly, firm habit of thought. There

are eye-brows which meet across the nose ; this circumstance gives the person an air of fe- rocious gloom, which is admired by the Arabs ; but the ancients, versed in physiognomy, con- ceived such to be the characteristic of cunning: Lavater, on the contrary, observes, that he had discovered them on the most worthy and open countenances, admitting at the same time that they may denote a heart ill at ease. Those who think profoundly, and those equally prudent and firm in their conduct, never have high and weak eye-brows. Thick angular eye-brows, interrupted in their lengths, signify spirit and activity ; and, when they approach the eyes closely, the more firm, vigorous, and decided, is the character. White eye-brows are demonstrative of weakness.

Of the nose he says, ‘ Its length should equal the length of the forehead ; at the top should be a gentle indenting; viewed in front, the back should be broad, and nearly parallel, yet abore the centre something broader; the bottom, or end of the nose, must be neither hard nor fleshy, and its under outline must be remarkably de- finite, well delineated, neither pointed nor very broad ; the sides, seen in front, must be well defined, and the descending nostrils gently shortened ; viewed in profile, the bottom of the nose should not have more than one-third of its length ; the nostrils above must be pointed be- low, round, and have in general a gentle curve, and be divided into equal parts by the profile of the upper lip ; the side, or arch of the nose, must be a kind of oval ; above, it must close well with the arch of the eye-bone, and near the eye must be at least half an inch in breadth. Such a nose is of more worth than a kingdom.’ Socrates, Lairesse, and Boerhaave, are admitted, however, to have been great men, who had ill-shaped noses.

Lavater expatiates on the mouth also with en- thusiastic fervor ; ‘Whoever,’ he exclaims, ‘in- ternally feels the worth of this member, so dif- ferent from every other member, so inseparable, so not to be defined, so simple, yet so various ; whoever, I say, knows and feels this worth, will speak and act with divine wisdom.’ He then proceeds to call it ‘the chief seat of wisdom and folly, power and debility, virtue and vice, beauty and deformity, of the human mind ; the seat of all love, all hatred, all sincerity, all false- hood, all humility, all pride, all dissimulation, and all truth.’

The character is further proclaimed in the lips, the more firm the

latter the more fixed the for- mer ; the weak and irresolute man has weak lips, with rapidity in their motion. The vicious, cringing, mean, and bad countenance is never formed with lips well defined, large, and justly proportioned to the other parts of the face, and the line of which is equally serpentine on each side ; such, though they may denote a tendency to sensuality, belong exclusively to a character deserving of admiration. A mouth the lips of which are so thin as to present, at first view, little more than a line, is said to indicate apathy and quiet, but industrious when roused. When this description of mouth is raised at the extremities, vanity or vain pretensions, affectation, and pro- bably deliberate malice, distinguish those so formed. The opposite of this kind of lips, swelled into considerable size, is a mark of in- dolence ard sensuality. The ‘ cut through, sharp drawn lip,’ as Lavater terms it, has to contend with avarice and anxiety. Lips closed accu- rately, without exertion, and handsome in their outline, belong to the exercise of discretion and firmness. Lips with the latter advantage, and the upper projecting, are generally appropriated to the virtuous and benevolent, though there are, without doubt, numberless persons of excellent character whose under lips project, but, in Lava- ter’s opinion, the last peculiarity implies a well- meaning man, whose goodness consists rather of cold fidelity than ardent friendship. The under lip, hollowed in the middle, denotes a fanciful character. ‘Though physiognomists,’ adds La- vater, ‘ have as yet but little noticed, yet much might be said concerning the lips improper, or the fleshy covering of the upper teeth, on which anatomists have not, to my knowledge, yet bestowed any name, and which may be called the curtain, or pallium, extending from the be- ginning of the nose to the red upper lip proper. If the upper lip improper be long, the proper is always short ; if it be short and hollow, the proper will be large and curved ; — another cer- tain demonstration of the conformity of the hu- man countenance. Hollow upper lips are much less common than flat and perpendicular; the

character they denote is equally uncommon. A mouth naturally falling open is indicative (naturally enough we should think) of a dispo- sition to complain : the mouth remaining natu- rally closed of endurance and courage.

The projecting chin is said to mark something- decided, and the receding the reverse. The pre- sence or absence of strength is frequently de- monstrated by the form of this part of the coun- tenance. Sudden indentings in the midst of the chin are peculiar to men of excellent cool under- standings, unless attended by marks of a con- trary tendency ; ‘ when the chin is pointed, those so formed are supposed to be penetrating and cunning. The chin, it is said, offers a

cer- tain criterion for the physiognomist, who may securely pronounce a large fat double chin an appendage of gluttony. ‘ Flatness of chin speaks the cold and dry ; smallness, fear ; and round- ness, with a dimple, benevolence.’

It is scarcely to be supposed that modesty was very predominant in our author’s physiognomy when he adds, ‘ No one whose person is not well formed can become a good physiognomist. Those painters were the best whose persons were the handsomest. Rubens, Vandyke, and Raphael, possessing three gradations of beauty, possessed three gradations of the genius of painting. The physiognomists of the greatest symmetry are the best. As the most virtuous can best determine on virtue, so can the most handsome countenances on the goodness, beauty, and noble traits of the human countenance, and consequently on its defects and ignoble proper- ties. The scarcity of human beauty is the rea- son why physiognomy is so much decried, and finds so many opponents. No person, therefore, ought to enter the sanctuary of physiognomy, who has a debased mind, an ill-formed forehead, a blinking eye, or a distorted mouth.’

It has been correctly observed, however, that although the science has fallen into disrepute, there can scarcely be mentioned a period in which any cultivation of science took place when physiognomy was not likewise the study, nay, sometimes even the profession, of men of the most eminent abilities and the greatest learning.

PHYSIOLOGY.

PHYSIOL’OGY, n. s. Fr. physiologic ; Gr. Qvaif and Xtyw. The doctrine or constitution of the works of nature.

Disputing physiology is of no accommodation to your designs. Glanvitle.

Some of them seem rather metaphysical than phy- siological notions. Boyle.

Philosophers adapted their descriptions of the Deity to the vulgar, otherwise the conceptions of mankind could not be accounted for from their phy- siology. Bentley.

PHYSIOLOGY, in its largest extent of significa- tion, means the science of nature, compounded as it is of the words 0v

indeed, when the word is used without any ad- jective specification, it is more usually limited to animal life, vegetable physiology being

generally treated of as a separate branch of enquiry.

In compliance with these restricted views we shall consider the subject on the present occa- sion, and the article which we are now about to draw up will principally apply to the nature and functions of the human body ; occasional illus- trations will of course be introduced from the vegetable and brute creation ; but organised liv- ing man will stand the prominent and particular object of our discourse.

The plan which we shall pursue will be, first, to treat of the properties of life generally, and afterwards consider the several faculties and functions which life in its highest state of exist-

ence unfolds to view. On some of these func- tions we shall be thought perhaps to dwell with disproportionate minuteness; but it ought to be recollected that as much curtailment as is consistent with explicit discussion must be ne- cessarily aimed at, and that, although in an essay which professes to take in the whole circle of animate being it will be proper to recognise all its parts, some of the parts, in a work like ours, fall to be considered in other places, and that, therefore, such an amplification as would other- wise be due to the general enquiry would prove in the present case but useless repetition. Un- der the word BRAIN, for instance, and as a single illustration of our meaning, the reader will meet with matter which, but for the necessity of con- forming to alphabetical arrangement, might have stood over for disquisition in this article.

Another reason may be given for the compara- tive brevity of the present paper, viz. that we propose to separate as much as possible physio- logical from anatomical investigation, conforma- bly with the views pointed out under the article ANATOMY ; and, although here and there it will be necessary to hint at structure as connected with function, yet we shall but with little excep- tion suppose our readers to be acquainted with the anatomy of the organs whose properties and pe- culiarities we are about to trace. , On the very threshold of our argument we must, however, in some sort depart frˆm this general principle and purpose ; for it would be improper to engage in an investigation of living properties without calling the reader's attention to the fact that physiologists have ever been busy in endeavouring to ascertain the precise nature of organic compages, as it relates to ultimate struc- ture ; and in this endeavour one great difficulty

immediately presents itself, viz. the impossibility of dividing the organic or living, from the inor- ganic or more material part of the organisation. Life as a property resides in or is diffused through the whole of an animated machine, and although there are some parts, as for example the hard substance of bone, in which vitality seems as it •were at a .ower ebb than in others, yet this per- haps is merely in appearance ; for from ftle mo- ment that organic properties are destroyed, even in bone, that bone ceases to be an integral portion of the body, to which hitherto it had been attached, and is no longer useful as portion and parcel of the body, but is separated and thrown off, either by the efforts of nature or the interposition of art.

And this leads us to remark on the great lead- ing distinction between organic and inorganic matter ; or, to employ phraseology which would be less obnoxious to objection, between organic existence and mere matter, which is indivisibility or mutual connexion of parts with the whole — a connexion which is displayed even in vegetable organisation ; for a branch from a tree, equally with a limb from the body of an animal, ceases to exist as an organised being by itself, and soon upon separation becomes subjected to other laws than those of life. But this life, whatever it is, and we shall have a word or two further to say on this head in the course of our enquiries, is ap- pended to or connected with, in some way or other, a material fabric, and the ultimate compo-

sition of this fabric has ever been a source of speculative enquiry.

Our forefathers in philosophy were contented with generalising the phenomena of nature un- der an elementary division of fire, air, earth, and water, and in a very vague way it must be owned applied these elementary principles to th« explication of organised substances ; thus the hardest parts, as the bones, they supposed to partake of the hardest of their elements, and by an admixture and different proportion of the other elements did they imagine the solids and fluids of living existence to be constituted. But even in the inanimate creation these elementary views have given way to a juster mode of philo- sophising, and it is now generally admitted that a confusion obtained among the ancient observers of nature, founded on their want of distinction between quality and substance, and by their as- suming simplicity of existence, which further researches might and have proved to be com- pound— as in the case of air, which every tyro now knows to be any thing but a simple ele- ment.

We do not indeed feel quite sure whether some of our more modern physiologists have not been rather too forgetful of this impossibility of

terminating our researches at a fixed point, when they have been anxiously endeavouring to trace organic existence up to its elementary sources ; although it must be confessed that researches of this kind are in the present day pursued in a better spirit of philosophising, and under the general feeling that more and more of the works and wonders of nature may be unfolded to our view, as we multiply the means of our investiga- tions, and do not go upon the assumption that we see every thing because a present horizon termi- nates our present views ; that it is in the very na- ture of all material science to have no bounds ; that we must avoid both giving laws and giving limits from our own imaginations, and be always careful to gx\ard against confounding the notions of final and efficient cause, or of thinking of what we ought to see rather than of what we do see.

There is one very great difficulty connecting itself with our endeavours to unravel organised matter and trace it to its outward bounds, which arises from the circumstance of living existence being so completely an imperium in imperio. Thus, if we suppose a given structure, say of fibre, or to express the minuteness of the thing fibrilla, to be the principle in which all organised being is resolvable ; we are impeded in this sweeping inference by the recollection that this very fibre is itself while part of the organised fabric neces- sarily made up of vessels and nerves — vessels to circulate blood through it and nerves to give it susceptibility, — that again these vessels and nerves must themselves be compounded of fi- brous or of membraneous tissue, — and that thus they are mutually adinfinitum structurally, if we may so say, subservient to each other.

Having thrown out these intimations respecting the intricacies connected with the investigation of structural primordia, we shall now proceed to give the reader an insight into what modern en- deavours have accomplished on this head, both

in the way of demonstration and inference; and we do not know that we can accomplish this task better than by copying the following very long note of Dr. Copland which he has append- ed to that part of Richerand's Physiology which refers to primary and essential structure.

M. Richerand very sensibly remarks that the simple or elementary fibre, about which so much has been written, may be considered as

the phi- losopher's stone of physiologists. In vain, he says, Haller himself in his pursuit of his chimera told us that the elementary fibre is to the physio- logists what the line is to the geometer ; and that, as all figures are formed from the latter, so are all the tissues formed from this fibre; fibra idem physiologo est quod linea geometrae, ex qua nempe figure omnes oriuntur. The mathemati- cal line is imaginary, and a mere abstraction of the mind, while the elementary fibre is allowed a material or physical existence. Nothing, there- fore, can make us admit the existence of a sim- ple elementary or primitive fibre, since our senses show us, in the human organisation, four very distinct materials. These materials Richerand in another place states to be cellular, nervous, muscular, and horny tissue.

Let the reader, however, bear in mind what we have just advanced in reference to the qualifi- cation with which e>en such divisions as these should be received or adopted; and with this recollection let him read attentively the following extract from Dr. Copland's valuable edition of Richerand, to which we have just referred.

' The intimate or elementary constitution of the animal texture has long engaged the attention of anatomists and physiologists. As researches respecting this subject can only be prosecuted by means of the microscope the results must therefore be received with some degree of reser- vation, unless they coincide with the observation of former enquirers or be confirmed by subse- quent observers. From amongst those who have been engaged in this species of investigation J. F. Mickel is entitled to much confidence on ac- count of his talents and industry ; and the results of his labors claim particular notice, as they con- firm much that has been recorded by former ob- servers.'

According to the views of this physiologist the solids and fluids of the human body may be re- duced to two elementary substances; the one is formed of globules, the other of a coagulable matter which either alone or united to the for- mer constitutes the living fluids when it is in the liquid state, and gives rise to the solid tissues when it assumes a concrete form.

The globules present in their nature and as- pect differences which are relative to the situa- tions in which they are examined. They appear in the blood flattened, and composed of a central part, which is solid, and of an exterior portion, which is hollow and vesicular. Those found in the kidneys are smaller than those of the spleen, and the globules of the liver are still smaller. Those contained in the substance of the nerves present a less volume than those observed in the blood.

Globules exist not, according to Mickel, in the proper structure of the cellular tissues, of

fibrous and cartilaginous parts, and of the bones. On the contrary, they abound in nerves and muscles, and determine their nature and color. Some of the fluids also, as the urine, contain no globules, whilst they are abundant in the blood, in the chyle, the lymph, the milk, &c.

During the first period of conception the mu- cous and homogeneous mass which constitutes the embryo contains no globules ; it is not until a more advanced period that it is composed of two substances, the one fluid the other solid. These two elements seem to influence the form of the fibres and plates in which animal substances are disposed. The laminated tissues arise almost exclusively from the fluid matter. The fibrous tissues may also be produced from this matter alone, as in the tendons, &c. ; they are, however, more frequently formed from the union of the globules with the concretive fluid, as may be ob- served in the nervous and muscular textures.

These observations of Mickel respecting ani- mal organisation, it ought to be noticed, bear a near resemblance to the opinions entertained by Pfaff, who considered the elementary tissues tc be formed from a series of molecules and globules, and to be different according to the presence and influence of the latter form of matter. The idea of a fluid substance capable of concretion is ana- logous to the opinion of the ancients respecting the substance denominated by them gluten. It is the cellular tissue, according to Mickel, which represents that substance ; and in fact he regards this tissue as a species of concrete fluid, possess- ed of the properties already indicated.

It must, in our opinion, be admitted that the theory of Mickel possesses claims to a favorable notice. It is the result of observations which accord with those of others ; it is also simple, and is easily to be reconciled with the phenomena which living texture presents.

Dr. Meyer of Bonn also considers that two kinds of elementary textures exist in animal bo- dies ; the one is, according to him, composed chiefly of capillary vessels, and is formed from an assemblage of these vessels; under it he ar- ranges cellular, serous, fibrous, and mucous tis- sues; the other possesses a proper and peculiar parenchyma, composed of globules, or of an or- ganic pulp ; such are the glands, the bones, the muscles, nerves, brain, and spinal chord. The first set of organs is a continuation, in his opinion, of the vascular system ; while the se- cond, on the contrary, is further removed from such a connexion. Foreign substances intro- duced into

the circulation pass immediately and with rapidity into the former textures, while they either fail altogether in penetrating or insinuate themselves much more slowly, and after quite a different manner, into the parenchyma of the latter organs. The one class seems to appertain in general to the system of secretion; the other class of textures neither secrete from their indi – vidual influence, nor can they of themselves add to their nutrition. The first appears to be nou- rished by the immediate, rapid, and continual access of the fluid parts of the blood ; thp second by a slow and periodic disposition, and conver- sion into their proper substance of the sanguine- ous globules of the blood by means of the influ-

ence of the vascular extremities upon the blood which they contain.

The primary solids, or rather the elementary fibres of the human body, and of the higher classes of animals, cannot be considered with propriety to be more than three — the cellular or laminar, the muscular, and the nervous.

1. The cellular fibre is the most essential to animal existence, and is found in every individual of this kingdom. It consists of an assemblage of minute laminae and distinct filaments. It is neither sensible nor irritable, and is chiefly com- posed of a nearly concrete gelatine.

2. The muscular fibre is not so generally dis- tributed throughout the animal kingdom as the former, for it is not found in the zoophites.

3. The nervous or medullary fibre. The na- ture of this tissue has been the subject of much investigation. M. de Bainville thinks that it originates in the muscular fibre, as this latter takes its origin in the cellular substance.

To these fibres professor Chaupier has added a fourth, namely, the albugineous fibre which is saline, white, and very strong ; and is neither sensible nor irritable. The majority of anatomists, however, consider it as merely a very condensed cellular fibre

These fibres may be called the first order of the solids, as they serve to form all the other tissues and organs of the body. The cellular substance, for instance, is spread out and con- densed into membranes, or rolled up in the form of vessels ; muscular fibres also assume the form of membranes, concur to the formation of vessels,

and constitute muscles ; nervous fibres produce the nerves, &c. Finally, those primary solids associate in various forms, and give rise to the compound solids, as the bones, the glands, &c. ; and even to those of a more complex nature, as several of the thoracic and abdominal viscera. Indeed every species of solid has for its base the cellular substance which is penetrated by nerves and vessels. The viscera, for example, are of this nature, having moreover a membraneous envelope. The bones also consist of a similar texture, and of a deposition also of phosphate of lime in their cellular substance.

Those primary solids, or most simple anato- mical constituents which we have just now par- ticularised, associate in various forms, giving rise to compound solids or tissues which are charac- terised not only by their form and nature, but also by the faculties which they perform.

These animal textures or compound solids were first arranged, with any degree of accuracy, by Richat ; and however successful future re- searches into their ultimate nature may be, or whatever classification may be pioposed by fu- ture enquirers, he is still entitled to the honor of having introduced a philosophical analysis into anatomical and physiological science. The ar- rangement of the tissues which this great man adopted is as follows : — the exhalant, absorbent, cellular, arterial, viscous, nervous of animal life, nervous of organic life, osseous, medullary, car- tilaginous, fibre-cartilaginous, fibrous, muscular of animal life, muscular of organic life, mucous, serous, synovial, glandular, dermoid,epi-dermoid, and corneous or pilous system. Madelon has lately proposed another classification, possessing

some advantages over that of Richat. He hn» reduced the number of textures, or systems, to twelve, viz. the cellular, nervous, osseous, cartila- ginous, fibrous. muscular,erectile, mucous, serous corneous or epidermoid, and parenchymatous.

Professor Mayer has recently adopted a classi- fication of the animal textures of compound solids, founded on his views respecting the ele- mentary fibres or primary solids. He recognises only seven systems, viz. the lamellated tissue, 2d. the cellulo-fibrous tissue, 3d, the fibrous sys- tem, 4th, the cartilaginous tissue, 5th, the osseous tissue, 6th, the muscular fibre, and 7th, the ner vous tissue.

The arrangement of this class of solids which we would propose is the following : — Employing the term tissue generally, we would divide the compound solids of the body into two classes, viz. general systems,

and particular textures.

1. General systems. — Under this class we would arrange, 1st, the cellular system ; 2d, the nervous system, which comprehends two orders, viz. A, the involuntary or ganglial order of nerves, or the system of the great sympathetic — and B, the voluntary order of nerves; 3d, the muscular system, which also embraces two orders, A, the involuntary order of muscular fibres : B, the voluntary order of muscular fibres ; 4th, the vascular system ; this system has four orders, viz. A, the arterial order of vessels ; B, the capillary order ; C, the venous order ; D, the absorbent vessels, including, a, the lymphatics, and b, the lacteals.

2. Particular textures. — This class includes, 1st, the mucous textures; 2d, the serous tex- tures; 3d, the fibrous textures, embracing the fibrous, the fibro-cartilaginous, and the dermoid ; 4th, the cartilaginous textures ; 5th, the osseous textures ; 6th, the orictile textures ; 7th, the glan- dular textures, including the parenchyma of the viscera ; 8th, the corneous textures, embracing, A, the pilous, and B, the epidermoid textures.

Proceeding synthetically, we may arrange all the solids of which the animal body is composed after the following manner : —

Class 1st, or Elementary animal solids. The cellular fibre. The nervous fibre.

The muscular fibre.

Class 2nd, Secondary or Compound animal solids*

Order I: — General systems. The cellular system, in- The nervous systems.

eluding the adipose

tissue.

A. The involuntary or ganglial order of nerves, or system of the great sympathetic.

B. The voluntary or- der of nerves.

The muscular system. The vascular system.

A. Involuntary mus- A. Arterial vessels, cles.

B. Voluntary mus- B. Venous vessels, cles.

C. Absorbents.

a. Lymphatic ab- sorbents.

b. Lacteal absorb- ents.

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Order II. — Particular textures. Mucous textures. Serous textures.

Erectile textures.

Glandular textures. Cartilaginous textures. Osseous textures.

Fibrous textures.

A. The fibrous.

B. Fibro-cartilagi- nous textures.

C. Dermoid textures. Corneous texture.

A. The epidermoid.

B. The pilous.

Class 3d, Associated, or complex animal solids. Order I. — Organs of nutrition.

Digestive organs. Organs of absorption

and circulation. Organs of respiration Organs of secretion

and assimilation.

and animal heat.

Order II. — Organs of relation.

Organs of sensation. Organs of voluntary motion.

Order III. — Organs of reproduction. Organs of generation in both sexes.

We have made tin's long' extract from Dr. Copland, because we think it presents as con- centrated a view as any we have met with respecting the labors of physiological analysts in reference to ultimate structure. It will be afterwards seen, when we are upon the nervous system, as indeed the above extract intimates, that Dr. C. is partial to those views which regard the primordia of all the textures to be a globular formation. This view (and some of his intima- tions deserve the credit of novelty as well as in- genuity) has been taken up in different ways by other physiologists, especially by Dr. Edwards of Paris, but still more recent investigators have questioned the accuracy of Dr. E.'s inferences, and indeed the whole business of ultimate or primordial organisation is exceedingly obscure, or but dimly seen, and that partly from the causes we have already pointed out.

But as well on the head of properties as con- struction opinion is in some measure different, although part of the diversities, as we shall im- mediately see, depends upon the difference of sig- nification which is affixed to terms.

It will be recollected we stated above that the grand distinguishing feature of life is indivi- sibility or totality, or, as it may be expressed, mutual connexion and dependence of one part upon another. Break a stone into two equal fragments, and each part' preserves the same identity as before the division — not so with sub- stance that is organised ; for in this last a con- necting or central principle exists which is destroyed by separation, and the separated parts — parts separated from the centre — immediately lose their organic properties, and become subject to new laws. It may be said that an exception obtains to this law in some of the zoophites and verrnes ; but there is no point of fact, no excep- tion even in these examples, because, in cases where life is preserved after separation, the being thus treated may be considered either as a series of beings each

having its own central VOL. XVII.

vitality, or to be so low in the scale of organisa- tion as to be only admissible as a connecting link with the inorganic world.

This principle of indivisibility has been well expressed we believe by Kicherand in the follow- ing words : — ‘ The mode of existence in living bodies resides in the whole, while each part of inanimate matter belongs to itself.’

Setting out then with a recognition of this leading characteristic of organisation, we are fur- ther to enquire into the fundamental properties which organisation manifests. We must premise that the usual divisions of organised beings is into animal and vegetable ; the former possessing those faculties from which result sensation and loco-motion, the latter being destitute of such faculties. Some indeed have supposed that this division is untenable, and that wherever there is organisation there is some sort of sensa- tion, or rather of sensibility ; but it is not within our present province to enter into this question, since it is only animal physiology with which we are now to be engaged.

Now a faculty to which the word irritability has been appropriated is decidedly a faculty of organisation exclusively ; it is the power or pro- perty of contracting upon the application of cer- tain excitants or stimuli ; but with this excita- tion there is often a simultaneous consciousness of the effect, and in that case the physiologist says there is another faculty brought into ex- ercise, namely, sensibility. And so far there is no difficulty ; but this last power or property, be- sides being different in different parts and in different circumstances of the individual so as to vary in degree and in kind, is often manifested in such sort as that the parts and organs impli- cated seem to have perception without that per- ception calling forth consciousness ; and it hence becomes a question whether this faculty belongs to irritability or sensibility, or rather by what term it should be designated.

It should seem, says Richerand, that no part of the body can do without a species of sensi- bility, which is absolutely necessary for life. Without it how could various organs act upon the blood to draw from it the means of their nutrition or materials for the different secretions? Therefore this degree of sensibility is common to everything which has life, to animals and ve- getables, to a man when asleep and awake, to the foetus and the infant, to the organs of assimilating functions, and to those organs which put us on a level with surrounding beings. This low degree of sensation could not have been sufficient for the

existence of man, and of beings resembling him exposed to numerous connexions with every thing that surrounds them ; therefore they possess a sensibility far superior, by which impres- sions affecting certain organs are perceived, judged, compared, Sec. This sort of sensibility would be more properly called perceptibility, o- the faculty of judging of the motions experienced. It requires a centre to which the impressions have a mutual relation; therefore it only exists in animals which like man have a bruin, or some- thing equivalent in its place; whilst zoophites and vegetables, not possessing this central organ, are both destitute of this faculty; however po-

lypi, and several plants, as the sensitive, have certain spontaneous motions, which seem to in- dicate the existence of volition, and consequently of perceptibility ; but these actions, like that of a muscle from the thigh of a frog excited by the galvanic stimulus, are occasioned by an impres- sion that does not extend beyond the part itself, and in which sensibility and contractility exist in a confused state.

Perhaps volition is the best test of these kinds of susceptibility; yet volition has some power over the organic functions, as in the instance of respiration ; and the increase of sensibility on some occasions under disease adds to the diffi- culty of denning and separating it according to its grades. Richerand imputes our want of con- sciousness of impressions upon our organs by the animal fluids to our being accustomed to them, as is to be observed in vision, hearing, smell, taste, and feeling, which cease to be excited by stimuli to which they have been long accustomed. But, if this be the cause, surely the sensibility must have been intolerable before it began to operate : at the moment of birth it must have been beyond endurance. Is it not more probable that this want of consciousness proceeds from the nature of involuntary living action ? Is not the sensibility in question an intermediate faculty between that which gives sensation and volition and that upon which muscular irritation and con- traction depend ? In a galvanised frog there can be no perception ; for (as Cuvier observes) the possession of sensation by these fragments can- not be reconciled with our consciousness of the unity of our being, although the actions are excited through the medium of nervous susceptibility, and are of a different nature from those which would

follow a mere irritation of the muscu- lar fibre. May we not then infer that the ner- vous organisation is endowed with a suscep- tibility independent, of what M. Richerand per- haps improperly calls percipient sensibility ; and that it is through the medium of this faculty that the incessant and unperceived performance of the vital functions is accomplished ? When the voluntary faculty ceases to acknowledge its ap- propriate stimuli ; when sensation for a time is suspended, as in apoplexy, or in experiments on frogs by pouring opium on the brain of these animals; the vital functions are still kept going on by means of the susceptibility to which we now refer. Convulsive action, whether occurring in the voluntary or involuntary muscles, seems to result from an unhealthy condition of this nervous suscep- tibility, which, in instances of sudden death, pro- duced by an abrupt abolition of the sentient and loco-motive faculty, for some time longer lingers in the system, deranged, indeed, but not yet de- stroyed, and produces those spasmodic motions which are observed in an animal body under the circumstances which we are now supposing. When, for example, a domestic fowl is deprived of life, either by its head being severed from its body, or by the more usual mode of screwing the neck, a spasmodic or convulsive kind of vel- licutions will be observed, and indicate the re- mains of this susceptibility for some time subse- quently to the departure of actual sensibility. In the case of articulated worms alike separation

of parts does not seem to operate the same im- mediate destruction of the sensitive and locomo- tive faculty; for as, in them, there is no single brain, but ganglia as the centres of sensation and volition, each part of a divided worm is thus, as we have above remarked, a distinct sentient being. From the remains of this principle may originate those convulsive affections which almost invariably precede death in the course of nature, and which are often manifest in a violent degree for some time after the departure of the sentient or perceiving faculty ; but which is it- self destroyed prior to the total destruction of muscular irritability, or the vis insita of Haller. This last property is denominated by the moderns contractility, and is generally supposed to exist rather in the muscular than nervous tissues. The general organ, says Cuvier, of motion, is the fleshy or muscular fibre. This fibre contracts itself by volition, but the will only exercises this power through the medium of the nerves. Every fleshy fibre receives a nervous filament, and the obedience of the fibre ceases when the commu- nication of that filament with the rest of the sys- tem is cut off or interrupted. Certain external agents applied immediately to the fibre likewise cause contractions, and they preserve their action upon it even after the section of its nerve, or its total separation from the

body, during a period which is longer or shorter in different species of animals. This faculty of the fibre is called its irritability. Does it in the latter case, continues Cuvier, depend upon the portion of the nerve remaining in the fibre after its section which al- ways forms an essential part of it ? or is the in- fluence of the will only a particular circumstance, and the effect of an irritating action of the nerve on a faculty inherent in the muscular fibre? Haller and his followers have adopted the latter opinion, but every day seems to add to the pro- bability of the opposite theory.'

Those of course who follow this theory would conceive, as very many do conceive, that the nervous and muscular tissues are modifications of one simple structure, while the followers of Haller regard muscle and nerve as, ab origine ad finem, distinct organisation ; and these last sup- pose that the nerves are mere instruments for de- veloping contractility in the muscular fibre, which contractility is capable of being exhi- bited without the interposition of nerve at all. Many plants are possessed of contractile, though not as it would appear of sensitive, or proper sensitive, or loco-motive power ; this contracti- lity, from the mode of its excitation and from the phenomena which it exhibits, has been thought to be the same with the irritability of the animal fibre, although neither brain nor nerves have yet been detected in vegetables. In opposition, however, to the muscular doctrine, if so we may term it, some have questioned the existence of muscular fibre as a distinct tissue. M. Dela- metherorie, a French physiologist, who wrote some few years since, carries this principle or as- sumption to the extent of denying altogether muscular construction, and states that the sub- stance which has been, ordinarily considered muscle is merely a congeries of blood vessels, lymphatics, and nervous filaments, bound toge-

ther by cellular membrane, in the intervals of which are deposited animal gelatine and fat, and many since his time have reasoned upon the same assumption.

Irritability itself, on the other hand, has been divided into two species : the one has been named by some physiologists tenacity, the other musculosity ; but perhaps the difference would rather refer to the variation of susceptibility to excitant than any thing otherwise specific ; the slow, gradual, and tonic, action of the bladder in expelling tne urine, to which we may probably add the power which conveys the

blood the round of circulation after it has lost the influence of the heart's action, seems principally to vary from that of the voluntary muscles by being more beyond the influence and caprices of the will.

Irritability and sensibility, whether distinct faculties or modifications of the same property, are developed and excited by peculiar and re- spective agents, even where the structural ar- rangement of parts would not point out any variation. Thus, light is a stimulus to the eye, sound to the ear, a sapid body to the taste, and an odoriferous body to the srnell. Thus mercury will excite the hepatic foxglove, the renal viscus, although in each instance the indivisible facul- ties of sensibility or irritability are called into play; and no difference indicating peculiar exci- tability can be traced by the anatomist in the ar- rangement, or the chemist in the composition of the ultimate fibrilla:, constituting either the nerves or the contractile organs of the respective parts. This circumstance, as we shall afterwards see when treating of the circulation, is laid hold of as an argument in favor of the independent power of blood-vessels in the way of contrac- tile propulsion, although their proper muscu- larity is denied by those who regard them as mere regulators of, not efficient organs in, the circulatory impulse.

The animal frame is thus altogether supported partly in the same manner as a piece of complicat- ed machinery, composed of several springs, each of which is kept in exercise by a principle pecu- liar to itself, while the effect of them all together is one resulting whole ; produced and maintain- ed by one prime and constantly operating prin- ciple— the vitals.

Now researches into the nature, and essence, and cause of this principle have been character- ised, even up to the present day, by a great deal of misconception as to the very nature and object of philosophising. One party, as we have remarked in another place, advocating the doctrine that organisation, or a certain mode of putting together the particles or molecules of which an organised substance is composed, is the principle upon which vitality is produced ; while another contends that this vitality is a something — a subtile something — appended to matter, seemingly forgetful that such something, however subtile, must, to come within the cogni- zance of our ken, be itself matter ; for man never has had, nor can have, any notion of the mode of that existence which is named spiritual in oppo- sition to material. The opponents, then, of the organic theorists, are in reality more decidedly

materialists than are those against which their arguments and

invectives are directed ; and al- though when the organist means to say that every thing connected with life, from the mere lowest grade of sentient manifestation up to the highest degree of intellectual and moral being, is the result of bodily construction, and that, therefore, the materials of which the body is com- posed are the ultimatum of every thing in thought and act ; when, we say, the organologist reasons and infers from these premises, and iw this manner, and to this end, his inferences are wide of the truth, and his principles most deci- dedly at variance with all that is seen and known respecting volition and responsibility. But we must contend that the appending philosopher, if so we may term him, makes the matter worse, and forgets that, even upon his own showing, he is giving immortality and perpetuity of existence to the meanest reptile that crawls upon the earth .

No one can question that life exhibits an order of truths peculiar to itself, and which is nowhere to be found beyond the sphere of living exist- ence ; but we should always recollect that it is the province of physical reasoning not to ima- gine, but to infer ; and when we observe that this same life, in all its modifications and stages, re- quires for its development and maintenance the incessant agency of peculiar powers, and matter peculiarly constructed, we are not merely justi- fied in concluding, but we are compelled to the inference, that the combinations of effects to which we have applied the term life are connect- ed with such agency and such organised matter. The nature of the link which constitutes this con- nexion must ever in one sense be concealed — that is, the why and wherefore it is brought about; — but the connexion itself is sufficiently evident, and all our knowledge, after discoursing and disputing to the end of time, must terminate in the result of observations on the laws, not in finding out the essence, of vitality : a proposition this which one should think sufficiently plain and perspicuous, but if it had been received and properly acted upon would have saved the press the labor of volume upon volume of unmeaning controversy,

But to revert briefly to the subject of this in- troductory disquisition : We have first seen that there is considerable intricacy attached to the question respecting the material elements which enter into the composition of an organised body — that some have supposed the primordial elements to be globular — that some have opposed this assumption, and that much of ingenuity but nothing absolutely satisfactory has been shown by physiologists in their investigation of the ele- ments of bodies. We have all along assumed that there is a great leading distinction between animate and inanimate, or organised and dead matter, in the one depending for its totality of ex- istence

upon some central principle, while the other has a sort of independent being,one fragment of dead matter being the same in quality as the mass from which it has been broken. It has been remarked further that when we come to trace the differences in the degrees of this organising principle through vegetable and animal

X 2

life, that we find “difficulty in the distinction be- tween mere susceptibility and positive sensibility ; but that perceptibility and irritability, and voli- tion, are clearly distinct powers or faculties, the difficulty lying principally in the necessity we are under often of assuming sensibility in a sort of latent form or without consciousness on the part of the individual in whom it is called into being.

On this last particular we may have a word or

two more to say when we are upon the subject of the sensations ; we now proceed to treat of the functions peculiar to life, and in so doing we shall follow generally the arrangement pro- posed and adopted by Richerand, which appears to us the most philosophical and satisfactory scheme that has been contrived. Here and there we shall deviate from the arrangement ; but when we do so the reason for the change will we ima- gine be sufficiently obvious to the reader.

Classification of the functions of life.

Order 1st. Functions which assimi- late the aliment by which the body is nou- rished (assimi- lating, internal, or digestive functions).

I

Class I. Functions •which serve for the pre-., servation of the indivi- dual (indivi- dual life.)

Order 2nd. Functions which form connexions with surround- ing objects (ex- ternal or rela- tive functions).

Genus 1st. Digestion tracts the nutritive part.

Reception of the food.

Mastication.

Solution by the saliva.

Deglutition.

Digestion in the stomach.

duodenum.

intestines.

Excretion of the faces and urine. /• Inhalation of chyle.

Genus 2nd. Absorption car- \ lymph.

ries it into the mass of hu- < Action of vessels. mors. I glands.

v the thoracic duct.

/•Action of the heart.

Genus 3d. Circulation pro- j arteries.

pels it towards the organs. \ capillary vessels.

v veins.

/•Action of the parietes of the thorax Genus 4th. Respiration \ lungs.

combines it with atmosphe- ˆ Alteration of the air. ric oxygen ? * in the blood.

x Disengagement of animal heat. Genus 5th. Secretion causes f Exhalation. it to pass through several •? Secretion by follicles. modifications. C glands.

Genus 6th. Nutrition ap—\ plies it to organs to which it ˆ Different in every part according tc

is to supply growth and re- t store their loss. J

the peculiar composition of each.

Genus 1st. Sensations in- form the oeing of their pre- sence.

Genus 2nd. Motions ap- proach towards or remove it from them.

Genus 3rd. The voice and speech cause it to communi- cate with similar beings with- out change of place.

the sight.

hearing.

Organs of «(smell, taste, feeling. Action of nerves.

the brain.

Human understanding. Sleep and watching. Dreaming and sleep-walking. Sympathy. ˆHabit.

f Organs and muscular motion. \ The skeleton.) Articulations. (.Place.

(Walking. Running. SwTmmfng. Flying. Creeping.

m. • < Articulated, or speech. The vo,ce { Modulated > or singin?.

‘ Stammering. I Lisping. I Dumbness. ˆVentriloquism.

PHYSIOLOGY

f Order 1st. ˆ Functions

which require ! Conception and genera- te concur- j tion. rence of both [sexes. J

Class II. Functions which serve for the pre- servation of the species (life of the species.)

Order 2nd. Functions which belong- exclusively to females.

Gestation.

Delivery. Lactation.

Growth.

Virility

Decrease.

I

After ptesenting his readers with the above table of classification, and giving his reasons for its adoption, M. Richerand goes on to observe very properly that too much importance should not be attached to it, being like all others purely hypothetical. All is connected together; all is co-ordinate in the animal economy ; the func- tions are linked

together and depend on one an- other, and are performed simultaneously; all represent a circle in which it is not possible to mark the beginning or the end. In circulum abeunt. — Hippocrates. In man, while awake, digestion, absorption, circulation, respiration, secretion, nutrition, sensation, motion, voice, and even generation, may be performed at the same time ; but whoever, in the study of the animal economy, should bestow his attention on this simultaneous exertion of the functions, would acquire but a confused knowledge of them.

‘ I might,’ adds our author in another part, ‘ have begun by a view of the external func- tions as well as those of assimilation or nutri- tion, of sensation or of digestion. I have given preference to the functions of assimilation be- cause of all others they are the most essential to existence, and their exercise is never inter- rupted from the instant in which the embryo begins to live, till death. In beginning with an account of them we, therefore, imitate nature ; who imparts to man this mode of existence be- fore she has connected him with outward objects, and who does not deprive him of it until the organs of sense, of motion, and of the voice, have completely ceased to act.

As in one particular we shall deviate from our author’s arrangement, viz., in considering the voice immediately after the respiratory function,

f General differences of the sexes

< Hermaphroditism.

(.Systems relative to generation.

f Of the uterus in a state of impregnation.

ˆ History of the embryo

C. foetus and its membranes.

{ Of the uterus after delivery.

) The lochiae.

C Action of the breasts.

- Milk.

/• Infancy — dentition — ossification.

) Puberty — menstruation.

) Adolescence.

(.Youth.

Temperament. •

Idiosyncracy.

•Sanguine. | Muscular. Biliary melancholic. ‘Lymphatic. ˆNervous.

European.

Human race 0’.

i Mongol.

(.Hyperborean. f Age of decrease. ? Old age. I. Decrepitude.

Death.

Putrefaction.

it may not be amiss before we commence to let M. Richerand state in his own words his reason for separating these functions ; which, although there is some degree of force in it, does not, we confess, appear to us sufficiently powerful to authorise the separation.

‘ As to the course,’ says M. Richerand, ‘ which has been followed in the arrangement of the functions that belong to the same order, or which concur in the same end, it was too well laid down by nature to permit us to depart from it. I have thought it right that the consideration of the voice should immediately precede that of generation, in order that the arrangement might at a glance show the connexion that exists be- tween their phenomena. Several animals . use their voice only during the season of love ; the birds which sing at all times have, during that period, a more powerful and sonorous voice. When man becomes capable of reproduction his vocal organs suddenly become evolved, as though nature had wished to inform him that it is through them he is to express his desires to the gentle being. who may sympathise in them. The voice, therefore, serves as a natural con- nexion between the external functions and those which are employed in the preserTation of the human species.

‘ The voice, which leads so naturally from the functions which establish our external relations to those whose end is the preservation

of the species, is still more intimately connected with motion. It is, in a manner, the complement of the phenomena of loco-motion ; by means of it our communication with external objects is ren- dered easier, more prompt, and more extensive ; it depends on muscular action, and is the result

of voluntary motion. Finally, these motions sometimes supply the place of speech, in panto- mime for example, and in the greater number of cases the language of action concurs in adding to its effect. Every thing, therefore, justifies us in placing this function after motion, in sepa- rating it from respiration, with which every other has joined it, without considering that the relation between the voice and respiration is purely anatomical, and can, therefore, in no wise apply to physiology.'

OF DIGESTION.

Under this head it will be seen, by reference to the table, are included the reception of the food, mastication, solution by the saliva, deglutition, digestion in the stomach, in the duodenum, and in the intestines, and lastly, the excretion of the fceces and urine. This order then we shall pur- sue, and these several particulars we shall include while treating on the digestive process ; and we shall have to speak of the pancreatic secretion, of the bile, of the spleen, and omenturn as auxilia- ries or subsidiaries to the function in question.

The food received by the mouth is masticated or ground down by the teeth, which are so con- structed in man as to be equal to the tearing or grinding down of both vegetable and animal substances. The canine, or as Richerand calls them, laniary teeth, are for the purpose of divid- ing hard substances, and it is by these princi- pally that man is proved to be naturally car- nivorous ; the cuspid serve for the biting off small pieces ; while the molares or grinding are those by which the act of mastication is mainly performed, after the morsel has been torn off by the laniary teeth, and as it were cut through by the cuspid.

In this process of mastication the lower jaw is principally brought into action, which is so con- nected with the skull as to admit of easy motion, while the articulation is at the same time very strong; ' its condyles are prevented from descend- ing very deeply into the glenoid cavity, and thus being confined to vertical movements, by a car- tilage

which is hollow on each surface, and moveable, and permit the condyle to move from the glenoid cavity to a tubercle which stands be- fore this, and thus to acquire still greater mobi- lity.' We find, however, in some instances of opening the mouth exceedingly wide, as in gaping or singing, that dislocation here occurs, though very rarely, the condyles slipping under the zygomatic arches.

Now during this movement of the lower jaw, and the manducation by the teeth, a flow of saliva is occasioned from the salivary glands, being mechanically and otherwise excited into action, and thus is the food further acted upon by this secretion, which during the process be- comes mixed with mucus of the labial and buc- cal glands, and the moisture which comes from the soft parts of the mouth. The food thus pre- pared is pressed by the tongue against the roof of the mouth, which 'turning its tip upwards, and backwards, at the same time that its base is depressed, there is offered to the food an inclined plane, over which the tongue presses it from be- fore backwards, to make it clear the isthmus

of the fauces, and to thrust it into the oesophagus. The following is the account which Blumenbacli gives of the mechanism of deglutition: — 'The tongue being drawn towards its root, swelling and growing rigid, receives the bolus of food upon its dorsum, which is drawn into a hollow form . The bolus is then rolled into the isthmus of the fauces, and caught with a curious and rather violent effort by the infundibulum of the pharynx, which is enlarged and in some measure drawn forward to receive it. The three constric- tor muscles of the pharynx drive it into the OBSO- phagus. These motions are all performed in very rapid succession, and require but a short space of time. Nature,' he goes on to say, ' has provided various contrivances for opening and securing this passage. The important motion of the tongue is regulated by the os hyoides. The smallest particle of food is prevented from enter- ing the nostrils, or Eustafhian tube, by means of the soft palate, which, as well as the uvula sus- pended from its arch, and whose use is not clearly understood, is extended by muscles of its own, and closes those openings. The tongue protects the glottis ; for the larynx at the moment of deglutition is drawn upwards and forwards, and in a manner concealed under the retracted root of the tongue, and applied to the latter in such a way that the glottis, being also constricted and protected by the epiglottis, is most securely defended from the entrance of foreign substances.' We may remark, by the way, that there is some obscurity with reference to the epiglottis; for it seems that, as Dr. G. states in a note on Blu- menbach, the glottis may be closed sufficiently, independently of the epiglottis. We have been informed that the celebrated tragedian Mr. John Kemble was

withbut an epiglottis, and Dr. Ma- gendie states that ‘ he saw two persons perfectly destitute of epiglottes, who always swallowed without difficulty.’ Targioni also, we are told, met with one, and in that case neither deglu- tition nor speech was impaired.

Passing thus over the glottis, the food is received into the oesophagus, through which it is propelled into the stomach, not by its specific gravity, but by the contraction of this membrano- muscular canal ; for although, as it has been ob- served, weight is no obstacle to the food passing through the oesophagus into the stomach, yet it has so little to do with it ‘that the diminution of the muscular contractility at the approach of death is sufficient altogether to prevent it. The act of drinking is then attended with a noise of unfavorable omen. This noise consists in the gurgling of the fluid, which has a tendency to get into the larynx, whose opening is not covered over by the epiglottis ; and if the attempt to swallow be persevered in, or if the by-standers insist upon getting some fluid down the throat, the deglutition of which is impracticable, it flows into the trachea, and the patient dies of suffo- cation.’

The mass thus prepared by manducation, and by the fluids to which we have referred, is now received into the stomach, and here it becomes subjected to the influence of a secretion, which seems to be constantly poured out from the inner surface of the organ, and which fluid is named

the gastric juice, the nature of which, and the purposes it reserves in the digestive process, we are immediately to observe upon.

How, it may be asked, does this secretion ap- ply itself to every portion of the injected mate- rial, since the fluid is only of course poured out from the membrane of the stomach itself, and unless it be supplied in sufficient quantity to penetrate the whole of the mass as it passes through the viscus, it might be expected that some, and indeed the greater portion of the ingesta would pass on to the outward, or pyloric extremity of the stomach, unaffected by the gas- tric secretion ? But it has been shown, by the experiments of Dr. Wilson Philip, that the layer of the food next the surface of the stomach is first digested, and in proportion as this under- goes the proper change, and is moved on by the muscular action of the stomach, that next in turn succeeds to undergo the same change. ‘There is something,’ says Dr. Uwins in

his recent Trea- tise on Stomach Affections, ‘ exceedingly interest- ing in the mode by which this successive appli- cation of portions of food to the surface of the slomach is effected. It is indeed brought about by virtue of that peculiar action which is called peristaltic, and which extends down the whole line of the intestines. When I first read Dr. Philip’s remarks on this particular in his work on indigestion, I conceived them to be as novel as they are interesting, and I still believe Dr. P. to have been quite unconscious of having been anticipated ; but, in looking over some old works on the subject of digestion, a friend of mine found a statement in a thesis bearing the date of 1715 which is almost verbatim the same with that of Dr. P.’ We have consulted the treatise to which allusion is here made, and find, as it is stated, that Dr. Philip’s account of the process is almost a translation of the Latin. But Dr. P. was doubtless ignorant of this curious antici- pation of his very interesting discovery.

Blumenbach expresses himself in the following manner, in reference to the rationale of digestion. ‘ This very important function is probably assisted by various accessory circumstances. Among them some particularly mention the peristaltic motion, which, being constant and undulatory, agitates and subdues the pultaceous mass of food. The existence of a true peristaltic motion in the stomach during health is not however quite certain : indeed the undulatory agitation of the stomach that occurs appears intended for the purpose of driving the thoroughly dissolved por- tion downwards [onwards], while those portions which are not completely subacted are repelled from the pylorus by an anti-peristaltic motion.’ So that here we have in some measure an an- nouncement of the same principle as that of Dr. P., but to this last individual the credit is un- doubtedly due of establishing, by a series of well conducted experiments, the precise mode in which the part of the food acted on by the gastric juice is pushed on towards the pylorus, and other portions take its place to be treated in the same manner. It is said that during healthy digestion the chyme passes the pylorus in between three and six hours after meals.

Having passed this orifice of the stomach it

has now arrived at the duodenum, and it may be right to state that there is a peculiarity in the construction, position, and office of this the first of the intestines, which together constitute it a sort of second stomach ; it is in the first place more fixed in its place than the other portions of the intestinal tube, and here too the chyme is acted on not only by the secretions from the internal surface of the gut, but by the bile and pancreatic fluid, both of which are received into the duodenum.

From the duodenum the mass is continued along the course of the small intestines by a. true peristaltic impulse, by which a sort of vermicular motion is occasioned, and through which the gradual propulsion is effected. At the com- mencement of the large intestines the reader conversant with anatomy knows that there is such a construction of the canal as to facilitate a third detention of the mass, and to prevent any return of it into the smaller intestines ; here it is that the faecal character commences upon the ingesta, for the food by this time has lost a great deal of its nutritious portion, and it is the office of the large intestines to receive and se- parate and expel this excrementitious portion. And, whatever disarrangement may take place in the stomach or bowels, no faecal matter can be returned into the upper division of the intestinal canal, unless the valve at the ideal head of the colon have lost its muscular power.

Such then is briefly the digestive organisation. We have first the mouth for the reception of the food, the teeth and motion of the jaws for man- ducation, the salivary secretion, and the curious construction of the pharynx and glottis for pro- pelling the mass into the stomach. We have next the stomach for subjecting the mass to the agency of the gastric juice. We have thirdly its passage into the duodenum, its further retention there, and the reception into this gut of the bili- ary and pancreatic secretion. The mass from the duodenum is propelled slowly on by pe- ristaltic action through the convolutions of the jejunum and ileum, and from the inner surface of these last it is that those innumerable chyli- ferous vessels take up the nutritious portion of the food and convey it into the blood, while the effete part passes on through the valve of the colon ; here it becomes more thoroughly excrementitious, and is at length, still by the peristaltic or ver- micular motion of the gut, transmitted to the rectum to be discharged by the anus, when the sphincter or retaining power of that gut is soli- cited to give way by the quantity or stimulus of the contained faeces.

But it behoves us to stop and enquire a little further into the nature of the respective changes produced upon the aliment in the mouth, in the stomach, in the duodenum, and its passage through the intestinal convolutions.

That saliva in the first instance operates a considerable change upon the masticated mass is sufficiently evident, and it is curious to ob- serve that the very action which communicates the food excites to the secretion of the sal i vary glands. Here then the first change is effected, but of its precise nature we want perhaps fur- ther observation and experiment to satisfy us.

For the chemical composition of the saliva the reader is referred to the article CHEMISTRY ; it may be here just stated that it has a strong affinity for oxygen, and it has been suggested that an absorption of that principle takes place during mastication, so as to assist in the changes which the alimentary mass is destined to under- go. It has, however, been justly remarked that the absorption of oxygen by this fluid, during the process of mastication, has not been suffici- ently attended to in our speculations respecting the process of digestion. We can hardly sup- pose that it takes up oxygen without a portion of nitrogen or common air ; and if any quantity of the latter be mixed with it during the insali- vation of the food an evident source is dis- closed, from which nitrogen may be conveyed into the circulating fluids in addition to that which is derived from the ordinary aliments. The importance then of the salivary secretion in aid of the digestive process is easily con- ceivable; and, although pathological and practical intimations are somewhat out of place in a treatise on pathology, we may just stop to say that due mastication of the food is not merely of consequence from the division of its parts into small fragments, but that it is also important inasmuch as it gives time and opportunity for the admixture of the saliva with the com- municated mass ; and that therefore persons who are in the practice of fast eating deprive their stomachs of one of the assistants which nature has provided.

But what is the absolute nature of the influ- ence which the gastric juice effects upon the ingested material ? It was once supposed that a species of fermentation constituted the princi- ple of the digestive action; trituration also was conjectured especially by the mechanical physi- ologists to operate the effect; and to such sn extent was this assumption carried that Dr. i'itcairn suggested the food to be ground down > >ith a pressure equal to the weight of not less than 170,'JOO Ibs., assisted at the same time in its gigantic labor by an equal pressure derived from the surrounding muscles. Maceration, putrefac- tion, concoction, have all at different times been proposed as principles of the digestive process, but all in the most vague manner, and without a due recognition of the fact that what takes place under the guidance of vitality does not require or admit of analogies from other departments of nature in an abstract manner. John Hunter used to settle this matter in a laconic but satis factory way : ' The stomach, gentlemen,' he was wont to say while addressing his pupils, ' has been held by some to be a mill, others will have that it is a fermenting vat,

others that it is a stew- pan ; but in my view of the matter it is neither a mill, a fermenting vat, nor a stew-pan, but a stomach, gentlemen, a stomach.'

It is now pretty generally allowed that the conversion of food into' chyme (the name given lo the pulpy mass which is projected into the duodenum) is principally effected by the solvent and coagulating power of the gastric secretion ; but even this solvent energy is of a sui generis character, and doe? not admit of close compari- i,on with solution effected out of the body. The

coagulating quality of the secretion is evinced by its effecting this change upon milk that is taken into the stomach ; but this coagulated mass is soon redissolved and commingled with the other portions of the chyme. The solvent power indeed of the gastric secretion is so great, that under some circumstances the coats of the stomach have been corroded by it. It was the opinion of Mr. John Hunter, however, that such a fact can never take place except in cases of sudden death, when the stomach is in full health and the gastric secretion now just poured forth is surrounded by a dead organ; for he argues plausibly that, so long as the stomach is itself alive, it is capable by its living principle of counteracting the effect of this solvent power, a power so great that handles of clasped knives have been found half digested, and their blades blunted in the stomach, and pieces of the toughest meats and of the hardest bones enclosed by Dr. Stevens in perforated balls, and thus necessarily uninfluenced by any action of the stomach itself, were eventually broken down and dissolved by the contact of the gastric secretion. ,

It is generally allowed that besides this sol- vent and peculiar agency of the gastric secretion itself, digestion or conversion into chyme of the ingested mass is assisted by pressure on the stomach from the alternate motion of the abdo- men, and the high temperature of the parts. We all know how material an aid to the digestive functions exercise proves, and this could not be the case were the conversion of the food into chyme merely consequent upon the solvent agency of the gastric . fluid, unless indeed we might suppose that the exercise influenced by increas- ing this secretion, and thus only in an indirect manner contributing to the effect. While exer- cise thus contributes to the digestive process when taken at proper times and in due degrees, we must recollect that rest and certain positions on the other hand favor the due conversion of the food into chyme. If a person makes violent exertions, or takes a recumbent position immedi- ately upon eating, digestion does not go on with so much ease as if he refrain from exercise and sit in an upright or only in an inclined posture. M.

Iticherand, in remarking on the observation that during sleep digestion takes place much more readily when we lie on the right than on the left side, states that this has been ascribed to the compression of the liver on the stomach, but that it is much more likely to depend on the circumstance that when we lie on the right side the passage of the food is facilitated by its own weight, the natural obliquity of the stomach from left to right being increased by the changes attending the presence of the food.

But there are questions that still remain to be answered in reference to the gastric fluid, as a digestive agent, viz. : — What is the quantity in a given time of this secretion which is poured out from the secretory surface of the stomach 1 what is its precise chemical nature or quality 1 and whether, after it has operated in the formation of chyme, that chyme is always of the same nature ?

In respect, however, both to the quantity and precise quality of the gastric juice, there is some

difficulty, since it is next to impossible to pro- cure it entirely unmixed with the other secretions which are poured out from the stomach simul- taneously ; and then again it is supposed that it varies in different stomachs, or even in the same stomach at different times. Magendie remarks, that the application of different substances to the surface which secretes it constantly modifies its nature ; and ‘ it is at least certain,’ says Ur. Paris, in his Treatise on Diet, ‘ that the gastric juice varies in different animals : for example, that of man is incapable of acting (readily) on bones, while that of a dog digests those substances perfectly.’ It has, however, been conjectured that the average quantity secreted is about a pound in twenty-four hours ; and Dr. Good re- marks in the following way as to its quality :— * It is a thin, transparent, and uninflammable fluid, of a weak saline taste and destitute of smell.’ Generally speaking, it has a near resem- blance in its external properties to the saliva, and is neither acid nor alkaline ; though in these qualities it seems to vary more or less not only in animals, whose digestive organs are of a different structure from those of man, but even in the same animal under different circumstances. It may, however, be laid down as a regular rule that in carnivorous and graminivorous animals, possessing only a single stomach, this fluid is slightly acid, and colors blue vegetable juices red. In omnivorous animals, as man, whose food is composed of vegetable and animal

mate- rials indifferently, it is neutral ; and in gramini- vorous ruminating animals with four stomachs, and particularly in the adults of these kinds, it is slightly alkaline, and colors blue vegetable juices green.

Dr. Prout, and some of the continental che- mists, have contended for the generation in the gastric juice of muriatic acid, both free and combined with alkalis. Leudet and Lassaign have lately instituted experiments which in some measure contradict those of Prout, Tiedemam, and Gmelin, so that the subject may be consi- dered in some measure still sub judice.

We will just make room for the insertion of the following extract from Dr. Elliotson on the subject of the digestive organisation and functions in other animals beside man.

In granivorous birds the food passes into the crop, and from this into a second cavity, from which it enters the gizzard, a strong muscular receptacle, lined by a thick membrane, in which, instead of been masticated, it is ground down by means of pebbles and other hard bodies swallowed instinctively by the animal ; hence true salivary glands do not exist about the mouth of birds, but abound in the abdomen opening into the lower part of the crop and the gizzard, in carnivorous birds, the gizzard is soft and smooth. The fluids of both crop and gizzard contain a free acid, according to Tiedmann and Gmelin, which is the muriatic or acetic.

Some graminivorous quadrupeds, with di- vided hoofs, have four stomachs, into the first of which food passes when swallowed, and from this into the second. It is subsequently returned by portions into the stomach, chewed, and again shallowed, when, by a contraction of the open-

ings of the two first stomachs, it passes over them into the third, and from this goes into the fourth. The process can be delayed at pleasure when the paunch is quite full. Some birds and insects also ruminate. The same chemists found the fluids of the two first stomachs alkaline, and of the third and fourth acid. The. stomachs of some insects and Crustacea contain teeth. Some zoophytes are little more than a stomach ; others have several openings on the surface leading by canals that unite and run into the stomach— a structure, called by Cuvier mouth-root. Be- tween the most distinct kinds of stomach we see numerous intermediate varieties. The cardiac half of the interior of the stomach of a horse for example, is covered by cuticle, and appears merely recipient, while the pyloric half is villous and digestive, and

the state of the contents in each half is therefore very different, a link thus existing between such stomachs as the human and the ruminating.'

And with respect to our last question pro- pounded above, viz. whether chyle be the same whatever aliment it may be manufactured from? Magendie and others have proved that it is not, but that there are as many species of chyme as there are food ; and even this difference conti- nues to exist in dung in a considerable measure after the duodenal action, and the biliary and pancreatic secretion have together operated the further change so as to have converted the chyme into chyle ; for, according to the experi- ments of the ablest physiologists, this last fluid differs in composition, according to the nature of the ingesta from which it has been formed. When the individual, for instance, has been chiefly sustained by sugar, the chyle is without that mixture of ribrine which is found when the food has been principally composed of animal matter ; and when much oil or fat has entered into the constituents of the aliment, the chyle differs both in appearance and odor from that under common circumstances — it is more acrimonious or alkalescent.

Magendie, we may take occasion here to re- mark, concluded by a series of experiments that no animal is capable of deriving nutriment from any material that does not contain some portion of nitrogen or azote ; for, on feeding animals of various kinds on substances without a sensible portion of this principle, such as sugar, gum, olive oil, and butter, together with distilled wa- ter, and limiting them to this diet, they gradually lost flesh and strength, and at length died ; and it proved a singular circumstance in these expe- riments that all the animals, before death, exhi- bited an ulcer in the cornea, which sometimes so spread as to empty the eye of its humors.

But we are now to consider the duodenal and other changes which the chyme undergoes. It has already been said that when the mass enters into this gut (the duodenum) it becomes mixed with the secretions poured into this organ from the pancreas, the liver, and the duodenum itself: here then it becomes chyle ; or the duodenum may be considered, as we have above intimated, a second stomach. Now let us enquire what part the bile, what the pancreatic secretion, what the spleen, and what the omentum may be con-

sidered as contributing to this conversion of chyme into chyle.

It is a curious fact that there is considerable similarity in the nature of the pancreatic secre- tion and that from the salivary glands ; and that there is a sympathy between the secretory organs of the one fluid and the other, so that what excites the salivary secretion excites simul- taneously the pancreatic ; and it should seem that what the saliva does for the mass in the mouth, the pancreatic juice does for the chyme in the duodenum. It is also observable that the pancreatic fluid is in larger quantities in herbi- vorous than in carnivorous animals ; and, upon the whole, it seems fair to infer, with some phy- siologists of the present day, that it ‘ animalises the unazotised principles of vegetable food.’ It is easy to conceive that there are greater impedi- ments in the way of ascertaining the average quantity of this secretion than that of the saliva or the gastric juice itself.

The questions of interest in reference to the bile are — whence does it proceed ? or in what manner is it secreted ? and how far is it necessary for the completion of the chyliferous change ?

‘ It has been disputed whether the bile is pro- duced from arterial or venous blood. Although the former opinion is countenanced by the ana- logy of other secretions (see the section on Secre- tion), nevertheless more accurate investigation proves that the greater part, if not the whole, of the biliary secretion is venous. With respect to arguments derived from analogy, the vena portse, resembling arteries in its distribution, may like- wise bear a resemblance to them in function. Besides, the liver is analogous to the lungs, in which the great pulmonary vessels are intended for their function, and the bronchial arteries for their nourishment ; and, if we are not greatly mistaken, the use of the hepatic artery is similar. We would, however, by no means completely deny its importance in the secretion of bile, but must regard it as inconsiderable, adventitious, and not well established.’ So writes Blumen- bach ; and Dr. Elliotson, in commenting on this passage, remarks, that two instances have occurred in London of the vena portse running, not to the liver, but immediately into the vena cava inferior. The bile must have been secreted entirely from the blood of the hepatic artery. One of these is describ- ed by Mr. Abernethy, and the other is mentioned by Mr.Lawrence. We must not forget, Dr. E. adds, that in the mollusca there is no vena portae, and the liver secretes its blood from the aorta. M. Simon informs us that, after tying the hepatic artery in pigeons, the bile was secreted as usual ; but after tying the vena portae none was produced. Akaau found water injected into either the vena portae or the hepatic artery exude on the surface of the liver, but this might be

mere imbibition.

Upon the whole it seems a fair inference that the vena portae is destined for the formation of bile principally but perhaps not wholly, and in cases of lusus naturae the hepatic artery is called upon to supply its place ; but it would be an interesting trial, to find whether bile, when thus secreted from the hepatic artery, is the same in chemical composition or absolute essence as when furnished by the vena portae.

After the bile is secreted it is conveyed through its appropriate conduits into the duode- num ; but even here there is a question, both with respect to the quantity of supply and whether the retention of it in the gall-bladder is neces- sary to the full saturation of its specific quality.

It has been observed by Bichat, Blumenbach, Douglass, and others, that cystic bile becomes more concentrated, viscid, and bitter, by stag- nating in the gall bladder, the cause of which may be the absorption of its aqueous portions by the lymphatics; or by something positively added in this viscus ; and although some ani- mals are without a gall bladder, and although this viscus is absent in some rare cases in our own species, yet as a general circumstance it may be remarked, that in the carnivorous animals its existence seems far more general than among vegetable feeders. Now, as the carnivori are for the most part animals which can bear longer in- tervals of fasting than the herbivorous race, the gall bladder has been conjectured, by Cuvier, to be a reservoir of bile in cases where the animal is subject to lengthened periods of fasting from irregular or deficient supply of food. It may then have reference both to quantity arid quality, or serve as well the purpose of a reservoir as an elaborator

It is worthy of notice that the supply of bile is regulated by circumstances which create its de- mand. ‘ I attended a case,’ says Dr. Monro, ‘ in which there was an abscess of the liver, and a preternatural communication between that or- gan and the lungs, through which the bile \vas secreted, and discharged by coughing. The quantity thus discharged was very different at different times. Jt was always greater after meals, and especially for an hour after dinner.’ As a certain measure then, but not the same quantity, of bile may always be required, the gall bladder may serve to retain it for those oc- casions when the stimulus of eating is absent. But on these heads we have not much more than conjectural inference.

Whether the bile in the general way, and without the interference of

disordered action, makes its way at all into the stomach has been a subject of enquiry. To us it would appear that bile getting into the stomach in any measure, or in any way, would imply disease ; for hao. nature required this fluid for the formation of chyme it would most probably have been contrived that the ducts from the liver would have passed di- rectly into some part of the stomach, and it should seem that all return through the pylorus into the stomach is contrary to the obvious construction of the pyloric valve, which is manifestly formed for the passage of matter only in one direction. Richerand, however, supposes that some portion of the bile always finds its way into the stomach, while Blumenbach and others are of a contrary opinion. After speaking of the uses of the fluid, the last mentioned author remarks : ‘ We shall omit the less probable uses assigned to the bile, v. g. of exciting hunger by regurgitating int.» the stomach — a circumstance which, we think, can hardly happen during health.’

The uses of the bile, in Blumenbach’s opi- nion, are, that ‘ it gradually precipitates the

faces and separates the milky chyle from the mixed and equable pultaceous chyme, while this is passing through the tract of the small intes- tines after being propelled from the stomach into the duodenum, and diluted by the pancreatic juice. It separates itself,’ he continues, ‘ into two portions, the one serous, the other resinous. The latter combines with the faeces, tinges them, and is discharged with them ; the former is probably mixed with the chyle and carried back into the blood. The bile seems to act, moreover, as a stimulus to the peristaltic motion of the intestines.’ It is supposed by Dr. Prout, ‘ that during the precipitation of the chyle, and the decomposition of the bile, a gaseous product is usually evolved, the mass becomes neutral, and traces of an albu- minous principle commence, strongest at a cer- tain distance from the pylorus, below the point at which the bile enters the intestines ; and gra- dually fainter in each direction. On mixing with chyme out of the body, a distinct pre- cipitation takes place, and the mixture becomes neutral ; but the formation of an albuminous principle is doubtful probably from the want of the pancreatic fluid. The bitter and bilious matter passes off with the faeces, while the soda of the bile probably combines with the acid, and contributes to the formation of chyle. The loss of the alkali, which preserves the picromel in solution, causes the separation of the latter ; and Dr. Prout found the distinctive qualities of it the more evident the

further from the intestine it was examined.

We continue our extract from Dr. Elliotson, who goes on to say : ‘ It is no longer wonderful that in jaundice it is so intense that no bile is seen in the faces; and, according to Dr. Fordyce, even in artificial obstruction of the choledochus by ligature, nutrition continues, though no doubt less perfectly than in health. For Tiedemann and Gmelin after tying the biliary duct, which proved on dissection to have continued imper- vious, found the thoracic duct still containing an abundance of matter, yellowish, indeed, from the jaundice, but coagulating, and its coagulum be- coming red, precisely like chyle ; the small in- testines had the soft flakes usually considered chyle, but thought mucus by them ; and both large and small intestines contained nearly all the principles, except those of the bile, seen in sound animals ; but the contents ot the large in- testines were exceedingly offensive. In the less satisfactory experiments of MM. Leuret and La- j>ui

The conclusion from these experiments and observations would therefore appear to be, that, although the bile thus materially aids in sepa- rating the chyle from the other portions of the duodenal contents, the chyle may be formed without it, but probably in much inferior quan- tity, and in a state of much less perfection.

With these inferences the experiments and observations of Dr. Blundell and Mr. Brodie will be found to harmonise, both of whom, and Dr. B. in the first instance, tied the choledic duct for the purpose of ascertaining how far the process of nutrition, and the formation of chyle, were dependent upon the supply of bile from the liver to the duodenum.

‘When an animal,’ says Mr. Brodie, ‘swal- lows solid food, the first change which it under- goes is that of solution in the stomach. In this state of solution it is denominated chyme. The appearance of the chyme varies according to the nature of the food. For example, in the stomach of a cat the lean or muscular part of animal food is converted into a brown fluid of the consistence of thin cream ; while milk is first separated into its two constituent parts of coagulum and whey, the former of which is afterwards redissolved, and the whole converted into a fluid substance with very minute portions of coagulum floating in it. Under ordinary circumstances the chyme, as soon as it has entered the duodenum, assumes the character of chyle. The latter is seen mixed with excrementitious matter in the intestine; and, in its pure state, ascending the lacteal ves- sels. Nothing like chyle is ever found in the stomach ; and Dr. Prout, whose attention has been much

directed to the chemical examination of these fluids, has ascertained that albumen, which is the principal component part of chyle, is never to be discovered higher than the pylorus. Now, in my experiments, which were made chiefly on young cats, where a ligature had been applied so as to obstruct the choledic duct, the first of these processes, namely the production of chyme in the stomach, took place as usual ; but the second, namely the conversion of chyme into chyle, was invariably and completely inter- rupted. Not the smallest trace of chyle was discoverable either in the intestines or the lac- teals. The former contained a semi-fluid sub- stance, resembling the chyme found in the stomach, with this difference, however, that it became of a thicker consistence in proportion as it was a greater distance from the stomach ; and that, as it approached the termination of the ileum in the odeum, the fluid part of it had altogether disappeared, and there remained only a solid substance, differing in appearance from ordinary feces. The lacteals contained a trans- parent fluid, which I suppose to have consisted partly of lymph, partly of the more fluid part of the chyme, which had become absorbed.

‘ I conceive,’ continues Mr. Brodie, ‘ that these experiments are sufficient to prove that the office of the bile is to change the nutritious part of the chyme into chyle, and to separate from It the excrementitious matter. An observation will here occur to the physiologist. If the bile be of so much importance in the animal economy, how is it that persons occasionally live for a con- siderable time in whom the flow of bile into the duodenum is interrupted ? On this point it may be remarked, 1st. That it seldom happens that the obstruction of the chqledic duct from disease is so complete as to prevent the passage of the bile altogether ; and the circumstance o* the evacuation being of a white color may prove: the deficiency, but does not prove the total ab- sence of bile. 2dly, That in the very few au- thenticated cases which have occurred of total obliteration of the choledic duct in the human subject, there has been, I believe, always extreme emaciation, showing that the function of nutri- tion was not properly performed. 3dly, That ihe fact of individuals having occasionally lived for

a few weeks 01 months under these circumstances, only proves that nutrition may take place to some extent without chyle being formed. In my experi- ments I found that the more fluid parts of the chyme had been absorbed, and probably this would have been sufficient to

maintain life during a limited period of time.'

It seems then, upon the whole, sufficiently evident that the fluid secreted by the liver, and transmitted into the duodenum, has a very con- siderable influence towards completing the pro- cess of chyle formation; there are some other notions respecting the office of this great viscus in the animal economy which are probably some- what more hypothetical, but yet do not seem destitute of foundation, we mean that, like the lungs, it helps to rid the system of carbon. It is to be recollected that it is only to these two viscera, the lungs and the liver, that venous blood, blood charged with carbon, is transmitted ; and it is matter of common observation that bilious diseases are most frequent in hot climates and seasons, which is attributed to the greater abundance of the bile in those times and circum- stances, when less carbon passes off by the lungs, there not being so much occasion for the absorp- tion of heat into the frame. Conformably to this theory it has been remarked, that ' in the foetus, for whose temperature the mother's heat must be sufficient, the lungs perform no function, but the liver is of great size, and bile is secreted abundantly, so that the meconium accumulates considerably during the latter months of preg- nancy. We shall see, indeed, that at the very time the functions of the lungs suddenly begin at birth, the liver suddenly loses so much of its supply of blood. Warm-blooded animals with large lungs, living in the air, have the liver pro- portionably smaller than those which live partly in water; in cold-blooded animals and reptiles, which have lungs with large cells, as but slightly to decarbonise the blood ; in fish, which get rid of carbon but slowly by the gills ; and in the molucca, which decarbonise still more slowly by gills or lungs, the liver is proportionally large. More blood flows to the liver accordingly as the lungs are less active organs. In the mam- malia and birds it receives the blood of only the stomach, intestines, spleen, and pancreas ; but, in the cold-blooded, of many other parts ; in the tortoise of the hind legs, pelvis, tail, and vena azygos ; in serpents of the right renal, and all the intercostal veins ; in fish of the renal veins, the tail, and genitals. It is moreover said that in pneumonia and phthisis more bile is secreted ; and in the blue disease, and other affections of the heart, that the liver is enlarged. The con- stituents of the bile contain a large quantity of carbon, which is chiefly in union with hydrogen, and under the form of resin or fatty matter, and resin is most abundant in the bile of herbivorous animals, whose food contains a very large pro- portion of carbon and hydrogen. In the lungs the carbon may be said to be burnt, whence ani- mal heat ; in the abdomen it passes off still com- bustible.'

Of the use of the spleen. — This still continues to be a physiological

problem. That a large v.scus should be found without any obvious in-

tention seems extraordinary, and Dr. Paley, when he is treating on final causes, suggests ‘ that it may be merely a stuffing, a soft cushion to fill up a vacuum or hollow, which, unless oc- cupied, would leave the package loose and un- steady;’ thus supposing, as Dr. Elliotson wittily and sarcastically states it, that a pad is necessary to make the viscera fit, just as hatters put stuf- fing under the leather of a hat which is made too big for the head. ‘ When,’ he adds, ‘ I consider the stupendous power and design displayed throughout nature, I instantly revolt at such an explanation as Paley’s, to say nothing of its anatomical absurdity.’

The most generally entertained opinion of the office of this viscus is that it proves subservient to the stomach and liver, by collecting blood for the purpose of being sent to these last organs when a more than ordinary supply is required ; and this inference has been drawn from the mode in which the blood-vessels of the spleen are connected with those of the liver and sto- mach ; this last organ, when it is full, not only compressing the spleen by its distension, but, from the very same pressure, causing a diversion of blood from the spleen to itself. Mr. Pring, we believe, in a work of great originality, was the first to combat this supposition, and to main- tain that we have no proof that the repletion of the stomach effects any material compression on the spleen and its blood-vessels, so as to alter the circulation. ‘ Besides, in ruminating animals, as Blumenbach observes, it lies next the first stomach or paunch, and, if compressed, must be so before digestion begins ; and in proportion as the fourth stomach fills, and digestion proceeds more actively, is the distension of the paunch diminished.’

Sir Everard Home conceived that a great pro- portion of the liquid which disappears from the stomach mjght get from the cardiac extremity of this organ into the spleen, and thence into the mass of blood ; but from later experiments he has been induced to abandon this hypothesis, and the real office of the spleen still continues among the arcana of nature. It is, however, most probably connected in some way with the digestive and assimilating functions, and it is a remarkable fact, long ago observed, that the ex- tirpation of this organ sometimes renders the bile in the gall bladder pale and inert. Some physiologists have recently speculated on the use of the spleen in the lymphatic system ; and still more recently it has been thought a secretory organ with a glandular duct, but nothing very satisfactory has been elicited from these views of the subject, and we repeat that more facts are wanting than hitherto we are in possession of to render fully evident the precise use of this viscus in the animal economy.

The amentum would seem principally ordained for the purpose of lubricating the intestines, and assisting their constant motion ; but it has been suggested that this also as well as the spleen may serve as a diverticulum to the viscera ; ‘ if,’ says Blumenbach, ‘ we reflect on the singular structure of the omentum parvum or hepato- gastrum especially, we may be inclined to believe that there is another, and perhaps principal

office attached to it unknown at present, and discoverable by comparative anatomy.’

Respecting the functions of the large intes- tines we cannot do better perhaps than present to our readers the following extract from Dr. Capland.

‘ To the functions of the larger intestines may be given the term faecation, because it is in this situation of the digestive canal that the faecal mat- ter is found. In its course through the small in- testines the alimentary matters are deprived of their chyle, and of a portion of their aqueous parts ; the residue is poured into the colon, where its course is more slow, and where it assumes new characters. The fsecal mass, according to the properties which it presents at the commence- ment of the colon, is evidently composed — 1st. Of the residue of the aliments ; and 2d. Of the excrementitial parts of the secretions peured into the superior parts of the digestive tube. The faeces, when they arrive in the rectum, or at the time of their expulsion from the body, are greatly increased by the more solid parts of the secretions poured out upon the internal surface of the colon, their more fluid parts having been absorbed. It is in some measure owing to the quantity and properties of the excrementitial parts of these latter secretions, which principally proceed from the follicular apparatus of this intes- tine, that the faeces present distinctive characters.’

Gaseous substances generally are found in greater or less abundance in the small intestine?. Tˆis gas may come from more than one source ; it may arise from the change which the alimen- tary substances undergo in their course, or it m,;y be secreted by the mucous membrane of the intestines themselves. While we would not altogether deny a share in its production to the former, we contend for the latter. \Ve believe that the mucous membrane of the digestive canal may both secrete gaseous substances and absorb them ; and we found our belief upon the following circumstances : — 1 st. We have proofs, derived from experiment and observation, that gaseous

substances are absorbed and given off from the mucous membranes of the respiratory apparatus. 2d. Pathological facts intimately connected with the functions and properties of this membrane, in different parts of the body, support the position. We have, however, no doubt that the changes which the alimentary substances undergo in the stomach occasional y give rise to gaseous products, and we believe that a similar result follows the removal of the excrementitial matters in the colon and rectum.

On the urinary secretion, which the reader •will perceive by turning to the table of arrange- ment Richerand introduces under the head of digestion, we shall have to offer a few remarks when considering the subject of secretion ; at present we shall limit ourselves to remarking that the transmission of fluids from the stomach to the urinary organs, and other parts, is a phy- siological problem that has not been satisfactorily solved.

OF ASSIMILATION AND ABSORPTION.

Assimilation and absorption are the processes by which that remarkable characteristic of organic

being, upon which we have commented in the introductory part of the present treatise, is ef- fected and maintained. Our author says that a definition of life might be taken from the sin- gular property which is possessed by a living being of preserving an independence of interioi temperature through all the chances and changes of exterior heat ; but, besides that this principle and law of living matter is subject to much qualification, it appears to us that life is still better distinguished from inorganic matter by the faculty which it possesses of making dead matter subservient to its own purposes, of at- taching it to itself, and occasioning it to become an integral portion of the organised frame.

In respect, however, to the absolute nature and modus operand! of this faculty there is still much of doubt and dispute. Some supposing that the repairing function Is exercised through a distinct order of vessels, the lacteals and lym- phatics, for which see ANATOMY. Others con- ceiving that matters are taken up both from without and from internal parts by the blood vessels, more especially the veins ; from internal parts we say, for we shall afterwards see, when on the subject of exhalation and secretion, that there is a constant expulsion from the blood of matter, part of which is thrown out of the frame entirely, and part reabsorbed, or again taken up into the circulating mass.

In the section just concluded on digestion, we talked of chyle, and its separations from the effete part of the alimentary mass; but we did not pursue this same chyle on to its ultimate destination, which is that of the blood vessels through the lacteal vessels, opening in the villi of the intestines — the small intestines mainly — and running on into the receptacle of the chyle, to be conveyed by the thoracic duct into the blood vessels at the angle, found by the union of the subilavian and jugular vein.

Now no one doubts that these lacteal vessels are the main instruments through which nutri- tious matter is conveyed into the blood, and by which nutrition is thus mainly effected ; but there are disputes still existing whether their office is actually limited to this function, and whether the other portion of vessels which with the lacteal have been, since the discovery of both of them, considered the vessels appropriated alone to the process of absorption, are in reality such ; or whether the old supposition of imbibition or pe- netration through the coats of the veins of matter from without, the vessels must not be received to enable us to account for all the phenomena attendant upon absorption. Another point of uncertainty, in reference to .the function now under notice, is this, whether any matter is taken up from the outer surface and conveyed into the blood-vessels, while the external skin or cuticle remains as an entire covering to that surface. In other words does the surface of the body ab- sorb 1 It behoves us then in the present section not only to enquire into the rationale of assimi- lation and absorption, but to advert to +hese dis- puted particulars.

In respect to the lacteals and their office, there is something very singular in the selecting power which they manifest; for, although the chyle is

applied to their mouths mixed with other matter, that other matter is rejected by them, and the chyle alone selected. This power indeed is ma- nifested throughout the system of absorbents generally, soma substances being chosen, and some left as unfit for reception. Every one has seen marks on the skin of sailors and others, which have been artificially made by pricking holes in the cuticle, and then rubbing into these holes charcoal or gunpowder; and these marks thus made remain permanent, because the ab- sorbent power refuses to take the materials with which they are made into the mass of circulation. Indeed we might give another explanation of this phenomenon, viz.

that fluidity being a necessary circumstance for absorption, these substances are not absorbed because they are not soluble in the fluids of the body. But a selecting principle is manifestly in operation throughout the whole absorbing system ; and Magendie has contended for this principle, in the lacteals being carried to such an extent, as that they can be made to ab- sorb nothing but chyle ; a doctrine, however, which seems disproved by the well known expe- riments of Mr. John Hunter, who, pouring milk into the intestines of a dog, found the lacteals soon after filled with it. Different matters too will be taken up by the lacteals, carried through the cir- culation, and afterwards thrown out by emunc- tories ; although, with respect to the extent and nature of this principle, there are confessedly some reasons to be doubtful.

NVhat is the rationale, it is natural to enquire, of the process by which chyle is received into the minute branches of the lacteals, and conveyed on to the blood ? That open mouths are exer- cised in this case at least, and that chyle does not penetrate the coats of the absorbent, has been demonstrated ; so that, whatever may be the laws of absorption in other parts of the frame, in this there is not merely a selecting but an imbibing power displayed, and the chyle once received is as it were sucked through the vessels by a vital force, more similar than any other to that of capillary attraction in inanimate nature ; but still different : or at least if there be an actual similarity in the mode of drawing up liquids through minute tubes, and the transmission of the chyle through the minute lacteals there is in the latter case a regulating force which must con- siderably modify the result ; and, although it is right to call in the aid of natural philosophy for the explication of living actions, the mistakes which our ancestors have been led into from too largely admitted analogies ought always to be in recollection.

On the mesentery there are numerous glands attached to the lymphatic vessels, and which are so situated that the chyle, in passing on to the blood, traverses them ; it is of course natural to suppose that some operation is performed by these glands upon the chyle : a supposition which is strengthened by the fact that although under some forms of disease, as in the mesenteric atro- phy of children, the glands in question remain previous for the transmission of the chyle, the body nevertheless becomes emaciated, as if from an insufficient supply of chyle to the blood. These glands are cellular in their construction,

and it is supposed that the matter contained in the lacteals entering into them is poured into these cells, which matter is taken up by the

vessels running out of them in the way of absorption, and that thus something more than a mere pas- sage mechanically, as it were, through the gland, is accomplished.

So far then every thing is to a certain degree evident on the function of assimilation. We have seen that a separation of the chyle from effete matter is effected in the upper part of the alimentary tube, and that the former is conveyed by distinct and appropriate conduits on to the blood-vessels. The chemical composition of the chyle we refer to the article CHEMISTRY ; here limiting ourselves to saying that the contents of the thoracic duct have been found differently filled, according as the animal upon which the examination is made shall have fasted for a long time, or have lately taken food : in the latter case the fluid is more albuminous, and really chylife- rous ; in the former it has more of the character of lymph. Does not this circumstance, by the way, in some measure militate against the as- sumption of Magendie ; that it is chyle, and chyle only that the lactiferous vessels will take up ?

The lymphatic system of vessels is so similar in appearance to the lacteals that an inference has been made, from this similarity, in favor of their being the exclusive absorbents of the general frame, while the lacteals are principally the absorbents of the chyle. But it must be ob- served that their open mouths have never yet been discovered, so that when it is stated that they arise by such open orifices from different structures, and take up the fluid which these tis- sues pour out, we rather talk inferentially than in the way of demonstration.

Besides the chyle separated from the faeces in the small intestines, there are the halitus of the cavities, properly so called, especially that of the fauces and of all the mucous tela, the more watery part of those secreted fluids which are retained for some time in their ducts, i. e. in the breast, the vesiculoe seminales, the gall-bladder, &c., and not a small portion of the stellatious fluids, which are applied to the common integuments.

The solids, after performing their purpose in the animal economy, insensibly melt away, and are absorbed, as is proved by the greater part of the thymus gland during infancy, of the roots of the first teeth, and of the alveoli, after the second teeth have fallen out. The constant change of the whole osseous system, arising from the insensible renovation of bony matter, may also be adduced.

Indeed this process of absorption is so con- stant and so universal, that no part of an organ- ised frame continues to have from day to day the

same identity; in the fingers which now direct the pen of the writer not a particle of the same matter probably exists that constituted the structure of the parts a twelvemonth since, and the same mutation is incessantly going on through every part and portion of the frame ; an argu- ment has indeed hence been drawn against what is called materialism, since consciousness and identity remain, while the material particles of the body are thus unceasingly running their round of mutations.

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We have already intimated that analogy led to the inference that as the lymphatics appear nearly the same in structure and peculiarities as the lac- teals, the two systems together constitute the whole of the absorbing system ; and this is in truth the generally received doctrine of the pre- sent day, more especially in this country, since the anatomy and peculiarities of the lymphatic system have been so ably elucidated by the labors of Hewson, John Hunter, and Mr. Cruick- shank.

Some French and American and German physiologists have lately endeavoured to prove that the principal part of absorption is effected through the medium of the veins ; thus in some measure reviving the old doctrine of imbibition into the blood, directly through the coats of ves- sels, and not by a distinct and exclusive system of organs.

The arguments of Magendie and others in favor of venous, as opposed to lymphatic absorption, are shotfly the following : — In the first place they urge that the suddenness with which the secre- tions are sometimes affected is inconsistent with the notion of the course of absorbed fluids through the lymphatic and the thoracic duct (we should perhaps have premised that lymphatic absorption implies this course, since the termi- nation of most of the branches of the lymphatics is into the thoracic duct) ; and still further they say, that as the urine often becomes tinged in a very short time with turpentine, rhubarb, co- paiba, and other substances, while no such tinge is traceable in the lymph contained in the thoracic duct, it would seem that this channel is not their course to the kidneys. To this, how- ever, it may be replied, that the fact militates equally against venous absorption itself, since the round of circulation must be performed equally in one case as in the other, and, more- over the blood is apparently often as free from the impregnation adduced, as the contents of the thoracic duct. Not, however, always.

The objectors further state that, when the tho- racic duct of a dog is tied, an infusion of nux vomica injected into the stomach or rectum, kills as quickly as though the ducts were per- vious. But in this case the nervous organisa- tion may be the media of transmission ; and it is not necessary to suppose any absorption at all for the production of the effect.

But we must here find room for one or two of the positive experiments in favor of the im- bibing power of the venous coats, or of the admission of matter into the blood through these coats. A vein was placed in some acid liquor with its two extremities projecting from this liquor; then a stream of warm water was in- jected through the vein by its orifices, and, after continuing this injection for some time, the cur- rent of water which passed out of the lower orifice of the vein was sensibly impregnated with acidity. This fact, then, it is urged, proved a communication between the interior of the vein and the liquid in which its exterior was immersed; indeed, it showed actual venous absorption. But still the lymphatic physiolo- gists reply to this, that the condition of a vessel may be changed by subjection to these trials ;

and it does not follow that the coats of a vessel would have thus proved pervious if it had been in its natural condition, and surrounded merely by the exhalations of the living body.

‘ Three ounces of diluted alcohol were given to a dog ; in a quarter of an hour the blood of the animal had a decided smell of alcohol ; the lymph of the thoracic duct had none.

‘ Half a pound of assafoetida dissolved in the same quantity of honey was given to a horse, which was afterwards fed as usual, and killed in sixteen hours. The smell of assafoetida was per- ceptible in the veins of the stomach, small in- testines, and csecum; but not in the arterial blood, nor in the lymph.’

It is allowed by the same author from whom we extract the account of the last two experiments, that in Fiedemann’s and Gmelin’s trials, among a variety of substances taken, colored, odorous, or saline, very few could be detected in the chyle, but many were found in the blood.

These and other experiments and observations which might be adduced, did our limits permit, have led to the inference that the only general absorbents are the veins ; that the lacteals merely take up the chyle from the food ; that the lym- phatics are not in reality absorbents ; and that the villi of the intestines are composed partly by

venous twigs which absorb all the fluids in the intestines excepting the chyle ; this last being taken up by the lacteals, and going into the blood through the receptaculum chyle and tho- racic duct. It is supposed, moreover, that the intestinal fluids having been received by the veins are carried on to the heart and lungs, having first been conveyed into the li»er by the vena portae, whose function it is minutely to subdivide and mix with the blood the fluids thus absorbed ; which subdivision and intermixture is necessary to prevent their proving detrimental.

The physiologists who thus argue against lym- phatic absorption suppose the purpose which these vessels serve in the animal economy is that of conveying the finer parts of the blood tc the heart, as the veins convey the grosser and colored portion of the fluid. And it must be confessed that their positions and inferences are considerably forcible. But, on the other hand, many facts favor the other side of the question : how, for instance, can we explain the circum- stance of a poison inserted into a part of the frame, and running often with great rapidity along the course of a lymphatic trunk, unless this last vessel were possessed of an imbibing power, and its minute extremities had open mouths ? A cancer of the breast may be often clearly traced in its progress through the ad- joining lymphatics into the lymphatic glands of the axilla ; and it is too well known that the ex- tirpation of the diseased part is generally un- availing after the neighbouring glands have thus taken on disordered action, inasmuch as the lymphatic vessels now appear to have absorbed into the system that peculiar something upon which cancer depends ; and have converted a topical into a constitutional ailment. Who does not know, also, that mercurial friction is the most availing when performed where the lym- phatics and their glands are most numerous? In

our observations also, on various imbibitions, we ought always to recollect that the lymphatics are connected with the veins. Some experiments nave even propelled mercury into the vena portae through the lymphatic absorbents; and altogether we should say that although much may be advanced on both sides of the question, and although great credit is due to the ingenuity of the physiologists to whom we have alluded, we have still, perhaps, ‘ reason for believing that the economy of secretion and absorption is effected by two systems of vessels distinct from veins and arteries, and in a state of health con- tinually holding a balance with each other.’

Is absorption effected by the surface ? or, in other words, does the skin while it is entire — the outer skin — admit of the entrance into the body of any matter from without ? This question, like that of lymphatic absorption itself, is still unsettled among physiologists, some embracing one, others arguing on the other side.

It is well known that by bathing the body in water thirst is oftentimes much alleviated, as is sometimes done by sailors when their supply of fresh water fails them; they often, indeed, in order to allay thirst, strip their shirts off, dip them into the water, and put them on wet. Here, it should seem, say those who defend the doc- trine of cutaneous absorption, that some of the fluid applied to the surface must get into the fluids of the body. No; say their opponents, that does by no means follow ; and we may ascribe the relief from thirst by this expedient, upon the principle of the grateful sensations pro- duced, and the consequently altered conditions of those parts upon which thirst depends.

By the much quoted experiment of Dr. Watson, as well as by several others, it has however been shown that the actual weight of the body is occasionally increased without taking any thing into the stomach. Dr. W. gave a Newmarket jockey, previously to a race, a glass of wine, which weighed little more than an ounce, and upon his being weighed immediately after the course he was found to have increased thirty ounces, notwithstanding there must have been considerable expenditure of the fluids by perspiration. Here, however, the objectors to absorption by the surface are furnished with a reply ; and they suggest that the matter by which the additional weight was given to the body might have been taken in by the lungs, which all allow are absorbing surfaces, because the cells are not, as on the exterior of the body, lined with cuticle. In order to meet this objec- tion, experiments have been made of application to the surface of matters while the person was breathing through an aperture so that none of the matter, if any were diffused in the room, could have been taken into the system by the. lungs ; in some instances the results of these trials have favored one, and in others the other side of the question ; and, probably, as well in ihis as in most other cases, an intermediate in- ference is the true one. Absorption may be ge- nerally difficult while the epidermis or scarf skin is entire ; but it does noi seem to form a complete barrie” aeainˆt the admission of every thing from without.

Richerand has the following remarks on this subject : — ‘ The increased weight of the body after exercise in wet weather ; the abundant se- cretion of urine after remaining long in the bath ; the manifest enlargement of the glands of the groin after keeping the feet

immersed for a con- siderable time in water ; the effects of mecu i a 1 frictions, &c., show in an unquestionable manner that absorption takes place through the skin, with more or less rapidity according to circum- stances. It must, however, be taken into account that the means which promote cutaneous absorp- tion, operate at least as much by altering the structure of the epidermis as by increasing the action of the absorbing surfaces. In this manner the bath appears to operate by softening the texture of the epidermis ; and frictions by raising and displacing its scales.'

This last intimation of Richerand we think deserves particular attention in reference to the point in dispute ; for it should seem that with- out actual abrasion of the outer skin ite layers may, by rubbing or softening, be so taken off temporarily from the absorbing surface of the inner skin as to occasion substances to enter which would not otherwise. We all know that where the cuticle is thin absorption is attended with less difficulty than in other parts, and that rubbing certain matters on the surface will oc- casionally procure them an inlet when merely placing them on the surface would not have proved sufficient. The writer of this paper has often appeared to succeed in ordering the abdo- men to be rubbed with castor oil, in cases where the irritability of the stomach had precluded the admission of purgatives by the mouth ; and in one case, after a good deal of this kind of friction, some' castor oil was detected in the urine which could not well be accounted for in any other way than by absorption from the surface : the surface, however, not being actually abraded.

The settling indeed of this dispute, respecting cutaneous absorption, is not a matter merely of physiological curiosity ; bin necessarily would have considerable bearing upon the question of the medicinal powers of impregnated baths, and other external applications beyond the circum- stances of temperature or friction. But we should be wandering from our present duty in pursuing this path of investigation.

OF THE CIRCULATION OF THE BLOOD.

Had we been writing before the time of the great Harvey, the title of this section would have been — on the motion of the blood, and even on that nothing could have been said but what was in some sort vague, hypothetical, and unsatisfactory. To Harvey, and to Harvey alone, are we indebted for the demonstration of the course the blood takes in its distribution to the several and sepa- rate parts of the body; although he obtained only obloquy for his pains, and his practice as a physician became diminished in consequence. Harvey was physician

to Bartl.olemew's hospi- tal ; he was forty-one when he promulgated the doctrine, and he is entitled UP the glory, says Hume, of having made the discovery ' by rea- soning alone, without any admixture of accident.' He deduced the inference tlu.t the blood goes

from and to the heart in a circular way, princi- pally from the disposition of the valves of that organ, and which are clearly so constructed as to admit the passage of a fluid only in one direction ; to this he added the consideration that, when an ar- tery is opened, the jet that flows from the punc- ture does so in a direction from the heart, and the flow is in the contrary direction when we open a vein, and a ligature upon an artery causing blood to accumulate on the side nearest the heart, while a ligature on a vein occasions the swell beyond the puncture. He found too that animals bled to death by wounds in arteries or veins. Subsequently the course of the blood was de- monstrated by microscopic observations on cold blooded animals, as on frogs, which show a per- petual flow of blood from the heart to the arte- ries, and thence into the veins, completing the circular career.

The circulation was, it must be admitted, obscurely hinted at by Servetus, a Spanish phy- sician, who was burnt to death by Calvin in 1553, for impugning a belief in the Trinity; but the passage on which so much stress has been laid as an anticipation of the Harveyan dis- covery, and which the writer of this paper has examined for the purpose of ascertaining its scope and compass, clearly amounts to nothing more than an announcement of the pulmonary circulation ; and even that made in so obscure and imperfect a manner as to give the impression of the discoverer's being scarcely aware of the nature and extent of his own discovery.

In the article ANATOMY will be found an ac- count of the structure, form, and position, of the human heart; to that account, in pages 175 and 228, of vol. ii. we refer the reader ; here merely call- ing attention to the circumstance that the organ is furnished with valves or circular folds of mem- branes that are so constructed as to fall down and admit the passage of a fluid into its cavity, but to be raised up by the contraction of the ventricle so as to prevent the exit of the fluid in the same direction in which it entered ; it was from this construction of the heart, and from ob- serving valvular bodies at the mouths of the great blood-vessels from the heart, which, as we have just stated, led

Harvey to those reflections which terminated in his ascertainment of the circulation ; and it is of great consequence for the physiological student to preserve a constant and clear recollection of the valves of the heart, as well as of the pulmonary artery and aorta, in order to become familiar with the mode in which the vital fluid effects its circuit — vital fluid, we say — not under the notion that vitality can be predicated of the blood any more than of other, parts of a living organised body, but merely to express that this fluid is as it were the fountain from whence all parts of the system are supplied with pabulum for the various processes and ope- rations of life. That life is in the blood is as bad philosophy almost as to say that the soul is in the pineal gland, or that affections reside in the heart ; all notions of thus localising the living principle ought to be abandoned, with indeed every other that leads to the inference that we can, by searching, find out what life is, or where it is.

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There is a great difficulty in following the course of the arteries from their commencement in the heart to their final destination. Authors talk of minute branches ending in the open mouths of exhalants which pour out a particular fluid, either on the surfaces of membranes or by themselves ; and these inferences are made rather from what is seen in the way of effect than of actual structure, for no microscopic observations have hitherto succeeded in tracing these open endings of the vessels ; and it is to this moment a disputed point by what machinery these seve- ral exhalations and secretions are effected, and whether the whole of what we are generally accustomed to consider exhalation or secretion from open extremities may not be merely ooz- ings through the sides of close vessels. At any rate the termination of arteries into the veins is the only one, as stated in the article AN ATOMY, which has yet been absolutely demonstrated.

When considering the very curious subject of absorption we alluded to this question of vascular termination ; at present we have only to do with the mode in which the communication is accom- plished between the system of arteries and that of veins, or rather with the manner in which the blood is conveyed from one to another part of this admirable machinery.

The blood, returning from its circuit round the body, is received into the right or anterior auricle and ventricle; from this cavity it is pro- jected through the great pulmonary arteries into the lungs; having circulated through these organs it returns by the pulmonary veins into the left or posterior auricle and ventricle, whence it gets into the

aorta, through which it passes on to be distributed through the various ramifica- tions of the arterial system, to be returned into the right or anterior part, whence we began the description of the blood's course. Neither right and left, nor anterior and posterior, are correctly descriptive of the sides of the heart, and physio- logists often now use the term pulmonic to de- note the side of the heart which used to be called the right, and systemic to indicate the left : the right as we have said being that part from which the hangs receive their supply of blood, and the left being the part for the supply of the whole sys- tem ; this last being, as might be supposed, and as we have already said (see ANATOMY page 288) the most powerful of the two cavities. A sort of double circulation, it will be observed, is thus effected, one through the lungs, and the other through the body generally, a fact to which we shall have to call the attention of the reader in the next section, which will treat of the respira- tory process, and the purpose which it serves in the animal economy.

The motions of the heart are described as an alternate systole and diastole, or contraction and relaxation, of the auricles and ventricles in suc- cession. Thus, when the ventricles distended with blood contract upon their contents to force the blood into the pulmonary artery and aorta, the auricles at this moment relax and receive a fresh supply from the pulmonary veins and from the vena cavse. On applying the ear or a stethoscope, says Dr, Elliotson, to the region of the heart, the distinct sound of the action

of the ventricles and auricles may at once be perceived. At the moment of the arte- rial pulse is heard a dull sound, and immedi- ately afterwards, without any interval, a clearer sound, similar to the noise of a valve or to the licking of a dog. The former arises from the action of the ventricles, the latter from that of the auricles.

The former occupies about three-fourths of the whole time, the latter one-fourth or one- third, and then a pause occurs of another one-fourth. This is termed the rhythm of the heart's action.

The sounds of the heart are ordinarily heard in health between the cartilages of the fourth and seventh ribs, and under the inferior parts of the sternum ; those of the left side of the heart in the former situation, those of the right in the latter. The shock or stroke occurs at the contrac- tion of the ventricles. The force and extent of the sound

and of the shock, and the rhythm of the heart's action are variously altered in disease, and other sounds superadded.

' If,' says Richerhand, and we shall here make a long extract from this excellent physiologist, •' I am asked why the four cavities of the heart do not all contract at once, I answer that it is easier to assign the final than the proximate cause. If the contraction of these cavities had been simul- taneous, instead of being successive, it is evi- dent that the auricles could not have emptied themselves into the ventricles. The alternate action is moreover absolutely necessary, as the heart, any more than the other organs, is unable to keep up a perpetual action, ihe principle of its motion which is soon exhaused being incapable of restoring itself except during rest. But the alternations of action and repose in organs, which, like the heart, perform functions essen- tial to life, must be extremely short in their du- ration, and at very close intervals.

' The cavities of the heart, however, are not entirely passive during dilatation, and the action of that organ does not wholly depend on the excitement of the blood in its parietes (a ques- tion that has been disputed), since the heart, after it has been torn .from the body of a living ani- mal, palpitates, its cavities contract and dilate though quite emptied of blood, and appear agitated by alternate motions, which become fainter as the part gets cold. If you attempt to check the diastole (dilatation) of the heart, this organ resists the hand which compresses it, and its cavities appear endowed with a power which Galen termed pulsive, in virtue of which they dilate to receive the blood, and not because they receive it. In that respect the heart differs essentially from the arteries whose dilatation is occasioned by the presence of the blood, what- ever some physiologists may have said to the contrary. I have repeated, but unsuccessfully, the famous experiment by which it is attempted to be proved that these vessels have the power of moving independently of the presence of the blood (this is a question to which we shall im- mediately advert). An artery (continues Rich- erhand) tied and emptied of blood, contracts between the two ligatures, but is no longer seen to move in alternate contractions.

' The heart manifestly shortens itself, and the base approaches towards the apex during the systole or contraction of the ventricles. If it became elongated as some anatomists have thought, the tricusped and nictial valves would be incapable of fulfilling the functions to whicli they are destined, since the columnse carnse, whose tendons are inserted in the edges of these valves, would keep them applied to the parietes of the ventricles. The pulsations which are felt in the intervals

between the cartilages of the fifth and sixth true ribs are occasioned by the apex of the heart which strikes against the pari- etes of the chest. In the explanation of this phenomenon it is not necessary to admit the elongation of the heart during its systole ; it is sufficient to consider that the base of the heart in which the auricles are situated, rests against the vertical column, and that these two cavities, by dilating at the same time, and by their inabi- lity to move the vertebrae before which they are situated, displace the heart and thrust it down- wards and forwards. This motion depends like- wise on the effort which the blood sent into the aorta makes to bring to a straight line the cur- vature of the artery, which reacts and carries downwards and forwards the whole mass of the heart, as it were, suspended to it.'

Magendie's remarks on the motions of the heart as externally perceived are the following : —

‘ Each time the ventricles contract the whole bulk of the heart is suddenly carried forward, and the apex of the organ strikes the left parietes of the chest opposite the space between the sixth and seventh true ribs.

‘ This displacement forwards of the heart during the systole has given rise to a long and obstinate controversy; some pretend that the heart shortens in contracting; others maintain that it lengthens, and that it ought necessarily to do so ; for without this it would not be able to strike the parietes of the thorax, as it is more than an inch distant from it during the diastole. A great number of animals were uselessly sacri- ficed for the purpose of studying the motion of the heart, and the heart was seen to lengthen and shorten by different observers at the same time. But what experiment was not able to perform a very simple argument accomplished. Bassuel happened to drop in during the dispute, and showed that if the heart lengthened in the sys- tole, the nictral and tricuspid valves kept down by the carnous columns would not be able to shut the auriculo-ventricular openings. The advocates for the lengthening of the heart no longer held out ; but it remained to be demon- strated in what manner, when the ventricles shortened, the heart directs itself forward.’

Senac showed that this phenomenon depends on three things; 1st. The dilatation of the auri- cles, which is made during ˆthe contraction of the ventricles ; 2d. The dilatation of the aorta and pulmonary artery, in consequence of the introduction of the blood, propelled thither by the ventricles ; 3d. The erection of the arch of the aorta, produced by the contraction of the left ventricle.

As the determination of this point is a mat- ter not merely of curiosity, but has some practi-

cal beairmgs, especially in reference to disordered conditions of the organ, and its consequent movements, we shall further extract from another celebrated physiologist a passage referring to the dispute, and add the comments on the passage by an able physiologist of this country.

‘• The systole,’ says Blumenbach, ‘ of the ven- tricles, upon which is said to be spent one-third of the time of the whole action of the heart, is per- formed in such a way that their external portions are drawn

towards their septum, and the apex of the heart towards the base. This at first sight seems disproved by the circumstance of the apex striking against the left nipple, and consequently appearing elongated, — a circumstance, however, to be attributed to the double impetus of the blood, flowing into the auricles and expelled from the ventricles, by which double impetus the heart must be driven against that part of the ribs.'

On this particular we have the following re- marks from Dr. Elliotson : —

'Dr. W. Hunter accounted for this in 1746. The systole and diastole of the heart simply could not produce such an effect ; nor could it have been produced if it had thrown the blood into a straight tube in the direction of the axis of the left ventricle, as is the case with fish and some other classes of animals ; but by throwing the blood into a curved tube, viz. the aorta, that artery at its curve endeavours to throw itself into a straight line to increase its capacity ; but the aorta being the fixed point against the back, and the heart in some degree loose and pendu- lous, the influence of its own action is thrown upon itself, and it is tilted from and against the inside of the chest.'

' Though this is generally allowed,' continues Dr. E., ' Haller remarks that in the frog also, which has a straight aorta, the point of the heart moves forward during the contraction ; and some say that while the heart of a dog continues to palpitate after being extracted from the chest, the apex is lifted up at each contraction of the empty ventricles.

'The occurrence is ascribable likewise in some measure to the distension of the auricles ; for Haller found the apex give the usual stroke at the nipple on his distending the left auricle with air. and Senac has shown a similar influence from the right auricle also.'

Dr. Barclay has the following passage on this point : —

' When the blood is forced into the arteries their curvatures near where they issue from the ventricles are from their distension lengthened, and extended towards straight lines; and, caus- ing the heart to palpitate in their motions, com- pel it to describe the segment of a circle, when the apex moving aslantad and sinistrad, is made to strike against the left side. The same kind of motion having also been observed by the cele- brated Haller in distending the left or systemic auricle, it must follow that the stroke which is given to the side may be the effect of two dis- tinct causes, either acting separately or in com- bination ; but acting on a heart obliquely situated as ours is in

the cavity of the thorax, where the aspect of the base is aslantad and dextrad, and

that of the apex sin i . trad and sacrad. In com bination as the first of the two by removing the pressure will facilitate the influx of the venous blood into the left or systemic auricle which is situated dorsad; so the second, by the influx of blood into the auricle, will contribute in its turn to facilitate the circular motion of the heart pro- ceeding from the arteries.'

The power of the heart is in some measure restrained by the pericardium, and this circum- stance ought always to be taken into consider- ation, both in natural and diseased conditions of the organs.

In respect to the quantity of blood which is transmitted at each ventricular contraction or systole into the arterial system, opinion in some measure varies. Blumenbach estimates the quantity transmitted into the aorta by each con- traction of the ventricle at about two ounces, and he supposes that all the blood of the body must pass through the heart seventy-five times every hour. ' That the powers of the heart can- not,' he .says, ' be accurately calculated is clear upon reflecting that neither the volume of the blood projected at each pulsation, nor the celerity nor distance of its projection, much less the obstacles to the powers of the heart, can be ac- curately determined. A rough calculation may be made by taking every probable conjecture to- gether ; v. c. if the mean mass of the blood is considered as ten pounds or 120 ounces; the pulsation seventy-five in a minute, or 4500 in an hour; and the quantity of blood expelled from the left ventricle at each contraction as two ounces ; it follows that all the blood must pass through the heart seventy-five times every hour.' The mean quantity of blood is however estimated too low by this physiologist. Richerand on the same subject expresses himself in the following terms : —

The quantity of blood which each contraction of the ventricles sends into the aorta and pul- monary artery most probably does not exceed two ounces in each of these vessels. The force with which the heart acts on the blood which it sends into them is but imperfectly known, how- ever numerous the calculations by which it has been endeavoured to solve this physiological problem. In fact, from Keil, who estimates at a few ounces only the force of the heart, to Borelli, who makes it amount to 180,000 Ibs. we have the calculations of Michelot, Jurine, Ro- binson, Morgan, Hales, Sauvages, Cheselden, &c. ; but, as Vecy D'Azyr observes, not one of these calculations is without some error, either anatomical or arithmetical; hence we may con-

clude, with Haller, that the force of the heart is great, but that it is perhaps impossible to esti- mate it with mathematical precision. If we open the chest in a living animal, and make a puncture in its heart, and introduce a finger into the wound, pretty considerable pressure is felt during the contraction of the ventricles. ‘ And,’ says Blumenbach, ‘ the impetus of the blood passing from the heart may be conceived by the violence and altitude of the stream, pn> jecting from a large wounded artery, situated near it. I have seen the blood driven at first to the distance of about five feet from the carotid

of an adult and robust man. The experiments ‘ of Hales,’ our author goes on to say, ‘ in which the blood was received into very long glass tubes fixed to the arteries of living animals, and the length of the projection measured, are indeed beautiful, like every thing done by this philoso- pher, who was calculated by nature for such en- quiries. But, if the force of the heart is to be esti- mated in this way, we must take into account the pressure of the volume of blood contained in the tube, and gravitating upon the left ventricle. The result of Ilales’s calculations was, that the blood being projected from the human carotid to the height of seven feet and a half, and the surface of the left ventricle being fifteen square inches, a column of blood weighing 51 -5 Ibs. was incumbent upon the ventricle, and overcome by its systole.’

It is sufficiently evident, as indeed the later physiologists have admitted, that vital forces are not susceptible of the same kind of calculations and estimates as those exerted upon inert mat- ter ; and that therefore estimates founded upon the analogies of natural philosophy generally must in their very nature be fallacious. It is however at the same time evident that the heart must act with very considerable force in bring- ing about the circular impetus, even though we admit that it may be much assisted by the ac- tion of the vessels themselves. How far these last are instrumental towards completing the process we are presently to investigate ; but let us first enquire what it is that excites the heart to contract, and consequently to propel its con- tained blood? The ancients were satisfied in replying to this question by supposing a pul- sific virtue or power in the heart by which it commenced and carried on its actions; and Mr. John Hunter, in later times, talked with but lit- tle more precision of ‘ the

stimulus of necessity' exciting the organ to contract. The following are the terms employed to express this idea by the able physiologist whom we have just named. ' The alternate contraction and relaxation of the heart constitute a part of the circulation; and the whole takes place in consequence of a ne- cessity, the constitution demanding it and be- coming a stimulus. It is rather, therefore, the want of repletion which makes a negative im- pression on the constitution, which becomes the stimulus, than the immediate impression of something applied to the heart. This we see to be the case wherever a constant supply, or some kind of aid, is wanted in consequence of some action. We have as regularly the stimulus for respiration ; the moment one is finished an im- mediate demand taking place ; and, if prevented, as this action is under the influence of the will, the stimulus of want is increased. We have the stimulus of want of food, which takes place regularly in health, and so it is with the circula- tion. The heart, we find, can rest one stroke, but the constitution feels it ; even the mind and the heart are thereby stimulated to action. The constant want in the constitution of this action in the heart is as much as the constant action of the spring of a clock is to its pendulum, all hanging or depending upon each other.'

We have above called this mode of accounting

for the systole and diastole of the heart, its alter- nate and unceasing contraction and dilatation, a vague one, not out of any disrespect to the great physiologist who has proposed it, but on the ground of its being merely a substitution of words for things, and a confounding the notion of final and efficient causes — a mistake whicn pervaded the reasonings of the ancients when they discussed the question of qualities and powers, but which ought not to have disfigured the otherwise masterly speculations and philoso- phising of Mr. John Hunter; and we are the rather disposed to dwell upon the error, inas- much as there may be a disposition to receive it proportioned to the merit of the person pro- pounding it. We are not indeed alone in our severity of comment in the present instance. We recollect being struck some twenty years since with the same kind of objection we are now urging to language of this kind, in Dr. Bed- does's preface to Brown's Elements of Medicine ; and in an able book which now lies before us we meet with the following remarks on the doctrine of ' the stimulus of necessity.'

' Mr. Hunter's Treatise on the Blood is a work,' says Dr. Mason Good, ' of such sterling merit, so rich in facts, and so valuable in its re- marks, that, notwithstanding a few nice spun and chimerical speculations that occasionally be- wilder it, there is no book on physiology which the

student ought to study more assiduously. Yet I am much afraid that the language now read,' alluding to the quotation we have above made, ' has no great deal of meaning in it ; and that it does little more than tell us that the heart contracts because it does contract, or, rather, that the circulation takes place because it takes place.'

But the question recurs, what is the immediate or efficient cause of the heart's perpetual, or rather alternate, motion? Some have ascribed this to the stimulus of the blood acting upon the peculiar irritability of the heart ; some to the ex- citement of the nervous system ; and others to a vacuum taking place in the cavities, into which, according to the common laws of derivation, as it has been expressed, a vacuum takes place, and, blood thus rushing in, a contraction neces- sarily occurs to prevent over distension.

It would seem fair to infer that no one single principle can be looked up to as the sole source of the phenomenon in question, and that those who are busily employed on the one hand to prove that it is the stimulus of the blood, and on the other that it is that of the nerves, are both right and both wrong. Oxygen, as the universal excitant, was the favorite dictum of some physiologists soon after the pneumatic doctrines of animal life came to be propounded ; but, as will be seen in the chapter on Rtspira- tion, a great deal had been taken for granted in reference to the reception of oxygen into the blood, or its absorption by that fluid, which subsequent experiments and reasonings have in some measure invalidated.

Perhaps the account given by Blumenbach of the rationale of the heart's action is as simple and satisfactory as any that has been offered. We shall therefore use the freedom of extracting it,

together with the comments of his able translator and annotator.

' The wonderful and, while life remains, con- stant strength of the heart is universally allowed to depend upon its irritability, in which it very far surpasses, especially as to duration, every other muscular part.

' That the parietes of the cavities are excited to contraction by the stimulus of the blood is proved by the experiment of Haller, who lengthened at pleasure the motion of either side of the heart by affording it the stimulus of blood for a longer period than the other.

‘ And yet,’ says Dr. Elliotson, in remarking on this passage, ‘the heart of frogs contracts and relaxes alternately for a length of time when out of the body and destitute of blood.’ And he alludes further to the experiments of Mr. Brodie, who divided the great vessels in rabbits, and found the action of the heart ‘ apparently unaltered for at least two minutes after that viscus and the great blood vessels were empty of blood.’ ‘ But the quantity of blood,’ our com- mentator very properly adds, ‘ greatly influences the action of the heart.’

Blumenbach goes on to say, ‘ The great influ- ence of the nerves over the heart is demonstrated by the size of the cardiac nerves, and by the great sympathy between the heart and most func- tions, however different. A convincing proof of this is the constant sympathy of the heart during the most perfect health with all the passions and with the primse vise in various disorders.

‘ The great importance of blood to the irritability of the heart is evident from the great abundance of blood vessels in its muscular substance.

‘ Nevertheless it is very probable that the im- portance of the nerves in this respect is greater in the voluntary muscles, and of the blood in the heart.

‘ Besides these two powers of the heart there is another which is mechanical, dependent upon structure, and contributing greatly in all proba- bility to sustain the circulation. For, when the blood is expelled from the contracted cavities, a vacuum takes place, into which, according to the common laws of derivation, the blood from the venous trunks must rush, being prevented by means of valves from regurgitating.’

As the principle of vacuum to which Blumen- bach here alludes will be found an important one, especially in the connexion which the respi- ratory has with the circulatory process, we shall further extract the remarks of Dr. E. on the text of his author, in reference to this point. ‘ The influence of the vacuum pointed out by Rudiger, enlarged upon by Dr. Andrew Wilson, and men- tioned as probable by Haller, John Hunter, &c., has been very ably displayed by Dr. Carson of Liverpool. The quantity of blood, the length of its course, and the various obstacles opposed to its progress, render, in his opinion, the mere pro- pulsive power of the heart insufficient to main- tain the circulation perpetually. But assistance must be given by the vacuum, which takes place in all the cavities of the organ when the contrac- tion of the muscular fibres is over. The blood is thus drawn into each

relaxed cavity, and the heart performs the double office of a forcing and

a suction pump. The situation of the valves of the heart is thus explained : — There I'.re valves between the auricles and ventricles, and at the mouths of the two great arteries, because behind each of these four openings is a cavity of the heart, alternately dilating and affording a vacuum into which, were there no valves, the blood would be drawn retrograde. At the venous openings of the auricles no valves exist, because they do not open from a cavity of the heart — from a part ever experiencing a vacuum; and, therefore, the blood cannot, when the auricles contract, move retrograde, but will necessarily press forward into the ventricles, which at that moment are offering a vacuum.' — ' All allow that, when the heart is relaxed, its cavities enlarge, though some ascribe this to its elasticity, and others regard it as a necessary consequence of the arrangement of its fibres. Experiment proves the same. Dr, Carson extracted the hearts of some frogs, and immediately put them into water, blood warm. They were thrown into violent action, and upon some, occasions projected a small stream of a bloody color through the transparent fluid. The water could not have been projected unless pre- viously imbibed. It was thought that a stream of the same kind continued to be projected at every succeeding contraction, but that after the first or second it ceased to be observable in con- sequence of the fluid, supposed to be imbibed and projected, losing its bloody tinge, and be- coming transparent, or of the same color with the fluid in which the heart was immersed. The organ was felt to expand during relaxation — a fact stated long ago by Pechlin.'

A vacuum, in some way or other, or in some part or other, produced as one of the principles connected with circulating agency, is contended for by several physiologists. Dr. Barry has re- cently referred this vacuum to the respiratory process in a manner different from Dr. Carson, and we have just been looking over a paper in the Lancet, which attributes it to the repeated closing of the glottis ; but we must not allow ourselves to proceed at present further into this enquiry, but go on to the consideration of ano- ther disputed point, viz. whether this projectile force of the heart, connected with its properties of suction, supposing them to exist, be sufficient to convey the blood the whole round of its cir- cuit, or whether the vessels through which it flows are at all, or to what extent, auxiliary forces ; •whether, in other words, the arteries and veins are mere conduits, or whether any share is con- tributed by them to the propulsion of the blood.

Dr. Harvey, the great discoverer of the circu- lation, supposed the whole projecting power to reside in the heart, in which opinion he has been followed by physiologists of much note ; and in- deed the doctrine of the passivity, in some mea- sure, of the arterial tubes has recently been revived, and ably defended by Parry and others. The reader, by turning to the article ANATOMY, will find that the coats of arteries have been described as consisting partly of muscular fi- bres ; but it is contended by many that muscu- larity is erroneously conceived to appertain to these fibres, since they are destitute of fibrine» aud do not contract upon the application ol

those stimuli which invariably produce this effect upon true muscular substance. It is further maintained that the alternate contractions and dilatations of arteries, in the manner just described as the actions of the heart, have never been proved even by those physiologists who award to them an independent and active power. Fur- ther, it is urged that a function so orderly and regular as that of the circulation cannot well be supposed obnoxious to those casualties which would be likely to arise out of a separate and independent action in the several conduits con- veying the blood. The utmost power then that these philosophers award to the arteries is that of elasticity, and, as it is termed, tonicity, by which the dilatation from the impetus of the blood is kept within due limits, and thus the current maintained. These arguments are strengthened by allusions to diseased conditions. Bichat, for instance, whose theory of the circulation denies the abstract action of the arteries, remarks that all irregularities in the course of the blood imply a disordered condition of the heart itself, while the arteries may be ossified, to a very considera- ble degree and extent, without occasioning any disturbance. Some indeed have gone so far as to deny that, in the structure of the arterial tubes, any thing can be found that bears the remotest resemblance to muscle; thus Mr. Hare, in his work on the stomach, expresses himself in the following terms : — ‘ Having sought in vain for the reputed muscular coat of an artery, I am led to conclude that the whole tube is constructed of cellular tissues, which, from its different degrees of density or compactness, appear to form sepa- rate coats ; and which from its yielding power is fitted for all the purposes of circulation by the impulse which the blood receives from the heart alone, the great muscular power of which appears more than sufficient for propelling it through elastic tubes to all parts of the body.’

Those philosophers who defend the opposite doctrine, viz. that the arteries contract and dilate alternately, as does the heart, and thus assist in the circulation beyond the mere reception and transmission of blood, allege that the inference respecting the absence of muscularity in arteries, from their deficiency in fibrin is fallacious ; since muscles themselves will sometimes resist all sti- muli, excepting that of their specific or peculiar excitant. ‘ It would be too much,’ says Mr. Charles Bell, who has written a very ingenious tract on the Circulation, ‘ to infer that the iris is not muscular because it does not act upon being pricked. We see that the heart, after it is ex- hausted and refuses to act whatever stimulus be applied, will contract when it is distended ; be- cause distension is its natural excitement. For the same reason an intestine will revive and act upon being distended with air, though it will not act upon being pricked with needles.’ Arteries then, notwithstanding they are destitute of fibrin, may, it is argued, be provided with a faculty tantamount to positive muscularity when urged to action by their appropriate stimulus.

To the position above announced, that the con- tractions and dilatations of arteries have never been demonstrated, it is replied that the branches *»f vessels which have been laid bare and exposed

to view for the purpose of ascertaining this point are not sufficiently large for their actions to be thus detected. ‘ The carotid artery,’ says Mr. Bell, ‘ is six inches in length, and only half an inch in diameter ; it elongates at each contrac- tion of the heart a quarter of an inch, and of course rises in its bed in a curve to accommodate itself to its confined place. Suppose then (he adds) that it dilates in breadth in proportion to this elongation, should the dilatation be visible to me ?’

Then again an argument is adduced on this side of the question from the difficulty of conceiv- ing that such a small apparatus as is the heart should be equal to propelling the innumerable currents of blood at so many different angles, through many tortuous courses, contrary to the action in several cases of gravity, and under dif- ferent circumstances external and internal of the body, to every portion of the system.

These systematists further argue that topical augmentation in arterial movements, in conse- quence of local excitation, is totally inconsistent with the notion that the alternate contraction and dilatations of the heart are the sole source of the blood’s impetus.

But even admitting, it is said, that this local excitation might occasionally take place, consist- ently with the general passibility of

the arterial tubes, how can we account without the assump- tion of positive, independent, arterial power, ‘ for sudden increase and diminution of secretion, for sudden and partial growth, for wasting and decay of parts while the general body is vigorous, for an organ being plentifully supplied with blood one hour, and the next left with a dimi- nished quantity?’ Further, say the objectors to the Harveyan and Parryean doctrine, ‘to sup- pose that the heart is the only engine of circulat- ing the blood, or even that it is the principal cause of the blood’s motion, must leave us in per- fect astonishment when we see it ossified in its substance, or encompassed with a tumor which surrounds it wholly, and adheres to it on all sides.’

But the principal difficulty which the hypothe- sis in question has to encounter would seem to be constituted by the circumstances connected with capillary circulation ; especially in those structures which appear in some measure differ- ent from the mere termination of the arteries into small capillary tubes. It has already been said that other terminations of these vessels have been supposed, although, perhaps, not demonstrated : indeed, in some instances, it is difficult to account for the blood’s entrance and exit without the ad- mission of a species of extravasation, as in the case qf the placenta, where the blood would ap- pear to be thrown out into a sort of cellular structure, and taken up again into the venous system by a species of imbibing power. In these examples, then, and indeed in the mere inter- change of blood from the capillary order of arte- ries to that of the veins, it seems difficult to account for the manner in which the blood finds its way into the radicles of the veins; if we sup- pose the whole of circulating agency to resolve itself into the momentum, or rather impelling power, of the heart ; indeed, on either supposition

or hypothesis, there appears much difficulty in tracing the blood through the capillary system of arteries, and into the capillaries of the veins, without assuming some imbibing or absorbent faculty on the part of the latter ; whether that faculty be exerted at the heart itself, in the way intimated when we were considering the heart’s action, or whether it be assisted by a power and principle of suction in the commencing extremi- ties of the venous ramifications. We are told indeed, and told truly, that injections thrown forcibly into the arteries of a dead subject will be propelled on into the veins ; but the mecha- nical powers which are manifested upon the ex- tinction of the living principle must of course, to say the least, be much modified by the

presence and agency of life.

It ought to be remarked that those individuals who deny the alternate contraction and dilatation of the arteries do not exactly defend their passi- vity ; indeed the term tonicity, which Dr. Parry applies to express arterial condition, is inconsist- ent with such notion : all that they, at least most of them, mean to say in defence of the heart as the propelling power is this, that this power throws the blood into tubes, which, by their elas- ticity, open for its reception, and that this elas- ticity is prevented from acting beyond a certain measure by the structure of the vessel itself; so that the jet of blood which spirts out per saltern, as physiologists express themselves, upon a wound made into a large artery, is not so projected be- cause the vessel from which it immediately pro- ceeds acts and reacts, or rather contracts and dilates, as does the ventricle of the heart itself, but that the successive streams are caused by the contraction and relaxation of this last organ.

In the capillary system, even of the arterial tubes, this kind of motion is lost, the blood in the very small vessels flowing in an equals tream ; and this circumstance is made use of in illustration and support of the principle to which we now refer ; inasmuch, it is said, as the influence of the heart now becomes in a great measure lost : and although here the artery still does not lessen and enlarge, or dilate and contract, as does the organ from which all the blood issues, the power of the artery over its contained blood is now less dependent upon the heart's force, and the blood therefore flows more in the way of continued stream ; still, however, dependent upon the im- pulse at the source and centre of circulation.

Anatomists, who admit of the fibrous coat of the artery, describe the capillary tubes as having these fibres in much larger proportion to the elastic tunic than is the case with the larger ar- teries, and this construction seems in harmony with the supposition now adduced, that in the vessels, and those more immediately under the control of the heart, elasticity is a principle mainly called into exercise; while contraction and propulsion are the agencies demanded from the capillaries.

It is a question in our minds whether both the advocates for and against the systole and diastole of the arteries may not, in some cases, have push- ed their positions and arguments under too gteat a forgetfulness of vital powers and vital propul- tions being differently governed from tubular

machinery, and conveying conduits not en- dowed with the living

principle. We have, therefore, been much pleased in meeting with the following remarks by Dr. Copland in his notes upon Richerand's Physiology, which, entirely coinciding with our own views on circulating impulse, we shall take the liberty of transcribing into our pages. Dr. Copland is remarking on some positions respecting the blood's motion made by Magendie, and he expresses himself as follows : —

' The arteries throughout the body are sur- rounded by the ganglial nerves. These nerves form a reticulum around them, from which reticulum very minute fibrillae are given off and dip into their fibrous or muscular tunic.

' This particular disposition of the ganglial nerves on the arteries ought to be kept in recol- lection when we enquire into the functions of the latter. How far it tends, not only to the discharge of the more manifest action which the arterial system performs, but also to those insensible changes which the blood undergoes in health and disease, and to the assimilation of chyle and other absorbed materials conveyed into this fluid we hare ventured to stale at another place. We shall here merely take notice of an opinion rela- tive to the operation of this class of vessels in the circulation of the blood, lately contended for by M. Magendie. This physiologist has inferred from his researches on the circulation,

' 1 . That neither the larger nor the smaller ar- teries present any trace of irritability.

' 2. That they are dilated during the heart's systole.

' 3. That they are capable of contracting them- selves with sufficient force on the blood they contain, so as to propel it into the veins.

' 4. That the blood in the arteries is not alter- nately at rest and in motion ; but that it is, on the contrary, in a continued succedaneous (by little jets) motion in the trunks and ramifications, and uniform in the smallest ramifications and divisions.

- 5. That the contraction of the left ventricle of the heart, and the elasticity of the larger and smaller arteries furnish a satisfactory mechanical reason for these phenomena.

' 6. That the contraction of the heart and arte- ries has a considerable influence on the course of the blood through the veins.'

' We cannot concur,' says our commentator, ' in these conclusions,

especially in the surprising inference which forms M. Magendie's fifth pro- position, and we might, were it consistent with our limits, point out various fallacies in his experiments, to some of which, indeed, all ex- periments on living subjects are more or less liable, viz. the unnatural position of the animal during their performance, and more particularly as respects the operations of the part immedi- ately its subject. (This by the way is a very important intimation, and not sufficiently at- tended to by some of our experimental physiolo- gists. — Ed.) If M. Magendie limits the process to the mechanical means indicated above, we would ask how he accounts for the influence of mental motions,in determining the action of vessels in particular Darts of the body ? How the diTersi-

fied influences of numerous external agents on the circulation can be explained ? Wherefore so very opposite effects are produced \ipon the arte- ries when one extremity is placed in a pail of ice, and another in a pail of warm watei ? How can he reconcile his conclusions with the very satis- factory experiments performed by Sir Everard Home, Dr. Hastings, and others ? and how can he account for the determination of blood to particular parts, whilst a diminished quantity is sent to other situations, if he discard the pre- dominant or vital power which the vessels them- selves, and especially their smaller ramifications, possess in virtue of the particular structure al- ready noticed? We readily grant that the larger branches of arteries evince little or no contrac- tile action, particularly in their natural state ; but we contend that it increases as we advance towards the extreme capillaries, the action of which drives the blood to them in larger propor- tion, and thus increases both the mechanical and vital properties of the larger branches supplying them.

‘ We allow that the properties for which M. Magendie contends have an actual place in the process of arterial circulation ; but they are not the only ones : they are insufficient of themselves to accomplish the purpose he assigns to them ; and, moreover, they are secondary to, and con- trolled by, a superior influence.

‘ From these observations it may be perceived that the arteries act in the process of the circula- tion, not by means of contractile action similar to what is performed by the heart, nor yet by means of elasticity only, but by an organic or vital operation, which is nearly imperceptible in the larger branches, but which increases as we ad-

vance to the extreme capillaries ; whilst on the contrary the elastic or mechanical properties augment as we proceed in the opposite direction.'

This last sentence of Dr. Copland seems to us to contain as much truth, or rather correctness, with respect to the rationale of arterial and cardiac impulse, as any that we have met with ; but still it remains to be enquired by virtue of what influence the refluent part of the circulation, if we may so express it, is brought about? It has been already intimated that, without supposing a sort of imbibing power in the radicles of the venous capillaries, it is difficult to trace in idea the mode of interchange between the arterial and venous ramifications ; especially when we take into ac- count that in some spongy or cellular structures, 1 there would appear to be a sort of extravasation of blood, or a throwing of it out from the termi- natipn of one system of vessels to be taken up again by another. But even allowing that some- thing of this power is exerted at the extremities it still remains to be questioned how the blood is urged in a continued stream often against the force of gravity, and in many instances with other impediments, on to the auricle and ventri- cle of the heart ? Here again we are brought to determine on the problem of the heart's power, but the power in this last case, as, indeed, we have before said, must be of a kind opposite to *hat of propulsion. On this head, perhaps, mechanical analogies have been too freely allowed to mingle with our reasonings, and vital pecu-

liarities too much overlooked ; but here we shall let another ingenious author express himself.

' It yet remains/ says Dr. Mason Good, after discoursing on arterial circumstances, ' It yet re- mains to account for the second half, or that which consists in the passage of the blood through the veins ; and upon this subject there is one most important and elucidating fact which till of late lias never been in any degree brought forward in the course of the enquiry. It is this, that when the heart, by the contraction of its ventricles, has exhausted itself of the blood contained within it, a comparative vacuum must follow, and the blood from the vente cavae, or venous system at large, be sucked up into the right auricle. This ingenious remark seems just to have been thrown out by Dr. Wilson Philip ; and Dr. Carson of Liverpool, taking advantage of it, has constituted a simple and beautiful theory of the projectile powers employed in the circulation, the general principle of which may be expressed in a few words. The heart is sup- posed to act at one and the same time in a two- fold capacity. By the contraction of the ven- tricles it propels the blood through the arteries ; and by the

dilatation of the auricles it draws, it up from the veins. It is at once, therefore, a forcing and a suction pump. The contraction of the heart, and consequently its comparative vacuum, are supposed to be considerably as- sisted by the elasticity of the lungs and the play of the diaphragm, and the joint resistance which these afford to atmospherical pressure; whilst this very pressure, applied on every part of the exterior of the animal frame, continues in an equal degree to the ascent of the blood in the veins ; for as the column of venous blood is per- petually girt on all sides, and cannot fall back because of the numerous valves with which the veins are furnished, it must necessarily take an opposite or ascending direction.

‘ There are, nevertheless, numerous difficul- ties that still remain to be explained, such as the proportion of projectile power furnished by the conducting pipes themselves ; by what means the want of a diaphragm is compensated in birds and reptiles which have no such organ ; and what constitutes the projectile power in animals that have no heart, and consequently no double pump to work with.’

Dr. Good might have added to these objections the circumstances which are exhibited in vege- table physiology, the rise and descent of the sap of plants, &c., which appear to be effected some- what upon the same principles as the motion of the blood in the animal economy, and which, being obviously insusceptible of all the reason- ing applied to the explanation of the latter upon mechanical predicates, must be referred to vital or organic laws.

‘ There is another curious fact which physio- logy has pointed out, but has never hitherto been able to explain, and that is, a direct communi- cation between remote or unconnected organs apparently by some other channel than the cir- culation of the blood. Something of this kind seems to exist between the spleen and the sto- mach, the former of which has been proved by Sir Everard Home to receive fluids from the

cardiac portion of the latter, though we can trace no intercourse of vessels. But the most extraor- dinary example of this kind which at present we seem to possess is the communication which exists between the stomach and the bladder ; for the experiments of Sir Everard Home (Philoso- phical Transactions 1811, page 63), and the still more decisive ones of Dr. Wollaston and Dr. Marcet (Philosophical

Transactions, p. 96) seem to have established beyond a controversy that certain substances introduced into the stomach, as rhubarb or prussiate of potassa, may pass into the bladder without taking the course of the blood vessels, and consequently by some other channel ; a channel, indeed, of which we know nothing. This is a subject well worth studying ; for if two organs, so remotely situated as the sto- mach and bladder, be thus capable of maintain- ing a peculiar intercourse, so other organs may possess a like intercommunion, and by such means lay a foundation for those numerous sympathies between distant parts which so often strike and astonish us. M. Magendie's hypothesis, that veins are absorbents, will explain the facts in Sir Everard Home's experiments, but has no bear- ing upon those of Dr. Wollaston and Dr. Marcet.

To this important fact in the animal economy we alluded when considering the subject of ab- sorption ; we now proceed to make some men- tion of the pulse which has a manifest connexion with the circulating impulse, but the mode and measure of which connexion, seem still in some degree sub judice points.

Upon what, let us ask of ourselves, does pulsa- tion depend ? Is it produced by the alternate con- tractions and dilatations of the arteries them- selves ? or is it the consequence of the heart's systole and diastole? does it depend upon the co- lumn of blood forcibly and momentarily, or at least in momentary succession, striking against the sides of the vessels and thus distending them ? or is it a combined effect of all these cir- cumstances and principles taken collectively ?

That arterial contraction is not the cause of the pulse is proved by the fact that the beat of the vessel is felt, not at the moment of contrac- tion, but dilatation ; and let it be noticed that this arterial dilatation is not simultaneous with the dilatation of the heart, but is affected at the mo- ment of the heart's contraction. We should be therefore probably correct in saying that the pulse is rather the consequence of an impulse communi- cated to the vessel by that portion of blood which is propelled into the arteries from the heart com- ing into contact with the antecedent columns; and that being resisted in some measure by the blood already in the vessel, it is thus forced against its sides and communicates to them their pulsatory motion. It may be easily conceived that some- thing of the same kind would be effected upon a set of elastic pipes, even destitute of the living principle ; were an injection in this successive way of a fluid to be made into them, the dis- lodgment of one column of fluid for the recep- tion of another would be attended with that sort of pulsatory expansion which arterial dilatation produces.

In the capillaries and in the veins this projectile motion becomes lost ; and hence, in these, the

blood, as we have before said, is carried on more in the way of a continued stream, and no pulse or comparatively but little is felt in them. And in these last we may, by the way, remark that the circulation becoming more independent upon the heart itself, and more dependent upon other powers, exercise of the body, friction, and mus- cular contractions, however produced, assist the capillary and venous circulation in a marked de- gree : the pulse indeed is itself affected by these assistants to the circulatory impulse ; but it is so rather in an indirect than immediate manner, since what throws more blood upon the heart must, caeteris paribus, cause greater and more powerful contractions of that organ, and of course greater and more powerful impulses upon the large branches of the arteries in which the pulse is felt.

On the differences of the pulse as constitu- tional, or characteristic of health on the one hand and disease on the other, it is scarcely within the province of physiology to descant ; but a few remarks may be admitted here on this head as not altogether out of place.

We cannot but remark the difference of senti- ment which has obtained among medical men on this subject : some asserting that there is neither ground nor necessity for a recognition of any difference in the pulsations as marking different conditions of the system further than the mere number of them; while others have divided and subdivided to a most whimsical extent. The truth in this case, as indeed in most other points that are controverted, would seem to be at some distance from either extreme, although we rather incline to think that those physiologists and pa- thologists who think more of number than kirid are the nearest to the truth.

But on the nature and general doctrine of pulsation we have met with nothing more ac- cordant with our own sentiments than the re- marks which Dr. Mason Good has prefixed to one of the sections of his book entitled The Study of Medicine.

‘ The variations of the pulse have been rami- fied into so many divisions and subdivisions, and nice unnecessary distinctions, as to puzzle the young and be of no use to the old ; and hence some of the best pathologists of modern times have been too much disposed to shake off nearly the whole of the incumbrance, and pay no at- tention whatever to the pulse except in regard to frequency. Among this number was Dr. He- berden ; ‘ such minute distinctions of the several

pulses,' says he, 'exist chiefly in the imagination of the makers, or at least have little place in the knowledge and cure of diseases. Time, indeed, has so fully set them aside, that most of tlose names of pulses are now as unheard of in prac- tice as if they never had been given.'

' But this is to limit the subject to too strict a boundary, and to exclude ourselves from what, in many instances, are clear and even leading diag- nostics. There are some practitioners, and of very high merit too, whose fingers are no more capable of catching the finer distinctions of the pulse than the ears of other persons are of the niceties of mu- sical sounds. I suspect this was the case with Dr. Heberden, as it was also with the late Dr.

Hunter; of whom Mr. J. Hunter observes that, though he was extremely accurate in most things, lie could never feel that nice distinction in the pulse that many others did, and was ready to suspect more nicety of discrimination than can really he found.'

' Dr. Fordyce's table of the pulse/ continues Dr. G., ' is perhaps unnecessarily complicated ; but the strength or weakness, fulness or smallness, hardness or softness, regularity or irregularity, of the pulse are indications nearly as clear as its frequency or slowness, and in many cases quite as diagnostic of the general nature of the disease. Frequency and slowness of pulse taken by them- selves indicate little more than the degree of ir- ritability of the heart, or the force of the stimu- lus that is operating upon it. The strength and regularity, or weakness and irregularity, of the pulse are as palpable to the finger as the pre- ceding signs, and show in characters nearly as decisive the degree of vigor or debility of the heart, and hereby, except where this organ is laboring under some local affection, the vigor or debility of the system which a mere variation in the state of the frequency of the pulse will not tell us. A full and a small pulse may be dis- tinguished with almost as much ease as any other property it possesses ; this Mr. John Hunter ascribed to the state of the arteries ; but if I mis- take not it gives us rather a measure of the quan- tity of blood circulating through the system than of the muscular strength of the arteries or of the heart itself. Hardness and softness of- pulse, together with that vibrating thrill which has been called windiness, are not quite so easily learned as its fulness and smallness, but a nice finger will readily discriminate them. Dr. Fordyce makes them dependent, and 1 think with great reason, on the state of the arteries, rather than that of

the heart, or on the quantity of the circulating fluid ; and Mr. John Hunter concurs in the same view. They measure the degree of vascular tone or power of resistance ; and when the same effect, whether above or be- low the natural standard, takes place in the ca- pillary arteries, it produces that change in the pulse which he distinguishes by the name of ob- struction and freedom, but which it is not al- ways easy to discriminate from several of the preceding qualities.

'Thus far,' continues our author, 'the doctrine of pulsation may be studied to advantage ; but when beyond this we come to a distinction be- tween the free and dilated pulse, as proposed also by Dr. Fordyce ; the quick and the fre- quent as proposed by Stahal ; and the dicrotic, and inciduous, proposed by Solano as mere subvarieties of the rebounding or redoubling — itself a variety of the irregular pulse — we perplex pathology with a labyrinth in which the student is lost, and the master wanders to no purpose.'

Dr. Good has other remarks on the subject under discussion, but it is not the purpose of the present paper to go into pathological disqui- sition, and we have only ventured so far as we have under the feeling that the mind, being called a little to the modes in which variation may be manifested, is thereby assisted in judging of the natural condition of the powers that are the sub-

jects of investigation; if, for example, the fact of the hard pulse be admitted, or that which gives a jar to the finger which presses the artery, the admission leads to the question and considera- tion of how far the tunics of the vessels them- selves may influence the circulating impulse without reference to the beats of the heart. An elastic and fibrous power is, as we have seen, awarded by most physiologists to the arteries, while others have contended that these envelop- ments are merely membranous. Now, if we can detect a condition of the moving power which indicates a sort of opposition — which seems to say that elasticity is too soon and rea- dily interfered with by contractility — we go some way towards settling the disputed point. Whe- ther a hard wiry pulse does not manifest this intention, as it were, may be left for the readers' reflections to determine.

We should not do right in closing this sec- tion of our treatise without adverting more dis- tinctly than we have hitherto done to the oppo- sition which the blood has to meet with in pur- suing its free course through the body ; and to the question how far circulatory impulse is under the influence of powers exterior to the body.

We may first remark that the impulse of the circulating energy has to

contend with the larger diameter of the general mass of the arteries, compared with that of the central source of cir- culation; this range of diameter augmenting, as it has been expressed, in proportion to the in crease of the ramifications. It has indeed been stated that the aggregate diameter of the arterial system forms a cone, the apex of which is the heart.

Then again ‘ the short angles against which the blood has to strike, at the origin of the dif- ferent branches,’ must necessarily constitute a greater call upon the projectile force of the powers concerned in the circulation and the tortuous course that some of the arteries take, more especially those which enter the brain ; though some physiologists have doubted whether this last circumstance can in any way operate towards resistance or impediment. Mr. Charles Bell,we recollect, expresses this doubt ; but, though his objections to the principle may be ingenious, we should feel a reluctance in admitting any ob- jections to a construction the final cause of which seems so apparent. In the case, for in- stance, of the bending and winding of the main artery which supplies the brain, it is almost de- monstrative that this is a provision by nature against sudden impulses upon an organ which is so obnoxious to injury from these inordinate rushes of blood.

Natural gravity is another power which the circulation has in some measure to oppose, since the direction of the coming branches is upwards and lateral, as well as downwards and forward ; and it has been supposed by some that the fric- tion against the sides of the vessel is a source of impediment to freedom of propulsion.

Sufficiently obvious is it then that the force which has to meet and encounter these obsta- cles must not only be great but peculiar — by which last expression we mean that all calcula- tions-on mechanical and hydraulic principles, and

that do not take into account vital causation and impulse, must necessarily be erroneous ; al- though to a certain degree they apply, and in this modified or subordinate way do we find ex- terior influence operate upon the functions now under notice.

By density and rarity in the air — by the de- gree of atmospherical moisture or dryness— by different positions of the body — by changes in external temperature — by a greater or less ful- ness of the vascular

system — by exercise or rest, &c.j is the circulating impulse in some measure modified, while on the other hand the vital forces concerned in the phenomenon counteract these agencies to a very considerable extent. But to go into these principles and peculiarities would carry us beyond our limits, and we should besides be trespassing too much upon the province of pathology by discussing them to any extent. See MEDICINE.

ON RESPIRATION, &c.

The respiratory function has so obvious a con- nexion with that of the circulation that it seems especially in order to treat of one in immediate succession to the other; and, under this view of the dependence which the powers that move on the blood have upon the air which is taken into the lungs, it may be right to advert in the first instance to those speculations which have been thrown out as to the manner in which this rela- tionship is maintained between the one and the other function. Having thus treated of the pro- cess of breathing, as connected with the circula- tion, we shall then advert to some other pur- poses which the organs of respiration are more immediately destined to effect ; — more imme- diately, we say, because there is scarcely a function in the whole of the organised body upon which the inhalation of air by the lungs has not some, more or less, remote influence ; for digestion, assimilation, secretion, nutrition, even the sentient system, and its various affec- tions ; and, in fine, every principle and property of the living machine, is interfered with by im- pediments or obstructions to the free play of the lungs and their appendages. When, then, we talk of the more immediate or direct purposes and dependencies of the pulmonary system, we mean to confine ourselves to the influence of breathing upon the blood ; its composition, qua- lities, and mode of action ; and to the furnish- ing of those communications and interchanges of sentiments and ideas which audible, and in the human frame articulate, sounds, are the me- dia of.

‘ The respiratory function,’ says Dr. Good, ‘ is maintained by a current of air alternately thrown into and out of the chest, and is sub- servient to two important purposes ; that of furnishing us with speech, or the means of vo- cally communicating and interchanging our ideas ; and that of carrying off from the blood a gas recrementary and deleterious to life ; and, possibly, of introducing in its stead one or more gases indispensable to animal existence. Now, without the change thus effected upon the blood while it circulates through the lungs, the motion of the heart would soon cease altogether ; and

therefore it is that we say the circulatory has such a manifest connexion with the respiratory process.'

The structure of the lungs, their connexion with the trachea or air passages, and the mode in which the organs are supplied with blood, will be found described in the article ANATOMY. The organs thus constructed, and thus connected, are destined, from the moment that an infant be- comes separated from its maternal attachment, to receive and expel a certain quantity of air ; how this inspiration and expiration, which must continue while life continues, are brought about, does not seem very easy to be explained ; some ascribing the commencement of respiration to one cause, some to another.

' The ordinary cause,' says Dr. Elliotson, ' of the first inspiration, appears to be the novel im- pression of cool air upon the surface ; for if at any time we are suddenly exposed to a cold wind, or plunged into cold water, the diaphragm and intercostal muscles instantly contract, and a sudden inspiration takes place. The blood rushes into the expanded lungs, and, being after- wards obstructed when the inspiratory muscles seem to act and the elastic lungs shrink, gives rise to an uneasy sensation, which is instinc- tively removed by another inspiration, and thus respiration continues through life.' The fact of respiration commencing before the chord is tied shows that neither congestion in the aorta, nor deficiency of chemical changes, is the cause of the first inspiration. If an animal is born under warm water, its respiration begins at the mo- ment you choose to bring it up into the air. Buffon proved this by causing a bitch's accouche- ment to take place in a tub of warm water, and allowing the pups to remain there for half an hour. The power of excitement of the surface to cause inspiration has been recently shown by Bichard and others, who, on mechanically irri- .tating foetal kittens still enclosed in the mem- branes, found inspiratory efforts take place at each irritation.'

The following extract from Dr. Darwin, on the subject of respiration, gives a somewhat dif- ferent account of its primary cause. ' Respira- tion,' says this physiologist, ' is immediately caused by the sensorial power of sensation, in consequence of the baneful want of vital air, and not from the accumulation of blood in the lungs, as that might be carried on by inhaling azote alone, without the oxygenous part of the atmo- sphere. The action of respiration is thus similar to the act of swallowing our food to appease the pains of hunger ; but the lungs being surrounded with air, their proper pabulum, no intermediate voluntary exertions are required, as in hunger, to obtain and prepare the proper material.'

Blumenbach's views of the primary source of respiration are expressed in the following man- ner : — ' When the child is born, and capable of volition, the congestion of blood that takes place in the aorta from the obstruction in the umbili- cal arteries ; the danger of suffocation, from the cessation of those changes in the blood in regard of the oxygen and carbon ; the novel impression of that element into which the child, hitherto an aquatic being, is conveyed, the cooler tempera-

ture to which it is now exposed ; and the many new stimuli which are now applied; seem to in- duce new motions in the body; especially the dilatation of the chest, and the first inspiration.'

Of these accounts we rather prefer the last, as it seems to explain the phenomenon by referring to several particulars, rather than aiming to seize hold of one principle and source ; an error which reasoners are apt to be led into from their natu- ral wish to generalise. But, after all, these func- tions seem rather referrible to the laws of orga- nisation than susceptible of explanation by any of these appeals to final cause : there is no sti- mulus of pain required to set going the first ac- tions of individuals in the vegetable creation ; and the chord is separated, and inspirations com- mence, in some animals of the mammalia class, without any expression which denotes uneasy feeling. But it must be granted, in favor of our theorist, that crying seems as natural to a child from its birth, as the birth itself.

Upon whatever principle, however, the com- mencement of respiration is to be explained, certain it is, as Dr. Darwin has stated, that the process continues to proceed through life, with- out the intervention of sensation ; and we now proceed to present the reader with an account of this process from one of our most able physio- logists, Dr. Richerand.

In man, and all warm-blooded animals with a heart containing two auricles and two ventricles, the blood which has been conveyed to all the organs by the arteries, and which has been brought back by the veins to the heart, cannot return to it without having previously passed through the lungs, which are viscera destined to the transmission of the air, of a spongy texture, and through which the blood must of necessity circulate to get from the right to the left cavities of the heart. This course of the blood consti- tutes the pulmonary or lesser circulation ; it does not exist in some cold-

blooded animals. In reptiles, for instance, the heart has but one auricle and one ventricle ; the pulmonary artery in them arises from the aorta, and conveys but a small proportion of the blood ; hence the habi- tual temperature of these animals is much lower than that of man. For the same reason too there exists so small a difference between their venous and arterial blood, the quantity of fluid vivified by exposure to the air in the pulmonary vessel being too small to effect, by its union with the general mass, a material change on its qualities.

Mayow has given the most accurate notion of the respiratory organ, by comparing it to a pair of bellows containing an empty bladder, the neck of which, by being adapted to that of the bellows, should admft air on drawing asunder its sides. The air, in fact, enters the lungs only when the chest dilates and enlarges by the sepa- ration of its parietes. The agents of respiration are therefore the muscles which move the parietes of the chest; these are formed of osseous and soft parts, in such a manner as to possess a soli- dity proportioned to the importance of the or- gans which the chest contains, besides a capacity of motion required to carry on the functions en- trusted to them.

To carry on respiration, which may be defined

the alternate ingress of air into the lungs and its egress from those organs, it is necessary that the dimensions of the chest should be enlarged (this active dilatation of the cavity of the chest is called inspiration), and that it should contract to expel the air which it had received during the first process. This second action is called expi- ration ; it is always of shorter duration than the former ; its agents are more mechanical, and the muscles have less influence upon it.

In health the chest dilates only by the descent of the diaphragm. The curved fibres of that muscle, strengthened in contraction, descend towards the abdomen and compress the viscera. The descent of the viscera thrusts forward the anterior parietes of that cavity, and these recede when on expiration taking place after inspiration the diaphragm now relaxed rises, pressed up- ward by the abdominal muscle, compressed them- selves by the large muscles of the abdomen. But, when it is necessary to take into the chest a great quantity of air; it is not sufficient that it should be enlarged merely by the descent of the dia- phragm, it is required besides that its dimensions should be increased in every direction. The in- tercostal muscles then contract, and endeavour to bring together the ribs, between which they are situated. The intercostal spaces, however, become wider, especially at

their anterior part ; for whenever lines, falling obliquely on a ver- tical line change their directions, approaching to a right angle, the intermediate spaces receive the greater increase, as the lines, more oblique at first, become at last more nearly horizontal. Besides^ as the ribs are curved in the course of their length in two directions, and both in the direc- tion of their faces, and edgewise, the convexity of the first curvature is outwards, the ribs recede to a distance from the axis of the chest, whose cavity is enlarged transversely ; while the second curvature (on the direction of their edge) being increased by a real twisting of these bones, and which reaches to the cartilaginous parts, the ster- num is heaved forwards and upwards, so that the posterior extremity of the ribs is removed from their sternal end. But as the ribs are not all equally moveable, as the first is almost always invariably fixed, and as the others are moveable in proportion to their length, the sternum is tilted in such away that the lowermost extremity is thrust forward. The diameter of the chest from the fore to the back part increases, there- fore, as well as the transverse diameter. This increase of dimensions has been estimated at two inches to each of these diameters ; the dimen- sions of the vertical diameter, which are regu- lated by the depression of the diaphragm, are much greater.

Professor Saba'ier, in his Memoir on the Mo- tion of the Ribs and on the Action of the Inter- costal Muscles, maintains that, during the action of inspiration, the upper ribs alone rise, that the lower ribs descend and slightly close on the chest, while the middle ribs project outwardly ; and that in exspiration the former set of ribs de- scend ; that the latter start a little outwardly, and that the middle set never act on the cavity of the chest. The learned professor adds, that the cartilaginous articulating surfaces by which

the ribs are connected with the transverse processes of the vertebrae appear to him to favor these dif- ferent motions, as the direction of the articula- tions of upper ribs is upward, and that of the lower downward ; but on considering the subject with attention it will be seen that the surfaces by which the transverse processes of the vertebrae are articulated to the tuberosity of the ribs are turned directly forwards in the greatest number, some of the lower ribs are at the same time di- rected slightly upward. If we examine the action of the bones of the chest during inspiration in a very thin person, for example in phthisical pa- tients whose bones are covered with little else than skin, we shall find that all the ribs rise and are carried

somewhat outwardly. It is not easy to conceive how the intercostal muscles, which professor Sabatier considers as the agents of res- piration, should elevate the upper ribs and de- press the lower. The diaphragm, whose circum- ference is inserted in the latter, might by its contraction produce this effect; but, as the inter- costals have their fixed point of action in the upper ribs, they oppose and neutralise this effort, and all the ribs are elevated at once. If this were not the case the ribs ought to be depressed whenever the intercostals contract, since the lowermost, fixed by the diaphragm, would be- come the fixed point on which all the others should move.

As the fibres of the external and internal in- tercostal muscles are in direct opposition to each other, those of the former set of muscles, having an oblique direction from above downward, and from behind forward, and crossing the fibres of the other set whose obliquity is in a different di- rection, several physiologists have thought that these muscles were opposed to each other ; that the internal intercostal muscles brought together the ribs, after they had been separated by the ex- ternal intercostals, the one set being muscles of expiration, while the other set contracted during inspiration.

It is well known with what pertinacity Ham- berger, in other respects a physiologist of consi- derable merit, defended this erroneous opinion in his dispute with Haller ; it is now, however, as- certained that all the intercostal muscles concur in dilating the chest, and that they ought to be ranked amongst the agents of inspiration, be- cause the unequal capacity of motion in the ribs prevents the internal intercostals, the lower in- sertion of which is nearer to the articulation of these bones to the vertebrae, from depressing the upper ribs. Of the very conclusive experiments by which Haller undertook to refute the argu- ments of his adversary, I shall relate only that which is performed by stripping the parietes of the chest, in a living animal, of all the muscles which cover it, and by removing in different parts of the thorax some of the external intercostal muscles. The internal intercostals are then seen to contract during inspiration together with the remaining external intercostals. These muscles, therefore, have a common action, and are not in opposition to each other. The same experiment serves to prove the increased dimensions of the space between the ribs. On holding one's finger between two of the ribs, it feels less confined,

when during inspiration these bones rise and thrust forward the sternum.

This question being at rest, altnough in pur- suit of science one should

enquire how things are affected and not wherefore they come to pass, one feels naturally desirous to know what purpose is answered by the different directions of the fibres of the two sets of intercostal muscles ; and with what view nature has de- parted from her wonted simplicity in giving to their fibres opposite direction. In answer to this, it may be stated that the action of powers applied obliquely to a lever, being decomposed in consequence of that obliquity, a part of the action of the external intercostals would tend to • draw the ribs towards the vertical column, which could not happen without forcing back the ster- num if the internal intercostals did not tend to bring forward the ribs, at the same time that they elevate them; so that these two muscular planes, united in their action of raising the ribs, antagonise and reciprocally neutralise each other in the effort by which they tend to draw them in different directions.

To this advantage, of mutually correcting the effects that would result from their respective obliquity, may be added the benefit arising from a texture capable of greater resistance; it is clearly obvious that a tissue whose threads cross each other is firmer than one in which all the threads merely in juxta-position, or united by means of another substance, should lie all in the same direction. Hence nature Las adopted this arrangement in the formation of the muscular planes constituting the anterior and lateral pa- rietes of the abdomen, without which the abdo- minal viscera would frequently have formed herniary tumors by separating the fibres and getting engaged between them. In this respect one may compare the tissue of the abdominal parietes, in which the fibres of the external and internal oblique muscles which cross each other are themselves crossed by the fibres of the transversales, to the tissue of those stuffs whose threads cross each other, or rather to wicker- work, to which basket-makers give so much strength by interweaving the osier in every direc- tion.

When from any cause respiration becomes dif- ficult and the diaphragm is prevented descend- ing towards the abdomen, or the motion of in- spiration impeded in any way, the intercostals are not alone employed in dilating the chest, but are assisted by several other auxiliary muscles ; the scaleni, the subclavii, the pectorales, the serrati magni, and the latissimi dorsi, by con- tracting elevate the ribs and increase in more directions than one the diameter of the chest. The fixed point of these muscles, then becomes their moveable point, the cervical column, the clavicle, the scapula, and the humors, being kept fixed by other powers which it is unneces- sary to enumerate. Whoever witnesses a fit of convulsive asthma, or of a suffocating cough, will readily understand the importance and ac- tion of these auxiliary muscles.

Inspiration is truly a state of action ; an effort of contractile organs which must cease when they are relaxed. The expiration which

follows is passive, and assisted by very few muscles, and depends chiefly on the reaction of the elastic parts entering into the structure of the parietes of the chest. We have seen that the car- tilages of the ribs are pretty considerably twisted, so as to carry outwards and downwards their upper edge; when the cause which occasions this twisting ceases to act, these parts return to their natural condition, and bring back the ster- num towards the vertebral column, towards which the ribs descend from their weight. The diaphragm is forced towards the chest by the ab- dominal viscera, which are compressed by the broad muscles of the abdomen.

In every effort of expiration, as in cough and vomiting, these muscles react, not merely by their own elasticity, but they besides contract and tend to approach towards the vertical co- lumn, by pressing upwards the abdominal vis- cera towards the chest. The triangularis sterni, the subcostales, and the serratus inferior posti- cus, may be likewise ranked among the agents of expiration ; but they appear to be seldom em- ployed, and to be too slender and weak to con- tribute much to the contraction of the chest.

When the chest enlarges, the lungs dilate and follow its parietes, as these recede from each other. These two viscera, soft, spongy, and of less specific gravity than water, covered by the pleura which is reflected over them, are always in contact with the portion of that membrane which lines the cavity of the thorax ; no air is interposed between their surfaces (which are habitually moistened by a serous fluid exuding from the pleura), and that membrane, as may be seen by opening under water the body of a liv- ing animal, when no air will be seen to escape. As the lungs dilate their vessels expand, and the blood circulates through them more freely ; the air contained in the innumerable cells of their tissue becomes rarified in proportion as the space in which it is contained is enlarged. Be- sides the warmth communicated to it by the surrounding parts enables it in a very imperfect manner to resist the pressure of the atmosphere rushing through the nostrils and mouth into the lungs by the opening into the larynx which is always pervious except during deglutition.

Physiologists, for the most part, consider the bronchial arteries as the

nutritious vessels of the lungs. They assert that, as the blood which flows along the branches of the pulmonary ar- tery resembles venous blood, it is unfit for the nutrition of the lungs, and that it was necessary that these organs should be supplied by arteries arising from the aorta, and containing blood analogous to that which is sent to every part of the body. But though it is admitted that this venous blood, brought from every part of the body and sent into the lungs by this principal artery, may not be fit to maintain the organ in its natural economy, this blood is fit for that use when, after being made hot, spumous, and florid, by the absorption of the atmospherical oxygen, it returns by the pulmonary veins into the left cavities of the heart.

It was long believed, on the authority of Willis, that the aerial tissue of the lungs is vesicufar, and that each ramification of the bronchix- terminated

in their substance in the form of a small ampul- la; but at present most anatomists adopt the opinion of Helvetius. According to Ilelvetius, every air vessel terminates in a small lobe, or kind of sponge, fitted for the reception of air, and formed of a number of cells communicating together. These lobes, united by cellular tissue, form larger lobes, and these together form the mass of the lungs.

The tissue that connects together the different lobes is very different from that in which the ramifications of the bronchise terminate: ail never penetrates into it, except when the tissue of the air cells is ruptured. On such occasions, which are not of rare occurrence, on account of the excessive thinness of the laminae of the air cells of that tissue, the lung loses its form, and becomes emphysematous. Haller estimates at about the thousandth part of an inch the thick- ness of the parietes of the air cells; and, as the extreme ramifications of the pulmonary vessels are distributed on these parietes, the blood is almost in immediate contact with the air. There can be no doubt that the oxygen of the atmo- sphere acts on the blood under such circum- stances, since it alters its qualities, and commu- nicates to it a florid red color, when enclosed in a hog's bladder, and placed under a vessel filled with oxygen gas.'

Thus far M. Richerand. He goes on to say that every time the chest dilates in an adult there enter into the lungs between thirty and forty cubic inches of atmospheric air ; and he further endeavours to make good the assumption which we have found in the above extract, that oxygen is absorbed in the passage of blood through the lungs. Whether this hypothesis be capable of substantiation we shall

presently enquire; but first we shall extract Dr. Carson's account of the mechanism of respiration, as given by Dr. Elliotson in his notes on Blumenbach.

' The substance of the lungs,' says Dr. C., ' is highly elastic, and constantly kept in a forced state of distension after birth by the pressure of the atmosphere. This is evident also from the lungs collapsing upon our puncturing the walls of the thorax, a circumstance arising from the atmospheric pressure on the one hand becoming counterbalanced on the other, so that their elas- ticity, experiencing no opposition, becomes effec- tive. During inspiration the intercostal muscles raise and draw out the ribs, and the diaphragm descends ; the enlargement of the thoracic cavity is instantly followed of necessity by the greater distension of the substance of the lungs from the diminished resistance to the atmosphere, gravi- tating in the bronchise. The diaphragm and in- tercostal muscles ceasing to act, the substance of the lungs exerts its elasticity with effect, re- covers its former dimensions, and drives out the additional volume of air just admitted, and the passive diaphragm follows the shrinking sub- stance of the lungs, offering from its relaxation no resistance to the atmospheric pressure on the surface of the abdomen. Thus expiration is produced. The muscular power of the dia- phragm and intercostal muscles is far greater than the elastic power of the lungs, and there- fore, when exerted, overcomes it, producing io-

spiration ; but, ceasing to be exerted, the elastic power gains efficiency and produces expiration. To the elastic, others add the muscular power of the bronchia, and altogether suppose the respi- ratory process to be more independent upon ex- terior powers than has been assumed. ' In the common account of respiration,' says Dr. Elliot- son, ' the elasticity and muscularity of the lungs are unnoticed, and expiration is ascribed to the elasticity of the cartilages of the ribs, and to the contraction of the abdominal muscles emptying the lungs by pressure. Now, according to Dr. Carson, in the first place the elasticity and mus- cularity of the lungs is itself sufficient for the purpose ; in the second there is no proof of the agency of the abdominal muscles in expiration; it proceeds equally well in cases of inanition, when their contraction would rather enlarge than diminish the abdominal cavity, and in experi- ments when they are entirely removed from ani- mals—a child was born without them, and had lived eighteen months at the time of the publica- tion of its case, and was very well ; and, I may

add, thirdly, that although the elasticity of the cartilages of the ribs must conspire with that of the lungs, numerous cases are recorded of im- mobility of the ribs, by ossification of their con- nexions, where ossification was not materially impeded. These causes are adduced to show that the diaphragm is the chief instrument of respiration ; but, as its elasticity cannot produce expiration, they show that this was accomplished entirely, or in a great measure, by the lungs themselves. Even where there is no ossification, the motion of the ribs has very little share in respiration ; and Dr. Bostock considers the chief use of the intercostals to be that of giving a fixed point for the action of the diaphragm ; and the operation of the abdominal muscles in expiration to be nearly passive. It is commonly known, however, that if the pleura is wounded air rushes into the chest during inspiration only, and is in some measure expelled again during expiration. Were the ascent of the diaphragm, and descent of the ribs, in expiration, the effect of solely the contraction of the lungs, of a tendency to vacuum occasioned by their shrinking, air and fluids should stream to the chest as much during expi- ration as inspiration, should rush to fill up the vacuum as much as the diaphragm should as- cend, and the ribs descend, for that purpose : nor should air be expelled from the wounded pleura ; for we may regard the thoracic cavity as bounded above by the surface of the lungs, and always, in the sound state, possessing the same dimensions; the expansion of the lungs being commensurate with the descent of the diaphragm and ascent of the ribs, and the descent of the diaphragm and ascent of the ribs commensurate with the shrinking of the lungs. The fact that air does not stream into the wounded pleura in expiration, but even streams from it, while the ribs are moveable and the abdominal muscles active, proves that the descent of the ribs, and ascent of the diaphragm, one or both, in ordinary expiration, do partly occasion by compression the diminution of the lungs, or, at least, are not its passive effect, but coincide with it by inde- pendent powers, which are the elasticity of the

elevated ribs (and displaced abdominal organs ?), if not the contraction of the extended abdominal muscles. Haller refers expiration to the pressure of the lungs by the elastic ribs, and the abdomi- nal and other muscles, and to the elastic and muscular contraction of the lungs themselves, which he considers more forcible than the com- pression. It appears to me that he is right ; but that nevertheless either the lungs alone, or the walls of the chest alone, are able, when unas- sisted by the other, to produce expiration. The change in the situation of the ribs is moreover trifling compared to that of the diaphragm ; and respiration often succeeds very well by

the dia- phragm alone. Animals which are remarkable for swiftness and perseverance in the race, scarcely employ the intercostal muscles, using the diaphragm almost solely.

‘ The beautiful contrivance in the shape of the thorax deserves attention. By its being conical every degree of motion in the diaphragm pro- duces a greater effect on the capacity of the chest than could occur were it of any other shape. ‘The passage of the air into the cells may be distinctly heard on applying the ear to the cor- responding part of the chest, and is called by Laennie the respiratory murmur. It is much louder in children, and in them the cells are far more numerous and small. Whence an equal portion of lung from an infant a few days old weighs fourteen times more than from a man of seventy.

‘ The elasticity and muscularity of the lungs are not sufficiently great to expel the whole of this air in expiration. Thus they remain con- stantly in a certain degree of distension.’

By these extracts the reader will perceive that, as in the case of the circulation, it is still in some measure a sub judice point how far the heart acts independently upon other powers to- wards propelling the ,blood ; so in the case of respiration different physiologists take different views of the share which the diaphragm, the ribs, the abdominal, and the thoracic muscles have in the act ; some indeed ascribing the main part of the process to an independent elasticity and muscularity of the lungs themselves, whil« others give the principal credit to surrounding and extraneous parts : to us it would appear that the intermediate opinion even on this head, as it is on most others, is nearest the truth ; and that nature has so constructed the whole of the pulmonary apparatus as for all parts to contri- bute their share towards the production of the effect in ordinary cases, while in extraordinary, or where one or more of the appendages are inter- fered with, a greater call being then made on the organs themselves, a commensurately greater power is then summoned to act.

That respiration should be performed with fa- cility and freedom not only is a certain degree of integrity implied on the part of the organs themselves, and their assistants, if we may so name them, but it is likewise necessary that tl e circumambient air should be in due appropri- ation to the demands of the pulmonary appa- ratus ; although even in this last respect nature does wonders often in accommodating powers to accidental deviations. The conditions of the

air to which we allude are physical and chemical — that is, a certain measure of density or rarity, humidity or dryness, is looked for by the lungs for their free play and action ; but it is still perhaps more essential for the proper perform- ance of the respiratory process, and for the full effect of the influence of that process, that the chemical composition of the air be in due ad- justment. Respecting this last circumstance we shall presently then speak more at large, but first it will be right to introduce a few words on •what we have just called the physical relation of the air to the lungs, in opposition to its chemical qualities and powers.

It is well known to natural philosophers that the earth is surrounded with a subtle and trans- parent fluid, called air; that this circumambient fluid, if it be proper to apply the term to air, presses upon all bodies which it surrounds, enters into all open spaces of these bodies, and forces itself laterally or upon the sides of the bodies as well as upon their tops or vertically. This air is compressible to an almost unlimited extent, and spaces are occupied by it in the inverse ratio of the pressure that is made upon it. Now this pressure is varied in some measure even upon the surface of the earth, according to the different conditions of humidity or heat with which the atmosphere is at the time charged ; but, when we ascend to considerable heights above the surface of the globe, the pressure is much less, a difference which is perceptible even upon the summits of mountains; and thus it is that the pulmonary vacuity, which immediately upon birth the air rushes in to occupy, is dif- ferently supplied with its quantum of air, ac- cording- as the pressure and density, or opposite states, are present. It would be leading us too much into the doctrines of pathology to trace these variations, and their effects upon the respi- ratory and other organs; it is here sufficient to have referred to the principle of air constantly seeking a vacuum to occupy, and. rushing in all •directions to supply this vacuum with more or less rapidity and force, according to the pressure from above, to prove that, while both inspiration and expiration are greatly regulated by the vital powers and properties of the lungs and their appendages, much also in the phenomenon of breathing has dependence upon, and relation to, the different measures of elasticity and compres- sibility of the atmosphere itself. Some physio- logists, indeed, as we shall immediately see, ac- count for the main circumstance upon which vitality depends ; viz. the circulation of the blood upon temporary vacua being produced ; and even those who do not follow these rea- ! oners through all their assumptions and infer ences allow that much even of vital circum- stance is modified by the gravity of the air and its tendency to an equilibrium.

The quantity of air that enters the lungs at each inspiration has been stated, with some va- riation ; and this variation has doubtless more dependence upon the circumstances of the indi- vidual than upon the inaccuracy of the experi- menter. Allen and Pepys have estimated that at. each inspiration about 16-5 cubic inches are inhaled by a stout adult man, and that the quan-

tity found in the lungs after death is about 100 cubic inches. ‘ Dr. Bostock, agreeing with Men- zies and many others, believes forty cubic inches to be the average inspiration, and thinks that 161 or 170 remain in the lungs after ordinary expiration, for these organs are never emptied by expiration.’ The ordinary quantity of aque- ous vapor emitted by the lungs, trachea, mouth, and throat, may be about twenty ounces in twen- ty-four houis! The different inspirations made in a given time vary, as well as the quantity of air taken in by each inspiration. The alternations of inspiration and expiration are stated by Blu- menbach to be about fourteen times in a minute ; once to about five pulsations of the heart. Hales estimated the average number of inspirations at about twenty ; and this perhaps is pretty nearly correct. ‘ By taking twenty as the medium,’ says Magendie, ‘ 28,000 inspirations take place in twenty four hours. But it is probable this number is subject to considerable variations from a va riety of circumstances, such as during sleep, motion, distension of the stomach with food, the capacity of the chest, moral affections, &c.’

Besides those interruptions in the process of breathing which have place from more tempo- rary or more permanent alterations from the condition of health in the pulmonary organisa- tion, and those which depend upon the physical varieties of the air, there are other more irregular and transient affections of the pulmonary pas- sages, which are usually noticed under the general account of respiratory function ; we allude to the acts of coughing, sneezing, sighing, &c.; and we do not know that we can do better in this instance than extract from the instructive pages of M. llicherand. We here, as in other places, employ the translated copy, and are therefore not responsible for the occasional gallicisms that occur in our citations.

Sig/nng. — ‘ When the imagination,’ says Ri- cherand, ‘ is strongly impressed with any object, when the vital functions are languid, the vital principle seems to forsake all the organs, to con- centrate itself on those which partake most in the affections of the mind. When a lover in the midst of an agreeable reverie sighs deeply, and at intervals, a physiologist perceives in that expression of desire nothing but a long and deep inspiration, which by falling distends the lungs, enables the blood collected in the right cavities of the heart to flow

readily into the left cavities of that organ. This deep inspiration, which is frequently accompanied by groans, becomes ne- cessary, as the motions of respiration rendered progressively slower are no longer sufficient to dilate the pulmonary tissue.

Sobbing differs from sighing merely in this, that, though the expiration is long, it is inter- rupted, that is, divided into distinct periods.

Yawning is effected in the same manner ; it is the certain sign of ennui, a disagreeable affec- tion which, to use the expression of Brown, may be considered as debilitating or asthenic. The fatigued inspiratory muscles have some difficulty in dilating the chest, the contracted lungs are not easily penetrated by the blood, which stag- nates in the right cavity of the heart and pro- duces an uneasy sensation, which is put an end

to by a long and deep inspiration ; the admis- sion of a considerable quantity of air is facili- tated by opening the tnouth widely, by the separation of both jaws. One yawns at the approach of sleep, because the agents of inspi- ration, being gradually debilitated, require to be roused at intervals. One is likewise apt to yawn on waking, that the muscles of the chest may be set for respiration, which is always slower^ and deeper during sleep. It is for the same reason that all ao^"aJs yawn on waking, that the musclai ;nay be prepared for the contractions •fchich the motions of respiration require. The crowing of the cock, and the flapping of his wings, seem to answer the same purpose. It is Vi consequence of the same necessity that the numerous tribes of birds in our groves, on the rising of the sun, warble and fill the air with harmonious sounds. A poet then fancies he hears the joyous hymns by which the feathered throngs greet the return of the god of light.

While gaping lasts the perception of sounds is less distinct, the air as it enters the mouth rushes along the eustathian tubes into the tympanum, and the membrane is acted upon in a different direction. The recollection of the relief attend- ing the deep inspiration which constitutes gaping, the recollection of the grateful sensation which follows the oppression that was felt before, invo- luntarily leads us to repeat this act whenever we see any one yawning.

Sneezing consists in a violent and forcible ex- piration, during which the air expelled with con- siderable rapidity strikes against the tortuous nasal passages, and occasions a remarkable noise. The irritation of the pituitary membrane deter- mines by sympathy this truly convulsive effort of the pectoral muscles, and particularly of the diaphragm.

Coughing bears a considerable resemblance to sneezing, and differs from it only in the shorter period of duration, and the greater frequency of the expirations ; and as in sneezing the air sweeps along the surface of the pituitary membrane, and clears it of the mucus which may be lying upon it, so the air when we cough carries with it the mucus contained in the branchiae in the trachea, and which we spit up. The violent cough at the beginning of a pulmonary catarrh, the sneezing which attends coryza, show that the functions of the animal economy are not directed by an intelli- gent principle, for such as are catarrhous could not mistake in such a manner the means of putting a stop to the disease, and would not call forth ac- tions which, instead of removing the irritation and inflammation already existing, can only ag- gravate them.

Laughing is but a succession of very short and very frequent expirations. In hiccup the air is forcibly inspired ; enters the larynx with difficulty on account of the spasmodic constriction of the glottis; is then expelled rapidly; and, striking against the side of that aperture, occasions the particular noise attending it.

Snoring, of which Richerand does not make :nention, is said to be a deep, sonorous, and as it were tremulous inspiration, from the vibration of the velum palati during deep sleep, with the Mouth open-

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The following note is added by the editor to the page in which the physiology of the above phenomena are thus traced.

‘ The author has neglected to notice the state of respiration during the more active voluntary motions. Muscular exertion, especially when considerable, is preceded by a long and deep in- spiration, the glottis is closed, the diaphragm and respiratory muscles of the chest are con- tracted, and the reaction of the abdominal muscles causes the contents of the abdomen to be pressed upon in all directions. At the same time that the respiratory muscles are exerted, those of the face are associated in the increased action in consequence of the latter receiving some nerves from the same class (see the section on the Ner-

vous System), and the jaws are forcibly pressed together. By this action of the muscles engaged in respiration, the chest is rendered capacious, and the strength is greatly increased, because the trunk of the body is thus rendered immoveable in respect to its individual parts, the muscles arise from fixed points, and consequently wield the members of the body with their full energy. Haller appears to be correct in concluding that, under a state of increased action of the muscles, the flow of blood becomes greater towards the head, and thus the nervous energy is increased and amply generated by means of this augmented flow, so as to keep up the muscular action for a longer period than would otherwise be the case. During violent exertions, also, the return of blood from the brain is in some degree impeded.

The physiological state of muscular actions, as they are related to the mechanical function of respiration, is very happily described by Shakspeare, where he makes Henry V. encourage his soldiers at the siege of Harfleur : —

Stiffen the sinews, summon up the blood.

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Now set the teeth, and stretch the nostrils wide, Hold hard the breath, and bend up every spirit To his full height.

In vomiting, also, and in the action of expelling the faeces and contents of the bladder, the tho- racic and abdominal muscles of respiration are brought into action.'

But, as we have above intimated, by far the most important part of respiration consists in the change effected on the blood by the action of the inspired air.

' The blood is conveyed to the lungs,' says Dr. Good, 'of a deep purple hue, faint, and exhaust- ed by being drained in a considerable degree of its vital power, or immature and unassimilated to the nature of the system it is about to support, in consequence of its being received first from the trunk of the lacteals. We find it returned from the lungs spirited with newness of life, per- fect in its elaboration, more readily disposed to coagulate, and the dead purple hue transformed into a bright scarlet. What has the blood hereby lost ?' What, might our author have added, has it gained ? How has this wonderful change been accomplished ?

When first the Lavoiserian principles of che- mistry came to be applied to the changes which the blood experiences from exposure to the

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genous portion of the air, it was assumed, as a matter almost of physical demonstration, that blood, in its passage through the lungs, absorbed part of the oxygen of the atmosphere; that, in consequence of this absorption, the venous color was changed into arterial brightness ; that, from the fixidation of an aerial substance, heat was en- gendered or emitted from its latent condition ; and that this heat proved the perennial source of animal temperature.

When on this last subject, we shall have occa- sion to canvas the experiments and opinions that have been instituted and broached on the subject of animal heat, and its dependence upon or connexion with the changes that take place in the lungs by the respiratory process ; we are now to limit our enquiry into the nature and ex- tent of the change itself.

We for the most part refer our readers to the article ANATOMY for information on those points which relate to structure, confining ourselves in the present paper to function alone ; but it may be right just to state in this place that ‘ the mucous web surrounding the air-cells of the lungs is supplied with innumerable blood ves- sels, divisions of the pulmonary artery, and four pulmonary veins, the branches of which accom- pany the ramifications of the bronchiae, and after repeated divisions at length form an immense collection of most delicate and reticulated anas- tomoses. This extraordinary net-work, pene- trating the mucous web on every side, closely surrounds the air cells, so that the prodigious quantity of blood existing in the pulmonary ves- sels is separated from the contact of the air by very fine membranes only, which Hales estimated at scarcely ˆ of an inch in thickness.’

It is the extreme tenuity of this membrane, and its vast expansion of surface, to which we are desirous at present of calling the reader’s atten- tion. It must further be recollected that the atmosphere is composed of two aeriform fluids, seventy-nine of azotic or nitrogen gas, and twenty- one of oxygen, in 100. The atmosphere is in- deed never without some very small portion of carbonic acid gas ; but this is in so small quan- tity that it has been considered rather an adven-

titious ingredient than an absolutely essential one.

Now at every inspiration the quantity of the nitrogen gas is somewhat diminished, and the oxygen is partly converted into carbonic acid gas, or, as it used to be called, fixed air, proofs of which we are furnished with in the expired air, making lime water turbid, and giving other evidences with which chemical experimenters are sufficiently familiar.

That expired air, then, is very different in its constituents and qualities from that which was taken into the lungs is on all hands universally agreed ; but the question is whence this differ- ence, and how effected ? Does the blood actually absorb oxygen, and is this oxygen conveyed by means of the circulation through the arteries ; or does the inspired oxygen go wholly to the formation of carbonic acid in the bronchial cells ?

The first doubts that were thrown out on the subject of aerial oxygenous absorption by the blood in its passage through the lungs were those

which resulted from the experiments of Messrs Allen and Pepys ; these gentlemen could not discover that any portion of the oxygen was ab- sorbed in ordinary respiration, and they consi- dered that what does disappear goes to combine with the carbon of the blood, and produce car- bonic acid, the latter being equal in bulk to the oxygen that has been lost. And, subsequently to these experiments, Mr. Ellis, who has published an enquiry on the changes induced in atmos- pheric air by respiration, contends that there is an excretion of carbon by the pulmonary vessels ; and that the inspired air, that is, the oxygenous portion of it, unites with this excreted carbon, and thus forms carbonic acid exterior to the lungs, which carbonic acid is exhaled in the expirations. Dr. Prout has been led to consider this opi- nion accurate, from the fact that, ‘ when phos- phorus, dissolved in oil, is injected into the blood- vessels, vapors of phosphoric acid stream from the mouth and nostrils ;’ the inference from which fact is, that phosphorus is most probably ex- creted from the blood-vessels, and unites witli the oxygenous portion of the inhaled atmosphere so as to form phosphoric acid. ‘ If,’ says Dr. Prout, ‘ the phosphoric acid which is inhaled under these circumstances had been formed in the vessels themselves, it would have remained in the blood, and not have been exhaled, as it is not volatile.’

Mr. Ellis advocates his principle of the non- absorption of oxygen by the blood, and of the carbonic acid exhalation being formed in the •way just adverted to, by adverting to the circum- stance of seeds

while germinating, and even plants themselves during growth, throwing out carbon in the form of aqueous vapor, even where no oxygen is present, this ejected carbon being a secreted matter ; and it is in this way he supposes that a secretion is continually taking place on the surface of the lungs and of the skin.

‘ According to Mr. Ellis, we have no proof of the existence of carbonic acid, or of any aeriform fluid existing naturally in the blood, and conse- quently have no reason to expect that any can be thrown out; while, if oxygen enter from the air-cells into the system, it must be by absorp- tion, or chemical affinity. If by absorption, it would in animals take the regular course of the thoracic duct, and the blood in the right ventri- cle of the heart would first exhibit a scarlet hue; while, in the germination of vegetables, their seeds give no evidence of possessing a structure fitted to absorb and expel uniform fluids ; nor of any such fluids at any time existing in them. To the operation of chemical affinity he con- ceives an actual contact between the air and the blood to be requisite ; but in the lungs we have an intervention of the coats of the cells and of the blood-vessels. And if these be presumed to be so thin, that when moist they will allow the air or its oxygen gas to pervade them, the gas would rather pass into the interstices of the cellular membrane than into the pulmonary vessels, and thus create an emphysema. But the whole of such permeation he holds to be gratuitous and contrary to experiments. The diminution of the bulk of respired air, he thinks, may be accounted for by a union of the carbone of the blood with

the oxygen in the air cells, and the formation of aqueous vapor by the disengagement of the caloric from the oxygen of the atmospheric air.

In respect to the objection proposed by Mr. Ellis on the score of its being difficult to con- ceive that oxygen should permeate the membrane lining the bronchial cells, experiment has shown its fallacy and want of foundation ; for it has been proved that venous blood acquires a florid color by exposure to oxygen, even when covered with a bladder, provided this bladder be mois- tened ; and Dr. Edwards has shown that more oxygen is continually lost in the respiration of brutes than goes to the formation of carbonic acid : it has been moreover observed above that the intervening membrane between the oxygen of the atmosphere and the blood circulating through the lungs is exceedingly thin. In this particular then, as in the case of the

circulation and the mechanical or physical circumstances of respiration, we feel disposed to consider that there is both truth and error in those phy- siologists who attribute all the effect to one source; and we should be highly gratified, did our limits permit, in presenting to our readers the view taken on this controverted subject of aerial absorption by the pulmonary blood-vessels by the able editor of Richerand's Physiology, to •which, however, we refer the reader.

In respect to the change of color in the blood, from the venous to the arterial hue, we think that the fact is rather in favor than otherwise of aerial absorption ; for although, as it has been properly remarked, a separation of carbon accompanies the conversion of color from the purple to the scarlet dye, yet arterial blood if enclosed in vacuo becomes purple ; a proof that the mere constituents of the blood acting upon each other is a sufficient cause of the change : and Dr. El- liotson very properly adds, ' that the circumstance of venous blood remaining dark, though by the air-pump carbonic acid is evolved from it, looks rather as if the florid color were dependent upon the operation of oxygen.' Whether caloric gets admission into the blood vessels through the medium of the pulmonary circulation will be more appropriately enquired into when we are on the topic of animal temperature.

Thus have we gone to the extent of our limits in treating of the physical and chemical circum- stances and changes connected with the respi- ratory process. It may be added that Dr. Prout has lately thrown out a suggestion that the che- mical part of the function does not end in the changes effected upon the fluids in the way above traced and commented on, but that the idea of galvanic influence put into excitation by the oxidising of carbon may, if pursued, open a fruitful field of philosophising on animal func- tions. And every thing, we are sure, will be done by Dr. Prout that high ingenuity, active indus- try, and a philosophical mind can effect.

We are tempted before we go upon the sub- ject of other purposes effected by the respiratory organisation and its appendages, viz. that of re- gulating the voice and speech, to present our readers with the following interesting note from Dr. Elliotson, on the length of time to which respiration may be suspended with impunity,

Sec. If opr readers should say we do nothing but extract from others, we are very ready to plead guilty to the charge; but then it must bt: recollected that our professed business is merely that of collecting and collating facts and opinions : and, when we find that we cannot state these facts and announce these opinions in better language than that

of the authors to whom we apply for our readers' information, it is surely better to employ their phraseology than to translate it into words of our own.

' When the air is not changed, death in general occurs long before all the oxygen is consumed through the carbonic acid which is formed, but bees, some worms, and mollusca completely deoxidise it.

Lavoisier removed the carbonic acid by po- tassa as quickly as it was produced, and found that a guinea pig could live in air containing but 6'66 per cent, of oxygen, and with stili less be- come only drowsy. Dr. Edwards advances, con- trary to Morozzo, that every warm-blooded animal perishes instantly when placed in air in which another has died through want of renovation, and that all of the same class among them deoxi- dise it equally ; though in different times. This time will occasionally differ one.third, notwith standing the size of the body and the movements of the chest be equal in them, and the carbonic acid be removed as quickly as formed. The young deoxidise it more slowly than adults ; and the young if quite deprived of air die later than adults. Indeed Buffbn found, and Dr. Le Gal- lois and Dr. Edwards have confirmed his dis- covery, that new-born animals of many species, as dogs and rabbits, will live a long time without air, even after they have been allowed to respire. This period lessens as the animal's temperature rises with age ; and in those whose temperature at birth is high, as guinea-pigs, it is very short. They live longer than adults also in a limited quantity of air. Amphibious animals likewise live long without air.

Persons have been said to be able, by habit, to live without air a considerable time. Death generally occurs at the latest in one or two minutes when respiration is suspended ; but by habit some few divers of the swimming school at Paris can remain under water three minutes. If the system is in an extraordinary state of nervous insensibility, the absence of air, like the absence of food, or the administration of strong agents, may be borne for a very long time. Even faint- ing renders submersion less dangerous. ,

Dr. E, adds, in a note on this paper, ' Some very grand instances of exaggeration on this sub- ject will be found in an amusing and useful book entitled The Uncertainty of the Signs of Death. M. D'Egly, member of the Royal Soci- ety of Inscriptions, declares that he was engaged to a dinner for which the fish was to be provided by a Swiss diver, who obtained his living by plunging into the water and pulling the fish out of their holes. The dinner hour arrived, but no fish. Drags were employed, and the diver's body was found. The curate wished to

bury it immediately, as it had been nine hours under water ; but M. D'Egly determined on attempting resuscitation, and succeeded in three-quarters of

an hour. The Rev. Dr. Derham, in his Physico- Theology, is more credulous than the cure ; he quotes Pechlin for the case of a man pensioned by the queen for having joined this world again, after remaining upright under water, his feet sticking in the muddy bottom, for sixteen hours, at Tronningholm. Yet this is nothing; for Mr. Tibsius, the keeper of the royal library, has written an account of a woman whom he saw alive and well after being three days under water. And this is nothing ; for Mr. Burmann declares he heard a funeral sermon at Bonn, in Lithuria, upon an old man of seventy, who, the preacher protested, had fallen into the water when sixteen years old, and remained under it for seven weeks. Mr. Brydone was told that one diver called Galas, but nicknamed Pesce, could live several days in the sea ; and Kircher asserts that this aquatic person could walk from Sicily to Italy.'

VOICE AND SPEECH.

One particular constituting man's preeminence over the brute creation is that of his abiliity to articulate sounds, so as to convey his sentiments and ideas; for even in that tribe of animals which most nearly resemble the human in exter- nal configuration, nothing of actual articulation has ever been accomplished ; and even among those animals which are taught to imitate the ar- ticulate sounds of man, the task is merely that of imitation, and does not amount to any thing approaching even to the manit'estatation of intel- ligence. It is true that animals have a language of their own; they make one noise, as a modern author expresses it, to express joy, another terror, another to summon their young, &c., and com- prehend the meaning of sounds made by us, not only of an inarticulate kind, but also articu- .ated. In the instance of dogs Dr. Gall relates, in his work on the functions of the brain, that ' they learn to understand not merely separate words or articulate sounds, but whole sentences, expressing many ideas. I have often spoken,' he says, ' intentionally of objects which might in- terest my dog, taking care not to mention his name or make any intonation or gesture which might awaken his attention. He, however, showed no

less pleasure or sorrow, as it might be ; and indeed manifested by his behaviour that he had perfectly understood the conversation which concerned him. I had taken a bitch from Vienna to Paris ; in a very short time she com- prehended French as well as German, of which I satisfied myself by repeating before her whole sentences in both languages.'

Many of our readers will think these state- ments are stretched out into phrenological length, and that some of the dog's understand- ing was only understood by his master: but whether that was the case or not, certain it is that nothing like speech was ever effected by animals of the canine class, however intelligent or how- ever instructed ; and, in fact, the structure of the vocal organs is such as to preclude the power of articulate expression even supposing the presence of a mind to compass the task : but let us, after our accustomed manuer, extract from one or two modern authors on the interesting subject now to i>e canvassed : and, first, we will bring into re-

quisition a writer whom we always quote with extreme pleasure, on account not merely of the interest of his matter, but the elegance and grace of his language.

' The organ of the voice,' says Dr. Mason Good, 'is the larynx, its muscles, and other ap- pendages; and the voicejtself is the sound of the air propelled through and striking against the sides of the glottis, or aperture into the mouth. The shrillness or roughness of ihe voice depends on the internal diameter of the glottis, its elasti- city, mobility, and lubricity, and the force with which the air is protruded. Speech is the modi- fication of the voice into distinct articulations in the cavity of the glottis itself, or in that of the mouth or of the nostrils.'

There is a difficulty, however, in determining by what means the air is rendered sonorous in the glottis, and various explanations have been offer- ed upon the subject. The oldest is that of Ga- len, who supposed the calibre of the glottis to be alternately expanded and contracted, an idea revived in modern times by Dodart, who at the same time compares its action to that of a flute.

A second explanation is that of M. Ferrien, who supposes the variation of sound to depend upon variations of tension and relaxation in the ligaments of the glottis, and in this view such li- gaments become vibrating chords, and the entire apparatus approaches the nature of a violin. A third explanation is that of M. Richerand, who unites the two preceding conjectures, and sup- poses that the glottis is a wind and a

chord in- strument at the same time. To these explana- tions we may add that of Kratzenstein, who re- gards the glottis, in conjunction with the whole length of the larynx, as a kind of drum ; and that of M. Blumeribach, who views the former in the light of an ˆEolian harp : all of which are in- genious sports of the imagination, but contribute little to the advance of physiological science.

Those animals only that possess lungs pos- sess a larynx ; and hence none hut the first three classes in the Linnaan system, consisting of mammalia, birds, and amphibia. Even among these, however, some genera or species are en- tirely dumb, as the myrmecophaga or ant-eater; the manis or pangolin, and the cetaceous tribes ; the tortoise, lizards, and serpents ; while others lose their voice in particular regions ; as the dog is said to do in some parts of America, and quails ar" frogs in various districts of Siberia.

It »s from the greater or less degree of perfec- tion with which the larynx is formed, in the classes of animals that possess it, that the voice is ren- dered more or less perfect ; and it is by an intro- duction of superadded membranes or muscles into its general structure, or a variation in the shape, position, or elasticity of those that are most common to it, that quadrupeds and other animals are capable of making those peculiar sounds by which their different kinds are re-spectively characterised ; and are able to neigh, bray, bark, or roar; to purr, as the cat and tiger kind ; to bleat, as the sheep: or to croak as the frog ; which last, however, has a sac or bag of a singular character in the throat, or cheek, direct- ly communicating with the larynx, on which their croaking principally depends.

The larynx of the bird class is of a very pe- culiar kind, and admirably adapted to that sweet and varied music with which we are so often de-lighted in the woodlands. In reality the whole extent of the trachea in birds may be regarded as one vocal apparatus; for the larynx is divided into two sections, or may rather, perhaps, be considered as two distinct organs ; the more complicated, or that in which the parts are more numerous and elaborate, being placed at the bot- tom of the trachea, where it diverges into two branches or bronchise, one for each of the lungs; and the simplex, or that in which the parts are fewer, and consists of those not included in the former, occupying its usual situation at the up- per end of the trachea, which, however, is s>till without an epiglottis; both food and water being, as we have

already observed, rendered incapable of penetrating the aperture of the glottis by ano- ther contrivance. The lungs, trachea, and larynx of birds, may therefore be regarded as forming a complete natural bag-pipe, in which the lungs constitute the pouch and supply the wind ; the trachea itself the pipe ; the inferior glottis the reed or mouth-pipe, which protrude the simple sounds; and the superior glottis the finger-holes, which modify the simple sound into an infinite variety of distinct tones, and at the same time give them utterance.

Here, however, as among quadrupeds, we meet with a considerable diversity in the struc- ture of the vocal apparatus, and especially in the length and diameter of the tube or trachea, not only in the different species, but often in the dif- ferent sexes of the same species, more particular- ly among aquatic birds. Thus the trachea is straight in the tame or dumb swan (anas olor) of both sexes; whilst in the male musical swan (anas cygnus), but not in the female, it winds into large convolutions, contained in the hollow of the sternum ; in the spoonbill (platalea leuco- rodia), as also in the motmot pheasant (phasianus mot-mot), and some other similar windings in the trachea occur, not enclosed in the sternum. The males of the duck and merganser (anas and mergus) have at their inferior larynx a bony ad- dition to the cavity, which contributes to strengthen their voice.

Among singing birds Mr. Hunter, who, at the request of Mr. Pennant, dissected the larynx of many distinct kinds, observes that the loudest songsters have the strongest muscles, and that the sky-lark has the strongest of the whole, whose clear and vigorous note is often heard when he can no longer be followed in his ascent by the most penetrating eye. He observes, also, that among this division of birds the muscles of the male following the same rule are stronger than those of its respective female, whose voice is al- ways less powerful. In birds that have no na- tural voice he perceived no difference of muscular power in the larynx of either sex.

From this more extensive and complicated machinery, in the vocal organs of birds, we find numerous species possessing powers of a very extraordinary kind. In many of them, as the thrush and the nightingale, the natural s»ng is exquisitely varied, and through an ‘astonishing length of scale. In the pipra musica, or tuneful

manakin, the song is not only intrinsically sweet-” but forms a complete octave, one note succeeding another, in ascending and measured intervals, through the whole range of its diapason. There are various kinds that are capable of imitating the music of human art, and amuse us by acquhv- ing national and popular tunes ; as the

bullfinch, the linnet, and even the robin, when reared in a state of separation from all other birds; whilst some again are capable of imitating human speech, as the parrot, the jay, and jackdaw, and indeed most of the psittacus and corvus genera ; a fact which proves the possession of a powerful and retentive memory, as well as of a precise and delicate ear. A linnet, acording to Mr. Pen- nant, was once taught the same at Kensington ; and even the nightingale is said to have talents for speaking equal to those for singing. But where is the man, whose bosom burns with a single spark of the love of nature, who could for a moment consent that this sweet songster of the groves should barter away the touching wildness of its native notes for any thing that art has to be- stow ?

Yet, perhaps, there is no species among the class of birds that is more entitled to notice in a physiological survey, on account of its voice, than the turdus polyglottus, or mocking bird. This is a subdivision of the thrush kind; its own natural note is delightfully musical and so- lemn ; but beyond this it possesses an instinctive talent for imitating the note of every other kind of singing bird, and even the voice of every bird of prey, so exactly as to deceive the very kinds it mocks. It is, moreover, playful enough to find amusement in the deception, and takes a pleasure in decoying smaller birds near it, by mimicking their notes, when it frightens them almost to death, or drives them away with full speed, by pouring upon them the screams of such birds of prey as they most dread.

Now it is clear that the imitative, like the na- tural voice, has its seat in the cartilage and other moveable powers that form the larynx ; for the great body of the trachea only gives measure to the sound, and renders it more or less copious in proportion to its volume. It is not, therefore, to be wondered at that a similar sort of imitative power should be sometimes cultivated with suc- cess in the human larynx; and that we should occasionally meet with persons who, from long and dexterous practice, are able to copy the not-s of almost all the singing birds of the woods, or the sounds of other animals ; and even to per- sonate the different voices of orators, and other public speakers.

One of the most extraordinary instances of this last kind consists in the art of what is called ventriloquism, of which no very plausible expla- nation has yet been offered to the world. On this obscure subject we might present some very interesting matter from the author to whom we have been principally indebted for the pre- ceding account of the vocal organisation and function ; but our limits preclude our going fur- ther into the question, and we must refer to

tha articles bearing on the subject, in the body of the work, for more ample disquisition.

We have only room to add a few words on

the rationale of articulation as opposed to the mere exertion of the voice. We of course pre- sume the necessity of more than brutal intelli- gence to compass articulation, but it is the quo modo of the thing itself which demands a little further enquiry in this place.

Speech has been denned a peculiar modifica- tion of the voice adjusted to the formation of the sounds of letters by the expiration of air through the mouth or nostrils, and in a great measure by the assistance of the tongue applied and struck against the neighbouring parts, the palate and front teeth in particular, and by the diversified action of the lips. Thus is it constituted by mo- difications which the voice is made to pass through from the motions of these assisting parts of the articulating organisation. ‘ The ape, in which these parts are formed as in man would speak like him, if the air in passing out of the larynx did not rush into the hyothyroid sacs, in some animals membraneous, but cartilagi- nous in others, and even osseous in the alouate or purr, whose howl is so hoarse and frightful. Every time the animal wishes to cry, these sacs become distended, and then emptied, so that ii cannot furnish the different parts of the mouth with sounds to be articulated.’

The classification of these articulations into rowels and consonants has been generally recog- nised; in point of fact, however, articulated sounds are constituted by vowels, the conso- nants being merely for the purpose of connect- ing vowels together. The utterance of conso- nants is necessarily more forced and unnatural than that of vowels, the latter being formed by the voice, modified but not interrupted by the varied position to which we have alluded of the tongue and lips ; and hence the superior har- mony of those languages which have the greatest number of such letters, as in the ancient lan- guage of the Greeks, quibus dedit ore rotundo musa loqui. Hence, on the other hand, the harsh- ness of some of the northern languages. ‘ It would be difficult,’ says Richerand, ‘ to accumu- late a greater number of consonants in one word (and consequently a word of more difficult pro- nunciation till the organs of the voice come to be used to the practice) than is found in the pro- per name of a German called

Schmidtgen. It should be observed, however, that after the diffi- culties shall have been conquered of this kind of pronunciation, or when the organs may have been used to it from infancy, a much more harmonious result is effected than would a priori be con- ceived.

ON LIVING TEMPERATURE, or ANIMAL HEAT.

All animals as far as can be ascertained, and even vegetables, have a tendency to preserve a temperature more or less distinct from that of the surrounding medium. Yet the difference among them in this respect is so great that they have been divided into warm and cold blooded. To the former belong the more complicated, those whose pulmonary apparatus is most elaborate ; man and mammiferous quadrupeds atid birds. To the second oviparous and quadrupeds, fish, and most of the intervertebrate. Birds have the highest temperature 107° to 110°, man W to

98£°. There is some variation, not only in indi- viduals, but according to age, season, and cli- mate. It is less in the young according to Dr. Edwards and Despretz; the former states the human temperature in infancy to be 94£°; the latter asserts that, while in birds it is 105° in winter, it is nearly 111° in summer, gradually increasing in spring and diminishing in autumn. In the heat to which Dr. Fordyce and his friends were exposed, the temperature of the body rose two or three degrees ; and Dr. Delarade, in a vapor bath at near 120°, found the heat under his tongue increased but about five degrees at the end of seventeen minutes. In sparrows and yellow hammers Dr. Edwards found it five or six degrees higher in summer than in winter ; and Dr. Davy one or two degrees higher in Ceylon than in England. In disease it will fall, and on the other hand rise ; in fever it has been noted at 107°, in tetanus at 110°, and probably on tonic occasions it rises still higher, at least locally. In old age it is not so high as in the age of full vigor, nor in remote parts as in those nearer the heart. John Hunter made observations on the heat of cold blooded animals. The thermometer in the stomach and under the skin of the abdo- men of the frog and toad stood at 40° when the atmosphere was 36° ; in the lungs of snails at 35°, 36°, 37°, 38°, when the atmosphere was at 28°, 30°, and 34°; the heat of earth worms was 58 J, when the atmosphere was 56°. Fish are not above two degrees warmer than the water. Cold blooded animals placed in an elevated tempera- ture are much more influenced by surrounding media than the warm blooded. Yet frogs are but 80° or 82° in a medium of 110° or 115°. The heat of insects when congregated is considerable. J. Hunter found the thermometer rise to 93° or 98° in a hiv in spring, to 104° in summer, to be at 82° when the air was 40°, and at 73° in winter. The same tendency in

vegetables is shown by the greater difficulty with which the juices in their stems and branches are frozen than lifeless fluids, by ice thawing when roots shoot into it, and by snow upon the leaves or stems of plants thawing sooner than that which lies on surround- ing inanimate bodies. J. Hunter observed a branch of growing fir and a bean leaf thaw the part of the surface of a freezing mixture, on which it was placed, and the fir subsequently another to which it was removed. When the sheath of the arum maculatum and cordifolium is bursting, and the cylindrical body just peeping forth, it is said by Sennaelicer to be so hot for some hours as to seem burning, and twelve of them placed round the bulb of a thermometer to have raised the mercury from 79° to 143°.

Even eggs are cooled and frozen with more difficulty than equal masses of inanimate matter; although when once frozen, and their life de- stroyed, they freeze readily.

We are naturally led to investigate the cause of this peculiarity in an organised body ; and it is not surprising that, when the chemical changes that occur in the blood while circulating through the lungs came to be applied to the explication of vital phenomena, these changes were applied also to the exposition of the perennial and inde- pendent temperature of animals.

The explanation, says a modern physiologist, of this equable and perpetual temperature is par- ticularly simple and natural, and founded on the doctrine which makes the lungs the grand focus, and the decomposition of the oxygenised portion of the air which we breathe the fomes of our heat. For as the oxygenous part of the inspired air is decomposed in the air cells of the lungs, in such way that its base, viz. oxygen, which by its union with latent caloric was before aeriform, now separates from this caloric; it would appear that by this decomposition one portion of the caloric is rendered sensible in the bronchise, and tjie other enters in a latent form into the blood while circulating in the innumerable and delicate networks of the pulmonary vessels. This theory of course goes upon the presumption that the capacity of carbonic acid for heat being less than the capacity of oxygen, when the blood is deprived of carbonic acid by respiration, its capa- city for heat becomes greater; and the simplicity and beauty of the doctrine gained it almost uni- versal admission. Upon further enquiry and reflection, however, it was conceived that several

circumstances in the living frame stood adverse to its adoption; it was said that even allowing the previous absorption of oxygen by the pulmonary vessels, the gradual and equable sup- ply of heat to the frame could scarcely be ex- plained upon these principles ; and the alterations in interior heat without corresponding, or at least proportionate changes in the lungs, as in cases 01 febrile, nervous, and other states, were adduced as difficulties and impediments to the reception and application of Dr. Crawford's principles. Heat of a part too, it is known, may be increased by exercise of that part, or other circumstances which do not imply the necessity of any pulmonary change ; and altogether it came to be generally understood and felt, that while much Ingenuity and a certain degree or measure of truth were to be found in the hypothesis of Crawford, a good deal remained both of a po- sitive and negative nature to invalidate the legi- timacy of its inferences.

At length came Mr. Brodie's experiments, which, at their first announcement, were sup- posed to have thoroughly overturned the hypo- thetical doctrine of Crawford and others, and to have proved that the perennial temperature of animals is rather referrible to a certain condition of the brain and nerves than to the decomposi- tion of air in the lungs. Mr. Brodie decapitated an animal, and found that he could for some time keep up the respiratory act by artificial means, and that he could thereby change the blood from venous to arterial by abstracting the carbone as completely as in the case of natural breathing; were this change then the cause of animal heat, it was natural to suppose that while the action of the heart could be preserved the temperature of the animal experimented on would be preserved also ; but, instead of this, the body cooled and became of a lower and lower tempe- rature, till the action of the heart ceased altoge- ther. The inference, then, of Mr. Brodie, and in this inference he has been countenanced by the opinions of others, was, that the chemical theory of animal temperature is untenable.

But this inference has by others again been main- tained to be fallacious, since artificial respiration never can so nearly imitate natural breathing as to be productive, throughout the frame, of the same results. In artificial respiration, it is uned, the air does not rush into the pulmonary cells, because these are in a vacuum, but is propelled into, and forcibly, and therefore injuriously, di- lates them ; the consequence is the formation of a large quantity of frothy mucus. ' Whether,' says the author from whom we now extract, ' the fall of temperature be owing to the evaporation of this copious secretion and its prevention of contact between the air and air-cells, or to the injurious nature of artificial respiration, still the fact ascertained by Le

Gallois, viz. that, under artificial respiration, the animal may be killed even if no part be injured, destroys the conclu- sions which appeared deducible from Mr. Bro- die's experiments. Indeed, he adds, Le Gallois found that less oxygen was consumed than in natural breathing, and that the temperature fell exactly in proportion to the smallness of the quantity of oxygen consumed ; which, by the way, is contrary to the statements of Mr. Brodie. But on this controverted point we shall make room for the opinions of two able authors, Dr. Elliotson and Dr. Copland, who take somewhat different views of the subject; merely premising that a mixture of truth and error may have crept into both assumptions, and that much more both in the way of experiment and observation than we have hitherto had is requisite to satisfy the mind of the impartial enquirer.

'A host of circumstances,' says Dr. Elliotson, ' show that our temperature depends upon respi- ration, and, therefore, upon chemical changes.

' In high temperatures we have less necessity for the evolution of heat ; in low temperatures more. Accordingly, in the former, the arterial blood remaining arterial is nearly as florid in the veins as in the arteries, and the inspired air is less vitiated ; in low temperatures the venous blood is extremely dark, and the inspired air more vitiated. Some have imagined that the body remains at its standard high temperature by the refrigeration of the evaporating sweat. But, though this must contribute, it is not the sole cause ; for frogs lose as much proportion- ably to their size by evaporation as any other animal, and yet they follow pretty closely the surrounding temperature. Whenever, on the other hand, the body itself heightens its tempe- rature, as in fever, more oxygen is consumed by the lungs. The temperature of the various classes of animals, and their vitiation of the air, are always proportional; and inverse to the length of time they can live without air.

' The temperature of young animals is lower than that of adults, or rather they maintain a peculiar temperature much less ; and they viti- ate the air less ; and require respiration less pro- portionally than adults. As they proceed to vitiate it more, and require respiration more, their calorific power increases. While their calorific powers are weak, they nreathe, if they are exposed to cold, quicker, so as to keep up their temperature as much as possible. The same is also found in adult warm-blooded ani-

jnals, mt of the hyberniting family, when ex- posed to cold.

‘ Dr. Edwards found that habit has great influ- ence on the calorific powers of animals ; that a given low artificial temperature in winter will rednce the animal heat much less than in sum- mer, and that with the habit of evolving more heat in winter is acquired the habit of consuming and requiring more oxygen, so that animals sup- plied with a given quantity of air, and placed in a given warm temperature in winter, die much sooner than in summer. Yet the momentary application of heat or cold has a different effect ; the former heating less if the body has been sub- jected to a low, and the latter cooling less if the body has been subjected to a high temperature. We all feel the cold less quickly on leaving the house in winter if well warmed first, than if we leave it already chilly.

‘ When animals hybernate, their temperature falls and their respiration is nearly or entirely suspended. Their consumption of air lessens as the temperature falls, whence they consume less in November than in August. If hybernating animals, while torpid and still placed in the same temperature, are stimulated mechanically to breathe, their temperature rises with the progress of respiration.

‘ If the cold, to which they are exposed, be so intense that it threatens death, it actually no lon- ger depresses respiration, but for a time excites it, and their temperature rises proportionally. Man, and other non-hybernating animals, breathe more quickly when exposed to cold, no doubt, for the purpose of supplying heat, till the powers become exhausted.

‘ The higher the temperature of the animal the more extensive is the aggregate surface of the air cells, the more blood passes through its lungs, and the more necessary to its existence is respi- ration. The lungs of cold-blooded animals are not subdivided into minute cells, but formed into vesicles ; and birds which have the highest tem- perature among animals are drowned the soonest.

‘ The changes of air by the blood are seen to be effected entirely by the red particles. Provost and Dumas found that the number of red parti- cles is proportionate to the temperature.

‘ If the blood circulates without being first pro- perly changed in the lungs, the temperature is below the natural standard. Those who have the blue disease are cold ; and coldness is a symptom of hydrothorax, and of the repletion of the air cells with mucus in chronic bronchitis ; in the former of which affections the lungs can- not fully expand, and in the latter the air is pre- vented from coming fully in contact with

the air cells.

‘ In cold climates, and in temperate ones, in cold weather, animal food is desired and taken in abundance ; in hot climates, and during the summer in temperate regions, light vegetable food is preferred, and the appetite less. We may conceive the former diet more calculated to support a process similar to combustion, and under the former circumstances we have seen that the changes of the air in the lungs are actu- ally more considerable.

‘ The temperature of parts falls, if not maintain-

ed by a constant stream of blood from the lungs through the aorta and its ramifications, and is ceteris paribus, in exact proportion to this supply.

‘ Whether Crawford’s theory be corrector not, the production of animal heat must be as evi- dently a chemical process as changes of animal temperature among inanimate bodies ; yet some ascribe it to nervous energy. I cannot imagine nervous energy to cause heat any more than to cause chemical affinity : as it may bring substances together which have an affinity for each other, and thus produce their union, so it may effect those changes which are, according to physical laws, accompanied by changes of temperature; but caloric in the body must, I apprehend, like affinity, follow the same laws, and no others, as out of the body. This, however, does not pre- vent animal temperature from deserving the epithet vital, because it is regulated by the vital powers of the system, although through the in- strumentality of chemical changes. If the high temperature of an inflamed part is owing to in- creased momentum, the increased sum of the quantity and velocity of its blood; yet this in- creased momentum is produced by vital powers.’

Here our author introduces remarks on Mr. Brodie’s experiments, which, having already been referred to, need not be repeated. He then goes on to say, ‘Dr. Philip has made experiments equally conclusive with those of Dr. Le Gallois against the inferences drawn by Mr. Brodie. As very little air is taken into the lungs in natural inspiration, and a regard to the bulk and frequency of each inspiration not always attended to in experiments, it is very probable that that gentleman had thrown too much air into the lungs, so that the unnatural quantity of cold air, and the augment- ed secretion of bronchial fluid, made the tempe- rature fall. By impelling- little, and that not fre- quently, Dr. Philip found that artificial respiration, after the destruction of the brain, actually retard- ed the cooling of the animal, while stronger re-

spiration did actually cool the body.

‘ Of two rabbits killed in this way, their tem- perature being 104°, one was subjected to six artificial respirations, and the other to from twenty to thirty in a minute ; the temperature of the former was 100° at the end of an hour, and that of the latter 98°. Of two with the temperature at 102-5° one was undisturbed, and one subjected to about thirty inspirations in a minute ; the temperature of the former at the end of half an hour was 98-75° ; of the latter only 98-5°. But the lungs of the latter being now inflated but about twelve times in the mi- nute, the temperature of the former at the end of another half hour was 95-25°, and of the latter 96°. In one experiment, in which the lungs were inflated but a few times in a minute, the temperature actually rose nearly a degree by artificial respiration. Dr. Hastings at the same time made similar comparative experiments, and with similar results. In one the rabbit in which artificial breathing was performed cooled only 4° ; while that which was left undisturbed cooled 7-5°.

‘ Dr. Philip afterwards took pairs of rabbits, killed them in the same way, and then in one experiment destroyed the brain and spinal mar- row of one with a wire, while he left the other

untouched ; in another, precisely similar, he in- flated the lungs of both. Yet in each experi- ment they both cooled equally. In a third the brain and spinal marrow of one only .vas de- stroyed, and the lungs of both inflated.— These two cooled equally.

‘The temperature of foetuses born without brain is maintained during the few days that they may live.

‘ Professor Rudolphi remarks that the tempe- rature of animals bears no proportion to their nervous system ; that if it did, man should be warmer than any brute; the mammalia much more so than birds; fish much more so than in- sects ; and birds and amphibia nearly upon a par, — all which would be the reverse of the fact.

‘ Vegetables have a tendency to preserve a pe- culiar temperature, and they have no nervous system.

‘ But that the nervous system affects the tem- perature is certain ; a passion of the mind will make the stomach or the feet cold, or the

whole body hot. Paralysed parts are often colder than others, or more properly are more influenced than others by all external changes of tempera- ture. But every function is affected by the mind, though not dependent on the brain for its regular performance. And in varieties of tem- perature, both by the state of the mind and by paralysis, there is as far as we can judge a com- mensurate affection of the local circulation. Parts heated by any passion are also red, and vice versa ; and paralytic parts must have imperfect vascular functions in some measure at least from the want of the compression of the vessels by muscular action, and of the general excitement by volition ; they waste and sometimes inflame or ulcerate, or slough on the slightest injury. And parts perfectly paralysed still maintain a temperature above that of the surrounding me- dium as well as circulation, secretion, &c., and sometimes the same as in health.

‘ Dr. Philip considers galvanism an important agent in the nervous system, and found that it raised the heat of fresh arterial blood 3° or 4°, and at the same time made the blood venous ; a circumstance proving that the action is purely chemical — an alteration of the blood to that state in which its capacity for caloric is less.

‘ There is certainly no more reason to believe animal heat dependent on the nervous system than secretion, and every organic function. That like these it is influenced by the state of the nervous system is certain, but never I imagine except through the instrumentality of chemical changes.’

‘ We shall now contrast with these very im- portant statements and very ingenious remarks the quotation from Dr. Copland, to which we have already alluded as containing much of interest- ing matter.

- The ganglionic system of nerves,’ says Dr. C., ‘ by means of the influence derived from its prin- cipal and subordinate sources and numerous dis- tributions, and exerted upon the vascular system, generates animal heat throughout the body, and the production of animal heat takes place in a manner analogous to the processes of nutrition and secretion. The experiments of insulating

a limb, by dividing all the voluntary nerves and arteries, excepting one arterial trunk, performed by Mr. Brodie in order to ascertain the effects produced upon the generation of heat in the limb, prove this proposition, and could not fail of giving rise to what was actually observed. For the ganglial or vital nerves supplying that vessel could not be completely detached as long as any of the coats of the artery

remained un- divided.

‘ The state the nof animal heat, like other secre- tions, will be greatly modified by the condition, both as it respects kind and degree, of the vital influence of the ganglial system, and by the state of the blood on which this influence is exerted, which state will have a double operation in modifying the result.’

In another part the author, from whom we are now extracting, goes on to say : —

‘ Animal heat, however intimately related with the respiratory process, cannot be considered a function of the lungs. It must nevertheless be allowed that the changes induced on the blood during respiration are preparatory to the evolu- tion of this heat ; and although we contend that the effect is immediately the result of a manifes- tation of the vital influence of the ganglial system of nerves, exerted upon the blood contained in the vessels to which these nerves are distributed, yet it must be admitted that the respiratory pro- cesses are requisite to its production, inasmuch as they produce on the blood a change of pro- perties which are requisite to excite this system ; and as this fluid, when thus changed, contains the materials necessary to, or is otherwise in a suitable condition for the manifestation of, the influence which that part of this system of nerves which is distributed to the blood-vessels exerts.

‘ Preparatory changes thus take place in the lungs, which are necessary to the exertion of this influence, and to the evolution of heat ; but, as it was contended that these changes are more of a vital than a chemical nature, so it is considered that the production of heat is more the result of the influence which the nerves of the vessels ex- ert upon the blood, than of the change in the capacity for cadoric which the blood itself expe- riences in its passage into the venous state. The difference of capacity which actually exists be- tween venous and arterial blood is not sufficient, according to the experiments of Dr. Davy, to form the basis of the chemical theory formerly received ; but the difference which actually does exist may be concerned in a subordinate manner in the process.

- We infer that the various causes which modify the production of animal heat, act 1. Immediately upon the organic system of nerves themselves, changing the condition of their influence ; 2. Upon the blood, altering the nature and compo- sition of this fluid, and thereby rendering it unfit for producing the requisite excitement of this system of nerves, and incapable of the

changes which the influence of these nerves produces upon its constituent parts ; 3. Immediately through the centro-spinal system, modifying the influence which this system imparts to the ganglial.

‘ These different ways in which the vital influ-

ence exerted by this system of nerves in the pro- duction of animal heat is modified might have been illustrated by experiments, and by refer- ences to facts in comparative physiology, if our limits could have admitted so great an exten- sion of them. From what we have said, it will however, be perceived, that we view the pro- duction of animal heat more in the light of a vital secretion than of a chemical phenomenon ; and that, like the other secretions and nutrition, it proceeds from and is controlled by the vital influence of the ganglial system of nerves.’

OF SECRETION.

Exhalation, secretion by follicles, and secre- tion by glands (these glands being differently constructed in different parts of the body, accord- ing to the purposes they are to serve), it will be seen, by referring to the table of arrangements, are the several items noticed by the constructor of the table.

Secretion, we may state generally, is that pro- cess by which is separated from the blood every species of animal fluids, and indeed we might say of animal solid, because, although in a state of solution, when thrown out of their respective vessels, all parts, even the most compact of the frame, are built up as it were through the medi- um of the secretory process.

This function, when considered in all its bear- ings, is one of the most astonishing which vitality unfolds; for from precisely the same fluid, the blood, are elaborated matters both widely differ- ent from each other, and as different from the material (the blood) whence they are manufac- tured. Thus, what can be more unlike than the urine and the fluid from which it is furnished, or than the urine itself and other secretions ? and when we attempt to explain the matter upon me- chanical, or even chemical principles, we still, allowing that our premises and conclusions should be correct, remain in thorough ignorance of the power which directs to these nice combinations and

results.

Secretory processes have been divided into three kinds, 1. Serous transudation, which is supposed to be effected by the termination of arterial tubes of a minute kind upon surfaces which furnish the matter thus exhaled. These terminations of vessels, however, we have already said are rather supposed than demonstrated ; and some have imagined exudation through the coats of capillaries, rather than matter poured out from open mouths.

The second kind of secretory apparatus has been described by follicles, cryptse, or lacunae, which consist of a great number of vessels, so constructed as that an excretory duct is sent out from the congeries in the form of what an anatom- ist would call a vas eflferens. This kind of gland is described as being found in the ear, in the tonsils, and other organs which secrete a par- ticular kind of matter ; and indeed when once we admit of conglomeration, as opposed to con- globation, we admit into the division the most complicated, as well as the least complex of the glandular organisation ; so that the division might stand thus, which indeed is Blumenbach's, viz. merely, 1. Transuding vessels; 2. Secretory

follicles ; and 3. Those supplied with an ex ere tory duct sent out from the congeries of vessels constituting the gland. The main objection to this division in our minds would be that transu- dation cannot be supposed without some con- verting power in the transuding pore, unless in cases where the exhalation should be merely the more tenuous part of the blood, and uniformly the same in every part.

On glandular structures, however, even with- out reference to the peculiarity of the matter they engender, there is much that is still obscure. We copy the following sentences on this head from Blumenbach: —

' Properly speaking, the conglomerate, as they are called, to distinguish them from the lym- phatic conglobate, are the only two secretory organs; such as the salivary and lachrymal glands, the pancreas and the breasts. They are provided with an excretory duct coming imme- diately from the large lobes which are composed of others, smaller, and whose i-nterior structure was once the source of warm disputes in the schools of medicine. Malpighi considered the miliary globules which are easily discovered in most glands as acini, according to his expres- sion internally excavated. Ruysch on the con- trary contended that these supposed hollow acini were nothing more than glomerules of blood-vessels, an opinion shown to be far more

consistent with nature by microscopical observa- tions, and the effect of minute injection.

‘ The structure of some secreting organs, especi- ally of the liver and kidneys, the latter of which strikingly exhibit the glomerules of Rxiysch or the acini of Malpighi, are not, excepting in their peculiar parenchyma, very dissimilar from this structure, and indeed throw considera- ble light upon the question. On the outer part of these, small twigs arise from the sides of the capillary arteries, and run into vascular glo- merules, hanging from them like granules as from stalks ; from these arterial glomerules spring both very minute, colorless, secreting vessels, and the radicles of veins into which the arteries are continued, and which convey back into the venous trunks the remaining blood de- prived of the secreted fluid.’

It has been made a question how far the blood-vessels supplying glands should be con- sidered merely organs of supply to those glands, • or whether it is in these and from these vessels themselves that the glandular function is effected.

‘ The formation of the new substance within the vessels may i/e demonstrated,’ says Mr. Hare, as quoted by Dr. Elliotson, ‘by forcing colored injections into the arteries of growing bones, when the lime is seen to issue from their orifices in the form of a white powder, and deposit itself like the farina of a flower for the office of consolidation. In a similar way the injected arteries of tb« common domesticated hen, while her eggs ato incomplete, will show the deposition of lime from their exhalant branches upon the membrane which afterwards becomes the shell.’

We have thus in some measure deviated in the present instance from our plan of excluding anatomical delineations, because in the structure

of these separating manufactories, so to name them, there is a good deal that is rather conjec- tural, or at least disputable, than actually de- monstrated; so that the composition of these parts is in some sort their physiology.

The fluids which they separate have been divided by Fourcroy into 1. The saline, as the sweat and urine ; 2. The oleaginous or inflam- mable, as the fat, the wax of the ears, &c. ; 3. The saponaceous, as bile

and milk ; 4. The mucous, or those which are found on the sur- faces of internal membranes, that are hence called mucous tissues; 5. The albuminous, comprising the serous part of the blood ; 6. The fibrous, which resides in another portion of the blood.

Dr. 13ostock's arrangement, in his recently published system of physiology, is into the aqueous, as the perspiration and halitus from the lungs; the albuminous, comprising ' all the membranous or white parts of animals, the fluids of serous membranes, and those of the cellular mem- brane,— the former differing from the albumen of the blood chiefly in being freed from extraneous matter and coagulated, the latter from serum, chiefly in containing much less albumen; the mucous comprising the mucus of all mucous membranes, the saliva, gastric juice, tears, and semen ; the gelatinous furnishing membrane and going to the formation of skin; the fibri nous, or the muscular fibres abounding in azote, and thus more completely animalised resembling the fibrin of the blood, apparently their source ; the oleaginous, comprehending the fat, marrow, and secretions of sebaceous glands, and perhaps the milk, as its properties depend so considera- bly on oily matter; the resinous, which are simi- lar to the former, but owe their specific character to a kind of resin ; the osmazomean, an animal principle, which in all parts of the body is re- ferred to this division ; the saline or, the acids, alkalies, and neutral and earthy salts of the various solids and fluids.

On this arrangement Dr. Elliotson very pro- perly remarks that ' it is certainly good, but, like every other arrangement of natural objects, convenient for general views and memory rather than correct. The semen is mucous, but unlike every other fluid ; the gastric juice and cerebral substance are equally sui generis. Fibrous matter as well as mucous exists in semen, and is probably indeed its specific part; albumen exists abundantly in milk united into an emul- sion with the oleaginous portion. The bile and urine have few properties in common, and urea is certainly not a resinous substance.

For an account of the chemical composition of these several and separate secretions we must refer to the article- CHEMISTRY, and in some places to t'ue respective words as they occur in alphabetical order. We shall terminate the present section with a few remarks on the pecu- liarities of the fat, the urinary secretion, and the matter of perspiration.

Fat. — Every part of the body is connected together by cellular membrane, and into some parts of this tela is deposited an oily semi- fluid substance, which, when first formed from the blood, exists in

drops ; but even during life it is

more diffused and less concrete in some parts than in others : after death, from the cessation of vital action and from the reduction of tempe- rature, it assumes every where the form of a concrete substance.

‘ There have been controversies respecting the mode of its secretion ; some, as W. Hunter, contending that it is formed by peculiar glands ; others that it merely transudes from arteries. Besides other arguments in favor of the latter opinion, we may urge the morbid existence of fat in parts naturally destitute of it ; a fact more explicable on the supposition of diseased action of vessels than of the preternatural formation of glands. Thus it is occasionally formed in the globe of the eye; a lump of hard fat generally fills up the place of an extirpated testicle ; and steatoms have been found in almost every cavity of the body.’

One of the most remarkable circumstances connected with this secretion is the rapidity with which it is occasionally formed and dissipated; in the latter case it must be reabsorbed ; this is more especially the case in some constitutions than in others. You will see individuals often manifestly fatter on one day than on the preced- ing or succeeding day.

Hydrogen and carbon are more abundant in fat than azote, and it has hence been supposed a kind of intermedium for a portion of the nutri- tive matter extracted from the food, through which it must necessarily pass before it is assi- milated to the individual, of which it is destined to repair the loss. Thus, it is said, that an indi- vidual with much fat is able to abstain from food longer than another without this supply, and during such abstinence the collected fat is rapidly reabsorbed. Others have supposed that fat affords a receptacle for the superfluous hydro- gen of the system, which could not otherwise be easily evacuated ; certain it is that it lubricates the solids and thus facilitates motion ; it serves also, by filling up the angles and interstices of the body to give a roundness and smoothness to the form ; hence the characteristic beauty of the- infantile period. It serves also to prevent in- ordinate sensibility by sumninding, and thus de- fending, the extremities of the nerves ; and it manifestly serves as a defence against cold, partly from the circumstance that animal oil is a bad conductor of caloric, and therefore preven- tive of the vapid transmission of heat to a cold medium. Like all the other secretions it is greatly influenced by conditions of the mind. Much fat and much anxiety are scarcely com- patible.

‘ Yond’ Cassius has a lean and hungry look ; He thinks too much.’

Urinary secretion. — The composition of this fluid, as well as that of the other secretions, will be found in the article CHEMISTRY. We shall only here offer a remark or two on the mode in which it is secreted; ou the manner in which it is transmitted to the bladder ; retained in it and expelled from it; on the rapidity with which some matters are conveyed from other parts of the frame into the urinary organs ; and on the purposes which urine, as an eicretion, is sup-

posed to answer in reference to the general eco- nomy of the animal system.

‘ If ever,’ says Richerand, ‘ the art of man shall penetrate into the mystery of the intimate structure of our organs, it seems probable that the kidneys will furnish the first solution of the problem. Even coarse injections pass readily from the venal arteries into the ureters or excre- tory ducts of the kidneys, a convincing proof of immediate communication among the minute arteries, which, exceedingly tortuous, form with the minute reins the cortical or outward sub- stance, and the straight urinary tubes which, distributed in conical fasciculi into the interior of these organs, constitute what has been called its tubuli and papillae. This free communica- tion, he goes on to say, gives an idea of the ra- pidity with which the blood must flow through these organs whose firm consistence allows a very moderate dilatation to the vessels.’ The great difficulty, however, in this, as in other in- stances of secretory organs, is to find the precise point where the pabulum of secretion becomes itself actually the secreted matter; and there is nothing either1 in mechanism or chemistry that satisfactorily unfolds this secret. That the trans- mutation is gradual, in one sense, seems to be proved by the circumstance that the urine in the ureters is turbid and imperfect, and by its acquir- ing, as it passes along these ducts, the charac- teristic quality of urine. What impels it through the ureters ? Partly gravity, and partly the contrac- tility of the ureters themselves, aided, it is said, by the compression of the abdominal viscera in their alternate motions during respiration, and the con- cussion attending the several kinds of bodily ex- ercise. It is questionable, however, whether these last have any power in propelling the fluid from the kidneys into the bladder. The retro- grade flow of the urine, when it has once entered the bladder, is prevented by the oblique inser- tion of the ducts.

‘ The following are the causes which enable the bladder to retain the urine ; the contraction of its sphincter, a muscular ring surrounding the termination of the organ into the urethra ; the angle formed by the urethra after it leaves the bladder ; and, lastly, the anterior fibres of the levator ani which surround the neck of that or- gan, surrounded beside and supported by the prostate gland.’ At length the collection of the fluid in the bladder causes an uneasy sensation and urges to the discharge, which is effected both by the action of the detrusor urinae, and abdominal pressure. In men the acceleratores are called into action, and ‘ Mr. Charles Bell has described two long muscles running from the back of the prostate gland to the orifice of the ureter ; their action is not only to assist in emp- tying the bladder, but to pull down the orifice of the ureter,’ so that we have another cause pre- venting the reflux into the ureter from the blad- der, even when the last organ is repleted.

We have already alluded to the rapidity with which various substances come to affect the urinary organs, and this in truth is one of the greatest arcdna in the whole animal economy. That communications between the stomach and kidneys exist -by undiscovered channels has been

inferred by the rapidity with which fluids disap- pear from the former and impregnate the latter, even when the pylorus has been tied, and thus exit prevented from this channel. It is probable that the investigations that are now being made on the subject of absorption, and its peculiarities, may tend to throw more light than hitherto has been cast on this remarkable fact : and here it may be proper to remark that the kidneys are not the only parts upon which this speedy trans- fer is made from one to another portion of the frame. In Dr. Cooke’s recent publication on apoplexy we have an account of a man who fell down dead immediately upon taking a large quantity of gin, and of a fluid smelling like gin being found in the ventricles of the brain. In this case, if the narration be true, the transmis- sion must have been exceedingly rapid; for it could not have taken place after death ; and we have just said the fatal consequence of the liquor manifested itself almost immediately upon being swallowed.

It is not here our intention to go into patho- logical considerations on the venal function, and the changes of which the urine is susceptible (see URINE or UREA in the body of the work); but we have here to remark that the kidneys have been supposed the organs through which the system is freed from its superfluous azote, as the lungs and liver serve the purpose of getting rid of the refuse quantity of carbon ; this inference ‘has been drawn from the large quantity of the azotic

principle which the urea of healthy urine contains. With respect to the mode in which urea is formed and separated, we may insert the following extract from Dr. Copland's note on Richerand : — ' It seems not improbable that the debris of the textures, being carried into the circulation, is converted by the influence of the organs and vessels through which it flows into the substance called urea, and that the function of the kidneys is to eliminate it with other ma- terials that would be hurtful to the system.' Dr. C. founds this opinion on the experiments of Dumas, Prevost, and Le Gallois, who found, on examining the blood of living animals whose kidneys had been extirpated, that it contained urea, the quantity of which was increased in proportion to the duration of life after the opera- tion ; whilst this substance could not be detected in the blood of those animals in which the uri- nary secretion was uninterrupted. It is there- fore thought that urea is not formed in the kidneys by their appropriate functions, as some physiologists have conjectured ; but that it, and probably other materials which are removed from the blood by these organs, are derived from other sources.

PERSPIRATION.

Much yet remains to be learned on the struc- ture and functions of the skin. We have already seen that doubts have existed as to whether ab- sorption is effected by the surface of the body while the outer skin remains entire ; but on the power which it possesses of exudation or throw- ing off matter, or rather of permitting matter to pass, there can be no question. Indeed there does not seem any room to doubt that not oniy

common perspiration, but foreign and injurious matter, may be excreted from the surface of the body, eliminated from the mass of fluids. This is exemplified', says Blumenbach, in the miasmata of exanthematic diseases, in the smell of the skin after eating garlick, musk, &c.; and, he might have added, in the elimination of gouty matter from the surface of the body, which, under certain circumstances however,\is accumu- lated under the skin, and forms the concretions named chalk stones.

But the matter which principally and con- stantly finds its way through the skin is the insensible perspiration, which, according to chemical examination, is composed of various proportions of carbon,

azote, and nitrogen. The sweat which is occasionally seen standing in drops on the surface of the body seems to be nothing more than this perspirable exhalation in an increased measure; its hydrogen, physiolo- gists tell us, uniting with the oxygen of the at- mosphere, and thus giving a liquid or condensed form to the secretion. Upon the same hydrogen, says Blumenbach, variously modified by the accession of other elements and constituents, would seem to depend the natural and peculiar odor perceived in the perspiration and sweat of certain nations and individuals. The quan- tity of matter, he goes on to say, perspired from the integuments, which in a well grown adult are equal to about fifteen square feet, cannot be accurately estimated, but is probably about two pounds in twenty-four hours. And upon this paragraph we have the following note from Dr. Elliotson : — To ascertain the quantity of watery secretion, Lavoisier and Seguin enclosed the body in a silk bag, varnished with elastic gum, and having a small opening carefully cemented around the mouth, so that, by weighing the body previously and subsequent to the experiment, thsy were able to ascertain exactly what had been lost; and, by subtracting from this loss the weight of the perspired contents of the bag, they also ascertained how much of this had passed off by the lungs. From repeated trials they found the mean pulmonary discharge in twenty- four hours amounted to fifteen ounces, and the cutaneous to thirty ounces. The quantity of carbon separated by the lungs ought however to be taken into the account. If it amount to eleven ounces in twenty-four hours, the quantity stated by Allen and Pepys, there will be but four ounces of pulmonary exhalation. But, if oxygen and azote are absorbed in respiration, there must have been correspondently more pul- monary exhalation, and Hales estimated it at about twenty ounces in the twenty-four hours. They found the cutaneous transpiration at its minimum during, and immediately after, meals, and at its maximum during digestion.

The minimum after digestion was found by them to be eleven grains per minute, the maxi- mum twenty-two grains; at and immediately after dinner 10ˆ, and the maximum 19ˆ, under the most favorable and unfavorable circum- stances. It was increased by liquid, but not by solid food. The pulmonary they regard as greater than the cutaneous, proportionately to the surface on which it occurs. Whatever was taken,

the weight was found to become alternately as before. Indigestion lessened transpiration, and the body continued heavier generally till the fifth day, when the original weight was restored. Transpiration was less in moist air and at a low temperature, and the pulmonary and cutaneous transpirations obeyed the same laws.

These observations are sufficient to prove the importance of cutaneous transpiration, and its relation with the pulmonary exhalations ; the connexion between the one and the othˆr func- tion has also been traced in a different way ; for, as in the instance of inspiration a gas is absorbed and so heat given out, so it is said that in sweat a fluid is formed which has more capacity for heat than the blood, and hence cold is generated. Indeed the production of cold by evaporation from the surface is allowed on all hands; but something further is conceived in the particular now adverted to ; and Dr. Currie has ingeniously conjectured that even in the formation of the perspirable fluid, before it makes its way to the surface, a cooling effect is produced upon the principles just adverted to ; and he was led to this inference from having observed the cooling effects of immersion under some circumstances in the tepid bath, where there could be no eva- poration, and consequently no generation of cold from this source.

It is possible that the laws of chemistry may have been stretched too far in the speculations which physiologists have engaged in concerning this function of cutaneous perspiration in con- nexion with that of respiration ; but the con- nexion to a certain extent, and in many different ways, is sufficiently manifest, and there is a wide field open for the researches of the chemist, the physiologist, and the pathologist, for the consi- deration of the respiratory and the transpiratory process in relation the one to the other. We shall have to make a few remarks on this head when considering the subject of urinary affec- tions under the article UREA or URINE, in the body of the work. But we must now proceed to consider the second order of functions marked out by Richerand, viz. those which form connexions with surrounding objects. This order, it will be perceived, comprises three genera, viz. sensations, motions, voice and speech ; but on these, as well as on the second class of functions, we shall be exceedingly brief, since digestion, absorption, circulation, respiration, secretion, and nutrition, constitute the principal particulars for physiological consideration, the remainder having to do with NATURAL PHILOSOPHY, NA- TURAL HISTORY, or METAPHYSICS, and therefore falling to be considered under different divisions of the Encyclopaedia. The third genus indeed of the second order we have already commented on under the head of Respiration ; and we now pass on to a few brief remarks on Sensations and Motions : —

SENSATIONS.

Of Light. — The rays of light passing through the cornea from any pointof an enlightened object form, as it is stated, a cone, the apex of which answers to the point of the object, and the base covers the

anterior part of the cornea. Those rays

which do not fall upon the cornea are lost to vi- sion— those which do are refracted by the den- sity of the cornea, and thus turned towards the axis of the eye ; when they enter the aqueous humor the refraction of the rays is less, while those which strike upon the lens through the pu- pil are refracted still more, because this last body has still more density. Those rays which pass upon the membrane called the iris are reflected, and show the color of the eye ; the pupil, through which those rays which eventually serve for vi- sion must pass, is contracted or dilated accord- ing to the degree of light which enters the eye, provided the retina and optic nerve, of which the retina is a sort of expansion, are in a healthy condition. When the retina is painfully affected by too powerful a light, the pupil contracts in order that admission may be only given to a small number of rays ; on the other hand it widens when the light is less vivid that more light may be received upon the visual organ — the retina.

Objects are said to be inverted on the retina, and that we correct the false impression thus made by experience and the assistance of other senses, but this is a mistake; for it ought al- ways to be recollected that it is the sensation of the image, and not the image itself, that is com- municated to the sensorium ; and the notion of one sense correcting another has been too vaguely taken up and reasoned upon ; certain it is, however, that the child's progress in vision and general feeling is a matter partly of experi- ence, though we believe the inferior animals are our superiors in this respect, and conceive of distances accurately immediately upon seeing the light. We not long since saw the first start of a young bird from its nest in a breeding cage : it was to a perch in the cage, and the young stran- ger perched as accurately upon the part aimed at as if it had had months of experience ; and we are told by a celebrated naturalist of a chicken breaking from its egg and immediately obeying the dictates of its nature by darting upon and seizing a spider, that, unfortunately for itself, was crawling past at the moment of the chicken's en- tering upon this world of destruction.

Besides the controlling motions of the iris, which are directed by the sensibility of the optic nerve, the pigmentum nigrum serves to absorb those rays of light which are too numerous or pungent. The albinos are without this pigment, and are therefore incapable of enduring a strong light. See OPTICS.

Light in some persons is preternaturally or morbidly short, while in others it is more than commonly long : the former defect is occasioned by the too great convexity of the cornea or pro- minence of the lens ; in the latter there is the op- posite conformation of parts. The first defect is lessened as the individual advances in life ; — the second is increased by increasing years.

With respect to the external organ we may remark that the brows above the eyes in some measure direct the perspiration of the forehead from trickling into the organs, and likewise prove some defence against too strong a light. The lids too are shades or curtains to prevent the entrance of too strong a light, and to guard against the intrusion of insects or matters floating

in the atmosphere ; while the tears which are poured out from the lachrymal gland wash away foreign matters from the eyes, preserve their brightness, and facilitate their motions.

Of hearing. — Sound is occasioned by the vi- brations excited in a sonorous body, transmitted to and through the air as an elastic medium : — it is propagated with less velocity than light. We hear the report of a gun at a distance after we have seen the flash connected with the explosion. We see lightning and then hear the rumbling of the thunder immediately after.

The human ear is so constructed, even exter- nally, as to collect and concentrate the sonorous rays ; but it is the auditory nerve, distributed among the windings of the labyrinth, that receives the impression of sound to convey them to the sensorium. On reaching the bottom of the meatus auditorius these sounds strike against the membrane which is stretched across the tym- panum, the cavity of which is filled through the eustachian tube; as the vibrations of the air pass into the meatus, tremulous motions are excited in the interior, which move the malleus and stapes, ‘ and then institute a due relation between the organ of hearing and the sounds which strike it.’ The oscillatory tremors are propagated to the vestibule, the fluid which fills the different cavi- ties of the internal ear receives them, and thus are the branches of the auditory nerves affected, ac- cording to the nature and energy of the sounds conveyed, or the degree of integrity in which the organ itself is.

Hearing, like sight, may be peculiar; that is, the individual may be open to the perception of sounds in the one instance, and have his visual organ quite correct in the other, — and yet be without what is called a musical ear, or be unable to distinguish the different shades of

color. These varied susceptibilities without any thing in the organs to explain them, have much puzzled both metaphysicians and physiologists ; but the phrenologist tells you they are referrible to a par- ticular construction of that portion of the senso- rium commune which is destined to receive the perception of color and sound, and he marks out the spot of the brain, as denoted by external con- figuration, which is wanting in development where these faculties are wanting.

Of smell. — ‘ The principal seat of this sense — the fungous portion of the nasal membrane, besides numerous blood-vessels remarkable for being more liable to spontaneous haemorrhage than any others in the body, is supplied by nerves ; chiefly the first pair which are distributed on both sides the septum narium, and also by two branches of the fifth pair. The former appear to be the seat of smell, the latter for the common feeling of the part that excites sneezing, &c.’

It is supposed by some physiologists that the olfactory nerves do not extend into the sinuses, and that these sinuses only improve the sense by enabling the individual to retain a larger quan- tity of air, and for a longer time, which is loaded with odoriferous effluvia; it is remarkable that, though the sinuses are scarcely formed at birth, the sense of smell seems sufficiently acute ; which is explained upon the principle of general sensibility making up for imperfection in organs

The disgust which the adult feels in the percep- tion of various odors is rather perhaps referrible to the principle of association than to any actual difference of the perception itself between him and the boy. This sense is indeed very curiously the inlet to impressions both of the delightful and disagreeable kind in a remarkable degree. Rousseau very aptly called it the sense of imagi- nation. We may instance the case of an indivi- dual turning away from the offensive breath of ano- ther, when that degree of disagreeableness would hardly be perceptible did it proceed merely from inanimate matter. Like the other senses it may be much improved by exclusive culture, and it is upon this principle that as well in this as in the instance of any other sense, the loss of one is made up by a more than ordinary acuteness in another. Blind persons can sometimes find out by the sense of smell alone how many indi- viduals are in the room with them.

Of taste. — Each sense has been said to be but in reality a peculiar

modification of feeling ; of taste this may be said more appropriately than of any other sense ; the surface of the tongue, which is its residence, only varying from the skin in being thinner, more vascular, its papillae being formed in a somewhat different manner, and having cryptae or follicles which secrete a particular mucus. The sense of taste is generally referred to the lingual branch of the fifth pair; some have supposed that the ninth pair contri- butes its share to its development ; while others regard this last as merely supplying the organ with motive power. The papillae of the tongue, in which the sense of taste would seem to reside, are certainly supplied from the fifth.

Of feeling and touch. — This has been with some propriety considered the elementary sense, — the generic something of which the others are modifications; indeed we perceive not only some qualities, as heat, hardness, weight, &c., by the touch only, but our knowledge obtained by other senses respecting some qualities is rendered more accurate by the touch ; such qualities are figure, distance, &c. In some parts of the sur- face this sense is peculiarly modified ; in the skin, for instance, covering the points of the fingers, here we meet with papillae which somewhat re- semble those of the tongue ; but they seem con- stituted more of nervous projections than secreting cryptse — they are enveloped in an ex- tremely vascular membrane. When the sense of feeling is brought out, these papillae are sup- posed to swell, and raise the epidermis away so as to render the sense more accurate. We may, however, remark that there is no part of anatomi- cal physiology that requires more of remodelling than that connected with the integuments of the body, and this is remarkable, since one should suppose that what is so immediately under the eye would be the easiest to be understood.

The same remark on the varieties of the sense of feeling may be made, as in reference to the other senses, that it is sometimes generally per- ceptible, while insensible to certain impressions; and that these differences are rather ascribable to varied conditions or conformations of brain than to any difference in the organisation itself, would appear to be made out by the circumstance of

apoplectic or paralytic attacks sometimes sus- pending or abolishing one kind of sense, while they render more acute, another. Indeed it is now, since the researches of Mr. Charles Bell, considered that the muscular fibres, rather than the mere integuments, are the parts in which these variations are actually developed.

Action of the nerves. — On this head every thing is conjectural ; for

whether we talk of ner- vous fluid as being the medium of sense, or of oscillations or vibrations, we are equally gratuit- ous in our assumption, and meet with difficulties at every step in our proposed analogies. That the nervous branches should have ever been sup- posed vibratory chords, like the strings of a mu- sical instrument, seems astonishing when we reflect upon their form, composition, and modes of connexion ; and that they are tubes, conveying a fluid from the cerebral mass, is equally incon- sistent with all the phenomena connected with nervous development ; this hypothesis would seem especially at variance with what has been called the reacting communication between the centre or centres of sensation, and the organs of sense. Recently the nervous influence has been considered more allied to the Galvanic impulse than any other mode of excitant; and, although vital and other impulses and agencies must be always in some measure regulated upon differ- ent principles, we cannot help thinking that more analogy has been traced between sentient excitation and the stimulus of which we speak, than had been hitherto made out.

With respect to the general rationale of sen- sation, the difference between sensibility and perceptibility, and the comparison of man's intel- ligence with the instinctive, and sensitive, and loco-motive faculties of the inferior animals ; we had contemplated, in this part of our investiga- tion, a few further intimations than those which will be found in the introductory part of the pre- sent treatise. Our limits, however, oblige us to forego our intention, which we do with the leˆs concern, since in the article BRAIN, and under the word PHRENOLOGY, will be found, perhaps, as much of metaphysico-phy biology as it is proper for us to engage in ; the more abstract enquiries on the subject of mind will be found canvassed in the metaphysical articles, and the moral circum- stances and responsibilities of our nature are better, perhaps, placed upon other foundations than any which physiology can supply. We shall merely content ourselves in this place by extract- ing what we have advanced in another publica- tion, and reiterate ' that endeavours to establish an identity of faculty in the man and the brute (if the dispute is not a mere logomachy), have failed of their object : and as we believe that the fables of the Hamadryade are not realised in the trees of our forests ; so we still flatter ourselves, notwithstanding the indications of reason, and the great power of imitation which have been ex- hibited by some individuals of the ape species, that the human intellect is of a nature essentially different from that of the monkey.'

We must, however, stop to fulfil an engagement which we placed ourselves under with the rea- der, in reference to the new division of

the nervous system, which has lately been proposed and fol-

lowed out with much ability by Mr. Charles Bell. The reader, by turning to the article ANATOMY, will find that under the word Physio- logy was promised an outline of these new doc- trines.

Mr. Bell then takes the entire system of nerve- as it is extended from or connected with the brain, including the whole length of the spinal chord. Indeed anatomists now generally speak of cranial brain and spinal brain, rather than of spinal chord, in order to do away with the old opinion, that the nerves are sent out from the brain, as the arteries are from the heart. The view at present generally taken, whether the phy- siologist be a convert to phrenology or not, is that the whole nervous system is in that sort of communication which is inconsistent with the former notions of origin and distribution of nerve. Mr. Bell supposes, that besides the nerves of sense, as those for vision, smell, hearing, and taste, there are four systems combined into a whole, viz. those for sensation, and those for vo- luntary motion, arising nearly together but in separate columns ; those of respiration, and those which combine the others into a whole, and per- form the vital functions. The first two arise in separate columns from the spinal chord (that is, the nerves of sensation and motion) ; they com- prise, beside the spinal nerves generally consi- dered such, the fifth nerves from the brain, according to the common division, and the tenth or suboccipital of some anatomists. These, our author says, are all of double origin (that is, the parts for sensation and the parts for motion are distinct at their roots), they are the nerves of muscular motion, and the general sensibility of the body's surface.

Then come the respiratory nerves of Mr. Bell's arrangement, which are principally sent off from that part which anatomists name the medulla oblongata. They are the par vagum of the eighth pair, the portio dura of the seventh, the ac- cessory of the eighth, the phrenic or diaphrag- matic, which is said to be principally formed by a branch from the second, third, and fourth, of the upper spinal nerves; and the external respira- tory, having the same origin. All these Mr. Bell calls superadded or respiratory nerves, and he maintains that they are distinct from those of sense and motion ; that they do not pass off like them laterally, and with a double origin ; that they are not furnished with gauglia at their roots; and that they do not bestow the faculty of feeling on the parts to which they are distributed.

The nerves which unite the whole are the sym- pathetic of former anatomists.

Mr. Bell has thus established (provided his views be correct) a distinct system of respiratory nerves, which Dr. Philip, by the way, says ought to have been named pneumo-gastric, from their influence as well over the digestive organs as the organs of respiration). He (Mr. Bell) has also shown clearly the separate origin of the nerves of sense and motion : thus solving a problem which had hitherto puzzled anatomists, and upon which indeed not a ray of light had been thrown since the time of Galen up to the announcement of the discoveries now referred to. M. Magendie seems to wish it thought that he was the original

discoverer of this last and most important dis- tinction between nerves of sense and motion, as originating by separate roots in the spinal chord; but, whether the observations of this last very able and indefatigable physiologist were made with or without any assistance from Mr. Bell's announcement, certain it is that Mr. B. was the first to publish the fact, and therefore is justly entitled to the credit of being its discoverer. It ought however to be recollected that with re- spect to the former division, between brain and spine nerves, Dr. Gordon had already started ob- jections, and that the French physiologists, even previously to Mr. Bell, had shown the connexion which the function of breathing has with that portion of the spinal chord principally in which Mr. B. has demonstrated the origin of the respi- ratory (pneumo-gastric) system of nerves.

OF SLEEP, DREAMING, &c.

The condition and the exciting causes of sleep demand no description; in respect to its proxi- mate cause, or in other words the condition of the brain necessary for its induction, there is considerable obscurity. Blumenbach ascribes sleep to a diminished or impeded flow of arterial blood to the brain ; for that fluid, he says, is of the highest importance, during the waking state, to the reaction of the sensorium upon the func- tions of the senses, and upon voluntary motions ; on this opinion, his commentator, Dr Elliotson, makes the following very judicious remarks: — ' The alteration of circulation is usually not the cause but the consequence ; necessary, indeed, to the continuance of the altered degree of activity in the organ, but not the cause. If the circula- tion through a part be mechanically increased or diminished, the sensibility and activity of the part will doubtless be proportionally increased or diminished. But in ordinary sleep the diminish- ed circulation appears only the consequence ; for inactivity always

follows activity.' We conceive this distinction to be important between vascular conditions as a mere circumstance and cause — a distinction which pathologists as well as physio- logists would do well to recognise in some of their speculations and practice respecting nervous derangements. An exhausted or depressed ner- vous energy is doubtless the cause of drowsiness coming upon an individual which ends in sleep ; but the altered condition of the circulation would appear to be a mere consequence, or at any rate only a concomitant.

Pressure on the brain will produce an arti- ficial sleep, but this is a condition rather allied to apoplexy than true sleep, and no inference can be drawn from it : indeed, till we know more than we at present do, respecting the primary and directing changes in the nervous organisa- tion, the cause of sleep must, as well as the cause of some nervous conditions, be quite obscure. We believe that if Richerand, who remarks, on the subject of somnolescence, that the human body presents, with tolerable accuracy, the i.iodel of the centripetal and centrifugal powers of an- cient philosophy, the motion of several of the systems that enter into its structure is directed from the centre to the circumference ; it is a true exhalation that expels the produce and continual

destruction of organs; such is the action of the heart, arteries, and all secretory glands. Oilier actions, on the contrary, are directed from the circumference to the centre, and it is by these means that we continuallyreceive from the aliments introduced into the digestive organs the air that penetrates into the internal structure of the lungs, and surrounds the surface of the body, the ele- ments of its growth, and reparation. These two motions in an opposite direction continually balance each other, and alternately preponderate according to age, sex, sleep, or waking. During sleep the motions are directed from the circum- ference towards the centre (motus insomno intro- vergunt, Hippocrates) ; and, if the organs that connect our intercourse with external objects De- pose, the internal parts act with greater advan- tage.' Hence our author would explain, or rather trace, the connexion of repose with corpulence ; and of inordinate mental or bodily exercise with leanness. Sleep may indeed be so indulged as to reduce man to a condition of mere brutal ex- istence, as in a case related by the author of the above extract, viz. that of a man sleeping five- sixths of the day with a digestion always active and easy, and with moral affections circumscribed in the desire of aliment and

repose.

Boerhaave also speaks of a German physi- cian, who maintained that sleep was the natural state of man ; that when he was awake he was in a state of disease, and he so acted up to his the- ory that he brought on apoplexy as a consequence of his inordinate indulgence.

Dreams are certainly sportings,asBlumenbach calls them, of the imagination ; but as in the con- dition of sleep it is difficult to conceive the pre- cise condition of the sensorial organ or organs which shall simulate the condition of wakeful- ness, or rather cause the consciousness of being awake, and walking, and eating, and drinking, and speaking, while the individual is actually lying upon his pillow and not making any of these supposititious exertions, unless indeed when dreaming is carried to the height of somnambu- lism, or walking in the sleep ; here indeed the individual, like the man who is insane, reasons and even acts correctly, but without reference to other balancing and correcting principles which both actuate and restrain in the state of wake- fulness or sanity. Phrenological speculators have argued with a great deal of ingenuity on these conditions, under the assumption that they imply the activity of one or more organs, while the rest are in a contrary state, and that therefore do we witness all the confusion, and irregularity, and want of restriction or restraint, which cha- racterise dreaming and somnambulancy and mad- ness.

Sympathies. — In respect to these it may be re- marked that they exist sometimes between organs, the nervous connexion of which can be traced, and in these instances the phenomena they produce are in one sense of easy explication; but at other times they are displayed between organs which one should anatomically infer are any thing but in a state of combination : in these last instances the laws which regulate them are more obscure. What Dr. Darwin calls reverse sympathy is a curious circumstance, viz. the cessation of an VOL. XVII.

‘jritative action in one part, being succeeded by a like action in another, and that with some de- gree of regularity : for instance, the skin will be covered by the eruption of measles on one day, and on the next this eruption shall be found to have prematurely subsided, and the internal membrane lining the lungs to have taken on a disordered action in consequence. Then again there is a sympathy which is in some measure inexplicable between opposite extremities of u continuous membrane, as is exemplified in the instance of ascarides in the rectum occasioning- an itching of the nostrils ; now why this should take place only at opposite extremities or parti- cular points of the membrane, and not continue through its whole course, does not

seem of very easy explanation. Sympathy has been applied as a term to those actions in the system which seem especially to be under the influence of final cause, if we may so say, as when the rectum contracts by the stimulus of excrement, and the sphincter ani relaxes as a consequence of that contraction,

Habit. — No one requires any illustrations of the potency of habit. Who does not know that even miscarriage is liable to recur merely from its influence, and that thousands both of natural and morbid circumstances establish themselves, as parcel of mind and body, under its entire in- fluence. We do feel persuaded that those lessons of morality would be most efficient which should present to the mind in lively colors, and with reiterated impression, the dangerous force of this most dangerous power, when suffered to gain an ascendance under a wrong bias.

Animal motions. — Muscularity is the great organ of loco-motion, and all the modifications of it are traceable to the different manner in which muscles are attached to bones. Now ‘ a property common to all muscles, and the imme- diate consequence of their irritability, is to become shorter, more rigid, and generally un- equal, and as it were angular during contraction. Prevost and Dumas assert that the muscular fibres, straight while at rest, approximate each other at intervals under contraction, so as to acquire a zigzag course and shorten the dis- tance of their two extreme points. They as- certained satisfactorily that during contraction no increase of volume is acquired. If muscles while the fibres are straight are stretched still more, as continually happens in the muscular coats of cavities, the subsequent shrinking to the original dimension is unattended by the zigzag appearance. Nervous filaments, they also assert, go perpendicularly to the muscular fibre at the very points where the angles are formed under the zigzag contraction, and yet not to terminate there or unite with the muscular fibres, but tore- turn or anastomoze with other nerves. The ap- proximation of the nervous filaments to each other is thought to draw the muscular fibres into angles, and thus be the cause of muscular con- traction. The approximation of the nervous tila- ments is considered an electric phenomenon. Electricity will effect it ; and in whatever way it is effected, electric appearances are said always to be discoverable.

Muscular power is no where more displayed

than in some fish. ‘ I have seen,’ says Sir Gilbert Blane, ‘ the sword of a sword fish sticking in a plank, which it had penetrated from side to side ; and when it is considered that the animal was then moving through a medium even a thousand times more dense than that through which a bird cleaves its course at different heights of the atmosphere, and that this was performed in the same direction with the ship, what a conception do we form of this display of muscular power. Muscular strength is proportionably much greater in smaller animals. A flea can draw from se- venty to eighty times its own weight, whereas a horse cannot draw with ease more than three times its own weight.

The functions now to be considered are those in the second class of Richerand’s system of ar- rangement ; they serve for the preservation of the species, and are divided into two orders, the first of which require the concurrence of both sexes, the second exclusively belong to females. On these functions we shall, for reasons already stated, be exceedingly brief.

ON tHE DIFFERENCES OF THE SEXES.

During infancy we find the general character- istics of sex comparatively so indistinct that some physiologists have been disposed to refer the successive development of the male and fe- male peculiarities solely to the generative organs. Propter solum uterum mulier est id quod est : Van Helmont. There is, however, some error in this conclusion ; for we find that even from the birth some measure of difference is per- ceivable between the male and the female ; the former having less mobility of constitution, and less delicacy and roundness of form than the latter ; as the child grows this difference be- comes more and more evident, the muscles of the boy become larger and firmer, the face and head more expanded, the sharpness of the bones more decided, and as youth falls into puberty the dif- ference now is much more striking ; the chest is more expanded in the male, the breasts do not as in the female become large and round, the hips are smaller in proportion to the chest, the body generally is more sinewy, and muscular, and angular; hair covers the chin, and the larynx, as marked by change of voice, is much altered. The pulse too in the male is for the most part less frequent than in the female, the stomach and appetite for food is greater, while the growth of the body is less rapid, and the several periods of dentition, puberty, and acme of stature later.

Hermaphroditism. — The sexes are sometimes, but very rarely, dubious ; but the combination of the two sexes in one individual, is a mere poetical fancy, at least in the human, and in animals that bear the smallest resemblance to man. We mean the completion of the two sexes in one in- dividual ; for it certainly does appear that in a few very rare cases the organs are so formed as that the individual is neither of one sex pro- perly, nor of the other. We saw some time since, in London, a person who was exhibited as an hermaphrodite, and it was stated that this person possessed the sexual desires and capabilities of enjoyment of both sexes, and certainly as to ex- ternal form and even to genital formation there

apptxired a complete union of thesexes; butvvc are very doubtful whether the statements in re- ference to propensities and powers were not in- vented, or at least exaggerated. The mammas in this case were beautifully formed and deve- loped. The limbs had the round contour of the female ; the voice, if we recollect right, was femi • nine ; and the whole appearance indicated volup tuousness. But on the other hand the chin was covered with beard, there was more hair gene- rally than is seen about the female, and it was stated that both the urine and the menses passed through a projecting body which appeared like an enlarged clitoris, only that there was the in- dication of an urethra and five small orifices at its under part. The question here was whether an uterus and ovaria existed ; and until the death and examination of the person, this question must remain unsettled. We merely allude to the case as the most marked instance that has come within our own personal know- ledge of dubious or mixed sex.

Some physiologists havrf traced a close ana- logy between the sexual organisation of the male and female, comparing the ovaria of the latter with the testicles of the former, the Fallopian tubes with the vasa deferentia, the uterus with the vesiculae seminales, the clitoris with the penis, the nymphae with the preputium ; and to such an extent has this been carried by Sir Everard Home that he conceives the sexes are at their first for- mation hardly determined, but capable of pass- ing from one into the other. These, however, seem fanciful and unstable opinions.

Genital function in man. — The generative pro- cess in man is affected by a diminution from the blood of the seminal secretion ; this secretion is of a yellowish color, of a peculiar odor, of mu- cous viscidity, and great specific gravity; it has been found, also, to be formed of an infinite number of animalcules, which in the human semen are of an oval form, and have very fine tails; the semen, immmediately upon its secre- tion, passes the vasa deferentia, and

enters the vesiculae seminales ; what alteration it here un- dergoes does not seem quite certain, or whether the vesiculae are not merely reservoirs for it. It was stated by Richerand that they lessened the time of copulation, and that those animals, as the dog, who are without them are therefore longer in coitu ; but in this he has been led into an error by too partial observation. As the se- men in man passes through the prostate gland it is mixed with the mucus which this gland secretes, and is projected through the uterus with it. 'The emission of semen is excited by its abundance in the vesicles, and by sexual instinct; it is effected by the violent tentigo which ob- structs the course of the urine, and, as it were, throws the way open for the semen; by a kind of spasmodic constriction of the vesiculae semi- nales; by a convulsion of the levatores ani and of the acceleratores urinae ; and by a succus- sion of the whole system, short and less violent, though almost of an epileptic nature, and follow- ed by a depression of strength.'

Genital junction in the female. — The question of how far the semen is propelled into the geni- tal organs of the female does not seem to be

quite settled ; and, indeed, there still remains some difference of opinion, as to the part which the female performs in the process of generation. It was formerly thought that the ovaria secreted a seminal fluid, which mixing with the male se- men in the uterus, impregnation was the result of the union; that notion is now, however, pretty generally abandoned, but it is still supposed that the ovarium prepares something essential to generation, since its removal renders the female sterile. Some imagine that an actual contact of the ovum and semen is necessary, and it is ima- gined that the semen is absorbed into the uterus, where it is met by the ovum which has descend- ed through the Fallopian tubes. It is even sup- posed by some physiologists that an actual absorption of the semen from the vagina to the ovum takes place ; in confirmation of this opi- nion, Dr. Gartner of Copenhagen discovered a passage leading from the ovarium to the vagina. .Dr Blundell, who has given his attention much to this subject, supposes that a sort of peristaltic motion is performed by the vagina and womb, occasioned by the stimulus of the semen, and that by this action the semen is conveyed to the rudiments : it is his opinion that the aura semi- nalis is not sufficient for impregnation, but that the semen of the male must come in contact with the rudiments. This is a return to the old doc- trine of impregnation before the time of Harvey, and is most

probably the correct one.

A question remains respecting the bursting of the Graffian vesicles, whether this is effected merely by the influence of the semen or from the mere excitation connected with the venereal act, the semen only then impregnating the con- tents of the vesicles when they shall have escaped from the ovaries. There seems some difficulty in determining this point, but at any rate it is pretty generally understood that these vesicles may burst and their contents be discharged with- out actual impregnation ; so that corpora lutea, or the remaining yellow bodies after the rupture of the vesicles, are not properly regarded as the test of impregnation.

In what manner the semen operates upon the ovarian secretion, so as to fecundate, seems beyond human power to divine. The ingenuity of man has not, however, been idle on this recon- dite subject, and the most fanciful and absurd speculations have been put forth as solutions of the question. It has been supposed that the animalculae of which the semen is constituted pass in a current through the Fallopian tubes to the ovaria, where they enter into a violent contest — that all are killed except one, which, being left champion in the field of battle, pene- trates into the ovarium destined to receive it. According to the hypothesis of M. Buffon, every part of the body furnishes its appropriate mole- culae to compose the semen, ‘ and these atoms coming from the eyes, ears, &c., of the man and woman, arrange themselves round the internal mould, the existence of which he admits, believing it to form the base of the edifice, and to arise from the male if it should be a boy, and from the female if a girl.

It has been properly remarked, upon this wild and fanciful hypothesis, that, were it necessary to

offer any objection to it, the fact that infants are often born perfectly organised, the parents of whom had some defect in structure, would be sufficient to refute it.

For the other particulars mentioned in this part of the classification we refer to the article MIDWIFERY.

OF ACES AND TEMPERAMENTS. An infant is born but with a very imperfectly formed epidermis, hence its general redness of appearance; this, however, is soon developed upon the surface, the redness and roughness of the skin disappear, the down which covered the face falls off, and the wrinkles are effaced. For the first month or two the child seems to require nothing but nourishment and sleep ; it

at length, and gradually, becomes accustomed to the im- pression of exterior objects, as well as to its own internal sensations, and the gradual develop- ment of the understanding is exceedingly inte- resting. ‘ Towards the middle of the second month it becomes capable of agreeable sensations. If it feels them before that time, at least, it is only then that it begins to express them by laughing.’ Teething. — This process commences with some degree of irregularity ; but it is generally believ- ed that in the seventh or eighth month the teeth begin to show themselves, and the following or- der, with some deviation, is observed; the m d- dle incisions first appear in the upper gums, then the corresponding under incisions, then the late- ral incisions of the upper jaw, followed by the lower, and the cuspidate appear in the same or- der. It is not, in general, till towards the second year that the molar teeth make their appearance, and these come out in the reverse order, those of the inferior jaw appearing first. The teeth, are now twenty in number ; at the end of the fourth year, two new grinders are added in each jaw. These last during life, while the first, or milk teeth, as they are called, are shed in the same order in which they appear, and new teeth better formed and larger, take their place. This last change takes place when the child is seven years old. About the ninth year two large grinders make their appearance beyond the others, and the dentition is now complete with twenty-eight teeth. It is usually after the age of eighteen, and sometimes later, that the denies sapientiae, two in each jaw, present themselves.

This double range of teeth actually exists in the jaw of the foetus. ‘ Each alveolar process contains two membranous follicles, lying one over the other. That which is to form the pri- mitive tooth swells the first, a calcareous matter covers its surface and forms the body of the tooth, which invades also the follicle by which the osseous part is secreted ; so that, the growth of the little bone being completed, the membranous vesicle, in the parietes of which the dental vessels and nerves branch out, is found in the centre of its body, and adheres to the parietes of its internal cavitiy. It is difficult to say why the growth of the dental germs is successive; why in the seventh year the primitive teeth are detached and are replaced by others which have remained so long buried within the alveolar processes. Dentition is like all other pheno-

mena, of the living economy ; it is subject to endless varieties in its period, duration, &c. Thus teeth of a third set have been known to be cut in very old people. There are instances, but they are very scarce, of children that have come into the world with two incisores in the upper jaw.' — Richerand.

For an account of the process of ossification in general see the article BONE.

Puberty. — In this country the season of pu- berty is scarcely ever sooner than the fifteenth year, and often much later, if the constitution is not very forward. Its principal marks are, as we have above noticed, the change of voice, arising from laryngial changes and a sudden dilatation in the aperture of the glottis. In females the change is mainly marked by the appearance of the menstrual discharge, and by the enlargement of the breasts, ' neque enim vox mutatur, neque barba venit.'

Manhood. — The twenty-first year is legally marked as the period of manhood. ' It may be considered,' says Richerand in his excellent treatise on physiology, 'as beginning from the twenty- first to the twenty-fifth year. Then all increase of the body in height is at an end ; the processes are completely united to the body of the bones: but still growth goes on in other dimensions. All the organs acquire remarkable hardness, solidity, and consistency. It is the same with the intellectual and moral faculties. To the empire of imagination succeeds that of judg- ment, that is capable of fulfilling all the duties of family and society. This period of life, to which we give the name of mature age, extends to the fiftieth or fifty-fifth year for men ; it scarcely goes beyond the forty-fifth for women, with whom it begins also a little sooner. Dur- ing this long interval men enjoy the whole plenitude of their existence.'

TEMPERAMENT.

On this head we give the following extract from Dr. Uwins's work on diseases connected with indigestion.

' It would seem natural enough to suppose that an individual from birth might be endowed with more or less of vigor, not merely of constitution generally, but in one or other of the media, so to say, of vital causation ; and such we find the fact.

One person, without being generally feeble, will prove from his cradle to his grave to be what is called nervous ; that is he may be firmly

made and accoutred by nature, so far as the mere ground work of the machinery goes ; he may have a bone compact in its structure and large in its dimension ; he may possess a mus- cle that shall forcibly contract in obedience to the mandates of the will; he may be furnished with blood-vessels ready and able to act with freedom and facility under the order of the cir- culating impulse ; an absorbent energy prepared to take up the nutritive, and an excernent power to throw off effete matter ; — and yet shall be in one sense or in one particular a weakly indivi- dual ; that is, the organs which are destined by nature to receive and transmit sentient impres- sions shall be so constructed as to run rapidly

into a disordered state from the slightest source of irritation ; to be morbidly acute at. one time, unduly torpid at another, and never in that con- dition of tone or strength which is consistent with a firm or regular performance of function.

In another individual we shall find the circu- lation of the blood to be that function which shall, be most easily pushed into a deranged condition by disease, creating impulse. His feeling is by no means morbidly acute ; his lymphatic organisation and absorbent energy are so adjusted to the requisites of the frame that he has no tendency to glandular ailment, no readiness to be affected through any portion of the secretory or excretory system, and yet expose him to sources of irritation, and you will find the result manifest itself in partial or general disorder of blood-vessels ; haemorrhages will easily occur; inflammation will be prompt to establish itself ; the individual is of a sanguine temperament.

The lymphatics of a third individual are the parts upon which disorder most readily fixes. In this instance the perfective organisation may be developed with a due regard to healthy pro- portion; the blood-vessels, when once supplied with their material of circulation, may circulate freely ; the brain and the heart, the centre and sources of the perceptive and vascular impetus, may be both in the best condition of suscepti- bility ; and yet the supplying and discharging portion of the frame shall be so feeble in its structure, and so morbid in its excitability, as to be constantly obnoxious to disease. In this case that kind of constitution exists which is vulgarly called scrofulous, and which, notwithstanding all our recent refinements in phraseology, in spite of all our attempts to generalise and sim- plify, cannot but be received as consisting in ‘ a particular condition of the lymphatic system.’

‘ In the above sketch,’ continues the author from whom we extract,

‘we must enter our pro- test against a desire of being understood as pre- cise and determinate. The divisions, after all, are in one sense ideal ; and we find in nature no prototype of absolutely unmixed constitution. The lymphatic falls in with the sanguine, the nervous with the lymphatic, the sanguine with the nervous, in such sort that you can never pre- dicate any thing beyond apparent predominance and frequently hardly that. The ancient doc- trine of temperament was objectionable because it did not sufficiently recognise these endless mixtures, and because it assumed the existence of a something tangible — a materies, upon which the difference in constitution is founded. We actually know nothing beyond the fact of varied susceptibility ; we are still ignorant of the cause upon which the variety depends.’

VARIETIES OF THE HUMAN SPECIES.

Richerand follows Lace”pede in making four principal varieties of the human species : — The European Arab, the Mogul, the Negro, and the Hyperborean. ‘ We might add,’ he says, ‘ a fifth, the American, were it not most probable that the new continent is peopled by inhabitants who, coming from the old either by land in the austral hemisphere, or along the immense archipelago of

the Pacific Ocean, have been altered by the in- fluence of that climate, and the yet virgin soil, so that they are to be regarded less as a distinct race than a simple variety.’

Cuvier’s division is into, 1. The Caucasian; 2. The Mongolian; 3. The Negro; while Blu- menbach’s, which we believe to be the most ge- nerally approved, is into five varieties : — The Caucasian, Mongolian, Ethiopian, American, and Malay. We cannot but avail ourselves here of the very interesting account given by Dr. El- liotson of these varieties.

1. The Caucasian. — The skin white; the cheeks red, — almost a peculiarity of this variety ; the hair of a nut-brown, running on the one hand into yellow, and on the other into black, soft, long, and undulating. The head extremely symmetrical, rather globular ; the forehead mo- derately expanded ; the cheek bones narrow, not prominent, directed downwards from the malar process of the superior maxillary bone ; the alve- olar edge round ; the front teeth of

each jaw placed perpendicularly. The face oval, and pretty straight ; its parts moderately distinct, the nose narrow and slightly aquiline, or at least its dorsum rather prominent ; the mouth small ; the lips, especially the lower, gently turned out ; the chin full and round : — in short the countenance of that style which we consider the most beautiful.

This comprehends all Europeans except the Laplanders and the rest of the Finnish race ; the western Asiatics as far as the Obi, the Caspian, and the Ganges; and the people of the North of Africa.

2. The Mongolian. — The skin of an olive color; the hair black, stiff, straight, and sparing. The head almost square ; the cheek bones promi- nent outwards ; the space between the eyebrows, together with th'e bones of the nose, placed nearly in the same horizontal plane with the malar bones; the superciliary arches scarcely percep- tible ; the osseous nostrils narrow ; the fossa maxillaris shallow ; the alveolar edge arched ob- tusely forwards ; the chin somewhat projecting. The face broad and flattened, and its parts con- sequently less distinct; the space between the eyebrows very broad as well as flat ; the cheeks not only projecting outward, but nearly globu- lar; the aperture of the eyelids narrow, — linear; the nose small and flat.

This comprehends the remaining Asiatics, ex- cept the Malays of the extremity of the Trans- gangetic peninsula ; the Finnish races of the North of Europe, — Laplanders, &c. ; and the Esquimaux diffused over the most northern parts of America, from Behring's Strait to the farthest habitable spot of Greenland.

3. Ethiopian. — The skin black ; the hair black and crisp. The head narrow, compressed late- rally ; the forehead arched ; the malar bones projecting forwards; the osseous nares large; the malar fossa behind the infra-orbitar foramen deep ; the jaws lengthened forwards ; the alveolar edge narrow, elongated, more elliptical ; the up- per front teeth obliquely prominent ; the lower jaw large and strong; the cranium usually thick and heavy. The face narrow, and projecting at its lowei part ; the eyes prominent ; the nose

thick and confused with the projecting cheeks ; the lips, especially the upper, thick; the chin somewhat receding. The legs in many instance,? bowed.

This comprehends the inhabitants of Africa ; with the exception of those in the northern parts, already included in the Caucasian variety.

4. The American. — The skin of a copper color ; the hair black, stiff, straight, and sparing. The forehead short ; the cheek bones broad, but more arched and rounded than in the Mongolian variety, not, as in it, angular and projecting out- wards ; the orbits generally deep ; the forehead and vertex frequently deformed by art ; the cra- nium usually light. The face broad, with pro- minent cheeks, not flattened, but with every part distinctly marked if viewed iu profile ; the eyes deep ; the nose rather flat, but still prominent.

This comprehends all the Americans excepting the Esquimaux.

5. The Malay. — The skin tawny ; the hair black, soft, curled, thick, and abundant. The head rather narrow ; the forehead slightly arched ; the parietal bones prominent ; the cheek-bones not prominent; the upper jaw rather projecting. The face prominent at its lower part; not so narrow as in the Ethiopian variety, but the fea- tures, viewed in profile, more distinct; the nose full, broad, bottled at its point; the mouth large. This comprehends the inhabitants of the Pacific Ocean, of the Marian, Philippine, Molucca, and Sunda Isles, and of the peninsula of Malacca.

General remarks, — The color of the hair thus appears somewhat connected with that, of the skin, and the color of the iris is closely connected with that of the hair. Light hair is common with the white and thin skin only, and a dark thick skin is usually accompanied by black hair ; if the skin happens to be variegated, the hair also is variegated ; with the cream-white skin of the albino we find hair of a peculiar yellowish white tint ; and, where the skin is marked by reddish freckles, the hair is red. When the hair is light the iris is usually blue ; when dark it is >of a brownish black ; if the hair loses the light shade of infancy, the iris likewise grows darker, and, when the hair turns gray in advanced life, the iris loses much of its former color ; the albino has no more coloring matter in his choroid or iris than in his skin, and they therefore allow the redness of their blood to appear, the latter being of a pale rose-color and semi-pellucid, the for- mer, from its greater vascularity, causing the pupil to be intensely red; those animals only whose skin is subject to varieties vary in the color of the iris ; and, if the hair and skin hap- pen to be variegated, the iris is observed like- wise variegated.

The Caucasian variety of head, nearly round, is the mean of the rest, while the Mongolian, almost square, forms one extreme, having the American intermediate, and Ethiopian the other extreme, having the Malay intermediate between it and the Caucasian.

The Caucasian variety of face is also the mean, while the Mongolian and American, ex- tended laterally, form one extreme, and the Ethi- opian and Malay, extended inferiorly, constitute the other. In the first of each extreme, viz. tha=

Mongolian and Ethiopian, the features are dis- tinct, while in the second, viz. the American and Malay, they are somewhat blended.

Although this division of mankind is well founded and extremely useful, it is liable, like every artificial division of natural objects, to many exceptions. Individuals belonging to one variety are not unfrequently observed with some of the characteristics of another ; the character- istics of two varieties are often intimately blended in the same individual (indeed all the four varie- ties run into each other by insensible degrees) ; and instances continually occur of deviation in one or more particulars from the appearances characteristic of any variety : so that the assem- blage rather than individual marks must fre- quently be employed to determine the variety.

Particular remarks. — The Caucasian variety is pre-eminent in all those mental and corporeal particulars which distinguish man from brutes. It is to the two sexes of this variety that Milton's lines apply: —

For contemplation he and valor formed ; For softness she and sweet attractive grace.

The cranium is very capacious, the area of the face bears to its area but a proportion of one to four, and projects little or not at all at the lower parts: the intellectual faculties of its individuals are susceptible of the highestcultivation, while the senses of smelling, hearing, and seeing, are much less acute than in dark nations. Philosophy aud the fine arts flourish in it as in their proper soil.

The Ethiopian variety, when instructed by the Caucasian, has produced instances of mental ad- vancement great indeed, but inferior to what the latter is capable of attaining. ' There scarcely ever,' says Hume, ' was a civilised nation of that complexion, nor even an individual, eminent either in action or speculation. No ingenious manufactures amongst them, no arts, no sciences. On the other hand, the most mde and barbarous of the whites, such as the ancient Germans, the present Tartars, have still something eminent about them, in their valor, form of government, or some other particulars.'

Blumenbach, how- ever, possesses English, Dutch, and Latin po- etry written by different negroes, and informs us that, among other examples of distinguished ne- groes, a native of Guinea, eminent for his inte- grity, talents, and learning, took the degree of doctor in philosophy at the university of Wittem- berg, and that Lislet, of the isle of France, was chosen a corresponding member of the French Academy of Sciences. ‘ Provinces of Europe,’ says he, ‘ might be named, in which it would be no easy matter to discover such good writers, poets, philosophers, and correspondents of the French Academy ; and, on the other hand, there is no savage people which have distinguished themselves by such examples of perfectibility, and even capacity for scientific cultivation, and consequently that none can approach more nearly than the negro to the polished nations of the globe.’ This mental inferiority is attended of course by a corresponding inferiority of the brain. The circumference, diameters, and ver- tical arch of the cranium, being smaller than in the European, and the forehead particularly

being narrower and falling back in a more arched form, the brain in general, and particularly those parts which are the organs of intellect, properly so called, must be of inferior size. The orbits, on the contrary, and the olfactory and gustatory, or, rather, masticatory, organs being more amply evolved, the area of the face bears a greater pro- portion to the area of the scull, — as 1-2 to 4- ; the proportion is greater in the orang-outang, and in the carnivora nearly equal. The senses here situated, as well as that of hearing, are as- tonishingly acute, though not only in this, but also in the three following varieties, and the corres- ponding nerves, at least the first, fifth, and facial, of great size.

The ossa nasi lie so flatly as to form scarcely any ridge; the face, as we have formerly seen, projects considerably at its lower part ; the lower jaw is not only long but extremely strong ; the chin not only not prominent but even receding, and the space between it and the lower teeth is small, while that Between the upper teeth and the nose is large ; the meatus auditorius is nearer the occiput, — more remote from the front teeth than in the European ; the foramen magnum occipitale lying farther back, the occiput is nearly in aline with the spine; the body is slender, especially in the loins and pelvis, whose cavity likewise is small ; the length of the fore- arms and fingers bears a large proportion to that of the os humeri ; the os femoris and tibia are more convex, and the edge of the latter, accord- ing to a remark of the late Mr. Fyfe of Edinburgh, very sharp ; the calves are placed high ; the os calcis, instead of forming an arch, is on a line with the other bones of the foot, which is of great breadth ; the toes are long; the penis large and frequently destitute of fraenum. Mr. White, from

whom many of these remarks are derived, describes the testes and scrotum as small. Mr. Billmann of Cassell has observed that the stomach is shorter, more globular at its cardiac extremity ; and the observation is confirmed by Soemmerring, who finds that of the ape still shorter ; the skin is thicker, and, finally, the term of life generally shorter, than in Europeans.

Nearly all these facts demonstrate rather a less distance of the negro than of the European from the brute creation. But with an inferiority to the Caucasians so slight, if compared with his immense superiority over the most intelligent brutes, so incessantly running into the Caucasian and all the other varieties, so liable to innumer- able diversities of conformation as well as bearing some resemblance to brutes, and so certainly bearing no more resemblance to them in some points nor so much in others as many tribes of other varieties, the poor negro might justly class those of us who philosophically view him as merely a better sort of monkey, or who desire to traffic in his blood, not only below himself, but below apes in intellect and below tigers in feel- ing and propensity.

Indica tigris agit rabida cum tigride pacem Perpetuarn. Savis inter se convenit ursis.

‘The unconscious admiration which that tra- veller detected himself in bestowing upon the na- tive beauties affords,’ says the writer of a critique

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of major Denham’s Travels in Africa, ‘ one more example of this truth, that, ‘however much Eu- ropeans have doubted whether negroes were men, there has never been a difference of opinion as to whether negresses were women.‘j

‘ The skin of the negro has a peculiar velvet- like softness, and is lubricated by an oily secre- tion. The Malays have but little hair upon the chin, and possess a great development of the parts of the head above the ears. The Mongolians are remarkably square and robust; their shoulders high, their extremities short and thick. The Americans have small hands and feet, and are nearly destitute of beard. Shorter in the fore- head than the Mongolians, they have nut so great intellectual distinction.

Not only have the five varieties their distinc- tive characteristics, but the different nations com- prehended in each variety have each their

pecu- liarities, both mental and corporeal : among the Caucasian, for example, the Germans, French, Spaniards, and English, are extremely different from each other. Nay the provinces of the same country differ, and the families of the same pro- vince : and, in fact, every individual has his own peculiar countenance, figure, constitution, form of body and mental character.

After this interesting commentary on the clas- sification of Blumenbach, Dr. Elliotson proceeds by saying, ‘a question here presents itslf: are the differences among mankind to be ascribed to

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the influence of various causes upon the de- scendants of two, or of more, but all similar, primary parents, or- to original differences in more than two primary parents ? ‘

He decides in favor of the opinion that ‘ we are all brothers,’ or originate from one common pa- rentage, first from the general simplicity of nature’s laws ; secondly from analogical facts leading to the conclusion that none of the differences of mankind are so great as to require the belief of their origin- ality; and, thirdly, direct facts, he says, harmonise with this conclusion. All races run insensibly one into another, and therefore innumerable in- termediate examples occur when the distinction between two varieties is lost.

He illustrates these positions by an appeal to a vast number of historical facts; by a considera- tion of the immense influence of time, place, and circumstance : and by reasonings and inferences taken from natural history, which it would give us pleasure to follow were we permitted by our limits. His conclusion from the whole survey is stated in the following words : —

‘ On account of all these facts, and of the con- sideration that a child is continually produced differing remarkably from both its parents, and that such an individual, born in ancient times, might have given origin to a large nation resem- bling himself, I can discover no reasons for not believing that we all sprung from two parents.’

PHYS’Y, n. s. The same with fusee. See

FUSEE.

Some watches are made with four wheels, some have strings and physies, and others none. Locke.

PHYTIV'OROUS, adj. Gr. Qvrov, and voro, to devour. That eats grass or any vegetable.

Hairy animals, with only two large foreteeth, are all phytivurous, and called the hare-kind. Ray.

PHYTOLACCA, pokeweed, or American nightshade, in botany, a genus of the decagy- nia order and decandria class of plants ; natural order fifty-fourth, miscellaneae. It grows natu- rally in Virginia, and has a thick, fleshy, peren- nial root, divided into several parts as large as middling parsnips. From this rise many purple herbaceous stalks, about an inch thick, and six or seven feet long, whicK break into many branches, irregularly set with large, oval, sharp- pointed leaves, supported on short foot-stalks. These, at first, are of a fresh green color. But as they grow old they turn reddish. At the joints and divisions of the branches come forth long bunches of small bluish-colored flowers, consisting of five concave petals each, surround- ing ten stamina and ten styles. These are suc- ceeded by round depressed berries, having ten cells, each containing a single smooth seed. In Virginia and other parts of America the inhabi- tants boil the leaves, and eat them in the man- ner of spinach. They are said to have an anodyne quality ; and the juice of the root is violently cathartic. The stems, when boiled, are as good as asparagus. The Portuguese had formerly a trick of mixing the juice of the berries with their red wines, to give them a deeper color ; but as

it was found to debase the flavor, and to make the wine deleterious, the king of Portugal or- dered all the stems to be cut down yearly before they produced flowers. The phytolacca decan- dria is still however used both in Portugal and England for the coloring of wine. The same practice was common in France till it was pro- hibited by an edict of Louis XV. This plant has been said to cure cancers.

PHYTON, a general of the people of Rhegium, against Dionysius, the tyrant of Sicily. He was taken by the enemy, and tortured, and his son was thrown into the sea, A.A.C. 387. See SYRACUSE..

PHYXIUM, an ancient town of Elis.

PIA, or PIALIA, festivals instituted in honor of Adrian, by the emperor Antoninus Pius. They were celebrated at Puteoli on the second year of the Olympiads.

PIABA, in ichthyology, is a small fresh-water fish, caught in the rivers and brooks in the Bra- sils, and in some other parts of America. It is

about the bigness of the common minnow ; is well tasted and much esteemed by the natives.

PIABUCU, in ichthyology, an American fish, eaten in many places by the natives. It is said to be very ravenous and greedy of blood. It seldom exceeds four inches in length.

PIACENZA, or PLACENTIA, a gloomy town of the north of Italy and duchy of Parma, si- tuated in an extensive plain, near the right bank of the Po, not far from its junction with the Trebia. It is surrounded by earthen ramparts, and defended by a castle. Of its streets, a few are broad and straight, but most of them are narrow and winding ; the most spacious is the Stradona ; but it has the appearance of a road>

being bordered with gardens and a dead wall. The palazza publico is in the only square of con- sequence. In another is situated the ducal pa- lace, a building of considerable extent, but of little architectural merit ; and the cathedral, remarkable only for its heaviness and bad taste. It contains, however, a number of fine paintings. The theatre is neat and commodious. Here is also a university of no great note ; but the town library contains 30,000 volumes ; and there are several extensive private collections. Piacenza is a place of lit le activity ; it has, however, manufactures of silk stuffs, woollen, fustian, stockings, and hats ; also a great yearly fair held in April. It was the birthplace of pope Gre- gory X. and of cardinal Alberoni. In June, 1799, the French were defeated in the neigh- bourhood, in a very sanguinary conflict with Suwarrow. Population 20,000. Thirty-two miles W.N.W. of Parma, and thirty-four south- east of Milan.

PIACENZA, or the PIACENTINO, a duchy of Italy, in the Parma States, extending from the Appennines to the Po. It is about thirty-six miles in length from north to south, and from ten to eighteen in breadth from east to west. It is a fertile tract, producing corn, wine, oil, silk, and chestnuts. The hilly part contains mines of iron, copper, and vitriol.

PI'ACLE, n. s. ") Lat. piaculum, piacularis.

PIAC'ULAR, adj. >A crime; expiatory; hav-

PIAC'ULOUS. j ing the power to atone; such as requires expiation.

When the profession (Pharisaism) began no his- tory recordeth. Some would fain fetch them from Jsa. Ixv. 5. But these strain too far; for, in the verse before, the same men eat swines' flesh which to the Pharisees is more than piacular. Ep. Hull.

To tear the paps that gave them suck, can there be a greater piucte against nature, can there be a more execrable and horrid thing 1 Howel.

While we think it so piaculoiu to go beyond the ancients, we must necessarily come short of genuine antiquity and truth. Glanville.

It was piaculous unto the Homans to pare their nails upon the nundina;, observed every ninth day.

Browne,

PIA MATER, Latin. A thin and delicate membrane, which lies under the dura mater, and covers immediately the substance of the brain. See ANATOMY, Index.

PIANISSIMO, in music, very soft.

P1ANKASHAWS, a nation of North Ameri- can Indians, who resided formerly in the North Western Territory, on the banks of the Wabash.

PIANO, Italian, in music, softly.

PIANO-FORTE, Italian. A pleasing stringed and keyed instrument of English origin, being invented by our poet Mason, the author of Ca- ractacus : it received its name from its varied command, within certain limits, both of softness and strength. The chief beauty of this instru- ment, and which indeed constitutes its principal advantage over the harpsichord, is its capacity of obeying the touch, so as to enable the per- former to vary and accommodate the expression to all those delicacies, energies, and striking lights and shades which so greatly characterise the more refined compositions of modern times. The piano-forte, though of recent invention, has

received from the hands both of Englishmen and foreigners many useful and valuable improve- ments ; and in that state in which it assumes the name of grand piano-forte, and is furnished with its additional keys, is not only qualified to give brilliancy of effect to sonatas, concertos, and all pieces of extraordinary execution, but forms an expressive accompaniment to the voice, and is one of the noblest and most elegant instru- ments in the whole compass of

musical practice.

PIAll, a recent black general of the indepen- dents of Venezuela, Colombia. When Bolivar, on his landing at Ocumare, marched on Carac- cas, he confided to Piar a body of infantry, and, when the former was repulsed, Piar managed to retreat with great skill, and afterwards beat the enemy several times. He was the idol of the soldiers, until he aspired to the supreme rank. To arrive at this it was necessary to sacrifice the whites and Bolivar. His scheme was, however, happily discovered, and, being arrested, he was tried by a court martial, and sentenced to be shot. Bolivar made some vain efforts to save him, but was obliged to sign his death warrant. He fell with bravery, pierced with seven balls, at the gates of Angustura. His projects were soon forgotten, but his military feats are still celebrated by the Colombians.

PIAS, or BIAS, a town of Asiatic Turkey, on the site of the ancient Issus. It was not many years ago a warlike and populous town, the re- sidence of a chief, who rebelled against the grand seignior, and laid the neighbouring districts under contribution, till the Porte, irritated by his depredations, fitted out an expedition, which took thˆs place and reduced it to ruins.

PIASTUS, or Pi AST, a native of Poland, the son of Cossisco, or Kossiusko, a citizen of Crus- witz, who, from the station of a wheelwright, was raised to the throne of the duchy or kingdom of Poland, about A.D. 830, on the death of Po- piel II. Different fabulous legends are told by the canon of Cracow, Guagnini, and other his- torians of that age, of the cause of this promo- tion ; such as that, in the midst of a famine, he had entertained two angels, or at least two pil- grims, very hospitably ; who, in return, enabled him miraculously to supply the wants of the people ; from all which we may gather that Piast had become popular by his liberality in a time of scarcity: All historians agree that he governed with so much justice and clemency that the Poles had no reason to regret their choice. He died at Gnesna, whither he had removed the court from Cruswitz, and was succeeded by his son, Ziemovitus.

PIAZ'ZA, n. s. Ital. piazza. A walk ander a roof supported by pillars.

He stood under the piazza.

Arb. and Pope's Scrilil.

PIAZZA., a town of the interior of Sicily, in the Val di Noto, situated

on the great road from Girgenti to Catania, about twenty miles from the south-west coast. Population 1 3,500. It is remarkable for nothing but the number of its churches and convents; but none of the buildings are worth notice.

PIAZZA, in architecture, popularly called piache, an Italian name for a portico, or covered

walk. The word literally signifies a broad open place or square; whence it also became applied to the walks or porticoes around them.

PIAZZA. (Jerome Bartholomew), an Italian, originally a Roman Catholic, a Dominican fnar, and a judge in the inquisition, but, turning Pro- testant, he came to England, and taught Italian and French at Cambridge. He published An Account of the Inquisition and its Proceedings, as practised in Italy : with an Extract out of an Authentic Book of the Roman Legends: Lond. 1722. He married a French Protestant, by whom he had three children ; and died at Cam- bridge in 1745, with a good character.

PIBROCH, says Dr. Beattie, is a species of tune peculiar to the Highlands and Western Isles of Scotland. It is performed on a bagpipe, and differs totally from all other music. Its rhyme is so irregular, and its notes, especially in the quick movement, so mixed and huddled toge- ther, that a stranger finds it almost impossible to reconcile his ear to it, so as to perceive its mo- dulation. Some of these pibrochs, being intended to represent a battle, begin with a grave motion resembling a march, then gradually quicken into the onset; run off with noisy confusion and tur- bulent rapidity, to imitate the conflict and pur- suit; then swell into a few flourishes of trium- phant joy; and perhaps close with the wild and slow wailings of a funeral procession.

PIC DU MIDI, LE, one of the highest moun- tains on the French side of the Pyrenees. Its elevation is somewhat more than 9500 feet. Thirty miles south of Pau,and seventy-five from Fontarabia, on the Bay of Biscay.

PICA, pr PYE, in ecclesiastical matters, had formerly the same sense as ordinal, meaning a table or directory pointing out the order in which the devotional services appointed for dif- ferent occasions were to be

performed. It is derived from He, a contraction of iriva%, a table ; or from litera pictata, a great or black letter at the beginning of a new order in the prayers. It was used in a similar sense by officers of civil courts, who called their catalogues, or indexes of things contained in the rolls of their courts, the pyes.

PICA, among printers, is a particular size of their types or letters, so called from having been first used in printing the pye or pica above-mentioned. *

PICA, in medicine, a depravation of appetite, which makes the patient long for what is unfit for food, or incapable of nourishing; as chalk, ashes, coals, plaster, lime, &c. See MEDICINE, Index.

PICA, in ornithology. See CORVUS.

PICA MARINA, in ornithology. See ALCA and HSMATOPUS.

PIC./E, pies, in ornithology, the second order of birds in the Linnaean system. They are thus characterised by Kerr : — ‘ The bill is sharp and convex on its upper surface. The legs are short, strongish, and of different kinds, some climbers, and some fitted for walking, i. e. having no back toe. The body is firmly constructed. The birds of this order live on various kinds of food, and are mostly unfit for food. They pair, build their nests on trees, and the male feeds the female

during incubation.’ — Animal Kingdom, vol. L p. 418. There are thirty genera.

PICARD (John), an able mathematician, one of the most learned astronomers of the seven- teenth century, born at Fleche. He became priest and prior of Rillie, in Anjou. Going to Paris, he was, in 1666, appointed astronomer to the Academy of Sciences. In 1671 he was sent, by order of the king, to the castle of Uraniburg, built by Tycho Brahe in Denmark, to make astronomical observations there ; and thence he brought the original MSS. written by Tycho Brahe. He made important discoveries in as- tronomy ; and was the first who travelled through France to measure a degree of the meridian. His works are, 1. A Treatise on Levelling. 2. Fragments of Dioptrics. 3. Experimenta circa Aquas E/Huentes. 4. De Mensuris. 5. De Mensura Liquidorum et Aridorum. 6. A Voy- age to Uraniburg, or Astronomical Observations made in Denmark. 7. Astronomical Observa- tions made in several parts of France, &c. These, and some other of his works, which are much esteemed, are in the Memoirs of the Academy of Sciences, vols. 6 and 7.

PICARDS, a religious sect which arose in Bohemia in the fifteenth century. Picard, the author of this sect, drew after him a number of men and women, pretending he would restore them to the primitive state of innocence wherein man was created ; and accordingly he assumed the title of the New Adam. Under this pre- tence he indulged his followers in all kinds of impurity. He first published his opinions in Germany and the Netherlands, and persuaded his people to go naked. He seized on an island in the river Laulnecz, some leagues from Thabor, the head-quarters of Zisca, where he fixed him- self and his followers. At length Zisca, general of the Hussites, marched against them, made himself master of their island, and put them all to death except two ; whom he spared, that he might learn their doctrine. Such is the account which various writers, relying on the authorities of .ZEneas Sylvius and Varillas, have given of the Picards, who appear to

have been a party of the Vaudois, that fled from persecution in their own country, and sought refuge in Bohemia. But it is highly probable that the whole is a ca- lumny invented to disgrace the Picards, because they deserted the communion of the church of Rome. Lasitius informs us that Picard, with forty other persons, besides women and child- ren, settled in Bohemia in 1418. Balbinus the Jesuit, in his Epitome Rerum Bohemicarum, lib. ii. gives a similar account, and charges on the Picards none of the crimes ascribed to them by Sylvius. Schlecta, secretary of Ladislaus, king of Bohemia, in his letters to Erasmus, gives a particular account of the Picards, wherein he represents their principles as no other than those of the Vaudois; and M. de Beausobre has shown that they were both of the same seel, though under different denominations.

PICARDY, a former province of France, bounded on the north by Hainault, Artois, and the Straits of Calais ; on the east by Champagne • on the south by the Isle of France ; and on the west by Normandy and the English Channel.

The name is not more ancient than the twelfth century. It has been compared in form to a bent arm; and in this figure is nearly 150 miles long, but not above forty broad, and in many places not above twenty. It is generally level, and produces wine, fruit of all kinds, plenty of corn, and great quantities of hay; but, wood being scarce, most of the inhabitants burn turf. They have, however, some pit coal. It was united to the crown of France in the year 1643. Rs principal rivers are the Somme, Oise, Canche, Scarpe, Lys, Aa, Scrape, and Deule. Since 1790 it his formed the department of the Somme, and part of those of the Aisne, and the Straits of Calais. Amiens is the capital.

PICAROON’, n. s. Span, picaron ; It. pi- care. A robber ; a plunderer.

Corsica and Majorca in all wars have been the nests of picaroons. Temple’s Miscellanies.

PICART (Bernard) an engraver, son of Ste- phen Picart, also a famous engraver, was born at Paris in 1673. He learned the elements of his art from his father, and studied architecture and perspective under Sebastian le Clerc. As he embraced the reformed religion, he settled in Holland, where his genius produced those mas- ter-pieces which made

him esteemed the most ingenious artist of his age. A multitude of books are embellished with plates of his engraving. He died in 1733.

PICCAGE, in law (piggagium, from the Fr. piquer, i. e. effodere), a consideration, paid for the breaking up of ground to set up booths, stalls, or standings, in fairs ; payable to the lord of the soil.

PICCOLOMINI (Alexander), archbishop of Patras, was born at Sienna, about 1508, of an illustrious and ancient family, originally from Rome. He composed for the theatre, and was equally distinguished for genius and virtue. His charity was very great, and was much exerted in favor of men of letters. He wrote many works in Italian. The principal are, 1. Various Dra matic Pieces. 2. A Treatise on the Sphere. 3. A Theory of the Planets. 4. A Translation of Aristotle's Art of Rhetoric and Poetry, in 4to. 5. A System of Morality ; Venice 1575, in 4to. ; translated into French by Peter de Larivey, in 4to. ; Paris, 1581. He was the first who wrote in the Italian language upon philosophical sub- jects. He died at Sienna, the 12th of March, 1578, aged seventy.

PICCOLOMINI (Francis), of the same family, was born in 1520, and taught philosophy with success for twenty-two years in the most cele- brated universities of Italy, and afterwards re- tired to Sienna, where he died in 1604, aged eighty-four. His works are, 1. Commentaries upon Aristotle ; Mentz, 1608, 4to. 2 Universa Philosophia de Moribus ; Venice, 1583, folio. He labored to revive the doctrine of Plato, and imitated his manners. He had for his rival the famous James Zabarella, whom he excelled in facility of expression and elegance of language ; but to whom he was much inferior in point of argument.

PICCOLOMINI (James), whose proper name was Ammanati, took that of Piccolomini, in ho- nor of his patron Pius II. He was born near

Luccaˆtin 1422. He became bishop of Massa, afterwards of Frescati; a cardinal in 1461, under the title of de Pavie ; and died in 1479, aged fifty-seven, of an indigestion of figs. He left 8000 pistoles in the banker's hands, which pope Sixtus IV. claimed, and of which he gave a great part to the hospital of the Holy Ghost. His works, which consist of some Letters, and a History of his own Time, were printed at Milan, in 1521, in folio. His history, entitled Commentaries, commences the 18th of June, 1464, and ends the 6th of December, 1469. They are a Sequel of Pope Pius II. 's Commentaries, which end with 1463.

PICCOLOMINI (Octavius), of Arragon, duke of Amain, prince of the empire, an imperial gene- ral, and knight of the Golden Fleece, was

born in 1599. He first bore arms among the Spanish troops in Italy. He afterwards served under Ferdinand II., who sent him to the relief of Bohemia, and gave him the command of the imperial troops in 1634. He signalised himself at the battle of Nortlingue, and made marshal de Chatillon raise the siege of St. Omer. He defeated the marquis Fenquieres in 1639; nor did the loss of the battle of Wolfenbuttel, in 1651, impair his glory. He died on the 10th of August, 1656, aged fifty-seven, with the charac- ter of an active general. The celebrated Ca- prara was his nephew.

PICENI, or PICENTES, the ancient inhabi- tants of Picenum (Cicero, Livy), who were ori- ginally a colony of Sabines. They were different from the Picentini, • on the Tuscan Sea, though called so by the Greeks ; but Ptolemy calls them Piceni, as does also Pliny. Their territory at this day is supposed to form the greatest part of the march of Ancona. Cluverius.

PICENTIA, the capital of the Picentini, who inhabited the Ager Picentinus (Strabo, Pliny).

PICENTINI, an ancient people of Italy, who inhabited the Ager Picentinus. The Greeks com- monly confound the Picenti and Picentes, but the Romans distinguish them. The former had only two towns, named Silernum and Picentia ; the situation of both uncertain ; only Pliny says the latter stood within land, at some distance from the sea. Now thought to be Bicenza (Holsten- tius), in the Principato Citro of Naples.

PICENTINUS AGER, an ancient district of Italy, on the Tuscan Sea, extending from the Promontorium Minervse, the southern boundary of Campania on the coast, to the Silarus, the northern boundary of Lucania, reaching within land as far as the Samnites and Hirpini.

PICENTIUM AGER, PICENUM, or PICENUS AGER, a territory of Italy, lying to the east of Umbria, from theAppennine to the Adriatic ; on the coast, extending from the river Aesis on the north, as far as the Praetutiani to the south. In the upper or northern part of their territory, the Umbri excluded them from the Appennine, as far as Camerinum ; but in the lower or southern part they extended from the Adriatic to the Appennine. It was very fertile, and very popu- lous. Caes. Plin. Florus, Cic. Call. Liv. Tac. Varro.

PICHEGRU (Charles), a French revolution- ary general, born in 1761, at Arbois in Franche-

compte, of mean parentage. He received a good education under the monks of his native town; after which he entered into the army, and be- came a serjeant. In the revolution he rose to the rank of general, and in 1793 gained a vic- tory over the allied armies at Hagenau ; in con- sequence of which he succeeded to the command uf the army of the north. His celebrated exploit was the subjugation of Holland, for which he was elected a member of the national assembly. At length he fell under the suspicion of being a royalist, and was banished to Cayenne, whence he escaped to England. Engaging in the schemes of the emigrants against Buonaparte, he went to Paris early in 1804, and was soon arrested, and committed a prisoner to the Temple. Here he was found dead (having been strangled), on the 6th of April ; but whether he died by his own hand, or by that of an assassin, employed by the party in power, is a question which has been frequently and warmly agitated.

PICHINCHA, a mountain of Peru in Quito, in the province of Truxillo, estimated at 2432 toises above the level of the sea. It is, however, 1 278 yards lower than the perpendicular height of Cotopaxi, and was formerly a volcano, but the crater on one of its sides is covered with sand and calcined matter ; so that at present neither smoke nor fire issue from it. When Don George Juan and Antonio de Ulloa were sta- tioned ,on it for the purpose of making astrono- mical observations, they found the cold on the top of this mountain extremely intense, the wind violent, and they were frequently involved in so thick a fog or cloud that an object at six or eight paces distance was scarcely discernible. The air grew clear, by the clouds moving nearer to the earth, and on all sides surrounding the mountain, to a vast distance, representing the sea with the mountain standing like an island in the centre. When that happened, they heard the dreadful noise of the tempests that discharged themselves on Quito and the neighbouring coun- try. Tney saw the lightning issuing from the clouds, and heard the thunder roll far beneath them. While the lower parts were involved in tempests of thunder and rain, they enjoyed a delightful serenity ; the wind was abated, the sky clear, and the enlivening rays of the sun moderated the severity of the cold. But, when the clouds rose, their thickness rendered respi- ration difficult : snow and hail fell continually, and the wind returned with all its violence ; so that it was impossible entirely to overcome the fear of being, together with their

hut, blown down the precipice on whose edge it was built, or of being buried in it by the constant accu- mulation of ice and snow. Their fears were likewise increased by the fall of enormous frag- ments of rocks. Though the smallest crevice visible in their hut was stopped, the wind was so piercing that it penetrated through; and though the hut was small, crowded with inha- bitants, and had several lamps constantly bum- ing, the cold was so great that each individual was obliged to have a chafing dish of coals, and several men were constantly employed every morning to remove the snow which fell in the night. By the severities of such a climate, their

feet were swelled, and so tender that walking was attended with extreme pain, their hands covered with chilbl&ins, and their lips so swelled and chopped that every motion in speaking drew blood.

1 I was twice at the mouth of the crater of Pichincha,' says Humboldt, ' the mountain that overlooks the city of Quito. I know of no one but Condamine that ever reached it before ; and he was without instruments, and could not Stay above a quarter of an hour, on account of the extreme cold. I was more successful. From the edge of the crater rise three peaks, which are free from snow, as it is continually melted by the ascending vapor. At the summit of one of these I found a rock, that projected over the precipice, and hence I made my observations. This rock was about twelve feet long, by six broad, and strongly agitated by the frequent shocks, of which we counted eighteen in less than half an hour. We lay on our bellies, the better to exa- mine the bottom of the crater. The mouth of the volcano forms a circular hole, nearly a league in circumference, the perpendicular edges of which are covered with snow on the top. The inside is of a deep black ; but the abyss is so vast that the summits of several mountains maybe distin- guished in it. Their tops seemed to be 600 yards below us ; judge then where their bases must be. I have no doubt that the bottom of the crater is on a level with the city of Quito. Condamine found it extinct, and even covered with snow ; but we had to report the unpleasant news that it was burning. On my second visit, being better furnished with instruments, I found the diameter of the crater to be 1600 yards, whereas that of Vesuvius is but 670. The height of the mountain is 5280 yards.

PICK, v. a., v. n. & n. s.) Saxon f>asccan ;

PICK'ER, n.s. > Belg. and Teut.

PICK'THANK, n. s. j picken. To cull;

choose ; select ; gather here and there ; glean. It has commonly out after it when it implies selec- tion, and vp when it means casual occurrence : as a verb neuter to eat or perform any thing slowly: a picker is one who picks or culls: a pickthank, an officious fellow ; a parasite.

The want of many things fed him with hope, that he should out of these his enemies distresses pick some fit occasion of advantage.

Knolles's History. This fellow picks up wit as pigeons peas.

Khahspeare. He hath picktd out an act,

Under whose heavy sense your brother's life

Falls into forfeit. Id. Measure for Measure.

Trust me, sweet,

Out of this silence yet I picked a welcome ;

And, in the modesty of fearful duty,

I read as much as from the rattling tongue

Of saucy and audacious eloquence. Shakspeare.

You owe me money, Sir John, and now you pick a quarrel to beguile me of it. Id. Henry IV.

Many tales devised,

Oft the ear of greatness needs must hear,

By smiling pickthanks and base newsmongers.

Shakspeare.

It hath been noted by the ancients that it is dan- gerous to pick one's ears while he yawneth ; for that, in yawning, the minor parchment of the ear is ex- tended by the drawing of the breath. Bacon.

It was believed that Perkin's escape was not without the king's privity, who had him all the time of his flight in a line ; and that the king did this to pick a quarrel to put him to death. Id.

Contempt putteth an edge upon anger more than the hurt itself; and, when men are ingenious in picki7ig out circumstances of contempt, they do kin- dle their anger much. Id.

With pleasing tales his lord's vain ears he fed, A flatterer, a pickthank, and a lyar. Fairfax.

It were a wonder, if, after the death of a prince, there should want some pickthank, to insinuate him- self into his successor. Bp. Hall. They must pick me out with shackles tired,

To make them sport with blind activity. Milton. What made thee pick and chuse her out,

To employ their sorceries about I Hudibras.

Hope is a pleasant premeditation of enjoyment ; as when a dog expects, till his master has done picking a bone. More.

A painter would not be much commended who should pick out this cavern from the whole JSneids ; he had better leave them in their obscurity. Dryden.

Imitate the bees, who pick from every flower that which they find most proper to make honey.

Id.

Why standest thou picking 1 is thy palate sore, That bete and radishes will make thee roar 1 Id.

He was too warm on picking work to dwell, But faggoted his notions as they fell, And, if they rhym'd and rattled, all was well. Id.

How many examples have we seen of men that have been picked up and relieved out of starving ne- cessities, afterwards conspire against their patrons !

L'Estrange.

If he would compound for half, it should go hard but he'd make a shift to pick it up. Id.

They are as peevish company to themselves as to their neighbours ; for there s not one circumstance m nature, but they shall find matters to pick a quar- rel at. Id.

The business of a picktlutnk is the basest of offices.

Id.

He that is nourished by the acorns he picked up under an oak in the wood, has appropriated them to himself. Locke.

The pickers pick the hops into the hair-cloth.

Mortimer.

If he be great and powerful, spies and pichthanks generally provoke him to persecute and tyrannise over the innocent and the just. South.

He asked his friends about him, where they had jiicked up such a blockhead. Addison's Spectator.

He picks and culls his thoughts for conversation, by suppressing some, and communicating others.

Addison.

Deep through a miry lane she picked her way, Above her angle rose the chalky clay. Gay.

The will may pick and chuse among these objects, but it cannot create any to work on. Cheyne.

Heaven when it strives to polish all it can,

Its last, best work, but forms a softer man,

Picks from each sex, to make the fav'rite blest,

Your love of pleasure, our desire of rest. Pope.

Thus much he may be able to pick out, and willing to transfer into his new history ; but the rest of your character will probably be dropped on account of the antiquated stile they are delivered in. Swift.

You are not to wash your hands, till you have picked your sallad. Id.

Pick the very refuse of those harvest fields.

Thomson.

She has educated several poor children, that were picked up in the streets, and put them in a way of honest employment. Law.

PICK, v. a. & n. s.ˆ Sax. bycan ; Tent, pik- PICK’ED, adj. j ken ; Fr. piijuer ; Span.

PICK’AXE, n. s. I picar. To prick; pierce; PICK’LOCK, >peck ; rob ; strike with a

PICK’POCKET, sharp or pointed instru-

PICK’PURSE, | ment: as anounsubstan-

PICK’TOOTH. J tive, a sharp pointed tool :

picked is sharp ; pointed ; smart : a pick-axe, an axe made to pierce or pick rather than to cut : ” a picklock, an instrument which penetrates and opens a lock without the key: pickpocket and pickpurse are names for the thief who steals from the pocket or purse by thrusting his hand privately into the former : picktooth, an instru- ment for cleansing the teeth.

The eye that mocketh at his father, the ravens of the valley shall pick out. Proverbs xxx. 17.

We take him to be a thief too, Sir ; for we have found upon him, Sir, a strange picklock.

Shakspeare.

I think he is not a pickpurse nor a horse stealer.

Id.

I’ll hide my master from the flies, as deep As these poor pickaxes can dig. Id. Cymbeline. The other night I fell asleep here, and had my pocket pickt ; this house is turned bawdy- house, they pick pockets. Shakspeare.

Pick an apple with a pin full of holes not deep, and smear it with spirits, to see if the virtual heat of the strong waters will not mature it. Bacon.

Their tools are a pickaxe of iron, seventeen inches long, sharpened at the one end to peck, and flat- headed at the other to drive iron

wedges. Carew. In answering of a book, ‘tis best to be short, otherwise he that 1 write against will suspect that I in- tend to weary him, not to satisfy him. Besides, in being long, I shall give my adversary a huge advan- tage ; somewhere or other he will pick a hole.

Selden.

As when bands

Of pioneers, with spade and pickaxe armed, Forerun the royal camp, to trench a field.

Milton.

Scipio, having such a picklock, would spend so many years in battering the gates of Carthage.

Browne.

It corrupts faith and justice, and is the very pic/c- lock that opens the way into all cabinets.

L’Estrange.

Let the stake be made picked at the top, that the jay may not settle on it. Mortimer’s Husbandry. With an iron picker clear the earth out of the hills.

Mortimer. Did you ever find

That any art could pick the lock, or power Could force it open. Denham.

What the miners call chert and whern, the stone- cutters nicomia, is so hard that the picks will not touch it ; it will not split but irregularly.

Woodward.

Thou raisedst thy voice to describe the powerful Betty or the artful picklock, or Vulcan sweating at his forge, and stamping the queen’s image on viler metals. Arbuthnot.

It is reasonable, when Esquire South is losing his money to sharpers and pickpockets, I should lay out the fruits of my honest industry in a law suit.

Arbuthnot’ s History of John Bull. In the face, a wart or fiery pustule,

heated by scratching or picking with nails, will terminate cor- rosive. Wiseman.

Pickpockets and highwaymen observe strict ju sties among themselves. Bentley's Sermons.

If a court or country's made a job,

Go drench a pickpocket, and join the mob. Pope. His fellow pickpurse, watching for a job,

Fancies his ringers in the cully's fob. Swift.

If a gentleman leaves a picktooth case on the ta- ble after dinner, look upon it as part of your vails.

Id.

PICK'APACK, adj. \ From pack, by a re-

PICK'BACK, adj. 5 duplication very com-

mon in our language. In manner of a pack : on the back.

As our modern wits behold, Mounted a pickaback on the old, Much farther off. Hudibras.

In a hurry she whips up her darling under her arms, and carries the other a pickapack upon her shoulders. L'Estrange.

PICRAWAY, a county in the central part of Ohio. Chief town, Circleville. Pickaway plains extend several miles south of Circleville. They are a dead level ; extremely fertile, without a single tree, and are regarded as a great curiosity. Here are many fine farms, and one pleasant town called Jefferson.

PICKAWAY, chief town of Pickaway county, Ohio, is three miles from Circleville.

PICKEER', v. a. Ital. piccare . To pillage ; pirate ; rob ; make a flying skirmish.

No sooner could a hint appear, But up he started to pickeer, And made the stoutest yield to mercy, When he engaged in controversy. Hudibras.

PICK'EREL-WEED, n. s. From pike. A water plant, from which pikes are fabled to be generated.

The luce or pike is the tyrant of the fresh waters ; they are bred, some by generation, and some not ; as of a weed called picker el- weed, unless Gosner be mistaken. Walton.

PICKERING, a market-town in the North Riding of Yorkshire, twenty-seven miles north- east from York, nine from Malton, and 226 north by west from London. It is situate on a hill, in the mountainous district of Blackmore, and had formerly a very strong castle, the ruins only of which remain ; the streets are irregularly built. Here thelord of the manor holds a court the se- cond and third Monday after Easter, and the first and second Monday after Michaelmas. The church is a large building, and in the parish are several dissenting meeting-houses. Market on Monday. Fairs, Monday before February 1 3th ; Monday before May 12th ; September 25th ; and the Monday before November 22nd, all for cattle.

PICKERY, in Scots law, petty theft, or steal- ing things of small value.

PICKET, an out-guard posted before an army, to give notice of an enemy approaching. 2. A punishment (for some time discontinued in the British army), in which a soldier stands with one foot upon a sharp-pointed stake ; the time of his standing is limited according to the offence.

PICKETS, in fortification, stakes sharp at one end, and sometimes shod with iron, used in lay- ing out the ground, about three feet long ; but, when used for pinning the fascines of a battery, they are from three to five feet long.

PICKETS, in artillery, are about five or six feet long, shod with iron, to pin the park lines in laying out the boundaries of the park.

PICKETS, in the camp, are also stakes of about six or eight inches long, to fasten the tent cords, in pitching the tents ; also, of about four or five feet long, driven into the ground near the tents of the horsemen, to tie their horses to.

PIC'KLE, n. s. & v. a.) Teut. pickle ; Belg.

PIC’KLEHERRING. J pekel. Any kind of salt or pungent liquor, in which flesh or other substance is preserved ; thing kept in pickle : hence perplexed conditioner state; a word of contempt: pickle is to preset ve in pickle; to sea- son or imbue highly with any thing; as, a pickled rogue, i. e. one consummately villanous: a pickle-herring [pickle and herring] is a jackpud- ding ; a merry-andrew ; a buffoon.

Thou shalt be whipt with wire, and stewed in

brine, Smarting in lingering pickle. Shakspeare.

How cam’st thou in this pickle ? Id.

Some fish are gutted, split, and kept in pickle ; as whiting and mackerel. Carew’s Survey of Cornwall. Autumnal cornels next in order served,

In lees of wine, -well pickled and preserved.

Dryden.

They shall have all, rather than make a war, The straits, the Guiney-trade, the herrings too ; Nay, to keep friendship, they shall pickle you. Id.

A physician undertakes a woman with sore eyes ; his way was to dawb ‘em with ointments, and while she was in that pickle carry off a spoon.

L’Estrange.

Another branch of pretenders to this art, witiiouf horse oipickleherring, lie snug in a garret.

Spectator.

He instructs his friends that dine with him in the best fickle for a walnut. Addison’s Spectator.

The pickleherring found the way to shake him, for, upon his whistling a country-jig, this unlucky wag danced to it with such a variety of grimaces, that the countryman could not forbear smiling, and lost the prize. Id.

A third sort of antiscorbuticks are called astrin- gent ; as capers, and most of the common pickles, prepared with vinegar. Arbuthnot.

Poor Umbra, left in this abandoned pickle,

E'en sits him down. Swift's Miscellanies.

PICO, an island near the coast of Africa, one of the Azores. It consists almost entirely of a mountain rising to the height of 7000 feet, and crowned with a magnificent dome ; its sides are covered with vineyards, and produce considerable quantities of a fine wood in great request for fur- niture at Lisbon. The great wealth of Pico consists in its wine, of which it yields annually about 5000 pipes. The British commissaries of the West India colonies keep an agent at Fayal, who contracts for the principal portion of each vintage. The wine is of the color and flavor of inferior Madeira, and is held in great repute by our army and navy. The inhabitants of the Peak live chiefly in detached houses. There is a town called Lagena, chiefly for the accommoda- tion of the monks ; but no harbour, or any other anchorage that can accommodate large vessels. Pico can thus carry on trade only through the medium of Fayal, a neighbouring island.

PICQUET, a celebrated game at cards played between two persons, with only thirty-two cards ; all the deuces, threes, fours, fives, and sixes, be- ing set aside.

In playing at this game twelve cards are dealt

to each, and the rest laid on the table ; when, if one of the gamesters find he has not a court card in his hand, he is to declare that he has carte blanche, and tell how many cards he will lay out, and desire the other to discard, that he may show his game, and satisfy his antagonist that the carte blanche is real, for which he reckons ten. And here the eldest hand may take in three, four, or five, discarding as many of his own for them, after which the other may take in all the remain- der if he pleases. After discarding, the eldest hand examines what suit he has most cards of; and, reckoning how many points he has in that suit, if the other has not so many in that, or any other suit, he reckons one for every ten in that suit, and he who thus reckons most is said to win the point. It is to be observed that, in thus reckoning the cards, every card goes for the number it bears ; as a ten for ten ; only all court cards go for ten, and the ace for eleven, and the usual game is 100 up. The point being over, each examines what sequences he has of the same suit, viz. how many tierces, or sequences

of three cards ; quartes, or sequences of four cards ; quintes, or sequences of five cards, &c., he has. These several sequences are distinguished in dig- nity by the cards they begin from : thus ace, king, and queen, are styled tierce major ; king, queen, and knave, tierce to a king; knave, ten, nine, tierce to a knave ; and the best tierce, quarte, or quinte, prevails, so as to make all the others in that hand good, and to destroy all those in the other hand. In like manner a quarte in one hand sets aside a tierce in the other.

The sequences over, the antagonists proceed to examine how many aces, kings, queens, knaves, and tens each holds; reckoning for every three of any sort, three ; but here too, as in sequences, he that with the same number of threes or fours has one that is higher than any the other has, makes his own good, and sets aside all his ad- versary's ; but four of any sort, which is called a quatorze, because fourteen are reckoned for it, always set aside three.

The game in hand being thus reckoned, the eldest proceeds to play, reckoning one for every card he plays above nine, while the other follows him in the suit: but unless a card be won by one above nine, except it be the last trick, no- thing is reckoned for it. The cards being played out, he that has most tricks reckons ten for win- ning the cards, but if they have tricks alike, neither reckons any thing. If one of them wins half the tricks, instead of ten, which is his right for winning the cards, he reckons forty, and this is called capot.

This deal being finished, each person sets up nis game ; they then proceed to deal again as before ; cutting afresh each time for the deal : if both parties are within a few poiuts of being up, the carte blanche is the first that reckons, then the point, then the sequences, then the quatorzes, then the tierces, and then the tenth cards. He that can reckon thirty in hand by carte blanche, points, quintes, &c., without playing, before the other has reckoned any thing, reckons ninety for them, and this is called a repike ; and, if he reckons above thirty, he reckons so many above niuety. If he can make up thirty, part in hand, and

part in play, before the other has told anything, he reckons for them sixty ; and this is called a repike ; and if he reckons above thirty, he reckons so many above ninety. If he can make up thirty, part in hand, and part in play, before the other has told any thing, he reckons for them sixty ; and this is called a pique, whence the name of the game. M. de Moivre, in his doctrine of chances, has resolved among others, the following prob- lems: — 1. To find, at picquet, the probability which the dealer has for taking one ace or more in three cards, he

having none in his hands. He concludes from his computation that it is 29 to 28 that the dealei takes one ace or more. 2. To find at picquet the probability which the eldest has of taking an ace or more in five cards, he having no ace in his hand. Answer, 232 to 91, or 5 to 2, nearly. 3. To find at picquet the proba- bility which the eldest has of taking both an ace and a king in five cards, he having none in his hand. Answer, the odds against the eldest hand taking an ace and a king are 331 to 315, or 21 to 20, nearly. 4. To find at picquet the proba- bility of having twelve cards dealt to, without king, queen, or knave ; which case is commonly called cartes blanches. Answer, the odds against cartes blanches are 1791 to 1 nearly. 5. To find how many different sets, essentially different from one another, one may have at picquet before taking in. Answer 28,967,278. This number falls short of the sum of all the distinct combi- nations, whereby twelve cards may be taken out of thirty-two, this number 225,792,840 ; but it ought to be considered that, in that number se- veral sets of the same import, but differing in suit, might be taken, which would not introduce an essential difference among the sets.

The technical terms used in picquet are as follows : —

Capot is when either of the players makes every trick for which he scores forty.

Cards signify the majority of tricks, which reckon for ten points.

Carte Blanche means a hand without a court card in the twelve dealt, which counts for ten, and takes place of every thing else.

Huitieme, eight successive cards of the same suit, counts eighteen points.

Pique is when the elder hand has reckoned thirty in hand, and play before the adversary has gained one ; in which case, instead of thirty, it is called sixty, adding thereto as many points as are obtained above thirty.

Point, the greatest number on the cards of the same suit in hand, after having taken in, reckoned by their pips, scores for as many points as cards.

Quart, four cards in sequence of the same suit, counts four points: there are five kinds of quarts, the first called quart-major, consists of ace, king, queen, and knave ; the second, quart from a king, of king, queen, knave, and ten ; the third, quart from a queen, of queen, knave, ten, nine ; the fourth, quart from a knave, of knave, ten, nine,

eight ; the fifth, a basse-quart or quart-minor, of ten, nine, eight, and seven.

Quatorze, the four aces, kings, queens, knaves, or tens, scores fourteen points.

Quint means five cards of the same suit in se- quence, and reckons fifteen points : there are

four sorts of quints ; a quint-major of ace king, queen, knave, and ten, down to knave, ten, nine, eight, and seven, styled a quint-minor.

Repique signifies when one of the players counts thirty or more in hand, before tbs adver- sary obtains one, then it is called ninety, reckon- ing as many points above ninety as were gained above thirty.

Sixieme, or six cards of the same suit in se- quence, reckons for sixteen points : there are three sorts of sixiemes, viz. sixieme-major from the ace, sixieme from the king, and sixieme mi- nor from the queen.

Septieme, or seven of the same suit in sequence, counts for seventeen points; there are two sep- tiemes, one from the ace, the other from the king.

Threes of aces, &c. down to tens, reckon three points.

Talon or Stock means the eight remaining cards after twelve are dealt to each player.

Tierce, or sequence of three, reckons for three : there are six kinds of tierces, tierce-major, of ace, king, queen ; down to nine, eˆght, seven, styled tierce-minor.

For ˆthe mode of playing the general game, see Hoyle.

PICRA, a lake of Africa, which Alexander the Great crossed, when he went to consult the ora- cle of Jupiter Ammon. — Diod.

PICRAMNIA, in botany, a genus of the pen- tandria order, and dioecia class of plants; natu- ral order doubtful : CAL. tripartite : COR. three petals ; the stamina from three to five, awl- shaped, and seem to join

together at the base : STY LI two, which are short and bent backwards : BERRY roundish, and contains two oblong seeds, and sometimes one seed only. There is only one species, viz.

P. antidesma, the murjoe bush. This shrub is frequent in copses and about the skirts of woods in Jamaica, rising about eight or nine feet from the ground. The leaves are oval, pointed, and placed alternately along the branches ; the flower-spikes are long, pendulous, and slender ; the florets small and white ; the berries are numerous, at first red, then of a jet black color ; the pulp is soft, and of a purple complexion. The whole plant is bitter, and especially the berry. The negroes make a decoction of them, and use it in weaknesses of the stomach, and in venereal cases.

PICRANIA, in botany, a genus of plants, of the class pentandria, and order monogynia. The species known is P. amara, or bitter wood, a tall and beautiful timber tree, common in the woods of Jamaica. The name is expressive of its sen- sible qualities. Every part of it is intensely bitter ; and, even after the tree has been laid for Moors many years, whoever rubs or scrapes the wood feels a great degree of bitterness in their mouth or throat. Cabinet-work made of this wood is very useful, as no insect will live near it. This tree has a great affinity to the quassia amara of Linnaeus ; in lieu of which it is used as an antiseptic in putrid fevers. When used, less of it will do than of the quassia amara of Suri- nam. See QUASSIA.

PICRIS, in botany, ox-tongue ; a genus of the polygamia aequalis order, and syngenesia class

of plants ; natural order forty-ninth, composite. There are four species, of which the only re- markable one is the P. echioides, the common ox-tongue, growing spontaneously in corn-fields in Britain. It has undivided leaves embracing the stem, with yellow blossoms, which some- times close soon after noon, at other times re- main open till nine at night. It is an agreeable pot-herb while young. The juice is milky, but not too acrid.

PICRIUM, in botany, a genus of the mono- gynia order and tetrandria class of plants ; natu- ral order doubtful : CAL. monophyllous and quin- quefid : COR. menopetalous, and its tube is short ; the filaments are four, and hooded at their inser- tion ; the stile long and thick, the stigma bila- mellated : CAPS, round, bivalved, and contains a number of small seeds. There are two species, 1. P. ramosa, and 2. P. spicata; both natives of Guiana. Both species are bitter, and employed in dyspepsy, and to promote the menses ; they are also recommended in

visceral obstructions.

P1CROMEL, in chemistry and anatomy, the characteristic principle of bile. If sulphuric acid , diluted with five parts of water, be mixed with fresh bile, a yellow precipitate will fall. Heat the mixture, then leave it in repose, and decant off the clear part. What remains was formerly called resin of bile, but it is a greenish com- pound of sulphuric acid and picromel. Edul- corate it with water, and digest with carbonate of barytes. The picromel now liberated will dissolve in the water. On evaporating this solu- tion, it is obtained in a solid state. Or by dis- solving the green sulphate in alcohol, and digest- ing the solution over carbonate of potassa till it cease to redden litmus paper, we obtain the pi- cromel combined with alcohol. It resembles inspissated bile. Its color is greenish-yellow; its taste is intensely bitter at first, with a suc- ceeding impression of sweetness. It is not af- fected by infusion of galls, but the salts of iron and subacetate of lead precipitate it from its aqueous solution. It affords no ammonia by its destructive distillation. Hence the absence of azote is inferred, and the peculiarity of picromel.

PICROTOXIA, in chemistry, the bitter and poisonous principle of cocculus Indicus, the fruit of the menispermum cocculus. To the fil- tered decoction of these berries add acetate of lead, while any precipitate falls. Filter and evaporate the liquid cautiously to the consist- ence of an extract. Dissolve in alcohol of 0-8 1 7, and evaporate the solution to dryness. By re- peating the solutions and evaporations, we at last obtain a substance equally soluble in water and alcohol. The coloring matter may be re- moved by agitating it with a little water. Crys- tals of pure picrotoxia now fall, which may be washed with a little alcohol. The crystals are four-sided prisms, of a white color, and intensely bitter taste. They are soluble in twenty-five times their weight of water, and are not preci- pitable by any known re-agent. Alcohol, specific gravity 0-810, dissolves one-third of its weight of picrotoxia. Pure sulphuric ether dissolves two- fifths of its weight.

Strong sulphuric acid dissolves it, but not when much diluted^ Nitric acid converts it in-

to oxalic acid. It dissolves and neutralises in acetic acid, and falls when this is saturated with an alkali. It may therefore be regarded as a vegeto-alkali itself. Aqueous potassa dissolves it, without evolving any

smell of ammonia. It acts as an intoxicating poison.

Sulphate of picrotoxia must be formed by dis- solving picrotoxia in dilute sulphuric acid; for the strong acid chars and destroys it. The solu- tion crystallises on cooling. The sulphate of picrotoxia dissolves in 120 times its weight of boiling water. The solution gradually lets fall the salt in fine silky filaments disposed in bun- dles, and possessed of great beauty. When dry it has a white color, and feels elastic under the teeth, like plumose alum. It is composed of

Sulphuric acid . . 9‘99 5 Picrotoxia . 90-01 45

100-00

Nitrate of picrotoxia. — Nitric acid of the spe- cific gravity 1-38, diluted with twice its weight of water, dissolves, when assisted by heat, the fourth of its weight of picrotoxia. When this solution is evaporated to one-half it becomes viscid, and on cooling is converted into a trans- parent mass, similar to a solution of gum arabic. In this state the nitrate of picrotoxia is acid, and exceedingly bitter. If it be still further dried, in a temperature not exceeding 140°, it swells up, becomes opaque, and grows at last perfectly white and light, like calcined alum. If we keep it in this state, at a temperature below that of boiling water, adding a little water occasionally, the whole excess of acid exhales, and the taste becomes purely bitter. When this salt is washed in pure water, the acid is totally removed, and the picrotoxia is separated in the state of fine white plates. See CHEMISTRY.

Muriate of picrotoxia. — Muriatic acid, of the specific gravity 1-145, has little action on picro- toxia. It dissolves it when assisted by heat, but does not become entirely saturated. Five parts of this acid, diluted with three times its weight of water, dissolve about one part of picrotoxia at a strong boiling temperature. The liquor, on cooling, is converted into a grayish crystalline mass, composed of confused crystals. When these crystals are well washed, they are almost destitute of taste, and feel elastic under the teeth. They dissolve in about 400 times their weight of boiling water, but are. almost entirely deposited on cooling. The solubility is much increased by the presence of an excess of acid.

Acetate of picrotoxia. — Acetic acid dissolves picrotoxia very well, and may be nearly satu- rated with it by the assistance of a boiling heat. On cooling, the acetate precipitates in well-de- fined prismatic needles. This acetate is soluble in fifty times its weight of boiling water. On cool- ing, it forms crystals of great beauty, light, with- out

any acid smell, and much less bitter than picrotoxia itself. It is decomposed by nitric acid, which disengages the acetic acid. Dilute sulphuric acid has no marked action on it. It is not so poisonous as pure picrotoxia. — Boullay. Ann. de Chimie.

PICTAVIA, an ancient kingdom of Caledo-

nia or Scotland, comprehending, at its most flourishing period, all the territories bounded on the north by the Forth and Clyde, arid on the south by the Tweed and Solway. It was inha- bited by the Picts. See PICTS.

PICTAVIUM, an ancient town of Gaul, the capital of the Pictones, called also Lemnum, now Poictiers.

PICTET (Benedict), a native of Geneva, born in 1655, of a distinguished family. After hav- ing travelled into Holland and England, he taught theology in his own coxmtry with great reputation. The university of Leyden, after the death of Spantreina, invited him to fill his place ; but he preferred his own country, for which he received the thanks of the council. He died 9th of June, 1724, aged sixty-nine. He pub- lished a great number of works in Latin and French, which are much esteemed in Protestant countries. The principal of these are, 1. A Sys- tem of Christian Theology in Latin, .3 vols. in 4to., best edition, 1721. 2. Christian Morality, Geneva, 1710, 8 vols. 12mo. 3. The History of the Eleventh and Twelfth centuries; a sequel to that of Sueur, 1713, 2 vols. 4to., and held in higher estimation. . 4. Several Controversial Treatises. 5. A great number of tracts on mo- rality and piety ; particularly the Art of Living and Dying well; Geneva, 1705, 12mo. 6. Let- ters. 7. Sermons, from 1697 to 1721; 4 vols 8vo.

PICTET (John Lewis), a counsellor of Geneva, born in 1739, of the same family. He was mem- ber of the Council of Two Hundred ; counsellor of state and Syndic, and died in 1781. He stu- died astronorny, and made several voyages into France and England. He left in MS. the Jour- nal of a voyage which he made to Russia and Siberia in 1768 and 1769, in order to observe the transit of Venus over the sun’s disk.

PICTI, or PICTJE, Lat. painted, an ancient people of Scythia, so named, because they painted their bodies with various colors, to make them appear terrible to their enemies. They are also called Agathyrsi. According to Servius, a colony of them emigrated to’ the north parts of Britain, where they settled, and preserved their name and manners, and gave rise to the king- dom of the Picts. But this is disputed. See

PICTONES, an ancient people of Gaul, men- tioned- by Caesar (De Bell. Gall. vii. c. 4), who inhabited the country called Poictou in modern times, till the late revolution in France.

PICTONIUS, from the Pictones, who were subject to this disease, in medicine, applied to a species of colic. It should rather be called co- lica pictorum, the painter's cholic, because, from their use of lead, they are much afflicted with it.

PICTS, one of those nations who anciently possessed the north of Britain. It is generally believed that they were so called from their cus- tom of painting their bodies ; an opinion which Camden supports with great erudition. See Cough's edition, Vol I. p. xci. of the preface. It is certainly liable, however, to considerable ob- jections ; for as this custom prevailed among the other ancient inhabitants of Britain, who used the glastum of Pliny and the vitrum of Mela for

that purpose, it may be asked, why the name of Ficti was confined by the Romans to only one uibe, when it was equally applicable to many others ? Why should they design them only by an epithet without ever annexing their proper name ? Or why should they impose a new name on this people only, when they gave their proper name to every other tribe which they had occasion to speak of? As these questions cannot be answered in any satisfactory manner, •we must look for some other derivation of the name. The Highlanders of Scotland, who speak the ancient language of Caledonia, express the name of this once famous nation by the term pictich, meaning pilferers or plunderers. The appellation was probably imposed upon this people by their neighbours, or assumed by them- selves, some time after the reign of Caracalla, when the unguarded state of the Roman province, on which they bordered, gave them frequent op- pprtunities of making incursions thither, and committing depredations. Accordingly this name seems to have been unknown till the end of the third century. Eumenius. the panegyrist, is the first Roman author who mentions this peo- ple under their new name of Fictich, or, with a Latin termination, picti.

Concerning the origin of the Picts, authors are much divided. Boethius derives them from the Agathyrsi, Pomponius Lsetus from the Ger-

mans, Bede from the Scythians, Camden and Father Innes from the ancient Britons, Stilling- fleet from a people inhabiting the Cimbrica Chersonesus, and Keating and O'Flaherty, on the authority of the Psalter Cashel, derive them from the Thracians. But the most probable opinion is, that they were the descendants of the old Caledonians. Several reasons are urged in support of this opinion by Macpherson ; and the words of Eumenes, ' Caledonum, aliorumque Pictorum, silvas,' &c., plainly imply that the Picts and Caledonians were one and the same people. As there has been much dispute about the origin of the Picts, so there has been like- wise about their language. There are many rea- sons which make it plain that their tongue was the Gaelic or Celtic; and these reasons are a further confirmation of their having been of Caledonian extract. Through the east and north-east coasts of Scotland (which were pos- sessed by the Picts) we meet with an innumera- ble list of names of places, rivers, mountains, &c., which are manifestly Gaelic. From a very old registry of the priory of St. Andrew's (Dal- rymple's Collections, p. 122), it appears, that in the days of Hungus, the last Pictish king of that name, St. Andrew's was called Mucross ; and that the town now called Queensferry had the name of Ardchinneachan. Both these words are Gaelic. The first signifies the heath or promon- tory of boars; and the latter the height or penin- sula of Kenneth. In the list of Pictish kings published by father Innes most of the names are obviously Gaelic, and in many instances the same with the names in the list of Scottish or Caleaoman kings published by the same author. Had Innes understood any thing of this language he would not have supposed with Camden that the Picts spoke the British tongue. The two VOL. XVII.

words on which they build their conjecture (strath and aber), are as common in the'Gaelic as they could have leen in the British, and at this day make a part of the names of places in countries to which the Pictish empire never ex- tended. The names of Strathhllan and Lochaber may serve as instances.

The Picts of the earliest ages, as appears from the joint testimony of all writers who have ex- amined the subject, possessed only the east and north-east coast of Scotland. On one side the ancient Drumalbin, or that ridge of mountains reaching from Lochlomond near Dumbarton to the frith of Taine, which separates the county of Sutherland from a part of Ross, was the boun- dary of the Pictish dominions. Accordingly we find in the life of St. Columba that, in travelling to the palace of Brudeus, king of the Picts, he travelled over Drumalbin, the Dorsum Britan- niae of Adamnan. On the other side, the terri- tory of the Picts was bounded by the Roman province. After Britain was relinquished by the emperor Ilonorius, they and the

Saxons by turns were masters of those countries which lie between the frith of Edinburgh and the river Tweed. We learn from Bede that the Saxons were masters of Galloway when he finished his Ecclesiastical History. The Picts, however, made a conquest of that country soon after ; so that, before the extinction of their monarchy, all the territories bounded on the one side by the Forth and Clyde and on the other by the Tweed and Solway fell into their hands. The history of the Picts, as well as of all the other ancient inhabitants of Britain, is extremely dark. The Irish historians give us a long list of Pictish kings, who reigned over Pictavia for eleven or thirteen centuries before the Christian era. After them Innes, in his Critical Essay, gives us a list of above fifty, of whom no fewer than five held the sceptre, each for a whole century. It is proba- ble that these writers had confounded the history of the Picts with that of their ancestors the old Caledonians. In any other view their accounts of them are highly fabulous ; and have been long ago confuted by Dr. Macpherson, of Slate. Adamnan, abbot of Ionia, is the first author who expressly mentions any Pictish king: and the oldest after him is Bede. We are informed b.y these two writers that St. Columba converted Brudeus, king of the Picts, to the Christian faith. Columba came into Britain A. D. 565. The history of Drust, or Drest, who is said to have reigned over the Picts in the beginning of the fifth century, when St. Ninian first preached the gospel to that nation, A. D. 630, has all the appearance of fiction. Bede informs us that, during the reign of the ancestors of Brudens, the Picts killed Egfred, king of Northumberland, in battle, and destroyed the greatest part of his army. The same author mentions another of their kings called Naitan, to whom Ceolfrid, ab- bot of Wiremouth, wrote his famous letter con- cerning Easter and the Tonsure; a letter in which Bede himself is supposed to have had a principal hand. Roger Hoveden and Simon of Durham mention two other Pictish kings, On- nust and Kinoth, the first of whom died in 761, and the latter flourished about 774, and gave &»

asylum to Alfred of Northumberland, who was about that time expelled his kingdom. The ac- counts given by the Scottish historians of several other Pictish kings cannot be depended on ; nor are the stories told by the British historians, Geoffroy of Monmouth and the

author of the Eulogium Brittaniae, worthy of greater credit. In the ninth century the Pictish nation was to- tally subdued by the Scots under Kenneth II. Since that time their name has been lost in that of the conquerors, with whom they were incor- porated : however, they seem to have been treated by the Scottish kings with great lenity, so that for some ages after they commanded respect. The prior of Hogulstead, an old Eng- lish historian, relates that they made a consider- able figure in the army of David I., in his dis- putes with Stephen, king of England. In a bat- tle fought in 1136, by the English on one side and the Scots and Picts on the other, the latter insisted on their hereditary right of leading the van of the Scots army, and were indulged in that request. The principal seat of the Pictish kings was at Abernethy. Brudeus, however, as ap- pears from the accounts given by Adamnan, in his life of Columba, had a palace at Inverness. With respect to the manners and customs of the Picts, there is no reason to suppose they were any other than those of the old Caledonians and Scots, of which many particulars are related in the Roman writers. Upon the decline of the empire, cohorts of barbarians were raised, and Picts were invited into the service, by Honorius, when peace was every where restored, and were named Honoriaci. Those under Constaiitine opened the passes of the Pyrenean mountains, and let the barbarous nations into Spain. From this period we date the civilisation of their man- ners, which happened after they had by them- selves, and then with the Scots, ravaged this Roman province.

PICTS' WALL, in antiquity, a wall begun by the emperor Adrian, on the northern bounds of England, to prevent the incursions of the Picts and Scots. It was first made only of turf, strengthened with palisadoes, till the emperor Severus, coming into Britain in person, built it wilh solid stone. This wall, part of which still remains, began at the entrance of the Solway Frith in Cumberland, and running north-east ex- tended to the German Ocean. See ADRIAN and SEVERUS.

PICTURE, n. s. & v. a, \ Lat. pictura. A PICTO'RIAL, adj. J resemblance of per-

sons or things, particularly in colors ; the science of painting : to paint or represent : pictorial (only used by Browne) is, produced by a painter ; or referring to painting.

All filled with these rueful spectacles of so many wretched carcases starving, that even I, that do but hear it from you, and d picture it in my mind, do greatly pity it. Spenser.

Madam, if that your heart be so obdurate, Vouchsafe me yet your

picture for my love, The picture that is hanging in your chamber.

Shakspeare. I have not seen him so pictured. Id.

Pictures and shapes are but secondary objects, and please or displease but in memory. Bacon.

Quintilian, when he saw any well-expressed image of grief either in picture or sculpture, would usually weep. Wotton.

He who caused the spring to be pictured, added this rhyme for an exposition.

Carew's Survey of Cornwall.

Sea horses are but grotesco delineations, which fill up empty spaces in maps, as many pictorial in- ventions, not any physical shapes. Browne.

It is not allowable, what is observable of Raphael Urban ; wherein Mary Magdalen is pictured before our Saviour washing his feet on her knees, which will not consist with the strict letter of the text.

Browne's Vulgar Errours.

Your neighbours would not look on you as men, But think the nations all turned picts again. Lee.

If nothing will satisfy him, but having it under "iy hand, that I had no design to ruin the company of picture-drawers, I do hereby give it him.

Stillingfleet.

His thoughts, which are the pictures and results of passions, are generally such as naturally arise from those disorderly motions of our spirits. Dryden. Devouring what he saw so well designed,

He with an empty picture fed his mind. Id.

It suffices to the unity of any idea, that it be con- sidered as one representation or picture, though made up of ever so many particulars. Locke.

Love is like the painter, who, being to draw the picture of a friend having a blemish in one eye, would picture only the other side of his face. South.

Fond man, See here thy pictured life.

Thomson's Winter.

She often shows them her own picture, which was taken when their father fell in love with her. Law.

Borne on fine wires amid the pictured skies With ivory orbs the" planets set and rise ; Round the dwarf earth the pearly moon is rolled, And the sun twinkling whirls his rays of gold.

Darwin.

PICTURESQUE BEAUTY refers to ' such beautiful objects as are suited to the pencil.' This epithet is chiefly applied to nature, though it will often apply to the works of art also. Those objects are most properly denominated pic- turesque which are disposed by the hand of na- ture with a mixture of varied rudeness, simpli- city, and grandeur. A plain neat garden, with little variation in its plan, and no striking gran- deur in its position, displays too much of art, design, and uniformity, to be called picturesque. ' The ideas of neat and smooth,' says Mr. Gil- pin, ' instead of being picturesque, in fact, dis- qualify the object in which they reside from any pretensions to picturesque beauty. Nay, farther, we do not scruple to assert that roughness forms the most essential point of difference between the beautiful and the picturesque ; as it seems to be that particular quality which makes objects chiefly pleasing in painting. I use the general term roughness ; but, properly speaking, rough- ness relates only to the surfaces of bodies : when we speak of their delineation we use the word ruggedness. Both ideas, however, enter equally into the picturesque, and both are observable in the smaller as well as in the larger parts of na- ture ; in the outline and bark of a tree, as in the rude summit and craggy sides of a mountain.

'Let us then examine our theory by an ap- peal to experience, and try how far these quali- ties enter into the idea of picturesque beauty,

and how far they mark that difference among objects which is the ground of our enquiry. A piece of Palladian architecture may be ele- gant in the last degree; the proportion of its parts, the propriety of its

ornaments, and the symmetry of the whole, may be highly pleasing : but, if we introduce it into a picture, it imme- diately becomes a formal object, and ceases to please. Should we wish to give it picturesque beauty, we must use the mallet instead of the chisel : we must beat down one half of it, deface the other, and throw the mutilated members around in heaps ; in short, from a smooth build- ing we must turn it into a rough ruin. No painter who had the choice of the two objects would hesitate a moment. Again, why does an elegant piece of garden ground make no figure on canvas? — The shape is pleasing, the combi- nation of the objects harmonious, and the wind- ing of the walk is the very line of beauty. All this is true ; but the smoothness of the whole, though right, and as it should be in nature, of- fends in picture. Turn the lawn into a piece of broken ground, plant rugged oaks instead of flowering shrubs, break the edges of the walk, give it the rudeness of a road, mark it with wheel tracks, and scatter around a few stones and brush-wood ; in a word, instead of making the whole smooth, make it rough, and you make it also picturesque. All the other ingredients of beauty it already possessed.'

Picturesque composition, in art, may be de- nned, to speak generally, as the art of uniting, in one whole, a variety of irregularly grand and striking parts, which parts may be sought and found among the works of art, though in a far less proportion, as well as in the works of nature. Objects may likewise be made picturesque : this, however, is hazardous work, and there is no small danger of missing the picturesque and falling into the ridiculous. Artificial ruins, for example, can seldom be regarded as matters of good taste : and, when the trick is known, the eye, or rather the imagination through the medium of the eye, refuses to recognise therein any of the principles of romantic beauty sought to be im- parted. The great source of picturesque beauty is Nature in all her original variety and irregular grandeur. ' We seek it/ says the authority quoted above, ' among all the ingredients of landscape — trees, rocks, broken grounds, woods, rivers, lakes, plains, valleys, mountains, and dis- tances. These objects, in themselves, produce infinite variety ; no two rocks or trees are exactly the same ; they are varied a second time by com- bination ; and almost as much a third time by different lights and shades, and other aerial ef- fects. Sometimes we find among them the ex- hibition of a whole, but oftener we find only beautiful parts.'

PICUIPINIMA, in ornithology, is the name of a species of pigeon in Brasil. It is so very small as scarcely to exceed the lark in size. Its head, neck, and wings, are of a pale lead color, with a black semilunar mark at the extremity of each wing; but its long wing-feathers, which

are seen when the wings are expanded in flying, are of a reddish brown on one side, and blackish on ‘he other, with black ends or tips ; the tail is

long, and is variegated with black, white, and brown ; the belly is covered with white feathers, every one of which has a brown mark of the shape of a half-moon at the end.

PICUMNUS AND PILUMNUS were two deities at Rome, who presided over the auspices re- quired before the celebration of nuptials. Pilumnus was supposed to patronise children, as his name seems in some manner to indicate, quod pellit mala infantiae. The manuring of land was first invented by Picumnus, for which reason he is called Sterquilinius. Pilumnus is also in- voked as the god of bakers and millers, as he is said to have first invented the art of grinding corn.

PICUS, in fabulous history, a king of Latium, son of Saturn. He married Venilia, or Canens, by whom he had Faunus ; was beloved by the goddess Pomona, and returned her affection. As he was one day hunting in the woods he was met by Circe, who became deeply enamoured of him, and who changed him into a woodpecker, called by the name of picus among the Latins. His wife Venilia was so disconsolate, when she was informed of his death, that she pined away. Some say that Picus was the son of Pilumnus, and that he gave out prophecies to his subjects by means of a favorite woodpecker ; from which originated the fable pf his being metamorphosed into that bird.

Picus (John), earl of Mirandola, a prodigy of parts and learning, was the youngest child of John Francis Picus, earl of Mirandola and Concordia; and was born in 1463. The progress that he made in letters was extremely rapid. He was the scholar of R. Jochanan, a German Jew, who confirmed his natural fondness for the cabalistical writings. After visiting the most famous universities of France and Italy, he went to Rome; where, in 1486, before he was twenty- four years of age, he published 900 propositions in logic, mathematics, physics, divinity, cabalis- tic learning, and magic, drawn not only from Greek and Latin, but even from Jewish and Arabian writers ; subjoining to his advertisement, that, ‘ if any philosopher or divine would come to Rome to dispute with him upon any or all of them, he would defray the expenses of his jour- ney from the remotest corners of Italy.’ But, some of his propositions being charged with heresy, he was forbid to dispute upon them. At the age of twenty-eight he confined himself wholly to the study of the Scriptures ; and undertook to combat the Jews and Mahometans, as well as to confound judicial astrology. He

died in 1494, in his thirty-second year. He was called the phoenix of his age, and by Scaliger Monstrum sine Vitio. He composed a great number of works, which have often been printed.

Picus (John Francis), prince of Mirandola, nephew of John Picus mentioned above, was born about the year 1469. He cultivated learning and the sciences after the example of his uncle ; but had a principality and dominions to superintend, which involved him in great trou- bles, and at last cost him his lite. He was twice driven from his principality, and twice restored ; and at last, in 1533, was, together with his eldest son Albert, assassinated in his own castle by

his nephew Galeoti. He was a great lover of letters ; and such of his works as were then com- posed were inserted in the Strasburgh edition of his uncle's in 1 504, and continued in future im- pressions, besides some others which were never collected.

Prcus, the woodpecker, in ornithology, a ge- nus belonging to the order of picae. The beak is straight, and consists of many sides, and is like a wedge at the point: the nostrils are covered with bristly feathers ; the tongue is round like a worm, very long, and sharp at the point, which is beset with bristles bent backwards. The grand characteristic, says Latham, of these birds is the tongue (which in no bird is similar, the wryneck excepted, whose other characters, how- ever, differ too widely to give it place in this class), the muscles necessary to the motions of which are singular and worthy of notice ; afford- ing the animal means of darting it forwards the whole length, or drawing it within the mouth at will. Mr. Latham enumerates no fewer than fifty species of woodpeckers, and nine varieties. The most remarkable are: 1. P. auratus, the gold- winged woodpecker, is about eleven inches long, and weighs about five ounces. The bill is an inch and a half long, and is some.what bent, and is not square but roundish, ridged only on the top, the point being sharp ; the upper parts of the head and neck are ash-colored ; the hind head is red ; the sides of the head, throat, and fore part of the neck, are pale yellow ; on each side of the head is a stripe of black, from the base of the lower jaw to the neck; the back, scapulars, and wing-covers, are of a gray brown color, transversely striated with black lines ; the rump is whitish ; the breast, belly, and sides, are whitish-yellow, and each feather is marked with a round

black spot at the tip ; on the middle of the breast there is a large crescent of black ; the thighs, upper and under tail-coverts, are black and white mixed; the quills are brown, with yellow shafts spotted with brown on the outer edge; the tail is blackish, being outwardly edged with gray ; the other feather is dotted with whitish on the margins; the shafts of all but the two middle feathers are yellow half way from the base; and the legs and claws are brown. The female differs in having the crown and neck behind gray-brown ; the hind head of a less vivid red; and the greater quills not spotted on the edges. She also wants the black list on the throat, but otherwise is like the male. This species inhabits Virginia, Carolina, and Canada, and abounds in New Jersey and about New York, where it is called by some hittock or pint, and by others high-hole. Both the former names have some relation to its note ; and the latter, perhaps, to the situation of the nest. It is almost continually on the ground, and is not observed to climb on the trees like others of the genus. It lives chiefly on insects, and is commonly very fat, so as to be thought very palatable for the table. It stays all the year. In its form, and some of its qualities, it resembles the cuckoo. It flies to the top of trees, and sits occasionally on the branches. Forster, in the Philosophical Transactions, says it is a bird of passage in the northern parts of America, visiting the neighbour-

hood of Albany Fort in April, and leaving it in September : that it lays from four to six eggs, in hollow trees, and feeds on worms and other in- sects.

2. P. erythrocephalus, the red-headed wood- pecker, is about eight inches and three-quarters long, and weighs two ounces. The bill is an inch and a quarter in length, of a lead color, with a black tip ; the irides are dusky ; the head and the neck are of a most beautiful crimson ; the back and wings are black ; the rump, breast, and belly, are white ; the first ten quills are black, the eleventh black and white, and the others are white with black shafts; the tail is black and cuneiform ; the legs and claws are of a lead color. The cock and hen are very nearly alike. This species inhabits Virginia, Carolina, Canada, and most of the parts of North America; but, at the approach of winter, it migrates more or less to the south, according to the severity of the season ; and upon this circumstance the peo- ple of North America foretel the rigor or cle- mency of the ensuing winter. Kalm observes that it is a very common bird, and is very destructive to the maize fields and orchards, pecking through the ears of maize, and destroy- ing great quantities of apples. In some years they are more numerous than in others, when they attack the orchards where the sweet apples grow, which they eat so far that nothing remains but the mere peels. Some years ago there was a premium of two-pence per

head paid from the public fund to extirpate these pernicious birds. They are likewise very fond of acorns. In Vir- ginia and Carolina they stay the whole year, but are not seen in such numbers in winter as in summer. During the winter they are very tame, and often come into the houses, as the redbreast does in England. This species is found chiefly in old trees ; and the noise they make with their bills may be heard above a mile distant. It builds the earliest of all the woodpeckers, and generally pretty high from the ground. It is ac- counted very good eating.

3. P. flavus, the yellow woodpecker, is about nine inches long. The bill is of a yellowish white, and more than an inch long ; the hind head is crested ; the head itself, the neck, and whole body, are covered with dirty-white fea- thers ; from the lower jaw to the ears, on each side, there is a red stripe ; the wing-coverts are brown and edged with yellowish, and some of the greater ones are mixed with rufous on the inner web ; the quills are brown or rufous ; the tail is b'ack ; the legs and claws are gray. This species is common at Cayenne, and is called there chapentier jaune. It makes its nest in old trees which are rotten within ; making with its bill a hole from without, at first horizontal, but declining downward as soon as it has pierced through the sound part, till it is at last a foot and a half below the first opening. The female lays three white, and nearly round, eggs, and the young are hatched about the beginning of April. The male bears his share in the work with the female ; and, in her absence, keeps sentinel at the entrance of the hole. The note of this bird is a kind of whistle six times repeated, of which the two or three last are in a graver accent than

the others. The female wants the red band on the side of the head which the male has. Speci- mens vary; some are of that dirty-white, as Brys- son describes it, others of a light-yellow ; which last was the case in a specimen in the Leverian museum : this is thirteen inches in length.

4. P. major, the great spotted woodpecker,weighs two ounces and three-quarters ; the length is nine inches, the breadth sixteen. The bill is one and a quarter long, of a black horn color. The irides are red. The forehead is of a pale buff-color ; the crown of the head a glossy black ; the hind part marked with a rich deep crimson spot. The cheeks are white, bounded beneath by a black line, that passes from the corner of the mouth, and surrounds the hind part of the head. The

neck is encircled with a black color ; the throat and breast are of a yellowish-white ; the vent- feathers of a fine light crimson. The back, rump, and coverts of the tail, and lesser coverts of the wings, are black; the scapular feathers, and coverts adjoining to them, are white. The quill feathers are black, elegantly marked on each web with round white spots. The four middle feathers of the tail are black, the next tipped with dirty-yellow ; the bottoms of the two out- most black ; the upper parts a dirty-white. The exterior feathers marked on each web with two black spots ; the next with two on the inner web, and only one on the other. The legs are of a lead color. The female wants that beautiful crimson spot on the head ; in other respects the colors of both agree. This species is much more uncommon than the viridis, No. 10, and keeps altogether in the woods. They are pretty com- mon in England, France, Germany, and other parts of Europe, frequenting the woods, and are likewise met with in America. They are very cunning, and hide themselves when observed. The extreme facility with which these birds descend and ascend the trees is surprising.

5. P. martius, the greatest black woodpecker, is about the size of a jackdaw, being about seventeen inches long ; the bill is nearly two inches and a half in length, of a dark ash color, and whitish on the sides ; the irides are pale yellow, and the eyelids are naked according to Scopoli ; the whole bird is black, except the crown of the head, which is vermilion ; the first quill-feather is the shortest, and the two middle tail-feathers, which are longer than the others, make it appear a little rounded ; the legs are of a lead color, covered with feathers on the fore part for half their length. The female differs from the male in having the hind head only red, and not the whole crown of the head ; and the general color of the plumage has a strong cast of brown in it. Sometimes the red on the hind head is wholly wanting ; and indeed both male and female vary in different subjects, in their proportion of red on the head. This species is found on the continent of Europe, but is nume- rous only in Germany. It is not an inhabitant of Italy or France, but it is found in Sweden, Switzerland, and Denmark, though not in winter. It builds in old ash and poplar trees, making large and deep nests ; and Frisch observes that they often so excavate a tree that it is soon after blown down with the wind ; and that under the

hole of this bird may often be found a bushel ‘ t dust and bits of wood. The female lays two or or three white eggs, the color of which is peci – liar to the whole of the genus.

6. P. medius, the middle-sized woodpecker, agrees with the major (No. 4) in colors and size, excepting that the crown of the head of this is of a rich crimson ; the crown of the head in the male of the former

black ; and the crimson is in form of a bar on the hind part. Birds thus marked have been shot in Lancashire, and other parts of England ; but Mr. Pennant is doubtful whether they are varieties, or distinct species.

7. P. minor, the least spotted woodpecker, scarcely weighs an ounce : the length is six inches ; the breadth eleven. The forehead is a dirty white : the crown of the head in the male of a beautiful crimson: the cheeks and sides of the neck are white, bounded by a bed of black beneath the former. The hind part of the head and neck, and the coverts of the wings, are black ; others varied with black and white ; the breast and belly are of a dirty white : the crown of the head, in the female, is white ; the feet are of a lead color. It has all the characters and actions of the greater kind, but is not so often met with. Buffon affirms that it inhabits most parts of France. It approaches near habitations in win- ter, and may be seen in orchards adjoining to houses. It builds in a hole of a tree, and often disputes the right of possession with the little colemouse. Willoughby says it is called in England by the name of hickwall. It is said to inhabit the higher parts of Asia.

8. P. principalis, the white-billed woodpecker, is somewhat bigger than the martius (No. 5) and equal in size to a crow. It is sixteen inches long, and weighs about twenty ounces. The bill is white as ivory, three inches long, and channelled ; the irides are yellow, and on the hind head is an erect pointed crest, of a fine red color, some of the feathers of which are two inches long ; the head itself, and the body in ge- neral, are black ; but the lower part of the back, rump, and upper tail-coverts, are white ; from the eye there arises a stripe of white, which passes on each side of the neck down to the back ; three or four of the prime quills are black, but the rest are white; the tail is cuneiform, and of the same color as the body ; the legs and claws are also black. This species inhabits Caro- lina, Virginia, New Spain, and Brasil, and is called by the Spaniards carpenter, and not with- out reason, as this, as well as the other species, make a great noise with the bill against the tree, in the woods, where they may be heard at a great distance, as if carpenters were at work, making, according to Catesby, in an hour or two a bushel of chips. He adds that the Canadian Indians make use of the bills of these birds for coronets, setting them round in a wreath with the points outwards ; and that the northern Indians pur- chase them of the southern at the rate of two or three buck skins' per bill. Kalm says they are found in New Jersey, though very seldom, and only at certain seasons.

9. P. pubescens, the little wookpecker, ac- cording to Catesby, weighs only about an ounce and a half. Brisson says it is larger than the

smallest of our European species, being about five inches and a half long. The bill is about eight lines long, and of a horn color ; the top of the head is black, and on each side above the eye is a white line ; the hind head is red : the hind parts of the neck, the back, and rump are black, which is divided into two parts by a line of white passing down the middle to the rump ; the sca- pulars, upper wing, and tail-coverts are black ; the greater wing-coverts and quills are spotted with white ; the under parts of the body are pale gray ; the tail is black ; the four middle feathers are plain, the rest are barred with white and black ; and the legs and claws are black. The female has no red on the hind head. Lin- naeus says that the outer tail-feather is white, marked with four black spots. This species in- habits Virginia and Carolina. According to Kalm, it abounds in New Jersey, where it is the most daring and dangerous to orchards. As soon as it has pecked one hole in a tree, it makes another close to the first, in a horizontal direc- tion, proceeding till it has made a circle of holes quite round the tree ; and the apple-trees in the orchards have often several rings of holes round the stem, insomuch that the tree frequently dries up and decays.

10. P. viridis, the green woodpecker, weighs six ounces and a half; its length is thirteen inches, the breadth twenty and a half; the bill is dusky, triangular, and nearly two inches long ; the crown of the head is crimson, spotted with black, and the males have a rich crimson mark beneath the blackness ; the back, neck, and lesser coverts of the wings, are green ; the rump of a pale yellow; the whole of the under part of the body is of a very pale green, and the thighs and vent are marked with dusky lines ; the legs and feet are of a cinereous green ; the tail con- sists of ten stiff feathers, whose ends are gene- rally broken, as the bird rests on them in climb- ing; their tips are black; the rest of each is alternately barred with dusky and deep green. These birds feed entirely on insects ; and their principal action is that of climbing up and down the bodies or boughs of trees ; for the first pur- pose they are provided with a long slender tongue, armed with a sharp bone, and barbed on each side, which by the means of a curious apparatus of muscles they can exert at pleasure, darting it to a great length into the clifts of the bark, transfixing and drawing out the insects that lurk there. They make their nests in the hollows of trees : in order, therefore, to force their way into these cavities, their bills are formed strong, very hard, and wedge-like at the end ; Dr. Derham observes, that a neat ridge runs along the top, as if an artist had designed it for strength and beauty. Yet it has not power to penetrate

a sound tree ; their perforation of any tree is ˆa warning to the owner to throw it down. Their legs are short, but strong ; their thighs very mus- cular; their toes disposed two backward, two forward ; the feathers of the tail very stiff, sharp pointed, and bending downwards. The first three circumstances admirably concur to enable them to run up and down the sides of trees with great security ; and the strength of the tail supports them firmly when they continue long in

one place, either where they find plenty of food, or while they are forming an access to the interior part of the timber. This form of the tail makes their flight very aukward, as it inclines their body down, and forces them to fly with short and frequent jerks when they would ascend, or even keep in a line. This species feeds oftener on the ground than any other of the genus : all of them make their nests in the hollows of trees ; and lay five or six eggs, of a beautiful semi-transparent white. These birds sometimes build in a hollow ash or other tree, fifteen or twenty feet from the ground. The male and female take it by turns to bore through the living part of the wood, till they come to the rotten part, wherein, after being hollowed out to a proper depth, they lay their eggs, which are generally greenish, with small black spots. These holes are so deep, that a man may thrust his whole arm down one of them till he reach the eggs. The young ones climb up and down the tree before they can fly. The holes of the woodpecker are as perfectly round as if made by a pair of compasses. Nut- hatches, starlings, and bats, frequently build in these holes when deserted. Both Frisch and Klein mistake in saying that the females have not the red crown ; for even the young ones in the nest have the appearance of it ; but they do not become of a full red till after the first moult. They are fond of bees, and make great havock among them. Salerne says they are found in the markets of Italy. In Sir A. Lever’s museum there was a variety of this bird of a straw color, except the crown, which is faintly marked with red.

PID’DLE, v. n. & n. s. This word is obscure in its etymology, says Johnson. Skinner derives it from Ital. piccialo, or Fr. petit, little. Mr. Lye thinks it the diminutive of the Welsh breyta, to eat ; perhaps it comes from peddle, to deal in little things. It is used also as a diminutive of puddle.

From stomach sharp, and hearty feeding, To piddle like a lady breeding.

Swift’s Miscellanies.

1 speak only of the general outline of their con- stitution ; piddling

objections may be made to parti- cular parts, and experience will point out the neces- sity of reconsidering many things. Bp. Watson.

PIE, 11. s. Derived by Skinner from biezan to build, that is, to build of paste ; by Junius, by contraction from pasty ; a crust baked with something in it.

No man's pie is freed From his ambitious finger.

Shakspeare. Henry VIII.

Mincing the meat in pies saveth the grinding of the teeth, and more nourishing to them that have weak teeth. Bacon.

He is the very Withers of the city ; they have bought more .editions of his works than would serve to lay under all their pies at a lord mayor's Christmas.

Dry den.

Chuse your materials right ; From thence of course the figure will arise, And elegance adorn the surface of your pies.

King. Eat beef or pfe-crust, if vou'd serious be. Id.

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PIE'BALD, adj. f pie ; a party-colored bird : PIED 1 hence of various colors : pie-

Pi ED'NESS, n. s. J bald and pied signify varie- gated.

The pie will discharge thee for pulling the rest.

Tusser.

There is an art, which in their piedness shares W ith great creating nature.

Shakspeare. Winter's Tale. The raven croaked hoarse on the chimney's top, And chattering pies in dismal discords sung.

Shakspeare.

All the yearlings which were streaked and pied,

Should fall as Jacob's hire. Id. Merchant of Venice.

Pied cattle are spotted in their tongues. Bacon .

The seat, the soft wool of the bee, The cover, gallantly to see, The wing of a pied butterfly, I trow 'twas simple trimming. Drayton. They desire to take such as have their feathers of pied, orient and various colours. Abbot.

Meadows trim with daisies pied, Shallow brooks and rivers wide. Milton.

It was a particoloured dress Of patched and piebald languages.

Hudibras.

Who taught the parrot human notes to try, Or with a voice endu'd the chattering pie 1 'Twas witty want. Dryden.

They would think themselves miserable in a patched coat, and yet contentedly suffer their minds to appear abroad in a piebald livery of coarse patches and borrowed shreds. Locke.

They are pleased to hear of a piebald horse that is strayed out of a field near Islington, as of a whole troop that has been engaged in any foreign adven- ture. Spectator. Peel'd, patch'd, and piebald, linsey-woolsey bro- thers, Grave mummers ! sleeveless some, and shirtless

others. Pope.

PIE, n. s. Sax. pie ; Fr. pie. An old popish service-book, so called, as is supposed, from the different colors of the text and rubric. ' Cock and pie,' says Dr. Johnson, ' was a slight ex- pression in Shakspeare's time, of which I know not the meaning.' It means the above, a book of devotion ; a rubric. Lat. coccus and pins .

Mr. Slender, come ; we stay for you. — I'll eat nothing, I thank you, Sir ; — By cock and pie you shall not chuse, Sir ; come,

come. Shakspeare. Merry Wives of Windsor. PIE POWDER COURT, in English law, curia pedis pulverizati, the court of Dusty-foot, from the French pied, pes, and poudreux, pulveru- lentus, a court held in fairs, to administer justice to buyers and sellers, and for redress of disor-

ders committed in them. Skene, de Verbor. signif., verbo Pes- pulverosus says, the word sig- nifies a vagabond ; especially a pedlar, who has no dwelling, therefore must have justice sum- marily administered to him, viz. within three ebbings and three flowings of the sea. Bracton, lib. 5, tract. 1, c. 6, num. 6, calls it Justitiam pepoudrous. Of this court, read the statute 17 Edw. IV. c. 2 : 4 Inst. 272 : and Cromp. Jur. 221. Among our Saxon ancestors it was called ceapung-gemot, i. e. a court of merchandise, or handling matters of buying and selling. It is mentioned in Doctor and Student, c. 5, which says, it is a court incident to fairs and markets,

to be held only during the time that the fairs are kept.— Cowell. The fair of St. Giles, held on the hill of that name, near the city of Winches- ter, by virtue of letters patent of king Edw. IV., has a court of Pie-powder of a transcendant ju- risdiction; the judges whereof are called justices of the Pavilion, and have their power from the bishop of Winchester.

PIECE, n. s., V. a., & v. n.~\ French piece ;

PIECE'LESS, adj. > Ital. pizza, pe-

PIECE'MEAL, adj. & adv. j cia ; Span.p ieza ; barb. Lat. petia. A part ; fragment ; portion ; complete part or specimen ; picture ; composi- tion ; performance ; great or small gun ; coin : to piece is to add to or repair by pieces : hen'ce to join ; unite ; coalesce : pieceless, an obsolete ad- jective for whole; not made up of separate or dif- ferent pieces : piece-meal (Sax. pice-mel), in pieces ; single; separate : a-piece is an idiomati cal expression for ' to each ' (piece or person) , ' of a- piece,' signifies like, i. e. as of the same piece.

Bring it out piece by piece. Ezeh. xxiv. 26.

The chief captain, fearing lest Paul should have been pulled .in pieces of them, commanded to take him by force. Acts.

When he cometh to experience of service abroad, or is put to a piece or a pike, he maketh as worthy a soldier as any nation he meeteth with. Spenser.

Pyrrhus, with continual battery of great pieces, did batter the mount.

Knolles's History of the Turks.

A piece of ordnance 'gainst it I have placed.

Shakspeare. I speak too long, but ‘tis to piece the time,

To draw it out in length. Id. Merchant of Venice.

He pieces out his wife’s inclination ; he gives her folly, motion, and advantage. Shakspeare.

Many of the ships have brass pieces, whereas every piece at least requires four gunners to attend it.

Raleigh’s Essays.

Plant it with women as well as men, that it may spread into generations, and not be pieced from with- out. Bacon.

The cunning priest chose Plantagenet to be the subject his pupil should personate ; because he was more in the present speech of the people, and it pieced better and followed more close upon the bruit of Plantagenet’s escape. Id.

In those poor types of God, round circles ; so 1 Religion’s types the pieceless centres flow, And are in all the lines which always go. *

Donne.

He strook his helme, full where his plume did

stand,

On which it piece-meal brake, and fell from his un- happy hand. Chapman. I’ll be torn piecemeal by a horse, Ere I’ll take you for better or worse.

Hudibras.

Truth and fiction are so aptly mixed, That all seems uniform and of a piece.

Roscommon.

I demand, concerning all those creatures that have eyes and ears, whether they might not have had only one eye, and one ear a-ptece. More.

It is accounted a piece of excellent knowledge, to know the laws of the land. Tillotson.

Whether the piecing out of an old man's life is worth the pains, I cannot tell. Temple.

If unnatural, the finest colours are but dawbing, and the piece is a beautiful monster at the best.

Dryden.

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PIEDMONT.

My own is of a piece with his, and, were he living, they are such he would have written. Id.

Too justly ravished from an age like this ; Now she is gone, the world is of a piece. Id.

When Jupiter granted petitions, a cockle made request, that his house and his bcdy might be all of a piece. L'Eitrange.

These lesser rocks or great bulky stones, that lie scattered in the sea or upon the land, are they not manifest fragments and pieces of these greater masses 1

Burnet.

Neither was the body then subject to distempers, to die by piecemeal, and languish under coughs or consumptions. South.

He wrote several pieces which he did not assume the honour of. Addison.

A man that is in Rome can scarce see an object, that does not call to mind a piece of a Latin poet or historian. Id.

Other blasphemies level, some at one attribute, some at another ; but this, by a more compendious impiety, shoots at his very being, and, as if it scorned these piecemeal guiles, sets up a single monster big enough to devour them all.

Government of the Tongue. When once the poet's honour ceases, From reason far his transports rove ;

And Boileau, for eight hundred pieces, Makes Louis take the wall of Jove. Prior.

Why did I not his carcase piecemeal tear, And cast it in the sea 1 Derham.

The ball goes on in the direction of the stick, or of the body of the piece out of which it is shot/

Cheyne.

Each heavenly piece unweary'd we compare, Match Raphael's grace with thy loved Guide's air.

Pope.

Piecemeal they win this acre first, then that ; Glean on and gather up the whole estate. Id.

His other pieces were read only by those few who delight in obsolete books. Johnson.

PIECE, in matters of money, signifies some- times the same thing with species ; and some* times, by adding the value of the pieces, it is used to express such as have no other particular name.

PIECE is also a kind of money of account, or rather a manner of accounting, used among the negroes on the coast of Angola in Africa. See MOSEY.

PIECE, in heraldry, denotes an ordinary or charge. The honorable pieces of the shield are the chief, fess, bend, pale, bar, cross, saltier, chevron, and in general all those which take up one-third of the field, when alone, and in what manner soever it be. See HERALDRY.

PIECES, in the military art, include all sorts of great guns and mortar. Battering pieces are the larger sort of guns used at sieges for making the breaches ; such are the twenty-four pounder and culverine, the one carrying a twenty-four and the other an eighteen pound ball. Field pieces are twelve pounders, six pounders, &c., which march with the army. A soldier's fire- lock is likewise called his piece.

PIEDMONT, a province of Sardinia, form- ing the north-west portion of Italy, having France on the west, and Lombardy on the east. It is the principal continental province of the kingdom, and contains a superficial extent of nearly 13,000 square miles, which presents a succession of mountains and hills, commencing

to the west with the loftiest of the Alps, and gradually diminishing in

height as they approach the beautiful plains which form the central part of the province, and extend to Lombardy. Piedmont is of an oblong form, and largest from north to west. It is watered in its whole breadth by the Po, which receives a number of rivers and streams descending from the mountains, as the two Doras, the Stura, Oreo, Sesia, Tanaro, Borbio, and V'aro. In the mountainous regions of the province, the snow and ice remain during a great part of the year; in the plains the climate during winter is temperate, and the heat of summer is moderated by the vicinity of the Alps. Piedmont is considered very fertile, the soil consisting for the most part of a rich sandy loam, which, with extensive irrigation, produces abundant crops of wheat, barley, rye, and maize ; and in the lower grounds rice. The hills are in general covered with vineyards, the produce of which is abundant, but not of supe- rior quality. Olives, almonds, chestnuts, figs, oranges, and lemons are also raised. The pas- tures are extensive, and the rearing of cattle forms one of the chief branches of industry. A still greater is the culture of silk, which is raised in immense quantities, and preferred to all the other silks of Italy. In mineral productions, too, Piedmont is the richest tract in Italy. The principal manufactures are the spinning and weaving of silk ; linen, cotton, and woollens, are also made. The exports consist of raw and - manufactured silk, cattle, wine, fruit, butter, hides, and wool.

Lady Morgan's lively representation of the first impressions produced by the scenery of Piedmont, on descending the Cottonian Alps, we shall here transcribe : —

' The traveller who ascends from Lans-le- bourg, shivering with cold and shuddering with apprehension, descends into the town of Susa, glowing under the rays of summer suns, and not more intoxicated by their ' soft ethereal warmth ' than by the pleasurable consciousness which attends the first arrival in a country un- known and unexplored. The shading off of moral distinctions, the fading of one nation into another, is first observed at the last post-house of Mount Cenis, where the postilions reply to the traveller's questions in a jargon composed of bad French, Italian, and Piedmontese. But nature's distinctions are more broadly marked. Not a trace of the eminently French character- istics of the Savoyards can be found in the po- pulation on the Italian side of the mountain.

' The pass of Susa, opening its narrow defile at the foot of the Cottonian Alps, defended by its antique fortress, the Brunetta, was one of infinite importance in days when military tactics were guided by the obstacles or facilities which nature supplied ; and it had obtained the name of La chiava d'ltalia. The town of Susa, made the capital of

Piedmont under its marquises, is small and inconsiderable ; but it is striking, not only by a population that seems made up of priests and soldiers, but by the pious frescoes, which cover the walls even of its meanest build- ings; converting sties into stations, and hovels into oratori?.:*. Many of these v ere ancient,

and not ill-executed ; others were new or re- freshed, and smacked of the restoration. The facade of one house represented the Virgin and and the angel Gabriel ‘ in converse sweet/ encircled with fluttering cupids armed with bows. The portico of another exhibited St. Dominick ogling the Magdalen, who lay at his feet. Here St. Peter had his keys new gilt ; and there St. Paul his sword new hafted. Every where purgatory, with most corporeal souls burning in flames of most material fire, quicken- ed the penitent or threatened the sinner. Eren the trading interests of the town sought the patronage of theology. Death, with his scythe, hung over the shop, whose inscription intimated that qui si vende acqua vita ; and prayers for the souls of the dead, and the dying, were soli- cited over the inn-door, whence the timid traveller departs for the perilous Alps.

‘ All in this little frontier town, remote and obscure as it lay under the shadows of impend- ing snow-mountains, indicated the vigorous re- vival of antique state and feudal power; and all the external testimonies of the rule and sway of his Sardinian majesty, which we had left in Savoy (the Ireland of his little monarchy), were quadrupled in the first town of his Piedmontese dominions. Every where the crown glittered over those royal slop-shops so numerous on the continent, where kings, becoming retail dealers, seize the monopoly of powder, tobacco, cards, paper, and salt ; and deprive their subjects of the legitimate means of subsistence, and of pay- ing their heavy taxation. Every where the monk prowled, the sentinel challenged, and the police interfered. Even the feudal fortress was reinstated in its ancient array ; and the fort of the Brunette, with its bastions and brown rocks (dismantled by the French) now once more raises its crenelles, and its barbicans, parades its warder, and exhibits its governor as in the days of the Green Count, and Tete de Fer of Savoy. Machiavel has observed that a passion for raising castles and fortresses, in the middle ages, did more injury to society than any other of the disorders of those dark times, ‘ che alcu- no altro disordine di quello state’ (II Principe). The king of Sardinia is, however, now raising forts on every pinnacle in his Alpine States; and

his fort of St. Michael, which was building as we passed through Savoy, on the frightful heights of Mount St. Andre, at an enormous expense and risk of human lives, will long remain a monument of the efforts made by kings, who, in the nineteenth century, are pretty much what kings were in the ninth. Susa, with all its errors on its head, is reached with delight, and left with regret. It is the first stage in the series of pleasurable sensations ; and perhaps both the pleasure and the regret are derived from those very faults which, while they indi- cate a systematic effort at social retrogradation, give to sites their most picturesque features and distinguished forms.

4 The road from Susa to Turin, including a distance of forty miles, lies through a fertile plain, bathed by La Piccola Dora, and occa- sionally undulated with abrupt hills and high perpendicular rocks, which become gradually

smaller, and more remote as the pass opens and the mountains are cleared. These elevations have been seized in former times for the pur- poses of Church and State, and are covered with dilapidated cloisters and ruined fortresses, that now add much to the beauty of the scenes in which they dominate. The dismantled towers of St. Joire, and the ruined walls of the famous abbey of St. Benedict (the cradle of his order), still fix the upturned eye, and command a valley flowing with milk and honey ; while the castle of Avegliana lords the plain above the wretched village, which deforms its base, and was once the dependency of its power. Vines draped round sturdy oaks, groves of mulberries, and fields of young, rich, ripening corn, every where contrast the resources of natural and national prosperity with exhibitions of moral suffering and human infirmity. It is in these laughing vales that beggary assumes its most disgusting form, and that want and penury are not the least evils the wretched have to contend with. As often as we stopped to change horses, groups of miserable beings crawled round, and raised the deafening cry of ‘ Carita, Elemosina,’ in the name of those negligent saints who had abandoned them to every species of physical evil. All the maladies incidental to the Alpine region seemed here accumulated. Some were blind, others devoured with scrofula, and few had their entire complement of limbs and senses. But by far the most shocking objects were the Cretins, here strikingly numerous ; and their idiot chatter and wild laugh were more fearful than even maimed limbs and distorted forms. Opposed to these groups usually stood the mistress of the post-house, with a head piled with towers of lace and ribands in all the opu- lence and pride of the Piedmontese toilet, the spruce gens-d’armes with whom she coquetted, the whiskered corporal of the village detachment quaffing his boccale at the door, and the sleek, sly, well-fed friar again

permitted to present his scrip and his benedicite at every gate. While such was the population, the road was the very abstract of all the ‘ crackskull commons’ of Europe ; and it put the springs of our carriage so often to the test, that more than once we were obliged to beg the postilions to moderate their pace; a precaution rarely necessary with Italian post-boys. To our suggestions they usually replied, by pointing to a noble line of road marked parallel to our own, with the information of ‘ Ecco la strada Francese,’ ‘ There is the French road,’ which was soon to be finished. This assertion, however, did not appear very probable if we might judge by the way in which the work was carried on. For it was consigned to the labor of a few old men, old women, and little boys, with a wheel-barrow and a shovel for their only implements. The most curious cir- cumstance, however, in this new road was, that some of the nobles whose estates lie contiguous, object to it as French and revolutionary.

‘ From Rivoli begins a spacious and beautiful avenue, shaded with double rows of lofty trees ; it runs for two leagues, through plains of high cultivation, and terminates only at the entrance of Turin, where spires, turrets, and belfries, are

caught but at intervals ; while the church of the Superga, towering above all, forms the lead- ing point of the brilliant coup-d’oeil. As the capital is approached, its splendid position amidst an amphitheatre of vine-covered hills is strikingly picturesque ;’ but see TURIN.

The population of Piedmont amounts to about 1,750,000, who, with the exception of 20,000 Waldenses, are all Catholics. The inns and accommodations for travellers are poor, and in all the arts of life the inhabitants are back- ward. They are, however, industrious, and considerable improvements were introduced by the French from 1798 to 1814. In a military sense, Piedmont is strong on the side of France, but. exposed on that of Lombardy. Its southern division was in 1794 and 1795 long the scene of undecisive military operations between the French and allies; but in April, 1796, the arri- val of Buonaparte brought the French army into the heart of the country, and obliged the court of Turin to make a separate peace. This was followed in the course of two years by the incorporation of Piedmont with France, under the name of the departments of the Stura, Tanaro, Po, Sesia,

Dora, Marengo, and Maritime Alps. These divisions were abolished in 1816, and a subdivision into twenty-six districts adopted, viz. Turin, Acqui, Alba, Alessandria, Aosta, Asti, Biella, Casale, Cuneo, Ivrea, Mondovi, Montona, Novara, Palanza, Pignerolo, Saluzzo, Susa, Tortona, Vercelli, Vigeronne, Voghera, Sesia, Domo d'Ossola, Nice, Sospello, Oneglia. See SARDINIA.

PIE'LED, adj. Scot, peild; Lat. pilatus. Having short hair ; bald.

Pieled priest, dost thou command me be shut out ? — I do. Shakspeare. Henry VI.

PIER, n. s. Fr. pierre. The column of an arch ; any abutment or support ; a dam against water.

Oak, cedar, and chesnut are the best builders ; for fier» sometimes wet, sometimes dry, take elm.

Bacon.

The English took the galley, and drew it to shore, and used stones to reinforce the pier.

Hay ward.

The bridge, consisting of four arches, is of the length of six hundred and twenty-two English feet and a half: the dimensions of the arches are as fol- lows, in English measure ; the height of the first arch one hundred and nine feet, the distance between the piers seventy- two feet and an half ; in the second arch the distance of the pien is one hundred and thirty feet -, in the third the distance is one hundred and nine feet ; in the fourth the distance is one hundred and thirty-eight feet. Arbuthnot.

PIER, in building, denotes a mass of stone, &c., opposed by way of fortress to the force of the sea, or a river, for the security of ships that lie at harbour in any haven.

PIERS OF A BRIDGE. See BRIDGE.

PI ERA, in ancient geography, a fountain of Peloponnesus, between Elis and Olympus. Paus. v. c. 16.

PIERCE, v. a. &t?.n.-\ Fr. percer ; Lat.

PIER'CER, n.s. {percieo ; Gr. irsipto.

PIER’CINGLY, adv. {To penetrate; enter

PIER’CINGNESS, n. s. J by force ; make way by force; strike; move; affect; affect deeply:

a piercer is a borer or instrument which perfo- rates : the adverb and noun substantive corres- pond with these senses.

There is that speaketh like the piercing of a sword ; but the tongue of the wise is health.

Proverbs.

The love of money is the root of all evil ; which while some coveted after, they have pierced themselves through with many sorrows. 1 Tim. vi. 10.

Cart, ladder, and wimble, with perser and pod.

Tusser.

She would not pierce further into his meaning, than himself should declare ; so would she interpret all his doings to be accomplished in goodness.

Sidney.

All men knew Nathaniel to be an Israelite ; but our Saviour, piercing deeper, giveth further testimony of him than men could have done. Hooker.

Steed threatens steed in high and boastful neighs, Piercing the night’s dull ear.

Shakspeare. Henry V.

They provide more piercing statutes daily to chain up the door. Shakspeare.

Her sighs will make a battery in his breast ; Her tears will pierce into a marble heart. Id.

Say, she be mute, and will not speak a word ; Then I’ll commend her volubility ; And say she uttereth piercing eloquence. Id.

Short arrows, called sprights, without any other heads, save wood sharpened, were discharged out of muskets, and would pierce through

the sides of ships where a bullet would not pierce.

Bacon's Natural History. With this fatal sword, on which I died,

I pierce her opened back or tender side. Dry den.

The hollow instrument, terebra, we may English piercer, wherewith many flies are provided, proceed- ing from the womb, with which they perforate the tegument of leaves, and through the hollow of it inject their eggs into the holes they have made.

Ray.

The glorious temple shall arise, And with new lustre pierce the neighb'ring skies.

Prior.

We contemplate the vast reach and compass of our understanding, the prodigious quickness and piercingness of its thought.

Derham's Physico- Theology.

PIERCED, in heraldry, an epithet for any ordi- nary that is pierced, perfora- ted, or struck through, with a hole in it, so as that the field may be seen. The piercing must be particularly expres- sed, whether it be square, round, or lozenge, as in the annexed figure, a cross loz- enge pierced.

PIERCED is also, in marine affairs, an epithet for a ship capable of receiving guns, as, pierced for 100 guns, &c.

PIERIA, in ancient geography, a district of Macedonia, contained between the mouths of the rivers Ludias and Peneus ; extended by Strabo beyond the Ludias, to the Axios on the north, and on the south no farther than the Aliacmon, along the west side of the Sinus Thermaicus.

PIERIA of Syria, the north part of Seleucia, on the Antiochena, situated on the Sinus Issicus, and lying next Cilicia on the north-west.

PIERIDES, in fabulous history, the daughters of Pierus, a Macedonian prince, who, presuming

to dispute with the Muses for the prize of poetry, were turned into magpies. They were also called Paeonides.

PIEIUDES, a name of the Muses, from Mount Pieris in Thessaly, which was consecrated to them ; or, according to others, from Pierus, a Thessalian poet, who was the first who sacrificed to them. See PIERIS.

PIERINO DEL VAGA, an eminent Italian painter, born of poor parents in Tuscany about the year 1500. lie was placed apprentice with a grocer in Florence ; but, a painter named Vaga taking him to Rome, he was called Del Vaga, from living with him, his real name being Buonacorsi. After Raphael's death, he joined with Julio Romano and Francis Penni to finish the works in the Vatican, which were left imperfect by their common master ; and, to confirm their friendship, married Penni's sister. He gained the highest reputation by his performances in the palace of prince Doria at Genoa ; but the multi- plicity of his business drained his spirits in the flower of his age; for he died in 1547. Of all Raphael's disciples, Pierino kept the character of his master longest, i. e. his exterior character and manner of designing ; for he fell very short of the fineness of Raphael's thinking.

PIERIS, in ancient geography, a mountain which is thought to have given name to Pieria of Macedonia ; taking its name from Pierus, a poet, who was the first that sacrificed to the Muses, thence called Pierides.

PIERRE (St. Jaques Henri Bernardin de), was born in 1 737 at Havre de Grace, where his parents, who were in easy circumstances, gave him a good education. But he embarked, at the age of twelve years, for Martinique, under the protection of one of his uncles, who commanded a merchant vessel. He soon returned, as he says in one of his letters, ' dissatisfied with his rela- tive, with the sea, and with that island.' He then resumed his studies, and continued them successively at Gisors and at Rouen, under the Jesuits. His parents sent him to Paris to the school of civil engineers. He then entered into a corps of military engineers, and in the following year went to Malta. A quarrel determined him to embark for Holland with the intention of going to Portugal, then at war with Spain; but, an un- foreseen obstacle preventing the execution of this design, he offered his services to Peter III. of Russia. He heard of the revolution, which precipitated that unfortunate monarch from the throne at this juncture; nevertheless he pursued his journey, under the idea of finding the empress Catherine at Petersburgh ; but on his arri- val in that city he

learned that she was at Mos- cow. He accordingly went thither, and obtained a commission as lieutenant in the corps of engineers, which he relinquished at the expi- ration of eighteen months. He then set out for France by way of Poland. That country was now convulsed by civil wars ; he joined the party protected by France, and was taken prisoner by the Russians. Being released in a few days, he resided for some time at Warsaw, then visited Dresden, Berlin, and Vienna, with the intention of entering into the service of some foreign power ; but, being unable to make up his mind

on the subject, returned to Paris, and sailed for the Isle of France. Here he remained two years ; but, the ordinary engineers considering him as an intruder, he quarrelled with them, and solicited and obtained permission to return home. Thus terminated his fruitless peregrinations and mili- tary career. At this period he commenced au- thor. In 1773 was published his Voyage to the Isle of France, without his name. The Studies of Nature appeared at the end of 1784, when their author had attained the age of forty-seven years. Like Rousseau, his talents had no dawn, but suddenly burst forth in the full blaze of their splendor; his book was universally read, not- withstanding the well-founded censures of some natural philosophers, whose hostility was roused by his systems ; and, in spite of the condemna- tion of a party, exasperated by his doctrines. The general voice of the public, and the applause of persons of taste, drowned those murmurs ; new editions followed in rapid succession; the name of St. Pierre was enrolled among those of the best writers of France, and thenceforward poverty gave place to the comforts of honorable independence. Pensions and rewards now sought the man whom they had formerly shunned. The last lamented monarch of the house of Bourbon spontaneously appointed him intendant of the botanical garden and museum of natural his- tory, with these words, ‘ I have read your book ; it is the production of an honest man ; and in you I have provided a worthy successor to M. de Buffon.’ Under the Napoleon dynasty he received the cross of the legion of honor; and Joseph Buonaparte bestowed upon him, unso- licited, a pension of 6000 francs. Thus the de- clining years of St. Pierre were made comfort- able ; and, as he himself observes, ‘ his bark, long tossed by the tempest, advanced with pro- pitious gales towards the haven of life.’ In the first five years that succeeded the publication of the Studies of Nature, the author was engaged in preparing farther developments of his subject. He arranged his ideas slowly and leisurely ; and, gradually disencumbering them of their first dress, at length clothed them in that delicate, picturesque, harmonious, and brilliant language which constitutes the charm of his works. This patient attention to the finishing of his compo- sitions

caused him to keep back, for several years, his Paul and Virginia, which he copied over seven or eight times. It was not published till 1789. Nearly at the same period he gave to the world the tale of the Indian Cottage, a produc- tion of a different stamp, in which satire was happily blended with that exquisite feeling for the physical and moral beauties of nature which pervades all the works of M. de St. Pierre. The fragments of the Arcadia, which he left unfinished, afforded the means of forming a complete idea of the original talents which he displayed as a pain- ter and a colorist. He left behind him Harmo- nies of Nature, partly finished ; Memoirs of his Life, and a number of irregular dramas, and other sallies of imagination. He died 21st July, 1814. PIERRE (St. Eustace de), a brave French pa- triot, who devoted his life to save his country, at the celebrated siege of Calais, under our Ed- ward III.

PIERRE (St.), a seaport town of Martinico, in the West Indies, situated at the west coast of the island, five leagues south of Fort Royal. It is a port of entry, ‘and the centre of considerable business. It has been four times burnt down, and contains at present about 2000 houses. The anchorage ground is along the sea-side, on the strand. Another part of the town is separated from this by a river, and the houses are built on a low hill, which is called the fort, from a small fortress which defends the road.

PIERUS, the father of the nine Pierides.

Pi ERUS, in geography, 1. A mountain of Thes- saly sacred to the Muses ; 2. A town of Thes- saly (Paus. vii. 22) ; 3. A river of Peloponnes- us; 4, 5. A mountain and lake of Macedonia.

PIESTRUM, from irtifa, to press. In mid- wifery, an instrument to compress the head of a dead foetus, for its more easy extraction from the womb.

PIETAS, a deity of the Romans. See PIETY.

PIETISTS, a religious sect among the Protes- tants of Germany, a kind of mean between the Quakers of England and the Quietists of the Romish church. They despise all sorts of eccle- siastical polity, school theology, and forms and ceremonies, and give themselves up to

contem- plation and mystic theology. Many gross errors are charged on the Pietists, in a book entitled Manipulus Observationum Antipietisticarum : but they have the air of polemical exaggeration. Indeed there are Pietists of various kinds : some running into gross illusions, and carrying their errors to the overturning of a great part of the Christian doctrine, while others are only vision- aries. See Mosheim's Ecclesiastical History, vol. iv.

PIETISTS, otherwise called the Brethren and Sisters of the Pious and Christian Schools, a society formed in the year 1678 by Nicholas Barre, and obliged by their engagements to de- vote themselves to the education of poor chil- dren of both sexes.

PIETRO (ST.), the ancient Hieracum, a popu- lous though small island of the Mediterranean, on the south-west coast of Sardinia, near St. Antioco, and ten miles distant from the town of Iglesia, in Sardinia. It is well cultivated ; but the inha- bitants are chiefly employed in fishing, and mak- ing bay-salt. The chief place is Carlo Forte, which has a castle.

PI'ETY, 7i. s. •) FT. pietc ; Ital. pieta ; Sp,

Pi'ous, adj. >piedad ; Lat. pittas, plus, qu.

PI'OUSLY, adv. j dius a deus, vel a Gr. &of, Cret. Otof, Ainsworth. Devotion ; duty to God ; godliness ; reverence for the Heathen deities ; patriotism ; duty to parents or seniors : pious and piously follow all these senses.

What piety, pity, fortitude did ˆEneas possess be- yond his companions ? Peacham on Poetry.

I sh'all never gratify spightfulness with any sinis- ter thoughts of all whom pious frauds have seduced. I King Charles.

The prime act and evidence of the Christian hope is, to set industriously and piously to the performance of that condition, on which the promise is made.

Hammond.

As he is not called a just father that educates his children well, but pious ; so that prince, who de- fends and well rules his people, is religious.

Taylor's Hide of Living Holy.

There be who faith prefer and piety to God.

Muton. Pious awe that feared to have offended. Id,

Learn

True patience, and to temper joy with fear And pious sorrow. II.

This martial present piously designed, The loyal city give their best loved king.

Dryden.

See lion-hearted Richard, with his force Drawn from the North, to Jury's hallowed plains : Piously valiant. Philips.

Let freedom never perish in your hands ! But piously transmit it to your children.

Addison.

'Till future infancy, baptized by thee, Grow ripe in years, and old in piety. Prior.

Where was the martial brother's pious care ? Condemned perhaps some foreign shore to tread.

Pope.

Pope's filial piety excels Whatever Grecian story tells. Swift.

Praying for them would make them as glad to se: their servants eminent in piety as themselves. Law.

It would effectually prevent that bad disposition which is too apt to steal upon and infect some of the best human minds (especially those who aim at sin- gular and exalted degrees of piety). Mason.

True piety is cheerful as the day, Will weep indeed and heave a pitying groan For others' woes, but smiles upon her own.

Ccwptr.

PIETY is the virtue of veneration for the Deity, and love and tenderness to our friends. This distinguished virtue, like many others, re- ceived among the Romans divine honors, and was one of their deities. Acilius Glabrio first erected a temple to this divinity, which he

did upon the spot on which a woman had fed with her own milk her aged father, who had been im- prisoned by order of the senate, and deprived of all aliments. The story is well known. If piety was thus practised and thus honored in Heathen antiquity, it ought not to be less so among Christians, to whom its nature is better defined, and to the practice of which they have motives of greater cogency.

PIETY, Lat. pietas, in allegorical painting and sculpture. Pietas, as the goddess of devotion, is represented as veiled, and casting incense on an altar. The Romans, in their solemn devo- tions, covered their heads with a long veil. — Ovid, Fast 1. iii. v. 364. Lucr. v. v. 1198. The vestal virgins were, therefore, always veiled.

PIEZOMETER. This is an instrument in- vented by Mr. Perkins for ascertaining the com- pressibility of water. Having originally filled a cylinder, three feet long and four inches diame- ter, with water, into which a rod or piston was passed through a stuffing box, and having a slid- ing ring upon the rod, the whole was lowered 500 fathoms into the sea, when it appeared, by the situation of the sliding ring, that the column of water, which pressed upon the piston, had sunk it so as to have compressed the water one hundredth part of its bulk. The same, appara- tus was placed in a cannon filled with water, and secured very tight, when a pressure equal to 500 fathoms, was forced in by means of the hydrau- lic press, and the same results as in the experi-

raent in tne ocean took place. The following is

a more detailed account of the instrument he

finally employed, abridged from the Philosophi-

sal Transactions, 1820, p. ii.

The end B, see diagram, of a cy- linder A, three inches wide and

eighteen long, being made water- tight by a plate firmly soldered to it,

a cap C, also water-tight, was made

to screw on and off. The rod D, fg

of an inch in diameter, and carrying

a flexible ring a, was made to pass

through a tight stuffing box E. A

cannon capable of containing the

piezometer, was fixed vertically in

the earth, the touch -hole being

plugged tight, and the muzzle about

eighteen inches above ground. A

strong cap was then firmly screwed

on at the mouth, and in the centre ot

it a small forcing pump, with a piston

five,-eighths of an inch in diameter,

was tightly screwed. A valve was

introduced at a srjall aperture, to ascertain tne degree of pressure, one

.pound of pressure on that valve in- dicating an atmosphere. The piezo- meter being introduced into the can- non, the water was forced in till the cap showed signs of leakage, the valve at the same time indicating a pressure of 100 atmospheres. When the piezometer was taken out of the can- non, the flexible ring a was eight inches up the rod D, which proved that the rod had been forced that length into the cylinder, and that the compression was about one per cent. In order to produce this compression, three per cent, must be pumped into the gun, an effect arising from the expansion of the gun, or the entrance of the water into the pores of the cast-iron. On his voyage to England, Mr. Perkins repeated this experiment frequently, and with the same result, by sinking the piezometer with fifty-four pounds of lead, to the depth of 500 fathoms, which gives nearly a pressure of 100 atmospheres.

Being satisfied that the above piezometer would not show all the compression, he made another, consisting of a small tube, closed at the lower end, and water-tight. At the upper end the water entered

through a small aperture, closed by a sensible valve opening inwards. It was then perfectly filled with water (the weight of which was accurately known), and subjected in a hydraulic press to a pressure of about 326 atmospheres. When taken out and weighed, there was found an increase of water amounting to three and a half per cent. This water had been previously boiled, and cooled down 48°, and kept at that temperature during the experi- ment, which was performed before many scien- tific individuals. Mr. Perkins made several cu- rious experiments, by sinking strong empty porter bottles to different depths ; but we must refer for an account of these to the Philosophical Transactions, as tkey do not contain any very precise results.

PIG, n. s. Sax. pic ; Belg. bigge. A young sow or boar; an oblong mass of lead or un- forged metal, or sodden ore. See Sow .

Some men there are love not a gaping pig, Some that are mad, if they behold a cat.

Shukspeare.

Alba, from the white sow named, That for her thirty sucking pigs was famed.

Dry den.

The flesh-meats of an easy digestion are piy, lamb, rabbit, and chicken. Flower on the Humours.

A nodding beam, or pig of lead, May hurt the very ablest head. Pope.

PIG, in zoology. See Sus.

PIG, GUINEA. See CAVIA.

PIG IRON. See IRON.

PIG OF LEAD, the eighth part of a fother, amounting to 250lbs. weight.

PIGALLE (John Baptist), a celebrated sculp- tor, born at Paris in 1714. He became chan- cellor of the academy of painting and knight of St. Michael. He went to Italy, and returned inspired with the genius of the great artists. His most valued works are a Mercury and a Venus, which he made by order of Louis XV., as pre- sents to the king of Prussia. He also carved a statue of Voltaire, with many other admired pieces. He died at Paris in 1785.

PIGANIOL DE LA FORCE, (John Aymar de), a native of Auvergne, of a noble family, who ap- plied himself with ardor to the study of geogra- phy, and of the history of France. He also travelled for improvement. His chief works are, 1. An Historical and Geographical Description of France; the largest edition is that of 1753, in 15 vols. 12mo. 2. A Description of Paris, in 10 vols. 12mo. ; of which he published an abridg- ment, in 2 vols. 12mo. 3. A Description of the Castle and Park of Versailles, Marly, &c., in 2 vols. 12mo. Piganiol had also a concern with abbe Nadal in the Journal of Trevoux. He died at Paris in February, 1753, aged eighty. He was as much respected for his manners as for his talents. To a profound and varied know- ledge he united a great probity and honor, and all the politeness of a courtier.

PIG'EON,w. s. > Fr. pigeon ; Ital.

PIG'EON-LIVERED, adj. $piccione, qu. Latin pipio? A fowl; the COLUMBA of Linnaeus, which see : pigeon-livered means mild, gentle, and sometimes cowardly, or tame, like this bird.

A turtle dove and a young piyeon.

Genesis xv. 9. This fellow picks up wit as pigeons peas.

Shakspeare.

I am pigeonlivered, and lack gall. To make oppression bitter. Id. Hamlet. Perceiving that the pigeon had lost a piece of her tail, through the next opening of the rocks rowing with all their might, they passed safe, only the end of their poop was bruised. Raleigh.

Fixed in the mast, the feathered weapon stands, The fearful pigeon flutters in her bands. Dry den.

See the Cupola of St. Paul's covered with botK sexes, like the outside of a pigeon-house. Addison.

This building was designed a model, Or of a p(ge

PIGEON, in ornithology, see COLUMBA. The varieties of the common pigeon, enumerated by Linnaeus, amount to twenty-one ; but those of the pigeon fanciers to more than double that number. The ring-dove (C. palumbus, L.), and

the turtle-dove (C.turtur), with the greater num- ber of the varieties, are cultivated only by a few persons known as pigeon fanciers : but the com- mon pigeon of different colors is cultivated for the table. The flesh of the young is very savory and stimulating, and highly valued for pies ; that of the full aged pigeon is more substantial, harder of digestion, and heating. Black or dark feathered pigeons are dark fleshed, and of high flavor, inclining to the game bitter of the wild pigeon. Light colored feathers denote light and delicate flesh. The dung of pigeons is used for tanning upper leathers for shoes ; it is also an excellent, manure. It is so highly prized in Persia that many pigeon-houses are erected at a distance from habitations for the sole purpose of collecting this manure. They are large round towers, broader at the bottom than at the top, and crowned by conical spiracles through which the pigeons descend. Their interior resembles a honeycomb, forming thousands of holes for nests ; and the outsides are painted and orna- mented. The dung is applied almost entirely to the rearing of melons, a fruit most rapidly raised in scarce seasons ; and hence the reason that during the famine of Samaria a cab of dove's dung was sold for five pieces of silver. (2 Kings vi. 25). The Persians do not eat the bird. Pi- geons are now much less cultivated than formerly, being found injurious to corn fields, and espe- cipally to fields of peas. They are, however, very ornamental; a few may be kept by most farmers, and fed with the common poultry, and some who breed domestic fowls on a large scale may, perhaps, find it worth while to add the pigeon to their number. The gray pigeon is most suitable for the common pigeon-house ; it generally shows fruitfulness by the redness of the eyes and feet, and by the ring of gold color which is about the neck.

Stocking of pigeon-houses is best performed in May or August, as the birds are then in the best condition. Young birds called squeakers should be chosen, as the old are apt to fly away. The pigeon lays in breeding two white eggs, which produce young ones of different sexes. When the eggs are laid, the female sits fifteen days, not including the three days she is em- ployed in laying, and is relieved at intervals by the male. The turns are generally pretty regular. The female usually sits from about five in the evening till nine the next morning; at which time the male supplies her place, while shn is seeking refreshment abroad. Thus they sit al- ternately till the young are hatched. If the fe- male does not return at the expected time, the male seeks her, and drives her to the nest ; and, should he in his turn be neglectful, she retaliates with equal severity. When the young ones are hatched, they only require warmth for the first three days ; a task which the female takes en- tirely upon herself, and never leaves them except for a few

minutes to take a little food. After this they are fed about ten days with what the old ones have picked up in the fields, and kept treasured in their crops, whence they sa- tisfy the craving appetite of their young ones, who receive it very greedily. This way of sup- plying the young with food from the crop, in

birds of the pigeon-kind, differs from all others. The pigeon has the largest crop of any bird, for its size ; which is also quite peculiar to the kind. In two that were dissected by an eminent ana- tomist it was found that, upon blowing the air into the windpipe, it distended the crop or gullet to an enormous size. Pigeons live entirely upon grain and water ; these, being mixed together in the crop, are digested in proportion as the bird lays in its provisions. Young pigeons are very ravenous, which necessitates the old ones to lay in a more plentiful supply than ordinary, and to give it a sort of half maceration in the crop, to make it fit for their tender stomachs. The nu- merous glands, assisted by air and the heat of the bird's body, are the necessary apparatus for secreting a sort of pap, or milky fluid (com- monly called pigeon's milk), but as the food ma- cerates, it also swells, and the crop is consider- ably dilated. If the crop were filled with solid substances, the bird could not contract it ; but it is obvious the bird has the power to compress its crop at pleasure, and, by discharging the air, can drive the food out. also, which is forced up the gullet with great ease. The young usually receives this tribute of affection from the crop three times a day. The male for the most part feeds the young female, and the old female per- forms the same service for the young male. While the young are weak, the old ones supply them with food macerated suitably to their ten- der frame ; but, as they gain strength, the parents give it less preparation, and at last drive them out, when a craving appetite obliges them to shift for themselves ; for, when pigeons have plenty of food, they do not wait for the total dismission of their young; it being a common thing to see young ones fledged, and eggs hatching at the same time and in the same nest. Pigeons are granivorous, and very delicate and cleanly in their diet ; they will sometimes eat green aroma- tic vegetables, but are fondest of seeds ; and tares, and the smallest kind of horse-beans, are the most suitable food both in point of economy and fattening qualities.

Pease, wheat, buck-wheat, and even barley oats, &c., are also eaten by pigeons, but old tares may be reckoned their best food, says Mr. London; new tares, pease, or beans, are reckoned scouring. Wherever pigeons are kept, the best way to ktep them chiefly at home, and thereby both prevent their being lost and their doing injury to corn-crops, is to feed them well ; this is also the only way in which, in modern times, they will afford abundance of fat and delicate squabs

for the table, which, well fed, they will do every month in the year, and thus afford a constant supply of delicate stimulating food. Pigeons are generally fed in the open air adjoin- ing their cote or house ; but in inclement weather, or to attach new pigeons to their home, both food and water should be given alternately. That this may be done without waste, and with- out frequently disturbing the birds, two contri- vances are irrv use ; the first is the meat-box or hopper, whence grain or pulse descends from the hopper as eaten out of a small shallow box ; the next is the water-bottle, an ovate, long, naked bottle, reversed in a small basin to which

it serves as a reservoir. Any bottle will do, but the pigeons are apt to alight on and dirty such as when reversed present a flat top. Pigeons being fond of salt, what is called a pigeon-cat is often placed in the midst of the pigeon-house, or in the open air near it. It seems these birds are fond of salt and hot substances, and con- stantly swallow small stones to promote diges- tion. The salt-cat is thus composed : gravel or drift-sand, unctuous loam, the rubbish of an old wall, or lime, a gallon of each ; should lime be substituted for rubbish, a less quantity of the former will suffice ; one pound of cummin-seed, one handful of bay-salt; mix with stale urine. Enclose this in jars, corked or stopped, holes being punched in the sides, to admit the beaks of the pigeons. These may be placed abroad. They are very fond of this mixture, and it pre- vents them from pecking the mortar from the roofs of their houses, which they are otherwise very apt to do. Cleanliness is one of the first and most important considerations in a dove- cote.

They are of three kinds, small boarded cases fixed on posts, trees,, or against the ends of houses : lofts fitted up with holes or nests ; and detached buildings. ‘ The first are generally too small to contain a sufficient brood, and are also too subject to variations of temperature; and the last, on the other hand, are now-a-days too large, and therefore the most suitable for the farmer is a loft or tower rising from a building in which no noisy operation is carried on. The lofts of any of the farm-buildings at a distance from the threshing-machine are suitable, or a loft or tower over any detached building will answer well ; but the best situation of all is a tower raised from the range of poultry-buildings, where there is such a range, as the pigeons can thus be more conveniently treated, and will feed very readily with domestic poultry. For a tower of this sort, the round form should be

preferred to the square ; because the rats cannot so easily come at them in the former as in the latter. It is also much more commodious ; as, by means of a ladder turning round upon an axis, it is possible to visit all the nests in the house, without the least difficulty ; which cannot be so easily done in a house of the square form. And in order to hinder rats from climbing up the out- side of it, the wall should be covered with tin- plates to a certain height, as about a foot and a half; which should project out three or four inches at the top, to prevent more effectually their getting up. A common mode in France is to raise a boarded room on a strong post, power- fully braced, the interior sides of which are lined with boxes for the birds, and the exterior east and west sides with balconies, or sills for them to alight on and enter to their boxes. The north and south sides are lined with boxes in- side, but without openings, as being too cold on the one front, and too warm on the other. The interior must be lined with nests or holes, sub- divided either by stone, as in the ancient mural pigeon-houses ; by boards ; or each nest com- posed of a vase or vessel of earthenware fixed on its side. Horizontal shelves divided verti- cally at three feet distance, are generally esteemed] referable to every other mode.

Pigeons are protected by the legislature. By the 1 James, c. 27, whosoever shall shoot at, kill, or destroy, any dove or pigeon, with any gun or bow, or take, kill, or destroy the same with setting dogs or nets, or any snares, engines, or instruments whatsoever, shall, on being con- victed before two justices, by confession, or oath of two witnesses, be commited to gaol for three months, or pay for the use of the poor 20s. for every pigeon ; or, after this commitment become bound by recognizance, with two sure- ties, before two justices, in £20 each, not to of- fend in like manner again. And by the 2 Geo. III. c. 29, any person who shall shoot at, or by any means kill or take, with a wilful intent to destroy, any pigeon, he shall on conviction there- of, by confession, or oath of one witness, before one justice, forfeit 20s. to the prosecutor ; and, if not immediately paid, such justice shall com- mit him to the house of correction, for any term not exceeding three months, nor less than one, unless the penalty be sooner paid. Persons who are convicted on this act shall not be convicted by any former act, and prosecutions on this act must be commenced within two months after the offence was committed. These two abstracts are given to inform the keepers of pigeons of the laws in force to protect them ; but more especially to re- move the vulgar error,so prevalent among the lower class of people, that pigeons are a nuisance, that they destroy a great deal of seed in the fields, grain in the rick-yards, and loosen the tiles on the tops of buildings ; and that any person may

shoot them, provided that he does not carry them away.

PIGEON (Peter Charles Francis), curate and afterwards rector or vicar of Bayeux, one of the numberless victims who fell a sacrifice to Jacobin rage and infidelity, in the beginning of the French revolution. Although a man of not only sincere piety, but of uncommon mildness and humanity, yet, because he refused to take the oaths imposed by the republicans, he and his family were at first insulted and persecuted in the cruellest manner, and he himself was at last murdered on the 20th of August, 1793, in his thirty-eighth year.

PIGEON PEA. See CYTISUS. PIGEON FOOT is a species of geranium. PIGHIUS (Stephen Vinand), a learned anti- quary, born at Campen in Overyssel, in 1520. He vrent to Rome, and was patronised by cardinal Granvelle, who made him his librarian. The learned are indebted to him for the first good edition of Valerius Maximus, in 1585, 8vo. He became preceptor to prince Charles of Juliers, who dying, he wrote a panegyric upon him, on which his father, prince William, made him ca- non of Santen, where he died in 1604, aged eighty-four. His Annales, seu Fasti Romano- rum Magistratuum et Provincianim, were pub- lished by Schottus in 1615, in 3 vols. folio.

PIGHT, old preter. and part. pass, of pitch. See PITCH.

PIG'MENT, n. s. Lai. pigmentum. Paint ; color to be laid on any body.

Consider about the opacity of the corpuscles of black pigments, and the comparative diaphaneity of white bodies. Boyle.

PIGMENTUM, frompingo, to paint, pigment. This name is given by anatomists to a mucous substance found in the eye, which is of two kinds. The pigment of the iris is that which covers the anterior and posterior surface of the iris, and gives the beautiful variety of color in the eyes. The pigment of the choroid membrane is a black or brownish mucus, which covers the anterior surface of the choroid membrane, conti- guous to the retina and the anterior surface of fiie ciliary processes.

PIGMY, n. s. Fr.pigmee ; La.t.pygm

Of so low a stature, that, in relation to the other, they appear a.spigmiet. Heylin.

When cranes invade, his little sword and shield The pigmy takes. Dryden's Juvenal.

The criticks of a more exalted taste, may discover such beauties in the ancient poetry, as may escape the comprehension of us pigmies of a more limited genius. Garth.

But that it wanted room, It might have been a pigmy's tomb. Swift.
PIGNEAUX (N.), late bishop of Audran, •was born in the department of the Aisne, in France, 1740. He went in 1770, with the au- thority of the pope, as a missionary to Cochin China, and gained the esteem of the king, Caung- Schung, who confided to him the education of his only son. The troubles which disturbed the empire of his protector, obliged him to fly to the town of Sat-Gond, whence he proposed invoking the assistance of France. The king had been surprised by three ambitious brothers, who overthrew his empire and forced him to seek an asylum in the isle of Pulo-Wa. In 1787 the bishop departed for France, taking his pupil with him, and formed an offensive and defensive league between France ?.nd Cochin China, re- turning with the title of ambassador extraordi- nary to that kingdom. Before his arrival in Cochin China, the Revolution broke out, and all help was refused him. Still he did not lose his courage, but, going to the isle of Pula-Wa, brought thence Caung-Schung, who, profiting by the discontent of his subjects, regained his em- pire in 1790. He now created Pigneaux his first minister, and under his direction founded several manufactories. The bishop translated for him a Treatise on Tactics, instituted schools, to which fathers of families were obliged to send their children at the age of four years, and died in 1800, when Caung-Schung caused him to be interred with the highest funeral honors of the Cochin-Chinese.

PIGNORIUS (Lawrence), a learned Italian, born at Padua in 1571, and bred an ecclesiastic. He made deep researches into antiquity, and published several curious works in Italian and Latin, particularly Mensa Isiaca, on the anti- quities of Egypt. The great Galileo procured him the offer of a professorship at Pisa, but he declined it. In 1630 he was made a canon in Treviso, but died of the plague in 1631.

PIG'NUT, n. s. Pig and nut. An earth nut.

I witli my long nails will dig thee pignuts.

PIGS'NEY, n. s. Sax. t>iza, a girl. A word of endearment to a girl. It is used by Butler for the eye of a woman, ' I believe, says John- son, improperly.'

Shine upon me but benignly With that one, and that other pigsney.

Jludibrat.

PIGUS, in ichthyology, a species of leather- mouthed fish, very much resembling the common carp ; being of the same shape and size, and its eyes, fins, and fleshy palate, exactly the same ; from the gills to the tail there is a crooked dotted line ; the back and sides are bluish, and the belly reddish. It is covered with large scales, from the middle of each of which there rises a fine pellucid prickle, which is very sharp. It is an excellent fish for the table, being perhaps prefer- able to the carp : and it is in season in the months of March and April. It is caught in lakes in some parts of Italy, and is mentioned by Pliny, though without a name. Artedi says it is a species of cyprinus, and he styles it the cyprinus called piclo and pigus.

PIGWID'GEON, n. s. Used by Drayton as the name of a fairy, and is a kind of cant word for any thing petty or small.

Where is the Stoick can his wrath appease,

To see his country sick of Pym's disease ;

By Scotch invasion to be made a prey

To such pigwidgeon myrmidons as they 1

Cleaveland.

PI-HAHIROTH, a mouth or narrow pass be- tween two mountains, called Chiroth or Eiroth, and lying not far from the bottom of the west coast of the Arabian Gulph ; before which the children of Israel encamped, just before their entering the Red Sea.

PIISSKER, in ichthyology, is a fish of the mustela kind, commonly called the fossil mus- tela, or fossil fish. They are generally found as long as a man's hand is broad, and as thick as one's finger ; but they sometimes grow mucli longer : the back is gray with a number of spots and traverse streaks, partly black and partly blue; the belly is yellow, and spotted with red, white, and black ; the white are the larger, the others look as if they were made with the point of a needle ; and there is on each side a longitu- dinal black and white line. There

are some fleshy excrescences at the mouth, which are ex- panded in swimming, but contracted when out of the water. These fishes run into caverns of the earth, in the sides of rivers, in marshy places, and penetrate a great way, and are often dug up at a distance from waters. Often, when the waters of brooks and rivers swell beyond their banks, and again cover them, they make their way out of the earth into the water ; and. when it deserts them, they are often left in vast numbers upon the ground, and become a prey to swine. It is thought to be much of the same kind with the fisgum fish ; and it is indeed pos- sible that the poecilia of Schonefeldt is the same.

PIKE, n. s. Fr. picque, ‘ his snout being sharp.’ Skinner and Junius. The popular name of the esox lucius.,

The luce or pike is the tyrant of the fresh waters : Sir Francis Bacon observes the pike to be the longest lived of any fresh water fish, and yet he computes it

tt»b& riot usually above forty years ; and others think it to be not above ten years ; lie is a solitary, melan- choly, and bold fish ; he breeds but once a year, and iiis time of breeding or spawning is usually about the end of February, or somewhat later, in March, a* the weather proves colder or warmer : and his manner of breeding is thus : a he and a she pike will usually go together out of a river into some ditch or creek, and there the spawner casts her eggs, and ihe melter hovers over her all the time she is casting ner spawn, but touches her not. Walton’s Angler.

In a pond into which were put several fish and two pikes, upon drawing it some years afterwards there were left no fish, but the pikes grown to a pro- digious size, having devoured the other fish and their numerous spawn. Hale.

The pike the tyrant of the floods. Pope.

PIKE, ra. s. ~\ Sax. t>iic : Goth, piki (a

PI’KED, adj. (pointed stick or pole) ; Teut.

PiKE’MAN,n. s. Ipicke ; Belg. pick ; Fr. pique.

PIKE'STAFF.) A lance; a long pointed weapon ; a fork used in husbandry ; a pitch- fork (which may have one or more points): piked is sharp, acuminated : a pike man is a soldier who is armed with a lance or pike : pikestaff, the pole or handle of a pike.

A rake for to rake up the fitches that lie, A pike to pike them up handsome to drie. Tusspr. Three great squadrons of pikemen were placed against the enemy. Knolles'i History of the Turks.

Beat you the drum that it speak mournfully, – Trail your steel piket. Shakspeare. Coriolanus.

Let us revenge this with our pikes, ere we become rakes ; for I speak this in hunger for bread, not for revenge. Shakspeare.

Why then I suck my teeth, and catechise My piked man of countries. Id. King John.

They closed, and locked shoulder and shoulder, their pikes they strained in both hands and therewith their buckler in the left, the one end of the pike against the right foot, the other breast-high against the enemy. lluyward.

A lance he bore with iron pike ; The one half would thrust, the other stnke.

Hudibras.

Hard wood, prepared for the lathe with rasping", they pitch between the pikes. Moxon.

To me it is as plain as a pikestaff", from what mix- ture it is, that this daughter silently lowers, t'other steals a kind look. Taller.

PIKE, in war, an offensive weapon, consisting of a wooden shaft, twelve or fourteen feet long, with a flat steel head pointed, called the spear. This weapon was long in use among the infantry; but now the bayonet, which is fixed on the muz- zle of the firelock, is substituted in its stead.

PIKE, in ichthyology. See Esox. The pike never swims in shoals as most other fishes do, but always lies alone ; and is so bold and avenous that he will seize upon almost any thing less than himself. Instances of the vora- city of these fishes are so numerous and well known that it is unnecessary to quote them. They breed but once a year, in March. They are found in almost all fresh waters ; but very

different in goodness, according to the nature of the places where they live. The finest pike are found in clear rivers ; those in ponds and meres are inferior, and the worst are those of the fen ditches. They are very plentiful in these last places, where the water is foul and colored ;

and their food, such as frogs and the like, plen- tiful but coarse ; so that they grow large, but are yellowish and high bellied, and difi'er greatly from those which live in clearer waters. The fishermen have two principal ways of catching pikes, by the ledger, and the walking bait. The ledger bait is fixed in one certain place, and may continue while the angler is absent. This must be a live bait, a fish or frog : and, among fish, the dace, roach, or gudgeon, are the best ; of frogs, the only caution is to choose the largest and yellowest that can be met with. If the bait be a fish, the hook is to be stuck through the upper lip, and the line must be fourteen yards at least in length; the other end of this is to be tied to a bough of a tree, or to a stick driven into the ground near the pike's haunt, and all the line wound round a forked stick except about half a yard. The bait will by these means keep playing so much under water, that the pike will soon lay hold of it. If the bait be a frog, then the arming wire of the hook should be put in at the mouth, and out at the side ; and, with a needle and some strong silk, the hind leg of one side is to be fastened by one stitch to the wire arming of the hook. The pike will soon seize this, and must have line enough to give him leave to get to his haunt and poach the bait. The trol- ling for pike is a pleasant method also of taking them : in this a dead bait serves, and none is so proper as a gudgeon. This is to be pulled about in the water till the pike seizes it ; and then he is to have line enough, and time to swallow it : the hook is small for this sport, and has a smooth piece of lead fixed at its end to sink the bait; and the line is very long, and runs through a ring at the end of the rod, which must not be too slender at top. The art of feeding pikes, to make them fat., is by giving them eels ; otherwise perches, while small, and their prickly fins tender, are the best food for them. Breams put into a pike-pond are a very proper food : they will breed freely, and their young ones make excellent food for the pike. The numerous shoals of roaches and ruds which are continually changing place, and often in floods get into the pike's quarters, afford food for them for a long time. Pikes, when used to be fed by hand, will come up to the very shore, and take the food that is given them out of the fingers of the feeder. It is won- derful to see with what courage they will do this, after a while ; and it is very diverting when there are several of them nearly of the same size, to see what striving and fighting there will be

for the best bits that are thrown in. The most conve- nient place is near the mouth of the pond, and where there is about half a yard depth of water ; for, thus, the offal of the feedings will all lie in on,e place, and the deep water will serve for a • place to retire into and rest in, and will be always clean and in order.

PILA (Lat. from Gr. iriXnt, compressed wool), in archaiology, a little image of a man made of wool, and sacrificed by the ancients to the house- hold gods, or lares, in the fetes instituted in ho- nor of those inferior deities by Servius, and styled compitales. Macrobius states that actual infants were originally offered up for this pur- pose; but on the expulsion of the kings from

Rome that barbarous custom was abolished, and the pila substituted in place of the child. This appellation was likewise given to a figure made of straw, which they presented to the bulls in the amphitheatre for the purpose of exciting them ; as also to a species of standard upon which were represented several shields piled upon one another. Titus Livius calls the pillar in the forum, from which Horace had suspended the spoils of the Curiatii, Pila Horatia.

PILA, in antiquity, was a ball variously made according to the different games in which it was to be used. Playing at ball was very common among the Romans of the first distinction, and was looked upon as a manly exercise, which con- tributed both to amusement and health. The pila was of four sorts : 1. Follis or balloon ; 2. Pila Trigonalis; 3. Pila pagonica; 4. Harpastum. All these come under the general name of pila.

PILA MARINA, or the sea ball, in natural his- tory, a substance very common on the shores of the Mediterranean, and elsewhere. It is gene- rally found in the form of a ball about the size of the balls of horse-dung, and composed of a variety of fibrillae irregularly complicated. Va- rious conjectures have been given of its origin by different authors. Bauhine tells us that it consists of small hairy fibres and straws, such as are found about the sea plant called alga vitria- riorum ; but he does not ascertain to what plant it owes its origin. Imperatus imagined it con- sisted of the exuvise both of vegetable and

ani- mal bodies. Mercatus is doubtful whether it be a congeries of the fibrillae of plants, wound up into a ball by the motion of the sea-water, or whether it be not the workmanship of some sort of beetle living about the sea shore, and analo- gous to our common dung beetle's ball, which it elaborates from dung for the reception of its pro- geny. Schreckius says it is composed of the filaments of some plant of the reed kind : and Welchius supposes it is composed of the pap- pous part of the flowers of the reed. Rlein, who had thoroughly and minutely examined the bo- dies themselves, and also what authors had con- jectured concerning them, thinks that they are wholly owing to, and entirely composed of, the capillaments which the leaves, growing to the woody stalk of the alga vitriariorum, have when they wither and decay. These leaves, in their natural state, are as thick as a wheat straw, and they are placed so thickly about the tops and extremities of the stalks, that they enfold, em- brace, and lie over one another; and from the middle of these clusters of leaves, and indeed from the woody substance of the plant itself, there arise several other very long, flat, smooth, and brittle leaves. There are usually four from each tuft of the other leaves; and they have ever a common vagina, which is membranaceous and very thin. This is the style of the plant, and the pila marina appears to be a cluster of the fibres of the leaves of this plant, which cover the whole stalk, divided into their constituent fibres ; and by the motion of the waves first broken and worn into short shreds, and afterwards wound up together into a roundish or longish ball. — Klein, de Tab. Marin. p. 22.

PILANI, Roman soldiers who were armed

with a sort of spontoon, the iron of which was thick and long, called pilum.

PILASTER, n. s. Fr. pilastre ; Ital. pitas- Iro. A square column sometimes insuVated,but oftener set for the greater part within a wall.

Pilasters must not be too tall and slender, lest they resemble pillars ; nor too dwarfish and gross, lest they imitate the piles or piers of bridges. Wotton. Built like a temple, where pilasters round

Were set. Milton.

The curtain rises, and a new frontispiece is seen, joined to the great pilasters each side of the stage.

Dry den.

Clap four slices of pilaster on't, That laid with bits of rustic makes a

front.

Pope.

PILASTER, Fr. pilastre, in architecture, a square pillar or column, usually placed against a wall, and projecting not more than one-fifth or one-sixth of its thickness. It has the same pro- portions and ornaments as a column, varying according to the different orders of architecture, but no diminution. The pilasters in a building should be of the same order as the columns, if any of the latter are used.

It would be incorrect to attribute the inven- t:on of pilasters to mere imitation of the column, inasmuch as the motive for their use is chiefly to give strength to the building, and the desire to render these props ornamental occasioned the ancient architects to apply to them the graces of adornment and proportion. See ARCHITECTURE.

PILATE (Pontius), was governor of Judea when our Lord was crucified. Of his family or country we know but little, though it is believed that he was of Rome, or at least of Italy. He was sent to govern Judea in the room of Gratus, A. D. 26 or 27, and governed this province for ten years, from the twelfth or thirteenth year of Tiberius to the twenty-second or twenty-third. He is represented, both by Philo and Josephus, as a man of an impetuous and obstinate temper, as a judge who used to sell justice, and to pro- nounce any sentence that was desired, provided he was paid for it. They likewise speak of his rapines, murders, oppressions, and the torments that he inflicted upon the innocent, and the per- sons he put to death without any form of pro- cess. Philo, in particular, describes him as having exercised excessive cruelty during his whole government, disturbed the repose of Judea, and given occasion to the troubles and revolt that followed. St. Luke records his massacre of the Galileans in the temple (xiii. 1, 2. &c.), Justin Martyr, Tertullian, Eusebius, and after them several others, both ancient and modern, assure us that it was formerly the custom for Roman magistrates to prepare copies of all ver- bal processes and judicial acts which they passed in their several provinces, and to send them to the emperor. And Pilate, having accordingly sent word to Tiberius of what had passed relat- ing to Jesus Christ, the emperor wrote an ac- count of it to the senate, in a manner that ˆave reason to judge that he thought favorably of the religion of Jesus Christ, and showed that he would be willing they should decree divine honors to him. But, fortunately, the senate was not of the same opinion, and so the matter was

dropped. It appears, by what Justin says of these acts, that the miracles of Jesus Christ were mentioned in them ; and that the soldiers' had divided his garments among them. Eusebius insinuates that they spoke of his resurrection and ascension. Neither Eusebius nor St. Jerome, however, nor any other author that wrote afterwards, seem to have seen them, at least not the true and original acts ; for, as to what we have now in great numbers, they are not authentic. There are also letters of Pilate to Tiberius ex- tant, giving a history of our Saviour; but they are universally allowed to be spurious. Pilate having, by his excessive cruelties and rapine, disturbed the peace of Judea during the whole time of his government, was at length deposed by Vitellius, the proconsul of Syria, A. D. 36, and sent to Rome to give an account of his con- duct to the emperor. Tiberius having died be- fore he arrived at Rome, his successor, Caligula, banished him to Vienne in Gaul, where he was reduced to such extremity that he killed him- self. He was only procurator of Judea, though the evangelists call him governor, because he in effect acted as one, by taking upon him to judge in criminal matters. See Calmet's Dictionary, and Beausobre's Annotations. With regard to Pilate's wife, the general tradition is that she was named Claudia Procula, or Proscula ; and, as to her dream, some think that as she had intelligence of our Lord's apprehension, and knew by his character that he was a righteous person, her imagination, struck with these ideas, naturally produced the dream we read of; but others think that this dream was sent miraculously, for the clearer manifestation of our Lord's innocence.

PILATRE DU ROSIER (Francis), was born at Metz the 30th of March, 1756. He was first ap- prentice to an apothecary there, and afterwards went to Paris in quest of improvement. He ap- plied himself to the study of natural history and of natural philosophy, and had already acquired some reputation when the discovery of M. Mont- golfier had just astonished the learned world. On the 25th October, 1783, he attempted an aerial voyage with the marquis of Arlande. He performed several other excursions in this way with success, in the presence of the royal family of France, of the king of Sweden, and of Prince Henry of Prussia. He then resolved to pass into England by means of his aerial vehicle, and for that purpose repaired to Boulogne, whence he rose about seven o'clock in the morning of the 15th of June, 1785; but, in half an hour after he set out, the balloon took fire, and the aeronaut, with his companion M. Romaine, was seriously

injured by the fall. Pilatre's social virtues and courage, which were very dis- tinguished, heightened the regret of his friends for his loss. His merit as a chemist, and his experiments as an aeronaut, procured him some pecuniary rewards, and some public appoint- ments. He had a pension from the king, was intendant of Monsieur's cabinets of natural phi- losophy, chemistry, and natural history, professor of natural philosophy, a member of several acade- mies, and principal director of Monsieur's mu- seum.

PILAYA y PASPAYA, or CINTI, a province

of Peru, forty leagues south of La Plata, and bounded on the north by Tomina and Poma- bamba, on the east by the Chiriguanos Indians, and on the west and south by Porco and Chichas. Its length is about thirty leagues, and its width forty. Intersected in all directions by the Cor- dillera, the climate in the valleys is moderately hot, and the soil very productive : the grapes or the district are made into wine and brandies, which are much esteemed. The San Juan, which rises in Lipes, pervades this country: the Toropalca and Cinti also fertilise the valleys through which they run ; and the Supas and Agchilla form, by their united streams, the Pas- paya, which divides the province from Poma- bamba, and runs into the Pilcomayo. The towns of Pilaya and Paspaya were, not many years since, destroyed by the incursions of the Indians from the east ; but there are some abundant lead-mines in the settlement of Pototaca. In- habitants about 12,000.

PILCHARD, or PILCHER, in ichthyology, a fish which has a general likeness to the herring, but differs in some particulars very essentially. The body is less compressed than that of the herring, being thicker and rounder: the nose is shorter in proportion, and turns up; the under jaw is shorter. The back is more elevated ; the belly less sharp. The dorsal fin of the pilchard is placed exactly in the centre of gravity, so that when taken up by it, the body preserves an equilibrium, whereas that of the herring dips at the head. The scales of the pilchard adhere very closely, whereas those of the herring very easily drop off. The pilchard is in general less than the herring, but is fatter, or more full of oil. Pilchards appear in vast shoals off the Cornish coasts about the middle of July, disappearing the beginning of winter, yet sometimes a few return after Christmas. Their winter retreat is the same with that of the herring, and their motives for migrating the same. See CLUPEA. They affect, during summer, a warmer latitude ; for they are not found in any quantities on any of our coasts, except those of Cornwall, that is to say, from Fowey Harbour to the Scilly Isles, between which places the shoals keep shifting for some weeks. The approach of pilchards is known by the same signs as those that indicate the arrival

of the herrings. Persons, called in Cornwall huers, are placed on the cliffs, to point to the boats stationed off the land the course of the fish. By the 1st of James I., c. 23, fishermen are em- powered to go on the grounds of others to hue, without being liable to actions of trespass, which before occasioned frequent law-suits. Enormous multitudes of these fish are taken on the coast of Devonshire as well as Cornwall, between the months of July and September inclusive, when the whole line of coast presents a scene of bustle and activity. The fish for foreign export and winter consumption are laid upon shore in large stacks or piles, with layers of salt between each row ; here they are suffered to lie for twenty or thirty days, during which time a vast discharge of pickle mixed with blood and oil takes place, all of which is carefully caught in pits and pre- served for manure, which is eagerly purchased by the farmer and carried away in casks. It is

said that every pilchard will dress and richly manure one square foot of ground. The fish are then carefully washed with sea water, dried and packed in hogsheads, in which state they are sent abroad. The average value of pilchards taken in one year in Cornwall is supposed to be ‘torn £50,000 to £60,000. See our article FISHERIES.

PIL’CHER, n. s. Sax. jjylche. Warburton says we should read pilche, in Shakspeare, see below, which signifies a cloke or coat of skins (meaning the scabbard) : this is confirmed by Junius, who renders pilly a garment of skins ; Fr. pellice ; Ital. pelticcia ; Lat. pellis. A gown, or case. It is used for a child’s garment, provincially, to this day.

Pluck your sword out of his pitcher by the ears.

Sluikspeare.

PILCOMAYO, a large river, formerly of Peru, now included in the viceroyalty of Buenos Ayres, province of Charcas. It falls into the Pa- raguay on the left, by two branches, on the point of land formed by the most northern of which, the city of Assumption was founded by Gonzales de Mendoza, in 1538. The other branch joins the Paraguay within a short distance of the conflu- ence of the Vermejo. It is the

largest river of the Gran Chaco, and is one of the most impor- tant of the branches of the Paraguay, forming a water communication of nearly 900 miles, with the province of Los Charcos, and the mines of Potosi. It is said that, owing to the quantity of quicksilver washed into the river from the moun- tains, no fish will live in it. In 1740 a failure of its waters is recorded, even at its .source, by which the working of the mines of Potosi was suspended.

PILE, 7i. s. & v. a. Sax. Jul; Belg. pyle ; Fr. pile ; Lat. pila. A piece of timber used as a buttress or prop. See below. Hence a build- ing ; heap ; accumulation ; any thing heaped to be burned; to heap or accumulate.

Woe to the bloody city, I will even make the pile for fire great. Ezekiel xxiv. 9.

The bridge the Turks before broke, by plucking up of certain pilet, and taking away of the planks.

Knolles.

What piles of wealth hath he accumulated To his own portion ! what expence by the hour Seems to flow from him ! how, i' the name of thrift, Does he rake this together 1 Shakspeure.

I'll bear your logs the wliile ; pray give me it,

I'll carry 't to the pile. Id. Tempest.

The fabrick of his folly, whose foundation

Is piled upon his faith, and will continue

The standing of his body. Id. Winter's Tale.

Attabaliba had a great house piled upon the sides with great wedges of gold. Abbot.

Not to look back so far, to whom this isle

Owes the first glory of so brave a pile. Denham.

The ascending pile stood fixed her stately height.

Milton.

Our noblest piles and stateliest rooms Are but outhouses to our tombs

; Cities, tho’ e’er so great and brave, But mere warehouses to the grave. Butler.

The pile o’erlooked the town, and drew the sight.

Dryden.

Against beleagured heaven the giants move ; Hills piled on hills, on mountains mountains lie, T« mike their mad approaches to the sky. Id.

The foundation of the church of Harlem is sup- ported by wooden piles, as the houses in Amsterdam are. Locke.

If the ground be hollow or weak, he strengthens it by driving in piles. Moxon.

Men piled on men, with active leaps arise, And build the breathing fabrick to the skies.

Addison.

The wife, and counsellor or priest, Prepare and light his funeral fire, And chearful on the pile expire. Prior.

In Alexander’s time, the Indian philosophers, when weary of living, lay down upon their funeral pile without any visible concern. Collier.

By the water passing through the stone to its per- pendicular intervals, was brought thither all the me- tallic matter now lodged therein, as well as that which lies only in an undigested and confused pile.

Woodward.

In all that heap of quotations which he has piled up, nothing is aimed at. Atterbury.

All these together are the foundation of all those heaps of comments, which are piled so high upon authors, that it is difficult sometimes to clear the text from the rubbish* Felton.

Fancy brings the vanished piles to view, And builds the imaginary Rome anew. Pope.

No longer shall forsaken Thames Lament his old Whitehall in flames ; A pile shall from its ashes rise, Fit to invade or prop the skies.

Swift’s Miscellanies.

The whole performance is not so much a regular fabric, as a heap of shining materials thrown toge- ther by accident, which strikes rather with the so- lemn magnificence of a stupendous ruin, than the elegant grandeur of a finished pile. Johnson.

PILE, n. s. Lat. pilus. A hair; hairy sur- face. Obsolete.

Yonder's my lord, with a patch of velvet on's face : his left cheek is a cheek of two pile and a half, but his right cheek is worn bare. Shakspeare.

Many other sorts of stones are regularly figured ; the amianthus of parallel threads, as in the pUe of v Ivet. Grew.

PILE, n. s. Lat. pilum. The head of an ar- row.

His spear a bent,

The pile was of a horse fly's tongue, Whose sharpness nought reversed.

Drayton. Whom, on his haire-plumed helmet's crest, the

dart first smote, then ran Into his forehead, and there stuck the steele pile

making way Quite through his skull. Chapman.

PILE, n. s. Fr. pile ; Ital. pila. One side of a coin ; the reverse of cross.

Other men have been, and are of the same opi- nion, a man may more justifiably throw up cross and pile for his opinions, than take them up so. Locke. PILE, in artillery, implies a collection or heap of shot or shells, piled up by horizontal courses into either a pyramidal or else a wedge-like form, the base being an equilateral triangle, a square, or a rectangle. In the triangle and square, the pile terminates in a single ball or point, and forms a pyramid ; but, with the rectangular base, it finishes at top, in a row of balls, or an edge forming a wedge.

In the triangular and square piles the number of horizontal rows, or courses, or the number

counted on one of the angles from the bottom to the top, is always

equal to the number counted on one side, in the bottom row. And, in rectan- gular piles, the number of rows or courses is equal to the number of balls in the breadth of the bottom row, or shorter side of the base ; also, in this case, the number in the top row or edge :s one more than the difference between the .ength and breadth of the base.

To PILE ARMS, to place three muskets, with or without fixed bayonets, in such a relative po- sition that the butts shall remain firm upon the ground, and the muzzles be close together in an oblique direction. This method has been adopted to prevent the injury which was formerly done to musketry, when the practice of grounding the firelock prevailed. Every recruit should be taught how to pile arms before he is dismissed the drill.

PILE, among the Greeks and Romans, was a pyramid built, whereon were laid the bodies of the deceased to be burnt. It was partly in the form of an altar, and differed in height according to the quality of the person to be consumed. Probably it might originally be considered as an altar, on which the dead were consumed as a burnt offering to the infernal deities. The trees made use of in the erection of a funeral pile •were such as abounded in pitch or resin, as being most combustible ; if they used any other wood, it was split that it might the more easily catch fire. Round the pile were placed cypress boughs, to hinder the noisome smell. See FU- NERAL.

PILE, in coinage, denotes a kind of puncheon, which, in the old way of coining with the ham- mer, contained the arms or other figure and in- scription to be struck on the coin. See COINAGE. Accordingly we still call the arms side of a piece of money the pile, and the head the cross ; be- cause, in ancient coin, a cross usually took the place of the head in ours.

PILE, in heraldry, an ordinary in form of a wedge, which is borne commonly, as in fig. 1 . Sometimes the pile is borne wavy, as fig. 2. Hf

Fig. 1.

Fig. 2.

Fig. 3.

beareth azure a pile wavy issuing out of the dexter corner. Sometimes inverted, as fig. 3.

PILE WORMS are a kind of worms found in the piles of the sea dikes in Holland. They are of very various sizes ; for some of the young ones

are not above an inch or two in length, while others have been found thirteen or four- teen inches long. The heads of these creatures are covered with two hard shells or hemicrania ; which, together, form a figure resembling an auger, and with which they bore the wood. The best remedy against them is to perforate the pile with many small holes about an inch asunder ; then it must be done over with a varnish in the hottest sun ; and, while the varnish is hot, brick

dust must be strewed over it ; and, this being several times repeated, the pile will be covered with a strong crust, absolutely impenetrable to all insects. See Philosophical Transactions, No. 455, sect. 5.

PIL'EATED, adj. Lat. pileus. Having the form of a cover or hat.

A pileated echinus taken up with different shells of several kinds. Woodward on Fossils.

PILES, n. s. Lat. pilula. Used only in the plural. The haemorrhoids.

Wherever there is any uneasiness, solicit the hu- mours towards that part, to procure the piles, which seldom miss to relieve the head. > Arbuthnot.

PILES. See MEDICINE, Index.

PILES, in the architecture of bridges and other works connected with deep water, are beams or stakes of wood, driven firmly into the ground, for various purposes ; as for forming the foun- dation for piers, buildings, &c. A large por- tion of some cities, as for instance Amsterdam, is wholly built upon piles, but they are not ordi- narily employed for foundations unless the ground be unsound, or when the weight to be borne is very great. When they are to be driven quite below ground, small straight trees are often used without squaring ; but, for the outside work of coffer-dams, square piles are always used. When they are to touch each other, flat ones, called pile planks, of three or four inches thick, are used, according to the depth of water, and have grooves formed in their edges, to receive tongues or slips of wood which make the joints tight.

Two rows of piles are first driven one within the other, at a distance proportionate to the depth and force of the water they are driven in. The space between is filled with clay, so as to form a mound or rampart, defended outside and inside by the piles. Different machines have been used to drive the piles; some worked by a number of men, who raise a heavy weight a small height, and let it fall upon the pile, others by horses and wheelwork. A very simple machine is often

employed. A long thick plank of wood, being fixed up close to the pile, has a mortise through the upper end, in which a pulley is fitted ; a rope goes over this to suspend the rammer, which is a large block of hard wood, properly hooped : in rising and falling it slides against the face of the plank, and is guided by irons, which are fixed to the ram, and are bent round the edges of the plank in the manner of hooks. The plank, when placed upright, is secured by guy ropes, in the manner of a ship's mast, the end of the great rope which suspends the ram has ten or twelve small ropes spliced into it, for as many men to take hold, and work it by ; they raise the ram up by pulling the ropes altogether, and then letting them go, the ram falls upon the pile. When the latter becomes firm enough to cause the ram to rebound, they take care to pull the ropes instantly after the blow, that they may avail themselves oi the rebound. Other machines instead of a plank have two upright beams attached, at such a dis- tance asunder as to leave an opening for the re- ception of a piece of wood which is affixed to the ram, and by this means it is guided. Pilci are chiefly used for making the faces of wharfs,.

hanks of rivers, piers in or against the sea, &c. For these purposes they are driven in rows, rather in an inclined position, and support the planking or framing fixed against them. For defence against the water, in laying the founda- tion of bridges, &c., piles are almost always re- quired, and are employed to form a water-tight enclosure, called a coffer-dam, from which space the water is drawn by pumps, and the pier laid within it. This, the most difficult of all kinds of piling, must stand a good height above the ground, and yet have sufficient strength to resist the pressure of the water. The piles used are in general of square tapering timber, cut to a point at one end, and shod with iron ; the other end being bound by iron hooping to prevent the pile head splitting.

A machine of this kind, with a beech ram four feet long and one foot square, may be worked by ten or twelve men, at the rate of twenty-four blows per minute. To estimate the force of the rammer, multiply its weight into the velocity it acquires in falling. Thus, if a rammer which weighs SOOlbs. be let fall from four feet, it will fall that height in half a second, and have at the time of percussion a velocity capable to carry it uniformly eight feet in half a second, without any further help from gravity ; so that we must multiply 500 by 16, or its weight by the number of feet it would fall in a second, and the product 8000

gives the momentum of the stroke. If pulleys, or a windlass, be made to raise the ram- mer to a height, and then, by an easy contri- vance, loosen it at once, the momentum of the stroke will always be as the square root of the height.

In the bridges and other large works of modern times, a very heavy iron ram has been raised to a considerable height, and then let fall. The machine is worked both by horses and steam-en- gines : see fig. 1. plate PILE-DRIVING. A,A, are the uprights, erected on the frame B, and supported by the braces they are connected oy the cross-feet a at bottom, and the piece D at top ; in this the pulley b for the rope d is fitted. Fillets of iron are fixed withinside the up- rights A, A, and enter grooves made in the edges of the great iron ram E, which is thereby guided as it rises and falls : F is a piece called the fol- lower, a wooden block, sliding between the up- rights, and mortised to receive the iron tongs e, which take hold of an eye upon the top of the cast iron ram : the rope is attached to the follower by an iron loop /, through which the centre pin of the tongs passes. On the base, a B, of the machine an. iron frame is bolted, to contain the windlass G, on which the rope d winds. On the end of the windlass a cog-wheel, is fixed, and a pinion upon the axis, A, engages its teeth. Motion is given to the spindle ft by the winches k, fixed on each end of it ; and the fly-wheel, /, regulates its motion, when turned by two men at each handle. The pile is included in the space between the two uprights, A, A, before it is driven down ; and the ram, being engaged by the tongs e, is drawn up by turning the handle k, till the tails, n, of the tongs come to the inclined planes m: by these they are closed together, which opens the lower ends, disengages them from the eye of the

ram, and it falls upon the head of the pile imme diately. The men at the handles shift the spindle h endways, which disunites the pinion from th;; wheel, and then the weight of the follower, F, runs back the windlass G, and descends till its tongs take hold of the ram, ready to take it up again. The inclined planes, m, are not fixed to the uprights A, A, but are connected together by pieces of wood, which embrace the uprights, and these have holes through them to receive iron bolts, which also pass through the uprights. By this means the inclined plane* can be shifted, to set them at any required height, that they may, by discharging the ram at the proper height, give a blow proportioned to the pile which is to be driven by it. The tongs nre made sometimes with rollers in the ends, as in fig. 2, that they may act more easily in the inclined planes. Other machines have a kind of latch, shown in fig. 3, instead of the tongs; in this ˆrepresents the iron loop for the rope ; the centre pin of it passes through the latch r s t, which catches the eye of the ram by the hook t, and is discharged by

the line r, when the men snatch it. The weight s is to cause the hook to catch ; the loop f is at- tached to a woodea follower, which guides it. When machines of this kind are moved by steam- engines, a pulley, fixed on the end of the spindle A, in place of the handle k, receives an endless rope from some wheel put in motion by the en- gine; one man then attends it, to throw the spindle endways at the proper time, to permit the descent of the follower; or levers and a con- necting rod from the inclined plane are used to disengage the spindle the moment after the fol- lower discharges the ram.

The piles at Westminster bridge were driven by an ingenious machine invented by Mr. Voloue, and worked with horses. They were afterwards cut ofF, under water, by a machine, so as to be level with the surface of the ground to found the piers upon. This last machine con- sisted of a framing fitted upon the upper part of the pile, and could be fixed fast thereto. The lower part of it formed guides for the saw, which reciprocated horizontally at a certain depth be- neath the top of the pile, and had weights to cause it to advance up to the cut. The saw was put in motion by ropes from each end, which were conducted over pulleys, to two men stand- ing on a float or raft at the surface. After fixing the machine, before the sawing was begun, the whole was suspended by a tackle, which therefore took up the top part of the pile with the machine as soon as it was cut off. This was the invention of Mr. Etheridge, carpenter to the works ; it was very effective, as the time em- ployed in cutting off a fir pile of fourteen or six- teen inches square, in ten feet depth of water, was seldom more, and often less, than a minute and a half.

A similar but somewhat more convenient ma- chine has been since invented by Mr. Foulds, for which the Society of Arts presented him their gold medal. See figs. 4 and 6 : A A B is the ex- ternal frame, consisting of four parallel rays A, framed into two others B, at right angles, with proper cross pieces to unite them, and inclined to strengthen the whole; within this frame a

second, or internal frame, D E, is situated ; like the other, it has four parallel pieces, D and E, connected together into one frame by cross pieces ; at the top it has two pieces a, a, which rest upon the beam B, and suspend its weight, and on these it is capable of sliding backwards

and forwards between B B, always preserving its parallelism, because it is moved by the racks, d, d, affixed to it, one at top and the other at the bottom ; the pinions for both are fixed on a ver- tical axis e, supported by the external frame ; therefore, by turning the handle r, the internal frame with the saw is advanced to the pile, as at K, fig. 5. The saw itself is sustained in a frame L, fig. 6, which fits, in the manner of a sash frame, between the two beams, D, of the internal frame, and has racks,/,/, (dotted) behind it,which work in pinions on an axis g, fig, 5, extended across the frame, and by the handle, y, of this it is capable of being drawn up and let down, or detained at any height by a ratchet-wheel and click x', the saw, m, is fixed upon a spindle N, supported in bearings on the frame L,and turned by the handle, R, at the top; the saw is connect- ed with the spindle by a piece of iron p, having a mortise through it for the reception of the spin- dle, to which it is fastened by a nut beneath : by this means the saw's edge may be advanced as the work goes on.

In using this machine, the beams, B, are fixed across a barge, which is ballasted till they are horizontal, and the spindle of the saw is there- fore vertical in this state ; it is moored with her side against the pile, K, to be cut off, as shown by the dotted line V, fig. 5 ; then, by the rack and pinion fg, the saw is adjusted in height to the level where the pile is to be cut ; by the handle r it is advanced to the pile K, whilst by the other handle, R, the saw is kept in continual motion backwards and forwards, till the pile is cut through, and the piece is taken into the barge, which proceeds to cut off the next by the same means. By this machine temporary piles may be cut off level with the bottom, when the work is finished, which is a superior method to draw- ing them up out of the ground, as is the usual practice, because this must necessarily make a deep ditch or trench all round the pier or foun- dation. To draw piles out of the ground, when they have been driven fast also requires a great force. At Waterloo bridge the useless piles were drawn, we believe, by one of Mr. Bramah's hy- drostatic cylinders, which one or two men could manage so as to draw the largest pile.

PILES (Roger de), a learned French writer, born at Clamecy, of a good family, in 1635. He studied at Nevers and Auxerre; then went to Paris for philosophy, and studied divinity in the Sorbonne. Meantime he cultivated painting under Recollet. In 1652 he became preceptor to the son of M. Amelot, whom he accompanied into Italy, and on his return became famous as a connoisseur. f In 1682, M. Amelot being sent on an embassy to Venice, De Piles attended him as secretary ; and, during his residence there, he was sent by the marquis of Louvois into Ger- many, to purchase pictures for Louis XIV., and likewise to

execute a private commission on state affairs. In 1685 he attended M. Amelot to Lis-

bon, and in 1689 to Switzerland, as secretary. In 1692 he was sent incognito to Holland, as a virtuoso, but in reality to act as a spy. Being detected, he was put m prison, where he conti- nued till the peace of Ryswick, and where he wrote his Lives of the painters. In 1705, though in his seventieth year, he attended M. Amelot on his embassy into Madrid. He died in 1709. His other works are, 1. An Abridgment of Ana- tomy; 2. A Translation of Fresnoy ; 3. Dia- logues on Painting ; 4. A Dissertation on the Works of famous Painters; 5. Elements of Painting. All in French.

PILEUS, Lat., from Gr. TriXifoov, a hair-cap, in the archaiology of costume, a hat, cap, or bonnet to cover the head. Plaut. Stat. The Roman pileus was not much unlike our night- cap, or rather our seaman's cap. On several ancient Greek vases we find sundry heroes of antiquity invested with the iri\i£iov, and more especially the figures of Ulysses, perhaps by way of indicating his long and frequent voyages. According to Eustathius it was Apollodorus, the master of Zeuxis, who first decorated Ulysses thus. At the commencement of the republic the Romans were much in the habit of going about with the head uncovered, or covered but with a piece of their vestment ; they wore the pileus only during public games, at the time of the saturnalia, or in voyages. It was likewise used as an emblem of liberty ; and in this sense was applied to slaves about to be enfranchised. Servum ad Pileum vocare (Livy), was to give him his freedom, which they did by first shaving his head, then putting a cap upon it.

PILEUS THESSALICUS, a broad-brimmed bon- net for the purpose of shielding the wearer ei- ther from sun or rain. It took its name from the Thessalonians, who first adopted it.

PILEUS PANNONICUS was a sort of military bonnet made of skin.

PILEWORT, the ranunculus ficaria of Lin- naeus, is a very small plant, found in moist mea- dows, and by hedge sides. The roots consist of slender fibres, with some little tubercles among them which are supposed to resemble the haemorr- hoids. Thence it has been concluded that this root must needs be of wonderful efficacy for the cure of that distemper; to the taste it is little other than mucilaginous; and, although still retained in several of the foreign pharmacopoeias, it is hardly used in this country.

PIL'FER, v. a. & v. n. ~\ Fr. piller, pilfier. PIL'FERER, n. s. >To steal;

gain by

PIL’FERY. j petty theft; practise

petty robbery : pilfery is petty theft.

Your purposed low correction Is such as basest and the meanest wretches, For pilf rings and most common trespasses, Are punished with. Shakspeare. King Lea

He would not pilfer the victory ; and the defeat was easy. Bacon.

They not only steal from each other, but pilfer away all things that they can from such strangers as do land. Abbot.

I came not here on such a trivial toy As a stray’d ewe, or to pursue the stealth Of pilfering wolf. Milton,

Ev’ry string is told,

For fear some pilfring hand should make too bold.

Dry den.

When these plagiaries come to be stripped of their pilfered ornaments, there’s the daw of the fable.

V Estrange.

A wolf charges the fox with a piece of pilfery ; the fox denies, and the ape tries the cause. Id.

Hast thou suffered at any time by vagabonds and pilferers ? Promote those charities which remove such pests of society into prisons and workhouses.

Atterbury’s Sermons.

Triumphant leaders, at an army’s head, Hemm’d round with glories, pilfer cloth or bread, As meanly plunder as they bravely fought. Pope.

To glory some advance a lying claim, Thieves of renown, and pilferers of fame.

Young.

PIL'GRIM, n. s. Belg. pelgrim ; Teut. pit- gram; Fr. pelerin; Ital. pelegrino; Lat. pcre- grinus. A traveller; a wanderer; particularly one who travels on a religious account.

Befell that in that seson on a day In Southwerk at theTabberd as I lay, Redy to wendin on my pilgrimage To Canterbury, with devote corage, At night wer come into that hosiery Wele nine and twenty in a cumpany Of sundrie folk.

Chaucer. Prologue to Canterbury Tales. In prison thou hast spent a pilgrimage, And, like a hermit, overpast thy days.

Shakspeare. I We are like two men

That vow a long and weary pilgrimage. Id. Most miserable hour that time ere saw In lasting labour of his pilgrimage. Id.

Granting they could not tell Abraham's footstep from an ordinary pilgrim's ; yet they should know some difference between the foot of a man and the face of Venus. Stilling fleet.

Painting is a long pilgrimage ; if we do not actu- ally begin the journey, and travel at a round rate, we shall never arrive at the end of it. Dryden.

Like pilgrims to the' appointed place we tend ; The world's an inn, and death the journey's end.

Id.

The ambulo hath no certain home or diet, but pil- grims up and down every where, feeding upon all sorts of plants. Grew.

Two pilgrims, which have wandered some miles together, have a heart's grief when they are near to part. Drummond.

Books of this sort, or sacred, or profane, Which virtue helped, were titled not amiss ' The medicine of the mind : ' who read them, read Wisdom, and was refreshed ; and on his path Of pilgrimage, with healthier step advanced.

Pollok.

PILGRIMAGE is a kind of religious discipline, which consists in taking a journey to some sup- posed holy place. Pilgrimages began to be made about the middle ages of the church ; but they were most in vogue after the end of the eleventh century, whe.n ev.ery one was for visiting places of devotion, not excepting kings and princes ; and even bishops made no difficulty of being absent from their churches on the same account. The places most visited were Jerusalem, Rome, Com- postella, and Tours. In 1428, in the reign of Henry VI., many licenses were granted to captains of English ships, for carrying devout persons to the shrine of St. James of C'ompostella, in Spain ;

provided that those pilgrims should first swear ' not to take any thing prejudicial to England, nor to reveal any of its secrets, nor to carry out with them any more gold or silver than what would be sufficient for their reasonable expenses.' In this year there went out thither the following number of persons : — from London 280, Bristol 200, Weymouth 122, Dartmouth ninety, Yar- mouth sixty, Jersey sixty, Plymouth forty, Exeter thirty, Liverpool twenty-four, Ipswich twenty; in all 926 pilgrims. For the pilgrimages of the followers of Mahomet see MAHOMETANISM.

In every country where popery was estab- lished pilgrimages were common ; and in those countries 'which are still popish they continue. In England the shrine of St. Thomas a Becket was the chief resort of the pious, and in Scot- land St. Andrew's ; where, as tradition stated, was deposited a leg of the holy apostle. In Ire- land they still continue, and the number of holy wells, and miraculous cures, &c., produced by them is said to be great.

PILKINGTON (Laetitia), a famous authoress, daughter of Dr. Van Lewin, a physician of Dub- lin, where she was born in 1712. She was married very young to the reverend Matthew Pilkington, a poet of considerable merit ; and these two wits, as is often the case, lived very unhappily toge- ther. They were at length totally separated, on the husband discovering a gentleman in her bed- chamber at two o'clock in the morning. After this unlucky adventure, Mrs. Pilkington came to London, and having recourse to her pen for subsistence, through the means of Colley Gibber, she lived some time on the contributions of the great. She was, however, thrown into the Mar- shalsea for debt ; until, being set at liberty, she opened a pamphlet shop. At length she raised a handsome subscription for her Memoirs ; which are written with great sprightliness and wit, containing several entertaining anecdotes of dean Swift, with whom she was intimate. This ingenious, but unhappy woman, is said at last to have killed herself with drinking, at Dublin, in

1750.

PILL, n.s. Fr. pillule ; Lat. pilula. Medi- cine made into a small ball or mass.

When I was sick you gave me bitter pills.

Shakspeare.

In the taking of a potion or pills, the head and the neck shake. Bacon's Natural History.

The oraculous doctor's mystick bills, Certain hard words made into pills. Crashaw.

That wheel of fops ; that santer of the town Call it diversion, and the pill goes down. Young.

PILL, v. a. French filler. To rob ; plunder. Obsolete.

So did he good to none, to many il! ; So did he all the kingdom rob and pill.

Spenser.

The commons hath, he pill'd with grievous taxes, And lost their hearts. Shakspeare. Richard 11,

He who pill'd his province, 'scapes the laws, And keeps his money, though he lost his cause.

Dryden.

Suppose pilling and polling officers, as busy upon the people, as those flies were upon the fox.

L'Estrange.

PILL, v. n. Corrupted of peel. To be stript away ; to come off in flakes or scoriae.

Jacob took him rods of green poplar, and pilled white strakes in them. Genesis xxx. 37.

The whiteness pitied away from his eyes. Tobit. PIL'LAGE, n. s. &u. a.) French pillage. PIL'LAGER, n. s. $ Plunder ; some-

thing obtained by plunder: to rob; plunder; spoil.

Others, like soldiers,

Make boot upon the summer's velvet buds ; Which pillage they with merry march bring home.

Sliakspeare.

Jove's seed the pillager Stood close before, and slackt the force the arrow did

confer. Chapman.

The consul Mummius, after having beaten their army, took, pillaged, and burnt their city.

Arbulhnot.

But she with such delicate skill Her pillage so fits for her use,

That the chemist in vain with his still Would labour the like to produce. Cowper.

PIL'LAR, n. s. Fr. piller ; Span, pilar ; Welsh and Arm. piler. A column ; supporter ; maintainer. See PILE.

Note, and you shall see in him The triple pillar of the world transformed Into a strumpet's stool.

Shakspeare. Antony and Cleopatra. I charge you by the law, Whereof you are a well deserving pillar, Proceed to j udgment. Id. Merchant of Venice. Pillars or columns, I could distinguish into simple and compounded. Wottons Architecture.

If this fail,

The pillared firmament is rottenness, And earth's base built on stubble. Milton. The palace built by Picus vast and proud, Supported by a hundred pillars stood. Dri/den. The' infuriate hill shoots forth the pillared flame.

Thomson.

PILLAR, in the manege, is the centre of the ring, or manege ground, round which a horse turns, whether there be a pillar in it or not. Besides this, there are pillars on the circumference or sides of the manege ground, placed at cer- tain distances, by two and two, whence they are called the two pillars, to distinguish them from that of the centre. The use of the pillar in the centre is for regulating the extent of ground, that the manege upon the volts may be performed with method and justness, and that they may work in a square by rule and measure, upon the four lines of the volts ; and also to break unruly high-mettled horses, without endangering the rider. The two pillars are placed at the distance of two or three paces one from the other ; and the horse is put between those, to teach him to rise before, and yerk out behind, and put him- self upon raised airs, &c., either by the aids or chastisements.

PILLAR, POMPEY'S. See ALEXANDRIA.

PILLARS, in antiquarian topography, are large single stones set up perpendicularly. Those which are found in this country have been prin- cipally the work of the Druids ; or, as they are the most simple of all monuments, are probably more ancient than druidism itself. They were placed as memorials recording different events ; such as remarkable instances of God's mercies, contracts, singular victories, boundaries, and sometimes sepulchres. Various instances of these

monuments erected by the patriarchs occur in the Old Testament: such was that raised by Ja- cob at Luz, afterwards by him named Bethel ; such, also, was the pillar placed by him over the grave of Rachael. They were likewise marks of execrations and magical talismans. These stones, from having been long considered as objects of veneration, at length were, by the ignorant and superstitious, idolatrously worshipped. After the introduction of Christianity, therefore, some had crosses cut on them, which was considered as snatching them from the service of the devil.

PILLAU, a well-built old sea-port of East Prussia, between the Baltic and the long mari- time inlet called the Frische Haff. It is impor- tant chiefly for its harbour, its population being- under 3000. Adjoining to the town is a regu- lar fortress, considered the key to this part of Prussia. The harbour, which serves as the port of Konigsberg, is commodious, but has only twelve feet of water. It has a good sturgeon fishery, and the number of vessels amounts to several hundreds annually. The peninsula on the point of which it stands is a pleasant

and fertile track, and near the fort is a fine plain, where the Frische Haff forms a semicircular bay, on the other side of which stands Alt or Old Pillau, consisting of two fishing villages. Twenty -two miles W.S.W. of Konigsberg.

PILLIBEET, a town in the province of Delhi, Hindostan, district of Bareilly, thirty- three miles north-east from Bareilly. During the Rohillah government this was an emporium of commerce, and was greatly augmented by Hafez Rehmut, who built a spacious pettah here four miles in circumference. Its staples are saul, sissoo, and fir timbers, sugars, and coarse cloths ; and from the mountains of Almora are imported borax, pitch, drugs, wax, and honey. After its acquisition by the Nabob of Oude its commerce was annihilated ; but, since its cession to the British, it has greatly revived.

PIL'LION, n. s. From pillow ; or Lat. pul- vinus. A soft saddle for a woman.

I thought that the manner had been Irish, as also the furniture of his horse, his shank pillion without stirrups. Spenser.

The horse and pillion both were gone ; Phyllis, it seems, was fled with John. Swift.

PIL'LORY, n. s. Tr.pillori ; barb. Lat. pil- lorium. A frame made with holes and moveable boards, through which the heads and hands of criminals were put. See below.

I have stood in the pillory for the geese he hath killed. Shakspeare.

God uses not the rod where he means to use the sword. The pillory or scourge is for those malefac- tors, which shall escape execution. Bp. Hall.

To be burnt in the hand or pilloried is a more last- ing reproach than to be scourged or confined.

Government of the Tongue.

As thick as eggs at Ward in pillory. Pope.

The jeers of a theatre, the pillory, and the whip- ping-post, are very near a-kin.

Watts on the Mind. An opera, like a pillory, may be said To nail our ears down, but expose OUT head.

Youny.

PILLORY, in law, collistrigium, q.d. collum stringens; pilloria : from the Fr. pilleur, i.e. depeculator, or pelon ; derived from the Gr. irvr)\, janua, a door, because one standing on the pillory puts his head as it were through the door, and opaw, to see : is an engine made of •wood to punish offenders, by exposing them to public view, and rendering them infamous. There is a statute of the pillory, 51 Hen. III. And by statute it was appointed for bakers, forestallers, and those who use false weights, perjury, forgery, &c. 3 Inst. 219. Lords of leets were to have a pillory and timbrel, or it will be the cause of forfeiture of the leet ; and a village may be bound by prescription to provide a pillory, &c. 2 Hawk. P. C. 73. But, by stat. 56 Geo. III. c. 138, the punishment of pillory is abolished in all cases except perjury, and in all cases where the punishment of the pillory has hitherto formed the whole or part of the judg- ment, the court may pass sentence of fine and im- prisonment, or both, in lieu of the pillory. So that this punishment is virtually abolished altogether. PIL'LO W, n. s. \ Sax. pyle ; Swed. pil ; Teut. PIL'LOWCASE. $ pole ; Belg. pulewe. A bag of down or feathers laid under the head to sleep on ; any cushion : the case explains itself. One turf shall serve as pillow for us both, . One heart, one bed, two bosoms, and one troth.

Shakspeare

A merchant died that was very far in debt, his> goods and household stuff were set forth to sale ; a stranger would needs buy a pillow there, saying, this pillow sure is good to sleep on, since he could sleep on it that owed so many debts. Bacon.

Thy melted maid, Corrupted by thy lover's gold, His letter at thy pillow laid. Donne

When the sun in bed, Curtain'd with cloudy red, Pillows his chin upon an orient wave The flocking shadows pale, Troop to the' infernal jail. Milton.

Their feathers serve to stuff our beds and pillows, yielding us soft and warm lodging.

Rayon the Creation.

When you put a clean pillowcase on your lady's pillow, fasten it well with pins. Swift.

Yon cottager, who weaves at her own door, Pillow and bobbin s all her little store ; Content though mean, and cheerful if not gay, Shuffling her chreads about the livelong day, Just earns a scanty pittance, and at night Lies down secure, her heart and pocket light.

Cowper.

PILNITZ, a town of Upper Saxony, memo- rable for the treaty entered into between the em- peror of Germany, the king of Prussia, and other princes of Europe, against France, in 1792. It lies seven miles south-east of Dresden.

PILON (Frederick), an Irish dramatic writer, born at Cork in 1750. He was sent to Edinburgh to study medicine, but the stage soon withdrew his attention from physic. He made his appear- ance on the Edinburgh theatre in the character of Oroonoko, and continued to act on the provin- cial theatres for four years, till 1776, when he went to London ; where he published a Critical Essay on Hamlet, which procured him the pa- tronage of Mr. Coleman In 1776 he wrote the Drama; a poem, in the manner of Churchill's

llosciad ; and Regatta, a poem on the fete given on the Thames in 177(3, both of which were well received. After various other miscellaneous pieces, he published, in 1778, The Invasion, or a Trip to Brighthelmstone, a comedy, which was acted with applause at Covent Garden. After this, his Fair American, an opera, was refused by the manager of Covent Garden; and, though acted at Drury Lane, produced a dispute with the manager, and much more trouble than profit to the author. His next comedy was He would be a Soldier, the profits of which to him were much inferior to what might have been expected; and, being distressed by creditors, he went to France, where he wrote The Ward of Chancery, but had not finished it completely when he returned to England, and died at Lambeth, Janu- ary, 1788.

PILOS'ITY, n. s. Lat. pilosus. Hairiness.

At the years of puberty, all effects of heat do then come on, as pilosity, more roughness in the skin.

Bacon.

PI'LOT,n.s.) Fr. pilote ; Ital. and Span.

PI’LOTAGE. $ plloto ; Dan. Port, and Dut. piloot. He whose office it is to steer a ship ; the skill of a pilot or his wages.

We must for ever abandon the Indies, and lose all our knowledge and pilotage of that part of the world.

Raleigh. When her keel ploughs hell,

And deck knocks heaven, then to manage her,

Becomes the name and office of a pilot.

Ben Jonscm.

To death I with such joy resort, As seamen from a tempest to their port ; Yet to that port ourselves we must not force, Before our pilot, nature, steers our course.

Denham , What port can such a pilot find,

Who in the night of fate must blindly steer ?

Dry den.

The Roman fleet, although built by shipwrights, and conducted by pilots without experience, defeated that of the Carthaginians. Arbuthnot on Coins.

PILOT, in a general sense, implies a person properly qualified and licensed to conduct ships on or near the sea-coast, or through intricate channels, and into the roads, bays, rivers, &c., within his respective district. They are not con- stant standing officers on board our ships, but are called in occasionally, on coasts or shores unknown to the master : and, having piloted the vessel, they return to the shore where they reside. After a pilot is taken on board a merchant ship, the master has no longer any command of her till she is safe in harbour ; but then the master resumes the government, and is to see her bed and lying ; the pilot being no longer liable, though for his own convenience he may still be on board. The same rule holds good if a pilot goes on board only to conduct a ship through some dangerous place, as for instance Yarmouth Roads ; after passing them the master must resume the command, and the pilot is no longer responsible.

The regulations with regard to pilots in the royal navy are as follow : — The commanders of the king’s ships, in order to give all reasonable encouragement to so useful a body of men as pilots, and to remove all

their objections to his

majesty's service, are strictly charged to treat them with good usage, and an equal respect with warrant officers. The purser of the ship is always to have a set of bedding provided on board for the pilots, and the captain is to order the boatswain to supply them with hammocks, and a convenient place to lie in near their duty, and apart from the common men ; which bed- ding and hammocks are to be returned when the pilots leave the ship.

A pilot, when conducting one of his majesty's ships in pilot-water, shall have 'the sole charge and command of the ship, and may give orders for steering, setting, trimming, or furling the sails, tacking the ship, or whatever concerns the navigation ; and the captain is to take care that all the officers and crew obey his orders. But the captain is diligently to observe the conduct of the pilot, and take particular care that the hand-lead be kept constantly going, whether the pilot think this precaution necessary or not ; and if he judge him unqualified to conduct the ship, or that he is carrying her into danger, he may remove him from the command and charge of the ship, and take such methods for her preser- vation as shall be judged necessary ; remarking upon the log book the exact hour and time when the pilot was removed from his office, and the reasons assigned for it.

Captains of his majesty's ships which are to sail from the river Thames or the Nore are to apply to the commissioners of the navy for pilots, and are to employ those only who shall be sent them by the Trinity House of Deptford Stroud ; but captains of ships which are to sail from the Downs to the Nore or the Thames are to employ pilots belonging to the society of pilots at Dover. The captain of a king's ship employing a pilot in a foreign part of his majes- ty's dominions shall give him three certificates of the services he performs (to be marked re- spectively first, second, and third) of the same tenor and date ; which being produced to the proper naval officer, he shall cause the same to be immediately paid ; but, if there be no naval officer there, the captain shall pay him, and send the proper vouchers, with his bill, to the navy board, in order to be paid as bills of exchange.

Captains of his majesty's ships, employing foreign pilots to carry the ships they command into or out of foreign ports, shall pay them the rates due by the establishment or custom of the country, before they discharge them; whose receipts being duly vouched, and sent with a certificate of the service performed to the navy board, they shall cause

them to be paid with the same exactness as they do bills of exchange.

The owners of hired ships, cutters, and other armed vessels, are, by their contracts, to provide for them masters who have been accustomed to sail in ships and vessels of this description ; it is therefore incumbent upon the latter to take charge of them upon all ordinary cases of cruising or pilotage, where it is not usual for a king's ship to employ a pilot extra; and it has been deemed advisable, in order to prevent any unnecessary expense to the public on this ac- count, to require, as indispensable to the pay- ment of certificates for pilotage of hired vessels,

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that they be approved by the commander-in-chief or commanding officer on the station; or that his order for the employment of the pilot is produced.

If any person shall take upon him to conduct or pilot a ship by or from Dover, Deal, or the Isle of Thanet, to any place on the river Thames or Medway, before he has been examined by the master and wardens of the society or fellowship of pilots of the Trinity House of Dover, Deal, and the Isle of Thanet, touching his ability • and approved and admitted into the said societyˆ at a court of load-manage, by the lord warden of the cinque ports or his deputy, and the master and wardens ; such person, for the first offence, shall forfeit £10, for the second £20 and for every other offence £40, &c. 3 Geo. I. c. 13, sec. 1. This act shall not hinder any person from assisting a ship in distress.— Sec. 7. Nor shall it extend to the taking away any liberties vested in the corporation of the Trinity House of Deptford Stroud.— Sec. 9.

If any person shall take charge of any ship as pilot, down the river of Thames, or through the North Channel, to or by Orfordness, or round the Long-Sand-Head into the Downs, or down the South Channel into the Downs, or from or by Orfordness upon the North Channel, or the river Medway, other than such as should be licensed to act as a pilot, by the master, wardens, and assistants of the Trinity House of Deptford Stroud, under the common seal of the corpora- tion ; every person so offending, and being con- victed before two justices of the peace for the city of London, or the counties of Middlesex, Essex, Kent, or Surrey, shall, for every offence, forfeit £20, provided that nothing in this act shall extend to the obliging any master of any ship in the coal trade or coasting trade to em- ploy a pilot. 5 Geo. II. c. 20, sec. 1.

In case any pilot shall refuse to take the charge of any of his majesty's

ships when appointed thereto by the said corporation, or shall have misbehaved himself in the conduct of any ships, or in any other part of his duty; or if pilots shall refuse to obey any summons of the corporation, or such orders as the corporation shall make in the premises, the general court of the said corporation, upon examination thereof, are required to recal the warrants granted to such pilots ; and if such persons shall (after notice given by the clerk of the said corporation to them in person, or left at their place of abode) act as pilots within the limits afore-mentioned, they shall be subject to all the penalties inflicted on unlicensed pilots.— Sec. 9. Yet nothing in this act shall extend to the impeaching of any privileges enjoyed by the pilots of the Trinity House of Kingston-upon-Hull, or the Trinity House of Newcastle-upon-Tyne.— Sec. 1 1 . Nor shall this act extend to the impeaching of the franchises, nor to take away the sole right of piloting merchant-ships from or by Dover, Deal, or the Isle of Thanet, upon the river of Thames or Medway, granted to the society and fellowship of the master, wardens, and pilots of the Trinity House of Dover, Deal, and the Isle of Thanet, by 3 Geo. I. 6. 13, sec. 12.

If any pilot shall negligently lose the ship

under his care, and be therefore convicted, he shall for ever be incapacitated from acting as a pilot.

PILOT, BRANCH, is a pilot duly authorised by the Trinity Board to pilot ships up particular channels and rivers. They have regular wages from the Trinity House Company.

PILOT FISH, or gasterosteus ductor, in ichthy- ology, is a species of the gasterosteus, and is found in the Mediterranean and in the Atlantic Ocean, chiefly towards the equator. Catesby, who gives a figure of it in its natural size, together with a short description, calls it perca marina secteria, or rudder-fish. One of them, which Gronovius describes, was about four inches long, and its greatest breadth little more than an inch : the head is about a third of the body, and covered, excepting the space between the snout and the eye, with scales scarcely perceptible, and cover- ing one another like tiles ; the iris of the eye is a silver gray; the jaws are of equal size, and furnished as well as the palate with small teeth disposed in groups ; there is also

a longitudinal row of teeth on the tongue. The trunk of the pilot-fish is oblong, a little rounded ; but it ap- pears quadrangular towards the tail, because at this place the lines are thicker, and form a kind of membranaceous projection. The back fin is long, and furnished with seven radii ; on the fore part of this fin are three moveable prickles very short ; the fins on the breast have each of them twenty radii, forked at their extremity ; the ab- dominal fins have six ; that of the anus has seventeen branches, of which the first is longest ; this fin is preceded by a small moveable prickle ; that of the tail is thick, large, and forked. The pilot-fish is of a brownish color, changing into gold ; a transversal black belt crosses the head ; the second passes over the body at the place of the breast ; a third near the moveable prickles of the back; three others near the region of the anus ; and a seventh at the tail. Seafaring peo- ple observe that this fish frequently accompanies their vessels ; and, as they see it generally towards the fore part of the ship, they imagined that it was guiding and tracing out the course of the vessel, and hence it received the name of pilot- fish. Osbec tells us that they are shaped like those mackarels which have a transversal line across the body. ‘ Sailors,’ continues he, ‘ give them the name of pilots, because they closely follow the dog-fish, swimming in great shoals round it on all sides. It is thought that they point out some prey to the dog-fish. See Mem. of the Swed. Acad. for 1755, vol. xvi. p. 71. It likewise follows the shark apparently for the remains of its prey. Barbut informs us that these fishes propagate their species like the shark. He adds that in the gulph of Guinea they follow ships for the sake of the offals, and hence the Dutch give them the name of dung-fish. Though so small, they can keep pace with ships in their swiftest course.

PILPAY, a celebrated brahmin, who flourished about A. A. C. 250. He wrote a book of fables, which has been translated into most of the languages of Europe.

PILSEN, a circle in tne west of Bohemia, ad- joining to Bavaria: iron is the chief mineral

product. Its area is 1600 square miles; its population nearly 170,000. It had formerly large silver mines, but they are now exhausted The pastures are good, and the cheese much esteemed.

PILULE, pills. See PHARMACY.

PILULARIA, in botany, pepper-grass, a ge- nus of plants in the class cryptogamia, and order of filices ; ranking in the natural method in the fifty-fifth order, filices.

PILUM, a missive weapon used by the Ro- man soldiers, and in a charge darted upon the enemy. Its point, we are told by Polybius, was so long and small, that after the first discharge it was generally so bent as to be rendered useless. The legionary soldiers made use of the pilum, and each man carried two. The pilum under- went many alterations and improvements, inso- much that it is impossible with any precision to describe it. Julius Scaliger labors to give an accurate account of it. It appears to have been sometimes round, but most commonly square, to have been two cubits long in the staff, and to have had an iron point of the same length hooked and jagged at the end. Marius made a material improvement in it ; for, during the Cimbrian war, he so contrived it that, when it stuck in the ene- mies' shield, it should bend down in an angle in the part where the wood was connected with the iron, and thus become useless to the person who received it.

PILUMNUS, in Roman mythology, the god of the bakers. Turnus boasted of being descend- ed from him. Virg. ./En. ix. 4.

PILUS, Gr. TriXoc, carded wool. In anatomy, the short hair which is found all over the body.

PILUS, in botany, a hair : which, according to Linnaeus, is an excretory duct of a bristle-like form. They are fine slender, cylindrical, flexible bodies, found on the surfaces of the herbaceous parts of plants ; some of them punctured, and in some plants, as the borago laxiflora, covered with warts. ,

They are either simple or undivided, com- pound or branched. 1 . Pili simplices, the most common form of the simple hair is that of a jointed thread, generally too flexible to support itself, and thus most commonly found bent and waved. According to its degree of firmness, its quantity, and the mode of its application to the surfaces of stems and leaves, it constitutes the characteristic of surfaces: thus, the surface is termed pilosus, or hairy, when the hairs are few and scattered, but conspicuous, as in hieracium pilocella; — lanatus, woolly, when they are com- plicated, but nevertheless the single hairs are distinguishable, as in verbascum; — tomentosus, shaggy, when they are so thickly matted that the individual hairs cannot be distinguished, and when the position of the hair is nearly parallel with the disk, being at the same time straight, or very slightly curved, and thick although unmat- ted : it constitutes the silky surface, as is seen on the leaves of potentilla anserina, and achemilla alpina. In some instances the simple hair is firm enough to support itself erect; in which case it is usually awl-shaped, and the articu- lations are shorter

towards the base, as in bryonia alba. It does not always, however, terminate in

a point, but sometimes in a small knob, as in the newly-evolved succulent shoots of ligneous plants, belladonna, &c. In some instances also, as on the under disk of the leaves of the symphytum officinale, the simple hair is hooked toward1* its apex ; which occasions the velvety feeling when ihe finger is passed over the surface of these .eaves, the convex part of the curve of the hair being that only which cornes in contact with the finger. Another variety of the simple hair is that which has given rise to the term glanduloso- ciliata : it is a slender hollow thread, supporting a small, cup-shaped, glandular body, and is rather to be regarded as a stipate gland. 2. Pili compositi are either plumosus. feathery, which is a simple hair with other hairs attached to it late- rally, as in hieracium undulatum ; or it is ramo- sus, branched, that is, lateral hairs are given off from common stalks, as on the petiole of the gooseberry leaf; or it consists of an erect firm stem, from the summit of which smaller hairs diverge in every direction, as in marrubium pere- grinum ; or it is stellatus, star-like, being com- posed of a number of simple diverging awl- shaped hairs, springing from a common centre, which is a small knob sunk in the cutis, as on the leaves of marsh-mallow. Some authors have applied the term ramenta to small, flat, or strop- like hairs which are found on the leaves of some of the genus begonia. Thomson.

PIM ELITE, a variety of steatite found at Kosemutz in Silesia.

PIMENTA, n.s. Fr. piment ; Span, pi- mento. A kind of spice.

Pimento,, from its round figure, and the place whence it is brought, has been called Jamaica pep- per, and, from its mixt flavour of the several aro- maticks, it has obtained the name of all-spice : it is a fruit gathered before it is ripe, and resembles cloves more than any other spice. Hill’s Materia Medica,

PIMENTA, or PIMENTO, or, as Edwards writes, PIEMENTO, in botany, Jamaica pepper, or all- spice, a species of the myrtus. See MYRTUS ‘ The pimento trees grow spontaneously, and in great abundance, in many parts of Jamaica, but more particularly on hilly situations near the sea, on the north side of that island ; where they fill the air with fragrance, and form the most delici- ous groves that can possibly be imagined. This tree is purely a child of nature, and seems to mock all the labors of man in his endeavours to extend or improve its growth ;

not one attempt in fifty to propagate the young plants, cr to raise them from the seeds, in parts of the country where it is not found growing spontaneously, having succeeded. The usual method of forming a new pimento plantation (in Jamaica it is called a walk) is to appropriate a piece of woodland, in the neighbourhood of a plantation already exist- ing, or in a country where the scattered trees are found in a native state, the woods of which being fallen, the trees are suffered to remain on the ground till they become rotten and perish. Within a year after the first season, abundance of young pimento plants will be found growing vigorously in all parts of the land, being without Ooubt produced from ripe berries scattered there hy the birds, while the fallen trees, &c., afford tnem both shelter and shade. At the, end of two

years it will be proper to give the land a thorough cleansing, leaving such only of the pimento trees as have a good appearance, which will then soon form such groves as those I have described, and, except perhaps for the first four or five years, require very little attention afterwards. Soon after the trees are in blossom, the berries become fit for gathering ; the fruit not being suffered to ripen on the tree, as the pulp in that state, being moist and glutinous, is difficult to cure, and when dry becomes black and tasteless. It is im- possible, however, to prevent some of the ripe berries from mixing with the rest ; but, if the proportion of them be great, the price of the commodity is considerably injured. It is gathered by the hand ; one laborer on the tree, employed in gathering the small branches, will give em- ployment to three below (who are generally women and children) in picking the berries; and an industrious picker will fill a bag of 70 Ibs. in the day. The returns from a pimento walk in a favorable season are prodigious. A single tree has been known to yield 150 Ibs. of the raw fruit, or 1 cwt. of the dried spice ; there being commonly a loss in weight of one-third in curing ; but this, like many other of the minor productions, is exceedingly uncertain, and per- haps a very plenteous crop occurs but once in five years.

PIMP, n. s. Fr. pinge ; Belg. poppere. Skin- ner. A procurer ; pander ; one who provides gratifications for the lust of other* ,

I'm courted by all As principal pimp to the mighty king Harry.

Addison Lords keep a pimp to bring a wench ;

So men of wit are but a kind

Of panders to a vicious mind ;

Who proper objects must provide

To gratify their lust of pride. Sicifc.

PIMPILLO, a species of CACTUS, which see.

PIMPINELLA, burnet saxifrage ; a genus of the dvginia order, and pentandria class of plants : in the natural method ranking under the forty- fifth order, umbellatae. There are seven species : the most remarkable are : —

1. P. anisum, the common anise, is an annual plant, which grows naturally in Egypt, but is cultivated in Malta and Spain ; from whence the seeds are annually imported into Britain. The lower leaves of this plant are divided into three lobes, which are deeply cut on their edges ; the stalk rises a foot and a half high, dividing into seve- ral slender branches, garnished with narrow leaves, cut into three or four narrow segments, termi- nated by pretty large loose umbels, composed of smaller umbels or rays, which stand on pretty long foot-stalks. The flowers are small, and of a yellowish white ; the seeds are oblong and swel- ling. The former species requires no culture ; the latter is too tender to be cultivated foi , r jfit in this country. However, the seeds will come up if sown in the beginning of April upon a warm border. When they come up, they should be thinned and kept clear of weeds, which is all the culture they require.

2. P. major, or greater burnet saxifrage, grow- ing naturally in chalky woods, and on the sides

vf the banks near hedges, in several parts of Eng- iand. The lower leaves of this sort are winged ; the lobes are deeply sawed on their edges, and sit close to the midrib, of a dark green. The stalks are more than a foot high, dividing into four or five branches. The lower part of the stalk is garnished with winged leaves, shaped like those at the bottom, but smaller ; those upon the branches are short and trifid; the branches are terminated by small umbels of white flowers, which are composed of smaller umbels or rays. The flowers have five heart-shaped petals, which turn inward, and are succeeded by two narrow,

oblong, channelled seeds. Both these species are used in medicine. The roots of pimpinella have a grateful, warm, very pungent taste, which is entirely extracted by rectified spirit ; in distil- lation the menstruum arises, leaving all that it had taken up from the root united into a pungent aromatic resin. This root promises, from its sensible qualities, to be a medicine of con- siderable utility, though little regarded in common practice ; the only officinal composition in which it is an ingredient is the pulvis ari com- positus. Stahl, Hoffman, and other German physicians, are extremely fond of it ; and recom- mend it as an excellent stomachic, resolvent, detergent, diuretic, diaphoretic, and alexiphar- mic. They often gave it with success in scorbu- tic and cutaneous disorders, foulness of the blood and juices, tumors and obstructions of the glands, and diseases proceeding from a de- ficiency of the fluid secretions in general. Boer- haave directs the use of ‘it in asthmatic and hydropic cases, where the strongest resolvents are indicated ; the form he prefers is a watery infusion; but the spirituous tincture possesses the virtues of the root in much greater perfection. Aniseeds have an aromatic smell, and a pleasant warm taste, accompanied with a degree of sweet- ness. Water extracts very little of their flavor ; rectified spirit the whole. The seeds are in the number of the four greater hot seeds ; their prin- cipal use is in cold flatulent disorders, where tenacious phlegm abounds, and in the gripes to which young children are subject. Frederick Hoffman strongly recommends them in weakness of the stomach, diarrhoeas, and for strengthening the tone of the viscera in general; and thinks they well deserve the appellation given them by Helmont, intestinorum sol amen. The smaller kind of aniseeds brought from Spain are pre- ferred.

PIMPLA, a mountain of Macedonia, near Olympus, sacred to the Muses, hence called Pimpleae.

PIM’PLE, n. s. Fr. pompette. A small red pustule.

If Rosalinda is unfortunate in her mole, Nigra- nilla is as unhappy in a pimple. Addison’s Spectator.

If e’er thy gnome could spoil a grace, Or raise a pimple on a beauteous face. Pope.

The rising of a pimple in her face, the sting of a gnat, will make her keep her room two or three days.

Law.

PIMPLES. By mixing equal quantities of the juice of house-leek, sedum minus, passed through paper, and of spirit of wine rectified by itself, a white coagulum of a very volatile nature is

formed, which Dr. Bughart commends for coring pimples of the face ; and says that the thin liquor separated from it with sugar candy is an excellent remedy for thick viscid phlegm in the breast.

PIN, n. s.) Sax. pnr&an, to shut up, and PIN'FOLD. $ fold. To shut up ; enclose: a place in which beasts are confined.

The Irish never come to those raths but armed : which the English nothing suspecting, are taken at an advantage, like sheep in the pinfold. Spenser.

If all this be willingly granted by us, which are accused to pin the word of God in so narrow a room, let the cause of the accused be referred to the ac- cuser's conscience. Hooker. I care not for thee.

— If I Ijad thee in Lipsbury pinfold, I would make thee care for me. Sfiakspeare. King Lear.

Confined and pestered in this pinfold here, Strive to keep up a frail and feverish being.

Milton.

Oaths were not purposed more than law To keep the good and j ust in awe, But to confine the bad and sinful, Like moral cattle in a pinfold. Hudibras.

PIN, n.s. & v.a. } Sax. j>inn ; Belg. pin ; Fr PIN'CUSHION, fespingle; Lat. spina, spinula ; PIN'DUST. 3 barb. Lat. pennum. A short wire with a sharp point used chiefly by women to fasten their clothes : any peg or small bolt ; a small roller; a musical note or strain; horny substance formed in the eye : to fasten with pins; join: pincushion is a cushion for sticking pins upon : pindust, that which is made in point- ing pins.

His fetch is to flatter to get what he can ; His purpose once gotten, a pin for thee than.

Tusser.

Soon after comes the cruel Saracen, In woven mail all armed warily,

And sternly looks at him, who not a pin Does care for look of living

creature's eye.

Spenser .

I'll make, thee eat iron like an ostridge, and swal- low my sword like a great pin, ere thou and I part.

Shukspeare.

Bedlam beggars with roaring voices, Sticks in their numbed and mortified bare arms, Pins, wooden pricks, nails, sprigs of rosemary.

Id.

Romeo is dead, the very pin of his heart cleft with the blind hautboy's butshaft. Id.

Wish all eyes Blind with the pin and web. Id.

Our gates, Which yet seem shut, we have but pinned with

rushes ; They'll open of themselves. Id. Macbeth.

They drew his brownbread face on pretty gins, And made him stalk upon two rolling pins. Corbet.

If removing my consideration from the impression of the cubes to the cubes themselves, I shall pin this one notion upon every one of them, and accordingly conceive it to be really in them ; it will fall out that I allow existence to other entities which never had any. Digby of Bodies.

The little parts of pindust, when mingled with sand, cannot, by their mingling, make it lighter.

Digby.

These bullets shall rest on the pins; and there must be other pins to keep them. Wilkint.

P 1 X-M AKIN G.

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With pins of adamant And chains they made all fast.

Milton's Paradise Lost. I've learned how far I'm to believe Your

pinning oaths upon your sleeve.

Hudibras.

‘Tis foolish to appeal to witnesses for proof, when ‘tis not a pin matter whether the fact be true or false.

L’ Estrange.

/is the woman was upon the peevish pin, a poor body comes, while the froward fit was upon her, to bog. Id.

They help to cozen themselves, by chusing to pin their faith on such expositors as explain the sacred scripture in favour of those opinions that they be- forehand have voted orthodox. Locke.

She would ruin me in silks, were not the quantity that goes to a large pincushion sufficient to make her a gown and petticoat. Addison’s Guardian.

Thou art a retailer of phrases, and dost deal in remnants of remnants, like a maker of pincushion*.

Congreve.

Whatever spirit, careless of his charge, His post neglects, or leaves the fair at large, Shall feel sharp vengeance soon o’ertake his sins, Be stopt in vials, or transfixt with pins. Pope. Not Cynthia, when her manteau’s pinn’d awry, E’er felt such rage. Id.

PIN-MAKING. The art of making pins, of brass wire, was not known in England before the early part of the sixteenth century : prior to that period they were made of bone, ivory, or box. They are mentioned in the English statute book first, in the reign of Richard III. (in 1483), pro- hibiting foreign manufactures. In 1543, by statute 34 & 35 of Henry VIII., cap. vi., it was enacted, ‘ that no person shall put to sale any pins, but only such as shall be double-headed, and have the heads soldered fast to the shank of the pins, well smoothed, the shank well shapen, the points well and round filed, cauted and sharpened.’ The pin manufactory was intro- duced into Gloucester, in 1626, by John Tilsby.

Though pins are of apparently simple con- struction, their manufacture, however, is not a lit- tle curious. The following is the common pro- cess : — When the brass wire, of which the pins are formed, is first received at the manufactory, it is generally too thick

for the purpose of being cut into pins. The first operation, therefore, is that of winding it off from one wheel to another with great velocity, and causing it to pass be- tween the two through a circle, in a piece of iron of smaller diameter ; the wire, being thus reduced to its proper dimensions, is straightened by drawing it between iron pins, fixed in a board, in a zig-zag manner, but so as to leave a straight line between'them ; afterwards it is cut into lengths of three or four yards, and then into smaller ones, every length being sufficient to make six pins : each end of these is ground to a point, which is done by boys, each of whom sits with two small grinding-stones before him turn- ed by a wheel. Taking up a number in his hands he applies the ends to the coarsest of the two stones, being careful, at the same time, to keep each piece iroving round between his fingers, so that the points may not become flat : he next gives them a smoother and sharper point, by applying them to the other stone. By this means, a iad of fourteen years old is enabled to

point 16,000 pins in an hour. When the wire is thus pointed, a pin is taken off from each end, and this is repeated. The next operation is that of forming the heads, or, as it is termed, head- spinning, which is done by means of a sort of spinning-wheel ; one piece of wire being thus, with great rapidity, wound round another, and the interior one being drawn out, leaves a hollow tube between the circumvolutions; it is then cut with shears, every two circumvolutions or turns of the wire forming one head : these are soften- ed by throwing them into iron pans, and placing them in a furnace till they are red hot. As soon as they are cold they are distributed to children, who sit with anvils and hammers before them, which they work with their feet, by means of a lathe, and, taking up one of the lengths, they thrust the blunt ends into a quantity of heads which lie before them, and catching one at the extremity, they apply it immediately to the anvil and hammer, and, by a motion or two of the foot the pointed end and the head are fixed together in much less time than it can be described, and with a dexterity only to be acquired by practice. A new invention for heading pins by Mr. William Bundy, of Camden Town, obtained his majesty's letters patent, in September 1809. This operation is performed by means of a frame or stock made of metal, in which are fitted a pair of steel dies, in the manner of those generally used in the manufacture of screws, held together by cylinders ; the dimensions may be various, according to the quality of the work, but the dies most generally in use are about two inches long and one inch wide. In the prominent parts, and on that side of each of the two dies which comes in contact when in use, are made corresponding grooves, which when pressed together form holes, each to be the diameter of the shaft in- tended to

have the head fixed on ; these holes may be made tapering upwards, or contracted at that part close under the head, where half a hemisphere, whose diameter being that of the size of the head required, is to be worked out. View- ing the dies thus worked, and in a particular kind of frame, which is the position in which they are placed while introducing the pointed shafts, each having a head loosely put on, the upper die being at liberty in the frame, the pressure of its weight will be found sufficient to hold the number of shafts, with their heads in theii respective places, while they are pushed forwards with a straight motion till the quantity of the heads prevents the shafts from going any farther In this state it is necessary to turn a lever, to which is fixed a screw for the purpose of forcing the dies together, which will hold the shafts firm enough to receive a stroke from a press on the top piece to secure and form complete the whole number of heads in the dies. The hemispheres are to be finished according to fancy, as respects the ornament or figure of moulding intended for the top of the head by sinking them accordingly. The patentee says, ‘ I leave a point in the centre of those cavities in the top piece, which serves, when forced into the top of the shaft, to widen it there, and form a rivet, and thereby secure the head firm from coming off the top of the shaft ; and, the dies being hard screwed together with

the lever, there will be a collar formed by that pressure on the shaft under the head sufficient to prevent the liability of the head being by any ordinary means forced down the shaft.’ Having described the working parts, and explained the process by the drawings, Mr. Bundy adds, that ‘ placing the whole in a fly press, one stroke there- with on the top-piece will be found sufficient to complete the whole number of heads in the dies.’ Hitherto it has been the practice to strike the head several times, ‘ but my method,’ says Mr. B., ‘ of effectually and securely fastening the heads on the shafts, and leaving the heads of a superior form, is by placing the shafts in a per- pendicular direction, and striking the heads and shafts on their tops, which I call superior heads, and which method I claim as my invention. To succeed in the completest manner in forming these superior heads, it will be necessary that the dimensions of the heads before they are fixed to the shafts, should be particularly attended to. If they are to be of nearly a spherical figure, they should he prepared of a greater depth of axis than the diameter ; that the diameter may be small enough to go freely into the hemispheres in the dies and top-piece which are to

receive them ; for this purpose head wire may be made flat, either by drawing or rolling to a size, so that when spun one or more rounds will be sufficient fora head. I recommend head wire of a smaller size than ordinary without flatting, so that when spun and cut three rounds, it shall contain the quantity of metal required for the size of the in- tended head.' When the heads have been fixed on the shafts by the fly press, the screw is then to be turned back by a lever; and taking hold of the milled head, which is on the head of the small shaft, and which goes through the screw and is fixed to the top dies by being screwed hard in the die, it may be drawn back to sepa- rate the dies sufficiently wide for the superior headed pins which they contain, to fall through into some place prepared to receive them.

The pin is now finished as to its form, but re- quires coloring; it is therefore thrown into a copper containing a solution of tin and lees of wine, where it remains some time, but when taken out it assumes a white but very dull appearance : to give it a polish, it is put into a tub containing a quantity of bran, which is set in motion by turn- ing a shaft that runs through its centre ; and thus by means of friction it becomes perfectly bright. The pin being complete, it only remains to se- parate it from the bran, which is performed by a sort of winnowing, the bran flying off and leav- ing the pin behind. On the continent the mode of tinning brass pins is rather different. A ves- sel is filled by layers with plates of tin and brass pins, a tin plate being at the bottom and another at the top. The vessel is then filled with water, adding some cream of tartar, by the acid of which the tin is dissolved. After about five hours' boiling the pins are found to be uniformly tinned.

The pins of this country are those most in re- pute, as well in the pointing as the whitening, because our pin-makers in pointing use two steel mills, the first of which forms the point, and the latter takes off the irregularities, and renders it smooth, and as it were polished. In whitening

they make use of the best block-tin granulated ; whereas in some places they are said to have re- course to a mixture of tin, lead, and quicksilver ; which not only whitens worse than tin, but is also dangerous on account of the ill quality of the mixture, which renders a puncture with a pin thus whitened somewhat difficult 10 be cured.

Pins are sometimes made of iron wire, render- ed black by a varnish of linseed oil with lamp- black ; these are designed for the dress of persons in mourning.

We understand that the well-known manufac- turers, Messrs. Burn ford, Francis, and Co., of Gracechurch Street London, haveulso an inven- tion for putting on the heads of this useful little article, with expedition and uniformity, which they find too profitable for disclosure. We have only therefore to notice further —

Wright's patent pin-making machinery. — This ingenious machine comprehends a diversity of mechanical movements and contrivances, by which a coil of wire is rapidly converted into pins, without the instrumentality of manual as- sistance, or any extraneous aid whatever. The wire being placed on a reel, and the machine set in operation by steam, or other motive power, the main shaft, upon which the several cams are fixed, begins to revolve, and the various mecha- nical apparatus thus put in motion, simultane- ously draws the wire, straightens it, cuts it of the required length, points it, forms the head, and drops the pin thus perfected into a receptacle prepared for it. A piece of mechanism embrac- ing so many movements, and performing such a variety of functions essentially differing from each other, may be considered so complicated as to prove very troublesome while in action, and liable to be easily disarranged ; but this machine is comparatively simple in its construction, per- forms its various motions with little noise, and less apparent effort, and cannot readily be put out of order. Its susceptibility of adjustment, too, greatly recommends it, as the pins may be made of different lengths, the heads of various forms, and the points lengthened or shortened at pleasure, without arresting the progress of any of the movements. The wire for four pins, is ope- rated upon at the same time, and the machine completes with facility forty perfect pins per minute, of a quality superior in every respect to the best of those in ordinary use.

In plates I. & II. PIN-MAKING (to which we indiscriminately refer in this article, as the figures are in both plates), fig. 1 is a geometrical repre- sentation of the machine taken on the side ; fig.

2 is a similar view, exhibiting the end; and fig.

3 is the plan or horizontal appearance of the top : similar letters refer to the same parts in each of these three figures. A coil of brass wire of the size suited to the intended pin is placed upon the reel a, which turns loosely upon its vertical axle at the side of the machine. The end of the wire is brought forward and passed between the pins of the plate 6 (fig. 3), called a straightening plate, which is intended to guide the wire in a direct line as it advances ; it is thence passed between the chaps of the pincers c, where it is held fast and conducted into the cutting dies d.

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P I N – M A K I N G.

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Having thus disposed the wire, the machinery is to be put in motion, either by turning a. winch, or by gear connected to the shaft e. At one end of this shaft a fly-wheel is attached to regulate the motion, and at the reverse a beveled toothed- wheel, which takes into another beveled toothed- wheel on the end of the main s\&ft,f,j’,f. Upon this main shaft a series of cams are fixed, which, as the shaft revolves, respectively press against certain bars and levers, and thereby give motion to all the operative parts of the engine.

The movements uf the machine first bring for- ward the end of the wire, which is held between the pincers ; this is done by the cam 1, as the shaft revoives, working against the friction roller at the end of the slider g, by which that slider is push- ed forward. The effect of projecting the slider is, in the first place, to move the small cross lever h, when a tappet under that lever presses out against an inclined plane on one of the legs of the pincers, which therefore closes the chaps, and causes the wire to be held securely ; the fur- ther progress of the slider brings the projecting piece 2 against the end of a screw on the side of the pincers’carriage, by which means the pin cers holding the end of the wire are advanced a certain distance. This distance is regulated by the adjustment of the screws, and by that means the machine is

enabled to make the pins longer or shorter, as may be required. A length of wire sufficient for one pin having been thus brought forward, on the retiring of the cam 1, a worm spring carries the slider back to its former position ; and in doing this the small lever h, by quitting the inclined plane, enables the chaps of the pincers to open, and then the projecting piece 2, striking against the other screw, forces the pincers'carriage back with it, the wire being at that time held fast by the pins on the straight ening plate, and thereby prevented from return- ing. Thus so much of the wire as will be re- quired to form one pin is made to advance at every revolution of the cam 1.

Supposing a sufficient length of wire for mak- ing one pin to have been passed through the die d, it is now to be cut off. The manner of doing this will be best seen by reference to the detach- ed figure 4, which is a section of the die upon an enlarged scale ; 3 is a roller at the end of the arm i, seen affixed to the slider g, in fig. 3. When the slider g returns, after driving the wire forward, the roller 3 presses against the inclined plane on the under side of the lever 4, and, by raising it, depresses the reverse end of the lever, and thereby presses down the cutter 5, which has a sharp edge at the apex of its conical recess, and thereby cuts off the length of the wire for one pin. The advance of the slider g, at a se- cond operation, sends forwards the roller 3, and the lever 4 descends, by which the pin is releas- ed, and is taken thence by the carrier about to be described. These carriers are seen at k, /c, k, A, in figs. 2 and 3, affixed to the bar /, /, by sockets and screws, which bar slides lateraily to and fro with the carriers for the purpose of taking the pins from one operation to the next. The con- struction of the carriers will be best understood by reference to the detached fig. 5, which exhi- bits a side and end view, upon an enlarged VOL. XVII.

scale; its holding part is a pair of pincers, ihp upper chap being a firm piece of rnetal tixed to its stent, the lower chap attached by a spring, which presses them together. The opening of the chaps is exactly in the line of the die d, so that, when the carrier by the sliding of the bar / is brought opposite to the die, the pin slips side- ways in between the chaps, and is there held by the spring in a small groove : the lever of the cutting die rising at the same time, as before ex- plained, releases it.

The lateral movement of the bar /, by which the pin is carried from the cutting die to be pointed, is effected by the rotation of the eccen- tric cam 6, upon the main shaft f\ which cam as it revolves occasionally presses down the lever m, and by means of a cord

attached to the end of this lever, and passed over the pulley 7, to the shackle at the end of the bar /, that bar with the carriers is drawn forward.

The pin has now been brought by the carrier k to the first pointing wheel n, and is there re- ceived by the first holder 0. This piece of mechanism, called the holder, is shown detached at fig. 6. It is of a cylindrical form, with a moutli and moving chap 9. The end of the pin is brought by the carrier into the mouth of the holder, and is there held until the chaps close and confine it, which is done by the following contrivance : — As the main shaft / revolves, the cam 10 recedes from the friction wheel at the end of the sliding bar p, and enables a powerful spring beneath to draw backward the bar y;, which carries with it the yoke

The pointing of the wire is effected by the ra- pid revolution of the bevel-wheel n, which is cut on its edge, like a file. This bevel-wheel is ac- tuated by a band, extending from a series of multiplying wheels in connexion with the revo- lution of the fly-wheel on the axle of the shaft e. From this fly-wheel a band is conducted down to the rigger r, as seen in figs. 1 and 2 ; upon the shaft of which rigger there is a large wheel s, from whence a band passes to the rigger t, and upon the shaft of this rigger t there are the large wheels u, u, from whence bands pass upwards to the pointing wheels n. Thus, as the shaft e turns, the pointing wheels n revolve with a multiplied velocity, equal to about 4000 times that of the fly-wheel. In order to bring the end of the pin down upon the pointing wheel, n, the holder o must be tilted ; this is provided for by mounting the holder-carriage upon axles, which allow it to vibrate, the tilting being effected by the cam 12 on the shaft /'. As this shaft rovolves, the peri- phery of the cam 12 runs against the upper side

of the lever 13, the end of which is attached to the holder-carriage (see figs. 3 and 6) and keeps the holder in a level position during one-half of the revolution ; but when the cam releases it, which is the case at the time the pointing is about to commence, a spring draws up the lever 13, and the carriage is so far tilted as to allow the pin to come in contact with the periphery of the pointing wheel. It is also necessary to hold the pin steadily upon the wheel while the pointing is

performed ; this is done by the lever 14 (see fig. 6), which moves upon pivots. As the cam 15, on the shaft /, fig. 3, revolves, it pushes the sliding bar 16, which has at its end a small inclined plane 17 (see fig. 6), that lifts the oack end of the lever, and consequently depress- ing the front part where the finger 18 is attached ; by these means the finger is made to bear upon the pin, and hold it down in contact with the rapidly revolving pointing wheel n, before de- scribed.

It is necessary to turn the pin round while it is in contact with the pointing wheel, and for this purpose the pin-holder is made to revolve oy the following means : — On the shaft/, fig. 2, there is a cam which acts against the under side of the weighed lever v, v, at the end of which lever there is a vertical rack 19, taken into the toothed pinion at the hinder part of the holder o ; this pinion is seen at 20, in fig. 6, and, by the rising and falling of this lever and rack, the pin- holder is made to turn with considerable speed ; at the same time the pointing-wheel, revolving with great velocity, as above said, cuts or files away the end of the pin in a bevel direction, and effects the pointing.

As the pointing is considered not to be com- plete from the operation of the first pointing- wheel, a second pointing-wheel is introduced, which has a finer cut file upon its edge. The pin, after having undergone the first process of pointing, is carried from the first holder o to the second o, by the second carrier k, exactly in the same manner as before described ; the second holder now clasps the pin between its chaps, by similar means to those already explained, and the holder and pointing-wheel both revolve, to complete the point of the pin by the agency of wheels and bands, actuated, as above said, by the rotation of the shaft e, and its fly wheel. The third carrier k now takes the pin from- the se- cond pointing-holder o, and conducts it to the first heading die w, which is seen detached, upon a larger scale, and in section, at fig. 7. This die is set in its frame as at w, in figs. 1, 2, and 3 ; the lower half being fixed to the frame, the upper half to the lever above, which rises by the action of a flat spring, and opens the mouth or chaps of the die. The pin being in this situa- tion between the chaps, the cam 21 upon the shafts /as it revolves acts against the friction roller 22, at the top of the upright lever 23, and drives the connecting rod 24 forward, by which means the upper chap of the heading die is brought down, and the pin held fast. When the pin is thus secured between the chaps of the die, the cam 25 projects forward the heading bar *, j, T, which, by striking against the end of the cylinder 26, fig. 7, drives the steel punch 27, at the extremity of the cylinder, against the end of

the pin about to be headed, and forces a portion of the wire into a

circular recess in the die, so as to produce by its pressure a solid head to the pin. The fourth carrier k now takes hold of the pin, and, the parts of the die opening as the cams 21 and 25 revolve, the pin is conducted by the carrier to the second heading apparatus to be completed, a section of which is shown at fig. 8. The pin is now held by the carrier opposite to the opening of the second heading-die y, when the advance of the heading-bar x, as before de- scribed, causes the punch 28 to be driven for- ward, and the point of the pin to be pushed into the recess of the die, where, the partially formed head stopping the progress of the pin, the punch presses it with very great force, and completes the formation of the st-iid head.

The pin being now completed, it only remains to withdraw it from the die y, which is done by the following contrivance : — Behind the die a piece of bone or wood is placed in a sliding rod 29, for the point to enter: this rod has a helical spring coiled round it, which keeps it up against the back of the die, and, when the pin is forced into the piece of bone by the advance of the punch, the rod 29 recedes, but as soon as the punch is withdrawn the spring forces the rod back again, and the pin with it, by which the head of the pin is made to stand out of the die. A small forked lever z, attached to the heading- bar x, now drops on to the end of the pin, and, as the heading-bar with the forked lever retires, the pin is drawn out of the die and let fall into a box or other receptacle below.

The several parts and different operations of this highly ingenious piece of machinery having been particularly explained, it may be desirable to recapitulate in a general way the several move- ments, by which, from plain wire, the pins are formed and perfected in their progress through the machine, four pins being under operation at the same time.

The rotation of the shaft/ causes the several cams thereon to move the sliders, levers, and wheels, that work the different parts of the ma- chine. The slider g pushes the pincers c forward, which draws the wire from the reel a, and at every rotation of the shaft advances such a length of wire as will produce one pin. The die d cuts off the length of wire by the descent of its upper chap, which piece is shown (full sized) at A, fig. 10; and, when the chap opens, the first carrier k takes the pin from thence to the pointing appa- ratus. Here the pin is received by the holder, which turns round while the bevel-edged file wheel rapidly revolving reduces the end of the wire to a point, as seen at B, fig. 10. The pin is thence conducted by the second carrier to the finer file wheel, where the point is completed by a similar operation, as seen at C, fig. 10. The third carrier now takes the pin to the first

head- ing die, where the advance of a steel punch forces the end of the pin wire into a recess, and partly forms the head, as at D, fig. 10. The fourth carrier takes the pin from thence and brings it to the second heading-die, where the head is perfected, as at E, fig. 10 ; and the re- tiring of the heading-bar causes a forked lever to draw the finished pin from the die, and drop it into a receptacle below.

Inconsiderable as the article produced by this scientific piece of mechanism may appear to the superficial observer, it is nevertheless stated, from incontrovertible sources of information, that more than 15,000,000 of pins are daily manufactur- ed in this country, to meet the demand for home consumption and foreign markets. There is lit- tle doubt that the superior quality of these pins, and the facility and perfection with which they are produced, by tms invention, will supersede every other mode of manufacturing them. Little use has yet been made of the machinery.

PINACIA, among the Athenians, were tablet* of brass inscribed with the names of all those citizens in each tribe who were duly qualified and willing to be judges of the court of Areo- pagus. These tablets were cast into a vessel provided for the purpose, and the same number of beans, 100 being white and all the rest black, were thrown into another. Then the names of the candidates and the beans were drawn out one by one, and they whose names were drawn out together with the white beans were elected judges or senators. In Solon's time there were only four tribes, each of which chose 100 sen- ators ; but, the number of tribes afterwards in- creasing, the number of senators or judges in- creased to so many hundreds more.

PINACOTHECA, Gr. irivat, a picture, and TiQqfu, to put, in archaiology, signified what we denominate a cabinet or gallery of paintings, and in this sense it is employed by Vitruvius, who, speaking of the different divisions and chambers of a house, assigns to each its due pro- portions with the exception of the pinacotheca, respecting which he only says that it should be spacious, and, if possible, on the north side, because, it being desirable to give this apartment a light always equal, that end could not be at- tained so well from any other aspect.

PIN7EUS. See PINEAV.

PINARUS, a river which runs between Syria and Cilicia, and falls into the sea near Issus ; now called Delifou. — Dionys.

PIN'CERS, n. s. Fr. pincette ; or from pinch. An instrument by which nails are drawn, or any thing griped or pinched.

As superfluous flesh did rot, Amendment ready still at hand did wait, To pluck it out with pincers fiery hot, That soon in him was left no one corrupt jot.

Spenser.

The circumcellions exercised horrible cruelties upon the orthodox ; killing some ; torturing others ; blow- ing lime and vinegar into the eyes of God's ministers, and tearing off the breasts of women with pincers.

Bp. Hall.

Every ant brings a small particle of that earth in her pinrers, and lays it by the hole. Addison.

PINCH, v. a. & n. s. Fr. pincer : Spanish pinzar. To squeeze forcibly and sharply : hence to oppress ; gall ; distress ; gripe : a pinch is a squeeze of the above kind : oppression ; diffi- culty; time of distress.

There is that waxeth rich by his wariness, and pinching. Ecclus.

When the doctor spies his vantage ripe,

To pinch her by the hand,

The maid hath given consent to go with him.

Shaksfeare.

They at a pinch can bribe a Vote. Swift's

When the respondent is pinched with a strong ob- jection, and is at a loss for an answer, the moderator suggests some answer to the objection of the oppo- nent. Watts.

This is the way to pinch the question ; therefore, let what will come of it, I will stand the test of your method. Collier.

PINCHBECK, an alloy of copper, in which the proportion of zinc is greater than in brass. According to Dr. Thomson, when the alloy con- tains three parts of zinc and four of copper, it assumes a color nearly the same with gold, but it is not so malleable as brass. It is then called pinchbeck, prince's metal, or Prince Rupert's metal.

PINCKNEYVILLE, apost town of Wilkinson county, Mississippi, five miles east of the Mis- sissippi, about sixteen south-east of Fort Adams. It is situated in a very pleasant and fertile country.

PIN CUM, in ancient geography, a town of Mcesia Superior, now called Gradisca.

PINDAREES (that is, freebooters) ; the name given in British India to the hordes of mounted robbers who, for several years (since 1812), in- fested the possessions of the East India Com- pany. In the autumn, when the Nerbudda is so low that it is fordable by cavalry, they entered into the rich territory of ihe company, devastated the country, and carried off the spoils to their mountains. These freebooters had existed since 1761, but made themselves particularly formida- ble in the nineteenth century. They were de- scended mostly from the caste of Mohammedan warriors, which formerly received high pay from the

Indian princes. But the British East India Company disarmed many of the tributary native princes, and maintained under the command of the English residents at the Indian courts large bodies of mercenary troops, which the mediatised nabobs were obliged to pay. The number of the Pindarees was thus increased, and they were secretly excited by the Indian tributaries to at- tack the company. In 1817, the British gover- nor-general, the marquis of Hastings, determined on the destruction of these robbers, whose force was estimated at 40,000 horse, Attacked on all sides, they were conquered and dispersed. Gar- risons were placed in some fortresses, and hos- tages taken to Calcutta ; their other strong places were demolished. A flying party of sea- poys was kept without intermission on the right bank of the Nerbudda, &c. At last, a moderate yearly tribute was imposed on the subjected tribes. The East India Company has followed the rule of increasing their revenue, territory, and troops, after every war, at the expense of the vanquished, so that the subjected princes have seldom ventured to break a second lance with the British governor-general.

PINDAR, the prince of lyric poets, was born at Thebes, about 523 years B. C. He received his first musical instructions from his father, who was a flute-player by profession; after which, according to Suidas, he was placed under Myrtis, a lady of distinguished abilities in lyric poetry. During this period he became acquainted with the poetess Corinna, who was likewise a student

•under Myrtis, and, Pausanias says, one of the most beautiful women of her time. Plutarch tells us, that Pindar profited from the lessons which Corinna, more advanced in her studies, gave him at this school. The first poetical effu- sions of a genius so full of fire and imagination as that of Pindar would be wild and luxuriant ; and Lucian has preserved six verses, said to have been the exordium of his first essay, in which he crowded almost all the subjects for song which ancient history and mythology then fur- nished. Upon communicating this attempt to Corinna, she told him, smiling, that he should sow with the hand, and not empty his whole sack at once. Pindar, however, soon quitted the leading-strings of his poetical nurses, and became the disciple of Simonides, now in ex- treme old age : after which he soon surpassed all his masters, and acquired great reputation over all Greece ; but was less honored in his own country than elsewhere ; for

at Thebes he was often said to be vanquished, in the musical and poetical contests, by candidates of inferior merit. Indeed at that period little fame in these accomplishments was to be acquired, otherwise than by entering these lists. Accordingly we find that both Myrtis and Corinna publicly disputed the prize with him at Thebes. He obtained a victory over Myrtis, but was vanquished five different times by Corinna. But this, says Pau- sanias, was because the judges were more sensi- ble to the charms of beauty than to those of music and poetry. When he quitted that city, as his judgment was matured, he avoided the errors for which he had been chastised, and sud- denly became the wonder and delight of all Greece. Every hero, prince, and potentate, desirous of lasting fame, courted the muse of Pindar. He seems to have been often present at the festivals of the Olympian, Pythian, Ne- mean, and Isthmean games, as may be inferred from seveial expressions in the odes which he composed for the victors in them all. Those at Olympia who were ambitious of having"lheir achievements celebrated by Pindar, applied to him for an ode, which was first sung in the Pry- tanean or town-hall of Olympia, where there was a banqueting room, set apart for the entertain- ment of the conquerors. Here the ode was re- hearsed by a chorus, accompanied by instruments. It was afterwards performed in the same manner at the triumphal entry of the victor into his own country, in processions or at the sacrifices that were made with great pomp and solemnity on the occasion. There is no great poet in antiquity whose moral character has been less censured than that of Pindar. Plutarch has preserved a single verse of his Epicedium or Dirge that was sung at his funeral ; which, short and simple as it is, implies no small praise : ' This man was pleasing to strangers, and dear to his fellow- citizens. His works abound with precepts of morality : and it does not appear that he ever traduced even his enemies, comforting himself, for their malignity, by a maxim which he inserted in his first Pythic, and which afterwards became proverbial, 'That it is better to be envied than pitied^' Pausanias says, Pindar's character as a 1 oet was consecrated by the god of verse him-

self, who, by an express oracle, ordered trie peo- ple of Delphos to set apart for Pindar one-half of the first-fruit offerings brought by the religi- ous to his shrine, and to allow him a conspicu- ous place in his temple, where in an iron chair he used to sit and sing his hymns in honor of that god. This chair was remaining in the time of Pausanias, several centuries after, and shown to him as a relic worthy of the sanctity and magnificence of that place. Fabricius tells us that Pindar lived to the age of ninety ; and, ac- cording to the chronology of Dr. Blair, he died 435 years B. C., aged eighty-six. His fellow citizens

erected a monument to him in the Hip podrome at Thebes, which was extant in the time of Pausanias ; and his renown was so great after his death that his posterity derived very considerable honors and privileges from it When Alexander the Great attacked the city of Thebes, he gave express orders to his soldiers to spare the house and family of Pindar. The Lacedemonians had done the same before this period ; for, when they ravaged Boeotia and burned the capital, the following words were written upon the door of the poet : — ‘ Forbear to bum this house ; it was the dwelling of Pindar.’ Re- spect for the memory of this great poet con- tinued so long, that, even in Plutarch’s time, the best part of the sacred victim at the Theoxenian festival was appropriated to his descendants The latest and best edition of this poet is that of Heyne, 1798, 8vo. which contains the Greek Scholia. There is an English version of Pindar, by Gilbert West, which is much esteemed.

PINDARIC ODE, in poetry, an ode formed in imitation of the manner of Pindar. See POETRY.

PINDASUS, a mountain of Troas.

PINDENISSUS, a town of Cilicia, on the borders of Syria. Cicero, when proconsul of Asia, took it after a siege of twenty-five days. Cic. Ep. ii. 10.

PINDTARUK, or PINTARA, a small village in the Gujrat Peninsula, extending about two miles from the sea-shore, on a sandy plain, near the south-western extremity. In the neighbour- hood is a spring of pink colored water, cele brated among the natives as a place of pilgrimage. This spring gives its name to the village, which is inhabited only by a few religious persons, who subsist on the bounty of the pilgrims. It lies in the direct road toDwaraca: persons resorting to that fane take the opportunity of bathing in the pink-colored stream, and thereby purifying themselves. The spring is within high water mark ; by which circumstance it is kept con- stantly clean. The adjacent lands along the coast are much impregnated with iron, which may account for the color and mineral qualities of the spring. In the neighbourhood are many large tanks. The village belongs to the Jam of Noanagur.

PINDUS, in ancient geography, an extensive chain of mountains in Thessaly, inhabited by different people of Epirus and Thessaly, separat- ing Macedonia, Thessaly, and Epirus; having Macedonia on the north, the Perrhcebi on the west, and the Dolopes on the south. (Strabo.^ It was sacred to Apollo and the Muses.

PINDUS, a Doric city of /Etolia, situated on a

cognommal river, which falls into the Cephissus. Strabo

PINE, v. a. 8c v. n. Sax Jnnian ; Goth, pina ; Belg. pijnen. To languish; wear away with any kind of misery; wear out; make to lan- guish ; grieve for.

Ye shall not mourn, but pine away for your ini- quities. F.xekiel.

The wicked with anxiety of mind Shall pine away ; in sighs consume their breath.

Sandys.

My hungry eyes, through greedy covetise, With no contentment can themselves suffice ; But having, pine ; and, having not. complain.

Spenser.

I burn, I pine, I perish, If I atchieve not this young modest girl.

Shakspeare.

Since my young lady's going into France, the fool hath much pined away. Shakspeare. King Lear.

We may again

Free from our feasts and banquets bloody knives, Do faithful homage and receive free honours : All which we pine for. Id. Macbeth.

Part us : I towards the north, Where shivering cold and sickness pines the clime.

Shakspeare.

Look rather on my pale cheek pined ; There view your beauties ; there you'll find A fair face, but a cruel mind. Carew.

Where we are left open from all just restraint of divine and human

laws, to pine ourselves in an affec- tation of holiness; is bat a wayward and thankless austerity. Bp. Hall.

To me, who with eternal famine pine, Alike is hell, or paradise, or heaven. Milton. Abash'd the devil stood,

Virtue in her shape, bow lovely, saw ; and pined His loss. Id. Paradise Lost.

Farewel the year that threatened so The fairest light the world can show ; Welcome the new, whose every day, Restoring what was snatched away By pining sickness from the fair, That matchless beauty does despair. Waller. We stood amazed to see your mistress mourn, Unknowing that she pined for your return.

Dryden.

Beroe pined with pain,

Her age and anguish from these rites detain. Id. Thus tender Spencer lived, with mean repast Content, depressed with penury, and pined, In foreign realm : yet not debased his verse.

Philips.

This night shall see the gaudy wreath decline, The roses wither, and the lilies pine. Tickel.

Man was not made to pine in solitude, Ensepulchred, and far from converse placed ; Not for himself alone, untamed and rude, To live the bittern of the desert waste.

K. White.

PINE, n. s. Latin pinus ; Fr. pin. A tree. See PINUS.

You may as well forbid the mountain pines

To wag their high tops and to make a noise,

When they are fretted with the gusts of heaven.

Shakspeare.

The pine-tree hath amentaceous flowers, or katkins, which are produced at remote distances from the fruit, on the same tree ; the seeds are produced in squamous cones : to which should be added,

that the leaves are longer than those of a fir-tree and are produced by pairs out of each sheath. Miller.

All things are here of him ; from the black pines, Which are his shade on high, and the loud roar Of torrents, where he listeneth, to the vines Which slope his green path downward to the shore, Where the bowed waters meet him and adore, Kissing his feet with murmurs. Byron.

PINEA, or PIGNE, in commerce, a term used in Peru and Chili for a kind of light, porous masses or lumps, formed of a mixture of mercury and silver dust from the mines. The ore, or mineral of silver, when dug out of the veins of the mine, is first broken and then ground in mills for the purpose, driven by water with iron pestles, each of 200 Ibs. weight. The mineral, when thus pulverised, is next sifted, and then worked up with water into a paste ; which, when half dry, is cut into pieces, called cuerpos, a foot long, weighing each about 2500 Ibs. Each piece or cuerpo is again kneaded up with sea- salt, which, dissolving, incorporates with it. They then add mercury, from ten to twenty Ibs. for each cuerpo, kneading the paste afresh until the mercury be incorporated therewith. This office, which is exceedingly dangerous on ac- count of the noxious qualities of the mercury, is always made the lot of the poor Indians. This amalgamation is continued for eight or nine days ; and some add lime, lead, or tin ore, &c., to for- ward it ; and, in some mines, they are obliged to use fire. To try if the mixture and amalga- mation be sufficient, they wash a piece in water ; and, if the mercury be white, it is a proof that it has had its effect; if black, it must be still farther worked. When finished, it is sent to the lavatories, which are large basins that empty successively into one another. The paste, &c., being laid in the uppermost of these, the earth is then washed from it into the rest by a rivulet turned upon it; an Indian, all the while, stirring it with his feet, and two other Indians doing the like in the other basins. When the water runs quite clear out of the basins the mercury and silver are found at bottom incorporated. This, matter they call pella, and of this they form the pineas, by expressing as much of the mercury as they can ; first, by putting it in woollen bags, and pressing and beating it strongly : then, by stamping it in a kind of woollen, mould, of an octagonal form, at bottom whereof is a brass plate pierced full of little holes. The matter, when taken out of the mould, is laid on a trivet, under which is a large vessel full of water ; and, the whole being covered with an earthen head, a fire is made around. The mercury still remains in the mass, and is thus reduced into fumes, and, at length condensing, it is precipitated into the water, leaving behind it a mass of silver grains of different figures, which, only joining cr touch- ing at the extremes, render the matter veiy porous and light. This, therefore,

is the pinea or pigne, which the workmen endeavour to sell secretly to vessels trading to the South Sea ; and from which those who have ventured to engage in so dan- gerous a commerce have formerly made vas gains.

PIN'EAL, adj. Fr. pineale. Resembling pine-apple. An epithet given by Des Cartes, from the form, to the gland which he imagined the seat of the soul.

Courtiers and spaniels exactly resemble one ano- ther in the pineal gland. Arbuthnot and Pope,

PINEAL CONCRETIONS. This matter of a stony consistence, sometimes deposited in the substance of the pineal gland, was formerly reckoned, from its position in the centre of the brain, to be the seat of the soul, the intellectual sanctuary. The concretions have been proved oy Dr. Wollaston to be phosphate of lime.

PINEAL GLAND, a gland in the third ventricle of the brain, so called from its resembling a nine-apple. See ANATOMY, Index.

PINE'APPLE, n. s. The anana, named for its resemblance to the cone of pines.

Try if any words can give the taste of a pine-apple, and make one have the true idea of its relish.

Locke.

The pineapple hath a flower consisting of one leaf, divided into three parts, and is funnel-shaped ; the ambryos are produced in the tubercles ; these be- come a fleshy fruit, full of juice ,- the seeds, which are lodged in the tubercles, are very small and al- most kidney-shaped. Miller.

PINE-APPLE. See BROMELIA. PINE-APPLE, WILD. See RENEALMIA. PINEAU (Gabriel Du), an eminent French .awyer born at Angers in 1573. After practising some time at Angers, he went to Paris, and prac- tised with eclat before the parliament. Upon his return to Angers he became a counsellor in the presidial court, and was consulted by all

the neighbouring provinces. Mary de Medicis made him master of requests, and, in her disgrace, wished to support herself by his credit and coun- sels; but Du Pineau, equally dutiful to the monarch and his mother, never failed to incul- cate sentiments of peace. In 1632 Louis XIII., by way of reward, appointed him mayor and captain-general of the city of Angers : a situation in which he merited the flattering title of Father of the people. This worthy citizen died the 15th of October, Ifi44, aged seventy-one. His house was a kind of academy, where regular conferences were held, and attended by young officers, ad- vocates, and other literary characters. His writ- ings are, 1. Latin Notes, in addition to those of Du Moulin, upon the Canon Law, printed along with the works of that eminent lawyer by the care of Francis Pinson. 2. Commentaries, ob- servations, and consultations upon several im- portant questions respecting the laws both of Anjou and of France, with some dissertations upon different subjects, &c., reprinted in 1725 in 2 vols. folio, by Livoniere, with Remarks.

PINEAU, or PINJEUS (Severin Du), a native of Chartres, and first surgeon to the king of France. He was very skilful in lithotomy ; and has left behind him, 1. A Discourse concerning the Ex- traction of the Stone in the Bladder, published in 1610, in 8vo. 2. A Treatise Deˆ7irginitatis Notis, printed at Leyden 1641, in 12mo. He died at Paris in 1619.

PINEDA (John), a learned Jesuit, born at Seville of a noble family. He entered into that society in 1572. He taught philosophy and di- vinity in several colleges ; devoted his time to the study of the Scriptures; and for that pur- pose made himself master of the Oriental lan- guages. His -works are, 1. Commentaries upon

Job, in 2 vols. folio. 2. Two upon Ecclesiastes, 3. A General History of the Church, in Spanish, 4 vols. folio. 4. A History of Ferdinand III. in Spanish, folio. He died in 1637, much re- gretted.

PINELLI (John Vincent), a learned Italian, born at Naples, son of count Pinelli, a noble Genoese, who had settled in that city, and had acquired a handsome fortune in trade. After receiving a liberal education he repaired to Pa- dua, at the age of twenty-four. He had an excellent library, consisting of a choice collection of books and MSS., which he continued to en- rich till the hour of his death. His literary cor- respondence, not only in Italy, but throughout Europe, procured him all the new works worthy of a place in his collection. In many cities of Italy he had persons employed to search, at least once a month, the stalls of those artificers who make use of old parchments, such as lute- makers, sieve-wrights, and others ; and thus often saved

from destruction valuable fragments. His passion for knowledge embraced all the sciences ; but history, medals, antiquities, natural history, and botany, were his favorite studies. He was consulted from all quarters by the learned world, and corresponded with Justus Lipsius, Joseph Scaliger, Sigonius, Possevin, Peter Pithou, and many others. He had a great dislike to plays, entertainments, shows, &c., we are told, and every thing which most excites the curiosity of other men. During forty-three years that he lived at Padua he was never known to be out of the city but twice ; once on occasion of a plague which infested it; and once on a voyage to Naples, at the earnest solicitation of his friends. He died in 1601, aged sixty-eight. PaulGualdo, who has written Pinelli's life, says, that when his rich library was transported by sea to Naples, it • was packed up in 1 30 chests, of which fourteen contained MSS. ; but it did not go wholly to his heirs. The senate of Venice caused their seal to be set upon the MSS. and took away what concerned the affairs of the republic, to the num- ber of 200 pieces. — ' I compare,' says De Thou, ' Pinelli to Titus Pomponius ; for, as that illus- trious Roman was called Attic, Pinelli also bore the title of Venetian, on account of the great affection which the republic of Venice had for him.'

PINEROLO, or PIGNEROL, a town and bishop's see in Piedmont, delightfully situated at the foot of a fertile hill, behind which rise some elevated summits of the Alps. It stands on the river Clusone, and is neither regular nor well built, but contains a handsome hospital and cavalry barracks. The population, including the adjacent district, amounts to 10,000, who manu- facture woollens, silk, paper, and leather. Their trade in these articles, corn, wine, spirits, and fire-wood, is considerable. The air is thought salubrious. Pinerolo was formerly a place of strength; but, on its cession to Savoy in 1713, its fortifications were blown up. It is surrounded at present only by a slight wall. Twenty-two miles S.S.W. of Turin.

PINES, ISLAND OF, in the South Pacific Ocean, is situated near the southern point of New Cale- donia. It is about eighteen leagues in circum-

ference, and fourteen or fifteen miles over in a south-east and north-west direction, and high in the middle. Long. 167° 38′ E., lat. 22° 38′ S.

PI NET (Antony Du), lord of Noroy, a native of Besancon, who lived in the sixteenth century. He was strongly attached to the Protestant religion. His books, entitled La Conformite des Eglises Reformes de France, de I'Eglise primi- tive, Lyons, 1 564, in 8vo. ; and the notes he added to the French translation of the Fees of the Pope's Chancery, printed at Lyons, in 8vo., 1564, and reprinted at Amsterdam in 1700, in 12mo., plainly discoTer his sentiments. He pub- lished the last-mentioned performance under this title : Taxe des Parties casuelles de la Bou- tique du Pape, in Latin and French, with some notes taken from decrees, councils, and canons, to ascertain the discipline anciently observed in the church. His translation of Pliny's Natural History, with notes, printed at Lyons, in 2 vols. folio, 1566, and at Paris, 1608, was much read. Pinet also published Plans of the principal For- tresses in the World, at Lyons, 1564, in folio.

PIN'FEATHERED, adj. Pin and feather. Not fledged ; having the feathers yet only begin- ning to shoot.

We see some raw pinfeathered thing Attempt to mount, and fights and heroes sing ; Who for false quantities was whipt at school.

Dry den.

PINGRE (Alexander Guy), a celebrated French astronomer, born in 1709. He was a zealous advocate for the freedom of the French church, against the bishops : for which he was five times taken up by lettres de cachet. Having made great proficiency in astronomy, he pub- lished A Calculation of an Eclipse of the Moon, on the 23d of December, 1749. In 1760 the Academy of Sciences appointed him to observe the transit of Venus. He calculated the eclipses for 1000 years before our Saviour's birth. On the death of M. De Lisle, he was elected geogra- phical astronomer. He translated Manilius's poetical treatise on Astronomy. He afterwards studied botany with success. He died in 1796.

PINGUICULA, butterwort, a genus of the monogynia order and diandria class of plants; natural order twenty-fourth, corydales. There arc four species, of which the most remarkable is P. vulgaris, common butterwort, or Yorkshire sanicle, grows commonly on bogs or low moist grounds in England and Scotland. Its leaves are covered with soft, upright, pellucid prickles, secreting a glutinous liquor. The flowers are pale red, purple, or deep violet color, and hairy within. If the fresh gathered leaves of this plant are put into the strainer through which warm milk from the cow is 'poured, and the milk set by for a day or two to become acescent, it acquires a consistency and tenacity,

and neither whey nor cream separate from it. In this state it is an extremely grateful food, and, as such, is used by the inhabitants of the north of Sweden. There is no further occasion to have recourse to the leaves ; for half a spoonful of this prepared milk, mixed with fresh warm mflk, will convert it to its own nature, and this again will change another quantity of fresh milk, and so on without end. The juice of the leaves kills lice ; and the

common people use it to cure the cracks or chops in cows' udders. The plant ii generally supposed injurious to sheep, by occasioning in them that disease called the rot. But from ex- periments made on purpose, and conducted with accuracy, it appears that neither sheep, cows, goats, horses, or swine, will feed upon this plant. Wherever this plant is found it is a certain in- dication of a boggy soil. The Laplanders make an agreeable food with the milk of the rein-deer by the fresh leaves of this plant, like that of the Swedes with the milk of cows, and with the same consequences.

PIN'GUID, adj. Lat. pinguis. Fat; unctu- ous. Little used.

Some clays are moiepinguid, and others more slip- pery ; yet all 'are very tenacious of water on the sur- face. Mortimer.

PINGUIN, or PENGUIN, in ornithology, a genus of birds of the order of palmipedes ; dis- tinguished by Latham by the following charac- ters : the bill is strong, straight, more or less bending towards the point, and furrowed on the sides; the nostrils are linear, and placed in the furrows; the tongue is covered with strong spines, pointing backwards ; the wings are small, very like fins, and covered with no longer fea- thers than the rest of the body, and therefore useless in flight ; the body is clothed with thick short feathers, having broad shafts, and placed as compactly as the scales of fishes; the legs are short, thick, and placed very near the vent ; the toes are four, all placed forwards, the interior are loose, and the rest are webbed ; the tail is very stiff, consisting of broad shafts scarcely webbed. Pinguins are inhabitants of south lati- tudes only ; being, as far as is yet known, found only on the coasts of South America, from Port Desire to the Straits of Magellan ; and Frezier says they are found on the west coast as high as Conception. In Africa they seem to be un- known, except on a small isle near the Cape of Good Hope, which takes its name from them. They are found in vast numbers on land during the breeding season ; for they seldom come on shore but at that time : they form burrows under ground like rabbits ; and the isles they frequent are perfectly undermined by them. Their atti- tude on land is quite erect, and on that account they have been compared by some to pygmies, by others

to children with white bibs. They are very tame, and may be driven like a flock of sheep. In water they are remarkably active, and swim with vast strength, assisted by their wings, which serve instead of fins. Their food in ge- neral is fish ; not but that they will eat grass like geese. Mr. Latham remarks that this genus ap- pears to hold the same place in the southern division of the earth that the awks do in the northern; and that, however authors may differ in opinion on this head, they ought not to be confounded with one another. The pinguin is never seen but in the temperate and frigid zones south of the equator, while the awk only appears in the parallel latitudes north of the equator ; for neither of these genera have yet been ob- served within the tropics. Forster, in his voyage (vol. I. page 92), says he saw one for the firs: time in lat. 48° S., nor are they ever met wil>

nearer than 40° S. (Id. Introd. Disc, on Pin- guins, Comment. Got. vol. III.). The wings of the pinguin are scarcely any thing else than mere tins, while the awk has real wings and gills, though they be but small. The former has four toes on each foot, the latter only three. \Vhile swimming, the pinguin sinks wholly above the breast, the head and neck only appearing ont of the water, while the awk, like most other birds, swims on the surface. There are several other peculiarities which serve to distinguish the two genera, but what we have mentioned are doubt- less sufficient. ‘ The bodies of the pinguin tribe,’ says our author, ‘ are commonly so well and closely covered with feathers that no wet can penetrate ; and, as they are in general excessively fat, these circumstances united secure them from cold. They have often been found 700 leagues from land ; and frequently on the mountains of ice, on which they seem to ascend without diffi- culty, as the soles of their feet are very rough and suited to the purpose.’ Mr. Latham enume- rates nine different species of this genus, besides two varieties of the black-footed pinguin or diomedea.

1. P. antarctic is about twenty-five inches long, and weighs about eleven pounds and a half. Tre bill is upwards of two inches and three-quarters long; the upper parts of the body are black, the under are glossy white; beneath the chin there is a narrow streak of a blackish color, passing backward towards the hind head, a little bent about the region of the ears; the wings are much the same as in the other species ; the tail is cuneiform : the feathers, or rather bristles, of which it is composed, are black, and in number thirty-two ; the legs are of a flesh color, and the soles of the feet are black. This species, says Latham,

inhabits the South Sea, from 48° to the antarctic circle ; and is frequently found on the ice on mountains and islands, which it ascends; it is a pretty numerous species. Our last voyagers found them in plenty in the Isle of Desolation. In an island they touched at not greatly distant, the rocks were almost covered with the pinguins and shags; the first probably of this sort.

2. P. black-footed, or diomedea demersa. See DIOMEDEA.

3. P. collared is a very little less than the Papuan, being eighteen inches long. The bill which is black is similar to that of the Patagonian pinguin ; the irides are black ; the eye is surrounded with a bare skin of a blood color, of an oval shape, and three times as large as the eye itself ; the head, throat, hind part of the neck and sides, back, wings, and tail, are all black ; the fore part of the neck, breast, belly, and thighs, are white, extending round the neck, where the white begins like a collar, except thaf it does not quite meet at the back part; the legs are black. This species inhabits New Guinea. It was also seen by Dr. Forster near Kerguelen's Land ; and again on two isles adjoining to the island of South Georgia.

4. P. crested. It is a very beautiful species, twenty-three inches long; the hill is three inches long, and of a red color, with a dark furrow running along on each side to the tip ; the upper

mandible is curved at the end, the under is ob- tuse; the irides are of a dull red; the head, neck, back, and sides are black. Over each eye there is a stripe of pale yellow feathers, which lengthens into a crest behind, nearly four inches long ; the feathers on each side of the head, above this stripe, are longer than the rest, and stand upward, while those of the crest are decumbent, but can be erected on each side at pleasure; the wings, or rather fins, are black on the outside, edged with white ; on the inside they are white ; the breasts and all the under parts are also white ; the legs are orange, and the claws are dusky. The female has a streak of pale yellow over the eye, but it is not prolonged into a crest behind as in the male. This species inhabits Falkland Islands, and was likewise met with in Kerguelen's Land, or Isle of Desolation, as well as at VanDiemen's Land, and New Holland, particularly in Adven- ture Bay. They are called hopping pinguins and jumping jacks, from their action of leaping quite out of the water, on meeting with the least obstacle, for three or four feet at least : and indeed they often do this, without any seeming cause unless to advance. This species seems to have a greater air of liveliness in its countenance than others, yet it is in fact a very stupid bird, so much so as to suffer itself to be knocked on the head with a stick when on land. Forster

says he found them difficult to kill ; and, when provoked, he adds, they ran at the sailors in flocks, and pecked their legs and spoiled their clothes. When angered, too, they erect their crests in a beauti- ful manner. These birds make their nests among (hose of the pelican tribes, living in tolerable harmony with them ; and lay seldom more than one egg, which is white, and larger than that of a duck. They are mostly seen by themselves, seldom mixing with other pinguins. They are often met with in great numbers on the outer shores, where they have been bred. They fre- quently suffer themselves to be taken by the hand. The females lay their eggs in burrows, which they easily form with their bills, throwing out the dirt with their feet. In these holes the eggs are deposited on the bare earth. The time of sitting is in October ; but some of the species, espe- cially in the colder parts, do not sit till Decem- ber, or even January. How long they sit is not known.

5. P. Magellanic is about the size of the an- tarctic pinguin. They are about two feet and sometimes two feet and a half long, and weigh eleven pounds. The bill is black, having a transverse band across near its tip; the head and neck are black, except a few markings here and there ; the upper, parts of the body and wings are of the same color ; the under parts of both are white from the breast, except a narrow band of black passing at a little distance within the white on the breast, and downwards on each side, be- neath the wings quite to the thighs ; the legs are of a reddish color, irregularly spotted on the thighs ; and the claws are black. This species, which is very numerous, inhabits the Straits or* Magellan, Staten Land, Terra del Fuepo, and Falkland Islands. Far from being timid, these birds will often attack a man and peck his legs, As food they are not at all unpalatable. They

often mix with sea-wolves among the rushes, Burrowing in holes like a fox. They swirn with prodigious swiftness. They lay their eggs in collective bodies, resorting in incredible numbers to certain spots, which their long residence has freed from grass, and to which were given the name of towns. Penrose observes, that they composed their nests of mud, a foot in height, and placed as near one another as may be. ‘ The eggs,’ says he, ‘ are rather larger than those of a goose, and laid in pairs. When we took them once, and sometimes twice in a season, they were as often replaced by the birds; but prudence would not permit us to plunder too far, lest a supply in the next year’s brood might be pre- vented.’ They lay some time in November, driving away the albatrosses, which have hatched their young in turn before them.

The eggs were palatable food, and were preserved good for three or four mouths.

6. P. Papuan is about two feet and a half long, being a little bigger than the Cape pinguin. This species inhabits the Isle of Papos, or New Guinea, and has been met with at Falkland Isles and Kerguelen's Land. It is often found among the Patagonian pinguins.

7. P. Patagonian is so named, not only be- cause it is found on that coast, but also because it exceeds in bulk the common pinguins as much as the people are said to do the common race of men. It was first discovered by captain Macbride who brought one of them from Falkland Islands, off the Straits of Magellan. The length of the stuffed skin of this bird measured four feet three inches, and the bulk of the body seemed to ex- ceed that of a swan. The bill was four inches and a half long, slender, straight, bending on the end of the upper mandible, with no nostrils. The tongue half the length of the bill, and sin- gularly armed with strong sharp spikes pointing backwards. The plumage is most remarkable, the feathers lying over one another with the com- pactness of the scales of a fish, their texture equally extraordinary, the shafts broad and very thin, the veins unwebbed ; the head, throat, and hind part of the neck are of a deep brown color ; from each side of the head to the neck are two lines of bright yellow, broad above, narrow be- neath, and uniting half way down ; from thence the same color widens towards the breast, fading away until it is lost in pure white, of which color is the whole underside of the body, a dusky line dividing it from the color of the upper part. The whole back is of a very deep ash color, al- most dusky, but the end of each feather is marked with a blue spot, those about the junc- tion of the wings larger and paler than the other. The wings are in this species, as in all the others, extremely short in respect to the size of thebird ; hang down, and have the appearance of fins, whose office they perform ; their length is only fourteen inches ; on the outside they are dusky, and covered with scale-like feathers, or at best with such whose shafts are so broad and flat as scarce to be distinguished from scales; those on the ridge of the wings consisting entirely of shaft ; the larger, or quill feathers, have some very short welis. The tail consists of thirty brown feathers, or rather thin shafts, resembling split whalebone,

flat on the upper side, concive on the under, and the webs short, unconnected, and bristly. From the knees to the end of the claws six inches, co- vered with strong pentangular black scales ; the fore toe scarce an inch long, and the others so remarkably short as to evince the necessity of that strength of the tail, which seems intended as a support to the bird in its erect attitude, in the same manner as that of

the woodpecker is when it clings to the sides of trees. Between the toes is a strong semilunar membrane, continued up even part of the claws, the middle claw is near an inch long, and the inner edge very sharp and thin, the interior toe is small, and placed very high. The skin is extremely tough and thick ; which, with the closeness of the feathers, guards it effectually in the water. This species, which was first met with in Falkland Islands, has since been seen in Kerguelen's Land, New Georgia, and New Guinea. M. Bougainville caught one, which soon became so tame as to follow and know the person who had care of it. It fed on flesh, fish, and bread, but after a time grew lean, pined away, and died. The chief food when at large is thought to be fish ; the remains of which, as well as crabs, shell-fish, and molluscs, were found in the stomach. This species is the fattest of the tribe; and therefore most so in January when they moult. They are supposed to lay and sit in October. They are met with in the most deserted places. Their flesh is black, though not very unpalatable. This has been considered as a solitary species, but has now and then been met with in considerable flocks. They a-e found in the same places as the Papuan pinguins, and not unfrequently mixed with them ; but in gene- ral show a disposition of associating with their own species.

8. P, red-footed, or phaeton demersus. See PHAETON.

9. P. small, or, as Latham calls it, the little pinguin, is about the size of a teal, being fifteen inches long. The bill, which is of a dusky color, is about one inch and a half long, and shaped like that of the" phaeton demersus. The upper parts of the bird from the head to the tail appear to be of a cinereous blue color, of which color are the ends of the feathers; the base of them, however, is brown black, and the shafts of each of the same color, the under parts from chin to vent are white, the wings are dusky above and white beneath; the tail, which is exceedingly short, consists of sixteen stiff feathers, which are scarcely perceptible, the legs are of a dull-red color, the webs are dusty, and the claws are black. This species is pretty common among the rocks on the south parts of New Zealand, but they are most frequent at Dusky Bay. They make deep burrows on the sides of the hills, in which they lay their eggs. These holes are so thick in some parts, that a person is scarcely able to walk three or four steps without falling into one of them up to the knees. The inhabitants of Queen Char- lotte's Sound kill them with sticks, and, after skinning them, esteem the flesh as good food. At New Zealand they are named korora. 'These birds,' says Latham, ' I have found to vary both in size and color. Some are much smaller than others, quite black above, and measure only thir-

teen inches .n length , others are rather larger, and of a plain lead-color on the upper parts, and the wings black, though all are white or nearly so beneath. The legs in these two last are marked with black at the ends of the toes, and the claws are black.

PINGUIS, a river of Mysia, which runs into the Danube. — Plin. iii. c. 26.

PIN'lON,n. s- & v. a. Fr. pignon ; Lat. penna. The joint of a wing remotest from the body. Shaks- peare uses it for a feather or quill of the w-ing ; the tooth of a wheel ; a fetter or shackle : to bind the wings or arms ; to shackle ; bind to.

How oft do they with golden pinions cleave The flitting skies, like flying pursuivant ! Spenser.

He is pluckt, when hither He sends so poor a pinion of his wing. Shakspeare.

Know, that I will not wait pinioned at your mas- ter's court ; rather make my country's high pyramids my gibbet, and hang me up in chains.

Id. Antony and Cleopatra.

Whereas they have sacrificed to themselves, they become sacrifices to the inconstancy of fortune, whose wings they thought by their self-wisdom to have pinioned. Bacon.

O loose this frame, this knot of man untie ! That my free soul may use her wing,

Which now is pinioned with mortality, As an entangled, hampered thing. Herbert.

A second spear sent with equal force, His right arm pierced, and holding on, bereft His use of both, and pinioned down his left.

Dry den.

In vain from chains and fetters free, The great man boasts of liberty ; He's pinioned up by formal rules of state.

Norris.

The God, who mounts the winged winds, Fast to his feet, the golden pinions binds, That high through fields of air his flight sustain.

Pope.

So by each bard an alderman shall sit, A heavy lord shall hang at every wit ; And, while on fame's triumphant car they ride, Some slave of mine be pinioned to their side. Id.

Though fear should lend him pinions like the wind, Yet swifter fate will seize him from behind. Swift.

Avaunt, away ! the cruel sway, Tyrannic man's dominion ;

The sportman's joy, the murd'ring cry, The flutt'ring, gory pinion . Burns.

PINION, in mechanics, an arbor or spindle in the body whereof are several notches, which catch the teeth of a wheel that serves to turn it round, or it is a lesser wheel that plays in the teeth of a larger. See CLOCK-WORK.

FINITE, in mineralogy, micarelle of Kirwan. Color blackish-green. Massive, in lamdlar concre- tions, and crystallised in an equiangular six-sided prism ; in the same figure truncated or bevelled, and in a rectangular four-sided prism. Cleavage shining; lustre resinous. Fracture uneven. Opaque. Soft. Sectile; frangible, and not flexible. Feels somewhat greasy. Specific gra- vity 2-95. Infusible. Its constituents are, silica 29-5, alumina 63-75, dxide of iron 6-75. — Klaproth. It is found in the granite of St. Mi- chael's Mount, Cornwall ; in porphyry in Glen-

Glowe and Blair-Gowrie ; at St. Pardoux in Auvergne, &c.

' Two different analyses of pinite have been made known,' says Dr. Gmelin of Tubingen, in a letter in Dr. Brewster's Journal, ' the one by Klaproth, of pinite from the Pinistollen, the other by Drapier, of pinite from Auvergne. They found it to consist of the following ingredients : —

Klaproth.

Silica . 29-50

Alumina, . 63'75

Oxide of iron . 6-75

Drapier.

46-0

42-0

2-5

100-00

90-5

Klaproth himself seems not to have put much confidence in his analysis, which was made at an early period, as he has not admitted it into his contributions. The mineralogical affinity which was presumed to exist between pinite and mica, having thus received no confirmation from che- mistry, I imagined that a repetition of its ana- lysis would not be superfluous. For this inves- tigation, I made choice of the pinite of St. Par- doux, it being the only kind I could procure in sufficient quantity.

‘ Its specific gravity was found n 2-7575 + 6| R. It is asserted in almost all mineralogical works that the pinite cannot be melted before the blowpipe : this assertion is founded upon the examination of Klaproth, made upon the pi- nite of Pinistollen. I have had no opportunity of examining that variety under the blowpipe ; but the pinite of St. Pardoux melts on the edges into a glass full of blisters, when thin splinters of it are presented to the flame, although it does not melt into a globule. I have observed in ge- neral the same reactions as those which have been described by professor Berzelius, in his treatise on the Blowpipe ; and I have only one circumstance to add, which, in so far as regards the geological relations of pinite, seems to de- serve some attention. The pinite, when heated in a glass phial, gives out water of a disagree- able empyreumatic smell, which instantly blues reddened litmus, and therefore contains am- monia. It cannot be determined whether this ammonia is ready formed in the mineral, or is rather a product of the decomposition of some animal-matter contained in it : the latter, how- ever, would seem to be the more probable con- jecture. It may be observed that pinite never occurs in fresh rocks, but always, as for instance in Auvergne, in a decomposed granite, upon which the volcanic mountains of that country rest; and upon this occasion I beg leave to ob- serve that I have discovered a considerable quantity of ammonia in the natroliteof Hohent- wiel, and in the porphyry-slate itself, in which the natrolite is

found in veins. — Gilbert's Anna- len, 1820, No. iv. p. 367.

Analysis. — a. 1'49 grains of pinite, in coarse pieces, were reduced by ignition to 1-459 grains; 100 parts, therefore, would experience a loss of 1-410. b. 2-5 grains of pinite, after having been reduced to an impalpable powder, ware mixed with 12-5 grains of carbonate of barytes, and ig- nited ; the mass cohered loosely, and assumed a green color. When dissolved in muriatic acid,

chlorine was evolved. Silica, separated in the ordinary way, weighed, after ignition, 1'38 grains ~ 65-200 per cent. c. The liquor was now precipitated by carbonate of ammonia ; the precipitate which fell down was separated by the filter, and well washed. The solution was then evaporated to dryness, and the dry mass fused. Alcohol and a little muriatic acid were poured apon the fused mass, and the alcohol set on fire ; but there appeared nothing of a green or purple color, a circumstance by which tlie absence of boracicacid and lithium is proved, d. Themu- riate of alkali, converted into a neutral sulphate, weighed 0-387 grains ; when dissolved in water, 0-0191 grains. Silica — 0'764 per cent, were left undissolved. The sulphate was now con- verted into a carbonate by means of acetate of lead, which was dissolved in water, leaving a small re- sidue of oxide of manganese. The solution was saturated by muriatic acid, and evaporated, in in order to drive off the excess of acid. The muriatic salt was dissolved in a little water, and mixed with a concentrated solution of muriate of platina. The precipitate was washed with a small quantity of water. The solution which passed through the filter was mixed with some sulphuric acid, evaporated, and exposed to an intense heat. The sulphate was separated frora the metallic platina by means of water, and put aside for crystallisation. There were formed crystals of sulphate of soda, which effloresced perfectly on exposure to the atmosphere, and weighed in this state 0-022 grains. This quan- tity being deduced from the whole quantity of the salt (0-387 grains), there remain for the sul- phate of potassa 0-365 grains. 2'5 grains of pinite contain, therefore, 0-19735 grains of po- tassa — 7-894 per cent., and 0-00964 grains of soda — 0-386 per cent. e. The precipitate formed by carbonate of ammonia (c) was dis- solved in muiiatic acid, and the barytes preci- pitated by sulphuric acid. The filtered liquor was then evaporated, again dissolved in water, mixed with caustic

ammonia, and quickly fil- tered. The filtered liquor, when evaporated, deposited alumina, which, after ignition, weighed 0-038 grains — 1-52 per cent. Oxalate of am- monia produced in this liquor a very slight pre- cipitate, which could not be weighed. When boiled with carbonate of potassa, no precipitate fell down. /*. The precipitate thrown down by caustic ammonia (e) was dissolved in muriatic acid, and boiled with an excess of caustic po- tassa. The alkaline solution was supersaturated by muriatic acid, and the alumina then preci- pitated by carbonate of ammonia. It weighed, after ignition, 0-899 grains, zz 23-960 per cent. g. The residue (in j) left undissolved by po- tassa was dissolved in muriatic acid, boiled with nitric acid, and the iron thrown down by succi- nate of ammonia. The oxide of iron weighed 0-1378 grains rz 5-212 percent, h. The iron having been separated, the liquor was boiled with subcarbonate of potassa, by which mag- nesia was precipitated, containing a quantity of oxide of manganese. It weighed, after ignition, O-094 grains — 3-760 per cent.

The pinite of St. Pardoux is therefore com- posed of

v.,. . . S 55-200 (6))

Slhca' . . J 0-764 (d<\

Alumina, . . 23-960 J (With traces of lime), 1 -520 i Potassa, ...

Soda,

Oxide of iron, ... Magnesia, with oxide of manganese, Water, with an animal matter,

55-964

25-480

7-894 (d) 0-386 (d) 5-512 (g) 3-760 (h) 1-410 (a)

100-406

PINK, n. s. Fr.pince; from Belg. pink, an eye: whence the French word aillet, says John- son : from French pence, a point, because of its pointed leaves. — Thomson. A small fragrant flower of the gilliflower kind ; a small eye ; a color ; any thing strikingly excellent

Come, thou monarch of the vine, Plumpy Bacchus, with pink eyne, In thy vats our cares be drowned.

Shakspeare.

I am the very pink of courtesy Id.

In May and June come pinks of all sorts ; espe- cially the blush pink. Bacon's Essays.

The sea-hedgehog is enclosed in a round shell, handsomely wrought and pinked. Carew.

Pink is very susceptible of the other colours by the mixture ; if you mix brown-red with it, you will make it a very earthy colour. Dryden's Dufretnoy.

A hungry fox lay winking and pinking, as if he had sore eyes. L' Estrange.

Happy the climate where the beau Wears the same suit for use and show ; And at a small expence your wife, If once well pinked, is clothed for life. Prior. Then let Crispino, who was ne'er refused The justice yet of being well abused, With patience wait ,- and be content to reign The pink of puppies in some future strain.

Young.

PINK, n. s. Fr. pinque. A kind of heavy narrow-sterned ship.

This pink is one of Cupid's carriers ; Give fire, she is my prize. Shakspeare.

PINK, Fr. pinque, a name given to a ship with a very narrow stern. Those used in the Medi- terranean Sea differ from the xebecs only in being more lofty, and not sharp in the bottom ; they are vessels of burden, have three masts, and carry lateen sails. All vessels, however small, whose sterns are very narrow, are called pink- sterned.

PINK, in botany. See DIANTHUS. PINK, INDIAN, the English name of three spe- cies of different genera; viz. dianthus, ipomea, and lonicera.

PINK, SEA, a species of statice. PINKERTON (John), F. S. A., a miscellane- ous writer, was born in Edinburgh, February 13th, 1758, and was the third son of James Pinkerton, a dealer in hair, but descended of a respectable family. After acquiring the rudi- ments of education in the suburbs of the Scottish metropolis, he was removed, in 1764, to a school of a respectable character, at Lanark, kept by a brother-in-law of Thomson, the poet ; and was then articled to a

writer to the signet, in whose office he continued five years. Here he imbibed a taste for poetry, of which the first fruits appeared in .776, in an elegy called Craigmiller Castle. On

the death of his father, in 1780, he came to Lon- don, where he settled the following year, and published a volume of miscellaneous poetry, under the title of Rhymes, with dissertations on the Oral Tradition of Poetry, and on the Tragic Ballad, prefixed. This he followed up the suc- ceeding year by two others; one in quarto con- taining Dithyrambic Odes, &c., the other entitled Tales in Verse. A passion for collecting medals, excited in his boyish days by his coming into possession of a rare one of the emperor Constan- tine, drew his attention to the imperfections of all books on the subject, and led him to draw up his excellent essay on Medals, printed in 1784, in 2 vols. 8vo. ; a compilation in which he was much indebted to the assistance of Mr. Douce. Mr. Pinkerton published in 1785 Letters on Literature, under the assumed name of Heron, in which he recommends a new and very fantas- tical system of orthography. This book, how- ever, obtained him the acquaintance of Horace Walpole, of whose witticisms, &c., he published a collection, after his decease, under the title of Walpoliana, 2 vols. 18mo. In 1787 appeared the Treasury of Wit, 2 vols. 12mo., under the fictitious name of Bennet; Dissertation on the Origin and Progress of the Scythians, or Goths, being an Introduction to the Ancient and Mo- dern History of Europe ; A Collection of Latin Lives of Scottish Saints, 8vo. in 1789, now scarce; an edition of Barbour's Old Scottish poem, the Bruce, 3 vols. 8vo. in the same year ; the Medallic History of England, 4to. ; An En- quiry into the History of Scotland, preceding the reign of Malcolm III., 2 vols. 8vo. 1789, re- printed, with additions, 1795 ; Scottish Poems, reprinted from scarce editions, 3 vols. 8vo. ; Ico- nographia Scotica, or Portraits of Illustrious Personages of Scotland, with notes, 2 vols. 8vo. 1795_1797; The Scottish Gallery, 8vo. 1799; Modern Geography, digested on a New Plan, 2 vols. 4to. 1802, reprinted 3 vols. 1807; General Collection of Voyages and Travels, 19 vols. 4to. ; Recollections of Paris, 2 vols. 8vo. ; New Mo- dern Atlas, in parts, 1809 ; and Petralogy, or a Treatise on Rocks, 2 vols. 8vo. 1811; his last original work. Mr. Pinkerton, in his later years, resided almost entirely at Paris, whither he first proceeded in 1806, and where he died March 10th, 1826.

PIN'MONEY,n. s. Pin and money. Money allowed to a wife for her private expenses with- out account.

The woman must find out something else to mort- gage, when her pinmoney is gone. Addison.

PINNA, in ancient geography, a town of Italy, south of Picenum, at the mouth of the Matrinus, Sil. 8, v. 518.

PINNA, in zoology, a genus belonging to the order of vermes testacea. The animal is a slug. The shell is bivalve, fragile, and furnished with a beard, gapes at one end, the valves hinge with- out a tooth. They inhabit the coasts of Provence, Italy, and the Indian Ocean. P. marina, the largest and most remarkable species, inhabits the Mediterranean. It is blind, as are all of the genus; but furnished with very strong calcare- ous valves. The scuttle-fish (sepia), an inhabi- tant of the same sea, is a deadly foe to this ani-

mal. As soon as the pinna opens its shell, he rushes upon her like a lion, and would always devour her, but for another animal of the crab kind naked like the hermit, and very quick- sighted. This cancer or crab the pinna receives into her covering; and, when she opens her valve in quest of food, lets him out to look for prey. During this the scuttle-fish approaches, the crab returns with the utmost speed and anxiety to his hostess, who being thus warned of the danger, shuts her doors, and keeps out the enemy. Dr. Hasselquist, in his voyage townrds Palestine, beheld this curious phenomenon, which, though well known to the ancients, had escaped the moderns. Aristotle (Hist. lib. 5, c 15), and Pliny (lib. 9, 51, and 66), confirm the facts above set forth. The pinnae marinae differ less from mussels in the size of their shells than in the fineness and number of certain brown threads whicU attach them to the rocks, hold them in a fixed situation, secure them from the rolling of the waves, especially in tempests, and assist them in laying hold of slime. See MY- TILUS. These threads, M. de Reaumur says, are nearly as fine and beautiful as silk from the silk worm, and hence calls them the silk-worms of the sea. Stuffs, and several kinds of beauti- ful manufacture, are made of them at Palermo r in many places they are the chief object of fish- ing, and become a silk proper for many pur- poses. It requires a considerable number of the pinnae marinae for one pair of stockings. The thread is so fine that a pair of stockings made of it can be easily contained in a snuff-box of an or- dinary size. A pair of men's gloves of this thread lately cost thirteen carlinis, women's gloves eighteen, pair of stockings six ducats, waistcoat thirty, and coat 100 ducats. The men who are employed in fishing up the pinna marina, say that it is necessary to break the tuft

of threads. They are fished up at Toulon, from the depth ot fifteen, twenty, and sometimes more than thirty feet, with an instrument called a cramp, a kind of fork of iron, of which the prongs are perpendicular with respect to the handle. Each of them is about eight feet long, and there is a space between them of about six inches. The tuft ot silk issues directly from the body of the animal ; it comes from the shell at the place where it opens, about four or five inches from the summit or point in the large pinnae. M. de Reaumur (Mern. d 1'Acad. des Sciences, 1711, p. 216, and 1717, p. 177,) considers the pinna as the most proper of all shell-fish to elucidate the formation of pearls. It produces many of them of different colors, as gray or lead colored, red, and some of a blackish color, and in the form of a pear. The animal which lodges in the pinna marina rarely shows itself, because the valves are seldom opened. Its head is below, its largest extremity opposite ; it is kept in the shell by four vigorous muscles, placed at the extremities of the valves ; the shell has no hinges, but a flat and blackish ligament, which is equal in length to one-half of the shell. M. d'Argenville distinguishes three kinds of the pinnae: — 1. P. M. astura of the Venetians is large, red within, and has reddish mother-of-pearl, similar to the substance of the shell itself. Some of these shells weigh nearly

fifteen pounds. 2. P. M. papyracea, is smaller, slender, papyraceous, of the color of horn, a little shaded with pale red. 3. P. M. perna, is adorned with points in the channels of the shell, but what is singular, the edges of the shell are thicker at the openings than at the joining of the valves.

PIN'NACE, n. s. Fr. pinnasse ; Ital. pinnacia ; Span, pinaca. A boat belonging to a ship of war; a small sloop or bark attending a larger ship.

For fear of the Turks' great fleet, we came by night in a small pinnace to Rhodes.

Knolles's History. Whilst our pinnace anchors in the Downs,

Here shall they make their ransom on the sand.

Shakspeare.

I discharged a bark, taken by one of my pinnaces, coming from cape Blanch. Raleigh's Apology.

Thus to ballast love,

I saw I had love's pinnace overfraught. Donne.

I sent a pinnace or post of advice, to make a dis- covery of the coast, before I adventured my greater ship. Spelman.

He cut down wood, and made a pinnace, and en- tered the South-sea. Heylin.

A pinnace anchors in a craggy bay. Pope.

Swift as a swallow sweeps the liquid way,

The winged pinnace shot along the sea. Pope.

PINNACE, Fr. pinnace, sorte d'embarcation matee en goelette, a small vessel, navigated with oars and sails, and having generally two masts, rigged like those of ˆ schooner. They are chiefly used for procuring intelligence, and for landing of men, &c.

PINNACE, Fr. pinnace ou chaloupe a huit avirons, is also a boat, usually rowed with eight oars.

PIN'NACLE, n. s. Fr. pinnacle ; Lat. pinna. A turret or elevation above the rest of a build- ing ; a high point.

My letting some men go up to the pinnacle of the temple, was a temptation to them to cast me down headlong. K ing Charles.

He who desires only heaven, laughs at that en- chantment which engages men to climb a tottering pinnacle, where the standing is uneasy and the fall deadly. Decay of Piety.

The slippery tops of human state, The gilded pinnacles of fate. Cowley.

He took up ship-money where Noy left it, and, being a judge, carried it up to that pinnacle, fivm whence he almost broke his neck. Clarendon.

Some metropolis

With glistering spires and pinnacles adorned.

Milton.

He then led me to the highest pinnacle of the rock, and placing me on the top of it, Cast thy eyes east- ward, sa>d he, and tell me what thcu seest.

Spectator.

PINNACLE, in architecture, the top of a house, terminating in a point. This kind of roof among the ancients was appropriated to temples ; their ordinary roofs were all flat, or made in the platform way.

PINNACLE ISLAND, an island of the South Pa- cific Ocean, so named by Captain Cook in 1778. It is about fourteen miles from north to south, the shore every where broken and uneven, and forming bays bounded by rugged cliffs. Long. i86° 40 E.,lat. 60° 25′ N.

PIN

PINNATED LEAVES, in botany. See Bo

TANY.

PINNAT1FIDUM FOLIUM. See BOTANY.

PINNATIPEDES, Lat. from pinna, a fin, and pes, a foot, in ornithology, an order of birds that have pinnated feet, or are fin-footed. It is the eighth order both in the Linnean system and Mr. Latham's ; but the fourth according to Dr. Gmelin's arrangement, which is followed by Mr. Kerr ; who characterises them thus : — The bill, body, and mode of life, in the birds of this order, resemble those of the waders. The thighs are likewise naked for the lower half, and the feet are fitted for wading in marshes, all the toes being divided ; but the toes are edged on each side with a membrane for their whole length. These birds mostly live in pairs while breeding, and construct very large nests of various leaves and grass in their marshy haunts. See GRALL.E, and WADERS. There are only three genera ac- cording to all these ornithologists. They are fig- ured in Latham.

PIN'NER, n. s. From pinna or pinion. The !; ppet of ahead-dress, which flies loose.

An antiquary will scorn to mention a pinner or a night-rail, but will talk on the vitta. Addison.

Her goodly countenance I've seen, Set off with kerchief starched, and pinners clean.

Gay.

PINNOPHYLAX, PINNOTERES, or PINNO- TERUS, a kind of crab-fish, furnished with very good eyes. It is said to be the companion of the pinna marina. They live and lodge together in the same shell, which belongs to the latter. When it has occasion to eat, it opens its valves and sends out its faithful purveyor to procure food. If during their labor the pinnoterus per- ceives the polypus, it immediately returns to warn its blind friend of the danger, when, by shutting its valves, it escapes the rage of its enemy ; but, when the pinnoterus loads itself with booty without molestation, it makes a gentle noise at the opening of the shell, and when ad- mitted the two friends feast on the fruits of its industry. See PINNA.

PINOS, a low island of the Atlantic, on the coast of Darien, 115 miles E. S. E. of Reo Vilo : also an island of the Atlantic Ocean, near the south coast of Cuba, from which it is separated by a channel sixteen leagues long, and six wide. It is forty-two miles long and thirty-four broad, and abounds in pastures and large trees ; also in goats and other animals. It has several very well sheltered roads, and is inhabited by a few fishermen. Long. 82° 45′ W., lat. 21° 38′ N.

PINS, BELAYING, in ships (chevillots de fer, ou de bois, pour amarrer des manoeuvres, Fr.), are pieces of wood, or iron, fixed in a rank for making fast the small running-rigging.

PINS AND CHAINS, for securing the bars in the capstan, are iron pins connected with small chains, which are fastened to the drum-head of the capstan by means of staples.

PINSK, a trading town of Russian Lithuania, in the government of Minsk, surrounded by marshes. It is the see of a bishop of the united Greek church ; but a number of the inhabitants are Jews Its chief manufacture is leathei.

Population 4500. Eighty-four miles east of Brzeze, and 100 S. S. E. of Grodno.

PINT, n. s. Sax. pint; Fr. pinte ; low Lat. vinta. Half a quart ; in medicine, twelve ounces ; a liquid measure.

Well, you’ll not believe me generous, till I crack half a pint with you

at my own charges. Dryden.

PINT (pinta), a vessel, or measure, used in estimating the quantity of liquids, and even sometimes of dry things. Budaeus derives the word from the Greek irivQa ; others from the German pint, a little measure of wine; Nicod from the Greek irivtw, to drink. The English pint is two-fold ; the one for wine measure, the other for beer and ale-measure. See WEIGHTS and MEASURES. The Scotch pint is four times as large.

PINTADO, or afra avis, in ornithology, a name given by the ancient Roman authors to the Guinea-hen.

PINTIA, an ancient town of Spain, supposed to have been on the site of Valladolid.

PINTLES, Fr. eguillots de gouvernail, a sort of small mixed metal bolts, fastened upon the back part of the rudder, with their points downwards, in order to enter into, and rest upon the braces, fixed on the stern-post to hang the rudder.

PINTOR (Peter), a native of Valentia in Spain, born in 1426 ; who was physician to Alexander VI., whom he followed to Rome, where he practised with great success. He wrote two works of considerable merit, 1. Aggregator Sententiarum Doctorum de Curatione in Pestilentia, printed at Rome 1499, in folio. 2. De Morbo Faedo et Occulto his Temporibus Affli- genti, &c., printed at Rome, 1500, in 4to., black letter ; a book extremely scarce, unknown to Luisini and Astruc, and which traces the vene- real disease to the year 1496. Pintor died at Rome in 1503, aged eighty-three.

PINTURICCIO (Bernardin), a celebrated Italian painter, born at Perusia in 1454. He was the disciple of Peter Perugino, under whom he became so good an artist that he employed him on many occasions as his assistant. He prin- cipally painted history and grotesque; but he also excelled in portraits, among which those of Pope Pius II. and Innocent VIII., of Julia Far- nese, Caesar Borgia, and Isabella queen of Spain, are particularly distinguished. His chief perform- ance is the history of Pius II., painted in ten compartments in the history of Siena; in which undertaking Raphael, then a young man, assisted him so far as to sketch out cartoons of many parts of the composition. His death was occasioned by a singular disappointment. Being employed by the Franciscan monks of Sienna to draw a pic- ture, they gave him a chamber to paint it, which they cleared of all furniture except an old trunk, which he insisted on being also removed, in doing so it broke,

and discovered 500 pieces of gold, which the monks gladly seized, and the painter died of vexation at missing the treasure.

PINUS, the pine-tree, a genus of the mono- delphia order, and monoecia class of plants; na- tural order fifty-first, coniferae. The pine-tree was well known to the ancients, and has been described and celebrated both by their philoso-

phers and poets. Pliny enumerates six specie* of this genus ; and it is mentioned by Virgil in his Eclogues, Georgics, and ./Eneid ; by Horace in his Odes; by Ovid in his Metamorphoses; by Statius ; and by Catullus, &c. There are generally reckoned fourteen species of this genus. All of them are propagated by seeds produced in hard woody cones. The way to get the seeds out of these cones is to lay them before a gentle fire, which will cause the cells to open, and then the seeds may be easily taken out. If the cones are kept entire the seeds will remain good for some years; so that the surest way of preserving them is to let them remain in the cones till the time for sowing the seeds. If the cones are kept in a warm place in summer they will open and emit the seeds ; but if they are not exposed to the heat they will remain close for a long time. The best season for sowing the pines is about the end of March, When the seeds are sown the place should be covered with nets to keep off the birds ; otherwise, when the plants begin to ap- pear with the husk of the seed on the top of them, the birds will peck off the tops, and thus destroy them. The most remarkable species are : —

1. P. abies, or European spruce fir, a native of the northern parts of Europe and of Asia, in- cludes the Norway spruce and long-coned Cor- nish fir. The former of these is a tree of as much beauty when growing as its timber is valu- able when reared. Its growth is naturally up- right, and the height it reaches renders it valua- ble: the white deal, so much coveted by the joiners, &c., is the wood of this tree ; and from this fir pitch is drawn. The leaves are dark green ; they stand singly on the branches, but the younger shoots are very closely garnished with them. They are very narrow ; their ends are pointed; and their beauties excite admira- tion. The cones are eight or ten inches long, and hang downwards. The better the soil is the faster will the spruce fir grow, though it will thrive very well in most lands. In strong loamy earth it makes a surprising progress ; and it de- lights in fresh lands of all sorts, which never have been worn out by plowing, &c., though it be never so poor. The long-coned Cornish fir differs scarcely in any respect from the Norway spruce, except that the leaves and the cones are larger.

2. P. balsamea, the hemlock fir, a native of Virginia and Canada, possesses as little beauty as any of the fir tribe ; though, being rather scarce, it is deemed valuable. It is called by some the yew-leaved fir, from the resemblance of the leaves to those of the yew tree. It is a tree of low growth, with but few branches ; and these are long and slender, and spread abroad without order. The leaves do not garnish the branches so plentifully as those of any other species. The cones are very small and rounded ; they are about half an inch long ; and the scales are loosely arranged. We receive these cones from America, by which we raise the plants. This tree is fond of moist rich ground, and in such soil makes the greatest progress.

3. P. Canadensis, American or Newfoundland spruce .ir, a native of Canada, Pennsylvania, and

other parts of North America, includes three va- rieties : the white, the red, and the black New- foundland spruce. These, however, differ very little. They are of an upright growth, though they do not shoot so freely or grow so fast with us as the Norway spruce. The leaves are of the same green j and garnish the branches in the same beautiful manner as those of that species ; only they are narrower, shorter, and stand closer. The greatest difference is observable in the cones ; for these are only about an inch long, and the scales are closely placed. In the cones, indeed, consists the chief difference of these three varie- ties ; those of the white species are of a very light brown color ; those of the red more of a nut- brown or reddish color ; and those of the black species of a dark or blackish color. This trifling variation, however, is pretty constant in the plants raised from the seeds. The sorts often flower, and produce cones when only about five or six feet high, and look then very beautiful ; but this is a sign of weakness in the plant, which it does not often fairly get over.

4. P. cedrus, ranked by Tournefort and others under larix, famous for its duration, is that popu- larly called by us the cedar of Lebanon, by the ancients cedrus magna, or the great cedar : also ced relate, KiSpiXarri ; and sometimes the Phoeni- cian or Syrian cedar, from the country where it grows in its greatest perfection. It is a conife- rous evergreen of the bigger sort, bearing large roundish cones of smooth scales, standing erect, the leaves being small, narrow, and thick set. They sometimes counterfeit cedar, by dying wood of a reddish hue : but the smell discovers the cheat, that of true cedar being very

aromatic. In some places the wood of the cajou-tree passes under the name of cedar, on account of its red- dish color and its aromatic smell, which some- what resemble that of santal. Cedar wood is reputed almost immortal and incorruptible; a prerogative which it oWes chiefly to its bitter taste, which the worms cannot endure. For this reason it was that the ancients used cedar tablets to write upon, especially for things of importance, as appears from that expression of Persius, Et cedro digna locutus. A juice was also drawn from cedar, with which they smeared their books and writings, or other matters, to preserve them from rotting ; which is alluded to by Horace : by means of which it uas that Numa's books, written on papyrus, were preserved entire to the year 535, as we are informed by Pliny. Solo- mon's temple, as well as his palace, were both of this wood. That prince gave king Hiram several cities for the cedars he had furnished him on these occasions. Cortes is said to have erected a palace at Mexico, in which were 7000 beams of cedar, most of them 120 feet long, and twelve in circumference, as we are informed by Herrera. Some tell us of a cedar felled in Cy- prus 130 feet long and eighteen in diameter. It was used for the main mast in the galley of king Demetrius. Le Bruyn assures us that the two largest he saw on Mount Lebanon measured, one of them fifty-seven palms, and the other for- ty-seven, in circumference. In the temple of Apollo at Utica there are cedar trees nearly 2000 years old : which yet are nothing to that beam

in an oratory of Diana at Seguntum in Spain, said to have been brought thither 200 yean be- fore the destruction of Troy. Cedar is of so dry a nature that it will not endure to be fastened with iron nails, from which it usually shrinks ; so that they commonly fasten it with pins of the same wood. Hanbury says the wood is not ob- noxious to worms; that its oil preserves cloth and books from corruption, and that the saw-dust will even preserve the human body from it. See CEDAR. What we find mentioned in Scripture of the lofty cedars can be nowise applicable to the common growth of this tree ; since, from the experience we have of those now growing in England, as also from the testimony of several travellers who have visited those few remaining trees on Mount Libanus, they are not inclined to grow very lofty ; but on the contrary extend their branches very far ; to which the allusion made by the Psalmist agrees very well, when he is describing the flourishing state of a people, and says, ' They shall spread their branches like the cedar-tree.'

5. P. larix. the larch-tree, which the old bo- tanists ranked under larix, with deciduous leaves and oval obtuse cones. It grows naturally upon the Alps and Apennines, and of late has been very much propagated in Britain. It is of quick growth, and the trunk rises to fifty feet or more ;

the branches are slender, their ends generally hanging downward, and are garnished with long narrow leaves which arise in clusters from one point, spreading open above like the hairs of a painter's brush ; they are of a light green, ant* fall away in autumn. In April the male floweri appear, which are disposed in form of small cones ; the female flowers are collected into oval obtuse cones, which in some species have bright purple tops, and in others they are white : these differences are accidental ; the cones are about an inch long, obtuse at their points ; the scales are smooth, and lie over each other : under each scale there are generally lodged two seeds, which have wings. There are other two varieties of this tree, one of which is a native of America, and the other of Siberia. The cones of the Ame- rican kind which have been brought to Britain are in general larger than those of the common sort. In Switzerland their houses are covered with boards of this wood cut out a foot square ; and as it emits a resinous substance it so diffuses itself into every joint and crevice, and becomes so compact and close, as well as so hardened by the air, as to render the covering proof agains all weather. But as such covering for houses would cause great devastation in case of fire, the buildings are confined to a limited distance The wood, when first laid on the houses, is saic to be very white ; but this color, in two or three years, is changed, by means of the sun and resin, to a black, which appears like a smooth shining varnish. Of the common larch there are several varieties. The flowers, which it exhibits early in spring, are of a delicate red color ; another sort produces white flowers at the same season, and these have a delighuui effect among those of the red sort; whilst anotner, called the black Newfoundland iarix, increases the variety, though by an aspect little differing from the others.

There are also larches with greenish flowers, pale red, &c., all of which are accidental varie- ties from seeds. These varieties are easily dis- tinguished, even when out of blow : the young shoots of the white flowering larch are of the lightest green, and the cones when ripe are nearly white. The red flowering larch has its shoots of a reddish cast, and the cones are of a brown color ; whilst the cones and shoots of the black Newfoundland larch are in the same man- ner proportionally tinged. Their chief beauty consists in the manner of their growth, the nature and beauty of their pencilled leaves and fair flowers; for the cones that succeed them are small, of a whitish, a reddish, or a blackish brown color, and make no figure. The pinus cedrusand pinus larix are propagated by sowing in March, on a bed of light earth

exposed to the morning sun. The seed must be covered half an inch thick with fine light earth, and the beds watered at times when the weather is dry. In about six weeks the plants will appear ; they must at this time be carefully guarded from the birds, shaded from the sun and winds, and kept very clear of weeds. In the latter end of April following they may be removed into beds of fresh earth, placing them at ten inches distance every way. They are to be kept here two years, and such of them as seem to bend must be tied up to a stake to keep them upright. They may afterwards be planted in the places where they are to remain. They thrive well on the sides of barren, hills, and make a very pretty figure there. Dr. Pallas, in his Flora Rossica, informs us that if this tree is burnt, and the wood confined, the internal part of the wood distils copiously a drying reddish gum, a little less glutinous than gum arabic, somewhat of a resinous taste, but wholly soluble in water. At the instigation of M. Kindar, this gum has been sold in the Rus- sian shops under the name of gummi Orenburg-ensis, but which our author thinks should be called gummi uraliense loricis. It is eaten by the Woguli as a dainty, and is said to be nutritious and antiscorbutic. Some manna was gathered from the green leaves, but it could never be con- densed. The Russians use the boletus laricinus as an emetic in intermittents, and to check the leucorrhoea. At Baschir and Siberia the inha- bitants sprinkle the dry powder on the wounds of oxen and horses, as a detergent and anthel-mintic. The nuts of the pinus cimbra, the same author asserts, are eaten as luxuries in Russia, and are even exported with the same view. The unripe cones give a very fragrant oil, termed balsamic. The inhabitants of Siberia use the tender tops,* and even the bark rubbed off in the spring, as an antiscorbutic. The kernels of the nuts of the amygdalus nana give a very pleasing flavor to brandy ; and when pressed afford a bitter oil in large quantities. The way of destroying the bitter is by digesting it in the sun with spirit of wine, and it then becomes sweet and extremely agree- able. From the larch-tree is extracted what we erroneously call Venice turpentine. This natural balsam flows at first without incision ; when it has done dropping, the people make incisions at about two or three feet from the ground into the trunks of the trees, into which they fix narrow

troughs about twenty inches long. The end of these troughs is hollowed like a ladle; and in the middle is a small hole bored for the turpen- tine to run into the receiver which is placed be- low it. As the gummy substance runs from the trees it passes along the sloping gutter or trough to the ladle, and thence runs through the holes into the receiver. The people who gather it visit the trees morning and evening from the end of May to September, to collect the turpentine

out of the receivers. When it flows out of the tree Venice turpentine is clear like water, and of a yellowish white ; but, as it grows older, it thick- ens and becomes of a citron color. It is procured in the greatest abundance near Lyons, and in the valley of St. Martin near St. Lucern in Switzerland.

6. P. orientalis, the oriental fir, a native of the east, is a low but elegant tree. The leaves are very short, and nearly square. The fruit is ex- ceedingly small, and hangs downward; and the whole tree makes an agreeable variety with the other kinds.

7. P. picea, or yew-leaved fir, is a tall ever- green, and a native of Scotland, Sweden, and Germany. This species includes the silver fir and the balm of Gilead fir. The first of these is a noble upright tree. Mr. Marsham says, ‘ The tallest trees I have seen were spruce and silver firs in the valleys in Switzerland. I saw several firs in the dockyards in Venice forty yards long ; and one of thirty-nine yards was eighteen inches diameter at the small end. I was told they came from Switzerland.’ The branches are not very numerous, and the bark is smooth and delicate. The leaves grow singly on the branches, and their ends are slightly indented. Their upper surface is of a fine strong green color, and their under has an ornament of two white lines run- ning lengthwise on each side of the midrib ; on account of which silvery look this sort is called the silver fir. The cones are large, and grow erect; and when the warm weather comes on they soon shed their seeds. All who wish to raise this plant should therefore gather the cones before that happens. The balm of Gilead fir has of all the sorts been most coveted, on account of the great fragrance of its leaves ; though this is not its only good property ; for it is a very beautiful tree, naturally of an upright growth, and the branches are so ornamented with their balmy leaves as to exceed any of the other sorts in beauty. The leaves, which are very closely set on the branches, are broad ; and their ends are indented. Their upper surface, when healthy, is of a fine dark -green color, and their under has white lines on each side the midrib lengthwise, nearly like those of the silver fir. These leaves when bruised are very finely scented ; and the „ buds, which smell in the autumn for the next year’s shoot, are very orflamental all winter, being turgid, and of a fine brown color : and from these also exudes a kind of fine turpentine, of the same kind of (though heightened) fragrancy. The tree being wounded in any part emits plenty of this turpentine ; and Hanbury says, ‘ it is supposed by many to be the sort from whence the balm of Gilead is taken, which occasions this tree being so called. But this is a mistake ; for

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the true balm of Gilead is taken from a kind of •terebinthus : though I am informed that what has been collected from this tree has been sent over to England from America (where it grows naturally), and often sold in the shops for the true sort.’ The silver fir is very hardy, and will grow in any soil or situation, but always makes the greatest progress in rich loamy earth. The •balm of Gilead fir must be planted in deep, rich, good earth ; nor will it live long in any other. The soil may be a black mould, or of a sandy nature if it be deep enough, and if the roots have room enough to strike freely.

8. P. pinea, or stone pine, is a tall evergreen tree, native of Italy and Spain. It delights in a sandy loam, though like most others it will grow well in almost any land. Respecting the uses of this species, Hanbury tells us that ‘ the kernels are eatable, and by many preferred to almonds. In Italy they are served up at the table in their desserts. They are exceedingly wholesome, being good for coughs, colds, consumptions, &c., on which account only this tree deserves to be propagated.’ Hanbury observes, ‘ It is a great mistake Mr. Miller has committed, by saying, that seeds kept in the cones will be good and grow if they are sown ten or twelve years after the cones have been gathered from the trees : whereas the seeds of this sort, whether kept in the cones or taken out, are never good after the first year.’

9. P. pineaster, or wild pine, grows naturally in the mountains in Italy,

and the south of France. It grows to the size of a large tree ; the branches extend to a considerable distance ; and while the trees are young they are fully garnished with leaves, especially where they are not so close as to exclude the air from those within ; but as they advance in age the branches appear naked, and all those which are situated below become unsightly in a few years ; for which rea- son they are now much less in esteem than for- merly. From this species is extracted the com- mon turpentine, much used by farriers, and from which is drawn the oil of that name. The pro- cess of making pitch, tar, resin, and turpentine, from these trees, is very familiar. In spring, when the sap is most free in running, they pare off the bark of the pine tree, to make the sap run down into a hole which they cut at the bot- tom to receive it. In the way, as it runs down, it leaves a white matter like cream, but a little thicker. This is very different from all the kinds of resin and turpentine in use, and it is generally sold to be used in the making of flambeaux instead of white bees' wax. The matter that is received in the hole at the bottom is taken up with ladles, and put in a large basket. A great part of this immediately runs through, and this is the com- mon turpentine. This is received into stone and earthen pots, and is ready for sale. The thicker matter, which remains in the basket, they put into a common alembic, adding a large quantity of water. They distil this as long as any oil is seen swimming upon the water. This oil they separate from the surface in large quantities, and this is the common oil or spirit of turpentine. The remaining matter at the bottom of the still is common vellow resin. When they hare thus

obtained all that they can from the sap of tlu: tree they cut it down, and, hewing the wood iuii; billets, they fill a pit dug in the earth with these billets, and, setting them on fire, there runs from them while they are burning a black thick mat- ter. This naturally falls to the bottom of the pit, and this is the tar. The top of the pit is covered with tiles, to keep in the heat ; and there is at the bottom a little hole, out at which the tar runs like oil. If this hole be made too large it sets the whole quantity of the tar on fire ; but, if small enough, it runs quietly out. The tar, being thus made, is put in barrels ; and if it is to be made into pitch they put it into large boiling- vessels, without adding any thing to it. It is then suffered to boil a while, and, being then let out, is found when cold to be what we call pitch. A decoction of the nuts or seeds of this species in milk, or of the extremities of the branches pulled in spring, is said, with a proper regimen, to cure the most inveterate scurvy. The wood of this species is not valued.

10. P. rubra, the Scotch fir or pine. It is common throughout Scotland, whence its name ; though it is also found in most of the other countries of Europe. M. Du Hamel, of the Royal Academy of Sciences, mentions his having re- ceived some seeds of it from St. Domingo, and thence concludes that it grows indifferently in the temperate, frigid, and torrid zones. The wood is the red or yellow deal, which is the most durable of any of the kinds yet known. The leaves are much shorter and broader than those of the pinea, of a grayish color, growing two out of one sheath ; the cones are small, pyramidal, and end in narrow points ; they are of a light color, and the seeds are small. The wood of the Scotch pine is superior to that of any other spe- cies. When planted in bogs, or in a moist soil, though the plants make great progress, yet the wood is white, soft, and little esteemed; but when planted in a dry soil, though the growth of the trees is there very slow, yet the wood is pro- portionably better. Few trees have been ap- plied to more uses than this. The tallest and straightest are formed by nature for masts to our navy. The timber is resinous, durable, and ap- plicable to numberless domestic purposes, such as flooring and wainscoting of rooms, making oi beds, chests, tables, boxes, &c. From the trunk and branches of this, as well as most others of the pine tribe, tar and pitch are obtained. By incision, barras, Burgundy pitch, and turpentine, are acquired and prepared. The resinous roots are dug out of the ground in many parts of th« Highlands, and, being divided into small splin- ters, are used by the inhabitants to burn instead of candles. At Loch-Broom, in Ross-shire, the fishermen make ropes of the inner bark ; but hard necessity has taught the inhabitants of Sweden. Lapland, and Kamtschatka, to convert the same into bread. To effect this they, in the spring season, make choice of the tallest and fairest trees ; then, stripping off carefully the outer bark, they collect the soft, white, succulent in- terior bark, and dty it in the shade. When they have occasion to use it, they first toast it at the fire, then grind, and after steeping the flour In warm water, to take off the resinous taste, they

make it into thin cakes, which are baked for use. On this strange food the poor inhabitants are sometimes constrained to live for a whole yˆar; and we are told, through custom, become at last even fond of it.

Linnteus remarks that this same bark bread will fatten swine ; and humanity obliges us to wish that men might never be re- duced to the necessity of robbing them of such a food. The interior bark of which the above- mentioned bread is made the Swedish boys fre- quently peel off the trees in the spring, and eat raw with greedy appetite. From the cones of this tree are prepared a diuretic oil, like the oil of turpentine, and a resinous extract, which has similar virtues with the balsam of Peru. An in- fusion or tea of the buds is highly commended as an antiscorbutic. The farina, or yellow pow- der, of the male flowers is sometimes in the spring carried away by the winds in such quantities, where the trees abound, as to alarm the ignorant with the notion of its raining brimstone. The tree lives to a great age ; Linnaeus affirms to 400 years.

11. P. strobus, Lord Weymouth's pine, or North American white pine. This grows some- times to the height of 100 feet and upwards, and is highly valued on account of its beauty. The bark of the tree is very smooth and delicate, especially when young ; the leaves are long and slender, five growing out of one sheath ; the branches are pretty closely garnished with them, and make a fine appearance. The cones are long, slender, and very loose, opening with the first warmth of the spring; so that if they are not gathered in winter the scales open and let out the seeds. The wood of this sort is esteemed for making masts for ships. In queen Anne's time there was a law made for the preservation of these trees, and for the encouragement of their growth in America. Within these last fifty years they have been propagated in Britain in considerable plenty. The best soil for this species is a sandy loam, but inferior soils will answer.

12 P. taeda, the swamp pine, is a tall ever- green tree, a native of the swamps of Virginia and Canada. There are several varieties of this genus, which Hanbury enumerates and describes, such is, 1st, The three-leaved American swamp pine. 2d, The two leaved American pine. 3d, The yellow American pine, the yellow tough pine, and the tough pine of the plains ; among which there is but little variety. 4th, The bas- tard pine. 5th, The frankincense pine. And, 6th, The dwarf pine.

PINZGAU, a large district of the duchy of Salzburg, Upper Austria. It extends across the duchy, from Carinthia to the Tyrol, and has an area of nearly 900 square miles, with 26,000 in- habitants. It consists of mountains of great height, which occupy almost the whole face of the country, except the Salza valley. That river rises among these mountains. Cattle here form the general object of attention ; but in the moun- tain* are mines of copper and lead.

PIOMBINO, a principality of Tuscany, be- tween the provinces of Pisa and Sienna, extend- ing along the sea-coast. Its superficial extent is 190 square miles; its population 18,000, and

its annual revenue about £8000. The soil is fertile in corn, wine, oil, and fruits. It has like- wise good pastures.

PIOMBINO, a town of Italy, the capital of the principality of this name, is situated on a rocky promontory on the Mediterranean, opposite the island of Elba. It is the residence of the prince, and contains a population of 4000, a harbour, and considerable fisheries. Forty miles south by east of Leghorn, and sixty S.S.W. of Florence.

PION, a descendent of Hercules, who built Pionia. Paus. ix. c. 18.

PIONEER', n. s. Pionier, fromp'on, obso- lete French. According to Scaliger, pion comes frompeo for pedito, a foot soldier, who was for- merly employed in digging for the army. A pioneer is in Dutch spagenier, from spage a spade ; whence Junius imagines that the French borrowed pagenier and pioneer. One whose bu- siness it is to level the road, throw up works, or sink mines in military operations.

Well said, old mole, can'st worki' the' ground so

fast '! A worthy pioneer. Shakspeare. Hamlet

Three try new experiments, such as themselves think good ; these we call pioneers or miners.

Bacon. His pioneers Even the paths, and make the highways plain.

Fairfax.

Of labouring pioneers

A multitude, with spades and axes armed, To lay hills plain, fell woods, orvallies fill.

Milton.

The Romans, after the death of Tiberius, sent thi- ther an army of pioneers to demolish the buildings and deface the beauties of the island. Addison.

PIONEERS, in the art of war, are such as are .commanded in from the country, to march with an army for the above purposes. The soldiers are likewise employed in all these services. Most of the foreign

regiments of artillery have half a company of pioneers, well instructed in that im- portant branch of duty. Our regiments of in- fantry and cavalry have three or four pioneers each, provided with aprons, hatchets, saws, spades, pick-axes, &c.

PIONIA, a town of Mysia, in Caycus.

PI'ONY, n. s. ~Lat.p(Konia. A large flower. See PEONY.

There might you see the piony spread wide, The full blown rose, the shepherd and his lass, Lapdog and lambkin with black staring eyes, And parrots with twin cherries in their beak.

Coteper

PIONY. See PJEONIA.

PIOZZI (Mrs. Hester Lynch), was the daugh- ter of John Salisbury, esq. of Bodvel, Caernar- vonshire, born in 1739. Early in life she was distinguished by her accomplishments, and in 1763 accepted the hand of Mr. Thrale, an opu- lent brewer of Southwark, which he then repre- sented in parliament. Soon after her acquaint- ance with Dr. Johnson commenced, of whom she, at a subsequent period, published Anecdotes, in one octavo volume. Mr. Thrale dying in 1781, she retired to Bath, and in 1784 accepted the addresses of signer Piozzi, a Florentine, who taught music in that city. A warm expostulation from her friend Dr. Johnson upon the subject

entirely dissolved their friendship ; and soon after her marriage she accompanied her husband on a visit to Italy, during her residence in which she joined Messrs. Merry, Greathead, and Parsons, in the production of a collection of pieces in verse and prose, entitled the Florence Miscellany. Of this a few copies were printed in 1 786, but it •was never published. Her other writings are Three Warnings, a tale, in imitation of La Fon- taine. A Translation of Boileau's Epistle to his Gardener, first printed in Mrs. Williams's Mis- cellany, and a prologue to the Royal Suppliants ; Observations made in a Journey through France, Italy, and Germany, 2 vols. 8vo. 1789; British Synonymy, or an Attempt at Regulating the Choice of Words in Familiar Conversation, 2 vols. 8vo. 1794; and Retrospection of a Review of the

most striking Events, 8cc., and their con- sequences, which the last 1800 Years have pre- sented to the View of Mankind, 2 vols. 4to. 1801. Mrs. Piozzi became a second time a widow, and died at Clifton, May 2d, 1821, in her eighty-second year.

PIP, n. s. & v. a. Fr. pepie ; Dan. pip ; Belg. pippe, deduced by Skinner from pituita ; but probably coming from pipio or pipilo, on account of the complaining cry. A disease of fowls ; a horny pellicle that grows on the tip of their tongues ; a spot on cards : to chirp or cry like a bird.

When murrain reigns in hogs or sheep, And chickens languish of the pip. Hudibras.

It is no unfrequent thing to hear the chick pip and cry in the egg, before the shell be broken. Boyle.

A spiteful vexatious gypsy died of the pip.

L'Estrange

When our w omen fill their imaginations with pips and counters, I cannot wonder at a new-born child that was marked with the five of clubs.

Addison's Guardian.

PIP, or PEP, a disease among poultry, consist- ing of a white thin skin, or film, that grows under the tip of the tongue, and hinders their feeding. It usually arises from want of water, or from drinking puddle-water, or eating filthy meat. It is cured by pulling off the film with the fingers, and rubbing the tongue with salt. Hawks are particularly liable to this disease, es- pecially from feeding on stinking flesh.

PIPE, n. s. } Saxon pipe ; Welsh pib ;

PI'PER, /-Belg. pype; Teut. pfeif; Fr.

PI'PING, adj. jpipe; Ital. and Span, pipa ; Heb. 33. A tube; any long hollow body; a musical instrument ; the key or organs of voice : to pipe is to play on the pipe : hence a feeble soxind : a piper is one who plays on that instru- ment : piping, feeble or weak of sound ; sickly ; applied also to the bubbling noise of boiling, as in the phrase f piping hot.'

We have piped unto you, and you have not danced.

Matthew.

Pipers and trumpeters shall be heard no more in thee. Revelation.

The veins unfilled, our blood is cold, and then We powt upon the morning, are unapt To give or to forgive ; but when we've stuffed These pipes, and these conveyances of blood With wine and feeding, we have suppler souls.

Sha&speare.

I have known, when there was no musick w.th him but the drum and the fife, and now had he ra- ther hear the tabor and the pipe. Id.

My throat of war be turned, ,Which quired with my drum, into a pipe Small as an eunuch's. Id. Coriolanus.

His big manly voice,

Turning again toward childish treble, pipet And whistles in his sound. Id. As You Like It.

I, in this weak piping time of peace, Have no delight to pass away the time, Unless to spy my shadow in the sun.

Shakspeare.

Merry Michael, the Cornish poet, piped thus upon his oaten pipe for merry England. Camden.

Try the taking of fumes by pipes, as in tobacco and other things, to dry and comfort. Bacon.

That office of her majesty's exchequer, we, by a metaphor, call the pipe, because the whole receipt is finally conveyed into it by the means of divers small pipes or quills, as water into a cistern. Bacon.

The exercise of singing openeth the breast and pipes. Peacham.

The part of the pipe, which was lowermost, will become higher ; so that water ascends by descending

Wilkins. The solemn pipe and dulcimer. Milton.

Then the shrill sound of a small rural pipe Was entertainment for the infant stage.

Roscommon.

In singing, as in piping, you excel. Dryde.n. There is no reason why the sound of a pipe should leave traces in their brains. Locke.

It has many springs breaking out of the sides of the hills, and vast quantities of wood to make pipes of. Addison.

An animal, the nearer it is to its original, the more pipes it hath, and as it advanceth in age stilj fewer. Arbuthnot.

Gaming goats and fleecy flocks, And lowing herds, and piping swains, Come dancing to me. Swift.

My husband's a sot, With his pipe and his pot. Id.

The pipe, with solemn interposing puff, Makes half a sentence at a time enough, The dozing sages drop the drowsy strain, Then pause and puff, and speak, and pause again.

Cowper.

PIPE, n. s. Fr. pipe ; Belg. peep. A liquid measure containing two hogsheads.

I think I shall drink in pipe wine with Falstaff; I'll make him dance.

Shaktpeare. Merry Wives of Windsor.

PIPE. See WEIGHTS and MEASURES.

PIPE, PIPA, in law, is a roll in the exchequer, called also the great roll.

PIPE, in mining, is where the ore runs for- ward endwise in a hole, and does not sink dowr > wards or in a vein.

PIPE, AIR. See AIR-PIPES.

PIPE FISH. See SYNGNATHUS.

PIPE OFFICE is an office wherein the officer called the clerk of the pipe makes out leases of crown lands, by warrant from the lord treasurer, or commissioners of the treasury, or chancellor of the exchequer. To this office are brought all accounts which pass the remembrancer's office, and remain there. All tallies which vouch the payment of any sum contained in such accounts are examined and allowed by the chief secondary of the pipe. Besides the chief clerk, in

office, there are eight attorneys or sworn clerks, and a comptroller.

PIPES, in practical mechanics, are of various sorts, as tobacco-pipes, once much in use hy per- sons of all conditions, but now very generally laid aside by persons in the middle class of life, and almost wholly by those who move in higher circles. Still the demand for them is consider- able, and there are many manufactures of them in the vicinity of London : those employed in it, however, seem rarely to rise to a state of compe- tence. There are pipes likewise which answer the purpose of canals or conduits for the convey- ance of water and other liquids. These are made of wood, of lead, of iron, of copper, of pottery ware, and of stone. We shall give a sketch of the manufacture of each of these.

Tobacco-pipes are too well known to need a minute description : they consist of a long tube from twelve to fifteen or eighteen inches in length, made of a peculiar kind of clay, having at one end a little bowl for the reception of to- bacco, the smoke- of which when lighted is drawn by the mouth through the other end. They are made of various shapes and fashions : some long, others short ; some are very plain, and can be sold to the publicans at the rate of four or five a penny ; others are handsomely wrought, and varnished of different colors, and are sold as high as from eight to twelve shillings per gross. The Turks, who are famed for smoking, make use of pipes three or four feet long made of rushes or of wood, bored at the end, on which they fix a kind of pot of baked earth, which serves as a bowl, and which -they take off after smoking. To make the tube tight some are made of spiral wire covered with leather. This at the same time leaves them flexible, and the bowl can stand on the ground whilst the smoker inhales its fumes through an ivory or silver mouth-piece. Of this kind is the hookah, or houkar, of Hindostan : it is a complete furnace or chafing-dish, with grate- bars, ash-pit, &c., having a tight cover over the top with one of these flexible pipes attached to it. An officer of the court of a petty eastern prince is called houkar boudar, and is solely em- ployed in managing this machine, .the mouth- piece of which he presents with due solemnity to his master after dinner. In some instances the bowl is kept in an adjacent closet, and the pipe conducted through a hole in

the wall. Those which are most complete have another peculiarity ; the smoke, before it goes into the tube, is made to pass under water, by bubbling up through H, which, by depriving it of its acrid and pungent taste, is found to give it a mild and agreeable flavor.

The clay of which our tobacco-pipes are made is perfectly white, and is distinguished from other kinds by its great adhesion to the tongue, •whjch is well known to be considerable when baked, in consequence of its affinity to water. In a raw state this property is perceptible in a slight degree. The pipe-clay is largely found at the island of Purbeck in Dorsetshire, and at Teign- mouth in Devonshire, in lumps, which are puri- •fied by dissolving in water ; the solution being well stirred up, in a large pit, is poured off into another, where it subsides and deposits the clay;

the water becoming clear is let off, and the clay at the bottom is left sufficiently dry for use: by this means the smallest stones or particles of foreign matter are left at the bottom of the first pit. The clay thus prepared is spread on a board and beaten with an iron bar to temper and mix it ; then it is divided into pieces of the proper size to form a tobacco-pipe ; each of these pieces is rolled under the hand into a long roll with a bulb at one end to form the bowl, and in this state they are laid up in parcels for a day or two until they become sufficiently dry for pressing, which is the next process, and is conducted in the following manner: —

The roll of clay has a small wire thrust nearly through its whole length to form the tube, and is put in between two iron moulds, each of which has imprinted in it the figure of one-half of a pipe, and therefore when put together the cavity between them is the figure of a whole one. They are put together by pins, which enter holes in the opposite half. The moulds with the clay in them are now put into a press, which consists of an iron frame fowned of two plates, one of which is fixed down to the bench, and the other pressed towards it by a screw turned round by a handle. The moulds are put in between the two plates, and the screw being turned round presses them together, imprinting the figure of a pipe on the clay included between them. The lever is next depressed, and the stopper entering the mould forms the bowl of the pipe, and the wire which is still in the pipe is thrust backwards and for- wards to carry the tube completely into the bowl. The press is now opened by turning back the screw, and the mould is taken out. A knife is next thrust into a cleft of the mould left for the purpose, to cut the end of the bowl smooth and flat : the wire is carefully withdrawn, and the pipe taken out of the mould. The pipes, when so far completed, are laid by two or three days properly

arranged for the air to have access to them in all their parts, till they become stiff, when they are dressed with scrapers to take off the impression of the joints of the moulds ; they are afterwards smoothed and uolished with a piece of hard wood.

The next process is baking or burning, and this is performed in a furnace of peculiar con- struction. It is built within a cylinder of brick-work, having a dome at top, and a chimney ris- ing fiom it to a considerable height. Within this is a lining of fire brick -work having a fire-place at the bottom of it. The pot which contains the pipes is formed of broken pieces of pipes and cemented together by fresh clay, hardened by burning : it has a number of vertical flues sur- rounding it, conducting the flame from the fire- grate up to the dome, and through a hole in the dome into the chimney. Within the pot several projecting rings are made, and upon these the bowls of the pipes are supported, the ends rest- ing upon circular pieces of pottery which stand on small loose pillars rising up in the centre. By this arrangement a small pot or crucible can be made to contain fifty gross of pipes without the risk of damaging any of them. The pipes are put into the pot at one side when the crucible is open, but when filled tfiis orifice is made up with

broken pipes and fresh clay. ‘At first the fire is but gentle; by degrees it is increased to the pro- per temperature, and so continued for seven or eight hours, when it is damped and suffered to cool gradually : the pipes, when cold, are taken out and ready for sale.

Wooden pipes are trees bored with large iron augers of different sizes, beginning with the less and proceeding on to chose that are larger; the first being pointed, the rest are formed like spoons, increasing in diameter from one to six or eight inches ; they are fitted into the extremities of each other. If small, these pipes are fre- quently bored by mere manual labor, but where they are large, and made of hard wood, the use of horses or of the steam engine is required. On the large scale the following will serve as a de- scription of their manufacture : — The piece of timber, or perhaps the tree itself, when a little shaped on the outside by the axe, intended to form a pipe, is placed on a frame and held down firmly upon it by means of iron chains and windlasses ; it is at the same time wedged up to prevent its rolling sideways ; if the piece is tole- rably straight this will answer every purpose, otherwise it must be fixed firm by wedges, iron hooks,

&c., similar to those used by sawyers, driven into the carriage at one end and into the tree at the other. The frame and tree being bound together run upon small wheels traversing two .ong beams, or, as they are usually called, ground-sills, placed on each side of a pit dug to receive the chips made by the borers. At one end they are connected by a cross beam bolted upon them: this supports the bearing for a shaft, the extremity of which beyond the bearing is perforated at the end of a square hole, to receive the end of the borer. The timber and carriage are made to advance towards the borer by means of ropes : one rope being made to wind up, while the other gives out and draws the carriage and piece of timber backwards and forwards ac- cording as the wheel is turned. The weight of the borer is supported by a wheel turning between uprights fixed on a block, the end of which rests upon the ground-sills. It is moved forwards by two iron bars pinned to the front cross-bar of the carriage. The distance between the wheel and the carriage may be varied, by al- tering the iron bar and pins so as to bring the wheel always as near as convenient to the end of the tree. The shaft, as we have already hinted, may be turned by any first mover, as wind, water, horses, or steam, as is most convenient, and a man or boy regulates the wheel. When the borer is put in motion, by turning the wheel, the workman draws the tree up to the borer that pierces it ; when a few inches are bored he draws the tree back by reversing the motion of the wheel, in order that the borer may throw out its chips; he then returns the tree, and continues the process till the work is finished. The borer in this case, be its size what it will, is of the same shape as that of a common auger.

Some years ago Mr. Howel, of Oswestry, in- vented an engine for the purpose of boring or hollowing wooden water-pipes, by means of which the process is not only much more expedi- tious, but causes a considerable saving of timber.

By this mode, instead of the common method of boring by augers, or instruments of any other de- scription which perforate the wood by cutting out the inner part of the substance in chips or shav- ings, a hollow tube or cylinder, made of thin plates of iron or other metal, about one inch less in diameter than the hole to be bored, is to be made use of. To one end of this tube or cylin- der is to be fixed a flanch or ring, of from one- quarter of an inch to five eighths of an inch in breadth ; and one part of the circumference ot this flanch or ring is to be divided or separated, so that, if it be made of steel, an edge or cutter may be formed thereby; or, for the more conve- nient use of it, a cutter of steel or other metal may be screwed, or otherwise connected with the tube and the flanch or ring. The recommenda- tion of this instrument is, that it will bore out a piece of wood capable of

being converted into a pipe or pipes of smaller dimensions, with the aid of less power, and with less waste of wood than by means of the process usually resorted to. But it may be proper to add that very few wooden pipes are now employed.

By another invention, pipes have been matV of separate pieces or staves, instead of boring the solid timber. In this case, the end of one piece > of pipe is tapered off to fit into the next piece, and the different parts are connected by dove- tailing, rabbetting, screws, &c. &c. The outer and inner surfaces may be painted, Tarnished, or covered over with pitch, tar, or any kind of ce- ment that can be made to adhere.

The method of making leadenpipes consists in casting the lead upon a smooth steel mandril, placed in a mould also of metal, to form the out- side. These pieces are about eighteen inches long. They are afterwards joined together by a process called lining. But a very great improve- ment has been recently made in the manufacture of leaden pipes, by drawing them in a manner similar to wire. The lead to form the pipe is cast upon a mandril of the diameter of the insida of the pipe, but of such a thickness as to equal the whole pipe in weight; it is then fastened upon one end of a cylindric steel mandril, and the lead is pulled through different sized holes till the pipe is of sufficient length and thickness. These pipes can be drawn to the length of eight or ten feet. The power required, however, is very great, which is one objection to the method. They are also liable to flaws ; for, if the casting happen to be imperfect, the imperfection is much increased and extended by the process of draw- ing.

This manufacture has been much improved by passing the lead upon the mandril through grooved rollers of different sizes, following each other in succession. The power required is much less than that required for drawing; and the pipes are said to be superior in other respects. See PLUMBING.

Iron pipes are cast at the foundries of any di- mensions ; and, for durability and strength com- bined, are greatly superior to any other material: they may he procured in lengths of ten feet, and united by nuts and screws passed through flaunches, cast on the ends of them. Most of the water companies of the metropolis have, within

ttiese few years past, adopted cast-iron pipes for iheir mains; they are usually cast in lengths of ten feet, with an enlarged socket at one end of sufficient size to receive the end of the next pipe As these joints cannot be driven close, to fit like wooden joints, they require some cement. To apply this, the joint is first caulked, by driv- ing a small quantity of hemp down to the bottom of it with a blunt chisel, and then filling the remainder of the socket with iron cement, which i« a composition of borings or turnings of cast-iron, mixed up with sulphur and sal ammo- niac. This is moistened with water, and rammed into the cavity; the rapid oxidation of the iron borings unites them into one mass, and at the same time expands the bulk of the cement, so as to fill up all the space. Another method, much used for large pipes, is to have two ears project- ing from each pipe at the joint, through which screw-bolts are passed, to draw them close. The joints are sometimes filled with lead run in whilst melted.

Of late years pipes made of pottery have also been brought much into use ; and Bell, of Bir- mingham, obtained in 1808 his majesty's letters patent for the exclusive privilege of manufactur- ing the following kind : —

' It has been found,' says he, ' by long expe- rience, that pumps or pipes for conducting water from water-works which have been made of wood, or iron, lead, or any other metallic sub- stances, have been objected to ; the nature of my improvement is, therefore, to remove the aforesaid objections, which I completely perform by making tubes of porcelain pottery, and vari- ous compositions which are vitrifiable, and not liable to corrosion or decay. These tubes are formed in such a way at the ends as to fit one within the other, which I connect or unite toge- ther by cement, so as to make them water or air tight. And by the addition of any number of these tubes, connected as aforesaid, I form one complete tube or pipe to any extent which may be required. I prefer the method of enclosing them in cast-iron pipes or cases, which are to be made in various ways and forms ; which pipes or cases serve as defenders of these porcelain or pottery tubes, to prevent breaking or bursting. Cases or pipes may be made of wood, and vari- ous other substances, for enclosing these porce- lain or pottery tubes or pipes ; but, for the sake of compactness, strength, and durability, I recommend cast-iron cases, boxes, or pipes. There are compound metals which are less cor- rosive than the real metals as aforesaid, of which tubes may be made, and if enclosed in the man- ner before described would be useful in conduct- ing water and various liquids, either hot or cold, for particular purposes ; as also thin tubes, made of wood, which may be prepared for durability by boiling it, or burning or charring itj which has the effect of preventing its breeding or har-

bouring insects, &c.' Of these last, in addition to his porcelain or pottery tubes enclosed, he claims the invention.

The Manchester Water- Works Company em- ploy stone pipes for the conveyance of their water, and the stone which they have found most suit- sble to their purpose comes from a quarry at

Fox-Hill, in the parish of Gorting-Power, Gloucestershire, which is very like the Portland- stone; but the latter is the more dense or specifically heavy, in the proportion of seventeen to sixteen ; that is, the Fox-hill stone requires seventeen cubical feet to the ton, but sixteen feet only of the Portland-stone go to the ton. The following method is used in boring the stone for pipes : — the first mover is a steam-engine of a power adapted to the work, giving a rotatory motion to a shaft placed horizontally, and run- ning from one end of the works to the other. The works are divided into compartments, each of which serves for the boring of four pipes at the same time ; by means of what is known to me- chanics by the name of the bevel-geer, motion is communicated from the main horizontal shaft to a vertical arbor, at the top of which is a wheel. The rotatory motion of this wheel, by means of a crank bar, gives a reciprocating motion to the larger wheel, and this latter motion is such as to give rather more than a complete rotation to each of four smaller wheels placed opposite ; with respect to the larger wheel, the mutual con- nexion between them and it being by means of teeth or cogs. Thus the small wheels go through somewhat more than a complete rotation in one direction, and then rather more than a complete rotation in the opposite direction, and so on alternately. On the vertical shafts, beneath the smaller wheels, are placed iron tubes, which are suffered to act by their own weights upon the stones to be bored, and by means of their rota- tion to bore those stones by attrition. The stones are cut into lengths of six or eight feet, and bored into pipes of various diameters. When the pipes are of fourteen inches diameter the thickness of stone allowed is about five inches. The tubes by which the boring is effected are of course fourteen inches in diameter, and weigh about one hundred and a half. They are made of thin plate iron, except their circular rim or sole at the bottom, which is about half an inch thick. As the attrition wears away the stones on which the soles of the tubes rest, they sink lower and lower ; a semi-fluid mixture of sand and water runs down from the small wheels at the top of the tubes, keeping the whole moist, and carrying off the particles of stone as it is bored.

Copper-pipes are made of copper plate turned up and soldered, and are much used in distillers' work, because they can be tinned

withinside, and then communicate no taint : but they are too expensive for ordinary use.

PIPES OF AN ORGAN. See ORGAN.

PIPES, SEA, in zoology, are univalved shells, of an oblong figure, terminating in a point, sometimes a little bending, and sometimes straight. Sea ears, figures of which we have given along with sea-pipes, are also univalved flat shells, resembling in shape the ear of a man. In sea ears it is not uncommon to find small pearls, the seeds of which are often found in the middle of their cavities, which are of the finest naker or mother-of-pearl color. There are ridges on both sides; those without form a kind of volute or spire, terminating in an eye. In these shells there is a row of round holes, six of which generally go quite through. There is a shell of

this kind, which is longer in proportion to its •width, and much less common, for it is never found in our seas. There is another, very fine and thin, of a dirty gray color, neither nakered nor perforated as the others are ; the inner rim is spiral, and at some distance from the outer. The sea pipes are distinguished from sea worms by having their pipes single ; whereas the others form an assemblage of pipes joined together. The sea worms, from the number and junction of their parts, are multivalves. The shells of pipes called dentales and antales, are distin- guished from each other only by their size, the antales being much the least. The sea-pencil, or watering spout, is the most remarkable shell of this tribe, and must be considered as having a specific character, either by its form, which is straight, or the singularity of its superior extre- mity, which is perforated like the spout of a watering pot. The shell, pierced with many holes, is found with its natural covering in our seas. It is finely nakered within, and in the middle of its hollow or cavity contains many small pearls.

PIPER (Francis Le), an eminent English painter, the son of a gentleman in Kent, de- scended from a Walloon family. His father gave him a liberal education, but his genius led him to painting, in which he had a peculiar talent ; for he needed but to see a face once, and would paint as exact a likeness as if the person had sat often. He also painted landscapes well ; but delighted in painting faces

peculiarly strik- ing or ugly. He likewise modelled figures in wax to the life. In his travels he was equally whimsical. He often set out on a tour through France, the Netherlands, Germany, and even Egypt, without taking leave of his friends, or warning them of his return. He died in Alder- man bury in 1740, in consequence of his surgeon pricking an artery when bleeding him.

PIPER, in ichthyology. See TRIGLA.

PIPER, in botany, pepper; a genus of the trygynia order, and diandria class of plants; natural order second, piperitae. There are twenty species ; the most remarkable are : — 1 . P. amalago, or black pepper, and the piper inequale, with some other species, are indigenous, and named joint wood, or peppery elders. The first bears a small spike, on which are attached a number of small seeds of the size of mustard. The whole plant has the exact taste of the East India black pepper.

2. P. betelum, the betel, or betle, is a creep- ing and climbing plant like the ivy; and its leaves a good deal resemble those of the citron, though they are longer and narrower at the ex- tremity. It grows in all parts of India, but thrives best in moist places. The natives culti- vate it like the vine, placing props for it to climb upon ; and it is a common practice to plant it against the tree which bears the areca nut. At all times of the day, and even in the night, the Indians chew the leaves of the betel, the bitter- ness of which is corrected by the areca that is wrapped up in them. There is constantly mixed with it the chinam, a kind of burnt lime made of shells. The rich frequently add per- fumes, either to gratify their vanity, or their sen-

suality; as it is a powerful incentive to love. Betel is taken after meals ; it is chewed during a. visit ; it is offered when you meet, and when you separate ; in short, nothing is to be done without betel. If it is prejudicial to the teeth, it assists and strengthens the stomach. At least, it is a general fashion that prevails throughout India.

3. P. inequale, the long pepper of Jamaica. The bush grows taller than the amalago. The leaves are broad, smooth, and shining. The fruit is similar to the long pepper of the shops but smaller. The common people in Jamaica sea- son their messes with the black pepper. To pre- serve both, the fruit may be slightly scalded when green, then dried, and wrapped in paper.

4. P. siriboa, with oval, heart-shaped, nerved leaves, and reflexed spikes. This is the plant which produces the pepper used in food. It is a shrub whose root is small, fibrous, and flexible ; it rises into a stem,

which requires a tree 01 i prop to support it. Its wood has the same sort of knots as the vine ; and, when it is dry, it ex- actly resembles the vine branch. The leaves, which have a strong smell and a pungent taste, are of an oval shape; but they diminish towards the extremity, and terminate in a point. From the flower buds, which are white, and are some- times placed in the middle and sometimes at the extremity of the branches, are produced small berries resembling those of the currant tree. Each of these contains between twenty and thirty corns of pepper ; they are commonly gathered in October, and exposed to the sun seven or eight days. The fruit, which was green at first and afterwards red, when stripped of its covering, assumes the appearance it has when we see it. The largest, heaviest, and least shrivelled, is the best. The pepper plant flourishes in the islands of Java, Sumatra, and Ceylon, and more parti- cularly on the Malabar coast. It is not sown but planted ; and great nicety is required in the choice of the shoots. It produces no fruit till the end of three years ; but bears so plentifully the three succeeding years, that some plants yield between six and seven pounds of pepper. The bark then begins to shrink ; and the shrub declines so fast that in twelve years it ceases bearing. The culture of pepper is not difficult : it is sufficient to plant it in a rich soil, and care- fully to pull up the weeds that grow in great abun- dance round its roots, especially the first three years. As the sun is highly necessary to the growth of the pepper plant, when it is ready to bear, the trees that support it must be lopped to prevent their shade from injuring the fruit. When the season is over, it is proper to crop the head of the plant. Without this precaution, there would be too much wood, and little fruit. See a full account of the method of cultivating pepper in Sumatra, in Marsden's History of Sumatra, or New Annual Register, 1783. The pepper ex- ported from Malabar, which was formerly en- tirely in the hands of the Portuguese, and is at present divided between the Dutch, British, and French, amounts to about 10,000,000 weight.

PIPERINE is a name given to a new vege- table principle extracted from black pepper by M. Pelletier. To obtain it, black pepper was digested repeatedly in alcohol, and the solution

evaporated, until a fatty resinous matter was left. This, on being washed in warm water, be- came of a good green color. It had a hot

and burning taˆte ; dissolved readily in alcohol, less so in ether. Concentrated sulphuric acid gave it a fine scarlet color. The alcoholic solution after some days deposited crystals ; which were purified by repeated crystallisation in alcohol and ether. They then formed colorless four- sided prisms, with single inclined terminations. They have scarcely any taste. Boiling water dissolves a small portion; but not cold water. They are soluble in acetic acid : from which combination feather-formed crystals are obtained. This substance fuses at 212° Fahrenheit. The fatty matter left after extracting the piperine is solid at a temperature near 32°, but liquifies at a slight heat. It has an extremely bitter and acrid taste, is very slightly volatile, tending rather to decompose than to rise in vapor. It may be considered as composed of two oils : one volatile and balsamic ; the other more fixed, and containing the acrimony of the pepper.

PIPE TREE. The lilac tree.

PIPE TREE, in botany. See SYRINGA.

PIP'KIN, n. s. Diminutive of pipe, a ves- sel. A small earthen boiler.

Some officer might give consent To a large covered pipkin in his tent. King.

A pipkin there like Homer's tripod walks. Pope.

PIPLEY, or PIPALI, a town of Hindostan, in the province of Orissa, district of Mohurbunge, situated on the Subuenreeka River, twenty-two miles north-east from Balasore. About the mid- dle of the seventeenth century this was a great resort of European trade, whence the Dutch shipped annually 2000 tons of salt : and the first permission obtained by the English from the Mogul emperors to trade with Bengal was re- stricted to this place, now almost unknown. Since that period the floods have washed away great part of the town.

PI PLY, a town in the province of Orissa, district of Cuttak, thirty miles south from the town of Cuttak.

PIP'PIN, n. s. Dutch puppynghe. — Skinner. A sharp apple.

You shall see mine orchard, where, in an arbour, we will eat a last year's pippin of my own graffing.

Shakspeare.

Pippins take their name from the small spots or pips that usually

appear on the sides of them : some are called stone pippins from their obdurateness ; some Kentish pippins, because they agree well with that soil ; others French pippins, having their origi- nal from France, which is the best bearer of any of these pippins ; the Holland pippin and the russet pippin, from its russet hue ; but such as are distin- guished by the names of grey and white pippins are of equal goodness ; they ate generally a very pleasant fruit and of good juice, but slender bearers.

Mortimer's Husbandry.

Entertain yourself with a pippin roasted.

Harvey.

The pippin -women I look upon as fabulous.

Addison.

His foaming tusks let some large pippin grace, Or 'midst those thundering spears an orange place.

King. This pippin shall another trial make :

See from the cere two kernels brown 1 take. Cay.

On twigs of hawthorn he regaled, On pippins' russet peel,

And when his juicy sallads failed, Sliced carrot pleased him well. Cowper.

PIPPIN, or PIPPEN. See PYRUS.

PIPRA, in ornithology, a genus of birds of the order of passeres. Latham gives it the name of manakin, and so does Buffon, who informs us that it was bestowed upon them by the Dutch settlers in Surinam. Latham describes twenty- five different species, and five varieties. The general character is, that the bill is short, strong, hard, and slightly incurvated, and the nostrils are naked. The middle toe is connected to the outer as far as the third joint : this character, however, is not universal, some species differing in this particular. The tail is short. This genus has a considerable resemblance to the genus parus, or titmouse. They are supposed to inhabit South America only, but Mr. Latham has seen many of those species which he has described, that came from other parts, which certainly be- long to this genus. — Buffon differs widely in his arrangement from him, and only

enumerates six species. lie gives the following account of the genus in general : — ‘The natural habits common to them all were not known, and the observa- tions which have been made are still insufficient to admit an exact detail. We shall only relate the remarks communicated to us by Sonnini of Manoncour, who saw many of these birds in their native climates. They inhabit the immense forests in the warm parts of America, and never emerge from their recesses to visit the cleared grounds of the vicinity of the plantations. They fly with considerable swiftness, but always at a small height, and to short distances ; they never perch on the summits of trees, but on the middle branches ; they feed upon small wild fruits, and also eat insects. They generally occur in small bodies of eight or ten of the same species, and sometimes intermingle with other flocks of the same genus, or even of a different genus, such as the Cayenne warblers, &c. It is commonly in the morning that they are found thus assem- bled, and then seem to be joyous, and warble their delicate little notes. The freshness of the air seerns to inspire the song; for they are silent during the burning heat of the day, and disperse and retire to the shade of the thickest part of the forest. This habit is observed, indeed, in many kinds of birds, and even in those of the- woods of France, where they collect to sing in the morning and evening; but the nianakins never assemble in the evening, and continue to- gether only from sun-rise to nine or ten o’clock A. M. and remain separate during the rest of the day and the succeeding night. In general they prefer a cool humid situation, though they never frequent marshes or the margins of lakes.’

1. P. musicalis, or, as Mr. Latham calls it, the tuneful manakin. Its length is four inches, the bill is dusky, the forehead yellow, and the crown and nape blue : the chin, sides of the head below the eyes, and the throat, are black; the upper part of the back, the wings, and the tail, are dusky black ; the tail is very short ; the lower part of the back and rump, the breast, belly, vent, and thighs, are orange-colored ; the legs we

dusky. It is a native of St. Domingo, where it has gained the name of organiste from its note, form- ing the completest octave in the most agreeable manner, one note successively after another. It is said not to be uncommon, but not easy to be shot, as, like the creeper, it perpetually shifts to the opposite part of the branch from the specta-

tor's eye, so as to elude his vigilance. It is most likely the very bird mentioned by Du Pratz, above quoted, whose notes, he says, are so varied and sweet, and which warbles so tenderly, that those who have heard it value much less the song of the nightingale. It is said to sing for nearly two hours without scarce taking breath, and, after a respite of about the same time, begins again. Du Pratz, who himself has heard it, says that it sung perched on an oak, near the house he was then in.

2. P. rupricola, the crested manakin, is about the size of a small pigeon, being about ten or twelve inches long. The bill is about an inch and a quarter long, and of a yellowish color. The head is furnished with a double round crest ; the general color of the plumage is orange, in- clining to saffron; the wing-coverts are loose and fringed; the quills are partly white and partly brown ; the tail feathers are twelve ; the base half of the ten middle ones is of an orange color, thence to the ends they are brown ; the outer feathers are brown, and the base half of the inner web is orange ; all are similarly fringed ; the upper tail coverts are very long, loosely webbed, and square at the ends; the legs and claws are yellow. The female is altogether brown, except the under wing-coverts, which are of a rufous orange ; the crest is neither so com- plete nor rounded as that of the male. Both males and females are at first gray, or of a very pale yellow, inclining to brown. The male does not acquire the orange color till the second year, neither does the female the full brown. ' This beautiful species,' says Latham, ' inhabits vari- ous parts of Surinam, Cayenne, and Guiana, in rocky situations ; but is nowhere so frequent as in the mountain Luca, near the river Oyapoc, and in the mountain Courouaye, near the river Aprouack, where they build in the cavernous hollows, and the darkest recesses. They lay two round white eggs, the size of those of a pigeon, and make the nest of a few dry bits of sticks. They are in general very shy, but have been fre- quently tamed, insomuch as to run at large among the poultry. It is said that the female, after she has laid eggs for some years, and ceases so to do more, becomes at the ensuing moult of the same color as the male, and may be mistaken for him ; in this imitating the females of various kinds of poultry, such as the peacock, pheasant, &c. See PAVO, &c. A most complete pair is in the Leverian Museum.' Our author describes a variety of this species, which he calls the Pe- ruvian manakin. It is longer than the preced- ing, especially in the tail, and the upper coverts of it are not truncated at the ends ; the wing coverts are not fringed as in the rock manakin, and the crest is not so well defined as in that bird ; the general color of the plumage inclines much to red ; the second coverts and rump are of an ash color ; the wings and tail are black ;

the bill and legs are as in the last described. It is an inhabitant of Peru, whence its name.

PIQUA, or PIQUATOWN, a post town of Mi- ami county, Ohio, on the Great Miami, 130 miles from its mouth ; eight miles north of Troy, thirty south of Wapaghkanetta, sixty-seven W. N. W. of Columbus, 125′ south of Fort Meigs. It is delightfully situated, and is a flourishing town.

PI'QUANT, adj. Fr. piquant. Piercing; stimulating to the taste.

Some think their wits asleep, except they dart out somewhat that is piquant, and to the quick ; that is a vein that would be bridled ; and men ought to find the difference between saltness and bitterness

Bacon's Essays.

A small mistake may leave upon the mind a last- ing memory of having been piquantly, though wittily, taunted. Locke.

Men make theii railleries as piquant as they, can to wound the deeper. Government of the Tongue.

There are vast mountains of a transparent rock, extremely solid, and as piquant to the tongue as salt. Addison on Italy.

PIQUE, n. s. & v. a. Fr. pique, piquer. Ill will ; offence taken ; petty malevolence : to touch with, or provoke to ill will ; also, with the reciprocal pronoun, to value ; to fix reputation as on a point. Fr. se piquer.

He had never any the least pique, difference, or jea- lousy with the king his father. Bacon's Henry VII.

Men take up piques and displeasures at others, and then every opinion of the disliked person must partake of his fate. . Decay of Piety.

Though he have the pique and long, 'Tis still for something in the wrong ; As women long, when they're with child, For things extravagant and wild. Hudibras. Add long prescription of established laws. And pique of honour to maintain a cause, And shame of change. Dryden.

Men apply themselves to two or three foreign, dead, and which are called the learned, languages j and pique themselves upon their skill in them.

Locke.

Out of a personal pique to those in service, he stands as a looker-on, when the government is at- tacked. Addison.

Piqued by Protogenes' fame, From Cos to Rhodes Apelles came, To see a rival and a friend, Prepared to censure or commend. Prior.

Why pique all mortals, that affect a name ! A fool to pleasure, yet a slave to fame ! Pope. The lady was piqued by her indifference, and began to mention going away. Female Quixote.

PIQUE, Fr. in music, or Piquiren, a Ger- man expression for staccato ; but these terms apply more generally to violin passages, because they denote a greater degree of staccato execih- tion than the piano forte is capable of producing.

PIQUEER'ER, n. s. Rather pickeerer. Ital. piccare. A robber ; plunderer.

When the guardian professed to engage in faction, the word was given, that the guardian would soon be seconded by some other picqueerers from the same camp. Swift.

PIQUET', n. s. Fr. picquet. A game at cards. See PICQUET.

She commonly went up at ten, | Unless piquet was in the way. Prior.

Instead of entertaining themselves at ombre or pi- quet, they would wrestle and pitch the bar. Spectator.

PIRA ACANGATA, the name of a Brasilian fish which resembles the perch in size and shape, seldom exceeding four or five inches in length ; its mouth is small ; its tail forked. On the back it has only one long fin, supported by rigid and prickly spines. This fin it can depress at pleasure, and sink within a cavity in the back. Its scales are of a silvery white color ; it is wholesome and well tasted.

PIRA COABA, the name of an American fish of the trutaceous kind, of a very delicate flavor. It grows to twelve inches ; its nose is pointed, and its mouth large, but without teeth ; the upper jaw is longer than the under one, and hangs over like a cartilaginous prominence; its

eyes are very large, and its tail is forked ; under each of the gill fins there is a beard of six white fila- ments, covered with silvery scales. Marcgrave. PIRA PIXANGA, another Brasilian fish of the turdus or wrasse kind, called by some the gat- visch. It is generally about four or five inches long ; its mouth is pretty large, and furnished with very small, and very sharp teeth ; its head is small, but its eyes are large and prominent, the pupil being of a fine turquoise color, and the iris yellow and red in a variety of shades. The coverings of the gills end in a triangular figure, and are terminated by a short spine or prickle ; its scales are very small, and so evenly arranged, and closely laid on the flesh, that it is very smooth to the touch ; its tail is rounded at the end ; its whole body, head, tail, and fins, are of a pale yellow color, variegated all over with very beautiful blood-colored spots : these are round, and of the size of hemp seed on the back and sides, and something larger on the belly ; the fins are all spotted in the same man- ner, and are all marked with an edge of red. It is caught among the rocks, and about the shores, and is a very well tasted fish.

PrRACY,w.s.) Fr. pirate; Lat. pi- PI'RATE, n. s. & v. n. £ rata ; Greek 7r«pari)C' PIRAT'ICAL, adj.) Robbery at sea ; a sea- robber : to take by robbery : predatory ; consist- ing with robbery : all these terms have been me- taphorically applied by booksellers and authors, to the fraudulent invasion of COPYRIGHT, which see.

Pirates all nations are to prosecute, not so much in the right of their own fears, as upon the band of human society. Bacon.

Having gotten together ships and barks, fell to a kind of piratical trade, robbing, spoiling, and taking prisoners the ships of all nations. Id.

Our gallants, in their fresh gale of fortune, began to' scum the sea with their piracies. Carew.

Now shall the ocean, as thy Thames, be free From both those fates of storms and piracy. Waller.

His pretence for making war upon his neighbours was their piracies ; though he practised the same trade. Arbuthnot.

When they were a little got out of their former condition, they robbed at land and pirated by sea.

Id. Relate, if business or the thirst of gain

Engage your journey o'er the pathless main,

Where savage pirates seek through seas unknown The lives of others, vent'rous of their own.

Pope.

The errors of the press were multiplied by pirati- cal printers ; to not one of whom I ever gave any other encouragement than that of not prosecuting them. Id.

PIRACY, by the ancient common law, if com- mitted by a subject, was held to be a species of treason, being contrary to his natural allegiance ; and, by an alien, to be felony only : but now, since the statute of treasons, 25 Edw. III. c. 2r it is held to be only felony in a subject. Formerly it was only cognisable by the admiralty courts, which proceed by the rules of the civil law. But, it being inconsistent with the liberties of the nation that any man's life should be taken away, unless by the judgment of his peers, or the common law of the land, the statute 28 Hen. VIII. c. 15 established a new jurisdiction for this purpose, which proceeds according to the course of the common law. This offence, by common law, consists in committing those acts of robbery and depredation upon the high seas, which, if committed upon land, would have amounted to felony there. But, by statute, some other offences are made piracy also : as, by statute 1 1 and 12 W. III. c. 7, if any natural born subject commits any act of hostility upon the high seas, against others of his majesty's sub- jects, under color of a commission from any foreign power ; this, though it would only be an act of war in an alien, shall be construed piracy in a subject. And farther, any commander, oc. other seafaring person, betraying his trust, and running away with any ship, boat, ordnance, ammunition, or goods; or yielding them up voluntarily to a pirate; or conspiring to do these acts ; or any person assaulting the commander of a vessel, to hinder him from fighting in de- fence of his ship ; or confining him, or causing or endeavouring to cause a revolt on board ; ' shall, for each of these offences, be adjudged a pirate, felon, and robber, and shall suffer death, whether he be principal, or merely accessory by setting forth such pirates, or abetting them before the fact, or receiving or concealing them or their goods after it. By the stat. 8 Geo. I. c. 24, the trading with known pirates, or furnishing them with ammunition, or fitting out any vessel for that purpose, or in anywise consulting, combin- ing, confederating, or corresponding with them ; or the forcibly boarding any merchant vessel, though without seizing or carrying her off, and destroying or throwing any of the goods over- board ; shall be deemed piracy ; and such ac- cessories to piracy as are described by the sta- tute of king William are declared to be princi- pal pirates ; and all pirates convicted by virtue of this act are made

feions without benefit of clergy. By the same statutes also (to encourage the defence of merchant vessels against pirates), the commanders or seamen wounded, and the widows of such seamen as are slain, in any piratical engagement, shall be entitled to a bounty, to be divided among them, not exceed- ing one-fiftieth part of the value of the cargo on board : and such wounded seamen shall be en- titled to the persion of Greenwich hospital;

which no other seamen are, except only such as have served in a ship of war. And if the com- mander shall behave cowardly, by not defend- ing the ship, if she carries guns or arms ; or shall discharge the mariners from fighting, so that the ship falls into the hands of pirates ; such commander shall forfeit all his wages, and suffer six months imprisonment. Lastly, by statute 18 Geo. II. c. 30, any natural born subject or denizen, who in time of war shall commit hos- tilities at sea against any of his fellow subjects, or shall assist an enemy on that element, is liable to be tried and convicted as a pirate.

PIIUEEUS, or PIR.&US, portus, in ancient ge- ography, a celebrated port on the west of Athens, consisting naturally of three harbours or basins, was originally a village of Attica, on an island ; and, though distant forty stadia from Athens, was joined to it by two long walls, and itself walled round ; with a very commodious and safe har- bour. The whole of its compass was sixty stadia, including the Munychia. Near the Piraeus stood the sepulchre of Themistocles ; whither his friends conveyed his bones from Magnesia. The entrance of the Piraeus is narrow, and formed by two rocky points, one belonging to the pro- montory of Action, the other to that of Alcimus. W ithin were three stations for shipping ; Kan- tharus, so called from a hero of that name; Aphrodisium, from a temple of Venus ; and Zea, the resort of vessels laden with grain. Here was a demos or borough town of the same name before the time of Themistocles, who re- commended the exchanging its triple harbour for the single one of Phalerum, both as more capa- cious and as better situated for navigators. The wall was begun by him when archon, in the second year of the seventy-fifth Olympiad, A. A. C. 477 ; and afterwards he urged the Athe- nians to complete it as the importance of the place deserved. This whole fortification was of hewn stone, without cement or other material, except lead and iron, which were used to hold together the exterior

ranges or facings. It was so wide that the loaded carts could pass on it in different directions, and it was forty cubits high, which was, however, only half what he had de- signed. Hippodamus, a celebrated architect, was employed to lay out the ground. Five porticoes, which uniting formed the long portico, were erected by the ports. Here was an agora or market-place, and, farther from the sea, another called Hippodamia. Near the vessels were dwellings for mariners. A theatre was opened, temples were raised, and the Piraeus, which sur- passed the city in utility, began to equal it in dignity. The cavities and windings of Munychia, natural and " artificial, were filled with houses ; and the whole settlement, comprehending Phale- rum and the ports of the Piraeus, with the arse- nals, the storehouses, the famous armory of which Philowas the architect, and the sheds for 300, and afterwards 400, triremes, resembled the city of Rhodes, which had been planned by the same fiip- podamus. The ports, on the commencement of the Peloponnesian war, were secured with chains. Sentinels were stationed, and the Piraeus was care- fully guarded. It was reduced with gieat diffi- culty by Sylla, who demolished the walls, and

set fire to the armory and arsenals. In the civil war it was in a defenceless condition. Calenus, lieutenant to Caesar, seized it, invested Athens, and ravaged the territory. Strabo, who lived under the emperors Augustus and Tiberius, ob- serves that the many wars had destroyed the long walls, with the fortress of Munychia, and had contracted the Piraeus into a small settlement by the ports and the temple of Jupiter. In the second century, besides houses for triremes, the temple of Jupiter and Minerva remained, with their images in brass, and a temple of Venus, a portico, and the tomb of Themistocles. The port of the Piraeus has been named Porto Lione, from its marble lion, and also Porto Draco. The lion was a piece of admirable sculpture, ten feet high, and reposing on its hinder parts. It was pierced, and, as some think, belonged to a foun- tain. Near Athens, in the way to Eleusis, was another, couchant; probably its companion. Both these were removed to Venice by general Morosini, and placed in front of the arsenal.

PIRANESI, an eminent Venetian architect and engraver, bom about 1711. He was re- markable for a bold and free manner of etching, whereby he drew his figures upon the plate at once. He died in 1780.

PIRATE is used for an armed ship that roams the seas without any legal commission, and seizes or plunders every vessel she meets indis- criminately, whether friends or enemies.

PI RENE, a fountain sacred to the Muses, springing below the top of

the Acrocorinthus, a high and steep mountain which hangs over Corinthus. Its waters were agreeable to drink, ex- tremely clear, very light and pale, representing the grief of Pirene, and the paleness brought on by the too eager pursuits of the Muses. Plin. Paus. Strab. Athen. Pers.

PIRENE, in mythology, a daughter of the river god Achelous, who had two sons by Neptune, named Leches and Cenchrius, from whom the two harbours of Corinth were named. The latter was killed by Diana, and Pirene was so disconsolate for his death that she wept continually till she was dissolved into the fountain that bears her name.

PIRISTENA, or PRISTENA, a town of Tur- key in Europe, near Cossora, in the west of Ro- mania, 118 miles east of Ragusa. It is a bishop's see, and contains 9000 or 10,000 inhabitants, but is little known or visited by travellers.

PIRITHOUS, in fabulous history, a king of the Lapithae, in Thessaly, son of Ixion and the cloud ; or, as others say, of Jupiter and Dia. Hearing of the exploits of Theseus, he resolved to try his valor by invading Attica ; but, when the two monarchs met at the head of their armies, they formed a lasting friendship, which after- wards became proverbial. Pirithous soon after married Hippodamia, the daughter of Adrastus, king of Argos, when as well as the Centaurs the gods themselves were invited, but Mars, the god of war, being excepted, avenged the neglect by occasioning dissension among the guests. The centaur Eurythjon, attempting to offer violence to the bride, was killed by Theseus ; on which a general battle ensued between the Centaurs and Lapithae, wherein the former were defeated. See

LAPITHJE. After this, Hippodamia dying, Piri- thous became disconsolate ; till, consulting with Theseus, they formed the desperate enterprize of descending to hell, and carrying off the goddess Proserpine; for which Pluto condemned Piri- thous to be tied to Ixion's wheel, or worried by the dog Cerberus. But he was soon after deil- vered by Hercules, and restored to his kingdom

PIRMASENZ, a town in the Bavarian pro- vince of the Rhine, chiefly noted for its respectable public buildings, and having been in the course of the last century the capital of Hesse Darmstadt. At this period it had nearly 9000 inhabitants ; but they have since diminished to little more than one-third of that number. It has an elegant council- house, a Lutheran school and church, and a Calvinist church. On the 14th September 1793 the duke of Brunswick obtained an ad- vantage over the French near this town. Thir- teen miles E. S. E. of Deux Ponts, and thirty- five west of Spire.

PIROMALLI (Paul), a learned dominican of Calabria, who was sent a missionary into the east. He remained long in Armenia, where he brought back to the Romish faith many schis- matics and Eutychians, and finally the patriarch himself, who had before thrown every obstacle in his way. He afterwards went into Georgia and Persia, and into Poland, as Pope Urban VIII. 's nuncio, to appease the disturbances oc- casioned by the Armenians, whom he reunited to the church. In the course of his return to Italy he was taken by some Corsairs who car- ried him prisoner to Tunis. As soon as he was ransomed, he went to Rome, and gave an ac- count of his mission to the pope, who conferred pon him signal marks of his esteem ; entrusted him with the revisal of an Armenian Bible, and sent him again into the east where he was pro moted, in 1655, to the bishopric of Nassivan. After having governed that church for nine years, he returned to Italy, and took the charge of the church of Basignano, where he died in 1667. His charity, and other virtues, did honor to his character and office. There are extant, of his writings, some Controversial and Theological works ; an Armenian and a Persian Dictionary ; an Armenian Grammar; and a Directory of great use in correcting Armenian books.

PIRON (Alexis) the son of an apothecary, was born at Dijon in 1689,

and spent thirty years in dissipation. He was obliged to quit Dijon, on account of an ode he had written, which gave great offence. He supported him- self at Paris by the elegance of his hand-writing, and lived in the house of M. de Bellisle, as his secretary, and afterwards with a financier. His reputation as a writer commenced with some pieces which he published, which showed strong marks of original invention ; but what fully es- tablished his character in this way was his comedy entitled Metromony, which was the best that had appeared in France since R.egnard's Gamester. This performance, in five acts, well conducted, replete with genius, wit, and humor, was acted with the greatest success upon the French stage in 1738 ; and the author met with every attention in the capital which was due to a man of genius. He died the 21st of January

1773, aged eighty-three. A collection of hi* works appeared in 1776 in 7 vols. 8vo. and 9 vols. 12mo. The principal pieces are, Gusta- vus and Ferdinand Cortez, two tragedies, and The Courses of Tempe, an ingenious pastoral.

PISA, in ancient geography, a town of Elis, on the Alphaeus, at the west end of the Pelo- ponnesus, founded by Pisus. Oenomaus reigned in it, till he was conquered by Pelops. See PELOPS. Its inhabitants accompanied Nestor to the Trojan war, and long enjoyed the privilege of presiding at the Olympic games, which were celebrated near Pisa. But this honorable dis- tinction proved at last their destruction. For they were envied for it by the people of Elis, who made war upon them, and after many bloody battles, with various success, at last took their city and totally demolished it. Pisa was famous for its horses ; its inhabitants were called Pisaei and Pisates ; and a colony of them founded Pisae, now Pisa, in Italy.

PISA, a city in the north-west of Italy, and grand duchy of Tuscany, situated on the Arno. It is six miles in circuit and stands on an exten- sive and richly cultivated plain, bounded by the Appennines on one side, and open on the other to the Mediterranean. The noble river divides the town into two nearly equal parts ; the quays, which run along either bank from one extremity to the other, are spacious, and bordered by rows of good houses ; the bridges are three in num- ber, and the middle one is built of marble. The streets have raised flags for foot passengers, and are in general broad and well-paved. The cathedral, with its baptistery, cemetery, and bel- fry, is perhaps the finest specimen that exists of the gothico-moresco style of building. The ex- terior is covered with marble, diversified with columns and other remains of antiquity, and surmounted by a handsome dome: The interior is adorned with numerous statues and paintings. The

baptistery is of beautiful marble, embel- lished in the interior with columns and arcades. The Campo Santo, a large oblong building, with elegant gothic windows, encloses a court formerly used as a cemetery, in which is a variety of mo- numents, sarcophagi, and other Greek and Ro- man antiquities. But, of all the buildings of Pisa, the most curious is a cylindrical tower of 188 feet in height, constructed of successive rows of pillars, chiefly marble, and remarkable for its inclination of about fifteen feet from the perpendicular. This is ascribed by some writers to design, by others to the sinking of a part of the soil on which the edifice stands ; it does not, however, appear in the least to affect the solidity of the building, which has stood fop more than six centuries. The city contains several other elegant churches : the square of the university likewise contains several marble buildings ; among other public establishments the hospital for 30O patients is worthy of notice. The university is one of the oldest in Italy. Though reduced by the subjugation of Pisa to the Florentines, it was afterwards reinstated, and is still accounted the seat of superior Tuscan education. It has four col- leges, with forty professors ; a library, botanical garden, cabinet of natural history, and an obser- vatory.

Pisa was one of the twelve towns of ancient Etjuria, afterwards augmented by a colony from Rome. In the tenth century it took the lead of the commercial republics of Italy, and in the eleventh its fleet maintained a superiority in the Mediterranean, and assisted in the crusades. But in the thirteenth century the ascendancy of Genoa cast Pisa into the shade, and since the beginning of the sixteenth it has been subject to Florence. Its population must at this period evidently have been far beyond its present limit. Its trade has long been very circumscribed, Leghorn absorbing the foreign intercourse : it contains, however, a few manufactures, and the mildness of the climate during winter attracts hither a number of invalids. The baths in the neighbourhood, called the Bagni di Pisa, are also much resorted to. Water is brought to the town by a very long aqueduct. The fortifica- tions consist of a wall and ditch, a castle and a modem citadel. It is the see of an archbishop, and has given birth to Galileo, Algarotti, and various eminent persons. Population 17,000. It stands about eight miles from the mouth of the river, thirteen north by east of Leghorn, and thirty west of Florence.

PIS/E, in ancient geography, a town of Etru- ria, built by a colony of Pissei, from Pisa in Pe- loponnesus. Uionysius of Halicarnassus says it

was built before the Trojan war, but others say it was built by those Pisaeans who were ship- wrecked on the coast of Italy in their return irom it. The people were called Pisani, and were once very powerful. They conquered Sar- dinia, Corsica, and the Baleares Islands. It is now called Pisa.

PISAN (Thomas), a celebrated astrologer of Bologna, who was invited to Venice by Forli, counsellor of that republic, who gave him his daughter in marriage. Charles V. of France in- vited him to his court, whither he went in 1380, and predicted the day of his death, which, it is said, happened accordingly.

PISAN (Christina), daughter of the astrologer, was born in Venice in 1363, and was an accom- plished writer. She wrote the Life of King Charles V. of France, and was much patronised by Charles VI.

PISAURUM, in ancient geography, a town of Italy, in Picenum. It became a Roman colony, in the consulship of Claudius Pulcher. It is now called Pesaro. It was destroyed by an earthquake, in the beginning of Augustus's reign.

PISCATAQUA, a river of New Hampshire, which rises in Wakefield, separates New Hamp- shire from Maine, and, pursuing a S.S. E. course of about forty miles, flows into the Atlantic, be- low Portsmouth. From its source to Berwick lower falls it is called Salmon fall river ; thence to the junction of the Chocheco it takes the name of Newichawannock, and afterwards that of Piscataqua. By means of the Piscataqua and its tributary waters a sloop navigation is opened to South Berwick, Dover, Newmarket, Durham, and Exeter. Piscataqua harbour, formed by the mouth, is one of the finest on the continent.

PISCAIAQUIS, a river of Maine, which runs east into the Penobscot, twenty-five miles

below the junction of the Metawamkeak. Length 100 miles.

PISCATAQUOG, a river of New Hampshire, which rises in Deerfield and Francestown, and runs E. S. E. into the Merrimack, in north-east corner of Bedford.

PISCA'TION, n. s. ˆ Lat. piscatio, piscato-

PIS'CATORY, adj. > rius, piscis and voro.

PISCIV'OROUS. 3 The act or art of fishing : relating to fishes: living on fish.

There are four hooks of cynegeticks, or venation, five of halieuticks, or piscation, commented by Ritter- husius. Browne.

In birds that are not carnivorous, the meat is swal- lowed into the crop or into a kind of ante-stomach, observed in piscivorous birds, where it is moistened and mollified by some proper juice. Ray.

On this monument is represented, in bas-relief, Neptune among the satyrs, to show that this poet was the inventor of piscatory eclogues. Addison.

PISCES, Lat. piscis, a fish, is the fourth class of the animal kingdom in the system of Linnaeus : the science which treats of the habits and peculiarities of these interesting animals is frequently denominated ichthyology. The great Swedish naturalist includes in this class all those animals who constantly inhabit the water, breathe by means of gills, swim by means of fins, and are mostly covered with cartilaginous scales. The heart has the same structure, and the blood the same qualities, with those of the amphibia ; but the animals belonging to this class are easily distinguished from the amphibia by having no such voluntary command of their lungs, and by having external branchiae or gills.

Fishes are ranked by Cuvier amongst the verte- bral animals, who breathe by means of branchiae or gills, have no trachea or larynx, and whose organs of motion consist of fins. They have a nose unconnected with the organs of respiration ; ear entirely enclosed in the head ; the tympanum, &c., being absent. Both jaws are moveable. The place of the pancreas is supplied by the pyloric caeca. They have moreover a urinary bladder, two ovaries, and a heart consisting of a single auricle and ventricle. They may be distributed into two leading divisions; the cartilaginous, whose skeleton consists of carti- lage ; the bony, where it is formed of a more firm substance. To these we shall again advert.

Popularly fishes may be considered in respect to their general structure, as distinguished into the Compressed, vvhen the diameter from side to side is less than from back to belly : De- pressed, when the diameter from side to side is greater than from back to belly : Oblong, when the longitudinal exceeds the transverse diameter ; Oval, when the base is likewise circular ; Orbi- cular, when the longitudinal and transverse di- ameters are nearly equal; Gibbous, when the back presents one or more protuberances ; cari- nate, ensiform, cuneiform, wedgeshaped, &c. The surface of the body is termed naked when destitute of scales ; scaly when furnished with them ; smooth when the scales are without angles, &c. ; lubricous when provided with a

mucus ; tuberculate, &c. ; loricate, or mailed, when enclosed in a hard integument ; fasciate or banded when marked with zones from il»e

back to the belly ; spinous, striped, reticulate, or checquered, &c.

The parts of the body of fishes are external or internal. The former are

I. The HEAD.— The head is placed at the anterior part of the body, and is obtuse, acute, slanting, aculeate, unarmed, &c. To this member belong the mouth, nose, jaws, lips, teeth, tongue, palate, eyes, and the branchial opercules, membrane and aperture. 1. The mouth is called superior when placed at the upper part of the head : inferior when at the lower part ; vertical when it descends perpendicularly , ho- rizontal when it is parallel to the water in which the fish swims ; oblique when it is neither verti- cal nor horizontal. 2. The nose or snout is cuspidate when its apex terminates in a sharp point; spatula-shaped when its extremity is flattened ; triquetrous or tetraquetrous, having three or four flat sides ; reflex when it is incur- ved towards the belly. 3. The jaws, always two in number, vary in respect to figure, &c., being subulate or awl-shaped; carinate or keel- shaped; dentate, or provided with teeth; naked, not covered with lips, &c. 4. The lips are often not distinctly visible, and are either of a fleshy or a bony consistence ; distinguished into pli- cate, or consisting of folds, and retractile, or capable of being drawn in or out. 5. The teeth are either acute, obtuse, serrate, similar, dissi- milar, &c. 6. The tongue is acute or obtuse ; bifid, or divided into two lobes ; carinate, or ridged on the surface ; dentate, or covered with teeth ; papillous, or covered with fleshy points. 7. The palate is smooth (destitute of teeth or tubercles) or it is denticulate. 8. The nostrils are situated generally before the eyes, and are situated anterior when they occupy the fore part of the rostrum, or snout ; posterior when they occupy the base ; superior when they are on the crown of the head ; cylindrical when they form a tube ; solitary when there is only one on each side the head ; double when there are two. 9. The eyes, which are two in number, consist of the pupil and the iris ; besides which most of them have a firm pellucid membrane, called the nictitant membrane, which serves the purpose of an eyelid. The eyes are covered, semi-covered, or naked, according as they are furnished or otherwise with this membrane ; vertical, or lateral, when situated on the crown or the sides of the head ; binate when both are on the same side of the head ; plane, or depressed, when the convexity of the ball does not rise above the

surface of the head ; convex when they exceed the surface ; saliant when they are very promi- nent. 10. The branchial opercles, or gill-covers, are scaly or bony processes situated on both sides of the head, and close the gills ; they are simple when composed of a single piece ; di- phyllous, triphyllous, &c., when composed of two, three, or more pieces ; ciliate, having the margin fringed ; scabrous when covered with asperities ; striate, or marked with hollow lines ; radiate when the marks run like rays, &c. 11. The branchial, or branchiostegous membrane, formed of crooked bony substances, is under and adheres to the opercula, being capable of being folded or expanded at pleasure ; it is either

patent, i e. projecting beyond the margin of the opercula and latent; or covered, according as it is more or less concealed by them. 12. The aperture of the gills is commonly lateral and cleft, formed by means of the gills and closed by the opercula. It is aculeate, or arched ; oper- culate when covered by the opercles ; pipe- shaped, in the form of a tube.

II. The TRUNK. — This comprehends in fishes all the body, from the nape to the fins, and con- sists of the branchiae or gills, throat, thorax, back, sides, abdomen, lateral line, anus, tail, and scales. 1. The gills are generally formed of four unequal bones, furnished with small soft appendages, like the beards of a feather, of a red color. They are aculeate when provided with spines ; denuded when wanting opercles, &c. 2. The throat is situated between the branchial apertures, and is said to be swelling when it exceeds the level of the body ; carinate when angulated underneath ; plane when in a line with the thorax and head. 3. The thorax is comprehended between the throat and pectoral fin. 4. The back, or upper part of the body, extends from the nape to the origin of the tail. It is apterygious if without fins ; monoptery- gious, dipterygious, &c., if furnished with one or two, &c., fins ; convex, serrate, &c. 5. The sides are between the back and the abdomen. 6. The abdomen is the under part of the trunk, between the extremity of the thorax and the tail ; it is either carinate, serrate, or plane. 7. The lateral line is a line formed by tubercles or lines along the sides, and terminating at the fins; it is straight, curved, broken, interrupted, double, &c. 8. The anus, or vent, is the ex- ternal orifice of the rectum, said to be jugular when situated under the branchial opercles; pectoral when under the gills; remote when distant from the head ; mean equally near the head and the tail. 9. The tail is the solid part of the trunk, and either round, carinate, muri- cate, or apterygious, &c. 10. The scales are cartilaginous integuments, oval ; orbiculate, i. e. nearly round ; smooth ; ciliate, i. e. set with setaceous processes ; serrate, i. e. toothed like a saw ; or imbricate, when the

scales partly lap over one another.

III. The FINS. The fins are bony rays, con- nected by a tender membrane, and denominated, according to their position, dorsal, pectoral, ventral, anal, or caudal. 1. The dorsal fins are situated on the upper part of the trunk, between the head and tail, and vary in number; whence called monopterygious, dipterygious, Sac. ; they are said to be fleshy when covered with a thick skin or muscular substance ; and ramentaceous when furnished with filamentous appendages, &c. 2. The pectoral fins are on each side, about the aperture of the gills, and are solitary, double, or altogether wanting. 3. The ventral fins are in the under part of the fish, and are abdominal, jugular, thoracic, &c., according to their situation. 4. The anal fin is between the anus and the caudal fin, and is bifurcate, or two forked ; coalescing, i. e. united with the caudal fin ; longitudinal, extending from the anus to the tail; posterior when placed at the end of the tail near the caudal fin. 5. The caudal fin

is at the extremity of the tail, and is equal or entire when its rays are of equal length; lanceo- late when the middle rays are the largest; emar- ginate when they are the shortest, &tc.

The internal parts of fishes are,

I. ORGANS AND VISCERA. — The principal organs and viscera that have been distinguished in fishes are the brain, oesophagus or gullet, stomach, swimming or air-bladder, heart, intes- tines, liver, gall-bladder, spleen, urinary-bladder, kidneys, diaphragm, peritonaeum, and ova. Fishes have no external organ of hearing, and were long supposed to have none internal ; but modern naturalists conceive that they have found traces of this organ in a membrane at some dis- tance behind the eyes of several fishes, as the skate, cod-fish, &c. Those who deny the sense of hearing to fishes suppose they perceive sounds through their feeling, being affected by the vi- bratory motion sounds produce in the water.

1. The brain is divided into three lobes, sur- rounded by a kind of matter resembling saliva. In this region are the optic and olfactory nerves.

2. The oesophagus or gullet is short, and scarcely to be distinguished from the stomach, which is a membranous sack divided into two

lobes. 3. The swimming or air-bladder, called also the sound, is an oblong white membranous bag, in which is contained a quantity of elastic air. This organ lies close to the back bone, and has a strong muscular coat, by which it can contract itself. Flat fish are unprovided with this blad- der. 4. The heart is of a triangular form, with the apex upwards, and consists of one auricle and one ventricle. It is enclosed in a pericar- .dium. 5. The intestines are in general short, making only three turns, the last of which ter- minates in a common outlet or vent. 6. The liver ‘s remarkably large, commonly on the left side, and contains a great proportion of oil or fat. 7. The gall-bladder is oval, and is under the right side of the liver. It communicates with the stomach by means of the cystic duct and choledochic canal. 8. The spleen varies in form and color, and is situated near the back- bone, so as to be subject to the alternate con- striction and dilatation of the air-bladder. 9. The urinary bladder is in most fishes of an oval form, terminating under the tail. 10. The kid- neys are two flat pyramidal bodies, of a reddish color, and the length of the abdomen. 11. The diaphragm is a white, shining membrane, which separates the thorax from the abdomen. 12. The peritonaeum is a thin dark membrane, that invests the contents of the abdomen. 13. The ova, or roe, in the females, and the milt, or soft roe in the males, are disposed into two large oblong bodies, one on each side the abdomen.

II. BONES. — The bones of the skeleton of a fish may be divided into those of the head, tho- rax, abdomen, and fins. 1 . The head contains a vast number, in the perch as many as eighty ; those of the skull are the principal ; besides which are those of the palate, the jaw bones, the opercular bones, &c. 2. The thorax is a cavity formed by the sternum, or back-bone, the vertebrae, clavicles, and scapulae. 3. The abdo- men is encompassed by the ribs and ossa pelvis, defending the viscera. 4. The tail is composed

of bones which terminate the vertebral column ; the fins consist of an intertexture of ossicles and firm membranes.

III. MUSCLES. — The muscles in fish consist of the two lateral muscles proceeding from the head to the tail, along the side, which have transverse branches that are similar and parallel : those of the caudal and pectoral fins which have four muscles each, namely, two erectors and two depressors ; each ventral fin has also three muscles, one erector and two depressors. 2. The carinal muscles of the back and tail are slender, closely united, and propor- tioned in number to the dorsal fins. Those fishes with one dorsal fin having one pair of carinal muscles; those with two dorsal fins three pair, Sec. 3. The interspinous muscles are those which raise and depress the dorsal and anal fins, of

which there are four to each inter- spinous ray ; namely, two erectors and two depressors.

IV. VESSELS. — The principal vessels are, . The aorta, attached to the apex of the heart, which sends out numerous branches to the gills, and is afterwards subdivided into very minute vessels. 2. The sinus venosus, which communi- cates with the auricle by a large aperture, and receives at the other end three principal trunks of veins. 3. The lacteals and lymphatics, which, together with the thoracic duct, &e., form a net- work about the heart, and in various parts of the trunk.

We have adopted throughout this work the arrangement of Linnaeus in most departments of natural history : and have described the dif- ferent species of animals under their respective genera. It can only remain in this place to give a brief sketch of the history of ichthyology as a science (if indeed it has any history prior to the time of Linnaeus), and to add his and Cu- vier's principal orders.

The authors who have left treatises on this subject are numerous ; and are ranged by Ar- tedi into their proper classes, with great care. The following is an abstract of his account, with some additions : —

The systematical ichthyologists are Aristotle, Pliny, Isidore, Albertus Magnus, Gaza, the in- terpreter of Aristotle, Marschall, Wootton, Bel- lonius, Rondeletius, Salvian, Gesner, Aldrovand, Johnston, Charlton, Willughby, Ray, Artedi, and Linnaeus.

Those who have written of the fishes of pajv ticular places are, Ovid, of the fishes of the Euxine ; Oppian, of those of the Adriatic ; Au- sonius, of those of the Moselle ; Mangolt, of those of the Podamic lake ; Paulus Jovius, of those of the Tyrrhene Sea ; Bened. Jovius, of those of the lake Larius ; Petrus Gillius, of those of the Massilian Sea ; Figulus, of those of the Moselle ; Salvian, of those of the Tyrrhene Sea ; Schwenkfeldt, of those of Silesia: Schonefeldt, of those of Hamburgh ; Margrave of the Bra- silian fishes ; Ruysel, of those of Amboyna; and Francis Valentine, of those of the same place. Of these authors, Ovid, Ausonius, Op- pian, and Bened. Jovius, wrote in verse, the rest in prose. Those who are to be regarded only as COQJ-

pilers from the works of other writers. Pliny, yElian, Athaeneus, Isidore, the author of the Libri De Natura Iterum, Albertus Magnus, Johannes Cuba, Marschall, Gesner in great part, Aldrovand in great

part, Johnston, Charlton, &c.

In regard to method, some have treated of fishes in alphabetical order ; some have followed a. natural method more or less perfect ; others have attended to no method at all, as Ovid, jElian, Athaeneus, Ausonius, Hildegarde, De Pinguia, Paulus, and Bened. Jovius, Figulus, Salvian in his History of the Roman Fishes, and Ruysch : those who have written alphabeti- cally, are Cuba, Marschall, Salvian in his Tabula Piscatoria, Gesner, Schonefeldt, Johnston.

Among the authors who have adopted some kind of r>ethod, may first be placed those who have treated of fishes according to the place where they are caught ; as Oppian, Rondeletius, Aldrovand, Johnston, and Charlton. Those who have treated of fishes, dividing them into ceta- ceous, spinose, and cartilaginous, are Aristotle, the author of this method, Wootton, Willughby, Ray ; the last two authors have added to this plan the numbering the rays of the fins on the back.

This was the first step towards the arrangement of Linnaeus or Artedi ; for the latter in fact was the original author of the system commonly known as that of the illustrious Swede. Wil- lughby's work, entitled De Historia Piscium, was printed at Oxford in 1686, and unfolded many new and accurate views of the anatomy and physiology of fishes. Ray published, in 1707, his Synopsis Methodica Piscium, which may be regarded as an abridged and corrected view of Willughby's larger work, and as indi- cating a series of genera. This valuable descrip- tive catalogue continued to be appealed to as a standard, till Artedi and Linnaeus effected numerous important changes.

The former of these died before he could mature his plan, and Linnaeus, his friend and coadjutor, first published it in 2 vols. 8vo. under the titles of Bibliotheca Ichthyologia, and Philoso- phia Ichthyologica : republished in 1792 in four vols. But Artedi instituted the orders and genera, and defined the characters on which these divisions are founded. Independently of the cetaceous tribes, which are now classed with the mammalia, his method consisted of four great divisions, viz. 1. The malacopterygian, which denoted those fishes which have soft fins, or fins with bony rays, but without spines : this order included twenty-one genera. 2. The acanthop- terygian, or those with spiny fins, containing sixteen genera. 3. The branchiostegous, which corresponds to the amphibia nantes of Linnaeus, which want the operculum, or branchiostegous membrane: and 4. Thechondropterygian, which answers to that part of the amphibia nantes which have not true bones, but only cartilages, and the rays of whose fins scarcely differ from a membrane. In the first

edition of the System of Nature Linnaeus wholly adopted this method, but more matured reflection led him to make con- siderable alterations.

It may be worth mentioning, in conclusion of this sketch, that Klein and Gronovius have also

been projectors of new ichthyological systems which have rivalled the Linnaean. Klein distri- buted fishes into three sections, according as thej had lungs, and visible or invisible gills ; but his subdivisions were very numerous and complex, and his scheme never extensively adopted. That of Gronovius was founded on the presence or absence, and the number or the nature of the fins : his first class including all the cetaceous animals, and the second all the fishes properly so called. The chondropterygian, and the os- seous or bony, form two other great divisions, and the osseous are sub-divided into bronchios- tegous and branchial. These last are grouped according to the Linnaean rules, but, in the for- mation of the genera, the number of the dorsal fins is admitted as a character. Scopoli also struck out an original path, and assumed the position of the anus as the basis of his three primary divisions; his secondary characters sometimes coincided with those of Gronovius, and sometimes with those of Linnaeus ; while his third series of characters was drawn from the form of the body, or that of the teeth. Gouan, of Montpelier, is another ichthyologist who has attempted to unite and improve the systems of Artedi and Linnaeus. The authors to whom we have thus referred, excepting Belon, Rondelet, and Gronovius, published their works without any regular series of plates ; but there are others who have given very valuable figures of fishes, as Seba, in his collection of the sub- jects of natural history; Catesby, in his Natural History of Carolina; Broussonet, in his Ichthy- ologia; and Bloch, in his Natural History of Fishes, published at Berlin, in German, and , afterwards reprinted in 1785, in French, as a part of the Histoire Naturelle de Buffon. The original work of Bloch includes about 600 spe- cies of fishes, beautifully colored. La Cepede, the friend and continuator of Buffon, also exe- cuted an elaborate and extensive work on the natural history of fishes. He divides them into two secondary classes, viz. the cartilaginous and the osseous; each consisting of four divisions, taken from the combinations of the presence or absence of the operculum, and of the branchial membrane : thus, according to this system, the first division of the cartliaginous includes those fishes which have neither operculum nor branchial membranes; the second, which have no opercu- lum, but a membrane; the third, which have an operculum, but no membrane; and, the fourth, those that have both. The same charac- ters, stated in an inverse order, determine the divisions of the osseous species. Each of

these divisions is distributed into the Linnaean orders, and these again are divided into the Linnsean genera.

In the Linnaean system the fins of fishes are the foundation of the first four orders, and are named from their situation on the animal, viz. the dorsal or back-fins ; the pectoral or breast- fins; the ventral or belly-fins ; the anal or vent- fin ; and the caudal or tail-fin. The ventral-fins are considered by our great naturalist as analo- gous to feet in quadrupeds. The other two orders are formed from the nature of the gills ; thus,

LINN«AN ORDERS.

I. Apodes are fishes destitute of ventral fins.

II. Jugulares are fishes that have ventral fins oefore the pectoral.

III. Thoracic! are fishes that have ventral fins under the pectoral.

IV. Abdominales are fishes that have ventral fins behind the pectoral.

V. Branchiostegous are fishes that have gills destitute of bony rays.

VI. Chondropterygious are fishes that have cartilaginous gills.

The generic character is derived from the shape of the body, the covering, figure, struc- ture, and parts of the head, but principally from the branchiostegous membrane ; and the specific character from the cirri, jaws, fins, spines, late- ral line, digitated appendages, tail, and color.

In Cuvier's and Blumenbacn's systems the last two orders are included in the order pijces car- tilagenei, or cartilaginous fishes, which differ from others in having a cartilaginous instead of a bony skeleton (see CARTILAGINOUS). This method is adopted also in Dr. Shaw's General Zoology.

CUVIER'S SYSTEM may be thus exhibited :

(A) CARTILAGINOUS FISHES.

Order I. Chondropterygii ; having no gill-cover ;

an uterus, with two oviducts.

1. Petromyzon, lamprey.

2. Gastrobranchus.

3. Raia, skate, torpedo, stingray,

4. Squalus, shark, saw-fish.

5. Lophius, sea-devil, frog-fish.

6. Balistes, file-fish.

7. Chimaera.

II. Branchiostegi ; having a gill cover.

1. Accipenster, sturgeon, beluga.

2. Ostracion, trunk-fish.

3. Tetrodon.

4. Diodon, porcupine-fish.

5. Cydopterus, lumpsucker.

6. Centriscus.

7. Syngathus, pipe-fish.

8. Pegasus.

(B) BONY FISHES, divided according to the

situation of their fins. Order I. Apodes; no ventral fins.

1. Mursena, eel kind.

2. Gymnotus, electrical eel.

3. Anarrhichas, sea-wolf.

4. Xiphias, sword-fish.

5. Ammodites, launce.

6. Ophidium.

7. Stromateus.

8. Trichiurus.

II. Thoracici; ventral fins directly under the thoracic.

1. Echeneis, sucking fish.

2. Coryphaena, dorado.

3. Zeus, dory.

4. Pleuronectes, flounder, plaice, dab, hali-

but, sole, turbot.

5. Clisdadon.

6. Sparus.

7. Perca, perch.

8. Scomber, mackarel, bonito, tunny.

9. Mullus, mullet, &c. &c.

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III. Abdominales; ventral fins behind liie tho-

racic ; chiefly inhabit fresh water.

1. Cobitis, loach.

2. Silurus.

3. Salmo, salmon, trout, smelt.

4. Esox, pike.

5. Clupea, herring, sprat, shad.

6. Cyprinus, carp, tench, gold fish, minnow,

Sac. &c.

IV. Jugulares ; ventral fins in the front of the

thoracic.

1 . Gadus, haddock, cod, whiting, ling.

2. Uranoscopus, stargazer.

3. Blennius, blenny.

4. Callionymus, dragonet.

5. Trachinus, weaver.

PISCES, in astronomy, the twelfth sign or constellation of the zodiac. The stars of this constellation in Ptolemy's catalogue are thirty- eight, in Tycho's thirty-six, in Hevelius's thirty- nine, in the Britannic Catalogue, 113. See AS- TRONOMY.

PISCIDIA, a genus of the decandria order and diadelphia class of plants ; natural order thirty-second, papilionaceas. There are two species, viz.

1 . P. Carthaginiensis, with oblong oval leaves, is a native of the West Indies. It differs from the erythrina only in the shape and consistence of the leaves, which are more oblong and stiffer ; but in other respects they are very similar.

2. P. erythrina, the dog-wood tree, grows plentifully in Jamaica, where it rises to twenty- five feet or more ; the stem is almost as large as a man's body, covered with a light colored smooth bark, and sending out several branches at the top without order; the leaves are about two inches long, winged with oval lobes. The flowers are of the butterfly kind, and of a dirty white color; they are succeeded by oblong pods, with four longitudinal wings, and jointed between the cells which contain the seeds. Both species are easily propagated by seeds ; but require ar- tificial heat to preserve them in this country. The negroes in the West Indies make use of the bark of this species to intoxicate fish. When gentlemen have an inclination to divert themselves with fishing, or rather with fish-hunting, they send each of them a negro slave to the woods, to fetch some of the bark of the dog-wood tree. This bark is next morning pounded very small, put into old sacks, carried into rocky parts of the sea, steeped till thoroughly soaked with salt water, and then well squeezed by the negroes to express the juice. This juice imme- diately colors the sea with a reddish hue ; and, being of a poisonous nature, will in an hour make

the fishes, such as groopers, rock-fish, old wives, Welshmen, &c., so intoxicated, as to swim on the surface of the water, quite heedless of the danger ; the gentlemen then send in their negroes, who pursue, swimming and diving, the inebriated fishes, till they catch them with their hands ; their masters standing by, on high rocks, to see the pastime. It is remarkable that, though this poison kills millions of the small fry, it has never been known to impart any bad quality to the fish which have been caught in consequence

of the intoxication. The wood of this tree, although pretty hard, is only fU for fuel ; and even for this purpose the negroes very seldom employ it. The bark is rough, brown, and thick ; the tree sends forth a considerable number of branches, and is well clothed with leaves, which resemble those of the pea, are thick, cottony, and of a deep green. The bark used for the above-mentioned purpose is chiefly that of the roots.

PISCINA, in antiquity, a large basin in a public place or square, where the Roman youth learned to swim ; and which was surrounded with a high wall, to prevent filth from being thrown into it. This word is also used for a la- vatory among the Turks, placed in the middle court of a mosque, or temple, where the mus- sulmans wash themselves before they offer their prayers.

PISCO, a seaport town of the province of lea, Peru. It was formerly a large and rich place; but was taken and sacked in 1624 by some piratical adventurers, and afterwards in 1686 by the buccaneers. In 1687 it was de- stroyed by an earthquake, the sea completely inundating it. The inhabitants then removed to the place where it now stands. The whole town consists of 300 families, chiefly mestizoes, mulattoes, and blacks ; the whites being much the smallest number The road of Pisco is ca- pacious enough to hold a royal navy, but open towards the north ; the wind, however, is rarely in that quarter, and never dangerous. 118 miles south of Lima.

PISGAH, or PHASGAH, a mountain on the other side Jordan, joined to Abarim and Nebo, and running south to the mouth of the Arnon ; from which Moses had a view of the promised land, and where he died,

after appointing Joshua his successsor. Wells takes Pisgah and Nebo to be different names of the same mountain, a part or branch of the mountain Abarim. Or that the top of Nebo was peculiarly called Pisgah; or some other part of it cut out in steps, as the primitive word denotes : and thus it is rendered by Aquila, by a Greek word signifying cut out. PISH, interj. & v. a. A contemptuous ex- clamation. This is sometimes spoken and writ- ten pshaw. ‘ I imagine them formed by chance,’ says Dr. Johnson ; but see PSHAW. An expres- sion of contempt : to express contempt.

There was never yet philosopher That could endure the toothach patiently ; However they have writ the stile of Gods, And make a pish at chance or sufferance.

Shakspeare.

She frowned and cried pish, when I said a thing that I stole. Spectator.

If you shall give way to any of these vicious courses, ye shall grieve the Holy Spirit of God, and that will be a shameful sin of ingratitude in you, how slight soever it may seem to a carnal heart, and by such a one may be past over, and pisht at, in imi- tation of the careless note of Pharaoh ! Bp. Hall.

He turned over your Homer, shook his head, and pished at every line of it. Pupe.

PISIDIA, an inland country of Asia Minor,

between Phrygia, Pamphylia, Galatia, and Isau-

ria. Mela 1. c. 2. Strabo xii. Acts xiii. 14 — 52.

PISIS, a native of Theˆpia, who obtained

great influence among the Thebans, and acted with great zeal and courage in defence of their liberties. He was at last taken prisoner by De- metrius, who made him governor of Thespia.

PISISTRATID.E, the two sons of Pisistratus, viz. Hipparchus and Hippias, who rendered themselves as illustrious as their father. They governed with great moderation; but the name of tyrant or sovereign being insupportable to the Athenians, Harmodius and Aristogiton con- spired against them ; Hipparchus was murdered, and Hippias was at last expelled by the united efforts of the Athenians and their allies. The rest of the Pisistratidas followed him in his ba- nishment ; and

after they had refused to accept the liberal offers of the princes of Thessaly and the king of Macedonia, who wished them to settle in their respective territories, they retired to Sigaeum, which their father had, in the summit of his power, conquered and bequeathed to his posterity. The Pisistratidae were banished from Athens about eighteen years after the death of Pisistratus.

PISISTRATUS, an Athenian, who early dis- tinguished himself by his valor in the field, and by his address and eloquence at home. After he had rendered himself the favorite of the po- pulace by his liberality, and by the intrepidity with which he had fought their battles, particu- larly near Salamis, he resolved to make himself sovereign of his country. Every thing seemed favorable to his ambitious views; but Solon alone opposed him, and discovered his duplicity before the public assembly. He was twice ba- nished, and, upon his being the third time received by the people of Athens as their sove- reign, he sacrificed to his resentment the friends of Megacles, but did *not lose sight of the public good; and, while he sought the aggrandisement of his family, he did not neglect the dignity and the honor of the Athenian name. He died about A.A.C. 528, after he had enjoyed the sovereign power at Athens for thirty three years, and was succeeded by his son Hipparchus. Pisistratus claims our admiration for his justice, his libera lity, and his moderation. It is to his labors that we are indebted for the preservation of the poems of Homer ; and he was the first, according to Cicero, who introduced them at Athens in the order in which they now stand. He also esta- blished a public library at Athens ; and the va- luable books which he had diligently collected were carried into Persia when Xerxes made himself master of Athens.

PIS'MIRE, n. s. Sax. myna ; Belg. pismiere. Mr. Thomson thinks of Teut. maur, and fys, bustle. An- ant; an emmet.

Prejudicial to fruit are pismires, caterpillars, and mice. Mortimer.

His cloaths, as atoms might prevail, Might fit a pismire or a whale. Prior.

PISMIRE. See FORMICA and TERMES.

PISO (Lucius Calpurnius), surnamed Frugi on account of his frugality, was tribune of the people, A.A.C. 149, and afterwards consul. During his tribuneship he published a law against extortion, entitled Lex Calpurnia de Pecuniis repetundis. He happily ended the war in Sicily. To reward the services of one of his sons, \ ho

had distinguished himself in that expedition, he left him by his will a golden crown, weighing three pounds.

Piso (Cains Calpurnius), a Roman consul, who, in the' year 67 B. C., was author of the law which forbad canvassing for public of- fices, entitled Lex Calpurnia de Ambitu. He displayed all the firmness worthy of a consul in one of the most stormy periods of the republic ; and prevented the people from raising Marcus Palicanus, a man of no merit, to the consular dignity.

Piso (Cneius Calpurnius), was consul in the reign of Augustus, and governor of Syria under Tiberius, whose confidant he was. It is said that by the order of this emperor he caused Ger- manicus to be poisoned. Being accused of that crime, and seeing himself abandoned by every one, he laid violent hands on himself A. D. 20. He«*vas a man of insupportable pride and exces- sive violence. Of this many instances are re- corded, but the following is the most horrible. Having ordered a soldier to be executed, because he had left the camp with another soldier and returned without him, the other soldier presented himself to the centurion, who, finding he was not murdered, stopped the execution, and all three went to Piso, amidst the joyful applause of the whole army. Whereupon Piso put a stop to their joy, by ordering all three to be put to death.

Piso (Lucius), a Roman senator, who attended the emperor Valerian in his unfortunate expedi- tion into Persia, and, after his capture, pro- claimed himself emperor; but was defeated, taken prisoner, and put to death by Valens, A.D. 261.

PISON, in ancient geography, the first of the four rivers that watered the garden of Eden, which Moses describes as ' encompassing the whole land of Havilah, where there is gold,' &c. (Gen. ii. 11, 12). Some suppose the Pison to be the Ganges ; others, particularly Calmet and Reland, take it to be the Phasis, which runs north through Colchis (which they suppose to be Havilah), from near the head of the Euphrates to its exit in the Euxine Sea; but these great commentators are evidently mistaken, for the Phasis, instead of rising near the head of the Euphrates, and running north-west, has its source about 350 miles north of the head of the Eu- phrates, and runs south-west into

the Euxine. The conjecture of Bochart and others appears to be more probable, that the Pison is the western branch of the divided streams of the Tigris and Euphrates, which runs along the side of Havi- lah in Arabia, and encompasses an extensive territory.

P1SONIA, in botany, fingrigo, a genus of the dioecia order and polygamia class of plants ; natural order nyctaginese : CAL. scarcely any : COR. bell-shaped ; five-cleft ; stamens five or six; pistil one : CAPS, superior, one-celled ; valveless : male and female on the same or on different plants. Species five.

PISSASPHALTUM, earth pitch; a fluid, opaque, mineral body, of a thick consistence, strong smell, readily inflammable, but leaving a residuum of grayish ashes after burning. It

arises out of the cracks of the rocks, in places in the island of Sumatra, and some ot'ier places in the East Indies, where it is much esteemed in paralytic disorders. There is a remarkable mine of it in the island of Bua, and abbe Fortis says, that the pissasphaltum of Bua is correspondent to that fossil production, which, by Hasselquist, is called mumia minerale, and mumia nativa Persiana by Koempfer, and which the Egyptians made use of to embalm their kings. ' Mumiahi, or native Persian mummy,' says Kcempfer, ' proceeds from a hard rock in very small quantity. It is a bituminous juice, that transudes from the stony superficies of the hill, resembling in appearance coarse shoe-makers' wax, as well in its color as in its density and ductility. While adherent to the rock it is less solid, but is formed by the warmth of the hands. It is easily united with oil, but repels water; it is quite void of smell, and very like in substance to the Egyptian mummy. When laid on burning coals, it has the smell of sulphur tempered a little with that of naphtha, not dis- agreeable. There are two kinds of this mummy ; the one is valuable for its scarcity and great ac- tivity. The native place of the best mummy is in the province of Daraab. It is found in a narrow cave, not above two fathoms deep, cut like a well out of the mass, at the foot of the ragged mountain Caucasus.' This description agrees perfectly with the pissasphaltum, or fossil mummy of Bua. Linne believes it would be very good for wounds, as the oriental mumia is, and like the pitch of Castro, which is frequently used by the Roman surgeons for fractures, con- tusions, and in many external applications.

PISTA'CHIO, n. s. Fr. pistache ; Ital. pistac- chi ; Lat. vistachia.

Pistachiot, so they be good, and not musty, joined with almonds, are an excellent nourisher. Bacon.

The pistachio is of an oblong figure, pointed at both ends, about half an inch in length ; the kernel is of a gieen colour and a soft and unctuous sub- stance, much like the pulp of an almond, of a plea- sant taste : pistachios were known to the ancients, and the Arabians call them pestuch and festuch, ai»f we sometimes festich nuts. Hili

PISTACHIO, or PISTACHIA. See PISTACIA.

PISTACIA, turpentine-tree, pistachia nir and mastich tree ; a genus of the pentandria order and dioecia class of plants; natural order fiftieth, amentaceae. There are nine species, of which the most remarkable are,

1. P. lentiscus, the common mastich tree, grows naturally in Portugal, Spain, and Italy. Being an evergreen, it has been preserved in this country, in order to adorn the green-houses. In the countries where it is a native it rises to the height of eighteen or twenty feet, covered with a gray bark on the stem ; but the branches, which are very numerous, are covered with a reddish- brown bark, and are garnished with winged leaves, composed of three or four pairs of small spear-shaped lobes, without an odd one at the end. This species is commonly propagated by laying down the branches, though it may also be raised from the seed in the manner directed for the pistachia nut-tree ; but this, being more tender than any of the other sorts, requires to

be constantly sheltered in winter, and to have a warm situation in summer. Pistachia nuts are moderately large, containing a kernel of a pale greenish color, covered with a reddish skin. They have a pleasant, sweet, unctuous taste, resembling that of almonds ; and they abound with a sweet and well-tasted oil, which they yield in great abundance on being pressed after bruising them ; they are reckoned amongst the analeptics, and are wholesome and nutritive; and are by some esteemed very proper to be prescribed by way of restoratives, eaten in small quantity, to people emaciated by long illness.

2. P. orientalis, the true mastich tree of the Levant, from which the mastich is gathered, has been confounded by most botanical writers with the common mastich tree, above described, though there are considerable differences between them. The bark of the tree is brown ;

the leaves are composed of two or three pairs of spear-shaped lobes, terminated by an odd one; the outer lobes are the largest; the others gradually dimi- nish, the innermost being the least. These turn of a brownish color towards the autumn, when/ the plants are exposed to the open air ; but if they are under glasses they keep green. The leaves continue all the year, but are not so thick as those of the common sort, nor are the plants so hardy.. In the island of Chio the officinal mastich is obtained most abundantly ; and, ac- cording to Tournefort, by making transverse in- cisions in the bark of the tree, whence the mas- tich exudes in drops, which are suffered to run down to the ground, when, after sufficient time is allowed for their concretion, they are collected for use. Mastich is brought to us in small, yellowish, transparent, brittle tears, or grains ; it has a light agreeable smell, especially when rubbed or heated ; on being chewed, it first crumbles, soon after sticks together, and becomes soft and white, like wax, without impressing any considerable taste. No volatile oil is obtained from this substance when distilled with water. Pure alcohol and oil of turpentine dissolve it ; water scarcely acts upon it ; though by mastica- tion it becomes soft and tough, like wax. When chewed a little while, however, it is white, opaque, and brittle, so as not to be softened again by chewing. The part insoluble in alcohol much resembles in its properties caoutchouc. It is considered to be a mild corroborant and astrin- gent; and, as possessing a balsamic power, it has been recommended in haemoptysis proceed- ing from ulceration, leucorrhoea, debility of the stomach, and in diarrhoeas and internal uleera- tions. Chewing this drug has likewise been said to have been of nse in pains of the teeth and gums, and in some catarrhal complaints ; it is, however, in the present day, seldom used either externally or internally. The wood abounds with the resinous principle, and a tincture may be ob- tained from it, which is esteemed in some coun- tries in the cure of haemorrhages, dysenteries, and gout.

3. P. terebinthus, the pistachia tree, grows natuially in Arabia, Persia, and Syria, whence ..he nuts are annually brought to Europe. In those countries it grows to the height of twenty- £v« or thirty feet ; the bark of the stem and old

branches is of a dark russet color, but that of the young branches is of a light brown. These are garnished with winged leaves, composed sometimes of two, at other times of three, pairs of lobes, terminated by an odd one ; these lobes approach towards an oval shape, and their edges are turned backward : and these, when bruised, emit a smell similar to that of the shell of the nut. Some of these trees produce male and others female flowers, and some have both male and female

on the same tree. The male flowers come out from the sides of the branches, in loose bunches or catkins. They have no petals, but five small stamina crowned by large four-cornered summits filled with farina; and, when this is discharged, the flowers fall off. The female flowers come out in clusters from the sides of the branches ; they have no petals, but a large oval gerrnen supporting three reflexed styles, and are succeeded by oval nuts. This species is propa- gated by its nuts; which should be planted in pots filled with light kitchen-garden earth, and plunged into a moderate hot-bed to bring up the plants ; when these appear, they should have a large share of air admitted to them, and by degrees they should be exposed to the open air, which at last they will bear in all seasons, though not without great danger of being destroyed in severe winters.

PISTIA, in botany, a genus of the hexandria order and gynandria class of plants; natural order fifty -fourth, miscellaneae.

PISTIL, among botanists, the little upright column which is generally found in the centre of every flower. According to the Linnaean system, it is the female part of generation, whose office is to receive and secrete the pollen, and produce the fruit. It consists of three parts, viz. germen, stylus, and stigma. See BOTANY.

PISTILLA'TION, n.s. Lat. pistillum. The act of pounding in a mortar.

The best diamonds we have are comminuble, and so far from breaking hammers, that they submit unto pistillation, and resist not an ordinary pestle.

Browne's Vulgar Errowt.

PISTOJA, a large town of Italy, in the grand duehy of Tuscany, situated on the declivity of the Appennines, near the Ombrone. It stands in a beautiful plain, surrounded with old walls, and defended by a decayed castle. Its popula- tion does not exceed 10,000 ; but there are few towns in Italy of which the streets are so spacious, or the dwelling-houses so well built. It con- tains, however, few public buildings of note : but is the seat of an academy, two public libra- ries, and a museum. Here are also manufactures of silk, cotton, leather, and hardware, on a small scale. The mountains of the vicinity contain mines of copper, and of crystals known by the name of Pistoja diamonds. The Neapolitans were defeated here by the Austrians, in April 1815. Fourteen miles N.N.W. of Florence; and forty-two S. S. W. of Bologna.

PISTOL, n. «. & v. a. Fr. pistole, ptstolet ; Span, and Ital. pistola. A small handgun ; to shoot with a pistol.

Three watch the door with pittols, that none should issue out.

Shaksveare. Merry Wives of Windsor.

The whole body of the horse passed within pistnl- *not of the cottage. Clarendon.

Quicksilver discharged from a pistol will hardly pierce through a parchment.

Browne's Vulgar Errours.

A woman had a tubercle in the great canthus of the eye, of the bigness of a pistoJ-bullet. Witeman,

How Verres is less qualified to steal, With sword and pistol, than with wax and seal.

Young.

PISTOL, the smallest kind of fire-arms, borne at the saddle-bow, on the girdle, and in the pocket. Pistol barrels are forged in one piece, two at a time, joined by their muzzles, and are bored before they are cut asunder; whereby there is a saving of time and labor, and a greater certainty in the bore being the same in both. The method of welding, boring, polishing, &c., is the same with that of guns.

PISTOLE', n. s. French pistole. A coin of many countries and many degrees of value, as some have thought from Pistoia, an ancient re- public of Italy.

I shall disburden him of many hundred pistoles, to make him lighter for the journey. Dryden.

PISTOLE, a gold coin, struck in Spain and in several parts of Italy, Switzerland, &c. The pis- tole has its augmentations and diminutions, which are quadruple pistoles, double pistoles, and half pistoles. See COINS.

PISTOLET’, n. s. Diminutive of pistol. A little pistol.

Those unlickt bear-whelps, un&ledpistolets,

That, more than cannon-shot, avails or lets.

Donne.

PISTON, n. s. Fr. piston. The moveable part in several hydraulic machines; popularly the sucker. See STEAM ENGINE.

At the beginning of the operation, if the leathers be dry, the piston will not exhaust the air sufficiently, and the water will not rise ; but, if a little water be poured upon the piston, it will swell the leathers, and, causing them to fitdose, thus make the piston act. Immison’s Elements.

PISTORIUS (John), M. D. and D. D., was born at Nidda in 1546. He studied medicine, and was admitted M. D. with applause; but, his prescriptions not being attended with success, he quitted that profession, and studied the law. His talents procured him the appointment of counsellor to Ernest Frederick, margrave of Baden-Dourlach. He had embraced the Protes- tant religion ; but some tim* after returned to the communion of the church of Rome. He became afterwards one of the emperor’s counsel- lors, provost of the cathedral of Breslaw, and domestic prelate to the abbot of Fulda. He wrote, 1. Several Controversial Tracts against the Lutherans : 2. Artis Cabalisticae Scriptores, printed at Basle, 1587, a scarce and curious col- lection ; 3. Scriptores rerum Polonicarum ; 4. Scriptores de rebus Germanicis, in 3 vols. folio, from 1603 to 1613. This is a curious and scarce performance. The author died in 1608, aged fifty-two.

PISUM, pease, a genus of the decandria order, and diadelphia class of plants : natural order thirty-second, papilionaceae. The species are numerous.

1. P. Americanum, commonly called Cape Horn pea, with an angular trailing stalk, whose lower leaves are spear-shaped, sharply indented, and those at the top narrow pointed.

2. P. humile, the dwarf pea, with an erect branching stalk and leaves, having two pairs of round lobes.

3. P. maritimum, the sea pea, with foot-stalks, which are plain on their upper side, an angular stalk, narrow-pointed stipulae, and foot-stalks bearing many flowers.

4. P. ochrus, with membranaceous running foot-stalks, having two leaves and one flower upon a foot-stalk.

5. P. sativum, the greater garden-pea, whose lower stipulse are roundish, indented, with taper foot-stalks, and many flowers on a foot-stalk. A great variety of garden-pease are now culti- vated in Britain, which are distinguished by the gardeners and seedsmen, and have their different titles ; but as many of these have been seminal variations, so if they are not very carefully managed, by taking away all those plants which have a tendency to alter before the seeds are formed, they will degenerate into their original state ; therefore all those persons who are curious in the choice of their seeds look carefully over those which they design for seeds at the time when they begin to flower, and draw out all the plants which they dislike from the other. This is what they call rogueing their pease ; meaning hereby the taking out all the bad plants from the good, that the farina of the former may not im- pregnate the latter; to prevent which they always do it before the flowers open. By thus diligently drawing out the bad, reserving those which come earliest to flower, they have greatly improved their pease of late years, and are con- stantly endeavouring to get forward varieties.

PIT, n. s. & v. n. Sax. {nt; Dan. pit ; Fr. puit. A hole in the ground ; ditch ; abyss ; pro- fundity; any large excavation or area, as the middle of a theatre ; area of a cock-fight, &c. the grave ; any hollow or dent : to pit, is to press into ; to mark with hollows or dints.

O Lord, think no scorn of me, lest I become like them that go down into the pit. Psal. xxriii. 1.

Tumble me into some loathsome pit, Whe’renever man’s eye may behold my body.

Shakspeare,

Our enemies have beat us up to the pit ; It is more worthy to leap in ourselves, Than tarry till they push us. Id. Julius Ceeiar. Pits upon the sea-shore turn into fresh water, by percolation of the salt through the sand ; but, in some places of Africa, the water in such pits will be- come brackish again. Bacon.

Into what pit thou seest From what height fallen. Milton.

Make him glad, at least, to quit His victory, and fly the pit. Hudibras

Let Cully, Cockwood, Fopling charm the pit, And in their folly shew

the writer's wit. Dryden.

They managed the dispute as fiercely as two game-cocks in the pit. Locke on Education.

An anasarca, a species of dropsy, is characterised by the shining and softness of the skin, which gives way to the least impression, and remains pitted for some time. Sharp.

PITAPAT, n. s. ' Probably fiom Fr. pas a vas, or putte patteJ — Johnson. Or a frequentative of PAT. A flutter ; palpitation ; light, quick step.

Now I hear the pitapat of a pretty foot through the dark alley : no, 'tis the son of a mare that's broken loose, and munching upon the melons.

Dry den.

A lion meets him, and the fox's heart went pita- pat. L'Estrange.

PITCALRNE (Archibald), M. D., an eminent physician and ingenious poet, descended from an ancient family in Fifeshire. He was born in Edinburgh on the 25th of December, 1652. He commenced his studies at Dalkeith ; and thence removed to the university of Edinburgh, where he improved himself in classical learning, and completed a regular course of philosophy. The law seems to have been his own choice ; and to this science he turned his attention with an ardor peculiar to himself. He pursued it with so much intenseness that his health began to be impaired. On this account, his physicians ad- vised him to set out for the south of France. By the time he reached Paris, he was happily so far recovered that he determined to renew his studies ; but being informed that there was no able professor of law in that city, and finding several gentlemen of his acquaintance engaged in the study of physic, he went with them to the lectures and hospitals, and employed himself in this manner for several months till his affairs called him home. On his return he applied himself chiefly to the mathematics. His intimacy with Dr. D. Gregory, the celebrated mathemati- cal professor, began about this time. Pitcairne's progress in mathematics was rapid, and corres- pondent to his other pursuits. His improve- ments on the method of infinite series then adopted, which Dr. Wallis of Oxford afterwards published, were a conspicuous and early proof of his abilities in this science. He however resolved to

devote himself entirely to medicine, and with this view soon returned to Paris, where he culti- vated the object of his pursuit with his natural enthusiasm, and with a steadiness from which he could not be diverted. In 1680 he received from the faculty of Rheims the degree of M. D. ; which, on the 7th August, 1699, was likewise conferred on him by the university of Aberdeen; both being attended with marks of peculiar dis- tinction. Soon after his graduation at Rheims, he returned to Edinburgh, where, on the 29th of November, 1681, the Royal College of Physici- ans was instituted ; and his name, among others, graced the original patent from the crown. In his Solutio Problematis de Inventoribus, the treatise above alluded to, he discovers a high de- gree of medical literature, and makes use of it to vindicate Dr. Harvey's claim to the discovery of the circulation of the blood. During his resi- dence in Scotland, his reputation became so con- siderable that, in 1691, the university of Ley- den solicited him to fill the medical chair then vacant. Dr. Pitcairne's well known political principles excluded him from promotion at home : he therefore accepted the invitation from abroad; and on the 26th of April, 1692, de-

livered at Leyden his elegant and masterly inaugural, Oratio : qua ostenditur medicinam ab omni philosophorum secta esse liberam. He discharged the duties of his office at Leyden so as to answer the most sanguine expectations. At the close of the session he visited his native country, intending to return in time for his lec- tures. But, marrying in Scotland, he declined the office, and was appointed titular professor or medicine in the university of Edinburgh. In a science so slowly progressive as that of medicine Dr. Pitcairne did a great deal. He not only ex- ploded many false notions of the chemists and Galenists, which prevailed in his time, but many of those too of his own sect. He proved the continuity of the arteries and veins; and seems to have been the first who showed that the blood flows from a smaller capacity into a larger ; that the aorta, with respect to the arterial system, is the apex of a cone. He collected one of the finest private libraries in the world ; which was purchased after his death by Peter the Great. Notwithstanding the fatigues he underwent in the exercise of his profession, his constitution was naturally delicate. About the beginning of Oc- tober, 1713, he became affected with his last illness ; and on the 23d he died. Some anony- mous publications are attributed to Dr. Pit- cairne, particularly a treatise De Legibus Histo- riae Naturalis, &c. ; but the only ones he thought proper to legitimate are his Dissertationes Medi- cs, and a short essay De Salute.

PiTCAIRN'S ISLAND, an island in the South Pacific Ocean, without a river or harbour. It is situated in long. 133° 21′ W., and lat. 25° 2′ S.,

and in 1808 it was discovered by an American vessel which touched at this island, that it had been resorted to as a last retreat, by such of the mutineers of the Bounty as left Otaheite, to settle on some uninhabited island, out of the reach of further pursuit.

We have seen an extract from the Journal of captain King of the Elizabeth, who visited this island in 1819, which we think will interest our readers : — ‘ On the 2d of March we saw Pit- cairn’s Island : at 5 P. M. of the same day we were within half a league of it, and could not persuade ourselves, from the barren appearance of the hill, that any persons who had ever seen the fertile hills and dales of Great Britain would ever fix their residence among these barren mountains. We stood off and on all night, un- der easy sail, and showed a light in the main- rigging, which was answered by two large fires on shore. A young girl, named Dorothy Young (as we afterwards were told), had been at work at a plantation opposite to the ship, ran to the village, and told them of our arrival, in conse- quence of which they made the fires in answer to our light. About 6 A. M., on Wednesday, March 3d, I stood the ship close in to what the inhabitants call ship-landing place (from the cir- cumstance of the Bounty being hauled on shore and burnt at this place), in expectation that some of the inhabitants would probably come off to me. I hove too with our head off, and prepared a boat to go on shore ; in a few minutes after we saw a boat with nine men come out from amongst the rocks, through a tremendous surf. I now

sent my boat to meet them, and tow them on board. When they came alongside, they as- cended the ship’s side with much good humor, and came aft on the quarter-deck where I was, and, taking me by the hand, gave it a hearty shake, and said, ‘ How do you do, captain ?* They then asked the ship’s name, my name, where bound, whence from, and made many other trifling enquiries, in very good English. After satisfying them respecting these matters, I invited them into the cabin, and set before them some salt-beef, grog, biscuit and porter, with •which they seemed pleased. Putting their hands before them in the position of prayer, and saying giace, they began to refresh themselves, and were much pleased with the porter. While they were eating I had leisure to survey their fine open countenances, which, notwithstanding their ex- posure to the sun, were truly British.

‘ They were nine young men, the offspring of the deluded crew of the

Bounty, most of them standing six feet high, very muscular and agile, of an engaging deportment and open disposition. After their repast they returned thanks to God in the same pious manner as before. They then went on deck, where they gave surprising proofs of their agility, by going aloft, jumping over- board, and swimming round the ship, while it was going through the water at the rate of two knots per hour. I now prepared to go on shore, and took the surgeon with rne. Five of the natives accompanied us to assist in landing, the others remained on board till my return. When I got near the shore I found the surf so violent that I durst not attempt with my boat to go through it. I went into theirs, when one of them taking hold of me bid me not fear, for should the boat upset, he would take me safe on shore. We now entered the surf, when, to my great surprise, a number of young women and children came halfway into the surf to assist in landing the boat. These women ventured far beyond their depth, and assisted in bearing the boat up, by swimming and sustaining it with their hands. We landed in safety, and were immediately met by John Adams, a hearty corpulent old man, who like the rest was naked, with the exception of a piece of cloth round his middle. He invited us to his house, for which we set out directly, accompa- nied by all the population of the island. Our way lay up a very steep hill, and along a foot- path so narrow that they were actually obliged to carry the doctor up. When we attained the summit of the hill, we had a fine road through the woods; and after crossing. two valleys, which abounded with cocoa-nut trees, we arrived at the village situated in a beautiful valley, in which were seven houses, each of which had a fine lawn before it. Two of the houses had a story above the ground, and all had very clean convenient places for their poultry and pigs. We stopped at the house of Thursday October Christian, the first born on the island, who gave us for dinner a sucking pig, cooked after the Otaheitean man- ner, two brace of fowls, and plenty of yams and plaintains. After dinner were served up bananas and a species of apple peculiar to the island, which we found very good. Every thing was clean, and conducted with great propriety.

Grace was said both before and after dinner; John Adams saying it first, then every one in rotation according to their seniority. After dinner we took a look at the different plantations, and found that most of their labor consisted in raising yams. There was an abundance of plantains and some sugar-cane, from which they ex- tract molasses and liquor.

‘ In the evening, after supper, they entertained us with an Otaheitean dance, which consisted of various writhings and distortions of the body, by no means obscene, yet in no respect pleasant. While some

were dancing, the rest sat down to look on, in company with six sailors belonging to the ship, when suddenly one of the younc women jumped up and ran to her brother, say ing, ‘ she would not sit any longer near tha? naughty man (pointing to one of my sailors), for he wanted her to commit fornication.’ I asked the man why he behaved so rude to people thafc had treated him so well ? He told me that it \vn* by mere accident he put his foot against her’s, and that he had never spoken to her. After the Otaheitean dance the sailors showed their abilities in dancing, which excited great laughter and di- version. After the dance we were shown to. bed ; the surgeon and myself slept in the same room. We had each of us a good feather-bed and clea “• sheets, made from the bark of a tree, where we slept very comfortably all night. In the morning we breakfasted on fowls and a beverage like tea, made from a root similar to the gentian, buf which they called ginger. After breakfast we returned to the Ship Landing-place, to endea- vour to go on board ; but the sea was too high. Davy, as they called the sea, had never been so bad before, excepting once in their remembranci . We were all sitting down in conversation, when a little child ran down to go into the surf. I ran to prevent the child, and so did the wife of Charles Christian, saying at the same time to Diana, the eldest daughter of John Adams, ‘Diana, your child will be drowned.’ Adams having told me, prior to this, that his daughters were not married, I expressed my surprise to the wife of Christian. Old Adams, hearing this, took me aside, and gave me the following account: — Notwithstanding his paternal care of his daugh- ters, Edward Quintraland Diana had committed an offence against the laws of God, for which he supposed them worthy of death, and accordingly gave orders that they should be shot ; but, as no person seemed willing to execute his orders, he made the necessary preparations for executing them himself, when he was strongly opposed by Auther Quintral, who said that though the of fence was certainly a great one, and the more so as a similar one had not been committed since the death of Christian, yet he did not conceive it to be a crime worthy of death. The rest being of the same opinion, Adams changed his mind also, but forbade them to marry. Adams, upon this occasion, probably changed his mind through interest; for he will not suffer his daughters to marry for fear of losing their labor in cultivating his plantation. As we could not go on board, I now searched for a watering-place, and found a very convenient one in moderate weather, and with excellent water

‘ Each family gathered together some poultry, hogs, goats, plantains, and everything the island produced, and next morning, Davy being milder, we went on board, accompanied by the whole Copulation of the island. As most of them had Tiever seen a ship, they were much pleased, but * > on grew sea sick. I now gave them a whale ooat in return for their refreshments, some books, -azors, combs, and in short every thing they stood in need of; but nothing pleased them so well as the books, as they wished much to read and writt. I offered Auther Quintral two claw-ham- mers, which he refused ; and Adams, who was present, told him that it was very improper to refuse any thing their countrymen offered : Auther replied, it was much more improper to lake things that they do not want. While Ada-ms was on board the ship, he gave me a brief ac- count of the different occurrences that had taken place upon the island; and, among others, he mentioned his divorcing Christian and his wife, in consequence of having read in the Old Tes- tament that marriages should not be allowed among those who’ were at all related to each other, and that they had lived separate a long time. After a great deal of conversation upon the subject, I persuaded him to allow Diana, his daughter, to be married to Edward Quintral, and Christian to live with his wife, both of which he promised to do; and, calling Edward to him, he took him by the hand, saying, ‘ Come here, my son, you shall have my daughter Diana, and to- morrow we shall keep the wedding/ I now gave him some porter, wine, and spirits, to re- gale themselves with at the wedding. Every person in the ship was so struck with their sim- plicity of manners, the mildness of their language, and their modest deportment, that they were oaded with presents. They got nearly 200 »ooks, of various descriptions, from the officers and crew; — even the sailors belonging to the ship behaved with a degree of modesty in the presence of these naked females that would have surprised a Joseph Andrews. John Adams now assembled his family in order to take leave, which they did in the most affectionate manner ; and so grateful were they for the few things they had received from the ship that they all kneeled down to kiss my hand, which I could by no means permit. I promised, should I come again to the island, that I would bring them some black cattle, and particularly some asses, of which they said they were greatly in want. They now went into their boat with some reluct- ance, particularly one young man who wished to see his friends in England, but his mother, with tears in her eyes, requested that 1 would not take away her son ; nor were we ourselves free from regret, at leaving a people whom we considered in a moral point of view as far superior to any of the human species we ever

beheld.

‘ I did not hear whether they had found any metals; but I recollected, after leaving the island, that the stones with which they sharpened their tools, appeared to have a yellowish metallic appearance ; and also some veins of yellow metal in them. I much regret not having examined them more closely, or bringing a piece with me. One of the sailors gave a shilling to b°

tied round the neck of one of their children ; but before I left the island it was brought to me, to be restored to the donor, observing at the same time that they had no use for it, and it would buy him something when he got to England. Old Adams informed me, when they first settled on the island, that there were plenty of fish ; but, for some time before my touching at this place, they could not catch any, and they thought the copper of the Bounty had poisoned them all. The island produces yams, and other esculent roots, for which we could not find names. I presented them on my departure with some pease, barley, flour, orange, melon, pumpkin, celery, and many other seeds, which I had saved during my voyage (intending to give them should I ever touch at the island). Salt is procured among the rocks, the sea being hove into the cavities daring the blowing weather is left there, and by the rays of the sun produces salt, a circumstance very common in warm climates. The only birds which I saw were pigeons and sea gulls. George Young carried the Bounty’s anvil and swivel from the Ship Landing-place, up the steep foot-path where the doctor was carried up ; the anvil was as- much as I could well lift, and he says he could have carried the anchor also.’

PITCH, n. s., v. a., & v. n. } Pret. pight. PITCH’EH, sfr.ficher. Skin-

PITCII’FORK. J ner. Lat. pan-

gere. — Minsheu, more probably. Position . ele- vation ; length or degree of descent or ascent : hence highest rise ; size ; stature : to fix ; plant ; cast ; throw : as a neuter verb, to order ; fix choice (taking upon) ; fall ; light ; drop ; fall headlong; fix a hut or any temporary abode : a pitcher is a bar or instrument used for pitching stakes. A pitchfork is a fork to throw corn or hay with.

They pitched by Emmaus in the plain.

1 Mac.

An hideous rock is pight, • Of mighty Magnes stone, whose craggy clift, Depending from on high, dreadful to sight Over the waves his

rugged arms doth lift.

Spenser.

Then brought she me into this desart vast, And by my wretched lover's side me pight. Id.

That infernal monster, having cast His weary foe into the living well,

'Gan high advance his broad discoloured breast Above his wonted pilch. Id.

In setting down the form of common prayer, there was no need to mention the learning of a fit, or the unfitneps of an ignorant minister, more than that her which describeth the manner how to pitch a field • should speak of moderation and sobriety in diet.

Hooker. Mahometes pitched his tents in a little meadow.

Knolles.

Stay yet, you vile, abominable tents, Thus proudly pight upon our Phrygian plains.

Snakspeare.

When I dissuaded him from his intent, I found him pight to do it. Id.

On Dardan plains the Greeks do pitch Their brave pavilions. Id. Troilus and Creuida.

They'll not pitch me i' th' mire, Unless he bid 'em. Td. Fempeu

Were the whole frame here, It is of such a spacious lofty pitch Your roof were not sufficient to contain it.

Shakspeare.

A beauty waning, and distressed widow, Seduced the pitch and height of all his thoughts To base declension and loathed bigamy. Id. That greate worke, unlesse the seede of Jove, Ti'ie deathlesse muses,

undertake, maintaines a pitch

above All mortall powers. Chapman.

He counselled him how to hunt his game, What dart to cast, what net, what toile to pitch.

Fairfax.

Others expectation was raised to a higher pitch than probably it would. Hammond.

I pitched upon this consideration, that parents owe iheir children, not only material subsistence, but much more spiritual contributions to their mind.

Digby on the Saul. Our resident Tom From Venice is come, And hath left the statesman behind him, Talks at the same pitch, Is as wise, is as rich, And just where you left him, you find him.

Denham, Down they fell,

Driven headlong from the pitch of heaven, down Into this deep. Milton'* Paradise Lost.

By how much from the top of wondrous glory, Strongest of mortal men, To lowest pitch of abject fortune thou art fallen.

Milton.

To overcome in battle, and subdue Nations, and bring home spoils, with infinite Manslaughter, shall be held the highest pitch Of human glory. Id,

It turned itself to Ralpho's shape ; So like in person, garb, and pitch, Twas hard t' interpret which was which.

Hudibrcu.

Cannons shoot the highest pitches, The lower we let down their breeches. Id. A free agent will pitch upon such a part m his choice, with knowledge certain.

More't Divine Dialogues.

Princes that feared him grieve; concerned to see No pitch of glory from the grave is free. Waller.

Pitch upon the best course of life, and custom will render it the most easy. Tillotson.

When the victor

Had conquered Thebes, he pitched upon the plain His mighty camp. Dryden's Knight's Tale.

The courser o'er the pommel cast the knight ; Forward he flew, and, pitching on his head, He quivered with his feet, and lay for dead.

Dry den.

I translated Chaucer, and amongst the rest pitched on the wife of Bath's tale. Id,

The covetous man was a good while at a stand ; but he came however by degrees to pitch upon one thing after another. L'Estrange.

When the swarm is settled, take a branch of the tree whereon they pitch, and wipe the hive clean.

Mortimer.

To the hills poles must be set deep in the ground, with a square iron pitcher or crow. Id.

They would wrestle, and pitch the bar for a whole afternoon. Spectator.

One pitched battle would determine the fate of the Spanish continent. Addiion on the War.

Alcibiades was one of the best orators of his age, notwithstanding he lived at a time when learning was at the highest pitrh. Addison.

PITCH, n. 1. 1 Sax. pic, ; Teut. peek ; Belg. PITCH'Y, adj. Spik; Swed. beck; Lat. pis; Gr. virra, iriooa. A resin, commonly that of the pine, extracted by fire and inspissated : to pitch is to smear with pitch ; to darken : pitchy is smeared or impregnated with pitch ; resembling pitch ; black ; dark.

PITCH is a tenacious oily substance, drawn chiefly from pines andjfirs, and used in ship- ping, medicine, and various arts : it is more pro- perly tar inspissated by boiling it over a slow fire. See TAR. This part of the process is commonly performed in a still, in order to save an essential oil which arises on boiling, and which is called, from the

name of the tree which tar is principally prepared from, oleum pini. and oleum tasdrc. It is used in caulking of ships, to fill the chinks or intervals between the planks of their sides, decks, or bottoms. The want of this article might, in cases of real necessity, be supplied by preparations of paint and other sub- stances.

In the island of Trinidad there is a lake of asphaltum, or mineral pitch, which furnishes an inexhaustible supply of this article. When this substance exudes from the ground, it is in the state of liquid tar. The Spaniards found it to answer so well when laid on boiling hot, and mixed with tallow or oil, in the proportion of about 41bs. to every 100 Ibs. of pitch, that ad- miral Apod aca, in the year 1797, when the is- land fell into our possession, received orders to form an establishment for the preparation of this pitch for the use of the navy. It is said to pos- sess the valuable qualities of resisting the worm which abounds in the Gulf of Paria, and of pre- serving iron. But there appears to be a preju- dice against it, of which we know not the foun- dation.

PITCH'ER, n. s. Fr. picher; Span, pichel. An earthen vessel ; a water-pot.

With suddain fear her pitchtr down she threw, And fled away. Spencer.

Pitchers have ears, and 1 have many servants ; Besides old Gremio is hearkening. Shakspeare.

We read of kings, and gods, that kindly took A pitcher fill'd with water from the brook. Carew.

Pyreicus was only famous for counterfeiting aP» base things ; as earthen pitchers and a scullery.

Peacham on Drawing.

Hylas may drop hisp»

PITCHING, in sea affairs, may be defined the vertical vibration which the length of a ship makes about her centre of gravity ; or the move- ment by which she plunges her head and after- part alternately into the hollow of the sea. This motion may proceed from two causes : the waves which agitate the vessel ; and the wind upon the sails, which makes her stoop to every blast thereof. The first absolutely depends upon the agitation of the sea, and is not susceptible of inquiry ; and the second is occasioned by the inclination of the masts, and may be submitted to certain established maxims. When the wind acts upon the

sails, the mast yields to its effort, with an inclination which increases in proportion to the length of the mast, to the augmentation of the wind, and to the comparative weight and distri- bution of the ship's lading. The repulsion of

the water to the effort of gravity, opposes itself to this inclination, or at least sustains it, by as •nuch as the repulsion exceeds the momentum, or absolute effort of the mast, upon which the wind operates. At the end of each blast, when the wind suspends its action, this repulsion lifts the vessel ; and these successive inclinations and repulsions produce the movement of pitching, •which, when it is considerable, will greatly re- tard the course, as well as endanger the mast, and strain the vessel.

PITCH-PIPE, an instrument used by vocal practitioners to ascertain the pitch of the key in which they are about to sing. It is blown at one end like a common flute, and being shortened or lengthened by a graduated scale, is capable of producing, with mechanical exactness, all the semitonic degrees within its compass.

PITCHSTONE, PEARLSTONF,, PUMICE, and OBSIDIAN. All these substances, formerly re- garded as distinct, are now included under one species in mineralogy, the character of which is the following : cleavage none ; fracture conchoi- dal, sometimes highly perfect, sometimes less distinct ; in the granular masses, the fracture is

Silex

Alumine .... Potash J Soda J Oxides of iron and manganese Lime ..... Water

Before th« blow-pipe, they all melt with more or less facility into a vesicular glass, or they yield an enamel, according to the fusibility of their in- gredients. The geological relations of these species are very remarkable. Pitchstone forms mountain masses, and is generally in close con- nexion with porphyry. Many of the other va- rieties occur under similar circumstances. Pitch- stone veins sometimes occur in sandstone. Pu- mice and obsidian are among the products of volcanoes. The southern countries of Europe, South America, Mexico, and the Sandwich Islands are rich in the varieties of pitchstone.

Pearlstone, in particular, occurs in Hungary, and at Cabo de Gates, in Spain. Obsidian is very frequent in Iceland and Mexico ; pumice in the Lipari islands, Teneriffe and Peru. Obsidian is employed for mirrors, vases, snuff-boxes, &c. In Mexico and the Island of Ascension, very sharp fragments are used as tools and weapons. Pumice yields a well known material for grind- ing and polishing, and is also employed for a filtering stone.

PIT'COAL, n. s. Pit and coal. Fossile coal.

The best fuel is peat, the next charcoal made of pitioal or cinders. Mortimer's Husbandry.

PIT'FALL, n. s. Pit and fall. A pit dug and covered, into which a passenger may fall unexpectedly.

Poor bird ! thoud'st never fear the net nor lime, The pitfall nor the gin. Shahtpeare. Macbeth.

These hidden pitfalls were thick at the entrance of the bridge, so that throngs of people fell into them.

Additon.

Obsidian.

Pitchstone.

Pearlstone.

72.00

73.00

75.25

12.50

14.50

12.00

0.00

4.50

10

1.75

0.00

2.00

1.10

1.60

0.00

1.00

0.50

0.00

8.50

4.50

more or less uneven and splintery ; lustre vi treous and resinous; colors black, brown, red, yellow, green, gray, and white; hardness between that of feldspar and quartz ; specific gra- vity 2.3. The variety called obsidian possesses the most perfect conchoidal fracture and the highest degree of lustre. Agreeably to the de- gree of transparency, it is divided into trans- parent and translucent obsidian ; the former of which is sometimes called marekanite. If the high perfection of the conchoidal fracture disap- pears, the mineral takes the name of pitchstone. Pitchstone often contains those faces which are called the faces of distinct concretion ; if these are numerous, variously curved, and contain but little matter between them, pearlstone is formed. The obsidian is often vesicular, the cavities being small, and keeping a constant direction ; if there are a great many of them of larger sizes the whole mass becomes apparently very light, the original color disappears, and gives place to a pearly or silky lustre ; and thus arises the variety called pumice. The analysis of these varieties presents the following results : —

Pumice.

77.50 17.50

ˆ3.00

1.75 0.00 0.00

PITH, n. s. -\ Saxon pifc ; Belg. pette ;

PITH'INESS ˆ Qu. Gr. ir/jicroe. The me-

PITH'LLSS, adj. i dulla or marrow of plants ;

PITH'Y. Whence strength; fire; ener-

gy; weight; important or principal part of a discourse or business : pithiness is chiefly used in the metaphorical senses : pithy and pithless for abundant in, or destitute of, pith, force, or strength.

That's my pith of business

'Twixt you and your poor brother. Shttkspeare.

In all these, Goodman Fact was very short, but pithy ; for he was a plain home-spun man. Additon.

PITHEA LAPPMARK, a division of Swedish Lapland, extending from Norway to West Both- nia, along the river Pithea, and now forming part of the government of Umea. It is about 140 miles in length, and sixty-five in breadth. The eastern part has a good soil and climate, but on the last enumeration there were only 1045 in- habitants, of whom 932 were Laplanders; at the present day they cannot exceed 2000. The mountain Nasa Fjael has mines of lead and silver.

PITHECUSA, an island of Italy, on the coast of Etruria, anciently called TEnaria, with a town so named on the top of a mountain. It was sub- jected to earthquakes, and had a volcano ; which led mythologists to say that the giant Typhon was buried alive under the mountain, and strug- gled at such times to throw off his burden. Ovid, Plin., &c.

PITHO, in mythology, the goddess of per- suasion among the Romans, the daughter of Mer- cury and Venus. She was represented with a

diadem on her head, to intimate her influence over the heart of man. One of her arms ap- peared raised as in the attitude of an orator haranguing a public assembly ; and with the other she holds a thunderbolt and fetters, made with flowers, to signify the powers of reasoning and the attractions of eloquence. A caduceus, as a symbol of

persuasion, appears at her feet, with the writings of Demosthenes and Cicero, the two most celebrated orators among the ancients.
PITHOLAUS AND LYCOPHRON, two nobles of Pherse, who killed the tyrant Alexander, and seized the kingdom ; but were expelled by Philip II. of Macedon.

PITIIOM, one of the cities which the Israel- ites built for Pharaoh in Egypt (Exod. i. 11) during their servitude. This is probably the same city with Pathumos, mentioned by Hero- dotus, which he places upon the canal made by the kings Necho and Darius to join the Red Sea with the Nile, and consequently with the Medi- terranean. There was an arm of the Nile called Pathmeticus, Phutmicus, Phatnicus, or Phatniti- cus. Bochart says that Pithom and Raamses are about five leagues above the division of the Nile, and beyond this river: but this assertion has no proof from antiquity. Marsham will have Pithom to be the same as Pelusium or Da- mietta.

PITHOU, or PITHOEUS (Peter), a Frenchman of great literary eminence, descended of an ancient and noble family in Normandy, and born at Troyes in 1 539. He first studied at Troyes, and afterwards at Paris, where he became the scholar and friend of Turnebus. Having acquired the languages, he was placed under Cujacius at Bourges to study civil law, and accompanied him to Valence. In 1560 he returned to Paris. In 1563 he published Adversaria Subseciva, which laid the foundation of that great and ex- tensive fame he afterwards acquired. Soon after this Henry III. advanced him to some consider- able posts ; in which, as well as at the bar, he acquitted himself most honorably. He abjured the Protestant religion, and embraced the Catho- lic ; and afterwards attended the duke of Mont- morency into England. Pithoeus died upon his birth-day in 1596, leaving behind him a wife whom he had married in 1579, and some chil- dren. He collected a very valuable library, con- taining a variety of rare MSS., as well as printed books. He published a great number of works upon law, history, and classical literature ; and he gave several new and correct editions of ancient writers. He was the first who made the world acquainted with the Fables of Phtedrus ; which, together with the name of their author, were utterly unknown and unheard of till published from a MS. of his.

PITHYUSJE ISLES, a group of islands in the Mediterranean, belonging to the crown of Spain, of which the principal is Ivica. They have the coast of Spain to the north-west, Africa to the south, Sardinia to the east, and the Balearic Is- lands to the north-east. All these islands produce corn, oil, and wine, and good pasturage. Their exports consist in salt, and, in a smaller degree, in wool. The inhabitants are said to be

extremely indolent. Their language is a strange

jargon, and very few understand Spanish. The island next in size to Ivi9a is Formentera; the others are the Conejeras, Bosqua, Esparta (three small islands near the harbour of the town of Ivica), Grossa, St. Eulalia y de Arabi, Taco- mago, &c.

PITIGLIANO, an inland town of the grand duchy of Tuscany, province of Sienna, with 2000 inhabitants. Fifty-four miles S. S. E. of Sienna.

PITISCUS (Samuel), a learned antiquary, born at Zutphen, was rector of the college of that city, and afterwards of St. Jerome at Utrecht, where he died February 1st, 1717, aged ninety. He wrote, 1. Lexicon Antiquitatum Romanorum, in 2 vols. folio, a work which is esteemed ; 2. Editions of many Latin authors, with notes, and other works.

PIT'MAN, n. s. Pit and man. He that in sawing timber works below in the pit.

With the pitsaw they enter the one end of the stuff, the topraan at the top, and the pitman under him ; the topman observing to guide the saw exactly, and the pitman drawing it with all his strength per- pendicularly down. Moxan.

PITOT (Henry), F. R. S., a learned writer, of a noble family in Languedoc, born at Aramont on the 29th of May, 1695. He acquired mathe- matics without a master, and went to Paris in 1718, where he formed a close friendship with the illustrious Reaumur. In 1724 he was ad- mitted a member of the Royal Academy of Sci- ences at Paris, and in a few years rose to the degree of a pensioner. Besides a vast number of Memoirs, printed in the collection of that society, he published in 1731 The Theory of the Working of Ships, in 1 vol. 4to., a work of con- siderable merit, which was translated into Eng- lish, and procured the author to be admitted into the Royal Society of London. In 1740 the states-general of Languedoc appointed him their chief engineer, and inspector-general of the canal. That country is indebted to him for several monu- ments of his genius, and he supplied Montpelier with water, by a noble aqueduct. The illustri- ous marshal de Saxe was the great patron and friend of Pilot, who had instructed this hero in the mathematics. In 1735 he married Maria-Leon ina Pharambier de Sabbalona, descended of a very ancient noble family of Navarre, by whom he had one son, who was advocate-general of the court of accounts, aids, and finances of Montpe- lier. Pitot was also a member of the Royal Society of Sciences of Montpelier. He died at Aramont, 27th December, 1771, aged seventy-

six. PITS (John), a celebrated biographer, born in 1560 at Alton in Hampshire, and educated at Wykeham's school, near Winchester, till he was eighteen years of age, when he was sent to New College, Oxford, and admitted probationer fellow Having continued in that university nearly two years, he left the kingdom as a voluntary Romish exile, and retired to Douay; from thence he went to the English college at Rheims, where he remained about a year, and then proceeded to Rome, where he continued a member of the Eng- lish college nearly seven years, and was made a priest. In 1589 he returned to Rheims; and there, during two years, taught rhetoric and Greek. He now quitted Rheims on account of

the civil war in France, and retired to Pont a Mousson in Lorraine, where he took the degrees of M.A. and B. D. Hence he travelled into Ger- many, and resided a year and a half at Triers, where he commenced licentiate. From Triers he visited several of the principal cities inGermany; and, continuing three years at Ingolstadt in Ba- varia, took the degree of D. D. Thence, having made the tour of Italy, he returned once more to Lorraine, where he was patronised by the cardi- nal of that duchy, who preferred him to a canonry of Verdun ; and about two years after he became confessor to the duchess of Cleves, daughter te the duke of Lorraine. While in this employment, he wrote in Latin the Lives of the Kings, Bishops, Apostolical Men, and Writers of England. The last of these, commonly known and quoted by this title, De illustribus Angliae Scriptoribus, was published after his death. The three first still remain in MS. among the archives of the collegiate church of Liverdun. The duke of Cleves dying after Pits had been about twelve years confessor to the duchess, she returned to Lorraine, attended by our author, who was pro- moted to the deanery of Liverdun, which, with a canonry and officialship, he enjoyed to the end of his life. He died in 1616, and was buried in the collegiate church. He is accused of partial- ity to the Romish writers.

PITSAW, n. s. Pit and saw. The large saw used by two men, of whom one is in the pit.

The pitsaw is not only used by those workmen that saw timber and boards, but is also for small matters used by joiners. Moxon.

PITT (Christopher), an eminent English poet, celebrated for his translation of Virgil's jEneid, was born in 1699. Having studied four

years at New College, Oxford, he was presented to the living of Pimperne in Dorsetshire, which he held during life. Next to his translation of Virgil, he gained the greatest reputation by his excellent English translation of Vida's Art of Poetry. He died in 1648.

PITT (Thomas), the founder of the Chatham family, was born at St. Mary, Stanford, Dorset- shire, in 1653, and towards the close of the cen- tury became governor of Madras, where he realised a large fortune. He was at this period the purchaser of a large diamond, afterwards call- ed the Pitt diamond, for £20,400, which he sold to the king of France for more than five times that sum. A rumor prevailed for some time in England that he acquired it unfairly; and Pope is supposed to have alluded to this in the following couplet : —

Asleep and naked as an Indian lay, An honest factor stole a gem away.

Mr. Pitt was therefore induced to compose a narrative of the manner in which he really be- came possessed of the diamond. He was made in 1716 governor of Jamaica, but did not hold that situation more than a year. He sat in four parliaments, for Old Sarum and Thirsk,and died in 1726. This gentleman was grandfather of the celebrated earl of Chatham.

PITT (William), earl of Chatham, a celebrated British statesman, was born in November 1708. He was the youngest son of Robert Pitt, esq., of

Boconnock in Cornwall. His intellectual faculties and powers of elocution soon became apparent ; but at the early age of sixteen he felt the attacks of an hereditary gout, by which he was tormented at times during the rest of his life. His lordship entered early into the army, and served in a regiment of dragoons. Through the interest of the duchess of Marl- borough, he obtained a seat in parliament before he was twenty-one years of age. His first ap- pearance in the house was as representative of the borough of Old Sarum, in the ninth parlia- ment of Great Britain. In the tenth he repre- sented Seaford, Aldborough in the eleventh, and the city of Bath in the twelfth ; where he conti- nued till he was called up to the house of peers in 1766. The intention of the duchess in bring- ing him thus early into parliament was to oppose Sir Robert Walpole, whom he kept in awe by the force of his eloquence. At her death the duchess left him £10,000, on condition, as was then reported, that he never should receive a place in administration. In 1746 he was ap- pointed vice-treasurer of Ireland, and soon after paymaster-general of the forces, and a privy counsellor. He discharged the office of paymas- ter with such honor

and inflexible integrity, re- fusing even many of the perquisites of his office, that his bitterest enemies could lay nothing to his charge, and he soon became the darling of the people. In 1755 he resigned office, on see- ing Mr. Fox, afterwards lord Holland, preferred to him. The people were alarmed at this resig- nation; and, being disgusted with the unsuccess- ful beginning of the war, complained so loudly that, on the 4th of December 1756, Mr. Pitt was appointed secretary of state in the room of Mr. Fox, and other promotions were made to second his plans. He then took such measures as were necessary for the honor and interest of the na- tion; but in February 1757, having refused to assent to the carrying on a war in Germany for the sake of his majesty's dominions on the con- tinent, he was deprived of the seals. Upon this the complaints of the people again became so violent that on the 29th of June he was once more appointed secretary, and his friends filled other important offices. The war was now con- ducted with uncommon success ; until on the 5th of October, 1761, Mr. Pitt, to the astonish- ment of-the public, again resigned. The imme- diate reason is now known to have been that having received intelligence of the family com- pact being signed between France and Spain, and that the latter was about to join Fiance against us, he thought it necessary to preventher by immediately commencing hostilities. Hav- ing communicated this opinion in the privy council, the other ministers urged that they would think twice before they declared war. ' I will not give them leave to think,' replied Mr. Pitt, ' this is the time to crush the whole rouse of Bourbon. But, if the members of this board are of a different opinion, this is the iast time I shall ever mix in its councils.' He also felt him- self generally thwarted under the new reign by the influence of the earl of Bute. After his re- signation, in 1761, Mr. Pitt never had any share in administration. He received a pension of

£3000 a-year, to be continued after his decease, during the survivancy of his lady and son ; and this gratuity was dignified with the title of ba- roness of Chatham to his lady, and that of baron to her heirs male. Mr. Pitt at that time declined a title of nobility; but in 1766 accepted of a peerage under the title of baron Pynsent and earl of Chatham, and at the same time was ap- pointed lord privy seal. However, he continued stedfast in his opposition to the measures of ad- ministration. His last appearance in the house of lords was on the 2d of April, 1778. He was then so ill as to be supported to his seat by his brother-in-law lord Mahon and his son William ; but the question was

important, being a motion of the duke of Richmond to address his majesty to remove the ministers, and make peace with America on any terms. His lordship made a long speech, which had overcome his spirits ; for, attempting to rise a second time, he fell down in a convulsive fit, and, though he recover- ed for a time, his disorder continued to increase till the llth of May, when he died at his seat at Hayes. His death was lamented as a national loss. As soon as the news reached the house of commons, which was then sitting, colonel Barre" made a motion, that an address should be pre- sented to his majesty, requesting that the earl of Chatham should be buried at the public expense. But Mr. Rigby having proposed the erecting of a statue to his memory, as more likely to perpe- tuate the sense of his great merits entertained by the public, this was unanimously carried. A bill was soon after passed, by which £4000 a-year was settled upon John, the new earl of Chatham, and the heirs of the late earl to whom that title may descend. — His lordship was married in 1754 to lady H. Esther, sister to the earl of Temple ; by whom he had three sons and two daughters. The manners of lord Chatham were easy and bland, his conversation spirited and gay, and he readily adapted himself to the complexion of those with whom he associated. He was uncon- strained as artless infancy, and generous as the noon-day sun ; yet had he something impene- trable that hung about him ; and his unusual energy of soul made him often appear haughty and imperious. He was, indeed, incapable of as- sociating in councils, and was not formed for the sweeter bands of society. He was a pleasing companion, but an unpliant friend. The elo- quence of lord Chatham was one of his most striking characteristics. Here he far outstripped his competitors, and stood alone the rival of an- tiquity. But his spirit and intrepidity were con- spicuous in every action of his life; nor did they leave him to the last. As an instance of his de- termined resolution, when he had any great na- tional object in view, we 'shall conclude with a characteristic anecdote : — Preparatory to one of the secret expeditions, during the war which end- ed in 1763, the minister had given orders to the different presiding officers in the military, navy, and ordnance departments, to prepare a large body of forces, a certain number of ships, and a proportionable quantity of stores, &,c., against a tertain day. To these orders be received an answer from each of the officers, declaring the total impossibility of a compliance with them.

Notwithstanding it was then at a very late hour, he sent immediately for his secretary, and, after expressing his resentment at the ignorance or negligence of his majesty's servants, he gave the following commands: — 'I desire, Mr. Wood, that you will immediately go to

lord Anson-, you need not trouble yourself to search the ad- miralty, he is not to be found there ; you must pursue him to the gaming-house, and tell him, from me, that if he does not obey the orders of government which he has received at my hands, I will most assuredly impeach him. Proceed from him to lord Ligonier; and, though he should be bolstered with harlots, undraw his curtains, and repeat the same message. Then direct your course to Sir Charles Frederick, and assure him that, if his majesty's orders are not obeyed, they shall be the last which he shall re- ceive from me.' In consequence of these com- mands, Mr. Wood proceeded to White's, and told his errand to the first lord of the admiralty ; who insisted that the secretary of stale was out of his senses, and it was impossible to comply with his wishes ; ' however (added he), as mad- men must be answered, tell him that I will do my utmost to satisfy him.' From thence he went to the commander-in-chief of the forces, and de- livered the same message. He also said that it was an impossible business; ' and the secretary knows it (added his lordship) ; nevertheless, he is in the right to make us do what we can ; and what is possible to do, inform him shall be done.' The surveyor-general of the ordnance was next informed of Mr. Pitt's resolution; and, after some little consideration, he began to think that the orders might be completed within the time prescribed. The consequence at last was that every thing, in spite of impossibilities, was ready at the time appointed.

PITT (the right honorable William), the second son of the illustrious statesman and pa- triot whose life and character we have sketched in the preceding article, was born at Hayes in Kent, on the 28th of May 1759, the memorable year in which the French dominion in North America was destroyed by the directing energy of his father, and the active heroism of general Wolfe. The earl of Chatham being driven from power at the beginning of the late Reign, and dis- posed to private life by frequent ill health, be- stowed much of his time and care on the educa- tion of his children. His eldest son was destined for the army, and another, James Charles, for the navy. The education of these he in a great measure confided to others. William he resolv- ed to make a statesman; and in the formation of his character, and cultivation of his talents, was particularly assiduous. His hopes of suc- cess were at least equal to his care ; for he was accustomed to say that his ' son William would one day increase the glory of the name of Pitt.' His classical education was conducted at Burton Pynsent, the family seat, by a private tutor, Dr. Wilson, afterwards a canon of Windsor ; while his father took every means in his power, by personal instruction and conversation, to expand his mind and mature his judgment. He was particularly anxious to teach him, while yet very

young, to speak with elegance and force, and to argue with

precision. He caused him, it is said, to declaim from a chair or a table, and engaged him in dis- putations on the most important subjects; press- ing him with difficulties, that he might acquire a facility of overcoming opposition, and never al- lowing him to stop till each subject was exhaust- ed, and every difficulty overcome. Thus he acquired two qualities of the utmost importance in public life; firmness and readiness, a quick and decisive perception, and a ready delivery.

At about fifteen years of age Mr. Pitt was sent to Cambridge, and admitted into Pembroke Hall, under the tuition of Dr. Turner, afterwards master of the college, and dean of Norwich. His private college tutor was the late Dr. Prettyrnan, afterwards bishop of Lincoln ; to whose care and attention, in his mathematical and classical studies, he is said to have owed much. His conduct at Cambridge was highly exemplary. His rank as a nobleman's son en- titled htm to take the degree of M. A. tanquam nobilis, and therefore exempted him from the exercises and examinations to which those who first go out bachelors in that faculty are sub- jected. But, though he was thus deprived of the opportunity of displaying his talents in the contest for academical honors, his reputation in the university stood high, both for industry and conduct, and procured him an influence in that learned body of considerable importance in after life. Having left the university, Mr. Pitt was entered a student of Lincoln's Inn about the same time with Mr. Addington (afterwards lord Sidmouth), whose father was both the friend and physician of his family : and, on account of his degree, he was called to the bar in three years. He went the western circuit, we believe, twice, but had little practice, and acquired no celebrity as a lawyer.

His attention was now directed to that depart- ment of general politics for which his education had better fitted him. At the general election in 1780 he was advised to become a candidate for the university of Cambridge ; but, high as his reputation then was, he had not yet sufficient influence to secure this great object. Early in the year 1781 he was, therefore, through the in- fluence of the duke of Rutland, with Sir James Lowther, returned to parliament for the borough of Appleby in Cumberland, and his first ap- pearance gave the highest promise of his future greatness. He took the side of opposition both on the subject

of reform and of the American war, and eminently distinguished himself among the most illustrious speakers of that remarkable period. Into the various contests, d iscussions, and changes of this busy time, we mean not, in this place, to enter, and the rather as the reader, by referring to our history of ENGLAND, will find an account sufficiently copious, both of the public transactions and parliamentary motions and mea- sures of the period. See also the life of Mr. Fox.

In December 1783 William Pitt, not yet twenty-foui years of age, was called to fill the important office of prime minister of Great Bri- tain, as first lord of the treasury, and chancellor of the exchequer. Such had been the vacillation of public parties, and the dissatisfaction with

public measures for some time previous, that this, with the other appointments connected with it, was approved by the nation with every ex- pression of joy. The coalition ministry, which Mr. Pitt and his friends displaced, was particu- larly obnoxious to the nation, but it still retained a majority in the house of commons; and, though gradually declining in strength, made many efforts to displace the new ministry. These would, probably, in most other circumstances, have been successful ; but the youthful premier, supported by the king, the house of peers, and a large majority of the nation, stood undaunted before the formidable opposition in the lower house, and declared himself, with a firmness equally surprising and characteristic, the minister of the crown, which possessed uncontrolled power to nominate its own servants. He found himself, however, obliged either to dissolve the parliament, or to form some accommodation with his opponents. The latter expedient he at- tempted without success, and therefore suddenly adopted the former, on the 25th of March 1784. He was now returned by the university of Cam- bridge, and found himself, on the meeting of the new parliament, possessed of a triumphant ma- jority in both houses, and supported by as general an expression of national approbation as was ever, in any circumstances, conferred on any mi- nister.

Having attained, at so early an age, the summit of power and influence, Mr. Pitt exer- cised his authority with a decision and firmness which have been as much the object of tl.e op- probrium of one party as of the hearty applause and approbation of another. Into any particular detail of his long political power we mean not to enter in this place ; the articles already re- ferred to render such detail unnecessary. The period in which he exercised his high office is singularly important, and will be long remark- able in the history of the world ; and in that ge- neral history Mr. Pitt will hold a distinguished place, whether it be written by friend or foe. He was

censured b« the opposition and his ene- mies* for a total desertion of his former princi- ples on his accession to power — those principles which cast a special glory round his father's name, and by which he himself, while in oppo- sition, had courted popularity and attained power. The future historian of this great man's life, however, will attribute a just portion of the supposed inconsistency to the enthusiasm of youth and the habit of opposition on the one hand, and on the other to that change of senti- ment and system which the actual possession of power must inevitably produce. For every man in similar circumstances will quickly find that that which often appears most beautiful and perfect in theory, is not always easy, nor often possible in practice. We mean not to call in question the advantages which are supposed to result from an opposition in a fee country ; but evils are inevitable in every numan system, and some sufficiently notorious seem to attach to the system of party opposition in this country, and to be at- tributable to some of the greatest men, when in opposition.

It does not, therefore, appear to us, we confess,

necessarily to follow, that the measures of a minister are wrong, and his character vicious and inconsistent, because they differ materially from his language in opposition ; and we are perfectly certain that the grounds on which we would venture to palliate the supposed political delinquences of Mr. Pitt, cannot safely be re- jected by his political enemies, without exposing themselves and their leaders to at least equal censure. The period in which, as prime minister, he stood at the head of the public counsels, was beyond all precedent difficult and dangerous, and he might without much censure, even in the first stages of his administration, hesitate about carrying into effect those theories of reform which, in his early enthusiasm, he so eloquently supported. Those difficulties which he would then be the last to anticipate, he would now be the first to feel ; and the rapid events of his mo- mentous life quickly pressed them on his atten- tion with a force not to be resisted. That he was ambitious of power is not denied by his friends ; but, even if he erred in the exercise of his power, it seems now to be admitted, even by his ene- mies, that he aimed to promote the honor and the interest of his country. He has never been accused of any private vice: and, while he re- trieved the finances of the country from ap- proaching ruin, and by his management and measures enabled the country to make exertions beyond the utmost reach of previous calculation, he himself lived in comparative poverty,

and died in debt.

After holding his high office for the long period of eighteen years, Mr. Pitt and all the members of his cabinet suddenly retired in 1801. The cause of his retreat from office was said to be a promise to the Catholics connected with the •union of Ireland which he could not fulfil. The real cause, we are persuaded, was the necessity, real or supposed, of making peace. Mr. Ad- dingtonbpcame prime minister, and preliminaries were signed at London on the 1st of October, 1801. The definitive treaty was signed at Amiens in March 1802, see ENGLAND, and was defended by Mr. Pitt in the house of commons with all the force of his abilities and influence. Comparing his conduct now with that in January 1800 we must confess that we think it inconsis- tent ; but perhaps it was necessary to prove, to general conviction, how vain was the hope of permanent tranquillity with such a power as that of France ; and this advantage the hollow truce which endured little more than a year, we be- lieve, effectually produced.

In 1804 Mr. Pitt opposed the administration which he had hitherto generally supported ; and, after various contests, Mr. Addington retired, and he resumed his former situation; not without being violently accused of deceiving Mr. Fox, by whose influence he succeeded in lessening the minister's majority. He did not long sur- vive his reinstatement in office; his constitution was not strong, and he was subject to an here- ditary gout, which he is said to have increased by his too free use of port wine. In 1805 he succeeded in forming a new coalition against France, between Great Britain, Russia, and Aus- tria, the effects of which were singularly fatal ;

the humiliation of Austria being comp.etely sealed by the disastrous battle of Austerlitz in the close of that year. His end was now rapidly approaching ; but it was probably hastened by the news of that disaster, and by the desolating prospect which the civilised world exhibited to his ardent but debilitated mind. He died in a Christian manner on the 23rd of January, 1806, in the forty-seventh year of his age. Among the last words which he was heard to utter were, ' Oh, my country !' Mr. Pitt was interred at the pub- lic expense, and a monument was ordered in Westminster Abbey to his memory. On the 3rd of February, 1806, £40,000 sterling were voted to defray his debts, which both friends and ene- mies allowed were contracted neither by profusion nor excess. His great political opponent, how- ever, opposed this motion. The public funeral took place on the 22nd of February. The prin- cipal herald proclaimed the style of the deceased : The late right honorable William Pitt, one of his majesty's

most honorable privy council, first lord commissioner of the treasury, admiral and lord warden of the Cinque Ports, and governor of Dover Castle ; one of the representatives in parliament for the university of Cambridge, and high steward for that university ; one of the lords of trade and plantation ; a commissioner for the affairs of India; and the character to whose me- mory is inscribed — Non sibi sed patriae vixit !'

PITT, a county of the east part of North Caro- lina. Population 9169. Chief town Greenville. PITT AC US, a native of Mitylene in Lesbos, was one of the seven wise men of Greece ; his father's name was Hyrradius. With the assist- ance of the sons of Alcaeus he delivered his coun- try from the oppression of the tyrant Melanchrus; and, in the war which the Athenians waged against Leshos, he appeared at the head of his country- men, and challenged to single combat Phrynon the enemy's general. As the event of the war seemed to depend upon this combat, Pittacus had recourse to artifice ; and when he engaged he entangled his adversary in a net which he had concealed under his shield, and easily despatched him. He was amply rewarded for this victory, and his countrymen unanimously appointed him governor of their city with unlimited authority. In this capacity Pittacus behaved with great moderation and prudence; and, after he had governed his fellow-citizens with the strictest jus- tice, and established the most salutary laws, he voluntarily resigned the sovereign power, having enjoyed it for ten years. His disinterestedness gained him many admirers ; and, when the Mity- leneans wished to reward his public services by presenting him with an immense tract of territory, he refused to accept more land than what should be contained in the distance to which he could throw a javelin. He died in his seventieth year, about A. A. C. 579, after he had spent the last ten years of his life in literary ease and retire- ment. Many of his maxims were inscribed on the walls of Apollo's temple at Delphi, to show to the world how great an opinion the Mytile- neans entertained of his abilities as a philosopher and a moralist.

PITTANCE, n. s. Tr.pitance ; lid.pittanza ; Span, pitania; of low Lat. pitacium. An al-

lowance of meat in small portions ; any small portion.

Then at my lodging,

The worst is this, that at so slender warning You're like to have a thin and slender pittance.

Shakspeare. The ass saved a miserable pittance for himself.

L'Estrange.

I have a small pittance left, with which I might retire. Arbuthnot.

Many of them lose the greatest part of the small pittance of learning they received at the university.

Swift's Miscellanies.

Half his earned pittance to poor neighbours went ; They had his alms, and he had his content. Harte. Though duly from my hand he took

His pittance every night, He did it with a jealous look,

And, when he could, would bite.

Cowper.

A terrier, too, which once had been a Briton's, Who dying on the coast of Ithaca,

The peasants gave the poor dumb thing a pittance.

Byron.

PITTHEUS, the son of Pelops and Hippo- damia, king of Trcezene. He educated not only his grandson Theseus, the son of .flLgeus king of Athens by his daughter ˆEthra, but also many of his subjects ; and wrote a work, which was extant in the time of Pausanias the geographer. He was buried at Trcezene, where his tomb and seat of judgment were seen many ages after. Paus. 1 and 2. Plut. Strabo, 8.

PITTOSPORUM, in botany, a genus of the monogynia order, and pentandria class of plants : CAL. pentaphyllous, inferior, and deciduous : petals five : the style thread-shaped : CAPS. somewhat angular, trilocular, and containing three or four angulated seeds, adhering to the capsule by means of a liquid resin in the locula- ments. Of this there are three species, viz.

1. P. coriaceum grows in Madeira, and flowers in May and June.

2. P. tenuifolium, and — 3. P. umbellatum, are both natives of the Cape of Good Hope.

PITTSBOROUGH, a post town and capital of Chatham county, North Carolina, thirty miles south-west of Raleigh, and fifty-four N. N. W. of Fayetteville. It is situated on an eminence, in a very fertile and well cultivated country, and contains a court-house, jail, and academy.

PITTSBURG, a city of the United States, and capital of Alleghany county, Pennsylvania, 230 miles N. N. W. of Baltimore, and 297 west by north of Philadelphia. It is situated on a beautiful plain, on a broad point of land, where the confluence of the Alleghany and Monongahela forms the Ohio. This place was once in the hands of the French, and then called Fort du Quesne, afterwards Fort Pitt, and was commenced as a town under the name of Pittsburg in 1760. It is a very flourishing manufacturing and commercial town, and has an extensive trade. It contains a court-house, a jail, a na- tio :al armoury and magazine, an academy, a library of about 2000 volumes, four banks in- cluding a branch of the United States bank, and eight houses of public worship. The plat of ground on which the town is built i . nearly in the form of a triangle, and is now almost filled

with houses. A suburb has been laid out on the Alleghany, called the northern liberties, ano another on the Monongahela. There are four other villages which are virtually suourbs of Pittsburg, Birmingham on the left bank of the Monongahela ; Alleghany upon the second hank of Alleghany River, opposite the city ; Lawrence- ville, two miles above Pittsburg on the Alleghany ; and a street running along the left bank of the Monongahela opposite Pittsburg. The number of dwelling houses in the city, in 1816, was stated at 960, and in the suburbs and villages in the vicinity 300, making in the whole 1260, and the total population estimated at 12,000.

Pittsburg is a place of great domestic and foreign commerce. The waggons that have passed to and from the town, counted at the nearest turnpike gate, have amounted in one year to 11,800. The surrounding country is one great bed of fossil coal, and the hills in sight of the town are full of that mineral. The region also abounds in iron ore, and various mineral and vegetable productions. In 1816 there were in this town and its connected vicinity eight steam mills, five green and white glass houses, in which every kind of glass, from a porter bottle or win- dow glass to very elegant cut crystal glass, is manufactured ; four air furnaces ; three breweries, in which are made immense quantities of beer, porter, and ale ; sixty-seven flour mills, and nu- merous other mills and manufactories. With regard to

manufactures Pittsburg is the first town in the western country, and with regard to popu- lation and trade it is second only to New Orleans.

Travellers are almost always disappointed on entering this city ; there is but one point of ap- proach which affords a good view of the place ; that is the summit of a hill in the road from Washington. Except from the gratifying re- flection excited by the appearance of so much industry, Pittsburg is by no means a pleasant place to a stranger. The constant volumes of smoke fill the atmosphere with coal dust. In October 1815 it was calculated that 2000 bushels of coal were consumed daily on a space of two miles and a half square. Three newspapers are published here. Vessels of 200 or 300 tons at some seasons descend the Ohio from Pittsburg ; the distance from this place to New Orleans by the course of the rivers is about 2000 miles.

PITTSFIELD, a post town of Berkshire county, Massachusetts, six miles north of Lenox, thirty-six E. S. E. of Albany, and 136 west of Boston. It is watered by the Housatonic, and is a very pleasant, handsome, and flourishing town. It contains three houses of public wor- ship, two for Coogregationalists and one for Me- thodists, a bank, a town-house, a female acade- my, a printing office from which is issued a weekly newspaper, three woollen manufactories, a marble manufactory, a manufactory of small arms, &c. Large numbers of chaises, coaches, and waggons are made here. Good marble is found in this and several of the neighbouring towns. The United States have barracks here sufficient to accommodate 2000 men, and a hos- pital. Pittsfield is situated in a very fertile tract of country, and is one of the best agricultural

towns in the state. A cattle show is held in this town annually about the 1 st of October.

PITTSYLVANIA, a county of the United States, on the south side of Virginia, bounded north by Bedford and Campbell counties, east by Halifax county, south by North Carolina, and west by Henry and Franklin counties. Chief town Danville.

PIT’UITE, n. s. 1 Fr. pituite ; Lat. pitui-

PITU’ITOUS, adj.’] ta. Phlegm ; consisting of phlegm.

It is thus with women only that abound with pi- tuitous and watery humours.

Browne’s Vulgar Errours.

The lungs are formed, not only to admit, by turns, the vital air by inspiration, and excluding it by re- spiration ; but likewise to separate and discharge the redundant pitnitous or flegmatick parts of the blood.

Blackmore.

The forerunners of an apoplexy are weakness, wa- teriness, and turgidity of the eyes-, pituitou* vomiting and laborious breathing. Arbuthnot on Diet.

Serous defluxions and redundant pituite were the product of the winter, which made women subject to abortions. Arbuthnot.

PITUITARY GLAND. See ANATOMY.

PIT’Y, n. s. & v. a. PIT’EOUS, adj. PIT’EOUSLY, adv. PIT’EOUSNESS, n. s. PIT’IABLE, adj.

Fr. pitie ; lta.l.pieta; Lat. pietas. Compas- sion ; tender or pious sympathy ; ground of

ˆregret or grief; used PIT’IABLESESS, n. s. \ sometimes in this last PIT’IFUL, adj. sense in the plural, see

PIT’IFULLY, adv. the extract from L’Es-

PIT’IFULNESS, n. s trange: to compassion- PIT’ILESS, adj. J ate misery or distress;

regard with sympathy ; be compassionate : pi- teous is, sorrowful ; mournful ; exciting to pity : tender; compassionate; also mean, paltry, wretched ; piteously and piteousness follow these senses. Pitiable means deserving compassion : pitiableness, state of deserving pity : pitiful, sor- rowful ; melancholy ; tender ; mean ; despicable : pitifully and pitifulness corresponding : pitiless is, destitute of pity or compassion ; merciless.

I will not pity nor spare, nor have mercy, but de- stroy them. Jeremiah xiii. 14. He made them to be pitied of all.

Psalm cvi. 46. Pitifully behold the sorrows of our hearts.

Common Prayer.

Will he his pitiful complaints renew 1 For freedom with afflicted language sue 1 Sandys.

Basilius giving the infinite terms of praises to Zelmane's valour in conquering, and pitifulness in pardoning, commanded no more words to be made of it. Sidney.

Some, who have not deserved judgment of death, have been for their goods' sake caught up and carried straight to the bough ; a thing indeed very pitiful and horrible. Spenser.

When they heard that piteous strained voice, IB haste forsook their rural merriment. Id.

Fair be ye sure, but proud and pitiless, As is a storm, that all things doth prostrate.

Finding a tree alone all comfortless, Beats on it strongly, it to ruinate. Id.

That he is old, the more is the pity, his white } airs do witness it. Shakspeare. Henry IV.

When I desired their leave that I might pity him, t: ey took from me the use of mine own house.

Shakspeare.

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A sight most pitiful in the meanest wretch, Past speaking of in a king. Id. King Lear.

Be pitiful to my condemned sons, Whose souls are not corrupted. Shakspeare , That's villainous, and shews a most pitiful ambi- tion in the fool that uses it. Id. Hamlet.

He beat him most pitifully ; nay, He beat him most unpitifully. Shakspeare. The most arch deed of piteous massacre, That ever yet this land was guilty of. Id.

I must talk of murthers, rapes, and massacrees, Ruthful to hear, yet piteously performed. Id.

Hadst thou in person ne'er offended me, Even for his sake am 1 now pitilest. Id.

Julius Caesar writ a collection of apophthegms ; it is pity his book is lost. Bacon.

My chance, I see, Hath made even pity pitiless in thee.

Fairfax.

One, in a wild pamphlet, besides other pitiful malignities, would scarce allow him to be a gentle- man. Wotton. You I could pity thus forlorn. Miltmt.

Piteous amends ! unless Be meant our grand foe. Id. Paradise Los*.

Wan and meagre let it look, With a pity-moving shape. Waller.

Some of the philosophers doubt whether there were any such thing as sense of pain ;. and yet, when any great evil has been upon them, they would sigh and groan as pitifully as other men. Tillotsnn.

For the pitiableness of his ignorance and unwilled 'mistake, so long as they lasted, his neglect thereof may be excused and connived at. Kettlewell.

Tis great pity we do not yet see the history of Chasmir. Temple.

The mournful train,

With groans and hands upheld, to move his mind. Besought his pity to their helpless kind. Drydm.

See, where she comes, with that high air and mien. Which marks in bonds the greatness of a queen ; What pity 'tis. Id.

Which when Deucalion with a piteous look Beheld, he wept. Id.

What entertainment can be raised from so pitiful a machine, where we see the success of the battle from the beginning ? lit.

Upon my livid lips bestow a kiss, Nor fear your kisses can restore my breath ; Even you are not more pitiless than death. Id. An ant dropt into the water ; a woodpigeon took pity of her, and threw her a little bough.

L' Estrange.

Singleness of heart being a virtue so necessary, ‘tis a thousand pities it should be discountenanced.

Id.

If these pitiful shanks were answerable to this branching head, I should defy all my enemies. Id.

The conveniency of this will appear, if we consi- der what a pitiful condition we had been in. liny.

Sin can please no longer, than for that pitiful space of time while it is committing; and surely the present pleasure of a sinful act is a poor coun- tervail for the bitterness which begins where the ac- tion ends and lasts for ever. South.

Who would not be that youth 1 what pity is it, That we can die hut once to serve our country !

A liaison.

Compassionate my pains ! she pitiei me . To one that asks the warm return of loye, Compassion’s cruelty, ‘tis scorn, ‘tis death. Id.

If the series of thy joys Permit one thought less cheerful to arise, / iteous transfer it to the mournful swain

Prior 2G

P1U

450

P1U

The pitiable persons relieved are constantly under your eye. Atterbury.

Lest the poor should seem to be wholly disre- garded by their maker, he hath implanted in men a qaick and tender sense of pity and compassion.

Calamy.

She gave him, piteous of his case, A shaggy tapestry. Pope's Dunciad.

Those men who give themselves airs of bravery on reflecting upon the last scenes of others, may behave the most pitifully in their own. Clarissa.

Pity weakness and ignorance, bear with the dul- ness of understandings, or perverseness of tempers.

Law.

The man is to be pitied, who in matters of moment has to do with a staunch metaphysician ; doubts, disputes, and conjectures will be the plague of his life. Beattie.

Oh then I read thy loss — Thy heart is sunk In the dark waters pitiless ; some dear friend, Or brother, loved as thine own soul, lies there — I pity thee, sad man, but can no more — Gold I can give, but can no comfort give ; For I am comfortless. Maturin.

PITYOCAMPASIS, in entomology, a name often given to the caterpillar of the pine-tree. It is the bombyx pityocampa of Fabricius, and greatly resembles the processionary caterpillar of the oak. The ancients used it as a vesicatory, and the acrimony seems to reside chiefly in a dust which is concealed in receptacles on its back. This is its offensive weapon, for it is thrown out at will, and produces very troublesome effects, though the hair of the animal and every part of its body seem to have a similar, but weaker power. The effect is also weaker in winter. Their silk is not sufficiently strong for the loom, and in hot

water melts almost to a paste. In the earth it forms nests of stronger silk, but it is then found with difficulty : in boxes its silk is ex- tremely tender ; and handling the cone produces all the bad effects of the dust.

PIVOT, n. s. FT. pivot. A pin on which any thing turns.

When a man dances on the rope, the body is a weight balanced on its feet, as upon two pivots.

Drydens Dufresnoy.

PIVOT, a foot or shoe of iron or other metal, usually conical or terminating in a point, where- by a body, intended to turn round, bears on ano- ther fixed at rest, and performs its revolutions. The pivot usually bears or turns round in a sole, or piece of iron or brass hollowed to re- ceive it.

PIURA, a province of Peru, bounded north- east by Loxa, eˆst by Jaen de Bracamoros, south- east by the district of Huambos, west by the Pacific, and north-west by the Bay of Guayaquil. It is sixty-six leagues from north to south, and fourteen wide ; and abounds in maize, cotton, and sugar, French beans, melons, quinces, and other fruits.

PIURA, the capital of the province of this name was the first Spanish settlement in Peru, and founded in 1531, by Pizarro. It then stood in the valley of Targasala, nearer the sea, and was called San Miguel de Piura, but the inhabitants irinoved, on account of the unhealthiness of the situation, to its present site. The houses are of brick, cane, or wood-work, and have generally

only one story. The corregidor, and a revenue officer reside here and at Pavia alternately. It has an hospital and church. Inhabitants 7000. Twenty-five miles S. S. E. of Payta. The cli- mate is hot and dry, but not unwholesome.

PIUS, a name assumed by seven popes of Rome, of whom the most celebrated are the fol- lowing:—

Pius II. (./Eneas Sylvius Piccolomini), was born on the 18th of October 1405, at Corsigni, in Siennese. /Eneas was carefully educated, and, having finished his studies at Sienna, he went in 1431 to the council of Basle with cardinal Capra- nica, as his secretary. He afterwards acted in the same capacity to cardinal Albergati, and to Frederick III., who decreed to him the poetic crown, and sent him ambassador to Rome, Mi- lan, Naples, and Bohemia. Nicolas V. advanced him to the bishopric of Trieste, and after to that of Sienna. In 1456, after having

distinguished himself in various nunciatures, he was made a cardinal by Calixtus III., whom he succeeded as pope on the 27th of August 1458. Pius II., from the commencement of his pontificate, ap- peared jealous of any innovations on the papal prerogatives. In 1460 he declared a bull, 'de- claring appeals from the pope to a council to be null, erroneous, detestable, and contrary to the sacred canons.' That bull, however, did not prevent the procurator general of the parliament of Paris from appealing to a council in defence of the Pragmatic sanction, which the pope had strenuously opposed. Pius was then at Mantua, whither he had gone to engage the Catholic princes in a war against the Turks. The greater part of them agreed to furnish either troops or money ; others refused both, particularly the French. He at length persuaded Louis XL to abolish the Pragmatic sanction, which the par- liament of Paris had supported with so much vigor. The year 1462 was rendered famous by a controversy which took place between the Cor- deliers and Dominicans, in which the dispute became so violent that they styled each other heretics ; which obliged the pope to issue a bull, fordidding such odious epithets. He next pub- lished another bull, dated 26th of April, retract- ing what he had written to the council of Basle when he was its secretary; wherein he had ex- pressed some sentiments that ' tended to diminish the authority of the apostolic see.' In this bull he gave a short account of his life and actions, with the history of the council of Basle, to which he went with cardinal Capranica in 1431. In the mean time, the Turks were threatening Chris- tendom. Pius, ever zealous against the infidels, resolved to fit out a fleet, and pass over into Asia himself. He went to Ancona, but fell sick with the fatigue of the journey, and died on the 16th of Aug-ist 1464, aged fifty-nine. Pius II. was one of the most learned men of his time, and one of the most zealous pontiffs. His chief works are, 1. Memoirs of the Council of Basle. 2. The History of the Bohemians, from their ori- gin to 1458. 3. Two books on Cosmography. 4. The History of Frederic III., published in 1785, folio. 5. A Treatise on the Education of Children. 6. A poem upon the Passion of Jesus Christ. 7. A Collection of 432 letters, printed

at Milan 1473, in folio, in which are some curi- ous anecdotes. 8. Memoirs of his own Life, published by John Gobellin Personne, his secre- tary, at Rome, 4to., 1584. 9. Historia rerum ubicumque gestarum, of which only the first part was published at Venice in 1477, in folio. His works were printed at Helmstadt in 1700, in folio, with his life prefixed.

Pius IV. (John Angelo De Medicis), but not of the Florence family, was born at Milan in 1499. He was son to Bernardin Medecini, and brother of the famous rnarquis de Marignan ge- neral to Charles V. He filled several important offices under popes Clement VII. and Paul III. Julius III., who had entrusted him with several legations, made him a cardinal in 1549; and he was elected pope on the death of Paul IV., De- cember 25th 1559. His predecessor had ren- dered himself detestable to the Romans, and Pius IV. commenced his reign by punishing his nephews, causing cardinal Carasse to be strangled, and his brother, prince Palliano, to be beheaded. His zeal was afterwards directed against the Turks and Protestants. To stop the progress of these last, he renewed the council of Trent. In 1561 he sent to all the Catholic and Protestant princes the bull for calling that assembly. An end was, however, put to itby^he industry of his nephew, S. Charles Barromeus, in 1563; and, on the 26th of January 1564, he confirmed its decrees. In 1565 a conspiracy was formed against his life by Benedict Acolti, and other vi- sionaries; but was discovered, and Benedict put to death. Pius died December 9th 1565, aged sixty-six, much hated by the Romans, whom his severities had exasperated. Pie adorned Rome with several public edifices.

Pius V. (S. Michael Ghisleri), born at Bosco, on the 17th of January 1504, was the son of a senator of Milan. He became a Dominican friar. Paul IV. made him successively bishop of Sutri, cardinal, and inquisitor-general in Lom- bardy : but the severity with which he exercised his office obliged him to quit that country. He was sent to Venice, where his zeal met with still greater obstacles. Pius IV. made him bishop of Mondovi ; and on his death he was elected pope, in 1566. His first object was to repress the luxury of the clergy, the pride of the cardi- nals, and the licentious manners of the Romans. He caused the decrees of Reformation enacted by the council of Trent to be put in execution ; he prohibited bull-baiting in the Circus ; he ex- pelled prostitutes from Rome ; and allowed car- dinals to be prosecuted for debt. He was, however, a great persecutor of the Protestants, and several perished in the flames of the inqui- sition. He particularly displayed his zeal for the grandeur of the Holy See in 1568, by ordaining that the bull In caena Domini, which Clement XIV. had suppressed, should be published throughout the whole church. That bull estab- lishes the unlimited power of the popes over all princes, and was rejected by most of the foreign states. Pius V. had the courage to make war on the Turks, forming a league with the Venetians and Philip II. of Spain. This was the first time that the standard of the two keys was seen dis- played against the crescent. The naval armies

engaged on the 7th of October 1571, in Lepanto Bay, and the Christian princes obtained a signal victory over the Turks, who lost above 30,000 men, and near 200 galleys. The success was chiefly owing to the pope, who exhausted his treasury in fitting out that armament. He died of the gravel six months after, 30th April 1572, aged sixty-eight. His name will for ever adorn the list of Roman pontiffs. His bulls in favor of the inquisition, with his rigorous prosecution of heretics, prove that he had more zeal than hu- manity ; but, in other respects, he was not with- out his virtues. Selim II. caused public rejoic- ings to be made at Constantinople for his death for three days. The pontificate of Pius is also celebrated for the condemnation of Baius, the ex- tinction of the order of Humiliati, and the refor- mation of that of the Cistercians. He was canonised by Clement XI. in 1712. There are extant several of his letters, printed at Anvers, in 1640, in 4to. Feiibian, in 1672, published his life, translated from the Italian of Agatio di Somma.

Pius VI., whose original name was Angelo Braschi, was of a noble, but reduced family. He was born in 1718, and rose to the rank of prelate and cardinal entirely by his merit. He was elect- ed pope on the death of Clement XIV. During the first years of his pontificate, which were per- fectly tranquil, he succeeded in draining a con- siderable portion of the Pontine marshes, not only employing the best engineers, but regularly inspecting the work himself. Along the banks of the canals, which were ornamented with four rows of poplars, he made a road near forty miles long, in a straight line, terminating with an ele- gant palace. His tranquillity was at last inter- rupted on the accession of the emperor Joseph II., whose plans of reformation prognosticated no increase of authority to the church. To pre- vent their execution, Pius made a visit personally to the emperor, in January 1782, who received him with all possible respect, but adhered inflex- ibly to his purpose. The revolution in France, and the consequent overthrow of all forms of re- ligion there, gave him a still greater shock. Fiu?, however, did his utmost to preserve peace with the republic, but the murder of citizen Basseville, the French ambassador, in 1793, furnished the Directory with a pretext to overthrow the papal power, and carry the pope a prisoner to France ; where, after being shifted about to various places, he died at Valence in August 1799, and received a burial far inferior to his dignity.

Pius VII. (pope), whose family name was Barnabus Chiaramonte, was born at Cevena, August 14th, 1740. He was raised to the pur- ple in 1785, and held the bishopric of Imola, where he was visited by Buonaparte, in 1796. Having conciliated the favor of this important guest, he was, through his influence, promoted to the papacy, in

March, 1800, and on the 15th of July 1801 signed the concordat between the Holy See and the Gallican church. He went to Paris in 1804, to assist at the coronation of the emperor ; and afterwards refused to confer a similar favor on Louis XVIII. By a decree of the 17th of May, 1809, Napoleon put an end to the .temporal power of the pope, uniting his ter-

ritories to the French empire ; and Pius himself was detained as a prisoner at Fontainebleau, till the overthrow of Buonaparte, when he returned to Rome, and died there August 20th, 1823.

PIX, n, s. Lat. pixis. A little chest or box, in which the Romish consecrated host is kept.

He hath stolen a pix, and hanged must a' be.

Shakspeare.

Prx, TRIAL OF THE, in British coinage, a curi- ous and ancient mode of examining the correct- ness of gold and silver coins. It is thus described in substance, in the Archaeologia, by the very able Mr. Ruding, author of Annals of the Coin- age. Having stated that the earliest notice of the pix which he has met with in any modern fo- reign mint, is in the reign of Philip VI. of France in the fourteenth century ; it cannot, he adds, be determined whether the passage in which it occurs relates to a public trial.

But the invention of it in this kingdom, or at least its introduction into our courts, is probably of high antiquity; for in the 9th or 10th of Ed- ward I. it is mentioned as a mode well known, and of common usage. In one of those years the king, by his writ, commanded the barons of the exchequer to take with them Gregory de Ro- kesle (then master of the mint), and straightway, before they retired from the exchequer, to open the boxes of the assay of London and Canter- buryi and to make the assay, 'in such manner as the king's council were wont to do/ and to take an account thereof, so that they might be able to certify the king touching the same, whenever he should please.

From this record, which is the most ancient hitherto discovered relating to this trial, it ap- pears, says our author, that, previous to the above date, it had usually been made before the king's council, but that, by the authority of the writ above quoted, it was then to be held

in the court of exchequer, in the presence of the barons. It was afterwards taken from their cognizance, and came again under the power of the lords of the council in the Star chamber, where it is found to have been in the year 1595 (as appears from a verdict of that date), and where it conti- nued until 1699, when it again became subject to the court of exchequer; under which it has remained to the present time. From memoranda of assays, which are still preserved in that court, it seems that this trial used to be annually ; and the same is stated to have been the regtlar prac- tice until the usurpation, when it was held at such times as the state pleased. At present, I believe, it is not customary for the master to re- quire it to be held until, upon his removal from the office, it becomes necessary, in order that he may receive his quietus. As the authority under which these trials are held occasionally varied, so did likewise the persons who sat as judges in the court. Thus, as we have seen above, they were first the members of the king's council, then the barons of the exchequer, and again the mem- bers of the privy council, as judges of the star chamber, where sometimes the king himself pre- sided ; as did James I. at an assay which was made upon the 9th of May 1611.

In 1643 a committee of lords and commons was appointed, by order of parliament, for the '

purpose of making this trial. At one period (in 1649), the court was held before the lord presi- dent of the council of state, the commissioners of the great seal, and others of the council of state, and committee of revenue, by virtue of an act of parliament: at another (in 1657) by the lords commissioners of the great seal, assisted by the lords commissioners of the treasury, the justices of the several benches, and barons of the exche- quer, or some of them, under the authority of a warrant signed by the protector Cromwell ; and it is now composed of such members of the privy council as are expressly summoned for that purpose ; the lord high chancellor, or, in his absence, the chancellor of the exchequer pre- siding.

The manner in which this trial was formerly conducted in the court of exchequer appears, from a v»rdict of the llth year of Henry VI., to have been by an assay, made in the presence of the court, and of other persons who were* ap- pointed to assist, by the king's assay master, and to have been determined without the intervention of a jury. The earliest notice which has occur- ed in which the judgment of professional artists was required to sanction, as a jury, the judgment of the court, is dated in the 37th of Elizabeth ; when a trial was beld in the star chamber. The number of the jurors has occasionally varied con- siderably. No less than nineteen names appear to the verdict of

the 37th of Elizabeth ; and in 1651 the moneyers speak of a jury of twenty-four men : whilst the number usual at the present time is no more than twelve.

‘ As I have not been able to discover any an- cient ceremonial by which the forms of this trial were regulated, I must now proceed,’ Mr. R. continues, ‘ to state the modern practice of sum- moning the court, and conducting the business of it. Upon a memorial being presented by the master of the mint, praying for a trial of the pix, the chancellor of the exchequer moves his majesty in council, to that purpose. A summons is then issued to certain members of the privy council, to meet at the house, which is now allotted to the office of receiver of (the fees in his majesty’s ex- chequer, at eleven o’clock in the forenoon, on a certain day. A precept is likewise directed by the lord high chancellor to the wardens of the Goldsmiths’ Company, requiring them to nomi- nate, and set down, the names of a competent number of sufficient and able freemen of their company, skilful to judge of, and to present the defaults of the coins, if any should be found, to be of the jury, to attend at the same time and place. This number is usually twenty-five; of which the assay master of the company is always one.

‘ When the court is formed, the clerk of the goldsmiths’ company returns the precept, toge- ther with the list of names ; the jury is called over, and twelve persons are sworn. The presi- dent then gives his charge, which was formerly to be general, like the oath, to examine by fire, by water, by touch, or by weight, or by all, or by some of them, in the most just manner, whe- ther the monies were made according to the in- denture, and standard trial pieces, and withis the remedies. But, in 1754, the lord high chan-

cellor Talbot directed the jury to express pre- cisely how much the money was within the remedies, and the practice which he thus enjoin- ed is still continued. The other parts of the charge necessaiily vary, according to the ability of the president, and his knowledge of the sub- ject. When it is concluded, the pix is delivered to the jury, and the court is commonly adjourned to the house of the president, where the verdict is afterwards delivered.

‘ The jury then retire to the court room of the duchy of Lancaster, whither the pix is removed, together with the weights of the exchequer and mint, and where the scales which are used upon this occasion are suspended, the beam of which is so delicate that it will turn with six grains, •when loaded with the whole of those weights, to the amount of 48 Ib. 8 oz. in each scale. The jury being seated, the indenture, or the warrant under which the master has acted, is read. Then the pix is opened, and the money which had been taken out of each delivery, and enclosed in a paper parcel, under the seals of the warden, mas- ter, anfl comptroller of the mint, is given into the hands of the foreman, who reads aloud the in- dorsement, and compares it with the account which lies before him. He then delivers the parcel to one of the jury, who opens it, and ex- amines whether the contents agree with the in- dorsement.

‘ When all the parcels have been opened, and found to be right, the monies contained in them are mixed together in wooden bowls, and after- wards weighed. Out of the said monies so mingled, the jury take a certain number of each species of coin, to the amount of one pound weight, for the assay by fire ; and the indented trial pieces of gold and silver, of the dates speci- fied in the indenture, being produced by the proper officer, a. sufficient quantity is cut from either of them, for the purpose of comparing with it the pound weight of gold or silver which is to be tried (after it has been previously melted and prepared) by the usual methods of assay. When that operation is finished, the jury return their verdict, wherein they state the manner in which the coins they have examined have been found to vary from the weight and fineness required by the indenture, and whether, and how much, the variations exceed, or fall short of, the remedies which are allowed ; and, according to the terms of the verdict, the master’s quietus is either grant- ed or withheld.’ — Archceologia, vol. xvi.

PIZARRO (Francis), a celebrated Spanish general, the discoverer and conqueror of Peru, in conjunction with Diego Almagro, a Spanish na- vigator. They are both chargeable with great cruelty to the inhabitants ; and they fell victims to their own ambition, jealousy, and avarice. Almagro, revolting, was defeated and beheaded by Pizarro, who was assassinated by Almagro’s friends in 1541. See PERU.

PIZ’ZLE, n. s. [quasi pissle. — Minsheu]. The urinary organ of the bull.

The fizzle in animals is official to urine and gene- ration. Browne.

PLACARD’, it. a. j Span, plncart ; Belg.

PLACART'. > plakuert ; Fr. plac ard. An

edict- public declaration ; manifesto.

The word placard is also used for a libel or lam- poon. At Rome, placards against the pope are fre- quently fixed, in the night-time, to the statue of Pasquiu. Dr. A. Keea.

PLA'CATE, v. a. ~\ Lat. placeo. To ap. PLA'CABLE, adj. t pease ; pacify, reconcile PLACABIL'ITY, n. s. £ placable is, possible or PLA'CABLENESS. J willing to be appeased •, merciful : placability and placableness mean the disposition of being so.

That the effect of an atonement and reconciliation was to give all mankind a right to approach and rely on the protection and beneficence of a placated deity, is not deducible from nature. Forbes.

Since I sought

By prayer the* offended deity t' appease ; Methought I saw him placable and mild, Bending his ear. Milton's Paradise Lost.

Those implanted anticipations are, that there is a God, that he is placable, to be feared, honoured, loved, worshipped, and obeyed. Hale.

The various methods of propitiation and atonement shew the general consent of all nations in their opi- nion of the mercy and placability of the divine nature.

Anonymous.

PLACE', n. s. & v. a. "^ Sax. J>laeca; French

PLA'CER, n. s. >place ; Teut. plalz ;

PLACE'MAN. 3 Spanish plaza ; Ital.

piazza ; Latin plate.a. Space ; locality ; situation ;

state; room; way; residence; existence; office;

rank ; precedence : to place is, to put ; fix ; settle ;

deposit ; establish : placer, one who places : a

placeman is a pensioner on the government of a

country.

Place such over them to be rulers.

Exodus xviii. 21. Search you out a place to pitch your tents.

Deuteronomy.

Saul set him up a place, and is gone down to Gilgal. 1 Samuel.

He placed forces in all the fenced cities.

2 Chronicles.

Ye seek to kill me, because my word hath no place in you. John viii. 37.

The Romans shall take away both our place and nation. John.

Avenge not yourselves, but rather give place unto wrath. Romans.

Sovereign lord of creatures all, Thou placer of plants, both humble and tall.

Spenser.

What scripture doth plainly deliver, to that the first place both of credit and obedience is due.

Hooker.

The horsemen came to Lodronius, as unto the most valiant captain, beseeching him, instead of their treacherous general, to take upon him the place. Knolles'* History of the Turks.

In his brain

He hath strange placet crammed with observation.

Shahspeare.

I know him a notorious liar ; Think him a great way fool, lolely a coward ; Yet these fixed evils sit so fit in him, That they take place, when virtue's steely bones Look bleak in the cold wind. Id.

The heavens themselvas, the planets, and this

center, Observe degree, priority, and place. Id.

If I'm traduced by tongues that neither know My faculties nor person, Tis but the fate of place, and the rough brake That virtue must go through. Id.

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Hosea saith of the Jews, they have reigned, but not by me ; which place proveth, that there are go- vernments which God doth not avow. Bacon.

They are defects, not in the heart, but in the brain ; for they take place in the stoutest natures.

Id.

All bodies are confined within some place ; But she all place within herself confines. Davies. These fair overtures, made by men well esteemed for honest dealing, could take no place. Hay ward.

Do you think I'd walk in any plot, Where madam Sempronia should take place of me, And Fulvia come i' the rear. Ben Jonson's Catiline.

There is no place of doubting, but that it was the very same. Hammond's Fundamentals.

Is not the bishop's bill denied, And we still threatened to be tried 1

You see the king embraces Those counsels he approved before ; Nor doth he promise, which is more, That we shall have their places.

Denham.

Here I could frequent

With worship, place by place, where he vouchsafed Presence divine. Milton's Paradise Loft.

Our two first parents yet the only two Of mankind in the happy garden placed.

Milton.

II is catalogue huxl aa especial place for sequestered divines. Fell.

Let the eye be satisfied in the first place, even against all other reasons, and let the compass be rather in your eyes than in your hands. Dryden.

Where arms take place, all other pleas are vain ; Love taught me force, and force shall love maintain.

Id.

He stood astride, and to his fellows cried, Give place, and mark the difference if you can Between a woman warrior and a man. Id.

Those accusations had been more reasonable, if placed on inferior persons. Id. Aurengzebe.

Place is the relation of distance betwixt any thing and any two or more points considered as keeping the same distance one with another ; and so as at rest : it has sometimes a more confused sense, and stands for that space which any body takes up.

Locke.

There would be left no measures of credible and incredible, if doubtful propositions take place before self-evident. Id.

I could not pass by this pla.ce, without giving this short explication.

Burnet's Theory of the Earth. Pensions in private were the senate's aim ; And patriots for a place abandoned fame. Garth. I will teach him the names of the most celebrated persons who frequent (hat place. Addison.

We shall extinguish this melancholy thought, of our being overlooked by our Maker, if we consider, in the first place, that he is omnipresent ; and, in the second, that he is omniscient. Id.

As a British freeholder, I should not scruple taking place of a French marquis. Id. Free/wider.

It is stupidly foolish to venture our salvation upon an experiment, which we have all the reason ima- ginable to think God will not suffer to take place.

Atterhtry.

Some magistrates are contented that their places should adorn th«m ; and some study to adorn their places, and reflect back the lustre they

receive from thence. Id.

Mixt government,' partaking of the known form* received in the schools, is by no means of Gothick invention, but hath place in nature and reason.

Swift.

'Twas his care 'lo place on good security his gold. Pope.

God would give them, in their several places and callings, all spiritual and temporal blessings, which he sees wanting to them. Duty of Man.

But all shall give account of every wrong, Who dare dishonour or defile the tongue; Who prostitute it in the cause of vice, Or sell their glory at the market price ; Who vote for hire, or point it with lampoon, The dear-bought placeman, and the cheap buffoon.

Cow per.

PLACE, in astronomy, the place of the sun, a star, &c., denotes the sign and degree of the zodiac which the luminary is in ; or the degree of the ecliptic, reckoning from the beginning of Aries, which the planet or star's circle of longi- tude cuts; and therefore coincides with the lon- gitude of the sun, planet, or star. The place of the moon, being that part of her orbit wherein she is found at any time, is of various kinds, by reason of the great inequalities of the lunar motions, which render a number of equations and reductions necessary before the just point be found. See ASTRONOMY.

PLACENTA, in anatomy. See MIDWIFERY and ANATOMY.

PLACENTIA BAY, an extensive bay on the south coast of Newfoundland ; which forms a good harbour for vessels, and is much frequented by ships employed in the cod fishery. The en- trance is a narrow channel through which only one ship can pass at a time ; but the water is deep enough for the largest, and the harbour is capacious enough to hold 150 sail, which are there secure against all winds, and can fish as quietly as in a river. Before the narrow channel is a road of five miles extent, but exposed to the west winds. The current is very strong in the entrance, so that ships must be towed through it. The Great Strand is large enough to dry fish to load sixty vessels. There is beside a Little- Strand used by the inhabitants of the town. The French first built some huts here with branches of pine-trees, for drying their fish in rainy weather. Near this are the houses of the inhabitants, which form a town called Placentia, in long. 54° to 55° 10′ W., lat. 47°

to 47° 50′ N.

PLACENTIUS (Peter), a German poet, who wrote a Latin Poem of 360 verses, entitled Pugna Porcorum, in which every word begins with a P. He died in 1548.

PLACETTE (John De La), an eminent pro- testant minister, born at Pontac in Bern, in 1639; and educated by his father, who was also a clergyman. lie exercised his office as a mi- nister among the Protestants in France till the Revocation of the edict of Nantes in 1685, when he retired to Denmark, where he continued till the death of the queen, who had been his patron, in 1711. After her death he went to Holland, and settled first at the Hague, and finally at Utrecht, where he died in 1718, aged seventy- nine. He wrote many valuable works on reli- gion and morality ; besides some polemical pieces against the church of Rome. His treatise upon Conscience was translated into English by Dr. Basil Rennet, in 1705.

PLAC'JD, adj. \ Lat. placidus. Gentle ; I'I.AC'IDLY, adv. j quiet ; mild; the adverb corresponding.

It conduceth unto long life and to the more placid motion of the spirits, that men's actions be free.

Bacon.

That placid aspect and meek regard, Rather than aggravate my evil state, Would stand between me and thy father's ire.

Milton.

If into a phial, filled with good spirit of nitre, you cast a piece of iron, the liquor, whose parts moved uniformly and placidly before, by altering its motion it begins to penetrate and scatter abroad particles of the iron. Boyle.

The water easily insinuates itself into, and pla- cidly distends the tubes and vessels of vegetables.

Woodward.

PLAC’IT, n. s. ~La.l.placitum. Decree; de- termination.

We spend time in defence of their placits, which might have been employed upon the universal author.

Glanville.

PLACK’ET, or PLAQUET, n. s. Qu. Fr. pla- quer. A petticoat.

You might have pinched a plaquet, it was sense- less. Shakspeare.

The bone ache is the curse dependant on those that war for a plaquet. Id. Troilus and Cressida.

PLAGIA’RISM, n. s. \ Latin plagium.

PLAGIA’RY. S Theft : literary adop-

tion of the thoughts or works of another; a pla- giary is, he who commits this theft. Browne also uses this word for plagiarism.

Plagiary had not its nativity with printing, but began when the paucity of books scarce wanted that invention. Browne.

Without invention a painter is but a copier, and a poet but a plagiary of others ; both are allowed sometimes to copy and translate. Dryden.

With great impropriety, as well as plagiarism, they have most injuriously been transferred into proverbial maxims. South.

The ensuing discourse lest I chance to be tra- duced for a plagiary by him who has played the thief, was one of those that, by a worthy hand, were stolen from me. Id.

PLAGIARY, in philology, is a purloiner of another man’s works, who puts them off as his own. Among the Romans, plagiarius was properly a person who bought, sold, or retained a freeman for a slave ; and was so called because, by the Flavian law, such persons were condemned ad plagas, ‘ to be whipped.’ Thomasius has an express treatise De plagio literario, wherein he lays down the laws and measures of the right which authors have to one another’s writings. — ‘ Dictionary writers,’ it is observed by Chambers, ‘seem exempted from the common laws of meum and tuum. Their works are supposed, in great measure, compositions of other people ; and what they take from others they take avowedly. In effect, their quality gives them a title to every thing that may be for their purpose, wherever they find

it ; and if they rob, they do not do it any otherwise than as the bee does, for the pub lic service. Their occupation is not pillaging, but collecting contributions ; and, if you ask them their authority, they will produce you the practice of their predecessors of all ages and nations.'

PLAGUE', n. s. &v.a.~\ Tent., Belg., and PLA'GUY, adj. >Dan. plage; Lat.

PLA'GUILY, adv. jplaga. Pestilence;

a mortal or highly contagious disease ; hence state of misery ; any thing noisome or vexa- tious: to infect with pestilence or disease; op- press ; trouble : teaze : plaguy and plaguily (both low words) follow the last sense of the verb.

I am set in my plague, and my heaviness is ever in my sight. Psalm xxxviii. 17.

If her nature be so, That she will plague the man that loves her most,

And take delight to increase a wretch's woe, Then all her nature's goodly gifts are lost.

Spenser.

I am not mad, too well I feel, The different plague of each calamity.

Shakspeuiv.

Say my request's unjust, And spurn me back ; but, if it be not so, Thou art not honest, and the gods will plague thee.

Id.

Thou art a boil,

A plague sore, or imbossed carbuncle, In my corrupted blood. Id. King Lear. The general opinion is, that years hot and moist are most pestilent ; yet many times there have been great plagues in dry years.

Bacon's Natural History. Of heats,

Add one more to the plaguy bill. Donne. Snakes that use within thy house for shade, Securely lurk, and, like a plague, invade Thy cattle with venom. May's Virgil.

Please yourselves, therefore, ye sinful and natural men, with the spiritual condition wherein ye stand : God is no otherwise near to you, but to plague and punish you. Bp. Hall.

Thus were they plagued And worn with famine. Milton. ,

What perils do environ The man that meddles with cold iron ! What plaguy mischiefs and mishaps Do dog him still with after-claps ! Hudibras. PLAGIUM, in the Roman law, is the crime of stealing the slave of another, or of kidnapping a free person, in order to make him a slave. According to German la%v, it is the getting forci- ble possession of a man's person, so as to restrain him of his liberty. Metaphorically, it is used for the act of stealing the thoughts and words of another, by publishing them as one's own. Plagiarism, though often practised, is not unfre- quently charged where a second invention has taken place, since the most striking figures, for instance, are those which are most likely to sug- gest themselves to a variety of persons. The idea of raising all the roofs of a city, and looking into the interior of the houses, used by Quevedo and Le Sage, might easily occur to a person un- acquainted with their works, as the writer has had occasion to know. Such repetitions of course become more and more likely in proportion as the number of books and educated men in- creases.

PLAGUE. See MEDICINE, Index. In that article we have noticed the most recent medical opinions upon this important subject, and have quoted the strong language of Dr. Gregory, that its being ' a highly contagious disease cannot for a moment be made a matter of dispute.' This has, however, of late become so seriously con- troverted, that a committee of the house of commons was for some time engaged on a review

of our Quarantine and Sanitary Laws, which government have already considerably relaxed. The whole question of the contagion of plague came thus before a high and most intelligent tri- bunal : the reader will find an account of the evidence and results in our article SANITARY LAWS. We shall in this place only notice the general account of historians respecting what has been called the plague in former times.

Thucydides, lib. ii., gives an account of a dreadful plague which happened at Athens about A. A. C. 430, and with which he himself was in- fected, while the Peloponnesians under the com- mand of Archidamus wasted all her territory abroad ; but of these two enemies the plague was by far the most severe. The most dreadful plague that ever raged at Rome was in the reign of Titus, A.D. 80. The emperor left no remedy unattempted to abate the malignity of the dis- temper, acting during its continuance like a fa- ther to his people. The same fatal disease raged m all the provinces of the Roman empire in the reign of M. Aurelius, A.D. 167, and was fol- lowed by a dreadful famine, earthquakes, inun- dations, and other calamities. About A. D. 430, the plaerue visited Britain, just after the Picts and Scots had made a formidable invasion of the southern part of the island. It raged with uncommon fury, and swept away most of those whom the sword and famine had spared, so that the living were scarcely sufficient to bury the dead. About A.D. 1348 this disease is said to have become almost general over Europe. Many authors give an account of it as having appeared first in the kingdom of Kathay in 1346, and to have proceeded gradually west to Constantinople and Egypt. From Constantinople it passed into Greece, Italy, France, and Africa, and by degrees along the coasts of the ocean into Bri- tain and Ireland, and afterwards into Germany, Hungary, Poland, Denmark, and the other northern kingdoms. According to Antonius, archbishop of Florence, the distemper carried off 60,000 people in that city. In 1656 the plague was brought from Sardinia to Naples, being introduced into the city by a transport with soldiers on board. It raged with excessive violence, carrying off in less than six months 400,000 of the inhabitants. In 1720 the city of Marseilles was visited with this destructive disease, brought in a ship from the Levant ; and in seven months, during which it continued, it carried off not fewer than 60,000 people. The ravages of this disease have been dreadful where- ever it has made its appearance. On the first arrival of Europeans at the island of Grand Canary, it contained 1 4,000 fighting men, soon after which two-thirds of these inhabitants fell a sacrifice to the plague. The destruction it has made in Turkey in Europe, and particularly in Constantinople, must be known to every reader; and its fatal jeflTects have been particularly heightened there by that firm belief which pre- vails among the people of predestination, &c. It is generally brought into European Turkey froii. Egypt ; where it is very frequent, especially at Grand Cairo. To give even a list of all the plagues which have desolated many flourishing countries, would extend this article beyond all

bounds, and minutely to describe them all is impossible. Respecting

the plague which raged in Syria in 1760, we refer to the abbe Mariti's Travels through Cyprus, Syria, and Palestine, vol. I., p. 278 — 296. This plague was one o(the most malignant and fatal that Syria ever ex- perienced ; for it scarcely made its appearance in any part of the body when it carried off the patient.

PLAICE, H.S. Belg. plate; Itel.platissa. A flat fish.

Of flat fish there are soles, flowkes, dabs, and plaice. Carew.

PLAICE, or PLAISE, is the English name of a species of pleuronectes. See PLEURONECTES.

PLAIN, adj., adv., n. s., & v. a.~\ Fr. plain ;

PLAINDEAL'ING, adj. & n. s. f Belg. pleyn ;

PLAIN'LY, adv. \Latin p'Utnus.

PLAIN'NESS, n.s. I Flat; smooth;

PLAIN'WORK. 3 level ; even;

hence bare; unoyiamented ; simple; not varied ; and hence, metaphorically, evident ; open ; clear ; artless; simple ; mere : as an adverb, distinctly; simply : as a noun substantive, level open ground ; opposed to that which is hilly or much diversified ; a field of battle : as a verb active, to make level, or even (obsolete) : plaindealing is, honest, open dealing; sincerity: plainly and plainness, fol- low all the senses of plain as an adjective: plain- work is ordinary or common needle-work.

In a plain in the land of Shinar they dwelt.

Genesis.

The string of his tongue was loosed, and he spake plain. Mark.

The south and south-east sides are rocky and mountainous, but plain in the midst. Sandys.

A plaining song, plain-singing voice requires. For warbling notes from inward cheering flow.

Sidney.

Well, said Basilius, I have not chosen Dametas for his fighting nor. for

his discoursing, but for his plainness and honesty, and therein I know he will not deceive me. Id.

It was his policy to leave no hold behind him ; but to make all plain and waste. Spenser.

St. Augustine acknowledgeth that they are not only set down, but also plainly set down in scrip- ture; so that he which heareth or readeth may with- out difficulty understand. Hooker.

He that beguiled you in a plain accent was a plain knave, which, for my part, I will not be.

Shakspeare. King Lear.

Though I cannot be said to be a flattering honest man ; it must not be denied, but I am a plaindealing villain. Shaksyeare.

Coriolanus neither cares whether they love or hate him ; and, out of his carelessness, lets them plainly see't. Id.

Think'st thou that duty shall have dread to speak, When power to flattery bows ; to plainness honour Is bound, when majesty to folly falls 1 Id.

In choice of instruments, it is better to chuse men of a plainer sort, that are like to do that that is com- mitted to them, and to report faithfully the success, than those that are cunning to contrive somewhat to grace themselves, and will help the matter in report.

Bacon's Essays.

Give me leave to be plain with you, that yourself give no just cause of scandal. Bacun.

They erected their castles and habitations in the f 'c/'-.'s and open countries, where they iound most

fruitful lands, and turned the Irish into the woods and mountains. Davies.

The Scots took the English for foolish birds fallen into their net, forsook their hill, and marched into the plain directly towards them. Hayward.

Upon one wing the artillery was drawn, every piece having his guard of pioneers to plain the ways.

Id.

Of many plain, yet pious Christians, this cannot be affirmed. Hammond's Fundamentals.

They weie wont to make their canoes or boats plain without, and hollow within, by the force of fire.

Heylin.

I am no politician ; and was ever thought to have too little wit, and too much plaindealing for a states- man. Denham.

Express thyself in plain, not doubtful words, That ground for quarrels or disputes affords. Id.

They wondered there should appear any difficulty in any expressions which to them seemed very clear and plain. Clarendon.

They charged the enemies' horse so gallantly, that they gave ground ; and at last plainly run to a safe place. Id.

By that seed

Is meant thy great Deliverer, who shall bruise

The serpent's head : whereof to thee anon

Plainlier shall be revealed.

Hilton's Paradise Lost.

His diet was of the plainest meats, and commonly not only his dishes, but the parts of them were such as most others would refuse. Fell.

The experiments alledged with so much confidence, and told by an author that writ like a plain man, and one whose profession was to tell truth, helped me to resolve upon making the trial. Temple.

Thy vineyard must emploj thy sturdy steer

To turn the glebe ; besides thy daily pain

To break the clods and make the surface plain.

Dryden.

A crown of ruddy gold inclosed her brow, Plain without pomp, and rich without a show. Id. It looks as fate with nature's law may strive,

To shew plaindealing once an age would thrive.

Id.

If some pride with want may be allowed, We in our plainness may be justly proud, Whate'er he's pleased to own, can need no show.

Id.

Bring a plaindealing innocence into a consistency with necessary prudence- L' Estrange.

'Tis plain in the history, that Esau was never sub- ject to Jacob. Locke.

My heart was made to fit and pair within, Simple and plain, and fraught with artless tender- ness. Rowe.

Hilly countries afford the most entertaining pros- pects, though a man would chuse to travel through a plain one. Addison.

It is plain that these discourses are calculated for none but the fashionable part of womankind.

Id. Spectator.

Goodman Fact is allowed by every body to be a p/ain-spoken person, and a man of very few words ; tropes and figures are his aversion. Addison.

We see plainly that we have the means, and that nothing but the application of them is wanting. Id.

To speak one thing, mixed dialects they join ; Divide the simple, and the plain define. Prior.

Pour forth Britannia's legions on the plain.

Arbnthnot.

Plainness and freedom, an epistolary stile required.

Wake,

Our troops beat an army in plain fight and open licld. Felton.

From Epiphanius's censure of Origen, one may perceive plainly that he thought the Anti-nicene church in general, both before and after Origen, to be of a very contrary judgment to that which he condemns in Lucian and Origen, that is, to Arianism.

Waterland.

Some have at first for wits, then poets past, Turned criticks next, and proved plain fools at last.

Pove.

You write to me with the freedom of a friend, set- ting down your thoughts as they occur, and dealing plainly with me in the matter. Id.

As shades most sweetly recommend the light, So modest plainness sets off sprightly wit. Id.

While here the ocean gains, In other parts it leaves wide sandy plains. Id. She went to plainwork, and to purling brooks. Id.

A man of sense can artifice disdain, As men of wealth may venture to go plain.

Young.

There is little, however, that can be contradicted, even when a plainer tale comes to be told. Johnson.

PLAIN, v.n. \ Fr. plaint, plain

PLAINT, n. s. I tif ; of Latin plango.

PLAIN TFTJL, adj. >Tn lament; com-

PLAINTIFF, n. s. & adj. i plain : a plaint is, PLAINTIVE, adj. j a lamentation ; com-

plaint; expression of injury or sorrow: plaint- ful, full of complaint ; audibly sorrowful : plain- tiff, the complainant of damage or injury in a law-suit (opposed to the defendant) ; it is also used by Prior as an

adjective, for complaining ; lamenting ; or in the sense of plaintive.

Long since my voice is hoarse, and throat is sore, With cries to skies, and curses to the ground : But more I plain, I feel my woes the more. Sidney. Then pour out plaint, and in one word say this : Helpless his plaint, who spoils himself of bliss.

Id.

To what a sea of miseries my plaintful tongue doth lead me ! Id.

The fox that first this cause of grief did find, ‘Gan thus first plain his case with words unkind.

Spenser.

The incessant weeping of my wife, And piteous plaininys of the pretty babes, Forced me to seek delays. Shakspeare.

Bootless are plaints, and cureless are my wounds.

Id.

There are three just grounds of war with Spain ; one of plaint, two upon defence. Bacon.

Where though 1 mourn my matchless loss alone, And none between my weakness judge and me ;

Yet even these gentle walls allow my moan, Whose doleful echoes to my plaints agree. Wotton. How many children’s plaints and mother’s cries !

Daniel. He to himself thus plained. Milton.

Listening where the hapless pair Sat in their sad discourse, and various plaint, Thence gathered his own doom.

Id. Paradise Lost. For her relief,

Vext with the long expressions of my grief, Receive these plaints. Waller.

You and I shall talk in cold friendship at a bar before a judge, by way of plaintiff and defendant.

Dryden.

His careful mother heard the plaintive sound, Encompassed with her sea-green sisters round. Id.

The plaintiff proved the debt by three positive wit- nesses, and the defendant was cast in costs and da- mages. L' Estrange.

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Can nature's voice

Plaintive be drowned or lessened in the noise ; Then shouts as thunder loud affect the air 1 Prior.

In such a case the plaintiff will be hiss'd, My lord, the judges laugh, and you're dismissed.

Pope.

By woe the soul to daring actions swells , By woe, in plaintless patience it excels. Savage. Leviathans in plaintive thunders cry. Young.

Defendant thus becomes a name, Which he that bore it may disclaim ; Since both in one description blended, Are plaintiff's — when the suit is ended.

Cotoper.

PLAINFIELD, a town of Cheshire county, New Hampshire, north America, on the Con- necticut River, eleven miles south of Dartmouth College, and fourteen North of Claremont. Union Academy, a well endowed seminary, is in this place, and opposite to the town the Quechy flows into the Connecticut with a considerable fall.

PLAIT, n. s. & v. a. Corrupted from plyght, from to ply or fold. A fold ; a double : to fold ; weave; involve.

Let it not be that outward adorning of plaiting the hair. 1 Peter.

Should tlie voice directly strike the brain, It would astonish and confuse it much ;

Therefore these plaits and folds the sound restrain, That it the organ

may more gently touch. Davies.

Time shall unfold what plaited cunning hides. Who covers faults at last with shame derides.

Shakspeare.

Tis very difficult to trace out the figure of a vest through all the plaits and foldings of the drapery.

Addison. Nor shall thy lower garments artful plait,

From thy fair side dependent to thy feet,

Arm their chaste beauties with a modest pride,

And double every charm they seek to hide.

Prior.

Will she on Sunday morn thy neckcloth plait ?

Gay.

The busy sylphs surround their darling care, Some fold the sleeve, while others plait the gown ; And Betty's praised for labours not her own.

Pope.

Your hands have not been employed in plaiting the hair, and adorning your persons ; but in making cloaths for the naked. Law.

PLAN, n. s. & v. a. Fr. and Span, plan ; Lat. planus. Plot ; form ; scheme ; model : to scheme ; design.

Remember, O my friends, the laws, the rights, The generous plan of power delivered down From age to age to your renowned forefathers.

Adduon.

Artists and plans relieved my solemn hours ; I founded palaces, and planted bowers. Prior.

Vouchsafe the means of vengeance to debate, And. plan with all thy arts the scene of fate. Pope.

PLAN, in general, denotes the representation of something drawn on a plane; such are maps, charts, ichnographies, &c. See MAP, CHART, &c.

PLAN, in architecture, is particularly used for a draught of a building, as it bears on the ground, showing the extent, division, and distribution of its area or ground-plot into apart- ments, rooms, passages, &c. To render plans intelligible, it is usual to distinguish the massives

with a black wash ; the projectures on the ground are drawn in full lines, and those supposed over hem in dotted lines. The augmentations or alterations to be made are distinguished by a color different from what is already built ; and the tints of each plan made lighter as the stories are raised. In large buildings it is usual to have three several plans for the first three stories.

PLANCH'ED, adj. > Fr. plancher. Made

PLANCH'ER, n. s. J of boards ; a floor so made.

He hath a garden circummur'd with brick, Whose western side is with a vineyard backt, And to that vineyard is a planched gate, That makes his opening with this bigger key.

Shakspeare.

Oak, cedar, and chestnut, are the best builders ; some are best for planchers, as deal ; some for tables, cupboards, and desks, as walnuts. Bacon.

PLANCUS (Lucius Munatius), a writer of the Augustan age, an orator and a disciple of Cicero. He was with Caesar in Gaul, and be- came governor of a province in Gallia Celtics (where he built Lugdunum, now Lyons) ; and was made consul with Brutus. He then fa- voured the republican cause, but afterwards de- serted to Caesar. He disgraced himself still more, by becoming a servile flatterer of Antony and Cleopatra; to please whom he acted as a stage dancer, and in a comedy personated the sea-god Glaucus, by dancing quite naked, with his body painted green, a crown of reeds on his head, and the tail of a large fish appended to his back. Finding that this sycophantic adula- tion procured him contempt instead of approba- tion, even from Antony, he deserted to Octavins, before the battle of Actium ; who received him with great marks of respect ; which Plancus re- turned by proposing in the senate to confer on him the title of Augustus. About this period Horace dedicated his seventh Ode to him. The elegance of his Letters to Cicero, which are still extant, prove that he was not unworthy of a lite- rary compliment.

PLANCUS (Francis), M. D., was born at Amiens in 1696, and was author of some celebrated works. 1. A complete System of Surgery, in 2 vols. 12mo. 2. A choice Library of Medicine, continued and completed by M. Goulin, making in all 9 vols. 4to., or 18 vols. 12mo. 3. A Translation of Vander Wiel's Observations on Medicine and Surgery, 1758, 2 vols. 12mo. Plancus was the editor of various editions of works on medicine and surgery, and enriched them with notes. He died September 19th, 1661, aged sixty-nine.

PLANE, n. s. & v. a. Lat.p/awus. In geometry, level surface : in carpentry, an instrument by which boards are made of level surface : to level, smooth ; use a plane.

The iron is set to make an angle of forty-five de- grees with the sole of the plane. Moxon.

These hard woods are more properly scraped than planed. Id. Mechanical Eiercise*.

The foundation of the Roman causeway was made of rough stone, joined with a most firm cement ; upon this was laid another layer of small stones and cement, to plane the inequalities of the rough stone, in which the stones of the upper pavement were fixt Arbuthnot on Coins.

Comets, as often as they are visible to us, move in planes inclined to the plane of the eelipUek in all kinds of angles. Bentley.

Projectiles would ever move on in the same right line, did not the air, their own gravity, or the rug- gedness of the plane on which they move, stop their motion. Cheyne.

PLANE, in geometry, denotes a surface that lies evenly between its bounding lines ; and, as a right line is the shortest extension from one point to another, so a plane surface is the shortest ex- tension from one line to another.

PLANE, in joinery, consists of a piece of wood, very smooth at bottom, as a stock or shaft ; in the midst of which is an aperture, through which a steel edge, or chisel, placed obliquely, passes ; which, being

very sharp, takes off the inequalities of the wood along which it slides. Planes have various names, according to their various forms and uses : as, 1. The fore-plane, a very long one, and usually that which is first used : the edge of its iron or chisel is not ground straight, but rises with a convex arch in the middle ; its use is to take off the greater irregularities of the stuff, and to prepare it for the smoothing-plane. 2. The smoothing-plane is shorter, its chisel being finer ; and its use is to take off the greater ir- regularities left by the fore-plane, and to prepare the wood for the jointer. 3. The jointer is the longest of all ; the edge of its chisel is very fine, and does not stand out above a hair's breadth ; it is chiefly used for shooting the edge of a board perfectly straight, for jointing tables, &c. 4. The strike-block is like the jointer, but shorter : its use is to level short joints. 5. The rabbet- plane, which is used in cutting the upper edge of a board, straight down into the stuff, so that the edge of another cut after the same manner may join in with it, on the square : the chisel of this plane is as broad as its stock, that the angle may cut straight, and it delivers its shavings at the sides, and not at the top like the others. 6. The plough, which is a narrow-rabbet plane, with the addition of two staves, on which are shoulders ; its use is to plough a narrow square groove on the edge of a board. 7. Moulding planes, which are of various kinds, accommo- dated to the various forms and profiles of the moulding ; as the round-plane, the hollow-plane, the ogee, the snipe's-bill, &c., which are all of several sizes, from half an inch to an inch and a half.

PLANE, PERSPECTIVE, in perspective, is sup- posed to be pellucid, and perpendicular to the 'umzon; the horizontal plane, supposed to pass through the spectator's eye, parallel to the hori- zon ; the geometrical ptane, likewise parallel to the horizon, wherein the object to be represented is supposed to be placed, and as such brought direct to the eye of the spectator.

PLAN E-T REE,' n. s. Fr. plane, platane ; Lat. PLATA NUS, which see.

The beech, the swimming alder, and the plane.

Dry den.

PLAN'ET, n. s. ~\ Fr. pianette ; Lat. pla- Pi,AN'ETARY,ad;. f neta; Greek 7r\av»jrjjc, PLANET'ICAL, {wanderers. A star or hea- PLAN'ET- STRUCK.) venly body wandering or continually changing its position with respect to

other stars See ASTRONOMY. Planetary and planetic mean erratic; pertaining to, or governed by, a planet or planets : planet-struck is

used also in this last sense.

Barbarous villains ! hath this lovely face Ruled like a wandering planet over me, And could it not enforce them to relent T

Shakspeare.

We make guilty of our disasters the sun, the moon and stars, as if we were villains by an enforced obedience of planetary influence. Id.

Wonder not much if thus amazed I look,

Since I saw you, I have been planetstruck ;

A beauty, and so rare, I did descry. Suckling,

And planets, planet-struck real eclipse Then suffered. Milton's Paradise Lost.

Their planetary motions and aspects. Milton.

Darkling they mourn their fate, whom Circe's

power,

That watched the moon and planetary hour, With words, and wicked herbs, from human kind Had altered. Dryden.

Pwas born in the planetary hour of Saturn, and I think I have a piece of that leaden planet in me -f I am no way facetious. Addison.

PLANETARIUM, an astronomical machine, so called from its representing the motions, or- bits, &cc., of the planets, agreeably to the Coper- nican system. See ASTRONOMY.

PLANETARY SYSTEM is the system or assem- blage of the planets, primary and secondary, moving in their respective orbits, round their common centre the sun. See ASTRONOMY, Index.

PLANISPHERE, n. s. Lat. planus and sphere. A sphere projected on a plane : a map of one or both hemispheres.

PLANK, n. s. & v. a. Fr. planche ; Arm. plank ; Teut. plankc ; Lat. planca. A thick strong board : to lay with planks.

If you do but plank the ground over it will breed salt-petre. Bacon's Natural History.

The doors of plank were ; their close exquisite,

Kept with a double key. Chapman's Odyssey

The smooth plank new rubbed with balm.

Milton.

A steed of monstrous height appeared ; The sides were planked with pine. Dryden.

PLANOCON'ICAL, adj. Lat. planus and conus. Level on one side and conical on others.

Some few are planoconical, whose superficies is in part level between both ends. Crew's Museum.

PLANOCON'VEX, n. $. Lat. planus and convexus. Flat on the one side and convex on the other.

It took two object-glasses, the one a planoconvex for a fourteen feet telescope, and the other a large double convex for one of about fifty feet.

Newton's Opticks.

PLANT, n.s.,v.a.,&v.n.") Sax. plants; Fr.

PLANT'ACE, n. s. I plante ; Sp., Port.,

PLANT'AL, adj. ^and Lat. planta, q.

PLANTA'TION, it. s. fpalanta, a polo? —

PLANT'ED, part . j Minsheu. Avege-

PLANT'ER, n. s. J table ; any thing

produced from seed : to set in the ground with

a view to cultivate ; hence to settle ; establish :

as a verb neuter, to perform the act of planting :

plantage is an obsolete word for herbage: plantal,

pertaining to plants : plantation, the act or art of planting; place planted; hence a colony; establishment ; foundation : planted is used by Shakspeare for well-grounded ; settled : a planter is one who sets, sows, or cultivates plants; par- ticularly applied to a cultivator of the West India colonies; one who introduces or dissemi- nates any thing or system of things.

Plant not thee a grove of any trees near unto the altar of the Lord. Deuteronomy xvi. 21.

Butchers and villains, How sweet a plant have you untimely cropt !

Shakspeare.

The fool hath planted in his memory An army of good words. Id.

1'ruth, tired with iteration, As true as steel, as plantage to the moon. Id. If you plant where savages are, do not only enter- tain them with trifles and gingles, but use them justly- Bacon.

Planting of countries is like planting of woods : the principal thing that hath been the destruction of most plantations hath been the base and hasty draw- ing of profit in the first years ; speedy profit is not to be neglected, as far as may stand with the good of the plantation. Id. Essays.

Episcopacy must be cast out of this church, after possession here from the first plantation of Christianity in this island. King Charles.

There's but little similitude betwixt a terreous hu- midity and plantal germinations. Glanville.

Take a plant of stubborn oak, And labour him with many a sturdy stroke.

Dri/den.

When Turnus had assembled all his powers, His standard planted on Laurentum's towers ; Trembling with rage, the Latian youth prepare To join the' allies. Id. JEneis.

There stood Sabinus, planter of the vines, And studiously surveys his generous wines.

Dryden .

It continues to be the same plant, as long as it partakes of the same life, though that life be com- municated to new particles of matter, vitally united to the living plant, in a like continued organisation, conformable to that sort of plants. Locke.

What do thy vines avail, Or olives, when the cruel battle mows The planter's, with their harvest immature ?

Philipi.

The next species of life above the vegetable is that of sense : wherewith some of those productions, which we call pJan<-animals, are endowed. Grew.

Virgil, with great modesty in his looks, was seated by Calliope in the midst of a plantation of laurel.

Addison.

Had these writings differed from the sermons of the first planters of Chistianity in history or doctrine, they would have been rejected by those churches which they had formed. Id.

That product only which our passions bear, Eludes the planter's miserable care. Prior.

Once I was skilled in every herb that grew, And every plant that drinks the morning dew.

Pope.

To build, to plant, whatever you intend, In all let nature never be forgot. Id.

He to Jamaica seems transported, Alone, and by no planter courted. Sutift. PLANTAGENET, the surname of fourteen kings of England, from Henry II. to Richard III. inclusive. See ENGLAND. Antiquarians are much at a loss to account for the origin of this name; the best derivation they can find for it is that

Fulk, the first earl of Anjou of that name, being stung with remorse for some wicked action, went in pilgrimage to Jerusalem as a work of atone- ment ; where, being soundly scourged with broom twigs, which grew plentifully on the spot, he ever after took the surname of Plantagenet, or broomstalk, which was retained by his noble posterity.

PLANTAGO, plantain, a genus of the mo- nogynia order, and tetrandria class of plants. To this genus Linnseus has joined the coronopus and psyllium of Tournefort. There are several distinct species, and some varieties ; but, as they are rarely cultivated, we only mention such of them as grow naturally in Britain, i. e. the com- mon broad-leaved plantain, called way-bread; the great hoary plantain, or lamb's-tongue : the narrow-leaved plantain, or ribwort. The besom plantain, and rose-plantain, are accidental varie- ties which have also been found in England. Plantains are frequently very troublesome weeds. The common plantain and rib-wort plantain are both used in medicine. They are said to be slightly astringent; and the green leaves are commonly applied to fresh wounds.

PLAN'TAIN, n. s. Fr. plantain ; Lat. plan- tago. An herb : a tree of the West Indies. See PLANTAGO.

The toad, being overcharged with the poison of the spider, as is believed, has recourse to the plantain leaf. More.

I long my careless limbs to lay Under the plantain's shade. Waller

The most common simples are mugwort, plantain, and horse-tail. Wiuman't Surgery.

PLANTAIN, LITTLE WATER, the English name of the genus limosella.

PLANTATIONS, in English law. It seems to be doubtful whether all the settlements of our traders and navigators are within the statute of 7 and 8 Will. III. for regulating the plantation trade. But, whatever distinction may at one time have been made between the terms colony and plantation, there seems now to be none. The word plantation, it is said, first came into use, suggested by those of Ulster, Virginia, Maryland, and other places, which all implied the idea of introducing, instituting, and establishing, where every thing was desert before. Colony did not come much into use till the reign of Charles II., and seems to have denoted that kind of political relation in which the plantations stood to the mother country. Thus the different parts of New England were, in a great measure, volun- tary societies planted without the direction or participation of the home government ; so that, in the time of Charles II., there were not want- ing persons who pretended to doubt of their constitutional dependence on the crown of Eng- land ; and itˆwas recommended, in order to put an end to such doubts, that the king should ap- point governors, and ' so make them colonies.' A colony, therefore, might be considered as a plantation, when it had a governor and civil establishment, subordinate to the

mother coun- try. All the plantations in America, except those of New England, had such an establish- ment; and they were, upon that idea, colonies as well as plantations. — Tomlins.

PLANTATIONS.

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Plantations or colonies, in distant countries, according to Blackstone, are either such where the lands are claimed by right of occupancy only, by finding them desert and uncultivated, and peopling them from the mother country ; or ‘vhere, when already cultivated, they have been e.her gained by conquest or ceded by treaties. And both these rights are founded upon the law of nature, or at least upon that of nations. But there is a difference between these two species of colonies, with respect to the laws by which they are bound. For it has been held that, if an uninhabited country be discovered and plant ed by English subjects, all the English laws then in being, which are the birth-right of every sub- ject, are immediately there in force. But this must be understood with very many, and very great restrictions. Such colonists carry with them only so much of the English law as is applicable to their own situation and the condition of an infant colony; such, for instance, as the general rules of inheritance, and of protection from per- sonal injuries. The artificial refinements and distinctions incident to the property of a great and commercial people, the laws of police and revenue (such especially as are enforced by penalties), the mode of maintenance for the established clergy, the jurisdiction of spiritual courts, and a multitude of other provisions, are neither necessary nor convenient for them, and therefore are not in force. What shall be admit- ted and what rejected, at what times and under what restrictions, must, in case of dispute, be decided in the first instance by their own pro- vincial judicature, subject to the revision and control of the king in council : the whole of their constitution being also liable to be new modelled and reformed by the general superin- tending power of the legislature in the mother country. But in conquered or ceded countries, that have already laws of their own, the king may indeed alter and change those laws : but, till he does actually change them, the ancient laws of the country remain in force ; unless such as are against the law of God, as in the case of an infi- del country. — 7 Hep. 17: Calvin’s Case. [How then is the murderous law of the Suttees still recognised in Hindostan ?] See, in the case of Campbell v. Hall, an elaborate argument of lord Mansfield, to prove the king’s legislative autho- rity, by his prerogative alone, over a ceded or conquered country. — Cowp. 204. Our American plantations are principally of this latter sort, being

obtained in the last century, either by right of conquest and driving out the natives, or by treaties. And therefore the common law of England, as such, has no allowance or authority there ; they being no part of the mother country, but distinct (though dependent) dominions. They are subject,however, to the control of the parliament ; though (like the Isle of Man, and the

pany those commissions ; under the authority of which provincial assemblies are constituted, with the power of making local ordinances, not repugnant to the laws of England. 2. Proprie- tary governments ; granted out by the crown to individuals, in the nature of feudatory princi- palities, with all the inferior regalities, and subor- dinate powers of legislation, which formerly be- longed to the owners of counties palatine : yet still with these express conditions, that the ends for which the grant was made be substantially pursued, and that nothing be attempted which may derogate from the sovereignty of the mother country. 3. Charter governments ; in the nature of civil corporations, with the power of making bye-laws for their own interior regulation, not contrary to the laws of England ; and with such rights and authorities as are specially given them in their several charters of incorporation. The form of government in most of them is borrowed from that of England. They have a governer named by the king (or in some proprietary co- lonies by the proprietor), who is his representative or deputy. They have courts of justice of their own, from whose decisions an appeal lies to the king and Council here in England. Their ge- neral assemblies, which are their House of Commons, together with their Council of State, being their upper house, with the concurrence of the king or his repiesentative, the governor, make laws suited to their own emergencies. But it is particularly declared by stat. 7 and 8 W. III., c. 22, that all laws, bye-laws, usages, and cus- toms, which shall be in practice in any of the plantations, repugnant to any law made or to be made in this kingdom relative to the said plan- tations, shall be utterly void and of none effect. And, because several of the colonies had claimed the sole and exclusive right of imposing taxes upon themselves, the statute 6 Geo. III., c. 12, was passed, expressly declaring that all his ma- jesty s colonies and plantations in America have been, are, and of right ought to be, subordinate to, and dependent upon the imperial crown and parliament of Great Britain, who have fell power and authority to make laws and statutes of sufficient validity to bind the colonies and people of America, subjects of the crown of Great Britain, in all cases whatsoever. This a» thority was afterwards enforced by stat. 7 Geo. III. c. 59, for suspending the legislation of New- York ; and by several subsequent statutes : but in the year 1782, by stat. 22 Geo. III. c. 46,

his majesty was empowered to conclude a truce or peace with the colonies of New Hampshire, Massachusett's Bay, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, the three lower counties on Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia in North America ; and for that purpose to repeal, or to suspend, the operation of any acts of par-

rest) not bound by any acts of parliament, un-

less particularly named. — 1 Comm. Itrod. § 4.

With respect to their interior polity, our colo- nies are stated by Blackstone to be properly of three sorts: 1. Provincial establishments; the constitutions of which depend on the respective commissions issued by the crown to the gover- nors, and the instructions which usually aceom-

nies. A peace was soon after concluded, and the independence, which the above mentioned colonies had before declared, was confirmed to them, under the title of the United States of America.

5 Geo. II. c. 7 regulates suits in the courts of law and equity jn the plantations; and makes

PLA

4 2 PLA

houses, lands, negroes, and real estates, assets to pay debts. 13 Geo. III. c. 14 enforces mort- gages of estates in the West India colonies, and the mode of proceeding to foreclose the same. 22 Geo. III. c. 75 declares that offices in plan- tations shall only be granted by patent, during the residence of the grantee and quamdiu sebene gesserit : and, on absence or misbehaviour, the officer is removeable by the governor and coun- cil, who may also give leave of absence. By stat. 11 and 12 Wil. III. c. 12, confirmed and extended by 42 Geo. III. c, 85, all offences committed by governors of plantations, or any other persons in the execution of their offices, in any public service abroad, may be prosecuted in the court of king's bench in England. The indictment is to be laid in Middlesex; and the offenders are punishable as if the offence had been committed in England, and also incapaci- tated from holding any office under the crown. The court of king's bench is empowered to award a mandamus to any court of judicature, or to the governor, &c., of the county where the offence was committed, to obtain proofs of the matter alleged : and the evidence is to be trans- mitted back to that court, and there admitted on the trial.

As to the laws and government of particular colonies or plantations, we must refer to the al- phabetical account of them.

PLANTIN (Christopher), a celebrated printer born near Tours in 1533. He settled at Ant- werp, and there erected a printing-office, which was considered as the chief ornament of the town, being one of the finest printing-offices in Europe. He died in 1598, aged sixty-five; and left a most sumptuous and valuable library to his grandson Balthasar.

PLANTING, in agriculture and gardening. See RURAL ECONOMY and WOODS.

PLASENCIA,a town in the interior of Estre- madura, Spain, situated in a narrow, fertile val- ley, watered by the river Xerte. It covers a large extent of ground, is a bishop's see, and has a good but irregular cathedral, seven churches, se- ven convents, and a splendid mansion belonging to the Mirabel family. This town, though not, as has been supposed, the Ambracia of the Ro- mans, is of ancient date, and has several anti- quities, in particular an aqueduct of eighty arches, still in such preservation as to convey water. Inhabitants 4800. 120 miles west by south of Madrid, and fifty-two north by west of Truxillo.

PLASH, 72. s.) Belg. plas, plasche ; Dan.

PLASH'Y, adj. J platz; qu. Lat. palus ? A small lake of water ; a puddle ; a marshy place : plashy is, watery ; miry.

He leaves

A shallow plash to plung him in the deep, Aad with satiety seeks to quench his thirst.

Shakxpeare,

Two frogs consulted in the time of drought, when many plashes that they had repaired to were dry, what was to be done 1 Bacon.

I understand the aquatile or water- frog, whereof in ditches and standing plashes we behold millions.

Browne.

Near stood a mill in low and plashy ground.

Betterton.

With filth the miscreant lies bewiayed, Fallen in the plash his

wickedness had laid.

Pope.

PLASH, n. s. & v. a. Fr. plessez. A branch interwoven with others. To interweave branches. An operation thought by some persons to promote the growth and continuance of old hedges.

Plant and plash quicksets, Evelyn.

In the plashing your quick, avoid laying of it too low and too thick, which makes the sap run all into the shoots, and leaves the plashes without nourish- ment. Mar-timer.

PLASM, n. s. Gr. irXa

The shells served as plasms or mounds to this sand, which, when consolidated, and freed from its inves- tient shell, is of the same shape with the cavity of the shell. Woodward.

PLASSEY, a town, plain, and grove, near the city of Muxadah, in India, celebrated for a battle fought between the British under lord Clive, and the native Hindoos under the nabob Surajah Dowlah, in 1757. The British army consisted of about 1200 men, of whom the Europeans did not exceed 900 ; while that of the nabob consisted of 50,000 foot and 18,000 horse. Notwithstanding this great disproportion, however, lord Clive effectually routed the nabob and his forces, with the loss of three Europeans and twenty-six sepoys killed, and five Europeans and forty sepoys wounded. The nabob's loss was estimated at about 200 men, besides oxen and elephants.

PLASTER, n. s. & v. a. 1 Fr. plaster, from PLAS'TERER, n. s. > Latin emplastrum ;

Belg. plaster; Gr. 5r\a£w. Substance made of water and some absorbent matter, such as chalk or lime well pulverised ; a glutinous or adhesive salve : to overlay or apply plaster : a plasterer is one whose trade is to lay on plaster.

In the same hour came forth the fingers of a man's hand, and wrote upon the plaster of the wall. .

Daniel

A heart settled upon a thought of understanding is as a fair plastering on the wall. Ecctes.

Seeing the sore is whole, why retain we the plaster ?

Hooker.

You rub the sore, When you should bring the plaster.

Shakspe ire Boils and plagues

Plaster you o'er, that one infect another Against the wind a mile. Id.

The harlot's cheek beautied with plastering art.

Id.

Thy father was a plasterer, And thou thyself a shearman. Id.

With cement of flour, whites of eggs, and stone powdered, piscini mirabilis is said to have walls plastered. Bacon.

The plasterer makes his figures by addition, and the carver by subtraction. Wotton.

It not only moves the needle in powder, but like- wise, if incorporated with plasters, as we have made trial. Browne.

Plasters, that have any effect, must be by dis- persing or repelling the humours. Temple. Plaster the chinky hives with clay. Dryden. In the worst Inn's worst room, with mat half- hung, The floors of plaster, and the walls of dung. F. > pe.

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The brain is grown more dry in its consistence, and receives not much more impression, than if you wrote with your finger on a plastered wall.

Watts's Improvement of the Mind, Well, figure to your senses straight, Upon the house's topmost height, A closet, just six feet by four, With white- washed walls and plastered floor.

•Kirke White.

PLASTER, in pharmacy, an external application of a harder consistence than an ointment ; to be spread, according to the different circumstances of the wound, place, or patient, either upon linen or leather. See PHARMACY.

PLASTER, or PLAISTER, in building, a compo- sition of lime, sometimes with sand, &c., to cover the nudities of a building. See PARGET- ING and STUCCO.

PLASTER OF PARIS, a preparation of several species of gypsum*dug near Mont Martre, a vil- lage near Paris; whence the name. The best sort is hard, white, shining, and marbly. It neither gives fire with steel, nor ferments with aquafortis ; but readily calcines into a fine plas- ter, the use of which in building and casting statues is well known. Two or three spoonfuls of burnt alabaster, mixed up thin with water, in a short time coagulate, at the bottom of a vessel full of water, into a hard lump, notwithstanding the water that surrounded it. Artificers observe, that the coagulating property of burnt alabaster will be very much impaired or lost, if the pow- der be kept too long, especially in the open air, before it is used ; and when it has been once tempered with water, and suffered to grow hard, they cannot, by any burning or powdering of it again, make it serviceable for their purpose as before. This matter, when wrought into vessels, &c., is still of so loose and spongy a nature, that the air has easy passage through it. Mr. Boyle gives an account, among his experiments with the air-pump, of his preparing a tube of this plaster, closed at one end and open at the other ; and, on applying the open end to the cement, as is usually done with the receivers, it was found utterly impossible to exhaust all the air out of it ; for fresh air from without pressed in as fast as the other, or internal air, was exhausted, though the sides of the tube were of a consider- able thickness. A tube of iron was then put on the engine ; so that, being filled with water, the tube of plaster of Paris was covered with it ; and, on using the pump, it was immediately seen, that the water passed through into it as easily as the air had done, when that was the ambient fluid.

The method of representing a face truly in plaster of Paris is this : — The person, whose figure is designed, is laid on his back, with any convenient thing to keep off the hair. Into each nostril is conveyed a conical piece of stiff paper, open at both ends, to allow of respiration. These tubes being anointed with oil, are sup- ported by the hand of an assistant ; then the face is lightly oiled over, and, the eyes being kept shut, alabaster, fresh calcined, and tempered to a thinnish consistence with water, is by spoon- fuls nimbly thrown all over the face, till it lies near the thickness of an inch. This, matter grows sensibly hot, and in about a quarter of an

hour hardens into a kind of stony concretion ; which, being gently

taken off, represents, on its concave surface, the minutest part of the original face. In this a head of good clay may be moulded, and therein the eyes are to be opened, and other necessary amendments made. This second face being anointed with oil, a second mould of calcined alabaster is made, consist- ing of two parts joined lengthwise along the ridge of the nose; and herein may be cast, with the same matter, a face extremely like the original.

Plaster of Paris casts from the antique are cheap, and offer a facility to the artist of studying the most beautiful productions of the great mas- ters of sculpture without the necessity either of travelling or incurring heavy expenses; while, at the same time, the amateur is gratified by hav- ing it in his power to adorn his rooms with fac- similes of the finest productions of ancient art, which would otherwise exist only for the benefit and delight of the fortunate few.

Plaster of Paris, diluted with water into the consistence of a soft or thin paste, quickly sets or grows firm, and its bulk is thereby increased ; for Mr. Boyle found that a glass vessel, filled with the fluid mixture, and closely stopped, burst when the mixture set, and sometimes a quantity of water issued through the cracks. This expansion of the plaster, in passing from a soft to a firm state, is one of its valuable pro- perties ; rendering it an excellent matter for fill- ing cavities in sundry works, where other earthy mixtures would shrink and leave vacuities, or entirely separate from the adjoining pans.

It is probable, also, that this expansion of the plaster might be made to contribute not a little to the elegance of the impressions which it re- ceives from medals, &c., by properly confining the soft matter, that its expansion mav force it into the minutest traces of the figure.

If finely powdered alabaster, or plaster of Paris, be put into a basin over a fire, it will, when hot, assume the appearance of a fluid, by rolling in waves, yielding to the touch, steaming, &c., all which properties it again loses on the departure of the heat ; and being thrown upon paper will not at all wet it, but immediately dis- cover itself to be as motionless as before it was set over the fire.

PLASTERER'S COMPANY, in heraldry, was incorporated in 1 500. Their arms are, as in the annexed figure, azure, on a chevron gules, between a trowel and two hatchets, handles of the second ; headed argent in chief, and a treble brush in base proper ; a rose gu/es seeded or, between two fleurs-de-lis of the first.

PLASTIC, adj. Gr. ir\aT«oC. Having the power to give form.

Benign Creator ! let thy plastick hand Dispose its own effect. Prior.

There is not any thing strange in the production of the formed metals, nor other plastick virtue con- cerned in shaping them into those figures, than merely the configuration of the particles.

Woodward's Natural History.

PLASTIC ART, the art of representing all sorts of figures by the means of moulds. This term is derived from the Gr. TrXaciKj;, the art of forming

modelling, or casting in a mould. The artist makes use of moulds to form figures in bronze, lead, gold, silver, or any other metal or fusible substance. The mould is made of clay, stucco, or other composition, and is hollowed into the form of the figure that is to be produced ; they then apply the jet, which is a sort of funnel, through which the metal is poured that is to form the figures. It is thus, after much practice and attention, that the artist forms, 1 . Equestrian and pedestrian statues of every kind : 2. Groups ; 3. Pedestals ; 4. Bas-reliefs ; 5. Medallions ; 6. Cannons, mortars, and other pieces of artillery ; 7. Ornaments of architecture, as capitals, bases, &c. ; 8. Various sorts of furniture, as lustres, branches, in every kind of metal ; and in the same manner figures are cast in stucco, plaster, or any other fusible matter. Wax being a sub- stance that is very easily fused much use is made of it. There are impressions which are highly pleasing in colored wax, of medallions, basso and alto relievos, and of detached figures ; which, however, are somewhat brittle. There is also another method of taking the impressions of medals and coins, which is as follows : — They wash or properly clean the piece whose impres- sion is to be taken, and surround it with a bor- der of wax. They then dissolve isinglass in water, and make a decoction of it, mixing with it some vermilion, to give it an agreeable red color. They pour this paste, when hot, on the stone or medal, to the thickness of about the tenth part of an inch ; then leave it exposed to the sun, in a place free from dust. After a few days this paste becomes hard, and offers to the eye the most admirable and faithful representa- tion of the medal that it is possible to conceive : they are then carefully placed in drawers ; and thousands of these impressions, may be included in a small

compass. The proficients in plastics have likewise invented the art of casting in a mould papier mache or dissolved paper, and forming it into figures, in imitation of sculpture, of ornaments and decorations for ceilings, furni- ture, &c., and which they afterwards paint or gild. There are, however, some inconveniences' attending this art ; as, for example, the imper- fections in the moulds, which render the contours of the figures inelegant, and give them a heavy air : these ornaments, moreover, are not so durable as those of bronze or wood, seeing that in a few years they are preyed on by worms. The figures that are given to porcelain, Delft ware, &c., belong also to plastics ; for they are formed by moulds, as well as by the art of the sculptor and turner ; and by all these arts united are made vases of every kind, figures, groups, and other designs, either for use or ornament.

PLASTIC NATURE, a certain power by which, as an instrument, many philosophers, both an- cient and modern, have supposed the great motions in the corporeal world, and the various processes of generation and corruption, to be perpetually carried on. Among the philoso- phers of Greece, such a power was almost uni- versally admitted. It seems, indeed, to have been rejected only by the followers of Democri- tus and Epicurus, who thought gravity essential to matter, and the fortuitous motion of atoms,

which they held to have been from eternity, the source, not only of all the regular motions in the universe, but also of the organisation of all corporeal systems, and even of sensation and intellection in brutes and in men. It is evident that those men, whatever they might profess, were in reality atheists ; and Democritus avowed his atheism. The greater part of the philoso- phers who held the existence of a plastic nature considered it not as an agent in the strict sense of the word, but merely as an instrument in the hand of the deity ; though even among them there were some who held no superior power, and were, of course, as gross atheists as Demo- critus himself. Such was Strato of Lampsacus, who was originally of the peripatetic school, over which he presided many years with great reputation. He was the first and chief assertor of what has been termed hylozoic atheism; a system which admits of no pfbwer superior to a certain natural or plastic life, essential, ingener- able, and incorruptible, inherent in matter, but without sense and consciousness. That such was his doctrine we learn from Cicero. Cicero adds, however, that Strato, in admitting this plastic principle, differed widely from Democri- tus. That the rough and smooth, and hooked and crooked atoms of Democritus were, indeed, dreams and fancies, is a position which no sen- sible person will controvert ; and surely Strato was himself as great a dreamer, when he made sensation and intelligence result from a certain plastic

or spermatic life in matter, which is itself devoid of sense and consciousness. It is, indeed, inconceivable, to use the emphatic language of Cudworth, ‘ how any one in his senses should admit such a monstrous paradox as this, that every atom of dust has in itself as much wisdom as the greatest politician and most pro- found philosopher, and yet is neither conscious nor intelligent !’

PLASTRON, n. s. Fr. plastron. A piece of leather stuffed, in order to receive the pushes of fencers.

Against the post their wicker shields they crush, Flourish the sword, and at the plastron push.

PLAT, v. a. From PLAIT, which see. -To weave ; make by texture.

I have seen nests of an Indian bird curiously interwoven and plat -ed together.

Ray on the Creation.

I never found so much benefit from any expedient, as from a ring, in which my mistress's hairis/;/at(eti in a kind of true lover's knot. Addison.

PLAT, ra. «. More properly PLOT, which see A small piece of ground.

Such pleasure took the serpent to behold The flowery plat, the sweet recess of Eve.

Mtlton.

On a plat of rising ground, I hear the far-off curfew sound, Over some wide watered shore, Swinging slow with sullen roar. Id.

It passes through banks of violets and plats of willow of its own producing. Spectator.

PLATA, Rio DE LA, a river of South Ameri- ca, for a short time after 1515 called the river of De Solis, from Juan Diaz de Solis its dis

coverer. Sebastian Cabot, however, having taken on its banks a considerable booty from the Indians, gave it its present name. Estimated by the body of water which it pours into the ocean, it is one of the largest rivers in the world. It is, however, properly speaking, but a conti- nuation of the PARAGUAY and PARANA, which see. See also AMERICA, SOUTH.

When the Parana takes its more decisive bend to the south-east to join the Uruguay, and the two streams expand together, they become pro- perly the La Plata, and through this channel the great body of water formed by the confluence of ihe Parana, the Paraguay, and the Uruguay, flows into the ocean and forms an estuary of fresh water without parallel for width and magnificence. It is 150 miles broad at its mouth, from Cape St. Maria to Cape St. An- thony : but some geographers have considered the point of Monte Video on one side,

and the Punla de Piedras or Stony Point on the other, as its proper boundaries. Between those pro- montories it is about eighty miles broad. The water, however, neither loses its freshness, nor feels the influence of the tide in any considera- ble degree, between the first mentioned extremi- ties. At Buenos Ayres, about 200 miles from the mouth, it is about thirty miles broad ; and, the shores being little elevated, the eye can sel- dom reach from one side to the other. This noble expanse is, notwithstanding its extent, deformed by rocks and sand-banks, and render- ed of dangerous navigation by shoals and shal- lows. Impetuous torrents of wind also sweep, at intervals, over the vast plains of the Pampas, 10 the south-west of Buenos Ayres, and rush down this wide opening with amazing fury. It has been observed, however, that a thunder-storm generally precedes the ravages of the Pamperos, and gives sufficient notice to mariners to prepare for them. The only port in this quarter which is adapted for the safety of ships of considerable burden is that of Monte Video ; though those of Maldonado, Barragon, Buenos Ayres, and Colonia, afford anchorage.

The La Plata was formerly it is said navigable as high as the city of Assumption for large ships ; but from the accumulations of sand this is certainly now impracticable. There are two great banks, which are the terror of mariners ; i. e. the English and the Ortiz bank. The for- mer is the most advanced toward the ocean, and is of considerable extent. Occasionally, and when the floods come down the rivers, it is covered for several fathoms, but has in general only a few feet water : the same may be said of the Ortiz bank, which lies higher xip, and more across the river, being of greater length but less breadth. Still further to perplex the navigation here is a reef of rocks and shoals stretching out from Punta de Piedras, and rendering the en- trance along the southern shores of the river of great intricacy and danger. The northern chan- nel is at once narrower and deeper than the southern. Ships generally make Cape St. Maria ; and their best way is to range along the northern sho-e, till they are clear of the Ortiz, between which and Fisher's bank, off Colo- nia or St. Sacrament, there is a good passage to VOL. XVII.

the road of Buenos Ayres. In the lower part of the river there are very few islands. That of de Lobos, or the Wolves (so called from the seals and other amphibious animals that frequent it), lies off the Punta de Este, surrounded by dan- gerous rocks. The Isle de Flores, or of Flow- ers, lies between the English bank and the port of Monte Video, and affords tolerable anchorage. San Gabriel protects the roadstead of St. Sacra- ment, until near the confluence of the Uruguay and the Parana ; where on one side is the island of Martin Garcia, and on the other that of Pal- mas. The difficulties of this navigation have been found to be

much exaggerated by the policy of the Spaniards. The soundings decrease regu- larly from fifteen to four and three fathoms water, and the bottom varies from sand at the mouth, to rocky clay, thick mud, and sediment.

PLA1VEA, or PLAT.EJE, an ancient and strong town of Bceotia, at the foot of Mount Citheron, on the borders of Megaris and Attica, between Mount Cithutron and Thebes; famous for a battle fought between Mardonius, the Persian general, and the united Spartans and Athenians, under Pausanias and Aristides, wherein the former were defeated with great slaughter. The Persian army consisted of 300,000 men, of whom scarcely 3000 escaped. The Grecian army lost only ninety-one Spartans, fifty-two Athenians, and sixteen Tegeans. The plunder of the Per- sian camp was immense. This decisive victory, which from that period secured the liberties of Greece against the power of the Persians, was fought on the 22nd of September, A. A. C. 479, the same day on which the Greeks obtained another important victory at Mycale. See MY- CALE. The Greeks, in memory of it, built a temple to Jupiter Eleutherius, and instituted the games called Eleutheria. Platsea was taken by the Thebans, after a famous siege in the begin- ning of the Peloponnesian war ; and afterwards destroyed by the Spartans A. A. C. 427. It was rebuilt by Alexander the Great ; but is now in ruins. These may, however, be traced in all their extent. Their form is triangular, the cir- cuit about 3200 yards, or a mile and three quarters. At the south angle evidently stood the citadel ; the whole remaining masonry con- sists of blocks accurately hewn and well put together.

PLATˆANS, the people of Plataea. They were greatly attached to the Athenians, and sent them 1000 men, when Greece was invaded by Datis the general of Darius.

PLATALEA, the spoonbill, in ornithology, a genus belonging to the order of grallae. The beak is plain, and dilates towards the point into an orbicular form ; the feet have three toes, and are half palmated. The species are distinguished by their color.

1. P. ajaja,the roseate spoonbill, is but a little less than the white. The bill is marked all round with a furrow parallel to the edge, and is of a grayish white color, so transparent as to show the ramification of the blood-vessels be- longing to it ; the forehead is of a whitish color between the bill and eyes and throat ; the plu- mage is a fine rose color, deepest on the wings ; the legs are gray, the claws blackish, and the

toes have membranes as in the next species. The variety of this species is entirely of a beau- tiful red color, having a collar of black at the lower part of the neck ; the irides are red. Latham imagines it is the roseate in full plumage. It is said to be of a blackish chestnut the first year ; becomes rose-colored the second ; and of a deep scarlet the third. It lives on small fish.

2. P. leucorodia, the white spoonbill, is about the size of a heron, but somewhat shorter in the neck and legs. The bill is more than half a foot long, and, like that of the rest of the genus, is shaped like a spoon; the color of the bill is very various, being in some birds black ; in others brown, and sometimes spotted ; from thˆ base to two-thirds of its length several indenta- tions cross it, the rising parts of which are of a dark color ; the tongue is short and heart-shaped, the irides are gray, the skin of the lore round the eyes and of the throat is bare and black, the plumage is entirely white, though in some specimens the quills were tipped with black; the legs are generally either black or of a grayish brown color; between the toes there is a mem- brane connected to the outer one as far as the second, and to the inner as far as the first joint. ‘ This bird,’ says Latham, ‘ is found in various parts of the old continent, and from the Ferro Isles near Iceland to the Cape of Good Hope. It frequents the neighbourhood of the sea, and has been met with on the coasts of France and at Sevenhuys, near Leyden, in great plenty, annually breeding in a wood there. The nest is placed on high trees, near the sea-side. The female lays three or four white eggs, powdered with a few pale red spots, and of the size of those of a hen. They are very noisy during breeding time, like our rooks ; are seldom found high up the rivers, chiefly frequenting the nouths of them. Their food is fish, which they often take from other birds, in the manner of the bald eagle; also mussels and other shell fish, being found in greatest numbers where these are plentiful ; and they will also devour frogs and snakes, and even grass and weeds which grow in the water, as well as the roots of reeds. They are migratory, retiring to the warmer parts as the winter approaches, and are rarely seen in England. Their flesh is said to have the flavor of a goose, and is eaten by some, and the young birds have been thought good food. The two varieties of this species are equal in size to the roseate species. The bill

of the first is reddish ; the plumage mostly white ; the feathers of the wings partly white and partly black, and the legs reddish. The plumage of the other is entirely white, not excepting even the quills. It has a crest of feathers whose webs are very loose, and separated from one another ; the bill is of a rufous gray color, having red edges, and the legs are of a dull pale red. They both inhabit the Philippine Islands.

3. P. pigmea, the dwarf spoonbill, is about the size of a sparrow. The bill is black, longer than the head, flat at the end, and nearly of a rhomboidal form ; the angles and top of the upper mandible are white, the tongue is smooth, the body is brown above and white beneath, the quills have white shafts, the tail is rounded,

short, and of a brownish white color; the feet have four toes, are cloven, and the claws are pointed. It inhabits Surinam and Guiana.

PLAT' AN E, n. s. Fr. platane ; Lat. platanus. The plane tree.

The platane round,

The carver holm, the maple seldom inward sound.

Spenser.

I espied thee fair and tall, Under a platane. Milton.

PLATANUS, the plane-tree, a genus of the polyandria order and moncecia class of plants, natural order fiftieth, amentaceae. There are two species

1. P. occidentalis, occidental or western plane- tree, rises with a straight smooth stem to a great height, branching widely round. It has lobated leaves seven or eight inches long, and from nine or ten to twelve or fourteen broad, divided into three large lobes, with very small flowers, col- lected into round heads, succeeded by round rough balls of seeds. It is a native of Virginia and other parts of North America, where it attains an enormous size, and is remarkable for having its stem of an equal girth for a considerable length ; some trees being eight or nine yards in circumference.

2. P. orientalis, oriental or eastern plane tree, rises with a very straight smooth branching stem to a great height. It has palmated leaves six or eight inches long and as broad, divided into five large segments, having the side ones cut into two smaller, green above, and pale underneath ; and long pendulous pedunculi, each sustaining several

round heads of close-sitting, very small flowers ; succeeded by numerous downy seeds, collected into round, rough, hard balls. It is a native of Asia and many parts of the east, and grows in great plenty in the Le- vant. The varieties of these two species are the Spanish or middle plane tree, having re- markably large leaves of three or five narrower segments ; and the maple-leaved plane tree, hav- ing smaller leaves, somewhat lobated into five segments, resembling the maple tree leaf. All these elegant trees are of a hardy temperature, so as to prosper here in any common soil and exposure in our open plantations, &c., and are some of the most desirable trees of the decidu- ous tribe. They were in singular esteem among the ancients of the east for their extraordinary beauty and the delightful shade they afforded by their noble foliage. The leaves commonly expand in May, and fall off early in autumn ; and the flowers appear in spring, a little before the leaves, being succeeded by seeds, which in fine seasons frequently ripen here in September. These fine trees are singularly fitted for all orna- mental plantations. Their straight growth, re- gular branching heads, and the lofty stature they attain, together with the extraordinary breadth of their luxuriant leaves, render them extremely desirable furniture to adorn avenues, lawns, parks, and woods ; some disposed in ranges, some as single standards, others in clumps, some in groves, &c. The propagation of these trees is by seed, layers, and cuttings. The seeds frequently ripen in these parts, and are also procured from other countries, and may be

obtained of the nurserymen or seedsmen. The ocRt season for sowing them is autumn, if they can be then procured. Choose a somewhat shady moist soil ; and having dug the ground, and raked it fine, form it into four feet wide beds, and either scatter the seeds evenly on the surface, and rake them in, or previously with the back of a rake turn the earth off the surface nearly half an inch deep into the alleys ; then sow the seed, and directly, with the rake turned the proper way, draw the earth evenly over the seedsˆ and trim the surface smooth ; many of the plants will rise in spring, and some probably till the spring following. When they are one or two years old plant them out in nursery rows, two or three feet asunder, and about half that distance in the lines ; to remain till of a proper size for final transplantation. The melhod of propagation by layers is commonly practised in the nurseries, in default of seed, and by it they most readily grow; for

which purpose some stout plants for stools must be planted, which in a year after must be headed down near the bottom, that they may throw out many shoots near the ground, convenient for laying ; which, in the autumn after they are produced, lie by for slit-laying, and by the autumn after will be well rooted, and form plants two or three feet high, so as to be separated, and planted in nur- sery rows like the seedlings. All the sorts will take tolerably by cutting off the strong young shoots ; but the platanus occidentalis more freely than the oriental kind. Autumn is the best season ; as soon as the leaf falls choose strong young shoots, and plant them in a moist soil ; many of them will grow, and make tolerable plants by next autumn. To continue the dis- tinction of the varieties more effectually, they should be propagated either by layers or cut- tings; for, when raised from seed, those of the respective species generally vary.

PLATE, n. s. & v. a. Sax. plat; Fr. plat ; Belg. plate ; Gr. >n\arvQ. A piece of metal beat out flat or into breadth ; armour of plates ; wrought silver or gold ; a broad shallow eating- dish or vessel ; to cover or arm with plates ; beat into laminae.

The doors are curiously cut through and plated.

Sandys.

With their force they pierced both plate and mail, And made wide furrows in their fleshes frail.

Spenser.

The Turks entered into the trenches so far that they carried away the plate. Knolles's History.

In his livery Walked crowns and coronets ; realms and islands

were As plates dropped from his pocket. Shakspeare.

Plate sin with gold, And the strong lance of justice hurtless breaks. Id.

Marshal, ask yonder knight in arms, Why plated in habiliments of war? Id.

Make a plate, and burnish it as they do iron.

Bacon.

They eat on beds of silk and gold, And leaving plate, Do drink in stone

of higher rate.

Ben Jomon't Catiline. A table stood,

Yet well wrought plate strove to conceal the wood.

Cowley.

A leaden bullet shot from one of these guns, the space of twenty paces, will be beaten into a thin plate. Wilhins.

The bold Ascalonite

Fled from his lion ramp, old warriors turned

Their plated backs under his heel. Milton.

They that but now for honour and for plate Made the sea blush with blood, resign their hate.

Waller. Eternal deities !

Who rule the world with absolute decrees,

And write whatever time shall bring to pass

With pens of adamant on plates of brass.

D" y 'den. If to fame alone thou dost pretend,

The miser will his empty palace lend,

Set wide his doors adorned with plated brass.

Id.

Ascanius this observed, and, smiling, said, See, we devour the plates on which we fed. Id.

At your dessert bright pewter comes too late, When your first course was all served up in plate.

King.

The censers of rebellious Korah, &c., were by God's mandate made plates for the covering of the holy altar. White.

The censers of these wretches who could derive no sanctity to them ;

yet in that they had been con- secrated by the offering incense, were appointed to be beaten into broad plates, and fastened upon the altar. South.

If a thinned or plated body, of an uneven thick- ness, which appears all over of one uniform color, should be slit into threads of the same thickness with the plate ; I see no reason why every thread should not keep its colour. Newton.

M. Lepidus's house had a marble door-case, after- wards they had gilded ones, or rather plated with gold. Arbuthnot.

What nature wants has an intrinsick weight, All more is but the fashion of the plate. Young.

PLATE is likewise used by sportsmen to ex- press the reward given to the best horse at races ; which was formerly often a piece of elegant silver plate, as a tea-pot, tea kitchen, caudle cup or punch bowl ; but is now almost univer- sally converted into a purse.

PLATFORM, n. s. Fr. flat, plat and form. The sketch of any thing horizontally delineated ; ichnogtaphy ; scheme ; plan ; flat place.

When the workmen began to lay the platform at Chalcedon, eagles conveyed their lines to the other side of the streight. Sandys.

Their minds and affections were universally bent even against all the orders and laws wherein this church is founded, conformable to the platform or Geneva. Hooker.

Where was this 1 — Upon the platform where we watch.

Shakspeare.

I have made a platform of a princely garden by precept, partly by drawing not a model, but some general lines of it. Bacon's Etsays.

They who take in the entire platform, and see the chain, which runs through the whole, and can bear in mind the observations and proofs, will discern how these propositions flow from them. Woodward.

No artful wildness to perplex the scene ; Grove nods at grove, each alley has a brother, And half the platform just reflects the other.

Pope.

PLATFORM, in the military art, is an elevation of earth, on which

cannon are placed to fire on

the enemy ; such are the mounts in the middle of curtains. On the ramparts there is always a platform, where the cannon are mounted. It is made by the heaping up of earth on the rampart, or by an arrangement of madriers, rising insen- sibly for the cannon to roll on, either in a case- mate or on attack in the outworks. All practi- tioners are agreed that no shot can be depended on, unless the piece can be placed on a solid platform ; for, if the platform shakes with the first impulse of the powder, the piece must like- wise shake, which will alter its direction, and render the shot uncertain. They must be made higher behind than before by six or nine inches, to prevent too great a recoil, and to advance the gun easily when loaded. They are from eighteen to twenty feet long, eight feet before, and four- teen or fifteen feet behind, and the direction left to the officers of the royal regiment of artillery.

PLATFORM, or ORLOP, in a man of war, is a place on the lower deck, abaft the main mast, between it and the cock-pit, and round about the main capstan, where provision is made for the wounded men in time of action.

PLATINA (Bartholomew Sacchi), or Philip, as others call him, a learned Italian historian, born in 1421 at Piedena, a village between Cremona and Mantua. He first embraced a military life, but afterwards devoted himself to literature. He went to Rome under Calixtus III. about 1456; was introduced to cardinal Bessarion, obtained some benefices from Pius II., and was appointed apostolical abbre viator. Paul II. succeeding, abolished the offices of all the abbreviators. Platina complained to the pope, and requested to be judged by the auditors of the Rota. Paul gave him a haughty repulse, and finally put him in prison, where he suffered great hardships for four months, when he was liberated, but forbid to leave Rome. After this he was again imprisoned with many others, on suspicion of a plot, and put to the rack. The plot being found imaginary, he was next accused of heresy. Sixtus IV., succeeding Paul in 1 467, appointed Platina keeper of the Vatican library, in which station he lived very happily till 1481, when he died of the plague. He was author of several works, of which the most famous is his History of the Popes.

PI.ATINA, or PLATINUM. See PLATINUM.

PLATING. See SILVER.

PLATINUM, or PLATINA, in chemistry, is the heaviest of the metals. The name was given it by the Spaniards from the word plata, signifying silver, by way of comparison with that metal, whose color it resembles, or from the river Plata, near which it is found. It is characterised by a silvery color, not tarnished by the air ; it is very hard and tenacious, sonorous, exceedingly mal- leable and ductile, specific gravity 21-5, detonat- ing with nitre ; soluble only by boiling it in sixteen times its weight of nitro-muriatic acid, and giving the solution first a yellow and then a red-brown color ; its oxide is precipitated from this solution by the addition of muriate of am- monia, in the form of an orange powder. It is found in the gray silver ore of Guadalcanal in Spain, in Choco, in New Granada, and in the province of Barbacoas. It is peculiar to an al-

luvial tract of 600 leagues, where it is associated with grains of native gold, zircon, spinel, quart?., and magnetic ironstone. It is not true that this metal occurs near Carthagena, or Santa Fe, or in the islands of Porto Rico and Barbadoes, or in Peru, although these different localities have been mentioned by authors. The gray copper ore of Guadalcanal in Spain contains from one to ten per cent of platina. A Negro slave in the gold mines of Condoto, in the government of Choco, in South America, found a mass of platina of extraordinary magnitude, and which is now de- posited in the royal museum, in Madrid. It weighs rather more than l£lb., and is the largest piece of this metal hitherto met with. The large specimen brought from America by Humboldt, and deposited in the king's cabinet in Berlin, and which weighs 1085 grains, was also found in Choco. These facts allow us to hope that platina may be found in its original repository somewhere in that country. It was unknown in Europe before the year 1748. Don Antonio Ulloa then gave the first intimation con- cerning its existence, in the narrative of his voyage with the French academicians to Peru.

Its ore has been found to contain likewise four new metals — PALLADIUM, IRIDIUM, OS- MIUM, and RHODIUM, which see; beside iron and chrome. The* crude platina is to be dis- solved in nitro-muriatic acid, precipitated by muriate of ammonia, and exposed to a very vio- lent heat. Then the acid and alkali are expelled, and the metal reduced in an agglutinated state, which is rendered more compact by pressure while red-hot.

Pure or refined platina is by much the heaviest body in nature. It is very malleable, though considerably harder than either gold or silver ; and it hardens much under the hammer. Its color on the touch-stone is not distinguishable from that of silver. Pure platina requires a very strong heat to melt it ; but, when urged by a white heat, its parts will adhere together by hammering. This property, which is distin- guished by the name of welding, is peculiar to platina and iron, which resemble each other likewise in their infusibility.

Platina is not altered by exposure to air ; nei- ther is it acted upon by the most concentrated simple acids, even when boiling, or distilled from it. The aqua regia best adapted to the so- lution of platina is composed of one part of the nitric and three of the muriatic acid. The solution does not take place with rapidity. A small quantity of nitric oxide is disengaged, the color of the fluid becoming first yellow, and af- terwards of a deep reddish-brown, which, upon dilution with water, is found to be an intense yellow. This solution is very corrosive, and tinges animal matters of a blackish-brown color : it affords crystals by evaporation.

Count Moussin Poushkin has given the follow- ing method of preparing malleable platina : — Precipitate the platina from its solution by muriate of ammonia, and wash the precipitate with a little cold water. Reduce it in a convenient cru- cible to the well-known spongy metallic texture, which wash two or three times with boiling wa- ter, to carry off any portion of saline matter that

may have escaped the action of the fire. Boil it for about half an hour in as much water, mixed with one-tenth part of muriatic acid, as will co- ver the mass to the depth of about half an inch, in a convenient glass vessel. This will carry off any quantity of iron that might still exist in the metal. Decant the acid water, and edulco- rate, or strongly ignite the platina. To one part of this metal take two parts of mercury, and amalgamate in a glass or porphyry mortar. This amalgamation takes place very readily. The proper method of conducting it is to take about two drachms of mercury to three drachms of platina, and amalgamate them together; and to this amalgam may be added alternate small quantities of platina and mercury, till the whole of the two metals is combined. Several pounds may be thus amalgamated in a few hours, and in the large way a proper mill might shorten the operation. As soon as the amalgam of mercury is made, compress it in

tubes of wood, by the pressure of an iron screw upon a cylinder of wood adapted to the bore of the tube. This forces the superabundant mercury from the amal- gam, and renders it solid. After two or three hours, burn upon the coals, or in a crucible lined with charcoal, the sheath in which the amalgam is contained, and urge the fire to a white heat ; after which the platina may be taken out in a very solid state, fit to be forged. Mu- riate of tin is so delicate a test of platina, that a single drop of the recent solution of tin in mu riatic acid gives a bright red color to a solution of muriate of platina, scarcely distinguishable from water.

If the muriatic solution of platina be agitated with ether, the ether will become impregnated with the metal. This ethereal solution is of a fine pale yellow, does not stain the skin, and is precipitable by ammonia. If the nitro-muriatic solution of platina be precipitated by lime, and the precipitate digested in sulphuric acid, a sul- phate of platinum will be formed. A subnitrate may be formed in the same manner.

Platinum does not combine with sulphur di- rectly, but is soluble by the alkaline sulphurets, and precipitated from its nitro-muriatic solution by sulphureted hydrogen. Pelletier united it with phosphorus, by projecting small bits of phosphorus on the metal heated to redness in a crucible ; or exposing to a strong heat four parts each of platinum and concrete phosphoric acid with one of charcoal powder. The phosphuret of platinum is of a silvery-white, very brittle, and hard enough to strike fire with steel. It is more fusible than the metal itself, and a strong heat expels the phosphorus, whence Pelletier at- tempted to obtain pure platinum in this way. He found, however, that the last portions of phosphorus were expelled with too much diffi- culty.

Platinum unites with most other metals. Added in the proportion of one-twelfth to gold, it forms a yellowish-white metal, highly ductile, and tolerably elastic, so that Mr. Hatchett sup- posed it might be used with advantage for watch- springs, and other purposes. Its specific gravity was 19-013.

Platinum renders silver more hard, but its

color more dull. Copper is much improved by alloying with platinum. From one-sixth to one- twenty-fifth, or even less, renders it of a golden color, harder, susceptible of a finer polish, smooth-grained, and much less liable to rust. Alloys of platinum with tin and lead are very apt to tarnish. For its important combinations with iron and steel, see STEEL. The following remarks of Mr. Murray on an easy method of forming alloys of platinum may not be unac- ceptable : —

‘ While operating on antimony,’ says Mr. M., ‘ I had placed a small button of that metal in a platinum spoon, and introduced it into the flame of a spirit lamp. The antimony had scarcely attained fusion, when the platinum spoon, toge- ther with it, ran into a uniform brittle mass, and fell in vivid combustion on the glass lamp, which was consequently fractured. The effect in question is better exhibited by wrapping up a bit of antimony in platinum foil, and holding it by a pair of forceps in the alcoholic flame, when a beautiful ignition shortly commences, and the glowing mass falls to the ground. Fragments of grained tin, arsenic, lead, bismuth, &c., folded up in platinum-foil, exhibited at the instant of fusion and combination very brilliant and beau- tiful phenomena ; but the finest effect certainly was that of zinc and platinum-foil, when the fused mass emitted an intense light of a blue color. Alloys of tin and arsenic, bismuth ana lead, &c., were in like manner subjected to ex- periment. Laminated gold, silver, and copper, proto-carburet, and per-carburet of iron, pinch- beck, &c., were rolled up in platinum-foil, and introduced into the flame, but without any par- ticular result. Remarkable and beautiful, how- ever, were the phaenomena which appeared, when some metallic wires were brought in con- tact with platinum wire at a white heat in this flame. Gold, silver, and copper wires were those used. They fused in the flame, and, when brought in contact with the platinum wire, severally produced minute adhering balls, which, repeated with narrow intervals between, appeared ultimately like little glowing beads threaded on a string. These united with the platinum, and burned with very delicate scintillation ; and, when the wire was inclined, the beads ran along the metallic string, combining with successive films of the wire, until the latter became as fine as the almost airy thread of the gossamer. The gold, silver, and copper wires, per se, entered into tranquil fusion, and did not scintillate. When zinc is carried along |he platinum wire, the ends or streams of a fine blue flame ascend from it, and, when the bead rather exceeds in size, jets of a similar colored flame issue, ac- companied sometimes with slight explosion.’

Platinum, antimony, charcoal (fine levigated, from the betel-nut) and silica, when alloyed in a somewhat similar manner, gave a button im- pressed with difficulty by the knife, and gra- nular. Crushed in a steel-mortar, it was reduced to powder, the particles of which were very brilliant.

Platinum, silica, and antimony, nearly similar. Parts capable of imperfect extension by the hammer ; and sometimes on the edge so hird

(perhaps from an imperfect combination of the silica) as to scratch glass ; less bright than the preceding alloy.

Platinum, antimony, and zirconia. The igni- nition here was extremely beautiful, and the fusion of the whole was more complete than any tried. It was crushed by the steel-mortar, and presented brilliant facets. The fused globules were exteriorly spotted with very minute and sparkling crystalline points. This alloy was less silvery and brilliant than that with silica and charcoal.

Glucina, platinum, and antimony, — had a co- lor not unlike a specimen of native nickel from Hesse, or intermediate between pure nickel and refined silver. Scarcely abraded by the knife. Crushed in the steel-mortar, it was less granular and angular in its particles than the preceding.

Alumina, antimony, and platinum, very much resembled the former, but a shade darker in color.

The alloy with silica, charcoal, potassium, an- timony, and platinum ; and that with zirconia, potassium, &c., seemed to differ little from those without potassium. The potassium burns be- fore the fusion of the alloy takes place, and, perforating the platinum-foil, escapes in the cha- racter of flame, so that it would only preserve the reduction of the earthy oxide.

The combination of zinc, platinum, and pro- toxide of barium was ragged, scoriaceoiis, and very hard.

From its hardness, infusibilty, and difficulty of being acted upon by most agents, platinum is of great value for making various chemical vessels. These have, it is true, the inconveni- ence of being liable to erosion from the caustic alkalies and some of the neutral salts.

Platinum is now hammered in Paris into leaves of extreme thinness. By enclosing a wire of it in a little tube of silver, and drawing this through a steel plate in the usual way, Dr. Wol- laston has succeeded in producing platinum wire not exceeding j^jth of an inch in diameter.

According to Mr. E. Davy, there are two phosphurets and three sulphurets of platinum. See his excellent memoir in the Philosophical Magazine, vol. xl.

The salts of platinum have the following ge- neral characters : —

1 . Their solution in water is yellowish-brown.

2. Potash and ammonia determine the forma- tion of small orange-colored crystals.

3. Sulphureted hydrogen throws down the rnetal in a black powder

Ferroprussiate of potash, and infusion of galls, occasion no precipitate.

1. The sulphate of platinum may be obtained by passing a current of sulphureted hydrogen gas through the mtro-muriatic solution. It should be washed and boiled once or twice with nitric acid, to ensure its entire conversion into sulphate. It has a brownish-black color, and resembles the carbonaceous crust left when sugar is decomposed, by heat. It is brittle, easily pulverised, and has the lustre nearly of crystallised blende. Its taste is acid, metallic, and somewhat caustic. It reddens litmus paper slightly. It is deliquescent, and soluble in water.

alcohol, and ether, as well as in muriatic, nitric, and phosphoric acids. At a red heat it is re- solved into metal.

The suboxide of platina and the oxide of the sulphuret of platina absorb whatever combus- tible gas is brought into contact with them, but they do not absorb either oxygen or carbonic acid gas. 100 grains of the suboxide of platina absorb from fifteen to twenty cubic inches of hydrogen gas; and, during this process, so great a quantity of heat is developed, that the metallic substance becomes red-hot, and the hydrogen gas detonates, if previously mixed with atmos- pheric air, or with oxygen gas. The platina thus charged with hydrogen greedily absorbs a portion of oxygen, as much as will suffice for the formation of water ; if brought in contact with less than the portion of atmospheric air re- quired for this purpose, the hydrogen combines with part of the azote, and forms ammonia. During this process the platina is perfectly re- duced to a metallic state, and loses the property of decomposing alcohol.

The following is a beautiful experiment for exhibiting the action of powder of platina upon hydrogen gas. Put the powder of platina into a glass-funnel, closed at its lower extremity. Introduce from above a current of hydrogen gas through a capillary tube, the end of which must be distant from one to two inches from the pla- tina, in order to have the hydrogen gas mixed with atmospheric air, before it comes into contact with the metal. The dust of platina almost instantaneously becomes first red, then white-hot, and continues in this state as long

as there is any hydrogen gas acting upon it. If introduced in a quantity sufficiently considerable the gas itself will be inflamed.

M. Dobereiner has since endeavoured to de- duce a eudiometrical process from this singular property of platina. He mixes the pulverised platinum with a little clay, and, having formed it into a mass of the consistency of paste, he con- verts it into small balls of the size of a pea. He then dries them, and makes them red-hot with the blowpipe, in order to give them solidity. He now introduces one of these balls into a tube of glass, shut up above, and resting on a trough of mercury, and containing two volumes of hydrogen gas and one of oxygen. The mix- ture of these two gases forms water in a few seconds. One of these balls may serve for a hundred experiments, provided it is dried in the air after each experiment.

Fulminating platinum has been lately dis- covered by Mr. Edmund Davy. Into a solution of the sulphate in water aqueous ammonia is poured, and the precipitate which falls, being washed, is put into a matrass with potash-ley, and boiled for some time. It is then filtered, washed, and dried. A brown powder is obtained, lighter than fulminating gold, which is the ful- minating platinum. It explodes violently when heated to 400° ; but does not detonate by friction or percussion.

PLATO, an illustrious philosopher of anti- quity, who was by descent an Athenian, though the place of his birth was the island of /Eginn. His descent by his father was from Codrus the

last king of Athens and by his mother from Solon the celebrated legislator. The time of his birth is placed in the beginning of the eighty-eighth Olym- piad; but Dr. Enfield thinks it may be more accu- rately fixed in the third year of the eighty-seventh Olympiad, or 430 years before the Christian era. He gave early indications of an extensive and original genius, and had an education suitable to his high rank, being instructed in the rudiments of literature by the grammarian Dionysius, and trained in athletic exercises by Aristo of Argos. He applied with great diligence to the arts of painting and poetry ; and wrote an epic poem, which, upon comparing it with Homer, he burnt. He next wrote a dramatic piece, which was to have been acted ; but, happening to attend upon a discourse of Socrates, he was so captivated by his eloquence that he reclaimed his tragedy, re-

nounced the muses, burnt all his poems, and ap- plied himself wholly to the study of philosophy. It is said that Plato's first masters in philosophy were Cratylus and Hermogenes, who taught the systems of Heraclitus and Parmenides ; but when he was twenty years old he attached him- self wholly to Socrates,. with whom he remained eight years as a scholar. During this period he frequently displeased his companions, and some- times even his master, by grafting upon the So- cratic system doctrines which were taken from seme other stock. Plato, however, retained the warmest attachment to his master. When So- crates was simmoned before the senate, his illustrious scholar undertook to plead his cause, and began a speech in his defence ; but the judges would not permit him to proceed. After the condemnation, he presented his master with money sufficient to redeem his life ; which, how- ever, Socrates refused to accept. During his imprisonment Plato attended him, and was pre- sent at a conversation which he held with his friends concerning the immortality of the soul ; the substance of which he afterwards committed to writing in the beautiful dialogue entitled Phaedo. The philosophers at Athens were so alarmed at the death of Socrates that most of them fled from the city. Plato, whose grief upon this occasion is said by Plutarch to have been ex- cessive, retired to Megara ; where he was kind- ly entertained by Euclid, who had been one of Socrates's first scholars, till the storm was over. He afterwards travelled in pursuit of knowledge ; and from Megara went to Italy, where he con- ferred with Eurytus, Philolaus, and Archytas, the most celebrated of the followers of Pythagoras, whose doctrine was then become famous in Greece ; and from these the Pythagoreans have affirmed that he received all his natural philoso- phy. He next went to Cyrene, where he studied geometry under Theodorus the mathematician. Thence he passed into Egypt, to acquire their theology, to study more nicely the proportions of geometry, and to instruct himself in astrono- mical observations; and, having taken a full sur- vey of the country, he settled for some time in the province of Sais, learning of the wise men there their opinions concerning the universe ; and Pausanias affirms that he learned from these the immortality and transmigration of souls. He next travelled into Persia to consult the magi on

the religion of that country. He then returned into Italy, to the Pythagorean school at Taren- tum, where he endeavoured to improve his own system, by incorporating with it some of the doc- trines of Pythagoras, then taught by Archytas, Timaeus, and others. And afterwards, when he visited Sicily, he retained such an attachment to the Italic school, that, through the bounty of Di- onysius, he purchased at a vast price several books which contained the doctrines of

Pythago- ras, from Philolaus, one of his followers. Re- turning home, richly stored with knowledge of various kinds, Plato settled at Athens, and formed a new school for the instruction of youth in phi- losophy, in the academy. This new school soon became famous, and its masterwas ranked among the most eminent philosophers. People of the first distinction in every department frequented the academy ; and even females disguised often attended his lectures. Among the illustrious names which appear in the catalogue of his fol- lowers are Dion the Syracusan prince, and the orators Hyperides, Lycurgus, Demosthenes, and Isocrates. The distinguished reputation of Plato brought upon him the envy of his former com- panions in the school of Socrates, and they loaded him with detraction and obliquy. From this spirit Xenophon and Plato, though they re- late the discourses of their common master, avoid mentioning one another. Diogenes the Cynic ridiculed Plato's doctrine of ideas. In the midst of these private censures, however, the public fame of Plato daily increased : and several states, among which were the Arcadians and Thebans, sent ambassadors with earnest requests that he would come over, not only to instruct the young men in philosophy, but also to prescribe them laws of government. The Cyrenians, Syracu- sans, Cretans, and Eleans, sent also to him : he did not, however, visit any of them, but sent laws and rules of government to all. He was a man of great virtues, and exceedingly affable. Diogenes, piqued at the taste and elegance of Plato, took every opportunity of attacking him, He dined one day at his table with other com- pany, and, trampling upon the tapestry with his dirty feet, said, ' I trample upon the pride of Plato ;' to which Plato cleverly replied, ' With greater pride.' The admiration of this illustrious man was not confined to a few philosophers. He was greatly esteemed by several princes, parti- cularly Archelaus king of Macedon, and Diony- sius, tyrant of Sicily. At three different periods he visited the court of this latter prince, and made several bold but unsuccessful attempts to subdue his haughty spirit. The professed object, says Dr. Enfield in his History of Philosophy, of Plato's first visit to Sicily, which happened in the fortieth year of his age, during the reign of the elder Dionysius, the son of Hermocrates, was to take a survey of the island, and particu- larly of Mount jEtna. Whilst he resided at Syracuse he was employed in the instruction of Dion, the king's brother-in-law, who possessed excellent abilities, though hitherto restrained by a tyrannical government, and relaxed by the lux- uries of a licentious court. Disgusted by the debaucheries of the Syracusans, Plato endea- voured to rescue his pupil from the general de-

pravity. Nor did Dion disappoint his hopes; and, hoping that philosophy might produce the same effect upon Dionysius, he procured an in- terview with him. During the conference, whilst Plato discoursed on the happiness of virtue, and the miseries attending injustice and oppression, Dionysius took offence, dismissed him with dis- pleasure, and even formed a design against his life. It was not without difficulty that Plato escaped. A vessel which had brought over Pollis, a delegate from Sparta, was fortunately then re- turning to Greece. Dion engaged Pollis to land Plato safely in his native country ; but Dionysius discovered the design, and made Pollis promise that he would either put him to death or sell him as a slave. Pollis accordingly sold him in his native island of jEgina. Ani- cerris, a Cyrenaic philosopher, discovered the stranger, and purchased his freedom for thirty minaa (£84 10s. sterling), and sent him home to Athens. Repayment being afterwards offered to Anicerris by Plato's relations, he refused the money, saying, with that generous spirit which true philosophy inspires, that he saw no reason why the relations of Plato should engross to themselves the honor of serving him. After a short interval Dionysius repented of his unjust resentment, and wrote to Plato, requesting him to return to Syracuse, and to forget his former tyrannous behaviour ; to which request Plato returned this high-spirited answer, that philoso- phy would not allow him leisure to think of Dionysius. He was, however, prevailed upon by Dion to return to Syracuse, and take upon him the education of Dionysius the younger, the heir apparent. He was received by Dionysius I. with every possible respect ; but after seeing his friend banished, and being; himself kept as a kind of prisoner at large in the palace, he was by the tyrant sent back into his own country, with a promise that both he and Dion should be recalled at the end of the war in which the Sicilians were then engaged. This promise was not fulfilled. The tyrant wished for the return of Plato, but could not resolve to recal Dion. At last, however, he prevailed upon Plato to visit that capital a third time. When he arrived, the king met him in a magnificent chariot, and conducted him to his palace. The Sicilians too rejoiced in his return ; for they hoped that the wisdom of Plato would at length triumph over the tyrannical spirit of the prince. Dionysius seemed wholly divested of his former resent- ments, listened with apparent pleasure to the philosopher's doctrine, and among other expres- sions of regard presented him with eighty talents of gold. In the midst of a numerous train of philosophers Plato now possessed the chief in- fluence and authority in the court of Syracuse. Whilst Aristippus was enjoying himself in splen- did luxury; whilst Diogenes was freely indulging his acrimonious humor; and whilst ./Eschines was gratifying his thirst after riches ; Plato sup- ported the credit of philosophy with an air of

dignity which his friends regarded as an indica- tion of superior wisdom, but which his enemies imputed to pride. After all, Plato could not prevail upon Dionysius to alter his system of policy, or to recul Dion from exile. At length

Plato requested permission to return to Greece, which was granted him after some delay, and he was sent home loaded with rich presents. On his way to Athens, passing through Elis during the celebration of the Olympic games, he was present at this general assembly of the Greeks, and en- gaged universal attention. Plato now devoted himself to science, and spent the last years of a long life in the instruction of youth. Having en- joyed the advantage of an athletic constitution, he arrived at the eighty-first year of his age, and died in the first year of the 108th Olympiad. He passed his whole life in a state of celibacy, and therefore left no natural heirs, but transferred his effects, by will, to his friend Adiamantus. The grove and garden which had been the scene of his philosophical labors at last afforded him a sepulchre. Statues and altars were erected to his memory ; the day of his birth long continued to be celebrated as a festival by his followers ; and his portrait is to this day preserved in gems ; but the most lasting monuments of his genius are his writings, which have been transmitted, with- out material injury, to the present times. The ancients thought more highly of Plato than of all their philosophers : they always called him the Divine Plato; and they resolved that his descent should be more than human, for Apuleius mentions a common report, ‘ that his mother Perictione, who was a very beautiful woman, was impregnated by Apollo in the shape of a spectre.’ Plutarch, Suidas, and others, affirm this to have been the common report at Athens. When he was an infant, his father Aristo went. to Hymettus, with his wife and child, to sacri- fice to the Muses ; and, while they were busied in the rites, a swarm of bees came and distilled their honey upon his lips. This, says Cicero, was considered as a presage of his future elo- quence. The writings of Plato are all in the form of dialogue ; where he seems to deliver nothing from himself, but every thing as the sentiments and opinions of others, of Socrates chiefly, of Tima?us, &c. His style, as Aristotle observed is betwixt prose and verse : on which account some have not scrupled to rank him with the poets. The first edition of Plato’s works in Greek was published by Aldus at Venice in 1513 ; but a Latin version by Marsilius Ficinus had been printed there in 1491. They were reprinted to- gether at Lyons in 1588, and at Frankfort in 1602. Henry Stephens, in 1578, gave a most beautiful and correct edition of Plato’s works at Paris, with a new Latin version by Serranus, in 3 vols. folio. An elegant and correct edition after the Greek text of Henry Stephens, and the Latin version

of Ficinus, was published at Deux Ponts, 1788, 12 vols. 8vo. English versions of Plato's Dialogues have been published at various periods ; but the best is that of Floyer Syden- ham, 1767-8, 4 vols. 4to., the whole of which have been republished, with the additional works of Plato, by Thomas Taylor, with copious notes, 5 vols. 4to.

PLATOFF, or PLATOW, a late hetman of the Cossacks, was born in South Russia, about 1 763, and in 1 806 and 1 807 had the rank of lieu- tenant general in the army sent to the assistance of Prussia. He was afterwards employed aga'nst

the Turks ia Moldavia, and became a general of cavalry. When the French invaded Russia, in 1812, Platoff was defeated at Grodno and obliged to retire; but he returned during the retreat of the enemy, and with twenty regiments of Cossacks harassed them much in their flight. In 1813, after the battle of Leipsic, he entered France, and was at Paris with the emperor Alexander, with whom he came to England, and was the object of much popular admiration. In 1815 he commanded the Cossacks destined for the second invasion of France. After the peace he retired to Tcherkash, where he died in February

1818.

PLATONISM, the philosophy of Plato, which was divided into three branches, theology, phy- sics, and mathematics. Under theology were comprehended metaphysics and ethics, or that which, in modern language, is called moral phi- losophy. Plato wrote likewise on dialectics, but with such inferiority to his pupil Aristotle that his works in that department of science are seldom mentioned. The ancient philosophers always began their theological systems with dis- quisitions on the nature of the gods, and the formation of the world ; and it was a fundamen- tal doctrine with them, that from nothing nothing can proceed. They believed that a proper cre- ation is improper even to Omnipotence, and that to the production of any tiling a material is not less necessary than an efficient cause. That, with respect to this important question, Plato agreed with his predecessors and contemporaries ap- pears evident from the whole tenor of his Ti- mreus. We agree with Dr. Enfield in thinking that in this dialogue, which comprehends his whole doctrine on the formation of the universe, matter is so manifestly spoken of as eternally co-existing with God, that this part of his doctrine could not have been

mistaken by so many learned and able writers had they not been seduced by the desire of establishing a coincidence of doctrine between the writings of Plato and Moses. It is certain that neither Cicero, Apuleius, Alcinous, nor even Chalcidius, understood Plato in any other sense than as admitting two primary and incorruptible principles, God and matter ; to which we have reason to add a third, namely ideas. The pas- sages quoted, by those who maintain the contrary opinion, by no means answer their purpose. Plato indeed calls God the parent of the universe, and speaks of him as ‘ forming animate and in- animate things, which did not before exist :’ but these expressions do not imply that this offspring of Deity was produced from nothing, or that no prior matter existed from which they were formed. Through the whole TimjEiis Plato sup- poses two eternal and independent causes of all beings; one that by which all things are made, which is God ; the other that from which all things are made, which is matter. He distin- guishes between God, matter, and the universe, and supposes the Architect of the world to have formed it out of a mass of pre-existent matter. Matter, according to Plato, is an eternal and in- finite principle. His doctrine on this head is thus explained by Cicero : — ‘ Matter, from which .ill things are produced and formed, is a sub- stance without form or quality, but capable of

receiving all forms, and undergoing every kind of change ; in which, however, it never suffers annihilation, but merely a solution of its parts, which are in their nature infinitely divisible, and move in portions of space which are also infi- nitely divisible. When that principle which we called quality is moved, and acts upon matter, it undergoes an entire change, and those forms are produced from wkich arises the diversified and coherent system of the universe.’ Plato also insists upon the notion that matter has originally no form, but is capable of receiving any. He calls it the mother and receptacle of forms, by the union of which with matter the universe becomes perceptible to the senses; and main- tains that the visible world owes its form to the energy of the divine intellectual nature. Our author is supported, in drawing this inference, by the testimony of Diogenes Laertius ; yet the learned Dr. Ogilvie has expressed great surprise that any one should consider matter as having been, in Plato’s opinion, uncreated ; and he affirms that Laertius, instead of asserting that spirit and matterwere the principles of all things, ought to have said that God alone, in Plato’s estimation, was their original. To prove this, he gives from the Timaeus a quotation, in which Plato declares that God framed heaven and earth, and the inferior deities; and that as he fashioned, so he pervades all nature. He observes that Cicero denominates the God of Plato the maker, and the God of Aristotle only

the governor of the world. And, to satisfy those who demand a proof of Plato's having taught a real creation, he affirms that his writings abound with decla- rations on the subject, of which the meaning cannot be misapprehended. But the declara- tions of Plato on this subject appear by no means explicit ; and the inference which Dr. Ogilvie draws from the words of Cicero seems not to flow necessarily from the sense of those words. That Plato believed God to have framed the heaven and the earth, and to have fashioned all nature, is a position which has never been controverted ; but between framing or fashioning the chaos, and calling the universe into exist- ence from non entity, there is an infinite and an obvious difference. The distinction made by Cicero between the God of Plato and the God of Aristotle is just, but it will not bear the superstructure which Dr. Ogilvie builds upon it. Aristotle maintained the eternity of the world in its present form. Plato taught that the first matter was in time reduced from a chaotic state into form by the power of the Demiurgus; but nothing in his writings declares his belief that the first matter was itself created. The learned Cudworth, who endeavoured, like Dr. Ogilvie, to show a coincidence of doctrine between the theology of Plato and that of the Gospel, gives a number of quotations in support of his position ; of which we shall here insert only those two upon which Dr. Ogilvie seems to lay the greatest stress. Plato, says he, calls the one God, ' He that makes earth, and heaven, ar.d the gods, and doth all things both in heaven, and hell, and under the earth.' And again, ' He by whose efficiency the things of the world were afterwards made, when they were not before.' Both Cvid-

worth and Ogilvie think this last sentence an explicit declaration of Plato's belief in the creative power of God : but that they are mis- taken has been evinced by Mosheim with a force of argument which will admit of no re- ply. Mosheim thinks that Cudworth was mis- led by too implicit a confidence in Ficinus; and it is not impossible that Dr. Ogilvie may have been swayed by the authority of Cudworth. That intellect existed antecedent to all bodies is indeed a Platonic dogma, from which Dr. Ogilvie, after Cudworth, wishes to infer that the doctrine of the creation was taught in the academy ; but Plato, with every other Greek philosopher, distinguished between body and matter : and, though he held the priority of in- tellect to the former, it by no means follows that he believed it to have existed antecedent to the latter. That he believed mind, or rather soul (for he distinguishes between the two), to be the cause or principle of motion, cannot be

denied ; but we are not therefore authorised to conclude that he likewise believed it to be the cause of the existence of matter. That he believed mind to be the most ancient of all things, taking the word things in the most absolute sense, cannot be true, since, by Dr. Ogilvie's own acknowledgment, he held the existence and eternity of ideas : not to add that he believed TO tv or TO ayaQov, the first hypostasis in his trinity, to be superior to mind and prior to it, though not in time, yet in the order of nature. When, therefore, he calls mind the most ancient of all things, he must be sup- posed to mean only that it is more ancient than all bodies and inferior souls. In the Platonic cosmogony, we cannot, therefore, doubt, but that the eternity of the u\q Trpwrj; was taken for granted. But Plato did not believe it to have a single form or quality which it did not receive either from the demiurgus, or the psyche — the second or third person of his trinity. Except Aristotle, all the Greek philosophers, who were not materialists, held nearly the same opinions respecting the origin of the world ; so that, in examining their systems, we shall be greatly misled if we understand the terms incorporeal and immaterial as at all synonymous. It was also a doctrine of Plato that there is in matter a ne- cessary, but blind and refractory force ; and that hence arises a propensity in matter to disorder and deformity, which is the cause of all the im- perfection which appears in the works of God, and the origin of evil. On this subject Plato writes with wonderful obscurity, but he appears to have thought that matter, from its nature, re- sists the will of the Supreme Artificer, so that he cannot perfectly execute his designs : and that this is the cause of the mixture of good and evil in the material world. Plato, however, was no ma- terialist. He taught that there is an intelligent cause, which is the origin of all spiritual being, and the former of the material world. The na- ture of this great being he pronounced it diffi- cult to discover. The existence of God he in- ferred from the marks of intelligence which appear in the form and arrangement of bodies in the visible world : and, from the unity of the ma- terial system, he concluded that the mind by which it was formed must be one. God, accord

ing to Plato, is the supreme intelligence, incor- poreal, without beginning, end, or change, and capable of being perceived only by the mind. His notions of God are indeed exceedingly re- fined, and such as it is difficult to suppose that he could ever have acquired but from some obscure remains of primeval tradition. In the Divine Nature he believed that there are two, and pro- bably three, hypostases, whom he called TO ov and TO tv, vovg and fyvxr). The first he consi dered as self-existent, and elevated far above all mind and all knowledge ; calling him, by way of eminence, the being, or the one. The only at-

tribute which he acknowledged in this person was goodness ; and therefore he frequently styles him TO ayaOov — the good, or essential goodness. The second he considered as mind, the wisdom or reason of the first, and the maker of the world; and therefore he styles him vov £, Xoyog, and Srjfiiovpyog. The third he always speaks of as the soul of the world ; and hence calls him -ˆVXTI, or \l/vxv TOV icoffpov. He taught that the second is a necessary emanation from the first, and the third from the second, or perhaps from the first and second. Plato often asserts, as superior to the self-moving principle, an immoveable VOVQ, or intellect, which was properly the demiurgus, or framer of the world ; and above this hypos- tasis one most simple and absolutely perfect being, who is considered, in his theology, as avroQioQ, the original deity, in contradistinction from the others, who are only Oioi tK Qtov. These doctrines are to be gathered from his works at large, particularly from his Timseus, Philebus, Sophista, and Epinomis ; but there is a passage in his second epistle to Dionysius, in answer to a letter in which that monarch had required him to give a more explicit account of the nature ot God. In treating of the eternal emanation of the second and third hypostases from the first, the philosophers of the academy compare them to light and heat proceeding from the sun. Plato himself, as quoted by Dr. Cudworth, illustrates his doctrine by the same comparison. It is not, however, certain, that Plato considered his ipvxn TOV Koffpov as a pure spirit, or as having subsist- ed from eternity as a distinct hypostasis. ‘ This governing spirit, of whom the earth, properly so called, is the body, consisted, according to him, of the first matter, and of pure intelligence, framed to actuate the machinery of nature. The Supreme Being placed him in the middle of the earth ; which, in the vivid idea of Plato, seemed itself to live, in consequence of an influence that was felt in every part of it. From this seat his power is represented as being extended on all sides to the utmost limit of the heavens ; confer- ring life, and preserving harmony in the various and complicated parts of the universe. Upon this being God looked with peculiar complacency after having formed him as an image of himself, and gave beauty and perfect proportion to the mansion which he was destined to occupy. The Supreme Being struck out from this original mind innumerable spirits of inferior order, en- dowed with principles of reason ; and he com- mitted to divinities of secondary rank the task of investing these in material forms, and of dispers- ing them as inhabitants of the sun, moon, and

other celestial bodies. He taught also, that at death the human soul is

reunited to the i//t>x»j TOV soffpov, as to the source from which it originally came.' Such is the third person of the Platonic triad, as we find his nature and attributes accu- rately stated by Dr. Ogilvie. That his doctrine on this subject should be inaccurate and errone- ous can excite no wonder; whilst it must be confessed to have such a resemblance to the truth, and to be so incapable of being proved by reasoning from effects to causes, that we could not doubt of his having inherited it by tradition, even though we had not complete evidence that something very similar to it was taught long be- fore him, not only by Pythagoras and Parme- nides, but by the philosophers of the east. In Plato's cosmogony there is another principle, more mysterious if possible than any thing yet mentioned. This is his intellectual system of ideas, which, it is not easy to collect from his writ- ings, whether he considered as independent ex- istences, or only as archetypal forms, which had subsisted from eternity in the Xoyoc or divine intellect. On this subject he writes with such exceedingobscurity that men of the first eminence, both among the ancients and the moderns, have differed about his real meaning.

The following is an abstract of Plato's physio- logical creed : it is cautiously expressed, for the philosopher lived and wrote among a people nursed in ignorance, intoxicated with power, and jealous of their national superstitions.

Speech, says he, should bear some proportion to the subjects described ; but, as no words can fully express their essence or reach their sub- stance and internal nature, we must be content if we can deliver some likeness or image that may convey a shadow or semblance of the truth. If, therefore, my friend ! of the numberless doc- trines which many have advanced concerning the nature of the gods and the creation of the world, we are not able to make out an exact and con- sistent scheme, you must not be surprised, but be pleased if we can reach a probable one ; re- membering that both I who speak and you who hear and judge have no divine but an imperfect human nature : it, therefore, becomes us, upon such high subjects, to rest satisfied with probable accounts, without captious enquiry into the matter. Let us then declare for what reason the Author of Being and Creator of the World at first com- posed the wondrous frame.

He is good ; and envy or ill-will is in no respect incident to the good. Exempt from these it was His will that all things should be made as like himself as possible. With this intention, find ng all visible matter not in a state of rest, but tossed to and fro in a wild irregular motion, He first brought order out of confusion as the preferable state ; for it was and is utterly impos- sible that the best of beings should.produce

any thing, and that thing be not the best and fairest, of which the materials will admit. Wherefore contemplating, He saw that even among material objects, nothing void of thought, could, in whole or in part, ever compare for excellency with what was possessed of intelligence ; and then, that it was impossible that thought should re- side in any substance but in mind and spirit.

He, therefore, endowed a mind with intelligence, and, conjoining that mind to the immense mate- rial frame, finished the mighty work, the fabric of the world, with the highest beauty and perfec- tion of which it was capable. Thus, in a pro- bable way of reasoning, we must needs conclude that the universe is in truth, animated thinking substance, so formed by the fore-knowledge of God.

Plato then proceeds to give an account of the composition of the elements, the formation of the heavens, the spherical figure of the universe, and of the harmonious proportions concurring in the production of the immaterial thinking substance which animates the whole. This, as its father who begat it, being perceived to be self-moved, and self-subsistent, and the image of the eternal God, He approved, and was glad, and went on to liken it still more to the original model. Wherefore, as it is an eternal animated substance, He resolved to render the whole cre- ation, as far as possible, the same : but, since the nature of an immortal substance cannot be perfectly adapted to generated matter, the great Architect contrived a certain moving semblance of endless duration. Having, therefore, put the heavens in order,— duration or eternity continu- ing the self-same individual thing, — He framed a progressive imitation of it, perpetually in- creasing by number and quantity, which men call time: for days, and nights, and months, and years, did not exist, until the heavens were made, and were by him ordained to co-exist with the heavens, how soon they were set in motion. It is true that men, when they speak of past and future, improperly and inadvertently apply these parts of created time to eternal duration. In sound reason, however, we can with propriety only say of the latter, that it is ; while it was and it will be should be solely applied to pro- gressive existence, advancing step by step in time. The expressions it was and it will be de- note successive movements ; but the other, eter- nal duration or existence, is for ever the same, indivisible, immovable, without possibility of its becoming older or younger, or that it should be said to be now past, or that it is yet to come. In a word, nothing can be applied to it which ge- neration, or the receiving the beginning of existence, makes us apply to sensible objects ; these last being all portions of time which re- volve in successive periods and only imitate eternity. Time, therefore, began with the heavens, that, as they took

rise together, they may be to- gether dissolved, if such dissolution shall ever happen. It was formed upon the model of the eternal nature, and made as like to it as possible; the model having existed from all eternity, and the copy being to exist for all time, of which alone it can be said that it was, it is, and will hereafter be.

He afterwards describes the creation of the re- maining animated parts of the universe : they were of four sorts, — the celestial race of the gods, — the winged inhabitants of the sky, — the finny shoals of the waters, — and the animals of the dry land. Having explained the igneous com- position of the first, whom he calls visible or be- gotten gods, he subjoins the following remark-

able passage : — that, as for the other deities, besides these heavenly bodies, it was above his capacity to describe their nature or comprehend their generation ; but we must believe those inspired persons, who, as they themselves say, are descendants of the gods, and who, some way or other, have come at a clear knowledge of their progenitors. No matter, he adds, though what they say be destitute of probable or necessary proof; we cannot refuse assent to these children of the gods, both as they prefer to relate their family concerns, and likewise in due obedience to the laws. But the Sovereign Creator, having finished the production of his celestial progeny, assembled them all together and spoke in this manner : —

Gods of the gods ! whose maker I am, and author of your powers which, proceeding from me, if I so will, shall never be dissolved ! Whatever hath been tied can be loosed ; but to undo what has been well done, or to destroy an harmonious frame, is malicious and evil : where- fore as you have received a being, immortal in- deed and indissolvable you are not ; yet shall you never be dissolved nor taste the destiny of death ; my unchangeable will being a greater and more authentic security than the bonds of life in which you were bound at your creation. Now, then, attend and learn what I appoint and enjoin. Three species of creatures are yet to be made. While these are wanting the heavens will be imperfect ; it would not contain every kind of living creature, as it must do to be en- tirely complete. Were they, however, to be ge- nerated by me, and receive under my hand the sources of life, they must likewise prove immor- tal and be on a level with the gods. In order, therefore, that they may both be mortal, and that the whole may be perfect, do you according to your natures

undertake the work, and, imitating vny power in the production of yourselves, finish the animal creation. As for that which is to be styled immortal and divine, and which will be the leading principle in such of them as endea- vour always to follow Right, and Us, that I my- self will create and deliver over to you : then, for what remains, do you, interweaving the mor- tal with immortality, form and generate animals, nourish them with food, and receive them to your bosom when fallen to decay.

Thus God spake ; and, turning to the eternal mould in which he had mixed and tempered the soul of the universe, he poured in the remains of the celestial creation, and mixing them together in nearly the same manner, but now not so pure and genuine as the former, nor all equally so, but of a first, second, and third alloy, he com- pounded the mighty mass and distributed minds equal in number to the stars, — a mind to every star : and, having placed them in these as in a chariot, he showed them the nature of the whole of things and fixed their irrevocable laws. First, that one common origin should be allotted to all, that no one might have less than another at the hands of his maker; but that, when they were disseminated each into the organ of time, — the heavenly body, — proper to them, they should produce the most religious and godlike of all mor- tal creatures, — man. But, as trie numan nature

was to be twofold, the better sex was to be called the male ; and, since they were of course to be transplanted into bodies, now in contact and now at a distance from surrounding objects, in the first place, one general sense must be natural to all, especially a perception of external violence;— next, mutual love, but mixed with pleasure and pain, and along with these fear and anger, with all their consequences and all their contraries. These passions if they can command, they shall live in justice and felicity; but if commanded by them, in wrong and misery. Whosoever, there- fore, lives well his allotted time shall, after death, return to the habitation of his congenial star and there lead a blessed life ; but failing, he must at his next birth assume the female nature. Both male and female, after 1000 years, shall by lot enter upon a second state, and choose what kind of life each pleases to lead

With almost every ancient theist of Greece, Plato believed in an order of beings called daemons, which were superior to the souls of men, and struck off by the Demiurgus from the soul of the world. Of these the reader will find some account under DAEMON. We mention them here because they make an important appearance in Plato’s system of physics, which was built upon them. He taught that, in the formation

of the visible and tangible world, fire and earth were first formed, and were afterwards united by means of air and water ; that from perfect parts one perfect whole was produced, of a spherical figure, as most beautiful in itself, and best suited to contain all other figures ; that the elementary parts of the world are of regular geometrical forms, the particles of earth being cubical, those of fire pyramidical, those of air in the form of an octohedron, and those of water in that of an icosohedron ; that these are adjusted in num- ber, measure, and power, in perfect conformity to the geometrical laws of proportion ; that the soul which pervades this sphere is the cause of its revolution round its centre ; and, lastly, that the world will remain for ever, but that, by the action of its animating principle, it accomplishes certain periods, within which every thing returns to its ancient place and state. This periodical revolution of nature is called the Platonic or great year. Plato, preparatory to the study of all philosophy, required from his disciples a knowledge of the elements of mathematics. In his Republic, he makes Glaucus, one of the speakers, recommend them for their usefulness in human life. Concerning policy, Plato has written at large in his Republic, and in his Dialogue on Laws. He was so fond of his own ideas on this subject, that it was chiefly the hope of having an opportunity to realise his plan of a republic, which induced him to visit the court of Dionysius. But they who are conversant with mankind, and capable of calmly investigating the springs of human actions, will easily perceive that his projects were chimerical, and could only have originated in a mind replete with philo- sophical enthusiasm. Of this nothing can be a clearer proof than the design of admitting in his republic a community of women, to give reason an entire control over desire. The main object of his poJitical institutions appears to have been

the subjugation of the passions and appetites, by means of the abstract contemplation of ideas. A system of policy, raised upon such fanciful grounds, cannot merit a more distinct considera- tion. Such is genuine Platonism as it was taught in the old academy by the founder of the school and his immediate followers ; but, when Arcesi- laus was placed at the head of the academies, great innovations were introduced both into their doctrines and mode of teaching. This man was therefore considered as the founder of what was afterwards called the middle academy. Being a professed sceptic, he carried his maxim

,of uncertainty to such a height as to alarm the general body of philosophers, offend the gover- nors of the state, and bring just odium upon the very name of the academy. At length Carrie- ades, one of the disciples of this school, relin- quishing some of the more obnoxious tenets of Arcesilaus, founded what has been called the new academy with very little improvement on the principles of the middle. Under one or other of these forms Platonism found its way into the Roman republic. Cicero was a Platonist, and one of the greatest ornaments of the school. A school of Platonists was likewise founded in Alexandria in the second century of the Chris- tian era; but their doctrines differed in many particulars from those taught in the three acade- mies. They professed to seek truth whertver they could find it, and to collect their dogmas from every school. They endeavoured to bend some of the principles of Plato into a confor- mity with the doctrines of the gospel ; and they incorporated with the whole many of the maxims of Aristotle and Zeno, and not a few of the fic- tions of the east. Their system was therefore extremely heterogeneous, and seldom so rational as that of the philosopher after whose name they were called, and of whose doctrines we have given so copious a detail.

PLATOON', n. s. Fr. peloton. A small square body of musketeers, drawn out of a battalion of foot, to strengthen the angles of a square. See below.

In comely wounds shall bleeding worthies stand, Webb's firm platoon, and Lumly's faithful band.

Tickle.

PLATOON, in military affairs, was formerly a small body of men, in a battalion of foot, &c., that fired alternately. A battalion was then ge- nerally divided into sixteen platoons, exclusive of the grenadiers, which formed platoons, as oc- casion required. At present the battalion is ge- nerally divided into wings, grand divisions, divisions (or companies), subdivisions, and sec- tions; and the word platoon is seldom used, except to denote a number (from ten to twenty) of recruits assembled for the purpose of instruc- tion ; in which case it may be considered sy- nonymous with company.

PLATTER, n. s. From plate. A large dish, of earth or wood generally.

The servants wash the platter, scour the plate,

Then blow the fire. Dryden's Juvenal.

Satira is an adjective, to which lanx, a charger, or large platter, is

understood. Dryden.

PLATYPUS, in zoology, a genus of mam- malia, the generic character of which is that the

mouth is shaped like the bill of a duck ; feet palmate. There is but a single species, P. anatinus, a native of Australasia, of which Dr. Shaw gives the following description : — ‘ Of aU the mammalia,’ says he, ‘ yet known, it seems the most extraordinary in its conformation ; exhibit- ing the perfect resemblance of the beak of a duck, engrafted on the head of a quadruped. So accurate is the similitude that at first view it naturally excites the idea of some deceptive pre- paration by artificial means: the very epidermis, proportion, serratures, manner of opening, and other particulars of the beak of a shoveller, or other broad-billed species of duck, presenting themselves to the view : nor is it without the most minute and rigid examination that we can persuade ourselves of its being the real beak or snout of a quadruped.

The body is depressed, and has some resem- blance to that of an otter in miniature : it is co- vered with a very thick, soft, and beaver-like fur, and is of a moderately dark brown above, and of a subferruginous white beneath. The head is flattish, and rather small than large : the mouth, or snout, as before observed, so exactly resem- bles that of some broad-billed species of duck that it might be mistaken for such ; round the base is a flat circular membrane, somewhat deeper or wider below than above ; viz. below near the fifth of an inch, and above about an eighth. The tail is flat, furry like the body, ra- ther short and obtuse, with an almost bifid ter- mination; it is broader at the base, and gra- dually lessens to the tip, and is about three inches in length : its color is similar to that of the body. The length of the whole animal, from the tip of the beak to that of the tail, is thirteen inches ; of the beak an inch and a half. The legs are very short, terminating in a broad web, which on the fore feet extends to a consi- derable distance beyond the claws ; but on the hind feet reaches no farther than the roots of the claws. On the fore feet are five claws, straight, strong, and sharp-pointed ; the two exterior ones somewhat shorter than the three middle ones. On the hind-feet are six claws, longer and more inclined to a curved form than those of the fore feet ; the exterior toe and claw are consider- ably shorter than the four middle ones ; the in- terior or sixth is seated much higher up than the rest, and resembles a strong sharp spur. All the legs are hairy above ; the fore-feet are naked both above and below ; but the hind-feet are naked above and hairy below. The internal edges of the under mandible (which is narrower than the upper), are serrated or channelled with numerous striae, as in a duck’s bill. The nos- trils are small and round, and are situated about a

quarter of an inch from the tip of the bill, and are about the eighth of an inch distant from each other. There is no appearance of teeth ; the palate is removed, but seems to have resembled that of a duck ; the tongue also is wanting in the specimen. The ears or auditory foramina are placed about half an inch beyond the eyes ; they appear like a pair of oval holes, of the eighth of an inch in diameter, there being no external ear. On the upper part of the head, on each side, a little beyond the beak, are situated

two smallish oval white spots, in the lower part of each of which are imbedded the eyes, or at least the parts allotted to the animal for some kind of vision ; for, from the thickness of the fur and smallness of the organs, they seem to have been but obscurely calculated for distinct vision, and are probably like those of moles, and some other animals of that tribe ; or perhaps even subcutaneous ; the whole apparent diame- ter of the cavity in which they were placed not exceeding the tenth of an inch.

‘ When we consider the general form of this animal, and particularly its bill and webbed feet, we shall readily perceive that it must be a resi- dent in watery situations ; that it has the habits of digging or burrowing in the banks of rivers, or under ground ; and that its food consists of aquatic plants and animals. This is all that can at present be reasonably guessed at ; future ob- servations, made in its native regions, will, it is hoped, afford us more ample information, and will make us fully acquainted with the natural history of an animal which differs so widely from all other quadrupeds, and which verifies in a most striking manner the observation of Buffon ; viz. that whatever it was possible for nature to produce has actually been produced. On a sub- ject so extraordinary as the present, a degree of scepticism is not only pardonable but laudable ; and I ought, perhaps, to acknowledge that I al- most doubt the testimony of my own eyes with respect to the structure of this animal’s beak ; yet must confess that I can perceive no appear- ance of any deceptive preparation; and the edges of the rictus, the insertion, &c., when tried by the test of maceration in water, so as to ren- der every part completely moveable, seem per- fectly natural ; nor can the most accurate exa- mination of expert anatomists discover any deception in this particular.’

Dr. Shaw observes, in a subsequent volume, as the result of more accurate experiments, that * on laying open the parts beyond the base of the bill, it appears that the platypus, like the ant- eaters, is furnished with small bony processes, resembling grinding-teeth, imbedded in the gum, but not fastened or rooted in the jaw : of these processes there are two on each side, both of the upper and under jaw.’

PLAU’DIT, n. s.) Lat. plaudite (the old PLAU’DITE. $ demand of applause made

by the player, when he left the stage). Ap- plause.

Some men find more melody in discord than in the angelic quires ; yet even these can discern music in a concert of plaudits, eulogies given themselves.

Decay of Piety.

True wisdom must our actions so direct, Not only the last plaudit to expect. Denham. She would so shamefully fail in the last act, that instead of a plaudite, she would deserve to he hissed off the stage. More.

PLAU’SIBLE, adj. \ Fr. plausible, plausi PLAUSIBIL’ITY, n. s. I bilite ; from Lat. plaudo. PLAU’SIBLENESS, \ Apparently deserving PLAU’SIBLY, adv. i of praise ; such as gains PLAU’SIVE, adj. J praise ; specious ; ta- king; popular: plausive is an obsolete adjective of the same signification, and all the other words follow the above senses.

Go you to Angelo, answer his requiring with z. plausible obedience, agree with his demands to the point. Shahspeare.

His plausive words

He scattered not in ears ; but grafted them

To grow there and to bear. Id.

Judges ought to be more reverend than plausible, and more advised than confident. Bacon.

They found that plausible and popular pretext of raising an army to fetch in delinquents.

King Charles.

These were all plausible and popular arguments, in which they, who most desired peace, would insist upon many condescensions. Clarendon.

I hope they will plausibly receive our attempts, or candidly correct our misconjectures. Browne.

The notion of man's free will, and the nature of sin, bears with it a commendable plainness and plau- sibleness. More.

No treachery so plausible as that which is covered with the robe of a guide. L'Estrunge.

The case is doubtful, and may be disputed with plausible arguments on either side. South.

Thou canst plausibly dispute,

Supreme of seers, of angel, man, and brute.

Prior.

They could talk plausibly about what they did not understand, but their learning lay chiefly in flourish.

Collier.

The plausibleness of Arminianism, and the con- gruity it hath with the principles of corrupt nature. . Saunderson.

Two pamphlets, called the management of the war, are written with some plausibility, much artifice, and direct falsehoods. Swift.

PLAUTUS (Marcus Accius), a comic writer of ancient Rome, born at Umbria, in Italy. He is said to have acquired the Agnomen of Plautus from having splay feet. His parentage appears to have been mean ; some say he was the son of a slave. Few facts have come down to us to illustrate his life. He came to Rome, and ob- tained not only fame but emolument from his dramatic compositions, which were represented about a century and a half before the Christian era. Plautus is said to have acquired consider- able property, and to have been tempted, in order to increase it, to engage in trade, but that, like many other literary speculators, he suc- ceeded so ill that he was reduced to so great poverty as to hire himself as a laborer to grind in a mill. Yet even in this toilsome situation his mind remained undepressed, and he com- posed three comedies. He died in the first year of the elder

Cato's censorship, about A. U. C. 569, and A. A.C. 184. There are twenty of his plays extant, though not all entire. The best edition of his works is the Variorum of Gronovius.

PLAY', v. n., v. a., & n. *.

PLAY'BOOK, n. s.

PLAY'DAY,

PLAY'DEBT,

PLAY'ER,

PLAY'FELLOW,

PLAY'FUL,

PLAY'GAME,

PLAY'HOUSE,

PLAY'PLEASUaE,

PLAY'SOME, adj. PLAY'SOMENESS, n. t. PLAY'THINGˆTI. s. PLAY'WRIGHT.

Saxon plejan ; Teut. belaichen ; Mod. Goth, bi- laiken. To sport ; frolic; wanton;

| toy; trifle; mock;

[practise trick or illusion ; hence personate another in drama or other- wise ; act in any marked or parti- cular character ; touch a musical

instrument : as a verb neuter, to use such an in- strument ; exhibit dramatically ; act ; perform : a play is, sport ; amusement ; assumed appear- ance or conceit ; game ; practice of gaming ; ac- tion; employment ; office ; agitation or motion; liberty of action or motion ; a dramatic compo- sition : a play debt is used particularly for a debt contracted in gaming : a play-wright for an author of a dramatic piece

or pieces : the other compounds are sufficiently obvious in their meaning.

The people sat down to eat, and to drink, and rose up to play-. Exodus.

Command thy servants to seek out a man who is a cunning player on the harp. 1 Samuel xvi. 16.

Be of good courage, and let us play the men for our people. 2 Samuel x. 12.

Doubt would fain have played his part in her mind, and called in question how she should be assured that Zelmane was not Pyrocles. Sidney.

Detennining, as after I knew, in secret manner, not to be far from ihe place where we appointed to meet, to prevent any foul play that might be offered unto me. Id.

Like players placed to fill a filthy stage, Where change of thoughts one fool to other shews, And all but jests, serve only sorrow's rage. Id.

Inconstant in his choice of his friends, or rather never having a friend but playfellows, of whom, when he was weary, he could no otherwise rid himself than by killing them. Id.

My dearling and my joy ; For love of me leave off this dreadful play.

Spenser.

She seemed still back unto the land to look, And her playfellows aid to call, and fear The dashing of the waves. Id.

I'll bring my young man to school ; look where his master comes ; 'tis a playing day I see.

Shakspeare.

How every fool can play upon the word ! Id. When lenity and cruelty play for kingdoms, The gentler gamester is the soonest winner. Id. His mother played false with a smith. Id. Every thing that heard him play, Even the billows of the sea,

Hung their heads, and then lay by ; In sweet musick is such art, Killing care, and grief of heart, Fall asleep, or hearing die.

Id. Henry VIII.

John hath seized Arthur, and it cannot be, That whilst warm life plays in that infant's veins, The misplaced John should entertain One quiet breath of rest. Id. King John.

Citherea all in sedges hid,

Which seem to move and wanton with her breath, Even as the waving sedges play with wind.

Shakspeare.

Thus we play the fool with the time, and the spirits of the wise sit in the clouds and mock us. Id.

Only they,

That come to hear a merry play, Will be deceived. Id. Henry VIII.

Your pictures out of doors, Saints in your injuries, devils being offended, Players in your housewifery. Id. Othello.

Your precious self had not then crossed the eyes Of my young playfellow. Id. Winter's Tale.

These are the youths that thunder at a play-house, and fight for bitten apples. Id. Henry VIII.

Certain pantomimi will represent the voices of players of interludes so to life, as you would think they were those players themselves. Bacon.

He taketh a kind of playpleasure in looking upon the fortunes of others. Id. Essays.

Boys and girls come out to play, Moon shines as bright as day. Old Song. Courts are theatres, where some men play Princes, some slaves, and all end in one day.

Dunne.

The snake bit him fast by the tongue, which there- with began so to rankle and swell, that, by the time he had knocked this foul player on the head, his mouth was scarce able to contain it. Curew.

Wherein doth our practice of singing and playing with instruments in our cathedral churches differ from the practice of David? Peacham.

Alphonso, duke of Ferrara, delighted himself only in turning and playing the joiner. Id.

Tis possible these Turks may play the villains.

Denham. Nature here

Wantoned as in her prime, and played at will Her virgin fancies. Milton.

Two gentle fawns at play. Id.

O Castalio ! thou hast caught My foolish heart ; and like a tender child, That trusts his plaything to another hand, I fear its harm, and fain would have it back.

Otway.

He was resolved not to speak distinctly, knowing his best play to be in the dark, and that all his safety lay .in the confusion of his talk. Tillotson.

He hurries me from the playhouse and scenes there, to the beargarden. Stillingfleet.

Men are apt to play with their healths and their lives, as they do with their cloaths. Temple.

Clad like a country swain, he piped, he sung, And playing drove his jolly troop along.

Dry den.

My wife cried out fire ! and you brought out your buckets, and called for engines to play against it.

Id.

Ev'n kings but play ; and when their part is done, Some other, worse or better, mount the throne. Id.

A play ought to be a just image of human na- ture, representing its humours and the changes of fortune to which it is subject, for the delight and in- struction of mankind. Id.

The senseless plea of right by providence Can last no longer than the present sway ; But justifies the next who comes in play. Id Thine be

the laurel; then ; support the stage, Which so declines, that shortly we may see Players and plays reduced to second infancy. Id.

Thus said the player god ; and adding art, Of voice and gesture, so performed his part, She thought, so like her love the shade appears, That Ceyx spake the words. Id.

I am a, sufficient theatre to myself of ridiculous actions, without expecting company either in a court or playhouse. Id.

When they can make nothing else on't, they find it the best of their play to put it off with a jest.

L'Estrange.

In arguing, the opponent uses comprehensive and equivocal terms, to involve his adversary in the doubtfulness of his expression, and therefore the answer on his side makes it his play to distinguish as much as he can. Locke.

That liberty alone gives the true relish to their ordinary playgames. Id.

A child knows his nurse, and by degrees the play- things of a little more advanced age. Id.

The joints are let exactly into one another, that they have no play between them, lest they shake upwards or downwards. Moicm.

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Life is not long enough for a coquette to play all hei tricks in. Addison's Spectator.

She has several plaijdebtf, on her hand, which must be discharged very suddenly. Id.

He is scandalized in youth for being lively, and at childhood for being playful. Id.

He applied the pipe to his lips, and began to play upon it ; the sound of it was exceeding sweet.

Id.

The setting sun

Plays on their shining arms and burnished helmets, And covers all the field with gleams of fire.

Addison.

Should a writer give the full play to his mirth, without regard to decency, he might please readers ; but must be a very ill man, if he could please him- self. Id. Freeholder.

O Richard,

Would fortune calm her present rage, And give us playthings for our age. Prior. A man has no pleasure in proving that he has played the fool. Collier on Friendship.

He plays a tickling straw within his nose. Gay. Bull's friends advised to gentler methods with the young lord ; but John naturally loved rough play.

Arbuthnot.

There are multitudes of leases upon single lives, and playdebtt upon joint lives. Id.

This was the play at which Nero staked three thousand two hundred and twenty-nine pounds three shillings and four pence upon every cast ; where did he find playfellows? Id.

Take thy harp and melt thy mai'd ; Play, my friend ! and charm the charmer.

Granville.

By constant laws, the food is concocted, the heart beats, the blood circulates, the lungs play.

Cheyne.

Enormous monsters, rolling o'er the deep, Gambol around him in the wat'ry way, And heavy whales in awkward measures play.

Pope.

I would make use of it rather to play upon those I despised, than to trifle with those I loved. Id,

Had some brave chief the martial scene beheld By Pallas guarded, in the dreadful field, Might darts be bad to turn their points away, And swords around him innocently play, The war's whole art with wonder had he seen, And counted heroes where he counted men. Id.

Shakspeare, whom you and ev'ry playhouse bill Stile the divine, the matchless, what you will, For gain, not glory, winged his roving flight, And grew immortal in his own despight. Id.

Allow him but the plaything of a pen, He ne'er rebels or plots like other men. Id.

He ended much in the character he had lived in ; and Horace's rule for a play may as well be applied to him as a playwright. Id.

The clergyman played at whist and swobbers.

Swift. Visits, plays, and powdered beaux. Id.

I thought the life of every lady Should be one continual playday ; Balls and masquerades and shows.

Id. Miscellanies.

Yours was a match of common good liking, without any mixture of that ridiculous passion, which has no being but in playbooks and romances.

Swift.

Be it .a weakness, it deserves some praise, We love the play-place of our earlier days, The scene is touching, and the heart is stone That feels not at that sight, and feels at none.

Cowper.

PLAYFAIR (John), a distinguished Scottish natural philosopher and mathematician, was born at Bervie near Dundee in 1749. His father was a parochial clergyman ; and, having finished his education at the university of St. Andrews. our author received ordination, and succeeded to his father's benefice in 1772. After holding it some years he resigned, and, going to Edin- burgh, obtained the mathematical chair of the university. .In 1778 he published in the Phi- losophical Transactions a paper on the Arithme- tic of Impossible Quantities ; and, on the es- tablishment of the Royal Society of Edinburgh, was appointed one of the secretaries. To the first volume of its

Transactions he contributed an Account of the Life and Writings of Matthew Stewart, Professor of Mathematics at Edinburgh, and an Essay on the Causes which affect the Accuracy of Barometrical Measurements. He also contributed to several of the subsequent volumes. Professor Playfair in 1816 visited the Alps for the purpose of making geological ob- servations on the structure of those mountains. As a geologist he adopted the opinions of Dr. James Hutton, which he defended in his Illus- trations of the Huttonian Theory, 4to. His death took place at Edinburgh, July 20th, 1819. Besides the productions noticed, he was the author of Elements of Geometry, 8vo. ; and Outlines of Natural Philosophy, 2 vols. 8vo. ; nurnerous articles in the Encyclopaedia Britan- nica, &c. &c.

PLAYFAIR (William), an ingenious mechanic and author, born in the neighbourhood of Dun- dee, 1759, and brother of Mr. professor Play- fair, was originally bound to a mill-wright of the name of Mickle, the celebrated Mr. John Ren- nie being his fellow-apprentice. At the expira- tion of his indentures he went to Birmingham, and was engaged there for some time by Mr. Watt as a draughtsman. Going to the continent he obtained accidentally, at Frankfort-on-the- Maine, a description of a telegraph then lately erected on the mountain of Belville, and, con- structing two working models of the instru- ment, sent them to the duke of York ; whence the plan of the machine first became known to Eng- land. He successively obtained several patents for useful inventions. After residing some time in London he again repaired to Paris, where he erected a rolling mill on a new plan, for which he obtained a patent ; but, on the breaking out of the revolution, becoming obnoxious to Bar- rere, he returned to England. His pamphlets and works are so numerous that it becomes im- possible to enumerate them. Those works by which he is most known are The Statistical Breviary ; The Commercial and Political Atlas, 1786 ; The History of Jacobinism, 1795 ; Statis- tical Tables, exhibiting a View of all the States of Europe, 4to., 1800; and an Enquiry into the causes of the Decline and Fall of wealthy and powerful Nations, 4to., 1805, reprinted in 1807; a new edition of Adam Smith's Wealth of Nations, with supplementary chapters, &c., 3 vols. 8vo., 1 806 ; A Statistical Account of the United States of America, translated from the French, 8vo. 1807; British Family Antiquity, 9 vols, 4to. ; A Vindication of the Reign of

George III. ; Political Portraits in this New .rEra, 2 vols., 1814 ; and

France as it is. Mr. Playfair was strongly attached to the Pitt school, but his Breviary and Atlas display considerable ingenuity, in simplyfying statistical details. He died February llth, “]823.

PLEA, n. s. Old Fr. plaid ; Belg. pleit ; Lat. placet. The act or form of pleading ; things of- fered or demanded in pleading ; apology ; ex- cuse.

The magnificoes have all persuaded with him ; But none can drive him from the envious plea Of forfeiture of justice and his bond. Shakspeare.

When such occasions are, No plea, must serve ; ‘tis cruelty to spare.

Denham.

They tow’rds the throne supreme, Accountable, made haste, to make appear With righteous plea their utmost vigilance.

Milton.

The fiend, with necessity, The tyrant’s plea, excused his devilish deeds. Id.

Their respect of persons was expressed in judicial process, in giving rash sentence in favour of the rich, without ever staying to hear the plea, or weigh the reasons of the poor’s cause. Kettlewelt.

Whoever argues in defence of absolute power in a single person, though he offers the old plausible plea, that it is his opinion, which he cannot help unless he be convinced, ought to be treated as the common enemy of mankind. Swift.

PLEA, in law, is what either party alleges for himself in court, in a cause there depending ; and, in a more restrained sense, it is the defend- ant’s answer to the plaintiff’s declaration. Pleas are usually divided into pleas of the crown and common pleas.

i. PLEAS, COMMON (says judge Blackstone), are such suits as are carried on between common persons in civil cases. These are of two sorts ; dilatory pleas, and pleas to the action.

1. PLEAS, DILATORY, are such as tend merely to delay or put off the suit, by questioning the propriety of the remedy, rather than by denying the injury ; pleas to the action are such as dis- pute the very cause of suit. They are, 1. To the jurisdiction of the court ; alleging,

that it ought not to hold plea of this injury, it arising in Wales or beyond sea ; or because the land in question is of ancient demesne, and ought only to be de- manded in the lord's court, &c. 2. To the dis- ability of the plaintiff, by reason whereof he is incapable to commence or continue the suit ; as, that he is an alien, enemy, outlawed, excommu- nicated, attainted of treason or felony, under a praemunire, not in rerum naturft (being only a fictitious person), an infant, a feme couvert, or a monk professed. 3. In abatement ; which abate- ment is either of the writ, or the court, for some defect in one of them; as by misnaming the de- fendant, which is called a misnomer; giving him a wrong addition, as esquire instead of knight ; or other want of form in any material respect. Or, it may be that the plaintiff is dead ; for the death of either party is at once an abatement of the suit. These pleas to the jurisdiction, to the disability, or in abatement, were formerly very often used as mere dilatory pleas, without any foundation in truth, and calculated only for delay ; but now, by stat. 4 and 5 Ann. c. 16, no dilatory plea is VOL. XVII.

to be admitted without affidavit made of the truth thereof, or some probable matter shown to the court to induce them to believe it true. And, with respect to the pleas themselves, it is a rule that no exception shall be admitted against a de- claration or writ, unless the defendant will in the same plea give the plaintiff a better ; that is, show him how it might be amended, that there may not be two objections upon the same ac- count. All pleas to the jurisdiction conclude ttf the cognizance of the court ; praying 'judgment whether the court will have farther cognizance o the suit.' Pleas to the disability conclude to the person; by praying 'judgment, if the said A the plaintiff ought to be answered.' And pleas in abatement (when the suit is by original) con- clude to the writ or declaration ; by praying 'judgment of the writ, or declaration, and that the same may be quashed,' cassetur, made void, or abated : but, if the action be by bill, the plea must pray 'judgment of the bill,' and not of the declaration; the bill being here the original, and the declaration only a copy of the bill. When these dilatory pleas are allowed, the cause is either dismissed from that jurisdiction, or the plaintiff is stayed till his disability be removed ; or he is obliged to sue out a new writ, by leave obtained from the court, or to amend and new frame his declaration. But when, on the other hand, they are over-ruled as frivolous, the de- fendant has judgment of respondeat ouster, or to answer over in some better manner. It is then incumbent on him to plead.

2. PLEAS TO THE ACTION are to answer to the merits of the complaint. This is done by con- fessing or denying it. A confession of the whole complaint is not very usual ; for then the de- fendant would

probably end the matter sooner, or not plead at all, but suffer judgment to go by default. Yet sometimes, after tender and refusal of a debt, if the creditor harasses his debtor with an action, it then becomes necessary for the de- fendant to acknowledge the debt, and plead the tender; adding that he has always been ready, tout temps prist, and is still ready, encore prist, to discharge it : for a tender by the debtor and refusal by the creditor will in all cases discharge the costs, but not the debt itself; though in some particular cases the creditor will totally lose his money. But frequently the defendant confesses one part of the complaint (by a cognovit actionem in respect thereof), and traverses or denies the rest ; in order to avoid the expense of carrying that part to a formal trial which he has no ground to litigate. A species of this sort of con- fession is the payment of money into court : which is for the most part necessary upon plead- ing a tender, and is itself a kind of tender to the plaintiff; by paying into the hands of the pro- per officer of the court as much as the defendant acknowledges to be due, together with the costs hitherto incurred, in order to prevent the ex- pense of any farther proceedings. This may be done upon what is called a motion ; which is an occasional application to the court by the parties or their counsel, in order to obtain some rule or order of court, which becomes necessary in the progress of a cause ; and it is usually grounded upon an affidavit (the perfect tense of the vert

atfido), being a voluntary oath before some judge or officer of the court ; to evince the truth of cer- tain facts, upon which the motion is grounded : though no such affidavit is necessary for payment of money into court. If, after the money is paid in, the plaintiff proceeds in his suit, it is at his own peril : for, if he does not prove more due than is so paid into court, he shall be nonsuited and pay the defendant's costs ; but he shall still have the money so paid in, for that the defendant has acknowledged to be his due. To this head may also be referred the practice of what is call- ed a set off"; whereby the defendant acknowledges the justice of the plaintiff's demand on the one hand ; but, on the other, sets up a demand of his own, to counterbalance that of the plaintiff, either in the whole or in part ; as, if the plain- tiff sues for £10 due on a note of hand, the de- fendant may set off £9 due to himself for mer- chandise sold to the plaintiff; and, in case he pleads such set off, must pay the remaining balance

into court. Pleas that totally deny the cause of complaint are either the general issue, or a special plea in bar. 1. The general issue, or general plea, is what traverses, thwarts, and de- nies at once, the whole declaration, without offering any special matter whereby to evade it. As in trespass either vi et armis, or on the case, ‘ non culpabilis, not guilty ;’ in debt upon con- tract, ‘ nihil debet, he owes nothing ;’ in debt on bond, ‘ non est factum, it is not his deed ;’ or an assumpsit, ‘ non assumpsit, he made no such promise.’ Or in real actions, ‘ nul tort, no wrong done; nul disseisin, no disseisin ;’ and in a writ of right, the mise or issue is, that ‘ the te- nant has more right to hold than the demandant has to demand.’ These pleas are called the ge- neral issue, because, by importing an absolute and general denial of what is alleged in the decla- ration, they amount at once to an issue ; by which is meant a fact affirmed on one side and denied on the other. 2. Special pleas in bar of the plaintiff’s demands are very various, accord- ing to the circumstances of the defendant’s case. As, in real actions, a general release or a fine ; both of which may destroy and bar the plaintiff’s title. Or, in personal actions, an accord, arbitra- tion, conditions performed, nonage of the de- fendant, or some other fact which precludes the plaintiff from his action. A justification is like- wise a special plea in bar ; as in actions of as- sault and battery, son assault demesne, that it was the plaintiffs own original assault; in tres- pass, that the defendant did the thing complained of in right of some office which warranted him so to do ; or, in an action of slander, that the plaintiff is really as bad a man as the defendant said he was. Also a man may plead the statutes of limitation in bar ; or the time limited by cer- tain acts of parliament, beyond which no plain- tiff can lay his cause of action. This by the sta- tute of 32 Hen. VIII. c. 2, in a writ of right, is sixty years : in assises, writs of entry, or other possessory actions real, of the seisin of one’s an- cestors in lands ; and either of their sesin, or one’s own, in rent, suits, and services, fifty years : nnd in actions real for lands grounded upon one’s own seisin or possession, such possession n:ust have been within thirty years. By stat. 1

Mar. st. 2, c. 5, this limitation does not extend to any suit for avowsons. But by stat. 21 Jac. I. c. 2, a time of limitation was extended to the case of the king; viz. sixty years precedent to 19th of February 1623 : but this becoming inef- fectual, by efflux of time, the same date of limi- tation was fixed by stat. 9 Geo. III., c. 16, to commence and be reckoned backwards, from the time of bringing any suit or other process to re- cover the thing in question ; so that a possession for sixty years is now a bar even against the pre- rogative, in derogation of the ancient maxim, Nullum tempus occurrit regi. By another stat., 21 Jac. I. c. 16, twenty years is the time of li- mitation

in any write of formedon ; and, by a consequence, twenty years is also the limitation in every action of ejectment; for no ejectment can be brought, unless where the lessor of the plaintiff is entitled to enter on the lands, and, by stat. 21 Jac. I. c. 16, no entry can be made by any man, unless within twenty years after his right shall accrue. Also all actions of trespass (quare clausum fregit, or otherwise), detinue, trover, replevin, account, and case (except upon accounts between merchants), debt on simple contract, or for arrears of rent, are limited by the statute last mentioned to six years after the cause of action commenced : and actions of as- sault, menace, battery, mayhem, and imprison- ment, must be brought within four years, and actions for words two years, after the injury committed ; and by stat. 31 Eliz. c. 5, all suits, indictments, and informations, upon any penal statutes, where any forfeiture is to the crown, shall be sued within two years, and, where the forfeiture is to a subject, within one year, after the offence committed, unless where any other time is specially limited by the statute. Lastly, by stat. 10 W. III. c. 14, no writ of error, scire facias, 01 other suit, shall be brought to reverse any judgment, fine, or recovery, for error, unless it be prosecuted within twenty years. The use of these statutes of limitation is to preserve the peace of the kingdom, and to prevent those in- numerable perjuries which might ensue if a man were allowed to bring an action for any injury committed at any distance of time. Upon both these accounts the law therefore holds, that inte- rest reipublicae ut sit finis litium : and upon the same principle the Athenian laws in general pro- hibited all actions where the injury was commit- ted five years before the complaint was made. If therefore, in any suit, the injury or cause of ac- tion happened earlier than the period expressly limited by law, the defendant may plead the sta- tutes of limitations in bar : as upon an assump- sit, or promise to pay money to the plaintiff, the defendant may plead, Non assumpsit infra sex annos, he made no such promise within six years ; which is an effectual bar to the complaint. An estoppel is likewise a special plea in bar; which happens where a man hath done some act, or executed some deed, which stops or precludes him from averring any thing to the contrary. As if a tenant for years (who hath no freehold) levies a fine to another person. Though this is void as to strangers, yet it shall work as an estoppel to the cognizor ; for, if he afterwards brings an ac- tion to recover these lands, and his fine is plead-

ed against him, he shall thereby be stopped from saying that he had

no freehold at the time, and therefore was incapable of levying it. The conditions and qualities of a plea (which, as well as the doctrine of estoppels, will also hold equally, mutatis mutandis, with regard to other parts of pleading), are, 1. That it be single and contain- ing only one matter ; for duplicity begets confu- sion. But by stat. 4 and 5 Ann. c. 16, a man, with leave of the court, may plead two or more distinct matters or single pleas ; as in an action of assault and battery, these three, Not guilty, son assault demesne, and the statute of limita- tions. 2. That it be direct and positive, and not argumentative. 3. That it have convenient certainty of time, place, and persons. 4. That it answer the plaintiff's allegations in every ma- terial point. 5. That it be so pleaded as to be capable of trial. Special pleas are usually in the affirmative, sometimes in the negative, but they always advance some new fact not mention- «d in the declaration ; and then they must be averred to be true in the common form : — ' And this he is ready to verify.' — This is not necessary in pleas of the general issue, those always con- taining a total denial of the facts before advanced by the other party, and therefore putting him upon the proof of them.

ii. PLEAS OF THE CROWN are all suits in the king's name, or in the name of the attorney-ge- neral in behalf of the king, for offences commit- ted against his crown and dignity, and against his peace ; as treason, murder, felony, &c. See ARRAIGNMENT.

PLEA TO INDICTMENT is the defensive matter alleged by a criminal on his indictment. This is either, 1. A plea to the jurisdiction; 2. A demurrer; 3. A plea in abatement; 4. A spe- cial plea in bar ; or, 5. The general issue.

I. A plea to the jurisdiction is where an in- dictment is taken before a court that has no cognizance of the offence ; as if a man be indict- ed for a rape at the sheriff's tourn, or for treason at the quarter sessions ; in these, or similar cases, he may except to the jurisdiction of the court, without answering at all to the crime alleged.

II. A demurrer to the indictment is incident to criminal cases, as well as civil, when the fact as alleged is allowed to be true, but the prisoner joins issue upon some point of law in the indict- ment by which he insists, that the fact, as stated, is no felony, treason, or whatever the crime is alleged to be. Thus, for instance, if a man be indicted for feloniously stealing a grayhound; which is an animal in which no valuable property can be had, and therefore it is not felony, but r>nly a civil trespass to steal it ; in this case the party indicted may demur to the indictment; denying it to be felony, though he confesses the act of taking it. Some have held, that if, on de- murrer, the point of law be

adjudged against the prisoner, he shall have judgment and execution, as if convicted by verdict. But this is denied by others, who hold that in such case he shall be directed and received to plead the general issue, Not guilty, after a demurrer determined against him. Which appears the more reason- able, because it is clear, that if the prisoner freely discovers the fact in court, and refers it to the

court whether it be felony or not; and, upon the fact thus shown, it appears to be felony, thft court will not record the confession, but admit him afterwards to plead not guilty. And this seems to be a case of the same nature, being for the most part a mistake in point of law, and in the conduct of his pleading; and, though a man by mispleading may in some cases lose his pro- perty, yet the law will not suffer him by such niceties to lose his life. However, upon this doubt, demurrers to indictments are seldom used ; since the same advantages may be taken upon a plea of not guilty ; or afterwards in arrest. of judgment, when the verdict has established tht Tact.

III. A plea in abatement is principally for a misnomer, a wrong name, or a false addition to the prisoner. As, if James Allen, gentleman, is indicted by the name of John Allen, esqiiire, he may plead that he has the name of James, and not of John ; and that he is a gentleman, and not an esquire. And, if either fact is found by a jury, then the indictment shall be abated, as writs and declarations may be in civil actions. But, in the end, there is little advantage accruing to the prisoner by means of these dilatory pleas : because, if the exception be allowed, a new bill of indictment may be framed, according to what the prisoner in his plea avers to be his true name and addition. For it is a rule, upon all pleas of abatement, that he who takes advantage of a flaw, must at the same time show how it may be amended. Let us therefore next consider a more substantial kind cf plea, viz.

IV. Special pleas in bar ; which go to the merits of the indictment, and give a reason why the prisoner ought not to answer it at all, nor put himself upon his trial for the crime alleged. These are of four kinds : a former acquittal, a former conviction, a former attainder, or a par- don. There are many other pleas which maybe pleaded in bar of an appeal : but these are ap- plicable to both appeals and indictments. 1. First, the plea of auterfoits acquit, or a former acquittal, is grounded on this universal maxim of the common law of England, that no man is to be brought into jeopardy of his life, more than once, for the same offence. And hence it is al- lowed as a consequence, that when a man is once fairly found not guilty upon any indictment or other prosecution, before any court having competent jurisdiction of the offence, he may plead such acquittal in bar of any subsequent

accusation for the same crime. 2. Secondly, the plea of auterfois convict, or a former convic- tion of the same identical crime, though no judgment was ever given, or perhaps will be (being suspended by the benefit of clergy or other causes), is a good plea in bar to an indict- ment. And this depends upon the same prin- ciple as the former, that no man ought to be twice brought in danger of his life for one and the same crime. 3. Thirdly, the plea of auter- fois attaint, or a former attainder, is a good plea in bar, whether it be for the same or any other felony. For wherever a man is attainted of felony, by judgment of death either upon a verdict or confession, by outlawry, or heretofore by adjuration, and whether upon an appeal or

an indictment ; he may plead such attainder in bar to any subsequent indictment or appeal for the same or for any other felony. And this because, generally, such proceeding on a second prosecu- tion cannot be to any purpose ; for the prisoner is dead in law by the first attainder, his blood is already corrupted, and he has forfeited all that he had : so that it is absurd and superfluous to endeavour to attaint him a second time. Though to this general rule, as to all others, there are some exceptions ; wherein, cessante ratione, cessat et ipsa lex. 4. Lastly, a pardon may be pleaded in bar ; as at once destroying the end and purpose of the indictment, by remitting that punishment which the prosecution is calculated to inflict. There is one advantage that attends pleading a pardon in bar, or in arrest of judg- ment, before sentence is past; which gives it by much the preference to pleading it after sentence or attainder. This is, that by stopping the judgment, it stops the attainder, and prevents the corruption of the blood : which, when once corrupted by attainder, cannot afterwards be restored otherwise than by act of parliament.

V. The general issue, or plea of not guilty, upon which plea alone the prisoner can receive his final judgment of death. In case of an in- dictment of felony or treason, there can be no special justification put in by way of plea. As, on an indictment for murder, a man cannot plead that it was in his own defence against a robber on the highway, or a burglar ; but he must plead the general issue, Not Guilty, and give this spe- cial matter in evidence. For (besides that these pleas do in effect amount to the general issue ; since, if true, the prisoner is most clearly not guilty) as the facts in treason are said to be done proditorie et contra ligeantiae suae debitum ; and, in felony, that the killing was done felonice ; these charges, of a traitorous or felonious intent, are

the points and very gist of the indictment, and must be answered directly, by the general negative, not guilty; and the jury upon the evidence will take notice of any defensive matter, and give their verdict accordingly as effectually as if it were or could be specially pleaded. So that this is, upon all accounts, the most advan- tageous plea for the prisoner. When the prisoner has thus pleaded not guilty, non culpabilis, or nient culpable, which was formerly used to be abbreviated upon the minutes, thus, Non. (or nient) cul., the clerk of the assize, or clerk of the arraigns, on account of the crown replies, that the prisoner is guilty, and that he is ready to prove him so. This is done by two monosylla- bles in the same spirit of abbreviation cul. prit : which signifies first that the prisoner is guilty (cul. culpable, or culpabilis), and then that the king is ready to prove him so (prit, praesto sum, or paratus, verificare). By this replication the king and the prisoner are therefore at issue ; for when the parties come to a fact which is affirmed on one side and denied on the other, then they are said to be at issue in point of fact ; which is evidently the case here, in the plea of non. cul. by the prisoner, and the replication of cul. by the clerk.

PLEACH, v. a. Fr. plesser. To bend ; to interweave. See PLASH. A word not in use.

Wouldest thou be windowed i:i great Rome, an?

see

Thy master thus, with pleachl arms, bending down His corrngible neck ? ShaJupeare.

Steal into the pleached bower, Where honey-suckles, ripened by the sun, Forbid the sun to enter. Id.

PLEAD’, v. n. & v. a.\ Fr. plaider ; Span. PLEAD’ABLE, tpleytur ; Belg. pley

PLEAD’ER, i ten, pltyderen ; all of

PLEAD’ING. 3 Lat. placet. To argue

before a court ; speak in an argumentative way : reason ; be offered as an excuse : as a verb ac- tive, to defend ; allege ; discuss ; offer as a plea : pleadable is, that may be alleged in defence : a pleader is, a legal advocate ; any one who speaks for or against in argument: pleading, the act or form of a public trial or discussion. We plead not guilty, we must add, with regard to the sentiment in the extract from

Selden ; but it probably suggested Paley's excuse for the same legal falshood.

0 that one might plead for a man with God, as a man pleadeth for his neighbour ! Job xvi. 21.

Don Sebastian came forth to intreat that they might part with their arms like soldiers ; it was told him that they could not justly plead law of nations, for that they were not lawful enemies.

Spenser.

To his accusations

He pleaded still not guilty ; and alledged Many sharp reasons. Shakspeare. Henry VIII. Will you, we shew our title to the crown"? If not, our swords shall plead it in the field.

Shakspeare. If you

Would be your country's pleader, your good tongue Might stop our countryman. Id. Coriolamis.

A man may plead not guilty, and yet tell no lie ; for, by the law, no man is bound to accuse himself ; so that, when I say not guilty, the meaning is, as if I should say by way of paraphrase, I am not so guilty as to tell you ; if you will bring me to trial, and have me punished for this you bring to my charge, prove it against me. Selden.

If nature plead not in a parent's heart. Pity my tears, and pity her desert. Dryden.

1 ought to be discharged from this information, because this privilege is pleadable at law. Id.

So fair a pleader any cause may gain. Id. It must be no ordinary way of reasoning, in a man that is pleading for the natural power of kings, and against all compact, to bring for proof an example where his own account founds all the right upon compact. Locke.

Of beauty sing ;

Let others govern or defend the state, Plead at the bar, or manage a debate. Granvilk.

The brief with weighty crimes was charged, On which the pleader much enlarged.

Swift's Miscellanies. If the heavenly folk should know, These pleadings in he court below. Id.

Lawyers and divines write down short notes, in order to preach or plead. Watts on the Mind.

He was treated with great harshness and severity, but declining their questions, by pleading his oath of secrecy, was at last dismissed. Johnson.

Oh how inscrutable are the depths and deceits of the human heart ! — Had my enemy brought against me a charge of indolence, self-indulgence, or pride, and impatience, or a too quick resentment of affronts and injuries, my own heart must have confirmed the accusation, and forced me to plea I guilty. Mason.

PLEADINGS.

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PLEADINGS, in law, are the mutual alterca- tions between the plaintiff and defendant. See PROCESS, SUIT, and WRIT. They form the third part or stage of a fact ; and at present are set down and delivered into the proper office in writing, though formerly they were usually put in by their counsel ore tenus, or viva voce, in court, and then minuted down by the chief clerks or prothonotaries ; whence, in old law French, the pleadings are frequently denominated the parol. The first of these is the declaration, narratio, or count, anciently called the tale ; in which the plaintiff sets forth his cause of complaint at length : being indeed only an amplification or exposition of the original writ upon which his action is founded, with the additional circumstances of time and place, when and where, the injury was committed. In local actions, says judge Black- stone, where the possession of land is to be reco- vered, or damages for any actual trespass, or for waste, &c., affecting land, the plaintiff must lay his declaration or declare his injury to have hap- pened in the very county and place that it really did happen; but in transitory actions, for inju- ries that might have happened any where, as debt, detinue, slander, and the like, the plaintiff may declare in what county he pleases, and then the trial must be in that county in which the de- claration is laid. Though, if the defendant will make affidavit that the cause of action, if any, arose not in that but another county, the court will direct a change of the venue or visne (that is, the vicinia or neighbourhood in which the in- jury is declared to be done), and will oblige the plaintiff to declare in the proper county. For the statute 6 Ric. II. c. 2, having ordered all

writs to be laid in their proper counties, this, as the judges conceived, empowered them to change the venue, if required, and not to insist rigidly on abating the writ : which practice began in the reign of James I. And this power is discre- tionally exercised, so as not to cause but prevent a defect of justice. Therefore the court will not change the venue to any of the four northern counties previous to the spring circuit; because there the assizes are holden only once a year, at the time of summer circuit. And it will some- times remove the venue from the proper juris- diction (especially of the narrow and limited kind), upon a suggestion, duly supported, that a fair and impartial trial cannot be had therein. It is generally usual, in actions upon the case, to set forth several cases, by different counts in the same declaration ; so that if the plaintiff fails in the proof of one, he may succeed in another. As in an action on the case upon an assumpsit for goods sold and delivered, the plaintiff usually counts or declares, first, upon a settled and agreed price between him and the defendant ; as that they bargained for £20 : and, lest he should fail in the proof of this, he counts likewise upon a quantum valebant ; that the defendant bought other goods, and agreed to pay him so much as they were reasonably worth : and then avers that they were worth other £20, and so on in three or iuur different shapes; and at last concludes with declaring that the defendant had refused to fulfil any of these agreements, whereby he is en-

damaged to such a value. And if he proves the case laid in any one of his counts, though he fails in the rest, he shall recover proportional damages. This declaration always concludes with these words, ‘ and thereupon he brings suit,’ &c., inde producit sectam, &c. By which words, suit or secta (a sequendo) were anciently understood the witnesses or followers of the plaintiff. For in former times the law would not put the defendant to the trouble of answering the charge till the plaintiff had made out at least a probable case. But the actual production of the suit, secta, or followers, is now antiquated, and has been totally disused ever since the reign of Edward III. though the form still continues. At the end of the declaration are added also the plaintiff’s common pledges of prosecution, John Doe and Richard Roe ; which, as elsewhere ob- served (see WRIT), are now mere names of form ; though formerly they were of use to answer to the king for the amercement of the plaintiff, in case he were non-suited, barred of his action, or had a verdict and judgment against him. For if the plaintiff neglects to deliver a declaration for two terms after the defendant appears, or is guilty of other delays or defaults against the rules of law in any subsequent stage of the ac- tion, he is adjudged not to follow or pursue his remedy as he ought to do ; and thereupon a nonsuit, or non

prosequitur, is entered, and he is said to be non pros'd. And for thus deserting his complaint, after making a false claim or com- plaint (pro falso clamore suo), he shall not only pay costs to the defendant, but is liable to be amerced to the king.

A retraxit differs from a nonsuit, in that the one is negative and the other positive : the nonsuit is a default and neglect of the plaintiff, and therefore he is allowed to begin his suit again upon payment of costs ; but a retraxit is an open and voluntary renunciation of his suit in court ; and by this he for ever loses his action. A dis- continuance is somewhat similar to a nonsuit ; for when a plaintiff leaves a chasm in the pro- ceedings of his cause, as by not continuing the process regularly from day to day, and time to time, as he ought to do, the suit is discontinued, and the defendant is no longer bound to attend ; but the plaintiff must begin again, by suing out a new original, usually paying costs to his anta- gonist. When the plaintiff has stated his case in the declaration, it is incumbent on the de- fendant, within a reasonable time, to make hi'" defence, and to put in a plea ; or else the plair tiff will at once recover judgment by default, o nihil dicit, of the defendant. Defence, in its true legal sense, signifies not a justification, pro- tection, or guard, which is now its popular signi- fication ; but merely an opposing or denial (from the French verb defendre) of the truth or validity of the complaint. It is the contestatio litis of the civilians : a general assertion that the plain- tiff has no ground of action ; which assertion is afterwards extended and maintained in his plea. Before defence made, if at all, cognizance of the suit must be claimed or demanded ; when any person or body corporate has the franchise, not only of holding pleas within a particular limited

jurisdiction, but also of the cognizance of pleas ; and that either without any words exclusive of other courts, which entitles the lord of the fran- chise, whenever any suit that belongs to his juris- diction is commenced in the courts of Westmin- ister, to demand the cognizance thereof ; o- with such exclusive words, which also entitle the de- fendant to plead to the jurisdiction of the court. Upon this claim of cognizance, if allowed, all proceedings shall cease in the superior court, and the plaintiff is left at liberty to pursue his reme- dy in the special jurisdiction. As when a scholar or other privileged person of the universities of Oxford or Cambridge is impleaded in the courts at Westminster, for any cause of action whatso- ever, unless upon a question of freehold. In these cases, by the charter of those learned

bodies, confirmed by act of parliament, the chan- cellor, or vice-chancellor, may put in a claim of cognizance ; which, if made in due time and form, and with due proof of the facts alleged, is regularly allowed by the courts. It must be de- manded before full defence is made or imparl- ance prayed ; for these are a submission to the jurisdiction of the superior court, and the delay i> the laches in the lord of the franchise ; and it will not be allowed if it occasions a failure of justice, or if an action be brought against the person himself who claims the franchise, unless he has also a power in such case of making another judge. After defence made, the defend- ant must put in his plea; but, before he defends, if the suit is commenced by capias or latitat, without any special original, he is entitled to de- mand one imparlance, or licentia loquendi ; and may, before he pleads, have more granted by consent of the court, to see if he can end the matter amicably, without further suit, by talking with the plaintiff; a practice which is supposed to have arisen from a principle of religion in obedience to that precept of the gospel, ‘ agree with thine adversary quickly whilst thou art in the way with him.’ And it may be observed that this gospel precept has a plain reference to the Roman law of the XII. tables, which ex- pressly directed the plaintiff and defendant to make up the matter while they were in the way, or going to the praetor ; in via rem uti pacent orato.

There are also many other previous steps which may be taken by a defendant before he puts in his plea. He may, in real actions, demand a view of the thing in question, to ascertain its identity and other circumstances. He may crave oyer of the writ, or of the bond, or other spe- cialty upon which the action is brought ; that is, to hear it read to him : the generality of de- fendants in the times of ancient simplicity being supposed incapable to read it themselves ; where- upon the whole is entered verbatim upon the record ; and the defendant may take advantage of any condition or other part of it, not stated in the plaintiff’s declaration. In real actions also the tenant may pray in aid, or call for the assistance of another to help him to plead, because of the feebleness or imbecility of his own estate. Thus a tenant for life may pray in aid of him that has the inheritance in remainder or reversion ; and an in-

cumbent may pray in aid of the patron 01 crdi- nary ; that is, that they shall be joined in the ac- tion, and help to defend the title. Voucher also is the calling in of some person to answer tne ac- tion, that hath warranted the title to the tenant or defendant. This is still made use of in the form of common recoveries, which are grounded on the writ of entry; a species of action that relies chiefly on the weakness of the tenant’s title, who therefore vouches another person to warrant it. If

the vouchee appears he is made defendant instead of the voucher ; but, if he afterwards makes default, recovery shall be had against the original defendant ; and he shall recover an equivalent in value against the deficient vouchee. In assizes, indeed, where the principal question is, whether the demandant or his ancestors were or were not in possession till the ouster hap- pened, and the title of the tenant is little if at all discussed, there no voucher is allowed, but the tenant may bring a writ of warrantia chartae against the warranter, to compel him to assist him with a good plea or defence, or else to render damages and the value of the land, if recovered against the tenant. In many real actions also, brought by or against an infant under the age of twenty-one years, and also in actions of debt brought against him, as heir to any deceased an- cestor, either party may suggest the nonage of the infant, and pray that the proceedings may be deferred till his full age, or, in the legal phrase, that the infant may have his age, and that the parol may demur, that is, that the pleadings may be stayed ; and then they shall not proceed till his full age, unless it be apparent that he cannot be pre- judiced thereby. But by the statutes of Westm. 1, 3, Edw. I. c. 46, and of Gloucester, 6 Edw. I. c. 2, in writs of entry sur disseisin in some par- ticular cases, and in actions au cestrel brought by an infant, the parol shall not demur ; other- wise he might be deforced of his whole property, and even want of maintenance till he came of age. So, likewise, in a writ of dower, the heir shall not have his age ; for it is necessary that the widow's claim be immediately determined, else she may want a present subsistence. Nor shall an infant patron have it in a quare impedit, since the law holds it necessary and expedient that the church be immediately filled. When these proceedings are over, the defendant must then put in his excuse or plea. See PLEA. No man is allowed to plead specially such a plea as amounts only to the general issue, or a total de- nial of the charge; but in such case he must plead the general issue in terms whereby the whole question is referred to a jury. But if the defendant, in an assize or action in trespass wish to refer the validity of his title to the court rather than the jury, he may state his title spe- cially; and give color to the plaintiff, or suppose him to have an appearance or color of title. As if his own true title is, that he claims by feoff- ment with livery from A, by force of which he entered on the lands in question; he cannot plead this by itself, as it amounts to no more than the general issue. But he may allege this specially provided he goes farther, and says, tha> the plaintiff claiming by color of a prior deed of fe-

offment, without livery, entered ; upon whom he entered ; and may then refer to the judgment of the court which of these two titles is the best in point of law.

When the plea of the defendant is thus put in, if it does not amount to a total contradiction of the declaration, but only evades it, the plaintiff may plead again, and reply to the defendant's plea: either traversing it, i. e. totally denying it; as if, on an action of debt upon bond, the defendant plead solvit ad diem, that he paid the money when due ; here the plaintiff in his repli- cation may totally traverse this plea, by denying that the defendant paid it : or he may allege new matter in contradiction to the defendant's plea ; as, when the defendant pleads no award made, the plaintiff may reply and set forth an actual award, and assign a breach : or the replication may confess and avoid the plea, by some new matter or distinction ; as, in an action for trespassing upon land of which the plaintiff is seised, if the defendant show a title to the land by de- scent, and that therefore he had a right to enter, and give color to the plaintiff, the plaintiff may either traverse and totally deny the fact of the descent, or he may confess and avoid it by re- plying that true it is that such descent happened, but that, since the descent, the defendant himself demised the lands to the plaintiff for term of life.

To the replication the defendant may rejoin or put in an answer called a rejoinder. The plain- tiff may answer the rejoinder by a sur-rejoinder ; upon which the defendant may rebut, and the plaintiff answer him by a sur-rebutter. Which pleas, replications, rejoinders, sur-rej cinders, re- butters, and sur-rebutters, answer to the excep- tio, replicatio, duplicatio, triplicatio, and quadru- plicatio, of the Roman laws. The whole of this process is denominated the pleading ; in the se- veral stages of which it must be carefully observ- ed not to depart or vary from the title or defence which the party has once insisted on. For this, which is called a departure in pleading, might occasion endless altercation. Therefore the re- plication must support the declaration, and the rejoinder must support the plea, without depart- ing out of it. As in the case of pleading no award made, in consequence of a bond of arbitra- tion, to which the plaintiff replies, setting forth an actual award ; now the defendant cannot rejoin that he has performed this award ; for such rejoinder would be an entire departure from his original plea, which alleged that no such award was made ; therefore he has now no other choice but to traverse the fact of the replication, or else to demur upon the law of it. Again, every plea must be simple, entire, connected, and confined to one single point ; it must never be entangled with a variety of distinct independent answers to the same matter, which must require as many different replies, and introduce a

multitude of issues upon one and the same dispute. For this would often embarrass the jury, and sometimes the court itself, and at all events would greatly enhance the expense of the parties. Yet it frequently is expedient to plead in such a manner as to avoid any implied admission of a fact which

cannot with propriety or safety be positively af- firmed or denied. And this may be done by what is called a protestation, by which the party interposes an oblique allegation or denial of some fact, protesting that such a matter does or does not exist; and at the same time avoiding a direct affirmation or denial. Sir Edward Coke has defined a protestation to be, ‘ an exclusion of a conclusion ;’ for the use of it is, to save the party from being concluded with respect to some fact or circumstance which cannot be directly affirmed or denied without falling into duplicity of plead- ing, and which yet, if he did not thus enter his protest, he might be deemed to have tacitly waived or admitted. So if a defendant, by way of inducement to the point of his defence, alleges a particular mode of seisin or tenure winch the plaintiff is unwilling to admit, and yet desires to take issue on the principal point of the defence, he must deny the seisin or tenure by way of pro- testation, and then traverse the defensive matter. So, lastly, if an award be set forth by the plain- tiff, and he can assign a breach in one part of it, and yet is afraid to admit the performance of the rest of the award, or to aver in general a non- performance of any part of it, lest something should appear to have been performed, he may save to himself any advantage he might hereafter make of the general non-performance, by alleging that by protestation he can plead only the non- payment of the money. In any stage of the pleadings, when either side advances or affirms any new matter, he usually avers it to be true ; ‘ and this he is ready to verify. ‘ On the other hand, when either side traverses or denies the facts pleaded by his antagonist, he usually ten- ders an issue, as it is called ; the language of which is different according to the party by whom it is tendered ; for if the traverse or denial come from the defendant, the issue is tendered in this manner: ‘And of this he puts himself upon the country,’ thereby submitting himself to the judgment of his peers ; but if the traverse lies upon the plaintiff, he tenders the issue or prays the judgment of the peers against the defendant in another form; thus, ‘and this he prays may be enquired of by the country. ‘ But if either side pleads a special negative plea, not traversing or denying any thing that was before alleged, but disclosing some new negative matter; as where the suit is on a bond conditioned to per- form an award, and the defendant pleads nega- tively that no award was made; he tenders no issue upon this plea, because it does not yet ap- pear

whether the fact will be disputed, the plain- tiff not having yet asserted the existence of any award ; but when the plaintiff replies-, and sets forth an actual specific award, if then the defend- ant traverses the replication, and denies the mak- ing of any such award, he then, and not before, tenders an issue to the plaintiff. For when, in the course of pleading, they come to a point which is affirmed on one side, and denied on the other, they are then said to be at issue; all their debates being at last contracted into a single point, which must now be determined either in favor of the plaintiff or of the defendant. See ISSUE.

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PLEAS'ANCE, n. s. ˆ PLEAS'ANT, adj. PLEAS'ANTLY, adv. PLEAS'ANTNESS, n s. PLEAS' A NTRY, PLEASE, v. a. & v. n. PLEAS'ER, n. s. PLEASINGLY, adv. PLEAS'INGNESS, n. s. PLEASE'MAN, PLEAS'CRE, w. s. & v. a.

Fr. plaisauce,plai- sant, plaire ; Span. placer; Port.plazer; Ital. piacere ; Lat. placeo. Gaiety ; mirth ; delight : plea- sant is, delightful ; gay ; lively ; grateful to the senses ; trifling: pleasantly, pleasant- ness, and pleasantry,

PLEAS'UREFUL, adj. J follow these senses ; but the latter has a particular application to pleasant or sprightly talk ; or a sprightly saying : to please is, to gratify ; delight ; accommodate ; humor ; content ; obtain favor from : ' be pleased with,' to approve ; favor : ' to be pleased,' to like : as a verb neuter, to afford pleasure ; gain approbation ; like ; choose ; condescend or com- ply : a pleaseman is, a sycophant ; an officious parasite : the other derivatives follow the various senses of please.

I have seen thy face, and thou wast pleased with me. Genesis.

The Lord taketh pleasure in them that fear him.

Psalms.

How good and how pleasant it is for brethren to dwell in unity ! Id.

He will do his pleasure on Babylon.

Isaiah xlviii. This is my beloved son, in whom I am well pleased.

Matthew.

Things, thus set in order,

Shall further thy harvest, and pleasure thee best.

Tutser.

Doth not the pleasantness of this place carry in itself sufficient reward 1 Sidney.

The lovely pleasance and the lofty pride Cannot expressed be by any art. Spenser.

Oh that men should put an enemy in their mouths, to steal away their brains ! that we should with joy, pleasunce, revel, and applause, transform ourselves into beasts ! Shakspeare.

The gods are just, and of our pleasant vices Make instruments to scourge us. Id.

Doctor Pinch,

Establish him in his true sense again, And I will please you what you will demand. Id.

Please you, lords,

In sight of both our battles we may meet. Id. Some carry-tale, some pleaseman, some slight zany, That knows the trick to make my -lady laugh, Told our intents. Id. Love’s Labour Lost.

Convey your pleasures in a spacious plenty, And yet seem cold. Shakspeare.

Use your pleasure ; if your love do not persuade you to come, let not my letter. Id.

I count it one of my greatest afflictions, that I cannot pleasure such an honourable gentleman.

Shakspeare.

Planting of orchards is very profitable, as well as pleasurable. Bacon.

When the way of pleasuring and displeasuring lieth by the favourite, it is impossible any should be overgreat. Id.

This coui»try, for the fruitfulness of the land and the conveniency of the sea, hath been reputed a very commodious and pleasureful country. jbbot.

Pleasingly troublesome thought and remembrance have been to me since I left you. Suckling.

Nay, the birds rural musick too Is as melodious and as free, As if they sung to pleasure you. Cowley.

King James was wont pleasantly to say, that the duke of Buckingham had given him a secretary who could neither write nor read. Clarendon.

Verdure clad Her universal face with pleatmt gi?«n.

Milton

Sweeter thy discourse is to my ear, Than fruits of palm-tree pleasantest to thirst. Id.

What next 1 bring shall please Thy wish exactly to thy heart's desire. Id.

Not sunk in carnal pleasure. Id.

Thus to herself she pleasingly began. Id.

It affords a pleasurable habitation in every part, and that is the line ecliptick.

Browne's Vulgar Errours.

Wre ascribe not only effects depending on the na- tural period of time unto arbitrary calculations, and such as vary at pleasure, but confirm our tenets by the uncertain account of others. Browne.

He would fain put on some pleasantness, but was not able to conceal his vexation. Tillotson.

Nothing is difficult to love ; it will make a man cross his own inclinations to pleasure them whom he loves. Id.

Many of our most skilful painters were pleased to recommend this

author to me, as one who per- fectly understood the rules of painting.

Dryden's Dvfresnoi/.

I found something that was more pleasing in them, than my ordinary productions. Dryden.

The end of the artist is pleasingly to deceive the eye. Id.

Raise tempests at your pleasure. Id. •

They, who would prove their idea of infinite to be

positive, seem to do it by a pleasant argument, taken

from the negation of an end, which being negative,

the negation of it is positive. Locke.

We can at pleasure move several parts of our bo- dies. Id.

There are, that the compounded fluid drain, From different mixtures ; so the blended streams. Each mutually correcting each, create A pleasurable medley. Philips.

It was refreshing, but composed, like the pleasant- ness of youth tempered with the gravity of age.

South.

A cause of men's taking pkasure in the sins of others, is, that poor spiritedness that accompanies guilt. Id.

In all thy humours, whether grave or mellow, Thou'rt such a touchy, testy, pleasant fellow.

Addison

The harshness of reasoning is not a little softened and smoothed by the infusions of mirth and plfa- santry. Id.

The grave abound in pleasantries, the dull in re- partees and points of wit. Id. Spectator.

Our ill-judging thought Hardly enjoys the pleasurable taste. Prior. Let neither the power or quality of the great, or the wit of the pleasant, prevail with us to flatter the vices, or applaud the profaneness of

wicked men.

Rogers.

All the land in their dominions, being acquired by conquest, was disposed by them according to their pleasure. Arbuflmnt.

Eustathius is of opinion, that Ulysses speaks plea- santly to Elpenor. Broome.

Leave such to trifle with more grace and ease, Whom folly pleases, and whose follies please. Pope.

He gains all points, who pleasingly confounds, Surprises, varies, and conceals the bounds. Id.

In hollow caves sweet Echoe quiet lies ; Her name with pleasures once she taught the shore, Now Daphne's dead, and pleasure is no more Id,

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The first words that I learnt were, to express my desire, that he would please to give me my liberty.

Swift.

The itch of cavil, festering with disease, No art can circumscribe, no genius please.

Whyte's Poems.

She soon shall see her tender brood, The pride, the pleasure of the wood, Amang the fresh green leaves bedewed,

Awake the early morning. Burns.

Vicissitude wheels round the motley crowd, The rich grow poor, the poor become purse proud ; Business is labour, and man's weakness such, Pleasure is labour too, and tires as much. Cowper.

PLEBEI'AN, n. s. & adj. Fr. plebeien ; Lat. plebeius. One of the lower people: vulgar; low: plural populace.

Your plebeians if they be senators.

Shakspeare,

The differences of mouldable and not mouldable, scissible and not seissible, are plebeian notions.

Bacon.

As swine are to gardens, so are tumults to parlia- ments and plebeian concourses to publick counsels.

King Charles.

He through the midst unmarked, In show plebeian angel militant Of lowest order. Milton's Paradise Loit. Dishonour not the vengeance 1 designed, A queen ! and own a base plebeian mind ! Dryden.

Upon the least intervals of peace, the quarrels be- tween the nobles and the plebeians would revive.

Swift.

PLEBEIANS. The ancient Romans were di- vided into patricians and plebeians. The dis- tinction was made by Romulus the founder of the city ; who confined all dignities senatorial, civil, military, and sacerdotal, to the rank of pa- tricians. But to prevent the seditions which such a distinction might produce through the pride of the higher order and the envy of the lower, he endeavoured to engage them to one another by reciprocal ties and obligations. Every plebeian was allowed to choose out of the body of the patricians a protector, who should be obliged to assist him with his interest and substance, and to defend him from oppression. These protectors were called patrons; the pro- tected clients. But, though the attachment be- tween the patrons and clients continued invio- late for above 600 years, yet during the republic, the struggles between the patricians and plebeians were often frequent and violent.. See ROME.

PLEBEIAN GAMES, in antiquity, were cele- brated by the Roman people in remembrance, as some say, of their reconciliation with the patri- cians, after their expulsion from the city, A. U. C. 261 ; or, according to others, to commemorate the final destruction of the kingly power, A. U. C. 245. These games commenced on the seventh of the kalends of December, and continued three days in the circus.

PLECTRANTHUS, in botany, a genus of the gymnospermia order, and

didynamia class of plants ; natural order forty-second, verticillatae : CAL. monophyllous, short, and bilabiated; the upper lip of which is large, oval, and bent up- wards ; the inferior lip is quadrifid, and divided into two lacinia : COR. is monopetalous, ringent, and turned back ; the labiee look different ways, and from the base of the tube there is a necta-

rium like a spur : the filaments are in a declining situation, with simple antherae : the .stylus fili- form ; the stigma bifid. It has four seeds co- vered only by the calyx. There are two species, viz. —

1. P. fruticosus, a native of the Cape of Good Hope. It flowers from June to September.

2. P. punctatus, a native of Africa. It flowers from January to May.

PLECTRUM, irXnKrpov, in ancient music, a small piece of wood or ivory used by the ancients in playing upon the lyre, crooked and pointed at both ends, in using which there was more spirit given to the tone, and less danger of hitting the wrong string than by using the finger.

PLEDGE', n. s. & v. a. Fr. pleige, pleiger ; barb. Lat. plegium. Any thing plighted or put to pawn ; a gage ; security ; surety ; bail : to put in pawn ; secure by pawn or pledge : hence invite to drink, in which anciently he who gave the invitation pledged himself for his friend's safety.

These men at the first were only pitied ; the great humility, zeal, and devotion, which appeared to be in them, was in all men's opinion a pledge of their harmless meaning. Hooker.

If none appear to prove upon thy person Thy heinous, manifest, and many treasons ; There is my pledge, I'll prove it on thy heart.

Shakspeare. The fellow, that

Parts bread with him, and pledges The breath of him in a divided draught, Is the readiest man to kill him. Id. Timon. What purpose could there be of treason, when the Guianians offered to leave pledges, six for one 1

Raleigh.

That flexanimous orator began the king of Horne- bia's health ; he presently pledged it. Howel.

Here's to thee, Dick ; this whining love despise ; Pledge me, my friend, and drink till thou be'st wise.

Cowley.

That voice their liveliest pledge Of hope in fears and dangers. Milton.

Good sureties will we have for thy return, And at thy pledges' peril keep thy day. Dryden. Money is necessary both for counters and for pledges, and carrying with it even reckoning and se- curity. Locke.

The deliverance of Israel out of Egypt by the mi- nistry of Moses was intended for a type and pledge of a spiritual deliverance which was to come by Christ. Nelson.

Hymen shall be atoned, shall join two hearts, And Aribert shall be the pledge of peace. Rowe.

Asleep and naked as an Indian lay, An honest factor stole a gem away ; He pledged it to the knight ; the knight had wit, So kept the diamond, and the rogue was bit.

Pope.

Time was, he closed as he began the day With decent duty, not ashamed to pray • The practice was a bond upon his heart, A pledge he gave for a consistent part, Nor could he dare presumptuously displease A power, confessed sa lately on his kness.

Cowper.

PLEDGE in LAW. See PAWN. PLE’DGET, n. s. Belg. plagghe. A small mass of lint.

I applied a good pledget of basilicon.

Wiseman’s Surgery.

PLEDGET, BOLSTER, or COMPRESS, in suigery, is a kind of flat tent laid over a wound to imbibe the superfluous humors, and to keep it clean.

PLEI’ADS, n. s. 1 Lat. pleiades ; Gr. ir\ti-

PLEI’ADES. \ aStg. A northern constel-

lation; the seven stars.

Canst thou bind the sweet influences of Pleiades, or loose the bands of Orion 1 Job. xxxvii. 31.

The pleiades before him danced, Shedding sweet influence. Milton.

Then sailors quartered heaven, and found a name For plciads, hyads, and the northern car. Dryden.

PLEIADES, in astronomy, an assemblage of seven stars in the neck of the constellation Tau- rus. They are thus called from the Greek irXtiv, navigare, to sail ; as being terrible to mariners, by reason of the rains and storms that frequently rise with them. The Latins called them vergiliae, from ver, spring ; because of their rising about the time of the vernal equinox. The largest is of the third magnitude, and is called lucida pleiadum.

PLEIADES, in the mythology, the seven daugh- ters of Atlas king of Mauritania, and Pleione, thus called from their mother. They were Maia, Electra, Taygete, Asterope, Merope, Halcyone, and Celoeno ; and were also called Atlantides, from their father. These princesses were carried off by Busiris, king of Egypt; but Hercules, having conquered him, delivered them to their father ; yet they afterwards suffered a new perse- cution from Orion, who pursued them five years, till Jove, being prevailed on by their prayers, took them up into the heavens, where they form the constellation which bears their name. Maia was the mother of Mercury by Jupiter.

PLEIONE, in fabulous history, a daughter of Oceanus, who married Atlas, king of Mauritania, by whom she had a son and twelve daughters, seven of whom were from her called Pleiades, and five were called Hyades, from their brother Hyas.

PLEN'ARY, adj. & n. s. Lat. plenus. Full ; complete ; a complete or decisive procedure.

I am far from denying that compliance on my part' for plenary consent it was not, to his destruction.

King Charles.

The cause is made a plenary cause, and ought to be determined plenarily. Ayliffe's Parergon.

Institution without induction does not make a plenary against the king, where he has a title to pre- sent. Id.

A treatise on a subject should be plenary or full, so that nothing may be wanting, nothing which is proper omitted. Watts.

PLENILU'NARY, adj. Lat. pknilunium. Relating to the full moon.

If we add the two Egyptian days in every month, the interlunary and pienilunary exemptions, there would arise above an hundred more. Browne.

PLENIP'OTENT, adj. 1 lˆ.pkmpotem.

PLENIPOTENTIARY, n. s. S Invested with full power : a negotiator invested with full power.

My substitutes I send you, and create Plenipolent on earth, of matchless might Issuing from me. Milton's Paradise Lost.

They were only the plenipotentiary monks of the patriarchal monks. Stillingjieet.

PLE'NIST, n. s. PLEN'ITUDE, PLEN'TEOUS, adj. PLEN'TEOUSLY, adv. PLEN'TEOUSNESS, n, s. PLEN'TIFUL, adj. PLENTIFULLY, adv. PLEN'TIFULNESS, n. s. PLEN'TY.

Lut.plenus, plemtas ; Gr. TrXtov. One who believes in the univer- sal fulness of space, or that all space is full of matter : ple nitude, plenteousness,

plentifulness, and plenty, mean fulness ; copiousness ; abundance ; completeness : reple- tion : plenty is also corruptly used for plentiful : plenteous is copious ; abundant ; exuberant ; fertile : the adverb and noun substantive cor- responding in sense : plentiful, synonymous with plenteous, only more commonly used in prose ; plentifully and plentifulness correspond- ing.

The seven years of plenteousness in Egypt were ended. Genesis.

Ye shall eat in plenty and be satisfied, and praise the Lord. Joel ii. 26.

To grass with thy calves, Where water is plenty. Tusser's Husbandry.

Thy due from me is tears, ,

Which nature, love, and filial tenderness Shall, O dear father, pay thee plenteously.

Shakspeare.

If reasons were as plenty as blackberries, I would give no man a reason on compulsion. Id.

To Amalthea he gave a country, bending like a horn ; whence the tale of Amalthea's plentiful horn.

Raleigh.

He that is plentiful in expences, will hardly be preserved from decay. Bacon's Essay.

The plenitude of the pope's power of dispensing was the main question. Id. Henry VII.

Lab 'ring the soil and reaping plenteous crop.

Milton.

God created the great whales and each Soul living, each that crept, which plenteously, The waters generated. Id. Paradise Lost.

They were not multiplied before, but they were at that time plentifully encreased. Browne.

Those spaces, which the vacuists would have empty, because devoid of air, the plenists do not prove replenished with subtle matter by any sensible effects. Boyle.

When they had a plentiful harvest, the farmer had hardly any corn. L'Estrange.

What makes land, as well as other things, dear, is plenty of buyers, and but few sellers ; and so plenty of sellers, and few buyers, makes land cheap.

Locke.

Bern is plentifully furnished with water, there being a great multitude of fountains.

Addison's Italy.

The plenitude of William's fame Can no accumulated stores receive. Prior. If there were every where an absolute plenitude and density without any pores between the particles of bodies, all bodies of equal dimensions would con- tain an equal quantity of matter, and consequently be equally ponderous. Bentley.

Relaxation from plenitude is cured by spare diet.

Arbuthnot.

God proves us in this life, that he may the more plenteously reward us in the next. Wake.

Two plenteous fountains the whole prospect

crowned ;

This through the gardens leads its streams around.

Pope.

Alcibiades was a young man of noble birth, ex- cellent education, and a plentiful fortune.

Whose grievance is satiety of ease, Freedom their pain, anil plenty their disease.

Harte.

The teeming clouds Descend in gladsome plenty o'er the world.

Thomson.

There's Johnie o' the Buskie-glen,

Fu' is his barn, fu' is his byre ;

Tak this frae me, my bonnie hen,

It's plenty beets the luver's fire. Burns. PLENUM, in physics, denotes, according to the Cartesians, that state of things wherein every part of space is supposed to be full of matter, in opposition to a vacuum, which is a space sup- posed devoid of all matter.

PLEONASM (from Tr\fova

PLESH, n. s. Used by Spenser instead of PLASH, which see. A puddle; boggy marsh.

Out of the wound the red blood flowed fresh, That underneath his feet soon made a purple plesh.

Spenser.

PLETH'ORA, or j Gr. 7rXij3wpa. The

PLETH'ORY, n. s. > state in which the vessels

PLETHOR'IC, adj. j contain a greater quantity of humors than is agreeable to health : plethoric is, of a full habit.

Perhaps thou labourest of some plethory of pride, or of some dropsy of

covetousness, or of the stag- gers of inconstancy ; it is a rare soul that has not some notable disease. Bp. Hall.

The diseases of the fluids are a plethora, or too great abundance of laudable juices, Arbuthnot.

The fluids, as they consist of spirit, water, salts, oil, and terrestrial parts, differ according to the re- dundance of the whole or of any of these ; and therefore the plethoric are phlegmatick, oily, saline, earthy, or dry. Id.

In too great repletion, the elastic force of the tube throws the fluid with too great a force, and subjects the animal to the diseases depending upon a plethory.

Id.

PLEURA, ir\£vpa, a thin membrane which lines the internal surface of the thorax, and covers its viscera. It forms a great process, the me- diastinum, which divides the thorax into two cavities. Its use is to render the surface of the thorax moist by the vapor it exhales. See ANA- TOMY.

PLEU'RISY, n. s. Fr. pleuresie ; Gr. irXev- pirif ; Lat. pleuritis.

Pleurisy is an inflammation of the pleura, though it is hardly distinguishable from an inflammation of any other part of the breast, which are all from the same cause, a stagnated blood, and are to be reme- died by evacuation, suppuration, or expectoration, or all together. Quincy.

The viscous matter, which lies like leather upon the extravasated blood of pleuritic people, may be dissolved by a due degree of heat. Arbuthnot.

His blood was pleuritical, it had neither colour nor consistence. Wiseman's Surgery.

PLEURONECTES, in ichthyology, a genus belonging to the order of thoracici. Both eyes are on the same side of the head ; there are from four to five rays in the gill membrane ; the body

is compressed, the one side resembling the back the other the belly. These flat fish swim side- wise, for which reason Linnaeus called them pleuronectes. There are several species ; the most remarkable are these : —

1. P. flesus, the flounder, inhabits every part of the British Sea, and even frequents our rivers at a great distance from the salt waters ; and for this reason some writers call it the passer fluvia- tilis. It never grows large in our rivers, but is reckoned sweeter than those that live in the sea. It is inferior in size to the plaise, seldom or never weighing more than six pounds. It may very easily be distinguished from the plaise, or any other fish of this genus, by a row of sharp small spines that surround its upper sides, and are placed just at the junction of the fins with the body. Another row marks the side-line, and runs half way down the back. The color of the upper part of the body is a pale brown, sometimes marked with a few obscure spots of dirty yellow ; the belly is white.

2. P. hippoglossus, the holibut. This is the largest of the genus ; some have been taken in our seas weighing from 100 to 300 Ibs. ; but much larger are found in those of Newfound- land, Greenland, and Iceland, where they are taken with a hook and line in very deep water. They are part of the food of the Greenlanders, who cut them into large slips, and dry them in the sun. They are common in the London markets, where they are exposed to sale, cut into large pieces. They are very coarse eating, ex- cepting the part which adheres to the side fins, which is extremely fat and delicious, but surfeit- ing. They are the most voracious of all flat fish. There have been instances of their swal- lowing the lead weight at the end of a line, with which the seamen were sounding the bottom from on board a ship. The holibut, in respect to its length, is the narrowest of any of this ge- nus except the sole. It is perfectly smooth, and free from spines either above or below. The color of the upper part is dusky ; beneath of a pure white.

3. P. limanda, the dab, is found with the other species, but is less common. It is in best season during February, March, and April ; they spawn in May and June, and become flabby and watery the rest of summer. They are supe- rior in quality to the plaise and flounder, but far inferior in size. It is generally of a uniform brown color on the upper side, though sometimes clouded with a darker. The scales are small and rough, which is a character of this species. The lateral line is extremely incurvated at the beginning, then goes quite straight to the tail. The lower part of the body is white.

4. P. maximus, the turbot, grows to a very large size : Pennant has seen them of twenty three pounds weight. The turbot is of a remark- able, square form ; the color of the upper part of the body is cinereous, marked with numbers of black spots of different sizes; the belly is white, the skin is without scales, but greatly wrinkled, and mixed with small short spines, dispersed without any ordei.

5. P. platessa, the plaise, very common on most of our coasts, and sometimes taken of Ui«

weight of fifteen pounds; but it seldom attains that size, one of eight or nine pounds being reck- oned a large fish. The best and largest are taken off Rye on the coast of Sussex, and also off the Dutch coasts. They spawn in the beginning of February. They are very fiat, and much more square than the holibut. Behind the left eye is a row of six tubercles, that reaches to the com- mencement of the lateral line. The upper part of the body and fins are of a clear brown, marked with large bright orange-colored spots ; the belly is white.

6. P. solea, the sole, is found on all our coasts; but those on the western shores are much superior in size to those on the north. On the former they are sometimes taken of the weight of six or seven pounds, but towards Scar- borough they rarely exceed one pound ; if they reach two, it is extremely uncommon. They are usually taken in the trawl-net ; they keep much at the bottom, and feed on small shell-fish. It is of a form much more narrow and oblong than any other of the genus. The irides are yellow, the pupils of a bright sapphirine color; the scales are small and very rough, the upper part of the body is of a deep brown ; the tip of one of the pectoral fins black, the under part of the body white, the lateral line is straight, the tail rounded at the end. It is a fish of a very deli- cate flavor, but the small soles are in this respect much superior to large ones. By the ancient laws of the Cinque Ports, no one was to take soles from the 1st of November to the 15th of March ; neither was any body to fish from sun-setting to sun-rising, that the fish might en- joy their night food. The chief fishery for them is at Brixham in Torbay.

PLEXIPPUS ANDTOXEUS, the sons of Thes- tius brothers of Althaea, and uncles of Meleager, who killed them, and in consequence lost his own life. See MELEAGER.

PLEXUS, among anatomists, a bundle of small vessels interwoven in the form of net- work; thus a congeries of vessels within the brain is called plexus choroides, reticularis, or retiformis.

PLI’ABLE, adj. ˆ Fr. pliable, plier, pliant.

PLI’ABLENESS, n. s. ‘ Flexible ; easily bent:

PLI’ANCY, {ˆ hence of flexible disposi-

PLI’ANT, adj. \ tion or temper : pliable-

PLI’ANTNESS, n. s. \ ness and pliancy are of

PLI’ERS. J corresponding sense :

pliant is, bending ; flexible ; limber ; tough ; and is also used metaphorically for compliant ; easily persuadable: pliers, an instrument for bending wire or other works of art.

In languages the tongue is more pliant to all sounds, the joints more supple to all feats of activity, in youth than afterwards. Bacon.

Greatness of weight, closeness of parts, fixation, pliant ness or softness. Id. Natural History.

God’s preventing graces, which have thus fitted the soil for the kindly seeds-time, planted pliableness, humility in the heart. Hammond.

As the sword of the best tempered metal is most flexible ; so the truly generous are mpst pliant and courteous to their inferiors. Fuller.

Particles of heavenly fire, Or earth but new divided from the sky, And pliant still retained the etherial energy. Dryden.

Though an act be never so sinful, they will strip it of its guilt, and make the very law so pliable and bending, that it shall be impossible to be broke.

South.

Compare the ingenuous pliableness to virtuous counsels in youth, as it comes fresh out of the hand* of nature, with the confirmed obstinacy in most sorts of sin, that is to be found in an aged sinner.

Id.

The will was then ductile and pliant to right rea- son, it met the dictates of a clarified understanding halfway. Id.

Whether the different motions of the animal spirits may have any effect on the mould of the face, when the lineaments are pliable and tender, 1 shall leave to the curious. Addison.

Had not exercise been necessary, Nature would not have given such

an activity to the limbs, and such a pliancy to every part, as produces those com- pressions and extensions necessary for the preserva- tion of such a system. Id. Spectator.

An anatomist promised to dissect a woman's tongue, and examine whether the fibres may not be made up of a finer and more pliant thread.

Addison.

As the wax melts that to the flame I hold, Pliant and warm may still her heart remain, Soft to the print, but ne'er turn hard again.

Granger. I made a detention by a small pair of pliers.

Wiseman.

Those, who bore bulwarks on their backs, Now practise ev'ry pliant gesture, Op'ning their trunk for ev'ry tester.

Swift's Miscellanies.

Pliers are of two sorts, flat-nosed and round- nosed ; their office is to hold and fasten upon a small work, and to fit it in its place : the round-nosed pliers are used for turning or boring wire or small plate into a circular form. Mown.

PLICA POLONICA, or plaited hair, is a dis- ease frequent in Poland, and occurring also in Hungary, Russia, and Tartary. See MEDI- CINE.

PLIGHT, v. a. & n. s. Skinner derives this word from the Dutch plicht, office or employ- ment; but Junius observes that Saxon phht, signifies distress or pressing danger ; whence I suppose, says Dr. Johnson, plight was derived, it being generally used in a bad sense. Rather the noun substantive seems derived from the verb, which has the sense, and was originally the preterperfect of pledge, condition ; hence fix or bring into a certain state. To pledge ; offer a deposit as surety or security; pawn: as a noun substantive, condition or state; case; pledge; gage.

Who abuseth his cattle and starves them for meat, By carting or plowing his gain is not great ; Where he that with labour can use them aright, Hath gaine to his comfort, and cattle in plight.

Tusser.

He plighted his right hand Unto another love, and to another land.

Spense-r.

When as the careful dwarf had told, A nd made ensamplc of their mournful sight

Unto his master, he no longer would There dwell in peril of like painful plight. Id.

Saint Withold

Met the night mare, and her ninefold, Bid her alight, and her troth plight.

Shahspeare.

PLI

I again in Her.ry'« royal name, (Jive thee her hand lor sign of plighted faith. Id. I think myself in bettt- plight for a lender than you are. Id.

Beseech your highness, My women may be with me ; for, you see, My plight requires it. Id. Winter's Tale.

Thou must not here Lie in this miserable loathsome plight. Milton.

New love you seek.

New vows to plight, and plighted vows to break.

Dryden.

I'll never mix my plighted hands with thine, While such a cloud of mischiefs hangs about us.

Addisan.

PLIGHT, v. a. & n. s. Lat. plico. To weave ; braid : hence a fold ; pucker ; and (obsolete) a garment.

Her head she fondly would aguise With gaudie girlonds, or fresh flowrets dight About her neck, or rings of rushes plight.

Spenser.

Yclad, for fear of scorching air, All in a silken camus, lilly white, purfled upon with many a folded plight. Id.

Because my wrack

Chanc't on his father's shore, he let not lack My plight, or coate, or cloake, or any thing Might cherish heat in me. Chapman.

I took it for a fairy vision Of some gay creatures of the element, That in the colours of the rainbow live, And play i' the' plighted clouds. Milton.

PLINIA, in botany, a genus of plants of the class polyandria, and order monogynia. The empalement is divided into five segments ; the flower consists of five petals ; the stamina are numerous filaments, slender, and as long as the flower ; the antheras, and the germen of the pistil, are small; the style is subulated, and of the length of the stamina ; the stigma is simple ; the fruit is a large globose berry, of a striated or sul- cated surface, containing only one cell, in which is a very large, smooth, and globose seed. There is only one species, a tree of North America.

PLINTH of A STATUE, &c., is abase, either flat, round, or square, that serves to support it.

PLINTH OF A WALL denotes two or three rows of bricks advancing out from a wall ; or, in general, a flat high moulding, that serves in a front wall to mark the floors, to sustain the eaves of a wall, or the larmier of a chimney.

PLINTH, n. s. Gr. ir\iv9oc. In architecture, that square member which serves as a founda- tion to the base of a pillar.

The plinth is used at the foot, or foundation of columns : being that flat square table, under the mouldings of the base and pedestal, at the bottom of the whole oider ; seeming to have been originally intended to keep the bottom of the primitive wooden pillars from rotting. Dr. A . Jtees.

PLINY, THE ELDER, or Caius Caecilius Pli- nius Secundus, one of the most learned men of ancient Rome, was descended from an illustrious family, and born at Verona. He bore arms in the German war ; was one of the college of Augurs ; became intendant of Spain ; and was employed in several important affairs by Vespasian and Titus. While at

Masenum, where he commanded the fleet, he was surprised at a sudden appear- ance of clouds and dust from Vesuvius. His

curiosity led him to the mountain and he lodged for tht night at the villa of his friend Pomponi- anus near its base. In the morning, however, he was compelled to fly by showers of ashes filling his apartment, and in his flight was suffo- cated. His nephew, Pliny the Younger, relates the circumstances of that dreadful eruption, and the death of his uncle, in a letter to Tacitus. Pliny the Elder wrote a Natural History in thirty-seven books, which is still extant, and has gone through many editions ; the most esteemed of which is that of Father Hardouin, printed at Paris in 1723, in two volumes folio. The following is the mode of his spending his time at Rome, when in possession of the imperial favor. Be- fore day-break he waited upon Vespasian, to re- ceive and execute his orders. On returning home he employed the rest of the day in study. After taking a light repast, he reclined in the sun according to the Roman custom, while a book was read to him, from which he took notes. He never perused any work without making extracts, as he was accustomed to say ‘ that no book was so bad as not to afford something valuable.’ He then bathed, slumbered a little, and, after rising, studied till supper time. Even during that re- past a reader was at his side, as there was upon all his journeys ; and a vacant hour seldom occurred which he did not employ in reading and writing.

PLINY, THE YOUNGER, nephew and adopted son of the preceding, was born in the ninth year of Nero, A. D. 62, at Novocomum. Lucius Caecilius was the name of his father. He showed very early talents, and had the celebrated Vir- ginius for his tutor. He frequented the schools of the rhetoricians, and heard Quintilian, for whom he ever after entertained so high an es- teem that he bestowed a considerable portion upon his daughter at her marriage. He was in his eighteenth year when his uncle died ; and he then began to plead in the forum. About a year after he assumed the military character, and went into Syria as tribune ; but returned after a campaign or two. In his passage home he was detained by contrary winds at the island of Icaria. Upon his return from Syria, he married, and settled in Rome, in the reign of Domi- tian. During this most perilous time, he con- tinued to plead in the forum, where he was dis- tinguished no less by his uncommon abilities and eloquence, than by his resolution and cou- rage. He was therefore often appointed by the senate to defend the plundered provinces against their oppressive governors, and to manage other causes of an important and dangerous nature. One of these was for the province of Bcetica, in their prosecution of Bsbius Massa ; in which he acquired so general an applause, that the em- peror Nerva, then a

private man, and in banish- ment at Tarentum, wrote to him a letter, in which he congratulated not only Pliny, but the age which had produced an example so much in the spirit of the ancients. Pliny relates this affair in a letter to Tacitus, whom he intreats to record it in his history. He obtained the offices of quaestor and tribune, and fortunately escaped the tyranny of Domitian. But he tells us him self, that his name was afterwards found in Do-

mitian's tablets, in the list of those who were destined to destruction. He lost his wife in the beginning of Nerva's reign, and soon after mar- ried his celebrated Calphurnia, of whom we read so much in his Epistles. He had, however, no children by either of his wives. He was pro- moted to the consulate by Trajan in the year 100, when he was thirty-eight years of age; and in this office pronounced a panegyric, which has ever since been admired. He was then elected augur, and afterwards made proconsul of Bithy- n:a ; whence he wrote to Trajan that curious letter concerning the primitive Christians ; which, with Trajan's rescript, is extant among his Epis- tles. Pliny's letter, as Mr. Melmoth observes in a note upon the passage, is esteemed one of the few genuine monuments of ecclesiastical an- tiquity relating to the times immediately suc- ceeding the apostles, it being written at most not above forty years after the death of St. Paul. It was preserved by the Christians, as a clear and unsuspicious evidence of the purity of their doctrines, and is often appealed to by the early writers of the church against the calumnies of their adversaries. It is not known what became of Pliny after his return from Bithynia. Anti- quity is also silent as to the time of his death : but it is supposed that he died about A. D. 116. He wrote and published a great number of works ; but nothing has escaped the wreck of time except his Epistles and his panegyric upon Trajan. In his letters he may be considered as writing his own memoirs. Every epistle is a kind of his- torical sketch, wherein we have a view of him in some striking attitude. In them are also pre- served anecdotes of many eminent persons, whose works have come down to us, as Sueto- nius, Silius Italicus, Martial, Tacitus, and Quin- tilian ; and of curious things, which throw great light upon the history of those times. There are two elegant English translations of his Epistles; the one by Mr. Melmoth, and the other by lord Orrery.

PLISTHENES, the son of Atreus, king of Argos, and the father of

Agamemnon and Mene- laus, according to Hesiod and others. He died before his father, and his children were educated by their grandfather, Atreus, and hence were called Atridae, and passed for his sons.

PLISTONAX, the son of Pausanias, one of the kings of Sparta, was general of the Lacedae- monians in the Peloponnesian war. He succeeded Plistarchus, and reigned fifty-eight years, but was banished nineteen years, till he was re- called by order of the Delphian oracle.

PLOCAMA, in botany, a genus of the mono- gynia order, and pentandria class of plants : CAL. quinquedentate : fruit a berry and trilocu- lar, with solitary seeds. There is only one spe- cies ; a native of the Canaries.

PLOCE, in music, Lat. nexus ; a species of writing, among the ancients, consisting of a suc- cession of disjointed or diatonic passages. Ascending passages were termed nexus or ductus rectus ; descending ones were termed nexus anacamptos, or ductus reversus ; ascending and descending passages, nexus circumstans, or duc- tus circumcurrens.

PLOCK, one of the eight palatinates of the

present kingdom of Poland, comprises the north and north-west of the kingdom, and lies entirely to the right of the Vistula and the Bug, extend- ing from the Russian frontier to the vicinity of Thorn. Its area is flat but fertile, and calculated at about 7400 square miles. It includesthe an- cient palatinate of this name, with considerable additional territory. Its climate and products differ in no respect from those of the north of Poland in general. The chief rivers are the Vistula and the Narew. Inhabitants 320,000.

PLOCK, or PLOTZK, the chief place of the pre- ceding palatinate, is a bishop's see, situated on the Vistula, in the midst of orchards. It has also a college of Piarists, and 3000 inhabitants . Fifty-five miles W. N. W. of Warsaw.

PLOD, v. n. 3 Dutch ploeghen. Skinner.

PLOD'DER, n. s. $ To toil; drudge; pore; travel.

Rogues, plod away a' the hoof, seek shelter, pack.

Shakspeare.

If one of mean affairs May plod it in a week, why may not I Glide

thither in a day 1 Id. Cymbeline.

Hast thou not held my stirrup 1 Bare-headed, plodded by my foot-cloth mule, And thought thee happy when I shook my head ?

Shakspeare.

Universal plodding prisons up The nimble spirits in the arteries ; As motion and long-during action tires The sinewy vigour of the traveller. Id. Study is like the heaven's glorious sun, That will not be deep searched with saucy looks ;

What have continual plodders ever won, Save base authority from others' books 1 Id.

He plods to turn his amorous suit T' a plea in law, and prosecute. Hudibras. The unlettered Christian, who believes in gross, Plods on to heaven, and ne'er is at a loss. Dryden.

A plodding diligence brings us sooner to our jour- ney's end, than a fluttering way of advancing by starts. L'Estrange.

She reasoned without plodding long, Nor ever gave her judgment wrong.

Swift's Miscellanies.

Some stupid, plodding, money-loving wight, Who wins their hearts by knowing black from white.

Young. The curfew tolls the knell of parting day,

The lowing herds wind slowly o'er the lea, The ploughman homeward plods his weary way, And leaves the world to darkness and to me. Gray's Elegy.

PLOEN, a town of the duchy of Holstein, Denmark, situated between a large and a small lake. It has an elegant palace, formerly the re-sidence of the dukes of Holstein-Ploen, a branch of the royal family of Denmark. Inhabitants 2000. Eighteen miles S. S. E. of Kiel, and twenty-two north by west of Lubeck.

PLOMBIERES, a post town of the depart- ment of the Vosges, France, the chief place of a canton in the arrondissement of Remiremont, containing about 1300 inhabitants. It stands in a very picturesque situation, between two steep mountains at the bottom of a valley

crossed by the Angronne. It is generally well built, and has some fine walks round it, varied with beauti- ful scenery. Here are a fine church and an hos- pital, founded by Stanislaus, king of Poland, to

whom this town is indebted for many of its em- bellishments. Plombieres is celebrated for its mineral and warm springs, which have acquired a very extensive reputation. These springs ap- pear to have been known to the Romans, and for several centuries they have been frequented by invalids from all parts of the world. There are four distinct baths supplied from different springs ; the temperature varies from 32° to 56°. There are besides these two saponaceous springs, one iron, and several vapor stoves. These wa- ters are used for drinking, washing, and bathing ; they are very clear and colorless, without any peculiar taste. They are chiefly beneficial in palsy and external pains, obstinate ulcers, and cutaneous disorders, and are taken from the month of May to the end of September. There are manufactories of cutlery here and other arti- cles of iron and polished steel, tool and nail fac- tories, cotton-spinning mills, paper-mills, forges, &c. A trade is carried on in cherry-water. Flombieres is twelve miles south-west of Re- miremont, fifteen N. N. E. of Luxeuil, fifty-four west of Bourbonne, and 309 E. S. E. of Paris.

PLOMO, in metallurgy, is a name given by the Spaniards, who have the care of the silver mines, to the silver ore when found adhering to the surface of stones, and when it incrusts their cracks and cavities like small grains of gun-pow- der. Though these grains are few in number, and the rest of the stone has no silver in it, yet they are esteemed a certain token that there is a rich vein near it. And if in digging forwards they still meet with these grains, or the plomo in greater quantity, it is a certain sign that they are getting nearer to the rich vein.

PLOT, n. s., v. n., bv.a.l Or PLAT, which PLOTTER, n. s. J see. Sax. plat. A

small piece of ground ; a plantation : hence plan ; scheme ; and hence (or from Fr. complot) a con- spiracy; intrigue: to form mischievous schemes ; contrive ; to plan in any way ; describe ichno- graphically : a plotter is, a contriver ; conspira- tor; schemer.

The wicked plotteth against the just.

Psalm xxxvu.

Plant ye with alders or willowes a plot, Where yeerely as needeth mo poles may be got.

Tusser.

Some goddess inhabiteth this region, who is the soul of this soil ; for neither is any less than a god- dess, worthy to be shrined in such a heap of plea- sures ; nor any less than a goddess could have made it so perfect a plot. Sidney,

It was a chosen plot of fertile land, Amongst wide waves set like a little nest, As if it had by nature's cunning hand Been choicely picked out from all the rest.

Spenser.

The law of England never was properly applied unto the Irish nation, as by a purposed plot of go- vernment, but as they could insinuate and steal themselves under the same by their humble carriage.

Id. on Ireland.

Many unfrequented plots there are, Fitted by kind for rape and villany.

Shakspeare.

Were there but this single plot to lose, This mould of Marcius, they to dust would grind it, And throw't against the wind. Id.

When we mean to build, We first survey the plot, then draw the model, And when we see the figure of the house, Then we must rate the cost of the erection. Id. I have o'erheard a plot of death upon him. Id.

The subtle traitor

This day had plotted in the council house To murther me. Id. Henry III.

An irreligious Moor, Chief architect and plotter of their woes.

Shakspeare.

This liketh moory plots, delights in sedgy bowers.

Dray ton.

The count tells the marquis of a flying noise, that tne prince did plot to be secretly gone ; to which the marquis answered, that though love had made his highness steal out of his country, yet fear would never make him run out of Spain. Wotton.

This treatise plotteth down Cornwall, as it now standeth, for the particulars.

Carew's Survey of Cornwall. Easy seems the thing to every one, That nought could cross their plot or them suppress.

Daniel.

Wrho says he was not A man of much plot, May repent that false accusation ; Having plotted and penned Six plays to attend

The farce of his negociation. Denham,

Frustrate all our plots and wiles. Milton.

He who envies now thy state, Who now is plotting how he may seduce Thee from obedience. Milton's Paradise Lost. Nothing must be sung between the acts, But what some way conduces to the plot.

Roscommon.

The wolf that round the' inclosure prowled To leap the fence, now plots not on the fold.

Dry den.

With shame and sorrow filled ; Shame for his folly ; sorrow out of time For plotting an unprofitable crime. Id.

Colonel, we shall try who's the greater plotter of us two ; I against the state, or you against the pet- ticoat, id.

Weeds grow not in the wild uncultivated waste, but in garden plots under the negligent hand of a gardener. Locke.

O think what anxious moments pass between The birth of plots, and their last fatal periods ! O 'tis a dreadful interval of time, Made up of horrour all, and big with death !

Addistm.

They deny the plot to be tragical, because its catastrophe is a wedding, which hath ever been accounted comical. GUI/.

Our author

Produced his play, and begged the knight's advice, Made him observe the subject and the plot, The manners, passions, unities, what not 1 Pope.

If the plot or intrigue must be natural, and such as springs from the subject, then the winding up of the plot must be a probable consequence of all that went before. Id.

PLOT (Robert), LL.D., a learned antiqua- rian and philosopher, born at Sutton-barn, in the parish of Borden in Kent, in 1641. He studied in Magdalen Hall, and afterwards in University College, Oxford. In 1682 he was elected secretary of the Royal Society, and pub- lished the Philosophical Transactions from Ni. 143 to No. 166 inclusive. The next year Eha* Ashmole, Esq., appointed him first keeper of hi?

museum, and about the same time the vice-chan- cellor nominated him first professor of chemistry in the university of Oxford. In 1687 he was made secretary to the earl marshal, and in 1688 historiographer to king James II. In 1690 he resigned his professorship of chemistry, and also his place of keeper of the museum, to which he presented a very large collection of natural curiosities ; which were those he had described in the histories of Oxfordshire and Staffordshire ; the former published at Oxford in 1677, folio; reprinted with additions and corrections in 1705 ; the latter in the same size in 1686. In January 1694-5, Henry Howard, earl Marshal, nominated him Mowbray-herald extraordinary ; and, on the 30th of April 1696, he died of the stone at his house in Borden. Amongst several MSS. which he left were large materials for the Natural History of Kent, Middlesex, and London. He also published De origine fontium tentamen phi- losophicum, 8vo. ; and nine papers in the Philo- sophical Transactions.

PLOTINA POMPEIA, a Roman lady who was married to the emperor Trajan, when he was in a private station. She accompanied him and

shared his honors when he was elected emperor, and became celebrated for her humanity, affabi- lity, and liberality to the poor. She accompanied Trajan in his expedition to the east, and on his death brought back his ashes to Rome, where she was treated by Adrian with all the honors due to her dignity and virtue. She died A. D.

122.

PLOTINUS, a Platonic philosopher of the third century, born at Licopolis. in Egypt, A. D. 204. He attended some of the most famous professors of philosophy in Alexandria. But, upon hearing Ammonius, he became so fond of his system, that he studied under him for eleven years. He then travelled for farther im- provement into Persia and India, and followed the Roman army, in 243, when the emperor Gordian set out on his unfortunate expedition against the Persians, in which he lost his life, and our philosopher narrowly escaped sharing his fate. In 244 he returned to Rome, where he read philosophical lectures, which were attended by people of all ranks, patricians and plebeians, and rendered him very popular. Among other learned pupils, the celebrated Porphyry attended him six years; and his reputation for integrity and virtue, as well as learning, became so great, that his arbitration was often applied for, to de- cide or prevent law-suits ; and many persons of property, when dying, left their children to his tutorage, and their estates to his care. The em- peror Gallienus and his empress Salonina had so great esteem for him, that they once intended to rebuild the city of Campania, and assign it over, with its territory, to Plotinus, to be colonised by a set of philosophers, upon the plan of Plato's republic ; but were dissuaded by some of the courtiers. The philosophical opinions of Plo- tinus were rather remarkable. He not only en- tertained the utmost contempt for all terrestrial enjoyments, but despised matter so philosophi- cally, that he was ashamed that his soul was obliged to be lodged in a body, which he consi- dered as a prison. From this principle he lived

very abstemiously, and slept very little, and hence there is reason to believe his brain was in some degree affected ; for, though a Pagan to the end of his life, he pretended to many of those visions and illuminations by the Deity, which the superstitious devotees in all ages and religions have boasted of. In short he boasted that he not only had a familiar daemon or ange!, like Socrates, but that he had even often been united to the Deity himself. Yet of this Deity he appears to have entertained very confused notions. Full of romantic metaphysical ideas and uncertaintities, he died, A. D. 570, aged sixty-six, with these words : — ' I am laboring with all my might to return the divine part of me to that Divine Whole which nils the uni- verse ! ' He left fifty-

four treatises on various subjects, which his disciple Porphyry collected and arranged in six Enneades, or volumes, of nine tracts each ; and published with his life. Marsilius Ficinus, at the desire of Cosmo de Medicis, translated this work into Latin, which was published at Basil in 1559, and reprinted along with the Greek in 1580, folio.

PLOTIUS TUCCA, a learned Roman, who flourished in the Augustan age, and was intimate with the literati of that dignified period. He was particularly the friend of Horace, Maecenas, and with Virgil, who left him his heir. Augus- tus appointed him, together with Varius, to review Virgil's TCneid.

PLOTUS, or darter, in ornithology, a genus of birds belonging to the order palmipedes. The bill is long and sharp-pointed ; the nostrils are merely a long slit placed near the base ; the face and the chin are bare of feathers ; the neck is very long, and the legs are short. They have four toes webbed together.

1. P. anhinga, the white-bellied darter, is not quite so big as a mallard ; but its length from the point of the bill to the end of the tail is ten inches. The bill is three inches long, straight and pointed, the color is grayish, with a yellowish base, the neck long and slender, the upper part of the back and scapulars are of a dusky black color, the middle of the feathers is dashed with white, the lower part of the back, &c., is of a fine black color, the under parts from the breast are silvery white, the smaller wing-coverts and those in the middle are dusky black, the larger ones are spotted with white, and the outer ones are plain black, the tail-feathers are twelve, broad, long, and glossy black, the legs and toes are of a yellowish-gray. This species inhabit Brasil, and are exceedingly expert in catching fish. Like the cormorant, they build nests on trees, and roost in them at night. They are scarcely ever seen on the ground ; being always on the highest branches of trees on the water, or such as grow in the moist savannas on river sides. When at rest, they sit with the neck drawn in between the shoulders like the heron. The flesh is in general very fat, but has an oily, rank, and disagreeable taste, like that of a gull.

2. P. Cayennensis, the anhinga of Cayenne, black-bellied anhinga, is as large as a common duck, with a very long neck and a long sharp-pointed straight bill. The upper part of the bill is of a pale blue, and the lower is reddish j

the eyes are very piercing, the head, neck, and upper part of the breast are light brown ; both sides of the head and the upper part of the neck are marked with a broad white line ; the back, scapulars, and wing-coverts, are marked with black and white stripes lengthwise, in equal portions ; the quill-feathers, the belly, thighs, and tail, are of a deep black color, the tail is very long and slender, the legs and feet are of a pale green color, and the four toes, like those of the cormorant, are united by webs. This species is found in Ceylon and Java. They generally sit on the shrubs that hang over the water, and, when they shoot out their long slender necks, are often taken for serpents at first sight. Latham de- scribes three varieties of this species, which are all equal in size to the common birds of the species. The first and the second varieties, which last Latham calls the black darter, inhabit Cayenne ; and the third, or rufous darter, inha- bits Africa, particularly Senegal, where it is called kandar.

3. P. Surinensis, the Surinam darter, is about thirteen inches long, being about the size of a teal. The bill is of a pale color, and about one inch and one-eighth in length ; the irides are red, the crown of the head is black, and the feathers behind form a sort of crest; the neck, as in the other species, is long and slender ; the cheeks are of a bright bay color; from the coiner of each eye there comes in a line of white; the sides and back part of the neck are marked with longitudinal lines of bluck and white ; the wings are black, and the tail is dusky brown ; it is also tipped with white, and shaped like a wedge ; the breast and belly are white ; the legs short, but very strong, and of a pale dusky color ; the four toes are joined by a membrane, and barred with black. This species inhabits Surinam, frequenting the sides of rivers and creeks, where it feeds on small fish and insects, especially on flies, which it catches with great dexterity. When domesticated, which often happens, the inhabitants call it the sun bird. Authors have differed exceedingly concerning the genus to which this species belongs, as it is found to differ from the others in some pretty essential charac ters; it agrees, however, in so many, and those the most essential, as sufficiently to authorise classing it with this genus.

PLOVER, n. s. Fr. pluvier ; Lat. pluvialis. A lapwing; a bird.

Of wild birds, Cornwall hath quail, rail, par- tridge, pheasant, and plover.

Carew's Survey of Cornwall. Scarce

The bittern knows his time : or, from his shore, The plovert when to scatter o'er the heath And sing. tJiormon's Spring.

PLOVER. See CHAEADRIUS.

PLOUGH, n. s., v. n.,&v. a.ˆ\ . Sax. ploj ;

PLOUGH'- BOV, n. s. Belg. ploegen;

PLOUGH'ER, Gothic ploja ;

PLOUGH'-LANDS, S-Swed. ploya.

PLOUGH'MEN, The agricultu

PLOUGH'-MONDAY, ral instrument

PLOUGH'-SHARE. J for cutting

furrows ; a kind of plane used by carpenters : to turn up the ground in order to sow; practise VII.

ploughing: to turn up, or bring to view by tlu. plough ; to furrow ; divide ; tear : plough-land is land suited to the plough, or for corn ; for plough-monday, see below : the other compounds the extracts explain.

No man that puttith his hond to tl.e plow and bihodyng bacward is able to the revvme of God.

Wiclif. Luke ix. Plough-monday next after that the twelftide is

past,

Bids out with the plough, the worst husband is last.

Tusser.

As the earth was turned up the ploughshare lighted upon a great stone ; we pulled that up, and so found some pretty things, Sidney.

When the country shall be replenished with corn, as it will, if well fallowed ; for the country people themselves are great ploughers and small spenders of corn : then there should be good store of magazines erected. Spenser.

Rebellion, insolence, sedition, We ourselves have ploughed for, sowed and scattered, By mingling them with us. Shakspeare. Coriolanus.

Let the Volscians Plough Rome and harrow Italy. Id.

Let

Patient Octavia plough thy visage up With her prepared nails.

Id. Antony and Cleopatra. When shepherds pipe on oaten straws, And merry larks are ploughmen's clocks, The cuckoo then on every tree. Shakspeare.

Who hath a ploughland casts all his seed corn

there,

And yet allows his ground more corn should bear.

Donne.

Till the' out-lawed Cyclops' land we fetcht ; a race Of proud-lined loiterers, that never sow, Nor put a plant in earth, aor use a plough.

Chapman.

Look how the purple flower, which the plough Hath shorn in sunder, languishing doth die.

Peacham.

God provides the good things of the world, to serve the needs of nature by the labours of the ploughman. Taylor.

The careful ploughman doubting stands. Milton. In this book are entered the names of the manors or inhabited townships, the number of ploughlands that each contains, and the number of the inhabitants. Hale. Your reign no less assures the ploughman's peace, Than the warm sun advances his increase. Waller.

The merchant gains by peace, and the soldiers by war, the shepherd by wet seasons and the ploughmen by dry. Temple.

Should any slave, so lewd, belong to you ; No doubt you'd send the rogue, in fetters bound, To work in Bridewell, or to plough your ground.

Dry den.

Who can cease t'admire

The ploughman consul in his coarse attire 1 Id. Some ploughs differ in the length and shape of their beams ; some in the share, others in the coulter and handles. Mortimer.

They only give the land one ploughing, and sow white oats, and harrow them as they do black. Id. You find it ploughed into ridges and furrows.

Id.

The pretty innocent walks blindfold among burn- ing ploughshares without being scorched. Addison.

When the prince her funeral rites had paid, He ploughed the Tyrrhene seas with sails displayed.

Id, 2 K

PLO

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PLU

A weak stomach will turn rye breid into vinegar, and a ploughman will digest it.

Arhuthnnt on Aliments.

Another of a dusky color, near black ; there are of these frequently ploughed up in the fields of Wei- don. Woodward.

With speed we plough the watery way, My power shall guard thee. Pope's Odyssey.

A ploughboy that has never seen any thing but thatched houses, and his parish church, imagines that thatch belongs to the very nature of a house.

Watts's Logick.

In ancient times the sacred plough employed The kings and awful fathers. Thomson.

At the plough, scythe, or reap-hook, I feared no competitor, and thus 1 set absolute want at defiance ; and, as I never cared farther for my labours than while I was in actual exercise, I spent the evenings in the way after my own heart. Burns.

Peace be to those (such peace as earth can give) Who live in pleasure (dead e'en while they live) ; Born capable indeed of heavenly truth ; But down to latest age, from earliest youth, Their mind a wilderness through want of care, The plough of wisdom never entering there. Cowper.

PLOUGH is by others defined, a machine for turning up the soil by the action of cattle, con- trived to save the time, labor, and expense, which, without this instrument, must have been employed in digging the ground, and fitting it for receiving all sorts of seeds. See RURAL ECONOMY.

PLOUGH MONDAY, the first Monday after Twelfth-day, appears to have received this name because it was the first day after Christmas that husbandmen resumed the plough. In some of the northern and midland counties they still draw the plough on this day in procession to the doors of the villagers and towns-people. Long ropes are attached to it, and thirty or forty men, stripped to their clean white shirts, but protected from the weather by waistcoats beneath, drag it along. Their arms and shoulders are decorated with gay-colored ribands, tied in large knots and bows, and their hats are smartened in the same way. They are usually accompanied by an old woman, or a boy dressed up to represent one ; she is gaily bedizened, and called the Bessy. Sometimes the sport is assisted by a humorous countryman to represent a fool. He is covered with ribands, and attired in skins, with a depend- ing tail, and carries a box to collect money from the spectators. They are attended by music, and Morris-dancers when they can be got ; but there is always a sportive dance with a few lasses in all their finery, and a superabundance of ri- bands. When this merriment is well managed it is very pleasing. The money collected is spent at night in conviviality.

Blomfield's History of Norfolk tends to, clear the origin of these annual processions. An- ciently, a light called the plough-light, was main- tained by old and young persons who were husbandmen, before images in some churches, and on Plough Monday they had a feast, and went about with a plough and dancers to get ir.oney to support the plough-light. The refor- mation put out these lights ; but the practice of going about with the plough begging for money remains, and the ' money for light' increases the income of the village alehouse.

PLOWDEN (Edmund), serjeant at law, the son of Humphrey Plowden of Plowden, in Shropshire, of an ancient and genteel family. He was first a student at the university of Cam- bridge, where he studied philosophy and medi- cine for three years. He then removed to Oxford, where, having studied about four years more, in 1552 he was admitted to the practice of physic and surgery ; but afterwaids gave up both, entered the Middle Temple, and began to study the law. Wood says, that in 1557 he was summer reader to that society, and Lent reader three years after, being then serjeant. He died in 1584, aged sixty-seven. He married the daughter of William Sheldon, of Boley, in Wor- cestershire ; by whom he had a son, who died soon after his father. He wrote, 1. Commen- taries or Reports of divers Cases, &c., in the reigns of king Edward VI., queen Mary, and queen Elizabeth, London, 1571, &c., in the old Norman language. 2. Queries, or a Moot-book of cases, &c., translated, methodised, and en- larged, by H. B. of Lincoln's Inn, London, 1662, 8vo.

PLUCHE (Antony), an elegant writer, born at Rheims in 1688, who obtained by his engaging manners and proficiency in the belles lettres the appointment of humanist in the university of that city. Two years after he obtained the professor of rhetoric's chair, and was admitted into holy orders. Clermont, bishop of Laon, informed of his talents, gave him the direction of the college of his episcopal city ; but some particular political opinions obliged him to re- sign his office. The intendant of Rouen, at the request of the celebrated Rollin, entrusted him with the education of his son. After having left Rouen he went to Paris, where, by the patronage of some literary friends, and his own writings, he acquired great reputation. He published, 1. Le Spectacle de la Nature (Nature Displayed), in 9 vols. in 12mo., a work equally instructive and entertaining. 2. Histoire du Ciel, or History of the Heavens, in 2 vols. in 12mo., in two parts. 3. De Linguarum artificio ; a work which he translated with this title, La Mecanique des Langues, in 12mo. 4. Harmony of the Psalms and the Gospel, or a Translation of the Psalms and Hymns of the Church, with notes relative to the Vulgate, the Septuagint, and Hebrew Text; Paris, 1764, 12mo. In 1749 abbe Pluche retired to Varenne, St. Maure, where he gave himself entirely up to devotion and study, and where he died of an apoplexy, on the 20th of November 1761, aged seventy-three.

PLUCK, v. a. & n. s.) Saxon ploccian,

PLUCKER, n. s. $ lyccan;Teut.£/?«cA-en;

Belg. plocken. To pull with violence ; snatch ; draw ; force up or down ; strip of plumage ; it has various adjuncts as away, down, oft, on, up,

&c. ‘ To pluck up heart or spirit,’ is a prover- bial expression for taking up or resuming cou- rage : as a noun substance a pull ; art of pluck- ing : a plucker is one who pulls violently or 1 lucks.

Pluck away his crop with his feathers.

Leviticus

I will pluck them up by the roots out of mj land.

2 Chroniclet.

They pluck off their skin from off them. Micah. It seemed better unto that noble king to plant a peaceable government among them, than by violent means to pluck them under. Spenser on Ireland.

He willed them to pluck up their hearts, and make all things ready for a new assault, wherein he ex- pected they should with courageous resolution recom- pense their late cowardice. Knolle&.

You were crowned before, And that high royalty was ne’er plucked off.

Shakspeare.

Pluck down my officers, break my decrees, For now a time is come to mock at form. Id

Canst thou not

Pluck from the memory a rooted sorrow, And with some sweet oblivious antidote Cleanse the stuffed bosom. Id. Macbeth.

I gave my love a ring ;

He would not pluck.it from his finger, for the wealth That the world masters. Id. Merchant of Venice.

If you do wrongfully seize Hereford’s right, You pluck a thousand dangers on your head.

Shakspeare.

Since I plucked geese I knew not what it was to be beaten. Id.

I come to thee from plume-p/acAed Richard. Id. Thou setter up and ptucker down of kings ! Id. Birds kept coming and going all day ; but so few at a time that the man did not think them worth a pluck. L'Estrange.

Pull it as soon as you see the seed begin to grow brown, at which time let the pluckers tie it up in handfuls. Mortimer.

Were the ends of the bones dry, they could not, without great difficulty, obey the plucks and attrac- tions of the motory muscles. Ray on the Creation. Dispatch 'em quick, but first pluck out their

tongues, Lest with their dying breath they sow sedition.

Addison.

Beneath this shade the weary peasant lies, Plucks the broad leaf, and bids the breezes rise.

Gay.

From the back

Of herds and flocks, a thousand tugging bills Pluck hair and wool. Thomson's Spring.

E'en children followed with endearing wile, And plucked his gown to share the good man's smile.

Goldsmith.

Hope, with uplifted foot set free from earth, Pants for the place of her ethereal birth, On steady wings sails through the' immense abyss, Plucks amaranthine joys from bowers of bliss, And crowns the soul. Cowper.

PLUCK, n. s. Goth, lugu ; Erse plughk. The heart, liver, and lights of an animal.

PLUG, n. s. & v. a. Swed. plugg ; Belg. plugg ; Teut. plock. A stopple ; any thing driven into a vessel to stop a hole ; to stop up a hole.

Shutting the valve with the plug, draw down the sucker to the bottom.

Boyle,

The fighting with a man's own shadow, consists in the brandishing of two sticks grasped in each hand, and loaden with plugt of lead at either end : this opens the chest. Addison.

A tent plugging up the orifice, would make the matter recur to the part disposed to receive it.

Sharp's Surgery.

In bottling wine fill your mouth full of corks, to- gether with a large plug of tobacco. Swift.

PLUGS, in naval affairs, pieces of timber, formed like the frustum of a cone, and used to stop the hawse-holes and the breaches made in the body of a ship by cannon balls ; the former

are called hawse plugs, the latter shot plugs, and are formed of various sizes, in proportion to the holes made by the different sizes of shot, which may penetrate the ship's side* or bottom in battle. They are always kept ready for this purpose.

PLUKENET (Leonard), an English phy- sician, born in 1642, one of the most excellent and laborious botanists of any age. He was author of Phytographia Plucenetiana, a work much esteemed ; Almagesticum Britannicum ; and other works of the kind, on which he spent the greatest part of his life and fortune. He was appointed superintendant of the garden at Hampton Court, by Charles II., with the title of royal professor of botany. He died about 1706. His Opera Botanica, with cuts, were printed at London in 6 vols. folio, in 1720.

PLUKENETIA, in botany, a genus of the monadelphia order, and moncecia class of plants ; natural order thirty-eighth, tricoccae.

PLUM, n. s. ˆ Sax. Jjlum, J?lumtneojj ;

PLUM-PORRIDGE, $ Dan. blumme. (Perhaps, says Mr. Thomson, from what we call its bloom or blue color). Improperly written plumb. A fruit with a stone. See PRUNUS. In the cant of the city, as Johnson says, a hundred thousand pounds. A porridge made with plums.

I will dance, and eat plums at your wedding.

Shakspeare. He crammed them till their guts did ache

AVith caudle, custard, and plumcake. Hudibras.

Philosophers in vain enquired, whether the sum- mum bonum consisted in riches, bodily delights, vir- tue, or contemplation ? They might as reasonably have disputed whether the best relish were in apples, plums, or nuts'? Locke.

A rigid dissenter, who dined at his house on Christmas-day, eat very plentifully of his plum-por- ridge. Addison.

By the present edict, many a man in France will swell into a plum, who fell several thousand pounds short of it the day before. Id.

The miser must make up his plum, And dares not touch the hoarded sum. Prior.

By fair dealing John had acquired some plums, which he might have kept, had it not been for his law-suit. Arbuthnot.

Every eye is fixed on my countenance to enjoy the transports which I am expected to discover at the entrance of a plum-pudding of immoderate size ; half of which is immediately transferred to my plate.

Canning.

PLUM, BAY. See PSIDIUM.

PLUM, BRASILIAN. See SPONDIAS.

PLUM, BLACK THORN or SLOE. See PRUNUS.

PLUM-TREE, in botany. See PRUNUS.

PLUMAGE. See PLUME.

PLUMB, n. s., adv., & v, a.~\ Fr. plomb ;

PLUMB-LINE, f Latin plumbum.

PLUMBER, 4 A plummet; a

PLUMBERY. J weight let down

at the end of a line ; perpendicularly ; to sound, search, or measure with a plumb : for the work of the plumber and plumbery, see below.

Behold I will set a plumb-line in the midst of my people Israel. Amos vii, 8.

He meets

A vast vacuity, all unawares Fluttering his pennons vain, plumb down he falls.

Milton.

If all these atoms should descend, plumb down

with equal velocity, being all perfectly solid ar.d imporous, and the vacuum not resisting their mo- tion, they would never the one overtake the other.

Ray.

If the plumb-line hang just upon the perpendicular, when the level is set flat down upon the work, the work is level. Moxon.

Is it not a sad thing to fall thus plumb into the grave? well one minute, and dead the next. Collier.

The most experienced seamen plumbed the depth of the channel. Swift.

PLUMB ISLAND, an island in the Atlantic, near the coast of Massachusetts, between New- buryport and Ipswich ; nine miles long, and one broad. Its south end is on the north of the en- trance of Ipswich harbour, and its north end on the south of the entrance of Newburyport. Near the north end there are two lights. Several houses have been erected on this island by the Marine and Humane Society. There is also an elegant hotel about a mile south of the lights. A bridge has been built across Plumb Island River, and an excellent road has been made from Newburyport to the island, a distance of three miles. This island is a place of much resort in the summer. Also, a small island near the north- east coast of Long Island, in th% state of New York. It is annexed to Southold.

PLUMB LINE, among artificers, denotes a per- pendicular to the

horizon ; so called, as being commonly extended by means of a plummet.

PLUMBAGO, in botany, lead-wort, a genus of the monogynia order, and pentandria class of plants. There are four species ; the most re- markable are

1. P. Europaea. It grows naturally in the south of Europe, and has a perennial root strik- ing deep into the ground. There are many slender channelled stalks, about three feet high, terminated by tufts of small funnel-shaped flowers, of a blue or white color. It is propa- gated by seeds, and by parting the roots.

2. P. Zeylonica grows naturally in both the Indies. The upper part of the stalk and em- palement is covered, with a glutinous juice, which catches the small flies that light upon it. It is too tender to thrive in the open air in this country.

PLUMBAGO, in chemistry and mineralogy, carburet of iron, graphite of Werner, and fercar- bure of Haiiy, a species of mineral carbon, of a dark iron gray or black color, occurring in masses in kidney-shaped lumps, and disseminated. It has a glistening metallic lustre; its fracture is small, somewhat curved, foliated, approaching to scaly, or granular uneven. It occurs generally in granular or scaly distinct concretions ; takes a polish by cutting or rubbing; gives a dark lead-gray streak, and is unctuous to the feel, soft, and not very brittle. Spec. grav. 1-98 to 2‘26. It does not flame when heated, nor can it by itself support combustion. After long exposure to a high heat in a muffle its carbon is burnt off, and its earthy and metallic part remains behind. If one part of plumbago, and two of very caustic dry alkaline, be heated in a retort with the pneu- mato-chemical apparatus, the alkaline becomes effervescent, hydrogen gas is obtained, and the plumbago disappears. This experiment proves that the small quantity of water contain in the

salt is decomposed, and that its oxygen, by com bining with the carbon of plumbago, forms the carbonic acid.

The purer kind of plumbago, according to Scheele and Berthollet, consists of about ninety percent, of carbon and ten of iron. An impure kind from Fluffier afforded Vauquelin of twenty- three carbon, two iron, thirty-seven alumiac, thirty-eight silex.

Mr. Maculloch asserts that a certain ‘ f rtion of plumbago often found in pig-iron adds con- siderably to its toughness. On one occasion in particular he mentions that a cannon had been condemned for some

fault in the bore, and i.* was found to be so exceedingly tough that i o ie of the men were able to break off a trunnion, as is the usual practice in these cases, when three or four blows of the sledge were commonly found sufficient for this purpose. ‘ I was particu- larly induced therefore,’ says Mr. Maculloch, ‘ to examine this specimen, and was surprised to find that it not only contained a most unusual proportion of plumbago, but that this was in what I may call a disengaged state, for want of a better term. The plumbago was not only visi- ble on breaking the metal, giving it the appear- ance of having been rubbed with powdered black lead, but the iron was capable of leaving its trace on paper. I have neither before nor since ever met with another example of this kind. The remaining guns of this lot, which must have been made of the same metal, went on service, and some of them are probably still existing. I have no doubt that they were the best that we received during the war ; and it would have been very desirable to have discovered by what means this very uncommon specimen of gun-metal had been procured, as its toughness is a matter of such importance. It was from Mr. Walker’s foundery. I do not pretend to account for this singular state of the iron ; as, although the pre- sence of plumbago is sufficient to affect the color of the metal, it is never, bating this instance, distinctly visible, as far as my experience goes. Yet, in gun-metal it is easy to conjecture its presence and proportion by the color of the frac- ture ; which is darkest or most gray where it is most abundant. The trials which I have made also go to prove that the grayest metal is the toughest ; although I know that many iron-founders consider that gun-metal may be too gray, and act on this principle in the assortment of the pigs for the reverberatory.’

Much of the attention of modern chemists has been excited by a curious apparent conver- sion of pig and cast iron into plumbago. It has been more particularly exhibited in the pipes in porter-breweries and calico-printing houses, and in those of gas-manufactories. The writer of this article has in his possession a portion of a pipe that was used for seventeen years and a half by one of these gas-houses, and that now exhibits every character of black-lead. The most remarkable quality of this is, that, on its first ex- posure to the air, its heat was sufficient to evapo- rate the moisture on its surface with rapidity, and increased till it became impossible to hold it. The following is another of many instances of the same description : —

After captain Roe had invented the diving- bell, he joined Sir

Archibald Grant, a great speculator of that day in coal-mines and other matters, in an attempt to weigh the Florida, one of the Spanish Armada, which had foundered off the coast of Mull, near the entrance of Tober- mory harbour. This attempt, which took place in 1 740, was unsuccessful, as far as related to the ship; but some guns, both of brass and iron, were brought up. The former, whether they be- longed to the Spanish vessel or not, had the mark of an English founder, R. and J. Philips, 1584, with a crown and E. R. on them. The iron guns were deeply corroded, and, on scraping them, it was said that they were found so hot that they could not be touched, and that they did not become cool till they had been two or three hours exposed to the air.

The astonishment of the Highlanders on find- ing guns still hot, after having been more than a century under water, may easily be imagined ; and it is not surprising that the story was not believed and that not being believed, it was for- gotten. This may afford us a useful hint on the subject of physical incredulity : since as- suredly a fact thus nakedly stated, without a knowledge of the explanatioa here given, must have been pronounced impossible by every one, chemist or not. The blackest pig-metal appears to yield the greatest quantity of black lead, and in the most solid state. When the experiment is complete, the produce equals the iron in bulk, and is a solid mass, capable of being cut by a knife, even into pencils ; but, it is of a much more coarse grain, or scaly granular texture, than any natural black lead that has occurred to me.

To procure it in perfection, the acid should be very weak, and the operation is then neces- sarily very tedious. Acetous acid appears to be the best, and it is by this that it is produced in porter-backs, in the waste-pipes of breweries, and in calico printing-houses, where sour paste is employed. The process by water is insuffera- bly tedious.

If the experiment is perfect, the black lead becomes hot on exposure to air, smoking while there is any moisture to be evaporated.

Thus black lead is an oxide of plumbago, or of carbon, if we choose to use this term for the presumed element. It is scarcely necessary to say that the metallic nature of the base of char- coal is proved by the same experiment ; nor that iron is not a necessary ingredient in black lead. The best kinds, indeed, are those which contain least.

This experiment, and these conclusions, would be much more satisfactory, if we could produce the metal of black lead in its separate state. No method of doing that has yet occurred to any one ; and it will probably be found a very diffi- cult problem, as this is evidently a

highly com- bustible substan.ce. But chemistry does so much every day that ohce appeared hopeless, that we have no reason to despair.

Plumbago was formerly supposed absolutely infusible, but professor Selleman having suc- ceeded in fusing and volatilising charcoal by Dr. Hare's Galvanic Deflagrator, applied the same

powerful instrument to plumbago, and obtained the following results : — ' From a piece,' says he, ' of very fine plumbago, from Carolina, I sawed small parallelepipeds, about one-eighth of an inch in diameter and from three-fourths of an inch to one inch and a quarter in length : these were sharpened at one end, and one of them was employed to point one pole of the deflagrator, while the other was terminated by prepared charcoal. The best were obtained Vhen the plumbago was connected with the copper, and prepared charcoal with the zinc pole. The spark was vivid, and globules of melted plumbago could be discerned, even in the midst of the igni- tion, forming and formed upon the edges of the focus of heat. In this region also there was a bright scintillation, evidently owing to combus- tion, which went on where air had free access, but was prevented by the vapor of carbon, which occupied the highly luminous region of the focus, between the poles, and of the direct route be- tween them. Just on and beyond the confines of the ignited portion of the plumbago there was formed a belt of a reddish-brown color, a quarter of an inch or more in diameter, which appeared to be owing .to the iron, remaining from the combustion of the carbon of that part of the piece, and which, being now oxidized to a maxi- mum, assumed the usual color of the peroxide of that metal.

' In various trials, the globules were formed very abundantly on the edge of the focus, and, in several instances, were studded around so thickly as to resemble a string of beads,, of which the largest were of the size of the smallest shot; others were merely visible to the naked eye, and others still were microscopic. No glo- bule ever appeared on the point of the plumbago which had been in the focus of heat, but this point presented a hemispherical excavation, and the plumbago there had the appearance of black scoriae or volcanic cinders. These were the general appearances at the copper pole occupied by the plumbago.

' On the zinc pole, occupied by the prepared charcoal, there were very peculiar results. This pole was, in every instance, elongated towards the copper pole, and the black matter accumu- lated there presented every appearance of fusion, not into globules, but into a fibrous and striated form, like the half-flowing slag found on the upper currents of

lava. It was evidently trans- ferred, in the state of vapor, from the plumbago of the other pole, and had been formed by the carbon taken from the hemispherical cavity. It was so different from the melted charcoal, de- scribed in my former communications, that its origin from the plumbago could admit of no reasonable doubt. I am now to state other ap- pearances, which havˆ excited in my mind a very deep interest. On the end of the prepared char- coal, and occupying frequently an area of a quarter of an inch or more in diameter, were found numerous globules of perfectly melted matter, entirely spherical in their form, having a high vitreous lustre, and a great degree of beauty. Some of them, and generally they were those most remote from the focus, were of a jet black like the most perfect obsidian; others were

brown, yellow, and topaz colored ; others still were grayish-white, like pearl-stones, with the translucence and lustre of porcelain : and others still limpid like flint-glass, or, in some cases, like hyalite or precious opal, but without the iri- descence of the latter. Few of the globules upon the zinc pole were perfectly black, while very few of those on the copper pole were otherwise. In one instance, when I used some of the very pure English plumbago (believed to be from Borrowdale), white and transparent globules were formed on the copper side.

‘ I detached some of the globules, and, partly bedding them in a handle of wood, tried their hardness and firmness ; they bore strong pressure without breaking, and easily scratched, not only flint-glass, but window-glass, and even the hard green variety, which forms the aquafortis bottles.’

While again repeating the experiments, pro- fessor Silliman obtained still finer results.

‘ The spheres of melted plumbago were in some instances so thickly arranged as to resem- ble shot lying side by side ; in one case they completely covered the plumbago, in the part contiguous to the point on the zinc side, and were, without exception, white, like minute, de»” licate concretions of mammillary chalcedony. Among a great number there was not one of a dark color, except that, when detached by the knife, they exhibited slight shades of brown at the place where they were united with the gene- ral mass of plumbago. They appeared to me to be formed by the condensation of a white vapor, which, in all

the experiments where an active power was employed, I had observed to be exhaled between the poles, and partly to pass from the copper to the zinc pole, and partly to rise vertically in an abundant fume like that of the oxide proceeding from the «ombustion of various metals. It seems possible that it is white volatilised carbon, givitig origin, by its conden- sation, in a state of greater or less purity, to the gray, white, and perhaps to the limpid globules.

‘ I have already stated that the white fume mentioned above, appears when points of char- coal are used. I have found that this matter collects in considerable quantities a little out of the focus of heat around the zinc pole, and occa- sionally exhibits the appearance of a frit of white enamel, or looks a little like pumice stone : only it has the whiteness of porcelain, graduating, however, into light gray, and other shades, as it recedes from the intense heat. In a few instances I obtained upon the charcoal, when this sub- stance terminated both poles, distinct, limpid spheres, and at other times they adhered to the frit like beads on a string. Had we not been encouraged by the remarkable facts already stated, it would appear very extravagant to ask whether this white frit and these limpid spheres could arise from carbon, volatilised in a white state even from charcoal itself, and condensed in a form analogous to the diamond. The rigorous and obvious experiments necessary to determine this question it is not now practicable for me to make ; and I must, in the mean time, admit the possibility that alkaline and earthy impurities may have contributed to the result.’

In another experiment, professor Silliman

melted a piece of plumbago into two or three large limpid globules, and nothing remained ot the original appearance of the plumbago but a small number of black points. Dr. Clarke says that the fusion of plumbago with the gas blow- pipe was attended with a vivid scintillation. The surface was covered with a number of minute globules ; some of which exhibited a limpid and highly transparent glass, others a glass of a brown hue ; the larger globules being jet black and opake.

PLUMBERY is in part a practical applica- tion of hydraulics ; it also embraces the casting and laying of sheet-lead as a covering on build- ings. To the plumber is confided the pump- work, as well as the making and forming reser- voirs, large and small, for all the purposes of ou~ domestic economy. To him, also, we are in- debted for the water-closet, an apparatus of English invention, and unknown on the conti- nent till the peace of Amiens allowed of its exportation.

The plumber chiefly works in lead. This metal is known in the arts, from its durability, malleability, and many other properties, which renders it of the very highest importance.

As obtained from the mines, it is almost always combined with sulphur, and hence it is called a sulphuret. The operation of roasting the ore, or smelting, as it is called, to obtain the pure metal, consists: — 1. In picking up the mineral to separate the unctuous, rich, or pure ore, and the stony matrix, and other impurities. 2. In pounding the picked ore under the stamp- ers. 3. In washing the pulverised ore to carry off the matrix by the water. 4. In roasting the mineral in a reverberatory furnace, taking care to stir it, to facilitate the evaporation of the sul- phur. When the surface begins to become of the consistence of paste, it is covered with char- coal, the mixture is shaken, the lire increased, and the lead then flows down on all sides to the bottom of the basin of the furnace, from which it is drawn off into moulds or patterns, prepared to receive it. The moulds are made so as to take a charge of metal equal to 154 Ibs. ; these are called in commerce pigs, or pigs of lead, and are exported, and sold as such at the depots, by the lead merchants.

The plumbers use lead in sheets, and of these they have two kinds ; one of which they call cast, and the other milled lead. The cast lead is used for the purpose of covering the flat roofs of terraces or buildings, forming gutters, lining reservoirs, &c. In architecture it is technically divided into 5, 5£, 6, 6£, 7, 7J-, 8, and 8£ Ibs. cast-lead, by which is understood that, to every foot superficial of such cast-lead, it is to con- tain these several weights of metal in each res- pectively ; so that an architect, when directing a plumber to cover or line a place with cast sheet- lead, tells the workman that ‘ it is to be done with 6 or 7 Ib. lead ;’ meaning by it that he ex- pects each foot superficial of the metal to be equal in weight to six, seven, or other number of pounds. The plumbers sometimes attempt de- ception in this arrangement, and particularly in work agreed for by contract, by putting down a lighter metal than the one they have C’yaged to

do. The writer of this article has often had occasion to interfere in such attempts, and has had the whole of such lead removed, not finding it adequate in weight per foot to that which was contracted for.

. Every plumber, who conducts business to any extent, casts his sheet-lead at home ; this he does from the pigs, or from old metal which he may have taken in exchange. The ductility of lead renders it easy to be run. They provide a cop- per, well fixed in masonry, and placed at one end of their casting-shop, and near to the mould o • casting-table. The casting-table is generally in its form a parallelogram, varying in its size from six feet in width to eighteen or more feet in length. It is raised from the ground as high as to be about six or seven inches below the top of the copper which contains the metal, and stands on strongly framed legs, so as to be very steady and firm. The top of the table is lined by deal boarding laid very even and firm, and it has a rim projecting upwards, four or five inches, all round. At the end of the table, nearest to the copper in which is the heated lead, is adapted a box equal in length to the width of the table; at the bottom of this is a long horizontal slit, from which the heated metal is to issue when it is to be cast into sheets. This box moves upon rollers along the edges of the projecting rim of the table, and is set in motion by ropes and pulleys fixed to beams over the table. As soon as the metal is found to be adequately heated, every thing is made ready for casting it on the table, the bottom of which is then covered by a stratum of dry and clean sand, and a rake is applied to smooth it regularly all over the surface. When this is done the box is brought close up to the copper. It must be observed that these boxes are made, in their size, equal to the containing of as much of the melted lead as will cast the whole of the sheet at the same time, and the slit in the bottom is adjusted so as to let as much, and no more, out, during its progress along the table, as will be sufficient to cover it completely of the thick- ness and weight per foot required. When the box has dispersed its contents upon the table, it is suffered to cool and congeal, when it is rolled up and removed away, and other sheets are made till all the melted metal in the copper -be cast. The sheets so formed are rolled up and weighed, as it is by weight the public are charged for sheet-lead.

The other kind of sheet-lead made use of by plumbers, called in the trade milled lead, is not manufactured at home. This they purchase of the lead merchant, as it is cast and prepared commonly at the ore and roasting furnaces. Such kind of lead is very thin, and commonly there is not more than four pounds of metal to the foot superficial. It is used by architects for the covering only of the hips and ridges of roofs of buildings. It is by no means adapted to gut- ters or terraces, or, in fact, to any part of a building much exposed either to great wear and tear, or the effects of the sun, as it expands and cracks by the latter, and is soon worn away by exposure. It is laminated in sheets about the same size as has been described for cast sheet- lead ; and, in the operation

of making, a lami-

nating-roller is used, or a flatting-mill, which reduces it to the state in which it is seen in commerce.

Solder is used by the plumber for the purpose of securing the joints of leaden work, in cases in which a lap or roll-joint cannot be employed. It is a general rule with respect to solder, that it should a/ways be easier of fusion than the metal intended to be soldered by it. Next to this, care must be taken that the solder be as far as it is possib-le of the same color with the metal intended to be soldered. Technically, the soft solder is that which the plumber makes use of, by reason of its melting easily. This solder is composed of tin and lead, in equal parts, fused together; after which it is run into moulds in shape not unlike a common gridiron. In this state it is sold by the pound by the manufactu- rer. In the operation of soldering, the surfaces of the metal intended to be joined are scraped and rendered very clean, they are then brought close up to each other, and, to secure them, they are held by one plumber while another lays a little resin or borax about the joint. This is done to defend the metal, while soldering, from oxidation. The heated solder is then brought in a ladle and poured on the joint to be soldered, and is smoothed and finished by rub- bing it about with a heated grozing-iron, and, when complete, it is filed or scraped off, and made even with the joint and contiguous surface of the lead.

The plumber has no need of great variety of working tools, as the ductility of the metal he works in does not require them, and what he may require are generally supplied by the master tradesman. They consist of an iron hammer made rather heavier than they usually are seen, having a short but thick handle. Two or three different sized wooden mallets, and a dressing and flatting-tool. This instrument is made of beechen wood, commonly about eighteen inches long, and two inches and a half square, planed quite smooth on one side, and rounded into an arch on the other, or upper side. One of its ends is tapered and rounded to make it conve- nient to be held in the hand of the workman. With this tool the plumber stretches out and flat- tens all the sheet-lead, as well as dresses it into the shape it may be wanted in the various pur- poses to which such lead is applied, using first the flat side of this tool, and then the “round side, as may be required. They have also a jack and trying-plane, similar to the same kind of tools used by carpenters. These tools consist of a piece of beechen wood, that for the former about sixteen inches, and for the latter twenty- two inches long, in each of which a flat iron of sharpened steel is fitted, and held to its work by wooden wedges adapted to

mortises made at the distance of about one-third from the fore- end of each plane. At the opposite end is formed a handle, by which the planes are worked. With such tools plumbers plane straight the edges of iheir sheet-lead, when it is required to present a \ ery regular and correct line, as it is frequently wanted to do in architecture. They are provided also with a line and roller, called a chalk-line ; with this they line out all the lead into the differ-

ent widths it may be wanted. Their cutting tools embrace chisels and gouges of different sizes, as well as several cutting-knives. These latter are used for the purpose of accurately cut- ting the sheet-lead into the strips and pieces to the division marked by the chalk-line which has been drawn on the lead. They have files of different sizes, which they use in manufacturing of cistern leads to pipes, pump-work, &c.

For soldering, they keep a variety of different sized grozing-irons; these are commonly about twelve inches long, and tapered at both ends, the handle-end turned quite round to allow of its being held firmly in the hand while in use. The opposite ends of which are made spherical, and some of them are of a spindle-shape, and of a size in proportion to the soldering to be done with them. These irons are heated to redness when used. Their iron ladles are of three or four sizes, and used for the purpose of heating the solder.

A plumber's measuring rule ' «f two feet in length, divided into three parts, each of which is eight inches long. Two of its legs are of box-wood, and duodecimally divided, and a third of a piece of slow-tempered steel ; this is attached to one of the box legs by a pivot, on which it turns, and, the same legs being grooved out on its side, it receives the steel leg, when not in use, in this groove. The plumber finds a rule of this description very convenient, inasmuch as he can pass the steel leg of his rule into places he may have to examine, which he could not readily get any thing else to enter : it also answers the purpose occasionally of removing the oxide or any other matter from off his heated metal. A plumber's rule, by being so made, is constantly in use in one way or another.

Scales and weights are also very essential, as nothing done by the plumber is chargeable till it be weighed. He is also supplied with centre- bits of till sizes, and a stock to work them in, for the making perforations in lead or wood, where he may have occasion to insert

pipes, &c., &c. The compasses he uses occasionally to strike out any circular portion of lead wanted to line or cover figures of that description.

Of laying sheet-lead. — The method usually adopted consists, if it be for terraces or flats, of covering such places with a bottom as even as possible, either by boarding or plastering ; if by the former, observing to have the boards thick enough to prevent their warping and twisting upwards, as, when this is not attended to, the lead-work is soon cracked and becomes very un- sightly. The sheets of lead not being more than about six feet in width makes it necessary to have joints when a large surface is to be covered ; these joints the plumber manages in various ways to prevent their leaking. The best way is by forming what are called rolls : a roll consists of a piece of wood of about two inches square, planed rounding on its upper side ; these are fastened under the joints of the lead between the edges of the two sheets which meet together, one of which is dressed up over the roll on the inside, and the other over both of them on the outside, by which means the water is prevented from percolating the flat. No other fastening is

required than the adherence of the lead by bemg closely hammered together, and down upon the flat : indeed all fastening to the sheet lead, ex- posed to heat and cold, ought to be avoided, as it expands and shrinks by such vicissitudes, and if secured so as to prevent these from spontane- ously affecting it, it will be cracked and dilapi- dated quickly. When rolls are not used, which is sometimes the case from their being found inconvenient by their projection, seams, as they are called, are employed, and consist in simply bending the two edges of the lead which ap- proach to each other up and again over one another, and then dressing them down close to the flat throughout their whole length. This plan is by no means equal to the one by the roll, either for neatness or security. Soldering the joints is sometimes had recourse to for such kind of work, but it is a very bad way, and no good plumber would recommend it, as lead so fixed will be cracked and leak like a sieve, after having been exposed to one summer's sun. Leaden-flats, as well as gutters, require to be laid with a current to keep them dry. The rule for forming of which consists in giving a fall from back to front, or in the way in which it is determined that the sheets of lead are to be laid. A quarter of an inch to the foot run is a suffi- cient fall for lead, that is, if the sheets be twenty feet long, and hence they will require to be laid five inches higher at one end than at the other. This inclination, or, as it is called, giving a cur- rent, is generally apportioned and determined on by the carpenter and plumber previously to the laying of the lead, while the former's part of

the business is doing.

Flashings, as they are called, are pieces com- monly of milled-lead about eight or nine inches wide, and fixed all round the extreme edges of a flat or gutter, in which lead has been used. If a wall of brick-work surround it, it is passed into the joint between the bricks and its other edge, dressed over that of the edge of the lead in the flat or gutter, and, when no joint can be found to receive its upper edge ; it is then fastened by wall-hooks, and its other edge dressed down as before.

Drips in fiats or gutters consist in raising one part above another, and dressing the lead as has been described for covering the rolls. They are had recourse to when the lengths of the gutter or flat exceed that of the length of the sheet, or sometimes for convenience ; they are also an ex- pedient to avoid joining the lead by soldering it.

The pipes used by the plumber are of various sizes as well as descriptions. All the smaller sizes are called by their calibre or bore, thus, 2» t > 1 > H-J lf» and 2-inch pipe. They originally used to be cast by a core of wood of these respec- tive diameters, but they are now all made by a machine worked by steam, which furnishes a neater article of almost any length, and con- siderably more cheap than heretofore. All those pipes, from £ to 1ˆ-inch calibre, are charged by the foot run, and those above that size by the hundred weight. The rain-water pipes at- tached to the outside of buildings, for the pur- pose of conveying off the superfluous water from the roofs of them, are called by the plumb-

ers socket-pipes; of these several respective diameters, 3, 3J, 4, or 5 inches, and are made from sheet-lead, and most commonly from that which is called milled. They are formed in lengths of from eight or ten feet each ; the sheet-lead for making which is dressed on a rounded core of wood, and the vertical joint, which is made at the back, is fastened and se- cured by solder. The horizontal joints are formed by an astrigal moulding in a separate piece of lead about two or three inches wide, and which laps completely over it, both above and below it, and is called the lap-joint, or collar of the socket-pipe. Two broad pieces of lead are attached to the back of the lap-joints, called the tacks, these are spread out right and left of the pipe upon the wall, to which they are ham- mered quite close, and answer the purpose of fixing the whole to the buildings : to do which more effectually, wall-

hooks of iron are some- times put, and driven into the masonry. The cistern-head, which is fixed at the top of rain- water pipes, is made up of sheet-lead, or cast in a mould. They are commonly moulded into a variety of forms, these are easily supplied in a metal so ductile as lead is : they are fastened by tacks in the same way as the collars are.

Reservoirs are generally formed of wood or masonry on their exterior, and their insides lined with cast sheet-lead, the joints of which are se- cured by solder. In this application of solder- ing no fear of cracking need be anticipated, as change of temperature seldom takes place in or near the place where reservoirs are commonly placed.

Pumps are of various descriptions, and em- ployed for purposes multiplied and extensive ; but the plumber's employment in this kind oi work is confined generally to the making of two or three kinds required in our domestic economy. These may be considered as the sucking, forcing, and lifting pumps. The former and latter being now the most commonly made use of.

The sucking-pump consists of two pipes, one of which is the barrel, and the other the suction- pipe, which is of smaller diameter; these are joined by means of flanches, pierced with holes to admit of being fastened by screwed bolts. The joint of the flanches is filled with leather, which, being strongly compressed by the screwed bolts, renders the joint air-tight. The lower end of the suction-pipe is commonly spread out a little to facilitate the entry of the water, and fre- quently has a grating across it to keep out filth or gravel. The working barrel is cylindrical, and as evenly bored as possible, that the piston may fill it with as little friction as may be con- sistent with air-tightness. The piston is a sort of truncated cone, generally made of wood, the small end of which is cut off at the sides, so as to form a sort of arch, and by which it is fastened to the iron rod or spindle. The two ends of the conical part may be hooped with brass: this cone has its larger end surrounded with a ring or band of strong leather, fastened to it by nails. The leather- band should always reach to some distance beyond the base of the cone, and the whole must be of uniform thickness all round, so as to suffer equal compression between the

cone and working barrel when put into action. The seam or joint of the two ends of this band must be made very close, but not screwed or stitched together; if done so it would occasion lumps or inequalities, which would destroy its tightness; and no harm can result from the want of it, because the two ends will be squeezed close together when in the barrel. It is by no means necessary that this compression be

great; when it is so, it is found a detrimental error of the pump-maker, by occasioning enormous fric- tion, which destroys the very purpose they have in view, viz. rendering the piston air-tight ; and it moreover causes the leather to wear through very soon at the edge of the cone-, and also wears away the working barrel ; in consequence of which it becomes wide in that part which is continually passed over by the piston, while the mouth remains of its original diameter, and hence follows the impossibility to thrust in a piston that shall completely fill the part so worn away.

The suction-pipe is usually made of smaller size than the working barrel, but only for the sake of economy, as it is not necessary that it should be so; but it ought to be of such a size that the pressure of the atmosphere may be able to fill the barrel with water as fast as the piston rises. This is the kind of pump fixed and made by plumbers, and is that which is commonly seen over wells and reservoirs for the purpose of raising water for the common purposes of life. The length of the suction-pipe should never be greater than thirty feet below its moveable valve, and there may be a loss of time. in the ascent of the water, unless it be made even a few feet shorter. In using it the velocity of the stroke should never be less than four inches, nor greater than two or three feet in a second. The stroke should be as long as possible to prevent loss of water by the frequent alternations of the valves. When this pipe is adapted to common purposes, its diameter should be about two-thirds or three- fourths of that of the barrel

The forcing-pump consists of a working barrel, a suction-pipe, and a main, called the serving main, or raising pipe. This kind of pump was formerly much in use for the purpose of forcing water to unnatural heights. The raising pipe of such pumps is usually in three parts, the first of which may be considered as making part of the working barrel of the pump, and is sometimes cast in one piece, whilst the second is joined to it by flanches, with which it forms an elbow. The third is properly the beginning of the main, and is continued forward to the place of the de- livery of the water, where it is supplied by two moveable valves. The beauty of this kind of pump consists in the perfection of the barrel and piston, for which reason it is now made of brass or bell metal; and, when it is well polished, the piston may he used in it without either a wad- ding or leather.

The lifting-pump consists, as before, of a working barrel, which is closed at both ends. The piston is solid, and its rod passes through a collar of leather in the plate, and closes the up- per end of the working barrel. The barrel com- municates laterally with the suction-pipe, and

above with the raising main. This kind of pump differs only from the sucking-pump before de- scribed in having two valves, the lower one moveable, and the upper one fixed. The first

Eump, invented above a century before Christ y Ctesibius of Alexandria, to whom also music is indebted for the organ, was a forcing-pump, as may be easily collected from its description by Vitruvius (1 x. cap. 12).

Mixed i amps are the combination of the prin- ciple of t'ae forcing and sucking-pumps into one machine ; when the lower valve of a forcing-pump is above the surface of the water it can only raise it by suction, but the manufacture of the pump remains as before. The mechanism of a pump may be employed for converting the weight of water descending in its barrel to the purpose of working another pump ; such a pump has been invented by Mr. Trevithick, a descrip- tion of which may be seen in Nicholson's Jour- nal.

Of the spiral pump. — If we wind a pipe round a cylinder of which the axis is horizontal, and connect one end with a vertical tube, while the other is at liberty to turn round and receive water and air in each revolution, the machine is called a spiral pump. This pump was invented about 1746, by Andrew Wirtz, a pewterer in Zurich, and was afterwards employed at Florence. At Archangelsky near Moscow such a pump, it is reported, was erected in 1784, which raised a hogshead of water in a minute to a height of seventy-four feet, and through a pipe 760 feet in length. The force employed is not stated ; we may therefore conjecture that it was turned by water. See PUMP, AND HYDRAULICS.

Water-closets are manufactured by one set of workmen, and sold to the plumber to fix in their places. A water-closet consists of a basin and apparatus, traps, socket-pipe, and cistern ; the whole of which is put into action by the plumber. To supply the cisterns with water is the purpose of his adopting a forcing or lifting-pump. These latter are on a small scale, very neatly fitted up, and require only the suction and main pipe to be added by the plumber to be capable of forcing or lifting water to almost any height. They are sold by the manufacturers at various prices. The mains or pipes are charged by the plumber

additional, with such day-work as is required in putting the whole in its place. Plumbers charge their sheet-lead by the 1 cwt., and their prioes are arranged half-yearly by the Warden and Court of Assistants of the Plumbers' Company. The milled lead is charged two shillings per cwt. more than the cast.

PLUME, n. s. & v. a.*\ Fr. plume, plumage ;

PLU'MAGE, n. s. * Lat. plumu. A fea-

PLU'MOUS, adj. (ther ; collection of fea-

PLU'MY. 3 thers, as in a crest;

hence a crest; token of honor; pride; also a term used by botanists for that part of the seed of a plant which in its growth becomes the trunk : to pick and adjust feathers; place as a plume; or adorn with plumes : also (Ir. plumer) to strip of plumes or feathers ; to make bare or defence- less : plumage is a collection or suit of feathers : plumous and plumy mean feathery or resembling leathers.

Let frantick Talbot triumph for a while, And, like a peacock, sweep along his tail; We'll pull his plumes, and take away his train

Shaktpea.-e.

Let every feeble rumour shake your hearts, Your enemies with nodding of their plumes Fan you into despair. Id. Coriolanut.

Great duke of Lancaster, I come to thee From p/uwie-pluckt Richard, who with willing soul Adopts thee heir. Id. Richard 11.

Farewel the plumed troops, and the big war, That make ambition virtue. Id. Othello.

They stuck not to say, that the king cared not to plume the nobility and people to feather himself.

Bacon.

The plumage of birds exceeds the pilosity of beasts. Id.

With this againe, he rusht upon his guest, And caught him by the horse-haire plume, that dangled on his crest. Chapman.

Ambitious to win from me some plume.

Milton.

His statue reached the sky, and on his crest Sat horror plumed. Id. Paradise Lost.

Satan fell, and straight a fiery globe Of angels on full sail of wing flew nigh, Who on their plumy vans received him soft From his uneasy station, and upbore As on a floating couch through the blithe air.

Milton.

Eastern travellers know that ostridges' feathers are common, and the ordinary plume of Janizaries.

Browne.

The fearful infant,

Daunted to see a face with steel o'erspread, And his high plume that nodded o'er his head.

Dryden.

Such animals as feed upon flesh devour some part of the feathers of the birds they gorge themselves with, because they will not take the pains fully to plume them. Ray.

Swans must be kept in some enclosed pond, where they may have room to come ashore and plume them- selves. Mortimer.

They appear made up of little bladders, like those in the plume or stalk of a quill. Crew's Museum.

Sometimes they are like a quill, with the plumy part only upon one side. Id. Cosmology.

Appeared his plumy crest, besmeared with blood.

Addison.

This has a like plumous body in the middle, but finer. Woodward.

Say, will the falcon, stooping from above, Smit with her varying plumage, spare the dove ?

Pope.

But gaudy plumage, sprightly strain, And form genteel, were all in

vain, And of a transient date. Cowper.

PLUMEAL’LUM, n. s. Lat. alumen plumo- sum. A kind of asbestus.

Plumeallum, formed into the likeness of a wick, will administer to the flame, and yet not consume.

Wilkins.

PLUMERIA, in botany, red jasmine, a genus of the monogynia order, and pentandria class of plants ; natural order thirtieth, contortae.

PLUMIER (Charles), a learned Minim born at Marseilles, and one of the most able botanists of the seventeenth century. He was instructed by the famous Maignan, who taught him mathe- matics, the art of making burning-glasses, mi- croscopes, &c. He at length went to Rome, and applied himself entirely to botany under a

skilful Italian. On his return to Provence, he settled in the convent at Bornes, a maritime place near Hieres, where he made discoveries in the fields with respect to simples. He was sent by the French king to America, to bring from thence such plants as might be of service in medicine. He made three different voyages to the Antilles, and to the island of St. Domingo. The king gave him a pension ; and he at last settled at Paris. Preparing to go a fourth time to America, he died at the port of Santa Maria, near Cadiz, in 1706. He wrote several excellent works: the chief are, 1. A volume of the Plants in the American Islands. 2. A Treatise on the American Fern. 3. The Art of Turnery; a curious work embellished with plates.

PLUM’MET, n. s. Diminutive of PLUMB, which see. A weight of lead hung at a string, by which depths are sounded, and perpendicu- larity ascertained.

Judgment also will I lay to the line, and right- eousness to the plummet. Isaiah xxviii. 17.

Deeper than did ever plummet sound, I’ll drown my book. Shakspeare. Tempest.

God sees the body of flesh which you bear about you, and the plummets which it hangs upon your soul; and therefore, when you

cannot rise high enough to him, he comes down to you. Duppa.

The heaviness of these bodies, being always in he ascending side of the wheel, must be counter- poised by a plummet fastened about the pulley on the axis : this plummet will descend according as the sand doth make the several parts of the wheel lighter or heavier. Wilkins.

Fly, envious time,

Call on the lazy leaden- stepping hours,

Whose speed is but the heavy plwnmst'-s pace.

Milton.

PLUMMET, PLUMB RULE, or PLUMB LINE, an instrument used by carpenters, masons, &c., in order to judge whether walls, &c., be upright planes, horizontal, or the like. It is thus called from a piece of lead, fastened to the end of a cord, which usually constitutes this instrument. Sometimes the string descends along a wooden ruler, &c., raised perpendicularly on another ; in which case it becomes a level.

PLUMMING, among miners, is the method of using a mine-dial, in order to know the exact place of the work where to sink down an air-shaft, or to bring an adit to the work, or to know which way the load inclines when any flexure happens in it. It is thus performed :— A skilful person with an assistant, and with pen, ink, and paper, and a long line, and a sun-dial, after his guess of the place above ground, descends into the adit or work, and there fastens one end of the line to some fixed thing in it ; then, the incited needle is let to rest, and the exact point where it rests is marked with a pen : he then goes on farther in the line still fastened, and at the next flexure of the adit he makes a mark on the line by a knot or otherwise : and then letting down the dial again, he there likewise notes down that point at which the needle stands in this second position. In this manner he proceeds, from turning to turning, marking down the points, and marking the line, till he comes to the intended place : this done, he ascends and begins to work on the surface of the earth what he did in the

adit, bringing the first knot in the line to such a place where the mark of the place of the neeuie will again answer its pointing, and continues this till he come to the desired place above ground, which will of course be perpendicular over that part of the mine into which the air shaft is to be sunk.

PLUMP, n.s., adj., &v. a. ˆ Dr. Johnson PLUMP'NESS, n. s. > says of

this word

PLUMP'Y, adj. j the etymology is

not known. Skinner derives it from pommcle, French, full like a ripe apple ; it might be more easily deduced from plum, which yet seems very harsh. Junius omits it. But there is a Belg. plomb, and Swed. plumbe, meaning a tuft, or cluster. Somewhat fat ; sleek ; full and smooth ; not lean ; a cluster ; knob ; tuft : to swell ; fa-tten : plumpness is, fatness; fulness of habit or ap- pearance: plumpy, a ludicrous word for fat.

We rested under a plump of trees. Sandys.

Come, thou monarch of the vine, Plumpy Bacchus, with pink eyne, In thy vats our cares be drowned.

SJiakspeare.

England, Scotland, Ireland, lie all in a plump to- gether, not accessible but by sea. Bacon.

Warwick, having espied certain plumps of Scottish horsemen ranging the field, returned towards the arriere to prevent danger. Hayward.

The particles of air expanding themselves, plump out the sides of the bladder, and keep them turgid.

Boyle.

Spread upon a lake, with upward eye A plump of fowl behold their foe on high ; They close their trembling troop, and all attend On whom the sowsing eagle will descend.

Dry den.

The heifer that valued itseif upon a smooth coat and a plump habit of body, was taken up for a sacri- fice ; but the ox, that was despised for his raw bones, went on with his work still. L'Estrange.

I'm as lean as carrion ; but a wedding at our house will plump me up with good cheer. Id.

Let them lie for the dew and rain to plump them.

Mortimer. Plump gentleman, Get out as fast as e'er you can : Or cease to push, or to exclaim, You make the very crowd you blame. Prior.

Those convex glasses supply the defect of plump- ness in the eye, and by encreasing the refraction make the rays converge sooner, so as to convene at the bottom of the eye. Newton's Opticlts.

The famished crow Grows plump and round, and full of mettle.

Swift.

She dexterously her plumpers draws, That serve to fill her hollow jaws.

Id. Miscellanies.

PLUMP, adv. Corrupted from PLUMB, which see. With a sudden fall.

I would fain now see 'em row'ld Down a hill, or from a bridge Head-long cast, to break their ridge ; Or to some river take 'em Plump, and see if that would wake 'em.

Ren Jonson.

PLUN'DER, v. a. & n. s. } Belg. and Teut.

PLUN'DERER. } plunderer ; Dan.

plyndre. To pillage ; rob : plunder is the spoil

or pillage of war ; a robbery : plunderer, a thief ;

robler.

Let loose the murmuring army on their masters, To pay themselves with plunder. Otway.

Being driven away, and his books plundered, one of his neighbours bought them in his behalf, and preserved them for him till the end of the war.

Fell.

Ships the fruits of their exaction brought, Which made in peace a

treasure richer far, Than what is plundered in the rage of war.

Dry den.

We cannot future violence o'ercome, Nor give the miserable province ease, Since what one plunderer left the next will seize.

Id.

Nebuchadnezzar plunders the temple of God, and we find the fatal doom that afterwards befel him.

South's Sermons,

It was a famous saying of William Rufus, whoso- ever spares perjured men, robbers, plunderers, and traitors, deprives all good men of their peace and quietness. Addison.

Their country's wealth our mightier misers drain, Or cross, to plunder provinces, the main. Pope.

He plundered the convents of their stores of pro- vision ; and told them that he never had heard of any magazines erected by the Apostles. Johnson. PLUNGE, v. a., v. re., & n. s. Fr. plonger ; Belg. plompen ; Germ, plump. To force sud- denly into or under water; hence to force or urge into distress, guilt, or hazard; sink sud- denly ; to dive ; fall or rush into crime, ca- lamity, or hazard : the act of putting or sinking under water ; difficulty ; strait ; distress.

She was weary of life, since she was brought to that plunge, to conceal her husband's murder, or ac- cuse her son. Sidney. Accoutred as I was I plunged in.

Shakspeare. Plunge us in the flames. Milton.

0 conscience ! into what abyss of fears And horrors hast thou driven me, out of which

I find no way ; from deep to deeper plunged. Id.

He could find no other way to conceal his adul- tery, but to plunge into the guilt of a murther.

Tillotson. Headlong from hence to plunge herself she

springs, But shoots along supported on her wings. Dryden.

1 mean to plunge the boy in pleasing sleep, And ravished in [dalian bowers to keep. Id.

At this advanced, and sudden as the word, In proud Plexippus' bosom plunged the sword. Id.

His courser plunged,

And threw him oft ; the waves whelmed over him, And helpless in his heavy arms he drowned. Id.

People, when put to a plunge, cry out to heaven for help, without helping themselves. L'Estrange.

When tortoises have been a long time upon the water, their shell being dried in the sun, they are easily taken ; by reason they cannot plunge into the water nimbly enough. Ray-

You warn us of approaching death, and why Will you not teach us what it is to die ? But having shot the gulf, you love to view Succeeding spirits plunged along like you ; Nor lend a friendly hand to guide them through.

Norm.

Bid me for honour plunge into a war ; Then shall thou see that Marcus is not slow.

Addivrii.

Wilt thou behold me sinking in my woes 1 And wilt thou not reach out a friendly arm, To raise me from amidst this plunge of sorrows '

Id

Impotent of mind and uncontrouled, He plunged into the gulf which heaven foretold.

Pope.

Without a prudent determination in matters before us, we shall be plunged into perpetual errois. Watt*. Let them not be too hasty to plunge their enqui- ries at once into the depth of knowledge. Id.

He must be a good man ; a quality which Cicero and Quinctilian are much at a plunge in asserting to the Greek and Roman orators. Baker on Learning.

Thence country wives, wi' toil and pain, May plunge and plunge the kirn in vain ; For oh ! the yellow treasures taen,

By witching skill ; An' dawtit, twal-pint Hawkie's gaen

As yell's the Bill. Burns. Half on wing,

And half on foot, they brush the fleecy flood, Conscious, and fearful of too deep a plunge.

Coteper.

Then must I plunge again into the crowd, And follow all that peace disdains to seek ? Byron.

PLUNKET (Oliver), D. D., a Roman Catho- lic divine, the titular archbishop of Armagh, went to Rome at an early age, and received the title of primate of Ireland from pope Innocent XI. In September, 1679, he was arrested on a charge of treason, and being sent to London, was executed at Tyburn in 1681. The life of fchis respectable man, whose innocence was sub- sequently established, fell a sacrifice to a conspi- racy between some priests of a scandalous life, whose disorders he had censured, and certain persons under sentence of death.

PLU'RAL, adj. \ Lat. pluralis. More than PLU'RALJST, ra. s. f one : a pluralist is he who PLURALITY, ? holds more than one ecele- PLU'RALLY.) siastical benefice : plu- rality, the state of being more than one ; the greater number or majority : plurally, in a sense implying more than one.

To be brief, he (a pedant) is a heteroclite, for he wants the plural number, having only the single quality of words. Sir E. Overbury.

Thou hast no faith left now, unless thoud'st two ; Better have none Than plural faith, which is too much by one.

Shakspeare.

It is not plurality of parts, without majority of parts, that maketh the total greater ; yet it seemeth to the eye a shorter distance of way, if it be all dead and continued, than if it have trees, whereby the eye may divide it. Baconj

Those hereticks had introduced a plurality of gods, and so made the profession of the unity part of the symbolum that should discriminate the orthodox from them. Hammond.

The Greek and Hebrew have two variations, one to signify the number two, and another to signify a number of more than two ; under one variation the noun is said to be of the dual number, and under the other of the plural. Clarke.

‘Tls impossible to conceive how any language can want this variation of the noun, where the nature of its signification is such as to admit of plurality.

Id. Latin Grammar.

Sometimes it admitteth of distinction and plura- lity ; sometimes it redueeth all into conjunction and unity. Pearson.

Take the plurality of the world, and they are nei- ther wise nor good. L Estrange.

If the pluralist* would do their best to supprtsi

curates, their number might be so retrenched, that they would not be in the least formidable.

Collier on Pride.

They could forego plurality of wives, though that be the main impediment to the conversion of the East Indies. Bentley.

PLURAL. See GRAMMAR.

PLURALITY OF BENEFICES, or livings, is where the same clerk is possessed of two or more spiritual preferments, with cure of souls. The smallness of some benefices first gave rise to pluralities; for an ecclesiastic, unable to sub- sist on a single one, was allowed to hold two ; and at length the number increased without bounds. A remedy was attempted for this abuse at the council of Lateran under Alexander III. and Innocent III. in 1215, when the hold- ing more than one benefice was forbidden by a canon under the penalty of deprivation ; but, the same canon granting the pope a power to dis- pense with it in favor of persons of distinguished merit, the prohibition became almost useless. They were also restrained by stat.

21 Hen. VIII. cap. 13, which enacts that if any person having one benefice with cure of souls, of the yearly value of £8 or above (in the king's books), accept any other with cure of souls, the first shall be adjudged in law to be void, &c., though the same statute provides for dispensation in certain cases. In England, to procure a dis- pensation, the presentee must obtain of the bishop in whose diocese the livings are, two certificates of the values in the king's books, and the reputed values and distance ; one for the archbishop, and the other for the lord chancellor. And, if the livings lie in two dioceses, then two certificates of the same kind are to be obtained from each bishop. He must also show the arch- bishop his presentation to the second living ; and bring with him two testimonials from the neighbouring clergy concerning his behaviour and conversation, one for the archbishop, and the other for the lord chancellor ; and he must also show the archbishop his letters of orders, and a certificate of his having taken the degree of M. A. at the least, in one of the universities of this realm, under the hand of the register. And if he be not B. D. nor D. D. nor LL. B. nor LL. D. he is to procure a qualification of a chaplain, which is to be duly registered in the faculty of office, in order to be tendered to the archbishop, according to the statute. And if he has taken any of the aforesaid degrees, which the statute allows as qualifications, he is to pro- cure a certificate thereof, and to show the same to the archbishop ; after which his dispensation is made out at the faculty office, where he gives security according to the direction of the canon. He must then repair to the lord chancellor for confirmation under the broad seal ; and he must apply to the bishop of the diocese where the living lies for his admission and institution. By the several stamp acts, for every skin or paper, or parchment, &c., on which any dispen- sation to hold two ecclesiastical dignities or benefices, or a dignity and a benefice, shall be engrossed or written, there shall be paid a treble 40s. stamp duty. There is also a regulation with regard to pluralities ; but it is often dis- pensed with : for, by the faculty of dispensation,

a pluralist is required, in that benefice from which he shall happen to be most absent, to preach thirteen sermons every year, and to exer- cise hospitality for two months yearly. In Germany the pope grants dispensations for possessing a plurality of benefices, on pretence that the ecclesiastical princes there need large revenues to bear up against the Protestant princes.

PLUS, Lat. more, in algebra, a character marked thus +, used for the sign of addition. See ALGEBRA.

PLUSH, n. s. Fr. peluche ; Dan. plys ; Lat. pilosus. A kind of shaggy cloth or shag; a kind of woollen velvet. •,

The bottom of it was set against a lining of plush, and the sound was quite dead, and but mere breath.

Bacon.

I love to wear clothes that are flush, Not prefacing old rags with plush.
Cleaveland.

The color of plush or velvet will appear varied if you stroak part of it one way, and part of it another.

Boyle.

PLUSH, a kind of stuff, with a sort of velvet nap or shag on one side, consisting of a woof of a single woollen thread, and a double warp ; the one of two woollen threads twisted, the other goat's or camel's hair ; though there are plushes entirely of worsted, others of hair, and others again of silk, cotton, &c. White plush breeches have been often worn by English dragoons. They resist moisture, and are easily cleaned. Blue plush pantaloons are worn by the Royal Artillery drivers.

PLUSH'ER, n. s. Lat. galea lavis. A sea fish.

The pilchard is devoured by a bigger kind of fish called a plusher, somewhat like the dog-fish, who leapeth above water, and therethrough bewrayeth them to the balker. Carew.

PLUTARCH, a celebrated philosopher and historian of antiquity, who lived from the reign of Claudius to that of Hadrian, was born at Chseronea, a small city of Bceotia in Greece. Plutarch's family was ancient in Chaeronea : his grandfather Lamprias was a philosopher, and eminent for his learning ; and is often mentioned by Plutarch in his writings, as is also his father. Plutarch was placed, at an early age, under the care of Ammonius, an Egyptian; who, after hav- ing taught philosophy with great reputation at Alexandria, settled at Athens. Under this master he made great advances in knowledge ; but neglected the study of languages. Though he is supposed to have resided in Rome nearly forty years, at different times, yet he never seems to have acquired a competent skill in' the Latin language ; nor did he even cultivate his mother tongue, the Greek, with acccuracy, and hence that harshness, inequality, and obscurity in his style, which is so justly complained of. After leaving Ammonius, he travelled into Egypt, and was initiated in the Egyptian mysteries, as ap- pears by his treatise of Isis and Osiris : in which lie shows himself well versed in their ancient the- ology and philosophy. From Egypt he returned into

Greece; and, visiting in his way all the aca- demies and schools of the philosophers, gathered from them many of those observations with he has enriched his works. He does not

seem to have been attached to any particular sect, but culled from each whatever he thought excellent. He disliked the paradoxes of the Stoics, but was still more averse from the impiety of the Epicureans: in many things he followed Aristotle; but his favorites were Socrates and Plato, whose memory he revered so highly that he annually celebrated their birth-days with much solemnity. He applied himself with extreme diligence to collect, not only all books, but also all the sayings and observations of wise men, which he had heard in conversation, or had re- ceived from others by tradition ; and likewise to consult the records and public instruments pre- served in cities which he had visited in his travels. He took a jcurney to Sparta in order to search the archives of that famous king- dom, to understand their ancient government, with the history of their legislators, kings, and ephori. Few circumstances of Plutarch's life are known. According to the learned Fabri- cius, he was born under Claudius, fifty years after the Christian era. He was married to a most amiable woman of his own native town, whose name was Timoxena. He had several children, and among them two sons; one called Plutarch after himself, the other Lam prias in me- mory of his grandfather. Lamprias seems to have inherited his father's philosophy ; and to him we owe the table or catalogue of Plutarch's writings, and perhaps also his apophthegms. He had a nephew, Sextus Chseroneus, who taught the em- peror Marcus Aurelius the Greek tongue, and was much honored by him. Some think that the critic Longinus was of his family ; and Apu- leius, in the first book of his Metamorphoses, affirms himself to be descended from him. Plu- tarch was several times in Rome, and contracted an intimacy with Sossius Senecio, who had been four times consul, and to whom Plutarch has dedicated many of his lives. But his chief ob- ject in these journeys was to search the records of the capitol, and the public libraries. Suidas says he was entrusted ˆalso with the management of public affairs in th'e empire, during his resi- dence in the metropolis. ' Plutarch,' says he, ' lived in the time of Trajan, who bestowed on him the consular ornaments, and caused an edict to be passed that the magistrates or officers of Illyria should do nothing in that province with- out his knowledge and approbation.' It

is gene- rally supposed that Trajan, a private man when Plutarch first came to Rome, was, among other nobility, one of his auditors ; and that, therefore, this emperor afterwards made use of him in his councils. Fabricius asserts that he was Tra- jan's preceptor, and that he was raised to the consular dignity by him, and made procurator of Greece in his old age by Adrian. The desire of visiting his native country prevailed with him at length to leave Italy ; and at his return he was unanimously chosen archon of Chseronea, and soon after admitted into the number of the Del- phic Apollo's priests. Fabricius says he died in the fifth year of Adrian, aged seventy. His works have been divided into Lives and Morals. PLUTEOUS, a defensive machine, much used by the ancient Romans. It was composed of wicker hurdles laid like a roof on the top of

posts, which the soldiers, who went under it to. shelter, bore up with their hands. Rennet, in page 238 of his Roman Antiquities, observes that some will have them, as well as the vineae, to have been contrived with a double roof; the first and lower roof of' planks, and the upper roof of hurdles, to break the force of any blow, without disordering the machine. They were put much to the same use as the musculi. Father Daniel, the Jesuit, in his history of the French militia, quotes a passage out of a poem by Ab- bon the Monk, entitled the Siege of Paris ; the neaning of which is that the Normans brought up a large quantity of machines, that were called plutei by the Romans, and that they thus pre- served their soldiers from the arrows and javelins.

PLUTO, in Pagan worship, the king of the infernal regions, was the son of Saturn and Ops, and the brother of Jupiter and Neptune. This deity, being childless and unmarried, mounted his chariot to visit the world ; and, arriving in Sicily, became enamoured of Proserpine, whom he saw gathering flowers with her companions in the valley of Enna, near mount ./Etna ; when, forcing her into his chariot, he drove her to the river Chemarus, through which he opened him- self a passage back to the realms of night. See CERES and PROSERPINE. Pluto is usually re- presented in an ebony chariot drawn by four black horses ; sometimes holding a sceptre, to denote his power; at others a ward, with which he drives away the ghosts ; and at others keys, to signify that he had the keys of death. Homer observes that his helmet had the quality of ren- dering the wearer invisible, and that Minerva borrowed it in order to be concealed from Mars when she fought against the Trojans. Pluto was greatly revered both by the Greeks and Romans, who erected temples and altars to him. To this god sacrifices were offered in the night, and it was not lawful to offer them by day. In a piece of painting discovered about the end of the last century, in

an old burial place of the Nassonian family, Pluto and Proserpine are sitting or. thrones, whilst Mercury is introducing the ghost of a young woman, who seems intimidated at Pluto's stern look. Behind stands her mother, waiting to conduct her back to some grove in Elysium. Pluto holds a sceptre in his hand, and has a veil over his head.

PLUTUS, in Pagan worship, the god of riches. He was represented as appearing lame when he approached, and with wings at his de- parture ; to show the difficulty of amassing wealth, and the uncertainty of its enjoyment. He was also frequently represented blind, to show that he often bestowed his favors on the most un- worthy, and left in necessity those who had the greatest merit.

PLUVIAL, adj.) Lat. pluvia. Rainy ; re-

PLUVIOUS. ylating to rain.

The fungous parcels about the wicks of candles only signifieth a moist and pluvious air about them.

Browne.

PLUVIUS, a surname of Jupiter. He was invoked by that name among the Romans when- ever the earth was parched up by continued heat, and want of rain. He had an altar in thfe temple on the capitol.

PLUVIOMETER, or rain gUuge, is an in- strument used for 'showing the quantity of rain that falls upon the earth at any particular place, when it is desirable such observations should be made. It consists of a funnel communicating with a cylindrical tube at its bottom, into which the rain is conveyed by the funnel. The depth of water in the cylinder is measured by a rule fixed to a float, the rule passing through the centre of the funnel. The divisions on the rule show thejmmber of cubic inches of water that have fallen on a surface equal to the area of the top of the funnel. The funnel is so contrived as to prevent the water from evaporating. To use the pluviometer, so much water must be first put into the cylinder as will receive the float, so that O on the rule may exactly coincide with the aper- ture of the funnel. The instrument itself should be firmly fixed, so that whatever winds may blow the fall of the rain may not be interrupted by any obstacles. By the pluviometer the mean annual depths of rain in inches may be ascer- tained.

PLY, v. a. & v. n. Belg. plien, to work at any thing. Junius and Skinner. To work closely and importunately :- set on work; practise or solicit diligently : as a verb neuter, to work, to offer ser- vice ; go or busy one's self in haste.

Their bloody task, unwearied still they ply.

Walter.

Keep house, and ply his oook, welcome his

friends, Visit his countrymen, and banquet them.

Sliakapeure. Still at his oar the industrious Libys plies ;

But as he plies, each busy arm shrinks in,

And by degrees is fashioned to a fin. Id. Ovid.

He who exerts all the faculties of his soul, and plies all means and opportunities in the search of truth, may rest upon the judgment of his conscience so informed, as a warrantable guide. South.

Whosoever has any thing of David's piety will be perpetually plying the throne of grace with such like acknowledgments ; as, blessed be that providence which delivered me from such a lewd company. Id.

It is not his (by manlier virtues graced) To pore upon the noon-tide brook, and sigh, And weep for age o'er sorrow uneffaced, Him social duties call the tear to dry, And wake the nobler powers of usefulness to ply.

Kirke White.

PLY, v. n. & n. s. Fr. plier. To bend : bent ; turn ; bias ; plait ; fold.

The late learners cannot so well take the ply ex- cept it be in some minds that have not suffered themselves to fix, but have kept themselves open, and prepared to receive continual amendment.

Bacon.

The willow plied, and gave way to the gust, and still recovered itself again, but the oak was stub- born, and chose rather to break than bend.

L'Ettrange.

The rugae or plies of the inward coat of the sto- mach detain the aliment in the stomach.

Arbuthnot.

FLYERS, in fortification, a kind of balance nsed in raising or letting down a draw-bridge. They consist of two timber levers, twice as long as the bridge they lift, joined together by other timbers formed together in the form of a St. Andrew's cross to counterpoise them. They are

supported by two upright jambs, on which they swing ; and the bridge is raised or let down by means of chains joining the ends of the plyefs and bridge.

PLYING, in the sea-language, the act of making, or endeavouring to make, a progress against the direction of the wind. Hence a ship that ad- vances well in her course in this manner of sail- ing, is said to be a good plyer.

PLYMOUTH, a sea-port town, near the ex- treme western point of the Devonshire coast, is a place of considerable antiquity, and was prin- cipally inhabited by fishermen till the reign of Henry II., since which time it has gradually in- creased in importance. Its distance from Lon- don is 218 miles. Many of the streets are narrow and irregular, but great improvements are daily taking place ; and elegant edifices both public and private springing up in every di- rection. The town contains two parish churches, St. Andrew and Charles, and eleven Dissenting places of worship. The public charities and reli- gious societies are numerous. Its literary institu- tions are the Athenaeum, which owes its origin to the efforts of Henry Woollcombe, esq., and a few other public-spirited gentleman ; and the public library, which contains several thousand valuable books. The inns are numerous and commo- dious. The theatre and royal hotel form one magnificent building 275 feet in length, with noble porticoes, &c., being erected on the model of a Greek temple on the Ilyssus. Plymouth is supplied with water by a fine stream which was brought from Dartmoor, in the reign of Eliza- beth, through the exertions of Sir Francis Drake, the celebrated circumnavigator. The market- place is remarkably large, and abundantly sup- plied with the necessaries of life at a cheap rate. The corporation consists of a mayor, twelve aldermen, twenty-four common councilmen, re- corder, and town clerk. Plymouth carries on a considerable coasting trade, and it has some foreign commerce, but its manufactures of coarse woollens, serges, &c., which were formerly very extensive, have totally disappeared. Its sound affords fine

anchorage for ships, particularly since the erection of its magnificent breakwater. . This noble mole stretches across the entrance of the sound, and is 1700 yards long. It was begun in 1812, and is formed of immense blocks of marble heaped one upon another ; and which, having been shaken together by the storms of succeeding winters, have acquired amazing strength and solidity. From the breakwater may be seen, in fine weather, the Eddystone light- house. See EDDYSTONE ROCKS. Inside the Breakwater, and about a mile from the main land, is St. Nicholas's Island, comprising an area of seven acres, and strongly fortified.

The celebrated M. Dupin saw this great work in progress, in September 1816, and his accurate description of the mode in which the operations were carried on both at the works and on shore cannot fail to be interesting to our readers.

‘ The hills of stone, lining the right bank of the mouth of thePlym (the Catwater), have been cut, and, by the aid of gunpowder, masses are detached weighing ten or twelve tons. These masses are thrown into the sea, without any par-

ticular order, but within the lines fixed for the boundaries of the work. The points for deposit- ing the stone, so as to diminish the width, and thereby form the internal and external slopes, are determined by means of sounding. When the work at any part rises high enough to be vi- sible at low water, the largest blocks of stone are employed. They are laid together in such a way as to produce the greatest possible resistance to any derangement which might be occasioned by the waves of the sea. They are not, however, so combined as to form a smooth surface externally ; on the contrary, they present great irregularities, and thus form a break-water, in the true sense of the word. The external plane or slope, from the level of low water to the summit, as well as the horizontal part of the summit, have a smooth and uniform surface : but the stones, though smoothed on the external surface, are not squar- ed on the other sides. They are laid one into another; and in form, bulk, and mode of con- nexion, perfectly represent those ancient struc- tures, celebrated for solidity, and known by the name of Cyclopean Structures.

‘ We may now describe the means employed in extracting the stone from the quarries, placing it on board vessels, and disembarking it at

the necessary point. These methods are, generally speaking, as simple as ingenious, and are well worthy the attention of the mechanician. The hills, from which the stone is extracted, extend to the bank of the Plym ; and a quay is con- structed on the bank of the river, to afford con- veniences for the loading of several vessels at the same time. The hills are every where covered with strata of vegetable earth, more or less thick. This earth is gradually removed before the stone can be got out. The hills are cut from the top downwards, by sections nearly vertical. The vegetable earth which has been removed, together with the small pieces of stone procured in course of the excavation, are piled up, and form an ar- tificial hill, which rises beside those which are gradually disappearing. By means of iron chains, flying bridges are thrown from the summit of the new hill to the summit of the primitive hill ; and the workmen, with wheel-barrows and hand- barrows, remove the vegetable earth along these bridges.

‘ There appeared to be nothing peculiar in the process by which the quarries are worked ; only that it is much more easy when the stone is found in vertical strata than when it lies hori- zontally. It sometimes happens that, in the same hill, there are strata nearly horizontal, con- tiguous to others nearly vertical ; a geological fact, which, though not without example, is ne- vertheless very remarkable. The largest blocks of stone, which are reserved for the external and upper parts of the work, are extracted, from the latter strata. At the foot of each section of the hill a file of cranes is established, on an extreme- ly simple principle. The feet of these cranes rest on a sole fixed into the earth ; and the heads turn in an iron collar provided with rings, to which chains are fastened ; these chains, four or five in number, extend some from the top down- wards, and have their point of attachment in the ground — and others from the bottom upwards,

and hare their point of attachment on the summit of the hill. In proportion as the excavation ad- vances, the points of attachment of the chains are altered, and the range of cranes is extended, so that the pieces of stone detached by the gun- powder, and thrown down by the workmen, are always caught by some one of the cranes. They are each moved by means of a double handle, the axis of which has a pinion attached to it ; this pinion sets in motion a toothed wheel, which acts upon the pinion attached to the cylinder, round which the chain, by which the weight is raised, rolls and unrolls. Two men are sufficient to work each crane : one links together the two ends of the chain round the piece of stone to be raised, and the other turns the handle. As soon as the stone is disengaged from those which sur- round it, the workman, who fixed it mthe chain, pushes it with his hands, and makes the crane turn on itself, until the stone comes on a level with a

flat carriage, with four small cast iron wheels, of nearly equal diameter.

‘ The block of stone being deposited on this carriage, the two workmen at the crane proceed to raise another piece of stone, and to place it on another carriage. These little carriages are pro* vided at both ends with two strong iron hooks, for fastening to the traces of a horse, either before or behind, according as it may be found necessary to make the carriage advance or retrograde ; for it is not made to turn upon its wheels. The wheels are placed in the grooves of an iron rail- way, prepared for that purpose. These iron rail- ways meet at the different points of embarkation, and branch out to each of the cranes above de- scribed. When a carriage arrives to be loaded at the cranes, a driver is in readiness with his horse, and he fastens the traces to the hooks in front of the carriage. He drives off, proceeding a little before his horse, in order to turn the little pieces of iron, which form edges for the grooves of the rail-way, at places where two roads, cross- ing each other, render it necessary that the edges of the rail-way should be capable of taking two different directions. The rail-ways lead to the point of embarkation, parallel with the quay, and the carriage which runs in this direction must turn at right angles, in order that it may be em- barked on board the vessel which is waiting at the quay to receive it. For this purpose, a cir- cular plate of cast-iron is laid down, with edges which appear to be a prolongation of the rail-way. This plate, the centre of which is in the middle of the road, turns on rollers fixed circularly be- neath it. It is moreover enchased in a cast-iron hoop, and fixed into the ground, to prevent it. from inclining either to one side or the other. The driver having brought his carriage to the iron plate, which prolongs the iron rail-way, un- fastens the horse, and turns with his hands the iron plate, with the carriage upon it, until the rail-way on the plate is brought in a line with the turn of the road leading to the vessel, per- pendicular to the quay.

‘ A strong beam is fixed into the front of the quays. Two beams perpendicular to this, on a line with the grooves of the latter part of the rail- way, are fixed, with strong hinges, in front of the immoveable beam. The iron grooves of the rail-

way are carried along these two beams, which rcay be either raised or lowered by turning upon the fixed beam. The free extremities of the two beams rest on the edge of a port-hole, at the stern of the vessel

that is to be loaded. Accord- ing as the tide is either high or low, the slope of the beams changes, though the ends still rest on the port-hole. The vessels employed to convey the blocks of stone have only one deck, along which run two iron rail-ways extending from stem to stern, one on the starboard, and the other on the larboard side. Two similar rail-ways take the same direction into the bottom of the hold. A horizontal capstan in the middle of the vessel, moved by iron wheel-work, makes the carriage advance from the circular iron plate, before mentioned, to the deck of the vessel, where the carriages are ranged, so that the front of the one comes in contact with the back of the other.

‘ It will naturally be supposed that in order to keep the vessels steady during the loading, it is necessary, in depositing the carriages in the hold, to begin by introducing them alternately on the starboard and larboard sides. Thus the vessel is prevented from heeling either on one side or the other, which would render the operations difficult and even dangerous. In this manner sixteen or twenty carriages are put on board each vessel ; six or seven on each side of the hold, and two or tiiree on each side of the deck. With one horse for drawing the carriages to the circular iron plates on which they are turned to the point of embarkation, the driver of the horse, and six or eight men for working the capstan and pulleys, a vessel bearing sixty tons is loaded in the space of fifty minutes.

‘ The great works which I have here attempt- ed to describe, the enormous masses of stone which the workmen strike with huge hammers, or precipitate from the summit of the hills ; the suspended roads for conveying away the earth ; the lines of cranes and their simultaneous ma- chinery ; the movement of the carriages ; the ar- rival, loading, and departure of the vessels, pre sent altogether, to an admirer of the great works of art, one of the most imposing spectacles that can be imagined. At certain hours the ringing of a bell announces the explosion of the quarries. The works instantly cease, the workmen retire ; all becomes silence and solitude ; and this silence is rendered still more imposing by the report of the gunpowder, the breaking of the rocks, the crash occasioned by their fall, and the prolonged echoes. Near the quarries there are several •workshops for repairing the tools, carriages, ves- sels, &c. A little square building serves as an office for the engineer and a few agents, who are sufficient for the direction and completion of an undertaking the annual expenses of which amount to £100,000. The works are entrusted to two contractors : one superintends the transport of the stone, and the other the explosion of the quar- ries and the construction of the breakwater. The vessels employed in conveying the stone are pre- viously gauged,

and each vessel has its burden marked on scales fixed up at the stem and stern. In proportion as the vessel is loaded, the scale descends in the water, and thus the burden is VOL. XVII.

ascertained. This serves for the rule by which all the works are paid. A certain sum is paid for the extraction of every ton of stone, and so much for placing it on board the vessels and con- veying it to the breakwater.'

Plymouth is defended by a fortification called the citadel, which completely overlooks the en- trance to Catwater, its harbour ; the ramparts occupying a circuit of nearly three-quarters of a mile. West of the citadel is the Hoe, a fine grassy spot which commands most delightful land and sea views ; and forms a charming pro- menade for the inhabitants. Beneath the citadel on the east is the government victualling estab- lishment for supplying the royal navy with bread, and other provisions. The dock yard is situated at Devonport formerly known by the name of Plymouth Dock, which is two miles from Plymouth. This establishment commenc<:d in the reign of William III., and is now allowed to be equal, at least, to any arsenal in the world. It is seated on the eastern bank of the river Ta- mar, and includes within its walls an area of seventy acres. It contains many spacious docks, and slips, covered with vast and expensive roofs, under which ships of all classes are now built and repaired. See DOCK-YARDS. The eye of the visitor is also struck with the view of magni- ficent store-houses, of workshops on ar_ immense scale ; and indeed of all that is necessary to the rapid equipment of large fleets.

The harbour, called Hamoaze, is a remarkably fine one, being four miles in length, on an aver- age breadth of one mile. In this capacious bay, which is completely sheltered on all sides, a large number of ships, not wanted for active service, are laid up in ordinary, moored to vast chains which stretch across the bed of the harbour, North of the dock yard lies the gunwharf, which was completed in 1726. This establishment contains vast quantities of cannon, shot, &c., belonging to the vessels in ordinary ; and con- nected with it is a large powder magazine, situ- ated at Morice Town.

The town of Devonport owes its origin to the establishment of the dock yard, and is both ex- tensive and well built, enclosed by fortifications which have for some years remained in an un- finished state. It is connected with the suburbs of Stoke, Morice Town, &c. From its having long been termed Plymouth Dock, it was gene- rally confounded with Plymouth, and this occa- sioned, a few years since, the change of its name. The streets are built, generally, at right angles

: the foot-paths are paved wilh slabs of Devonshire marble, obtained from quarries in the neighbou*- hood ; and when washed by showers nothing can be conceived more beautiful than the appear- ance of most of the pavements. The parish church is at Stoke, about a mile distant, but tlu town contains two chapels of ease, and numerous dissenting meeting houses. Among several other handsome buildings are the town hall, and the public library. The column which was erected to commemorate the change of the name of the town is a prominent and interesting object. Devonport is abundantly supplied with water by a fine stream, similar to that of Plymouth, wh'/>h flows a distance of thirty miles, from nearly

the centre of Dartmoor, — ‘ the mother of rivers.’ On the south of the town is Mount Wise, a gravelled plain, used as a military parade, and which commands fine views of Plymouth Sound, the Breakwater, Mount Edgecumbe, &c. Mid- way between Plymouth and Devonport is the town of Stonehouse, in which are situated the royal marine barracks, and the royal naval hos- pital, capable of receiving, at once, 1200 patients. Divided from this establishment by a narrow sea- water creek is the military hospital, a large and handsome building. At Devil’s Point, the western extremity of Stouehouse, the new vie-, tualling buildings are erecting at a vast expense ; but which, from their fine situation at the foot of Hamoaze, and their proximity to the waters of the Sound, must hereafter be of the utmost service in prbvisioning the fleets. It would not be consistent, however, with the limits of this work to enter into a detailed description of all the government establishments, military and civil, included within the limits of the port of Plymouth ; those which have already been men- tioned will give a sufficient idea of the import- ance of the place. The population, from the cheapness of the markets, and the almost unri- valled beauty of the surrounding scenery, is con- stantly increasing.

PLYMOUTH, formerly Saltash, a post town of Windsor county, Vermont, eighteen miles west of Windsor. A remarkable cavern was disco- vered in this town in 1818. It is situated at the foot of a mountain, near the head of Black Ri- ver, and has five apartments, the largest of which is thirty feet long, twenty broad, and twenty high. Two of the others are nearly as large. The rocks which, form the cavern are wholly of imestone. Numerous petrifactions are found here,

most of which resemble icicles hanging from the rocks.

PLYMOUTH, a post town of Grafton county, New Hampshire, on the west side of the Merri- mack; thirty-one miles S. S. E. of Haverhill, forty-three north of Concord, seventy north-west of Portsmouth. In the north part of the town there is a pleasant village containing a court-house, a Congregational meeting-house, and about twenty-five dwelling-houses. The courts for the county are held alternately here and at Haverhill.

PLYMOUTH, a county of the east part of Mas- sachusetts, bounded north by Norfolk county, east by the Atlantic, south by Barnstable county and Buzzard's Bay, and west by Bristol county. Population 35,169.

The capital, of the same name, contains a court-house, jail, bank, and four houses of pub- lic worship; three for Congregationalists, and one for Baptists. The harbour is spacious, but shallow. Vessels drawing more than ten or ele- ven feet of water must unload in part at a dis- tance from the wharfs. The compact part of the town is pleasantly situated, and well built, chiefly of wood. The shipping belonging to this port in 1816 amounted to 18,875 tons, and is employed in the fisheries, West India and Eu- ropean trade. A rivulet passes through the town which affords a valuable alewive fishery, and also furnishes seats for a number of mills and impor- tant manufactories ; among which are considerable iron-works, and cotton and woollen manufacto- ries. A fort for the defence of the town, and a light-house, are built nine miles east by north of Plymouth.

The township is extensive, containing more than eighty square miles. It is sixteen miles long, and more than five broad. The soil near the coast is generally good ; the rest of the town- ship is barren, and, notwithstanding its antiquity, is still a forest, consisting mostly of pine, though there are some tracts covered with oak. More than two-thirds of the inhabitants reside in the village. There is another village at Monument Ponds, seven miles south of the town.

Plymouth is the oldest town in New England. The first settlers landed here on the 22d of De- cember, 1620; this anniversary is still observed. The rock on which they landed was conveyed, in 1774, to the centre of the town. Thirty-six miles E. S. E. of Boston.

PLYMPTON, a post town of Plymouth county, Massachusetts, ten miles north-west of Plymouth, thirty-two south of Boston, west 459. Population 900. It contains a cotton manufactory, a cotton and

woollen manufactory, and a forge.

PLYNTERIA, a Grecian festival in honor of Aglauros, or rather of Minerva, who received from the daughter of Cecrops the name of Aglau- ros. The word is derived from irXwuv, lavare, because during the solemnity they undressed the statue of the goddess, and washed it. The day on which it was observed was looked upon as unfortunate and inauspicious ; and therefote. no person was permitted to appear in the tem- ples, as they were purposely surrounded with ropes. It was customary at this festival to bear in procession a cluster of figs ; which intimated the progress of civilisation among the first inha- bitants of the earth, as figs served them for food after they had begun to dislike acorns.

PNEUMATICS.

PNEUMATIC, adj. } Greek

PNEUMAT'ICAL. } from Trvtv/za, breath or

air. Moved by wind ; relative to wind.

The race of all things here is, to extenuate and turn things to be more pneumatical and rare ; and not to retrograde, from pneumatical to that which is dense. Bacon's Natural History.

I fell upon the making of pneumatical trials, whereof I gave an account in a book about the air.

Boyle.

That the air near the surface of the earth will ex- pand itself when the pressure of the incumbent atmo- sphere is taken off, may be seen in the experiments made by Boyle in his pneumatick engine.

Locke's Elements of Natural Philosophy.

The lemon uncorrupt with voyage long, To vinous spirits added,

They with pneumatick engine ceaseless draw.

Philips.

PNEUMATICS.

1. PNEUMATICS. This science combines the phenomena which relate to the weight, pressure, and elasticity of the air or atmosphere that sur- rounds our globe. Some of the more essential me- chanical properties of air, have been examined under the article AIR-PUMP; and its vitality has been fully illustrated in our view of pneumatic chemistry. Much, however, yet remains to be stated with regard to pneumatic equilibrium, which must of necessity occupy a prominent place in the present treatise.

2. Various conjectures have been formed with respect to the height of the atmosphere ; and, as we know to a certainty the relative weight of a column of the atmosphere by the height to which its pressure will raise water or mercury in an empty tube, so different calculations have been founded on these data, to ascertain its extent as well as its density at different heights. If the air of our atmosphere were indeed every where of a uniform density, the problem would be very easily solved. We should in that case have nothing more to do than to find out the propor- tions between the height of a short pillar of air, and a small pillar of water of equal weight; and, having compared the proportion, which the height these bear to each other in the small, the same proportions would be certain to hold good in the great, between a pillar of water thirty-two feet high, and a pillar of air that reaches to the top of the atmosphere, the height of which we wish to know. Thus, for instance, we find a cer- tain weight of water reaches one inch high, and a similar weight of air reaches seventy-two feet high : this then is the proportion two such pillars bear to each other on the small scale. Now, if one inch of water is equal to seventy-two feet of air, to how much air will thirty-two feet of water be equal ; by the common rule of proportion we readily find, that thirty-two feet, or 384 inches of water, will be equal to331,776inches,which makes something more than five miles, which would be the height of the atmosphere, was its density every where the same as at the earth, where seventy- two feet of air were equal to one inch of water. But this is not really the case ; for the air's den- sity is not every where the same, but decreases as the pressure upon it decreases; so that the air becomes lighter and lighter the higher we as- cend ; and at the upper part of the atmosphere, where the pressure is scarcely any thing at all, the air, dilating in proportion, must be expanded to a very great extent ; and therefore the height of the atmosphere must be much greater than has appeared by the last calculation, in which its density was supposed to be every where as great as at the surface of the earth. In order, there- fore, to determine the height of the atmosphere more exactly, geometricians have endeavoured to determine the density of the air at different dis- tances from the earth. Thq following sketch

will give an idea of the method which some have taken to determine this density which is prepa- ratory to finding out the weight of the atmosphere more exactly. If we suppose a pillar of air to reach from the top of the atmosphere down to the earth's surface, and imagine it marked like a standard by inches, from the top to the bottom, and still further suppose that each inch of air, if

not at all compressed, will weigh one grain, the topmost inch then weighs one grain, as it suffers no compression whatever, the second inch is pressed by the topmost with a weight of one grain, and this, added to its own natural weight or density of one grain, now makes its density, which is ever equal to the pressure, two grains. The third inch by the weight of the two inches above it, whose weight united make three grains, and these added to its natural weight give it a density of four grains. The fourth inch is pressed by the united weight of the three above it which together make seven grains, and this added to its natural weight gives it a density of eight grains. The fifth inch being pressed by all the former fifteen, and its own weight added, gives it a density of sixteen grains, and so on descending downwards to the bottom. The first inch has a density of one, the second inch a den- sity of two, the third inch a density of four, the fourth of eight, the fifth of sixteen, and so on. Thus the inches of air increase in density as they descend from the top, at the rate of 1,2, 4, 8, 16, 32, 64, &c. Or if we reverse this, and begin at the bottom, we may say, that the density of each of these inches grows less upwards. If, in- stead of inches, we suppose the parts into which this pillar of air is divided to be extremely small, and like those of air, the rule will hold equally good in both. So that we may gene- rally assert that the density of the air from the surface of the earth decreases in a geometrical proportion. This being understood, should we now desire to know the density of the air at any certain height, we have only first to find out how much the density of the air is diminished to a certain standard height, and thence proceed to tell how much it will be diminished at the greatest heights that can be imagined. At small heights the diminution of its density is by frac- tional or broken numbers. We will suppose at once that at the height of five miles the air is twice less dense than at the surface of the earth : at two leagues high it must be four times thinner and lighter, and at three leagues eight times thinner and less dense, and so on. In short, whatever decrease it received in the first step, it will continue to have in the same proportion in the second, third, and so on; and this, as was observed, is called geometrical progression.

3. Upon the same principle it was attempted to calculate the height of the atmosphere ; by carrying a barometer to the top of a high moun- tain, the density of the air at two or three dif- ferent stations was

easily ascertained. But so feeble are human efforts in endeavouring to com- prehend and measure the works of the Creator, that this theory was soon demolished. It was found that the barometrical observations by no means corresponded with the density which, by other experiments, the air ought to hare had ; and it was therefore suspected that the upper parts of the atmosphere were not subject to the same laws or the same proportions as those which were nearer the surface of the earth. This pro- cess has, however, been fully examined under the article BAROMETER. Another still more in- genious method was therefore devised. Astro- nomers know to the greatest exactness the part Oi ”

the heavens in which the sun is at any one moment of time : they know, for instance, the moment in which it will set, and also the precise time in which it is about to rise. They soon, however, found that the light of the sun was visible before its body, and that the sun itself appeared some minutes sooner above the horizon than it ought to do from their calculations. Twilight is seen long before the sun appears, and that at a time when it is several degrees lower than the horizon. There is then, in this case, something which de- ceives our sight; for we cannot suppose the sun to be so irregular in his motions as to vary every morning ; for this would disturb the regularity of nature. The deception actually exists in the atmosphere : by looking through this dense, transparent substance, every celestial object that lies beyond it is seemingly raised up, in a way similar to the appearance of a piece of money in a basin filled with water. Hence it is plain, that if the atmosphere was away, the sun’s light would not be brought to view so long in the morning before the sun itself actually appears. The sun itself without the atmosphere would ap- pear one entire blaze of light the instant it rose, and leave us in total darkness the moment of its setting. The length of the twilight, therefore, is in proportion to the height of the atmosphere : or let us invert this, and say that the height of the atmosphere is in proportion to the length of the twilight : it is generally found, by this means, to be about forty-five miles high, so that it was hence concluded either that that was the actual limit of the atmosphere, or that it must be of an extreme rarity at that height.

4. If a common drinking glass or tumbler be filled with water, and a

piece of bladder tied closely over its mouth, on allowing it to sink to the bottom of a vessel of water, and to stand there with its mouth upwards, the bladder exhi- bits no sign of being pressed upon, although it bears on its upper side the whole weight of the water directly above it, as the water beneath the bladder resists just as strongly as that above presses : but if by means of a syringe or pump, the water be extracted from within the glass, the bladder itself will then have to bear the whole pressure of the water above it, and will probably be torn or burst, the degree of pressure, and consequently the depth of water in such a case might be ascertained by placing some support, by which the action could be measured under the bladder, to sustain it after the removal of the inte- rior water. Now this phenomenon may be exactly copied in our atmosphere or sea of air. A glass held in the hand is immersed in the fluid air, and is as full of it as the other glass was of water : its mouth may be covered over with bladder, and no external pressure will be apparent, be- cause there is a resistance from the air within just equal to the pressure of the air on the out- side ; but, if the air be extracted from under the covering by means of the air-pump, the bladder is first seen sinking down and becoming hollow from the weight of the air over it, and at last bursts inwards with a loud report. By placing a circular piece of wood under the bladder for it to rest upon, and a spring of known force to support the wood, we may ascertain very nearly the

weight and pressure of ihe air over it. The problem, however, can be solved more elegantly and ac- curately by means of the barometer already de- scribed. This phenomenon, illustrative of at- mosheric pressure, is often shown by placing the hand on the mouth of a glass so as to cover it closely, and then extracting the air from under- neath the hand, the weight of the atmosphere holds the hand down upon the mouth of the glass with considerable force. By means of the exhausting air-pump on the one hand, and of the condensing syringe on the other, all the most important facts dependent on atmospheric pres- sure, and its increase or diminution, may be strikingly shown. Thus to exhibit the effect of diminished pressure, water which is not heated by several degrees to the boiling point of ordi- nary low situations, but which would be boiling at the top of Mont Blanc, is caused to boil im- mediately by placing it under the receiver of an air-pump, and making a few strokes of the piston, to reduce the density of the air around it ; and, if the exhaustion be rendered complete, the water will boil, even when less warm than the blood of living animals : and at any tempe- rature, however low, water even in a vacuum as- sumes rapidly the form of air, or condensible vapor, but without exhibiting the violent agita- tion of boiling. Other liquids as spirits or

ether, from requiring inferior degrees of heat to sepa- rate their particles to aeriform distances, boil under the receiver of an air-pump at very low temperatures. Ether boils when as cold as freezing water. On the other hand, to exhibit the effect of increased pressure, if we confine the particles of a liquid by still more than a common atmospheric or equivalent pressure, de- grees of heat higher than the common boiling point will be required to separate them. In the diving bell at sixty-eight feet under the surface, the boiling point of water is 272° instead of 212°, and at any other depth it is higher than 212° in proportion to the depth. The fact that liquids are driven off, or made to boil, at lower degrees of heat when the atmospheric pressure is lessened or removed, has recently been applied to some very useful purposes.

5. The process for refining sugar is to dis- solve impure sugar in water, and, after clarifying the solution, to boil off or evaporate the water again that the dry crystallised mass may remain. Formerly this evaporation was performed under the atmospheric pressure; and a heat of 218° or 220° was required to make the syrup boil, by which degree of heat, however, a portion of the sugar was discolored and spoiled, and the whole product was deteriorated. The valuable thought occurred to Mr. Howard that the water might be dissipated by boiling the syrup in a vacuum or place from which the air was excluded, and therefore at a low temperature. This was done accordingly ; and the saving of sugar and the improvement of quality have been such as to make the patent right, which secured the emolu- ments of the process to certain parties, worth many thousand pounds a year. The syrup, during this process, is not more heated that it would be in a vessel merely exposed to a summer sun. In the preparation of many medicinal sub-

stances the process of boiling in vacuo is equally important. Many watery extracts from vege- tables have their virtues impaired, or even de- stroyed, by a heat of 212°; but, when the water is driven off in vacuo, the temperature need never be higher than blood heat, and all the activity of the fresh plant remains in the extract.

6. It appears, by a paper in the fifth number of the Edinburgh Philosophical Journal, that the invention of the process of artificial desicca- tion under the receiver of an air-pump, and which .las been ascribed to a modern philosopher, is due to Mr. Edward Nairne : a paper concerning which was published in the Philosophical Trans- actions for 1777. In this paper it is stated, on the authority of Mr.

Cavendish, that water, whenever the pressure of the atmosphere on it is' diminished to a certain degree, is immediately turned into vapor, and is as immediately turned back again into water. When the heat is at 72° of Fahrenheit's scale, it turns into vapor as soon as the pressure is no greater than that of three- quarters of an inch of quicksilver, or about one- fortieth of the usual pressure of the atmosphere; but, when the heat is only 41°, the pressure must be reduced to that of a quarter of an inch of quicksilver before the water turns into vapor. Hence it follows that, when the receiver is ex- hausted to the above mentioned degree, the moisture adhering to the different parts of the machine will turn into vapor and supply the place of the air, which is continually drawn away by the working of the pump, so that the fluid in the body to be dried, as well as in the receiver, will consist in a great measure of vapor.

7. If a piston move in a cylinder so as to be air-tight, and be provided with a valve which opens upwards, upon pressing the piston to the bottom of the cylinder, the air contained in the cylinder will be forced through the valve in the piston. Let us then suppose the piston in close contact with the bottom and sides of the cy- linder, all air having been excluded : upon at- tempting to draw the pislon up, it will be found that very considerable force will be necessary ; and that when sufficient effort has been used, and the piston has been brought to the top of the cylinder, if it be disengaged from the agent which drew it up, it will descend with great force and strike the bottom. This effect plainly indicates the weight of the air pressing on the upper surface of the piston. This is what is vul- garly called suction ; as if there were some force within the cylinder which drew the piston to the bottom. But within the cylinder is nothing but empty space, and it is plainly unreasonable to ascribe to empty space any mechanical influence. That it is the weight of the incumbent atmo- sphere pressing on the upper surface of the piston which forces it to the bottom of the cy- linder, is still further proved by the fact, that if the upper surface of the piston be increased, the force which presses it down will be also increased, and what is more will be increased in precisely the same proportion as the surface of the piston. In fact, it is found that, when all air or other elastic fluid has been expelled from beneath the piston, there will be a pressure amounting to about fifteen pounds on every square inch of the

upper surface of the piston ; from which we may infer that, a column of air, having a square inch for its base, and which extends from the surface of the earth to the top of the atmosphere, weighs about fifteen pounds. The atmospheric engine is a machine whose efficacy depends on the principle which we have been just explaining. In this machine

the weight of the atmosphere is used as a first mover in pressing a piston to the b

8. But there is a still more conclusive argu- ment that it is the weight of the atmosphere which presses down the piston. If, by a valve in the bottom of the cylinder, the air be admitted below the piston, it will no longer be pressed down, or rather it will be pressed both upwards and downwards by equal forces, and will be in- different as to its ascent or descent, except so far as the weight of the piston itself will produce the effect. This is owing to a property of air, by which it presses equally in every direction, which we shall explain more fully hereafter.

9. Many effects with which we are familiar, and which often excite our curiosity, are ac- counted for by the gravitation of the atmosphere. If the nozzle and the valve-hole of a pair of bellows be stopped, it will be found that a very considerable force will be necessary to separate the boards. This is owing to the air not being permitted to enter at the usual apertures, to resist the pressure of the atmosphere on the external surfaces of the boards. Shell-fish which adhere to rocks, snnils, and other animals, have a power by muscular exertion of expelling the air from between the surface of the rock and the surface which they apply to it, in consequence of which they are pressed upon the rock by the atmo- sphere with a force of about fifteen pounds for every square inch in the surface of contact. The same cause enables flies and other animals to walk on a perpendicular plane of glass or on the lower surface of an horizontal plane, apparently suspended by their feet, and with their bodies downwards. This has lately been proved to arise from a power of expelling the air from be- tween their feet and the surface on which they tread, so as to obtain a pressure from the atmo- sphere proportionate to the magnitude of the soles of their feet.

10. It may hardly be necessary to state that the animal body is made up of solids and fluids, and that the atmospheric pressure affects it ac- cordingly. It is, however, at first view difficult to conceive how the human frame can bear a pressure of fifteen pounds on every square inch of its surface, while the person who supports the weight remains altogether insensible Jlo its influ- ence ; but such is the fact. Experiment proves that his not feeling the fluid pressure is owing to its being perfectly uniform all around. If a pressure of the same kind be even many times greater, such for instance as fishes bear in deep water, or as a man supports in the diving bell, it must in both cases after the lapse of a few mi- nutes pass unnoticed. Fishes are at their ease in a depth of water where the pressure around will instantly

break or burst inwards almost the strongest empty vessel that can be sent down ; and men walk on earth without discovering »

lieavy atmosphere about them, which will in- stantly crush together the sides of a thick iron boiler, left for a moment without the counter-acting internal support of steam or air.

11. The fluid pressure on the bodies of ani- mals, thus unperceived under ordinary circum- stances, may be rendered instantly sensible by a little artificial arrangement. In water, for in- stance, an open tube partially immersed becomes full to the level of the water around it, and the water contained in it is supported, as already explained, by what is immediately below its mouth : — now a flat fish resting closely against the mouth of the tube would evidently be bear- ing on its back the whole of this weight, perhaps 100 Ibs., but the fish would not thereby be pushed away, nor would it even feel its burden, because the upward pressure of the water imme- diately under it would just counterbalance, while the lateral pressure around would prevent any crushing: effects of the mere upward and down- ward forces, but if, while the fish continued in the supposed situation, the 100 Ibs. of water were lifted from off its back by a piston in the tube, the opposite upward pressure of 100 Ibs. would at once crush its body into the tube and de- stroy it. At a less depth, or with a smaller tube, the effect might not be fatal, but there would be a bulging or swelling of the substance of the fish into the mouth of the tube. In air and in the human body a perfectly analogous case is ex- hibited. A man, without pain or any peculiar sensation, lays his hand closely on the mouth of a vessel containing air, but, the instant that the air is withdrawn from within the vessel, the then unresisted pressure of the air on the outside fixes the hand upon the vessel's mouth, causes it to swell or bulge into it, and makes the blood ooze from any crack or puncture in the skin.

12. These last few lines closely describe the surgical operation of cupping, the essential cir- cumstances of which are the application of a cup or glass with a smooth blunt lip to the skin of any part, and the extraction by a syringe or other means of a portion of the air from within the cup. It may facilitate to some minds the exact comprehension of this phenomenon, to consider the similar case of a small bladder or bag of India rubber full of any fluid, and pressed be- tween the hands on every part of its surface except one, at which part it swells, and even bursts if the pressure be strong enough. In cupping, the whole body except the surface under the cup is squeezed with a

force of fifteen pounds on the square inch, while in that one situation the pressure is diminished according to the degree, of exhaustion in the cup, and the blood consequently accumulates there. The mere application of a cup with exhaustion constitutes the operation called dry cupping ; to obtain blood, the cup is removed, and the tumid part is cut into by the simultaneous stroke of a number of lancet points, and the cup is afterwards used as before, so that the blood may rush forth under the diminished pressure. The partial vacuum in the cup may be produced either by a syringe or by burning a little spirit in the cup, and ap- plying it while the momentary dilatation effected by the heat lias driven out the greater part of

the air. The human mouth applied upon any part becomes a small cupping machine and for- merly in cases of poisoned wounds was used as such.

13. There is an effect of the atmospheric pres- sure on the living body which is rarely thought of although of much importance, viz. its keeping all the parts about the joints firmly together, by an action similar to that on the Magdeburgh he mispheres. The broad surfaces of bone forming the knee joint, for instance, even if not held to- gether by ligaments, could not, while the capsules surrounding the joint remain air-tight, be separat- ed by a force of less than about 100 Ibs. In the loose joint of the shoulder, this support is of greater consequence. When the shoulder or other joint is dislocated, there is no empty space left, as might be supposed, but the soft parts around are pressed in to fill up the natural place of the bone. When a thigh bone is dislocated the deep socket called the acetabulum instantly becomes like a cupping glass, and is tilled partly with fluid and partly with the soft solids. In all joints it is the atmospheric pressure which keeps the bones in such steady contact that they work smoothly and without noise.

14. A quantity of air or gas shut up in any vessel, and compressed, is equally affected throughout, and its tendency to escape from the pressure is equal in all directions, as is proved by the force necessary to keep similar valves close wherever placed. Hence the hydrostatic press and hydrostatic bellows, which depend for their action on this law, may be worked by air or gas, as they are by a liquid. Owing to this law, air, when allowed, will always rush from where there is more to where there is less pressure. The suddenness with which any com- pression made on part of a confined aeriform fluid is communicated throughout the whole is strikingly seen in the simultaneous increase in light of all the gas burners over an extensive building, or even over a town, at any instant when the force supplying the gas is augmented.

15. It must be observed, in this place, that very great condensation requires great force, and therefore small syringes. It is therefore conve- nient to have them of various sizes, and to begin with those of a larger diameter which operate more quickly, and when the condensation be- comes fatiguing to change the syringe for a smaller. For this reason, and in general to make the condensing apparatus more convenient, it is proper to have a stop-cock interposed between the syringe and the vessel, or as it is usually call- ed the receiver. This consists of a brass pipe, which has a well-ground cock in its middle, and a hollow screw at one end, which receives the nozzle-screw of the syringe, and a solid screw at the other end, which fits the screw of the re- ceiver.

16. It is known that when air or any other elastic fluid is dilated, by enlarging the space in which it is enclosed, cold is produced. Messrs. Welter and Gay Lussac, who were engaged in researches concerning the heat disengaged by the gasses, when their volume is varied under very different pressures, discovered several important facts, one of the most singular of which is as follows : — The

air which escapes from a vessel by blowing through an aperture, under any pressure whatever, does not alter in temperature although it ex- pands on issuing from the vessel. Hence it should seem to result, that heat is produced in the blowing of the air, and that this heat is so much the more considerable as the difference of pressure producing the blast is greater, so that the heat exactly compensates for the cold pro- duced by expansion. This fact would explain the heat produced, when air enters into a vacuum, or into a space occupied by air at a less pres- sure. It would likewise explain why the blast of the Chremnitz machine, with a column of wa- ter produces cold, and freezes water, while the air of the Chaillot engines, where the pressure is invariable and equal to 2-6 atmospheres, does not alter the thermometer.

17. A great variety of experiments have been made to determine the elasticity of air. Those made by M. de Luc, general Roy, Mr. Trembly and Sir George Shuckbourgh, are by far the most accurate ; but they are all confined to a very moderate degree of rarefaction. The gene- ral result has been that the elasticity of rarefied air is very nearly proportional to its density. We cannot say with confidence that any regular deviation from this law has been observed, there being as

many observations on one side as on the other : but we think that it is not unworthy the attention of philosophers to determine it with precision in the cases of extreme rarefaction, where the irregularities are most remarkable. The great source of error has hitherto arisen from the adhesion of the mercury when the impelling forces are very small and other fluids can hardly be used, because they either coat the inside of the tube and diminish its capacity, or they are converted into vapor, which alters the law of elasticity.

18. Let us, upon the whole, assume the Boy- lean law, viz. that the elasticity of the air is pro- portional to its density. The law deviates not in any sensible degree from the truth in those cases which are of the greatest practical import- ance, that is, when the density does not much exceed or fall short of ordinary air.

19. Let us now see what information this gives us with respect to the action of the particles on each other. The investigation is extremely easy. A force eight times greater than the pressure of the atmosphere will compress common air into the eighth part of its ordinary bulk, and give it eight times its common density ; and in this case we know that the particles are at half their for- mer distance, and that the number which are now acting on the surface of the piston employ- ed to compress them are quadruple the number which act on it when it is of the common den- sity. Therefore, when the eightfold compressing force is distributed over a four-fold number of particles, the portion of it which acts on each is double. In like manner, when a compressing force of twenty-seven is employed, the air is compressed into one twenty-seventh of its former bulk, the particles are at one-third of their for- mer distance, and the force is distributed among nine times the number of particles : the force on each is therefore three.

In short, let – be the distance of the particles, x

the number of them in any given vessel, and therefore the density, will be as j3, and the num- ber pressing by their elasticity on its whole inter- nal surface will be as x*. Experiment shows that the compressing force is as x3, which, being distributed over the number as x2, will give the force on each as x. Now this force is in imme- diate equilibrium with the elasticity of ‘the par- ticles immediately contiguous to the compressing surface. This elasticity is therefore as x: and it follows from the nature of perfect fluidity, that the particle adjoining to the compressing surface presses with an equal force on its adjoining par- ticles on every side. Hence we must conclude that the corpuscular repulsions, exerted by the adjoining particles, are inversely as their distances from each other, or that the adjoining

particles tend to recede from each other with forces in- versely proportional to their distances.

20. Sir Isaac Newton was the first who rea- soned in this manner from the phenomena. In- deed he was the first that had the patience to re- flect on the phenomena with any precision. His discoveries in gravitation naturally gave his thoughts this turn, and he very early hinted his suspicions that all the characteristic phenomena of tangible matter were produced by forces which were exerted by the particles at small and insen- sible distances : and he considered the pheno- mena of air as affording an excellent example of this investigation, and deduced from them the law which we have now demonstrated ; he says that ‘ air consists of particles which avoid the adjoining particles with forces inversely propor- tional to their distances from each other.’ From this he deduces (in the second book of the Prin- cipia) several beautiful propositions, determining the mechanical constitution of the atmosphere. But it must be noticed that he limits this action to the adjoining particles, and this is a remark of immense consequence, though not attended to by the numerous experimenters wjio adopt the law. It is plain that the particles are supposed to act at a distance, that this distance is variable, and that the forces diminish as the distances in- crease. -A very ordinary air-pump will rarefy the air 125 times. The distance of the particles is now five times greater than before ; and yet they still repel each other ; for air of this density will still support the mercury in a syphon-gage at the height of 0-24 or ˆ of an inch ; and a better pump will allow this air to expand twice as much, and still leave it elastic. Thus we see that, whatever is the distance of the particles of common air, they can act five times farther off. The question now becomes whether, in the state of common air, they really do act five times far- ther than the distance of the adjoining particles ; while the particle a acts on the particle 6 with the force 5, does it also act on the particle c with the force 2-5, on the particle d with the force 1-669, on the particle e with the force 1-25, on the par- ticle/with the force 1, on the particle g with the force 0-8333, &c.

21. Sir Isaac Newton shows, in the plainest manner, that this is by no means the case ; for if this were the case, he makes it appear that the

sensible phenomena of condensation would be totally different from what we observe. The force necessary for a quadruple condensation would be eight times greater.

22. If we could suppose that the particles of air repelled each other with invariable forces at sul distances within some small or insensible li- mit, this would produce a compressibility and dasticity similar to what we observe. For if we Consider a row of particles, within this limit, as compressed by an external force applied to the two extremities, the action of the whole vow of the extreme points would be proportional to the number of particles, that is, to their distance in- versely, and to their density : and a number of such parcels, ranged in a straight line, would constitute a row of any sensible magnitude, having the same law of compression. But this law of corpuscular force is unlike every thing we observe in nature, and to the last degree im- probable.

23. We must therefore continue the limitation of this mutual repulsion of the particles of air, and be contented for the present with having established it as an experimental fact, that the adjoining particles of air are kept asunder 'by forces inversely proportional to their distances ; or perhaps it is better to abide by the sensible law that the density of air is proportional to the compressing force. This law is abundantly suf- ficient for explaining all the subordinate pheno- mena, and for giving us a complete knowledge of the mechanical constitution of our atmo- sphere.

24. The air-pump, with some of its most im- portant experimental illustrations, must now be adverted to.

25. We have seen that the common AiR-Puwp, as described under that article, is materially de- fective in the principle on which its valves are constructed, so that it ceases to operate long ere a perfect vacuum is formed jn the receiver. It may now, however, be advisable to examine an instrument contrived by Mr. Stiles, the ingenious mathematical' instrument maker to the London Institution ; which unites in a very eminent de- gree all the advantages of those that have hitherto been constructed, with the very important desi- deratum of performing exactly twice the work of a common double-barrel pump.

26. Fig 1, plate I., PNEUMATICS, represents a section of the principal parts of the pump, from which it will be seen that it is worked in the usual way, by means of a winch with a wheel and racks ; this part, therefore, requires no explanation. But to the end of each rack is firmly attached, by means of the connecting pieces of brass marked a, a, the cylindrical rods b, b, passing through the collars of leather, c, c, which have reservoirs of oil in the cups above them, for the purpose of more effectually render- ing them air-tight. The pistons, d, d, are solid, having no valve in them, and consist of discs of leather steeped in oil

and tallow, and screwed up fast between their shoulders ; they are then turned to fit the bore of the barrels.

27. The positions assumed by them as shown in the section must next be attended to. The one in Barrel A is shown nearly at the end of its as-

cending stroke, while the piston in barrel B in equidistant from the bottom in its descending motion; the piece C is fitted in between the caps which contain the collars of leathers, and it screwed firmly to them. The barrel B is with- drawn from its cap E, in order to explain the mode of connexion between the cap and the bar- rel, as each cap, D and E, is similarly fastened by screws, placed at convenient distances, to the flanges of the respective barrels A and B. The angular perforated passages, e, e, as seen in the piece C, communicate with the main inlet pipe or passage' from the receiver; the one leading into barrel B is seen open, and allows a free and unobstructed way for the air to enter above the piston d, in its descending stroke, as marked by the darts pointing downwards ; while the air is also passing down the pipe F, whose connexion with the piece C is more clearly shown in the perspective view of the instrument, and through the horizontal way or channel communi- cating with barrel A, as shown by the letters f,f. Here the air passes through an oiled silk valve, which consists of a brass valve piece, having a hole perforated through its centre, and a small groove or nick cut in the upper part ; a piece of oiled silk is strained over its surface, and secured by silk thread twisted round in the groove ; this piece, with the valve, is shown in the bottom of barrel A, opening upwards, permitting the air to enter beneath the piston in its ascending motion, as shown by the darts pointing in that direction. Having thus traced the inlet ways to the top of barrel B, and bottom of barrel A, we may now describe the mechanism by means of which the top inlet valves are connected with their respective barrels. The valves we are now about to describe consist of the two metallic cy- linders F and G, the first being closed, and G, which is shown open ; the rods or cylinders pass through the small collars of leather, g, g, with an oil cup to each cap, as shown by the curved lines above them ; which caps may be screwed up when requisite in order to press the collars o, leather closer, and render them air-tight ; the cy- lindrical valves or rods are kept in the vertical position by passing through a piece of brass, which is attached by means of screws to the under side of the head of the pump marked H; to this piece are attached two levers I and K, revolving upon the steel pins of the milled headnuts h, h. The levers work in a mortice cut to receive them in that part of the piece H shown by the letters i, i. Attached to one end of each of those levers are seen the small steel screws /c, k. Two small plates of brass I,

I (the front plate of each being only shown in the section), whose extremities are again attached by the screws m, m, to the pieces n, n, answer the purpose of sling rods for con- necting the motion here requisite for raising and depressing the cylinders or valves according to the alternate motion of the levers I and K. The pieces n, n, are perforated, and slide freely on the valves F and G. The way in which this alternate motion takes place may easily be ex- plained. On the back part, or opposite edge, of each toothed rack, as seen in fig. 2, re placed a plate of steel (fastened by small screws), the length of which is limited by the working stroke

of each piston, and projects on that side of each rack on which the levers are represented. The lever K is shown in the position with the valve G open, for permitting the air from the receiver to enter the top of barrel B, and the bottom of barrel A, as before described ; while the lever I, with the valve F, is seen as thrown down, closing the top inlet of barrel A. We shall now sup- pose the piston of barrel B to conclude its descent to the bottom, having expelled the air beneath, through the outlet valve s, and the piston of barrel A, its ascent to the top of the barrel ; the rods and racks will also pass through the same space, and, the moment the pistons reach their respective limits, the levers I and K are relieved from the opposite ends of the plates or fillets of steel ; the lever I, by the action of the spiral spring o, which is coiled round the cylindrical valve F, and pressing between the turned shoul- der p, and the under side of the perforated or sliding piece n, is then returned to an horizontal position. The lever K, by a like action, pro- duced by the spring q, which is also coiled round the cylindrical valve G, and pressing between the piece of brass H, and shoulder piece N, closes the cylindrical valve G by its pressure, and its lever K, of course, takes an horizontal position. By reversing the motion of the winch, for the next stroke of the pistons, the positions of those levers are again changed by the ends of the fillets of steel, placed on the back edge of the racks, coming in contact with their extremities; The lever I is thrown up in the direction of the dotted lines, carrying with it the cylindrical valve F, which is consequently opened, and a free access for the air to enter the barrel A, above the piston d, on its downward* motion, now takes place ; the valve f, placed at the bottom, closes, and the air received by it is expelled through the valve s, which is similar in construction with the valveˆ/”, but in this case opens outwards, while the lever K, in consequence of the ascending motion of the rack and the fillet of steel, must come into contact with its

extremity, and is thrown down on the spiral spring o, coiled round the cylindri- cal valve G, which still more effectually secures the valve in this position ; the return of the air by the upward motion of the piston being also prevented. The lever K will now be in the po- sition shown by the dotted lines, and the air re- ceived above the piston in its former downward stroke is thus expelled through the top outlet valve t, and passes through the side, or leading- off pipe L, in the direction as shown by the darts pointing downwards, and which commu- nicates with the same general outlet as the bot- tom discharging valves *, s. A reference fo the above description will show that while one barrel is discharging its contents by the upward motion of its piston, it is at the same time filling to dis- charge by the downward stroke. The other barrel is discharging by the downward action of the piston, and also filling through the ways described to discharge again by its upward motion, so that it performs the work of two pumps of the same capacity of barrel, constructed on the common principle. In addition to the above advantages, the mode of working the top inlet valves mecha- nic-ally, insures a much more perfect vacuum

than could otherwise be obtained. Thus, if we suppose the bottom inlet valves f,f, and also the discharging valves s, s, to have become leaky, by simply turning off the cock M we cut off' all communication between them and the receiver; the pump then becomes a single-acting pump, with all the advantages of the common instru- ment. If we now suppose the top valves to be bad, in order to cut them off, detach the centre screws It, h, from the levers 1 and K, permitting those parts to hang loose down by the sides of the cylindrical valves ; the spiral springs q, q, will then press those valves close down over the top angular inlet ways, and prevent the access o: air from the receiver above the piston. If we then open the cock M, which in the former case was closed, the pump may be worked from the bottom set of valves alone.

28. The air-pump offers a variety of very beautiful illustrations, tending to prove the ma teriality, weight, pressure, and elasticity of the atmosphere, some of which have already beei. detailed under the article AIR-PUMP.

29. There is a very ingenious air-pump for the use of persons suffering from suspended anima- tion that must here be noticed, as it combines the principle of the force-pump with that of the ex- hausting apparatus. Fig. 3 shows the interior of two pump cylinders, a and b, joined together, so that they make one body ; in each of these cylinders is placed a piston t, which are both by the piston-rod d (passing through the line e) at- tached to the handle f, by means of the

small screws g ; h is a discharging, i an introduction pipe, with an opening k; t are two leather elastic tubes, with a horn band m, in which band is attached a small Indian rubber pipe n ; o is an injection pipe with a moveable shield p, and q the screw to fix it ; r a blade.

30. As soon as the body is taken out of the water, the two elastic tubes n are dipped for a moment in warm water, bent as may be found necessary, and then placed to such a depth in the nose that the horn-bands m are half in the nos- trils, these bands being necessary to prevent the circulation through, the pipes being stopped, when the nostrils are held close by the hand of the operator. The pipe o is then put into the mouth, until the shield p is close to the lips ; the latter is shifted according to the size of the suf- ferer, and fastened by the screw q, so that the pipe may go the required depth into the mouth, with the blade r upon the tongue.

31. As soon as the breathing pump is placed in this position by the operator, who holds it iu the left hand, another person, B, must hold the nose and mouth air-tight round the pipe and tubes ; the handle of the piston is drawn upwards by the right hand of the operator, and immedi- ately both pistons rise to the top of the cylinder; upon this movement life valves s, u, shut, and t, v, open ; and while the cylinder a is filled, through the nose, with foul air from the lungs, the cylin- der b is filled with fresh or atmospheric ai through the introduction pipe i, the piston being pressed downwards, the valves s, u, are opened, and t, v, shout, and, while the foul air from the cylinder a is discharged through the pipe A, the atmospheric air by which the cylinder 6 was

filled, is pressed through the pipe o in the mouth, and consequently in*.o the lungs, and breathing will be immediately restored.

32. The operator ought to make the strokes as regular as the breath is usually drawn, and pro- per care must be taken that the stomach and breast be pressed every time the piston rises in the cylinder, in order to assist the discharge of the foul air.

33. If, at the commencement of the operation, there is reason to believe that the lungs are too heavily charged with foul air, the elastic Indian rubber tubes ought alone to be brought into the nose, and, while keeping the mouth air-tight with the hand, a few strokes will

immediately remove and discharge it. This operation will give room immediately for the fresh air to act with success by means of the pipe o, which must then be put into the mouth. Should it be wished to make an experiment to draw the foul air out by the mouth, and to introduce the fresh air through the nose, unscrew the pipe o and the tubes / ; then turn the pump so that the cylinder b is up, and a downwards ; the pipes and tubes are then replaced, so that / is joined to the cylin- der b, and o to a.

34. The valves are placed in such a manner between the screws at the bottom of the cylin- der, that they may easily be taken out and turned another way, as is shown in the drawing, so that they have different directions, and may act in either way, as is judged necessary. If it be wished to make a trial of purified air, the ap- paratus containing the air must be screwed into the opening k of the introduction pipe », the gas will immediately, by drawing the handle of the pumps upwards, float out of the apparatus into the cylinder a ; and in consequence, by the re- action of the pistons downwards, be introduced into the lungs ; and should the room where the operation is performed be too close, and filled by foul air, then take a long tube, and place the

funnel either out of the window, or into the next room, where the air is cool and fresh.

35. It will be perceived that the air-pump employed for pneumatic experiments depends for its efficacy entirely on the elastic quality in the air, by which, while there is any portion of air in the receiver and exhausting tube, that por- tion, however small, will expand and diffuse it- self equally through the barrel in addition to the space it before filled. It must be pretty evi- dent, with very little consideration, that by this process a perfect vacuum can never be produced under the receiver. For some air, however small the quantity be, must remain after every depres- sion of the piston. Let us, however, examine how nearly we may approach to a vacuum, or, more properly speaking, let us determine what degree of rarefaction may be effected, supposing the mechanical construction of the instrument we have described to be perfect, and no obstruc- tions to arise from circumstances merely practical.

36. At the commencement of the process the air which fills the receiver, exhausting tube, and barrel, is of the density of the external air; let its entire quantity in this state be called one. Let the capacity of the air barrel bear any proposed proportion to that of the receiver and tube ; sup- pose that it is one-third of their united magni- tudes, and therefore that it contains one-fourth of the air contained within

the valve in the entire apparatus. Upon the first depression of the piston this fourth part will be expelled, and three- fourths of the original quantity will remain. One- fourth of this will in like manner be expelled upon the second depression of the piston, which is equivalent to three-sixteenths of the original quantity, and consequently there remains in the apparatus nine-sixteenths of the original quantity. Calculating in this way, that one-fourth of what is contained in the apparatus is expelled at every descent of the piston, the following table will be easily computed : —

No. of Strokes.

1. . .

2. . .

3. . .

4. . . 5.

Air expelled at each Stroke.

16 ~~4 X 4 ‘ ‘ ‘ 9 _ 3×3 64 ~~4 X 4 X 4 27 _ 3×3×3 256 ~~ 4 X 4 x 4 X 4

81

3×3×3×3

1024 4×4×4×4×4

“4×4×4×4 243_3×3×3×3×3 1024 4 X4X4X4X4

37. The method by which the computation might be continued is obvious. The air expelled at each stroke is found by multiplying the air expelled at the preceding stroke by 3 and divid- ing it by 4 ; and the air remaining after each stroke is also found by multiplying the air re- maining after the preceding stroke by 3, and dividing it by 4.

38. It appears, by this computation, that after the fifth stroke the air remaining in the receiver is less than one-fourth of the original quantity. Less than one-fourth of this will remain after

the next five strokes, that is, less than one-six- teenth part of the original quantity. If we cal- culate that every five strokes extract three-fourths of the air contained in the apparatus, we shall then under-rate the rapidity of the exhaustion ; and yet, even at this rate, after thirty

strokes of the pump, the air remaining in the receiver would be only ˆ9S th part of the original quan- tity. The pressure of this would amount to about the sixteenth part of an ounce upon the square inch. It is evident that, by continuing the process, any degree of rarefaction which may

be desired can be obtained. For all practical purposes, therefore, a vacuum may be considered to be procured ; but, in fact, we are as far from having a real vacuum in the receiver as ever, for such is the infinitely expanding power of air, that the smallest particle will as completely fill the receiver and barrel as the most dense substance could ; that is to say, no part of the receiver or barrel, however small, will be found absolutely free from air, however long the process of ex- haustion may be continued.

39. With regard to the real amount of rarefac- tion, it may be proper to state that Mr. Nairne having been perplexed by the disagreement of the pear gauge and the common barometrical gauges, in their indications of the degree of ex- haustion in the receiver, was induced to under- take a series of experiments, in order to investi- gate the cause of the disagreement. He exhibited to the honorable Mr. Cavendish, Mr. Sraeaton, and other members of the Royal Society of Lon- don, an experiment in which this disagreement amounted to some thousand times, and Mr. Cavendish immediately furnished him with a sa- tisfactory explanation of the fact. ‘ It appeared,’ he said, ‘ from some experiments of his father, lord Charles Cavendish, that water, whenever the pressure of the atmosphere on it is diminished to a certain degree, is immediately turned into va- por, and is as immediately turned back again into water on restoring the pressure. This degree of pressure is different according to the heat of the water. When the heat is 72° of Fahrenheit’s scale, it turns into vapor as soon as the pressure is no greater than that of three-quarters of an inch of quicksilver, or about one-fortieth of the usual pressure of the atmosphere ; but when the heat is only 41° the pressure must be reduced to that of a quarter of an inch of quicksilver be- fore the water turns into vapor. Hence it fol- lows that, when the receiver is exhausted to the above-mentioned degree, the moisture adhering to the different parts of the machine will turn into vapor, and supply the place of the air, which is continually drawn away by the working of the pump, so that the fluid in the pear gauge, as well as that in the receiver, will consist in good measure of vapor. Now, letting the air

into the receiver, all the vapor within the pear gauge will be reduced to water, and only the real air will remain uncondensed ; consequently the pear gauge shows only how much real air is left in the receiver, and not how much the pressure or spring of the included fluid is diminished, and that equally, whether it consists of air or vapor.'

40. Now this ingenious explanation, which Mr. Nairne considered as perfectly satisfactory, contains the fundamental principle of producing artificial dryness and cold in the receiver of the air-pump, viz. that the evaporation from any wet body, and consequently its dryness, and the cold arising from evaporation, increases with the de- gree of exhaustion ; and, consequently, that arti- ficial dryness and artificial cold may be produced under the receiver of an air-pump.

41. In following out the valuable principle of Mr. Cavendish, Mr. Nairne placed several fluids and wet substances under the receiver. Three grains of water in a watch-glass lost one grain and a

half by evaporation in ten minutes; 100 grains of spirit of wine lost nine grains. Every sub- stance which he tried sustained a certain loss by evaporation, excepting sulphuric acid, which always gained, by absorbing the vapor exhaled from the wet part of the pump. Having thus ascertained that the exhaustion of the air pro- duced a rapid evaporation, and that the sulphuric acid absorbed the vapor thus exhaled, Mr. Nairne used this process for producing dry air in the receiver, in order to try the effect of the pass- age of the electric fluid through a dry and a moist atmosphere.

42. ' I now,' says he, ' put some sulphuric acid into the receiver, as a means of trying to make the remaining contents of the receiver, when exhausted, as much as possible to consist of permanent air only, unadulterated with vapor.' The consequence of this was, that the electrical phenomena were exhibited in the air which he had dried, and very imperfectly in air which he had made damp, by introducing a piece of wet leather, and removing the sulphuric acid.

43. The next step which Mr. Nairne takes is to produce artificial cold by the air-pump, and he gives an account of his experiment in the fol- lowing words : — ' Having lately received from my friend, Dr. Lind, some ether prepared by the ingenious Mr. Wolfe, I was very desirous to try whether I could produce any considerable degree of cold by the evaporation of ether under a receiver whilst exhausting. For this purpose I put the ether into a phial, the neck of which was sufficient to admit the ball of a thermometer ; this being placed on the air-pump, under a re- ceiver which had a plate at the top, with a wire

passing through a collar of leather ; to this wire the thermometer was fixed, by which means I could easily dip the ball of the thermometer into the ether.

44. ‘ The pump was now worked ; and, whilst the receiver was exhausting, the ball of the ther- mometer was often dipped into the ether; and, when the degree of exhaustion by the barometer gauge was 65° (which was the utmost in this case that the pump would exhaust to), the degree of cold indicated by the fall of the quicksilver in the thermometer was 48° below 0° on Fahren- heit’s scale ; so that there was a degree of cold produced 103° colder than the air in the room where the experiment was made, the thermome- ter in it being at 55° above 0°. The pump was

,kept continually working for half an hour, and the ball of the thermometer often dipped into the ether; but no greater degree of exhaustion or cold could be produced. The air being let into the receiver, the quicksilver in the thermometer rose 10°, viz. to 38° below 0°.

45. ‘ Fresh ether being put into the phial to what was remaining, the thermometer rose to 30° above 0° : the pump was then worked again constantly for half an hour ; yet by the barome- ter-gauge, the degree of exhaustion was now not more than 16°, and the degree of cold produced did not exceed 11° below 0°, as appeared by the quicksilver in the thermometer. The air being let into the receiver, the remaining ether was ex- amined, and there were found several pieces of ice at the bottom of the phial, some of them as

big as large peas, which, when the ether became nearly of the heat of 32°, or freezing point of water, were entirely dissolved.’

46. A very elegant hydro-pneumatic fountain may be formed by employing the air pump : the arrangement of the apparatus may be easily un- derstood. A brass plate is furnished with a re- ceiver made to fit air-tight, and the whole may be connected by a stop-cock placed beneath. If the receiver be now exhausted of air, the stop- cock turned, and the lower extremity of the tube immersed in a vessel of water, the moment a communication is opened with the receiver a jet of water will be seen to ascend in a continuous stream. There is another mode of producing the same effect, without the intervention of the air-

pump. To exhaust the receiver, in this appara- ratus, the lower part of the glass must, in the first instance, be filled with mercury, and a com- munication opened by a pipe with the cup of mercury ; if the pipe bo thirty inches in length, it is evident that the fluid metal must sink ; and as it descends a partial vacuum will be formed within the receiver. The air then pressing on the surface of the water will drive it up the per- pendicular tube, and a jet, exactly similar to the one already described, will be the result. That the air-spring causes it to expand when the ex- ternal pressure is reduced may now be rendered apparent by the air-pump. To effect this, we need only place an egg beneath the receiver, from which a piece of the shell has been broken at the small end, and it will be found, on rarefy- ing the air, that the small bubble of air contained in the large end, will, by its expansion, drive out the whole of the contents of the shell. A wither- ed apple, or any other fruit, placed beneath the receiver of the air-pump, will immediately ex- pand and appear perfectly fresh ; but they will return to their original bulk the moment that the air is re-admitted ; and a bladder about half fill- ed with air will expand, and in some cases burst, by a similar process, the moment, however, that we re-admit the air, it will return to its original size ; thus proving that no additional air was ad- mitted, but that the spring of that which it pre- viously contained produced the effect. This experiment may be varied by putting the blad- der in a frame, and placing weights upon it, which will be raised by the expansion of the en- closed air.

47. There is a very interesting experiment that may be easily performed with a common air- pump, which is intended to illustrate the facility with which fluids boil beneath an exhausted re- ceiver. If water, below 212° of Fahrenheit's thermometer, be placed on the pump-plate, and the air withdrawn, it will instantly boil, but on the readmission of air ebullition will cease. There is an experiment nearly analogous to this, which may be performed without the aid of an air- pump : if we half fill a Florence flask with water and place it over a lamp, letting it boil briskly for a few minutes, ami then cork the mouth of the flask as expeditiously as possible, it will be found, on removing the flask from the lamp, that ebullition will still continue. The ooiling may be afterwards renewed, by wrapping round the empty crupper part of the flask a cloth

wetted with cold water, or by gradually pourinef cold water upon its external surface ; but, if hot water be applied to the flask, the boiling instantly ceases. In this manner the ebullition maybe re- newed and again made to ceasn alternately by the mere application of hot and cold water.

48. One of the most striking and self-evident proofs of the materiality of air will be found in the resistance that it offers to the motion of any bodv whose surface is large. The sails of a ship and a wind-mill are affected in the same way as the minutest blade of grass ; and this will be equally apparent in the motion of smoke, and the devastating effecfs of the Africaner West In- dian tornado. When the air is at rest in a quiescent state we can move in it with the utmost facility; but when the motion is quick, or the surface extensive, as in the fly of a clock, its re- sistance then becomes obvious to the senses. To illustrate this fact a double fly, with vanes of un- equal size, is usually placed beneath the receiver of the air-pump, and so constructed that motion may be communicated when the air is withdrawn. When this is effected it is found that the fly that exposes a large surface to the action of the atmos- phere passes round as swiftly as the smaller vanes; but, on re-admitting the air, its velocity will be very much diminished if not altogether destroyed.

49. The utility of a fly in machinery mayr upon this principle, be very readily explained. A fly is an equaliser of motion, and, if we sup- pose that motion to be too quick, a larger sur- face is exposed to the resisting medium or air, and vice versa.

50. Another mode of showing the air's resist- ance by means of the air-pump may now be ad- duced ; it is well known that, bulk for bulk, fea- thers are lighter than gold; and, in proof of this, we find that if a feather and a guinea be dropped from the hand at the same time the latter will reach the ground first. If, however, the experi- ment be performed in vacuo, a very different re- sult is obtained. If we take a tall receiver furnished with a plate at the top, and provided with an apparatus for supporting and lowering a guinea and a feather at pleasure. When this is exhausted the guinea and feather may be dis- charged, and they will reach the bottom at the same instant of time ; thus proving that all bodies would descend to the earth from equal heights in equal times were it not for the resistance of the air. That bodies float in the air by which they are surrounded may also be shown by withdraw- ing a portion of the air from a large receiver, and we shall find that the weight of any enclosed body will be increased. The usual mode of ex- hibiting this is, to suspend a bunch of feathers at one end of a beam of a delicate balance, and attach a piece of lead of equal weight at the other. IS'ow it will be evident that the bulk of the feathers must be greater than that of the lead, and, as such, that their buoyancy must be the greatest; so that ort withdrawing the air they will cease to float in equilibrio, the feathers will descend, the equilibrium will be destroyed, and we shall find that one of the lightest substances there is will apparently become the heaviest. The

exceeding minuteness of the particles of

which air is composed, may readily be shown I>y placing a brass plate upon an open receiver and forcing a plug of dry wood through its centre, so that the end may be immersed beneath a vessel of water. If the receiver be now exhausted, bubbles of air will be seen rapidly rising through the water, having previously passed through the pores of the wood. In proof of this, the ebulli- tion may be immediately and entirely stopped, by closing the aperture ; and, if this be effected with the thumb, it may be afterwards withdrawn and the motion renewed. A nearly similar ef- fect may be produced by merely immersing a piece of marble in water, as, on placing it beneath an exhausted receiver, its whole surface will be found studded with bubbles of air, which have passed through a variety of minute pores in its apparently solid surface.

51. The ‘ Bacchus apparatus’ is usually em- ployed as an amusing mode of illustrating the action of the lungs-glass. The figure is seated on a cask, with a tube proceeding from the mouth of the barrel; this is filled with red wine or colored water, so that being put under a re- ceiver when the air is exhausted, the liquor is thrown up to his mouth by the expansion of the air which is thus imprisoned, and the deity seems to be at his usual employment. While he is drinking his stomach expands, which is effected by a bladder containing a small quantity of air concealed under his external silk covering. See fig. 4, plate I., PNEUMATICS.

52. There is an exceedingly beautiful philo- sophical toy, of which the action depends chiefly on the elasticity of the air. It is a small balloon or thin globe of glass, having an opening at the bottom, and a small car or basket hanging to it. If put to float in water, while the globe contains air only, it is so light that half of it remains above the surface ; but water may be introduced to adjust the specific gravity so that it may be only a little less than that of water. If such a bal- loon be placed in a tall jar of water, the mouth of which is closely covered by bladder, or India rubber tied upon it, or pressing such covering with the hand, the balloon will immediately descend in the water, it will rise again when the pressure ceases, and will float about, rising, or falling, or standing still according to the pressure made. The reason of this is, that the pressure on the top of the jar immediately condenses the air be- tween the surface of the water and the cover ; this

condensation acts upon the water below, and, by influencing it through its whole extent, compresses also the air in the balloon or globe, and forces just as much more water into it as will render the balloon heavier than water, and therefore heavy enough to sink. As soon as the pressure ceases, the elasticity of the air in the balloon repels again the lately entered water ; and the machine then becoming lighter than water ascends to the top. If the balloon be ad- justed to have a specific gravity nearly that of water, it will not rise of itself after once reach- ing the bottom, because the pressure of the water then above it will perpetuate the condensation of the air which caused it to descend ; it may even then however be made to rise again, by in- clining the water jar to one side, so that the per-

pendicular height of water over it shall be dimi- nished.

53. This toy proves many things — the mate- riality of air, by the pressure of the hand being communicated to the water below through the air in the upper part of the jar — the compressi- bility of air, by what happens in the globe just before it descends — the elastic force of air when, on the pressure ceasing the water is again ex- pelled from the globe — the lightness of air in the buoyancy of the globe — it shows that in a fluid the pressure is in all directions, because the effects happen in whatever position the jar be held — it shows that the pressure is as the depth, because, a less pressure of the hand is required the farther that the globe has descended in the water — and it exemplifies many circumstances of fluid support.

M. A very important pneumatic engine, in- tended to raise water by the pressure of the at- mosphere, must now be noticed. It is repre- sented at fig. 5, plate I., PNEUMATICS. z n is a beam, capable of vibrating upon a centre ; a and b two chambers, formed of metal, of sufficient strength to resist the pressure of the at- mosphere (about fourteen pounds to the square inch) upon its external surface, and having the caps, o, p, suspended, one at each end of the beam, capable of closing each of these chambers in an air-tight manner. The chamber b is shown in section.

55. At c and d are two pipes, containing valves opening upwards, leading and affording a communication from the vessels w and k. These contain floats, r, e, attached to the beam z n by rods, which receive motion from the floats ; to these rods are attached the slides k, h, to close alternately, at each vibration of the beam, the small apertures. The pins attached to one of the rods from the floats give motion to the small vibration tube v, which, by the rods at- tached to the cranks in the chamber, alternately opens and closes the pipes

communicating with the vessels a and b.

56. e is a pipe leading from the gasometer, branching off at e e into the two chambers « and t>, for the purpose of supplying the gas that is to be consumed in effecting the vacuum. This supply can be admitted or shut off by means of the small cocks, which open and close by cranks worked by the movement of the beam.

57. There are two other branch pipes, supplied with gas from the gasometer, and ending in a jet at each end. By the slanting directions of the ends, it is evident that the flames from these jets will, when their respective orifices A, A, be open, protrude into the chambers a and b. There are two pipes, affording a communication from the outer air to the interior of each of the chambers a and b ; their outer ends are ca- pable of being closed by means of the cranks z, z, which are attached by chains to the floats f, /. The mode of operation consists in al- lowing the gas to pass from the gasometer along one of the branches of the pipe e e, and thence into either of the chambers, where, by the jet of ignited gas playing in the orifice A, it becomes ignited, and by its combustion rare-

fies and expels a considerable portion of the at- mospheric air from that chamber. Suppose now the cap of the chamber be put down, and, by the movement of the rod attached to the float, the orifice h and gas pipe be closed, the combustion will immediately cease, and leave therein a partial vacuum. The atmosphere, beginning now to press upon the vessel, will cause so much of the water to pass from it into the chamber d as will nearly compensate the vacuum, when the valve through which the water passed being closed, and a communication between the inte- rior of the chamber and the open air effected by the small opening, the water contained in the chamber flows thence through the aperture, and affords power by its fall and weight on an overshot water-wheel. Thence it passes to the lower vessel, and finally is admitted by a. pipe into the cistern, leaving the engine in a condition to renew the operation. It will be seen that, when the cap of one chamber closes, the several openings to the same chamber close with it; and, by the rising of the other end of the beam, the similar openings to the other chamber are opened, and prepared for a like operation. It will also be seen that the production of this mo- tion is attained by the rising of the two floats in the opposite chambers.

58. The advantages to be derived from this engine, as detailed in the descriptive outline of the inventor, are.

• 59. First, The quantity of gas consumed being very small, the expense of working the engine is moderate. In its application on land the saving will be extremely great, the cost of the coal gas (deducting the value of the coke) being inconsi- derable. The expense of working a marine en- gine will certainly be greater, as the gas used for that purpose must be extracted from oil, resin, tar, or some other substances equally portable ; yet, even in this case, it will not equal the cost of the fuel required to propel a steam boat : and, as a few butts of oil will be sufficient for a long voyage, vessels of the largest tonnage may be propelled to the most distant parts of the world.

60. Secondly,- The engine is light and portable in its construction, the average weight being less than one-fifth of the weight of a steam-engine (and boiler) of the same power. It also occu- pies a much smaller space, and does not require the erection of so strong a building, nor of a lofty chimney. In vessels, the saving of tonnage will be highly advantageous, both in the smaller comparative weight and size of engine, and in the very reduced space required for fuel.

61. Thirdly, This engine is entirely free from danger : no boiler being used, explosions cannot take place ; and as the quantity of gas consumed is so small, and the only pressure that of the atmosphere, it is impossible that the cylinder can burst, or the accidents incident to steam boats occur. The power of the engine (being derived from the atmospheric pressure often pounds and upwards upon the square inch) may be in- creased with the dimensions of the cylinders to any extent, and always ascertained by a mercu- rial gauge.

62. It is scarcely necessary to allude to the well known fact, that, after the deduction, the

friction arising from the use of the air and cold water pumps, &c., the general available power of the condensing steam engine is little more than two-thirds of its estimated amount. The cost of the machine will be less, particularly as constructed for raising water ; it is therefore pe- culiarly adapted for draining fens, &c., or supply- ing reservoirs. The expense of wear and tear will also be considerably less than that of the steam engine, and, when occasionally out of order, it may be repaired at a trifling cost, and with but little delay.

63. In examining the effects of this engine, we cannot to a certain extent withhold our approba- tion ; for the patentee has undoubtedly

effected and applied a vacuum, produced by ignition, in a manner much more manageable than by the ordinary process. The probability of its enter- ing efficiently into competition with steam power is a question that requires the data of experience, which, in the present state of the invention, can hardly be procured.

64. Having in the preceding pages fully ex- amined the weight and pressure of the atmo- spheric fluid that surrounds our globe, we may now consider the motions of which air is sus- ceptible when the equilibrium of pressure (whe- ther arising from its weight or its elasticity) is removed.

65. In this consideration we shall avoid the extreme of generality, which renders the discus- sion too abstract and difficult, and adapt our investigation to the circumstances in which compressible fluids (of which air is taken for the representative) are most commonly found. We shall consider air, therefore, as it is commonly found in accessible situations, as acted on by equal and parallel forces; and we shall consider it in the same order in which water is treated in a system of hydraulics.

66. In that science the leading problem is to determine with what velocity the water will move through a given orifice when impelled by some known pressure; and it has been found that the best form in which the most difficult and intricate proposition can be put is to determine the velocity of water flowing through this orifice when iinpelled by its weight alone. Having de- termined this, we can reduce to this case every question which can be proposed ; for, in place of the pressure of any piston or other mover, we can always substitute a perpendicular column of water or air whose weight shall be equal to the given pressure.

67. The first problem, therefore, is to deter- mine with what velocity air will rush into a void when impelled by its weight alone. This is evidently analogous to the hydraulic problem of water flowing out of a vessel. And here we must be contented with referring our readers to the solutions which have been given of that, problem, and the demonstration that it flows with the velocity which a heavy body would ac- quire by falling from a height equal to the depth of the hole under the surface of the water in the vessel. In whatever way we attempt to demon- strate that proposition, every step, nay, every word, of the demonstration applies equally to the air, or to any fluid whatever. Or, if our

readers should wish to see the connexion or analogy of the cases, we only desire them to re- collect an undoubted maxim in the science of motion, that, when the moving force and the matter to be moved vary in the same proportion, the velocity will be the same. If, therefore, there be similar vessels of air, water, oil, or any other fluid, all of the height of a homogeneous atmo- sphere, they will all run through equal and similar holes with the same velocity ; for, in what- ever proportion the quantity of matter moving through the hole is varied by a variation of den- sity, the pressure which forces it out by action in circumstances perfectly similar, varies in the same proportion by the same variation of density.

68. We must, therefore, assume it as the lead- ing proposition, that air rushes from the atmo- sphere into a void with the velocity which a heavy body would acquire by falling from the top of a homogeneous atmosphere.

69. All the modifications of motion which are observed in water conduits take place also in the passage of air through pipes and holes of all kinds. There is the same diminution of quan- tity passing through a hole in a thin plate that is observed in water. We know that (abating the small effect of friction) it issues with a velocity similar to that acquired by falling from the sur- face ; and yet if we calculate by this velocity and by the area of the orifice, we shall find the quan- tity deficient nearly in the proportion of sixty- three to 100. This is owing to the water pressing towards the orifice from all sides, which occasions a contraction of the jet. The same thing happens in the efflux of air. Also the mo- tion of water is greatly impeded by all contrac- tions of its passage.

70. It requires, therefore, an increase of pres- stire to force it through them, and this in pro- portion to the squares of their velocities. Thus, if a machine working a pump causes it to give a certain number of strokes in a minute, it will deliver a determinate quantity of water in that time. Should it happen that the passage of the water is contracted to one-half in any part of the machine (a thing which frequently happens at the valves), the water must move through this contraction with twice the velocity that it has in the rest of the passage.

71. This will require four times the force to be exerted on the piston. Nay, if no part of the passage is narrower than the barrel of the pump, but, on the contrary, a part much wider, and if ihe conduit be again contracted to the width of the barrel, an additional force must be

applied to the piston to drive the water through. It will require a force equal to the weight of a column of water of the height necessary for communi- cating a velocity the square of which is equal to the difference of the squares of the velocities of the water in the wide and narrow parts of the conduit.

72. The same thing takes place in the motion of air, and therefore all contractions and dilata- tions must be carefully avoided, when we wish to preserve the velocity unimpaired. Air also suffers the same retardation in its motion along pipes. By not knowing, or not attending to this circumstance, many engineers have been disap-

pointed in their expectations of the quantity of air which will be delivered by long pipes. Its extreme lightness of air hindered them from sus- pecting that it would suffer any sensible retarda- tion. Dr. Papin, a most ingenious man, proposed that as the most effectual method of transferring the action of a moving power to a great distance. Suppose, for instance, that it was required to raise water out of a mine by a water machine, and that there was no fall of water nearer than a mile's distance. He employed this water to drive a piston, which should compress the air in a cylinder communicating by a long pipe with another cylinder at the mouth of the mine. This second cylinder had a piston in it whose rod was to give motion to the pumps at the mine. He expected, that as soon as the piston at the water- machine had compressed the air sufficiently, it would cause the air in the cylinder at the mine to force up its piston, and thus work the pumps, Dr. Hooke made many objections to the method, when laid before the Royal Society ; and it was much debated there. But dynamics was at that time an infant science and very little understood, and Newton had not then taken any part in the business of the society. Notwithstanding Pa- pin's great reputation as an engineer and me- chanic, he could not bring his scheme into use in England ; but afterwards in France and in Germany, where he settled, he got some persons of great-fortune to employ him in this project ; and he erected large machines in Auvergne and Westphalia for draining mines. But, so far from being effective machines, they would not even begin to move. He attributed the failure to the quantity of air in the pipe of communica- tion, which must be condensed before it can con- dense the air in the remote cylinder. This indeed is true. He therefore diminished the size of this pipe, and made his water machine exhaust instead of condensing, and had no doubt but that the immense velocity with which air rushes into a void would make a rapid and effectual communication of power. But he was equally disappointed here, and the machine at the mine stood still as before.

73. Near a century after this a very intelligent engineer attempted a much more feasible thing of this kind at an iron foundry in Wales. He erecteu a machine at a powerful fall of water, which worked a set of cylinder bellows, the blow pipe of which was conducted to the distance of a mile and a half, where it was applied to a blast furnace. But, notwithstanding he took every care to make the conducting pipe air-tight, above ten minutes elapsed after the action of the pistons in the bellows, before the least wind could be perceived at the end of the pipe ; whereas the engineer expected, an interval of six seconds only.

74. No very distinct theory can be delivered on this subject ; but we may derive considerable assistance in understanding the causes of the ob- struction to the motion of water in long pipes, by considering what happens to air. The elasti- city of the air, and its great compressibility, have given us the most distinct notions of fluidity in general, proving, in a way that can hardly be controverted, that the particles of a fluid are kept

at a distance from each other, and from other bodies, by their corpuscular forces.

75. The writers on hydrodynamics have al- ways considered the obstruction to the motion of fluids along canals of any kind as arising from something like the friction by which the motion of solid bodies on each other is obstructed; but we cannot form to ourselves any distinct notion of resemblance, or even analogy between them. The fact is, however, that a fluid running along a canal has its motion obstructed ; and that this obstruction is greatest in the immediate vicinity of the solid canal, and gradually diminishes to the middle of the stream. It appears, therefore, that the parts of fluids can no more move among each other than among solid bodies, without suf- fering a diminution of their motion. The parts, in physical contact with the sides and bottom, are retarded by these immoveable bodies. The particles of the next stratum of the fluid cannot preserve their initial velocities without passing the particles of the first stratum ; and it appears from the result that they are thus retarded. They retard in the same manner tire particles of the third stratum, and so on to the middle stra- tum. This sort of friction is not a consequence of rigidity alone, as in solids, but that it is equally a property of fluids. Nay, since it is a matter of fact in air, and is even more remarkable there than in any other fluid, as we shall see by the experiments which have been

made on the sub- ject ; and as our experiments on the compres- sion of air show us the particles of air ten times nearer to each other in some cases than in others (viz. when we see air 1000 times denser in these cases), and therefore force us to acknowledge that they are not in contact ; it is plain that this obstruction has but little analogy to friction, which supposes roughness or inequality of surface. No such inequality can be supposed in the sur- face of aerial particle ; nor would it be of any service in explaining the obstruction, since the particles do not rub on each other, but pass each other at some small and imperceptible distance.

76. We must therefore have recourse to some other mode of explication. We shall apply this to air only in this place ; and, since it is proved by the incontrovertible experiments of Canton, Zimmerman, and others, that water, mercury, oil, &c., are also compressible and perfectly elastic, the argument from this principle, which is conclu- sive in air, must equally explain similar pheno- mena in hydraulics.

77. The most highly polished body which we know may be considered as possessing an uneven surface when we compare it with the small spaces in which the corpuscular forces are exerted ; and a quantity of air moving in a polished pipe may be compared to a quantity of small shot sliding down a channel with undulated sides and bot- tom. The row of particles immediately conti- guous to the sides will therefore have an undu- lated motion : but this undulati Jn of the contiguous particles of air will not be so great as that of the surface along which they glide ; for not only does every motion require force to produce it, but also every change of motion. The particles of air resist this change from a rectilineal to an undulative motion ; and, being elastic, that is,

repelling each other and other bodies, they keep a little nearer to the surface as they are passing over the eminence, and their path is less incur- vated than on the surface. The difference be- tween the motion of the particles of air and the particles of a fluid quite inelastic is, in this re- spect, somewhat like the difference between the motion of a spring carriage and that of a com- mon carriage.

78. When the common carriage passes along a road not perfectly smooth, the line described by the centre of gravity of the carriage keeps perfectly parallel to that described by the axis of the wheels, rising and falling along with it. Now let a spring body be put on the same wheels and pass along the same road. When the axis rises over an eminence of perhaps half an inch, and sinks down again into the next hollow, and then rises a second time, and so on, the centre of gravity of the body describes a much straighter line ; for, upon the

rising of the wheels, the body resists the motion and compresses- the springs, and thus remain's lower than it would have been had the springs not been interposed. In like manner it does not sink so low as the axle does when the wheels go into a hollow. And thus the motion of a spring-carriage becomes less vio- lently undulated than the road along which they pass. This illustration will, we hape, enable the reader to conceive how the deviation of the particles next to the sides and bottom of the ca- nal from a rectilineal motion is less than .that of the canal itself.

79. It is evident that the same reasoning will prove that the undulation of the next row of par- ticles will be less than that of the first : that the undulation of the third row will be less than that of the second, and so an. And. thus it appears, that, while the mass has a progressive motion along the pipe or canal, each particle is describ ing a waving line, of which a line parallel to thh direction of the canal is the axis, cutting all these undulations. This axis, of each undulated path, will be straight or curved as the canal is; and the excursions of the path on each side of its axis will be less and less as the axis of the path is nearer to the axis of the canal.

80. Let us now see what sensible effect this will have ; for all the motion which we here speak of is imperceptible. It is demonstrated in machines that if a body, moving with any velo- city, be deflected from its rectilineal path by a curved and perfectly smooth channel, to which the rectilineal path is a tangent, it will pro- ceed along this channel with undiminished velo- city. Now the path, in the present case, may be considered as perfectly smooth, since the par- ticles do not touch it.

81. It is one of the undulations only which we are considering, and we may at present conceive this as without any subordinate inequalities. There should not, therefore, be any diminution of the velocity. Let us grant this of the absolute velocity of the particle ; but what we observe in the velocity of the mass is different, and we may judge of it by the motion of a feather carried along witli the air. Let us suppose a single atom to be a sensible object, and let us attend to two such particles, one at the side and the other in the

middle: altriough we cannot perceive the undu- lations of these particles during their progressive motions, we see the progressive motions them- selves. Let us suppose that the middle particle has

moved without any undulation whatever, and that it has advanced. The lateral particle will also have moved ten feet; but this has not been in a straight line. It will not be so far ad- vanced, therefore, in the direction of the canal ; it will be less behind, and will appear to us to have been retarded in its motion : and, in like manner, each series of particles will be more and more retarded (apparently only) as it recedes farther from the axis of the canal, and what is usually called the thread of the stream.

82. And, as has been already stated, this change of place is shown to be a necessary consequence of what we know to be the nature of a compres- sible or elastic fluid ; and that without suppos- ing any diminution in the real velocity of each particle, there will be a diminution of the velo- city of the sensible threads of the general stream, and a diminution of the whole quantity of air which passes along it during a given time.

83. Let us now suppose a parcel of air im- pelled along a pipe, which is perfectly smooth, out of a larger vessel, and issuing from this pipe with a certain velocity, it requires a certain force to change its velocity in the vessel to the greater velocity which it has in the pipe. This is abundantly demonstrated. How long soever we suppose this pipe, there will be no change ir the velocity, or in the force to keep it up. But let us suppose that about the middle of this pipe there is a part of it which has suddenly got an undulated surface, however imperceptible. Let us further suppose that the final velocity of the middle thread is the same as before. In this case it is evident that the sum total of the mo- tions of all the particles is greater than before, because the absolute motions of the lateral par- ticles is greater than that of the central particle, which we suppose the same as before. This ab- solute increase of motion cannot be without any increase of propelling force : the force acting now, therefore, must be greater than the force acting formerly. Therefore, if only the former force had continued to act, the same motion of the central particle could not have been preserved, or the progressive motion of the whole stream must be diminished.

84. And thus we see that the insensible un- dulations become a real obstruction to the sensible motion which we observe, and occasions an ex- pense of power.

85. Let us see what will be the consequence of extending this obstructing surface further along the canal. It must evidently be accompanied by an augmentation of the motion produced, if the central velocity be still kept up ; for the par- ticles which are now in

contact with the sides do not continue to occupy that situation : the mid- dle particles moving faster forward get over tnem, and in their turn come next the side ; and as they are really moving equally fast, but not in tne direction into which they are now to be forc- ed, force is necessary for changing the direction aiso ; and this is in addition to the force neces- sary for producing the undulations already so

minutely treated of. The consequence of this must be, that additional force will be necessary for preserving a given progressive motion in a larger pipe, and that the motion produced in a pipe of greater length, by a given force, will be less than in a shorter one, and the efflux will be diminished.

86. There is another consideration which must have an influence here. Nothing is more certainly demonstrable than the necessity of an additional force for producing an efflux through any contraction, even though it should be suc- ceeded by a dilatation of the passage. Now both the inequalities of the sides and undulations of the motions of each particle are equivalent to a succesion of contractions and dilatations ; although each of these is next to infinitely small, their number is also next to infinitely great, and therefore the total effect may be sen- sible.

87. We have hitherto supposed that the absolute velocity of the particles was not diminished: This we did, having assumed that the interval of each undulation of the sides was without inequalities. But this was gratuitous ; it was also gratuitous that the sides were only undulated. We have no reason for excluding angular asperities. These will produce, and most certainly often do produce, real diminutions in the velocity of the contiguous particles ; and this must extend to the very axis of the canal, and produce a diminution of the sum total of motion : and, in order to pre- serve the same sensible progressive motion, a greater force must be emplojed. This is all that can be meant by saying that there is a resistance to the motion of air through long pipes.

88. There remains another cause of diminu- tion, that is, the want of perfect fluidity, whe- ther arising from the dissemination of solid par- ticles hi a real fluid, or from the viscidity of the fluid. We shall not insist on this at present, because it cannot be shown to obtain in air, at least in any case which deserves consideration.

89. What has been said on this subject is suf- ficient for the purpose of

illustrating the retard- ation of air when passing through long and narrow pipes. We are able to collect an im- portant maxim from it, viz. that all pipes ot communications should be made as wide as cir- cumstances will permit ; for it is plain that the force to OTercome it must be in proportion to the mass of matter which is in motion. The first increases as the diameter of the pipe, and the last as the square. The obstruction must there- fore bear a greater proportion to the whole mo- tion in a small pipe than in a large one.

90. Mr. Hachette has just published a very important paper illustrative of the flowing of aeriform fluids into the atmosphere, and on the combined action of th€ striking of the air and of the atmospherical pressure. Mr. H. commences by observing ‘ that the flowing of aeriform fluids into atmospheric air has recently offered several phenomena deserving the attention of philoso- phers. I shall adduce in the first place a very curious observation of Messrs. Gay Lussac and Welter, communicated to the Institute the 29th of April 1822, and published in the Annales, tome xix. p. 436. They have confirmed tliiˆ very

remarkable fact, that the air which escapes from a vessel by blowing through an aperture under any pressure whatever, does not alter in tempe- rature, although it expands on issuing from the vessel.’ From this they have deduced the expla- nation of two other facts, well known, observed at Schemnitz in Hungary, and at Cliaillot, near Paris. The wind or blast of the columnar ma- chine at Schemnitz produces a degree of cold which freezes water even in summer ; whilst the blast from the reservoir of air of the Cliaillot engine, which is obtained under a constant pres- sure of two atmospheres and a half, scarcely affects the most sensible thermometer in the same season.

91. This explanation, still but little known, would perhaps be contested if it were not con- firmed by the experiments of the artificial con- gelation of water, the analysis of which we are now about to otfer, and which is obtained by a current of condensed air. Let A B C’D’, plate II. fig. 1, be a cylindrical vessel, in which moves a piston C D, and having a cock E, which can be opened or shut at pleasure. We suppose that the part A B C D of this vessel contains atmospheric air, more or less compressed than exterior atmos- pheric air. The cock E

being shut, and the in- terior air A B C D no longer communicating with tie outer air, let us suppose the piston C D low- ered to C' D'. The included air will be expanded, and this dilatation will produce a fall of tempera- ture so much the more sensible as the dilatation is greater. Let us now suppose that the piston is fixed to CD, and that A BCD is a vessel filled, wholly or in part, with condensed atmos- pheric air, and maintained by any means what- ever at the same degree of compression. In this hypothesis, the air, at the moment of opening the cock E, will blow through E with a constant force, and the thermometer, having its bulb placed at E, will indicate no perceptible change of temperature.

92. In the first hypothesis the whole volume of air contained in the vessel expands within the vessel, and the temperature falls : in the second hypothesis only that portion of air which issues from the vessel expands outside, and the tempe- rature of that issuing air does not alter percep- tibly. Such are the facts observed by Gay Lussac and Welter. Let us examine what passes in the experiment which is repeated in all courses of natural philosophy, to show the artificial conge- lation of water. The receiver of a condenser is filled with air compressed to the force of several atmospheres. This receiver carries at its upper end a capillary tube, through which the air of the receiver may be allowed to escape. To this current of air a glass bulb, similar to that of a thermometer, is represented ; and small crystals, scarcely visible to the naked eye, are soon formed on the outside surface of the bulb. Although the time for the formation of these crystals is very short, it is necessary to divide it by imagi- nation into several periods. In the first period the compressed air dilates in the whole capacity oj the receiver, and cools : in the following pe- riods the air, more and more dilated, falls to a very low temperature ; and, finally, in the last period, the current of air attains the maximum of

cold. From this observation it results, that the small crystals obtained on the glass bulb do not proceed from the cooling of the air outside of the receiver of the condenser, but from the fall of the temperature within the receiver. This fall inside is not instantaneous. It increases by the dilata- tion of the air of the receiver. This air, although subject to a progressive dilatation in the whole capacity of the receiver, preserves, during its flow, an elastic force greater than that of the at- mosphere, strikes against the glass bulb, and cools it. What proves that this cooling takes place is, that the atmospheric air surrounding the bulb deposits on it a slight stratum of liquid water, on which the small crystals are formed, produced by the current of air previously cooled within the receiver.

93- In July 1826 M. Doubuisson, chief en- gineer at the corps royal des mines, published experiments on the flow of atmospheric air compressed in a gasometer, from which it issued into the atmosphere. He found that the quantity of air expelled from the gasometer through an orifice in a thin plate, and under a determinate pressure, is to the quantity which issues through short cylindri- cal or conical tubes, having the aperture where the air issues of the same diameter as the orifice in a thin plate, in the ratio of 1000 to 1427. In giving an account of these experiments in the Bulletin de la Societe Philomatique, for Sep- tember 1826, M. Hachette remarked ‘ that M. Doubuisson had not made the air flow through the adjutage known by the name of the tube of Venturi, which is only a common bellows pipe reversed, the section of its greatest diameter being taken from the orifice. The air being expansible would fill that tube, and the experiment would have shown the increase of expenditure due to the acceleration of the velocity of the air on the section of the adjutage of least diameter.’

94. In October, 1 826, Messrs. Thenard and Clement visited the iron foundries of Fourcbam- bault (department of La Nierre), and the follow- ing experiment was made under their eyes : — A workman presented a piece of deal board against the blast of a pair of bellows set in motion by a steam-engine. When the board was at a certain distance from the orifice of the pipe it was strongly repelled : if it was put nearer to the plane of the orifice it was carried towards the plane, as though the repulsion had changed to attraction. This effect takes place only so far as the end of the pipe is in the plane of some object surrounding it.

95. M. Clement first discovered that the at- mospheric air acted, in this case, on the board as it does on the outside of a conical pipe through which water is flowing. This philosopher re- turned to Paris, showed, by means of a boiler which he had at his disposal, that steam, at a pressure of two or three atmospheres, produced an effect similar to that of a blast of a forge bel- lows. He adapted to the boiler a vertical cylin- drical pipe, terminated by a circular plate about a decimetre (3-9 inches) in diameter, in the cen- tre of which was a circular orifice of a smaller diameter.

96. When the steam issues through that ori- fice, a circular disk of the same diameter as the

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PNEUMATICS.

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rlate is brought near to it, and the disk carried towards the plate is observed to adhere to it, as if it were attracted by a force acting in the di- rection contrary to that of gravity. Points pro- jecting more or less from the face of the disk or of the plate opposite, determined the distance of these faces apart. M. Clement stated that the facts we have just related, in a memoir which he read to the Royal Academy of Sciences Decem- ber 6th, 1826, and which is referred to the ex- amination of commissioners.

97. ‘ On the llth April, 1827,’ M. Hachette observes, ‘ I repeated M. Clement’s principal experiment, at the sitting of the society for the encouragement of arts, making use of a chamber pair of double bellows, which had its nozzle ter- minating in a plate of copper. I announced on the same day that the adherence of a disk opposed to the plate did not depend essentially on the expansibility of the air

from the bellows, and that I had obtained effects similar to those obtained by M. Clement, by making water flow between the approximated disks, the curvatures of which I had varied.

98. ‘ At the sitting of the Societe Philomatique, on the 13th of April 1827, I presented a bent tube, by means of which, blowing with the mouth, the same phenomena are produced as by the blowing machine of Fourchambanlt, or by the steam boiler of M. Clement.’

99. The study of these phenomena leads to this question : — To determine the pressure in every point of the exterior and interior surfaces of a vessel which is filled with a liquid or a gas, supposing this vessel to empty itself into the at- mosphere,— 1st, by an orifice in a thin plate, 2nd, by an adjutage or pipe, and 3d, by a zone comprised between two surfaces brought nearly together. It is to arrive at the solution of this question, that I have endeavoured to simplify the apparatus previously employed, and have made several experiments, an account of which I have given in the fallowing notes, which were read at the sitting of the Societe Philomatique on the 28th of April :—

100. Some experiments on the flow of the gases between two surfaces brought nearly toge- ther elicited a variety of very singular phenomena. The principal fact observed by Messrs Thenard and Clement results from the combined action of the shock of the air against a plate, and of the atmospheric pressure on the same plate. All the circumstances of this action are rendered evident by means of the very simple instrument represented, figs. 7. A B C D, fig. 2, is a bent tube of tin plate or glass, terminated by a circular plate, C D, of tin. In the centre of the plate is an orifice E, of three or four millimetres (= -12 or ‘157 of an inch) in diameter. Three or four small strips of tin are soldered on the edges of the plate, and are intended to retain opposite to the plate a disk of the same diameter, and of any materia1 we like.

101. The instrument may yet be reduced, fig. 2, to a single plate C D of tin plate, in the cen- tre of which is a small orifice covered by a straight tuˆe AE, soldered on the plate.. For the plate, E C D, of tin, any other metal, or a slice of a large cock may be substituted. The bent tube,

is seen in such a position that the plate C D may be nearly horizontal. On this plate the disk C’ D’ of any material, flexible or inflexible, is placed : now, on blowing at A with consider- able force, the disk, however tight it may be, will not quit the plate. Inverting the tube, as shown in fig? 4, and adding at A a second tube A’ a, fitting close into the extremity A of the first tube A B, on blowing at A’, the wind passes

through the orifice E and enters into the atmos- phere by the cylindrical zone comprised between the edges of the plate C D,and of the disk C' D'. Not only the disk does not fall, but it is driven towards the plate C D by a force greater than is necessary to be in equilibrium with its weight.

102. The tin platˆ strips soldered on the edge of the plate C D, fig. 4, end in a ring G H. A support, G' II', of cork or other materials, slides and is held between the strips, and supports a disk of paper or pasteboard C" D", at any desi- rable distance from the plate C D. Regulating this distance suitably, and blowing at A', the disk C" D" will be seen to approach the plate C D, and to take the position C' D', very near to the plate C D.

103. The same effects will take place with the disk C' D', fig. 3, on blowing up the extremity A of the straight pipe A E, held in a position nearly vertical.

104. When the disk C' D' is flexible and a little elastic, and the experimenter blows into A, figs. 2 and 3, or into A, fig. 4, a sound is pro- duced, resulting from the successive beatings of the disk on the plate CD.

105. The air is driven from the mouth hole A of the tube towards the orifice E of the plate C D, and strikes the part of the disk opposite that ori- fice, and the mean pressure on that part of the disk is greater than the atmospheric pressure. The blast of air takes the place of the air included between the plate and the disk opposite to it. It moves in that interval with a velocity which decreases from the edges of the orifice. The elastic force of that air decreases at the same time, so that the mean pressure between, and the inner face of the disk, becomes less than the atmosphe- ric pressure, and, as the latter pressure is exerted on the whole of the outer face of the disk C' D', this disk, subject to two contrary pressures on opposite faces, obeys the greater ; whence it fol- lows that the disk C' D' must be driven towards the plate C D.

106. It i5 necessary for the disk C'D' to be near the orifice E of the. pipe A E, in order that the shock of the air may be modified by the at- mospheric pressure.

107. Let C" D* C D, fig. 5, be a vessel in the form of a cymbal, composed of a hollow cylinder, C D E F, and of a flat rim, in width equal to C* F or G D". Having fitted to the bottom, C D, a pipe, A E, which covers the orifice E of the diameter of three millimetres (= 0-118 inches), on blowing into A against the disk C' D' near the flat

rim C” D”, this disk is impelled towards the orifice E.

108. The vessel and pipe is rep resented, fig. 5, of about half the real size. The weight of the disk, increased by that of the bodies attached to it at P, amounts to above twelve grammes (rˆ

2 M2

185 English grains). This weight is the measure of the pressure resulting from a common blast at A. in the upper extremity of the pipe A E.

109. When we have blown repeatedly on the disk C’D’, it becomes covered with moisture, and we can see the furrows of the threads of air in the direction of radii, and ending at a little circumference nearly of the same diameter as the orifice E.

110. The disk C’D’ being fifty-four milli- metres (zz2‘13 inches) in diameter, the pressure of the atmosphere on that disk is equal to a weight of twenty-three killogrammes (zr 50-74lbs. avoirdupois) ; whence it follows that, in this experiment, the pressure of the air blown against the inner face of the disk, and the atmospheric pressure exerted on the exterior face of the same disk, differ from each other only about one half a thousandth part of the second pressure. All other circumstances remaining the same, the form of the orifice of the plate modifies the phenomena. When that orifice is a lengthened rectangle, or a cross, fig. 3, the difference of the pressures on the opposite faces of the disk diminishes consi- derably. The following experiments have for their object to measure these pressures, in the situation in which, the plate and the disk being circles of the diameter, the orifice of the plate is also a circle.

111. The following experiments on the motion of air between two plane surfaces, are no less curious and important. A bent tube, B B’, fig. 6, was fitted on the sides of the chest of a smith’s

Distances between the disks C D, C’ D’.

15 millimetres ~ 0‘59 inches .

19 =. 0-75

113. It is evident from this table, that when the distance from the disk to the plate is only a millimetre (0-039 inch) the wind from the bellows enters into the atmosphere, through a cylindrical zone of 312 square millemetres, and its height one millimetre. When the distance is thirteen millimetres (~ half an inch), the surface of the cylindrical zone is 4082 square millime- tres. For the first distance of a millimetre, the zone through which the air passes is smaller in surface than the orifice ; and, for the second dis- tance of thirteen millimetres, it is ten times larger. In both cases, the action of the shock of the air blown against the disk by the bellows, is dimi- nished by the atmospheric pressure.

114. The combination of the shock of the air and the pressure of the atmosphere, does not take place between two plane surfaces only. The plate being supposed terminated by a plane face, the opposite face of the disk maybe slightly convex. A great convexity would too far remove the disk from the plate, and, if the face of the disk were concave, the shock of the air on that face would no longer be counterbalanced by the opposite atmospherical pressure.

115. The metallic plate soldered to the extre- mity of the bellows-pipe mentioned before, is 125 millimetres (~ 4-9 inches). M. Hachette placed on this plate a disk of smooth card- board, and stuck on successively a series of pieces of paper, in order to get the number of pieces which would by their weight be equal to

forge-bellows; the bellows being put in motion, by means of the lever, the air in the chest was kept at a constant pressure, which was measured by a column of water by means of a lube with a double bend, having one end fixed in the chest of the bellows. The air arrived through right- angled pipes, B, B, B, and issued from the orifice E, made in the centre of a circular wooden disk C D c d; another disk, C D' II', carried a solid rod or tail II' II, passing through a plate G G', and sliding in the case K K', several up- right, C G, D G', are fixed in the parallel disks CD, G G. At the distance of thirteen milli- metres, the pressure of air from the bellows against the interior face of the disk becomes equal to tbe atmospherical pressure against the face opposite. In this first series of experiments, the rod II H' was supported by a line II Q P, passing over a pulley having its axis of rotation at It, and a weight to balance the friction, the weight of the disk C' D' and its rod H II' was previously put on the disk B.

112. In order to continue these experiments, the line H P Q of the rod H II' was detached, and the weights were placed on the platform 1 1′ of that rod.. When the distance between the disks exceeds thirteen

millimetres (half an inch), the shock of the air predominates over the at- mospheric presure, the disk is raised, the weights which maintained it at the distances stated in the first column of this table, were observed to be as follows : —

Weights in equilibrium with the shock of the air of the bellows against the disk C' D'. 35 grammes ~ 540 grains E. 22 — 340.

the atmospheric pressure, while the bellows were in motion. This number of pieces increased considerably when the disk of card-board pre- sented a slight degree of convexity towards the plate. This effect of the change of curvature was also confirmed by experiments on the flow- ing of water.

116. We must now examine the motion of air between a circular plate and a flexible and slightly elastic disk of the same diameter placed upon the plate. Fig. 7 represents a disk of smooth paper rather thin, C' D' is put upon the plate CD, fig. 2; having wetted this disk about its centre, by touching it with a drop of water carried at the end of the finger, a gentle blast is to be given at A, the extremity of the bent pipe A B C D. The paper being a little transparent in the moistened part, the orifice E in the plate may be seen, and, during the blast at A, the wetted part swells up from the inside outwards, opposite the orifice E, and continues that curva- ture ; the rest of the disk trembles, and a whistling or humming noise is heard ; by blow- ing with more force the shock of the air over- powers the atmospheric pressure, and the paper disk flies away. These phenomena become more perceptible on a paper disk of greater diame- ter. I have put upon the metallic pipe of 124 millimetres in diameter, soldered to the extre- mity of the pipe of a pair of chamber bellows, a disk of brown paper, rather thick and moistened ; on working the bellows the disk swells up, as m

the preceding experiment, opposite the orifice; at a certain distance from that orifice the disk is depressed, and it separates from the edges of the plate in order to allow a passage for the air. The depression stops, momentarily, the communica- tion of the air between the centre and edges of the plate ; the air, the flowing of which is inter- rupted, increases in elastic force, and opens itself a new passage. The preceding depression and inflections of the disk are renewed, producing very intense irregular sounds, which mix with those of the metallic plate.

117. The motion of a liquid between two surfaces must now be compared with the motion of an aeriform fluid between the same surfaces.

118. The motion of an aeriform fluid or a liquid, which we compare, takes place between the surfaces, S, S’, sufficiently near together to prevent the atmospheric air from penetrating the space between the two surfaces.

119. When the aeriform fluid contained in a vessel passes under a given pressure into that space, the fluid fills it by its expansibility, and it enters into the atmosphere through a zone which has for its limit the edges of the two surfaces S, S’, or of only one of them; the perimeter of this zone being greater than that of the orifice made in the surface S, through which the fluid issues from the vessel containing it, it follows that the velocity of the fluid is decreasing from the orifice to the edges of the zone through which it flows into the atmosphere ; and, as the fluid in motion fills the whole space comprised between the zone and the orifice, it loses a very considerable part of the elastic force which it had in the interior of the vessel, in order that its mean pressure against the surface S’ may be less than the atmospheri- cal pressure. The expansibility of the fluid is not a necessary element of the difference of the pressure exerted on the opposite sides of the surface S’. By substituting a liquid, in place of an aeriform fluid, the adherence of the liquid to the surfaces S, S’, answers instead of the expan- sibility: these surfaces being sufficiently near together, the atmospheric air does not introduce itself into the space which separates them ; the liquid fills that space, from which it issues to en- ter into the atmosphere The velocity of the fluid decreases as with the aenform fluid, from the orifice made in the surface S, to the edges of the surface S’, and the mean pressure exerted by the liquid inside, against one side of the surface S’, is less than the atmospheric pressure against the surface opposite.

120. We have hitherto considered the nature of air with reference to its motion and elasticity, without examining the effects which result from a change of temperature. Now the air that we breathe is continually operated upon in the great laboratory of nature by the action of solar and other heat.

121. The following table contains the expan- sion of 1000 parts of air, nearly of the common density, by heating it from 0° to 212°. The first column contains the height of the barometer; the second contains this height augmented by the small column of mercury in the tube of the ma- nometer, and therefore expresses the density of the air examined ;

the third contains the total

expansion of 1000 parts; and the fourth contains the expansion for 1°, supposing it uniform throughout.

Barom.

Density of air examined.

Expansion of 1000 parts by 212°.

Expansion by 1°.

29-95

31-52

483-89

2-2825

30-07

30-77

482-10

2-2741

29-48

29-90

480-74

2-2676

29-90

30-73

485-86

2-2918

29-96

30-92

489-45

2-3087

29-90

30-55

476-04

2-2455

29-95

30-60

487-55

2-2998

30-07

30-60

482-80

2-2774

29-48

30-00

489-47

2-3087

Mean

30-62

484-21

2-2840

122. Hence it appears that the mean expan sion of 1000 parts of air of the density of 30‘62 by 1° of Fahrenheit’s thermometer is 2-284, 01 that 1000 becomes 1002-284.

123. If this expansion be supposed to follow the same rate that was observed in the comparison of the mercurial and air thermometer, we shall find that the expansion of 1000 parts of air for 1° of heat at the different intermediate tempera tures will be as in the following table : —

Temp.

Total expansion.

Expansion for 1°.

484-210

2-0099

192

444-011

2-0080

172

402-452

2-1475

152

359-503

2-2155

132

315-193

2-2840

112

269-513

2-3754

92

222-006

2-4211

82

197-795

2-5124

72

172-671

2-5581

62

147-090

2-6037

52

121-053

2-5124

42

95-929

2-4211

32

71-718

2-3297

22

48-421

2-2383

12

26-038

2-1698

0

124. If we would have a mean expansion for any particular range, as between 12° and 92°, which is the most likely to comprehend all the geodaetical observations, we need only take the difference of the bulks 26-038 and 222-006 = 195-968, and divide this by the interval of tem- perature 80°, and we obtain 2-4496, or 2-45, for the mean expansion of 1°.

125. It would perhaps be better to adapt the table to a mass of 1000 parts of air of the stand- ard temperature 32° ; for in its present form it shows the expansibility of air originally of the temperature 0°. This will be done with sufficient accuracy by saying (for 212°) 1071-718 : 1484-210— 1000 : 13849, and so of the rest.

Thus we shall construct the following table of the expansion of 10,000 parts of air.

Temp.

Bulk.

Differ.

Expansion for 10

212

13489

375

18-7

192

13474

387

19-3

172

13087

392

196

152

12685

413

20-6

132

12272

426

21-3

112

11846

443

22-1

92

11403

226

22-6

82

11177

235

23-5

72

10942

238

23-8

62

10704

243

24‘3

52

10461

235

23-5

42

10226

226

22-6

32

10000

217

21-7

22

9783

209

20-9

12

9574

243

20-2

0

9331

126. This will give for the mean expansion of 1000 parts of air between 12° and 92 iz 2-29. 127. Although it cannot happen that in mea- suring the differences of elevation near the earth's surface, we shall have occasion to employ air greatly exceeding the common density, we may insert the experiments made by general Roy on such airs. They are expressed in the following table; where column first contains the densities measured by the inches of mercury that they will support when of the temperature 32° ; column second is the expansion of 1000 parts of such air by being heated from 0° to 212°; and column third is the mean expansion for 1°.

Mean

Density.

Expansion for 212°.

Expansion for 1°.

101-7

451-54

2-130

92-3

423-23

1-996

80-5

412-09

1-944

54-5

439-87

2-075

49-7

443-24

2-091

75-7

434

2-047

128. We have much more frequent occasion to operate in air that is rarer than the ordinary state of the superficial atmosphere. General Roy ac- cordingly made many experiments on such airs. He found in general that their expansibility by heat was analogous to that of air in its ordinary density, being greatest about the temperature 60°. He found, too, that its expansibility by heat diminished with its density, but he could not determine the law of gradation. When reduced to about one-fifth of the density of common air, its expansion was as follows : —

Temp.

Bulk.

Difference.

Expansion for 1°.

212

1141-504

7-075

0-354

192

1134-429

12-264

0-613

172

1122-165

14-150

0-708

152

1108-015

14-151

0-708

132

1093-864

14-228

0-711

112

1079-636

14-937

0-747

92

1064-699

20-911

1-045

72

1043-788

25-943

1-297

52

1017-845

17-845

0-892

32

1000-000

Mean expansion

0-786

From this very extensive and judicious range of experiments it is evident that the expansibility of air by heat is greatest when the air is about its ordinary density, and that in small densities it is greatly diminished.

129. The facts we have now been examining lead us to a very important part of domestic economy, namely, the best mode of heating and ventilating houses by reference to a change in the atmospheric density, but new and more valuable information has since been furnished by the re- searches of Mr. Tredgold.

130. In winter we require artificial heat, and during a short part of summer we seek for coolness, but at all times we need pure and wholesome air. These, however, are comforts which are not always to be commanded, and particularly where we desire to join economy with healthiness and comfort. The principles concerned in the move- ment of invisible elastic fluids are seldom under- stood by those who engage in the management of ventilation ; and, on the still more recondite subject of heat, we too often find that the most ab- surd opinions ‘are entertained. On the other hand, perswis rarely take the trouble to think for themselves ; and, most likely, because very little pains have been taken to reduce the sub- ject to principles, or to render it accessible to those who would wish to be acquainted with it; and more especially those who would wish to be able to distinguish quackery from science.

131. This seems an anomaly that can be ex- plained only by the powerful influence of habit, which leads us in the steps of our forefathers, while in other arts changes have been made which render it necessary to improve the venti- lation of our dwellings. For in their large mansions the wind was suffered to blow freely through them, and a current of air to circulate through the wide space between the pannelled wainscot and the wall. It must be habit also that renders the constant attendance at the bench or the bar supportable in the noxious atmosphere and elevated temperature of a court of justice. It must be habit which causes the offensive effluvia of a hospital to be

disregarded by medical men, — for surely these are not necessary evils ; but before I visited hospitals, courts, manufacto- ries, and poor-houses, for the express purpose of seeing how they were ventilated, I had no idea of the magnitude of these evils. Air places are not equally ill ventilated, for there are some

where it is much more effectively done than in others; and in a few cases I have observed that cleanliness has in some degree compensated for the want of fresh air.

132. We owe much to the labors of Dr. Hales on this interesting subject ; but most, if not all, of those who have attended to it since he wrote, have confined their attention to im- prove the means of admitting that quantity of air which Dr. Hales had shown was injured by respiration. If such a change would have pre- served the mass of air in a room in a state of purity, the prime object of ventilation would have been accomplished ; but it is an obvious truth, that, unless we extract all the air which is injured, it must accumulate ; for, in conse- quence of the tendency of gaseous bodies to mix, when suffered to remain long in contact, the air given off from the lungs must mix with, and so far deteriorate, all the air in the room. Now, the mere change of a portion of this mixture for an equal portion of fresh air, will only improve the air of the room, by the removal of as much of the whole quantity of injured air, as is ex- pressed by the fraction of which the numerator is the air extracted, and the denominator the bulk of air in the room. Therefore, either a very great proportion of air must be removed by ven- tilation, or we must endeavour to find the means of removing that which is unfit for sup- porting life, as soon as it is generated.

133. In practice it is always inconvenient to introduce fresh air in large quantities; it is ex- pensive in winter, and fills every thing with dust in summer ; and, in this variable climate, the process becomes quite unmanageable in spring and autumn. Hence we are compelled to seek for the means of removing the noxious arr be- fore it has had time to mix with the air of the room ; and we are not a little encouraged in the research, by observing that our Creator has pro- vided for the removal of the air we eject from the lungs in such a manner that we cannot in- spire it again in a free atmosphere. The air in respiration loses its oxygen, and this loss is re- placed by about an equal bulk of carbonic acid gas, which is heavier than oxygen in the ratio of 1 : -725 ; but the air expelled from the lungs is given out at a temperature of about 90°, and is nearly, if not quite, saturated with

the quantity of vapor due to that temperature, which vapor and azote are both lighter than common air. Consequently the mixture of azote, carbonic acid gas, and vapor ejected from the lungs, is specifically lighter than common air, and ascends with considerable velocity ; the remarkable pause, which occurs immediately after an expiration, gives time for its ascent, and for a fresh supply of air to approach for the succeeding inspiration.

134. It may be remarked that the ejected air gradually diffuses itself among the air it rises through, which renders it necessary to provide for the removal of a much greater quantity than that which is expired; but it will be evident that, if the whole mass of air be ascending with a slow current, and there be apertures for its es- cape at the top of the room, the diffusion will be less than in still air, and much less than it would be if the ascent were interrupted by de-

scending streams of cold air. While the vitiated air retains its heat, it may easily be shown that it will be lighter than common air, and conse- quently will ascend with greater velocity, and go off by the apertures ; but if it be retarded, so as to become of equal temperature with the com- mon air, it will descend, become diffused, and deteriorate the rest of the air in the room.

135. It will be evident, then, that ventilation should be continual, during the time a room is in use ; that the heated air should be given out at the highest parts of the room, and the cooler fresh air should enter at the lower parts. That, previous to a room being used, it should be ven- tilated freely ; and also immediately after it has been used, in order that any effluvia, which has collected through imperfect action of the veriti- lating process, may be removed. In warm wea- ther, the latter change would be assisted by washing, or sprinkling with water.

136. But it is too common to let a room ac- quire an oppressive temperature before ventila- tion is given ; to provide noplaces for supplying cold air, except what chance furnishes ; or, if it be supplied at all, it is at the upper part of the room, so as to interrupt the ventilation, instead of amending it.

137. It will sometimes happen, that, through want of attention to ventilation, the air will ar- rive at that state of density which renders it in equilibrium with the external air, though of a higher temperature. In such a casp, opening windows, or ventilators, produces no effect in still weather; and it becomes necessary to resort, either to mechanical power, or heat, to change the air. In hospitals,

and buildings of a like description, it is therefore desirable to pro- vide such mˆans of ensuring a regular change of air.

138. In considering the principles of ventila- tion, it must be obvious, that it is much more necessary in some places than in others ; in isolated houses it may be neglected with im- punity, but, in the confined streets of extensive towns, it must not be left to chance. Even in planning towns, the importance of thorough scope for the winds to follow the valleys, should be regarded, that the heavy impure air may be driven away. When a narrow street crosses a valley, without being crossed by another street, at the lowest part, it becomes very difficult to keep it in a proper state. But, in many cases, we meet with streets on level ground, planned as if it were to render it impossible for a current of air to follow them ; and, from the very circum- stance of their not being pervious to the fresh air, they become the resort of the wretched, with a tenfold increase of filth and misery. By form- ing the New Street in London, much good has been done ; and one cannot well let this oppor- tunity pass without expressing a wish that other optnings may be effected, planned with a more direct view to the health and convenience of the metropolis, unencumbered by massive colo- nades. The giant members of the Doric column were never designed for a screen to a toy shop.

139. The usual construction of prisons ren- ders them similar to the interrupted and confined streets of towns, but the improvement of raising

the cells above the ground story must be very beneficial ; and the extensive area, enclosed by walls, and the isolated buildings of some of the best prisons, must render them very healthy, when a proper attention to cleanliness is ob- served. Ar elevated site is clearly the best for any building which is to be enclosed by high walls ; there should be as few intarnal divisions of the area as possible; and long rectangular yards, with open railing at the ends, seem better adapted for ventilation and exercise than the po- lygonal figures of many of our new prisons, and, perhaps, quite as favorable for other objects. Where a prison is in a low and unhealthy situa- tion, it would be desirable to adapt a machine for changing the air of the prison to the tread- wheel to work, where there was a deficiency of more profitable employment for the power. This would surely be better than either working vanes against the wind for no purpose, or working against the

friction of a brake-wheel.

140. The atmosphere of London is truly a problematical subject; but it is important that it should be studied. It contains upwards of a million of human beings, each of which con- sumes thirty-two cubic inches of oxygen per minute, and ejects an equal bulk of carbonic acid gas in the same time ; there is also an im- mense number of animals, all tending to vitiate the atmosphere. The greater part of the carbon of nearly two million chaldrons of coals is also converted into carbonic acid gas in one year, at the expense of an equal bulk of oxygen. But the evolution of so much carbonic acid gas, im- mense as it is, almost always takes place at a temperature, and under circumstances, very fa- vorable for its diffusion in the atmosphere ; while the power of the carbon to absorb animal effluvia very probably renders it an important agent in improving the quality of the air of the metropolis. We must, however, regret, that the ascending currents of smoke are almost always charged with considerable quantities of soot; and that, of the ingenious methods which have been tried to remedy this inconvenience, very few have been, in any material degree, success- ful. There are two principles which may be re- sorted to ; the one consists in causing the soot to precipitate from the smoke before it ascends, or during its ascent up the chimney ; the other consists in providing the means to consume the soot; and, whichever of these principles be acted upon, the draught of the chimney will be impaired. Hence, for all operations which re- quire a strong fire, there must either be a very vigh chimney, or the neighbourhood must be an- noyed by smoke. A well managed fire will •kfford very little sooty smoke when it is properly Constructed ; but how difficult it is to get a fire well managed ; and, therefore, while exertion to educe the quantity of sooty smoke should be encouraged, we can scarcely expect more than a slight amelioration of the evil. But, while the wore extended benefit of open streets, and the free access of currents of fresh air, must be left to the care of public bodies, it is in the power of individuals to increase and improve the ventila tion of their. own dwellings.

141. It has already been noticed that the air which is given out in respiration is lighter than

common air of the same temperature; and that, being of a greater temperature than common air, it ascends as soon as it is ‘.xpelled from the lungs: hence its proper outlet is at the upper part of a room ; but, in some cases, the same opening will give admission to a stream of cold air, unless it be of a peculiar construction. To avoid this defect, there should be a free supply of fresh air to the lower part of the

room, and the openings contrived so that their action shall not be interrupted by winds. It will be found an ad- vantage to let the ascending air flow into the space between the ceiling and roof. We will sup- pose a case where the vitiated air passes imme- diately through the ceiling into the space in the roof, as shown in the accompanying diagram.

where its course is indicated by the dotted lines, the apertures through which it ascends being con- cealed by ornamental plates A A, placed at a little distance below them. If cold air be forced in at the top or otherwise, it will occupy the lower part of the space, as at B B B, and cannot make its way into the tubes D D, unless it be in greater quantity than fills the space above the level of the tops of these tubes. The top C should not be longer than is required for the in- tended purpose, and the greater height it has the better, but it should not, in any case, be higher than the chimneys of the building, as it may cause them to smoke. Where a room is required to be ventilated, and is not next the roof, the air-tube should be got by the most favorable di- rection into the space in the roof. In all case* the apertures should be provided with registers tiiat can be opened or closed at pleasure. The most simple is constructed in the same manner as the thiottle valve of a steam engine. It con- sists of a plate A, fixed on an axis in some part of the air-tube, and is represented in the diagram.

It should not be made to move too easily, in order that it may stand at any opening at which it is set.

142. The apertures for admitting fresh air ought, to be abundantly large, and covered with wire-gause, that rapid currents may be avoided. The modern mode of finishing rooms is not well

adapted for admitting; fresh air, as it seems to have been a direct object of research to exclude it. But it is only necessary to provide the means of warming fresh air before it enters, during the winter season, and then the motive for excluding air is done away, and the same channel may sup- ply it in summer, when it becomes as agreeable as it is necessary.

143. When workmen were less skilful, our apartments had a plentiful supply of air, and the want of ventilation was never felt; but now that walls are rendered impervious to the air by plas- tering, and floors are

made double, and doors and windows are fitted with scrupulous accuracy, the consequent decrease of the fresh air admitted renders it necessary to attend to ventilation, which formerly there was very little reason to provide for. Yet, it must be admitted, that, with a system of ventilation which we can re- gulate, in respect to quantity, at pleasure, rooms must be more comfortable than when the wind entered on every side, and could not be ex- cluded. When one improvement is effected many others become evidently desirable ; it is thus that art has made such rapid strides of late years ; but the improvement in the construction of buildings has been slow, compared with that in some other arts, and the effect of close rooms on health has not been so soon nor so distinctly perceived, as one would have expected. The comfort of a warm room is sought for much more than that of a pure and healthy atmo- sphere.

144. It has been shown that there ought not to be less than fouV cubic feet of air removed per minute by ventilation for each individual in a room; and in the same work the following rule is given for the area of the ventilators through which the heated air is to ascend. Let N be the number of people the room is intended to contain, /* the height from the floor of the room to the top of the ventilator tube in feet, T the temperature of the internal air, and t the tem- perature of the external air ; then,

TTXˆ T-ˆri r — the area of the ventilator in

75 h (T— 0 (

feet. It will be obvious that the largest ventilation is required when there is only a small difference between the temperature of the external and in- ternal air. When the difference does not exceed

•95 N

10°, and the internal air is at 60°, then, • —

V A

Nc the area of the ventilator in feet or — = n: area

with sufficient accuracy. V

145. There will be much advantage in di- viding this area, so that the air may rise through several outlets instead of one ; and, conse- quently, operate more uniformly in ventilating the room. When the cold air enters, the aper- tures should be not less than double the area

of the outlets for hot air.

146. The same rule applies to the ventilation of churches, courts of justice, and the like ; and it is exceedingly simple and easy of application.

147. It is not difficult to cause the ventilators to open or close in proportion to the tempera-

ture of the room. The difference between the expansion of iron and zinc rod* might be made the means of opening the registers, whenever the temperature rose above the intended degree. The same thing may be done by expansion of mercury ; and, perhaps still easier, by the expan- sion of air. Attendants seldom think it neces- sary to open ventilators till the heat has become oppressive; the influx of cold air is then dan- gerous ; and, therefore, it is desirable that venti- lation should be self-acting. They should begin to open as soon as the temperature exceeds 54° of Fahrenheit, and be quite open at 70°.

148. In cases where the ventilation is likely to be interrupted by winds, it may be much assisted by placing a lamp in the upper tube, the heat of which will serve to maintain an ascending current; but it will in most cases be quite sufficient to depend on the heat generated by the individuals in the room ; which must, at least, be sufficient to raise the temperature of four cubic feet of air 10° in a minute for each indi- vidual. The advantage to be derived from using a lamp, consists in establishing a current at first, and, by that means, preventing the cool walls from condensing the vapor when many people assemble in a room that has not for some time been used.

149. The principles of warming buildings de- pend on the laws by which hot bodies commu- nicate heat, limited by the circumstance that the air which is to be respired, must not be injured by the heating surface. And it is obvious that the quantity of heat required must depend very much on the closeness of the windows and doors, the kind of walls, and the proportion of windows. The effect of different kinds of walls will be most sensible in the time necessary to raise the room to its proper temperature, but the escape of heat from doors and windows will be constantly taking place. It may be shown that each foot of surface of glass will cool about one cubic foot and a half of air per minute, from the temperature of the room to that of the external air; and hence the loss of heat from windows is easily estimated. To the loss of heat from the windows must be added the quantity for ventilation, and an allowance for other causes of loss should be made. We then have no diffi- culty in proportioning the quantity of heat, and

reducing that to a regular system which has been conducted by guess. A minute is made the measure of time in both cases, and a cubic foot the measure of the quantity of air heated or cool- ed. That is, if there be 150 cubic feet of air cooled per minute by the windows, and 400 cubic feet per minute changed for ventilation, and fifty cubic feet be allowed for loss by apertures ; then there must be 150 + 400 + 50 — 600 cubic feet of air warmed per minute, to maintain the room at the proposed temperature.

150. The bulk of air in a room has no concern in such calculations ; but the temperature is more slowly obtained, after setting the apparatus to work, when a room is large, both on account of the greater quantity of air to be heated, and the greater extent of walls, floors, &c., to be warmed. What an immense length of time it would require to warm the walls and air of a

large cathedral, while its height must render it nearly impossible to warm it by hot air. The only course that could be relied upon in such a case would be to communicate the heat as di- rectly as possible to the solid matter of the seats, &c., instead of expending it upon air to rise to the upper regions of the building.

151. But we have yet to consider how a hot body communicates its heat, and the temperature to which its surface should be limited, when the air is to be warmed at that surface.

152. A hot body radiates or projects heat through air from its surface ; and it also commu- nicates its heat to any solids or fluids in contact with it. Both these methods of communicating heat are employed in warming buildings. There are cases in which it is not prudent to employ radiant heat, but in all cases where it can be em- ployed with safety, the union of the two methods renders the place which is warmed most healthy and agreeable.

153. To afford radiant heat, we have a fire in an open grate, so constructed as to expose a con- siderable surface to send out heat; and all the other parts of the fire-place, in contact with the fuel, should be slow conductors of heat, such as fire-brick and the like. To understand the rea- son of this precaution, we have only to consider that fuel does not send out radiant heat freely till its temperature be about 800° ; and, as a given quantity of fuel only supplies a certain quantity of heat

in a given time, it is obvious that, if we expose too much surface at a tempe- rature of 800°, more heat will be given out than the fuel can supply, and the temperature of the fire must be lowered, or will burn dead, as it is termed, ff the back of the grate containing the fuel be of iron, the surface of hot fire must be less than when slow conductors are used, because there will be a greater loss of heat through the iron back. It is often attempted to employ the heat which is given off by an iron back to warm air ; but air warmed in this manner is burnt, and unfit for respiration, besides creating a great deal of dust; and the loss of radiant heat is nearly equivalent to the quantity communicated to air in that manner. It is one of the advantages of an open grate, when properly constructed, that it allows all the burnt air, and the noxious gase- ous matter from the fuel, to escape up the chim- ney, as they are formed ; but this desirable pro- perty does not belong to all kinds of grates, even when their chimneys are good, and not liable to smoke. In order that the arrangement may pro- duce the effect, the entrance to the chimney should be immediately above the fire, and large enough to give passage to the smoke, burnt air, &c., from the fire ; it should not be larger, be- cause, then, too much air will be abstracted from the room, and much heat will be lost. This leads me to notice a defect of a species of grate, lately much in use, in which the opening for the smoke is at the back of the grate, and very little above the level of the fire ; as shown in the dia- gram, where the smoke passes through a long narrow opening at A B. A chimney of this kind will not act, unless it has a powerful draught ; and the greater the draught is, the less effect will be obtained from the fire ; but, however powerful

the draught may be, a quantity of sulphureous va- por and burnt air will be intercepted at A, by the thin edge of the plate in which the aperture is made, and rise into the room. Common iron- stoves, with open fires, and descending flues, have the same defect; they are very commonly employed for warming shops and counting- houses in London, but are only felt oppressive where the doors are not opened with sufficient frequency to change the air of the place very often.

154. Where air is not in any degree injured by fire, but merely heated, it is felt oppressive ; because, air being increased in bulk by heat, we must either take a greater quantity into the lungs at once, or breathe oftener in the same time, to obtain that quantity of oxygen our system has been accustomed to absorb But the diminished proportion of oxygen, in a given bulk of air, is not the only cause of our feeling oppressed in heated air; for, by heating air we increase its power of abstracting moisture from us. If a room be warmed by radiant heat alone, the solid matters in the room are warmed, \vithout heating the air to the same degree, because radiant heat, passing through the air,

does not materially in- crease its temperature.

155. The impressions of radiant heat diminish as the squares of the distance from the fire, and consequently extend, so as to be effective, to a small distance only. This suggests the expedient of employing a moveable screen, to receive the impressions of heat, and protect the family circle from the influx of cold air, from the distant parts of the room. Such a screeen may be contracted or expanded, according as the weather is more or less severe, and entirely removed in summer. The Chinese or Japanese screen is partially used for this purpose, but the taste of our countrywo- men is capable of giving it more appropriate or- naments, and of rendering it as interesting as it is useful.

156. The lively and cheerful blaze, and genial heat, of an open fire, is not, however, to be ob- tained at a small expense ; and, by other me- thods, the same room may be warmed by one- third of the fuel required by an open fire. These methods I shall proceed to explain, noticing every variety that is not objectionable by being injurious to health.

PNEUMATICS.

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157. In the methods now about to be describ- ed, warmth is communicated by contact ; and, since the heat is ultimately communicated to the air of the place which it is the object to warm, it is of the utmost importance that that air should not be injured by the hotness of the surface from which it obtains heat. The fact that air receives no injury from a surface of the temperature of boiling water is very well ascertained ; and, perhaps, it may pass over a surface heated to 300° without material injury, but not when the temperature is higher. Air which has passed over red-hot iron, or red-hot brick, acquires a disagreeable odor, and, in respiration, produces a harsh dry sensatiou in the organs, and a tendency to cough. Air which has passed over the same surfaces, with their temperatures under 300°, is mild and agreeable. The precise nature of the change which an excess of heat produces in air is not, perhaps, thoroughly understood, but it is supposed to consist in a partial combustion of the particles of animal and vegetable matter sus- pended in the air; it is a change, however, which produces a very sensible effect on any per- son who lives a considerable portion of his time in air which has undergone it.

158. Hence, in selecting those methods which are adapted to give

warmth to the air of an apartment, it will be desirable to avoid those where the air must be in contact with surfaces of a higher temperature than 300°, and even that should be considered the extreme limit of the heat of a surface to warm air. To confine the temperature of the heating surface within this limit excludes so many of the usual methods of warming that we have only few left to consider.

159. The most useful for small houses is that where the fuel, &c., is confined by such a thick- ness of matter that the external surface cannot be heated beyond 300°. A stove of this kind should be as completely insulated as possible; so that the heat of the fire, and of the smoke and hot air passing through the flues, may be given out to the air it is intended to warm. The flues will be effective, with a good chimney, at a horizontal distance of forty feet from the fire, and of from fifty to sixty feet where the flue rises, either re- gularly or by steps. It is sometimes necessary to make flues descend again, before the smoke passes into the chimney ; but this renders them liable to explode, whenever the fire is so misma- naged as to fill the flues with gas. In hot-houses for plants, the flues are extended in one direction so as to afford as equable a heat as possible to a considerable length of house ; but, in other cases, the flues may be made to wind backwards and forwards, so as to occupy only a small horizontal space, of which we have an example in Swedish stoves. The materials of these stoves should be of such a nature that the air may be warmed against the surface, without becoming loaded with dust. Indeed all passages for air to circu- late through should be hard, smooth, clean, and durable. The wear of soft bricks, mortar, &c., by the friction of air, is much more considerable than those who have not observed it with care can have any idea of; and, besides the disagree- ableness of dusty rooms, it is not desirable to inhale air charged with particles of brick and

mortar. When the matter <.f the stove is of suf- ficient thickness to limit the temperature to the proposed degree it is not economical to make it thicker, unless the fire be kept on only a certain time, and then the damper and the ash-pit both shut close, so that no air can pass through the flues : then a considerable mass of materials will afford a regular supply of heat for a long time after the fire is out; and you have to wait nearly as long a time before the stove affords any heat, if it be suffered to remain till it be cold. In fact, it requires a regular and systematic attention to manage such a stove, which renders it unfit for our uncertain climate, where the weather would very often change before the stove could be ren- dered capable of affording its warmth. Conse- quently, it is an obvious advantage to have the parts of the stove no thicker than is required to limit the temperature of its surface, because it then affords its heat speedily,

and no attention to closing valves or dampers is necessary ; and yet the mass of heated matter round the fire- place is considerable, and therefore it is not very soon cooled, if the fire be neglected. As the length of horizontal flue is limited, and it is not convenient to make any material change in the size of the flues, the power of the stove is usually regulated by the size of the fire-place ; but it is better to do it by the area of the aperture into the chimney ; for then we can have a slow fire, which will require less attention. By a quick fire, we gain most heat from a given quantity of fuel, but it requires constant attention ; hence, where labor is more valuable than coal, a slow fire should be preferred. The area of the aperture into the chimney may be determined by the rule

— = ~ a. Where c is a number of pounds of \M

coal to be consumed in an hour, h the vertical height of the chimney in feet, and a the area of the aperture in inches, and if the quantity of air to be warmed per minute, in cubic feet, be mul- tipled by 0-00472, the results will be the pounds of coal which the stove to warm it should con- sume in an hour.

160. Where a greater quantity of fuel than ten pounds of coal per hour is required to sus- tain the temperature, it will be necessary to have two stoves ; as this is better than increasing the surface of the flues.

161. In these rules, the fire is estimated to be capable of keeping the temperature of the room 30° above that of the external air, when it is sup- plied with Newcastle coal ; and the fire being rendered capable of regulation by a damper in the chimney, and a register at the ash-pit, it is easy to have any variation of heat within that range.

162. In churches, and buildings of a like kind, the whole of the air, or nearly the whole, may be supplied to the stove from within the building ; but, in smaller buildings that are in more fre- quent use, a part of the air should be brought from the exterior, and the rest from the interior; the relative proportions of which will be deter- mined by what has been remarked in treating the subject of ventilation.

163. Enough has, perhaps, been said respect-

ing the properties and powers of stoves of this kind ; and if the importance of the principles of limiting the temperature of the surface,

and of preventing the heated air becoming charged with minute particles of dust be admitted, it must be acknowledged that very few of the contrivances called stoves are proper instruments for afford- ing heat.

164. About the year 1796 a new method of limiting the temperature of a surface, for afford- ing heat, was discovered by Messrs. Strutt of Derby. It consists in placing the surface atsuch a distance from the fire that its temperature cannot exceed 300° ; and as, from the nature of the arrangement, this surface can only be of small extent, it was found necessary to direct the air in small streams against the heated surface with great velocity, to cause it to absorb a greater quantity of heat, and by that means compensate for want of surface.

165. It will be obvious that, in this arrange- ment, the fire should either be raised in an open grate in the centre of the cockle (for that is the name given to the vessel which is heated), or the fire should give off heat through sides of slow conducting matter; — the latter appears to be the plan adopted by Messrs. Strutt. It will also be evident that the smoke of the chimney cannot be brought to a lower temperature than that of the surface giving off heat, unless it be given off through the sides of the flue which conducts it to the chimney. Consequently, the whole of the heat cannot be obtained without in part employ- ing the principle we have already considered. It has already been remarked that, in employing the cockle, we obtain only a very limited sur- face for affording heat ; but, to render the small surface it affords as effective as possible, Messrs. vStrutt have contrived a most ingenious method of causing the air to be projected in small streams with considerable velocity against the hottest part of the cockle ; and, again, that air can only ascend into the air-chamber which has been brought into close contact with the heating surface on the upper part of the cockle.

166. The method of warming by the cockle is rather more limited in application than that by slow conductors ; as, in order to get power to move the air through with sufficient velocity, the cockle must be at about the depth of twenty feet below the room it is intended to warm.

167. The value of steam, as a vehicle for dis- tributing heat, consists in the facility with which it can be conveyed from one fire to any part of the buildings to be warmed, — in the temperature of the surface affording heat never exceeding that degree which is injurious to the air, — and in the perfect safety from fire. Low pressure steam should always be employed for distributing heat ; for, when the just proportion of heating surface is prepared, the increased temperature

of high pressure steam is not wanted ; and it may be proved that there is no economy in using it, while it must be dangerous in proportion to the pressure it is worked at ; for it cannot be ex- pected that an experienced engineer will be em- ployed in attending the boiler of an apparatus for warming a building. But employing a simple apparatus, and low pressure steam, with

a species of safety-valve inaccessible to the at- tendant of the fire, and yet not likely to be out of order, will render a steam apparatus perfectly safe, and capable of producing the greatest effect from a given quantity of fuel.

168. The boiler for producing steam is usually constructed in the same manner as a steam- engine boiler, and of the same proportions. It should contain as much steam as will fill all the pipes, or other vessels for affording heat, he- sides about an equal space for water. From the boiler the steam flows into pipes, which convey it to the places where heat is required, and where it flows into larger pipes, or into other appro- priate vessels for affording surface to give out heat. From these pipes, or vessels, the con- densed water is returned to the boiler, provided the pipes or vessels be situate above the level of the water in the boiler; but, if this should not be the case, the condensed water is allowed to run off by an inverted syphon, where a column of about nine feet of water is opposed to the force of the steam. Sometimes the same thing is effected by an apparatus termed a steam-trap, which acts by means of a hollow ball, similar to a ball-cock. And, in both these methods, it is necessary to have a small outlet, for clearing the pipes of air when the steam is let in. The valve by which the air is let out, and admitted at, when the pipes are clear of steam, is often made self-acting; the motion being produced by the expansion and contraction of the pipes. When the pipes are cool, the valve is open ; but when they become heated, by the steam being admitted, they expand in length, and close the valve.

169. In some cases the condensed water may be let off by a common cock ; which, when the apparatus is at work, should be only opened just so as to let the condensed water escape. For hot-houses this answers very well, and requires very little more attention than the other modes. The conveying pipe should ascend as nearly in a vertical direction as possible from the boiler, and then descend to the vessels for containing steam to afford heat ; by this arrangement, the steam is not interrupted by the return of con- densed water down the pipe. It must be ob- vious that the condensed water should be let out at the lowest part of the pipes or vessels; but it is not equally obvious that the air in the pipes should be let out at the same place ; and, from a

want of attention to this circumstance, there has sometimes been a difficulty in expelling the air from the pipes. Common air is, however, heavier than steam, and should be let out at the lowest part of the pipes.

170. The heating surface may be obtained in various ways. For ordinary circumstances common flange pipes, of from three to five inches interior diameter, and cast as thin as they can be cast, sound and perfect. Double cy- linders, one of which is shown in the first figure, and its section beneath, may, in other cases, be used with advantage, as they afford a large quantity of surface ; and, by introducing a pipe A, for fresh air, into the central part of the cylinder, it warms the air as it enters the room.

171. The top and the base fit on to the oy

Under, and it is supplied with steam from the wrought iron-pipe B, and the air and condensed water are taken away by the pipe C. The ad- mission of fresh air is to be regulated by the handle D. The steam occupies the space between the two cylinders at a, a, in the section. It is necessary that the cylinder should have an open top, as shown at E ; and, as the height should not exceed about three feet, it is requisite to make the open work ornamental.

172. In other instances, I have used pipes joined in short lengths, nearly in the form of a distiller's worm, and placed an open trellis screen over them.

173. The proportion of pipe required to heat a given quantity of air per minute is easily cal- culated, by the following formula : —

•48 C (T — 0 , . . . '-..

s 1~ :n the superficial content ot sur-

200 — T

face of steam vessel that will heat C cubic feet of air, from the temperature t to T, in one mi- nute. Therefore, the quantity of ventilation and loss of heat per minute, being ascertained by the principles already given for ventilation, it is easy to provide the requisite supply of heat. It is assumed that the pipes are of cast iron,

that being the fittest material, except for the small conveying pipe, which may be of wrought iron ; out other surfaces will afford about the same quantity of heat, if of a dark color, and the surface a little rough and spongy : a bronze color is very well adapted for the giving of heat.

174. In applying steam-heat, it should always

be made to warm that part of the air which is introduced for ventilation, before it enters the rooms ; but it should only be warmed to a tem- perature a little lower than the mean tempera- ture of the room ; the proportion of pipe to bo applied for that purpose our formula will show, and a register to regulate the quantity which enters, will put it in the power of any person to alter it at pleasure.

175. When steam-heat is employed in a dwelling-house, the distilled water is found use- ful for many domestic purposes ; and, as the saving of fuel, by returning it to the boiler, is much less than it is imagined to be, not exceed- ing one-twelfth of the whole expenditure, the convenience of having this kind of water will be a sufficient compensation. For further informa- tion on this important subject, see Tredgold on Heating and Ventilating Buildings.

176. In the preceding account of the motion of air in conexion with ventilation we have but ex- amined the tendency to a state of pneumatic equilibrium which is continually taking place on the large scale over every part of the terraqueous globe. It is by the aid of the winds that the earth's surface is ventilated, and the atmosphere fitted for respiration. If our globe were at rest, and the sun were always acting over the same part, the earth and air directly under it would become exceedingly heated, and the air would be constantly rising like oil in water, or like the** smoke from a great fire; while there would be ' currents or winds in all directions below, towards the central spot. But the earth is constantly whirling under the sun, so that the whole middle region or equatorial belt may be called the sun's place ; and therefore, according to the principle just laid down, there should be a constant rising of air over it, and constant currents from the two sides of it, or the north and south, to supply the ascent. Now this phenomenon is really going on, and has been going on since the beginning of the world, producing the steady winds of the northern and southern hemispheres, called trade winds, on which, on most places within thirty degrees of the equator, mariners reckon almost as confidently as on the rising of the sun himself.

177. According to the laws of statics, the air, which is less rarefied or

expanded by heat, and consequently is more ponderous, must have a motion towards those parts of it which are more rarefied, and less ponderous, to bring it to an equilibrium ; also, the presence of the sun con- tinually shifting to the westward, that part towards which the air tends, by reason of the rarefactiou made by his greatest meridian heat, is, with him, carried westward ; and consequently the ten- dency of the whole body of the lower air is that way.

178. Thus a general easterly wind is formed, which being impressed upon the air of a vast ocean, the parts impel one the other, and so keep moving till the next return of the sun, by which so much of the motion as was lost is again re- stored ; and thus the easterly wind is made per- petual.

179. From the same principle it follows that this easterly wind should, on the north side of the equator, be to the northward of the east, and in south latitudes to the souˆward of it; for,

near the line, the air is much more rarefied than at a greater distance from it ; because the sun is twice in a year vertical there, and at no time distant above 23£°; at which distance, the heat, being as the sine of the angle of incidence, is but little short of that of the perpendicular ray ; whereas under the tropics, though the sun stay longer vertical, yet he is a long time 47° off, which is a kind of winter, in which the air so cools as that the summer heat cannot warm it to the same degree with that under the equator. Wherefore, the air towards the north and south being less rarefied than that in the middle, it fol- lows, that from both sides it ought to tend towards the equator.

180. This motion, compounded with the for- mer easterly wind, accounts for all the pheno- mena of the general trade-winds, which, if the whole surface of the globe was sea, would un- doubtedly blow quite round the world, as they are found to do in the Atlantic and the Ethiopic oceans. But seeing that so great continents do in- terpose, and break the continuity of the ocean, regard must be had to the nature of the soil, and the position of the high mountains, which are the two principal causes of the variations of the wind from the former general rule ; for if a country lying near the sun prove to be flat, sandy, and low laud, such as the deserts of Libya are usually reported to be, the heat occasioned by the

•ˆreflexion of the sun's beams, and the retention . of it in the sand, is incredible to those who have not felt it ; by which the air being exceedingly rarefied, it is necessary that the cooler and more dense air should run thitherwards, to restore the equilibrium. This is supposed to be the cause why, near the coast of Guinea, the wind always sets in upon the land, blowing westerly instead of easterly, there being sufficient reason to believe that the inland parts of Africa are prodigiously hot, since the northern borders of it were so very intemperate, as to give the ancients cause to conclude that all beyond the tropics was un inhabitable by excess of heat.

181. Mr. Clare, in his Motion of Fluids, p. 302, mentions a familiar experiment, that serves to illustrate this matter, as well as the alternate course of land and sea breezes. Fill a large dish with cold water, and in the middle of it place a water-plate, filled with warm water : the first will represent the ocean, the other an island, rarefying the air above it. Then holding a wax- candle over the cold water, blow it out, and the smoke will be seen, in a still place, to move toward the warm plate, and, rising over, it will point the course of the air (and also of vapor) from sea to land. And if the ambient water be warmed, and the plate filled with cold water, and the smoking wick of a candle held over the plate, the contrary will happen.

182. From the same cause it happens, that there are so constant calms in that same part of the ocean, called the rains ; for this tract being placed in the middle, between the westerly winds blowing on the coast of Guinea, and the easterly trade winds blowing to the westward of it; the tendency of the air here is indifferent to either, and so stands in equilibrio between both ;

and the weight of the incumbent atmosphere being diminished by the continual contrary winds blowing from hence, is the reason that the air here holds not the copious vapor it receives, but lets it fall in so frequent rains.

183. But, as the cold and dense air, by reason of its greater gravity, presses upon the hot and rarefied, it is demonstrable that this latter must ascend in a continued stream as fast as it rare- fies; and that, being ascended, it must disperse itself to preserve the equilibrium ; that is, by a contrary current, the upper air must move from those parts where the greatest heat is : so by a kind of circulation, the north-east trade-wind below will be attended with a south-westerly wind above ; and the south-east with a north- west wind above.

184. That this is more than a bare conjecture, the almost

instantaneous change of the wind to the opposite point, which is frequently found in passing the limits of the trade-winds, seems strongly to assure us ; but that which above all confirms this hypothesis is the phenomenon of the monsoons, by this means most easily solved, and without it hardly explicable.

185. Supposing, therefore, such a circulation as above, it is to be considered, that to the north- ward of the Indian Ocean there is every where land, within the usual limits of the latitude ot' 30° ; viz. Arabia, Persia, India, &c., which, for the same reason as the Mediterranean parts of Africa, are subject to insufferable heats when the sun is to the north, passing nearly vertical ; but yet are temperate enough when the sun is re- moved towards the other tropic, because of a ridge of mountains at some distance within the land, said to be frequently in winter, covered with snow, over which the air, as it passes, must needs be much chilled. Hence it happens that the air coming, according to the general rule, out of the north-east, to the Indian Sea, is some- times hotter, sometimes colder, than that which, by this circulation, is returned out of the south- west; and, by consequence, sometimes the under current, or wind, is from the north-east, some- times from the south-west.

186. That this has no other cause is clear from the times in which these winds set, viz. in April; when the sun begins to warm these coun- tries to the north, the south-west monsoons begin, and blow, during the heats, till October, when the sun being retired, and all things grow- ing cooler northward, and the heat increasing to the south, the north-east winds enter, and blow all the winter till April again. And it is, un- doubtedly, from the same principle, that to the southward of the equator, in part of the Indian Ocean, the north-west winds succeed the south- east, when the sun draws near the tropic of Ca- pricorn. Philosophical Transactions, No. 183, or Abridgement, vol. ii. p. 139.

187. Some philosophers, dissatisfied with Dr. Halley's theory above recited, or not thinking it sufficient for explaining the various phenomena of the wind, have had recourse to another cause, viz. the gravitation of the earth and its atmo- sphere towards the sun and moon, to which the tides are confessedly owing.

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188. From the laws of universal attraction it has been inferred that

these celestial bodies must act upon the atmosphere, or that they must occasion a flux and reflux of the atmosphere, as well as of the ocean. Hence it has been alleged, that though we cannot discover aerial tides, of ebb or flow, by means of the barometer, because columns of air of unequal height, but different density, may have the same pressure or weight ; yet the protuberance in the atmosphere, which is continually following the moon, must, they say, of course produce a motion in all parts, and so produce a wind more or less to every place, which, conspiring with or counteracted by the winds arising from other causes, makes them greater or less. Several dissertations to this purpose were published, on occasion of the subject proposed by the Academy of Sciences at Berlin, for the year 1746.

189. Although the atmospherical air is much more variable than water, and the action of the sun and moon upon it becomes much less appa- rent to us, because they must frequently concur with or be counteracted by the much more powerful effects of heat and cold, of drynessand moisture, of winds, &c., so that their action upon the barometer has been long disputed and even denied, yet, that the moon in particular, as well as the sun, has such an action has been for a considerable time surmised ; and of late years it has been in a degree observed and rendered sensible by means of very accurate and long-continued barometrical observations, and per- ceived only by taking a mean of the observations of many years.

190. Toaldo, the learned astronomer of Padua, after a variety of observations made in the course of several years, found reason to as- sert that, ceteris paribus, at the time of the moon's apogeum, the mercury in the barometer rises the 0*105 of an inch higher than at the peri- geum ; that at the time of the quadratures the mercury stands 0-008 of an inch higher than at the time of the syzygies ; and that it stands 0*022 of an inch higher when the moon in each lunation comes nearest to our zenith (meaning the zenith of Padua, where the observations were made), than when it goes farthest from it. Journal des Sciences Utiles.

191. In the seventh volume of the Philoso- phical Magazine there is a paper of L. Howard, esq., which contains several curious observations relative to this subject. This gentleman found, both from his own observations, and from an examination of the Meteorological Journal of the Royal Society, which is published annually in the Philosophical Transactions, that the moon had a manifest action upon the barometer. ' It appears,' he says, ' to me evident, that the atmo- sphere is subject to a periodical change of gra- vity, by which the barometer, on a mean of ten years, is depressed at least one-tenth of an inch

while the moon is passing from the quarters to the full and new ; and elevated, in the same pro- portion, during the return to the quarter.' A great fall of the barometer generally takes place before high tides, especially at the time of new or full moon.

192. The causes, it is said, which render the

diurnal tide of the atmosphere insensible to us, may be the elasticity of the air, and the inter- ference of the much more powerful effects of heat, cold, vapors, &c.

193. It has been calculated by D'Alembert, from the general theory of gravitation, that the influence of the sun and moon in their daily mo- tions is sufficient to produce a continual east wind about the equator. So that, upon the whole, we may reckon three principal daily tides, viz. two arising from the attractions of the sun and moon, and the third from the heat of the sun alone : all which sometimes combine toge- ther, and form a prodigious tide.

194. In corroboration of the opinion of the influence of the sun, and principally of the moon, in the production of wind, we must like- wise mention the observations of Bacon, Gas- sendi, Dampier, Halley, &c. ; namely, that the periods of the year most likely to have high winds are the two equinoxes ; that storms are more frequent at the time of new and full moon, espe- cially those new and full moons which happen about the equinoxes ; that, at periods otherwise calm, a small breeze takes place at the time of high water; and that a small movement in the atmosphere is generally perceived a short time after the noon and the midnight of each day.

195. M. Muschenbioeck, however, will not allow that the attraction of the moon is the cause of the general wind ; because the east wind does not follow the motion of the moon about the earth ; for in that case there would be more than twenty-four changes, to which it would be sub- ject in the course of a year instead of two. In- trod. ad. Phil. Nat. vol. ii. p. 1102.

196. Some action in the production of wind may also be derived from volcanoes, fermenta- tions, evaporations, and especially from the con- densation of vapors; for we find that, in rainy weather, a considerable wind frequently precedes the approach of every single cloud, and that the wind subsides as soon as the cloud has passed over our zenith.

197. Wherever any of the above-mentioned causes are constantly more predominant, as the heat of the sun within the tropics, there a

cer- tain direction of the wind is more constant; and where different causes interfere at different and irregular periods, as in those places which are considerably distant from the torrid zone, there the winds are more changeable and uncertain.

198. In short, whatever disturbs the equili- brium of the atmosphere, viz. the equal density or quantity of air at equal distances from the surface of the earth ; whatever accumulates the air in one place, and diminishes it in other places, must occasion a wind both in disturbing and in restoring that equilibrium, as above stated.

199. Mr. Henry Eeles, apprehending that the sun's rarefying of the air cannot simply be the cause of all the regular and irregular motions which we find in the atmosphere, ascribes them to another cause, viz. the ascent and descent of vapor and exhalation, attended by the electrical fire or fluid ; and on this principle he has en- deavoivid to explain at large the general pheno- mena of the weather and barometer. Philoso- p' ical Transactions, vol. xlix. art. 25, p. 124.

200. M. Brisson (Principes de Physique) also is of opinion that electricity is the principal and more general cause which produces winds ; but Mr. Cavallo is of a different opinion.

201. After making various observations on the nature and theory of winds, Dr. Darwin recapi- tulates his opinions in the following matter. 1 . The north-east wind consists of air flowing from the north, where it seems to be occasionally produced; and has an apparent direction from the east, owing to its not having acquired in its journey the increasing velocity of the earth's sur- face. These winds are analogous to the trade- winds between the tropics, and frequently con- tinue in the vernal months for four or six weeks together, with a high barometer, and fair and frosty weather. They sometimes consist of south- west air, which had passed by us or over us, driven back by a new accumulation of air in the north ; and they continue but a day or two, and are attended with rain.

2. The south-west wind consists of air flow- ing from the south, and seems occasionally ab- sorbed at its arrival to the more northern lati- tudes. It has a real direction from the west, owing to its not having lost in its journey the greater velocity it had acquired from the earth's surface from whence it came. These winds are analogous to the

monsoon, between the tropics, and frequently continue for four or six weeks together, with a low barometer, and rainy wea- ther. They sometimes consist of north-east air, which had passed by us, and which becomes retrograde by a commencing deficiency of air in the north. These winds continue but a day or two, attended with severe frost, with a sinking barometer ; their cold being increased by their expansion as they return into an incipient va- cancy.

3. The north-west wind consists first of south- west winds which have been passed over, been bent down, and driven back towards the south by newly generated northern air. They con- tinue but a day or two, and are attended with rain or clouds. They consist of north-east winds bent down from the higher parts of the atmo- sphere, and having there acquired a greater velocity from the earth's surface are frosty and fair. They consist of north-east winds formed into a vertical eddy, not a spiral one, with frost or fair.

4. The north winds consist first of air flowing slowly from the north, so that they acquire the velocity of the earth's surface as they approach it ; they are fair or frosty, but seldom occur. They consist of retrograde south winds ; these continue but a day or two, are preceded by south-west winds, and are generally succeeded by north-east winds, cloudy or rainy weather, the barometer rising.

5. The south winds consist first of air slowly flowing from the south, losing their previous westerly velocity by the friction of the earth's surface as they approach it ; they are moist, but seldom occur. They consist of retrograde north winds; these continue but a day or two, and are preceded by north-east winds, and are generally succeeded by south-west winds, colder, and the barometer sinkins.

6. The east winds consist of air brought has- tily from the north, and not impelled farther southward, owing to a sudden beginning ab- sorption of air in the northern regions; they are very cold, the barometer high, and are generally succeeded by south-west winds.

7. The west winds consist of air brought hastily from the south, and checked from pro- ceeding farther to the north, by a beginning pro- duction of air in the northern regions ; they are warm and moist, and generally succeeded by 'north-east winds. They consist of air bent downwards from the higher regions of the atmo- sphere; if this air be from the south, and brought hastily, it becomes a wind of great velo- city, moving perhaps sixty miles in an hour, and is warm and rainy; if it consists of northera air bent down it is of less velocity, and cooler.

202. Various other interesting remarks and reflections on winds may be seen in the notes to the Botanic Garden, by the same writer.

203. The industry of some late writers having brought the theory of the production and motion of winds to somewhat of a mathematical demon- stration, we shall here give it the reader in that form : —

204. If the spring of the air be weakened rn any place, more than in the adjoining places, a wind will blow through the place where the di- minution is.

For, 1. Since the air endeavours, by its elastic force, to expand itself every way ; if that force be less in one place than another, the effort of the more against the less elastic will be greater than the effort of the latter against the former. The less elastic air, therefore, will resist with less force than it is urged by the more elastic: conse- quently the less elastic will be driven out of its place, and the more elastic will succeed. If, now, the excess of the spring of the more elastic above that of the less elastic air, be such as to occasion a little alteration in the baroscope ; the motion both of the air expelled, and that which succeeds it, will become sensible, i. e. there will be a wind.

2. Hence, since the spring of the air increases as the compressing weight increases, and com- pressed air is denser than air less compressed, all winds blow into rarer air out of a place filled with a denser.

3. Wherefore, since a denser air is specifically heavier than a rarer, an extraordinary lightness of the air in any place must be attended with extraordinary winds or storins. Now, an extra- ordinary fall of the mercury in the barometer showing an extraordinary lightness in the atmo- sphere, it is no wonder if that foretels storms. See BAROMETER.

4. If the air be suddenly condensed in any place, its spring will be suddenly diminished : hence, if this diminution be great enough to affect the barometer, there will a wind blow through the condensed air.

5. But since the air cannot be suddenly con- densed, unless it have before been much rarefied, there will a wind blow through the air, as it cools, after having been violently heated.

6. In like manner, if air be suddenly rarefied, its spring is suddenly increased : wherefore, it

will flow through the contiguous air, not acted ou by the rarefying force. A wind, therefore, will blow out of a place in which the air is sud- denly rarefied ; and on this principle, in all pro- bability, it is, that,

7. Since the sun's power in rarefying the air is notorious, it must necessarily have a great in- fluence on the generation of winds.

8. Most caves are found to emit wind, either more or less. M. Muschenbroeck has enume- rated a variety of causes that produce winds, existing in the bowels of the earth, on its surface, in the atmosphere, and above it. See Intr. ad Phil. Nat. vol. ii. p. 1116, &c.

205. The rising and changing of the wind are determined experimentally, by means of weather- cocks, placed on the tops of houses, &c. But these only indicate what passes about their own height, or near the surface of the earth : Wolfius assures us, from observations of several years, that the higher winds, which drive the clouds, are different from the lower ones, which move the weather-cocks,. And Dr. Derham observes something not unlike this. Phys. Theol. lib. i. cap. 2.

206 The author las*, mentioned relates, upon comparing several aeries of observations made of the winds in divers countries, viz. England, Ireland, Switzerland, Italy, France, New Eng- land, &c., that the winds in those several places seldom agree ; but when they do it is commonly when they are strong, and of long continuance in the same quarter ; and more, he thinks, in the northerly and easterly than in other points. Also, that a strong wind in one place is oftentimes a weak one in another, or moderate, according as the places are nearer, or more remote. Phil. Trans. No. 267 and 321.

207. Wind being only air in motion, and air being a fluid subject to the laws of other fluids, its force may be regularly brought to a precise computation : thus, ' The ratio of the specific gravity of any other fluid to that of air, together with the space that fluid, impelled by the pres- sure of the air, moves in any given time, being given ; we can determine the space through which the air itself, acted on by the same force, will move in the same time.' By this rule : —

1. As the specific gravity of air is to that of any other fluid ; so, reciprocally, is the square of the space which that fluid, impelled by any force, moves in any given time, to the square of the space which the air, by the same impulse, will move in the same time. Supposing, therefore, the ratio of the specific gravity of that other fluid

to that of air, to be ~ — ; the space described

by the fluid to be called x ; and that which the air will describe by the same impulse a: The

/671

rule gives us x ~ \/ . Hence, it we sup- pose water impelled by the given force to move two feet in a second of time, then wills— 2 ; and, since the specific gravity of water to the air is as 800 to 1 , we shallhavefcn 800, and c = 1 ; con- sequently, x =. */ 800 + 4 = V 3200 = 57 feet nearly. The velocity of the wind, therefore, to that of water moved by the same power, will be Voj,. XVII.

as 57 to 2 ; i. e. if water move two feet in a se- cond, the wind will fly 57 feet. sc % i

2. Add, that s — \/ — r— ; and therefore the

space any fluid, impelled bK any impression, moves in any time, is determined by finding a fourth proportional to the two numbers that ex- press the ratio of the specific gravities of the two fluids, and the square of the space the wind moves in, in the given time. The square root of that fourth proportional is the space required, M. Mariotte, e. gr. found, by various experiments, that a pretty strong wind moves 24 feet in a second of time ; which is at the rate of 1440 in a minute ; i. e. at the rate of somewhat more than 16 miles in an hour : wheref re, if the space which the water, acted on by the same force as the air. will describe in the same time, be re- quired ; then will c ~ 1, x ~ 24, b rz 800 ;

and we shall find s — V' ;,— — if nearly. Der-

800

ham estimated the velocity of the wind in very great storms at 66 feet per second ; and de la Coadamine at 90 £ feet per second.

3, * The velocity of wind being given, to de- termine the pressure required to produce that velocity ;' we have this rule. The space the wind moves in one second of time is to the height a fluid is to be raised in an empty tube, in order to have a pressure capable of producing that velocity, in a ratio compounded of the specific gravity of the fluid to that of the air, and of quadruple the altitude a body descends in the first second of time, to the aforesaid space of the air.

208. Suppose, e. gr., the space through which the air moves in a second, a — 24 feet, or 288 inches ; call the altitude of the fluid x ; and the

6 800 x 14 11200 ratio ot mercury to air — — – – – — — – — ;

and the altitude through which a body descends in the first second of time, 16 feet 1 inch ; then, by the theorem, we shall have 288 : x '.' 11200

288 X 288 X 762 : 288, and coBsequently * =

~ '01, &c., of an inch. Hence we see why a small but sudden change in the barometer is fol- lowed with violent winds. See an account of the principle upon which these calculations are founded under the article WATER.

209. When the direction of the wind is not perpendicular, but oblique to the surface of the solid, then the force of the former upon the latter will not be so great as when the impulse is direct, and that for reasons which are easily de- rived from the theory of the resolution and com- position of forces, and from the theory of direct and oblique impulses. In short, the general proposition for compound impulses is, that the effective impulse is as the surface, as the square of the air's velocity, as the square of the sine of the angle of incidence, and as the sine of the ob- liquity of the solid's motion to the direction of the impulse, jointly ; for the alteration of every- one of these quantities will alter the effect in the same proportion. But these general rules, as \e have already more than once observed, are

subject to great variations ; so that their results seldom coincide with those of actual experi- ments.

210. Philosophers have used various methods for determining the velocity of the wind, which is very different at different times. The method used by Dr. Derliam was that of let- ting light downy feathers fly in the wind, and accurately observing the distance to which they were carried in any number of half seconds. This method he preferred to that of Dr. Hooke's mola alata, or pneumatica. (See Phil. Trans. No. 24, and Birch's Hist. Roy. Soc. vol. iv. p. 225.) He tells us that he thus measured the velocity of the wind in the great storm of August, 1705, and by many experiments found that it moved at the rate of thirty-

three feet per half second, or of forty-five miles per hour : whence he concludes that tlie most vehement wind (as that of Novem- ber, 1703) does not fly at the rate of above fifty or sixty miles per hour. Phil. Trans. No. 313, or Abr. vol. iv. p. 411.

211. Mr.Brice observes that experiments with feathers are subject to uncertainty : as they seldom or ever describe a straight line, but describe a sort of spirals, moving to the right and left, and rising to very different altitudes in their progress. He, therefore, considers the motion of a cloud, or its shadow, over the surface of the earth, as a much more accurate measure of the velocity of the wind. In this way he found that the wind, in a considerable storm, moved at the rate of 62-9 miles per hour ; and that, when it blew a fresh gale, it moved in the same time about twenty-one miles ; and that in a small breeze the wind moved at the rate of 9‘9 miles per hour. Phil. Trans, vol. Ivi. p. 226.

212. But it has been observed by Cavallo and others, that this method is very fallacious, partly because it is not known whether the clouds do or do not move exactly with the air in which they float; and partly because the velocity of the air in the region where the clouds float is by no means the same with that of the air which is nearer to the surface of the earth, and is some- times quite contrary to it, as indicated by the motion of the clouds themselves. Others have estimated the velocity of the wind by the changes effected by it upon the motion of sound, which must of course be very inacurate. A very simple method of determining the velocity of the wind is that which M. Coulomb (Mem. de 1′ Acad. Roy. 1781, p. 70) employed in his expe- riments on wind-mills, because it requires nei- ther the aid of instruments nor the trouble of calculation. Two persons were placed on a small elevation, at the distance of 150 feet from one another, in the direction of the wind ; and, while the one observed, the other measured the time which a small and light feather employed in removing through this space. The distance between the two persons, divided by the number of seconds, gave the velocity of the wind per second. The best method, says Cavallo, of mea- suring the velocity of the wind, is by observing the velocity of the smoke of a low chimney, or by estimating the effect it produces upon certain bodies, and thus may be determined its force as well as its velocity. We shall here observe that

from the concurrence of experiments made with various instruments, and different modes of cal culation, it has been inferred, that in currents of air, of the denominations which are expressed in the fourth column of the annexed table, the aii moves at the rate of so many feet

per second as are expressed in the second column, or of so many miles per hour as are expressed in the first column.

213. A TABLE of the different velocities and force.> of the winds, constructed by Mr. Rouse with great care, from a considerable number of facts and experiments, and communicated to Mr. Smeaton, and first published by him in the fifty-first volume of the Philosophical Transactions.

Velocity of the

Perpendi-

Wind.

cular force

on 1 sq. ft. in avoir-

Common appellations of the forces of winds.

Miles

~ Feet in

in one

one

dupois

hour.

second.

pounds.

1

1-47

•005

Hardly perceptible.

2 3

2-93 4-40

•0201 •044$

Just perceptible.

4

5-87

•079)

Gentle pleasant

5

7-33

•123$

wind.

10 15

14-67 22-00

•492 I

1-107$

Pleasant brisk gale.

20 25

29-34 36-67

1-968 >

3-075 $

Very brisk.

30 35

44-01 51-34

4-429 i 6-027 \

High wind.

40 45

58-68 66-01

7-873 1 9-963 $

Very high.

50

75-35

12-300

A storm or tempest.

60

88-02

17-715

A great storm.

80

117-36

31-490

A hurricane.

/• A hurricane that

\ tears up trees,

100

146-70

49-200

< and carries build

i ings, &c., before

1

Vit.

214. The force of the wind is as the square of its velocity, as Mr. Ferguson has shown by ex- periments on the whirling-table ; and in mode- rate velocities this will hold very nearly. Upon this principle the numbers in the third column are calculated. The proposition upon which this column has been formed seems to be, that the impulse of a current of air, striking perpen- dicularly upon a given surface, with a certain velocity, is equal to the weight of a column of air which has that surface for its base, and for its height the space through which a body must fall, in order to acquire that velocity of the air.

215. It is observed, with regard to this table, that the evidence for those numbers, where the velocity of the wind exceeds fifty miles an hour, does not seem of equal authority with that of those of fifty miles, or under. Phil. Trans, vol. li. p. 165.

216. As the winds of the torrid zone differ in several important particulars from those which

blow without the tropics, we shall first describe them, and afterwards those of the temperate zones.

217. I. In those parts of the Atlantic and Pacific oceans which lie nearest the equator, there is a regular wind during the whole year called the trade-wind. On the north side of the equator it blows from the north-east, varying frequently a point or two towards the north or east ; and on the south side of it, from the south- east, changing sometimes in the same manner towards the south or east. The space included between 2° and 5° of N. lat. is the internal limit of these two winds. There the winds can nei- ther be said to blow from the north nor the south ; calms are frequent, and violent storms. This space varies a little in latitude as the sun approaches either of the tropics. — In the Atlantic Ocean the trade winds extend farther north on the American than on the African coast ; and, as we advance westward, they become gradually more easterly, and decrease in strength. Their force diminishes likewise as we approach their utmost boundaries. It has been remarked, also, that, as the sun approaches the tropic of Cancer, the south-east winds become gradually more southerly, and the north-east winds more easter- ly : exactly the contrary takes place when the sun is approaching the tropic of Capricorn.

218. The trade wind blows constantly m the Indian Ocean from 10° of S. lat. to near 30°: but to the northward of this the winds change every six months, and blow directly opposite to their former course. These regular winds are called monsoons, from the Malay word moossin, which signifies ‘ a season.’ When they shift their direction, variable winds and violent storms suc- ceed, which last for a month and frequently lon- ger; and during that time it is dangerous for vessels to continue at sea.

219. The monsoons in the Indian Ocean may be reduced to two”; one on the north and ano- ther on the south side of the equator ; which ex- tend from Africa to the longitude of New Hol- land and the east coast of China, and which suffer partial changes in particular places from the situation and inflection of the neighbouring countries.

1. Between 3° and 10° of S. lat. the south- east trade-wind continues from April to October ; but during the rest of the year the wind blows from the north-west. Between Sumatra and New Holland this monsoon blows from the south during our summer months, approaching gradu- ally to the south-east as we advance towards the coast of New Holland ; it changes about the end of September, and continues in the opposite di- rection till April. Between Africa and Mada- gascar its direction is influenced by the coast; for it blows from the north-east from October to April, and during the rest of the year from the south-west.

2. Over all the Indian Ocean, to the north- ward of 3° S. lat., the north-east trade-wind blows from October to April, and a south-west wind from April to October. From Borneo, along the coast of Malacca and as far as China, this mon- soon in summer blows nearly from the south, and in winter from the north by east. Near the

coast of Africa, between Mozambique and Capo Guardafeu, the winds are irregular during the whole year, owing to the different monsoons which surround the particular place. — Monsoons are likewise regular in the Red Sea; between April and October they blow from the north-west, and during the other months from the south-east, keeping constantly parallel to the coast of Arabia.

220. Monsoons are not altogether confined to the Indian Ocean ; on the coast of Brasil, between Cape St. Augustine and the island of St. Catherine, the wind blows between Septem- ber and April from the east or north-east, and between April and September from the south-west.— The bay of Panama is the only place on the west side of a great continent where the wind shifts regularly at different seasons : there it is easterly between September and March ; but between March

and September it blows chiefly from the south and south-west.

221. Such in general is the direction of the winds in the torrid zone all over the Atlantic, Pacific, and Indian Oceans, but they are subject to particular exceptions, which we shall now endeavour to enumerate. — On the coast of Africa, from Cape Bayador to Cape Verde, the winds are generally north-west ; from hence to the is- land of St. Thomas near the equator they blow almost perpendicular to the shore, bending gra- dually, as we advance southwards, first to the west and then to the south-west. On the coast of New Spain likewise, from California to the Bay of Panama, the winds blow almost constant- ly from the west or south-west, except during May, June, and July, when land winds prevail, called by the Spaniards popogayos. On the coast of Chili and Peru, from 20° to 30° S. lat. to the equator, and on the parallel coast of Africa, the wind blows during the whob year from the south, varying according to the direction of the land towards which it inclines, and extending much farther out to sea on the American than the African coast. The trade winds are also in- terrupted sometimes by westerly winds in the Bay of Campeachy and the Bay of Honduras.

222. \s to the countries between the tropics, we are too little acquainted with them to be able to give a satisfactory history of their winds.

In all maritime countries between the tropics of any extent, the wind blows during a certain number of hours every day from the sea, and during a certain number towards the sea from the land ; these winds are called the sea and land breezes. The sea breeze generally sets in about ten in the forenoon, and blows till six in the evening; at seven the land-breeze begins, and continues till eight in the morning, when it dies away. During summer the sea-breeze is very perceptible on all the coasts of the Mediterranean Sea, and even sometimes as far north as Norway.

223. In the island of St. Lewis on the coast of Africa, in 16° N. lat., and 16° W. long., the wind during the rainy season, which lasts from the middle of July to the middle of October, is ge- nerally between the south and east ; during the rest of the year it is for the most psrt east or north-east in the morning ; but, as the sun rises, the wind approaches gradually to the north, till

about noon it gets to the west of north, and is called a sea-breeze. Sometimes it shifts to the east as the sun descends, and continues there during the whole night. In February, March, April, May, and June, it blows almost constant- ly between the north and west. In the island of Balama, which lies likewise on the west coast of Africa, in 11° N. lat., the wind during nine months of the year blows from the south-west; but in November and December a very cold wind blows from ihc aorth-east.

224. In ‘he kingdom of Bornou, which lies between 16° and 20° N. lat., the warm season is introduced about the middle of April by sultry winds from the south-east, which bring along with them a deluge of rain. In Fezzan, which is situated about 25° N. lat., and 35° E. long., the wind from May to August blows from the east, south-east, or south-west, and is intensely hot.

225. In Abyssinia the winds generally blow from the west, north-west, north, and north-east. During the months of June, July, August, Sep- temper, and October, the north and north-east winds blow almost constantly, especially in the morning and evening; and during the rest of the year they are much more frequent than any other winds.

226. At Calcutta, in the province of Bengal, the wind blows during January and February from the south-west and south; in March, April, and May, from the south ; in June, July, Au- gust, and September, from the south and south- east ; in October, November, and December, from the north-west. — At Madras the most fre- quent winds are the north and north-east. — At Tivoli in St. Domingo, and the Isles de Vaches, the wind blows oftenest from the south and south-east. — From these facts it appears, that in most tropical countries with which we are ac- quainted the wind generally blows from the nearest ocean, except during the coldest months, when it blows towards it.

227. II. In the temperate zones the direction of the winds is by no means so regular as be- tween the tropics. Even in the same degree of latitude, we find them often blowing in different directions at the same time ; while their changes are frequently so sudden and so capricious that to account for them has hitherto been found im- possible. When winds are violent, and continue long, they generally extend over a large tract of country ; and this is more certainly the case when they blow from the north or east, than from any other points. By the multiplication and comparison of Meteorological Tables, some re- gular connexion between the changes of the

atmosphere in different places may in time be observed, which will at last lead to a satisfactory theory of the winds. It is from such tables chiefly that the following facts have been collected.

228. In Virginia, the prevailing winds are be- tween the south-west, west, north, and north- Vest ; the most frequent is the south-west, which

Wows more constantly in June, July, and Au- gust, than at any other season. The north-west winds blow most constantly in Novefnber, De- cember, January, and February. — At Ipswich, in New England, the prevailing winds are also be- tween the south-west, west, north, and north-

east ; the most frequent is the north-west. But at Cambridge, in the same province, the most frequent wind is the south-east. — The predomi- nant winds at New York are the north and west. And in Nova Scotia north-west winds blow for three-fourths of the year. — The same wind blows most frequently at Montreal in Canada ; but at Quebec the wind generally follows the direction of the river St. Lawrence, blowing either from the north-east orsouth-west. — At Hudson's Bay west- erly winds blow for three-fourths of the year ; the north-west wind occasions the greatest cold, but the north and north-east are the vehicles of snow.

229. It appears, from these facts, that west winds are most frequent over the whole eastern coast of North America ; that in the southern provinces south-west winds predominate ; and that the north-west become gradually more fre- quent as we approach the frigid zone.

230. In Egypt, during part of May, and dur- ing June, July, August, and September, the wind blows almost constantly from the north, varying sometimes in June to the west, and in July to the west and the east: during part of September, and in October and November, the winds are variable, but blow more regularly from the east than any other quarter ; in Decem- ber, January, and February, they blow from the north, north-west, and west ; towards the end of February they change to the south, in which quarter they continue till near the end of March ; during the last days of March, and in April, they blow from the south-east, south, and south- west, and at last from the east; and in this di- rection they continue during a part of May.

231. In the Mediterranean the wind blows nearly three-fourths of the year from the north; about the equinoxes there is always an east wind in that sea, which is generally more constant in spring than in

autumn. These observation do not apply to the gut of Gibraltar, where there are seldom any winds except the east and west. — At Bastia, in the island of Corsica, the prevailing wind is the south-west.

233. In Syria the north wind blows from the au- tumnal equinox to November ; during December, January, and February, the winds blow from the west and south-west; in March they blow from south ; in May from the east ; and in June from the north. From this month to the autumnal equinox the wind changes gradually as the sun approaches the equator ; first to the east, then to the south, and lastly to the west. At Bagdad the most frequent winds are the south-west and north-west; at Pekin the north and the south; at Kamtschatka, on the north-east coast or* Asia, the prevailing winds blow from the we*..

233. In Italy the prevailing vii-df differ con- siderably according to the situation of the places where the observations have been made : at Rome and Padua they are northerly ; at Milan easterly All that we have been able to learn concerning Spain and Portugal is, that on the west coast of these countries the west is by far the most com- mon wind, particularly in summer ; and that at Madrid the wind is north-east for the greatest part of the summer, blowing almost constantly from the Pyrenean Mountains. — At Berne in

Switzerland the prevailing winds are the north and west; at St. Gothard the north-east; at Lausanne the north-west and south-west.

234. Father Cotte has given us the result of observations made at eighty-six different places of France ; from which it appears that along; the whole south coast of that kingdom the wind blows most frequently from the north, north-west, and north-east ; on the west coast from the west, south-west, and north-west; and on the north coast from the south-west. That in [the interior parts of France the south-west wind blows most frequently in eighteen places ; the west wind in fourteen ; the north in thirteen ; the south in six ; the north-east in four ; the south-east in two ; the east and north-west each of them in one. On the west coast of the Netherlands, as far north as Rotterdam, the prevailing winds are probably the south-west, at least this is the case at Dunkirk and Rotterdam. It is probable also that along the rest of this coast, from the Hague to Hamburgh, the prevailing winds are the north- west, at least these winds are most frequent at the Hague and at Franeker. The prevailing wind at Delft is

the south-east, and at Breda the north and the east.

235. In Germany the east wind is most fre- quent at Gottingen, Munich, Weissemburg, Dusseldorf, Saganum, Erford, and at Buda in Hungary ; the south-east at Prague and Wirtz- berg ; the north-east at Ratisbon ; and the west at Manheim and Berlin.

236. From an average often years of the register kept by order of the Royal Society, it appears, that at London the wind blows in the following order : —

Winds. Days. Winds. Days.

South-west . . 112 South-east . . .32

North-east . .58 East 26

North-west . . 50 South 18

West .... 53 North 1(5

237. It appears, from the same register, that the south-west wind blows at an average more frequently than any other wind during every month of the year, and that it blows longest in July and August; that the north-east blows most constantly during January, March, April, May, and June, and most seldom during February, July, September, and December; and that the nrith-west wind blows often from November to

March, and more seldom during September and October, than any other months. The south-west winds are also most frequent at Bristol, and next to them are the north-east.

238. The following table of the winds at Lan- caster has been drawn up from a register kept for seven years at that place : —

Winds. – Days. Winds. Days.

South-west . . .92 South-east ... 35

North-east ... 67 North 30

South . . . .51 North-west ... 26 West .... 41 East 17

239. The following table is an extract of nine years' observations made at Dumfries by Mr. Copland : —

Winds. Days. Winds. Days.

South . . . . 82£ North 36%

West .... 69 North-west . . . 25 i East .... 68 South-east . . . 18£ South-west . . 50J North-east . . . 14£

240. The following table is an abstract of seven years' observations made by Mr. Meek at Cambuslang near Glasgow : —

Winds. South-west North-west

Days.

. 174 . 140

Winds. North-east South-east

Days.

. 104

. 47

241. It appears, from the register from which this table was extracted, that the north-east wind blows much more frequently in April, May, and June, and the south-west in July, August, and September, than at any other period. We learn from the Statistical Account of Scotland that the south-west is by far the most frequent wind all over that kingdom, especially on the west coast. At Saltcoats in Airshire, for instance, it blows three-fourths of the year; and along the whole coast of Murray, on the north-east side of Scotland, it blows for two-thirds of the year. East winds are common over all Great Britain during April and May; but their in- fluence is felt most severely on the eastern coast.

242. The following table exhibits a view of the number of days during which the westerly and easterly winds blow in a year at different parts of the island. Under the term westerly are in- cluded the north-west, west, south-west, and south ; the term easterly is taken in the same latitude : —

Years of Ob- servation.

Places.

Wind.

Westerly.

Easterly.

10

233

132

7

Lancaster ....

216

149

51

Liverpool ....

170

175

9

Dumfries ....

227-5

137-5

10

Branxholm, fifty-four

miles south-west of

Berwick ....

232

133

7

Cambuslang . . .

214

151

8

Hawkhill, near Edin-

burgh ....

229-5

135-5

Mean

217-4

144-7

243. In Ireland the south-west and west are the grand tiade-winds, blowing most in summer, autumn, and winter, and least in spring. The north-east blows most in spring, and nearly double to what it does in autumn and winter. The south-east and north-east are nearly equal, and are most frequent after the south-west and west.

244. At Copenhagen the prevailing winds are the east and south-east; at Stockholm the west and north. In Russia, from an average of a re- gister of sixteen yei.rs, the winds blow from No- vember to April in the following order : —

West. N. W. East. S. W. South. N. E. N. S. E. Days 45 26 23 22 20 19 14 12

And duHng the other six months,

West. N. W. East. S. W. South. N. E. N. S.E. Days 27 27 19 24 22 15 32 18

245. The west wind blows during the whole year seventy-two days ; the north-west fifty- three ; the south-west and north forty-six days each. During summer it is calm for forty-one days, and during winter for twenty-one. In Norway the most frequent winds are the south, the south-west, and south-east. The wind at Bergen is seldom directly west, but generally south-west or south-east; a north-west, and es- pecially a north-east wind, are but little known there.

246. From the whole of these facts, it appears that the most frequent winds on the south coasts of Europe are the north, the north-east, and north-west ; and, on the western-coast, the south- west : that in the interior parts which lie most contiguous to the Atlantic Ocean, south-west winds are also most frequent ; but that easterly winds prevail in Germany. Westerly winds are also most frequent on the north-east coast of Asia.

247. It is probable that the winds are more constant in the south temperate zone, which is in a great measure covered with water, than in the north temperate zone, where their direction must be frequently interrupted and altered by mountains and other causes.

248. M. de la Bailie, who was sent thither by the French king to make astronomical observa- tions, informs us that at the Cape of Good Hope the main winds are the south-east and north-west ; that other winds seldom last longer than a few hours ; and that the east and north- east

winds blow very seldom. The south-east wind blows in most months of the year, but chiefly from October to April; the north-west prevails during the other six months, bringing along with it rain, and tempests, and hurricanes. Between the Cape of Good Hope and New Hol- land the winds are commonly westerly, and blow in the following order : north-west, south- west, west north.

249. In the great South Sea, from lat. 30° to 40° S. the south-east trade-wind blows most fre- quently, especially when the sun approaches the tropic of Capricorn ; the wind next to it in fre- quency is the north-west, and next to that is the south-west. From S. lat. 40° to 50° the prevail- ing wind is the north-west, and next the south- west. From 50° to 60° the most frequent wind

is also the north-west, and next to it is the west.

250. Thus it appears that the trade-winds sometimes extend farther into the south tempe- rate zone than their usual limits, particularly during summer; that beyond their influence the winds are commonly westerly, and that they blow in the following order : north-west, south- west, west.

251. Thus have we finished the history of the direction of the winds. In the torrid zone they blow constantly from the north-east on the north side of the equator, and from the south-east on the south side of it. In the north temperate zone they blow most frequently from the south- west; in the south temperate zone from the north-west, changing, however, frequently to all points of the compass, and in the north tempe- rate zone blowing particularly during spring from the north-east.

252. The phenomena that result from the vi- bration of elastic aeriform bodies usually form an important part of the science of pneumatics ; we have, however, already furnished the reader with a general treatise on this subject under its proper head, and we now advert to it only to complete that branch of acoustics which could not have been understood without a reference to the principles of optics. We may commence with the analogy which is usually supposed to exist between light and sound. On this subject we find Dr. Young full and interesting.

253. Ever since the publication of Sir Isaac Newton’s incomparable writings, his doctrines of the emanation of particles of light from lucid substances, and of the formal pre-existence of colored rays in white light, have been almost universally admitted in this country, and but

little opposed in others. Leonard Euler indeed, in several of his works, has advanced some powerful objections against them, but not suf- ficiently powerful to justify the dogmatical re- probation with which he treats them ; and he has left that system of an ethereal vibration, which after Huygens and some others he adopt- ed, equally liable to be attacked on many weak sides. Without pretending to decide positively on the controversy, it is conceived that some considerations may be brought forwards, which may tend to diminish the weight of objections to a theory similar to the Huygenian. There are also one or two difficulties in the Newtonian system which have been little observed. The f.rst is, the uniform velocity with which light is supposed to be projected from all luminous bo- dies, in consequence of heat, or otherwise. How happens it that, whether the projecting force is the slightest transmission of electricity, the fric- tion of two pebbles, the lowest degree of visible ignition, the white heat of a wind furnace, or the intense heat of the sun itself, these wonderful corpuscles are always propelled with one uni- form velocity ? For, if they differed in velocity, that difference ought to produce a different re- fraction. But a still more insuperable difficulty seems to occur in the partial reflection from every refracting surface. Why, of the same kind of rays, in every circumstance precisely similar, some should always be reflected, and others transmitted, appears in this system to be wholly

inexplicable. That a medium resembling, in many properties, that which has been denomi- nated ether, does really exist, is undeniably proved by the phenomena of electricity; and the arguments against the existence of such ar> ether throughout the universe have been pretty sufficiently answered by Eu'er. The rapid transmission of the electrical shock shows that the electric medium is possessed of an elasticity as great as is necessary to be supposed for the propagation of light. Whether the electric ether is to be considered as the same with the lumi- nous ether, if such a fluid exists, may perhaps at some future time be discovered by experi- ment. The uniformity of the motion of light in the same medium, which is a difficulty in the Newtonian theory, favors the admission of the Huygenian ; as all impressions are known to be transmitted through an elastic fluid with the same velocity. It has been already shown that sound, in all probability, has very little tendency to diverge : in a medium so highly elastic as the luminous ether must be supposed to be, the ten- dency to diverge may be considered as infinitely sirall, and the grand objection to the system

of vibration will be removed. It is not absolutely certain that the white line visible in all directions on the edge of a knife, in the experiments of Newton and of Mr. Jordan, was not partly oc- casioned by the tendency of light to diverge. Euler's hypothesis, of the transmission of light by an agitation of the particles of the refracting media themselves, is liable to strong objections ; according to this supposition the refraction of the rays of light, on entering the atmosphere from the pure ether which he describes, ought to be a million times greater than it is. For explaining the phenomena of partial and total reflection, refraction, and inflection, nothing more is necessary than to suppose all refracting media to retain, by their attraction, a greater or less quantity of the luminous ether, so as to make its density greater than that which it possesses in a vacuum, without increasing its elasticity ; and that light is a propagation of an impulse communicated to this ether by luminous bodies : whether this impulse is produced by a partial emanation of the ether, or by vibrations of the particles of the body, and whether these vibra- tions are, as Euler supposed, of various and irregular magnitudes, or whether they are uni- form, and comparatively large, remains to be hereafter determined. Now, as the direction of an impulse transmitted through a fluid, depends on that of the particles in synchronous motion, to which it is always perpendicular, whatever alters the direction of the pulse will inflect the ray of light. If a smaller elastic body strike against against a larger one, it is well known that the smaller is reflected more or less powerfully, according to the difference of their magnitudes : thus, there is always a reflection when the rays of light pass from a rarer to a denser stratum of ether; and frequently an echo when a sound strikes against a cloud. A greater body striking a smaller one propels it, without losing all its motion ; thus the particles of a denser stratum of ether do not impart the whole of their mo- tion to a rarer, but, in their effort to oroceed,

they are recalled by the attraction of the refract- ing substance with equal force ; and thus i re- flection is always secondarily produced, A'hen the rays of light pass from a denser to a rarer stratum. The repulsion of inflected rays has been very ably controverted by Mr. Jordan, the ingenious author of a late publication on the In- flection of Light. It has already been conjec- tured by Euler that the colors of light consist in the different frequency of the vibrations of the luminous ether : it does not appear that he has supported this opinion by any argument; but it is strongly confirmed by the analogy be- tween the colors of a thin plate and the sounds of a series of organ pipes. The phenomena of the colors of thin plates require, in the Newtonian system, a very complicated supposition, of an ether

anticipating by its motion the velocity of the corpuscles of light, and thus producing the fits of transmission and reflection ; and even this supposition does not much assist the expla- nation. It appears, from the accurate analysis of the phenomena which Newton has given, and which has by no means been superseded by any later observations, that the same color recurs whenever the thickness answers to the terms of an arithmetical progression. Now this is pre- cisely similar to the production of the same sound by means of a uniform blast, from organ-pipes which are different multiples of the same length. Supposing white light to be a continued impulse or stream of luminous ether, it may be conceived to act on the plates as a blast of air does on the organ-pipes, and to produce vibrations regu- lated in frequency by the length of the lines which are terminated by the two refracting sur- faces. It maybe objected that, to complete the analogy, there should be tubes, to answer to the organ-pipes : but the tube of an organ-pipe is only necessary to prevent the divergence of the impression, and in light there is little or no ten- dency to diverge ; and, indeed, in the case of a resonant passage, the air is not prevented from becoming sonorous by the liberty of lateral mo- tion. It would seem that the determination of a portion of the track of a ray of light through any homogeneous stratum of ether is sufficient to establish a length as a basis for colorific vibra- tions. In inflections, the length of the track of a ray of light through the inflecting atmosphere may determine its vibrations : but, in this case, as it is probable that there is a reflection from every part of the surface of the surrounding at- mosphere, contributing to the appearance of the white line in every direction, in the experiments already mentioned, so it is possible that there may be some second reflection at the immediate surface of the body itself, and that, by mutual reflections between these two surfaces, something like the anguiform motion suspected by Newton may really take place ; and then the analogy to the colors of thin plates will be still stronger. A mixture of vibrations, of all possible frequencies, may easily destroy the peculiar nature of each, and concur in a general effect of white light. The greatest difficulty in this system is, to ex- plain the different degree of refraction of differ- ently colored light, and the separation of white light in refraction : yet, considering how imper-

feet the theory of elastic fluids still remains, it cannot be expected that every circumstance should at once be clearly elucidated. It may hereafter be considered how far the excellent experiments of count

Rumford, which tend very greatly to weaken the evidence of the modern doctrine of heat, may be more or less favorable to one or the other system of light and colors.

254. Mr. Wheatstone's experiments are of a very novel and curious character, and as such must be next adverted to.

255. The application of the principles of science to ornamental and amusing purposes contributes, in a great degree, to render them extensively popular ; for the exhibition of strik- ing experiments induces the observer to inves- tigate their causes with additional interest, and enables him more permanently to remember their effects.

256. But the kaleidophorie possesses higher claims to attention ; for it exemplifies an inter- esting series of natural phenomena, and renders obvious to the common observer what has hi- therto been confined to the calculations of the mathematician ; it presents another proof that, however remote from common observation the operations of nature may be, the most beautiful ordei and symmetry preva.l through all.

257. In the property of ' creating beautiful forms,' the kaleidophone resembles the celebrated invention of Dr. Brewster, from which its name is modified ; but to the instrument itself, and its mode of action, it is almost superfluous to say mere is no similarity. Previously to entering into an explanation of its construction and ef- fects, the following brief summary may suffice to give a general idea of the nature of the expe- riments it is intended to illustrate.

258. These experiments principally consist in subjecting to ocular demonstration the orbits or paths described by the points of greatest excur- tiori in vibrating rods, which in the most fre- quent cases, those of the combinations of dif- ferent modes of vibration, assume the most diversified and elegant curvilinear forms. We are indebted to Dr. T. Young for the first ob- servation of these phenomena; the following account of his experiments is quoted from the Philosophical Transactions for 1800. ' Take one of the lowest strings of a square piano-forte, round which a fine silvered wire is wound in a spiral form ; contract the light of a window, so that when the eye is placed in a proper position, the image of the light may appear small, bright, and well defined, on each of the convolutions of the wire. Let the chord be now made to vibrate, and the luminous point will delineate its path like a burning coal whirled round, and will pre- sent to the eye a line of light, which, by the assistance of a microscope, may be very ac- curately observed. According to the different ways by which the wire is put in motion, the form of this path is no less diversified and

amusing than the multifarious forms of the quie- scent lines of vibrating plates discovered by pro- fessor Chladni ; and it is, indeed, in one respect even more interesting, as it appears to be more within the reach of mathematical calculation to determine it."

259. The extremely limited extent of the ex- cursions of a vibrating chord prevents its motion from being distinctly observed by the naked eye, but as the rods employed in the present experi- ments can extend their excursions to nearly two inches, and as the means employed greatly in- crease the intensity of the light, the phenomena are exhibited in a far more evident manner. The entire track of each orbit is rendered simul- taneously visible by causing it to be delineated by a brilliantly luminous point ; and, the figure being completed in less time than the duration of the visual impression, the whole orbit appears as a continued line of light. As, besides the changes which result from the combinations of the primitive with the higher modes of vibration, the figures of the orbits are affected by the form of the rod, by the extent of the excursions of the vibrations, by the mode of producing the motions, and by many other circumstances, a great variety of pleasing and regular forms is obtained. This variety is also enhanced by giving the same motions to a number of sym- metrically disposed luminous points, the mutual intersections of the orbits of which produce in- numerable elegant forms; and the appearances; may be still more variegated by occasionally causing these points to rpflect differently-colored lights.

260. The apparatus ibr exhibiting these ex- periments consists of a circular board about nine inches in diameter, into which are perpendicu- larly fixed, at equal distances from the circum- ference and from each other, three steel rods,, each about a foot in length. The first rod is cylindrical, about one-tenth of an inch in diameter, and is surmounted by a spherical bead. The only beads well adapted for this purpose are made of extremely thin glass sil- vered on the interior surface, and about one- sixth of an inch in diameter; they are to be obtained at the shops under the name of steel beads. The protuberances at the apertures must be removed or blackened, otherwise the reflec- tions from them will render the images confused. To produce the colored tracks, these beads must be coated with transparent colors, such as are ordinarily used for painting on glass ; the light will then be reflected through the colored sur- face ; but, in beads made of colored glass, the reflection being made from the external surface, shows only white light. The bead is cemented into a small brass cup screwed to the top of the wire, which concentrates and reflects the light which falls upon it. The second is a similar rod, upon the upper extremity of which is placed a plate moving on a joint, so

that its plane may be rendered either horizontal, oblique, or per- dendicular ; this plate is adapted to the recep- tion of the objects, which consist of beads dif- ferently colored and arranged on pieces of black card in symmetrical forms. The third is a four- sided prismatic rod, and a similar plate is at- tached to its extremity for the reception of the same objects. Another rod is fixed at the centre of the board ; this is bent to a right angle, and is furnished with a bead similarly to the first- mentioned rod. A small nut and screw are fixed to the board near the lower end of the first rod.

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261. We may now proceed to describe the different appeal ances which the rods present when in action, and to give directions for the production of the different effects, following the order in which the rods have been previously mentioned.

262. On causing the straight rod to vibrate, so that its lowest sound be produced. The most simple mode of vibration of a rod vibrating transversely, when one of its extremities is fixed and the other is free, is that in which the entire rod makes its vibrations alternately on each side of the axis, which is nowhere intersected by the curve, but only touched at the fixed end. This gives the gravest sound which can be produced from the rod. In the other modes of vibration the axis is intersected by the curve one, two, three, or more times. The best means to com- mand the production of these sounds is to touch a node of vibration lightly with the finger, and to put a vibrating part in motion by a violin- bow. In the second sound, the number of vi- brations is to that of the first as 52 : 22, or 25 : 4 ; the difference of the sounds is, therefore, two octaves and an augmented fifth. Separating the first sound from the series, the number of the vibrations of all the others will be to one ano- ther as the squares of the numbers 3, 5, 7, 9, &c. ; the third, in which there are three nodes, will therefore exceed the second by an octave and an augmented fourth ; in the fourth the acuteness will be augmented by nearly an octave ; in the fifth by nearly a major sixth, &c. To re- duce to the same pitch all the proportions of the sounds which such a rod is capable of produc- ing, Mr. W. regards the sound corresponding with the most simple motion as the C one octave lower than the lowest of the piano-forte; the proportions of the sound will then be —

Number of nodes .

0

1

2

3

4

5

Sounds ....

C

G»2

D<

D—*

Bb5

F”+

Numbers, the ~

squares of which f correspond with £ these sounds .)

2

(5) 3

5

7

9

11

The possible series of sounds, regarding the fun- damental as unity, will therefore be — 1, 6ˆ, 17$, 34ˆ., 56 J, &c. ; or expressed in integral numbers —36, 225, 625, 1225, 2025, &c.— Chladni, Traite d’ Acoustique, p. 91. As it is seldom that the motions of a cylindrical rod can be con- fined to a plane, the vibrations will almost al- ways be combined with a circular motion. When the pressure on the fixed end is exerted on

two opposite points, and the rod put in mo- tion in the direction of the pressure, the follow- ing progression in the changes of form will be distinctly observed : the track will commence as a line, and almost immediately open into an

ellipse, the lesser axis of which will gradually extend as the larger axis diminishes, until it be- comes a circle ; what was before the less will then become the larger axis, and thus the motions will alternate until, from their decreasing magnitudes, they cease to be visible. In the case just de- scribed the ellipses make a right angle with each other; but by altering the direction of the mo- tion, so as to render it oblique to the direction of the pressure, they may be made to intersect under any required angle, and when this angle = 0 the motion will be merely vibratory.

263. Every single sound formed by the sub- divisions of the rod will present similar appear- ances, but the excursions will be smaller as the sound is higher, or, which is the same thing, as the number of the vibrations increases.

264. In the most simple case of the co-exig- ence of two sounds, shown by putting the entire rod in motion, and producing also a higher sound by the friction of a bow ; the original figure will appear waved or indented, and, as unitj is to the number of indentations, so will the number of vibrations in the lower sound be to the number in the higher sound. On varying the mode of excitation, by striking the rod in different parts and with different forces, very complicated and beautiful curvilinear forms may be obtained.

265. Placing the hand on the lower part of the rod, below the place at which it is excited, the excursions of the motions will rapidly decrease and exhibit spiral figures.

266. To obtain the figures with brilliancy and distinctness, a single light only should be em- ployed, as that of the sun, a lamp, or a candle ; rays of light proceeding from several points, as from a number of candles, or from the reflection of the clouds, occasion the track to be broad and indistinct ; but double lights may be em- ployed with effect, provided they be of equal intensity and symmetrically placed ; each bead will then describe two similar figures. The ap- pearances, in a bright sunshine, are remarkably vivid and brilliant.

267. Although very beautiful and varied forms may be produced from the motion of a single point, yet the compound figures, which are pre- sented by objects formed by a number of points, offer appearances still more pleasing to the eye.

268. An object being placed horizontally on the plate of the second rod, and the rod being put in motion, the mutual intersections of the points each describing a similar figure, present to the eye complicated, yet symmetrical figures, resembling elegant specimens of engine-turning.

2C9. When the plate is horizontal, the figures are all in one plane, but if it be inclined or per- pendicular, the curves being then made in pa- rallel planes, gives the idea of a solid figure, and in some cases the appearances are particu- larly striking.

270. Complementary colors alone should be employed in the objects ; for these, harmonising together, give greater pleasure to the eye than an injudicious combination of discordant tints : the intensities should be occasionally varied, and colorless light intermingled with the differeut shades.

271. When the prismatic rod is put in mo- tion, in the direction of either of its sides, the points move only rectilineally; but, when the motion is applied in an oblique direction, a variety of compound curves is shown : this rod is principally employed to exhibit the optical phenomena which will be afterwards mentioned.

272. When a rod is straight, the curve pro- duced by any .point describing its motion is always in the same plane ; but in a rod bent to any angle, the two parts moving most frequently in different directions, curves are produced whose parts do not lie in the same plane. A few trials will soon indicate the best way of ap- plying the motion, so as to cause the two parts to vibrate in different directions.

273. When dark objects are substituted for luminous ones, their tracks become nearly invisi- ble, and, from the onger duration of the visual impression at the limits of vibration, the images are multiplied in proportion to the number of points at which they are retarded. Place hori- zontally, on the second rod, a word printed or written on a piece of card ; in the lowest mode of vibration, at the opposite limits of the excur- sions, two legible images of the word will be distinctly seen, and but an indistinct shade, oc- casioned by the tracks of the letters, will appear in the intermediate space : the vibratory motion is imperceptible to the eye ; the images will, therefore, appear stationary in this respect, but the diminution of the excursions will cause them to approximate very slowly and gradually towards the centre : this diminution operates so gradually as to allow the images to superpose

each other completely at each recurring vibration, without producing any intermingling or confusion.

274. On placing the object perpendicularly, the two images will appear in parallel planes, the furthest image appearing through the first apparent surface. Small pictures have a singu- lar effect applied in this manner.

275. When other sounds co-exist with the fundamental, the images are multiplied, but they become fainter as their number increases : these multiplied images are equally visible whether the vibrations be rectilineal, elliptical, or cir- cular.

276. As that property of vision which occa- sions the apparent duration in the same places of visible images, after the objects which excite them have changed their positions, has enabled us to submit to inspection the phenomena abore described, it may not be irrelevant to subjoin a description of an apparatus which illustrates the transient duration of the impressions of light in a very evident manner.

277. At the back of a wooden frame, about six inches in height and breadth, and from one to three inches or more in depth, a circular plate of glass is placed, upon which a design is painted with transparent colors ; at the front is placed, parallel to the glass, a circle of tin, covered on its exterior surface with white paper, and having the space between two adjacent radii cut out. This circle moves freely on its centre round an axis, supported by a bar in front, and is put into rapid and regular motion by the application of any mechanical principle proper for the pur-

pose ; and a catch is so placed that, when the motion ceases, the aperture shall be concealed by the bar which supports the axis.

278. If a light be placed behind the transpa- rent painting, and still better if it be concen- trated by a lens, on making the circle revolve with rapidity, the whole of the picture will be rendered visible at one view, although but very limited portions are successively presented to the eye.

279. The intensity will differ in proportion to the excess of the transmitted light above that which falls in front of the circle ; it will, there- fore, increase the distinctness of the picture, to darken the latter as much as possible.

280. The next series of experiments by Mr. Wheatstone are of still greater importance than those already presented to our readers. They relate to the phonic molecular vibrations, and are incapable of abridgement. Mr. W. commences with an examination of what he terms linear phonics, and arranges them under two heads.

281. 'Transversal: making their oscillations at right angles to their axis. 1. Capable of ten- sion, or variable rigidity : chords, or wires. 2. Permanently rigid : rods, fork, rings, &c. Lon- gitudinal: making their oscillations in the direc- tion of their axis. 1. Columns of aeriform fluids or liquids ; cylindric and prismatic rods. Superficial phonics. 1. Capable of tension: extended membranes. 2. Permanently rigid : la- mina, bells, vases, &c. Solid phonics. 1. Vo- lumes of aeriform fluids.

282. The sensation of sound can be excited by any of these bodies when they oscillate with suf- ficient rapidity, either entire, or divided into any number of parts in equilibrium with each other. The laws of these subdivisions differ in the vari- ous phonics according to their form and mode of connexion or insulation ; and the velocities of the oscillations, or degrees of tune, depend on the form, dimensions, mode of connexion, mode of division, and elasticity of the body employed. The points of division in linear phonics are called nodes, and the boundaries of the vibrating parts of elastic surfaces are termed nodal lines. The parts of which the oscillatory portions have their greatest excursions are named centres of vibra- tion ; these are always at the greatest mean dis- tances from the nodal points or lines. These mechanical oscillations are not however them- selves the immediate causes of sound ; they are but the agents in producing in the bodies them- selves, and in other contiguous substances, iso- chronous vibration of certain particles varying in magnitude according to the degree of tune. ' I convinced myself,' observes Mr. W., ' of this important fact by the following simple experi- ment : I took a plate of glass capable of vibrat- ing in several different modes, and covered it with a layer of water ; on causing it to vibrate by the action of a bow, a beautiful reticulated surface of vibrating particles commenced at the centres of the vibrating parts, and increased in dimensions as the excursions were made larger. When a more acute sound was produced the centres consequently became more numerous and the number of coexisting vibrating particles like- wise increased, but their magnitudes proportion-

ally diminished. The sounds of elastic laminae are generally supposed to be owing to the entire oscillations of the simple parts as shown by 3hladni, when, by strewing sand over the sono- rous plates, he observed the particles repulsed by the vibrating parts accumulate on the nodal lines, and indicate the bounds of the sensible os- cillation : the water laid on its surface would, on account of its cohesion to the glass, show no peculiar phenomena, but the appearances above described clearly demonstrate that the oscillating parts consist of a number of vibrating particles of equal magnitudes, the

excursions of which are greatest at the centre of vibration, and gradual- ly become less as they recede further from it, until they become almost null at the nodal lines. To multiply these surfaces and to observe whe- ther the magnitudes of these particles vary in different media, in a glass vessel of a cylindric form, I superposed three immiscible fluids of different densities; namely mercury, water, and oil. On producing the sounds corresponding with each mode of division I observed a number of vibrating parts agreeing with the sound, and showing similar appearances to the plate, formed on the surfaces of each of the fluids ; not the least agitation appeared in the uniform parts. I afterwards inserted this glass in another vessel of water in order to observe the vibrations of the external surface, and found the same results as in the interior, though the levels of the surfaces were different.

283. ‘ The most accurate method to observe these phenomena is by employing a metallic plate of small dimensions, which must be fixed horizontally in a vice at one end, and covered on its upper side with a surface of water : on causing it to oscillate entirely by means of a bow, a regular succession of these vibrating cor- puscles will appear arranged parallel to the two directions of the plate ; and, if the action of the bow be rendered continuous, their absolute num- ber might be counted with the aid of a microme- ter. Diminishing the oscillating part of the plate to one-half of its length, the double octave to the preceding was heard, agreeably to the es- tablished rule that the velocities of the oscilla- tions are inversely as the squares of the lengths ; four vibrating corpuscles then occupied the space before occupied by one, and the absolute number was double to that in the former in- stance ; but the absolute number of these cor- puscles have no influence whatever on the degree of tune, which entirely depends on their relative magnitude in the s’ame substance ; theory shows us that in plates of this description alteration of breadth does not affect the degree of tune ; let us therefore reduce this half of the plate to half its breadth, and we shall find the note remain the same; but the absolute number of the corpuscles will in this case be equal to that in the entire plate. Let us now take two plates of equal Jengths and breadths, but one double in thick- ness to the other ; the rule is, that the velocities pf the oscillations are as the thicknesses of the plates ; we shall therefore, in the thicker plate, see a double number of particles to that of the other, occupying the same extent of surface. The last circumstance in which two plates :.iay

differ is their specific rigidity, and in this respect it will be found that two plates of exactly equal dimensions, and covered with the same number of vibrating corpuscles of equal magnitudes, but of different substances, differ in sound ; therefore the absolute magnitudes of the particles cannot be assumed as a standard of tune, unless regu- lated by the specific rigidity.

284. ‘ Unassisted by any means of actual ad- measurement, the above are

but the proximate results sensible to the eye ; more extended and accurate experiments are necessary to confirm the results with mathematical certainty. As the absolute magnitudes of these particles will, I imagine, be hereafter a most useful element for calculation, I will here indicate the most effectual way I am acquainted with to arrive at this know- ledge. A thick metallic slip of considerable length and breadth, bent similarly to a tuning fork, and fixed at its curved part in a vice, is very easily excited by friction, and a more con- siderable surface of regularly arranged vibrating particles is seen than in most other superficies ; any description of common exciter may be em- ployed. When this bent plate is excited by per- cussion, the particles, before their disappearance, will assume an apparent rotatory motion, on ac- count of the force exerted, and its susceptibility

_of continuing the vibrations. Employing a parallelopedal rod, the appearances of the higher modes of subdivisions are particularly neat ; the entire vibrating parts between the nodes form ellipses, and the semi-part at the free end a regu- lar half of the same figure. It is important to remark that the crispations of the water only ap- pear on the sides in the plane of oscillation ; the other two sides, on one of which the exciter must be applied, do not show similar appear- ances.

285. ‘ I have also rendered the phonic molecu- lar vibrations visible, when produced by the longitudinal oscillations of a column of air ; the following were the means employed : — I placed the open end of the head of a flute or flagelet on the surface of a vessel of water, and, on blow- ing to produce the sound, I observed similar crispations to those described above, forming a circle round the end of the tube, and afterwards appearing to radiate in right lines ; on the har- monics of the tube being sounded, the crispa- tions were correspondently diminished in magni- tude. These phenomena will be more evident if the tube be raised a little from the surface of the liquid, and a thin connecting film be left surrounding it ; the vibrating particles will then occupy a greater space, and be more sensible.

286. ‘The existence of the molecular vibra- tions being now completely established, it be- comes a critical question, in what manner the sensible oscillations induce these vibrating par- ticles. I do not know whether what I am now going to adduce will be admitted as the right explanation, but it is certainly analogous, so far as the superficial and transversal linear oscilla- tions are concerned. A flexible surface, covered with a coat of resinous varnish, being made to assume any curve, the cohesion of the varnish will be destroyed in certain parts, and a number of cracks will be observed, more regularly dis-

posed as the force inducing the curve has been more regularly applied ; when the original posi- tion of the surface is restored, the cracks will be imperceptible, but will again appear at every subsequent motion. Be this as it may, these particles are invariable concomitants of the sen- sible oscillations, and there is no reason to sup- pose otherwise than that their vibrations are isochronous with them. To avoid confusion, I have restricted the word vibrations to the mo- tions of the more minute parts, and the term os- cillations to those of the sensible divisions. We may reasonably suppose that the molecular vi- brations pervade the entire substance of a pho- nic ; their excursions, however, are not the same in all parts, and they can only be rendered visible when these excursions are large ; they may be so few in number as to be entirely inaudible, as in their transmission through linear conductors ; but, however few, when they are properly di- rected, they induce the mechanical divisions of sonorous bodies, each of which will give birth to numerous vibrating corpuscles whose excur- sions are greater, and the sound will be rendered audible. Dr. Savart has well investigated the modes of division in surfaces put in motion by communicated vibrations. All those phonics,

The tune

The time

The intensity

The richness, or volume

The quantity (timbre) ....

289. ‘ It has often been thought necessary to admit the existence of more minute motions than the sensible oscillations, in order to account for many phenomena in the production of sound. Perrault, in his Essai du Bruit, insisted on their necessity more than any other author I have read. He imagined that the vibrations have a much greater velocity than the oscillations which cause them, but the experiment he adduced to prove this is far from conclusive; he mistook for these vibrations the oscillations of the subdivi- sions of the long string he employed. Other distinguished philosophers have had ideas of a similar nature, and Chladni thinks their exist- ence necessary to account for the varieties of quality. I, however, conceived I was the first who had indicated these phenomena by experi- ment, until a few days ago repeating them, together with the others which form the subject of this paper, in the presence of Professor Oersted, of Copenhagen, he acquainted me with some similar experiments of his own.

Substi- tuting a very fine powder, Lycopodion, instead of the sand used by Chladni, for showing the oscillations of elastic plates, this eminent philo- sopher found the particles not only repulsed to the nodal lines, but at the same time accumulated in small parcels, on and near the centres of vibration ; these appearances he presumed to indicate more minute vibrations, which were the causes of the quality of the sound ; subsequently he confirmed his opinion, by observing the crispations of water, or alcohol, on similar plates, and showed that the same minute vibra- tions must take place in the transmitting medi- um, as they were equally produced in a surface of water, when the sounding plate was dipped

whose limited superficies preclude them from exciting in themselves a sufficient number of vi- brating corpuscles, when insulated, produce scarcely any perceptible sound, as extended chords, tuning forks, &c. ; but those whose super- ficies or solidities are more extended, as bells, elastic laminae, columns of air, &c., produce suf- ficient volume of sound without accessory means.

287. ‘ Loudness of sound is dependent on the excursions of the vibrations ; volume, or fulness of sound, on the number of co-existing particles put in motion. Thus the tones of the ˆEolian harp, on account of the number of subdivisions of the strings, are remarkably beautiful and rich, without possessing much power ; and the sounds of an Harmonica glass, in which a greater number of particles are excited than by any other means, are extraordi- narily 30 united, according to the method of excitation, with considerable intensity ; their pervading nature is one of the greatest peculia- rities of these sounds.

288. ‘ The following is a recapitulation of the various properties of sound, which are attri- butable to modifications of the vibrating cor- puscles : —

£ /“velocities of the vibrations.

» \ continuance of the vibrations.

g- < excursions of the vibrations.

a / number of co-existing vibrations.

j ˆmagnitudes of the vibrating corpuscles.*

into a mass of this fluid. These experiments were inserted in Lieber’s History of Natural Philosophy, 1813.

290. ‘ Rectilineal Transmission of Sound. — As the laws of the communication of the phonic vibrations are more evident in linear

conductors, I shall confine the present article to a summary of their principal phenomena.

291. 'In my first experiments on this subject, I placed a tuning fork, or a chord extended on a bow, on the extremity of a glass or metallic rod, five feet in length, communicating with a sound- ing board ; the sound was heard as instantane- ously as when the fork was in immediate con- tact, and it immediately ceased when the rod was removed from the sounding-board, or the fork from the rod. From this it is evident that the vibrations, inaudible in their transmission, being multiplied by meeting with a sonorous body, become very sensibly heard. Pursuing my investigations on this subject, I have dis- covered means for transmitting, through rods of much greater lengths, and of very inconsiderable thicknesses, the sounds of all musical instru- ments dependent on the vibrations of solid bodies, and of many descriptions of wind in- struments. It is astonishing how all the varie- ties of tune, qualities, and audibility, and all the combinations of harmony, are thus transmitted unimpaired, and again rendered audible by communication with an appropriate receiver. One of the practical applications of this dis- covery has been exhibited in London for about two years under the appellation of The En- chanted Lyre. So perfect was the illusion in this instance from the intense vibratory state of the reciprocating instrument, and from the inter-

peption of the sounds of the distant exciting one, that it was universally imagined to be one of the highest efforts of ingenuity in musical mechanism. The details of the extensive mo- difications of which this invention is susceptible, I shall reserve for a future communication ; the external appearance and effects of the indivi- dual application above-mentioned have been described in the principal periodical journals of the day.

292. ' The transmission of the vibrations through any communicating medium, as well as through linear conductors, is attended by peculiar phenomena; pulses are formed similar to those in longitudinal phonics, and consequently the centres of vibration and the nodes are repro- duced periodically at equal distances ; in this we observe an analogous disposition with regard to light. I had intended to include in this paper all the analogical facts I have observed illustra- tory of the identity of the causes of these two principal objects of sensation, but want of time, and the danger of delay, now the subject is occupying so much the attention of the scientific world, has induced me hastily to collect the pre- sent experiments,

and to defer the others for a future opportunity.

293. ‘ The thicknesses of conductors mate- rially influence the power of transmission, and there is a limit of thickness, differing for the dif- ferent degrees of tune, beyond which the vibra- tions will not be transmitted. The vibrations of acute sounds can be transmitted through smaller wires than those of grave sounds : a proof of this is easy : attach a tuning-fork to one end of a very small wire, and apply the other end to the ear, or a sounding-board ; on striking the fork rather hard, two co-existing sounds will be pro- duced, that which is more acute will be dis- tinctly heard, but the other will not be trans- mitted. If the vibrations of a tuning-fork be conducted through a piece of brass wire, of the size and thickness of a large needle, the sound, imperfectly transmitted, will become more audi- ble by the pressure of the fingers on the con- ducting wire ; but, if a steel wire of the same length and thickness be employed, the sound will be unaltered by any pressure, because steel has a greater specific elasticity than brass.

294. Polarisation of sound. — ‘Hitherto I have only considered the vibrations in their rectili- neal transmission ; I shall now demonstrate that they are peculiarly affected, when they pass through conductors bent at different angles. I connected a tuning-fork with one extremity of a straight conducting rod, the other end of which communicated with a sounding board ; on caus- ing the tuning-fork to sound, the vibrations were powerfully transmitted, as might be ex- pected from what has already been explained ; but, on gradually bending the rod, the sound progressively decreased, and was scarcely per- ceptible when the angle became a right one ; as. the angle was made more acute, the phenomena were produced in an inverted order ; the inten- sity gradually increased as it had before dimi- nished, and, when the two parts were nearly parallel, it became as powerful as in the rectilineal transmission. By multiplying the right angles

in a rod, the transmission of the vibrations may be completely stopped.

295. ‘ To produce these phenomena, however, it is necessary that the axis of the oscillations of the tuning-fork should be perpendicular to the plane of the moveable angle ; for, if they be pa- rallel with it, they will be still considerably transmitted. The following experiment will prove this : — I placed a tuning-fork perpendicu- larly on the side of a rectilinear rod ; the vibra- tions were, therefore, communicated at right angles ; when the axis of the oscillations of the fork coincided with the rod, the intensity of the transmitted vibrations was at its maximum ; in proportion as the axis deviated from parallelism, the intensity of the transmitted vibrations dimi- nished ; and, lastly, when it became perpendicu- lar, the intensity was at its minimum. In the second quadrant, the order of the phenomena was inverted as in the former experiment, and a second maximum of intensity

took place when the axis of the oscillations had described a semi-circumference, and had again become parallel, but in an opposite direction. When the revolu- tion was continued, the intensity of the trans- mitted vibrations was varied in a similar manner; it progressively diminished as the axis of the oscillations deviated from being parallel with the rod, became the least possible when it arrived at the perpendicular, and again augmented until it remained at its first maximum, which completed its entire revolution.

296. ‘ The phenomena of polarisation may be observed in many corded instruments : the chords of the harp arc attached at one extremity to a conductor which has the same direction as the sounding board; if any cord be altered from its quiescent position, so that its axis of oscillation shall be parallel with the bridge, or conductor, its tone will be full ; but, if the oscillations be excited so that their axis shall be at right angles with the conductor, its tone will be feeble. By tuning two adjacent strings of the harp-unisons with each other, the differences of force will be •sensible to the eye in the oscillations of the re- ciprocating string according to the direction in which the other is excited.

297. ‘ It now remains to explain the nature of the vibrations which produce the phenomena, the existence of which has been proved by the pre- ceding experiments. The vibrations generally assume the same direction as the oscillations which induce them ; in a longitudinal phonic the vibrations are parallel to its axis ; in a trans- versal phonic, they are perpendicular to this di- rection ; a circular or an elliptic form can be also given to the vibrations by causing the oscil- lations to assume the same forms. Any vibrating corpuscle can induce isochronous vibrations of similar contiguous corpuscles in the same plane either parallel with, or perpendicular to, the di- rection of the original vibrations, and the polari- sation of the vibrations consists in the similarity of their directions, by which they propagate themselves equally in the same plane ; therefore, the vibrations being transmitted through linear conductors, it is the plane in which the vibrations are made that determines their transmission, or non-transmission, when the direction is altered.

A longitudinal or a transversal vibration may be transmitted two ways to a conductor bent at right angles ; their axis may be in that direction, as to be in the same plane with the right angle, in which case the former will be transversally, or the latter longitudinally transmitted in the new direction ; or their axis may be perpendicular to the plane of this new direction, under

which circumstances neither can be communicated. In explaining the polarisation of light, there is no necessity to suppose that the reflecting surfaces act on the luminous vibrations by any actual at- tracting or repulsing force, causing them to change their axes of vibrations ; the direction of the vibrations in different planes, as I have proved exist in the communication of sound, is sufficient to explain every phenomenon relative to the polarisation of. light.

298. ‘ Let us suppose a number of tuning forks oscillating in different planes, and commu- nicating with one conducting rod ; if the rod be rectilinear, all the vibrations will be transmitted ; but, if it be bent at right angles, they will under- go only a partial transmission ; those vibrations whose planes are perpendicular, or nearly so, to the plane of the new direction, will be destroyed. The vibrations are thus completely polarised in one direction, while passing through the new path, and, on meeting with a new right angle, they will be transmitted or not, accordingly as the plane of the angle is parallel with, or per- pendicular to, the axes of the vibrations. In this point of view, the circumstances attending the phenomena are precisely the same as in the elementary experiment of Malus on the polarisa- tion of light.

299. ‘ Double refraction is a consequence of the laws of polarisation, by which a combination of vibrations having their axes in different planes, after travelling in the same direction, are sepa- rated into two other directions, each polarised in one plane only. That this well-known property of light has a correspondent in the communica- tion of phonic vibrations I shall now demon- strate. When two tuning forks, sounding dif- ferent notes by a constant exciter, and making their oscillations perpendicularly to each other, have their vibrations transmitted at the same time through one rod, at the opposite extremity of which two other conductors are attached at right angles, and when each of these conductors is parallel with one of the axes of the oscilla- tions of the forks, on connecting a sounding- board with either conductor, those vibrations only will be transmitted through it which are polarised in the same plane with the angle made by the two rods through which the vibrations pass ; either sound may be thus separately heard, or they may both be heard in combina- tion by connecting both the conductors with sounding-boards.

300. ‘ The phenomena of diffraction regard- ing only the form of the surfaces, or the superfi- cies over which the vibrations extend, are by the conformation of the organs of hearing, not of any consequence to the perception of sound, though the same phenomena, when the chromatic vibrations are concerned, are very evident to the eye. They, however, undoubtedly take place

equally in both instances, and may be well ex- plained by the theory already laid down. Each separate vibration propagating itself in the plane of its vibrating axis, a number of vibrations in different planes, after passing through an aper- ture, naturally expand themselves transversely as well as rectilineally, and thereby occupy a greater space than they would were they only longitudinally transmitted.

301. ‘ I have still to indicate a new property of the phonic vibrations, but, whether it is ana- logous to any of the observed phenomena of light, I am yet ignorant. When the source of the vibrations is in progressive motion, the vibrations emanating from it are transmitted when the conductor is rectilineal and parallel with the original direction; and they are de- stroyed when the conductor is perpendicular to the direction, though the axis of vibration and the conductor, being in both instances in the same place, would transmit the vibrations were the phonic stationary. These circumstances are proved by the following experiments : — When a tuning fork placed perpendicularly to a rod, communicating at one or both extremities with sounding-boards, and caused to oscillate with its vibrating axis parallel with the rod, moves along the rod, preserving at the same time its perpen- dicularity and parallelism, the vibratiuos will not be transmitted while the movement continues, but the transmission will take place immediately after it has remained motionless. When the tuning fork moves on the upper edge of a plane perpendicular to a sounding board, the vibrations rectilineally transmitted will not be influenced by the progressive motion.’

302. A general notion of the velocity with which sound moves, has already been given un- der the article ACOUSTICS; and we may now furnish a few important data which will fully explain the precise nature of the disturbing force.

303. Chladni and Jacquin, of Vienna, made about ten years ago some experiments, with a view to determine the sonorous properties of different gases ; the results of which, being cu- rious, may be stated here. By causing a small tin pipe, brought into contact with a cock in the neck of a bell-glass, to be blown by gas con- tained in a bladder, applied to the external aper- ture of the cock, these philosophers observed that the sound was a semi-tone lower with azotic and oxygen gas than with atmospheric air ; a third lower with carbonic acid gas ; and nearly the same with nitrous gas ; but, with oxygen gas, from nine to eleven tones higher than the air that surrounds us. A mixture of azote and oxygen, in the same proportions as in the atmo- spheric air, gave the same tone as the latter ; but when the mixture of these gases was not uniform, the sounds were totally discordant. The expe- riments of Chladni and Jacquin were very dif- ferent from those of Priestley and Perolle, on sound in different kinds of gases. The experi-

ments of the last-mentioned philosophers related only to the intensity with which the vibrations of another elastic body (of a bell struck by a hammer) are conducted through these gases. Perolle contradicts Priestley's assertion, that the

powerof conducting is as the densities; but to this rule Priestley himself makes an exception, in regard to oxygen gas, which appears to be a stronger conductor ; azotic gas was examined by neither of these philosophers. In hydrogen gas they both found the conducting power very •weak, which is no doubt owing to its little den- sity. In oxygen gas they found the sound somewhat stronger than in common air; in the nitrous gas, Perolle found it also somewhat stronger. In carbonic gas, Priestley found the sound stronger, but Perolle weaker, duller, and somewhat lower than in common air ; which last circumstance may be considered as agree- able to truth, because the vibrations of a sound- ing body must be more retarded the denser the surrounding fluid is, or according to its pressure on that body.

304. The velocity of sound was determined with considerable accuracy, and on a great scale, by Cassini and Maraldi, while employed in con- ducting the trigonometrical survey of Trance. During the winter of the years 1738 and 1739 these astronomers repeatedly discharged, at night, when the air was calm, and the tempera- ture uniform, a small piece of ordnance, from their station on Mont-Martre, above Paris, and measured the time that elapsed between the flash and the report, as observed from their signal- tower at Mont L'hery, at the distance of about eighteen miles. The mean, of numerous trials, gave 1 1 30 feet for the velocity of the transmission of sound.

305. About this time, Condamine, who was sent with the other academicians to ascertain the length of a degree in Peru, took an opportunity of likewise measuring the celerity of sound. He found this was 1175 feet on the sultry plain of Cayenne, and only 1120 feet on the frozen heights of Quito. It was obvious, therefore, that the rarefaction of the air in those lofiy re- gions had but in a very small degree affected the result. Compared with what had been ob- served in France, the velocity of the aerial pulses was somewhat diminished at Quito, by the prevailing cold, but was, on the other hand, considerably augmented by the excessive heat and moisture which oppress Cayenne.

306. The distance at which sounds may be heard is much greater than is

generally ima- gined. Dr. Derham informs us, on the authority of S. Averrani, that at the siege of Messina the report of the guns was heard at Augusta and Syracuse, almost 100 Italian miles distant; and he also states that in the naval engagement be- tween the English and Dutch, which took place in 1672, the report of their guns was heard up- wards of 200 miles off. Humboldt mentions the reports of volcanoes in South America, heard at the distance of 300 miles ; and Dr. Thomson states, on the authority of a friend, that the loud explosions which took place from the vol- cano in St. Vincent's, were heard distinctly at Demerara : now this is a distance which must considerably exceed 300 miles. On the other hand, again, sound is enfeebled and dissipated sooner in alpine regions : thus, the traveller, j- oving at some height above a valley, descries, with uncommon clearness, perhaps a huntsman

on the brow of the opposite mountain, and, while he watches every flash, yet can he scarcely hear the report of the fowlmg-piece.

307. Dr. Moll's experiments, which were made with the greatest accuracy in Holland, in the year 1823, are of considerable importance. He ascertained that when sound was transmitted by a clear atmosphere, unaccompanied by the retarding accelerating effects of wind, it tra- velled at the rate of about 1116 English feet per second.

308. A very valuable and elaborate series of experiments on the velocity of sound has been made at Madras, by Mr. Goldingham. The following table contains the substance of these experiments ; and it is curious to remark how the velocity gradually increases towards the middle of the year, and again gradually dimi- nishes. Mr. Goldingham conceives that this re- gularity would be still greater with the mean of several years' observations.

Months.

Baro- meter,

Ther- mome-

Hygro- meter.

Velocity of a sound in

in

ter,

i

a second

inches.

Fahr.

dry.

in feet.

January .

30-124

79-05

6- 2

1101

February .

30-126

78-84

14-70

1117

March . .

30-072

82-30

15-22

1139

April . .

30-031

85-79

17-23

1145

May . .

29-892

88-11

19-92

1151

June . .

29-907

87-10

24-77

1157

July . .

29-914

86-65

27-85

1164

August

29-931

85-02

21-54

1163

September

29-963

84-49

18-97

1152

October .

30058

84-33

18-23

1128

November

30-125

81-35

8-18

1101

December

30-087

79-37

1-43

1099

309. Mr. Goldingham concludes that, for each degree of the thermometer, 1-2 feet may be al- lowed for the velocity of sound for a second; for each degree of the hygrometer 1-4 feet; and for one tenth of an inch of the barometer 9-2 feet. He concludes that ten feet per second is the difference of the velocity of sound between a calm and in a moderate breeze, and twenty-one feet and a quarter in a second, or 1275 in a mi- nute, is the difference when the wind is in the direction of the motion of sound, or opposed toil.

310. The effects of sound are considerably in- creased during the night ; and this was remarked by the ancients. Humboldt was particularly struck with this fact, when he heard the noise of the great cataracts of the Orinoco; which he describes as three times greater in the night than in the

day ; though, during the former time, the humming of insects, and the sound of the breeze, is scarcely heard. M. Humboldt attempts to account for this singular phenomenon by the following hypothesis : he supposes that the vi- brations of sound are materially retarded by partial undulations in the atmosphere, arising from the sun's heat — so that the waves of sound are divided and redivided, whenever the density

of the medium through which they are propelled is sufficiently altered to form an acoustic mirage.

311. It is well known that solid bodies, in general, are good conductors of sound : thus, any agitation communicated to one end of a beam is readily conveyed to the ear applied to the other end of it. The motion of a troop of cavalry is said to be perceived at a greater dis- tance by listening with the head in contact with the ground, than by attending to the sound con- veyed through the air ; and we may frequently observe that some parts of the furniture of a house are a little agitated by the approach of a waggon, before \ve hear the noise which it im- mediately occasions. The velocity with which impulses are transmitted by solids is in general considerably greater than that with which they are conveyed by the air: M. Wunsch has ascer- tained this by direct observations on a series of deal rods closely united together, which appeared to transmit a sound instantaneously, while a sensible interval was required for its passing through the air. It appears, from experiments on the flexure of solid bdflies of all kinds, that their elasticity, compared with their density, is much greater than that of the air : thus, the height of the modulus of elasticity of fir-wood is found, by means of such experiments, to be about 9,500,000, whence the velocity of an impulse conveyed through it must be 17,400 feet, or more than three miles in a second. It is obvious, therefore, that in all common experiments such a transmission must appear perfectly instantane- ous. There are various methods of ascertaining this velocity from the sounds produced under 'afferent pircumstances by the substances to be examined, and professor Chladni has in this manner compared the properties of a variety of natural and artificial productions.

312. It does not appear that any direct ex- periments have been made on the velocity with which an impulse is transmitted through a liquid, although it is well known that liquids are capa- ble of conveying sound without difficulty ; pro- fessoi Robison informs us, for example, that he heard the sound of a bell, transmitted by water, at the distance of 1200 feet. It is, however, says Dr. Young, easy to calculate the velocity •with which sound

must be propagated in any liquid of which the compressibility has been measured. Mr. Canton has ascertained that the velocity of water is about 22,000 times as great as that of air ; it is therefore measured by the height of a column which is in the same propor- tion to thirty-four feet, that is 750,000 feet, and the velocity corresponding to half this height is 4900 feet in a second. In mercury, also, it ap- pears, from Mr. Canton's experiments, that the velocity must be nearly the same as in water; in spirit of wine a little smaller.

313. It seems probable, from various analo- gies, that ice has nearly the same faculty of transmission as water itself. If a heavy blow ce struck against any part of the frozen surface of a large pool or lake, a person standing at a. •wide distance from the spot will feel, under fnot, a very sensible tremor, at some considerable 'ime before the noise conveyed through the at- mosphere has reached his ear. It is asserted

that the savage tribes who rove on the icy steppes of Tartary can readily distinguish, from afar, the approach of cavalry, by applying their head close to the frozen surface of the ground.

314. The rate with which the tremor of sound is transmitted through cast-iron, has been ascer- tained from actual experiment by M. Biot. This philosopher availed himself of the opportunity of the laying of a series of iron pipes, to convey water to Paris ; these pipes were about eight feet each in length, connected together with small leaden rings. A bell being suspended within the cavity, at one end of the train of pipes, on striking the clapper at the same instant against the side of the bell, and against the internal sur- face of the pipe, two distinct sounds were suc- cessively heard by an observer stationed at the other extremity. With a train of iron pipes of 2550 feet, or nearly half & mile in length, the interval between the two sounds was found, from a mean of 200 trials, to be 2-79 seconds. But the transmission of sound through the internal column of air would have taken 2-5 seconds : which leaves fifty-nine for the rapidity of the tremor conducted through the cast-iron. From other more direct trials it was concluded that the exact interval of time, during which the sound performed its passage through the sub- stance of the train of pipes, amounted only to 26- 100th parts of a second ; being ten or twelve times less than the ordinary transmission through the atmosphere.

315. It is well known that the intensity of sound is diminished by the rarefaction of the medium in which it is produced. We might, therefore, expect the sound excited in hydrogen gas would be more feeble than what it is, under similar circumstances, produced in atmospheric air of a similar specific gravity; but the differ- ence is actually much greater.

316. A small piece of clock-work, by which a bell is struck every half-minute, being placed within the receiver of an air pump, the machine was put in motion, and, after the air had been rarefied 100 times, hydrogen gas was introduced; but the sound, so far from being augmented, was, at least, as feeble as in atmospheric air of that extreme rarity, and decidedly much feebler than when formed in air of its own density, or rarefied ten times.

317. The most remarkable fact is that the ad- mixture of hydrogen gas with atmospheric air has a predominant influence in blunting or stifling sound. If one half of the volume of aj- mospheric air be extracted, and hydrogen gas be admitted to fill the vacant space, the sound will then become scarcely audible.

3 18. But the rate of the transmission of sound is found to vary in different gases, after the inverse subduplicate ratio of their densities : thus, through carbonic gas, the communication of the tremor would be about one-third slower than ordinary ; but, through the hydrogen gas, which is twelve times more elastic than common air, the flight would very nearly exceed three and a half times the usual rapidity. An admixture of this gas with the atmosphere would, therefore, greatly accelerate the transmission of sound.

319. It may be worth while observing that Mr.

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Cooper has ascertained that, if hydrogen gas be breathed for a few moments, it has the curious effect of changing the voice. The effect is observed on the person speaking, immediately after leaving the vessel of hydrogen, but it soon goes off. No instance has yet occurred in which this effect on the voice has not been produced by the hydrogen.

320. By a reference to the preceding facts, it will be evident that there is scarcely any body that does not possess the power of conducting sound by the vibration of its particles, and our space will only permit of a brief notice of the experiments by Mr. Wheatstone, tending to illustrate the phenomena of polarisation.

321 . 'I connected,' says he, ' a tuning-fork with one extremity of a straight conducting rod, the other end of which communicated with a sound- ing-board : on causing the tuning-fork to sound, the vibrations were powerfully transmitted, but, in gradually bending the rod, the sound progressively decreased, and was scarcely perceptible when the angle was a right one. As the angle was made more acute the phenomena were produced in an inverted order : the intensity gradually increased as it had before diminished ; and, when the two parts were nearly parallel, it became as

powerful as in the rec- tilineal transmission. By multiplying the right angles in a rod, the transmission of the vibra- tion may be completely stopped.'

322. In these experiments the axis of the oscillations of the tuning-fork should be perpen- dicular to the plane of the moveable angles : for, if they are parallel, they will still be trans- mitted. Mr. Wheatstone gives the following explanation to prove this : — ' I placed a tuning- fork perpendicularly on the side of a rectilineal rod. The vibrations were therefore communi- cated at right angles ; when the axis of oscilla- tions of the fork coincided with the rod the intensity of the transmitted vibrations was at its maximum. In proportion as the axis deviated from parallelism the intensity diminished ; and, when it became perpendicular, the intensity was a minimum.' The phenomena of polarisation may be observed in many chorded instruments. The chords of the harp are attached to a con- ductor which has the same direction as the sounding-board ; if any chord be altered from its quiescent position, so that its axis of oscilla- tion shall be parallel with the bridge or con- ductor, its tone will be full ; but if the oscilla- tions be excited, so that their axes shall be at right angles with the conductor, the tone will be feeble.

323. In many cases the reflection of sound becomes extremely inconvenient, by the new di- rection that is given to the voice in large rooms, and a variety of architectural arrangements have been employed to remedy this effect ; but there is another circumstance connected with the transmission of sound in apartments, which should not escape our attention : namely, that the aerial pulses are facilitated or retarded in their progress by the artificial currents that arise from the pro- cess of ventilation.

324. The methods by which it is proposed by Mr. Matthews to counteract this acoustical de- fect are as follows : — where there is room a circle should be preferred, or at least a form, as

nearly so as can be ; this, however, is not posi- tively essential. The ceiling should be one entire inverted dome, or obtuse cone, with the base upwards, extending in that direction to within about ten feet of the walls of the build- ing. From the highest part, it should again de- scend to the wall, and nearly as low as the heads of the occupants of the back seats. The lowest point of the ceiling, if a circle, to be in the centre not more than fifteen or sixteen feet from the ground. The station of the speaker should be under the lowest point of the cone, with a hollow sounding-board about a foot above his head, and so constructed as to convey a clear sound behind him. A constant breeze of air will be made to pour forth in every direction, from holes in its sides, until it reaches the highest part of the ceiling. From thence

it cannot re- turn; but will be drawn off by means of venti- lators that will not admit cold air: but will leave the vacuous space to be supplied from the sounding-board only. In courts of justice, and other places where the voice will have occa- sionally to proceed from different parts of the building, it can be made to proceed from the place where a person is speaking; and the mo- ment he has done, to proceed from an opposite place in which another person also speaks, by opening and shutting dampers provided for this purpose. This air in winter can be heated to the degree required. Thus, the sound, instead of having occasion to cross the ascending evapora- tion, and be opposed to the current of air, which now rushes forward to supply its place, will pass along with the current, and a moderately low- toned voice will be distinctly heard in every part of a large room.

325. Dr. Wollaston has lately discovered the very singular fact, that there are many persons who never felt any defect in their hearing, and who yet cannot hear certain sounds, which others perceive distinctly.

326. It is well known that persons affected with slight deafness hear sharp sounds much better than those which are grave and low. They distinguish the voices of women and children, from their acuteness, much better than the lower tones of men's voices. This fact is acted upon practically, as it may be remarked that those accustomed to speak to deaf people use a shriller tone of voice, rather than merely a louder tone than common.

327. This partial deafness may be artificially produced, by shutting the mouth and nose, and exhausting the air in the Eustachian tube, by a forcible attempt to take breath by expanding the chest. When this is carefully done, so that the exhaustion of the air behiud the drum of the ear is as complete as possible, the external air is felt strongly, and even painfully, pressing on the drum ; and the ear becomes insensible to low sounds, though shrill sounds are as readily per- ceived as before.

328. After the ear is brought into this state, it will remain so for some time, without continuing the painful effort to take breath, and even with- out stopping the breath ; for, by suddenly dis- continuing the effort, the end of the tube will close like a valve, and prevent the air from get-

ting into the drum. The act of swallowing will open the closed tube, and restore the air to its wonted feeling.

329. When the ear is thus exhausted, if we at- tempt to listen to the sound of a carriage passing in ths street, the rumbling noise cannot be heard, though the rattle of a chain or loose screw re- mains as easily heard as before. At a concert the experiment has a singular effect : as none of the sharper sounds are lost, and the great mass of the louder sounds are suppressed, the shriller ones are consequently so much the more dis- tinctly heard, even to the rattling of the keys of a bad instrument, or the scraping of catgut unskil- fully touched.

330. Dr. Robison found, by the most distinct experiments, that any noise whatever, will have the effect of producing a musical note if repeated with due frequency, not less than thirty or forty times in a second. Nothing surely can have less

pretension to the name of a musical sound than the solitary snap which a quill makes when drawn from one tooth of a comb to another : but when the quill is held to the teeth of the wheel, whirling at such a rate that 720 teeth pass under it in a second, the sound of G in alt. is heard most distinctly ; and if the weight of the wheel's motion be varied in any proportion, the noise made by the quill is mixed, in the most distinct manner, with the musical note corresponding to the frequency of the snaps. The kind of the original noise determines the kind of the con- tinuous sound produced by it, making it harsh and unpleasant, or smooth and harmonious, ac- cording as the original noise is abrupt or gra- dual : but even the most abrupt noise produces a tolerably smooth sound when sufficiently fre- quent. Nothing can be more abrupt than the snap just now mentioned ; yet the G produced by it has the smoothness of a bird's chirrup.

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POA

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POC

PNEUMONIA. From Trvtvfia, breath. Pneumonitis : peripneumonia ; peripneumonia vera. Inflammation of the lungs. A genus of disease in the class pyrexiae, and order phleg- masiae, of Cullen ; characterised by pyrexia, dif- ficult respiration, cough, and a sense of weight and pain in the thorax. The species, according to the above nosologist, are, 1. Peripneumonia. The pulse not always hard, but sometimes soft : an obtuse pain in the breast : the respiration al- ways difficult ; sometimes the patient cannot breathe, unless in an upright posture; the face swelled, and of a livid color ; the cough for the most part with expectoration, frequently bloody. 2. Pleuritis. The pulse hard: a pungent pain in one side ; aggravated during the time of inspira- tion ; an uneasiness when lying on one side : a very painful cough, dry in the beginning of the disease, afterwards w^ith expectoration, and fre- quently bloody. See MEDICINE, Index.

PO, a large and celebrated river of Italy, an- ciently called Eridanus and Padus, which rises from Mount Viso, in Piedmont, seven miles north of Chateau Dauphin, on the borders of the late province of Dauphiny; crosses Saluzzo, runs through Piedmont, Montferrat, Milan, Man- tua, Modena, and Ferrara ; where it begins to di- vide at Ficheruolo, and at last falls into the Adri- atic by four principal mouths. In its course it passes Ville Franca, Carmagnola, Carignano, Moncalier, Turin, Verrua, Brema, Valencia, Placentia, Cremona, Viadana, St. Benedict, Ferrara, Ariano, Comacchio, &c. It receives the waters of many Alpine rivers, which make it often overflow its banks. The principal tri- butary streams are the Dora Riparia, the Dora Baltea, the Stura, the Oreo, the Sesia, the Ta- naro, the Ticino, the Adda, the Olona, the Oglio, the Mincio, the Crostolo, and the Panaro.

POA, meadow-grass : a genus of the digynia order, and pentandria class of plants; natural order fourth, gramina: CAL. is bivalved and multiflorous: the spicula or partial spike is ovate, with the valvules scabrious and a little

sharp, or thin on the margin. There are twenty species ; most of them grasses, and rery agree- able food for cattle. P. aquatica, water reed- grass, grows in marshes. The cattle will fre- quently go so deep as to endanger their lives for it. It is the largest of the British grasses, grow- ing to the height of five or six feet. The leaves are smooth, and half an inch wide or more. The panicle is eight or ten inches long, greatly branched, and decked with numerous spiculae : these are of a reddish brown color intermixed with green, of a compressed lanceolate form, imbricated with about six flowers for the most part, but varying from five to ten.

POACH , v. a. & v. n. 1 Fr. packer, poche

POACH'ER, n. s. \ (a pouch or pocket).

To boil or parboil eggs by throwing them out of the shell into water, ' by which they are formed into globules or pouches.' — Thomson. Hence to parboil an undertaking, i. e. begin without completing it ; see the extracts from Bacon : to steal, i. e. carry off, game (in a bag or pouch) ; plunder by stealth : a poacher is one who steals game.

The yolks of eggs are so well prepared for nou-

rishment, that, so they be poached or rare tailed, they need no other preparation. Bacon.

Of latter times, they have rather poached and offered at a number of enterprizes, than maintained any constantly. Id.

The flowk, sole, and plaice, follow the tide up into the fresh rivers, where, at low water, the country people poach them with an instrument somewhat like the salmon spear. Carew.

In the schools

They poach for sense, and hunt for idle rules.

Oldham.

You old poachers have such a way witli you, that all at once the business is done. More's Foundling.

So shameless, so abandoned are their ways, They poach Parnassus, and lay claim for praise.

Garth.

POACH', v. n. ˆ Probably from Podge, POACH'IXESS, n. s. >a puddle. To

be or be- POACH'Y, adj. j come damp : poachiness

is, marshiness ; dampness : poachy, damp ;

marshy.

Chalky and clay lands burn in hot weather, chap

in summer, and poach in winter. Mortimer.

What uplands you design for mowing, shut up the

beginning of February ; but marsh lands lay not up

till April, except your marshes be very poachy.

Id. Husbandry.

POCK, n. s. > Sax. poc, from Pox, which POCKHOLES, > see. A pustule raised by the POCKY, adj. J small-pox, or any similar dis- order : pockholes, the holes left by pock.

Are these but warts and pockholes in the face O' the' earth? Donne.

POCK'ET, n. s. & v. a.} Sax. pocca; Fr. POCK'ET-BOOK, n. s. \pochette. The small POCK'ET-GLASS. J bag or pouch insert-

ed into clothes ; a certain quantity of hops : to put into the pocket, taking up after it, occasio- nally : a pocket-book and pocket-glass, mean respectively a book and glass carried for conve- nience in the pocket.

Here's a letter Found in the pocket of the slain Roderigo.

Shakspeare.

If thy pocket were enriched with any other injuries but these, I am a villain ; and yet you will stand to it, you will not pocket up wrongs. Id.

As he was seldom without medals in his pocket, he would often shew us the same face on an old coin, that we saw in the statue. Addison on Medals.

Whilst one hand exalts the blow, And on the earth extends the foe ; T' other would take it wondrous ill, If in your pocket he lay still. Prior.

He lays his claim To half the profit, half the fame, And helps to pocket up the game. Id.

The world's a farce, an empty show, Powder, and pocketgluss, and beaux. Id.

Licinius let out the offals of his meat to interest, and kept a register of such debtors in his pocketbook.

Arbuthnot.

Blessed paper-credit !

Gold, imp'd with this, can compass hardest things, Can pocket states, or fetch or carry kings. Pope.

And vanity with pochetglass, And impudence with front of brass.

Swift's Miscellanies.

Note down the matters of doubt in some pocket – friwft, and take the first opportunity to get them re- solved. Wait.*

My vanity was highly gratified by the reception I met with from the public ; and besides, I pocketed, all expenses deducted, nearly twenty pounds.

Burns.

POCOCK (Sir George), K. B., a British admiral, son of the Rev. Thomas Pocock, F.R.S., was born March 6th, 1706. In 1718 he commenced seaman under his uncle, Sir George Byng, and served in the memorable victory that year off Sicily ; and afterwards rose through the various naval ranks with honor. In February, 1754, he had a command in the East Indies; and, in 1758, was admiral-in-chief, when the British fleet, with inferior force, gained three signal victories over the French, for which the East India Company voted him thanks in 1759. After several other hard fought, but successful, battles, he returned with glory to Britain in 1760. In 1761 he immortalised his name at the capture of Havannah. He died in London, April 3rd, 1792, much esteemed, aged eighty- seven.

POCOCKE (Edward), D. D., one of the most learned men of his dayt was the eldest son of the Rev. Edward Pococke ; and born at Ox- ford in 1604.

In 1628 he was admitted fellow of his college, when he had prepared an edition of the Second Epistle of St. Peter, the Second and Third of St. John, and that of St. Jude, in Syriac and Greek, with a Latin Translation and Notes. In 1629 he was ordained priest, and appointed chaplain to the English at Aleppo, where he continued five or six years ; and dis- tinguished himself by his fortitude and humanity during the plague. Returning to England, he was in 1636 appointed reader of the Arabic lec- tures, founded by archbishop Laud. In 1637 he went back to Constantinople, where he pro- cured many valuable MSS. He embarked in 1640, and, taking Paris in his way, visited Ga- briel Sionita, the famous Maronite, and Hugh Grotius. In 1643 he was made rector of Child- rey in Berks ; and about 1 646 married the daughter of Thomas Burdett, Esq. In 1647 he obtained the restitution of the salary of his Ara- bic lecture. In 1648 king Charles I., then pri- soner in the Isle of Wight, nominated him pro- fessor of Hebrew, and canon of Christ Church ; but in 1650 he was ejected for refusing to take the engagement ; but upon the petition of seve- ral governors of houses, &c., he was suffered to enjoy both. He had previously published his Specimen Historiae Arabum ; now appeared his Porta Mosis : soon after the English Polyglot edition of the Bible, to which he had largely contributed, and Eutychius's Annals, with a Latin version. At the Restoration he was re- restored to his canonry, and received the degree of D.D. He then published his Arabic version of Grotius on the Truth of the Christian Reli- gion ; and an Arabic poem entitled Lamiato'l Ajam, with a Latin translation and notes. Soon after appeared Gregory Abul-Pharajius's Historia Dynastiarum. In 1674 he published an Arabic version of the chief parts of the English Liturgy ; and, a few years after, his Commentary on the Pro- phecies of Micah, Malachi, Hosea, and Joel. He died in 1691, after having been long esteemed the first person in Europe for eastern learning ;

and was no less eminent for modesty, humility, and all the Christian virtues. His theological works were republished at London in 1740, in 2 vols. folio.

POCOCKE (Richard), LL. D., a relation of the above, born in 1704, at Southampton, where he was educated. He afterwards studied at Corpus Christi College, Oxford, where he graduated in 1731 and 1733. In 1737 he began his Travels into the east, and returned in 1742. In 1743 he published a description of the East, Vol. I. containing observations on Egypt. In 1745 he published Vol. II., on Palestine, Syria, Meso- potamia, Cyprus, and Candia; which he dedi- cated to the Earl of Chesterfield, then lord lieu- tenant of Ireland, whom he attended to Ireland, and was made archdeacon of Dublin. In March 1 756 he was appointed bishop of Ossory, by the duke of Devonshire, and in 1765 bishop of Meath; but died in September 1765, of an apo- plectic fit.

POC'ULENT, adj. Lat. poculum. Fit for drink.

Some of these herbs, which are not esculent, are notwithstanding poculent ; as hops and broom.

Bacon.

POD, n. s. Dutch bode, boede, a little house. — Skinner. But the Sax. codd and Goth, kodde, Swed. kudde, and Welsh cod, are synonymes of this word, which affords an instance of the strik- ing intermutations of p and c in the northern lan- guage. A husk ; capsule ; seed vessel.

To raise tulips, save the seeds which are ripe, when the pods begin to open at the top, which cut off with the stalks from the root, and keep the pods upright, that the seeds do not fall out. Mortimer.

PODAG'RICAL, adj. Lat. podagra; Gr. voSaypiK&c, irodaypa. Afflicted with the gout.

From a magnetical activity must be made out, that a loadstone, held in the hand of one that is ;>o- dagrical, doth either cure or give great ease in the gttut. Browne's Vulgar Errours.

PODAGRA. From »rovc, the foot, and aypa, a taking, or seizure. Febris podagrica. Arth- ritis ; dolor podagricus ; the gout. A genus of disease in the class pyrexiae and order phlegma- siffi, of Cullen; known by pyrexia, pain in the joints, chiefly of the great toe, or at any rate of the hands and feet, returning at intervals : pre- vious to the attack, the functions of the stomach are commonly disturbed. The species are, 1 Podagra regularis. Arthritis podagra; arthritis rachialgica; arthritis aestiva, of Sauvages. The regular gout. 2. Podagra atonica. Arthritis melancholica ; hiemalis ; chlorotica; and asth- matica, of Sauvages. The atonic gout. 3. Po- dagra retrograda. The retrocedent. 4. Podagra aberrans. Misplaced or wandering gout. See MEDICINE, Index.

PODALIRIUS, son of ˆEsculapius and Epi- one, was one of the pupils of the Centaur Chi- ron, under whom he made himself such a master of medicine that during the Trojan war the Greeks invited him to their camp to stop a pes- tilence which had baffled the skill of all their physicians. Some say, however, that he went to the Trojan war. not as a physician but as a war- rior, with his brother Machaon, iu thirty ships,

with soldiers from (Echalia, Ithome, and Trica. At his return Podalirius was shipwrecked on the coast of Caria. where he cured of the epilepsy a daughter of the king. He fixed his habitation there; and built two towns, one of which he called Syrna, after his wife. The Carians, on his death, built him a temple, and paid him divine honors.

PODGORZA, a manufacturing town in Austrian Galicia, on the Vistula, opposite to Cracow. Its trade was formerly considerable; but, after this part of Poland became subject to Austria, it declined, though the government made it one of the principal depots of the salt from the mines of Wieiiczka. Population 4000.

PODLACHIA, one of the eight palatinates of the present kingdom of Poland, bounded on the north and east by the Bug, on the south by Lublin, and on the west by the Vistula. Its area is 5520 square miles; entirely level, and with a number of marshy tracts and small streams ; the only large rivers are those which are on its boundaries. Population 438,000. The chief town is Siedlce. While we now write (May 1831) this province has become the theatre of a new revolution, which, commencing at Warsaw, promises fair to liberate the whole of Russian Poland from the dominion of that power.

PODLUZACS, a tribe of Croats, settled in a district in the southern extremity of Moravia. Their numbers have considerably increased of iate, and, though surrounded with a German population, they preserve their ancient dress, language, and manners.

PODOLIA, an extensive government of Eu- ropean Russia, lying adjacent to the province of Buckowine in Austria. Its area is 20,400 square miles ; adjoining the Carpathians, and having a considerably elevated surface ; so that vines do not thrive here, but corn, pasturage, and cattle abound. The inhabitants are not industrious; the surface of the soil being barely scratched by the plough, and every process connected with the arts conducted in the most rude manner. The forests afford for export, timber, pitch, tar, rosin, potash, and Polish cochineal. The other products are flax, hemp, salt-petre, tobacco, and bees-wax. The chief rivers, the Dniester and the Bog, facilitate the communication with the Black Sea ; but the commerce is very limited. Population 1,330,000.

Podolia, an independent duchy in the mid- dle ages, was conquered by the Poles, and long incorporated with the Ukraine. The capital is Kaminiec, or, as it is called by the Russians, Kaminetz-Podolsk, a place well known in the seventeenth century, for the noble opposition which it make to the Turks.

PODOPHYLLUM, duck's foot, or May apple, in botany, a genus of the monogynia or- der, and polyandria class of plants ; natural order twenty-seventh, rhaeadeas : COR. nine petals • CAL. triphyllous: BERRY unilocular, crowned with the stigma.

*PODURA, or spring tail, in entomology, a genus ot insects of the order of aptera. They have six feet formed for running ; two eyes com- posed of eight facets ; a tail forked, bent under *he body, elastic, and acting like a spring; the*

antennae are long and setaceous. ' This genus is distinguished,' says Barbut, ' into several spe- cies. Some inhabit still waters, leaping and walking with ease on the surface of that element. They assemble in troops in the morning, on the banks of pools, fish-ponds, and reservoirs ; others are found in damp places, under leaves, bark, and stones ; others among heaps of rotten wood, mushrooms, and in melon beds. In Lapland they are seen running upon the snow, but when it begins to melt they perish. The podura, by its elasticity, eludes the eager grasp of the natu- ralist. Its hard forky tail is a kind of spring, by means of which the body of the animal is thrown up into the air.' P. villosa is one of the largest species found in Britain, and appears to be of a brown sooty color, though it is really of a yellow brown, interspersed throughout with black-colored spots and streaks. The head and thorax are hairy, and stick to the fingers when touched : the abdomen is smooth : the antennae, consisting of four articulations, are as long as two thirds of the body. It is commonly found under stones.

POE-BIRD, in ornithology, is an inhabitant of some of the South Sea Islands, where it is held in great esteem and veneration by the na- tives. It goes by the name of kogo in New Zea- land ; but it is better known by that of poe-bird. It is somewhat less than our blackbird. The feathers are of a fine mazarine blue, except those of its neck, which are of a most beautiful silver gray, and two or three short white ones which are on the pinion joint of the wing. Under its throat hang two little tufts of curled snow-white feathers, called its poies (the Otaheitean word for ear-rings) ; which occasioned the name of poe- bird. It is remarkable for the sweetness of its note, as well as the beauty of its plumage. Its flesh is also delicate food.

PGECILE, a famous portico at Athens, which received its name from the variety (iroiiciXoc), of paintings which it contained. Zeno kept his school there ; and there also the stoics received their lessons, whence their name, from

PO'EM, n. s.

PO'ESY,

PC'ET,

PO'ETASTER,

PO'ETESS,

POET'IC, adj.

POET'ICAL,

POET'JCALLY, adv.

PO'ETIZE, v. n.

PO'ETRESS, n. s.

PO'ETRY.

~Fr.poesie,poete, poetiser : Lat. poemu, poesis, potto, ; Gr. Troijjfia, a iroitta (facio) See below. A metrical composition : poesy and

ˆ-poetry mean the art of making or producing such a composition : Shakspeare uses poesy for a short conceit, or legend,

J on a ring: a poet is, a

maker or author of poetry ; one who writes with measure : poetaster, a low dabbler in poetry : poetess and poetress, a female poet : poetic and poetical, expressed in, or partaking the nature of, poetry : poetically following this sense : to poetize is, to compose poetry ; write as, or like, a poet.

Most peerless poetrest,

The true Pandora of all heavenly graces. Spenser. Musick and poesy used to quicken yon.

StaJupean

A. paltry ring, whose poesy was For all the world like cutler's poetry Upon a knife : Love me, and leave mo not. Id. The poet's eye in a fine frenzy

rolling, Doth glance' from heaven to earth, from earth to

heaven ;

And, as imagination bodies forth The forms of things unknown, the poet's pen Turns them to shape, and gives to every thing A local habitation and a name. Id.

— I do not know what poetical is, — The truest poetry is most feigning. fy.

The many rocks, in the passage between Greece and the bottom of Pontus, are poetically converted into those fiery bulls. Raleigh.

There is an hymn, for they have excellent poesy ; the subject is always the praises of Adam, Noah, and Abraham, concluding ever with a thanksgiving for the nativity of our Saviour. Bacon.

I versify the truth, not poetise. Donne. A poem is the work of the poet ; poesy is his skill or craft of making ; the very fiction itself, the reason or form of the work. Ben Jonson.

Let no poetaster command or intreat Another, extempore verses to make. Id.

The lady Anne of Bretaigne, passing through the presence in the court of France, and espying Char- tier, a famous poet, fast asleep, kissing him, said, We must honour the mouth whence so many golden poems have proceeded. Peacham on Poetry.

Virgil, speaking of Turnus and his great strength, thus poetizes. Hakewlll.

Strike the best invention dead, Till baffled poetry hangs down the head.

Clea.vela.nd.

Ah ! wretched we, poets of earth, but thou Wert living the same poet that thou'rt now, While angels sing to thee their aires divine, And join in an applause so great as thine.

Cowley.

'Tis not vain or fabulous,

What the sage poets, taught by the heavenly muse, Story M of old in high immortal verse, Of dire chimeras and enchanted isles. Milton.

The moral of that poetical fiction, that the upper- most link of all the series

of subordinate causes is fastened to Jupiter's chair, signifies that almighty God governs and directs subordinate causes and effects. Hale.

They apprehend a veritable history in an emblem or piece of Christian poesy.

Browne's Vulgar Errovrs. Begin not as the old poetaster did, Troy's famous war, and Priam's fate I sing.

Roscommon .

With courage guard, and beauty warm our age, And lovers fill with like poetick rage. Waller.

The utmost that can be achieved, or I think pre- tended, by any rules in the art of poetry, is but to hinder some men from being very ill poets, but not «o make any man a very good one. Sir W. Temple. To you the promised poem I will pay. Dryden.

How far have we

Prophaned thy heavenly gift of poesy 1 Made prostitute and profligate the muse, Whose harmony was first ordained above For tongues of angels ? Id.

A poet is a maker, as the word signifies ; and ha who cannot make, that is invent, hath his name for nothing. Id.

Neither is it enough to give his author's sense in good English^ in poetical expressions, and in musical numbers. Id.

The criticks have concluded that the manners of the heroes are poetically good, if of a piece. Id.

Although in poetry it be necessary that the unities

of time, place, and action should be explained, there

is still something that gives a greatness of mind to

the reader, which few of the criticks have considered.

Addison's Spectator.

Horace hath exposed those trifling poetasters that spend themselves in glaring descriptions, and sewing here and there some cloth of gold on their sackcloth.

Felton. The muse saw it upward rise,

Though marked by none but quick poetick eyes.

Pope. I alone can inspire the poetical crowd. Swift.

These are the gloomy companions of a disturbed imagination, the melancholy madness of poetry with- out the inspiration. Junitu.

The gentleman deals in fiction, and naturally ap- peals to the evidence of the poets. Id.

There was a predominant fancy and spirit of his own infused, superior to what some draw off from the ancients, or from poesies, here and there culled out of the moderns, by a painful industry and ser- vile imitation. Johnson.

The death of the king furnished a generaJ subject for a poetical contest, in which Mr. Savage engaged, and is allowed to have earned the prize of honour from his competitors. Id.

They best can judge a poet's worth, Who oft themselves have known The pangs of a poetic birth,

By labours of their own. Gowper.

POENI, a name given by the Romans to the Carthaginians ; a corruption of the word Phceni,

POERSON (Charles Francis), an eminent French painter, born at Paris in 1653. He ex- celled in portraits and history, and became di- rector of the French academy at Rome. He died in 1715.

PCESTUM, PJESTIJM, or POSIDONIA, an an- cient city of Graecia Magna, now part of Naples. See PJESTUM. It was founded by one of those colonies from Greece who early established themselves in Italy ; and it flourished before the foundation of Rome itself. It was destroyed by the Goths on the decline of the Roman empire. Since that time it has lain in ruins, which in 1755 were accidentally discovered, and ordered by the king of Naples to be cleared out ; upon which Poastum arose from the obscurity in which it had continued for seven centuries, covered with rubbish, and little noticed either by neigh- bours or travellers. It appears, at present, to have been of an oblong figure, two miles and a half in circumference, and having four gates op- posite to each other. The chief antiquities are a theatre, amphitheatre, and three temples, with relics of aqueducts, &c.

POETRY.

POEI RY, Gr. iroiijrjua, of TTOCEW (I make), is a term of art, more correctly expressive than most others which have been handed down to us from the ancients. It is, indeed, the art, the power to make or create more than any other human pur- suit, and while it may, perhaps, be generally de- nned as the language of passion and imagination, this clearly rather describes it in its effect than in its origin or essential nature; as the dews rising from a collection of herbage in spring seem to hav» originated in the vegetable mass which they have only visited and fertilised. The poetic forms of language, we mean, are obviously dis- tinguishable from the poetry of thought. For while both may combine, and in their union af- ford the only perfect exhibition of the power of each, as in our unequalled Milton, the latter is not to be denied to some of our distinguished prose writers, as, for instance, Milton's great contemporary Jeremy Taylor.

We must therefore reject, as wholly heretical, the doctrine of Aristotle that poetry is but riyyt} fiifir}TiKr}, an imitative art. It has in charge a much higher task. The utterance of some of the deepest feelings and most original thoughts of the human mind belongs to poetry. Lord Bacon has happily described its chief office when he says, ' Poetry doth raise and erect the mind by sub- mitting the theory of things to the desires of the mind.' It submits the whole outward world to the plastic hand of the true poet ; to this he adds the thousand forms of an imaginary world, and concentrates, combines, and models, the whole by a power assuredly not of any imitative kind ; as certainly not to be learnt or derived from his fellow man ; and as clearly not transferable by him to another. The father of the modern phi- losophy has exactly indicated the true tendency of real poetry, when he speaks of it as elevating the mind by the submission of its materials to the desires. Its whole business is to enrich and mag- nify and dignify the literal facts and images with which it works: a Miltonic Satan is almost dan- gerously grand and awe-inspiring; the mad Lear of a Shakspeare has nothing mean nor disgusting in his madness. And poetry, we are persuaded, can only captivate when it addresses our hopes rather than our fears ; when it stirs up and ad- ministers to our ' desires' as opposed to our aversions. It was the child, perhaps, of the praise of God — (It is well established that the dramatic poetry of all the western civilised na- tions, see our article DRAMA, had its origin in hymns sung to the honor of Bacchxis) — it ex- pressed gratitude and burst into strains of exta- tic joy before an infinitely great and good Being, the very thought of whom would be accompa nied with the desire and the hope of propitiat- ing him. Under every form of religion this desire has obtained and been loudly expressed ; the early poetry of all nations abounds with the strongest manifestations of

it. Such poetry would naturally appropriate all that is splendid and glowing, se'rene and beautiful in the external creation.

If, as it has been well said upon this point, ' there is great beauty in the use of familiar words, skilfully applied and combined, and that some of the most affecting and sublime passages in our great poets are constituted of materials of the cheapest quality : they are no longer cheap or ordinary in the place into which we find them transplanted; and in giving to them this new value lies the profound secret of the poetical artist. It is by arrangement, and disposition, and combination, that he draws out the latent powers of language, and, by the contact of new affinities, mysteriously varies its nature, and en- dows it with new properties. But, if words or phrases of vulgar origin still retain in their new situation the savour of their plebeian stock, they retain also their full disqualification for the post and preferment to which they are advanced. Poets, such as Shakspeare and Milton, have each been the fountain of honor, from which sometimes a language of the lowest birth has de- rived a nobility of rank. Something doubtless is to be ascribed to the prerogative of transcen- dant excellence, and something to prescription, and the reconciling effect of time and usage ; but the magic really resides in that fine and discri- minative tact, which at once detects the capabi- lities of homely expressions, and snatches them warm and breathing from the intercourse of common life, to impart their freshness and sta- mina, and to take on themselves another nature.'

Another natural source of poetry was love ; or the mutual desire of the sexes, connected with this passion, to please and to be pleased ; or to find and to exhibit personal attractions. Hence the impassioned but still tender, and touching, and simple power of the ancient lyric poetry,

Warm from the heart and faithful to its fires.

The thousand causes of separation between lovers are often commemorated in its odes ; while the final and desolating separation of death gave rise to the shorter dirge ; then to the elegy. Epic and moral poetry would first ex- press the detestation of the wise and good against the corruptions and corrupters of mankind : it was at first vehement and severe; then more coolly preceptive. Afterwards followed the adap- tation of poetry to war, and, as the stimulant of patriotism ; its association with music; its ap- plication to the purposes of personal satire.

Wre believe the actual history of this almost divine art w ill be found to correspond with these general views. Whether we look, however, at sacred or profane poetry, what shall we find like a mere imitative art in the first masters? What did David or Solomon imitate in their divine poems ? A

man, who is really joyful or af- flicted, cannot be said to imitate joy or afflic- tion. The lyric verses of Alceeus, Alcman, and Ibycus, the hymns of Callimachus, the eletry of Moschus on the death of Bion, are all strongly depicted poetry, at once from the earliest and purest sources : but Alcaeus was no imitator of

love, Callimaclms no hypocrite in his religious awe and admiration, Moschus no imitator of grief at the loss of an amiable friend. Aristotle himself wrote a poetical elegy on the death of a man whom he had loved ; but it would be diffi- cult to say what he imitated in it. ‘ O beautiful Virtue,’ he exclaims, ‘ it was always an envied happiness in Greece even to die, and to suffer the most painful, the most afflicting evils : such are the immortal fruits which thou raisest in our minds; fruits more precious than gold, more sweet than the love of parents and soft repose ; for thee Hercules the son of Jove, and the twins

of specimens of poetry in proof of our assertion. Thus Southey’s specimens exhibit pieces of more than 200 writers, among whom there are not twenty whose compositions rise to the dig- nity of poetry ; and of these, perhaps, not more than seven will be known to posterity by their works. The art of constructing easy, elegant, and even spirited verse, may be acquired by any mind of moderate capacity and liberal knowledge ; but to frame the lay that quickens the pulse, flushes the cheek, warms the heart, and expands the soul of the reader, playing upon his passions as upon a lyre, and making

of Leda, sustained many labors, and by their il- him feel as if he were conversing with a spirit — lustrious actions sought thy favor; for love of this is the art of nature herself, invariably and thee Achilles and Ajax descended to the man- perpetually pleasing, by a secret undefinable sion of Pluto ; and, through a zeal for thy charm, that lives through all her works, charms, the prince of Atarnea also was deprived ‘ The power of being a poet is a power from of the sun’s light : therefore shall the Muses, heaven : wherein it consists we know not ; but daughters of Memory, render him immortal for this we do know, that there never existed a poet his glorious deeds, whenever they sing of hospi- of the highest order, — and we acknowledge none tality, and the honors due to a constant friend- other to be truly poets, — who either learned his ship/ art of one, or taught it to another. It is true It has however been asserted, in modern times, that the poet communicates to the bosom of his that descriptive poetry, and descriptive music, as reader that name that burns in his own, but the they

are called, are strict imitations; but, not bosom thus enkindled cannot communicate the to insist that mere description is the meanest fire to a third ; in the mind of the bard alone part of both arts, if indeed it belongs to them at that energy of thought which gives birth to poe- all, it is clear that words and sounds have no try is an active principle, in all others it is only necessary resemblance to visible objects : and a passive feeling. This theory is confirmed by what is an imitation, but a resemblance of some the fact that, though poetical genius is wonder- other thing? Besides, no unprejudiced hearer fully aided in it? development and display by will say that he finds the smallest traces of imi- learning and taste, yet among the rudest people tation in the numerous fugues, counterfugues, it is found, like native gold and diamonds, as and divisions, which disgrace rather than adorn

the modern music : even sounds themselves are imperfectly imitated by harmony, and, if we sometimes hear the murmuring of a brook, or the chirping of birds in a concert, we are gene- rally apprised beforehand of the passages where we may expect them. Some eminent musicians, indeed, have been absurd enough to think of imitating laughter and other noises; but, if they had succeeded, they could not have made amends for their want of taste in attempting it ; for such ridiculous imitations must necessarily destroy the spirit and dignity of the finest poems, which they ought to illustrate by a grace- ful and natural melody. It seems to us that as those parts of poetry, music, and painting, which relate to the passions, affect by sympathy ; so those, which are merely descriptive, act by a kind of substitution ; that is, by raising in our minds affections, or sentiments, analogous to those which arise in us when the respective ob- jects in nature are presented to our senses.

A late able writer thus compares the history and claims of the different fine arts : — ‘ Poetry is the oldest, the rarest, and the most excellent of the fine arts. It was the first fixed form of language; the earliest perpetuation of thought ; it existed before prose in history, before music in melody, and before painting in description. Anterior to the discovery of letters, it was employed to com- municate the lessons of wisdom, and to celebrate the achievements of valor ; music was invented to accompany, and painting to illustrate it. We have said that poetry is the rarest of the fine arts, and we may appeal to almost any collection

pure and perfect in substance, though encrusted in baser matter, as among the most enlightened nations; but it is seldomer seen, and in smaller- quantities, not being laboriously dug from the mine, purified in the furnace, and polished on the wheel, but only occasionally washed from the mountains, or accidentally discovered among the sands. It is another curious fact that, with the exception of ancient Rome, the noblest works of

the muse have been produced in the middle age between gross barbarism and voluptuous re- finement, when the human mind yet possessed strong traits of its characteristic grandeur and simplicity, but, divested of its native fierceness, and chastened by courtesy, felt itself rising in knowledge, worth, and intellectual superiority. The poems of Homer existed long before Greece arrived at its zenith of glory. Dante, Pe- trarch, and Ariosto, in Italy ; Camoens, in Por- tugal ; and Shakspeare, Spenser, and Milton, in England, flourished in ages far inferior to the present in luxury of manners, and refinement of taste : yet their poems, in the respective coun- tries, have not since been equalled, and will pro- bably never be surpassed by their successors.

‘ Poetry is also the most excellent of the fine arts. It transcends all other literary composi- tion in harmony, beauty, and splendor of style, imagery, and thought, as well as the perma- nency and vivacity of its influence on the mind ; for its language and sentiments are so intimately connected that they are remembered together: they are soul and body, that cannot be separated without death, — a death, in which the dissolu- tion of the one causes the disappearance of the

other ; if the spell of the words be broken, the charm of the idea is lost. Poetry excels music in the passion and pathos of its movements ; for its cadences are ever united with distinct feelings and emotions of the soul, and their association is always clear and comprehensible ; whereas music, except when it is allied with poetry, or appeals to memory, is simply a sensual and vague, though innocent, delight, conveying no improvement to the heart, and leaving no abid- ing impression on the mind.

‘Once more — Poetry is superior to painting: for poetry is progressive, painting stationary, in its powers of description. Poetry elevates the soul through every rising gradation of thought and feeling, and produces its grandest effects at the last : painting begins precisely where poetry ends, with the climax of the subject, and lets down the mind from the catastrophe, through the details of the story, imperceptibly soothing it from sublime astonishment into tranquil appro- bation. Poetry tells its own story ; painting usually requires an interpreter. Painting is li- mited to a moment of time, and an eye-glance of space ; but it must be confessed that it can make that moment last for years, and render that eye-glance as illustrious as the sun. Poetry is restricted neither to time nor place ; resembling the sun itself, it may shine in every quarter of .he globe, and endure to the end of ages.

‘ Poetry has a fourth peculiarity, to which we have not yet alluded : —

though the most benefi- cial to the world, it is the most unprofitable to its possessors of all the fine arts. There has scarcely been a period, or a country, in which a poet could live by his skill. It is allowed that great honors and emoluments have been bestowed on some of the tribe ; but munificent patronage is yet rarer than transcendant talents : — at the court of Augustus tliere was only one Mecaenas, but there were many poets. Now, in all ages and nations, musicians and painters of every descrip- tion have been able to get bread by their labors, and in general they have been dignified and re- munerated to the extent of their merits. It must be enough to make a poor poet burst with spleen to read the lives of eminent musicians and painters, and contrast them with those of his more illustrious brethren : while the former have I pen courted, enriched, and ennobled, by pon- titi's and princes, the latter have languished in poverty, and died in despair. Will any man deny that the poems of Milton, as works of genius, are equal to the pictures of Rubens? Yet the painter's pencil supported him in princely magnificence ; the poet's muse could not procure, what even his enemies would have fur- nished to him gratuitously in a dungeon — bread and water. Poets might be permitted to say, that painting and music may be appreciated in this world, and recompensed by the kings of it; but poetry cannot : its ' price is above rubies,' and its honors are those which kings cannot con- fer.'— Eclectic Review iii. 847.

Mr. Hazlitt, who yet can call poetry afterwards an ' imitation of nature,' has the following sprightly and correct passage on its general cha- racter : — ' Poetry is the language of the imagina- tion and the passions. It relates to whatever

gives immediate pleasure or pain to the human mind. It comes home to the bosoms and busi- nesses of men ; for nothing but what so comes home to them in the most general and intelligible shape can be a subject for poetry. Poetry is the universal language which the heart holds with nature and itself. He who has a contempt for poetry cannot have much respect for himself, or for any thing else. It is not a mere frivolous ac- complishment (as some persons have been led to imagine), the trifling amusement of a few idle readers or leisure hours — it has been the study and delight of mankind in all ages. Many peo- ple suppose that poetry is something to be found only in books, contained in lines of ten syllables, with like endings : but wherever there is a sense of beauty, or power, or harmony, as in the mo- tion of a wave of the sea, in the growth of a flower that 'spreads its sweet leaves through the air, and dedicates its beauty to the sun,' — there is poetry in its birth. If history is a grave study, poetry may be said to be a graver : its materials lie deeper, and are spread wider. His- tory treats, for the most part, of the cumbrous and unwieldy masses of things, the empty, cases in which the affairs of the world are packed, un- der the heads of intrigue or war, in different states, and from century to century : but there

is no thought or feeling that can have entered into the mind of man, which he would be eager to communicate to others, or which they would listen to with delight, that is not a fit subject for poetry. It is not a branch of authorship : it is 'the stuff of which our life is made.' Ihe rest is 'mere oblivion,' a dead letter: for all that is worth remembering in life is the poetry of it. Fear is poetry, hope is poetry, love is poetry, hatred is poetry, contempt, jealousy, remorse, admiration, wonder, pity, despair, and madness, are all poetry. Poetry is that fine particle within us, that expands, rarefies, refines, raises our whole being : without it ' man's life is poor as beast's.' Man is a poetical animal : and those of us who do not study the principles of poetry act upon them all our lives, like Moliere's Bourgeois Gen- tilhomme, who had always spoken prose without knowing it. The child is a poet, in fact, when he first plays at hide-and-seek, or repeats the story of Jack the Giant-killer ; the shepherd-boy is a poet when he first crowns his mistress with a garland of flowers ; the countryman when he stops to look at the rainbow ; the city apprentice when he gazes after the lord mayor's show ; the miser when he hugs his gold ; the courtier who builds his hopes upon a smile; the savage who paints his idol with blood ; the slave who wor- ships a tyrant, or the tyrant who fancies himself a god ; — the vain, the ambitious, the proud, the choleric man, the hero and the coward, the beg- gar and the king, the rich and the poor, the young and the old, all live in a world of their own making; and the poet does no more than de- scribe what all the others think and act. If his art is folly and madness, it is folly and madness at second hand. ' There is warrant for it.' Poets alone have not 'such seething brains, such shaping fantasies, that apprehend more than cooler reason' can.

' The lunatic, the lover, and the poet Are of imagination all compact. One sees more devils than vast hell can hold ; The madman. While the lover, all as frantic, Sees Helen's beauty in a brow of Egypt. The poet's eye, in a fine frenzy rolling, Doth glance from heaven to earth, from earth to

heaven ;

And, as imagination bodies forth The forms of things unknown, the poet's pen Turns them to shape, and gives to airy nothing A local habitation and a name. Such tricks hath strong imagination.'

But we are most happy to be supported in our views of the high claims of this art by such a man as Dr. Channing of America. In his admirable Remarks on the Character and Writ- ings of John Milton he says, ' Of all

God's gifts of intellect, he [Milton] esteemed poetical genius the most transcendant. He esteemed it in himself as a kind of inspiration, and wrote his great works with something of the conscious dignity of a prophet. We agree with Milton in his estimate of poetry. It seems to us the divinest of all arts; for it is the breathing or expression of that principle or sentiment which is deepest and sublimest in human nature ; we mean of that thirst or aspiration to which no mind is wholly a stranger, for something purer and lovelier, something more powerful, lofty, and thrilling, than ordinary and real life affords. No doctrine is more common among Christians than that of man's immortality ; but it is not so generally understood, that the germs or princi- ples of his whole future being are now wrapped up in his soul, as the rudiments of the future plant in the seed. As a necessary result of this constitution, the soul, possessed and moved by these mighty though infant energies, is perpetu- ally stretching beyond what is present and visible, struggling against the bounds of its earthly prison-house, and seeking relief and joy in imaginings of unseen and ideal being. This view of our nature, which has never been fully developed, and which goes further towards ex- plaining the contradictions of human life than all others, carries us to the very foundation and sources of poetry. He who cannot interpret by his own consciousness what we now have said, wants the true key to works of genius. He has not penetrated those sacred recesses of the soul, where poetry is born and nourished, and inhales immortal vigor, and wings herself for her hea- venward flight. In an intellectual nature, framed for progress and for higher modes of being, there must be creative energies, powers of original and ever crowing thought; and poetry is the form in which these energies are chiefly mani- fested. It is the glorious prerogative of this art that ' it makes all things new ' for the grati- fication of a divine instinct. It indeed finds its elements in what it actually sees and experiences, in the worlds of matter and mind ; but it com- bines and blends these into new forms and ac- cording to new affinities ; breaks down, if we may so say, the distinctions and bounds of nature ; imparts to material objects life, and sentiment, and emotion, and invests the mind with the powers and splendors of the oulwaid

creation ; describes the surrounding universe in the colors which the passions throw over it, and depicts the mind in those modes of repose or agitation, of tenderness or sublime emotion, which manifest its thirst for a more powerful and joyful existence. To a man of a literal and prosaic character, the mind may seem lawless in these workings ; b'U it observes higher laws than it transgresses, the laws of the immortal intellect ; it is trying and developing its best faculties; and in the objects which it describes, or in the emotions which it awakens, anticipates those states of progressive power, splendor, beauty, and happiness, for which it was created.

‘ We accordingly believe that poetry, far from injuring society, is one of the great instru- ments of its refinement and exaltation. It lifts the mind above ordinary life, gives it a respite from depressing cares, and awakens the con- sciousness of its affinity with what is pure and noble. In its legitimate and highest efforts it has the same tendency and aim with Christi- anity ; that is, to spiritualise our nature. True, poetry has been made the instrument of vice, the pander of bad passions ; but, when genius thus stoops, it dims its fires, and parts with much of its power ; and, even when poetry is enslaved to licentiousness or misanthropy, she cannot wholly forget her true vocation. Strains of pure feeling, touches of tenderness, images of innocent happiness, sympathies with suffering virtue, bursts of scorn or indignation at the hol- lowness of the world, passages true to our moral nature, often escape in an immoral work, and show us how hard it is for a gifted spirit to divorce itself wholly from what is good. Poetry has a natural alliance with our best affections. It delights in the beauty and sublimity of the outward creation and of the soul. It indeed portrays with terrible energy the excesses of the passions ; but they are passions which show a mighty nature, which are full of power, which command awe, and excite a deep though shud- dering sympathy. Its great tendency and pur- pose is, to carry the mind beyond and above the beaten, dusty, weary walks of ordinary life ; to lift it into a purer element, and to breathe into it more profound and generous emotion. It reveals to us the loveliness of nature, brings back the freshness of youthful feeling, revives the relish of simple pleasures, keeps ‘unquenched the enthusiasm which warmed the spring-time of our being, refines youthful love, strengthens our interest in human nature by vivid delineations of its tenderest and loftiest feelings, spreads our sympathies over all classes of society, knits us by new ties with universal being, and through the brightness of its prophetic visions helps faith to lay hold on the future life.

‘ We are aware that it is objected to poetry, that it gives wrong views and excites false expectations of life, peoples the mind with shadows and illusions, and builds up ima- gination on the ruins of wisdom. That there is a wisdom against which poetry wars, the wis- dom of the senses, which makes physical com- fort and gratification the supreme good, and wealth the chief interest of life, we do not deny ; nor do we deem it the least service which poetry

renders to mankind, that it redeems them from the thraldom of this earthborn prudence. But, passing over this topic, we would observe that the complaint against poetry as abounding in illusion and deception is in the

main groundless. In many poems there is more of truth than in ruany histories and philosophic theories. The fictions of genius are often the vehicles of the sublimest verities, and its flashes often open new regions of thought, and throw new light on the mysteries of our being. In poetry the letter is falsehood, but the spirit is often profoundest wisdom. And, if truth thus dwells in the boldest fictions of the poet, much more may it be expected in his delineations of life ; for the present life, which is the first stage of the im- mortal mind, abounds in the materials of poetry, and it is the high office of the bard to detect this divine element among the grosser labors and pleasures of our earthly being. The present life is not wholly prosaic, precise, tame, and finite. To the gifted eye it abounds in the poetic. The affections, which spread beyond ourselves and stretch far into futurity ; the workings of mighty passions, which seem to arm the soul with an almost superhuman energy ; the innocent and irrepressible joy of infancy ; the bloom, and buoyancy, and dazzling hopes of youth ; the throbbings of the heart, when it first wakes to love, and dreams of a happiness too vast for earth ; woman, with her beauty, and grace, and gentleness, and fulness of feeling, and depth of affection, and her blushes of purity, and the tones and looks which only a mother's heart can inspire ; — these are all poetical. It is not true that the poet paints a life which does not exist. He only extracts and concentrates, as it were, life's ethereal essence, arrests and condenses its volatile fragrance, brings together its scattered beauties, and prolongs its more refined but evanescent joys ; and in this he does well ; for it is good to feel that life is not wholly usurped by cares for subsistence, and physical gratifications, but admits, in measures which may be indefinitely enlarged, sentiments and delights worthy of a higher being. This power of poetry to refine our views of life and happi- ness is more and more needed as society ad- vances. It is needed to withstand the encroach- ments of heartless and artificial manners, which make civilisation so tame and uninteresting. It is needed to counteract the tendency of physical science, which being now sought, not as formerly for intellectual gratification, but for multiplying bodily comforts, requires a new development of imagination, taste, and poetry, to preserve men from sinking into an earthly, material, epicurean life. — Our remarks in vindication of poetry have extended beyond our original de- sign. They have had a higher aim than to assert the dignity of Milton as a poet, and that is, to endear and recommend this divine art to all who and would cultivate and refine their

nature.'

Of the oriental poetry we can here only remark that, while gems of the brightest genius abound in it to luxuriance, in the poetry of ancient Greece and Rome alone do they appear set and polished to perfection. There was a flexibility

in the language of the Greeks admirably adapted to give every fluctuation of thought and feeling its due expression, while the well ascertained and disciplined numbers of their syllables be- came real notes to this music of the soul.

Different names were given to these import- ant combinations : the most useful were the spondee, composed of two long syllables ; and the dactyl, of one long and two short syllables. These were solely employed in the construction of the hexameter verse, of which an imitation has been vainly attempted in English. Witness the last and not least attempt of our poets in this way, that of Mr. Southey in the Vision of Judg- ment : the movement of which has been well given in —

Jack ascended the hill, and Jill he ascended it also, Down tumbled poor Jack, and Jill he came tumbling

down after, Jack fractured his crown, but of Jill nothing more

is recorded.

The pronunciation of the Greek and Latin lan- guages is, indeed, almost as totally lost to us as that of the Hebrew ; but such is the exquisite mechanism of the'r metre that their verses can- not be read without producing a rich and melo- dious intonation.

It is somewhat uncertain what species of poetry was first cultivated in Greece. Fables, as among the oriental nations, were compositions of great antiquity; the ode formed a part of reli- gious worship ; the pastoral must have been in- troduced in an age sufficiently refined to relish simplicity. The immortal poems of Homer were composed at an early epoch of Grecian literature, and, as is well known, transmitted by oral tradition to a more polished age. Of this extraordinary man so much has been said that it would appear difficult to say any thing which should not now be trivial or impertinent. We may observe that it is pretended the Iliad and Odyssey were composed at different eras, by various authors ; and that these desultory tales were at length collocated and edited by some in- genious critic, who might possibly have been distinguished by the appellation of Homer. The novelty and extravagance of this hypothesis have perhaps obtained for it partisans among those professed sceptics and segregatists who can per- ceive no difference between vulgar errors and popular opinions, and whose ambition it is to recede as far as possible from the convictions of other men. It is generally admitted that the ex- cellence in which the supposed Homer stands unrivalled is the energy of his conceptions, which gives to his personages, his scenes, and his descriptions a kind of real existence. With such felicity are his characters cast that no

rea- der of feeling can be at a loss to conceive how Achilles would look, or Nestor speak, or Ulys- ees act, on any occasion. Let any unprejudiced man decide whether such exquisite harmony of design could have been the result of chance, or of each book having its separate Homer ?

The name of Pindar has descended to us with honor ; for of h/rical compositions the most popular was the heroic ode : but the poems which inspired in his compatriots the most ex-

alted enthusiam are but imperfectly understood, and are almost incapable of translation. The public recitation of the ode was accompanied both by music and dancing : a circumstance to which its structure was obviously adapted. The two first stanzas, called the strophe and the anti- strophe, were of equal length. In the first part the performers approached the altars ; in the latter, the dance being inverted, they measured back their steps to their former place, where, whilst they sung the e'pode, they stood still. It appears that this form was peculiar to the heroic ode. There were other lyrical compositions of a different cast. Sappho's poems inspire only tender impas- sioned sentiment ; those of Anacreon, whether amatorv or convivial, are equally remote from the sublimity of Pindar, and the melting soft- ness of Sappho. The fervid imagination of Pin- dar is compared by Horace to the impetuosity of a mountain torrent : —

Monte decurrens velut amnis, imbies Quern super notas aluere ripas, i'ervet, immensusque ruit profundo Pindarus ore.

From the heroic ode the regular drama was de- rived. The invention of dialogue and action, as we have shown in the article already referred to, belongs to] Aeschylus ; the original ode was preserved in the chorus, which constituted the popular part of the entertainment. Like the band of a modern orchestra, the chorus was composed of several persons who recited in a different manner from the other performers. We learn from Horace that their business was to deduce from the passing scene some lesson of morality, or to inculcate on the spectator some religious precept.

The rules of the ancient drama were suited to its institution. The unities of time and place were necessary in a performance to which the auxiliary resources of modern machinery were wanting, and from which all the illusions of the modern scene were precluded. The tra- gedies of Euripides and Sophocles were master- pieces in their kind, but would now probably be little relished even by scholars and scholastic enthusiasts.

Comedy, also, originally consisted of a chorus. The rudiments of the comic art may, perhaps, be detected in the satyrs, a sort of interlude first annexed to tragedies, in which the scene was rural, and the personages Satyrs, or sylvan deities. In the plays of Aristophanes living characters were introduced, and Socrates beheld himself ridiculed on the stage. This abuse a better taste corrected ; and the comedies of Me- nander, or the new comedy (imitated by Te- rence), exhibited only interesting pictures of do- mestic life. The chorus at first appendant on comedy, was gradually changed into the pro- logue, a personage who carefully apprised the spectators of all they were to see.

Ennius, one of the elder Roman poets, first produced the satire, a species of miscellaneous poetry purely Roman, which was destined to re- ceive perfection from Horace. With equal originality, Lucretius wrote his metaphysical poem, in which are developed the philosophical

systems of his age ; but it was not till the era of Augustus that the bards of Latium established any equality with those of Greece. It was then that Horace, not satisfied with having trans- planted all the Greek lyric beauties in his odes, opened a rich vein of satiric poetry ; and Virgil, having equalled Theocritus, aspired to emulate Homer. In the /Eneid it may be acknowledged that he sometimes fell short of his master. His characters possess not the same features, dura- bility, and grandeui : nor are his scenes equally animated and dramatic. To atone for these defects, he unites every charm that gives interest to narrative or enchantment to description ; oc- casionally he rises to the sublime, but the beau- tiful is his natural element ; he can excite terror, but he is more prone to inspire tenderness and pity. In the delicate touches of nature and pathos, he seems to have grown enamoured of his subject, and to have lingered affectionately on the endearing scenes and charities of domestic life. In the Georgics, Virgil has left a model of didactic composition, ennobled by a strain of pure philosophical sentiment. Ovid, whose talents were not less versatile than those of his contemporaries, adorned the fables of mythology with description, and illustrated in his epistles al- most every romantic story of antiquity. The style of his elegies is not unlike that of his epistles : he paints to the eye, but he has often too much wit and fancy to touch the heart. Tibullus has, per- haps, exceeded every other elegiac writer in simplicity and tenderness. Lucan and Statius were also epic poets, but they are seldom quoted, and not often read. Lucan possessed a genius of an exalted order ; but his subject was pecu- liarly unfortunate, and his beauties are now neglected because they are found in scenes re- pulsive to the imagination, and uncongenial with the feelings. Among the last of the Roman poets appeared Juvenal and Persius, of whom the former was one of the most original writers she had produced. He professes to exhibit a picture of his times ; and there is in his manner an undissembled fervor that

well atones for his occasional ruggedness.

We have only room to glance at the origin of modern poetry. The barbarous nations who sub- dued Rome, though ignorant of the polite arts, were not insensible to the charms of poetry. Their bards were no less venerated than their priests ; and whatever instruction they received, whatever knowledge they possessed, was com- municated in metre. In the age of Charlemagne the minstrels of Provence, or, as they were called, the troubadours, introduced the metrical tales or ballads, which, from the dialect in which they were written, acquired the name of romances. Their poems were all composed in rhyme ; but whether this practice was borrowed from the Arabs or the Goths is uncertain. The Italian language, which of all the corrupt dialects in- troduced by the barbarians assimilated most with the Roman, soon acquired a tincture of elegance. In the middle ages Dante wrote ; Ariosto fol- lowed ; and Petrarch, the enthusiastical votary of classical genius, appeared amc-ng the first founders of modern literature. The passion for allegory, so long the characteristic of the Italian

school, w;is by Chaucer rendered as prevalent in England as it had previously been on the conti- nent. During several ages, Italy continued to be the Poets' Land of Europe ; and in that inter- val was produced the Jerusalem Delivered, a poem not unworthy of a Roman bard, or an Augustan age.

We may here remark that we owe to the Italian Masque the Comus of Milton; which however, as has been well observed, ' is as far su- perior to the Faithful Shepherdess, as the Faith- ful Shepherdess is to the Aminta, or the Aminta to the Pastor Fido. It was well for Milton that he had here no Euripides to mislead him. He understood and loved the literature of modern Italy. But he did not feel for it the same venera- tion which he entertained for the remains of Athenian and Roman poetry, consecrated by so many lofty and endearing recollections. The faults, moreover, of his Italian predecessors, were of a kind to which his mind had a deadly antipathy. He could stoop to a plain style, sometimes even to a bald style; but false bril- liancy was his utter aversion.' The above writer (Edinburgh Review, August 1825) has run a parallel between Dante in the Divine Comedy and Milton's Paradise Lost, which we are sure our readers will thank us for transcribing here.

'The poetry of Milton differs from that of Dante as the hieroglyphics of Egypt differed from the picture-writing of Mexico. The images which Dante

employs speak for themselves : — they stand simply for what they are. Those of Milton have a signification which is often dis- cernible only to the initiated. Their value de- pends less on what they directly represent, than on what they remotely suggest. However strange, however grotesque, may be the appearance which Dante undertakes to describe, he never shrinks from describing it. He gives ns the shape, the color, the sound, the smell, the taste ; he counts the numbers ; he measures the size. His similes are the illustrations of a traveller. Unlike those of other poets, and especially of Milton, they are introduced in a plain business- like manner, not for the sake of any beauty in the objects from which they are drawn, not for the sake of any ornament which they may im- part to the poem, but simply in order to make the meaning of the writer as clear to the reader as it is to himself. The ruins of the precipice which led from the sixth to the seventh circle of hell were like those of the rock which fell into the Adige on the south of Trent. The cataract of Phlegethon was like that of Aqua Cheta at the monastery of St. Benedict. The place where the heretics were confined in burning tombs re- sembled the vast cemetery of Aries ! Now, let us compare with the exact details of Dante the dim intimations of Milton. We will cite a few examples. The English poet has never thought of taking the measure of Satan. He gives us merely a vague idea of vast bulk. In one pas- sage the fiend lies stretched out huge in length, floating many a rood, equal in size to the earth- born enemies of Jove, or to the sea-monster which the mariner mistakes for an island. When he addresses himself to battle against the guardian angels, he stands like Teneriffe or Atlas; his

stature reaches the sky. Contrast with these descriptions the lines in which Dante has des- cribed the gigantic spectre of Nimrod. ‘ His face seemed to me as long and as broad as the ball of St. Peter’s at Rome ; and his other limbs were in proportion ; so that the bank, which con- cealed him from the waist downwards, neverthe- less showed so much of him, that three tall Germans would in vain have attempted to reach to his hair.’ We are sensible that we do no jus- tice to the admirable style of the Florentine poet. But Mr. Gary’s translation is not at hand ; and our version, however rude, is sufficient to illustrate our meaning.

‘Once more, compare the lazar-house in the eleventh book of the Paradise Lost with the last ward of Malebolge in Dante. Milton avoids the loathsome details, and takes refuge in indis- tinct but solemn and tremendous imagery, — despair hurrying from couch to couch to mock the wretches with his attendance, death shaking his dart over them, but, in spite of supplications, delaying to strike. What says Dante ‘. ‘ There was such a moan there, as there would be if all the sick who, between July and September, are in the hospitals of Valdichiana, and of the Tuscan swamps, and of Sardinia, were in one pit together ; and such a stench was issuing forth as is wont to issue from decayed limbs.’

‘We will not take upon ourselves the invidi- ous office of settling precedency between two such writers. Each in his own department is incomparable; and each, we may remark, has, wisely or fortunately, taken a subject adapted to exhibit his peculiar talent to the greatest advan- tage. The Divine Comedy is a personal narra- tive. Dante is the eye-witness and ear-witness of that which he relates. He is the very man who has heard the tormented spirits crying out for the second death, who has read the dusky characters on the portal within which there is no hope, who has hidden his face from the terrors of the Gorgon, who has fled from the hooks and the seething pitch of Barbariccia and Diaghig- nazzo. His own hands have grasped the shaggy sides of Lucifer. His own feet have climbed the mountain of expiation. His own brow has been marked by the purifying angel. The rea- der would throw aside such a tale in incredulous disgust, unless it were told with the strongest air of veracity, with a sobriety even in its horrors, with the greatest precision and multiplicy in its details. The narrative of Milton in this respect differs from that of Dante, as the adventures of Amadis differ from those of Gulliver. The author of Amadis would have made his book ridiculous if he had introduced those minute particulars which give such a charm to the work of Swift, the nautical observations, the affected delicacy about names, the official documents transcribed at full length, and all the unmeaning gossip and scandal of the court, springing out of nothing, and tending to nothing. We are not shocked at being told that a man who lived, no- body knows when, saw many very strange Sights, and we can easily abandon ourselves to the il- lusion of the romance. But when Lemuel Gulliver, surgeon, now actually resident at Ro- therhithe, tells us of pygmies and giants, flying

islands and philosophisinghorses,nothingbutsuch circumstantial touches could produce for a single moment a deception on the imagination. Of all

the poets who have introduced into their works the agency of supernatural beings, Milton has succeeded best. Here Dante decidedly yields to him : and, as this is a point on which many rash and ill-considered judgments have been pronounced, we feel inclined to dwell on it a little longer. The most fatal error which a poet can possibly commit, in the management of his machinery, is that of attempting to philosophise too much. Milton has been often censured for ascribing to spirits many functions of which spirits must be incapable. But these objections, though sanctioned by eminent names, originate, WJB venture to say, in profound ignorance of the art of poetry.'

In Spain, though poetry was early cultivated, it was but with little attention to classical taste. In France it did not emerge from barbarism till the reign of Francis I., and arrived perhaps at its ultimate point of perfection in the era of Louis XIV. La Fontaine and Boileau, Corneille and Racine, had then lived, and produced works destined to immortalise their names. Unfortu- tunately for French poets, criticism was then almost coeval with poetry ; and a pedantic atten- tion to rules was permitted to repress the native energies of genius. We have traced in our ar- ticle DRAMA the origin of the modern drama, in the mysteries ; a sort of religious farce, imported from the east. To the mysteries succeeded allegorical plays, called moralities : these pro- duced the mask, which became the favourite amusement of the court in the time of Charles I., and is only redeemed from opprobium and oblivion by Milton's Comus. Gondibert, written by lord Sackville, was the first tragedy repre- sented on an English stage.

Till the commencement of the eighteenth century, the German language was almost a stranger to poetry. Klopstock introduced into it hexameter verse, in which the mechanism of classical numbers is rather perceived than felt. From that era, Germany has been more produc- tive of books than all the rest of Europe ; and, during this period, many writers have arisen of real and original genius : but the literary com- merce of the country is chiefly supported by 1 ranslation.

With regard to the art of poetry, as it has been taught by rules, we are of opinion with Sir William Temple, ' The utmost that can be achieved, or I think pretended, by any rules in the art of poetry is but to hinder some men from being very bad poets ; but not to make any man a very good one.' See, however, our article VERSIFICATION for something on this head.

The public taste of this country has, upon the whole, within the last half century, been simplified, purified, and invigorated. Men have begun to be weaned from the perusasion that poetry is something necessarily striking and dazzling, and epigrammatic, and antithetical : squared and balanced by rule and measure ; and made up of established periphrases,

conventional phrases, and traditional metaphors ; forming al- together a sort of poetic cypher; a symbolical

diction as unlike as possible to the language im- memorially spoken by men and women and children. They have begun to give up the ex- pectation that every word and line in poetry must be essentially different from prose ; to per- ceive that to call a line flat or lagging is some- times the dictate of an inflexible and prejudiced ear, not knowing or not considering that poetry has its reliefs as well as painting. They have begun to admit that poetry, like prose, must have her moods of relation ; her easy moments ; her bye-passages and resting-places : to discover, in short, that poetry is not a being of mere artifice, moving in buckram and sparkling with embroi- dery; but that, like the mountain shepherdess, she searches the woods and the meadows for her fairest and freshest ornaments, assumes all the changing colors, and follows all the vagrant varieties of primitive nature : ' Mille habet ornatus ; mille decenter habet.'

We conclude with a passage which ably groupes the characters of our chief modern poets.

' Waller is the first writer who made prose sound agreeably in rhyme. He was in truth an indifferent poet, possessing little genius as an author, or principle as a man, and obtained a name chiefly by reducing verse to ' the level of the meanest capacity.' But, in fact, the first name of that period which is really great is that of Dryden. Dryden was at the head of his line. As a bitter, biting satirist, as a writer of sensible, masculine, sounding verse, there is no one who goes beyond him. But as a poet he was of a different order from those who illuminated the reigns of Elizabeth and James; and he occupied, in our opinions, a decidedly lower step. He was a writer of shrewd sarcasm and of excellent good sense, but he was deficient in imagination, in pathos, and in nature. He was more artificial, generally speaking, than his predecessors ; and he ought to have been more natural, for he re- sorted far more to common phraseology and ex- isting people. Nevertheless, it is not too much to say that he failed signally in tragedy, and that he did not excel in narrative or in tendei serious poetry many of inferior reputation who have preceded and followed him. But in the war of verse he was in his element. He fought well and effectually ; he gave blow back for blow, and knew the weak side of his foes, and launched his sounding anathemas against their characters and persons. His ' Absalom and Achitophel,' and ' Mac-Flecnoe' are each capital, are each excellent satires, though the palm must assuredly be awarded to the former poem. ' The Hind and the Panther' also is a fine thing in its way ; but it differs little in point of style from such of his productions as were merely satirical.

- *Contemporary with Dryden was Lee, a power- ful irregular writer,*

whose stormy verses shook the stage from its propriety, and Shadwell, the ‘ Young Ascanius’ of Mac-Flecnoe, who swore

That he to death true Dullness would maintain ; And in his father’s right and realm’s defence, Ne’er to have peace with wit, nor truce with sense.

Then came Sedley and Dorset, and John Phillips (the axithor of the Splendid Shilling), and Rowe, and Parnell (who wrote the Hermit),

POETRY.

o/o

and \viUy Dr. Garth and Addison, so great ir. prose and so little in poetry ; and lively laugh- ing Mat. Prior, to whom the world was a joke; then followed Vanbrugh and Congreve, the bril- liant twins of Comedy, and Gay (who reduced folly to a fable, and wrote Black-eyed Susan, and the Beggar’s Opera), and lastly, the better known and more justly celebrated Alexander Pope.

‘ Pope was a fit successor for the chair of Dryden. He had the same good sense, the same stinging sarcasm ; the same hatred of what is base or mean, with something more of refinement, and a clearer moral view than can perhaps be ascribed to his predecessor. Each, however, belonged to his age, and illustrated it finely. Dryden would have been out of place at the court of queen Anne, and Pope could not easily have recon- ciled himself to the coarse gallants and lascivi- ous wits of the Restoration. The one had a strong arm and a fearless spirit, and struck down whole squadrons of rogues and politicians, with all the indignation of a moralist, and the rancour of a partisan. The other shot his sharp arrows at the heart of the proud man and the knave, the time-server, and the hypocrite (whether hidden in an alias or covered with lawn) ; he spared neither rank, nor sex, nor age, so it were impu- dent and profligate ; but wisely thought that, if a reformation in morals was to be effected, it must be effected by example ; not of the poor, but of the high-born and opulent. This led him amongst the aristocracy of his time ; and he whipped the gilded follies and humble sins of the wealthy, with as much good will and more honesty than the magistrates of our time exercise their summary justice upon the petty offenders who sell cabbages and beef upon the Sabbath. Pope, in a word, was a first-rate writer of the .same genius as Dryden, and upon the whole his equal. His poems contain passages of great pathos, of piercing satire, and of admirably turned compliment ; and his Rape of the Lock has never yet been equalled. Next to Pope we may record Swift, a stern, shrewd, sarcastic writer of verse, and a ‘ fellow of infinite humor.’ There were two sides, however, to the dean’s character, one of which we do not desire at

pre- sent to contemplate : but the other was rich and bright as the genius of wit could make it. After him we find the name of Thomson, who looked on Nature with an observant but easy eye, and transcribed her varying wonders to man. His Seasons contain finer ct at least more popu- lar things than any of his other poems (although he but too frequently amplifies a simple fact, till you scarcely know what he is about) ; but there is a much more equal power, and far more pure poetry in his delightful Castle of Indolence, it was here that he built up those shadowy bat- tlements, and planted those ‘ sleep-soothing’ groves, under which lay

‘ Idlesse, in her dreaming mood.’

It was here that he wove in his poetic loom those pictures of pastoral quiet — of flowerv lawns and glittering streams — of flocks and tran- quil skies, and verdant plains,

‘ And vacant shepherds piping in the dale’ —

the stock-dove, and the nightingale, and the rest of that tuneful quire which lull our minds into forgetfulness, and sing to us on summer morn- ings and winter nights, in town and in country equally well, until we forget the prose of human life in its romance, and bathe our fevered senses in the fresh flowers of poetry which the bounty of Thomson has bequeathed to us ! There is nothing in the history of verse, from the restora- tion of Charles II. to the present, time (not even in Collins, we think, and certainly not in Gray), which can compete with the first part of the Cas- tle of Indolence. His account of ‘ Drv>wsy Head,’ and

‘ Of dreams that wave before the half-shut eye,’

of the disappearance of the sons of Indolence, with the exquisite simile with which it closes — the huge covered tables, all odorous with spice and wine — the tapestried halls and their Italian pictures — the melancholy music — and, altogether, the golden magnificence and oriental luxuries of the place, aud the ministering of the spirits who

‘ Poured all the Arabian heaven upon our nights/

(an exquisite line) — may stand in comparison with almost any thing in the circle of poetry.

‘ We must not forget, in our list, Dr. Young, whose Night Thoughts have acquired at least as much reputation as they deserve — nor the un- fortunate, and not very deserving Richard Sa- vage— nor Gibber, the prince of coxcombs — nor Churchill, a coarse and immoral satirist — nor Shenstone, fine and finical, though with touches of tenderness and beauty

— especially in his sweet Spenserian stanzas of The Schoolmistress. After him came Mark Akenside — Armstrong — • excellent Goldsmith — and Gray — and his satel- lite Mason. Of these, and indeed of most of the other modern writers of verse, so much has been said in various places (in fact, we ourselves have had occasion frequently to glance at them), that we shall not now trouble the reader with any further discussion on the subject. In the same manner also must we now pass over the few re- maining names on the poetic roll, with the ex- ception of Warton, Cowper, and Burns ; in truth, there are no other which can claim our particular attention. The two latter are great names ; and we think deserving of all the fame they inherit. The effect of Cowper's writings is even now observable in our poetry ; and Burns is, beyond all doubt, the gieatest untaught poet since the time of Shakspeare.' — Edin. Review, Aug. 1825.

POGGIO BRACCIOLIKI, or POGGIUS BRACCI- Greek under John of Ravenna, and Emanuel

OLINUS, a man of great talents and learning, who contributed much to the revival of know-

Chrysoloras. He was first writer of the apos- tolic letters, an office which he held ten years,

ledge in Europe, was born at Terra Nuova, in and was then made apostolic secretary, which he Florence, in 1380. He studied Latin and held forty years under seven popes. In 1453,

when he was seventy-two years of age, he ac- cepted the employment of secretary to the re- public of Florence, to which place he removed, and died in 1459, aged seventy-nine. He visited several countries, and searched many monasteries, to recover ancient authors, numbers of which he brought to light. He sold a MS. copy of Livy, written with his own hand, for so large a sum that he purchased an estate with it near Florence. His own works consist of moral pieces, orations, letters, and a History of Flo- rence from 1350 to 1455, which is his chief work. His life was disgracefully licentious.

POGO is a name by which the inhabitants of the Philippine Islands distinguish their quail, which, though smaller than ours, is in every other respect very like it. See PERDIX.

POICTIERS. See POITIERS. • POFGNANT, adj.) Fr. poignant. Sharp ;

POI'GNANTLY, adv. \ stimulating the palate; piercing : hence painful ; the adverb corre- sponding.

No poignant sauce she knew, nor costly treat, Her hunger gave a relish to her meat. Dryden.

The studious man whose will was never deter- mined to poignant sauces and delicious wine, is, by hunger and thirst, determined to eating and drink- ing. Locke.

Full three long hours his tender body did sustain Most exquisite and poignant pain.

Norris's Miscellanies.

If God makes use of some poignant disease to let out the poisonous vapour, is not the mercy greater than the severity of the cure ? South' Sermons.*

I sat quietly down at my morsel, adding only a principle of hatred to all succeeding measures by way of sauce ; and one point of conduct in the dutchess's life added much poignancy to it. Swift.

As almost every character which has excited . either attention or pity has owed part of its success to merit, and part to a happy concurrence of circum- stances in its favour : had Cssar or Cromwell ex- changed countries, the one might have been a ser- geant and the other an exciseman. So it is with wit, which generally succeeds more from being hap- pily addressed, than from its native poignancy.

Goldsmith.

POINCIANA, Barbadoes flower-fence, or false ebony, a genus of the monogynia order, and decandria class of plants, natural order thirty-third, lomentaceae : CAL. pentaphyllous ; petals five, the uppermost larger than the rest ; the stamina long, and all fertile ; the seed vessel a legumen. There is only one species, viz. —

P. pulcherrima, a native of both Indies. It rises with a straight stalk ten or twelve feet high, which is covered with a gray bark, and is sometimes as thick as the small of a man's leg, dividing into several spreading branches at the top, which are armed at each joint with two short, crooked, strong spines, and garnished with decompound winged leaves, each leaf consisting of six or eight pairs of simple winged leaves. They are of a light green color, and when bruis- ed emit a strong odor. The branches are termi- nated by

loose spikes of flowers, sometimes formed like a pyramid, at others disposed more in the form of an umbel. The foot-stalk of each flower is nearly three inches long ; the flower is composed of five petals, which are roundish at

the top, but aro contracted to narrow tails at the base. They spread open, and are beautifully variegated with a deep red or orange color, yel- low, and some spots of green ; and emit a very agreeable odor. After the flower is past, the germen becomes a broad flat pod three inches long, divided into three or four cells by trans- verse partitions, each including one flattish irre- gular seed . The plant is propagated by seeds ; but, being tender, is to be constantly kept in the bark stove. It is very impatient of moisture in winter ; and, if the least damp seizes its lop, it either kills the plant or destroys its head. With proper management it will grow taller here than in the places where it is native ; but its stems will not be thicker than a man's finger. In Barbadoes it is planted in hedges to divide the lands, whence it has the name of flower-fence. In the West Indies its leaves are made use of as a purge instead of senna ; and in Jamaica it is called sena.

To POIND, in Scots law, to seize and sell a debtor's goods to pay his creditors.

POINSINET (Henry), A. A., a French dra- matic writer, born at Fontainbleau in 1735, whose operas, being accompanied with excellent music, were very successful. He went in 1760 to Italy and Spain, but was drowned in the Guadalqurver.

POINT>.s.,t>.a.&

POINT'ED, adj.

POINT'EDLY, adv,

POINT'EDNESS, n. s.

POINT'EL, n. s.

POINT'ER,

POINT'ING-STOCK,

POINT'LESS, adj.

of space or time ; exact place ; critical moment ; thing or part of space at which any thing is aimed ; act of aiming or striking ; headland ; promontory ; degree ; state ; note in writing or in music ; tune ; spot ; mark

of a degree on the horizon or mariners' compass ; instance ; single position or assertion ; single part of a whole or of a complicated question : to point is to sharpen ; direct toward a point ; show : as a verb neuter, note with the finger ; bring to or force upon notice, taking at and to; to distin- guish words or sentences by points; show dis- tinctly : pointed, pointedly, and pointedness, follow the senses of the noun substantive, point : pointel is something placed on a point: pointer, a particular kind of dog that points out game : pointing-stock, a butt, or object of ridicule : pointless, blunt ; obtuse ; without object or meaning : pointblank, directly : point de vise, exact ov exactly in the point of view ; a Galli- cism.

Esau said, Behold I am at the point to die ; and what profit shall this birthright do to me ?

Genesis xxv. 32-

From the great sea, you shall point out for you1 mount Hor. Numbers xxxiv. 7.

The company did not meddle at all with the state point, as to the oaths ; but kept themselves entirely to the church point of her independency, as to her purely spiritual authority, from the state. Lesley.

The highest point outward things can bring one un o is the contentment cf the rrind, with which no estate is miserable. Sidney.

Fr. pointe ; Wei. pwynt ; lla.punto; Span, punt a ; Port. ˆpunta ; Belg. punt ; Lat. 'punctura. A sharp or acumin- ated end ; hence an indivisible portion

The fifth had charge sick persons to attend, And comfort those in point of death which lay.

Spenser. Faerie Queene. The thorny point

Of bare distress hath ta en from me the shew Of smooth fidelity. Shakspeare. As You Like It.

If your son have not the day, For a silken point I'll give my barony.

Shakspeare.

I am resolved on two points ; That if one break the other will hold ; Or if both break, your gaskins fall. Id.

How oft, when men are at the point of death, Have they been merry ! which their keepers call A lightning before death. Id.

Carve out dials point by point, Thereby to see the minutes how they run. Id.

A figure like your father, \rmed at all points exactly cap-a-pe, Appears before them. Id. Hamlet.

What a point your falcon made, And what a pitch she flew above the rest.

Shakspeare.

I'll hear him his confessions justify, And point by point the treasons of his master He shall again relate. Id. Henry VIII.

You, my lord archbishop, Whose white investments figure innocence, Wherefore do you so ill translate yourself Into the harsh and boist'rous tongue of war ? Turning your tongue divine To a loud trumpet, and a point of war.

Shakspeare.

This boy will carry a letter twenty mile, as easy as a cannon will shoot pointblank twelve score. Id.

Every thing about you should demonstrate a care- less desolation ; but you are rather point de vise in your accoutrements, as loving yourself, than the lover of another. Id.

Alas ! to make me A fixed figure, for the hand of scorn To point his slow unmeaning finger at. Id.

I, his forlorn dutchess, Was made a wonder and a pointingstock To every idle rascal follower. Id. Henry VI. There arose strong winds from the south, with a twint east, which carried us up.

Bacon's New Atlantis.

A seaman, coming before the judges of the admi- ralty for admittance into an office of a ship, was by one of the judges much slighted ; the judge telling him, that he believed he could not say the points of his compass. Bacon.

A war upon the Turks is more worthy than upon any other Gentiles, in

point of religion and iu point of honour. Id.

The other level pointblank at the inventing of causes and axioms. Id.

Men's behaviour should be like their apparel, not too straight or point de vise, but free for exercise.

Id.

The princes of Germany had but a dull fear of the greatness of Spain ; now that fear is sharpened and pointed, by the Spaniards late enterprizes upon the Palatinate. Id.

Then neither from eternity before, . Nor from the time when time's first point begun, Made he all souls. Davies.

Who setteth out prepared At all points like a prince, attended with a guard.

Dray ton.

The vicious language is vast and gaping, swelling, and irregular ; when it contends to be high, full of rock, mountain, and pointedness. Ben Jonson.

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The sun stands not still in one pn~nt of heaven but walks his daily round ; that all the inferior world may share of his influences, both m heat and light.

Bp. Hall.

God hath chalked out his ways in the ten words of his royal law ; the sinner turns his back upon every one of them, and walks pointblank opposite. Id.

Another vows the same ; A third t' a point more near the matter draws.

Daniel.

We doubt not but such as are not much conversant with the variety of authors, may have some leading helps to their studies of points of precedence, bj this slight designation. Selden.

If you tempt her, the wind of fortune May come about, and take another point, And blast your glories. Denliam.

King James was wont to say that the duke of Buckingham had given him a

groom of his bed- chamber, who could not truss his points. Clarendon.

That bright beam whose point now raised, Bore him slope downward. Milton.

Shalt thou dispute

With God the points of liberty, who made Thee what thou art ? Id. Paradise Lost.

Vapours fired shew the mariner From what point of his compass to beware Impetuous winds. Id.

Mount Hermon, yonder sea, each place behold As I point. Milton.

Unless it be the cannon ball, That shot i' th' air pointblank upright, Was born to that prodigious height, That learned philosophers maintain It ne'er came back. Hudibrus.

East and West are but respective and mutable points, according unto different longitudes or distant parts of habitation. Browne.

You gain your point, if your industrious art Can make unusual words easy. Roscommon.

With the history of Moses, no book in the world in point of antiquity can contend. Tillotson.

Estius declares that, although all the schoolmen were for latria to be given to the cross, yet that it is pointblank against the definition of the council of Nice. StiUingfleet.

A pyramid reversed may stand for a while upon its point, if balanced by admirable skill. Temple.

Democritus, spent with age, and just at the point of death, called for loaves of new bread, and, with the steam under his nose, prolonged his life till a feast was past. ˆ.

His majesty should make a peace, or turn the war directly upon such points, as may engage the nation in the support of it. Id.

Doubts if he wielded not a wooden spear Without a point ; he looked, the point was there.

Dryden.

He takes Lucan, who crowded sentences together, and was too full of points. Id.

At certain periods stars resume their place, From the same point of heaven their course advance.

Id.

He had a moment's right in point of time ; Had I seen first, then his had been the crime. Id.

He, warned in dreams, his murder did foretel, From point to point, as after it befel. Id.

Part new grind the blunted ax, and point the dart.

Id.

Who fortune's fault upon the poor can throw, Point at the tattered coat and ragged shoe. Id.

A pointed flinty rock, all bare and black, Grew gibbous from behind. Id.

The copiousness of his wit was such that he often writ too pointedly for his subject. Id.

t'P

POI

578

POI

Like Horace, you only expose the follies of men ; and in this excel him, that you add pointedness of thought. Id.

Lay that pointless clergy-weapon by,

And to the laws, your sword of justice, fly. Id.

There is no creature so contemptible, but, by reso- lution, may gain his point. L'Estrange.

The faculties that were given us for the glory of our Master are turned pointblank against the inten- tion of them. Id.

We sometimes speak of space, or do suppose a point in it at such a distance from any part of the universe. Locke.

Men would often see, what a small pittance of reason is mixed with those huffing opinions they are swelled with, with which they are so armed at all points, and with which they so confidently lay about them. Id.

It will become us, as rational creatures, to follow the direction of nature, where it seems to point us out the way. Id.

Sometimes we use one finger only, as in pointing at any thing. Ray on the Creation.

Is not the elder By nature pointed out for preference 1 Rowe.

I don't see why Virgil has given the epithet of Alta to Prochita, which is much lower than Iscliia, and all the points of land that lie within its neighbourhood. Addisou.

In a commonwealth, the wealth of the county is so distributed, that most of the community are at their ease, though few are placed in extraordinary points of splendour. Id.

The two pinnae stand upon either side, like the wings in the petasus of a Mercury, but rise much higher, and are more pointed. Id. on Italy.

I shall do justice to those who have distinguished themselves in learning, and point out their beauties.

Addison.

Rouse up, for shame ! our brothers of Pharsalia Point at their wounds, and cry aloud to battle. Id. On one small point of land,

Weary'd, uncertain, and amazed, we stand.

Prior. The subtle dog scow'rs with sagacious nose,

Now the warm scent assures the covey near,

He treads with caution, and he points with fear,

Gay.

The well-taught pointer leads the way, The scent grows warm ; he stops, he springs his prey. Id.

They follow nature in their desires, carrying them no farther than she directs, and leaving off at the point at which excess would grow troublesome.

Atterbury.

Stanislaus endeavours to establish the duodecuple proportion, by comparing scripture together with Josephus : but they will hardly prove his point.

Arbuthnot on Coins.

These poises or pointeh are, for the most part, little balls, set at the top of a slender stalk, which they can move every way at pleasure. Derham.

Times corrupt, and nature ill inclined,

Produced the point that left a sting behind.

Pope.

Commas and point they place exactly right, And 'twere a sin to rob them of their mite. Id.*

Some on pointed wood

Transfixed the fragments, some prepared the food.

Id.

Who now reads Cowley 1 if he pleases, yet His moral pleases, not his pointed wit. Id.

I have extracted out of that pamphlet a few of those notorious falsehoods in point of fact and rea- soning. Swift.

There is no point wherein 1 have so much laboured as that of improving and polishing all parts of con- versation between persons of quality. Id

To point at what time the balance of power was most equally held between their lords and commons in Rome would perhaps admit a controversy. Id

The poet intended to set the character of Arete in a fair point of light. Broome.

Fond the Jews are of their method of pointing.

For be !.

Tell him what arc the wheels, springs, point •/•, hammer, and bell, whereby a clock gives notice of the time. Watts.

The gloss produceth instances that are neither per- tinent, nor prove the point. Baker on Learning.

The point of honour has been deemed of use ; To teach good manners, and to curb abuse.

Cowper. Shows with a pointing finger, but no nois?,

A pale procession of past sinful joys,

All witnesses of blessings foully scorned,

And life abused, and not to be suborned. Id.

A book concerning the habitudes of animals, by Mr. Bindley, was lately advertised : I have not yet seen it. The subject is curious, but difficult : it requires long and patient attention to come to any certain conclusion respecting the manners and perhaps the nascent morals of animals ; for a well-trained pointer, and other domesticated and well-educated animals, seem to have a knowledge of what may be called their duty to their master. Bp. Watson.

POINT, in astronomy, a term applied to cer- tain places marked in the heavens, and distin- guished by proper epithets, thus: — 1. Cardinal points are four grand points or divisions of the horizon, viz. the east, west, north, and south. 2. Equinoctial points, the points wherein the equator and ecliptic intersect; particularly that whence the sun ascends towards the north pole, is called the vernal point ; and that by which he descends to the south pole, the autumnal point. 3. Solstitial points, the points of the ecliptic, where the sun's ascent above the equa- tor, and descent below it, terminate. The for- mer is called particularly the estival or summer point ; the latter the brumal or winter point. 4. Vertical points, the zenith and nadir : the points wherein the orbits of the planets cut the plane of the ecliptic are called the nodes. See ASTRONOMY.

POINT, in geography, is used for a cape or headland jutting out into the sea ; thus seamen say, two points of land are in one another, when they are so in a right line against each other as that the innermost is hindered from being seen by the outermost.

POINT, in geometry, according to the cele- brated definition of Euclid, is

that which has neither parts nor magnitude. See GEOMETRY.

POINT, in grammar, is a character used to mark the divisions of discourse. See COLON, COMMA, &c. A point proper is a full stop or period. See PUNCTUATION.

POINT, in music, a mark or note anciently used to distinguish the tones or sounds : hence we still call it simple counter-point, when a note of the lower part answers exactly to that of an upper; and figurative counter-point, when any note is syncopated, and one of the parts makes several notes or inflexions of the voice, while the other holds on one. See Music. In an-

cient music there are six species of points ; viz. point of perfection ; point of imperfection ; point of augmentation ; point of division, of translation, and alteration. 1. The point of perfection belongs to the ternary division. 2. The point of imperfection, placed on the left of the longa. diminishes its value. 3. The point of augmentation belongs to the binary division. 4. The point of division is placed before the semi- breve, followed by a breve in perfect time ; it takes the value of one minim away from the breve, and makes it worth two instead of three semibreves. 5. If a semibreye between two points be followed by two or more breves, in imperfect time, the second point transfers its signification to the last of these breves, and ren- ders it perfect and equal to three minims ; it is the point of translation. 6. A point between two semibreves, themselves placed between two breves or squares, in perfect time, takes away one minim from each of these breves, so that each breve is equal but to two semibreves in lieu of three ; this is the point of alteration.

POINT, in perspective, is used for various poles or places, with regard to the perspective plane. See PERSPECTIVE.

POINT, in several arts, an iron or steel instru- ment. Engravers, etchers, cutters in wood, &c., use points to trace their designs on the copper, wood, stone, &c. See ENGRAVING, &c.

POINT, in the manufactories, is a term once used for all kinds of laces wrought with the needle ; such as the point de Venice, point de France, point de Genoa, &c., which are distin- guished by the particular economy and arrange- ment of their points. Point is sometimes used for lace woven with bobbins ; as English point, point de Malines, point d'Havre, &c.

POINTS, in electricity, are those acute termi- nations of bodies which facilitate the passage of the electrical fluid from or to such bodies. See ELECTRICITY, Index.

POINTS, in heraldry, are the several different parts of an escutcheon, denoting the local posi- tion of any figure. See HERALDRY.

POINTS, in philology, or the HEBREW VOWEL POINTS, are characters which have been em- ployed in the Hebrew language in the lieu of vowels to express the vowel sounds. See MA- SORA. The controversy whether the Hebrews originally used any vowels, or whether the points, which are now called by that name, were substituted instead of them ; or, if they were, whether they be as old as Moses, or were in- vented by Ezra, or by the Masorites, has exer- cised the wits of the most learned critics of the three last centuries, says a late able writer, and is still undetermined. The Jews maintain that these vowel points were delivered to Moses along with the tables of the law ; and conse- quently hold them as sacred as they do the tetters themselves. Many Christian authors who have handled this subject, though they do not affirm their divine original, nor their extravagant antiquity, pretend, however, that they are the only proper vowels in the language, and regulate and ascertain its true pronunciation. Though they differ from the Jews with respect to the origin of these points, they jet allow them a

pretty high antiquity, ascribing them to F,zr:i and the members of the great synagogue. About the middle of the sixteenth century, however Elias Levita, a learned German Jew, who then nourished at Rome, discovered the delusion, and made it appear that these appendages had never been in use till after the writing of the Talmuds, about 500 years after Christ. This innovation raised Elias a multitude of adver- saries, both of his own countrymen and Chris- tians. Among the latter appeared the two Bux- torfs, father and son, who produced some cabbalistical books of great antiquity (at least in the opinion of the Jews), in which there was express mention of the points. The Buxtorfs were answered- by Capellus and other critics ; till Father Morinus, having examined all that had been urged on both sides, produced hi> learned dissertation on that subject; against which there has been nothing advanced of any consequence, whilst his work has been univer- sally admired, and his opinion confirmed by those that have beaten the same field after him.

According to the learned father it appears plainly that neither Origen, nor St. Jerome, nor even the compilers of the Talmuds, knew any thing of what have been called the vowel points ; and that these books were not finished till the seventh century. Even the Jewish rabbis who wrote during the eighth and ninth centuries, were not in the least acquainted with them. He adds,

that the first vestiges he could trace of them were in the writings of rabbi Ben Aber chief of the western, and of rabbi Ben Naphtali chief of the eastern school, that is, about the middle of the tenth century ; so that they can hardly be said to be older than the beginning of that period. The Buxtorfs and other learned men have as- cribed the invention of the vowel points in ques- tion to the rabbis of the school of Tiberias ; which flourished about the middle of the second century. This opinion is by no means probable, because it appears plain from history, that before that period all the Jewish seminaries in that province were destroyed, and their heads forced into exile. Some of these retired into Babylo- nia, and settled at Sora, Naherida, and Pombe- ditha, where they established famous universi- ties. After this era there remained no more any rabbinical schools in Judea, headed by professors capable of undertaking this difficult operation,, nor indeed of sufficient authority to recommend it to general practice, had they been ever so thoroughly qualified for executing it.

Capellus and father Morin, who contend for the late introduction of the vowel points, ac- knowledge that there can certainly be no lan- guage without vocal sounds, which are indeed the soul and essence of speech ; but they affirm that the Hebrew alphabet actually contains vowel characters, as well as the Greek and Latin and the alphabets of modern Europe. These are aleph, lie, vau, jod, which they call the matres lectionis, or the parents of reading. To these some, and we think very properly, add ain, oin, or ajin. These, they conclude, perform exactly the same office in Hebrew that their descendants do in Greek. It is indeed agreed on all hands that the Greek alphabet is derived

from the Phoenician, winch is known to be the same with the Samaritan or Hebrew. Hitherto the analogy is not only plausible, but the resem- blance precise. The Hebrews and Samaritans employed these vowels exactly in the same manner as the Greeks ; and so all was easy and natural. But the assertors of the Masoretic system maintain that the letters mentioned above are not vowels but consonants or aspira- tions, or any thing you please but vocal letters. This they endeavour to prove from their use among the Arabians, Persians, and other oriental nations ; but to us it appears abundantly strange to suppose that the Greeks pronounced beta, gamma, delta, &c., exactly as the Hebrews and the Phoenicians did, and yet at the

same time did not adopt their mode of pronunciation with respect to the five letters under consideration. To this argument we think every objection must yield. The Greeks borrowed their letters from the Phoenicians ; these letters were the Hebrew or Samaritan ; the Greeks wrote and pronounced all the other letters of their alphabet, except the five in question, in the same manner with their originals of the east ; if they did so, it obviously follows that the Greek and oriental office of these letters was the same.

POINT-BLANK, in gunnery, denotes the shot of a piece levelled horizontally, without either mounting or sinking the muzzle. In shooting thus, the bullet is supposed to go in a direct line, and not to move in a curve as bombs and highly elevated random shots do. We say sup- posed to go in a direct line, because it is certain that a shot cannot fly any part of its range in a right line strictly taken : but the greater the velocity, the nearer it approaches to a right line ; or the less crooked fts range. The French point-blank, or but en blanc, is what the British call the line of metal elevation, which in most guns is from one to two degrees.

POINT DE GALLE, a fortified town in the Island of Ceylon, the third in consequence, is situated sixty miles south from Columbo. The harbour, particularly the outer road, is spacious, and the inner harbour is secure during a great part of the year. Ships outward-bound from Europe generally come in sight of the first land at Dondrahead, the southern promontory of Ceylon, and make Point de Galle their first har- bour. There is no regular rainy season, but from its situation at the extremity of the island it has a share of the rain of each coast, which fells in storms at all seasons of the year. The Heaviest rain, however, falls between November and February.

Point de Galle is an old Dutch fort out of re- pair, and not above six English families reside here constantly. The pettah, or native town, is, however, extensive, and superior to those at Trincomale" ; in respect to trade it ranks next to Columbo. Fisheries to a considerable extent are carried on, and the fish dried and J cured for exportation to the neighbouring continent. Arrack, oil, pepper, cotton, and cardamums, also form its exports. Cinnamon is grown, but not in such quantities as about Columbo : one of the East India ships touches here annually, to carry off what is prepared . Near the fort a colony of Chinese is established as gardeners by the East

India Company, for the purpose of raising vege tables. They cultivate esculents of various sorts and have also thriving plantations of sugar-cane. The mutton here is said to be indifferent ; but the beef, poultry, bread, and fish, are excellent. The travelling distance from Columbo is seventy- two miles.

POINT OF APPUI, in military affairs, the point upon which a line of troops is formed. When the right stands in front, and the column is marching to form, the first halted company, divi- sion, &c., is the point of appui; and, when the right is in front, the distant point of formation is the left. Point of intersection (Fr. point d' in- tersection), the point where two lines intersect each other. Intermediate point (Fr. point inter- mediare). In marching forward that is called an intermediate point which lies between the spot marched from, and the spot towards which you are advancing. In forming line, the centre point between the right and left is the interme- diate point. It is of the utmost consequence to every body of troops, advancing or retreating, but especially in advancing towards the enemy, to find an intermediate point between two given, and perhaps inaccessible, objects. The line of march is preserved by these means in its per- pendicular direction, and every column may be enabled to ascertain its relative point of entry in the same line. Point of alignment (Fr. point d'alignement), the point which troops form upon and dress by. Point of formation, a point taken, upon which troops are formed in military order.

A perpendicular point is the point upon which troops march in a straight forward direction. Relative points are the points by which the parallelism of a march is preserved. Point of passing, the ground on which one or more bodies of armed men march by a reviewing general. Point to salute at, the spot on which the reviewing general stands. This, however, is not to be understood literally, as every in- fantry officer, when he arrives within six paces of the general, recovers his sword and drops it, keeping it in that situation until he shall have passed him a prescribed number of paces. The cavalry salute within the breadth of the horse's neck, the instant the object is uncovered. Point of war, a loud and impressive beat of the drum, the perfect execution of which requires great skill and activity. The point of war is beat when a battalion charges.

POINTE, in modern music, is a sign of aug- mentation only, and is placed on the right of a note ; it augments by one half the value of every note to which it is attached ; thus the pointed semibreve is equal to three minims, or one semi- breve and a half; the pointed minim is equal to three crotchets, &c.

POINTER, in zoology. See CANIS.

POINTING, in grammai, the art of dividing a discourse, by points, into periods and members of periods, in order to show the proper pauses to be made in reading, and to facilitate the pro- nunciation and understanding thereof. See PUNCTUATION.

POIRET (Peter), a native of Metz, boru in 1646, and educated at Erasmus

College Basil. He is chiefly distinguished by his zeal

for Madame Guyon and the Mystic writers. He published several pieces in favor of their tenets, and died in 1719.

POISE, or (Ital. and Span, peso, ;

POIZE, n. s. & v. a. I Fr. peser of Lat. pondus. Weight ; gravity ; balance ; equilibrium ; any re- gulating power or force: to balance; hold in equiponderance : weigh ; test by a balance ; op- press or load with weight.

How nice to couch 1 how all her speeches poized

be? A nymph thus turned but mended in translation.

Sidney.

He fell, as an huge rockie clift, Whose false foundation waves have washed away With dreadful poize is from the main land reft.

Spenser.

When I have suit,

It shall be full of poise and difficulty, And fearful to be granted.

Shahspeare. Othello.

If the balance of our lives had not one scale of reason to poize another of sensuality, the baseness of our natures would conduct us to preposterous con- clusions. Id.

I'll strive with troubled thoughts to take a nap, Lest leaden slumber poize me down to morrow, When 1 should mount with wings of victory.

Shakspeare.

Where an equal poize of hope and fear Does arbitrate the event, my nature is That I incline to hope. Milton.

As the sands

Of Barca or Gyrene's torrid soil, Levy'd to side with warring winds, and

poize Their lighter wings. Id. Paradise Lost.

Love is the great leveller which in a manner set- teth all things on even ground, and reduceth to a just poise. Barrow.

Men of an unbounded imagination often want the poize of judgment. Dryden.

Where could they find another formed so fit, To poize with solid sense a sprightly wit 1 Id.

He cannot sincerely consider the strength, poize the weight, and discern the evidence of the clearest argumentations, where they would conclude against his desires. South.

'Tis odd to see fluctuation in opinion so earnestly charged upon Lather, by such as have lived half their days in a poize between two churches.

Atterbury.

The particles that formed the earth must convene from all quarters towards the middle, which would make the whole compound to rest in a poixe.

Benlley's Sermons.

POI'SON,re. s. & v. a.-\ French poison ; Qu. POI'SONER, n. s. I i,at.potio,potionatum.

POI'SONOUS, adj. > Mr. Thomson says,

POI'SONOUSLY, I L. Belg. piso, poscio,

POI'SONOUSNESS. J seem to have been like Ital. Josco,and Span, tosigo from Gr. TO%IKOV, Lat. toxicum.' Venom ; whatever destroys life ; particularly in a secret or occult manner ; hence whatever is malignant, infectious, or deleterous : to poison is to kill, injure, to infect with poison ; corrupt ; taint : all the other words are regu- larly derived from poison, noun-substantive.

He was so discouraged, that he poisoned himself end died. 2 Mac.

The other messenger

Whose welcome I perceived had poisoned mine.

Shakspeare.

*I must be the poisoner Of good Polixenes. j^*

Those cold ways,

That seem like prudent helps, are very poisonous, Where the disease is violent. Id. Coriolan'us.

Themselves were first to do the ill, Ere they thereof the knowledge could attain ; Like him that knew not poison's power to kill, Until, by tasting it, himself was slain. Davis.*

Virtue, dear friends, needs no defence, The surest guard is innocence, Quivers and bows and poisoned darts Are only used by guilty hearts. Roscommoti

So many mischiefs were in one combined ; So much one single poisoner cost mankind.

, Dn/den

Not Sirius shoots a fiercer flame, When with his poisonous breath he blasts the sky.

Id.

Notions with which the schools had poisoned our youth, and which only served to draw the prince to govern amiss, but proved no security to him, when the people were grown weary of ill government.

Davenant.

One gives another a cup of poison, but at the same time tells him it is a cordial, and so he drinks it off and dies. South.

Wretches who live upon other men's sins, thfc common poisoners of youth, getting their very bread by the damnation of souls. Id.

Men more easily pardon ill things done than said, such a peculiar rancour and venom do they leave be- hind in men's minds, and so much more poisonously and incurably does the serpent bite with his tongue than his teeth. Id.

Hast thou not With thy false arts poisoned his people's loyalty 1

tioice.

This being the only remedy against the poison of sin, we must renew it as

often as we repeat our sins, that is, daily. . Duty of Man.

A lake that has no fresh water running into it, will, by heat, and its stagnation, turn into a stink- ing rotten puddle, sending forth nauseous and poi- sonous steams. Cheyne.

Drink with Walters, or with Chartres eat ; They'll never poison you, they'll only cheat.

Pope.

That's just a swatch o' Hornbook's way ; Thus goes he on from day to day, Thus does he poison, kill, an' slay,

An's weel paid for't ; Yet stops me o' my lawfu' prey. Burns.

POISON, in medicine, any thing which, whe- ther taken into the stomach or lungs, or intro- duced by means of a wound or secreting surface, as the rectum, tongue, &c., proves fatal to ani- mal life by an action not mechanical. Most of the substances properly called poisonous are only so in certain doses ; for below this point, in the general scale, many of them form the most active and consequently the most valuable medi- cines of the dispensatory. There are nevertheless some poisons which are deleterious and even fatal in the smallest quantities imaginable, and which are hence never administered medicinally ; such are those of hydrophobia and the plague. There are other poisons, again, which are inno- cent when taken into the stomach, but which prove deleterious when applied to the lungs, or to an abraded surface; thus carbonic acid is con- tinually swallowed with fermented liquors with impunity, and the poison of the viper may be

itken in the same manner ; whilst inspiring car- oonic acid kills, and the poison of the viper in- serted into the flesh qften proves fatal.

Our article CHEMISTRY contains a detailed account of most poisons.

When a substance produces disease, not only in mankind but in all animals, it is distinguished by the term common poison, as arsenic, subli- mate, &c., whilst that which is poisonous to man only, or to animals, and often to one genus, is said to be a relative poison ; thus aloes is poi- sonous to dogs and wolves ; the phellandrium aquaticum kills horses, whilst oxen devour it greedily and with impunity. It appears, then, that substances act as poisons only in regard to their dose, the part of the body they are

applied to, and the subject.

Poisons have been arranged in six classes: —

I. Corrosive or escharotic poisons.

They are so named because they usually irri- tate, inflame, and corrode the animal texture with which they come into contact. Their action is in general more violent and formidable than that of the other poisons. The following list from Orfila contains the principal bodies of this class : —

1. Mercurial preparations ; corrosive subli- mate, red oxide of mercury ; turbith mineral, or yellow subsulphate of mercury ; pernitrate of mercury ; mercurial vapors.

2. Arsenical preparations ; such as white oxide of arsenic, and its combinations with the bases, called arsenites; arsenic acid, and the arseni- ates ; yellow and red sulphuret of arsenic ; black oxide of arsenic, or fly- powder.

3. Antimonial preparations ; such as tartar emetic, or cream tartrate of antimony ; oxide of antimony ; kermes mineral ; muriate of anti- mony ; and antimonial wine.

4. Cupreous preparations ; such as verdigris ; acetate of copper; the cupreous sulphate, nitrate,

• . and muriate ; ammoniacal copper ; oxide of copper; cupreous soaps, or grease tainted with oxide of copper; and cupreous wines or vinegars.

5. Muriate of tin.

6. Oxide and sulphate of zinc.

7. Nitrate of silver.

8. Muriate of gold.

9. Pearl-white, or the oxide of bismuth, and the subnitrate of this metal.

10. Concentrated acids; prussic, sulphuric, nitric, phosphoric, muriatic, hydriodic, acetic, &c.

11. Corrosive alkalis ; pure or subcarbonated potassa, soda, and ammonia.

12. The caustic earths, lime and barytes.

13. Muriate and carbonate of barytes.

14. Glass and enamel powder.

15. Cantharides.

II. Astringent poisons.

1. Preparations of lead, such as the acetate, carbonate, wines sweetened with lead, water im- pregnated with its oxide, food cooked in vessels containing lead syrups clarified \yith subcarbo- nate of lead, plumbean vapors.

III. Acrid poisons.

1. The gases; chlorine, muriatic acid, sulphu- lous acid, nitrous gas, and nitro-muriatic vapors.

2. .latropha manihot, the fresh root, arid its j'!icf, from which cassava is made.

3. The Indian ricinus, or Molucca wood.

4. Scammony. 5. Gamboge. 6. Seeds ot' palma Christi. 7. Elaterium. 8. Colocynth. 9. White hellebore root. 10. Black hellebore root. 11. Seeds of stavesacre. 12. The wood and fruit of the ahovai of Brasil. 13. Rhododendron chrysanthum. 14. Bulbs of colchicum, gathered in summer and autumn. 15. The milky juice of the convolvulus arvensis. 16. Asclepias. 17. (Enanthe fistulosa and crocata. 18. Some spe- cies of clematis. 19. Anemone pulsatilla. 20. Root of wolf's-bane. 21. Fresh roots of Arum maculatum. 22. Berries and bark of Daphne Mezereum. 23. The plant and emanations of the rhus toxicodendron. 24. Euphorbia offici- nalis. 25. Several species of ranunculus, par- ticularly the aquatilis. 26. Nitre, in a large dose. 27. Some muscles and other shell-fish.

IV. Narcotic and stupefying poisons.

1 . The gases ; hydrogen, azote,and oxide of azote.

2. Poppy and opium.

3. The roots of the solanum somniferum ; ber- ries and leaves of the solanum nigrurn ; those; of the morel with yellow fruit. 4. The roots and leaves of the atropa mandragora. 5. Datura stramonium. 6. Hyosciamus, or henbane. 7. Lactuca virosa. 8. Paris quadrifolia, or herb Paris. 9. Laurocerasus, or bay laurel and prus- sic acid. 10. Berries of the. yew tree.

11. Ervum ervilia ; the seeds. 12. The seeds of la- thyrus cicera. 13. Distilled water of bitter almonds. 14. The effluvia of many of the above plants.

V. Narcotico-acrid poisons.

1. Carbonic acid ; the gas of charcoal stoves and fermenting liquors. 2. The manchineel. 3. Faba Sancti Ignatii. 4. The exhalations and juice of the poison-tree of Macassar, or Upas- Antiar. 5. The ticunas. 6. Certain species of strychnos. 7. The whole plant, Lauro-cerasus. 8. Belladonna, or deadly nightshade. 9. To- bacco. 10. Roots of white bryony. 11. Roots of the chcerophyllum sylvestre. 12. Conium ma- culatum, or spotted hemlock. 13. j-Ethusa cyna- pium. 14. Cicuta virosa. 15. Anagalis arven- sis. 16. Mercurialis perennis. 17. Digitalis purpurea. 18. The distilled waters and oils of some of the above plants. 19. The odorant principle of some of them. 20. Woorara of Guiana. 21. Camphor. 22. Cocculus Indi- cus. 23. Several mushrooms ; see AcARicue, and BOLETUS. 24. Secale cornutum. 25. Lo- lium temulentum. 26. Sium latifolium. 27. Coriaria myrtifolia.

VI. Septic or putrescent poisons.

1. Sulphureted hydrogen. 2. Putrid effluvia of animal bodies. 3. Contagious effluvia, or fomites and miasmata. 4. Venomous animals; the viper, rattlesnake, scorpion, mad dog, &c.

,M. Drapiez has ascertained, by numerous ex- periments, that the fruit of the feuille a cordifolia is a powerful antidote against vegetable poisons. He poisoned dogs with the rhus toxicodendron, hemlock, and nux votnica; and all those which were left to the effects of the poison died, but those to which the above fruit was administered recovered completely, after a short illness. To see whether the antidote would act in the same way, applied externally to wounds into which

vegetable poisons had been introduced, he took two arrows, which had been dipped into the juice of the manchenille, and slightly wounded with them two cats ; to one of these wounds heapplied a poultice, composed of the fruit of the feuillea cOrdifolia, while the other was left without any application. The former suffered no inconveni- ence, except from the pain of the wound, which speedily healed ; while the other, in a short time, fell into convulsions, and died. This fruit loses these valuable virtues if kept two years after it is gathered.

Dr. Lyman Spalding of New York announces in a small pamphlet that, for above these fifty years, the scutellaria lateriflora has proved to be an infallible means for the prevention and cure of the hydrophobia, after the bite of rabid ani- mals. It is better applied as a dry powder than fresh. According to the testimonies of several American physicians, this plant, not yet received us a remedy into any European materia medica, afforded perfect relief in above 1000 cases, as well in the human species as in the brute crea- tion (dogs, swine, and oxen). — Philosophical Magazine.

When sudden death is suspected to have been occasioned by the administration of poison, either wilfully or by accident, the testimony of the physician is occasionally required to confirm or invalidate this suspicion. He may also be sometimes called upon to ascertain the cause of the noxious effects arising from the presence of poisonous substances in articles of diet; and it may, therefore, serve an important purpose to point out concisely the simplest and most prac- ticable modes of obtaining, by experiment, the necessary information.

The only poisons, however, that can be clearly and decisively detected by chemical means are those of the mineral kingdom. Arsenic, and corrosive sublimate, are most likely to be exhi- bited with the view of producing death ; and lead and copper may be introduced undesigned- ly, in several ways, into our food and drink. The continued arid unsuspected operation of the two last may often produce effects less sudden and violent, but not less baneful to health and life, than the more active poisons ; and their opera- tion generally involves, in the pernicious conse- quences, a greater number of sufferers.

When the cause of sudden death is believed, from the symptoms preceding it, to be the ad- ministration of arsenic, the contents of the sto- mach must be attentively examined. To effect this let a ligature be made at each orifice, the stomach removed entirely from the body, and its whole contents washed out into an earthen or glass vessel. The arsenic, on account of its greater specific gravity, will settle to the bottom, and may be obtained separate, after washing off the other substances by repeated effusions of cold water. These washings should not be thrown away till the presence of arsenic has been clearly ascertained. It may be expected at the bottom of the vessel in the form of a white powder, which must be carefully collected, dried on a filter, and submitted to experiment.

Boil a small portion of the powder with a few ounces of distilled water, in a clean Florence flask, and filter the solution.

To this solution add a portion of water, satu- rated with sulphureted hydrogen gas. If arsenic be present, a golden yellow sediment will fall

down, which will appear sooner if a few drops of acetic acid be added.

A similar effect is produced by the addition of sulphuret of ammonia, or hydro-sulphuret of po- tassa.

It is necessary, however, to observe, that these tests are decomposed not only by all metallic solutions, but by the mere addition of any acid. The sediments produced by any of the fore- going experiments may be collected, dried, and laid on red hot charcoal. A smell of sulphur will first arise, and will be followed by that of garlic.

A process for detecting arsenic was proposed by a Mr. Hume of Long-Acre. The test which he has suggested is the fused nitrate of silver or lunar caustic, which he employs in the follow- ing manner : —

Into a clean Florence oil-flask introduce twa or three grains of any powder suspected to be arsenic ; add not less than eight ounce measures of either rain or distilled water ; and heat this gradually over a lamp, or a clear coal fire, till the solution begins to boil. Then, while it boils, frequently shake the flask, which may be readily done by wrapping a piece of leather round its neck, or putting a glove upon the hand. To the hot solution add a grain or two of subcarbo- nate of potassa or soda, agitating the whole to make the mixturˆ uniform.

In the next place, pour into an ounce phial, or a small wine-glass, about two table spoonsful of this solution, and present, to the mere surface of the fluid, a stick of dry nitrate of silver or lunar caustic. If there be any arsenic present, a beau- tiful yellow precipitate will instantly appear ; which will proceed from the point of contact of the nitrate with the fluid, arid settle towards the bottom of the vessel as a flocculent and copious precipitate.

The nitrate of silver, Hume finds, also, acts very sensibly upon arseniate of potassa, and de- cidedly distinguishes this salt from the above so- lution or arsenite of potassa; the color of the precipitate, occasioned by the arseniate, being much darker and more inclined to brick-red. In both cases, he is of opinion that the test of nitrate of silver is greatly superior to that of sul- phate of copper; inasmuch as it produces a much more copious precipitate, when equal quantities are submitted to experiment. The tests he recommends to be employed in their dry state, in preference to that of solution ; and that the piece of salt be held on the surface only.

A modified application of this test has since been proposed by Dr. Marcet, whose directions are as follow : — Let the fluid, suspected to con- tain arsenic, be filtered ; let the end of a glass rod, wetted with a solution of pure ammonia, be brought into contact with this fluid, and let the end of a

clean rod, similarly wetted with so- lution of nitrate of silver, be immersed in the mixture. If the minutest quantity of arsenic be present, a precipitate of a bright yellow color, inclining to orange, will appear at the point of contact, and will readily subside to the bottom of the vessel. As this precipitate is soluble in am-

monia, the greatest care is necessary not to add an excess of that alkali. The acid of arsenic, with the same test, affords a brick-red precipitate. —— Hume, it may be added, now prepares his test by dissolving a few grains, say ten, of lunar caustic in nine or ten times its weight of distilled water; precipitating by liquid ammonia; and Adding cautiously, and by a few drops at once, liquid ammonia, till the precipitate is re-dissolved, and no longer. To obviate the possibility of any excess of ammonia, a small quantity of the precipitate may be left undissolved. To apply this test, nothing more is required than to dip a rod of glass into this liquor, and then touch with it the surface of a solution supposed to con- tain arsenic, which will be indicated by a yellow precipitate.

Sylvester has objected to this test, that it will not produce the expected appearance, when com- mon salt is present. He has, therefore, proposed the red acetate of iron as a better test of arsenic, with which it forms a bright yellow deposit; or the acetate of copper, which affords a green pre- cipitate. Of the two, he recommends the latter in preference, but advises that both should be resorted to in doubtful cases. Dr. Marcet, how- ever, has replied, that the objection arising from the presence of common salt is easily obviated ; for if a little diluted nitric acid be added to the suspected liquid and then nitrate of silver very cautiously till the precipitate ceases, the muriatic acid will be removed, but the arsenic will remain in solution, and the addition of ammonia will produce the yellow precipitate in its characteris- tic form. It is scarcely necessary to add that the quantity of ammonia must be sufficient to saturate any excess of nitric acid which the fluid , may contain.

A more important objection to nitrate of silver as a test of arsenic is that it affords, with the al- kaline phosphates, a precipitate of phosphate of silver, scarcely distinguishable by its color from the arseniate of that metal. In answer to this, it is alleged by Hume, that the arsenite of silver may be discriminated by a curdy or flocculent figure, resembling that of fresh precipitated mu- riate of silver, except that its color is yellow ; while the phosphate is smooth and homogeneous. The better to discriminate these two arsenites, he advises two parallel experiments to be made, upon separate

pieces of clean writing paper, spreading on the one a little of the fresh prepared arsenite, and on the other a little of the phosphate. When these are suffered to dry, the phosphate will gradually assume a black color, or nearly so, while the arsenite will pass from its original vivid yellow to an Indian yellow, or nearly a fawn color.

Dr. Paris conducts the trial in the following manner : — Drop the suspected fluid on a piece of white paper, making with it a broad line ; along this line a stick of lunar caustic is to be slowly drawn several times successively, when a streak will appear of the color resembling that known by the name of Indian yellow. This is equally produced by arsenic and by an alkaline phosphate, but the one from arsenic is rough, curdy, and flocculent, like that from a crayon ; that from a phosphate is homogeneous and uni-

form, resembling a water color laid smoothly on with a brush. But a more important and dis- tinctive peculiarity soon succeeds ; for in less than two minutes the phosphoric yellow fades into a sap green, and becomes gradually darker, and ultimately quite black, while on the other hand the arsenic yellow continues permanent, or nearly so, for some lime, and.then becomes brown. In performing this experiment, the sunshine should be avoided, or the change of color will take place too rapidly. (Ann. of Phil. x. 60). The author of the London Dispensatory adds, that the test is improved by brushing the streak light- ly over with liquid ammonia immediately after the application of the caustic, when, if arsenic be present, a bright queen's yellow is produced, which remains permanent for nearly an hour; but that when lunar caustic produces a white yellow before the ammonia is applied, we may infer the presence of some alkaline phosphate rather than of arsenic.

Smithson proposes to fuse any powder sus- pected to contain arsenic with nitre ; this pro- duces arseniate of potassa, of which the solution affords a brick-red precipitate with nitrate of silver. In cases where any sensible portion of the alkali of the nitre has been set free, it must be saturated with acetous acid, and the saline mixture dried and re-dissolved in water. So small is the quantity of arsenic required for this mode of trial, that a drop of solution of oxide of arsenic in water (which at 54° of Fahrenheit may be estimated to contain one-eightieth its weight of the oxide), mixed with a little nitrate of po- tassa, and fused in a platinum spoon, affords a very sensible quantity of arseniate of silvfir. (Ann. of Phil. N. S. iv. 127).

Dr. Cooper, president of Colombia College, finds a solution of chromate of potassa to be one of the best tests of arsenic. One drop is turned green by the fourth of a grain of arsenic, by two or three drops of Fowler's mineral solution, or any other arsenite of potassa. The arsenious acid takes oxygen from the chromic, which is converted into oxide of chrome. To exhibit the

effect, take five watch-glasses; put on one, two or three drops of a watery solution of white ar- senic ; on the second, as much arsenite of potassa ; on the third, one-fourth of a grain of white arsenic in substance; on the fourth, two or three drops of a solution of corrosive subli- mate ; on the fifth, two or three drops of a solu- tion of copper. Add to each three or four drops of a solution of chromate of potassa. In half an hour a bright clear grass-green color will appear in numbers one, two, three, unchangeable by ammonia; number four will instantly exhibit an orange precipitate; and number five a green, which a drop of ammonia will instantly change to blue. (Silliman's American Journal, iii).

But the most decisive mode of determining the presence of arsenic (which, though not absolutely indispensable, should always be resorted to, when the suspected substance can be obtained in sufficient quantity), is by reducing it to a metallic state ; for its characters are then clear and une- quivocal. For this purpose, let a portion of the white sediment, collected from the contents of the stomach," be dried and mixed with three

times its weight of black flux ; or, if this cannot be procured, with two parts of very dry carbonate of potassa (the salt of tartar of the shops), and one of powdered charcoal. Dr. Bostock finds that, for this mixture, we may advantageously substitute one composed of half a grain of charcoal, and two drops of oil, to a grain of the sediment. Pro- cure a tube eight or nine inches long, and one- fourth or one-sixth of an inch in diameter, of thin glass, sealed hermetically at one end. Then put into the tube the mixture of the powder and its flux, and, if any should adhere to the inner surface, let it be wiped off by a feather, so that the inside of all the upper part of the tube may he quite clean and dry. Stop the end of the tube loosely, with a little paper, and heat the sealed end only, on a chafing-dish of red-hot coals, taking care to avoid breathing the fumes. The arsenic, if present, will rise to the upper part of the tube, on the inner surface of which it will form a thin brilliant coating. Break the tube, and scrape off the reduced metal. Lay a little on a heated iron, when if it be arsenic, a dense smoke will arise, and a strong smell of garlic will be perceived. The arsenic may be farther identified, by putting a small quantity be- tween two polished plates of copper, surround- ing it by powdered charcoal, to prevent its escape, binding these tightly together by iron wire, and exposing them to a low red heat. If the includ- ed substance be arsenic, a white stain will be left on the copper.

It may be proper to observe that neither the stain on copper, nor the odor

of garlic, is pro- duced by the white oxide of arsenic, when heat- ed without the addition of some inflammable in- gredient. The absence of arsenic must not, therefore, be inferred, if no smell should be occa- sioned by laying the white powder on heated iron.

Dr. Black ascertained that all the necessary experiments, for the detection of arsenic, may be made on a single grain of the white oxide ; this small quantity having produced, when heated in a tube with its proper flux, as much of the metal as clearly established its presence. If the quan- tity of arsenic in the stomach should be so small, which is not very probable, as to occasion death, and yet to remain suspended in the washings, the whole contents, and the water employed to wash them, must be filtered, and the clear liquor assayed for arsenic by the tests. In this case it is necessary to be careful that the color of the precipitate is not modified by that of the liquid found in the stomach. If this be yellow, the precipitate by sulphate of copper and carbonate of potassa will appear green, even though no ar- senic be present; but on leaving it to settle, decanting off the fluid, and replacing it with wa- ter, it will evidently be blue without any tinge of green, being no longer seen through a yellow medium. The liquid contents of the stomach may also be evaporated to dryness below 250° Fahrenheit, and the dry mass be exposed to heat at the bottom of a Florence flask, to sublime the arsenic. If dissolved in an oily fluid, Dr. Ure proposes to boil the solution with distilled water and afterwards to separate the oil by the capil- lary action of wick threads. The watery fluid may then be subjected to the usual tests.

*M. Orfila has gone into ample details on the modifications produced by wine, coffee, tea, broth, &c., on arsenical tests, of which a good tabular abstract is given in Mr. Thomson's Lon- don Dispensatory. But it is evident that the differences in these menstrua, as also in beers, are so great as to render precipitations and changes of color by reagents very unsatisfactory witnesses, in a case of life and death. Hence the method of evaporation above described should never be neglected. Should the arsenic be com- bined with oil, the mixture ought to be boiled with water, and the oil then separated by tlie capillary action of wick-threads. If with resin- ous substances, these may be removed by oil of turpentine, not by alcohol (as directed by Dr. Black), which is a good solvent of arsenious acid. It may moreover be observed that both tea and coffee should be freed from their tannin by gela- tin, which does not act on the arsenic, previous to the use of reagents for the poison. When one part of arsenious acid in watery solution is added to ten parts of milk, the sulphureted hy- drogen, present in the latter, occasions the white color to pass into a canary yellow ; the cupreous test gives it a slight green tint, and the nitrate of silver produces no visible change, though even more arsenic be added ; but the hydrosulphurets throw down a golden yellow, with the aid of a few drops of an acid. The liquid**

contained in the stomach of a rabbit poisoned with a solution of three grains of arsenious acid afforded a white precipitate with nitrate of silver, grayish-white with lime-water, green with the ammoniaco-sul- phate, and deep yellow with sulphureted hydro- gen water.

The preceding copious description of the ha- bitudes of arsenious acid in different circum- stances is equally applicable to the soluble arsenites. Their poisonous operation, as well as that of the arsenic acid, has been satisfactorily referred by Mr. Brodie to the suspension of the functions of the heart and brain, occasioned by the absorption of these substances into the circu- lation, and their consequent determination to the nervous system and the alimentary canal. This proposition was established by numerous expe- riments on rabbits and dogs. Wounds were in- flicted, and, arsenic being applied to them, it was found that in a short time death supervened, with the same symptoms of inflammation of the sto- mach and bowels as if the poison had been swai- lowed.

He divides the morbid affections into three classes : 1st, Those depending on the nervous system, as palsy at first of the posterior extremi- ties, and then of the rest of the body, convul- sions, dilatation of the pupils, and general in- sensibility : 2d, Those which indicate disturbance in the organs of circulation ; for example, the feeble, slow, and intermitting pulse, weak con- tractions of the heart immediately after death, and the impossibility of prolonging them, as may be done in sudden deaths from other causes, by artificial respiration: 3d, Lastly, Those which depend on lesion of the alimentary canal, as the pains of the abdomen, nauseas, and vomitings, in those animals which were suffered to vomit, At one time it is the nervous system that is most

remarkably affected, and at another the organs of circulation. Hence inflammation of the sto- mach and intestines ought not to be considered as the immediate cause of death, iu the greater number of cases of poisoning by arsenic. How- ever, should an animal not sink under the first violence of the poison, if the inflammation has had time to be developed, there is no doubt that it may destroy life.' Mr. Earle states that a wo- man who had taken arsenic resisted the alarming symptoms which at first appeared, but died on the fourth day. On opening her body the mu- cous membrane of the stomach and intestines was ulcerated to a great extent. Authentic cases of poison are recorded where no trace of inflammation was perceptible in the primae vise.

The effects of arsenic have been graphically represented by Dr. Black : — ‘ The symptoms produced by a dangerous dose of arsenic begin to appear in a quarter of an hour, or not much longer, after it is taken. First sickness, and great distress at stomach, soon followed by thirst, and burning heat in the bowels. Then come on violent vomiting, and severe colic pains, and ex- cessive and painful purging. This brings on faintings, with cold sweats, and other signs of great debility. To this succeed painful cramps, and contractions of the legs and thighs, and ex- treme weakness and death.’ Similar results have followed the incautious sprinkling of schir- rous ulcers with powdered arsenic, or the appli- cation of arsenical pastes. The following more minute specification of symptoms is given by Orfila : — ‘ An austere taste in the mouth ; fre- quent ptyalism ; continual spitting ; constriction of the pharynx and oesophagus; teeth set on edge ; hiccups ; nausea ; vomiting of brown or bloody matter; anxiety; frequent fainting fits; burning heat at the prcecordia; inflammation of the Hps,~ tongue, palate, throat, stomach ; acute pain of stomach, rendering the mildest drinks in- tolerable ; black stools of an indescribable fetor ; pulse frequent, oppressed and irregular, some- times slow and unequal ; palpitation of the heart ; syncope ; unextinguishable thirst ; burn- ing sensation over the whole body, resembling a consuming fire ; at times an icy coldness ; diffi- cult respiration ; cold sweats ; scanty urine, of a red or bloody appearance ; altered expression of countenance ; a livid circle round the eyelids ; swelling and itching of the whole body, which becomes covered with livid spots, or with a mi- liary eruption ; prostration of strength ; loss of feeling, especially in the feet and hands ; deli- rium ; convulsions, sometimes accompanied with an insupportable priapism ; loss of the hair ; separation of the epidermis; horrible convul- sions ; and death.’

It is uncommon to observe all these frightful symptoms combined in one individual ; some- times they are altogether wanting, as is shown by the following case, related by M. Chaussier : — A robust man of middle age swallowed arseni- ous acid in large fragments, and died without experiencing other symptoms than slight syn- copes. On opening his stomach, it was found to contain the arsenious acid in the very same state in which he had swallowed .it. There was no appearance whatever of erosion or inflammation

in the intestinal canal. Etmuller mentions a young girl’s being poisoned by arsenic, ana whose stomach and bowels were sound to all ap- pearance, though the arsenic was found in them. In general, however, inflammation does extend along the whole canal, from the mouth to the rectum. The stomach and duodenum present frequently gangrenous points, eschars, perfora- tions of all their coats ; the villous coat in par- ticular, by this and all other corrosive poisons, is commonly detached, as if it were scraped off or reduced into a paste of a reddish-brown color. From these considerations

we may conclude, that from the existence or non-existence of intestinal lesions, from the extent or seat of the symptoms alone, the physician should not venture to pro- nounce definitely on the fact of poisoning.

The result of Mr. Brodie's experiments on brutes teaches that the inflammations of the intestines and stomach are more severe when the poison has been applied to an external wound, than when it has been thrown into the stomach itself.

Corrosive sublimate (the bichloride or oxymu- riate of mercury), next to arsenic, is the most vi- rulent of the metallic poisons. It may be col- lected by treating the contents of the stomach in the manner already described ; but as it is more soluble than arsenic, viz. in about nineteen times its weight of water, no more water must be employed than is barely sufficient, and the wash- ings must be carefully preserved for examina- tion. If a powder should be collected, by this operation, which proves, on examination, not to be arsenic, it may be known to be corrosive sub- limate by the following characters : —

Expose a small quantity of it, without any ad- mixiure, to heat in a coated glass tube, as direct- ed in the treatment of arsenic. Corrosive subli- mate will be ascertained by its rising to the top of the tube, lining the inner surface in the form of a shining white crust.

Dissolve another portion in distilled water; and it may be proper to observe how much of the salt the water is capable of taking up.

To the watery solution add a little lime-water. A precipitate of an orange-yellow color will in- stantly appear.

To another portion of the solution add a single drop of a dilute solution of subcarbonate of po- tassa (salt of tartar). A white precipitate will appear; but, on a still further addition of alkali, an orange- colored sediment will be formed.

The carbonate of soda has similar effects.

Sulphureted water throws down a dark -colored sediment, which, when dried and strongly heated, is wholly volatilised without any odor of garlic.

For the detection of corrosive sublimate, Syl- vester has recommended the application of gal- vanism, which exhibits the mercury in a metallic state. A piece of zinc wire, or, if that cannot be had, of iron wire, about three inches long, is to be twice bent at right angles, so as to resemble the Greek letter n. The two legs of this figure should be distant about the diameter of a com- mon gold wedding-ring from each other, and the two ends of the

bent wire must afterwards be tied to a ring of this description. Let a plate of

glass, not less than three inches square, be laid as nearly horizontal as possible, and on one side drop some sulphuric acid, diluted with about six times its weight of water, till it spreads to the size of a halfpenny. At a little distance from this, towards the other side, next drop some of the solution supposed to contain corrosive sub- limate, till the edges of the two liquids join to- gether; and let the wire and ring, prepared as above, be laid in such a way that the wire may touch the acid, while the gold ring is in contact with the suspected liquid. If the minutest quan- tity of corrosive sublimate be present, the ring in a few minutes will be covered with mercury on the part which touched the fluid.

Smithson remarks that all the oxides and sa- line compounds of mercury, if laid in a drop of marine acid on gold, with a bit of tin, quickly amalgamate the gold. In this way a very mi- nute quantity of corrosive sublimate, or a drop of its solution, may be tried, and no addition of muriatic acid is then required. Quantities of mercury may thus be rendered evident which could not be so by any other means. Even the mercury of cinnabar may be exhibited ; but it must previously be boiled with a little sulphuric acid in a platinum spoon, to convert it into sul- phate. An exceedingly minute quantity of me- tallic mercury in any powder may be discovered by placing it in nitric acid on gold, drying, and adding muriatic acid and tin.

The only mineral poison of great virulence that has not been mentioned, and which, from its being little known to act as such, it is very im- probable we should meet with, is the carbonate of baryta. This, in the country where it is found, is employed as a poison for rats, and there can be no doubt would be equally destruc- tive to human life. It may be discovered by dissolving it in muriatic acid, and by the insolu- bility of the precipitate which this solution yields on adding sulphuric acid, or sulphate of soda. Soluble barytic salts, if these have been the means of poison, will be contained in the water employed to wash the contents of the stomach, and will be detected, on adding sulphuric acid, by a copious precipitate.

It may be proper to observe that the failure of attempts to discover poisonous substances in the alimentary canal after death is by no means a sufficient proof that death has not been occasion- ed by poison. For it has been clearly established, by experiments made on animals, that a poison rnay be so completely evacuated that no traces of it shall be found, and yet that death may ensue from the morbid changes which it has occasioned in

the alimentary canal, or in the general system.

Copper and lead sometimes gain admission into articles of food, in consequence of the employ- ment of kitchen utensils of these materials.

1. If copper be suspected in any liquor its presence will be ascertained by adding a solution of pure ammonia, which will strike a beautiful blue color. If the solution be very dilute it may be concentrated by evaporation ; and, if the li- quor contain a considerable excess of acid, like that used to preserve pickles, as much of the al- kali must be added as is more than sufficient to

saturate the acid. In this, and all other experi- ments of the same kind, the fluid should be viewed by reflected, and not by transmitted light.

If into a newly prepared tincture of guaiacum wood we drop a concentrated solution of a salt of copper, the mixture instantly assumes a blue color. This effect does not take place when the solution is very wˆak, for example when there is not above half a grain of the salt to an ounce of water; but then, by the addition of a few drops of prussic acid, the blue color is instantly deve- loped of great purity and intensity. This color is not permanent, but soon passes to a green, and at length totally disappears. For want of prussic acid, distilled laurel water may be employed. The test produces its effect, even when the pro- portion of the salt of copper to the water does not exceed l-45000th. In this minute propor- tion no other test, whether the prussiate of potassa, soda, or ammonia, gives the least indica- tion of copper.

2. Lead is occasionally found, in sufficient quantity to be injurious to health, in vyater that has passed through leaden pipes, or been kept in leaden vessels, and sometimes even in pump water, in consequence of that metal having been used in the construction of the pump. Acetate of lead has also been known to be fraudulently added to bad wines, with the view of concealing their defects.

Lead may be discovered by adding, to a por- tion of the suspected water, about half its bulk of water impregnated with sulphureted hydrogen gas. If lead be present it will be manifested by a dark brown, or blackish, tinge. This test is so delicate that water condensed by the leaden worm of a still tub is sensibly affected by it. Lead is also detected by a similar effect ensuing on the addition of sulphuret of ammonia, or po- tassa.

For discovering the presence of lead in wine, a test invented by Dr. Hahnemann, and known by the title of Hahnemann's wine test, may be em- ployed. This test is prepared by putting together, into a small phial,

sixteen grains of sulphuret of lime, prepared in the dry way (by exposing to a red heat, in a covered crucible, equal weights of powdered lime and sulphur, accurately mixed), and twenty grains of bitartrate of potassa (cream of tartar). The phial is to be filled with water, well corked, and occasionally shaken for the space of ten minutes. When the powder has subsided decant the clear liquor, and preserve it in a well-stopped bottle for use. The liquor, when fresh prepared, discovers lead by a dark colored precipitate. A farther proof of the pre- sence of lead in wines is the occurrence of a pre- cipitate on adding a solution of the sulphate of soda. Sylvester has proposed the gallic acid as an excellent test of the presence of lead. The quantity of lead which has been detected, in so- phisticated wine, may be estimated at forty grains of the metal in every fifty gallons. When a con- siderable quantity of acetate of lead has been taken into the stomach (as sometimes, owing to its sweet taste, happens to children,) after the ex- hibition of an active emetic, the hydrosulphuret of potassa or of ammonia may be given ; or pro-

bably a solution of sulphate of soda (Glauber's salt) would render it innoxious.

The following tests of arsenic and corrosive sublimate have been lately proposed by Brugna- telli : — Take the starch of wheat boiled in water until it is of a proper consistence, and recently prepared ; to this add a sufficient quantity of iodine to make it of a blue color; it is afterwards to be diluted with pure water until it becomes of a beautiful azure. If to this some drops of a watery solution of arsenic be added, the color changes to a reddish hue, and finally vanishes. The solution of corrosive sublimate, poured into iodine and starch, produces almost the same change as arsenic ; but if, to the fluid acted on by the arsenic, we add some drops of sulphuric acid, the original blue color is restored with more than its original brilliancy, while it does not re- store the color to the corrosive sublimate mix- ture.

POISONNIER (Peter Isaac), M. D., was born at Dijon in 1720, and in 1746 succeeded M. Dubois as professor of physic in the college de France. In 1758 he was first physician to the French army, and was called into Russia, to attend the empress Elizabeth. Here he assisted at the famous experiment relative to the conge- lation of quicksilver, of which he afterwards gave an account to the Academy of Sciences. He was made, on

his return to France, counsellor of state and inspector-general of physic ; and received a pension of 12,000 livres for his dis- covery of distilling fresh from sea-water. During the ascendancy of Robespierre he was impri- soned ; but released on his death, and died in 1797 or 1798. He wrote several treatises on the maladies of seamen, the West India fever, Sec.

POITIERS, LIMONUM, a large and very an- cient city, the principal place of the department of the Vienne, France, with a population of 21,000 inhabitants: having a royal court for the departments of the Vienne, the Lower Charente, the Two Sevres and the Vendee, an inferior court of justice, a chamber of commerce and manufactures, an agricultural society, a univer- sity academy, a faculty of law, a royal college, a free drawing school, and medical, chemical, and pharmaceutical courses of lectures. This city stands in a picturesque situation, on the side of a steep hill, surrounded by lofty rocks, at the confluence of the Boivre and the Clain, which almost surround it. It is encircled with ancient walls, flanked with towers at intervals, and is in general badly built; the streets are narrow, close, and very steep, but the appearance of the place is pleasant. The public walk of Pont- Guillon, which occupies the interval between the two rivers ; the old towers, the ruins, still imposing, of the gothic castle which once stood here ; the beautiful verdant carpet, through which the limpid streams wander, watering the majestic alleys of the boulevards; the whole view, in short, of the town, which rises in an amphitheatre, is one of the most delightful in France.

Poitiers was a place of some note in the time of the Romans, who adorned it with an amphi- theatre and an aqueduct. In 1356 king John lost under its walls the fatal battle, which cost

him his liberty ; and the English carried him into England, where they kept him prisoner. During the wars against the English, Charles VII. transferred the parliament of Paris hither for some time; in 1569 admiral Coligny laid siege to it ; and since that time its ancient castle has been almost razed to the ground. In this city the unfortunate Urbain Grandier was tried, condemned, and burnt alive, accused of having bewitched the nuns of Loudun. It was in an age renowned for its intelligence and for the great men that have flourished in it ; the very time, in fact, of the foundation of the French Academy, that this juridical assassination was perpetrated, and which was only equalled by the punishment of the young chevalier de la Barre 132 years after.

Here are manufactories of coarse cloth, wool- len counterpanes, caps, vinegar, starch, earthen- ware, playing cards, harnessing, carriages, &c. ; also linen bleaching grounds, paper mills, dye- houses, tanyards, &c. The inhabitants carry on a trade in corn, wine, brandy, vinegar, wool, hemp,

flax, honey, wax, skins, iron, &c. There is a departmental nursery here, and races from the 18th to the 20th of May, for thirty-two de- partments.

Among the public institutions may be men- tioned the library containing 12,000 volumes, the cabinet of natural history and philosophy, the botanic garden, the assembly room, the pub- lic walk, one of the finest and pleasantest in France, from which there is a delightful view, the baths, and the cathedral, built in the eleventh century, one of the finest specimens of gothic architecture. At a short distance from this city is an enormous stone raised above the ground sup- posed to be a monument of the Celtic times. The ancient province of Poitou presents many stones of this description, but this is the most remarka- ble ; it is about twenty feet long, by seventeen broad, and three feet thick, supported by a sin- gle pillar. Poitiers is ninety miles south of Tours, eighty-seven north-west of Limoges, ninety-three north of Angouleme, 105 E. N.E. of Rochelle, and 265 south-west of Paris.

POITOU, the name, before the revolution, of a province of France, bounded by Anjou on the north, Saintonge on the south, and the ocean on the west. It was divided into Upper and Lower Poitou, and was about 210 miles in length, by seventy in breadth. It is now divided into the departments of LA VIENNE, DEUX SEVRES, and LA VENDE'E. See these departments.

POIVRE (N.), a celebrated French botanist and traveller, born at Lyons in 1715. He stu- died in the Missionary Congregation at Paris, and then went to China, where he was imprisoned two years, after which he went to Cochin China. In 1745 he returned to France; and afterwards went to the East Indies ; but the ship in which he sailed was taken on the passage by the Bri- tish, and carried into Batavia ; where he made many observations, before he returned to Paris. In 1749 he was appointed envoy from Louis XV. to the king of Cochin China, for the pur- pose of opening a commercial intercourse with that country. He resided several years in va- rious parts of the East, and returned to Paris,

where he died in 1786. He published his tra- vels, under the title of a Voyage of a Philoso- pher, in 12mo.

POKE, n. s. Sax. Jsocca; Fr. poche. A pocket ; small bag ; pouch.

Gervais answered, certes were it gold, Or in a poke nobles all untold, Thou shouldest it have. Chaucer.

I will not buy a pig in a poke.

Camden's Remains. She suddenly unties the poke, Which out of it sent such a smoke, As ready was them all to choke, So grievous was the pother.

Draytons Numphid.

My correspondent writes against master's gowns and poke sleeves. Spectator.

PO'KE, v. a. "^ Swed.po/cu, puk, a stake.

PO'KER, n. s. >To feel in the dark; to

PO'KING-STICK. j search any thing with a long

instrument ; the iron bar with which we stir the

fire; an instrument anciently made use of to

adjust the plaits of the ruffs which were then

worn.

Your run" must stand in print, and for that pur- pose get poking-sticks with fair long handles, lest they scorch your hands. Middleton's Blurt Master Constable, a Comedy, 1602.

Gloves, as sweet as damask roses, Masks for faces, and for noses ; Bugle bracelet, necklace amber, Perfume for a lady's chamber ; Golden quoifs, and stomachers, For my lads to give their dears ; Pins and poking-sticks of steel, What maids lack from head to heel.

Shakspeare. Winter's Tale.

If these presumed eyes be clipped off, they will make use of the protrusions or horns, and poke out their way as before. Browne.

If the poker be out of the way, stir the fire with the tongs. Swift.

POL DE ST. LEON, a manufacturing town in the department of Finisterre, France, near the sea, and situated on an eminence. Its manufac- tures are leather and pottery ; and it has a con- siderable trade in the linen and horses of the

adjacent country. Population 5500. Twelve miles north-west of Morlain, and tmrty-four north-east of Brest.

POLA, an ancient city of Italy, in the south part of Istria, with a citadel and bishop's see. It is seated on a hill near a deep bay of the Adriatic, forty-four miles south of Trieste. It was originally founded by the Colchians, and afterwards made a Roman colony, and named Pietas Julia. (Plin. iii. 9 ; Mela, ii. 3 ; Strabo, i. & v.) It has still the remains of a Roman am- phitheatre, and a triumphal arch.

POLA, in ichthyology, a flat fish, resembling the soal, but somewhat shorter and smaller, called also cynoglossus and linguatula. It abounds in the Mediterranean, and is sold both in Rome and in Venice for the table.

POLA, an ancient town, formerly a considera- ble city of Austrian Illyria, in the peninsula of Istria, on the gulf of Venice. It is still a bishop's see ; but its population is dwindled down to a tenth of what it was in the time of the Romans, i.e. not above 1000. Its harbour, however, is large and excellent.

POLACHIA, a ci-devant palatinate of Po- land, now annexed to Prussia. It was bounded on the north by Prussia and Lithuania ; on the east by Lithuania : south by Lublin, and west by Masovia. It is eighty-eight miles long, and thirty broad.

POLACRE, a ship with three masts, usually navigated in the Levant and other parts of the Mediterranean. These vessels are generally fur- nished with square sails upon the main-mast, and lateen sails upon the fore and mizen masts. Some of them, however, carry square sails upon all the three masts, particularly those of the ci- devant Provence in France. Each mast is com- monly formed of one piece, so that they have neither top-mast nor top-gallant-mast ; neither have they any horses to their yards, because the men stand upon the top-sail-yard to loose or furl the top-gallant-sail, and on the lower- yard to reef, loose, or furl, the top-sail, whose yard is lowered sufficiently down for that purpose.

POLAND.

POLAND, an extensive country of Central Europe, part of the ancient Sarmatia, is bound- ed on the north and east by Russia ; on the south by Hungary, Walachia, and Molda- via ; on the west by Prussia and other German states. No other European territory has under- gone such extensive changes of sovereignty. At the end of the fourteenth century, on the annexa- tion of Lithuania, it contained an area of 284,000 square miles, or was nearly one-third larger than France. It was then divided into the provinces

To Austria To Prussia To Russia

of Great and Little Poland Proper; Macovia and Podlachia ; Volhynia,

Podalia, and the Uk- raine. North-east extended the great duchy of Lithuania. The palatinates were at this time thirty-one in number. Perhaps at the present time this whole territory does not contain more than 15,000,000 of inhabitants.

STATISTICS. — On the final partition of this country, in 1795, the distribution of the inhabi- tants was about as follows : —

Sq. Miles. Population.

64,000 4,800,000

52,000 3,500,000

168,000 6,700,000

284,000 15,000,000

590 POLAND.

In 1807, at the peace of Tilsit, Prussia ceded above two-thirds of her acquisitions ; but the portion re- stored to her by the Vienna congress in 1815, joined to what she had not ceded, gives her at present a Polish territory of »'

Austria was obliged in 1809 to cede part of her ac- quisitions ; and, recovering only a small portion in 1815, her present Polish possessions consist of (This is exclusive of the Buckowine, a conquest from Turkey.)

The separate state, called the kingdom of Poland, go- verned by the czar, contains

Russia has made no cessions ; her share, as it stood in 1795, increased by some subsequent acquisitions ; in particular, a district of Prussian Poland, ac- quired in 1807, comprises abdut . . . : ,.

Sq. Miles. Population.

29,000 1,800,000

30,000 3,500,000

47,000 2,800,000

178,000 6,900,000

Total

The Prussian part of this territory lies to the north-west, the Austrian south, the new kingdom of Poland central, while the , acquisitions an- nexed to the Russian empire (larger than all the rest collectively), occupy all the country eastward, and extend in a vast parallelogram from Lithu- ania in the north, to the Ukraine in the south.

The whole of Poland (Polan. Scla. a plain), may be characterised as one vast plain ; the only great mountains near, being the Carpa- thians, which form the barrier between this country and Hungary. There is indeed an infe- rior range which penetrates the south-west of Poland from Silesia; and a curved line of higher country runs centrally from Hungary to Lithua- nia, marked by the course of the rivers. All those on the west side of this line flowing into the Baltic ; and, along the east, into the Black Sea. Some parts of this almost immense level, bear the marks of cultivation, but others are vast tracts of forest or marsh in traversing which the traveller scarcely meets with any thing to cheer his way. Nothing is heard but the cracking of the driver's whip, re-echoed from the lonely depth of the forest, and no trace of human be- ings presents itself, except in the mark of some former traveller's fire. The forests are most abundant in the interior and eastern part of an- cient Poland. The districts of the new kingdom present many vast plains waving with grain, or pastured by droves and herds. ' It is not easy to traverse the vast wildernesses of Poland,' says a modern writer, ' without being filled with a sen- timent of awful admiration. Their frequent and deep shade conspires with their never-end- ing extent to suggest an idea of infinity which approaches the sublime ; and sublime indeed would be the prospect, if only a solitary mount peered above the tops of the trees, that the eye might be permitted to rove unimpeded over a hemisphere of green and delightful foliage. Dur- ing the summer heat, the forests afford a very grateful shelter to the traveller. In winter, the scene is totally changed. Every bough and branch is heavily laden with congealed snow, and the evergreens are completely hid beneath •his white and universal covering. The pines lift their lofty heads in the cold, clear air, huge and still as giants, enchanted into pillars of salt.'

284,000 15,000,000

The rivers of Poland, which flow into the Baltic, are the Vistula, Niemer, Bug, Dwiiia. and Pregel ; into the Euxine, the Przypiec, Dnieper, and Dniester. In the new kingdom, the Vistula is the most important stream ; but it neither rises nor terminates in the country. It enters on the south-east, and, flowing through the central parts, passes Warsaw and Dantzic, and falls into the Baltic. It receives the Bug, and several other tributary streams, in its pro- gress, and is connected with the Dnieper by the canal which joins it to the Prepiz, which flows into that river. By this means the Vistula affords an inland navigation of great utility in convey- ing the agricultural

produce of Poland to the the ports of the Baltic, especially to Dautzic.

The state of cultivation, the woods, morasses, and other local causes, create a considerable degree of diversity in the climate. In all parts it is similar to that of Russia, under the same parallel ; and, though it was long branded as generally unhealthy, in modern Poland the air in many places is dry and pure ; and instances of longevity are numerous. During three or four months in the middle of winter, the tem- perature generally varies from 8° to 20° of Fah- renheit's scale ; and for nearly an equal period, in summer, it ranges from 65° to 75°. The winter usually commences about the end of Oc- tober, or the beginning of November, and lasts five or six months, during the greatest part of which the whole face of the country is robed in a mantle of the purest white, and Nature pre- sents a universal blank. The air at tins season is however very serene; but, when the wind blows from the north or north-east, it . is ex- tremely keen and piercing. The seasons return with regularity. Spring is, as in most countries, the most agreeable ; and it derives additional charms from its immediate contrast with the stern aspect of winter. The air gradually loses its severity, the temperature of the atmosphere becomes mild and genial, and no sooner is the bosom of the earth disrobed of its wintry vesture than vegetation proceeds with great rapidity. The most pleasant and fertile part, perhaps, is the Ukraine.

Poland yields, among the minerals, iron, lead, copper, and marble: gold and silver, in insig-

nificant quantities, have also been found. Among its products are likewise rock crystal, alum, salt- petre, coal, and potter's clay. But the most noted of all the minerals is the salt yielded by the minas at Wieliczka and Bochnia, which are among the most celebrated in Europe. The salt prepared for traffic is cut into large cubical blocks, and conveyed to the places of its con- sumption, in distant parts of the country, with- out any package. It is so pure that it only re- quires pounding to render it fit for use. The annual revenue of these mines, previously to the first partition of Poland, in 1772, was estimated at three millions and a half of Polish florins, or nearly £98,000. Dr. Neale visited the mine at Wieliczka a few years since, and says, ' When all the party had descended, torches were lighted, and we found ourselves at the entrance of a chapel, hollowed out of the salt-rock, containing altars, columns, and statues. Thence we de- cended by spacious galleries and winding pas- sages from one chamber to another, to the depth of 900 feet, where we found our progress termi- nated

by a large lake, formed by the accumulated waters of the springs issuing from the sides of the mine: these springs dissolve large quantities of salt in their passage, and when at rest deposit it in beautiful cubical crystallisations at the bot- tom of the lake, from which they are raked up by means of instruments with long iron prongs. The extent of these excavations is 6000 feet in their longest diameter, which is from north to south, and about 2000 from east to west ; the greatest depth to which they have gone is 900 feet, but even below that level they have ascer- tained the existence of immense strata of salt, extending from east to west, to an unknown dis- tance. The chambers, scooped out in various directions, resemble the aisles of a cathedral. We entered one that contained a large table ; at which, on solemn occasions, such as the visits of the members of the imperial family, 300 persons have been accommodated. The workmen em- ployed generally amount to aboxit 450 ; and in one of the mines there is a stable for fifty horses. No women are ever permitted to enter them. The galleries and shafts are perfectly dry, and even dusty ; for the salt, imbibing all moisture, like a sponge, robs even the human body in its passage, and makes the mouth and throat feel hot and dry. The intricacy of the numerous pas- sages is such, that they sometimes mislead even the best accustomed to them. The mines of Bochnia employ 250 workmen ; their extent from north to south is only 750 feet, and from east to west 10,000 feet. The richness of these mines is such, that it has been calculated that their contents might suffice for the whole popu- lation of Europe. Every year there are dug up 600,000 quintals ; and, although they have now been constantly worked since the year 1261, there is no appearance of their contents being exhausted.' — Travels in Germany, Poland, &c.

The soil has been miserably neglected for ages, yet the annual export of corn is well kn

horses, are to be found, as in South America. Mr. Jacob, in his intelligent Report to government on the Trade in foreign Corn, and on the Agri- culture of the north of Europe, has the following important observations respecting this country : —

' The far greater part of that division of ancieriJ Poland, which is now comprehended in the vice- regal kingdom of that name, is a level Country, with scarcely an ascent or descent, except where the courses of the rivers have ibrmed channels below the general level of the country. As these rivers, though in summer they appear small streams, are swollen by the rains of autumn, and the melting of the snow on the Carpathian Mountains in the spring, they form large chan- nels, extending on both sides to a great distance • and their deposit, in many parts, enriches the land, and it presents, in the summer, the aspect of verdant and luxuriant meadows. In other parts the periodical swellings of the streams have formed morasses,

which in their present state are not applicable to any agricultural purposes. The plains, which extend from the borders of one river to another, are open fields, with scarcely any perceptible division of the land, and show- ing scarcely any trees even around the villages. The portion of woodland on these plains is very extensive ; but they are in large masses, with great intervals of arable land between them. The soil is mostly sandy, with occasional mix- ture of a sandy loam ; it is very thin, resting chiefly on a bed of granite, through which the heavy rains gradually percolate. Such a soil is easily ploughed ; sometimes two horses or two oxen, and not unfrequently two cows, perform this and the other operations of husbandry. This representation of the kingdom of Poland is strictly applicable to six of the eight waiwood- ships or provinces into which it is now di- vided.

‘ To the south of the river Pilica, which com- prehends the two provinces of Sandomir and Cracow, the appearance of the- land, and the face of the country, improve ; and, in proceeding south to the banks of the Vistula, there is to be seen a more undulating district and a more te- nacious and fruitful soil. Much of the land is a clayey loam, requiring three or four horses to plough it, yielding, when tolerably managed, crops of excellent wheat and oats ; and, where the husbandry is so good as to have adopted the practice of sowing clover between the two corn crops, the produce is very abundant. The southern point of this district, forming now an independent republic, called, from the name of its capital, Cracow, is very fertile. It extends along the Vistula about twenty miles, and con- tains, in 500 square miles or 320,000 acres, about 100,000 inhabitants.

‘ Some of the estates in Poland, belonging to the nobility of the highest rank, are of enormous extent ; but owing to the system of dividing the land among all the children, unless a special en- tail secures a majorat to the eldest son, which is in some few instances the case, much of it is possessed in allotments, which we should deem large ; but which, on account of their low value, and when compared with those of a few others, are not so. Of these secondary classes of es-

tates, 5000 or 6000 Acres would be deemed small, and 30,000 or 40,000 acres large. There are, besides these, numerous small properties, some of a few acres, which, by frequent subdi- visions, have descended to younger branches of noble families. The present owners are com- monly poor, but too proud to follow any pro- fession but that of a soldier, and prefer to labor in the fields with their own hands rather than to engage in trade of

any kind. As titles descended to every son, and are continued through all the successors, the nobility have naturally become very numerous ; but, since the emperor of Russia has gained the dominion over Poland, the use of titles has been restricted. No one can assume that of baron, unless his clear income from his estates exceed 1000 gulden or £25; none that of count, whose rents are less than 3000 gulden or £75 ; and none that of prince, who has less than 5000 gulden or £125.

'The whole of the lands are made alienable, and may now be purchased by persons of any rank, and are actually held by some who are burghers or peasants ; the Jews alone are pro- hibited from becoming proprietors of the soil, though they have very numerous mortgages upon it. When they foreclose, the lands must conse- quently be sold ; and as these Jews, the monied capitalists, cannot become purchasers, the prices they yield are very trifling.

' The most numerous class of cultivators are peasants ; they have a limited property in the lands which they occupy, and the cottages in which they live, under the condition of working a stipulated number of days in each week on their lord's demesne, and paying specified quan- tities of produce, such as poultry, eggs, yarn, and other things, in conformity with ancient usage. The extent of these holdings varies ac- cording to the quality of the land, and the quan- tity of duty work, or of payments in kind, which are to be fulfilled.

' On a large property which I examined the peasants had about forty-eight acres of land each, for which they were bound to work for two days in every week with two oxen. If their labor was farther required, they were paid three-pence per day for two other days, and if beyond that number sixpence per day. On another property I found the peasants had about thirty-six acres, for which they worked two days in each week, with two oxen; when called upon for extra labor, they are paid sixpence a day for themselves and oxen for the next two days, or, if they work without their oxen, threepence. If their labor is demanded the remaining two days in the week, the sum to be paid is made the subject of a spe- cial agrement ; on one estate the peasants had but twenty-four acres, and did one day's work themselves, with one horse; the rest of their labor was paid for in money, by agreement made at the time it was required. Another proprietor, on land somewhat exhausted, granted to each of his peasants more than fifty acres of land, for which they worked with two horses, three days >t» a week. It would be easy to give instances of more various rates of duty work, and of the quantity of land which is appropriated for its performance. Some are of a luxurious and of a

ludicrous kind. I was told that the inhabitants of two whole villages, near a

princely domain, hold their lands on condition of employing a certain number of days in each week in cleaning the walks, and keeping in good order the plea- sure grounds, which surround the vast castle of their benevolent and hospitable lord.'

In general our author found the peasantry in a condition of great distress, and involved in debt to their lord. They are no longer slaves, or adstricti glebs. By the constitution promul- gated in 1791 they were declared free, and that part of the constitution suffered no alteration under the dominion of the Russians and Prus- sians ; was confirmed when the king of Saxony became sovereign; and was again assured in 1815, when the emperor of Russia was enthroned as king of Poland. The practical effects of the privileges thus granted have hitherto been very inconsiderable. The peasants can leave their land, but must first acquit the pecuniary de- mands of their lords. Few are able to do this, as most of them are in arrears. The lords must supply them with their oxen, in case one dies ; their plough and other implements must be fur- nished to them by him ; and in years of scarcity they become involved in debt, for the requisite subsistence of themselves and their cattle. This, together with local attachments, and the habit of respect for their feudal superior, has, in general, prevented the peasants from wandering away from the houses of their fathers, and from the protection of their chief. It thus rarely happens that the peasants quit the estates on which they have been born ; and the instances that do occur are chiefly to be attributed to the embarrassed circumstances into which their lord may fall. A declining property produces a necessitous pea- santry, and such may sometimes be induced to try their fortune under another proprietor.

The want of peasantry is a general subject of complaint, especially among those (who are the far greater number) whose estates are loaded with mortgages or other incumbrances ; such sometimes lose them, but cannot command the means of inducing new ones to settle on the lands. Though no longer slaves, the condition of the peasants is but little practically improved by the change that has been made in their con- dition. When a transfer is made, either by tes- tament or conveyance, the persons of the pea- santry are not indeed expressly conveyed, but their services are, and in many instances are the most valuable part of the property.

' It is said that, when the freedom of the pea- sants was first decreed, it was viewed by them with great distrust. They were alarmed with the apprehension that in age or sickness, or other incapacity, they should be abandoned by their lords, and left to perish in want. By the form that society has taken in the course of the thirty-four years that have passed since the alteration was enacted, their alarms have been dispelled ; and, the same acts of kindness being exercised in most cases as were formerly cus-

tomary, they can perceive no alteration in their condition, that is, either materially more bene- ficial or injurious to them.

‘These people live in wooden hut», covered

with thatch or shingles, consisting of one room with a stove, around which the inhabitants and their cattle crowd together, and where the most disgusting kinds of filthiness are to be seen. Their common food is, cabbage, potatoes some- times, but not generally, pease, black bread, and soup, or rather gruel, without the addition of butter or meat. Their chief drink is water, or the cheap whiskey of the country, which is the only luxury of the peasants ; and is drunk, whenever they can obtain it, in enormous quan- tities. They use much salt with their vegetable food, and, in spite of the heavy tax on that com- modity, can never dispense with the want of it at their meals. I was informed, and saw reason to credit the accounts, that, when the peasants brought to the market towns their trifling quan- tities of produce, a part of the money was first used to purchase salt, and the rest spent in whiskey, in a state of intoxication that commonly endured till the exhaustion of the purse had restored them to sobriety. In their houses they have little that merits the name of furniture ; and their clothing is coarse, ragged, and filthy, even to disgust. Very little attention has been paid to their education, and they are generally igno- rant, superstitious, and fanatical. They observe about twenty holidays in the year, besides the Sundays ; and pass much of their time in pil- grimages to some favorite shrine, in counting beads, and similar superstitious occupations.

‘ This representation of the condition and cha- racter of the peasantry,’ says Mr. Jacob, ‘ though general, cannot be considered so universal as to admit of no exceptions ; some rare instances of perseverance in economy, industry, and tem- perance, are to be found ; and, unfavorable as their circumstances may be for the creation of such habits, they are here attended by the usual correspondent results. Some few peasants have been enabled to gain three or four allotments, and to employ their sons or hired servants to work for them ; and there are instances of such persons making a still further progress, and being enabled to purchase estates for themselves. Such cases as these, however, occur so rarely, that, though they produce individual comfort and wealth, they have no perceptible influence on the general mass of society, or on the sur- plus quantity of agricultural productions.

‘ As may be naturally inferred, from the sys- tem under which labor is

applied to the land, that labor is performed in the most negligent and slovenly manner possible. No manager of a large estate can have his eye constantly on every workman; and, when no advantage is gained by care in the work, it will naturally be very imperfectly executed. All the operations of husbandry struck me to be very ill performed : the ploughing is very shallow and irregular ; the harrows with wooden tines do not penetrate sufficient to pull up weeds in fallowing ; the roller is almost unknown ; and thus the land is filled with weeds of all descriptions. I observed the same want of attention in threshing ; and it ap- peared to me that a much greater proportion of the grain was left among the straw, than in that which has passed under an English flail. In short, the natural effects of the system of

duty work was visible in the whole of the admi- nistration of the large estates where it is fol- lowed, with the exception of those few proprie- tors who have intelligent and active managers, and are free from pecuniary embarrassments. The common course of cropping is, the old sys- tem of a whole year's fallow, followed by winter corn, and that by summer corn, and then a fallow again. Thus one-third of the land bears nothing. The winter crop in the northern part of Poland consists of wheat and rye ; the pro- portion of the latter to the former is nearly as nine to one, and the wheat enjoys the beneiit of what little manure is preserved. Thus the wheat actually cultivated does not occupy more than one-thirtieth part of the arable land. In the southern part of the kingdom the wheat bears a larger proportion to the rye, amounting on the more tenacious soils to a fifth, and even in some cases to a fourth part of the rye. The statements I could collect, and my own observations, led me to conclude the stock of cattle to be very small, in proportion to the extent of land, and to the number of inhabitants.

The reformation was early introduced into Poland, and in 1550 a complete equality in pri- vileges was established between the Catholics and Protestants. At the end of that century the Socinians appeared, who were at first permitted to live in tranquillity, but were afterwards driven to abjuration or exile. In the mean time the church of Rome had the art to procure an act, which confirmed to the Catholic clergy the per- manent possession of their vast property, and the preponderance which naturally followed enabled that party to narrow the toleration. In 1766 a relaxation of the prohibitions was obtained by the interference of Russia, Prussia, England, and Denmark ; and the partition that ensued altered the face of affairs so far that the Catholics found it necessary to sue for that toleration which they had refused to others. Before this change the usurpations of the clergy had gone beyond all bounds ; the tithes in some parts were said to be more nearly a fifth than a tenth of the pro- duce ; and the pope was not only the head of the Catholics, but interfered in every appoint- ment of the

bishops and archbishops. His nuncio held a separate court for the decision of ecclesiastical cases. >

The numbers of the Greek church are now on the increase in the Russian provinces : the Jews, as we have seen, occupy a conspicuous place in the population. They are the men of business for almost the whole country ; the cur- rent money in the kingdom is chiefly in their hands ; and a great proportion of the land is mortgaged to them. Some of them. have a fair title to the name of merchants ; but the majority are mean and fraudulent.

The Poles are, for the most part, almost as il- literate as their neighbours, the Russians : but universities were established in Poland a con- siderable time before the partition, viz. at Cra- cow, Wilna, and Posen ; strange as it may seem, however, there were no schools till the different governments among whom the country was di- vided, erected a certain number. Additional universities have also been established at Lemberjz

and Warsaw. The Polish language is a dialect of the Sclavonic ; though less unpleasant to the ear than might be imagined. The general use of Latin in literary composition, and even in the conversation of the higher ranks, has prevented the improvement of the vernacular tongue. But some works of merit are said to have been com- posed in it during the last century. The Poles seem to hare a peculiar facility in learning foreign languages.

The Poles, originally descendants from the ancient Sclavonic stock, have, in their general appearance, as well as in their language, man- ners, and customs, a great similarity to their eastern neighbours. In general they are of a middle stature, but many of the superior classes are tall and graceful, though the peasants are often low and stunted. The countenance of the Poles is generally open and friendly. The men of all ranks wear large whiskers, and shave their heads, leaving only a single lock of hair on the crown. The females of the higher ranks are ce- lebrated for their beauty, their elegant figures, and graceful demeanor. In society they are lively and animated. Mr. Coxe considers the dress of the higher classes, both men and wo- men, as elegant. That of the gentlemen, he says, is a waistcoat with sleeves, with an upper robe of a different color, which reaches below the knee, and is fastened round the waist with a sash or girdle ; the sleeves in warm weather are tied behind the shoulders. In summer the robe is of silk; in winter of cloth, velvet, or stuff, edged with fur, and a sabre is a

necessary appen- dage of the dress, as a mark of nobility. The gentlemen wear caps or bonnets of fur, and bus- kins of yellow leather, the heels of which are plated with iron or steel. The dress of the ladies is a simple polonaise, or long robe edged with fur. This winter robe or pelisse is lined, or rather padded with wool, but is only used when they go into the open air. In other respects their dress differs little from that of the English or French ladies. Many of the young men in Po- land have laid aside the national costume, and adopted the English dress. The summer dress of the peasants consists of a shirt and drawers of coarse linen, without shoes or stockings, and of round caps or hats. The women of the lower class wear upon their heads a wrapper of white linen, under which their hair is braided, and hangs down in two plaits.

The best buildings of the country are occupied by the Jews, whose filth would be intolerable any where else, but cleanliness is not regarded as a virtue in Poland. Men, women, children, hogs, cows, and poultry, all live under the same roof; and the traveller is frequently obliged to share this only apartment in the house with them. Every estate has its still ; spirits are found every where, and being used with every meal, habits of intoxication prevail to an ex- traordinary degree. Beer is little used by the peasantry, and provisions are hardly to be found by the traveller, except in the thinly scattered towns. The inns of Poland are in general sta- bles, built of planks ; having a room at one end, without window or furniture, and often so in-

fested with vermin that lodgers seek for re- fuge and repose among the horses. The Ger- man settlers present a striking contrast to the natives. They have a cheerful look of industry and opulence, and their houses are comparatively clean and comfortable.

H i STO R Y .— The sovereigns of Poland at first had the title of duces, dukes or generals, as their office had been only to lead the armies into the field. The first of these is universally allowed to have been Lechus or Lecht ; who, according to some writers, migrated at the head of a numerous body of the descendants of the ancient Sclavi ; and, to this day, Poland is called by the Tartars the kingdom of Lechus. Busching, however, gives a different account of the origin of the Poles. Sarmatia, he observes, was an extensive country, inhabited by a variety of nations of different names. He supposes the Poles to be the descendants of the ancient Lazi, a people who lived in Colchis near the Pontus Euxinus ; whence the Poles are sometimes called Polazi. Crossing several rivers, they entered Posnania, and settled on the borders of the Warta, while their neighbours the Zechi settled on the Elb, in the 550th year of Christ.

The name Poland, or Polska, as it is called by the natives, comes from the Sclavonic word Pole, or Polo, which signifies a country adapted to hunting,

because the whole country was formerly covered with vast forests. To Lechus succeeded Viscimer, generally supposed to have been his nephew. He was a warlike and successful prince, subduing many provinces of Denmark, and building the city of Wismar, so called from his name. After his death the nobility were on the point of electing a sovereign, when the people, harassed by the grievous burdens occasioned by the wars of Viscimer, unanimously demanded another form of government. The nobility flat- tered this humor of the people, but instituted such an administration of affairs as threw all the power into their own hands. Twelve palatines, or vaivodes, were chosen ; and the Polish do- minions divided into as many provinces. These palatines exercised a despotic authority within their several jurisdictions, and aggravated the misety of the people by perpetual wars among themselves; upon which the Poles, worn out with oppression, resolved to return to their old form of government. They cast their eyes upon Cracus, or Gracus, whose wealth and popularity had raised him to the highest honors among his countrymen, and who is said to have been de- scended of the Roman Gracchi. He signalised himself against the Franks, whom he overthrew in several desperate engagements, and afterwards built the city of Cracow. He did not enlarge his dominions, but made his subjects happy by many excellent regulations. At last, after a long and glorious reign, he expired, or, according to some, was assassinated by a nobleman who as- pired to the crown. He left three children ; Cracus 1 1., Lechus, and a daughter named Vanda. Cracus succeeded to the dukedom, but was soon after murdered by Lechus. However, the crime he had committed so disturbed his conscience, that the secret could not be kept. When it was known that he had murdered his Irother, he was

deposed with ignominy, and his sister Vanda de- clared duchess. Soon after she had been raised to the sovereignty, one Rithogar, a Teutonic prince, sent an ambassador demanding her in marriage, and threatening war if his proposals were refused, when our heroine marched in per- son against him at the head of a numerous army. The troops of Rithogar abandoned him without striking a blow ; upon which he killed himself in despair ; and Vanda, having become enamored of him, was so much concerned for his death that to complete the romance of the story she is said to have drowned herself in the Vistula. From this unfortunate lady the country of Vandalia takes its name. The family of Cracus having thus become extinct, the Poles restored the vaivodes notwith- standing all that they had formerly suffered from them. The consequences were as before : the vaivodes abused their power. At that time the Hungarians and Moravians had invaded

Poland with a numerous army, and were opposed only by a handful of men. However, one Premislaus, a private soldier, contrived a stratagem by which the numerous forces of the enemy were over- thrown ; and for his valor was rewarded with the dukedom. We are ignorant of the other trans- actions of his reign ; but all historians inform us that he died deeply regretted, and without issue.

On his death several candidates appeared for the sovereignty, and the Poles determined to pre- fer the victor in a horse race. Lechus, one of the competitors, being detected in endeavouring to take an undue advantage, another Lechus, a peasant, who made the discovery, was raised to the throne, and the former was put to death. This happened A. D. 774, and Lechus III. behaved with great wisdom and moderation. Though he possessed the qualities of a great warrior, and extended his dominions on the side of Moravia and Bohemia, yet his chief delight was to make his subjects happy by peace. In the decline of life he engaged in a war with Charlemagne, and is said to have fallen in battle with that monarch ; though others say he died a natural death. Le- chus III. was succeeded by his son Rechus IV. who inherited all his father's virtues. He sup- pressed an insurrection in the Polish provinces, by which he acquired great reputation ; after which he led his army against the Greek and Italian legions who had overrun Pannonia, and completely defeated them. Nor was his valor more conspicuous in the battle than his clemency to the vanquished. His son Popiel I., who suc- ceeeded him, bears also the character of a vir- tuous and pacific prince. He removed the seat of government from Cracow to Gnesna, and was succeeded by his nephew Popiel II. a minor, whose maturity was distinguished by cruelty. Prompted by an ambitious and barbarous queen, he invited his twenty uncles, natural sons of Lechus III. to an entertainment, and poisoned them all. Their bodies being left unburied were devoured by rats. Foreign enemies took advan- tage of these disorders; and the state seemed to be on the verge of dissolution, when Pi- astus was proclaimed duke in 830, from whom the natives of ducal or regal dignity were called Piastes. This excellent monarch died in 861,

and was succeded by his son Ziemovitus, who was of a more warlike disposition than his father, and who first introduced a regular dis- cipline among the Polish troops. He was victorious in all his battles with the Germans and Hungarians; and considerably enlarged his dominions. After his death nothing remarkable happened in Poland till the time of Mieczislaus I. who attained the ducal authority in 964. He was born blind, and continued so for seven years ; after which he is said to have recovered his sight without using any medicine ; a circum- stance so extraordinary that it was accounted a miracle. In his reign the Christian religion was introduced into Poland ; in consequence of his marriage with Deborwka, daughter to the duke of Bohemia, who had rejected his offer, unless he

would be baptised. He founded the archbishop- rics of Gnesna and Cracow, and many other sees ; but allowed his dominions to be ravaged by the Russians. He was succeeded by his son Boleslaus I. the first king of Poland.

Boleslaus I., surnamed Chrobry, succeeded to the sovereignty in 999. He professed and che- rished Christianity, and was a man of great valor and prudence. The emperor Otho III. invested him with the regal dignity ; which was confirmed by the pope. Upon this he affected a great deal of state. It, however, excited the envy of the duke of Bohemia, who had solicited the same honor for himself, and had been re- fused. His jealousy was further excited by the connexion between Boleslaus and the emperor, the former having married Rixa the emperor's niece. Without any provocation, therefore, he entered Poland at the head of a numerous army, committing every where dreadful ravages. Bo- leslaus immediately marched against him, and the Bohemians retired with precipitation. Scar- city of provisions, and the inclemency of the season, prevented Boleslaus at that time from following him ; but, as soon as these obstacles were removed, he entered Bohemia at the head of a formidable army; took Prague after a siege of two years ; and, after overruning the whole country, made himself master of the fortress of Wissogrod, with the duke and his son Jare- mir ; put out the eyes of the former, and con- demned the latter to perpetual imprisonment. From Bohemia Boleslaus marched towards Mo- ravia ; but no sooner did he arrive on the fron- tier than the whole province submitted without a blow. A civil war having taken place, on the death of Wolodimir, grand duke of Russia, be- tween his two sons Jarislaus and Suantepolk, the latter fled to Boleslaus for assistance; who accordingly set out at the head of a numerous army, under pretence of doing justice to Suan- tepolk. He was met on the Bog by Sarislaus at the head of an army much superior in number to his own, but he soon gained a complete vic- tory over him, and obliged him to fly to Kiovia, This city was now taken, with a vast treasure, and thus Boleslaus became master of the greatest part of Russia ; whereupon he reinstated Suan- tepolk, and completely routed a second army brought against him by Jarislaus. In return for these favors, which Boleslaus had conferred on Suantepolk, he projected nothing less than the

destruction of him and his whole army. The massacre was already begun when Boleslaus received the intelligence ; and, having already assembled part of his army, fell upon the trai- tors with such fury that they were obliged to fly, and he got safe to Poland. But in the mean time Jarislaus,

having assembled fresh forces, pursued the Poles ; and having come up with them just as one-half had crossed the river Boris- thenes attacked them with the utmost fury. Boles- laus defended himself with resolution ; the Rus- sians were entirely put to the rout, and a terrible carnage ensued. The vistory, however, though complete, was not decisive ;" for which reason Boleslaus continued his retreat, without attempt- ing to conquer a country too extensive for him to keep in subjection. He next led his avmy into Saxony, plundered the country, and fixed the boundaries of his empire at the Elbe ; where he erected two iron columns. He afterwards conquered Prussia and Pomerania ; and then applied himself wholly to the enacting of whole- some laws. But in the midst of this tranquillity Jarislaus assembled the most numerous army that had ever been heard of in Russia, with which he appeared on the frontier of Poland. Boleslaus, though now advanced in years, marched out against his adversaries, and met them on the banks of the. Boristhenes, where he gained another signal victory. Many thousand prisoners were taken, whom Boleslaus released upon very easy conditions. This well timed clemency produced such a happy effect, that the Russians voluntarily submitted to his juris- diction, and again became his subjects. He died in 1025, after having vastly extended his dominions. Boleslaus was succeeded by his son Mieczislaus II., but he possessed none of the great qualities of his father, being indolent and debauched. In the beginning of his reign the Russians, Bohemians, and Moravians, re- volted. However, as the spirit and discipline introduced by Boleslaus still remained in the army, Mieczislaus found no difficulty in re- ducing them again to obedience : after which, devoting himself entirely to voluptuousness, he was seized with a frenzy, which put an end to his life in 1034. The bad conduct of this prince proved very detrimental to the interest of his son Casimir. Instead of electing him king, the people chose Rixa his mother queen regent. She proved tyrannical, and so partial to her countrymen, the Germans, that a rebellion en- sued, and she was forced to fly to Germany, whither she had sent Boleslaus's vast treasure. In consequence of her bad behaviour and expul- sion, Casimir was driven out of the kingdom ; and, a civil war taking place, many pretenders to the crown appeared. To the miseries occa- sioned by this were added those of foreign war both with the Bohemians and Russians. In the midst of these accumulated distresses, Casimir was loudly called for, and his election to the throne resolved on. After some search, he was discovered in France, where he had as- sumed the monastic habit. A dispensation being obtained, his return was celebrated with joy bf all ranks ; and he was crowned at Gnesna, by the primate, with great solemnity. He

proved a virtuous and pacific prince; sup- pressed the banditti, restored order, and by his marriage with the princess Mary, sister to the duke of Russia, all differences with that nation were terminated. The kingdom

flourished during his reign, and became more respectable from the wisdom and stability of the adminis- tration than it could have been by many victo- ries. After a happy reign of sixteen years, he died much beloved and regretted.

By the administration of Casimir, the king- dom required sufficient strength to carry on several successive wars. Boleslaus II., the son of Casimir, an enterprising and valiant prince, succeeded to the throne ; and three unfortunate princes, expelled from their own dominions, took refuge at his court. These were, Jacomir, son of Briteslaus, duke of Bohemia; Bela, brother to the king of Hungary ; and Zaslaus, duke of Kiovia, eldest son to Jarislaus duke of Russia. The duke of Bohemia, dreading the consequences of Jacomir's escape, assembled an army, and, without any declaration of war, marched through the Hercynian forest, desolating Silesia, and laid waste the frontiers of Poland. Boleslaus marched against him with a greatly inferior force ; but by his superior abilities sur- rounded his adversary in a wood, and reduced him to the greatest distress. In this extremity the duke sent proposals for accommodation, which were rejected with disdain by Boleslaus ; upon which the former ordering fires to be kindled in his camp, as if he designed to conti- nue there, escaped in the night. The king pur- sued him, but in vain; so he returned, after ravaging the frontiers of Moravia. The next year he entered Bohemia with a numerous army ; but the duke submitted to such terms as he thought proper to impose. In these Jacomir was not forgotten, after which he determined to march towards Hungary, to assist Bela. Enter- ing that country, at the head of a numerous body, he seized the king, who soon after died of a broken heart ; so that Bela succeeded to the throne without farther opposition. After these victories, however, Boleslaus, instead of assist- ing Zaslaus, began to think of subjecting the whole of his dominion to himself, in right of his queen, as well as of his descent from Jarislaus's sister. Having therefore assembled a very numerous and well disciplined force, he entered the duchy of Kiovia, where he was opposed by Wisseslaus, who had usurped the sovereignty. Boleslaus, however, continued to advance ; and the Russian prince, being intimi- dated by the number and good order of his enemies, deserted his own troops, and fled away privately ; upon which his forces dispersed. The inhabitants of Kiovia now called to their assistance Suantoslaus and Uszevcld, two bro- thers of Wisseslaus ; but these princes, acting the part of mediators, procured pardon for the inhabitants from Zaslaus their natural sovereign. With the same facility the two princes recovered all the other dominions belonging to Zaslaus, only one city venturing to stand a siege, which was soon reduced. But in the mean time, the king of Hungary dying, a revolt ensued, and the two sons of Bela were on the point of being

deprived of their dominions. This Boleslaus no sooner heard than he marched into Hungary; where, by the bare terror of his name, he re-established tranquillity. While this was accom- plishing, Zaslaus was again driven from his territories, all the conquests formerly made were lost, and Suantoslaus and Uszevold rendered more powerful than ever. The king, however, soon disconcerted their measures. He ravaged the palatines of Lusac and Chelm, reduced the strong city of Wolyn, and transported the booty to Poland. The campaign was finished by a battle with Uszevold, which proved so bloody that, though Boleslaus was victorious, his army was much weakened, and he could not pursue his conquests. In winter he made numerous levies ; and returning in spring to Kiova re- duced it, after several desperate attacks, by famine : but, instead of treating the inhabitants with cruelty, he commended their valor, and strictly prohibited his troops from pillaging or insulting them; distributing provisions among them with the utmost liberality. But this cle- mency was followed by a great disaster. Kiovia was the most dissolute, as well as the richest city in the north, and the king and all his sol- diers gave themselves up to the dissipations of the place. The Polish women, exasperated at their husbands having been seven years absent, are said to have proved almost universally un- faithful. The effect was a general desertion, and Boleslaus saw himself left almost alone in the heart of Russia. A civil war now ensued ; and when Boleslaus arrived with the few re- maining Poles, and assisted by an army of Rus- sians, he with difficulty restored the public peace. To add to the calamities of this un- happy kingdom, the schisms which for some time had prevailed in the church of Rome found their way into Poland. The matter came at last to be a contention for wealth and povve'r between the king and clergy. This soon gave occasion to bloodshed ; and the bishop of Cra- cow was massacred in his cathedral while per- forming the sacerdotal duties. This and other outrages in a short time brought on the signal vengeance of the clergy. Pope Gregory VII. thundered out the most dreadful anathemas against the king, released his subjects from their allegiance, deprived him of the titles of sove- reig ity, and laid the kingdom under a general interdict. To this terrible sentence Boleslaus in vain opposed his authority, and tried to recal the spirit which had formerly rendered him so formidable. Conspiracies were formed against him, and the whole kingdom became a scene of confusion. He fled therefore with his son Mieczislaus, into Hungary : but here also the vengeance of the clergy pursued him, nor did they cease persecuting him till he was brought to a miserable end. Some writers state that he was murdered oy the clergy as he was hunt- ing; others that he killed himself in despair; and one author tells us that he wandered about in the woods of Hungary, and was at last killed and devoured by dogs. The destruction of Boleslaus was not sufficient to allay the papal

resentment. It extended to the whole kingdom of Poland. Mieczislaus, the son of Boleslaus,

was not suffered to ascend the throne ; and the kingdom continued under the interdict which could be removed only by the force of gol'l. Besides the tax called Peter pence, new imposi- tions were added of the most oppressive nature-, till at length the pontiff, having satiated his avarice and impoverished the country, consented that Uladislaus, the brother of the deceased monarch, should be raised to the sovereignty with the title of duke. This prince being of a meek disposition, with little ambition, acquiesced in the will of the pope, accepted the terms offered, and sent an embassy to Rome. The in- terdict was now removed, but all his endeavours to recover the regal dignity proved fruitless ; the pope having, in conjunction with the em- peror of Germany, conferred that honor on the duke of Bohemia. Russia took the opportunity of the late civil disturbances to throw off the yoke; and this revolt drew after it the revolt of Prussia, Pomerania, and other provinces. The smaller provinces, however, were soon reduced ; but the duke had no sooner returned to Poland than they again rebelled, and hid their families in impenetrable forests. Uladislaus marched against them with a considerable army ; but was entirely defeated, and obliged to return back with disgrace. Next year, however, he had better fortune ; and, having led against them a more numerous army, they submitted, and de- livered up the ring-leaders of the revolt. No sooner were the Pomeranians reduced than civil dissensions took place. Sbigneus, the son of Uladislaus by a concubine, was placed at the head of an army by the discontented nobility, to subvert his father's government, and dispute the title of Boleslaus to the succession. The war was terminated by the defeat and captivity of Sbigneus ; who was at first confined, but after- wards released, on condition that he should join his father in punishing the palatine of Cracow.

Before this could be done the palatine effected a reconciliation with the duke ; with which the young princes being displeased, a war took place between them and their father. At last the palatine of Cracow was banished and the princes submitted ; after which Uladislaus, hav- ing chastised the Prussians and Pomeranians, who had again revolted, died in 1103, the fifty-ninth year of his age. Uladislaus was succeeded by his son Boleslaus III., who divided the domi- nions equally betwixt his brother Sbigneus and himself. The former, being dissatisfied with his share, raised several cabals, and a civil war was for some time only prevent- ed by the good offices of the primate ; but at last Sbigneus, having stirred up the Bohemians, Saxons, and Moravians, against his brother, made such formidable preparations as threatened the conquest of all Poland. Boleslaus, being unprovided with forces to oppose such a formi- dable power, had recourse to the Russians and Hungarians ; who readily embraced his cause. The event was, that

Sbigneus was entirely de- feated, and might easily have been obliged to surrender himself at discretion, had not Bole- slaus left him in quiet possession of the duchy of Mazovia, to maintain himself suitably to his dignity. This kindness the ungrateful Sbigneus

repaid by entering into another conspiracy ; until, the plot being discovered, he was seized, banished, and declared a traitor if ever he set foot again in Poland. The Pomeranians, how- ever, armed in his behalf; but he was defeated, taken prisoner, and again banished. Almost all the nobility now solicited the king to put such an ungrateful traitor to death : this generous prince, however, notwithstanding all he had yet done, took him back to Poland, and appointed him a maintenance suitable to his rank. Bole- slaus was scarcely freed, from the intrigues of his brother, when he found himself in greater dan- ger than ever from the ambition of the emperor Henry IV. He had attacked the king of Hun- gary, with whom Boleslaus was in close alliance, and from whom he had received assistance when in great distress himself. The king of Poland determined to assist his friend, and therefore made a powerful diversion in Bohemia, where he repeatedly defeated the Imperialists; upon which the latter were ordered to ravage Silesia, and even entered Poland, where they laid siege to Lubusz ; but were at last obliged to abandon the enterprize. However they were not dis- couraged, but penetrated siill farther into Po- land, and were laying waste all before them, •when the superior skill of Boleslaus compelled them to retire without coming to action. This soon brought on a peace, which was confirmed by a marriage between Boleslaus and the emper- or's sister. In short, Boleslaus III. might have equalled his ancestor, Boleslaus I., in glory, had he not been imposed upon by a Hungarian, whom in 1135 he made governor of Wislica, a strong town on the Nida, which he betrayed to the Russians. Boleslaus, enraged, made war upon the Russians, by whom he was entirely defeated, and by this disgrace was so much afflicted that he died soon after, having reigned thirty-six years.

Boleslaus, by his will, left his dominions equally divided among his four sons. Uladis- laus, the eldest, had the provinces of Cracow, Sirad, Lencici, Silesia, and Pomerania. Boles- laus, the second son, the palatinates of Culm and Cujava, with the duchy of Mazovia. The palatinates of Kaleszh and Posnania fell to Miec- zislaus, the third son ; and to Henry, the fourth, were assigned those of Lublin and Sandomir. Casimir, the youngest child, then an infant in the cradle, seems to have been forgotten. By the will of the late duke, all the brothers were obliged to own the supremacy of Uladislaus, who was declared duke of all Poland. The har- mony of the

princes was first disturbed by the ambition of Christina, the wife of Uladislaus, who assembled the states, and made a long speech, showing the dangers which might arise from a partition of the ducal dominions among so many. Having thus induced the nobility to declare on his side, she first drove Boleslaus out of his territories ; next marching against Henry, she dispossessed him also, forcing both to take refuge with Mieczislaus in Posnania, where all the three brothers were besieged. Se- veral of the nobility interposed, and used all their influence to effect a reconciliation, but in vain. Uladislaus insisted that the besieged princes

should surrender at discretion. Thus driven lo despair, the brothers sallied out, and attacked the duke's army with such impetuosity that they obtained a complete victory, and took all his bag- gage. The brothers improved their victory, and laid siege to Cracow. The Russians, who had assisted Uladislaus at first, now entirely aban- doned him, and evacuated Poland, which obliged him to shut himself up in Cracow ; but, finding the inhabitants little disposed to stand a siege, he retired into Germany to solicit assistance from his wife's friends. This they refused, while in the mean time Cracow surrendered ; the un- fortunate Uladislaus was formally deposed, and his brother Boleslaus raised to the supreme au- thority.

Boleslaus IV. began his administration with an act of generosity to Uladislaus, to whom he gave the duchy of Silesia, which thus was separated from Poland, and has never since been re- annexed to it. This had no other effect upon Uladislaus than putting him into a condition to raise fresh disturbances ; for he now persuaded the emperor Conrade to invade Poland ; but Boleslaus so harassed and fatigued his army that he was obliged in a short time to return to his own country; and for some years Poland enjoyed profound tranquillity. During this interval Henry entered on a crusade, by which he pro- cured extraordinary fame, but lost all his army. Soon after his return Poland was invaded by the emperor Frederic Barbarossa. The number of the Imperialists was so great that Boleslaus and his brothers did not think proper to oppose them in the field ; but contented themselves with cutting off the convoys, placing ambuscades, and harassing them on their march. With this view the three brothers divided their forces, and desolated the country before the enemy. Thus the emperor on advancing could not subsist, and was at last reduced to such a situation that he could neither go forward nor retreat. Boleslaus on this was invited to the German camp, and a treaty was soon agreed upon, which was confirmed by a marriage between Adelaide, niece to the emperor, and Mieczislaus duke of Pos- nania. Boleslaus, having thus escaped from all danger, determined to attempt the conquest of Prussia. Having unexpectedly invaded the coun- try with a numerous army, he succeeded in his enterprise ; great numbers of infidels were con- verted, and many churches set up : but no sooner was Boleslaus gone than the inhabitants

returned to their paganism. Upon this Boles- laus again came against them with a formidable power ; but, being betrayed by some of the na- tives whom he had raised to posts of honor, his army was led into defiles, and almost entirely cut off; Boleslaus and Mieczislaus escaped with great difficulty. This misfortune was followed by another. The children of Uladislaus laid claim to all the Polish dominions which had been possessed by their father, and were sup- ported by a great number of discontented Poles, and German auxiliaries. Boleslaus, un- able to withstand his enemies by force, had recourse to negociation. An assembly of the states was held, before which the duke so fully refuted the claims of the children of Uladislaub

that it was almost unanimously voted that they had kindled an unjust war ; and, to take away every pretence for renewing the civil discords of Poland, they were a second time invested with the duchy of Silesia. After this, Boleslaus ap- plied himself to the duties of his government at home till his death, which happened in 1174.

The states now raised his brother Mieczislaus to the ducal throne ; but the moment he ceased to be a subject, he became a tyrant, and a slave to almost every vice ; in consequence of which he was deposed, and his brother Casimir elected. Casimir was a prince of the greatest justice and benevolence ; he redressed grievances, suppressed exorbitant imposts, and assembled a general diet, in which it was proposed to rescue the peasants from the tyranny of the nobility. This proved less difficult than had been imagined : the nobility were influenced by the example of the sovereign, they immediately granted all that he required ; and, to secure this declaration in favor of the peasants, the archbishop of Gnesna issued anathemas against those who should en- deavour to regain the privileges which they had now renounced ; and the acts of the diet were transmitted to Rome, where they were confirmed by the pope. Finally, in an assembly of the diet, Casimir proposed to resign the sovereignty in favor of his brother. To this the states re- plied in the most peremptory manner : they de- sired him never more to mention the subject, lest they should be under the necessity both of de- posing him and excluding his brother, who, they were determined, should never more have the do- minion of Poland. Casimir, however, was so much concerned at the account of his brother's misfor- tunes, that he tried every method to relieve him, and even connived at the arts practised by some discontented noblemen to restore him. By a sin- gular generosity, he facilitated the reduction of Gnesna and Lower Poland, where Mieczislaus might have lived in peace and splendor, had not his heart been incapable of feeling kindness. The consequence was, that he used all his art to wrest from his brother the whole of Poland, and actually conquered the provinces of Mazovia and Cujava ; but of these he was soon dispos- sessed. After this he made another attempt, on occasion of a report that Casimir had been poi- soned in an expedition into Russia. He sur- prised the city of Cracow ; but the city refused to surrender, and his hopes were entirely blasted by the return of Casimir himself; who, with un- paralleled magnanimity intreated peace of him. The last action of this amiable prince was the conquest of Russia, which he effected rather by the reputation of his wisdom and generosity than by arms. Those barbarians voluntarily sub- mitted to a prince so famed for his benevolence and humanity. Soon after his return he died at Cracow, lamented as the best prince in every respect who had hitherto filled the throne.

Casimir left one son, named Lechus, an in- fant ; and the states, dreading

the consequences of a minority ? hesitated at appointing him sove- reign. At last, however, Lechus was nominated, chiefly through the interest he had obtained by the reputation of his father's virtues. The con- sequence was what might have been expected.

Mieczislaus formed an alliance against him with the dukes of Opelen, Pomerania, and Breslau ; and, having raised all the men in Lower Poland that could bear arms, took the road to Cracow with a numerous army. A bloody battle was fought on the banks of the Mozgarva ; in which both sides were so much weakened that they were forced to retire. Mieczislaus was first ready for action, and therefore had the advantage ; however, he thought proper to employ artifice rather than force ; having, therefore, attempted in vain to corrupt the guardians of Lechus, he entered into a treaty with the duchess dowager his mother. To her he represented the miseries which would ensue from her refusal of the con- ditions he proposed. He stipulated to adopt Lechus and Conrade, her sons, for his own ; to surrender the province of Cujava for their sup- port ; and to declare them heirs to all his domi- nions. The principal nobility opposed this accommodation, but it was accepted by the duchess ; and Mieczislaus was once more put in possession of the capital, after having taken a solemn oath to execute the treaty. But it was a maxim with him that a sovereign is no longer obliged to keep his oath than while he dare not break it. Having obtained power, he soon acted as if no treaty with the duchess had subsisted. On this, the duchess, perceiving herself duped, formed a strong party ; Mieczislaus was driven out of Cracow, and almost reduced to his former circumstances, when he produced a variance between the duchess and the palatine of Cracow, and once more regained possession of that dis- trict, but did not long enjoy his prosperity, fall- ing a victim to his intemperance ; so that Lechus was restored in 1206. The government of Lechus II. was altogether most unfortunate. In his time the Tartars made an irruption, and committed every where the most cruel ravages ; they came at last to an engagement with the Poles, assisted by the Russians; and, after an obstinate and dreadful conflict, obtained a complete victory. This incursion, however, terminated precipi- tately ; for they retired just as the whole kingdom was ready to submit ; but the devastations they had committed produced a famine, which was soon followed by a pestilence that depopulated the whole country. In this unhappy situation of affairs, Lechus was murdered by his subjects as he was bathing. A civil war took place after his death ; and the history for some time is so confused that it is difficult to say who was his successor. During this anarchy the Tartars made a second irruption, and were advancing to the capital when they were attacked and de- feated with great slaughter by the palatine of Cracow. The power of the enemy, however, was not broken ; next year they returned, and committed incredible barbarities. They were returning,

laden with spoil, when the palatine again fell upon them, but after an obstinate en- gagement he was defeated ; the nobility now fled into Hungary, and the peasants sought an asylum among rocks and forests. Cracow, being left defenceless, was taken, pillaged, and burnt ; af- ter which the Tartars desolated Silesia and Mo- ravia, destroying Breslau and other cities. Nor did Hungary escape their barbarity; the king

.rave battle to the Tartars, but was defeated with vast slaughter, his capital laid in ashes, and above 100,000 of his subjects massacred. No- thing could withstand the prodigious numbers of this new enemy, and the fury with which they fought. On the frontiers of Hungary they fixed their head-quarters ; and spread their devastations on every side with a celerity and success that threatened the destruction of every neighbouring kingdom.

In this dreadful situation was Poland when Boleslaus V., surnamed the Chaste, was raised to the sovereignty. He was opposed by his un- cle Conrade the brother of Lechus, who was pro- voked at becoming the subject of his own nephew. Having assembled a powerful army, Conrade gained possession of Cracow ; assumed the title of duke of Poland ; and might possibly have kept possession of the throne, had not his ava- rice and pride equally offended the nobility and peasants, who unanimously invited Boleslaus from Hungary, to come and head the insurrection which now took place. On his arrival he was joyfully received into the capital ; but Conrade headed a powerful party ; and on this occasion the knights of the Teutonic order were first by him called into Poland. Conrade, however, was defeated in two pitched battles, and forced to live in a private situation ; though he never ceased to harass his nephew. Of the reign of Boleslaus we have little account, except that he made a vow of perpetual continency, and im- posed the same on his wife ; that he founded near forty monasteries ; and died after a long reign in 1279 ; having adopted Lechus duke of Cujavia, and procured a confirmation of his choice by the people. The reign of Lechu? III. was one continued scene of foreign and domes- tic trouble. On his accession he was attacked by the united forces of Russia and Lithua- nia, assisted by the Tartars ; whom, however, he defeated in a pitched battle, and obliged to quit the kingdom; but civil dissensions took place soon after, and increased to such a degree that Lechus was obliged to fly to Hungary. The inhabitants of Cracow alone remained firm in their duty ; and they were at last relieved by Lechus at the head of an Hungarian army, who defeated the rebels, and restored to his kingdom a legitimate government. He had scarcely reas- cended the throne when the united forces of the Russians, Tartars, and Lithuanians, made a se- cond

irruption into Poland, and desolated the country. Their forces were rendered more ter- rible by their having along with them a vast number of large dogs trained to war. Lechus, however, with an army much inferior, obtained a complete victory. Soon after this he died, with the reputation of a warlike and wise, but unfortunate prince.

A civil war once more ensued ; and the affairs of the state continued in a declining condition, till 1296, when Premislaus, then duke, resumed the title of king. In 1305 Uladislaus Locticus, who had seized the throne in 1 300, and afterwards been driven out, was again restored. The first transaction of his reign was a war with the Teu- tonic knights, who had usurped the greater part of Pomerania. Thev had been settled in the ter-

ritory of Culm by Conrade duke of Mazovia; but soon extended their dominion over the neigh- bouring provinces, and, having obtained pos- session of Dantzic, massacred a number of Pomeranian gentlemen in cold blood. The knights were ordered by the pope to renounce their conquests ; b it they set at nought his thunders. The king first marched against the marquis of Brandenburgh, because he had pre- tended to sell the right of those countries to the Teutonic knights. Uladislaus next laid waste the territory of Culm ; and, though opposed by the forces of the marquis, the knights, and the duke of Mazovia, obtained the victory in two decisive battles. Had he improved these advan- tages he might easily have exterminated the whole order, but he concluded a treaty under the me- diation of the kings of Hungary and Bohemia. In a few months he was convinced of the perfidy of the knights ; for they not only refused to eva- cuate Pomerania as had been stipulated, but en- deavoured to extend their usurpations. Uladis- laus, enraged at this, took the field a third time, and gave them battle with such success that 4000 knights were left dead on the spot, and 30,000 auxiliaries killed or taken prisoners. Af- ter this he spent the remainder of his life in tranquillity.

He was succeeded by his son Casimir III., surnamed the Great, who subdued the province of Russia Nigra in a single campaign. Next he turned his arms against Mazovia; over-ran the duchy, and annexed it as a province to the Polish crown ; after which he applied himself to domes- tic affairs. The only vice with which he is charged is incontinency ; but even this the clergy declared to be a venial sin, amply com- pensated by his other virtues. Casimir was succeeded by his nephew Lewis king of Hun- gary ; who, perceiving a coldness in the Poles towards him, left Poland soon after his coronation, committing the government to the hands of his mother Elizabeth. Poland at this time, however, was too much distracted to be governed by a woman. The country was over-run with robbers, who committed the most horrid disorders ; it was likewise invaded by the Lithuanians ; the whole province of Russia Nigra revolted ; and the

kingdom was filled universally with dissension. The Poles could not bear to see their towns filled with Hungarian garrisons; andsentamos- sage to the king, reproaching him with his neglect of them. On this Lewis raised a numerous army to subdue their spirit. His first operations were directed against the Russians ; whom he reduced to subjection. Then he turned his arms against the Lithuanians, and, driving them out of the kingdom, re-established tranquillity. On his death Hedwiga, daughter of Casimir, was pro- claimed queen ; she married Jagello, great duke of Lithuania, who was now converted to Christia- nity, and baptised by the name of U-ladislaus. In consequence the duchy of Lithuania, as well as the vast provinces of Samogitia and Russia Nigra, became annexed to the crown of Poland. This excited the jealousy of the Teutonic knights, who were sensible thatUladislaus would now un- dertake the reduction of Pomerania. On a sudden, therefore, two armies marched towards the fron-

tiers of the duchy, which they penetrated, laying waste the country. As soon as he heard of these ravages, Uladislaus raised an army, the command of which he committed to his brother Skirgello, who defeated the knights, and obliged them to abandon their conquests. In the mean time Uladislaus marched into the Higher Poland, which was under many petty tyrants ; the pala- tine of Posnia in particular had distinguished himself by his rebellious practices ; but he was completely defeated by Uladislaus, and the whole country reduced to obedience.

Having secured the tranquillity of Poland, Uladislaus visited Lithuania, with a great num- ber of the clergy, to convert his pagan subjects. This he effected, but left the care of the duchy to his brother Skirgello, a man of a cruel, haughty dis- position, associating with him his cousin V'itowda, a prince of a very contrary character. The bar- barity of Skirgello soon obliged this prince to take refuge among the Teutonic knights, whom he at length joined in invading the country. As soon, however, as an opportunity offered, he came to an accommodation with the king, who bestowed on him the entire government. He endeavoured to repair the calamities which the late wars had occasioned ; but his impetuous va- lor prompted him at last to engage in a war with Tamerlane the Great, and he encountered an army of 400,000 Tartars under Ediga, Tamerlane's lieu- tenant, with only a tenth part of their number. The battle continued for a whole day ; but at last Vi- towda, being surrounded by the enemy, broke his way through with prodigious slaughter, and came off without a defeat. During the absence of Vi- towda, the Teutonic knights had penetrated into Lithuania ; on his return he attacked and de- feated them, making an irruption into Livonia.

This was succeeded by a long series of wars between Poland and Prussia, in which Uladis- laus himself took the field. He penetrated into Prussia, took several towns, and was advancing to Marienburg, when he was met by the Prussian knights, who determined to hazard a battle. When the engagement began the Poles were de- serted by their auxiliaries, but the courage and conduct of the king so animated them, that, after a desperate battle, they obtained a complete vic- tory ; near 40,000 of the enemy being killed in the field, and 30,000 taken prisoners. Uladis- laus concluded a peace upon easier terms than his adversaries had any reason to expect. But some infraction of the treaty soon occasioned a renewal of hostilities, and Uladislaus would now hearken to no terms ; until the enercy, driven to desperation, determined on burying themselves in the ruins of their capital. The siege was ac- cordingly commenced, and both sides behaved with great vigor ; but at last, through the good conduct and valor of the grand master Plawen, the Polish monarch was obliged to grant them an advantageous peace. Uladislaus V. died in 1435, and was succeeded by his son Uladislaus VI., then only nine years of age.

He had scarcely ascended the throne when the kingdom was invaded by the Tartars, who defeated Buccarius the Polish general ; and, com- mitting every where dreadful ravages, returned to their own country loaded with booty. A few

years after the nation was involved in a war with Amurath II., emperor of the Tuiks. But, be- fore the young king could take the field, a strong body of auxiliaries was despatched under the celebrated John Hunniades, vaivode of Transyl- vania, to oppose the Turks, and defeated Amu- rath with the loss of 30,000 men ; after which Hunniades retook all the places which had been conquered by Amurath. A treaty was concluded, by which the Turks promised to re- linquish their designs upon Hungary, to acknow- ledge the king's right to that crown, and to give up all their conquests in Rascia and Servia. This treaty was sealed by mutual oaths; but Uladislaus broke it at the persuasion of the pope's legate; who insisted that nqw was the time for humbling the power of the infidels. The consequence of this perfidy was, that Uladislaus was entirely defeated and killed at Varna, and the greatest part of his army cut in pieces.

Uladislaus VI. was succeeded by Casimir IV., in whose reign the Teutonic knights were sub- dued, and obliged to yield up the territories of Culm, Michelaw, and Pomerania, with the towns of Elbing, Marienburg, Talkmith, Schut, and Christburg. On the other hand, the king restored to them all his other conquests in Prussia, granted a seat in the Polish senate to the grand-master, and endowed him with other privileges, on con- dition that, six months after his accession, he should do homage for Prussia, and take an oath of fidelity to the king and republic. The diet did not think

proper to renew the war against the Turks, but took under their protection the hospodar of Moldavia ; as thinking that this province would make a convenient barrier to the Polish dominions. About this time also, the crown of Bohemia becoming vacant, the people wished to be governed by a prince of Poland ; upon which the barons elected Uladislaus, eldest son of Casimir, in opposition to the intrigues of the king of Hungary. Not satisfied with this, Uladislaus took advantage of the dissensions in Hungary, to unite that crown to his own ; and this he also effected. So many foreign expedi- tions, however, exhausted the treasury ; the gen- try were greatly diminished by a number of bloody engagements ; agriculture was neglected, and the country almost depopulated. Before a proper remedy could be applied for these evils Casimir died, in 1492, more admired than be- loved or regretted. It is related by the historians that in his reign the deputies of the provinces first appeared at the diet, and assumed to them- selves the legislative power ; all laws before this time having been framed by the king in conjunc- tion with the senate'. Before Casimir's time, also, the Latin language was understood only by the clergy of Poland.

During the succeeding reigns of John, Albert, and Alexander, the Polish affairs fell into de- cline,, the kingdom being harassed by continual ,wars with the Turks and Tartars. However, they were retrieved by Sigismund I., who as- cended the throne in 1507. This monarch, hav- ing reformed some abuses, next set about ren- dering the kingdom as formidable as it had formerly been. He first quelled a rebellion which broke out at Lithuania; after which he

drove the Walachians and Moldavians out of Russia Nigra, and defeated the Russians with the loss of 30,000 men. The Russian general, and several noblemen of the first distinction, were taken prisoners. After this the king turned his arms against the Teutonic knights, who had elected the marquis of Brandenburgh their grand- master. He took several important places in Brandenburgh ; but, as he was pursuing his con- quests, the marquis was reinforced by 14,000 Germans, under the duke of Schonenburg, who laid siege to Dantzic. They were obliged, how- ever, to relinquish their enterprise ; and, in their retreat, were attacked and cut to pieces by a strong detachment of Polish cavalry. Soon after this the marquis submitted to the conqueror. Sigismund granted him half the province of Prussia as a secular duke, dependent on the crown of Poland. The power of Sigismund now excited the jealousy of Austria; and the vaivode of Walachia, with 50,000 men, made an irruption into Pokatior, but was defeated by count Taro at the head of only 6000. The count, having then augmented his army with a

strong body of Lithuanians, attacked the Muscovites and Tartars (also excited by the emperor against Poland), pursued them into Russia, reduced several towns, and at last laid siege to the for- tress of Straradub ; by which means the regent and nobility were obliged to surrender at discre- tion : Taro carried oft" upwards of 60,000 priso- ners, with an immense booty. In the reign of Sigismund the kingdom of Poland appears to have been at its highest pitch of glory. This monarch possessed the republic of Poland, the great duchies of Lithuania, Smolensko, and Sa- veria, besides considerable territories beyond the Euxine and Baltic; while his nephew Louis governed Bohemia, Hungary, and Silesia. But this glory received a sudden check in 1 548 by the defeat and death of Lewis, who perished in a battle with Solyman, emperor of the Turks. The daughter of this prince married Ferdinand of Austria ; whereby Hungary, Bohemia, and Si- lesia, became inseparably connected with the hereditary dominions of the Austrian family. Sigismund died a few months after, aged eighty- four, leaving behind him the character of the completest general, and the ablest politician, of the north; he was also, personally, a very strong man.

Sigismund Augustus, who succeeded his father Sigismund I., proved also a great and fortunate prince. He applied himself to the reforming of abuses, enriching the treasury, and redeeming the crown lands. Out of the revenue, thus re- covered, he obtained a formidable standing army, without laying any additional tax upon his sub- jects. The province of Livonia was then divided between the Teutonic knights and the archbishop of Riga; when the Russians, under pretence of assisting the former, seized great part of the do- minions of the latter. The archbishop had recourse to Sigismund ; who, after fruitless ef- forts to accommodate matters, marched to the frontiers of Livonia with an army of 100,000 men The knights, now deserting their late al- lies, put themselves under the protection of the king of Poland : but the czar, John Basilides, did

not lose his courage ; he even refused any answer to the proposals of peace made by Sigismund, and invaded Poland with his whole army. Si- gismund revenged himself by invading Russia ; until these mutual desolations and ravages at last made both parties desirous of peace, and a truce for three years was agreed on ; during which the king of Poland died, and with him ceased the house of Jagellon, which had governed Poland nearly 200 years.

A vast number of intrigues were now set on foot at the courts of Vienna, France, Saxony, Sweden, and Brandenburgh, to establish a prince on the throne, the diet consulting only their own interest, and being ready to sell themselves to the best bidder. The Protestants having by this time obtained a considerable footing in the king- dom, religious disputes were also intermingled with political. One good effect, however, flowed from this; a

law was passed that no difference in religious opinions should disqualify any Pole from holding public offices ; and that the future kings should swear to cultivate the internal tranquillity of the realm. While each of the candidates was attempting to support his own interest, John Crososki, a Polish gentleman of great merit, but diminutive stature, had just returned from France. He owed many obligations to the duke of Anjou ; whom he represented in such favor- able terms, that the Poles decided on making him king, and Charles IX. promoted the scheme. Accordingly it was stipulated that he should marry the princess Anne, sister to the late mo- march ; and, every thing being settled, the young- king quitted France, attended by a splendid retinue, and was received and crowned with great solemnity at Cracow. Scarcely was he seated on the throne, however, when by the death of Charles IX. he became heir to the crown of France : on his setting out for that country, the Poles were much exasperated against his whole nation, so that all the French in Cracow would have been massacred if the magistrates had not furnished them with guards. Henry en- deavoured to apologise for his behaviour ; but nothing could satisfy the Poles; who, on the 15th July 1575, solemnly divested him of the regal dignity, and declared the throne vacant. Commotions and factions were now again the order of the day. One principal part at last proposed Maximilian emperor of Germany ; an- other was for electing the princess Anne, and marrying her to Stephen Batori prince of Tran- sylvania. The latter prevailed, through the courage of one gentleman, who, in imitation of the Roman tribunes, stood up in full senate and opposed the proclamation of Maximilian as ille- gal. Both parties wrote to the princes whose cause they had espoused, intreating them to come and take possession of the throne. Batori proved the more alert; for, while Maximilian was disputing about certain conditions which the Poles stipulated, the former entered Poland, married the princess, and was crowned on the 1st of May, 1576.

Dantzic, however, adhered to the interest of Maximilian even after he was dead, and had the presumption to demand from the king an oath acknowledging their independence. Batori re-

‘erred them to the senate, admonishing the citi- zens to avoid all occasions of a civil war. But his remonstrances were vain ; and the Dantzickers were deaf to his proposals, until he declared them rebels, and sent against them a body of troops, who defeated them with the loss of 8000 men killed, and many prisoners. In the mean time the czar of Muscovy laid siege to Revel ; but, failing, ravaged Livonia in a dreadful man- ner. This did not hinder Stephen from laying siege to Dantzic in person, with the utmost vigor.

*Collen, the Dantzic general, made many sallies, in several of which he defeated the Poles : but, happening at last to be killed, the citizens were obliged to surrender at discretion. The terms whicli the king demanded were, that they should ask his pardon, dismiss their troops, and rebuild the monastery of Olivia, which they had destroyed; while he, on the other hand, con- firmed all their privileges, and granted them full liberty of adhering to the confession of Augs- burg. The king could now direct his whole strength against the czar, who had made himself master of several important places in Livonia, and *hose whole course was marked by unparallel- ed outrages. Such was the horror inspired by his perfidy and cruelty that the inhabitants of Wender chose rather to bury themselves in the ruins of their town, than to submit. In 1578 a body of forces was despatched into the province, the towns of Wender and Dunnenburg were sur- prised, and an army sent by the czar to the for- mer was defeated. Livonia was also invaded by the Swedes, who professed to be enemies to both parties, and were scarcely inferior in cruelty to the Russians.*

Stephen having made great preparations, and called to his assistance Christopher prince of Transylvania, took the field in person against the Muscovites, and laid siege to Polocz. The Rus- sians no sooner heard of his approach than, to strike terror into the enemy, they put all the citizens to death. When Stephen came near the town, the river was dyed with blood, and a vast number of human bodies fastened to planks, and terribly mangled, were floating down the stream. Finding that cannon made little impression upon the walls, the irritated Poles rushed to the assault with burning torches, and reduced the fortifica- tions to ashes. After the reduction of Polocz, Batori continued the war with great success. Two detachments of his army penetrated the enemy's country by different roads, wasting all before them to the gates of Smolensko, and re- turned with the spoils of 2000 villages. The czar at length was obliged to sue for peace ; which he obtained on condition of relinquishing Livonia, after having thrown away the lives of more than 400,000 of his subjects in attempting to conquer it. Stephen, thus freed from a most destructive and cruel war, applied himself to the internal government of Poland. He made the Polish cavalry formidable to the Turks and neighbouring nations; and founded the military establishment, which the Poles named quar- tienne ; because a fourth part of the revenue was employed in supporting it. Batori sent a body of cavalry towards the frontiers of Tartary, to check the incursions of t,hose barbarians; by

which means the Ukraine, avast tract of desert country, was filled with flourishing towns and villages, and became a strong barrier against the Turks, Tartars, and Russians. His last memo- rable action was attaching the Cossacks to Po- land. He presented them with the city of Tech- temeravia, on the Boristhenes, which they formed into a magazine, and

made the residence of their chieftains ; gave them officers of all degrees, established discipline among them, altered their arms, and formed them into a regular militia, which performed eminent services to the state All kinds of manufactures then known in Poland were likewise established among the Cossacks. While Batori was thus laudably employed, the Swedes broke the convention into which they had entered with Poland, and were on the point of getting possession of Riga. To this, indeed, Batori himself had contributed by attempting to impose the Romish religion upon the inhabitants of that city which was on the point of ad- mitting a Swedish garrison. Upon this treason he resolved to take exemplary vengeance, but before he could execute it he died, in 1 586, in the tenth year of his reign, aged fifty-four.

Four different candidates now appeared for the crown, viz., the princes Ernest and Maxi- milian of the house of Austria ; Sigismund prince of Sweden, and Theodore czar of Muscovy. Each of these had a separate party ; but Sigis- mund and Maximilian were so near a par that in 1587 both were elected. The consequence was a civil war ; in which Maximilian was de- feated and taken prisoner : and thus Sigismund III., De Vasa, became master of the throne. He waged a successful war with the Tartars, was otherwise prosperous, and succeeded to the crown of Sweden ; but he found it impossible to retain both kingdoms, and he was formally de- posed from the Swedish throne. In 1610 he conquered Russia, and placed his son on the throne ; but the Polish conquests of that country were always precarious. Accordingly the young prince was soon after deposed ; and the Russians began to make encroachments on Poland itself. A very unfortunate war also took place with Sweden, now governed by the great Gustavus Adolphus ; the particulars of which will be found related under SWEDEN. At last Sigismund, worn out with cares and misfortunes, died in

1629.

After Sigismund's death the affairs of Poland seemed to revive under Uladislaus VII. ; he obliged the Russians to sue for peace, and Swe- den to restore some of her conquests : but, having attempted to abridge the liberty of the Cossacks, they revolted. The war was not terminated in the lifetime of Uladislaus, who died in 1648. His brother and successor, John Casimir, con- cluded a peace with these dangerous enemies : but ere this was effected the Russians took the oppor tunity of invading and pillaging Lithuania. In a little time after the whole kingdom was subdued by Charles X. of Sweden. Happily for Poland, however, a rupture took place between the courts of Sweden and Copenhagen ; by which means the Poles were enabled to drive out the Swedes in 1657. The king resigned the crown in 1668. For two years after Poland was one scene of

confusion; but on the 17th ofSeptember, 1670, Michael Coribut Wiesnowiski, collaterally de- scended from the house of Jagello, but in a very mean situation, was chosen king. His reign continued but for three years ; during which John Sobieski, a native Polish general, gave the Turks a dreadful overthrow. Of 300,000 only 15,OOC escaped, the rest being all either killed or taken : however, the Polish soldiers, being bound by the laws of their country only to stay a certain time in the field, refused to pursue this signal victory. Wiesnowiski died before the news of this transaction reached Cracow ; and after his death a new scene of confusion ensued, till at last, in 1674, Sobieski was elected king.

John Sobieski, by his valor and good conduct, retrieved the affairs of Poland, and entirely checked the progress of the Turks. These bar- barians were everywhere defeated (see TURKEY"), but, notwithstanding his great qualities, Poland was now so thoroughly pervaded by the spirit of anarchy, that the latter part of his reign was in- volved in perplexity and cabal. Sobieski died in 1696; and with him fell the independence of his country. Most violent contests took place about the succession; the recital of which would far exceed our limits. At last Frederick Augus- tus I., of Saxony, prevailed ; but yet, as some of the most essential ceremonies were wanting in his coronation, because the primate, who was in an opposite interest, would not perform them, he found it extremely difficult to reduce his subjects to obedience. To add to his misfortunes, hav- ing engaged in a league with Denmark and Rus- sia against Sweden, he was attacked with great fury by Charles XII. Though Augustus had not been betrayed, as indeed he almost always was, he was by no means a match for the ferocious Swede. The particulars of this war, however, which ended in the conquest of Poland, as they make great part of the exploits of that northern hero, more properly fall under SWEDEN. Here we need only observe that Augustus was reduced to the humiliating necessity of renouncing the crown of Poland on oath, and of congratulating his rival Stanislaus Leczinski upon his accession to the throne, 12th of September 1733: but, when the power of Charles was broken by his defeat at Pultowa, the fortunes of Augustus re- vived ; Stanislaus was driven out; and the for- mer, being absolved from his oath by the pope, resumed the throne of Poland.

Surrounded by great and ambitious powers, the Polish nation now sunk under the weight of their rapacity. On the 5th of October, 1763, died Frederick II. elector of Saxony, and king of Poland. lie was succeeded by count Poniatowski, a Polish grandee, who was proclaimed, Septem- ber 7th, 1764, by the name of Stanislaus Augus- tus, and crowned on the 25th

of November, the same year. — During the interregnum, between the death of Augustus II. and the election of Sta- nislaus, a decree had .been made by the diet, with regard to the Dissidents or Dissenters from tiie popish religion. By this decree they were prohibited from the free exercise of their religion, and totally excluded from, all posts and places of authority. On this several of the European powers interposed, but the decree was confirmed

by the coronation diet held after the king's elec- tion. In October 1766 the declarations from the above courts were presented to Stanislaus Au- gustus, at an ordinary diet, requesting the re- establishment of the dissidents in their :ivil and religious rights. But the Popish party insisted on a confirmation of the decrees made against them. At last, after violent disputes, the business was referred to the bishops and senators. About this time the court of Petersburg, which had previously sent a small body of Russian troops to within two miles of Warsaw, added to them a force of 15,000. The Dissidents, being thus as- sured of the protection of foreign powers,' enter- ed, on the 20th of March 1767, into two confe- deracies, at Thorn and Sluck ; one signed by those of Great and Little Poland, the other by those of Lithuania. The cities of Thorn, Elbing, and Dantzic, acceded to the confederacy of Thorn, April 10th, and the duke and nobles of Courland to that of Sluck, May 1 5th. The em- press of Russia, and king of Prussia, continued to issue forth new declarations in favor of the dissidents, and the Russian troops of Poland were soon augmented to 30,000 men. Other confe- deracies were also formed in different parts. All of them published manifestoes, in which they advised the inhabitants to treat the Russians as their defenders. The Catholics were equally ac- tive. The pope also sent exhortations to the king, great chancellor, and nobility, &c. On the 26th ofSeptember, 1767, the confederacy of dissidents and that of the malcontents were united in prince Radzivil's palace. A few days after the Russian troops in the capital were re- inforced. On the 5th of October an extroardi- nary diet was held, but the affairs of the dissi- dents met with so much opposition that it was adjourned to the 12th. Next day, the 13th, the bishops of Cracow and Kiow, the palatine of Cracow, and the Staroste of Dolmski, were car- ried off by a Russian detachment. The crime alleged against them, in a declaration published by the prince, was, that ' They had been disre- spectful to the empress of Russia, in attacking the purity of her intentions towards the republic, though she was resolved to continue her protec- tion and assistance for preserving the liberties of Poland, and correcting all abuses,' &c.

The innovations above mentioned soon pro- duced a civil war, which at last ended in the utter ruin of the kingdom. In the beginning of 1768 was formed the confederacy of Bar. The intention of it was to abolish, by force of arms, the constitutions in favor of the dissidents. Si- milar confederacies

were quickly entered into throughout the kingdom : the clergy excited all ranks of men to exert themselves in defence of their religion ; and with such success that even the king's troops could not be trusted to act against them. Great cruelty was exercised against the dissidents where there were no Russian troops to protect them. Towards the end of October, 1769, prince Martin Lubomirski, one of the southern confederates, who had been driven out of Poland, and had taken shelter with some of his adherents among the mountains of Hun- gary, posted a manifesto on several of the churches of Cracow, in which he invited the nation to a

general revolt, assuring them of th3 assistance of the Ottoman Porte, with whom he pretended to have concluded a treaty. This was the beginning of hostilities between the Turks aud Russians, which were not terminated but by a vast effusion of blood. Poland was the first scene of this war, and was soon reduced to the most deplorable situation. In the end of 1768 the peasants of the Greek religion in the Polish Ukraine, and province of Kiow, took up arms, and committed the greatest ravages, having, they said, been threatened with death by the confederates unless they would turn Roman Catholics. Against these insurgents the Russians employed tlieir arms, and made great numbers prisoners. The rest took refuge among the Hadamacks; by whom they were soon joined, and in the begin ning of 1769 entered the Ukraine in conjunction with them, committing every where the most horrid massacres. Here, however, they were at last defeated by the Polish troops, at the same time that several of the confederacies in Poland were severely chastised. Soon after, the Chan of the Crim Tartars, having been repulsed with loss in an attempt upon New Servia, entered the Polish territories, where he left many frightful marks of his progress. Matters continued much in the same way during the rest of 1769 ; and in 1770 skirmishes often happened between the Russians and confederates, in which the latter were al- ways worsted.

In 1770 a considerable number of the confe- derates of Bar came to an accommodation with the Russians, who took them under their protec- tion. Agriculture, in the mean time, had been so much neglected that the crop of wheat was very deficient. This encouraged a number of desperadoes to associate under the denomination of confederates, who were guilty of still greater excesses than their predecessors. Thus a great part of the country was at last reduced to a mere desert. In 1771 the confederates sprung up afresh, and were secretly encouraged and sup- plied with money by France. A great number of French officers also engaged as volunteers in their service. The Austrian and Prussian troops likewise entered the country, on

different sides ; and the confederates found themselves in a short time entirely surrounded by those who seemed to have nothing else in view than an absolute conquest of the country. Before matters came to this crisis, however, the confederates formed a design of assassinating the king, on account of his supposed attachment to the dissidents. This extraordinary attempt was made on Sunday night September 3d, 1771, by about forty con- spirators, under three chiefs, named Kosinski, or Kutsma, Lukaski, and Strawenski; who had been hired and sworn to bring the king, dead or alive, to general Pulaski, a Polish nobleman, and leader of the confederates, who planned the atrocious enterprise. Mr. Coxe, in his travels, gives a particular account of this daring outrage. The royal carriage was fired into about 200 paces from the prince Crartoriski's house, and all the king's attendants put to flight; the king was cut across the head with a sabre, seized by the col- jar, and dragged along the ground between horses at full gallop, for near 500 paces. The conspi-

rators afterwards mounted him upon a horse. and rifled his pockets, when the majority dis- persed, leaving only seven with him. — At last all had left him, the night being very dark, except Kosinski, who resolved to save his life, upon the king's assuring him of a pardon. They stopped at a mill, whence Stanislaus sent a line to gene- ral Coccei, informing him of his miraculous escape.

Neither the virtues nor the popularity of this sovereign could allay the factious spirit of the Poles, nor prevent the dismemberment of his kingdom. The partition of Poland was first projected, it is said, by the king of Prussia. Po- lish or Western Prussia had long been an object of his ambition : exclusive of its fertility, com- merce, and population, its local situation ren- dered it highly valuable to him, as it lay between German and Eastern Prussia. Frederick pursued his object, however, with all the caution of an able politician. On the commencement of the troubles of Poland he showed no eagerness to interfere ; and, although he had concurred with the empress of Russia in raising Stanislaus Au- gustus to the throne, yet he declined taking any active part in his favor against the confederates. Afterwards, in 1769, when the whole kingdom became convulsed, and desolated at the same time by the plague, he, under pretence of forming lines to prevent the spreading of the infection, advanced his troops and occupied Polish Prus- sia. Though now master of the country, and by no means apprehensive of any resistance from the Poles, yet, as he was aware that the security of his new acquisition depended upon the ac- quiescence of Russia and Austria, he planned the partition of the rest of this unhappy country. He first communicated this project to the empe- ror, either on their interview at Niess in Silesia, in 1769, or in that of 1770 at Neustadt in Aus- tria. To induce the empress of Russia to ac- quiesce he despatched his brother Henry to Petersburg, who

suggested to her that the house of Austria was forming an alliance with the Porte ; that, nevertheless, the friendship of that house was to be purchased by her acceding to the partition, &c., until Catharine, anxious to push her conquests against the Turks, closed – with the proposal, and received ' nothing loth' her famous portion of the Polish territories. The treaty was signed at Petersburg in February 1772, by the Russian, Austrian, and Prussian plenipotentiaries. The courts of London, Paris, Stockholm, and Copenhagen, remonstrated against the usurpation; but remonstrances without assistance were useless. Poland submitted to the dismemberment, not without the most violent struggles, and now for the first time felt and lamented the fatal effects of her discord and disunion. A diet being demanded, by the par- titioning powers, to ratify the cession of the provinces, it met on the 19th of April 1773 ; and such was the spirit of the members, that, not- withstanding the deplorable situation of their country, and the threats and bribes of the three powers, the treaty was not carried through with- out great opposition. For some time the ma- jority of the nuncios appeared determined to oppose the dismemberment, and the king firmly

persisted in this resolution. But by menaces of pillaging Warsaw; by bribes, promises, and threats, the members of the diet were at length prevailed on to perform the parricidial act and ratify the dismemberment. Of the dismembered countries, the Russian province is the largest, the Austrian the most populous, and the Prussian the most commercial. The partitioning powers, however, did less injury to the republic by dis- membering its fairest provinces, than by perpe- tuating the principles of anarchy and confusion, and establishing on a permament footing that aristocratic kind of liberty which is the parent of faction, and has proved the final ruin of the republic. Under pretence of amending the con- stitution, they confirmed all its defects, and took effectual precautions to render this unhappy country incapable of emerging from its deplora- ble state.

That the virtuous and accomplished Stanislaus should have labored to extricate himself and the great body of the people from such unparalleled oppression, and that the more respectable part of the nation should have wished to give themselves and their posterity a better form of government, was very natural and meritorious. The influence of the partitioning powers was indeed exerted to make the king contented with his situation. His revenues, which before did not exceed £100,000, were now increased to three times that sum. The republic likewise agreed to pay his debts, amounting to upwards of £400,000. It bestow- ed on him also, in

hereditary possession, four starosties, or governments of castles, with the dis- tricts belonging to them ; and reimbursed him the money he had laid out for the state. It was also agreed that the revenues of the republic should be enhanced to 33,000,000 of florins (near £2,000,000 sterling), and the army should consist of 30,000 men. Soon after the conclu- sion of the peace with Turkey, the empress of Russia also made the king a present of 250,000 rubles, as a compensation for that part of his dominions which fell into her hands. These bribes, however, were not sufficient to blind the eyes of Stanislaus, or to cool the ardor of his patriotism. He labored for posterity, and with such apparent success that on the 3d of May, 1791, a new constitution of the government of Poland was established by the king, together with the confederate states assembled in double number to represent the Polish nation. That this was a perfect constitution, we are far from thinking ; but it was probably as perfect as the inveterate prejudices of the nobles would admit of. It deviated as little as possible from the old forms, and was enacted and agreed to with the approbation of all ranks.

But a few of the corrupt nobles, perceiving that it would curb their ambition, deprive them of the base means which they had long enjoyed of gratifying their avarice by setting the crown to sale, and render it impossible for them to con- tinue with impunity their oppression of the pea- sants, protested against it, and withdrew from the confederates. They also preferred their complaints to the empress of Russia, who, ready on all occasions and on the slightest pretence to invade Poland, poured her armies into the re- public, and. surrounding the king and the diet

with soldiers, compelled them by the most furi- ous and indecent menaces to undo their glorious labor, and to restore the constitution as settled after the partition treaty. Of the progress of the Russians in this work of darkness we cannot find room for a detailed account.

On the 18th May, 1792, the Russian ambas- sador delivered a declaration, which was worthy of such a cause. It was a tissue of falsehood and hypocrisy. It asserted that this wanton in- vasion, which was against the sense of every Polander, was meant entirely for the good of the republic. It censured the precipitancy with which the new constitution was adopted, and ascribed the ready consent of the diet to the in- fluence of the Warsaw mob. It represented the constitution as a violation of the principles on which the Polish republic was founded — com- plained of the licentiousness with which the sacred name of the empress was treated in some speeches of the members; and concluded by professing that on these accounts, and in behalf of the emigrant Poles, her imperial majesty had ordered her troops to enter the territories of the republic, &c. The spirit manifested by some of the nobility was now truly honorable. They de- livered in their plate to the mint : prince Rad- zivil engaged to furnish 10,000 stand of arms, and

another a train of ar.tillery. The courage of the new and hastily embodied soldiers corres- ponded with the patriotism of their nobles. Po- niatowski, nephew to the king, was appointed commander-in-chief ; and, though his force was greatly inferior t& that of the enemy, it must be confessed that he made a noble stand. On the 24th of May the enemy's Cossacks were repulsed and pursued by the patroles of the republic. On the 26th, about one o'clock, the piquets disco- vered a large body approaching the outposts ; and a squadron of cavalry, commanded by lieutenant Kwasniewski, supported by lieu- tenant Golejowski, with two squadrons more, in all about 300, marched out to meet them. They attacked the Cossacks with success, but pursued them with more valor than prudence to the side of a wood, where they found them- selves drawn into an ambuscade, and surrounded by 2000 horse. The intrepid Poles bravely fought their way through the Russian lines, and killed upwards of 200 of the enemy; but in this engagement Kwasniewski was wounded and made prisoner. The remainder of the detach- ment reached their quarters in safety. AH the history of man does not furnish a greater instance of perfidy, meanness, and duplicity than that of the conduct of Prussia on this occasion. A treaty of defensive alliance had been solemnly con- tracted between the republic of Poland and the king of Prussia, by which it was expressly stipu- lated, ' That, in case of menace or invasion from any foreign power, they shall assist each other with their whole force, if necessary. Instead, however, of assisting Poland, Prussia insultingly recommended her to retrace her steps ; in which case she said that she would be ready to attempt an accommodation in her favor. This attempt was never made, and probably never intended ; for the empress pursued her measures. On the 10th of June general Judycki, who commanded a detachment of the Polish troops between Mire

and Swierzna, was attacked by the Russians ; but, after a combat of some hours, he obliged them to retire. On the succeeding day and on the 14th the Russians rallied again to the attack; when, after various fluctuations of success, the Poles under prince Joseph Poniatowski com- menced a retreat. During their march their rear was harassed by a body of 4000 Russians, till, arriving at Boruskowee, the wooden bridge unfortunately gave way under the weight of the cavalry. The enemy in the mean time brought their artillery to play upon the rear of the fugi- tives. The Polish army next directed its course towards Zielime, where meeting, on the 17th, with a reinforcement from Zaslow, it halted to give battle to the enemy. The Russians were upwards of 17,000 strong, with twenty-four pieces of cannon, and the force of the republic much inferior. After a furious contest

from 7 A. M. till 5 P. M. the Russians were at length obliged to retreat, and leave the field of battle in possession of the patriots. The Russians were computed to have lost 4000 men in this engage- ment, and the Poles about 1100. Notwithstand- ing these exertions the Poles were compelled gradually to retire before their numerous and disciplined enemies. Nieswez, Wilna, Minsk, and several other places of less consequence, fell into their hands one after another. On a truce being proposed to the Russian general, Kochows- ki, the proposal was haughtily rejected ; while the desertion of vice brigadier Rudnicki, and some others who preferred dishonor to personal danger, proclaimed a tottering cause. The pro- gress of the armies of Catharine was universally marked with devastation and cruelty ; such was the hatred of the people that even as they ap- proached the country all around became a wil- derness. Prince Poniatowski continued to retreat, and on the 17th of July his rear being attacked by a very superior force, it suffered a very con- siderable loss, though the skill and courage of general Kosciusko enabled him to make a re- spectable defence. On the 18th a general en- gagement took place between the two armies. The Russian line extended opposite Dubienka, along the Bog, as far as Opalin. The principal column, consisting of 14,000 men, was chiefly directed against the division of general Koscius- ko, which consisted of ,"> 000 men only. After a most vigorous resistance, in which the Russians lost upwards of 4000 men, and the troops of the republic only some hundreds, the latter were compelled to give way before the superior num- ber of the enemy, and to retire farther into the country. This unequal contest was at last pre- maturely terminated. The king, whose benevo- lent intentions were, perhaps, overpowered by mental imbecility, and whose age and infirmities rendered him unequal to the difficulties and dangers of a protracted war, instead of putting himself, according to his first resolve, at the head of the army, determined to surrender at discretion. On the 23d of July he summoned a council of all the deputies at that moment in Warsaw. He laid before them the last despatches from the empress, which insisted upon total and unreserved submission. He pointed out the danger of a dismemberment of the republic,

should they delay to throw themselves upon the clemency of the empress, and to intreat her protection ; and mentioned the fatal union of Austria and Prussia with Russia ; together with the disgraceful supineness manifested by every other court in Europe. Four citizens only, the intrepid and patriotic Malachowski, and the princes Sapieha, Radzivil, and Soltan, vehement- ly protested against these proceedings ; the fol- lowing evening a company of gentlemen from the provinces assembled for the same purpose. This assembly waited immediately on the four distinguished patriots, and returned them their acknowledgments fcrthe spirit and firmness with which they had resisted foreign despotism : and the submission of the king to the designs of Rus- sia was no sooner made known than Poland was bereft of

all her best and most respectable citi- zens. Malachowski as marshal of the diet, and prince Sapieha grand marshal of Lithuania, en- tered strong protests on the journals of the diet against the royal proceedings, and declared solemnly that the diet legally assembled in 1788 was not dissolved. But on the 2d of August a counter confederation was formed at Warsaw, of which the grand apostate Potocki was chosen marshal. The acts of this confederation were evidently the dictates of Russia, and were calcu- lated only to restore the ancient abuses, and to place the country under a foreign yoke. At this moment the sympathy of the people of Great Britain for Poland was evinced by a liberal sub- scription of every party and sect for the purpose of assisting the king and the republic to main- tain their independence.

*Not satisfied with restoring the old constitu- tion, the empress of Russia seized upon that part of the territory which, at the last partition, she and her coadjutors had left to the republic ; and her ambassador, entering into the diet with a crowd of armed ruffians, compelled the king and that assembly to grant the form of legality to her usurpations. The nation, however, did not sub- mit. General Kosciusko kept together a few heroes, whom he was soon enabled to augment to the number of an army. ' Painful as is the task,' says a historian of this tragedy, ' we have now to enter on the detail of the blackest scene of perfidy and wickedness which the annals of Europe have to record : a detail disgusting in its progress, cruel and sanguinary in its catas- trophe, beyond all former precedent. On the 6th January 1793 the king of Prussia published a declaration respecting the march of his troops into Poland. In this, with unblushing effron- tery, and in direct contradiction to the letters he had himself written to the unfortunate Stanislaus, congratulating him on the change of government in May 1791, he asserted that ' this change had been effected without the knowledge of the neighbouring friendly powers. The revolution had, he added, bee*n beheld with much displea- sure by a great part of the nation, who had im- plored and happily received the assistance of her imperial majesty of Russia, whose troops were co-operating with the confederated nobility for the suppression of innovation, and the resto- ration of virtue to the constitution. He hoped that the troubles of Poland would have termi-*

nated without liis interference, but that the ob- stinate resistance of the soi-disant patriots, and the Jacobinical proceedings, especially in Great Poland, obliged him to take effective measures for his own safety. He had therefore concerted measures with the courts of Vienna and Peters- burgh, aud had resolved to send a body of troops under general Mollendorf into

Great Poland.' Whatever factions existed in Poland previous to the Russian invasion they remained undisco- vered by any eye, except that of the Prussian monarch. To the rest of Europe it appeared that the new constitution of Poland was received with applause by the unanimous voice of the whole nation, and produced real satisfaction among all ranks, except a few of the nobility who were either basely devoted to the court of Russia, or disappointed by being precluded from the chance of succeeding to the throne. The Prussian troops, however, advanced to Thorn, and, being refused entrance, attacked it with cannon, broke open the gates, dislodged the guards, and took possession of it on the 24th of January. Different Polish detachments, dis- persed throughout Great Poland, were attacked at the same time, and driven from their posts. Dantzic, which had already suffered considerably by the oppressions of its neighbours, soon be- came subjected to the Prussians, and 1700 men were quartered upon the citizens. On the 3d of February the confederated Poles published a pro- test against the violent entrance of the Prussian troops, in which they complained of the breach of the most solemn engagements by those who were bound by treaties to give them all possible assistance. This confederation, which sat at Grodno, sent a note on these subjects, dated 6th of February, to count De Sievers, the Russian ambassador, to be communicated to the empress,

entioning that an alarm of an intended new partition was general in Poland, and trusting to her majesty's friendship and good-will to quiet the alarms of the people, and concluding, that the confederation had sworn to maintain the unity and indivisibility of the republic. But, on the 24th February, they were insulted by a new manifesto of the king of Prussia, informing them that the same motives which had induced him to send troops into Great Poland, had led him to make sure of Dantzic and its depen- dencies. In this manifesto he also charged the city with ' having become the seat of an auda- cious sect, in close connexion with the rebels of France ; and therefore he had ordered his lieute- nant-general Raumez to take possession of Dantzic for the preservation of good order.' In consequence of all this the burgomaster and council of Dantzic, at the kind request of the king of Prussia, on the 2d April ordered all the inhabitants to keep quiet. The second partition of this unfortunate country was now rapidly ap- proiching.

It was preceded by manifestoes from the loyal and imperial robbers. The declaration of the emperor of Germany was dated Vienna, Febru- ary 14th, and was couched in terms of great forbearance, but contained an absolute injunction to the Poles in his dominions placidly to regard the dismemberment of their country. In March

the manifesto of the empress of Russia appeared Religion was, as usual, called in to sanction this atrocious act of rapine and injustice, and Catha-

rine humanely lamented the sufferings of the Poles, among whom she had endeavoured for thirty years to preserve tranquillity, &c. To provide, therefore, for the future safety of the Polish dominions, and to prevent all further changes, she graciously intended to take for ever, under the sceptre of Russia, those lands, with their inhabitants, which lie between Druy, on the left bank of the Dwina, to Neroch and Dubrova, and following the border of the wai- wodship of Vilna, to Stalptsa, to Nesvig, and then to Pinsk ; thence passing Kunish, between Viskero and Novogreble, near the frontier of Gallicia; thence to the Dniester, and terminating in the old border of Russia and Poland at Icger- tie.' In this partition, « the increase of the hap- piness of the inhabitants was avowed to be the sole object of her imperial majesty.' The decla- ration of the Prussian monarch, which was dated 25th March, echoed the sentiments of the Rus- sian manifesto, and avowed that to preserve the republic of Poland from the dreadful effects of its internal divisions, and to rescue it from utter ruin, no means remained but to incorporate her frontier provinces into the states of Prussia ; and therefore he had determined to take immediate possession of the cities of Dantzic and Thorn, the waiwodships of Posen, Gnesen, Kalish, Si- radia, Lentschir, Rawa, and Polotsk ; the city and monastery of Czentochowa ; the provinces of Wielun, Cujavia, and Dobrzyn, &c. The people were further exhorted to behave as loyal subjects to Prussia, and renounce all connexion with the crown of Poland. On the 9th April the count De Sievers signed a further declara- tion on the part of Russia, in which, after detail ing her efforts for preserving order in Poland, and the ingratitude with which these had been received, she pours forth a torrent of invectives against the Jacobine opposers of despotism in Poland. In return to all these declarations the confederation sent a note to M. de Sievers, ex- pressing the utmost surprise at his avowal of the intended usurpation. The ministers of Berlin and Petersburgh delivered notes to the Polish diet, demanding the appointment of a deputation to sanction the intended division, which pro- duced violent altercations. In the sitting of June 26th it was agreed, by a great majority, to claim the mediation of foreign courts with those of Berlin and Petersburgh, to induce them to withdraw their troops, and give up the provinces of the republic. A motion was next made that the deputation demanded should be empowered to treat only with Russia, which was supported by the king, and carried by a majority of 107 against twenty- four. On the 28th the question respecting the delegation to treat with the courts of Petersburgh and Berlin was agitated, and op- posed by almost the whole chamber; and an in- junction was voted to the chancellors of Cour- land and Lithuania, to draw up answers to the notes from those courts, agreeable to this resolu- tion. The diet was then adjourned to the 1st of July, and from that to the 15th; when a second conference took place between the depu-

lies and the Russian ambassador, and the former delivered a remonstrance against the violence committed against the deputies, many of whom had been forcibly arrested at their houses. This memorial he refused to transmit to the empress, and replied in a note full of menaces, insisting on the ratification of the treaty, to which the diet refused to accede, and prorogued its sitting to the 30th. Successive threatening, notes were sent to the diet, both by the Russian and Prus- sian ministers ; and the castle was surrounded by Russian soldiers. At last, on the 2d September, the diet came to a resolution to declare to all Europe that, in defiance of the faith of treaties, by which the dependence of Poland was guaran- teed, being at that moment deprived of free-will, surrounded with an armed force, and threatened with a further invasion by Prussian troops, ' they were compelled to authorise a deputation to sign the treaty planned and amended under the dicta- tion of the Russian ambassador.' It was further declared, in this extorted treaty, in the name of the king, that he would not give his consent, in his own name and that of the diet, but on con- dition that the articles should be mutually agreed to, under the guarantee of the court of Russia. The violences exercised on this occassion were exceeded by those which took place during the subsequent negociation with Prussia, which was opened on the 23d September by the Russian ambassador; who, previous to the sitting, arrest- ed four of the representatives ; and stationed grenadiers in the avenues to the castle, which was surrounded with troops.

Poland, thus reduced to one third of her force and extent, lost a proportionate part of her reve- nues. In the session of the 23d November a plan was adopted of raising two loans, under the guarantee of the empress of Russia ; one for 27,000,000 of Polish florins, to discharge the king's debts ; the other of 10,000,000, for the use of the republic. The finances of the republic were limited in future to 16,000,000 a year, ten of which were to be contributed by the remain- der of the Polish provinces, and six by the rem- nant of Lithuania, to defray the support of the king, and the expenses of the civil list and army. The termination of the diet of Grodno was marked by turbulence and precipitation. The new con- stitution, though partly opposed by some of the nuncios, experienced little alteration, and its ac- ceptation was formally announced. The two last sessions were tumultuous, and every effort •was exerted by the opponents of Russia, but in vain.

At last these repeated and unparalleled op- pressions excited the latent patriotism of the Poles. Early in February the intrepid Kosci- usko appeared at the head of a considerable body of insurgents, attacked the Prussians,

forced them to retreat, and pursued them to a great distance. The Russians having evacuated Cracow, on the 23d of March, Kosciusko took possession of it on the 24th, and next morning ordered the gates to be shut, and proclaimed himself com- mander in chief of all the forces of Poland. He then imposed an oath of fidelity on all the mili- tary in the city, took possession of the public tieasure, and proceeded to measures of military

sequestration. On the 25th he issued a procla- mation, in the most energetic terms, inviting the nation to shake off its fetters. This proclamation was received with great applause. Kosciusko was conducted to the town house, presented to the chief nobility, and by them formally invested with the title of general, while every thing was abundantly supplied for the support of his army. On the 26th a revolutionary tribunal was established, composed of fourteen members, and every five houses were required to furnish one man armed and equipped for the defence of the constitution against the usurping powers. The corporation then assembled before the town- house, whence the magistrates led them to the church of the Holy Virgin, where the constitution of the 3d of May, 1791, was publicly read, and an oath taken to defend it. Kosciusko then is- sued another proclamation, exhorting the Poles to respect the dominions of the emperor; and the Austrian generals on the frontiers were officially informed that, if any violence were committed on the emperor's subjects, the revolutionary govern- ment would procure immediate indemnification. Warsaw was now in the highest state of fermen- tation. There were no fewer than 15,000 Rus- sians in the city : where the permanent council decreed the insurgents rebels, and subjected them to the most arbitrary punishments. The king issued a proclamation exhorting his subjects to a peaceable acquiescence in the established order of things, and urging the danger and destruction of resistance. In the mean time the nobles who had taken the oaths before Kosciusko went to their respective estates to assemble and arm their vassals. Baron Ingelstrohm about this time sur- rounded the diet at Warsaw with a military force, and demanded the surrender of the arsenal. This was refused, and notice being sent to Kosciusko, he, about the end of March, set out for Warsaw with his army, and a reinforcement of 4000 pea- sants armed with pikes, &c. On the 4th of April he was met by a detachment of 6000 Russians, with a park of heavy artillery. A fierce battle ensued. The Polish peasants, in desperate va- lor, made a dreadful carnage of the enemy : ge- neral Woronzow was taken prisoner, and 1000 Russians killed ; while the Poles are said to have lost only sixty men, and took eleven pieces of cannon. After the battle Kosciusko proceeded, with his army, to Craycovy, where he was joined by a great body of disaffected Poles. Early on the 17th a commotion took place at Warsaw which ended in the citizens seizing the arsenal and after a bloody conflict expelling the Russians. The Poles set fire to several houses

in the city, to dislodge the remaining enemies, and a dread- ful slaughter and pillage ensued. The king's si- tuation after this became critical : a new regency kept no measures with the agents of Prussia and Russia, and the people were jealous of every motion of the king. They made him promise, repeatedly, that he would not quit Warsaw ; placed two municipal officers as a guard on him, and desired him often to show himself to the people. The amiable monarch not only com- plied with these requests, but entered with such ardor into the national cause as to send the half of his silver plate to the'mint, and 1000 ducats to

the military chest. The other half of his plate he devoted to the relict of the families of those patriits who had perished on the 17th and 18th of April.

By the advice of Kosciusko, on the 29th May, the provisionary council was abolished, and a national council instituted in its stead, under the direction of the king, who engaged never to sepa- rate his interests from those of the nation. In the mean time the Polish army daily increased, and the empress sent 40,000 Russians from the Ukraine, and 16,000 from Livonia, to oppose its progress. In the end of May Kosciusko's troops amounted to 22,970 men ; that of general Ko- chowski to 18,000; that of Jassinski at Grodno to 6000 ; another corps of 12,000 were stationed at Wilna ; and another of 8000 at Warsaw ; be- sides great numbers of peasants not included. Not to mention various skirmishes, which in general ended in favor of the Poles, a Prussian army under general Eisner on the 15th of June took Cracow, Kosciusko not being able to move to its relief; after which Eisner joined the Prus- sian monarch, who arrived at Killeeon the 25th, joined the Russian forces, and soon after en- camped near Warsaw. The citizens, enraged at so near an approach of their enemies, sacrificed several of those delinquents who had been con- victed of treason, among whom were some per- sons of the most distinguished rank. To con- ciliate the Russians, however, a proclamation was issued, permitting the free use of the Greek religion. Another was issued, setting forth, that, as the Polish revolution took place upon princi- ples quite distinct from those of the French, all authorities should be respected, and the king treated with the honor due to his rank. In the end of June a manifesto was issued by the em- peror on his troops entering Poland. On the 12th of July the head-quarters of the king and prince of Prussia were only ten miles from War- saw. Meantime Kosciusko having eluded that army, and defeated another party of Prussians, had got into Warsaw. On the 31st of June the Prussians

began a heavy cannonade on that city ; a dreadful fire was kept up on it by night and day, and an incredible number of lives were lost. Both king and prince were in imminent danger. Four entrenched and connected camps, under Kosciusko, Dambrowski, Zajaczeck and Mokno- rowski, were placed before Warsaw. Kosciusko and Madalinski were stationed at Mokatow ; Dambrowski was opposed to the Russians at Czerniaco ; Zajaczeck to the Prussians at Wola ; and Moknorowski with prince Jos. Poniatowsky to the Prussians at Gurce. About this time the Poles obtained some considerable advantages over the Russians at Liebau, and Kerzniniec in Volhynia. In Great Poland the Poles had im- prisoned the Prussian troops, thrown down the Prussian eagles, and plundered the military chest. On the 22d general Marawsky arrived with 10,000 men; the provinces of Posnania, Gnesen, and Raffish, took up arms in his favor, and success attended the Poles in every quarter. Near Warsaw, however, the Prussians had carried some Polish redoubts. On the night of the 5th of September the Prussians and Russians aban- doned the seige of Warsaw, after a fruitless attack

of two months, much disabled by want of pro- visions, &c. The king of Prussia retreated, to his own dominions in three columns, leaving the sick and wounded at the mercy of the Poles. Meantime the Russian corps, to the number of 10,000, retreated to Lublin. Early in September news was received in Warsaw of the success of the Poles in Lithuania ; but about the same time the Russian»grand army of 20,000 men arrived in Poland ; and on the 18th a bloody engagement took place near Brzesk, in which the Poles lost great numbers, and were forced to retreat across the Bog. They were successful, however, against a party of Prussians at Kamiona, and their num- bers still increased in Great Poland. Bomberg was taken by the brave Madalinski, and Kosciusko next turned his views to Lithuania, but hearing of the defeat at Brzesk, and that Suwarrow was marching to Warsaw, he resolved to meet him. Hearing that Fersen intended to join him, he ad- vanced with 6000 men to prevent that junction; and on the 10th of October a dreadful battle took place. The Russians advanced twice, and were twice repulsed ; but the Poles, leaving tiieir fa- vorable position on the heights, boldly pressed on, till the Russians forming anew, and turning back on their pursuers, the rout became geneial, though Kosciusko flew from rank to rank in the hottest of the engagement, and had three horses killed under him. At length he fell, and was wounded by a Cossack. He rose, but was again knocked down by a Cossack, who was aiming at him a mortal blow, when his arm was held by the Russian general Chrnozazow, whose wife Kos- ciusko had lately allowed to depart from Warsaw, Kosciusko requested death, but the general pre- ferred taking him prisoner. The Polish infantry continued to fight with furious valor. This dis- aster excited universal regret at Warsaw, yet the Supreme Council published a spirited procla- mation, exhorting the Poles to remember their

motto, Liberty or Death ! to preserve their union, and redouble their efforts. The Russians under Fersen soon after summoned Warsaw, and ou being refused, after joining all the corps under Fersen, Dernfeld, Denisow, and Suwarrow, they on the 4th of November attacked the suburb of Prague, separated from Warsaw by the Vistula, and defended by above 100 cannon. The fero- cious Suwarrow ordered his soldiers to mount to the assault as they had done at Ismael, by climb- ing over their dead and wounded countrymen as well as their enemies, and to fight only with sabre and bayonet. The Russians obeyed his orders with savage impetuosity, and presented themselves all at once before the lines at Prague. Thus surrounded, the Polish generals found themselves unable to oppose 50,000 men with only 10,000. The cry raised by the Russians reached to the other side of the Vistula, and added to the consternation of the Poles, who were engaged with the rest of the Russian troops, and endeavoured to retreat into Warsaw, over a bridge, but were dreadfully slaughtered in the attempt. After a severe conflict of eight hours, resistance on the part of the Poles ceased : but the massacre by Suwarrow, who, from his habitual cruelty, was singled out for this butchery, con- tinued for two hours longer ; and the pillage

iasted till next day at noon : 5000 Poles were slain in the assault, the rest were imprisoned or dispersed. The citizens were now forced to lay down their arms, and their houses were plun- dered by the merciless Russians ; who, after the battle had ceased ten hours, at nine at night set fire to the town, and again began to massacre the people ; thus 9000 persons, unarmed men, de- fenceless women, ami harmless infants, perished, either in the flames or by the sword, and nearly the whole suburb was reduced to ashes. During this siege not fewer than 30,000 Poles were put to death. In this exigence count Potocki proposed to treat \ith the Russians in the name of the re- public ; Lut was haughtily answered by Suwar- row, that the empress was not at war with the republic, aud that his object was only to reduce her refractory subjects. Deputies were then sent from the magistrates of Warsaw to surrender the city, on the single condition of preserving their lives and property. Suwarrovv insisted on the surn i der of their arms. This was refused by the Polish soldiers, and their general Wawrzecki, with many others, refused to take part in the capitulaticn : on which the Russian general al- lowed the military to leave Warsaw with their arms, but threatened no quarter next time he should meet with them. On the 7th the Supreme Council icsigned their authority to the king. Suwarrow ou the 9th made his triumphant entry into Warsaw, during which the citizens observed a mournful silence. On the 10th he went with much pomp to pay his

respects to king Stanis- laus; anel, to complete this execrable tragedy, the 1st of December was set apart for solemn thanksgiving, and Te Deum sung for the triumph of powerful oppression. The Polish patriots, to the number of 30,000, who refused to accede to the capitulation, went to Sandomir under Wawr- zecki ; but were soon forced to disband. Ano- ther corps of 6000, under Wawrzecki, Mada- linski, and Dambrowski, went to Galicia. A powerful military force was stationed at Warsaw, and cannon pointed at the city in every direction to keep it in subjection. Meantime Kosciusko recovered of his wounds under the care of Ma- dame Chrnozazow. On the 20th of December a courier arrived from the empress, demanding the arrest of count Ignatius Potocki, and several other patriots, whom she sent to Petersburg ; and the same messenger brought orders to king Stanislaus to retire to Grodno ; he accordingly left Warsaw on the 7th of January, 1795.

Such was the state of Poland, until, in 1806, the victories of Buonaparte brought the French hither, and led their ruler to seek additional means of aggrandisement in the independent spirit of the Poles. At the peace of Tilsit, having stripped Prussia of the greatest part of her possessions here, he gave a small portion to Russia, and erected the rest into the grand duchy of Warsaw, which he assigned to the king of Sax- ony. In 1809 he compelled Austria to cede part of Galicia to Russia, and a farther part to this new state. But in 1812 the Russians were enabled to occupy Poland ; and the congress of Vienna, while it decreed to Austria and Prussia a partial re- stitution of their late cessions, confirmed to Russia nil the Polish and Lithuanian provinces ac-

quired before 1795, conferring on her, in addi- tion, the sovereignty of the central provinces, which constitute the present kingdom of Poland Each of the three powers was enjoined by the congress to give to its respective portion of Po- land as free a constitution as circumstances should permit. In this some progress has already been made by Russia and Austria ; but so backward is the state of civilisation, so debasing are the effects of long servitude, that ages must elapse before the improvement of the Poles can be effectual. The peasantry, when no longer driven to their work by compulsion, have shown themselves so obstinately indolent that the authority of the magistrates has been found necessary to inflict the blows formerly adminis- tered by the order of the landholder.

POLAND, THE NEW KINGDOM OF, the onlypor- tion of the foregoing country that still retains its ancient name, comprises the central provinces of Poland, or the chief part of that which, from 1807 to 1813, formed the duchy of Warsaw. It is bounded by the respective acquisitions of Russia, Austria, and Prussia. The form of this territory is a square of about 200 miles, in the middle of which stands the capital, Warsaw : there is also a detached tract extending north- east towards Lithuania. Its area is 47,000

square miles, and its population about 3,000,000, di- vided into the eight palatines of Cracow, Sando- mir, Kalisch, Lublin, Plock, Masovia, Podlachia, and Augustow. They participate, in soil and climate, the characteristics common to Poland at large.

Though subject to the same sovereign as Rus- sia, the kingdom of Poland is governed in every respect as a separate monarchy. The late em- peror Alexander gave the Poles, in November 1815, a constitutional charter, so framed as to combine several modern improvements in legis- lation, with the ancient forms of the Polish con- stitution. Now, as formerly, there is a king, a senate, and a diet. The regal dignity is vested in the czar, represented by a viceroy, and a ca- binet of ministers, in whom the executive go- vernment resides. The chief ministerial depart- ments are those of war, finance, police, law, and education. All ministers are accountable to the senate, being obliged to lay reports before it, and to submit to its discussions, nearly in the form observed in the British parliament. The senate consists of ten bishops, ten worgwodes (pala- tines), and ten castellans, named by the king for life. The lower house, or chamber of represen- tatives, of seventy-seven deputies from the pro- vincial nobility and gentry, and of the members of the cabinet, who have seats here ex oflficio.. The diet, on the model of the smaller Polist diet, is limited to the senate and house of repra sentatives. Its sittings last only a fortnight ; and the sovereign is not pledged to convoke it more than once in two years : its consent being only necessary to measures of national interest; namely, the imposition of taxes, and acts affect- ing the constitution. The revenue of this king- dom amounts to about £900,000 sterling, of which £180,000 go to the civil list. The military force is considerable in cavalry. The religion of the majority is the Catholic ; but the Protestants

are numerous ; and the Jews are computed to form a seventh of the population.

These statistical details were drawn up with preat accuracy and applied to the state of this portion of Poland as late as the close of 1830, but a revolution, which seemed to set at defiance »he whole power of the Russian empire, then

broke out. Nearly the whole of the kingdom took arms against Russia; but iheir efforts proved finally unavailing, and on March 25, 1832, a ma-

nifesto was issued by the emperor of Russia, de- claring Poland for ever incorporated with the Russian empire.

POLAR REGIONS.

POLAR REGIONS. Various causes have con- spired, within a recent period, to attract atten- tion to those immense basins of water which appear more or less to surround the poles, and unite the two great oceans of the earth. Civi- lisation has spread toward the northern shores both of America and of Asia ; navigation and commercial speculation have extended still far- ther their discoveries and temporary conquests ; the continent of South America has rapid ly ad- vanced in political importance, and is taking a new and most interesting station among the free and commercial governments. During this pe- riod China and the East Indies have fully main- tained their interest with the western world ; a shorter passage to those storehouses of wealth and luxury would, at the present time, be as acceptable to Europe as when Columbus was stimulated to seek it — while a state of general peace has for many years enabled the nations best qualified, and most disposed, to promote the science of physical geography. Russia and the United States of North America have contri- buted their respective quotas of exertion in this cause; but Great Britain, as by her maritime and commercial station in honor and duty bound, and more, perhaps, than in duty bound, has been foremost to explore these dark but inte- resting recesses of nature. She has nearly com- pleted the boundaries of the North Polar Sea, and penetrated beyond the arctic and antarctic circle, several degrees further than any other nation.

We feel it therefore demanded of us to de- vote a distinct article to the progressive geogra- phy of these regions ; noticing first the discove- ries of navigators previous to the late expeditions from this country ; and then more particularly the result of those spirited undertakings.

NORTH POLAR REGIONS. — In geography, as in some other of the sciences, the world has been singularly indebted to the sincere pursuit of certain great errors. Columbus was thus allured to his arduous enterprise, by supposing that the East Indies extended westward to many times their present width ; and, long after the discovery of the extent of the American continent, it was hoped that some opening, admitting a passage to the east, might be found. In some very early maps, preserved in the king's library, Asia and America are united throughout their whole extent.

Vesputius, Ojeda, and others, however, beat in vain round the Gulf of Mexico, and when they had traced the vast mass of the American continent stretching southward, the minds of men were reluctantly turned towards the north, as the only quarter in which to hope for a passage.

Within two years from the discovery of Ame- rica by Columbus, our Henry VII. granted a commission to John Cabot, a Venetian, who re- sided many years at Bristol, to discover un- known lands, and annex them to the crown of England. In the spring of 1497, after steering directly west on the parallel of Bristol for three weeks, he reached a large island which he called Prima Vista, ‘ The First Seen,! by subsequent usage named Newfoundland. On the first day of that saint he discovered the neighbouring island St. John’s, and having secured three of the inhabitants of these islands, and several of the productions, he is said to have coasted the whole of the north-east promontory of America between 38° and 56° of latitude, although it is remarkable that we hear of no continental point or place to which he gave name.

We are not unaware of the pretensions to the discovery of Newfoundland which have been urged on behalf of the Norwegian navigators of the eleventh century. The story told by Snorro, the northern historian, and once a judge in Ice- land, is, that about the year 1001, as one of the Icelandic colonists, named Herjolf, was proceed- ing with his son Biorn, on a trading voyage, their ships were separated in a squall, and Biorn hearing, on the coast of Norway, that his father was gone towards Greenland, steered westward, with the hope of finding him, when a new and severe storm drove him to the southward many leagues, until he reached a fine open country well shaded with wood. Returning to Iceland, Biorn induced a friend and fellow-countryman, of the name of Leif, to go back with him to this new-discovered shore; j>n approaching which they first observed a barren, rocky island, to which they gave the name of Helleland, and a low sandy coast covered with trees extending beyond it, which they called Markland. A voyage of two days more brought them to ‘ a new coast of land,’ to the northward of which they discovered another and very large island. Here they ascended a river which led to a lake, surrounded with woods, on the banks of which they determined to winter. They described the climate on their return as exceedingly mild and agreeable, the soil fertile, and the fish, particu- larly salmon, abundant in the river. In the woods they found a wild vine, which was suffi- ciently welcome to the settlers, to induce them to give the name of Vinland or Winland to the whole country. The shortest da they observed to consist of eight hours sun ; the only circum- stance of their narrative which indicates the la- titude of this district, and which would very well accord with that of the eastern coast of Newfoundland ; while, from the other coasts de- scribed, it would not appear improbable that

these navigators were in reality the first Euro- peans that reached the western continent. Such obscurity, however, rests over the circumstances of the voyage that that of Cabot has always been taken to be the first authentic discovery of Newfound- land and the neighbouring shores. We should not, indeed, have noticed this ancient record (from the Chronicle of Aldus, Stockholm, 1697) of a cir- cumstance that had dropt from the recollection of mankind until the discoveries of Columbus, and their consequences, but for the singular fact that, after possessing and settling Newfoundland for upwards of two centuries, we have at this day no accurate acquaintance with the interior ; no certain information whether there are perma- nent native inhabitants of the woods or not ; and that in a late expedition, undertaken by captain (then lieutenant) Buchan, the commander of one of the British expeditions to the pole, that officer has thrown more light upon this subject than has ever been received in Europe since our pos- session of the island ; and actually found a sort of lake in the country that reminds us of the scenery of this the earliest of all the supposed discoveries of America.

*' If it had been Henry's purpose to prosecute the object of the commission given by him to * Cabot,' says Dr. Robertson, ' and to take pos- session of t!ie countries which he had discovered, the success of this voyage must have answered his most sanguine expectations. His subjects were undoubtedly the first Europeans who had visited that part of the American continent (in modern times) ; and were entitled to whatever rights of property prior discovery is supposed to confer.' On the return of Cabot, however, this •monarch was too deeply engaged in his war with Scotland, with insurrections at home, and with a projected alliance with Spain, the sovereign mis- tress of both Indies, to follow up with any vigor this promising circumstance ; and the reigns of his successors, of Edward VI. and of Mary, were too deeply occupied with religious disputes to allow much of the public attention to be af- forded to such enterprises. Private individuals, indeed, united with much zeal in the spirit of discovery which was now diffused throughout Europe. In the reign of Henry VIII. the son of John Cabot was despatched by some Bristol merchants to the coast of Brasil, and in that of Edward VI. a company of ' merchant adventurers for the discovery of regions, dominions, islands, and places unknown,' obtained a charter from the government, and chose this celebrated navigator for their governor. In the same reign we find increasing attention directed to the fisheries of the coast of Newfoundland.*

Towards the close of the fifteenth century, and in 1500 and 1501, Cortereal, a Portuguese, also sailed along the Icoast of Labrador, which is hence in early maps called after him Corterealis, and probably he even traced the entrance of Hudson's Bay. It is certain that he returned with sanguine hopes of discovering a passage, for he soon after set out on a new

expedition ; but the issue was fatal ; he returned no more. His brother Miguel, who went in search of him, snared the same fate. A third, who desired to e' How, was stopped by the express orders of the

king. With this enterprising and unfortunate family, seems to have expired the zeal of the Portuguese for northern discoveries.

But the reign of the maiden queen was des- tined to extend our geographical knowledge, our navy, and our colonies, in the happiest union of efforts. Elizabeth, it is well known, directed her attention to these objects immediately on her accession. She encouraged the company of Merchant Adventurers in their attempts to disco- ver the north-west passage to India ; she cul- tivated the new connexion which had been accidentally opened with Russia by one of the captains ; and patronised three successive voyages of Martin Frobisher to the north-east coast of Ameiica. In the first of these he reached the coast of Labrador in about six weeks, and shortly after entered the straits in lat. 63° 8′ which now bear his name. It is the Lumley's Inlet of Davis, and many writers, having Cape Walsingham on the north, and Resolution Island on the south ; and has often been confounded with Hudson's Strait, the larger opening at Cape Chedley, in the south. Frobisher speaks of discovering on this coast, at a distance, ' a number of smal things floating in the sea, afarre off, which ' he ' supposed to be porposes, or seales, or some kind of strange fish ; but which proved to be men in their canoes, covered with skin.' Having attracted one of them tOAvard him by the sound of a bell, which he appeared to offer as a present, Frobisher caught this ' strange infidel fast, and plucked him with main force, boat and all, into his bark, out of the sea. Whereupon, when he found himself in cap- tivity, for very choler and distain lie bit his tongue in twaine within his mouth.' This man afterwards died in England. The voyage was principally regarded at the time for diffusing a fallacious hope of finding gold in these regions. One of the sailors had accidentally picked up a stone ' much like to a sea coal in color,' and his wife, on his return, happening to throw a part of it into the fire, and afterwards to quench it with vinegar ' it glistened with a bright mar- quesset of gold.' This event soon spread in a credulous age. ' The gold-finers of London,' says Hakluyt, ' assayed the stone, and gave it as their judgment that it contained a large quantity of gold. This circumstance actually became the main encouragement to a second voyage, and Frobisher was ' especially directed by commis- sion ' to search for ' more of this gold ore,' ra- ther ' than for any further discovery of the passage.' We need, therefore, only further ob- serve, that after taking out ' gold-finers,' to search for ore, and lading their ships on this second voyage with ' almost 200 tons,' though at first the delusion of having found the all-need- ful and all-rewarding object of anxiety continued both amongst the crews and at home, upon trial it proved to be ' no better than black lead ; and verified the proverb— that all

is not gold that glisteneth.'

Flattered by these partial successes of her commander, queen Elizabeth gave the name of Meta Incognita to the newly-discovered regions, and ordered a third expedition to be prepared to colonise them. Fifteen ships were accordingly destined to the service, twelve of which were to

bring back cargoes of gold ore, and the three others to remain, with 100 men, who were to form the settlement for one whole year. Fro- bisher was made supreme naval and military commander, and received a gold chain from the queen on his appointment.

The fleet destined for this earliest project of colonising the western world sailed from Har- wich on the 3 1st of May, 1578, passed Cape Clear on the 6th of June, and discovered the coast of West Friesland on the 20th of that month, which was now named West England. All was ' well' until they reached the mouth of Frobisher's Strait, when the Dennis, a vessel of 1 00 tons, which had on board a principal part of the house which was designed for the winter settlers, was crushed by an island of ice, and went to the bottom. To this disaster succeeded a violent storm, which dispersed the whole fleet, driving some of the vessels up into the strait, in which they were afterwards locked up by the ice, and others into the open sea. Fogs, mists, and irresistible currents now perplexed them, and threw the admiral's experience itself out of all calculation. The fleet, after parting with two more ships, re-assembled with great difficulty in the countess of Warwick's Sound, and deter- mined, under all the circumstances, to make the best of its way homewards, and abandon for the present the thought of establishing a colony.

In 1578 we find a gentleman of considerable talents and connections, Sir Humphrey Gilbert, receiving a commission from the crown, to un- dertake western discoveries, and to possess lands unsettled by Christian princes or their subjects, provided that he took possession of them within six years from the discovery. In this year he is said to have undertaken a voyage to Newfound- land; but no details of it remain. In 1583 Eli- zabeth incorporated a younger brother of Sir Humphrey's, with himself, Adam Gilbert, nnd other associates into a company to be called The Colleagues of the Fellowship for the Disco- verie of the North-West Passage ; and Sir Hum- phrey set sail to take formal possession of New- foundland, and the Northern coast of America. ' The Portugals,' it is observed in Hakluyt, ' having a notable trade of fishing,' at this period, ' on the Newfoundland

banke, where there are sometimes more than a hundred sail of ships.'

Sir Humphrey's fleet, consisting of five ships, of from two to ten tons burden, sailed from Cawsand Bay on the llth of June. Amongst his men were included divers ' minerall men and refiners,' smiths, carpenters, and artificers ; and ' for the solace of our people, and allurement of the savages, we were provided with musicke in good varietie ; not omitting the least toyes, as morrice-dancers, hobby-horses, and May-like conceits, to delight the savage people, whom we intended to winne by all faire means possible.' At the harbour of St. John's they were welcomed by several English traders and foreigners, who had already settled here, and in whose presence they took possession of the port, and 200 leagues every way, in the name of the queen of Eng- land. Sir Humphrey re-embarked to pursue his discoveries southward. His ship, the Delight, a wretched bark of ten tons, was ultimately

wrecked on Sable Island ; and he again set sail for England in the Squirrel frigate. After a va- riety of uninteresting adventures, he passed the Azores in a perilous condition, on the 9th of September, and was observed to be nearly over- whelmed in a great swell of the sea. He still, however, persevered in making for home ; bravely observing, that ' he would not forsake his little company,' with whom he had ' passed so many storms and perils.' The last tidings that were heard of him speak of his being seated abaft of the binnacle, with a book in his hand, calling out, ' Courage, my lads! we are as near to heaven by sea as by land !' This gentleman was half-brother to Sir Walter Raleigh. The first charter of a British colony was granted to him and his companions.

Captain Davis, one of the most successful of our early navigators, was engaged in 1585 on a new expedition to the north ; the merchants of the metropolis, being convinced ' of the likely- houd of the discoverie of the north-west passage ;' and that the former commanders had only been diverted from the design by the pursuit of irre- levant objects. Two barks, one of eighty tons called the Sunshine, and another the Moonshine, of thirty- five tons, were placed under his com- mand ; the former manned with twenty-three persons, and the latter with nineteen. Touching on the coast of West Greenland this little fleet passed over to the north-east shore of the western continent, and saw land in lat. 64° 1 5', the wea- ther being temperate, and the sea clear of ice. Jt was a cluster of islands, ' among which were many faire sounds, and good loads for shipping.' The first in which they anchored they called Gilbert's Sound, and found the natives easily at- tracted by their music and friendly gesticula- tions. ' They are a very tractable people, void of craft or double-dealing,' says the narrator; ' and easie to be brought to any civilitie or good order.' Here they found plenty ' such oare as M. Frobisher brought from Meta Incognita;' but seem*

to have understood its value, or rather want of value, better than he. Standing to the north-west on the 1st of August, in six days they discovered land, and a clear shore, in lat. 66° 40′ — ‘ a very fair rode under a brave mount,’ to which they gave the name of Mount Raleigh. The north foreland they called Deer’s Cape, and the south Cape Walsingham. This latter is to be distinguished from the Cape Walsingham of Frobisher, which is the southernmost point of Hall or Hale Island, at the southern side of Cumberland Strait. The great bay between these headlands they called Exeter Sound. August 8th they returned to the south; and, coasting round Cape Walsingham, reached another southern extremity of the land, now called Cumberland Land, or Island Jto which they gave the name of God’s Mercy, ‘ as being the place of our first entrance for the discovery.’ They now sailed west, keeping this land to the north, and found a fine open passage from twenty to thirty leagues in width, ‘ the water of the very color, nature, and quality of the main ocean, which gave us the greater hope of our passage.’ About sixty leagues up this strait they met with another archipelago of islands ; and the weather

becoming very foggy, and the wind constantly to the south-east, after six days of abortive ef- forts to proceed, they set sail for England.

In a second voyage this intrepid adventurer dismissed two of his ships off Cape Farewell, to proceed northward between Greenland and Ice- land, in search of a passage ; whilst he should further explore the promising outlets he had dis- covered between Cumberland Island and Fro- bisher’s Archipelago. In long 70° W., and lat. 66° 33’, he found a clear coast, which was after- wards discovered to be that of a considerable island ; and passing a group of islands, the weather being very hot, they were singularly enough troubled with a fly ‘ which is called muskyto, for they did sting very greevously.’ They now found open sea in a western course of fifty leagues, and doubled a cape in lat. 66° 19’, which brought them down in part into Hudson’s Bay. They coasted the western side of Labrador for some time; but on the llth of September, the weather being stormy and unpropitious, they again left for England, having a ‘ perfect hope of the passage, finding a mighty great sea, passing between two lands west.’ Davis, says in a letter to his friend at home, ‘ I have now experience of much of the north-west part of the world. I have brought the passage to that likelihood, as that I am assured it must bee in one of four places, or els not at all.’ We seem destined to in- dulge ‘ the triumph of hope over experience’ (as Dr. Johnson said on a different occasion) upon this subject.

A third voyage, undertaken in the year 1587, conducted our navigator to the highest point of northern latitude that had ever been reached, that of 72° 12', on the west coast of Greenland, which they now called London Coast, and gave the name of Cape Saunderson to its most west- ern promontory. The strait between this and the opposite shore of America seems from this circumstance to have taken Davis's name. In the rest of the voyage he passed through Cumber- land Straits, round by a group of islands at the bottom, and came home through Lumley's Inlet, or Frobisher's Strait, without making any new discovery of consequence.

From the western coast of Mexico, the Spanish government sent several early expeditions, to discover the Strait of Anian. This celebrated strait, which glittered for several centuries before the eyes of adventurers, has involved geogra- phers in much perplexity, and been considered even as wholly inexplicable. The late Mr. Murray was convinced that it originated in a very different quarter of the world from that to which navigators have been accustomed to refer it. ' In the earliest maps,' he says, ' Anian is de- lineated as the most eastern country of Asia, and it occupies the position of Cachmehina, which has always, with the natives, borne the title of Anam. To understand how the separating Strait of Asia and America could be placed here, we must attend to the train of ideas which prevailed at that infant era of geographical knowledge. The American Islands, when first discovered, were still viewed as part of the East Indies, in search of which the voyage of Columbu» was undertaken. Even after they were proved to

belong to a great mass of continent, that conti- nent was supposed to be attached to, and to form the eastern boundary of Asia. Under the influence of these impressions, it is easy to con- ceive how the early East India navigators, on coming to Anam or Cochin China, where the coast first decidedly changes from east and west to south and north, might imagine that they were now between the two continents, and would soon come to the division between them, which might be named by anticipation the Strait of Anian. In one of the maps in the king's library this strait is represented as running up across the whole breadth of the two continents. The pro- gress of navigation proved that no such Strait existed here ; but still the idea was rooted in the minds of geographers, and they transferred it farther and farther north, till they reached the frozen extremities of Asia. It is not probable, however, that this impression was founded even upon the most remote tradition of Behring's Straits. The derivation above given seems con- firmed by the circumstance that the idea of the Strait of Anian was always combined, not with that of a bleak and wintry passage, but of a smiling and fertile region, and even of gold ; which last association wonderfully heightened its empire over the imagination of mankind.'

The further efforts of the Spanish government to explore the north-west

coast are concealed by that mysterious obscurity which it studiously throws over its proceedings. The only other re- markable early voyage is that professed to have been made by Juan de Fuca, by birth a Greek. The Spaniards deny all knowledge of him ; but one Douglas, an Englishman, who met him ac- cidentally at Venice, took down his narrative, to the following purport : that, after passing the 48° of latitude, he had entered the Strait of Anian, and having sailed for twenty days through a long and winding channel, and seen people on the shore covered with the skins of beasts, he had emerged into the North Sea, when, conceiving himself to have accomplished the object of his voyage, he returned. This narrative was ac- counted a fable, till Meares and Vancouver, ift tracing the north-west coast of America, dis- covered Vancouver's Island, separated from the continent by a long and narrow channel, pre- cisely similar to that through which Fuca de- scribed himself to have passed. The aspect of the country and natives, and the passage with the open sea, precisely corresponded. It became evi- dent, therefore, that the old captain had merely committed an error of judgment when, in sailing through this channel, he supposed himself to be sailing between Asia and America.

We now find the Dutch entering the field of enterprise. In 1594 William Barentz made his first voyage easterly as far as Waygatz, then along the western coast of Nova Zembla to lat. 77° 25'. The following year he undertook a second voyage, but did not reach Nova Zembla till the 17th August, when 'the weather being misty, melancholic, and snowie, and the ice im- passible,' they returned to the westward, and ar- rived at the Maes in the close of the year.

A third voyage of Barentz is more interesting. The ships, on this occasion, after sailing among

much ice, discovered, 9th June, Bear (since called Cherry) Island; and, proceeding northerly, were the first who arrived at Spitzbergen, along the western coast of which they had advanced, on the 19th, as high as 80° 11', opposite what is now called Hakluyt's Headland. Returning to the southward, Barentz made for the coast of Nova Zembla ; doubled the northern extremity ; and then was compelled, by the ice and bad weather, to seek for refuge in a bay, which he called Ice Haven : here he passed a ' cold, com- fortlesse, darke, and dreadful winter,' in about the seventy-sixth parallel. The ship was wholly wrecked, and the surviving part of the crew, fifteen in number, left this spot the following year in two open boats ; and, after forty days of the greatest fatigue, famine, and cold, in which Barentz

and two others died, they reached Kilduin in Lap- land, a distance of upwards of 1000 miles from the bay.

The Russia and Turkey Companies fitted out two vessels for voyages in these regions, in 1602 and 1606, under the respective commands 'of George Weymouth and John Knight : James Hall, a Danish commander, was also despatched hither four successive times by his government; but no discoveries worth recording were made by any of these expeditions. The honor of making the next advance in north-western geo- graphy belongs to Henry Hudson, the enter- prising navigator who gave his name to the bay, or inland sea, in which Hudson's Strait termi- nates, and also made no fewer than four voyages after a passage to India by the Polar regions, in the last of them, on which he sailed from the Thames, 17th April, 1610, his vessel was fitted out at the private expense of Sir John Wilsten- holm and Sir Dudley Digges, whose names he inscribed on two prominent points of his chart, at the north-west extremity of Labrador. After reaching these by a western course through" Fro- bisher's Strait, the land winding southward, he found an open sea; and his journey now ab- ruptly terminates, a mutiny having arisen in the crew, who thrust their commander, with his son and seven others, into an open boat, in which they are all supposed to have perished. It seems a feeble tribute, on the part of his country, to this noble seaman, to have transferred his name only to the scene of his- murder, and to have suf- fered the circumstances of his death to have been passed over, as they were, with a very in- sufficient enquiry after the perpetrators of it. He was the first of these voyagers who observed the incli7iation or dip of the magnetic needle.

Sir Thomas Button was the first navigator who reached the eastern coast of America, on the west side of Hudson's Bay. This he accom- plished in 1612, following Hudson's route to Cape Digges, and then steering directly west across th» bay. On the 18th of August he en- tered Nelson's River, on which the principal factory of the Hudson's Bay Company has since been established, and here he secured his ves- sels until the following spring, finding plenty of game in the neighbourhood. Steering north in the spring of 1613 he reached Southampton Island in lat. 65°, and having then coasted the whole of the west side of the bay, returned home.

W. Baffin, an English adventurer in the same regions in 1616, has given name to another very important bay to the north of Davis's Strait. He coasted the whole north-eastern shore of America to a higher latitude than had ever before been reached ; but, leaving very imperfect observations of the points of discovery which he made, and no one longitude, ' each succeeding geographer, as Mr. Barrow observes, ' has drawn Baffin's Bay on his chart as best accorded with his fancy. In his latitudes, however, Baffin was tolerably accurate for the age in which he lived ; and the return

of Captain Ross, from his expedition in this direction, has confirmed the whole of Baf- fin's general outline.

In 1631 Luke Fox entered Hudson's Bay by the usual route, and explored Sir Thomas Roe's Welcome, a strait between the eastern coast of America and Southampton Island. He made the important observation that a tide came down from the north, contrary to that general tide which came in by the straits. He traced also a considerable part of the channel on the eastern side of the great island of Southampton, which captain Parry has since called, after him, the Fox Channel. Fox sailed along a considerable part of its eastern coast; but, when he found this to fail him, he began to think ' he had made a scurvie voyage of it,' and called the point of lantf he finally reached ' Foxe's Farthest.

Captain James, an adventurer fitted out the same year with Fox by the merchants' of Bristol, was overtaken by winter in the southern part of Hudson's Bay, where he endured a series of suf- ferings from cold, the narrative of which tended much to chill the public ardor for future discoveries.

Forts and factories now began to be erected on the western coast of Hudson's Bay, for the pro- tection of the fur trade, of which the company of that name had obtained a grant from Charles 1., and projects of discovery were abandoned foi the more certain results of commerce. This company has been accused of a general un- friendliness to scientific projects, or a jealousy of discoveries that might interfere with their monopolies in these regions ; and in the early part of their history these dispositions were but too evident. Latterly their conduct has been more liberal; but the geographical information with which they have favored the world, compared with their means and advantages for exploring some of the most interesting parts of North America, has been very small.

In 1719 one of their servants at Nelson's River having heard, in his intercourse with the Indians, of a rich copper-mine northward, which was situated on the banks of a navigable river or inlet, came to England to solicit the directors to fit out two vessels of discovery for the purpose of searching for it, and exploring the bay. Their charter was partly held on their making efforts ' to discover a new passage to the South Sea,' a stipulation of which Knight did not fail to re- mind them ; independently of which it would appear that his ' troublesome zeal' would have obtained no assistance. He ultimately procured two vessels, which sailed from Gravesend in 1720, but never returned. Captain Scroggs, in

the Whalebone, now proceeded in search of Knight's expedition, and in lat. 62° saw and treated with the Indians. In 64° 56′ he dis- covered and named Whalebone Point, and saw many whales, but heard nothing of his prede- cessor.

In 1742 captain Middleton was despatched by the lords of the admiralty in a ship of war to coast the eastern shores of America in this di- rection. He ascended Hudson's Bay and Sir Thomas Roe's Welcome to 65° 12', where he found a headland, north of Cape Dibbs, and be- yond it ' a fair opening' or river from six to eight miles wide at the mouth. This is now called the Wager Inlet, or river, arid presents on the north side a convenient cave or harbour, which he named Savage Sound. Middleton, after having ascertained, as he thought, that there was no opening at the bottom of this inlet, steered northward to Cape Hope, the most northerly point of America, and which he hailed with pe- culiar joy, conceiving it to be the north-east point of that continent. They, however, found land to the westward, and, the sea being blocked with ice in a bay (Repulse Bay) which opened eastward, they made sail for England.

Middleton reported on his return to England that every chance of discovering a passage in this direction was completely at an end. ' If there were such,' he said, ' it must be impassa- ble for the ice ; and, from the narrowness of any such outlet in 67° or 68° of latitude, it can be clear of ice only one week in the year, and many years, I apprehend, not clear at all.' He would be happy to give any assistance in his power, but ' hoped never to venture himself that way again.' He was now in fact openly accused by Mr. Dodds and others of having been bribed from his duty by the Hudson's Bay Company ; a long dispute 'ensued with respect to this charge, which, however, was not established, though the reputation of Middleton sutfered with both the government and the public.

Dodds contended that ' the demonstrations now of there being a passage are as strong as they well can without actually passing it. Another expedition therefore was undertaken by captain William Moor and captain Francis Smith, in the Dibbs galley of 186 tons, and California of 146 tons. It was fitted out by a subscription of £10,000 in £100 shares, in 1746; government offering a large reward for the discovery of the north-west passage. These vessels ultimately went exactly to the same point as Middleton reached, and returned. Mr. Ellis's Journal of the voyage has supplied the public with some interesting particulars of a winter passed in Hayes River, about two miles above Fort York. Here, having secured their vessels in a creek, the people first set to work to dig holes in the ground to bury their wine and beer, and build log huts for their temporary abode.

Being com- fortably hutted on the 1st of November, on the 2d of that month they could not keep their ink from freezing at the fire, and the cold increased to such a degree as to render it prudent to take all their seamen from the ships. Mr. E. de- scribes the full and change of the moon as the periods of severest cold. At other times they

could take occasional exercise out of doors, and procure plenty of rabbits and partridges. Sometimes the difference was so great between the air without and within their huts as to cause instantaneous fainting on entering them, and, if but a door or window was opened, the cold air would rush in with great fury, and convert the vapors of their little atmosphere into a shower of snow. ‘ If we touch iron,’ says this gentle- man, ‘ or any other smooth solid surface in the winter, our fingers are fast froze to it; if, in drinking a dram of brandy out of a glass, one’s tongue or lips touch it, in pulling it away the skin is left upon it. An odd instance of this sort happened to one of our people who was carrying a bottle of spirits from the town to his hut ; for, not having a cork to stop the bottle, he made use of his finger, which was soon froze fast, by which accident he lost a part of it to make a cure practicable.’

We have now to notice two rather important land expeditions. — The journeys of Mr. Hearne in 1769 and 1772, into the interior of the coun- try west of Hudson’s Bay, had for their chief object the discovery of a large river and copper mine which had been frequently mentioned by the Indians to the servants of the Hudson’s Bay Company.

He started from Churchill Fort, on the 6th of November, 1769, and crossing the Seal River, explored a group of small lakes near Chesterfield inlet ; westward of them he found a larger lake, to which he gave the name of Athapuscow (the Slave Lake of Mackenzie), in lat. 62° N. In his journey he reached a place called Congecathawhachaga, on the 1st of July, in lat. 68° 46′ N., and 118° 15′ W. long. On the 13th he found what is called the Copper Mine River, and on the 15th began his survey of it, at about forty miles from its estuary, which he traced to what he consi- dered the shores of the North Arctic Ocean. It was encumbered all the way with flats and falls. His supposed arrival at a point of the Northern Ocean, which he states to have borne north-west by west, and of which he declares he had an ex- tensive view, is the only remarkable circum- stance of his various routes.

Mr. Mackenzie set out from Fort Ghepiwagen on the 13th of June, 1789, on a similar errand. He took a more western course than Mr. Hearne, some of whose Indians accompanied him, and performed two journeys, principally in canoes, on the interior rivers of this continent. He proceeded first on the Slave River to the Slave Lake, through which he entered the

river that now bears his name, and after passing the coun- tries of several distinct tribes of Indians, arrived sit that of the Esquimaux, in lat. 67° 45'. Mac- kenzie's River here begins to widen considerably, or rather spread itself into a number of narrow channels, flowing around low islands. On the 10th of July it wore a face- of solid ice, inter- mixed with veins of black earth. On the 12th, in lat. 69° 1', he found a lake open to the west, , in which, out of the channel of the river, there was not more than four feet of water. From a high part of one of the islands to the east he could discern a range of mountains in the south-west, extending northward beyond the ice. Yet

shortly after, in lat. 69° 14', he assumes that he had reached the Arctic Ocean, or rather would appear to wish the reader to think so, while he avoids expressly asserting it. Here he saw a number of whales, which his guides assured him were the principal food of the Esquimaux, none of whom appeared, though vestiges of their habitations were seen. Mr. Mackenzie encamped on an island at the mouth of the river, which he called Whale Island, for two days, yet never tasted the water it appears, and leaves the prin- cipal point of his journey, like Mr. Hearne, most lamely drawn.

This gentleman, in a second journey on the Unjiga, or Peace River, in 1792, reached the Stony or Rocky Mountains, in a south-west direction, and, having with some difficulty trans- ported his canoe across them, embarked on a branch of the Oregan, Colombia, or Great River of the west, which is here about 200 yards wide, and which he successfully pursued to one of the numerous inlets of the Pacific Ocean, in lat. 52° 20'. He afterwards travelled to the Pacific by land.

In the interim the honorable Daines Barring- ton had (in 1773) presented to the Royal Society a series of papers on the practicability of ap- proaching the North Pole, and the president and council of that society made application to the Admiralty, to send out a ship or ships, to try how far navigation might be practicable in that quarter. The Racehorse and Carcass bombs were accordingly prepared, and the command given to captains Constantine Phipps and Lut- widge. Sailing from the Nore on the 10th of June, they passed along the western coast of Spitzbergen, and advanced to latitude 80° 48', in sight of the Seven Islands ; here they were beset in the ice on the 1st of August, and on the 10th, after being forced through it by a north- east wind, they proceeded to the southward, and arrived on the 25th of September at the Nore.

Captain Cook, it is well known, was employed in this direction on his last voyage, having under his command the Resolution and Discovery. Pre- vious to the sailing of this expedition, an act was passed for granting the reward of £20,000 for the discovery of ‘ any northern passage’ by sea, between the Atlantic and Pacific Oceans, and the reward of £5000 to any ship which should approach the North Pole within a degree. Cook left England in July 1776; entered Behring’s Strait the 9th of August, 1779 ; and on the 17th reached lat. 70° 41′ N., where he saw the highest point of America surrounded with ice ; which he therefore named Icy Cape, in lat. 70° 29’, long. 198° 20’. The ice drifting down towards the ships, and the weather becoming foggy, he now stood to the southward ; and, as the season was advanced, he determined to pass the winter at the Sandwich Islands, where he was killed, and the expedition returned home without accom- plishing any further discovery in this direction.

We ought now to notice the successive Rus- sian voyages along Jhe northern coast of Asia. Between 1734 and 1738 lieutenants Moroviof, Malgyn, and Skurakof, succeeded in proceeding from Archangel to the Bay of Obe ; and, in the last vear, Offzin and Koskelef reached the mouth

of the Yenisei, from that bay. In 1735 lieute- nant Prontshistshef set out in the contrary direc- tion from the Lena, but was stopped by Cape Cavero Vostochnoi, which is the single spot on this coast which has never been passed. From the Lena eastward to the Kowyma, the voyage has frequently been performed, and Shalauroff, in 1671, succeeded in reaching the Shelatskoi Noss, but could not double it; the only instance of its having been passed is that of Deshnef, who, as far back as the year 1648, penetrated to Anadyr, from the Kowyma, through Behring’s Strait.

The only English Voyages to the Polar Re- gions, between that of Cook and those of the year 1818, were the unfortunate ones of Mr. Charles Duncan, a master of the navy, despatched by the Hudson’s Bay Company, in 1790, to join a sloop of the name of Churchill, then in Hud- son’s Bay; he soon discovered that his crew were so utterly averse from the enterprise, and set up so formidable an opposition to his pro- ceeding, that he deemed it prudent to return home. On this the governors fitted out a strong ship, the Beaver, with which Mr. Duncan com- menced his second voyage, and wintered in Churchill River till the 15th of July, when he proceeded to Chesterfield Inlet ; but here again his crew mutinied, encouraged by an officer second in command, and thus ended this attempt.

Before entering upon our late expeditions, we must notice further efforts of Russia in this direction. Since the general peace she has been prosecuting discoveries in every part of the globe. In the southern ocean her ships have penetrated as far as the seventieth parallel, and discovered, it is said,

islands which had escaped the eye of captain Cook : they boast of having rounded the Sandwich land of that celebrated navigator; and of having ascertained that the Southern Shetland consists only of numerous groups of small islands. But more of this here- after. They have sent land expeditions into the unknown regions of Tartary, behind Thibet, and into the interior of the north-western side of North America. Men of science have been com- missioned to explore the northern boundaries of Siberia, and to determine points, on that exten- sive coast, hitherto of doubtful position. ‘ In February, 1821,’ says the Quarterly Reviewer, ‘ Baron Wrangel, an officer of great merit, and of considerable science, left his head-quarters on the Nishney Kolyma, to settle, by astronomical observations, the position of Shalatzkoi-Noss, or the north-east cape of Asia, which he found to lie in lat. 70° 50′ N. considerably lower than it is usually placed on the maps. Having arranged this point, he undertook the hazardous enter- prise of crossing the ice of the polar sea on sledges drawn by dogs, in search of the land said to have been discovered, in 1762, to the northward of the Kolyma. He travelled directly north, eighty miles, without perceiving any thing but a field of interminable ice, the surface of which had now become so broken and uneven as to prevent a further prosecution of his journey. He had gone far enough, however, to ascertain that no such land could ever have been disco vered.’*

Count Romanzoff, the able minister of the late emperor Alexander, had intended to equip an expedition to explore the north-west passage by Hudson’s Bay or Davis’s Strait : but, on finding that preparations were making in England to at- tempt it by that route, he determined on prose- cuting the discovery from the eastward. For this purpose he caused a ship of 180 tons to be built of fir, at Abo, to which he gave the name of Rurick. Her establishment consisted of lieute- nant Kotzebue, lieutenant Schischmareff, two mates, M. A. Von Chamisso, of Berlin, natural- ists, Dr. Eschholz, surgeon, M. Choris, painter, and twenty men; and, to the credit of the com- mander, it may be mentioned that, after a navi- gation of three years in opposite climates, and in so small a vessel, he lost one man only, who left the Baltic in a consumption. The Rurick sailed from Plymouth in October 1815; and on the 28th of March had reached Easter Island. Some of the natives swam off to them with yams, taro roots, and bananas, which they gave in ex- change for bits of iron hoop. As the boats ap- proached the shore, they began to assemble in great numbers, and though unarmed, and appa- rently desirous of the strangers landing, they were thought to exhibit a hostile appearance ; and the boats were repelled from the shore by volleys of stones. This conduct, so contrary to their former practice, was

afterwards explained to lieutenant Kotzebue, at the Sandwich Islands, as arising from the conduct of an American, who kidnapped a party of the natives a short time before on board his schooner called the Nancy, from New London.

On the 16th of April lieutenant Kotzebue de- scried a small island, probably the Dog Island of Schouten, but which, differing twenty-two miles in latitude from that given by him, Kotzebue calls Doubtful Island-, and on the 19th they dis- covered another small island, covered with ma- jestic cocoa-nut trees, to which he gave the name of Romanzoff. It had no inhabitants ; but boats and deserted huts were visible. This new dis- covery so delighted our navigator, that, inconsi- derable as he felt it to be, ' I would not,' he says, ' have resigned the pure and heartfelt joy which it gave me for the treasures of the world.' On the 22d they fell in with another island, in 14° 41′ S., long. 144° 59′ 20 W., which was also considered as a new discovery ; the truth how- ever is, that they all belong to those groups whose numbers are not yet ascertained, but which are known by the name of King George's and Palliser's Islands, discovered by Cook ; to which also belong what he is pleased to call Rurick's Chain, and Krusenstern's Island.*

On the 19th of May they crossed the line of Mulgrave's islands, in 8° 45′ 52″ N., and on the 21st discovered a group of low coral islands, ly- ing in about 11° N., and long. 190°, and sepa- rated by a channel, which, considering it as a new discovery, they named Kutusoff and Suwa- roff ; but this ' new discovery' seems only to form a part of the group long known as Wallis's Is- lands.

On the 19th of June they reached Avatscha Bay, in Kamtschatka ; on the 20th of July they descried Behring's Islands, and on the 27th were

close in with St. Lawrence Island, where they had some communication with the natives, who resembled the people whom Cook found on the shores of Norton Sound, and the Aleutian Islands ; and were living in tents made of the ribs of whale, covered with the skin of the morse. Their mode of salutation was like that of the Esqui- maux of Baffin's Bay ; ' each of them,' says Kotzebue, ' embraced me, rubbed his nose hard against mine, and ended his caresses by spitting on his hands, and wiping them several times over my face.'

On the 30th of July they were on the Ameri- can shore, between Cape Prince of Wales and Garozdeff's Islands, which being found to con- sist of four instead of three, as laid down in Cook's chart, induced Kotzebue to conjecture that the fourth must have subsequently risen out of the sea, ' otherwise,' says he, ' Cook or Clarke would have seen it.' At all events, he looked on it as a new discovery, and named it after Ratma- roff, who had

been Krusenstern's first lieutenant on his voyage to Japan. To the northward of Cape Prince of Wales is a long low island, co- vered with luxuriant verdure, and apparently well inhabited : but on landing they found only dogs in the houses, which had mud walls ; the interior was cleanly and convenient, and divided into a number of apartments by boarded parti- tions ; the floors, raised three feet from the ground, were also of wood, which is supplied by the vast quantity of drift brought by the north- east current from the mouths of the rivers of America to the southward of Behring's Straits, and thrown on the shores of the straits. Beyond this island was a deep inlet, running eastward in- to the continent. On entering this bay two boats were observed, of the same kind as those made use of in the Aleutian Islands. The appearance of the people in them was extremely filthy and disgusting, and their countenances had an ex- pression of fierceness. To this bay, which was not examined, Kotzebue gave the name of his lieutenant, Schischmareff; to the island that of admiral Saritscheff.

Proceeding northerly they met with two light boats, the people in which were extremely savage, and, uttering the most piercing cries, threatened to hurl their lances : pointing muskets at them had no effect. The land continued low, and trended more to the eastward, when on the 1st of August the entrance into a broad inlet was discovered, into which the current ran rapidly. The interior of this great inlet is the undoubted discovery of Kotzebue.

' I cannot,' says he, ' describe the strange sen- sation which I now experienced, at the idea that I perhaps stood at the entrance of the so long sought north-east passage, and that fate had chosen me to be the discoverer. I felt my heart oppressed ; and at the same time an impatience which would not let me rest, and was still in- creased by the perfect calm. To satisfy myself, at least, by going on shore, and clearly observing from some eminence the direction of the coast, I had two boats got ready, at which our naturalists were highly delighted. We set out by two o'clock in the afternoon; the depth regularly de- creased : half a mile from shore we had still five

fathoms. We landed without difficulty near a hill, which I immediately ascended : from the summit I could nowhere perceive land in the strait ; the high mountains to the north either formed islands or were a coast by themselves for that the two coasts could not be connected together was evident even from the great differ- ence between this very low and that

remarkably high land. From the eminence on which I stood I had a very extensive view into the country, which stretched out in a large plain, here and there interrupted by marshes, small lakes, and a river, which flowed, with numerous windings, and the mouth of which was not far from us. As far as the eye could reach every thing was green ; here and there were flowers in blossom, and no snow was to be seen but on the tops of the mountains at a great distance : yet one had to dig but half a foot deep to find nothing but frost and ice under this verdant carpet. It was my intention to continue my survey of the coast in the boats ; but a number of baydares coming to us, along the coast to the east, withheld me. Five of them, each with eight to ten men, all armed with lances and bows, soon landed near us. At the head of each boat was a fox skin, on a high pole, with which they beckoned to us, uttering at the same time the loudest cries. I ordered my crew to be prepared for defence ; and went my- self, with our gentlemen, to meet the Americans, who on seeing us approach sat down like Turks, in a large circle on the ground, by which they meant to manifest their friendly intentions : two chiefs had seated themselves apart from the rest. We entered this cifcle well armed, and perceived that they had left most of their arms in their boats, but had long knives concealed in their sleeves. Distrust, curiosity, and astonishment, were painted on their countenances ; they spoke very much, but unfortunately we did not under- stand a word. To give them a proof of my friendly sentiments, I distributed tobacco; the two chiefs received a double portion ; and they were all evidently delighted at this valuable pre- sent. Those who had received tobacco first were cunning enough secretly to change their places, in the hope of receiving a second portion. They prize tobacco highly, and are as fond of chewing as of smoking it. It was a curious sight to see this savage horde sitting in a circle, smok- ing out of white stone pipes, with wooden tubes. It is very remarkable that the use of tobacco should already have penetrated into these parts, which no European has ever visited. The Ame- ricans receive this, as well as other European goods, from the Tschukutskoi. To the two chiefs 1 gave knives and scissars ; the latter, with which they seemed to to be quite unacquainted, gave them particular pleasure, when they remarked that they could cut their hair with them; and im- mediately they went from hand to hand round the whole circle, each trying their sharpness on his hair. It was probably the first time in their lives that these Americans had seen Europeans, and we reciprocally regarded each other. They are of a middle size, robust make, and healthy appearance ; their motions are lively, and they seemed much inclined to sportiveness ; their countenances, which have an expression of wan- tonness, but not of stupidity, are ugly and dirty,

characterised by small eyes and very high cheek bones ; they have holes on each side of the mouth, in which they wear morse-bones, orna- mented

with blue glass beads, which gives them a most frightful appearance. Their hair hangs down long, but is cut quite short on the crown of the head. Their head and ears are also adorned with beads. Their dresses, which are made of skins, are of the same cut as the Parka in Kamt- schatka ; only that there it reaches to the feet, and here hardly covers the knee ; besides this they wear pantaloons and small half-boots of seal-skin.'

The latitude of the ship's anchorage was 66° 42′ 30", long. 164° 12′ 50", and here terminated her geographical discoveries. Nothing but sea was seen to the eastward, and a strong current ran to the north-east ; from which circumstances our navigators still cherished a hope of discover- ing through this inlet a passage into the frozen ocean. With this view they spent thirteen days in examining the shores of this inlet; but the only passage out of it was on the south-eastern shore, apparently communicating with Norton Sound, and a channel on the western side open- ing probably into Schischmareff Bay.

On a promontory, which juts into the south- eastern part of the bay, the landing party made ' a singular discovery :' — ' We had climbed much about during our slay, without discovering that we were on real ice bergs. The doctor, who had extended his excursions, found part of the bank broken down, and saw to his astonishment that the interior of the mountain consisted of pure ice. At this news we all went, provided with shovels and crows, to examine this phenomenon more closely ; and soon arrived at a place where the back rises almost perpendicularly out of the sea, to the height of 100 feet ; and then runs off, rising still higher. We saw masses of the purest ice of the height of 100 feet, which are under a cover of moss and grass ; and could not have been produced but by some terrible revolution. The place which by some accident had fallen in, and is now exposed to the sun and air, melts away, and a good deal of water flows into the sea. An indisputable proof that what we saw was real ice is the quantity of mammoth's teeth and bones, which were exposed to view by the melting, and among which I myself found a very fine tooth. We could not assign any reason for a strong smell, like that of burnt horn, which we perceived in this place. The covering of these mountains, on which the most luxuriant grass grows to a certain height, is only half a foot thick, and consists of a mixture of clay, sand, and earth ; below which the ice gradually melts away, the green cover sinks with it, and continues to grow ; and thus it may be foreseen that, in a long series of years, the mountain will vanish, and a green valley be formed in its stead. By a good observation we found the latitude of the tongue of land 66° 15′ 36″ N.'

This result of ' a terrible revolution' is con- sidered by M. Chamisso, the naturalist of the expedition, 'to be similar to the ground-ice, covered with vegetation, at the mouth of the Lena, out of which the mammoth, the

skeleton of which is now in St. Petersburg, was thawed.' He makes the height of it to be ' eighty feet af

most ;' and ' the length of the profile, in which the ice is exposed to sight, about a musket-shot.'

On quitting this inlet, to which was properly given the name of Kotzebue's Sound (on the 15th of August), with a fine open sea, without the least appearance of ice on the water, or snow on the land, and with the thermometer from 8° to 12° of Reaumur (50° to 59° of Fahrenheit), the Rurick stood directly across for the Asiatic coast, ' because,' says Kotzebue, ' I wished to become acquainted with its inhabitants, and to compare them with the Americans.' This comparison had long before been made, and was certainly no ob- ject of his voyage. Here were no discoveries to be made. He stood, however, over to East Cape, and, having passed the remainder of the month of August among the Tchukutskoi, made the best of his way to Oonalaska.

The recent expeditions to the North Polar Re- gions seem first to have been suggested by the remarkable fact of the breaking away of an im- mense body of ice from the eastern coast of Greenland. ' It had been observed in the summer months of the year 1815,' says the able writer in the Quarterly Review, who has so constantly kept this subject before the public, ' and more particularly in those of 1816 and 1817, by ships coming from the West Indies and America, as well as by those going out to Halifax and New- foundland, that islands of ice, unusual in mag- nitude and number, occurred in the Atlantic, many of them as far down as the fortieth parallel of latitude. Some of these were detached ice-bergs, from 100 to 130 feet above the surface of the water, and several miles in circumference ; others were flat islands of packed ice, presenting so vast an extent of surface that a ship from Boston is said to have been three days entangled in it, near the tail of the Great Bank of Newfoundland. The ship of the Unitas Fratrum, proceeding to the missions on Old Greenland, was, last year, eleven days beset, on the coast of Labrador, with the ice-bergs, many of which had huge rocks upon them, gravel, soil, and pieces of wood. The packet from Halifax passed, in April last, a mountain of ice nearly 200 feet in height, and at least two miles in circumference. By accounts frem Newfoundland, Halifax, and other northern ports of America, it would appear that greater quantities of ice were soen in the months of May, June, and July, than had ever been witnessed by the oldest navigators ; and that the whole island of Newfoundland was so completely environed with it that the vessels

employed in the fishery were unable to get out to sea to follow their usual occupations. The source from which these enormous masses proceeded could not long be concealed. It was well known to the Greenland fishermen that from Staatenhoek, the southern promontory of Old Greenland, an uninterrupted barrier of ice stretched north-easterly, or parallel nearly to the coast, approaching frequently to the very shores of Iceland ; and that the small island situated in lat. 71° 11', long. 5° 30′ W., called Jan Mayen's island (a sort of land-mark which those engaged in the seal fishery always endeavour to make), had of late years been com- pletely enveloped in ice ; and that from this point it generally took a more easterly direction,

till it became fixed to the shores of Spitzbergen, from 76° to 80° of latitude. The most central parts of this immense area of ice, which occupy the mid-channel between Greenland and Spitz- bergen, separate from time to time into large patches, and change their position according to winds and tides ; but the general direction in which they move with the current is from north-east to south-west, or directly towards that part of Old Greenland where the Danish colonies were supposed to be established, and which are immediately opposite to Iceland. Here it would seem those masses became a kind of fixed nu- cleus, round which a succession of floating fields of ice attached themselves, till the accumulated barrier, probably by its own weight and magni- tude, and the action of the impeded current, at length burst its fetters, and has been carried away to the southward.'

Mr. Scoresby, junior, an able navigator of the Greenland seas, had actually observed at this period 2000 square leagues (18,000 square miles) of those seas included between the parallels 70° and 80° to be perfectly void of ice, which had disappeared within the last two years.

On the whole the hopes of the country, as to the success of an expedition in search of a north- west passage, were fully revived when an active and spirited administration announced its deter- mination to patronize the attempt. Two distinct expeditions were now therefore prepared ; one, which was intended to proceed by the North Pole, as the nearest and probably the most prac- ticable route, to Behring's Strait ; the other, to attempt a passage by the openings leading west out of Baffin's Bay. To the expedition destined for the Polar passage were assigned the Doro- thea, of 370 tons, commanded by captain David Buchan, and the Trent of 250 tons, by lieutenant John Franklin. To that for the North-west pas- sage, properly so called, the Isabella of 382 tons, commanded by captain John Ross, and the Alexander of 252 tons, by lieutenant William Edward Parry. The results were not flattering. The Polar expedition returned without making a single discovery, through the Dorothea having become disabled by the ice ; the other examined Baffin's Bay, so far as to ascertain that the nar- rative of

that navigator is substantially true ; and that the chart appended to the Voyage of the North-West Fox is, in fact, the chart of Baffin, and very correct. Captain Ross, therefore, seems to have done nothing more than confirm the vague account of Baffin's voyage in Purchas's Pil- grim, leaving Sir T. Smith's Sound, Alderman James's Sound, and Lancaster Sound, unexplored with regard to the possibility of their leading to a passage.

As a warning indeed to future explorators we should add that captain Ross was completely mistaken in regard to the last of these supposed inlets ; and that he could not see at the distance of about eight leagues ' the land round the bot- tom of the bay, forming a connected chain of mountains with those which extended along the north and south sides.' Captain Sabine disputed the correctness of his conclusion at the time ; — but captain Parry was destined afterwards to conduct a new expedition through a nobie chat.-

nel of ninety miles uninterrupted length, in this direction.

The vessels selected for the new expedition were the Hecla and the Griper. The Hecla was of 375 tons burden, and, having been built as a bomb-vessel in 1815, was well adapted for stow- age. She was commanded by lieutenant W. E. Parry, and had on board a ship's company of fifty-eight persons. The Griper, formerly a twelve gun brig of 180 tons, was much smaller than the Hecla ; and, though her accommodations were inferior, yet she neither sailed so well as the other ship, nor was she able to carry her own supply of provisions ; she was commanded by lieutenant Matthew Liddon, and had a ship's company of thirty-six persons. Both of these vessels had the whole of their outside, from the keel to some height above the water-line, covered with an extra lining of oak plank, from three to four inches thick, and a number of beams and additional timbers were put into the holds, in order to resist the pressure of approaching floes of ice. Their bows were also defended from the impulse of floating masses by strong plates of iron. Standing bed-places were substituted in place of cots ; and planks, tarpaulins, and Russian mats, were provided for housing the ships during winter. The ballast consisted of seventy chal- drons of coals in the llecla,and thirty-four in the Griper. The men were also furnished by govern- ment with a suit of warm clothes and a wolfskin blanket. In order to preserve the health of the ship's crew a large quantity of Messrs Donkins and Gamble's preserved meats and soups was supplied ; — antiscorbutics of different kinds were provided, and articles of utility and ornament were carried out to secure the friendship of the Indians or Esquimaux, or to purchase any sup- plies which the expedition might require.

Thus equipped, and supplied with scientific instruments of every kind, the expedition set sail fromDeptford on the 4th May 1819. It passed the Orkney Islands on the 20th, and on the 15th June it descried Cape Farewell, at the great dis- tance of forty leagues. On the 3d July it crossed the Arctic Circle, and advanced among the ice on the west coast of Greenland, as high nearly as 73° of latitude, without being able to observe a single opening. Unwilling to proceed to the north of Lancaster Sound, captain Parry resolved to force his way through this apparently inter- minable barrier, and after six days of laborious warping through the ice, in which much skill and courage were displayed, he succeeded on the 28th in bringing the vessels into an open sea, and, in three days more, a favorable breeze carried him across Baffin's Bay, and enabled him to land at Possession Bay, for the purpose of making mag- netic observations. Mr. Fisher, with two men, was directed to proceed up a stream which flows through the valley, and which is about thirty-five or forty yards wide at its mouth, for the purpose of observing the nature and productions of the country ; and he here witnessed ' human tracks in so perfect a state, that had the place been known to be frequented by man,' says Mr. F., 'we should have supposed that people had been here only a few days before ; but one of the men who were with me, as well as myself, remem-

bered that we had been on the very same spot where the tracks were observed last year, gathering plants, so that we had not the smallest doubt of their being the remains of our own footsteps made last year ; for, had any Esquimaux been at this place since we were here before, it is more than probable that they would have taken away the pole on the hill; for from what we saw of them nothing could be a greater prize for them than a piece of wood of the size of that in question.'

On the 2d of August the expedition was di- rectly opposite Lancaster Sound. On the 3d they had fairly entered it, and, under the influ- ence of a favorable breeze, they had, before the 4th, completely crossed the mountainous barrier, which, in a deceitful state of the atmosphere, had appeared to captain Ross to shut up this sound. The decision of this long agitated question cre- ated, as might have been expected, much interact on board, and did not fail to excite those hopes of future success which a different result would have in a great measure extinguished. ' It is more easy to imagine than to describe the almost breathless anxiety,' says captain Parry, ' whicli was now visible in every countenance, while, as the breeze increased to a fresh gale, we ran quickly up the sound. The mast-heads were crowded by the officers and men during the whole afternoon ; and an unconcerned observer, if any could have been unconcerned on such an occasion, would have been amused by the eager- ness with which the various reports from the crow's-nest were received, all however hitherto favorable to our most sanguine hopes.' — p. 31. The land which they

passed on the 4th August, namely, from Brooking Cuming's Inlet to Cape Fellfoot, differed from any that had been previ- ously seen. It appeared like an immense wall in ruins, rising almost perpendicularly from the sea to the height of about 500 feet. The surface of the precipice consisted of horizontal strata, some of which projected farther out than the rest, de- taining the debris of the superincumbent rocks, and forming a succession of taluses of different inclinations. The precipices thus assumed a va- riety of shapes and sizes, ana the whole of this bold coast had a very interesting appearance. On the 5th August, when they had nearly reached Prince Leopold's Isles, their progress to the west was completely checked by a compact body of ice, which it was impossible to penetrate. They had, therefore, no choice but to wait for the dissolution of this immense barrier, or to follow the open sea to the southward. They adopted this last alternative, and bent their course into the Prince Regent's Inlet. Here they encountered vast numbers both of the white and black whales, and also several sea-unicorns or narwhals.

The white or Beluga whale, the average length of which was from eighteen to twenty feet, asto- nished the sailors with a species of music which received the name of the whale song. ' Whilst we were pursuing them to- day,' says Mr. Fisher, ' I noticed a circumstance that appeared to mfe rather extraordinary at the time, and which I have not indeed been able to account for yet to my satisfaction. The thing alluded to is a sort of whistling noise that these fish made when

under the surface of the water ; it was very au- dible, and the only sound which I could compare it to is that produced by passing a wet finger round the edge or rim of a glass tumbler/

In advancing to the south, along the eastern side of Prince Regent's Inlet, they observed that the rise and fall of the tide was about twelve or fourteen feet, and the ebb was observed to set to the southward and westward, which led them to conclude that the flood came in that direction, and not through Lancaster Sound. Another compact barrier of ice, extending obliquely from the west land to the south-east land, again ar- rested their progress, and they were reduced to the alternative of either waiting for an opening in it, or shaping their course to the north, in order to avail themselves of any favorable changes that might have taken place in the barrier near Prince Leopold's Isles. The last of these plans was thought the most advisable, and they ac- cordingly turned to the north. On the 9th of Au- gust, to the south of Port Bowen, they saw vast numbers of the

common black whales. One of these fish, which they caught on the llth, was about thirteen feet five inches long, and had a horn four feet two inches in length, while the greatest circumference of its body was nine feet. On the 12th the narwhals were seen swimming about at all hours of the day in shoals. On the 16th a current was observed whose direction was N. N. W., and which moved at the rate of a quarter of a mile per hour; and, on the 20th, they passed Cape Fellfoot, where the horizontal strata resemble two parallel tiers of batteries, placed at regular intervals from the top to the bottom of the cliff, affording a grand and im- posing appearance. On the same day they passed Maxwell Bay, a very noble one, with several islands, and many openings in its northern shore ; and on the 22d, leaving Beechey Island to the north, they crossed Wellington Channel, in long. 93° W., which was as open and navigable to the utmost extent of their view, as any part of the Atlantic, and which captain Parry would have explored, had the ice obstructed his progress to the westward. The rapidity, however, of the run from Beechy Island to Cape Hotham held out better prospects, though they were of short duration. A tody of ice was seen to the west- ward, but, a narrow neck of it appearing to con- sist of loose pieces, the Hecla was pushed in, and, after a quarter of an hour's boring, forced her way through it, followed by the Griper. On the 23d they passed to the south of Griffith's Island ; on the 24th, to the south of Lowther Island, and between Young and Davy Islands (called Snow Isles in our chart) ; on the 25th they passed Garret Island ; and on the 26th, 27th, and 28th, Allison's Inlet, Cape Cockburn, and across Graham Moore's Bay. On the 28th they landed on Byam Martin Island, in lat. 75° 9', and long. 103° 50', for the purpose of making magnetical observations, and the results which they obtained were of a very unexpected nature. They found that the variation of the needle was now 168° easterly, or 192° westerly, having passed 180°, so that they had actually crossed the line of no variation, or rather the line of 180° of variation to the north of the magnetic pole.

The last observations which they made were on the 22d, in long. 91° 55', and lat. 74° 20', so that the magnetic pole must be placed somewhere be- tween 91° 55', and 103° 50′ of W. long., not far from the 102d degree.

This island, estimated to be about ten miles long, consisted of white sandstone, and exhi- bited a more luxuriant vegetation than any of those which they had lately setn. ' We saw,' says Mr. Fisher, ' no animals of any kind on thi« island ; but we found evident proofs of its having been frequented, not only by different species of the brute creation, but that it had also, at some period or other, been inhabited by man ; for, at the distance of about a quarter of a mile from the shore, we found the ruins of six huts close togetner on the side of a hill. They had been all nearly of the same size, that is, about twelve feet long, and from eight to twelve feet broad, besides a space of about three feet square, formed by four flags set

upon their edge at the end of each hut. I understand from those who have been often among the Esquimax huts in Greenland, that they have always a small apart- ment of this sort at one end of their hut, in which they keep all their provisions. Whether the cloven tracks we saw were chiefly those of musk-oxen or rein-deer, it is impossible to say ; but, if we were to judge from the number of deer's horns we saw, we should be inclined to consider them as being principally those of the latter animal. It would appear that bears also frequent this land occasionally : we found two or three of their skulls, and their tracks were very numerous along the beach.' — Fisner's Journal.

On the 30th of August a favorable breeze per- mitted the expedition to advance to the westward among the ice, round the south end of Byam Martin's Island. On the 1st of September they came in sight of Melville Island. On the 2d a party landed upon it ; and on the 4th, at seven o'clock in the evening, they crossed the meridian of 110°, and thus accomplished the first portion of the discovery of the North West Passage which the British government had considered worthy of a reward. After prayers, on the 5th, all hands were called on deck, when Mr. Parry told the ship's company, in an official manner, that they had last night passed the meridian of 110° W. of Greenwich, and by that means be- came entitled to the reward of £5000, promised by parliament to the first ship that reached that longitude beyond the Arctic Circle. He took also this opportunity of informing them how highly satisfied he was with their past conduct. ' I think it may be considered a remarkable in- stance in our voyage,' says Mr. Fisher at this point, ' that the first anchor we let go since we left England was in 110° W. long."

The expedition continued to advance west- ward from the 6th to the 18th of September, a little beyond Cape Providence, experiencing considerable difficulties from the heaviness of the drifting ice, which appeared to be coming from high latitudes. It was now packed close in with the land ; the ships were regularly beset in (he bay ice on the morning of the 18th, and, as the severity of the season was rapidly increasing, captain Parry had no other alternative, but

either to return to sora-? secure harbour to the eastward, or o> remain fixed during the winter, upon an exposed coast, without a bay or a headland to afford him the smallest shelter. He therefore availed himself of a fine breeze, and returned to Winter Harbour on the 24th, after experiencing very serious obstructions from the driving floes, one of which

forced the Griper aground.

Winter Harbour is partly guarded from the violence of the sea by a reef of rocks at the mouth over which there is in some places scarcely a fathom of water, and between that reef and the land there is a bar, with only three fathoms and a half in some places. The harbour itself being about three miles long, it was thought proper that the ships should be stationed about half a mile from the top of it ; but, the whole being completely frozen over, it was necessary to cut a canal for their passage through the solid ice.

This operation was performed by first mark- ing out parallel lines, distant from each other a little more than the breadth of the larger ship. Along each of these lines a cut was then made with an ice-saw, and others again at right angles to them, at intervals of from ten to twenty feet ; thus dividing the ice into a number of rectangu- lar pieces, which it was again necessary to subdi- vide diagonally, in order to give room for their being floated out of the canal. ‘ To facilitate the latter part of the process, the seamen, who are always fond,’ says captain Parry, ‘ of doing things in their own way, took advantage of a fresh northerly breeze, by setting some boats’ sails upon the piece of ice, a contrivance which saved both time and labor. ‘ This part of the operation, however, was by far the most troublesome, princi- pally on account of the quantity of young ice which formed in the canal, and especially about the entrance. At half past seven P. M., we weighed our anchors, and began to warp up the canal, but the northerly wind blew so fresh, and the people were so much fatigued, having been almost constantly at work for nineteen hours, that it was midnight before we reached the ter- mination of our first day’s labor. I directed half a pound of fresh meat per man to be issued as an extra allowance, and this was continued daily till the completion of our present under- taking. All hands were again set to work on the morning of the 25th, when it was proposed to sink the pieces of ice as they were cut under the floe, instead of floating them out, the latter mode having now become impracticable, on account of the lower part of the canal through which the ships had passed being hard frozen during the night. To effect this it was ne- cessary for a certain number of men to stand upon one end of the piece of ice which it was intended to sink, while other parties, haul- ing at the same time upon ropes attached to the opposite end, dragged the block under that part of the floe on which the people stood. The officers of both ship’s took the lead in this em- ploy, several of them standing up to their knees in water frequently during the day, with the ther- mometer generally at 12°, and never higher than 16. At 6 P. M. we began to move the ships. The Griper was made fast astern, and the Hecla and the two ships’ companies being divided on

each bank of the canal, with ropes from the Hecla’s gangways, soon drew the ships along to the end of our second day’s work. I should on every

account have been glad to make this a day of rest to the officers and men ; but the rapidity with which the ice increased in thickness, in pro- portion as the general temperature of the atmo- sphere diminished, would have rendered a day's delay of serious importance. I ordered the work, therefore, to be continued at the usual time in the morning, and such was the spirited and cheerful manner in which this order was com- plied with, as well as the skill which had now been acquired in the art of sawing and sinking the ice, that, although the thermometer was at 6° in the morning, and rose no higher than 9° du- ring the day, we had completed the canal at noon, having effected more in four hours than in either of the two preceding days. The whole length of this canal was 4082 yards, or nearly two miles and one-third, and the average thick- ness of the ice was seven inches. At half past one P. M. we began to track the ships along in the same manner as before, and at a quarter past three we reached our winter quarters, and hailed the event with three loud and hearty cheers from both ships' companies.' — Captain Parry's Journal, p. 27.

The whole of the masts were now dismantled except the lower ones ; — the boats, yards, masts, and rigging, were deposited in a shade erected for them on shore ; and a housing raised over deck, as the covering of their winter's habitation. The sun had not entirely deserted the parallel of Winter Harbour. He still shot a few uncertain beams from the southern horizon ; but even these were withdrawn on the 4th of November, and our voyagers were left in their dreary exile, with the certainty of losing the light of the sun for nearly three momhs, and of having only the twilight of an Arctic winter to guide them in their pursuits and amusements.

The arrangements made by captain Parry, to provide occupations for the winter, were of the most judicious description. He ordered the crew to be mustered in divisions at nine o'clock in the morning, and six o'clock in the evening of everyday, fn order to see that they were all clean and sober, and to afford an opportunity of exa- mining the state of their bed-places. He esta- blished a weekly newspaper, called the North Georgia Gazette and Winter Chronicle, and every fortnight the crew were amused with plays, acted by the officers, some of which were written for the occasion, with the view of inspiring a zeal and ardor for accomplishing the objects of the expedition. Frequent hunting parties were ar- ranged, for the double purpose of amusement, and of supplying the crew with fresh provisions ; and every thing was done to beguile the tedium of the winter, by keeping both the minds and bodies of the crew in a state of constant occupa- tion and excitement. The following is captain Parry's description of the dreariness of external nature in these regions : —

' The officers were in the habit of occupying near two hours in the middle of the day in ram- bling on shore, even in our darkest period, ex- cept when

a fresh wind and a heavy smw-drift confined them within the housing of the ships.

It may be well imagined that at this period there was but little to be met with in our walks on shore, which could either amuse or interest us. The necessity of not exceeding the limited dis- tance of one or two miles, lest a snow-drift, which often rises very suddenly, should prevent our return, added considerably to the dull and tedious monotony which day after day present- ed itself. To the southward was tfee sea, cover- ed with one unbroken surface of ice, uniform in its dazzling whiteness, except that in some parts a few hummocks were seen thrown up somewhat above the general level. Nor did the land offer much greater variety, being almost entirely co- vered with snow, except here and there a brown patch of bare ground in some exposed situations, where the wind had not allowed the snow to re- main. When viewed from the summit of the neighbouring hills, on one of those calm and clear days which not uwfrequently occurred dur- ing the winter, the scene was such as to induce contemplation, which had perhaps more of me- lancholy than of any other feeling. Not an ob- ject was seen on which the eye could long rest with pleasure, unless when directed to the spot where the ships lay, and where our little colony was planted. The smoke which there issued from the several fires, affording a certain indica- tion of the presence of man, gave a partial cheer- fulness to this part of the prospect; and the sound of voices, which, during the cold weather, could be heard at a much greater distance than usual, served now and then to break the silence which reigned around us, — a silence far different from that peaceable composure which characteri- ses the landscape of a cultivated country ; it was the deathlike stillness of the most dreary desola- tion, and the total absence of animated existence. Such indeed was the want of objects to afford re- lief to the eye or amusement to the mind, that a stone of more than usual size appearing above the snow, in the direction in which we were going, immediately became a mark on which our eyes were unconsciously fixed, and towards which •we mechanically advanced. Dreary as such a scene must necessarily be, it could not, however, be said to be wholly wanting in interest, especi- ally when associated in the mind with the pecu- liarity of our situation, the object which had brought us hither, and the hopes which the least sanguine among us sometimes entertained of spending a part of our next winter in the more ge- nial climate of the South Sea Islands. Perhaps, too, though none of us then ventured to confess it, our thoughts would sometimes involuntarily wander homewards, and institute a comparison between the rugged face of nature in this deso- late region, and the livelier aspect of the

happy laud which we had left behind us.' — Parry's Journal, p. 124.

It is remarkable that the mean temperature of the four summer months, at Melville Island, is exactly the same as the mean temperature of the year formerly assigned to the North Pole itself! The greatest cold experienced by captain Parry was quite tolerable in calm weather, and we be- lieve that less inconvenience was experienced from it by the party than has often been felt in Canada and Siberia. One of the crew of the VOL. XVII.

Griper, who had lost his way in a hunting ex- cursion, returned with one of his hands much frost-bitten. It was at first as hard as a piece of marble, but, by successful treatment, it recovered so far, that he lost only a part of each of the four fingers of his left hand. Another sailor, who had his hands frost-bitten, came on board in such a state, that when his hands were immersed in a tub of cold water, for the purpose of being thawed, the cold communicated to the water created a film of ice on its surface. The skin and nails came off some of the fingers, and the rest were amputated. One of the most remarka- ble effects, however, of severe cold, was its in- fluence on the mental as well as the corporeal faculties. On the 5th of October, two of the gen- tlemen of the expedition, who had exposed them- selves to severe frost in the ardor of pursuing a wounded stag, were sent for by captain Parry. Upon arriving in his cabin, ' They looked wild, spoke thick and indistinctly, and it was impossi- ble to draw from them a rational answer to any of our questions. After being on board for a short time, the mental faculties appeared gradu- ally to return with the returning circulation ; and it was not till then that a looker-on could easily persuade himself that they had not been drink- ing too freely. To those who have been much accustomed to cold countries, this will be no new remark ; but I cannot help thinking that many a man may have been punished for intoxi- cation, who was only suffering from the benumb- ing effects of frost ; for I have more than once seen our people in a state so exactly resembling that of the most stupid intoxication, that I should certainly have charged them with that offence, had I not been quite sure that no possible means were afforded them on Melville Island to procure any thing stronger than snow-water.' — Captain Parry's Journal, p. 108, 109.

The only other affliction which arose from the weather was what is called snow-blindness. It began by a sensation like that which is felt when sand or dust gets into the eyes. A solution of sugar of lead removed the complaint in two or three days, and the recurrence of the disease was prevented by the use of a piece of crape. The scurvy appeared in the months of March and April, but the invalids all recovered, in conse- quence of captain Parry's having been at much pains to raise some mustard and cress for them in his own cabin.

The reappearance of the sun on the 3d of February was, after an absence of ninety-two days, joyfully welcomed. The weather gradually improved. The shooting excursions were re- sumed ; and, in order to break the monotony of the spring, an expedition was projected across Melville Island.

This expedition, consisting of captain Parry, captain Sabine, Mr. Fisher, and others, amount- ing in all to thirteen, set off on the 1st of June. ‘ Shortly after we started,’ says Mr. Fisher, ‘ we came to a small lake, about half a mile in length, and 200 yards in breadth ; a considerable part of it was clear of ice, which led us to suppose that two eider ducks, that flew past us a little while before we came to it, had come from it. Soon after we passed this lake we saw several ptaiini-

gans ; and, in the course of the night, shot seven of them as we went along. Between two and three o’clock in the morning we got to the north- west end of a range of hills, which terminate the view to the north from Winter Harbour. From the top of these hills we could see the ships’ masts very plainly with the naked eye, the dis- tance being, as nearly as we could judge, ten or eleven miles. From these hills also we had a very extensive view of an immense plain, ex- tending to the north and west of us. It was completely covered with snow, and so level that, had we not been convinced that it was con- siderably higher than Winter Harbour, we should be apt to suppose that it was the sea ; but, as this objection could not be started against its being a large lake, some were of opinion that it was so ; on approaching the border of it, how- ever, we were soon satisfied that it was only a level plain. Our route, from the time of our leaving the ships, until we came in sight of this plain, was over ground, generally speaking, pretty even, but gradually ascending. Its sur- face, for most part of the way, was at least more than two-thirds covered with snow. Soon after we got to the confines of the plain, above men- tioned, we saw a rein-deer and a fawn coming across it from the southward. The fawn ap- peared to be very young, and rather of a darker color than the doe. The latter did not differ in this respect from those that we killed in the be- ginning of last winter.’ — Fisher’s Journal, p. 199. The party arrived at the sea at Point Nias, in lat. 75° 34’, on the 7th of June. From this they passed over to Bushnan’s Cove on Liddon’s Gulf, which they reached on the llth. On the 12th they went to Hooper’s Island, and returned

The greatest heat at Melville Island was The greatest cold at ditto . . was

Mean temp, of warmest month, July

of coldest month, February

of winter, Dec. Jan. Feb.

in safety to Winter Harbour on the 15th, after a journey of 180 miles. The most remarkable event in this tour was the discovery of the re mains of six Esquimaux huts, about 300 yards from the beach of Liddon's Gulf. These huts, situated in lat. 75° 2′ 37', and W. long. 111° 37′ 17", were exactly the same as those formerly described.

The state of the ice on the 1st of August per- mitted the expedition to leave Winter Harbour, and every thing seemed to predict a successful voyage west. These expectations, however, were soon disappointed. The situation of the ships among the masses of driving ice was often precarious, and, when they reached Cape Dun- das, at the west end of Melville Island, on the 16th, the ice from the north compelled them to abandon all hopes of prosecuting their voyage, after obtaining a glimpse of three capes to the south, which they called Banks' Land. Captain Parry resolved therefore to advance, if possible, to the south ; but, after waiting in vain for an opening in the ice, he renounced this plan also, and on the 30th August notified his intention of returning to England. No events of any great interest marked the return of the expedition, ex- cepting a communication with the Esquimaux, who inhabit an inlet called the River Clyde, on the western shores of Baffin's Bay.

The Hecla arrived in Leith Roads on the 3d November, after an absence of eighteen months ; and captain Parry had the high satisfaction of seeing every officer and man on board both ships (with only one exception, out of ninety-four per- sons) return to their native country in as robust health as when they left it.

+ 60′

— 50 f 42-41

— 32-19

— 28-02

Fahr. on the 17th of July.

on the 15th of February.

of spring, March, April, May — 3'27

of summer, June, July, Aug. — 37-11

of autumn, Sept. Oct. Nov. — 0-51

The mean temperature for twelve months + 1-33

If we substitute the mean temperature of August 1819, in place of August 1820, it will scarcely affect the mean results.

The greatest height of the barometer was The lowest state of ditto

Inches.

30-86 29-00

on the 26th of April, on the 6th of March.

These results indicate a very extraordinary degree of cold. According to the table given by Mr. Leslie, after Mayer and Kirwan, the temperature of Melville Island should have been nearly 36°, whereas it is only 1°, a result which throws into the shade all those speculations re-

1820, March 19th. Mean Temp. — 13°-75.

March 25tn. Mean Temp. — 26°-71.

specting the climate of the Arctic regions with which the public have been misled.

Captain Parry made various observations on the difference of temperature between the sun- shine and the shade. The following are those which he has published : —

Shade.

— 24°

— 23

— 22

— 21

— 13

— 22

— 22

— 22

Sun. + 24°

+ 27 + 28 + 29 + 19 + 17*

f 25

+ 21

Diff.

48°

50

50$

50

32

37

47

43

POLAR REGIONS.

627

Shade.

Sun.

Diff.

f Ih 30′ P.M.

+ 17

+ 6-5

10-5

April 26th.

\ ~

+ 22

+ 7

15

Mean Temp. <

{ 2 18

+ 24-5

+ 7-d

16-9

— 10>17. t

1 2 50

+ 21

+ 6-7

14-3

1

L 6

+ 9-5

+ 4-5

5-0

fllh 20 A.M.

+ 15

+ 5

10

!11 30

+ 20

+ 7

13

April 27th. Mean Temp. <

4- 0-08.

11 40 11 55

0 25 P.M.

1

+ 34 + 24 + 21 + 20

+ 9 + 8-5 + 7 + 7-5

25 15-5

14

2 20

+ 25

+ 7-7

L 2 45

+ 10

+ 4-5

The principal meteorological phenomena seen during the progress of the expedition were aurorae boreales, paraselenas and halos. Out of many which occur, we select the following as short and pleasing : — ‘ In the month of February, at half-past ten P. M., on the 19th, the aurora borealis was seen,’ as described by lieutenant Beechey, ‘ in bright coruscations, shooting prin- cipally from the south by west quarter across the zenith to N. N. E., and partially in every part of the heavens. The light, when most vivid, was of a pale yellow, at other times white, excepting to the southward, in which direction a dull red tinge was now and then perceptible. The co- ruscations had a tremulous waving motion, and most of them were crooked towards the E. N. E. The fresh gale which blew at the time from the N. N. E. appeared to have no effect on the aurora, which, as before observed, streamed directly to windward, and this with great ve- locity. The brighter part of this meteor dimmed whatever stars it passed over, even those of the first magnitude and those of the second and third magnitude, so much as to render them scarcely visible.’ (p. 147). « The whole of the phenomenon disappeared in about three-quarters of an hour.’

‘ With our present temperature, the breath of a person, at a little distance,

looked exactly like the smoke of a musket just fired, and that of a party of men employed upon the ice to-day re- sembled a thick white cloud.'

Experiments with the pendulum. — A full detail of these experiments was published in the Phi- losophical Transactions. Captain Sabine has given the following brief statement of the results, which are as follows : —

Diminu-

tion of

Ellipti-

From the acceleration between

gravity from the

city of the

Pole to the

earth.

Equator.

London and Brassay . .

.0055066

3TO.3

London and Hare Island .

•0055139

i

313,6

Brassay and Hare Island .

•0055082

sri.s

London and Melville Island

•0055258

Captain Parry was surprised at the great dis- tance at which sounds were heard in the open

aii, during the continuance of intense cold ; and, notwithstanding the frequency with Ahich they had occasion to remark it, it always afforded them surprise. l We have, for instance,' says he, ' often heard people distinctly conversing, in a common tone of voice, at the distance of a mile; and to-day I heard a man singing to himself as he walked along the beach, at even a greater dis- tance than this.'

From the experiments made at Winter Har- bour to determine the variation in the magnetic force, it appears that the time of vibration of Mr. Brown's dipping-needle decreased between London and Winter Harbour in the ratio of 481 to 446 ; and consequently the force in the di- rection of the dipping-needle appeared to have increased in the ratio of T168 to 1. From thej increase in the times of vibration of three hori- zontal needles, between Sheerness and Winter Harbour, the force acting upon them appeared to have diminished in the ratio of 12'93 to 1 ; 13-23 to 1 ; and 13-83 to 1 ; the mean of which is 13-33 to 1.

We have thus detailed at length the proceed- ings of this first expedition of captain Parry, be- cause, in point of fact, it accomplished far more for geographical science than any of the subse- quent ones ; and will therefore be an ample spe- cimen of the rest.

In his second expedition he was directed to keep close to the coast of America, or to attempt to find his way to Behring's Straits by Hudson's Bay. Middleton's facts had by no means dis- proved the possibility of finding an outlet here ; and their weight was diminished by the cloud which hung over his testimony. It was deter- mined, then, to revive on this side the often re- peated attempt. All the measures taken in for- mer voyages for strengthening the ships, and storing them with ample supplies, were repeated, with such improvements as experience had sug- gested ; and, in the spring of 1821, the new ex- pedition, composed of the Fury, under captain Parry, and the Hecla, under captain Lyon, was ready to start. On the 8th of May it set sail from the Nore ; but, being detained by adverse winds, it was not till the 14th of June that they reached Davis's Straits, and saw there the first iceberg. They were soon in Hudson's Straits, where mountains of ice were still tossing, and allowed only a perilous passage. They consiJered themselves even fortunate in being inserted into a corner

therefore, was begun before they reached that point on the eastern coast of Southampton Island whence Baffin had turned back, and where their career of discovery was to begin.

After great deliberation they determined to at- tempt the much controverted ' Frozen Strait' of Middleton ; and, in fact, though some days were spent in exploring a wide bay, to which they gave the name of the duke of York, this strait was found to exist, and to bring them into Repulse Bay. It too soon, however, proved to be completely land-locked, and the whole coast to correspond with the description of Middleton. More than a month had been lost in going over his ground ; and it was now their task to explore the coast beyond, leaving not an opening untried, by which it was possible that aa entrance into the Polar Sea could exist. The coast held the un- promising direction of from west to east ; and presented a complete chaos of straits, bays, islands, and passages, blocked up with ice of every form and dimension. After exploring therefore a number of inlets, to the principal of which was given the name of captain Lyon, the thickening symptoms of polar winter obliged them to saw a passage into the heart of a field of ice attached to an island, called by them Winter Island, and to lay themselves up for the season.

The tedious hours of this long winter were beguiled by dramatic entertainments, musipal parties, and particularly by intercourse with a tribe of Esquimaux, who came to settle in their vicinity. From the conversation, and even the rude delineations of the latter important notices were derived respecting the shores beyond. It was stated that the coast, which had hitherto run eastward, would now take a northerly direction ; that it belonged to a great peninsula, forming the north-east extremity of America, and on the western side of which was a vast extent of ocean. The peninsula was bounded on the north by a strait leading into that ocean ; and on the other side was a large tract of insular land, called Keiyuk Tarruoke ; north of which, again, was another strait, similarly opening into the western sea. All this proved substantially correct. Hav- ing employed the best half of June in sawing through 2000 feet of environing ice, they set sail on the 3rd of July, and about the middle of the month saw before them the great northern insular tract, which they chose to call Cockburn Island ; and, on the left, the strait which they fondly hoped was to lead them into the great ocean. On attempting, however, to enter this passage, it was found, to their deep disappointment, closed by a continued and impenetrable barrier of ice. In the course of the summer they worked their way forward ten or twelve miles, thus placing themselves within the strait, but never could

reach farther ; and the whole extent of the bay and of the sea appeared covered with ice piled upon ice, in immoveable masses. All their sub- sequent information was gained by land-expedi- tions, which enabled them to delineate the strait, its islands, and its opening into the Polar Sea; but all their endeavours to penetrate across the great masses of continent were baffled by rocks, ravines, lakes, and inundations, occasioned by the thaw. To the great tract of land on whose

eastern coast they sailed they gave the name ol Melville Peninsula.

On the commencement of the third summer, as their stores and supplies were drawing to a close, captain Parry formed the too daring de- sign of taking those of the Hecla into his own ship, sending home captain Lyon, and prosecut- ing the voyage alone. Happily this hazardous scheme was frustrated by the appearance of very formidable symptoms of scurvy, which left no choice but that the whole should hasten home- wards. Such were the results of the second ex- pedition of this intrepid navigator.

The admiralty, now determining to act upon every probable point of communication, com- missioned captain Lyon to proceed from Re- pulse Bay to the mouth of Hearne's River; captain Franklin by an overland journey from Mackenzie's River to Behring's Straits ; and Di. Richardson to accompany captain Franklin to the first point, and then to trace the way back to Hearne's River. Captain Lyon was forced back to England by stress of weather, and the badness of his vessel, after he had found Sir Thomas Roe's Welcome much narrower than laid down in the charts, and full of shoals ; but he saw no ice in it. Southampton Island he found broader than it was thought to be, or consisting, perhaps, of several islands. Corrections were also made by him in the positions of some of the capes in Hudson's Straits. Captain Lyon's Narrative, hi small octavo, with plates, is an interesting work.

Captain Franklin and Dr. Richardson (after a series of exertions and hardships, for the parti- culars of which we must refer to their respective publications), had in a former journey completely settled the geography of the mouth of the Cop- per Mine River, and between 500 and 600 miles to the eastward of it. The latitude of this river, which Hearne originally stated to be upwards of 72° N., but which was afterwards reduced to 69°, is now determined to be 67° 48′ N., and long. 115° 30′ W., which is five degrees more westerly than is usually laid down in the charts. One part of the coast, to the eastward of Hearne's River, was found to come down as low as the Arctic circle, or 66° 30′ N. Little or no ice was floating on the sea, which was deep and unob- structed, on which ships of any burden might freely navigate. Captain Franklin had every reason to believe that when once an expedition reached this part of the coast of North America it

would find no difficulty in making good the passage west. He found that the general current set to the eastward, as all the driftwood was found on the western sides of the promon- tories. Nearly parallel to the coast, and at the distance of five or six miles from it, a range of numerous islands extended along the whole coast he at this time traversed.

The one now projected, therefore, was the second, and by far the more important journey of captain Franklin over land — with a view to explore the mouth of Mackenzie's River, and to travel thence by sea to the north-west extre- mity of America.

It was planned at the close of 1823, and Dr. Richardson offered as before to become the com- panion and auxiliary of captain Franklin, tak ing

for his specific object the survey of the coast eastward from Mackenzie to Copper Mine River. As we have noticed the equipments of some other of our northern expeditions, we may here insert a brief description of those of cap- tain Franklin's : — 1. He superintended at home the building of three mahogany boats, having tim- bers of ash, both ends alike, and fitted to be steered either with a sweep oar or a rudder. The largest was twenty-six feet long, five feet four inches broad, and adapted for six rowers, a steersman, and officer ; it could be carried on the shoulders of six men, and was capable of carrying three tons weight beside the crew. The two others were each twenty-four feet long, and four feet ten inches broad, adapted for five men, a steersman, and officer. These were particu- larly designed for the navigation of the rivers of North-West America, and the ascent and descent of the rapids. 2. Colonel Pasley, of the Royal Engineers, suggested in addition, an admirable little vessel called the Walnut Shell, nine feet only in length, four feet four inches broad, framed of ash, and fastened with thongs, the whole being covered with a prepared canvas, and shaped exactly like one valve of a walnut shell. It weighed only eighty-five Ibs., and could be taken into five or six portable pieces, and put together again in twenty minutes. Scientific in- struments of the most accurate and portable kind were of course among the most important articles of outfit; together with the newly in- vented pemmican or prepared meat of the me- tropolis, which captain Franklin calls ' the prin- cipal article of provision.'

The officers embarked from Liverpool on the 16th of February, 1825, and passed through the state "of New York to Upper Canada and Fort William, on the northern shore of Lake Supe- rior. This point they reached on the 10th of May : and now proceeded by Rainy Lake, the Lake of the Woods,

Lake Winipeg, and the Saskatchawan River to Cumberland House, where they arrived on the 15th of June. Their course was now by Pine Island, Beaver and the English River, Deep River, and Clear and Buffalo Lakes, where they overtook the boats of the expedition on the 29th of June.

In the instructions of captain Franklin he was told to expect to find his majesty's ship, Blossom, under the command of captain Beechey, in the rendezvous of Kotzebue's Inlet, in the summer of 1826.

We cannot do justice to the able and valua- ble information of captain Franklin's published Narrative of his Second Expedition, now be- fore us. It must here suffice to say that he so far accomplished its objects as to reach the coast of North America, and lay down the bearing of Fort Norman, at tke mouth of Mackenzie's River (in July, 1826), as in W. long. 124° 44′ 47", N. lat. 64° 40′ 38″ ; variation 39° 57′ 52 E. Here the eastern detachment parted com- pany with captain Franklin, and completed a survey of the coast between what they have called Point Separation and the Copper Mine River, the result of which is seen in our map NORTH POLAR REGIONS.*

Captain Franklin pursued his western track

along the coast, as also seen in our map, to Re turn Reef, about half way between Mackenzie's River and Icy Cape, having been detained about a week by fogs. This circumstance, the advanced state of the season, and his uncertainty as to the actual pointto which captain Beechey might have arrived, induced him here to pause — he could not calculate on accomplishing the rest of his proposed journey in less than a month, and if this calculation were interfered with by any un- foreseen accident the safety of his crew he felt might be compromised. The utmost point west he reached was in lat. 70° 24′ N., and long. 149° 37′ W.

A party in the barge of the Blossom had at that period reached beyond the inlet of Kotzebue to within about 160 miles of the Return Reef, or ultimate point of Franklin. Captain Beechey's narrative we believe has not yet (May 1828) been given to the public.

Captain Parry's third expedition, in 1824-5, took the direction of Barrow's Strait and Prince. Regent's Inlet, but the ice in Baffin's Bay retarded him so long that he did not reach Port Bowen, on the eastern shore of the inlet, until all further navigation was for the year precluded. Here, therefore, his first winter was passed pretty nearly in the same manner as former winters in the polar seas, while the ships were shut up in ' thril- ling regions of thick-ribbed ice.' Perhaps, in- deed, this third winter was somewhat more dreary than former ones ; there was a total ab- sence of all human

creatures besides themseives, and almost of every object of animated nature. ‘ In other respects,’ as captain Parry observes, ‘ a description of the aspect of nature would suit alike each winter they had passed in the ice.’ Their comforts and conveniences, however, were considerably improved this voyage, and with these the general health of the seamen. This circumstance captain Parry mainly attributes to his being able to keep up a uniform and mode- rate temperature throughout every part of the ships, varying only from 56° to 63°, with a per- fectly dry atmosphere, by means of Silvester’s ‘ warming apparatus,’ — ‘ a contrivance.’ he says, ‘ of which I scarcely know how to express my admiration in adequate terms.’

Neither the occupation of the seamen, nor the occasional diversion of their minds, were ob- jects likely to be neglected by our navigator. In- stead of their former recreations, which might now be supposed to have lost the charm of no- velty, captain Hoppner (of the Fury), sug- gested and planned a masquerade, in which both officers and men should be able to take a share. ‘ It is impossible that any idea could have proved more happy, or more exactly suited to our situation. Admirably dressed characters of various descriptions readily took their parts, and many of these were supported with a de- gree of spirit and genuine humor which would not have disgraced a more refined assembly ; while the latter might not have disdained, and would not have been disgraced by, copying the good order, decorum, and inoffensive cheerful- ness which our humble masquerades presented. It does especial credit to the dispositions and good sense of our men, that, though all the off.-

cers entered fully into the spirit of these amuse- ments, which took place once a month, alternately on board each ship, no instance occurred of any thing that could interfere with the regular disci- pline, or at all weaken the respect of the men towards their superiors. Ours were masquerades without licentiousness — carnivals without excess.’ —Parry’s Journal, pp. 49, 50. An occupation not less assiduously pursued, and of much more important and permanent benefit to those en- gaged in it, was the re-establishment of schools.

A great number of important observations on the magnetic influence were conducted by lieu- tenant Foster, which have appeared in the Philo- sophical Transactions of the Royal Society. In treating of Professor Barlow’s plate for correct ing the effect of local attraction, and the severe trial it had to undergo in latitudes where the compasses had before been rendered wholly useless, captain Parry says, ‘ never had an in- vention a

more complete and satisfactory triumph ; for to the last moment of our opera- tions at sea did the compass indicate the true magnetic direction.' ' Such an invention,' he adds, ' as this, so sound in principle, so easy of application, and so universally beneficial in practice, needs no testimony of mine to establish its merits ; but, when I consider the many anxious days and sleepless nights which the uselessness of the compass in these seas has formerly occa- sioned me, 1 really should esteem it a kind of personal ingratitude to Mr. Barlow, as well as great injustice to so memorable a discovery, not to have stated my opinion of its merits, under circumstances so well calculated to put them to a satisfactory trial.' — pp. 55, 56.

On the 20th of July the disruption of the ice first allowed the ships to remove from their winter quarters, and enabled them to stretch across towards the western shore of Prince Re- gent's Inlet, where, after some slight obstruction, they succeeded in making progress along the land. This, however, did not continue long ; the ice was perceived to approach the land, till at length it reached the ships and drove them both on shore, and the Fury was found to be so very seriously damaged as to make it impossible for her to proceed farther without repairs. It was now therefore necessary to form a sort of basin by means of the ice ; the process was tedious and laborious, and various impediments occurred from the movement and pressure of the ice. They succeeded, however, after immense exer- tions, in heaving the Fury down ; but this had scarcely been accomplished when a gale of wind destroyed the securities of the basin, which ren- dered it necessary to tow her out, to re-equip the Hecla, and for the latter to stand out to sea. The Fury was once more driven on shore, and it now appeared on a close examination, that it was perfectly hopeless, circumstanced as they were, to make her sea-worthy ; that it was abso- lutely necessary to abandon her. ' The officers and men,' says captain Parry, ' were now lite- rally so harassed and fatigued as to be scarcely capable of further exertion without some rest ; and on this, and one or two other occasions, I noticed more than a single instance of stupor amounting to a certain degree of failure in intel-

lect, rendering the individual so affected quite unable at first to comprehend the meaning of an order, though still as willing as ever to obey it. Captain Parry afterwards says : — (With a twelve- month's provisions for both ships' companies, it would have been folly to hope for final success, considering the small progress we had already made, the uncertain nature of the navigation, and the advanced period of the present season. I was therefore reduced to the only re- maining conclusion, that it was my duty, under all the circumstances of the case, to return to England, in compliance with the plain tenor of my instructions.'

This, therefore, was the least successful of all the brave and skilful efforts

of captain Parry.

We can but very briefly advert to his late at- tempts to ‘ reach the Pole.’

The object of this expedition was to reach the North Pole by means of two sledge-boats, so constructed as either to travel over the ice, or sail or row through spaces of open water. The Hecla was again appointed to carry him and his companions to Spitzbergen, and there to wait in harbour for his return. The vessel left the Nore on the 4th of April, reached Hammerfest on the 18th, and on the 27th, having received on board a number of rein-deer, made sail to the northward. On the 14th of May the Hecla was abreast of Hakluyt’s Headland, when she was obliged to run into the main-ice for security in a heavy gale of wind. She remained beset and drifting about with the ice, chiefly to the eastward, for four-and-twenty days, when, on the 8th of June, she was liberated. During this detention the weather was delightful : ‘ I never remember,’ says captain Parry, ‘ to have expe- rienced in these regions such a continuance of beautiful weather as we now had, during more than three weeks that we had been on the north- ern coast of Spitzbergen.’ Twice he thought of here leaving the Hecla, and taking to the boats, but her safety, in such a sea, thus left with fewer than half her working hands, could not be reck- oned upon for an hour ; besides, he could not have known when or where to meet with her on his return. ‘ The nature of the ice,’ he tells us, ‘ was beyond all comparison the most unfavor- able for our purpose that I ever remember to have seen. The men compared it to a stone- mason’s yard, which, except that the stones (masses) were of ten times the usual dimensions, it, indeed, very much resembled.’

On reaching the Seven Islands they were found to be all shut in by land-ice ; but the party deposited on Walden Island a store of provisions for their return. Captain Parry then stood on ̂to the northward among loose and broken ice, in search of the main body, as far as 81° 5′ 32”; but, not finding any thing like a field of ice, he stood back to the southward, and on the 19th of June discovered a bay on the north coast of Spitzbergen, in which the Hecla was anchored in lat. 79° 55′ N., long. 16° 54′ E. It is named in the Dutch charts Treurenberg Bay.

Captain Parry on the 21st of June set out on his perilous undertaking, with two boats named the Enterprize and Endeavour; Mr. Beverly, the surgeon, being attached to his own : —

‘ Our plan of travelling,’ he says, ‘ being nearly the same throughout this excursion, after we first entered upon the ice, I may at once give some account of our usual mode of proceeding. It was my intention to travel wholly at night, and to rest by day, there being, of course, constant daylight in these regions during the summer season. The advantages of this plan, which was occasionally deranged by circumstances, con- sisted, first, in our avoiding the intense and op- pressive glare from the snow during the time of the sun’s greatest altitude, so as to prevent, in some degree, the painful inflammation in the eyes, called ‘ snow-blindness,’ which is common in all snowy countries. We also thus enjoyed greater warmth during the hours of rest, and had a better chance of drying our clothes ; besides which, no small advantage was derived from the snow being harder at night for travelling. The only disad- vantage of this plan was, that the fogs were somewhat more frequent and more thick by night than by day, though even in this respect there was less difference than might have been supposed, the temperature during the twenty- four hours undergoing but little variation. This travelling by night and sleeping by day so com- pletely inverted the natural order of things, that it was difficult to persuade ourselves of the reality. Even the officers and myself, who were all furnished with pocket chronometers, could not always bear in mind at what part of the twenty-four hours we had arrived; and there were several of the men who declared, and I believe truly, that they never knew night from day during the whole excursion.

- *When we rose in the evening, we commenced our day by prayers, after which we took off our fur sleeping-dresses, and put on those for tra- velling ; the former being made of camlet, lined with racoon-skin, and the latter of strong blue box-cloth. We made a point of always putting on the same stockings and boots for travelling in, whether they had dried during the day or not ; and I believe it was only in five or six in- stances, at the most, that they were not either still wet or hard frozen. This indeed was of no consequence, beyond the discomfort of first put- ting them on in this state, as they were sure to be thoroughly wet in a quarter of an hour after commencing our journey; while, on the otner hand, it was of vital importance to keep dry things for sleeping in. Being ‘ rigged’ for tra- velling, we breakfasted upon warm cocoa and biscuit, and after stowing the things in the boats and on the sledges, so as to secure them, as much as possible, from wet, we set off on our day’s journey, and usually travelled from five to five and a half hours, then stopped an hour to dine, and again travelled four, five, or even six hours, according to circumstances. After this we halted for the night, as we called it, though it was usually early in the morning, selecting the largest surface of ice we happened to be near, for hauling the boats on, in*

order to avoid the danger of its breaking up by coming in contact with other masses, and also to prevent drift as much as possible. The boats were placed close alongside each other, with their sterns to the wind, the snow or wet cleared out of them, and

the sails, supported by the bamboo masts and three paddles, placed over them as awnings, an entrance being left at the bow. Every man then immediately put on dry stockings and fur boots, after which we set about the necessary repairs of boats, sledges, or clothes ; and, after serving the provisions for the succeeding dayy we went to supper. Most of the officers and men then smoked their pipes, which served to dry the boats and awnings very much, and usually raised the temperature of our lodgings 10° or 15°. This part of the twenty-four hours was often a time, and the only one, of real enjoyment to us ; the men told their stories, and ‘ fought all their battles o'er again,' and the labors of the day, unsuccessful as they too often were, were for- gotten. A regular watch was set, during our resting-time, to look out for bears, or for the ice breaking up round us, as well as to attend to the drying of the clothes, each man alternately taking this duty for one hour. We then con- cluded our day with prayers, and, having put on our fur dresses, lay down to sleep with a degree of comfort which perhaps few persons would imagine possible under such circumstances ; our chief inconvenience being that we were some- what pinched for room, and therefore obliged to stow rather closer than was quite agreeable. The temperature, while we slept, was usually from 36° to 45°, according to the state of the external atmosphere ; but on one or two occasions, in calm and warm weather, it rose as high as 60° to 66°, obliging us to throw off a part of our fur- dress. After we had slept seven hours, the man appointed to boil the cocoa roused us, when it was ready, by the sound of a bugle, when we commenced our day in the manner before de- scribed.

‘ Our allowance of provisions for each man per day was as follows : —

Biscuit . . 10 ounces. Pemmican . . 9 do. Sweetened cocoa

powder . . 1 do. to make one pint. Rum . . 1 gill. Tobacco . . 3 ounces per week.

Our fuel consisted entirely of spirits of wine, of which two pints formed our daily allowance, the cocoa being cooked in an iron boiler over a shallow iron lamp, with seven wicks ; a simple apparatus, which answered our purpose remark- ably well. We usually found one pint of the spirits of wine sufficient for preparing our break- fast, that is, for heating twenty-eight pints of water, though it always commenced from the temperature of 32°. If the weather was calm and fair, this quantity of fuel brought it to the boiling point in about an hour and a quarter; but more generally the wicks began

to go out before it had reached 200°. This, however, made a very comfortable meal to persons situated as we were. Such, with very little variation, was our regular routine during the whole of this excursion.' — P. 55 — 59.

On the 20th of July captain Parry says :— ' We halted at seven A.M., having, by our reck- oning, accomplished six miles and a half in a N.N.W. direction, the distance traversed being

ten miles and an half. It may, therefore, be imagined how great was our mortification in finding that our latitude, by observation at noon, was only 82° 36′ 52", being less than five miles to the northward of our place at noon on the 17th, since which time we had certainly tra- velled twelve in that direction.' — P. 94. This circumstance was carefully concealed from the men ; and on the 22d they had the satisfaction of observing that the ice had certainly improved ; though the floes had not extended their surfaces so as to entitle them to |be called ' fields.'

' In proportion, then, to the hopes we had begun to entertain, was our disappointment in finding, at noon, that we were in lat. 82° 43′ 5", or not quite four miles to the northward of yes- terday's observation, instead of the ten or eleven which we had travelled ! However, we deter- mined to continue to the last our utmost exer- tions, though we could never once encourage the men by assuring them of our making good pro- gress, and, setting out at seven in the evening, soon found that our hope of having permanently reached better ice was not to be realised ; for the floe on which we slept was so full of hum- mocks that it occupied us just six hours to cross it, the distance in a straight line not ex- ceeding two miles and a half.' — P. 98, 99.

This laborious work was disheartening enough to the officers, who knew to what little effect they had been struggling, which, however, the men did not, ' though,' says Parry, ' they often laughingly remarked that ' we were a long time getting to this 83° !' At last it became — we may say it had for some time become — hopeless to pursue the journey.

' For the last few days, the eighty-third pa- rallel was the limit to which we had ventured to extend our hopes; but even this expectation had become considerably weakened since the setting in of the last northerly wind, which continued to drive us to the southward, during the neces- sary hours of rest, nearly as much as we could gain by eleven or twelve hours of daily labor.

Had our success been at all proportionate to our exertions, it was my full intention to have pro- ceeded a few days beyond the middle of the period for which we were provided, trusting to the resources we expected to find at Table Island. But this was so far from being the case that I could not but consider it as incurring useless fatigue to the officers and men, and unnecessary wear and tear for the boats, to persevere any longer in the attempt. I determined, therefore, on giving the people one entire day's rest, which they very much needed, and time to wash and mend their clothes, while the officers were oc- cupied in making all the observations which might be interesting in this latitude; and then to set out on our return on the following day. Having communicated my intentions to the people, who were all much disappointed in finding how little their labors had effected, we set about our respective occupations, and were much favored by a remarkably fine dav.' — P. 102—104.

The highest point of latitude that was reached captain Parry considers to be 82° 45', on the meridian of 19° 2Z' east of Greenwich.

SOUTH POLAR REGIONS. — From the period of captain Cook's voyages, the South Polar Ocean has been little regarded as a point of interest in geography, and in no considerable degree explored. He penetrated beyond the Antarctic circle, in long. 39° 30′ E., advancing to lat. 67° 30', and met with fields and detached pieces of ice, in long. 101° and 1 10° W., be- tween which he proceeded to lat. 71° 10′ S., the nearest approach made by him towards the South Pole, fields and mountains of ice being here scattered over the surface of the sea ; and in long. 136° and 148° W., between which he descended to lat. 68°.

Captain Cook discovered no land in these regions beyond Sandwich land in lat. 60°. But the Russians, in a recent voyage of discovery, are said to have fallen in with several islands about the seventieth parallel ; they also circum- navigated the Sandwich Land, which was left undetermined by Cook, and conjectured that it might be a part of a great southern continent.

The only detailed account of discoveries in this region which we have to add is from a paper of some length in the Edinburgh Philosophical Journal, relative to the discovery of what has been called New South Shetland. This is said to have been first seen, at least in modern times, by Mr. William Smith, master of the brig Wil- liams of Blythe, trading from Buenos Ayres to Valparaiso. Fancying that the passage round Cape Horn might be weathered better by pre- serving a more than usual southerly course, and being on the 19th of February, 1819, in lat. 62° 40′ S., and long. 60° W., he imagined he saw land at the distance of two leagues. Next day (Fe- bruary 20th), he stood in for his supposed land ; at noon his lat. by observation was 62° 17′ S., long. 60° 12′ W., by an excellent chronometer;

the weather was moderate and the atmosphere clear. So fine was it, that he could not mistake the appearance. Fearing the return of blowing weather, he was deterred from approaching nearer, and being principal owner of the brig he was unwilling to endanger his policy of insur- ance, in case of meeting with any accident. He observed, however, to the westward more land, which he approached to the distance of ten miles ; this, as well as the former, appearing tc be an island, and the coast bare and rocky : he observed great abundance of whales and seals. On his arrival at Valparaiso, he related every thing that he had seen to the English there, who at first ridiculed the account : but he had a second opportunity of visiting this spot, in October 1819. He now discovered the same land, bearing south-east by east, three leagues. The weather was hazy ; he bore up for it, and approached within four miles, when he proved it to be an island, or rather a large barren rock, inhabited only by innumerable penguins ; he sounded, and in forty fathoms found a bottom of fine black sand ; he hauled in till it bore east by south; having sounded when in sixty fathoms, he procured the same bottom. During the night he hauled off for security to the north- ward, but at day-light next morning he again stood in for the island ; he could now diatinguish it perfectly at the distance of three leagues ; he

sounded in ninety-five fathoms and brought up fine sand and ooze. At 8 A. M., the weather being very clear, he could plainly distinguish the mainland, bearing S. S. E., the island being distant from it about three leagues. The main- land presented itself as a cape, to which the coast tended in a north-east direction, he stood in, and ran along the land as far as the point to which he gave the name of North Foreland, ob- taining all the way regular soundings of sand and gravel, lessening gradually from thirty-five to twenty fathoms. He now hauled in for the cape, and proceeded, within three leagues, more easterly ; the island now bearing north-west, distance seven leagues, and, observing the ap- pearance of a good harbour, he sent a boat's crew and his first mate on shore, where they planted a board with the Union-jack, and an appropriate inscription, with three cheers, taking possession in the name of the king of Great

Britain. To the mainland was given at first the name of New South Britain ; but as that title, it was suggested, might lead to confusion with other places, Mr. Smith changed its name to New South Shetland, on account of its lying in about the same latitude as the Shetland Islands. He afterwards

ascertained the existence and situation of the land for the length of 150 miles in a W. S.W. direction.

Mr. Smith having transmitted his observations to the British commanding officer in the Pacific, captain Shireff of the Andromache, who was at that time in Santiago, this officer forthwith chartered the brig Williams on government ac- count, in order to make an accurate and regular survey of the coasts and harbours. Captain Basil Hall, F. R. S., was afterwards sent out, for the purpose of exploring and surveying this new region, which offers so many commercial advantages to Great Britain.

POLARITY, the quality of a thing considered as having poles, or a tendency to turn itself into one certain posture ; but chiefly used in speaking of the magnet. See MAGNETISM.

POLARISATION OF LIGHT. If a ray of light fall upon one of the surfaces of a rhomboid of Iceland crystal, and is transmitted through the opposite surface, it is separated into two pencils, one of which proceeds in the direction of the in- cident ray, while the other forms with it an acute angle of between 6° and 7°. The first of these pencils is said to experience the usual or ordinary refraction, and the other the unusual or extraor- dinary refraction. If the luminous object from which the ray proceeds be looked at through the crystal, two images will be distinctly seen, even •when the rhomboid is turned round the axis of vision. If another rhomboid of Iceland spar be placed behind the first, in a similar position, the pencil refracted in the ordinary way by the first will be so also by the second ; and the same thing holds with the extraordinary refracted pencil, none of the pencils being separated into two, as before. But if the second rhomboid be slowly turned round, while the first remains stationary, each of the pencils begins to be separated into two ; and, when the eighth part of a revolution is completed, the whole of each of the pencils is divided into two portions. When the fourth part of a revolution is completed, the pencil, re- fracted in the ordinary way by the first crystal, will be refracted in the extraordinary way only by the second ; and the pencil, refracted in the ex- traordinary way by the first, will be refracted in the ordinary way only by the second ; so that the four pencils will be again reduced to two. At the end of three-eighths, five-eighths, and seven-eighths, of a revolution, the same phenomena will be exhi- bited as at the end of one-eighth of a revolution. At the end of four-eighths and six-eighths of a re- volution, the same phenomena will be seen as at the first position of the crystals, and at the end of two-eighths of a revolution. If we look at a luminous object through the two rhomboids, we shall at the commencement of the revolution see only two image.,, /I, one of the least and one of the greatest refracted images. At the end of one-*

eighth of a revolution four images will be seen ; and so on. It is obvious that the light which forms these images has suffered some new modification, or acquired some new property, which prevented it, in particular parts of a revolution, from penetrating the second rhomboid. This property has been called polarisation; and light is said to be polarised by passing through a rhomboid of calcareous spar, or any other doubly refracted crystals. See OPTICS, sect. 186 — 285.

POLARISATION OF SOUND. The following cu- rious facts, which are considered to prove the polarisation of sound, are given by Mr. Wheatstone, in the Annals of Philosophy, No. xxxii. p. 87 : — ' I connected,' says he, ' a tuning fork with one extremity of a straight conducting rod, the other end of which communicated with a sounding-board ; on causing the tuning-fork to sound, the vibrations were powerfully trans- mitted, but, in gradually bending the rod, the sound progressively decreased, and was scarcely perceptible when the angle was a right one. As the angle was made more acute, the phenomena were produced in an inverted order; the intensity gradually increased as it had before dimi- nished, and, when the two parts were nearly parallel, it became as powerful as in the rectilineal transmission. By multiplying the right angles in a rod, the transmission of the vibration may be completely stopped/

In these experiments, the axis of the oscilla- tions of the tuning-fork should be perpendicular to the plane of the moveable angles ; for, if they are parallel, they will still be transmitted. Mr. Wheatstone gives the following explanation to prove this : — ' I placed a tuning-fork perpendi- cularly on the side of a rectilineal rod. The vi- brations were therefore communicated at right angles ; when the axis of the oscillations of the fork coincided with the rod, the intensity of the transmitted vibrations was at its maximum. In proportion as the axis deviated from parallelism, the intensity diminished, and, when it became perpendicular, the intensity was a minimum.' The phenomena of polarisation may be observed in many chorded instruments. The chords of the harp are attached t« a conductor which has

the same direction as the sounding-board ; if any chord be altered from its quiescent position, so that its axis of oscillation shall be parallel with the bridge or conductor, its tone will be full ; but if the oscillations be excited, so that their axes shall be at right angles with the conductor, the tone will be feeble.

POLE, n. s. & v. a. i Sax. } > ole : Armen.

POLE-AXE.]paol; Fr. pal; Ital.

polo; Lat. palus. A long staff; a long piece of timber erected ; a rod, or perch, containing five yards and a half; any measure of length: to ; urnish with poles : a pole-axe, an axe fixed to a pole.

This ordinance of tithing them by the pole is not only fit for the gentlemen, but also the noblemen.

Spenser.

Withered is the garland of the war, The soldier's pole is fallen.

Shakspeare. Antony and Cleopatra.

Live to be the show and gaze o' th' time ; We'll have thee, as our rarer monsters are, Painted upon a pole, and underwrit, Here may you see the tyrant. Shakspeare.

A long pole, struck upon gravel in the bottom of the water, maketh a sound.

Bacon's Natural History.

A peer of the realm and a counsellor of state are not to be measured by the common yard, but by the pole of special grace. Bacon.

Their houses poles set round meeting together in the top, and covered with skins. Heylin.

To beat religion into the brains with a poleaxe is to offer victims of human blood. Howel.

One hung a poleaxe at his saddlebow,

And one a heavy mace to stun the foe. Dryden.

Every pole square of mud, twelve inches deep, is worth sixpence a pole to fling out. Mortimer.

Begin not to pole your hops. Id.

If, after some distinguished leap, He drops his pole, and seems to slip : Straight gathering all his active strength, He rises higher, half his length. Prior.

He ordered to arm long poles with sharp hooks, wherewith they took hold of the tackling which held the mainyard to the mast ; then, rowing the ship, they cut the tackling, and brought the mainyard by the board. Arbuthnot on Coins.

POLE, n. s. ~\ Fr. pole. ; Lat. polus,

PO'LAR, adj. i polar is. The extremity of

POLAR'ITY, n. s. Vthe earth's axis, north or

POLAR'Y, adj. i south : polar and polary

POLE-STAR, n. s. j are pertaining to or near either of the poles ; having a tendency to one of the poles : polarity, such tendency.

If a pilot at sea cannot see the polestar, let him steer his course by such stars as best appear to him.

King Charles.

As when two polar winds, blowing adverse Upon the Cronian sea, together drive Mountains of ice. Milton's Paradise Lost.

From the centre thrice to the utmost pole. Milton.

This polarity from refrigeration, upon extremity and defect of a loadstone, might touch a needle any where. Browne's Vulgar Errours.

Irons, heated red hot, and cooled in the meridian from North to South, contract a polary power.

Browne.

From pole to pole

The forky lightnings flash, the roaring thunders roll.

Dryden.

I was sailing in a vast ocean without other help than the polestar of the ancients. Id.

I doubt,

If any suffer on the polar coast, The rage of Arctos, and eternal frost. Prior. Heaven speed the canvass, gallantly unfurled, To furnish and

accommodate a world, To give the pole the produce of the sun, And knit the unsocial climates into one. — Cowper.

POLE, in astronomy, one of the points in the heavens round which the whole sphere seems to turn. It is also used for a point directly perpendicular to the centre of any circle's plane, and distant from it by the length of a radius.

POLE, in geography, one of the points on which the terraqueous globe turns ; each of them being ninety degrees distort from the equator, and, in consequence of their situation, the incli- nation of the earth's axis, and its parallelism during the annual motion of our globe round the sun, having only one day and one night through- out the year. Owing to the obliquity with which the rays of the sun fall upon the poles, and the great length of the winter, the cold is so intense that those parts of the globe have never been fully explored, though the attempt has been re- peatedly made by the most celebrated navigators. Their attempts indeed have chiefly been confined to the northern regions ; for, with regard to the south pole, there is not the same incitement to at- tempt it. The great object for which navigators have adventured into these frozen seas was to find out a more ready passage to the East Indies ; and this has been attempted three several ways : one by coasting along the northern parts of Eu- rope and Asia, called the north-east passage; another, by sailing round the northern part of the American continent, called the north-west passage ; and the third, by sailing directly over the pole itself. See POLAR REGIONS.

POLE, MAGNETIC. See MAGNET and MAG- NETISM.

POLE (Reginald), cardinal, younger son of Sir Richard Pole, Lord Montague, was born at Stoverton Castle, in Staffordshire, in the year 1 500. At seven years of age he was sent to a Carthusian monastery at Sheen, near Richmond in Surry; and thence, when about twelve, re- moved to Magdalen College, Oxford. In 1513 he took the degree of A. B., and was admitted to deacon's orders; in 1517 he was made preben- dary of Salisbury, and in 1519 dean of Wim- borne and Exeter. When about nineteen, he was sent to finish his studies at Padua in Italy, where he resided some time in great splendor, having a handsome pension from king Henry VIII. He returned to England in 1525, where lie was graciously received at court ; but, prefer- ring study, he retired to the convent at Sheen, for about two years, when Henry began to di- vulge his scruples concerning his marriage with Catharine of Spain. Pole avoided all danger of giving offence, by asking leave to visit Paris and Italy ; and his pension was continued. The king, having now divorced queen Catharine, married Anne Boleyn ; and, being resolved to throw off the papal yoke, ordered Dr. Sampson to write a book in justification of his conduct, which he sent to

Pole for his opinion. To this Pole, secure in the pope's protection, wrote an answer, entitled Pro Unitate Ecclesiastica. and

sent it to the king ; who was so offended, that he. withdrew his pension and all his preferments, and procured an act of attainder to be passed against him. In the mean time Pole was created a cardinal, and sent nuncio to different parts of Europe. At length the pope fixed him at Vi- terbo, where he continued- till 1543, when he was appointed legate to the council of Trent, and was afterwards employed by the pope as his chief counsellor. Paul III. dying, in 1549, Pole was twice, it is said, elected his successor, and twice refused. On the accession of queen Mary, in 1553, cardinal Pole was sent legate to England, where he was received with great ve- neration, and conducted to the archbishop's pa- lace at Lambeth, Cranmer being then prisoner in the Tower. The day after the execution of Cran- mer, he was consecrated archbishop of Canter- bury. In the same year, 1556, he was elected chan- cellor of the University of Oxford, and soon after of Cambridge ; both which he visited by his com- missioners. He died of a double quartan ague, in 1558, about sixteen hours after the death of the queen, and was buried in the cathedral of Canterbury. He seems to have been a man of mild manners, and of real worth. He wrote De Ecclesiae Potestate, A Treatise on Justifica- tion, and various other tracts.

POLE'CAT, n. s. i. e. Pole or Polish cat, because they abound in Poland. The fitchew; a stinking animal ; a name of reproach.

Polecats ? there are fairer things than polecats.

Shakspeare.

Out of my door, you witch ! you hag ! you pole- cat. Id.

She, at a pin in the wall, hung like a polecat in a warren, to amuse them. L'Estrange.

How should he, harmless youth, Who killed but polecats, learn to murder men 1

Gay.

POLECAT. See MUSTELA. PO'LEDAVY, n. s. A sort of coarse cloth.

Ainsworth.

Your poledavy wares will not do for me. Howel.

POLEIN, in English antiquity, a sort of shoe, sharp or peaked at the point. This fashion took its rise in the time of king William Rufus ; and the picks were so long that they were tied up to the knees with silver or golden chains. They were forbidden by stat. an. 4 Edw. IV. cap. 7. Tune fluxus crinium, tune luxus vestium, tune usus calceorum cum arcuatis aculeis, inventus est. — Malmesb. in Will. II.

POLEMARCIIUS, in ancient history, a magistrate at Athens, who had under his care all the strangers and sojourners in the city. It was his duty to offer a solemn sacrifice to Enyalus (said to be the same with Mars, though others will have it that he was only one of his at- tendants), and another to Diana, surnamed Ayporspa, in honor of the famous patriot Har- modius. It was also his business to take care that the children of those that had lost their lives in the service of their country should be provided for out of the public treasury.

POLEMBERG (Cornelius), a celebrated Dutch painter, born at Utrecht in 1586. His best pieces are of the cabinet size. He was brought over to England by king Charles I.;

but, thoug m'ghly encouraged, preferred return- ing to Utrecht, where he died in 1660.

POLEMIC, adj. & n. s. } Greek TroXsjuicoc.

POLEMICAL. $ Controversial : dis-

putative : a disputant.

Among all his labours, although polemick dis- courses were otherwise most uneasy, as engaging to converse with men in passion. Fell.

I have had but little respite from these polemical exercises, and, notwithstanding all the rage and ma- lice of the adversaries of our church, I sit down con- tented. Stillinyfleet.

The nullity of this distinction has been solidly shown by most of our polemick writers of the protes- tant church. South.

The best method to be used with these polemical ladies is to show them the ridiculous side of their cause. Addisvn.

Each staunch polemick, stubborn as a rock, Came whip and spur. Pope.

He signalised himself in the schools, as a philoso- pher and polemick of extensive knowledge and deep penetration ; and went through all the courses with a wise regard to the dignity and importance of each science. Johnson.

POLEMO, or POLEMON, an Athenian of dis- tinguished birth, who succeeded Xenocrates in the direction of the academy, but in the earlier part of his life was a man of loose morals. Re- turning home one morning in a state of intoxica- tion he broke into the school of Xenocrates, while he was lecturing in the midst of his dis- ciples. Xenocrates, immediately turning his discourse to the subjects of temperance and modesty, recommended these virtues with such energy of language, and strength of argument, that, instead of ridiculing the philosopher, as he intended, Polemo became quite ashamed of his own folly, and resolved to devote his life from that moment to the study of wisdom. Accord- ingly, from his thirtieth year, he constantly prac- tised the most rigid virtue and hardy fortitude ; though the austerity of his manners was tempered with urbanity and generosity. He died at an advanced age of a consumption, about A. A. C. 270. Of his tenets little is said by the ancients, because he strictly adhered to the doctrine of Plato.

POLEMON, a son of Zeno the rhetorician, and a renowned sophist. He was made king of Pontus by Marc Antony, and was succeeded by his son Polemon II. See PONTUS.

POLEMONIUM, in ancient geography, a town of Pontus, on the east bank of the mouth of the Thermodoon ; now called Yatija.

POLEMONIUM, in botany, Greek valerian, or Jacob's ladder, a genus of the monogynia order, and pentandria class of plants ; in the natural method ranking under the twenty-ninth order, campanaceae. The corolla is quinquepartite; the stamina inserted into scales, which close the bottom of the corolla; the stigma istrifid: the capsule bilocular superior. There are two species: the most remarkable is P. coeruleum, with an empalement longer than the flower. It grows naturally in some places of England : however, its beauty has obtained it a place in the gardens. There are three varieties ; one with a white, another with a blue, and another with a variegated flower; also a kind with varie-

gated leaves. They are easily propagated by seeds; but that kind with

variegated leaves is preserved by parting its roots, because the plants raised from seeds would be apt to degenerate and become plain.

A POLEMOSCOPE, in optics, is the same with an opera glass.

POLENBURG (Cornelius), an excellent painter of little landscapes and figures. See POLEMBERG. He was educated under Blomaert, whom he soon quitted to travel into Italy ; and studied long in Rome and Florence, where he formed a style entirely new, which, though preferable to the Flemish, is unlike any Italian, except in his having adorned his landscapes with ruins. There is a varnished smoothness and finishing in his pictures that render them always pleasing, though simple, and too nearly resembling one another. At London he painted the figures in Steenwyck's perspectives, for king Charles I., but staid only four years. His works are very scarce and valuable.

POLERON, one of the Banda or Nutmeg Islands in the East Indies. It was one of those spice islands which put themselves under the protection of the English, and voluntarily ac- knowledged James I., king of England, for their sovereign ; for which reason the natives of this and the rest of the islands were murdered or driven thence by the Dutch, together with the English.

POLES, in castrametation, long round pieces of wood, by which a marquee or tent is sup- ported. There are three sorts, viz. ridge-pole, a long round piece of wood, which runs along the top of an officer's tent or marquee, and is sup- ported by two other poles, viz. front-pole, a strong pole which is fixed in the front part of an officer's tent or marquee, and is kept in a per- pendicular position by means of two strong cords, called weather cords, that run obliquely from each other across two other cords from the rear- pole, and are kept fast to the earth by wooden pegs. Rear-pole, a strong pole which is fixed in the back-part of an officer's marquee or tent, and is kept in the same relative position as has been described above.

Fi're-PoLEs, or RODS, are also artificial fire- works. They are generally of the length of ten or twelve feet, and of the thickness of two inches at most. One of the ends of the fire-pole is hollowed out with three or four flutes to the length of two or three feet. Into one of these flutes are fixed rockets or squibs. Paper crackers are fixed in the others. After holes have been bored through the body of the pole, in order that the rockets may have communication with the crackers, they must be neatly wrapped in paper, the more effectually to deceive the spectators.

POLES, PJCKET, in military affairs, round pieces c ' wood shod with iron, and driven firmly inio the earth, to fasten cavalry by when ut picket. The

poles for the heavy horse should be longer than those which are commonly used. See PICKETS.

POLET./E, were ten magistrates of Athens, who, with three that had the management of money allowed for public shows, were em- powered to let out the tribute money and other

*public revenues, and to se.l confiscated estates; all which bargains were ratified by their presi- dent, or in his name. They were by their office also bound to convict such as had not paid the tribute called ptroiiuov, and sell them in the market by auction. The market where these wretches were sold' was called 7rw\jjr»j/*oi> rn fitrouels.*

POLEY MOUNTAIN, or POLEY GRASS, is a species of lythrum.

POLHEM (Christopher), a Swedish engi- neer, was born in Gothland in 1661. Charles XI. sent him to travel, when he remained some time at Paris. Our George I. afterwards invited him to Hanover, to superintend the working of the Hartz mines ; but he preferred returning to his native country. Sweden owes to Polhem a great number of ingenious and useful inventions in mining, draining, docks, and canals ; and he particularly displayed his genius in his plans for the construction of the canal of Trollhaetta, and the basin of Carlscrona. He was rewarded by a patent of nobility, and the title of counsellor of commerce. He was also a member of the Academy of Sciences at Stockholm, to whose Transactions he furnished many contributions. His death took place August 31st, 1751.

POLIAS, a surname of Minerva, as the pro- tectress of cities.

POLICE', n. s. Fr. police. The government of a city or country, so far as regards the inhabi tants.

Where there is a kingdom altogether unable or in- dign to govern, it is a just cause of war for another nation, that is civil or policed, to subdue them.

Bacon's Holy War.

By establishing or separating the different boards of finance, police, &c., from the courts of law, which before impeded each other by meeting in the same place, she has facilitated the dispatch of business, and rendered the administration of justice more speedy. Coxe.

POLICE, Gr. TTO\IC, a city. This term, or ' Pub- lic Police and Economy,' is applied by Black- stone to signify the due regulation and domestic order of the kingdom : it is more generally ap- plied to the internal regulations of

large cities and towns, particularly of the metropolis. See 4 Comm. c. 13. p. 162.

The police of the metropolis, says Colquhoun, is a system highly interesting to be understood : but a vast proportion of those who reside in the capital, as well as the multitude of strangers who resort to it, have no accurate idea of the principles of organisation which move so com plicated a machine: establishing those con- veniences and accommodations, and preserving that regularity which prevails, in the particular branches of police which may be denominated municipal regulations. These relate to paving, watching, lighting, cleansing, and removing nui- sances; furnishing water; the mode of building houses ; the system established for extinguishing fires ; and for regulating coaches, carts, and car- riages ; with a variety of other useful improve- ments tending to the comfort and convenience of the inhabitants. See Colquhoun's Treatise.

To administer that branch of the police which is connected with the prevention and suppression

POLICE.

«T crimes, twenty-six magistrates, viz. the lord mayor and aldermen, sit in rotation every fore- noon, and take cognizance of all complaints within the ancient jurisdiction of the city of London. See LONDON.

For every other part of the metropolis twenty- four stipendiary magistrates are appointed; three at Bow Street, under a jurisdiction long established ; and twenty-one, first established by stat. 32 Geo. III., c. 53 (generally called the Police Act). This act was repealed, and other provisions of a similar nature were enacted by various acts, as 54 Geo. III. c. 37, &c. These twenty-one magistrates have seven different offices of courts of justice assigned them, at convenient distances, in Westminster, Middle- sex, and Surrey; where they sit every day, Sun- days excepted, one justice from ten in the morn- ing till eight in the evening, and two from twelve till three; for the purpose of executing those multifarious duties connected with the office of a justice of peace which occur in large societies. This institution was suggested to the legislature in consequence of the pressure felt by the pub- lic from the want of some regular tribunals, where the system should be uniform, and where the purity of magistrates, and their regular at- tendance, might insure to the lower orders of the people the adjustment of their differences at the least possible expense ; and the assistance of gratuitous advice in every difficulty, as well as official aid in all cases within the sphere of the magistrate. Similar provisions are made to pre- vent depredation on the Thames, by the acts 39 and 40 Geo. III. c. 87; 42 Geo. III. c. 76; 47 Geo. III. stat. 1, c. 37 ; and 54 Geo. III. c. 187, usually called the Thames Police Acts.

The duty of these stipendiary magistrates, in conjunction with the county magistrates, extends also to several judicial proceedings, where, in various instances, they are empowered and re- quired to hear and determine offences in a sum- mary way; particularly in cases relating to the customs and excise; game-laws; pawnbrokers; laborers ; and apprentices, &c. They act minis- terially in licensing and'regulating public-houses ; punishing vagrants ; removing the poor, &c., &c. And examine into complaints in criminal cases, capital and others, for the purpose of sending them to superior tribunals for trial.

The following is an abstract of the Civil Mu- nicipal Regulations of the police of the metro- polis : —

The metropolis having by degrees been ex- tended so far beyond its ancient limits, every parish, hamlet, liberty, or precinct, now con- tiguous to the cities of London and Westminster, may be considered as a separate

municipality ; where the inhabitants regulate the police of their respective districts, raise money for paving the streets, and assess the householders for the in- terest thereof, as well as for the annual expense of watching, cleansing, and removing nuisances and annoyances. These funds, as well as the execution of the powers of the different statutes creating them (excepting where the interference of magistrates is necessary), are placed in the hands of trustees ; of whom, in many instances, the churchwardens or parish officers, for the time

being, are members ex officio ; and, by these different bodies, all matters relating to the im- mediate safety, comfort, and convenience of the inhabitants, are managed and regulated ; under the provisions of statutes made in the last and present reign, as well public as private, applica- ble to the metropolis in general, and to the various parishes, hamlets, and liberties in par- ticular; former statutes for these purposes having been found inadequate. The stat. 10, Geo. II. c. 22, established a system for paving, lighting, cleansing, and watching the city of London ; but the statute which removed signs and sign-posts, balconies, spouts, gutters, and those other en- croachments and annoyances which were felt as grievances by the inhabitants, did not pass till the year 1771. The stat. 11 Geo. III., c. 29, contains a complete and masterly system of that branch of the police which is connected with municipal regulations ; and may be considered as a model for every large city in the empire. This statute extends to every obstruction by carts and carriages, and provides a remedy for all nuisances which can prove, in any respect, offensive to the inhabitants; and special com- missioners, called commissioners of sewers, are appointed to ensure a regular execution. This statute is improved by stat. 33 Geo. III. c. 75; by which the power of the commissioners is in- creased, and some nuisances, arising from butchers, dustmen, &c., further provided against. Various acts are from time to time passed for local improvements in streets, squares, docks, &c. In the city and liberty of Westminster also many new and useful municipal regulations have been made within the present century. The stats. 27 Eliz. and 16 Car. 1 (private acts) divided the city and liberties into twelve wards, and appointed twelve burgesses to regulate the police of each ward, who, with the dean or high steward of Westminster, were authorised to govern this district of the metropolis. The stat. 29 Geo. II., c. 25, enabled the dean or his high steward to choose eighty constables in a court- leet; and the same act authorised the appoint- ment of an annoyance-jury of forty-eight inhabi- tants, to examine weights and measures, and to make presentments of every public nuisance either in the city or liberty. The stat. 31 Geo.

II. c. 17, 25, improved the former statute, and allowed a free market to be held in Westminster. The stat. 2 Geo. III. c. 21, amended by stat. 3, Geo. III. c. 23, extended and improved the system for ‘ paving, cleansing,

lighting, and watching the city and liberty, by including six other adjoining parishes and liberties in Middle- sex. The stats. 5 Geo. III. cc. 13, 50; 11 Geo. Ill c. 22; and particularly 14 Geo. III. c. 90, for regulating the nightly watch and constables, made further improvements in the general sys- tem ; by which those branches of police in West- minster are at present regulated. See also 44 Geo. III. c. 61; 45 Geo. III. c. 113; 46 Geo.

III. c. 89; and 48 Geo. III. c. 137, under which many improvements have been made in West- minster, with a view to the convenience and dignity of the courts of justice and houses of parliament.

In the borough of Southwark also the same

system has been pursued: the stats. 28 Geo. II. c. 9, 6 Geo. III. c. 24, having established a sys- tem of regulation applicable to this district of the metropolis; relative to markets, hackney- coach stands, paving, cleansing, lighting, watch- ing, marking streets, and numbering houses ; and placing the whole under the management of commissioners.

The stat. 9 Ann. c. 23 first established the regulations with regard to hackney-coaches and chairs, which have been improved and extended by several subsequent statutes; see LONDON; and stat. 33 Geo. III. c. 75, § 15 —19, which enlarges the power of the magistrates of the city of London, to compel the appearance of hackney-coachmen residing out of their imme- diate jurisdiction.

Carts and other carriages have also been regu- lated by different statutes, viz. stats. 1 Geo. I., stat. 2. c. 57 ; 18 Geo. II. c. 33 ; 24 Geo. II. c. 43; 30 Geo. II. c. 22 ; 7 Geo. III. c. 44; 24 Geo. III. stat. 2, c. 27 ; which contain a very complete system relative to this branch of police : by virtue of which all complaints arising from offences under these acts are cognizable by the magistrates in a summary way.

The stat. 34 Geo. III. c. 65 established an improved system with regard to watermen ply- ing on the river Thames. The lord mayor and aldermen are empowered to make rules and orders for their government ; and with the re- corder of the city, and justices of the peace ot the respective counties and places next adjoining to the Thames, between Gravesend and Windsor, have power, within those districts, to put in execution not only the laws, but also the rules and orders to be from time to time made by them relative

to such watermen : such rules and orders to be from time to time sent to the public office in the metropolis, and to the clerks of the peace of the counties joining the Thames, within thirty days after they are made or altered. The magistrates have power given them to fine watermen for extortion and misbehaviour : and persons refusing to pay the legal fares may be compelled so to do with all charges, or be im- prisoned for a month ; and persons giving water- men a fictitious name or place of abode shall forfeit £5. See WATERMEN. A new declara- tion of the just fares of the watermen was pub- lished as we were preparing for press.

Offences relative to the driving of cattle im- properly, usually termed bullock-hunting, are also determinable by the magistrates in the same summary way, under the authority of stat. 21 Geo. III. c. 67 ; by which every person is au- thorised to seize delinquents guilty of this very dangerous offence.

The last great feature of useful police to be here mentioned consists in the excellent regula- tions relative to buildings, projections, and fires; first adopted after the fire of London in 1666, and extended and improved by several statutes from that time down to the stat. 14 Geo. III. c. 78. This statute repeals all former acts, and, besides regulating the mode of building houses in future, so as to render them ornamental, com- modious, and secure against the accidents of fire, established other useful rules for the prevention

of this dreadful calamity; by rendering it incum- bent on the churchwardens to provide engines and ladders ; to fix fire-plugs at convenient dis- tances on all the main pipes in the parish ; to fix a mark in the street where they are to be found, and where there is a key ready to open the plugs : rewards are also payable to persons bring- ing the engines to a fire.

These outlines will explain, in some rneas '.<», by what means the system of the police, in most of its great features, is conducted in the metropo lis ; to which it may be necessary to add, that the beadles of each parish are the proper per- sons to convey informations, in case of any in- convenience or nuisance, by which a stranger may have it removed. The city and police magistrates, in their respective courts, if not im- mediately authorised to remedy the wrong com- plained of, will point out how it may be effected. The new arangement tnat nas ate y oeen adopt- ed of substituting active men, under the control of the home department, for the feeble old men which for a number of years had been entrusted nightly with the care of the property in the metro- polis appears fully to answer the end for which it was intended. The city and suburbs are now much better watched than formerly, though this arrangement costs considerably more than the old

plan.

POLICHNA, 1. An ancient town of Troas, on Ida. Herodot. vi. c. 28; 2. Another in Crete. Thucyd. ii. c. 85.

POL ICY, n. s. Gr. iroXima; Lat. politia. The art of government, particularly with respect to foreign powers ; art ; prudence ; manage- ment ; stratagem.

If it be honour in your wars to seem The same you are not, which for your best ends You call your policy, how is't less or worse, But it shall hold companionship in peace With honour as in war ? Shakspeare. Cono/uTfoJ.

If she be curst it is for polici, , For she's not freward, but modest.

Shakspeare.

The best rule of policy is to prefer the doing ot justice before all enjoyments. King Charles.

The wisdom of this world is sometimes taken in scripture (or policy, and consists in a certain dexterity of managing business for a man's secular advantage.

South.

POLICY OF INSURANCE, or assurance of ships, is a contract, whereby a person takes upon him- self the risks of a sea voyage ; obliging himself to make good the losses and damages that may befal the vessel, in part or in whole ; in conside- ration of a certain sum per cent, paid, according to .he risk run. See MARINE INSURANCE.

POLIDORO DA CARAVAGGIO, an eminent painter, born at Caravaggio, in the Milanese, in 1492. He went young to Rome, where he worked as a laborer in preparing stucco for t.he painters ; and, seeing them at work in the Vati- can, he solicited some of them to teach him the rules of designing. He attached himself par- ticularly to Maturino, a young Florentine ; and, a similarity in talents and taste producing a dis- interested affection, they associated like bro- thers, labored together, and lived on one common purse, until the death of Maturino. He prac- tised the chiaroscuro in a degree superior to anv

m the Roman school ; and finished an incredible number of pictures in fresco and in oil, for the public buildings. Being obliged to fly from Rome when it was pillaged, he retired to Mes- sina, where he obtained a large sum of money, by painting the triumphal arches for the recep- tion of Charles V. after his victory at Tunis; but, when he was preparing to return to Rome, he was murdered for the sake of his riches, by a Sicilian valet and other assassins, in 1543.

POLIEA, a festival at Thebes in honor of Apollo, who was there represented with gray hairs, TroXtoc, contrary to the practice of all other places. An ox was also sacrificed, and formerly a bull, till once that one could' not be got.

POLIGNAC (Melchior De), a celebrated French cardinal, born of an ancient and noble family at Puy, in 1662. He was sent by Louis XIV. ambassador extraordinary to Poland, where, on the death of Sobieski, he formed a project of procuring the election of the prince of Conti, But failing, he returned home under some dis- grace ; when restored to favor, he was sent to Rome as auditor of the Rota. He was pleni- potentiary during the congress at Utrecht, when Clement I. created him a cardinal ; and upon the accession of Louis XV. was appointed to reside at Rome as minister of France. He re- mained there till 1732, and died in 1741. He left a MS. poem entitled Anti-Lucretius, seu De Deo et Natura ; the plan of which is said to have been formed in Holland in a conversation with Mr. Bayle. This celebrated poem was first published in 1749, and has since been several times printed in other countries. He had been received into the French Academy in 1 702, into the Academy of Sciences in 1715, into that of the Belles Lettres in 1717.

POLIGNY, an agreeable and well built post- town of the department of the Jura, France, the chief place of a subprefecture, or arrondissement of the same name, with a population of 4500 inhabitants ; having an agricultural society, a communal college, and an inferior court of judi- cature at Arbois. It is pleasantly situated at the foot of a mountain, that forms part of the Jura chain, standing in a fertile country near the source of the Glantine. It is adorned with several public fountains. The shambles, which are erected under an arch, crossed by a canal of running water, are kept remarkably clean. Near the same spot also is a grotto, curious on account of its congelations. The manufactures consist of casks, common delfware, saltpetre, and oils, and there are some dye-houses, tan-yards, and saw-mills. In the neighbourhood are some quarries of marble and alabaster. The inhabitants carry on a trade in grain, flour, excellent red wine, brandy, turnery goods, delf, leather, rape seed, &c. This town is twenty-one miles,

N. N. E. of Lous-le-Saulnier, forty-two south of Besan9on, and 289 south-east of Paris.

POLISH, v. a., v. n. & n. s. > Fr. polir ;

POL'ISHER, n. s. 5 Lat. polio. To

smooth ; brighten by attrition ; gloss : to receive a gloss : the gloss effected ; elegance of manner ; polite breeding.

He setteth to finish his work, and polishes it per- fectly. Ecclus.*

It was reported by the ancients, that there was a kind of steel, which would polish almost as white and bright as silver. Bacon.

Studious they appear Of arts that polish life, inventors rare.

Milton.

Not to mention what a huge column of granite

cost in the quarry, only consider the great difficulty

of hewing it into any form, and of giving it the due

turn, proportion, and polish. Addison on Italy.

What are these wond'rou civilising arts ,*

This Roman polish, and this smooth behaviour,

That render man thus tractable and tarne ?

Addison.

I consider a human soul without education like marble in the quarry, which shews none of its in- herent beauties, till the skill of the polisher fetches out the colours. Id.

Another prism of clearer glass and better polish seemed free from veins. Newton's Opticks.

Pygmalion, with fatal art, Polished the form that stung his heart.

Granville.

As his parts were extraordinary, so he well knew how to improve them ; and not only to polish the diamond, but enchase it in the most solid and

durable metal. Johnson.

POLISHER, or burnisher, among mechanics, is an instrument for polishing and burnishing things proper to take a polish. The gilders use an iron polisher to prepare their metals before gilding, and the blood-stone to give them the bright polish after gilding.

POLISHERS, among cutlers, are a kind of wooden wheels made of walnut tree, about an inch thick, and of a diameter at pleasure, which are turned round by a great wheel ; upon these they smooth and polish their work with emery and putty.

POLISHERS for glass consist of two pieces of wood ; the one flat, covered with old hat ; the other long and half round, fastened on the former, whose edge it exceeds on both sides by some inches, which serves the workmen to take hold of, and to work backwards and forwards by.

POLISHERS used by spectacle-makers are pieces of wood a foot long, seven or eight inches broad, and an inch and a half thick, covered with old beaver hat, whereon they polish the shell and horn frames their spectacle glasses are to be set in.

POLITE', adj. } Lat. politus. Glossy ;

POLITE'LY, adv. £ smooth ; refined or ele-

POLITE'NESS, n. s. J gant in behaviour : the ad- verb and noun substantive corresponding with this last sense.

If any sort of rays, falling on the polite surface of any pellucid medium, be reflected back, the fits of easy reflection, which they have at the point of re-flexion, shall still continue t6 return. Newton.

Some of them are diaphanous, shining, and polite ; other not polite, but as if powdered over with fine iron dust. Woodwar:l.

A nymph of quality admires cur knight,

He marries, bows at court, and grows oolite.

I have seen the dullest men aiming at wit, and others, with as little pretensions, affecting politeness in manners and discourse. Swift

As in smooth oil the razor best is whet.

So wit is by politeness keenest set. Young.

POLITE ARTS. See ARTS.

POLITENESS is by lord Chesterfield called the art of pleasing. It has also been called an arti- ficial good nature; and indeed good nature is the foundation of true politeness ; without which art will make but a very indifferent figure, and wit generally defeat its own ends. ‘ True politeness,’ it has been well said, ‘ is that continual attention which humanity inpires us with, both to please others, and to avoid giving them offence. The surly plain-dealer exclaims loudly against this virtue, and prefers his own bluntness and Gothic freedom. The reason generally is because they are his own. The courtier and fawning flatterer, on the contrary, substitute in its place insipid compliments, cringings, and a jargon of unmean- ing sentences. The one blames politeness, be- cause he takes it for a vice ; and the other is the occasion of this, because that which he practises is really so. ‘ He who thinks himself sure of pleasing,’ ‘ says lord Chesterfield, ‘ and he who despairs of it, are equally sure to fail.’ And he is undoubtedly in the right. The one, by his assuming vanity, is inattentive to the means of pleasing; and the other, from fear, is rendered incapable of them. Some of the best rules on this subject (as far indeed as it can be a matter of rule), with strictures on particular kinds of impoliteness, may be found in the Spectator, Rambler, Idler, Lounger, Mirror, and Knox’s Essays. Lord Chesterfield’s Letters are also worthy of perusal, provided the reader be on his guard against insincerity and other vices which they are calculated to infuse, and provided he always bear in mind that true politeness does not consist in specious manners and dissimula- tion, but that it must always be founded on real worth and virtue.

POLITI (Alexander), a learned Italian, born at Florence in 1679, and distinguished for saga- city, and an extensive memory. He taught phi- losophy, theology, and rhetoric, at Genoa ; and afterwards Greek at Pisa. He published an edition of Homer, with Eustathius’s commen- tary, and added a Latin translation, with notes. He died of an apoplexy in 1752.

POLITIAN (Angelo), was born at Monte Pulciano in Tuscany, in 1454. He learned Greek under Andronicus ; and philosophy under Ficinus and Argyropylus. He was one of the most learned writers of his time. The first work which gained him a reputation was a poem on the tournament of Julian de Medicis. The ac- count he wrote some time after of the conspiracy of the Pazzi’s was very much esteemed. He wrote many other

pieces which have merited ap- probation ; but his Epistles have been most read. He died at the age of forty years. His morals answered the homeliness of his face ra- ther than the fineness of his genius.

POLITIC, n. s.

POLIT'ICAL, adj. PoLiT/iCALLY,adu.

Lat. politia ; Gr. iroXirtia. Form of go- vernment or civil con-

PonT'rcASTER, n. s. (stitution : political and POLITICIAN, [politic mean, relating

POLITICLY, to the administration

POL ITICS, of public affairs ; civil ;

POL'ITY, J hence prudent; skil-

ful; wise; cunning; the latter word is generally

used in modern times in the latter senses, while political is restricted to that which pertains to public affairs: politically and politicly follow these senses : a politicaster is a quack in politics, see the extract : politician, one versed in the arts or secrets of government ; also a shrewd or cun- ning man : politics (Fr. politiqtie), is the science of public government ; the practice or art of ad- ministering the public affairs.

Virtuously and wisely acknowledging that he with his people made all but one politic body, whereof himself was the head : even so cared for them as he would for his own limbs. Sidney.

Because the subject which this position concerneth is a form of church government, or church pvlitu, it behoveth us to consider the nature of the church, as is requisite for men's more clear and and plain un- derstanding1, in what respect laws of polity or go- vernment are necessary thereunto. 'Hooker.

The Turks politically mingled certain Janizaries, harquebusiers, with their horsemen. Knollet.

And 't be any way, it must be with valour ; for policy I hate : 1 had as lief be a Brownist as a politi- cian. Shaksjieare.

This land was famously enriched With politic grave counsel ; then the king Had virtuous uncles. Id. Richard HI.

Thus have I politicly begun my reign, And 'tis my hope to end successfully.

Shahspeare.

Authority followeth old men, and favour youth ; but for the moral part, perhaps youth will have the pre-eminence, as age hath for the politick.

Bacon.

Although I may seem less a politician to men, yet I need no secret distinctions nor evasions before God.

King Charles.

Your ill-meaning politician lords, Under pretence of bridal friends and guests, Appointed to await me thirty spies. Milton.

In the Jewish state, God was their political prince and sovereign, and the judges among them were as much his deputies, and did represent his person, as now the judges do the persons of their several princes in all other nations. Kettlewell.

No civil or politic constitutions have been more celebrated than his by the best authors. Temple.

While emp'rick politicians use deceit, Hide what they give, and cure but by a cheat, You boldly show that skill which they pretend, 4nd work by means as noble as your end.

Dry den.

Be pleased your politics to spare, I'm old enough and can myself take care. Id. There are quacks of all sorts ; as bullies, pedants, hypocrites, empiricks, Jaw-jobbers, and politicasters.

L'Estrange.

The polity of some of our neighbours hath not thought it beneath the public care to promote and reward the improvement of their own language.

Locke on Education.

If a man succeeds in any attempt, though under- dertook with never so much rashness, his success shall vouch him a politician, and good luck shall pass for deep contrivance ; for give any one fortune, and he shall be thought a wise man. South.

It would be an everlasting reproach to politicks, should such men overturn an establishment formed by the wisest laws, and supported by the ablest heads.

Addison.

More true political wisdom may be learned from this single book of proverbs, than from a thousand Machiavels. Rogen.

POLITICAL E C O Ts i O M Y.

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Coffee, which makes the politician wise. And see through all things with his half-shut eyes, Sent up in vapours to the baron's brain New stratagems, the radiant lock to gain. Pope. No less alike the politic and wise,

All fly slow things, with circumspective eyes ;

Men in their loose unguarded hours they take,

Not that themselves are wise, but others weak.

Id.

The dutchess hath been most politicly employed in sharpening those arms with which she subdued you.

Id.

Of crooked counsels and dark politics. Id.

It was not by any means unfit that a judge should form part of a council, which was to preserve the rights of sovereigns, but where no party politics pre- vailed. But here, in fact, the judge was under the control of the executive government, and instantly became a party politician. Canning.

POLITICS. Lord Bacon divides politics into three parts, viz. the preservation of the state, its happiness and nourishing, and its enlargement. Of the first two, he informs us, various au- thors have treated, but the last has never been handled ; and he has given a specimen of an essay to supply the want.

POLITICAL ECONOMY. It has been said to be a sign of the times upon which we are justi- fied in resting many hopes of the future im- provement of our race, that so considerable a degree of attention has been excited to the subject of political economy. This science has been ex- hibited as the great high road to public and private happiness ; in which ' no groping, no

perplexing research, no hopeless, thankless toil is required ; the principal difficulties are overcome ; all that remains to be done is, we are told, to remove the obstacles which conceal that road from the view of those who are less fortunate than ourselves.' We have certainly been brought to believe that political economists have furnished many useful hints for the improvement of the condition of mankind ; that they have explored various causes by which former plans of improvement have been checked ; and achieved the destruction of some ancient systems of political and commercial legislation, to which we have no desire to return. We also give them credit for diligence of research and operation in the face of those numerous and powerful parties, which, under all established sys- tems, are interested in the perpetuation of abuses. But we smile at their hardihood in venturing to claim for their inheritance the pretensions of the French perfectibiliticians ; and this chiefly from the ' readiness with which all the late discoveries in commercial science have been received and assented to.' The fact is, when the name of the*

- *This is the language of one of their boastful ad- vocates : — ' Not only have they pointed out these causes of evil, but, fearlessly braving the prejudices of the ignorant and vulgar, they have brought to light a remedy by which that evil may be averted. If, therefore, they are of opinion that the perfectibi- lity of the species is a mere vision, although bright and fascinating to dwell upon, they have, at all events, produced a plan by which a large addition may almost immediately be made to human happiness, and which will ultimately raise the species to a state at least approaching to the perfectibility which has been aimed at.' — Westminster Review. No. VII. VOL. XVII.*

late Mr. Ricaido is exdunea. these writers scarcely attempt to adduce, euhei at home or abroad, that of a single discoverer in political eco- nomy ; the greatest praise is due to those able men amongst them who have abjured any such distinction ; and the chief advantages, as yet, which have occurred to the public from the dis- cussions connected with it, ar:. rather to be found in what has been exploded than in any thing they have established.

Mr. M'Culloch has well said — ' There is a peculiarity in the political and economical sciences which deserves to be noticed, inasmuch as it serves to show the superior necessity and importance of general instruction in their princi- ples. The peculiarity in question originates in the circumstance of the politician or economist being extremely apt to be influenced by other considerations than a regard to the interests of truth and the public welfare. The cultivators of the mathematical and physical sciences, can very rarely have any motive to bias their judgments, OF- to induce them to conceal or

pervert the truth. But such is not the case with those who discuss political or economical questions. Every abuse, and every vicious and unjust institution and re- gulation, operates as a bounty on the production of false theories; for, though injurious to the public, they are almost always productive of' advantage to a greater or smaller number of in- dividuals, who, to preserve this advantage, enlist a portion of the press into their service, and la- bor, by means of perverted and fallacious state ments, to make the public believe that the abuse is really beneficial to them, and that they are in- terested in its support. These attempts to make the worse appear the better cause, or to make the most flagrant abuses be viewed as national bene- fits, have very often been attended with complete success. And there are plainly no means of ob- viating this evil, of correcting what is really dis- advantageous in the influence of the press, and of preventing the public from being misled by the specious sophistry of those whose interest and object it is to delude them, except by making them generally acquainted with the elementary and fundamental truths of this science .... Ignorance is the impure and muddy fountain whence nine-tenths of the vice, misery, and crime, to be found in the world are really de- rived. Make the body of the people once fully aware of the circumstances which really deter- mine their condition, and you may be assured that an immense majority will endeavour to turn that knowledge to good account.'*

This we fully believe ; but for the very reasons here assigned, i. e. the bounties that so quickly arise for the ' production of false theories,' &c. ; why, we ask, are our modern investigators of this science so prone to theorize 1 and why can they not content themselves, in common with the real promoters of many other valuable sciences, with recording experiments, for awhile, and collecting well-attested facts ?

*Looking into their best works we stumble at the threshold, and can find no two accredited writers agreed in a definition of the chief terms of this so-named science, having its founda- tion, according to Mr. M'Culloch and the West**

minster Review, in tlie ' Enquiry into the Nature and Causes of the Wealth of Nations,' by Dr. Smith. Mr. Malthus tells us, that by wealth is to be understood all ' those material objects which are necessary, useful, or agreeable to man,' to which Mr. M'Culloch very soundly objects, observing that this definition is too comprehen- sive, as it would include such material

products as atmospheric air, and the heat of the sun, which are highly useful and agreeable, yet, by universal consent, are excluded from the inves- tigations of political economy : he proposes, therefore,, to limit the definition of wealth to those objects alone which have exchangeable value, and it will then stand thus, ‘ those mate- rial products which have exchangeable value, and which are either necessary, useful, or agree- able to man.’

This writer is very tenacious of the propriety of confining the definition of wealth to material objects. Having observed that some economists had considered wealth as synonymous with all that man desires as useful and agreeable to him, he adds, ‘ But if political economy were to em- brace a discussion of the production and distri- bution of all that is useful and agreeable, it would include within itself every other science ; and the best Encyclopaedia would really be the best treatise on political economy. Good health is useful and delightful ; and, therefore, on this hypothesis, the science of wealth ought to com- prehend the science of medicine. Civil and re- ligious liberty are highly useful, and, therefore, the science of wealth must corrprehend the science of politics. Good acting is agreeable, and therefore, to be complete, the science of wealth must embrace a discussion of the prin- ciples of the histrionic art, and so on. Such definitions are worse than useless. They can have no effect but to generate confused and per- plexed notions respecting the objects and limits of the science, and to prevent the student ever acquiring a clear and distinct idea of the nature of the enquiries in which he is engaged.’

Political economy we are therefore told, in the latest and best publication of our author, has for its object to point out ‘ the means by which the industry of man may be rendered most productive of those necessaries, comforts, and enjoyments which constitute wealth,’ a definition to which we see no fair objection. But when this gentle- man afterwards proceeds to insist that labor is the only source of wealth, we are once more startled. ‘ Independently of labor,’ he says truly, ‘ matter is rarely of any use whatever, and (but this we dispute) is never of any value. Place us on the banks of a river,’ he adds, ‘ or in an orchard, and we shall infallibly perish either of thirst or hun- ger, if we do not, by an effort of industry, raise the water to our lips, or pluck the fruit from the parent tree.’

This last specimen of industry is certainly needful in the situation described, and something rather more properly to be termed ‘labor’ in most others ; but if our good mother earth had not been previously the source of the apples, and the channel of the water, we should like to know to what effect these extraordinary exertions would DC made ? If labor be, in strict philosophy, the

only source of wealth, then it might be produced, as it has been well observed, ‘ without the assis- tance of land ;’ and

Dipping buckets into empty wells Might by some happy ‘ discovery’ be no longer connected with

— Growing old in drawing nothing up.

We must be pardoned, indeed, for adding, that these lines would form a happy descriptive definition of the chief employment on this high road to happiness, if this doctrine be true.

More seriously — we fully adopt the sentiments of the Quarterly Reviewer on this notable illus- tration of Mr. M’Culloch’s. ‘ It is necessary to exert much more labor than the effort of in- dustry here described to obtain the use of silver and gold ; but to say that human labor is the sole source of these metals would surely be a most strange «nd useless perversion of terms. As well might we say, when two men were co- operating in carrying a log of wood, which was too heavy for either of them separately, that one was the sole carrier, because, without the effort of industry made by him, the log might have re- mained unmoved and useless. We totally dis- approve of such futile and unnecessary attempts at simplification. We are disposed to consider labor as a most essential source of wealth ; but knowing, with Adam Smith, the absolute neces- sity of the co-operation of land to give us food, clothing, lodging, &c. &c., we see no kind of rea- son why we should not acknowledge, with him, what is so obviously true, that both land and and labor are sources of weath.’

As Dr. Adam Smith’s book will be accessible to most of our readers, we will first, with the aid of the above writer, glance at the main prin- ciples which characterise the modern school of political economy, and which are considered improvements on Dr. Smith’s theory : then at- tend to Mr. Mill’s exhibition of the ‘ Elements’ of the science ; and finally, to its history from the earliest periods, marking its chief eras, after Mr. M’Culloch.

The main principles of the new school are the three following : —

1. That the quantity of labor worked up in commodities is the sole regulator of their ex- changeable value.

2. That demand and supply have no effect on price and value, except in cases of monopoly, and for a short period.

3. That the difficulty of production in regard to land is the regulator of profits, to the exclu- sion of the cause stated by Dr. Smith, namely, the relative abundance and competition of capital.

Certainly, of whatever other elements ex- changeable value may be composed, the labor worked up in it must at all times be the most influential. It would indeed be most absurd to compare with it generally, the difference of value occasioned by any other ingredient. This is so obvious as scarcely to require stating. But, though the labor worked up in a commodity is allowed to be beyond comparison the main in- gredient of value, if there be really other ingre- dients, and they are at the same time of such a nature as essentially to encourage or discourage

production, and thus operate powerfully upon the creation or retardation of wealth, it would be inexcusable, from a foolish desire of simplifi- cation, not to allow them their due weight.

The author of the Wealth of Nations, in his chapter on the Component Parts of Price (B. i. c. 5j, resolves the price of the great mass of commodities in erery improved society into the three elements of wages, profits, and rent. And in his next chapter he considers natural price as made up of wages, profits, and rents, at their ordinary and natural rates. There is obviously in every society, as stated by this great writer, an ordinary or natural rate of wages and profits ; but it is not the same with rents. On account of the different fertility of different soils in the same country, the portion of the produce of land which is resolvable into rent is extremely vari- ous. Sometimes it is a half, a third, or a fourth, and sometimes little or nothing; but if the price of a bushel of corn be the same, whether it be resolvable into more or less rent, rent cannot have much influence in determining its exchange- able value; we must therefore conclude that satisfactory reasons have been given why, in tracing the causes of exchangeable value, rent may be considered as having but a very small ef- fect. Profits, however, are still left, besides wages or labor. And it remains to be considered whether profits do or do not influence, and if they do, to what extent they influence, the exchangeable value of commodities.

In the early periods of society, when labor alone is concerned in production and the returns are immediate, the value of commodities so ob- tained is determined, as our modern economists allow, by the quantity of labor employed to ob- tain them. But in all stages of society there are a few commodities which are obtained nearly in the same way.

A stone enclosure, for instance, is built from materials on the spot, and constructed in eight days by fifty laborers at half-a- crown a-day. This enclosure, when completed and fit for use, will, on account of the very

small quantity of profits concerned, be worth but little more than the labor employed on upon it, that is, 400 days, or, in money, fifty pounds. Now, if a pipe of wine be worth, when it is first put into the cask, exactly this same money or quantity of labor, but must be kept two years before it is used, and the rate of profits be fifteen per cent., at the expiration of that time, it must be sold at above £65, or its value must be above 520 days instead of 400 days labor, in order that the conditions of its supply may be fulfilled. Thus two com- modities have had the same quantity of labor employed upon them, and yet the exchangeable value of one of them exceeds that of the other above thirty per cent., on account of the very different quantity of profits worked up in each. Wine is frequently kept much more than two years. Ships are often five or seven years in building. The final returns for commodities which purchase teas in China, reckoning from the period when the first advances were made, are sometimes delayed not less than two or three years ; and the same may be said of wrought cottons sold in India after the raw material had

been brought from that quarter of the globe and worked up in England. In short, the condi- tions of the supply of commodities at the same period in improved countries, with reference to the quantity of profits, are extremely various; but all must be repaid in their value when sold, and though it does not often happen that, in short periods, profits fall considerably, yet in the progress of nations great changes must neces- sarily occur; and, taking only what really hap- pens, we are disposed to believe that the varia- tions of value arising from profits are in many commodities freqeuntly more than twenty per cent., and that variations of ten or twelve per cent, are common. How then can it be asserted that commodities exchange with each other ac- cording to the quantity of labor worked up in them ? So far as we can trust this plain view of facts it seems notoriously otherwise.

These authors, however, contend that, ‘ the profits of stock are only another name for the wages of accumulated labor.’ We have always understood wages to mean the remuneration paid for some kind of human exertion ; and it is cer- tain that the accumulated labor worked up in machinery, raw materials, or any other species of capital, is just of the same nature as immedi- ate labor, and paid for exactly in the same way : but the profits both upon the accumulated labor and the direct labor are totally a different kind of thing. On this point Adam Smith well ob- serves, ‘ the profits of stock, it may perhaps be thought, are only a different name for the wages of a particular sort of labor, the labor of inspec- tion and direction. They are, however, altoge- ther different, are regulated by quite different principles, and bear no proportion to the quan- tity, hardship, and ingenuity, of this supposed labor of inspection and direction.’

But Mr. M’Culloch seems to intimate that he considers the effect of capital

employed to keep a cask of wine till it is fit for drinking is to set in motion the agency of nature, or the processes which she carries on in the casks, instead of the agency, or labor of men. (See article POLITICAL ECONOMY, Encyclopedia Sritannica, Supplement.) This, however, is utterly to confound the most obvious distinctions. The assistance of nature to give this kind of improvement to wine is at the command of every one who has capital, and therefore requires no wages ; in this case nature gives her labor gratis. This is quite clear, be- cause the increased value which the wine ac- quires is in no degree proportioned to the effi- ciency of her workmanship : all wine kept Jor two years must be paid for at the same price, whether it improved by keeping or not. In no view of the subject, therefore, is there the slightest ground for confounding the profits of stock with the wages of labor : yet, without this strange and most uncalled for misnomer, how is it pos- sible to say that commodities exchange with each other nearly according to the quantity of labor worked up in them. Large concessions and modifications were, in consequence, repeatedly made on this point by Mr. Ilicardo, and which, though not sufficient to meet the truth of the case, are sufficient to destroy the assumption that the products of- the same quantity of labor

in the same country, always remain the same in value. In the last edition of his work he says, ‘ It is necessary for me to remark that I have not said, because one commodity has so much labor bestowed upon it as will cost £1000, and another so much as will cost £2000, that, there- fore, one would be of the value of £1000 and the other of the value of £‘2000 ; but I have said that, their value will be to each other as two to one, and that in these proportions they will be exchanged. .It is of no importance to the truth of this doctrine whether one of these commodities sells for £l 100 and the other for £2200; or one for £1500 and the other for 3000 ; into that question I do not at present enquire. I affirm only, that their relative values will be governed by the relative quantities of labor bestowed on their production.’ — (c. i- p. 46.)

On this assumption the whole of the calcula- tions and reasonings throughout the remaining part of the work is founded ; although, in two sections of the first chapter expressly devoted to the subject, it is allowed, that the principle that the quantity of labor bestowed on com- modities regulates their relative value is con- siderably modified by the employment of ma- chinery, as well as by the unequal rapidity of the returns of capital.

A second new principle of the modern school is, that demand and supply have no influence on price and value, except in cases of monopoly, or for short periods of time.

On this subject Mr. M'Culloch is very de- cided, having referred to Adam Smith on the general equality of wages and profits, he says, 4 the principle of the equality of wages and pro- fits once established, it is easy to show that va- riations in the demand and supply of commodi- ties can exert no lasting influence on price. It is the cost of production, denominated by Smith and the marquis Gamier necessary or natural price, which is the permanent and ultimate regu- jator of the exchangeable value or price of every commodity which is not subjected to a mono- poly, and which may be indefinitely increased in quality by the application of fresh capital and labor to its production.'

We are willing to allow that the natural prices of commodities are determined by the natural costs of production, according to the meaning of the term, as used by Adam Smith, or even after we have excluded" the effects of rents : but, as profits will still remain a component part of price, it is absolutely necessary, before we can exclude demand and supply from a lasting in- fluence on exchangeable value, to show that they can have no influence on the natural rate of pro- fits. Dr. Smith, in using the term natural rate of wages and profits, says, that he means by it ' the ordinary or average rate which is found in every society or neighbourhood, and which is regulated partly by the general circumstances of the society, their riches or poverty ; their ad- vancing, stationary, or declining conditions ; and partly by the particular nature of each employ- ment.' An average of ten or a dozen years may fairly be considered as sufficient or more than sufficient to determine this ordinary rate of pro- fits. But it is a matter of universal notoriety

that, in the progress of a nation towards wealth, considerable fluctuations take place in the rate of profits for ten, twelve, or twenty years together out of 100 or 200 ; and the question is, to what cause these fluctuations are to be assigned.

And upon this point Mr. Ricardo has estab- lished a most useful and important truth, i.e. that profits are determined by the proportion of the whole produce which goes to labor. It is, indeed, a direct corollary from the proposition, that the value of commodities is resolvable into wages and profits ; but its simplicity and ap- parent obviousness do not detract from its utility. It is, however, only one important step in the theory of profits, which cannot be complete till we have ascertained the cause which, under all circumstances, regulates this proportion of the whole produce which goes to labor immediate and accumulated.

Into these we cannot go minutely ; but it will be found that the specific reason which occasions a larger or smaller proportion of the produce of a given quantity of labor to go to labor, is the fall or rise in the value of the whole produce of such labor resulting from the temporary or or- dinary state of the supply, compared with the demand. If we refer to the value of the whole produce of a given quantity of labor, this pro- position is true, whatever may be the variations in the productiveness of labor ; but, if we are considering the value of a given quantity of pro- duce as determining profits, we must refer to the state of the demand and supply, while the pro- ductiveness of labor remains the same. To take a familiar case : if cottons fall in value from an abundant supply, not occasioned by improved machinery, will not a larger proportion of the produce of the same quantity of accumulated and immediate labor be necessary to repay that labor ? and will not a smaller proportion be left for profits, although, instead of an increased de- mand for labor, the capitalist will neither have the power nor the will to employ so much as before ? On the other hand, if cottons rise in value from a diminished supply, not occasioned by the diminished productiveness of labor, will not a smaller proportion of the produce of the same quantity of accumulated and immediate labor go to repay that labor ; and will not a larger proportion of the produce be left for profits, although, instead of a diminished demand for labor, the capitalists will have both the power and the will to employ more labor ? It appears, therefore, that in these cases of varying profits, it is specifically the varying state of the demand compared with the supply of produce while the productiveness of labor remains the same, which determines them. And it seems to follow that the ordinary state of profits, or the ordinary pro- portion of the produce which goes to repay the advances of accumulated and immediate labor necessary to obtain it, is determined by the or- dinary state of the demand compared with the supply of such produce.

The third important principle which peculiarly distinguishes the new school of political eco- nomy is, that the difficulty of production in the case of land is the regulator of profits, to the entire exclusion of the cause stated by Adam

Smith, namely, the relative abundance and com- petition of capital.

« Dr. Smith,' says Mr. M'Culloch, ' was of opinion that the rate of profit varied inversely as the amount of capital, or, in other words, that it was always greatest where capital was least abundant, and lowest where capital was the most abundant. He supposed that, according as capital increased,

the principle of competition would stimulate capitalists to endeavour to encroach on the employment of each other, and that, in furtherance of this object, they would be tempted to offer their goods at a lower price, and to give higher wages to their workmen. This theory was long universally assented to. It has been espoused by MM. Say, Sismondi, and Storch, by the marquis de Gamier, and, with slight modifications, by Mr. Malthus. But, not- withstanding the deference due to these authori- ties, it is easy to see that the principle of com- petition could never be productive of a general fall in the rate of profit. Competition will prevent any one individual from obtaining a higher rate of profit than his neighbours ; but no one will say that competition diminishes the productiveness of industry, and it is on this that the rate of profit must always depend. The fall of profits, which invariably takes place as society advances, and population becomes denser, is not owing to competition, but to a very different cause — ' to a diminution of the power to em- ploy capital with advantage, resulting either from a decrease in the fertility in the soil which must be taken into cultivation in the progress of society, or from an increase of taxation.'

*" Here," remarks the Quarterly Reviewer, " the opinion of Adam Smith on the subject of pro- fits is not properly understood. It is quite clear, from the context of the passage referred to, that he never meant to state generally, that the rate of profit varies inversely as the amount of capital, without any reference to the diffi- culty or facility of finding employment for it, which would be saying that England must have lower profits than Holland, on account of the greater quantity of capital employed in England, or that the rate of profits in any country whose capital was increasing must go on falling regu- larly, and be always lower at everyi subsequent period, whether new channels of trade, and more productive means of employing capital, were opened to her or not. What Adam Smith says is this (b. ii. c. iv.), ' As capitals increase in any country the profits which can be made by employing them necessarily diminish. It becomes gradually more and more difficult to find within the country a profitable method of employing any new capital. There arises in consequence a competition between different capitals, the owner of one endeavouring to get possession of that employment which is occu- pied by another.' This very distinctly implies, not merely absolute amount of capital, but re- lative difficulty of finding profitable employment for it. Abundance and competition, indeed, always have a relative signification ; and, by the abundance and competition of capital, Adam Smith obviously means an increase in the shar» cf the ' annual produce wnicn. as sosn as i**

comes from the ground, or from the hands of the productive laborers, is destined for replacing a capital.' But it is quite certain that, whenever this share increases, profits must fall."

Competition certainly cannot diminish the productiveness of industry ; but it does not follow that it is on this that the rate of profit must always depend. ' The rate of profits depends upon the proportion of the whole produce which goes to replace the advances ; but this proportion may obviously be the same when the productiveness of industry is very different.' If the prices of calicoes fall, it is quite obvious that, while the workman continues to earn the same money wages, he will obtain a larger pro- portion of the calicoes produced by him. This does not imply an increased demand for labor, and it is equally certain that it does not imply an increased value of labor. Measured in money, the value of which for short periods is considered as being steady, labor remains of exactly the same value as before, and the addi- tional quantity of calicoes earned by the work- man is exclusively owing to the fall in their money price. On the other hand, if, under the same circumstances, calicoes rise in money price, the workman must necessarily earn a smaller proportion of what he produces; but this, so far from implying a decrease in the demand for labor, implies, on the part of the capitalist, both the power and will to employ more than before. Nor does it imply a diminished value of labor. Measured in the steady article of metallic money, labor has continued exactly of the same value ; and, though the workman earns a smaller quantity of calicoes, yet this is exclusively owing to the rise in the price of calicoes, while the price of his labor has remained the same. Instances of this kind are occurring all around us every day of our lives; and we believe that there is no political economist who would ven- ture to say, that, in these individual cases, the variations of profits, arising from wages absorb- ing a greater or smaller proportion of the pro- duce, were occasioned by the rise or fall in the value of the labor, instead of a rise or fall in the value of the produce. But, in reality, the prin- ciple is as applicable generally as it is individu- ally, and will be found to be true for periods of considerable length, as well as for those short periods during which we are in the habit of considering metallic money as practically of the same value. If the competition of capital in any particular department of industry may so lower the value of the produce as to occasion a larger proportion of the produce to be paid to the laborer, there seems to be no reason why the competition of increasing capital in all depart- ments should not so lower the value of the mass- of commodities, compared with labor, as to award generally a larger proportion of what is divided between the laborers and the capitalists to the laborers, and thus occasion a general fall on profits.

It appears to us that in denying the effects of the relative competition of capital on profits, and referring exclusively to the relative product- iveness of labor, the friends of the new school have rejected a principle which will account for

almost every variation of profits which can pos- sibly occur, and have endeavoured to substitute another, which will only account for one class of cases, and those of such a nature that they may wot occur in the course of one or two centuries.

On the whole the real difference between the new system and that of Dr. Smith may, we are inclined to think, be still further concentrated ; and that it will not be incorrect to state that all the peculiar doctrines of the former directly and necessarily flow from the first of the new princi- ples above adverted to, namely, that the ex- changeable value of commodities is determined by the quantity of labor worked up in them. Hence it would follow, directly and necessarily, that neither the demand compared with the sup- ply, nor the relative abundance and competition of capital, can have more than a mere temporary effect on values and profits.

Mr. Mill has produced what he terms ‘ a school-book of political economy;’ professing ‘ to detach the essential principles of the science from all extraneous topics, to state the proposi- tions clearly and in their logical order, and to subjoin its demonstration to each.’ ‘ I profess,’ he adds, ‘to have made no discovery.’ His work is divided into four classes, devoted re- spectively to the consideration of production, distribution, interchange, and consumption. Those who are not aware of the degree in which classification has been neglected by able writers on this science, we should recommend to com- pare the different orders followed by Mr. Ri- cardo and Mr. Mill. Mr. Ricardo’s treatise contains thirty-one chapters. The first and the twentieth are on value ; the second, the twenty- fourth, and thirty - first, on rent ; the fourth and thirtieth on price ; the seventh on foreign trade ; the next ten chapters are on taxation (with the exception of one on tithes) ; the twenty-second and the twenty-fifth take us back to trade ; and in the twenty-ninth we are again entangled in the doctrine of taxation. When subjects are discussed in this manner, scrap by scrap, how- ever sound or original the writers’ views may be, there is not one reader in twenty who will not be more perplexed than instructed by his work.

While great merit belongs on the whole, as we think, to this work as an elementary treatise, there are some points on which the writer has chosen to rest his cause on the most dubious and circuitous kind of reasoning. We instance the following passage, which contains the grounds on which he assents, and calls for the assent of his readers, to Mr. Malthus’s proposition — that the natural tendency of the human species to in- crease is such as would in a very short space of time double the numbers of any society.

‘The females of those species of animals whose period and mode of

gestation are similar to those of the female of our own species, and which bring forth one at a birth, are capable, when placed in the most favorable circumstances, of a birth every year, from the time when the power of producing begins till the time when it ends, omitting one year now and then, which, at the most, amounts to a very small proportion on the whole. The suckling of the infant, in the case of the female of the human species, if con-

tinued more than three months, has a tendency to postpone the epoch of conception beyond the period of a year. This, it is to be observed, is the only physiological peculiarity which autho- rises an inference of any difference in the fre- quency of the births in the case of the female of the human species, and that of those other species to which we have referred. To reason correctly, we should make an allowance for that peculiarity. Let such ample allowance be made as will include all interruptions ; let us say that one birth in two years is natural to the female of the human species. In Europe, to which we may at present confine our observations, the period of childbearing in women extends from sixteen or seventeen to forty-five years of age. Let us make still more allowance, and say it ex- tends only from twenty to forty years of age. In that period, at the great allowance of two years to one birth, there is time for ten births, which may be regarded as not more than the number natural to the female of the human species. Under favorable circumstances, the mortality among children is very small. Mortality among the children of very poor people is unavoidable, from want of necessary means of health. Among the children of people in easy circumstances, who know and practise the rules for the preser- vation of health, the mortality is small ; and there can be no doubt, that, under more skilful modes of managing the food, and clothing, and air, and exercise, and education of children, even this mortality would be greatly diminished. . ‘ We may conclude, therefore, that in the most favorable circumstances, ten births are the mea- sure of fecundity in the female of the human species ; and that, of the children born, a small proportion would die before the age of maturity. For occasional instances of barrenness, and for this small degree of mortality, let us make mucli more than the necessary allowance, a deduction of one-half, and say, that every human pair, united at an early age, commanding a full sup- ply of every thing necessary for physical welfare, exempt from the necessity of oppressive labor, and sufficiently skilled to make the best use of their circumstances for preventing disease and mortality among themselves and their children, will, one with another, rear five children. If this is the case, it is needless to exhibit an ac- curate calculation, to show that population would double itself in some moderate portion of years. It is evident, at once, that it would dou- ble itself in a small number of years.’ (p. 31 — 33.)

Mr. Mill fairly admits, at the same time, that ‘ the statements, respecting

the rate of procreation in different countries, will be found to be either suppositions with respect to matters of fact, upon the conformity of which suppositions to any real matters of fact we can have no assurance, or statements of fact of such a nature as prove nothing with regard to the points in dispute." But see our article POPULATION.

We might question whether Mr. Mill has suc- ceeded in showing, that the propensity towards frugality is too rare and too feeble to permit the rapid accumulation of capital. When we look at the immense accumulation which has taken place in our own country within the last

thirty years, in spite of the enormous amount of loans and taxes whioh have been consumed in the service of the public, we cannot help suspect- ing that, so far as the accumulation of capital de- pends on individual frugality, it would increase much more rapidly than our author allows. We might further suggest that the rate of profit on capital will not necessarily fall, unless the de- mand for the employment of capital does not keep pace with the increase of its disposable amount ; and that even if profits should be low- ered, yet a lower rate of profits on a greater annount of capital may produce a. larger fund for savings *.han i higher rate of profit on a less ca- pital. It is therefore clear that Mr. Mill has here trusted to a long line of argument, in which there appear to be many weak points. We should even be disposed to question what he appears to take for granted as self-evident — that the funds applied in the maintenance of labor depend entirely on the amount of the savings. That which is saved may be such that it cannot be employed reproductively with advantage. To be so employed, it must be capable of putting in motion industry which will produce a value greater than its own. Now, what evidence is there, that every thing which is saved is neces- sarily capable of being immediately employed in the production of something which will be of superior value ? And, if all savings are not ca- pable of being immediately so applied, is there not in every stage of society a limit set to the rate of accumulation, totally independent of the propensity of man to lay up in store or to con- sume?*

Savings do not become capital, unless they are employed reproductively ; and it is the difficulty of finding modes of so applying them, not the strong inclination of man to spend all that he can obtain, that opposes a bar to the rapid accu- mulation of capital. Any plan, therefore, of increasing the capital of a country by an arti- ficial diminution of the consumption, proceeds upon a supposition of very dubious truth. You may, by such

means, diminish the amount of the unproductive consumption of the country, but you will not necessarily increase its produc- tive consumption. The more probable result will be, either that the amount of annual pro- duction will be lessened, or that a proportion of the unproductive consumption will be shifted from one class of commodities to another. We are, therefore, not a little surprised that Mr. Mill should be inclined to look upon sumptuary laws as good in themselves, and to object to them chiefly on the ground of the difficulty of carrying them into effect.

The prosperity of a country depends on two things ; — the amount of its annual consumption, and consequently of its annual production, and the greatness of the unproductive consumption in relation to the reproductive. The greater the annual production, and the less the quantity of labor which gives it, the more flourishing is the state of the country. Sumptuary laws, consi- dered in a political, not a moral view, assume, that it is the duty of the legislator to diminish the unproductive consumption ; in other words, to diminish that which the happiness of the

world requires should be increased. They fur- ther assume that to diminish the unproductive consumption is a certain means of increasing the reproductive. To both of these assumptions Mr. Mill, in his doctrine of capital, has paid too much deference.

There is another mode of forcing the accumu- lation of capital, which Mr. Mill has suggested, and of which he has examined the consequences with more minuteness than it deserves.

‘ There is certainly one course by which the le- gislature might produce considerable effects upon the accumulation of capital; because it might lay hold of any portion which it pleased of the net produce of the year, and convert it into ca- pital. We have only, therefore, to enquire in what manner this could be performed, and what effects it would produce. The mode of taking whatever portion it might find expedient is ob- vious and simple. An income tax of the proper amount would effectually answer the purpose.

‘ The legislature might employ the capital thus forcibly created in one or other of two ways : it might lend it to be employed by others ; or it might retain the employment in its own hands. The simplest mode, perhaps, would be, to lend it to those manufacturers and capitalists who might apply for it, and could give security for the re- payment. The interest of what was thus laid out in one year might be employed as capital the next. Every annual portion would thus make compound interest, and, so long as the in- terest remained pretty high, would double itself in a small number of years. If wages appeared likely to fall, a higher income tax would be re- quired. If

wages rose higher than seemed to be necessary for the most desirable condition of the laborer, the income tax might be reduced.' — P. 45, 46.

Our author is far from recommending this plan. But we think that he might have gotten rid of it much more briefly than he does. Government might compel the payment of the tax ; but it could not create facilities of employing what was thus forcibly accumulated in the production of commodities of increased value ; and, unless such facilities constantly existed, accumulation would be of no avail. It might depress and discourage reproductive industry, but could not promote it.

On the subject of value Mr. Mill follows, of course, in the steps of Mr. Ricardo ; but on that of the value of money he singularly contradicts the sentiments of his 'school.

' It is not difficult,' he says, ' to perceive that it is the total quantity of the money in any country Avhich determines what portion of that quantity shall exchange for a certain portion of the goods or commodities of that country. If we suppose that all the goods of the country are on one side, all the money on the other, and that tl ey are exchanged at once against one another, it is obvious that one-tenth, or one- hundredth, or any other part of the goods, will exchange against one-tenth, or any part of the whole of the money ; and that this tenth, &c, will be a great quantity or small, exactly in proportion as the whole quantity of the money in the country is great or small. If this were the state of the facts, therefore, it is evident

that the value of money would depend wholly upon the quantity of it.

' It will appear that the case is precisely the same in the actual state of the facts. The whole of the goods of a country are not exchanged at once against the whole of the money ; the goods are exchanged in portions, often in very small portions, and at different times, during the , ourse of the whole year. The same piece of money which is paid in one exchange to-day may be paid in another exchange to-morrow. Some of the pieces will be employed in a great many exchanges, some in very few, and some, which happen to be hoarded, in none at all. There will, amid all these varieties, be a certain average number of exchanges, the same which, if all the pieces had performed an equal num- ber, would have been performed by each ; that average we may suppose to be any number we please; say, for example, ten. If each of the pieces of the money in the country perform ten purchases, that is exactly the same thing as if all the pieces were multiplied

by ten, and per- formed only one purchase each. The value of all the goods in the country is equal to ten times the value of all the money ; as each piece of the money is equal in value to that which it ex- changes for, and as it performs ten different ex- changes in a year.'

He was bound to have maintained, that the value of money is regulated by the quantity of labor employed in producing it. It is perhaps of more importance to remark that he has not proved the principle on which he proceeds. He supposes the whole of the money in the country (or, if each piece of money performs ten ex- changes, ten times the whole of the money) to be equal in value to the whole of the commodities in it : and from this supposition it will doubtless follow that, other things remaining the same, the value of money will vary inversely as its quantity. The truth of the doctrine, however, depends entirely on the accordance of the sup- position with fact ; and that accordance is by no means self-evident. On the subject of the rate of profit, Mr. Mill has given a clear exposition of the doctrine of Mr. Kicardo.

Wherever he treats of capital or profits we think this writer most deficient ; generally, and especially in the chapter on interchange, his reasonings are both perspicuous and concise. His work is one from which even he who has made considerable proficiency in the science may learn much. It will assist him in metho- dising his opinions ; it will point out to him connexions which hitherto hive probably escaped his notice ; it will aid him in bringing his no- tions in complete review before the mind, and in taking from time to time a comprehensive survey of the science. To those who are unim- bued with the principles of political economy, Mr. Mill's Elements present great facilities for the acquisition of valuable knowledge.

The hiitory of the science is brief but interest- 'ng. It is to be dated from the publication of Dr. Smith's Wealth of Nations. ' If he has not left us a perfect work,' says Mr. M'Culloch, ' he has, at all events, left us one which contains a greater number of useful truths than have ever

been given to the world by any other individual • and he has pointed out and smoothed the route, by following which, subsequent philosophers have been enabled to perfect much that he had left incomplete, to rectify the mistakes into which he had fallen, and to make many new and im- portant discoveries. Whether, indeed, we refer to the soundness of its leading doctrines, to the liberality and universal applicability of its prac- tical conclusions, or to the powerful and benefi- cial influence it has had on the progress and per- fection of economical science, and still more or, the policy and conduct of nations, Dr. Smith's work must be placed in the foremost rank of those that have helped to liberalise, enlighten,, and enrich mankind.'

This writer ranks Mr. Malthus's Essay on the Principle of Population, published in 1798, as the next great contribution to the science subsequently to the publication of the Wealth of Na- .tions. ' The fact,' he says, ' that the population of every country has a natural and constant ten- dency not only to rise to the level of the means of subsistence, but to exceed them, had been frequently observed by previous writers, and had been strikingly illustrated by Mr. Townsend, in. his Dissertation on the Poor Laws, published in 1 786. But, though not the original discoverer of the principle of population, Mr. Malthus was certainly the first to establish it on a secure foun- dation [whether he has done this, by the way, we wholly doubt], and to show its vast conse- quence to a right understanding of almost all the great questions connected with the essential in- terests of society ; and especially of those re- specting the governing causes of the rate ot wages and the condition of the poor. He has demonstrated, by an extensive and careful exa- mination of the state of population in different countries, and in every stage of society, that an increase in the means of subsistence is the only sure criterion of a real, and permanent, and be- neficial increase in the numbers of any people.'

' The Traite d'Economie Politique of M. J. B. Say of Paris, the first edition of which appeared in 1802, would deserve,' adds our author, ' to be respectfully mentioned in a sketch of the pro- gress of political economy, were it for nothing else than the effect that his well digested and lu- minous exposition of the principles of Dr. Smith has had in accelerating the progress of the science on the continent. But in addition to the great and unquestionable merit that it possesses from its clear and logical arrangement, and the felicity of many of its illustrations, ' it is enriched with several accurate, original, and profound discus- sions.'— Preface to Mr. Ricardo's Principles of Political Economy. Of these, the explanation of the real nature and causes of gluts is de- cidedly the most important and valuable. M. Say has shown that no conceivable increase of the powers of production can ever occasion a ge- neral glut, or overloading of the market. Too much of one commodity may occasionally be produced ; but it is quite impossible, he con- tends, there can be too great a supply of every species.

In 1815 the real nature, origin, and causes of rent were ably treated in two pamphlets, pub-

lished nearly at the same moment, by A Fellow of University College,

Oxford, and Mr. Mai • thus. But the appearance of Mr. Ricardo's work on the Principles of Political Economy and Taxation, in 1817, is regarded as forming a new and memorable era in the history of the science. Exclusive of correlative discussions, Mr. Ricardo has here analysed the principles which determine the exchangeable value of commodities, and has given a full view of the science of the distribu- tion of wealth.

The fundamental principle maintained by Mr. Ricardo, ' that the exchangeable value, or re- lative worth of commodities, as compared with each other, depends exclusively on the quantities of labor necessarily required to produce them,' we have discussed to the full extent of our limits.

Among the subsequent contributors to the elucidation of this science, we may mention Mrs. Marcet, who, in her Conversations on Poli- tical Economy, has illustrated and explained the elementary and leading principles, established by Dr. Smith, Mr. Ricardo, and others, with much ingenuity. ' Mr. Mill's Elements of Political Economy is a work of a higher order,' says Mr. M'Culloch, ' and is, perhaps, better calculated for the use of those who are considerably advanced in the science than of beginners. Mr. Mill touches on almost every topic of discussion : he has disentan- gled and simplified the most complex and difficult questions; has placed the various principles which compose the science in their natural order ; and has shown their connexion with and depen- dence on each other. Mr. Mill's object being only to give a strictly logical deduction of the principles of Political Economy, he has not at- tempted to illustrate his doctrines by references either to past or present circumstances or institu- tions ; and, though his work may on that account be less generally interesting, it is so much the better calculated to fix the connexion of the great truths of the science in the mind of those who have already studied them in detail.' See also this writer's own able Discourse on Political Economy, 8vo. Edin. 1825.

POLITY, or POLICY, denotes the peculiar form and constitution of the government of any state or nation ; or the laws, orders, and regulations, relating thereto. (See GOVERNMENT). Polity differs from politics only, as the theory from the practice of an art. . POLL, n. s. & v. a.~\ lielg. polk, pol, the

POL'LARD, \toP5 Sax. P°l anc^ c°l>

POL'LENGER, t The head; a register of

POLL'ER. ' heads or persons : to

poll is to take such a register for election or other purposes; to lop off the top of trees, horns of sheep, hair of the human head, &c. ; to mow ; crop ; plunder : a pollard is a tree lopped ; clipped coin : pollenger is brush-wood : a pol- lor, a robber ; plunderer.

Neither shall they shave, only poll their heads.

Ezekiel. Lop for the fewel old pollenger grown,

That hinder the come or the grasse to be mown.

Tusser.

*Take and exact upon them the wild exactions, coignie, livery, and sorehon, by which they poll a id utterly undo the poor tenants**

Spenter on Irelan.i.

*Look if the withered elder hath not his poll clawed like a parrot. Shakspeare. Henry IV**

Have you a catalogue

Of all the voices that we have procured

Set down by the poll ? Id. Coriolanus.

The muster file, rotten and sound, amounts not to fifteen thousand poll. Shakspeare.

He'll go and sowle the porter of Rome gates by the ears : he will mow down all before him, and leave his passage polled. Id.

The oft cutting and polling of hedges conduces much to their lasting. Bacon's Natural History.

He told the people that subsidies were not to be granted nor levied for wars in Scotland ; for that the law had provided another course by service of escuage, much less when war was made but a pre- tence to poll and pill the people. Bacon.

Nothing procureth the lasting of trees so much as often cutting ; and we see all overgrown trees are pollards or dottards, and not trees at their full height.

Id.

The poller and exacter of fees justifies the resem- blance of the courts of justice to the bush, where- unto while the sheep flies for defence, he loses part of the fleece. Id. Essays.

The same king called in certain counterfeit pieces coined by the French, called pollards, crocars and rosaries. Camden.

May thy woods oft polled, yet ever wear

A green, and, when she list, a golden hair.

Donna.

Who ever brought to his rich daughter's bed, The man that polled but twelve pence for his head ?

Dry den.

Polled sheep, that is sheep without horns, are reckoned the best breeders, because the ewes yean the polled with the least danger. Mortimer.

In solemn conclave sit, devoid of thought,

And poll for points of faith his trusty vote.

Eckel.

POLL MONEY, or CAPITATION, a tax imposed by authority on the person or head ; either on all indifferently, or according to some known mark or distinction, as quality, calling, &c. Thus, by the statute 18 Car. II. every subject in the king- dom was assessed by the head, or poll, according to his degree; every duke £l 00, marquis £80. baronet £30, knight £20, esquire £10, &c., and every single private person 12d. This was no new tax, as appears by former acts of parlia- ment.

POLLACH1US, or POLLACK, in ichthyology, See GADUS.

POLLARD, or crocard, a sort of base money current in Ireland in the time of Edward I. See Simons Hist, of Irish Coins, p. 15.

POLLARDS, in rural economy, a kind of coarse wheaten flour ; one degree finer than the bran.

POLLEN, in botany, the fecundating or ferti- lizing dust contained within the antherae or tops of the stamina, and dispersed upon the female organ when ripe for the purposes of impregna- tion. See BOTANY. This dust, corresponding to the seminal fluid in animals, is commonly of a yellow

color ; and is very conspicuous in the summits of some flowers, as the tulip and lily. Its particles are very minute, and of extreme hardness. Examined by the microscope, they are generally found to assume some determinate form, which often predominates, not only through all the species of a particular genus, but a!so through the genera of a natural family or order

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Thispowderbeing triturated, and otherwise pre- pared in the stomach of bees, by whom great quantities are collected in the hairy brushes with which their legs are covered, is supposed by some authors to produce the substance known by the name of wax ; a species of vegetable oil, rendered concrete by the presence of an acid, which must be removed before the sub- stance can be rendered fluid.

The pollen of the date seems, from the expe- riments of Fourcroy and Vauquelin, to approach in its constitution to animal substances ; that of hazel-nut contains tannin, resin, much gluten, and a little fibrin ; and that of the tulip yielded to Grotthus the following constituents m twenty- si x parts :

Vegetable albumen . . . 20‘25

Malate of lime, with trace of ma- late of magnesia Malic acid Malate of ammonia Coloring matter Saltpetre ? .

-) „ . j l

„ _n l

1-00

-25

26-00

POLLENIN. The principle in pollen, inter- mediate between gluten and albumen, has been named by Dr. John pollenin. It is yellow, without taste and smell ; insoluble in water, al- cohol, ether, fat, and volatile oils, and petroleum. It burns with flame. On exposure to air it as- sumes the smell and taste of cheese, and soon becomes putrid with disengagement of am- monia.

POLLENTIA, a town or colony of Roman citizens in the Balearis Major. It is now said to be Alcudia, situated on the north-east side of the Island Majorca.

POLLENTIA, a town of the Picenum, likewise a colony. It is thought to be either the same with, or near to the Urbs Salvia, but is now ex- tinct.

POLLENTIA, a town of Liguria, at the con- fluence of the Stura and Tanarus. Suetonius calls it a municipium, and the people Pollentina Plebs. It was famous for its abundance of black fleeces ; but was afterwards, under Arcadius and Honorius, stained with a defeat rather of the Romans under Stillico than of the Goths under Alaricus, though palliated by Claudian the poet ; after which Rome was taken and set on fire. It is now called Solenza, in the late Piedmont, near Asti.

PO'LLEVIL, n. s. Poll and evil.

Pollevil is a large swelling, inflammation, or im- posthume in the horse's poll or mane of the neck, just between the ears towards the mane.

Farrier's Dictionary.

POLLEX, in anatomy, the thumb or great toe, according as manus or pedis is added to it.

POLLEXFEN (Sir Henry), a celebrated Eng- lish lawyer and judge under Charles II., was born in Devonshire. In 1688 he sat as one of the members for Exeter, and was retained as counsel for the bishops. After the revolution he was appointed chief-justice of the common pleas ; but held this office only a very short time, dying in 1692. His Arguments and Reports were published in 1702 in folio. Burnet gives

him a character still exemplified, both on the bench and at the bar, that of ' an honest and learned but perplexed lawyer.'

POLLIA, in botany, the name given by Mr. Lee to the plant called by others

POLLICHIA, a genus of the monogynia order, belonging to the monandria class of plants ; and in the natural method ranking with those that are doubtful. Of this there is only one species, viz. P. campestris, or whorl-leaved pollichia, a native of the Cape of Good Hope, which flowers in September.

POLLICIS PRESSIO, and POLLICIS VERSIO were used at the combats of gladiators as signals of life or death to the vanquished combatant ; or to the victor to spare or take the life of his an- tagonist. The pollicis pressio,

by which the people granted life to the prostrate gladiator, was no more than a clenching of the fingers of both hands together, and so holding the two thumbs upright close together. The pollicis versio which authorised the victor to kill the other as a coward was the bending back of the thumbs. Such is Dacier's opinion; but others say the pollicis pressio was when the people held up one hand with the thumb bent, and the pollicis versio when they showed the hand with the thumb raised. Authors, however, are not perfectly agreed, though the phrases pollicem premere, and pollicem vertere, frequently occur in the Latin classics.

POLLIO (Caius Asinius), a celebrated Latin poet and orator, was of consular dignity, and composed some tragedies which were esteemed, but are now lost. He was the first who opened at Rome a library for the use of the public. He died at Frescati, aged eighty.

POLLIO, a friend of Augustus, who used to feed his fishes with human flesh. This cruelty was discovered when one of his servants broke a glass in the presence of Augustus, who had been invited to a feast. The master ordered the ser- vant to be seized, but he threw himself at the feet of the emperor, and begged him to interfere,. and not to suffer him to be devoured by fishes. Upon this the causes of his apprehension were examined ; and Augustus, astonished at the bar- barity of his favorite, caused the servant to be dismissed, all the fish-ponds to be filled up, and the crystal glasses of Pollio to be broken to pieces.

POLLISELLA, or POLLICELLA, called an- ciently Vallis Poenina, a valley of Italy, between the Adige and the Baltena, in the department of the Mincio, district and late territory of Ve- rona; containing thirty-eight parishes, in 1797. It abounds in meadows, black cattle, sheep, and vines.

PO'LLOCK, n. i. Lat. ocellus niger. A kind of fish. See POLLAC.

The coast is plentifully stored with shellfish, sea- hedgehogs, scallops ; pilchard, herring, and pollock.

Caraw.

POLLUTE', v. n. ~) Fr. polluer ; Lat. polluo.

POLLU'TER, n. s. >To make unclean, in a

POLLU'TION. J religious sense ; to defile;

taint ; corrupt : a polluter is he who defiles or corrupts : pollution, the act of doing so; or state induced.

Hot and peevish vows Are polluted offerings, more abhorred Than spotted livers in the sacrifice.

Shakspeare,

She wooes the gentle air To hide her guilty front with innocent show, And on her naked shame, Pollute with sinful blame, The saintly veil of maiden white to throw.

Milton. Polluted from the end of his creation. Id.

Envy you my praise, and would destroy With grief my pleasures, and pollute my joy 1

Dry den.

Ev'n he, the king of men, Fell at his threshold, and the spoils of Troy The foul polluters of his bed enjoy. Id. Mneid. The contrary to consecration is pollution, which happens in churches by homicide, and burying an excommunicated person in the church. Ayliffe.

POLLUTION, in general, signifies the render- ing a person or place unclean or unholy. For the Jewish pollutions, see IMPURITY. The Ro- manists hold a church to be polluted by the effu- sion of blood or of seed therein ; and that it must be consecrated anew. And the Indians are so superstitious on this head, that they break all the vessels which those of another religion have drunk out of, or even only touched ; and drain all the water out of a pond in which a stranger has bathed.

POLLUX. See CASTOR AND POLLUX.

POLLUX, in astronomy, a fixed star of the second magnitude in the constellation Gemini, or the Twins. See CASTOR.

POLLUX, CASTOR AND, a fiery meteor. See CASTOR AND POLLUX.

POLLUX (Julius), an ancient Greek writer, who was born at Naucrates, in Egypt, and nou- rished under Commodus. He was educated under the Sephists, and made great progress in grammatical and critical learning. He taught rhetoric at Athens, and became so famous that he was made preceptor to Commodus. He drew up for his use an Onomasticon or Greek

Vocabu- lary, divided into ten books. It is extant, and contains a vast variety of synonymous words and phrases, ranged under the general classes of things. It was intended to facilitate the know- ledge of the Greek language to the young prince ; and it is still very useful to all who wish to be perfect in it. The first edition was printed at Venice by Aldus in 1502, and a Latin version was afterwards made and published with it : but there was no correct and handsome edition till that of Amsterdam, in 1706, in folio, by Le- derlinus and Hemsterhusius. Lederlinus went through the first seven books, correcting the text and version, and subjoining his own, with the notes of Salmasius, Is. Vossius, Valesius, and of Kuhnius, whose scholar he had been, and whom he succeeded in the professorship of the oriental languages in the university of Stras- burg. Hemsterhusius continued the same me- thod through the last three books. Pollux wrote many other things, none of which remain. He died aged fifty-eight.*

POLO (Marco), a famous traveller of the thirteenth century, son of Nicolas Polo, a Vene- tian merchant. Accompanied by bis brother

Matthew, Nicholas had penetrated to the court of Kublai, the khan or the Tartars, when this prince, highly entertained with their account of Europe, made them his ambassadors to the pope. They now therefore proceeded to Rome, and, having obtained a couple of missionaries, visited Tartary, accompanied by the young Marco. He was employed by the sultan on various embas- sies, until, after a residence of seventeen years, the three Venetians returned with, immense wealth to their own country, in 1295. Marco afterwards served his country at sea, and, being taken prisoner by the Genoese, remained many years in confinement, which he beguiled by com- posing the history of the travels. The first edi- tion appeared at Venice in 1496, 8vo. It has been translated into various languages, the best versions are in Latin, Cologne, 1671, and in French, published at the Hague in 1675, in 2 vols. Polo not only gave a better account of China than any previous one, but likewise fur- nished an account of Japan, of several islands in the East Indies, of Madagascar, and of the coast of Africa. The period of his death is not known.

POLTAVA, a town and government of Rus- sia, on the Vorskla. The town is indifferently built, but the streets are wide and straight, and in the centre is a very good square, with a gra- nite monument in honor of Peter the Great. It carries on an active traffic, chiefly in cattle, with Siberia, Germany, the Crimea, and Constanti- nople. They also export flax, hemp, corn, and wax, at the four yearly fairs. Gardens in the environs produce a large quantity of cherries and other fruit. Here is a regular earthen for- iress, which was besieged in 1709 by Charles XII., between whom and Peter I. on the 8th of July, was fought the well known battle of Pol- tava, in which the Swedes were completely de- feated. 737 miles south by east of

Petersburg, and 459 S.S. W. of Moscow.

The province is situated between the govern- ments of Cherson and Charkov, extending from 48° 30′ to 50° 75′ of N. lat. Its area is about 16,000 square miles. The soil is rich and strong, yielding, to an extremely imperfect cul- tivation, heavy crops. The pasturage is also rich ; and the horses, though small, are active, and in considerable repute. The manufactures and trade are very limited. Population 1,500,000. The rivers are numerous ; but, with the excep- tion of the Dnieper, are navigable only by small boats. The exports are corn, cattle, linen, lime, charcoal, pitch, and potash.

POLTRON', n. s. Lat. pollice truncate, from the thumb cut off ; it being an old practice of cowards to cut off their thumbs, that they might not be compelled to serve in war. — Saumaise. Menage and Minsheu derive it from the Italian voltro, a bed ; as cowards feign themselves sick : others derive it from poletro or poltro, a young unbroken horse. Fr. Span, and Ital. poltrone is an idle wench. A coward ; a nidgit;" a scoun- drel.

Patience is for poltroons. Shaktpeare.

They that are bruised with wood or fists, And think one beating may for once Suffice, are cowards and polh – ->ns. Hudibrat

For who, but a poltroun possessed with fear, Such haughty insolence can tamely bear?

Dry den.

POLYADELPHIA, from iro\vs, many, and a$t\ia, brotherhood, many brotherhoods, the eighteenth class in Linnaeus's sexual system, consisting of plants with hermaphrodite flowers, in which several stamina or male organs are united by their filaments into three or more dis- tinct bundles. See BOTANY, Index.

POLYjENUS (Julius), the author of some Greek epigrams, extant in the first book of the Anthologia.

POLY.SNUS, the author of eight books of the Stratagems of Illustrious Commanders in War. He was probably a Macedonian, and perhaps a soldier in the early part of his life. He was un- doubtedly a rhetorician and a pleader of causes ; and appears, from the dedication of his work to the

emperors Antoninus and Verus, to have lived towards the end of the second century. The Stratagemata were published in Greek by Isaac Casaubon, with notes, in 1589, 12mo. ; but no good edition of them appeared till that of Ley- den, 1690, in 8vo. The title-page runs thus : — Polyaeni Stratagematum libri octo, Justo Vulteio Interprete ; Pancratius Maasvicius recensuit ; Isaacus Casaubonus necnon suas notas adjecit.

POLYANDRIA, from uroXvc, many, and avtjp, a man or husband, many husbands, the thirteenth class in Linnaeus's sexual method, consisting of plants with hermaphrodite flowers, furnished with several stamina, that are inserted into the common receptacle of the flower. See BOTANY, Index.

POLYANTHEA, a collection of common- places in alphabetical order, for the use of ora- tors, preachers, &c. The word is formed from the Greek TroXwc, much, and avQoQ, flower ; and has much the same meaning with anthology or florilege. The first author of the polyanthea was Dominic Nanni de Mirabellio, whose labor nas been improved on by Barth. Amantius, and Franc. Torsius ; and since these by Jos. Langius, under the title of Polyanthea Nova, 1613.

POLYANTHES, the tuberose, a genus of the monogynia order, hexandria class of plants; natural order tenth, coronariae. The corolla is funnel-shaped, incurvated, and equal ; the fila- ments are inserted into the throat of the corolla ; in the. bottom of which the germen is situated. There is but one species, consisting of some va- rieties ; all of which, being exotics of tender quality, require the aid of artificial heat, under the shelter of frames and glasses, &c., to bring them to flower in perfection in this country. It has an oblong, bulb-like, tuberous, white root ; crowned with a few long very narrow leaves ; amidst them an upright, straight, firm stem, three ur four feet high, terminated by a long spike of large white flowers arranged alternately. The varieties are the common tuberose, with single flowers, double-flowered, dwarf-stalked, and va- riegated-leaved. They all flower here in June, July, and August ; the flowers are funnel or bell- shaped, and garnish the upper part of the stem in a long spike, consisting of from ten to twenty or more separate in alternate arrangements. The common single-flowered tuberose is the sort

most commonly cultivated, as it generally blows the most freely, and possesses the finest fragrance. The double-flowered kind also highly merits cul- ture, as when it blows fair it makes a singularly fine appearance. The dwarf and the variegated kinds are inferior to the other two. All the va- rieties being exotics from warm countries, al- though they flower in great perfection in our gardens by hot-beds, they will not prosper in the open ground, and do not increase freely in England ; so that a supply of the roots is im- ported annually from Italy, arriving in February or March for

the ensuing summer's bloom. The largest are preferred ; for on this depends the having a complete blow. They are planted in pots, and plunged in a hot-bed, under a deep frame with glass-lights ; or placed in a hot-house, where they may be blowed to great perfection. The principal season for planting them is March and April : in order to continue a long succes- sion of the bloom, make two or three different plantings, at about a month interval ; in March, April, and May, whereby the blow may be con- tinued from June until September. The propa- gation is principally by offsets of the roots. Plant them in March either in a bed of light dry earth in the full ground ; or, allow them a moderate hot-bed ; and in either method indulge them with a shelter in cold weather, either of a frame and lights, or arched with hoops and oc- casionally matted ; but let them enjoy the full air in all mild weather, giving also plenty of water in dry weather during their growth. Let them grow till their leaves decay in autumn : then take them up, clean them from earth, and lay them in sand till spring ; when such roots as are large enough to blow may be planted and managed as already directed, and the smaller roots planted again in a nursery bed, to have another year's growth ; afterwards plant them for flowering. The Egyptians put the flowers of tuberose into sweet oil ; and by these means give it a most excellent flavor, scarcely inferior to oil of jasmine.

POLYANTHOS, or POLYANTHUS, a term in botany.

POLYANTHUS, n. s. Gr. iroXwc, a prefix in the composition of many words, derived from the Greek, and intimating multitude j and av0oc, a flower. A plant.

The daisy, primrose, violet darkly blue,

And polyanthus of unnumbered dyes. Thomson.

POLY ANUS, a mountain of Macedonia, near Pindus. — Strabo.

POLYB1DAS, a Spartan general, who com- manded after the death of Agesipolis. He re- duced Olynthus.

POLYBIUS, in fabulous history, king of Corinth, a son of Mercury and Chthonophyle, the daughter of king Sicyon. He married Pe- riboea, who having no sons, they adopted Oedipus, when found in the woods. His daughter Lysi- anassa was married to Talus, son of Bias, king of Argos ; by whom she had Adrastus, who succeeded his grandfather, Polybius. — Paus. Apollod.

POLYBIUS, a famous Greek historian, born a;. Megalopolis, in Arcadia, 205 B.C. He was the son of Lycortas, chief of the republic of ttiK

Achaeans, and trained to arms under the cele- brated Philopoemen, whose urn he carried in the funeral procession of that general. He arose to considerable honors in his own country, but was compelled to visit Rome with other princi- pal Achaeans, who were detained there as hos- tages for the submission of their state. Hence he became intimate with Scipio Africanus ˆEmi- lianus, and was present with him at the demoli- tion of Carthage. He saw Corinth also plun- dered by Mummius, and thence passing through the cities of Achaia reconciled them to Rome. He extended his travels into Egypt, France, and Spain, that he might avoid such geographical errors as he has censured in others. It was in Rome that he composed his excellent history, for the sake of which his travels were undertaken. This history was divided into forty books ; but there only remain the five first, with extracts of some parts of the others. It has had several editions in Greek and Latin ; and there is an English translation by Mr. Hampton. He lived to the age of eighty-two.

POLYBOTES, in fabulous history, one of the giants who warred against Jupiter. Neptune crushed him under the island Coos, as he was walking across the ./Egean Sea. — Paus. i. 2.

POLYCARP, one of the most ancient fathers of the Christian church, was born towards the end of the reign of Nero, probably at Smyrna ; where he was educated at the expense of Calista, a matron distinguished by her piety and charity. He was a disciple of St. John the Evangelist, and conversed with some of the other apostles. Buco- lus ordained him a deacon and catechist of his church ; and upon his death he succeeded him in the bishopric. The controversy about the observation of Easter arising, Polycarp had a conversation with Anicetus, bishop of Rome, on the subject, which they carried on with calmness, though they differed in opinion. But he showed great zeal against the heresies of Marcion, Va- lentinus, and Cerinthus. Some think that St. John dedicated his Apocalypse to him, under the title of ‘ the angel, or messenger, of the Church of Smyrna.’ Polycarp governed the church of Smyrna with apostolic purity, till he suffered martyrdom in the seventh year of Mar- cus Aurelius. He was burnt at a stake on the twenty-third of April A.D. 167, and many mi- raculous circumstances are said to have hap- pened at the time, to which some modern di- vines, particularly Dr. Jortin, give credit, while Dr. Middleton and others ridicule them : such as, that the flames divided and formed an arch over his head, without hurting him ; that, upon this, the persecutors

run him through with a sword ; that his body sent forth a most fragrant smell, and that a dove was seen to fly away from the wound, which some took to be his soul ! &c. He wrote some homilies and epistles, which are now lost, except that to the Philippians, which contains short precepts and rules of life. St. Jerome informs us, it was even in his time read in the public assemblies of the Asiatic churches. It is singularly useful in proving the authenti- city of the books of the New Testament ; for he has several passages quoted from Matthew, Luke, t]ie Acts, and most of St. Paul's Epistles ;

the first Epistle of St. John, and first of Peter. Indeed his whole Epistle consists of phrases and sentiments taken from the New Testament.

POLYCARPON, in botany, a genus of the trigynia order, belonging to the triandria class of plants ; natural order twenty-second, caryophyl- lece : CAL. pentaphyllous ; there aie five very small ovate petals : CAPS, unilocular and tri- valved.

POLYCASTE, in fabulous history, the youngest daughter of Nestor, and wife of Tele- machus.

POLYCHREST, in pharmacy, signifies a medicine that serves for many uses, or that cures many diseases.

POLYCHREST, SAL, a compound salt, made of equal parts of saltpetre and sulphur, deflagrated in a red-hot crucible.

POLYCHROITE, the coloring matter of saffron.

POLYCLETUS, a celebrated statuary of Si- cyon, who flourished about A. A. C. 232. He was so eminent that many of the ancients pre- ferred him to Phidias.

POLYCLITUS, an ancient historian of La- rissa. — ./Elian, xxi. 41.

POLYCNEMUM, in botany, a genus of the monogynia order, belonging to the triandria class of plants ; natural order twelfth, holeraceae : CAL. iriphyllous ; and there are five calciform petals, with one seed almost naked.

POLYCOTYLEDONES. See BOTANY.

POLYCRATES, tyrant of Samos, is famous for the good fortune which always attended him. He became very powerful ; and got possession not only of the neighbouring islands, but also of some cities on the coast of Asia. He had a fleet of 100 ships of war, and was so universally esteemed

that Amasis, the king of Egypt, made a treaty of alliance with him. He, however, ad- vised him to chequer his enjoyments, by relin- quishing some of his most favorite objects. Po- lycrates, in compliance, threw into the sea one of his most valuable jewels ; but soon after he re- ceived as a present a large fish, in whose belly it was found. Amasis no sooner heard this than he gave up all alliance with him, saying that sooner or later his good fortune would vanish. Some time after Polycrates visited Magnesia on the Maeander, whither he had been invited by Orontes the governor, who traitorously put him to death, merely to terminate his prosperity.

POLYCRITUS, an ancient biographer, who wrote the life of Dionysius, tyrant of Sicily. — Diog.

POLYCROTA, in the naval architecture 01 the ancients, is used to express such of thfi- galleys as had three, four, five, or more tires c.f rowers, seated at different heights ; they were distinguished by this term from the monocrota, or those which had only single rows of oars. The number of rows of rowers in the polycrote galleys has given occasion to some to suppose those vessels of such a height from the water as is scarcely credible. Commentators are not agreed upon the construction of these vessels.

POLYDAMAS, in fabulous history, was a famous athlete, who imitated Hercules in wha ever he did. He killed a lion with his fist, ap

it is reported he could stop a chariot with his hand in its most rapid course. He was one day with some of his friends in a cave, when on a sudden a large piece of rock came tumbling down, and, while all fled away, he attempted to receive the falling fragment in his arms. His prodigious strength, however, was insufficient, and he was instantly crushed to pieces under the rock.

POLYDECTES, son of Magnes, was king of the island of Seriphos. He received with great kindness Danae and her son Perseus, who had been exposed on the sea by Acrisius. He took great care of the education of Perseus ; but, be- coming enamoured of Danae, he removed her from his kingdom, apprehensive of his resent- ment. He afterwards paid his addresses to Danae ; and, being rejected, he attempted to offer her violence. Danae fled to the altar of Minerva for protection ; and Dictys, the brother of Poly- dectes, who had himself saved her from the sea- waters,

opposed her ravisher, and armed himself in her defence. At this critical moment Perseus arrived ; and with Medusa's head he turned into stones Polydectes, and the associates of his guilt. The crown of Seriphos was given to Dictys, who had shown himself so active in the cause of innocence.

POLYDORA, an island of the Propontis, near Cyzicus.

POLYDORA, in fabulous history, the daughter of Meleager, king of Calydon, who married Protesilaus, and killed herself when she heard of his death.

POLYDORE VIRGIL. See VIRGIL.

POLYDORUS, a son of Priam by Hecuba; or, according to others, by Laothoe, the daughter of Altes, king of Pedasus. Being young and inexperienced, when Troy was besieged by the Greeks, his father removed him to the court of Polymnestor, king of Thrace, to whose care he entrusted the greatest part of his treasures, till his country should be freed from foreign inva- sion. On the death of Priam, Polymnestor made himself master of the riches which were in his possession ; and, to ensure them the better, he murdered the young prince, and threw his body into the sea, where it was found by Hecuba. According to Virgil, his body was buried near the shore by his assassin ; and there grew on his grave a myrtle, whose boughs dropped blood, when ./Eneas, going to Italy, attempted to tear them from the tree.

POLYDORUS, a king of Thebes, the son of Cadmus and Hermione, who married Nycteis, by whom he had Labdacus the father of Laius and grandfather of Oedipus. — Apollod.

POLYDORUS, son of Alcamenes, king of Sparta. He put an end to a war which had lasted twenty years between his subjects and the Messenians : and in his reign the Spartans planted two colo- nies, one at C'rotona, the other at Locri. He was highly respected, yet was assassinated by a villain named Polemarchus.

POLYED'RICAL, adj.) Gr. voXveSpos ;

POLYE'DROUS. \fr.polyedre. Hav-

ing many sides.

The protuberant particles may be spherical, ellip- tical, cylindrical, polyhedrical, and some very irregu- lar j and according to the nature of these, and the

situation of the lucid body, the light must be va- riously affected. Boyle.

A tubercle of a pale brown spar had the exterior surface covered with small polyhedrous crystals, pel- lucid with a cast of yellow. Woodward.

POLY GALA, milkwort, a genus of the oc- tandria order, and diadelphia class of plants ; and in the natural method, ranking under the thirty-third order, lomentaceae. The calyx is pentaphyllous, with two of its leaflets wing- shaped and colored ; the legumen is obcordate and biloculaf. There are twenty-four species, of which the most remarkable are —

1. P. senega, seneka, or rattlesnake-wort, grows naturally in most parts of North America. It has a perennial root composed of several fleshy fibres, from which arise three or four branching stalks, which grow erect, garnished with spear-shaped leaves placed alternately. The flowers are produced in loose spikes at the end of the branches; they are small, white, and shaped like those of the common sort. It flowers here in July, but the plants do not produce seeds. The root of this species operates very powerfully ; but besides the virtues of a purga- tive, emetic, arid diuretic, it was long recom- mended as an antidote against the poison of a rattlesnake ; but this opinion is now exploded. It still, however, maintains its character in seve- ral disorders. Its efficacy in pleurisies is most fully established in Virginia : formerly near fifty out of 1 00 died of that distemper, but by the happy use of this root hardly three out of that number are now lost. As the seeds seldom succeed, even in the countries where the plant is a native, the best method of propagating it is to procure the plants from America, and plant them in a bed of light earth in a sheltered situation, where they will thrive without any other culture than keeping them free from weeds. But, though the plant will stand out ordinary winters, it will be proper to cover it during that season with old tanners' bark, or other mulch, to keep out the frost.

2. P. vulgaris, common milkwort, is a native of the British heaths and dry pastures. The stalks are about five or six inches long, several arising from the same root: the leaves are firm, smooth, entire, and grow alternate upon the stalks, which are terminated with spikes of flowers, most commonly blue, but often red or white : the calyx consists of five leaves, three of which are small and green, two below, and one above the corolla; the other two intermediate ones are large, oval, flat-colored, veined, and resemble petals, which at length turn greenish, and re- main a defence to the seed-vessel ; the corolla consists of three petals folded together, and forming a tube : the carina is terminated by a heart-shaped, concave appendage, fringed at the extremity. The root has a bitter taste, and pos- sesses the virtues of the American rattlesnake root. It purges without danger, and is also emetic and diuretic ; sometimes operating all the three ways at once. A

spoonful of the decoction, made by boiling an ounce of the herb in a pint of water till one-half has exhaled, has been found serviceable in pleurises and fevers, by promoting a diaphoresis and expectoration; and three

spoonfuls of the same, taken once an hour, has proved beneficial in the dropsy and anasarca. It has also been found serviceable in consumptive complaints.

POLYGAMIA, TroXvg many, and ya/tog mar- riage. This term, expressing an intercommuni- cation of sexes, is applied by Linnaeus, both to plants and flowers. A polygamous plant is that which bears both hermaphrodite flowers and male and female, or both.

POLYGAMI7E, orders of. See BOTANY. POLYGAMOUS PLANTS. See BOTANY. POLYGAMUM, a species of holcus, by some erroneously reckoned a species of panicum. It is a native of Africa, and brought from thence to the West Indies. It agrees with every soil and situation ; and in many of the rocky and barren parts of Jamaica, which formerly could not support a goat, may now be seen large herds of cattle, sheep, and horses, in excellent order, and fitted for all the purposes of rural economy or the market, feeding on Guinea grass. It is best propagated by the roots, and planted about three feet asunder. In six months it grows very tall, so as often to be six feet high. At this time horses and cattle are turned in to eat what they please of it ; and, while they plough up the sur- face of the ground with theii feet, they shake the ripe seed. The rank grass is afterwards cut down, burned off, and the old stock routed up and thrown away. The seeds vegetate and throw up a plentiful crop ; which with common atten- tion will last many years. For this purpose a Guinea grass pasture requires to be kept clean, and supplied in particular places as may be ne- cessary from time to time. The fields ought to be divided into parks by fences, and the cattle shifted from one enclosure to another occasionally. POLYG'AMY, n. s. > Fr. polygamie; Gr. POLYG'AMIST. J woXvya/aa. Plurality

of wives : one who holds the lawfulness of po- lygamy.

He lived to his death in the sin of polygamy, with- out any particular repentance. Perkins.

They allow no polygamy : they have ordained that none do intermarry or contract, until a month be past from their first interview. Bacon,

Christian religion, prohibiting polygamy, is more agreeable to the law of nature, that is, the law of God, than Mahometanism that allows it ; for one man, as having many wives by law, signifies nothing, unless there were many women to one man in nature also. Graunt.

Polygamy is the having more wives than one at once. Locke,

POLYGAMY, LAWS RESPECTING. Polygamy is universally deemed unlawful, and even unnatu- ral, throughout all Christian countries. But a plu- rality of wives was permitted not only among the Hebrews, but also, as Selden observes, among most other ancient nations. The Romans indeed were more severe in their morals, and never practised it, though it was not forbidden among them ; and Marc Antony is mentioned as the first who took the liberty of having two wives. From that time it became pretty frequent in the empire till the reigns of Theodosius, Honorius, and Arcadius, who first prohibited it by express law in 393. After this the emperor Valentinian, l»y an edict, permitted all the subjects of the

empire, if they pleased, to marry several wives , nor does it appear, from the ecclesiastical history of those times, that the bishops made any oppo- sition to this introduction of polygamy. In Germany, Holland, and Spain, this offence is dif- ferently punished. By a constitution of Charles V. it was a capital crime. By the laws of ancient and modern Sweden it is punished with death. In Scotland it is punished as perjury. In Eng- land it is enacted by statute 1 Jac. I. cap. 11, that if any person, being married, do afterwards marry again, the former husband or wife being alive, it is felony, but within the benefit of clergy. The first wife in this case shall not be admitted as an evidence against her husband, because she is the true wife ; but the second may, for indeed she is no wife at all; and so vice versa of a se- cond husband. This act makes an exception to five cases, in which such second marriage, though in the three first it is void, is, however, no felony. ‘ 1 . Where either party hath continually been abroad for seven years, whether the party in England had notice of the other’s being living or not. 2. Where either of the parties hath been absent from the other seven years within this kingdom, and the remaining party hath had no notice of the other’s being alive within that time. 3. Where there is a divorce or separation a mensa et thoro by sen- tence in the ecclesiastical court. 4. Where the first marriage is declared absolutely void by any such sentence, and the parties loosed a vinculo. Or, 5. Where either of the parties was under the age of consent at the time of the first marriage ; for in such case the first marriage was voidable by the disagreement of either party, which this second marriage very clearly amounts to. Bui if at the age of consent the parties had agreed to the marriage, which completes the contract, and is indeed the real marriage, and afterwards one of them should marry again, judge Blackstone ap- prehends that such second marriage would be

within the reason and penalties of the act.

Montesquieu contends that polygamy is phy- sically conformable to the climate of Asia. The season of female beauty precedes that of their reason, and their beauty from its pre- maturity soon decays. The empire of their charms is short. It is therefore natural, he says, that a man should leave one wife to take another; that he should seek a renovation of those charms that had withered in his possession. ‘ But are these the real circumstances of polygamy ? ‘ asks Mr. Marsden, ‘ Surely not. It implies the con- temporary enjoyment of women in the same pre- dicament; and,’ he adds, ‘ I should consider it as a vice that has its source in the influence of a warm atmosphere upon the passions of men, which, like the cravings of other disordered appe- tites, make them miscalculate their wants.’ Moreover, the climate which expands the desires of the men, and prompts a more unlimited ex- ertion of their faculties, does not inspire their constitutions with proportionate vigor ; but, on the contrary, renders them in this respect inferior to the inhabitants of the temperate zone ; whilst it equally influences the desires of the opposite sex, without being found to diminish from their capacity of enjoyment. Whence we may infer, that if nature intended one woman only should

be the companion of one man in the colder regions of the earth, it appears also intended, si fortiori, that the same law should be observed in the hot- ter; inferring nature’s design, not from the de- sires, but from the abilities with which she has endowed mankind. Montesquieu also suggested that the inequality in the comparative numbers of each sex, born in Asia, which is represented to be greatly superior on the female side, may have relation to the law that allows polygamy. But it is replied that there is strong reason for denying the reality of this supposed excess. Marsden asserts that the proportion of the sexes throughout Sumatra does not sensibly differ from that ascertained in Europe ; nor could he ever learn, from the inhabitants of the many eastern islands with whom he had an opportunity of conversing, that they were conscious of any ma- terial disproportion in this respect.

Major Grant observes that the males and fe- males brought into the world are so nearly on a balance, that only abating for a little excess on the side of the males, in the proportion of about nineteen to eighteen, to make up for the extraor- dinary exposures of men in war, and at sea : it evidently follows that nature only intends one wife, or one husband, for the same person ; since, if they have more, some others must go without any at all.

Hence he concludes, that the Christian law, which prohibits polygamy, is agreeable to the law of nature.

It is well known that the poet Milton was an advocate for great latitude in the causes of divorce ; but his notions respecting polygamy were not fully understood, until the late publi- lication of his Treatise pn Christian Doctrine. He was the advocate of polygamy, as amongst the privileges of the male sex. See our article MILTON.

Another of the boldest and most specious modern advocate of polygamy was the late Rev. Mr. Ma- dan, an evangelical clergyman of the church of England, who, in 1780, published a work, under the title of Thelypthora ; or, A Treatise on Fe- male Ruin, in its Causes, Effects, Consequences, Prevention, and Remedy, &c., in which he con- tended that marriage, being simply and wholly an act of personal union (or the actus coitus), adultery is never used in the sacred writings but to denote the defilement of a betrothed or mar- ried woman, and to this sense he restricts the use of the term, so that a married man, in his opinion, is no adulterer, if his commerce with the sex be confined to single women, who are under no ob- ligations by espousals or marriage to other men ; but, on the other hand, the woman who should dare to have even but one intrigue with any other man besides her husband (let him have as many wives as Solomon), would, ipso facto, be an adul- tress, and ought, together with her gallant, to be punished with immediate death. This, he boldly states, is the law of God ; and on this founda- tion he limits the privilege of polygamy to the man.

In support of his system, he refers to the po- lygamous connexions of the patriarchs and saints of the Old Testament, and infers the lawfulness of their practice from the blessings which at- tended it, the laws which were instituted to regu-

late and superintend it, 8cc. He e/en labors much to reconcile the genius of the evangelical dispensation to an arrangement of this sort ; and asserts that there is not one text in the New Testament that hints at the criminality of a po- lygamous connexion. From St. Paul's direction, that bishops and deacons should have but one wife, he would infer that it was lawful for lay- men to have more. Christ, he says, was not the giver of a new law ; but the business of marriage, polygamy, &c., had been settled before his ap- pearance in the world, by an authority which could not be revoked. This writer further thinks polygamy advantageous in a civil light, and highly politic in a domestic point of view.

Itisdueto awork long deteriorated, and nowwe believe nearly extinct (the Monthly Review), to add, that the best answer to this scheme appeared at the time in that publication. We have only room for a summary of the

arguments of the writer : —

‘ When we reflect,’ says he, ‘ that the primi- tive institution of marriage limited it to one man and one woman ; that this institution was adhered to by Noah and his sons, amidst the degeneracy of the age in which they lived, and in spite of the examples of polygamy, which the accursed race of Cain had introduced ; when we consider how very few (comparatively speaking) the examples of this practice were among the faithful ; how much it brought its own punishment with it ; and how dubious and equivocal those passages are in which it appears to have the sanction of divine approbation ; when to these reflections we add another respecting the limited views and tempo- rary nature of the more ancient dispensation and institutions of religion — how often the imperfec- tions, and even vices of the patriarchs, and peo- ple of God in old time, are recorded, without any express notification of their criminality — how much is said to be commanded, which our reverence for the holiness of God and his law will only suffer us to suppose was, for wise ends, permitted — how frequently the messengers of God adapted themselves to the genius of the people to whom they were sent, and the circum- stances of the times in which they lived; above all, when we consider the purity, equity, and benevolence of the Christian law ; the explicit declarations of our Lord, and his apostle St. Paul, respecting the institution of marriage, its design and limitation ; when we reflect, too, on the testimony of the most ancient fathers, who could not possibly be ignorant of the general and common practice of the apostolic church ; and, finally, when to these considerations we add those which are founded on justice to the female sex, and all the regulations of domestic economy and national policy, we must wholly condemn the revival of polygamy ; and thus bear our ho- nest testimony against the leading design of this dangerous and ill-advised publication.’ — Monthly Review, vol. Ixiii. p. 338. Dr. Paley has also a good passage on this subject, Moral Philosphy, vol. i.

POLYGARS, in Hindostan, is a name that nas been sometimes given to a predatory race of natives who long inhabited impenetrable v. oods in various parts of that continent.

POLYGON.

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Latterly, THE POLYGARS’ TERRITORY is a name given to a district in the Southern Carna- tic, situated between 10° and 11° of N. lat. To the north it is bounded by Trichinopoly ; on the south by Marawas and Madura; on the east it has Tanjore and the sea ; and on the west Din- digul.

The polygars are, according to Hamilton, mi- litary chieftains of different degrees of power and consequence, who bear a strong affinity to the zemindars of the Northern Circars. Those whose pollams, or estates, are situated on the frontier and jungly part of the country, are represented to have been for the most part leaders of banditti, or freebooters, who, as is not uncommon in Asia, had afterwards been entrusted with the police of the country. Some of them trace their descent from the ancient rajahs, or from those who held high office? of trust under the Hindoo govern- ment, and received allowances in land or money for the support of a body of horse and foot on the feudal principle. Other polygars had been renters of districts, or revenue officers, who had revolted in times of public disturbance, and usurped the possession of lands, to which they were constantly adding by successive encroach- ments, when the ruling power happened to be •weak and inefficient. The heads of villages, when favored by the natural strength of the country, frequently assumed the name and cha- racter of polygars, and kept up their military retainers and nominal officers of state, exercising in this contracted sphere many of the essentfal powers of sovereignty.

‘ The amount of the tribute which they paid to the Soubahdars of the Carnatic was wholly disproportioned to their revenues ; but more was constantly extorted by the officers of govern- ment under the names o£ fines and presents, which was a perpetual source of violence and distraction. During the periods of public cala- mity they retaliated upon the nabob’s officers and the peaceable inhabitants of the government villages, those acts of indefinite and oppressive authority, which were committed on themselves. Hence the British government were repeatedly burdened with large armaments to subdue these feudatories, involving heavy disbursements from the public revenue, and severe loss of lives.’

The principal pollams, or polygar estates, are those of Shevagunga, Ilamnad, Manapara, Ma- dura, and Nattam. The first two were permanently assessed in 1803, at the same time as those of Tinevelly ; and the rest were soon afterwards settled in perpetuity. From this period the tri- bute of the polygars, although increased, has been punctually paid ; no blood has been shed, or money expended in military operations against them, and the surrounding districts have enjoyed tranquillity under the revival of the an- cient system of village police. This territory is not so well watered, nor in so high a state of cul- tivation, as Tanjore ; but the soil is naturally fertile, and the agriculture improving. There are no rivers of any considerable magnitude ; the chief towns are Nattam, Manapar, Veramally, Puducotty, Cottapatam, and Tondi. The dis- trict is comprehended in the collectorship of Dindigul.

POL'YGLOT, adj. & ».. s. Fr. polyglottc ; Gr. iroXvyXuTToc- Having many languages. The polyglot or linguist is a learned man.

Bowel.

POLYGLOT, among divines and critics, is chiefly used for a Bible printed in several languages. See BIBLE.

POLYGLOTTUS. See TURDUS.

POLYGNOTUS, a famous painter of Thasos, who flourished about 422 years before the Chris- tian era, and was the son and scholar of Aglao- phon. He adorned one of the public porticoes of Athens with his paintings, in which he had represented the most striking events of the Tro- jan war. The Athenians were so pleased with him that they offered to reward his labors with whatever he pleased to accept, but he declined the offer ; and the Amphictyonic council, which was composed of the representatives of the principal cities of Greece, ordered that Polyg- notus should be maintained at the public expense wherever he went.

POL'YGON, re. s.) Fr. poligone ; Fr.

POLYG'ONAL, adj. $ and ywvia, an angle. A figure of many angles : multangular.

He began with a single line ; he joined two lines in an angle, and he advanced to triangles and squares, polygons and circles. Watts.

POLYGON, in geometry, is a figure whose perimeter consists of more than four sides, such are the pentagon, hexagon, heptagon, &c. If the angles be all equal among themselves, the polygon is said to be a regular one ; other- wise, it is irregular. Polygons take particular names according to the number of their sides ; thus a polygon of three sides is called atrigon,of four sides a tetragon, of five sides a pentagon, of six sides a hexagon, &c. ; and a circle may be considered as a polygon of an infinite number of small sides, or as the limit of the polygons.

Polygons have various properties, as, 1. Every polygon may be divided into as many triangles as it has sides. 2. The angles of any polygons taken together, make twice as many right angles, wanting four, as the figure has sides. Thus, if the polygon has five- sides, the double of that is ten, from which subtracting four leaves six right angles, or 540 degrees, which is the sum of the five angles of the pentagon. And this property, as well as the former, belongs to both regular and irregular polygons. 3. Every regular polygon may be either inscribed in a circle, or described about it. But not so of their regular ones, except the triangle, and another particular case as

in the following property. An equilateral figure in- scribed in a circle is always equiangular. But an equiangular figure inscribed in a circle is not always equilateral, but only when the number of sides is odd. For, if the sides be of an even number, then they may either be all equal, or else half of them may be equal, and the other half equal to each other, but different from the former half, the equals being placed alternately. 4. Every polygon, circumscribed about a circle, is equal to a right-angled triangle, of which one leg is the radius of the circle, and the other the perimeter or sum of all the sides of the polygon. Or the polygon is equal to half the rectangle un- der its perimeter and the radius of its inscribed

circle, or the perpendicular from its centre upon one side of 'the polygon. Hence, the area of a circle being less than that of its circumscribing polygon, and greater than that of its inscribed polygon, the circle is the limit of the inscribed and circumscribed polygons : in like manner the circumference of the circle is the limit between the perimeters of the said polygons; conse- quently the circle is equal to a right-angled tri- angle, having one leg equal to the radius, and the other leg equal to the circumference ; and therefore its area is found by multiplying half the circumference by half the diameter. In like manner, the area of any polygon is found by multiplying half its perimeter by the perpendi- cular demitted from the centre upon one side.

The following table exhibits the most remark- able particulars in all the polygons, up to the dodecagon of twelve sides, viz., the angle at the centre, the angle of the polygon, and the area of the polygon when each side is one.

No.

of Sides.

Name of Polygon.

Ang. F. at cent.

Ang. C. of

Polyg-

Area.

3

Trigon

120°

60°

0-4330127

4

Tetragon

90

90

1-0000000

5

Pentagon

72

108

1-7204774

6

Hexagon

60

120

2-5980762

7

Heptagon

51?

128J

3-6339124

8

Octagon

45

135

4-8284271

9

Nonagon

40

140

6-1818242

10

Decagon

36

144

7-6942088

11

Undecagon

*32**

147A

9-3656399

12

Dodecagon

30

150

11-1961524

To find the area of any regular polygon. — Multiply the square of its side by the tabular area, found on the line of its name in the last column of the table, and the product will be the area. Thus, to find the area of the trigon, or equilateral triangle, whose side is twenty. The square of twenty being 400, multiply the tabu- lar area -4330127 by 400, and the product 173-20508 will be the area.

0-4330127 400

173-2050800

There are several curious algebr»-'cal theorems for inscribing polygons in circles, or finding the chord of any proposed part of the circumference, which is the same as angular sections. These kinds of sections, or parts and multiples of arcs, were first treated of by Vieta, as shown in the Introduction to Hutton's Log. page. 9, and since pursued by several other mathematicians, in whose works they are usually to be found.

POLYGON, in fortification, denotes the figure or perimeter of a fortress, or fortified place. This is either exterior or interior, f he exterior poly- gon is the perimeter or figure formed by lines con- necting the points of the bastions to one another, quite round the work. And the interior polygon is the perimeter or figure formed by lines con- necting the centres of the bastions, quite around.

POLYGONS, LINE OF, is a line on some sec- tors, containing the homologous sides of the first nine regular polygons inscribed in the same cir- cle ; viz., from an equilateral triangle to a dode- cagon.

POLYGONAL NUMBERS are the continual or successive sums of a rank of any arithmeticals beginning at one, and regularly increasing ; and therefore are the first order of figurate numbers : they are nailed polygonals, because the number of points in them may be arranged in the form of the several polygonal figures in geometry.

The several sorts of polygonal numbers, viz. the triangles, squares, pentagons, hexagons, &c., are formed from the addition of the terms of the arithmetical series, having respectively their common difference 1, 2, 3, 4, &c. ; viz., if the common difference of the arithmeticals be one, the sums of their terms will form the triangles ; if two, the squares ; if three, the

pentagons, if four, the hexagons, &c. Thus :—

Arith. progres. 1, 2, 3, 4, 5, 6,

1, 3, 1, 3, 1, 4, 1, 4,

ifc Triang. nos.

< Arith. progres. { Square nos.

{ Arith. progress. i Pentag. nos.

< Arith. progres. (Hexagon nos.

7.

6, 10, 15, 21, 28. 5, 7, 9, 11, 13. 9, 16, 25, 36, 49.

7, 10, 13, 16, 19. 1, 5, 12, 22, 35, 51, 70. 1, 5, 9, 13, 17, 21, 25. 1, 6, 15, 28, 45, 66, 91.

The side of a polygonal number is the number of points on each side of the polygonal figure when the points in the number are ranged in that form. And this is also the same as the number of terms of the arithmeticals that are added to- gether in composing the polygonal number ; or, in short, it is the number of the term from the beginning. So, in the second or squares,

123 4

14 9 16

the side of the first (1) is 1, that of the second (4) is 2, that of the third (9) is 3, that of the fourth (16) is 4, and so on. And – The angles, or nurribers of angles, are the same as those of the figure from which the number takes its name. So the angles of the triangular numbers are three, of the square ones four, of the pentagonals five, of the hexagonals six, and so on. Hence, the angles are two more than the common difference of the arithmetical series from which any rank of polygonals is formed : so the arithmetical series has for its common difference the number 1 or 2 or 3 &c., as follows viz. 1 in the triangles, two in the squares, three in the pentagons, &c ; and, in general, if a be the number of angles in the polygon, then a — 2 is — d, the common difference of the arithmetical series, or d + 2 rz a, the number of angles.

PROB. I. — To find any polygonal numbe- pro- posed ; having given its side n and angles a. The polygonal number being evidently the sum of the arithmetical progression whose number of terms is n and common

difference a — 2, and the sum of an arithmetical progression being equal

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*to half the product of the extremes by the num- ber of terms, the extremes being 1 and 1 \ d. (n— 1) = 1 4- (a — 2). (« — 1); therefore that n*d — n- (d— 2) number, or this sum, will be —*

8

rf (u — 2) — n • (a — 4) , , . .,

— i – – – – – , where d is the com

mon difference of the arithmeticals that form the polygonal number, and is always two less than the number of angles a.

Hence, for the several sorts of polygons, any particular number whose side is n will be found from either of these two formulae, by using for d its values 1, 2, 3, 4, &c.; which gives these following formulae for the polygonal number in each sort, viz. the

Triangular . Square . . Pentagonal Hexagonal Heptagonal

PROB. 2. — To find llie sum of any number of polygonal numbers of any order. — Let the angles of the polygon be a, or the common difference of the arithmeticals that form the polygonals, d ; and n the number of terms in the polygonal series, whose sum is sought ; then is

the sum of the n terms sought.

Hence, substituting successively the numbers 1, 2, 3, 4, &c., for d, there are obtained the fol- lowing particular cases, or formulae, for the sums of n terms of the several ranks of polygonal numbers, viz. the sum of the

Tnangulars . . Squares ... Pentagonals . . Hexagonals . . Heptagonals . .

3n

3n + 0

5n2 + 3n — 2

POLYGONOMETRY is the measure or doc- trine of polygons.

POLYGONUM, knot-grass, a genus of the trigynia order, and octandria class of plants ; in the natural method ranking under the twelfth order, holoracese. There is no calyx : the corolla is quinquepartite,and calycine, or serving instead of a calyx : there is one angulated seed. There are twenty-seven species ; the most remarkable are these: — 1. P. bistorta, bistort, or greater snakeweed, has a thick oblique intorted root, blackish without and red within ; a simple, round, slender stem, nearly two feet high ; oval leaves, having decurrent foot-stalks, and the stalk

terminated by thick short spikes of whitish-red flowers. See No. 4. The root of a kind of bis- tort, according to Gmelin, is used in Siberia for ordinary food. This species is by Haller called bistorta foliis ad orarn nervosis, and by some other, botanists bistorta montana minor. The natives call it mouka ; and so indolent are they, that, to save themselves the trouble of digging it out of the earth, they go in spring to pillage the holes of the mountain rats, which they find filled with these roots. In our country bistort is used as a medicine. All the parts of bistort have a rough austere taste, particularly the root, which is one of the strongest of the vegetable astrin- gents. It is employed in all kinds of immode- rate haemorrhagies, and other fluxes, both inter- nally and externally, where astringency is the only indication. It is certainly a very powerful styptic, and is to be looked on simply as such ; having no other claim to the sudorific, antipesti- lential, and other virtues ascribed to it, than in consequence of its astringency, and of the antiseptic power which it has in common with other vegetable styptics. The largest dose of the root in powder is a single dram. 2. P. fagopy- rum, buck-wheat, or brank, rises with an iipright, smooth, branchy stem, from about a foot and a half to a yard high, heart-shaped sagittated leaves, and the branches terminated by clusters of whitish flowers, succeeded by large angular seeds. This species is angular. It is a sort of corn, and is cultivated both by way of fodder, cutting its stalks while young and green to feed cattle, and for its grain to feed pigeons, poultry, hogs, &c. It nourishes in any soil and situation, but generally thrives best in a light dry earth ; the driest seasons seldom retard its growth. 3. P. orientale, commonly called persicaria, has fibrous roots ; an upright, robust, strong, jointed stem, rising eight or ten

feet high, divided at top into several branches , very large oval lanceolate alternate leaves, on broad foot-stalks half sur- rounding the stem; and all the branches termi- nated by long, slender, hanging spikes of reddish-purple heptandrous and digynious flowers, from July till October. This is a most elegant annual for the embellishment of pleasure-grounds; as- suming a majestic tree-like growth by its erect luxuriant stern and branchy head ; which being garnished with noble large foliage, and numerous pendulous spikes of flowers, in constant succes- sion for three or four months, exhibits a very ornamental appearance from June or July until October, and is so easy of culture that, from its scattered seeds in autumn, young plants rise spontaneously in abundance the ensuing spring, and shoot up so rapidly as to attain six or eight feet in height by July, when they generally begin flowering, and continue till attacked by the frost, when they totally perish ; so that a fresh supply must be raised from seed annually. 4. P. vivi- parum, the smaller bistort, has a thickish root, a simple slender stem half a foot high, spear- shaped leaves, and the stalks and branches ter- minated by long spikes of whitish-red flowers. Both this and the bistort (No. 1.), flower in May and June, succeeded by ripe seeds in August, They grow wild in England, &c., the first in moist, the other in mountainous situations. They ajj?

perennials, and are propagated by parting the roots in autumn, and are retained in some curious gardens for variety ; but their chief merit is for medical purposes : they are powerful astringents, and are used both internally and externally; esteemed very efficacious in hsemorrhagies and other fluxes, and good to heal sore mouths. All the above species are hardy, and thrive in any soil or situation.

POL'YGRAM, n. s. Gr. 7ro\«c and ypa/tˆa. A figure consisting of a great number of lines.

POLYG'ltAPH Y, n. s. Gr. rroXwe and ypa0»; ; Fr. polygraphie. The art of writing in several unusual manners of cyphers ; as also decipher- ing the same.

POLYGRAPHV, PoLYGRAPHIA, Of PoLYGRA-

PHICE, is formed from the Greek iro\v, much, and yp«0»;, writing. The

ancients seem to have been very little acquainted with this art ; nor is there any mark of their having gone beyond the Lacedemonian scytals. Trithemius, Porta, Vige- nere, and father Niceron, have written on poly- graphy.

POLYGYNIA. See BOTANY.

POLYHALLITE, a mineral in masses of a fibrous texture. Sp. gr. 277. Pearly lustre. Its constituents are hydrous sulphate of lime 28-25 ; anhydrous sulphate 22-42 ; anhydrous sulphate of magnesia 20-03 ; sulphate of potassa 27-7; muriate of soda 0-19; red oxide of iron O-34. It occurs at Ischel in Upper Austria.

POLYHEDRON, in geometry, denotes a body or solid comprehended under many sides or planes.

POLYHEDRON, in optics, is a multiplying-glass or lens, consisting of several plane surfaces dis- posed into a convex form. See OPTICS.

POLYHISTOR (Alexander), an ancient Gre- cian historian, born at Miletum about A. A. C. 85. He wrote forty-two books on grammar, his- tory, and philosophy, of which only a few ex- tracts are extant in the works of Pliny and other authors.

POLYHYMNIA, in the Pagan mythology, one of the nine Muses, thus named from TroXvc, much, and fivtia, memory. She presided over history, or rather rhetoric ; ?nd is represented with a crown of pearls and a white robe ; her right hand in action as if haranguing, and hold- ing in her left a caduceus or sceptre, to show her power.

POLYL'OGY, n. s. Gr. iroXvc and Xoyoc- Talkativeness.

POLYM'ATH Y, n. s. Gr. 7roXvC and pavdavu. The knowledge of many arts and sciences ; also an acquaintance with many different sub- jects.

POLYMIGNITE, a new mineral found in the zirconian sienite of Fredericksswarns. It is black, brilliant, and crystallised in small prisms, long, thin, with a rectangle, the edges of which are commenly replaced by one or several planes. Sp. gr. 4-806. It scratches glass, but cannot be scratched by steel. Fracture conchoidal, without indications of cleavage. The surface of the crys- tals has vivid lustre, almost metallic. The frac- ture also resembles the surface, possessing a brilliancy far beyond what is common in mine- rals. At the blow-pipe it suffers no change.

With borax it melts easily, and forms a glass colored with iron. With more borax it becomes opaque and of an orange color. Its composition is

extraordinary : —

Titanic acid . . . 46-3

Zirconia 14-4

Oxide of iron . . . 12-2

Lime . «... • • 4-2

Oxide of manganese . . 2-7

Oxide of cerium . . 5‘0

Yttria . . . . 11-5 Traces of magnesia, potash, silica, oxide of tin.

96-3

— Berzelius ; Annales de Chim. xxxi. 405.

POLYMNESTOR, a king of the Thracian Chersonesus. He married Ilione, Priam’s eldest daughter ; and, for the sake of the treasure with which he was entrusted by Priam during the siege of Troy, he murdered Polydorus. The fleet in which the victorious Greeks returned, together with their Trojan captives, among whom was Hecuba, stopped on the coasts of Thrace, where one of the female captives discovered the body of Polydorus, whom Polymnestor had thrown into the sea. The dreadful news was communicated to Hecuba his mother, who, to revenge her son’s death, called out Polymnestor ; when the female captives, rushing on him, put out his eyes with their pins, while Hecuba murdered his two children, who had accompanied him. Euripedes says that the Greeks condemned Polymnestor to be banished into a distant island for his perfidy; but Hyginus relates the story differently, and tells us that, when Polydorus was sent to Thrace, Ilione his sister took him instead of her son Deiphilus, who was of the same age, being afraid of her husband’s cruelty. The monarch, unacquainted with the imposition, looked upon Polydorus as his own son, and treated Deiphilus as her brother. After the destruction of Troy, the conquerors wished the house and family of Priam to be extirpated, and therefore offered Electra the daughter of Aga- memnon to Polymnestor, if he would destroy Ilione and Polydorus. He accepted the offer, and despatched his own son Deiphilus, whom he took for Polydorus. Polydorus, who passed as the son of Polymnestor, consulted the oracle, and being informed that his father was dead, his mother a captive in the hands of the Greeks, and his country in ruins, he communicated the an- swer to Ilione, who told him what she had done to save his life, upon which he avenged the per- fidy of Polymnestor by putting out his eye.*

POLYMNIA, in botany, a genus of the poly- gamia necessaria order, and syngenesia class of plants; natural order forty-ninth, composite. The receptacle is paleaceous ; there is no pap- pus ; the exterior calyx is tetraphyllous, or pen- taphyllous ; the interior decaphyllous, and com- posed of concave leaflets.

POLYNESIA is a name given by modern geographers to various groupes of islands in the Great Pacific Ocean, situated east of the Asiatic Islands an'd ALSTRAIASIA (which see), and on both sides the Equator.

Hence they are sometimes divided into Northern and Southern Polynesia. The meri- dian of 130° K. long, separates these islands from the Asiatic Archipelago ; and nearly from the shores of Japan, a line extending to the E. to about 125° of W. long., forms the eastern confines to the fiftieth parallel of S. lat. by which they are bounded on that side. Polynesia thus stretches through an extent of about 5100 miles from north to south, and 3600 from east to west. Besides an indefinite number of detached is- lands, this space includes the following principal groups : —

NORTH OF THE EQUATORIAL LINE.

1 . Pelew Islands,

2. Carolines,

3. Ladrones,

4. Sandwich Islands,

5. Minor Islands,

6. Friendly Islands.

SOUTH OF THE EQUATORIAL LINE.

7. Navigator's Islands,

8. Georgian Islands,

9. Society Islands,

10. Marquesas,

11. Washington Islands,

12. Minor Islands.

Almost all these groupes engage our separate attention in their alphabetical places ; but the ‘ Minor’ islands on both sides of the line, and the Georgians will require some notice in this place.

The Minor islands in the Northern Pacific may be thus traced : — Commencing on the north- west, we meet with Rica de Plata, Rica de Oro, and the groups called Guadalupa and Malabriga. To the south-east of these are Dicierta, Comitra, Lamira, St. Bartholomeo, Gasper Rico, Brown’s Range, Piscadores, Calvert’s Islands, St. Pierre, Barbadoes, Pit Isle, Matthew’s Island, and Christmas Island. This last was discovered by captain Cook on the 24th of December, 1777. The Russian commander, Von Kotzebue, has also lately disclosed two chains of islands, stretching nearly north and south, situated prin- cipally between 6° and 12° of lat., and be- tween 167° and 173° of E. long, from Green- wich. The eastern chain he calls Radack, and the western Ralick. Each of them contains several islands, but present no remarkable fea- ures.

The Georgian Islands are a groupe that in- cludes OTAHEITE, EIMEO, Tapua-manu, and Te- taroa. For an account of the two former see the alphabetical places. About fourteen leagues west of the harbour of Talu, in Otaheite, is Tapua manu, five or six miles long, and rising in the centre to a peak, with a double summit. It abounds with cocoa-nut trees, but the popu- lation is small. Within ten leagues of Matavai, and enlosed with a reef of coral rocks, there are a number of low islets, called Tetaroa, belonging to the king of Otaheite, and which supply this island with fish, in exchange for bread-fruit. A conspicuous island, called Maitea, is situated nearly twenty leagues east of Otaheite ; and is only a few miles in circumference. Its northern side is too precipitous to be inhabited, but the ‘eclivities in the southern part are more gentle,

and the country populous, This is enclosed on the east by a coial reef, and is occasionally vi- sited by canoes from Otaheite, which barter for pearls. Society presents a very different aspect, both in these and the Society Islands, from that which it exhibited a few years ago, the labors of the missionaries having resulted in the formal renunciation of idolatry with its superstitious customs and practices in Otaheite, and eight of the other islands. Infanticide has been abo- lished ; the practice of murdering prisoners of war renounced ; the suppression of many perni- cious amusements effected; and a reception of Christianity avowed. The erection of numerous places for Christian worship, and the establish- ment of schools, have been the necessary conse- quences, together with a general

observance of the Christian sabbath.

The Minor islands scattered over the Southern Pacific are Byron's Island, situated near the equator ; St. Augustine's, several degrees south- west of it : north-west of these, Solitary Island ; and, between the Equator and the Georgian archipelago, Penrhyn, and some other small rocky islets. There are also several islands on the south side of this group, among which are Hood's, Gloucester, Osnaburg, and High Islands. Further east, and stretching to the American coast, S. J. Baptista, Oparo, Tubouai, and Pit- cairn's Islands, with Ducie's Isle, and Easter Island. The most interesting of these are Tu- bouai, Pitcairn's, and Easter Islands. On Tu- bouai, the mutineers of the Bounty attempted to form a settlement after they left Otaheite in 1789, but the hostility of the natives compelled them to seek another asylum, which they after- wards found on PITCAIRN'S ISLAND, which see. See also EASTER ISLAND.

The language throughout all the Polynesian Isles is so nearly similar that the natives can easily understand each other; and, in the whole of the dialects spoken from New Zealand to the Marquesas, and from the Sandwich Islands to Easter Island, scarcely a term occurs which, it is said, cannot be found in the various dialects of the Malay language. It is difficult to account for this similarity, unless we suppose all these people to have sprung from the same stock. Yet it is remarkable that the prevailing trade wind, which greatly facilitates the passage west- ward, renders it so difficult in the direction in which these people are supposed to have spread, that it seems only possible to have been accom- plished during the season of the variable winds, when tempests have been known to drive the existing inhabitants so far to sea in their canoes as to render their return impracticable. Thus, in the hands of nature, or rather Nature's Al- mighty God, to scatter the feathery seed of plants, and rear up the coral rock from the depths of the ocean to receive it ; or carry thither the floating waste of an older world, and, finally, man, are operations alike easy — while the storm by which the feeble canoe is driven from all that is dear to its possessors, is made to subserve some mighty plan of Providence, and to spread universal civilisation.

POLYNICES, the son of (Edipus by his mother Jocasta. See ETEOCLES, JOCASTA, and CEoipus.

POLYPETALOUS. See BOTANY.

POLYPHEMUS, in fabulous history, a cele- brated Cyclops, king of all the Cyclops in Sicily, the son of Neptune and Thoosa the daughter of Phorcys. He was a monster of great strength, very tall, and had but one eye in the middle of the forehead. He ate human flesh, and kept his flocks on the coast of Sicily, where Ulysses, at his return from the Trojan war, was shipwrecked. Ulysses, with twelve of his companions, was seized by the Cyclops, who confined them in his cave, and daily devoured two of them. Ulysses would have shared the same fate, had he not intoxicated the Cyclops, and put out his eye with a fire- brand when he was asleep. Polyphemus was awakened by the sudden pain, and stopped the entrance of his cave ; but Ulysses escaped, by creeping between the legs of the rams of the Cyclops as they were led to feed on the moun- tains. Polyphemus became enamoured of Ga- lataea; but his addresses were disregarded, and the nymph shunned his presence. The Cyclops, when he saw Galatea preferred Acis, crushed his rival with a piece of broken rock.

POLYPH'ONISM, n. s. Gr. iro\vs and Quvr), sound. Multiplicity of sound.

The passages relate to the diminishing the sound of his pistol, by the rarity of the air at that great ascent into the atmosphere, and the magnifying the sound by the polyphonisms or repercussions of the rocks and caverns. Derham.

POLYPODIUM, in botany, male fern, a ge- nus both of the natural and artificial orders of filices, belonging to the cryptogamia class of plants. The fructifications are in roundish points, scattered over the inferior disc of the frons or leaf. There are sixty-five species, of which the most remarkable are these : —

1. P. filix mas, common male fern. This grows in great plenty throughout Britain, in woods and stony uncultivated soils. The greatest part of the root lies horizontally, and has a great number of appendages, close to each other in a vertical direction, while a number of small fibres strike downwards. The leaves are a cubit high, and grow in circular tufts. They are at first al- ternately pinnate, the pinnae increasing in size from the base towards the middle, and after- wards gradually decreasing upwards to the sum- mit of the leaf. These pinnae are again pinna- tifid, or subdivided almost to the nerve into obtuse parallel lobes, crenated on the edges. The stalks are covered with brown filmy scales. The fructifications are kidney-shaped, and co- vered with a permanent scaly brown, surrounded v.ith a saffron-colored elastic ring. This fern has nearly the same qualities, and is used for most of the same intentions, as the pteris aqui- lina. They are both burnt together for the sake of their ashes, which are purchased by the soap and glass-makers. In the island of Jura are ex- ported annually £150 worth of these ashes. Gunner relates, in his Flor. Noveg., that the young

curled leaves, at their first appearance out of the ground, arc by some boiled and eaten like asparagus : and that the poorer Norwegians cut off those succulent laminae, like the nails of the finger at the crown of the root, which are bases of the future stalks, and brew them into

beer, adding thereto a third portion of malt, and in times of great scarcity mix the same in their bread. The same author adds that this fern cut green, and dried in the open air, affords not only an excellent litter for cattle, but, infused in hot water, becomes no contemptible fodder to goats, sheep, and other cattle, which will readily eat and sometimes grow fat upon it : a circum- stance well worth the attention of the inhabitants of the Highlands and Hebrides, as great numbers of their cattle, in hard winters, frequently perish for want of food. But the anthelmintic quality of the root of the male fern is that for which it is chiefly to be valued. See MEDICINE.

2. P. oreopteris, and 3. thelypteris, are chiefly remarkable because they have been con- founded by English botanists with the above species. The oreopteris has a large scaly root, wrapped and tied together with small strong fibres, not to be separated without difficulty. The fructifications are on the margins, both when young and old, and never run into one another : the lobes are oval and plain. It is four times as large as the thelypteris, and grows in dry woods, moors, or hills, and very seldom near water; which characters are widely different from those of the species with which it has been confounded. It is found in England, and very plentifully in Scotland. See Linnaean Transactions, vol. 1. p. 181.

POLYP'ODY, n. s. Lat. polypodium. A plant.

Polypody is a capillary plant with oblong jagged leaves, having a middle rib, which joins them to the stalks running through each division. Miller.

A kind of polypody groweth out of trees, though it windeth not. Bacon's Natural History.

POLYPREMUM, in botany, Carolina flax, a genus of the monogynia order, and tetandria class of plants; natural order twenty-second, caryophilleae : CAL. tetraphyllous . COR. quadrifid and rotaceous, with its lobes obcordate ; the cap- sule compressed, emarginated, and bilocular.

POL'YPUS, n. s. > Gr. 7roXwir«c; FT. polype.

POL'YPOUS, adj. 5 Any thing with many roots or feet, as a swelling in the nostrils; a tough concretion of grumous blood in the heart and arteries, &c. : of the nature of a polypus.

If the vessels drive back the blood with too great a force upon the heart, it

will produce polypow con- cretions iu the ventricles of the heart, especially when its valves are apt to grow rigid. Arbuthnot.

The juices of all austere vegetables, which coa- gulate the spittle, being mixed with blood in the veins, form polypusses in the heart. Id.

The polypus of the nose is said to be an excre- scence of flesh, spreading its branches amongst the laminae of the os ethmoides, and through the cavity of one or both nostrils. Sharp.

The polypus, from forth his cave

Torn with full force, reluctant beats the wave ;

His ragged claws are stuck with stones. Pope.

POLYPUS, a species of fresh water insects, be- longing to the genus of hydra, of the order of zoophytes, and class of vermes. See ANIMAL- CULE. The name of hydra was given them by Linnaeus on account of the property they have of reproducing themselves when cut in pieces, every part soon becoming a perfect animal. Dr. Hill called them biota, on account of the strong

principle oflife with which every part of them is endowed. These animals were first discovered by Leuwenhoek, who gave some account of them in the Philosophical Transactions for 1703 ; but their wonderful properties were not known till 1740, when Mr. Trembley began to investigate them, or rather till March 1741, when he had satisfied himself that they were real animals. The surprise of Mr. Trembley and others on disco- vering the true nature of these animals was very great. When Reaumur saw for the first time two polypes formed from one which he had divided into two parts, he could scarcely believe his own eyes ; and, even after having repeated the opera- tion 100 times, he said that the sight was by no means familiar to him. On the 18th July, 1741, M. Buffon wrote to Martin Folkes, esq., presi- dent of the Royal Society, acquainting him with ‘ the discovery of a small insect called a polypus, which is found about the common duckweed ; and which, being cut in two, puts forth from the upper part a tail, and from the lower end a head, so as to become two animals instead of one. If it be cut into three parts, the middlemost also puts out from one end a head, and from the other a tail, so as to become three distinct ani- mals, all living like the first, and performing the various offices of their species.’ In March 1742 Mr. Folkes gave an account of these

animals to ?he Royal Society. They were soon after found in England : after which no further doubt remained concerning their reality. The strange properties recorded of this animal, though very surprising, are, however, none of them peculiar to it alone. The Surinam toad pioduces its young, not in the ordinary way, but in cells upon its back. Mr. Sherwood has discovered the small eels in sour paste to be without exception full of living young ones. And, as to the most amazing of all its properties, the reproduction of its parts, the crab and lobster, if a leg be broken off, always produce a new one ; and Messrs. Bonet, Lyonet, Reaumur, and Folkes, have all found by experi- ment that several earth and water worms have the same property, some of them even when cut into thirty pieces. The urtica marina, or sea-nettle, has been also found to have the same ; and the sea-star fish, of which the polype is truly a spe-

or nerve, which makes the main stem of the cluster an angle somewhat larger than a right one : the smaller lateral branches proceed from both sides of this nerve, and these are shorter the nearer their origin is to the principal branch. There is a polype at the extremity, and others on both sides of the lateral twigs, but at different distances from their extremities. They are all exceedingly small, and bell-shaped, with a quick motion about the mouth, though it is impossible to discern the cause of it. See ANIMALCULE, and PULEX.

2. P. fuscus has frequently eight arms several times longer than the body.

3. P. griseus is of a yellowish color, small towards the bottom, and has generally about seven long arms. The fuscus, griseus, and viri- dis, are those on which the greatest number of experiments hare been made ; and their shapes are so various that it is not easy to describe them. They are generally found in ditches. Whoever has carefully examined these when the sun is very powerful, will find many little trans- parent lumps of the appearance of a jelly, the size of a pea, and flatted upon one side. The same kind of substance is likewise met with on the under side of the leaves of plants which grow in such places. These are the polypes in a quiescent state, and apparently inanimate. They are generally fixed by one end to some solid substance, with a large opening, which is the mouth, at the other ; having several arms fixed round it, projecting as rays from the centre. They are slender, pellucid, and formed of a ten- der substance like the horns of a snail, and capable of contracting themselves into a very small compass, or of extending to a considerable length. The arms are capable of the same con- traction and expansion as the body ; and with these they lay hold of minute worms and other insects, bringing them to the mouth and swal- lowing them ; the indigestible parts are again thrown out by the mouth. The green polype was that first discovered by Mr. Trembley ; and the first appearances of spontaneous motion was perceived by its arms,

which it can contract, extend, and twist about in various directions. On the first appearance of danger they contract

cies, though it had long escaped the searches of to such a degree that they appear little bigger

the naturalists, was always well known by the fishermen to have it alsp. The general character of the polype is, that it fixes itself by its base } is gelatinous, linear, naked, contractile, and can change its place. The mouth, which is placed at one end, is surrounded by hair-like feelers. The young ones grow out from its sides ; but in autumn it produces eggs from its sides. There are seven varieties.

i. P. anastaticus, or hydra Anastatica, the clustering polype, forms a group resembling a cluster, or rather an open flower, supported by a stem, which is fixed by its lower extremity to some of the aquatic plants or extraneous bodies in tha water ; the upper extremity is formed into eight or nine lateral branches, perfectly similar to each other, which have also subordi- nate branches, whose collective form much re- sembles that of a leaf. Every one of these assemblages is composed of one principal branch

than a grain of sand, of a fine green color, the arms disappearing entirely. Soon after he found the griseus, and afterwards the fuscus. The bodies of the viridis and griseus diminish almost insensibly from the anterior to the posterior ex- tremity ; but the fuscus is for the most part of an equal size for two-thirds of its length from the anterior to the posterior extremity, from which it becomes abruptly smaller, and then continues of a regular size to the end. These three kinds have at least six, and at most twelve or thirteen arms, though sometimes the griseus is met with having eighteen arms. They can contract themselves till their bodies do not exceed one-tenth of an inch in length, and they can stop at any intermediate degree of contraction or exten- sion. They are of various sizes, from half an inch to an inch and a half long ; their arms are seldom longer than their bodies, though some have them an inch, and some even eight inches

long. The thickness of their bodies decreases as they extend themselves, and vice verstt ; and they may be made to contract themselves either by agitating the water in which they are con- tained, or by touching the animals themselves. When taken out of the water, they all contract so much that they appear only like a little lump of jelly. The arms have the same power of contraction or expansion that the body has ; and they can

contract or expand one arm, or any number of arms, independent of the rest ; and they can likewise bend their bodies or arms in all possible directions. They can also dilate or contract their bodies in various places, and sometimes appear thick set with folds, which, when carelessly viewed, appear like wings. Their progressive motion is performed by that power which they have of contracting and dilating their bodies. When about to move they bend down their head and arms, lay hold by means of them on some other substance to which they design to fasten themselves ; then they loosen their tail, and draw it towards the head ; then either fix it in that place, or, stretching forward their head as before, repeat the same operation. They ascend or descend at pleasure in this manner upon aquatic plants, or upon the sides of the vessel in •which they are kept ; they sometimes hang by the tail from the surface of the water, sometimes by one of the arms ; and they walk with ease upon the surface of the water. On examining the tail with a microscope, a small part of it will be found to be dry above the surface of the water, and in a little concave space, of which the tail forms the bottom ; so that it seems to be suspended on the surface of the water, on the same principle that a small pin or needle is made to swim.

When a polype, therefore, means to pass from the sides of the glass to the surface of the water, it has only to put that part out of the water by which it is to be supported, and to give it time to dry, which it always does upon these occa- sions ; and they attach themselves so firmly by the tail to aquatic plants, stones, &c., that they cannot be easily disengaged : they often farther strengthen these attachments by means of one or two of their arms, which serve as a kind of anchors for fixing them to the adjacent sub- stances. The stomach of the polype is a kind of bag or gut into which the mouth opens, and goes from the head to the tail. This, in a strong light, is visible to the naked eye, especially if the animal be placed between the eye and a candle; for these animals are quite transparent, whatever their color may be. The stomach, however, appears to more advantage through a powerful magnifier. Mr. Trembley, by cutting one of these animals transversely into three parts, satisfied himself that they were perforated throughout. Each piece immediately contracted itself, and the perforation was very visible through a microscope. The skin which encloses the sto- mach is that of the polype itself; so that the whole animal, properly speaking, consists only of one skin, in the form of a tube, and open at both ends. No vessels of any kind are to be distinguished. The mouth is s'ituated at the an- terior end in the middle between the shooting

forth of the arms, and assumes different appear- ances according to circumstances ; being some- times lengthened out in the form of a nipple, at others appearing truncated ; sometimes the aper- ture is quite closed, at others there is a hollow ; though at all times a small aperture may be dis-

covered by a powerful magnifier. The skin of a polype, when examined with, a microscope, ap- pears like shagreen, covered with little grams, more or less separated from each other, according to the degree of contraction of the body, if the lips of the polype be cut transversely, and placed so that the cut part of the skin may lie directly before the microscope, the skin throughout its whole thickness will be found to consist of an infinite number of grains, and the interior part to be more shagreened than the exterior one ; but they are not strongly united to each otherr and may be easily separated. They even sepa- rate of themselves, though in no great numbers, in the most healthy animals of this kind; for, where they are observed to separate in large quantities, it is a symptom of a very dangerous disorder. In the progress of this disorder the surface of the polype becomes gradually more and more rough and unequal, and no longer well defined or terminated as before. The grains fall off on all sides ; the body and arms contract and dilate, and assume awhile shining color; and at last the whole dissolves into a heap of grains, which is more particularly observed in the green polype.

The skin of the polype is entirely composed of grains, cemented by a kind of gummy sub- stance ; but it is to the grains entirely that the polype owes its color. The structure of the arms is analogous to that of the body ; and they appear shagreened when examined by the mi- croscope, whether they be in a state of contrac- tion or extension ; but if very much contracted they appear more shagreened than the body, though quite smooth when in their utmost state of extension. In the green polype the ap- pearance of the arm is continually varying ; and these variations are more sensible towards the extremity of the arm than at its origin, but more scattered in the parts further on. The extremity is often terminated by a knob, the hairs of which cannot be observed without a very powerful mag- nifier. They have a remarkable inclination of turning towards the light ; so that if that part of the glass on which they are be turned from the light, they will quickly remove to the other. The fuscus has the longest arms, and makes use of the most curious manoeuvres to seize its prey. They are best viewed in a glass seven or eight inches deep, when their arms commonly hang down to the bottom. When this, or any other kind is hungry, it spreads its arms in a kind of circle to a considerable extent, enclosing in this, as in a net, every insect which comes within the cir- cumference. While the animal is contracted by seizing its prey, the arms are observed to swell like the human muscles when in action. Though no appearance of eyes can be observed in the polype, they certainly have some knowledge of the approach of their prey, and show the greatest attention to it as soon as it comes near them. It seizes a worm the moment it is touched by one

of the arms ; and in conveying it to the mouth it frequently twists the arm into a spiral like a cork-screw ; by which means the insect is brought to the mouth in a much shorter time than otherwise it would be; and so soon are the in- sects on which the polypes feed killed by them, that M. Fontana thinks they must contain the most powerful kind of poison ; for the lips scarcely touch the animal when it expires, though there cannot be any wound perceived on it when dead. The worm, when swallowed, appears sometimes single, sometimes double, according to circumstances. When full, the polype con- tracts itself, hangs down as in a kind of stupor, but extends again in proportion as the food is digested and the excrementitious part is dis- charged. The bodies of the insects, when swal- lowed, are first macerated in the stomach, then reduced into fragments, and driven backward and forward from one end of the stomach to the other, and even into the arms, however fine they be ; whence it appears that the arms, as well as the other parts of this remarkable creature, are a kind of hollow gut. To observe this motion it is best to feed the polypes with such food as will give a lively color ; such, for instance, as those worms which are furnished with a red juice. Some bits of a small black snail being given to a polype, the substance of the skin was soon dissolved into a pulp consisting of small black fragments ; and, on examining the polype with a microscope, it was found that the parti- cles were driven about in the stomach, and that they passed into the arms, from thence back again into the stomach, then to the tail ; whence they passed again into the arms, and so on. The grains of which the body of the polype consist take their color from the food with which it is nourished, and become red or black as the food happens to afford the one color or the other. They are likewise more or less tinged with these colors in proportion to the strength of the nutri- tive juices ; and they lose their color if fed with aliments of a color different from themselves. They feed on most insects found in fresh water; and on worms, the larvae of gnats, &c., and even on snails, large aquatic insects, and fish or flesh if in small bits. Sometimes two polypes lay hold of the same worm, and eacli begins to swal- low at its own end till their mouths meet and the worm breaks. Nay, the one polype will sometimes devour the other along with its por- tion. It appears, however, that the stomach of one polype is not fitted for dissolving the sub- stance of another ; for the one which is swallowed always gets clear again after being imprisoned for an hour or two.

The manner in which the polype generates is most perceptible in the griseus and" fuscus, as being considerably larger than the viridis. If we examine one of them in summer, when the animals are most active, and prepared for propa- gation, some small tubercles will be found pro- ceeding from its sides, which constantly increase in bulk, until, in two or three days, they assume the figure of small polypes. When they first begin to shoot, the

excrescence becomes pointed, assuming a conical figure, and deeper color than the rest of the body. In a short time it becomes

truncated, and then cylindrical, after which the arms begin to shoot from the anterior end. The tail adheres to the body of the parent animal, but gradually grows smaller, until at last it ad- heres only by a point, and is then ready to be separated ; when both the mother and young ones fix themselves to the sides of the glass, and are separated from each other by a sudden jerk. The time requisite for the formation of the young ones is very different, according to the warmth of the weather and the nature of the food eaten by the mother. Sometimes they are fully formed and ready to drop off in twenty-four hours ; but when the weather is cold fifteen days are requi- site for bringing them to perfection. There is a reciprocal communication of food betwixt the young and old before they be separated. The young ones, as soon as they are furnished with arms, catch prey for themselves, and communi- cate, the digested food to the old ones, who on the other hand do the same to the young ones. The polypes produce young ones indiscriminately from all parts of their bodies, and five or six young ones have frequently been produced at once ; nay, Mr. Trembley has observed nine or ten produced at the same time. Nothing like copulation among these creatures was ever ob- served by Mr. Trembley, though for two years he had thousands of them under his inspection. To be more certain on this subject he took two young ones the moment they came from their parent, and placed them in separate glasses. Both of them multiplied, not only themselves, but also their offspring, which were separated and watched in the same manner to the seventh generation ; they have even the same power of generation while adhering to their parent. In this state the parent, with its children and grand- children, exhibits a singular appearance, looking like a shrub thick set with branches. Thus several generations are attached to one another, and all of them to one parent. Mr. Adams gives a figure of one polype with nineteen young ones hanging at it ; the whole group being about an inch broad, and an inch and a half long : the old polype ate about twelve monoculi per day, and the young ones about twenty among them

When a polype is cut transversely or longitu- dinally into two or three parts, each part in a short time becomes a perfect animal ; and so great is this prolific power that a new animal will be produced even from a small portion of the skin of the old one. If the young ones be muti- lated while they grow upon the parent, the parts so cut off will be reproduced, and the same property belongs to the parent. A truncated portion will send forth young ones before it has acquired a new head and tail of its own, and sometimes the head of the young one supplies the place of that which should have grown out of the old one. If we slit a polype longitudi- nally through the head to the middle of the body, we shall have one formed with

two heads ; and by slitting these again in the same manner we may form one with as many heads as we please. A still more surprising property of these animals is, that they may be grafted together. If the truncated portions of a polype be placed end to end, and gently pushed together, they will unite

into a single one. The two portions are first joined together by a slender neck, which gradu- ally fills up and disappears, the food passing from the one part into the other; and thus we may form polypes not only from portions of the same, but of different animals ; we may fix the head of one to the body of another, and the com- pound animal will grow, eat, and multiply, as if it had never been divided. By pushing the body of one into the mouth of another, so far that their heads may be brought into contact, and kept there for some time, they will at last unite into one animal, only having double the number of arms which it would otherwise have had. The fuscus may be turned inside out like a glove, at the same time that it continues to live and act as before. The lining of the stomach now forms the outer skin, and the former epi- dermis constitutes the lining of the stomach. If previous to this operation the polype have young ones attached to it, such as are but newly beginning to vegetate turn themselves inside out, while the larger ones continue to increase in size till they reach beyond the mouth of the parent, and are then separated in the usual manner from the body. When thus turned the polype combines itself in many different ways. The fore part frequently closes and becomes a supernumerary tail. The animal, which was at first straight, now bends itself, so that the two tails resemble the legs of a pair of compasses, which it can open and shut. The old mouth is placed as it were at the joint of the compasses, but loses its power of action ; to supply which a new one is formed in its neighbourhood ; and in a little time there is a new species of polypus formed with several mouths. The sides of a polype, which has been cut through in a longitudinal direction, begin to roll themselves up, commonly from one of the extremities, with the outside of the skin inwards ; but in a little time they un- roll themselves, and the two cut edges join toge- ther, sometimes beginning at one extremity, and sometimes approaching throughout their whole length. As soon as the edges join they unite so closely that no scar can be perceived. If a polype be partly turned back, the open part closes, and new mouths are formed in different places. Every portion of a polype is capable of devouring insects almost as soon as it is qut off; and the voracity of the whole genus is asto- nishing ; for Mr. Adams observes that most of the insects on which they feed bear the same proportion to the mouth of a polype that an apple of the size of A man's head bears to his

mouth.

4. P. hydratulus has a vesicular body, and four obsolete arms. It is found in the abdomen of sheep, swine, &c. The hydratulus is men- tioned by many medical writers. Dr. Tylon, in dissecting an antelope, found several hydratides of films, about the size of a pigeon's egg, filled with water, and of an oval form, fastened to the omentum ; and some in the pelvis, between the bladder of urine and rectum. He suspected them to be animals, for the following reasons: 1. Because they were included in a membrane like a matrix, so loosely that by opening it with the finger, or a knife, the internal bladder, containing

the serum or lymph, seemed nowhere to have any connexion with it, but would very readily drop out, still retaining its liquor, without spill- ing any. 2. This internal bladder had a neck or white body, more opaque than the rest, and pro- tuberant from it, with an orifice at its extremity ; by which, as with a mouth, it exhausted the se- rum from the external membrane, and so supplied its bladder or stomach. 3. On bringing this neck near the candle, it moved and shortened itself. It is found in the abdomen of sheep, swine, mice, &c., lying between the peritoneum and the intestines.

5. P. pallens has generally about six arms of a moderate length. The polypus hydra pallens is very rarely met with, and is described only by M. Roesel. It is of a pale yellow color, grow- ing gradually smaller from the bottom; the tail is round or nobbed ; the arms are about the length of the body, of a white color, generally seven in number, and are apparently composed of a chain of globules. The young are brought forth from all parts of its body.

6. P. socialis is bearded, thick, and wrinkled. The hydra socialis is described by Muller under the title of vorticella. They are found in clusters ; and, when viewed by a microscope, ap- pear like a circle surrounded with crowns or ciliated heads, tied by small thin tails to a com- mon centre, from whence they advance towards the circumference, and then turn like a wheel, occasioning a vortex which brings along with it the food proper for them. See ANIMALCULE.

7. P. stentoreus, the funnel-shaped polype, has a mouth surrounded with a row of hairs. This species is of three colors, green, blue, and white ; but the last is the most common. They do not form clusters, but adhere singly by the tail to whatever comes in their way : the anterior end is wider than the posterior; and, being round, gives the animal somewhat of a funnel form, though the circle is interrupted by a kind 'of slit or gap. The edge of this gap is surrounded with a great number of little fimbrillas, which by their motions excite a current of water, that forces into the mouth of the animal

the small bodies that come within its reach. Mr. Trembley says that he has often seen a great number of animalcules fall into the mouths of these creatures, some of which were let out again at an opening which he could not describe. They can fashion their mouths into several different forms; and they multiply by dividing neither transversely nor lon- gitudinally, but diagonally.

8. P. viridis, the green polype, has commonly ten short arms.

POLYPUS MARINUS is different in form from the fresh-water polype already described, but is nourished, increases, and may be propagated, after the same manner ; Mr. Ellis having often found in his enquiries that small pieces cut off from the living parent, in order to view the seve- ral parts more accurately, soon gave indications that they contained not only the principles of life, but likewise the faculty of increasing and multiplying into a numerous issue. It has been discovered and sufficiently proved by Peyssonel, Ellis, Jussieu, Reaumur, Donati, &c., that many of those substances which had formerly been

considered by naturalists as marine vegetables or sea-plants are in reality animal productions; and that they are formed by polypes of different shapes and sizes, for their habitation, defence, and propagation. To this class may be referred ;he corals, corallines, keratophyta, eschara, sponges, and alcyonium : nor is it improbable ihat the more compact bodies, known by the common appellation of star-stones, brain stones, petrified fungi, and the like, brought from va- rious parts of the East and West Indies, are of the same origin. Mr. Ellis observes that the ocean, in all the warmer latitudes, near the shore, and wherever it is possible to observe, abounds so much with animal life, that no inanimate body can long remain unoccupied by some spe- cies. In those regions, ship's bottoms are soon covered with the habitation of thousands of ani- mals ; rocks, stones, and every thing lifeless, are covered with them instantly ; and even the branches of living vegetables that hang into the water are immediately loaded with the spawn of different animals, shell fish of various kinds; and shell-fish themselves, when they become impo- tent and old, are the basis of new colonies of animals. For a further account of this system, see CORALLINA and CORALLINES.

POLYPUS OF THE HEART, a fleshy rooted ex- crescence, growing from a part of its substance. See SURGERY.

POLYPUS, in surgery, in Cullen's nosology, a species of sarcoma or tumor, which is generally narrow where it originates, and then becomes wider, somewhat like a pear. It is most common- ly met with in the nose, uterus or vagina ; and has received its name from an erroneous idea, that it

usually bad several roots, or feet, like zoophite polypi. See SURGERY.

POLYSPHEKCON, one of the officers of Alexander the Gieat. Antipater, at his death, appointed him governor of Macedonia, in pre- ference to his own son Cassander; yet, notwith- standing iris age and experience, he showed great ignorance in government. He became cruel, not only to the republican Greeks, and such as op- posed his ambitious views, but even to the help- less children and friends of Alexander, to whom he owed his rise and reputation. He was killed in battle, A. A. C. 309. Curt. Diod. 17, Justin 13. See MACEDON.

POLYSYL'LABLE, n. s. Fr. polysyllable , Gr. iroXvf and <7vX\a/3q. A word of many syl- lables.

In a polysyllable word consider to which syllable the emphasis is to be given, and in eacli syllable to which letter. Holder.

Your high nonsense blusters and makes a noise ; it stalks upon hard words, and rattles through poly- syllables. Addison.

Polysyllabical echoes are such as repeat many syl- lables or words distinctly. Diet.

POLYSYLLABLE, in grammar, is a word con- sisting of more than three syllables; for when a word consists of one, two, or three syllables, it is called a monosyllable, a dissyllable, or a tri syllable.

POLYTECHNIQUE, Fr. ecole polytechnique, a word derived from the Greek, and used by the French to distinguish an establishment in which all sciences are taught. The military school, which existed during the French monarchy, was comprised by Buonaparte in this institution.

POLYTHEISM.

POLYTHEISM, re. s.) Fr. polytheisme ;

POLYTHE'IST. S Gr. TroXwc and 0£0f.

The doctrine of plurality of gods : one who holds that doctrine.

The first author of polytheism, Orpheus, did plainly assert one supreme

God. Stillingjleet.

Some authors have falsely made the Turks poly- theists. Uiincomb.

POLYTHEISM. ‘ That there exist beings, one or many, powerful above the human race, is a pro- position,’ says lord Kames, ‘ universally admitted as true in all ages and among all nations.’ This universal belief his lordship founds upon instinct or internal sense. The apostle Paul seems to teach a similar, only a far clearer and nobler doc- trine when he asserts ‘ the Eternal power and God- head’ of one glorious Creator to be clearly seen in the creation of the world and its appendages. But it is one thing to contend for what unsophis- ticated and unpolluted reason would see in the works of nature, and another to state what man- kind have deduced from them, or rather in con- tempt of their lessons: for reason and revelation have in fact been generally disused and abused together.

In point of fact, we believe all the false reli- gions of the world to be traceable to revelation more or less corruptly transmitted. Assuming,

then, that the first men professed pure theism, we may endeavour to trace the rise and progress of polytheism and idolatry ; and to ascertain the real opinions of the Pagan world concerning that multitude of gods with which they filled heaven, earth, and hell.

Whether we believe, with the author of the book of Genesis, that all men have descended from the same progenitors ; or adopt the hypo- thesis of modern theorists, that there have been successive creations of men ; polytheism and idolatry will be seen to have arisen from the same causes, and to have advanced nearly in the same order from one degree of impiety to ano- ther. On either supposition, the original proge- nitors must have been instructed by their Creator in the truths of genuine theism; and there is no room to doubt but that those truths, simple and sublime as they are, would be for a while con- veyed pure from father to son, particularly whilst the race lived as one family, and were not spread over a large extent of country. If any credit be due to the records of antiquity, the pri- meval inhabitants of this globe lived to so great an age that they must have increased to a very large number long before the death of the com- mon parent, who would of course be the bond of union to the whole society, and whose dictates,

in what related to the origin of his being and the existence of his Creator, would be listened to with the utmost respect by every individual of his nu-

merous progeny.

Many causes, however, would conspire to dis- solve this family into separate and independent tribes, of which some would be driven by violence, others would voluntarily wander, to a dis- tance from the rest. The first wanderers would retain in tolerable purity their original notions of Deity ; and they would certainly endeavour to impress those notions upon their children : but, in circumstances much more favorable to speculation than theirs" could hare been, the hu- man mind dwells not long upon notions purely intellectual ; and their personal and social cor- ruptions would soon render the recognition of a pure and holy Being, as the object of their ho- mage, unwelcome to their thoughts. Bishop Law has supposed very early generations of men (even those to whom he contends that frequent revelations were vouchsafed) were anthro- pomorphites in their conceptions of the Divine Being.

Of pure mind, separated from matter, men in these circumstances would not long retain the faintest notion ; but conscious each of power in himself, and experiencing the effects of power in the great agencies of nature, as, for instance, the sun, they would conceive that luminary to be animated as their bodies were animated. They would feel his influence when above the horizon ; they would see him moving from east to west ; they would consider him when set as gone to take his repose : and, those exertions and inter- missions of power being analogous to what they experienced in themselves, they would look upon the sun as a real animal. Thus to their gross minds would the Divinity soon appear altogether such a one as themselves, a compound being partly corporeal and partly spiritual ; and, as soon as they imbibed such notions, they may be pro nounced to have become idolaters.

When the human mind had once received this direction its gods would multiply with wonder- ful rapidity. Darkness and cold men could not but perceive to be contrary to light and heat ; and, not having philosophy to distinguish between mere privations and positive effects, they would consider darkness and cold as entities equally real with light and heat, and attribute these dif- ferent and contrary effects to different and con- trary powers. Hence the spirit or power of darkness was in all probability the second god in the Pagan calendar ; and as they considered the power of light as a benevolent principle, the source of all that is good, they looked upon the contrary power of darkness as a malevolent snt- rit, the source of all that is evil. This we know, at least, from history to have been the belief of the Persian magi, a very ancient sect, who called their good god Yazdan, and Ormuzd, or Oro- mazdes, and the evil god Ahriman. See ARIMANIUS. Considering light as the symbol, or perhaps as the body, of Ormuzd, they always worshipped him before the fire, and especially before

the sun, the source of the most perfect light ; and for the same reason fires were kept continually burning on his altars. That they

sometimes addressed prayers to the evil prin- ciple, we are informed by Plutarch, in his life of Themistocles ; but with what rites he was worshipped, or where he was supposed to re- side, is not so evident. Certain it is, that his wor- shippers held him in detestation ; and, when they had occasion to write his name, they always in- verted it (uBuiuqv)? to denote the malignity of his nature.

The principles of tne magi, tnough widely dis- tant from pure theism, were much less absurd than those of other idolaters. They never wor- shipped their gods by images, or had any other emblems of them than light and darkness. Dio- genes Laertius and Clemens Alexandrinus say, that they condemned all statues and images, al- lowing fire and water to be the only proper em- blems or representatives of their gods. And Cicero reports that at their instigation Xerxes burnt all the temples of Greece, because the builders of those edifices impiously presumed to enclose within walls the gods, to whom all things ought to be open and free, and whose proper temple is the whole world. Indeed all historians agree that, when magianism was the religion of the court, the Persian monarchs demolished all images.

The worship of the sun soon introduced that of the other heavenly bodies. Men could not but experience great benefit from those luminaries in- die absence of their chief god; and, when they had admitted two divine principles, it was natural to consider the moon and the stars as benevolent in- telligences, sent to oppose the power of darkness whilst their greatest divinity was absent or asleep. It was thus that he maintained a con- stant superiority over the evil principle. The moon, to the vulgar eye, appears much more magnificent than a planet or star. By these idola- ters she was considered as the divinity second in lank and in power ; and whilst the sun was wor- shipped as the king, she was adored as the queen of heaven.

The earth, as the common mother of all things ;. the ocean, whose waters never rest; the air, the region of tempests; and all the elements, were gradually added to the number of divinities. The polytheists, of whom we now treat, conceived every thing in motion to be animated by an intel- ligence powerful in proportion to the magnitude of the body moved . This sect of idolaters, which remains in some parts of the east to this day,, was named SABIANS, see that article. This spe- cies of idolatry is thought to have first prevailed in Chaldea, and to have been that from which Abraham separated himself, when, at the com- mand of the true God, he ‘ departed from his country, and from his kindred, and from his father’s house.’

That savages have universally worshipped, as their first and supreme divinities, the sun, moon, and stars, is a fact evinced by every historian ; looking, however, at the progressive history of idolatry in the ancient monarchies of the world, we shall find it aided, probably, by the remain ing gleams of tradition, as to the actual manifes- tations of God. From the pentateuch, we learn ,, that when, in the first ages, the Supreme Being condescended to manifest his presence to men,

ue often exhibited some sensible emblem of his power and glory, as in the declaration of his •will from the midst of a preternatural fire. Thus he appeared to Moses himself, when he spoke to him from the burning bush ; it was by a pillar of cloud and fire that he led the Israelites from Egypt to Canaan ; and it was in the midst of smoke, and fire, and thunderings, that the law was delivered from Mount Sinai. That such manifestations of the Divine Presence would be occasionally made to the descendants of Noah, who settled in Chaldea after the deluge, must appear extremely probable ; and from the He- brew Scriptures we know the Chaldeans to have been a civilised people when they fell into idola- try. All history likewise represents the Chal- deans as at a very early period corrupted by luxury and vice. When this happened the moral governor of the universe would withdraw from them those occasional manifestations, and leave them to their own inventions. In such circumstances, a people addicted to astronomy, who had been taught that the Deity often ap- peared to their ancestors in a flame of fire, would be quite prepared to consider the sun as the place of his permanent residence, if not as his body. And, when either opinion was firmly established, polytheism would be its inevitable consequence.

From Chaldea the idolatrous worship of the host of heaven spread itself over the East, passed into Egypt, and thence into Greece, as Plato affirms. That Sabiism was the first species of idolatry, beside the many allusions to it in Scrip- ture, we have the evidence of the most ancient pagan historians, of whose writings any part has reached us. Herodotus, speaking of the reli- gion of the Persians, says that they worship the sun, moon, and earth, fire, water, and the winds ; and this adoration they have all along paid. He testifies the same thing of the savage Africans. Diodorus Siculus tells us that the first men sup- posed the sun and moon to be the principal and eternal gods. And Sanchoniathon, in the frag- ment preserved by Eusebius, that the two first mortals were ./Eon and Protogonus; and their children Genus and Genea, who inhabited Phoe- nicia; and, that when they were scorched with the heat, they lifted up their hands to the sun, whom they believed to be the Lord of Heaven, and called him Baalsamen, the same whom the Greeks

call Ztvc-

Hitherto those divinities were worshipped in person, or, as Prideaux expresses it, in their sacella or sacred tabernacles. But, their grossly ignorant worshippers not supposing it possible that any intelligence could exert its influence but in union with some body, statues or pillars were thought of as proper emblems of the absent gods. Sanchoniathon says that Hyspouranios and his brother Ousous, Phoenician patriarchs, erected two pillars, the one to fire, and the other to air or wind, and worshipped those pillars, pouring out to them libations of the blood of the wild beasts hunted down in the chase. As these early monuments of idolatry were called jSairvXm, a word probably derived from the Hebrew Bethel, it is also probable they were altars of loose stones, such as that which Jacob erected. As

his was erected in honor of the true God, theirs was consecrated to the host of heaven ; and the form of consecration seems to have been the same anointing the stone or pillar with oil. When this was done, the ignorant worshippers supposed the intelligences by which the sun and planets were animated took possession of the consecrated pillars; and, as they were dedicated to the host of heaven, they were generally erected on the tops of mountains. The practice pre- vailed universally through the east ; and there was nothing which Moses more strictly enjoined his people to destroy than the altars, statues, and pillars, erected upon high places. See Deut. xii. 23.

Another species of idolatry was perhaps the second in order. The Chaldeans, Egyptians, and all the Eastern nations who believed in a su- perintending providence, imagined that the go- vernment of this world, the care of particular nations, and even the superintendance of groves, rivers^and mountains, in each nation, was com- mitted by the gods to a class of spirits superior to the soul of man, but inferior to those heavenly intelligences which animated the sun, the moon, and the planets. These spirits were by the Greeks called Saipovig, demons, and by the Romans genii. The belief of their existence would seem to have been derived from various different sources-

1. It appears to have been impossible for those men who could not form a notion of a God divested of body and a place, to conceive how the influence and agency of such a being could every instant extend to every point of the universe. Hence they placed the heavenly re- gions under the government of a multitude of heavenly gods, the sun, the moon, and the stars. But, as the nearest of those was at an immense distance from the earth, they thought that these superior governors of universal nature em- ployed subordinate demons, to execute their behests.

2. A state of indolence was held an indispen- sable ingredient in perfect felicity. This notion made Epicurus deny the providence, whilst he admitted the existence, of gods ; if it had such an effect upon a philosopher, who in the most enlightened ages had many followers, it would naturally lead untaught idolaters to imagine that the governors of the universe had devolved a great part of their trouble on deputies.

3. When men reflected on the infinite distance between themselves and the gods, they would naturally wish that there might somewhere exist a class of intermediate intelligences, whom they might employ as intercessors with the gods. WThat men wish, they readily believe. Hence another fruitful source of intermediate intelli- gences, more pure than human souls.

4. The next opinion was the offspring of phi- losophy. On this earth we perceive a scale of beings rising gradually above each other in per- fection, from mere btute matter through fossils, vegetables, insects, fishes, birds, and beasts, up to man. But the distance between man and God is infinite, and capable of admitting num- berless orders of intelligences, all superior to the human soul, and each rising gradually above the

other, till they reach that point at which creation stops. Part of this immense chasm philosophers perceived to be actually filled by the heavenly bodies (for in philosophical polytheism there was an occasional recognition of one invisible God supreme over all) ; bxit still there was an im- mense vacuity between the human species and the moon, the lowest of the heavenly host ; and this they imagined must be occupied by invisible inhabitants of different orders which they called good and evil demons.

5. Tradition is another source from which the universal belief of good and evil demons may be derived. If the Mosaic account of the creation of the world, the peopling of the earth, and the dispersion of mankind, be true (and a more con- sistent account has not as yet been given), some knowledge of good and evil angels must have been transmitted from father to son by oral tra- dition. This tradition would be corrupted. When the true God was considered, not as sole governor of the universe, but only as the self-ex- istent power of light and good, the devil would be elevated from the rank of a rebellious created spirit to that of the independent power of dark- ness and evil; the angels of light would be trans- formed into good demons, and those of darkness into evil demons. This account of the origin of demonology receives no small support from Plato, who derives one branch of it wholly from tradition.

Though these demons were generally invisible, they were not supposed to be pure disembodied spirits. — Proclus in his Commentary upon Plato's Timseus, tells us, that ' every demon superior to human souls consisted of an intellectual mind and an ethereal vehicle.' Plato himself divides the class of demons into three orders ; and, whilst he holds their souls to be particles or emanations from the divine essence, he affirms that the bo- dies of each order are composed of that particu- lar element in which they for the most part re- side ; and, though all nature was full of them, they were believed to have local attachments to mountains, rivers, and groves, where their ap- pearances were most frequent ; and that, like men, they delighted in the shady grove, and in the purling stream. Hence the earliest altars of paganism were built in groves, or on the banks of rivers ; because it was believed that in such places were assembled multitudes of those intel- ligences, to carry their prayers and oblations to the far distant residence of the celestial gods. Hence too are to be derived the mountain and river gods, with the dryads and hamadryads, the satyrs, nymphs, and fauns, which make so con- spicuous a figure in the Greek and Roman my- hology.

These different orders of intelligences, who, though worshipped as demigods, were yet be- lieved to partake of human passions, led the way to the deification of departed heroes and other eminent benefactors of mankind. By the philo- sophers, all souls were believed to be emanations from the 'divinity ; but 'gratitude and admiration concurred to make man regard the inventors of arts and the founders of society as having more than a common ray of the divinity. So that the deceased founder of a people was easily advanc- ed into the rank of a demon. When the religi-

ous bias was in this train, natural affection would have its share in promoting this new species of worship ; and, as the natural father was often also the political father of a people, such persons would soon be deified. Fondness for the off- spring would next have its turn ; and a discon- solate father, at the head of a people, would con- trive to sooth his grief for the untimely death of a favorite child, and to gratify his pride, by pay- ing divine honors to its memory.' That this was the origin and progress of the worship of depart- ed souls, we have the authority of Sanchoniathon, where the various motives for this species of ido- latry are recounted in express words. 'After many generations,' says he, ' came Chrysor ; and he invented many things useful to civil life, for which, after his decease, he was worshipped as a god. Then flourished Ouranos (heaven) and his sister Ge (Earth), who deified and offered sacri- fices to their father Hypsistos, when he had been torn in pieces by wild beasts. Afterwards Cronos (Time) consecrated Muth his son, and was him- self consecrated by his subjects.'

In the reign of Cronos is said to have flou- rished a personage of great reputation for wis- dom, who by the Egyptians was called Thoth, by the

Phoenicians Taautos, and by the Greeks Hermes. According to Plutarch, he was a pro- found politician, and chief counsellor to Osiris, then king of Egypt : and Philo Byblius, the translator of Sanchoniathon, adds, ‘ that it was this Thoth or Hermes who first brought religious worship into due method and order.’ To make religion serviceable to the state, he appointed Osiris and other departed princes to be joined with the stars and worshipped as gods ; and being by Cronos made king of Egypt, he was, after his death, worshipped himself as a god by the Egyptians. To this honor he had indeed a better title than most princes, if what is said be true, that he was the inventor of letters, arithme- tic, geometry, astronomy, and hieroglyphics, and was therefore one of the greatest benefactors of the human race. That the gods of Greece and Rome were derived from Egypt and Phoenicia is universally known. See our article MYSTERIES and MYTHOLOGY.

The deification of departed heroes and states- men introduced the universal belief of national and tutelar gods, as well as the practice of wor- shipping those gods through the medium of sta- tues. When the founder of a state was elevated to the rank of a god, as he was believed still to retain human passions and affections, it was na- tural to suppose he would favor that nation for which he” had done so much upon earth ; that he would oppose its enemies, and protect the laws and institutions which he had given it. By the same train of sentiment, each city, and even every family found Lares and Penates among their departed ancestors, under whose protection they believed their private affairs to be placed. Those national and houshold gods were believed to be, in their deified slate, clothed with aerial bodies, in the same form which their grosser bodies had upon earth.

Hitherto the souls of departed heroes held the rank only of demons or demigods ; but they gra- dually rose, till they dethroned the heavenly bo- dies and became themselves the dii majorura

gentium. This revolution was the combined operation of the prince and the priest; and the first step taken towards it seems to have been the complimenting their heroes and public benefactors with the name of that being which was most es- teemed and worshipped. Thus a king for his beneficence was called the sun, and a queen for her beauty the moon ; and Diodorus relates that Sol first reigned in Egypt, called so from the luminary in the heavens. As this adulation ad- vanced into established worship, they turned the compliment the other way, and called the planet or luminary after the hero, the better to accus- tom the people, even in the act of planet-

*worship, to this new adoration. Diodorus says that the sun was called Osiris, and the moon Isis. Ma- crobius, that the Ammonites called the sun Mo- loch ; *the Syrians Adad; the Arabs Dionysus; the Assyrians Belus; the Phoenicians Saturn; the Carthaginians Hercules ; and the Palmyrians Elegabalus. By the Phrygians the moon was called Cybele; by the Athenians Minerva; by the Cyprians Venus ; by the Cretans Diana ; by the Sicilians Proserpine ; by others Hecate, Bellona, Vesta, Urania, Lucina, &c.*

As a farther proof that hero worship was thus superinduced upon the planetary, the first sta- tues consecrated to the greater hero-gods, those who were supposed to be supreme, were not of a human form, but conical or pyramidal, like those which in the earliest ages of idolatry were dedicated to the sun and planets. Pausanias says that the statue of Jupiter Mellichius repre- sented a pyramid ; that of the Argive Juno did the same, as appears from a verse of Phoronis quoted by Clemens Alexandrinus ; and indeed the practice was universal, both among barbarians and Greeks.

This short sketch of the progress of polytheism and idolatry will account for many circumstances recorded of the pagan gods, which at first view seem surprising, and which at last brought the whole system into contempt among the philoso- phers of Athens and Rome ; viz. the immoral characters of those divinities, and the abominable rites with which they were worshipped. Jupiter, Apollo, Mars, and the whole pantheon, are de- scribed by the poets as violaters of women and notorious adulterers. Mercury was a thief, and the god of thieves. Venus was a prostitute, and Bacchus a drunkard. The malice and revenge of Juno were implacable ; and so little regard was any of them supposed to pay to the laws of ho- nor and rectitude, that it was a common practice of the Romans, when besieging a town, to in- voke the tutelar deity, and to tempt him by a bribe to betray his friends and votaries. In a word, they were, in the language of the poet,

‘ Gods partial, changeful, passionate, unjust, Whose attributes were, rage, revenge, and lust.’

Having once animated human bodies, and being supposed still to retain human passions and ap- petites, they were believed, in their deified state, to feel the same sensual desires which they had felt upon earth, and to pursue the same means for their gratification. As men could not well attempt to surpass the gods in purity and virtue, they were easily persuaded by profligate priests,

that the most acceptable worship to be paid to any deity was to imitate the example of that deity, and to indulge in the practices over which he presided. Hence the worship of Bacchus was performed during the night by men and women mixing in the dark after intemperate eating and drinking.

Hence too it was the practice in Cy- prus and some other countries to sacrifice to Ve- nus the virginity of young women some days before their marriage, in order, as it was pre- tended, to secure their chastity ever afterwards ; and, Herodotus says, every woman among the Babylonians was obliged once in her life to pros- titute herself in the temple of the goddess Mylitte (Venus), that she might thenceforward be proof against temptation.

Thus the origin of polytheism and its whole progress and consequences alike connect it with vices and impurities of every kind. It had its origin at no period and amongst no people of the world, in absolute ignorance of the true God, nor in any impossibility of perpetuating the knowledge of Him : but, in the emphatic language of the philosophic apostle, because they did not like to retain God in their knowledge.

The progress of polytheism, as far as we have traced it, has been regular ; and, after the enor- mous error of forsaking the worship of the true God was admitted, every subsequent step ap- pears natural. It would be easy to prove that it has likewise been universal. Sir William Jones has discovered such a striking resemblance be- tween the gods of ancient Greece and those of the pagans of Hindostan as puts it beyond a doubt that those divinities had the same origin. The Ganesa of the Hindoos he has clearly prov- ed to be the Janus of the Greeks and Romans. The Saturn of Greece and Rome, the same with the Menu or Satyavkara of Hindostan, whose patronymic is Vaivaswata, child of the sun. The Roman Jupiter had the same attri- butes with the Indian god of the visible heavens called Indra, or the king, and Divespeter, or lord of the sky, whose consort is Sachi, and whose weapon is vajra or the thunderbolt. Indra is the regent of winds and showers ; and, though the east is peculiarly under his care, yet his Olym- pus is the north pole. With all his power he is a subordinate deity, far inferior to the Indian triad Brahma, Vishnou, and Mahadeva or Siva, who are three forms of one and the same god- head. Having traced the resemblance between the idolatry of Rome and India through many other gods, this distinguished orientalist observes, ‘ on a close examination, the characters of all the pagan deities melt into each other, and at last into one or two : the whole crowd of gods and goddesses in ancient Rome and Hindostan mean only the powers of nature.’ From every account which modern travellers give of the religion of savage nations, it not only appears that those nations adore, as their first and greatest gods, the sun, moon, and stars; but that such of them as have any other divinities have proceeded from the worship of the heavenly bodies to that of ce- lestial demons, and from these to the deification of dead men. They also universally believe their hero-gods and demi-gods to retain the pas-ˆ sions, appetites, and propensities of men.

POLYTHEISM.

That our Scandinavian and Saxon ancestors had the same notions of the gods with the other pagans is evident from their calling the days of the week by the names of their divinities, and from the forms of the statues by which those divinities were represented. 1. Thus the idol of the sun, from which our Sunday is derived, was placed in a temple and sacrificed to; for they believed that the sun co-operated with this idol. He was represented as a man half naked, with his face like the sun, holding a burning wheel with both hands on his breast, signifying his course round the world ; and, by its fiery gleams, the light and heat with which the sun warms and nourisheth all things. 2. The idol of the moon, from which o'ur Monday is named, anciently Moonday, appears habited in a short coat like a man, holding a moon. 3. Tuisco, the most an- cient and peculiar god of the Germans, repre- sented in his garment of a skin according to their ancient manner of clothing, was, next to the sun and moon, the idol of highest rank in northern paganism. To him the third day of the week was dedicated Tuesday or Tuisday. 4. Woden was a valiant prince among the Saxons. His image was prayed to for victory ; which, if they ob- tained, they usually sacrificed the prisoners taken in battle to him. Wednesday is derived from him, anciently Wodensday. The northern his- tories make him the father of Thor, and Friga to be his wife. 5. Thor was placed in a large hall, sitting on a bed canopied over, with a crown of gold on his head, and twelve stars over it, hold- ing a sceptre in the right hand. To him was at- tributed the power over both heaven and earth ; so that as he was pleased or displeased he could send thunder, tempests, plagues, &c., or fair and seasonable weather. From him our Thursday derives its name, anciently Thorsday. 6. Friga represented both sexes, holding a drawn sword in the right hand, and a bow in the left. She was generally taken for a goddess ; and was reputed the bestower of peace and plenty, love and amity. Her day of worship was called by the Saxons Frigedeag, now Friday ; but the habit and weapons of this figure have a resemblance to Diana rather than to Venus. 7. Seater, or Crodo, stood on the prickly back of a perch. He was thin-visaged and long-haired, with a long beard, bare-headed and bare-footed, carrying a pail of water in his right hand, wherein are fruits and flowers, and holding up a wheel in his left, and his coat tied with a long girdle. His stand- ing on the sharp fins of this fish signified to the Saxons that by worshipping him they should pass through all dangers unhurt : by his girdle flying both ways was shown the Saxon freedom ; and by the pail, with fruit ana flowers, was de- noted that he would nourish the earth. From him comes Saturday. There is a striking resem- blance between those deities and the seven chief gods of the Romans, from whom their days were also named; viz. Apollo, Diana, Mars, Mercury, Jupiter, Venus, and Saturn.

Such were the principal gods of the northern nations : but these had also

inferior deities, who were supposed to have been translated rnto heaven for their lieroic deeds, and whose great- est happiness consisted in drinking ale out of the

skulls of their enemies in the hall of Woden. See MYTHOLOGY.

There is, however, one species of idolatry more wonderful than any thing that has yet been men- tioned, viz. the worship of brutes, reptiles, and vegetables, among the Egyptians. To the Greeks and Romans, as well as to us, that superstition appeared very monstrous. Brute worship pre- vailed at so early a period in Egypt, that the philosophers of antiquity seem to nave had no advantage over the moderns in their researches into its origin ; and among the modern hypo- theses those of Mosheim and Warburton appear the most probable. The former of these learned writers attributes it to the policy of the prince and the craft of the priest. The latter contends, with much earnestness and ingenuity, that it resulted from the use of hieroglyphic writing. We believe that both these causes contributed to the produc- tion of so monstrous an effect : and that the use of hieroglyphics, as sacred symbols, completed that wonderful superstition which the craft of the priest and the policy of the prince had begun. For the arguments on each side, we must refer the reader to these learned authors. We shall here only observe that Mosheim's account of the origin and progress of that species of idolatry which was peculiar to Egypt, and with respect to the rise of brute worship, appears perfectly satisfactory. But the Egyptians worshipped several species of vegetables ; and, to account for this ridiculous idolatry, we must call in the aid of Warburton's hypothesis.

That learned author having proved that hiero- glyphic writing was prior to alphabetical charac- ters ; and having traced this kind of writing from such rude pictures as those which were in use among the Mexicans, through all the different species of what he calls euriologic, tropical, and symbolic hieroglyphics (see HIEROGLYPHICS), shows, by many quotations from ancient authors, that the Egyptian priests wrapt up their theology in the symbolic hieroglyphics, after alphabetic characters had banished them from the transac- tions of civil life. These symbols were figures of animals and vegetables, denoting from analogy certain attributes of their divinities; and when the vulgar, forgetting this analogy, ceased to un- derstand them as a species of writing, and were yet taught to consider them as sacred, they could not but view them as emblems of the divinities whom they adored. But, if rude sculptures upon stone could be emblematical of the divinities, it was natural to infer that the animals and vege- tables themselves must be emblems morestrikiirj, and more sacred. Hence, the learned author thinks, arose that wonderful superstition peculiar to the Egyptians. These two hypotheses com- bined together seem to account sufficiently for the idolatry of Egypt, monstrous as it was.

To this account of the origin of brute-worship we are aware that an objection will occur; vi/.. that ‘ brute worship was not peculiar to Egypt. The Hindoos have a religious veneration for the cow and the alligator.’ But there is every rea- son to believe that brute-worship was introduced into India bv a colony of Egyptians at a very remote perioa. That between these two nations there was an early intercourse is universally aj-

lowed. Sesostris made an inroad into India, and conquered part of the country. Brute worship might also be introduced into Hindostan by those vast colonies of Egyptians who took refuge in that country from the tyranny and oppression of the shepherd kings. That such colonies did set- tle in India is undeniable, from monuments still remaining in that country of forms which could hardly have occurred to a native of Asia, though they are very natural as the workmanship of Africans. This is confirmed by MSS. lately dis- covered by members of the Asiatic Society.

Having thus traced the rise and progress of polytheism and idolatry, as they prevailed in the most celebrated nations of antiquity, we proceed to enquire into the real opinions of those nations concerning the nature of the gods whom they adored. And here it is evident from the writings of Homer, Hesiod, and the other poets, who were the principal theologians among the Greeks and Romans, that though heaven, earth, hell, and all the elements, were filled with divinities, there was yet an occasional acknowledgment of one who was supreme over all the rest. ‘ Whence each of the gods was generated,’ says Herodotus, ‘ or whether they have all existed from eternity, and what are their forms, is a thing that was not known till very lately; for Hesiod and Homer were, as I suppose, not above 400 years my se- niors; and they introduced the theogony among- the Greeks, and gave the gods their several names.’ Now Hesiod, towards the beginning of his theogony, expressly invokes his Muse to cele- brate in suitable numbers the generation of the immortal gods, who had sprung from the earth, the dark night, the starry heavens, and the salt sea. He calls upon her likewise to say ‘ in what manner the gods, the earth, the rivers, ocean, stars, and firmament, were generated, and what divine intelligences had sprung from them of benevolent dispositions towards mankind.’ From his invocation, it is evident that the poet did not consider the gods of Greece as self-existent beings ; neither could he look upon them as creatures ; for of creation the ancient Greeks had no conception ; but he considered them as ema- nations, coeval with the earth and heavens, from some superior principles; and by the divine intelligences sprung from them it is certain he understood benevolent daemons. The first prin- ciples of all things, according to him,

were Chaos, and Tartarus, and Love ; cf which only the last was active, unless by Tartarus he meant a self-existent principle of evil ; in which case his creed will be the same with that of the ancient Magi. Hesiod is said to have taken his theology from Orpheus ; and his doctrine concerning the generation of the gods is the same with that taught in certain verses usually attributed to Or- pheus, in which Love and Chaos are thus brought together.

With the theology of Homer our readers are so well acquainted that we need no quotations to prove that this great poet held Jove to be the father of gods and men : and the doctrine of the poets was the creed of the vulgar Greeks and Romans. It does not indeed appear that in the system of vulgar paganism the subordinate gods were accountable to their chief for any part of VOL. XVII.

their conduct, except when they transgressed the limits of the provinces assigned them. Venus might conduct the amours of heaven and earth in whatever manner she pleased ; Minerva might communicate or withhold wisdom from any in- dividual with or without reason ; and, in Homer's battles, the gods separated into parties, and sup- ported the Greeks or Trojans according as they favored the one or the other. Jove indeed some- times called them to order; but his interference was thought partial and tyrannical, rather than just. The vulgar Greeks, therefore, although they admitted but one, or at most two self-existent principles, did not consider the inferior divinities as mediators between them and the supreme, but as gods to whom their worship was on certain occasions to be ultimately directed.

The creed of the philosophers seems to have been different. Such of them as were theists, and believed in the administration of Providence, admitted of but one God, to whom worship was ultimately due ; and they adored the subordinate divinities as his children and ministers, by whom the course of providence was carried on. With respect to the origin of those divinities Plato is very explicit. Cicero teaches the same doctrine with Plato concerning the gods; and Maximus Tyrius, who seems to have understood the genius of polytheism as thoroughly as any man, has a passage in which we have a plain acknowledg- ment of one supreme God, the sovereign of the universe, and of three inferior orders of gods, who were his ministers in the government of the world ; and he calls these intelligences Stove, Beov ireuSaf KM i\ovs, gods, the sons and friends of God. 'Amidst war, contention, and discord, you may find every where throughout the world one uni- ' form law and opinion, that there is one God, the king and father of all, and many gods, the sons of god, who reign with God. These things both the Greek and barbarian affirm, both the inhabi- tants of the continent and of the sea coast, both the wise and the unwise.'

This account of philosophical polytheism re- ceives no small support from the Asiatic Re- searches of Sir William Jones. ‘ It must always be remembered,’ says that accomplished scholar, ‘that the learned Indians, as they are instructed by their own books, acknowledge only one Supreme Being, whom they call Brahme, or the Great One, in the neuter gender. They believe his essence to be infinitely removed from the comprehension of any mind but his own ; and they suppose him to manifest his power by the operation of his divine spirit, whom they name Vishnou, the Pervader, and Ner&yan, or moving on the waters, both in the masculine gender, whence he is often denominated the first male. When they consider the divine power as exerted in creating, or giving existence to that which ex- isted not before, they call the deity Brahma ; when they view him in the light of destroyer, or rather changer of forms, they give him a thousand names, of which Siva, Iswara, and Mahadeva, are the most common ; and, when they consider him as the preserver of created things, they give him the name of Vishnou. As the soul of the world, or the pervading mind, so finely described by Virgil, we see Jove represented by several

Tloman poets ; and with great sublimity by Lu- can in the well known speech of Cato concerning the Ammonian oracle. ‘ Jupiter is wherever we look, wherever we move.’ This is precisely the Indian idea of Vishnou ; for, since the power of preserving created things by a superintending providence belongs eminently to the godhead, they hold that power to exist transcendently in the preserving member of the triad, whem they suppose to be every where always, not in sub- stance, but in spirit and energy.’ This supreme god Brahme, in his triple form, is the only self- existent divinity acknowledged by the philoso- phical Hindoos. The other divinities, Genesa, Indra, Cuvera, &c., are all looked upon either as his creatures or his children, and of course are worshipped only with inferior adoration.

It was upon this principle, of the generation of the gods, and of their acting as ministers to the supreme Numen, that all the philosophers of Greece, who were not atheists, worshipped many divinities, though they either openly condemned or secretly despised the traditions of the poets respecting the amours and villanies of Jupiter, Venus, Mercury, &c. But a theogony was not peculiar to the Greeks, Romans, and the Hindoos; it made part of every system of polytheism. Even the Egyptians themselves, the grossest of all idolaters, believed in one self-existent God, from whom all their other divinities descended by generation. This appears from the writings of

Horus, Apollo, Jamblicus, Porphyry, and many other ancient authors ; but if the inscription on the gates of the temple of Neith in Sais, as we have it from Plutarch and Proclus, be genuine, it will admit of no doubt. This famous inscription, according to the last of these writers, was to this purpose : — ' I am whatever is, whatever shall be, and whatever hath been. My veil no man hath removed. The offspring which I brought forth was the sun.'

The Persian magi believed in two self-existent principles, a good and an evil : see MAGI. But Diogenes Laertius says, they held that fire, earth and water, which they called gods, were gene- rated of these two. Zoroaster, the reformer of the Persian theology, taught that ' Ormuzd was as far removed from the sun as the sun is re- moved from the earth.' According to this mo- dification of magianism, the sun was one of the generated gods, and held the office of vicegerent to the invisible fountain of light and good. Still, however, a self-existent principle of evil was admitted ; but though he could not be destroyed or annihilated, by any power, it was believed

that he would at last be completely vanquished by Ormuzd, and rendered thenceforward incapa- ble of producing any mischief.

From this short view of polytheism, as we find it delineated by the best ancient writers, we may conclude that the whole pagan world believed in but one, or at most two, self-existent gods, from whom they conceived all the other divinities to have descended in a manner analogous to human generation. The vulgar pagans, however, con- sidered each divinity as supreme and unaccount- able within his own province, and therefore enti- tled to worship which rested ultimately in himself. The philosophers, on the other hand, seem to have viewed the inferior gods as ac- countable for their conduct to him who was their sire and sovereign, and to have paid to them only that inferior kind of devotion which the church of Rome pays to departed saints. The vulgar pagans were sunk in the grossest ignorance, from which statesmen, priests, and poets, exerted their ut- most influence to keep them from emerging ; for it was a maxim which, however absurd, was uni- versally received, that ' there were many things true in religion which it was not convenient for the vulgar to know; and some things which, though false, it was yet expedient that they should believe.' The polytheism and idolatry of the vulgar, therefore, were their misfortune rather than their fault. But the philosophers were wholly 'without excuse; because that, when they knew God, they glorified him not as God, neither were thankful, but became vain in their imagina- tions, and their foolish heart was darkened. Pro- fessing themselves wise, they became fools, and worshipped and served the creature more than the Creator, who is God blessed for ever.' Rom. i. 20—25.

The philosophers, it is never to be forgotten, converted in no one instance a single village either from idolatry or vice; on the contrary, they patronised both by their maxims, and countenanced them by their example. Their ignorance was great, but their dishonesty greater. ‘ Reason,’ says Leland, ably, ‘ may be, and has been of great use, when under the conduct of divine revelation, and making use of the light which that affords ; but when, trusting to its own force, it has affected independency, and endeavoured to strike out new paths, it has often made wild %vork in religion, and plunged men into atheism, scepticism, and infidelity, on the one hand, or into idolatry, superstition, and num- berless varieties of error, on the other.’

POLYTRICHUM, in botany, golden maiden- hair, a genus both of the natural and artificial order of musci, belonging to the cryptogamia class of plants. The anthera is operculated, and placed upon a very small apophysis or articula- tion ; the calyptra villous ; the star of the female is on a distinct individual. There are three species; the most remarkable of which is P. commune, the great golden maiden-hair,, fre- quently met with in bogs and wet places of this country. It grows in patches, the stalks erect,

generally single and unbranched, from three to twelve inches, or even a yard, high. The leaves are numerous, stiff, lanceolate, acute, growing round the stalk, without order, and, if viewed with a microscope, appear to have their edges finely serrated. They are of a bright green when young and fresh, but reddish when dried or in decay : the filaments, or peduncles, are of a shin- ing red, or orange color, from two to four inches long, arising singly from the top of the stalks, and surroundfv’i ut their base with a cylindrical

tubular vagina, or perichsetium. The capsule is quadrangular, green at first, afterwards yellow, and red when ripe, having an annular pedestal, or apophysis, at its base. The operculum is flat, with a projecting point in the centre; and underneath is a whitish circular membrane, placed in the middle of the capsule’s orifice, and sustained there by numerous arched threads or cilia, connected by one end to the circumference of this membrane, and by the other fastened to the ring of the anthera. The pollen is freed from the anthera or capsule through the space be- tween the cilia. The calyptra is twofold, an in- ternal and an external one; both of which at first entirely cover and hang over the anthera. The internal one is conical,

membranaceous, and smooth ; the external one is composed only of tawny hairs, connected into a sort of mat, lace- rated at the base, and serving like a roof of thatch to defend the other. Besides the stalks, before described, there are commonly some others near at hand, which are destitute both of filaments and capsules, but terminated with a kind of rosaceous cup, either of a bright red or yellowish color, composed of leaves of different sizes, the outermost broad, the innermost lanceo- late, growing gradually more and more fine arid slender to the centre. This cup Linnseus consi- ders as the female flower of this moss ; but Hal- ler is of opinion that it is only the gem or origin of a new stalk, which frequently rises from its centre, and this again becomes sometimes proli- ferous. There are two varieties ; the first has much shorter stalks than the preceding, and often branched ; the leaves stifTer, erect, and more crowded; in other respects the same. The other has a stalk scarcely more than half an inch high, terminated with a cluster of linear, erect, rigid leaves, for the most part entire on the edges, and tipped each with a white hair. The filament is about an inch high, and the capsule quadrangular. The female flower, or gem, is of a bright red co- lor. The first kind, when it grows long enough for the purpose, is sometimes used in England and Holland to make brooms or brushes. Of the female sort the Laplanders, when obliged to sleep in desert places, frequently make a speedy and convenient bed. Where this moss grows thick together, they mark out, with a knife, a piece of ground, about two yards square, or of the size of a common blanket; then, beginning at one corner, they gently sever the turf from the ground, and, as the roots of the moss are closely interwoven and matted together, they by degrees strip off the whole circumscribed turf, in one en- tire piece; afterwards they mark and draw up another piece exactly corresponding with the first ; then, shaking them both with their hands, they lay one upon the ground, with the moss upper- most, instead of a matrass, and the other over it, with the moss downwards, instead of a rug ; and between them both take a comfortable nap, free from fleas and bugs, and without fear of contagious distempers. It is probable they might take the hint of making such a bed from the bear, a cohabitant of their country, which prepares his winter quarters with a large collec- tion of this same moss. See Muscr. POLYXdSNUS. Sae POLYJEKUS.

POLYXENA, in fabulous history, a daughter of Priam and Hecuba, famed for beauty and ac- complishments. Achilles fell in love with her, and would have married her, but Hector opposed the match. After Hector's death, he went to the temple of Apollo to marry her, but was treache- rously murdered by her brother Paris with an arrow, in the heel, his only vulnerable part ; whereupon Polyxena, whose affection was mu- tual, killed herself on his tomb. Others say she was sacrified by the Greeks to pacify his manes.

POLYXO, a priestess of Apollo's temple in Lemnos. She was likewise nurse

to queen Hyp- sipyle. It was by her advice that the Lemniart women murdered all their husbands.

POLYXO, a native of Argos, who married Tleoptolemus, son of Hercules. She followed him to Rhodes after the murder of his uncle Licym- nius ; and, when he departed for the Trojan war with the rest of the Greek princes, she became the sole mistress of the kingdom. After the Tro- jan war Helen fled from Peloponnesus to Rhodes, where Polyxo reigned. Polyxo detained her, and, to punish her as being the cause of a war in which Tleoptolemus had perished, she ordered her to be hanged on a tree by her female servants, disguised in the habit of Furies.

POLYZELUS, an ancient Greek poet, born at Rhodes. He wrote a poem on the origin and birth of Bacchus, Venus, the Muses, &c., some verses of which are quoted by Athenaeus.

POMACEjE, from pomum an apple, the thirty-sixth order in Linnaeus's Fragments of a Natural Method, the genera of which have a pulpy esculent fruit, of the apple, berry, and cherry kind. See BOTANY.

POMA'CEOUS, adj. Lat. pomum. Consist- ing of apples.

Autumn paint

Ausonian hills with grapes, whilst English plains Blush with pomaceous harvests breathing sweets.

Philips.

PO'MANDER, n. s. Fr. pomme d'amber. A sweet ball ; a perfumed ball or powder.

I have sold all my trumpery ; not a counterfeit stone, n«t a ribbon, glass, pomander, or browch to keep my pack from fasting. Shakspeare.

They have in physic use of pomander and knots of powders for drying of rheums, comforting of the heart, and provoking of sleep. Bacon.

The sacred virgin's well, her moss most sweet and

rare, Against infectious damps for pomander to wear.

Dray ton.

POMATUM, n. s. Lat. pomatum. An oint- ment.

I gave him a little pomatum to dress the scab.

Wiseman.

POMATUM is generally used in dressing the hair. It is also used as a medicine.

POMBAL (Sebastian Joseph Carvalho Mello count d'Oeyras, marquis de), the most famous of modern Portuguese statesmen, was born at Soura, in the territory of Coimbra, in 1699. He was the son of Emanuel Carvalho, a gentle- man of the second class, and studied the law at the university of Coimbra. Preferring a mili- tary life he first procured a commission in the guards, but here the violence of his temper in-

volved him in errors, in consequence of which he thought proper to retire from the army. He now took up his residence at his native place, and married, in opposition to the wishes of her friends, a lady of a noble and wealthy family. Shortly after (in 1738) he obtained a new in- troduction to court, and through the patronage of the queen he was appointed ambassador to London. Here he became acquainted with the reciprocal interests of England and Portugal, and gained correct ideas of the power to which a free nation may attain by industry and com- merce. He likewise acquired a just notion of the mercantile system, and of the measures cal- culated to support it. In 1745 he was recalled, and, through the influence of his patroness, was sent to Vienna, to adjust a dispute between pope Benedict XIV. and the empress Maria Theresa, relative to the patriarchate of Aquileia. His wife dying, he married the young countess Von Daun, niece of the celebrated marshal of that name ; and this union established his ascen- dancy over the queen of Portugal, an Austrian princess. In 1750, therefore, on the death of the king, she persuaded her son, Joseph I., to appoint him secretary of state for foreign affairs. His first care was to improve the commercial resources of his country, and encourage a spirit of industry; but he also seems to have en- deavoured systematically to depress the nobility, and displayed a marked dislike to the Jesuits. He was, however, proceeding to prosecute effec- tually various useful reforms, when the dreadful earthquake at Lisbon occurred in 1755. On this occasion he displayed the most active bene- volence towards the distressed citizens, being found personally in all parts of the city assisting in and directing every measure to relieve their sufferings. His services procured him

deserved respect, and the king rewarded him with the title of count d'Oeyras. In the following year he was made prime minister, and assumed a most unlimited power in every department of the state. Many of his measures were arbitrary, but the licentiousness of the age, and the character of the people, would seem to excuse, if not to justify, his proceedings. The attempt to assassin- ate the king, for which the duke of Aveiro and others of the nobility suffered, he openly attributed to the Jesuits ; and in the month of April, 1759, he transmitted to the pope a letter from the king, in which it was stated that, if that order were any longer suffered to carry on their intri- gues, the government would infallibly be over- turned ; that therefore it was necessary to banish them completely from the kingdom. The pon- tiff strongly opposed the measure ; but the count was determined to carry it into execution. On the 3d of September a decree was passed, by which the Jesuits were declared rebels and traitors, and interdicted from remaining as a boriy in Portugal, or ever returning to it under any pretence. At first they seemed determined to set the royal authority at defiance ; but by the assistance of the military they were sent on l)oard different transports, to the number of 1854, and conveyed to the states of the church. An offer was made to the younger brethren, that ihey should remain at liberty in Portugal, pro-

vided they would renounce their order; but this they declined.

During the war between Portugal and Spain, the count exerted himself successfully in putting the Portuguese army and navy on a good foot- ing ; he afterwards turned his attention to the encouragement of trade and commerce ; es- tablished schools of industry, and a school of commerce, where '200 pupils were admitted ancl taught the various branches of knowledge suited to their future destination ; and introduced a •thorough reform in all the seminaries of the kingdom. A new institute was also established for the education of the young nobility. A second attempt made on the king's life in De- cember 1768, by a disappointed mule-driver, who had served in the artillery, led him to pay a still greater attention to this minister. He presented him with several valuable estates, loaded him with pensions, and at length, in 1770, conferred on him the title of marquis de Pombal. During the remainder of this reign he – kept the king entirely in his power ; but upon the death of the monarch, in 1777, the marquis was dismissed, but permitted to retain his titles and his income. He, however, soon found that he was an object of suspicion.; his papers were sealed up, and an intimation was sent to him to retire to his estate in the country ; where, having first seen all his plans relinquished or overturned, he died in May 1782, in his eighty-third year.

POMEGRAN'ATE, n. s. Lat. pomum gru- natum. A tree ; the fruit of that tree. See below.

And Saul tarried in the uttemiost part of Gibeah. under a pomegranate tree. 1 Sam. xiv. 2.

It was the nightingale, and not the lark, That pierced the fearful hollow of thine ear, Nightly she sings on yon pomegranate tree.

S/uifispeare.

In times past they dyed scarlet with the seed of a pomegranate. Peacham on Drawing.

Nor on its slender twigs Low bending be the full pomegranate scorned.

Thomson.

The flower of the pomegranate consists of many leaves placed in a circular order, which expand in form of a rose, whose bell-shaped multifid flowercup afterwards becomes a globular fruit, having a thick, smooth, brittle rind, and is divided into several cells, which contain oblong hardy seeds, surrounded with a soft pulp. Miller.

On her fair cheek's unfaded hue, The young pomegranate's blossoms strew Their bloom in blushes ever new. Byron.

POMEGRANATE. See PUNICA. POMERANIA, a considerable province of Prussia on the Baltic, extends from long. 12° 29′ to 18° 2′ E., and from lat. 52° to 54° 44′ N. Its form is oblong, its length (from east to west) above 200 miles : its breadth varies from thirty to sixty, and in some place? eighty miles. The area is computed at 12,000 square miles. Part of it formerly belonged to Sweden ; but Prussia now has possession of the whole, and of the adjacent island of Rugen. It is divided into the governments of Stettin, Stralsund, and Coslin Population 670,000. The chief towns

Population. Population.

Stettin . .

22,000

Golberg

. 4,500

Stralsund

11,200

Stolpe . .

. 4,400

Stargard .

8,600

Wolgast

. 3,800

Anklam .

4,700

Coslin . .

. 3,300

This is a tract of flat country, and so slight is the slope towards the sea that the rivers do not retain a sufficient current to flow, but expand into lakes, of which the Haff, of an oblong form and communicating with the Baltic, is the largest. On the other hand, towards the Bal- tic, the land is so low that it would be inun- dated, were it not protected by a range of sand- hills, and by artificial dikes. The soil is tight, consisting, in various parts, of a drifting sand ; but on the banks of lakes and rivers it is a dark and heavy mould. The atmosphere is often foggy, and the climate cold, but not unhealthy. The rivers are the Oder, Leba, Stolpe, Rega, Persante, Ucker, and Ihna.

Agriculture is here in a low state, the peasants, with the exception of those in Swedish Pomerania, being in a state of vassalage. Cat- tle breeding is the favorite occupation ; and the sheep range in numerous flocks. Hogs are also reared in great number ; the number of geese is also large ; they are exported dried or smoked. The forests abound in game. The minerals are almost confined to marsh-iron, alum, and salt.

The woollen manufacture has received at- tention here, as well as those of linen, leather, iron, hardware, and glass. The exports are corn, cattle, timber, wool, wax, and dried fish. The imports sugar, coffee, and cotton goods. This country has, by the means of the Oder, a considerable transit

business for Silesia and part of Brandenburgh, being the channel of export for their linen, and of import for their wine and colonial produce.

*This country was originally inhabited by Gothic tribes, and invaded, in the sixth century, by a host of Vandals or Sclavonians, who settled in it. The name of Pomerania first occurs in a bull of pope Innocent, dated in 1140, for the confirmation of a newly elected bishop. After this it long formed an independent duchy, and was a component part of the German empire in the twelfth century; but in 1637 the ducal family became extinct. At that time the elec- toral house of Brandenburg was supposed to have the best claim to the succession ; but the duchy was in the possession of the Swedes, who accordingly retained it, and Prussia was indem- nified out of the secularised bishoprics. But, on the unfortunate result of the expeditions of Charles XII. turning the scale in favor of Prus- sia, she seized the greater part of Pomerania, and at the peace of Stockholm retained the whole except the western angle, subsequently called Swedish Pomerania. This territory was ceded by Sweden to Denmark in 1814, as an indemnity for Norway, but came soon after to Prussia, by exchange for Saxe-Lauenburg. The division of Anterior and Hinder Pomerania, **hich subsisted for some centuries, is now abo- i?hed.*

POMERELIA, or LESSER POMERANIA, is a district of the Prussian States, bounded on the north by the gulf of Dantzic, on the south by

Poland, and on the west by Pomerania Proper Its form is oblong, being ninety miles in length from north to south, and about fifty in breadth. It. was formerly a part of the duchy of Pomera- nia; but was acquired in the fourteenth century by Prussia, and subsequently by Poland ; lastly, it was ceded to Prussia in 1773, and now forms part of the government of Dantzic. It com- mands the lower part of the Vistula.

POMEROYAL. See PYRUS.

POMET (Peter), an able druggist at Paris, born in 1658. He collected at a great expense from all countries drugs of every kind, and rendered himself celebrated by his book, entitled Histoire Generale des Drogues, which is the most complete book on the subject that has yet been printed. He died in 1699.

POMEY (Francis), a learned Jesuit, welV known for his Pantheon Mysticum, which An- drew Tooke translated, and published in his own name, without once mentioning the original author's name. Pomey was well versed in Latin. He died in 1673, aged fifty-five.

POMFRET (John), an English poet, son of the rector of Luton in

Bedfordshire, was born in 1667, and educated at Cambridge ; after which he took orders and was presented to (Dr. Johnson says was rector of) the living of Mai- don in Bedfordshire. In 1703 he went to Lon- don for institution to a more valuable piece of preferment ; but, the bishop (Compton) having been induced to consider a passage in his Choice as licentious, his induction was delayed, and he in the mean time caught the small pox, and died in the metropolis, aged thirty-five. His Choice has been much read and admired. Dr. Johnson says, ‘ He pleases many, and he who pleases many must have merit.’

POMIF’EROUS, adj. Lat. pomifer. A term applied to plants which have large fruits, and are covered with thick hard rind.

All pomiferoiis herbs,’ pompions, melons, gourds, and cucumbers, unable to support themselves, are either endued with a faculty of twining about others, or with claspers and tendrils, whereby they catch hold of them. Ray on the Creation.

Other fruits contain a great deal of cooling viscid juice, combined with a nitrous salt ; such are many of the low pomiferous kind, as cucumbers and pom-

pions.

Arbuthnol on Aliments.

POMME, or POMMETTE, in heraldry, is a cross with one or more balls or knobs at each of the ends.

POM’MEL, n. s. Fr. pomeau; Ital. porno. A round ball or knob ; the nob ots a sword han- dle ; a cushion ; the fore part of a;saddle.

Huram finished the two pillars attd’the pommels, and the chapiters which were on the Wp of the two pillars. 2 Ch ronicles .*

Like pommels round of marble clear, Where azured veins well mixt appear. Sidney. His chief enemy offered to deliver th« pommel of his sword in token of yielding. ‘ Id.

Every of our novices hath learned to make no difference of men ; and dare breathe in the poison- ous air of Italy itself, and touch the very pommn ot the chair of pestilence. Bp- Hall-

The starting steed was seized with sudden fright, And, bounding, o’er the pommel cast the knight.

Dry dew.

POMMERCULLIA, in botany, a genus of the monogynia order and triandria class of plants ; natural order fourth, gramina: CAL. bivalved, and shaped like a top ; the valvula quadrifid, and bearded on the back : COR. two unequal valves; the filaments three, with long pointed antherse ; the style simple. The whole flower forms itself into a sharp point, and the corolla serves as a covering to the seed, which is long, clear, and smooth. There is only one 'species, viz: — P. dianthoides.

POMCERIUM, in Roman antiquity, was, according to Livy, that space of ground, both within and without the walls, which the augurs, at the first building of cities, solemnly consecrat- ed, and on which no edifices were allowed to be raised. Plutarch gives this account of the ceremony of drawing the pomcerium : — ' They dug a trench, and threw into it the first fruits of all things, either good by custom, or necessary by nature ; and, every man taking a small turf of earth of the country whence he came, they cast them in promiscuously. Then, making this trench their centre, they described the city in a circle round it. After this, the founder, yoking a bull and a cow together, ploughed a deep furrow, with a brazen ploughshare, round the bounds. The attendants took care that all the clods fell inwards, i. e. towards the city. This furrow they called pomcerium, and built the wall upon it.' — Plutarch, in this account, is to be understood as speaking of Rome.

POMCERRIUM PROFERE, signifies to extend or enlarge a city, which could not be done by any but those who had taken away some part of an enemy's country in war. But this qualification was sometimes dispensed with. Pomcerium is quasi pone mania, i. e behind the walls.

POMONA, in mythology, the tutelar deity of orchards and fruit trees. See VERTUMNUS.

POMONA, in geography, or MAINLAND, the principal of the ORKNEY ISLES, which see.

POMP, n. s. -\ Fr. pompe ; Lat.

*POM'POUS, adj. * pompa. Ostentation ;*

POM'POUSLY, adv. (splendor ; pride ; grand

POM'POUSNESS, n. s. J or showy procession; the adjective, &c., corresponding.

Take physic, pomp, Expose thyself to feel what wretches feel.

Shakspeare,

The bright pomp ascended jubilant. Milton,

All eyes you draw, and with the eyes the heart ; Of your own pomp yourself the greatest part.

Dry den.

Whate'er can urge ambitious youth to fight, She pompously displays before their sight. Id.

Such a numerous and innocent multitude, clothed in the charity of their benefactors, was a more beau- tiful expression of joy and thanksgiving than could have been exhibited by all the pomps of a Roman triumph. Addlson's Guardian.

The English and French raise their language with metaphors, or by the pompousness of the whole phrase wear off any littleness that appears in the particular parts. Addison.

An inscription in the ancient way, plain, pompous, yet modest", will be best. Atterbury to Pope.

What flatt'ring scenes our waud'ring fancy

wrought, Honr.e's pon>j>Hu glories rising to our thought.

Pope.

What is the pcm;; of learnt ng ? the parade Of letters and of tongues 1 Even as the mists Of the gay morn before the rising sun, To pass away and perish. Kirke While.

POMPADOUR (Jean Antoinette Poisscn marquise de), the celebrated mistress of Louis XV., was born in 1722. Voltaire says she was the daughter of a farmer at Ferte sous Jouare, whose wife becoming the mistress of Lenormand de Tournehem, a farmer-general, the mother pro- moted her daughter's marriage with M. Lenor- mond d'Etisle, nephew of Tournehem, and after- wards procured her introduction to the king. She succeeded in Louis's favor the duchess de Chateauroux, who died in 1744: in 1745 she was created marchioness of Pompadour. Her influence was

used certainly in promoting the fine arts, which she herself cultivated with con- siderable success, and a great part of her ill- acquired wealth was lavished on books, paint- ings, and curiosities. But her extravagance was unbounded. She obtained a pension of 240,000 francs, and in 1756 the place of lady of the pa- lace to the queen. She frequently interfered in the public affairs ; and the seven years' war with Prussia, is said to have been one of her mea- sures. Her death took place April 14th, 1764.

POMPEII AND HERCULANEUM. These two ancient Roman cities, near the modern Naples, were overwhelmed by the same eruption of Ve- suvius, A. D. 79. It buried them both some feet deep under showers of ashes, pumice-stone, &c. Of this eruption, in which the elder Pliny lost his life, his nephew, the younger Pliny, gives the following account, in a letter to Tacitus the historian : — ' To TACITUS. — Your request that 1 would send you an account of my uncle's death, in order to transmit a more exact relation of it to posterity, deserves my acknowledgments ; for if this accident shall be celebrated by your pen, the glory of it, I am well assured, will be ren- dered for ever illustrious. And notwithstanding he perished by a misfortune, which, as it in- volved at the same time a most beautiful coun- try in ruins, and destroyed so many populous cities, seems to promise him an everlasting re- membrance ; notwithstanding he has himself composed many and lasting works ; yet I am persuaded the mentioning of him in your im- mortal writings will greatly contribute to eter- nize his name. Happy I esteem those to be, whom Providence has distinguished with the abilities either of doing such actions as are worthy of being related^ or of relating them in a manner worthy of being read ; but doubly happy are they who are blessed with both these uncommon talents ; in the number of which my uncle, as his own writings and your history will evidently prove, may justly be ranked. It is with extreme unwillingness, therefore, that I execute your commands ; and should indeed have claimed the task, if you had not enjoined it. He was at that time with the fleet under his command at Misenum. On the 23d of August, about one in the afternoon, my mother desired him to observe a cloud which appeared of a very un- usual size and shape. He had just returned from taking the benefit of the sun, and after bathing himself in cold water, and taking a slight repast,

had retired to his study : he immediately arose and went out upon an eminence from which he might more distinctly view this very uncommon appearance. It was not at that distance dis- cernible from what mountain this cloud issued, but it was found afterwards to ascend from mount Vesuvius. I cannot give you a more exact description of its figure than by

resembling it to that of a pine-tree ; for it shot up a great height in the form of a trunk, which extended itself at the top into a sort of branches ; occasioned, I imagine, either by a sudden gust of air that impelled it, the force of which decreased as it advanced upwards; or the cloud itself, being pressed back again by its own weight, ex- panded in this manner. It appeared sometimes bright, and sometimes dark and spotted, as it was either more or less impregnated with earth and cinders. This extraordinary phenomenon excited my uncle's philosophical curiosity to take a nearer view of it. He ordered a light vessel to be got ready, and gave me the liberty, if I thought proper, to attend him. I rather chose to continue my studies; for, as- it happened, he had given me an employ- ment of that kind. As he was coming out of the house, he received a note from Rectina, the wife of Bassus, who was in the utmost alarm at the imminent danger which threatened her; for, her villa being situated at the foot of mount Vesuvius, there was no way to escape but by sea; she earnestly intreated him therefore to come to her assistance. He accordingly changed his first design, and what he began with a phi- losophical, he pursued with an heroical turn of mind. He ordered the galleys to put to sea, and went himself on board with an intention of assisting not only Rectina, but several others ; for the villas stand extremely thick upon the beautiful coast. When hastening to the place from which others fled with the utmost terror, he steered his direct course to the point of danger, and with so much calmness and pre- sence of mind as to be able to make and dic- tate his observations upon the motion and figure of that dreadful scene. He was now so nigh the mountain that the cinders, which grew thicker and hotter the nearer he approached, fell into the ships, together with pumice-stones, and black pieces of burning rock ; they were likewise in danger not only of being a- ground by the sud- den retreat of the sea, but also from the vast fragments which rolled down from the moun- tain, and obstructed all the shore. Here he stopped to consider whether he should return back again, to which the pilot advising him : ' Fortune,' said he, ' befriends the brave : carry me to Pomponianus.' Pomponianus was then at Stabiae, separated by a gulf which the sea, after several insensible windings, forms upon that shore. He had already sent his baggage on board ; for though he was not at that time in actual danger, yet being within the view of it, and indeed extremely near, if it should in the least increase, he was determined to put to sea as soon as the wind should change. It was fa- vorable, however, for carrying my uncle to Pom- ponianus, whom he found in the greatest con- sternation : he embraced him with tenderness,

encouraging and exhorting him to keep up his spirits ; and the more to dissipate his fears, he ordered, with an air of unconcern, the baths to be got ready ; when, after having bathed, he sat down to supper with great cheerfulness, or at least (what is equally heroic) with ail the ap- pearance

of it. In the mean while the eruption from mount Vesuvius flamed out in several places with much violence, which the darkness of the night contributed to render still more vi- sible and dreadful. But my uncle, in order to sooth the apprehensions of his friend, assured him it was only the burning of the villages, which the country people had abandoned to the flames ; after this he retired to rest, and it is most certain he was so little discomposed as to fall into a deep sleep; for being pretty fat, and breathing hard, those who attended without ac- tually heard him snore. The court which led to his apartment being now almost filled with stones and ashes, if he had continued there any time longer, it would have been impos- sible for him to have made his way out; it was thought proper therefore to awaken him. He got up and went to Pomponianus and the rest of his company, who were not unconcerned enough to think of going to bed. They con- sulted together whether it would be most pru- dent to trust to the houses, which now shook from side to side with frequent and violent con- cussions; or fly to the open fields, where the calcined stones and cinders, though light indeed, yet fell in large showers, and threatened destruc- tion. In this distress they resolved for the fields, as the less dangerous situation of the two ; a re- solution which, while the rest of the company were hurried into it by their fears, my uncle embraced upon cool and deliberate considera- tion. They went out then, having pillows tied upon their heads with napkins ; and this was their whole defence against the storm of stones that fell round them. Though it was now day every where else, with them it was darker than the most obscure night, excepting only what light proceeded from the fire and flames. They thought proper to go down farther upon the shore, to observe if they might safely put out to sea, but they found the waves still run extremely high and boisterous. There my uncle having drunk a draught or two of cold water, threw himself down upon a cloth which was spread for him, when immediately the flames and a strong smell of sulphur, which was the forerunner of them, dispersed the rest of the company and obliged them to arise. He raised himself up with the assistance of two of his servants, and instantly fell down dead ; suffocated, as I con- jecture, by some gross and noxious vapor, having always had weak lungs, and frequently subjected to a difficulty of breathing. As soon as it was light again, which was not till the third day after this melancholy accident, his body was found entire, and without any marks of violence upon it, exactly in the same posture that he fell, and looking more like a man asleep than dead. During all this time my mother and I, who were at Misenum — But as this has no connexion with your history, so your enquiry went no farther than concerning my uncle's death; with that,

therefore, I will put an end to my letter ; suffer me only to add, that I have faithfully related to you what I was either an eye-witness of myself, or received immediately after the accident hap- pened, and before there was time to vary the truth. You will choose out of this narrative such circumstances as shall be most suitable to your purpose; for there is a great difference between what is proper for a letter, and a history ; be- tween writing to a friend, and writing to the public. Farewell.'

All memorials of the devoted cities were lost ; and discussions on the places they had once oc- cupied were excited only by some obscure pas- sages in the classical authors. Six successive eruptions had contributed to lay them still deeper under the surface. But, after sixteen centuries had elapsed, a peasant, in 1711, in digging a well beside his cottage, obtained some fragments of colored marble, which attracted attention. Re- gular excavations were made under the superin- tendance of Stendardo, a Neapolitan architect ; and a statue of Hercules of Greek workmanship, and also a mutilated one of Cleopatra, were withdrawn from what was afterwards proved to be a temple in the centre of the ancient HERCU- LANEUM, to which, as it was first discovered, we shall first direct our attention.

Twenty or thirty years afterwards the king of the two Sicilies directed a complete search to be made among the remains of the subterraneous city, and the antiquities to be preserved. The pre- cise extent of Herculaneum cannot be ascertained, though we know that it was a city of the second order. All the streets run in right lines ; they are paved with blocks of lava ; and there is for the most part an elevated foot-path along the sides for the convenience of pedestrians. The houses, whose exterior does not seem to have been ornamental or even regular, consist only of one story built of brick. The walls of some are covered with colored stucco, upon which are ex- ecuted paintings in fresco. From the general appearance of the different edifices, we may safely conjecture that the volcanic matter con- '.isted of very fine dust or ashes, which fell in repeated showers, until the city was totally buried under it. Indeed, it was so fine, that the most

perfect impressions of the objects thus covered were imprinted on it ; and, on their being now removed, the cavity may serve for a plaster or metallic cast. By this means innumerable arti- cles were preserved entire, and scarcely dis- placed from their original position.

The remains of several public buildings have been discovered, which have possibly suffered from subsequent convulsions. Among these are two temples, one of them 150 feet by sixty, in which was found a statue of Jupiter. A more extensive edifice stood opposite to these, forming a rectangle of 228 feet by 132, supposed to have been appropriated for the

courts of justice. The arches of a portico surrounding it were supported by columns ; it was paved within with marble ; the walls were painted in fresco ; and bronze statues stood between forty-two columns under the roof.

The theatre was nearly entire ; very little had been displaced ; and we see in it one of the best specimens extant of the architecture of the an- cients. Jt seems to have had two principal gates, with inscriptions over the architraves of each, besides seven entrances, called vomitoria, com- municating with the benches. Many columns and pilasters, with labored entablatures, appeared in the proscenium, and some bronze and marble statues. The walls were covered with paintings in arabesque, and the floor paved with marble. Twenty-five rows of high and wide maible benches accommodated the audience; which, rising gradually above each other, gave a full and distinct view of the arena below. It would contain 10,000 persons, and was rich in antiqui- ties. Statues occupying niches represented the muses; scenic masks were imitated on the enta- blatures ; and inscriptions were engraved on dif- ferent places. A metallic car was found with four bronze horses attached to it, nearly of the natural size ; but all in a state of decay. A beautiful white marble statue of Venus, only eighteen inches high, in the attitude of the famous Venus de Medicis, was recovered ; and in the immediate vicinity was found a colossal bronze statue of Vespasian, filled with lead, which twelve men were unable to move ; and an inscription about twelve Neapolitan palms in length, as follows : —

is so fine, that the most twelve Neapolitan palms

IMP , CAESAR , VESPASIANVS , AVG , PONTIF , MAX POT , VII ‘ IMP ‘ XVII • P . P ‘ COS ‘ VII ‘ DESIGN

*TRIE , POT , VII ‘ IMP ‘ XVII ‘ P . P ‘ COS ‘ VII * DESIGN ‘ VIII TEMPLVM , MATRIS , DEVM , TERRAE , MOTV , CONLAPSVM , RESTITVIT.*

Remarkably few skeletons have been found in this city, though many occur in the streets of Pompeii ; but one appears near the threshold of a door, with a bag of money in its hand, as if in the attitude of escaping.

The exfodiation was prosecuted along the walls of the buildings, turning the corners, and entering by the doors and windows as they oc- curred. Two marble equestrian statues of the finest workmanship, which had been erected in honor of the two consuls, Balbus and son, were found opposite to the theatre ; and in prosecut- ing the researches into the public edifices and private houses, or even through the streets, the workmen met with many things worthy of obser- vation. A well, now containing good water, was

seen surrounded by a parapet, and covered

by an arch which had excluded the ashes. A capacious bath, of a circular form, was pene- trated, and also repositories of the dead, still more ancient than the overthrow of Herculaneum. Numerous sacrificial implements, however, such as paterae, tripods, cups, and vases, were reco- vered in excellent preservation, and even some of the knives with which the victims are conjec- tured to have been slaughtered.

Articles in vast variety were obtained from the houses, wherein the beams appeared as if con- verted to charcoal ; but it is to be observed that all the remains of wood exhibit the same aspect to the very heart.

If the subjects recovered from Herculaneum be classed according to their value, the statues should be enumerated first. Of these some are

colossal, some of the natural size, and some in miniature ; and the materials either clay, marble, or bronze. They represent divinities, heroes, or distinguished persons; and in the same sub- stances, especially bronze, there are the figures of many animals. There are two statues seven feet high of Jupiter, and a woman in clay ; and two of gladiators, about to combat, in bronze, are much admired. The same may be said of Nero in bronze, naked and armed as a Jupiter Tonans, with a thunderbolt in his hand. A Venus pudica of white marble, in miniature, is extremely beau- tiful, and also the statue of a female leaving the bath. In the year 1 758 a fine bronze statue of a naked Mercury was discovered ; and, in the course of the excavations beyond the confines of the city, a Silenus with a tiger was found, which had formerly adorned a fountain. Several fauns of bronze, with vases on their shoulders, were obtained in the vicinity of Silenus ; and it is sin- gular to observe that the younger figures have silver eyes, a disagreeable deformity sometimes adopted in marble statues. The figure and atti- tude of a drunken faun, stretched on a lion's hide, and supported by a skin of liquor, pre- sents all the vacuity of thought and sensation of animal pleasure which accompany ebriety ; ano- ther faun asleep, as large as life, presents a state of absolute repose. There is also a bronze equestrian statue of an armed Amazon, only six- teen inches high. There are many elegant statues of the goddesses and graces only eight or ten inches in height, and we likewise see some of the monstrous Egyptian divinities with which the Ilerculaneans were acquainted. Several fine busts, or simple heads of the ancient philosophers, as Zeno or Epicurus, stood in the houses, the name being inscribed below or on a pedestal. Bas reliefs likewise

occurred, but few coins or medals. Gold coins of Augustus were found, and silver medallions, two or three inches in dia- meter, bearing uncertain devices.

The ancient pictures of Herculaneum are of the utmost interest, not only from the freshness and vividness of color, but from the nature of the subjects they represent. All are executed in fresco; they are exclusively on the walls, and generally on a black or red ground. It has been supposed, from passages in the classics, that the ancients used only four colors, white, black, yel- low, and red ; but here are added blue and green. Every different subject of antiquity is depicted here ; deities, human figures, animals, landscapes, foreign and domestic, and a variety of grotesque beings. One of larger size found in a temple, and the most celebrated, represents Theseus vanquishing the minotaur, which lies stretched at his feet, with the head of a bull and the body of a man. A female, supposed to be Ariadne, and three children, form part of the group. This, along with a picture composed of several figures as large as life, of which Flora is the most conspicuous, adorned a temple of Her- cules ; each is six or seven feet high and five broad. Another represents Chiron teaching Achilles the lyre ; and female centaurs are seen suckling their young. The interior of a shoe-makers shop is exposed on a smaller scale ; a feast, baskets of fruit, a grasshopper driving a

parrot yoked to a car, a cupid guiding swans in the same manner, and many allegorical subjects are represented. The king, desirous of preserv- ing these pictures, directed them to be sawn out of the walls, after which they were put in shallow frames and kept in the museum.

It is extraordinary that numbers of perishable substances should have resisted the corrosions of time. Many almonds in the shells, imprinted with all the lines and furrows characterising their ligneous envelope ; figs ; and some kinds of wild apples, and a sort of pine cone yet growing in the woods of Italy, the seeds of which are now used for culinary purposes, were dug out of the ruins of Herculaneum. Grain, such as barley, and also beans and peas, remained en- tire, of a black color, and offering resistance to pressure. The stones of peaches and apricots are common, thus denoting the frequency of two trees, reputed indigenous in America and Per- sia. But what is still more singular, a loaf, stamped with Roman characters, the baker's name, or the quality of the wheat, was taken from an oven, and was apparently converted to charcoal. After such an amazing lapse of time, liquids have been found approaching to a fluid state ; and a phial of oil, conceived to be that of olives, is yet white, greasy to the touch, and emits the smell of rancid oil. An earthen vase was found in the cellars containing wine, which now resembles a lump of porous dark violet- colored glass. There is, however, great diffi- culty in comprehending how this change

should have taken place, though the ancients used very thick wines. Eggs are also said to have been found whole and empty.

An entire set of kitchen furniture has been collected, which displays several utensils exactly similar to our own. The copper pans, instead of being tinned, are coated internally with sil- ver, and these have not been attacked by verdi- gris. Here is a large brass caldron, three feet in diameter, and fourteen inches deep, an urn or boiler for hot water similar to those on our tables, having also a cylinder in the centre for a heater. There are pestles and mortars, and all kinds of implements for cutting out and figuring pastry ; and in short a complete culinary appa- ratus. Utensils of finer quality, which had been employed at tables, have likewise been collected, as silver goblets and vases, silver spoons, and the remnants of knives. But from the absence of forks, both among the other remains and in pictures, it is probable that their invention and common use are to be dated several centuries later.

Several articles belonging to personal orna- ment and decoration occurred ; and two silver bodkins, eight inches in length, with which the Roman ladies pinned up their hair, are pre- served, the end of one appropriately sculptured with a Venus adjusting her tresses before a looking-glass, held by Cupid. Gold armlets, bracelets, necklaces, with pieces of plate gold suspended to them as a locket, are preserved. Small nets also with fine meshes, which some have supposed the ladies employed to tie up their hair ; and others of coarser texture, which must have been used for other purposes. Very

few jewels are discovered, which favors the idea of the inhabitants having had time to escape. There was a wooden comb, with teeth on both sides, closer on one of them than on the oppo- site ; and portions of gold lace fabricated from the pure metal. Sandals of laced cords are seen, and a folding parasol, absolutely similar to what we esteem a modern invention, was like- wise discovered. We seem to have improved principally upon the Romans, in hardware and cutlery. Their locks and keys, scissors and needles, are very clumsy articles, and their seals, rings, and necklaces, look as if they had been made at the blacksmith's forge. The toilets of the ladies, too, were not so elegantly furnished with nick-nacks in those days. Their combs would scarcely compare with those which we use in our stables ; and there is nothing that would be fit for a modern lady's dressing case.

The weight of the steel-yard is generally the head of an emperor. There is a

sun-dial, the gnomon of which is the hinder part of a pig, with the tail sticking up to cast the shadow. The tesserae, or tickets of admission to the theatres, are of ivory, one has the name of the poet jEschylus written on it in Greek charac- ters.

There is kept in the museum a case of sur- geon's instruments complete, with pincers, spatulae, and probes ; also a box supposed to have contained unguents ; and pieces of marble employed in braying pharmaceutical substances. A variety of carpenters' and masons' tools were found, much resembling our own ; and bolts and nails all of bronze.

Different balances appear, of which the most common is analogous to the Roman steelyard ; but those with flats for scales, though wanting the needle, are likewise seen. The weights are either of marble or metal, of all gradations up to thirty pounds ; and from the marks exhibited by a set, well made of black marble, in a spherical shape, it is supposed the pound was divided into eight parts. There are pocket long measures, folding up like our common foot rtvle.

The various implements for writing repeatedly occurred ; and among the pictures is a female apparently listening to dictation. That the an- cients were acquainted with the art of making glass is proved by the varieties discovered in these exfoliations. Considerable numbers of phials and bottles, chiefly of an elongated shape, are preserved; they are of unequal thickness, much heavier than glass of ordinary manufac- ture, and of a green color. Vessels of cut white glass have been found, and also white plate glass, which antiquaries suppose was used in lining chambers called camera vitreae. Colored glass or artificial gems, engraved, frequently occur; and the paintings exhibit crystal vessels. The beauty and variety of the vases have at- tracted particular notice, and they serve as ex- cellent models for the moderns ; for all the skill of the ancient artists seems to have been ex- hausted in their execution. There is one pre- served, four feet in diameter, of fine white mar- ble ; others are of earthenware or silver, and the majority of bronze or copper. Some are low, wide, and flat; others tall and narrow, plain,

fluted, or sculptured. Sacrificial vases weie supported on tripods, whose construction seem> to have been attended with equal care. Some of the latter are richly sculptured with real and imaginary figures of men and animals. One is ornamented with three lions' heads, and is sup- ported by as many paws ; another rests on three Priapeian satyrs of elegant workmanship. The god of the gardens seems to have been treated with peculiar regard by the Herculeans. He appears with all his attitudes of every possible variety, figure, and dimensions, in tripods, lamps, and household utensils. Several tripods are very ingeniously constructed, so that

the feet may be closed or expanded by double sets of hinges. Endless diversity and infinite elegance are displayed in the lamps. Sometimes a lamp appears as a shell, sometimes as a bird ; then a human figure or resembling a quadruped. The vases, lamps, and tripods, were particularly used in sacrifices, several of which are represented in the pictures ; and, among others, are sacrifices to the Egyptian deities.

In regard to sports and pastimes, numerous re- mains render us familiar with those of the ancients. Here we find dice, with the same disposal of points on a cube; and dice boxes of bone or ivory, like those now used, besides some of a flattish shape. Several are false, being loaded on one side, and the manner of throwing the dice appears on a picture. No musical instruments were found but the sistrum, which we imperfectly understand; cymbals and flutes of bone or ivory are yet obtained. However, a concert is represented on a picture sixteen inches square, containing a lyrist, a player on a double flute, probably by a mouth-piece, and a female apparently singing from a leaf of music ; besides other two figures. Several theatrical masks, of different fashions were found in clay and metal along with moulds for their formation.

It is to be observed in general, with regard to the numerous articles relative to this brief de- tail, that the quality of the statues infinitely ex- ceeds that of the pictures ; and that the vases, and tripods, lamps and candelabra, are frequently of the finest workmanship. Of many, once complete, only fragments at this day remain ; and while gold, silver, bronze, or clay remain entire, iron has altogether wasted away.

After a vast collection of antiquities had been made, the king resolved on publishing a labori- ous and expensive work, containing engravings of those which appeared most curious. In the course of thirty- eight years, from 1754 to 1792, this was accomplished in nine folio volumes, in- cluding the pictures, bronzes, lamps, and cande- labra. The first is devoted to a catalogue, five to pictures, two to the bronzes, and one to the lucerne. No fewer than 738 pictures are named in the catalogue, and the other articles are pro- portionably numerous. The work was, with royal munificence, presented to the principal public libraries in Europe ; but, owing to the succession of the king of the Sicilies to the crown of Spain, it is seldom to be seen complete.

In penetrating an apartment of a villa, in the neighbourhood of Herculaneum, a number of supposed pieces of charcoal were carried off,

which, by accidental fracture, exposed the re- mains of letters, and proved so many ancient MSS. Here Camillo Paderni, the keeper of the museum, buried himself during twelve days, and succeeded in carrying away 337 MSS.; and, by subsequent careful research, the total number recovered now considerably exceeds 1800. The MSS. consisted of rolls, scarcely a span in length, and two or three inches in thickness, formed of pieces of Egyptian papyrus glued together. Some had a label in front, at one end of the roll, exposing the name of the work or the author, as it occupied its place in the library. But the substance of the involutions was so crushed together, the ink or pigment employed for the character had faded to such a degree, that, united to the general injury which they had received from time, and the heat to which they had been exposed, the opening of them seemed at first sight to be impracticable. Accordingly, some snapped asunder like burnt wood, others flew into fragments, or they exposed nothing. The assistance of Piaggi, a monk, was obtained from the Vatican, who invented an ingenious method of unfolding the MSS. without destruc- tion. He made a machine, with which, by the means of certain threads, which being gummed, stuck to the back part of the papyrus, where there was no writing, he began, by degrees, to pull, while with a sort of engraver's instrument he loosened one leaf from the other, and then made a sort of lining to the back of the papyrus, with exceedingly thin leaves of onion, and with some spirituous liquor, with which he wetted the papyrus, by little and little as he unfolded it. The process was slow, but tolerably certain ; and the first MS. put on the machine, being un- rolled in the year 1754, proved to be a treatise in Greek capitals, written by Philodemus, an Epicurean philosopher, against music, with his name twice inscribed at the end, or interior of the roll. Similar means were adopted with other MSS., and they were partly successful. Almost the whole of the manuscripts are in Greek, very few having hitherto been found in Latin ; and some of the rolls are forty or fifty feet in length. The entire surface of the roll is divided into successive columns, resembling our ordinary pages, each containing from forty to seventy lines in different MSS., this being dependent on the size of the roll ; but each lii.e is only about two inches long, and the column is no broader. I n the original state, therefore, the reader held the roll before his eyes with one hand, while he unwound it with the other, as is represented by some of the Herculaneum pictures. Uncommon difficulties were experienced from the decay of the substance, from frequent blanks and obliter- ations within, and from the absence of punctua- tion. Four volumes, all by Philodemus, were successively unrolled ; and, in 1760, Piaggi reached a fifth by another author, on botany. But the king was induced to order it to be withdrawn, and a sixth volume was put on the machine, where it remained thirty-six years. After twenty years preparation, the work on music was published, with illustrations by Maz- zocchi, a learned Italian, under the title Hercu- lanensium Voluminum

qua? Supersunt, tomus 1.

Napoli, 1793. Cicero, notwithstanding, has called the author Optimum et Doctissimum; Piso, the supposed owner of the MSS., derived his philosophy from him, and he was well skilled in the polite literature of the period. In the course of forty years from the discovery of the MSS., which were gradually withdrawn, only eighteen were unfolded. The accession of Charles, indeed, to the crown of Spain, and the death of Mazzocchi, had enervated the Hercu- lanean Society, which was renewed in 1787, by the marquis Caracioli, and the secretary of state thenceforward placed at its head. Yet the work advanced very tardily ; few persons were em – ployed, either from the difficulty or want of in- terest in its prosecution; and it was perhaps totally interrupted by the political events which disturbed the peace of Europe. Meantime six of the MSS. were presented, along with other Herculaneum curiosities, to Buonaparte in 1802, by the sovereign of the Sicilies, in whose reign, indeed, we believe that both Philodemus and the volume of Lucerne were published ; and ten volumes are said to have been sent, on some oc- casion, to the prince of Wales.

At length a proposal was made on the part of this country to co-operate with the Neapolitan government on a subject so important to the dif- fusion of literature as that of elucidating the Herculaneum MSS. ; and Mr. Hayter, chaplain to the prince of Wales, was appointed with a re- gular commission to superintend their subse- quent development. A parliamentary grant of £1200 was next obtained to aid its prosecu- tion ; and Mr. Hayter, having commenced his operations under the most favorable auspices in 1802, employed thirteen persons in unrolling, deciphering, and transcribing. Some improve- ments seem to have been attempted in the evo- lution of the MSS. by a chemical process ; but of those subjected to it, we are told ‘ the greatest part of each mass flew under this trial into useless atoms ; besides, not a character was to be discovered upon any.single piece: the dread- ful odor drove us all from the museum.’ Mr. Hayter continued his operations from 1802 to 1806, during which time he affirms that more than 200 papyri had been opened wholly or in part, and he calculated that the remainder would have been unrolled and copied within six years farther at latest. But as to the precise nature and description of these MSS., the accessions which literature has gained or would gain by the work, we are only informed that certain fac- similes of some books of Epicurus were en- graved.

In 1806, during Mr. Hayter’s operations, it became necessary to evacuate Naples ; but the existing government acquainted him that the king had prohibited the removal of the MSS. ; and in the flight of the court every thing was abandoned to the French, who seem to have con- tinued the assistants in unrolling and decipher- ing as before. From the opposition

which Mr. Hayter experienced, he could do nothing more than retire with some of the fac-similes to Pa- lermo, where it appears he superintended engra- vings of them. Yet misunderstandings with the secretary of state prevented him from procuriug

a complete copy of the whole, until the British ambassador interfered.

Ninety-four fac-simile copies were then ob- tained, partly engraved, it would seem, and partly in MSS. These were carried to England by Mr. Hayter on his final recal in 1809, and presented by the prince Regent to the university of Oxford. However, a very confused and in- llistinct account of the whole of this matter has reached the public, which compels us to be thus orief regarding the history of the Herculaneum MSS.

Perhaps it may ultimately be found that they are less worthy of notice than was antici- pated, particularly if we are entitled to form any judgment regarding the rest from the inconsi- derable portions that have already been pub- lished.

We shall now give a brief account of the smaller but more interesting of these two cities, Pompeii. At a mile from the Torre dele' An- nonziata the traveller must quit the route of Sa- lerno and turn to the right to come at the ruins of Pompeii. The first object is called the country house ; thus named because it is situated with- out the walls of the town. This villa had two divisions, one higher than the other ; columns, or rather square pillars, formed a covered gal- lery, which was continued round the court, and six other columns, destined probably to sustain a kind of portico. These columns or square pillars were covered with a yellowish stucco, and the pedestals were black and ornamented. The second division of the edifice was decorated with several columns, which formed a rich por- tico, of a proportion however sufficiently little. In general all the parts of this house were ex- tremely close and narrow. Upon the road which passes before the door of entrance to this house, are the tracks of carriages. Near to the door have been found two skeletons ; the one held a key in one hand, and in the other a purse filled with medals and precious stones. They believe that the other had carried a box, contain- ing different valuable things found near him. Perhaps this was the master of the house and his slave, who, in running away, had taken the most precious objects, but who, when they arrived at the door, found it already encumbered with cin- ders, under which they have been buried. The court of the house formed a square of ninety- four feet.

In entering the court one sees a covered por- tico supported by six columns ; on two sides it was surrounded with trees, of which there are still seen trunks and branches. Before this portico was a basin, of which they have also found the pipes of lead on the spot. At the end of the gallery was a vault of stone, which ap- pears to have served as a cellar because there have been found there several of those vessels in which the ancients preserved their wine. Near this, is a descent into a stone cellar, very dark, and covered with stucco ; it is left absolutely whole, but has been blocked up with cinders. Near the staircase which leads to this cellar have been found seven skeletons of women, whom terror, in the moment of the volcanic eruption, had no doubt carried to shelter themselves in this

remote place, where they perished. They were all pressed, one near the other, in a corner near to the door, and in discovering their bones they have observed the image and form of their bo- dies, which were preserved in the cinders ; they have there even discovered parts of their clothes. These impressions are seen still in the museum de Portici ; they show there among others that of the breast of one of these women, which is so well preserved that there is the impression of a very delicate lace. There also is perceived the impression of rings, of bracelets, of necklaces, and of earrings, with which these women were adorned.

At the end of the gallery you descend by a staircase to the second division of the house, which contains several rooms more or less grand, and behind which was the garden, into which you descend also by a grand staircase. In all this part of the house they have not found a single place which can be regarded as a bed- chamber, with the exception of a kind of alcove and circular wardrobe, having three windows into the garden. This second part of the house was the most elegant. Near to the chamber of which we have been speaking, and which may be regarded as a sleeping room, was the eating parlour, and at the side was the buttery, whence you enter into a room which appears to have served as a vestry, for there they have found clothes. Another smaller court, embellished with a basin, and columns of different propor- tions, was near the great road, and was the en- trance to the great court of the interior, where was the door by which to go out upon this great road. Near the garden are the cold bath and the vapor bath.

The fragments of columns which were near the tomb of the arch-priestess Mammia show that formerly it was more elevated than it now is; upon a square base it had a circular building ornamented with columns and marble statues. By a door you enter into the first enclosure, that is to say, into the fore court of the sepulchral monument ; the tomb, correctly speaking, was surrounded with a terrace; some steps conducted to the base of it, upon which one still finds columns. Thence an opening leads into the tomb, where there are several niches, of which the principal enclosed an

urn, which probably con- tained the ashes of Mammia. In the fore court were two open excavations ; these were the en- trance to two vaulted caverns, which could not have any other use than to serve for burying. Upon the wall of the sepulchral monument, and near the excavations which we have just men- tioned, have been found masks of a colossal greatness ; they appear r.ot to have belonged to the tomb of Mammia, which is of a proportion much too small; they remind us of scenical masks; and many learned men have regarded this place as the burying place of the players of this town.

The entrance to Pompeii is small, and would not announce a town of great importance. On the two sides there are arcades and porticoes, which form the entrance to the ways, or paths, for the foot soldiers ; they are continued on the side of the great road ; but that of Pompeii is

very narrow, being but tnree feet wide. This agrees with the breadth of the principal road, which is but ten or twel"° feet, though it is lengthened to a distance of fifteen or sixteen fathoms. In the ancient ground of the road may still be seen very obvious traces of tracks of dif- ferent carriages, with four feet distance between the wheels. At the entrance is raised a square pedestal, which appears to have supported a pretty large column.

In following this principal street the form of different shops may still be recognised, notwith- standing the ravages caused by time and the earthquake. To judge from a kind of balus- trade or wire lattice, which is seen at one of them, it was the shop of a dealer in perfumes and spirituous liquors ; below, there is a kind of pipe or excavation in marble, but it would be difficult to assign the use of it.

' There is often an emblem, over the door of a house, that determines the profession of its former owner. — The word ' Salve, ' on one, seems to denote that it was an inn, as we have, in our days, the sign of ' The Salutation.' In the outer brick-work of another is carved the phallus, a known object of religious adoration, in many countries, probably a symbol of creative power. The same device is found on the stucco of the inner court of another house, with this in- timation : Hie habitat felicitas ; a sufficient expla- nation perhaps of the character of its inhab- itants.

The volcanic matter covering Pompeii being little more than an accumulation of ashes, far different from the solid lava that covers Hercu- laneum, about a fourth part of the former has been cleared, and the

traveller finds himself in the midst of ancient buildings. It appears probable that many of the shops with which this street is bordered were taverns, in which they gave at the same time to eat, and in which they prepared warm drinks. In these buildings they have found only the most necessary utensils ; but all were very well worked ; there were lamps, candelabras, vessels, and kitchen utensils, weights, statues, different vessels of all sizes, in earth, in bronze, and in glass : many fragments of glass windows ; small idols, women's trinkets in gold and silver; mirrors, wax tablets for writing, sur- gical and musical instruments ; colors of all kinds; medals in gold, silver, and bronze; children's playthings, toothpicks, paint-boxes, even eatables, corn, fruits of different sorts, &c. They have found there neither statues nor busts of a great size ; the best paintings have not been found so much at Pompeii as at Herculaneurn.

The temple of his is without doubt the most remarkable of the ruins discovered at Pompeii. The columns with which it was surrounded are almost entirely preserved. The half of those which ornamented the peristyle have been broken, as the capitals and the pediment. The temple itself is almost entirely built with bricks, and on the outside covered with a very solid stucco. The orders are of a small proportion, which diminishes the effect the edifice would have had if it had been of a more imposing architecture. They have found in this temple all the instruments belonging to the religious ce-

remonies, and even the skeletons of priests, who had been surprised there, and surrounded by the showers of cinders in the middle of the occupations of their ministry. They show also their vestments, the cinders and coals upon the altars, the candelabras, many lamps, cisterns, vessels to hold the holy water, the paterae employed in libations, a kind of kettles to preserve the in- testines of the victims in ; cushions upon which they placed the statue of the goddess Isis, when they offered sacrifices to her ; the attributes of the divinity, with which the temple is every where ornamented, &c. Many of these vessels have the figure of an ilex, of an hippopotamus, or a lotus. The walls of the temple were orna- mented with paintings relative to the worship of Isis ; there have been found there, among others, the figures of priests in their habits; their vest- ment was of white linen, the heads of the of- ficiating priests were shaven, and their feet were covered with a fine and light lace. It appears that, in the sanctuary of this foreign divinity, they granted also places to other divinities, for there have been found there statues of Bacchus, Venus, and Priapus. All that were transportable of these different objects have been placed in the museum de Portici. The temple had the form of a long square, and was not covered. A covered gallery supported by columns surrounded the temple ; it served for a shelter in case of bad weather. In the middle was raised a small chapel, to which you are led by some steps, and which ap- pears to have been the

sanctuary of the god- dess. At the bottom was probably the place where they assembled those initiated, and on the side is another cell, in which the three statues of Venus, Bacchus, and Priapus, were united in one niche. The principal entrance to the temple was on the side of the street of Pompeii ; and on each side of the entrance was an altar, before a figure of the goddess, wrought in basso relievo. The grand altar upon which they sacri- ficed was three feet and a half high ; and there have been found there ashes and bones partly broken and burnt. The principal door of the interior sanc- tuary consisted of two wings ; they have found there still the brass hinges which have been carried to the museum de Portici. There has been found the skeleton of a priest upon this pave- ment near a marble table ; it appears that this priest had been surprised by the volcanic erup- tion at the moment he was going to eat fish, for in digging they have still found the relics dis- persed, and some vessels which were used to prepare this sort of food. We know, from Plu- tarch, that the priests of Isis might not live upon any thing but fish. The statue of the goddess in white marble was found in this sanctuary. It was placed upon a square base ; and is of a very agreeable style. Near it has been found a stone table, covered with hieroglyphics : the great altar on which they sacrificed is also of an elegant form. There are still to be found there different ornaments, different fragments of columns which decorated the sanctuary, masks of baked earth, which served, at the same time, as ornaments, and to collect the rain waters. Probably the roof of the gallery was ornamented with similar masks ; the open mouth served to give efflux to

the watd They have found there censers or acerrse, in thin iron, serving to burn the per- fumes.

Near the temple of Isis there was a spacious edifice, which, according to all appearance, has served for an apartment and place of arms to the Roman soldiers : which is the reason it has been called the soldiers' quarter. This edifice has least suffered from the earthquake, because it was low, and of a light construction.

In the quarter of the soldiery have been found almost all the walls, and nearly all the columns, entire. The form of this edifice is that of a long square, and it is surrounded by columns, and a covered gallery. This gallery communicated with several chambers or cells, which probably served as lodging rooms for the soldiers. The interior court, in length about twenty-three toises, and breadth seventeen, served probably for mili- tary exercises. The columns are of the Doric order : they have no base ; they are

in height eleven feet, and their diameter is eighteen inches. The gallery between the colonnade and the wall is thirteen feet seven inches wide. It served for a promenade, and, at the same time, to shelter the cells, in each of which were lodged, probably, four soldiers ; for in each there are four suits of armour. These cells were not of equal dimen- sions : all were very small, covered with stucco, ornamented with arabesque paintings and Mosaic pavements. They were shut by means of a fold- ing door, which opened on the inside. They re- ceived the light only by the door, and perhaps sometimes by an opening contrived in the ceiling. Among the armour which has been found there, there is, according to M. Hamilton, a helmet upon which is engraved the siege of Troy. These helmets were nearly similar to those of our ancient warriors in the times of chivalry, and were furnished with vizors. There is still found there a trumpet of brass, of a form rather singular ; six ivory pipes, fixed to the lower part, unite in one single mouth-piece : they have no holes to vary the tones, but the difference of their diameters would produce different sounds, which, joined to the sound of the trumpet, must have formed a military music, very noisy, although a little monotonous. The bronze chain which was attached to it has served, no doubt, to hang it upon the shoulder. The neatness of these cham- bers, the paintings with which they were orna- mented, the mosaic which formed their pavement, contrasts very much with the darkness which must have reigned there : but it appears that the soldiers, as well as the greater part of the in- habitants of Pompeii, passed almost the whole of their time upon the terraces and in the galleries, and returned to their chambers only to sleep, or, at the most, to take some repast. There are there also larger chambers, which are considered as the abode of the commander ; because at a little dis- tance have been found the supposed skeletons of some slaves, and of a horse loaded with clothes, stuffs, and valuable effects, which they endea- voured probably to. save. At some steps further there was a peristyle ornamented with columns, with fine capitals ; probably this was the side door. Very near another door leads, by means of four steps, to a place which was equally sur-

rounded with a covered gallery, supported by Ionic columns.

To the right is the entrance of a little theatre, which is believed to have been covered ; the steps only are seen, the rest is covered with ruins. Some travellers think that this edifice was an odeon. To the left of the door of the soldiers' quarter there are five little divisions, chambers, or cells, in one of which has been found a handmill ; and one of the others appears to have served as a prison to the soldiers that they had put in irons. They have found there several skeletons, which appear to have belonged to the unhappy soldiers who, at the time of the eruption, were confined here in prison, without the possibility of saving themselves. Their feet were placed upon a block of wood, and under- neath passed an iron which held them,

and which was fixed to the block by solid nails.

The construction of the houses of Pompeii shows that this town must have been built upon a very unequal surface : it appears that it had subterranean communications with Vesuvius t for, at the present time, a cellar, which has been found under the terrace of a small house, is filled in such a manner with suffocating ef fluvia that it is necessary to use every precaution on entering it. When this cellar was dis- covered there was found there the skeleton of a woman, stretched out by the side of a large vase, near a stove which heated, at the same time, two bathing rooms and a dark rotunda, lighted only by an opening contrived in the roof. This place is equally remarkable to the naturalist and the antiquary. The vase, by the side of which the skeleton is stretched upon a heap of cinders, is three feet and a half in diameter, and appears to have served for a bathing tub. The place where the skeleton is found, and its position, evince that the person has been suddenly thrown down, which was, without doubt, the effect of an asphixy produced by the noxious effluvia. It is owing to the counsels and solicitations of M. Hamilton that travellers find this skeleton still in the place and position it was discovered in ; it is certain that it makes here a much livelier impression than if it had been transported to the cabinet of Portici.

For further information on this subject see Antichita d'Ercolano, 9 vols. in folio; Bayardi Prodrome delle Antichita d'Ercolano; Notjzie del Scoprimento dell' antica Citta d'Ercolano; Vinuti Descrizione delle prime Scoperte dell' antica Citta d'Ercolano; Murr de Papyris Her- culanensibus ; Drummond and Walpole, Hercu- lanensia; Hayter's Letter and Report on the Herculaneum Manuscripts ; Philosophical Trans- actions for 1751, 1753, 1754, 1755, 1756; and Sir W.Hamilton, Campi Phlegraei, p. 58. Like- wise refer to the interesting article on the same subject in Dr. Brewster's Edinburgh Encyclo- paedia; La Lettre de Winckelmann au Comte de Briihl; La Relation des nouvelles Decou- vertes faites a Herculanum, by the same author ; also his Six Letters, written in Italian, and ad- dressed to M. Bianconi: — A French translation of these three works was published in Paris, in 1784, by M. Jansen. Fougeroux de Bondaroy, of the Royal Academy of Sciences, has published

POM

Recherches sur les Iluines d'Herculanum et sur les Lumikres qui peuvent en resulter, relative- ment a 1'Etat present des Sciences et des Arts, avec un Traite sur la Fabrique des Mosaiques, 12mo., Paris, 1770. Henri Math. August. Cra- mer put forth, at Halle, in 1773, Details pour servir k 1'Histoire des Decouvertes d' Hercula- nurn, avec une Preface de J. J. Rambach. Added to these, a little German work on the Ruins of

Herculanemn and Pompeii, 8vo Cooke's Pompeii, in folio, contains the best ac- count of the city that Ins yet been published.

POMPEY, surnamed the Great, or Cneius Pompeius Magnus, one of the greatest generals of ancient Rome, was the son of Cneius Pom- peius Strabo, and Lucilia. He early distin- guished himself in the field of battle, and fought with bravery and success under his father, whose courage and military prudence he imitated. In the beginning of his career, the beauty of his person gained him many admirers ; and, by dis- playing his oratory at the bar, he obtained un- bounded applause. During the civil war, be- tween Marius and Sylla, he joined the party of the latter; and, though then only twenty-three years of age, raised three legions for him. In his twenty-sixth year he conquered Sicily, then in the power of Marius ; and in forty days reco- vered all the territories of Africa, This rapid success astonished the Romans, and surprised even Sylla himself, who complimented him with the title of Great, and gave him a triumph, though at first he refused it. After Sylla's death, he supported himself against the remains of the Marian faction under Lepidus, and defeated them. He put an end to the war against Ser- torius in Spain, and obtained a second triumph, A. A. C. 73, Soon after he was made consul, when he restored the tribunitial power to its original dignity; and in forty days cleared the Mediterranean of pirates, where they had com- mitted dreadful depredations for many years, and had almost destroyed the naval power of Rome. He next conquered two of the most formidable enemies of Rome, Mithridates VII. of Pontus, and Tigranes, king of Armenia. After conquering the Albanians, Iberians, and some other nations scarcely known to the Romans, he received homage from twelve kings at once, and, entering Syria, pushed his conquests as far as the Red Sea ; subdued part of Arabia, made Judasa a Roman province, and returned to Italy with all the p'omp of an eastern conqueror. The Romans dreaded his approach, knowing his power, lest the bloody proscriptions of Marius and Sylla should be renewed. But he soon dis- pelled their fears, disbanded his army, and en- tered Rome as a private citizen. This modest behaviour increased his popularity immensely, and he was decreed another triumph : on which occasion he added 20,000 talents to the public treasury, and 55,000,000 of drachmae to the na- tional revenue. He soon after formed the first triumvirate, by uniting his interest with that of Caesar and Crassus ; which he strengthened still farther by marrying Julia, Caesar's daughter. But this powerful confederacy, which divided the then known world amongst them, was soon 'woken : Julia died, Crassus was killed, and a

civil broke out between Pompey and Csesar, wnerem tne latter was victorious. See PHAR- SALIA and ROME.

Pompey fled to Egypt, intending to take re- fuge with Ptolemy Auletes, whom he had placed on the throne. He landed at the harbour ot Pelusium ; and, on quitting his wife Cornelia and his son, repeated the two verses of Sopho- cles : ‘ The free man who seeks an asylum at the court of a king will meet with slavery and chains.’ He there found death. Scarcely had he landed on the shore, when Theodore, the rhe- torician of the isle of Chio, Septimius the cour- tier, and Achillas the eunuch, who commanded his troops, wishing for a victim to present to his conqueror, stabbed him with their swords. At the sight of the assassins, Pompey covered his face with his mantle, and died like a Roman. They cut off his head, and embalmed it, to offer it to Caesar, leaving his body naked on the shore. Philip, his freed man, collecting toge- ther, under favor of the night, the wreck of a boat, and stripping off his own cloak to cover the sad remains of his master, burnt them accord- ing to the custom. An old soldier, who had served under Pompey’s colors, came to mingle his tears with those of Philip, and to assist him in performing the last offices to the manes of his general.

POMPEY (Cneius and Sextus), sons of Pompey the Great, commanded a powerful army, when they lost their illustrious father. Julius Caesar pursued them into Spain, and defeated them at the battle of Munda, in which Cneius was slain, 45 B. C. Sextus made himself master of Sicily; but being defeated by Augustus and Lepidus, he fled to Asia with only seven ships, the re- mains of his fleet, which consisted of more than 350 ; and thence, unable to continue the war, he was obliged to retire to Lesbos, where renewing the war by raising an army, and seizing on some considerable cities, Marcus Titius, in the interest of Marc Antony, gave him battle, defeated him, took him prisoner, and basely put him to death, anno 35 B. C. See ROME.

POMPEY’S PILLAR. See ALEXANDRIA.

POM’PHOLYX, n. s.

Pompholyx is a white, light, and very friable sub- stance, found in crusts adhering to the domes of the furnaces, and to the covers of the large crucibles, in which brass is made either from a mixture of copper and lapis calaminaris, or of copper and zinc.

Hill.

POMPIGNAN (J. J. Le Franc), marquis of, a French poet, born at Montauban, in 1709. His tragedy of Dido is much admired, and his translation of Virgil’s Georgics is an elegant per- formance.

POMPILIUS (Numa), See NUMA.

POMPILUS, in ichthyology, a species of coryphoana.

POMPION. See CUCURBITA.

POMPONATIUS (Peter), an eminent Italian philosopher, bora at Mantua in 1462. He was of so small a stature that he was little better than a dwarf; yet he possessed an exalted ge- nius, and was considered as one of the greatest philosophers of his age. He taught philosophy, first at Padua, and afterwards at Bologna, with

the highest reputation. His book de Immortali- late Animae, published in 1516, made a great noise. He maintained that the immortality of the soul could not be proved by philosophical reasons; but solemnly declared his belief of it as an article of faith. This did not, however, prevent his adversaries from treating him as an atheist; and the monks procured his book, al- though he wrote several apologies for it, to be burnt at Venice. His sentiments upon incan- tations were also thought very dangerous. He shows in his book on this subject that he be- lieved nothing of magic and sorcery ; but lays a prodigious stress on occult virtues in certain men, by which they produced miraculous effects. Paul Jovius says that he died in 1525, aged sixty-three. He was three times married ; and had but one daughter, to whom he left a large sum of money. He used to apply himself to the solution of difficulties so very intensely that he frequently forgot to eat, drink, or sleep.

POMPONIUS ATTICUS. See ATTICUS.

POMPON tus L&TUS (Julius), an eminent Italian writer of the fifteenth century. He wrote an abridgment of the Lives of the Caesars, and se- veral other works.

POMPOSO, in music, in a distinguished, energetic, and full-toned manner of execution. Pompous style, figures of noisy sounds, signify- ing nothing. Galimatias pompeux.

POMUM, an apple ; a species of seed-vessel, composed of a succulent fleshy pulp ; in the middle of which is generally found a membra- nous capsule, with a number of cells, or cavities, for containing the seeds. Seed vessels of this kind have no external opening or valve. At the end opposite to the foot-stalk is frequently a small cavity, called by the gardeners the eye

of the fruit, and by botanists umbilicus, the navel, from its resemblance to the navel in animals. Gourd, cucumber, melon, pomegranate, pear, and apple, furnish instances of the fruit or seed- vessel in question.

POND, or

PON'DER, v. a. & v. n.

PON DERAL, adj.

PON'DERABLE,

PONDERA'TION, n. s.

PONDEROSITY,

PON'DEROUS, adj.

PON'DEROUSNESS, n. s. J ponderable is, capa- ble of being weighed : ponderation is the art of weighing : ponderosity and ponderousness mean weight ; gravity : ponderous, heavy ; weighty ; momentous; impressive; important.

Mary kept all these things, and pondered them in her heart. Luke ii. 19.

O my liege lord, the god of my life, Pleaseth you pond your suppliant's plaint.

Spenser.

This tempest will not give me leave to ponder Cn things would hurt me more.

Shakspeare. King Lear. If your more ponderous and settled project May suffer alteration, I'll point you Where ye shall have receiving shall become you.

Shakspeare.

Colours, popularities, and circumstances sway the ordinary judgmea;, not fully ponderin the matter.

Lat. pondero, pon- dus. Literally to weigh; weigh men- tally ; consider : think; muse; taking on : ponderal is, es- timated by weight :

Bacon.

It is more difficult to make gold, which is the most ponderous and materiate amongst metals of other metals less ponderous and materiate, than vice versft, to make silver of lead or quicksilver ; both which are more ponderous than silver. Id.

Imagination hath more force upon things living, than things inanimate ; and upon light and subtile motions, than upon motions vehement or ponder ma.

Id.

This ponder, that all nations of the earth . Shall in his seed be blessed. Milton's Paradise Lost.

His pond'rous shield behind him cast. Milton.

The bite of an asp will kill within an hour, yet the impression is scarce visible, and the poison com- municated not ponderable. Browne.

Crystal will sink in water, as carrying in its own bulk a greater ponderosity than the space in any water it doth occupy. Id.

The oil and spirit place themselves under or above one another, according as their ponderousness makes them swim or sink. Boyle.

Intent he seemed, And pond'ring future things of wond'rous weight.

Dryden. Whom pond'ring thus on human miseries,

When Venus saw her heav'nly sire bespoke. Id. Impatient of her load,

And lab'ring underneath the pond'rous god,

The more she strove to shake him from her breast,

With far superior force he pressed. Id.

Pressed with the pond'rous blow,

Down sinks the ship within the abyss below. Id.

Gold is remarkable for its admirable ductility and ponderosity, wherein it excels all other bodies.

Ray.

Upon laying a weight in one of the scales, in- scribed eternity, though I

threw in that of time, prosperity, affliction, wealth, and poverty, which seem very ponderous, they were not able to stir the opposite balance. Addison.

Thus did the money drachma in process of time decrease ; but all the while we may suppose the pon- deral drachma to have continued the same.

Arbuthnot.

While we perspire we absorb the outward air, and the quantity of perspired matter, found by pon- deration, is only the difference between that and the air imbibed. Id.

Because all the parts of an undistributed fluid are of equal gravity, or gradually placed according to the difference of it, any concretion that can be sup- posed to be naturally made in such a fluid must be all over of a similar gravity, or have the more pon- derous parts nearer to its basis. Bentley.

POND, n. s. Sax. pmban, to shut up. A small pool or lake of water ; a basin ; water not running or emitting any stream.

In the midst of all the place was a fair pond, whose shaking crystal was a perfect mirror to all the other beauties, so that it bare shew of two gardens.

Sidney.

Through bogs and mires, and oft through pond or

pool, There swallowed up. Milton's Paradise Lost.

Had marine bodies been found in only one place, it might have been suspected that the sea was. what the Caspian is, a great pond or lake, confined to one part. Woodward.

His building is a town,

His pond an ocean, his parterre a down. Pope. POND. In the Transactions of the Society of Arts, Manufactures, and Commerce, London, vol. viii. 1790, there is a short account of a ma- chine for draining ponds, without disturbing th£

mud It was communicated to the society, to- gether with a drawing and model of the machine, by lieutenant-colonel Dansey. The model was made from the description of a machine used by a gentleman near Taunton for many years before, for supplying a cascade in his pleasure-grounds. The colonel's regiment was then lying at Wind- sor ; and, thinking that the invention might be useful to supply the grand cascade at Virginia with water, he made the model, and presented it to king George III. who approved of it; incon- sequence of which, a penstock on that principle was constructed from the model of one of the ponds in the neighbourhood. The colonel thinks the machine may be useful in the hands of men of science, and applicable to silk, cotton, and other mills, where a steady and uniform velocity of water is wanted ; which might be regulated at pleasure, occasioning no current to disturb the mud or fish, as the stream constantly runs from the surface. He says he has often made the ex- periment by the model in a tub of water. We must refer to the above volume of the Society's Transactions for a figure of the machine.

Fish-ponds are no small improvement of watery and boggy lands, many of which are fit for no other use. In making a pond, its head should be at the lowest part of the ground, that the trench of the flood-gate or sluice, having a good fall, may not be too long in emptying. The best way of making the head secure is to drive in two or three rows of stakes about six feet long, at about four feet distance from each other, the whole length of the pond head, whereof the first row should be rammed at least about four feet deep. If the bottom is false, the foundation may be laid with quick-lime ; which, slaking, will make it as hard as a stone. Some lay a layer of lime, and another of earth dug out of the pond, among the piles and stakes ; and, when these are well co- vered, drive in others as they see occasion, ram- ming in the earth as before, till the pond-head be of the height designed. The dam should be made sloping on each side, leaving a waste to carry off the over-abundance of water in times of floods or rains; and, as to the depth of the pond, the deepest part need not exceed six feet, rising gradually in shoals towards the sides, for the fish to sun themselves, and lay their spawn. Gravelly and sandy bottoms, es- pecially the latter, are best for breeding ; and a fat soil with a white fat water, as the washings of hills, commons, streets, sinks, &c., is best for fattening all sorts of fish. For storing a pond, carp and to be preferred for their quick growth, and great increase, as breeding five or six times a-year. A pond of an acre, if it be a feeding and not a breeding one, will every year feed 200 carp of three years old, 300 of two years old, and 400 of a year old. Carp delight in ponds that have marie or clay bottoms, with plenty of weeds and grass, whereon they feed in the hot months. Ponds should be drained every three or four years, and the fish sorted. In breeding ones, the smaller ones are to be taken out, to store other ponds with ; leaving a good stock of females, at

least eight or nine years old, as they never breed before that age. In feeding ponds, it is best to keep them pretty nearly of a size. VOL. XVII.

PONDICHERRY, or PUDUCHEIU, a city on the sea coast of the Carnatic, once capital of the French possessions, and the most splendid European settlement in India. It stands on a sandy plain not far from the sea-shore, producing only palm-trees, millet, and few herbs ; but during the south-west monsoon, which is the season of naval warfare, it is to wind- ward, an advantage of which the French expe- rienced the benefit during the wars of the last century.

Pondicherry has few advantages as a com- mercial town, and when it ceased to be the capital of the French possessions fell into decay. In 1758 the French government, confiding in the great force sent out under M. Lally, ordered him to destroy and dismantle all the British fortifica- tions that might fall into his power; a heavy retribution followed when Pondicherry was taken by colonel Coote, in 1761. On this occasion the fortifications were levelled, and the ditch filled up.

It has been observed that the French power in India, though of short duration, was remark- ably brilliant while it lasted. It may be said to have commenced under the government of M. Dupleix in 1749, and was extinguished by the surrender of this place in 1761 : the beginning of the colony has a much earlier date, and has been thus given by Dr. Hamilton. In 1601 the French first adventured to India in two ships fitted out from St. Maloes, under the command of the Sieur Bardalieur, which were wrecked next year among the Maldives Isles. In 1604 Henry IV. incorporated the first French East India Com- pany. In 1672 the French, under M. Martin, purchased from the king of Visiapoor (Beja- poor) this village with a small tract adjacent, where he effected a settlement which soon be- came populous. In 1693 the Dutch took Pon- dicherry, which they retained until the peace of Ryswick, in 1697, when they were obliged to restore it with the fortifications greatly improved. In August 1748 admiral Boscawen besieged Pondicherry with an army of 3720 Europeans, 300 topasses, and 2000 sepoys ; and, on the 6th of October, was compelled to raise the siege, having lost in the course of it 1065 Europeans. The French garrison consisted of 1800 Euro- peans and 3000 sepoys. M. Dupleix acted as governor during this siege, having been appointed in 1 742 ; in 1 754 he was removed from the go- vernment.

Lally landed here on the 28th of February 1758, when an active war ensued between the French and British forces, which ended in th< total ruin of the former. Pondicherry surren- dered to the British army under colonel Coote on the 16th of January 1761, after a long and strict blockade. The total number of European military taken in the town,

including services attached to the troops, was 2072 ; the civil in- habits were 381 ; the artillery fit for service were 500 pieces of cannon, and 100 mortars and ho- witzers. The ammunition, arms, weapons, and military stores, were in equal abundance. At the peace of 1 763 it was restored to the French East India Company, with the fortifications in a very dilapidated condition ; but by great exer-

lions, and the skill of the French engineers, they were again strengthened. In October 1778 it surrendered a second time to the British un- der Sir Hector Monro, after a defence highly honorable to the governor M. de Bellecombe. The garrison now consisted of 3000 men, of whom 900 were Europeans ; the besieging army amounted to 10,500 men, of whom 1500 were Europeans. At the peace of 1783 it again de- volved to the French, but, on the breaking out of hostilities, surrendered to the British army on the 23d of August 1793. On this occasion the garrison consisted of 900 soldiers, and 1500 armed inhabitants.

At the peace of Amiens it was restored, the in- habitants being then estimated at 25,000, the re- venue at 40,000 pagodas per annum, and the ex- tent of sea coast five miles. On this event Buonaparte seems to have formed expectations of raising it to its ancient splendor, and sent out an establishment of great magnitude under general de Caen. Whatever were his plans they were all frustrated by the short duration of the peace, as Pondicherry was once more and finally occupied by the British in 1803; the French admiral Linois only escaping with his ships.

Travelling distance from Madras, 100 miles; from Seringapatam 260 ; from Hyderabad 452 ; from Delhi 1400; from Calcutta 1130; from Nagpoor 773 ; from Poonah 707.

PO'NENT, adj. Ital. ponente. Western.

Thwart of these, as fierce Forth rushed the levant and the ponent winds Eurus and Zephyr. Milton's Paradise Lost.

PO'NIARD, n. s. Fr. poignard ; Lat. pugio. A dagger; a short stabbing weapon.

She speaks poniards, and every word stabs.

Shakspeare.

Melpomene should be represented, in her right hand a naked poniard. Peacham on Drawing.

Poniards hand to hand

Be banished from the field, that none shall dare With shortened sword to stab in closer war.

Dryden.

She thought to stab herself, but then she had The dagger close at hand, which made it awk- ward—

For eastern stays are little made to pad, So that a poniard pierces if 'tis stuck hard.

Byron.

PONK, n. s. ' Of this word I know not the original,' says Johnson ; qu. PUNK, which see. A nocturnal spirit ; a hag.

Ne let the ponk, nor other evil sprights,

Ne let mischievous witches. Spenser.

PONS-DE-TOMMIERES (St.), a post-town in the department of Herault, France, and the principal place of a subprefecture, having an in- ferior court of justice, an agricultural society, and a communal college, with 5600 inhabitants. It is situated in a charming valley, surrounded by mountains on the right bank of the Jaur. The church and most of the houses are built of mar- ble, dug out of the quarries in the vicinity. The Jaur is supplied from a fine spring, which rises in the town under a lofty rock, and falls into a vast natural basin of considerable depth. On the right is a church built in the time of Charle- magne, which is in a good state of preservation ;

on the left, on the height, is a gothic tower, and the whole forms a most beautiful picture for the artist

The manufactures consist chiefly in cloths for the Levant trade, and caps ; there are also wool- spinning-mills, tanyard, and hydraulic saw-mills. There is a fine walk at the meeting of the roads to Castres and Salvetar. This town is seventy- six miles west of Montpelier, thirty-seven E. S.E. of

Castres, and 594 south of Paris, by Alby and Cahors.

PONT A BASCULE, is a bridge which is sup- ported by an axle-tree that runs through its cen- tre, and is lifted up on each side as occasion requires. Pont a coulisse, a sliding or shifting bridge. This bridge is used for the purpose of conveying troops, on foot, across a fosse or a river of moderate breadth. It must be very light and portable ; constructed with boards, and mea- suring about six feet in breadth. The planks are numbered, so that the instant it is found necessary to effect a passage, they may be put together by means of running grooves. When the planks are thus arranged, the pontoneers, to whom these matters are always entrusted, throw two thick beams across the fosse or river, so as to be parallel to each other, and about five feet asunder, to allow the floor or platform half a foot on each side. Small iron wheels or casters are fixed underneath the two sides of the floor or platform, in such a manner that the whole may be instantly slided into the deep grooves that have been previously made in the transverse beams. This construction is extremely simple, and very practicable in war. The sliding bridges may also be used to advantage in crossing rivers even of large dimensions. They are then double, and united in the middle by means of two piles, or strong stakes of wood, driven into the bed of the river, and upon which the transverse beams can rest from each side. ‘ It is here necessary to observe,’ says major James, ‘ that in a war of posts, and in a broken and mountainous country, an ingenious and active officer may, at the head of a body of pontoneers, be of the greatest ser- vice to a general, and even sometimes determine the issue of a battle. When the Austrian and French armies first met, near the memorable vil- lage of Marengo, a large detachment of Buona- parte’s army would have been drowned in the Scrivia, had it not been for the presence of mind and the activity of the officer who commanded a body of pontoneers. The republican troops, having been thrown into disorder, were flying in all directions ; and, as the Scrivia had been con- siderably swollen by the rain which fell the pre- ceding night, they would have been cut off: but ponts a coulisse, or sliding bridges, with the as- sistance of some boats, were hastily established, and they not only escaped the pursuit of the victorious Austrians, but added to the strength of the French army, which had also given way.’ For the particulars of this transaction see Ber- th ier’s Report.

PON’TAGE, n. s. Lat. pons, ponlis, a bridge. Duty paid for the reparation of bridges.

In right of the church, they were formerly by the common law discharged from pontage and murage.

Ay life.

PONT-A-MOUSSON, a post-town of the de- partment of the Meurthe, France, the chief place of a canton in the arrondissement of Nancy, containing 7000 inhabitants. It stands at the foot of Mount Mousson, in a fine vale surrounded with fruitful hills, on the Moselle River, which divides it into two parts ; that on the left bank is large, well built, and airy, and has a beautiful public square surrounded by arcades. In the neighbourhood there are two mineral springs of a chalybeate quality, which are held in some es- timation. This is the native place of marshal Du- roc, who died on the field of honor on the 23d of May, 1813. Here are manufactures of coarse cloth, caps, pipes, earthenware, and chamois leather ; besides an important factory for the making of beet-root sugar, some dye-houses, tan-yards, &c. The trade consists in grain, wine, brandy, vegetables, wood, fir-planks, &c. This town is situated twenty-one miles N. N.W. of Nancy, and twenty-two south of Metz.

PONTARLIER, a post-town, and the chief place of an arrondissement of the same name, in the department of the Doubs, France, hav- ing a lower court of judicature and a com- munal college, with 4200 inhabitants. This town stands pleasantly on the river Doubs, in the midst of the Jura mountains ; it is regularly built, the streets are clean and airy, and the style of the houses very elegant. Situated on the frontiers of the kingdom, at a short dis- tance from the most convenient pass into Swit- zerland, it is the first mart for commerce between this republic and France. The entrance to this pass is much frequented, and defended by a castle built on an almost inaccessible rock, cal- led the fort of Joux. The manufactures of the place consist of wooden utensils, scythes, steel goods, &c. They have also forges, flatting mills, refining and blast furnaces, and hydraulic saw- mills. Their trade is chiefly in corn, wine, brandy, grocery, butter, cheese, horses, cattle, marble, gypsum, flint, turf, 8tc. The fine cheese called Grayere cheese is made in the neighbour- ing mountains. Pontarlier is forty-five miles south-east of Besancon, thirty east of Salins, sixty north-east of Lous-le-Saulnier, and 339 south-east of Paris.

PONTANUS (John Jovian), a learned Spa- nish historian, born in 1426. He was preceptor and secretary to Alphonsus V. king of Arragon. He wrote the History of the Wars of Ferdinand I. and John of Anjou ; and died in 1503, aged seventy-seven.

PONTANUS or DUPONT (Peter), a learned grammarian of Bruges, who flourished in the beginning of the sixteenth century ; and, though he lost his sight in his thirteenth year, acquired a high degree of erudition. He taught the Belles Lettres at Paris with great reputation, and pub- lished several valuable works.

PONT-AUDENIER, a post-town, and the principal place of an arrondissement of the same name in the department of the Eure, France, having an inferior court of justice, and a cham- ber of commerce, with about 5500 inhabitants. It is pleasantly situated in a fertile country, at the foot of a mountain, and near some beautiful meadows, on the left bank of the Rille, which is

navigable here and forms a smal. port. It is sur- rounded with walls and ditches filled with run- ning water, and is generally well built; the streets are fine, and the public places very plea- sant. The manufactures consist of printed linens, caps, and glue; there are cotton spinning- mills, tan-yards, producing highly esteemed leather, paper-mills, &c., and a trade is carried on in these articles, as well as cotton, velvet, flax, elder, corn, and cattle. It is fifty-one miles north-west of Evreux, thirty-six E. N. E. of Rouen, fifteen E.S.E. of Honfleur, and 121 north-west of Paris.

PONCHARTRAIN, a lake of Louisiana, United States, about thirty-five miles long from east to west, twenty-five broad, and in general from twelve to twenty feet deep. It communi- cates with Lake Borgne on the south-east, Lake Maurepas on the north-west, and the city of New Orleans by Bayou St. John on the south. It is surrounded by marshes, and the landing, on account of the mud, is in many places difficult.

PONT DE BATEAUX, French, is a bridge of boats. When a river is either too broad, too deep, or too rapid, to allow stone or pile-work to be used, a number of boats or barges must be moored and lashed together, at given distances, over the whole breadth of the river ; and, when this has been done, a solid floor or platform is constructed on them, for the passage of cannons, waggons, &c. Pont a fleur d'eau, French, a bridge which lies upon the surface of the water. It is generally made for the purpose of keeping up a communication with the different works in a fortified place, when the ditches are filled with water. The bridge is raised upon wooden trestles.

PONT DE FASCINES, French, a bridge made of hurdles or fascines. It is generally six toises in breadth, and is used at sieges when the fosses are filled with water. When the besiegers have resolved to storm a breach, the approach to which is interrupted by water, they throw one, two, or three beds of fascines across, fastened together and kept steady by means of wooden piles. Stones and earth are next thrown upon the fascines, to keep them steady in the water. An epaulement is then made towards the side of the revetement of the place, and the bridge is finally constructed with thick planks. The epaulement serves to protect the workmen or ar- tificers from

the fire of the besieged.

PONT DE CORDES, French, a bridge of ropes, or a bridge constructed with ropes A French writer says, ‘ I have not been able to discover, in any work, not even in the Dictionnaire Rai- sonne des Sciences, a description of this bridge; yet it is well known that by the means of this construction (which owes its origin to two Cata- lonian priests, and to which we are indebted for the knowledge of a passage over the Legra) the count d’Harcourt gained a victory over the Spaniards in the plain of Lorens, on the 22d of June, 1745. These bridges are made with strong ropes, twisted and interwoven together; and are extremely useful in passing deep ravines and hollows.

PONT D’oa, French, in military affairs, is a figurative expression which the French use when they suffer an enemy whom they have de-

feated to retire without molestation. Hence, faire un pont d’or a son ennemi, to suffer your enemy to escape. Pont -tournant is a moveable bridge, of the nature of a draw-bridge, with this difference, that it turns upon a pivot, and goes entirely round. Pont de joncs is a bridge made up of large trusses of lushes or willows that grow in marshy spots, or upon the banks of a river. These are bound together, and, with planks thrown upon them, serve to afford a pas- sage over fosses, &c. Pont de sortie, a sally-bridge. Pont dormant, a wooden bridge, gene- rally laid upon the fosse of a fortified town, for the purpose of maintaining a constant communi- cation between the main body of the place and the outworks and country round. These bridges are not thrown entirely across the fosses, but terminate within twelve or fifteen feet of the revetement ; the space thence is supplied by draw-bridges. When the pont dormant is very long a swing bridge is constructed in the centre of it. When the ditches are wet, and so con- stantly supplied with water that the depth is generally the same, bridges of boats may be used instead of ponts dormans. And, in cases of attack, floating bridges may be substituted in lieu of both.

PONT-DU-GARD, about sixteen miles north- east of Nimes on the road to Avignon, France, »ne of the finest remains of ancient architecture in the world, is situated in a narrow defile, where the Gard rolls its impetuous torrent in the midst of a silent solitude. It is a Roman aqueduct, intended to convey water from the fountain of Eu- rus, and composed of three rows of

arcades ris- ing one over another along an extent of 600 feet, and 160 feet high. The first row stretches over the whole breadth of the valley, and consists of six arches, under one of which flows the Garden ; the second is formed of eleven arches ; the third has thirty-five arches, and supports the canal or aqueduct, which is six feet broad by as many in depth. It is constructed in the Tuscan style, with astonishing solidity and admirable light- ness ; the enormous masses of stone being sup- ported merely by their own weight and exact equilibrium, without the least cement : with the exception of the upper extremities, it is in such perfect preservation that it might comparatively be accounted of recent erection.

This amazing monument of the genius of the Romans is supported by two mountains, which it unites for the purpose of continuing the pas- sage of the waters. The sides and bottom of the aqueduct are covered with a cement extremely well preserved, even in the subterraneous parts, where it is entirely laid on the rock. It winds its course over mountains and rocks for full thirty miles, branching off into three conduits, one of which conveys the water to the amphithea- tre at Nimes, the second to the fountain, and the third to the private houses. One of these chan- nels is to be seen, almost entire, in a private en- closure. Besides these, there are some smaller ones, that .convey the water to several country- houses in the neighbourhood. That part which is in the best state of preservation is between the Pont-du-Gard and Nimes, and which, from its running under ground, has suffered less dilapi-

dation than others. You may go from one end to the other of the Pont-du-Gard, climbing up the declivity on the right bank of the Garden, to reach the southern extremity of the aqueduct, at the place where it loses itself in the mountains. A modern bridge, forming the passage of the great road, abuts on the aqueduct, which it sup- ports and by which it is supported in its turn.

PONTE-CORVO, a town of the papal state, the capital of a small delegation, situated on the Garigliano. It is the see of a bishop, united to that of Aquino; and has a castle, cathedral, six churches, and 5200 inhabitants. Bernadotte, now king of Sweden, formerly bore the title of its prince.

PONTEDERIA, in botany, a genus of the monogynia order, belonging to the hexandria class of plants ; and in the natural method rank- ing under the sixth order, ensata. The corolla is monopetalous, sexfid, bilabiate; there are three stamina inserted into the top, and three into the tube of the corolla ; the capsule is bi- locular.

PONTEFRACT, or POMFRET, an ancient borough and market town, in the

*liberty of the honor and parish of this name, in the wapentake of Osgoldcross, and West Riding of Yorkshire, 173 miles from London, forty-seven from Man- chester, twenty-four from York, thirteen from Leeds, and nine from Wakefield. The towi. stands on a fine eminence, and is approached on every side by a considerable ascent, a little be- low the conflux of the rivers Aire and Calder. Authors disagree greatly respecting the deriva tion of its name ; by some it is stated to have obtained the appellation ' Pomfret' from Porho ferre, on account of its fertile soil, but Camden asserts that it was changed by the Romans to * Pontefract.' The town is famous in history for its castle, in which king Richard II. was mur- dered or starved to death, and where the earls Rivers and Grey, Sir Thomas Vaughan and Sir Richard Hawse, were, by the machinations of the duke of Gloucester, afterwards Richard III., basely murdered. This celebrated castle was built about the year 1078 or 1080 ; and situated on an elevated rock, commanding extensive views of the surrounding scenery, and affording to the town, from its strength, every protection during the time of the civil wars. It occupied a space of more than six acres, and was considered the largest in England ; few remains of it are now to be seen.*

Pontefract was a burgh in the time of Edward the Confessor, from which period it has sent two members to parliament. The franchise is in the inhabitant householders. The government of the town is in a body corporate, consisting of a mayor, recorder, and twelve aldermen (all of whom are in the commission of the peace), with a common council consisting of twenty four bur gesses. The quarter-sessions for the borough are held in the court-house of the town-hall, a hand- some modern building, erected at the joint ex- pense of the corporation and the riding ; in this building is the savings' bank, and also the rota- tion office, where the magistrates hold their weekly sittings for the despatch of the magisterial business of the borough. At the top of the beast-market is a stately court-house, erected a

few years since by the riding; in this building the sessions of the peace, for the west riding, are held annually in Easter week. The parish church, dedicated to St. Giles, is of high an- tiquity, being known as early as the reign of Henry I. in the charier of Hugh Delaval; it is small, and with few exterior beauties; but the interior yields to none in neatness : the living is a vicarage in the patronage of the king. Besides the parish church, the other places of worship are a chapel each belonging to the Methodists, Calvinists,

Roman Catholics, and Friends. There are various charity hospitals, and the king's free grammar school, founded and endowed by Ed- ward VI., and a charity school founded by the earl of Strafford in 1695. The places of amuse- ment are the assembly room, a neat theatre, and an excellent race-ground, about a mile from the town, where races take ptace annually, and which are respectably and numerously attended.

Pontefract never has been noted as a manu- facturing town, but it possesses an excellent lo- cal trade, which is much advanced by the highly respectable neighbourhood, studded with many fine seats of the nobles, and opulent individuals. The vicinage of the town is also famed for its gardens and nurseries, which are very extensive, and great quantities of vegetables, &c., are car- ried hence for the supply of the Leeds, Wake- tield, and other markets. Liquorice is also grown about here to a considerable extent. The well supplied market is on Saturday. The mar- ket-cross, called St. Oswald's Cross, was pulled down in 1735, and a handsome dome erected in its place, supported by a colonnade of Doric pillars. Fairs, on the Saturday before Palm- Sunday, and the Saturday after St. Andrew's Day, both for cattle. Here are also small fairs for cattle every fortnight, on the Saturday after those at York.

PONTICELLO, in music, an Italian expres- sion for the bridge of a violoncello, violin, &c.

PONTIFEX. Lat. From pans, a bridge, •aid. facio, to make; q. d. a bridge-builder. A priest, or chief priest, as well as an overseer of bridges, the latter office being entrusted to the chief priests among the ancient Romans. See PONTIFF.

PONTIFF, n. ». ˆ Fr. pontife ;

POJJTIF'ICAL, adj. & n. s. t Lat. pontij'ex. A

PONTIFICATE, n. s. £ priest ; a high

PONTIFI'CIAN. J priest ; the pope :

pontifical is, belonging to a pontiff; splendid ; magnificent; a book of ecclesiastical ceremonies : pontificate, the state or quality of a pontiff; the popedom : pontifician, a papist.

Thus did I keep my person fresh and new,

My presence, like a robe pontifical,

Ne'er seen, but wondered it.

Shakspeare. Henry IV.

It were not amiss to answer by a herald the next pontifical attempt, rather sending defiance than pub- lishing answers. Raleigh.

Livy relates, that there were found two coffins, whereof the one contained the body of Numa, and the other his books of ceremonies, and the discipline of the pontiffs. Bacon.

Many other doctors, both pontijicians and of the reformed church, maintain that God sanctified the seventh dav. M'/me.

By the pontifical, no altar is to be consecrated without reliques. Stillingjieei.

What the Greek and Latin churches did, may be seen in pontificals, containing the forms for consecra- tions. South.

He turned hermit in the view of being advanced to the pontificate. Addison.

Painting, sculpture, and architecture may all re- cover themselves under the present pontificate, if the wars of Italy will give them leave. Id.

The pontifical authority is as much superior to the regal as the sun is greater than the moon. Baker.

PONTIFF, or high-priest, Lat. pontifex, a per- son who has the superintendance and direction of divine worship, as the offering of sacrifices and other religious solemnities. The Romans had a college of pontiffs; and over these a sovereign pontiff, or pontifex maximus, insti- tuted by Numa, whose function was to prescribe the ceremonies each god was to be worshipped withal, compose the rituals, direct the vestals, and for a good while to perform the business of augury, till, on some superstitious occasion, he was prohibited intermeddling therewith. The office of the college of pontiffs was to assist the high-priest in giving judgment in all causes re- lating to religion, enquiring into the lives and manners of the inferior priests, and punishing them if they saw occasion, &c. The Jews too had their pontiffs; and, among the Romanists, the pope is still styled the sovereign pontiff.

PONTIF'ICAL, adj. \ Lat. pans and facut.

PON'TIFICE, n. s. J Relating to bridge-build- ing: bridge work.

Now had they brought the work by wondrous art Pontifical, a ridge of pendant rock O'er the vexed abyss. Milton's Paradise Lost.

He, at the brink of Chaos, near the foot

Of this new wondrous pontijice, unhoped

Met his offspring dear. Id.

PONTIFICATE is used for the state or dignity of a pontiff or high-priest ; but more particularly, in modern writers, for the reign of a pope.

PONTINA LACUS, PONTINE LAKE, or PON- TINE MARSHES, a lake or marshes of Italy, in the country of the Volsci, through which the great Appian road passed. Travellers were con- veyed in boats, drawn by mules, along the canal that ran from Appii Forum to Terracina. From its stagnant waters the air had become so noxious that travellers had long avoided passing near it, till pope Pius VI., at great expense, drained the lake and the marshes, and made a most excellent road here. It is still, however, very unhealthy, and all travellers are advised to pass it, if possi- ble, without sleeping, or stopping longer than is necessary to bait or change horses. See Pius VI.

PONTINUS, in ancient geography, a moun- tain and river of Argolis. Hor. Sat. v. 9. Lucan Hi. 85.

PONTON, n. s. Fr. ponton. A floating bridge.

The black prince passed many a river without the help of pontons. Spectator.

Ponton is a floating bridge or invention to pass over water : it is made of two great boats placed at some distance from one another, both planked over, as is the interval between 'hem, with rails on their sides ; the whole so strongly built as to carry over horse and cannon. Military Dictionary.

PONTON, or PONTOON, a kind of flat-bottomed boat, whose carcass of wood is lined, within and without, with tin, serving to lay bridges over rivers for the artillery and army to march across. The French pontoons, and those of most other powers, are made of copper on the outside: though they cost more at first, yet they last much longer than those of tin ; and, when worn out, the copper sells nearly for as much as it cost at first; but, when ours are rendered useless, they sell for nothing. Our pontoons are twenty-one feet six inches long at top, and seventeen feet two inches at bottom, four feet nine inches broad, and depth within two feet three inches.

The common pontoons will support a weight of 4000 or 5000 pounds. General Congreve's wooden pontoons are twenty-six feet long at top, twenty-three at bottom, two feet eight inches deep, and two feet three inches wide.

The PONTOON-CARRIAGE is made with two wheels only, and two long side-pieces, whose fore-ends are supported by a limber. It serves to carry the pontoon-boards, cross timbers, anchors, and every other thing necessary for making a bridge.

A PONTOON-BRIDGE is made of pontoons, slipped into the water, and placed about five or six feet asunder; each fastened with an anchor, when the river has a strong current, or to a strong rope that goes across the river, running through the rings of the pontoons. Each boat has an anchor, cable, baulks, and chests. The baulks are about five or six inches square, and twenty- two feet eight inches long. The chests are boards joined together by wooden bars, about three feet broad, and twelve feet long. The baulks are laid across the pontoons at some dis- tance from one another, and the chests upon them joined close. One gang board twenty-two feet long, one foot wide, and two inches and a half thick.

PONTOPPIDAN (Erick), a Danish divine, born in the isle of Fulinen, in 1616. He was made bishop of Drontheim in Norway, and pub- lished several learned works, particularly a Grammar of the Danish Language. He died in 1678, aged sixty-two.

PONTOPPIDAN (Erick), a Danish historian, grand-nephew of the preceding, who became bishop of Bergen in Norway. He wrote, 1. A History of Norway ; 2. A History of the Refor- mation in Denmark ; and several other w orks.

PONT-ST.-ESPRIT, a small post-town of the department of the Gard, France, the chief place of a canton in the arrondissement of Uzes, con- taining rather more than 5000 inhabitants, stands on the right bank of the Rhone, and has a very convenient port. In general it is badly built, consisting of a few narrow and dirty streets. It is defended by an ancient citadel built by Louis XIII., to restrain the protestants. The town is remarkable chiefly for a bridge built over the Rhone of amazing boldness, length, and solidity ; it is composed of twenty-six arches, nineteen of which are large and seven small ; its length is 420 feet, and its breadth seventeen. It describes in its course several windings, owing to the diffi- culty that was found in laying the foundations. Commenced in 1265, under the reign of St.

Louis, it was finished in 1309 under that of Philip the Fair. The Rhone is in

this place ex- tremely rapid, and the currents, which set in front of the arches, draw the boats through with the swiftness of a dart. There is a trade carried on here in wines, oils, fruit, silk, &c., and con- siderable markets are held on Tuesday and Sa- turday in every week. It is forty miles north- east of Uzes, and twenty-one north-west of Orange.

PONTUS, an ancient kingdom of Asia, origi- nally a part of Cappadocia ; bounded on the east by Colchis, on the west by the river Halys, on the north by the Euxine Sea, and on the south by Armenia Minor. Some derive the name of Pontus from the neighbouring sea, the Pontus Euxinus ; others from a king named Pontus, who imparted his name both to the country and the sea : but Bochart d-educes it from the Phoa- nician word botno, signifying a filberd, as if that nut abounded remarkably in this place. But this derivation seems to be very far fetched ; and the common opinion, that the country derived its name from the sea, seems by far the most probable. The kingdom was divided into three parts, viz. 1. Pontus Cappadocius extending from Pontus Polemoniacus to Colchis, having Armenia Minor and the upper stream of the Euphrates for its southern boundary. 2. Pontus Galaticus, extending from the river Halys to the Thermodon. 3. Pontus Polemoniacus, from the Thermodon to the borders of Pontus Cappado- cius.

This country and the adjacent provinces were, in different periods, under the dominion of the Assyrians, Medes, and Persians; the last 01 whom divided Cappadocia into satrapies or go- vernments. This regulation was effected in the reign of Darius the son of Hystaspes, and has been regarded as the date of the kingdom. The first king of this country whom we find mention- ed in history is Artabazus, who had the crown bestowed on him by Darius Hystaspis. The next was Rhodobates, who reigned in the time of Darius Nothus. After him came Mithridates, who, refusing to pay the usual tribute to the Persians, was defeated by Artaxerxes Mnemon ; but a peace was soon after concluded by the mediation of Tissaphernes. Besides this, we hear nothing of him, farther than that he was treacherously taken prisoner by Clearchus, after- wards tyrant of Heraclea, and obliged to pay a large sum for his ransom. Mithridates I. was succeeded by Ariobarzanes, who being appointed by Artaxerxes governor of Lydia, Ionia, and Phrygia, employed the forces that were under his care in the extending of his own dominions, and subduing those of his natural prince. The king of Persia sent Autophrodates against him ; but Ariobarzanes, having with great promises pre- vailed on Agesilaus and Timothaeus the Athenian to come to his assistance, obliged Autophrodates to retire. He then rewarded Agesilaus with a great sum of money, and bestowed on Timo- thseus the cities of Sestos and Abydos, which he had lately taken from the Persians. He used his utmost endeavours to reconcile the Lacedemo- nians and Thebans ; but, not being able to bring the latter to any reasonable terms, he assisted the

Lacedemonians with vast sums of money. The Athenians showed so much respect for this prince, that they not only made him free of their city, but granted both him and his children whatever they asked of them. He was murdered in the 28th year of his reign by one Mithridates, about the time that Alexander the Great invaded Asia ; so t.iat Pontus for a time fell under the power of the Macedonians.

In the reign of Antigonus, Mithridates the son of Ariobarzanes shook off the Macedonian

nence. The king now began to put in execution his schemes of conquest. He began with Paph- lagonia, which the Romans had declared a free state. This he easily reduced, and divided be- tween himself and his ally, Nicomedes king of Bithynia. The Romans remonstrated ; but Mithridates, disregarding them, invaded and re- duced Galatia, and then turned his eyes on Cap- padocia. That kingdom was then held by Aria- rathes, a favorite of the Romans, who had married a sister of Mithridates; still he did not

yoke. Under those of Mithridates III., Ariobar- scruple to hire an assassin to despatch him while

zanes II., and Mithridates IV., the immediate successors of Mithridates II., nothing remarkable happened. But Mithridates V. made war on the inhabitants of Sinope, a city on the coast of Paphlagonia, and became master of all the ad- jacent places ; but finding the peninsula on which Sinope stood well fortified and garrisoned by the inhabitants, and their allies the Rhodians, he abandoned the enterprise. He afterwards proved a great friend to the Rhodians. He en- tered also into a strict alliance with Antiochus the Great, who married one of his daughters.

After the death of Mithridates V. his son Pharnaces I. invaded the territories of Eumenes, the great ally of the Romans, when the latter sent ambassadors to Rome, and entered into an alliance with Ariarathes king of Cappadocia. Pharnaces, in his turn, also sent ambassadors to Rome, complaining of Eumenes and Ariarathes; upon which some Romans were sent into Asia to arbitrate between them and Pharnaces ; but the latter, being disappointed of assistance from Seleucus king of Syria, whom the Romans would not allow to join him, was at last forced to sue for peace. Mithridates, king of Armenia, who had joined Pharnaces, was obliged to pay 300 talents to Ariarathes for having assisted his enemy, contrary to a treaty then subsisting be- tween them. Soon after Pharnaces died, and left

the kingdom to his son Mithridates VI., more weakened by this peace than by the most destructive war. The new king entered into an alliance with the Romans, and proved such a faithful friend that he was rewarded by the senate with Phrygia Minor, and honored with the title of the friend and ally of the people of Rome. After a long and prosperous reign he was murdered by some of his intimate acquaintance, and was succeeded by his son Mithridates VII., sur- named the Great.

In his youth this young prince took care to inure himself to hardships, passing whole months in the open air, employed in the exercise of hunting, and often taking his rest amidst the fro- zen snow. He married his sister Laodice, by whom he had a son named Pharnaces. After this he took a journey through many different kingdoms of Asia, and learned their different languages, of which he is said to have spoken twenty-two. During the three years which he spent in this country, a report being spread that he was dead, his wife Laodice had a son by one of her courtiers. When her husband returned, she pre- sented him with a poisoned bowl ; but Mithridates had accustomed himself to take poison, so that it only hastened the destruction of his wife, and all those who had been accessory to her inconti-

his kingdom was invaded by Nicomedes of Bi- thynia. The particulars of the tragedy that fol- lowed the succession and death of his uncle, the villanous attempts of Mithridates to get his own son made king of Cappadocia, with the equally villanous measures taken by queen Laodice and Nicomedes of Bithynia to disappoint him, with the appeal of all parties to the Romans, and their decision, are related under CAPPADOCIA, which see. The election of Ariobarzanes by the Cappadocians now followed his expulsion by Tigranes, and restoration by Sylla: and these transactions completely involved Mithridates with the Romans.

The Mithridaticum Bellum of the Roman his- torians was the sequel ; one of the longest and most celebrated wars ever carried on by the Ro- mans against a foreign power. The ambition of Mithridates, from whom it receives its name, may be called the cause and origin of it. Three Roman officers, L. Cassius, the proconsul, M. Aquilius, and Q. Oppius, at first opposed Mith- ridates with the troops of Bithynia, Cappadocia, Paphlagonia, and Gallo-Graecia. The army of these provinces, together with the Roman sol- diers in Asia, amounted to 70,000 men, and 6000 horse. The forces of the king of Pontus were greatly superior; he led 250,000 foot, 40,000 horse, and 130 armed chariots, into the field of battle, under the command of Neoptole- mus and Archelaus. His fleet consisted of 400 ships of war, well manned and provisioned. In an engagement the king of Pontus obtained the victory, and dispersed the Roman forces in Asia. He became master of the greatest part of Asia, and

the Hellespont submitted to his power. Two of the Roman generals were taken, and M. Aquilius, who was principally entrusted with the conduct of the war, was carried about in Asia, and exposed to the ridicule and insults of the populace, and at last put to death by Mithridates, who ordered melted gold to be poured down his throat, as a slur upon the avidity of the Romans. The conqueror took every possible advantage ; he subdued all the islands of the ./Egean Sea, and, though Rhodes refused to submit to his power, yet all Greece was soon over-run by his general Archelaus, and made tributary to the kingdom of Pontus. Meanwhile the Romans incensed against Mithridates on account of his perfidy, and of his cruelty in massacring 80,000 of their countrymen in one day all over Asia, ap- pointed Sylla to march into the east. Sylla landed in Greece, where the inhabitants readily acknowledged his power; but Athens shut, her gates against the Roman commander, and Ar- chelaus, who defended it, defeated, with the

greatest courage, all the efforts and operations of the enemy. This spirited defence was of short duration. Archelaus retreated into Boeotia, where Sylla soon followed him. The two hos- tile armies drew up in a line of battle near Chaeronea, and the Romans obtained the victory, and, of the almost innumerable forces of the Asiatics, no more than 10,000 escaped.

Another battle in Thessaly, near Orchomenos proved equally fatal to the king of Pontus. Dorylaus, one of his generals, was defeated and he soon after sued for peace. Sylla listened to the terms of accommodation, as his presence at Rome was now become necessary to quell the commotions and cabals which his enemies had raised against him. He pledged himself to the king of Pontus to confirm him in the possession of his dominions, and to procure him the title of friend and ally of Rome ; and Mithridates con- sented to relinquish Asia and Paphlagonia, to deliver Cappadocia to Ariobarzanes, and Bithy- nia to Nicomedes, and to pay to the Romans 2000 talents to defray the expenses of the war, and to deliver into their hands seventy galleys with all their rigging. Though Mithridates seem- ed to have re-established peace in his dominions, yet Fimbria, whose sentiments were contrary to those of Sylla, and who made himself master of the army of Asia by intrigue and oppression, kept him under continual alarms, and rendered ihe existence of his power precarious. Sylla, who had returned from Greece to ratify the treaty which had been made with Mithridates, rid the world of the tyrannical Fimbria ; and the king of Pontus, awed by the resolution and determined firmness of his adversary, agreed to the condi- tions, though with reluctance. The hostile pre- parations of Mithridates,

which continued in the time of peace, became suspected by the Romans, and Muraena, who was left as governor of Asia in Sylla's absence, and who wished to make himself known by some conspicuous action, be- gan hostilities by taking Comana and plunder- ing the temple of Bellona. Mithridates did not oppose him, but he complained of this breach of peace before the Roman senate. Muraena was publicly reprimanded; but, as he did not cease from hostilities, it was easily understood that he acted by the private directions of the Roman people. The king upon this marched against him, and a battle was fought, in which both the adversaries claimed the victory. This was the last blow which the king of Pontus received in this war, which is called the second Mithridatic war, and which continued for about three years. Sylla, at that time, was made perpetual dictator at Rome, and he commanded Mursena to retire from the kingdom of Mithridates. The death of Sylla changed the face of affairs ; the treaty of peace between the king of Pontus and the Ro- mans, which had never been committed to writ- ing, demanded frequent explanations, and Mith- ridates at last threw off the mask of friendship, and declared war. Nicomedes, at his death, left his kingdom to the Romans, but Mithridates disputed their right to the possessions of the de- ceased monarch, and entered the field with 120,000 men, besides a fleet of 400 ships in his ports, 16.000 horsemen to follow him, and 100

chariots armed with scythes. Lucullus was ap- pointed over Asia, and entrusted with the care of the Mithridatic war. His valor and prudence showed his merit; and Mithridates, in his vain attempts to take Cyzicum, lost no less than 300,000 men. Success continually attended the Roman arms. The king of Pontus was defeated in several bloody engagements, and with diffi- culty saved his life, and retired to his son-in-law Tigranes, king of Armenia. Lucullus pursued him, and, when his applications for the person of the fugitive monarch had been despised by Ti- granes, he marched to the capital of Armenia, and terrified, by his sudden approach, the nu- merous forces of the enemy. A battle ensued. The Romans obtained an easy victory, and no less than 100,000 foot of the Armenians perish- ed, and only five men of the Romans were killed. Tigranocerta, the rich capital of the country, fell into the conqueror's hands. After such signal victories, Lucullus had the mortification to see his own troops mutiny, and to be dispossessed of the command by the arrival of Pompey. The new general showed himself worthy to succeed Lucullus. He defeated Mithridates, and render- ed his affairs so desperate that the monarch fled for safety into the country of the Scythians, where, for a while, he meditated the ruin of the Roman empire, and. with more wildness than prudence, secretly resolved to invade Italy by land, and march an army across the northern wilds of Asia and Europe to the Appennines. Not only the kingdom of Mithridates had fallen into the enemy's hands, but also all

the neighbouring kings and princes were subdued, and Pompey saw prostrate at his feet Tigranes himself, that king of kings, who had lately treated the Ro- mans with such contempt. Meantime, the wild projects of Mithridates terrified his subjects ; and they, fearful to accompany him in a march of above 2000 miles across a barren and uncul- tivated country, revolted and made his son king. The monarch, forsaken in his old age, even by his own children, put an end to his life (see MITHRIDATES VII.), and gave the Romans cause to rejoice, as the third Mithridatic war was end- ed in his fall, B. C. 63. Such were the unsuc- cessful struggles of Mithridates against the power of Rome. He was always full of resources, and the Romans had never a greater or more danger- ous war to sustain. The duration of the Mith- ridatic war is not precisely known. According to Justin, Orosius, Florus, and Europius, it last – ed for forty years ; but the opinion of others who fix its duration to thirty years, is far more credible ; and, indeed, by proper calculation, there elapsed no more than twenty-six years from the time that Mithridates first entered the field against the Romans, till the time of his death.

Pompey, who was then engaged in a war with the Jews, received the first notice of the death of Mithridates as he was on his march to Jerusa- lem, and was so impatient to impart it to the soldiery that he could not even wait till they had raised him a mount of turf from whence to speak to the army, according to the custom of the camp ; but ordered those who were by him to form a kind of mount with their saddles, am)

from thence acquainted the soldiery that Mith- ridates had laid violent hands on himself, and his son Pharnaces was ready to acknowledge the kingdom as a gift of the people of Rome. This news was received with joyful shouts by the army, and the day solemnised with leasts and sa- crifices throughout the camp. For the general joy atRomeon that occasion, see MITHIU DATES VII. • Pharnaces, when he heard of his father's death, caused his body to be preserved in brine, pro- posing to present it to Pompey, who had pro- mised to return into Pontus after the reduction of Judea. Accordingly, having taken the city and temple of Jerusalem, he set out with two le- gions for Pontus; and, being arrived at Sinope, was there met by ambassadors from Pharnaces, acquainting him that their master had forbore assuming the title of king till his will and plea- sure were known. The same ambassadors de- livered up to Pompey those who had taken M. Aquilius, all the prisoners, hostages, and de- serters, whether Romans, Greeks, or Barbarians, and the body of Mithridates, with his rich ap- parel and arms. Both soldiers and officers flocked to see the king's

body; but Pompey declined the sight ; saying that all enmity between that great prince and the people of Rome was ended with his life. , He returned the body to the am- bassadors, and caused it to be interred, with the utmost pomp and magnificence, in the burying place of the kings of Pontus.

Pompey now bestowed the kingdom of Bos- phorus on Pharnaces, and honored him with the title of a friend and ally of the people of Rome; and the latter sent orders to all the garrisons of Pontus to submit themselves, with the castles and treasures with which they were entrusted, to Pompey, who by that means amassed an immense jooty. In the city of Talaura alone, which Mithridates used to call his wardrobe, he found 2000 cups of onyx set in gold, with such quan- tities of gold and silver vessels, costly furniture, saddles, bridles, and trappings, set with jewels and precious stones, that the Roman commissa- ries spent thirty days in taking the inventory. In another castle he found three large tables with nine salvers of massy gold, enriched with pre- cious stones of great value ; the statues of Mi- nerva, Mars, and Apollo, of pure gold and most curious workmanship ; and a pair of gaming tables of two precious stones, three feet broad, and four feet long, on which was a moon of gold weighing thirty pounds, with their men. In a fort situated among the mountains were deli- vered up to him the king's statue of massy gold, eight cubits high, his throne and sceptre, and the bed of Darius Hystaspis. Most of these trea- sures had been transmitted to him from his an- cestors, chiefly from Darius king of Persia; some belonged to the Ptolemies of Egypt, and had been deposited by Cleopatra in the hands of the Coans, who delivered them to Mithridates. Pompey having thus obtained entire possession of Pontus, and reduced it to the form of a Ro- man province, marched into Asia properly so called ; and, having wintered at Ephesus, early in spring set out for Italy with a fleet of 700 ships. As he brought over his army, the senate was under no small apprehension lest he should

make himself absolute ; but he no sooner landed at Brundusium, than he disbanded the army, see the article POMPEY, without waiting for any de- cree of the senate. He was attended in his tri- umphal chariot by 324 captives of distinction, among whom were five sons and two daughters of Mithridates.

Pompey had no sooner left Asia, out Phar- naces fell unexpectedly upon the Phanagorenses, a people of Bosphorus, whom Pompey had de- clared free, because they had revolted the first of all from Mithridates, and by their example in- duced others to abandon the king's party. Phar- naces besieged their chief city Phanagoria, and kept them blocked up till, for want of provisions, they were forced to sally out, and put all to the issue of a battle ; which proving unsuccessful, they delivered up themselves and their city to the conqueror. Some years after, the civil wa.' breaking out

between Caesar and Pompey, he laid hold of that opportunity to recover the pro- vinces which his father had formerly possessed ; and, having raised a considerable army, over-ran Pontus, Colchis, Bithynia, Armenia, and the kingdom of Moschis, where he plundered, as Strabo observes, the temple of the goddess Leu- cothea. He took the strong and important city of Sinope, but could not reduce Amisus. But Caesar, having got the better of Pompey and his party, appointed Cn. Domitius Calvinus gover- nor of Asia, enjoining him to make war upon Pharnaces with the legions that were quartered in that province. Domitius immediately sent ambassadors to Pharnaces, commanding him to withdraw his troops from Armenia and Cappa- docia. The king answered that he was willing to abandon Cappadocia, but Armenia Minor was part of his hereditary dominions, and therefore he would not resign it till he had laid his preten- sions before Caesar himself, whom he was ready to obey. Hereupon Domitius. drawing together what forces he could, marched into Cappadocia, which he recovered without opposition, Phar- naces having abandoned it to make a stand in Armenia, which lay nearer his own dominions. Thither Domitius pursued him ; and, having overtaken him near Nicopolis, Pharnaces, at the head of a choice body of men, fell upon the Roman left wing, consisting mostly of raw and undisciplined Asiatics ; and, having put them «< > flight, penetrated to the centre, where the thirty fifth legion, the only one which Domitius had, after a faint resistance, gave ground, and, retiring to the neighbouring mountains, left their allies to shift for themselves, who were all cut off. Do- mitius, with the remains of his army, marched back into Cappodocia ; and thence into the pro- vince of Asia. The king being elated with this victory, and hearing that Caesar, with the flower of the Roman forces, was engaged at the siege of Alexandria, appointed one Asander governor of Bosphorus, and marched himself into Cappa- docia in pursuit of Domitius with a design to in- vade Asia, and recover all the provinces which had been subdued by his father.

Bithynia and Cappadocia readily submitted; but Armenia Minor, which was held by Dejota- rus, made so vigorous a resistance, that he was forced to give over the enterprise, lest the Ro-

mans should in the mean time strengthen them- selves in Asia, whither he was in haste to march, in hopes of meeting there with the same success as his father had done. But, before he reached that province, he was informed that Asander had revolted, and obtained of the Romans the king- dom of Bosphorus for himself. At the same time, he received intelligence that Caesar, having at last reduced Alexandria, and settled the affairs of Egypt

and Syria, was marching into Armenia. Alarmed at this news, he despatched ambassa- dors to sue for peace. Caesar courteously entertained the ambassadors, and appeared very de- sirous of entering into a treaty. But, in the mean time, he pursued his march ; and, arriving on the confines of Pontus, ordered all the troops that •were quartered in the neighbouring province to join him ; for he had brought from Alexandria only the sixth legion, consisting of 1000 men only. With these forces he advanced against Pharnaces; who being greatly frightened at his approach, from his success in all his expeditions, again despatched ambassadors, with a crown of gold, offering his daughter in marriage, and pro- mising to do whatever he should require. The ambassadors took care to let him know that their master, though highly obliged to Pompey, yet had never been prevailed upon to send him any supplies during the civil war, which Dejotarus, king of Armenia Minor, whom he had honored with his friendship, had done. Caesar answered that he was willing to conclude a peace with Pharnaces, provided he retired from Pontus, re- turned all the captives and hostages, whether Roman or their allies, and restored the goods of the Roman citizens. He added that, as to his not sending supplies to Pompey, they ought ra- ther to have concealed such an ungrateful proceeding of their master, than alleged it as any merit. Pharnaces. upon the return of his ambas- sadors, acquainted Caesar that he agreed to the conditions ; but, finding that Caesar's affairs called him into Italy, he required a longer time for the performance of what was stipulated, starting daily new difficulties, in hopes that Caesar would be obliged to depart, and leave the affairs of Pontus in the same posture he had found them. Caesar at length could no longer brook the king's deceitful behaviour ; and, marching out in the night, rushed at break of day into the king's camp, exclaiming, Shall this treacherous parricide go unpunished ? The king's chariots, which were armed with scythes, caused some disorder among Caesar's horse ; but. the rest of his army coming up, he put the enemy to flight, and obtained a complete victory. This battle was fought near the place where Mithridates had routed, with great slaughter, the Roman army under Triarius ; and the victory was gained so rapidly that Caesar, in a letter to his friend Anitius, at Rome, expressed it in three words, veni, vidi, vici. Pharnaces himself had the good luck to escape while the Romans were plunder- ing the camp. Caesar afterwards used to call Pompey a fortunate rather than a great com- mander, since he had gained his chief glory in the Mithridatic war, fighting with so cowardly an enemy. The monument of Mithridates' victory over Triarus, as it was consecrated to the gods,

he did not think lawful to pull down, but set up another over against it to transmit to posterity his victory over Pharnaces, and after this victory, having recovered and restored to the allies of Rome all the places which Pharnaces had taken during the war, he declared Amisus a free city, and

appointed Mithridates Pergamenus king of Bosphorus in the room of Pharnaces.

Domitius Calvinus was desired to pursue the war against Pharnaces, if he should appear again in the field ; for the latter had retired after the battle to Sinope, with 1000 horse. Here he was quickly besieged by Domitius, to whom he sur- rendered the town, upon no other condition than that he should be suffered to retire into Bosphorus with the small body that attended him. This Domitius granted, but, as he had asked a safe conduct only for his horsemen, caused all the king's horses to be killed. With these, and a band of Scythians and Sarmatians, Pharnaces at- tempted to recover the kingdom of Bosphorus, but being met between Theodocia and Pantica- peum, both which cities he had reduced, by Asander, who was still in possession of the king- dom, a sharp engagement ensued, the king's men, not being used to fight on foot, were put to flight, and Pharnaces himself who remained alone in the field was surrounded by the enemy, and cut in pieces.

Pontus was now again reduced to the form of a province, and so continued to the triumvirate of Marc Antony, who after the battle at Philippi conferred it upon Darius the son of Pharnaces. He continued faithful to the Romans ; but did nothing during his reign worth mentioning ; and was succeeded in the kingdom by Polemon, like- wise preferred to that honor by Marc Antony. He was the son of Zeno, a famous orator of Lao- dicea, and after him that part of Pontus which borders on Cappadocia was named Polemoniacus. He attended Anthony in his expedition agains the Parthians ; and, being taken prisoner in the unsuccessful battle fought by Statianus, was sent by the king of the Medes, an ally of the Par- thians, to conclude a peace with the Romans. In this embassy he acquitted himself so well that Antony added the kingdom of Armenia to his former dominions. In the war between Antony and Augustus, although he joined the former, after the battle of Actium he was received into favor by the latter ; and being sent by Agrippa against Scribonius. who, upon the death of Asander, had usurped the kingdom of Bospho- rus, he reduced that state and the kingdom of Colchis, which was bestowed upon him by Agrippa, who likewise honored him with the title of friend and ally of the people of Rome. He afterwards waged war with the neighbouring barbarians who refused to live in subjection to the Romans ; but was overcome and put to death by the Aspungitani, a people bordering, accord- ing to Strabo, on the Palus Moeotis.*

Upon his death, his son Polemon II. was by the emperor Caligula raised to the throne of Bosphorus and Pontus. But he obliged him to exchange the former for part of Cilicia; and Nero, with his consent, reduced that part of Pontus which he enjoyed to the form of a pro- vince. He fell in love with

of Aprippa king of Judea: and to marry her embraced the Jewish religion. But as she soon became tired of his riotous way of living, and returned to her father, he re- nounced his new religion. Polemon dying with- out issue, the ancient kingdom of Pontus was parcelled out into several parts, and added to the provinces of Bithynia, Galatia, and Cappadocia ; only that part of it which was called Pontus Pole- moniacus retaining the dignity of a distinct and separate province.

During the civil discords between Vespasian and Vitellius, one Anicetus, first a slave, after- wards freedman, to king Polemon II., and then commander of the royal navy, took up arms with a design to rescue the kingdom from the Roman yoke. Being joined by great multitudes, drawn together with the prospect of spoil, he over-ran the country, and possessed himself of Trapesund, a city founded by the Grecians on the utmost confines of Pontus. Here he cut in pieces a cohort made up of the inhabitants, but which had been formerly presented with the privilege of Roman citizens : he likewise burnt the fleet, and scoured the neighbouring sea, Mucianus having called to Byzantium most of the Roman galleys. On this Vespasian, who was then in Syria, sent Verdius Gemnius into Pontus with a choice body of auxiliaries from the legions, who, assailing the enemy while they were in disorder, drove them into their vessels ; then with some galleys he chased Anicetus into the mouth of the Chobus, where he thought himself safe under the protection of Sedochus king of the Lazians. Sedochus at first refused to deliver him up ; but was soon prevailed upon, partly by threats, partly by presents, to surrender him and all the other fugitives who had taken sanctuary here. Thus ended that servile war; and the kingdom of Pontus continued to be a province of the em- pire till the time of David and Alexis Comneni, who being driven to Constantinople by the French and Venetians, A. D. 1204, under the command of Baldwin, earl of Flanders, settled, the one at Heraclea, the other at Trebisond. The troubles that arose among the Latins gave Alexis Com- nenus an opportunity of erecting a new empire, which comprehended great part of Pontus, and was known by the name of the empire of Tre- bisond. The Comneni held it about 250 years, till the time of Mohammed II., who carried David Comnenus, the last emperor of Trebi- sond, prisoner to Constantinople, A. D. 1462, with all his family, and subjected his empire to that of Constantinople ; under which Trebisond and all Pontus have continued ever since.

PONTUS EUXINUS, a sea at the west end of Colchis, between Asia and Europe, north of Asia; now called the Black Sea. See EUXINE.

PONTYPOOL, a market-town in Trevethan parish, Abergavenny hundred, Monmouth,Wales, nine miles north from Newport, and 150 west by north from London. This place has long been noted for its manufacture of japanned ware, to which it gives name, and consists of two principal streets. It is placed on the edge of a steep cliff, overhanging the Avon Lwyd, and on the slope of a declivity under impending hills. The town, which has risen in the course of the last century,

owes its existence to the mineral treasures which lie in the surrounding country. Immense quan- tities of iron ore, coal, and limestone, are found here. The church is an ancient stone building, and here is a canal, lately cut, from Newport.

PO'N Y, n. s. Corrupted from puny, as Dr. Johnson suggests : but qu. Wei poun, little ? A small horse.

You must know that one day last week, as Lady Betty Curricle was taking the dust in Hyde Park, in a sort of duodecimo phaeton, she desired me to write some verses on her ponies. Sheridan.

PONZA, or PONTIA, a small island of the Tuscan Sea, to which many illustrious Romans were anciently banished.

POOL, n. s. Sax. pul ; Belg. pod ; Swed. pol. A lake or collection of standing water : a small collection of any liquid.

There is at Jerusalem, by the sheep-market, a pool which is called in the Hebrew tongue Bethesda, having five porches. John v. 2.

Moss, as it cometh of moisture, so the water must but slide, and not stand in a pool. Bacon.

Sea he had searched, and land,

From Eden over Pontus, and the pool

Maeotis. Milton's Paradise Lost.

The circling streams, once thought the pools of

blood , From dark oblivion Harvey's name shall save.

Dryden.

After the deluge, we suppose the vallies and lower grounds, where the descent and derivation of the water was not so easy, to have been full of lakes and pools. Burnet.

POOLE (Matthew), a very learned writer in the seventeenth century, born at York in 1624. He was educated at Emanuel College, Cam- bridge, and afterwards incorporated in the uni- versity of Oxford. He succeeded Dr. Anthony Tuckney in the rectory of St. Michael de Quern, in London, about 1648. In 1658 he set on foot a project for maintaining youths of great parts at the two universities, and had the approbation of the heads of houses in botli of them. He pursued the affair with so much vigor, that in a short time £900 per annum was procured for that purpose ; but this design was laid aside at the Restoration. In 1662 he was ejected from his living for nonconformity. He was ten years em- ployed in composing his Synopsis Criticorum, &c. Besides this great work, he published several other pieces. When Dr. Oates's depo- sitions concerning the popish plot were printed, our author found his name in the list of those who were to be cut off, on account (as was supposed) of what he had written against the papists in his Nullity of the Romish Faith ; so that he was obliged to retire into Holland, where he died in 1679, and left behind him the cha- racter of a very able critic and casuist.

POOLE, a borough, market, and sea-port town of Dorsetshire, is supposed to have taken its name from a bay or pool of water, called Lanford, which surrounds it on all sides but the north. The site of the town is thus a peninsula, joined to the parish of Lanford by a narrow neck of land.

It was a fort in the time of the Romans, and a military way may be traced from hence to Wimbome : the church of St. James was for-

merly a chapel of ease to Landford. The pre- sent church, which was erected in 1819-20, is capable of accommodating more than 2000 persons, is an elegant edifice, in the modern gothic style ; in the chancel is a large handsomely painted window, representing Faith kneeling on the cross. The guildhall, situated nearly in the centre of the town, is a neat structure, in which all the business of the borough and town is transacted. Beneath this and round it the market is held every Monday and Thursday. The gaol stands in King Street : it is spacions, but to the credit of the town is seldom crowded with inmates. There is also a temporary place of confinement,

called the Salisbury, situated in Salisbury Street. The custom-house, which is situated on the quay, is a new, commodious, and spacious erection.

The ancient history of this town is involved in obscurity; it is evidently of no great anti- quity, for it is not mentioned in any records preceding the Norman conquest ; it was origin- ally a poor fishing village, but rose gradually into importance, and may date the commence- ment of its prosperity from the decay of the neighbouring town of Wareham. It seems to have undergone a great portion of the vicissitudes of fortune, as we have frequent mention of its alternate progress or decay, till 11 Henry VI., when the privileges of Melcombe were removed thence to Poole. From this period it uniformly prospered. During the civil wars it was a gar- • rison for, and a strenuous defender of, the parlia- ment. About this time it was fortified. By a char- ter of queen Elizabeth it was made a county of itself totally distinct from Dorsetshire; it conse- quently enjoys from that source, and from charters granted by other sovereigns, and by W. Longes- pee,earl of Salisbury, many high and distinguish- ed privileges. Its government is vested in a recorder, a mayor, senior bailiff, and three other magistrates, a sheriff, and a water bailiff, who are annually chosen from among the burgesses and other minor officers. A petty session is held in the guildhall every Thursday, and the general quarter sessions are on the second Friday after those for Dorsetshire. It returns two members to parliament, who are chosen by the corpora- tion, which consists of an indefinite number of burgesses : the manner in which these were originally so constituted has never, we believe, been correctly ascertained; the present mode is, when it is thought requisite to increase the num- ber, for each resident burgess to nominate one ; the present number is about 130.

It is a perpetual curacy, subject to the juris- diction of Canford, but is exempt from any episcopal see.

The harbour which surrounds the town is acknowledged to be one of the finest in the kingdom, upwards of sixty miles in circumfer- ence, the bottom of every part of which con- sisting of soft black mud, it is impossible that a vessel can sustain injury by striking; the only inconvenience is to wait till the next tide. It is a peculiarity belonging to this harbour that the tide ebbs and flows twice in every twenty-four hours ; and numerous as have been the surmises, no satisfactory account has yet been rendered of the cause of this phenomenon. The quay by

which the town is nearly encircled is the most noble and safe in the united kingdom, being unrivalled for utility, spaciousness, good accom- modation, and depth of water, which at all times admits vessels to lay along-side their landing places in perfect safety.

The principal manufacture here is that of cordage for shipping. A great trade is annually carried on between this port and the colonies of Newfoundland, whither the merchants export the necessaries required by the colonies, and in return receive fish, oil, and cranberries ; the first of which articles they convey to foreign markets for disposal. This part of commerce much in- creased during the late war, since which time a greater trade has been carried on with other foreign parts, and this is now fast gaining ground. Much coasting business is also transacted here. Oysters of a very fine species are annually pro- cured in vast quantities from beds in the har- bour, which not only supply the town and neighbourhood, but are transported to London in great quantities ; upwards of 200 sail of vessels belong to the harbour.

The town contains several dissenting meeting- houses, amongst which are an Independent, Quaker's, Unitarian, Baptist, Methodist, &c.

Poole is situated 108 miles south-west from London, six from Wimborne, ten from Christ- church, ten from Wareham, twelve from Ring- wood, and fourteen from Blandford. In 1821 it contained 6390 inhabitants, 1180 houses.

POOLE'S-HOLE is a remarkable subterrane- ous cavern, about a mile from the crescent at Buxton. The entrance is very low and narrow, so that it is necessary for the visitor to stoop ; but at the distance of thirty yards a spacious ca- vern opens, from the roof and sides of which water, continually dropping, congeals into large pillars and masses on the floor, forming a variety of fantastic figures. On reaching what is deno- minated the Flitch of Bacon, which is a large icicle depending from the roof, the cavern be- comes again contracted ; but a little further on it expands to a much greater height and width, till the visitor arrives at a large massy column of stalactites, called Mary Queen of Scots' Pillar. To explore this place farther it is necessary to descend a few yards by very slippery and uneven steps; at first the path at bottom is tolerably even and level, but at the distance of about twenty yards the passage rises with a perpendicular ascent, 240 feet, extremely difficult and danger- ous. The Lady's Pillar and Curtain, the eye of St. Andrew's Needle, Break- Back Passage, Poole's Chamber and Closet, the names given to beauti- ful incrustations, successively arrest the atten- tion in this long passage, which extends 460 yards, to Queen Mary's Pillar, and 100 yards beyond it. Behind Poole's Hole, on the edge of a vast hill, is a collection of whimsical habitations, called Ash-Hillocks, originally limekilns, and now inha- bited by a numerous set of industrious laborers.

POONAH, or PUNA, a city of Bejapoor, the ca- pital of the Mahratta Peshwa, and of the entire ter- ritory of the Mahrattas. It does not cover

more than about two square miles, and is but indifferently built. The British residency is at the Sungum. At the bottom of the Savaveeti Hill is a large nr'd

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endosed with high brick walls, wheie the Peshwa assembles I!K brahmins, to whom he gives alms when the rainy season terminates, who, on this occasion, beg their way nither fr;,, all parts of India. To the eastward of the city there are mythological excavations resembling those of Carli and Elephanta, but of a very in- ferior description.

The Moota washes the city on the north side, and forms its junction here with the Moola. It is about 200 yards broad, and so shallow in the dry season that no bridge has been hitherto built here.

The Peshwa Bajeerow was a son of the famous Ragobah (Ragoonauth Row) of bad memory. His predecessor, Madhurow, the young Peshwa, died suddenly the 27th of October, 1705, when this prince was raised to the sovereignty, but was repeatedly dethroned and reinstated by contending chiefs. His alliance with the Bri- tish, concluded at Bassein on the 30th Decem- ber, 1802, established his power, however, and the government has ever since remained undis- turbed.

The suttee, or burning of widows with their husbands' corpse, is very frequent at Poonah ; and the immolation is usually performed at the junction of the Moota and Moola, close to the British residency. The population probably ex- ceeds 100,000.

Travel ling distance from Bombay ninety-eight miles ; from Hyderabad 387 ; from Oojain 442 ; from Nagpoor 486; from Delhi 913 ; and from Calcutta, by Nagpoor, 1208 miles.

POOP, n. s. Fr. pouppe ; Lat. puppis. The hindmost part of the ship.

Some sat upon the top of the poop weeping and wailing, till the sea swallowed them. Sidney.

He was openly set upon the poop of the galley.

Knoll.es.

The poop was beaten gold. Shakspeare.

Perceiving that the pigeon had only lost a piece of her tail through the next opening of the rocks, they passed safe, only the end of their poop was

bruised.

Raleigh.

With wind in poop, the vessel ploughs the sea, And measures back with speed her former way.

Dry den.

POOR, adj & n. s. ~\ Fr. pauvre ;

POOR'LY, adv. i Span, and Port.

POOR'NESS, n. s. >potre ; Ital. po-

POOR-SPIRIT'ED, adj I vero ; Lat. pau-

POOR-SPIRIT'EDNESS, n. s. J per. Indigent ; necessitous ; in want ; barren ; dry ; starved ; spiritless ; flaccid ; unhappy ; mean ; low ; de- pressed; paltry; trifling; contemptible ; used as a word of tenderness or pity, and as a word of contempt : the poor, for the noun substantive is always used collectively, signifies those of the lowest rank in life ; any not rich : poorly and poorness follow all the senses of the adjective : poor-spirited means cowardly ; mean-spirited.

Pore men ben taken to prechyng of the gospel. Widif. Matt. 11.

He that giveth to the poor shall not lack.

Prov. xxviii. 27.

Those thieves spared his life, letting him go to learn to live poorly. Sidney.

Poor cuckoldly knave — I wrong him to call him poor ; they say he hath masses of money. Sliahspeare.

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I have very poor and unhappy brains for drinking . I could wish courtesy would invent some other en- tertainment, id,

Your constancy

Hath left you unattended : be not lost So poorly in your thoughts. Id. Macbeth.

A conservatory of snow and ice used for delicacy to cool wine, is a poor

and contemptible use, in re- spect of other uses that maj be made of it. liacou.

A soothsayer made Antonius believe, that his ge- nius, which otherwise was brave, was, in the pie- sence of Octavianus, poor and cowardly. Id.

If you sow one ground with the same kind of grain, it will prosper but poorly. Id.

The poorness of the herbs shews the poorness of the earth, especially if in color more dark. Id.

And if that wisdom still wise ends propound, Why made he man, of other creatures, king ; When, if he perish here, there is not found In all the world so poor and vile a thing 1 Davics.

No less I hate him than the gates of hell, That pooreness can force an untruth to tell.

Chapman.

Where juice wanteth, the language is thin, flag- ging, poor, starved, and scarce covering the bone.

Ben Jonsan.

You meaner beauties of the night, That poorly satisfy our eyes, More by your number than your light, You common people of the skies : What are you when the sun shall rise? Wot ton. The marquis, making haste to Scarborough, em- barked in a poor vessel. CUtren4on.

Vext sailors curse the rain, For which poor shepherds prayed in vain.

Waller.

From a confined, well-managed store, You both employ and feed the poor. Id.

Vain privilege, poor women have a tongue ; Men can stand silent, and resolve on wrong.

Dry den. The poor dare nothing tell but flattering news.

Id.

Nor is their courage or their wealth so low, That from his wars they poorly would retire. Id Never any time since the reformation can shew so many

poor amongst the widows and orphans

If a prince should complain of the poorness of hi exchequer, would he be angry with his merchants, if they brought him a cargo of good bullion ?*

Burnet's Theory

When he delights in sin, as he observes it in other men, he is wholly transformed from the creature God first made him : nay, has consumed those poor remainders of good that the sin of Adam left him.

South.

Has God cast thy lot among the poor of this world, by denying thee the plenties of this life, or by taking them away ? this may be preventing mercy ; for much mischief riches do to the sons of men. Id.

A cause of men's taking pleasure in the sins of others, is, from that meanness and poor-spiritedness that accompanies guilt. Id.

We have seen how poor and contemptible a force has been raised by those who appeared openly.

Addison's Freeholder.

There is a kind of sluggish resignation, as well as poorness and degeneracy of spirit, in a state of slavery.

Addison.

Poor, little, pretty, fluttering thing, Must we no longer live together 1

And dost thou prune thy trembling wing, To take thy flight thou know'st not whither 1

1'r'urr.

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POOR LAWS.

That I have wronged no man will be a poor plea or apology at the last day ; for it is not for rapine that men are formally impeached and finally condemned; but I was an hungry, and ye gave me no meat. Calamy's Sermons.

Who builds a church to God and not to fame, Will never mark the marble with his name ; Go search it there, where to be born and die, Of rich and

poor makes all the history. Pope.

To be without power or distinction is not, in my poor opinion, a very amiable situation to a person of title. Swift.

Matilda is so intent upon all the arts of improv- ing their dress, that she has some new fancy almost every day ; and leaves no ornament untried, from the richest jewel to the poorest ftower. Law.

The poor monk never saw many of the decrees and councils he had occasion to use. Baker.

Teach the old chronicle, in future times, To bear no memory but of poor rogue's crimes.

Harte. Mirvan ! poor-spirited wretch ! thou hast deceived

me. Dennis.

A man may hae an honest heart,

Though poortith hourly stare him ; A man may tak a neebor's part,

Yet hae nae cash to spare him. Burns.

POOR LAWS. Of the various and compli- cated statutes of our law relating to the poor we cannot be expected to present our readers with more than a very brief summary ; and after the labors of Mr. Const and Mr. justice Burn, and his continuators in this department of juris- prudence, even professional readers can require little more. We shall follow up our brief state- ment of the existing laws with some reflections on their poliacal and moral character, and gene- ral tendency.

OF OVERSEERS.

1 . Of the appointment of overseers. — All per- sons, of whatever age or sex, are prima facie liable to serve as overseers, unless they can show some legal exemption to except them. That a woman may be appointed overseer, see 2 Term Rep. K. B. 395. It is said that all peers of the realm, by reason of their dignity ; clergymen, by reason of the order ; members of parliament, by reason of their privileges of parliament ; and attornies, by reason of the necessity of their attendance at Westminster-Hall; are exempted from being chosen overseers, even where there is a special custom in the parish for every inha- bitant to serve ; it is admitted that practising barristers also have the same privilege. It has also been held that an alderman of London ought to be discharged from serving parish offices, on

account of his necessary attendance on the duties of the corporation. Persons also of other particular professions and descriptions are ex- empted, by divers statutes ; as the president and members of the college of physicians, in London. Stat. 32 Hen. VIII. c. 40. Surgeons, being freemen of the corporation of surgeons, in London, for so long a time as they shall prac- tise. Stat. 18 Geo. II. c. 15; and it is said, sur- geons in general, by special custom, at common law. Apothecaries, free of the apothecaries' com- pany, and every person using and exercising the said art, who has served as an apprentice to it for seven years, while they practise, stat. 6 and 7

W. III. r. 4. Dissenting ministers, who snail conform to the directions of the toleration act, stat. 1 W & M. c. 18, and dissenters in gene- ral are allowed to serve the office by deputy. Prosecutors of felons to conviction, who shall apprehend and take any person guilty of bur- glary, or privately stealing from the shop. Stat. 10 and 1 1 W. III. c. 33. Soldiers serving in the militia during the time of service ; and, perhaps, it may be considered, that those who are ex- empted from serving the office of churchwarden, are also exempted from serving the office of over- seer. It has also been said that persons who are only occasional residents in a parish, ought not to be appointed ; and it seems clear that absentees, or persons who do not reside, but only hold land in the parish, cannot be chosen. The appointment must be under the hands and seals of two justices, pursuant to the direction of the stat. 43 Eliz. c. 2. and, therefore, it cannot be made by the sessions, nor by the mayor of a, corporation, conjointly with the justice of a county ; but, if there should happen to be only one justice in a county, perhaps he alone may appoint. It is, however, completely determined, that the two justices must sign and seal the ap- pointment in the presence of each other; for it is not merely a ministerial but a judicial act, wherein the justices are to exercise their discretion.

The justices cannot appoint more than four overseers for any parish, unless the parish be divided into two or more divisions or townships, each separately maintaining its own poor. After an appointment of four overseers by magistrates at one meeting, the magistrates are functi officio ; and no other magistrates can afterwards, upon a claim of exemption by one of the persons so appointed, appoint another in his place ; but the party must appeal to the sessions to get his dis- charge. It seems to be settled that no overseer can be appointed for any place that is not, in contemplation of law, a vill ; and therefore, if a place that is extra-parochial come within the notion of a vill, overseers may be appointed for the purpose of obliging the inhabitants to pro- vide for their own poor. But it is a subject that has been much litigated what kind of place shall be so considered.

The justices ought not to appoint separate overseers for distinct parts of a

parish, under stat. 13 and 14 Car. II. c. 12, unless necessity for this can be evinced by the inability of a parish to reap the benefit of the stat. 43 Eliz. c. 2. When a parish is thus divided into separate townships, each township is to be considered as a distinct parish.

The appointment cannot be removed into the court of king's bench before the time for appeal- ing is expired ; for it would deprive the party of his right of appeal. This appeal may be made as well by the parishioners as by the persons who are appointed overseers. 3 Term Rep. K. B.

38.

By stat. 59 Geo. III. c. 12, sect. 6, persons assessed to the poor rates, and resident out of the parish (but within two miles of the church), may be appointed overseers ; and by sect. 7 of the same act assistant overseers may be nomi- nated by the parish, in vestry, with a yearly

*salary ; who shall receive then appointment un- der the hands and seals of two justices. •.**

2. Of their accounts. — It is provided, that over- seers shall, within four days after the end of their year, after other overseers nominated, make and yield up to two justices, true and perfect accounts of all monies by them received, or rated and as- sessed, and not received ; and also such stock as shall be in their hands or in the hands of the poor to work, and of all other things concerning their office ; and pay over the balance to the succeed- ing overseers. Stat. 43 Eliz. c. 2. sect. 2. The succeeding overseers may, by distress, levy the sums of money or stock which shall be behind, upon any account so made ; in defect of distress, the offender may be committed to the common gaol until payment of the arrears ; two justices may commit overseers, who shall refuse to ac- count, until they make a true account, and pay over the balance in their hands. Sect. 4. Over- seers shall not bring into their account any mo- ney, given to the relief of a poor person, not registered in the parish books, as a person enti- tled to receive collections, on pain of £5.

The overseers shall, within fourteen days after other overseers are appointed, deliver to such succeeding overseers a true and just account, in writing, fairly entered in a book or books to be kept for that purpose, and signed by the over- seers ; such account to be verified on oaih before one justice, who shall sign and attest the caption of the same at the foot of the account ; and the overseers shall deliver over all the stock, and pay the

balance, remaining in their hands, to their successors ; these books of account to be carefully preserved in some public place ; and copies thereof delivered, if required, to any per- son assessed. Stat. 17 Geo. II. c. 38. sect. 1. If any overseer shall refuse or neglect to account and pay the balance, as aforesaid, two justices may commit such overseer until he complies.

By stat. 50 Geo. III. c. 49, in all cases when any such account is required to be made under 17 Geo. II., it shall be submitted by the church- wardens and overseers to two justices at a special sessions within the fourteen days, and such jus- tices may examine into the matter of such account, and administer an oath to the party as to the truth thereof, and may disallow charges ; which account shall be signed by such justices ; over- seers and churchwardens, neglecting or refusing to yield up, submit, or verify, such accounts, or to deliver over to their successors within ten days, any goods, &c., remaining in their hands, shall be committed to gaol until compliance ; and, upon neglecting to pay over within fourteen days money in their hands, it shall be levied by distress and sale of their goods ; and, in default of distress, shall be committed till payment. Parties aggrieved may appeal to quarter sessions, sect. 2, 3. — Saving the rights of magistrates of corporations, sect. 4. This act not to extend to places exempted from accounting under former acts, sect. 6. The provisions of this latter act are not a substitution in lieu of those in 17 Geo. II., but are cumulative ; and, if the overseer re- fuse to deliver in such accounts to his successor within fourteen days, he may be committed by two justices for that refusal.

The sessions, upon an appeal against the u.1 lowance of overseers' accounts, may, if they see reason, disallow of the accounts, and order the overseers to pay over such balances as they shall adjudge to be due to the parish ; but, if they re- fuse so to do, the sessions cannot commit, but must levy the arrears pursuant to the direction of the stat. 43 Eliz. c. 2, sect. 4. So also the ses- sions may, upon an appeal, set aside the allowed account, and order a re-examination of the ac- count by two justices; but the accounts must be previously allowed by two justices, or the ses- sions cannot receive an appeal.

It has been heretofore doubted how far over- seers who have laid out their money upon the maintenance of the poor were to be reimbursed after they were out of office. By stat. 41 Geo. III. (U. K.) c. 23, sect. 9, succeeding church- wardens and overseers are empowered to reim- burse to their predecessors in office any money expended for relief of the poor, while there was no rate, or during an appeal: and the quarter sessions, on application, shall make an order for that purpose.

3. If any action of trespass or other suit be brought against any person taking a distress, making of any sale, or any other thing done by authority

of the act, they may plead that it was done by virtue of the act ; and if a verdict be for the defendant, or the plaintiff be nonsuited after appearance, the defendant shall recover treble damages and costs. Stat. 43 Eliz. c. 2, sect. 19.

When any distress shall be made for a poor's- rate, the distress itself shall not be deemed un- lawful, nor the parties making it deemed tres- passers, on account of any defect or want of form in the warrant for the appointment of such overseers ; or in the rate of assessment ; or in the warrant of distress thereon ; nor shall the party distraining be deemed a trespasser ab initio, on account of any subsequent irregula- rity ; but the parties injured may have their ac- tion of trespass, on the case, at their election ; and, if the plaintiffs recover, they shall have full costs ; provided no such plaintiffs shall have any action for such irregularity, if tender of amends has been made before action brought. Stat. 17 Geo. II. c. 38, sect. 8.

Churchwardens and overseers shall meet toge- ther at least once a month in the church, upon a Sunday in the afternoon, after divine service, to consider of business respecting the poor ; upon pain of forfeiting 20$. for every neglect. Stat. 43 Eliz. c. 2, sect. 2.

If any overseer (or other officer of any parish) shall neglect, or refuse to obey and perform the several orders and directions in the statute par- ticularised, or any of them, if no penalty is spe- cifically provided, he shall forfeit, not exceeding £5, nor less than 20s. Stat. 17 Geo. II. c. 38, sect 14.

Overseers also may be indicted for refusing to accept of and undertake the office, or for refus- ing to make a rate to reimburse constables for the apprehending of vagrants, under stat. 17 Geo. II. c. 1, sect. 1 ; or for refusing to ac- count, within the t'rne limited, for the monies they have received for the relief of the poor ; or

for not relieving the poor; or for relieving them unnecessarily ; or for disobeying a legal order of justices ; or for not receiving a pauper when sent to their parish under an order of removal ; or for cruelty in the removal of poor women with chid : so also the court will grant an infor- mation against an overseer for fraudulently con- triving to remove a poor person in order to pre- vent him from becoming diargeable to the parish ; or for contriving to marry a pauper, or for giving a man money to marry a woman who was with child, in order to prevent the child from being a

burden to the parish ; but the court will not grant an information against an overseer for making an alteration in a poor's-rate, after it had been allowed by two justices, if the alteration appear to have been made with approbation of the justices. Nor can an overseer be adjudged guilty of absenting himself from the monthly meetings appointed by stat. 43 Eliz. c. 2, until he has had personal notice of his appointment ; and if he be appointed, under stats. 13 and 14 Car. II. c. 12, an overseer in an extra-parochial place, he is not liable to this penalty.

OF POOR RATES.

1. The churchwardens and overseers, or the greater part of them, shall take order, from time to time, witli the consent of two justices, to raise, weekly or otherwise (by taxation of every inha- bitant, parson, vicar, and every other occupier of lands, houses, tithes impropriate, propriations of tithes, coal-mines, or saleable underwood in the parish, in such competent sums as they shall think fit) : 1 . A sufficient stock of materials to set the poor on work. 2. Competent sums of money to relieve the lame, impotent, old, blind, and indigent. 3. To put out poor children ap- prentices. And, 4, For doing and executing all other things concerning the premises, as to the overseers shall seem convenient. Stat. 43 Eliz. c. 2, sect. 1 . — The mayors, or other head officers of corporations, shall have the same authority within their respective jurisdictions, both in and out of sessions, as is given to county justices ; and every alderman of London, within his ward. Sect. 8. As this latter clause restrains the ma- gistrates and justices to the limits of their respec- tive jurisdictions, the justices for a county cannot allow a rate made by the overseer of a borough. 2 Const. 62.

The justices of the counties, in which separate overseers shall be appointed for particular town- ships and villages, shall have the like authority to raise and levy monies, and to do and execute every thing in such townships and villages, as is given them in any parish where the overseers are appointed, under stat. 43 Eliz. c. 2 ; stat. 13 and 14 Car. II. c. 12, sect. 22. The justices and parish officers of a distinct jurisdiction, as of the precinct of the cathedral church, at Nor- wich, may, therefore, be compelled, by a manda- mus, to make a rate.

Public notice in the church shall be given, by the overseers, of every poor's-rate allowed by the justices, the next Sunday after such allow- ance ; and no "ate shall be valid, to collect and raise the same, unless such notice shall have been riven. Stat. 17 Geo. II. c. 3, sect. 1. In

trespass, on a distress for non-payment of a poor's-rate, the publication of the rate must be proved.

The overseers shall permit the inhabitants of the parish, &c., to inspect every such rate at all seasonable times, paying Is.; and shall give co- pies at the rate of 6d. for every twenty-four names ; or, on refusal or neglect, forfeit £20. True copies of all poors-rates shall also be en- tered in a book, within fourteen days after the determination of all appeals ; to be attested by the overseers, and kept for public perusal, under penalty of from £5 to 20s. where no other pe- nalty is provided. Stat. 17 Geo. II. c. 38, sects. 13, 14. Overseers, where there are no churchwardens, may do, perform, and execute, and shall be liable as to all matters relating to the poor, sect. 15. The rate which the church- wardens and overseers are, by these statutes, authorised to make, must be assessed only on the visible property, both real and personal, which the occupier or owner may have within the pa- rish ; and not according to the amount of the property which a person, rated as an inhabitant, may have out of the parish. The general rule seems to be that every species of property, lying within the. parish, which has an occupier, and from which an annual profit arises, is rate able.

2. The time for which a poor's rate ought to be made seems to be left to the discretion of the overseers. The statute of 43 Eliz. c. 2, says, ' weekly or otherwise.' In one case, it is said, that it ought to be monthly, because the possessors are to pay, and possessions frequently change ; this rule is confirmed by Burrow, but denied by Bolt, who states a dictum of lord Mansfield, that a poor's-rate might as well bf made for three months as for one month ; ano Holt, chief justice, assigned as a reason again? making poor's rates quarterly, that by this mean- a man cannot move in the middle of the quarter but he must be twice charged. The legislature, however, has provided against this by statute 17 Geo. II. c. 38, sect. 12, which enacts, ' That when any person shall come into, or occupy any premises, from which any person assessed shall be removed, or which at the time of making the rate were empty, every person, so removing or coming in, shall pay the rate, in proportion to their respective occupations.'*

3. The purposes also for which a poor's-rate is made must be conformable to the direction of the statute 43 Eliz. c. 2 ; and therefore a rate cannot be made to reimburse former overseers, for monies expended to the use of the poor, or to defray law charges ; for an overseer is not bound to lay out the money until he has it ; but if the monies, on any rate made by preceding overseers, be not raised at the expiration of their offices, the successors may, by statute 17 Geo. II. c. 38, sect. 11, raise it and reimburse them. By stats. 13 & 14 Car. II. c. 12, sect. 18, a rate may also be made for reimbursing constables such monies as they shall have expended in relieving the poor, in conveying them with passes ; and in carrying rogues, vagabonds, and sturdy beggars to houses of correction.

The rate must be made in equal proportion,

on all the persons assessed, according to their respective properties ; and, therefore, a pound rate on the rent of lands and houses, and the amount of the interest of personal property, is said to be the most fair and reasonable assess- ment : but this is denied to be the rule ; for the circumstances of a man of landed property may differ in proportion as his family is large or small, and personal property is in a continual state of fluctuation ; and, therefore, neither rent nor land tax ought to be considered in the mak- ing of a rate ; but the overseers, taking their former assessments as their best guide, are to proportion rates according to their best direc- tion ; and, if they make it unequal, the sessions on appeal will correct it ; for the sessions are the ultimate judges of the proportion and equality of the rate. A poor's-rate made upon three- fourths of the yearly value of 'land, and upon one moiety of the yearly value of houses, is not disproportionate or unequal. A rate made on one-half of the full yearly value or net rent of farms, and taking one-twentieth part of all stock, personal estate, and money out at interest, valu- ing the interest of such twentieth part at four per cent, and then rating one moiety of such twentieth part, varying the proportion as circum- stances require (for the overseers cannot make a standing rate), is a good and equal rate. A rate on lands and houses, at one penny in the pound, without making any distinction between farm dwelling-houses and cottages, although they had been before rated in different proportions, is not an unequal rate ; for whether houses are to be rated to the poor in a different proportion from land must depend on local circumstances. But of those equalities and proportions, the sessions are ultimately to judge. The appeal to the sessions may, by 43 Eliz. c. 2, sect. 4, be to any general quarter sessions; but by 17 Geo. II. c. 38, sect. 4, it must be on reason- able notice given to the next sessions, general or quarter.

Upon all appeals from rates, the session may, by stat. 17 Geo. II. c. 38, amend the rate, with- out altering it with respect to other persons. Upon an appeal from the whole rate, if it shall be found necessary, the sessions may, in their discretion, quash the rate, and direct the over- seers to make a new equal rate. The sessions cannot strike out the name of a person from the poor's rate ; so if the name of any person be omitted, the session must quash the rate, and cannot amend it by inserting his name. But it seems agreed that, where a person is overcharged in a poor's-rate, the sessions may relieve him, on appeal, by lessening the sum assessed on him. A parishioner who is liable to be rated, but who in fact is not rated, is a competent witness to prove that the person, whose name is omitted, is liable to be rated. The justices in session shall cause defects of form in appeals to be amended without costs ; and by stat. 41 Geo. III. (U.K.) c. 23. For the

better collection of the poor's- rates, it is enacted that on appeal from any poor- rate the quarter sessions may amend it without quashing it.

If a poor-rate be legal on the face of it, though stated to be made for illegal purposes, the VOL. XVII.

court will not quash the rate ; but will leave the parties aggrieved to appeal against the allow- ance of the overseer's accounts. An appeal in London or Middlesex must, as in all other counties, be made to the next practicable general quarter sessions: the stat. 17 Geo. II., in its terms, gives the appeal to the next general or quarter sessions. 15 East's Rep. 632.

4. The present, as well as the subsequent overseers may, by warrant from two justices, levy the sums of money assessed for the poor's- rates, and all arrears thereof, of every one that shall refuse to contribute according as they shall be assessed, by distress and sale of the offender's goods, rendering the party the overplus ; and, in defect of such distress, two justices may commit the defaulter till payment. Stat. 43 Eliz. c. 2, sect. 4. The goods of any person assessed may be distrained, not only in the place for which the assessment is made, but in any other place within the same county or precinct ; and if sufficient distress cannot be found there, on oath before a justice of any other county or precinct, goods in such other county or precinct may be distrained. Stat. 17 Geo. II. c. 38, sect. 7.

Justices granting distress-warrants shall therein order the goods distrained to be sold within a certain time limited in the said warrant, not less than four nor more than eight days ; unless the penalty and charges of distress be sooner paid. Stat. 27 Geo. II. c. 20, sect. 1.

Justices may act in all matters relating to the poor laws, notwithstanding they are rated to or chargeable with taxes or rates, within the parish or place affected by the acts of such justices. Stat. 16 Geo. II. c. 18, sect. 1. And a rate may be distrained for before the time for which the rate is made is expired ; but, if the landlord of the premises tender the rate, the overseers are bound to receive it, although the tenant is not rated ; and, if they make an excessive distress, they are liable to a special action on the case. The granting of such warrant of distress is a judicial, not ministerial act : and the magistrates ought first to summon the party and hear what he has to say. 7 Term Rep. K. B. 270.

Parishes may even be rated in aid ; fot, by the said stat. 43 Eliz. c. 2, if the justices perceive that the inhabitants of any parish are not able to levy, among themselves, sufficient sums of money for the purposes of the act, the' said two justices may rate any other (inhabitants) of other parishes, or out of any parish within the hun- dred where the said parish is, to pay such

sum or sums of money to the churchwardens and over- seers of the poor parish as the said justices shall think fit : and if such parish, so rated, is not able to pay the sum assessed, then the ses- sions may rate any other inhabitants of other parishes, in or out of any parish within the county, for the purposes aforesaid, sect. 3. The two justices or the sessions, as the case may happen to be, are, under this clase of the act, to order the quantum of money which they think ought to be raised in aid of the poor of the parish ; but the overseers must make the rate on those who are to pay it.

An order for taxing one parish in aid of ano- ther, under the said act 43 Eliz. was held good,

although the two parishes were, by act of par- liament, incorporated with others, for mainte- nance of the poor : there being a special proviso that nothing should extend to repeal the powers of 43 Eliz. as to taxing parishes in aid of others.

2 East's Rep. 417.

OF THE MANAGEMENT AND RELIEF OF THE

POOR.

Overseers are to set to work all such children whose parents shall not be thought able to maintain them ; and all such persons, married or unmarried, who have no means to maintain themselves, and use no ordinary and daily trade to get their living by ; to relieve, as has been already noticed, the lame, impotent, old, blind, and such other among them, being poor and not able to work; and to put out poor children apprentices. Stat. 43 Eliz. c. 2, sect. 1 ; and the justices, or any one of them, may send to the house of correction, or common gaol, such poor persons as shall not employ themselves ac- cording to the direction of the overseers, sect. 4. — The majority of the church-wardens and over- seers, by leave of the lord of the manor, whereof any waste or common within the parish shall be parcel, and by order of sessions, may build on such waste or common, at the charge of the parish, convenient houses for the impotent poor, sect. 5.. The overseers, with the consent of two justices, may set up any trade or manufactory for the employment and relief of the poor. Stat.

3 Car. I. c. 4, sect. 22.

The sessions may set poor prisoners on work, and expend the profit arising from their labor towards their relief; but no parish shall be rated above 6d. a week on this account. Stat. 19 Car. II. c. 4. Other provisions are also made by the same statute for the relief and removal of sick prisoners.

There shall be kept in every parish, at the charge of the parish, a book or books wherein the name of all such persons who do or may re- ceive collection shall be registered, with the day and year when they were first admitted to have relief, and the occasion which brought them under that necessity. Yearly, in Easter week, or as often as it shall be thought convenient, the parishioners of every parish shall meet in vestry, before whom the said book shall be produced ; and all persons receiving collections shall be called over, and the reasons of their taking relief examined, and a new list made and entered as shall be thought fit, to receive collection ; and no other person shall be allowed to have or re- ceive parish collection, but by authority under the hand of a justice residing in the parish, or, if none be there dwelling, in the parts near or next adjoining, or by order of quarter sessions, ex- cept in cases of pestilential diseases, and then only such families as are infected. Stat. 3 and 4 W.&M. c. 11, sect. 11.

No justice shall order relief to any poor per- son, until oath be made before him of some mat- ter which he shall judge a reasonable cause or ground for having such relief, and that the same person had applied to the parish for relief, and •was refused : and until such justice has sum- moned two of the overseers to show cause why

such relief should not be given. Stat. 9 Geo. I. c. 7, sect. 1. — The person, whom the justice shall order to be relieved, shall be entered in the books, as a person entitled to receive collections, as long as the cause of such relief continues, and no longer, sect. 2.

For the greater ease of parishes, the church- wardens and overseers, or the major part of them, with the consent of the major part of the pa- rishioners, may purchase houses, or contract with persons for the maintenance of the poor; and such persons shall have the benefit of their work and labor ; and when any parish shall be too small to purchase or hire such workhouse, two or more such parishes, with the consent of the majority of their respective parishioners, may unite in purchasing or hiring such house : but, by 45 Geo. III. c. 54, no contract for main- taining the poor shall be valid, unless the con- tractor resides in the parish where the poor are to be maintained, and security is given for the due performance of the contract.

The seventh section of 9 Geo. I. c. 4 is re- pealed, with respect to any parish, township, or place, which shall adopt the provisions continued in stat. 22 Geo. III. c. 83 (explained by stat. 33 Geo. III. c. 35), for the establishment of houses of industry, and incorporated societies, for the maintenance of the poor. That act lays down many excellent regulations for the further- ing the wholesome purpose of protecting and re- lieving the poor ; by appointing guardians of the poor, and governors and visitors of the poor- houses ; under restrictions, which, if adopted, would probably remedy many evils now attend- ant on the poor laws. By stat. 49 Geo. III. c. 124, sect. 5, two justices in petty sessions, may direct the regulations of 22 Geo. III. c. 83, to be executed in any parishes within their divi- sions, as fully as in those incorporated by that act.

Paupers refusing to work, or getting drunk, or otherwise misbehaving, may be committed to the gaol or house of correction, and kept at hard labor, not exceeding twenty-one days, sect. 5. — Persons having the management of the poor not to be concerned in contracts, on penalty of £100 ; sect. 6.

By stat. 54 Geo. III. c. 170, sect. 7, no master, governor, or person superintending houses for the reception of poor persons, or churchwar- dens, overseers, or any other person having the management of the poor, shall punish corporally any adult person under his care, for any misbe- haviour, nor confine any such person longer than twenty-four hours, or till they can be conveyed before a magistrate.

By stat. 55 Geo. III. c. 137 justices may di- rect a relief, under 36 Geo. III. c. 23, to be paid to such persons, during such times as the justice shall think proper, not exceeding three months, with power to make any further order for any time not exceeding six months, and so on from time to time, as occasion shall require, sect. 3. — Sums ordered to be paid for any longer period than a month, shall not exceed 3s. a week for each person, or three-fourths of the average weekly expense paid by the parish, on which such order shall be made for the maintenance of each per-

son in the workhouse, sect. 4. Justices of peace, and physicians, apothecaries, or clergymen au- thorised by them, may visit parish workhouses ; and two justices may make order for relieving the sick poor therein. Stat. 30. Geo. III. c. 49. And the sessions, as well as the single justice, may make original orders for the relief of the poor.

By stat. 56 Geo. III. c. 129, for repealing certain provisions in local acts

for the mainte- nance and management of the poor ; after recit- ing that divers local acts had passed, containing enactments relative to the maintenance and regu- lation of the poor, varying the general law with respect to particular parishes, &c., it is enacted that all enactments and provisions in any act passed since the beginning of the reign of king George I., of the following nature, should be re- pealed : viz. whereby any poor persons, not actually applying for, and receiving relief, are compellable to go or remain in any house of in- dustry or workhouse ; or may be kept therein, at the discretion of the governors or overseers, &c., after they are capable of maintaining them- selves, or until the charges of the parish in the maintenance of them or their families shall be reimbursed ; or whereby poor children are ren- dered liable to be apprenticed to the governor, &c., of any workhouse, &c. ; or whereby any parish, &c., at a greater distance than ten miles from the workhouse, &c., may become contribu- tors thereto ; or whereby governors, &c., of any workhouse, &c., are empowered to hire out the poor of full age, or to contract with any person for the profit of the labor of such poor. — And, by the same act, it is enacted that it shall not be lawful for any governor, director, guardian, or master of any house of industry or workhouse, on any pretence, to chain, or confine by chains or manacles, any poor person of sane mind.

Militia-men and their substitutes are relieved according to the provisions of the several militia acts, and other acts of parliament, viz. stats. 19 Geo. III. c. 72 ; 33 Geo. III. c. 8, sect 1 ; 34 Geo. III. c. 47 ; and particularly stat. 35 Geo. III. c. 81 ; 43 Geo. III. c. 47, stat. 2, c. 5.

The father and grandfather, and the mother and grandmother, and the children, of every poor old, blind, lame, and impotent person, or other person not able to work, being of suffi- cient ability, shall, at their own charges, relieve and maintain every such poor person, at the rate the justices in sessions shall assess, on pain of 20s. a month. Stat. 43 Eliz. c. 2, sect. 7.— The penalties levied, for disobeying such order of maintenance, shall go to the relief of the poor, sect. 11. The justices of the county or place in which the rich relation, and not where the poor relation, dwells, have alone authority to make this order, and to assess the rate of mainten- ance.

This statute extends only to natural relations, and not to relations in law ; and it seems that, in default of one relation, another may be com- pelled to relieve the pauper ; as in the case of grandfather, father, and child ; the father being incapable of maintaining the child, the grand- father may be compelled, if of sufficient ability ; and therefore a man is not obliged to maintain

his son's wife, nor his wife's mother, nor his wife's child by a former

husband. And it seems to be now settled, that it makes no difference, whether the wife be alive or dead at the time her poor relations require relief, contrary to some former determinations on this subject. It is said, also, that a wife cannot be ordered to maintain her grandchild, nor the husband of 'a grandmother to maintain her grandchild ; but if an order of maintenance be made on a grand- mother, and she afterwards marries, the husband shall be liable (during her life) to the main- tenance.

By 11 and 12 W. III. c. 4 the Protestant children of Popish parents may obtain relief by application to the court of chancery ; and by stat. 1. Ann, c. 30, the same is enacted with respect to the Protestant children of Jews.

As to relieving deserted families. — Persons running away from their families, and leaving them on the parish, are declared to be incorngi- ble rogues ; and if either man or woman shall threaten to run away, and leave their families on the parish, the same being proved by two wit- nesses, on oath before two justices, they shall be sent to the house of correction or give security to the parish. Stat. 7. Jac. I. c. 4, sect. 8. See VAGRANTS.

By 59 Geo. III. c. 12, sect. 1—5, parishes are empowered to establish select vestries for the concerns of the poor, to consist of a certain num- ber of householders (not more than twenty, nor less than five), elected by the parishioners at a vestry, and then appointed by the justices at sessions, together with the minister, church- wardens, and overseers ; and such select vestry is authorised to examine into the state and con- dition of the poor, the proper objects for relief, the nature and amount of the relief to be given, and to enquire into and superintend the collec- tion and administration of all money raised by poor rates, and of all other funds and money raised, or applied by the parish for relief of the poor. The overseers are required to conform tc the directions of the vestry ; and not to give any relief (except in cases of emergency, and under the order of a justice of peace), other than ordered by the vestry. In parishes not having select vestries, under this act all orders for relief of the poor are to be made by two justices, except in emergency, for fourteen days by one justice. By sect. 9 parishes are enabled to rent or purchase land for building or enlarg- ing workhouses in the parish, or some adjoining parish ; to provide land for the employment of the poor: the expense not to exceed a rate of Is. in the pound per annum. By sect. 24, 25, a summary remedy is provided, on application to two justices, for obtaining possession of any nouses or lands belonging to parishes, upon one month's notice. Sect. 27 facilitates the mode of obtaining relief, in cases of parishes incorporated under 22 Geo. III. c. 83. By sect. 29, &c., overseers are empowered to give relief by way of loan ; and pensions for services in the army, navy, &c., and the wages of seamen are made available, as a security or indemnity to the parishes affording relief to the parties entitled to such pensions or wages.

OF SETTLEMENT.

At present there are ten modes whereby per- sons may gain a settlement; which entitles them to claim, and receive relief from the parish in which they are settled, whenever such relief is necessary ; and, if this happens while the pauper resides in a parish where he or she is not set- tled, they are to be removed to their place of settlement ; under the regulations of the law. These are, 1. By birth, as in the case of bastards. 2. By parentage as where the father of a legiti- mate child was settled. 3. By marriage. 4. By residence of forty days. 5. By renting a tenement of the value of £10 a year. 6. By paying taxes for such a tenement. 7. By holding a public annual officer 8. By hiring and service. 9. By apprenticeship. 10. By residence on a man's own estate worth £30. Into the minuter distinctions of the acts of set- tlement we cannot here enter.

Many alterations in the general law of settle- ments having been made by several local acts, it was, by stat. 54 Geo. III. c. 170, enacted that all enactments contained in any act of parlia- ment since the commencement of the reign of Geo. I., whereby any alteration is made in respect of gaining or not gaining a settlement within any particular district, parish, &c., shall be repealed; and that every person shall be deemed to have acquired and acquire a settle- ment in every such district or parish by any means they would or might have done or do, in case such acts had not been made. All such parishes, &c., are therefore now subject to the general laws of settlement.

By 59 Geo. III. c. 50, reciting that many dis- putes had arisen respecting the settlement of the poor, by the renting of tenements, it is expressly enacted that no person shall acquire a settlement in any parish, by dwelling for forty days in any tenement, rented by such person, unless such tenement shall consist of a house or building within such parish, being a separate and distinct dwelling-house, or building, or of land within the parish, or of both, bona fide hired by such person at £10 a-year at least, for the term of one whole year: nor unless such house or building shall be held, and such land occupied, and the rent actually paid for the same, for one whole year at least, by the person hiring the same ; nor unless the whole of such land shall be situate in the same parish (or township) as the house wherein the party hiring the same dwells.

OF THE REMOVAL OF THE POOR CHARGEABLE,

OR LIKELJT TO BECOME CHARGEABLE. By stat. 13 and 14 Car. II. c. 12, sect. 1, upon complaint by the churchwardens and overseers to one justice within forty days, of a person coming to reside on a tenement under £10 a year, any two justices of the division might, on his being likely to become chargeable to the parish, remove such person to the place of his last legal settlement. And, if such person re- fused to go, or returned back when sent, he might be committed to the house of correction as a vagabond ; and, if the parish officers of his parish refused to receive him, they might be in- dicted for their default. This provision had long

been considered as cruel and impolitic : see 1 Blackstone's Commentaries, c. 9, and the notes: and, by 35 Geo. III., c. 101, the first (and con- sequently the third) section of this statute is re- pealed ; the reason assigned in the preamble of the 35 Geo. III. is, that ' many industrious poor persons chargeable to the parish, &c., where they live, merely from want of work there, would, in any other place where sufficient employment is to be had, maintain themselves and families without being burdensome to any .parish; and that such poor persons are, for the most part, compelled to live in their own parish, and not permitted to inhabit elsewhere, under pretence that they are likely to become chargeable to the parish where they go for employment : although their labor might, in many instances, be very beneficial to such parish.' The statute enacts, ' That no poor person shall, in future, be re- moved, by virtue of any order of removal, from the parish or place where such poor person shall be inhabiting, to their last settlement, until such person shall have become actually chargeable to the parish or place in which they shall inhabit ; when they may be removed by two justices ; in the same manner, and subject to the same ap- peal, and with the same powers, as might have been formerly done with respect to persons likely to become chargeable.' This provision had been previously made as to members of Friendly Societies, by stat. 33 Geo. III., c. 54.

Persons convicted of larceny or other felony, rogues, vagabonds, idle and disorderly persons, and reputed thieves, and unmarried women with child, shall be considered as actually chargeable. Stat. 35 Geo. III., c. 101, sects. 5, 6. By the same statute justices are empowered to suspend the removal of sick persons ; the charges incurred by such suspension to be borne by the parish to which they are removable. Sect. 2. — And any bastard, born during such suspension, on behalf of its mother, shall belong to the mother's settle- ment. Sect. 3.

By 52 Geo. III., c. 160, the settlement of paupers, being in gaol on mesne process, who may have relief ordered them under that act, shall be ascertained by one justice, who shall make an order of removal to the

proper parish, but which order shall be suspended whilst the pauper debtor remains in prison, and the parish where the pauper is settled shall pay the ex- penses. By 54 Geo. III., c. 170, sect. 10, churchwardens and overseers, or others having the management of the poor, may employ any person to remove paupers, ordered by magis- trates to be removed.

Persons who shall unlawfully return to tne parish whence they are legally removed shall be deemed idle and disorderly persons, and may be committed to the house of correction for one month. Stat. 17 Geo. II. c. 5. See VA- GRANTS It seems that nearly all the determina- tions, as to orders for removal of persons likely to become chargeable, now apply, mutatis mu- tandis, as to the removal of those who are ac- tually so.

The first step which the parish officers are to take, in order to procure the removal of a pauper chargeable to their parish, is to make a com

plaint to a justice of the peace, accompanied with A statement that the pauper had been examined : It need not, however, state that the examination was on oath ; but ought to show that the pauper was summoned and heard ; but even this is not, in all cases, absolutely necessary. The examina- tion must be taken before two justices, and it must be by the same two justices who signed the order ; and therefore an order stating it, in the alternative, to have been taken ‘ before us or one of us,’ is bad. The two justices also must sign the order in the presence of each other; and the justices of one county cannot make an order of removal on an examination taken and trans- mitted to them by justices of another county, although such examination be verified by oath. An order signed by two justices separately, and in different counties, is not void, but only voida- ble on appeal.

The next proceeding is the adjudication ; for an order of removal cannot be good if it omit to adjudge that the persons complained of actually became chargeable to the parish complaining, and that they are last legally settled in the parish to which they are intended to be removed. An order, removing nurse children to their deriva- tive settlement, is good, without stating the death of the parent, or adjudging the place, to which they are removed, to be the settlement of their parents. The order must state that the justices are justices of the peace for, and not in, the county ; but it need not state that they were of the division where the pauper lives ; and it is enough to name the county in the margin of the order ; for the margin of an order of removal is part of the order itself: if, however, two coun- ties are named,

and it state them to be justices of the counties aforesaid, it is bad.

That the poor laws, however benevolently de- signed or humanely administered, have been the source and support of many evils, to all classes of the community, has been but too well estab- lished : the poor's-rate in England has threatened in seasons of agricultural distress to absorb the rental of the country, while the once indepen- dent and industrious spirit of our poor has been in innumerable instances destroyed. ' The land must maintain us ' — ' We are not to starve ' — ' We are to live out of it as well as the rich ' — ' Is this enough for bread ?' — are observations, which, however abstractedly true, the poor can only be taught to make by most unnatural cir- cumstances. However difficult may be the remedy for some of these evils, that these laws press un- equally, and therefore often most unfairly, on those who pay poor's rates, that they are clogged with most expensive proceedings which the most care- ful overseers cannot avoid sanctioning — we allude to the wretched state of the law of settlement, and its consequences — and that in effect they have to a large extent made the poor idle and careless, and the industrious poor, is not to be disputed.

Still we say, with an able legislator on the subject, we do not attribute these mischiefs, which have arisen mainly out of the 43d Elizabeth, to its inventors or the spirit in which it origi- nated— quite the contrary : the support and

maintenance of the old, lame, blind, or impo- tent is conformable to a duty of higher influence than human institutions. But the constraining and acting upon this law in an advanced and much altered state of society, and the collateral measures of those who have had to administer it, have evidently introduced much that is foreign to its intention. It was never designed to give a right of support and maintenance to those who, by the practice of frugality, sobriety and in- dustry, might have supported themselves, but who have become chargeable by their crimes and misconduct. It never had in contemplation that men should anticipate parochial support as a source of maintenance for themselves and fami- lies,— nor did it intend to take away from the laboring classes all interest and concern in their own well-being. It did not contemplate the total destruction of independence, or that so large a proportion of the community should view the present moment as the sole object worthy of their attention. These are evils which have arisen out of the administration of that act. Whilst the country remained chiefly agricultural, the progress of this malady was slow. Since we have become a manufacturing people, its in- crease has been, out of all measure and calcula- tion, rapid. In 1776 the amount of the poor- rates was £1,530,800. In forty-three years after they had augmented to 8,500,000 ! And each successive augmentation of the burden has been attended with a proportionable increase of mi- sery. Pauperism contaminates all who come

within its vortex — foreigners contemplate with astonishment the sums provided in Great Bri- tain for the poor, which, with the addition of endowments to charities, exceed 9,000,000 an- nually, a revenue possessed by few sovereigns in Europe. And, dazzling as this appears at a dis- tance, what are the effects when viewed more closely? Does it produce happiness, content, and gratitude, even among the objects relieved ? Not a particle of gratitude, and certainly nothing of contentment, is to be found amongst the greater number — discontent, gloom, and misery, pervade all who are connected with it.

Such are the evils ; the remedies we feel to be among the most difficult objects of future legislative provision. Mr. Curwen once, we be- lieve about 1819, proposed a plan of general taxation on income, in fact an income or property tax, as a substitute for all poor's rates, and to be managed by the parochial officers. Mr. Scar- lett has since most ably contended for an abolition of the whole of the laws of settle- ment, observing that the expenses of removing the poor became, in numerous instances, far greater than their maintenance for half their lives. In 1834 an important modification of the poor laws WHS effected, the operations of which are not yet so fully developed as to supersede the analysis of the poor laws here given. The chief feature in the new arrangement consists in the vesting of extensive powers in three commis- sioners.

POORBUNDER. A town and government on the south-west coast of the Gujrat Peninsula, containing extensive iron-works. On a high mountain in this district, visible from Bhattia,,

once stood the city of Goomtee, which was the metropolis of the ranahs of Poorbunder, when their sway extended throughout the western quarters of the Gujrat peninsula. It was de- stroyed by Jam Bhamenee, the son of Jam Oner, who invaded the country from Sinde, for the purpose of overturning the government of Poor- bunder. Legendary tales and songs state their passage of the Run at Mallia, which may be es- teemed evidence of the extent of that curious swamp at an early period. In this district there are several extensive works for fusing iron.

By an agreement in 1808, with the Bombay government, Rana Sertanjee and Coer Hallajee of Poorbunder, engaged not to permit or con- nive at any act of piracy committed by any person under his authority ; and also to abstain from plundering British vessels in distress. Re- ciprocal freedom of trade to be permitted by both parties, and an agent from the Bombay go-

vernment to be allowed to reside at Poorbunder.

POOTELLAM, a town on the west coast of Ceylon, remarkable for its salt pans, formed by an arm of the sea. A large quantity of salt was manufactured here by the Dutch ; but, since the British acquired Ceylon, this production has been almost entirely neglected.

POP', n. s., v.n., &v. a. } Fr. paf ; Lat.

POP'-GUN, n. s. $ poppysma. A small,

smart, quick, sound or motion, formed from the sound, most probably : to move or enter quickly or suddenly ; to put out or in suddenly ; to shift : a pop-gun is a toy making a sudden, sharp, noise.

He that killed my king,

Popt in between the' election and my hopes.

Shakspeare. That is my brother's plea,

The which if he can prove, he pops me out

At least from fair five hundred pounds a year. Id.

A. boat was sunk and all the folk drowned, saving one only woman, that in her first popping up again, which most living things accustom, espied the boat risen likewise, and floating by her, got hold of the boat, and sat astride upon one of its sides. Caretc.

He popped a paper into his hand. Milton.

The commonwealth popped up its head for the third time under Brutus and Cassius, and then sunk for ever. Dryden.

A. fellow, finding somewhat prick him, popt his finger upon the place. L' 'Estrange.

If their curiosity leads them to ask what they should not know, it is better to tell them plainly, that it is a thing that belongs not to them to know, than to pop them off with a falsehood. Locke.

I have several ladies, who could not give a pop loud enough to be heard at the farther end of the room, who can now discharge a fan, that it shall make a report like a pocket pistol. Addison.

1 startled at his popping upon me unexpectedly.

Id. Didst thou never pop

Thy head into a tinman's shop 1 Prior.

Life is not weak enough to be destroyed by this pop-gun artillery of tea and coffee. Cheyne.

As he scratched to fetch up thought,

Forth popped the sprite so thin.

Swift's Miscellanies.

Others have a trick of popping up and down every moment, from their paper to the audience, like an idle school-boy. Swift.

POP./E, in Roman antiquity, persons wno at- tended the sacrifices, provided the victims, knocked them down and killed them. They were half naked ; their shoulders, arms, and upper parts of their bodies being uncovered as far as their navels, and the rest covered to the mid-leg with a linen apron, or the skins of the sacrifices. They wore crowns of laurel on their heads.

Ilia dies hornis casdem denuntiat agnis, Succinctique calent ad nova lucra popae.

Propert. 1. 4, eleg. 3, r. 61.

POPAYAN, a government of Columbia, in New Grenada, is bounded on the north by the Llanos de Nieva ; on the west by Choco and the Pacific ; on the east by the government of Quixos ; and on the south by that of Atacames. It is subordinate to the presidency of Quito, and contains the several districts of Cali, Quatro Ciudades, Timana, Guadalaxara de Buga, San Sebastian de la Plata, Almaguer, Caloto, San Juan de Pasto, El Raposo, and Barbacoas. Of these Pasto is large and fertile ; Cali and Buga, lying between Popayan and Choco, are thriving on account of the trade they mutually carry on ; and Caloto is fertile and rich, though subject to earthquakes : none of these, however, deserve the name of provinces.

Popayan possesses, from the extent of its sur- face, a very unequal climate : the district of Barbacoas, being on the sea shore, is extremely hot, whilst in the interior, on the mountains, the cold is excessive ; but the capital enjoys a tem- perate climate and eternal spring. Through the northern part of the government rises the central and highest branch of the three parallel chains of the Andes : its summits are above the lower limits of Congelation ; of these Baranguan, Quindiu, and Guancas, are the most lofty. Tempests and

earthquakes are more frequent in this government than in Quito itself.

The soil varies much. It produces grains and fruits in great abundance. Among the singular plants of the country is the coca, or betel, which is chewed by the natives in the same manner, and for the same purposes, that it is in the East Indies ; and one of the gum-trees of Popayan yields a resin so remarkably tenacious that, when used to varnish ornamental work, it resists the application of boiling water, or even acids ; for which reason, tables, cabinets, &c., made by the Indians, and lacquered with it, are highly valued at Quito.

Great numbers of horned cattle, horses, and sheep, are reared by the farmers. Popayan also carries on much trade, as all the European goods from Carthagena are consigned hither, and sent to Quito ; it exports thither, also, cattle and mules, receiving cloths, &c., in return. Its ac- tive commerce embraces likewise dried beef, salt pork, rum, tobacco, lard, cotton, &c., which are sent to Choco and other places, in barter for the precious metals : sugar and snuff are im- ported from Santa Fe. The exchange of silver for gold is also a great branch of traffic. To go from Popayan to Santa Fe, the central Cordil- lera must be crossed ; the pass most frequented is that of Guanacas in 2° 34′ N. lat., between Popayan and the small town of La Plata, pre-

senting every where to the view summits clothed in eternal snows. It is impossible to traverse this road without trembling ; and care must be taken to encamp at night as near the top of the mountain as possible, or to stop at the village of Guanacas, on the eastern side; it being absolutely necessary to stop, if the blackness of the clouds indicates that bad weather is at hand. The mules which convey passengers, and which are made use of in preference to horses, for the se- cureness of their footsteps, not only partake the dangers, but run much greater risks than the traveller, as they have equally with their riders to resist the effects of the extreme cold, and to undergo the greater part of the fatigue. The whole road, for the space of two leagues, is so covered with the carcases and bones of animals which have sunk under their exertions, that it is impossible to avoid treading over them. On the south, at the distance of five or six leagues, this pass has the snowy mountain of Coconoco, an ancient volcano, which is not at present in acti- vity, and on the north another summit called Houila, also covered with perpetual snow. Yet at the top of the gorge is a small lake or pond, of which the water never freezes ; and at less than 700 feet distant from this on each side, are the sources of the Cauca and the Magdalena. Goods are

often left in this place, because the muleteers will not run the risk of quitting it be- tween suns. The distance from Popayan to La Plata (the chief town on the Magdalen where the journey terminates), is about nineteen or twenty leagues, which generally occupies twenty or twenty-two days to travel; but the time taken to pass the actual ridge is about a day, and there are habitations at intervals.

This is not the case with the other road, which leads from Popayan by the mountains of Quin- diu, between the cities or rather towns of Ibague and Carthago, in 4° 36′ N. lat. It is the most difficult to scale, when taken in the sense of a road, of any in the whole Cordillera, crossing a thick forest, which, in the most favorable weather, is not passable under ten or twelve days. No hut is to be seen, or any means of human sub- sistence ; and the venturous traveller must take with him at least a month's provisions, as the sudden thaws and swellings of rivers often ren- der it equally impracticable to return or go for- ward.

The highest point of this pass, styled Garito de Paramo, is 11,499 feet above the level of the sea. The path is not more than a foot and a half broad, and has in several points the appear- ance of a gallery, whose surface has been taken off; the whole is bottomed with muddy clay. The torrents which rush down the rocks form occasional narrow beds, from twenty to twenty- five feet in depth, along which the passenger must work his way in the mud, encompassed by a wall of rocks covered with vegetation of luxu- riant growth, which renders them nearly dark. Along these galleries, many of which are a mile and a half in length, the oxen employed to carry baggage (and whose feet are better adapted than those of mules for struggling through the tough clay), can hardly force their way. The meeting with other travellers in such a situation is highly

troublesome, as there is the greatest difficulty tc pass. The roots of the bamboos, studded with strong prickles, projecting from the sides of the mountains, are among the other inconveniences, combined with the necessity of crossing the icy waters of the torrents, and of being deluged with the incessant rains which prevail. Colonists, whose affairs oblige them to go by this route, are carried in chairs on men's backs by a set of people, gene- rally either Creoles or Mulattoes, who are bred to this business. The common price of carriage from Ibague to Carthago, occupying about fif- teen or twenty days, is from fifty to sixty shillings. Beside the capital, Cali, Carthago, Ibogue, Pe- race, La Plata, Timana, Neyva, Mercaderc, and St. Juan de Pasto, are places of consideration.

POPAYAN, the capital of the above government, is situated in the beautiful valley of the Cauca River, in 2° 28′ 38′ N. lat., and 76° 31′ 30″ W. long., 195 miles S.S.W. of Santa Fe. It is 5905 feet above the level of the sea,

having an unin- terrupted prospect to the north, and a mountain named M, from its resemblance to that letter, on the east. On the summit of M is a convent, near which issues the Molena River, that runs rapidly through the city, and has two bridges, one of stone and the other of wood, erected over it. The Cauca flows about a league from Popa- yan, with a broad and quick current, subject to dreadful inundations from June to August, when the torrents descend from Guanacas and the neighbouring mountains ; in the immediate vicinity are the great volcanoes of Purace and Sotara.

The streets of this city are broad, straight, and level, the town being built in a rectangular shape. The houses have mostly only a ground floor, and, though made of unburnt brick, are often handsome. There is a cathedral, several convents and churches, and two nunneries. It is also the seat of the mint, the annual coinage of which is estimated at a million of dollars. Most of the people are of the Mulatto cast, owing to the great number of Negroes who have always been employed here and in the mines. The inhabitants have been computed at above 25,000, containing many very wealthy persons, who have accumulated their fortunes by trade.

POPE, n. s. -ˆ Span., Port., Ital., and

POPE'DOM, I Lat. papa ; Gr. irair na£. The

PO'PERY, > bishop of Rome : popedora

PO'PISH, adj. i is the state or dignity of the

PO'PISHLY, adv. } pope : popery, the religion of the church of Rome : popish is, taught bj the church of Rome ; tinctured with popery.

In this sense, as they affirm, so we deny, that whatsoever is popish we ought to abrogate Hooker. I refuse you for my judge ; and*

Appeal unto the pope to be adjudged by him.

Shakspeare.

That world of wealth I've drawn together For mine own ends ; indeed, to gain the popedom.

Id. I know thou art religious,

With twenty popish tricks and ceremonies. Id.

He was organist in the pope's chapel at Rome.

Peacham.

Christianity has been more oppressed by those that thus fought for it, than those that were in arms against it ; upon this score, the pope has done her more harm than the Turk. Decay nf Piety.

She baffled the many attempts of her enemies, and entirely broke the whole force of that party among her subjects, which was popishly affected.

Addison's Freeholder.

A friend in Ireland, popishlti speaking, I believe constantly well disposed towards me.

Pope to Swift.

Popery, for corruptions in doctrine and discipline, I look upon to be the most absurd system of Christi- anity. Swift.

The poor are near at hand, the charge is small, A slight gratuity atones for all.

For though the pope has lost his interest here, And pardons are not sold as once they were, No papist more desirous to compound, Than some grave sinners upon English ground.

Cowper.

POPE. In the east this appellation is fre- quently given to Christian ministers in general, and in the west bishops were so called in ancient times ; for many centuries, however, it has been exclusively appropriated to the bishop of Rome, whom the Roman Catholics look upon as the common father of all Christians. The Roman or Latin church is certainly a system of government whose jurisdiction extends to a great part of the known world, though its authority has been cir- cumscribed within narrower limits since the re- volution in the sixteenth century, that, in many places, delivered Christianity from the bondage of superstition. This system of ecclesiastical policy, extensive as it is, is under the direction of the bishop of Rome alone, who, by virtue of a presumed hereditary succession, claims the au- thority, prerogatives, and rights of St. Peter, the supposed prince of the Apostles, &s the supreme head of the universal church. lie is called the holy pontiff, or pope, — a name assumed in the twelfth century.

In the first ages of the church, the people and the priests, and sometimes

only the priests, elected the pope, according to the plurality of voices. The emperors afterwards claimed the right of confirming the election. In the eighth century pope Adrian I., in a council of bishops assembled at Rome, conferred upon Charlemagne and his successors the right of election ; and they reserved to themselves the privilege of ap- proving the person that was elected by the priests and people ; nor was the consecration of the elected pontiff valid, unless performed in the presence of the emperor's ambassadors. The election, however, after undergoing many revo- lutions as to the form of it, is now referred to the cardinals in conclave.

The person of the pope may be considered in two very different capacities, as temporal sove- reign of the Roman territory, and as chief pastor of the Catholic church. To give the reader a • clear and precise idea of the rights which every Catholic considers as inherent in the successor of St. Peter as a spiritual character, it will be necessary to observe that the pope as bishop of Rome, metropolitan and primate of Italy, and patriarch of the west, enjoys the same privileges and authority as are enjoyed by other bishops, metropolitans, primates, and patriarchs within their respective dioceses and districts; that his authority, like theirs, is confined within certain limits marked out by ancient custom, and by the canons; and that, like theirs also, it may be mo-

dified or suspended by the church at large. As patriarch of the west, the pope enjoys a pre-emi- nence elevated enough to satisfy the wishes of the most ambitious prelate, as by it he ranks be- fore all western ecclesiastics, and takes place and precedency on all public occasions. But the Roman pontiff claims honors still more distin- guished, and as successor of St. Peter is acknow- ledged by the Catholic church to sit as its first pastor by divine institution. It is maintained that the pope enjoys, by the institution of Christ, the primacy of honor and jurisdiction over the whole Christian church, and to refuse it to him would be deemed an act of rebellion. But no authority has yet determined, and it seems indeed very difficult to fix, the precise rights and pre- rogatives which are conferred by this primacy, and which are so inseparably annexed to it that to oppose their exercise, or deny their existence, would be either schism or heresy. The Jesuits have, however, ever maintained that the pope is infallible ; that he is the only visible source of that universal and unlimited power which Christ has granted to his church ; that he is not bound by any laws of the church, nor by any decrees of the councils that compose it ; and that he alone is the supreme lawgiver of that sacred commu- nity— a lawgiver whose edicts and commands it is in the highest degree criminal to oppose or disobey. According to the canons the pope was as far above all kings as the sun is greater than the moon. He was king of kings, and lord of lords, though he subscribed himself the servant of servants. The immediate and sole rule of the whole world belonged to him by natural, moral, and divine right; all

authority depending upon him. All nations and kingdoms were under the pope's jurisdiction, for to him God had delivered over the power and dominion in heaven and earth.

But though no temporal advantages were ori- ginally, or by its institution, annexed to the papal office, yet we find that even in the very commencement of Christianity the bishop of Rome had become a conspicuous personage so far as to attract the attention of the emperors, and sometimes to awaken their jealousy. When the emperors embraced Christianity it may easily be imagined that the successor of St. Peter (if such he were) acquired an increase of temporal weight and dignity ; and it has been observed that the Pagan historians speak with some as- perity of the splendor of his revenue and the de- licacy of his table. But, besides the consideration inseparable from the office itself, another source of temporal greatness may be found in the ex- tensive possessions of land, and in the great riches, in plate, of the Roman church itself. These riches considerable, even under the Pagan empe- rors and during the persecutions, were not a little increased by the liberal donations of the Christian princes, and particularly of Constan- tine the Great. As early as the fifth century the popes aimed at a supremacy of ecclesiastical jurisdiction, which was confirmed to them by the tyrant Phocas in the seventh. By the donation of the exarchate of Ravenna, and of Pentapolis, to the Roman pontiff, Pepin raised the bishop of Rome to the rank of a temporal prince: but it wai not until the time of Leo IX. that they

carried their pretensions so far as to assume the high title of lords of the universe, arbiters of the fate of kingdoms and empires, and supreme rulers over the kings and princes of the world ; arrogating the power of transferring territories and provinces from their lawful possessors to new masters.

Though the pope is both bishop and prince, yet his titles, dress, equipage, and the whole ceremonial of his court, are adapted to the first of these characters. He is styled holiness, the holy father, and sometimes in history the sove- reign pontiff; but the former appellations, as more appropriate to his duties and functions, are exclusively used in his own court. His robes are the same as those of a bishop in pon- tificals, excepting the stole and the color, which is white, not purple. His vestments, when he officiates in church, as well as his mitre, do not differ from those of other prelates. The tiara seems originally to have been an ordinary mitre, such as is still worn by the Greek patriarchs. The three circlets, which have raised it into a triple

crown, were added at different periods;, and it is said for different mystic reasons. The first or lowest seems to have been originally a mere border, gradually enriched with gold and diamonds. The second was the invention of Boniface VIII. about the year 1300 ; and to complete the mysterious decoration the third was superadded about the middle of the fourteenth century. The use of the tiara is confined to cer- tain extraordinary occasions, as in most great ceremonies the pope uses the common episcopal mitre. Whenever he appears in public, or is approached, even in private, he is treated with great reverence. In public, a large silver cross, raised on high, is carried before him as a sacred banner, the church bells ring as he passes, and all kneel in his sight. When he officiates at the patriarchal basilicae he is carried from his apart- ments in the adjoining palace to the church in a chair of state ; though in the chancel his throne is merely an ancient episcopal chair, raised only a few steps above the seats of the cardinals or clergy. In private, as the pontifical palaces are vast and magnificent, there are perhaps more apartments to be traversed, and greater appear- ances of splendor in the approach to his person, than in an introduction to any other sovereign. In his antichamber a prelate in full robes is al- ways in waiting ; and when the bell rings the door of the pontifical apartment opens, and the pope is seen in a chair of state with a little table before him. The person presented kneels once at the threshold, again in the middle of the room, and lastly at the feet of the pontiff, who, accord- ing to circumstances, allows him to kiss the cross embroidered on his shoes, or presents his hands to raise him. The pontiff then converses with him a short time, and dismisses him with some slight present of beads, or medals, as a memorial. The ceremony of genuflection is again repeated, and the doors close.

The pope has no hours of relaxation, always en- cumbered with the same robes, surrounded by the same attendants, and confined within the magic circle of etiquette. A morning of business and application closes with a solitary meal ; a walk

in the gardens of the quirinal or Vatican, a visit to a church or an hospital, are his only exercises- The pope never dines in company ; so that to him a repast is no recreation ; it is consequently short and frugal. Sixtus Quintus is reported to have confined the expenses of his table to about sixpence. Innocent XI. did not exceed half a crown ; and the late pontiff, considering the dif- ferent valuation of money, equalled them both in frugality, as the expenses of his table never exceeded five shillings a day. On the whole the person and conduct of the pope, whether in pub- lic or in private, are under perpetual restraint and inspection. The least deviation from strict pro- priety, or even from customary forms, would be immediately noticed, published, and censured in pasquinades. Leo X. loved shooting, and by the change of dress necessary for that amusement gave scandal. Clement XIV.

(Ganganelli) was advised by his physicians to ride ; he rode in the neighbourhood of his Alban Villa, and offended, it is said the people of the country not a little by that supposed levity. Benedict XIV. wished to see the interior arrangement of a new theatre, and visited it before it was open to the public ; the next morning an inscription appeared over the door by which he had entered, ' Porta santa ; plenary indulgence to all who enter.' These anecdotes suffice to show the joyless uniformity of the papal court, as well as the strict decorum that pervades every department immediately con- nected with the person of the pontiff.

To speak of the prerogative of the pontiff as a sovereign is scarcely necessary, as it is known to be uncontrolled by legal or constitutional au- thority : if ever any monarch had either an oppor- tunity or an inducement to realize the generous plan formed by Servius Tullus, of giving liberty and a constitution to his people, the popes, we should imagine, could have wanted nei- ther. But the doctrine of the infallibility of the popes must not pass unnoticed. On this subject we will give our readers the testimony of Mr. Eustace, at the same time apprising them that, though the statements are essentially true, they are colored by the partiality of Roman pre- judice. ' The truth is,' says our author, ' that there is no such article as the infallibility of the pope in the Catholic creed ; for, according to it, infallibility is ascribed not to any individual or even to any national church, but to the whole body of the church extended over the universe. That several theologians, particularly Italian and Spanish, have exaggerated the power and the privileges of the pope, is admitted; and it is well known that among these, some, or rather several, carried their own opinion of pontifical preroga- tive so high as to maintain that the pontiff, when deciding ex cathedra, or officially, and in capa- city of first pastor and teacher of the church, with all the forms and circumstances that ought to accompany legal decisions, such as freedom, de- liberation, consultation, &c., was, by the special protection of providence, secured from error. The Roman court favored a doctrine so conform- able to its general feeling, and of course encouraged propagation; hence, were we only to judge of the power of the pope by his own pretensions, we should find it unlimited and supreme; for there

s.re no prerogatives that can flatter ambition which he does not claim for himself and his court. He not only pretends that the whole power and majesty of the church reside in his person, and are transmitted, in certain portions, from him to the inferior bishops ; but, moreover, has frequently and distinctly asserted the abso- lute infallibility of all decisions and decrees that proceed from his tribunal ; though he never pre- tended to enforce it as an article of Catholic faith, or ventured to attach any marks

of censure to the contrary opinion. This latter opinion, the ancient and unadulterated doctrine of the Catho- lic church, prevailed over Germany, the Austrian empire, Poland, the Low Countries, and Eng- land ; and in France was supported by the au- thority of the whole Gallican church, and by the uanimous declaration of all the universities. So rigorously indeed was their hostility to papal infallibility enforced, that no theologian was admitted to degrees unless he maintained in a public act the four famous resolutions of the Gallican church against the exaggerated doctrines of some Italian divines relative to the power of the Roman see. These resolutions declare that the pope, though superior to each bishop indivi- dually, is yet inferior to the body of bishops as- sembled in council ; that his decisions are liable to error, and can only command our assent when confirmed by the authority of the church at large; that his power is purely spiritual, and extends neither directly nor indirectly to the temporalities or prerogatives of kings and princes ; and, in fine, that his authority is not absolute or despotic, but confined within the bounds prescribed by the canons and the customs of the church. This doctrine was taught in all the theological schools, that is, in all the universities and seminaries of France, as well as in all the abbies ; and was publicly maintained by the English Benedictine College at Douay. The conclusion to be drawn from these observations is, that no Catholic di- vine, however attached to papal prerogative, ever conceived an idea so absurd as that of ascrib- ing infallibility to the person of the pontiff; and secondly, that those theologians who ascrib- ed infallibility to papal decisions when clothed with certain formSj gave it as their opinion only, but never presumed to enforce it as the doctrine of the Catholic church.'

The pope is elected by the college of cardinals, being seventy-two in number, including the six suburban bishoprics ; whose principal and most honorable privilege is that of electing the pope ; and it is easy to conceive that their dignity and importance increased with that of the Roman see itself; and that they shared alike its tempo- ral and its spiritual pre-eminence. As the car- dinals are the counsellors, so they are the officers of the pontiff, and are thus entrusted with the management of the church at large, and of the Roman state in particular. The grand assembly of the cardinals is called the consistory, where the pontiff presides in person. Here they appear in all the splendor of the purple, and form a most majestic senate. Here, therefore, public communications are announced, foreign ambas- sadors received, cardinals created, formal com- pliments made and answered ; in short, all

the exterior splendor of sovereignty is displayed. But the principal prerogative of a cardinal is ex- ercised in the conclave, so called because the members of the sacred college are then confined within the precincts of the great halls of the Va- tican palace, where they remain immured till they

*agree in the election of a pontiff. As soon as the holy father has expired, the cardinal cham- berlain, in a purple dress, presents himself at the door of his chamber and knocks three times with a gold hammer, calling each time the pope by his Christian, family, and papal names. After a short time he says, in presence of the clerks of the chamber and his apostolical votaries, who take act of that ceremony, ' He is then dead.' The fisherman's ring is then brought to the cardi- nal who breaks it with the same hammer. He then takes possession of the Vatican in the name of the apostolical chamber. After having estab- lished his authority in that palace, he sends guards to take possession of the gates of the city and of the castle of St. Angelo ; and, when he has provided for the safety of Rome, he quits the Vatican in a carriage, preceded by a captain of the pope's guard, and having by his side the Swiss who generally accompany his holiness. When this march begins, the great bell of the capital is tolled, and, as it only tolls on this occa- sion, announces to the whole city the death of the sovereign pontiff. The body having been embalmed is clad in its pontifical dress, and with the mitre on its head, lies in state during three days on a bed of parade. It is next carried with great pomp to the church of St. Peter, where it remains nine days exposed to public view, after which the burial takes place. The next day the cardinals assemble in the same cathedral, where the oldest of them celebrates the mass of the Holy Ghost for the election of a new pope. Ano- ther prelate, in a Latin oration, exhorts the car- dinals to choose an individual worthy of so eminent a station ; after which they all march in procession behind the papal cross, the musicians singing the hymn Veni Creator! to the hall of conclave) which occupies a large portion of the Vatican. The large rooms are divided by tem- porary partitions into what are called cells, which are subdivided again into little rooms and closets. Every cardinal has his own, for him and his assistants, and it is only large enough to hold a bed, five or six chairs, and a table. The hour of holding the conclave being come, a bell is rung to cause the ambassadors, princes, prelates and other persons of distinction who may be pre- sent, to retire. When they are all gone out, the doors and windows are walled up, with theexcep- tion of one, which throws but a dim light upon the conclave. The only communication with the exterior is by the means of towers, in the same shape as those used in convents of nuns. One door is also kept for the removal of any cardinal who may be ill, but who loses the right of giving an active vote if he retires. The mode of elec- tion now in use is by a secret ballot. Two cha- lices stand on a long table in the chapel of Sixtus, into which the cardinals deposit their bulletins, containing the name of the individual for whom they vote. One of the scrutators reads it aloud, while two others mark the number of votes fo**

each indvvidual, by the side of his name, on the large tablet where all those of the cardinals are inscribed. Whoever obtains two-thirds of the votes present is canonically elected. His name is immediately proclaimed aloud, and the cardi- nals sitting on his right and left rise and quit their places. His consent is asked ; and, when it is given, the cardinals, beginning by the oldest, perform the first adoration ; that is to say, kiss his foot, and then his hand. The first cardinal dea- con now announces the election to the people, and the artillery of the castle of St. Angelo and the bells of the city spread the news afar. The people are then allowed to break into the con- clave and to carry oft' all they can.

No person is eligible to the papacy under fifty- five years of age, or that is not an Italian by birth, having already obtained a place in the college of cardinals ; or who is a prince by birth, or allied to a reigning house, lest such a pope should dismember the patrimony of St. Peter, or ' abandon that neutrality which a common father should observe towards all Christian princes ;' or, finally, should treat the cardinals with too much hauteur : thirdly, no one promoted to the degree of cardinal at the nomination of some crown, especially that of France and Spain, or being a natural-born subject of either of these powers, lest gratitude or national attachment should ren- der him too devoted to the interests of the one or the other, is eligible. Even youth, and a good complexion and figure, are considered as obsta- cles. Bat all these maxims and rules vary and change according to the inconstant and precari- ous impulse of policy and faction. Hence it often happens that, in the numerous college of cardinals, a very small number are permitted, upon a vacancy, to aspire at the papacy, the greatest part being generally prevented by their birth, their character, their circumstances, and by the force of political intrigues, from flattering themselves with the pleasing hope of ascending that towering summit of ecclesiastical power and dominion. ' It is not my intention,' says Mr. Eustace, ' to specify all the forms of etiquette observed, or the ceremonies practised during the process, or at the conclusion of the election ; two or three things, however, I must notice, for reasons which will appear sufficiently obvious : one is the custom of putting the tickets contain- ing the votes of the cardinals on the patina, or communion plate, and then into the chalice : now however important these votes may be, and however intimate their connexion with the wel- fare of the church, yet to apply to them the vases devoted in a peculiar manner to the most awful institutions of religion seems to pass beyond dis- respect, and almost to border on profanation. The next ceremony to which I have alluded is that called the adoration of the pope ; it takes place almost immediately after his election, when he is placed in a chair on the altar of the Sixtine cha- pel, and there receives the homage of the cardi- nals: this ceremony is agrain repeated on the high altar of St. Peter's. Now, in this piece of pageantry, I object not to

the word adoration ; no one who knows Latin, or reflects upon the sense which it bears on this and on a thousand other occasions, will cavil at it, though he may wish it

otherwise applied. Nor do I find fault with the throne ; he who is at the same time both pontiff and prince has from time and custom, perhaps, a double title to such a distinction. But why should the altar be made his footstool ? the altar, the beauty of holiness, the throne of the victim lamb, the mercy-seat of the temple of Christian- ity : why should the altar be converted into the footstool of a mortal ?'

The income of the Roman court is not only reduced in its amount, but is very irregular and uncertain. Several years ago, when in full pos- session of its territory, both in Italy and in France, it was not calculated at more than £600,000. ' Contrary to a very general opinion, I must here observe,' says Mr. Eustace, ' that this income arose principally from internal taxa- tion, and that a very small part of it was derived from Catholic countries. The sums remitted by Catholic countries may be comprised under the two heads of annats and of dispensations : now these two heads, when united, did not produce in France, the richest and most extensive of Catho- lic countries previous to the revolution, more than £15,000 per annum. In Spain the annats had been abolished, or rather bought off; and in Germany, if I mistake not, suppressed. Dis- pensations, that is, licenses to take orders, to hold livings, to contract marriages, and do vari- ous acts, in cases and circumstances contrary to the prescriptions of the common canon law, produced merely sufficient to pay the expenses of the courts through which they necessarily passed, and added little to the papal revenue. As for the concourse of pilgrims, which was sup- posed to be so very productive a source of income, it brought nothing to Rome but the filth and the beggary of Catholic Europe. The far greater part of these pilgrims were not only too poor to bring an accession of wealth to the city, but even to support themselves, and were gene- rally fed and lodged in hospitals expressly en- dowed for their reception. Into these hospitals 700 or more have frequently been admitted at a time, and supplied, not only with the necessaries, but even with the comforts of life.' The revolu- tionary invasion of Italy, and the consequent dismemberment of part of the Roman territory, lessened the papal income, not only by diminish- ing the number of persons who contributed to it, but by impoverishing all the inhabitants of the Roman state.

The propagation of Christianity being their first and most indispensable duty, the popes have applied themselves to it with zeal and success, not only in the early ages, when their spiritual functions were their chief occupation, but even at a later period, when politics and ambition had engrossed no small portion of their attention. To support this grand and

extensive plan of Christian conquest, there are several establish- ments at Rome, and one in particular which from its object is called the Collegium de Pro- paganda Fide. This seminary is vast and noble, supplied with a magnificent library, and with a press, in which books are printed in every known language. The same treasury has to keep all the public edifices in repair, especially those im- mense palaces which, though of little use as re-

sidences, are the receptacles of all the wonders of ancient and modern art; to protect the remains of Roman magnificence from further di- lapidation; and, in fine, to continue the embel- lishment and amelioration of the capital, and of its territory generally. When, to these burdens, we add the pensions which the pope is accustom- ed to settle on bishops when unusually poor and distressed, and the numberless claims upon his charity from every part of the world, we shall not be surprised either at the expenditure of an in- come not very considerable, or at the difficulties under which the papal treasury has frequently labored.

POPE, n. s. A small fish.

A pope, by some called a ruffe, is much like a pearch for shape, but will not grow bigger than a gudgeon : an excellent fish, of a pleasant taste, and spawns in April. Walton.

POPE, in ichthyology. See PERCA.

POPE (Alexander), a celebrated English poet, descended from a respectable family, and born the 8th of June, 1688, in London. His father being of the Romish religion, he was placed, at eight years of age, under the tutorship of Ta- verner, a priest, who taught him the rudiments of Latin and Greek ; and soon after he was sent to a Popish seminary at Winchester, whence he was removed to a school at Hyde Park corner. He discovered early an inclination to poetry ; and Ogilby's Virgil and Sandys's Ovid were his favorite books. At twelve he retired with his parents to Binfield, in Windsor Forest ; where he studied Spenser, Waller, and Dryden. At fifteen, to a proficiency in Latin and Greek, he added a knowledge of the French and Italian languages. His pastorals, begun in 1704, first introduced him to the wits of the time ; among whom were Wycherly and Walsh. The same year he wrote the first part of his Windsor Forest, though the whole was not published till 1710. In 1708 he wrote the Essay on Criticism, justly esteemed a masterpiece, though he was not then twenty years old. The Rape of the Lock was first published in 1712 ; in which, above all his

works, his strength of imagination seems most conspicuous. In 1713 he circulated proposals for publishing a translation of Homer's Iliad, by subscription : by which he acquired a con- siderable sum of money. The subscription amounted to £6000, besides £1200, which Lin- tot the bookseller gave him for the copy. Our poet's finances being now in good condition, he purchased a house at Twickenham, whither he removed with his father and mother in 1715: the former died here about two years after. In 1717 Pope published a collection of all he had printed separately ; and proceeded to give a new edition of Shakspeare ; which being announced, in 1721, discovered that he had consulted his fortune more than his fame in that undertaking. The Iliad being finished, he engaged, upon the like footing, to undertake the Odyssey. Broome and Fenton contributed parts of it, and received £500 from him for their labors. It was published in the same manner, and on the same conditions as the Iliad, excepting that Lintot, instead of £1200, gave '

ployed with Swift and Arbuthnot in printing some volumes of Miscellanies. About this time he narrowly escaped losing his life, as he was re- turning home in a friend's chariot; which, on passing a bridge, happened to be overturned, and thrown with him and the horses into the river. A fragment of the glass cut him so desperately that he ever after lost the use of two of his fingers. In

1727 his Dunciad appeared in Ireland; and in

1 728 in England, with notes by Swift, under the name of Scriblerus. It is a piece of the most perfect satire that ever was written. The work was presented to the king and queen by Sir Robert Walpole ; who, about this time, offered Pope a pension, which however he refused, as he had formerly done a proposal of the same kind made him by lord Halifax. He greatly cultivated the spirit of independence ; and —

' Unplac'd, unpension'd, no man's heir or slave,'

was frequently his boast. In 1729, by the ad- vice of lord Bolingbroke, he wrote his Essay on Man. This was followed by his Ethic Epistles ; the fourth of which, upon Taste, giving great offence, he next commenced his Satires, which he continued till 1739 ; and in which he attacked persons of the highest rank. His Essay on Man being translated into French in 1738, his system of Ethics was censured by professor Crousaz, but defended by Warburton, afterwards bishop of Gloucester. In 1742 he added a fourth book to the Dunciad. A genuine collec- tion of his letters was published in 1737. He had all his life been subject to the head-ach, which he derived from his mother ; and it was now greatly increased by a dropsy in his breast, under which he expired the 30th of May, 1744, in the fifty-sixth

year of his age. He left Miss Blount his heir, a lady to whom he was long de- voted ; and to Warburton the property of his works ; who accordingly gave a complete edition of them in 1751, in 9 vols. 8vo. Readers who wish to know more of this eminent poet may consult Warton's Essays on the Writings and Genius of Pope. Lord Orrery says of him, with no small degree of flattery, ' His chief aim was to be esteemed a man of virtue. His man- ners were delicate, easy, and engaging ; and he treated his friends with a politeness that charmed, and a generosity that was much to his honor.' Dr. Johnson accuses him of parsimony. By natural deformity, or accidental misfortune, his life was a long disease, from which arose many of his peculiarities. See Johnson's Lives of the Poets.

POPE (Sir Thomas), an eminent English states- man of the sixteenth century, born in 1508. He was a man of letters, and the founder of Trinity College, Oxford. He died in 1588, and left be- hind him a fine library.

POPHAM (Sir John), lord chief justice of the common pleas in the reign of queen Eliza- beth, was the eldest son of Edward Popham, Esq., of Huntworth in Somersetshire, and born in 1531. He was some time a student of Baliol College in Oxford. After quitting the univer- versity he fixed in the Middle Temple ; and in 1568 became summer or autumn reader. He was soon after made serjeant at law, and in 1579 solicitor-general. In 1581 he was appointed

attorney-general, and treasurer of the Middle Temple. In 1592 he was made lord chief jus- tice of the king's bench, and was knighted. In 1601 his lordship was one of the council de- tained by the unfortunate earl of Essex, when he formed the ridiculous project of defending him- self in his house; and, on the earl's trial, he gave evidence against him. He died ia 1607, aged seventy-six ; and was buried at Wellington in Somersetshire, where he generally resided. He was thought somewhat severe in the execution of the law against capital offenders ; but his severity had the happy effect of reducing the number of highway robberies. He wrote, 1. Reports and cases adjudged in the time of queen Elizabeth. 2. Resolutions and judgments upon cases and mat- ters agitated in all the courts at Westminster in the end of queen Elizabeth's reign.

POPHAM (Sir Home Riggs), a naval officer, and knight commander of the Bath, born in Ireland in 1762, was a lieutenant in the American war. At the peace he employed himself in com- mercial pursuits in the East Indies, and, while commanding a country ship, discovered a pas- sage for navigation at Pulo Penang. In 1794 he returned to the king's service, and, being useful to the duke of York in Holland, was ap- pointed master,

commander, and soon after post- captain. He wa« then employed in the Baltic, and in 1800 in the East Indies. In 1803 he entered the Red Sea, and settled advantageous terms of commerce for the English merchants : but, on his return home, his conduct was attacked in the house of commons. He was afterwards engaged in the expedition against Buenos Ayres, brought for it to a court martial, and sentenced to be reprimanded. He finally obtained the situation of commander-in-chief on the Jamaica station ; but died in Engknd at Cheltenham, September 13th 1820. He published A State- ment of his Treatment since his return from the Red Sea ; and A Description of the Prince of Wales 's Island.

POPINJAY, n.s. Belg. papegay; Ital. pa- pagallo ; Span, papagayo. A parrot ; a wood- pecker; a fop.

I, all smarting with my wounds, being galled To be so pestered by a popinjay, Answered neglectingly, I know «ot what.

Sluikspeare.

Terpsichore would be expressed, upon her head a coronet of those green feathers of the popinjay, in token of that victory which the muses got of the daughters of Pierius, who were turned into popinjays or woodpeckers. Penchant.

Young popinjays learn quickly to speak. Ascham.

The great red and blue parrot ; there are of these greater, the middlemost called popinjays, and the lesser called parroquets. Grew.

POP'LAR, n. s. Fr. peuplier ; Lat. populus. A tree.

Fo is drawn with the face of an ox, with a garland of poplar upon his head. Peacham.

All he described was present to their eyes, And as he raised his verse the poplars seemed to rise.

Roscommon. So falls a poplar that in wat'ry ground

Raised high the head. Pope's Iliud.

The leaves of the poplar are broad, and for the most part angular : the male trees produce amenta-

ceous flowers, wnich have many little leaves and apices, but are barren : the female trees produce membraneous pods, which open into two parts, con- taining many seeds, which have a large quantity ot down adhering to them, and are collected into spikes.

Miller.

POPLAR, in botany. See POPULUS. POPLAR, a populous and important parish in Ossulton hundred, Middlesex, formerly a hamlet and chapelry in the parish of Stepney, two mile and a half east from London. This parish has, within a few years, been most extensively im- proved, and is lighted with gas. Its name is derived from the great number of poplars which formerly grew here. That part next the river called Poplar, or Stepney-Marsh, on the Isle of Dogs, is the richest piece of marsh land in Eng- land ; it is neither an island nor a peninsula, but a head of land formed by the serpentine course of the river Thames. The East India Company have here a hospital for the reception of the widows of inferior officers and seamen ; the same company having given the ground for erecting the church, and been at the greater part of the expense in rebuilding it.*

POPLIT./EUS, in anatomy, a small muscle obliquely pyramidal, situated under the ham. See AKATOMY.

POPO, an island or cluster of isles in the Eastern Seas, the largest of which is about fifty miles in circumference. They are distant five leagues from the Bo Islands. They are inhab- ited, and afford nuts and dried fish. Long. 130° 0′ 15″ E., lat. 19° 14′ S. This is also the name of a small district on the Slave Coast of Africa.

POP'PY, n. s. Sax. popij; Latin, papaver. A flower.

His temples last with poppies were o'erspread, That nodding seemed to consecrate his head.

Dr uden.

Dr. Lister has been guilty of mistake, in the re- flections he makes on what he calls the sleeping Cu- pid with poppy in his hands. Addison.

Of these are eighteen species ; some sorts are cul- tivated for medicinal use ; and some suppose it to be the plant whence opium is produced. Miller.

And pale Nymphaea with her clay-cold breath ; And poppies, which suborn the sleep of death.

Harte.

POPPY, SPATTLING, a species of cucubalus.

POPULACE, or POP'ULACY, n. s. POP'ULAR, adj.

POP'ULARLY, adv.

POPULARITY, n. s.

POPULATE, V. n.

POPULA'TION, n. s.

PoPULOS'lTY,

Fr. populace; Lat populus. The multi- tude ; the common peo- ple ; the vulgar : po- pular is pleasing to, or ˆespoused by, the peo- j pie at large ; familiar ; I vulgar ; plebeian ; stu- dious of the people's favor : popularity, state

POP'ULOUS, adj.

POPULOUSLY, adv.

POP'ULOUSNESS, n.s.j of enjoy ing the people's favor ; graciousness of behaviour ; whatever moves or conciliates the people : to populate is to produce people : population, the state of a nation or people with regard to numbers : popu- losity and populousness, the state of abounding with people: populous, full of people; thickly inhabited ; the adverb corresponding.

Homilies are plain and popular instructions.

Hooker.

A wilderness is populous enough, Sc Suffolk had thy heavenly company. Shakspeare.

The best temper of minds desireth good name and true honour ; the lighter, popularity and applause ; the more depraved, subjection and tyranny. Bacon.

The persuader's labour is to make things appear good or evil, which as it may be performed by solid reasons, so it may be represented also by

colours, popularities, and circumstances, which sway the ordi- nary judgment. Id.

When there be great shoals of people, which go on to populate, without foreseeing means of life and sustentation, it is of necessity, that once in an age, they discharge a portion of their people upon other nations. Bacon's Essays.

The population of a kingdom does not exceed the stock of the kingdom, which should maintain them ; neither is the population to be reckoned only by num- bers ; for a smaller number, that spend more and earn less, do wear out an estate sooner than a greater number, that live lower and gather more. Bacon.

When he thinks one monarch's lust too mild a re- gimen, he can let in the whole populacy of sin upon the soul. Decay of Piety.

Under colours of piety ambitious policies march, not only with security, but applause, as to the popu- lacy. King Charles.

I was sorry to hear with what partiality and popu- iar heat elections were carried in many places. Id.

Such as were popular, And well-deserving, were advanced by grace.

Daniel,

The emmet joined in her popular tribes Of commonalty. Milton.

Far the greater part have kept Their station ; heaven, yet populous, retains Number sufficient to possess her realms. Id.

Nor can we excuse the duty of our knowledge, if we only bestow those commendatory concerns which popularity set forth the eminency thereof.

Browne's Vulgar Errours.

How it conduceth unto populosity, we shall make but little doubt ; there are causes of numerosity in any species. Browne.

The old general was set aside, and prince Rupert put into the command, which was no popular change.

Clarendon.

This will be allowed by any that considers the vastness, the opulence, the populousness of this region, with the ease and facility wherewith 'tis

governed. Temple's Miscellanies.

A popular man is, in truth, no better than a pros- titute to common fame and to the people. Dryden.

Your mind has been above the wretched affectation of popularity. Id.

Influenced by the rabble's bloody will, With thumbs bent back, they popularly kill. Id.

His virtues have undone his country, Such popular humanity is treason.

Addison't Cato.

Now swarms the populace, a countless throng, Youth and hoar age tumultuous pour along. Pope.

Admire we then,

Or popularity, or stars, or strings, The mob's applauses, or the gifts of kings 1 Id. The tribunes and people having subdued all com- petitors, began the last game of a prevalent populace, to chuse themselves a master. Swift.

He could be at the head of no factions and cabals, nor attended by a hired rabble, which his flatterers might represent as popularity. Id.

How populous, how vital is the grave ! This is creation's melancholy vault, The vale funereal, the sad cypress gloom, The land of apparitions, empty shades ! Young.

POPULATION. Few of our readers will be unacquainted with the modern investigation of this interesting subject, and the alleged discove- ries of Mr. Malthus and his school.

Dr. Adam Smith had previously observed : — ' Every species of animals naturally multiplies in proportion to the means of their subsistence, and no species can ever multiply beyond it. But in civilised society it is only among the inferior ranks of people that the scantiness of subsistence can set limits to the further multiplication of the human species ; and it can do so in no other way than by destroying a great part of the chil- dren which their fruitful marriages produce. The liberal reward of labor, by enabling them to pro- vide better for their children, and consequently to bring up a greater number, naturally tends to widen and extend those limits. It deserves to be remarked, too, that it necessarily does this as nearly as possible in the proportion which the demand for labor requires. If this demand is continually increasing, the reward of labor must necessarily encourage in

such a manner the marriage and multiplication of laborers, as may enable them to supply that continually increasing demand by a continually increasing population. If the reward should at any time be less than what was requisite for this purpose, the deficiency of hands would soon raise it ; and, if it should at any time be more, their excessive multiplication would soon lower it to this necessary rate. The market would be so much under-stocked with labor in the one case, and so much over-stocked in the other, as would soon force back its price to that proper rate which the circumstances of the society required. It is in this manner that the demand for men, like that for any other com- modity, necessarily regulates the production of men ; quickens it when it goes on too slowly, and stops it when it advances too fast. It is this demand which regulates and determines the state of propagation in all the different countries of the world, in North America, in Europe, and in China; which renders it rapidly progressive in the first, slow and gradual in the second, and altogether stationary in the last.' — Wealth of Nations, vol. i.

In another part of his great work he expresses the same idea in fewer words : — ' Countries are populous, not in proportion to the number of peo- ple whom their produce can clothe and lodge, but in proportion to that of these whom it can feed.'

The first of these passages is said to have given rise t« the celebrated Essay of Mr. Malthus.

In this work not only are the different rates of population in various countries adverted to at considerable length, and that of the newer con- trasted with the older nations of the world, but the assumptions of almost all former writers on the subject, that a high degree of population is conducive to national wealth and security, is con- tradicted, and such a situation broadly represented as one pregnant with great existing evils, and im- minent dangers for the future. Mr Malthus is

by no means to be restrained within the limits of the ground that is taken by the author of the Wealth of Nations. Far from thinking that the human species cannot, as Dr. Smith says, ' ever multiply ' beyond the means of subsistence, he considers that it has a constant and fearful ten- dency to do so ; and that, in point of fact, this tendency has generated a large portion of the vice and misery with which the older countries of the world abound. That this is an evil, there- fore, which requires to be arrested in its progress ; that early marriages among the poor should, upon this principle, be

discouraged, and in some cases punished ; and that all the charity of superior classes, which encourages the poor to multiply (which every increase of their comforts he is compelled to admit will), is wrong. He, therefore, proposes the enactment of a law whereby it should be declared, that no legitimate child born one year from the date of its promul- gation ; and no illegitimate child, born within two years, should thereafter be afforded parish assistance. This statutory exhibition of the ten- der mercies of his system, our author would have read by the clergyman to the poor, as they come to the altar.

The principles of Mr. Malthus's theory are contained in the first two chapters of his Essay, 2 vols. 4. edit. They may be thus condensed : — Population in very favorable circumstances, as in the newly settled countries of America, has been found, it is said, to double itself every twenty- five years. This rate is therefore assumed to be (at the least) its natural rate of increase, which might go on ad infinitum, if interrupted by no checks. But it is evident that the increase of food (land being an absolute quantity) could by no methods be augmented to such an indefinite extent. It might possibly double itself for once in twenty-five years, while the best lands re- mained uncultivated ; but, so far from following up this ratio of increase in subsequent periods, it cannot even be supposed possible that its pro- duce could be augmented even in the simple ratio of its original quantity. ' The necessary effects of these two different rates of increase,' says Mr. Malthus (and he begs his readers to bear the passage in mind), ' when brought together will be very striking. Let us call the population of this island 11,000,000, and suppose the pre- sent produce equal to the easy support of such a number. In the first twenty-five years the population would be 22,000,000, and, the food being also doubled, the means of subsistence would be equal to this increase. In the next twenty-five years the population would be 44,000,000 ; and the means of subsistence only equal to the sup- port of 33,000,000. In the next period the po- pulation would be 88,000,000, and the means of subsistence just equal to the support of half that number. And at the conclusion of the first cen- tury the population would be 176,000,000, and the means of subsistence only equal to the sup- port of 55,000,000, leaving a population of 121,000,000 totally unprovided for.'

Extending this reasoning to the whole earth, it will be found that the population of the world would increase in a geometrical ratio as 1.2.4.8. 16.32.64.128.256 – aid subsistence only in an

arithmetical ratio as 1.2.3.4.5.6.7.8.9. In two centuries the population would be, therefore, ac- cording to this mode of reckoning, to the possible means of subsistence, as 256 to 9; in three cen- turies, as 4096 to 1 3 ; and as of course there are ultimate limits to the produce of the earth, an

end must comedo any increase in the supply of food, while the principle of population still retains its full force. Such is the account rendered by Mr. Malthus of the dispensation of Providence with respect to the natural power of increase in mankind, and their subsistence respectively.

But as it is evident that in point of fact, man- kind, unable to exist without food, do not in- crease in the abovementioned geometrical ratio, but precisely in that in which food is produced for their support, Mr. Malthus, in his second chapter, enumerates, what he is pleased to call the checks to this exuberant power of production. They consist of ' all those customs, and all those diseases, which seem to be generated by a scarcity of the means of subsistence; and all those causes, independent of this scarcity, whe- ther of a moral or physical nature, which tend prematurely to weaken or destroy the human frame.' These checks may be classed under two general heads, the preventive "and the positive ; the former consisting of prudential abstinence from marriage, which when accompanied by ir- regular intercourse between the sexes, produces aggravated vice and misery ; when accompanied by moral restraint produces comparative comfort. The latter, consisting of every cause, whether arising from vice or misery, which in any degree tends to shorten the duration or repress the pro- ductive power of human life ; such as extreme poverty, wars, diseases, famine, pestilence, and the like. The obstacles to the increase of popu- lation, therefore, whether classed under the po- sitive or preventive checks, are all resolvable into moral restraint, vice, or misery. And as the former (explained to mean any abstinence from marriage, unaccompanied by irregular gratifica- tion), is the only mode of escaping the encoun- ter of the two latter in some form or other, it is evident that upon this theory the whole onus of counteracting, consistently with human happi- ness and virtue, the immense disproportion of the relative powers of increase above enumerated, rests entirely upon this single conservative prin- ciple. It follows of course also, that the more it can be made to operate, the greater portion of virtue and happiness will be found in society. And, as it is upon the lower ranks that the vice and misery alleged to arise from a redundant population particularly press, it evidently be- comes the duty of governments so to model their political arrangements as to lend encouragement to such protracted abstinence from marriage, from the moment that the produce of the land after its first period of doubling sinks into the regular arithmetical progress ; or, in plainer terms, from the moment that a country emerges from the purely agricultural state of society into one compounded of agriculture and commerce. Such is the theory of Mr. Malthus, and such are its consequences.

Granting the premises, it is indeed perfectly olsvious that this conclusion is undeniable.

- *Once persuade a man,' as it has been well said,*
- *against all experience, that the oak in his field hath a natural tendency to increase ad infinitum in the same ratio as during the first fifty years, and may in time overshadow his whole estate, unless checked by the axe, and his prudent course of conduct will not long be doubtful.'*

Our limits will not permit us to advert to what we conceive to be the origin of the mistakes and false reasonings of this school, with respect to the principle of population. It is the assump- tion of a general tendency to increase in the human species, the quickest that can be proved possible in a particular state of society. In other words, to confound a possible with a probable increase, or rather a mere power with a tendency to multiply in a given proportion.

Having assumed this tendency, then supposed checks are called in to make the facts of human history agree with the system. We apply the term assumed both to the tendency and the checks, because we think with Mr. Mill that ' the state- ments respecting the rate of procreation in dif- ferent countries will be found to be either suppo- sitions with respect to matters of fact, upon the conformity of which suppositions to any real matters of fact, we can have no assurance ; or statements of fact of such a nature as prove no- thing with regard to the points in dispute.' We only wonder that, after this remarkable conces- sion of the ilast writer, Mr. M'Culloch and others should regard the principle of population, as first alleged by Mr. Malthus, as so great a discovery ! AU surely depends on ' the rate of procreation' being at some period or place in the argument established, and ' the conformity of the suppo- sitions' of the system to ' real matters of fact.' The term check of course implies the prevention of that which would otherwise naturally take place; it is, therefore, very incorrectly applied to denote a relative difference, invariably fixed by the primary laws of nature, and the immu- table decrees of Providence. From the decep- tion caused by the wrong use of this term, we find writers supporting such positions as the following: ' civilisation does not weaken the principle of population (Monthly Review, June 1807, p. 137);' again, 'assuming a peopled portion of the earth, there is a point at which its produce would be a maximum ; there is no point, however, at which the people upon it, however numerous, might not under advan- tageous circumstances go on increasing without number. Besides,, while the soil is still capable of increasing its produce, yet if it be approach- ing somewhere near the limit of \ts capacity, the increase

of its produce, cannot possibly keep pace with the. natural, or rather the possible, increase of the population upon it.' (Christian Observer, July 1807, p. 452). These are, in truth, but natural corollaries from Mr. Malthus's premises, who asserts of population, ' that 100,000,000 are just as easily doubled every twenty-five years as 1000,' and ' population, could it be supplied with food, would go on with unexhausted vigor ; and the increase of one period would furnish the power of a greater in- crease the next, and this without any limit.' (Malthus, vol. I. p. 8). And again, ' it is not

the question in England, whether bv cultivating all our commons we could raise considerably more corn than at present, but whether we could raise sufficient for a population of 20,000,000 in the next twenty-five years, and 40,000,000 in the next fifty years ;' as if it were possible, that the people of England, one-third of whom are as- serted by this very writer to live in towns, and consequently not to keep up their own num- bers, could by any possible means increase so fast as to double their total amount in twenty-five years : which is assumed as the quickest possible rate in the agricultural state of society, where the employment and situation of the people are most favorable to population.

We contend that those of our readers who wish clearly to understand the principle of po- pulation, should abandon this assumed data, and proceed at once to enquire into the degree in which population natuially and really operates in the several stages of society.

We will offer a few hints on the chief points of enquiry that will thus arise. In newly settled and purely agricultural countries, where the progress of population is infinitely the fastest, it can never overtake the supply of food, as long as this first state of society con- tinues, for these plain reasons : that land will always produce, even in a very inferior state of cultivation, much more than sufficient food to support the cultivators, and the simple artisans attached to them ; and that where good land can be had for nothing, the love of property and independence will find it occupiers, although no immediate demand may exist for the produce beyond the place of its production, and the fa- mily which occupies the farm. The surplus produce, however, which such a country is ca- pable of raising, will usually find purchasers among the commercial and manufacturing na- tions whose wants create a demand for it. This demand will ensure its growth, and the returns from its export to those countries will afford to the growers many necessary or convenient ma- nufactures, besides a capital which will enable them to settle their children upon fresh land. This state of society, and the rapid progress of population attending it, will continue, in the natural order of things, till all the best and most conveniently situated spots of land are occupied ; and it would require the application of a large sum, on a remote

prospect of return, to bring the remainder into cultivation. Till this point, a country may be said to be in the agricultural state of society, and the population is evidently far wifhin the limits of the actual supply of food.

At this period, the children of the farmers, un- less their industry be violently depressed by ignorance or tyranny, will turn their views to trade and manufactures ; which would then be- come the most profitable employment of capital. They would bring up their children also to the same occupations, and, though capital made in trade might be occasionally realised in land, it would usually be by the purchase of that already cultivated, rather than by the cultivation of the barren and more ungrateful tracts. The surplus produce of the land, before exported to manu- facturing countries, will now be consumed by

the domesvic voikmtn; and the goods hefore imported will be wrought at home ; at first only in sufficient quantities for the domestic demand, but at length for the purpose of exporting them to other countries, which have not yet advanced beyond the agricultural state of society.

As soon as this manufacturing population is sufficiently numerous nearly to consume the sur- plus produce formerly exported, and it becomes difficult to procure grain for the various purposes of luxury, or convenience, to which it is applied in all commercial countries, its price will rise ; and this, let it be observed, before any actual pressure of distress for a mere sufficiency of sub- sistence occurs. This rise in the price will tempt the capitalist to lay out his money in bringing inferior waste land into cultivation, or in under- taking agricultural improvements, by which the old lands may be made to produce somewhat more food with an equal quantity of labor. As this mode of procuring food, however, is evi- dently much slower in operation, and its in- creased quantity, in a given space of time or territory, less abundant than in the agricultural state of society, it is clear, that if the natural progress of population continued the same, it must shortly overtake the supply of food, and verify the positions just disputed. Let us see, therefore, whether the manner in which this ma- nufacturing and commercial population arranges itself, and the moral and physical effects pro- duced by their employments, dispositions, and spontaneous distribution, do not naturally weaken the principle of population as it originally sub- sisted, and reduce it as nearly to a par with the diminished power of production in the soil, as the vfews of Providence for a still further ame- lioration will admit.

It is found that the convenience of the mer- chant and the manufacturer is much promoted by having their residences contiguous to each other, and by collecting round them the houses of those who are employed in the various depart- ments of their industry, and in supplying them with the necessaries and conveniences of life. They will, therefore, fix upon a favorable spot, in the midst of an extensive neighbourhood, where first a knot of houses will be formed, next a village, and at length a town, by the accession of more manufacturers, and of many of those who before carried on trades in the country, but who are tempted by the superior convenience of markets and intercourse to migrate to the town. From various other causes too, not necessary now to detail, towns will arise. In manufac- turing countries the rise of many has been wit- nessed even in recent times; till at length the independent proprietors, the farmers and agri- cultural laborers, and the very simple artisans, will be the only inhabitants remaining in the country. These will convey their stock, or its produce, to the market in the town, and re- turn thence with the manufactured goods they may want. Two descriptions of inhabitants will thus be formed, — the townsman, and the coun- tryman; and the habits, manners, and relative condition of each will naturally and sponta- neously produce a very essential difference in their relative tendencies to contribute to the m- Vor,. XVII

crease of population , while the progress of ci- vilisation, universally attendant upon commer- cial prosperity, will considerably diminish the absolute power of such increase throughout the whole community ; and as we would undertake to show, without any necessary increase of vice and misery. Care, forecast, anxieties of mind, emulation, severe attention to business, various active avocations, and the general incompatibi- lity of the marriage state with this new order of pursuits, form the first natural causes of a dimi- nished tendency in the population to increase, incident to the prosperous conduct of trade and manufactures. For there seems to be no doubt, that in proportion to the continued necessity of mental exertion or abstraction, many, who could well afford to rear a family, are placed in situa- tions and pursuits where a voluntary abstinence from marriage, and the incapacity and indispo- sition to rear large families, become very general. Moreover, the comparatively unfavorable state of the atmosphere even in towns of a moderate size, and the confinement, and unhealthy occu. pations of the inhabitants, not only weaken the robust state of health necessary to the produc- tion of a numerous and healthy progeny, and di- minish the number of births ; but likewise very much shorten the period of human life in those situations, and increase the proportion of deaths. The average number of births to a marriage in towns has been calculated at between three and four, while in the country it is said to amount to four and a half or five ; and even in moderate towns, such as Newbury containing a concen- trated population of not more than about 4200 souls, the deaths are to the population as one in twenty-eight or twenty-nine ; while, in the purely Agricultural villages, they often do not exceed the proportion of one in fifty or sixty. Here then are two natural and unavoidable causes very strongly tending to weaken the principle of population. Moreover, the artificial wants, which are converted into necessaries of life at every step in the progress of civilisation, render the support of a wife and family more difficult, consistently with retaining other per- sonal enjoyments, and cannot but diminish in some degree the proportion of marriages through- out the whole community. So that the triple operation of a decrease in the number of mar- riages, diminished fertility in the human species, and an augmented proportion of deaths imme- diately begins, by the natural and unavoidable course of nature, to repress the progress of po- pulation as soon as a part of the people are col- lected into towns.

This progress will indeed be retarded less during the earlier stages of the commercial and manufacturing states of society than afterwards, when towns become larger, population more dense, and civilisation more general. Nor is it necessary that in these earlier stages population should be so much retarded. For, as the power of the land is still capable of supporting a rapid increase of people from its surplus produce be- fore exported, some time

*must necessarily elapse before population, though with a very trifling abatement in its progress, would begin to press against the actual supply of food. The labor c t**

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POPULATION.

one family employed in tilling the earth, even in this early stage of agricultural improvement, may be fairly accounted able to support itself, and two others : two- thirds of the whole popula- tion may therefore by degrees become engaged in manufactures and commerce, in unprofitable professions, or may be living idly on the fruits of former industry, before a demand a ises for a further increase of food. But, long before a na tion can have two-thirds of its people thus occu- pied, a great proportion of it must reside in large towns, and the introduction of luxury, and an artificial state of society, must have produced many imaginary wants among the country resi- dents. Many of the people will be also lifted above the rank of the lower orders, and be af- fected by those artificial arrangements of society which, though they universally produce high mental cultivation, do very much diminish the natural powers of increase in mankind. Hence, from the diminished average of marriages and births, and the increase of premature mortality, a very great proportion of the population will cease to produce its own number ; and a considerable deficiency will remain to be filled up by the peasantry, or lower order of country residents : the most productive class in every well-regu- lated community

Tims it appears that, in proportion as the po- pulation advances towards an equality with the surplus produce, existing at the first emergence of a country from the purely agricultural state, in such, precisely, will its progress naturally be- come slower, by the inevitable and unalterable laws of Providence ; though the people be left as perfectly at liberty to follow the dictates of their own inclinations as is consistent with a free and well-regulated government. Let it be observed, also, that this effect will be produced by certain and unerring causes, which can by no human means be very materially altered. It is as impossible to render the residents in towns more fruitful, to make the air of towns more wholesome to infants, to induce any large pio- portion of those who wish to abstain from mar- riage for their own convenience to enter into that contract, as it would be to feed the increased population that would follow, supposing the possibility of their production to exist. The abatement in the progress of population is vo- luntary, natural, and unavoidable. It is another question, certainly, how far it necessarily pro- duces an increase of vice and misery, and how

far that species of moral restraint which consists in involuntary abstinence, be either necessary or useful to the welfare of the people. All that js here asserted is, that the abatement is the neces- sary consequence of the progress of society, and that to exclaim against its effects is in fact to exclaim against all advancement of a country beyond the purely agricultural state.

The result will be in an advanced state of society, by new capital being naturally thrown into agriculture, until each gradation of the soil is made productive by improved modes of cul- ture, &c., that one family employed in agricul- tural pursuits will be able at least to support iuelf and three others. Three-fourths of the people therefore will be left at large to follow

manufactures, or non-productive employments, to be the menial servants of the higher orders, to navigate the ships, and fight the battles of the country. Of these three-fourths, at least two- thirds, or one-half of the whole population, would cease to reproduce their own numbers of efficient people. This will be evident to any one who considers that in a state of society where so large a proportion of the people are merchants, manufacturers, or idle persons, at least one-third of the whole population must dwell in towns, some in very large towns ; and that the remainder of those, who are calculated not to reproduce their own numbers, principally consists of soldiers, sailors, men of good fami- lies but small fortunes, servants, dependents, and emigrants to colonies, or other places. These are usually taken out of the mass of the population in the prime of life, but before they have contributed children to replace their loss, which must therefore be filled up by the chil- dren of others. And, with respect to the towns, it is proved to demonstration, that, even of those of a moderate size, not one can keep up its own effective population.

Mr. Weyland, who has adopted and ably ad- vocated this view of the subject shows, that, ‘ an excess of annual deaths above annual births of seven in each 1000 of existing persons has been considered as a low average in towns even of a moderate size. Upon this datum, seven emi- grants per 1000 from the country will be re- quired to keep up the population of a town, even if the population of the town were station- ary ; but, if from an increase in the demand for labor it were rapidly extending itself, of course a larger influx of settlers must take place.

In a country containing a population of 9,000,000, the following is what Mr. Weyland conceives would be the distribution of the people according to the state of society sup- posed : —

1 . One-third in towns (not repro- ducing their own numbers). . . 3,000,000

2. One-fourth in agriculture (re- producing their own numbers and supplying the deficiencies in the

towns, &c.) 2,250,001)

3. A fourth of the remainder, men of rank and fortune with their fami- lies, unemployed descendants, and servants (not reproducing their own numbers).v 937,500

4. Army, navy, mercantile and military, emigrants to foreign settle- ments with their families and attend- ants (almost entirely supplied from the classes reproducing their own numbers) 46 750

5. Country manufacturers, shop- keepers, small proprietors, &c., with their families (reproducing their own numbers, but affording no ma- . terial supply to the deficiency of the

other classes). . . . 2,343,75)

Total 9,000,000

The three classes not reproducing their own numbers leaving a deficiency of at least a fift i

of their aggregate number, or 880,000 souls in a generation, to be made up by the two other classes, principally by that marked 2.

The conclusion from this argument is, that in this more advanced stase of society, such for example as we are now living in, ‘ although the powers of production yet remaining in the soil are continually decreasing, yet the natural ten- dency of population to press against the supply of food is also decreasing in a still greater ratio ; at least, in all countries where due attention is paid to religion, morals, and rational liberty.’ But there may be supposed, though as yet it is only hypothetical, a still more advanced state of society : and ‘ it is evident, that if a community conducting itself even upon the most reasonable principles, is indefinitely to continue increasing its population, in however retarded a ratio, it must at length come to the end of its resources in food : the land being an absolute quantity, and only capable, when most fully cultivated, of making a definite return.’ However remote and improbable this contingency may be, the author last quoted feels himself bound to pro- vide against it ; and argues, by an application of his previous calculations, that there is a point at which the sterile portion of the people becomes so numerous that the reproducing part will not be able by any natural fertility of its own to supply the deficiency ; a point which

must at length be reached, as the size of the towns is enlarged, and the habits of a highly advanced state of society are more widely ex- tended through the several ranks of the people.

This author argues to an extent in which we cannot follow him, in favor of our poor laws. We believe that Providence intends, we arc sure that Christianity commands, that the orphan, the sick, and the aged, should be supported by cha- rity ; but we also believe it to be the intention of Providence that the young and the healthy should furnish labor to the community, accord- ing to the natural demand ; and that the present system in England is a deviation from the wise and simple arrangement of Providence — that system, we mean which allows every man with- out reference to character, strength, or age, to clahn a right to support; to what becomes in effect a gratuitous support, since the return made to the parish is commonly of no sort of value, in digging gravel which nobody wants, in making pots which nobody buys, or in levelling roads which nobody travels. We believe that we shall become a more happy, more moral, and rrore prosperous people, in proportion as we gradually undermine habits which cannot be taken by storm, and, by encouraging the provi- dent banks, and inducing the poor to contri- bute to them by every indulgence and favor shown to those who do, return to the great law of nature, that every man's condition shall or- dinarily be proportioned to his own prudence, morality, and industry.

His investigation of the poor laws is followed by an enquiry into the natural order of prece- dence between population and food. It has been made an inference from Mr. Malthus's reason- ings, that an increase of people should always follow, and never precede an increase in the

produce of the soil : ' which when applied,' ob- serves Mr. Weyland, ' to a manufacturing so- ciety, appears to be tantamount to saying that an increase in the number of backs should al- ways follow, and never precede, an increase in the manufacture of coats ; whereas, surely a pre- vious increase of wearers and consumers is abso- lutely necessary to the respective production of further food and raiment,' — p. 82. Our author proves, we think, unanswerably, that when the best lands are already cultivated, farther produce can only be elicited by a rise in the article, oc- casioned by the demand of the already existing claimants ; and the whole detail of the subject is practically and fully entered upon; but we must here refer political economists to the book itself. His last book is devoted to the moral conse- quence deducible from the principles for which he argues, i. e. the nature and extent of the duty of charity, and the propriety of leaving to the lower orders the free option of marriage. On these points we cordially agree with him. ' If it be true, as asserted,' he argues, ' that population has in all cases a tendency of itself to exceed the supply of food for its support ;

since we can scarcely assist the poor in any way without en- couraging them to produce, and enabling them to rear a greater number of children, or at least without prolonging the existence of the objects of our charity ; it is evident that by every exer- tion of it we are only increasing the quantum of human misery. While we assist some, we are proportionably depressing others, and adding to that number which is already exuberant to a fault.'— p. 334.

In the face of this cheerless doctrine, he contends, that it is the poor man, who feels himself neglected, degraded, and an out- cast as it were from his fellows, who becomes mo' ose, brutish, and incorrigibly selfish in his pursuits. He it is whose natural feelings, not being softened down by intercourse with more enlightened men, nor by any sense of gratitude, yield to the first temptation offered to his pas- sions ; and who, restrained by no check, moral or natural, by no sense of respect towards others or himself, is impelled to the multiplication of his species like the brutes that perish. ' I am ready to acknowledge,' says our author, ' that the population thus raised is checked only by the rule which regulates the number of the brutes ; viz. by the perpetual contest between the powers of procreation and the principle of destruction — a rule which, when applied to the human species, involves almost every modification of vice and misery.'

The most original of our author's observations on marriage is that which points out the injustice of expecting equal restraint on this head, in the members of the lower and the higher classes of the community. The lower orders have fewer enjoyments to substitute for it, and infinitely fewer means of avoiding the temptations to vice, which an involuntary abstinence from marriage necessarily multiplies. Their mental resources being deficient, they are more in jvant of other gratifications, and of the means of humanising their minds by the enjoyment of the sccia. affec- tions. The conclusion is thus drawn : — ' in

unison with the apparent equity of the divine dispensations, with our sense of natural justice, and with the express commands and unqualified permissions of Scripture on the subject. It appears then, upon the whole, that no moral im- pediment to the progress of society, or to the natural tendency of population to keep within due bounds, is to be apprehended from as gene- ral prevalence of matrimonial connexions as the existing state of society will admit ; nay, that a perfect liberty in this respect is

essential to a healthy progress. We perceive that the princi- ple of population introduces no new duty, nor any necessary increase of vice and misery as so- ciety advances, and the land arrives nearer to its point of complete cultivation. I think upon the whole that an early marriage, and a young family, is a strong incentive to sobriety, industry, and decency, in a poor man, wherever his moral and religious instructors come in aid of his natural feelings of affection towards his wife and chil- dren. I have seldom seen the workings of good advice upon natural affections fail in their effect, except in old and very hardened profligates; and I have very frequently beheld the combination of the two effectual in reclaiming a loose and thoughtless character. I should be sorry, how- ever, to be so far misunderstood, as to be thought to assert that it would be consistent with the good of the state to afford to every idle and abandoned strippling the means of entering into the marriage contract, although he possess neither the will nor the intention of laboring for the support of his family, nor be in a capacity to have set before him in a forcible manner his du- ties in these respects. For truly I have never yet been able to discover, nor should I be very industrious in searching for, any scheme of po- lity which can enable the machinery of society to work freely and profitably, notwithstanding the general neglect of moral habits and precau- tions.'— p. 413, 414.

The result of the whole is that, by the arrange- ments of a wise and beneficent Creator, ' man- kind,' as Sir William Jones has beautifully said, ' cannot long be happy without virtue, nor ac- tively virtuous without freedom, nor securely free without rational knowledge ; ' but that hap- piness is placed within the reach, commonly of the individual, and always of the community, in proportion as honest industry flourishes, in pro- portion as sound religion inculcates pure mora- lity, and the diffusion of rational knowledge secures public and private liberty.

We can only observe, in conclusion, that after having seen the Essay of Mr. Malthus popular on both sides the Tweed, and occasionally shed- ding its baleful influence on the deliberations of the legislature, we are in no small degree edified and comforted by the disposition to retractation — politically called, we believe, ' ratting,' upon this subject, observable in the last number of the Quarterly Review. After having (No 51) stated Mr. Malthus's ' principle,' and its ' grand deductions' to remain ' unrefuted,' and that ' an inherent tendency to double in population ' must be < admitted,' while no such ' tendency is found in the fertility of the earth,' it argues something for the march of intellect, in our esti-

mation, to find this influential periodical at last consider that Mr. Malthus has but ' contrived to revive and elevate into popularity a theory ori- ginally broached by a philosophical infidel of the seventeenth century : ' that ' in the teeth, to all appearance, of the Malthusian theory,' it is '

proved by indisputable evidence that the present condition of the peasantry of Ireland, however destitute and miserable, is still much superior to that of the population of the same island some centuries ago ; ‘ though ‘ the disciples of Mr. Malthus use the number of idle and unoccupied laborers as an argument to prove that the pre- sent population of Ireland is redundant, &c.’ Lastly, that ‘ we are enabled to pronounce, upon evidence which cannot be disputed, that, whatever increase may have taken place in the population of Ireland within the last 200 years, the produce raised in that country for subsisting them has increased in a much greater ratio. See our tubulur view of Popu- lation.

POPULUS, the poplar, a genus of the oc tandria order, and disecia class of plants ; in the natural method ranking under the fiftieth order, amentacere. The calyx of the amentum is a lacerated, oblong, and squamous leaf; the co- rolla is turbinated, oblique, and entire. The female has the calyx of the amentum and co- rolla the same as in the male ; the stigma is quadririd; the capsule bilocular, with many pappous seeds. It is often mentioned by the poets, Virgil, Ovid, Horace, Catullus, &c. The principal species are these : 1 . P. alba, the abele tree, is a large tree, and grows naturally in the temperate parts of Europe. Its leaves are large, divided into three, four, or five lobes, in- dented on their edges, of a very dark color on their upper side ; standing upon foot-stalks an inch long. The young branches have a purple bark, and are covered with a white down ; but the bark of the stem and older branches is gray. In the beginning of April, the male flowers or cat- k}ns appear, which are cylindrical, and about three inches long. About a week after come out the female flowers. Soon after these come out, the male catkins fall off; and in five or six weeks after the female flowers have ripe seeds in a hairy covering. The catkins will then drop, and the seeds be wafted by the winds to a great distance. The wood of all these trees, but especially of the abele, is good for laying floors, where it will last for many years ; arid on account of its extreme whiteness is by many preferred to oak ; yet, on account of its soft contexture, being very subject to take the impression of nails, &c., it is less proper on this account than the harder woods. The abele likewise deserves particular notice, on account of the virtue of its bark in curing inter- mitting fevers. A dram powdered is given every four hours betwixt the fits. In obstinate caˆes, one-fifth part of Peruvian bark is given with it. See Philosophical Transactions vol. liii. p. 195. This bark vill also tan leather. M. Fougerou:: de Bondaroy, who made experiments on various species of poplar, reckons this the most valuable of them all, affording wood of an excellent quality.

2. P. balsam ifera, ti e Carolina poplar, is a

native of Carolina, where it becomes a large tree. The shoots ot this sort grow very strong in Bri- tain, and are generally angular ; with a light green bark like the willow. The leaves on young trees, and also those on the lower shoots, are very large, almost heart-shaped, and crenated ; but those upon the older trees are smaller : as the trees advance, their bark becomes lighter, ap- proaching to a grayish color. It may be propa- gated by cuttings or layers ; but the last is the method generally practised, and the plants raised by it are less moist than others. The shoots of this tree, while young, are frequently killed down to a considerable length by the frost in winter ; but, as the trees grow older, their shoots are not so vigorous, and become more ligneous, so are not liable to the same disaster. But the trees should be planted in a sheltered situation ; for, as their leaves are very large, the wind has great power over them ; and the branches being tender, they are frequently broken or split by the winds in summer, when they are much exposed. This species grows very quickly, and the wood is beautiful.

3. P. Canadensis, the Hard, is a large tree, the wood light, not easy to be split, and fit for several uses.

4. P. fastigata, the Italian or Lombardy poplar, is said by M. Fougeroux de Bondaroy to be of very little value ; but M. Dambourney says it is excellent for dyeing. See No. 9.

5. P. major, the white poplar, has its leaves rounder than the first, and not much above half their size : they are indented on their edges, and are downy on their under side, but not so white as those of the former, nor are their upper sur- faces of such a deep green color.

6. P. nigra, the black poplar, has oval heart- shaped leaves, slightly crenated on their edges ; they are smooth on both sides, and of a light green color. It is less apt to take root from large truncheons; therefore it is best to plant cut- tings of it about a foot and a half in length, thrusting them a foot deep in the ground. This sort will grow almost on any soil, but will thrive best in moist places. The inner bark is used by the inhabitants of Kamtschatka as a material for bread ; and paper has sometimes been made of the cottony down of the seeds. The roots dis- solve into a kind of gelatinous substance, and are coated over with a tubular crustaceous spar, called by naturalists osteocolla, formerly imagined to have some virtue in producing the callus of a fractured bone. See OSTEOCOLLA.

7. P. tacamahaca, grows naturally irl Canada and other parts of North America. This is a tree of a middling growth, but sometimes grows to thirty feet high, sending out on every side many short thick shoots, which are covered with a light brown bark, garnished with leaves differ- ing from ene another in shape and size ; most of them are almost heart-shaped ; but

some are oval, and others nearly spear-shaped ; they are whitish on their under side, but green on their upper. The buds are covered with a glutinous resin, which smells very strong, and is the gum taca- mahaca of the shops. The best, called, from its being collected in a kind of gourd-shells, ta- camahaca in shells, is somewhat unctuous and

softish, of a pale yellowish or greenish color, an aromatic taste, and a fragrant delightful smell approaching to that of lavender or ambergris. This sort is very rare ; that commonly found in the shops is in semitransparent globes or grains, of a whitish, yellowish, brownish, or greenish color, of a less grateful smell than the foregoing. This resin is said to be employed externally by the Indians for discussing and maturating tu- mors, and abating pains in the limbs. It is an ingredient in some anodyne, hysteric, cephalic, and stomachic plasters ; but the fragrance of the finer sort sufficiently points out its utility in other respects. The tacamahaca sends up a great number of suckers from its roots, by which it multiplies in plenty ; and every cutting which ii planted will take root.

8. P. tremula, the aspen tree, has roundisl angularly indented leaves : they arˆ smooth 01ˆ both sides, and stand on long foot-stalks, and so are shaken by the least wind ; whence it has the title of the trembling poplar, or aspen tree.

9. P. Virginiana, the Virginia poplar, affords a wood of excellent quality, that may be applied to many uses. All these trees may be propagated either by layers or cuttings, as also from suckers which the white poplars send up from their roots in great plenty. The best time for transplanting these suckers is in October, when their leaves begin to decay. These may be placed in a nur- sery for two or three years, to get strength before they are planted out where they are designed to remain ; but, if they are propagated from cut- tings, it is better to defer that until February, when truncheons of two or three feet long should be thrust about a foot and a half into the ground. These will readily take root ; and, if they be planted in a moist soil, they will arrive at a con- siderable bulk in a few years. From some ex- periments, made by M. Dambourney, it appears that the poplar may be usefully employed in dyeing. The Italian poplar gives a dye of as fine a lustre, and equally durable, as that of the finest yellow wood, and its color is more easily extracted. It is likewise very apt to unite with other colors in composition. Besides the popu- lus fastigata, M. Dambourney tried also tha Nigta, the Virginiana, the Canadensis, the alba and the tremula ; and found that all these dyed wool of a nut-color, fawn-color (vigogne), Nan- kin, musk, and other grave shades, according to the quantity of wood employed, and the length of time it was boiled.

POQUELIN. SeeMoLiERE.

PORANA, in botany, a genus of the mono- gynia order, and pentandria class of plants. The corolla is campanulated ; the calyx is quinquefid, and larger than the fruit ; the style semibifid, long, and permanent ; the stigmata globular ; the perianthium bivalved.

POR'CELAIN, n. s. Fr. porcelaine ; barb. Lat. porcellus, said to be derived from pour cent annees ; because it was believed by Europeans, that the materials of porcelain were matured un- der ground 100 years. China; china ware. See below.

We have burials in several earths, where we put divers cements, as the Chinese do their porcelain.

Bocotu

We ars not thoroughly resolved concerning porce- lain or china dishes ; that according to common be- lief, they are made of earth, which lieth in prepara- tion about a hundred years under ground.

Browne's Vulyar Errours. The fine materials made it weak : Parcelain, by being pure, is apt to break.

Dryden.

These look like the workmanship of heaven : This is the porcelain clay of human kind, And therefore cast into these noble moulds. Id.

PORCELAIN is a fine kind of earthenware, chiefly manufactured in China, and thence some- times called China-ware. All earthen wares which are white and semitransparent are also called porcelains: but among these, great dif- ferences are so evident, that even persons who are not connoisseurs in this way, prefer much the porcelain of some countries to that of others. The word porcelain is clearly of European deri- vation ; as the Chinese language has- no such sounds. Some derive it from porcelana, which in Portuguese signifies a cup. Porcelain is called in China tse"ki. The first porcelain seen in Europe was brought from Japan and China. The first European porcelains were made in Saxony and in France ; and afterwards in Eng land, Germany, and Italy : but, as all these were different from the Japanese, so each of them had its peculiar character. The finest and best por- celain of China is made in a village called King-te-ching, in the province of Kiang-si. This celebrated village (as they call it, for the villages of China are larger than the cities of Europe), is a league and a half in

length, and contains, we are assured, a million of inhabitants. The workmen, invited by the attracting allure- ments of the European trade, have established manufactories also in the provinces of Fokien and Canton; but this porcelain is not esteemed. It is not known who first found out the art of making porcelain, nor is the date of the invention recorded. But it is certain that the manufacture has been carried on in King-te-ching at least since A. D. 442, if not long before that period.

F. D'Entrecolles, a Romish missionary, gives an account of the method of making porcelain, of which Grosier has an abridgment, in his General Description of China, as follows : ' The principal ingredients of the fine porcelain are pe-tun-tse and kao-lin, two kinds of earth from the mixture of which the paste is produced. The kao-lin is intermixed with small shining particles ; the other is purely white, and very fine to the touch. These first materials are carried to the manufactories in the shape of bricks. The pe-tun-tse, which is so fine, is nothing else but fragments of rock taken from certain quarries, and reduced to powder. Every kind of stone is not fit for this purpose. The color of that which is good, say the Chinese, ought to incline a little towards green. A large iron club is used for breaking these pieces of rock : they are afterwards put into mortars ; and, by means of levers, headed with stone bound round with iron, and moved by manual labor or by water, they are reduced to a very fine powder. The dust afterwards collected is thrown into a large vessel full of water, which is strongly stirred with an iron shovel. When it has been

left to settle for some time, a kind of cream rises on the top, about four inches in thickness, which is skimmed off, and poured into another vessel filled with water : the water in the first vessel is stirred several times ; and the cream which arises is still collected, until nothing remains but the coarse dregs, which precipitate : these .dregs are carefully collected, and pounded anew. With regard to what is taken from the first vessel, it is suffered to remain in the second until it is formed into a kind of crust at the bottom. When the water above it seems quite clear, it is poured off by gently inclining the vessel, that the sediment may not be disturbed ; and the paste is thrown into large moulds proper for drying it. Before it is entirely hard, it is divided into small square cakes, which are sold by the hundred. The kao-lin, which is used in the composition of porcelain, requires less labor than the pe-tun-tse. Nature has a greater share in the preparation of it. There are large mines of it in the bosoms of certain mountains, the exterior strata of which consist of a kind of red earth. These mines are very deep, arid the kao-lin is found in small lumps, that are formed into bricks after having gone through the same process as the pe-tun-tse. It is from the kao-lin that fine porcelain derives all its strength. The Chinese have also disco- vered a substance proper to be employed in the composition of porcelain. It is a stone, or rather a species of chalk, called hoa-che, from

which the physicians prepare a kind of draught that is said to be detersive, aperient, and cooling. It is glutinous, and has a resemblance to soap. Porcelain made with hoa-che is very rare, and much dearer than any other. It has an exceed- ingly fine grain, and, with regard to\the painting, if it be compared with that of the common por- celain, it appears to surpass it much. This por- celain is, besides, so light, that it surprises those who are accustomed to handle other kinds ; it is also much more brittle : it is very difficult to hit upon the proper degree of tempering it. Hoa- che is seldom used in forming the body of the work ; the vessel is plunged when dry, that it may receive a coat before it is painted and var- nished. But Hoa-che, when washed, pounded, and dissolved in water, is alone sufficient to make porcelain ; and is used instead of kao-lin ; but it is much dearer.

To pe-tun-tse and kao-lin, the two principal elements, must be added the oil or varnish from which it derives its splendor and whiteness. This oil is of a whitish color, and is extracted from the same' kind of stone which produces the pe- tun-tse, but the whitest is always chosen, and that which has the greenest spots. The oil is obtained from it by the same process used in making the pe-tun-tse. To 100 Ibs. of its crearn is added one pound of che-kao, a mineral something like alum, which is put into the fire till it becomes red hot and then pounded. This mineral is a kind of runnel, and gives a consistence to the oil, which is however carefully preserved in its state of fluidity. The oil thus preserved is never employed alone, another oil must be mixed with it, which is extracted from lime and fern ishes, to 100 Ibs. of which is also added a pound of che-kao. When these two oils are mixed, thej must be equally thick. With regard to the quart

hty necessary to be employed, it is usual to mix ten measures of stone oil with one measure of the oil made from lime and fern ashes. The first labor consists in again purifying the pe-tun-tse and the kao-lin. The workmen tlien proceed to mix these two substances together. For fine porcelain they put an equal quantity of the kao- lin and the pe-tun-tse ; for the middling sort they use four parts of the kao-lin and six of the pe- tun-tse. The least quantity put of the former is one part to three of the pe-tun-tse. When this mixture is finished, the mass is thrown into a large pit, well paved and cemented in every part ; it is then trod upon, and kneaded until it be- comes hard. From this mass, thus prepared, the workmen detach different pieces which they spread out upon large slates where they knead and roll them in every direction, carefully obseiving to leave no \acuum in them, and to keep them free from the mixture of any extrane- ous body. A hair or a grain of sand would spoil the whole work. When this paste has not been properly prepared, the porcelain cracks, and melts or becomes warped. All plain works are fashioned with the wheel. When a cup has un- dergone this

operation, the outside of its bottom is quite round. The first workman gives it the re- quisite height and diameter, this cup then passes to a second workman, who forms its base ; soon after a third applies it to his mould, and gives it a proper form ; a fourth polishes it with a chisel, and the last workman fashions its bottom with a chisel. Some vases thus pass, with astonishing dexterity and expedition, through the hands of seventy persons. Large works are executed in parts which are fashioned separately. When all the pieces are finished, and almost dry, they are put together and cemented with paste made of the same substance, and softened with water. Some time after the seams are polished with a knife, both without and within ; and, when the vessel is covered with varnish, the least trace of them is not to be seen. In this manner, spouts, handles, rings, and other parts are added; and embossed works, grotesque images, figures of trees, animals, busts, &c., are brought to perfec- tion. With regard to those flowers and ornaments which are not in relief, they are either engraven o>r imprinted with a stamp. Ornaments in relief prepared separately are also added to pieces of porcelain, almost in the same manner as lace is put upon a coat.

After a piece of porcelain has been pro- perly fashioned, it then passes into the hands of the painters. These heapei, or painters, are very little acquainted with the rules of drawing ; all their skill being acquired by practice, though some of them display taste and genius. The la- bor of painting, in these manufactories, is di- vided among a great number of hands. One is entirely employed in tracing out the first colored circle, which ornaments the brims of the vessel ; another designs the flowers, and a third paints them ; one delineates waters and mountains, and another birds and other animals ; human figures are worst executed. The tsou-you, which is a kind of oil procured from white flint, has the pe- culiar property of making those pieces of porce- lain upon which it is laid appear to be covered

with an infinitude of veins in every direction ; at a distance one would take them for cracked vases, the fragments of which have not been dis- placed. The color communicated by this oil is a white, somewhat inclining to that of ashes. If it be laid upon porcelain, entirely of an azure blue, it will appear in the same manner to be variegated with beautiful veins. This kind of porcelain is called tsoui-ki. The Chinese make vases also ornamented with a kind of fret-work, perforated in such a manner as to resemble a very fine lace. In the middle is placed a cup proper for holding any liquid ; and this cup makes only one body with the former, which appears like a lace wrapped round it. The Chinese workmen had formerly the secret of making a still more singular kind of porcelain : they painted upon the sides of the vessel fishes, in- sects, and other animals, which could not be per- ceived until it was filled with water. This secret is in a great measure lost ; the

following part of the process, is, however, preserved : — The porce- lain, which the workmen intend to paint in this manner, must be extremely thin and delicate. When it is dry, the color is laid on pretty thick, not on the outside, as is generally done, but en the inside. The figures painted upon it, for the most part, are fishes, as being more analogous to the water with which the vessel is filled. When the color is thoroughly dry, it is coated over with a kind of size, made with porcelain earth ; so that the azure is entirely enclosed between two la- minae of earth ; when the size becomes dry, the workman pours some oil into the vessel, and afterwards puts it upon a mould and applies it to the lath. As this piece of porcelain has re- ceived its consistence and body within, it is made as thin on the outside as possible, without pene- trating to the color ; its exterior surface is then dipped in oil, and when dry it is baked in a com- mon furnace. The art of making these vases requires the most delicate care, and a dexterity which the Chinese perhaps do not at present possess. They have, however, from time to time, made several attempts to revive the secret of this magic painting, but their success has been very imperfect. This kind of porcelain is known by the name of kia-tsing, or pressed azure. After the porcelain has received its proper form, its color, and all the intended ornaments, it is put into the furnace. Each piece, however inconsi- derable it may be, is enclosed in an earthen case or box. In the bottom of these boxes is put a layer of fine sand, which is covered over with powder of the kao-lin, to prevent the sand from adhering too closely to the bottom of the vessel. The piece of porcelain is then placed upon this bed of sand, and pressed gently down, that the sand may take the form of the bottom of the vessel, which does not touch the sides of its case : the case has no cover. A second prepared in the same manner, and containing its vessel, is fitted into the first, so that it entirely shuts it, without touching the porcelain which is below; and thus the surface is filled with piles of cases, which defend the pieces they contain from the too direct action of the fire. Small pieces, such as tea cups, &c., are enclosed incases about four inches high, and sprinkled with the dust of the

kao-lin, and placed in piles. These different piles are placed very closely in the furnace ; they support each other mutually by pieces of earth which bind them at the top, bottom, and middle , but in such a manner that a free passage is left for the flame to insinuate itself everywhere around them. Before each of these furnaces for baking porcelain there is a long porch, which conveys air, and supplies in certain respects the place of a bellows. They were formerly six feet high and six long; but they are now two fathoms in height, and almost four in breadth ; and the sides and roof are

so thick that one may lay the hand upon them without being incommoded by the heat. The dome or roof is shaped like a funnel, and has a large aperture at the top, through which clouds of flame and smoke in- cessantly issue. Besides this principal aperture, there are five others smaller, which are covered with broken pots, but in such a manner that the workmen can increase or diminish the heat ac- cording as it maybe found most convenient: through these also he is enabled to discover when the porcelain is sufficiently baked. Having un- covered that hole which is nearest the principal aperture, he takes a pair of pincers and opens one of the cases : if he observes a bright fire in the furnace, if all the cases are red-hot, and if the colors of the porcelain appear with full lustre, he judges that it is in a proper state ; he then discontinues the fire, and entirely closes up the mouth of the furnace for some time. In the bottom of the furnace there is a deep hearth about two feet in breadth, over which a plank is laid, that the workmen may enter to arrange the porcelain. When the fire is kindled on this hearth, the mouth of the furnace is immediately closed up, and an aperture is left only sufficient for the admission of faggots about a foot in length, but very narrow. The furnace is first heated for a day and night; after which two men keep continually throwing wood into it, and re- lieve each other by turns : 180 loads are generally consumed for one baking. As the porcelain is burning hot, the workman employs for the pur- pose of taking it out long scarfs or pieces of cloth, which are suspended from his neck. The Chinese divide their porcelain into several classes, according to its different degrees of fine- ness and beauty. The whole of the first is re- served for the emperor.

The celebrated Reaumur first considered por- celain scientifically, and submitted the fruits of his investigations to the Academy of Sciences, in two memoirs, in 1727 and 1729. He endea- voured to investigate the internal structure of different kinds of porcelain ; and for that pur- pose procured broken pieces of the French, Saxon, and Japanese porcelains. Upon examin- ing the difference of their grains (the technical term among potters for their internal structure), he found the Japanese to be fine, close, compact, moderately smooth, and somewhat shining. The French porcelain of St. Cloud had a grain far less close and fine than the Japanese ; not shining, or hut very little, and resembling the grain of sugar. The grain of the Saxon kind was found more compact than either ; not gra-

ulous, but s!T)ootli and shining like enamel.

Finding such considerable differences in the grain, he next examined them by fire, which dis- covered properties still more essentially distinct. By a violent heat the French and Saxon porce- lains were melted, but the Japanese withstood the power of the most violent fire he could excite. This difference between European and Japanese porcelain suggested to our

author that, as all porcelains somewhat resemble glass in consis- tence and transparency, they must be semivitri- fications, though they are less compact, and much less transparent. He next made experiments upon the oriental porcelain, and, having exposed the Chinese Kao-lin and pe-tun-tse to a very violent fire, he discovered that the latter fused without addition, but that the former gave no signs of fusibility whatever. He afterwards mixed them, and made cakes of them, which by baking he converted into porcelain, resembling that of China. He farther discovered that the pe-tun-tse of the Chinese was a hard stone of the vitrifiable kind, but much more fusible than any of the kind known in Europe; and that the kao- lin was a talky substance, reduced to a very fine powder. He afterwards attempted to make por- celain like that of the Chinese with materials found in France ; but from some cause, not fully explained, he was unsuccessful in this as well as in some other experiments. He, however, in the course of these made a discovery of a pro- cess for converting common glass to a peculiar kind of porcelain, to which he gave his name, which he published in 1739. He rendered glass of a milky color, semitransparent, so hard as to strike fire with steel, infusible, and of a fibrous grain, by means of cementation. The process, which he published, is not difficult. Common glass, such as that of which wine bottles are made, succeeds best. The glass vessel which is to be converted into porcelain is to be enclosed in a baked earthen case or seggar. The vessel and case are to be filled with a cement composed of equal parts of saud and powdered gypsum or plaster; and the whole is to be put into a potter's kiln, and to remain there during the baking of common earthenware; after which the glass ves- sel will be found transformed into such a matter as has been described. See POTTERY and STAF-FORDSHIRE.

PORCH, n.s. Fr. parche; Lat. porticus. A roofed entrance before a door ; any entrance.

Ehud went forth through the porch, and shut the doors of the parlour. Judges iii. 23.

All this done,

Repair to Pompey's porch, where you shall find us.

Shakspeare. Not infants in the porch of life were free,

The sick, the old, that could but hope a day

Longer by nature's bounty, not let stay.

Ren JI»IHIH.

A PORCH, in the ancient architecture, was a vestibule, or a disposition of insulated columns usually crowned with a pediment, forming a covert place before the principal door of a temple or court of justice. When a porch had four columns in front it was called a tetrastyle ; when six, hexastyle; when eight, octostyle, Sec.

PORCH, Gr. aroa, in antiquity, was a public portico in Athens adorned with the pictures of

Polygnolus and other eminent painters. It was in this portico that Zeno the philosopher taught; and hence his followers were called Stoics. See STOIC and ZENO.

PORCIA, a sister of Cato the younger, highly commended by Cicero.

PORCIA, a daughter of Cato the younger, re- markable for prudence, philosophy, courage, and conjugal tenderness. She married first Bibulus, and after his death the celebrated Marcus Brutus. She gave herself a deep wound in the thigh, and, on Brutus asking the reason, she said she wished to try if she had fortitude to bear pain, and cou- rage to share his secrets. Brutus, astonished at her fortitude, told her of the conspiracy against Caesar. Porcia wished him success, and kept the secret, but dreaded the event, and swooned away the day Brutus went to the assassination of Caesar ; and, when he killed himself, she followed his example.

PORCIUS. See CATO.

PORCO, a province of Buenos Ayres, com- mences on the west side of the town of Potosi, from which it extends twenty leagues. From its elevated situation, there is a scarcity of fruits and strain, but in the valleys the soil is fruitful, and the breeds of sheep are considerable. Such as the vicunna and the guanaco, native breeds. In this province is the mountain of Porco, from which the incas of Peru drew their silver; and n was the first mine worked by the Spaniards. The mines still produce great quantities of that metal. Population 22,000.

PORCUPINE, n. s. Fr. pore espi, or epic ; Hal. porconpino ; Lat. porcus epinus. A. kind of hedge-hog.

This stubborn Cade

Fought so long, till that his thighs with darts Were almost like a sharp-quilled porcupine.

Shakspeare.

Long bearded comets stick, Like flaming porcupines, to their left sides, As they would shoot their quills into their hearts.

Dry den.

By the black prince of Monomotapa's side were ' he glaring cat-a-mountain and the quill-darting por- cupine. Arbuthnot and Pope.

The porcupine, when full grown, is as large as a moderate pig, there is no other difference between the porcupine of Malacca and that of Europe, but that the former grows to a larger size. Hill.

PORCUPINE, in zoology. See HYSTRIX.

PORCUPINE MAN, the name by which one Edward Lambert, who had a distempered skin, went in London. An account of him will be found in the Philosophical Transaction for 1755, by Henry Baker, F. R. S.

PORCUPINE RIVER, a river of North America, so called by captains Lewis and Clarke, from the number of porcupines found near it : it falls into the Missouri from the north, and is a bold and b autiful stream, 112 yards wide, though the water is only forty yards at its entrance. Cap- tain Clarke ascended it several miles, and passed it above where it enters into the high lands. It is about 2000 miles from the confluence of the Missouri with the Mississippi. Also a river of the United States, in the north-west territory which runs into Lake Superior. Long. 88° W., !at. 46° 14′ N.

PORE, n. s. ~\ Fr. pore ; Lat. porus;

PO'ROUS, adj. I Gr. TTO/OOC. A spiracle or PO'ROUSNESS, n.s< Vhole; particularly a spi- PO'RINESS, i racle of the skin ; passage

POROS'ITY. J of perspiration : porous,

porousness, poriness, porosity, follow this sense. Witches, carrying in the air, and transforming themselves into other bodies, by ointments, and anointing themselves all over, may justly move a man to think that these fables are the effects of ima- gination ; for it is certain that ointments do all, if laid on any thing thick, by stopping of the pores, shut in the vapours, and send them to the head ex- tremely. Bacon.

This is a good experiment for the disclosure of the nature of colours ; which of them require a finer po- rosity and which a grosser. Id. Vultures and dogges have torne from every limb His porous skin ; and forth his soul is fled.

Chapman.

They will forcibly get into the porousness of it, and pass between part and part, and separate the parts of that thing one from another ; as a knife doth a solid substance, by having its thinnest parts pressed into it. Digby on Bodies.

Why was the sight

To such a tender ball as the' eye confined, So obvious and so easy to be quenched ; And not, as feeling, through all parts diffused, That sh» might look at will through every pore ?

Milton.

The rapid current, which through veins Of porous earth with kindly thirst updrawn, Rose a fresh fountain, and with many a rill Watered the garden. Id. Paradise Lost.

From veins of vallies milk and nectar broke, And honey sweating through the pores of oak.

Dry den.

Pores are small interstices between the particles of matter, which constitute every body, or between cer- tain aggregates or combinations of them. Quincy.

I took off the dressings, and set the trepan above the fractured bone, considering the poriness of the bone below. Wiseman.

PORE, v. n. Gr. Tropoc is the optic nerve ; ' but I imagine pore to come by corruption from some English word,' says Dr. Johnson. It is, in fact, the Span, ojar, perojar (ft barb. Lat. ocu- lare). To look with great intenseness and care ; to examine with great attention.

All delights are vain ; but that most vain,

Which, with pain purchased, doth inherit pain ;

As painfully to pore upon a book,

To seek the light of truth, while truth the while

Doth falsely blind the eye-sight. Shakspeare.

Poreblind men see best in the dimmer light, and likewise have their sight stronger near at hand than those that are not poreblind, and can read and write smaller letters ; for that the spirits visual in those that are poreblind are thinner and rarer than in others , and therefore the greater light disperseth them.

Bacon's Natural Histo y.

A book was writ, called Tetrachordon, The subject new : it walked the town a while Numbering good intellects ; now seldom pored on.

Milton.

The ey > grows weary with poring perpetually on the same thing. Dryden s Dufremoy.

Let him with pedants hunt for waise in books, Pore out his life amongst the lazy gownmen, Grow old and vainly proud in fancied knowledge

Rows

Wilh sharpened sight pale antiquaries pore, The inscription value, but the rust adore. Pope.

He h-ath been poring so long upon Fox's Martyrs, that he imagines himself living in the reign of queen Mary. Swift.

POREE (Charles), a French Jesuit, and dra- matic writer, born m 1675. He entered the society in 1692. He wrote some Latin poems and dramatic pieces; and died in 1741.

PORELLA, in botany, a genus of the natural order of musci and cryptogamia class of plants. The anthera are multilocular, full of natural pores, with an operculum ; there is no calyptra, nor pedicle ; the capsules contain a powder like those of the other mosses ; and their manner of shedding this powder is not by separating into two parts, like those of the selago and lycopo- dinm, but by opening into several holes on all sides.

PORISM, in geometry, is a name given by the ancient geometers to two

classes of mathe- matical propositions. Euclid gives it to propo- sitions which are involved in others which he is professedly investigating, and which, although not his principal object, are yet obtained along with it, as is expressed by their name porismata, acquisitions. Such propositions are now called corollaries. But he gives the same name, by way of eminence, to a particular class of propo- sitions which he collected in the course of his researches, and selected from among many others on account of their great subserviency to the bu- siness of geometrical investigation. These propositions were so named by him either from the way in which he discovered them, while he was investigating something else, by which means they might be considered as gains or acquisitions, or from their utility in acquiring farther know- ledge as steps in the investigation. In this sense they are porismata; for 7ropi£w signifies both to investigate and to acquire by investigation.

These propositions formed a collection which was familiarly known to the ancient geometers by the name of Euclid's porisms ; and Pappus of Alexandria says that it was a most ingenious collection of many things conducive to the analysis or solution of the most difficult prob- lems, and which afforded great delight to those who were able to understand and to investigate them. Unfortunately for mathematical science, however, this valuable collection is now lost, and it still remains doubtful in what manner the an- cients conducted their researches into this curious subject. We have reason to believe that their method was excellent both in principle and extent ; for their analysis led them to many profound discoveries, and was restricted by the severest logic. The best account we have of this class of propositions is a fragment of Pappus, in which he attempts a general definition of them as a set of mathematical propositions distinguish- able in kind from all others ; but of this distinc- tion nothing remains, except a criticism on a definition of them given by some geometers, and with which he finds fault, as defining them only by an accidental circumstance, ' Porisma est quod deficit hypothesi a theoremate locali.' Pappus then proceeds to give an account of Euclid's po- risms , but the enunciations are so extremely

defective, while the figure to which they refer is now lost, that Dr. Halley confesses the fragment in question to be beyond his comprehension. The high encomiums given by Pappus to these propositions have excited the curiosity of the greatest geometers of modern times, who have attempted to discover their nature and manner of investigation. M. Fermat, a French mathema- tician of the seventeenth century, attaching him- self to the definition which Pappus criticises, published an introduction (for this is its modest title) to this subject, which many others tried to elucidate in vain. At length Dr. Simson of Glasgow, after patient enquiry, suggested a re- storation of the porisms of Euclid, which has all the appearance of being

just. It precisely cor- responds to Pappus's description of them. All the lemmas, which Pappus has given for the better understanding of Euclid's propositions, are equally applicable to those of Dr. Simson, which are found to differ from local theorems precisely as Pappus affirms those of Euclid to have done. They require a particular mode of analysis, and are of immense service in geome- trical investigation ; on which account they may justly claim our attention. While Dr. Simson was employed in this enquiry he carried on a correspondence upon the subject with the late Dr. M. Stewart, professor of mathematics in the university of Edinburgh; who, besides entering into Dr. Simson's views, and communicating to him many curious porisms, pursued the same subject in a new and very different direction. He published the result of his enquiries in 1746, under the title of General Theorems, not caring to give them any other name lest he might appear to anticipate the labors of his friend. The greater part of the propositions contained in that work are porisms, without demonstrations; therefore, whoever wishes to investigate one of the most curious subjects in geometry will there find abundance of materials, and an ample field for discussion. Dr. Simson defines a porism to be ' a proposition in which it is proposed to demon- strate that one or more things are given, between which and every one of innumerable other things not given, but assumed according to a given law, a certain relation described in the proposition is shown to take place.' This definition is not a little obscure ; it will be plainer expressed thus : ' A porism is a position affirming the possibility of finding such conditions as will render a cer- tain problem indeterminate or capable of innu- merable solutions.' This definition agrees with Pappus's idea of these propositions, so far at least as they can be understood from the frag- ment already mentioned ; for the propositions here defined, like those which he describes, are, strictly speaking, neither theorems nor problems, but of an intermediate nature between both ; for they neither simply enunciate a truth to be demonstrated, nor propose a question to be resolved, but are affirmations of a truth in which the determination of an unknown quantity is involved. In as far, therefore, as they assert that a certain problem may become in- determinate, they are ef the nature of theo- rems; and, in as far as they seek to discovei the conditions by which that is brought about,

'hey are of the nature of problems. We shall endeavour to make our readers understand this subject distinctly, by considering them in the way in which it is probable they occurred to the ancient geometers : this will at the same time show the nature of the analysis peculiar to them, and their great use in the solution of problems. It appears to be certain that it has

been the solution of problems which, in all states of the mathematical science, has led to the discovery of geometrical truths : the first mathematical en- quiries, in particular, must have occurred in the form of questions, where something was given, and something required to be done ; and by the reasoning necessary to answer these questions, or to discover the relation between the things given and those to be found, many truths were sug- gested which came afterwards to be the subject of separate demonstrations. The number of these was the greater, because the ancient geo- meters always undertook the solution of problems with a scrupulous and minute attention; inso- much that they would scarcely suffer any of the collateral truths to escape their observation. Now «s this cautious manner of proceeding gave an opportunity of laying hold of every collateral truth connected with the main object of enquiry, these geometers soon perceived that there were m my problems which in certain cases would ad- mit of no solution whatever, in consequence of a particular relation taking place among the quan- tities which were given. Such problems were said to become impossible ; and it was soon found that this always happened when one of the conditions of tlie problem was inconsistent with the rest. Thus, when it was required to divide a line so that the rectangle contained by its seg- ments might be equal to a given space, it is evi- dent that this was possible only when the given space was less than the square of half the line ; for, when it was otherwise, the two conditions defining, the one the magnitude of the line, and the other the rectangle of its segments, were in- consistent with each other. Such cases would occur in the solution of the most simple prob- lems; but, if they were more complicated, it must have been remarked that the constructions would sometimes fail for a reason directly con- trary to that just now assigned. Cases would occur where the lines, which by their intersection were to determine the thing sought, instead of intersecting each other as they did commonly, or of not meeting at all as in the abovementioned case of impossibility, would co- incide with one another entirely, and of course leave the problem unresolved. It would appear to geometers, upon a little reflection, that since, in the case of determinate problems, the thing required was determined by the intersection of the two lines already mentioned, that is, by the points common to both ; so, in the case of their coincidence, as all their parts were in common, every one of these points must give a solution, or, in other words, the solutions must be indefinite in number. Upon enquiry it would be found that this proceeded from some condition of theproblem having been involved in another, so that, in fact, there was but one which did not leave a sufficient number of independent conditions to limit the problem to a single or any determinate number

of solutions. It would soon be perceived that these cases formed very curious propositions 01 an intermediate nature between problems and

theorems; and that they admitted of being enun- ciated in a manner peculiarly elegant and concise. It was to such propositions that the ancients gave the name of porisms. This deduction requires to be illustrated by an example; suppose, therefore, that it were required to resolve the following problem : —

A circle A B C, a straight line D E, and a point

F, bei g given in opposition, to find a point G ir. the straight line D E, such that G F, the line drawn from it to the given point, shall be equal to G B, the line drawn from it touching the given cir- cle. Suppose G to be found, and G B 1o be drawn touching the given circle A B C in B, let II be its centre, join H B, and let H D be perpendicular to DE. From D draw D L, touching the circle A B C in L and join H L ; also from the centre

G, with the distance G B or G F, describe the circle B K F, meeting H D in the points K and K'. Then H D and D L are given in position and magnitude ; and, because G B touches the circle A B C, H B G is a right angle ; and, since G is the centre of the circle B K F, therefore H B touches the circle B K F, and H B — the rectangle K' H K ; which rectangle + D K* — H D2, be- cause K'K is bisected in D ; therefore H L* + K D2 = D Ha = H L2 and = L D2 ; therefore D Ka •=. D L2, and D K — D L ; and, since D L is given in magnitude, D K is also given, and K is a given point : for the same reason K' is a given point, and, the point F being given by hypothesis, the B K P is given in position. The point G, the centre of the circle, is therefore given, which was to be found. Hence this con- struction: having drawn HD perpendicular to D E, and D L touching the circle ABC, make D K and D K' each equal to D L, and find G the centre of the circle described through the points K' F K ; that is, let F K be joined and bisected at right angles by M N, which meets D E in G ; G will be the point required ; that is, if GBbe drawn touching the circle ABC, and GF to the given point, G B is equal to GF, The synthetical demonstration is easily derived*

from the preceding analysis ; but in some cases this construction fails. For, first, if F fall any- wnere in D H, as at F', the line M N becomes parallel to D E, and the point G is nowhere to be found ; or, in other words, it is at an infinite distance from D. — This is true in general ; but, if the given point F coincides with K, then M N evidently coincides with D E ; so that, agreeable to a remark already made, every point of the line DE may be taken for G, and will satisfy the conditions of the problem ; that is to say, G B will be equal to G K, wherever the point G be taken in the line D E :

the same is true if F coincide with K. Thus we have an instance of a problem, and that too a very simple one, which, in general, admits but of one solution; but which, in one particular case, when a certain relation takes place among the things giren, be- comes indefinite, and admits of innumerable so- "utions. The proposition which results from this case of the problem is a porism, and may be thus enunciated : ' A circle ABC being given by po- sition, and also a straight line D E, which does not cut the circle, a point K maybe found, such that if G be any point whatever in D E, the straight line drawn from G to the point K shall be equal to the straight line drawn from G touch- ing the given circle A B C.' The problem which follows appears to have led to the discovery of many porisms. A circle ABC and two points

fig. 2.

circumferences, and therefore is found. Hence, this construction : Divide E D in L, so that E L may be to L D in the given ratio of a to ft, and produce E D also to M, so that E M may be to M D in the same given ratio of a to /3; bisect L M in N, and from the centre N, with the dis- tance N L, describe the semicircle L F M ; and the point F, in which it intersects the circle A B C, is the point required. The synthetical demonstration is easily derived from the preced- ing analysis. But the construction fails when the circle L F M falls either wholly within or wholly without the circle A B C, so that the cir- cumferences do not intersect ; and in these cases the problem cannot be solved. The construction also fails when the two circumferences L F M, ABC, entirely coincide. In this case, every point in the circumference ABC will answer the conditions of the problem, which is therefore ca- pable of numberless solutions, and may, as in the former instances, be converted into a porism. We now enquire, therefore, in what circum- stances the point L will coincide with A, and also the point M with C, and of consequence the circumference LFM with ABC. If we suppose that they coincide E A ; A D ; ; a ' ft I : E C ; C D, and E A : E C : : A D : C D,'or by conversion E A : A C ; : A D : C D — A D ; I A D : 2 D O, O being the centre of the circle ABC; therefore, also, E A : A O ; : A D ; D O and by composition E O ; A O : ' A O ; DO, therefore E O x O D = A O2. Hence if the guen points E and D be so situated that E

fig. 3.

D, E, in a diameter of it being given, to find a point F in the circumference of the given circle ; from which, if straight lines be drawn to the given points E, D, these straight lines shall have to one another the given ratio of a to ft, which is supposed to be that of a greater to a less. — Sup- pose the problem resolved, and that F is found, so that F E has to F D the given ratio of a to /3 ; produce E F towards B, bisect the angle E F D by F L, and D F

B by F M : therefore E L : L D : : E F ; F D, that is, in a given ratio ; and, since E D is given, each of the segments E L, L D, is given, and the point L is also given be- cause D F B is bisected by F M, E M : M D : : E F ; F D, that is, in a given ratio, and therefore M is given. Since D F L is half of D F E, and D F M half of D F B, therefore L F M is half of (D F E + D F B), therefore L F M is a right angle ; and, since the points L, M, are given, the point F is in the circumference of a circle de- scribed upon L M as a diameter, and therefore given in position. Now the point F is also in the circumference of the given circle ABC, therefore it is in the intersection of the two given

X O D := A O2, and at the same time a ; ft ' '. E A : A D : : E C : C D, the problem admits of numberless solutions ; and, if either of the points D or E be given, the other point and also the ratio which will render the problem indeterminate, may be found. Hence we have this porism : ' A circle ABC, and also a point D being given, another point E may be found, such that the two lines inflected from these points to any point in the circumference ABC shall have to each other a given ratio, which ratio is also to be found.' Hence also we have an example of the derivation of porisms from one another ; for the circle ABC, and the points D and E remaining as before (fig. 3.), if, through D, we diaw any line whatever H D B, meeting the circle in Band II ; and if the lines EB, EH, be also drawn, these lines will cut off equal circumferences B F, HG. Let FC be drawn, and it is plain from the foregoing analysis that the angles D F C, CFB, are equal; therefore if OG, OB, be drawn, the angles B O C, C O G, are also equal ;

P O R I S M.

and consequently the angles DOB, DOG. In the same manner, by joining A B, the angle D B E being bisected by B A, it is evident that the angle A O F is equal to A O H, and there- fore the angle FOB to H O G, that is, the arch F B to the arch H G. This proposition appears to have been the last but one in the third book of Euclid's Porisms, and the manner of its enun- ciation in the porismatic form is obvious. The preceding proposition also affords an illustration of the remark, that the conditions of a problem are involved in one another in the porismatic or indefinite case ; for here several independent conditions are laid down, by the help of which the problem is to be resolved. Two points D and E are given, from which two lines are to be inflected, and a circumference A B C, in which these lines are to meet, as also a ratio which these lines are to have to each other. These condi- tions are all independent on one another, so that any one may be changed without any change whatever in the rest. This is true in general ; but yet in one case, viz. when the points are so related to one another that their

rectangle under their distances from the centre is equal to the square of the radius of the circle, it follows from the preceding analysis, that the ratio of the inflected lines is no longer a matter of choice, but a necessary consequence of this disposition of the points. From all this, we may trace the imperfect definition of a porism which Pappus ascribes to the later geometers, viz. that it differs from a local tneorem, by wanting the hypothesis assumed in that theorem. If we take one of the propositions called loci, and make the construc- tion of the figure a part of the hypothesis, we get what was called by the ancient geometers a local theorem. If, again, in the enunciation of the theorem, that part of the hypothesis which con- tains the construction be suppressed, the propo- sition thence arising will be a porism ; for it will enunciate a truth, and will require to the full understanding and investigation of that truth that something should be found, viz. the circum- stances in the construction supposed to be omit- ted. Thus, when we say, if from two given points E, D (fig. 3), two straight lines E F, F D, are inflected to a third point F, so as to be to one another in a given ratio, the point F is in the circumference of a given circle, we have a locus. But when conversely it is said, if a circle ABC, of which the centre is O, be given by position, as also a point E ; and if D be taken in the line E O, so that EO x O D = A O2; and if from E and D the lines E F, D F, be inflected to any point of the circumference A B C, the ratio of E F to D F will be given, viz. the same with that of E A to A D, we have a local theorem. Laˆ.ly, when it is said, if a circle A B C be given by position, and also a point E, a point D may be found, such that if E F, F D, be inflected from E and D to any point F in the circumference ABC, these lines shall have a given ratio to one another, the proposition becomes a porism, and is the same that has just now been investigated. Hence it is evident that the local theorem is changed into a porism, by leaving out what re- lates to the determination of D, and of the given ratio. But though all propositions formed in

this way from the conversion of loci are porisms, yet all porisms are not formed from the conver- sion of loci ; the first, for instance, of the preced- ing cannot by conversion be changed into a locus; therefore Fermat's idea of porisms, found- ed upon this circumstance, was imperfect. To confirm the truth of the preceding theory, pro- fessor Dr. Stewart, in a paper read many years ago before the Philosophical Society of Edin- burgh, defines a porism to be ' A proposition affirming the possibility of finding one or more conditions of'an indeterminate theorem ;' where, by an indeterminate theorem, he meant one which expresses a relation between certain quan- tities that are determinate and certain others that are indeterminate ; a definition which evidently agrees with the explanations above given. If the idea which Js given of these propositions be just, then they are to be discovered by consider- ing those cases in which the construction of H

problem fails, in consequence of the lines which by their intersection, or the points which by their position were to determine the problem required, happening to coincide with one another. A po- rism may therefore be deduced from the problem to which it belongs, just as propositions concern- ing the maxima and minima of quantities are de- duced from the problems of which they form limitations ; and such is the most natural and obvious analysis of which this class of proposi- tions admits.

Another general remark may be made on the analysis of porisms : it often happens that the magnitudes required may all, or a part of them, be found by considering the extreme cases; but for the discovery of the relation between them, and the indefinite magnitudes, we must have re- course to the hypothesis of the porism in its most general or indefinite form ; and must endeavour so to conduct the reasoning that the indefiniie magnitudes may at length totally disappear, and leave a proposition asserting the relation between determinate magnitudes only. For this purpose Dr. Simson frequently employs two statements of the general hypothesis, which he compares together. As, for instance, in his analysis of the last porism, he assumes not only E, any point in the line D E, but also another point O, any- where in the same line, to both of which he sup- poses lines to be inflected from the points A, B. This double statement, however, cannot be made without rendering the investigation long and com- plicated : nor is it even necessary; for it may be avoided by having recourse to simpler porisms, or to loci, or to propositions of the data. A po- rism may in some cases be so simple as to arise from the mere coincidence of one condition with another, though in no case whatever any incon- sistency can take place between them. There are, however, comparatively few pori'sms so sim- ple in their origin, or that arise from problems where the conditions are but little complicated ; for it usually happens that a problem which can become indefinite may also become impossible ; and if so the connexion already explained never fails to take place. Another species of impossi- bility may frequently arise from the pommatic case of a problem which will affect in some mea- sure the application of geometry to astronomy,

or any of the sciences depending on experiment or observation. For, when a problem is to be resolved by help of data furnished by experi- ment or observation, the first thing to be consi- dered is, whether the data so obtained be suffi- cient for determining the thing sought ; and in this a very erroneous judgment may be formed, if we rest satisfied with a general view

of the subject ; for, though the problem may in general be resolved from the data with which we are pro- vided, yet these data may be so related to one another in the case under consideration, that the problem will become indeterminate, and, instead of one solution, will admit of an indefinite num- ber. This we have found to be the case in the foregoing propositions. Such cases may not in- deed occur in any of the practical applications of geometry ; but there is one of the same kind which has actually occurred in astronomy. Sir Isaac Newton, in his Principia, has considered a small part of the orbit of a comet as a straight line described with a uniform motion. From this hypothesis, by means of four observations made at proper intervals of time, the determina- tion of the path of the comet is reduced to this geometrical problem : Four straight lines being given in position, it is required to draw a fifth line across them, so as to be cut by them into three parts, having given ratios to one another. Now this problem had been constructed by Dr. Wallis and Sir Christopher Wren, and also in three dif- ferent ways by Sir Isaac himself in different parts of his works ; yet none of these geometers ob- served that there was a particular situation of the lines in which the problem admitted of innu- merable solutions : and this happens to be the very case in which the problem is applicable to the determination of the comet's path, as was first discovered by the abbe Boscovich, who was led to it by finding that in this way he could never determine the path of a comet with any degree of certainty. Besides the geometrical there is also an algebraical analysis belonging to porisms ; which, however, does not belong to this place, because we give this account of them merely as an article of ancient geometry ; and the ancients never employed algebra in their in- vestigations. Mr. Playfair, professor of mathe- matics in the university of Edinburgh, has written a paper on the origin and geometrical investiga- tion of porisms, which is published in the third volume of the Transactions of the Royal Society of Edinburgh, from which this account of the subject is taken. He has there promised a second part to his paper, in which the algebraical inves- tigation of porisms is to be considered. This will no doubt throw considerable light upon the subject, as we may readily judge from that gen- tleman's known abilities, and from the specimen he has already given us in the first part. For more on this subject, see a very ingenious paper on Porisms by Henry Brougham, esq., in the Philosophical Transactions for 1798, or New Abridgment, vol. xviii. p. 345-355.

PORISMATIC,of or belonging to the mathe- matical doctrine of porisms.

PORISTIC METHOD, Gr. TroptTwcoc, in mathe- matics, is that which determines when, by what means, and how many different ways a problem may be solved.

PORK, ?i. s. \ Fr.porc; LuLporcus. Swine PORK'ER, / flesh unsalted :

porker is a PORK/EATER, \ hog : porket and porkling a PORK'ET, i young pig : porkeatcr is suf PORK'ING. J ficiently plain.

A hovel

Will serve thee in winter, moreover than that, To shut up thy porklings thou meanest to fat.

Tusser.

You art no good member of the commonwealth ; for, in converting Jews to Christians, you raise the price of pork. Shakspeare.

This making of Christians will raise the price of pork ; if we grow all to be porkeaters, we shall not shortly have a rasher on the coals for money.

Id. Merchant of Venice. A priest appears,

And offrings to the flaming altars hears ; A porket and a lamb that never suffered shears.

Dry den

All flesh full of nourishment, as beef and pork, increase the matter of phlegm.

Flayer on the Humours. Strait to the lodgment of his herd he run, Where the fat porkers slept beneath the sun.

Pope.

Thus saith the prophet of the Turk, Good mussulman abstain from pork ; There is a part in every swine, No friend or follower of mine May taste. Camper.

PORK. See Sus. The hog is the only domestic animal that we know of no use to man when alive, and therefore seems properly designed for food. The Jews, however, the Egyptians, and other inhabitants of warm countries, and all the Mahometans at present, reject the use of pork. The Greeks gave great commendation to this food, and their Athletse were fed with it. The Romans considered it as one of their delicacies. With regard to its alkalescency, no proper expe- riments have yet been made; but, as it is of a gelatinous and succulent nature, it is probably less so than many others. Upon the whole it ap- pears to be a very valuable nutriment. The rea- son is obvious why it was forbidden to the Jews : their whole ceremonial dispensation was typical. Filth was held as an emblem or type of sin. Hence

the many laws respecting frequent wash- ings ; and no animal feeds so filthily as swine. Mahomet borrowed this prohibition, as well as circumcision and many other parts of his sys- tem, from the law of Moses. But it is absurd to suppose, as some do, that Moses borrowed any thing of this kind from the Egyptians.

PORO ISLE, an island on the south-western coast of Sumatra, north-west of the Poggy Islands, and inhabited by a similar race of people. It is also denominated Pulo Siporah, or Good For- tune Island, and contains four villages, in which there are about 1000 inhabitants. In length this island is estimated at thirty-three miles, by eight the average breadth ; and described as being covered with wood. Long. 99° 15′ E., lat. 2° 12'S.

POROMPHALON, in medicine, from Trwpoc, a callus, and optyaXoc, the navel, a hard piece of flesh or stone growing out from the navel.

POROMUSHIR, the second of the Kurile islands, in the North Pacific, is about forty-four miles in length, and twelve in breadth, The

northern part is mountainous, the south-west di- versified by hills and valleys ; and there is a chain of mountains on the island, never free of snow. This island is said to be abundant in minerals, wolves, and red foxes, but destitute of timber. There is a large bay at the south-east extremity. The most southern point is Cape Wasilieff, in Ion. 156° 14′ E.. lat. M° 38′ N.

POROS, a small rocky island in the gulf of Egina, Greece, separated from the coast of Argo- lis by a narrow channel. It was the ancient Sphoeria, remarkable for its rocks of granite, and having a considerable maritime trade. The isle of Calauria is joined to Poros by a sand- bank.

POROSIS, in medicine, Trwpwcric, the breed- ing of callous or hard matter.

POROSITY, an essential property of bodies, is best ascertained by the microscope, which shows us the passage of fluids through solid bodies ; or we may discover this property in the trans- mission of light, in all directions, through the in- ternal structure of hard and solid bodies. The porosity of wood is very remarkable. Air may be blown by the mouth, in a profuse stream, through a cylinder two feet long of dried oak, beech, elm, or birch ; and if a piece of wood, or a piece of marble, be dipped in water, and sub- mitted to experiment under the receiver of a pneumatic machine, the air issuing through the exterior cavities will appear in a torrent of bub-

bles on the external surface. In like manner mercury is forced through a piece of dry wood, and made to fall in the form of a fine divided shower. If a few ounces be tied in a bag of sheep skin, it may be squeezed through the leather by the pressure of the hand, in numerous minute stream- lets. This experiment illustrates the porosity of the human cuticle. From microscopic observations, it has been computed that the skin is perforated by a thousand holes in the length of an inch. If we estimate the whole surface of the body of a middle-sized man to be sixteen square feet, it must contain no fewer than 2,304,000 pores. These pores are the mouths of so many excretory vessels, which perform that important function in the animal economy., insensible perspiration. The lungs discharge, every minute, six grains, and the surface of the skin from three to twenty grains, the average over the whole body being fifteen grains of lymph, consisting of water, with a very minute admixture of salt, acetic acid, and a trace of iron. If we suppose this perspirable matter to consist of globules only ten times smaller than the red particles of blood, or about the 5000th part of an inch in diameter, it would require a succession of 400 of them to issue from each orifice every second. The permea- bility of a solid body to any fluid, depends, how- ever, on its peculiar structure and its relation to the fluid. A compact substance will sometimes oppose the entrance of thin fluid, while it gives free passage to a gross one. Thus a cask, which holds water, will permit oil to ooze through it ; and a fresh, humid bladder, which is air-tight, will yet, when pressed under water, imbibe much of that liquid. If a cylindrical piece of oak, ash, elm, or other hard wood, cut in the direction of its fibres, be cemented to the end of

a long glass tube, water will pass freely through it, in divided streamlets; but a soft cork, inserted into a similar tube, will effectually prevent all es- cape of the liquid. Mercury may be carried in a small cambric bag, which could not retain water for a moment. If a circular hot .om of close-grained wood, divided by a fine slit (from the 30th to the 100th part of an inch wide), be cemented to the end of a glass tube, it will sup- port a column of mercury from one to three or more inches high, the elevation being always proportional to the narrowness of the slit. Hence a cistern of box-wood is frequently used for portable barometers, the fine joints admit- ting the access and pressure of the air, but preventing the escape of the mercury. Yet a sufficient force would overcome this obstruc- tion ; and, in the same manner, the air which is confined in the common bellows under a moderate pressure, might, by a more violent action, be made to transpire copiously through the boards and the leather. The transmission of a fluid through a solid substance shows the existence of pores; but the resistance, in ordi- nary cases, to such a passage, is insufficient, therefore, to prove the contrary. The permea- bility of translucent substances to the rays of light, in all directions, evinces the most extreme porosity. But this inference is not

confined merely to the bodies usually termed diaphanous ; for the gradation towards opacity advances by insensible shades. The thin air itself is not per- fectly translucid, nor will the densest metal ab- solutely bar all passage of light. The whole mass of our atmosphere, equal to the weight of a column of thirty-four feet of water, trans- mits, according to its comparative clearness, only from four-fifths to three-fourths of the per- pendicular light, and consequently retains or absorbs from a fifth to a fourth of the whole. But this absorption if greatly increased by the accumulation of the i ledium. When the sun has approached withiti a degree of the horizon, and his rays now traverse a tract of air equal in weight to a column of 905 feet of water, only the 2 12th part of them can reach the sur- face of the earth. Even gold itself is diapha- nous : if a leaf of that metal, either pure or with only an 80th part of alloy, and therefore of a fine yellow lustre, but scarcely exceeding the 300,000th part of an inch in thickness, and enclosed between two thin plates of mica, be held immediately before the eye, and opposite to a window, it will transmit a soft green light, like the color of the water of the sea, or of a clear lake of moderate depth. The inferior ductility of the other metals will not allow that fine lamination, which would be requisite for show- ing, in ordinary cases, the transmission of light. But their diaphanous quality might be inferred from the tints with which they affect the trans- mitted rays, on being alloyed with gold. Other substances, though commonly reckoned opaque, yet admit, in various degrees, the passage of light. The window of a small apartment being closed by a deal board, if a person within shut his eyes a few minutes to render them more acute, he will, on opening them again, easily discern a faint glimmer issuing through the win-

dow. In proportion as the board is planed thinner, more light will be admitted, till the furniture of the room becomes visible. Writing papei transmits about one third part of the •whole incident light, and when oiled, it often sup- plies the place of glass in the common workshops. The addition of oil, does not, however, materi- ally augment the diaphanous qualityof the paper, but renders its internal structure more regu- gu.ar, and more assimilated to that of a li- quid. The rays of light travel, without much obstruction, across several folds of paper, and even escape copiously through pasteboard. Com- bining these various facts, it follows that all bodies are permeable, though in extremely dif- ferent degrees, to the afflux of light. They must, therefore, he widely perforated, and in every possible direction.

PORPHYRIUS, a famous Platonic philoso- pher, horn at Tyre in 233, in

the reign of Alex- ander Severus. He was the disciple of Longi- nus, and became the ornament of his school at Athens ; thence he went to Rome, and attended Plotinus, with whom he lived six years. After Plotinus's death he taught philosophy at Rome with great applause ; and became well skilled in polite literature, geography, astronomy, and music. He lived to the end of the third century, and died in the reign of Diocletian. There are still extant his book on the Categories of Aris- totle ; a Treatise on Abstinence from Flesh ; and several other pieces in Greek. They were printed at Cambridge in 1 655, 8vo., with a Latin version. He also composed a large treatise against the Christian religion, which is lost. It was an- swered by Methodius, Eusebius, St., Jerome, &c. The emperor Theodosius the Great caused it to be burnt in 338.

POR'PHYRE, n. s. } From Fr. porphyre ; POR'PHYRY. \ Gr. iropvpa ; Lat. por-

yhyrites. Marble of a particular kind.

PORPHYRY, in the old system of mineralogy, was a genus of stones ranking in the order of saxa. It is found of several different colors, as green, deep red, purple, black, dark brown, and grey. The porphyry of the ancients is a most elegant mass of an extremely fine and compact structure, remarkably heavy, and of a fine strong purple, variegated more or less with pale red and white ; its purple is of all degrees, from the claret color to that of the violet ; and its varie- gations are rarely disposed in veins, but spots, sometimes very small, and at others running into large blotches. It is less fine than many of the ordinary marbles ; but it excels them all in hardness, and is capable of a most elegant polish. It is still found in immense strata in Egypt. The hard red-lead colored porphyry, variegated with black, white, and green, is a most beautiful and valuable substance. It has the hardness and all the other characters of the oriental porphyry, and even greatly excels it in brightness, beauty, and variegation of colors. It is found in great plenty in Minorca. The hard, pale-red porphyry, variegated with black, white, and green, is of a pale flesh color, often approaching to white. It is variegated in blotches from half an inch to an inch broad. It takes a hiuh polish, and emulates all the qualities of the oriental porphyry. It is

found in immense strata in Arabia Pettwa and in the Upper Egypt; and in separate nodules in Germany, England, and Ireland.

There are three famous obelisks of porphyry at Cairo, and two at Alexandria, called Cleopa- 'tra's needles. The art of cutting porphyry, practised by the ancients, appears now to be lost, as modern tools will scarcely touch it. Yet in the palace of the Thuilleries there are, or at least were, busts of Apollo and twelve emperors. Mr. Addison says he saw a

workman at Rome cutting porphyry ; but his advances were ex- tremely slow, and almost insensible. The Ita- lian sculptors work the pieces of old porphyry columns still remaining (for the porphyry quar- ries are long since lost) with a brass saw without teeth. With this saw, emery, and water, they rub and wear the stone with great patience. Many persons have endeavoured to retrieve the ancient art, and particularly Leon Baptist Al- berti ; who, searching for the necessary materials for temper, says he found goats' blood the best of any : but even this availed not much ; for, in working with chisels tempered with it, sparks of fire came much more plentifully than pieces of stone. The sculptors were thus, however, able to make a flat or oval form ; but could never attain to any thing like a figure. In 1 555 Cosmo de Medicis is said to have distilled a water from certain herbs with which his sculptor, Francis Tadda, gave his tools such an admirable hard- ness, and so fine a temper, that he performed some very exquisite works with them ; particu- larly our Saviour's head in demi-relievo, and Cosmo's head and his duchess's. The very hair and beard were well conducted ; but the secret appears to have died with him. The French have discovered another mode of cutting por- phyry, viz. with an iron saw without teeth, and grez, a kind of free-stone pulverised, and water. The authors of this invention say that they could form the whole contour of a column hereby, if they had matter to work on. Others have proposed to harden tools so as to cut porphyry by steeping them in the juice of the plant called bear's breech or brankursine. Mr. Boyle says that he caused porphyry to be cut by means of emery, steel saws, and water. See his Works, abr. vol. i. p. 111. Da Costa supposes that the method used by the ancients in cutting and engraving porphyry was with numbers of common tools at great expense ; that they rudely hewed or broke the stone into the intended figure, and by con- tinued application reduced them into more regu- lar designs ; and that they completed the work by polishing it with great labor, by particular hard sands found in Egypt. And he thinks that in the porphyry quarries there were layers of grit, or loose disunited particles, analogous to the porphyry, which they carefully sought for and used for this work. See Natural History of Fossils, p. 285.

Porphyry is defined by Dr. Ure as a com- pound rock, having a basis, in which the other contemporaneous constituent parts are imbedded. The base is sometimes claystone, sometimes horn- stone, sometimes compact feldspar; or pitch- stone, pearlstone, and obsidian. The imbedded parts are most commonly feldspar and quartz,

which are usually crystallized more or less per- fectly, and hence they

appear sometimes granu- lar. According to Werner there are two distinct porphyry formations ; the oldest occurs in Athole and Dalnacardoch, there is a very fine example of a bed of porphyry-slate in mica. The second porphyry formation is much more widely ex- tended. It consists principally of clay porphyry, while the former consists chiefly of hornstone porphyry and feldspar porphyry. It sometimes contains considerable repositories of ore, in veins. Gold, silver, lead, tin, copper, iron, and manga- nese occur in it ; but chiefly in the newer por- phyry, as happens with the Hungarian mines. It occurs in Arran, and in Perthshire between Dalnacardoch and Tummel-bridge.

' The columns of porphyry at Rome,' observes a writer in Dr. Brewster's Journal, ' are not nearly of so large a size as the large columns of granite. The urn of Constanza and the urn of Helena are each composed of a very large block of porphyry ; and the great tazza or saucer- shaped reservoir in the rotunda of the Museo Pio-Clementino is of one great piece of por- phyry. Pliny says that sculptors began to work in porphyry only in the reign of Claudius. Vo- piscus mentions porphyry. The room in which the princes of the Greek empire were born was incrusted with porphyry, and the princes born in this room were called Porphyrogeneti. The name porphyry, or purple, applied to this stone, was taken from the ancient purple dye, made of the shell-fish called porphyrios, which was got near Tyre. It is, therefore, supposed that the ancient dye was of the dull red color which this stone exhibits. A small grained greenish porphyry is sometimes found, but much more rarely than the red porphyry, amongst the re- mains of ancient art at Rome ; it is quite dif- ferent from the antique green serpentine.

PORPITES, the hair-button stone, in natural history, a name given by authors to a small spe- cies of fossil coral ; which is usually of a round- ed figure, considerably flatted, and striated from the centre every way to the circumference. These are of different sizes, and of different colors, as greyish, whitish, brownish, or bluish, and are usually found immersed in stone.

POR'POISE, n. s. I Fr. pore poisson. The

POR'PUS. S sea-hog.

PORPOISE, CAPF, a cape of North America, on the coast of York county, Maine, seven leagues north by east of cape Neddock, and five south-west of Wood Island. It is known by the high lands of Kennebunk, on its north-west quarter. A vessel that draws ten feet will be aground at low water in the harbour, and it is so narrow that a vessel cannot turn. It is within 100 yards of the sea, and secure from all winds. Long. 70° 23′ W., lat. 43° 22′

N.

PORRA'CEOUS, adj. Fr. porrace ; Latin porraceous. Greenish.

POR'RET, n. s. Lat. porrum. A scallion.

It is not an easy problem to resolve why garlick. molys and porrcts have white roots, deep green leaves, and black seeds. Browne.

POR'RIDGE, n. s. \ More properly por-

POR'RINGER, n. s. trage; barb. Lat. por- ratu, from porrum a fcek. Food made by

boiling meat in water; broth : a vessel in which broth is eaten.

PORSENNA, a king of Etruria, contemporary with Tarquin II. king of Rome, whom he en- deavoured to restore after his banishment, and fought against the Roman republicans at firs; with such success that he laid siege to Rome, but the courage of Codes and Scaevola obliged him to retire. See ROME, and MUTIUS.

PORSON (Richard), a late eminent Greek scholar, was born at East Ruston, in Norfolk, on Christmas-day, 1759. His father was in the humble condition of a parish clerk; but he was a man of great natural vigor of mind. To his father's care and direction in the commencement of his education, and particularly to his mode of cultivating the faculty of memory, this emi- nent linguist owed many of the high attainments which he afterwards made. By his father's aid he made a considerable progress in writing and mathematical calculations before he had com- pleted his ninth year, and from that period till he was twelve he was placed under the village schoolmaster, of the name of Summers. Person derived his first instruction in classical learning from the rector of the parish, Mr. Hewitt. When he had passed the age of fourteen it was thought necessary to send him to a public school ; and the means were chiefly supplied by the late Mr. Norris. In August 1774 he went, therefore, to Eton, with a temporary provision of £80 a year. He was from thence removed to Trinity College, Cambridge, in the end of 1777. For a time he devoted himself to the study of mathematics ; but he shortly after devoted himself entirely to classical literature. In 1781 he was elected by the vice-chancellor, the five regius professors, and the public orator, to a Craven scholarship. In 1782 he obtained a gold medal for his classi- cal proficiency ; and when he took his bachelor's degree he stood in the list of senior optimes. He was soon after elected a fellow of Trinity Col- lege, and took his master's degree in 1785. By the statutes he was obliged, in seven years after, either to take orders, and proceed bachelor of divinity, or to lose his fellowship. Having un-

fortunately imbibed Socinian opinions, he camo to the honourable resolution, in 1791, of resign- ing. The college and university have been much blamed for driving from their bosom such a man, but without reason : the statutes leave no alter- native. He was, however, recalled in 1792, in the most creditable manner, to succeed W. Cooke, M. A. of King's College, as Greek pro- fessor. In 1795 he married Mrs. Lunan, a sister of Mr. Perry, editor of the Morning Chronicle, to which paper Person was a frequent contri- butor. He was afterwards appointed principal librarian of the London/Institution, and resided chiefly at their house in the city, where he died. In 1785 he added notes to a new edition of Xenophon's Anabasis, originally edited at Ox- ford by Ilutchinson. In 1790 he added Nota; breves ad Toupii Emendationes in Suidam, and Nots? in curas Novissimas, to a new Oxford edi- tion of Emendationes in Suidam et Hesychium, et alios Lexicographos Grecos. In the same year he published with his name, Letters to Mr. Archdeacon Travis, in answer to his defence of 3 B

the Three Heavenly Witnesses, &c., written cer- tainly with great spirit, learning, and wit, but perhaps with too little respect for his learned adversary. In 1793 he corrected the press of a new edition of Heyne's Virgil, wrote a short pre- face, and added a few conjectural criticisms, &c. Porson possessed a copy of Pauw's edition of ,/Eschylus, corrected throughout by himself. Having lent it to a friend, a surreptitious edition was published. Schultz printed another in Ger- many, adding, with just respect and admiration, the corrections and new readings of Porson. In 1797 he published the Hecuba of Euripides, in 1 vol. 8vo., with many emendations from MSS., notes, and a learned vindication.

A MS. copy of the Lexicon of Photius, patri- arch of Constantinople in 857, &c., belongs to Trinity College. On the transcription of this valuable remnant for the press from the original, which had become nearly obliterated, the pro- fessor bestowed the labor of ten months, which, after all, was lost by'an accidental fire at Merton, in- Surry. Fortunately he himself was absent, and had the original with him. He lost a play of ./ Eschylus, ready for the press, in the same fire , It is a singular proof of Person's industry, that he sat down, without a murmur, and made a new transcript of the patriarch's Lexicon, equal, it is said, in correctness, to a fac simile. In spring 1797 his wife died of a consumption. He had himself narrowly escaped this fatal dis- ease in his early youth ; and after his wife's death was incessantly afflicted with spasmodic asthma for nearly twelve

years, which doubtless deprived the world of many rich fruits of his learning. In September 1808, having expe- rienced for some time a general debility, he fell into an intermittent fever, which was succeeded by two successive strokes of apoplexy, on the 19th and 20th of that month. He languished after this till Sunday the 25th, when he expired with- out a struggle. His body was removed from the London Institution to Cambridge, where he was buried in the chapel of Trinity College, on Tuesday the 4th of October, with every mark of honor which the college could confer. His tracts and miscellaneous criticisms have been published by Mr. Kidd.

PORT, n. s. i Sax. porire ; Fr.

PORT'AGE, tporte; Lat. porta.

POR'TAL, i A gate : the aper-

PORTCUL'LIS, ». s. & v. a. 3ture of a ship at which a gun is put out : portage is an obsolete word for port-hole : portal, a gate or gate-way : portcullis, a military defence of a gate.

Though I should run To those disclosing portah of the sun ; And walk his way, until his horses steep Their fiery locks in the Iberian deep. Sandys.

Over it a fair portcullis hong, Which to the gate directly did incline, With comely compass and compacture strong, Neither unseemly short, nor yet exceeding long.

PORT', n. s. & v. a.- PORT'AGE, n. s. PORT'ANCE, PORT'LY, adj. PORT'LINESS, n. s.

Fr. portte ; Lat. porto. Carriage ; air ; mien ;

. manner ; bearing ; ex- ternal appearance : to

' carry in form : portage

is the price of carriage : portly is, grand or great of mien : portliness and portance corrcsoonding.

In that proud porC, which her so goodly graceth, Whiles her fair face she rears up to the sky,

And to the ground her eyelids low embraced^ Most godly temperature ye may descry. Spenser.

There steppeth forth a goodly lady, That seemed to be a woman of great worth, And by her stately portance born of heavenly birth.

Id.

Rudely thou wrong'st my dear heart's desire, In finding fault with her too portly pride. Id.

Such pride his praise, such portliness his honour, That boldness innocence bears in her eyes ;

And her fair countenance like a goodly banner Spreads in defiance of all enemies. Id.

Think you much to pay two thousand crowns, And bear the name and port of gentleman ?

Shakspeare. Your loves,

Thinking upon his services, took from you The apprehension of his present portance, Which gibingly, ungravely, he did fashion. Id.

A goodly, portly man, and a corpulent j of a cheer- ful look, a pleasing eye, and a most noble carriage.

Id.

Our house little deserves The scourge of greatness to be used on it ; And that same greatness too, which our own hands Have helped to make so portly. Id.

When substantialness combineth with delightful- ness, fulness with fineness, seemliness with portliness, and currentness with stayedness, how can the lan- guage sound other than most full of sweetness 7

Camden's Remains.

A PORT, harbour, or haven, is formed either by nature or art to receive and shelter shipping from the storms and waves of the open sea. Ar- tificial ports are those which are either formed by throwing a strong mound or rampire across the harbour's mouth to some island or rock, or erecting two long barriers, which stretch from the land on each side like arms, or the horns of a crescent, and nearly enclose the haven ; tne former of these are called mole-heads, and the latter piers.

PORT is also a name given on some occasions to the larboard or left side of the ship, as in the following instances. Thus it is said, the ship heels to port, i. e stoops or inclines to the larboard side. Top the yard to port ! the order to make the larboard extremity of a yard higher than the other. Port the

helm ! the order to put the helm over to the larboard side of the vessel. In all these senses this phrase appears intended to prevent any mistakes happening from the similarity of sounds in the words starboard and larboard, particularly when they relate to the helm, where a misapprehension -might be attended with very dangerous consequences.

PORT is also a strong wine brought from Porto or Oporto.

PORT, in music, or PORT OF THE Voicr, the faculty or habit of making the shakes, passages, and diminution, in which the beauty of a song or piece of music consists.

PORT, in ships of war, the embrasure or open- ing in the side 'of a ship of war, wherein the

artillery is ranged in battery upon the decks above and below. The ports are formed of a sufficient extent to point and fire the cannon, without in- juring the ship's side by the recoil; and, as it serves no end to enlarge them beyond what is necessary for that purpose, the shipwrights have established certain dimensions by which they are cut in proportion to the size of the cannon. The ports are shut in at sea by a sort of hanging doors called the port lids; which are fastened by hinges to their upper edges, so as to let down when the cannon are drawn into the ship. Thus the water is prevented from entering the lower deck in a turbulent sea. The lower and upper edges of the ports are always parallel to the decks, so that the guns, when levelled in their carriages, are all equally high above the lower extremity of the ports, which is called the port- cells.

PORT, in geography, makes part of the names, both distinct and compounded, of a great number of bays, harbours, and sea port towns, in various places of the world. The principal of these, not elsewhere described by us, will be found below. PORT DALRYMPLE is a harbour or estuary on the north coast of Van Diemen's Land, into which the Tamar discharges itself, after receiving the North and South Esk rivers. At the union of the latter the Tamar is navigable by vessels of 150 tons. Kangaroos are found in numbers ; ducks of various kinds, and black swans. A British settlement was sent out from Port Jack- son, and established at Port Dalrym pie, in 1804. An animal described as a species of striped hyaena, but most probably of the opossum genus, is found here. It is said to have a remarkably !arge mouth, and to be very voracious.

PORT DISCOVERY is a harbour on the north- west coast of America, in the gulf of Georgia, a little to the east of New Dungeness. It received its name from the ship commanded by Van- couver, in May 1792, who found here, in thirty- four fathoms water, a muddy bottom, about a quarter of a mile from the shore. The entrance of the harbour is formed by low projecting points, extending on each side, from high woodland cliffs. A stream of water, near the ship's station, ap- peared to have its source at some distance. A few shrubs, that seemed to thrive luxuriantly, such as roses, sweetbriar, gooseberries, raspber- ries, currants, and other smaller bushes, were the vegetable productions. A few of the natives, in canoes, brought with them for sale some fish and venison. In their persons, canoes, and arms, these people resembled the inhabitants of Nootka, but were more cleanly. They wore ornaments in their ears ; and some of them understood a few words of the Nootka language. They were clothed in deer and bear skins, well wrought ; and, what was felt extraordinary, offered for sale, for some copper, two children, each about six or seven years of age. The entrance of the port is in long. 237° 20′ E., lat. 48° 7′ N.

PORT EGMONT is a large and convenient har- bour on the north-west coast of Falkland's Is- lands, discovered by Byron in the year 1765, and so named in honor of lord Egmont, then first lord of the admiralty. The mouth of it is «mth~east, twenty-one miles from a low rocky

island, which is a good sea-mark. Within th.» island, at the distance of about two miles from the shore, are between seventeen and eighteen fathoms water; and, about nine miles to the west of the harbour, there is a remarkable white sandy beach, off which a ship may anchor. The whole navy of England, it is said, might rida here in perfect security ; and here is abundance of fresh water, but wood is wanting. Commo dore Byron took possession of the port, and all the islands, in 1765, in the name of George ill. king o£ Great Britain. Long. 55° W., lat. 51′ 27′ S.

PORT ETCHES, a bay or harbour on the south- west of Hinchinbrook Island, where the Rus- sians have a factory, at the entrance of Prince William's Sound. At first, by way of security, a galliot of about seventy tons burden was drawn ashore, and formed nearly one side of a square, within which houses were built : on the decks were some swivels and carriage-guns well mounted. Long. 213° 56′ E., lat. 60° 21′ N.

PORT FRANCAIS, a bay or harbour on the west coast of North America, discovered by La Pe- rouse, in the year 1 786. ' The sea,' says he, ' rises here seven feet and a half at full and change of the moon ; it is high-water at one o'clock. The sea breezes, or perhaps other causes, act so powerfully upon the current of the channel, that I have seen the flood come in there like the most rapid river; and in other circumstances, though at the same

periods of the moon, it may be stemmed by a boat. I have, in my different excursions, found the high-water mark to be fifteen feet above the surface of the sea. These tides are probably incident to the bad season. When the winds blow with violence from the southward, the channel must be impracticable, and at all times the currents render the entrance difficult. The going out of it also requires a combination of circumstances, which may retard the departure of a vessel many weeks. There is no getting under weigh, but at the top of high-water ; the breeze from the west to the north-west does not often rise till towards eleven o'clock, which does not permit the taking advan- tage of the morning tide ; finally, the easterly winds, which are contrary, appear to me to be more frequent than those from the west ; and the vast height of the surrounding mountains never permits the land breezes, or those from the north, to penetrate into the road. As this port possesses great advantages, I thought it a duty incumbent on me to make its inconveniences also known. The climate of this coast seemed to me to be infinitely milder than that of Hud son's Bay, in the same degree of latitude. "W measured pines of six feet diameter, and 14. feet high. Vegetation is also very vigorous during three or four months of the year, should not be in the least surprised to see Rus- sian corn, and a great many common plants, thrive there exceedingly well. We found great abundance of celery, round-leaved sorrel, lupines, the wild-pea, yarrow, and endive. The woods abound in gooseberries, raspberries, and straw- berries; clusters of elder-trees, the dwarf-willow, different species of briar, which grow in the shade, the gum-poplar tree, the poplar, the sal-

low, the horn-beam ; and, finally, superb pines, fit for the masts of our largest ships. Not any of the vegetable productions of this country are unknown in Europe. The rivers are filled with trout, salmon, and other fish. In the woods our hunters met with bears, martins, and squirrels; and the Indians sold us skins of the brown and the black bear, of the Canadian lynx, ermine, martin, little gray squirrel, beaver, Canadian marmot, or monax, and the red fox. We saw tanned skins of the original or elk, and a horn of i wild goat; but the commonest and most /recious peltry is that of the sea otter, wolf, and bear. The sides of the harbour are formed by secondary mountains, whose elevation is from 800 to 900 toises. They are covered with pines and verdure, and the snow is only seen on their summits. In the valleys are found specimens of every thing which forms the

mass of the moun- tains, ochre, coppery pyrites, garnets, brittle, but very large and perfectly crystallised, schorle in crystal, granite, schisti, hornstone, very pure quartz, mica, plumbago, and coals. Some of these substances prove that these mountains con- tain copper and iron ores, but we saw not the least trace of any other metals. The inhabitants appeared to be similar in their habits to those generally found on the coast of North America. They were cruel, deceitful, addicted to quarrelling, and in their domestic habits filthy to an extreme. Long. 137° 10′ W., lat. 58° 37′ N.

PORT FREDERICK, a harbour on the north side of King George the Third's archipelago. Long. 224° 40′ E., lat. 58° 12′ N.

PORT JACKSON, a harbour and English settle- ment on the east coast of New Holland. Into the entrance, between two ship heads, distant from each other one mile and three-quarters, ships may run safely; there is nothing in the way. It may be entered and departed from in all winds. Within, the port divides into two branches, one stretching sixteen miles west, and the other seven miles north-west, both containing numerous creeks, on one of which the town of Sydney, the chief of Botany Bay, is situated. See HOLLAND, NEW. Long, of Cattle Point 151° 11′ 49 E., lat. 33° 51′ 45″ S.*

PORT Louis, called also, during the revolution, Port de la Liberte", a sea-port of France, in the department of the Morbihan, on the extremity of a peninsula, at the mouth of the river Blavet, is strongly fortified, and defended by a citadel built on an insulated rock on the north-west of the town. It was founded by Louis XIII., and is supposed to stand near the site of the ancient Blavia. Population 2700, whose chief traffic is in the fisheries. Four miles south by east of L'Orient.

PORT Louis, the capital of Mauritius, or the Isle of France, in the Indian Sea. It is situated in a low and flat valley, on the west of the island, surrounded by mountains, and covered with .rocks and stones, which render the roads rough and irregular ; but the streets have been of late carefully levelled. Excellent water is sup- plied from a river about a league off, whence a canal leads if to the foot of a high mountain at the western extremity of the place. Here boats come and fill their barrels from a large reservoir.

The houses of the town are built chiefly of wood, on a foundation of rough stone and lime. The quays are commodious; and there is a great basin for the purpose of repairing vessels. A guard-house is erected on the summit of the mountain at the western extremity of the town, where, in the night-time, a light is kindled. In 1817 Port Louis was almost entirely burnt to the ground. See the article MAURITIUS. Long. 57° 32′ E., lat. 20° 10′ S.

PORT MACQUARRIE, an inlet on the east coast of New Holland, into which the River Hastings falls. It was surveyed by Mr. Oxley in 18 18, who gave it its present appellation. Long. 152° 53′ 54″ E., lat. 31° 25′ 45″ S.

PORT MAHON, a sea-port of Minorca, and the chief place of a district, is surrounded by the sea, east, south, and west. It is built chiefly on rocks, hollowed out beneath by the water, which, in the course of time, will render the situation dangerous. The houses are in general good; but the streets are uneven, rough, and badly paved. The place d'armes is square, large, and handsome : on one side are barracks for 1200 men. The alameyda, an alley of trees, is the only pub- lic walk. This town was founded by Mago the Carthaginian, and afterwards surrounded with a Moorish wall ; but of this there are no remains except a gate. The harbour, at its entrance, has some shoals, but in the inside it is one of the safest and most convenient in the Mediterranean. On one side is a dock-yard, and on the other a natural mole. It contains four small islands, on one of which there is a neat hospital, built by the English. On taking it, in 1798, they erected a number of telegraphs, and planned additional fortifications here; but the Spaniards, on re- covering it in 1802, demolished almost all that had been done. Long. 4° 5′ E., lat. 36° 17′ N.

PORT MULGRAVE, or ADMIRALTY BAY, is a harbour on the west coast of North America, formed by islands on the east side of Behring's Bay, near the entrance ; it was so named by cap- tain Dixon, in honor of lord Mulgrave ; though visited before by Chitrow, master of the Russian fleet, under Behring. Here Dixon saw some of the natives, whose wretched hovels were a com- plete picture of filth and idleness. Long. 220° 35′ E., lat. 59° 34′ N.

PORT ORCHARD, a bay or harbour within Ad- miralty Inlet, so called from a gentleman in Vancouver's vessel, who discovered it in the year 1792. Long. 237° 36′ E., lat. 47° 39′ N.

PORT AU PRINCE, a sea-port on the west coast of the island of Hispaniola. The environs pro- duce cotton, indigo, sugar, and coffee. In 1770 great part of this town was destroyed by an earthquake : in 1791 it was set on fire, and creat part of it burned down ; and, in the year 1794, it was taken by the English. Except in time of war it was formerly the capital of the French part of Hispaniola. In 1790 it consisted of about 600 houses, and contained 2754 white in- habitants. The situation is marshy, and the cli- mate unhealthy : both the hills, however, which command the town and harbour, and the valleys, are abundantly fertile. To the east is the plain of Cul de Sac, extending from thirty to forty miles in length, by nine in breadth ; and con-

taining 150 sugar plantations, most of which are capable of being watered, in times of drought, by canals, admirably contrived. Long. 73° 10′ W., lat. 18° 35′ N.

PORT RESOLUTION, a harbour north of the most easterly point of the Island of Tanna, one of the New Hebrides, discovered by captain Cook in 1774. The depth of water here is from six to three fathoms, and the bottom is sand and mud. No place can be more convenient for taking in wood and water; but a shoal of sand and rocks lying on the east side makes it narrow. Long. 169° 45′ E., lat. 19° 32′ S.

PORT ROYAL, a sea-port of Jamaica, situated on a narrow neck of land on the south side of the island. Here 1000 sail of ships could anchor with convenience ; and the water was so deep at the quay that vessels of the greatest burden could lay their broadsides to the wharfs, and load or unload with little trouble. It contained 2000 houses, handsomely built ; and few places in the world exceeded it for trade, wealth, and dissoluteness of manners — till the 9th of June 1692, when a dreadful earthquake, which seemed to shake the foundations of the island, over- whelmed Port Royal, and buried nine-tenths of it eight fathoms under water: about ten years after, the town having been partially rebuilt, it was laid in ashes by a terrible fire. Still the ex- traordinary convenience of the harbour tempted them to rebuild; but, in the year 1722, a most dreadful hurricane reduced this place a third time to a heap of rubbish. The custom-house and public offices were now removed, and no market suffered to be held here for the future. It is therefore reduced to two or three streets, a few lanes, and about 200 houses. It contains, however, the royal navy-yard, navy hospital, and barracks for a regiment of soldiers. The fortifi- cations are also kept in excellent order. Twenty miles south-west of Kingston. •

PORT ROYAL, a post town of Caroline county, Virginia, on the Rappahannock ; twenty miles south-east of Fredericksburgh, west, eighty. It was once a place of considerable trade, but is now in a state of decay. Rappahannock Academy is situated about two miles west of the town. It has some funds, and a respectable library. Also a post- town of Montgomery county, Tennessee, at the union of the Sulphur Fork and Red River; twelve miles east of Clarksville.

PORT ROYAL ISLAND, an island in Port Royal Entrance, near the coast of

South Carolina, about twelve miles long, and five wide. Beau- fort is the principal town. Lat. 32° 12′ N.

PORT ST. JUAN, a bay or harbour on the south-west coast of the Island of Quadra and Vancouver, at the entrance of the straits of Juan de Fuca. Long. 235° 52′ E., lat. 48° 32′ N.

PORT ST. JULIAN, a harbour of the Atlantic, on the east coast of Patagonia, discovered by Magellan in April 1520. Here a mutiny arose, which was quelled by the resolution of the ad- miral, and the authors punished. He staid here two months, finding plenty of fish, wood, and wate . Here were first seen the large inhabi- tants, named Patagonians by this navigator. Long. 68° 44′ W., lat. 49° 10′ S.

PORT SANDWICH, a harbour of the Island of

Mallicollo, in the South Pacific. Captain Cook says, the night before we came out of Port Sandwich two reddish fish, about the size of a large bream, and not unlike them, were caught with hook and line. On these fish most of the officers, and some of the petty officers, dined the next day. The night following, every one who had eaten of them was seized with violent pains in the head and bones, attended with a scorching heat all over the skin, and numbness in the joints. There remained no doubt that this was occasioned by the fish being of a poisonous na- ture, and having communicated its bad effects to all who partook of them, even to the hogs and dogs. One of the former died ; and, not long after, one of the latter shared the same fate, in about sixteen hours. It was a week or ten days before all the gentlemen recovered. Long. 167°' 57′ E., lat. 16° 25′ S.

PORT TOBACCO, a post-town and capital of Charles county, Maryland, on a small river of the same name, which runs into the Potomac a little below the town; forty-five miles S.S. W. of Annapolis, west, thirty-four. It contains an episcopal church, a warehouse for the inspection of tobacco, &c. In the vicinity are the cele- brated cold waters of Mount Misery.

PORTA (John Baptist), a learned Italian ,. bom at Naples, in 1445. He held a kind ot literary assembly at his house ; but the court or Rome, suspecting their motives, prohibited the meetings. He wrote many learned works, par- ticularly one on Physiognomy, and some tracts on Optics ; and he discovered the Camera Ob- scura. See OPTICS, Index. He died in 1519.

PORTA (Joseph), an eminent painter, born at Castel Nuova, in 1535. He studied under Salviati, and his works were much esteemed. He died in 1585.

PORTA, or VENA PORTA, in anatomy, a large vein distributed through the

liver, in the manner of an artery. See ANATOMY. PORTABLE, adj. Lat. portabilis. Manage- able by the hand ; such as may be borne along with one.

How light and portable my pains seem now, When that which makes me bend makes the king bow. Shakxpeare.

All these are portable

With other graces weighed. Id. Macbeth.

He had reason to do, gaining thereby the charge of portage.

The pleasure of the religious man is an easy and portable pleasure, such an one as he carries about in his bosom, without alarming the eye or envy of the world. South.

PORTAGE, a term used in North America to signify a carrying place over- land between navi- gable rivers or navigable parts of the same rivor. The name is also given to towns in the vicinity of the carrying places.

PORTˆ ROMAN, in ancient geography, gates of Rome ; according to Pliny, Romulus left but three, or at most four, gates of Rome ; afterwards, on enlarging the pomoeria, or com- pass of the city, th«>y amounted to thirty-seven. PORTAL, in architecture, a little gate where there are two gates of a different size ; also a little square corner of a room cut off from the rest by the wainscot, and forming a short pas-*

sage into the i‘00’.n. The same name is also sometimes given to a kind of arch of joiners’ work before a door.

PORT’ASS, n. s. Sometimes portuis ; and by Chaucer, porthose. A breviary ; a prayer- book.

In his hand his portesse still he hare, That much was worn, but therein little red; For of devotion he had little care. Speiiser.

An old priest always read in his portass murnpsi- mus domine for sumpsimus ; whereof when he was admonished, he said that he now had used mumpsi- 3ius thirty years, and would not leave his old rnumpsimus lor their new sumpsimus. Camden.

PORTATE, or a CROSS PORTATE, in heral- dry, a cross which does not stand upright, as crosses generally do, but lies across the escut- cheon in bend, as if it were carried on a man's shoulder.

PORT-CRAYON, a pencil-case, which is usually four or five inches long, and contrived so as that the pencil may slide up and down. Its inside is round, and its outside is sometimes filed into eight sides or faces, on which are drawn the sector lines; sometimes it is made round both without side and within, and has its length divided into inches and parts of inches.

PORTCULLIS, or PORTCULLICE, in fortifica- tions, is an assemblage of several lar-re pieces of wood, joined across one another likefti harrow, and each pointed with iron at the bottom. They are sometimes hung over the gateway of old fortified towns, ready to let down in case of surprise, when the gates could not be shut.

PORTE, a title given, or rather taken by the grand signior. The origin of this title is said to be derived from the principal port or gate of Constantinople, which is so magnificent that the Turks suppose it to have no equal in the world.

PORTEND', v. a. -j Latin, portendo. To PORTEN'TION, n. s. f foretoken ; foreshow as PORTE NJ', f omens: a portent is an

PORTEM'TOUS, adj. 3 ill omen ; prodigy: por- tentous, foretokening ill.

As many as remained, he earnestly exhorted to prevent portended calamities. Hooker.

Doth this churlish superscription Portend some alteration in good-will ? Kltahspeare.

O, what' portents are these? Some heavy business hath my lord in hand, And I must know it. Id. licnry IV.

They are portentous things

Unto the climate that they point at. Shaktpeare. A. moist and a cool summer purtendelh a hard winter. Bacon.

True opener of mine eyes, Much better seems this vision, and more hope Of peaceful days portends, than those two past.

Milton. O1 erlay*

With this portentous bridge the dark abyss. Id. Far be it from you to be

dismal and direful comets, that pen-tend nothing but horror and death to the «arth. Bp. Hall.

Every unwonted meteor is portentous, and some divine prognostic. Glanville.

y though the red comets do carry the portensions i •! M;irs, the brightly white should be of the influence ‘ Krmrr,-.

My loss by dire portents the god foretold ; Yon riven oak, the fairest of the green. Dryden,

The ruin of the state in the destruction of the church is not only portended as its sign ; but also inferred from it as its cause. South.

Let us look upon them as so many prodigious ex- ceptions from our common nature, as so many por- tentous animals, like the strange unnatural productions of Africa. South.

The petticoat will shrink at your first coming to town; a touch of your pen will make it contract it- self, and by that means oblige several who are terrified or astonished at this portentous novelty. Addison.

PORTER, n. s.- Fr. portier; Lat j,orta, a

POR’TERAGE, (gate. One that has the

*POR’TRESS. * charge of a gate ; one who*

waits to receive, or who carries messages : por- terage is money paid for carriage : portress, the feminine of porter.

PORTER, Anna Maria, a popular novelist, born in England, but descended from an Irish family that acted a conspicuous part in the con- test between James II. and the Prince of Orange. The subject of this brief memoir evinced an unusual precocity of genius. At the age of thirteen years she commenced her subsequently brilliant career of authorship by the publication of her Artless Tales. These stories betrayed many marks of a juvenile and unpractised pen, but accompanied by as ‘many indications of the fer- tility of invention and fluency of style, which imparted so great a charm to her more matured productions. Her next work, Walsh Colville, is founded on facts, and is interwoven with cir- cumstances in which the fair Narrator felt a per- sonal interest. Amongst her after works are, Octavia ; TheHungarianBrothers ; Don Sebastian, or the House of Braganza, an Historical Ro- mance. The last work alone is sufficient to place its author amongst the first class of British novelists. To these are to be added, The

Re- cluse of Norway, The Village of Mariadorpt, The Fast of St. Magdalen, ballads, romances, &c. Her style in general is graceful, fluent, admirably adapted to the immediate purpose ; her narrative smooth, inartificial, spirited ; her didactic lessons abounding with an impressive and irresistible effect. In private life she was affable, unaffected, and possessed of extraordi- nary conversational powers. She died in 1832.

PORTER, a kind of malt liquor much drunk in London, which principally differs from ale and pale beer in its being made with high dried malt. See ALE and BREWING.

PORTEUS (Dr. Beilby), bishop of London, was a native of Yorkshire, where he was born about the year 1731 ; but he himself was accus- tomed to trace his descent from a Scottish fa- mily. His father, a tradesman of but little emi- nence, resided for many years in the north or" England ; and it was at the grammar-school at llipon, under the care of the Rev. John Hyde, that young Porteus commenced his classical career. By that gentleman he was qualified for the university, having determined on the church as a profession; and accordingly, with a zeal worthy of his future fortune, but an ambition that did not extend beyond a rural cure, he was entered at Christ's College, Cambridge. Mr, Porteus obtained nis first degree of B. A. iu

1752, when he was only seventeen or eighteen years of age. The same year he gained one of the two gold medals, held out as a remuneration to those who should produce the best classical essays. In 1755 the degree of M. A. was con- ferred upon this respectable student, who now began to behold the dawn of his good fortune ; for he was elected a fellow by his college, and nearly at the same time appointed one of the preachers at Whitehall chapel. It was not, however, until 1759 that Mr. Porteus was known beyond the limits of his university, for it was then that he obtained the Seatonian prize, for ihe best composition on Death, which he pub- ished soon after, in conformity with the will of ihe founder. In this poem is the excellent pas- sage on war which has been so frequently quoted.

One murder makes a villain,

Millions a hero ; princes are privileged

To kill, and numbers sanctify the crime.

Ah ! why will kings forget that they are men ?

And men that they are brethren ? Why delight

In human sacrifice? Why burst the ties

Of nature, that should knit their souls together

In one soft bond of amity and love 1

They yet still breathe destruction, still go on,

Inhumanly ingenious to find out

New pains for life — new terrors for the grave !

Artificers of death ! Still monarchs dream

Of universal empire growing up

From universal rum. Blast the design,

Great God of hosts ! nor let thy creatures fall

Unpitied victims at ambition's shrine !

In 1761 his pen was occupied in controversial divinity. A little before this period appeared a work, entitled The History of the Man after God's own Heart ; in which the many glaring defects in the character of David were art- fully exposed and heightened. Mr. Porteus undertook to vindicate the Scripture account of the royal psalmist ; he accordingly preached a sermon, November 29th, before the univer- sity of Cambridge, which he published under the title of The Character of David, King of Israel, impartially stated. It is perhaps to this little work that his future fortunes are to be attributed ; for Dr. Seeker, who, in 1758, had been translated from the see of Oxford to the archiepiscopal throne of Canterbury, having read this discourse, was induced to take Mr. P. under his immediate patronage. He accordingly was pleased immediately to appoint him one of his domestic chaplains, and presented him with a living in Kent, and another in Middlesex. A orebendal stall in Peterboro' soon followed : in return our divine on the death of the archbishop in 1768 edited and published his sermons and life. Previously to this event Mr. P., in 1765, married Miss Hodgson, a lady of some fortune, whose father had resided at Matlock in Derby- shire. The ceremony was performed there by his friend the primate. Two years after this, the degree of D. D. was conferred on him by his own university, and still greater honors now awaited him. The queen, hearing of Dr. Por- teus's reputation,

and being apprised of the ex- cellence of his private character, appointed him her pnvate caap.aivi , and such a high opinion uid her majesty entertain of his piety and en-

dowments, that she was determined to complete what Seeker had begun. Accordingly, in Janu- ary 1777, on the translation of Dr. Markham to the archbishopric of York, the royal interposi- tion was employed in favor of our divine, who was immediately raised to the see of Chester. In 1783 he produced a volume of his own ser- mons on several subjects; it was followed by two more, and these have since been considered as models. In 1787 a considerable change took place in his life, and the scene of his labors was not a little extended ; for, on the death of the amiable and learned bishop Lowth, Dr. Porteus was translated to the see of London. This event gave entire satisfaction to every description of Christians in the metropolis. In the year 1792 he commenced a series of very popular lectures, at St. James's church, Westminster. They were delivered every Friday, to crowded and genteel audiences, and had for their object to demonstrate the truth of the gospel history, and the divinity of Christ's mission. It was on this occasion that, towards the latter end of his life, he acquired the character of an accomplish- ed orator; and seems fully persuaded himself of the truth of those doctrines so earnestly recom- mended by him. This good prelate died early in 1809.

PORT-FIRE, a composition for setting fire to powder, &c. Port-fires are frequently used by artillery people in preference to matches ; and they are distinguished into wet and dry port-fires. The composition of the former is salt- petre four parts, sulphur one, and mealed pow- der four. When these materials are thoroughly mixed and sifted, the whole is to be moistened with a little linseed oil, and rubbed between the hands till all the oil is imbibed by the composi- tion. The preparation for dry port-fires is salt-petre four parts, sulphur one, mealed powder two, and antimony one. These compositions are driven into small paper cases, to be used when necessary.

PORTGREVE, or PORTGRAVE, was anciently the principal magistrate in ports and other mari- time towns. The word is formed from the Saxon port, a port or town ; and geref, a governor. It is sometimes also written port-reve. Camden observes that the chief magistrate of London was anciently called port-greve ; instead of whom Richard I. ordained two bailiffs ; and soon after- wards king John granted them a mayor for their yearly magistrates.

PORTICI, a town and palace of Nap.es, in Lavora ; four miles from the capital, charmingly situated on the sea-side, near mount Vesuvius. It is enriched with a vast number of fine sta- tues, and other remains of

antiquity, taken out of the ruins of Herculaneum, over which it stands. The museum consists of sixteen rooms, in which the different articles are arranged with great taste. See POMPEII and NAPLES.

PORTICO, n. s. Fr. portique ; Ital. portico, Lat. porticw. A covered walk ; a piazza.

The rich their wealth bestow On some expensive airy portico ; Where safe from showers t bey may be born in »tate And free from tempests foi fair weather wait.

Drydfn.

A PORTICO, in architecture, is a kind of gal- lery on the ground ; or a piazza encompassed with arches supported by columns, where people walk under covert. The roof is usually vaulted, sometimes flat. The ancients called it lacunar. Though the word portico be derived from porta, a gate or door, yet it is applied to any disposi- tion of columns which form a gallery, without any immediate relation to doors or gates. The most celebrated porticoes of antiquity were those of Solomon's temple, which formed the atrium or court, and encompassed the sanctuary ; that of Athens, built for the people to divert them- selves in, and wherein the philosophers held their disputes and conversations (see PORCH) ; and that of Pompey at Rome, raised merely for mag- nificence, consisting of several rows of columns supporting a platform of vast extent ; a draught whereof Serlio gives us in his antique buildings. Among the modern porticoes, the most cele- brated is the piazza of St. Peter of the Vatican. That of Covent Garden, London, the work of Inigo Jones, is also much admired.

PORTION, n. s. & v.a. Fr. portion ; Lat. portio. A part ; assigned part ; child's part or inheritance.

These are parts of his ways, but how little a portion is heard of him ! Job xxvi. 14.

Here's their prison ordained and portion set.

Milton.

Should you no honey vow to taste, But what the master-bees have placed In

compass of their cells, how small A portion to your share would fall ! Waller.

Of words they seldom know more than the gram- matical construction, unless they are born with a poetical genius, which is a rare portion among them.

Dry den.

As soon as any good appears to make a part of their portion of happiness, they begin to desire it.

Locke.

Those great portions or fragments fell into the abyss ; some in one posture and some in another.

Burnet. The gods who portion out

The lots of princes as of private men,

Have put a bar between his hopes and empire.

Rowe.

Leave to thy children tumult, strife, and war, Portions of toil, and legacies of care. Prior.

When he considers the temptations of poverty and riches, and how fatally it will affect his happiness to be overcome by them, he will join with Agur in pe- titioning God for the safer portion of a moderate con- venience. Rogers.

Argos the seat of sovereign rule I chose, Where my Ulysses and his race might reign, And portion to his tribes the wide domain. Pope.

Him portioned maids, apprenticed orphans blest, The young who labour and the old who rest. Id.

One or two faults are easily to be remedied with a very small portion of abilities. Swift.

Take, Madam, the reward of all your prayers, Where hermits and where bramins meet with theirs ; Your portimi is with them. Nay, never frown, But, if you please, some fathoms lower down.

Cowper.

PORTLAND, a post-town and port of entry, Cumberland county, Maine, United States ; fifty- four miles N.N.E. of Portsmouth, and 1 15 N.N.E. of Boston. It is a very pleasant town, finely situated on a peninsula in Casco Bay. It is the

shire town of the county ; and, in point of popu- lation, wealth, and commerce, the most con- siderable in Maine. It contains a very elegant court-house, an alms-house, a market-house, a bank, an insurance-office, an academy, a young ladies' boarding-school, alibrary of 1300 volumes, and eight houses of public worship, three for Congregationalists, two for Baptists, one for Episcopalians, one for Methodists, and one for Friends. The town is generally very well built, a large proportion of the public and private buildings are of brick, and many of them are elegant.

The harbour of Portland is one of the best on the continent. It is safe and capacious, easy of access, and is never frozen over, except for a few days during the severity of winter. On a head- land, in Cape Elizabeth, near the entrance of the harbour, there is a stone light-house seventy feet high, erected in 1790. The town is defended by Fort Preble and Fort Scammel, two fine forts on opposite sides of the ship channel, one mile and a half from the light-house, both mounting thirty- five pieces of cannon. At the east end of the town is Fort Burrows, in the rear of which are some other military works. On the highest emi- nence of Mount Joy's neck, on the north-east side of the town, stands an observatory, about seventy feet high, which affords an extensive, variegated, and beautiful view of the town, the harbour, the islands, and the interior country.

The situation of Portland, with regard to an extensive and growing back country, is such as to insure to it extensive business and high com- mercial importance. The exports consist chiefly of lumber, beef, fish, butter, &c. The shipping is principally employed in the fisheries, coasting business, and the trade to the West Indies, Rus- sia, and, of late, to the East Indies. The total amount of shipping belonging to this port, on the 1st of June 1818, was 27,770 tons.— Portland was formerly included in Falmouth; and, in 1775, the principal part of the town was burnt by the British. It was incorporated by its present name in 1786.

PORTLAND ISLE, an island, or rather pen- insula, of England, in the county of Dorset, op- posite Weymouth. Connected with the main- land by a singular ridge of pebbles, called the Chesil Bank, which extends seventeen miles west- ward from the island, along the coast ; the island itself does not extend more than four miles and a half in length, and two in breadth. It consists of one continued mass of freestone, forming the famous Portland stone, of which such quantities have been exported to the metropolis and other parts of England. The rocks form a barrier round the island, except

at the landing place on the north, where Portland castle is situated. It was built by Henry VIII., is of great strength, and completely commands Weymouth road. During the great rebellion it was garrisoned for the parliament, but taken, through a stratagem, by the king's troops. The island constitutes only one parish, and has but one church, standing near the sea; it contains, however, several con- siderable hamlets. The inhabitants are chiefly employed in agriculture, and in the quarries. The arable lands produce all sorts of grain, and

about 3000 sheep are kept. The corn is of ex- cellent quality ; and the sheep have been long noted for their delicate flavor, and elegant though small appearance. The principal freestone quarries are at Kingston. There is a pier, where upwards of 6000 tons of stone are annually shipped. The freestone rocks are intersected by strata of black and red sclustus, and of a species called sugar-candy stone ; they are also inter- spersed with petrified shells. Two light-houses have been erected on the island, one in 1716, and the other in 1789 : the latter is a circular conical structure, sixty feet high. The isle of Portland has been the scene of many important transac- tions in the annals of England : it was fortified before the year 1142, with a castle, now a ruin, but was formerly of great extent.

PORTLAND ISLAND, an island in the South Pacific Ocean, near the east coast of New Zea- land. Captain Cook in 1773 left on this island some pigs, fowls, seeds, and roots, for cultivation. Long. 178° 12′ E., lat. 39° 25′ S. This is also the name of a cluster of islands in the Indian Ocean, west of New Hanover, so named by Car- teret in 1767. They are about six or seven in number ; very low, and extend seven miles, in a chain east and west. They are of dangerous access, being environed with reefs and sand- banks, and covered with trees. The north-east point of the most eastern isle is in long. 147° 18′ 45′ E., lat. 2° 36′ S.

PORTLAND VASE, a celebrated vase, long in possession of the Berberini family; but which was purchased for 1000 guineas by the duke of Portland, from whom it has derived its present name. Its height is about ten inches, and its diameter, where broadest, six. There are a variety of figures upon it of most exquisite workmanship, in bass relief of white opaque glass, raised on a ground of deep blue, which appears black exceptwhen held against the light. It appears to have been the work of many years, and there are antiquarians who date its produc- tion several centuries before the

Christian era ; since, as has been said, sculpture was declining in excellence in the time of Alexander the Great. Dr. Darwin supposes it to represent a part of the Eleusinian mysteries. In one compartment, three exquisite figures are placed on a ruined column, the capital of which is fallen, and lies at their feet among other disjointed stones : they sit under a tree on loose piles of stone. The middle figure is that of a female in a reclining and dying attitude, with an inverted torch in her left hand, the elbow of which supports her as she sinks, while the right hand is raised and thrown over her drooping head. The figure on her right hand is a man, and that on her left a woman, both supporting themselves on their urns, and apparently thinking intensely. Their backs are to the dying figure, towards whom, however, their faces are turned, although without their making one effort to assist her. On another compartment of the vase is a figure coming through a portal, and going down with extreme timidity into a darker region, where he is re- ceived by a beautiful female, who stretches forth i her hand to help him : between her knees is a large and playful serpent. She sits with her feet

towards an aged figure, who has one foot sunk into the earth, and the other raised on a column, with his chin resting on his hand. Above the female figure is a cupid preceding the first figure, and beckoning him to advance. This first figure holds a cloak or garment, which he seems anxious to bring with him, but which adheres to the side of the portal through which he has passed. In this compartment there are two trees, one of which bends over the female figure, and the other over the aged one. On the bottom of the vase there is another figure on a larger scale than that we have already mentioned, but not so well finished nor so elevated. This figure points with its finger to its mouth. The dress appears to be cumbersome and curious, and above is the foliage of a tree. On the head of the figure there is a Phrygian cap : it is not easy to say whether this figure be male or female. On the handles of the vase are represented two aged heads with the ears of a quadruped, and from the middle of the forehead rises a kind of tree without leaves. These latter are in all pro- bability mere ornaments, and have no connexion with the rest of the figures, or with the story re- presented on the vase.

PORTLANDIA, in botany, a genus of the monogynia order, pentandria class of plants; natural order, doubtful : COR. elevated and fun- nel-shaped ; the anthers are longitudinal : CAPS. pentagonal, and retuse at top; bilocular, and crowned with a pentaphyllous CAL. There are two species, viz. 1. P. grandiflora; and 2. P. hexandra. The former has been particularly described by Dr. Browne, who has also given a good figure of it. It has frequently flowered in the royal garden at Kew, and in Dr. Pitcairn's at Islington. The external bark is remarkably rough, furrowed, and thick ; it has no taste. The inner bark is very thin, and of a dark brown color. Its taste is bitter and astringent, and its virtues are the same as those

of the Jesuit's bark. Infused in spirits of wine with a little orange peel, it makes an excellent stomachic tincture.

PORTMANTEAU, n. s. Fr. portmanteau. A chest or bag in which clothes are carried.

I desired him to carry one of my portmanteaut ; but he laughed, and bid another do it. Spectator.

Your cunningest thieves (and what else are read- ers who only read to borrow, i. e. to steal), use to cut off the portmanteau from behind, without staying to dive into the pockets of the owner. Swift.

PORTO BELI.O, in the province of Panama, on the north coast of the isthmus of Darien, from being one of the most celebrated cities of Spanish America, has, since the discontinuance of the galleons, dwindled to total insignificance. It is placed on the declivity of a mountain sur- rounding the port, and consists of about 130 houses, chiefly of wood, or the basement of stone, forming one long street. The port, dis- covered by Columbus in 1502, is entered by a channel with only fifteen feet water, which was formerly defended by three castles, destroyed by the English under Vernon in 1742. North-west of the city is the cove of La Caldera, sheltered from all winds. The climate of Porto Bello is eminently unhealthy, being surrounded by lofty

hills, that cause a total stagnation of air, and at the same time produce deluges of rain, and tre- mendous thunder and lightning. One of the mountains rising from the port presents a simi- lar phenomenon to that of the Table at the Cape of Good Hope, its top being covered with a white cloud, which, when it descends lower than common) indicates a storm.

The woods which surround the town, and greatly add to its unhealthiness, abound in tigers, which often descend into the streets, and carry off the animals they meet, and even at times human beings. Snakes are also very nu- merous, and the toads are a perfect plague, the streets after rain being covered with them so thick that it is almost impossible to walk with- out treading on and being bitten by them.

PORTO DE NAOS, a harbour on the south coast of Lancerota, one of the Canaries, is formed by a ridge of rocks, scarcely rising above the water.

These rocks break the force of the waves, so that within the sea is perfectly calm, and vessels not drawing more than eighteen feet of water may enter at high tides. It is the only port in the Canaries fitted for cleaning and repairing large vessels. Westward is a square castle of stone, mounted with cannon, but of no strength. There is no town or village near, but only some magazines where corn is deposited.

PORTO FARINA, called also Garel Mailah, or the Cave of Salt, a sea-port of Tunis, at the mouth of the River Megerdah, which spreads here into a lake, and forms an excellent harbour. It is supposed to be the ancient Ruscicona.

PORTO FERRAJO, a sea-port, and the chief place of the island of Elba, is on the west coast of the island, on a lofty point of land projecting into a commodious bay. It was once called Cosmopoli, from its founder, Cosmo I. duke of Florence. Its present name it received from the quantity of iron found in the neighbourhood. Porto Ferrajo is considered a strong place, being surrounded by nine bastions, and other works, and defended by two small forts called the Sletta and the Falcone. Its trade is not inconsiderable. In June, 1796, it was taken by the British, and retained until the peace of 1802. The residence of Buonaparte from the 4th of May, 1814, to the 26th of February here has given it an interest which it will long retain. In- habitants 3000. Long. 10° 19′ 35″ E., lat. 42° 49′ 6″ N.

PORTO LONGONE, a strongly fortified town on the east coast of the island of Elba. It stands on a large bay, defended by a castle on an almost inaccessible rock. Its inhabitants, about 1500, are chiefly fishermen. Four miles south-east of Porto Ferrajo.

PORTO MAURICIA, a town of the Sardinian states, in the province of Genoa, with 3000 in- habitants. It has a harbour and some trade. Fifty-six miles south-west of Genoa.

PORTO Rico, an island of the West Indies, sixty miles east of Hispaniola, is of an oblong form, its greatest length being forty-one leagues east and west, and breadth fifteen leagues north and south. A chain of mountains runs through its whole length, with some branches diverging to the north and south, and extending to the coasts.

The whole of these mountains are covered with wood, and in their intervals are fertile valleys and plains, watered by more than fifty r've'rs and rivulets, in whose sands gold dust is found, and four of the former are navigable two leagues from their mouth. The highest summits of the mountains are called the Peaks of Layoonita, which are often covered with snow, and are seen far at sea. The north coast is generally lined by a coral

reef under water, at a little distance from the shore. The east coast is indented with many bays, formed by the continual action of the waves. A chain of about fifty small islands, extending twelve leagues in length, lie off the north-east coast, and serve as rendezvous for smugglers, but cannot be approached by large vessels.

The wild animals here are hogs, dogs, rats, all of which were originally brought to the island by European vessels. The productions of the island are altogether very trifling in comparison with its extent and natural fertility, and may be estimated at 4500 quintals of sugar, 2000 quin- tals of cotton, and 20,000 quintals of coffee ; the other vegetable productions are rice, Indian corn, and tobacco. A great part is under pas- ture, and a vast number of cattle are reared.

The revenue raised in the island a few years since was £20,000 sterling, while the expenses were £65,000, of which £58,000 for the military establishment consisted of a regiment of regular infantry from Europe, and 2000 island militia. £100,000 was received in dollars annually from Mexico, and the surplus, after paying the deficit of the revenue, was applied to public purposes. The population of the island is estimated at about 136,000 individuals.

This island, discovered by Christopher Co- iumbus in 1493, was at the time supposed to contain 600,000 inhabitants, who, understanding that the Spaniards had made themselves masters of Hispaniola, concluded that they were invin- cible. But some of their princes having doubts on this point the experiment was tried on one of the domestics of Columbus, who was murdered ; after which they rose on the invaders, and put to death 150. The Spaniards are said to have retaliated by extirpating the whole of the native race. At the end of the seventeenth century, Porto Rico was taken by the English under the earl of Cumberland ; but suffering much from dysentery they soon abandoned it.

St. Juan de Porto Rico, the capital, is situated on the north coast on the west point of an islet, joined to the main by a bridge. It contains six straight streets from north to south, intersected by six others at right angles. The houses of the first class are of stone, large and open, but wretchedly furnished. The buildings are, a ca- thedral and other churches, two convents of monks, one of nuns, and a general hospital. The fortifications are numerous and strong.

The harbour or road is three miles long and one and a quarter broad, and capable of con- taining 300 to 400 vessels ; its depth is from two to seven fathoms. The channel is winding and intricate, and is buoyed off; two islets, Cabarita and Cabras, and many rocks level with the water, render it

still more dangerous, and make a pilot

necessary. All vessels entering are ooliged to pass within gun-shot of the Morro, whence they are hailed.

Other points of the island worth notice are the river Gurabo at the west end, in which the Spaniard Salcedo was drowned by the Indians in 1511, in order to discover whether or not the Spaniards were immortal. The Bay of Guanica, on the south coast, is an excellent port with a narrow entrance

Near the village of Caomo, on tne considerable river of the same name, and on the south coast, is a warm sulphureous spring whose tempera- ture is 95°. The Rio Lovisa is another large river of the island, having fourteen leagues course, and is navigable for large boats.

The principal capes of the island are, Punta Borriquen, the north-west point, surrounded by reefs ; Cape Roxo, the south-west point : Cape St. John, the north-east point ; Cape de Mala- pasqua, or St. Francis, the south-east point. The small islands dependent on Porto Rico are Bi- eque or Crab Island, five leagues from Cape Pinera, the east point of the island ; it is seven leagues long and two leagues wide, and covered with wood. The English attempted to settle here towards the close of the seventeenth cen- tury, but were attacked by the Spaniards, who murdered all the men and carried the women and children to Porto Rico. The Danes, also, attempted an establishment in 1717, and the English a second time in the same year, but they were both driven off by the Spaniards. The island has since remained uninhabited, but is frequented both by the English and Danes to cut wood. The Tropic Keys are a cluster of small islands north of Bieque, named from the number of tropic birds that frequent them.

PORTO SANTO, a small island of the Atlantic, in the vicinity of Madeira, to which it forms a species of appendage. It was discovered by the Portuguese nearly about the same time as Ma- deira, some ships of that nation being driven hither by stress of weather. They have ever since occupied it, being attracted chiefly by an excellent harbour, wherfc ships may lie in perfect security against all except south-west winds. The island does not much exceed fifteen miles in circumference, yet produces grain and provisions, and yields for export honey, wax, and dragon's blood. It is overrun with rabbits. Long. 16° 50′ W., lat. 33° 0′ N.

PORTO SEGURO, a province and town of Bra- sil, bounded north by Los Ibhios, east by the At- lantic, south by Espiritu Santo, and west by the new Francesco. It was first discovered by the Portuguese in 1500. Porto Seguro, the capital, is situated on the sea coast in the port of this name, formed by a reef or rather ledge of rocks, that run from an extended point of the main, about a mile out, forming a natural mole. These rocks are dry at low water, and terminate abruptly ; appearing again at half a mile distance. To the northward the land rises to a steep hill, ascended by a winding path ; and on its summit stands the town. The streets are broad and straight, but irregularly disposed ; the houses generally of one story, low and ill built, of soft clay plastered over Aboxit half a dozen are of two stories,

the largest of which is a quadrangular town- house, and prison, another the house of the gover- nor (formerly a college of Jesuits). The church is plain, has glass windows, and is by far the best building in the place. A new one has lately been erected. On the banks of the river below the town, stands a village full as large, the whole containing about 400 houses (or rather cabins) and 3000 inhabitants, slaves and Indians. Their employment is solely in a fishery off the islands and rocks of Abrolhos, where they catch large salmon, which they salt for the Bahia market. About fifty decked launches are employed in this fishery ; they keep the sea a month or six weeks. The business of careening these launches, and making the necessary nets and lines, forms the work of those who remain in the town. Their lines are some of the best in the world, composed of cotton well twisted, and rubbed several times with a glutinous resin that hardens in the sun, and is proof against salt water. The property of the launches and their cargoes is con- fined to a few individuals, who are comparatively rich. Among the inhabitants are some noble Portuguese Families. Ninety-two miles south of Jorge, and 286 N. N. E. of Espiritu Santo.

PORTO SEGURO, a river of the above province, rising in the mountain of Frio.

PORTO VECCHIO, a winding gulf on the south- east of Corsica, is one of the best harbours of the Mediterranean. The town and fortress at its head are on a high rock, of difficult access. The works are four batteries, commanded by some hills : large vessels can but barely approach within gun-shot. Being very unhealthy in sum- mer, it is in that season abandoned by the greater part of the inhabitants, who only amount to about 1500. The south point of the gulf is Cape Sigli, or Chiappa ; south of which are seve- ral islands, usually called the Cape Islands, which are foul all round. Between Porto Vec- chio and Cape Bianca, the south point of the island, the coast has many little coves, and some islands, the most conspicuous of which is Toro (the Bull). The town is considered unhealthy.

PORTOGRUARO, a trading town of Aus- trian Italy, at the confluence of the rivers Le- mene and Reghena. The air is extremely un- healthy on account of the neighbouring marshes. It is the see of a bishop. Inhabitants 4000. Twenty miles west by south of Palma Nova.

PORTONOVO, a town on the sea coast of the Carnatic, 117 miles S.S.W. from Madras, and thirty-two miles south by west from Pondicherry.

PORTPATR1CK, a town of Wigtonshire, so named from St. Patrick, pleasantly seated on the nearest point of Great Britain to Ireland, op- posite Donaghadee; the passage being only twenty miles over. It has a fine exposure to the south, and is surrounded on the other sides by a ridge of small hills in the form of an amphi- theatre. It is much frequented during the sum- mer months for bathing. Its harbour was for- merly small and incommodious, but is now one of the finest in Britain, and has a reflecting light- house. Packet boats sail regularly between this port and Donaghadee, with the mail and pas- sengers ; and mail coaches are now established from London and Edinburgh to Portpatrick

and from Dublin to Donaghadee. Since these improvements, the population, buildings, and commerce of the town have greatly increased. The chief trade is the importation of black cat- tle and horses from Ireland. It stands seventy- five miles west of Dumfries, and 133 south-west of Edinburgh.

PORTRAIT, n. s. & v. a.) Fr. portrait.

POR'TRAITURE, > A picture drawn

PORTRA'Y, v. a.) after the life : to

paint after life.

Take a tile, and so portray upon it the city of Je- rusalem. Ezekiel.

In most exquitite pictures, they blaze and portrait not only the dainty lineaments or beauty, but also round about shadow the rude thickets and craggy cliffs. Spenser.

I portrait in Arthur the image of a brave knight, perfected in the twelve private moral virtues. Id. By the image of my cause I see

The portraiture of his. Shakspeare. Hamlet.

The earl of Warwick's ragged staff is yet to be seen portrayed in many places of their church steeple.

Carets. Let some strange mysterious dream

Wave at his wings in airy stream

Of lively portraiture displayed,

Softly on my eye-lids laid. Milton.

Shields

Various, with boastful argument portrayed. Id.

As this idea of perfection is of little-use in por- traits, or the resemblances of particular persons, so neither is it in the characters of comedy and tragedy, which are always to be drawn with some speck of frailty, such as they have been described in history.

Dry den.

Our phenix queen was there portrayed too bright, Beauty alone could beauty take so right. Id.

This is the portraiture of our earth, drawn without flattery. Burnet's Theory of the Earth.

The figure of his body was strong, proportionable, beautiful ; and, were his picture well drawn, it must deserve the praise given to the portraits of Raphael.

Prior. Her wry-mouthed portraiture

Displayed the fates her confessors endure. Pope.

He delineates and gives us the portraiture of a per- fect orator. Baker.

In portraits, the grace, and, we may add. the like- ness, consists more in taking the general air, than in observing the exact similitude of every feature.

Reynolds.

PORTRAIT PAINTING. See PAINTING.

PORTSMOUTH, a borough and sea-port in Hampshire, with markets on

Tuesday, Thurs- day, and Saturday. It is the most considerable haven for men of war, and the strongest fortified place in England ; situated seventy-two miles from London, twenty miles south-east of Win- chester, and on the south-west point of the island of Portsea. The origin of the town is asserted to have been the retiring of the sea from the upper parts of the harbour, which rendering Portchester very inconvenient, the inhabitants removed to Portsea Island, and built Ports- mouth. The earliest account handed down to us appears in the Saxon Chronicle of 501, when t . was called Portesmuthe. Probably it derives its name from its situation.

It is a handsome, well built, and neatly paved town, of a quadrangular form, about a mile and a quarter in circumference The principal streets

run parallel with each other, and are intersected by others of less note. The point is separated from the town by a gateway and drawbridge. It is governed by a mayor, twelve aldermen, and burgesses, and sends two members to parlia- ment. In the centre of the town stands the parish church, erected between 1210 and 1220. It is in the form of a Latin cross, and by fre- quent repairs it now presents an incongruous appearance of Saxon and Doric architecture. The fortifications of Portsmouth anciently con- sisted of a wall of timber, covered with earth; a bastion to the north-east, and two forts of hewn stone at the mouth of the harbour, begun by Edward IV. and augmented by Henry VII. In the reign of Elizabeth it was fortified with new- works, and in succeeding reigns it received great additions to its strength and magnificence. It now presents nearly an equal quadrangle ; on. the land side is an inner wall, of immense sub- stance, rising to a considerable height, fronted with Portland stone, and a parapet wall of brick, with numerous batteries, redoubts, &c.

The moats are of great depth and width, and can be filled with water from the sea ; the whole is bounded by an extensive glacis. Fronting the sea is the queen's bastion, mounted with ten thirty-six pounders, and bombs of an immense size. To the right is a very strong redoubt, and near the entrance to the harbour is the platform, or saluting battery, mounted with four thirty- six, and twenty-one twelve-pounders. At the end of the platform is erected a semaphore, for transmission of signals, which is effected between this and London in three minutes. It is of wood framed and bolted, and contains several apart- ments, and a variety of beautiful mechanism.

The garrison of Portsmouth, during peace, generally consists of two regiments of infantry, royal marines, royal artillery, and royal marine artillery, who are employed to protect the forti- fications, the dock-yard, and other public pro- perty in the towns and outworks, and the royal engineers for keeping the fortifications in order. It would require about 1 3,500 troops to man the towers and forts in case of a siege. In various

parts of the town suitable residences are set apart for the officers of the garrison : and at- tached to the garrison is a chapel, anciently be longing to an hospital.

The principal point of attraction in this cele- brated port is the dock-yard, which was esta- blished in the reign of Henry VIII., and has received such additions and improvements that it is now the first in the world. It is situated in Portsea, adjoining the harbour, and covers an extent of from 115 to 120 acres of ground. The docks, arsenals, storehouses, barracks, &c., are very extensive, and kept in the finest order. The machinery worked by steam, for the making of blocks and other articles, is perhaps the most perfect of the kind in existence. See BLOCKS and DOCK YARDS. During the war, the number of men employed in the yard was aˆout 4200 ; but since the peace the establishment has been reduced, and at present they amount to about

2500.

In 1377 the French landed, and burnt and plundered Portsmouth, but were driven back to

their ships with great slaughter by the inhabi- tants. In 1544 the French fleet, under d'Anne- baut, came with intent to destroy Portsmouth ; but were ultimately repulsed by viscount Lisle, in the Great Harry. In 1662 Charles II. was united to the infanta of Portugal in the garrison chapel, with great ceremony ; the register is still preserved in this church. In 1628 Felton assas- sinated the duke of Buckingham, whose monu- ment forms the altar piece to the parish church. In 1712 this place gave birth to the philanthro- pic Jonas Hanway.

Here are meeting-houses for the Unitarians, Methodists, and Baptists. A fair takes place annually, in the High Street, commencing on the 10th of July, and continuing its noisy and unacceptable carnival for fifteen days.

PORTSMOUTH, a post town and port of entry, Rockingham county, New Hampshire, on the south side of the Piscataqua, three miles from the sea; fourteen E. N. E. of Exeter, twenty- four north of Newburyport, forty-five E. S. E. of Concord, fifty-four S. S.W. of Portland, and fifty-six north by east of Boston. It is the most considerable town, and the only sea-port in New Hampshire, and is handsomely built. Many of the houses are elegant. It has thirty-two good streets, a court-house, jail, alinshouse, academy, athenaeum, two market-houses, a town-hall, a custom-house, an insurance-office, five banks, in- cluding a branch of the United States bank, and

seven houses of public worship : three for Con- gregational ists, one for Episcopalians, one for Baptists, one for Methodists, and one for Universalists. The Episcopal church is a spacious and elegant brick edifice, from the cupola of which there is a handsome view of the town and surrounding country.

Portsmouth is well situated for trade, and has considerable commerce. The shipping owned here in 1818 amounted to 28,351 tons. The harbour is one of the best in the United States, having through its whole passage up to the town

forty-two feet water at low tide, and owing to the rapidity of the current, which is equal to five miles an hour, it is never frozen. It is so de- fended against storms by the adjacent land, that ships may securely ride here in any season of the year ; and it is almost impregnable by its natural situation. The entrance is defended by two forts — Fort Constitution on Great Island, and Fort M'Clary, opposite to it, in Kittery. There are three other forts built for the defence of the harbour, but not garrisoned at present. There is also a light-house on Great Island. On the 26th of December, 1802, 120 buildings, in 1806 twenty buildings, including the Episcopal church, and in 1813 173 buildings, were destroyed in this town by fire. The parts which were burnt by these fires have been handsomely rebuilt with brick.

In the Piscataqua, opposite to the town, is Navy Island, on which there is a United States navy yard. The island belongs to the general government, and is convenient for building ships of war. It contains a large ship-house, a hospi- tal, barracks, store-houses, three wet-docks, &c. The Washington, a seventy-four gun ship, was launched here in 1814.

PORTSMOUTH, a post town in Newport county, Rhode Island, on the north end of the island ; seven miles north of Newport. It is connected with Tiverton by a bridge, and with Bristol by a ferry. In the north-west part of the town there is a coal mine.

PORTSMOUTH, a post town of Norfolk county, Virginia, on the south-west side of Elizabeth river, opposite Norfolk, one mile distant from it ; both of which constitute one port of entry ; 110 miles east by south of Petersburg!!. It is plea- santly situated, and regularly laid out, and con- tains a court-house, a jail, a sugar refinery, and four houses of public worship, one for Episco- palians, one for Baptists, one for Methodists, and one for Roman Catholics. The courts for the county of Norfolk are held here.

PORTUGAL.

PORTUGAL, a modern kingdom, the most western of Europe, is bounded by Spain and the Atlantic, and extends from 36° 56′ to 42° 7′ of N. lat., and from 7° 34′ to 9° 30′ of W. long. Its form is oblong; its length being from north to south 350 miles, and its average breadth about 120. The following estimate of its population was published in 1802:

Provinces. Entre Douro e Minho, in

the north-west Tras os Montes in the

north-east Beira (central) Estremadura (containing

Lisbon)

Alentejo in the south-east Algarva in the south

Sq. miles.

Population.

3,490

907,965

5,450 8,725

318,665 1,121,595

9,855 10,575 2,780

826,680 380,480 127,615

40,875 3,683,000

The most striking circumstance here to be noticed is the great populousness of Entre Douro e Minho, and the extreme thinness of the inha- bitants in Alentejo and Algarva.

The principal towns of Portugal with their population are : —

Population.

Lisbon, the capital, . . 230,000 Oporto,. .... 74,000 Elvas, ... 16,000

Coimbra, ... 15,000 Braga, ... 13,000 Setubal .... 12,000 Evora, ... 12,000

Beja, 9,000

Santarem, ... 8,000 Lamego, ... 6,600 Estremos, ... 6,500 Faro, . . 6,000

Tavira, ... 5,800 Portalegre, . . , 5,600

r50

PORTUGAL.

Braganza, Viseu, Leyria,

Castel Branco, Lagos,

Population.

5,000 5,000 4,500 4,000

. 4,000

Of the late colonial possessions of Portugal the following is an estimate of the same date : —

Sq. miles. Population.

In America, Brasil, and

part of Guiana, . . 2,100,000 2,400,000

In Africa, Madeira, the Azores, and Cape de Verd Islands, with the settlements in Guia- na, Angola, and Mo- zambique, ... 50,000 460,000

In Asia, Goa, Timor, and

Macao, 1,000 110,000

2,151,000 2,970,000

Some of the most important of the mountain chains of Spain penetrate into this country, from east to west, and terminate in large pro- montories on the Atlantic shore. The most remarkable of these are the Serra de Estrella, nearly in the centre of Portugal, and the Serra de Monchique, the extremity of which, Cape St. Vincent, is the south-west point of Europe. Between the mountains are a number of pic- turesque valleys; but the only plains of great extent are one to the south of the Tagus, near Santarem, and another at the mouth of the Vouga, in the north. The chief rivers also from Spain are the Tagus, the Douro, the Minho, and the Guadiana : mineral and hot springs are also numerous ; but water is so scarce for culinary purposes, and so bad in Alentejo, that many places are almost uninhabitable. The climate in Portugal is in general mild and pleasant, owing to the height of the mountains, and the great extent of coast ; but in the north-east (Tras os Montes) the air is sharp. Snow seldom lies here on the low ground ; but the rains of winter are often heavy.

Wheat, barley, oats, flax, hemp, and other productions of a northern latitude, are raised in the high grounds ; vines and maize in those of warmer temperatures ; and rice in the low valleys. The fruits are olives, oranges, and lemons. Silk of good quality also abounds, but the indolence

of the people but feebly avails itself of these advantages. Even in the case of wool, there prevails a general inattention to quality, though the flocks are in considerable numbers. Asses and mules are used both for travelling and agri- culture. The Portuguese farmers are quite unacquainted with rotation in crops, and nothing can be more awkward than their implements. In one province, however, that of Entre Douro e Minho, the case is different. The people here are industrious, and the supply of water is good, partly from natural streams, and partly from wells dug in the sides of the mountains. Here, accordingly, the hills are covered with vineyards to their tops ; olive, orange, apricot, and other fruit trees are abundant ; while, in situations

of less warmth, the wheat, barley, and oats ol .1 northern latitude are grown.

Of the abundant mineral productions of this country none but iron has been wrought, in con- sequence partly of the scarcity of fuel, partly of the supply of minerals (chiefly copper and lead) from Brasil : but the mountains abound in fine marble, and contain traces of gold and silver. Large quantities of salt are formed by natural evaporation in bays along the coast.

The few manufactures of Portugal are in go- neral carried on in separate cottages, like th« coarse woollens of North Wales, or the linen of Normandy, and are founded on the primitive plan of every district manufacturing for its own consumption : they are principally of woollens, silk, and earthenware. Cotton has been at- tempted, and paper, glass, and gunpowder, are made in a few places.

The navigation and commerce of Portugal are, however, considerable, though for a long time past the import and export trade has been managed chiefly by foreign merchants, particu- larly British. The exports consist chiefly of raw produce, as wine, salt, and wool. Of wine the average value exported is nearly £2,000,000 ; of salt £300,000; of wool £100,000. The im- ports are various, viz. corn, flour, fish, woollens, linen, cotton, lace, hardware, hats, shoes, stock- ings ; in short, manufactures of almost every kind that can be supplied by a more advanced country like England. The annual amount, how- ever, is not great, the total imports of Portugal, including corn, being below £3,000,000. The intercourse with Brasil, restricted ostensibly to Portuguese merchants, has in fact long also been open to foreigners, trading under the name of some native merchant; government interfering only in regard to custom duties. The produce of the Brasilian mines, whether gold, silver, or precious stones, imported formerly to Lisbon, and thence throughout Europe, is now shipped directly from Brasil to European ports.

The religion of Portugal is the Roman Ca- tholic, maintained in a state of as gross super- stition as in Italy. The inquisition indeed has lat- terly acted only as an engine of civil police ; but a vast number of monasteries are kept up, and a large portion of the best land of the kingdom is church property. The court of Rome partici pates largely in the ecclesiastical government, reserving to itself the confirmation of bishops and archbishops, and the regulation of all the taxes payable by churchmen. Still with the king rests the nomination of church dignitaries, and the reservation of a fourth part of their in- come. There are in Portugal two archbishops, thirteen bishops, and three ecclesiastical colleges. The number of parishes (4271) is large for so thinly peopled a country.

The Portuguese language bears a close resem- blance to the Spanish. In it, as in the other southern tongues of Europe, the use of vowels is predominant. There are two universities in Portugal, that of Coimbra, founded in 1308, and attended by several hundred students ; and the smaller one of Evora, founded in 1533. Lisbon has its royal academy, and the small town of Thomar an academy of sciences ; but in general

literature and education are at a very 'ow ebb. In the middle and latter part of the e ghteenth century, partial improvements were introduced under the marquis of Pombal; and the censor- ship of the press is no longer in the hands of the clergy, but of a committee of the privy council: but politics have always been forbidden ground; though in philosophy, chemistry, natu- ral history, and rural economy, the road is open, and a degree of encouragement is afforded by the government. There are in Portugal only three or four newspapers, and not so many scientific or critical journals. The pupils on the new plan of education of Bell and Lancaster were in 1820 about 5000 throughout the king- dom. Portugal has had a number of poets ; but, with the exception of Camoens, they are almost entirely unknown in the other parts of Europe.

The forces, naval and military of Portugal, have in general been inefficient. A partial stimulus was given in 1760 to the Portuguese army, by a German commander, the count of Lippe ; but after his death his plans were not followed up; and it was not till 1809 that the army, recruited by British funds, and disciplined by British officers, became such as to vindicate their former renown. This discipline is at present kept up. The naval force is less re- quisite, and that of Portugal does not exceed fifteen or eighteen frigates.

Each province in Portugal has its governor ; and justice is administered in the first instance by the Juizes de Fora ; appeals being made to the corregidors, and from these to the Casa de supplicacao at Lisbon, and the

Relacao do porto at Oporto. Great abuses are said to exist in almost every department ; the inadequacy of salaries leading to the acceptance of bribes. During the levy of 1 809, numbers who ought to have marched were thus exempted by means of money, while others, lame and infirm, were, from the want of that medium, obliged to repair to the depots. Of the prisons most are in a wretched state. In Lisbon a number of the cells, or rather dungeons, admit the water of the Tagus, and are regularly inundated to the depth of ten or twelve inches.

The pride of family is as great here as in any country : the higher classes are divided into the Titulados or high nobility, and the Fidalgos or gentry ; but the characteristics of the provincial towns and peasantry differ in Portugal much more from those of the capital than in England. In the country the manners are in general pri- mitive, and partake little of the luxury and cor- ruption of the capital, but of the indolence and listlessness natural to thinly peopled districts, confirmed by the endless holidays of the Catho- lic church. Amidst all the drawbacks of the national character, it is satisfactory, however, to notice the general affability of superiors to their servants, who frequently pass a lifetime in one family. The Portuguese are, like the Spaniards, temperate; and, among the national amusements, the predilection for bull-fights is equally as great. A want of cleanliness is equally complained of in the capital and in the provincial towns. It is at least very perceptible in Oporto. Nothing also

can be plainer, or in the eyes of an English traveller more indicative of poverty, than the furniture of a respectable family in Portugal. The chairs are of common deal, covered with leather; the few pictures in the house are on religious subjects, and inferior in execution to those on the sign-boards of our towns ; but, in this luxurious climate, the chief enjoyment is out of doors, and a house is, much less than in Britain, an object of embellishment. In per- sonal appearance, as in other respects, the Por- tuguese of the north take the lead of their south- ern countrymen.

Portugal, though still but a small kingdom, was originally much smaller. The Spanish and Portuguese historians agree, that Alonso king of Leon and Castile, and son to Ferdinand the Great, bestowed his daughter Theresa in marriage upon an illustrious stranger, Henry, and gave him with her the frontier province which he had conquered from the Moors, small, indeed, in ex- tent, but excellently situated, and so pleasant and fertile that it has sometimes been styled Medulla Hispanica, or the marrow of Spain. To this territory was added the title of Count ; but authors are divided about the time that this stranger came into Spain, and who he was. However, the writers of the Universal History make it pretty evident that he was a grandson of Robert, the first duke of Burgundy. The new sovereign, with his consort, fixed his residence in Guimaraez, on the banks of the river Ave.

The remains of an ancient palace belonging to their successors are still to be seen ; and, on ac- count of its having been anciently the capital, the king, Denis, granted the inhabitants an im- munity from taxes, which they still enjoy.

The Portuguese, now finding themselves inde- pendent, immediately began, like other nations, to attempt the subjection of their neighbours. Henry is said to have performed great exploits against the Moors; but the accounts are indis- tinct. He died in 1112, and was succeeded by his son Don Alonso, then an infant in the third year of his age.

In the minority of Alonso I. the kingdom was governed by his mother Theresa, assisted by two able ministers ; but some differences took place between the queen regent and Urraca queen of Castile. Theresa insisted that some part of Ga- licia belonged to her by her father's will ; and therefore seized on Tuy. Urraca, having as- sembled a numerous army, went in person into Galicia; upon which Theresa was obliged to abandon Tuy, and take shelter in one of her own fortresses. The consequences, in all probability, would have been fatal to the new kingdom, had not the archbishop of Compostella, without whose assistance Urraca could do nothing, demanded leave to retire with his vassals. This offended the queen to such a degree that she threw him into prison ; which excited such a commotion among her own subjects that the Portuguese were soon delivered from their apprehensions. Queen Theresa fell immediately after into a simi- lar error, by throwing into prison the archbishop of Braga. The bishop, however, was quickly liberated by a bull from the pope, who threatened the kingdom with an interdict. Soon after this

queen Urraca died, and all differences were ami- cably settled at an interview between Theresa and Don Alonso Raymond, who succeeded to the kingdom of Castile. The greatest misfortune which befel this princess was a quarrel with her own son Alonso Enriquez. A civil war ensued, in which the queen's forces were totally defeated, and herself made prisoner, in which situation she continued during the remainder of hei life.

Alonso, having obtained possession of his do- minions, made several attempts upon Galicia, but without success ; so that he was at last con- strained to make peace with Alonso, the king of Castile and Leon, who had assumed the title of Emperor of the Spains ; more especially as his dominions were invaded by the Moors. A plague breaking out in the Moorish army, they were obliged to retreat; after which Alonso re- duced

several places belonging to that nation : but, in the mean time, the emperor Alonso, breaking into the Portuguese territories, destroyed every thing with fire and sword. The king of Portugal surprised and cut off a considerable part of his army ; which, however, did not hin- der the emperor from marching directly towards him. It was only at the intercession of the pope's legate that all differences were accom- modated, and a peace concluded. In the mean time, the progress of the Christian arms in Spain being reported to Abu-Ali Texefien, the chief monarch of the Moors in Barbary, he directed Ishtnael, his lieutenant in Spain, to assemble all the forces in the southern provinces, and drive the Christians beyond the Bouro. Ishmael im- mediately began to put these orders in execution; and, having added a considerable body of troops brought from Barbary to those whom he had ' raised in Spain, the whole army was numerous. He was met by Alonso of Portugal, in the plains of Ourique, on the banks of the river Tayo ; and Ishmael took all possible means to prevent the Christians from passing that river. The Portuguese forces were inconsiderable in number in comparison of the Moors ; but Ishmael, being confident of victory, divided his army into twelve bodies, and disposed them in such a manner as might best prevent the flight, not sustain the at- tack, of the Christians. The consequence was, that his army was overthrown with incredible slaughter, and a vast number of prisoners taken, among whom were 1000 Christians, of the sect styled Mozarabians, whom, at the request of Theotonus, prior of the Holy Cross, Alonso set at liberty with their wives and children. After this victory, gained in 1139, Alonso was pro- claimed king by his soldiers, and ever after re- nounced all subjection to the crown of Spain.*

Being desirous, however, of bringing down the power of the emperor, he entered into a league with Raymond count of Barcelona and regent of Arragon, against that prince. In consequence of this, he entered Galicia with a considerable force on one side, while Raymond did the same on the other. But the Portuguese monarch, in his ex- pedition into Galicia, received a dangerous wound, and had some of the nobility who at- tended him taken prisoners. At the same time, he heard that the Moors had invaded his domi- nions, so that he was obliged to retire ; which,

however, did not prevent the strong fortress oi Leyria from falling into their hands. This they demolished, and put all the garrison to the sword ; the king, however, caused it to be re- built. The war continued with various success till 1145, when the king projected an enterprise against Santaren, a strong city about twelve miles fiom Lisbon; which he took, and thus gained a considerable tract of country, and a strong bar- rier. After this success, Alonso caused him- self with much ceremony to be crowned king of Portugal, before an assembly of the states, where he again solemnly renounced all depend- ence on the crown of Spain. The next year he undertook the recovery of Lisbon out of the hands of the Moors, with a

small army ; and, while he was making but little progress, a fleet of adventurers, French, English, Germans, and Flemings, who were going to the Holy Land, anchored in the mouth of the Tagus, whose as- sistance he demanded. This was readily granted; and, with their assistance, Lisbon was reduced ; a conquest which so much raised the reputation of this monarch, and brought such numbers to recruit his army, that before the end of 1147 he had reduced twelve other considerable cities. For many years after this, Alonso was successful in all his undertakings. He settled the internal government of his kingdom, procured a bull from pope Alexander III. confirming his regal dignity, undertook many successful expeditions against the Moors, and became master of four of the six provinces which compose the present kingdom of Portugal. He was greatly assisted, it is said, by the counsels of his queen Matilda, by whom he had a numerous offspring, particu- larly three daughters ; the eldest of whom, Ma- tilda, was married to the king of Arragon ; the second, Urraca, to Ferdinand king of Leon ; and the third, Theresa, to Philip earl of Flanders.

In 1166 the king invaded the dominions of his son-in-law Ferdinand; and tookLimmia and Turon, two cities of Galicia, in which he put strong garrisons, and in 1167 marched with a numerous army towards Badajos, which he in- vested ; on the news of which Ferdinand, who had assembled a large army at Ciudad Rodrigo, marched to its relief. Yet, before he could come within sight of it, it had surrendered to the king of Portugal ; upon which Ferdinand resolved to besiege his antagonist; which Alonso perceiving, endeavoured to draw out his forces into the field. Though he was then upwards of seventy years of age, he was himself on horseback, and, oushing forwards at the head of his horse to get out at the gate, struck his leg against one of the bolts with such violence, that the bone was shattered to pieces. This accident occasioned such con- fusion that the Portuguese were easily beaten, and Alonso taken prisoner. The king of Leon behaved towards him with the greatest respect. He desired him to lay aside all thoughts of bu siness, and attend to his wound ; but, finding him restless and impatient, he assured him that he expected nothing more than to have things put into the same condition as before the war To this Alonso readily assented ; but, returning to his dominions before his cure was perfected was lame all the est of his life. Notwithstand-

ing this inconvenience, his courage transported him into the field whenever he was called by the interest of his subjects. Towards the end of his reign, an opportunity seemed to present itself of obtaining once for all an entire release from the disagreeable pretensions of the king of Leon, who, it seems,

had insisted on his father-in-law doing homage for his kingdom. The opportu- nity which now presented itself, was a quarrel between the king of Leon and his nephew Alonso of Castile. The latter asked assistance from the king of Portugal, which was readily granted. But Ferdinand having received intelligence that the infant Sancho, the king's eldest son, was advancing towards Ciudad Kodrigo, assembled his troops on that frontier with such diligence that he was enabled to attack him unexpectedly, and entirely defeated him. Understanding, however, that Sancho was recruiting his forces, he sent him word that they might be much better employed against the infidels. Sancho made a proper use of this advice; and, after making some motions to amuse the enemy, made a sudden irruption into Andalusia, penetrating as far as Triana, one of the suburbs of Seville. The Moors assembled their forces in order to attack him on his retreat; but Sancho, having first fatigued them by the celerity of his march, at length chose a strong camp, and, having given his troops time to repose, drew them out, and offered the enemy battle. The Moors accepted the challenge, but wire entirely defeated; and Sancho returned into Portugal with spoils to an immense amount. For some years after the war was continued without any remarkable event ; but in 1 1 84, Jo- seph, king of Morocco, having already trans- ported multitudes of men from Barbary, at length ifollowed in person with a prodigious army, and carried all before him as far as the Tayo. He appeared before the city of Santaren ; but, having wearied and reduced his army by unsuccessful assaults on that place, he was attacked by the Portuguese forces, assisted by Ferdinand of Leon, entirely defeated, and himself killed. By this victory, the Portuguese were left at liberty to improve the interior part of their country, and fortify their frontiers ; and, during this interval, the king died in 1185, in the seventy-sixth year of his age.

Alonso II. was succeeded by his son Sancho I. Of this prince it is remarkable that, before he ascended the throne, he was of a restless and warlike disposition ; but no sooner did he come to the throne than he became a lover of peace, and began with great assiduity to repair the cities that had suffered by the war, and to re- people the country. By his steady attention to this he in a very short time quite altered the appearance of his territories, and procured to himself the title of the restorer of cities, and father of his country. In 1 1 89 a fleet, composed for the most part of English vessels, but having on board a great number of adventurers of other nations, bound to the Holy Land, entered the river of Lisbon. They were very kindly received, and supplied with all kinds of refreshments by Sancho, who took this opportunity of soliciting them to assist him in a design he had formed, of attacking Silves, in Algarve ; to which they reaT Voi.. XVII.

dily yielded. Having joined a squadron of his own galleys, and marched a

body of troops by land, the place was reduced, and the English, according to agreement, rewarded with the plun- der. But in a short time, the Moors from Africa having again invaded Portugal, the town was several times taken and retaken, till at last San- cho, being sensible of the difficulties that would attend the keeping of it, caused it to be demo- lished. His last enterprise was the reduction of Elvas ; soon after which he died, with the repu- tation of the best economist that ever sat on the throne of Portugal. He had amassed a treasure of more than 700,000 crowns in ready money, besides 1400 merks of silver, and 100 of gold plate, which he disposed of some time before his death ; and was interred by his own com- mand with little pomp, in the cathedal of Coim- bra. From this period, the history of Portugal affords scarcely any event of importance, till the year 1289 ; when, in the reign of Dionysius, or Denis, a difference commenced with Castile which subsisted for a long time. Reconciliations frequently took place; but these were either of very short duration, or never sincere. At length, in the reign of John I., John II. of Castile, who had also pretensions to the crown of Portugal, invaded that kingdom at the head of the whole force of his dominions. According to the Por- tuguese historians, he besieged Elvas without effect; which disappointment enraged him to such a degree that he determined next year to iavade Portugal a second time, and ruin all the country. Accordingly, having collected an army of 30,000 men, he took and ruined several places, while John lay inactive, with a small army, waiting for some English succors. At last he ventured an engagement with the forces which he had ; and, notwithstanding the great supe- riority of the enemy, obtained a complete victory; after which he made an irruption into Castile, and gained another battle, which fixed him firmly on the throne of Portugal. The Castilians were obliged to consent to a truce of three years, which was soon after improved into a lasting peace. In 1414 king John undertook an expe- dition against the Moors in Barbary, where he commanded in person. The expedition proved successful, and the city of Ceuta was taken from the Moors at the first assault : but scarcely had the king left the country, when the princes of Barbary formed a league for the recovery of it ; and, though they were at first defeated by the princes of Portugal, yet the trouble of keeping it was so great that some of the council were of opinion the town should be demolished. John, however, determined to keep the city ; and therefore enlarged and strengthened the fortifications. He died in 1428 or 1433.

John II. was succeeded by his eldest son Edward. He undertook an expedition against Tangier in Barbary : but the event proved un- fortunate. The king's son, Don Ferdinand, was left as a hostage for the delivery of Ceuta ; but was, with the utmost cruelty and injustice, left in the hands of the infidels, by the king and council. Many preparations indeed were made for recovering the prince ; but before any thing could be accomplished the

king died in 1430,

which put an end to these designs. The war with Barbary continued at intervals, but with little success on the part of the Portuguese ; and till 1497 there is no event of any consequence recorded in the history of Portugal. This year was remarkable for the discovery of the passage to the East Indies by the Cape of Good Hope, by Vasco de Gama ; and at this period Portugal possessed an uncommon spirit of commercial enterprise ; and an intelligent monarch, who se- lected the most active and able agents for carry- ing his patriotic plans into execution. As great things perhaps were at this period achieved by them as were ever accomplished by a nation in so short a time. Within twenty-four years after the voyage of Gama, the Portuguese had ren- dered themselves masters of the city of Malacca, in which the great staple of the trade carried on among the inhabitants of all those regions in Asia which Europeans have distinguished by the general name of the East Indies was then es- tablished. This conquest secured to them great influence over the interior commerce of India ; while, at the same time, by their settlements at Goa and Diu, they were enabled to engross the trade of the Malabar coast, and to obstruct greatly the long established intercourse of Egypt with India by the Red Sea. In every part of the east they were received with respect : in many they acquired absolute command. Pursuing their trade without rival or control, they pre- scribed to the natives the terms of their mutual intercourse; they often set what price they pleased on the goods which they purchased; and were thus enabled to import from Hindostan and the regions beyond whatever was useful, rare, or agreeable, in greater abundance than had ever been known formerly in Europe. In consequence of this, the Venetians soon began to feel that decrease of their Indian trade which they had foreseen and dreaded. To prevent the farther progress of this, they incited the Sultan of the Mamelukes to fit out a fleet in the Red Sea, and to attack those unexpected invaders of a gainful monopoly, of which he and his pre- decessors had long enjoyed undisturbed pos- session. The Portuguese, however, encountered his formidable squadron with undaunted courage, entirely defeated it, and remained masters of the Indian Ocean. They continued their progress in the east almost without obstruction, untifthey established there an empire ; to which, whether we consider its extent, its opulence, the slender power by which it was formed, or the splendor with which the government of it was conducted, there had hitherto been nothing comparable in the history of commercial nations. Emanuel, who laid the

foundation of this stupendous fabric, had the satisfaction to see it completed. Every part of Europe was supplied by the Portuguese with the productions of the east ; and if we except some inconsiderable quantities of them, which the Venetians still continued to receive by the ancient channels of conveyance, our quarter of the globe had no longer any com- mercial intercourse with India, and the regions of Asia beyond it, but by the Cape of Good Hope. In September 1522 Emanuel died of an epidemical fever, and was succeeded by his son John III.

The most remarkarkable transaction o thi» prince's reign was the introduction of the inqui- sition into his dominions. This happened in 1525 or, according to some writers, in 1535. In the mean time Solyman the Magnificent, the most enlightened monarch of the Otto- man race, observing the rising power and opu- lence of the Portuguese, and eager to sup- plant them, sent orders to the bashaw of Egypt to employ his whole strength against the Christians in the East. The bashaw, in obedi- enbe to these orders, sailed from the Red Sea with a greater naval force than ever the Maho- metans had employed before ; having 4000 Janissaries, and 16,000 other troops on board. Yet, by the courage and conduct of the Portu- guese officers and soldiers, this mighty armament was defeated, and their East India possessions saved from the danger which threatened them. In Africa likewise the king of Fez was baffled before the town of Sasi. For a long time indeed the safety of the Portuguese in Africa had been derived only from the quarrels of the Moors ; for such was the envy and jealousy which reigned among themselves, that they could never unite heartily in opposing the common enemy. The consequence was, that King John began to ap- prehend that the conquest of Barbary was im- possible, and therefore, to limit his desires to the keeping of those fortresses which he had already. On the other hand, he exerted himself in the settlement of the Brasils, which he brought into a very good state, causing several strong towns to be erected, and many of the natives to profess Christianity. He fell, however, into a kind of apoplexy, which cut him off in June 1557; and was succeeded by his grandson Sebastian III. an infant of three years of age.

After the death of John, the administration re- mained in the hands of the queen, grandmother to Sebastian, who conducted herself with great prudence and address. The Moors, however, now laid close siege to Masagnan ; but the queen regent sent such speedy succors, that, though they brought 80,000 men into the field, the infi- dels were obliged to abandon the enterprise. At last, finding that her popularity was declining, she resigned her authority into the hands of car- dinal Henry, the king's brother. By him that prince's education was entrusted to the priests, who, by instilling false ideas of glory into his mind, paved the way for the catastrophe that followed. When Sebastian was grown up to man's estate,

he panted to distinguish himself against the infidels. He proposed an expedition to the East Indies ; but the prime minister Al- cocova substituted Africa in its stead. This ex pedition the king entered into in the most romantic manner. He first sent over Don An- tonio prior of Crato, with a few hundred soldiers ; then carried his principal courtiers over with him from a hunting match, and such troops as he could collect on so short warning ; and, when all these were assembled, the king spent his time in hunting and slight excursions against the enemy, without doing any thing of consequence, except exposing his person. At length he returned in such tempestuous weather that his sub- jects had given him up for lost. These accidents did not discourage Sebastian. On the contrary

he attempted a new expedition on account of Muley Hamet, king of Fez, who had been ex- pelled from his dominions by his uncle Muley Moloch, Hamet having restored the fort of Araila, which his father had taken from the Por- tuguese ; though earnestly and anxiously dis- suaded from the measure by the queen dowager, by Philip of Spain, and all his most zealous friends. On the 24th of June 1577, therefore, he sailed from Lisbon with a fleet of fifty ships and five galleys ; twelve cannon ; and transports and tenders, making in all 1000 sail. His troops were 9000 Portuguese foot, 3000 Germans, 700 Italians under Sir Thomas Stukely, a brave Eng- lish exile ; 2000 Castilians, and 300 volunteers, under Don Christopher de Turara. lie touched at Lagos Bay, in Algarve, where he spent four days; and was magnificently entertained by the duke of Medina Sidonia. The king ordered Don Diego de Souza to follow him with the rest of the army. They accordingly landed at Ar- zila on the African coast, where the king was met by Muley Hamet, who delivered his son as a hostage, and brought a reinforcement of 300 Moors. Here it was resolved to reduce the town of Larache ; but the king and Muley Ha- met differing on the question whether the troops should proceed by land or sea, Muley left him, and the king proceeded on the 29th July by land. Mean time Muley Moloch, though ill of a fever, came forward at the head of 60,000 horse and 40,000 foot, and advanced with such celerity that he came in sight of the Portuguese army on the 3d of August. On the measures now to be adopted Sebastian and his ally again differed ; but the king's opinion, to engage imme- diately, was resolved on. The Portuguese ad- vanced with the greatest resolution; broke the first line of the Moorish infantry, and disordered the second. Muley Moloch, upon this, exerting himself beyond his strength, fell from his horse, and, though one of his guards carried him to his litter, expired on reaching it. By this time the Moorish cavalry had wheeled round and attacked the Christians in the rear, broke the Portuguese on the right, and

in this interim Muley Hamet, m passing a rivulet, was drowned. The Germans, Italians, and Castilians, fought well, but the Portuguese acted indifferently ; and the whole army, except about fifty men, were either killed or taken prisoners. The fate of Sebastian is variously related. He is said to have had two horses killed under him and mounted a third. His bravest officers fell in his defence, and at last he was overpowered and killed by the Moors. But his death was long doubted.

*By this disaster, the kingdom of Portugal, from ranking with the most eminent, sunk at once into the lowest rank of the European states. All the young nobility were cut off, or carried into slavery, and the kingdom was exhausted of men and treasure, so that cardinal Henry, who assumed the government after the death of his nephew Sebastian, found himself in a very dis- agreeable situation. The transactions of his reign were not important ; but after his death, in 1580, a great revolution took place. The crown of Portugal was claimed by three different competitors ; viz. the prince o*f Parma, the*

duchess of Braganza, and Philip II. of Spain. Whatever might have been the merits of their respective claims, the power of Philip quickly decided the contest. His schemes were facili- tated by the treachery of the regents, who took the most scandalous methods of putting the kingdom into his hands, so that, finding every thing in his favor, he commanded the duke of Alva to invade Portugal at the head of 20,000 men. In vain did the people, perceiving that they were betrayed, exclaim against their go- vernors, and place on the throne Antonio, prior of Crato. His forces being inexperienced, and he himself but a weak leader, he was quickly defeated by the duke of Alva, and forced to fly from the kingdom. On his flight the whole kingdom submitted, together with the garrisons in Barbary, the settlements on the west coast of Africa, of Brasil, and in the East Indies. The Madeiras, however, except the isle of St. Michael, held out for Antonio. Philip made his entry into Lisbon as soon as the kingdom was reduced, and endeavoured to conciliate the affections of the people by tendering a' solemn oath to main- tain the privileges and liberties of the people ; and engaging that the viceroy or chief governor should be a native, unless the king should give that charge to one of the royal family.

These concessions, however, did not answer the purpose ; nay, though Philip was to the last degree lavish of honors and employments, the Portuguese were dissatisfied. The exiled prince, in the mean time, still styled himself king of Portugal. At first he retired to France, where he found so much countenance that with a fleet of nearly sixty sail, and a body of troops, he made an attempt upon the Terceras ; but his fleet was beaten by the Spaniards ; and, a great number of prisoners being taken, all the officers and gentlemen were beheaded, and a number of the inferior

ranks hanged. Antonio, notwith- standing, kept possession of some places, coined money, and performed other acts of regal power; but was at length constrained to return into France. He passed thence into England, where he was well received ; and, after king Philip had ruined the naval power of Portugal, as well as Spain, by equipping the armada, our queen Elizabeth made no difficulty of owning and assisting Antonio, and even of sending Sir John Norris and Sir Francis Drake with a strong fleet and a great army to restore him. Upon this, occasion Antonio sent his son Don Christopher, a hostage to Muley Hamet, king of Fez and Morocco, who was to lend him 200,000 ducats. But king Philip prevented this by surrendering Arzilla : and this disappointment, the unseason- able enterprise upon Corunna, and the dispute that arose between Norris and Drake, rendered that expedition abortive. Antonio remained some time in England ; but withdrew once more into France, where he fell into great distress ; and at length died, in the sixty-fourth year of his age. He left several children, who, on account of his being a knight of Malta, and having made a vow of virginity at his entrance into the order, were looked upon as illegitimate. He preserved to the last a great interest in Portugal; and drew thence, in the course of his life, im-

mense sums of money. In the interior the Por- tuguese, partly through their love of their prince, and partly from their hatred to the Castilians, were continually in the hopes that king Sebas- tian would re-appear and deliver them ; and in this respect such a spirit of credulity reigned, that it was said proverbially, they would have taken a negro for Sebastian. This humor led the son of a tiler at Alcobaza, who had led a profligate life, to give himself out for that prince ; and having associated himself with two compa- nions, one of whom styled himself Don Chysto- pher de Tavora, and the other the bishop of Guarda, they began to collect money, and were in a fair way of creating much disturbance, when the cardinal archduke caused them to be apprehended. The false Sebastian was led ig- nominiously through the streets of Lisbon, and sent to the galleys for life, and the pretended bishop was hanged. Not long after, Gonsalo Alvarez, the son of a mason, gave himself out for this same prince, and having promised mar- riage to the daughter of Pedro Alonsa, a rich yeoman, whom he created earl of Torres Novas, he assembled a body of about 800 men, and some blood was spilt before he was apprehended : ft length, being proved to be an impostor, him- s-elf, and his intended father-in-law, were hanged and quartered at Lisbon. There was another person who appeared about twenty years after the fatal

*defeat of Sebastian, at Venice, who created still more trouble. He assumed the name of Sebastian, and gave so very distinct an pccount of the manner in which he had passed las time from the defeat of that prince, that, after twenty-eight examinations before a committee of noble and impartial persons, they showed no disposition to declare him an impostor. The noise of this was diffused throughout Europe, and the enemies of Spain endeavoured every- where to give it credit. The Venetian senate, ! owever, refused to discuss the great point, whe- iher he was or was not an impostor, unless they were requested so to do by some state in alliance with them. Upon this the prince of Orange sent Don Christopher, the son of the late Don Antonio, to make that demand ; and at his request an investigation was entered with great solemnity : but no decision followed ; only the senate set him at liberty, and ordered him to de- part their dominions in three days. He was, after various adventures, shipped on board a galley as a slave; then carried to St. Lucar, where he was some time confined ; thence he was transferred to a castle in the heart of Castile, and never heard of more. Some persons were executed at Lisbon for their endeavovj.s *,o nise an insurrection in his behalf: but it was thought strange policy in the court of Spain, to make this affair so public without proofs ; and the at- tempt to silence this claim by affirming the party tc be a magician was thought ridiculous enough. The administration of affairs in Portugal during the reign of Philip was every way detrimental to the nation. His preparations for the invasion of England impoverished all his European do- minions; but it absolutely exhausted Portugal. To pacify the Portuguese, the king borrowed money from the robility upon the customs, and*

the branches, thus mortgaged, became fixed and hereditary ; so that the merchant was oppressed, and the king received nothing. This expedient failing, others were fallen upon, which made way for diverting other branches; for instance, that for the repair of fortifications, the money being strictly levied, and the works suffered to decay ; while, upon the whole, in the space of eighteen years, the nation was visibly impover- ished; yet the government of Philip was incom- parably better than that of his successors ; so that his death was regretted ; and the Portuguese at last confessed, that of bad masters he was the best.

His son Philip, the II. of Portugal and the III. of Spain, sat twenty years upon the throne before he made a visit to Portugal, where the people incurred an enormous expense to receive him, and thus gave him a false idea of their wealth. He held an assembly of the states, in which his son was sworn successor. The reign of Philip III. and IV. was a series of bad mea- sures, and worse fortune; all their dominions suffered greatly ; Portugal most of all. The loss of Ormus in the East, and of Brasil in the West Indies, together with the shipwreck of a fleet sent to escort that from Goa, brought the nation incredibly low. These are the heads only of the

transactions for forty years ; to enter into the particulars would require to point out the breaches made by the Spanish ministers on the conditions granted by king Philip; which, with respect to them, was the unalterable constitution of Portugal while subject to the monarchs of Castile; and which, notwithstanding, they so often and so flagrantly violated. The general assembly of estates was to be held frequently, yet they were held only thrice in sixty years ; and of these twice within the first three. The king was to reside in this realm as often and as long as possible ; yet Philip I. was there but once, Philip II. only four months, and Philip HI. never at all. The council of Portugal, which was to be composed entirely of natives, was filled with Castilians, as the garrisons also were, though the contrary had been promised, and the council finally reduced from five to three, then two, and at last to a single person. By these, and many other grievances, too tedious to mention, the detestation of the Spanish go- vernment became universal ; and in 1640 a re- volution took place, in which John duke of Braganza was declared king, by the title of John IV.

This revolution, being effected in accordance with the almost unanimous feelings of the nation, was ?ttended with very little effusion of blood ; neither were all the efforts of the king of Spain able to reinstate his authority. Several attempts indeed were made for this purpose. The first battle was fought in 1644, between a Portuguese army of 6000 foot and 1 100 horse, and a Spanish army of nearly the same number, when the latter were entirely defeated. King John carried on a defensive war during the remainder of his life ; but after his death, in 1655, the war was renewed with great vigor. This was what the Spaniards did not expect. It is not indeed easy to con- ceive a kingdom left in more perilous circum-

stances than Portugal was at this time. The young king Alonzo Henry was a child not above thirteen years of age, and reputed of no very sound constitution in body or mind ; the regency was vested in the queen dowager, a Castilian; the nation was involved in a war, and this re- specting the title to the crown ; the nobility, some of them secretly disaffected tc- the reigning family, and almost all of them embarked in feuds and contentions with each other, so that the queen scarce knew whom to trust. She acted, however, with great vigor and prudence. By marrying her only daughter, the princess Catha- rine, to Charles II. king of Great Britain, the queen procured to Portugal the protection of the English fleet, with reinforcements of some thousands of horse and foot; and at last, in 1665, terminated the war by the glorious victory of Montesclaros. This decisive action broke the power of the Spaniards, and fixed the fate of the

kingdom, though not of the king, of Portugal. Alonzo was a prince whose education had been neglected, and who was devoted to vulgar an.use- ments, and whom the queen, for these reasons, wished to deprive of the crown, that she might place it on the head of his younger brother Pe- ter. To accomplish this purpose she attempted every method of stern authority and secret arti- fice. But the Portuguese would not consent to set aside the rights of primogeniture, and involve the kingdom in all the miseries attending a dis- puted succession. After the death, however, of the queen mother, the infant entered into cabals against the king of a much more dangerous na- ture. Alonzo had married the princess of Ne- mours ; but that lady had transferred her affection to Peter, to whom she lent her unnatural assist- ance. Alonzo was compelled therefore to sign a resignation of the kingdom ; and his brother, after governing a few months without legal au- thority, was in a meeting of the states unani- mously proclaimed regent. Soon after this ini- quitous revolution, the marriage of the king and queen was declared null by the chapter of Lis- bon ; and the regent, by a papal dispensation, and with the consent of the states, espoused the worthless woman who had been his brother's wife. He governed under the appellation of re- gent fifteen ˆoars;.when, upon the death of the king, he mounted the throne by the name of Peter II. ; and, after a long reign of great pru- dence and vigor, he died on the 9th December, 1706. John V7. succeeded his father ; and, though he was then little more than seventeen years of age, acted with such wisdom and resolution, and adhered so steadily to the grand alliance formed against France and Spain, that, though he suffered severe losses during the war, he obtained such terms of peace at Utrecht that Portugal was in all respects a gainer by the treaty. The two crowns of Spain and Portugal were not, however, thoroughly reconciled till 1737; but from this period they became every day more united. In this situation of things a treaty was made in 1750 with the court of Madrid, by which Nova Colonia, on the Plata, was yielded to his catholic majesty, to the great regret of the Portuguese, as well on account of the value of that settlement as because they apprehended their possession of

the Brasils would by this action be rendered precarious. On the 31st of July, the same year, John V. worn out by infirmities, died in his sixty- first year and forty- fourth of his reign.

Joseph, prince of the Brasils, succeeded him, to the universal satisfaction of his subjects. Amongst other new regulations, the power of the inquisition suffered considerable restriction ; the king directing that none of their sentences should be put in execution till reviewed and approved by the privy council. But, as in the reign of his father he had consented to the treaty with Spain, he ratified it after his accession. However, within the space of a few years, the calamities of Por- tugal, and those of Lisbon in

particular, could scarcely be paralleled in history. An earthquake, a fire, a famine, a plot to assassinate their prince, executions upon executions, the scaffolds and wheels of torture reeking with the noblest blood ; imprisonment after imprisonment of the greatest and most distinguished personages ; the expul- sion of a chief order of ecclesiastics ; the inva- sion of the kingdom by a powerful, strong, and exasperated nation ; the numerous troops of the enemy laying waste their territory, bringing fire and sword almost to the gates of their capital ; the king ready almost to fly. The Spanish mi- nistry had already decreed the doom of Portu- gal, and nothing was to be heard at the Escurial but Delenda est Carthago. Carthaginian or Jewish story may afford a scene like this, but for the shortness of the period not one marked by more important events. From the result anticipated by Spain, under the hand of Providence, the gene- rosity of Great Britain alone preserved the Por- tuguese.' See GREAT BRITAIN, vol. x.p. 457. Joseph died in 1777.

Joseph dying without male issue, the suc- cession devolved to Mary his daughter, the late queen of Portugal. She was married before he died, by the pope's dispensation, to his brother prince Peter. Joseph, prince of Brasil, the son of this connexion, was married to his youngest aunt! On the 3d of March, 1801, Spain de- clared war against Portugal. On the 26th April a counter proclamation of war was made by Portugal. By the 6th June the Spaniards had reduced Elvas, Campo Major, Arroches, Fior de Rosa Estrencoz, Olivenza, and all the magazines of Alentejo. On the 6th June peace was made by the cession of the town and province of Oli- venza to Spain.

In the beginning of 1808, the French, by an arrangement made with the Spanish government, took- possession of Portugal ; previous to which the court, by the aid of the British fleet, sailed for the Brasils. Soon after Buonaparte en- trapped the Spanish court and royal family, and made them prisoners at Bayonne. He seized Spain, and conferred the crown on his brother Joseph. This detestable trick excited a spirit in Spain which all the tyrant's power was not able to subdue. During 1808, 1809, and 1810, Por- tugal was the chief scene of the military contest between Great Britain and France. It seems, like Spain, to have survived the tyranny of Buo- naparte, to be delivered over to a worse.

The steps of the late revolutionary and usurp- ing movements of Don Miguel and his associates

have been preparing for a length of time. 'We may thus trace the outline of the most interesting events in the modern history of Portugal : —

In 1816 John VI. refused to return to Lisbon, whither a squadron under Sir John Beresford had been sent to convey him ; partly, it is said, be- cause he was displeased at the disregard of his rights shown by the congress of Vienna ; partly because the unpopularity of the commercial treaty had alienated him from England ; but probably still more because he was influenced by the visible growth of a Brasilian party which now aimed at independence. Henceforward, indeed, the separation of Portugal from Brasil manifestly approached. The Portuguese of Europe began to despair of seeing the seat of the monarchy at Lisbon; the regency there were without strength, all appointments were obtained from the distant court of Rio Janeiro ; men and money were drawn away for the Brasilian war on the Rio de la Plata ; the army left behind was unpaid ; in fine, all the materials of formidable discontent were heaped up in Portugal, when the Spanish revo- lution broke out in the beginning of 1820. Six months elapsed without a spark having reached Portugal, when marshal Beresford went to Rio Janeiro to solicit the interference of the king ; but that prince made no effort to prevent the conflagration, and perhaps no precaution would then have been effectual. In August 1820 the garrison of Oporto declared for a revolution ; and, being joined on their march to the capital by all the troops on their line, were received with open arms by the garrison of Lisbon ; and it was de- termined to bestow on Portugal a still more po- pular constitution than that of Spain. With what prudence the measures of the popular leaders in the south of Europe were conceived or conduct- ed it is no part of our present business to enquire. Many friends of freedom remonstrated at the time against their errors. The people of Portu- gal indeed, unless guided by a wise and vigorous government, were destined by the very nature of things, in any political change made at that mo- ment, to follow the course of Spain. The regency of Lisbon, by the advice of a Portuguese minis- ter, at once faithful to his Sovereign, and friendly to the liberty of his country, made an attempt to stem the torrent, by summoning an assembly of the Cortes. The attempt was too late; but it pointed to the only means of saving the mo- narchy. The same minister, on his arrival in Brasil, at the end of 1820, advised the king to send his eldest son to Portugal as viceroy, with a constitutional charter, in which the legislature was to be divided into two chambers, and com- posed as in that of 1826. He also recommended an assembly of tha most respectable Brasilians at Rio Janeiro to organise their affairs. But a re- volution in that capital soon precipitated affairs; and the popular party, headed by Don Pedro, the king's eldest son, declared for the constitution of Portugal and the separation of Brasil at once. This, in April, 1821, drove the old king to Eu- rope. But on the voyage he was advised to stop at the Azores, where he

might negociate with more independence : but he rejected this coun- sel ; and on his arrival in the Tagus, on the 3d of July 1821, nothing remained but a surrender

to the people at discretion. The revolutionary Cortes were as tenacious of the authority of the mother country as the royal administration ; and they accordingly recalled the heir apparent to Lisbon. But the spirit of independence arose among the Brasilians, who, encouraged by the example of the Spanish Americans, presented ad- dresses to the prince beseeching him not to yield to the demands of the Portuguese assembly, who desired to make him a prisoner, as they had made his father ; but, by assuming the crown of Brasil, to provide for his own safety, as well as for their liberty. In truth it is evident that h

In the summer of 1823 the advance of the French army into Spain excited a revolt of the Portuguese royalists ; and now the infant Don Miguel, the king's second son, attracted notice, by appearing at the head of a battalion who de- clared against the constitution ; and the incon- stant soldiery, equally ignorant of the object of their revolts against the king or the Cortes, were easily induced to overthrow their own slight work. After a short interval the possessors of au- thority relapsed into the ancient and fatal error of their kind ; — that of placing their security in maintaining unbounded power. A resistance to the constitution, which grew up in the interior of the court, was fostered by foreign influence; and, after a struggle of some months, prevented the promulgation of a charter well considered and digested.

In April 1824 part of the garrison of Lisbon surrounded the king's palace, and hindered the access of his servants to him ; some of his minis- ters were imprisoned ; and the diplomatic body, including the papal nuncio, the French ambassa- dor, and the Russian as well as English minister, were the only means at last of restoring him to some degree of liberty, which was however so imperfect that, by the advice of the French am- bassador, the king took refuge on board of an English ship of war in the Tagus, where he was at length able to re-establish his authority. Over the part in these transactions into which Don Miguel rushed it is hardly required that we should throw a veil, in imitation of his father, who forgave these youthful faults as ' involuntary errors.' At last the king issued a proclamation, on the 4th of June 1824, for restoring the ancient constitution of the Portuguese monarchy, with assurances that an assembly of the cortes, or three estates of the realm, should be speedily held with all their legal rights, and especially with the privilege of laying before the king, for his consideration, the heads (or chapters) of such measures as they might deem necessary for the public good, for the administration of justice, and for the redress of grievances, whether public or private. To that assembly

was referred the consideration of the periodical meetings of suc- ceeding cortes, and ‘ the means of progressively ameliorating the administration of the state,’

PORTUGAL.

Immediately after the counter revolution in 1823, John VI. sent a mission to Rio Janeiro, requiring the submission of his son and his Brasilian subjects. But, whatever might be the wishes of Don Pedro, he had no longer the power to transfer the allegiance of a people who had tasted independence. Don Pedro could not restore to Portugal her American empire ; but he might easily lose Brasil in the attempt. A ne- gociation was opened at London, in the year 1825, under the mediation of Austria and England. It was evident that no amicable issue of such a negociation was possible, which did not involve acquiescence in the separation of the two countries.

A treaty was finally concluded on the 29th of August 1825, by Sir Charles Stuart, recognising the independence and separation of Brasil, ac- knowledging the sovereignty of that country to be vested in Don Pedro ; allowing the king of Portugal also to assume the imperial title ; bind- fng the emperor of Brasil to reject the offer of any Portuguese colony to be incorporated with his dominions ; and containing some other stipu- lations usual in treaties of peace. This treaty was ratified at Lisbon, on the 5th November 1825, by letters patent, from which, at the risk of some repetition, it is necessary to extract two clauses, of which the decisive importance will be shortly seen. ‘ I have ceded and transferred to my beloved son Don Pedro de Alcantara, heir and successor of these kingdoms, all my rights over that country, recognising its inde- pendence with the title of empire. We recognise our said son, Don Pedro de Alcantara, prince of Portugal and the Algarves, as emperor, and hav- ing the exercise of sovereignty in the whole empire.’

On the 10th of March, 1826, John VI. died at Lisbon. On his deathbed, however, he made provision for the temporary administration of the government. By a royal decree of the 6th of March he committed the government to his daughter, the Infanta Donna Isabella Maria, as- sisted by a council during his illness, or, in the event of his death, till ‘ the legitimate heir and successor to the crown should make other pro- vision in this respect.’ The regency was im- mediately installed, and universally obeyed at home, as well as acknowledged, without hesita- tion or delay, by all the powers of Europe. The princess regent acted in the name, and on the behalf of her brother, Don Pedro. Not a voice was raised in any corner of Europe against his hereditary right. It was impossible that the succession of any prince to a throne could be more quiet and undisputed.

The regency, without delay, notified the de- raise of the late king to their new sovereign : and here the difficulties of that prince's situation be- gan to show themselves. Though the treaty had

not weakened his hereditary right to Portugal, yet the main object of it was to provide, not only for the independence of Brasil, but for its ' separation' from Portugal, which undoubtedly imported a separation of the crowns. Possessing the government of Brasil, and inheriting that of Portugal, he became bound by all the obligations of the treaty between the two states. Though he inherited the crown of Portugal by the laws of that country, yet he was disabled by treaty from permanently continuing to hold it with that of Brasil. But if, laying aside unprofitable subtle- ties, we consult only conscience and common sense, we shall soon discover that these rights and duties are not repugnant, but that, on the contrary, the legal right is the only means of peforming the federal duty. The treaty did not expressly determine which of the two crowns Don Pedro was bound to renounce; it therefore left him to make an option between them. A breach in the order of succession became inevi- table, either in Portugal or Brasil. Necessity re- quired the deviation. But the same necessity vested in Don Pedro, as a king and a father, the power of regulating, ip this respect, the rights of his family ; and the permanent policy of monar- chies required that he should carry the deviation no farther than the necessity.

Don Miguel had no right which was imme- diately involved in the arrangement to be adopted ; and it is acknowledged that the two daughters of John VI., married and domiciled in Spain, had lost their rights as members of the royal family. Neither the queen, nor indeed any other person, had a legal title to the regency, which in Portugal, as in France and England, was a case omitted in the constitutional laws ; and, as no Cortes had been assembled for a century, could only be provided for by the king, who, of neces- sity, was the temporary lawgiver. The only par- ties who could be directly affected by the allot- ment of the two crowns were the children of Don Pedro, the eldest of whom was in her sixth year. It was absolutely necessary that Don Pedro should retain the powers of a king of Portugal, until he had employed them for the quiet and safety of both kingdoms, as far as these might be endangered by the separation. He held that crown as a trustee for the execution of the treaty, and left Donna Maria in undisputed possession.

The Infanta Donna Maria de Gloria, heiress to the Portuguese throne, visited the English court, and renewed the friendly relations of her family with that court, while the regent, Don Miguel, boldly usurped the throne, and was proclaimed king of Portugal in 1828. The treachery of Miguel

was, however, soon chastised, and the usurper ex- pelled from the throne by Don Pedro, who came from Brazil to restore his daughter to her do- minions. In 1833, Don Miguel was compelled to withdraw totally from the kingdom of Portugal.

PORTULACA, purslane, a genus of the mo- nogynia order, and dodecandria class of plants ; natural order thirteenth, succulentae : COR. pen- tapetalous : CAL. bifid : CAPS, unilocular, and cut round. There are several species, but the two following are the most remarkable :— –

1 P. anacampseros, perennial, or shrubbv cape purslane, rises with a shrubby branchy stalk, about six inches high, with oval, gibbous, succulent leaves, and the stalks terminated by small clusters of red flowers. Both these plants are of a succulent nature : the first is an

herbaceous annual, for culinary uses ; and the second a shrubby perennial, raised by the cu- rious for variety. They are both exotics of a tender quality, of the temperature of greenhouse or stove plants. The common culinary purslane is raised annually from seed for summer use, and is an excellent ingredient in^summer salads, but improper for winter on account of its cold moist nature. The plant, being tender, must be raised eithei on a hot-bed or in a warm border ; in which last it will not succeed before April or May. The shrubby sort mu.st be kept in the hot-house, in pots of a dry soil.

2. P. coleracea, annual or common culinary purslane, rises with herbaceous, low, succulent, branchy stalks, six or eight inches high, garnished with wedge-shaped, thick, succulent leaves, and small close-setting flowers. There are two va- rieties ; one with deep green leaves, the other with yellow leaves; both of which rise from the same seed.

PORTUMNA, a town of Ireland, in the county of Galway and province of Connaught, seventy-four miles from Dublin. The castle of Portumna, the seat of the earl of Clanricarde, is at this place, and near it are the ruins of an an- cient castle. There is also a garrison for a troop of horse and two companies of foot. The town is seated near the river Shannon, where it falls into Lough Derg. The Cistercian monks had a chapel here : the walls are still nearly entire ; and the ancient choir is now the parish church. PORTUMNUS. See MELICERTA. PORUS, in ancient mythology, the god of plenty, worshipped at Rome. He was the son of Metis, the goddess of

prudence.

PORUS, an Indian monarch, who opposed Alexander the Great, but was defeated by him. When brought before the Macedonian, he was asked ‘ how he wished to be treated ?’ — ‘ Like a king,’ replied Porus; and accordingly Alexan- der not only restored all his dominions, but gave him several additional territories ; in consequence of which Porus continued his most faithful ally till his death. Porus is said to have been a man of uncommon stature and strength.

POR’WIGLE, n. s. A tadpole or young frog not yet fully shaped.

That black and round substance began to grow oval, after a while the head, the eyes, the tail to be discernible, and at last to become that which the ancients called gyrinus, we a porwigle or tadpole. Browne’s Vulgar Errours.

POSE’, -v. a.) Sax. Depose. An old word

PO’SER, n. s. i signifying heaviness or stupe- faction.— Skinner. To puzzle ; gravel; put to a stand or stop : one that asks posing questions.

She in the presence of others posed him and sifted him, thereby to try whether he were indeed the very duke of York or no. Bacon.

He that q«iestioneth much, shall learn much ; but let his questions not be troublesome, for that is fit for a poser. Id.

Learning was posed, philosophy was set,

Sophisters taken in a fisher’s net. Herbert.

How God’s eternal son should be man’s brother, Poseth the proudest intellectual power. Crashuw.

The only remaining question to me I confess is a nosing one. Hammond.

As an evidence of human infirmities, I shall give

instances of our intellectual blindness, not that I de- sign to pose them with those common enigmas of magnetism. Glanvilte.

Particularly in learning of languages, there is least occasion for posing of children. Locke on Education. It leaves no reader at a loss,

Or posed, whoever reads ; No commentator’s tedious gloss,

Nor even index needs. Cowper.

POSEN, GRAND DUCHY OF, a province of Prussia, comprising that part of Poland which was restored to her by the treaty of Vienna. It is bounded on the east by the new kingdom of Poland, and on the south and west by Silesia and Brandenburgh, and is of an oblong form, with a long projection, to the south-east. It contains about 12,000 square miles. It is di- vided into the governments of Posen arid Brom- berg, and is included in the same military di- vision as Silesia. Population amounts to*

1,164,000.

The soil, like that of Poland, generally is light ; in some places there are tracks of heath j in others marshes ; but very few parts are in- capable of cultivation, or even of yielding a considerable return. It is watered by the Netz, the Wartha, the Obra, the Brahe ; and the canal of Bromberg, which makes the influence of the vicinity of Germany to be here sensibly felt : and the duchy of Posen is much less backward than the country to the east. In the towns the number of Germans is considerable ; and various foreign colonists have settled here at different times. When the intolerance of the Austrian government compelled a great number of Pro- testants to emigrate from Silesia, this country, from its vicinity, afforded the manufacturers a retreat, and they introduced here their capital and industry. Ever since 1792 the Prussian government has made efforts to attract foreigners here, granting them several substantial immuni- ties; and the manufactures of woollen, linen, leather, and other articles continue to be well kept up. The exports consist of these, corn, cattle, tallow, hides, wool, and the smaller arti- cles of wax, honey, hogs' bristles, feathers, &c.

POSEN, GOVERNMENT OF, is the name of one of the two governments into which the grand duchy is divided. It comprehends the south and south-west parts of the province, with an area of 6900 square miles, and 545,000 inhab- itants, and is divided into the following cir- cles : —

Posen,

Kosten,

Krotoszyn,

Obernik,

Kraben,

Peisern,

Meseritz,

Szrem,

Adelnau,

Bomst,

Szroda,

Schildberg

Fraustadt,

POSEN, or POSNAN, the capital of Prussia Poland, and a bishop's see, stands at the con- fluence of the Proszna and Wartha. It is a place of considerable antiquity, having been once the capital of Poland. The bishopric, the earliest in Poland, was founded in the tenth century; and, when the Hanseatic confederacy was formed, Posen became one of its members. It appears that several families from England and Scotland settled here at a remote date, and part of the*

inhabitants still claim their descent from them. Posen is surrounded with a mound and ditch, and built with regularity. Its public edifices are an old cathedral and council-house, guard- house, and the building that was the Jesuits' college. Here also is a theatre, a theological seminary, gymnasium, and a school for mid- wifery. The manufactures, which are on a small scale, are of linen, leather, and watches ; also fire arms. The sale and purchase of goods is chiefly managed by Jews. The chief articles of < xport are corn, wool, and timber : the last being «ent by water as far as Stettin. At midsummer, the great fair of Posen is attended by the land- holders of all the adjacent country. As to re- ligion, the majority are Catholics, but the Pro- testants and Jews are in considerable numbers ; and the latter occupy a particular quarter of the town, although the inhabitants are not above

20,000.

The situation of Posen exposes it to inunda- tions ; and its two suburbs are situated among marshes. This town suffered in the war between Sweden and Poland, between the years 1708 and 171 1, both from fire and pestilence. It fell under Prussia in 1772. In 1803 the whole of the Jews' quarter was burned down. In 1806, after the battle of Jena, it was entered by the French, and afterwards added by Buonaparte to the duchy of

Warsaw ; but in 18 15 was restored to Prussia. 144 miles east of Berlin, and 166 west of War- saw.

POSIDONIUS, an ancient philosopher of Apamea, who lived at Rhodes, and afterwards came to Rome, where he cultivated the friend- ship of Cicero and Pompey. He attempted to measure the circumference of the earth ; he ac- counted for the tides from the motion of the moon ; and OH calculated the height of the at- mosphere to be 400 stadia.

POS' [TED, adj. "} Lat. positus. Placed ;

POSI'TION, n. s. deposited; ranged: po

POSI'TIOKAL, adj. 3sition is state of being

placed ; site ; situation ; principle laid down :

positional, respecting position.

Of any offence or sin therein committed against God, with what conscience can ye accuse us, when your own positions are, that the things we observe should every one of them be dearer unto us than ten thousand lives'? Hooker.

Iron having stood long in a window, being hence taken, and by the help of a cork balanced in water, where it may have a free mobility, will bewray a kind of inquietude till it attain the former position. Wotton. That the principle that sets on work these organs is nothing else but the modification of matter, or the natural motion thereof thus or thus posited or dis- posed, is most apparently false. Hale.

A fallacious illation is to conclude from the po- sition of the antecedent unto the position of the con- sequent, or the remotion of the consequent to the remotion of the antecedent. Browne.

The leaves of cataputia or spurge plucked upwards or downwards, performing their operations by purge or vomit, as old wives still do preach, is a strange conceit, ascribing unto plants positional operations. Id. Vulgar Errours,

They are the happiest regions for fruits, by the ex- cellence of soil, the position of mountains, and the frequency of streams. Temple.

Since no one sees all, and we have different pros-

pects of the same thing, according to our different positions to it, it is not incongruous to try whether another may not have notions that escaped him.

Loche.

By varying the position of my eye, and moving it nearer to or farther from the direct beam of the sun's light, the colour of the sun's reflected light constantly varied upon the speculum as it did upon my eye.

Newton's Optics.

.Let not the proof of any positions depend on the positions that follow, but always on those which go before. Walts.

POSITIVE, adj. \ Fr. poiitif; Lat. po POS'ITIVELY, adv. Ititta. Real; absolute; POS'JTIVENESS, n.s. {direct; capable of being POSITIV'ITY. J affirmed; not negative

or implied ; dogmatic ; settled ; enactive : posi- tively follows these senses : positiveness and po- sitivity mean actualness ; reality ; perernptori- ness ; confidence.

Although no laws but positive be mutable, yet all are not mutable which be positive ; positive laws are either permanent or else changeable, according as the matter itself is, concerning which they were made.

Hooker.

It is well and truly said in schools, in sin there is nothing positiue ; but it is a want of that which ought to be, or subsist, partly in the nature of man, and partly in the actions of nature. Perkins.

Give me some breath, some little pause, Before 1 positively speak in this. Shakspeare.

The power or blossom is a positive good, although the remove of it, to give place to the fruit, be a com- parative good. Bacon.

The good or evil, which is removed, may be es- teemed good or evil comparatively, and not positively or simply. Bacon.

Laws are but positive ; love's power, we see, Is nature's sanction, and her first decree-

Dryden.

It was absolutely certain that this part was posi- tively yours, and could not possibly be written by any other. Id.

Whatsoever doth or can exist, or be considered as one thing, is positive : and so not only simple ideas and substances, but modes also are positive beings, though the parts of which they consist are very often relative one to another. Locke.

The posiliveness of sins of commission lies both in the habitude of the will and in the executed act too ; whereas the positiveness of sins of omission is in the habitude of the will only. Norn's.

I would ask a man, that has but once read the bible, whether the whole tenor of the divine law does not positively require humility and. meekness to all men.

Sprat.

I am sometimes doubting, when I might be po- sitive, and sometimes confident out of reason.

Rymer.

The law is called positive, which is not inbred, imprinted, or infused, into the heart of man, by nature or grace ; but is imposed by an external man- date of a lawgiver, having authority to command.

White.

This peremptoriness is of two sorts ; the one a magisterial ness in matters of opinion, the other a positiveness in relating matters of fact ; in the one we impose upon men's understandings, in the other on their faith. Government of the Tongue.

It is impossible that any successive duration should be actually and positively infinite, or have infinite successions already gone and past.

Benlley.

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Some positive persisting fops we know,

That, if once wrong, will needs be always so ;

But you, with pleasure, own your errors past,

And make each day a critick on the last. Pope.

Not to consent to the enacting of such a law, which has no view besides the general good, unless another law shall at the same time pass, with no other view but that of advancing the power of one party alone ; what is this but to claim a positive voice, as well as a negative 1 Swift.

Courage and positively are never more necessary than on such an occasion ; but it is good to join some argument with them of real and convincing force, and let it be strongly pronounced too. Watts.

Where men of judgment creep and feel their way, The positive pronounce without dismay ; Their want of light and intellect supplied By sparks absurdity strikes out of pride. Cowper.

POSITIVE ELECTRICITY. See ELECTRICITY.

POS'ITURE, n. s. Lat. positura. The man- ner in which any thing is placed.

Supposing the positure of the party's hand who did throw the dice, and supposing all other things, which did concur to the production of that cast, to be the very same they were, there is no doubt but in this case the cast is necessary. Bramhall.

POS'NET, n.s. FT. bassinet. Skinner. A little basin ; a porringer ; a skillet.

To make proof of the incorporation of silver and tin in equal quantity, and also whether it yield no soiliness more than silver ; and again, whether it will endure the ordinary fire, which belongeth to chaffing-dishes, posnets, and such other silver vessels.

Bacon.

POS'SE, n.s. Lat. posse. An armed power. From posse comitatus, the power of the shires. A low word.

The posse comitatus, the power of the whole county, is legally committed unto him. Bacon.

As if the passion that rules, were the sheriff of the place, and came off with all the posse, the under- standing is seized. Locke.

POSSE COMITATUS, in law, signifies the power of the county, or the aid

and assistance of all the knights, gentlemen, yeomen, laborers, ser- vants, apprentices, &c., and all others within the county that are above the age of fifteen, except women, ecclesiastical persons, and such as are decrepit and infirm. This posse comitatus was to be raised where a riot is committed, a pos- session kept upon a forcible entry, or any force of rescue used contrary to the king's writ, or in opposition to the execution of justice ; and it is the duty of all sheriffs to assist justices of the peace in the suppression of riots, &c., and to raise the posse comitatus, or to charge any num- ber of men for that purpose.

POSSESS', v. a. "^ Fr. posseder ;

POSSESS'ION, n. s. & v. a. Lat. possessor. To POSSESS'IONER, w. s. I own ; enjoy; oc-

POSSESS'IVE, adj. | cupy ; have power

POSSESS'ORY, over, or disposal

POSSESS'OR, n. s. J of : hence to de-

liver over; give possession, or command of (taking of or u-lth) ; affect by inward or con- cealed power : possession is ownership ; pro- perty ; the state of having in one's own hands, power, or use ; effect of being possessed, as the madness caused by an unclean spirit : as an ob- solete verb active, to invest with property : pos- sessioner and possessor are both obsolete words

for master ; owner ; proprietor : possessive and possessory, having possession.

And whanne the younge man had herde these wordis he wente away sorowful for he hadde many possessions. Wiclif. Matt. xix.

He shall inherit her, and his generation shall hold her in possession. Ecclus. iv. 16.

They were people, whom having been of old free- men and possessioners, the Lacedemonians had con- quered. Sidney.

She will not let instructions enter Where folly now possesses.

Shakspeare. Cymbeline Record a gift,

Here in the court, of all he dies possessed, Unto his son. Id. Merchant of Venice

This man, whom hand to hand I slew in fight, May be possessed with some store of crowns.

Stfiakspeare.

He's possest with greatness, And speaks not to himself, but with a pride That quarrels at self- breath. Id.

Let not your ears despise my tongue, Which shall possess them with the heaviest sound That ever yet they heard. Id.

The English marched towards the river Eske, in- tending to possess a hill called Under-Eske.

Hay ward.

Sundry more gentlemen this little hundred possess- eth and possessioneth. Carew.

Inspired within, and yet possessed without.

Cleavelanrl.

This he detains from the ivy much against his will ; for he should be the true possessory lord thereof.

Howel.

Seem I to thee sufficiently possessed Of happiness or not, who am alone From all eternity'? Milton's Paradise Lost.

What fury, O son,

Possesses thee, to bend that mortal dart Against thy father's head? Id.

In possession such, not only of right, I call you. Milton.

Thou profoundest hell Receive thy new possessor. Id.

Beware what spirit rages in your breast ; For ten inspired, ten thousand are possest.

Roscommon.

I hope to possess chymists and corpuscularians aj the advantages to each party, by confederacy between them. Boyle.

A considerable difference lies between the honour of men for natural and acquired excellencies and di- vine graces, that those having more of human nature in them, the honour doth more directly redound to the possessor of them. Stillingfteet.

Do nothing to lose the best possession of life, that of honour and truth. Temple.

Whole houses, of their whole desires possest, Are often ruined at their own request. Dryden.

The intent of this fable is to possess us of a just sense of the vanity of these craving appetites.

L'Estrange.

A man has no right over another's life, by his hav- ing a property in land and possessions. Locke.

This possesses us of the most valuable blessing of human life, friendship. Government of the Tongue. We possessed ourselves of the kingdom of Naples, the dutchy of Milan, and the avenue of France in Italy. Addison.

It is of unspeakable advantage to possess our minds with an habitual good intention, and to aim all our thoughts, words, and actions at some laudable end.

Id

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Endowed with the greatest perfections of nature, and possessed of all the advantages of external condi- tion, Solomon could not find happiness. Prior.

'Twas the interest of those, who thirsted after the possessions of the clergy, to represent the possessors in as vile colors as they could. Atterbury's Sermmis. With the rage of all their race possest,

Stung to the soul, the brothers start from rest.

Pope.

I think that the man is possessed. Swift.

Think of the happiness of the prophets and apos- tles, saints, and martyrs, who are now rejoicing in the presence of God, and see themselves possessors of eternal glory. Law.

POSSESSIO FRATRIS, in law, is where a man has a son and a daughter by one venter or wife, and a son by another venter, and dies ; if the first son enter, take possession, and die without issue, the daughter shall have the land as heir to her brother ; but if the eldest son die without issue, not having made an actual entry and seisin, the younger brother by the second wife, as heir to the father, shall enjoy the estate, and not the sister.

POSSESSION BAY, a bay on the north coast of the island of Georgia, observed by captain Cook in 1775. The head of it, he says, although it was then the summer season, as well as the places on each side, was terminated by high perpendicular ice-cliffs. The inner parts of the country were not less savage and forbidding. The wild rocks raised their lofty summits to the clouds, and the valleys lay clothed with ever- lasting snow. Long. 37° 18′ W., lat. 54° 5′ S.

POSSESSION BAY, a bay in the straits of Ma- gellan. The point lies in long. 69° 39′ W., lat. 52° 20′ S. ; and a reef of rocks runs off from it for about a mile. The soundings are irregular, but the anchorage is good.

POSSESSION ISLAND, an island in the South Pacific, near the north point of New Holland, where captain Cook hoisted the English colors, and took possession of all the east or north-east coast of New Holland, with all bays, harbours, rivers, and islands, situated on it, in the name of the king of Great Britain. Twenty miles north of York Cape. Long. 218° 21′ W., lat. 10° 33′ S.

POSSESSION, POINT, a cape on the west coast of North America, and east of Cook's inlet ; so called because here Mr. King, lieutenant to cap- tain Cook, took possession of the river and country in the name of George III. of Eng- land, on the 10th of June, 1778. The natives appeared similar to those of Prince William's Sound.

POSSESSION, in English law, is either actual, where a person actually enters into lands or tenements descended or conveyed to him ; or where lands are descended to a person, and he has not yet entered into them. A long posses- sion is much favored by the law as an argument of right, even though no deed can be shown, and it is more regarded than an ancient deed without possession. If he that is out of possession of land bring an action, he must prove an unde- niable title to it; and when a person would

recover any thing of another, it is not sufficient Co destroy the title of the person in possession H'ithout he can prove that his own right is

better than his. To make possession lawful upon an entry, the former possessor and his servants are to be removed from off the premises entered on : but a person by lease and release is in possession without making any entry upon the lands.

POSSESSIVE, in grammar, a term applied to nouns, which denotes the enjoyment or posses- sion of any thing, either in particular or in common ; as meus, mine ; tuus, thine.

PO'SSET, n. s. Lat. posca. Milk curl led with wine or any acid.

We'll have a posset at the latter end of a sea-cot 1 fire. Sltakspeare.

Swift as quicksilver it courses through The natural gates and alleys of the body ; And, with a sudden vigour, it doth posset And curd, like eager droppinps into milk, The thin and wholesome blood. Id. Hamlet.

In came the bridemaids with the posset, The bridegroom eat in spite. Suckling.

A sparing diet did her health assure ; Or sick, a pepper posset was her cure. Dryden. The cure of the stone consists in vomiting with posset drink, in which althea roots are boiled.

Flayer.

Increase the milk when it is diminished by the too great use of flesh meats, by gruels a d posset drink. 4 Arb ilhitat.

I allowed him medicated broths, posset ale, and pearl julep. WW/. ait's S irgery.

POSSEVIN (Anthony.), a Jesuit, born at Mantua, in 1533. He was employed by Gre- gory XIII. in embassies to Poland, Sweden, and Germany ; and wrote a number of works on theology. He died at Ferrara, in 1611.

POS'SIBLE, adj. "> Fr. possible ; Lat. possi-

POSSIBIL'ITY, n. s. >bi/is. Practicable; hav-

POS'SIBLY, adv. j ing the power to be or to be done ; not contrary to the nature of things : the noun substantive and adverb corresponding.

With men this is impossible, but with God all things are possible. Matthew,

xix. 26.

All things are possible to him that believeth.

Mark.

There is no let, but that as often as those books are read, and need so requireth, the stile of their differences may expressly be mentioned to bar even all possibility of error. Hooker.

Within the compass of which laws, we do not only comprehend whatsoever may be easily known to be- long to the duty of all men ; but even whatsoever may possibly be known to be of that quality. Id.

Admit all these impossibilities and great absurdi- ties to be possible and convenient. Whityijt.

Brother, speak with possibt'ities, And do not break into these woeful extremes.

Shakspeare.

When we have, for the proof of any thing, some of the highest kinds of evidence, and in this case it is not the suggestion of a mere possibility that the thing may be otherwise, that ought to be any suffi- cient cause of doubting. Wilkins.

He must not stay within doors, for fear the house should fall upon him, for that is possible : nor must he go out, lest the next man that meets him should kill him, for that is also possible. Id-

Possibly he might be found in the hands of th earl of Essex, but he would be dead first.*

Clarendon.

Firm we subsist, but possible to swerve. Slnitm.

Can we possibly his love desert ˆ Id,

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A bare possibility that a thing may be or not be, is no just cause of

doubting whether a thing be or not.

Tillotson .

It will scarce seem possible, that God should en- grave principles in men's minds in words of uncer- tain signification. Locke.

According to the multifariousness of this imitabi- lity, so are the possibilities of being. Norris.

Consider him antecedently to his creation, while he yet lay in the barren womb of nothing, and only in the number of possibilities ; and consequently could have nothing to recommend him to Christ's affection.

South.

Arbitrary power tends to make a man a bad sove- reign, who might possibly have been a good one, had he been invested with an authority circumscribed by law. Addison.

Example not only teaches us our duty, but con- vinces us of the possibility of our imitation.

Rogers.

POSSIDONIUS, a philosopher of Alexan- dria, who flourished after Eratosthenes, and before Ptolemy. He is by some confounded with Possidonius of Apamea.

POSSO (Andrew), an eminent painter of landscapes, history, and portraits, born at Trent in 1642. His paintings are very beautiful. He was also an author, and wrote some excellent tracts on perspective.

POST, v. a. Fr. paste, poster ; Ital posto ; Lat. positus, postis. Situation ; station ; place : seat ; office ; employment ; military station ; a piece of timber erected : to place ; station ; fix ; register (as in a book of accounts) ; delay ; to fix opprobriously on posts, or in a conspicuous situation.

The blood they shall strike on the two side posts and upper post of the house. Exodus xii. 7.

I have not stopt mine ears to their demands, Nor potted off their suits with slow delays ; Then why should they love Edward more than me ?

Shakspeare.

Fir-trees, cypresses, and cedars being, by a kind of natural rigour, inflexible

downwards, are thereby fittest for posts or pillars. Wotton's Architecture.

Many gentlemen, for their integrity in their votes, were, by posting their names, exposed to the popular calumny and fury. King Charles.

It is a goodly sight to behold things proceeding orderly ; to see every person quietly resting in his post, or moving evenly in his rank. Barrow.

The conscious priest, who was suborned before, Stood ready posted at the postern door. Dryden. See before the gate what stalking ghost,

Commands the guard, what sentries keep the post. Id.

Every man has his post assigned to him, and in that station he is well, if he can but think himself so. L' Estrange.

He that proceeds upon other principles in his en- quiry into any sciences, puts himself on that side, and potts himself in a party, which he will not quit till he be beaten out. Locke.

The waters rose every where upon the surface of the earth ; which new post, when they had once seized on, they could never quit Burnet.

When a man is posted in the station of a minister, he is sure, beside the natural fatigue of it, to incur the envy of some, and the displeasure of others,

Addison's Freeholder. As I watched the gates, Lodged on my post, a herald is arrived From Caesar's camp. Id. Cato.

Without letters a man can never be qualified for any considerable post in the camp ; for courage and corporal force, unless joined with conduct, the usual effects of contemplation, are no more fit to command than a tempest. Collier.

You have not posted your books these ten years T how should a man keep his affairs even at this rate ?

Arbuthnot. On pain of being posted to your sorrow,

Fail not, at four, to me. Granville.

Whatever spirit, careless of his charge,

His post neglects, or leaves the fair at large,

Shall feel sharp vengeance. Pope.

Many thousands there are who determine the jus- tice or madness of national administrations, whom neither God nor men ever qualified for such a post of judgment. Watts.

Post is equivocal ; it is a piece of timber, or a swift messenger. Id. Logick.

POST, n. s. & v. n.⌃*\ Fr. paste ; Ital. posta.*

POST'AGE, n. s. I A carrier or messenger;

POST'BOY, | one who travels with

POST'HASTE. ˆ speed ; quick manner of

POST'HORN, travelling: to travel spee-

POST'OFFICE, dily or hastily : postage

POST'HORSES, J is money paid for con- veying letters : postboy, a boy that rides post ; a posthorn announces the arrival of letters by a public post, and the post-office receive and distri- bute them : post-horses are those used in tra- velling post.

He lay under a tree, while his servants were get- ting fresh posthorses for him. Sidnry.

The Turkish messenger presently took horse which was there in readiness for him, and posted towards Constantinople with as much speed as he could.

K Holies I fear my Julia would not deign my lines,

Receiving them by such a worthless post.

Shakspeare

I brought my master news of Juliet's death, And then in post he came from Mantua To this same monument. Id. Romeo and Juliet.

I posted day and night to meet you. Sliakspture. Post speedily to my lord, your husband,

Shew him this letter. Id. King Lear.

Weird sisters hand in hand, Posters of the sea and land, Thus to go about. Id. Macbeth.

This is

The source of this our watch, and the chief head Of this posthaste and romage in the land.

Shakspeare.

He cannot live, I hope ; and must not die, Till George be packed with posthorse up to heaven.

Id.

I came yonder at Eaton to marry Mrs. Ann Page ; and 'tis a postmaster's boy. Id.

Themistocles made Xerxes post apace out of Greece, by giving out that the Grecians had a pur- pose to break his bridge of ships athwart the Helles- pont. Bacon's Essays.

A cripple in the way out-travels a footman, or a post out of the way. Ben Jonson't Discovery.

Espying the French ambassador with the king's coach attending him, made them balk the beaten road and teach posthackneyi to leap hedges.

Wotton .

In certain places there be always fresh post to carry that farther which is brought unto them by the other. Abbot.*

This man tells us, that the world waxes old though not in posthaste. Haketcill on Provide'i<€.

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Then this, then that man's aid, they crave, im- plore ; Post here for help, seek there their followers. Daniel.

Thousands at his bidding speed, And post o'er land and ocean without rest.

Milton.

He who rides post through an unknown country, cannot distinguish the

situation of places. Dryden.

Fifty pounds for the postage of a letter ; to send by the Church is the dearest road in Christendom.

Id.

No wonder that pastorals are fallen into dises- teem ; I see the reader already uneasy at this part of Virgil, counting the pages, and posting to the ˆineis.

Walsh.

This genius came thither in the shape of a post- boy, and cried out that Mons was relieved. Taller.

Without this letter, as he believes that happy re- volution had never been effected, he prays to be made postmaster generaU Spectator.

This only object of my real care, In some few posting fatal hours is hurled From wealth, from power, from love, and from the world. Prior.

If you don't send to me now and then, the post- office will think me of no consequence ; for I have no correspondent but you. Gay to Swift.

I send you the fair copy of the poem on dulness, which I should not care to hazard by the common post. Pop .

If you are sent to the postoffice with a letter, put it in carefully. Swift.

An officer at the posthouse in London places every letter he takes in, in the box belonging to the proper road. Watts.

By the correspondence which his place in the post- office facilitated, he procured country newspapers and sold their intelligence to a journalist in London, for a guinea a week. Johntmt.

But let eternal infamy pursue

The wretch to nought but his ambition true,

Who, for the sake of filling with one blast

The post-horns of all Europe, lays her waste.

Coivper.

POST, in military affairs, any place where soldiers are stationed. Thus the detachments established in front of the army are termed the out-posts ; the stations on the wings of the army are said to be the posts of honor, as being the most conspicuous and most exposed. But in the operations of a campaign, a post properly signifies any spot of ground capable of lodging soldiers, or any situation, whether fortified or not, where a body of men may make a stand and engage the enemy to advantage. The use of them is chiefly felt in a defensive war against an invading enemy ; as by carrying on a war of posts in a country where this can be done to advantage, the most formidable army may be so harassed and reduced that all its enterprises may be rendered abortive. Indeed, in modern times, pitched battles have become much more rare than formerly, mano2uvring and securing of posts being considered as the most essential objects in the conduct of a campaign. In the choice of a post, the general rules to be attended to are, that it be convenient for sending out parties to re-connoitre, surprise, or intercept the enemy ; that if possible it have some natural defence, as a wood, a river, or a morass, in front or flank, or at least that it be difficult of access, and suscep- tible of speedy fortification ; that it be so situate

as to preserve a communication with the main army, and have covered places in the rear to favor a retreat ; that it command a view of all the approaches to it, so that the enemy cannot advance unperceived and rest concealed, while ‘ the detachment stationed in the post are forced to remain under arms ; that it be not commanded by any neighbouring heights ; and that it be proportioned in extent to the number of men who are to occupy and defend it. It is not to be expected that all these advantages will often be found united ; but those posts ought to be selected which offer the greatest number of them.

POST OFFICE. This important office for the conveyance of letters through the kingdom, as well from foreign parts as from place to place within Great Britain, was attempted to be erected by the parliament in 1643 ; an office was erected first in 1 657, and after the restoration established by stat. 12 Car. II. c. 35. See Blackstone 1 Comm. 321.

The rates of letters have been from time to time altered, and some further regulations added by stats. 9 Ann. c. 10 ; 6 Geo. I. c. 21 ; 26 Geo.

II. c. 13 ; 5 Geo. III. c. 25 ; 7 Geo. III. c. 50 ; 28 Geo. III. c. 9; 39 Geo. III. c. 76; 41 Geo.

III. (U. K.) c. 7; 42 Geo. III. c. 81 and 101 ;

45 Geo. III. c. 11 ; 46 Geo. III. c. 73 and 92; 48 Geo. III. c. 116; 55 Geo.

III. c. 87, and penalties are imposed in order to confine the carriage of letters to the public office only ; ex- cept in some few cases. Rates of postage in postage in Ireland, are regulated by 54 Geo. III. c. 119; 55 Geo. III. c. 103. See also 43 Geo. III. c. 28, and Irish act 23, 24 Geo. III. c, 17.

The privilege of letters coming free of post- age to and from members of parliament was claimed by the house of commons in 1660, but dropped on a private assurance that it should be allowed. A warrant accordingly used to be issued to the postmaster-general to allow the same ; till at length it was expressly confirmed by stat. 4 Geo. III. c. 24 ; which, and stats. 24 Geo. III. stat. 2, c. 37 ; 35 Geo. III. c. 53, add many new regulations ; rendered necessary by the great abuses crept into the practice of franking. This privilege of franking is still fur- ther regulated by stat. 42 Geo. III. c. 63 ; and

46 Geo. III. c. 61 ; and is by several acts ex- tended to public offices and boards in particular government departments.

Our post office originally partook of the spy- like character of the present French establish- ment of this name. The preamble of the ordi- nance, made in 1657, states that the establishing one general post-office, besides the benefit to com- merce, and the convenience of conveying public dispatches, ‘ will be the best means to discover and prevent many dangerous and wicked designs against the commonwealth :’ and, strange to say, the policy of having the correspondence of the kingdom under the inspection of government is still continued ; for by a warrant from one of the principal secretaries of state, letters may be detained and opened. 1 Comm. 322, edit. 1793, n. 28. But by stat. 9 Ann. c. W, sect. 40, if any person shall, without such authority, wilfully detain or open any letter or packet delivered to the post-office, he shall forfeit £20, and be ir-*

capable of future employment in the post-office. — It has been decided that no person is subject to this penalty but those who are employed in the post-office, 5 Term Rep. 101. But seestat. 35 Geo. III. c. 62, and 17 Geo. III. stat. 2, c. 53, enabling the postmaster general to open and return letters to foreign parts in consequence of certain political emergencies.

By 7 Geo. III. c. 50, enforced by 42 Geo. III. c. 81, persons employed in the post-office se- creting any letters containing securities for money, &c., are punished as felons without be- nefit of clergy; as are also persons

procuring such offence. It seems that it is not a felony within 7 Geo. III. c. 50, sect. 1, for a person employed in the post-office, to steal out of a letter entrusted to his care a draft on a London banker, purporting to be drawn in London, but actually drawn about ten miles from London, on unstamped paper. It seems also that sect. 2 of the same act does not apply to persons employed in the post-office ; and that such a person, there- fore, who steals a letter out of the post-office, is not guilty of felony under that act. 3 Bos and Pull. 311.

No action can be maintained against the post- master-general, for the loss of bills or articles sent in letters by the post. 1 Ld. Raym. 646; 1 Com. Rep. 100. Many attempts were formerly made by postmasters in country towns to charge %d. and Id. a letter on delivery, at the houses in the town, above the parliamentary rates ; under the pretence that they were not obliged to carry the letters out of the office gratis. But it was re- peatedly decided that such a demand is illegal, and that they are bound to deliver the letters to the inhabitants, within the usual and established limits of the town, without any addition to the rate of postage. Yet, by 46 Geo. III. c. 92, letters may be conveyed to and from places, not being post-towns, and charged with extra prices.

We have noticed the new building of this name under the article LONDON.

POSTDILU'VIAN, adj. Lat. post after, and diluvium, a flood. Posterior to the flood.

The antediluvians lived a thousand years ; and as for the age of the postdiluvians for some centuries, the annals of Phoenicia, Egypt, and China, agree with the tenor of the sacred history. Grew.

Take a view of the postdiluvian state of this our globe, how it hath stood for these last four thousand years. Woodward.

POSTEL (William), a learned Rhemish en- thusiast, was born in Normandy in 1510, and in his youth supported himself at the college of St. Bar be, as the servant of the other students. Francis I. afterwards sent him to the east to collect MSS., which commission he discharged with credit, and was appointed on his return professor of mathematics and languages. After this he fell into disgrace, and was obliged to leave France. He died in a monastery in 1581. Pos- tel pretended to have died, and risen again with the soul of Adam ; and called himself Postellus restitutus ; he also maintained that, women shall have the dominion over men ; and that his doctrines were revealed to him by Jesus Christ.

POSTE'RIOR, adj.) F ™> ***rieur ; Lat. POSTERIORITY, n. s. tposienor.***

happening POSTE'RIORS, n. s.pl. ? after , pAcPo ? **»• ; fcl- POSTER'H Y, J lowing ; uackward :*

hence, in the noun-substantive plural, the back- ward part of the body : posterity, descendants ; those who come after us.

It was said,

It should not stand in thy posterity ; But that myself should be the father Of many kings. Shakspeare. Macbeth.

Where the anterior body giveth way, as fast as the posterior cometh on, it maketh no noise, be the motion never so great. Bacon.

Posterity informed by thee might know.

Milton.

There must be a posterity in time of every com pounded body, to these more simple bodies out ot which it is constituted. Hale.

Although the condition of sex and posteriority of creation might extenuate the error of a woman, yet it was inexcusable in the man. Browne.

No care was taken to have this matter remedied by the explanatory articles posterior to the report.

Addison.

Their names shall be transmitted to posterity, ana spoken of through all future ages. Smalridge.

They were fallible, they were men ; but if poste- ~ity, fallible as they, grow bold and daring, where the other would have trembled, let them look to it.

Waterland.

And now had fame's posterior trumpet blown, And all the nations summoned. Pope.

To the unhappy, that unjustly bleed, Heaven gives posterity t' avenge the deed. Id. To raise one hundred and ten thousand pounds is as vain as that of Rabelais, to squeeze out wind from the posteriors of a dead ass. Suift.

Hesiod was posterior to Homer. Broome.

This orderly disposition of things includes the ideas of prior, posterior, and

simultaneous. Watts.

PO'STERN, n. s. Fr. pbterne ; Belg. pos- tcrne ; Lat. postica. A small gate ; a little door.

Ere dawning light Discovered had the world to heaven wide,

He by a privy postern took his flight, That of no envious eyes he mote be spyed.

Spenter.

Go on, good Eglamour, Out at the postern by the abbey wall.

Shakspeare.

Great Britain hath had by his majesty a strong addition ; the postern, by which we were so often entered and surprised, is now made up. Raleigh.

Theso issued into the base court through a privy postern, and sharply visited the assailants with hal- berds. Hayward.

By broken byways did I inward pass, And in that window made a postern wide.

Fairfax.

To what purpose are those strait and capital inhi- bitions of the return of our factious fugitives into this kingdom, if, while the wicked is shut upon them, that they should not come to us, the postern be open to us, that we may go to them. Bp. Hall.

The conscious priest, who was suborned before, Stood ready posted at the postern door. Dryden.

If the nerves, which are the conduits to convey them from without to the audience in the brain, be so disordered as not to perform their functions, they have no postern to be admitted by, no other ways to bring themselves into view. Loche

A private postern opens to my gardens, Through which the beauteous

captive might remove.

Rome.

Thought, busy thought ! too busy for my peace ! Thro' the dark postern of time long elapsed, Led softly, by the stillness of the night. Young.

A POSTERN, in fortification, is usually made in the angle of the flank of a bastion, or in that of the curtain, or near the orillon, descending into the ditch ; whereby the garrison can march in and out, unperceived by the enemy, either to relieve the works, or to make private sallies, &c. The word is also used in general for any private or back door.

POSTEXIS'TENCE, n. s. Post and exist- ence. Future existence.

As Simonides has exposed the vicious part of wo- men from the doctrine of pre-existence, some of the ancient philosophers have satirised the vicious part of the human species, from a notion of the soul's post- existence. Addison.

POSTHUMOUS, adj. Fr. posthume ; Lat. posthumus. Done, had, or published, after one's death.

In our present miserable and undivided condition, how just soever a man's pretensions may be to a great or blameless reputation, he must, with regard to his posthumous character, content himself with such a consideration as induced the famous Sir Francis Bacon, after having bequeathed his soul to God, and his body to the earth, to leave his fame to foreign nations. Addison.

POS'TICK, adj. Lat. posticus. Backward.

The postick and backward position of the feminine parts in quadrupeds can hardly admit the substitu- tion of masculine generation. Browne.

POS'TIL, v. a. Fr. pastille ; Lat. postella, a gloss. To gloss; illustrate with marginal notes.

I have seen a book of account of Empson's, that had the king's hand almost to every leaf by way of signing, and was in some places postilled in the mar- gin with the king's hand. Bacon. Hence you fantastic postillers in song,

My text defeats your art, ties nature's tongue.

Cleaveland.

It hath been observed by many holy writers, com- monly delivered by postillers and commentators.

Browne.

POSTI'LION, n. s. Fr. postilion. One who guides the first pair of a set of horses; one who guides any post-horses.

Let the postilion nature mount, and let

The coachman art be set. Cowley.

A young batchelor of arts came to town recom- mended to a chaplain's place ; but, none being va- cant, modestly accepted of that of a postilion.

Tatter.

POSTING, or TRAVELLING BY POST, a parti- cular mode of travelling. A person is said to travel post, when, in place of going on during his whole journey in the same vehicle and with the same horses, he stops at different stages to provide fresh horses, for the sake of greater convenience and expedition ; and when therefore he takes a carriage expressly for himself instead of going by any regular coach. In tracing the origin of posts, it has been already remarked, that the more ancient establishments of this kind were fully as much for travelling stations as the conveyance of letters. The relays of horses pro- vided at these public stations for the messengers

of the prince were occasionally, by special license, allowed to be used by other travellers who had sufficient interest at court. Frequent demands of this nature would suggest the expe- dient of having in readiness supplies of fresh horses and carriages over and above what the public service required, to be hired out to other travellers on payment of an adequate price. We find, therefore, that in former times the post- masters alone were accustomed to let out horses for riding post, the rates of which were fixed in 1548 by a statute of Edward VI. at one penny per mile. In the statute re-establishing the post-office in 1660 it is enacted that none but the post-master, his deputies, or assigns, shall furnish post-horses for travellers ; with a pro- viso, however, that, if he has them not ready in half an hour after being demanded, the traveller shall be at liberty to provide himself elsewhere. The same prohibition is contained in the act establishing the Scotch post-office in 1695, as well as in the subsequent act of queen Anne, erecting the general office for the united kingdom. It is doubtful, however, whether it ever was strictly enforced. By an explanatory act of 26 Geo. II. the prohibition is confined to post horses only, and every person declared to be at liberty to furnish carriages and horses to them of every kind for travellers. The increase of commerce, and necessity for a speedy com-

munication between different parts of the king- dom, have brought stage-coaches into such ge- neral use that posting is seldom resorted to. The rate of posting now stands from Is. to Is. 3d. per mile, according as the season has been favorable to the production of fodder.

POSTLETHWAYT (Malachy), an eminent English lexicographer. He published The Uni- versal Dictionary of Trade and Commerce; an extensive and comprehensive work, in 2 vols. large folio, London, dedicated to Sir Stephen Theodore Janssen, Bart. It went through se- veral editions. He died in 1767.

POSTLIM'INOUS, adj. Lat. postiliminium. Done or contrived subsequently.

The reason why men are so short and weak in governing, is, because most things fall out to them accidentally, and come not into any compliance with their pre-conceived ends, but are forced to comply subsequently, and to strike in with things as they fall out, by postliminotu after-applications of them to their purposes. South.

POSTMERIDIAN, adj. Lat. postmeridia- nut. In the afternoon.

Over-hasty digestion is the inconvenience of post- meridian sleep. Bacon's Natural History.

POSTPONE', v. a. Yr.postposer; Lat. post- pono. To put off; to delay ; set in value below another power or thing.

You would postpone me to another reign,

TiL when you are content to be unjust. Drydtn.

All other considerations should give way, and be postponed to this. Locke on Education.

The most trifling amusement is suffered to post- pone the one thing necessary. Roger.*

POST-SCRIPT, n. s. Lat. post and scriptum. The paragraph added to the end of a letter.

One, when he wrote a letter, would put that which was mc.st material in the postscript. Bacon.

POS

I think lie prefers the public good to his private opinion ; and therefore is willing his proposals should with freedom be examined; thus I under- stand his postscript. Locke.

The following letter I shall give my reader at length, without either preface or postscript.

Addison.

Your saying that I ought to have writ a postscript to Gay's, makes me not content to write less than a whole letter. Pope.

POSTULATE, v. a. & n. s.\ Fr. postuler ;

POSTULA'TION, n.s. ˆ Lat. postulo. To

POS'TULATORY, adj. i assume without

POSTULA'TUM, n. s. J proof; a postu-

late is an unproved assumption : postulation, the act of assuming without proof ; postulatum is a single position of this ' kind : postulatory, as- suming without proof.

A second postulation to elicit my assent, is the ve- racity of him that reports it. Hale.

They most powerfully magnify God, who, not from postulated and precarious inferences, entreat a courteous assent, but from experiments and unde- niable effects. Browne.

This we shall induce not from postulates and in- treated maxims, but from undeniable principles.

.Id.

Whoever shall peruse the physiogmonia of Porta, and strictly observe how vegetable realities are forced into animal representations, may perceive the sem- blance is but postulatory. Id.

Calumnies often refuted, are the postulatums of scribblers, upon which they proceed as upon first principles. Addison.

Some have cast all their learning into the method of mathematicians, under theorems, problems, and postulates. Watts.

POSTULATE, in mathematics, &c., is such an easy and self-evident supposition as needs no explication or illustration to render it intelli- gible; as that a right line may be drawn from one point to another.

POSTURE, n. s. & v. a. J Fr. posture ; Lat.

POS'TU RE-MASTER. J positura. State;

place ; situation ; disposition with regard to something else ; position of the limbs in respect to each other : to posture, to put in a particular situation : posture-master, one who teaches or practises artificial movements or contortions of the body.

He starts,

Then lays his finger on his temple ; strait Springs out into fast

Strikes his breast haid, and then anon he casts Ills eyes against the moon, in most strange postures.

Shakspeare.

He was raw with posturing himself according to the direction of the chirurgeons. Brook.

I am at the same point and posture I was, when they forced me to leave Whitehall. King Charles.

The lord Hopton left Arundel Castle before he had put it into the good posture he intended.

Clarendon.

In this abject posture have ye sworn T' adore the conqueror. Milton.

Although these studies are not so pleasing as con- templations physical or mathematical, yet they re- compence with the excellency of their use in relation to man, and his noblest posture and station in this world, a state of regulated society. Hale.

The posture of a poetick figure is the description of his heroes in the performance of such or such an action. Dryden.

The gill'fins are so postured as to move from back to belly and e contra. Grew.

When the students have accomplished themselves in this part, they are to be

delivered into the hands of a kind of posturemaster. Spectator.

In the meanest marble statue, one sees the faces, postures, airs, and dress of those that lived so many ages before us. Addison.

The several postures of his devout soul in all con- ditions of life are displayed with great simplicity.

Atterbury.

Where there are affections of reverence, there will be postures of reverence. South.

PO'SY, n. s. [contracted from POESY, which see.] A motto on a ring.

A paltry ring,

That she did give me, whose posy was, • Like cutler's poetry ;

Love me, and leave me not, Shakspeare. You have chosen a very short text to enlarge upon ; I should as soon expect to see a critick on the posy of a ring, as on the inscription of a medal.

Addison.

PO'SY, n. s. A bunch of flowers. ' Of un- known derivation,' says Dr. Johnson. Mr. Thomson suggests the above word (posy, a motto, i. e. of a ring or nosegay) as its probable etymo- logy.

With store of vermeil roses, To deck their bridegroom's posies. Spenser. We make a difference between suffering thistles to grow among us, and wearing them for posies.

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Volume XVIII (Pot - Rome)

The London Encyclopaedia

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THE

LONDON ENCYCLOPAEDIA.

VOL. XVIII.

POTASH TO ROME.

J. Haddon, Printer, Castle Street, London.

THE

LONDON ENCYCLOPAEDIA,

UNIVERSAL DICTIONARY

SCIENCE, ART, LITERATURE, AND PRACTICAL MECHANICS,

COMPRISING A

POPULAR VIEW OF THE PRESENT STATE OF KNOWLEDGE.

ILLUSTRATED BY

NUMEROUS ENGRAVINGS, A GENERAL ATLAS,

AND APPROPRIATE DIAGRAMS.

Sic oportet ad librum, presertim miscellanei generis, Icgendum accedere lectorem, ut >olet ad courmnm couriva civilis (‘onvivator annititur oiniiilius satisfacere ; et tamen si quid apponitur, quod hujus aul illius palato non respondeat, et bic et ille urbane dissimulant, et alia f’ercula probaut, ne quid contristent convivatorem. Erasmtti.

A reader should sit dowa tg a book, especially of the miscellaneous kind, as a well-behaved visitor does to a banquet. The master of the feast exerts himself to satisfy his guests; but if, after all his care and pains, something should appear on the table that does not suit this or that person’s taste, they politely pas> it over without notice, and commend other dishes, that they may not distress a kind host. Tranjfarion.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITANˆ

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

IN TWENTY-TWO VOLUMES. VOL. XVIII.

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THK

POT’HERE,

POT’HOOK,

POT’LID,

POT’SHERD,

POT’TAGE,

POT’TER.

POT, n.s. “1 Fr. and Belg. pot, in all PO’TABLE, adj. I the senses ; Islandic and POTA’TIOX, n. s. Dan.potte ; Goth. pott. A vessel in which meat is }>boiled ; any vessel to hold liquids ; a cup : ‘ to go to pot,’ to be destroyed or devoured : to pot is to pre-J serve in pots : potable is drinkable : potation, a draught : potherb is a nerb fit for boiling : pothook and pot-lid explain themselves : potsherd (pot and sherd, from Belg. schaerde ; properly potshard), a fragment of a broken pot : pottage, any thing boiled for food. Jacob sod pottage, and Esau came from the fidd faint. Genesit.

The woman left her water-pot, and went her way.

John.

He on the ashes sits, his fate deplores ; And with a potsherd scrapes the swelling sores.

Sandys.

Toad that under the cold stone Sweltered, venom sleeping got ; Boil thou first i’ th’ charmed pot. Shakspeare. But that I think his father loves him not, I’d have him poisoned with a pot of ale. Id. My thoughts are whirled like a potter’s wheel.

Id.

I learnt it in England, where they are most potent in potting. Id.

Othello.

Thou best of gold art worst of gold, Other less fine in carat is more precious, Preserving life in medicine potable. Shakspeare. If I had a thousand sons, the first human principle I would teach them, should be to forswear thin yvtatitms, and to addict themselves to sack.

Id. Henry IV.

At this day at Gaza, they couch potsherds of vessels of earth in their walls to gather the wind from the top, and pass it in spouts into rooms.

Bacon's Natural History.

Dig a pit upon the sea shore, somewhat above the high-water mark ; and sink it as deep as the low-water mark ; and, as the tide cometh in, it will fill with water fresh and potable. Bacon.

The said potable gold should be endued with a capacity of being agglutinated and assimilated to the innate heat. Harvey.

Rivers run potable gold. Milton' ►► Paradise Lost.

Gigantic minds, as soon as work was done, To their huge pots of boiling pulse would run, Fell to with eager joy. Dryden.

Potted fowl and fish come in so fast, That ere the first is out the second stinks, And mouldy mother gathers on the brinks. Id. Whence come broken potsherds tumbling down, And leaky ware from garret windows thrown : Well may they break our heads. Id.

Some press the plants with sherds of potter's clay.

Id.

Egypt baser than the beasts they worship ; Below their potherb gods that grow in gardens.

Id. Vol.. XVIII.►►► PART 1.

Let me see her Arabian pothooks. Id.

The sheep went first to pot, the goats next, and after them the oxen, and all little enough to keep life together. L'Estrange.

Whenever potters meet with any chalk or marl mixed with their clay, though it will with the clay hold burning, yet, whenever any water comes near any such pots after they are burnt, both the chalk and marl will slack and spoil their ware.

Mortimer.

Acorns, mast, and other seeds may be kept well, by being barrelled or potted up with moist sand.

Id.

A potter will not have, any chalk or marl mixed with the clay. Id. Husbandry.

Pot them in natural, not forced earth ; a layer of ncn mould beneath and about this natural earth to nourish the fibres, but not so as to touch the bulbs.

Evelyn.

Where solar beams

Parch thirsty human veins, the damasked meads Unforced display ten thousand painted flowers Useful in potables. Philips.

Sir Tristram telling us tobacco was a potherb, bid the drawer bring in t' other half pint. Tatler.

Suppose your eyes sent equal rays

Upon two distant pots of ale,

Not knowing which was mild or stale. Prior. He like the potter in a mould has cast

The world's great fame. Id.

John's ready money went into the lawyers' pockets ; then John began to borrow money upon the bank stock, now and then a farm went to pot.

Arbuthnot's History of John Bull.

Of alimentary leaves, the olera or potherbs afford an excellent nourishment ; amongst those are the cole or cabbage kind. Arbuthnot.

The columella is a fine, thin, light, bony tube, the bottom of which spreads about, and gives it the resemblance of a wooden pallid in country houses.

Derham,

A soldier drinks his pot, and then offers payment.

Swift.

Leaves eaten raw are termed sallad ; if boiled, they become potherbs : and some of those plants which are vot-herbs in one family, are sallads in another. Watts.

For great the man, and useful, without doubt, Who seasons pottage, or expels the gout ; Whose science keeps life in, and keeps death out.

Harte.

POTAGER, 7i. s. From Pottage. A por-ringer.

An Indian dish or potager, made of the bark of a tree, with the sides and rim sewed together after the manner of twiggen-work. Grew's Museum.

POTAMOGETON, pond weed, a genus of the tetragynia order, and tetrandria class of plants; natural order fifteenth, inundate: CAL. none; petals four ; no style, and four seeds. There are twelve species, all of them vegetables floating on the surface of stagnant waters, affording agreeable shade to fish, and food to cattle.

B

POTASH.

POTAMON, ov POTAMO, a philosopher of Alexandria. He attached himself to none of the schools of philosophy of his time ; but kept a middle course between the scepticism of the Tyrrhenians and the presumption of the dog-matists. He was the first projector of the Eclectic sect ; for, though their mode of philosophising had been common before, he was the first that attempted to institute a new sect on this principle. ' Diogenes Laertius relates that, not long before he wrote his Lives of the Philosophers, an Eclectic sect, tK\tKTiica nc

cupunc, had been introduced by Potamo of Alexandria, who selected tenets from every former sect. Suidas and Porphyry also mention him. The time when Potamo flourished is uncertain. Suidas places him under Augustus : but it is more probable, from the account of Laertius, that he flourished about the close of the second century.'

POTAR'GO, n. s. Ital. potarge. A West Indian pickle.

What lord of old would bid his cook prepare Mangos, potargo, champignons, cavarre 1 King.

POTASH, n. s. Fr. potasse. The vegetable alkali. See below.

Cheshire rock-salt, with a little nitre, allum, and potash, is the flux used for the running of the plate-glass. Woodward.

POTASH, or POTASSA, in chemistry and the manufactures, more commonly known as the vegetable alkali, is a fixed alkaline salt obtained from the ashes of burnt vegetables of various kinds. The method of making potash is described by Dr. Shaw as follows : ??? Burn a quantity of billet wood to gray ashes ; and, taking several pounds of these ashes, boil them in water, so as to make a very strong lixivium or lie. Let this lie be strained through a coarse linen cloth, to keep out any parts of half-burnt wood that might happen to remain in the ashes; then evaporate this strained lie in an iron pan, over a quick fire, almost to dryness : then, taking out the matter remaining at the bottom, and putting it into an iron crucible, set it in a strong fire till the matter is melted, and then immediately pour it out upon an iron plate, where it soon cools, and appears in the form of a solid lump of potash. In this manner potash is made in the large way of business, for the service of the soap-boiler, glass-maker, fuller, &c. ; but, according to the difference of the wood, or combustible matter employed, with the manner of turning it, and conducting the process, different kinds of potash are prepared. There are certain saline plants that yield this potash to great advantage, as particularly the plant kali ; there are others that af-ford it in less plenty, and of an inferior quality, as bean-stalks, &c.; but, in general, all vegetable subjects afford it of one kind or other, and may most of them be made to yield it tolerably perfect after the manner of the process already laid down, even the loppings, roots, and refuse parts of ordinary trees, vine-clippings, &c.

It was announced in the philosophical Journals that, in France, potash had been obtained in great quantities from potato stalks. In order to put this to the test of experiment, Sir John Hay and Dr. M'Culloch made a trial on a large scale, and found that the quartity of potash

was

so small that no person could be remunerated by it for the trouble of the process. Messrs. Taylors of Queensferry, by desire of Sir John Hay, made an experiment on the produce of two acres of potato stalks, which yielded two casks of ashes, weighing 2 cwt. 23 Ibs., which produced of soluble substance only 36 Ibs., containing a great deal of muriate of potash and sulphate of potash. The value of this produce was not more than Id. per lb., or 6s. in all ; and on twelve acres of their own they had a similar result.

The following is a table of the saline product of 1 000 Ibs. of ashes of the following vegetables : ###

Saline products. Stalks of Turkey wheat, (1Q8 lbg

or maize, J

Stalks of sunflower . 349 Vine branches . 162-6

Elm . - .166

Box … 78

Sallow …102 Oak . - .111

Aspen … 61 Beech …219 Fir … . 132

Fern cut in August 116 { ##r According { to VVildenheim. Wormwood . . 748 Fumitory … 360

Heath … 115 \ildenheim.

On these tables Kirwan makes the following remarks: ### 1. That in general weeds yield more ashes, and their ashes much more salt, than woods ; and that consequently, as to salts of the vegetable alkali kind, as potash, pearl-ash, cashup, &c., neither America, Trieste, nor the northern countries, have any advantage over Ireland. 2. That of all weeds fumitory produces most salt, and next to it wormwood. But, if we attend only to the quantity of salt in a given weight of ashes, the ashes of wormwood contain most. Trifolium fibrinum also produces more ashes and salt than fern. Dr. John of Berlin observes that uncombined potash does not occur in living vegetables, it being always combined with an acid, and is only found in them when they

are in a state of putridity or decomposition. Plants that feel rough and sharp, particularly equiseti, contain much siliceous earth ; in the latter full thirteen per cent. Lichens that grow on the summits of fir trees contain an uncommon proportion of oxide of iron, which, Dr. John remarks, may be viewed as illustrative of the formation of iron by the vegetable process. Dr. John recommends the use of decaying and diseased wood to those who wish to obtain potash from it by burning, as he maintains that the quantity of potash is much increased by the putrefactive process. This remark is not new ; for we find it mentioned in the second volume of Schreber's Sammlung verschiedener Schriften, published in 1763, that putrid wood was recommended for obtaining ashes in preference to fresh wood. Plants, which were allowed to grow in a solution of natron, absorbed by their roots a considerable portion of the alkali ; but none of this appeared when the ashes of the plant were examined : in

place of it appeared potash ; and hence it is conjectured that vegetables have the power of converting natron into potash.

The process for obtaining pot and pearl-ash is given by Kirwan as follows : ###

1. The weeds should be cut just before they seed, then spread, well dried, and gathered clean.

2. They should be burned within doors on a grate, and the ashes laid in a chest as fast as they are produced. If any charcoal be visible, it should be picked out, and thrown back into the fire. If the weeds be moist, much coal will be found. A close smothered fire, which has been recommended by some, is very prejudicial.

3. They should be lixiviated with twelve times their weight of boiling water. A drop of the solution of corrosive sublimate will immediately discover when the water ceases to take up any more alkali. The earthy matter that remains is said to be a good manure for clayey soils.

4. The lie thus formed should be evaporated to dryness in iron pans. Two or three at least of these should be used, and the lie, as fast as it is concreted, passed from the one to the other. Thus, much time is saved, as weak lies evaporate more quickly than the stronger. The salt

thus produced is of a dark color, and contains much extractive matter; and, being formed in iron pots, is called potash.

5. This salt should then be carried to a reverberatory furnace, in which the extractive matter is burnt off, and much of the water dissipated : hence it generally loses from ten to fifteen per cent, of its weight. Particular care should be taken to prevent its melting, as the extractive matter would not then be perfectly consumed, and the alkali would form such a union with the earthy parts as could not easily be dissolved. Kirwan adds this caution, because Dr. Lewis and Mr. Dossie have inadvertently directed the contrary. This salt, thus refined, is called pearl-ash, and must be the same as the Dantzic pearl-ash,

To obtain this alkali pure, Berthollet recommends to evaporate a solution of potash, made caustic by boiling with quicklime, till it becomes of a thickish consistence ; to add about an equal weight of alcohol, and let the mixture stand some time in a close vessel. Some solid matter, partly crystallised, will collect at the bottom ; above this will be a small quantity of a dark-colored fluid ; and on the top another lighter. The latter, separated by decantation, is to be evaporated quickly in a silver basin in a sand-heat. Glass, or almost any other metal, would be corroded by the potash. Before the evaporation has been carried far, the solution is to be removed from the fire, and suffered to stand at rest ; when it will again separate into two fluids. The lighter, being poured off, is again to be evaporated with a quick heat ; and, on standing a day or two in a close vessel, it will deposit transparent crystals of pure potash. If the liquor be evaporated to a pellicle, the potash will concrete without regular crystallisation. In both cases a high-colored liquor is separated, which is to be poured off; and the potash must be kept carefully secluded from aii-Its taste is remarkably acrid, and it is so exceedingly corrosive that, when applied to any

part of the body, it destroys it almost instantaneously. On account of this property it has been called caustic, and is often used by surgeons to open abscesses, and destroy useless or hurtful excrements. When heated it melts. At a red heat it swells, and evaporates slowly in a white acrid smoke. When exposed to the air it soon attracts moisture, and is converted into a liquid ; and combines with carbonic acid, for which it has a great affinity. It has a very strong affinity for water. At the common temperature of the air, one part of water dissolves two parts of potassa. The solution is transparent, very dense, and almost of

the consistence of oil. In this state it is usually employed by chemists. When four parts of potash in powder, and one of snow are mixed together, the mixture becomes liquid, and absorbs a quantity of caloric. This mixture was employed by Lowitz to produce artificial cold. When the aqueous solution of potash is evaporated to a prdper consistency, the potash crystallises. The shape of its crystals is very different, according to the way in which they have been produced. When allowed to form in the cold, they are octahedrons in groups, and contain 0-43 of water: when formed by evaporation on the fire, they assume the figure of very thin transparent blades of extraordinary magnitude, which, by an assemblage of lines crossing each other in prodigious numbers, present an aggregate of cells or cavities, commonly so very close that the vessel may be inverted without losing one drop of the liquid it contains. Potash is not altered by exposure to the light.

A perfectly pure solution of potash will re-main transparent on the addition of lime-water, show no effervescence with dilute sulphuric acid, and not give any precipitate on blowing air from the lungs through it by means of a tube.

Pure potash for experimental purposes may most easily be obtained by igniting cream of tartar in a crucible, dissolving the residue in water, filtering, boiling with a quantity of quicklime, and, after subsidence, decanting the clear liquid, and evaporating in a loosely covered sil-ver capsule, till it flows like oil, and then pouring it out on a clean iron plate. A solid white cake of pure hydrate of potash is thus obtained, without the agency of alcohol. It must be immediately broken into fragments, and kept in a well-stoppered phial.

As 100 parts of subcarbonate of potash are equivalent to about seventy of pure concentrated oil of vitriol, if into a measure tube, graduated into 100 equal parts, we introduce the seventy grains of acid, and fill up the remaining space with water, then we have an alkalimeter for estimating the value of commercial pearl-ashes, which, if pure, will require for 100 grains 100 divisions of the liquid to neutralise them. If they contain only sixty per cent, of genuine subcarbonate, then 100 grains will require only sixty divisions, and so on. When the alkalimeter indications are required in pure or absolute potash, such as constitutes the basis of nitre, then we must use 102 grains of pure oil of vitriol, along with the requisite bulk of water to fill up the volume of the graduated tube.

The hydrate of potash, as obtained by the preceding process, is solid, white, and extremely caustic ; in minute quantities, changing the purple of violets and cabbage to a green, reddened litmus to purple, raid yellow turmeric to a reddish-brown. It rapjcly attracts humidity from the air, passing into the oil of tartar per deliquium of the chemists ; a name, however, also given to the deliquesced subcarbonate. Charcoal applied to the hydrate of potash at a cherry-red heat gives birth to carburetted hydrogen, and an alkaline subcarbonate ; but, at a heat bordering on whiteness, carburetted hydrogen, carbonous oxide, and potassium are formed. Several me-tals decompose the hydrate of potash, by the aid of heat; particularly potassium, sodium, and iron. The fused hydrate of potash consists of 6 protoxide of potassium -f 1-125 water r: 7-125, which number represents the compound prime equivalent. It is used in surgery as the potential cautery for forming eschars ; and it was formerly employed in medicine diluted with broths as a lithontriptic. In chemistry it is very extensively employed, both in manufactures and as a reagent in analyses. It is the basis of all the common soft soaps.

Dr. Wollaston has recently ascertained the existence of potash in sea-water. He estimates the proportion of this alkali, which he supposes to exist in the state of sulphate, at something less than jjˆth part of the water, at its average density. He has also detected traces of potash in the water of the lake of Ourmia or Arumea, which is unconnected with the ocean. The water of this lake (which is situated on the province of Azerbijan in Persia) is said to be salter than that of the sea, so that no fish can live in it.

Potash, until Sir Humphry Davy's memorable discovery of its chemical nature, was considered as a simple body, though strong suspicions were entertained of its being of a compound nature. From that philosopher's researches, however, potash appears to consist of a metallic basis, which he called potassium, united with oxygen, Jn the following proportions : ⁂

Potassium . . ‘ ,. 83 Oxygen … 17

POTASSIUM, in chemistry, the name given by Sir H. Davy to the metallic base of potash, discovered by him in 1807. Till this period potash and soda were necessarily regarded as simple from the impossibility of decomposing them by any known methods. Yet they were generally suspected to be compounds, though no chemist was able to detect their elements. By many the alkalescent principle was supposed to be nitrogen, as the acidifiable was oxygen. Morveau and Desormes published an ingenious set of experiments, in which they endeavoured to prove thatjpotash was a compound of hydrogen and lime. Darracq, however, with that accuracy which has characterised most of his enquiries, soon disproved this theory, and evinced that the results obtained by Desormes and Morveau were owing, in most cases, to the impurity of the

potash with which they had made their experiments ; while in others they had drawn wrong inferences from mistaken resemblances.

As soon as voltaic electricity was so far rendered manageable as to be applied with very great power to chemical analyses, Mr. Davy conceived the idea of enlisting this wonderful agency into his service, with a view of endeavouring to obtain a decomposition of the alkalies ; and he was the more fully induced to give a full scope and latitude to a series of experiments of this kind from observing that if a neutral substance, or a compound of an acid and an alkali, constituted a part of the voltaic circle, a decomposition of such substance was the result, the acid alone always travelling to the positive side of the chain and the alkali to the negative.

In the first attempts which Sir H. Davy made for the decomposition of the fixed alkalies, he entirely failed, in consequence of his having acted upon their aqueous solutions only. He afterwards used potash in the state of igneous fusion, and acted upon it by an electrical power, which was produced from a galvanic battery of 100 plates of six inches square, highly charged. Here some brilliant phenomena were produced. A most intense light and a column of flame were exhibited, which seemed to be owing to the development of combustible matter ; and when the order was changed, so that the alkali was brought in contact with the negative side of the battery, aeriform globules, which inflamed in the atmosphere, rose through the potash. Being, however, unable to collect the products of decomposition by this means, he had then recourse to pure potash in its usual state, and depended on

electricity alone for its fusion, as well as its decomposition.

A small piece of pure potash, moistened a little by the breath, was placed upon an insulated disc of platinum, connected with the negative side of a battery consisting of 100 plates of six inches and 150 of four inches square, in a state of intense activity, and a platinum wire, communicating with the positive side, was brought in contact with the upper surface of the alkali. Under these circumstances, a vivid action soon commenced. The potash began to fuse at both its points of electrisation, and small globules, having a high metallic lustre and precisely similar in visible characters to quicksilver, appeared, some of which burnt with explosion and bright flame. These globules, which appeared to be metallic, were the basis of potash.

If iron turnings be heated to whiteness in a curved gun-barrel, and potash be melted and made slowly to come in contact with the turnings, air being excluded, potassium will be formed, and will collect in the cool part of the tube. This method of procuring it was discovered by M. M. Gay Lussac and Thenard in 1808. It may likewise be produced by igniting potash with chafcoal, as M. Curaudau showed the same year.

M. Brunner, by acting on calcined tartar in a bottle of wrought iron, has succeeded in obtaining potassium at a comparatively moderate heat. The bottle is spheroidal, about half an inch in thickness, and capable of holding about a pint

of water ; a bent gun-barrel of ten or twelve inches in length screws into the mouth of the bottle. The bottle, well luted over with fire-clay, is set in a strong air furnace, so that the tube may dip down externally beneath the surface of naphtha contained in a cylindric copper vessel, standing in a tub containing ice and water. The top of the naphtha vessel has a cover fixed on it, pierced with a hole to receive the end of the gun-barrel ; and, from the side of the upper part of the vessel, a small tube goes off at right an-gles to let the air and vapors escape. It is advantageous to mix a little ground charcoal with the tartar previously calcined in a covered vessel, in the same iron bottle for example. Nearly 300 grains of potassium have been procured by this apparatus from twentjvfour ounces of crude tartar. ††† BMiotheque

Universelle, xxii. 36.

Potassium is possessed of very extraordinary properties. It is lighter than water, its specific gravity being 0-865 to water 1-0. At common temperatures it is solid, soft, and easily moulded by the fingers. At 150►► Fahrenheit it fuses, and in a heat a little below redness it rises in vapor. It is perfectly opaque. When newly cut, its color is splendent white, like that of sil-ver, but it rapidly tarnishes in the air. To preserve it unchanged, we must enclose it in a small phial, with pure naphtha. It conducts electricity like the common metals. When thrown upon water, it acts with great violence, and swims upon the surface, burning with a beautiful light of a red color, mixed with violet. The water becomes a solution of pure potash. When moderately heated in the air, it inflames, burns with a red light, and throws off alkaline fumes. Placed in chlorine, it spontaneously burns with great brilliancy.

On all fluid bodies which contain water, or much oxygen or chlorine, it readily acts ; and in its general powers of chemical combination, says its illustrious discoverer, potassium may be compared to the alkahest, or universal solvent, imagined by the alchemists.

Potassium combines with oxygen in different proportions. When potassium is gently heated in common air, or in oxygen, the result of its combustion is an orange-colored fusible substance. For every grain of the metal consumed, about one cubic inch and seven-tenths of oxygen are condensed. To make the experiment accurately, the metal should be burned in a tray of platina covered with a coating of fused muriate of potash.

The substance procured by the combustion of potassium at a low temperature, was first observed in October 1 807, by Sir Humphry Davy, who supposed it to be the protoxide ; but M. M. Gay Lussac andThenard, in 1810, showed that it was in reality the deutoxide, or peroxide. When it is thrown into the water, oxygen is evolved, and a solution of the protoxide results, constituting common aqueous potash. When it is fused, and brought in contact with combustible bodies, they burn vividly, by the excess of its oxygen. If it be heated in carbonic acid, oxygen is disengaged, and common subcarbonate of potash is formed.

W hen it is heated very strongly upon platina,

oxygen gas is expelled from it, and there remains a difficultly fusible

substance of a gray color, vitreous fracture, soluble in water without effervescence, but with much heat. Aqueous potash is produced. The above ignited solid is protoxide of potassium, which becomes pure potash by combination with the equivalent quantity of wa-ter. When we produce potassium with ignited iron-turnings and potash, much hydrogen is disengaged from the v.‘ater of the hydrate, while the iron becomes oxidised from the residuary oxygen. By heating together pure hydrate of potash and boracic acid, Sir H. Davy obtained from seventeen to eighteen of water from 100 parts of the solid alkali.

By acting on potassium with a very small quantity of water, or by heating potassium with fused potash, the protoxide may also be obtained. The proportion of oxygen in the protoxide is determined by the action of potassium upon water. Eight grains of potassium produce from water about nine cubic inches and a half of hydrogen ; and for these the metal must have fixed four cubic inches and three quarters of oxygen. But as 100 cubic inches of oxygen weigh 33-9 gr. 4►► will weigh 1-61. Thus, 9-61 gr/of the protoxide will contain eight of metal; and 100 will contain 83-25 metal -)- 16-75 oxygen. From these data, the prime of potassium comes out 4-969 ; and that of the protoxide 5-969. Sir H. Davy adopts the number 75 for potassium, corresponding to 50 on the oxygen scale.

When potassium is heated strongly in a small quantity of common air, the oxygen of which is not sufficient for its conversion into potash, a substance is formed of a grayish color, which, when thrown into water, effervesces without taking fire. It is doubtful whether it be a mixture of the protoxide and potassium, or a combination of potassium with a smaller proportion of oxygen than exists in the protoxide. In this case it would be a suboxide, consisting of 2 primes of potassium ►►► 10 -f 1 of oxygen

= 11.

When thin pieces of potassium are introduced into chlorine, the inflammation is very vivid ; and, when potassium is made to act on chloride of sulphur, there is an explosion. The attraction of chlorine for potassium is much stronger than the attraction of oxygen for the metal. Both of the oxides of potassium are immediately decomposed by chlorine, with the formation of a fixed chloride, and the extrication of oxygen.

The combination of potassium and chlorine is the substance which has

been improperly called muriate of potash, and which in common cases, is formed by causing liquid muriatic acid to saturate solution of potash, and then evaporating the liquid to dryness and igniting the solid residuum. The hydrogen of the acid here unites to the oxygen of the alkali, forming water, which is exhaled ; while the remaining chlorine and potassium combine. It consists of 5 potassium + 4-5 chlorine.

Potassium combines with hydrogen, to form potassureted hydrogen, a spontaneously inflammable gas, which comes over occasionally in the production of potassium by the gun-barrel experiment. MM. Gay Lussac andThenard describe

also a solid compound of the same two ingredients, which they call a hydruret of potassium. It is formed by heating the metal a long while in the gas, at a temperature just under ignition. They describe it as a grayish solid, giving out its hydrogen on contact with mercury.

When pdtassium and sulphur are heated together, they combine with great energy, with disengagement of heat and light even in vacuo. The resulting sulphuret of potassium is of a dark gray color. It acts with great energy on water, producing sulphureted hydrogen, and burns brilliantly when heated in the air, becoming sulphate of potash. It consists of 2 sulphur -f-5 potassium, by Sir H. Davy's experiments. Potassium has so strong an attraction for sulphur that it rapidly separates it from hydrogen. If the potassium be heated in the sulphureted gas, it takes fire and burns with great brilliancy ; sulphuret of potassium is formed, and pure hydrogen is set free.

Potassium and phosphorus enter into union with the evolution of light; but the mutual ac-tion is feebler than in the preceding compound. The phosphuret of potassium, in its common form, is a substance of a dark chocolate color, but when heated with potassium in great excess it becomes of a deep gray color, with considerable lustre. Hence it is probable that phosphorus and potassium are capable of combining in two proportions. The phosphuret of potassium burns with great brilliancy when exposed to air, and when thrown into water produces an explosion, in consequence of the immediate disengagement of phosphureted hydrogen.

Charcoal which has been strongly heated in contact with potassium

effervesces in water, rendering it alkaline, though the charcoal may be previously exposed to a temperature at which potassium is volatilised. Hence there is probably a compound of the two formed by a feeble attraction.

Of all known substances, potassium is that which has the strongest attraction for oxygen ; and it produces such a condensation of it, that the oxides of potassium are denser than the metal itself. Potassium has been skilfully used by Sir II. Davy and MM. Gay Lussac and Thenard, for detecting the presence of oxygen in bodies. A number of substances, undecom-posable by other chemical agents, are readily decomposed by this substance.

When a globule is placed upon ice, not even the solid form of both the substances can prevent their union ; for the metalloid instantly burns with a bright flame, and a deep hole is made in the ice, which is found to contain a solution of potash. When a globule is dropped upon moistened turmeric paper, it instantly burns, and moves rapidly upon the paper, as if in search of moisture, leaving behind it a deep reddish brown trace. So strong is the attraction of the basis of potash for oxygen, that it discovers and decomposes the small quantities of water contained in alcohol and ether, even when they are carefully purified.

POTATO, n. s. An American word, battata originally. See below. An esculent root.

6 POT

On choicest melons and sweet grapes they dine. And with potatoes fat their wanton swine. Waller.

Leek to the Welch, to Dutchmen butter's dear, Of Irish swains potatue is the chear ; Oats for their feasts the Scottish shepherds grind, Sweet turnips are the food of Blouzalind ; While she loves turnips butter I'll despise, Nor leeks, nor oatmeal, nor potatoe prize. Gay.

The families of farmers live in filth and nastiness upon buttermilk and potatoes. Swift.

The red and white potatoes are the most common esculent roots now in use, and were originally brought from Virginia into Europe. Miller.

POTATO, in botany. See SOLAKUM. Potatoes came originally from North America, where they were not reckoned good for food. They were first introduced into Ireland in 1565, and thence into England by a vessel wrecked on the western coast, at North Meols, in Lancashire, a place and soil still famous for producing this vegetable in great perfection. It was forty years after their introduction, however, before they were much cultivated about London ; and then they were considered as rarities, without any conception of the utility that might arise from bringing them into common use. At this time they were distinguished from the Spanish by the name of Virginia potatoes, or battatas, which is the Indian name of the Spanish sort. At a meeting of the Royal Society, March 18th, 1662-3, a letter was read from Mr. Buckland, a Somerset gentleman, recommending the planting of potatoes in all parts of the kingdom to prevent famine. This was referred to a committee ; and, in consequence of their report, Mr. Buckland had the thanks of the society ; such members as had lands were entreated to plant them, and Mr. Evelyn was desired to mention the proposals at the close of his Sylva. In Sweden, notwithstanding the indefatigable industry of Linnseus, the culture of potatoes was only introduced in 1764, when a royal edict was published to encourage their general cultivation. They were known there, however, at an earlier period ; for, in the Memoirs of the Royal Academy of Sciences in Sweden, 1747, M. Charles Skytse proposed to distil brandy from them, in order to save corn, which in that country is very dear. He found that an acre of land set with potatoes will yield a much greater quantity of brandy than when sown with barley. The utility of potatoes is well known, and this utility has brought them into general

use, and has extended them over every part of this kingdom. To promote this utility, and to make their cultivation more easy, a variety of experiments and inquiries have been made. See RURAL ECONOMY.

POTATO. The following account of the potato was communicated to the Board of Agriculture by Dr. Wright of Edinburgh.

The potato is a native of America, and was well known to the Indians long before the conquest of Mexico and Peru. Gomara, in his General History of the Indies, and Josephus Acosta, are amongst the earliest Spanish writers who have mentioned the potato by the Indian names of openanck, pape, and papas. Clusius, and after him Gerard, gave figures of the potato plant. Gerard was the first author who gave it the

name of solanum tuberosum, which Linnaeus and his followers have adopted. In 1584, Sir Walter Raleigh, so celebrated for his worth, his valour, and his misfortunes, discovered that part of America called Norembega, and by him named Virginia ; whether the admiral was acquainted with the potato in his first voyage, or whether it was sent to him by Sir Thomas Grenville, or by Mr. Lane, the first governors of Virginia, is uncertain. It is probable he was possessed of this root about the year 1586. He is said to have given it to his gardener in Ireland, as a fine fruit from America, and which he desired him to plant in his kitchen garden in the spring. In August this plant flowered, and in September produced a fruit; but so different to the gardener's expectation, that, in an ill-humour, he carried the potato apple to his master. " Is this," said he, " the fine fruit from America you prized so highly ?" Sir Walter either was, or pretended to be, ignorant of the matter; and told the gardener, since that was the case, to dig up the weed and throw it away. The gardener soon returned with a good parcel of potatoes. Gerard, an old English botanist, received seed-lings of the potato about the year 1590; and tells us, that it grew as kindly in his garden as in its native soil, Virginia. The plant was cultivated in the gardens of the nobility and gentry early, about the year 1620, as a curious exotic ; and towards the year 1684, was planted out in the fields, in small patches, in Lancashire. From thence it was gradually propagated all over the kingdom, as well as in France. In 1683, Suther-land has inserted the solanum tuberosum in his Hortus Medicus Edinburgensis; and it is probable that many others in Scotland cultivated the potato in their gardens about that time. It was not, however, grown in the open fields in Scotland till the year

1728, when Thomas Prentice, a day labourer, first cultivated potatoes at Kilsyth. The success was such, that erery farmer and every cottager followed his example ; and for many years past it has become a staple article. Thomas Prentice, by his industry, had saved ––200 sterling, which he sunk for double interest. Upon this he subsisted for many years, and died at Edinburgh in 1792, aged eighty-six years. This plant thrives as well in Europe as it does in America. In this island, particularly, it is quite at home ; and there is hardly a soil, but, with a little pains, may be made to produce the potato. The potato may be cultivated in every habitable part of the globe ; but with variable success. The heat of the West Indies is too great for it. In Jamaica, however, and other mountainous islands, where they have all climates, it has been produced in great perfection. On account of the potato being a species of solanum, or nightshade, there were many who were prejudiced against it, alleging it .was narcotic. In Burgundy, we find the culture and use of potatoes in food interdicted, as a poisonous and mischievous root. Amongst other effects, it was accused of producing leprosy and dysentery. Potatoes exposed a few days to the sun and weather acquire a green colour, bitter taste, and a narcotic quality. In this state they are not fit for eating ; but there is not

the smallest foundation for the other allegations. Prejudice and ignorance have long yielded to experience and truth ; and all mankind at this day agree, that there is no food so wholesome, more easily procured, or less expensive, than the potato. It constitutes the chief article of food to immense numbers of people, and may be converted to the support of all domestic animals, whether raw, boiled, or roasted.

POTCH, v. a. Fr. packer. To thrust out the eyes as with a thumb. To thrust ; push.

POTCH, v. a. Fr. pocJier. To poach ; to boil slightly. Commonly written POACH, which see.

POTEMKIN (George Prince), a descendant of a Polish family, who entered into the service of Russia, and distinguished himself so much as to be appointed to the chief command by Catharine II-On the 17th December, 1788, he took the important fortress of Oczakow from the Turks, and obtained several other victories over them. The empress

rewarded his services by loading him with riches and honors : and it is said that she intended to have made him sovereign of that part of his native country which she had dismembered, when he died in 1791, aged fifty-two.

POTENCY, n. s. -, Lat. potentia, potens. PO’TENT, adj. /Power; efficacy; autho-PO’TENTATE, t rity; potent is powerful;

PO’TENTLY. } forcible ; strong; efficacious : potentate, a possessor of sovereign power : potently follows the senses of potent.

Thus did the uncircumcised potentates Of earth, debase religion in the sight Of those they ruled, who looking up beheld The fair celestial gift despised, enslaved ; And mimicking the folly of the great, With prompt docility despised her too. Pollok.

All obeyed the superior voice Of their great potentate ; for great indeed His name, and high was his degree in heaven.

Milton.

POTENGER (John), an English author, born at Winchester in 1647. He took the degree of B.A. in Corpus Christi College, Oxford ; and entering the Temple, was called to the bar. He is chiefly known by his Life of Agricola. from Tacitus ; and his Pastoral Reflection on Death,, a poem. He died at Dorchester, in 1733.

POTENT, or POTEKCE, in heraldry, a term for a kind of cross whose ends all terminate like the head of a crutch. It is otherwise called the Jerusalem cross. See diagram.

POTENTIAL, adj. ˆ Fr. potenciel ; Lat. POTENTIALITY, n. s. ypotentialis. Existing in POTENTIALLY. 5 possibility only : having effect as distinct from an actual property : efficacious : potentiality is possibility : potentially corresponds with potential. The magnifico is much beloved, And hath in his effect a voice potential, As double as the Duke’s. Shakspeare. Othello The cautery is either actual or potential.

Marhham.

The true notion of a soul’s eternity is this, that the future moments of its duration can never be all

past and present ; but still there will be futurity and
ततततotentiality of more for ever and ever. Eentley.

‘ This duration of human souls is only potentially infinite. Id”

POTENTIAL, in grammar, is an epithet applied to one of the moods of verbs. The potential is the same in form with the subjunctive, and is, according to Ruddiman, implied in that mood; for which reason that grammarian rejects it : but others observe that it differs from the subjunctive in this that it always carries with it the signification of power, will, or duty. It is sometimes called the permissive mood, because it often implies a permission or concession to do a thing.

POTENTIAL CAUTERY, in medicine, denotes the consuming, or reducing to an eschar, any part of the human body by a caustic alkaline or metallic salt, &c., instead of a red-hot iron, which last is called the actual cautery.

POTENTILLA, silver-weed, wild tansey, or cinquefoil, a genus of the pentagynia order, and icosandria class of plants; natural order thirty-fifth, senticosae: CAL. decemfid : there are five petals : SEEDS roundish, naked, and affixed to a small dry receptacle. The species are six :

1. P. argentea, silvery upright potentilla, has upright stalks, branching a foot high ; and five-lobed leaves, having the lobes wedge-shaped, cut on the edges, hoary, and white underneath, and the branches terminated by small yellow flowers.

2. P. fragaroides, the strawberry-like potentilla, has a somewhat tuberous root, furnished with many long fibres, long trailing shoots, rooting at the joints; pinnated, mostly three-lobed leaves, having oval lobes, with the extreme lobe the largest, and clusters of small white flowers. This species bears a great resemblance to the small sterile strawberry plants.

3. P. fruticosa, the shrubby potentilla, commonly called shrub cinquefoil. This rises with a short shrubby stem, dividing into a branchy full head, three or four feet high; closely garnished with pinnated leaves of five oblo-ng, narrow, acute-pointed folioles, pale green above, and whitish underneath ; and the branches terminated by clusters of large, spreading, yellow flowers. This is a beautiful deciduous flowering shrub, ततततworthy of a place in every curious collection. It grows wild in Yorkshire, and other northern parts of

England, &c., but has be'en long cultivated in gardens as an ornamental shrub.

These plants flower in June and July; the flowers are composed each of five roundish pe-tals, and about twenty stamina. They are all very hardy, and may be employed in the different compartments of the pleasure ground. Their propagation is very easy. The shrubby potentilla may be propagated abundantly by suckers, layers, and cuttings ; ali of which will readily grow, and make plants in one year, which, after having two or three years growth in the nursery, will be fit for any of the shrubbery compartments. The herbaceous kinds may be propagated by parting the roots in autumn or spring, or by seed in any of those seasons.

POTERIUM, garden burnet, a genus of the polyandria order, and moncecia class of plants ; iiatural order fifty-fourth, iniscclaneae : MALE

I POT

CAL. tetraphyllous : con. quadripartite : there are from thirty to forty stamina. FEMALE CAL. tetraphyllous : COR. quadripartite : there are two pistils : the berry is formed of the indurated tube of the corolla. The species are three :

1. P. hybridum, hybrid agrimony-leaved bur-net, rises with upright, taper, closely gathered stalks, two feet high ; pinnated odoriferous leaves of three or four pairs of sawed lobes, terminated by an odd one ; and the stalks terminated by long foot-stalks, dividing into smaller, each supporting a small roundish spike of flowers. This species often proves biennial ; but, by cutting down some of the stalks before they flower, it will cause it to multiply at bottom, and become abiding.

2. P. sanguisorba, the common garden burnet, has fibry perennial roots, crowned by a large tuft of pinnated leaves, or six or seven pair of sawed lobes, terminated by an odd one ; upright angular stalks, dividing, and branching a foot and a half high, terminated by oblong spikes of purplish red flowers. This species grows wild in England, in chalky sorls ; but has been long cultivated as a choice sallad herb for winter and spring use, it being of a warm nature : the young leaves are the useful parts. It is perennial in root, and retains its radical leaves all the year; but the stalks are annual.

3. P. spinosum, shrubby spinous burnet of Crete, has a shrubby stem

and branches, rising about a yard high, armed with spines; small pinnated evergreen leaves, of six or seven pairs of lobes, terminated by an odd one, and the branches terminated by small heads of greenish flowers. All these species flower in June and July, succeeded by ripe seeds in autumn. They are naturally perennial ; but the two herbaceous ones are abiding in root only ; the other in root, stem, and branches : the two former are hardy, and the third requires shelter in winter. The second sort merits culture in every kitchen-gar- den for winter and spring salads. The third sort must be kept always in pots, to have shelter in winter. They are all easily propagated, the second sort by seed and by parting the roots. The first sort may also be increased by seeds and slips off the root, as for the former sort : and the propagation of the third is by slips or cuttings of the branches in spring and summer, planted in pots, and placed under glasses, giving shade and ###water; or it might be forwarded more by plunging them in a hot-bed. Burnet is of a heating, drying nature, cordial and alexipharmic.

POT'GUN, n. s. A corruption of popgun. A gun which makes a small smart noise. An author thus who pants for fame, Begins the world with fear and shame, W hen first in print, you see him dread Each potgun levelled at his head.

Swift's Miscellanies.

POTH'ECARY, n. s. A corruption of apothecary. Lat. apothecarius. One who compounds and sells physic.

Modern 'pothecaries, taught the art By doctors' bills to play the doctor's part, Bold in the practice of mistaken rules, Prescribe, apply, and call their masters fools.

Popt

P O T O S I.

POTH'ER, n. *. This word is sometimes written podder, sometimes pudder, and is derived by Junius from Fr. foudre, thunder, by Skinner from Dut. peuteren or peteren, to shake or dig ; and more probably, by a second thought, from Fr. poudre, dust. See BOTHER. Bustle ; tumult ; flutter. A low word.

Such a pother,

As if that whatsoever god, who leads him, Were crept into his human powers, And gave him graceful posture.

Shakspeare. Coriolanus. He suddenly unties the poke, Which from it sent out such a smoke, As ready was them all to choke,

So grievous was the pother. Drayton.

Some hold the one, and some the other, But howsoe'er they make a pother. Hvdibras. He that loves reading and writing, yet finds certain seasons wherein those things have no relish, only pothers and wearies himself to no purpose.

Locke.

I always speak well of thee, Thou always speak'st ill of me ; Yet after all our noise and pother, The world believes nor one nor t'other.

Guardian .

"Tis yet in vain to keep a pother About one vice, and fall into the other. Pope. What a pother has been here with Wood and his

brass,

Who would modestly make a few halfpennies pass !

Swift.

POTHOS, in botany, a genus of the polyandria order, and gynandria class of plants. The spatha or sheath is a simple spadix covered : CAL. none : petals four, and as many stamina ; the berries are dispermous. Species four, American plants.

POTIDJEA, a town of Macedonia, in the peninsula of Pallene. It was founded by a colony of Corinthians, and became tributary to the Athenians, from whom Philip II. of Macedon took it, and gave it to the Olynthians, whom he afterwards extirpated. Cassander repaired and enlarged it, and named it Cassandria.

POTION, n.s. Fr. potion; Lat. potio. A draught ; commonly a physical draught.

For tastes in the taking of a potion or pills, the head and neck shake. Bacon's Natural History.

The earl was by nature of so indifferent a taste, that he would stop in the midst of any physical po-tion, and, after he had licked his lips, would drink off the rest. Wotton.

Most do taste through fond intemperate thirst ; Soon as the potion works, their human countenance, The' express resemblance of the gods, is changed Into some brutish form of wolf or bear. Milton.

POTNIˆE, a town of Bceotia, where Bacchus had a temple. The Potnians, having murdered the priest of Bacchus, were ordered by the ora-cle to sacrifice a young man annually. This horrible sacrifice having continued some years, Bacchus interposed and substituted a goat. Paus. 9. c. 8.

POTOMAC, a river of the United States, which rises in two branches, the north and south, originating in and near the Alleghany mountains.

flows into Chesapeake Bay, between Point Look-out and Smith's Point. It is seven miles and a half wide at its mouth, and one mile and a quarter at Alexandria, 200 miles from the Ocean. The termination of the tide water is above 300 miles from the sea, and the river is navigable for ships of the greatest burden through nearly that distance. Above the tide water the river has three considerable falls, those above Georgetown are now passable in boats. Its length above the tide is upwards of 300 miles through an inhabited country. Its junction with the Shenando at Harper's Ferry is regarded as a great curiosity. The river has seven fathoms of water at its mouth, five at St. George's island, four and a half at Lower Matchodic, and three at Swan's Point, and thence to Alexandria.

POTOMAC ACADEMY, in Prince George county, Valencia, near the Potomac ; twenty-three miles east of Fredericksburg.

POTOMAC CREEK, a river of Virginia, which runs into the Potomac. Long. 77►► 22' W., lat. 38►► 24' N.

POTOSI, a government once belonging to Peru, but added by the Spanish government to the viceroyalty of Buenos Ayres, and now a province in the republic of Bolivia. It is bounded on the north by the Cordillera of Vilcanota, which separates it from the Peruvian provin(es, and by countries inhabited by wandering tribes ; on the east by the mountains of Arequipa, the Pacific Ocean, and the Chilian Andes ; on the west by the governments of Paraguay and Buenos Ayres; and on the south by that of Buenos Ayres. Great part of it is full of mountains,

ravines, and chasms, of a very cold temperature, and almost barren of vegetable productions; in other parts the country is covered with deserts, forests, vast plains, and mountain streams expanding into rivers. The Provincias de la Sierra, which lie near the Andes, are the most populous.

POTOSI, a city of the above province and district of Porco, is situated in a narrow glen on the river of this name, and on the south side of the mountain which contains the Potosi mines. The environs are barren, and the climate cold ; the valleys being destitute of wood, the sides of the hills covered only with moss, and their summits with eternal snows. A few vicunas are the only animals now and then seen grazing in this elevated region.

The silver mine of Potosi is by far the most productive of the whole of those in this govern ment. The mountain from which the metal ir? extracted is of a conical form, about six leagues in circumference, and 4182 feet above the neighbouring plains. The discovery of its treasure was owing entirely to the accident we have adverted to in our article AMERICA, SOUTH, which see : a Peruvian, named Diego Hualpa, while chasing some chamois among the rocks, in his ascent laid hold of a small shrub, whose roots giving way disclosed to his view an immense vein of silver, which has been since distinguished by the name of La Rica, or the Rich. The In-

and forming, through its whole course, part of dian concealed the circumstance for a time from

the boundary between Virginia and Maryland, all his friends, and only had recourse to this

It passes by Shepherdstown, Georgetown, Wash-treasure to supply his occasional wants ; but the

ington city, Alexandria, Port Tobacco, &c., and obvious change in his fortune had excited the

suspicions of one of his companions, who, by urgent entreaties, drew from him the secret, and, upon some slight quarrel, he soon after revealed it to his master, a Spaniard. The information was no sooner received than the mine was opened ; and it was formally registered 21st of April, 1545. Since that time it has been constantly wrought, and the silver, which has paid the royal duties from this mine, has been valued at 5750,000,000 of livres touraois, equal to ––234,693,840 sterling. The mountain is now almost completely excavated, and is perforated with above 300 pits, few of which, however, are more than seventy yards deep. It is opened at the base ; and vaults, dug horizontally, penetrate into its bowels, and meet the veins of silver. In these vaults, which are called by the miners sa-cabouas, and are about six feet high and eight feet broad, the air is cold and unwholesome, and the Indians work there alternately night and day, entirely naked, lest they should embezzle the ore.

On the first discovery of the mine of Potosi, the metal was much purer than at present, being now inferior to many of the other mines. It is the abundance of the ore alone which renders it worth working. According to Acosta, the average contents of silver in the crude ore were, in 1574, from eight to nine marks per quintal; and the minerals which yielded fifty marks per quintal were considered as extremely rich. Since the beginning of the eighteenth century, however, they reckon only from three to four marks per caxon, or from -f^ to f^ per quintal. A caxon contains about 50 cwt. From this it appears that the mean riches of the minerals have diminished in the proportion of 1 70 to one ; but, what is surprising, the quantity of silver extracted from the mines of Potosi has only diminished in the proportion of four to one, according to the following calculations, which are from Humboldt.

1. From the opening of the mines of Potosi in 1545 to the year 1556, when the royal duties were first recorded with accuracy, Ulloa, upon the authority of Don Sebastiani Sandoval y Guzman, who published an account of these mines in 1634, entitled Pretensiones del Potosi, makes the total produce which paid duty to be 613,000,000 of piastres, making a yearly average of 55,726,000 piastres, or 6,556.000 marks of silver. This immense sum, however, Humboldt, upon unquestionable data, has reduced to 127,500,000 piastres, or 15,000,000 of marks, making an annual produce of nearly 1, 363,636 J marks.

2. The royal duties paid on the silver extracted from the mines of

Potosi, between the 1st of January 1556, and 31st of December 1578, during which the fifth only was paid, amounted to 9,801,906 piastres, making a total produce of 49,009,530 piastres : or 5,765,827 marks of sil-ver, which, for twenty-three years, makes the average annual produce of 256,688 marks.

3. The duties paid from the 1st of January 1579, to the 19th of July 1736, during which one and a half per cent, de covos was first paid, and then the fifth of the remaining 98J piastres, amounted to 129,417,273 piastres, making a total produce of nearly 610,458,835 piastres, or

71,818,686ˆ marks of silver, which, for 157 years and a half, is at an annual average produce of nearly 455,991ˆ marks.

4. Between the 20th of July 1736 and the 31st of December 1789, during which the one and a half per cent, de covos and the half of the fifth only were paid, the royal duties amounted to 14,542,684 piastres, making a total produce of 128,129,374ˆ piastres, or 15,074,044 marks of silver, which, for fifty-three years and a half, makes an annual produce of nearly 281,758 marks.

5. From 1789 to 1803 we have no account of the royal duties ; but during that period the total produce of Potosi, according to the records of the mint, was 46,000,000 of piastres, or 5,411,764 marks, making a yearly average of 386,554 J marks.

It appears, therefore, that the annual produce of the last period is little more than a fourth of that of the first ; but, in giving the average produce for such long periods, the gradual diminution or increase of the quantity of silver extracted from these mines could not be distinctly marked. We may therefore observe that, during the second period, when the royal duties were first correctly registered, the king's fifth varied from 500,000 to 300,000 piastres ; and that, during the first fifty years of the third period, the duties varied from 1,000,000 to 1,500,000 piastres; and then gradually diminished until 1735, when they only amounted to 271,621 piastres, 6 reals. From 1737 to 1789, the increase was equally gradual from 183,704 to 335,468 piastres. We may also remark that, in these calculations, we have uniformly valued the piastre at only eight reals de plata, although, until near the close of the sixteenth century, the Spaniards reckoned by piastres of 480 ma-ravedis, or nearly 13►► reals de plata. In estimating, therefore, the total produce of these mines from 1545 to 1803,

allowance must be made for this low valuation.

The quantity of silver extracted from the mines of Potosi during the

Marks. 1st period, was 15,000,000

2nd 5,765,827

3rd 71,818,686

4th 15,074,044

5th 5,411,764

Allowance for the value of the piastre before 1600

To this may be added one-fourth more, on account of the enormous contraband at former pe-

ll 3,070,321

15,000,000

128,070,321

riods

Total produce

32,017,580 . 160,087,901

See a more detailed statement of the produce of late years in the

article already referred to.

Nothing, according to Helms, can equal the ignorance with which the mining is here carried on. The mines, many of them, are filled with

water, which, by the application of proper machinery, might be easily drained off. The methods employed for this purpose are, however, ill contrived and ineffectual. Mr. Helms saw one drain which had been begun in 1779, and had, at an incredible expense, been carried two miles. This drain, even at its mouth, was too high, and it had been made to slope one yard in every 132; so that it could not possibly free many of the pits from the water with which they were overwhelmed. ‘ Still greater ignorance,’ says Mr. Helms, ‘ was, if possible, displayed by the directors of the smelting houses and refining works at Potosi. By their method of amalgamation, they were scarcely able to gain two-thirds of the silver contained in the paco-ore; and, for every mark of pure silver gained, they destroyed one, and frequently two, marks of quicksilver. Indeed all the operations at the mines of Potosi, the stamping, sifting, washing, quickening, and roasting the ore, are conducted in so slovenly, wasteful, and unscientific a manner, that to compare the excellent method of amalgamation invented by baron Born, and practised in Europe, with the barbarous process used by these Indians and Spaniards, would be an insult to {he understanding of my readers. The tools of the Indian miner are very badly contrived and unwieldy. The hammer, which is a square piece of lead of twenty pounds weight, exhausts his strength. The iron, a foot and a half long, is a great deal too incommodious, and in some nar-row places cannot be made use of. The thick tallow candles wound round with wool, vitiate the air. In the royal mint at Potosi, where from 550,000 to 600,000 marks of silver, and about 2000 marks of gold, are annually coined, affairs were not better conducted. Every hundredweight of refined copper used for alloy in the gold and. silver coin cost the king ––35, through the gross ignorance of the overseers of the work, who spent a whole month in roasting and calcining it, and frequently rendered it quite unfit for the purpose.’ These various evils the German commissioners, sent over by the king of Spain to inspect the mines, endeavoured to remove. They constructed a new laboratory, according to the most improved model, by which the copper ores used for alloy could be refined in four hours and a half, and for one-twentieth part of the expense incurred by the former process : they also erected machinery for the draining of the mines. New

amalgamation works were also erected, and suitable instructions given to the persons employed. ‘ As soon as the water in the pits,’ Helms observes, ‘ can be got ‘under, the mines of Potosi will be in a more nourishing condition than ever. The total want of timber, however, on the naked ridge of mountains on which Potosi is situated, very much retards the work.’

POTOSI, formerly Mine-au-Burton, a post town and capital of Washington county, Missouri territory ; forty-five miles west of St. Genevieve, and sixty S. S.W. of St. Louis.

POTOSI, SAN Louis, an extensive intendency of Mexico or New Spain, under the Spanish government, whose territorial limits it is scarcely possible accurately to ascertain, it being sur-

rounded by deserts, or countries inhabited bv wandering and independent tribes of Indians On the south it is bounded by the intendancies of Vera-Cruz, Mexico, and Guanaxuato ; on the east by the gulf of Mexico, and on the west by Zacatecas and Durango. This immense district includes, therefore, a greater surface than Europe or Spain ; but though gifted by nature with the most precious productions, and situated under a serene sky, it is quite wild as to cultivation in most parts, and more thinly peopled than Asiatic Russia. Its position on the eastern limits of New Spain, the proximity of the United States, the easy communication with the colonists of Louisiana, and various other circumstances, concur, however, to favor its progress towards civilisation and prosperity.

On the coast, which is 230 leagues in extent, are a number of lagunas, or salt water lakes. The capital is of this name, and contained in Humboldt’s time 12,000 inhabitants. It is situated on the eastern side of this table-land west of the sources of the Rio de Panuca.

POTSCHINKI, a town of European Russia, in the government of Nischnei-Novgorod. It has a traffic in cattle, and 4000 inhabitants, and here is kept by government a stud of horses, which supplies a regiment of life-guards. 117 miles S.S.E. of Nischnei-Novgorod.

POTSDAM, a province of Brandenberg, Prussia, comprehending the former districts of the Ucker Mark, the Mark of Priegnitz, and the greatest part of the Middle Mark. It is situated between Pomerania and West Prussia on the north, and the province of Saxony on the south

and west : Berlin, with a small district around, forms a distinct government. Towards the north-west this province is bounded by the Elbe and the Havel, and on the north-east by the Oder. Its area is about 8000 square miles, divided into the following thirteen circles : ◆◆◆

Lowei Barnim, Upper Barnim, Teltow-Storkow, Zauch-Belzig, Juterbock-Lucken—

walde, East Havelland,

West Havelland,

East Priegnitz,

West Priegnitz,

Ruppin,

Prenzlow,

Templin,

New Angermunde.

This track is one extensive low plain, varied only occasionally by hills of slight elevation. The soil, though for the most part a light sand, sometimes barren and even drifting, contains spots, particularly on the rivers, remarkable for their fertility. The climate is not cold, and, since a number of the lakes have been drained, it is reckoned healthy. The chief mineral here is marsh iron ore, which affords about twenty per cent, of metal. The inhabitants, about 500,000, are in general industrious, and carry on manufactures of woollens, cotton, and linen. The towns are small, the principal, after Potsdam, being Brandenburg, Prenzlow, Spandau, and Ruppin.

POTSDAM, the chief town of the above government, is of a square form and situated on the north bank of the Havel, which here spreads its waters into a succession of small lakes. Potsdam, since the close of the seventeenth century,

has been the frequent residence of the court of Berlin, but is indebted for its chief improvements to Frederic II. The new town was either built or repaired entirely by that prince : the fronts of several of the streets are all of stone, but the rest of the houses are finished in a far inferior style. The streets are not as yet all paved. On the whole, however, Potsdam may vie in beauty with Manheim, or any German town. It is surrounded by a wall and ditch, and has four gates toward the land, and four toward the river; on the banks of which is the Havel, a magnificent structure, begun in 1660, and extended progressively during the subsequent reigns. Its finest ornaments are a colonnade, a cupola, and a marble staircase. In the front is a square for manoeuvring troops; and along the river extensive gardens. Connected with it also are a theatre, menagerie, and noble stables. The town-house was built in 1754, on the plan of that of Amsterdam. There are in Potsdam extensive barracks ; a great hall for exercising the troops in bad weather ; and in the garrison church statues of Mars and Bellona. Here also is the tomb of Frederick II. There are in the town six other churches and a Jewish synagogue. The market-place is ornamented by statues of the kings of Prussia and an obelisk. The lyceum, two public schools of inferior extent, and one belonging to the garrison ; the infirmary itself, a poor-house, and an orphan-house on a large scale, for the children of soldiers, are other public establishments worth notice.

The population of Potsdam, exclusive of military, is about 25,000 ; the former amount in general to the number of 6000 or 8000. In the absence of the court, Potsdam seems deserted. Its numerous manufactures are all on a small scale : but brewing is here, as in other German towns, a business of great extent ; and the cultivation of gardens in the neighbourhood supplies no small employment. The palace of Sans Souci, the favorite retreat of ‘ the great Frederick,’ is three-quarters of a mile to the north-west, and stands on the ascent of an eminence. It is only one story in height, with a circular pavilion at each end : in one is the library of Frederick, exactly in the state it was left at his death. Sans Souci has two appended buildings for a collection of paintings, and for other court entertainments. In the garden is a cabinet of statues, gems, and medals. Two miles to the west is a palace begun towards the close of the eighteenth century on a magnificent scale, but not likely to be soon finished. The structure called the marble palace is in the midst of a garden at some distance from Sans Souci. Fifteen miles W.S.W. of Berlin, and sixty-one E.N.E.

of Dresden.

POTSDAM, a post town of St. Lawrence county, New York ; ninety miles west of Platts-burg, and 150 N.N.W. of Albany. It is a flourishing town. The principal village is situated on tlie Racket, where there are fine falls, which afford excellent seats for mills and manufactories. A weekly newspaper is published here.

POTT (Percival), F.R.S., was born in Lon-don in 1713. He received the rudiments of his education at a private school at Darne in Kent ;

and became an apprentice to Mr. Nourse, one of the surgeons of St. Bartholomew's Hospital ; of which hospital, in 1744-5, he was elected an assistant; and, in 1749, appointed one of the principal surgeons. In 1746 he manied the daughter of Robert Cruttenden, Esq. His first publication is said to have been planned in 1756, during his confinement, in consequence of a compound fracture of the leg: from that time his pen was seldom long unemployed. His practice and his reputation were now rapidly increasing: in 1764 he was elected F. R. S.; and afterwards was complimented with honorary diplomas from the Royal Colleges of Surgeons in Edinburgh and Dublin. In 1787 he resigned the office of surgeon to St. Bartholomew's Hospital, ' after having served it,' as he used to say, ' man and boy, half a century ;' and on the 22d of December, 1788, after an illness of eight days, he expired. He published a great number of treatises on various branches in surgery; particularly, On Tumors which soften the Bones; On Ruptures; On the Hydrocele ; On Fistula Lachrymali* ; On Hernia of the Bladder and Stone ; On Fistula in Ano ; On Fractures and Dislocations ; On Wounds of the Head ; On the Cataract, Polypus of the Nose, Cancer of the Scrotum, Ruptures, and Mortification of the Toes. All these have been collected and published in 1 vol. 4to.

POTTER (Christopher), a learned English divine, born in 1591, and educated at Oxford. In 1633 he published his Answer to a late Po-pish Plot, entitled Charity Mistaken, which he wrote by special order of king Charles I., whosr chaplain he then was. In 1634 he was appointed dean of Worcester ; and in 1640 vice-chancellor of the university of Oxford ; in the execution of which office he met with considerable hindrance from the members of the long parliament. Upon the

breaking out of the civil wars, he sent all his plate to the king, declaring ‘ that he would rather, like Diogenes, drink in the hollow of his hand, than that his majesty should want;’ and he afterwards suffered much for the royal cause. He was accordingly nominated dean of Durham in 1646, but was prevented from being installed by his death, which happened about two months after. ‘ He was a person learned and religious, exemplary in his conversation, courteous in his carriage, of a sweet and obliging nature, and of a comely presence.’ He was remarkable for his charity to the poor.

POTTER (John), D. D., archbishop of Canterbury, was the son of a linen-draper at Wakefield, in Yorkshire, where he was born about 1674. He studied at University College, Oxford ; and at the age of nineteen published Variantes Lectiones et Notre ad Plutarchi Librum de Axidien-dis Poetis ; et ad Basilii magni orationern ad Juvenes, quomodo cum fructu legere possint Graecorum Libros, 8vo., 1693. In 1697 came out his Lycophron, in folio; which is reckoned the best edition of that obscure writer: soon after he published his Antiquities of Greece, ~1 vols. 8vo. These works established his literarv reputation, and engaged him in a correspondence with Graevius and other learned foreigners. In 1706 he was made chaplain to the qnee.i ; iu

171.5 bishop of Oxford; and in 1737 he succeeded archbishop Wake in the see of Canterbury; which high station he supported with much dignity until his death in 1747. He was a learned and exemplary churchman; but strongly tinctured with the pride of office ; and disinherited his eldest son for marrying below his rank. His Theological works, containing Sermons, Charges, Discourses on Church Government, and Divinity Lectures, were printed at Oxford, in 3 vols. 8vo., 1753.

POTTER (Robert), a divine of the church of England, was born in Norfolk in 1721, and educated at Emanuel College, Cambridge, where he took his bachelor's degree in 1741. His first preferment was the vicarage of Seaming in Norfolk, where he wrote poems in imitation of Pope, which were published in 1 vol. 8vo., in 1774. In 1777 appeared his translation of Jischylus, with notes, 4to. ; reprinted in 1779 in 2 vols. 8vo. In 1781 came out the first volume of his translation of Euripides, and the second in the year following. In 1788 he printed his Sophocles, and his school-fellow, lord Thurlow, gave him a prebend in the church of Norwich : bishop Ba-got presented him, about the same time, to the vicarages of Lowestoft and Kessingland. He died at Lowestoft in 1804. Besides the a"bove, Mr. Potter wrote Observations on the Poor Laws ; an Answer to Dr. Johnson's Lives of the Poets ; A Translation of the Oracle concerning Babylon, &c.

POTTERY, the manufacture of earthenware, or the art of making earthen vessels. See DELFT, PORCELAIN, &c. The wheel and lathe are the usual instruments in pottery ; the first for large works, and the last for small. The potter's wheel consists principally in the nut, which is a beam or axis, whose foot or pivot plays perpendicularly on a freestone sole or bottom. From the four corners of this beam, which does not exceed two feet in height, arise four iron bars, called the spokes of the wheel, which, forming diagonal lines with the beam, descend, and are fastened at bottom to the edges of a strong wooden circle, four feet in diameter, perfectly like the felloe of a coach wheel, except that it has neither axis nor radii, and is only joined to the beam, which serves it as an axis, by the iron bars. The top of the nut is flat, of a circular figure, and a foot in diameter; and on this is laid the clay which is to be turned and fashioned. The wheel thus disposed is encompassed with four sides of four different pieces of wood fastened on a wooden frame ; the hind piece, which is that on which the workman sits, is made a little inclining towards the wheel ; on the fore pieces are placed the prepared earth ; on the side piece he rests his feet, and these are made inclining to give him more or less room. Having prepared the earth, the potter lays a round piece of it on the circular head of the nut, and, sitting down, turns the wheel with his feet till it moves with the proper velocity ; then, wetting his hands with water, he presses his hand or his finger's end into the middle of the lump, and thus forms the cavity of the vessel, continuing to widen it from the middle ; thus turning the i:ir:<ie into form with one hand,

wnile he proportions the outside with the other, the wheel constantly turning all the while, and he wetting his hands from time to time.

When the vessel is too thick, he uses a flat piece of iron, somewhat sharp on the edge, to pare off what is redundant ; and, when it is finished, it is taken off from the circular head by a wire passed under the vessel. The potter's lathe is also a kind of wheel, but more simple and slight than the former : its three chief members are an iron beam or axis three feet and a half high, and two feet and a half diameter, placed horizontally at the top of the beam, and serving to form the vessel upon : and another larger wooden wheel, all of a piece, three inches thick, and two or three feet broad, fastened to the same beam at the bottom, and parallel to the horizon. The beam or axis turns by a pivot at the bottom in an iron stand. * The workman gives the motion of the lathe with his feet, by pushing the great wheel alternately with each foot, still giving it a greater or less degree of motion as his work requires. They work with the lathe with the same instruments, and after the same manner, as with the wheel. The mouldings are formed by holding a piece of wood or iron cut in the form of the moulding to the vessel, while the wheel is turning round; but the feet and handles are made by themselves, and set on with the hand ; and, if there be any sculpture in the work, it is usually done in wooden moulds, and stuck on piece by piece on the outside of the vessel. The art of making pottery is intimately connected with chemistry. For Mr. Wedgewood's remarkable improvements in this art see STAF-FORDSHIRE.

The process of manufacturing stoneware is described by Dr. Watson as follows : ###

Tobacco-pipe clay from Dorsetshire is beaten much in water. By this process, the finer parts of the clay remain suspended in the water, while the coarser sand and other impurities fall to the bottom. The thick liquid, consisting of water and the finer parts of the clay, is farther purified by passing it through hair and lawn sieves, of different degrees of fineness. After this, the liquid is mixed (in various proportions for various wares) with another liquor, of as nearly as may be the same density, and consisting of flints calcined, ground, and suspended in water. The mixture is then dried in a kiln ; and, being afterwards beaten to a proper temper, it becomes fit for being formed at the wheel into dishes, plates, bowls, &c. When this ware is to be put into the furnace to be baked, the several pieces of it are placed in the cases made of clay, called seggars, which are piled one upon another in the dome of the furnace. A fire is then lighted ; and when the ware is brought to a proper tem-per, which happens in about forty-eight hours, it is glazed by common salt. The salt is thrown into the surface, through holes in the upper part of it, by the heat of which it is instantly converted into a thick vapor; which, circulating through the furnace, enters the seggar through holes made in its side (the top

being covered to prevent the salt from falling on the ware), and, attaching itself to the surface of the ware, it forms that vitreous coat upon the surface which

POT 1

is called its glaze. The yellow or queeii's-ware is made of the same materials as the flint-ware ; but the proportion in which the materials are mixed is not the same, nor is the ware glazed in the same way. The flint-ware is generally made of four measures of liquid flint, and of eighteen of liquid clay. The yellow ware has a greater proportion of clay in it. In some manufactories they mix twenty, and in others twenty-four, measures of clay, with four of flint. These proportions, if estimated by the weight of the materials, would probably give for the flint-ware about 3 cwt. of clay to 1 cwt. of flint, and for the yellow ware somewhat more clay. The proportion, however, for both sorts of ware depends very much upon the nature of the clay, which is very variable even in the same pit. Hence a previous trial must be made of the quality of the clay, by burning a kiln of the ware. If there be too much flint mixed with the clay, the ware, when exposed to the air after burning, is apt to crack; and, if there be too little, the ware will not receive the proper glaze from the circulation of the salt vapor. This glaze, even when it is most perfect, is in appearance less beautiful than the glaze on the yellow ware.

The yellow glaze is made by mixing together in water, till it becomes as thick as cream, 112 Ibs. of white lead, 24 Ibs. of ground flint, and 6 Ibs. of ground flint-glass. Some manufactories leave out the glass, and mix only 80 Ibs. of white lead with 20 Ibs. of ground flint; and others, doubtless, observe different rules, of which it is very difficult to obtain an account.

The ware before it is glazed is baked in the fire. By this means it acquires the property of -strongly imbibing moisture. It is therefore dipped in the liquid glaze, and suddenly taken out: the glaze is imbibed into its pores, and the ware presently becomes dry. It is then exposed a second time to the fire, by which means the glaze it has imbibed is melted, and a thin glassy coat is formed upon its surface. The color of this coat is more or less yellow, according as a greater or less proportion of lead has been used. The lead is principally instrumental in producing the glaze, as well as in giving it the yel-low color ; for lead, of all the substances hitherto known, has the greatest power of promoting the vitrification of the substances with which it is

mixed. The flint serves to give a consistence to the lead during the time of its vitrification, and to hinder it from becoming too fluid, and running down the sides of the ware, and thereby leaving them unglazed.

The yellowish color which lead gives when vitrified with flints, may be wholly changed by very small additions of other mineral substances. Thus, to give one instance, the beautiful black glaze, which is fixed on one sort of the ware made at Nottingham, is composed of twenty-one parts by weight of white lead, of five of powdered flints, and of three of manganese. The queen's-ware at present is much whiter than formerly.

The coarse stoneware made at Bristol consists of tobacco-pipe clay and sand, and is glazed by the vapor of salt, like Staffordshire flint-ware; but it is far inferior to it in beauty.

POTTLE, n. s. From pot. A liquid mea-

sure containing four pints. Sometimes used for a tankard, or pot out of which glasses are filled.

Roderigo hath to-night caroused Potations pottle deep. Shakspeare.

The oracle of Apollo Here speaks out of his pottle, Or the Tripos his tower bottle.

Ben Jonsoii.

POUCH, n.s. Fr. poche. Sax. J>ora. A small bag ; a pocket.

In January husband that poucheth the grotes, Will break up his lay, or be sowing of otes.

Tusser.

Tester I'll have in pouch, when thou shalt lack.

Shakspeare.

The spot of the vessel, where the disease begins, gives way to the force of the blood pushing outwards, as to form a pouch or cyst. Sharp's Surgery.

The common heron hath long legs for wading, a long neck to reach prey, and a wide extensive throat to pouch it. Derham.

From a girdle about his waist, a bag or pouch divided into two cells. Gulliver's Travels.

POUCH, Fr. giberne, a case of black stout leather with a flap over it, which is generally ornamented by a brass crown, &c., for the battalion - men; a fuse for the grenadiers; and a bugle-horn for the light infantry. The pouch hangs from a cross belt, over the left shoulder, and is worn in that manner, by the infantry, for the purpose of carrying their ammunition. The pouches in use among the cavalry are smaller, which the French call demie giberne.

POUCHARD (Julian), a learned French critic, was born near Domfront, in Normandy, and educated at Mans, and at Paris, where he rendered assistance to M. Thevenot, in his edition of the Ancient Mathematicians. After this he was engaged some years in arranging

the MSS. of the royal library. In 1701 he became an associate of the Academy of Inscriptions, to whose memoirs he contributed some valuable papers on the learning of the Egyptians. He next became editor of the Journal des Scavans; and in 1704 was appointed professor of Greek, but died the year following, aged forty-nine. Besides the above works, he wrote a Universal History from the Creation to the Death of Cleopatra.

POUGHKEEPSIE, a township of the United States, the capital of Dutchess county, New York, situated on the east bank of the Hudson, about a mile east of the river, contains a court-house, jail, bank, academy, five houses of pub-lic worship ; and had, in 1812, 422 dwelling-houses, and forty-nine stores, shops, &c. Many of the old houses are mostly of stone, but those recently erected are of brick and wood. Pough-keepsie is a flourishing town, in one of the most wealthy and best agricultural counties in the state, and has an extensive trade. Here are three printing-offices, from each of which is is-sued _a weekly newspaper. Seventy-five miles north of New York. Population 4670.

POVERTY, n. s. Fr. pauvrete. ; Lat. pau-pertas. Indigence ; necessity ; want of riches.

My men are the poorest, But poverty could never draw them from me.

Shakspeare.

There is in all excellencies in composition a kind of poverty, or a casualty of jeopardy. Bacon.

Such madness, as for fear of death to die,

Is to be poor for fear of poverty. Denham.

These by their strict examples taught, How much more splendid virtue was than gold ; Yet scarce their swelling thirst of fame could hide, And boasted poverty with too much pride. Prior.

There is such a state as absolute poverty, when a man is destitute not only of the conveniences, but the simple necessaries of life, being disabled from acquiring them, and depending entirely on charity.

Rogers.

POVERTY BAY, a bay on the east coast 01 New Zealand, in the South Pacific Ocean, called by the natives Taoneroa, or Long Sand, discovered by Cook in the year 1769. This bay, in the form of a horse-shoe, is known by an island lying close under the north-east point. It obtained its name from the inhospitable behaviour of the natives. Long. 181►► 36’ W., lat. 38►► 42’ S.

POULT, n. s.

POU

►►►ULTRY, chicken.

POULTERER. JJ If thou dost it half so gravely, so majestically, hang me up by the heels for a poulterer’s hare.

Shakspeare.

Several nasty trades, as butchers, poulterers, and fishmongers, are great occasions of plagues.

Harvey.

What louder cries, when Ilium was in flames, Than for the cock the widow’d poultry made.

Dry den.

The cock knew the fox to be a common enemy of all poultry. L’Estrange.

One would have all things little, hence has iried Turkey poults, fresh from the egg, in batter fried.

King.

Soldiers robbed a farmer of his poultry, and made him wait at table, without giving him a morsel.

Swift.

POULTRY comprehends all birds brought up in yards, as cocks, hens, capons, ducks, turkeys, &c. Under this class we may. therefore, reckon the common cock, the peacock, the turkey, the pin-tada or Guinea hen, &c. They all bear a strong similitude to each other, being equally graniˆo-rous, fleshy, and delicate to the palate. Many of the wild species of birds, when cooped up or caged, pine away, grow gloomy, and some refuse all sustenance whatever ; none except those of the poultry kind grow fat, who seem to lose all remembrance of their former liberty, satisfied with indolence and plenty.

POULTICE, n. s. fr.pulte; Lat. pultis. A cataplasm ; a soft or mollifying application.

Poultice relaxeth the pores, and maketh the humour apt to exhale. Bacon's Natural History.

Poultices allayed pains, but drew down the humours, making the passages wider, and apter to receive them. Temple.

If your little finger be sore, and you think a poul-tice made of our vitals will give it ease, speak, and it shall be done. ' Swift.

POUNCE, n. s. & v. a.~\ Italian ponzone—

POUNCED', adj. J Skinner. Spanish

POUN'CETBOX, n. s. jpunzen;i&.t.punctus.

The claw or talon of a bird of prey ; a powder thrown through a perforated box : to pierce

or perforate; pour 'or sprinkle through perforations : pouncetbox, a small perforated box.

As haggard hawk, presuming to contend With hardy fowl, about his able might,

His weary pounces, all in vain doth spend To truss the prey too heavy for his flight.

Spenser

He was perfumed like a milliner, And, 'twixt his finger and his thumb, he held A pouncetbox, which ever and anon He gave his nose. Shakspeare. Henry IV .

The new dissembled eagle, now endued With beak and pounces, Hercules pursued.

Dry den.

POUNCE, gum semdarach, pounded and sifted very fine, to rub on paper in order to preserve it from sinking, and to adapt it better for the reception of ink in writing. Pounce is also charcoal-dust, enclosed in a piece of muslin or open stuff, to be passed over holes pricked in work, in order to mark the lines or designs on paper, silk, See., placed underneath, which are to be afterwards finished with a pen, needle, or other like instrument.

POUND, n.s. & v.a.~\ Sax. {mnd, Jniman POUND'AGE, n. s. > (whence in some

POUND'ER, n. s. j places they use the

word pun) ; Goth. Swed. and Dan. pund ; Belg. , pond ; Lat. and Ital. pond ; Lat. pondo. A certain weight, certain sum of money (money being first weighed) ; to beat or grind by a weight or pestle : poundage is, a certain sum deducted from or paid upon a pound of money : a pounder is a heavy large pear ; also a person or thing denominated from a certain number of pounds : as, a ten pounder, a gun that carries a bullet of ten pounds weight ; or in ludicrous language a man with ten pounds a year; in like manner, a note or bill has been called a twenty pounder or ten pounder, from the sum it bears.

A pound doth consist of ounces, drams, scruples.

Wilkins.

Tonnage and poundage, and other duties upon merchandizes, were collected by order of the board.

Clarendon.

His mouth and nostrils poured a purple flood, And pounded teeth came rushing with his blood.

Dry den.

Should their axle break, its overthrow Would crush, and pound to dust the crowd below, Nor friends their friends, nor sires their sons could

know. Dryden's Juvena .

Great Hannibal within the balance lay, And tell how many pounds his ashes weigh.

Dry den.

Alcinous' orchard various apples bears, Unlike are bergamots and pounder pairs. Id.

She describes

How under ground the rude Biphean race Mimick brisk cyder, with the brake's product wild Sloes pounded. Philips.

He that said that he had rather have a grain of fortune than a pound of wisdom, as to the things of this life, spoke nothing but the voice of wisdom.

South's Sermons.

Lifted pestles brandished in the air, Loud strokes with pounding spice the fabrick rend, And aromatick clouds in spires ascend. Garth.

Opaque white powder of glass, seen through a microscope, exhibits fragments pellucid and coloui-

less, as the whole appeared to the naked eye before it was pounded. Bent ley.

None of these forty or fifty pounders may be suffered to marry under the penalty of deprivation.

Swift.

That exchequer of medals in the cabinets of the great duke of Tuscany is not worth so little as an hundred thousand pound. Peacham of Antiquities. He gave, whilst ought he had, and knew no

bounds ;

The poor man’s drachma stood for rich men’s pounds.

Harle.

POVND, n. s. & v. a. From Sax. pindan. A pinfold; an enclosure: to enclose in a pound. Rather than they should pound us up.

Shakspeare.

I ordered John to let out the good man’s sheep that were pounded by night. Spectator.

I hurry,

Xot thinking it is levee-day, And find his honour in a pound, Hemm’d by a triple circle round.

Swift’s Miscellanies.

To POUR, -o. a. & v. n. From the Welsh bwrw. Lat. ruo ? To let or drive some liquid out of a vessel, or from one place or receptacle to another; to emit; send forth : as a verb neuter, to stream ; flow ; rush violently.

If they will not believe those signs, take of the water of the river, and pour it upon the dry land.

Exodus iv. 9. ‘

A Samaritan bound up his wounds, pouring in oil and wine, and brought him to an inn. Luke 10.

London doth pour out her citizens ; The mayor and all his brethren in best sort, With the plebeians swarming.

Shakspeare. Henry ‘ . As thick as hail,

Came post on post ; and every one did bear Thy praises in his kingdom’s great defence, And poured them down before him. Id. Macbeth. The devotion of the heart is the tongue of the soul ; actuated and heated with love, it pours itself forth in supplications and prayers. Duppa.

Your fury then boiled upward to a fome ; But, since this message came, you sink and settle, As if cold water had been poured upon you.

Dry den.

If we had groats or sixpences current bylaw, that wanted one-third of the silver by the standard, who can. imagine that our neighbours would not pour in quantities of such money upon us, to the great loss of the kingdom ? Locke.

If the rude throng pour on with furious pace, And hap to break thee from a friend‘0, embrace, Stop short. Gay.

All his fleecy flock

Before him march, and pour into the rock, Not one or male or female stayed behind.

Pope.

Is it for thee the linnet pours his throat ? Loves of his own and raptures swell the note. Id.

A ghastly band of giants, All pouring down the mountains, crowd the shore.

Id.

POUSSE, n. s. The old word for pease ; corrupted, as may seem, from pulse. ††† Spenser.

But who shall judge the wager won or lost? ††† That shall yonder herd groom and none other, Which over the pousse hitherward doth post.

Spenser.

POUSSIN (Nicholas), an eminent French painter, born in 1 594, at Andel, in Normandy.

16 POW

He was instructed for a few months by one Fer dinand Elle, a portrait painter, and spent a month with L'Allemant; after which he went to Italy to study the antique and bas relief, but neglected coloring. He was invited back to Paris by Louis XIII. who assigned him a pension with lodgings in the Thuilleries. Piqued by some insults from the faction of Vouet's school, he returned to Rome, where he died in 1665. He had during the whole of his life a perpetual demand for easel-pieces, for which he obtained large prices.

POUSSIN, or DUGHET (Caspar). This painter, whose real name was Dughet, was born in Paris in 1660. He went to Rome to see his sister, who was married to Nicholas Poussin ; under whose instruction he became one of the best landscape painters that ever appeared. While he continued at Rome he assumed the name of his brother-in law and benefactor, by which only he is now known. He died in 1662.

POUT, n. s. From pouth. A kind of fish ; a cod-fish; also a kind of bird, or heath fowl.

Of wild birds, Cornwall hath quail, wood-dove, heath-cock, and pout. Carew's Survey of Cornwall.

POUT, v. n. Sax.botan : Fr. hauler. To look sullen ; push out the lips.

Like a misbehaved and sullen wench, Thou pout'st upon thy fortune and thy love.

Sliakspeare.

Satyrus was made up betwixt man and goat, with a human head, hooked nose, and pouting lips.

I would advise my gentle readers, as they consult the good of their faces, to forbear frowning upon loy-alist?., and pouting at the government.

Addison's Freeholder.

The nurse remained pouting, nor would she toucl; a bit during the whole dinner.

Arbutknot and Pope.

The ends of the wounds must come over one another, with a compress to press the lips equally down, which would otherwise become crude, and pout out with great lips. Wiseman.

POWDER, n. s., v. a., v. n.ˆ\ French pou-POW’DER-BOX, dre ; Ital. pul —

POW’DER-CHEST, vere ; Lat. pul—

POW’DER-IIORN, vis. Dust; any

POW’DERMILL, body cornmi—

POW’DER-ROOM, nuted ; parti—

POW’DERING-TUB, cularly powder

POWDERY, adj. J prepared for

the hair, and gunpowder : to powder is to re-duce to dust ; to sprinkle as with dust : the compounds are explained by the extracts.

The calf which they had made, he burnt in the fire, and ground it to powder. Exodus xxxii. 20.

If you embowel me to-day, I’ll give you leave to vowder nie and eat me to-morrow. Shakspeare.

To the Spital go,

And from the powdering-tub of infamy Fetch forth the lazar kite Doll Tearsheet. Id. Salting of oysters, and powdering of meat, keepeth them from putrefaction. Bacon’s Nat. History.

The seditious, being furnished with artillery powdet and shot, battered Bishopsgate. Hayward.

Powder thy radiant hair,

Which if without such ashes thou would’st wear, Thou who, to all which come to look upon, Wert meant for Phoebus, would’st be Phaeton.

Donne.

When the’ hair is sweet through pride or lust, The powder doth forget the dust. Herbert.

Immoderate feeding upon powdered beef, pickled meats, anchovy, and debauching with brandy, do inflame and acuate the blood.

Harvey on Consumption. My hair I never powder, but my chief l Invention is to get me powdered beef.

Cleaveland.

In the galaxy, that milky way Which nightly, as a circling zone, thou seest Powdered with stars. Milton’s Paradise Lost.

The flame invades the powder-rooms, and then Their guns shoot bullets, and their vessels men.

Waller.

When we view those large bodies of oxen, what can we better conceit them to be, than so many living and walking powdering-tubs, and that they have animam salis 1 More.

Whilst two companions were disputing it at sword’s point, down comes a kite powdering upon them and gobbets up both. L’Estrange.

As to the taking of a town, there were few conquerors could signalise themselves that way, before the invention of powder and fortifications. Addison. _ A brown powdery spar, which holds iron, is found amongst the iron ore. Woodward on Fossils.

The powdered footman Beneath his flapping hat secures his hair.

Gay.

There stands the toilette, The patch, the powder-box, pulville, perfumes.

Id.

Upon the blowing up of a powdermill, the windows of adjacent houses are bent and blown outwards, by the elastick force of the air within exerting itself. Arbuthnot.

Our humbler province is to tend the fair, To save the powder from too rude a gale. Pope. You may stick your candle in a bottle or a pow-der-horn. Swift.

POWDER CHESTS, in the marine, wooden triangular chests, filled with gunpowder, nails, and old iron, to set on fire when a vessel is boarded by an enemy. These cases are usually from twelve to eighteen inches in length, and about eight or ten in breadth, having their outer or up-per part terminating in an edge. They are nailed to several places of the quarter-deck and bulk-head of the waist, having a train of powder which communicates with the inner apartments of the ship, so as to be fired at pleasure to annoy the enemy. They are particularly used in merchant-ships which are furnished wjth closed-quarters to oppose the boarders.

POWDERS, FULMINATING, in chemistry, are compositions which explode upon the application either of certain degrees of heat, trituration, or concussion. Under this title, therefore, are included several very distinct chemical combinations, the principal of which are those of azote, with the metals and alkalis. The common fulminating powder is thus made : ††† Triturate in a warm mortar three parts by weight of nitre, two of carbonate of potass, and one of flowers of sulphur. A few grains of this laid upon a knife, and held over the candle, first fuse, and then explode with a loud report. A drachm of it put into a shovel, and held over the fire, makes a noise as loud as a cannon, and indents the shovel as if it had received a violent blow. If the mass be removed from the fire as soon as

it is fused, and kept in a dry, well closed phial, it may at any time be exploded by a spark, and will burn like gunpowder, but more rapidly and with a greater report ; but this effect will not be produced by unmelted powder. Whilst the powder is in fusion, but not sufficiently heated to produce the blue flame, a particle of ignited charcoal thrown upon it will immediately occasion a very loud explosion. The fulminating property of this powder is acquired by fusion, or when the potass and sulphur form sulphuret of potass. It may therefore be prepared by mixing sulphuret of potass with nitre, instead of adding the sulphur and alkali separate. If a solution of gold be precipitated by ammonia, the product will be fulminating gold. This precipitate, when

separated by filtration, and washed, must be dried without heat, as it is liable to explode with no great increase of temperature ; and it must not be put into a bottle closed with a glass stopper, as the friction of this would expose the operator to the same danger. Less than a grain of this, held over the flame of .a candle, explodes with a very sharp and loud noise.

Fulminating silver may be made by precipitating a solution of nitrate of silver by lime-wa- ter, drying the precipitate by exposure to the air for two or three days, and pouring on it liquid ammonia. When it is thus converted into a black powder, the liquid must be poured off, and the powder left to dry in the air. It detonates with the gentlest heat, or even with the slightest friction, so that it must not be removed from the vessel in which it is made. If a drop of water fall upon it, the percussion will cause it to explode. It was discovered by Berthollet.

Brugnatelli made a fulminating silver by powdering a hundred grains of nitre of silver, putting the powder into a beer-glass, and pouring on it, first an ounce of alcohol, then as much concentrated nitrous acid. The mixture grows hot, boils, and an ether is visibly formed, that changes into gas. By degrees the liquor becomes milky and opaque, and is filled with small white clouds. When all the gray powder has taken this form, and the liquor has acquired a consistency, distilled water must be added immediately to suspend the ebullition, and prevent the matter from being redissolved, and becoming a mere solution of silver. The white precipitate is then to be collected on a filter, and dried. The force of this powder greatly exceeds that of fulminating mercury. It detonates in a tremendous manner, on being scarcely touched with a glass tube, the extremity of which has been dipped in concentrated sulphuric acid. A single grain, placed on a lighted coal, makes a deafening report. The same thing happens if it be placed on a bit of paper on an electric pile, and a spark drawn from it.

M. Chenevix has invented a fulminating silver not so dangerous as that just mentioned. It explodes only by a slight friction in contact with combustible bodies. It is thus prepared : ††† Diffuse a quantity of alumina through water, and let a current of oxygenated muriatic acid gas pass through it for some time. Then digest some phosphate of silver on the solution of the oxygenated muriate of alumina, and evaporate

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slowly. The product obtained will be a hyper-oxygenated muriate of silver, a single grain of which, in contact with two or three of sulphur, will explode violently with the slightest friction.

Fulminating mercury was discovered by Mr. Howard. A hundred grains are to be dissolved with heat in an ounce and a half by measure of nitric acid. The solution, when cold, is to be poured on two ounce measures of alcohol, and heat applied till an effervescence is excited. As soon as the precipitate is thrown down, it must be collected on a filter, that the acid may not react on it, and washed and dried by a very gentle heat. It detonates with a very little heat or friction.

Of some experiments on the powers of this pow-der, the inventor gives the following account : ••• ‘ Desirous of comparing the strength of the mercurial compound with that of gunpowder,’ says Mr. Howard, ‘I made the following experiment in the presence of my friend Mr. Abernethy : ••• Finding that the powder could be fired by flint and steel, without a disagreeable noise, a common gunpowder proof, capable of containing eleven grains of fine gunpowder, was tilled with it, and fired in the usual way : the report was sharp, but not loud. The person who held the instrument in his hand felt no recoil : but the explosion laid open the upper part of the barrel, nearly from the touch-hole to the muzzle, and struck off the hand of the register, the surface of which was evenly indented to the depth of 0-1 of an inch, as if it had received the impression of a punch.

‘ The instrument used in this experiment be-ing familiarly known, it is therefore scarcely necessary to describe it ; suffice it to say that it was of brass, mounted with a spring register, the moveable hand of which closed up the muzzle, to receive and graduate the violence of the explosion. The barrel was half an inch in calibre, and nearly half an inch thick, except where a spring of the lock impaired half its thickness.

‘ A gun belonging to Mr. Keir, an ingenious artist of Camden Town, was next charged with seventeen grains of the mercurial powder, and a leaden bullet. A block of wood was placed at about eight yards from the muzzle to receive the ball, and the gun was fired by a fuse. No

recoil seemed to have taken place, as the barrel was not moved from its position, although it was in no ways confined. The report was feeble : the bul-let, Mr. Keir conceived, from the impression made on the wood, had been projected with about half the force it would have been by an ordinary charge, or sixty-eight grains of the best gunpowder. We therefore recharged the gun with thirty-four grains of the mercurial powder ; and, as the great strength of the piece removed any apprehension of danger, Mr. Keir fired it from his shoulder, aiming at the same block of wood. The report was like the first, sharp, but not louder than might have been expected from a charge of gunpowder. Fortunately Mr. Keir was not hurt ; but lue gun was burst in an extraordinary manner. The breech was what is called a patent one, of the best forged iron, consisting of a chamber 0-4 of an inch thick all found, and 0-4 of an inch in calibre; it was torn open and flawed in many directions, and the gold touch-hole driven out. The barrel into

which the breech was screwed was 0‘5 of an inch thick ; it was split by a single crack three inches long, but this did not appear to me to be the immediate effect of the explosion. I think the screw of the breech, being suddenly enlarged, acted as a wedge upon the barrel. The balled missed the block of wood, and struck against a wall, which had already been the receptacle of so many bullets that we could not satisfy ourselves about the impression made by this last.

‘ As it was pretty plain that no gun could confine a quantity of the mercurial powder sufficient to project a bullet with a greater force than an ordinary charge of gunpowder, I determined to try its comparative strength in another way. I procured two blocks of wood, very nearly of the same size and strength, and bored them with the same instrument to the same depth. The one was charged with half an ounce of the best Dartford gunpowder, and the other with half an ounce of the mercurial powder; both were alike buried in sand, and fired by a train communicating with the powders by a small touch-hole. The block containing the gunpowder was simply split into three pieces ; that charged with the mercurial powder was burst in every direction, and the parts immediately contiguous to the powder were absolutely pounded, yet the whole hung together, whereas the block split by the gunpowder had its parts fairly separated. The sand surrounding the gunpowder was undoubtedly most disturbed ; in short, the mercurial powder appeared to have a great superiority.

During a lecture in the laboratory of Yale College, about 100 or 150

grains of fulminating mercury lay on a stool, and were covered with a glass receiver of about five or six quarts capacity. A small quantity of the same powder, at the distance of a few feet, was merely flashed by a coal of fire, but without explosion. In a manner not easily understood, the whole powder under the glass receiver instantly exploded with a dreadful report; but, what was particularly remarkable, the glass was merely lifted up a little, and was shattered by its fall, while the stool, made of fir plank, an inch and a half thick, on which the powder lay, had a hole blown quite through it, almost as large as the palm of the hand. The whole effect of the explosion was confined to the stool, every thing around having remained unin-jured.

An effect almost equally singular took place lately in the same laboratory, with some fulminating silver upon the point of a knife, which was about to be put upon a plate of copper, connected with one pole of a galvanic battery in active operation. The other pole was not touched by the experimenter, but, probably by the influence conveyed through the floor of the room, the powder exploded the moment the knife touched the plate of copper. The knife blade was broken in two, and one-half of it thrown to a distance among the audience.

Three parts of chlorate of potassa, and one of sulphur, triturated in a metal mortar, cause numerous successive detonations, like the cracks of a whip, the reports of a pistol, or the fire of musketry, according to the rapidity and force of

the pressure employed. A few grains, struck withahammer en an anvil, explode with anoise like that of a musket, and torrents of purple light appear round it. Thrown into concentrated sulphuric acid, it takes fire and burns with a white flame, but without noise.

Six parts of the chlorate, one of sulphur, and one of charcoal, detonate by the same means, but more strongly, and with a redder flame.

Sugar, gum, or charcoal, mixed with the chlorate, and fixed or volatile oils, alcohol, or ether, made into a paste with it, detonate very

strongly by the stroke, but not by trituration. Some of them take fire, but slowly, and by degrees, in the sulphuric acid.

AH those mixtures that detonate by the stroke, explode much more loudly if previously wrapped up in double paper.

Fulminations of the most violent kind require the agency of azote or nitrogen ; as we see not only in its compounds with the oxides of gold, silver, and platina ; but still more remarkably in its chloride and iodide.

A fulminating antimonic powder has been prepared by M. Serullas in the following man-ner : ††† Grind carefully together 100 parts of tartar emetic and three parts of lampblack, or ordinary charcoal powder. Crucibles capable* of' holding about three ounces of water, to be only three-fourths filled, are to be ground smooth on their edges, and rubbed inside with powdered charcoal, so as to dust lightly their surface, and prevent the subsequent adherence of the carbonaceous cone which remains after the calcination. The above mixture, being introduced into the crucible, is to be covered with a layer of powdered charcoal ; and the joinings of the cover must be luted. After exposure for three hours to a good heat in a reverberatory furnace, the crucible must be removed, and left to cool for six or seven hours. This interval of time is necessary to allow the air, which always penetrates a little way into the crucibles, to burn the exterior coat of the fulminating mass ; otherwise, if it be taken out too recently, there is always an explosion. We must then hastily enclose it, without breaking, into a glass with a wide opening. After some time, it spontaneously breaks down into fragments of different sizes, retaining all its properties for years. When the calcination has been conducted as above, the product is excessively fulminating, so that, without the least compression, it gives rise to a violent detonation on contact with water. 100 parts of antimony, seventy-five of carbureted cream of tartar, and twelve of lamp black, triturated together, form also an excellent mixture. A piece of the size of a pea of this fulminating compound introduced into a mass of gunpowder explodes it when thrown into water. It is to the presence of potassium that the above explosive property is due. Sixty parts of carbureted cream of tartar, 120 of bismuth, and one of nitre, treated as above, yield an alloy very rich in potassium, of which the smallest portion cut with scissars sparkles. When bruised it melts and burns. ††† An.de. Ckim. Oct. 1822.

POWDKR, JAMES'S. See JAMES'S POWDER.

POWDER MAGAZINE, a bomb-proof arched building, to contain powder in fortified places.

POWEL (David), D. D., a Welsh divine and antiquary, born in Denbighshire, about 1552, and educated at Oxford, where he graduated. He became vicar of Ruabon, in Denbighshire. He published Caradoe's History of Wales, with annotations, in 1584; and several other works. He died at Ruabon in 1590.

POWELL (Sir John), a judge of the common pleas and king's bench, was born at Gloucester, which city he represented in parliament in 1685. In 1687 he was made one of the justices of common pleas, from which he was removed to the king's bench the following year, when he distinguished himself on the trial of the seven bishops, and was in consequence deprived of office ; but he was restored to it at the revolution. He was a sound lawyer, and a man of humor. An old woman being tried before him on the charge of witchcraft, among other things it was stated that she could fly. ' Prisoner,' said the judge, ' is it true that you can fly? ' ' Yes, my lord.' 'Well, then, you may ; for there is no law against fly-ing ; ' and he directed the jury to acquit her. He died a judge in 171 3.

POWER, n. s. "l ►►r.pouvoir; Span.

POWER'ABLE, adj. \ poder. Command ; do—

POWER'FUL, [minion ; authority ; in—

POWER'FULLY, adv. [fluence arising from

POWER'FULNESS, n. s. greatness ; ability ;

POWER'LESS, adj. J strength ; motive ; force : hence motion of the mind ; faculty ; one invested with power ; host ; army ; divinity : powerable is an obsolete adjective for capable of performing : powerful, forcible; mighty; in-fluential : the adverb and nounsubstantive corresponding : powerless, weak ; impotent.

After the tribulation of those days shall the sun be darkened, and the powers of the heavens shall be shaken. Matthew.

Care, not iear ; or fear not for themselves, altered something the countenances of the two lovers : but so as any man might perceive, was rather an assembling of powers than a dismayedness of courage.

Sidney.

He, to work him the more mischief, sent over his brother Edward with a power of Scots and Redshanks into Ireland, where they got footing.

Spenser's State of Ireland.

That which moveth God to work is goodness, and that which ordereth his work is wisdom, and that which perfecteth his work is power. Hooker.

Gazellus, upon the coming of the bassa, valiantly issued forth with all his power and gave him battle.

Knolles.

If law, authority, and power deny not, It will go hard with poor Anthonio.

Sluikspeare.

If ever

You meet in some fresh cheek the power of fancy, Then you shall know the wounds invisible, That love's keen arrows make. M.

I was in the thought, they were not fairies, and yet the guiltiness of my mind, the sudden surprise of my powers, drove the grossness of the foppery into a received belief. ”"

Merciful powers !

Restrain in me the cursed thoughts, that nature Gives way to in repose. ‘ < *
 Ma

POW

Who leads his power? Under whose government come they along *

Shakfpeare.

My heart, dear Harry,

Threw many a northward look to see his father Bring up his powers, but he did long in vain. Id.

1 give you welcome with a powerless hand, But with a heart full of

unstained love. Id. This man had power with him, to draw him forth to his death. Bacon's Essays.

He died of great years, but of strong health and powers. Bacon.

That you may see how powerful time is in altering tongues, I will set down the Lord's prayer, as it was translated in sundry ages. Camden.

Cast down thyself, and only strive to raise The glory of thy Maker's sacred name ;

Use all thy pow'rs, that blessed power to praise, Which gives theepou'r to be and use the same.

Daviet.

So much he stands upon the powerfulness of the Christian religion, that he makes it beyond all the rules of moial philosophy, strongly effectual to ex-pel vice, and plant in men all kind of virtue.

Hakewill on Providence.

What beast, what worm, wherein we may not see the footsteps of Deity ? Wherein we may not read innniteness of power and skill ? Bp. Hall.

By understanding the true difference betwixt the weight and the power, a man may add such a fitting supplement to the strength of the power, that it shall move any conceivable weight, though it should never so much exceed that force which the power is naturally endowed with. Wilkins.

My labour

Honest and lawful, to deserve my food Of those who have me in their civil power. *'il on.

We have sustained one day in doubtful fight, What heaven's Lord hath powerfullest to send Against us" from about his throne. Id.

The sun and other powerfully lucid bodies dazzle our eyes. Boyle.

Before the revelation of the gospel, the wickedness and irapenitency of the heathen world was a much more excusable thing, because they had but very obscure apprehensions of those things which urge men most powerfully to forsake their sins. Titlotson.

Dejected ! no, it never shall be said, That fate had power upon a Spartan soul ; My mind on its own centre stands unmov'd And stable as the fabric of the world.

Dryden.

With indignation thus he broke His awful silence, and the powers bespoke. Id. It is not in the pouier of the most enlarged understanding to invent one new simple idea in the mind, not taken in by-the ways aforementioned. Locke.

Observing in ourselves that we can at pleasure move several parts of our bodies, which were at rest ; the effects also that natural bodies are able to produce in one another occurring every moment to our senses, we both these ways get the idea of power.

Id.

By assuming a privilege belonging to riper years, to which a child must not aspire, you do but add new force to your example, and recommend the ac-tion more powerfully. <.

If there's a power above us, And that there is all nature cries aloud Through all her works, he must delight in virtue.

Addhon.

'Tis surprising to consider with what heats these two powers have contested their title to the kingdom of Cyprus, that is in the hands of the Turk.

Id. on Italy.

PRA

POWER, in arithmetic and algebra, is that which results from the successive multiplication of any quantity or number into itself, the degree of the power being always denominated by the number of equal factors that are employed,

thus :

2 ••• 21, 1st power of 2.

2x2ˆ: 2% 2d power of 2.

2 x 2 X 2 ††† 3* 3d power of 2. Hence it appears, that the index which denotes the degree of any power, is always equal to the number of factors, from which that power arises or one more than the number of operations.

POWNALL (Thomas), F.R.S. aud F.S.A. an ingenious writer, was born at Lincoln in 1722, and became secretary to the commissioners for trade and plantations in 1745. In 1753 he went to America, where he prevented the formation of a congress in the seven years' war. For this he was made governer of Massachusetts, whence he removed to New Jersey, and next to South Carolina, where he continued till 1761, when he was recalled, and made director-general of the office of control with the rank of colonel. He died at Bath in 1805. His works are: 1. On the Administration of the Colonies. 2. Description of part of North America, folio. 3. Treatise on Ihe study of Antiquities, 8vo. 4. Memorials addressed to the Sovereigns of Europe and the Atlantic. 5. On the Antiquities of the Provincia Romana of Gaul, 4to. 6. Descriptions of Ro-man Antiquities dug up at Bath, 4to. 7. InteU If ctual Physics, 4to.

POX, n, *. Sax. poccap. See POCK. Properly pocks, which originally signified small bags or pustules ; pustules ; efflorescences. It is used of many eruptive distempers.

Wilt thou still sparkle in the box, Canst thou forget thy age and pox 1 Dorset.

Pox, SMALL. See MEDICINE, Index.

POYAIS. A fertile tract of land on the Mosquito shore, near the Bay of Honduras, in central America, having a capital of the same name, and inhabited by a warlike race of Indians, who have hitherto maintained their independence. Sir Gregor Mac Gregor, an English officer, who took an active part in the revolution of Venezuela, in 1816, seized upon Amelia Island in 1817, attacked Porto Bello in 1819; but was ultimately obliged to abandon his enterprise against the Spaniards. He settled amongst the Poyais Indians, obtained their entire confidence, was chosen cacique, improved their commerce, and established schools. The Poyais country yields indigo, sugar, coffee, cocoa, tobacco, mahogany, dye, stuffs, &c.

POZE, v. a. To" puzzle. See POSE.

And say you so ? then I shall poxe you quickly.

Shakspeare.

PRACHIN, one of the sixteen circles of Bohemia, occupies the south-west corner of the kingdom. Its area is 1820 square miles ; and on the borders of Bavaria it has a number of lofty mountains, covered with forests : the interior is more level and fertile. The Moldau has its source here, but the Wottawa is tlie larger stream. In the mountains are found precious stones, and in the sands of the Wottawa some gold dust and pearls. The Bohemian is the

Population 210.000. The

“) ff. pratique ; Lat. practica ; Or. Trpcuc-TiKt). Habit; cus-tom ; use ; method ; dexterity ; performance : practicable is fperformable ; feasi-ble ; assailable : the adverb and nounsubstantive corresponding : practical

J and practick (the

prevailing language, chief town is Piseck. PRACTICE, ►►.*. PRACTICABLE, adj. PRAC’TICABLY, adv. PRAC’TICABLENESS, n.s. PRAC’TICAL, adj. PRAC’TICALLY, adv. PRAC’TICA LNESS, n. s. PRAC’TIC, adj. PRAC’TISE, v. a. & v. n. PRAC’TISANT, n. s. PRAC’TISER, PRAC’TITIONER.

latter obsolete), relating to action ; not merely speculative : the adverb and nounsubstantive that follow corresponding : to practise, to do habitually or constantly : as a verb neuter, to form a habit of acting ; transact ; use ; a profession ; use bad or deceitful arts : practiser and practitioner, he who practises.

Incline not my heart to practise wicked works with men that work iniquity. Psalm cxli. 4.

Will truth return unto them that practise in her ?

Ecclus.

He sought to have that by practice which he could not by prayer ; and, being allowed to visit us, he used the opportunity of a fit time thus to

deliver us. Sidney.

Thereto his subtile engines he doth bend, His practick wit, and his fair filed tongue, With thousand other sleights. Spenser.

There are some papistical practitioners among you.

Whitgifte.

This disease is beyond my practice ; yet I have known those which have walked in their sleep, who have died holily in their beds. Sliakspeare.

Shall we thus permit

A blasting and a scandalous breath to fall On him so near us 1 this needs must be practice ; Who knew of your intent and coming hither ?

Id.

When he speaks,

The air, a chartered libertine, is still ; And the mute wonder lurketh in men's ears, To steal his sweet and honied sentences ; So that the act and practick part of life Must be the mistress to this theorick. Id.

If thou do'st him any slight disgrace, he will practise against thee by poison. Id. As You Like It. Here entered Pucelle and her practisants.

Shakspeare.

Sweet practiser, thy physick I will try, That ministers thine own death if 1 die. Id.

Wise states prevent purposes Before they come to practice, and foul practices Before they grow to act. Denham's Sophy.

True piety without cessation tost By theories the practick part is lost. Denham. At practised distances to cringe, not fight.

Milton. They shall practise how to live secure. Id.

Oft have we wondered How such a ruling spirit you could restrain, And practise first over yourself to reign. Waller. Religion comprehends the knowledge of its prin-r:ples, and a suitable life and practice ; the first, be-ing speculative, may be called knowledge ; and the latter, because it is practicable, wisdom. Tillotson.

I never thought I should try a new experiment, being little inclined to practise upon others, and as little that others should practise upon me.

Temple's Miscellanies. I had reasoned myself Into an opinion that the

use of physicians, unless in some acute disease, was a venture, and that their greatest practisers practised least upon themselves. Temple.

An heroick poem should be more like a glass of nature, figuring a more practicable virtue to us, than was done by the ancients. Dryden.

Obsolete words may be laudably revived, when they are more sounding, or more significant than those in practice. Id.

This falls out for want of examining what is practicable and what not, and for want again of measuring our force and capacity with our design.

L'Estranye.

Of such a practice when Ulysses told, Shall we, cries one, permit This lewd romancer and his bantering wit T

Tate.

There are two functions of the soul, contemplation and practice, according to that general division of objects, some of which only entertain our speculations others also employ our actions ; so the understanding, with relation to these, is divided into speculative and practick. South.

He must be first an exercised, thorough-paced practitioner of these vices himself. Id.

We will, in the principles of the politician, shew how little efficacy they have to advance the practiser of them to the things they aspiie to. Id.

Few practical errors in the world are embraced upon the stock of conviction, but inclination. Id. Whilst they contend for speculative truth, they by mutual calumnies, forfeit the practick.

Government of the Tongue. I've practised with him, And found a means to let the victor know, That Syphax and Sempronius are his fiiends.

Addison.

The meanest capacity, when he sees a rule pructi~ catty applied before his eyes, can no longer be at a loss how it is to be performed. Rogers.

Tooth-drawers are practical philosophers, that go upon a very rational hypothesis, not to cure, but to take away the part affected. Steele.

After one or more ulcers formed in the lungs, I never, as I remember, in the course of above forty years' practice, saw more than two recover.

Blackmore.

This is a practicable degree of Christian magnani mity. Atterbury.

The author exhorts all gentlemen practitioners to exercise themselves in the translatory. Arbuthnot

Others by guilty artifice and arts Of promised kindness practice on our hearts ; With expectation blow the passion up, She fans the fire without one gale of hope.

Granville.

Unreasonable it is to expect, that those who lived before the rise and condemnation of heresies, should come up to every accurate form of expression which long experience afterwards found necessary, to guard the faith, against the subtle practices, or provoking insults of its adversaries. Waterlund.

Some physicians have thought, that if it were practicable to keep the humours of the body in an exact balance of each with its opposite, it might be immortal ; but this is impossible in the practice. Swift.

I do not know a more universal and unnecessary mistake among the clergy, but especially the younger practitioners. Id.

PRACTICE, in military education, or gun-practice. In the spring, as soon as the weather permits, the exercise of the great guns begins, with an intention to show the gentlemen cadet", at the royal military academy at Woolwich, and private men, the manner of laying, loading.

pointing, and firing the guns. Sometimes instruments are used to find the centre line, or two points, one at the breach, the other at the muzzle, which are marked with chalk, and whereby the piece is directed to the target : then a quadrant is put into the mouth to give the gun the required elevation, which at first is guessed at, according to the distance the target is from the piece. When the piece has been fired, it is sponged to clear it from any dust or sparks of fire that might remain in the bore, and loaded ; then the centre line is found as before ; and if the shot went too high or too low, to the right or to the left, the elevation and trail are altered accordingly. This practice continues morning and evening for about six weeks, more or less, according as there are a greater or less number of recruits. In the mean time others are shown the motions of quick-firing with field-pieces. Mortar-practice is generally acquired thus : a line of 1500 or 2000 yards is measured in an open spot of ground from the place where the mortars stand, and a flag fixed at about 300 or 500 yards : this being done, the ground where the mortars are to be placed is prepared and levelled with sand, so that they may lie at an elevation of forty-five degrees ; then they are loaded with a small quantity of powder at first, which is increased afterwards by an ounce every time, till they are loaded with a full charge ; the times of the flights of the shells are observed to determine the length of the fuzes. The intention of this practice is when a mortar battery is raised in a siege, to know what quantity of powder is required to throw the shells into the works at a given distance, and to cut the fuzes of a just length, that the shell may burst as soon as it touches the ground.

PRADON (Nicholas), a French dramatic poet, born at Rouen in the seventeenth century. He affected to be the rival of Racine; and, through the support of a party, his tragedy of Phaedra and Hippolytus appeared for some time to balance the reputation of Racine's tragedy of the same title. He died at Paris in 1698.

PRˆCOG'NITA, n. s. Latin pracognita. Things previously known in order to understand something else.

Either all knowledge does not depend on certain prtecognita or general maxims, called principles, or else these are principles. Locke.

PR/EMUNIRE, in law, is taken either for a writ so called, or for the offence whereon the writ is granted ; the one may be understood by the other. It is named, from the first words of the writ, ' Praemunire facias, A. B. ??? Cause A. B. to be forewarned ??? that he

appear before us to answer the contempt wherewith he stands charged ;' which contempt is particularly recited in the preamble to the writ. It derived its ori-gin from the exorbitant power claimed and exercised in England by the pope ; and was originally ranked as an offence immediately against the king ; because it consisted in introducing a foreign power into this land, and creating imperium in imperio, by paying that obedience to papal process which constitutionally belonged to the king alone, long before the Reformation >n the reign of Henry VIII. The church of

Rome, under pretence of her supremacy and the dignity of St. Peter's chair, took on her to be-stow most of the ecclesiastical livings of any worth in England, by mandates, before they were void. These provisions were so common that at last Edward I., in the thirty-fifth year of his reign, made a statute against papal provisions, which, Coke says, is the foundation of all the subsequent statutes of praemunire. In the reign of Edward II. the pope again endeavoured to-encroach, but the parliament withstood him; and it was one of the articles charged against that unfortunate prince that he had given allowance to the pope's bulls. But Edward III. to remedy these grievances, in conjunction with his nobility, wrote an expostulatory letter to the pope ; but receiving a menacing answer, acquainting him that the emperor and the king of France had lately submitted to the holy see, Edward replied, that if both the emperor and the French king should undertake the pope's cause, he was ready to give battle to them both, in defence of the liberties of the crown. Hereupon more sharp and penal laws were devised against provisors, which enact, that the court of Rome shall present or collate to no bishopric or living in England ; and that whoever disturbs any patron in the presentation to a living by virtue of a pa-pal provision, such provisor shall pay fine and ransom to the king, and be imprisoned till he renounces such provision ; and the same punishment is inflicted on such as cite the king, or any of his subjects, to answer in the court of Rome. And, when pope Urban V. attempted to revive the vassalage and annual rent to which king John had subjected his kingdom, it was unanimously agreed by all the estates, 40 Edw. III., that king John's donation was null and void, being without the concurrence of parliament, and contrary to his coronation oath ; and all the nobility and commons engaged that, if the pope should endeavour to maintain these usurpations, they would resist him with all their power. In the reign of Richard II. it was found necessary to strengthen these laws ; and therefore it was enacted by statutes 3 Ric. IL c. 3, and 7 c. 12,. that no alien shall be capable of letting his benefice to farm ; or of

being presented to any ecclesiastical preferment, under the penalty of the statutes of provisors. By stat. 12 Ric. II. c. 15, all liegemen of the king accepting of a living by any foreign provision are put out of the king's protection, and the benefice made void. To which the statute 13 Ric. II. st. 2, c. 2, adds banishment, and forfeiture of lands and goods : and, by c. 3, any person bringing over any citation or excommunication from beyond sea, on account of the execution of the foregoing statutes of provisors, shall be imprisoned, forfeit his goods and lands, and suffer pain of life and member. The next statute, which is referred to by all subsequent statutes, is called the statute of praemunire. It is the statute 16 Ric. II. c. 5, which enacts that whoever procures, at Rome or elsewhere, any translations, processes, excommunications, bulls, instruments, or other things which touch the king, against him, his crown and realm, and all persons aiding and assisting therein, shall be put out of the king's protection, and their lands and

goods forfeited to the king's use, and they shall be attached by their bodies to answer to the king and his council ; or process of praemunire facias shall be made out against them, as in other cases of provisors. By stat. 2 Henry IV. c. 3, all persons who accept any provision from the pope, to be exempt from canonical obedience to their proper ordinary, are also subjected to the penalties of pramunire. In the reign of Henry VIII. trhe penalties of praemunire were extended to more equal abuses ; as the kingdom then entirely denounced the authority of the see of Home. And therefore, by the several statutes of 24 Hen. VIII. c. 12, and 25 Hen. VIII. c. 19 and 21, to appeal to Rome from any of the king's courts, to sue to Rome for any license or dispensation, or to obey any process from thence, are made liable to the pains of praemunire. To restore to the king the nomination of vacant bishoprics, and yet keep up the established forms, it is enacted by stat. 25 Henry VIII. c. 20, that if the dean and chapter refuse to elect the person named by the king, or any archbishop or bishop to confirm or consecrate him, they shall fall within the penalties of the statutes of praemunire. By stat. 5 Eliz. c. 1, to refuse the oath of

supremacy will incur the penalties of praemunire; and to defend the pope's jurisdiction in this realm is a praemunire for the first offence, and high treason for the second. By stat. 13 Eliz. c. 2, to import any agni Dei, crosses, beads, or other superstitious things pretended to be hallowed by the bishop of Rome, and tender the same to be used ; or to receive the same with such intent, and not discover the offender ; or if a justice of the peace, knowing thereof, shall not within fourteen days declare it to a privy counsellor, they all incur a praemunire. But importing or selling mass books, or other popish books, is by stat. 3 Jac. I. c. 5, sec. 25, only liable to a penalty of 40s. Lastly, to contribute to the maintenance of a Jesuit's college, or any popish seminary beyond sea, or any person in the same, or to contribute to the maintenance of any Jesuit or Popish priest in England, is by stat. 27 Eliz. c. 2, made liable to the penalties of praemunire. Thus far the penalties of praemunire kept within the bounds of their original institution, depressing the power of the pope ; but they have since been extended to other heinous offences. Thus 1 . By the stat. 1 and 2 Ph. & M. c. 8, to mo-lest the possessors of abbey lands granted by parliament to Henry VIII. and Edward VI. is a pramunire. 2. So likewise is the offence of act-ing as a broker or agent in any usurious contract, where above ten per cent, interest is taken, by stat. 13 Eliz. c. 10. 3. To obtain any stay of proceedings, other than by arrest of judgment or writ of error, in any suit for a monopoly, is likewise a praemunire, by stat. 21 Jac. I. c~3. 4. To obtain an exclusive patent for the sole making or importation of gunpowder or arms, or to hinder others from importing them, is also a praemunire, by statutes 16 Car. I. c. 21, and 1 Jac. II. c. 8. o. To assert, maliciously and advisedly, by speaking or writing, that parliament has a legislative authority without the king, is declared a praemunire by stat. 13 Car. II. c. I. 7. By the habeas corpus act, also, 31 Car. II. c. 2, it is a

proernunire, and incapable of the king's pardon, to send any subject of this realm a prisoner into parts beyond the seas. 8. By stat. 1 W. & M. stat. 1, c. 8, persons of eighteen years of age, refusing to take the oaths of allegiance and supremacy, upon tender by a magistrate, are subject to the penalties of a praemunire ; and by stat. 8 and 9 W. III. c. 24, Serjeants, counsellors, proctors, attorneys, and all officers of courts, practising without having taken these oaths, and subscribed the declaration against popery, are guilty of a praemunire, whether the oaths be tendered or not. 2. By stat. 6 Ann. c. 7, to assert maliciously and directly, by preaching, teaching, or advised speaking, that the then pretended prince of Wales, or any person other than according to the acts of settlement and union, has any right to the

throne of these kingdoms, or that the king and parliament cannot make laws to limit the descent of the crown ; such preaching, teaching, or advised speaking, is a praemunire : as writing, printing, or publishing the same doctrines, amounted to high treason. 10. By stat. 6 Ann. c. 23, if the assembly of peers of Scotland, convened to elect their ten representatives in the British parliament, shall presume to treat of any other matter save only the election, they incur the penalties of a praemunire. 11. The stat. 6 Geo. I. c. 18 (enacted after the infamous South Sea project), makes all unwarrantable undertakings by unlawful subscriptions, then commonly known by the name of bubbles, subject to the penalties of praemunire. 12. The stat. 1 2 Geo. III. c. 11, subjects to the penalties of praemunire all such as knowingly and wilfully solemnise, assist, or are present at, any forbidden marriage of such of the descendants of the body of king George II. as are by that act prohibited to contract matrimony without the consent of the crown. The punishment of praemunire may be gathered from the foregoing statutes, which are thus summed up by Coke : ‘ That, from the conviction, the defendant shall be out of the king’s protection, and his lands and tenements, goods and chattels, forfeited to the king ; his body shall remain in prison at the king’spleasure or during life. These forfeitures do not bring this offence within felony ; being inflicted by particular statutes, and not by the common law.’ But so odious, Sir Edward Coke adds, was this offence of praemunire, that a man that was attainted of it might have been slain by any other man without danger of law ; but this was soon held untenable, and explained that it is only lawful to kill him in the heat of battle, or for necessary self-d efence. And, to obviate such savage notions, the stat. 5 Eliz. c. 1, expressly provides that it shall not be lawful to kill any person attainted in a praemunire. But still such delinquent, though protected as a part of the public from public wrongs, can bring no action for any private injury, how atrocious soever ; being so far out of the protection of the law that it will not guard his civil rights, nor remedy any grievance which he as an individual may suffer. And no man, knowing him to be guilty, can with safety give him comfort, aid, or relief.

PRAVNESTE, in ancient geography, a town of Latium, south-east of Rome, towards the terri-

tory of the jEqui ; a place of great strength ; famous for the temple and oracle of Fortune, called Sortes Praenestinae, which Tiberius wished to destroy, but was deterred by the majestic appearance of the place. From a colony it was afterwards raised to a municipium by Tiberius, on his recovery from a dangerous illness near it. It was a very ancient city, with a territory of large extent. The temple of Fortune was built in the most sumptuous manner by Sylla, and the pavement was Mosaic work. Concerning the Sortes, Cicero himself says that it was a mere contrivance to deceive, either for gain or superstition.

PRˆENOMEN, among the ancient Romans, signified the name prefixed to the family name, answering to our Christian name : such as Caius, Lucius, Marcus, Quintus, &c.

PR./ETEXTA TOGA, among the ancient Ro-mans, a long white gown, with a border of pur-ple round the edges, and worn by the children of patricians till the age of puberty, *viz.* by the boys till seventeen, when they changed it for the toga virilis : and by the girls till marriage. It was the habit which the magistrates, augurs, and priests, as well as senators, assumed on all solemn occasions, and therefore, being looked upon as sacred, it is supposed to have been ––hosen for youth at that age to guard them in a peculiar manner against the temptations incident to that period of life.

PRALTEXTATjE, a name given so tragedies among the Romans, in which the actors personated people of quality who had the particular privilege of wearing the praetexta.

PRˆETEXTATUS, one clothed in the praetexta, applied in a particular manner to the noble youth by whom it was worn to denote their age and condition, as may be learned from different medals.

PRˆETIUM SEPULCHRI, in old law books, &c., those goods accruing to the church wherein a corpse is buried.

PR/ETOR, a magistrate among the ancient Romans, not unlike our lord chief justices ; as being vested with the power of distributing justice among the citizens. At first there was only one praetor; but

afterwards, another being created, the first or chief one had the title of praetor urbanus, or the city praetor; the other was called peregrinus, as being judge in all matters relating to foreigners. But, besides these, there were afterwards created many provincial praetors ; who were not only judges, but also assisted the consuls in the government of the provinces, and even were invested with the government of provinces themselves.

PRETORIA AUGUSTA, a town of Italy, belonging to the Salassii, near the two gates or defiles of the Alps, the Grajoe and Penninae ; a Roman colony, settled by Augustus after the defeat of the Salassii by Terentius Varro, on the spot where he encamped, situated on the river Duria Major. It is now called Aosta.

PRAETORIAN CAMP, the place designed for the purpose of assembling within the same enclosure all the troops subjected to the power of the praetors. Sejanus, minister of Tiberius, Occupying the station of prefect, desired that all

the soldiers of the praetorian cohorts, whose quarters were dispersed about, should be gathered together and lodged in one vast edifice, which he caused to be built, and entitled castrum praetorium or rather castra praetoriana. Antiquarians are not agreed as to the precise situation of this magnificent structure, but it is pretty evident that it stood at the eastern side of Rome, between the Nomentane and Tibertine ways, behind the baths of Uioclesian, and near the walls of the city. This camp or rather barrack was constructed of brick, of reticular workmanship, covered with stucco, and enriched with superb porticoes in columns. Constantine demolished it: but it appears to have been restored by the care of Ligoflo. In the centre of the camp was the pratorium or tribunal, at which the prefect distributed justice. This had the exterior form of a temple, but was very plain within, the most conspicuous object being a table covered with a purple cloth embroidered with gold.

The camp was surrounded by an enclosure in some places double, and more or less extensive, within which were erected, on a quadrangular plan, two stories in height, the quarters of the soldiers, between the different divisions of which vast colonnades established an easy communication. The towers placed on the outside gave to the whole the appearance of a fortress, and the great space withinside ensured health to the troops, while it afforded them the requisite room for going through their various exercises.

PRSTORIAN GUARDS, in Roman antiquity, were the emperor's guards, who at length were increased to 10,000 : they had this denomination, according to some, from their being stationed at a place called Praetorium : their commander was styled praefectus praetorii.

PRˆETORIUM, or PRETORIUM, among the Romans, denoted the hall or court wherein the prator lived, and wherein he administered justice. It likewise denoted the tent of the Roman general, wherein councils of war, &c., were held : also a place in Rome where the praetorian guards were lodged.

PRETORIUM, hi ancient geography, a town of South Britain, belonging to the Brigantes ; now called Patnngton, according to Camden, near the mouth of the Humber in Yorkshire.

PR/KTUTIANI, an ancient people of Italy, ###who ir.habvtod lh##t ipu.! of Picenum which was anciently called Interamna, from its lying between two rivers, and is now named Teramo.

PRAGA, a town of Poland, on the Vistula, opposite Warsaw, with which it communicates by a bridge of boats. It has never recovered the catastrophe of 1794, when it was taken by storm, by the Russians under Suwarrow, and r general massacre ensued. The town was on this memorable occasion set on fire in several places, and almost reduced to ashes. The number of lives lost has been calculated at 20,000.

PRAGMATICAL, adj. I Fr. pragmatique ,

PRAGMAT'IC. $ Greek Trpay/uara.

Meddling; impertinently busy.

No shara so gross, but it will pass upon a weak man that is pragmatical and inquisitive.

L'Ettrange.

PRA

Common estimation puts an ill character upon pragniatick meddling people.

Government of the Tongue.

Lacqueys were never so saucy and pragmatical as they are now-a-days. Addisons Spectator.

He understands no more of his own affairs than a child ; he has got a sort of a pragmatical silly jade of a wife, that pretends to take him out of my hands.

Arbuthnot.

Such a backwardness there was among good men to engage with an usurping people, and pragmatical and ambitious orators. Swift.

PRAGMATIC SANCTION, in the civil law, is defined by Hottoman to be a rescript or answer of the sovereign, delivered by advice of his council, to some college, order, or body of peo-ple. A similar answer given to any particular person is called simply rescript. The term pragmatic sanction is chiefly applied to a settlement of Charles VI. emperor of Germany, who in 1722, having no sons, settled his hereditary dominions on his eldest daughter the archduchess Maria Theresa, which was confirmed by the diet of the empire, and guaranteed by Great Britain, France, the States General, and most of the powers in Europe. The word pragmatic is derived from the Greek 7rpay/*a, negotium, lusiness.

PRAGUE, an important city of Europe, the capital of Bohemia, is situated on both sides of the Moldau, at about an equal distance from the east and west frontiers of that kingdom ; but it occupies a larger space of ground on the right than on the left bank of the river. The streets are well paved, with raised footpaths, and the town contains several squares. It is divided into the Old Town, extending in an oblong form along the right bank of the Moldau ; the New Town outside of the old, and consequently farther from the river; and lastly, the Radschin or Ilraclschin, a detached quarter, built on a high precipitous hill, on the left bank. The whole is surrounded by a moat and earthen mound, the circuit of which is not less than ten miles. The Old Town has in one part a separate quarter for the Jews. The Radscliin contains a number of houses belonging to the nobility and gentry, the cathedral, and the archbishop’s palace. In a low track, to the north and east of this, is the quarter called Klein-seite, or Little

Prague, said to be the oldest part of the town ; and on the river side the suburb called Smichow. The Moldau is here of great width, but too shallow to be navigable. Its course is from north to south, and it is crossed by a bridge of sixteen arches, and 1850 feet in length.

Prague contains the ruins of what was the residence of the sovereign of Bohemia before the incoiporation with the Austrian dominions. This building stood at the southern extremity of the town, in the citadel, which is still well fortified. At the other end of the town, a building, also called a palace, used for public offices. It is so large as to contain 150 rooms, with a noble hall. The cathedral is a fine Gothic structure, situated on the steep side of the hill of the Radschin, overlooking a great part of the city. It suffered greatly in the thirty years' war. The theatre is large ; and the churches, convents,

schools, family mansions, &c., are, though great in number, little distinguished as edifices. The houses are built in general of stone. Prague is the rendezvous of the families of the Austrian nobility and gentry, whose incomes exempt them from the necessity of living in retirement, without enabling them to figure among the grandees of the imperial court. The society is consequently genteel, and balls, theatrical exhibitions, and masquerades, are of frequent occurrence. Of the population, about 85,000, nearly 7000 are Jews, and about 5000 strangers, attracted hither by the pleasures or advantages of the place. The Protestants have here two churches : the great majority being Catholics ; and Prague is> the see of an archbishop. The favorite saint is John Nepomuck (Nepomucenus), who lived in the fourteenth century, and allowed himself to be cast into the Moldau, rather than reveal to the emperor an important secret.

The university is the oldest in Germany, having been founded in 1 348. About forty years after the well known John Huss and Jerome of Prague appeared, and the spirit of free enquiry, aided by an intercourse with England, has never since been wholly extinct. The interference of the Bohemian government with the new sectaries caused a reduction of the number of pupils at the university, and in 1409 that of Leipsic was founded by a body of them removing. The present number of the professors at Prague is about forty ; that of students 900. It has classes of theology, law, medicine, philosophy, and classics. The public library contains above 100,000 volumes. Here is also an observatory, a cabinet of natural history, a seminary for training schoolmasters, three gymnasia, an academy for drawing and painting, riding and fencing schools, and a number of private boarding

houses. To these may be added the academy of sciences, the societies of economics and of the friends of the arts. There are likewise some good private galleries of paintings. Tycho Brahe was a refugee in this city ; the site of his observatory is now occupied by a mansion of a nobleman. Of the charitable institutions, the principal are three hospitals, two orphan-houses, and a lying-in-hospital.

.The manufactures in linen, cotton, silk, and hats, are extensive ; there are also, on a smaller scale, those of paper, brass-ware, trinkery, plated goods, glass, tobacco (on the government account), mathematical and musical instruments. Here is also some transit trade, and brewing is carried on extensively. Of the mercantile houses, nearly the half are Jewish. The shops are in general ill furnished, and the lower orders in wretched poverty.

Prague has often been exposed to the calamities of war, particularly in the fifteenth century, by the persecution of the Hussites. In 1620 a battle was fought on the White Mountain, about two miles from this city, between the Imperialists and Bohemians, in which the latter were defeated, and compelled to relinquish their sovereign. In 1741 a French corps blockaded in Prague, and in 1757, the Austrians being defeated near this place by the Prussians, Prague underwent a siege and heavy bombardment. The

town would require almost an army to defend it ;

for, though fortified, it is far too extensive for

FRAME, in military affairs, a kind of floating battery, being a flat-bottomed vessel, which

strength, and is commanded by several adjacent draws little water, mounts several guns, and is -:*i*_ -M AT w ~e v;or,r.o Qr,rl vorv impfiil in rovcrmsr the disembarkation of

heights. 144 miles N. N. W. of Vienna, and seventy-five S. S. E of Dresden. Long, (of the observatory) 14►► 25′ 10″ E., lat. 50►► 5′ 23″ N. PRAISE, n. s. & v. a.~\ Belg. prijs ; Swed. PRAISEFUL, adj. f Dan. and Teut. prys;

PRAIS'ER, n. s. 1 of Goth, prose. Re-in high mettle.

PRAISE'WORTHY, adj. Jnown; fame; commendation ; honor ; tribute of gratitude : to commend ; applaud ; celebrate ; glorify : praiseful and praiser explain themselves : praiseworthy is commendable ; worthy of praise.

One generation shall praise thy works to another, and declare thy mighty works. Pialm cxlv. 4.

The shepherds returned, glorifying and praising God for all the things that they had heard and seen.

Luke ii. 20.

Of whose high praise, and praiseful bliss, Goodness the pen, heaven the paper is. Sidney. We men and praisers of men should remember, that, if we have such excellencies, it is reason to think them excellent creatures, of whom we are.

Sidney.

The Tritonian goddess having heard Her blazed fame, which all the world had filled, Came down to prove the truth, and due reward For her praiseworthy workmanship to yield.

Spenser.

Turn to God, who knows I think this true, And useth oft, when such a heart missays, To make it good ; for such a praiser prays.

Donne. He ordain'd a lady for his prise,

very useful in covering the disembarkation of troops.

PRANCE, v. n. Belg. pronken ; Dan. pran-go, to set one's self to show; to move pom-eut. prys; pously or ostentatiously ; to spring and bound

Generally praiseful. fair and young, and skilled in tentation : a frolic.

i J r -f ??? ?IL >. 71; i

The horses' hoofs were broken by means of the prancings, the prandnas of their mighty ones.

Judges v. 22.

Here's no fantastick mask, nor dance, But of our kids that frisk and prance; Nor wars are seen, Unless upon the green Two harmless lambs are butting one the other.

Wotton. I see

The' insulting tyrant prancing o'er the field, Strewed with Rome's citizens, and drenched ip

slaughter,

His horses' hoofs wet with Patrician blood. Addison. With mud filled high, the rumbling cart draw*

near, Now rule thy prancing steeds, laced charioteer.

Gay.

We should neither have meat to eat, nor manufacture to clothe us, unless ??M could prance about in coats of mail, or eat brass. Swift.

Far be the spirit of the chase from them, To spring the fence, to rein the prancing steed.

Thomson.

PRANK, v. a. & n. s. ' Belg. pronken. See PRANCE. To decorate ; dress or adjust to os-

housewiferies. Chapman's Iliad.

Forgive me, if my verse but say you are A Sidney : but in that extend as far As loudest praisers. Ben Jonson's Epigrams.

Since men have left to do praiseworthy things, Most think all praises flatteries ; but truth brings That sound, and that authority with her name, As to be raised by her is only fame. Ben Jonson.

Then is our fortitude worthy of praise, when we can endure to be miserable.

Bp. Hall. Contemplations. Will God incense his ire For such a petty trespass, and not praise Rather your dauntless virtue 1 Milton.

They touched their golden harps, and hymning

praised God and his works. Id.

Lucan, content with praise, may lie at ease In costly grotts and marble palaces ; But to poor Bassus what avails a name, To starve on compliments and empty fame 1

Dry den.

We praise not Hector, though his name we know Is great in arms ; 'tis hard to praise a foe. Id.

Firmus, who seized upon Egypt, was so far praiseworthy, that he encouraged trade. Arbuthn t.

A soul redeemed demands a life of praise ; Hence the complexion of his future days ; Hence a demeanour holy and unspecked, And the world's hatred, as its sure effect.

Cowper.

PRAM, or FRAME, a kind of lighter used in Holland and the ports of the Baltic Sea, to carry the cargo of a merchant ship along-side in order to lade, or to bring it to shore to be lodged in the storehouses after being discharged out of the vessel.

Some prank their ruffs, and others timely dight Their gay attire. Spenser.

These are tribunes of the people, The tongues o’ the common mouth : I despise them ; For they do prank them in authority Against all noble sufferance. Shakspeare.

Your high self,

The gracious mark o’ the land, you have obscured With a swain’s wearing ; and me, poor lowly maid, Most goddess-like pranked up. Id. Winter’s Tale.

Lay home to him ; Tell him, his pranks have been too broad to l>ear

with. Shakspeare.

They caused the table to be covered and meat set on, which was no sooner set down, than in came the harpies, and played their accustomed pranks.

Raleigh.

Ye gallants, whom a little yellow earth and the webs of that curious worm have made gorgeous without and perhaps proud within, remember that ere long, as one worm decks you without, so another worm shall consume you within ; and that both the earth that you prank up, and that earth wherewith you prank it, is running back into dust. Bp. Hall.

I had not unlocked my lips In this unhallowed air, but that this juggler Would think to charm my judgment as mine eyes, Obtruding false rules, prankt in reason’s garb.

Milton.

They put on their clothes, and played all those pranks you have taken notice of.

Addison’s Guardian.

As in unequal association it always happens, whatever unlucky prank was played was imputed to Cave.

Johnson.

PRASIUM, iii botany, shrubby hedge-nettle; a genus of the gymnospermia order and didyna

mia class of plants ; natural order forty-second, verticillatae. There are four monospermous berries.

PRASLIN, a high island, one of the Sechel-les in the Indian Seas, and next in size to Mahe, from which it is eight leagues distant; it has a good road on the north, sheltered by the little island Curieuse. It has some French families. Long. 55►► 47’ E., lat. 4►► 19” S.

PRATE, v. n. & n. s. ˆ Dan. prate ; Belg.

PRAT’TLE, v. n. & n. s. ypraten. To talk care—

PRAT’TLER, n. s. j lessly ; chatter ; tattle ;

be loquacious : prattle is a diminutive of prate, and as a substantive is idle, empty talk : prattler, a trifling talker.

His knowledge or skill is in prating too much.

Tusser.

Behold me, which owe A moiety of the throne, here standing To prate and talk for life and honour, ‘fore Who please to hear. Shakspeare. Winter’s Tale.

I prattle

Something too wildly, and my father’s precepts I therein do forget. Id. Tempest.

The bookish theorick, Wherein the toged consuls can propose As masterly as he ; mere prattle, without practice, Is all his soldiership. Id. Othello.

Poor prattler ! how thou talkest. Shahspeare. After Hammock and the

blacksmith had, by joint and several pratinas, found tokens of consent in the multitude, they offered themselves to lead them.

Bacon'* Henry VII. Prattler, no more, I say ; My thoughts must work, but like a noiseless sphere,

Harmonious peace must rock them all the day ; No room for prattlers there. Herbert.

Oh listen with attentive sight To what my prating eyes indite ! Cleaveland. Would her innocent prate could overcome me; Oh ! what a conflict do I feel. Denham's Sophy.

The insignificant prattle and endless garrulity of the philosophy of the schools. Glanville.

What nonsense would the fool thy master prate, When thou, his knave, canst talk at such a rate ?

Dryden.

A French woman teaches an English girl to speak and read French, by only prattling to her.

Locke.

There is not so much pleasure to have a child wattle agreeably, as to reason well.

Id. On Education. His tongue, his prattling tongue, had changed him

quite To sooty blackness, from the purest white. Addison.

I must prattle on, as afore, And beg your pardon, yet this half hour.

Prior.

Let cred'lous boys and prattling nurses tell, How, if the festival of Paul be clear, Plenty from liberal horn shall strow the year.

Gay.

When expectation rages in my blood, Is this a time, thou pracer? hence, begone.

Souihsm.

This is the way of the world ; the deaf will prate of discords in musick. Watts.

When children first begin to spell, And stammer out a syllable,

We think them tedious creatures ; But difficulties soon abate, When birds are to be taught to prole,

And women are the teachers. Cowper.

PRATINAS, a Greek poet, contemporary with jˆschylus, born at Phsius. He was the first among the Greeks who composed satires, which were represented as farces. Of these thirty-two were acted, and eighteen of his tragedies, one of which only obtained the poetical prize. Some of his verses are extant, quoted by Athenseus.

PRATO, a considerable and well built town of the grand duchy of Tuscany, district of Florence, Italy, is situated in a pleasant district, on the Bisenzio, and surrounded with a wall and ditch. It has several squares, of which the best is the Piazza Mercantile ; but the great ornament of the place is its fine white marble cathedral. There are twelve other churches, two poor-houses, a foundling, and four other hospitals ; manufactures of silk, woollen, soap, and hats. The vicinity is fertile and contains several stone quarries. Six miles south-east of Pistoja, and nine N. N. W. of Florence.

PRATT (Charles), earl of Camden, was the third son of Sir John Pratt, knight, chief justice of the court of king's bench under George I., and was born in 1713, the year before his father was called to the bench. He received the rudiments of his education at Eton, and afterwards removed to King's College, Cambridge. He took his degree of M. A., attended the Inner Temple, and was in due time admitted a barrister at law. Notwithstanding the great abilities he afterwards displayed, he passed nine years almost unknown and unnoticed, and was thinking of giving up the law and turning to divinity, when he was raised from obscurity by Mr. Henley (afterwards lord chancellor) employing him in a cause he himself was engaged in, on a circuit, and thus affording him the opportunity of displaying his professional knowledge and eloquence. He became now one of the most successful pleaders at the bar, and was chosen to represent the borough of Downton, Wilts, after the general election in 1756; appointed recorder of Bath and attorney-general in 1756; in January, 1762, he was made serjeant at law, appointed chief justice of the common pleas, and knighted. He

presided in that court with a dignity and impartiality never exceeded by any of his predecessors; and, when John Wilkes was committed to the Tower on an illegal general warrant, his lordship, with the intrepidity of a British magistrate, granted him an habeas cor-pus ; and, on his being brought before the court of common pleas, discharged him from his confinement. His spirited behaviour on this occasion, and in the consequent judicial proceedings between the printers of the North Briton and the messengers and others, was so acceptable that the city of London presented him with their freedom in a gold box, and put up his picture painted by Reynolds in the Guildhall. The corporations of Dublin, Bath, Exeter, and Norwich, paid him the like compliment. On the 16th of July, 1765, he was created a peer or Great Britain, by the title of lord Camden, baron Camden, in Kent; and July 30th 1766 on the resignation of Robert, earl of Northing-ton, he was appointed lord high chancellor of Great Britain. In this station he gave his most

decided opinion against the legality of general warrants. He conducted himself in this high office so as to obtain the esteem of all parties ; but, when the taxation of America was in agitation, he declared himself so strongly against it, that he was obliged to resign. Upon the fall of lord North he was again taken into the administration, and on the 27th of March, 1782, appointed president of the council ; an office which he resigned in March 1783. On the 13th of May 1786 he was created viscount Bayham, of Bayham abbey, Kent, and earl Camden. He died on the 18th of April, 1794, at his house in Hill Street, Berkley Square, being at that time president of the privy council, a governor of the charter-house, recorder of the city of Bath, and F. R. S. He married Elizabeth, daughter of Nicholas Jeffries, esq., by whom he had issue John Jeffries Pratt (second earl of Camden), and four daughters.

PRATT (S. J.), a miscellaneous writer, was born at St. Ives, Hunts, in

1749, and was successively an itinerant corrector, bookseller, and author, at first using the name of Courtney Mel-moth. His principal works were The Zion of Genius ; Sympathy, a poem ; and Landscapes in verse ; Liberal Opinions, 5 vols. ; Emma Corbett, 3 vols.; The Pupil of Pleasure, 2 vols.; and family Secrets, 5 vols. novels : also Glean-ings abroad and in England, 3 vols. 8vo., once very popular vols. of Travels : The Fair Circas-sian, a tragedy, &c. He died at Birmingham in

1814.

PRAV'ITY, n. s. Lat. pruvitas. Corruption ; malignity; vice.

Doubt not but that sin

Will reign among them, as of thee begot ;

And therefore was law given them, to evince

Their natural pravity. Milton's Paradise Lost.

More people go to the gibbet for want of timely correction, than upon any incurable pravity of na-ture. L'Estrange.

I will show how the pravity of the will could influence the understanding to a disbelief of Christianity- South.

PRAWN, n. s. Italian parnocche. A small crustaceous fish.

I had prawns, and borrowed a mess of vinegar.

Shdkspeare.

PRAWN. See CANCER.

PRAXAGORAS, a native of Athens, who at nineteen years of age composed the History of the Kings of Athens, in two books; and at twenty-two the Life of Constantine the Great, in which, though a Pagan, he speaks very highly of that prince. He also wrote the History of Alexander the Great. He lived under Constan-tius about A. D. 345.

PRAXIPHANES, a Rhodian, who wrote a learned commentary on the obscure passages of Sophocles. Diog.

PRAXITELES, a very celebrated Greek sculptor, who lived A. A. C. 330, in the reign of Alexander the Great. All the ancient writers

mention his statues with high commendation, especially a Venus executed by him for the city of Cnidos, which was so admirable a piece, that kinff Nicomedes offered to release the inhabitants from their tribute as the purchase of it ; but they

refused to part with it. The inhabitants of Cos requested him to make a statue of Venus. He gave them a choice of two, one naked, the other clothed ; they preferred the latter. He was one of the gallants of Phryne.

PRAY, v. n. & v. a. } Fr. prier ; Ital. pre-PRAY'ER, fgare ; Lat. precor. To

PRAY'ER-BOOK. y make petitions to a di-vine being; entreat; ask; supplicate; implore : prayer is petition to a divine being ; mode or practice of supplicating ; entreaty : prayerbook, book of devotional forms or prayers.

Therefore bretheren I beseche ghou be oure Lord lesus Crist, and be charite of the hooli goost, that ghe helpe me in youre preieris to the Lord, that 1 be delyuerid fro the unfaithful men that ben in iudee. Wiclif Homaiin* 15.

And the develis prieden him, and seiden, if thou castist us from hennes sende us in to the drove of swyn. Id. Matt. 3.

My heart's desire and prayer to God for Israel is, that they might be saved. Romans x. 1.

Is any sick? let him call for the elders of tlie church, and let them pray over him. Jamet v. 14.

I will buy with you, sell with you, but I will not eat with you, drink with you, nor pray with you.

Shukspeare, You shall find

A conqu'ror that will pray in aid for kindness, Where he for grace is kneeled to. Id

They did say their prayers, and addressed them Again to sleep. Id. Macbeth.

Were he as famous and as bold in war, As he is famed for mildness,

peace, and prayer.

Shakspeare.

Get a prayerbook in your hand, And stand between two churchmen ; For on that ground I'll build a holy descant. Id. Pray my colleague Antonius I may speak with

him ;

And as you go, call on my brother Quintus, And pray him with the tribunes to come to me.

Ben Jviison.

The solemn worship of God and Christ is neglected in many congregations ; and instead thereof, an indigested form and conception of extemporal prayer is used. White.

He that prays, despairs not ; but sad is the condition of him that cannot pray ; happy are they that can, and do, and love to do it. Tm/ lc.r.

No man can always have the same spiritual pleasure in his prayers; for the greatest saints have sometimes suffered the banishment of the heart, sometimes are fervent, sometimes they feel a barrenness of devotion ; for this spirit comes and goes.

Taylor.

Unskilful with what words to pray, let me Interpret for him. Milton.

Sighs now breathed Inutterable, which the spirit of prayer Inspired. Id.

He fell to his devotions on that behalf, and made those two excellent prayers which were published immediately after his death. Fell.

Prayer among men is supposed a means to change the person to whom we pray ; but prater to God doth not change him, but fits us to receive the things prayed for. Stillingjieet.

He praised my courage, prayed for my success ; He was so true a father of his country, To thank me for defending even his foes. Dryden.

He that will have the benefit of this act, must pray a prohibition before a sentence in the ecclesiastical court. Ayliffe.

Should you pray to God for a recovery, how rash would it be to accuse God of not hearing your prayers, because you found your disease still to continue. Wake.

but I pray, in this mechanical formation, when the ferment was expanded to the extremities of the arteries, why did it not break the receptacle ?

Betitley's Sermons.

Barnard in spirit, sense and truth abounds ; Pray then what wants he 1 fourscore thousand pounds. Pope.

I know not the names or number of the family which now reigns, farther than the prayerbook informs me. Swift.

If men would consider prayer not only as it is an invocation of God, but also as it is an exercise of holy thoughts, as it is an endeavour to feel and to be affected with the great truths of religion, they would soon see that, though God is so good as not to need much calling upon, yet that man is so weak as to need much assistance, and to be under a constant necessity of that help, and light, and improvement, which arises from praying much. Law.

Let cottagers and unenlightened swains Revere the laws they dream that Heaven ordains ; Kesort on Sundays to the house of prayer, And ask, and fancy they find, blessings there.

Cowper.

PRAYA, a sea-port town, the capital of Ter-cera, one of the Azores ; it stands in a beautiful plain, and has a church, four convents, three Hospitals, and about 3000 inhabitants.

PRAYA PORTE, the capital of St. Jago, one of the Cape de Verd Isles, is the residence of the Portuguese governor general ; but its trade is limited to the supply of provisions and refreshments to outward bound Guinea and East India ships. A fort commands the harbour.

PRAYER is a solemn address to God, which, when it is of any considerable length, has been said to consist of adoration, confession, supplication, intercession, and thanksgiving. By adoration we express our sense of God's infinite perfections, his power, wisdom, goodness, and mercy ; and acknowledge that our constant dependence is upon Him by whom the universe was created, and has been hitherto preserved. By confession is meant our acknowledgment of our manifold transgressions of the divine laws, and our consequent unworthiness of all the good things which we enjoy at present, or expect to be conferred upon us hereafter. In supplication we intreat our omnipotent Creator and merciful Judge not to deal with us after our iniquities, but to pardon our transgressions, and by his grace to enable us to live henceforth righteously, soberly, and godly, in this present world; and by Christians this intreaty is always made in the name and through the mediation of Jesus Christ, because to them it is known that there is none other name under heaven given unto men whereby they maybe saved. To these supplications for mercy, we may likewise add our prayers for the necessaries of life ; because, if we seek first the kingdom of God and his righteousness, we are assured that such things shall be added unfo us. Intercession signifies those petitions which we offer up for others, for friends, for enemies, for all men, especially for our lawful governors, whether supreme or subordinate. And thanksgiving is the expression of

our gratitude to God, the giver of every gooc and perfect gift, for all the benefits enjoyed by us and others, for the means of grace, and for the hope of glory. Such are the component parts of a regular and solemn prayer, adapted either for the church or for the closet. But an ejaculation to God, conceived on any emergency, is likewise a prayer, whether it be uttered by the voice or suffered to remain a mere affection of the mind ; because the Being to whom it is addressed discerneth the thoughts of the heart. In this article we have treated of prayer in general, as the private duty of every individual ; but there ought to be public as well as private prayer. The prayers of every Christian ought to be offered in the name and through the mediation of Jesus Christ. We conclude our reflections on the general duty, with observing, that nothing so forcibly restrains from ill as the remembrance of a recent address to heaven for protection and

assistance. After having petitioned for power to resist temptation, there is so great an incongruity in not continuing the struggle, that we blush at the thought, and persevere, lest we lose all reverence for ourselves. After fervently devoting our souls to God, we start with horror at immediate apostasy ; every act of deliberate wickedness is then complicated with hypocrisy and ingratitude ; it is a mockery of the Father of Mercies, the forfeiture of that peace in which we closed our address, and a renunciation of the hope which that address inspired. But if prayer and immorality be thus incompatible, surely the former should not be neglected by those who contend that moral virtue is the summit of human perfection.

Dr. Paley has so well met the question/ What virtue is there in prayer which should make it consistent with wisdom to grant a favor to the supplicant, which would not be consistent to grant without it ?' that we shall transcribe his observations.

' 1 . A favor granted to prayer may be more apt, on that very account, to produce good effects upon the person obliged. It may hold in the divine bounty, what experience has raised into a proverb in the collation of human benefits, that which is obtained without asking is oftentimes received without gratitude.

' 2. It may be consistent with the wisdom of the Deity to withhold his favors till they be asked for, as an expedient to encourage devotion in his rational creation, in order thereby to keep up and circulate a knowledge and sense of their dependency upon him.

' 3. Prayer has a natural tendency to amend the petitioner himself, and thus to bring him within the rules which the wisdom of the Deity has prescribed to the dispensation of his favors. If these, or any other assignable suppositions, serve to remove the apparent repugnancy between the success of prayer and the character of the Deity, it is enough ; for the question witli the petitioner is not from which, out of many motives, God may grant his petition, or in what particular manner he is moved by the supplications of his creatures ; but whether it be consistent with his nature to be moved at all, and wlwther there be any conceivable motives which

may dispose the divine will to grant the petitioner what he wants, in consequence of his praying for it.' ••• Moral Philosophy, vol. 2.

PREACH, v. n., v. a. & n. s. ~\ Fr. prescher ;

PREACH'ER, n. s. > Latin pradico.

PREACH'MENT. 3 To deliver a

public discourse upon sacred subjects ; to proclaim ; publish ; inculcate : used by Hooker for a discourse : a preacher is one who discourses publicly on religion : preachment, a religious discourse mentioned in contempt.

Prophets preach of thee ai Jerusalem. Nehemiah. The Lord gave the word ; great was the company of the preachers. Psalm Ixviii. 11.

From that time Jesus began to preach.

Matthew.

The Jews of Thessalonica had knowledge that the word of God was preached of Paul. Acts.

This oversight occasioned the French spitefully to term religion in that sort exercised, a mere preach.

Hooker.

There is not any thing publickly notified, but we may properly say it is preached. Id.

Was't you, thatrevell'd in our parliament, And made a preachment of your high descent 1

Shakspeare.

You may hear the sound of a preacher's voice, when you cannot distinguish what he saith.

Bacon.

Divinity would not pass the yard and loom, the forge or anvil, nor preaching be taken in as an easier supplementary trade, by those that disliked the pains of their own. Decay of Piety.

Here lies a truly honest man, One of those few that in this town Honour all preachers; hear their own.

Crashaw.

He decreed to commissionate messengers to preach this covenant to all mankind. Hammond.

It is evident in the apostles' 'preaching at Jerusalem and elsewhere, that at the first proposal of the truth of Christ to them, and the doctrine of repentance, whole multitudes received the faith, and came in.

Hammond.

Surely that preaching which comes from the soul, most works on the soul. Fuller.

He oft to them preached Conversion and repentance. Milton.

The shape of our cathedral is not proper for our preaching auditories, but rather the figure of an am-pitheatre with galleries. Graunt.

Can they preach up equality of birth, And tell us how we all began from earth ?

Dry den. All this is but a preachment upon the text.

L'Estrange.

No preacher is listened to but Time, which gives us the same train of thought that elder people have tried in vain to put into our heads before.

Swift.

Live while you live the sacred preacher cries, And give to God each moment as it flies.

Doddridge.

PREADAMITES, a denomination given to inhabitants of the earth, conceived by some to have lived before Adam. Isaac de la Pereyra, in 1 655, published a book to evince the reality of preadamites. by which he gained many proselytes ; but the answer of Demarets, professor of theology at Groningen, published in 1 656, put a stop to its progress; though Pereyra made a reply. His system was this : the Jews he calls

Adamites, and supposes them to have issued from Adam ; and gives the title Preadamites to the Gentiles, whom he supposes to have been a long time before Adam. But, this being ex. pressly contrary to the Mosaic account, Pereyra had recourse to the fabulous antiquities of the Egyptians and Chaldeans, and to some idle rabbins, who imagined there had been another world before that described by Moses. He was apprehended by the inquisition in Flanders ; but he appealed from their sentence to Rome ; whither he went in the time of Alexander VII., and where he printed a retraction. See PRE-EXISTEKCE.

PREAM'BLE, n. s. \ Fr. preambule ; Lat.

PREAM'BULOUS, adj. S preambulo. Introduction ; preface ; something previous : preambulous is preparatory.

Truth as in this we do not violate, so neither is the same gainsayed or crossed, no not in those very preambles placed before certain readings, wherein the steps of the Latin service book have been somewhat too nearly followed. Hooker.

Doors shut, visits forbidden, and divers contesta-tions with the queen, all preambles of ruin, though now and then he did wring out some petty content-ments. Wotton.

This preamble to that history was not improper for this relation. Clarendon.

With preambles sweet Of charming symphony they introduce Their sacred song, and waken raptures high.

Milton.

He not only undermineth the base of religion, but destroyeth the principal preambulous unto all belief, and puts upon us the remotest error from truth.

Browne. I will not detain you with a long preamble.

Dry den.

PREAPPREHEN'SION, n. s. Pre and apprehend. An opinion formed before examination.

A conceit not to be made out by ordinary eyes, but such as regarding

the clouds, behold them in shapes conformable to preapprehensions. Browne.

PREASE, n. s. Press ; crowd. See PRESS. Obsolete.

A ship into the sacred seas,

New-built, now launch we ; and from out our prease Chuse two and fifty youths. Chapman.

PREB'END, n. s. ˆ Fr. prebende ; low Lat.

PREB'ENDARV, n. s. J pr&benda. A stipend granted in cathedral churches ; the stipendiary.

To lords, to principals, to prebendaries.

Hubbard.

Deans and canons, or prebends of cathedral churches, in their first institution, were of great use, to be of counsel with the bishop. Bacon.

His excellency gave the doctor a prebend in St. Patrick's cathedral. Swift's Miscellanies.

A PREBEND is the maintenance a prebendary receives out of the estate of a cathedral or colle-giate church Prebends are distinguished into simple and dignitary; a simple prebend has no more than the revenue for its support; but a prebend with dignity has always a jurisdiction annexed to it.

PREBENDARY. The difference between a prebendary and a canon is, that the former receives his prebend in consideration of his offi-

dating in the church, but the latter merely by his being received into the cathedral or college.

PRECA'RIOUS, adj. ˆ Fr. precaire ; Lat.

PRECA'RIOUSLY, adv. sprecarius. Depen—

PRECA RIOUSNESS, n. s. J dent ; uncertain, because depending on the will of another; held by courtesy. Dr. Johnson remarks, ' No word is more unskilfully used than this with its derivatives. It is used for uncertain in all its senses ; but it only means uncertain, as dependent on others :' the adverb and noun substantive follow the senses of the adjective.

What subjects will precarious kings regard ?

A beggar speaks too softly to be heard. Dryden.

Those who live under an arbitrary tyrannick power, have no other law but the will of their prince, and consequently no privileges but what are preca—

Addison.

If one society cannot meet or convene together, without the leave or licence of the other society ; nor treat or enact any thing relative to their own society without the leave and authority of the other ; then is that society in a manner dissolved, and subsists precariously upon the mere will and pleasure of the other. Lesley.

He who rejoices in the strength and beauty of youth, should consider by how precarious a tenure he holds these advantages, that a thousand accidents may before the next dawn lay all these glories in the dust. Rogeris Sermons.

Most consumptive people die of the discharge they spit up, which, with the precariousness of the symptoms of an oppressed diaphragm, from a mere lodg-ment of extravasated matter, render the operation but little adviseable. Sharp's Surgery.

Our scene precariously subsists too long

On French translation and Italian song :

Dare to have sense yourselves ; assert the stage,

Be justly warmed with your own native rage.

Pope.

Heaven, earth, “and hell, and worlds unknown, Depend precarious on thy throne. Watts.

PRECAUTION, n. s. & v. a. Fr. precaution, from Lat. pmcautus. Preservative caution ; preventive measures; to warn beforehand.

By the disgraces, diseases and beggary of hopeful young men brought to ruin, he may be prtcautioned.

Locke.

Unless our ministers have strong assurances of his falling in with the grand alliance, or not opposing it, they cannot be too circumspect and speedy in taking their precautions against any contrary resolution.

Addison on the War.

PRECEDA’NEOUS, adj. Mistaken by the author, as Dr. Johnson says, for prsecidaneous ; Lat. pr&ciduneus, cut or slain before. Previous, antecedent.

That priority of particles of simple matter, influx of the heavens and preparation of matter might be antecedent and precedaneous, not only in order, but in time, to their ordinary productions. Hale.

PRECEDE’, v. a. ~\ fi.preceder ; Lat.

PRECE’DENCE, n. s. i pracedo. To go be-PRECE’DENCY, sfore in order of

PRECE’DENT, adj. & n. s. i time, place, or rank : PREC’EDENT, n. s. J precedence and precedency is, superiority ; adjustment of place ; and, in an obsolete sense, something going before or past ; precedent is, former ; going before ; and, as a noun substantive, any thing of the same kind done before ; a rule or example.

Examples for cases can but d:rect as precedentt only. Hooker.

I do not like, but yet it does allay The good precedence.

Shakspeare. Antony and Cleopatra. Our own precedent passions do

instruct us What levity's in youth. Id. Timon.

No power in Venice Can alter a decree established : Twill be recorded for a precedent ; 4nd many an errour, by the same example, Will rush into the state.

Id. Merchant of Venice.

When you work by the imagination of another, it is necessary that he, by whom you work, have a precedent opinion of you, that you can do strange things.

Bacon.

Among the laws touching precedence in Justinian, divers are that have not yet been so received every where by custom. Selden.

The royal olive accompanied him with all his court, and always gave him the precedency. Howel.

How are we happy, still in fear of harm 1 But harm precedes not sin. Milton.

None sure will claim in hell Precedence ; none, whose portion is small Of present pain, that with ambitious mind Will covet more. Id. Paradise Lott.

The constable and marshal had cognizance touching the rights of place and precedence. Hale.

The world, or any part thereof, could not be precedent to the creation of man. Id.

God, in the administration of his justice, is not tied to precedents, and we cannot argue, that the providences of God towards other nations, shall be conformable to his dealings with the people of Israel.

Tillotsm.

Arius and Pelagius durst provoke To what the centuries preceding spoke. Dryden.

That person hardly will be found, With gracious form and equal virtue crowned ; Yet if another could preeedence claim, My fixt desires could find no fairer aim. Id. Being distracted with different desires, the next inquiry will be, which of them has the precedency, in determining the will to the next action ? Locke.

Truths, absolutely necessary to salvation, are so clearly revealed that we cannot err in them, unless we be notoriously wanting to ourselves ; herein the fault of the judgment is reduced into a precedent default in the will. South.

Such precedents are numberless ; we draw Our rights from custom ; custom is a law.

Granville.

The ruin of a state is generally preceded by an universal degeneracy of manners and contempt of religion. Swift.

The contempt with which the whole army heard of the manner of your retreat assures me that, as your conduct was not justified by precedent, it will never be thought an example for imitation. Junius.

PRECEDENCE, PRECEDENCY, a place of honor to which a person is entitled. This is either of courtesy or of right. The former is that which is due to age, estate, &c., which is regulated by custom and civility ; the latter is settled by authority, and, when broken in upon, gives an action at law. A table of precedency is given in our article HERALDRY.

PRECE'NTOR, n.s. Fr. precenteur ; Latin precentor. He that leads a choir.

Follow this piecent.tr of ours, in blessing and magnifying that God of all grace, and never yield-

ing to those enemies, which he died to give us power to resist and overcome. Hammond.

PRE'CEPT, n.s.-\ Fr. precepte ; Lat. prte-PRt.cs.p'jiA.L,adj.9ceptum. A rule authori-PRECEP'TIVE, i tatively given ; a mandate ; PRECEP'TOR, n. 5. J direction : preceptial and preceptive mean, consisting of or giving precepts : preceptor is a teacher ; tutor.

The custom of lessons furnishes the very simplest and rudest sort with infallible axioms and precepts of sacred truth, delivered even in the very letter of the law of God. Hooker.

Men

Can counsel, and give comfort to that grief Which they themselves not feel ; but tasting it, Their counsel turns to passion, which before Would give preceptial medicine to rage ; Fetter strong madness in a silken thread, Charm ach with air, and agony with words.

Shakspeare.

As the preceptive part enjoys the most exact virtue so is it most advantageously enforced by the promissory, which, in respect of the rewards, and the manner of proposing them, is adapted to the same end. Decay of Piety.

A good schoolmaster minces his precepts for chil-

dren to swallow, hanging clogs on the nimbleness of his own soul, that his scholars may go along with him. Fuller.

'Tis sufficient, that painting be acknowledged for an art ; for it follows, that no arts are without their precepts. Dryden.

Passionate chiding carries rough language with it, and the names that parents and preceptors gire children, they will not be ashamed to bestow on others.

Locke.

The lesson given us here is preceptive to us not to do any thing but upon due consideration.

L' Estrange.

The ritual, the preceptive, the prophetick, and all other parts of sacred writ, were most sedulously, most religiously guarded by them.

Government of the Tongue.

A precept or commandment consists in, and has respect to, some moral point of doctrine, *viz.* such as concerns our manners, and our inward and outward good behaviour. Ayliffe. It was to thee, great

Stagyrite, unknown,

And thy preceptor of divine renown. Blackmure.

It is by imitation, far more than by precept, that we learn every thing ; and, what we learn thus, we acquire not only more effectually, but more pleasantly. Burke on the Sublime,

PRECESSION OF THE EQUINOXES.

PRECESSION OF THE EQUINOXES. One of the most obvious and at the same time most important of the celestial motions is the diurnal revolution of the starry heavens. The whole appears to turn round an imaginary axis, which passes through two opposite points of the heavens, called the poles. One of these is in our sight, being very near the star, and in the tail of the little bear. The great circle which is equidistant from both poles divides the heavens into the north and south hemispheres, which are equal. It is called the equator, and it cuts the horizon in the east and west points, and every star in it is twelve siderial hoars above, and as many below the horizon, in each revolution.

The motion of the sun determines the length of day and night, and the vicissitudes of the seasons. By a long series of observations the shepherds of Asia were able to mark out the sun's path in the heavens ; he being always in the opposite point to that which comes to the meridian at midnight, with equal but opposite declination. Thus they could tell the stars among which the sun then was, although they could not see them. They discovered that his path was a great circle of the heavens, afterwards called the ecliptic; which cuts the equator in two opposite points, dividing it, and being divided by it, into two equal parts : that when the sun was in either of these points of intersection, his circle of diurnal revolution coincided with the equator, and therefore the days and nights were equal. Hence the equator came to be called the equinoctial line, and the points in which it cuts the ecliptic were called the equinoctial points, and the sun was then 3aid to be in the equinoxes. One of these was called the vernal and the other the autumnal equinox.

It was a most important problem in practical astronomy to determine

the exact moment of the sun's occupying these stations; for it was natural to compute the course of the year from that mo-ment. Accordingly, this has been the leading problem in the astronomy of all nations. It is susceptible of considerable precision, without any apparatus of instruments. It is only necessary to observe the sun's declination on the noon of two or three days before and after the equinoctial day. On two consecutive days of this number, his declination must have changed from north to south or from south to north. If his declination on one day was observed to be 21' N., and on the next 5' S., it follows, that his de clination was nothing, or that he was in the equinoctial point about twenty-three minutes after seven in the morning of the second day. Knowing the precise moments, and knowing the rate of the sun's motion in the ecliptic, it is easy to ascertain the precise point of the ecliptic in which the equator intersected it.

By a series of such observations made at Alexandria, between the years 161 and 127 be-before Christ, Hipparchus, the father of our astronomy, found that the point of the autumnal equinox was about 6►► E. of the star called Spica virginis. Eager to determine every thing by multiplied observations, he ransacked all the Chaldean, Egyptian, and other records, to which his travels could procure him access, for obserˆ vations of the Same kind ; but only found some observations of Aristillus and Timochares made about 150 years before. From these it appeared evident that .the point of the autumnal equinox was then about 8►► E. of the same star. He discusses these observations with great sagacity and rigor ; and, on their authority, asserts that the

equinoctial points are not fixed in the heavens, but move to the west about 1►► in seventy-five years or less.

This motion is called the precession of the equinoxes, because by it the time and place of the sun's equinoctial station precedes the usual calculations : it is fully confirmed by all subsequent observations. In 1750 the autumnal equinox was observed to be 20►► 21' W. of spica

virginis. Supposing the motion to have been uniform during this period of ages, it follows, that the annual precession is about 50”►► ; that is, if the celestial equator cuts the ecliptic in a particular point on any day of this year, it will on the same day of the following year cut it in a point 50*►► to the west of it, and the sun will come to the equinox 20′ 23″ before he has completed his round of the heavens. Thus the equinoctial or tropical year, or true year of seasons, is so much shorter than the revolution of the sun or the sidereal year. This discovery has immortalised the name of Hipparchus.. It must be acknowledged, indeed, to be one of the most singular that has been made, that the revolution of the whole heavens should not be stable, but its axis continually changing. For since the equator changes its position, and the equator is only an imaginary circle, equidistant from the two poles or extremities of the axis ; these poles and this axis must equally change their positions. The equinoctial points make a complete revolution in about 25745 years, the equator being all the while inclined to the ecliptic in nearly the same angle. Therefore the poles of this diurnal revolution must describe a circle round the poles of the ecliptic, at the distance of about 23►► 30’ in 25745 years ; and, in the time of Timochares, the north pole of the heavens must have been 30►► east of where it now is.

The precession of the equinoxes, however, was known to the astronomers of India, many ages before the time of Hipparchus. The Chaldeans had also a pretty accurate knowledge of the year of seasons. From their saros, we deduce their measure of this year to be 365d. 5h. 49m. and 11s., exceeding the truth only by 26s., and much more exact than the year of Hipparchus. They had also a sidereal year of 365d. 6h. llm. The Egyptians also had a knowledge of something equivalent to this: for they had discovered that the dog star was no longer the faithful fore-waraer of the overflowing of the Nile. This knowledge is also involved in the precepts of the Chinese astronomy, of much older date than the time of Hipparchus. But all these facts do not deprive Hipparchus of the honor of the discovery, or fix on him the charge of plagiarism. This motion was clearly unknown to the astronomers of the Alexandrian school, and it was pointed out to them by Hipparchus in the way in which he ascertained every other position in astronomy, namely, as the mathematical result of actual observations, and not as a thing deducible from any opinions on other subjects related to it.

As a thing for which no physical reason could be assigned, the precession of the equinoxes was long disputed. But the establishment of the Copernican system reduced it to a very clear affair ; the motion, which was thought to affect VOL. XVIII.

all the heavenly bodies, is now seen to be only an effect of the earth's motion. The earth (urns round its own axis while it revolves round the sun, in the same manner as we may cause a child's top to spin on the brim of a millstone, while the stone is turning slowly round its axis. If the top spin steadily its axis will always point to the zenith of the heavens ; but we frequently see that, while it spins briskly round its axis, the axis itself lias a slow conical motion round the vertical line, so that, if produced, it would slowly describe a circle in the heavens round the zenith point. The flat surface of the top may represent the teriestrial equator, gradually turning itself round on all sides. If this top were formed like a ball, with an equatorial circle on it, it would represent the whole motion ; the only difference being, that the spinning motion and this wavering motion are in the same direction ; whereas the diurnal rotation and the motion of the equinoctial points are in contrary directions. Even this dissimilarity may be removed, by making the top turn on a cap, like the card of a mariner's compass. It is now fully established that, while the earth revolves round the sun from west to east in the plane of the ecliptic, in the course ofa year it turns round its own axis from west to est in 23h. 56′ 4″, which axis is inclined to this plane in an angle of nearly 23►► 28' ; and that this axis turns round a line perpendicular to the ecliptic in 25,745 years from east to west, keeping nearly the same inclination to the ecliptic. ►►► By these means its pole in the sphere of the starry heavens describes a circle round the pole of the ecliptic at the distance of 23►► 28' nearly. The consequence of this must be, that the terrestrial equator, when produced to the sphere of the starry heavens, will cut the ecliptic in two opposite points, through which the sun must pass when he makes the day and night equal : and that these points must shift to the west at the rate of 5"►► annually, which is the precession of the equinoxes. Accordingly, this has been the received doctrine among astronomers for nearly three centuries, and it was thought perfectly conformable to appearances.

Dr. Bradley hoped to discover the parallax of the earth's orbit by observations of the actual position of the pole of the celestial revolution. If the earth's axis keeps parallel to itself, its extremity must describe, in the sphere of the starry heavens, a figure equal and parallel to its orbit round the sun ; and, if the stars be so near that this figure is a visible object, the pole of diurnal revolution will be in different distinguishable points of the figure. Consequently, if the axis describe this cone already mentioned, the pole will not describe a circle round the pole of the ecliptic, but will have a looped motion along this circumference, similar to the absolute motion of one of

Jupiter's satellites, describing an epicycle whose centre describes the circle round the pole of the ecliptic.

This sagacious astronomer observed such an epicyclical motion, and thought that he had now overcome the only difficulty in the Copernican system ; but, on considering his observations, he found this epicycle quite inconsistent with the consequences of the annual parallax, and it put-

zled him exceedingly. One day, while sailing on the Thames, he observed that, every time the boat tacked, the direction of the wind, estimated by the direction of the vane, seemed to change. This suggested to him the case of his observed epicycle, and he found it an optical illusion, occasioned by a combination of the mo-tion of light with the motion of his telescope while observing the polar stars. Thus he established an incontrovertible argument for the Copernican system, and immortalised his name by his discovery of the aberration of the stars. The doctor now engaged in a series of observations for ascertaining all the phenomena of this discovery. In the course of these, which were continued for twenty-eight years, he discovered another epicyclical motion of the pole of the heavens. He found that the pole described an epicycle whose diameter was about 18", having for its

of this circle ; and its place, in this circumference, depends on the place of the moon's ascending node. Draw E P F and GPL perpendicular to it ; let G L be the colure of the equinoxes, and E F the colure of the solstices. Dr. Bradley's observations showed that the pole was in A when the node was in L, the vernal equinox; If the node recede to H, the winter solstice, the node is in B. When the node is in the autumnal equinox, at G, the pole is at C ; and when the pole is in F, the summer solstice, the pole is in D. In all intermediate situations of the moon's ascending node the pole is in a point of the circumference A B C D, three signs or 9►► more advanced. By

comparing together a great num-ber of observations, Dr. Bradley found that the mathematical theory, and the calculation depending on it, would correspond much better with the observations, if an ellipse were substi-centre that point of the circle round the pole of tuted for the circle A B C D, making the longer

the ecliptic in which the pole would have been found independent of this new motion : and that the period of this epicyclical motion was eighteen years and seven months. It struck him that this was precisely the period of the revolution of the nodes of the moon s orbit. Of these results he gave a brief account to lord Macclesfield, then president of the Royal Society. Mr. Machin, to whom he also communicated the observations, gave him in return a very neat mathematical hypothesis, by which the motion might be calculated.

Let E (fig. 1.) be the pole of the ecliptic, and

axis A C 18”, and the shorter, B D, 16”. D’Alembert determined, by the physical theory of gravitation, the axes to be 18” and 13”, 4. These observations, and this mathematical theory, must be considered as so many astronomical facts, and the methods of-computing the places of all celestial phenomena must be drawn from them, agreeably to the universal practice of determining every point of the heavens by its longitude, latitude, right ascension, and declination.

This equation of the pole’s motion makes a change in the obliquity of the ecliptic. The inclination of the equator to the ecliptic is measured by the arch of a great circle intercepted between their poles. If the pole be in O, instead of P, it is plain that the obliquity is measured by E O instead of E P. If E P be considered as the mean obliquity of the ecliptic, it is augmented by 9” when the moon’s ascending node is in the vernal equinox, and consequently the pole in A. It is, on the contrary, diminished 9” when the node is in the autumnal equinox, and the pole in C ; and it is equal to the mean when the node is in the colure of the solstices. This change of the inclination of the earth’s axis to the plane of the ecliptic was called the nutation of the axis by Sir Isaac Newton; who showed that a change of nearly a second must obtain in a year by the action of the sun on the prominent parts of the terrestrial spheroid. But he did not attend to the change which would be made in this motion by the variation which obtains in the disturbing force of the moon, in consequence of the different obliquity

of her action on the equator, arising from the motion of her own oblique orbit. It is this change which now goes by the name of nutation, and we owe its discovery entirely to Dr, Bradley. The general change of the position of the earth's axis has been termed deviation by modern astronomers.

It is easy to ascertain the quantity of this change of obliquity. When the pole is in O,

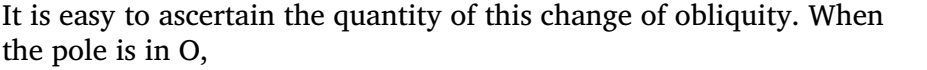

P Q a circle distant from it 23 28', represent-from the vernal equinox, and that P M is its co-r.g the circle described by the pole of the equator sine ; and (on account of the smallness of A P during one : revolution of the equinoctial points, in comparison of EP) PM may be taken for L be the place or this last mentioned pole at the change of the obliquity of the ecliptic. This some given time. Round P describe a circle, is therefore = 9' x cos. lone, node, and is ad-D, whose diameter AC is 18'. The real ditive to the mean obliquity, while O is in the wtuauon of the pole will be in tlie circumference semicircle B AD, that is, while tiie Ion-nude of

r,

Ji

PRECESSION OF THE EQUINOXES.

the node is from nine signs to three signs ;;but subtractive while the longitude of the node changes from three to nine signs. But the nutation changes also the longitudes and right ascensions of the stars and planets by changing the equinoctial points, and thus occasioning an equation in the precession of the equinoctial points. The great circle or meridian which passes through the poles of the ecliptic and equator is always the solstitial colure, and the equinoctial colure is at right angles to it: therefore when the pole is in P or in O, E P or E O is the solstitial colure. Let S be any fixed star or planet, and let S E be a meridian or circle of longitude ; draw the circles of declination PS, OS,

and the circles M' E M", m E m', perpendicular to P E, O E. If the pole were in its mean place P, the equinoctial points would be in the ecliptic meridian M'EM', or that meridian would pass through the intersections of the equator and ecliptic, and the angle M' E S would measure the longitude of the star S. But, when the pole is in O, the ecliptic meridian m Em' will pass through the equinoctial points. The equinoctial points must therefore be to the west of their mean place, and the equation of the precession must be additive to that precession ; and the longitude of the star S will now be measured by the angle m E S, which, in the case here represented, is greater than its mean longitude. The difference, or the equation of longitude, arising from the nutation of the

O Al earth's axis, is the angle O E P, or -^-fr O M is

the sine of the angle C P O, which, by what has been already observed, is equal to the longitude of the node : Theorem O M is equal

to 9" x longitude node, and ~- ††† is equal to

9* X sin. long, node . ,

: rr ††† n ††† 1 his equation is additive

sin. obhq. echp.

to the mean longitude of the star when O is in the semicircle C B A, or while the ascending node is passing backwards from the vernal to the autumnal equinox ; but it is subtractive from it while O is in the semicircle A D C, or while the node is passing backwards from the autumnal to the vernal equinox ; or, to express it more briefly, the equation is subtractive from the mean longitude of the star while the ascending node is in the first six signs, and additive to it while the node is in the last six signs.

This equation of longitude is the same for all the stars ; for their longitude is reckoned on the ecliptic, and therefore is affected only by the variation of the point from which the longitude is computed. The right ascension, being computed on the equator, suffers a double change. It is computed from, or begins at, a different point of the eqiiator, and it terminates at a different point ; because, the equator having changed its position, the circles of declination also change theirs. When the pole is at P the right ascension of S from the solstitial colure is measured by the an^le S P E, contained between that colure and the star's circle of declination. But, when the pole is at O, the right ascension is measured by the angle S O E, and the difference of S

cension. The angle S O E consists of two parts, G O E and COS; G O E remains the same' wherever the star S is placed, but COS varies with the place of the star.••• We must first find the variation by which G P E becomes G O E, which variation is common to all the stars. The triangles G P E, G O E, have a constant side G E, and a constant angle G ; the variation P O of the side G P is extremely small, and therefore the variation of the angles may be computed by Mr. Cotes's Fluxionary Theorems. See Simpson's Fluxions, sect. 253, &c. As the tangent of the side E P, opposite to the constant angle G, is to the sine of the angle G P E, opposite to the constant side E G, so is P O the variation of the side G P, adjacent to the constant angle, to the variation x of the angle G P O, opposite to the con-stantSideEG.ThisgiveSJ = 9'Xsin-long-node

tang. obi. eclip.

This is subtractive from the mean right ascenˆ sion for the first six signs of the node's longitude, and additive for the last six signs. This equation is common to all the stars.

We may discover the variation of the other part S O G of the angle, which depends on the different position of the hour circles P S and O S, which causes them to cut the equation in different points, where the arches of right ascension terminate, as follows : ••• The triangles SPG, S O G, have a constant side S G, and a constant angle G. Therefore, by the same Cotesian theorem, tan. S P : sin. S P G = P O : y, and y, or the second part of the nutation in right as—

9* x sin. diff R. A. of star and node

cension, ••• = ••• •••

cotan. declm. star.

The nutation also affects the declination of the stars : For S P, the mean codeclination, is changed into S O. ••• Suppose a circle described round S, with the distance S O cutting S P in *; then it is evident that the equation of declin. is* PzzPO x cos, OPf•••9" x sign R. A. of star ••• long, of node.

These are the calculations constantly used in our astronomical researches, founded on Machin's Theory. When still greater accuracy is required, the elliptical theory must be substituted, by taking (as is

expressed by the dotted lines) O in that point of the ellipse described on the transverse axis AC, where it is cut by O M, drawn according to Machin's theory. All the change made here is the diminution of O M in the ratio of 18 to 13-4, and a corresponding diminution of the angle C P O. The detail of it may be seen in De la Lande's Astronomy, art. 2874. The calculations being in every case tedious, and liable to mistakes, on account of the changes of the signs of the different equations, the zealous promoters of astronomy have calculated and published tables of these equations.

We may now consider the precession of the equinoctial points, with its equations, arising from the nutation of the earth's axis, as a physical phenomenon, and endeavour to account for it upon those mechanical principles which have so happily explained all the other phenomena of the celestial motions. Sir Isaac Newton quickly found it to be a consequence, and the most beautiful proof, of the universal gravitation of matter. There is no part of his immortal wort

where his sagacity and fertility of resource shine more conspicuously than in this investigation. His investigation, however, was only a shrewd guess, founded on assumptions, of which it would be extremely difficult to demonstrate either the truth or falsity, and which required the genius of a Newton to select in such a complication of abstruse circumstances. The subject has occupied the attention of the first mathematicians of Europe since his time ; and is still considered as the most curious and difficult of mechanical problems. The most elaborate aAd accurate dissertations on the precession of the equinoxes are those of Sylvabellaand Walmesly, in the Philosophical Transactions, published about 1754; that of Thomas Simpson, in his Miscellaneous Tracts ; that of Frisius, in the Mem. of the Berlin Academy, and afterwards in his Cosmographia j that of Euler in the Memoirs of Berlin ; that of D'Alembert in a separate dissertation ; and that of de la Grange on the Libration of the Moon, which obtained the prize in the Academy of Paris in 1769. The dissertation of Frisius is thought the most perspicuous of them all, being conducted in the me-thod of geometrical analysis ; whereas most of the others proceed in the fluxionary and symbolic , method,

which does not give the same perspicuous conviction of the truth of the results.

We shall here give a short sketch of Newton's investigation. Let S (fig. 2) be the sun, E the

eartn, and M the moon, moving in the orbit N M C Dn, which cuts the plane of the ecliptic, in the line of the nodes fin, and has one-half raised above it, as represented in the figure, the other half being hid below the ecliptic. Suppose this orbit folded down ; it will coincide with the ecliptic in the circle N m c d n. Let E X represent the axis of this orbit, perpendicular to its plane, and therefore inclined to the ecliptic. Since the moon gravitates to the sun in the direction M S, which is all above the ecliptic, it is plain that this gravitation has a tendency to draw the rnoon towards the ecliptic. Suppose this force to be such that it would draw the moon down from M to i in the time that she would have moved from M to t, in the tangent to her orbit. By the combination of these motions the moon will desert her orbit, and describe the line M r, which makes the diagonal of the

parallelogram; and, if_no farther action of the sun be supposed, she will describe another orbit M 5n', lying between the orbit M C D n and the ecliptic, and she will come to the ecliptic, and pass through it in a point n' nearer to M than n is, which was the former place of her descending node. By this change of orbit, the line'E X will no longer be perpendicular to it ; but there will be another iine E x which will now be perpendicular to the new orbit. Also the moon, moving from M to r, does not move as if she had come from the ascending node N, but from a point N lying beyond it ; and the line of the orbit in this new position is N'n'. Also the angle M N' m is less than the angle M N m. Thus the nodes shift their places in a direction opposite to that of her motion, or move to the west; the axis of the orbit changes its position, and the orbit itself changes its inclination to the ecliptic. These momentary changes are different in different parts of the orbit, according to the position of the line of the nodes. Sometimes the inclination of the orbit is increased, and sometimes the nodes move to the east. But, in general, the inclination increases from the time that the nodes are in the line of syzigee, till they get into quadrature, after which it diminishes till the nodes are again in syzigee. The nodes advance only while they are in the octants after the quadrature, and while the moon passes from the quadrature to the node, and they

recede in all other situations. Therefore the recess exceeds the advance in every revolution of the moon round the earth, and, on the whole, they recede.

What has been said of one moon would be true of each of a continued ring of moons surrounding the earth, and they would thus compose a flexible ring, which would never be flat, but waved, according to the difference (both in kind and degree), of the disturbing forces acting on its different parts. But suppose these moons to cohere, and to form a rigid and flat ring, nothing would remain in this ring but the excess of the contrary tendencies of its different parts. Its axis would be perpendicular to its plane, and its position in any moment will be the mean position of all the axes of the orbits of each part of the flexible ring. Suppose this ring to contract in dimensions, the disturbing forces will diminish in the same proportion, and in this proportion will all their effects diminish. Suppose its mo-tion of revolution to accelerate, or the time of a revolution to diminish ; the linear effects of the disturbing forces being as the square of the times of their action, and their angular effects as the times, those errors must diminish also on this account ; and we can compute what those errors will be for any diameter of the ring, and for any period of its revolution. We can tell, therefore, what would be the motion of the nodes, the change of inclination, and deviation of the axis, of a ring which would touch the surface of the earth, and revolve in twenty-four hours ; nay, we can tell what these motions would be, should this ring adhere to the earth. They must be much less than if the ring were detacaed. For the disturbing forces of the ring must drag along with it the whole globe of the earth. The quantity of motion which the disturbing forces would have oroduced in the ring

alone, will now, says Newton, be produced in the whole mass ; and therefore the velocity must be as much less as the quantity of matter is greatei : but still all this can be computed.

That there is such a ring on the earth is certain ; for the earth is not a sphere, but an elliptical spheroid. Sir Isaac Newton, therefore, made a

computation of the effects of the disturbing force, and has exhibited a most beautiful example of mathematical investigation. He first asserts that the earth must be an elliptical spheroid, whose polar axis is to its equatorial diameter as 229 to 230. Then he demonstrates that if the sine of the inclination of the equator be called TT, and if t be the number of days (sidereal) in a year, the annual motion of a detached ring will

be 360►► X

4 t

He then shows that

the effect of the disturbing force on this ring is to its effect on the matter of the -same ring, distributed in the form of an elliptical stratum (but still detached) as 5 to 2 ; therefore the motion

of the nodes will be 360►► X

/ 1

“7 *

, or 16’

16” 24’” annually. He then proceeds to show that the quantity of motion in the sphere is to that in the equatorial ring revolving in the same time, as the matter in the sphere to tlie matter in the ring, and as three times the square of a quadrantal arch to two squares of a diameter, jointly : then he shows that the quantity of mat-ter in the terrestrial sphere is to that in the protuberant matter of the spheroid as 52900 to 461 (supposing all homogeneous). From these premises it follows that the motion of 16′ 16″ 24’” must be diminished in the ratio of 10717 to 100, which reduces it to 9* 07’” annually. And this, he says, is the precession of the equinoxes, occasioned by the action of the sun ; and the rest of the 50J*, which is the observed precession, is owing to the action of the moon nearly five times greater than that of the sun. This appeared a great difficulty ; for the phenomena of the tides show that it cannot much exceed twice the sun’s force.

The ingenuity of this process is justly celebrated by Daniel Bernouilli, who (in his Dissertation on the Tides, which shared the prize of the French Academy with M’Laurin and Euler) says that Newton saw

through a veil what others could hardly discover with a microscope in the light of the meridian sun. His determination of the form and dimensions of the earth, which is the foundation of the whole process, is not offered as any thing better than a probable gues.s, in re difficillima ; and it has been since demonstrated with geometrical rigor by M'Laurin. His next

principle, that the motion of the nodes of the rigid ring is equal to the mean motion of the nodes of the moon, has been most critically discussed by the first mathematicians, as a thing which could neither be proved nor refuted. Frisius has at last shown it to be a mistake, and that the motion of the nodes of the ring is double the mean motion of the nodes of a single moon ; and that Newton's own principles should have produced a precession of eighteen seconds and a quarter annually ; which removes the difficulty formerly mentioned.

Sir Isaac Newton's third assumption, that the quantity of motion of the ring must be shared with the included sphere, was acquiesced in by all his commentators, till D'Alembert and Euler, in 1749, showed that it was not the quantity of motion round an axis of rotation which remained the same, but the quantity of momentum or rotatory effort. The quantity of motion is the product of every particle by its velocity ; that is, by its distance from the axis ; while its momentum, or power of producing rotation, is as the square of that distance, and is to be had by taking the sum of each particle multiplied by the square of its distance from the axis. Since the earth differs so little from a perfect sphere, this makes no sensible difference in the result. It will increase Newton's precession about three-fourths of a second.

The source of Newton's mistake in the solution of this intricate problem was first detected by Mr. Landen, in the first volume of his Memoirs. That superior mathematician discovered that when a rigid annulus revolves with two motions, one in its own plane, and the other round one of its diameters, half the motive force acting upon the ring is counteracted by the centrifugal force arising from the compound motion, and half only is efficacious or accelerating the plane of the annulus round its diameter. Mr. Landen did not expressly demonstrate this ; but it has been done very completely by Dr. Brinkley, in the seventh volume of the Memoirs of the Irish Academy. We cannot here pursue this subject ; but beg to refer the reader to Dr. Milner's paper in the Philosophical Transactions ; to Dr. Abram Robertson's paper in the Philosophical Transactions for 1807; to the Dissertation of Frisius already specified ; and to the popular view of

this problem by M. Laplace in his Exposition, book iv. ch. 13.

To find the precession in right ascension and declination. ††† Put d ††† the declination of a star, and a ~ its right ascension ; then their annual variations of precessions will be nearly as follow, *viz.* 20” -084 X cos. a ~ the annual precession in declinat, and 46” “0619 + 20” -084 X sin. a X tang, d ††† that of right ascension.

PRECI/E, precius, early, the twenty-first order in Linnseus’s fragments of a natural me-thod ; consisting of primrose, an early flowering plant, and a few genera which agree with it in habit and structure. Sec BOTAKY.

PRE’CINCT, n. a. Lat. pnccmctus. Outward limit ; boundary.

The main body of the sea being one, yet within divers precincts, hath divers names ; so the catholick church is in like sort divided into a number of distinct societies. Hooker.

This is the manner of God’s dealing with those that have lived within the precincts of the church ; they shall be condemned for the very want of trv.e faith and repentance. Perkins,

Through all restraint broke loose, he wings his

way

Nor far off heaven, in the precincts of light, Directly towards the new created world. Milton.

To find our hearthstone turned into a tomb, And round its once warm precincts palely lying The ashes of our hopes, is a deep grief, Beyond a single gentleman's belief. Byron.

PHE'CIOUS, adj. -) Fr. precieur ; Latin

PRE'CIOUSLY, adv. ypretiosus. Valuable ;

PRE'CJOCSNESS, n. s. J of great worth ; costly ; often used in irony : the adverb and nounsub- stantive follow the senses of the adjective.

A womman that hadde aboxe of alabastre of precious oynement cam to him and schedde out on the heed of him restynge. Wiclif. Matt. 26.

The lips of knowledge are a precious jewel.

Prov. xx. 15.

Many things which are most precious, are neglected only because the value of them lieth hid. Hooker.

I never saw

Such precious deeds in one that promised nought But begg'ry and poor luck. Shakspeare. Cymbeline.

Its preciousness equalled the price of pearls.

Let none admire

That riches grow in hell ; that soil may best Deserve the precious bane. Milton.

The index or forefinger was too naked whereto to commit their preciotities, and hath the tuition of the thumb scarce unto the second joint. Browne.

Barbarians seem to exceed them in the curiosity of their application of these preciosities. More.

Fortune, conscious of your destiny, Ev'n then took care to lay you softly by ; And wrapp'd your fate among her precious things, Kept fresh to be unfolded with your king's.

Dryden.

More of the same kind, concerning these precious saints amongst the Turks, may be seen in Pietio della Valle. Locke.

These virtues are the hidden beauties of a soul which make it lovely and precious in his sight, from whom no secrets are concealed. Addisons Spectator.

PRE’CIPICE, n. s. Fr. precipice ; Lat. prte-tipitium. A headlong or perpendicular steep.

I ere long that precipice must tread, Whence none return that leads unto the dead.

Sandys.

You take a precipice for no leap of danger, And woo your own destruction. Shakspeare.

Where the water dasheth more against the bottom, there it moveth more swiftly and more in precipice ; for in the breaking of the waves there is ever a precipice. Bacon.

No stupendous precipice denies Access, no horror turns away our eyes.

Denham.

Swift down the precipice of time it goes, And sinks in minutes, which in ages rose.

Dryden.

Drink as much as you can get ; because a good coachman never drives so well as when he is drunk; and then shew your skill, by driving to an inch by a precipice. Swift.

PRECIPITANCE, or ˆ Latin

PRECIP’ITANCY, n. s. precipi—

PRECIP’ITANT, adj. tans.

PRECIP’ITANTLY, adv. Haste; PRECIP’ITATE, v. a., v. n., adj. & n. s. rash

PRECIPITATELY, adv. haste ;

PRECIPITA’TIOS, n. s. hurry :

tant is, falling or rushing headlong ; hasty ; hurried : the adverb corresponding : precipitate, 1o urge or throw headlong ; urge on with violence ; hasten ; hurry blindly ; throw to the bottom by a chemical process: as a verb neuter, to fall headlong ; fall to the bottom : precipitate as an adjective is synonymous with precipitant : as a noun substantive, it is a medical term for the red oxide of mercury : precipitately and precipitation correspond with the adjective : precipitous is, steep ; headlong ; hasty ; rash.

Hadst thou been aught but goss'mer feathers; So many fathom down precipitating, Thou'dst shiver like an egg.

Shakspeare. King Lear. Let them pile ten hills on the Tarpeian rock, That the precipitation might down-stretch Below the beam of sight, yet will I still Be this to them. Id. Coriolanus.

Barcephas saith, it was necessary this paradise should be set at such a height, because the four rivers, had they not fallen so precipitate, could not have had sufficient force to thrust themselves under the great ocean. Raleigh.

She had a king to her son-in-law, yet was, upon dark and unknown reasons, precipitated and banished the world into a nunnery. Bacon.

As for having them obnoxious to ruin, if they be

of fearful natures, it may do well ; but, if they be

daring, it may precipitate their designs, and prove

dangerous. Id.

' By strong water every metal will precipitate. Id.

Separation is wrought by precipitation or sublima-tion ; that is, a calling of the parts up or down, which is a kind of attraction. Id.

The commotions in Ireland were so sudden and so violent, that it was hard to discern the rise, or apply a remedy to that precipitant rebellion.

King Charles.

Monarchy, together with me, could not but be dashed in pieces by such a precipitous fall as they intended. Id.

Short intermittent and swift recurrent pains do precipitate patients into consumptions. Harvey.

They were wont, upon a superstition, to precipitate a man from some high cliff into the sea, tying about him with strings many great fowls. Wilkins.

Dear Erythrasa, let not such blind fury Precipitate your thoughts, nor set them working, Till time shall lend them better means Than lost complaints. Denham's ►►7%.

The archbishop, too precipitate in pressing the reception of that which he thought a reformation, paid dearly for it. Clarendon.

Thither they haste with glad precipitance.

Milton.

Without longer pause,

Downright into the world's first region throws His flight precipitant. Id. Paradise Lost.

As the chymist, by catching at it too soon, losi. the philosophical elixir, so precipitancy of our understanding is an occasion of error. Glanville.

Though the attempts of some have been precipitous, and their enquiries so audacious as to have lost themselves in attempts above humanity, yet hava the enquiries of most defected by the way.

Browne's Vulgar Errours. The goddess guides her son, and turns him from

the light, Herself involved in clouds, precipitates her flight.

Dryden.

Thus framed for ill, he loosed our triple hold, Advice unsafe, precipitous, and bold. Id.

How precious the time is, how precipitous the oc-

casion, how many things to be done in their just season, after once a ground is in order. Evelyn.

The birds heedless while they strain Their tuneful throats, the toweling heavy lead O'ertakes their speed ; they leave their little lives Above the clouds, precipitant to earth. Philips.

Gold endures a vehement fire long without any change, and, after it has been divided by corrosive liquors into invisible parts, yet may presently be precipitated, so as to appear again in its own form.

Crew's Cosmologia.

When the full stores their ancient bounds disdain, Precipitate the furious torrent flows ; In vain would speed avoid, or strength oppose.

Prior.

That could never happen from any other cause than the hurry, precipitation, and rapid motion of the ###water, returning at the end of the deluge towards the sea. Woodward.

Mr. Gay died of a mortification of the bowels ; it was the most precipitate case I ever knew, having cut him off in three days. Arbuthnot.

As the escar separated, I rubbed the super-excrescence with the vitriol stone, or sprinkled it with precipitate. Wiseman.

Should he return, that troop so blithe and bold, Precipitant in fear, would wing their flight, And curse their cumbrous pride's unwieldy weight.

Pope. Not so bold Arnall ; with a weight of skull

Furious he sinks, precipitately dull.

Id. Dunciad.

Hurried on by the precipitancy of youth, I took this opportunity to send a letter to the secretary.

Swift.

A rashness and precipitance of judgment, and hastiness to believe something on one side or the other, plunges us into many errors. Watts's Logick.

We are complicated machines ; and though we have one main spring, that gives motion to the whole, we have an infinity of little wheels, which, in their turns, retard, precipitate, and sometimes stop, the motion. Chesterfield.

PRECIPITATION, in chemistry, the process of decomposition by which any body separates from others in a solution and falls to the bottom : thus, if to. an acid and an oxide a third body as an alkali be added, then the alkali having a greater affinity to the acid than the metallic oxide has, combines with it, and the oxide in consequence precipitates, or appears in a separate state at the bottom. The substance thus sinking is called the precipitate, and that, by the addition of which this effect is produced is called the precipitant. Sir Humphry Davy found that whenever one metal precipitates another from its acid solution, the body that falls down is usually free both from acid and oxygen ; and that the whole of the oxygen and the acid, is transferred from one metal to the other.

PRECISE', adj. "\ Fr. precis ; Lat. pr < e—

PRECISE'LY, adv. I cisws. Exact ; strict ;

PRECISE'NESS, n.s. vnice; having definite li—

PRECI'SIAN, (mits ; formal : precisely

PRECISION, 1 and preciseness corre—

PRECI'SIVE, adj. **** spond with this, and precision is synonymous with the latter : a precisian is one who limits or restrains with exactness or rigor : precisive, exactly limited.

In his track my wary feet have slept, His undcclined ways precise'u

kept. Sandys. Weans more durable to preserve the laws of God

from oblivion and corruption grew in use, not with ००० out precise direction from God himself. Hooker.

Doth it follow that all things in the church, from the greatest to the least, are unholy, which the Loni hath not himself precisely instituted 1 Id.

You'll not bear a letter for me ; you stand upon your honour; why, thou unconfinable baseness, it is as much as 1 can do to keep the term of mine honour precise. Shakspeare.

He knows,

He cannot so precisely weed this land As his misdoubts present occasion, His foes are so enrooted with his friends. Id. Though love use reason for his precisian, he admits him not for his counsellor. Id.

The state hath given you licence to stay on land six weeks, and let it not trouble you if your occasions ask farther time ; for the law in this point is not precise. Bacon.

I will distinguish the cases ; though give me leave, in the handling of them, not to sever them with too much preciseness. Id.

These men, for all the world, like our precUiant

be,

Who for some cross or saint they in the window see Will pluck down all the church. Drayton.

Where more of theˆe orders than one shall be set in several stories, there must be an exquisite care to place the columns precisely one over another.

Wot ton's Architecture.

Ip human actions there are no degrees and precise natural limits described, but a latitude is indulged.

Taylor.

Let us descend from this top Of speculation ; for the hour precise

Exacts our parting. Milton's Paraaue Lost. The rule, to find the age of the moon, cannol shew precisely an exact account of the moon, because of the inequality of the motions of the sun and of the moon. Holder.

He that thinks of being in general, thinks never of any particular species of being : unless he can think of it with and without precision at the same time. Locke.

The raillery of the wits in king Charles tl-c Se-cond's reign, upon every thing which they < ailed precise, was carried to so great an extravagance that it almost put all Christianity out of countenance.

Addison.

Measuring the diameter of the fifth d.uk circle, I found it the fifth part of an inch precuˆin.

Newton s Cy.'icks.

The reasonings must be precise, though the. practice may admit of great latitude. Arbuthwt.

I was unable to treat this part more in detail, without sacrificing perspicuity to ornament, without wandering from the precision or breaking the chain of reasoning. Pope.

The precise difference between a compound and

collective idea is this, that a compound idea unites

things of a different kind, but a collective, things of

the same kind. Watts.

A profane person calls a man of piety a precisian

Id.

Precisive abstraction is when we consider those things apart which cannot really exist apart ; as when we consider mode, without considering its substance or subject. I& What is the world? a term which men have got To signify not one in ten knows what A term which with no more precision passes, To point out herds of men than heads of asses ! In common use no more it means, we find, Than many fools in same opinions joined.

PRECLUDE’, v. a. Lat. prtsdudo. To shut out or hinder by anticipation.

This much will obviate and preclude the objections of our adversaries, that we do not determine the final cause of the systematical parts of the world, merely as they have respect to the exigencies or conveniences of life. Bentley.

If you once allow them such an acceptation of chance, you have precluded yourself from any more reasoning against them. IdI fear there will be no way left to tell you, that I entirely esteem you ; none but that which no bills can preclude, and no king can prevent. Poj>e.

PRECO’CIOUS, adj. J Fr. precose ; Latin

PRECOC’ITY. S pr&cosit. Ripe before

the time : too early ripeness.

I may say of the younglings of our time, that precocity of understanding supplieth age and stature.

Bp. Hail.

Some impute the cause of his fall to a precocity of spirit and valour in him ; and that therefore some infectious southern air did blast him. Hoviel.

Many precocious trees, and sucli as have their spring in the winter, may be found in most parts.

Browne.

And every body but his mother deemed Him almost man ; but she

flew in a rage

And bit her lips (for else she might have screamed) If any said so, for to be precocious Was in her eyes a thing the most atrocious. Byron.

PRECONCErF, n. s. Pra and conceit. An opinion previously formed.

A thing in reason impossible, which notwithstanding through their misfashioned preconceit appeared unto them no less certain than if nature had written ###it in the very foreheads of all the creatures.

Hooker.

In a dead plain the way seemeth the longer because the eye hath preconceited it shorter than the truth ; and the frustration of that maketh it seem so.

Bacon.

Custom with most men prevails more than truth ; according to the notions and preconceptions which it hath formed in our minds, we shape the discourse of reason itself. Hahewill.

Fondness of preconceived opinions is not like to render your reports suspect, nor for want of care, defective. Glanville.

The reason why men are so weak in governing is, because most things fall out accidentally, and come not into any compliance with their preconceived ends, but they are forced to comply subsequently.

South.

PRECONTRACT, n. s. ##r<z and contract-As a verb, accented on the last syllable. A contract previous to another.

He is your husband on a precontract ; To bring you thus together, ‘tis no sin.

S/iakspeare.

Some are such as a man cannot make his wife, though he himself be unmarried, because they are already precontracted to some other ; or else are in too near a degree of affinity or consanguinity.

PRE’CURSE, n. s. Lat. prcecurro. Fore-r inning.

The like precurse of fierce events, As harbingers preceding still the fates, And prologue to the omen coming on Have heaven and earth together demonstrated.

Stiaksvcaii .

Jove’s lightnings, the precursors

Of dreadful thunder claps, more momentary

Were not. Id. Tempest.

This contagion might have been presaged upon consideration of its precursors, *viz.* a rude winter, and a close, sulphurous and fiery air. Harvey.

Thomas Burnet played the precursor to the coming of Homer in his Homerides. Pope.

PREDA’CEOUS, adj. j Lat. prada. Lir—

PRE’DAL, ►►ing by prey; plun

PRED’ATORY. > dering.

The king called his parliament, where he exaggerated the malice and the cruel predatory war made by Scotland. Bacon.

As those are endowed with poison, because they are predacemu : so these need it not, because their food is near at hand, and may be obtained without contest Derham.

Sarmat a, laid by jnredal rapine low, Mourned he hard yoke, and sought relief in vain.

Boyse.

PREDECEA’SED, adj. Pra and deceased. Dead before.

Will you mock at an ancient tradition, begun upon, an honourable respect, and worn as a memorable trophy of predeceased valour ? Shakspeare.

PREDECES’SOR, n. s. Fr. predecesstur ; Lat. pra and decedo. One that was in any state or place before another ; an ancestor.

In these pastoral pastimes a great many days were spent to follow their flying predecessor*.

Sidney.

There is cause why we should be slow and unwilling to change, without very urgent necessity, the ancient ordinances, rites, and approved customs of our venerable predecessors. Hooker.

If I seem partial to my predecessor in the laurel, the friends of antiquity are not few. Drvden.

The present pope, who is well acquainted with the secret history, and the weakness of his predecessor, seems resolved to bring the project to its perfection.

Addison. The more beauteous Chloe sat to thee,

Good Howard, emulous of Apelles' art ; But happy thou from Cupid's arrow free,

And flames that pierced thy predecessor's heart.

Prior.

PREDESTINATE, v. a. & v. n.ˆ Fr. pre—

PREDESTINA'KIAN, n. s. I destiner;

PREDESTINA'TION, \ Latin pro;

PREDES'TINATOK, i and desti—

PREDES'TINE, v. a. J no. Toap—

point beforehand : in ludicrous laeguage, to hold predestination : predestinarian, one who holds that doctrine ; see below. Predestinator is used out of all analogy by Cowley as synonymous with predestinarian : to predestine is to decree beforehand.

Whom he did foreknow, he also did predestinate to be conformed to the image of his son. Romans.

Having predestinated us unto the adoption of children by Jesus Christ to himself. Ephesians i. 5.

Some gentleman or other shall 'scape a predestinate scratcht face.

Shakspeare.

Predestination we can difference no otherwise from providence and prescience, than this, that prescience only foreseeth, providence foreseeth and careth for, and hath respect to all creatures, and ‘predestination is only of men ; and yet not of all to men belonging, but of their salvation properly in the common use of divines ; or perdition, as some have used it. Raleigh’s History of tlte World

PREDESTINATION.

Why does tliepredeitiiuirian so adventurously climb into heaven, to ransack the celestial archives, read God’s hidden decrees, when with less labour he may secure an authentick transcript within himself?

Decay of Piety.

Me, mine example let the Stoicks use, Their sad and cruel doctrine to maintain ; Let all predestinators me produce, Who struggle with eternal fate in vain. Cowley.

Nor can they justly accuse Their maker, or their making, or their fate ; As if predestination overruled Their will, disposed by absolute decree, Or high foreknowledge.

Milt on’ t Paradite Lott. His ruff crest he rears, And pricks up his predestinating ears.

Dry den.

Ye careful angels, whom eternal fate Ordains on earth and human acts to wait, Who turn with secret power this restless ball, And bid predestined empires rise and fall. Prior.

PREDESTINATION is, according to the Calvinistic writers, the decree of God, whereby he hath from all eternity unchangeably appointed whatsoever comes to pass ; and hath more especially fore-ordained certain individuals of the human race to everlasting happiness, and hath passed by the rest, or fore-ordained them to everlasting misery.

The former of these are called the elect, and the latter the reprobate. This doctrine is the subject of one of the most perplexing controversies that have occurred among mankind. But it is not peculiar to the Christian faith. It has always been in some degree a popular opinion, and has been believed by many speculative men. The ancient Stoics, Zeno and Chrysippus, whom the Jewish Essenes seem to have followed, asserted the existence of a Deity that, acting wisely, but necessarily, contrived the general system of the world ; from which, by a series of causes, whatever is now done in it unavoidably results. This series or concatena-tion of causes, they held to be necessary in every part ; and that God himself is so much the servant of necessity, and of his own decrees, that he could not have made the smallest object in the world otherwise than it now is, much less is he able to alter any thing. Seneca gives a similar account of the doctrine of fate. See NECESSITY. The Stoical fate differs, however, from the Christian predestination in several points. They regard the divine nature and will as a necessary part of a chain of causes ; whereas all Christians consider the Deity as the Lord and Ruler of the universe, omnipotent and free, appointing all things according to his pleasure. Being doubtful of the immortality of the soul, the Stoics could have no idea of the doctrine of election and reprobation ; nor did they ever doubt their own freedom of will, or power of doing good as well as evil, as the Christian predestinarians have done. Mahomet introduced into his Koran the doctrine of an absolute predestination in the strongest terms. In the Christian Church the controversy concerning predestination first made its appearance about the beginning of the fifth century, in consequence of the heretical opinions advanced by Pelagius and Cae-lestius. See PELAGIANS. These were zealously

opposed by the celebrated St. Augustine, bishop of Hippo, who first asserted the leading tenets of the Predestinarians. The dispute was carried on with great zeal. Zosimus, bishop of Rome, decided at first in favor of Pelagius, but afterwards altered his opinion. The council of Ephesus approved of St. Augustine’s doctrine, and condemned that of his opponents. These opinions soon after assumed various modifications. A party called predestinarians carried Augustine’s doctrine farther than he had done, and said that God had decreed the sins as well as punishment of the wicked. Another party moderated Pelagius’s doctrine, and were called SEMI-PELAGIANS. (See that article.) But the doctrine of St. Augustine, who wrote several treatises on the subject, became general. He was the oracle of the schoolmen. They only disputed about the true sense of his writings.

The whole of the earliest reformers maintained these opinions of Augustine. Under Luther they only assumed a more regular and systematic form than they had before exhibited. But, as the Lutherans afterwards abandoned them, they are now known by the name of Calvinistic doctrines, from John Calvin of Geneva. The opponents of the doctrine of predestination among the Protestants usually receive the appellation of Arminians or Remonstrants. They derive the first of these appellations from James Arminius, professor of theology at Leyden, and the second from the Arminians who remonstrated against the synod of Dort. (See ARMINIUS.) A counter remonstrance was presented, containing the opinions of the Calvinists, which was approved of by the synod. The substance of it was afterwards adopted in nearly the same expressions into the Confession of Faith, compiled by the assembly of divines at Westminster in 1643; which every clergyman of the church of Scotland subscribes previous to his admission. It runs thus : ❖❖❖ ‘ God from all eternity did, by the most wise and holy counsel of his own will, freely and unchangeably ordain whatsoever comes to pass : yet so, as thereby neither is God the author of sin, nor is violence offered to the will of the creatures, nor is the liberty or contingency of second causes taken away, but ra-ther established. Although God knows whatsoever may or can come to pass upon all supposed conditions ; yet hath he not decreed any thing because he foresaw it as future, or that which would come to pass upon such conditions. By the decree of God, for the manifestation of his glory, some men and angels are predestinated unto everlasting life, and others are fore-ordained to everlasting death. These angels and men, thus predestinated and fore-ordained, are particularly and unchangeably designed ; and their number is so certain and definite that it cannot be either increased or diminished. Those of mankind that are predestinated unto life, God, before the foundation of the world was laid, according to his eternal and immutable purpose, and the secret council and good pleasure of his will, hath chosen, in Christ, unto everlasting glory, out of his mere free grace and love, without any foresight of faith, good works, or perseverance in either of them, or any other thing in the

creature, as conditions or causes moving him thereunto ; and all to the praise of his glorious grace. As God hath appointed the elect unto glory, so hath he, by the eternal and most free purpose of his will, fore-ordained all the means thereunto. Wherefore, they who are elected, being fallen in Adam, are redeemed by Christ, are effectually called unto faith in Christ, by his Spirit working in due season; are justified, adopted, sanctified, and kept, by his power through faith unto salvation. Neither are any other redeemed by Christ, effectually called, justified, adopted, sanctified, and saved, but the elect only. The rest of mankind God was pleased, according to the unsearchable counsel of his own will, whereby he extended or with-holdeth mercy as he pleaseth, for the glory of his sovereign power over his creatures, to pass by, and to ordain them to dishonor and wrath for their sin, to the praise of his glorious justice.'

There are two kinds of modern Calvinists or Predestinarians, *viz.* the Supralapsarians, who maintain that God did originally and expressly decree the fall of Adam, as a foundation for the display of his justice and mercy ; while those who maintain that God only permitted the fall of Adam are called Sublapsarians ; their system of decrees concerning election and reprobation being, as it were, subsequent to that event. But, as Dr. Priestley justly remarks, if we admit the divine prescience, there is not, in fact, any difference between the two schemes ; and, accord-Jngly, that distinction is now seldom mentioned. Nor was the church of Rome less agitated by the contest about predestination than the first Protestants were. The council of Trent was much perplexed how to settle the matter without giving offence to the Dominicans, who were much attached to the doctrine of Augustine, and possessed great influence in the council. After much dispute, the great object came to be, how to contrive such a decree as might give offence to nobody, and decide nothing. Upon the whole, however, they seem to have favored the Semi-pelagian scheme. Among other things, it was determined that good works are of themselves meritorious to eternal life ; but it is added, by way of softening, that it is through the goodness of God that he makes his own gifts to be merits in us. Catarin revived at that council an opinion of some of the schoolmen, that God chose a small number of persons, such as the blessed virgin, the apostles, &c., whom he was determined to save without any foresight of their good works ; and that he also wills that all the rest should be saved, providing for them all necessary means, but they are at liberty to use them or not. This is called in England the Baxterian scheme. The Jesuits at first followed the opinion of Augustine ; but afterwards forsook it. Molina, one of their order, was the author of what is called the middle scheme, or the

doctrine of a grace sufficient for all men, but subject to the freedom of the human will. Jansenius, a doctor of Lou vain, opposed the Jesuits with ereat vigor, and supported the doctrine of Augustine. (See JANSENISTS.) But the Jesuits had sufficient interest at Rome to procure the

opinions of Jansenius to be condemned. These disputes have never been fully settled, and still divide even the Roman Catholic church. Some of the ablest supporters of Predestination have appeared among the Jansenists, and particularly among the gentlemen of Port-Royal. With re-gard to Great Britain, the earliest English reformers were in general Sublapsarians, although some of them were Supralapsarians. But the rigid Predestinarians have been gradually declining in number in that church, although they still subscribe the thirty-nine articles. The celebrated Scottish Reformer, John Knox, having been educated at Geneva, established in his osvn country the doctrine of predestination in its strictest form : and it has probably been adhered to more strictly in Scotland than in any part of Europe. Of late years, however, the dispute concerning predestination has assumed a form considerably different from that which it formerly possessed. Instead of being considered as a point to be determined almost entirely by the Sacred Scriptures, it has, in the hands of a num-ber of able writers, in a great measure resolved itself into a question of natural religion, under the head of the philosophical liberty or necessity of the will. (See METAPHYSICS and NECESSITY.) Readers who wish for farther information on this subject may consult the writings of lord Kames, Jonathan Edwards, and Dr. Priestley, one of the most celebrated Necessita-rians of his age. To give even a sketch of the arguments on both sides would far exceed our bounds. Milton, an eminent philosopher and divine, as well as the first of poets, when he wished to exhibit the fallen angels themselves as perplexed by questions above their comprehension, set them to dispute about predestination: ††† They reasoned high, of knowledge, will, and fate, Fixed fate, free-will, foreknowledge absolute ; And found no end, in wand'ring mazes lost.

PREDETERMINE, v. a. Pr<z and determine. To doom or confine by previous decree.

We see in brutes certain sensible instincts antecedent to their imaginative faculty, whereby they are predetermined to the convenience of the sensible life.

Hale.

This predetermination of God's own will is so far from being the determining of ours, that it is distinctly the contrary; for supposing God to predetermine that I shall act freely ; 'tis certain from thence, that my will is free in respect of God, and not predetermined. Hammond's Fundamentals.

The truth of the catholic doctrine of all ages, in points of predetermination and irresistibility, stands in opposition to the Calvinists. Hammond.

PRE'DIAL, adj. Lat. prudium. Consisting of farms.

By the civil law, their predial estates are liable to fiscal payments and taxes, as not being appropriated for the service of divine worship, but for profane uses. Ayliffe.

PREDTCABLE, n. s. & adj.} Lat. pradi—

PREDIC'AMEKT, I cabile. A lo—

PRED'ICANT, > gical term, dePRED'ICATE, v.a., v. n. & n. s. i noting one of

PREDICA'TION, n. s. J the five things

which can be affirmed : such as may be affirmed :

predicament is a class or arrangement of beings-

PRE 4:

or thirgs : hence class case or condition of any kind : predicant, one who affirms : to predicate, to affirm any thing of another : to comprise an affirmation; affirm in any way; or that which is affirmed or denied of the subject : predication, affirmation.

The offender's life lies in the mercy Of the duke only, 'gainst all other voice ; In which predicament I say thou stand'st.

Shakspeare.

I shew the line and the predicament, Wherein you range under this subtile king. Id. ' God then is light in himself; so in relation to us : and

this predication of light serves to confirm our conformity to God in his behalf. Bp. Hall.

If there were nothing but bodies to be ranked by them in the predicament of place, then that description would be allowed by them as sufficient.

Digby mi. Bodies.

It were a presumption to think that any thing in any created nature can bear any perfect resemblance of the incomprehensive perfection of the divine na-ture, very being itself not predicating univocally touching him and any created being. Hale.

All propositions, wherein a part of the complex idea, which any term stands for, is predicated of that term, are only verbal ; v. g. to say that gold is a metal. Locke.

Let us reason from them as well as we can ; they are only about identical predications and influence.

Id.

These they call the five predicates ; because every thing that is affirmed concerning any being, must be the genus, species, difference, some property, or accident. Watts.

The predicate is that which is affirmed or defied of the subject. Id. Logick.

PREDICT', v. a.) Fr. predire ; Lat. pr<e-PREDJC'TION, n.s. fdictus. To foretell; to PREDIC'TOU. j foreshow : prediction is declaration or revelation of something future ; prophecy : predictor is a foreteller.

These predictions Are to the world in general, as to Caesar.

Sliakspeare.

The predictions of cold and long winters, hot and dry summers, are good to be known. Bacon.

How soon hath thy prediction, seer blest ! Measured this transient world the race of time. Till time stand fixed. Milton's Paradise Lost. In Christ they all meet with an invincible evidence, as if they were not predictions, but after-rela- tions; and the penmen of them not prophets but evangelists. South.

He is always inveighing against such unequal distributions ; nor does he ever cease to predict publick ruins, till his private are repaired.

Government of the Tongue. He, who prophesy ed the best, Approves the judgment to the rest; He'd rather choose that I should die, Than his prediction prove a lie.

Swift's Miscellanies.

Whether he has not been the cause of this poor man's death, as well as the predictor, may be disputed. Swift.

PREDIGES'TION, n. s. Pro: and digestion. Digestion too soon performed.

Predigestion, or hasty digestion, fills the body full of crudities and seeds of diseases.

Bacon's Essays.

PREDISPOSE', v. a. Pro: and dispose. To adapt previously to any certain purpose.

* PRE

Tunes and airs have in themselves some affinity with the affections ; so as it is no marvel if they alter the spirits, considering that tunes have a predisposition to the motion of the spirits. Bacon.

Vegetable productions require heat of the sun, to preditpose, and excite the earth and the seeds.

Burrtet.

Unless nature be predisposed to friendship by its own propensity, no arts of obligation shall be able to abate the secret hatred of some persons towards others. South.

External accidents are often the occasional cause of the king's evil ; but they suppose a predisposition of the body. Wiseman.

PREDOM'INATE, ►►.►►.} Fr. predominer ;

PREDOMINANCE, n. s. >Lat. pr<►► and do—

PREDOM'INANT, adj. j minor. To prevail; be ascendant; be supreme: predominance is prevalence ; superiority ; ascendancy : predominant, prevalent; ascendant.

Miserable were the condition of that church, the weighty affairs whereof should be ordered by those deliberations, wherein such an humour as this were predominant. Hooker.

We make guilty of our disasters, the sun, the moon, and the stars, as we if were knaves, thieves, and treacherous by spherical predominance.

Shakipeare.

Foul subordination is predominant, And equity exiled your highness' land. Id.

Those helps were overweighed by things that made against him, and were predominant in the king's mind. Bacon.

So much did love t' hei executed lord Preponderate in this fair lady's heart.

Daniel.

In human bodies there is an incessant warfare amongst the humours for predominancy. Hoicel. Whether the sun, predominant in heaven,

Rise on the earth ; or earth rise on the sun.

Milton.

An inflammation consists only of a sanguineous affluxion, or else is denominable from other humours, according to the predominancy of melancholy, phlegm, or choler. Browne.

The true cause of the Pharisees' disbelief of Christ's doctrine was, the predominance of their covetousness and ambition over their will. South.

The gods formed women's souls out of these principles which compose several kinds of animals ; and their good or bad disposition arises, according as such and such principles predominate in their constitutions. Addison.

The several rays in white light do retain their co-lorific qualities, by which those of any sort, whenever they become more copious than the

rest, do, by their excess and predominance, cause their proper co-lour to appear. Newton.

The rays, reflected least obliquely, may predominate over the rest, so much as to cause a heap of such particles to appear very intensely of their colour.

Id. Optichs.

I could shew you several pieces, where the beauties of this kind are so predominant, that you could never be able to read or understand them. Su-ift.

Where judgment is at a loss to determine the choice of a lady who has several lovers, fancy may the more allowably predominate. Clarissa.

If ever he fell into a fit of the gout, or if any other cause withdrew him from public cares, principles directly contrary were sure to predominate.

Burke. Character of Lord Chatham.

It is the prevalence or predominance of any particular passion which gives the turn or tincture to a

man's temper, by which he is distinguished, and for which he is loved or esteemed, or shunned and despised by others. Mason.

PREEMINENCE, n. s. > Fr. preeminence ;

PREEMINENT, adj. J Lat. pree and eminence. It has been written, to avoid the junction of ee, preheminence. Excellence ; superiority of merit or station : preeminent is excellent ; superior.

His lance brought him captives to the triumph of Artesia's beauty, such as, though Artesiabe amongst the fairest, yet in that company were to have the preeminency. Sidney.

That which standeth on record hath preeminence above that which passeth from hand to hand, and hath no pens but the tongues, no book but the ears of men. Hooker.

I do invest you jointly with my power,

Preeminence, and all the large effects

That troop with majesty. Shafupeare. King Lear.

The English desired no preeminence, but offered equality both in liberty and privilege, and in capacity of offices and employments. Hayioard.

It is a greater preeminence to have life, than to be without it ; to have life and sense, than to have life only ; to have life, sense, and reason, than to have only life and sense. Wilhins.

Tell how came I here 1 by some great maker In goodness and in power preeminent. Milton.

Beyond the equator, the southern point of the needle is sovereign, and the north submits his preeminence. Browne.

I plead for the preeminence of epick poetry.

Dry den.

We claim a proper interest above others, in the preeminent rights of the household of faith. Sprat. Am I distinguished from you but by toils,

Superior toils, and heavier weight of cares ?

Painful preeminence ! Additon's Cato.

PREEMPTION, n. s. Lat. praemptio. The right of purchasing before another.

Certain persons, in the reigns of king Edward VI. and queen Mary, sought to make use of this preemption, but, crossed in the prosecution, or defeated in their expectation, gave it over. Carew.

PREENGAGE’, v. a. > Pree and engage.

PREENGAGE’MENT, n. s. $ To engage by precedent ties or contracts : the noun substantive corresponding.

Men are apt to think that those obediences they pay to God shall, like a preengagement, disannul all after-contracts made by guilt. Decay of Piety.

The opinions, suited to their respective tempers, will make way to their assent, in spite of accidental preengagements. Glanville.

My preengagements to other themes were not unknown to those for whom I was to write. Boyle.

To Cipseus by his friends his suit he moved, But he was vreengaged by fora.er ties. Dryden.

As far as opportunity and former preengagements will give leave. Collier of Friendship.

The world has the unhappy advantage of preengaging our passions at a time when we have not reflection enough to look beyond the instrument to the hand whose direction it obeys. Rogers’s Sermons.

PREEXIST, v. a. ˆ Lat. prte and existo.

PREEXIS’TENCE, n. s. >To exist beforehand:

PREEXIS’TENT, adj. j the nounsubstantive and adjective corresponding. If thy preexisting soul,

Was formed at first with myriads more

It did through all the mighty poets roll. Drydcn.

Wisdom declares her antiquity and preexistence to all the works of this earth. Burnet.

Artificial things could not be from eternity, because they suppose man, by whose art they were made pxeexiitent to them ; the workman must be before the work. li.

As Simonides has exposed the vicious part of wo-man from the doctrine of preexistence ; some of the ancient philosophers have

satirised the vicious part of the human species, from a notion of the soul's postexistence. Addisc.n.

If this preexistent eternity is not compatible with a successive duration, then some being, though infi ××× nitely above our finite comprehensions, must have had an identical, invariable continuance from all eternity, which being is no other than God.

Bentley.

Blind to former, as to future fate, What mortal knows his preexistent state '

Pope.

PREEXISTENCE is a priority cf being, or the being of one thing before another. Thus a cause is in nature preexistent to its effect. The Peripatetics, though they maintained the eternity of the world, were likewise dogmatical in their opinion that the universe was formed, actuated, and governed, by a sovereign intelligence. Mr. Hume's speculations also, on this abstruse and arduous subject, had a greater tendency to dissipate its gloom than that philosopher himself could imagine. The preexistence of the human soul to its corporeal vehicle had been from time immemorial a prevailing opinion among the Asiatic sages, and from them was perhaps transferred by Pythagoras to the philosophy of the Greeks ; but his metempsychosis is too trivial either to be seriously proposed or refuted . Nevertheless, from the sentiments of Socrates concerning the immortality of the soul, delivered in his last interview with his friends, it is obvious that the tenet of preexistence was a doctrine of the Platonic school. But their hypothesis was totally unsupported by fact, except the solitary pretence of Pythagoras, that his soul had formerly animated the body of Euphorbus ; a fable evidently invented to support his doctrine of transmigration. After the Christian religion had been considerably diffused, and warmly combated by its philosophical antagonists, the same doctrine was resumed and taught at Alexandria, by Platonic proselytes, not only as a topic constituent of their master's philosophy, but as an answer to those formidable objections which had been deduced from the doctrine of original sin, and from the vices which stain, and the calamities which disturb human life. For the human beings introduced by them to the theatre of probation had already attained the capacity of moral agents ; as their crime therefore was voluntary their punishment might be just.

The word has also been used with regard to the divinity of our

Saviour. The Arians, who allowed the subordinate divinity of our Saviour, believed him preexistent to all time, and before all worlds ; but the Socinians, who esteemed his nature, as well as his person, merely human, insisted that before his incarnation he was only preexistent in the divine idea, not in nature ci person.

rrlE'FACE, n. s., v. n. & > French preface ; PREF'ACER, [v. a. S Latin prtzfatio.

PREF'ATORY, adj. J Something introductory to the main design; introduction; to say or introduce something proemial : a prefacer is the author of a preface : prefatory, introductory; preparative.

This superficial tale Is but a -preface to her worthy praise.

Shakspeare.

Sir Thomas More betrayed his depth of judgment in state affairs in his Utopia, than which, in the opinion of Budaeus, in a preface before it, our age hath not seen a thing more deep. Peacham.

I love to wear clothes that are flush, Not prefacing old rags with plush. Cleaveland. Heaven's high behest no preface needs. Milton, Wheresoe'er he gave an admonition, he prefaced it always with such demonstrations of tenderness.

Fell.

If there be not a tolerable line in all these six, the prefacer gave me no occasion to write better.

Dryden.

If this proposition, whosoever will be saved, be restrained only to those to whom it was intended, the Christians, then the anathema reaches not the heathens, who had never heard of Christ : after all, I am far from blaming even that prefatory addition to the creed. Id.

Before I enter upon the particular parts of her character, it is necessary to preface that she is the only child of a decrepid father. Spectator.

It is lamentable to behold with what lazy scorn many of the yawning readers in our age, now-a-days, travel over forty or fifty pages of preface and dedica►► tion (the usual modern stint) as if it were so much Latin. Swift.

Thou art rash, And must be prefaced into government.

Southern.

PRE'FECT, 7i. s. } Lat. prafectus. Gover-PRE'FECTURE. 5 nor ; commander : prefecture is his office or sphere of government.

He is much

The better soldier, having been a tribune, Prefect, lieutenant, praetor in the war.

Ben Jmtson.

It was the custom in the Roman empire for the prefects and viceroys of distant provinces to transmit a relation of every thing remarkable in their administration. Addison.

The PREFECT, in ancient Rome, was one of the chief magistrates who governed in the absence of the kings, consuls, and emperors. This power was greatest under the emperors. His chief care was the government of the city, taking cognizance of all crimes committed therein, and within 100 miles. He judged capitally and finally, and even presided in the senate. He had the superintendance of the provisions, building, and navigation.

The PREFECT OF THE PRˆTORIUM was the leader of the pretorian bands destined for the emperor's guards, consisting, according to Dion, of 100,000 men. This officer, according to Suetonius, was instituted by Augustus, and usually taken from among the knights. By the favor of the emperors his power grew very considerable; to reduce which, Constantine divided the prefecture of the praetorium into four

prefectures, and ⁂each of these again he subdivided into civil ?nd

military departments, the title being reserved to him who was invested with the civil authority, and that of cr aes belli given him who commanded the cohorts,

PREFER’, v. a. ˆ Fr. preferer ; Span.

PREF’ERABLE, adj. \ preferir ; Ital. pre-PREF’ERABLENESS, n. s. [ferire ; Lat. prtefero. PREF’ERABLY, adv. f To regard with su-PREF’ERENCE, n. s. \ perior esteem or at-PREFER’MENT. J tention ; taking above,

before, and to, before the object postponed ; to advance ; exalt ; raise ; exhibit ; offer or propose solemnly : preferable is eligible before some other thing or pereon ; the adverb and noun substantive corresponding : preference is, the act of preferring ; electing ; esteeming or raising one thing before another : preferment, advancement ; promotion ; place of honor or advantage ; particularly a church living.

If I do not remember thee, let my tongue cleave to the roof of my mouth ; if I prefer not Jerusalem above my chief joy. Psalms.

He that coraeth after me is preferred before me , for he was before me. John i. 15.

In honour preferring one another. Romans. I, when my soul began to faint, My vows and prayers to thee preferred :

The Lord my passionate complaint, Even from his holy temple, heard. Sandys. It may worthily seem unto you a most shamefu ⁂ thing, to have preferred an infamous peace before a most just war. Knolles.

I’ll move the king

To any shape of thy preferment, such As thou’lt desire. Shakspeare. Cymbeline.

They flatly disavouch To yield him more obedience or support, And as t’ a perjured duke of Lancaster, Their cartel of defiance they prefer. Daniel. The greater good is to be preferred before the less, and the lesser evil to be endured rather than the greater. Wilkins.

By the recommendation of the earl of D unbar, he was preferred to the bishoprick of Coventry and Litchfield. Clarendon.

O spirit, that dost prefer Before all temples the' upright heart. Milton. I shall give an account of some of those appropriate and discriminating notices wherein the human body differs, and hath preference above the most perfect brutal nature. Hale.

All which declare a natural preferment of the one unto the motion before the other. Browne.

Leave the criticks on either side to contend about the preference due to this or that sort of poetry.

Dryden All preferments should be placed upon fit men.

L'Estrange.

The stronger ties we have to an unalterable pursuit of happiness, which is greatest good, the more are we free from any necessary compliance with our desire, set upon any particular, and then appearing preferable good, till we have duly examined it.

Locke.

We find in ourselves a power to begin or forbear several actions of our minds and motions of our bo-dies, barely by a thought or preference of the mind, ordering the doing, or not doing such a particular action.

It gives as much due to good works as is consistent with the grace of the gospel ; it gives as much preference to divine grace as is - consistent with the precepts of the gospel.

1 he mercenary and inconstant crew of the hunters r.fter preferment, whose designs are always seen through. Davenant,

Almost every man in our nation is a politician, and hath a scheme of his own, which he thinks preferable to that of any other. Addison.

The several musical instruments in the hands of the A polios, Muses, and Fauns, might give light to the dispute for preference between the ancient and modern musick. Id.

Every person within the church or commonwealth may prefer an accusation, that the delinquent may suffer condign punishment. Ayliffe.

Take care,

Lest thou prefer so rash a prayer, Nor vainly hope the queen of love Will e'er thy fav'rite's charms improve.

Prior.

Prefer a bill against all kings and parliaments since the conquest ; and, if that won't do, challenge the crow n and the two houses. Collier.

Even in such a state as this, the pleasures of virtue would be superior to those of vice, and justly preferable. Atterbury.

How came he to chuse a comick preferably to the tragick poets ; or how comes he to chuse Plautus preferably to Terence 1 Dennis.

The Romanists were used to value the latter equally with the former, or even to give them the preference. Waterland.

A secret pleasure touched Athena's soul,

To see the pref'rence due to sacred age

Regarded. Pope's Odyssey.

He spake, and to her hand preferred the bowl.

Pope.

Princes must, by a vigorous exercise of that law, make it every man's interest and honour to cultivate religion and virtue, by rendering vice a disgrace, and the certain ruin to preferment or pretensions.

Swift.

We know your prudence, Sir William, and I should be sorry to stop your preferment. Junitts.

PREFIG'URATE, or ˆ ~Lal.pr<e and fguro. PREFIG'URE, v. a. >To show by antece-PREFIGURA'TION, n. s. j dent representation : antecedent representation.

What the Old Testament hath, the very same the New containeth ; but that which lieth there, as under a shadow, is here brought forth into the open sun ; things there prejigured are here performed.

Hooker. Such piety, so chaste use of God's day,

That what we turn to feast, she turned to pray,

And did prefigure here in devout taste,

The rest of her high sabbath, which shall last.

Donne.

If shame superadded to loss, and both met together, as the sinner's portion here, perfectly prefiguring the two saddest ingredients in hell, deprivation of the blissful vision, and confusion of face, cannot prove efficacious to the mortifying of vice, the church doth give over the patient. Hammond.

The variety of prophecies and pref Durations had their punctual accomplishment in the author of this institution. Norris.

The same providence that hath wrought the one will work the other ; the former being pledges, as well as prefigurations, of the latter. Burnet.

PREFINE',w. a. Fr. prejlnir; Lat. prtrfinio. To limit beforehand.

He, in his immoderate desires, prefined unto himself three years, which the great monarchs of Rome could not perform in so many hundreds. Knolles,

PREFIX', v. a. 8c n. s. Lat. prtzfgo. To appoint before hand; settle; put before another thing; a thing so fixed : a particle put before a word to vary its signification.

A time prefix, and think of me at last. Sandys At the prefixed hour of her awaking,

Came I to take her from her kindred's vault.

Shakspeare. Whose sins

Full weight must be transferred upon my head ; Yet neither thus disheartened or dismayed, The time prefixed I waited. Milton.

Because I would prefix some certain boundary between them ; the old statutes end with king Edward II., the new or later statutes begin with king Edward III. Hole's Law of England.

It is a prefix of augmentation to many words in that language. Browne's Vulgar Errours.

Booth's forward valour only served to show, He durst that duty pay we all did owe : The' attempt was fair ; but heaven's jrrejixed hour Not come. Dryden.

These boundaries of species are as men, and not as nature makes them, if there are in nature any such prefixed bounds. Locke.

In the Hebrew language the noun has its prefixa and affixa, the former to signify some few relations, and the latter to denote the pronouns possessive and relative. Clarke.

PREFORM', v. a. Pro; and form. To form beforehand. Not in use.

If you consider the true cause Why all these things change from their ordinance, Their natures and preformed faculties, To monstrous quality ; why you shall find That heaven made them instruments of fear Unto some monstrous state.

Shakspeare. Julius Ceesar.

PREG'NANT, adj. 1 Fr. pregnant; Lat. PREG'NANTLY, adv. S pragnans. Teeming ; breeding ; fertile ; full of meaning ; evident ; free : the adverb corresponding.

Pregnancy is made a tapster, and hath his quick wit wasted in giving reckonings. Shakspeare.

This granted, as it is a most pregnant and unforced position, who stands so eminent in the degree of this fortune as Cassio, a knave very voluble.

Id. Othello.

Were ‘t not that we stand up against them all, ‘Twere pregnant, they should square between themselves. Shakspeare. A most poor man made tame to fortune’s blows, Who by the art of known and feeling sorrows, Am pregnant to good pity. Id. King Lear.

A thousand moral paintings I can shew, That shall demonstrate these quick blows of fortune More pregnantly than words. Id. Timon.

He was sent to school, where his pregnancy was advantaged by more than paternal care and industry.

Fell.

These knew not the just motives and pregnant grounds with which I thought myself furnished.

King Charles. Thou

Dove-like satest brooding on the vast abyss, And madest it pregnant. Milton.

His town, as fame reports, was built of old By Danae, pregnant with almighty gold.

Dryden.

The breast is encompassed with ribs, and the belly left free for respiration ; and, in females, for that extraordinary extension in the time of their pregnanci,. Ray on the Creation

The dignity of this office among the Jews is so vregnantly set forth in

holy writ, that it is unquestionable ; kings and priests are mentioned together.

South.

Through either ocean, foolish man ! That pregnant word sent forth again, Might to a world extend each atom there, For every drop call forth a sea, a heaven for every star. Prior.

An egregious and pregnant instance how far virtue surpasses ingenuity. Woodward'* Natural History.

O detestable passive obedience ! did 1 ever imagine I should become thy votary in so pregnant an instance ? Arbuthnot.

This writer, out of the pregnancy of his invention, hath found out an old way of insinuating the grossest reflections under the appearance of admonitions.

Swift's Miscellanies.

PREGNANCY. See MIDWIFERY.

PKEHN1TE, or PRISMATIC PREHNITE, a mineral of which there are two sub-species, the foliated and the fibrous.

1. Foliated. Color apple-green. Massive, in distinct concretions, and sometimes crystallised. Primitive form an oblique four-sided prism of 103►► and 77►►. Secondary forms, an oblique four-sided table, an irregular eight-sided table, an irregular six-sided table, and a broad rectangular four-sided prism. Shining. Fracture fine grained uneven. Translucent. Hardness from felspar to quartz. Easily frangible. Specific gravity 2-8 to 3-0. It melts with intu-mescence into a pale-green or yellow glass. It does not gelatinize with acids. Its constituents, according to the analysis of Klaproth, are, silica 43-83, alumina 30-33, lime 18-33, oxide of iron 5-66, water 1-83. It occurs in France, in the Alps of Savoy, and in the Tyrol It is" said to become electric by heating. Beautiful varieties are found in the interior of Southern Africa.

2. Fibrous prehnite. Color light-green. Massive, in distinct concretions, and crystallised in acicular four-sided prisms. Glistening, pearly. Translucent. Easily frangible. Specific gravity 2'89. It melts into a vesicular enamel. It becomes electric by heating. Its constituents, according to Laugier, are, silica 42-5, alumina 28-5, lime 20-44, natron and potash 0-75, oxide of iron 3, water 2. It occurs in veins

and cavities in trap-rocks near Beith in Ayrshire, Bishoptown in Renfrewshire, at Hartfield near Paisley, and near Frisky Hall, Old Kilpatrick ; in the trap-rocks round Edinburgh, &c.

PREJUDGE', v. a. Fr. prejuger; Lat. prte andjudico. To determine beforehand; generally to condemn beforehand.

If he stood upon his own title of the house of Lancaster, he knew it was condemned in parliament, and prejudged in the common opinion of the realm, and that it tended to the disinherison of the line of York. Bacon's Henry VII.

The child was strong and able, though born in the eighth month, which the physicians do prejudge.

Bacon.

The cause is not to he defended, or patronized by names, but arguments, much less to be prejudged, or blasted by them. Hammond.

Some action ought to be entered, lest a greater cause should be injured and prejudged thereby.

Ayliffe.

The committee of council hath prejudged the whole case, by calling the united sense of both houses of parliament an universal clamour. Swift.

PREJU'DICATE,w.a.&a$.) Also of Lat. PREJUDICA'TION, n. s. Spraandjudico.

To determine beforehand to disadvantage : prejudiced : the art of prejudging.

Are you, in favour of his person, bent Thus to prejudicate the innocent? Sandys

Our dearest friend

Prejudicates the business, and would seem To have us make denial. Shahspeare.

Their works will be embraced by most that understand them, and their reasons enforce belief from prejudicate readers. Browne.

This rule, of casting away all our former prejudicate opinions, is not proposed to any of us to be practised at once as subjects or Christians, but merely as philosophers. WattSf

PREJUDICE, n. s. & v. a. > Fr. prejudice ; PREJUDICIAL, adj. \ Lat.prejudicium.

Prepossession ; judgment formed without examination ; used for prepossession either in favor of any thing or against it ; and sometimes (but not properly) with to before that which the prejudice is against ; mischief; hurt; detriment: to prejudice is to fill with unexamined notions or opinions ; to obstruct ; injure ; hurt : prejudicial, obstructed ; or possessed by opposite opinions ; contrary ; opposite ; hurtful.

The strength of that law is such, that no particular nation can lawfully prejudice the same by any their several laws and ordinances, more than a man, by his private resolutions, the law of the whole commonwealth wherein he liveth. Hooker.

What one syllable is there, in all this, prejudicial any way to that we hold ? Id.

Neither must his example, done without the hook, prejudice that which is well appointed in the book.

Whitg.‘fle. I have not spoke one the least word,

That might be prejudice of her present slate,

Or touch of her good person.

Shakspeare. Henry VIII.

Factions carried too high and too violently, is a sign of weakness in princes, and much to the prejudice of their authority and business. Bacon.

‘Tis a sad irreverence, without due consideration, to look upon the actions of princes with a prejudicial eye. Holydau.

The king himself frequently considered more the person who spoke, as he was in his prejudice, than the council itself that was given. Clarendon.

His going away the next morning with all his troops was most prejudicial and most ruinous to the king’s affairs. Id.

My comfort is, that their manifest prejudice to my cause will render their judgment of less authority.

Dry den.

How plain this abuse is, and what prejudice it does to the understanding of the sacred scriptures.

Locke.

A prince of this character will instruct us by his example, to fix the unsteadiness of our politicks ; or by his conduct hinder it from doing us any prejudice.

Addifnn.

One of the young ladies reads while ihe others are at work ; so that the learning of the family is not at all prejudicial to its manufactures. Id.

Half pillars wanted their expected heigJit,

And roofs imperfect prejudiced the sight. Prior.

A state of great prosperity, as it exposes us to va-

nous temptations, so it is often prejudicial to us, in that it swells the mind with undue thoughts.

Atterbury.

Sufler not any beloved study to prejudice your mind, so far as to despise all other learning.

Watt*.

To this is added a vinous bitter, warmer in the composition of its ingredients than the watery infusion ; and, as gentian and lemon-peel make a bitter of so grateful a flavour, the only care required in this composition was to chuse such an addition as might not prejudice it. London Dispensatory.

By these a man's judgment is easily perverted, and a wrong bias hung upon his mind; these are the inlets of prejudice ; the unguarded avenues of the mind. Mason.

The truth is, if the truth may suit your ear, And prejudice have left a passage clear, Pride has attained its most luxuriant growth, And poisoned every virtue in them both.

Cowper.

PREL'ATE, n. s. 1 Fr. prelat ; Lat. pralar

PRELAT'ICAL. S tus. An ecclesiastic of the highest order : relating to prelacy.

Divers of the reverend prelacy, and other most judicious men, have especially bestowed their pains about the matter of jurisdiction.

Hooker's Dedication.

It beseemed not the person of so grave a prelate, to be either utterly without counsel, as the rest were, or in a common perplexity to shew himself alone se-cure. Hooker.

Hear him but reason in divinity, And, all-admiring, with an inward wish You would desire the king were made a prelate.

Sftakspeare.

The archbishop of Vienna, a reverend prelate, said one day to king Lewis XI. of France : Sir, your mortal enemy is dead, what time duke Charles of Burgundy was slain. Bacon.

The presbyter, puff'd up with spiritual pride, Shall on the necks of the lewd nobles ride, His brethren damn, the civil power defy, And parcel out republic prelacy. Dryden.

Yet Munster's prelate ever be accurst,

In whom we seek the German faith in vain. Id.

Prelacies may be termed the greater benefices ; as that of the pontificate, a patriarchship, an arch-bishoprick and bishoprick. Ayliffie's Parergon.

How many are there, that call themselves protes-taots, who put prelacy and popery together as terms convertible? Swift.

The king then a wrote a letter to the bishop, in which he complained of the violation of his rights, and the contempt of his authority, charged the prelate with countenancing the late act of disobedience, and required an answer in two days. Johnson.

PRELATION, n. s. Lat. pralatus. Prefer- ––nce : setting of one above the other.

In case the father left only daughters, they equally succeeded as in co-partnership, without any prelation or preference of the eldest daughter to a double portion. Hale.

PRELECTION, n. s. Lat. pr&lectio. Reading ; lecture ; discourse.

He that is desirous to prosecute these asystata, or infinitude, let him resort to the prelections of Faber.

Hale.

PRELIBATION, n. s. Lat. pralibo. Taste beforehand ; effusion previous to tasting.

The firm belief of this, in an innocent soul, is a (ugh prelibathn of those eternal joys. More.

PRELIMINARY, adj. & n. * Fr. prelimi-naire ; Lat. prce limine. Previous ; introductory ; proemial : something introductory ; previous condition or stipulation.

My master needed not the assistance of that preliminary poet to prove his claim ; his own majestic mien discovers him to be the king. Dryden.

The third consists of the ceremonies of the oath on both sides, and the preliminaries to the combat.

Notes on Iliad.

PRFLUDE, n. s. & v. a.ˆ French prelude ; PRELU'DIOUS, adj. > Latin preeludium.

PRELU'DIUM, n. s. j A short piece of

music played before a full concert; anything introductory ; to serve as an introduction : preludi-ousis previous; introductory: preludium, a prelude.

That's but a preludious bliss, Two souls pickeering in a kiss. Cleaveland.

To his infant arms oppose His father's rebels and his brother's foes ; Those were the preludes of his fate, That formed his manhood, to subdue The hydra of the many-headed hissing crew.

Dryden.

Either songster holding out their throats, And folding up their wings, renev/d their notes, As if all day, preluding to the fight, They only had rehears'd, to sing by night. Id.

This Menelaus knows, exposed to share With me the rough preludium of the war. J'f. The last Georgick was a good prelude to e ˆEneis, and very well shewed what the poet ould do in the description of what was really great.

Addisoii.

One concession to a man is but a prelude to another. ('la riff.ii .

My weak essay

But sounds a prelude, and points out their prey.

Young,

PRELU'SIVE, adj. From prelude. Previous; introductory ; proemial.

The clouds

Softly shaking on the dimpled pond Prelusive drops, let all their moisture flow.

Thomson .

PREMATU'RE, adj. Fr. premature; Lat. prtsmaturus. Precocious ; ripe too soon ; formed before the time ; too early,

'Tis hard to imagine, what possible consideration should persuade him to repent, till he deposited tha►► premature persuasion of his being in Christ.

Hammond'* Fundamentals. PREMEDITATE, v. a. & v. n.) Fr. pre-
PREMEDITA'TION, n. s. \ medilcr ;

Lat. pnemeditor. To contrive ; form or conceive beforehand : to think beforehand : premeditation, forethought; act of meditating beforehand.

Of themselves they were rude, and knew not so much as how to premeditate ; the spirit gave them speech and eloquent utterance. Hooker.

Where I have come, great clerks have purposed To greet me with premeditated welcomes.

Shakspeare.

Are all th' unlooked-for issue of their bodies To take their rooms ere I can place myself 1 A cold premeditation for my purpose ! Id.

Hope is a pleasant premeditation of enjoyment, as when a dog expects, till his master has done picking of the bone. More.

He, amidst the disadvantage of extempore against prcemeditation, dispelled with ease and perfect clear-

ness all the sophisms that had been brought against him. Fell.

With words premeditated thus he said. Dryden.

Verse is not the effect of sudden thought ; but this hinders not that sudden thought may be represented in verse, since those thoughts must be higher than nature can raise without premeditation.

Id. on Dramatic Poetry.

PREMER'IT, v. a. Lat. prtemereor. To deserve before.

They did not forgive Sir John Hotham, who had so much premerited of them. King Charles.

PREM'ICES,w. s. Fr. premices ; Lal.primi-t'tie. First fruits.

A charger, yearly filled with fruits, was offered to the gods at their festivals, as the premices or first gatherings. Dryden.

PREM'IER, adj. & n. -s. Fr. premier. First; chief : a chief minister of state.

The Spaniard challengeth the premier place, in re-gard of his dominions. Camden's Remains.

Thus families, like realms, with equal fate, Are sunk by premier ministers of state. Swift.

PREMISE', v. a. ˆ Lat. pnemmus. Toex—

PREM'ISES, n. s. > plain previously; lay

PREM'ISS. j down premises : which

are propositions antecedently supposed or

proved : premiss is the singular, and rarely used ;

premises or premisses, in law, properly signifies

th►► > land, &c., mentioned in the beginning of a

‘. :od ; hence it came to mean in law language,

hon o and lands.

They infer upon the premises, that as great difference as commodiously may be, there should be in all outward ceremonies between the people of God, and them which are not his people. Hooker.

O let the vile world end, And the premised flames of the last day Knit earth and heaven together. Shakspeare. This is so regular an inference, that, whilst the premises stand firm, it is impossible to shake the conclusion. Decay of Piety.

The apostle’s discourse here is an answer upon a ground taken ; he premiseth, and then infers.

Burnet.

I premise these particulars, that the reader may know I enter upon it as a very ungrateful task.

Addison.

She studied well the point, and found Her foes’ conclusions were not sound, From premises erroneous brought, And therefore the deductions nought.

Swift’s Miscellanies.

They know the major or minor, which is implied, when you pronounce the other premiss and the conclusion. Watts.

PRE’MIUM, n. s. Lat. premium. Something given to invite a loan or a bargain.

No body cares to make loans upon a new project ; whereas men never fail to bring in their money upon a land tax, when the premium or interest allowed them is suited to the hazard they run.

Additon’i Freeholder.

People were tempted to lend, by great premiums and large interest ; and it concerned them to preserve that government, which they had trusted with their money. Swift’s Miscellanies.

PREMNA, in botany, a genus of the angio-epermia order, and didynamia class of plants : CAL.bilobed : COR. quadrifid :berry quadrilocular : VOL. XVIII.

SEEDS solitary. Species three, fine East ludia trees.

PREMON’ISH, v. a. Lat. premoneo. To

warn or admonish beforehand.

What friendly premonitions have been spent On your forbearance, and their vain event.

Chapman.

After these premonishmenti, I will come to the compartition itself. Wotton’s Architecture.

How great the force of such an erroneous persuasion is, we may collect from our Saviour’s premonition to his disciptes, when he tells them that those who killed them should think they did God service.

Decay of Piety.

It is no small mercy of God, that he gives us warning of our end. We shall make an ill use of so gracious a premonition, if we make not a meet preparation for our passage. By. Hall.

PREMONSTRANTS,orPRˆMONSTRATENSEs, a religious order of regular canons, instituted in 1120, by St. Norbert; and thence also called Norbertines. The first monastery of this order was built by Norbert in the Isle of France, which he called Prernonstre, Praemonstratum ; and hence the order derived its name; though, as to the occasion of that name, the writers of that order are divided. At first the religious of this order were so very poor that they had only a single ass, which served to carry the wood they cut down every morning, and sent to Laon in order to purchase bread. But they soon received so many donations, and built so man) monasteries, that in

thirty years after the foundation of the order they had above 100 abbeys in France and Germany ; and, in process of time, the order so increased that it had monasteries in all parts of Christendom, amounting to 1000 ab-beys, 300 provostships, a vast number of priories, and 500 nunneries. The rule they followed wa3 that of St. Augustine, with some slight alterations, and an addition of certain severe laws, whose authority did not long survive their founder. The order was approved by Honorius II. in 1126, and afterwards by several succeeding popes. At first the abstinence from flesh was rigidly observed. In 1245 Innocent IV. complained to a general chapter of its being neglected. In 1288 their general, William, procured leave of pope Nicholas IV. for those of the order to eat flesh on journeys. In 1460 Pius II. granted them a general permission to eat meat, excepting from Septuagesima to Easter. The dress of the religious of this order is white, with a scapulary before the -cassock. Out of doors they wear a white cloak and white hat ; within, a little ca-mail; and at church a surplice, &c. In the first monasteries built by Norbert there was one for men and another for women, only separated by a wall. In 1137, by a decree of a general chapter, this practice was prohibited, and the nuns removed out of those already built to a greater distance from those of the monks. The Prae-monstratenses, or monks of Premontre, vulgarly called white canons, came first into England A.D. 1146. Their first monastery, called New House, was erected in Lincolnshire by Peter de Saulia, and dedicated to St. Martial. In the reign of Edward I. this order had twenty-seven monasteries in England.

PREMONTVAL (Peter Le Guay de), an eminent French writer, born at Charenton in 1716. He became a member of the academy of Berlin. He wrote several works, of which the most noted is his Antidote to the Corruption of the French Language, written in German. H►► died at

Berlin in 1767, aged fifty-one.

PREMUNI'RE, n. s. Lat. premunire. A writ in common law, whereby a penalty is in-currable, as infringing some statute. See below.

Premunire is now grown a good word in our English laws, by tract of time ; and yet at first it was merely mistaken for premonire.

Bramhall against Hobbes.

Wolsey incurred a premunire, forfeited his honour, estate, and life, which he ended in great calamity.

South.

PREMUNIRE. See PR/EMUNIRE.

PRENANTHES, in botany, wild lettuce, a genus of the polygamia aequalis order, and syngenesia class of plants ; natural order forty-ninth, compositae : receptacle naked : CAL. calyculated : pappus simple, and almost sessile : the florets are placed in a single series. Species thirty-three ; one, P. mutalis, common to our own groves.

PRENOM'INATE, v. a. Latin pr&nomino. To forename.

He you would sound,

Having ever seen, in the prenominate crimes,

The youth, you breathe of, guilty. Sliakspeare.

The watery productions should have the prenomination ; and they of the land rather derive their names, than nominate those of the sea. Browne.

PRENOTION, n. s. Fr. prenotion; Lat. pra and nosco. Foreknowledge ; prescience.

The hedgehog's presension of winds is so exact, that it stoppeth the north or southern hole of its nest, according unto prenotion of these winds ensuing. Browne.

PRENTICE, n. s.) Contracted from APPREN'TICESHIP. i PRENTICE. One bound to a master, in order to instruction in a trade : state or servitude of an apprentice.

My accuser is my prentice, and, when I did correct him for his fault,

he did vow upon his knees he would be even with me. Shaktpeare.

He served a prenticeship, who sets up shop, Ward tried on puppies, and the poor, his drop.

Pope.

PRENZLOW, the chief town of the district of Brandenburgh, called the Ucker Mark, Prussia. It is situated in a plain on the lake and river Ucker, and is divided into the Old and New Town; both of which are tolerably built. Here are four Lutheran, two Calvinist, and one Catholic church ; a pleasant square, a beautiful public walk, several schools and hospitals, and 8000 inhabitants. The town has also several breweries, and a considerable trade in corn. The woollen manufactures, and still more those of tobacco, occupy a large portion of the inhabitants, many of whom are descended from French Protestant refugees. It was near this place, on 24th October 1806, that the remains of the Prussian army, about 20,000, defeated at Jena on the 14th, were obliged to surrender to the French. Seventy-three miles N.N.VV. of Frankfort on the Oder, and fifty-six N.N. E. of Berlin.

PREOC'CUPATE, v. a. } Fr. preoccuper ;

PREOCCUPA'TION, n. s. > Lat. pr&occupo. To

PREOC'CUPY, v. a. j anticipate ; prepos-

sess ; fill with prejudice : preoccupation corresponds with these senses : to preoccupy is the more modern synonyme of preoccupate.

Honour aspireth to death ; grief flieth to it ; and fear preoccupieth it. Bacon.

That the model be plain without colours, lest the eye preoccupate the judgment. Wotton.

As if, by way of preoccupation, he should have said ; well, here you see your commission, this is your duty, these are your discouragements ; never seek for evasions from worldly afflictions ; this is your reward, if you perform it ; this is your doom, if you decline it. South.

I think it more respectful to the reader to leave something to reflections, than preoccupy his judgment. Arbuthnot.

PREOM’INATE, v. a. Lat. pre and ominor. To prognosticate ; to show by omens any future event.

Because many ravens were seen when Alexander entered Babylon, they were thought to preominate his death. Browne.

PREOPIN’ION, n. s. Lat. prte and opinio Opinion antecedently formed; prepossession.

Diet holds no solid rule of selection ; some, in indistinct voracity, eating almost any ; others, out of a timorous preopinion, refraining from very many things. Browne.

PREORDAIN’, v. a. > Lat. pra and ordain.

PREOR’DINANCE, n. s. J To ordain beforehand : antecedent decree.

These lowly courtesies Might stir the blood of ordinary men, And turn preordinance and first decree Into the law of children.

Shakspeare. Julius Caesar.

Sin is the contrariety to the will of God, and if all things be preordained by God, and so demonstrated to be willed by him, it remains there is no such thing as sin. Hammond.

Few souls preordained by fate,

The race of gods, have reached that envied state.

Roscommon.

PREPARE’, v. a., v. n. & n.s.~} Fr. prcparer ;

PREPARA’TION, n. s. 1 It. preparare ;

PREPAR’ATIVE, adj. & n. s. | Lat. pneparo.

PREPAR’ATIVELY, adv. (ˆTo fit, qualify,

PREPAR’ATORY, adj. \ or make ready

PREPA’REDLY, adv. for any pur—

PREPA’REDNESS, n. s. | pose ; make

PREPA’RER. J ready beforehand ; form ; adjust ; compound : as a verb

neuter, to take previous or preparatory measures ; make every thing ready : Shakspeare uses prepare for preparation ; which signifies the act of preparing or previously fitting or ordering things ; previous measures ; introduction ; composition ; and, in an obsolete sense, accomplishments ; qualification : preparative is, having the power or quality of preparing : and, as a noun substantive, that which has this power; that which is done as introductory to something else ; the adverb corresponding with the adjective : preparatory is, introductory ; antecedent ; necessary ; previous : preparedly is, advisedly ; orderly ; by proper precedent measures : the noun substantive corresponding : preparer, he or that which fits or prepares.

There he maketh the hungry to dwell, that they may prepare a city for habitation. Psalm cviii, 36.

PRE

When he prepared tte heavens I was there, when be set a compass upon the face of the depth.

Proc. viii. 27.

The long suffering of God waited in the days of Noah, while the ark was a preparing. 1 Peter.

They tell us the profit of reading is singular, in that it serveth for a preparative unto sermons.

Hooker. I make bold to press, with so little preparation,

upon you. ??? You're welcome.

Shakspeare. Merry Wives of Windsor. Sir John, you are a gentleman of excellent breeding, authentick in your place and person, generally alfowed for your many warlike, courtlike, and learned preparations. Shakspeare.

Patient Octavia, plough thy visage up With her prepared nails.

Id. Antony and Cleopatra. Go in, sirrah, bid them prepare for dinner.

Shakspeare. In our behalf Go levy men, and make prepare for war. Id.

She preparedly may frame herself T' the way she's forced to.

Id. Antony and Cleopatra.

My book of advancement of learning may be some preparative or key for the better opening of the in-stauration. Bacon.

The bishop of Ely, the fittest preparer of her mind to receive such a doleful accident, came to visit her.

Wotton.

Efficacy is a power of speech, which represents to our minds the lively ideas of things so truly, as if we saw them with our eyes ; as Dido preparing to kill herself. Peacham.

The miseries, which have ensued, may be yet, through thy mercy, preparatives to us of future blessings. King Charles.

Resolvedness m sin can, with no reason, be imagined a preparative to remission. Decay of Piety.

Prepare men's hearts by giving them the grace of humility, repentance, and probity of heart.

Hammond.

He took the golden compasses, prepared In God's eternal store, to circumscribe This universe. Milton.

It is preparatively necessary to many useful things in this life, as to make a man a good physician.

Hale.

Preparatory, limited, and formal interrogatories in writing preclude this way of occasional interrogatories. ###"*.

I wish the chymists had been more sparing, who magnify their preparations, inveigle the curiosity of many, and delude the security of most.

Browne's Vulgar Errours.

Though he judged the time of sickness an improper season for the great work of repentance ; yet he esteemed it a most useful preparative, the voice of God himself exhorting to it. Fell.

The practice of all these is proper to our condition in this world, and

preparatory to our happiness in the next. Tillotson.

What avails it to make all the necessary preparatives for our voyage, if we do not actually begin the journey ? Dryden.

Confound the peace established, and prepare Their souls to hatred, and their hands to war. Id.

Codded grains are an improver of land, and preparer of it for other crops. Mortimer's Husbandry.

I will shew what preparations there were in nature for this dissolution, and after what manner it came to pass. Burnet.

Rains were but preparatory, the violence of the

deluge depended upon the disruption of the great abyss. Id.

Such a temper is a contradiction to repentance, as being founded in the destruction of those qualities which are the only dispositions and preparatives to it. South.

Some preachers, being prepared only upon two or three points of doctrine, run the same round.

Addison.

The beams of light bad been in vain displayed, Had not the eye been fit for vision made ; In vain the author had the eye prepared With so much skill, had not the light appeared.

Blackmnre.

In the preparations of cookery, the most volatile parts of vegetables are destroyed. Arbuthnot.

Nothing hath proved more fatal to that due preparation for another life, than our unhappy mistake of the nature and end of this. Wake.

PREPARATION OF DISSONANCES, in music. See Music.

PREPARATIONS, in anatomy, the parts of ani-mal bodies prepared, and preserved for anatomi-cal uses. Though several parts prepared dry are useful, yet others must be so managed as to be always flexible, and nearer a natural state. According to Dr. Monro, the best liquor for this purpose is a well rectified colorless spirit of wine, to which is added a small quantity of nitric or sulphuric acids. When these are properly mixed, they neither change the color nor the consistence of their parts, except where there are serous or mucous liquors contained in them. The brain, even of a young child, in this mixture grows so firm as to admit of gentle handling, as do also the vitreous and crystalline humors of the eye. The liquor of the sebaceous glands is coagulated by this spirituous mixture ; and it heightens the red color of the injection of the blood-vessels, so that, after the part has been in it a little time, several vessels appear which were before invisible. The glasses which contain the preparations should be of the finest sort, and pretty thick ; for through such the parts may be seen very distinctly, and of a true color, and the object will be so magnified as to show vessels in the

glass which out of it were not to be seen. As the glass when filled with the liquor has a certain focus, it is necessary to keep the preparation at a proper distance fronx the sides of it, which is easily done by little sticks suitably placed, or by suspending it by a thread in a proper situation. Mr. Sheldon describes a sim-ple method of stopping the mouths of the preparation glasses, by which means the stopper is rendered nearly as durable as the glass itself. ‘To execute it, let the anatomist take care to have the upper surface of his bottles made plane, by desiring the workmen at the glass-house to flatten them in the making. This they will easily do in forming the round ones, but the flat bottles are attended with considerable difficulty. The right way to make them, would be to blow them in moulds of various sizes; the workmen should likewise form the bottoms of the bottles perfectly flat, that they may stand upright and steady. Bottles of this form being provided for the larger preparations, we grind the upper surface of them on a plain plate of lead, about a quarter of an inch thick, and two feet in diarne-E2

ter ; first with fine emery and water, then with powdered rotten stone, or putty first wet with water and at last dry; so that the surface may be reduced to an exact horizontal plane, and of as fine a polish as plate glass. The manoeuvre requires but little dexterity; and the anatomist should be provided with a considerable number of these glasses thus prepared. To the top of each bottle a piece of plate glass, cut by a diamond, is to be adapted so as completely to cover, but not project over, the edge of the bottle. When these two smooth surfaces are put upon each other, with a drop of solution of gum between, the attraction of cohesion is so considerable that it requires great force to separate them. A piece of wet ox bladder, freed from fat, and soaked in water till it becomes mucilaginous, is then to be placed over the top, the air pressed out from between it and the glass ; after which it must be tied with a packthread dipped in the solution of gum arabic.

The bladder, being cut off neatly under the last turn of the thread, is then to be dried, the string taken cautiously off, and the top and neck painted with a composition of lampblack mixed with japanner's gold size: this soon dries, and leaves a fine smooth glossy surface, from which the dirt can at any time be as readily wiped off as from a mirror. By this method large bottles are as easily and effectually secured as small ones ; and it is found to answer as well as the hermetical sealing of glasses, which in large vessels is altogether impracticable. With respect to the stopper bottles, which are very convenient for holding small preparations, Mr. S. advises the stoppers to be perfectly well ground ; that they pass rather lower down than the neck of the bottle, for the convenience of drilling two holes obliquely through the inferior edge of the substance of the stopper, opposite to each other, for the convenience of fixing threads to hold the syibject ; for, if the threads pass between the neck and stopper, a space will be left ; or, if the stopper be well ground, the neck of the bottle will be broken in endeavouring to press it down. On the other hand, if any space be left, the thread, by its capillary attraction, will act from capillary attraction, raise the spirits from the bottle, and cause evaporation, which will likewise take place from the chink between the stopper and neck. Mr. W. Cooke has found that all preparations of animal bodies may be preserved by a solution of common salt. He finds that if used a little be-. low saturation, it will preserve animal substances for an indefinite period, at all the temperatures of our atmosphere. ××× Transactions of the Society of Arts, vol. xxxvii. p. 43.

PREPARIS, the most northern of the Anda-man Islands, in the eastern entrance of the Bay of Bengal, about a degree south of the Pegue shore, is four miles long, by one and a half broad. It rises gradually towards the middle, and is covered entirely with wood. In clear weather it may seen at the distance of twenty-five miles, but can only be approached on the east side, on account of rocks; on that side, within half a mile of the shore, there is seven fathoms water. It is only inhabited by birds, squirrels, and monkies. Long. 93×× 40' E., lat. 14×× 50' N.

PREPON'DER, v. a. ~\ Lat. pmpondero.

PREPONDERANCE, or /To outweigh; over—

PREPON'DERANCY, w. s. Npower by weight or

PREPONDERATE, i influence: the noun

PREPONDERA'TION. j substantive corresponding.

Though pillars by channelling be seemingly in-grossed to our sight, yet they are truly weakened ; and therefore ought not to be the more slender, but the more corpulent unless appearances preponder truths. Wotton's Architecture.

A solid verity in one month, is worthy to preponderate light falsehood in a thousand. Bp. Hall.

That is no just balance, wherein the heaviest side will not preponderate. Wilkins.

An inconsiderable weight, by distance from the centre of the balance, will preponderate greater magnitudes. Glanville.

As to addition of ponderosity in dead bodies, comparing them unto blocks, this occasional prepon-deruncy is rather an appearance than reality.

Browne's Vulgar Errouri.

He that would make the lighter scale preponderate, will not so soon do it, by adding new weight to the emptier, as if he took out of the heavier, what he adds to the lighter. Locke.

The mind should examine all the grounds of probability, and, upon a due balancing the whole, reject or receive proportionably to the preponderancy of the greater grounds of probability. Id.

Little light boats were the ships which people used, to the sides whereof this fish remora fastening, might make it swag, as the least preponderance on either side will do, and so retard its course.

Grew.

The triviallest thing, when a passion is cast into the scale with it, preponderates substantial blessings. Government of the Tongue.

Unless the very mathematical centre of gravity of every system be fixed in the very mathematical centre of the attractive power of all the rest, they cannot be evenly attracted on all sides, but must preponderate some way or other. Bentley.

In matters, which require present practice, we must content ourselves

with a mere preponderation of probable reasons. ll'atts.

PREPOSI'TION, n. s. Fr. preposition ; Lat. prapositio. In grammar, a particle governing a case.

A preposition signifies some relation, which the thing signified by the word following it, has to something going before in the discourse ; as, Cssar came to Rome. Clarke's Latin Grammar.

PREPOSSESS', v. a. Pr<e and possess. To possess with an opinion unexamined; to prejudice.

God hath taken care to anticipate and prevent

every man to give piety the prepossession, before other

competitors should be able to pretend to him ; and

so to engage him in holiness first, and then in bliss.

Hammond's FundamentaU.

Had the poor vulgar rout only, who were held under the prejudices and prepossessions of education, been abused into such idolatrous superstitions, it might have been pitied, but not so much wondered at.

South.

With thought, from prepossession free, reflect On solar rays, as they the sight respect. Blackmore.

She was prepossessed with the scandal of salivating

Wiseman.

PREPOSTEROUS, adj.~) Latin prteposte—

PREPOS'TEROUSLY, adv. 5-rus. Strictly,

PKEPOS'TEROUSNESS, n. s. 7 h tv.i.g that first

PREROGATIVE.

which ought 1o be last : hence, absurdly wrong ; perveited; the adverb and nounsubstantive corresponding.

Preposterous ass ! that never read so far To know the cause why musick was ordained.

Shakipeare.

Those things do best please me, * That befal preposterously.

Id. Midsummer Night'* Dream. Put a case of a land of Amazons, where the whole government, public and private, is in the hands of women : is not such a preposterous government against the first order of nature, for women to rule over men, and in itself void 1 Bacon.

Death from a father's hand, from whom I first Received a being ! 'tis a preposterous gift, An act at which inverted nature starts, And blushes to behold herself so cruel. Denham.

The Roman missionaries gave their liberal contribution, affording their preposterous charity to make them proselytes, who had no mind to be confessors or martyrs. Fell.

The method I take may be censured as preposterous, because I thus treat last of the antediluvian earth, which was first in order of nature.

Woodward's Natural History. Upon this supposition, one animal would have its lungs wnere another hath its liver, and all the other members preposterously placed ; there could not be a like configuration of parts in any two individuals.

Bentley's Sermons. The shapeless pair,

As they designed to mock me, at my side Take step for step ; and, as I near approach The cottage, walk along the plastered wall, Preposterous sight ! the legs without the man.

Cowper.

PREPOTENCY, n. s. Lat. prapotentia. Predominance ; superior power.

If there were a determinate prepotency in the right, and such as ariseth from a constant root in nature, we might expect the same in other animals.

Browne.

PRE’PUCE, n. s. Fr. prepuce; Lat. pree-putium. That which covers the glans ; foreskin.

The -prepuce was much inflamed and swelled.

Wiseman.

PREPUCE. See ANATOMY.

PRERAU, a circle comprising the north-east portion of Moravia, bordering on Austrian Silesia. Its area is 1210 square miles. The smaller part lying on the rivers March and Hanna, is fertile; the rest is mountainous and containing only here and there fruitful spots. The pastures are good, and the number of sheep considerable. The chief rivers are the March, Hanna, Becswa, and Oder, which has here the commencement of its course. Population 215,000. The chief town of the same name is situated thirteen miles south-east of Almutz and contains 2300 inhabitants.

PREREQUIRE’, v. a. ˆ Pne and require.

PREREQUISITE, adj. S To demand previously : pra and requisite. Something previously necessary.

Some primary literal signification is prerequired to that other of figurative. Hammond.

Before the existence of compounded body, there must be a preexistence of active principles, necessarily prerequisite to the mixing these particles of bo-dies. Hale.

The conformation of parts is necessary, not only

unto the prerequisite and previous conditions of birth, but also unto the parturition. Browne.

PRERO’GATIVE, n. s.) Fr. prerogatif; PREROGATIVE!), adj. J low Lat. prteroga-tiva. An exclusive or peculiar privilege ; hav-ing exclusive privilege.

My daughters and the fair Parthenia might far better put in their claim for that prerogative.

Sidney ,

The great caliph hath an old prerogative in the choice and confirmation of the kings of Assyria.

Knolles.

How could communities, The primogeniture, and due of birth, Prerogative of age, sceptres, and crowns, But by degree, stand m authentick place 1

Sfiakspeare.

‘Tis the plague of great ones, Prerogatived are they less than the base ; ‘Tis destiny unshunable. Id.

Had any of these second causes despoiled God of his prerogative, or had God himself constrained the mind and will of man to impious acts by any celestial inforcements 1 Raleigh.

They are the best laws, by which the king hath the justest prerogative, and the people the best liberty.

Bacon.

They obtained another royal prerogative and power, to make war and place at their pleasure.

Davies.

The house of commons, to these their prerogative* over the lords, sent an order to the lieutenant of the Tower, that he should cause him to be executed that very day. Clarendon.

For freedom still maintained alive, Freedom an English subject’s sole prerogative, Accept our pious praise. Dryden.

It seems to be the prerogative of human understanding, when it has distinguished any ideas, so as to perceive them to be different, to consider in what circumstances they are capable to be compared.

Locke.

I will not consider only the prerogatives of man above other animals, but the endowments which na-ture hath’conferred on his body in common with them.

Ray on the Creation.

PREROGATIVE COURT, an English court established for the trial of all testamentary causes, where the deceased has left bona notabilia within two different dioceses. In which case the probate of wills belongs to the archbishop of the province, by way of special prerogative. And all causes relating to the wills, administrations, or legacies of such persons, are originally cogniza-ble herein, before a judge appointed by the archbishop, called the judge of the prerogative-court ; from whom an appeal lies, by stat. 25 Hen. VIII. c. 19, to the king in chancery, instead of the pope as formerly.

PREROGATIVE, ROYAL, that special pre-emi- nence which the king hath over and above all other persons, and out of the ordinary course of the common law, in right of his regal dignity. It signifies in its etymology (from prae and roaro) something that is required or demanded before, or in preference to all others. And therefore Finch lays it down as a maxim, that the prerogative is that law in case of the king, which is law in no case of the subject. Prerogatives are either direct or incidental. The direct are such positive substantial parts of the royal character and authority, as are rooted in, and spring from,

the king's political person, considered merely by itself, without reference to any other extrinsic circumstancs ; as, the right of sending ambassadors, of creating peers, and of making war or peace. But such prerogatives as are incidental bear always a relation to something else, distinct from the king's person; and are, indeed, only exceptions, in favor of the crown, to those general rules that are established for the rest of the community : such as, that no costs shall be recovered against the king ; and that the king can never be a joint tenant; and that his debt shall be preferred before a debt to any of his subjects.

1 . The law ascribes to the king the attribute of sovereignty, or preeminency. See SOVEREIGNTY. 2. ' The law also,' says Sir William Blackstone, ' ascribes to the king, jn his political capacity, absolute perfection ; ' The king can do no wrong.' Which ancient and

fundamental maxim is not to be understood as if every thing transacted by the government was of course just and lawful ; but means only that whatever is exceptionable in the conduct of public affairs is not to be imputed to the king, nor is he answerable for it personally to his people : for this doctrine woulo totally destroy that constitutional independence of the crown which is necessary for the balance of power in our free and active, and therefore compounded, constitution. And' therefore, if the crown should be induced to grant any franchise or privilege to a subject contrary to reason, or in any wise prejudicial to the commonwealth or a private person, the law will not suppose the king to have meant either an unwise or an injurious action, but declares that the king was deceived in his grant ; and thereupon such grant is rendered void, merely upon the foundation of fraud and deception, either by or upon those agents whom the crown has thought proper to employ.' The law determines that in the king can be no negligence or laches ; und therefore no delay will bar his right. Nul-lum tempus occurrit regi is the standing maxim upon all occasions : for the law intends that the king is always busied for the public good, and therefore has not leisure to assert his right within the times limited to subjects. In the king also can be no stain or corruption of blood ; for if the heir to the crown were attainted of treason or felony, and afterwards the crown should descend to him, this would purge the attainder ipso facto. This happened in the case of Henry VII. who, as earl of Richmond, stood attainted, but his assumption of the crown cleared the attainders. Neither can the king, in judgment of law, as king, ever be a minor or under age ; and therefore his royal grants and assents to acts of parliament are good, though he has not in his natural capacity attained the legal age of twenty-one, By a statute, indeed, 28 Hen. VIII. c. 17, power was given to future kings to rescind all acts of parliament that should be made while they were under the age of twenty-four : but this was repealed by the stat. 1 Edw" VI. c. 11, so far as related to that prince, and both statutes are declared to be determined by 24 Geo. II. c. 24. It has also been usually thought prudent, when ihe heir apparent has been very young, to appoint a protector, guardian, or regent, for a

limited time : but the very necessity of such extraordinary provision is sufficient to demonstrate the truth of that maxim of common law, that in the king is no minority ; and therefore he has no legal guardian. 3. A third attribute of the king's majesty is his perpetuity. The law ascribes to him, in his political capacity, an absolute immortality. The king never dies ; Henry, Ed-ward, or George, may die ; but the king

survives them all. For, immediately upon the decease of the reigning prince in his natural capacity, his kingship or imperial dignity, by act of law, without any interregnum or interval, is vested at once in his heir ; who is, eo-instanti, king to ail intents and purposes. The royal prerogative invests the king with a number of authorities and powers; in the exertion whereof consists the executive part of government. This is wisely placed in a single hand by the British constitution, for the sake of unanimity, strength, and despatch. Were it placed in many hands, it would be subject to many wills : which, if disunited and drawing different ways, create weakness in a government ; and to unite these and reduce them to one is a work of more time and delay than the exigencies of state will afford. The king of England is therefore not only the chief, but properly the sole magistrate of the nation ; all others acting by commission from, and in due subordination to him. In the exertion of lawful prerogative the king is held to be absolute ; that is so far absolute that there is no legal authority that can either delay or resist him. He may reject what bills, may make what treaties, may com what money, may create what peers, may pardon what offences he pleases : unless where the constitution has expressly, or by evident consequence, laid down some exception or boundary ; declaring, that thus far the prerogative shall go and no farther. For otherwise the power of the crown would indeed be but a name and a sha-dow, insufficient for the ends of government, if, where its jurisdiction is clearly established and allowed, any man or body of men were permitted to disobey it, in the ordinary course of law : we do not now speak of those extraordinary recources to the first principles which are necessary when the contracts of society are in danger of dissolution, and the law proves too weak a defence against the violence of fraud or oppression. And yet the want of attending to this obvious distinction has occasioned these doctrines of absolute power in the prince and of national resistance by the people, to be much misunderstood and perverted by the advocates for slavery on the one hand, and the demagogues of faction on the other. In the exertion, therefore, of these prerogatives which the law has given him, the king is irresistible and absolute, according to the forms of the constitution. And yet, if the consequence of that exertion be manifestly to the grievance or dishonor of the kingdom, the parliament will call his advisers to a just and severe account. For prerogative consisting (as Mr. Locke has well denned it) in the discretionary power of acting for the public good where the positive laws are silent, if that discretionary power be abused to the public detriment, such prerogative is exerted in an unconstitutional

manner. The king's ministers in all such cases are amenable to parliament. Thus the king may make a treaty with a foreign state, which shall irrevocably bind the nation ; and yet. when such treaties have been judged pernicious, impeach-ments have pursued those ministers by whose agency or advice they were concluded.

With regard to all foreign concerns, the king is the delegate or representative of his people. What is done by the royal authority, with regard to foreign powers, is the act of the whole nation : what is done without the king's concurrence is the act only of private men. And, by the statute 2 Hen. V. c. 6, any subject committing acts of hostility upon any nation in league with the king, was declared to be guilty of high-treason : and, though that act was repealed by the stat. 20 Hen. VI. c. 11, so far as relates to the making this offence high-treason, yet it still remains a very great offence against the law of nations, and punishable by our laws, either capitally or otherwise, according to the circumstances of the case. 1. The king, therefore, considered as the representative of his people, has the sole power of sending ambassadors to foreign states, and receiving ambassadors at home. 2. It is also the king's prerogative to make treaties, leagues, and alliances, with foreign states and princes ; though in this, as in all other cases, ministers are amenable to parliamentary impeachment for advising the king to conclude any such treaties that are found to be derogatory from the honor and interest of the nation. 3. The king has also the sole prerogative of making war and peace. And therefore, to make a war completely legal and constitutional, it must be publicly proclaimed by the king's authority. In pursuance of which principle, it is with us declared by the statute 4 Hen. V. c. 7, that, if any subjects of the realm are oppressed in the time of truce by any foreigners, the king will grant letters of marque in due form to all that feel themselves aggrieved. 5. Upon exactly the same reason stands the prerogative of granting safe conducts ; without which, by the law of nations, no member of one society has a right to intrude into another. Great tenderness is shown by our laws, not only to foreigners in distress (see WRECK), but with re-gard also to the admission of strangers who come spontaneously : for so long as their nation continues at peace with ours, and they themselves behave peaceably,

they are under the king's protection, though liable to be sent home whenever the king sees occasion. But no subject of a na-tion at war with us can, by the law of nations, come into the realm, or can travel himself upon the high seas, or send his goods and merchandise from one place to another, without danger of be-ing seized by our subjects, unless he has letters of safe conduct ; which, by divers ancient statutes, must be granted under the king's great seal, and enrolled in chancery, or else they are of no effect ; the king being supposed the best judge of such emergencies as may deserve exception from the general law of arms. But passports under the king's sign-manual, or licenses iiom his ambassadors abroad, are now more usually obtained, and are allowed to be of equal validity. These are the principal prerogatives

of the king respecting this nation's intercourse with foreign nations.

In domestic affairs the king is consideieu in a great variety of characters; and thence theie arises a number of other prerogatives. 1. He is a constituent part of the supreme legislative power; and, as such, has the prerogative of rejecting such provisions in parliament as he judges improper to be passed. 2. The king has the sole power of raising and regulating fleets and armies. The sole prerogative, also, of erecting, manning, and governing of castles and forts, belongs to the king in his capacity of general of the kingdom ; and all lands were formerly subject to a tax, for building castles wherever the king thought proper : in consequence of which their number was increased most enormously. The greater part of them being demolished in the wars with the barons, succeeding kings were cautious of suffering them to be rebuilt: and Sir Edward Coke lays it down, that no subject can build a castle, or house of strength embattled, or other fortress defensible, without the license of the king ; for the danger which might ensue, if every man at his pleasure might do it.

The king has also the prerogative of appointing ports and havens, for persons and merchandise to pass into and out of the realm, as he in his wisdom sees proper. By the feudal law, all navigable rivers and havens were computed among the regalia, and wrere subject to the sovereign of the state. And in England it has al-ways been held that the king is lord of the whole shore, and particularly is the guardian of the ports and havens, which are the inlets and gates of the realm : and therefore, so early as the reign of John, we find ships seized by the king's officers for putting in at a place that was not a legal port. These legal ports were undoi btedly at first assigned by the crown ; since to

each of them a court of portmote is incident, the jurisdiction of which must flow from the royal authority : the great ports of the sea are also referred to as well-known and established, by stat. 4 Hen. IV. c. 20, which prohibits the landing elsewhere, under pain of confiscation ; and the stat. 1 Eliz. c. 11, recites, that the franchise of lading and discharging had been frequently granted by the crown. But, though the king had a power of granting the franchise of havens and ports, yet he had not the power of resumption, or of narrowing and confining their limits when once established ; but any person had a right to load or discharge his merchandise in any part of the haven ; whereby the revenue of the custom was much impaired and diminished, by fraudulent landings in obscure and private corners. This occasioned the statutes of 1 Eliz. c. 11, ana 13 and 14 Car. II. c. 11, sec. 14, which enable the crown, by commission, to ascertain the limits of all ports, and to assign proper wharfs and quays in each port, for the exclusive landing and loading of merchandise. 3. Another capacity in which the king is considered in domestic affairs is as the fountain of justice, and general conservator of the peace of the kingdom. 4. The king is likewise the fountain of honor,* office, and privilege; and this in a different sense from that wherein he is styled the fountain of ‘ustice , cot here he is>

really the parent of them. The king is, lastly, considered by the laws of England as the head and supreme governor of the national church. This prerogative was fixed by stat, 26 Hen. VIII. c. 1 and 1 Eliz. c. 1. In virtue of this authority, the king convenes, prorogues, restrains, regulates, and dissolves, all ecclesiastical synods or convocations. From this prerogative, also, of being the head of the church, arises the king’s right of nomination to vacant bishoprics, and other ecclesiastical preferments. As head of the church the king is likewise the dernier resort in all ecclesiastical causes; an appeal lying ultimately to him in chancery from the sentence of every ecclesiastical

judge : which right was restored to the crown by stat. 25 Hen. VIII. c. 9. PRES'AGE, n. s. & v. a.) Fr. presage ; PRESAGE'MENT. $ Latin prasagium.

Prognostic ; presension of futurity ; to fore-bode ; foretell : presagement is synonymous with presage nounsubstantive.

Henry's late presaging prophecy Did glad my heart with hope.

Shakspeare. Henry VI. If I may trust the flattering ruth of sleep, My dreams presage some joyful news at hand.

Shakspeare.

I have spent much inquiry, whether he had any ominous presagement before his end. Wotton.

This contagion might have been presaged upon consideration of its precursors.

Harvey on Consumption.

That cloud, that hangs upon thy brow, pretages A greater storm than all the Turkish power Can throw upon us. Denliam's Sophy.

What power of mind Foreseeing, or presaging from the depth Of knowledge past or present, could have feared How such united force of gods, how such As stood like these, could ever know repulse.

Milton.

The falling of salt is an authentick pretagement of ill luck, from whence notwithstanding nothing can be naturally feared. Browne.

When others fell, this standing did presage The ciown should triumph over popular rage.

Waller.

Wished freedom I presage you soon will find, If heaven be just, and if to virtue kind. Dryden.

That by certain signs we may presage Of heats and rains, and wind's impetuous rage, The sovereign of the heavens has set on high The moon to mark the changes of the sky. Id.

Dreams have generally been considered by authors only as revelations

of what has already happened, or as presages of what is to happen. Addison.

PRESBURG, or POSONYI-VARMEGYE, an important palatinate of Hungary, lying in an angle formed by the March and Danube. Its area is 1740 square miles. The Carpathians traverse the whole length of this district ; but in general the elevations are not great, and they are commonly covered with vineyards. Of the wine produced, that called the Szent George Ausbruck is inferior only to Tokay. Corn and fruit are produced in the south-east part, particularly in the dis'rict called the isle of Schutt. The chief towns are Presburg and Tyrnau ; the latter the seat of the court of appeal for the circle to the north of the Danube. Population of the palatinate 200,000, a mixture of Hungarians, Germans, Bohemians, Croats, and Jews.

PRESBURG, or POSONY, a large town of Hungary, on the north bank of the Danube, declared, by a royal decree of 1536, the capital of Hungary. The kings are still crowned here, but the viceroy and the higher officers of government reside at Buda; and the diets and supreme courts of justice meet at Pesth. Presburg contains at present little that is interesting. Its castle, which lately served as a barrack, was burned down in the early part of the present century ; and its walls form only a ruinous square pile, with a tower at each corner. This town stands on a hill of moderate elevation, overlooking a vast plain ; and the horizon is open in all directions except in the north-west, where, for nearly a third of its circumference, it is intercepted by the distant mountains. The Danube, here nearly half a mile wide, is crossed by a flying bridge. The fortifications have been demolished ; and no distinction is now made between the town and suburbs. The suburbs bear marks of improvement : there are here two squares, adorned with statues. The principal church of Presburg is an old Gothic edifice, said to have been built in 1090; the other public buildings are the palace of the palatine, the barracks, corn-market, and town-house. Presburg has an academy, a school for the children of nobility, two or three monasteries, a Catholic and a Lutheran gymnasium. The manufactures, though on a small scale, comprise woollens, silk, oil, tobacco, and snuff. The trade in corn and linen is considerable. It was here that a treaty was concluded between France and Austria, after the campaign of 1805. Thirty-eight miles east by south of Vienna, and 107 W.N. W. of Pesth.

PRES'BYTER, n. s. -) Lat. presbyter ;

PRESBYTE'RIAL, adj. (Gr. Trpttr/Surtpoc.

PRESB YTE'RIAN, adj.&n.s. ?A priest ; an elder:

PRES'BYTERY, n. s. J both the adjectives mean consisting of elders or presbyters ; or according to the presbyterian form of church government : presbyterian, as a noun substantive, one who holds with that form : presbytery, a body of elders or priests. See below.

They cannot delegate the episcopal power, properly so called, to presbyters, without giving them episcopal consecration. Lesley.

Presbyters absent through infirmity from their churches, might be said to preach by those deputies who in their stead did but read homilies. Hooker.

Those which stood for the presbytery, thought their cause had more sympathy with the discipline of Scotland than the hierarchy of England. Bacon.

Chiefly was urged the abolition of episcopal, and the establishing of presbyterian government.

King Charles. Flea-bitten synod, an assembly brewed

Of clerks and elders ana, like the rude

Chaos of presbytery , where laymen guide

With the tame woolpack clergy by their side.

Cleaveland.

Who should exclude him from an interest, and so unhappily a more unavoidable sway in presbyterial determinations 1 Holyday.

And presbyters have their jackpuddings too.

lludibras.

One of the more rigid presbyterians. Swift.

PRESBYTER, or elder, is a word borrowed from the Greek translation of the Old Testament,

where it commonly signifies ruler or governor ; it being a note of office and dignity, not of age : and in this sense bishops are sometimes called presbyters in the New Testament. The grand dispute between the followers of the Geneva and Roman discipline is about the sameness or difference of presbyters and bishops in the time of the apostles.

PRESBYTERIANS, PROTESTANT, so called from their maintaining that the government of the church appointed in the New Testament was by presbyteries, that is, by associations of ministers and ruling elders, possessed all of equal powers, without any superiority among them either in office or in order.

The Presbyterians believe that the authority of their ministers to preach the gospel, to administer the sacraments of baptism and the Lord's supper, and to feed the flock of Christ, is derived from the Holy Ghost by the imposition of the hands of the presbytery. They affirm that there is no order in the church as established by Christ and his apostles superior to that of the presbyters ; that all ministers, being ambassadors of Christ, are equal by their commission ; that presbyter and bishop, though different words, are of the same import ; and that prelacy was gradually established upon the primitive practice of making the moderator or speaker of the presbytery a permanent officer. See BISHOP.

In the Scottish church, every regulation of public worship, every act of discipline, and every ecclesiastical censure, which in other churches flows from the authority of a diocesan bishop, or from a convocation of the clergy, is the joint work of a certain number of clergymen and laymen acting together with equal authority, and deciding every question by a plurality of voices. The laymen, who thus form an essential part of the ecclesiastical courts of Scotland, are called ruling elders. Every parish has two or three of these lay-elders, who are grave and serious persons chosen from among the heads of families, of known orthodoxy, and steady adherence to the worship, discipline, and government of the church. Being solemnly engaged to use their utmost endeavours for the suppression of vice, and the cherishing of

piety and virtue, and to exercise discipline faithfully and diligently, the minister, in the presence of the congregation, sets them apart to their office by solemn prayer; and concludes the ceremony, which is sometimes called ordination, with exhorting both elders and people to their respective duties. The kirk-session, which is the lowest ecclesiastical judicatory, consists of the minister and those elders of the congregation. The minister is ex officio moderator, but has no negative voice over the decision of the session ; nor indeed has he a right to vote at all, unless when the voices of the elders are equal and opposite. He may indeed enter .his protest against their sentence, if he think it improper, and appeal to the judgment of the presbytery ; but this privilege belongs equally to every elder, as well as to every person who may believe himself agrieved by the proceedings of the session. The deacons, whose proper office it is to take care of the poor, may be present in-every session, and offer their counsel on

all questions that come before it ; but, except in what relates to the distribution of alms, they have no decisive vote with the minister and elders.

The nextjudicatoryis the presbytery, properly so called, which consists of all the pastors within a certain district, and one ruling elder from each parish, commissioned by his brethren to represent, in conjunction with the minister, the session of that parish. The presbytery treats of such matters as concern the particular churches within its limits; as the examination, admission, ordination, and censuring of ministers; the licensing of probationers, rebuking of gross or contumacious sinners, the directing of the sentence of excommunication, the deciding upon references and appeals from kirk-sessions, resolving cases of conscience, explaining difficulties in doctrine or discipline, and censuring, according to the word of God, any heresy or erroneous doctrine which hath been either publicly or privately maintained within the bounds of its jurisdiction. In presbyteries, the only prerogatives which the pastors have over the ruling elders, are, the power of ordination by imposition of hands, and the privilege of having the moderator chosen from their body. From the judgment of the presbytery there lies an appeal to the provincial synod, which ordinarily meets twice in the year, and exercises over the presbyteries within the province a jurisdiction similar to that which is vested in each presbytery over the several kirk-sessions within its bounds. These synods are composed of the members of the several presbyteries within the respective provinces which give names to the synods. The highest authority in the church of Scotland is the

general assembly, which consists of a certain number of ministers and ruling elders, delegated from each presbytery, and of commissioners from the universities and royal boroughs. A presbytery in which there are fewer than twelve parishes sends to the general assembly two ministers and one ruling elder : if it contains between twelve and eighteen ministers, it sends three of these, and one ruling elder : if it contains between eighteen and twenty-four ministers, it sends four ministers and two ruling elders ; and of twenty-four ministers, when it contains so many, it sends five with two ruling elders. Every royal borough sends one ruling elder, whose election must be attested by the kirk-sessions of their respective boroughs. Every university sends one commissioner from its own body. The commissioners are chosen annually, six weeks before the meeting of the assembly ; and the ruling elders are often men of the first eminence in the kingdom for rank and talents. In this assembly, which meets once a year, the king presides by his commissioner, who is always a nobleman; but he has no voice in their deliberations, unless he be a member of assembly, which is sometimes the case. Appeals are brought from all the other ecclesiastical courts in Scotland to the general assembly ; and, in questions purely religious, no appeal lies from its determinations. In the subordination of these assemblies, parochial, presbyterial, provincial, and national, the less unto the greater, consists the external order of the church of Scotland.

PRRflCIFNT, adj.y Lat. prtesciens. Fore—

PRESCIENCE, n. s. > knowing ; prophetic :

PRE’SCIOUS, adj. j prescioxis is of the same signification : prescience is foreknowledge ; knowledge of the future.

They tax our policy, and call it cowardice, Forestall our prescience, and esteem no act But that of hand.

Shakspeare. Troilus and Cressida.

Prescience, or foreknowledge, considered in order and nature, if we may speak of God after the man-ner of men, goeth before providence ; for God foreknew all things before he had created them, or before they had being to be cared for ; and prescience is no other than an infallible foreknowledge. Raleigh.

Henry, upon the deliberation concerning the marriage of his eldest daughter into Scotland, had shewed himself sensible and almost prescient of this event. Bacon.

God's prescience, from all eternity, being but the seeing every thing that ever exists as it is, contingents as contingents, necessary as necessary, can neither work any change in the object, by thus seeing it, nor itself be deceived in what it sees. Hammond.

If certain prescience of uncertain events imply a contradiction, it seems it may be struck out of the omnisciency of God, and leave no blemish behind.

More.

Freedom was first bestowed on human race, And preicience only held the second place.

Dryden.

Thrice happy thou, dear partner of my bed, Whose holy soul the stroke of fortune fled ; Prescious of ills, and leaving me behind, To drink the dregs of life. Id. Mneis.

Of things of the most accidental and mutable na-ture God's prescience is certain. South.

Who taught the nations of the field and wood, Prescient, the tides or tempests to withstand 7

Pope.

PRESCIENCE, in theology, prevision, or foreknowledge; that knowledge which God has of things to come. The doctrine of predestination is founded on the prescience of God, and on the supposition of all futurity being present to him. The apostle Peter, in his celebrated sermon at Jerusalem, asserts both doctrines, of prescience and accountability, in one sentence, Acts ii. 23. ' Him, being delivered by the determinate counsel and foreknowledge of God, ye have taken, and by wicked hands have crucified and slain.'

PRESCIND', v. a.) Lat. prascindo. To

PRESCIND'ENT, adj.] cut off; to abstract: abstracting.

A bare act of obliquity does not only prescind from, but positively

deny such a special dependence.

Norris.

We may, for one single act, abstract from a re-ward, which nobody who knows the pretcindent faculties of the soul can deny. Cheyne.

PRESCOT, a market town of Lancashire, with a market on Tuesday for corn, provisions, and cattle. It has considerable manufactures of sail-cloth, watches, &c. The church is a handsome building, having a steeple fifty-two yards high, allowed to be thn most complete in the county. There is also a dissenters meeting-house, a free-school, and several almshouses. At St. Helen's, near this town, is an extensive plate glass manufactory, in which 300 persons are employed ; and near it is another for smelting and refining copper ore. Near this town lies

Knowlesly, the seat of the earl of Derby. Pres-cot lies eight miles east of Liverpool, and 198 N. N. W. of London.

PRESCRIBE',!;, a. &u.n.-i Lat. prascribo PRESCRIPT, adj. & n. s. >To set down au-PRESCRIP'TION, n. s. J thoritatively ; order ; direct ; influence : prescript is directed ; laid down formally: prescript, noun substantive, and prescription, direction ; model ; medical recipe , long used custom.

Doth the strength of some negative arguments prove this kind of negative argument strong, by force whereof all things are denied which scripture affirmeth not, or all things which scripture prescribeth not condemned 7 Hooker.

Those very laws so added, they themselves do not judge unlawful ; as they plainly confess both in mat-ter of prescript attire, and of rites appertaining to burial. Id.

You tell a pedigree

Of threescore and two years, a silly time To make prescription for a kingdom's worth.

Shakspeare.

My father left me some prescriptions Of rare and proved effects ; such as his reading And manifest experience had collected For general sovereignty. Id.

Use such as have prevailed before in things you have employed them ; for that breeds confidence, and they will strive to maintain their prescription.

Bacon’s Essays. To the blanc moon her office they prescribed.

Milton.

By his prescript, a sanctuary is framed Of cedar, overlaid with gold. Id.

A reserve of puerility we have not shaken off from school, where, being seasoned with minor sentences, they prescribe upon our riper years, and never are worn out but with our memories. Browne.

Nor did he ever with so much regret submit unto any prescript. Fell.

Approving of my obstinacy against all common prescriptions, he asked me whether I had never heard of the Indian way of curing the gout by moxa.

Temple.

There’s joy, when to wild will you laws prescribe, When you bid fortune carry back her bribe.

Dry den.

The extremes! ways they first ordain, Prescribing such intolerable pain, As none but Caesar could sustain. Id.

Our poet bade us hope this grace to find, To whom by long prescription you are kind. Id. The assuming an authority of dictating to others, and a forwardness to prescribe to their opinions, is a constant concomitant of this bias of our judgments.

Locke.

It will be found a work of no small difficulty to dispossess a vice from that heart where long possession begins to plead prescription. South.

TheLucquese plead prescription for hunting in one of the duke’s forests that lies upon their frontiers.

Addison.

That obligation upon the lands did not prescribe or come into disuse, but by fifty consecutive years of exemption. Arbuthnot.

Modern ‘pothecaries taught the art By doctors’ bills to play the doctor’s part, Bold in the practice of mistaken rules, Prescribe, apply, and call their masters fools.

Pupe.

Should any man argue that a physician understands his own art best : and therefore, although hi

should prescribe poison to all his patients, he cannot be justly punished, but is answerable only to God 1

Swift.

So long a prescription supposes an acquiescence in the other claimants ; and that acquiescence supposes also some reason, perhaps now unknown, for which the claim was forborne. Johnson.

Yet half mankind maintain a churlish strife With Him, the Donor of eternal life, Because the deed, by which his love confirms The largess he bestows, prescribes the terms. Cowper.

PRESCRIPTION, in English law, is a title acquired by use and time, and allowed by law ; as when a man claims any thing, because he, his ancestors, or they whose estate he hath, have had or used it all the time whereof no memory is to the contrary : or it is where for continuance of time, ultra memoriam hominis, a particular per-son hath a particular right against another. There is a difference between

prescription, cus-tom, and usage. Prescription hath respect to a certain person, who by intendment may have continuance for ever; but custom is local, and always applied to a certain place ; as time out of mind there has been such a custom in such a place, &c. And prescription belongeth to one or a few only; but custom is common to all. Usage differs from both, for it may be either to persons or places : as to inhabitants of a town to have a way, &c. A custom and prescription are in the right ; usage is in the possession ; and a prescription, that is good for the matter and substance, may be bad by the manner of setting it forth : but where that which is claimed as a cus-tom, in or for many, will be good, that regularly will be so when claimed by prescription for one. Prescription is to be time out of mind ; though it is not the length of time that begets the right of prescription, nothing being done by time, although every thing is done in time ; but it is a presumption in law that a thing cannot continue so long quiet, if it was against right or injurious to another.

PRE'SEANCE,ra.s. Fr. preseance. Priority of place in sitting. Not used.

The ghests, though rude in their other fashions, may, for their discreet judgment in precedence and preseance, read a lesson to our civilest gentry.

Carew's Survey of Cornwall.

PRESEN'SION, n. s. Lat. prasensio. Perception beforehand. The hedghog'spresension of winds is exact. Browne.

PRES'ENT,a$.,v.o.,&n.sO _ Fri present;

PRES'ENCE, n. s. PRES'EXCE-CHAMBER, PRES'ENCE-ROOM, PRESENTA'NEOUS, adj. PRESEN'TABLE, PRESENTATION, n. s. PRESEN'TATIVE, adj. PRESENTEE', n. s. PRESEN'TER, PRESEN'TIAL, adj. PRESEN'TIALITY, n. s. PRESEN'TIATE,^. a. PRESENTIF'IC, adj. PRESENTIF'ICALLT, adv. PRES'ENTLY, adv. PRESENTMENT, n. s.

PttEs'ENTNESS.

Latin pr&sens. In company ; face to face ; at hand ; rea-dy ; quick in emergencies ; attention ; now existent or now specified ; not past or future : ' at present ' is used for now, or, at the present time : to present, is to i place in pre-J sence. parlicu-

larly of a superior ; introduce ; exhibit ; offer , give, or put into the hands ceremoniously ; distinguish with gifts ; lay formally before a court, or high authority : a present, something offered ; something given; something given ceremoniously ; a letter or mandate, per praesentes : presence is, state of being present or together ; approach face to face, or into view, particularly of a superior; a number assembled before a superior; room in which a superior shows himself; the superior so shown ; port ; air ; mien ; readiness ; aptitude : the two compounds that follow are obvious in their meaning: presentaneous is, quick ; immediate : presentable, what may be presented : presentation, the act of presenting ; exhibition ; particularly the act of giving any one an ecclesiastical benefice : presentative, presentable in an ecclesiastical sense : presentee, one presented to a benefice : presenter, one who presents: presential, supposing actual or real presence : the nounsubstantive corresponding : presentiate, to make present: presentific (obsolete), making present : presently, soon after ; and (obsolete) at this time ; now : present ment, the act of presenting or thing presented; representation in law : presentment is a de nunciation of the jurors, or some other officer, as justice, constable, searcher, surveyor, of an offence enquirable in the court to which it is presented. 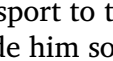 Cowell. Presentness is quickness at emergencies ; readiness of mind, arising from fortitude.

The shepherd Dorus answered with such a trembling voice and abashed countenance, and oftentimes so far from the matter, that it was some sport to the young ladies, thinking it want of education, which made him so discountenanced with unwonted presence. Sidney.

The towns and forts you presently have are still left unto you to be kept either with or without garrisons, so as you alter not the laws of the country.

Id.

By them they pass, all gazing on them round, And to the presence mount, whose glorious view Their frail amazed senses did confound. Spenser.

Tell on, quoth she, the woeful tragedy, The which these reliques sad present unto. la. Prayers are sometimes a presentation of mere desires, as a mean of procuring desired effects at the hand of God. Hooker.

To speak of it as requireth, would require very long discourse ; all I

will presently say is this. Id.

He sent part of the rich spoil with the admiral's ensign, as a present unto Solyman. Knottes.

To-night we hold a solemn supper, And I'll request your presence. Shakspeare. I know not by what power I am made bold, In such a presence here, to plead my thoughts.

Id,

An't please your grace, the two great cardinals Wait in the presence. Id. Henry VIII.

Plain Clarence ! J will send thy soul to heaven, If heav'n will take the present at our hands.

Shakspeare.

Be it known to all men by these jtresents. Id. He knows not what he says ; and vain is it, That we present us to him. Id. King Lear,

When comes your book forth? ••• Upon the heels of my presentment.

Covetous ambition, thinking all too little which •••presently it hath, supposeth itself to stand in need of all which it hath not. Raleigh.

Virtue is best in a body that is comely, and that hath rather dignity of presence than beauty of as-pect. Bacon.

If a man write little, he had need have a great me-mory ; if he confer

little, he had need have a present wit ; and if he read little, he had need have much cunning. MHe was appointed admiral, and presented battle to the French navy, which they refused. Hayward.

Be present to her now, as then And let not proud and factious men Against your wills oppose their mights.

Ben Jonson.

The Lady Anne of Bretagne, passing through the pretence in the court of France, and espy ing Chartier, a famous poet, leaning upon his elbow fast asleep, openly kissing.him, said, We must honour with our kiss the mouth from whence so many sweet verses have proceeded. Peacham.

Mrs. Gulston, possessed of the impropriate parsonage of Bardwell, did procure from the king leave to annex the same to the vicarage, and to make it presentative, and give them both to St. John's College in Oxon. Spelman.

Men that very presence fear, Which once they knew authority did bear.

Daniel.

Some plagues partake of such malignity, that, like a presentaneovs poison, they enecate in two hours.

Harvey.

Be not often present at feasts, not at all in dissolute company ; pleasing objects steal away the heart.

Taylor.

Now every leaf, and every moving breath Presents a foe, and every foe a death. Denham. A present good may reasonably be parted with, upon a probable expectation of a future good, which n more excellent. Wilkins.

Goring had a much better understanding, a much Keener courage, and presentness of mind in danger.

Clarendon.

Thou with eternal Wisdom didst converse, Wisdom thy sister, and with her did'st play In presence of the' Almighty Father, pleas'd With

thy celestial song. Milton.

To her the sov'reign presence thus replied. Id.

Thou future things canst represent As present. Id.

When he saw descend The Son of God to judge them, terrified He fled ; not hoping to escape, but shun The present ; fearing, guilty, what his wrath Might suddenly inflict. Id.

Say, heav'nly muse, shall not thy sacred vein Afford a present to the infant God 1 Id.

On to the sacred hill

They led him high applauded, and present Before the seat supreme. Id. Paradise Lost.

Thou therefore now advise, Or hear what to my mind first thoughts present.

Milton. Thus I hurl

My dazzling spells into the spungy air, Of power to cheat the eye with blear illusion, And give it false presentments, lest the place And my quaint habits breed astonishment. Id. But neither of these are any impediment, because the regent thereof is of an infinite immensity more than commensurate to the extent of the world, and such as is most intimately present with all the beings of the world. Hale.

He made effectual provision for recovery of ad vowsons and presentations to churches. Id

Perhaps I have not so well consulted the repute gt my intellectuals, in bringing their imperfections into such discerning presences. Glanville's Scepsis.

Errors, not to be recalled, do find Their best redress from presence of the mind ; Courage our greatest failings does supply.

Waller.

They that are to love inclined, Swayed by chance, not choice or art,

To the first that's fair or kind, Make a present of their heart. Id.

The whole evolution of times and ages, from everlasting to everlasting, is collectedly and presentifickly represented to God at once, as if all things and actions were, at this very instant, really present an i existent before him. More.

Since clinging cares and trains of inbred fears, Not awed by arms, but in the presence bold, Without respect to purple or to gold. Dryden.

Nor could I hope in any place but there, To find a god so present to my prayer. Id.

Somewhat is sure designed by fraud or force ; Trust not their presence, nor admit the horse. Id.

He now presents, as ancient ladies do, That courted long, at length are forced to woo. Id.

Octavia presented the poet, for his admirable elegy on her son Marcellus. Id.

Should I present thee with rare figured plate, 0 how thy rising heart would throb and beat. Id.

These presentations of fighting on the stage are necessary to produce the effects of an heroick play.

Id.

A good bodily strength is a felicity of nature, but nothing comparable to a large understanding and ###ready presence of mind. L'Estrange.

'Tis a high point of philosophy and virtue for a man to be so present to himself as to be always provided against all accidents. Id.

Men that set their hearts only upon the present, without looking forward into the end of things, are struck at. Id.

The thing was acceptable, but not the presenter.

Id.

If these nerves, which are the conduits to convey them from without to their audience in the brain, the mind's presence-room, are so disordered as not to perform their functions, they have no postern to be admitted by. Locke.

How great his -presence, how erect his look, Howev'ry grace, how all his virtuous mother Shines in his face, and charms me from his eyes !

Smith.

The fancy may be so strong as to presentiate, upon one theatre, all that ever it took notice of in times past. % Grew.

By union, I do not understand that which is local or presential, because I consider God as omnipresent.

N orris.

Thou spendest thy time in waiting upon such a great one, and thy estate in presenting him ; and, after all, hast no other reward, but sometimes to be smiled upon, and always to be smiled at. South.

This eternal, indivisible act of his existence makes all futures actually present to him ; and it is the presentialitii of the object which founds the unerring certainty of his knowledge. Id. Sermons.

Tell him that no history can match his policies, and presently the sot shall measure himself by himself.

South.

Who, since their own short understandings reach No further than the present, think e'en the wise Speak what they think, and tell tales of themselves.

Pmee

PRE

Knelier, with silence and surprise, We see Britannia's monarch rise, And aw'd by thy delusive hand, As in the presence-chamber stand. Addison. The state is at present very sensible of the decay 5n their trade. Id.

Our laws make the ordinary a disturber, if he does not give institution upon the fitness of a person presented to him, or at least to give notice to the patron of the disability of his presentee. Ayliffe.

Incumbents of churches presentable cannot, by their sole act, grant their incumbencies to others ; but may make leases of the profits thereof. Id.

The moments past, if thou art wise, retrieve With pleasant mem'ry of the bliss they gave ; The present hours in present mirth employ, And bribe the future with the hopes of joy. Prior.

Folks in mudwall tenement, Affording peppercorn for rent, Present a turkey or a hen, To those might better spaie them ten. Id. A graceful presence bespeaks acceptance, gives a force to language, and helps to convince by look and posture. Collier.

The present age hath not been less inquisitive than the former ages were.

Woodward's Natural History. What, shall the curate controul me'! have not I the presentation 1 Gay.

That he put these bishops in the places of the deceased by his own authority is notoriously false ; for the duke of Saxony always presented.

Atterbury.

So ladies in romance assist their knight, Present the spear, and arm him for the fight.

Pope.

The grand juries were practised with, to present the said pamphlet with all aggravating epithets, and their presentments published for several weeks in all the newspapers. Swift.

The ample mind keeps the several objects all within sight, and present to the soul. Watts.

Lectondes's memory is ever ready to offer to his mind something out of other men's writings or conversations, and is presenting him with the thoughts o* other persons perpetually. Id,

We have always the same natures, and are every where the servants of the same God, as every place is equally full of his presence, and every thing is equally his gift. Law.

This much I believe may be said, that the much greater part of them

are not brought up so well, or accustomed to so much religion, as in the present instance. Id.

The present moment like a wife we shun, And ne'er enjoy, because it is our own. Young. The ideas of pain, and above all of death, are so very affecting, that whilst we remain in the presence ofwhatever is supposed to have the power of inflicting either, it is impossible to be perfectly free from terror. Burke.

PRESENTATION, in ecclesiastic law. See Ac-VOWSON, and PATRONAGE.

PRESENTATION OF OUR LADY, the title of two orders of nuns. The first was established in France, about 1627, by Nicholas Sanguin, bishop of Senlis ; it was approved by Urban VIII. This order never made any great progress. The second was established in 1664, when Frederick Borromeo, being apostolical visitor, in the Valteline, was intreated by some devout maids at Morbegno to allow them to live in community in a retired place ; which he granted, and erected

them into a congregation, under the title of con gregation of our Lady. They lived under the rule of St. Augustine.

PRESENTATION OF THE VIRGIN, a feast of the Romish church, celebrated on the 21st of November, in memory of the Holy Virgin's being presented by her parents in the temple, to be there educated. Emanuel Comnenus, wha began to reign in 1143, makes mention of this feast in his constitution. Some imagine it to have been established among the Greeks in the eleventh century ; and think they see evident proofs of it in some homilies of George of Nicomedia, who lived in the time of Photius. Its institution in the west is ascribed to Gregory Xi. in 1372. Some think it was instituted in me-mory of the ceremony practised among the Jews for their new-born females ; corresponding to the circumcision on the eighth day for males.

PRESENTMENT, in law. A presentment, properly speaking, is the notice taken by a grand jury of any offence from their own knowledge or observation, without any bill of indictment laid before them at the suit of the king ; as the presentment of a nuisance, a libel, and the like ; upon which the officer of the court must afterwards frame an indictment, before the party presented can be put to answer it. An inquisition of office is the act of a jury, summoned by the proper officer to enquire of matters relating^ to the crown, upon evidence laid before them, come of these are in themselves convictions, and cannot afterwards be traversed or denied ; and therefore the inquest, or jury, ought to hear all that can be alleged on both sides. Of this nature are all inquisitions of felo dese; of flight in persons accused of felony ; of deodands, and the like ; and presentments of petty offences in the sheriff's tourn or court-leet, whereupon the presiding officer may set a fine. Other inquisitions may be afterwards traversed and examined; as particularly the coroner's inquisition of the death of a man, when it finds any one guilty of homicide; for in such cases the offender so presented must be arraigned upon this inquisition, and may dispute the truth of it ; which brings it to a kind of indictment, the most usual and effectual means of prosecution.

PRESERVE', v. a. &n. s.-\ Fr. preserver ;

PRESERVATION, n. s. f low Lat. pr&ser—

PRESER'VATIVE, adj. &n. s. I vo. To keep;

PRESER'VER. * save ; defend ;

protect from decay : as a noun substantive, something so protected, as ' preserved fruit' : preservation is, the art or care of preserving : preservative, preventive ; having the power of preserving ; that which has this power : preserver, a defender or protector; one who keeps from ruin or mischief; he who makes artificial preserves.

God sent me to preserve you a posterity, and save your lives. Genesis xlv. 7.

The Lord shall deliver me from every evil work, and preserve me unto his heavenly kingdom.

2 Timothy.

Of all wild beasts preserve me from a tyrant ; And of all tame, a flatterer. Sir P. Sidney.

If we think that the church needeth not those ancient preservatives, which ages before us were glad tc use, we deceive ourselves. Hooker.

PRE 0

Nature does require

Her times of preservation, which, perforce, I give my tendance to.

Shakspeare. Henry VIII. Sit, my preserver, by thy patient's side.

Shakspeare.

It hath been anciently in use to wear tablets of arsenick, as preservatives against the plague ; for that, being poisons themselves, they draw the venom from the spirits. Bacon.

Every senseless thing, by nature's light,

Doth preservation seek, destruction shun.

Davies.

Bodies kept clean, which use preservatives, are likely to escape infection. Harvey.

He did too frequently gratify their unjustifiable designs, a guilt all men, who are obnoxious, are liable to, and can hardly preserve themselves from.

Clarendon. We can preserve unhurt our minds. Milton.

Were there truth herein, it were the best preservative for princes, and persons exalted unto such fears.

Browne.

All this is easily discerned in those fruits which are brought in preserves unto us. Id.

Our allwise Maker has put into man the uneasiness of hunger, thirst, and other natural desires, to determine their wills for the preservation of themselves, and the continuation of their species.

Locke.

To be indifferent which of two opinions is true is the right temper of the mind, that preserves it from being imposed on, till it has done its best to find the truth. Id.

To be always thinking, perhaps, is the privilege of the infinite Author and preserver of things, who never slumbers nor sleeps ; but is not competent to any finite being. Id.

The fruit with the husk, when tender and young, makes a good preserve. Mortimer.

Andrew Doria has a statue erected to him, with .he glorious title of deliverer of the commonwealth ; and one of his family another, that calls him its preserver. Addison.

The most effectual preservative of our virtue is to avoid the conversation of wicked men. Rogers.

Every petty prince in Germany must be intreated .o preserve the queen of Great Britain upon her throne. Swift.

Molly is an Egyptian plant, and was really made use of as a preservative against enchantment.

Broome.

PRESERVER. M’INTOSH’S PATENT WATERPROOF LIFE PRESERVER.

This is a simple but ingenious adaptation of air-bags, made of waterproof cloth or canvas, to the support of the body in water. It consists of two strips of waterproof cloth, each about four inches broad and a yard long, or just what will easily surround the body, fastened together at the edges in the form of a narrow bag without any opening, save a small aperture at the side, into which a cock is inserted for the admission of air. To render it perfectly air tight, the cloth is waterproofed while the bag is making, and it is completely fastened by folding the stripes over each other at their junction. The air is simply introduced by blowing with the mouth through the cock, which is to be turned as soon as a sufficient quantity has been admitted, and it may then be applied round the body for use. The proper place to fasten it is immediately under the arms and across the breast, for which purpose it is

furnished with a piece of strong tape, the two ends of which are sewed to the edge of the bag where it is joined, about two or three inches on each side of the middle, where the cock is firmly fastened and made perfectly air-tight ; this piece of tape is just sufficiently wide to admit the head easily between it and the bag, and, when put on, it causes the latter to hang down from the neck a little below the breast, and to pass immediately under the arms round to the back, where it is fastened by two other pieces of tape sewed to the two ends of the bag ; these pieces may be made long enough to allow them to be brought round and fastened in front to prevent accidents in the event of their loosing behind. A small piece of tape about two inches long is likewise fastened across the bag at the middle, to allow the other tying pieces to pass through and to prevent them from slipping below the bag, and occasioning the slightest apprehension of danger, in the management of the apparatus. The air may be introduced into the bag either before or after it is placed round the body and fastened ; if it hold more air than what is necessary to support the individual using it in water, he will be the best judge of the proper quantity by inflating it before he puts it on ; but if it just hold the exact quantity, or very little more, it is quite immaterial whether it be inflated before or not; th6ugh we are of opinion it is always better to follow the former plan. There is not the smallest fear of bursting the bag in any case, because, as soon as it is full, any individual will find that he can blow no longer, and will be obliged to desist. With an apparatus of this kind, which may be had at a very trifling expense, a man may throw himself into the sea with perfect safety, and he may float 100 or 1000 miles with his head and

shoulders above water, without the least inconvenience, save what he would suffer from hunger or cold. He will not find it necessary to make the smallest exertion to keep himself in a proper position ; for owing to the manner in which the apparatus is placed, and to the equal distribution of the air all round his body, he will preserve nearly an erect posture as long as he pleases; by making the smallest exertion, however, he may take any other position he may find most agreeable : he may lie at his ease on his back, or on one side, or lean forward just as he has a mind ; do what he may he cannot sink, unless he chooses to open the cock, and then he must go to the bottom unless he can swim.

PRESIDE', v. n. ~\ Fr. presider ; Lat. pr<e-PRES'IDENCY, n. s. tsideo. To have authority PRES'IDENT, ►►over; be set over : presi—

PRES'IDENTSHIP. J dency is superintending : president is, one placed in chief authority ; a governor ; prefect ; tutelary power : presidentship, an office or station.

When things came to trial of practice, their pastors' learning would be at all times of force to over-persuade simple men, who, knowing the time of their own presidentship to be but short, would always stand in fear of their ministers' perpetual authority.

Hooker.

How might those captive Israelites, under the oversight and government of Assyrian presidents, be able to leave the places they were to inhabit ?

Brerewood on Languages.

As the president of my kingdom, will I Appear there for a man.

Shakspeare. Antony and Cleopatra. This last complaint the' indulgent ears did pierce Of just Apollo, president of verse. Waller.

Some o'er the publick magazines preside, And some are sent new forage to provide.

Dryden.

What account can be given of the growth of plants from mechanical principles, moved without the presidency and guidance of some superior agent?

Ray on the Creation.

The tutor sits in the chair as president or moderator, to see that the rules of disputation be observed. Watts.

O’er the plans Of thriving peace, thy thoughtful sires preside.

Thomson.

PRESS, v. a., v. n.

PRESS’ER, PRESS’GANG, PRESS’INGLY, adv. PRESS’ION, n. s. PRESS’ITANT, adj. PRESS MAN, n. s. PRESS’MONEY, PRESS’URE, PREST, adj. & n. s.

[n. s.

Fr. presser ; Lat.

presso. To squeeze;

compress ; constrain ;

crush ; drive with vio- (lence ; compel ; urge ; f make earnest ; force

into naval or military service : as a verb neu-ter, to act with or un-J der compulsive violence ; go forward with violence or energy ; crowd ; come or go importunately or vehemently ; urge with vehemence ; influence strongly ; invade : a press is, an instrument used for

squeezing, crushing, or compressing ; particularly the machine for printing books ; a crowd ; tumult ; violent tendency ; commission for impressing men in a military sense : a presser and pressman, one who works a press ; also one who forces away another : pressgang, a crew of men aiding a military press-officer : pression and pressure mean, the act of pressing, or force with which any thing is pressed ; impression ; stamp ; oppression ; distress : pressitant, gravitating ; heavy : pressmoney, money given to bind to military service : prest is, ready ; not dilatory ; ‘ this is said to have been the original sense of the word prest men ; men, not forced into the service, as now we understand it, but men, for a certain sum received, praest, or ready to march at command.’ Johnson: also, neat; tight: as a noun substantive, a loan.

The grapes I pressed into Pharaoh’s cup. Genesis. He pressed upon them greatly ; and they turned in.

Id.

The posts that rode upon mules and camels, went out, being hastened and pressed on by the king’s commands. Either.

The press is full, the fats overflow. Joel iii. 13. For he had healed many, insomuch that they pressed upon him for to touch him. Mark iii. 10.

Good measure pressed down, shaken together, and running over, shall men give into your bosom.

Luke vi. 38. I press toward the mark for the prize.

Philippians.

More wealth any where, to be breefe, More people, more handsome and prest Where find ye ? Tusser’s Husbandry.

She held a great gold chain ylinked well, Whose upper end to highest heaven was knit, And lower part did reach to lowest hell, And all that press did round about her swell, To catchen hold of that long chain. Spenser.

The experience of his goodness in her own deh’- verance, might cause her merciful disposition to take so much the more delight in saving others, whom the like necessity should prew. Hooker.

Grittus desired nothing more than to have confirmed the opinion of his authority in the minds of the vulgar people, by the prest and ready attendance of the Vayoud. Knolles's History of the Tvrks.

The Turks gave a great shout, and pressed in on all sides, to have entered the breach. Knolles.

Once or twice she heaved the name of father Pantingly forth, as if it prest her heart. Shakspeare.

Come with words as medical as true, Honest as either, to purge him of that humour That presses him from sleep. Id>.

For every man that Bolingbroke hath pressed To lift sharp steel against our golden crown, Heaven for his Richard hath in store A glorious angel. Id. Rickard 11.

From London by the king I was prest forth.

Shakspeare. I make bold to press

With so little preparation. Id.

These letters are of the second edition ; he will print them out of doubt, for he cares not what he puts into the press, when he would put us two in.

Id. Who is it in the press that calls on me?

Id. Julius Caesar.

Creep into the kiln hole. ××× Neither press, coffer, chest, trunk ; but he hath an abstract for the remembrance of such places. Shakspeare.

If I be not ashamed of my soldiers, I am a sowced gurnet ; I have misused the king's press.

Id.

From my memory

I'll wipe away all trivial fond records, All saws of books, all forms, all pressures past, That youth and observation copied there. Id. Concerning the musters and presses for sufficient mariners to serve in his majesty's ships, either the care is very little, or the bribery very great. Raleigh.

Let them be pressed, and ready to give succours to their confederates, as it ever was with the Romans ; for, if the confederate had leagues defensive, the Romans would ever be the foremost.

Bacon.

The less blood he drew, the more he took of treasure ; and, as some construed it, he was the more sparing in the one, that he might be the more pressing in the other. Id.

A wise father ingenuously confessed, that those, which persuaded pressure of consciences, were commonly interested therein. Id.

He required of the city a prest of six thousand marks ; but he could obtain but two thousand pounds. Id.

Each mind is prest, and open every ear, To hear new tidings, though they no way join us.

Fairfax.

Mine own and my people's pressures are grievous, and peace would be very pleasing. King Charles. Only one path to all ; by which the pressmen came.

Chapman.

The one contracts his words, speaking pressingly and short ; the other delights in long-breathed accents. Howel.

The endeavour to raise new men for the recruit of the army by pressing, found opposition in many places.

Clarendon.

He pressed her matron lips With kisses pure. Milton.

His obligation to read not only classick authors, but the more recent abortions of the press, wherein he proved frequently concerned. Felt.

PRE

His modesty might be secured from pressure by the concealing of him to be author. Id.

The genuine price of lands in England would be twenty years' purchase, were it not for accidental pressure under which it labours. Child on Trade.

Neither the celestial matter of the vortices, noi the air, nor water, are pressitant in their proper places.

More.

Chymists I might prets with arguments, drawn from some of the eminentest writers of their sect.

RyU.

If there be fair proofs on the one side, and none at all on the other, and if the most pressing difficulties be on that side on which there are no proofs, this is sufficient to render one opinion very credible, and the other incredible. TMotton.

I was prett by his majesty's commands, to assist at the treaty. Temple's Miscellanies.

Their morning milk the peasants press at night, Their evening milk before the rising light. Dryden.

He gapes ; and straight With hunger prest, devours the pleasing bait. Id.

He pressed a letter upon me, within this hour, to deliver to you. Id. Spanish Fryar.

She took her son, and press d

The illustrious infant to her fragrant breast.

Dryden.

The peaceful peasant to the wars is prest, The fields lie fallow in

inglorious rest. Id.

The insulting victor presses on the more And treads the steps the vanquished trod before.

Id.

Thronging crowds press on you as you pass, And with their eager joy may triumph slow. Id. A new express all Agra does affright,

Darah and Aurengzebe are joined in fight ;

The press of people thickens to the court,

The impatient crowd devouring the report. Id.

A great many uneasinesses always soliciting the will, it is natural that the greatest and most pressing should determine it to the next action. Locke.

After pressing out of the coleseed for oil, in Lincolnshire, they burn the cakes to heat their ovens.

Mortimer.

His easy heart received the guilty flame, And from that time he prest her with his passion.

Smith.

Why has there been now and then a kind of a press issued out for ministers, so that as it were the vagabonds and loiterers were taken in ?

Davenant. Be sure to prpss upon him every motire.

Additcm.

She is always drawn in a posture of walking, it being as natural for Hope to press forward to her proper objects as for Fear to fly from them. Id.

If light consisted only in pression, propagated without actual motion, it would not be able to agitate and heat the bodies which refract and reflect it ; if it consisted in motion propagated to all distances in an instant, it would require an infinite force every moment, in every shining particle, to generate that motion : and if it consisted in

pression or motion, propagated either in an instant or in time, it would bend into the shadow. Newton's Opticks.

Let us not therefore faint, or be weary in our journey, much less turn back or sit down in despair ; but press chearfully forward to the high mark of our calling. Rogers.

Here, Peascod, take my pouch, 'tis all I own, 'Tis my pressmaney . ††† Can this silver fail 1 Gay.

Excellent was the advice of Eliphaz to Job, in the midst of his great troubles and pressures : acquaint thyself now with God, and be at peace.

Atterbury.

They kept their cloaths, when they were not worn, constantly in a press to give them a lustre.

Arbuthnot.

The blood flows through the vessels by the excess of the force of the heart above the incumbent pres-ture, which in fat people is excessive. Id.

I put pledgets of [ml pressed out on the excoriation,

Wiseman.

I am the more bold to press it upon you, because these accomplishments sit more handsomely on persons of quality than any other. Felton. On superior powers

Were we to press, inferiour might on ours. Pope.

Leucothoe shook, And pressed Palemon closer in her arms. Id.

Through the press enraged Thalestris flies. And scatters death around from both her eyes. Id.

Those who negotiated took care to make demands impossible to be complied with ; and therefore might securely press every article, as if they were in earnest.

Swift.

You were pressed for the sea-service, and got off with much a-do. Id.

Of the stuffs I give the profits to dyers and pressers. Id.

While Mist and Wilkins rise in weekly might, Make presses groan, lead senators to fight. Young.

An Englishman fears contempt more than death ; he often flies to death as a refuge from its pressure, and dies when he fancies the world has ceased to esteem him. Goldsmith.

This treatise he completed but did not publish ; for that poverty which in our day drives authors as hastily in such numbers to the press, in the time of Ascham, I believe, debarred them from it. Johnson.

If, by the liberty of the press, we understand merely the liberty of discussing the propriety of pub-lic measures and political opinions, let us have so much of it as you please ; but if it means the liberty of affronting, calumniating, and defaming one another, I, for my part, own myself willing to part with my share of it whenever our legislators shall please to alter the law. Franklin.

PRESS, in the mechanic arts, is a machine made of iron or wood, serving to squeeze or compress any body very close. The ordinary presses consist of six members, or pieces ; *viz.* two fat smooth planks, between which the things to be pressed are laid ; two screws, or worms, fastened to the lower plank, and passing through two holes in the upper ; and two nuts, in form of an S, serving to drive the upper plank, which is moveable, against the lower, which is stable, and without motion. Presses for expressing liquors are of various kinds ; some in most respects the same with the common presses, excepting that the under plank is perforated with a great number of holes, to let the juice expressed run through into the tub, or receiver, underneath.

PRESS, CUTTING, or BOOKBINDER'S CUTTING-PRESS, is a machine used equally by bookbinders, stationers, and pasteboard makers ; consisting of two large pieces of wood, in form of cheeks, connected by two strong wooden screws , which, being turned by an iron bar, draw together, or set asunder, the cheeks, a? much as is necessary for the putting in the books or paper to be cut. The cheeks are placed lengthwise on a wooden stand, in the form of a chest, into which the cuttings fall. The cheeks are two pieces of wood, of the same length with the

screws, serving to direct the cheeks, and prevent their opening unequally. Upon the cheeks the plough moves, to which the cutting knife is fastened by a screw. The plough consists of several parts ; a wooden screw or worm, catching within the nuts of the two feet that sustain it on the cheeks, brings the knife to the book or paper, which is fastened in the press between two boards. This screw, which is pretty long, has two directories, which resemble those of the screws of the press. To make the plough slide square and even on the cheeks, so that the knife may make an equal paring, that foot of the plough where the knife is not fixed slides in, a kind of groove, fastened along one of the cheeks. Lastly, the knife is a piece of steel, six or seven inches long, flat, thin, and sharp, terminating at one end in a point, like that of a sword, and at the other in a square form, which serves to fasten it to the plough. See BOOKBINDING. As the long knives used by us in the cutting of books or papers are apt to jump in the cutting thick books, the Dutch are said to use circular knives, with an edge all round ; which not only cut more steadily, but last longer without grinding.

PRESSING, in the manufactures, is applied to cloth, stuff, &c., to render it smooth and glossy. There are two methods of pressing, *viz.* cold and hot. Cold-pressing is thus performed : ††† After the stuff has been scoured, fulled, and shorn, it is folded square in equal plaits, and a skin of vellum or pasteboard put between each plait. Over the whole is laid a square wooden plank, and so put into the press, which is screwed down tight by means of a lever. After it has lain a sufficient time in the press they take it out, removing the pasteboards, and lay it up to keep. Some only "'ay the stuff on a firm table, after plaiting and pasteboarding, cover the whole with a wooden plank, and load it with a proper weight. Hot-pressing is performed thus : ††† When the stuff has received the above preparations it is sprinkled a little with water, sometimes gum-water : then plaited equally, and between each two plaits are put leaves of pasteboard, and between every sixth and

seventh plait, as well as over the whole, an iron or brass plate well heated in a kind of furnace. This done, it is laid upon the press, and forcibly screwed down. Under this press are laid five, six, &c., pieces at the same time, all furnished with their pasteboards and iron plates. When the plates are well cooled the stutfs are taken out, and stitched a little together to keep them in the plaits. This manner of pressing was only invented to cover the defects of the stuffs ; and, accordingly, it has been frequently prohibited.

PftESTEIGN, a market town of Radnorshire, 149 miles W. N. W. of London, in the direct road to Aberystwith. It is a neat well-built town, with clean and regular streets, and is the residence of many genteel families. It is seated on a gravelly soil on the banks of the Lug, at the head of a very fertile vale : the mountains on the west and north-west forming a kind of amphitheatre round it. The name in Welsh is Slan-Andras, from the church, which is dedicated to St Andrew. The town is divided into four waids, which have each separate jurisdictions,

officers, levies, &c. It is a borough by prescription, and is governed by a bailiff, annually elected and sworn in by a steward appointed by the crown. The living is a rectory and vicarage united, worth from ––500 to ––600 a year: the parish lying in two counties. It has an excellent free school, well endowed. The county hall, gaol, bridewell, and correction-house, are kept in it. It has a market on Saturday, and two fairs. Presteign is thirty miles W. N. W. of Worcester.

PRESTER, a meteor consisting of an exhalation thrown from the clouds downwards with such violence that it is set on fire by the collision. The word is Greek, ?rp––j(7rjjp, the name of a kind of serpent ; called also dipsas, to which this me-teor is supposed to bear a resemblance. The prester differs from the thunderbolt in the man-ner of its inflammation, and in its burning and breaking every thing it touches with greater violence.

PRESTER JOHN, an appellation formerly given to an emperor of the Tartars, who was overcome by Jenghiz Khan A. D. 1201.

PRESTIMONY, in canon law, is derived a prsestatione quotidiana ; and is, by some, defined to be a kind of benefice, served by a single priest. Others say it is the incumbency of a chapel without any title or collation ; such as are most of those in castles, where prayers or masses are said, and which are mere endowed oratories. Whence the

term is also applied, in the Romish church, to certain perpetual offices bestowed on canons, religious, or others, for the saying of masses, by way of augmentation of their livings. Du Moulin calls it a profane benefice, which however, has a perpetual title, and an ecclesiastical office, with certain revenues attached to it ; which the incumbent is allowed to sell, and which may be possessed without tonsure ; such as the lay church-wardens of Notre Dame. He adds that, in propriety, the canonries of chapels are benefices of this nature.

PRES'TO, n. $. Ital. presto; Lat. presto. Quick ; at once. A word used by those that show legerdemain.

Presto ! begone ! 'tis here again ; There's every piece as big as ten. Swift.

PRESTON (Thomas), LL. D., a dramatic writer and actor who flourished in the beginning of queen Elizabeth's reign. He was first admitted M. A. and fellow of King's College, Cambridge, and afterwards created LL. D. and elected master of Trinity Hall. In 1564, when the queen was entertained at Cambridge, Preston acted so wel1 in the tragedy of Dido, a Latin piece written by John Ritw-ise, another fellow of the same college, that queen Elizabeth settled a pension of twenty pounds a year on him; a circumstance which Shakspeare is supposed to allude to, in his Midsummer Night's dream, Act 4th. He likewise attended and exhibited at Oxford, on the 6th of September 1566, with other eight Cantabrigi-ans, when the queen visited that university. He also wrote a dramatic piece, in the ancient metre, entitled Cambyses King of Persia.

PRESTON, a borough and market town of England, in Lancashire, seated on the Ribble, over which there is a handsome stone bridge. The

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town is well built, and lighted with gas; having a handsome and convenient town hall. The church is spacious and handsome : there are two Roman Catholic chapels, and meeting-houses for all classes of dissenters. The new prison, built according to the plan of John Howard, is a large and commodious building. Here is also a dispensary, a free grammar school, and several pub-lic charity schools. It is governed by a mayor, recorder, aldermen, four subaldermen, seventeen common-council-men, and a town clerk. It returns two members to parliament, the right of election being in the inhabitants at large, beˆng the only place in England where the members are returned by universal suffrage. The returning officers are the mayor and two bailiffs. The river here is navigable for small vessels only; and by canal navigation it has communication with most of the principal rivers in England. The cotton manufactories are carried on here extensively. Here is held a court of Chancery, and other offices of justice for the county palatine of Lancaster. It is noted for the defeat of the Scotch royalists under the duke of Hamilton in the reign of Charles I., as well as for that of the rebels in 1715, when they were all made prisoners, and sent up to London. It has a good market-place, large open streets, and markets on Wednesday and Friday. From Preston a Roman road, still distinctly visible in places, conducts to Ribchester, once a military station of that people. Its original designation has been a matter of much contention among antiquaries. Camden supposes it to have been the Coccium of Antoninus, and the Rigodunum of Ptolemy. Hors-ley was of the same opinion as to Coccium, but inclined to fix Rigodunum at Warrington. Mr. Whitaker, the historian of Manchester, contended that it was Rerigonium of Richard of Cirencester ; but Dr. Whitaker, who last investigated the subject, appears to have clearly identified it with Coccium ; and assigns its original establishment to Agricola. From the boldness and ex-tent of its ramparts, and also from the number of altars, inscribed stones, earthen vessels, plates of copper, coins, and other relics found here, Ribchester is presumed to have been a station of more tlian ordinary magnitude and importance. That the Ribble was anciently navigable as high as this place is proved by the fact of many anchors having been dug up in the vicinity, as well as the hull of a ship larger than any that could now be floated above Preston. Preston lies twenty-one miles south of Lancaster, and 216 N. N. W. of London.

PRESTON, a town of Scotland, in Haddington-shire, in the parish of Preston-Pans, seven miles west of Haddington ; formerly noted for its

fair, held on the second Thursday of October, called' St. Jerome's fair, at which the travelling chapmen made their annual election.

PRESTON-PANS, a parish of Scotland, in East Lothian, so named from the above town and the salt-pans near it, on the east coast of the frith of Forth. The soil is loam, partly on clay and partly on a sandy bottom ; and produces good crops of all the usual grain. There are ten salt-pans, of which six are wrought. The average quantity of salt made annually is lOJoO bushels

and four gallons. The total quantity delivered in five years, from 1787 to 1792, was 417,354 bushels five gallons.

PRESTON-PANS, a town in the above parish, built after the erection of the salt-pans, and nam-ed from them. It is a quarter of a mile north of Preston. It is a burgh of barony, and a port of the custom-house, eight miles east of Edinburgh, and nine and three-quarters north-west of Haddington. It received its charter of erection in 1617, by which Preston is included in its privileges. It is noted for its extensive manufactures particularly of salt, stone, and earthenware, and brick. and tile. A manufacture of oil of vitriol, aquafortis, and spirit of salt is also carried on to a great extent ; and the same company manufactures great quantities of Glauber's salts. On the east of the enclosures of Preston-Pans, on the 21st of September 1745, the forces under prince Charles Stuart obtained a victory over the royal forces under Sir John Cope. See GREAT BRITAIN.

PRESUME', v.n. ~\ Fr. presumer ;

PRESUMABLY, adv. Lat. pr&sumo. To

PRESU'MER, n. s. suppose; assume;

PRESUMP'TION, (believe or affirm

PRESUMPTIVE, adj. [without proof; in—

PRESUMPTU'OUS, trude; attempt

PRESUMPTUOUSLY, adv. \ vainly, or arrogant-
PRESUMP'TUOUSNESS, n.s.J ly; taking on, upon and of before the object (the last improperly) presumably is without examination : presumer and presumption follow these senses : presumptive is, taken by supposition ; confident ; arrogant; also in law applied to the person

who, if the ancestor should die immediately, would be his heir, but whose right of inheritance may be defeated by some nearer heir being born : presumptuous is arrogant ; confident; irreverent to-ward sacred things : the adverb and noun substantive corresponding.

Keep back thy servant from presumptuous sins.

Psalms.

In this we fail to perform the thing, which God seeth meet, convenient, and good ; in that we presume to see what is meet and convenient, better than God himself. Hooker.

The sins whereinto he falleth are not presumptuous ; but are ordinarily of weakness and infirmity.

Perkins.

That as my hand has opened bounty to you,

My heart dropped love ; my power rained honour,

more On you, than any. Shakspeare. Henry VIII.

Let my presumption not provoke thy wrath ; For I am sorry, that with reverence I did not entertain thee as thou art. Sliakspeare. Presumptuous priest, this place commands my patience. Id. There was a matter we were no less desirous to know, than fearful to ask, lest we might presume too far. Bacon.

The boldness of advocates prevails with judges ; whereas they should imitate God, who represseth the presumptuous, and giveth grace to the modest.

Id. Essays.

Heavy with some high minds is an overweight of obligation ; otherwise great deservers do grow into, lerable presume. Wotton.

PRE

PRE

Thou hast shewed us how unsafe it is to offend thee, upon presumption afterwards to please thee.

King Charles.

A tower whose top might reach to heaven, was a shameful arrogance, an impious presumption.

Bp. Hall.

It warns a warier carriage in the thing, Lest blind presumption work their ruining.

Daniel.

I entreat your prayers, that God will keep me from all premature persuasion of my being in Christ, and not suffer me to go on presumptuously or desperately in any course. Hammond.

A presumption upon this aid was the principal mo-tive for the undertaking. Clarendon. O much deceived, much failing, hapless Eve ! Of thy presumed return ! event perverse ! Milton. I to the heav'nly vision thus presumed. Id. God, to remove his ways from human sense, Placed heaven from earth so far, that earthly sight, If it presume, might err in things too high, And no advantage gain. Id. Paradise Lost.

Their minds somewhat raised By false presumptuous hope. Milton.

Authors presumably writing by common places, wherein, for many years, promiscuously amassing all that make for their subject, break forth at last into useless rhapsodies. Browne.

Although in the relation of Moses there be very few persons mentioned, yet are there many more to be presumed. Id.

There being two opinions repugnant to each other, it may not be presumptive or sceptical to doubt of both.

Id.

It being not the part of a presumptuous, but of a truly humble man to do what he is bidden, and to please those whom he is bound in duty to obey.

Kettlewell.

I had the presumption to dedicate to you a very unfinished piece. Dryden.

The powers incensed Punished his presumptuous pride, That for his daring enterprise she died. Id. Presuming of his force, with sparkling eyes, Already he devours the promised prize. Id.

We commonly take shape and colour for so presumptive ideas of several species, that, in a good picture, we readily say this is a lion, and that a rose.

Locke.

He that would not deceive himself, ought to build his hypothesis on matter of fact, and not presume on matter of fact, because of his hypothesis. Id.

Experience supplants the use of conjecture in the point ; we do not only presume it may be so, but actually find it is 80.

Government of the Tongue. Do you, who study nature's works, decide, Whilst I the dark mysterious cause admire ; Nor into what the gods conceal, presumptuously enquire. Addison's Remarks on Italy. Though men in general believed a future state, yet they had but confused presumptions of the nature and condition of it. Rogers. Luther presumes upon the gift of continency.

Atterbury. Canst thou love

Presumptuous Crete, that boasts the tomb of Jove ?

Pope.

Those at home held their immoderate engrossments of power by no other tenure than their own presumption upon the necessity of affairs. Swift.

Mark these, she says ; these, summoned from afar, Begin their march to meet thee at the bar ; There find a judge, inexorably just, And perish there, as all presumption must. Camper.

The same estate may be frequently devested by the subsequent birth of nearer presumptive heirs, be-fore it fixes upon an heir apparent. As if an estate is given to an only child, who dies ; it may descend to an aunt, who may be stripped of it by an after-born uncle ; on whom a subsequent sister may enter, and who will again be deprived of the estate by the birth of a brother, the heir apparent.

Judge Christian.

PRESUPPOSE', v. a. Fr. presupposer, pr<c and suppose. To suppose as previous ; imply as antecedent.

In as much as righteous life presupposeth life, in as much as to live virtuously it is impossible except we live ; the first impediment, which we endeavour to remove, is penury and want of things without which we cannot live. Hooker.

All kinds of knowledge have their certain bounds ; each of them presupposeth many necessary things learned in other sciences, and known beforehand.

Id.

All things necessary to be known that we may be saved, but known with presupposal of knowledge concerning certain principles, whereof it receiveth us already persuaded. Id.

PRESURMISE', n. s. Prte and surmise. Surmise previously formed.

It was your presurmise,

That, in the dole of blows, your son might drop.

Shakspeare.

PRETEND' v. a. &t v.n.~\ Fr. prctendre ; PRETENCE', n.s. I Latin, pratendo.

PRETEN'DER, VUsed by Dryden

PRETEND'INGLY, I literally for to hold

PRETEN'SION, n. s. J out ; to simulate ;

claim, taking to before the object: as a verb neuter, to put in a claim,

true or false ; presume an ability to a thing; profess presumptuously: a pretender is one who claims, and more commonly one who cannot prove or sustain a right : pretendingly is presumptuously ; arrogantly : pretension, claim, false or true ; fictitious appearance.

With flying speed and seeming great pretence Came running in a messenger. Spenser.

In the great hand of God I stand, and thence Against the undivulged pretence I fight Of treas'nous malice. Shakspeare. Macbeth.

This was but an invention and pretension given out by the Spaniards. Bacon.

'Tis their interest to guard themselves from those riotous effects of pretended zeal, nor is it less their duty. Decay of Piety.

But if to unjust things thou dost pretend, Ere they begin let thy pretensions end. Denham. So strong his appetite was to those executions he had been accustomed to in Ireland, without any kind of commission or pretence of authority.

Clarendon.

Spirits on our just pretences armed Fell with us. Milton.

This let him know, Lest wilfully transgressing he pretend Surprisal. Id.

Warn all creatures from thee Henceforth ; lest that too heavenly form, pretended To hellish falsehood, snare them. Id.

There is no security which men can yield comparable to that of an oath ; the obligation whereof nc man wilfully can infringe, without renouncing the fear of God, and any pretence to his favour.

Bar*rw. F 2

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Of the ground of redness in this sea are we not fully satisfied ? For there is another red sea whose name we pretend not to make out from these principles. Browne.

He so much abhorred artifice and cunning, that he had prejudice to all concealments and pretensions.

Fell.

This pretence against religion will not only be baffled, but we shall gain a new argument to persuade men over. Titlutson. Lucagus, to lash his horses, bends

Prone to the wheels, and his left foot pretends.

Dry den. Let not Trojans, with a feigned pretence

Of proffered peace, delude the Latian prince. Id.

The prize was disputed only till you were seen ; now all pretenders have withdrawn their claims. Id.

Men indulged those opinions and practices that favour their pretensions. L' Estrange.

Primogeniture cannot have any pretence to a right of solely inheriting property or power. ××× Locke.

Despise not these few ensuing pages ; for never was any thing of this pretence more ingenuously im-oarted. Evelyn.

Whatever victories the several pretenders to the impire obtained over one another, they are recorded on coins without the least reflection. Addison.

I have a particular reason to look a little pretendingly at present. Collier on Pride.

I should have dressed the whole with greajf r care ; but I had little time, which I am sure you know to be more than pretence. Wake.

Are they not rich 1 what more can they pretend?

Pope. To just contempt ye vain pretenders fall,

The people's fable and the scorn of all. Id.

In those countries that pretend to freedom, princes are subject to those laws which their people have chosen. Suift.

The numerous pretenders to places would never have been kept in order, if expectation had been cut off. Id.

Pretenders to philosophy or good sense grow fond of this sort of

learning. Watts.

PRETERITION, n. s. ►► Fr. preterition ;

PRE'TERITNESS. \ Lat .preteritus. The

act of going past : the state of being past.

Had not he been a wise disciple, that should have envied the great favour done to Judas, and have stomached his own preterition ? So foolish are they, who, measuring God's affection by temporal benefits, are ready to applaud prospering wickedness ; and to grudge outward blessings to them which are incapable of any better. Bp. Hall.

We cannot conceive a preteritness still backwards, in infinitum, that never was present, as we can an endless futurity that never will be present ; so that though one is potentially infinite, yet nevertheless the other is positively finite ; and this reasoning doth not at all affect the eternal existence of the adorable divinity, in whose invariable nature there is no past nor future. Bentley's Sermons.

PRETERITION, or PRETERMISSION, in rhetoric, a figure whereby, in pretending to pass over a thing untouched, we make a summary mention thereof. 1 will not say he is valiant, he is learned, he is just, &c.

PRETERLAFSED, adj. Lat. praterlapms. Past and gone.

We look with a superstitious reverence upon the accounts of preterlapsed ages. Glanville's Scepsis.

Never was there so much of either, in any prater-lapsed age, as in this. Walker.

PRE

PRETERLE'GAL, adj. Preter and legal. Not agreeable to law.

1 expected some evil customs preterlegal, and abuses personal, had been to be removed. King Chartes.

PRETERMIT, v. a. Lat. pratermitto. To pass by.

The fees, that are termly given to these deputies, for recompense of their pains, I do purposely pretermit ; because they be not certain.

Bacon.

PRETERNATURAL, adj. \ Preter and PRETERNAT'URALLY, adv. ►► natural. Diff'er-PRETERNAT'URALNESS, n. s.) ent from what is natural ; irregular : the adverb and noun substantive correspond.

Simple air, pr eternal urally attenuated by heat, will make itself room, and break and blow up all that which resisteth it. B.inm.

That form which the earth is under at present is preternatural, like a statue made and broken again.

Buntet.

We will enquire into the cause of this vile and preternatural temper of mind, that should make a man please himself with that which can no ways reach those faculties which nature has made the proper seat of pleasure. South's Sermons.

Anger and the thirst of revenge are a kind of fever ; fighting and law-suits bleeding ; at least an evacuation. The latter occasions a dissipation of money ; the former of those fiery spirits which cause a preternatural fermentation. Shenstone.

PRETERPER'FECT, adj. Lat. prateritum perfectum. A grammatical term applied to the tense which denotes time absolutely past.

The same natural aversion to loquacity has of late made a considerable alteration in our language, by closing in one syllable the termination of our preter-perfect tense, as drown'd, walk'd, for drowned, walked. Addison' s Spectator.

PRETEXT', n. s. Fr. pretexte ; Lat. pratex-tus. Pretence ; false appearance, or allegation.

My pretext to strike at him admits A good construction. Shahspeare. Curiolanits.

He made pretext, that I should only go And helpe convey his freight ; but thought not so.

Cluipman.

I shall not say with how much or how little pretext of reason they managed those disputes.

Decay of Piety. Under this pretext, the means he sought

To ruin such whose might did much exceed

His power to wrong. Daniel's Civil War.

As chymists gold from brass by fire would draw, Pretexts are into treason forged by law. Denham.

They suck the blood of those they depend upon, under a pretext of service and kindness.

L'Eitrange.

PRETEXTA TOGA. See PRˆTEXTA.

PRETI (Chevalier Matthias), a celebrated Italian painter, born at Calabria in 1613. His picture of the triumph of Osiris, the Egyptian conqueror, obtained the prize from the Academy of St. Luke at Rome. He died in 1699.

PRE'TOR, n. s. } Fr. preteur ; Lat. pratar.

PRETO'RIAN, adj. S The Roman judge; some times taken for a mayor : judicial.

Good Cinna, take this paper ; And look you lay t* in the pretor's chair.

Shakspeare.

The chancery had the pretorian power for equity ; the star-chamber had the censorian power for offences. Bacon.

Porphyrius, whom yon Egypt's pretor made, Is come from Alexandria to your aid. Dryden.

An advocate, pleading the cause of his client be-fore one of the pretori, could only produce a single witness, in a point where the law required two.

Spectator.

PRETOR. See PRJETOR.

PRETSCHINSTANSKOE KREPOST, a fortress in the government of

Orenbourg, European Russia, on the Sacmara, and the principal of the line of forts on that river. The town is inhabited by Tartars. The preparation of birch lar is here a considerable employment.

PRETTY, adj. & adv.-) Sax. prizete; Belg.

PRET'TILY, adv. ffrait; i. e. Goth.frida,

PRET'TINESS, n. s. jpryda. Neat; pleasing; elegant; beautiful or elegant without grandeur : used as a diminutive, contemptuously, and *or a small, but not extremely small, number: as an adverb, in some degree : prettily is neatly ; elegantly : prettiness follows the senses of the adjective and adverb.

How prettily the young swain seems to wash The hand was fair before.

Shakspeare. Winter's Tale. Of these the idle Greeks have many pretty tales.

Raleigh.

Cut off the stalks of cucumbers, immediately after their bearing, close by the earth, and then cast a pretty quantity of earth upon the plant, and they will bear next year before the ordinary time.

Bacon.

One saith prettily ; in the quenching of the flame of a pestilent ague, nature is like people that come to quench the fire of a house ; so busy, as one letteth another. Id.

A knight of Wales, with shipping and some pretty company, did go to discover those parts.

Abbot.

There is goodliness in the bodies of animals, as in the ox, greyhound, and stag; or majesty and stateli-ness, as in the lion, horse, eagle, and cock ; grave awfulness, as in mastiffs ; or elegancy and prettiness, as in lesser dogs and most sort of birds ; all which are several modes of beauty. More.

Of this mixture we put a parcel into a crucible, and suffered it for a pretty while to continue red hot.

Boyle.

Those drops of prettiness, scatteringly sprinkled amongst the creatures, were designed to defecate and exalt our conceptions, not to inveigle or detain our passions. Id.

A pretty task ; and so I told the fool, Who needs must undertake to please by rule.

Dryden

A weazle, a pretty way off, stood leering at him.

L'Estrange.

Children, kept out of ill company, take a pride to Behave themselves prettily, after the fashion of others.

Locke.

The world began to be pretty well stocked with people, and human industry drained those unhabitable places. Bitrnet.

The pretty gentleman is the most complaisant (feature in the world, and is always of my mind.

Spectator.

He'll make a pretty figure in a triumph, And serve to trip before the victor's chariot.

Addison.

I shall not enquire how far this lofty method may advance the reputation of learning ; but I am pretty sure 'tis no great addition to theirs who use it.

Collier.

PRE

These, colours were faint and dilute, unless the light was trajected obliquely ; for by that means they became pretty vivid. Newton.

This writer every where insinuates, and, in one place, pretty plainly professes himself a sincere Christian. Atterbvry.

The copper halfpence are coined by the publick, and every piece worth pretty near the value of the c►►Pper. Swift.

1 hey found themselves involved in a train of mistakes, by taking up some pretty hypothesis in philosophy. Wattt.

The first attempts of this kind were pretty modest.

Baker.

PREVAIL', v. n. *\ Fr. prevaloir; Lat.

PREVAILING, adj. I prevalere. To have

PREVAIL'MENT, n. s. I power or effect; over—

PREV'ALENCE, or ˆcome; gain superi-

PREV'ALENCY, n. s. PREV'ALENT, adj.

ority ; persuade ; in-duce ; gain influence :

PREV ALENTLY, adv. J prevailing is, dominant ; efficacious ; having most influence : prevailment, prevalence, and prevalency, predominance ; influence ; power ; superiority ; efficacy : prevalent and prevalently correspond.

With minds obdurate nothing prevaileth ; as well they that preach, as they that read unto such, shall still have cause to complain with the prophets of old, Who will give credit unto our teaching ?

Hooker.

They tba* were your enemies, are his, And have prevailed as much on him as you.

Shakspeare. Messengers

Of strong preveilment in unhardened youth. Id. Brennus told the Roman ambassadors that prevalent arms were as good as any title, and that valiant men might account to be their own as much as they

could get. Raleigh.

Nor is it hard for thee to preserve me amidst the unjust hatred and jealousness of too many, which thou hast suffered to prevail upon me. King Charles.

The millennium prevailed long against the truth upon the strength of authority. Decay of Piety.

I do not pretend that these arguments are demonstrations of which the nature of this thing is not capable : but they are such strong probabilities, as ought to prevail with all those who are not able to produce greater probabilities to the contrary.

Wilkins.

He was prevailed with to restrain the earl of Bristol upon his first arrival. Clarendon.

The duke better knew what kind of arguments were of prevalence with him. Id.

Animals, whose forelegs supply the use of arms, hold, if not an equality in both, a prevalency oft-times in the other. Browne.

The serpent with me Persuasively has so prevailed, that I Have also tasted. Milton.

On the foughten field,

Michael and his angels prevalent encamping. Id. This custom makes the shortsighted bigots, and the warier scepticks, as far as it prevails. Locke. They are more in danger to go ˆut of the way, who are marching under the conduct of a guide, that it is an hundred to one will mislead them, than he that has not yet taken a step, and is likelier to be prevailed on to enquire after the right way. Id.

Probabilities, which cross men’s appetites and prevailing passions, run the same fate : let never so much probability hang on one side of a covetous man’s reasoning, and money on the other, it is easy to foresee which will outweigh. id.

PRE

Upon assurances of revolt, the queen -was prevailed with to send hei forces upon that expedition.

South.

The conduct of a peculiar providence made the instruments of that great design prevalent and victorious, and all those mountains of opposition to be-come plains. Id.

Save the friendless infants from oppression ; Saints shall assist thee with prevailing prayers, And warring angels combat on thy side. Rotoe.

The gods pray

He would resume the conduct of the day, Nor let the world be lost in endless night ; Prevailed upon at last, again he took The harnessed steeds, that still with horror shook.

Adduon.

Why, fair one, would you not rely On reason's force with beauty's joined ?

Could I their prevalence deny, I must at once be deaf and blind. Prior.

The evening star so falls in the main, To rise at morn more prevalently bright. Id. This was the most received and prevalent opinion, when I first brought my collection up to London.

Woodward.

Least of all does this precept imply, that we should comply with any thing that the prevalence of corrupt fashion has made reputable. Rogers.

While Marlbro's cannon thus prevails by land, Britain's sea chiefs by Anna's high command, Kesistless o'er the Tuscan billows rise.

Blackmore.

Thus song could prevail O'er death and o'er hell,

A conquest how hard and how glorious '. Pope. This kingdom could never prevail against the united power of England. Swift.

Prevail upon some judicious friend to be your constant hearer, and allow him the utmost freedom.

Id.

PREVAR'ICATE, v. n. \ Fr. prevariquer ;

PREVARICA'TION, n. s. J Lat. pravarico. To cavil; quibble; shuffle: quibbling; shuffling; cavil.

Laws are either disannulled or quite prevaricated through change and alteration of times, yet they are good in themselves. Spenser.

Whoever helped him to this citation, I desire he will never trust him more ; for I would think better of himself, than that he would wilfully prevaricate.

Stillingfleet.

He prevaricates with his own understanding, and cannot seriously consider the strength, and discern the evidence of argumentations against his desires.

South.

Several Romans, taken prisoners by Hannibal, were released upon obliging themselves by an oath to return again to his camp ; among these was one, who, thinking to elude the oath, went the same day back to the camp, on pretence of having forgot something ; but this prevarication was so shocking to the Roman senate, that they ordered him to be delivered up to Hannibal. Addison.

PREVARICATION, in the civil law, is where the informer colludes with the defendants, and so makes only a sham prosecution.

PREVENE', v. a. ~} Lat. pravenio. To

PREVE'NIENT, adj. go before; hinder,

PREVENT', v. a. & v. n. I be before ; antici—

PREVEN’TER, n. s. ;;-pate ; preoccupy :

PREVEN’TION, the two active

PREVENTIVE, adj. & n. s. | verbs arp both of

PUEVEN’TIVELY, adv.) this signification:

prevenient is, preceding; going before, hindering : prevent as a verb neuter is used by Bacon for to come after the time : preventer is either one who goes before or one who hinders : prevention, the act of preceding or hindering ; anticipation ; preoccupation; obstruction: preventive, hindering ill or good, taking of before the object: the adverb corresponds in sense. Prevent him with the blessings of goodness.

Psalms.

Mine eyes prevent the night-watches, that I might be occupied in thy words. Id. cxix. 4.

Let thy grace O Lord, always prevent and follow US. Common Prayrr.

Are we to forsake any true opinion, or to slum any requisite action, only because we have in the practice thereof been prevented by idolaters 1

Hooker.

I do find it cowardly and vile, For fear of what might fall, so to prevent The time of life. Shakspeare. Julius Ccetar. Atchievemen’s, plots, orders, preventions, Success or loss. Shakspeare.

The same officer told us he came to conduct us, and that he had prevented the hour, because we might have the whole day before us for our business.

Bacon.

Strawberries watered with water, wherein hath been steeped sheep’s dung, will prevent and come early.

Id. Natural History.

The archduke was the assailant and the presenter, and had the fruit of

his diligence and celerity.

Bacon.

The greater the distance, the greater the prevention ; as in thunder, where the lightning precedeth the crack a good space. Id.

Wars preventive upon just fears are true defensives, as well as upon actual invasions. Id.

Thou hast prevented us with overtures of love, even when we were thine enemies. King Charles. Nothing engendered doth prevent his meat : Flies have their tables spread ere they appear ; Some creatures have in winter what to eat ; Others do sleep.

Herbert's Temple rf Sacred Poems. God's preventions, cultivating our nature, and fitting us with capacities of his high donatives.

Hammond.

From the mercy seat above Prevenient grace, descending, had removed The stony from their hearts, and made new flesh Regenerate grow instead. Milton's Paradise Lost.

This your sincerest care could not prevent, Foretold so lately what would come to pass.

Mittm.

Half way he met

His daring foe, at this prevention more Incensed. Id.

Physick is curative or preventive of diseases ; preventive is that which, by purging noxious humours preventeth sickness. Browne.

In reading what I have written, let them bring no particular gusto, or any prevention of mind, and that whatsoever judgment they make, it may be purely their own. Dryden.

If thy indulgent care

Had not prevened, among unbodied shades I now had wandered. Philips.

Preiention of sin is one of the greatest mercies God can vouchsafe. South.

Too great confidence in success is the likeliest to pi-evert it ; because it hinders us from making the best use of the advantages which we enjoy.

Alterburp

PRE 7

Procuring a due degree of sweat and perspiration, is the best preventive of the gout. Arbuthnot.

Soon thou shalt find, if thou but arm their hands, Their ready guilt preventing thy commands ; Could’st thou some great proportioned mischief

frame,

They’d prove the father from whose loins they came.

Pope.

PREVESA, a sea-port of Albania, situated at the entrance of the gulf of Arta. It has to the north a fine plain, containing a number of olive plantations, studded with well-built houses. To the west the ground rises, and renders the shore difficult of access. The inhabitants, chiefly Greeks, enjoy certain privileges, in consequence of stipulations between Great Britain and the Porte. Prevesa is built out of the ruins of the ancient Nicopolis, situated at a small distance to the north. It has a small harbour called Vathi, and carries on a good traffic in wood, oil, and fruit. Long one of the colonial possessions of Venice, this place was ceded to the Turks at the peace of Passarowitz in 1718, and remained in their hands until 1798, when it was occupied by the French. The following year it was taken by Ali Pacha, and a part of the inhabitants cruelly massacred. Population about 8000. Forty-five miles south by west of Joannina. PRE’VIOUS, adj. > Lat. prtevius. Antece-PRE’VIOUSLY, adv.) dent; going before; prior: antecedently.

By this previous intimation we may gather some hopes, that the matter is not desperate. Burnet. Darting their stings, they previously declare

Designed revenge, and fierce intent of war.

Prior.

It cannot be reconciled with perfect sincerity, as previously supposing some neglect of better information. Fiddes.

Sound from the mountain, previous to the storm, Rolls o'er the muttering earth. Thomson.

PREVOT D'ExiLES (Anthony Francis), a learned French writer, born at Hesdin in Artois, in 1697. While he was in the convent of St. Germains he wrote the greatest part of the Memoires d'un Homme de Qualite. In 1745 he composed his Histoire Generale des Voyages. Besides writing many other original pieces, he translated Richardson's Clarissa Harlowe, and Sir Charles Grandison, into French. In 1763 being attacked with an apoplectic fit in the forest of Chantilly, and being supposed dead, the curate of the parish ordered a surgeon to open his body, when the unfortunate victim of this rash operation cried out ; but the wound was mortal. He only opened his eyes to behold his executioners, and to close them for ever.

PREY, n. s. & v. a. Fr. proie ; Lat. prada. Something to be devoured or seized ; food or wealth gotten by violence ; plunder : to prey is, to feed or live by violence ; rob ; waste.

Hog in sloth, fox in stealth ; lion in prey.

Shakspeare.

They pray continually unto their saint the commonwealth, or rather not pray to her, but prey on her : for they ride up and down on her, and make her their boots. Id.

Jove venom first infused in serpents fell, Taught wolves to prey, and stormy seas to swell.

J/oi/.

1 PRl

A garrison supported itself, by the pr□□y it took from the neighbourhood of Aylestrary. Clarendon. The whole included race his purposed prey.

Milton.

Sne sees herself the monster’s prey, And feels her heart and entrails torn away.

Dryden.

There are men of prey, as well as beasts ant] birds of prey, that live upon, and delight in blood.

L’ Estrange.

Language is too faint to show His rage of love ; it preys upon his life ; He pines, he sickens, he despairs, he dies.

Addisfm.

Pindar, that eagle, mounts the skies, While virtue leads the noble way ; Too like a vulture Boileau flies, Where sordid interest shews the prey. Prior

Their impious folly dared to prey On herds devoted to the god of day. Pope. Who stung by glory, rave, and bound away ; The world their field, and human-kind their prey.

Young.

Poor England ! thru art a devoted deer, Beset with every ill but that of fear. Thee nations hunt ; all mark thee for a prey ; They swarm around thee, and thou stand’s! at bay.

Cowper.

PRIAM, the last king of Troy, the son of Laomedon. He was carried into Greece after the taking of that city by Hercules ; but was afterwards ransomed, on which he obtained the name of Priam, Ilpui/ ioc, Greek, signifying ransomed ; his former name being Podarces. At his return he rebuilt Ilium, and extended the bounds of the kingdom of Troy, which became very flourishing under his reign. He married

Hecu-ba, the daughter of Cisseus, king of Thrace, by whom he had nineteen children; and among the rest Paris, who carried off Helen, and occasioned the ruin of Troy, which is supposed to have been sacked by the Greeks about 1184 B.C., when Priam was killed by Pyrrhus the son of Achilles at the foot of an altar where he had taken refuge, after a reign of fifty-two years.

PRI'APISM, n. s. Fr. priapisme ; Lat. pria-pismus. A preternatural tension.

Lust causeth a flagrancy in the eyes and priapism.

Bacon. The person every nighthasa priapism in his sleep.

Flayer.

PRIAPUS. [Gr. nptoTroc, item membrum virile; propter magnitudinem cujus cognomina-tus est Priapus.] In mythological painting and sculpture. The representations of this deity, held among the ancients to preside over gardens as well as over the genital parts of the sexes, are very numerous upon antique monuments, and are often found in situations which seem very inappropriate ; whence it appears that the Greeks more particularly were apt to introduce and familiarise themselves with it. It is probable that they regarded the Priapus merely as an emblem of fecundity, and attached not to it (at least deemed it unnecessary to attach to it) any indecent or lascivious meaning. See PHAL-LUS. The original worshippers of this god, however (the people of Lampsacus), have been much belied if, in the festivals they held in his honor, they did not indulge in a good deal of licentiousness and impurity.

The representations of tins nature which have a religious object are

extremely numerous, and, as well as the worship of Priapus, have been treated of at a considerable length, and depicted in the rare work of Mr. Knight, entitled an Account of the Remains of the Worship of Priapus, to which is added a Discourse thereon, as connected with the Mystic Theology of the Ancients, London, 1786, 4to.

PRICE, n. s. & v. a. Fr. pr'uc ; Lat. pratium. Equivalent paid for any thing ; value ; rate of sale ; reward : to pay for or estimate.

I will buy it of thee at a price ; neifter will I offer burnt offerings unto the Lord my God, of that which cost me nothing. 2 Samuel xxiv. 24.

Some shall pay the price of others guilt ; And he the man that made sans foy to fall, Shall with his own blood price that he hath spilt.

Spenser.

We stand in some jealousy, lest by thus over-valuing their sermons ; they make the price and estimation of scripture, otherwise notified, to fall.

Hooker.

From that which hath its price in composition, if you take away any thing, or any part do fail, all is disgrace. Bacon.

If fortune has a niggard been to thee, Devote thyself to thrift, not luxury ; And wisely make that kind of food thy choice, To which necessity confines thy price. Dryden.

Supposing the quantity of wheat, in respect to its vent, be the same, that makes the change in the price of wheat. Locke.

Sometimes virtue starves, while vice is fed ; What then I is the reward of virtue bread ? That, vice may merit ; 'tis the price of toil ; The knave deserves it, when he tills the soil. Pope.

PRICE (John), an English writer of great learning, who flourished in the seventeenth century. He resided several years at Paris, where he published some works, but returned to England in 1646. After travelling through various places, he settled at Florence, where he became a Roman Catholic, and the grand duke of Tuscany made him keeper of his medals, and professor of Greek. He published several works, in which he displayed great erudition ; and died at Rome in 1676, or, as Dr. Watkins has it, in

PRICE (Rev. Richard), D. D., LL. D., and F. R. S. of London, was born at Tynton in Glamorganshire, February 22d, 1723. His father was a dissenting minister at Bridgend in that county, and died in 1739. His mother dying in 1740, became to London and attended Mr. Eames's academy, under the patronage of his uncle, the Rev. S. Price, who was a colleague of Dr. Watts for forty years. In 1744 he went to reside with Mr. Streatfield of StoTce Newington as his domestic chaplain, while he also regularly assisted Dr. Chandler at the Old Jewry. Having lived with Mr. Streatfield nearly thirteen years, on his death he in 1757 married Miss S. Blundell of Leicestershire. He then settled at Hackney, but, being soon after chosen minister at Newington Green, he lived there until the death of his wife in 1786, when he returned to Hackney. He was next chosen afternoon preacher at the meeting house in Jewry Street, but this he resigned on being elected pastor of the gravel-pit meeting at Hackney. In February, 1791, he was attacked with a nervous fever, and the stone, and died the 19th of April, 1791. He left his property to a sister and two nephews. His universal acquaintance with the sciences, and his usual application of them to the best purposes, are well known. Dr. Kippib, in his address at his funeral, observes, that ' In consequence of his profound knowledge in mathematical calculations, he was qualified at a particular crisis for being of singular utility to his fellow citizens. A number of schemes for insurance for lives, and the benefit of survivor-ship, promising mighty advantages, were rising up in London. These ruinous schemes would have been carried to great excess had not Dr. Price stepped forward and dispelled the delusion.' With him Mr. Pitt's scheme of the sinking fund originated. When the earl of Shelburne was prime minister, he sought the assistance of Dr. Price in forming a scheme for paying off the national debt, and moved an introductory resolution on that subject in the house of lords ; but upon his being driven from office the scheme was abandoned. It was, however, communicated to the public by Dr. Price in a treatise, entitled The State of the Public Debts and Finances, at signing the preliminary Articles of Peace in January 1783 ; with a Plan for raising Money by Public Loans, and for redeeming the Public Debts. After this, when Mr. Pitt determined to introduce a bill into parliament for liquidating the national debt, he applied to Dr. Price for his advice, and received from him three separate plans ; one of which, said by the Dr. to be the least efficient in its operation, was adopted by the minister, though without the slightest acknowledgment of his obligations. See SINKING FUND. In 1763 or 1764 he was chosen F. R. S. and contributed largely to the

transactions of that learned body; in 1769 he received from Aberdeen a diploma creating him D. D. ; and in 1783 the degree of LL. D. was conferred upon him by the college of Yale in Connecticut. His works are, A Review of the Principal Question and Difficulties in Morals, 8vo., 1758; Dissertations on Providence, &c., 8vo., 1767; Observations on Reversionary Payments, Sec., 8vo., 1771 ; Appeal on the National Debt, &c., 8vo., 1773; Observations on the Nature of Civil Liberty, 1776 ; on Materialism and Necessity, in a Correspondence between Dr. Price and Dr. Priestley, 1779 ; on Annuities, Assurances, Population, &c., 8vo., 1779; on the Population of England, 1780; on the Public Debts, Finances, Loans, &c., 8vo., 1783 ; on Reversionary Payments, 2 vols., 1783 ; on the Importance of the American Revolution, 1784 ; besides Sermons, and a variety of papers in the Philosophical Transactions, on astronomical and other philosophical subjects.

PRICK, v. a., v. n. &”) Sax. pnician ; Belg.

PRICK’ER, n. s. [M.S.

PRICK’ET,

PRICK’LE, PRICK’LINESS, PRICK’LOUSE, PRICK’SONG, PRICK’LY, adj. PiucK’rrxrii, n.s.

priken; Dan. prikke; Swed. prtcka. To puncture ; pierce ; ###spur ; goad ; form with a point ; fix by or hang on a point ; nominate by a mark or punc-j ture ; note down with

a style ; mark a tune ; to pain ; pierce with anguish or remorse; make

acid: as a verb neuter, come on the spur ; dress or adorn for show : a prick is a sharp pointed instrument of any kind ; the puncture, spot, or mark, made with such an instrument ; a point ; fixed place or point of time or attainment ; print of a hare's foot ; a painful or remorseful thought : pricker, synonymous with prick, an instrument ; also (not in use) a light horseman : a pricket is a buck of the second year : prickle, a small sharp or thorny point : pricklouse, a foolish word of contempt for a tailor : pricksong, a song set to music : prickly, full of sharp points (prickliness corresponding) : prickpunch is explained in the extract.

There shall be no more a pricking brier unto the house of Israel, nor any grieving thorn.

Ezekiet xxviii. 24.

When they heard this, they were pricked in their hearts, and said, Men and brethren, what shall we do 1 Acts ii. 37.

It is hard for thee to kick against the pricks.

Id. ix. 5.

The cooks slice it into little gobbets, prick it on a prong of iron, and hang it in a furnace. Sandys.

They had not ridden far, when they might see One pricking towards them with hasty heat.

Spenser.

Now grins this goodly frame of temperance Fairly to rise, and her adorned head To prick of highest praise forth to advance. Id.

Leave her to heaven,

And to those thorns that in her bosom lodge, To prick and sting her. Shakspeare. Hamlet.

These many then shall die, their names zxeprickt.

Shakspeare.

Well, 'tis no matter, honour pricks me on ; But how if honour pricks me off, when I come on. Id. Henry JV.

The country gives me proof Of bedlam beggars, who, with roaring

voices,

Strike in their numbed and mortified bare arms Pins, wooden pricks, nails, sprigs of rosemary.

Shakspeare.

My conscience first received a tenderness, Scruple, and prick, on certain speeches uttered By the bishop of Bayon. Id. Henry VIII.

Phaeton hath tumbled from his car, And made an evening at the noontide prick.

Shakspeare.

I've called the deer, the princess killed a. pricket.

Id.

He fights as you sing pricksongs, keeps time, distance, and proportion. Id. Romeo and Juliet.

The poets make Fame a monster ; they say, look how many feathers she hath, so many eyes she hath underneath, so many tongues, so many voices, she pricks up so many ears. Bacon.

Some who are pricked for sheriffs, and are fit, set out of the bill. Id.

The prickles of trees are a kind of excrescence ; the plants that have prickles are black and white, those have it in the bough ,- the plants that have prickles in the leaf are holly and juniper ; nettles also have a small venomous prickle. Id.

Artichoaks will be less prickly and more tender, if the seeds have their tops grated off upon a stone.

Id.

If the Englisn '/rould not in peace govern them by the law, nor could in war root them out by the sword, must they not be pricks in their eyes, and thorns in their si"es ? Duties.

They had horsemen, prickers as they are termed, fitter to make excursions and to chase, than to sustain any strong charge. Hayward. For long shooting, their shaft was a cloth yard, their pricks twenty-

four score ; for strength, they would pierce any ordinary armour. Carew

If God would have had men live like wild beasts, he would have armed them with horns, tusks, talons, or pricks. Bramhall.

Before each van

Prick forth the airy knights. Milton.

They their late attacks decline, And turn as eager as pricked wine.

Hudibras.

No asps were discovered in the place of her death, only two small insensible pricks were found in her arm. Browne.

His rough crest he rears, And pricks up his predestinating ears. Dryden.

In this king Arthur's reign, A lusty knight was pricking o'er the plain. Id.

1 no more

Shall see you browzing, on the mountain's brow, The prickly shrubs. Id.

The man who laughed but once to see an ass Mumbling to make the cross-grained thistles pass, Might laugh again, to see a jury chaw The prickles of unpalatable law. Id.

A fox catching hold of a bramble to break his fall, the prickles ran into his feet. L'Estrange.

A taylor and his wife quarrelling, the woman in contempt called her husband pricklouse. Id.

Pricker is vulgarly called an awl ; yet, for joiners' use, it hath most commonly a square blade.

Moron's Mechanical Exercises. Prickpunch is a piece of tempered steel, with a round point at one end, to prick a round mark in cold iron. Moxm.

A greyhound hath pricked ears, but those of a hound hang down ; for that the former hunts with his ears, the latter only with his nose. Grew.

I caused the edges of two knives to be ground truly strait, and pricking their points into a board, so that their edges might look towards one another, and, meeting near their points, contain a rectilinear angle, I fastened their handles together with pitch, to make this angle invariable. Newton..

The tuneful noise the sprightly courser hears, Paws the green turf, and pricks his trembling ears.

Gay.

If she pricked her finger, Jack laid the pin in the way. Arbuthnot's John Bull.

Keep close to ears, and those let asses prick ; 'Tis nothing, nothing ; if they bite and kick. Pope. His high courage pricked him forth to wed. Id.

How did the humble swain detest His prickly beard, and hairy breast !

Swift's Miscellanies.

The buck is called the first year a fawn, the se-cond year a pricket. Manwood.

The flower's divine, where'er it grows ; Neglect the prickles, and assume the rose. Watts. PRIDE, n. s. & v. a. Sax. pjut or priyb ; Swed. pryd ; Goth, pried. Inordinate self-esteem ; ostentation ; splendor ; exultation ; insolence ; elevation ; dignity of manner : to make proud ; rate one's-self high.

Whose lofty trees, yclad with summer's pride, Did spread so broad, that heaven's light did hide.

Spenser.

Pride hath no other glass To shew itself, but pride ; for supple knees Feed arrogance, and are the proud man's fees.

Stinkspeare.

That which

Hath wrought this hellish nischief unawares ;

That hardly we escaped the pride of France. Id.

God hath a special indignation at pride above all sins. Bp. Hall.

Vain aims, inordinate desires,

Blown up with high conceits engend'ring pride.

Milton. Smallest lineaments exact,

In all the liveries decked of summer's pride. Id. In this array the war of either side,

Through Athens passed with military pride.

Dry den.

The honest pride of conscious virtue. Smith.

He could have made the most deformed beggar as rich as those who most pride themselves in their wealth. Government of the Tongue.

Be his this sword,

Whose ivory sheath, inwrought with curious pride, Adds graceful terror to the wearer's side. Pope.

This little impudent hardwareman turns into ridicule the direful apprehensions of the whole kingdom, priding himself as the cause of them.

Swift's Miscellanies.

Though various foes against the truth combine, Pride above all opposes her design ; Pride of a growth superior to the rest, The subtlest serpent with the loftiest crest, Swells at the thought, and, kindling into rage, Would hiss the cherub Mercy from the stage.

Cowper. Earthly things

Are out the transient pageants of an hour ;

And earthly pride is like the passing flower,

That springs to fall, and blossoms but to die.

Kirke White.

PRIDEAUX (Humphry), D. D., a learned divine, born at Padstow in Cornwall in 1648. Three years he studied at Westminster under Dr. Busby ; and then was removed to Christ Church, Oxford. Here he published, in 1676, his Marmora Oxoniensia ex Aurundelianis, Sel-denianis, aliisque conflata, cum perpetuo Com-mentario. This introduced him to the lord chancellor Finch, afterwards earl of Nottingham, who, in 1679, presented him to the rectory of St. Clements, near Oxford, and in 1681 bestowed on him a prebend of Norwich. Some years after he was engaged in a controversy with the

Papists, at Norwich, concerning the validity of the orders of the church of England, which produced his book upon that subject. In 1688 he was installed in the archdeaconry of Suffolk ; to which he was collated by Dr. Lloyd, then bishop of Norwich. In 1691, upon the death of Dr. Edward Pococke, the Hebrew professorship at Oxford, being vacant, was offered to Dr. Prideaux, but he declined it. In 1697 he published his Life of Mahomet, and in 1702 was installed dean of Norwich. In 1710 he underwent the operation of lithotomy, which interrupted his studies for more than a year. Some time after his return to London he proceeded with his connexion of the History of the Old and New Testament. He died in 1724.

PRIDEAUX (John), D.D., a learned English prelate, born at Stowford in Devonshire in 1578. His father had a numerous family, and John applied for the office of parish-clerk at Ugborow and lost it : yet, by the generosity of a friend, he was sent to the university of Oxford ; where he succeeded Dr. Holland as master of Exeter

College, in which he took his degrees. He was also regius professor of divinity, and vice-chan- cellor. In 1641 he was made bishop of Worcester, but was plundered soon after, during the troubles that followed, for having excommunicated those who had taken up arms against the king. He died in 1650. His principal works are, 1. Orationes inaugurales. 2. Lectiones decem de totidem Religionis Capitibus. 2. Fasciculus Controver-siarum. 3. Theologiae Scholasticse Syntagma Mnemonicum. 5. Sermons, 4to. 6. A Synopsis of the Councils. His son Matthias was born in 1622, and died in 1646. After his death was published, with his name, though supposed to be his father's, a work entitled An easy and compendious Introduction for reading all sorts of Histories, 4to.

PRIE, n. s. An old name of privet. ••• Johnson.

Lop poplar and sallow, elme, maple, and prie, Well saved from cattle, till summer to lie. Tusser. PRIEST, n. s. "^ Sax. pneopc ; FT. pi eslre ; PRIEST'CRAFT, a corruption of Gr. jrptff-PRIEST'ESS, [/3ur••poc ; the Span, retains

PRIEST'HOOD, \presbytero. A minister of PRIEST'LY, adj. \ religion offering sacrifices PRIEST'RIDDEN, J or prayers ; one of the second order of the English hierarchy : priestcraft is religious fraud ; art of wicked priests : priestess, a female who officiated in the heathen rites : priesthood, the office or order of priests : priestly, pertaining to, or

becoming a priest: priestridden, managed or governed by priests. The high priest shall not cover his head.

Leviticus.

There were no priests and anti-priests in opposition to one another, and therefore there could be no schism.

Lesley.

Jeroboam is reproved because he took the priesthood from the tribe of Levi. Whitgifte.

I'll to the vicar ; Bring you the maid, you shall not lack a priest.

Shakspeare.

Our practice of singing differs from the practice of David, the priests, and Levites. Peacham.

These pray'rs I thy priest before thee bring.

Milton.

He pretends that I have fallen foul on priesthood.

Dryden.

How can incest suit with holiness, Or priestly orders with a princely state ? Id.

Puzzle has half a dozen common-place topicks ; though the debate be about Douay, his discourse runs upon bigotry and priestcraft. Spectator.

These two, being the sons of a lady who was priestess to Juno, drew their mother's chariot to the temple. Id.

When too, our mighty sire, thou stood'st disarmed, When thy rapt soul the lovely priestess charmed That Rome's high founder bore. Addison.

In the Jewish church none that was blind or lame was capable of the priestly office.

South'* Sermons.

No neighbours, but a few poor simple clowns, Honest and true, with a

well-meaning priest.

Roive,

The priesthood hath in all nations, and all religions, been held highly venerable. Atterbury.

From priestcraft happily set free, Lo ! ev'ry finished son returns to thee. Pope The inferior priestess, at her altar's side, Trembling, begins the sacred rites of pride. Id.

Such a cant of high-church and persecution, and being priestridden. Swift.

Curanius is a holy priest, full of the spirit of the gospel, watching, labouring, and praying for a poor country village. Law.

The state of parents is a holy state, in some de-gree like that of the priesthood, and calls upon them to bless their children with their prayers and sacrifices to God. Id.

A PRIEST, in antiquity, was a person set apart for the performance of sacrifice, and other offices and ceremonies of religion. Before the promulgation of the law of Moses, the first born of every family, the fathers, the princes, and the kings, were priests. Thus Cain and Abel, Noah, Abraham, Melchizedec, Job, Isaac, and Jacob, offered their own sacrifices. Among the Israelites, after their exodus from Egypt, the priestly office was confined to one tribe ; and it consisted of three orders, the high-priests, priests, and Levites. The priesthood was made hereditary in the family of Aaron ; and the first-born of the oldest branch of that family, if he had no legal blemish, was always the high-priest. This divine appointment was observed with considerable accuracy till the Jews fell under the dominion of the Romans. Then, indeed, the high-priesthood was sometimes set up to sale; and instead of continuing for life, as it ought to have done, it seems to have been nothing more than a temporary office. There is sufficient reason, however, to believe that it was never disposed of but to some descendant of Aaron, capable of filling it had the older branches been extinct. In the time of David the inferior priests were divided into twenty-four companies, who were to serve in rotation, each company by itself, for a week. The order in which the several courses were to serve was determined by lot ; and each course was in all succeeding ages called by the name of its original chief.

All nations have had their priests. The Pagans had priests of Jupiter, Mars, Bacchus, Hercules, Osiris and Isis, &c. ; and some deities had priestesses. The Mahometans have priests of different orders, called mollah and mufti ; and the Indians and Chinese have their brahmins and bonzes. The church of Home, which holds the propitiatory sacrifice of the mass, has, of course, her proper priesthood. In the church of England, the word priest is retained to denote the second order in the hierarchy. Some few of her most eminent divines have maintained that the Lord's Supper is a commemorative and eucharistical sacrifice. These consider all who are authorised to administer that sacrament as in the strictest sense priests. Great numbers, however, of the English clergy, perhaps the majority, agree with the church of Scotland and with the Dissenters, in maintaining that the Lord's Supper is a rite of no other moral import than the commemoration of the death of Christ. These cannot consider themselves as priests in the rigid sense of the word, but only as presbyters, of which the word priest is a contraction of the same import with elder.

PRIESTLEY (Joseph), LL.D. F.R.S. and member of many foreign literary societies, was born March 13th, 1733, at Field-head, in Birstall parish, in the West Riding of Yorkshire.

His father was a manufacturer of cloth, and both his parents were persons of respectability among the Calvinistic Dissenters. Joseph was brought up, from an early period, in the house of Mr. Joseph Keighly, who had married his aunt. Showing an early fondness for reading, he was sent to a school at Batley, where he acquired a knowledge of the Latin, Greek, and Hebrew languages. In his nineteenth year he went to the academy at Daventry, where he became the first pupil of Dr. Ashworth, under whom he studied divinity. In 1755, his twenty-second year, he was chosen assistant minister to the Independent congregation of Needham Market, Suffolk ; and at this -time began to entertain Unitarian opinions. He also became a student and admirer of the metaphysical philosophy of Mr. Hartley, of which, during life, he continued the elucida-tor and advocate. In 1758 he was invited to be pastor of a congregation at Namptwich, in Cheshire ; where he opened a school, exhibited philosophical experiments, and drew up an English Grammar, which was his first publication. Upon the death of the Rev. Dr. Taylor, tutor in divinity at Warrmgton Academy, Dr. Aikin being chosen to supply his place, Mr. Priestley was appointed to that of

belles lettres in the doctor's room in 1761. He soon after married Mary, daughter of Mr. Wilkinson of Bersham, near Wrexham. Among the first of his publications at Warrington, were his Chart of Biography, and his Chart of History. He also published the substance of his Lectures on General History and Politics. He next published Lectures on the Theory and History of Language; and on the Principles of Oratory and Criticism. He next published his great work, the History of Electricity, wherein he gave an account of many of his own experiments. The first edition appeared at Warrington in 1767, 4to., and the fifth in 4to. in 1794. In 1 768 he accepted of an invitation from a numerous and respectable congregation at. Leeds. Here he published many tracts upon polemical theology, particularly, Institutes of Natural and Revealed Religion : and a View of the Principles and Conduct of the Protestant Dissenters. In these works he showed himself an open enemy to all unions of ecclesiastical with political systems. His next publication at Leeds was The History and Present State of Discoveries relating to Vision, Light, and Colors, 2 vols. 4to. 1772. About this period he began his celebrated experiments upon the atmospheric air. In 1770, through the recommendation of Dr. Price, the earl of Shelburne invited him to re-side with him, as his librarian. At this time his family resided at Calne in Wilts, near Bow-wood, lord Shelburne's seat. In 1775 he published his Examination of Dr. Reid's Enquiry into the Human Mind, of Di. Beattie's Essay on Truth, and Dr. Oswald's Appeal to Common Sense. His object was to prepare the way for the Hartleian Theory of the Human Mind, which he next published, wherein he expressed his doubts of the immateriality of the soul : and in 1777, notwithstanding the obloquy occasioned by this work, he published Disquisitions relating to Matter and Spirit, in which he supported the

same doctrine. At this time also he stood forth as the champion of the philosophical doctrine of Necessity. As his friend, Dr. Price, differed

from him on these two last mentioned points (as well as respecting the divinity of our Saviour), a correspondence relative to them took place, which was published in one volume. In the midst of these speculations, he carried on his experiments upon air with success, and enriched the science of chemistry with various discoveries.

About this period his Institutes of Religion were continued ; his Letters to a Philosophical Unbeliever, and his Harmony of the Evangelists, and various similar tracts were published. The term of his engagement with lord Shelburne being concluded, and his lordship allowing him an annuity of ––150, he took up his residence near Birmingham, not only on account of the advantage its manufactures afforded to his chemical pursuits, but also because of its being the residence of Messrs Watt, Bolton, Keir, Withering, and other eminent men of science. He was soon after invited to be pastor to a congregation of Dissenters at Birmingham, whom he found cordially attached to him. From the Birmingham press issued his Letters to Bishop Newcome on the Duration of Christ's Ministry; his History of the Corruptions of Christianity ; and his History of Early Opinions Respecting Jesus Christ. Controversies now multiplied upon his hand. The disputes which took place upon the Dissenters' bill for relief from the test act furnished a new subject of contest ; and he appealed to the people in his Familiar Letters to the Inhabitants of Birmingham. Previously to this Dr. Priestley had shown his attachment to freedom, by his Essay on the First Principles of Government, and by a pamphlet on the State of Public Liberty in this Country ; and he had displayed a warm interest in the cause of America, when the disputes between Britain and her colonies broke out. The French Revolution was also viewed by him with satisfaction. His sanguine hopes, as well as those of many others, prognosticated from it the dawn of light and liberty throughout Europe ; and he particularly expected from it the downfall of all ecclesiastical establishments. In this state of party exasperation, the celebration of the 14th of July, 1791, by a public dinner, at which Dr. Priestley was not present, afforded the signal for those savage riots which disgraced the town of Birmingham. Amidst the burning of chapels and private houses. Dr. Priestley was hunted like a proclaimed criminal; and his house, library, MSS. and chemical apparatus, were destroyed. Driven from his favorite residence, his losses were but poorly compensated. After passing some time as a wanderer, an invitation to succeed Dr. Price afforded him a new settlement at Hackney, where he expected to have ended his days in quiet ; but he received an intimation of high authority that if he did not voluntarily leave the country the executive government would proceed against him. He therefore resolved to embark for America, and, accordingly,

in .1794 arrived with his family at Northumberland, an inland town of Pennsylvania. In the

United States he was received with general re-fpect ; and was offered the place of Chemical Professor at Philadelphia, but declined it. Having collected a new apparatus and library, lie resumed his experiments, and published the results in the American Philosophical Transactions, wherein he continued to defend the doctrine of Phlogiston to the last. He also published a comparison of the Jewish with Mahometan and Hindoo religions. He even commenced the printing of two extensive works ; *viz.* a Church History, and an Exposition of the Scriptures ; but did not live to finish them ; though he urged it upon his surviving friends. He also composed, transcribed, and left in MS. ready for the press, A Comparison of the different Systems of Grecian Philosophy with Christianity. His health began to decline in 1801 ; but his intellectual powers, continued unimpaired to the last ; in so much that he dictated some corrections of his unfinished works the last day of his life. He died on the 9th of February, 1 804, between eight and nine P. M. with much calmness. Dr. Aikin thus sums up his character : ❓❓❓ ‘ He was naturally disposed to cheerfulness. In large and mixed companies he usually spoke little. In his domestic relations he was uniformly kind and affectionate, and not malice itself could ever fix a stain on his private conductor impeach his integrity.’

PRIG, n. s. A cant word derived from prick ; as, he pricks up, he is pert ; or from prickeared, an epithet of reproach bestowed upon the presbyterian teachers of the commonwealth. A pert, conceited, pragmatical fellow.

The little man concluded, with calling monsieur Mesnager an insignificant prig. Spectator.

There have I seen some active prig, To shew his parts, bestride a twig.

Swift’s Miscellanies.

PRILUKI, a town of European Russia, in the government of Poltava. It stands on the river Udai, and has 2500 inhabitants, who carry on a traffic in corn, cattle, horses, and silk. Eighty miles S. S. E. of Czernigov, and 128 W. N. W. of Poltava.

PRIM, adj. By contraction from primitive. Formal ; precise ; affectedly nice.

A ball of new-dropt horse's dung iVIingli::g with apples in the throng, Said to the pippin, plump and prim, See, brother, how we apples swim.

Swift's Miscellanies.

PRIMˆE Vis., in medicine, a name some times given to the whole alimentary canai.

PRI'MATE, n. s. } Fr. primal ; Lat. primus.

PRI'MARY. $ A chief ecclesiastic : the

station of a primate.

We may learn from the prudent pen of our most reverend primate, eminent as well for promoting unanimity as learning. Holyday.

When he had now the primacy in his own hand, he thought he should be to blame if he did not apply remedies. Clarendon.

When the power of the church was first established, the archbishops of Canterbury and York had then no preeminence one over the other ; the former being primate over the southern, as the latter was over the northern parts. Aylifft.

The late and present primate, and the Jord arch—

oishop of Dublin, have left memorials of their

aounty. Swift.

PRI'MARY, adj. ~\ Lat. primarius.

PRI’MAL, } First ; chief; prin—

PRI’MARILY, adv. cipal : primal is a

PRI’MARINESS, n. s. ! poetical word of

PRIME, n. s., adj., & v. a. (the same significa—

PRIME’LY, adv. i tion : primarily,

PRIME’NESS, n. s. | originally; in the

PRI’MER. J first place : the

noun substantive corresponding : prime is the

first part of the day ; the beginning ; best or chief

part; spring or height of life or health; spring

of the year ; height of perfection : as an adverb,

early ; principal ; first rate ; blooming ; original :

to prime is, apply the first coat of paint ; put in

first powder, or the powder into the pan of a

gun : primely and primeness correspond with

prime, as an adjective : primer is an obsolete

word for first ; original.

His ‘larum bell might loud and wide be heard When cause required, but never out of time ; Early and late it rung at evening and at prime .

Spenser.

Make haste, sweet love, while it is prime, For none can call again the passed time. Id. Quickly sundry arts mechanical were found out in the very prime of the world. Hooker.

Will she yet debase her eyes on me, That cropt the golden prime of this sweet prince, And made her widow to a woful bed ? Shakspeare.

We smothered

The most replenished sweet work of nature, That from the prime creation e’er she framed. Id.

We are contented with

Catharine our queen, before the primest creature That’s paragoned i’ the’ world. Id.

It hath been taught us from the primal state, That he, which is, was wished, until he were. Id.

Before that beginning, there was neither primarily matter to be informed, nor form to inform, nor any being but the eternal. Raleigh.

4s when the primer church her councils pleased

to call, Great Britain’s bishops there were not the least of

all. Dray ton.

The figurative notation of this word, and not the primary or literal, belongs to this place. Hammond.

Divers of prime quality, in several counties, were, for refusing to pay the same, committed to prison.

Clarendon. Sure pledge of day that crown’st the smiling

morn

With thy bright circlet, praise him in thy sphere ###Vhile day arises, that sweet hour of prime. Milton.

Nor can I think that God will so destroy Us his prime creatures dignified so high. Id. Nature here wantoned as in her prime. Id.

In fevers, where the heart primarily suffereth, we apply medicines unto the wrists.

Browne’s Vulgar Errours.

The church of Christ, in its primary institution, was made to be of a diffusive nature, to spread and extend itself. Pearson.

i Hope waits upon a flowery prime, And summer, though it be less gay,

Yet is not looked on as a time Of declination or decay. Waller.

A pistol of about a foot in length, we primed with well dried gunpowder. Boyle.

Short were her marriage joys ; for, in the prime Of youth, her lord expired before his time. Dryden.

Humility and resignation are our prime virtues.

Id.

Moses being chosen by God to be the ruler of his people, will not prove that priesthood belonged to Adam's heir, or the prime fathers. Locke.

These I call original or primary qualities of body, which produce simple ideas in us, \h. solidity, extension, figure and motion. id.

That which is peculiar must be taken from the primariness and secondariness of the perception.

Norrif.

When the ruins both primary and secondary were settled, the waters of the abyss began to settle too.

Burnet.

Words signify not immediately and primely things themselves, but the conceptions of the mind about them South.

Nought treads so silent as the foot of time : Hence we mistake our autumn for our prim*. Young.

That little orb in days remote of old, When angels yet were young, was made for man. And titled earth, her primal virgin name. Pollok.

PRIMATE (primas regni, head of the kingdom) ; in the European states, the chief archbishop in the state, and the first subject of the realm; in the Catholic church, the primate is also perpetual legate of the pope, and has a sort of spiritual jurisdiction over the other archbishops. There are also primates of provinces. The archbishop of Toledo is primate of Spain ; the archbishop of Braga is styled primate of Portugal, although he is actually inferior to the patriarch of Lisbon.

In England, the archbishop of Canterbury is styled primate of all England, and the archbishop of York primate of England. In the Irish church, the archbishop of Armagh is primate of all Ireland ; the archbishop of Dublin primate of Ireland ; the archbishop of Cashel, primate of Munster; and the archbishop of Tuam, primate of Connaught. In the German em-pire, the archbishop of Salsburgh was primate of Germany. In France, the archbishop of Lyons is primate of France ; that of Bourges, primate of Aquitania, and that of Rheims, of Normandy. In Hungary, the archbishop of Gran is primate ; in Poland, the archbishop of Gresen.

PRIME, in fencing, is the first of the chief guards. See FENCING.

PRIME FIGURE, in geometry, one which can-not be divided into any other figures more sim-ple than itself, as a triangle among planes, and the pyramid among solids.

PRIME VERTICAL is that vertical circle which passes through the poles of the meridian, or the east and west points of the horizon ; whence dials projected on the plane of this circle are called prime vertical or north and south dials.

PRIM'ER, n. s. A small prayerbook in which children were taught to read, so named from the Romish book of devotions ; an elementary book ; an office of the Virgin Mary.

Another prayer to her is not only in the manual, but in the primer or office of the bltssed Virgin.

Stil lint/feet.

The Lord's prayer, the creed, and ten commandments he should learn by heart, not by reading them himself in his primer, but by somebody's repeating them before he can read. Locke.

PRIMER SEASIN, in feudal law, was a feudal burden, only incident to the king's tenants in

capite, and not to those who held of inferior or mesne lords. ††† It was a right which the king had when any of his tenants in capite died, seized of a knight's fee, to receive of the heir (provided he were of full age), one whole year's profits of the lands if they were in immediate possession, and half a year's profits if the lands were in reversion expectant on an estate for life. This seems to be little more than an additional relief, but grounded upon this feudal reason, that, by the ancient law of feods, immediately upon the death of a vassal, the superior was entitled to enter and take seisin or possession of the land, by way of protection against intruders, till the heir appeared to claim it, and receive investiture ; and, for the time the lord so held it, he was entitled to take the profits ; and, unless the heir claimed within a year and day, it was by the strict law a forfeiture. This practice, however, seems not to have long obtained in England, if ever, with regard to tenures under inferior lords ; but, as to the king's tenures in capite, this prima seisina was expressly declared under Henry III. 'and Edward. II. to belong to the king by prerogative, in contradistinction to other lords. And the king was entitled to enter and receive the whole profits of the land, till livery was sued ; which suit being commonly within a year and day next after the death of the tenant, therefore the king used to take at an aveiage the first-fruits, that is to say, one year's profits of the land. And this afterwards gave a handle to the popes, who claimed to be feudal lords of the church, to claim in like manner from every clergyman in England the first year's profits of his benefice, by way of primitiae, or first fruits. ††† All the charges arising by primer seisin were abolished by 12 Car. II. c. 24.

PRIME'RO, n. s. Span, primero. A game at cards.

I left him at primero

With the duke of Suffolk.

Shakspeare. Henry VIII.

PRIME'VAL, adj. > Lat. primavus. On—

PRIME'VOCS.] ginal ; such as was at first.

All the parts of this great fabric change, Quit their old stations and

primeval frame, And lose their shape, their essence, and their name.

Priw. Immortal dove,

Thou with almighty energy didst move,

On the wild waves incumbent didst display

Thy genial wings, and hatch primeval day.

Blackmore. Thou, who didst put to flight

Primeval silence, when the morning stars,

Exulting, shouted o'er the rising ball. Young.

PRIMING, among painters, signifies the lay-ing on of the first color.

PRIMING, in gunnery, the train of powder that is laid, from the opening of the vent, along the gutter or channel on the upper part of the breech of the gun : which, when fired, conveys the flame to the vent, by which it is further communicated to the charge, in order to fire the piece. This is only used on shipboard at the proof, and sometimes in garrison; for, on all other occasions, tubes, are used for that purpose.

PRIMING WIRE, in gunnery, a sort of iron needle employed to penetrate the vent or touch-

hole of a piece of ordinance when it is lot led, in order to discover whether the powder contained therein is thoroughly dry and fit for immediate service ; as likewise to search the vent, and penetrate the cartridge, when the guns are not loaded with loose powder.

PRIMIPILUS, in antiquity, the centurion of the first cohort of a legion, who had the charge of the Roman eagle. This officer also went un-der the several titles of dux legionis, praefectus legionis, primus centurionum, and primus centurio ; and was the first centurion of the triarii in every legion. He presided over all the other centurions, and generally gave the word of command by order of the tribunes. Having the care of the eagle, or chief standard of the legion, aquilae praeesse was used for the dignity of pri-mipilus ; and hence aquila is used by Pliny for that office. Nor was this station honorable only, but also very profitable ; for he had a special stipend allowed him, and, when he

left that charge, was reputed equal to the members of the equestrian order, bearing the title of primipi-larius, as those who had discharged the greater civil offices were styled ever after consulares, censorii, &c.

PRIMITIVE, the first-fruits gathered of the earth, whereof the ancients made presents to the gods.

PRIMITIVE, adj. ˆ Fr. primitif; Lat.

PRIM'ITIVELY, adv. fprimitivus. Ancient;

PRIM'ITIVENESS, n. s. j original ; from the beginning : formal ; precisely grave : the adverb and noun substantive correspond.

Their superstition pretends, they cannot do God greater service than utterly to destroy the primitive apostolic government of the church by bishops.

King Charles.

The scripture is of sovereign authority, and for it-self worthy of all acceptation. The latter, namely the voice and testimony of the primitive church, is a ministerial, and subordinate rule and guide, to preserve and direct us in the right understanding of the scriptures. White.

Our primitive great sire to meet His godlike guest, walks forth. AHlton.

Solemnities and ceremonies, primitively enjoined, were afterward omitted, the occasion ceasing.

Browne.

The doctrine of purgatory, by which they mean an estate of temporary punishments after this life, was not known in the primitive church, nor can be proved from scripture. Tillotsoii.

David reflects sometimes upon the present form of the world, and sometimes upon the primitive form of it. Burnet.

The purest and most primitively reformed church in the world was laid in the dust. South.

His memory was large and tenacious, yet, by a. curious felicity, chiefly susceptible of the finest impressions it received from the best authors he read, which it always preserved in their primitive strength and

amiable order. Johnson.

PRIMOGE’NIAL,a$. > Lat. primigenius.

PRIMOGENITURE, n. s. J Firstborn ; original ; primary; constituent : primogeniture is seniority ; eldership.

Are we so foolish, that, while we may sweetly en-joy the settled estate of our primogeniture, ××e will needs bring upon ourselves the curse of Reuben ?

Bp. Hull.

PRI ‘i

The primogenial light at first was diffused over die face of the xinfashioned chaos. Glam-ille.

Because the scripture affordeth the priority of order unto Shem, we cannot from hence infer his primogeniture. Browne.

It is not easy to discern, among many differing substances obtained from the same matter, what primogenial and simple bodies convened together compose it. Boyle.

The first or primogenial earth, which rose out of the chaos, was not like the present earth. Burnet.

The first provoker has by his seniority and primogeniture a double portion of the guilt.

Government of the Tongue.

PRIMOGENITURE, the right of the first born, has among most nations been very considerable. The first-born son in the patriarchal ages had a superiority over his brethren, and in the absence of his father was priest to the family. Among the Jews he was consecrated to the Lord, had a double portion of the inheritance, and succeeded in the government of the family or kingdom. But if a woman’s first child was a girl, neither she, nor the children that came after her, were consecrated. In every nation of Europe, the right of primogeniture prevails in some degree at present, but it did not prevail always. The law which calls the first-born to the crown, preferably to the others, was unknown to the first race of French kings, and even to the second.

It was not till the end of the tenth century, under the race of Hugh Capet, that the prerogative of succession to the crown was appropriated to the first-born. By the ancient custom of gavel-kind, still preserved in some parts of our island, primogeniture is of no account ; the paternal estate being equally shared by all the sons. And it has been a matter of violent and learned dispute, whether, at the death of Alexander III. Baliol or Bruce was, by the law as it then stood, heir to the crown of Scotland. The former had undoubtedly the right of primogeniture, but the latter stood in one degree of nearer relation to the deceased sovereign ; and the Scottish barons, not being able to determine whose claim was best founded, referred the question to Edward I. of England, and thereby involved their country in a long and ruinous war.

PRIMOR'DIAL, adj. Fr. primordial ; Lat. primordium. Original; existing from the beginning.

The primordials of the world are not mechanical, but spermatical and vital. More.

Salts may be either transmuted or otherwise produced, and so may not be primordial and immutable beings. Boyle.

Not every thing chymists will call salt, sulphur, or spirit, that needs always be a primordiate and in-generable body. Id.

PRIMORIE, a hilly district of Austrian Dal-Jnatia, between the Cettina and Narenta. It produces wine, oil, and figs. The chief town is Macarsca. This district was called Dalmatia by the Romans, and by the Greeks Parathalassia. Inhabitants 15,000.

PRIM'ROSE, n. s. & adj. Lat. primula veris. A flower that appears early in the year: gay; flowery.

I had thought to have let in some of all professions, that go the primrose way to the everlasting bonfire. Shakspeare.

> PRI

Pale primroses,

That die unmarried ere they can behold Bright Phoebus in his strength.

Shakspeare. Winter*! Ta.t.

There followeth, for the latter part of January, primroset, anemonies, the early tulip.

Bacon’s Essays.

How pleasant thy banks and green valleys below, Where wild in the woodlands the primroses blow; There, oft as mild evening weeps over the lea, The sweet-scented birk shades my Mary and me.

Burns.

PRIMROSE, in botany. See PRIMULA. PRIMULA, the primrose, a genus of the monogynia order, and pentandria class of plants ; natural order twenty-first, precise. The invo-lucrum lies under a simple umbel ; the tube of the corolla is cylindrical ; with the mouth or limb patulous. This genus, including also the polyanthus and auricula, furnishes an excellent collection of low, herbaceous, flowery perennials.

1 . P. auricula has a thick fibrous root, crowned by a cluster of oblong, fleshy, broad, serrated, smooth leaves, resembling the shape of a bear’s ear ; and amidst them upright flower stalks from about three or four, to six or eight, inches high, terminated by an umbellate cluster of beautiful flowers, of many different colors in the varieties. All of these have a circular eye in the middle of each flower, and of which there are different colors ; whence the auriculas are distinguished into yellow-eyed, white-eyed, &c. The petals of most of the kinds are powdered with an exceedingly fine farina, which contributes greatly to the beauty of the flower. They all flower in April or May, continuing a month or six weeks in beauty, and ripening plenty of seeds in June.

2. P. polyanthus has thick fibrous roots, increasing into large bunches, crowned with a cluster of large oblong, indented, rough leaves ; amidst them upright flower-stalks six or eight inches high, terminated mostly by a cluster of several spreading flowers of many different colors in the varieties. They all flower beautifully in April and May, and frequently again in autumn ; and sometimes even in winter, if the season is mild. The polyanthus is one of the noted prize flowers among the florists ; many of whom are remarkably industrious in raising a considerable variety of different sorts, as well as in using every art to make them blow with all requisite perfection. The chief properties required in a florist’s polyanthus are ††† 1 . The stem or

flower-stalk should be upright, moderately tall, with strength in proportion, and crowned by a good regular bunch of flowers on short pedicles, strong enough to support them nearly in an upright position. 2. The florets of each branch should be equally large, spreading open flat, with the colors exquisite, and the stripes and variegations lively and regular. 3. The eye in the centre of each floret should be large, regular, and bright ; and the antherse, by the florists called the thrum, should rise high enough to cover the mouth of the tube or hollow part in the middle of the florets, and render them what they call thrum-eyed ; but, when the style elevates the stigma above the antherae, the eye of the tube generally appears hollow, showing the stigma in the middle, like the head of a pin, and

is rejected as an incomplete flower, though its other properties should be ever so perfect. This pin-eyed polyanthus, however, though rejected by the florists, is the flower in its most perfect state, and great numbers of them are of as beautiful forms and colors as the thrum-eyed varieties.

3. P. veris, the spring primrose, has thick and very fibrous roots, crowned by a cluster of large oblong indented rough leaves, and numerous flower-stalks, from about three or four, to five or six, inches high ; each terminated commonly by one flower. All the varieties flower abundantly in March and April, and continue for a month or six weeks. The cowslip primrose, or cowslip, or oxlip, has very thick fibrous roots, cjowned by a cluster of oblong, indented, round, leaves, and upright, firm, flower-stalks five or six inches high, terminated each by a cluster of small flowers. They flower in April or May, continuing in succession a month or six weeks. All the varieties of the common spring primrose multiply so fast by the roots that it is scarcely worth while to raise them from seeds. However, though many single kinds may be raised from seed, yet parting the roots is the only

method by which the double kind can be preserved ; and the same thing is to be observed of all the rest.

PRINCE, n.s.&v.n.ˆv Fr. prince; Lat.priw—

PRINCE’DOM, n. s. jeeps. A sovereign; a

PRINCE’LIKE, adj. > chief ruler of either

PRINCE’LY, I sex ; the son of a king :

PRIN’CESS, n. s. J to play the prince: princedom is the rank or state of a prince ; Wicliff uses ‘ prynshood/ see the extract : prince-like, becoming a prince : princely, having the rank of princes ; befitting that rank; royal ; grand ; sumptuous : princess, the feminine of prince.

He reseruyde undir derknesse aungelis that kepten not her prynshood, but forsooken their hous into the doom of the gret God, into euerlastinge boondis.

Wiclif. Judas i.

A prince of great courage and beauty, but fostered up in blood by his haughty father. Sidney.

Meaning only to do honour to their princely birth, they flew among them all. Id.

Next Archigald, who, for his proud disdain, Deposed was from princedom sovereign. Spenser.

Heaven forbid that such a scratch should drive The prince of Wales from such a field as this.

Shakspeare. Nature prompts them,

In simple and low things, to prince it, much

Beyond the trick of others. Id. Cymbeline.

Here the bracelet of the truest princess That ever S’vore her faith. Id.

The wrongs he did me were nothing princelihe.

Shakspeare. Be opposite all planets of good luck

To my proceeding ; if with pure heart’s love

I tender not thy1 beauteous princely daughter.

Id.

Queen Elizabeth, a prince admirable above her sex for her princely virtues. Camden.

Many townes of princely youths he leveled with the ground. Chapman.

To use the words of the prince of learning hereupon, only in shallow and small boats they glide over the face of the Virgilian sea. Peacham.

Coelestial ! whether among the thrones, or named Of them the highest ; for such of shape may seem Prince above princes. Milton's Paradise Lost.

Under thee, as head supreme, Thrones, princedoms, powers, domimons, I reduce.

Milton. Princely counsel in his face yet shone. Id.

I expressed her commands To mighty lords and princely dames. Waller. Forces come to be used by good princes, only upon necessity of providing for their defence. Temple.

Ask why God's anointed he reviled ; A king and princess dead. Dryden.

Esau founded a distinct people and government, and was himself a distinct prince over them. Locke.

Had we no histories of the Roman emperors, but on their money, we should take them for most virtuous princes. Additon.

God put it into the heart of one of our princes, towards the close of her reign, to give a check to that sacrilege. Atterbury.

Princess adored and loved, if verse can give A deathless name, thine shall for ever live.

Granville.

Our tottering state still distracted stands, While that prince threatens, and while this commands. Pope. Under so excellent a princess as the

present queen, we suppose a family strictly regulated. Swift.

Happy those princes, who are educated by men who are at once virtuous and wise, and have been for some time in the school of affliction ; who weigh happiness against glory, and teach their royal pupils the real value of fame. Goldsmith.

PRINCE also denotes a person who is a sovereign in his own territories, yet holds of some other as his superior. Also the issue of princes, or those of any royal family. In England the king's children are called sons and daughters of England ; the eldest son is created prince of Wales ; the cadets are created dukes or earls as the king pleases ; and the title of all the children is royal highness ; all subjects are to kneel when admitted to kiss their hand, and at table out of the king's presence they are to be served on the knee. See ROYAL FAMILY.

PRINCE FREDERICK'S SOUND, an inlet of the North Pacific Ocean, on the west coast of North America ; so named by Vancouver in honor of the late duke of York. Long. 225►► 42' to 227►► 20', lat. 56►► 52' to 57►► 12' N.

PRINCE OF THE SENATE, in ancient Rome, the person who was called over first in the roll of senators, whenever it was renewed by the censors : he was always of consular and censorian dignity.

PRINCE OF WALES'S ARCHIPELAGO, a large island of the North Pacific Ocean, surrounded by a number of smaller ones, chiefly in the bays on its coast. They lie in long. 226►► 20' to 228►► 26', and lat. 54►► 42' to 56►► 21' N., and were so called by Vancouver.

PRINCE OF WALES'S, PULO PINAKO, or BE-TEL NUT, ISLAND, an island off the west coast of the Malay peninsula, from which it is separated by a narrow strait, about two miles broad, which forms the harbour, and affords excellent anchorage for the largest ships. There is also an inner harbour, where ships may receive all repairs that can be performed without going into dock. The principal entrance into the harbour is from the north-west; but there is also a fine channel to the southward. Here is always at least four fathoms, or four fathoms and

a half of water, but it deepens within to fourteen fathoms. The south channel is obstructed by mud banks, but which are buoyed, and leave

a safe channel with three fathoms and a half.

The island is five leagues long, and two to three broad. On the north-west it rises in high hills, covered with large trees ; on the east side is an extent of level ground well-cultivated. The island has two rivers considerable for its size That called Paz winds through the level part of the island for twenty miles ; its mouth is crossed by a mud bank with twelve feet in the springs, but boats can ascend it a considerable way. The second river, called Taloo Moodoo, is a rapid torrent stream that often overflows ; its mouth is crossed by a sand bank.

Fort Cornwallis is situated on the north-east point of the island, and, though considerable sums have been expended on it, is little more than a sufficient defence againt the Malays, and is incapable of any resistance to a regular attack by European tactics. The town, named George Town by the English, and Panjang Panaique by the Malays, is of considerable extent ; the streets wide and straight, with many good houses. A river runs close past it, and it has a good wharf for loaded boats, to which water is conveyed by pipes. A government house, a jail, a church, and several bridges have been latterly built, and other improvements executed.

Pulo Pinang was granted by the king of Queda, 1787, to captain Light, who married his daughter, and who transferred it to the East In-dia Company. Its situation rendering it an eligible rendezvous for the British China trade, as well as a retreat for the king's ships when obliged to quit the Coromandel coast in the monsoon, a small detachment of troops was sent from Bengal to occupy it ; and several English merchants, engaged in the Malay trade, making it their depot, it rapidly increased in population, particularly by the arrival of Chinese and Malays. In 1 805 it was erected into a separate government, and a large establishment appointed to it. In 1801 the population was 10,000, exclusive of Europeans and military; of those 2000 are Chinese, who chiefly follow the mechanical trades and shopkeeping, while the Malays, who constitute the mass of the remaining population, cultivate the soil, and chiefly pepper, rice, areca, and cocoa palms.

Though situated within five degrees of the equator, the climate of Prince of Wales's Island is remarkably temperate: the sea breeze that blows regularly throughout the day moderates the heat, and the vapors collected by the woody mountains condense in the night in heavy dews, that perpetuate a verdant herbage, unknown in southern India. One of the mountains rises with a steep ascent to a considerable elevation, and on its summit, which forms a platform of forty yards in

diameter, is a signal-house. The thermometer at this elevation seldom rises above 75►►, and in the night falls to 60►►. At the town the extremes are 85►► and 75►►. Among several waterfalls which this beautiful island possesses, one in particular attracts the notice of travellers, by its wildly picturesque ef-fect : it precipitates itself down a rocky precipice VOL. XVIIT.

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into a natural basin, surrounded by perpendicular walls of rock, whose craggy projections are covered with lofty trees and evergreen shrubs, and forming a fit retreat for Diana and her nymphs, or for Thomson's more interesting Mu-sidora,

To taste the lucid coolness of the flood.

Pinang has no beasts of prey, nor any wild quadrupeds but wild hogs, the little animal named hog-deer, and the bandicoot, a species of rat. Alligators are very numerous, and the termites, or white ants, are here peculiarly destructive, Pinang is abundantly supplied with poultry from the opposite coast, whence are also brought buffaloes for draft, and horses are procured from Sumatra. The sheep for the tables of the English come from Bengal. Fruits are in extreme plenty, particularly pine-apples, which grow wild, shaddocks, oranges, limes, &c.

The harbour abounds in fish, principally of the flat kind. The rocks are covered with a delicate small oyster, and on the banks, before the entrance of the rivers, common oysters are found. In short there is nothing wanting to render this island the most pleasant residence in India. A building-yard has been established at Pinang, and a ship of war and Indiaman of 1000 tons have been built here, the principal part of the timber being brought from Pegu. The rise of tide is nine feet. The value of the goods imported hither in 1807 from England amounted to ►►76,000 ; in 1810 to ►►38,253. Large quantities of Bengal and Madras piece-goods are imported for the Malay trade, and the consumption of European residents. Other imports are opium, grain, tobacco, red wood, sandal-wood, shark-fins, myrrh, pepper, rice, betel-nut, ben-zoin, camphor, gold dust, elephants' teeth, &c. A great many of these commodities are re-ex- ported to Sumatra, Junk Ceylon, and the other Indian islands; also to China, to Bengal, and Coromandel. Long, of the north-east point 100►► 19' E., lat. 5►► 25' N.

PRINCE’S ISLAND, a low woody island in the Eastern Seas, off the north-western extremity of Java, at the distance of about two leagues, and six from Sumatra. On the south-west side is a bay, into which two small fresh-water rivulets flow. There has of late been a town erected here, called Samadang, consisting of about 400 houses, and this island was formerly much frequented by the Indian ships of many nations. Here may be had some excellent turtle and fowls, and deer, besides all the usual vegetable production of the neighbourhood. Long 105►► 15’ E., lat. 6►► 25’ S.

PRINCE’S ISLAND, an island in the gulf of Benin, and Bight of Biafara, about 100 miles off the coast of West Africa. It is ninety miles in circumference, and is fertile in rice, tobacco, millet, manioc, sugar-canes, and fruits. It was discovered and settled by the Portuguese in 1471. On the north coast there is a town with a good harbour, containing about 200 houses. Long. 7►► 10’ E., lat. 1►► 50’ N.

PRINCE’S ISLANDS, four small islands inhabited by the (Greeks, in the sea of Marmora, nea-the straits of Constantinople, being only

about twenty miles from that capital, called Prinkipo, Prote, Kalke, and Antigone. They are situated near the entrance of the gulf of Nicomedia, and are frequently resorted to from Constantinople.

PRINCE WILLIAM HENRY’S ISLAND, an island in the East Indian Ocean, W. N. W. of Tench’s Island, about seventy miles in circumference; discovered by Ball and Philip in 1790. It is fertile, and inhabited by naked savages, who, however, have houses, canoes, &c. There is a high mountain in the centre, called St. Philip. Long. 149►► 30’ E., lat. 1►► 32’ S.

PRINCE WILLIAM HENRY'S ISLAND, an island in the South Pacific Ocean, discovered in 1767, by Captain Wallis.

PRINCE WILLIAM'S SOUND, a name given by captain Cook, in 1778, to an inlet of the sea on the north-west coast of America ; which occupies at least two degrees of longitude and one and a half of latitude, exclusive of its arms and branches, the extent of which is unknown.

From this sound or bay the name has been extended to a considerable territory on the coast. The men, women, and children, are all clothed in a sort of close frock, or robe, which sometimes reaches only to the knees, but generally down to the ancles. These frocks are composed of the skins of various animals, and commonly worn with the hairy side outwards. The men often paint their faces of a black color, and of a aright red, and sometimes of a bluish or leaden hue ; but not in any regular figure. The women puncture and stain the chin with black, that comes to a point in each cheek. Their canoes are of two sorts ; the one large and open, the other small and covered. The framing consists of slender pieces of wood, and the outside is composed of the skins of seals, or sea animals, stretched over the wood. Their weapons, and implements for hunting and fishing, are the same as those used by the Greenlanders and Esqui-maux. Many of their spears are headed with iron, and their arrows are generally pointed with bone. The food they were seen to eat was the flesh of some animal, either roasted or broiled, and dried fish. Some of the former that was purchased had the appearance of bear's flesh. They also eat a larger sort of fern-root, either baked, or dressed in some other method. Their drink is water ; in their canoes, they brought snow in wooden vessels, which they swallowed by mouth-fuls. The skins, that were brought by the natives for sale, were principally of bears, common and pine martins, sea otters, seals, racoons, ermines, foxes, and whitish cats or lynxes. The birds were the halcyon, or great king's fisher, which had fine bright colors ; the white headed eagle, and the humming bird. The fish brought to market for sale were chiefly torsk and halibut. The rocks were almost destitute of shell-fish ; and the only other animal of this tribe that was observed was a reddish crab, covered with very large spines. Few vegetables of any kind were observed ; and the trees that chiefly grew about this sound were the Canadian spruce pine, some of which were of a considerable size. Vancouver visited this sound in 1794, and says ' after a minute examination we \vere empowered to

make of Prince William's Sound, we were not only made acquainted

with its utmost limits in every direction, but proved it to be a branch of the ocean that requires the greatest circumspec-tion to navigate; and, although it diverges into many extensive arms, yet none of them can be considered as commodious harbours, on account of the rocks and shoals that obstruct the approach to them, or of the very great depth of water at or about their entrances : of the former, innumerable bave been discovered, and there is great reason to suppose that many others may have existence, of which we gained no knowledge. By what may be collected from our enquiries, Snug-corner Cove, and the passage to it from the ocean, seem to be the least liable to these objections of all places of shelter which the sound affords.' Long. 147►► W., lat. 20►► to 61►► N.

PRINCE?S ROYAL ISLANDS, a considerable group of islands on the western coast of North America, east of Queen Charlotte's Islands, between Pitt's Archipelago and Fitzhugh's Sound. They were first visited by Mr. Duncan who found a navigable channel between them, and afterwards more fully explored by Vancouver.

PRIN'CIPAL, adj. & n. s. \ Fr. principal ;

PRINCIPALITY, ►► Lat. principalis.

PRINCIPALLY, adv. j Chief; princely ;

first ; important : a head or chief; one primarily engaged ; a capital sum of money : principality is sovereignty ; superiority ; one invested with sovereignty or great power ; predominance; the country giving title to a prince : principally, chiefly ; above the rest ; above all the rest.

I am certeyn that neithir deeth, neither lyf, neithir aungelis, neithir principalis, neithir vertues

mai departe us fro the charite of God that is

in lesu Crist oure Lord. Wiclif. Rom. 8.

Divine lady, who have wrought such miracles in me, as to make a prince none of the basest, to think all principalities base in respect of the sheep-hook.

Sidney.

Suspicion of friend, nor fear of foe, That hazarded his health, had he at all ; But walked at will, and wandered to and fro, In the pride of his

freedom principal. Spenser.

Nothing was given to Henry but the name of king ; all other absolute power of principality he had. Id.

This latter is ordered, partly and as touching principal matters by none but precepts divine only ; partly and as concerning things of an inferior regard by ordinances, as well human as divine. Hooker.

Can you remember any of the prit^ipal evils that he laid to the charge of women 1 Shahpeare.

Thou wilt not only lose the forfeiture,

But, touched with human gentleness and love,

Forgive a moiety of the principal. Id.

Yet let her be a principality,

Sovereign to all the creatures on the earth. Id.

Seconds in factions, do many times, when the faction subdivideth, prove principals. Bacon.

In the chief work of elements, water hath the principality and excess over earth.

Digby on Bodies. Nisroch of principalities the prime. MUtor.

PRINCETON; a post-town of New Jersey, 10 miles north of Trenton, 40 north-east of Philadelphia, and 49 south-west of New York ; lat. 40►► 22' N. ; Ion. 74►► 35' W. It is a pleasant town, and contains a college, a theological semi-

nary, a brick Presbyterian church, and more than 100 houses. The college of New Jersey was founded in 1746, at Elizabethtown ; the next Year it was removed to Newark, and a royai charter was granted to it in 1748, by its present title. It remained at Newark ten years, and was permanently established at Princeton in 1757. Its situation is peculiarly healthful and pleasant, and it has long been a highly respectable and flourishing seminary. The college edifice is styled Nassau Hall, and is one of the most prosperous literary establishments in North America. Princeton was distinguished during the revolution by a decisive battle between the British troops and a detachment of the American army under General Washington. The British lost 100 killed, and 300 prisoners, who had taken refuge in the college? One of the American generals fell in this action.

PRINCIPAL, in English law, is either the actor or absolute perpetrator of the crime, who is called a principal, in the first degree; or he who is present, aiding and abetting the fact to be done, who is denominated a principal in the second de-gree. The presence of a principal need not al-ways be an actual immediate standing by, within sight or hearing of the fact ; but there may be also a constructive presence, as when one commits a robbery or murder, and another keeps watch or guard at some convenient distance. In case of murder, by poisoning, a man may be a principal felon by preparing and laying the poi-son, or giving it to another (who is ignorant of its poisonous quality) for that purpose, and yet not administer it himself, nor be present when the very deed of poisoning is committed. The same reasoning holds, with regard to other murders committed in the absence of the murderer, by means prepared beforehand, and which could hardly fail of their mischievous effect. As by laying a trap or pit-fall for another, whereby he is killed ; letting out a wild beast, with an intent to do mischief; or exciting a madman to com-mit murder ; in every one of these cases the party offending is guilty of murder as a principal, in the first degree. For he cannot be called an accessary, that necessarily presupposing a principal ; and the poison, the pit-fall, the beast, or the mad-man, cannot be held principals, being only the instruments of death. He must therefore be held certainly guilty in the first degree.

PRINCIPATO CITRA, or CITERIORE, a province in the central part of Naples, on the Mediterranean. It is of an irregular form, about ninety miles in length from north-west to south-east, and forty-five at its greatest breadth. Its territorial extent is 2400 square miles ; for the most part mountainous, but traversed by a plain, extending from Salerno to Agropoli, and watered by the rivers Silaro, Sarno, Galore,

and Negro. The mountains are in general well wooded, and a number of them covered with chestnut-trees. The plains are rich in corn and rice ; but the too extended cultivation of the latter has in several places made the climate unhealthy. The other products are wine, olive-oil, and fruit. Hogs are reared in great numbers ; and on the ”oast are considerable fisheries. The principal exports are chestnuts, timber, rice, dried fruit,

particularly figs; wine, hides, and pork. The capital is Salerno. Population about 245,000.

PRINCIPATO ULTRA, or ULTEIUORK, a province of the kingdom of Naples, south of the above, with a superficial extent of 1800 square miles, and traversed by the Apennines. It consists of an intermixture of mountains and well-cultivated valleys, and is watered by the Sabato, Tammaro, Galore, and Ofanto. Its climate is pure and salubrious, and the products are corn, wine, fruit, chestnuts, olive oil, and timber for export. The breeding of cattle and sheep is carried on extensively in the mountainous parts ; in warmer situations silk worms are reared. The only exports consist of raw products. The chief town is Avellino. Population 358,000.

PRINCIPIA’TION, n. s. Lat. principium. Analysis into constituent or elemental parts. A word not received.

The separating of any metal into its original or element, we will call principiation. Bacon*

PRINCIPLE, n. s. & v. a. Fr. principe; Lat. principium. Element; constituent part; primordial substance, or cause ; fundamental truth; motive : to fix in any tenet or principle.

Touching the law of reason, there are in it some things which stand as principles universally agreed upon ; and out of those principles, which are in themselves evident, the greatest moral duties we owe towards God or man, may, without any great difficulty, be concluded. Hooker.

Farewel, young lords ; these warlike principles Do not throw from you. Shakspeare.

Such kind of notions as are general to mankind, and not confined to any particular sect, or nation, or time, are usually styled common notions, seminal principles ; and lex nata, by the Roman orator.

Wilkins.

Wisest and best men full oft beguiled, With goodness principled not to reject The penitent, but erer to forgive, Are drawn to wear out miserable days.

Milton.

The soul of man is an active principle, and will be employed one way or other. Tillotsmi.

Some few, whose lamp shone brighter, have been

led,

From cause to cause to nature's secret head, And found that one first principle must be.

Dryden.

Governors should be well principled and good-na- tured. L'Estrange.

Let an enthusiast be principled, that he or his teacher is inspired, and you in vain bring the evidence of clear reasons against his doctrine.

Lock .

The promiscuous reading of the bible is far from being of any advantage to children, either for the perfecting their reading, or princijiling their religion.

Id.

For the performance of this, a vital or directive principle seemeth to be assistant to the corporeal.

Grew's Cosmologia.

It is the concern of his majesty, and the peace o►► his government, that the youth be principled with a thorough persuasion of the justness of the old king's cause. South.

There are so many young persons, upon the well and ill principling of whom next under God, depends the happiness or misery of this church and state. u

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I'll try

If yet - can pursue those stubborn principles

Of faith, of honour. Add'nons Cuto.

Plato lays it down as a principle, that whatever is permitted to befal a just man, whether poverty or sickness, shall, either in life or death, conduce to his good. Addison.

As no principle of vanity led lie first to write it, so much less does any such motive induce me now to publish it. Wake.

A feather shooting from another's head, Extracts his brain, and principle is fled. Pope.

tie seems a settled and principled philosopher, thanking fortune for the tranquillity he has by her aversion. Id.

All of them may be called principles, when compared with a thousand other judgments, which we form under the regulation of these primary propositions. Watts's Logick.

All kinds of dishonesty destroy our pretences to an honest principle of mind, so all kinds of pride destroy our pretences to an humble spirit. Law. Man's obligations infinite of course,

His life should prove that he perceives their force,

His utmost he can render is but small,

The principle and motive all in all. Cowper.

PRIN'COCK, ►►. s.) From prink or prim—

PEIN'COX. j cock. A coxcomb; a

conceited person. A ludicrous word. Obsolete.

You are a saucy boy ;

This trick may chance to scathe you I know what ; You must contrary me ! you are a princor, go.

Shakspeare.

PRINGLE (Sir John), an eminent physician and younger son of Sir John Pringle of Rox-burgh ; who took the degree of M. D. at Leyden, 1730 ; and published there Dissertatio Inaugu-ralis de Marcore Senili, 4to. After having been some years professor of moral philosophy at Edinburgh, he was, in June 1745, appointed physician to the duke of Cumberland, and physician to the hospital of the forces in Flanders, where the earl of Stair appears to have been his patron. In February 1746 Dr. Pringle, Dr. Armstrong, and Dr. Barker, were nominated physicians to the hospital for lame, maimed, and sick soldiers, behind Buckingham House ; and in April 1749 Dr. Pringle was appointed physician in ordinary to the king. In 1750 and 1755 he published Observations on the Nature and Cure of Hospital and Gaol Fevers, in a Letter to Dr. Mead, 8vo. ; and in 1752 Observations on the Disorders of the Army in Camp and Garrison, 8vo. On the 14th of April, 1752, he married Charlotte, daughter of Dr. Oliver, an eminent physician at Bath. In 1756 he was. appointed, jointly with Dr. Wintringham, physician to his majesty's hospital for the forces of Great Britain. After the accession of king George III. Dr. Pringle was appointed physician to the queen's household in 1761 ; physician in ordinary to the queen in 1763, when he was admitted of the College of Physicians in London ; and, on the 5th of June 1766, he was created a baronet of Great Britain. In 1772 he was elected president of the Royal Society, where his speeches for five successive years, on delivering the prize medal of Sir Godfrey Copley, gave great satisfaction. In 1777 he was appointed physician extraordinary to the king. lie was also a fellow of the College of Physicians at Edinburgh, and of the Royal Medical Society at Paris ; member of the Royal Academies at Paris, Stockholm, Gottingen, and of the Philosophical Societies at Edinburgh and Haerlem ; and continued president of the Royal Society till November 1778 ; after which period he gradually withdrew from public life. He died January 18th, 1782.

PRINK, v. n. Belg. pronken. To prank; deck for show. The diminutive of prank.

Hold a good wager she was every day longer prink-ing in the glass

than you was. Art of Tormenting.

PRINKIPO, the most eastern and considerable of the Prince's Islands, in the bay of Marmora, about a league distant from the coast of Asia Minor. It is about a mile in length, and half a mile in breadth, containing a town, now in a ruinous condition. The French merchants used formerly to have country houses on this island, but they have abandoned them, on account of the badness of the water, and other inconveniences ; it is at present inhabited only by a few Greeks, who support themselves by selling wine and provisions to the pleasure parties which come from Constantinople. Long. 28►► 56' E., lat. 40►► 51' N.

PRINOS, winter berry, a genus of the monogynia order, and hexandria class of plants ; natural order forty-third, dumosae : CAL. sexfid : COR. monopetalous, and rotaceous ; the belly exas-permous. Species ten, all native shrubs of North America and the West Indies.

PRINTING.

►►►") Fl

PRINT'ER, n. s- ˆItal. imprenta;

PRINT'IXG, i Belg.printe. To

PIUNT'LESS, adj. 3 indent or mark

by pressure; impress a thing so as to leave its form ; to form by impression ; impress the form of type, &c., on paper, so as to make a book ; the term is likewise applied to taking off copper-plates by a press, and the figures of blocks, &c., used in calico, silk, and other printing : as a neuter verb, to use the typographic art ; publish a book : a print is a mark or form impressed ; a feature made by impression ; the form, ar-

rangement or size, of printing types; mould or pattern cut in wood, copper, &c. ; single sheet, printed for sale; a newspaper : a printer is, ' par excellence,' one who prints books ; but also applied to similar operators on linen, calico, silk, &c. : printing, the art or business of a

printer : printless, that whicli leaves no impression.

Ye shall not make any cuttings in your flesh for the dead, nor print any marks upon you. Leviticus.

Oh, that my words were now written ! Oh, that they were printed in a book. Job xix. 23.

My soul is but a wind,

Which passeth by, and leavji no] >int behind.

Pundys*

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Your mother was most true to wedlock, prince, For she did print your royal father off, Conceiving you. Shakupeare. Winter's Tale.

Thou hast caused printing to be used; and, contrary to the king, his crown, and dignity, built a paper-mill. Shakspeare.

Attend the foot,

That leaves the print of blood where'er it walks.

Id. I love a ballad in print, or a life. Id.

Ye elves,

And ye, that on the sands with printless foot Do chase the ebbing Neptune. Id. Tempest.

Our life so fast away doth slide, As doth an hungry eagle through the wind ;

Or as a ship transported with the tide, W hich in their passage leave no print behind.

Dories.

Up they tost the sand, No wheel seen, nor wheels print was in the mould

imprest Behind him. Chaptnan's Iliad.

It is so raie to see

Ought that belongs to young nobility In print, that we must praise. Suckling.

I find, at reading all over, to deliver to the printer, in that which I ought to have done to comply with my design, I am fallen very short.

Dighy.

While the heaven, by the sun's team untrod, Hath took no print of the approaching light, Aud all the spangled host keep watch. Milton.

Whilst from off the waters fleet, Thus I set my printless feet, O'er the cowslip's velvet head, That bends not as I tread. Id.

Perhaps some footsteps printed in the clay, Will to my love direct your wand'ring way. Rose.

From my breast I cannot tear The passion, which from thence did grow ; Nor yet out of my fancy raze The print of that supposed face. Waller.

On his fiery steed betimes he rode, That scarcely prints the turf on which he trod.

Dryden.

Winds, bear me to some barren island, W 'here print of human feet was never seen. Id. The prints, which we see of antiquities, may contribute to form our genius, and to give us great ideas.

Id.

To refresh the former hint ; She read her maker in a fairer print. Id.

Is it probable that a promiscuous jumble of printing letter should often fall into a method, which should stamp on paper a coherent discourse ?

Locke.

As soon as he begins to spell, pictures of animals should be got him, with the printed names to them.

Id.

If they be not sometimes renewed by repeated exercise of the senses or reflection, the print wears out. Id.

Before the lion's den appeared the footsteps of many that had gone in, but no prints of any that ever came out. South.

His natural antipathy to a man who endeavours to signalize his parts in the world, has hindered many persons from making their appearance in print.

Addison.

The prints, about three days after, were filled witTi tre same terms. Id.

I published some tables, which were out of print.

Arbuthnut.

Inform us, will the emperor trea*, Or do the prints and papers lie ? Pt>pe.

This nonsense got in by a mistake of the stags editors, who printed from the piecemeal written parts.

Pope.

To buy books, only because they were published by an eminent printer, is much as if a man should buy clothes that did not fit him, only because made by some famous taylor. Id.

See, the printer's boy below ; Ye hawkers all, your voices lift. Sti-ijt.

He was sent without any superintendant to conduct a printing-house at Norwich, and publisn a weekly paper. Johntoii.

Satires and lampoons on particular people circulate more by giving copies in confidence to the friends of the parties, than by printing them. Sheridan.

PRINTING, the art of taking impressions from characters or figures,

moveable and immoveable. on paper, linen, silk, &c. There are three kinds of printing; the one from moveable letters for books ; another from copper-plates for pictures ; and the last from blocks, in which the representation of birds, flowers, &c., are cut for printing calicoes, linen, &c. The first is called common or letter-press printing; the second rolling-press printing ; and the last calico, &c., printing. The principal difference between the three consists in this, that the first is cast in relievo, in distinct pieces ; the second engraven in creux ; and the third cut in relievo, and generally stamped, by placing the block upon the materials to be printed, and striking upon the back of it.

Of the above branches, letter-press printing is the most curious, and deserves the most particular notice; for to it are owing chiefly our deliverance from ignorance and error, the progress of learning, the revival of the sciences, and numberless improvements in arts, which, without this noble invention, would have been either lost to mankind, or confined to the knowledge of a few.

HISTORY. ††† It has been a matter of considera ble surprise that some method of printing was not invented at a much earlier epoch in the history of the world. The arts of statuary and sculpture arrived at very great perfection among the Romans; the cutting of their seals and die.-; may be considered as a kind of printing on metals ; and their impressing these seals, cut in cornelians, agates, &c., on wax, was anothei species of printing on this substance. This was the very germ of the art ; and it is perfectly astonishing that no should have thought of printing two words together as well as one ; and then have multiplied them into a page. They set their foot on the very pearl, without stopping ic notice or pick it up.

The origin of printing is completely enveloped in mystery ; and an art which commemorates all other inventions ††† which hands down to posterity every important event ††† which immortalises the discoveries of genius and the exploits of greatness ††† which has been the only effectual instrument that could banish the darkness, and overturn the superstitions of a biaoted age ; and which, above all, extends and diffuses the word of God to all mankind ; this very art has left its own origin in obscurity, and has given employment to the studies and researches of the most learned men in Europe to determine to whom the honor of its invention is justly due.

PRINTING.

The art of printing ccmbines such a number and variety of branches that it would be absurd to suppose any one person could have invented the whole. In its present state of perfection, it is divided into eight or ten different kinds of manufactures ; and even in its rudest state must have required such an extensive acquaintance with mechanics, chemistry, and other branches of science, as could not be supposed to fall to the lot of any one or two men. It is this circumstance, doubtless, which has given plausibility to the claims of the numerous persons handed down to us as the original inventors of the art. The simple idea may have originated with a single individual, but a second person may have made such an important improvement as almost to eclipse the value of what his predecessor had accomplished. A third person may be supposed to have rendered a still greater addition to the art, and, either in reality or in idea, to attract to himself the merit of the whole : and indeed these appear to be the real merits of the case, and the only possible mode of reconciling the diversified and clashing statements which have been promulgated. The taking impressions from pages cut on blocks of wood, and from separate metal types cast for the purpose, are operations so entirely different, and the one is an art so decidedly inferior to the other, that they ought never to have been confounded under the same name : in the sequel we shall find that the merit of the two is not confined either to one person, or the honor to one place.

The honor of this invention has been appropriated to several places ; to Mentz, to Strasburg, to Harlem, to Dordrecht, to Venice, to Rome, to Florence, to Basle, to Augsburg, &c. Three only of these places, however, deserve any serious consideration : *viz.* Harlem, Mentz, and Strasburg. At the last mentioned place many attempts appear to have been made towards the discovery and completion of the art by John Guttenberg ; but, as there is no evidence that he actually brought his experiments to bear in the publication of any work at Strasburg, nothing more need be said of this city, though we shall have frequent occasion to introduce the name of this ingenious artist.

The most consistent account of the origin of the art of printing is that which is given by Ha-drian Junius, and which favors the claims of J aurence Coster, of the city of Harlem. This account is contained in his Batavia, published after his death at Leyden, more than a century after

the supposed invention of the art, and is the only paper or testimony upon which the partisans of the city of Harlem found their typographical pretensions. Junius had the relation from two respectable men, Nicholaus Galius, his intimate friend and correspondent and the pupil of Galius, Quirinius Talesius, both of whom had informed him, that they had in their youth heard this same story related more than once, by a certain bookbinder, nearly eighty years of age, named Cornelius, who professed to have been one of Coster's domestics. The substance of the narration of Junius is as follows : ••• ' It is now about 128 years,' he says, ' since Laurence, the son of John, a citizen of Harlem, and surnarned

Coster (that is, sacristan or church-warden, al that time an honorable office, and which his fa-mily had long held by hereditary right), amused hinjself, during his walks in the wood near that city, with forming letters of the bark of the beech tree, by means of which he printed upon paper some verses and short sentences, for the instruction of his grandchildren. With the assistance of his son-in-law Thomas, the son of Peter, he afterwards invented an ink, more viscous and tenacious than common ink, which was found to blot and fill the letters; with this new ink he printed, in the Flemish language, the Speculum nostrae Salutis, a work composed of images and letters. The leaves of this book being printed on one side only, the pages, which were left blank, were afterwards pasted together. After this, Coster abandoned the use of wooden letters, and adopted metal ones ; forming them at first of lead, and latterly of tin, which metal is rather harder than the former : some metal wine cups, made from the remains of these letters, may yet be seen in the dwelling-house of his descendants. The great profits which the inventor derived from this new art induced him to increase his establishment, and with this view he took some workmen into his family. One of these, who was called John, surnamed Fust, as is ˆuspected, or some other person bearing the name of John (it is of no great consequence which), after having learnt the art of arranging and casting types, as well as all other matters relating to the art of printing, in the knowledge of which he had been initiated under the obligation of an oath, seized the opportunity of his master being engaged at mass, on the night of Christmas eve, to carry off all the types and implements used in the printing office. He went with his plundei to Amsterdam, in the first instance, then to Cologne, and finally settled at Mentz, where he established a printing office, in which .vere printed, in the year 1442, with the types stolen from Harlem, the Docirinalfe Alexandri Galli, and the Tractatus Petri Hispani.'

The narrative of Junius has been questioned, and indeed violently opposed, by writers of the first literary eminence : and it certainly appears a remarkable circumstance that no Dutch writer, nor any work 01 the fifteenth or of the beginning of the sixteenth century, has made the least mention of these facts ††† not even Erasmus, who, from having been born at Rotteraam in the year 1 467, could hardly have been ignorant of events at once so singular and so creditable to his native country. There are several other objections to the above narrative, which we cannot here notice : but, without relying implicitly on all the state ††† ments of this narrative, it seems to us pretty evident that Coster carried the art of printing from impressions cut upon blocks to a greater extent, and applied it to a greater variety of purposes, than any person in Europe who had preceded him : though the merit of even this part of the art is not wholly due to himself; it had been practised in many countries for centuries, and especially in China, where it continues to the present day, with scarcely any variation or improvement.

It may be advisable to divide the history of the art into four parts :††† the first embracing the

mode of striking impressions from signets, seals, and other emblems cut on wood, or other substances, the origin of which is totally lost. The second stage is that which introduces us to the name and labors of Laurence Coster, who applied block printing to the production of books, of which his Speculum humanae Salvationis is said to be the first instance. This work consists of pictures out of the Bible, with some of the verses underneath each page, the whole being printed from a block of wood, like a wood-cut. He seems also to have had the merit of printing from separate wooden letters, cut so as to fit each other when composed together, and perhaps with the small words of most frequent use cut upon one block, to save the time and labor of the compositor. This occurred between the years 1431 and 1443. The third stage of the art was the adoption of cut metal instead of wooden letters, which is doubtless to be traced to the labors of John Geinsflesh, jun., distinguished by the name of Guttenberg. This person, with the assistance of his father, Geinsflesh the elder, invented cut metal types, and used them in printing the earliest edition of the Bible. This edition appeared in 1450, and the completing of it took up

seven or eight years. The fourth and last stage of the art, and which brought it to almost as high a state of perfection as it attained for two centuries afterwards, was the mode of casting types in mattrices, which was invented by a servant of Guttenberg's, of the name of Peter Schoeffer. For this valuable service he was admitted into the family of his master, Fust or Faustus, and was rewarded with the hand of one of his daughters. The first work printed on these improved types was the Durandi Rationale, in 1459. Most persons are acquainted with the legend of the Devil and Dr. Faustus. The origin of the tale is, that Faust carrying a parcel of his bibles to Paris, and offering them for sale as MSS., the French, upon considering the number of books, and their exact conformity with each other, even to a point, concluded that there was witchcraft in the case, and, it is said, that by either actually indicting him as a conjuror, or threatening to do so, they extorted the secret. This perhaps, however, is but a new editior of a fabulous tale ; as a Dr. Faustus who had correspondence with his Satanic majesty lived at a much earlier period.

In the year 1462 the city of Mentz, where Faust had settled, was taken and plundered ; and the art of printing, in the general ruin, was made public, and quickly spread itself over a great part of Europe. Harlem and Strasburg practised it very early; and whence it appears to have proceeded to Rome, to Paris, to Constantinople, and to most of the principal towns on the continent.

The date and mode of its introduction into England is a subject involved almost in as much mystery as the original invention of the art. It was an opinion regularly delivered down by our historians, that the art of printing was introduced and first practised in England by William Caxton, a mercer and citizen of London, who by his travels abroad, and a residence of many years in Holland, Flanders, and Germany, in the affairs of trade, had an opportunity of informing

himself of the whole method and progress of the art, and by the encouragement of the great, and particularly of the abbot of Westminster, first set up a press in that abbey, and began to print books soon after the year 1471. This was the tradition of our writers, till a printed book or chronicle, which had scarcely been observed by the curious, was discovered, as it is said, in the archbishop of Canterbury's Palace, with a date of its impression from Oxford, anno 1468 ; and was considered immediately as a clear proof and monument of the exercise of printing in that university, several years before Caxton returned from the continent.

The discovery of this boos seemed at once to deprive Caxton of the glory he had long enjoyed ††† as the author of printing in this kingdom. Its authenticity, however, has been warmly disputed by Mr. Palmer, in his History of Printing ; by Dr. Ducarvel, in his Letters to Meerman ; and especially by Dr. Conyers Middleton, who maintains that there was no printing in England till the introduction of it by Caxton. Indeed, if the fact were as stated by the alleged Chronicle in the archbishop's palace, it would derogate but little from the honor of Caxton, who was certainly the first person in England who practised the art of printing with fusile types, and consequently the first who brought it to perfection : whereas Corsellis, the other claimant, printed from sepa-jrate cut types in wood, that being the only me-thod he had learnt at Harlem. Great opposition was frequently manifested by magistrates and others, when this useful art was first introduced into a new city or town. We are told, in an old pamphlet in the collection of the earl of Or-ford, that, when it was introduced into Norwich, a general petition was presented to the magistracy against this unnecessary innovation.

Caxton had been bred very reputably in the way of trade, and served an apprenticeship to one Robert Large a mercer ; who, after having been sheriff and lord mayor of London, died in the year 1441. From the time of his master's death he spent the following thirty years beyond sea in the business of merchandise. There is no clear account left of his age : but he was certainly very old, and probably above fourscore at the time of his death. In the year 1471 he complained of the infirmities of age creeping upon him, and enfeebling his body: yet he lived twenty-three years after, and pursued his business, with extraordinary diligence, in the abbey of W estminster, till the year 1494, in which he died ; not in the year following as all who write of him affirm. This appears from some verses at the end of a book, called Hilton's Scale of Perfection, printed in the same year.

Before 1465 the uniform character was the old Gothic or German ; whence our black was afterwards formed. But in that year an edition of Lactantius was printed in a kind of Semi-Gothic, of great elegance, and approaching nearly to the present Romar. type ; which last was first used at Rome in 1467, and soon after brought to great perfection in Italy, particularly by Jenson.

Towards the end of the fifth century. Aldus invented the Italic character which is now in use, called, from his name, Aldine or cursivns. This

sort of letter he contrived to prevent the great number of abbreviations that were then in use.

The first essays in Greek that can be discovered are a few sentences which occur in the edition of Tully's Offices, 1465, at Mentz; but these were miserably incorrect and barbarous. In the the same year, 1465, was published an edition of Iˆactantius's Institutes, printed in monasterio Sublacensi, in the kingdom of Naples, in which the quotations from the Greek authors are printed in a very neat Greek letter. They seem to have had but a very small quantity of Greek types in the monastery ; for, in the first part of the work, whenever a long sentence occurred, a blank was left, that it might be written in with a pen : after the middle of the work, however, all the Greek that occurs is printed.

In 1488, however, all former publications in this language were eclipsed by a fine edition of Homer's works at Florence, in folio, printed by Demetrius, a native of Crete. Thus printing ˆsays Mr. Mattaire, p. 185) seems to have attained its acme of perfection, after having exhibited most beautiful specimens of Latin, Greek, and Hebrew. The earliest edition of the whole bible was, strictly speaking, the Complutensian Poly-gott of cardinal Ximenes ; but as that edition, though finished in 1517, was not published till 1522, the Venetian Septuagint of 1518 may properly be called the first edition of the whole Greek Bible; Erasmus having published the New Testament only at Basil in 1516.

A very satisfactory account of Hebrew printing is thus given by Dr. Kennicott in his Annual Accounts of the Collation of Hebrew MSS., p. 112. 'The method which seems to have been originally observed in printing the Hebrew Bible was just what might have been expected: 1. The Pentateuch, in 1482. 2. The Prior Prophets, in 1484. 3. The Posterior Prophets, in 1486. 4. The Fagiographia, in 1487. And, after the four great parts had been thus printed separately (each with a comment), the whole text (without a comment) was printed in one volume in 1488; and the text continued to be printed, as in these first editions, so in several others for twenty or thirty years, without

marginal Keri or Masora, and with greater arguments to the more ancient MSS. till about the year 1520 some of the Jews adopted later MSS. and the Masora ; which ab-surd preference has obtained ever since.'

In 1642 a Hebrew bible was printed at Man-tua under the care of the most learned Jews in Italy. This bible had not been heard of among v.he Christians in this country, nor perhaps in any other ; though the nature of it is very extraordinary. The text indeed is nearly the same with that in other modern editions ; but at the bottom of each page are various readings, amounting in the whole to above 2000, and many of them of great consequence, collected from MSS., printed editions, copies of the Talmud, and the works of the most renowned rabbies. And in one of the notes is this remark : ' That in several passages of the Hebrew bible the differences are so many and so great, that they know not rt'hich to fix upon as the true readings.'

We cannot quit this subject without observing, on Dr. Kerfnicott's authority, that as the first

printed bibles are more correct than the latter ones ; so the variations between the first edition, printed in 1488, and the edition of Vander Hooght, in 1705, at Amsterdam, in 2 vols. 8vo. amount upon the whole, to above 1200 !

When the art of printing was first discovered, they only made use of one side of a page ; they had not yet found out the expedient of impressing the other. When their editions were intended to be curious, they omitted to print the first let-ter of a chapter, for which they left a blank space, that it might be painted or illuminated at the op-tion of the purchaser. Several ancient volumes of these early times have been found, where these letters are wanting, as they neglected to have them painted.

In the productions of early printing may be distinguished the various splendid editions they made of primers or prayer books. They were embellished with cuts finished in a most elegant taste: many of them were ludicrous, and several were obscene. In one of them an angel is represented crowning the Virgin Mary, and God the Father himself assisting at the ceremony. In a book of natural history the Supreme Being is represented as reading on the seventh day, when he rested from all his works.

PRACTICE OF THE ART. ††† The workmen employed in the art of printing are of two kinds : compositors, who range and dispose the letters into words, lines, pages, &c., according to the copy delivered to them by an author; and pressmen, who apply ink upon the same and take off the impression. In London, and other large cities and towns, these two branches are usually kept so distinct that few workmen are able to engage in both of them ; and in small printing-offices, where of necessity they are alternately followed, very few men are able to attain either facility or beauty in their workmanship. The process of printing is now so common, but at the same time so diversified and peculiar, that any minuteness of description would be at once incomprehensible to those who have not seen it, and quite unnecessary to those who have. In place of any detail of this kind, we shall give some information which may be valuable to persons not immediately connected with the art ; and then enumerate some of those improvements which the art of printing has received within the last few years.

As it is impossible but that in every page, almost every letter of which consists of a separate piece of metal, a number of mistakes must have been made, a sheet is first printed off, which is called a proof, and given to a person employed as a corrector; who having read and marked the errors, after these are corrected, another proof-sheet is pulled, and is usually sent to the author for his revision and correction.

Wnen the art of printing was first established it was the glory of the learned to be correctors of the press to the eminent printers. Physicians, lawyers, and bishops themselves, occupied this department. The printers then added frequently to their names those of the correctors of the press; and editions were then valued according to the abilities of the corrector. As, however author*

and editors are now so numerous a race, we shall subjoin in the margin a familiaˆ illustration of

The marks used in correcting a proof-sheet.

To strike out superfluous words in a sentence a line is drawn through them ; and, should it afterwards be found advisable to retain the word, dots are placed beneath, and stet written in the mar-gin. An illustration is also afforded in the following line of the mode of marking those words the distance between which is to be diminished.

The men

To cause words to be changed from one character to another.

From Roman type into Italic was Italic into Roman was

Roman into small capitals was Roman into large capitals was

To introduce the proper stops in a sentence.

The punctuation may be corrected by employing either of ►► ►► Q the annexed corrections in the margin.

To transpose a word tr is written in the margin. 1 he people / gˆo7D(were) ˆr

To strike out superfluous letters or words the pen is drawn . .

through them, and the annexed 0//0 characters introduced in the margin.

To cause a letter that is turn-ed to be placed aright, a line is o/

drawn through it and this cha- /

racter introduced in the margin.

To make two words into one. Any thing you please.

The annexed marks denote the omission of an apostrophe, and also the manner in which a letter of a different fount should be noticed, when improperly used ; being the initials of the words wrong fount.

Where a word is omitted. We went into the yesterday. A

STEREOTYPE PRINTING.

Among the improvements which have been introduced into the art of printing within the last century, the first in point of time, and perhaps in point of utility, was stereotype or block printing. This is in fact something like a revival of the first essays of the art ; for a complete plate is made for every page of a work, and can only be appropriated to that single page. The advantages of this are, that only a very small impression need be taken at any one time, and, as long as the plate continues, subsequent editions can be procured at a very small charge.

The honor of this invention has been claimed c-y the French ; and so far as the mere idea goes,

without the execution, perhaps the claim may be substantiated, but no further. It is said that a Frenchman of the name of Valleyre, before the year 1735, printed the calendars at the beginning of some church books from a set of stereotype plates ; but his method of proceeding was so clumsy and unprofitable as to die with the man who had invented it. The real individual to whom the honor belongs of first bringing stereotype plates into actual service was an ingenious Scotchman, of the name of William Ged, of Edinburgh. Of his proceedings and misfortunes, in attempting to carry his invention into practical effect, an account was published about fifty years ago. It appears from this narrative that in the year 1725, in consequence of a conversation he had with a printer, his attention was strongly drawn towards the practicability of forming plates from types when formed into pages. Having been furnished with a page, he instituted a series of experiments, and at last, after two years labor, he succeeded in producing impressions from his plates which could not be distinguished from those taken from types. By what method he obtained these plates it is now impossible to say, as his apparatus and the knowledge of his mode of using them was not communicated to any one at his death ; indeed the tale of his sufferings and disappointments, and the selfish and dishonest hands into which it was his lot to fall, furnish the materials of an interesting and almost tragical narrative

That part of his narrative which relates his first visit to London is possessed of sufficient interest to be placed upon durable record. Not finding any body in Scotland willing to patronise his exertions, he met with a London citizen in Edinburgh of the name of Fenner, who, while at a distance from home, could talk largely of his thousands of

pounds, but who, in fact, was not worth as many shillings. With this man Ged entered into partnership, and had the deed legally signed before he left Scotland : coming, however, to London, he discovered to his sorrow that his pompous partner could scarcely give him a night's lodging. Disappointed in his expectation, he found his way into the company of Mr. Basket, the king's printer. He heard his proposals, and as Mr. Caslon the letter founder was present at the same time in the house, Mr. Basket proposed that they both should make plates from a page of type, by that day se'nnight, and that the overseer of the office should be the judge of the quality of each when produced. The condition of this engagement was, that the person who failed should give the other, and all the company present, a handsome dinner and entertainment at his own sole cost and charge. To the utter astonishment of Mr. Basket, the very afternoon in which Ged received the page, he obtained three separate plates with impressions from them equal to those from the original type. But alas ! poor man, he made more haste than good speed ; for the circumstance of his instant success reached the ear of the other competitor, and sooner than encounter a certain defeat, he evaded the bargain and made no attempt. See a History of the origin and Progress of Stereotype Printing by Mr. F. Hodgson, Newcastle.

The ingenious individual to whom is to be attributed the honor of the present mode of casting stereotype plates is Alexander Tilloch, esq., LL. D., the editor of the Philosophical Magazine, who some time prior to the year 1780, without any knowledge of Ged's invention, suggested the practicability of founding whole pages. But, as his account of his invention is very short, we will give it in his own words : ××× 'After men- -loning some of the expected advantages,' he says,' I communicated my ideas upon this subject -j Mr. Foulis, printer to the University of Glasgow, rcy native city, and where I then resided, who furnished me with a page of types ready set -p, or composed, for my first experiment, made in 1779, which had sufficient success to induce me LO try others, and convinced Mr. Foulis of the possibility of producing plates, which would yield

impressions not to be distinguished from those taken from types.

‘If I had seen some of the advantages which such a plan promised, Mr. Foulis saw and pointed out many more, of such a nature as could only present themselves to a regular bred practical printer. ××× We agreed to prosecute the business together, and, if possible, to bring it to perfection, and in pursuance of this resolution performed, I may say, innumerable experiments, till we at last overcame every difficulty, and were able to produce plates, the impressions from which could not be distinguished from those taken from the types from which they were cast.

‘ In the mean time we learnt that our art, or one extremely similar, had been practised many years before by Mr. Ged, and soon after the world was favored by Mr. Nichols with an interesting pamphlet, entitled Biographical Memoirs of William Ged, including a particular account of his progress in the art of Block-Printing. Though we had reason to fear, from what we found Ged had met with, that our efforts would experience a similar opposition from prejudice and ignorance, we persevered in our object for a considerable time, and at last resolved to take out patents for England, Scotland, and Ireland, to secure to ourselves, for the usual term, the benefits of our invention ; for the discovery was still as much our own as if nothing similar had been practised before ; Ged’s knowledge of the art having died with his son. The patents were accordingly obtained. As to benefits, however, I have as yet reaped none, and Mr. Foulis, I believe, has reaped as few, for owing to circumstances of a private nature, an 1 which no way concern the public to know, the business was laid aside for a time, and having afterwards quitted Glasgow, and removed to London, I soon found my-self so much occupied with other concerns that I have hardly had time to think upon it since. I ought, however, to observe here, that its being suspended was not on account of any imperfection attending the art, or objections against its being a fit subject to be prosecuted. On the contrary, several small volumes were printed from plates made by myself and Mr. Foulis, and the editions were sold to the trade without any intimation of their being printed out of the com-mon way! We had heard whispers that our

work could not possibly be such as would pass for common printing ! The trade knew what we were at, and would take care of any thing done in the new-fangled way. The first essays, therefore, were in the lowest sense of the word com-mon : one or two histories, and a cheap edition of The Economy of Human Life. We also printed a Greek

volume, Xenophonrs Anabasis, 1783, and had plates foi several small volumes of the English poets almost finished, but the latter were never put to press.' ††† Philosophical Magazine, vol. x. pages 272 ††† 275.

Stereotype printing is now practised in almost every country in Europe, but the mode of performing it differs almost in each of them. That adopted in this country generally is to make a mould in plaster of Paris taken from a page of types, to confine this mould in a box or pan made for the purpose, after the air and moisture are properly extracted, which is in about five minutes, and then to dip it into a pot of metal : the pan is lifted out by a crane or pulley, and the operation is completed. This department of the art of printing, though carried to an amazing extent within the last few years, is yet far from having obtained its maturity. The plan used by lord Stanhope, Mr. Wilson, and others, was so expensive as to deprive the publisher of almost all its advantages ; it is now, however, executed on such an economical plan, and with such certainty and expedition, as to tempt its adoption for all standard works in the language, and indeed for every work where a second edition will be required.

PRESSES.

Iron-presses. ††† The art of printing has of late received very important improvements by the substitution of iron for wooden-presses. The advantages of the iron presses in working are very considerable, both in saving labor and time. The first arises from the beautiful contrivance of the levers, the power of the press being almost incalculable at the moment of producing the impression ; and this is not attended with a correspondent loss of time, as is the case in all other mechanical powers, because the power is only exerted at the moment of pressure, being before that adapted to bring down the platten as quickly as possible. This great power of the press admits of a saving of time, by printing the whole sheet of paper at one pull, th platten being made sufficiently large foi the purpose ; whereas, in the old press, the platten is only half the size of the sheet.

For this change of the material of which presses are made, the trade are principally indebted to the late ingenious earl Stanhope. These presses, which still bear his name, have contributed very materially to the ease and beauty of the workmanship. There are likewise many other descriptions of iron presses, professing to be improvements upon the one suggested by lord Stanhope, but only one of them has obtained any celebrity, or possesses any superior advantages. This is the Columbian press, invented by Mr. Clymer; and from the amazing

power of the

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impression, the stability of the workmanship which it is next to impossible to break, as well as for other lesser advantages, perhaps will never be excelled. These two presses being now most in repute, we shall confine any minute descriptions to them alone, giving only a brief notice of several others, which have various degrees of merit.

The improved Stanhope press is exhibited in plate I. (PRINTING) : fig. 1 is a side elevation ; and fig. 2 a front view. A A shows a strong cast iron frame of the form represented in fig. 2. This frame is screwed down upon a piece of timber B, which has another timber C morticed into it at right angles, forming a frame1 in,the shape of the letter H , to serve as a basis for the whole press. D D represent two horizontal rails, having channels formed along their upper surfaces, into which the two rails or ribs upon the underside of the carriage or table E E are adapted to slide. The carriage is put in motion by the action of the handle F and barrel W, which has three strong straps or belts passing round its circumference, as seen in fig. 2, the ends of the said belts being attached to the opposite ends of the carriage, in the manner of ordinary printing presses. The table E E is made oerfectly flat upon its upper surface, in order to receive the form of the types : m represents the tympan, which is jointed to the end of the table; it is composed of a light frame of wrought iron, and fitted up in the usual manner.

The rails D, D, upon which the carriage runs, are secured to the main frame A A, by screw bolts ►►, a ; the outer extremities of the rails D are united together by cross bars, and supported by an arched frame v and upright pillar G, the foot of which is bolted down to the timber C. II H represent the platen, which is guided in its perpendicular motion

by a slide I, moving between angular ribs formed within the opening of the main frame, as seen in fig. 2. The upper part d of the frame is considerably enlarged, and is perforated in the centre to receive a brass nut or female screw, through which the main screw of the press works. M shows an upright spindle, the lower end of which is formed with a pivot adapted to turn in a hole at the top of the arch of the main frame ; the upper part of the spindle M works through a collar c, formed in a piece of metal, which projects from the main frame, and is secured by a screw. N represents the handle of the press : it is firmly attached to the lower “???arts of the spindle M, and has a nut on the opposite side to keep it in its place. Thus, when the handle is moved backwards or forwards, it turns the spindle M round, and by the operation of the lever O, and connecting link P, the motion is communicated to the main screw, by the intervention of the arm or lever R fixed upon the top. The platen is raised Tip, and kept in contact with the end of the screw, by the operation of the balance weight S. The degree of pressure may be increased or diminished by the operation of the screw p at the ‘end of the connecting link, being disposed so as to admit of varying the effective length of the link.

Columbian press. ??? A correct front view of this

press is represented in fig. 3, and a side elevation in fig. 4. A A shows the cheeks or main frame of cast iron ; they are united together at the bottom, but separate at the top ; the main frame is supported upon four legs, x x. B, B, represent the ribs or guides, upon which the carriage and table C C, with its appendages, is adapted to run, being moved backwards and forwards by the rounce E, and barrel F, round which strong linen belts are passed, and affixed at each end of the carriage, as in ordinary printing presses. D shows the platen, which is guided in its motion up and down by its square stem or pillar d, being placed angleways, and sliding between pieces of metal a, a ; which project from the main frame A A. The pieces a, a, are furnished with adjusting screws and wedges, for the purpose of tightening them up, and preventing any looseness in the platen. The stem d has a square plate, e, upon it at the part where it joins to the platen. The pressure is produced by a combination of levers situated at the upper part of the frame. G, I, show the main lever, moving on a strong centre bolt at H, between a forked or divided part of the main frame ; the end I of this lever also passes through an oblong opening formed between the bars h, and projects some distance beyond the outside of the frame. The central part G of the main lever has a strong pivot or trunnion cast upon it, which projects out sufficiently on each side to enter into

collars formed at the top of the stem d, of the platen, being retained in their places by four screw bolts, two of which are seen at G in figure 3. m, n, o, show the second lever, moving on a fixed centre pin in the main frame at m; it has the links n, I, jointed to it at the point n; the uppermost ends of these links are also jointed on each side of the main lever at I. The point o of the second lever has the link or connecting-rod p jointed to it, whilst the opposite extremity of the connecting-rod is jointed to the lever or handle N, by -which the pressman puts the system of levers into action.. The handle N turns upon a fixed centre pin passing through projecting pieces of the main frame, as seen at it; and the connecting-rod p is furnished with a double or universal joint, where it unites with the lever o, to admit of the oblique motion of the handle N, when it is pulled forwards to produce the pressure.

A counter-lever, r s t, is applied at the top of the press, moving upon a fulcrum at s ; this lever has a balance-weight in the form of an eagle clamped upon it by a screw at r, whilst the short end t of the lever is attached by a link to the end of the main lever at the end I. By this means the weight of the levers and platen is counterbalanced sufficiency to raise them up, when the handle N is left at liberty. The different levers in this press are so arranged that the first motion which is communicated to the handle N brings the platen down quickly ; but, by the time that its under surface arrives upon the tympan, the se-cond lever, m n, is brought nearly in a line with the direction of the links n, I. which causes them to draw down the end I of the main lever with great power ; at the same time that the point
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of the second lever is in the most favourable position to be operated upon powerfully by the connecting-rod proceeding from the handle N. When the impression is produced, two balance weights act in concert to return the handle N, and raise up the platen.

The testimonies in favor of this press, by al-most every master-printer who has used it, prove it to be the most complete press now in use ; and at present appears scarcely susceptible of much improvement.

Several other presses are now in use, particularly the Albion press ; but as they are somewhat similar in construction to the Columbian, though not so well approved, a particular specification need not be given. The Ruthven or horizontal press, invented by Mr. John Ruthven of Edinburgh, differs materially from all others, in the platen being moveable, and the types stationary. But, as it requires that a workman should almost learn his business over again to work at it, it is now seldom used. A beautiful and well-made press has lately been introduced into use by Messrs. Newman and Gillson, of Newark. Its power is produced by the use of inclined planes, and, these being fixed in a box which is well supplied with oil, the usua! inconveniences experienced in that mode of obtaining pressure are in a great measure obviated. For all light work this press perhaps equals any press in use ; but it is not adapted for large and heavy forms.

Several attempts have been made to apply a self-inking apparatus to the common press, and numerous patents have been obtained to this purpose; but as nothing has to this day been produced at all likely to succeed, however laudable and ingenious the attempts, we shall not sup-ply any description of them.

Of machine printing. ××× Previous to the introduction of machines into the business of printing, the press department was one of great labor and difficulty, and the number of copies of a newspaper, which could be printed within the hour, seldom exceeded 750, even with extraordinary exertion. The consequence was, that in newspaper offices, where the circulation was extensive, it was found necessary, in order to get the paper published in time, to compose two or more copies, so that by going to press at the same time, the demands of the public might be complied with; thus occasioning an enormous increase of expenditure both in the compositors' and press departments. In a newspaper circulating 7000 or 8000 copies, this expense, annually could not have been less than ××2000 ; all of which has been saved by the introduction of machines, which are worked by steam or hand.

The cylindrical mode of printing, which, in contradistinction to the old process, is called machine printing, was invented by the late Mr. Nicholson, well known in the scientific and literary world, who took out a patent in the year 1790, though it does not appear that his plans and experiments ended in any actually practical result. Whether M. Kbnig, who at a later period more successfully attempted to print by machinery, was indebted to Mr. Nicholson for his elementary principles, or whether almost the same ideas

spontaneously occurred to each individual, is a question that can only be satisfactorily solved by the former. Thus much is certain, that Mr. Kcinig's labors were the first which produced any fruit; and, >urely, more is due to him who, after years of persevering toil, succeeds in the application of hitherto unapplied principles, than to one of whom we can only say that he was sim-ply the first to suggest ideas, since no evidence is offered of their ever having been acted upon.

M. Konig, by birth a Saxon, and by occupation a printer, many years ago conceived it possible to print by steam, though he then expected no more than to be able to give accelerated speed to the common press, to which end his first efforts were bent. As from the nature of such an undertaking, considering the state of scientific pursuits in his native land, he could calculate on little success unaided by others, and failing in his application for encouragement and support at the hands of the most eminent printers in several ot the continental capitals, he turned his eyes towards England. Arriving in London, about 1804, he submitted his scheme to several printers of repute, who, not being disposed to incur the risk of property which a series of experiments were sure to entail, and perhaps, placing little confidence in a successful issue, received his overtures very coolly ; and it is probable his applications in this country would have shared the fate of similar attempts abroad, had he not finally been introduced to Mr. Bensley, senior, who, attracted by M.K.'s plans, speedily entered into an arrangement with him. After a short course of experiments on the fabrication of a press which should have accelerated motion, and at the same time render the work of the man who inks the type unnecessary, the above gentlemen were joined by Mr. G. Woodfall and Mr. R. Taylor, the former of whom, however, soon retired ; the remaining three, in no wise discouraged by the tediousness and expense which all who are conversant with the progress of any invention in machinery well know to be unavoidable, persevered amidst unforeseen perplexities, which were doubtless not diminished by the par-ty's deficiency in practical mechanical knowledge. It was at length discovered that the intended improvement of the commovi press could not be brought to bear, and that much labor and prodigious expense would be thrown away, unless some radical alterations were invented. CYLINDRICAL printing was now thought of, and, after some two or three years of renewed exertion, a small machine was brought forth, the characteristic of which was, that instead of the printing being produced by a flat impression (similar tc the press), the sheet passed between a large roller and the types still flat ; and, in lieu of the old-fashioned balls, used by hand to beat over

the types, and to communicate the ink to their surface, skins were strained round smaller rollers on which it was contrived to spread the ink, and under which the form, i. e. the frame in which the types are fixed, passed in its way to the printing cylinder. Considerable promise of success attended this production ; and, after continued experiments, it was deemed practicable to

rxtend the general principles to a more powerful machine. To print a newspaper was considered highly desirable ; and on exhibiting to Mr. N\ alters, proprietor of the Times newspaper, the machine already erected, and showing what further improvements were contemplated, an agreement was entered into with that gentleman for the erection of two large machines for printing his journal. So secret had been the operations of the patentees that the first public intimation of their invention was given to the reader of The Times on Monday, the 28th of November, 1814, who was told that he then held in his hand one of many thousand impressions thrown off by steam. At this time but few persons knew of any attempt going on for the attainment of the above object; whilst, among those connected with printing, it had been often talked of, but treated as chimerical.

The machines at the Times Office, cumbrous and complicated as subsequent improvements have made them appear, were yet in many respects admirably adapted to the purpose for which they were erected.

The next advance in improvement was the manufacture of a machine for Messrs. Bensley, distinguished from those before mentioned by the mode of perfecting (or printing on both sides), so that the sheet of white paper is placed in the feeder and delivered from the machine printed on both sides ! In addition to the essential difference between this machine and those previously made, it came forth with many obvious improvements, though still unquestionably complex : ??? and for the first attempt at effecting register (causing the pages to fall precisely on the back of one another), a greater degree of success than might have been expected was attained, subsequent experience showing the many difficulties to be surmounted in the accomplishment of this object. Deficiencies were now detected in the inking : the strained skins were found un-even in their surface; and

attempts were made to clothe the rollers with an elastic preparation of glue, treacle, &c., which has at length attained perfection.

By this time the invention had attracted the attention of various individuals, who thought the manufacture of printing machines an easier task than they afterwards found it to be ; and far the greater number of attempts, we believe, failed almost as soon as undertaken. A machine, however, similar in its capacities to that last mentioned, but much more simple in its construction, has been brought out, under the direction of some eminent English engineers. It was not long before these gentlemen were requested to apply their inking apparatus to Messrs. Bensleys' machine, and at one stroke, as it were, forty wheels were removed❓❓❓ so great was the sim-plification : and at the same time the defects of the former system, of communicating the ink to the types, were most effectually remedied. Massive and complicated as it was, yet as an immense expense had been incurred in its erection, Messrs. Bensley went on using their machine until the destruction of their establishment by fire in 1819. And, even after the rebuilding of the premises, the machinery, which had been

only partially damaged, was reinstated, and worked for some time : it has now, however, given place to two large and admirable machines built on the improved plan, which, when inspected by a judicious eye, can create only wonder at the heretofore circuitous manner adopted to attain ends so apparently within easy reach. The original machine contained upwards of 100 wheels ; whereas the new machine, with about ten wheels, accomplishes, in point of quantity, exactly the same object, with a marked advantage in regard to the quality of the printing. Another important point respecting the new machine is, that it occupies scarcely half the space of the original one.

This machine, notwithstanding the improvements which had been made upon it, has lately been replaced by one made by Augustus Apple-garth, esq., several of whose machines are at present in use in the metropolis ; and recently several have been exported to the continent. All the machines of his construction are worked by steam; but there are others which have for some years been brought into use which are turned by a fly wheel ; and of course have the advantage of being far less cumbersome, and more applicable to the general purposes of the trade. One was invented by Mr. W. Nicholson, of London, for which a patent was obtained 29th April, 1790; a second by Mr. Bacon of Norwich, and made by Bryan Donkin, esq., of London ; another was the invention of the late Charles Brightly, esq., of

Bungay, and executed by the same engineer; none of them, however, have been brought into practical adoption, though they each possessed a considerable share of merit, and were constructed at a very great expense.

The adoption of printing machines rendered necessary a new mode of distributing the ink upon the type, and which is now transferred to the common press. The original mode was to moisten sheep-skins in liquor, to fasten them round a ball of wool, and then, having procured two of them, the ink was distributed on the surface of each by working them together. This is now entirely superseded by the use of roHers. These rollers are a composition of glue and treacle, which, when heated into a liquid state, are cast in a mould, round a cone of hard wood ; and, when cold, are extracted from the mould, and are soon fit for use. This method of inking forms one of the most valuable improvements in modern printing ; as it not only affords considerable ease to the workmen, but is calculated to perform the operation with much greater regularity and certainty.

The machines worked by hand now most in repute are those manufactured by Mr. D. Napier. They print both sides the sheet at one operation ; and are calculated to do the work of about six or seven presses. This ingenious mechanist is now contriving one for printing newspapers, which is estimated to take off 300 impressions per minute, ††† a speed almost incredible. As this with some other machines for printing by the same engineer, are not yet completed, we must refer a minute description of them to the article TYPOGRAPHY which see.

PRINTING, COPPER-? r. ATE, requires some notice, though we hardly know a modern art or trade that has been so little improved in the mode of conducting it. It is performed by a machine called the rolling-press, which may be divided into two parts, the body and carriage.

The body consists of two cheeks of different dimensions, ordinarily about four feet and a half high, a foot thick, and two and a half apart,

joined at top and bottom by cross pieces. The cheeks are placed perpendicularly on a wooden stand or foot, horizontally placed, and sustaining the whole press. From the foot likewise rise four other perpendicular pieces, joined by cross or horizontal ones, which may be considered as the carriage of the press, and as serving to sustain a smooth, even plank, about four feet and a half long, two feet and a half broad, and an inch and a half thick; upon which the engraven plate is to be placed. Into the cheeks go two wooden cylinders or rollers, about six inches in diameter, borne up at each end by the cheeks, whose ends, which are lessened to about two inches diameter, and called trunnions, turn in the cheeks between two pieces of wood, in form of half moons, lined with polished iron to facilitate the motion. The space in the half moons left vacant by the trunnion is filled with paper, pasteboard, Sec., that they may be raised and lowered at discretion ; so as only to leave the space between them necessary for the passage of the plank charged with the plate, paper, and blankets. Lastly, to one of the trunnions of the upper roller is fastened a cross, consisting of two levers or pieces of wood traversing each other. The arms-of this cross serve in lieu of the handle of the common press ; giving a motion to the upper roller, and that to the under one; by which means the plank is protruded, or passed between them.

The printing is performed nearly as follows : ††† The workmen take a small quantity of the ink on a rubber made of linen rags, strongly bound about each other, and with this smear the whole face of the plate as it lies on a grate over a charcoal fire. The plate being sufficiently inked, they first wipe it over with a foul rag, then with the palm of their left hand, and then with that of the right ; and, to dry the hand and forward the wiping, they rub it from time to time in whitening. In wiping the plate perfectly clean, yet without taking the ink out of the engraving, the address of the workman consists. The plate thus prepared is laid on the plank of the press ; over the plate is laid the paper, first well moistened, to receive the impression, and over the paper two or three folds of flannel. Tilings thus disposed, the arms of the cross are pulled, and by that means the plate with its furniture passed through between the rollers, which, pinching very strongly, yet equally, press the moistened paper into the strokes of the engravings, whence]t licks out the ink.

PRINTING OF CALICO. The art of printing in colors is intimately connected with many of the chemical processes we have already described under the article DYEING ; we shall therefore avoid any unnecessary repetition of those details by occasional references to the various sections of that treatise. This ingenious art

consists in dyeing cloth with certain colors or figures upon a ground of a different hue. The colors are usually fixed by mordants that have various degrees of chemical affinity for the body to be employed.

The art of calico printing is of considerable antiquity, and we have seen some Egyptian cot-ton dyed by figured blocks many hundred years old. A similar process has long been resorted to in the Sandwich Islands, though they usually employ a large leaf as a substitute for the block.

A popular view of the process of printing calicoes may, however, be furnished prior to a more scientific analysis of the various processes. Some calicoes are only printed of one color, others have two, others three or more, even to the number of eight, ten, or twelve. The smaller the number of colors, the fewer in general are the processes.

One of the most common colors on cotton prints is a kind of nankeen yellow, of various shades, down to a deep yellowish brown, or drab. It is usually in stripes or spots. To produce it, the printers slightly coat a block, cut out into the figure of the print, with acetate of iron, thickened with gum or flour ; and apply it to the cotton, which, after being dried and cleansed in the usual manner, is plunged into a potash ley. The quantity of acetate of iron is always proportioned to the depth of the shade. For yellow the block is coated in a similar way with acetate of alumina. The cloth, after receiving this mordant, is dyed with quercitron bark, and then bleached. Red is communicated by the same process; only madder is substituted for the bark. The fine light blues which appear so often on printed cottons are produced by applying to the cloth a block covered with a composition, consisting partly of wax, which covers all those parts of the cloth which are to remain white. The cloth is then dyed in a cold indigo vat; and after it is dry the wax composition is removed by hot water. Lilac, flea brown, and blackish brown, are given by means of acetate of iron ; the quantity of which is always proportioned to the depth of the shade. For very deep colors, a little sumach is added. The cotton is afterwards dyed in the usual manner with madder, and then bleached. Dove-color and drab, by acetate of iron and quercitron bark. When different colors are to appear in the same print, a greater number of operations are necessary. Two or more blocks are employed, upon each of which that part of the print only is cut, which is to be of some particular color. These are coated with different mordants, and applied to the doth, which is afterwards dyed as usual.

Dr. Ure furnishes the following important observations on calico printing, for which he states that he is indebted to a much esteemed friend, who unites scientific knowledge to practical skill. It occurs in the second volume of Berthollet's Art of Dyeing.

To bleach cloth for printing, it is first of all to be singed, and then steeped in warm water (sometimes with an addition of spent ley) for a day or two. It is then well washed and boiled in potash ley, five different times.

For 2000 Ibs. (original weight) of cloth, 1000

gallons of water, and forty to forty-five Ibs. of potash are employed each thru:. The boiling is continued eight or ten hours.

Betwixt each operation the cloth must be well washed, and after the third and fourth boil it must be spread upon the grass, or steeped for a night in a weak solution of chloride of lime. After this it is winced a few minutes in a warm dilute sulphuric acid, well washed, and dried.

The principal processes, or rather styles of work, as they are called, are the following : ###

1. Single colored plates.

2. Ditto ditto grounded.

3. Light or dark chintzes.

4. Dark grounds, with a white discharge.

5. Blue grounds with a white resist.

6. Blue grounds, with a red and white resist together.

7. Chemical or spirit colors.

1. Single colors are called plates from their being generally printed with the copper plate. This process consists generally in printing a mordant upon the cloth; which mordant attracts a coloring matter when the cloth is dyed. The mordant is different, according to the color that is wanted.

For black. An acetate of iron is used of the specific gravity 1-040.

For purple. An acetate of iron, specific gravity 1-12, with six, eight, or twelve times its volume of water, according to the shade of color required, and the mass to be printed.

For red. A. solution of three pounds alum in a gallon of water, one half of which is decomposed by acetate of lime or lead.

For cltocolate. Mixtures of acetate of iron, specific gravity 1-12, with red mordant, in the proportions of one to two, four, six, according to the shade.

Each of these mordants is thickened with flour, or in some cases with gum, and printed upon the bleached cloth. After being exposed to the air for a few days, in a warm room, the goods are taken down and passed through the dung copper at a heat of from 150►► to that of boiling water. They are then washed, and winced in another clean dung copper, at a lower degree of heat than before, and then washed again. They are now ready to be dyed.

All the colors last mentioned, *viz.* black, pur-ple, red, and chocolate, are dyed with madder and sumach, except purple, in which the sumach is omitted. Different quantities of madder are used, according to the quantity of color on the cloth, from one pound per piece of twenty-one square yards, to three and even three and a half pounds; the sumach about one-eighth of the madder. The goods are entered when the cop-per is cool, and the heat is brought up gradually during two or three hours, and sometimes the ebullition is kept up for a quarter of an hour ; the pieces all the while being turned over a wince, from the one side of the copper vessel to the other. They are then washed, ariH boiled in bran and water ten or fifteen minutes. If they have much white, they must be branned a second and a third time, washing between each operation. To complete the whitening, they are spread upon the grass for a few days ; or what is

more expeditious, and more generally practised now, they are winced a short time in a warm but weak solution of chloride of lime.

For indigo blue. A strong solution of caustic potash is made, in every gallon of which, by the aid of as much orpiment, twelve or sixteen ounces of good indigo is dissolved. This solution, when clear, is thickened with gum. This being printed upon the cloth, nothing more is necessary than to wash it when dry.

For Prussian blue. The same mordant is used as for black ; but, after cleansing, the piece is winced in a solution of prussiate of potash, in which the prussic acid has been set free by means of sulphuric acid.

For gold. Five pounds sulphate of iron and one pound and a half acetate of lead are dissolved in a gallon of water : the solution, thickened with gum, is printed on the cloth ; and, aftei eight or ten days' age, is winced in a solution of potash made thick with lime. As soon as the black oxide of iron, which is precipitated, commences to redden, the piece is removed to a vessel of water, and then washed.

2. A second, and sometimes third color, is grounded or printed in with a small block, generally after the first has been dyed.

Bark yellow. A mordant is used, the same as for red. The piece, when slightly dunged, is dyed about an hour with one pound of quercitron bark, the infusion being gradually heated during that time to 130►► or 160►►.

Berry yellow. A decoction of French, or Turkey, or Persian berries, with half a pound of alum per gallon, is thickened with flour or gum ; and the piece, when dry, is passed through a weak alkaline carbonate, or lime-water.

Verdigris green. A solution of sulphate ano acetate of copper is put on cloth, which is then passed through a strong solution of potash, in which some protoxide of arsenic has been dissolved.

Drab. The same mordant as is used for pu►► pie. Bark, the dye stuff.

Olive.' The chocolate mordant dyed in bark Both these very much diluted, and thickened with gum.

Buff. A weak acetate of iron is applied, and washed in water.

3. Chintzes. ►►► A number of different colors printed upon cloth together, *viz.* black, red, one or two pale reds, purple, blue, green, and yellow. The black, red, and blue, are the same as in No. 1 ; the purple as No. 1 thickened with gum ; the two pale reds are weaker solutions of alum and acetate of alumina, thickened with gum ; the yellow is

berry yellow, applied after the other colors are finished ; the green is formed by the yellow falling upon the blue ; and all the varieties of orange, olive, &c., by its falling upon the pale reds and purple. The dyeing and subsequent bleaching are the same as has been described in No. 1, with madder only.

4. A dark ground discharged. ††† When the discharge is printed before the mordant, it consists of concentrated lime juice alone, thickened with gum. The mordant, which is also thickened, is blotched over the whole piece, and dried off it as quickly as possible. When the mordant is applied first it is not thickened,

and the acid has an addition of one pound bisulphate of potash in each gallon. They are dunged and dyed like other single colors. Blacks, instead of madder, are generally dyed with logwood and galls.

5. Blue grounds. ††† To make a blue paste for dark blues, three or four pounds sulphate of copper are dissolved in a gallon of water, with a pound or a pound and a half of acetate of lead. The clear solution is thickened with pipe-clay and gum. The pieces printed with this paste are hooked upon a frame, and dipped in a weak blue vat five or six times ; then taken out and kept in the air till they become blue. Alternate immersions and airings are thus continued till the requisite shade has been obtained. The goods are then washed and dipped in a weak sulphuric acid, to dissolve the oxide of copper. The blue vat, as is well known, is made by one part of indigo, with two parts sulphate of iron, and about two and a half parts hydrate of lime.

6. A mordant for red, to resist the blue vat, is made by dissolving about four ounces acetate of copper in a red mordant, made from four pounds of alum, and two pounds and a half acetate of lead per gallon, and thickening the solution with pipe-clay and gum. When this is printed upon the cloth, and dipped in the blue vat, it resists the blue, and a white is left, which, when dunged and dyed in madder, becomes red.

A white called neutral is made by dissolving sulphate of copper in concentrated lime juice, and is used along with this red. It must possess the three following properties: ††† 1. Resisting the blue ; 2. Remaining white after dyeing, when the red happens to go over it ; 3. To leave no oxide of copper upon the cloth.

A berry yellow is grounded in after the blue, white, and red, in this style, are finished.

7. Chemical colors. ††† This name has been given to those colors which are applied topically; most of them are fugitive.

Black. A decoction of logwood and galls, thickened with flour, and, when cold, nitrate of iron mixed with it.

Red. A decoction of Brasil or peach wood, with the protomuriate or permuriate of tin.

Purple. A decoction of logwood with muriate of tin.

Blue. Ground Prussian blue is soaked in muriatic acid for a day or two, and then as much of it mixed with gum tragacanth water as is sufficient to give it the desired shade.

Yellow. A decoction of fustic with muriate of tin.

Green. A mixture of the blue and yellow.

All these colors are simply washed off in water.

M. Vitalis gives the following prescriptions in calico-printing : †††

Mordant for reds. 240 litres of boiling water ; 150 pounds of pure alum; fifty pounds of acetate of lead ; six pounds of commercial potash or soda; six pounds of chalk; three pounds of ground Brasil wood.

Into a vat capable of holding 400 litres, and partly filled with the 240 litres of boiling water, the alum in powder is put, and then the decoction of Brasil wood. After stirring till the alum is dissolved, the acetate of lead in powder is

added. The mixture is to be carefully stirred for some time, and, when the liquor begins to clarify, the potash is put in, then the chalk, in small portions at a time, to avoid too great an effervescence. The whole must now be stirred for an hour and left to settle. The clear

liquor is used as occasion requires.

For strong reds (full reds) the above mordan' is thickened with starch. This is called first red.

If reds of a weaker tone be wanted, the mordant is thickened with gum.

For the second red, three pints of the mordant are thickened with two pounds and a half of gum dissolved in a pint of cold water. The whole is well mixed by due agitation.

For the third red, two litres (a pot) of mordant are mixed with the solution of five pounds of gum, dissolved in three pots of cold water

The above red mordant serves also for weld fus-tic and quercitron yellows, with all their shades.

Mordant for blacks. Twelve pints of iron liquor (pyrolignate of iron). Four ounces of copperas.

Dissolve the copperas in the liquor ; and, after having decanted the clear, mix in gradually four pounds of starch. Heat in a boiler, stirring continually, and take it out when the starch is well boiled.

Another black mordant. For eight pounds of iron liquor, take about two pounds and a half of superfine wheat flour, which is to be gradually mixed up with a portion of the liquor ; then add the remainder of this, and leave at rest for twelve or twenty-four hours, or even longer. Then boil for half an hour, or till the mixture has acquired the consistence of a paste. The boiler is then to be removed from the fire, and the mordant is to be stirred till it becomes cold. It is now to be passed through a sieve, and used in printing.

These mordants give a beautiful black with logwood, and especially madder.

Under the Chemical Black, in Rees's Cyclopaedia (article COLOR), we have the following recipes : ###

To a decoction of Aleppo galls, in five times their weight of water, made into a paste with flour, add a solution of iron in nitrous acid, of specific gravity 1-25, in the proportion of one measure of nitrate of iron to eighteen or twenty of the decoction, and a black will be formed fit for almost all the purposes of calico printing, and possessing the chief requisites of this color, namely, tolerable fixity,

and a disposition to work well with the block.

When a nitric solution of iron is added to a decoction of the galls, the solution is decomposed, the oxide of iron unites with gallic acid and tanning principle, while the nitrous acid is disengaged. This appears from the blackness which the solutions assume immediately on being mixed. The disengaged acid, however, re-acts in a short time on the new compound, the blackness gradually disappears, and, if the nitrate of iron has ►►been added in proper quantity, the paste in a few days becomes, from a black, of a dirty olive green. When the proportion of nitrate of iron is greater than one-eighteenth, this change takes place sooner; and, if it amounts to one-tenth, the paste, when applied to the cloth,

will be a bright orange, like the acetate of iron. By exposure to heat and air this color generally deepens, becoming gray, and at last a fu-11 black. In this state it is permanent, and adheres powerfully to the cloth.

These changes of color depend on the solution of the tannate and gallate of iron in the disengaged nitrous acid, and the dissipation of the acid from the cloth, when it is exposed to heat and air. This solution of the tannate and gallate of iron is indeed an essential requisite to the goodness of the chemical black. If the disengaged acid is not sufficient to effect this, or if it is in a state of too great dilution, the color has but a feeble adherence to the cloth. It is not presented in a state favorable to its union with it, since the combination into which the iron has entered is insoluble in water. It lies merely on the surface, but does not penetrate its fibres, and gives way readily in the various operations to which it is subjected. This chemical black, therefore, is a solution of the tannate and gallate of iron in nitric acid.

Mordants for violets (from Vitalis). First violet. ►►► Sixteen pints of iron liquor; eight pints of water ; four ounces of Roman vitriol (sulphate of copper). This mixture is to be thickened with powdered gum, in the proportion of a pound to the pint.

Second violet. ††† Mix three parts of the preceding with one of water, and thicken as above.

Third violet. ††† Dilute two parts of the first mordant with three of water.

Coffee color. ††† Ten pints of iron liquor; two pints of the mordant of the first red ; four pints of water. Thicken with starch.

Puce, or curmelite color. ††† Three pints of mordant of the first red ; half pint of iron liquor.

Deep brown. ††† Two pints of red mordant ; half pint of iron liquor.

Marroon color (chestnut-brown). ††† Two pints of violet mordant ; one pint of red mordant ; eight ounces of green copperas, to be dissolved in the mixed mordants.

Mordore. ††† Eight pints of violet mordant ; twelve pints of red mordant.

Deep lilac. ††† One pint of violet mordant ; one pint of mordant for the second red.

Light lilac. ††† One pint of violet mordant ; three pints of mordant of the second red.

Musk color. ††† One pint of red mordant ; three pints of black mordant.

Incarnate (flesh) color ; color between cherry and rose. ††† Ten pints of red mordant ; one pint of black mordant.

Olive color. ††† Welding on the mordant of the first, second, or third violet.

Reseda color. ††† Welding on puce mordant.

We may now select from Vitalis some examples of the mode of managing the different styles of calico printing. We shall place them in the order in which they occur under each head. We may commence with

Calicoes of one block. ††† First example. Violet on a white ground. 1. Impression of violet mordant ; 2. Dunging and washing ; 3. Maddering ; 4. Branning and exposure on the grass for a few days, to

clear the grounds.

Second example. Black on a yellow ground. VOL. XVIII.

1. Bath of yellow mordant; 2. Welding; 3. Topical black.

Calicoes of two blocks. ††† First example. First olive and second olive on a white ground. 1. Impression of the first olive mordant ; 2. Impression of the second olive mordant; 3. Welding.

Second example. Red and blue on a white ground. 1. Impression of the red mordant:

2. Maddering; 3. Impression by the block of topical blue. When the calico is to have several colors, says M. Vitalis, for example, black, several reds, several violets, &c., as many mordants must be given as there are different colors, which must be inserted (rentres) into the first plate (figure), called the plate of impression (printing block, planche d'impression). The insertion (rentrage) of the mordants is executed by means of blocks (planches), which take the name of rentreures. These blocks are engraved with the same patterns as the printing blocks, but so as that they apply the new mordants only to the places of the pattern reserved in the first blocks. It may be readily conceived how necessary it is for these blocks to have an exact correspondence with one another, otherwise the colors would not be comprised within the limits of their outlines. This fault is too often met with in common prints, on account of the rapidity with which they are worked off, and the little care taken in their fabrication. In order that every color may occupy the place assigned to it -in the drawn pattern (le dessein enlumine), adjusting brass points (picots de rapports) are made use of, which guide the printing on of the successive mordants, at precisely that place of the figure where the color to be produced from each mordant ought to fall.

Third example. Yellow and black on a white ground. 1 . Impression of the yellow mordant, welding ; 2. Impression of topical black.

Calicoes of three blocks. ††† Example. First olive, second olive, and yellow on a white ground. 1. Impression of the first olive mordant; 2. Impression of the second olive mordant ; 3. Impression of the yellow mordant; 4. Welding.

The third block (main) might also be performed by the impression of the topical yellow.

Calicoes of four blocks. ††† Example. Black, red, violet, and yellow on white. 1 . Impression of the black mordant; 2. Impression of the red mordant; 3. Maddering; 4. Impression of topical yellow, or of the yellow mordant, and welding.

Calicoes of Jive blocks. ††† Example. Black, red, violet, yellow, and blue. 1 . Impression of the black mordant; 2. Impression of the red mordant; 3. Impression of the violet mordant; 4. Maddering, insertion of the blue, and afterwards of the yellow.

Calicoes of six blocks. ††† Example. First olive, second olive, black, first red, second red, and yellow on white ground. 1. Impression of the black mordant ; 2. Impression of the first red-mordant ; 3. Impression of the second red mordant; 4. Maddering; 5. Impression of the se-cond olive mordant ; 6. Impression of the yel-low mordant; 7. W'elding.

It is now very seldom, however, that the nun;-

ber of three blocks (courses) is exceeded, on account of the high price to which the labor would necessarily raise the calico. The following is an example of printing in fugitive colors : violet, black, red, and yellow, on white ground. These four topical colors are successively applied, in the order above mentioned.

Calicoes with fast colors, after receiving the impressions, are dried, and washed from the mordants, when they are ready for the maddering.

Goods printed by reserve are so called, because the color does not strike the whole surface, but only certain unprotected portions of it. The reserve is composed of the reserve bath, and the thickening.

A reserve bath is thus formed : dissolve in a pint of water six ounces of sulphate of copper, three ounces of verdigris, two ounces of alum, and

four ounces of gum arabic.

Another reserve bath may be noticed : dissolve in two litres of water four ounces of Roman vitriol (sulphate of copper), and six ounces of verdigris, to which add one pound of gum arabic ; and, when it is dissolved, pass through a fine sieve, or let it settle, and decant.

To thicken the bath, knead a pound of pipe-clay, well ground and sifted, with three or four ounces of water : with this thick dough carefully mix the reserve bath, and triturate well before making use of it. The reserve is printed on the goods like the mordants. Twenty-four hours after the impression the goods are to be passed through the dyeing vat. This style is much used in blue dipping.

The theory of the reserve is very simple. The oxide of copper, which forms the basis of the reserve, restores to the indigo the oxygen which it had been deprived of by the sulphate of iron. The reoxygenated indigo loses its solubility, and consequently cannot fix on the stuff. Since the reserve, intended to nullify the action of the indigo essentially, acts merely by the oxide of copper which it contains, it follows that the proportions of this oxide are not indifferent, and that the measure will not perfectly accomplish its end, unless the dose of oxide of copper, which the sulphate, &c., can furnish, be adequate to neutralize the action of the indigo. A similar result would ensue, if the reserve be not suitably thickened. Some object to the introduction of alum.

The proportions of the cupreous salts ought, however, to be as little as can effect the purpose ; if their quantity be too great, their operation would be extended to the indigo diffused through the bath. Sometimes the sulphate of copper is made to predominate, and sometimes the acetate.

The following recipes for reserves are given by M. Vitalis :

1 . Sulphate of copper . . 20 pounds Acetate of copper . .12

Gum 16

Alum ,.d-. … - 5 Water :…: ˆ . a. . 32 litres

2. Sulphate of copper . :. . . 16 pounds Acetate . . - - 24 Alum . -..;. .4

Gum , * ;.; .. . 15 Ib. 8 oz. Water . 8 litres.

The thickening is always made with pipe clay.

To make a sky-blue on a dark blue. ††† 1 . Dye the cloth of a sky-blue; 2. Apply the usual reserve ; 3. Pass the cloth through a strong blue vat. Brighten in a bath, feebly acidulated with oil of vitriol (or muriatic acid), to carry off" the particles of lime suspended in the vat. Wash and dry.

Sky-blue, dark-blue, and white. ††† 1. Apply the reserve ; 2. Dye sky-blue ; 3. Apply the reserve anew ; 4. Pass through a blue vat of sufficient strength.

Deep blue, sky-blue, green, yellow, and white. †††

1. Print on the reserve; 2. Pass through a weak vat, giving two or three dips ; dry, brighten with very dilute sulphuric acid, wash, dry again; 3. Print on once more the common reserve paste ; 4. Dye in a stronger vat than the above, till the blue be sufficiently deep ; dry, brighten as before, wash and dry; 5. Print on the red mordant, and dry ; 6. Give the weld or quercitron. The mordant applied to the white spots, and to the pale blue (petit blan*), affords yellow and green. The white portions that have not been touched with the mordant remain white, in like manner as the pale blue spaces, not covered by this mordant, furnish the pale blue. Reserves are also applied to silks. For example, on the handkerchiefs called foulards, the reserve is styled waxing. A mixture of tallow and resin is melted, and applied to the silk with the block ; this reserve being given, the silk is dipped in the blue vat. The reserved portions, being defended from the action of the indigo, remain white, while the rest of the surface takes a fast blue.

Sky-blue, red, and white ††† 1. Apply the usual reserve ; 2. Apply the red mordant, thickened with pipe-clay, and dry ; pass through a weak blue vat, to obtain sky-blue ; wash at the river, madder, wash, and spread out on the grass to clear the white.

Printing with discharges (par rongeant) on a mordant. ††† This process serves to form mourning garments, composed of a white figure on a black ground. The piece of goods is first passed through the black mordant by means of the padding or blotching machine. When this mordant is very dry (by passing, for example, over steam cylinders), the white discharge is applied, prepared with nitric, oxalic, tartaric, or citric acid, or bisulphate of potash, thickened with roasted starch (British gum). It is dried, washed, and madtiered. On quitting the

madder bath, the goods must be well washed, and exposed on the grass till the whites be very clear.

The portions of the cloth where the mordant has not been acted on by the discharge will take a black of a greater or less depth from the mad-der, while, on those places where the discharge has been applied, the mordant will be removed, and the madder color will not combine with the stuff. Exposure on the grass will carry off the loose madder. In like manner, by this process, white figures may readily be obtained on a ground of red, carmelite, violet, puce, &c. ; since it will be necessary merely to pass through the mordant of one of these colors, then to apply the white discharge, and finally to madder. To have white figures on an olive ground, weld or quercitron must be used instead of madder.

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Printing with a discharge on color (dyed goods). ??? Suppose that the calico has been dyed in a logwood bath, mixed with iron liquor, the cloth will take a black color. If, after dyeing, it be impressed with a solution of tin, properly thickened, the ferruginous portions of the cloth touched with the discharge will be removed, and they will pass from a deep black to a very brilliant crimson.

By subjecting to the same treatment calicoes dyed of different colors and shades, determined by the different degrees of oxidizement of the iron, a multitude of varieties will be produced, either in the colors or in their shades.

By a similar operation, we may make figures of a beautiful green on goods, by dyeing them first of a pale blue in the indigo vat, passing them then through a bath of sumach and sulphate of iron, and finishing in a bath of quercitron with alum.

Here the green color produced by the indigo and the quercitron remains masked, as well as the other colors, by the oxide of iron in the sulphate, till the solution of tin be applied, which causes the other colors to disappear, and gives to those that remain a lustre which they

would not otherwise have had ; because the solution of tin renders the quercitron yellow more vivid, and because from this vivid yellow, associated with the blue, results a more brilliant green.

A figure of aurora color on an olive ground may be made, by passing the cloth first through a bath of sumach and sulphate of iron, then washing in an alkaline decoction of fustet, and printing on at last the solution of tin.

Let us give for an example the mode of making yellow figures on olive. The problem is reduced to find a discharge, which, in destroying the color communicated by iron, can at the same time change the color to yellow. This discharge is the thickened solution of tin. To the solution of salt of tin (muriate) a little muriatic acid is added. This is thickened with starch previously boiled, in a very thick and cold state, observing to pour in the solution in small portions, in order to ensure the thorough union of the ingredients. As soon as the piece has been impressed with this discharge, it is carried to the river to be washed, and to prevent the discharge from acting too long on the color. If the pattern required black, it would be necessary to apply it before the yellow discharge.

Calico printing by the combined methods of discharges on the mordant and on the dye. ††† First example. Olive, yellow, and white. 1 . Pass through the olive mordant. 2. Print on the white discharge ; wash and dry. 3. Weld. 4. Print on the yellow discharge.

Second example. ††† Bright red, and dull red ; white, yellow, and black, on an olive ground. 1. Print on the red mordant. 2. Madder. 3. Pass through the olive mordant. 4. Print on the white discharge. 5. Weld. 6. Print on the yellow discharge and the topical black, and wash.

The colors by discharges, though bright, are not so fast as those given by the dye-baths. If, instead of applying the yellow discharge, thickened as usual with starch, one-third more starch be employed, and a coloring of decoction

of Turkey berries, or Brasilvvood, be added, we shall obtain, in the first case, a richer yellow, and, in the second, an orange yellow.

The name of lapis lazuli is given to calicoes, which, after having been printed with reserve discharges, and different mordants, are passed in succession, first through the blue vat, and then through a madder

bath. If a yellow or a green be wanted, there is given, in the sequel of the madder washing, a yellow mordant, and the goods are turned through a bath of weld or quercitron.

Suppose that we are to print on cloth a pattern into which there enter white, red, black, blue, green, and yellow. The goods being previously thoroughly whitened, we proceed as follow : ###

1. Apply the reserve discharge. 2. Print on the red mordant, thickened with pipe-clay. 3. Print on the black mordant, thickened in the same manner. 4. Pass the goods through a strong vat in forty-eight hours at farthest after the printing has been given. The dipping ought to be for six minutes at most at two times : between each dip, the goods must be aired for five minutes. They are then carried to the river, allowed to steep in it for an hour, and washed. 5. They are dunged. 6. Passed through bran. 7. Maddered. 8. Beetled very carefully and dried. 9. The red mordant is applied, which serves also as a yellow mordant. The pieces are now to be well cleaned. 10. They are passed through the quercitron bath, after which they are washed and finally dried. It may be proper to add that the reserve discharge is prepared by melting together hog's-lard and resin (arcanson), and, when the mixture is cool, diluting it with oil of turpentine ; adding afterwards binarseniate of potash, and a little corrosive sublimate iu powder. The whole, being well blended or ground together, is to be then printed on.

The lapis pattern may be put on a blue ground, a red, green, puce, &c. ; whence result a great many varieties. The pattern was originally called lapis, from its resemblance to lapis lazuli. A slight reflection on the above process will show us how the different colors are produced.

The blue is the immediate effect of the b*ue vat; the red and black are developed by the maddering on the respective mordants of these colors. The combination of blue with yellow on the yellow mordant gives green. The ye/low results from the coloring matter of the quercitron bark fixed by the red mordant, which is, at the same time, the mordant for yellow. Finally, the white is occasioned by the white discharge of the reserve discharge.

The calico printer should be well acquainted with the nature of topical colors, or ' colors of application,' as they are sometimes called. The following are from Vitalis : ###

Topical or pencil blue. ### Boil in sixty pints of water, for half an hour, fifteen pounds of potash, and six pounds of quicklime, in order to rendet the potash caustic. Then add six pounds of orpiment

(sulphruret of arsenic) reduced to fine power, and continue the boiling for a quarter of an hour, taking care to stir continually with a rod. When the boiler is a little cooled, pour into

it from six to eight pounds of indigo well ground at the mill, and stir again till the indigo be well dissolved, which is discovered by a drop of the liquor, when placed on a bit of glass, appearing yellow. The bath, while still hot, is to be thickened with a pound of gum for every pot (two litres) of liquor, or with eight ounces of starch.

Rust yellow. ††† This is made with acetate of iron, or the black cask. It is thickened with gum for the light yellows, and with starch for the deeper shades. Rust yellow, when applied on blue, gives a deep green, which serves for the stems of certain flowers.

Topical green. ††† This preparation is formed by

This operation must be carefully preserved from a mixture of topical blue and yellow, in which contact of air, and only employed when its color ‘ is yellow, or at least yellowish-green. If it be-come blue, the liquor is to be treated anew with some pounds of caustic potash and orpiment.

This blue application, says M. Vitalis, much used formerly, is seldom employed at the present day. Another blue, of less permanence, but more brilliant, is now preferred. It is made with Prussian blue, in the following manner : ††† Into an earthen pot, four ounces of finely ground and sifted Prussian blue are to be put. Over this must be slowly poured, stirring all the while sufficient muriatic acid, to bring it to the consistence of syrup. The mixture is to be stirred every hour for

a day, and afterwards thickened with from four to eight pots (of two litres each) of gum-water, according to the shade wanted.

Topical red. ††† A pound of Brasil wood is to be boiled in four litres of water for two hours ; the decoction is then to be decanted and boiled down to two litres. As much red mordant must now be added as is necessary to form a fine red ; and it is to be finally thickened with eight ounces of starch. The color will be more beautiful the older the decoction of Brasil wood is.

Instead of Brasil wood, wood of Japan, Saint Martha, or Nicaragua (peach wood), may be used, provided their color has been refined from the dun which they contain, by the usual process with milk.

Topical yellow. ††† This is prepared by boiling four pounds of Turkey or Avignon berries in twenty-four litres of water, which is boiled down to one-half. The clear liquor is drawn off, and a pound and a half of alum is dissolved in it. For the light yellows, it is thickened with gum ; for the deep, with starch. This topical yellow does not resist soap. The following is equally fast and agreeable : †††

the yellow predominates considerably. The mixture must be made by little and little with the utmost care, so as to hit the wished-for shade.

Topical aurora. ††† A sufficient quantity of alum in solution must be added to the anotto bath ; and the mixture is to be thickened with gum.

Topical black. ††† To twelve pints-of the black cask, or of pyrolignate of iron, at 4†† Baume” (for salts), add four .ounce’s of Roman vitriol dissolved in water, and a sufficient quantity of decoction of galls to form a good black. Thicken with three pounds and a half of starch, which is to be gradually worked up with a portion of the liquor. Boil, withdraw from the fire, and keep stirring, till the liquor be cool ; it must then be passed through a searce or a linen cloth.

Another topical black. ††† In twenty-four pints of water, boil two pounds of logwood, two pounds of sumach, and eight ounces of galls, till the li-quor be reduced to half its volume. Add then a pint of the black cask (or pyrolignate of iron) ; boil away six pints ; take off the clear bath, dissolve in it two ounces of Roman vitriol, and one ounce of sal-ammoniac ; after which thicken with starch, and pass through a

searce before making use of the composition.

Topical violet and lilac. ††† In thirty pints of water boil six pounds of logwood, ground or in chips, till ten pints be evaporated ; decant the clear, and dissolve in it one ounce of alum for every pint of liquor. The deep violets are thickened with starch, and the light violets with gum, which is to be dissolved in the cold. This color changes readily, for which reason it should be prepared only as wanted ; and be immediately put to use.

In the manufacture of printed calicoes, colors are obtained from madder, which result from the mixture of red and black. For mordants, mix-

in eight pints of water, boil four pounds of tures in different proportions, of acetate of iron quercitron bark in powder, down to one-half of and acetate of alumina, are employed. Pass through the searce, thicken with

the bulk.

three pounds of gum, and mix in gradually, sufficiency of solution of tin to render the color of a brilliant yellow. This yellow resists vegetable acids and soap very well. When placed on a blue ground, it forms a fine green ; and it may be applied by the plate or the pencil.

The best solution of tin which can be employed for this topical yellow is that made with a mixture of three ounces of muriatic acid, four ounces of nitric, and four ounces of pure water. Two ounces of grain tin are to be dissolved bit by bit in this liquor. When the solution is completed, half an ounce of sugar of lead is to be added. The mixture must then be well stirred ; left to settle, and decanted. Half an ounce of the clear solution is to be taken for every pint of the yellow bath. On mixing with the yellow bath a little of the annotto bath, we have orange yellows.

By printing on a mordant, composed of equal parts of oxidised acetate of iron (black bouillon) and acetate of alumina, both concentrated, a deep mordore is obtained with madder. One part ‘of acetate of iron, and two of acetate of alumina, afford a less sombre mordore, inclining

towards puce-colored. On augmenting the quantity of acetate of alumina, the shade approaches more and more to red ; and, on introducing, at last, only one-twelfth of acetate of iron, an amaranth color is obtained. If, on the contrary, the proportion of acetate of iron be increased, browns are produced.

This color is that which requires most madder . It may be boiled longer than for the reds, but not so long as for the violets, because, as the portion of the coloring matter which is combined with the alumina does not stand a prolonged ebullition so well as that which has the oxide of iron for a mordant, the shade is degraded, and

there is obtained only a poor and unequal color, instead of a substantial and well raised one. Great care should also be taken to put into the bath a sufficient quantity of madder, so as to saturate all the mordant ; otherwise a uniform color can never be obtained, for the bath becomes exhausted, and some parts of the cloth would be saturated before other parts had been able to as-sume the proper shade. For conducting the operation properly, and for completely saturating the mordant, the maddering should be given at wo times. The bath is scarcely suffered to boil jhe first time, and, from the hue that the cloth has taken, the quantity of madder to be employed at the second maddering may be determined. When the cloth is to have, besides the mordore, fainter colors, they should not be printed on till after the first maddering, because the heat of the bath in the double maddering would degrade them. The mordore”s have a more agreeable nue, when, previous to maddering, they have been dyed with nearly half the quantity of weld or quercitron which would have been used had they been dyed with these substances alone. The mordants for mordore and puce afford, with both these substances, the shades of olive, bronze, terre d’Egypte, &c. In this case, it is sufficient for restoring the white, to pass through bran on their quitting the boiler, and to expose them for about eight days on the grass, lifting them once in this interval in order to wash and beetle them. The color has more lustre when, before drying the cloth, we

pass it through water acidulated so slightly with sulphuric acid as to be hardly perceptible to the taste.

The following example of a spirit red directly applied in calico printing is valuable: ††† Prepare an aqua regia, by dissolving two ounces of sal ammoniac in one pound of nitrous acid, specific gravity 1-25. To this add two ounces of fine grain tin ; decant it carefully off the sediment, and dilute it with one-fourth its weight of pure or distilled water.

To one gallon of water add one pound of cochineal, ground as fine as flour ; boil half an hour; then add two ounces of finely pulverised gum dragon (tragacanth), and two ounces of cream of tartar; and stir the whole till it is dissolved. When the liquor is cool, add one measure of the preceding solution of tin to two of the cochineal liquor, and incorporate well by stirring. Apply this with the pencil or block ; suffer it to remain on the cloth six or eight hours ; then rinse off in spring water. This color will be a bright and beautiful scarlet.

Boil twelve pounds of Brasil chips during an hour, in as much water as will cover them. Draw off the decoction, pour on fresh water, and boil as before. Add the two liquors together, and evaporate slowly down to one gallon. To the decoction, while warm, add four ounces of sal ammoniac, and as much gum dragon or Senegal as will thicken it for the work required. When cool, add one of the solutions of tin above described to four, six, or eight, of the Brasil liquor, according to the color wanted. Suffer it to remain for eighteen or twenty hours on the cloth ; then rinse off in spring water as before. The color will be a pale and delicate pink. If

it be required deeper, the decoction must be made stronger, and used in the proportion of three or four to one of the solution of tin. Nicaragua or peach wood, though not so rich in coloring matter as Brasil, yields a color, however, which is, if possible, more delicate and beautiful.

A process in calico printing, of peculiar elegance, with an alkaline solution of alumina, was invented by James Thomson, esq., of Primrose Hill, near Clithero. Its effect was to produce a fast green, by the mixture of a yellow mordant with the common solution of indigo in caustic potash, through the intervention of orpiment. This, as is obvious, could not be done with any acid solution of alumina. Mr. Thomson first formed a solution of that earth in potash, mixed this

with the solution of indigo, and applied the mixture, properly thickened, to the cloth. But as, in the ordinary dunging operation, the alkali would naturally wash away with it the greater part of the alumina, the goods before being dunged were passed through a solution of sal ammoniac. It is easy to perceive the rationale of what takes place. The potash on the cloth combines with the muriatic acid of the sal ammonia, and, as the two substances set free (the alumina and ammonia) have no tendency to combine, the former remains precipitated on the cloth at its points of application. It obtained currently, but very improperly, the name of Warwick's green, because Dr. Warwick made and sold the solution of aluminated potash to the printers.

Acetate of alumina is now most frequently made for the calico printers, by dissolving alum in a solution of crude acetate of lime (pyrolig-nite) ; a gallon of the acetate, of specific gravity 1'050, or 1-060, being used with two pounds and three quarters of alum. A sulphate of lime is formed, which precipitates, while an acetate of alumina mixed with some alum floats above. The specific gravity of this liquid is usually about t-080. The acetate of alumina employed as a mordant for chintzes is still commonly made by the mutual decomposition of alum and acetate of lead. Fifteen parts of alum are equivalent to about twenty-four of acetate.

The maddering of printed goods requires pains and precautions, which long practice alone can teach. The causes which make their effects to vary are too numerous for us to point them all out here. The quantity of madder employed, the duration of the maddering, the manner of managing the fire, are, along with the dunging, the circumstances which have most influence; and they cannot be subjected to any rule, because they must differ more or less in almost every process.

It is plain that all these operations have for their objects, 1st, to remove the mordant uncombined with the cloth ; 2dly, to fix the coloring matter ; 3dly, to carry off, by the action of the air and bran, the dun coloring matter which is mixed with the madder, as well as the color which covers the parts of the cloth not impregnated with mordant.

The cloths intended for printing ought to be very carefully bleached. The more perfect the

white is, the more lustre do the colors take, and the more easy is the unmaddering. The fine whites on sale are not even sufficient ; and it is right to give them at least one ley, one exposure on the grass, or one immersion in oxygenated muriatic acid, and to let them also soak some rxmrs in water acidulated with sulphuric_ acid. Very frequently, several leys and several immersions must be given. Thus the dressing (paste) is completely removed, the remaining coloring matter of the cloth is destroyed, which, by fix-ing in a very durable manner, that of the mad-der, might render the unmaddering a dim-cult operation ; and thus also the greater number of the stains formed during the maddering, to which the name of madder spots are given, are prevented.

These stains, almost indelible, very common on certain kinds of cotton cloth, and of a color perfectly similar to what madder gives to those parts of the cloth impregnated with oil, seem to arise from a combination with grease or oil, analogous to what takes place in the preparations of Turkey red. It is very probable that they are produced by the grease employed in the parou, or by the soap which must be employed in bleaching. The combination which in that case may be formed on the stuff, resists the subsequent operations well ; and it will be seen, in the process for the Adrianople red, that the action of alkaline solutions, even pretty concentrated, is insufficient to destroy the combination of the oil with the cotton. A strong ley, run off very hot, does not afford a complete guarantee against these spots, although it may be the surest means of avoiding them. It would be of great consequence for calico printers to be able to exclude from weaving and bleaching both grease and soap.

The Adrianople red has a lustre, which it is difficult to imitate by all the processes hitherto described. It has, besides, the property of resisting more completely the action of the different reagents, as alkalies, soap, alum, acids. Vogler acknowledges that by his numerous processes he has not been able to obtain a red possessing a durability equal to that of Adrianople, although he formed one much more permanent than the false Adrianople reds, which are often used for the siamoises and other red goods.

Aquafortis (dilute nitric acid) is, according to the same author, the

surest and most expeditious means for distinguishing the true red of Adrianople from the spurious. It is sufficient to plunge a thread of the latter into it. It is soon seen to grow pale, and in less than a quarter of an hour it becomes white, whilst the true Adrianople red remains an hour without being affected, and it never loses the color entirely, which only turns orange.

The Adrianople red, which for a long time came to us through our Levant trade only, stimulated the industry of our artisans ; but the attempts were for a long time fruitless, or success was confined to a small number of dyehouses. Abbe Mazeas published experiments which threw much light on this dye ; and the government promulgated in 1765, from information that it had procured, an instruction under the title of Memoir,

containing the process for the incarnate cotton red dye of Adrianople on cotton yarn. The same description is found in the treatise of Le Pileur d'Apligny ; but this process has not completely succeeded.

Three processes are employed for giving blue in the art of calico-printing. The first of these processes is used for dyeing cloth whose ground is to be blue or green ; and, whenever they bear colors which are to be kept from varying in the vat, these are covered with the white reserve.

If the cloth is to retain a white ground, and bear blue figures, of one shade, or of several, the second of these processes is had recourse to. Sometimes one or two colors are joined to the blue thus made ; but, in this case, they must be applied after the blue dyeing, because there is not a color which may not be either destroyed, or powerfully altered, in the operations which it requires.

Lastly, in other circumstances, a blue is to be put on cloth covered with a pattern, all of whose parts are already colored, and which leaves merely small spaces to color blue. For this purpose, the blue is used which is applied with the pencil (small brush). This blue of application is thickened with gum, and put upon the pencil. It may be printed on, by covering with canvas the frame which contains the thickened color, and removing the regenerated indigo with a scraper before applying the plate ; but only small objects of a slightly intense blue, which rarely succeeds, can be thus applied.

Bancroft says, that he has substituted sugar for the sulphuret of

arsenic with success; which would be advantageous, on account of the price and poisonous qualities of this substance. The experiment did not succeed with us. The blue of application has been attempted to be prepared by means of the oxide of tin ; but the degree of concentration of the alkaline solution adequate to the solution of the oxide and the indigo has not been hitherto ascertained, so as to be susceptible of thickening with the gums. This point once determined, a pencil blue will be had, which will possess the very great advantage of not occasioning a bulky deposite, which al-ways embarrasses the vessels where this blue is made in the ordinary processes, and which, however well washed, causes a considerable w'aste of the indigo.

In printing on cloth, ground indigo with oxide of tin, and passing the cloth through a solution of oxide of tin in potash, delft-ware blues may be made in a single vat. We have been able to make in this way only light blues. Were this process brought to the point of producing more substantial blues, it would afford great advantages.

The application of the chromate of lead op Turkey red cloth, forms a brilliant style of calico printing, now carried to high perfection at the establishment of Messrs. Monteith at Glasgow Nitrate of lead is dissolved in liquid tartaric acid, of a specific gravity about 1-250 : this solution is thickened with gum, and applied with the block to cloth previously dyed Turkey red. Whenever the paste is dried, the cloth is slowly passed through an aqueous solution, nearly s;i-

turated, of chloride of lime, kept at the temperature of about 100►► in a stone trough. The tartaric acid, disengaging the chlorine, discharges the color of the Turkey red at the points of application; while the nitrate of lead, or rather perhaps the oxide of lead, remains attached to the cloth. This is immediately washed, and then passed through a solution of bichromate of potash, by means of the padding machine.

An orange color was a few years ago given to goods in calico printing, by means of the crystals of hydrosulphuret of soda and antimony,

which are hence called orange crystals. But the use of the alkaline solution of sulphuret of antimony had been long known and practised by the Lancashire printers.

To produce violets on printed calicoes, the acetate of iron diluted with water is impressed, and they are maddered. This color is less easily degraded in the dyeing bath than the reds. It may also be kept boiling for a longer time, so as to raise the deep shades. The bath becomes very foul ; the color comes out of it very dull, and assumes lustre only by exposure on the grass, and ebullition with bran water ; it is even rare for the white to become beautiful again. But these inconveniences are obviated by dunging with a strong heat, which acts less upon this mordant than upon that employed for the reds.

For lilac, a mordant is printed on, composed of very dilute acetate of iron, mixed with a small quantity of acetate of alumina.

Few of the yellows produced from vegetable substances can acquire upon cotton permanence comparable to that of the colors producible from madder ; and they never acquire this quality without losing their lustre. When a color rather fast than brilliant is wanted the cotton is colored with oxide of iron, by impregnating it with any of the various solutions of this metal. The processes employed for this dye are very numerous, and their shades may obviously be greatly multiplied, by varying the state of oxidation of the metal, or the nature of the acid which holds it in solution ; as also by slight changes in the proportions of the materials, and in the manipulations.

In order to obtain a deep color, Chaptal treads the cotton in a solution of sulphate of iron, marking from 12$\bullet\bullet$ to 15$\bullet\bullet$ Baume. He squeezes it very slightly but equably. As soon as the whole portion (lot) is dipped, it is repassed, hank by hank, through the same solution, and immediately afterwards through a solution of potash, marking the same number of degrees. The color of the cotton becomes of a dirty blue-green, which changes in a few minutes to an agreeable golden yellow. At each dipping the vessel into which the cottons are plunged must be emptied, in order that the color may be equal and uniform.

For a pale and very soft yellow, he treads the cotton in a solution of sulphate of iron, marking three degrees, and repasses it as in the preceding process. On the other hand, he prepares a liquor with solution of potash, marking from two to three degrees, to which he adds solution of alum till he observes that the flocks are no longer dissolved. He impregnates the cotton

with this liquid, and renews it for each dip* ❓❓❓ The cotton is dyed of a very agreeable yellow. When the colors are not sufficiently deep, the cotton may be repassed through stronger solutions.

Chaptal recommends, for making the colors evenly, to pass at once no more than one-fourth kilogramme of cotton, to employ weak solutions of sulphate of iron, to dip the cotton first in a solution of potash, then in one of sulphate of iron, repeating these alternate dips as often as shall be requisite to arrive at the desited shade, and to use the greatest care in impregnating and squeezing the cotton equably.

A fresh-butter yellow is produced, by passing the cotton through slightly oxidised acetate of iron, mixed with nitrate of iron, which may be made to incline more to red, the greater the proportion of the latter salt.

With nitrate of iron alone, diluted with water, a pretty clear yellow may be had, which rises quickly. If the cotton be impregnated with nitrate of iron little diluted, allowed to dry, and then washed, it retains a very deep tint, similar to that of rust.

The rust-yellow, which is printed on cloth, is made with two parts of sulphate of iron, and one part of acetate of lead. By mixing with this, different proportions of highly' oxidised oxide of iron, shades bordering on red may be procured.

Cotton dyed by these processes takes very different colors in the dye-baths. That which received a faint yellow color by the process of Chaptal, becomes of a walnut hue in the decoction of galls. When the color is deeper it becomes mouse-gray ; with tan, or quercitron, it affords a yellow. When passed through a decoction of equal parts of nut-galls, sumach, logwood, and weld, the cotton becomes of a dirty gray-white. When dried, and passed through a strong solution of sulphate of iron, it assumes the bluish-gray color, which is called ceil de roi. Bancroft describes a topical color (couleur d'application), which is obtained from quercitron. A strong decoction of quercitron is made, filtered, and evaporated at a gentle heat, and, when it is reduced to less than one-half, it is allowed to cool to the temperature of the living body. After this, one-fourth of acetate of alumina is mixed with this liquid. The mixture is thickened with as much gum as is necessary to prevent its running during the impression, but not so much as to obstruct its penetrating the stuff. The color obtained by this application has neither as much intensity, nor as much

permanence, as that procured by previously impregnating the stuff with the mordant. Both qualities may, however, be increased by a mixture of nitrate of copper and nitrate of lime.

Quercitron ought undoubtedly to be considered as a very useful substance in dyeing; yet the attempts which we know to have been made, with the precautions prescribed by Bancroft, especially in reference to the temperature of the bath, seem to us to prove that the color derived from it is inferior in permanence to that producible from weld. A purer and more lively color may be obtained from ouercitron, by adopting

the process which Chaptal has given for fustic (yellow wood).

For dyeing cotton yellow, preparatory to printing, the first thing is to scour it in a bath prepared with a lixivium of the ashes of green wood, then to wash and dry it. It is alumed with the fourth of its weight of alum. After twenty-four hours it is taken out of the aluming and dried, without washing. A weld bath is thereafter prepared, at the rate of one part and a quarter of weld for one of cotton. In this the cotton is dyed, by turning it round the sticks, and working it with the hands, till it has acquired the wished-for shade. It is taken out of this bath to be macerated for an hour and a half in a solution of sulphate of copper or blue vitriol, in the proportion of one-fourth of this salt to one part of cotton. It is next thrown, without washing it, into a boiling solution of white soap, made in the same proportions. After being well stirred, it is to be boiled for nearly an hour, after which it must be well washed and dried.

If a deeper yellow, bordering on jonquille, be wanted, the cotton is not passed through the aluming, but two parts and a half of weld are employed to one of cotton, with the addition of a little verdigris dissolved in a portion of the bath. The cotton is plunged into it, and worked, till it has taken a uniform color. It is lifted out of the bath that a little soda ley may be poured in, when it is again immersed and turned through the bath for a full quarter of an hour. It is then

withdrawn, wrung, and dried.

Lemon yellow is made by the same process, except that only one part of weld is used (for one of cotton), while the quantity of verdigris can be diminished in proportion, or even entirely omitted, and aluming put in its place. Thus the shades of yellow may be varied in many ways. The operations on linen yarn are the same.

For the yellow colors, on printed cotton goods, these are impregnated, by means of engraved plates, with the mordant described in treating of madder, formed by the mixture of acetate of lead and alum : the yellow color induced on the parts not impregnated with the acetate of alumina is to be afterwards destroyed by the action of bran, and exposure on the grass. The same mordant may be successfully employed for cot-ton and linen which is to be dyed yellow.

In order to obtain from weld the whole color that it can yield, it must be boiled for three-quarters of an hour; the bundles of weld are now taken out of the bath, after which the cloths are passed through it, at a temperature a little below ebullition. They should not remain in it more than twenty minutes.

When the same piece of cloth is to exhibit the colors produced by both madder and weld, it is necessary to begin with the rnaddering, and not to print on the mordant intended for the weld till the operations of the madder are finished. This rule is founded on the property which madder possesses of fixing itself in the room of the yellow of weld ; so that if the maddering be long continued, after dyeing with weld, the color of the latter entirely disappears. V, eld, on the contrary, does not aflect the color produced by

madder, provided the mordant has been saturated with the latter, for otherwise a mixed color would be produced.

The operations required for restoring the white are much longer, and demand much nicer management, after welding than after maddering. See DYEING, par. 203—

By the following method we procure red co-lors, beautiful and permanent, without employing ley, oils, or galls : ××× Lime slaked in the air is to be dissolved in cold acetic acid. The solution marks from 5×× to 6×× ; and it is reduced to 2×× by the addition of water . Equal parts of this solution and acetate of alumina are mixed. The latter is prepared by pouring five kilogrammes of acetate of lead

into a solution of twenty kilogrammes of alum for 1 75 kilogrammes of water. The above mixture is made tepid, and the cottons, merely scoured with care, are passed through it. They are dried, thoroughly washed, dried and maddered with three-fourths of a kilogramme of madder for one kilogramme of cotton. They are brightened with ley and soap, then passed through a solution of tin, and revived with soap alone, in the proportion of twelve kilogrammes of soat> for 100 kilogrammes of cotton.

Very durable reds may be had by passing the cotton through this mordant, after having submitted it to oiling without galling. They are even very deep. But on passing the cotton which has received a single oil and four leys through a mixture of acetate of alumina, with one-fourth, one-twe fth, or one-eighteenth of lime, various very lively shades are obtained.

For making a dead red without lustre, termed in some places burned red, or Indian red, on account of its resemblance to that of Indian handkerchiefs, the cotton is scoured, boiled for half an hour in lime water, passed through an oil mixed with some intestinal liquor, and through three leys. It is washed well and turned througii a mordant composed of a tepid solution of twelve kilogrammes and a half of alum, to which four kilogrammes of acetate of lead have been added ; and a moment afterwards, half a kilogramme of soda in powder, and 0-244 kilogrammes of sal-ammoniac. It is washed wi h care, and maddered with its own weight of madder. If the color be poor, it is passed onco more through an oil, two leys, the same mordant, and a maddering. It may be brightened with soda and soap. The lime alone produces the difference between this color and the preceding. It renders the colors more permanent, but duller.

The durable rose (color) is produced by taking cotton passed through the oils, and which has received more numerous but weaker leys. It is galled with a ley of sumach (lessive de sumac ?) in which two kilogrammes and a half of gall-nuts have been boiled ; and alumed with seventeen kilogrammes and a half of alum. It is now washed, dyed with madder of the best quality, the madder bath being whitened (blanchi) with two kilogrammes of the oxide of tin, that precipitates from the solution of this metal in nitric acid. It is brightened with weak ley and soap, dried, and passed through a liquor formed of a solution of tin (in nitric acid at 32►►, diluted with

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an equal volume of water), reduced to 4►►. It is now washed and brightened in a solution of fifteen kilogrammes of soap, till the color be rosed in perfection.

On passing the cotton through soap of wool made with soda, taking the same pains as with the soapy liquor prepared for the red, and using very weak leys in the interval, then washing the cotton, and treating it by the same process as for dyeing wool scarlet, it assumes a scarlet tint, paler than that of wool, but pretty brilliant.

Cotton dyed red may, moreover, be made to pass through all the shades, down to the palest orange. For this purpose, pure nitric acid is diluted with two-fifths (three-fifths?) of water; chips of tin are oxidised in it till the liquor grows opal, and the solution is employed at different strengths, from 2►► to 20►►.

Poerner made a great many researches on the methods which may be employed to dye cotton by means of brasil, employing different mordants, as alum, solution of tin, sal ammoniac, potash, &c., in the bath, or in the preparation of the stuff; but he did not obtain colors which could resist the action of soap, although some of them stood pretty well the action of the air and washing with water. He recommends us to dry in the shade the cottons which have received these colors.

To Brown, who is engaged with much zeal in the arts, we are indebted for a process which is used for a crimson on cotton in some manufactories.

A solution of tin is prepared in the following proportions : ►►► Nitric acid four parts ; muriatic .icid two parts ; tin one part ; water two parts. The liquids are to be mixed, and the tin dis- :y>lved in them, by adding it in small bits at a time.

As the best colors that can be given to linen and cotton are derived from madder, attention must be paid to the methods described, in treating of madder, for rendering this dye more durable, and its color may be deepened by different black baths. For some hazels and snuff colors, a browning is given, after the welding and the madder bath, with soot, to which gall nuts and fustic are joined. Soot is sometimes

mixed with this bath, and a browning is moreover given with solution of sulphate of iron.

Walnut peels are occasionally substituted for solutions of iron in browning colors. They have a great advantage for the wools intended for (tapisseries) tapestry. The color does not be-come yellow by long exposure to the air, as happens to the brownings from iron ; but it keeps long without alteration. It has indeed a dull tone, suitable for shadows, and for representing the flesh in old figures, which would produce merely gloomy colors, without lustre, on cloths. The goodness of this color, however, and its cheapness, ought to extend its use for the sombre colors which are sometimes in fashion, at least on common stuffs.

A great number of shades are made at the Gobelins by means of this browning. To procure an assortment of them, a bouillon is first Viven to the woollen yarns with tartar and alum i'f different degrees of strength, according to the

shades required ; they are then successively dyed red, yellow, or some other color, recurring to the bath from* which most effect is wished to be obtained. When the color is found to be of the desired shade, it is passed, for a shorter or longer time, through the bath of walnut peels, of a strength adjusted to its purpose. This browning is likewise had recourse to for silk ; but the bath must be hardly tepid, in order to avoid the inequalities to which it is so liable.

For the different shades of marrone the cotton is galled, passed with the ordinary manipulation through water, into which a greater or less quantity of the black cask►►(tonne au noir) has been poured. It is next worked in a bath in which verdigris has been dissolved ; and a welding is given it. It is dyed in a bath of fustic, to which a solution of soda and alum is sometimes added. When the cotton which has received these preparations has been well washed, a good maddering is given it. It is then passed through a weak solution of sulphate of copper, and lastly through soap water.

The cinnamon and mordore colors are given to linen and cotton by commencing the dyeing with verdigris and weld ; they are next passed through a solution of sulphate of iron, which is called the security bath (bain d'assurance), and they are wrung out and dried. When dry they are galled in the proportion of 122 grammes of gall-nuts per kilogramme ; they are once more dried, alumed as for red, and

maddered. When they are dyed and washed, they are passed through very hot soap water, in which they are turned round the sticks till they are sufficiently brightened. Decoction of fustic is sometimes added to the aluming.

By taking cotton which had received the requisite preparations for the Adrianople red, and had been galled, then passing it through nitrate of iron, galling it anew, and aluming, Chaptal obtained a pretty naoaret. He prepares the nitrate of iron with the aquafortis of commerce, diluted with half its weight of water, into which he plunges fragments of iron, which he removes whenever he perceives the solution slackening. The liquor is now of a yellowish red, strongly acid, and marks from 40►► to 50►► on the aerome-terof Baume'. See DYEING, 180.

If after galling the cotton that has passed through the oils it is alumed in a bath, to which one-eighth of this solution of iron, for one of cotton, is added, the cotton comes out black, and takes a violet sloe color by the maddering and brightening.

James Thomson, esq., of Primrose Hill, F.R.S. obtained, in the years 1813 and 1815, two patents for certain improvements in calico printing. His processes, which are very elegant, have since beev. extensively and advantageously employed. The following is an outline of his specifications. That for 1813 is thus stated :►►►

First, Mix or combine with the acid called oxymuriatic acid (or dephlogisticated acid of sea salt) and water, some of the alkaline salts or earths hereinafter-named, which shall weaken or suspend the power of the said acid in such proportion that it shall not, in such mixed or combined state, of itself, and without any farther operation, be able

to remove the Turkey red color from the cloth, or materially to impair it, within the moderate space of time taken up in the performance of the process hereinafter described.

Secondly, Print, stamp, pencil, or otherwise apply to those parts of the said cloth, which are intended to be either wholly, or in a greater or less degree, deprived of their red color, some other acid, or metallic oxide, or calx, which has a greater affinity or attraction for the alkaline salt or earth with which the oxymuriatic acid is mixed or combined, than that acid itself possesses : and if any one of the stronger or more powerful acids be employed, which is either of a corrosive nature and cannot be safely used, or of a volatile nature and cannot be used conveniently, such acid must be combined with alkalies, earths, metals, or metallic oxides or calces, so as to form neutral salts, acid salts, or metallic salts, which shall not be too corrosive or too volatile ; and such alkalies, earths, metals, or metallic oxides, or calces only, must be employed, as have a weaker affinity or attraction for the same acid than that acid has for the alkaline salt or earth with which the oxymuriatic acid has been mixed or combined.

Thirdly, After the said acid, oxides, neutral salts, acid salts, or metallic salts, so directed to be printed, stamped, pencilled, or otherwise applied to the cloth as aforesaid, are sufficiently dry, immerse the cloth in the solution of the said oxymuriatic acid, so mixed or combined with some of the alkaline salts or earths hereinafter-named as aforesaid. When the acid or oxide, either in its simple or combined state, has been applied to parts of the cloth, it immediately seizes upon and combines with the alkaline salt or earth with which the oxymuriatic acid has been mixed or combined, and disengages that acid, which almost instantaneously deprives of their color those parts of the cloth to which the said acids or oxides, in their simple or combined state, have been so printed, stamped, pencilled, or otherwise applied as aforesaid.

Lastly, Wash or otherwise remove all the said acids, oxides, or salts, by the usual processes. For the more fully explaining and illustrating the invention herein before described, I add the following remarks : ††† The alkaline salts or earths which I mix or combine with the oxymuriatic acid, in order to suspend or prevent its action on those parts of the red cloth which are intended to retain their color, are the alkaline salts of potassa and soda, or the calcareous, magnesian, barytic, or strontitic earths, of which I prefer the calcareous earth.

The acids which I apply to the parts intended to be made white, or to those places on the cloth intended to be deprived of their red color, in a greater or less degree, are any of the vegetable, mineral, or animal acids, which have a stronger attraction for the alkaline salt or earth with which the oxymuriatic acid has been mixed or combined, than that acid itself has ; such, for instance, are the citric, oxalic, tartaric,

malic, ben-zoic, sulphuric, sulphurous, phosphoric, fluoric, bpracic, nitric, muriatic, arsenic, tungstic, succi-nic, and carbonic acids.

The stronger acids, or such as might corrode

the cloth, I saturate more or less with some alkaline salt, earth, or metallic oxide or calx, for which they have a weaker affinity or attraction than they have for the alkali or earth with which I have combined the oxymuriatic acid : for instance, I unite the sulphuric acid with potassa, so as to form the acid sulphate of potassa (or acid vitriolated tartar), or with aluminous earth, to form alum. The muriatic acid J combine with tin, or copper, or zinc, forming muriate of tin, muriate of copper, or muriate of zinc-In like manner, the nitric acid maybe combined with the aluminous earth, or with the volatile alkali, or with the metals, or oxides of copper, or zinc, or iron, or mercury ; and I take care, when I use acidulous compounds of such corrosive acids, not to suffer the acid so far to predominate as to render the compound injurious. In like manner I combine the volatile acids, or such as might evaporate too speedily, with some alkaline salt or earth, or metallic oxide or calx, for which they have a weaker affinity or attraction than they have for the alkali or earth with which I have combined the oxymuriatic acid : for instance, I combine the acetic acid with the earth of alum, so as to form acetate of alumina, ††† or with copper, forming acetate of copper, ††† or with zinc, forming acetate of-zinc. The carbonic acid may also be fixed and combined with an alkali, as with soda, for example, forming carbonate of soda, which may be used, though with less advantage than the preceding combinations. Those acids which are not corrosive nor volatile, and which consequently are used with most advantage in their simple or combined state, may, however, be united like the preceding to the alkalies, earths, metals, or metallic oxides or calces, for which they have a weaker affinity or attraction than they have for the alkali or earth with which the oxymuriatic acid has been united. Thus the tartaric acid may be combined with potassa, to form cream of tartar, ††† and the oxalic acid with potassa, to form salt of sorrel, ††† and these two salts may be employed in the process, though it is not necessary so to combine the two acids ; but, on the contrary, the acids may be used alone.

The combinations which I prefer, as uniting the greatest number of advantages upon the whole, are, the supersulphate of potassa (or acid vitriolated tartar), the sulphate of copper or blue vitriol, the muriate of tin or sal jovis, the nitrate of copper, and the muriate of copper. But

I prefer to any single combination a mixture of the supersulphate of potassa, with the tartaric or citric acids.

Lastly, I employ, uncombined, such metallic oxides or calces as approach in their properties to the nature of acids, and are capable of combining either with the alkaline salts of potassa or soda, or with the calcareous, magnesian, or strontitic earths, or of disengaging them, or any of them, from their combination with oxymuriatic acid : such, for instance, is the oxide of arsenic, or common white arsenic, and the oxides of tin and tungsten.

It is evident, from what I have set forth in the preceding part of this specification, that this process admits of great variety in its application, according to the combinations I make use of;

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since not only the various acids, oxides, and salts I have enumerated, may be employed, but also various mixtures of them, and in various proportions ; but I prefer and generally use the following process : ◆◆◆

First, I take one gallon of good vinegar, or rectified pyrolignous acid, which I thicken with starch or flour in the way practised by calico printers, in preparing the mordants or colors for printing. Whilst boiling hot I add to it five pounds of crystallised tartaric acid, and incorporate the whole very well by stirring.

Or, I take one gallon of strong concentrated lime juice or lemon juice, or one gallon of water, in which I have dissolved two pounds and a half of crystallised citric acid, which I thicken with starch or flour in the manner directed above, and to which, whilst hot, I add two pounds of supersulphate of potassa, and incorporate the whole very well by stirring. I prefer starch to any other thickening, though others may be used with more or less advantage.

Secondly, the paste so prepared I print, stamp, pencil, or otherwise apply to the cloth previously dyed turkey red, in the mode and with

the precautions generally used in the printing or stamping of linens or cottons.

Thirdly, I prepare a solution of oxymuriate of lime, either by dissolving the dry oxymuriate of lime (commonly called bleaching powder, or bleaching salts) in water, or by passing the oxymuriatic acid gas into a vat, vessel, or cistern, in which, by agitation or otherwise, I keep suspended such quantity of quicklime as will more than saturate fully and completely the said oxymuriatic acid gas. In either way, I obtain a solution of oxymuriate of lime, with excess of lime. That which I use and prefer is of the specific gravity 1050, and I seldom employ it lower than 1030 (water being considered as 1000). The vat, vessel, or cistern, which contains the solution of oxymuriate of lime, in which I immerse the cloths, may be of any size or form best adapted to the purpose or situation. I use and prefer vessels of stone of from six .to eight feet deep, six to seven feet long, and three and a half to four feet broad ; but larger or smaller vessels will answer very well.

Fourthly, When the cloths are ready for immersion, which they are as soon as the paste is dry, I hook them on a frame, such as is used in dyeing indigo or China blues, commonly called a dipping frame, on which the cloth should be so disposed that no two folds can touch each other. I then plunge the frame with the cloth so attached into the vat containing the solution of oxymuriate of lime, and keep it gently in motion during the time of immersion, which should not be prolonged more than ten minutes, and which rarely need exceed five minutes. The object being either wholly or partially to remove the Turkey red dye from certain parts or places, as soon as that is done the cloth should be withdrawn from the solution of the oxymuriate of lime, and plunged or rinsed in clean water. I practise and approve the aforesaid plan of immersion ; but any other plan or plans by which the cloth can be exposed a greater or less time to the action of the oxymuriate of lime, without bringing one part of the

said cloth into contact with another, will answer very well.

Lastly, After having, as before directed, rinsed or washed the cloths in clean water, I free them from all remains of the different agents or substances employed, by the ordinary means of washing, branning, or soaping, as practised by calico printers ; and if those parts of the cloth that are intended to be made white should still retain any red, or other tinge or stain injurious to the effect, in order to render the white complete I clear it by the usual process of exposure to the air, or by

passing the cloth through hot water, to which I have added as much of the solution of oxymuriate of lime as will remove the said stains or tinge, without material injury to those parts from which the red dye is not intended to be removed.

I then proceed, if other colors are to be applied to finish the cloths, by the ordinary and well known methods of calico printers; but these not being necessarily connected with, nor forming any part of the peculiar process or invention herein intended to be described, I purposely make no mention of here.

The above particulars and examples are given for the more full explanation of the said invention, and the manner in which the same is to be performed. But the invention, whereof I claim the sole and exclusive use, consists in printing, stamping, pencilling, or otherwise applying to those parts of the cloth which are intended to be either wholly, or in a greater or less degree, deprived of their red color, an acid, oxide, neutral salt, acid salt, or metallic salt, such as is herein before for that purpose directed, and immersing the whole cloth in such mixture or combination of oxymuriatic acid and water, with some of the alkaline salts or earths, as is herein directed for that purpose.

Mr. Thomson's patent for 1815 is specified as follows : ??? The ordinary practice of calico printers is to apply, with the block or pencil, what are termed after-colors, to certain spaces, originally left in their patterns, and intended to receive the said after-colors ; or to certain spaces on the cloth, from which parts of the original pattern have been discharged, in order to admit, by a subsequent operation, the application of the said after-colors. Now the object of my invention is, by one application of the block, cylinder, roller, plate, pencil, or other mode, to remove parts of the original pattern or color from the cloth, and at the same time to deposit a metallic oxide, or earthy base, which shall of itself be a color, or shall serve as a mordant to some color to be produced, as hereinafter described.

First, mix or combine with the acid called oxymuriatic acid (or dephlogisticated acid of sea salt) and water, the alkaline salts of potash or soda, or, which is still better, calcareous earth or quicklime, in such proportion as will weaken or suspend the power of the said acid, so that it shall not in such mixed or combined state, of it-self, and without any further operation, be able to remove, or materially to improve the colors, within the moderate space of time taken up in the performance of the process.

Secondly, Print, stamp, pencil, or otherwise

apply to those parts of the cloth which are intended to be deprived of one color and to receive another, a solution of some earthy or metallic salt ; the acid of which, having a greater affinity or attraction for the alkaline salt or earth with which the oxymuriate acid is mixed or combined than that acid itself possesses, will disengage it, and the metallic or earthy base of which, being deposited in the cloth, will either of itself be a color, or serve as a mordant to some other color, to be produced as hereinafter described.

Thirdly, After the metallic or earthy solution aforesaid has been printed, stamped, pencilled, or otherwise applied to the cloth, as before directed, and is sufficiently dry, immerse the cloth in the solution of oxymuriatic acid, combined with the alkaline salt of potash or soda, or, which I greatly prefer, with calcareous earth or lime, when the acid of the metallic or earthy solution which has been applied to parts of the cloth will immediately seize upon and combine with the alkaline salt or earth with which the oxymuriatic acid has been mixed or combined, and disengage that acid which will almost instantaneously deprive of their color those parts of the cloth to which the said earthy or metallic salt has been applied.

Fourthly, Wash or otherwise remove the said acids or salts by the usual processes, and when the earthy or metallic base, deposited in the cloth, is intended to receive another color, proceed to raise it by the usual operations of dyeing, as will be further illustrated in the examples hereafter given of particular applications of this invention. The earthy solutions which I apply to the parts intended to be deprived of their color, and to receive another, are the solutions of alumina, or earth of alum in acids; such, for example, as the sulphate of alumina, or common alum, the acetate of alumina, or the nitrate or muriate of alumina. The metallic solutions which I em-ploy are, the sulphate of iron or copperas ; the nitrate, or muriate, or acetate of iron ; the muriate of tin, or nitro-muriate of tin ; the sulphate of copper or blue vitriol, or the nitrate, muriate, or acetate of copper. All acids that

form soluble compounds with the before-named metals, or the earth of alum, may be employed ; but those only which form the most soluble compounds, such, for example, as those enumerated above, can be employed with advantage. For the more full and complete understanding of the principle laid down in the preceding part of this specification, I subjoin the following practical illustration of its application to various kinds of work. If I desire to have a yellow figure or stripe on the cloth, upon which a madder-red ground or pattern has been printed, after having, by the ordinary processes of calico printing, produced the red ground or pattern, I first print, stamp, pen-cil, or otherwise apply to those parts intended to be yellow, a strong aluminous mordant, composed of three pounds of sugar of lead, and six pounds of alum, dissolved in a gallon of water, and thickened with a due proportion of calcined starch, in the manner usually practised by calico printers.

Secondly, I prepare a solution of oxymuriate of lime, either by dissolving the dry oxymuriate

of lime (commonly called bleaching powder, or bleaching salts) in water, or by passing the oxymuriatic gas into a vat, vessel, or cistern, in which, by agitation or otherwise, I keep suspended such a quantity of quicklime as will more than saturate fully and completely the said oxymuriatic gas. In either way I obtain a solution of oxymuriate of lime, with excess of lime. That which I use and prefer is of the specific gravity 1050, and I seldom employ it lower than 1030 (water being considered as 1000). The vat, ves-sel, or cistern, which contains the solution of oxymuriate of lime in which I immerse the cloth, may be of any size or form best adapted to the purpose or situation. I use and prefer vessels of stone, of from six to eight feet deep, six to seven feet long, and three and a half to four feet broad ; but larger or smaller vessels will answer very well.

Thirdly, When the cloth is ready for immersion, which it is as soon as the paste is dry, I hook it on a frame, such as is used in dyeing in-digo or China blues, commonly called a dipping frame, on which the cloth should be so disposed that no two folds can touch each other. I then plunge the frame, with the cloth so attached, into the vat containing the solution of oxymuriate of lime, and keep it gently in motion du”ring the time of immersion, which rarely need exceed five minutes. The object being to remove the red dye from certain parts or places, as soon as that is done the cloth should be withdrawn from the solution of the oxymuriate of lime, and plunged into, or rinsed in cold water. I

practise and approve the aforesaid plan of immersion; but any other plan, or plans, by which the cloth can be exposed a greater or less time to the action of the oxymuriate of lime, without bringing one part of the said cloth into contact with another, will answer very well.

Lastly, After having, as before directed, rinsed or washed the cloth in clean water, I free it from all superfluous remains of the different substances employed, by the ordinary means of washing, dunging, and cleaning, as practised by calico printers ; after which I dye the cloth and raise the yellow in the usual way, with quercitron bark, or any other yellow dye.

If, instead of yellow, it is proposed to have a buff pattern or figure, I add to the aluminous mordant, prepared and thickened as above, one-fourth or one-sixth, or some intermediate proportion, of a solution of nitrate of iron, and proceed to print and immerse in oxymuriate of lime as in the former case.

The red dye will be removed as before, and its place be occupied by a buff. If the buff be raised in quercitron bark, an olive will be obtained. By printing at separate times, and on different parts of the cloth, each of the above-mentioned mordants, both yellow and olive figures on a red ground may be obtained. Similar effects, with trifling variations, take place, when, instead of red grounds, purple or chocolate grounds are employed ; but it must be observed, that these colors being produced from mordants, consisting wholly, or in part, of solutions of iron, and the oxide of that metal not being removcable by the process detailed in this

specification, the after colors produced will be modified more or less by the said oxide of iron. The foregoing examples are given for the more full explanation of the said invention, and the manner in which the same is to be performed ; but the invention, whereof I claim the sole and exclusive use, consists in printing, stamping, pencilling, or otherwise applying to cloth, previously printed and dyed, or dyed any other co-lor than turkey red, any of the earthy or metallic solutions

herein before for that purpose directed, and immersing the whole cloth in such mixture or combination of oxymuriatic acid and water, with some of the alkaline salts or earths, as is herein directed for that purpose, so as to remove the color or pattern from the part so printed, stamped, pencilled, or receiving such application, and, by the same process, fix on such parts either a new color or a mordant for a new color. In our treatise on the manufacture of cotton it was found necessary to describe the admirable printing apparatus employed at the Bandana works in Glasgow, and we now propose to furnish our readers with an account of Mr. Mauds-lay's press for a nearly similar purpose. Figs. 1. and 2, plate PRINTING, CALICO, represent an end and front view of the machine. A, A, are frames of cast-iron, wood, or other strong materials. B, B, are swinging frames of iron or wood ; the upper surfaces of which are made flat, to receive engraved copper plates, fastened on and regulated by screws ut a a. The screws at b b are to stop and regulate the swinging frames against pieces which project on the insides of the frames A, A, at dd. C, C, are slings or connecting rods of iron or other metal which have round holes at D, in the bottom end, to receive the ends of the strong bolt D, which is connected to the frame B B. The upper part of the connecting rods C are forked, to pass the pivots of wheels, &c., on the ends of the frames A, A, and are screwed in the usual way, have two metal nuts to each, to keep down and regulate the cross pieces of iron or other metal e, which fit on and into the eccentric wheels or cranks E. These are made of iron or other metal, for the purpose of lifting the swinging frame B, by means of the connecting rods C, C, and pressing the copper plates forcibly against the under part of the cylinder or press-head F, which is better seen in figs. 3 or 5. Through the eccentric wheels, &c., are made square or other formed holes, which are well fitt-ed on the spindle G, close on the outsides or insides of the frames A, A ; on the outsides of which are fitted the toothed wheel H, which works into and turns the wheel I, which is twice the diameter of H, and has on the rim a piece of metal of the proper curve with three whole teeth and one half tooth, which in their revolution fall into the teeth of the wheel R, fixed on the axis of the roller L ; which wheel will be regulated as to its Rurubei of teeth by the circumference of the rol-ler L, which must be twice or three times the

length of the engravings on the plate to be print ed from ; if twice it must have eight teeth, if three times twelve teeth ; or in that proportion, The half of every fourth tooth must be taken away to let the tooth of the segment on I pass; that it may strike fairly on the pitch line of the next tooth. The small roller M may be used or not as

occasion may require, as it is only to ease the motion of the blanket which passes over the roller N, which is to tighten the blanket by means of the screws and sockets O. At the opposite end of the spindle G is well fitted a large wheel P, which is turned by the pinion Q on the spindle of the fly-wheel R, and supported by the frame S, of iron or wood. This spindle may be turned by hand or by any other power given. The wheel and pinion may be varied to any power, by altering the sizes of them in the usual way. The plates may be cleaned by a scraper or doctor.

Fig. 3 is a transverse section of the machine, showing a different mode of using it. The frame A A is the same as in fig. 1 and 2, with the addition of two arms and brackets T, T, which support a frame of iron or wood, on which are fixed one, two, or more, copper plates. To print several colors they move to stops, and are regulated as in figs. 1 and 2. The cylinder E is made hollow, for the purpose of admitting steam, which will heat it to any temperature, to dry the color as quick as printed. The manner of letting in the steam is described in fig. 5. The lifting frame B acts the same as in figs. 1 and 2. Fig. 4 is a lifting frame, which has a cylinder similar to F, and may be used in the place of B, which makes it a hot-press for various purposes, by letting steam into the bottom as well as the top cylinder; and in case the color should dry in the plates, owing to the heat, cold water may be made to pass through the cylinder, which will always keep it cool. Fig. 5 is a longitudinal section of the cylinder, eccentric wheel, &c., with the manner of admitting steam by a small pipe aty, which may be connected with the boiler of a steam-engine, or a small boiler on purpose, which will serve one, two, or more presses, each having stop-cocks at convenient places, g is a pipe in the bottom of the cylinder to let out the condensed water.

Figs. 6 and 7 represent a side view of the up-per part of the machine, with the roller L placed above the cylinder, by which means the blanket is closer, and may if required receive more heat from the cylinder. The roller is moved by the same wheels as in figs. 1 and 2, only differently placed.

We must not close our account of the theory and practice of calico printing without adverting to the great use we have made of Dr. Ure's edition of Berthollet's Elements of the Art of Dyeing, which is decidedly the best work on the subject that has yet appeared.

PRI

PRIOLO, or PRIOLUS (Benjamin), an eminent Italian historian, born in Venice, in 1602, ind descended from the illustrious family of Prioli, some of whom had been doges of Venice. He studied at Orthez, Montauban, and at last at Leyden, under Heinsius and Vossius. He went to Paris to visit Grotius, and studied Aristotle at Padua, under Cremonius and Licetus. He became a confident of the duke of Rohan ; afterwards married and retired to Geneva; became intimate with the duke of Longueville, cardinal Chigi (afterwards Alexander VII.), and cardinal F. Barberini, and became a Roman Catholic. The civil war breaking out in France, he joined the malecontents, and his estate was confiscated. He then retired to Flanders, where he wrote his History of France, in Latin. He died at Lyons, in 1667, aged sixty-five.

PRIOR (Matthew), an eminent English poet, born in London in 1664. His father dying while he was very young, an uncle, a vintner, having given him some education at Westminster school, took him home to bring him up to his own trade. However, at his leisure hours, he prosecuted his study of the classics, and especially of his favorite Horace. This introduced him to some polite company, who frequented his uncle's house; among whom the earl of Dorset took particular notice of him, and procured him to be sent to St. John's College in Cambridge, where, in 1680, he took the degree of A. B. and afterwards became fellow of that college. Upon the revolution, Mr. Prior was brought to court by the earl of Dorset; and in 1690 he was made secretary to the earl of Berkeley, plenipotentiary at the Hague; as he was afterwards to the ambassador and the plenipotentiaries at the treaty of Ryswickin 1697; and in 1698 to the earl of Portland, ambassador to the court of France. He was in 1697 made secretary of state for Ireland ; and in 1700 was appointed one of the lords commissioners of trade and plantations. In 1710 he was supposed to have had a share in writing the Examiner. In 1711 he was made one of the commissioners of the customs ; and was sent minister plenipotentiary to France, for the negociating a peace with that kingdom. Soon after the accession of George I. to the throne in 1714 he presented a memorial to the court of France, requiring the

demolition of the canal and new works at Mardyke. In 1715 he was recalled ; and upon his arrival being taken up by a warrant from the house of commons, and strictly examined by a committee of the privy council, Robert Walpole, Esq., moved the house of commons for an impeachment against him ; and Mr. Prior was ordered into close custody. In 1717 he was excepted out of the act of grace ; at the close of that year, however, he was set at liberty. The remainder of his days he spent in tranquillity ; and died in 1721. His poems are well known and justly admired.

PRIOR, adj.) Lat. prior. Former ; being PRIOR'ITY, n. s.] before something else ; anterior ; state of being antecedent.

Follow, Cominus, we must follow you, Right worthy your priority. Shakspeare.

From son to son of the lady, as they should be in priority o►► birth. Hayward.

Men still affirm that it killeth at a distance, tliut it poisoneth by the eye, and by priority of vision.

Browne.

Whenever tempted to do or approve any thing contrary to the duties we are enjoined, Jet us reflect that we have a prior and superior obligation to the commands of Christ. Rogers.

Though he oft renewed the fight, And almost got priority of sight, He ne'er could overcome her quite. Swift. This observation may assist in determining the dispute concerning the priority of Homer and Hesiod.

Broome.

PRI'OR, n. s."i Fr. prieur. The head of a

PRI'ORESS, > convent of monks, inferior in

PRI'ORY. j dignity to an abbot : prioress,

the feminine of this noun : priory is, the convent

or establishment over which a prior is placed :

prior, says Ayliffe, is such a person, as, in some

churches, presides over others in the same

churches.

Our abbies and our priories shall pay This expedition's charge.

Shakspeare. King John. When you have vowed, you must not speak with

men But in the presence of the primess. Shakspeare.

The reeve, miller, and cook, are distinguished from each other, as much as the mincing lady prioress and the broad speaking wife of Bath. Driiden.

Neither she, nor any other, besides the prior of the convent, knew any thing of his name.

Addison's Spectator.

PRIORY, ALIEN. These priories were cells of the religious houses in England which belonged to foreign monasteries : for, when manors or tithes were given to foreign convents, the monks, either to increase their own rule, or rather to have faithful stewards of their revenues, built a small convent here for the reception of such a number as they thought proper, and constituted priors over them. Within these cells there was the same distinction as in those priories which were cells subordinate to some great abbey ; some of these were conventual, and, having priors of their own choosing, thereby became entire societies within themselves, and received the revenues belonging to their several houses for their own use and benefit, paying only the ancient apport, acknowledgment, or obvention, at first the surplusage, to the foreign house ; but others depended entirely on the foreign nouses, who appointed and removed their priors at pleasure. These transmitted all their revenues to the foreign head houses ; for which reason their estates were generally seized to carry on the wars between England and France, and restored to them again on return of peace. These alien priories were most of them founded by such as had foreign abbeys, founded by themselves or by some of their family. The whole number is not exactly ascertained ; the Monasticon has given a list of 100. Weever says 110. Some of these cells were made indigenous or denizon. The alien priories were first seized by Edward I. 1285 on the breaking out of the war between France and England ; and it appears from a roll that Ed-ward II. also seized them, though this is not mentioned by our historians : and to these the act of restitution 1 Edw. III. seems to refer In 1337 Edward III. confiscated

their estates and

let out the priories themselves with all their :ands and tenements, at his pleasure, for twenty-three years ; at the end of which term, peace being concluded between the two nations, he restored their estates in 1361, as appears by his letters patent to that of Montacute, county of Somerset, printed at large in Rymer, vol. vi. p. 311, and translated in Weever's Funeral Monuments, p. 339. At other times he granted their lands, or lay pensions out of them, to divers noblemen. They were also sequestered during Richard II.'s reign, and the head monasteries abroad had the king's licence to sell their lands to other religious houses here, or to any particular persons who wanted to endow others. Henry IV. began his reign with showing some favor to the alien priories, restoring all the conventual ones, only reserving to himself in time of war what they paid in time of peace to the foreign abbeys. They were all dissolved by act 2, Henry V., and all their estates vested in the crown, except some lands granted to the college of Fotheringay. The act of dissolution is not printed in the statute books, but it is be found entire in Rymer's Faedera, and in the Parliament Rolls, vol. iv. p. 22. In general, these lands were appropriated to religious uses. Henry VI. endowed his foundations at Eton and Cambridge with the lands of the alien priories. Others were granted in fee to the prelates, nobility, or private persons. Such as remained in the crown were granted by Henry VI., 1 440, to archbishop Chicheley, &c., and they became part of his and the royal foundations.

PRl'SAGE, n. s. From prise. See the extract.

Prisage, now called butlerage, is a custom whereby the prince challenges out of every bark loaden with wine, two tuns of wine at his price. Cowell.

PRISCIANUS, an eminent grammarian, born at Caesarea, who taught at Constantinople with great reputation about the year 525. He composed a work De Arte Grammatica, which was first printed by Aldus at Venice in 1476 ; and another, De Naturalibus Questionibus, which he dedicated to Chosroes king of Persia; besides which he translated Dionysius's description of the world into Latin verse.

PRISM, n. s.) French prisme ; Gr.

PRISMAT'IC, adj. . Trptcrjia. See Sir I.

PRISMAT'ICALLY, adv. j Newton's definition below : the adjective and adverb correspond.

Take notice of the pleasing variety of colours exhibited by the triangular glass, and demand what addition or decrement of either salt, sulphur, or mercury befalls the glass, by being priimaticallii figured ; and yet it is known that, without that shape, it would not afford those colours as it do►►s.

Boyle.

A prism of glass is a glass bounded with two equal and parallel triangular ends, and three plain and well polished sides, which meet in three parallel lines, running from the three angles of one end to the three angles of the other end. Newton.

If the mass of the earth was cubick, prismatick, or

any other angular figure, it would follow that one

too vast a part would be drowned, and another be

dry. Derham.

False eloquence, like the prismatick glass,

Its gaudy colours spreads on every place ;

The face of nature we no more survey,

All glares alike, without distinction gay. Pout,

Here, awful Newton, the dissolving clouds Form, fronting on the sun, thy showery prism. , Thomson.

If oyster-shells were thrown into a common fire and calcined for about half an hour, and then brought to a person who had previously been some minutes in a dark room, that many of them would exhibit beautiful irises of prismatic colours. Darwin.

A PRISM is an oblong solid, contained under more than four planes, whose bases are equa'., parallel, and alike situated. See OPTICS.

PRIS'ON, n. s. & v. a. \ Fr. prison. A strong PRISˆONBASE, /hold in which per

PRIS'ONER, ˆsons are confined; a

PRIS'ONHOUSE, \gaol: to confine or

PRIS'ONMENT. J captivate : prison—

house is synonymous with prison : prisonbase is a kind of rural play, described in the extract : prisoner, one confined in a prison ; a captive : prisonment, confinement; captivity.

The spachies of the court play every Friday at giocho di canni, which is no other than prisonbase upon horseback, hitting one another with darts, as the others do with their hands. Sandys.

So oft as homeward I from her depart,

I go like one that, having lost the field,

Is prisoner led away with heavy heart.

Spenser.

He hath commission To hang Cordelia in the prison. Shukspeare.

Universal plodding prisons up The nimble spirits in the arteries. Id.

Caesar's illerected tower, To whose flint bosom my condemed lord Is doomed a prisoner. Id. Ricliard II.

I am forbid to tell the secrets of my prison house.

Shakspeare.

May be he will not touch young Arthur's life, But hold himself safe in his prisonment. Id.

There succeeded an absolute victory for the English, the taking of the Spanish general d'Ocampo prisoner, with the loss of few of the English.

Bacon .

Then did the king enlarge The spleen he prisoned. Chapman's Iliad. A prisoner is an impatient patient, lingering under the rough hands of a cruele physitian ; his creditor knowes his disease, and hath power to cure him, but takes more pleasure to kill him.

Essayes and Characters, 1638. He that is tied with one slender string, such as one resolute struggle would break, he is prisoner only at his own sloth, and who will pity his thraldom 1

Decay of Piety. For those rebellious here their prison ordained.

Milton.

Culling their potent herbs and baleful drugs, They, as they sung, would take the prisoned soul, And lap it in Elysium. Id.

The tyrant ˆEolus,

With power imperial curbs the struggling winds, And sounding tempests in dark prisons binds.

Dry den.

He yielded on my word, And, as my prisoner, I restore his sword. Id. A prisoner is troubled, that he cannot go whither he would ; and he that is at large is troubled that he does not know whither to go. L'Estrange.

He, that has his chains knocked off, and the prison doors set open to him, is presently at liberty.

Locke.

At his first coining to his little village, it was as disagreeable to him as a prison, and every day seemed too tedious to be endured in so retired a place. ❖❖❖❖❖❖❖❖❖❖❖❖❖

A PRISON, lord Coke observes, is only a place of safe custody, salva custodia, not a place of punishment. Any place where a person is confined may be said to be a prison ; and, when a process is issued against one, he must, when arrested thereon, either be committed to prison, or be bound in a recognizance with sureties, or else give bail according to the nature of the case, to appear at a certain day in court, there to make answer to what is alleged against him. Where a person is taken and sent to prison in a civil case, he may be released by the plaintiff in the suit ; but, if it be for treason or felony, he may not regularly be discharged, until he is indicted of the fact and acquitted. See LAW.

PRISON DISCIPLINE. This is a topic upon which every patriotic feeling of the Christian moralist will be exercised ; and has been exercised in this country, very salutarily, we may add, for the last ten years. If no second Howard has arisen, investigations into the state of prisons more extensive than his have been successfully carried on in every part of Great Britain during this period, and, in the Society for the Improvement of Prison Discipline, an important centre of communication has been established for the benefit of the civilised world. In the retrospect of their proceedings much that is humiliating to our national pride will appear ; but as the exposure of the evils in question has led to a very important diminution of them by legislative enactments, and to the full understanding of the chief causes of the rest, they may be adverted to with considerable satisfaction.

Mr. Buxton's Enquiry whether Crime and Misery are produced or prevented by our present System of Prison Discipline, and his personal exertions in this cause both in and out of parliament, were the first great means of arousing the late attention of the benevolent to the subject. There is a singular honesty in the fabrication of his book ; and it is one of those rare cases in which no victory has been gained over the can-dor and veracity of the writer, by the strong persuasions of a mind under the fullest conviction and most glowing impressions upon the subject of his publication. For the truth of the facts, as they stand in his statements, Mr. Bux-ton declares himself to require no indulgence. ' Nothing is stated,' says he, ' (with the exception of the account of the Philadelphia gaol), which has not come within my own observation, and which has not been confirmed by the concurrent testimony of the gentlemen who have been my companions. The description of the Borough Compter, Tothill Fields, the Penitentiary,

the gaols at St. Alban's, at Bury, at Ghent, and at Bristol, have been read to their respective gaolers ; and that of Guildford was handed to a magistrate of the county of Surrey, with a request that he would point out any mistakes.' Mr. Buxton adds, ' I have generally mentioned the -days on which I visited the gaols, the persons with whom I went, and, where I could do it with propriety, the names of any prisoners whose

case attracted my particular attention. I have done this as inviting enquiry, as placing my statements in a more tangible shape, and as furnishing a facility for the detection of errors.' For the honor of the writer of the severe censures on our past proceedings which this book contains, such proofs of authenticity speak very forcibly ; but, for the honor of the British character, we have only to regret that they carry so high his pretensions to be believed. Of the reasoning in the introductory chapter, we do not hesitate to say that it is in a high degree moral, acute, and manly. We are not of opinion that prisoners should be indulged with Turkey carpets ; and we agree in the positions of the committee of aldermen, that debtors should not be placed within the walls of a prison, with greater comparative comforts than the families of the citizens whom they have wronged, or perhaps ruined ; neither do we feel any of that contumacious compassion for prisoners because authority and the law have made them such, which, we are persuaded, many do; but we cordially join with Mr. Buxton Hr opinion, that, where imprisonment is the legal consequence of debt, it should be only imprisonment, without any aggravations, or superadded sufferings ; for it is not to be disputed that all beyond mere confinement is beyond the law, which has nowhere authorised any infliction for this cause beyond the evil necessarily implied in the suspension of personal liberty. It is still more plainly evident, that persons under confinement for imputed offences ought not to be subjected to any rigors beyond what may be necessary to secure their detention. Even on convicted delinquents, where safe custody is all that the law has in contemplation, any annexa-tion of unnecessary hardship carries the punishment beyond the law ; and, where imprisonment is part or the whole of the punishment, all that is inflicted of suffering or privation, beyond what the sentence has defined, or the common regulations of the prison require, is excess and abuse, so much the more to be dreaded, because it takes place where the eye of the public does not often pierce.

It is quite evident that as little as possible of judicial punishment should be submitted to the discretion or disposition of the gaoler,

however necessary it may be to invest him with some de-gree of coercive authority to preserve the order and peace of the prison. A system of general rules only may and ought to be maintained, in which at least ordinary humanity suffers nothing suppliciary beyond the sentence of the court, in which respect should be had, as far as justice towards all will allow, to the corrrnon presumable differences of sentiment arising from previous habits, and in which all mischiefs that may affect the prisoner consequentially and permanently, after the law is satisfied, may, as far as possible, be prevented.

No language can better state the rights of a prisoner accused even of serious crimes than the following : ††† ††† You have no right to abridge him of pure air, wholesome and sufficient food, and opportunities of exercise. You have no right to debar him from the craft on which his family depends, if it can be exercised in prison. You

have no right to subject him to suffering from cold, by want of bed-clothing by night, or firing by day ; and the reason is plain, ††† you have taken him from his home, and have deprived him of the means of providing himself with the necessaries or comforts of life, and therefore you are bound to furnish him with moderate indeed, but suitable accommodation.

‘ You have for the same reason no right to ruin his habits by compelling him to be idle, his morals by compelling him to mix with a promiscuous assemblage of hardened and convicted criminals, o his health by forcing him at night into a damp unventilated cell, with such crowds of companions as very speedily render the air foul and putrid, or make him sleep in close con-, tact with the victims of contagious and loathsome disease, or amidst the noxious effluvia of dirt and corruption. In short, attention to his feelings mental and bodily, a supply of every necessary, abstraction from evil society, the conservation of his health and industrious habits, are the clear, evident, undeniable rights of an unconvicted prisoner. He should be brought to his trial as speedily as possible ; for every hour of unnecessary delay, in furnishing him with the opportunity of proving

his innocence, is, or at least may be, an hour of unjust imprisonment.

‘ At his trial, either he is acquitted, ††† in which case the least you can do is to replace him in the situation you found him, to pay his expenses home, and to furnish him with sufficient to support him till he has had an opportunity of looking out for work : or he is convicted, ††† and then it is for the law to appoint the punishment which is to follow his offence. That punishment must be inflicted ; but you must carefully guard that it be not aggravated, and that circumstances of severity are not found in his treatment which are not found in his sentence. Now no judge ever condemned a man to be half starved with cold by day, or half suffocated with heat by night. Who ever heard of a criminal being sentenced to catch the rheumatism, or the typhus fever ? Corruption of morals and contamination of mind, are not the remedies which the law in its wisdom has thought proper to adopt. We should remember, to use the words of a former writer on the subject, ‘ that disease, cold, famine, nakedness, a contagious and polluted air, are not lawful punishments in the hands of the civil magistrate ; nor has he a right to poison or starve his fellow creature, though the greatest of criminals.’ The convicted delinquent then has his rights. All measures and practices in prison, which may injure him in any way, are illegal, because they are not specified in his sentence : ††† he is therefore entitled to a wholesome atmosphere, decent clothing and bedding, and a diet sufficient to support him.

‘ But besides the rights of the individual, there are duties to the community : ††† Parum est improbos coercere paena, nisi probos efficias disciplina. One of the most important of these duties is, that you should not send forth the man committed to your tuition in any respect a worse man, a less industrious, a less sober, or a less competent man, than when he entered your VOL. XVIII.

walls. Good policy requires that, if possible, you dismiss him improved.

‘ For the improvement of the unconvicted prisoner you should labor, as a recompense for his confinement before trial ††† that thus you may convert the suspicion of crime into its prevention in future ††† lhat thus you may addict him to such habits, and instil such principles, and im-part such instruction, as may repair the damage you have done him ; and that he, being amerced of one period of his life, may be enabled to spend the remainder more respectably.

‘ For the improvement of the debtor you should labor, because the grand causes of debt are sickness, idleness, or intemperance: ††† you must, therefore, provide against its recurrence by those measures which may secure the health, the iudustry, and the sobriety of your prisoners. The convicted criminal is also entitled to your care. Our law is not, in its true spirit, whatever it may be in its modern enactments, a system of bloody vengeance ; it does not say, so much evil is repaired by so much misery inflicted. A merciful and enlightened jurisprudence, like the Author of all that is merciful and wise, does not rejoice in the death of a sinner; but rather that he should turn from his wickedness, and live. Punishments are inflicted that crime may be prevented, and crime is prevented by the reformation of the criminal. This may be accomplished. The prisoner, being separated from his former associates, ceases to think as they think ; he has time for recollection and repentance; and seclusion will humble the most haughty, and often-reform the most abandoned.

‘ It is then necessary that he sleep alone, and that he be alone during a great portion of the day.

‘ But, as idleness is one great cause of sin, industry is one great means of reformation. Mea sures must therefore be taken for his constan employment, and for making that employment agreeable, by allowing him to share largely in its profits.

1 The use of stimulating liquors is often the cause, and always the concomitant of crime. These, therefore, must be forbidden. The want of education is found to be a great source of crime ; for this, therefore, a provision must be made. The neglect of religious duties is the grand cause of crime. Ministers of religion must, therefore, be induced to give their active and zealous labors to the prisoners ‘daily, reading prayers in public, and giving private instruction. The assiduous services of such men will not be fruitless. Mr. Robinson of Leicester declared that no part of his ministry had been so signally successful as that in the gaols ; and the Ladies’ Committee of Newgate have many proofs that reformation may be accomplished, even amongst the most dissolute and abandoned.’ ††† Buxton, p. 11†††15.

Mr. Buxton maintains, that, as our prison discipline stood in 1815, the prisoner, immediately on his commitment, was made to experience the violation of all these rights. In language still hut too applicable in various parts of the country, ‘ You give him,’ says he ‘ (the pri-

soner) leisure, and for the employment of that leisure you give him tutors in every branch of iniquity. You have taken no pious pains to turn him from the error of his ways, and to save his soul alive. You have not cherished the latent seeds of virtue ; you have not profited by the opportunity of awakening remorse for his past misconduct. His Saviour's awful name becomes, indeed, familiar to his lips, because he learns to use it to give zest to his conversation, and vigor to his execrations ; but all that Saviour's office, his tenderness, and compassion, and mercy to the returning sinner, are topics of which he learns no more than the beasts that perish.'

That the reader may have before him a sort of specimen of some modern British prisons, we will exhibit a few particulars of the former condition of the Borough Compter. Of thiiteen persons confined on criminal charges, there were five cases of fever. In a room, seven feet by nine, three persons had slept the night before his first visit, one of whom was ill with fever, with which the other two were infected, and so found on his second visit. Till lately no surgeon or apothecary ; no infirmary ; no separation of a sick criminal, however infectious his disorder. The apartments of the male debtors on the same floor with the female prisoners, and separated only by doors seven feet asunder, which are always open in the day time, and in hot weather at night. One yard only for male and female debtors; no cooking utensils ||| no soap ||| no work or employment provided ||| no school. We are not to wonder at the gaoler's declaration that, in an experience of nine years, he had never known an instance of reformation. In Guildford gaol at this period, there was no infirmary ||| no chapel ||| no work ||| no classification.

So far back as 1815 we find from Mr. Buxton that a committee of aldermen of London was appointed to visit several gaols in England, and directed to compare the allowances, and the rules and orders, then existing in the prisons of the metropolis, with those of Gloucester, and elsewhere, and to draw out such new system of al-iQwances, and such new code of laws, as should appear to them to be salutary, and adapted to the prisons in question. That such of our readers as have not yet acquired any knowledge of this subject may

have their attention drawn towards it, we offer to their notice the following improvements which their reports suggested,

‘ 1. That the gaol should be divided into day-rooms, and distinct yards, having arcades in each.

‘ 2. That warm and cold baths should be provided, as also ovens, for fumigating clothes.

* 3. Circular apertures of open iron work, for the purpose of a thorough ventilation, should be made.

‘ 4. Such shutters and windows shall be constructed as shall exclude the possibility of the prisoners’ looking into any other apartment or yard.

‘ 5. That day cells for labor should be distinct from the .sleeping cells, as also exclusive cells for refractory prisoners.

‘ 6. King’s evidence should be precluded from a possibility of communication with the other prisoners.

‘ 7. That gratings should be filled up in the apartments where the visitors of felons are admitted; and so constructed as not to admit of any dangerous instrument being passed through.

‘ 8. Apartments for the reception of friends of the debtors should be constructed.

‘ 9. The chapel should be so constructed that one class of prisoners should not be seen by another class.

‘ With respect to the classification of prisoners, according to their several degrees of offence :

‘ 10. That those before trial should never be mixed with those convicted ; and that the respective classes should be arranged as nearly a? possible in the following order :

1. Capital felons.

2. Simple felony, and first offence.

3. Criminals under sentence of death.

4. Misdeameanors and persons wanting sureties.

5. Misdemeanors of the grossest kind.

6. Children.

‘ With respect to the internal regulations of the prison : ???

‘ 11. That all prisoners on coming in should be examined by the surgeon, and should be immediately washed, and their clothes purified ; and proper apparel should be provided for their use in the mean time.

‘ 12. That the prisoners should be required to wash themselves, at least once every day, at places appropriated for that purpose ; and that clean towels of open network be supplied for their use, twice a week.

‘ 13. That no beer should be admitted ; nor wine, nor other strong liquors, except to the infirmaries, by direction of the surgeon, or to the debtors. No debtor to be allowed to have to himself more than one pint of wine, or one quart of strong beer per day.

‘ 14. The friends of criminals to be admitted between the hours of nine in the morning, and two in the afternoon ; and not to be allowed to converse with the prisoners, but in the presence of the keeper or turnkey, except solicitors for the purpose of preparing defences.

‘ 15. The visitors of debtors to be admitted only at stated hours, into the rooms allotted for their reception, and not into the interior of the gaol, unless by order of a magistrate.

‘ 16. Not any description of prisoners should be permitted to enter into the sleeping-rooms during the day.

‘ 17. The transports, and those sentenced to hard labor or solitary confinement, to be kept in constant work suitable to their ability and strength ; such prisoners not be excused from work, unless on account of total inability, ill health, or other sufficient cause certified by the surgeon.

‘ 18. Prisoners to be discharged in the morning, and. if they have acquired any trade in the prison, proper tools to be given to them

‘ 19. That gaming of every kind should be strictly prohibited.

‘ With respect to the allowances of food : ???

‘ 20. That one pound and a half of bread, at least one day old, shoulr1 be allowed to each pri-

soner daily, and one pint of good gruel for breakfast, ††† and upon good behaviour half a pound of meat on a Sunday.

‘ 21 . That proper scales, weights, and measures should be provided in the gaol.

‘ 22. A messenger to be appointed for the accommodation of the debtors.

‘ 23. A laundry, and a matron under whose directions the female prisoners should do all the washing.

‘ 24. A bell to be fixed for sounding alarms in cases of escape.

‘ 25. The chaplain to keep a diary of observations, subject to the inspection of the visiting magistrates. He should read prayers, and preach a sermon every Sunday morning, and read prayers in the evening, and also read prayers every Wednesday and Friday. He should visit the sick, instruct prisoners in their moral duties, give spiritual advice, and religious consolation to such as may desire it. He should distribute amongst them religious books, and form a sort of school for the instruction of the children.’ ††† Bux-ton, p. 61 ††† 64.

Among the creditable exceptions to the neglected state of our prisons at this period stood the gaol of Bury ; where the benefits of a simple mechanical, as well as moral arrangement, have been practically and decisively displayed for many years ; and, connected with which, the name of Mr. Orridge, the governor, will long be mentioned with honor. The facts, as Mr. Bux-ton observes, will speak for themselves : ††† and the writer of this paper has verified them. No prisoner, at the time of Mr. B’s visit, was ill ; in eighteen years but one prisoner had escaped ; in every 100 of the prisoners not five were found who

had been there before ; never any riots, or quarelling, or swearing. Yet, for twenty years, Mr. Orridge informed us he had never used irons in this prison.

The researches of the modern advocates of prison reform have not, as we have intimated, been confined to their own country. ††† At the Maison de Force, at Ghent, the same practical testimony is borne to the good effects of a sound system of gaol discipline. Here was observed by Mr. Buxton an entire separation of men from women, the sickly from the healthy, the untried from the convicted, and the misdemeanants from the felons. ‘ The building, being yet unfinished, does not admit of more subdivisions of classes, which certainly might be carried farther, and probably will when the capacity of the structure will admit of it.’ A very important feature of the system of classification is that of children from men and women ; and in general it may be observed that the division into classes should have reference to moral as well as technical distinctions. The utmost order and regularity were found to prevail in this prison. While at work, no prisoner was allowed to speak ; and so strictly was the rule observed that the questions put to them by Mr. Buxton were not answered. No noise but the noise of the shuttle. Corporal punishment, formerly allowed,was then dispensed with, because, as the governor stated, it was found to be unnecessary. The penalty was privation of work. The behaviour of the prisoners was

subdued, civil, submissive, and decent throughout††† their persons cleanly, and their looks cheerful ††† all the rooms clean and sweet. ‘ By this excellent system,’ says Mr. Buxton, ‘ the prisoner gains habits of order, self-restraint, and subjection of mind. ††† The most boisterous tempest is not more distinct from the serenity of a summer’s evening ; the wildest beast of prey is not more different from our domesticated animals, than are the noise, contention, licentiousness, and tumult of Newgate, from the quietness, industry, and regularity of the Maison de Force.

In the prison of Philadelphia, where the great features of discipline are distribution, employment, and religious instruction, the effects are still more impressive. Mr. Turnbull, speaking of the various trades carried on in the prison, of blacksmith, carpenter, turner, shoemaker, tailor, weavers of cloth, linen, and carpeting, grinding of corn, sawing and polishing mar-ble, cutting stone, and rasping logwood, observes, ‘ that there was such a spirit of industry on every side, and such contentment pervaded the countenances of all, that it was with

difficulty he divested himself of the idea that these men surely were not convicts, but accustomed to labor from their infancy.' ' An account is opened with every prisoner ; he is debited with the amount of the sum stolen, or embezzled, with the expenses of his prosecution, with the fine imposed by the court, with the cost of his board and clothes; and he is credited with the produce of his labor.' All the dress, every mattress, sheet, rug, and coverlid, is woven by the male, and made up by the female prisoners. All laughing, singing, and conversation, during the hours of work, are prohibited ; and the silence which is observed is the first and most striking; circumstance which arrests the attention of a stranger. Great attention is paid to the promotion of moral and religious improvement by a supply of useful books, and by the regular performance of divine service. No keeper is permitted to carry a stick, or any offensive weapon. No fetters or irons are seen in the prison, the punishment is solitude, and no instance has occurred of its being necessary to inflict it upon the same person twice. In the four years preceding the commencement of the new system 104 prisoners escaped: in the four succeeding (except on the day of its establishment) not one escaped.

Under the old system the number of the most heinous crimes committed in the city and county from January, 1787, to June, 1791, was 129. Under the new system in the whole state, during the same period, twenty-four. ' At the time of the yellow fever, in 1793, great difficulty was found in obtaining nurses and attendants for the sick at Bush-hill hospital. Recourse was had to the prison. The request was made, and the apparent danger stated to the convicts. As many offered as were wanted. They continued faithful till the dreadful scene was closed ××× none of them making a demand for their services till all were discharged.

' One man committed for a burglary, wno had seven years to serve, observed, when the request was made to him, that having offended society

lie should be happy to render it some services for the injury ; and, if they could only place a confidence in him, he would go with cheerfulness. He went ××× he never left it but once, and then by permission to obtain some articles in the city. His conduct was so remarkable as to en-gage the-attention of the managers, who made him a deputy-steward ; gave him the charge of the doors, to prevent improper persons from going into the hospital, to preserve order in and about the house, and to see that nothing came to or went from it improperly. He was paid, and after receiving an extra compensation, at his discharge married one of the nurses. Another man, convicted of a robbery, was aken out for the purpose of attending a horse and cart, to bring such provisions from the vicinity of the city as were there deposited for the use of the poor, by those who were afraid to come in. He had the sole charge of the cart and conveying the articles for the whole period. He had many years to serve, and might at any time have departed with the horse, cart, and provisions. He despised, however, such a breach of trust, and returned to the prison. He was soon after pardoned, with the thanks of the inspectors. Another instance of the good conduct of the prisoners during the sickness happened among the women. When request was made to them to give up their bedsteads, for the use of the sick at the hospital, they cheerfully offered even their bedding, &c. When a similar request was made to the debtors, thej all refused. A criminal, one of the desperate gangs that had so long infested the vicinity of Philadelphia, for several years before the alteration of the system, on being discharged, called upon one of the inspectors, and addressed him in the following manner : ××× ‘ Mr.

-, I have called to return you my thanks

for your kindness to me while under sentence, and to perform a duty which I think I owe to society, it being all in my power at this time to afford. You know my conduct and my character have been once bad and lost, and therefore %vhat-ever I might say would have but little weight were I not now at liberty. Pursue your present plan and you will have neither burglaries nor robberies in this place.’

Of the very deplorable state of the females in Newgate before Mrs. Fry’s well-known visits no one can be ignorant ; of the change produced by the Bible, a school, and constant employment, among these desolate and vicious beings in a short compass of time, it is difficult to form an adequate conception. At the first visit, says a young lady who accompanied Mrs. Fry, and who related the circumstances to Mr. Buxton, ‘ the railing was crowded with half-

naked women, struggling together for the front situations with the most boisterous violence, and begging with the utmost vociferation. She felt as if she was going into a den of wild beasts, and she well recollects quite shuddering when the door closed upon her, and she was locked in, with such a herd of novel and desperate companions. This day, however, the school surpassed their utmost expectations ; their only pain arose from the numerous and pressing applications made by young women, who longed to be taught and employed. The narrowness of the room render*! it impossible to yield to these requests, whilst a denial seemed a sentence of destruction, excluding every hope, and almost every possibility o reformation.' ††† p. 122.

The visits of these ladies were incessant. They often spent the whole day in the conduct of this extraordinary school, joining in the employment, sharing the meals, and engaged in the inspection of their pupils. The first experiment was upon the untried part of the prisoners, and the success with which it was attended encouraged an extension of the scheme to those who had undergone their trials, and the inauguration of this great undertaking is thus set forth by Mr. Buxton : ††† ' Nothing now remained but to prepare the room ; and this difficulty was obviated by the sheriffs sending their carpenters. The former laundry speedily underwent the necessary alterations††† was cleaned and white-washed ††† and in a very few days the Ladies' Committee assembled in it all the tried female prisoners. One of the ladies began by telling them the comforts derived from industry and sobriety, the pleasure and the profit of doing right, and contrasted the happiness and the peace of those who are dedicated to a course of virtue and religion, with that experienced in their former lite, and its present consequences ; and, describing their awful guilt in the sight of God, appealed to themselves, whether its wages, even here, were not utter misery and ruin. She then dwelt upon the motives which had brought the ladies into Newgate ; they had left their homes and their families, to mingle amongst those from whom all others fled ; animated by an ardent and affectionate desire to rescue their fellow -creatures from evil, and to impart to them that knowledge which they, from their education and circumstances, had been so happy as to receive. She then told them that the ladies did not come with any absolute and authoritative pretensions ; that it was not intended they should command, and the prisoners obey ; but that it was to be understood, all were to act in concert ; that not a rule should be made, or a monitor appointed, without their full and unanimous concurrence ; that for this purpose each of the rules should be read, and put to the vote ; and she invited those who might feel any disinclination to any particular freely to state their opinion '

one discharged from the prison had been again committed for a transgression of the law.'

The five golden rules of which the plan of this proceeding was composed were : ◆◆◆

' 1st. ' Religious instruction,' ◆◆◆ perusal of the Scriptures morning and evening. They have found the prisoners remarkably ignorant of the first principles of Christianity, and they have reason to think that a prison, in excluding many objects of worldly interest, occupation, and pleasure, and in the pause which it produces in the career of life, and in the apprehensions it sometimes excites, is well calculated for the inculca-tion of religious impressions.

2dly, Constant employment is a grand and an indispensable requisite in the reformation of a prison. They would feel themselves totally in-competent to restrain the passions of this unruly race, if their minds were not engaged in useful and active objects.

3dly, Rules simple and lenient, but rigidly enforced, and, if possible, the concurrence of the prisoners in their formation.

4thly, Classification and separation to the greatest possible extent.

Sthly, They recommend that prisoners should be treated as human beings, with human feelings ; with that disinterested kindness which will engage their affections ; yet as human beings degraded by crime ††† with that degree of restraint, and with those symbols of degradation, which may recal a sense of their guilt, and humble their pride.' ††† Buxton, p. 139.

Of the success of Mrs. Fry and her associates it was well said at the time : ' Let us hear no more of the difficulty of regulating provincial prisons, when the prostitute felons of London have been thus easily reformed and converted. Let us never again be told of the impossibility of repressing drunkenness and profligacy, or introducing habits of industry in small establishments, when this great crater of vice and corruption has been thus stilled and purified. And above all let there be an end of the pitiful apology of the want of funds, or means, or agents, to effect those easier improvements, when women from the middle ranks of life ††† when quiet unas-suming matrons, unaccustomed to business, or to any but domestic exertion, have, without funds, without agents, without aid or encouragement of any description, trusted themselves within the very centre of infection and despair, and, by opening their hearts only, and not their purses, have effected, by the mere force of kindness, gentleness, and compassion, a labor, the like to which does not remain to be performed, and which has smoothed the way, and ensured success, to Jill similar labors. We cannot envy the happiness which Mrs. Fry must enjoy from the consciousness of her own great achievements; ††† but there is no happiness or honor of which we should be so proud to be partakers : And we seem to relieve our own hearts of their share of national gratitude in thus placing on her simple and modest brow that truly civic crown, which far outshines the laurels of conquest, or the coronals of power ††† and can only be outshone itself by those wreaths of imperishable glory which await the champions of faith and charity in a

higher state of existence.' ††† Edinburgh Review, September, 1818.

We have been detained longer than we ani - cipated by the topics of Mr. Buxton's admirable volume ; but they have enabled us to bring the great facts and elements of the subject before the reader.

Looking more at large into the subject, we shall find our English law

to recognise from the earliest periods three great classes of prisoners ††† the debtor, the accused criminal, and the convicted criminal. It is clear that the imprisonment of each proceeds upon totally different principles, and there are even subdivisions of these classes of some importance. We imprison the man suspected of crime,for instance solely to secure his appearance on the day appointed for trial; it is matter of necessity, and the law has therefore only recourse to it where no adequate substitute by way of security can be provided ; for, under the imputation of the heaviest crimes, it lodges a power with its higher officers of estimating and accepting such substitute. It is agreed, says Blackstone, that the Court of King's Bench, or any judge thereof in time of vacation, may bail for any crime whatsoever, be it treason, murder, or any other offence, according to the circumstances of the case. 4 Com. p. 299. We imprison the convict for punishment ; and the debtor in execution partly for punishment of the fraud which he is presumed or proved to have committed on his creditor, and partly as a mode of compelling him to produce or render available for the discharge of his debts that property which cannot be directly reached. Though, however, the objects which the law has in view, in these three cases of imprisonment, are thus various, and though the duties which are incurred in consequence toward the unhappy subjects of it will naturally have proportionate varieties, yet in some respects they will be entirely the same ; certain things are proper, certain things necessary in every prison, and for every prisoner.

In the first place a universal requisite is security ; an insecure prison is a solecism in terms ; on this point it would not be necessary to say a word, if all people were as well agreed in respect of the means as of the end. The ancient practice was to rely more upon fetters and manacles, than the walls of the prison or the vigilance of the gaoler ; but the new prison bill enacts that ' no prisoner shall be put in irons by the keeper of any prison except in cases of ur-gent and absolute necessity, and the particulars of every such case shall be forthwith entered in the keeper's journal, and notice forthwith given thereof to one of the visiting justices; and the keeper shall not continue the use of irons on any prisoner longer than four days, without an order in writing from a visiting justice specifying the cause thereof.' ††† s. x. reg. 12. No one can doubt the propriety of such a regulation ††† we are satisfied that fettering the debtor or the accused criminal as a matter of course was always illegal ; how far it stood within the protection of the law in the case of the convict seems not so clear. The common argument, that it is unlawful to ex-ceed the terms of a sentence, and that a sentence of imprisonment says nothing of fetters, proves

nothing; the sentence says nothing of many other prison privations, the legality of which cannot be doubted ; it is general in its terms, and includes every circumstance which goes to make up the idea of legal imprisonment, so that the question always comes round to what is legal imp-isonment. Waiving, however, a legal discussion, which the statute just cited renders unnecessary, we agree with the warmest opposers of the practice that it was always inexpedient to iron even the convict, unless his own refractoriness or desperation made it necessary. Observation too will warrant us in going a step farther, and expressing an opinion that the frequent necessity for the use of fetters almost amounts to proof of some mismanagement in the prison in which it shall exist. It is not the least merit in the prison bill that, by the restrictions imposed on the use of them, greater care and more skilful management become necessary on the part of governors of prisons.

The next requisite of all prisons clearly is that they should be healthy and clean. Air and exercise, food and clothes such as are necessary for the sustentation of health, together with medicine and attendance when sick, stand upon the same principle ; except in that short and awful interval which precedes execution, and which is spent in preparation for it, there can be no time or circumstance under which any prisoner may not demand all those things which are ordinarily necessary for the preservation of life. We are aware that, in some of these last particulars, we may be thought to push the claims of the prisoner farther than justice requires ; there are those who deny in the whole any claim of right which he can set up to food, clothing or lodging, and others who, admitting the abstract right, would yet practically reduce the quantity and quality below the scale implied in our remarks. It is more difficult to decide, whether, in particular instances, the introduction of more generous food or greater comforts should be allowed according to other considerations than those of health ; in other Words, whether the ability of the party to purchase, or his industry and good behaviour, should procure him luxuries denied to his fellow-prisoners in general. There is long practice, and

high authority in the favor of the affirmative; with regard to debtors, it is, we believe, universally allowed to them to procure from without any food or liquor, subject only to certain prohibitions and regulations ; and as to prisoners who labor, it has long been the custom, in some of our best regulated prisons, to stimulate industry by allowing a portion of the profits earned by the prisoner to be spent by him in this way.

The prison bill steers a middle course, allowing the introduction of food, not extravagant or luxurious, to debtors, or accused criminals, who receive no allowance from the county ; and prohibiting it in the case of convicts, except under the permission of the visiting justices, or the regulations of the quarter-sessions. ††† s. x. reg. 14 and 15. Mr. Holford asserts that, ‘ the prisoners whose labor is most productive in the Penitentiary at Millbank, are not those whose behaviour entitles them to most conside-

ration, or of whose eventual restoration with credit to society the chaplain entertains the most favorable expectation.’ p. 53. It is obvious, indeed, that the system of allowing them in all cases a participation in the fruit of their labors, must be unfavorable in many respects to the reformation of prisoners; its tendency being to confirm in the habit of looking to immediate self-indulgence, as the motive for action, men who have already found that motive too strong for their prudence or their conscience. Such a sys-tem seems to ui to be founded upon a mistaken view of many of the objects of imprisonment. Howard found one great evil of our prisons to be a total want of employment, and he described in very fascinating colors the appearance which those presented in which the prisoners were fully employed. Undoubtedly a salutary change was produced ††† the giving all prisoners an opportunity of working, and compelling some to work, were among the most efficient causes of the great improvement which has taken place in our prisons; but it is to mistake the means for the end, when prisons are estimated by the cheerful activity of the laborers, and the quantity of productive labor within their walls. A prison ought still to be a place of terror to those without, of punishment to those within ; let us reform criminals if we can ††† it is a great and glorious ob-ject, uncertain in the result, but imperative in the obligation. Punishment, however, is certain ; and it is one mode of punishment, severely felt by those who have led a life of self-indulgence, but unattended with any cruelty, to tie them down to a coarse, uniform diet. Two exceptions may be urged : we may be asked whether we would extend the rule to persons of the

higher ranks of life, and convicted of offences such as libel, provocations to duel, &c., which ordinarily are understood to carry with them less of moral turpitude. We confess that we can see no reason for not carrying the rule so far ; the health of the party must of course always be the first object, and it would be for the medical attendant to see that no change of habit was made so violent in its nature as to affect it ; but rank or education ought not to lighten punishment; if they make the feelings more susceptible to an equal infliction, it must be remembered also that the moral restraint and social obligation were stronger, and that the violation of them merits a severer suffering. The case of debtors also may be here pressed ; but, health being secured, we cannot say that there appears to us any injustice in subjecting them also to the mortification of their appetite. Every debtor in execution either can or cannot pay his creditor ; if he can, and will not, preferring to spend in self-indulgence the substance which in truth belongs to his creditor, it is well that he should be prevented from gratifying so unjust a desire; if he cannot, then he is supposed to be in a state of destitution, and the prison allowance must be a relief to him.

We have been induced, from the importance of the subject, to hazard some repetition, after our extract from Mr. Buxton with regard to these rights of prisoners. But, waiving many minor, yet important considerations, such as the difficult” of preserving uniform discipline, or

consistent details in a prison, in which the prisoners are allowed a different scale of diet, varying according to their own fancies, we come to these conclusions ××× that all have a right to be fed, and that all should be confined to the same prison allowance, qualifying the rule in individual cases according to the directions of the medical officer of the prison ; and, if any other variation be allowed, we should prefer the indulgence being granted as the reward of orderly behaviour, to the regulating it by the amount of the prisoner’s earning.

The prisoner, of whatever description, has further claims to be protected from the corruption of bad society, and to be afforded an opportunity of performing uninterruptedly his religious duties.

Upon this head, of religious instruction and attendance, the prison bill has made a most important improvement in our criminal law. The duties of the chaplain are marked out with fulness and precision; the inmates of a gaol require, and they will henceforward receive, even more minute and constant attendance than the poor of the most favored parishes. He is made one of the most responsible and important officers of the prison; his salary is regulated, not extravagantly and yet liberally, with reference to the number of prisoners ; a pension is provided for him in case of sickness, age, or infirmity ; and the situation may be now made to present, if the magistracy are disposed to act in hearty accordance with the legislature, which we do not doubt, an ample, and not undesirable field for the exertion of zeal and talent in the Christian ministry. We have now stated, though not so concisely as we could have wished, the claims which we conceive prisoners of every description seem to us to have on the country : on the other hand, the rights which the country has over the inmates of its prisons will vary with the causes which place them there ; but there are certain general powers which it may justly exercise in all cases.

It has a right to general order and decency within the prison ; and for this purpose it may enforce proper discipline on every individual, and reasonably punish the breach of it. For
े he same purpose, it may regulate the prison hours, and the mode of employment of all the prisoners, even of those whom it has no power of compelling to labor, restricting it to such kinds of work as may be fittingly and wholesomely carried on within the walls, directing the sale of the produce, and apportioning the earnings in such manner as may best accord with the regulations of the place ; it has a right to restrain the intercourse of the prisoners with each other, and to exercise an entire control over the visits of friends from without.

This last is a matter of importance, and of some difficulty ; on the one hand, to deny even to the convicted prisoner ah intercourse with his family and friends is not merely a measure of great severity, requiring some clear advantage as its justification, but, in our opinion, is to throw away a powerful mean, under proper regulations, of encouragement and moral improvement; ॐ on the other hand, it cannot lie doubted that great in-jury is done to the discipline of the prison, and

to the public, by an indiscriminate admission of visitors. A prison whose gates are perpetually admitting idle spectators will necessarily lose half its terrors. Those salutary ideas of loathsomeness and misery which men associate with a gaol, and which naturally tend to the prevention of crime, cannot fail to be much weakened by a sight of the cleanliness and order, the de-cent apparel and seeming comfort, which are found within the walls; men commonly judge from what they see, and make little account of what they do not see, the solitude and wearisome-ness, the hard fare and hard labor of the prisoners. They will therefore leave the prison, believing that the sufferings of confinement have been exaggerated ; and what they believe they may act upon ; or at least they will eagerly circulate the statement.

The notion of a fee on admission is rathet strange to onr feelings, but we take for granted that that is not the only requisite. The regulations of the Prison Bill, as we understand them, put the matter on the right footing ; prisoners only committed for trial are to receive visits at proper times and under proper restrictions, settled by the governor, or visiting justices; and convicts only under such rules and regulations as may be determined on at the quarterses- sions.

In this part of our subject one more topic remains to be discussed, but of great importance, the employment of the prisoners. It is obvious that this can have reference only to those who are confined upon suspicion, or for punishment of crimes; but with regard to each of these classes great difference of opinion prevails as to the principle and the mode of enforcing it. The law and common sense agree in making a wide distinction between prison employment and hard labor. The former is undoubtedly desirable for all prisoners, and every proper and rational inducement should be held out to them to engage in it ××× inducements which experience warrants us in saying will scarcely ever fail of success. It is a question, however, to which late circumstances have attached some consequence, whether there is any legal power, directly or indirectly, to com-pel persons, either untried or sentenced simply to imprisonment, to labor. The general practice, we believe, varies much in this respect between these two classes ; in a great, perhaps the greater num-ber of prisons, in which the reformation of the prisoner is attempted, a convict sentenced to imprisonment only is directly or indirectly compelled to work as a part of prison discipline; but in scarcely any is the same rule observed with re-gard to persons only committed for trial. It would be as difficult, perhaps, to find a direct authority in law for compelling the convict to work as the untried prisoner ; but many of the reasons

which apply with great cogency against compulsion on the latter certainly do not exist in respect of the former. Where a ma.i has been proved guilty of a crime against society, for which it is thought necessary to punish him by seclusion, society has a right to subject him to such discipline as may be thought likely to make him harmless to her interests when he shall be restored to liberty: this would warrant direct compulsion. And, as to the indirect compulsion of withholdiuc

sustenance from him if he refuses to earn it by labor, there can be no injustice in this, for he can have no positive claim to maintenance ; it is true that he has been withdrawn from his trade or occupation, but that is a necessary part of the punishment of his crime, the forfeiture of the means of resorting to his former mode of earning a livelihood. But with a man committed only on suspicion, whom the law still presumes to be innocent, and deprives of liberty only because it sees no other mode of securing his appearance at the day of trial, all the reason is in favor of his immunity from every other privation or interference. Direct compulsion, we believe, has not been attempted; the only ground on which it could be put would be the enforcement of discipline; and undoubtedly that must be preserved, if necessary, over every prisoner. We are not, therefore, disposed to deny, that for riot or disorderly behaviour an unconvicted criminal may, from the necessity of the case, be treated as a convict; in whatever character he comes, he is bound so far to submit to the laws of the place, as not to interfere with the peace and good order of others. But this is an argument which will never justify the compulsory labor of a peaceable and orderly, but slothful or even obstinate prisoner.

Witn respect to hard labor as a useful mode of punishment and correction there cannot well he much difference of opinion. When, however, this subject first attracted the public attention, the benevolent individuals in different counties who took the largest share in directing the measure, ‘ seldom ventured (as Sir George Paul says) to turn their eyes from income and profit to a county rate; every house of correction was to become a busy manufactory, and to maintain itself.’ Much as we are advocates for industry in prisoners, and economy of public money, we think both may be purchased too dearly ; and we are not sorry, we confess, that in almost every place in which

the manufactory-system has been tried it has proved, if not a failing concern on the whole, yet certainly far less profitable than was expected. We do not, of course, mean to condemn all profitable labor of the prisoners, but we are anxious that it should never be the primary object ; in truth the best economy is in that system which produces the fewest recommittals, and prevents the most crimes.

The tread-wheel is an invention which has certainly been exposed to most unfounded attacks, and perhaps been praised far beyond its real merits, but which we do not hesitate to pronounce an important instrument of prison discipline. The fifth Report of the Society for the Improvement of Prison Discipline is before us, and it is in no part more sensible or instructive than in what it communicates on this subject; on which, as might be expected, a great deal of ignorance prevails : and although almost every tread-wheel varies practically in the quantity of labor which it imposes, and consequently in a great measure in the effect which it is calculated to produce, the machine is praised or blamed as if it were one thing, the same in every prison. The labor of the wheel it should be remembered is by ascending steps, and the amount of ascent made must

depend on the number of hour* employed, the velocity of the wheel (which, when there is no fly-regulator, will also vary with the number of men on it at the same time), the distance from step to step, and the proportion of those out of each gang who are on the wheel at one time, to those who are off. It is obvious, therefore, that what may be very true of one wheel may be entirely false of another. Thus, to select a few instances out of many, at Lewes each prisoner works at the rate of 6600 feet in ascent, per day ; at Ipswich, 7450 ; at St. Albans, 8000 ; at Bury, 8950; at Cambridge, 10,1 75; at Durham, 12,000: at Brixton, Guildford, and Reading the summer rate exceeds 13,000 ; while at Warwick the sum-mer rate will be 17,000 feet in ten hours, if the present resolution be adhered to ; which, upon reflection, we are quite sure it never will, as no strength could long endure such labor. In addition to these immense differences, those of the dietaries must also be taken into the account. Our remarks shall be confined to the principle of this machine considered generally.

Assuming then that it will be used with discretion and humanity, we will state what we conceive to be its disadvantages and advantages. In the first place, it is inapplicable to prisoners under long confinements ; there is in it at once so much irksomeness, sameness, and real fatigue, that, after subduing a stubborn spirit, we should be afraid, with long

continuance, it might go on almost to stupify the intellect ; for, while the body labors, the mind is wholly unemployed. But, even if this be thought an extreme apprehension, it must be admitted that it not only teaches no trade or occupation by which a livelihood may afterwards be earned, but must in some measure render the parties less fit for manual labor by disuse of those parts and muscles of the body which are employed in handicraft trades. Making these deductions, of which the latter is capable of an answer when we limit the use of the tread-wheel to confinements of a short duration, in which a trade could not be learned, nor the body lose its aptness for one to which it had been accustomed, the advantages seem to be, that the tread-wheel is labor indeed, dreaded in the prospect, irksome in endurance, aqd remembered with disgust ; that it has never failed to subdue the most turbulent spirit; that, requiring no instruction, every man who can walk may lie set upon it from the moment that his sentence is pronounced ; that he cannot avoid his portion of labor, the wheel turning by weight and not by exertion ; that the occupation is so unceasing that conversation between the prisoners is much restrained; that it may without injury be employed for many hours in the day, and with a very little expense in the open air; that it affords great advantages for inspection, and thereby much facilitates the duties of the governor. Un-der these impressions, and with these restrictions, we cannot but say that we shall be glad to hear of the erection of a tread-wheel in every considerable prison in the country.

We conclude in the words of the Fifth Re-port: ••• ‘Of the progress of information and of public feeling, within these few year?, on the subject of prˆon discipline, the former Reports

of this Society bear ample testimony. Parliamentary interference, the exertions of the magistracy, and diligence of enquiry, have combined to bring the subject prominently before the pub-lic mind. The

principles on which punishments are enforced have undergone the deliberate investigation of the legislature. It is the general feeling that the unconvicted should be treated with as much lenity as is compatible with the safe custody of his person, and the good order of the prison ; whilst, upon those on whom the law inflicts punishment, a salutary system of discipline ought to be enforced; that, in the treatment of the convicted, no severity should be allowed that is not warranted by the laws, nor consistent with justice ; that the prevention of crime is the ultimate object of imprisonment, and that to at-tain this end it is necessary to insure the reformation, as well as the punishment of the prisoner. Uniform severity, it is generally admitted, hardens the offender, and prepares him for the perpetration of further crimes. It is necessary not only to inspire terror, but to kindle hope ††† to impress upon the mind not only a sense of guilt, but the love of virtue; and to implant those principles, and cherish those feelings, which religion only can impart.'

The separate discipline of the common gaol, the House of Correction, and the Hulk or Penitentiary, might here be adverted to; but on this subject we can only refer to the Quarterly Review, No. LX., and the Reports of the Society for the Improvement of Prison Discipline.

PRISTINE, adj. Lat. pristintts. First ; ancient; original.

Now their pristine worth The Britons recollect. Philips.

This light being trajected only through the parallel superficies of the two prisms, if it suffered any change by the refraction of one superficies, it lost that impression by the contrary refraction of the other superficies, and so, being restored to its pristine constitution, became of the same nature and condition as at first. Newton.

FRISTIS, in ichthyology, the sawfish, is generally considered as a species of the squalus, or shark genus, comprehending under it several varieties. ˆIr. Latham, however, is of opinion that it ought to be considered as a distinct genus itself, and that the characteristics of the several varieties are sufficient to constitute them distinct species. He ranks it as a genus belonging to the order of amphibia nantes. Its characters are these : a plain long snout, with spines growing like teeth out of both edges ; four or five spiracula, or breathing apertures, in the sides of the neck : die body is oblong and almost round, with a lough coriaceous skin ; the mouth is situated in the lower part of the head ; and the nostrils, oefore the mouth, are half covered with a mem-oranaceous lobe ; behind the eyes are two oval noles ; the ventral fins approach one another, and in the male are placed about

the organs of generation ; there are no fins at the anus. Of this genus our author enumerates five species : 1. P. antiquorum. The head is rather flat at top ; the eyes large, with yellow irides ; behind each is a hole, which some have supposed may lead to an organ of hearing. The mouth is well

furnished with teeth, but they are blunt, serving rather to bruise its prey than to divide it bj cutting. Before the mouth are two foramina, supposed to be the nostrils. The rostrum, beak, or snout, is in general about one-third of the total length of the fish, and contains in some eighteen, in others as far as twenty-three or twenty-four spines on each side ; these are very stout, much thicker at the back part, and channelled, inclining to an edge forwards. The fins are seven in number ††† *viz.* two dorsal, placed at some distance from each other††† two pectoral, taking rise just behind the breathing-holes, which are five in number ††† two ventral, situated almost underneath the first dorsal ††† and, lastly, the cau-dal, occupying the tail both above and beneath, but longest on the upper part. The general color of the body is a dull gray, or brownish, growing paler as it approaches the belly, where it is nearly white.

2. P. cirratus, of which, continues Dur author, we have only met with one specimen, which was brought from Port Jackson in New Holland. It is a male, and the total length about forty inches : the snout, from the tip of it to the eye, eleven : the spines widely different from any of the others; they are indeed placed, as usual, on the edge, but are continued on each side even beyond the eyes. The longer ones are slender, sharp, somewhat bent, and about twenty in number, and between these are others not half the length of the primal ones, between some three or four, between others as far as six ; and in general the middle one of these smaller series is the longest : besides these a series of minute ones may be perceived beneath, at the very edge. In the snout, likewise, another singularity occurs : ††† about the middle of it on each side, near the edge, arises a flexible ligamentous cord, about three inches long, like the beards at the mouth of some of the gadus or cod genus, and as pliant in the recent state. The color of the fish is a pale brown : the breathing apertures four : the mouth furnished with five rows of minute, but very sharp teeth.

3. P. cuspidatus. Of this our author has seen only two specimens, the one about a foot and a half in length, and the other more than two feet and a half. In both of these were twenty-eight spines on each side

; but the distinguishing feature is the spines themselves, being particularly flat and broad, and shaped at the point more like the lancet used by surgeons in bleeding, than any other figure.

4. P. microdon. Of this species the total length is twenty-eight inches, the snout occupying ten ; from the base of this to that of the pectoral fins four inches ; between the pectoral and ventral fins six. The two dorsal fins occupy nearly the same proportions in respect to each other; but the hinder one is the smallest, and all of them are greatly hollowed out at the back part, much more so than in the two first species. The snout differs from that of every other in several particulars; it is longer in proportion, being more than one-third of the whole fish. The spines do not stand out from the sides more than a quarter of an inch, and from this circumstance seem far less capable of doing injury than any other species yet known.

&. P. pectinatus. This, with the first species, grows to the largest size of any that have yet come under the inspection of the naturalist, some specimens measuring fifteen feet in length. The pectinatus differs from the P. antiquorum in having the snout more narrow in proportion at the base, and the whole of it more slender in all its parts ; whereas the first is very broad at the base, and tapers considerably thence to the point. The spines on each side also are longer and more slender, and vary from twenty-five to thirty-four in the different specimens.

PRITH'EE. A corruption of pray thee, or I pray thee.

Well, what was that scream for, I prithee ?

L' Estrange.

Alas ! why comest thou at this dreadful moment, To shock the peace

of my departing soul ? Away ! I prithee leave me ! Rowe's Jane Shore.

PRIVASET, a small town in the department of the Dordogne, France, remarkable for the grotto of Miremont, which is at a little distance from it, and which is considered as the finest in the kingdom. It is situated about two-thirds up an extremely barren hill ; its depth from the entrance to the extremity of the largest branch is 545 fathoms, and the extent of all its ramifications 2170 fathoms. If the different windings of the grotto and those which the traveller usually makes in order to observe the objects attached to the sides, were reckoned, they would amount to more than six miles ; and it would be dangerous to adventure far into it, without the assistance of a guide accustomed to the place. PRI'VATE, adj. & n. s.\ Lat. privatus. Se-PRI'VACY, n. s. I cret; reserved; con -

PRIVA'DO, \, cealed ; alone ; par—

PRIVATEER', n. s. & v. a. (ticular : Shakspeare PRI'VATKLY, adv. i uses the noun sub—

PRI'VATENESS, n. s. ˆ stantive for a private message: privacy and privateness mean secresy; retirement; state of being concealed or unexposed ; it is used, by Arbuthnot improperly, for privity: privado is adopted from the Spanish by Bacon for a private friend : a privateer is a vessel fitted out by private individuals against a public enemy : to privateer is to fit out or conduct such a vessel : privately follows the senses of private, adj.

And, as he sat upon the Mount of Olives, the disciples came unto him privately. Matthew xxiv. 3.

To correct the particular faults of private men, would be a work too infinite ; yet some there be of that nature, that though they be in private men, yet their evil reacheth to a general hurt, as the extortion of sheriffs, and their sub-sheriffs and bailiffs, the corruption of victuallers, &c. Spenter.

When publick consent of the whole hath established any thing, every man's judgment, being thereunto compared, were private, howsoever his calling be to some kind of public charge ; so that of peace and quietness there is not any way possible, unless the probable voice of every entire society or body politick overrule all private of like nature in the same body. Hooker's Preface.

Fou shall go with me ; have some private schooling for you both.

Shakspeare.

What infinite heartease must kings neglect. That private men enjoy 1 and what have kings, That private have not too, save ceremony 1 Id.

His private with me of the dauphin's love, Is much more general than these lines impart. la

There, this night,

We'll pass the business privately and well. Id. Ambassadors attending the court in great num-ber, he did content with courtesy, reward, and privateness. Bacon.

The lady Brampton, an English lady, embarked for Portugal at that time, with some privado of her own. Id.

He drew him into the fatal circle from a resolved yrivateneti, where he bent his mind to a retired course. Wotton.

Peter was but a private man, and not to be any way compared with the dukes of his house.

Peacham of Antiquities.

Even the privatett person may shine forth in good counsel. Bp. Hall.

My end being private, I have not expressed my conceptions in the language of the schools. Digby.

Fancy retires

Into her private cell, where nature rests. Milton. Clamours our privacies uneasy make, Birds leave their nests disturbed, and beasts their haunts forsake. Dryden.

Dare you,

A private man, presume to love a queen? Id. Private, or secret prayer, is that which is used by a man alone apart from all others. Duty of Man.

Her sacred privacies all open lie, To each profane enquiring vulgar eye. Rotoe. You see Frog is religiously true to his bargain, scorns to hearken to any composition, without your privacy. Arbuthnot.

In private grieve, but with a careless scorn ; In publick seem to triumph, not to mourn.

Granville.

The first principles of Christian religion should not be farced with school points and private tenets.

Saunderson.

He is at no charge for a fleet, further than providing privateers, wherewith his subjects carry on a piratical war at their own expense.

Swift's Miscellanies.

Fame, not contented with her broad highway, Delights, for change, through private paths to stray.

Harte.

PRIVATEERS are a kind of private men of war, the persons concerned wherein administer at their own costs a part of a war, by fitting out these ships of force, and providing th,em with all military stores ; and they have, instead of pay, leave to keep what they take from the enemy, allowing the admiral his share, &c. Privateers may not attempt any thing against the laws of nations ; as to assault an enemy in a port or haven, under the protection of any prince or republic, whether he be friend, ally, or neutral ; for the peace of such places must be inviolably kept; therefore, before a commission shall be granted to any privateer, the commander is to give security, if the ship be not above 150 tons, in ––1500, and, if the ship exceeds that burden, in ––3000, that they will make satisfaction for all damages which they shall commit in their courses at sea contrary to the treaties with any state, on pain of forfeiting their commissions ; and the ship is made liable. Besides these private commissions, there are special commissions for privateers, granted to commanders of ships, &c., who receive pay, are under marine discipline, and, if they do not obey their orders,

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may be punished with death. In case we are at war with more potentates than one, privateers must have commissions for acting against each of them ; otherwise, if a captain, carrying only one against the Danes, should in his course meet with and take a Frenchman, this prize is not good, but would be taken from him by any man of war he met, and could not be condemned (for him) in the admiralty. Ships taken by privateers were to be divided into five parts ; four parts whereof go to the persons interested in the privateer, and the fifth to his majesty. By statute the lord admiral, or commissioners of the admiralty, may grant commissions to commanders of privateers for taking ships, &c., which being adjudged prizes, and the tenth part paid to the admiral, &c., wholly belong to the owners of the privateers and the captors, in proportions agreed on between themselves.

PRIVATION, n. s. \ Fr. privation ; Lat.

PRiv'ATiVE,adj.kn.s yprivatio. Removal or

PRIV'ATIVELY, adv. j destruction of any thing or quality; removal from office : privative is causing removal, obstruction, or absence of something ; that of which the absence of some ther thing forms the chief idea : privatively is itively.

If part of the people or estate be somewhat in the election, you cannot make them nulls or cyphers in the privation or translation. Bacon.

Harmonical sounds and discordant sounds are both active and positive, but blackness and darkness are indeed but privatives, and therefore have little or no activity ; somewhat they do contristate, but very little.

Id. Natural History. For, what is this contagious sin of kind,

But a privation of that grace within ? Dairies.

The duty of the new covenant is set down, first privatively, not like that of Mosaical observances external, but positively, laws given into the minds and hearts. Hammond.

The very privative blessings, the blessings of immunity, safeguard,

liberty, and integrity, which we enjoy, deserve the thanksgiving of a whole life.

Taylor. So bounded are our natural desires,

That wanting all, and setting pain aside,

With bare privation sense is satisfied. Dryden.

After some account of good, evil will be known by consequence, as being only a privation or absence of good. South.

A privation is the absence of what does naturally belong to the thing, or which ought to be present with it ; as when a man or horse is deaf or dead, or a physician or divine unlearned ; these are privations. Waltis Logick.

PRIVERNUM, a town of the Volsci, in Latium, east of Setia. Having revolted from the Romans, their ambassadors were asked, what punishment they themselves thought they deserved ? They answered what those deserve who deem themselves worthy of liberty. Being asked, should the punishment be remitted, what peace was to be expected with them ? they replied, If ,‘ou grant a favorable peace, you may hope to have it sincere and lasting; but, if a bad one, you may expect it of short continuance. The Romans were so far from being displeased, that by a vote of the people they had the freedom of the city granted them. The town is now called PJPERNO. See that article.

PRIVET, in botany. See LIGUSTRUM.

PRIVET, EVERGREEN. See RHAMNUS.

PRIVILEGE, n. s. & v. a. Fr. privilege ; Lat privilegium. Peculiar advantage or right ; immunity : to invest with peculiar rights or immunities.

The court is rather deemed as a prtvueged place of unbridled licentiousness, than as the abiding of lam who, as a father, should give a fatherly example.

Sidney.

Here’s my sword,

Behold it is the privilege of mine honours, My oath, and my

profession. Shalapeare.

He took this place for sanctuary, And it shall privilege him from your hands. Id.

This place Doth privilege me, speak what reason will.

Daniel.

He claims his privilege, and says ‘tis fit, Nothing should be the judge of wit, but wit.

. Denhamˆ He went

Invisible, yet stayed, such privilege Hath omnipresence. Milton.

Many things are by our laws privileged from tythes, which by the canon law are chargeable. Hale.

When the chief captain ordered him to be scourged uncondemned, he pleads the legal privilege of a Ro-man, who ought not to be treated so. Kettlewell. Smiles, not allowed to beasts, from reason move. And are the privilege of human love. Dryden.

The great are privileged alone, To punish all injustice but their own. Id. The privilege of birth -right was a double portion.

Locke.

He happier yet, who privileged by fate To shorter labour, and a lighter weight, Received but yesterday the gift of breath, Ordained to-morrow to return to death. Prior. As infallibility is no privilege of the human nature, it is no diminution to a man’s good sense or judgment to be found in an error, provided he is willing to retract it. Mason.

PRiy’Y,a$.&n.s.} Fr. prive. Private; PRIV’ILY, adv > assigned to secret uses; PRIV’ITY, n. s. j admitted to secrets ; made conscious of: place of retirement, or for secret use : privily is, secretly ; privately : privity, private communication ; consciousness: joint knowledge; a secret part.

The sword of the great men that are slain entereth into their privy chamber. Ezekiel xxi. 14.

They have the profits of their lands by pretence of conveyances thereof unto their privy friends, who privily send them the revenues.

Spenser’s State of Ireland.

I will unto you in privity discover the drift of my purpose ; I mean thereby to settle an eternal peace in that country, and also to make it very profitable to her majesty. Spenser.

The authority of higher powers hath force even in these things which are done without their privity. and are of mean reckoning. Hooker.

Upon this French going out, took he upon him, Without the privity o' the' king, t' appoint Who should attend him. Shakspeare. Henry VIII.

The party, 'gainst the which he doth contrive, Shall seize on half his goods ; the other half Comes to the privy coffer of the state. Shakspeare.

Sir Valentine

This night intends to steal away your daughter ; Myself am one made privy to the plot. Id.

Few of them have any thing to cover their privities.

Abbot

Many being privy to the fact, How hard is it to keep it unbetrayed ?

Daniel.

One, having let his beard grow from the martyrdom of king Charles I. till the Restoration, desired to be made a privy counsellor. Spectator.

All the doors were laid open for his departure, not without the privity of the prince of Orange, concluding that the kingdom migkt better be settled in his absence. Swift.

He would rather lose half of his kingdom, than be privy to such a secret, which he commanded me never to mention. Id.

Your fancy

Would still the same ideas give ye, As when you spied her on the privy. Id.

PRIVY COUNCIL. See COUNCIL. The king's will is the sole constituent of a privy counsellor; and it also regulates their number, which in ancient times was about twelve. Afterwards it was increased to so large a number that it was found inconvenient for secresy and despatch; and therefore Charles II. in 1679 limited it to thirty, whereof fifteen were principal officers of state, and to be counsellors ex officio ; and the other fifteen were composed of ten lords, and five commoners of the king's choosing. Since that time, however, the number has been much augmented, and now continues indefinite. At the same time also the ancient office of lord president of the council was revived, in the person of Anthony earl of Shaftesbury-Privy counsellors are made by the king's nomination, without either patent or grant. Any natural born subject of Great Britain is capable of being a member of the privy council, taking the proper oaths for security of the government. By the act of settlement, 12 and 13 W. III. c. 2, it is enacted that no person born out of the dominions of the crown of England, unless born of English parents, even though naturalised by parliament, shall be capable of being of the privy council. The duty of a privy counsellor appears from the oath of office, which consists of seven articles. 1. To advise the king according to the best of his cunning and discretion. ###2. To advise for the king's honor and good of the public, without partiality, through affection, love, meed, doubt, or dread. 3. To keep the king's council secret. 4. To avoid corruption. 5. To help and strengthen the execution of what shall be there resolved. 6. To withstand all persons who would attempt the contrary. And, lastly, in general, 7. To observe, keep, and do all that a good and true counsellor ought to do to his sovereign lord. The privy council is the primum mobile of the state, and that which gives the motion and direction to all the inferior parts. It is likewise a court of justice of great antiquity : the primitive and ordinary way of government m England being by the king and privy council. It has been frequently used by all cur kings for determining controversies of great importance ; the ordinary judges have sometimes declined giving judgment, till they had consulted the king and privy council ; and the parliament have frequently referred matters of high moment to the same, as being, by long experience, better able to judge of, and by their

secresy and expedition to transact some state affairs, than the lords and commons. At present the privy council takes cognizance of few or no matters except such as cannot be well determined by the known laws and ordinary courts ; such as matters of complaint and sudden emergencies : their constant business being to consult for the public good in affairs of state. This power of the privy council is to enquire into all offences against the government, and to commit the offenders to safe custody, in order to take their trial in some of the courts of law. But their jurisdiction herein is only to enquire, and not to punish ; and the persons committed by them are entitled to their habeas corpus by stat. 16 Car. I. c. 10, as much as if committed by an ordinary justice of the peace. In plantation or admiralty causes, which arise out of the jurisdiction of this kingdom, and in matters of lunacy and idiocy, the privy council has cognizance, even in questions of extensive property, being the court of appeal in such cases ; or rather the appeal lies to the king's majesty himself in council. . From all the dominions of the crown, excepting Great Britain and Ireland, an appellate jurisdiction (in the last resort) is vested in this tribunal ; which usually exercises its judicial authority in a committee of the whole privy council, who hear the allegations and proofs, and make their report to his majesty in council, by whom the judgment is finally given. Anciently, to strike in the house of a privy counsellor, or elsewhere in his presence, was grievously punished : by 3 Hen. VII. c. 14, if any of the king's servants of his household conspire or imagine to take away the life of a privy counsellor, it is felony, though nothing shall be done upon it; and by 9 Ann. c. 16, it is enacted that any person who shall unlawfully attempt to kill, or shall unlawfully assault, and strike or wound any privy counsellor in the execution of his office, shall be felons, and suffer death as such. With advice of this council, the king issues proclamations that bind the subject, provided they be not contrary to law. In debates, the lowest delivers his opinion first, the king last, and thereby determines the matter. A council is never held without the presence of a minister of state. The dissolution of the privy council depends upon the king's pleasure; and he may, whenever he thinks proper, discharge any particular member, or the whole of it, and appoint another. By the common law also it was dissolved ipso facto by the king's demise, as deriving all its authority from him. But now, to prevent the inconveniences of having no council in being at the accession of a new prince, it is enacted by 6 Ann. c. 7, that the privy council shall continue for six months after the demise of the crown, unless sooner determined by the successor. Blackstone's Commentaries, book. i. p. 2'20, &c. The officers of the

privy council are four clerks of the council in ordinary, three clerks extraordinary, a keeper of the records, and two keepers of the council chamber. See PRESIDENT.

PRIVY COUNSELLOR, a member of tne privy council.

PRIVY SEAL, a seal which the king uses previously to such grants, &c., as are afterwards to pass the great seal The privy seal is also some

times used in matters of less consequence, which do not require the great seal.

PRIZE, n. a. & v. a. ˆ Fr. prix ; Teut. preiss ;

PRI ZER, > Lat. pretium. Reward ;

PRIZE'-FIGHTER. j something gained in contest or adventure; value ; price : to rate; value; esteem : prizer is he who values : prizefighter, he who publicly fights for hire or reward.

A goodly price that I was prized at of them.

Zechariah xi. 13. The king of Scots she did send to France,

To fill king Edward's fame with prisoner kings,

&nd make his chronicle as rich with prize,

As is the ouzy bottom of the sea

With sunken wreck. Shakspeare. Henry V.

Life I prize not a straw ; but for mine honour Which I would free. Shakspeare.

It holds its estimate and dignity, As well wherein ‘tis precious of itself, As in the prizer. Id. Trnitus and Cressida.

Age, that all men overcomes, has made his prize on thee. Chapman.

True poets empty fame and praise despise ;

Fame is the trumpet, but your smile the prize.

Dryden. I go to free us both of pain ;

I prized your person, but your crown disdain.

Id.

The raising such silly competitions among the ignorant, proposing prises for such useless accomplishments, and inspiring them with such absurd ideas of superiority, has in it something immoral as well as ridiculous. Addition.

He acquitted himself like a valiant, but not like an honest man ; for he converted the prizes to his own use. Arbuthnot.

Martin and Crambe engaged like prizefighters.

Id. atid Pope.

Then prostrate falls, and begs with ardent eyes Soon to obtain and long possess the prize. Pope.

Some the French writers, some our own despise ; The ancients only, or the moderns prize. Id.

They are not indeed suffered to dispute with us the proud prizes of arts and sciences, of learning and elegance, in which I have much suspicion they would often prove our superiours. Law.

So strong the zeal to immortalize himself Beats in the breast of man, that e’en a few, Few transient years, won from the’ abyss abhorred Of blank oblivion, seem a glorious prize, And even to a clown. Cowper.

PRIZE [prise, French, i. e. taken], in maritime affairs, a vessel taken at sea from the enemies of a state, or from pirates ; and that either by a man of war, or privateer, &c , having a commission for that purpose. Vessels are looked on as prizes if they fight under any other standard than that of the state from which they have their commission ; if they have no charter party, invoice, or bill of lading aboard; if laden with

effects belonging to the king's enemies, or with contraband goods. In ships of war the prizes are to be divided among the officers, seamen, &c., as his majesty shall appoint by proclamation ; but, among privateers, the division is according to the agreement between the owners. By stat. 13 Geo. II. c. 4, judges and officers failing of their duty in respect to the condemnation of prizes, forfeit ►►500 with full costs of suit ; one moiety to the king, and the other to the informer.

PRO. Lat. pro. For; in defence of; nro and con, for pro and contra, for and against.

Doctrinal points in controversy had been agitated in the pulpits with more warmth than had used to be ; and thence the animosity increased in books pro and cr>i. Clarendon.

Matthew met Richard, when Of many knotty points they spoke, And pro and con by turns they took. Prior. PROA, flying, in navigation, a vessel used in the South Seas, so named because, with a brisk trade wind, it sails nearly twenty miles an hour. In the construction of the proa, the head and stern are exactly alike, but the sides are very different; the side intended to be always the lee-side being flat ; and the windward side made rounding, in the manner of other vessels ; and to prevent her oversetting, which from her small breadth, and the straight run of her leeward side, would without this precaution infallibly happen, there is a frame laid out to her from windward, to the end of which is fastened a log, fashioned into the shape of a small boat, and made hollow. The weight of the frame is intended to balance the proa, and the small boat is by its buoyancy (as it is always in the water) to prevent her oversetting to windward ; and this frame is usually called an outrigger. The body of the vessel is made of two pieces joined end-wise, and sewed together with bark, for there is no iron used about her ; she is about two inches thick at the bottom, which at the gunwale is reduced to less than one. The sail is made of matting, and the mast, yard, boom, and outriggers, are all made of bamboo.

Their rigging consists of two stays that set up at the ends of the proa, and four shronds that set up at the four corners of the frame. The sail is shaped like a settee-sail ; and the lower end of the yard is confined forward in a shoe-block. In going about they keep her way, so that the stern becomes the head ; and, to shift the sail, the yard is raised, and the lower end taken along the gunwale, and fixed in a shoe-block as before ; the boom is shifted at the same, by slackening the sheet, and

peaking the boom up along the mast ; then, by hauling upon another sheet, the end of the boom is brought to the place where the lower yard-arm was before, and is hauled aft at the other end. They are steered by paddles at each end.

PROB’ABLE,o<#. \ Fr. probable ; Lat. pr< >- IJUOBABIL’ITY, n.s. ybabilis. Likely; having PROB’ABLY, adv. j more evidence than the contrary : the noun substantive and adve b corresponding.

As foi probabilities, what thing was there ever set down so agreeable with sound reason, but some probu-ble shew against it might be made ? Hooker.

The public approbation, given by the body of this whole church unto those things which are established, doth make it but probable that they are good, and therefore unto a necessary proof that they are not good it must give place. ‘

The only seasonable inquiry is, which is of prooa-bles the most, or of improbables the least such.

Hammana.

The reason why men are moved to believe a proba - bilitii of gain by adventuring their stock into such foreign countries as they have never seen, and of which they have-iaade no trial, is from the testimony of other credible persons.

With*

I do not say that the principles of religion are meerly probable ; 1 have before asserted them to be morally certain : and that to a man who is careful to preserve his mind free from prejudice, and to consider, they will appear unquestionable, and the deductions from them demonstrable. Id.

Though moral certainty be sometimes taken for a high degree of probability, which can only produce a doubtful assent ; yet it is also frequently used for a firm assent to a thing upon such grounds as fully satisfy a prudent man. Tilloison.

.If you like not my poem, the fault may possibly be in my writing ; but more probably ‘tis in your morals, which cannot bear the truth of it. Dryden.

Distinguish betwixt what may possibly, and what will probably, be done. L’ Estrange’ s Fablei.

Probability is the appearance of the agreement or disagreement of two ideas, by the intervention of proofs, whose connection is not constant ; but appears for the most part to be so. Locke.

If a truth be certain, and thwart interest, it will quickly fetch it down to but a probability ; nay, if it does not carry with it an impregnable evidence, it will go near to debase it to a downright falsity.

South.

They assented to things that were neither evident nor certain, but only probable ; for they conversed, they merchandized, upon a probable persuasion of the honesty and tiuth of those whom they corresponded with. Id.

Our constitution in church or state could not probably have been long preserved without such methods. Swift.

Which tempers, if they were duly improved by proper studies, and sober methods of education, would in all probability carry them to greater heights of piety than are to be found amongst the generality of men. Law.

PROBAT, or PROBATE, of a will or testament, ###n law, is the exhibiting and proving of last wills and testaments before the ecclesiastical judge delegated by the bishop, who is ordinary of the place where the party died.

PROBATION, n.s.-v Fr. probation; Lat.

PROBATIONARY,^’. I probatio, from Lat. pro—

PROBA’TIONER, n. s. S bo. Proof; testimony;

PROBA’TIONERSHIP, I act or time of proving,

PROS’ ATORY, adj. J or of trial : probationary and probatory mean serving for trial : probationer, one who is on his trial; hence, a novice: proba-tionership, his state or time of trial ; noviciate.

Of the truth herein, This present object made probation.

Shakspeare. Hamlet.

In the practical part of knowledge, much will be left to experience and probation, whereunto indication cannot so fully reach. Bacon's Natural History.

This root of bitterness was but a probationer in the soil ; and, though it set forth some offsets to preserve its kind, yet Satan was fain to cherish them.

Decay of Piety.

Job's afflictions were no vindicatory punishments, but probatory chastisements to make trial of his graces. Bramhall.

The kinds of probation for several things being as much disproportioned as the objects of the several senses are to one another. Wilkiis.

Hear a mortal muse thy praise rehearse,

In no ignoble verse ;

But such as thy own verse did practise here, When thy first fruits of poesy were given,

To make thyself a welcome inmate there ;

While yet a young probationer, And candidate of heaven. Dryden.

PRO

When these principles, what is, is, and it is impossible for the same thing to be and not to be, are made use of in the probation of propositions, wherein are words standing for complex ideas, as man or horse, there they make men receive and retain falsehood for manifest truth. Locke.

He has afforded us only the twilight of probability, suitable to that state of mediocrity and probationer-ship he has been pleased to place us in here, wherein to check our over-confidence. Id.

At the end of the world, when the state of our trial and probation shall be finished, it will be a pro-per season for the distribution of publick justice.

Kelson.

I suffer many things as an author militant, whereof, in your days of probation, you have been a sharer.

Pope to Swift.

Build a thousand churches, where these probationers may read their wall lectures. Swift.

PROBATION, in the universities, is the examination and trial of a student who is about to take his degrees.

PROBATION, in the monastic sense, signifies the year of a noviciate, which a religieux must pass in a convent to prove his virtue and vocation, and whether he can bear the severities of the rule.

PROBATIONER, in the church of Scotland, a student in divinity, who, bringing a certificate from a professor in a university of his good morals, and his having performed his exercises to approbation, is admitted to undergo several trials ; and, upon his acquitting himself properly in these, receives a license to preach.

PROBATUM EST. Lat. probatum est. A phrase added to the end of a receipt, signifying it is tried or proved.

Vain the concern that you express,

That uncalled Alard will possess

Your house and coach both day and night,

And that Macbeth was haunted less By Banquo's restless sprite :

Lend him but fifty louis d'or,

And you shall never see him more ; Take my advice, probatum est.

Why do the gods indulge our store,

But to secure our rest ? Prior.

PROBE, n. s. 1 Lat. probo. A slender

PROBE-SCISSORS. J wire by which surgeons search the depth of wounds : probe-scissors, are scissors attached to a probe.

A round white stone was lodged, which was so fastened in that part, that the physician with his probe could not stir it. Fell.

He'd raise a blush where secret vice he found ; And tickle while he gently probed the wound.

Dryden.

Nothing can be more painful, than to probe am1 search a purulent old sore to the bottom. South. I made search with a probe.

Wiseman's Surgery. The sinus was snipt up with probe-scissors.

Wiseman.

PROBTTY, n. s. Fr.pro&ife; Lat. probitas Honesty ; sincerity ; veracity.

The truth of onr Lord's ascension might be deduced from the probity of the apostles. Fiddes. So near approach we their celestial kind,

By justice, truth, and probity of mind. Pope.

PROB'LEM, n. s. } French probleme ;

PROBLEMATICAL, adj. ►► Gr. ►►►n-po/3\jj//a. A

PROBLEMATICALLY, adv.) question proposed ˆ

problematical is, uncertain; questionable, the adverb corresponding.

The problem is, whether a man constantly and strongly believing that

such a thing shall be, it doth help any thing to the effecting of the thing.

Bacon.

It is a question problematical and dubious, whether the observation of the sabbath was imposed upon Adam, and his posterity in paradise 1 White.

Deeming that abundantly confirmed to advance it above a disputable problem, I proceed to the next proposition. Hammond.

Although in general one understood colours, yet were it not an easy problem to resolve, why grass is green 1 Browne.

I promised no better arguments than might be expected in a point problematical. Boyle.

This problem let philosophers resolve, ttrhat makes the globe from West to East revolve ?

Blackmore.

Diligent enquiries into remote and problematical guilt, leave a gate wide open to the whole tribe of informers. Swift.

PROBLEM, in geometry, is a proposition, wherein some operation or construction is required ; as to divide a line or angle, erect or let fall perpendiculars, &c. See GEOMETRY.

PROBLEM, in logic, is a proposition that neither appears absolutely true nor false ; and consequently may be asserted either in the affirmative or negative.

PROBOS'CIS, n. s. Latin proboscis. A snout ; particularly the trunk of an elephant.

The elephant wreathed, to make them sport, His lithe proboscis. Milton.

PROBUS (Marcus Aurelius), from the son of a gardener, became, by his great valor as a soldier, and his eminent virtues, emperor of Rome, to which dignity he was raised by the army, After having subdued the barbarous nations that had made incursions into different parts of the empire, and governed with great wisdom and clemency, he was massacred in the seventh year of his reign, by some soldiers weary of

the public works at which he made them labor, in 282. See ROME.

PROCAS, a king of Alba, one of the descendants of ./Eneas, the son and successor of Aventinus, father of Amulius and Numitor, and great-grandfather to Romulus.

PROCATARCTICK, adj. Gr. ffpojearapc-TtKof. Forerunning ; remotely antecedent.

PROCATAR'XIS, n. s. An antecedent or preexistent cause.

The physician enquires into the procatarctick causes. Harvey.

Procatarris is the preexistent cause of a disease, which co-operates with others that are subsequent, whether internal or external ; as anger or heat of climate, which brings such an ill disposition of the juices." as occasions a fever : the ill disposition being the immediate cause, and the bad air the procatarctick cause. Quincy.

PROCEED', v. n. & ra. s.-\ Fr. proceder ;

PROCEED'ER, n. s. (ˆ Lat. proceda. To

PROCEEDING, (pass from one

PROCE'DURE. * thing or place to

another; advance; go forth in form or state; issue ; be propagated ; transact ; carry on an affair methodically ; prosecute a legal suit ; take effect ; have its course : a proceeder is, he who

proceeds in any way ; proceeding, and procedure, process; issue; transaction; manner of proceeding; course of conduct: legal method of process.

I proceeded forth and came from God ; neither came I of myself, but he sent me. John riii. 42.

Temperately proceed to what you would Thus violently redress. Shakspeare. Coriolaniu.

A dagger of the mind, a false creation Proceeding from the heat oppressed brain.

Shaksj eare.

He will after his sour fashion, tell you What hath proceeded worthy note to-day. Id.

I'll acquaint our duteous citizens With all your just proceedings in this case. Id. No known substance, but earth and the procedures of earth, as tile and stone, yieldiih any moss or herby substance. . Bacon.

He that seeketh victory over his nature, let him not set himself too great nor too small tasks ; for the first will make him dejected by often failing ; and the se-cond will make him a small proceeder, though by often prevailings. Id.

These things, when they proceed not, they go backward. Ben Jonson's Catiline.

Adam Proceeded thus to ask his heavenly guest.

Milton. To judgment he proceeded on the accused. Id.

O Adam, one Almighty is, from whom All things proceed, and up to him return. Id. Although the distinction of these several procedures of the soul do not always appear distinct, especially in sudden actions, yet in actions of weight all these have their distinct order and procedure.

Hale't Origin of Mankind.

Instead of a ship to levy upon his county such a sum of money for his majesty's use, with direction in what manner he should proceed against such as refused. Clarendon.

Then to the prelude of a war proceeds ; His horns, yet sore, he tries against a tree.

Dry den . All this proceeded not from any want of knowledge.

Id. I shall proceed to more complex ideas.

Locke.

The understanding brought to knowledge by degrees, and in such a general proceeding, nothing is hard. Id.

Clear the justice of God's proceedings, it seems reasonable there should be a future judgment for a suitable distribution of rewards and punishments.

Nelson.

This is the true procedure of conscience, always supposing a law from God, before it lays obligation upon man. South.

Since husbandry is of large extent, the poet singles out such precepts to proceed on as are capable of ornament. Addison.

This rule only proceed* and takes place, when a person cannot of common law condemn another by his sentence. Ayliffe.

It is a very unusual proceeding, and I would not have been guilty of it for the world. Arbuthnot.

How severely with themselves vroceed, The men who write such verse as who can read ? Their own strict judges, not a word they spare, That wants or force, or light, or weight, or care.

Pope.

From the earliest ages of Christianity there never was a precedent of such a proceeding. Swift.

Parts of the judicial procedure, which were at first only accidental, become in time essential. Johnson.

A cheek and lip ००० but why proceed ?

I loved her then ००० I love her still ; And such as I am love indeed

In fierce extremes ००० in good and ill. Byron,
PROCELEUSMATICUS, in the ancient poetry, a foot consisting of four short syllables, or two pyrrhics, as homKnlbus.

PROCELLARIA, in ornithology, a genus of birds, belonging to the order of anseres. The beak is somewhat compressed, and without teeth ; the mandibles are equal, the superior one being crooked at the point ; the feet are palmated, the hind claw being sessile, without any toe. La-tham enumerates twenty-four species, chiefly distinguished by their colors. The most remarkable are the following : ###

1. P. aequinoctialis. It is nearly of the size of a raven ; its color is a deep sooty brown or blackish ; on the chin there is a small patch of white running down a little on each side from the lower mandible : the beak is of yellowish white.

2. P. cinerea, the petrel. The size of this bird is rather superior to that of the common gull : the bill very strong, much hooked at the end, and of a yellow color. The nostrils are composed of two large tubes, lodged in one sheath ; the head, neck, whole under side of the body and tail are white ; the back and coverts of the wings ash-colored ; the quill-feathers dusky ; and the legs yellowish. In lieu of a back toe, it has only a sort of spur, or sharp straight nail. These birds feed on the fat of whales, &c., and are likewise said to eat sorrel, to qualify the unctuous diet they live on. This species inhabit the isle of St. Kilda; appear there in November, and continue the whole year, except September and October ; lay a large, white, and very brittle egg ; and the young are hatched in the middle of June. No bird is of such use to the islanders as this ; it supplies them with oil for their lamps, down for their beds, a delicacy for their tables, a balm for their wounds, and a medicine for their distempers. It is also a certain prognosticator of the change of the wind : if it comes to land, no west wind is expected for some time; and the contrary when it returns and keeps the sea. The whole genus of petrels have a peculiar faculty of spouting from their bills, to a considerable distance, a large quantity of pure oil ; which they do by way of defence, into the face of any one that attempts to take them ; so that they are, for the sake of this panacaa, seized by surprise, as this oil has been applied to medical purposes. Frederick Martens, who had an opportunity of seeing vast numbers of these birds at Sp.tzbergen, says they are very bold, and re-sort after the whale fishers in great flocks ; and that, when a whale is taken, they light on it, and pick out large lumps of fat, even while the animal is alive ; that the whales are often discovered at sea by the multitudes of them flying; and that, when one is wounded, they immediately follow its bloody track.

3. P. pelagica, the stormy petrel, is about the bulk of the house swallow : the length six inches, the extent of wings thirteen. The whole bird is black, except the coverts of the tail and vent-fea- thers,

which are white ; the bill is hooked at the

end ; the nostrils tubular ; the legs slender and long. It has the same faculty of spouting oil from its bill as the other species. Excepting in breeding time, they are always at sea ; and are seen all over the vast Atlantic Ocean, at the greatest distance from land ; often following the vessels in great flocks, to pick up any thing that falls from on board. They presage bad weather, and caution the seamen of the approach of a tempest, by collecting under the stern of the ships ; they brave the utmost fuiy of the storm, sometimes skimming with incredible velocity along the hollows of the waves, sometimes on the summits. These birds are the cypselli of Pliny, which he places among the apods of Aristotle ; not because they wanted feet, but were KCHCOTTO&I, or had had or useless ones ; an attribute he gives to these species, on the supposition that they are almost always on the wing. In August, 1772, Pennant found them on the rocks called Macdo-nald's Table, off the north end of the isle of Skye ; and conjectures they breed there. They lurked under the loose stones, but their twittering noise betrayed them.

4. P. puffinus, the shear-water, is fifteen inches long, and thirty-one broad ; the weight seventeen ounces ; the bill is an inch and three-quarters long; nostrils tubular, but not very prominent ; the head, and whole upper side of the body, wings, tail, and thighs, are of a sooty blackness ; the under side from chin to tail, and inner coverts of the wings, white ; the legs weak, and compressed sidewise ; dusky behind, whitish before. These birds are found in the Calf of Man ; and, as Mr. Ray supposes, in the Scilly Isles. They resort to the former in February ; take possession of the rabbit burrows, and disappear till April. They lay one egg, white and blunt at each end ; and the young are fit to be taken in the beginning of August ; when great numbers are killed by the person who farms the isle ; they are salted and barrelled ; and, when they are boiled, are eaten with potatoes. During the day, they keep at sea fishing ; and toward evening return to their young ; whom they feed, by discharging the contents of their stomachs into their mouths, which by that time is turned into oil. They quit the isle about the end of August ; and are dispersed over the Atlantic. This species inhabits also the Orkney Isles, where it makes its nest in holes on the earth near the shelves of the rocks and headlands ; it is called there the lyre ; and is much valued both as food, and for its feathers. The inhabitants salt them in August for winter provisions. They also take the old ones in March ; but they are then poor, and not so well tasted as the young : they first appear in those islands in February.

PROCEPTION, n. s. Lat. pro and capio. Preoccupation ; act of taking something sooner than another. A word not in use.

Having so little power to offend others that I have none to preserve what is mine own from their procep-tion. K*ng Charles,

PROCER'ITY, n.s. Lat. procerus. Tallness; height of stature.

We shall make attempts to lengthen out the hu-man figure, and restore it to its ancient procerity.

When he met a tall woman he immediately commanded one of his Titanian retinue to marry her, that he might propagate procerity, and produce heirs to the father's habiliments. Johnson.

Mr. Higgins says he has observed that procerity is much promoted by the equal length of the legs, more especially when they are long legs. Canning.

PROC ESS, n. s. Fr. proces ; Lat. processus. Tendency ; progressive course ; progress ; flux ; methodical arrangement or management; legal course or proceeding.

That there is somewhat higher than either of these two, no other proof doth need, than the very process of man's desire, which being natural should be frustrate, if there were not some farther thing wherein it might rest at the length contented, which in the former it cannot do. Hooker.

They declared unto him the whole procvss of that war, and with what success they had endured.

Knollet.

Commend me to your honourable wife ; Tell her the process of Antonio's end ; Say how I lov'd you ; speak me fair in death.

Shakspeare. Proceed by process,

Lest parties, as he is beloved, break cut. Id. All processes ecclesiastical should be made in the ting's name, as in writs at the common law.

Hay ward.

Immediate are the acts of God, more swift Than time or motion ; but to human ears Cannot without process of speech be told.

Milton.

Many acts of parliament have, in long process of time, been lost, and the things forgotten. Hale.

Experiments, familiar to chymists, are unknown to the learned who never read chymical processes.

Boyle.

That a suit of law, and all judicial process, is not in itself a sin, appears from courts being erected by consent in the apostle's days, for the management and conduct of them. Kettlewell.

Saturnian Juno

Attends the fatal process of the war. Dryden. The process of that great day, with several of the particular circumstances of it, are fully described by our Saviour. Nelson.

An age they live released From all the labour, process, clamour, woe, Which our sad scenes of daily : ction know.

Prior.

In the parable of the wasteful steward, we have a lively image of the force and process of this temptation. Rogers.

The patricians they chose for their patrons, to an-swer for their appearance, and defend them in any process. Swift.

PROCES'SION, n. s.~\ French procession; PROCES'SIONAL, adj. > Lat. processio. Pro-PROCES'SIONARY. 3 gress ; a train marching in ceremonious solemnity : the adjective corresponding.

If there be cause for the church to go forth in solemn procession, his whole family have such business come upon them that no one can be spared.

Hooker.

Rogations or litanies were then the very strength and comfort of God's church, whereupon, in the year 506, it was by the council of Aurelia decreed, that the whole church should bestow yearly, at the feast of Pentecost, three days in 'that processionary service. Id.

Him ail his train Followed in bright procession. Milton.

The priests, Pontitius at their head, In skins of beasts involved, the long procession led.

Dryden.

When this vast congregation was formed into a regular procession, to attend the ark of the covenant, the king marched at the head of his people, with hymns and dances. Addison.

The Ethiopians held an annual sacrifice of twelve days to the gods ; all that time they carried their images in procession, and placed them at their fes-tlva]s. Broome.

PROCESS IN LAW. See LAW.

PROCHEIN AMY, in law, the person next akin to a child in non-age, and who, in that respect, is allowed to act for him, and be his guardian, &c., if he hold land in soccage. To sue, an infant is not allowed to make an attorney : but the court will admit his next friend as plaintiff, or his guardian as defendant.

PROCIDA, an island, with a sea-port of the same name, on the coast of Naples, between the island of Isnhia and the promontory of Misenum. Though containing only seven square miles, the population of this island exceeds 12,000, of whom a large proportion lives in the chief town, carrying on a brisk trade. Others derive their support from fishing, and a few from rearing vines and silk. Game is uncommonly abundant here. This island was taken by the English in 1809, but soon after evacuated. It is twenty-two miles west of Naples.

PROCINC1”, n. s. Lat. procinctus. Complete preparation; preparation to the point of action.

When all the plain

Covered with thick imbattled squadrons bright,

Chariots, and flaming arms, and fiery steeds,

Reflecting blaze on blaze, first met hio view,

War he perceived, war in procinct. Milton.

PROC K I A, in botany, a genus of the mono gynia order, and polyandria class of plants ; natural order doubtful : CAL. triphyllous, besides two leafets at the base : COR. berry quinqueangu-lar, and polyspermous.

PROCLAIM’, v. a. \ Fr. proclumer ; Lat

PROCLAI’MER, n. s. fproclamo. To promul—

PROCLAMA’TION. j gate or denounce solemnly : openly tell ; outlaw : proclamation is publication by authority; declaration of the king’s will openly published.

When thou comest nigh unto a city to fight against it, proclaim peace unto it. Deut. xx. 10.

I proclaim a liberty for you, saith the Lord, to the sword and to the pestilence. Jer. xxxiv. 17.

I heard myself proclaimed. Shakspeare.

If the king sent a proclamation for their repair to their houses, some nobleman published a protestation against those proclamations. Clarendon.

Heralds,

With trumpet’s sound, throughout the host proclaim A solemn council. Milton.

The great proclaimer, with a voice More awful than the sound of trumpet, cryed Repentance, and heaven’s kingdom nigh at hand To all baptised. Id. Paradise Regained.

She to the palace led her guest,

Then offered incense, and proclaimed a feast.

Dryden.

Some profligate wretches, were the apprehensions of punishments of shame taken away, would as opsnlv proclaim their atheism as their lives do.

Locke.

K

PRO

While the deathless muse Shall sing the just, shall o'er their head diffuse Perfumes with lavish hand, she shall proclaim Thy crimes alone. Prior.

Then view him self-proclaimed in a gazette Chief monster that has plagued the nations yet : The globe and sceptre in such hands misplaced, Those ensigns of dominion how disgraced !

Cowper.

PROCLAMATIONS are a branch of the king's prerogative (see PREROGATIVE) ; and have then a binding force, ' when,' as Sir Edward Coke observes, ' they are grounded upon and enforce the laws of the realm. For, though the making of laws is entirely the work of a distinct part, the legislative branch of the sovereign power, yet the manner, time, and circumstances of putting those laws into execution, must frequently be left to the discretion of the executive magistrate. And therefore his constitutions or edicts, concerning those points which we call proclamations, are binding upon the subject, where they do not either contradict the old laws, or tend to establish new ones, but only enforce the execution of such laws as are already in being, in such manner as the king shall judge necessary.'

PROCLES, a king of Sparta, the son of Aristodemus and Argia, and the twin brother of Eurysthenes, who reigned jointly with him, and gave rise to the two royal families of Proclidae and Eurysthenidae, who governed Sparta for several centuries, exhibiting the singular political phenomena of a binarchy, or two hereditary kings governing with

equal, but limited power.

PROCLES, the son of Eucrates, a Carthaginian historian, who wrote some historical treatises, which are lost, except a few fragments preserved in the works of Pausanias. ††† Paus. iv. c. 35.

PROCLIVITY, n. s. Lat. prodivitas, proclivis. Tendency : natural inclination ; propension.

He had such a dextrous proclivity as his teachers were fain to restrain his forwardness, that his brothers might keep pace with him. Wottoti.

The sensitive appetite may engender a proclivity to steal, but not a necessity to steal. Bramhall.

PROCLUS, surnamed Diadocus, a Greek philosopher and mathematician, was born at Ly-sia, and lived about the year 500. He was the disciple of Syrianus. It is said that, when V7ita-lian laid siege to Constantinople, Proclus burnt his ships with large brazen specula. This philosopher was a Pagan, and wrote against the Christian religion. There are still extant his Commentaries on some of Plato's books, and others of his works written in Greek.

PROCON'SUL, n. s. Latin proconsul. A Roman officer who governed a province with consular authority.

Every child knoweth how dear the works of Homer were to Alexander, Virgil to Augustus, Ausonius to Gratian, who made him proconsul, Chaucer to Richard II., and Gower to Henry IV. Peachum.

PROCONSULS were appointed out of the body of the senate ; and usually as the year of any one's consulate expired, he was sent proconsul into some province. The proconsuls decided cases of equity and justice, either privately in thair prsetorium or palace, where they received petitions, heard comnlaints, granted writs under

their seal, and the like; or else publicly in the common hall, with the usual formalities observed in the court of judicature at Rome. They had besides, by virtue of their edicts, the power of ordering all things relating to the tribunes, taxes, contributions, and provisions of corn and money, &c. Their office lasted only a year. Sec-CON- SUL.

PROCOPIUS, a celebrated Greek historian, born in Caesarea, who acquired great reputation by his works in the reign of Justinian, and

was secretary to Belisarius during all the wars carried on by that general, in Persia, Africa, and Italy. He at length became senator, obtained the title of illustrious, and was made praetor of Constantinople.

PROCRASTINATE, v. a. & v. n. \ Latin

PROCRASTINA'TION, n. s. } procruati—

nor. To defer ; delay ; be dilatory : the noun substantive corresponds.

Hopeless and helpless doth .Sgeon wind,

But to procrastinate his lifeless end. Shakxpeare.

Let men seriously and attentively listen to that voice within them, and they will certainly need no other medium to convince them, either of the error or danger of thus procrastinating their repentance.

Decay of Piety.

How desperate the hazard of such procrastination is, hath been convincingly demonstrated by better pens. Id.

Set out early and resolutely without procrastinating or looking back. Hammond.

I procrastinate more than I did twenty years ago, and have several things to finish, which I put off to twenty years hence. Sicift to Pope.

Procrastination is the thief of time,

Year after year it steals, till all are fled,

And to the mercies of a moment leaves

The vast concerns of an eternal scene. Young.

PRO'CREATE, v. a.N Fr. procreer ; Lat.

PRO'CREANT, adj. I procreo, procreans. To

PROCREA'TION, n. s. s generate ; produce :

PROCREA'TIVE, adj. i procreant and procrea—

PROCREA'TIVENESS. j live mean producing; pregnant: procreation

and procreativeness cor-i expanding.

The temple-haunting martlet does approve, By his loved mansionry, that heaven's breath Smells wooingly here : no jutting frieze, But this bird

Hath made his pendant bid, and procreant cradle.

Shakspeare.

The inclosed warmth, which the earth hath stirred up by the heat of the sun, assisteth nature in tlie speedier procreation of those varieties which the earth bringeth forth. Raleigh.

These have the accurst privilege of propagating and not expiring, and have reconciled the procreaiivf-ness of corporeal, with the duration of incorporeal substances. Decay of Pietn.

Neither her outside formed so fair, nor aught

In procreation common to all kinds. Milton.

The ordinary period of the human procreative faculty in males is sixty-five, in females forty-five.

Hale.

Uncleanness is an unlawful gratification of the appetite of procreation. Sowh. Since the earth retains her fruitful power,

To procreate plants the forest to restore ;

Say, why to nobler animals alone

Should she be feeble, and unfruitful grown ?

Blackmcrc.

PRO

Flies crushed and corrupted, when inclosed in such vessels, did never procreate a new fly.

Bentley.

PROCRIS, a daughter of Pandion, or, according to others, of Erechtheus, king of Athens, and wife of Cephalus. See CEPHALUS.

PROCRUSTES, in fabulous history, a fa-mous robber of Attica, who was killed by Theseus, near the Cephisus. He used to tie travellers upon a bed ; and, if their length exceeded that of his bed, he cut off their feet and as much of their legs as exceeded ; but if they were shorter, he racked and stretched them till their length was equal to his own : ††† an emphatic em-blem of bigotry. He is called by some Da-mastes.

PROC'TOR, n. s. Contracted of Lat. procurator. A manager of another man's affairs : an ecclesiastical and university officer.

The most clamorous for this pretended reformation are either atheists, or else proctors suborned by atheists. Hooker.

I cannot proctor mine own cause so well To make it clear.

Shakspeare. Antony and Cleopatra. From a scholar he became a fellow, and the president of the college, after he had received all the graces and degrees, the proctorship and the doctor-ship. Clarendon. The proctor sent his servitor to call him. Walter. I find him charging the inconveniences in the payment of tythes upon the clergy and proctors.

Swift.

PROCULEIUS, a Roman knight, who was very intimate with Augustus. He is justly famed for his fraternal affection to his brothers, Mu-raena and Scipio, with whom he divided his possessions, after they had forfeited their estates, and offended Augustus, by joining with Pompey the younger. He was sent by Augustus to queen Cleopatra, to persuade her to surrender to him, but failed.

PROCURE', v. a. &††. n.^\ Fr. procurer;

Lat. procuro. To manage ; transact for another ; obtain ; forward ;

contrive ; persuade;

prevail on ; to

pimp : procurable

j is obtainable; to

PROCU’RABLE, adj.

PROCU’RACY, n.s.

PROCURA’TIOX,

PROCURA’TOR,

PROCURATO’RIAL, adj.

PROCUREMENT, n. s.

PROCU’RER,

PROCU’RESS.

be acquired : procuracy and procuration, management or transaction of a thing, particularly for another : procurator, he who so manages or transacts affairs : procuratorial, made by, or pertaining to a proctor : procurement is the act of procuring : procurer, one who gains ; obtains, dr acquires, particularly for others; a pander : procuress, a bawd.

They shall fear and tremble, for all the prosperity that I procure unto it. Jeremiah xxxiii. 9.

I had in charge at my depart from France, As procurator for your excellence, To marry princess Marg’ret for your grace.

Shakspearr.

Is it my lady mother ? What unaccustomed cause procures her hither 1 f.d.

Proceed, Salinus, to procure my fall, And by the doom of death end wees and all. Id.

Whom nothing can procure, When the wide world runs bias, from his will To writhe his limbs, and share, not mend the ill.

Herbert.

They confirm and seal Their undertaking with their dearest blood, As procurators for the commonweal. Daniel.

Happy, though but ill,

If we procure not to ourselves more woe. Milton. Angling was, after tedious study, a moderator of passions, and a procurer of contentedness.

Walton.

Though it be a far more common and procurable liquor than the infusion of lignum nephriticum, it may yet be easily substituted in its room. Boyle.

We no other pains endure, Than those that we ourselves procure. Dryden. PROCURATOR, among the Romans ; an agent, an overseer of an estate ; at a later period, the title of a provincial officer, inferior to the governor (see Province, and Proconsul), who managed the revenue. In some of the small provinces, or in a part of a large province, the procurator discharged the office of a governor, and had the power of punishing capitally, as was the case with Pontius Pilate, in Judsea, which was attached to the province of Syria. In the civil law, the procurator, or proctor, an-swprs to the attorney in the common law. (See advocate of the crown.) ••• Procurator, or proctor, in monasteries, is the conventual, to whom is intrusted the care of the temporal concerns. ••• Procurator di San Marco was the title of the chief officers or senators in the Venetian republic. Beside the nine actual procuratori, from among whom the Doge was chosen, there were also many titular procurators, who paid a great sum for this title, which was much coveted by the Venetian patricians on account of the rank it oonferred.

PROCYON, in ancient astronomy, a star near the dog-star, before which it generally rises in July. Cicero calls it Anticanis, which signifies the same with TTCJOKVOV.

PRODANO (the ancient Prote), a small island of Greece, on the west coast of the Morea, and separated from it only by a narrow channel. It

forms a small but secure bay, sixteen miles north by west of Navarin. Lat. 37►► 10’ N.

PRODICUS, a celebrated sophist and rhetorician of Cos, who flourished about A. A. C 396. He was sent ambassador by the Coans to Athens, where he taught publicly, and had among his pupils Socrates, Euripides, Theramenes, and Isocrates. He travelled through most towns of Greece, and made his auditors pay to hear his lectures. His writings were numerous ; and among them was the well known beautiful epi-sode of Hercules’s Choice, when addressed by Pleasure and Virtue, when the hero became the votary of the latter goddess. Prodicus experienced the fate of his excellent pupil, Socrates, being at last put to death by -the Athenians, on pretence that he corrupted the morals of their youth. Xenoph. Mem.

PRODIGAL, adj. } Fr. prodigue ; Lat. PRODIGAL’ITY, n. s. > prodigua. Profuse; PROD’IGAI.LY, adv.) wasteful; expensive; lavish ; with of before the object, and the noun substantive and adverb corresponding.

Be now as prodigal of all dear grace, As nature was in making graces dear, When she did starve the general world beside, And prodigally gave them all to you. Shakspeare.

A sweeter and lovelier gentleman, Framed in the prodigality of nature, The spacious world cannot again afford. Id. Diogenes did beg more of a prodigal man than the rest ; whereupon one said, see your baseness, that when you find a liberal mind, you will take most of him ; no, said Diogenes, but I mean to beg of the rest again. Bacon.

Lest I should seem over prodigal in the praise of my countrymen, I

will only present you with some fsw verses. Camden.

We are not yet so wretched in our fortunes, Nor in our wills so lost, as to abandon A friendship prodigally, of that price As is the senate and the people of Rome.

Ben Jonson.

A beggar grows rich, becomes a prodigal ; for to obscure his former obscurity, he puts on riot and ex-cess. Id.

Lucian has well described the fate of prodigal* in his picture of Opulentia, whose residence he represents to be on a lofty mountain, the summit of which her fond votaries are eagerly endeavouring to reach.

Burton.

I cannot well be thought so prodigally thirsty of my subject's blood as to venture my own life.

King Charles.

As a hero, whom his baser foes In troops surround ; now these assail, now those. Though prodigal of life, disdains to die By common hands. Denham.

He that decries covetousness, should not be held an adversary to him that opposeth prodigality.

Glanville.

The prodigal of soul rushed on the stroke Of lifted weapons, and did wounds provoke.

Dryden.

Let the wasteful prodigal be slain. Id.

The most severe censor cannot but be pleased with the prodigality of his wit, though at the same iime he could have wished, that the master of it had been a better manager. Id.

Nature not bounteous now, but lavish grows, Our paths with flow'rs she prodigally strows.

Id.

O ! beware,

Great warrior, nor, too prodigal of life, Expose the British safety. Philips.

It is not always so obvious to distinguish between an act of liberality and act of prodigality.

South.

PRODIG’IOUS, adj. -\ PRODIC’IOUSLY, adv. *

Ft. prodigieux ; Lat. prodigiosus.

PRODIG’IOUSNESS, n. s. ►► Amazing; astonish - PROD’IGY. 3 ing ; portentous ;

enormous ; monstrous : the adverb and noun substantive corresponding : prodigy is, any thing out of the ordinary process of nature ; portent.

Be no more an exhaled meteor, A prodigy of fear, and a portent Of broached mischief to the unborn times.

Shakspeare.

If e’er he have a child, abortive be it, Prodigious aud untimely brought to light ! Id. An emission of immateriate virtues we are a little doubtful to propound, it being so prodigious ; but that it is constantly avouched by many. Bacon.

Most of mankind, through their own slug;jish-oess, become nature’s prodigies, not her children.

Ben Joiifon.

It is prodigious t.►► iave thunder in a clear sky.

►► Browne,

Then ent’ring at the gate, Concealed in clouds, prodigiou* to relate,

He mixed, unmarked, amongst the busy throng.

Dryden.

I do not mean absolutely according to philosophic exactness infinite, but only infinite or innumerable as to us, or their number prodigiously great.

Ray on the Creation. They would seem prodigies of learning.

Spectator.

The party opposite to our settlement seem to Le driven out of all human methods, and are reduced to the poor comfort of prodigies and old woman's fables. Addison.

The Rhone enters the lake, and brings along with it a prodigious quantity of water. Id.

I am prodigiously pleased with this joint volume.

/'ope.

It is a scandal to Christianity that in towns, where there is a prodigious increase in the number of houses and inhabitants, so little care should be taken for churches. Swift.

PROD'ITOR, n. *. Lat. proditor. A traitor. Not in use.

Pieled priest, dost thou command me be shut out ? ••• I do, thou most usurping proditor. Shakspeare.

Solid and conclusive characters are emergent from the mind, and start out of children when themselves least think of it ; for nature is prodiiorious.

Wotion on Education.

Now proditorious wretch ! what hast thou done, To make this barb'rous base assassinate! Daniel.

PRODUCE', v. a. & n. s.~) Fr. produire ;

PRODI/CENT, n. s. Lat. produco. To

PRODU'CER, exhibit or offer to

PRODUCIBLE, adj. ˆnotice; bring for—

PRODU'CIBLENESS, n. s. f ward ; bear ; bring

PROD'UCT, n. s. forth ; cause ; be—

PRODUC'TION, get ; generate ;

PRODUCTIVE, adj. J effect : as a noun

substantive, that which is produced ; amount ;

profit : producent and producer mean, one that

offers or exhibits; one that generates or brings

forth : producible, such as may be exhibited ;

may be made or generated : product, something

yielded by nature ; composition ; work ; effect ;

result ; sum : production, the act of producing,

or thing produced : productive, having efficient

or generative power; fruitful.

Produce your cause, saith the Lord ; bring forth your strong reasons. Isaiah xli. 21.

This soil produces all sorts of palm trees.

Sandys.

It seems not meet, nor wholesome to my place, To be produced against the Moor. Shakspeare.

Somewhat is produced of nothing ; for lyes are sufficient to breed opinion, and opinion brings on substance. Bacon.

By examining how I, that could contribute nothing to mine own being, should be here, I came to ask the same question for my father, and so am led in a direct line to a first producer that must be more than man. Suckling.

Many warm expressions of the fathers are jtro-ducible in this case. Decay of Piety.

There is no reason producille to free the Christian children and Idiots from the blame of not believing, which will not with equal force be producible for those heathens to whom the gospel was never revealed. Hammond*

PRO

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PRO

They by imprudence mixed Prcduce prodigious births of body or mind.

Hilton. Thou all this good of evil shall produce. Id.

These are the product Of those ill-mated marriages. Id. Paradise Lost.

In thee,

Not in themselves, all their known virtue appears Productive as in herb and plant. Milton.

The best of queens and best of herbs we owe To that bold nation, which the way did show To the fair region, where the sun does rise, Whose rich productions we so justly prize.

Waller.

The salts producible, are the alcalis or fixed salts, ⍰⍰⍰which seem to have an antipathy with acid ones.

Boyle.

To confirm our doctrine of the jrroducibleness of salts, Helmont assures us that, by Paracelsus's sal circulatum, solid bodies, particularly stones, may be transmuted into actual salt equiponderant. Id.

You hoard not health for your own private use, But on the publick spend the rich produce.

Dry den.

A painter should foresee the harmony of the lights and shadows, taking from each of them that which will most conduce to the production of a beautiful effect. Id.

Be thou my aid, my tuneful song inspire, And kindle with thy own productive fire. Id. Observing in ourselves, that we can at pleasure move several parts of our bodies ; the effects also, that natural bodies are able to produce in one another, occurring every moment to our senses, we both these ways get the idea of power. Locke.

Whenever want of money, or want of desire in the consumer, rtyikes the price low, that immediately reaches the first producer. Id.

The landholder, having nothing but what the product of his land will yield, must take the market-rate. Id.

In Staffordshire, after their lands are marled, they sow it with barley, allowing three bushels to an acre. Its common produce is thirty bushels.

Mortimer's Husbandry.

If the productive fat of the marl be spent, it is not capable of being mended with new. Mortimer.

Range in the same quarter the products of the same season. Spectator.

This is turning nobility into a principle of virtue, and making it productive of merit, as it is understood to have been originally a reward of it. Id.

That is accounted probable which has better arguments producible for it, than can be brought against it. South.

This wonder of the sculptor's hand Produced, his art was at a stand. Addison. This tax has already been so often tried, that we know the exact produce of it. Id. Freeholder.

Our British products are of such kinds and quantities, as can turn the balance of trade to our advantage. Addison.

If an instrument be produced with a protestation in favour of the

producent, and the adverse party does not contradict, it shall be construed to the advantage of the proditceht. Ayliffe.

See thy bright altars Heaped with the products of Sabean springs. Pope.

Hymen's flames like stars unite, And burn for ever one ;

Chaste as cold Cynthia's virgin light Productive as the sun. Id.

Your parents did not produce you much into the world, whereby you avoided many wrong steps.

' Swift.

We have had our names prefixed at length to whole volumes of mean productions. Id.

Numbers of Scots are glad to exchange their barrec hills for our fruitful vales so productive of that grain.

Id.

Plutarch in his life of Theseus, says, that that age was productive of men of prodigious stature.

Broome.

Most of those books which have obtained great reputation in the world are the products of great and wise men. Watts.

It is generally known that he who expects much will be often disappointed ; yet disappointment sel-dom cures us of expectation, or has any other effect than that of producing a moral sentence or peevish exclamation. Johnson.

PRO'EM, n. s. Old Fr. pro'eme ; Lat. pro-amium ; Gr. irpooiutov. Preface ; introduction.

One and the same proem, containing a general motive to provoke people to obedience of all and every one of these precepts, was prefixed before the decalogue. White

So glozed the tempter, and his proem tuned.

Milton.

Justinian has, in the proem to the digests, only prefixed the term of five years for studying the laws.

Ayliffe.

Thus much may serve by way of proem, Proceed we therefore to Our poem.

Swift's Miscellanies.

PROETIDES,in fabulous history, the daughters of Proetus, king of Argos ; who, preferring themselves to Juno, were struck with insanity, and believed themselves to be turned into cows. They soon infected the rest of the Argian women, but were cured by Melampus, who received one of these princesses, and two-thirds of Argos, for his reward. See MELAMPUS. Their names were Lysippe, Iphinoe or Ipponoe, and Iphianassa, or Cyrianassa.

PROETUS, in fabulous history, a king of Argos ; the son of Abas and Ocalea, and twin brother of Acrisius, with whom he is said to have quarrelled even in the womb. Their dissensions increased with their years, and, on Abas's death, they contended for the kingdom ; but, Acrisius prevailing, Proetus retired to lobates, king of Lycia, whose daughter, Sthenoboea, he married, by whom he had Megapenthes, and the Proe-tides. By lobates's assistance, he took Tiryn-thus. Homer. Iliad, vi.

PROFAN E', adj. & v. a. -\ Fr. profane ; Lat.

PROFANA'TJON, I prof anus. Irreve—

PROFANE'LY, Vrent to sacred

PROFA'NER, n. s. i things ; polluted ;

PROFANE'NESS, n. s. J impure; not sa-cred : to pollute ; violate ; wrongly use : profanation, the act or habit of violating or treating irreverently things sacred : the adverb and other noun substantives corresponding.

Pity the temple profaned of ungodly men.

2 Maccabees.

He knew how bold men are to take even from God himself; how

hardly that house would be kept from impious profanation he knew. Hooker.

The argument which our Saviour useth against profaners of the temple, he taketh from the use whereunto it was with solemnity consecrated. Id. Profane fellow !

Were thou the son of Jupiter, and no more

But what thou art besides, thou wert too base

To be his groom. Skakˆeare. Cymb'line.

PRO

He then, that is not furnished in this sort, Doth but usurp the sacred name of knight, Profaning this most honourable order.

Shakspeare.

I feel me much to blame. So idly to profane the precious time. Id. Great men may jest with saints, lis wit in them : But, in the less, foul profanation. Id.

Rebellious subjects, enemies to peace, Prnfuners of this neighbour-stained steel. Id.

Apollo, pardon

My great profuneness 'gainst thy oracle ! Id. Nothing is profane that serveth to holy things.

Raleigh.

'Twere profanation of our joys, To tell the laity our love. Donne.

Let none of things serious, much less of divine, When belly and head's full, profanely dispute.

Ben Jon-ion.

Profanation of the Lord's day, and of other solemn festival days, which are devoted to divine and religious offices, is impious. White.

Foretasted fruit

Profaned first by the serpent, by him first Made common and unhallowed. Milton.

Far hence be souls profane, The Sibyl cried, and from the grove abstain.

Dry den.

How far have we

Profaned thy heavenly gift of poesy ! Made prostitute and profligate the muse, Debased. Id.

You can banish from thence scurrility and profaneness, and restrain the licentious insolence of poets and their actors. Id.

Others think I ought not to have translated Chaucer : they suppose a veneration due to his old language, and that it is little less than profanation and sacrilege to alter it. Id.

How are festivals profaned ? When they are not regarded, nor distinguished from common days ; when they are made instruments of vice and vanity ; when they are spent in luxury and debauchery ; when our joy degenerates into sensuality, and we express it by intemperance and excess. Nelson.

The universality of the deluge is attested by profane history ; for the fame of it is gone through the earth, and there are records or traditions concerning it in all parts of this and the new found world.

Burners Theory.

These have caused the weak to stumble, and the profane to blaspheme, offending the one, and hardening the other. South.

All profanation and invasion of things sacred is an offence against the eternal law of nature. Id.

There are a lighter ludicrous sort of profaners, who use the scripture to furnish out their jests.

Government of the Tongue.

Edicts against immorality and profaneness, laws against oaths and execrations, we trample upon.

Atterbury.

That proud scholar, intending to erect altars to Virgil, speaks of Homer too profanely. Broome. PROFECTION, n. s. Lat. profectio. Advance ; progression.

This, with profection of the horoscope unto the

seventh house or opposite signs, every seventh year

oppresseth living creatures. Browne.

PROFESS', v. a. & v. n.~\ Fr. profcsser;

PROFESS'EDLY, adv. j Lat. prqfessus. To

PROFESSION, n. s. [declare 'or make an

PROFESSIONAL, adj. (open show of

PROFESS'OR, n. s. | opinion respecting

PROFESS'OR-SHIP. J any thing; assert

one's skill in any art or science; to declare openly ; enter on a state of life by a public profession ; declare friendship : professedly is, declaratively ; according to one's own declaration : profession, declaration ; act of declaring one's own party or opinion ; calling ; known pursuit; technically distinguished from a trade, and applied to divinity, physic, and law, as vocations : professional, relating to, or befitting a profession : professor, one who publicly declares himself of a particular party or opinion ; or publicly teaches an art or science : professorship, his station or office.

Profess unto the Lord, that I am come unto the country which the Lord sware unto our fathers.

Deut. xxvi. 3.

They profess that they know God, but in works they deny him. Titus i. 16.

The profession! of princes, when a crown is the bait, are a slender security. Lesley.

Love well your father ; To your professing bosoms I commit him.

Shakspeare.

The day almost itself professes yours, And little is to do. Id. Macbeth.

Would you have me speak after my custom, As being a professed tyrant to their sex 1

Shukspeare. As he does conceive, He is dishonoured by a man, which ever Professed to him ; why, his revenges must In that be made more bitter. Id.

I must tell you

You tender more your person's honour, than Your high profession spiritual. Id.

If we confound arts with the abuse of them, we shall condemn all honest trades ; for there are that deceive in all professions, and bury in forgetfulness all knowledge. Raleigh.

When the holiness of the professors of religion is decayed, you may doubt the springing up of a new sect. Bacon's Essays.

But Purbeck, as prnfest a huntress and a nun, The wide and wealthy sea, nor all his pow'r respects.

Dray ton.

I could not grant too much to men, that, being professedly my subjects, pretended religious strictness.

King Charles.

An ill Christian is the worst of all men ; an ill professor the worst of all Christians ; an ill minister the worst of all professors. Bp. Hall.

The whole church of professors at Philippi to whom he writes was not

made up wholly of the elect, sincere, and persevering Christians, but like the net, in Christ's parable, that CdUght both good and bad, and had no doubt some insincere persons, hypocrites, and temporaries in it. Hammond.

Pretending first Wise to fly pain, professing next the spy.

Milton.

A naked profession may have credit, where no other evidence can be given. Glanville's Scepsis.

Dr. Prideaux succeeded him in the professorship ; being then elected bishop of Worcester ; Sanderson succeeded him in the regius professorship. Wot ton.

For by oil in their lamps, and the first lighting of them which was common to them both, is meant that solemn profession of faith and repentance, which all chiistians make in baptism.

Tiilotson.

A servant to thy sex, a slave to thce, A foe profest to barren chastity. Drvden.

Virgil, whom he professedly imitated, has surpassed him among the Romans. Id.

Ordinary illiterate people, who were professors, that shewed a concern for religion, seemed much conversant in St. ^.tul's epistles. Locke.

Let no man that professes himself a Christian, keep so heathenish a family, 'as not to see God be daily worshipped in it. Duty of Man.

No other one race, not the sons of any one other profession, not perhaps altogether, are so much scattered amongst all professions, as the sons of clergymen. Sprat'i Sermons.

England I travelled over, professedly searching all places as I passed along. Woodward.

Some of our profession keep wounds tented.

Witeman.

Most profligately false, with the strongest professions of sincerity. Swift.

Professors in most sciences are generally Ihe worst qualified to explain their meanings to those who are not of their tribes. Id.

This is a practice in which multitudes, besides those of the learned professions, may be engaged.

Watts.

Professional, as well as national, reflections are to be avoided. Clarissa.

A PROFESSOR, in the universities, is a person who teaches or reads public lectures in some art or science from a chair for the purpose.

PROFFER, v. a. & n. s. \ Fr. proferer ; PROF'FERER, n. s. > Lat. profero. To

propose ; offer to acceptance ; attempt : essay ; offer or attempt made : he who offers.

He seide han ye here ony thing that schal be etun ? And they profriden to him a part of a fisch roostyd, and a honeycomb. Wiclif. Luke 24.

Basilius, content to take that, since he could have no more, allowed her reasons, and took her proffer thankfully. Sidney.

fo them that covet such eye-glutting gain, Proffer thy gifts, and fitter servants entertain.

Spenser. Proffers, not took, reap thanks for their reward.

Shakspeare.

Maids, in modesty, say no, to that Which they would have the profferer construe ay.

Id.

It is done with time, and by little and little, and with many essays and proffers. Bacon's Essays.

The king

Great proffers sends of pardon and of grace ; If they would yield, and quietness embrace. Daniel.

He made a proffer to lay down his commission of command in the army. Clarendon.

None, among the choice and prime Of those heaven-warring champions, could be found So hardy as to proffer, or accept, Alone, the dreadful voyage.

Milton's Paradise Lost. But these, nor all the proffers you can make, Are worth the heifer which I set to stake.

Dry den.

Does Cato send this answer back to Caesar, For all his generous cares and proffered friendship 1

Addison.

He who always refuses, taxes the profferer with in-discretion, and declares his assistance needless.

Collier. The parent pair their secret homage pay,

And proffer up to heaven the warm request ••• That He who stills the raven's clamorous nest,

And decks the lily fair in flowery pride, Would, in the way his wisdom sees the best, For them and for their little ones provide ; But.chiefly in their hearts with grace divine preside:

Burns.

A weel-stocked mailen, himsel for the laird. And marriage aff-hand,

were his proffers: I never loot on that 1 kenn'd it, or car'd,

But thought I might hae waur offers, waur

offers,

But thought I might hae waur offers. Id.

For when one near displayed the absolving cross, And proffered to his touch the holy bead, Of which his parting soul might own the need, He looked upon it with an eye profane, And smiled ••• Heaven pardon ! if 'twere with disdain.

Byron.

PROFI'CIENCE, n. s. } Lat. proficio. Pr. PROFICIENCY, Vfit; advancement ,

PROFI'CIENT. j improvement

gained : a proficient is, he who progresses or advances in any study or pursuit.

I am so good a proficient in one quarter of an hour, that I can drink with any tinker in bis own language.

Shakspeare.

I am disposed to receive further light in this matter, from those whom it will be no disparagement for much greater proficients than I to learn.

Boyle.

Persons of riper years, who flocked into the church during the three first centuries, were obliged to pass through instructions, and give account of their proficiency. Addison.

Some reflecting with too much satisfaction on their own proficiencies, or presuming on their election by God, persuade themselves into a careless security.

Rogers'* Sermons.

Young deathlings were, by practice made Proficients in their fathers' trade. Swift.

PROFIC'UOUS, adj. Lat. proficuus. Advantageous ; useful. It is very projicuous to take a good large dose.

Harvey.

To future times

Projicuous, such a race of men produce, As in the cause of virtue firm, may fix Her throne inviolate. Philips.

PRO'FILE, n. s. Fr. profile. The side face; half face.

The painter will not take that side of the face which has some notorious blemish in it ; but either draw it in projile, or else shadow the more imperfect side. Dryden.

Till the end of the third century, I have not seen a Roman emperor drawn with a full face : they always appear in profile, which gives us the-view of a head very majestic. Addison.

PROFILE, in architecture, is the draught of a building, fortification, &c., wherein are expressed the several heights, widths, and thicknesses, such as they would appear were-the building cut down perpendicularly from the roof to the foundation. Whence the profile is also called the section, sometimes orthographical section.

PROFILE, in sculpture and painting. A head, a portrait, &c., are said to be in. profile, when they are represented sidewise, or in a side view ; as, when in a portrait there is but one side of the face, one eye, one cheek, &c., shown, and nothing of the other. On almost all medals, the faces are represented in profile.

PROF'IT, n. s., v. a., & v. n.} Fr. profit,

PROFITABLE, adj. Jprofter;Itz.

PROFITABLY, adv. \prafitto; Lat.

PROFITABLENESS, n. s. I prqfedus.

PROFITLESS, adj. J Gain ; advan-

tage; proficiency : to benefit, improve, or advance ; to gain advantage or improvement ; be of use or advantage : profitable is, gainful, advantageous, lucrative ; the adverb and noun substantive corresponding : profitless, worthless ; without advantage or recompense.

Whereto might the strength of their hands profit me 1 Job.

Wisdom that is hid, and treasure that is hoarded up, what ###profit is in them both 1 Ecclus. xx. 30.

Meditate upon these things, give thyself wholly to them, that thy profiting may appear to all.

1 Tim.

Then Judas, thinking indeed that they would be profitable in many things, granted them peace.

2 Mac. xii. Thou must know ‘Tis not my profit that does lead mine honour.

Shahspeare.

A pound of man’s flesh, taken from a man, Is not so estimable or profitable, As flesh of muttons, beefs, or goats. Id.

We must not think the Turk is so unskilful, To leave that latest, which concerns him first ; Neglecting an attempt of ease and gain, To wake and wage a danger profitless. Id.

The king did not Jove the barren wars with Scotland, though he made his profit of the noise of them.

Bacon.

The planting of hop-yards, sowing of wheat and rapeseed, are found very profitable for the planters, in places apt for them, and consequently profitable for the kingdom. Id.

Let it profit thee to have heard, By terrible example, the reward Of disobedience. Milton's Paradite Lost. We will now briefly take notice of the profitableness of plants for physic and food. More.

'Tis a great means of profiting yourself, to copy diligently excellent pieces and beautiful designs.

Dry den.

What profited thy thoughts, and toils, and cares, In vigour more confirmed, and riper years ? Prior.

What shall be the just portion of those, whom neither the condescension or kindness, nor wounds and sufferings of the Son of God could persuade, nor yet the excellency, easiness and profitableness of his Commands invite ? Calamy's Sermons.

The Romans, though possessed of their ports, did not profit much by trade. Arbvthnot mi Coins.

What was so profitable to the empire, became fatal to the emperor. Id.

You have had many opportunities to settle this reflection, and have profitably employed them.

Wake.

He thinks it highly just, that all rewards of trust, profit, or dignity, should be given only to those whose principles direct them to preserve the constitution.

Swift.

PROFLIGATE, adj., n.s.~\ I/at, profligatus.

PROF'LIGATELY, [&u. a. > Abandoned; lost

PROF'LIGATENESS, n. s. j to virtue and decency ; shameless : a rake ; an abandoned wretch : Harvey uses the verb after the Lat. profligo, but has not been followed : the adverb and noun substantive correspond with the adjective in sense.

Lavatories, to wash the temples, hands, wrists, and jugulars, do potently profligate and keep off the venom. Harvey

Time sensibly all things impairs ; Our fathers have been worse than theirs, And we than ours ; next age will see

A race more profligate than we, With all the pains we take, have still enough to be.

Roscomrnou. How far have we

Prophaned thy heavenly gift of poesy ?

Made prostitute and profiigate the muse,

Debased to each obscene and impious use,

Whose harmony was first ordained above

For tongues of angels, and for hymns of love.

Dry den.

Though Phalaris his brazen bull were there, And he would dictate what he'd have you swear, Be not so profiigate, but rather chuse To guard your honour, and your life to lose. Id.

It is pleasant to see a notorious profiigate seized with a concern for his religion, and converting his spleen into zeal. Addison.

I have heard a profiigate offer much stronger arguments against paying his debts, than ever he was known to do against Christianity ; because he happened to be closer pressed by the bailiff than the parson. Swift's Miscellanies.

Most profligately false, with the strongest professions of sincerity. Id.

How could such a profiigate as Antony, or a boy of eighteen like Octavius, ever dare to dream of giving the law to such an empire and people? Swift.

Melancholy objects and subjects will, at times, impress the most profiigate spirits. Clarissa.

PROF'LUENCE,n.s. (Lat./wo/Zaen*. Pro—

PROF'LUENT, adj. $ gress ; course : flowing forward.

In the profiuence or proceedings of their fortunes there was much difference between them. Wotton.

Teach all nations what of him they learned, And his salvation ; them who shall believe Baptizing in the profiuent stream, the sign Of washing them from guilt of sin. Milton.

PROFOUND’, adj., n. s. &v.n.-\ Fr. profond;

PROFOUNDLY, adv. f Lat. profun—

PROFOUND’NESS, n. s. [dus. Deep;

PROFUN’DITY. 3 far below the

surface ; intellectually deep ; learned ; skilful ;

cunning ; lowly ; humble : the deep or main sea ;

the abyss : as a verb, a barbarism, meaning to

dive or penetrate : the adverb corresponds with

the adjective : profoundness and profundity

mean depth of place, knowledge, or thought.

The revolters are profound to make slaughter, though I have been a rebuker of them. Hosea v. 2.

God, in the fathomless profound, Hath ail his choice commanders drowned.

Sandys.

Their wits, which did every where else conquer hardness, were with profoundness here overmatched.

Hooker.

Not orators only with the people, but even the very profoundest disputers in all faculties, have hereby often, with the best learned, prevailed most.

Id.

Upon the corner of the moon, There hangs a vapourous drop profound.

Shakspeare.

The most profoundly wise. Drayton.

What words wilt thou use to move thy God to hear thee? what humble gestures'? what profound reverence 1 Duppa.

All else deep snow and ice, A gulf profound, as that Serbonian bog Betwixt Damiata and mount Casius old. Milton.

If some other place the' ethereal king Possesses lately, thither to arrive, I travel this profound. Id. Paradise Lost.

The other turned Round, through the vast profundity obscure.

Milton.

We cannot profound into the hidden things of na-ture, nor see the first springs that set the rest a-going.

Glanville.

Now I die absent in the vast profound ; And me without myself the seas have drowned.

Dryden.

The virgin started, at her father's name, And sighed profoundly, conscious of the shame. Id.

Domenichino Was profoundly skilled in all the]❓❓❓ rts of painting ; but, wanting genius, he had less o, n-./bleness. Id.

Deep learned in the philosophy of heaven, He searched the causes out of good and ill, Profoundly calculating their effects Far past the

bounds of time. Poll'ok.

PROFUSE', adj. ~\ Lat. profusus. Lavish; PKOKUSE'LY, adv. f prodigal ; liberal to licen-PKOFusE'NESSjJi.s. i tiousness ; exuberant: the PKOFU'SION. J adverb corresponding :

profuseness is lavishness ; prodigality ; extravagance : profusion, abundance ; exuberant plenty ; also lavish or extravagant expense.

He was desirous to avoid not only profusion, but the least effusion of Christian oiood. Hayward.

The great profusion and expence Of his revenues bred him much offence. Daniel.

On a green shady bank, profuse of flowers, Pensive I sat. Milton's Paradise Lost.

Profuseness of doing good, a soul unsatisfied with all it has done, and an unextinguished desire of il.ung more. Dryden.

In profuse governments it has been ever observed that the people., from bad example, have grown lazy and expensive, the court has become luxurious and mercenary, and the camp insolent and seditious.

Davenant. What meant thy pompous progress through the

empire"? Thy vast profusion to the factious nobles? Rowe.

Oh liberty, thou goddess heavenly bright, Profuse of bliss, and pregnant with delight.

Addison.

Trade is fitted to the nature of our country, as it abounds with a great profusion of covnrrfodities of its own growth, very convenient for other countries.

u.

Hospitality sometimes degenerates into profuseness, and ends in madness and folly. Atterbury.

Then spring the living herbs profusely wild.

Thomson.

The raptured eye,

The fair profusion, yellow Autumn spies. Id. The prince of -poets, who before us went, Had a vast income, and profusely spent. Harte.

PROG, or PRIG, v. n. & n. s. Goth, trigda. To rob; steal; pilfer; shift meanly for provisions; victuals; food. A low word.

She went out progging for victuals as before.

L' Estrange.

Spouse tuckt up doth in pattens trudge it, With handkerchief of prog, like trull with budget ; And eat by turns plumcake and judge it. Congreie.

O nephew ! your grief is but folly, In town you may find better prog.

Swift's Miscellanies.

PROGENITOR, n. s. } Lat. progenitus. A

PROG'EKY. S forefather ; ancestor

m a direct line : progeny is offspring ; race ;

Although these things be already past away by her progenitor's former grants unto these lords, yet I could find a way to remedy a great part thereof.

Spenser's State of Ireland.

The sons of God have God's own natural Son as a second Adam from heaven, whose race and progeny they are by spiritual and heavenly birth.

Hooker.

Like true subjects, sons of your progenitors, Go chearfully together. Shakspeare.

Not me begotten of a shepherd's swain, But issued from the progeny of kings. Id.

Oh ! admirable temperance, worthy the progenitor of him, in whose

lips or heart was no guile.

Bp. Hall

All generations then had hither come, From all the ends of the earth, to celebrate And reverence thee, their great progenitor.

Milton.

By promise he receives Gift to his progeny of all that land. Id.

Thus shall we live in perfect bliss, and see, Deathless ourselves, a num'rous progeny.

Dryden.

Power by right of fatherhood is not possible in any one, otherwise than as Adam's heir, or as progenitor over his own descendants. Locke.

The principal actors in Milton's poems-are not only our progenitors, but representatives. Addison.

We are the more pleased to behold the throne surrounded by a numerous progeny, when we consider the virtues of those from whom they descend..

Id. Freeholder.

PROGNOSTIC, adj. &ra.s.-\ Fr. prognm-PROGNOS'TICABLE, adj. I tique; Gr.

PROGNOSTICATE, v. a. \ irpofvoHtTiKOQ.

PROGNOSTICATION, n. s. i Foretelling or PROGNOS'TICATOR. j foreshowing ;

applred particularly to foreshowing health or disease : a prediction or token, and (gallicism) the skill of foretelling diseases : prognosticable is such as may be foreshown or fore-known : prognosticate, to foretel ; foreshow : prognostication, the act of doing so, or the token, sentence, or determination given : prognosticator he who gives it forth.

He bid him farewell, arming himself in a black armour, as a badge or prognostication of his mind.

Sidnfy.

If an oily palm be not a fruitful prognostication I cannot scratch mine ear.

Shakspeare. Antony and Cleopatra.

He had now outlived the day which his tutor Sandford had prognosticated upon his nativity he would not outlive. Clarendon.

The causes of this inundation cannot be regular. and therefore their effects not prognosticate like eclipses. Browne's Vulgar Erroim.

Unskilled in schemes by planets to foresho\v,

I neither will, nor can prognosticate,

To the young gaping heir, his father's fate.

DruJen.

This theory of the earth begins to be a kind or prophecy or prognostication of things to come, as it hath been hitherto an history of things past.

Burnet.

Whatsoever you are or shall be, has been but an easy prognostic from what you were. South.

There is nothing so inconsiderable, which may not appear dreadful to imagination, that is filled with omens and prognostics. Addison.

That astrologer made his almanack give a tolerable account of the weather by a direct inversion o'"

FR progr’es ; La- \ tin progressus. I Course ; passage ; [procession ; ad- \ vancement ; im-J provement : to

the common prognosticate⁂, to let his beliet run counter to reports. Government of tlie Tongue.

Hippocrates’s prognostic is generally true, that tl is very hard to resolve a small apoplexy.

Arbuthnot. Careful observers By sure prognostics may foretel a shower.

Swift.

PROG’RESS, n. s. & v. n. -

PROGRES’SION, n. s.

PROGRES’SIONAL, adj.

PROGRESSIVE,

PROGRES’SIVELY, adv.

PROGRES’SIVENESS, n. s.

pass ; move forward : progression and progressiveness are synonymous with progress as a noun substantive : progressional, in a state of increase or advance : progressive, advancing; going forward ; the adverb corresponding.

I cannot, by the progress of the stars, Give guess how near to day.

Sliakspeare. Julius Ccesar. Let me wipe off this honourable dew, Tkat silverly doth progress on thy cheeks.

Shaksprare.

He hath framed a letter, which accidentally, or by the way of progression, hath miscarried. Id.

Out of Ethiopia beyond Egypt has been a strange progrest for ten hundred thousand men. Raleigh.

Princes, if they use ambitious men, should handle it so as they may be

still progressive, and not retro-gade. Bacon.

He gave order that there should be nothing in his journey like unto a warlike march, but rather like unto the progress of a king in full peace. Id.

Solon the wise his progress never ceased, But still his learning with his days increased.

Denham.

From Egypt arts their progress made to Greece, Wrapt in the fable of the golden fleece. Id.

The morn begins Her rosy progress smiling. Milton.

Their course

Progressive, retrograde, or standing still. Id. Those worthies, who endeavour the advancement of learning are likely to find a clearer progression, when so many rubs are levelled. Browne.

They maintain their accomplished ends, and relapse not again into their progressional imperfections.

Id.

In progressive motion, the arms and legs move successively ; but, in natation, both together.

Id. Vulgar Erroun.

The reason why they fall in that order, from the greatest epacts progressively to the least, is, because the greatest epacts denote a greater distance of the moon before the sun, and consequently a nearer approach to her conjunction. Holder.

It is impossible the mind should ever be stopped in its progress in this space. Locke.

In philosophical enquiries, the order of nature should govern, which in all progression is to go from the place one is then in, to that which lies next to it.

Id.

The progressive motion of this animal is made not by walking, but by leaping. Ray on the Creation.

Whosoever understands the progress and revolutions of nature, will see that neither the present form of the earth, nor its first form, were permanent and immutable. Eurnet.

O may I live to hail the day,

When the glad nation shall survey

Their sov'reign, through his wise command,

Passing in progress o'er the land. Addison.

Ere the progressive course of restless age Perform three, thousand times its annual stage, May not our power and learning be supprest, And arts and empire learn to travel west ? Prior.

The squares of the diameters of these rings, made by any prismatic color, were in arithmetical progression. Newton.

The Sylphs behold it kindling as it flies, And pleased pursue its progress through the skies.

Pope.

Perhaps I judge hastily, there being several, in whose writings I have made very little progress.

Swift's Miscellanies.

You perhaps have made no progress in the most important Christian virtues ; you have scarce gone half way in humility and charity. Law.

PROGRESSION, in mathematics, is either arithmetical or geometrical.

PROGRESSION, ARITHMETICAL, or CONTINUED ARITHMETIC PROPORTION, is, where the terms do increase and decrease by equal differences, and is called arithmetical progression :

Thus < 2' J, 6, 8, 10, &c. increasing) b b differenCe 2. MO, 8, 6, 4, 2, &c. decreasing $ '

PROGRESSION, GEOMETRICAL, or CONTINUED GEOMETRIC

PROPORTION, is when the terms do increase or decrease by equal ratios : thus,

2, 4, 8, 16, 32, 64, increasing 1 , continual *multiPlicaUon* bv 2

64,32,16, 8, 4, 2, decreasing } ** al * division

PROHIB'IT, v. a. } Fr. prohiber; Lat.

PROHIBITION, n. s. > prohibeo. To forbid ;

PUOHIB'ITORY, adj. J interdict ; hinder ; debar : the noun substantive and adjective corresponding.

She would not let them know of his close lying in that prohibited place, because they would be offended.

Sidney.

The weightiest, which it did command them, are to us in the gospel prohibited. Hooker.

Might there not be some other mystery in this vrohibition, tnan they think of! Id.

'Gainst self-slaughter There is a prohibition so divine, That cravens my weak hand.

Sbakspeare. Cymbeline.

He bestowed the liberal choice of all things, with one only prohibition, to try his obedience.

Raleigh.

Moral law is twofold ; simply moral, or moral only by some external constitution, or imposition of God. Divine law, simply moral, commandeth or prohibiteth actions, good or evil, in respect of their inward nature and quality. White.

Let us not think hard One easy prohibition, who enjoy Free leave so large to all things else. Milton.

Gates of burning adamant Barred over us, prohibit all egress. Id.

The law of God in the ten commandments consists mostly of prohibitions ; thou shall not do such a thing. Tillotson.

A prphihition will lie on this statute, notwithstanding tiie penalty annexed ; because it has words prohibitory, as well as a penalty annexed. Ayltff'e.

PROJ ECT', v. a., v. n. & n. s. ~\ Fr. projeter ; PROJEC'TILE, n. s. & adj. ˆLat. projicio,

PROJECTION, n.s. iprojecttts. To

PROJEC'TOR, n. $. J throw or cast

out ; cast forward ; exhibit as in the manner of an image on a mirror ; form in the mind ; contrive ; scheme : a scheme ; design ; contrivance : a projectile is a body put into motion : as an adjective it means impelled forward : projection is the act of shooting forwards; plan; scheme; crisis of a chemical operation : projector, one who forms schemes or designs; a mere schemer. A little quantity of the medicine in the projection will turn a sea of the baser metal into gold by multiplying. Bacon.

It ceases to be counsel, to compel men to assent to whatever tumultuary patrons shall project.

King Charles. What sit we then projecting peace and war 1

Milton.

If the electric be held unto the light, many particles will be discharged from it, which motion is performed by the breath of the effluvium issuing with agility ; for, as the electric cooleth, the projection of the atoms ceaseth. Browne.

Diffusive of themselves where e'er they pass, They make that warmth in others they expect ;

Their valour works like bodies on a glass, And does its image on their men project.

Dry den.

Chymists, and other projectors, propose to themselves things utterly impracticable. L' Estrange.

What desire, by which nature projects its own pleasure or preservation, can be gratified by another man's personal pursuit of his own vice1? South.

It is a discovering the longitude, and deserves a much higher name than that of a project. Additon.

The following comes from a projector, a correspondent as diverting as a traveller; his subject having the same grace of novelty to recommend it.

Id.

In the various projects of happiness, devised by human reason, there appeared inconsistencies not to be reconciled. Rogers.

Among all the projectors in this attempt, none have met with so general a success as they who ap-ply themselves to soften the rigour of the precept.

Id.

Good blood, and a due projectile motion or circulation, are necessary to convert the aliment into laudable juices. Arbuthnot.

PrnjecMes would for ever move on in the same right line, did not the air, their own gravity, or the ruggedness of the plane stop their motion.

Cheyne't Philosophical Principles. The ascending villas Project long shadows o'er the crystal tide.

Pope. Astrologers that future fates foreshow,

Projectors, quacks, and lawyers not a few. Id.

If we had a plan of the naked lines of longitude and latitude, projected on the meridian, a learner might more speedily advance himself in the knowledge of geography. Watts.

For the bulk of the learners of astronomy, that projection of the stars is best, which includes in it all the stars in our horizon, reaching to the 38| degree of the southern latitude. Id.

PROJECTILES.

PROJECTILES is a term under which has been comprehended that branch of mechanical philosophy which treats of the motion of bodies projected in any way from the surface of the earth, and influenced by the action of gravity. The principal application of this science in modern times, particularly in Europe, has been to gunnery, an art totally unknown to the ancients ; yet they were far from being ignorant of other branches of this science. Machines were known among the Greeks and Romans by the names of Ballista, Catapulta, 6cc., which produced effects by the elastic action of a strongly twisted cordage, and formed of tough animal substances, hardly less terrible than the artillery of the moderns; and the various tremendous engines of this kind, invented by the celebrated Archimedes, show to what considerable perfection the direction of projectiles had then been brought. .See ARCHIMEDES and ARTILLERY. Such instruments continued in use down to the twelfth and thirteenth centuries, and the use of bows still longer ; nor were they totally laid aside till they were superseded by the use of gunpowder and the modern ordnance.

The first application of gunpowder to military affairs was “made, as we have shown in the article just referred to, early in the fourteenth century : the first pieces of artillery being charged ˆith gunpowder and stone bullets of a prodi-

gious size. Thus, when Mahomet II. besieged Constantinople in 1543, he battered the walls with stones of this kind, and with pieces of the calibre of 1200lbs. ; which could not be fired more than four times a day. It was, however, soon discovered that iron bullets, of much less weight, would be more efficacious if impelled by quantities of stronger

powder. This occasioned an alteration in the matter and form of the cannon, which were now cast of brass. These were lighter and more manageable than the for-mer, and at the same time stronger in proportion to their bore.

By these means powder compounded in the manner now practised over all Europe came first in use. But the change of the proportion of materials was not the only improvement. The method of graining was of great advantage. The additional strength which the grained pow-der was found to acquire, from the free passage of the air between the grains, occasioned the meal powder to be entirely laid aside.

For the last 250 years the formation of can-non has been little improved ; the best pieces of modern artillery differing little in their proportions from those used in the time of Charles V. Indeed lighter and shorter pieces have been oftet. proposed and essayed; but, though they have advantages in particular cases, yet it seems now to be agreed that they are altogether insufficient

for general service. On the whole, however, small pieces of artillery have been brought into use : thus the battering pieces now approved are the demi-cannon of former times ; it being found that their stroke, though less violent than that of a larger piece, is yet sufficiently adapted to the strength of the usual profiles of fortification ; and that the facility of their carnage and management, and the ammunition they spare, give them great advantages beyond the whole cannon formerly employed. The method of making a breach, by first cutting off the whole wall as low as possible before its upper part is attempted to be beaten down, seems also to be a considerable modern improvement. But the most important advance in this art is the method of firing with small quantities of powder, and elevating the piece so that the bullet may just go clear of the parapet of the enemy, and drop into his works. By these means the bullet, coming to the ground at a small angle, and with a small velocity, does not bury itself, but bounds or rolls along in the direction in which it was fired : and therefore, if the piece be placed in a line with the battery it is

intended to silence, or the front it is to sweep, each shot rakes the whole length of that battery or front ; and has thereby a much greater chance of disabling the defendants, and dismounting their cannon. This method was invented by Vauban, and was by him styled Bat-ter ie 4 Ricochet. It was first practised in 1692 at the siege of Aeth. Something similar was practised by the king of Prussia at the battle of Rosbach in 1757.

PART I. THEORY OF PROJECTILES.

SECT. I. ††† OF THE EFFECTS OF GRAVITY ON PROJECTED BODIES.

It has been demonstrated that a body projected in the usual way from the surface of the earth in the atmosphere, must describe a conic section, having the centre of the earth in one focus, and that it will describe round that focus areas proportional to the times : it follows that, if the velocity of projection exceeds 36,700 feet in a second, the body (if not resisted by the air) would describe a hyperbola ; if it be just 36,700 it would describe a parabola; and, if it he less, it would describe an ellipsis. If projected directly upwards, in the first case, it would never return, but proceed for ever ; its velocity continually diminishing, but never becoming less than an assignable portion of the excess of the initial velocity above 36,700 feet in a second ; in the second case it would never return, its velocity would diminish without end, but never be extinguished. In the third case, it would proceed till its velocity was reduced to an assignable portion of the difference between 36700 and its initial velocity ; and would then return, regaining its velocity by the same degrees, and in the same places as it lost it. These are necessary consequences of a gravity directed to the centre of the earth, and inversely proportional to the square of the distance. But, in the greatest projections that we are able to make, the gravita-tions are so nearly equal, and in directions so

nearly parallel, that it would be ridiculous affectation to pay any regard to the deviations from equality and parallelism. A bullet rising a mile above the surface of the earth loses only ˆso ††f its weight, and a horizontal range of four miles only four of deviation from parallelism. Gravitation may be therefore assumed as equal and parallel. The errors arising from this assump-‘ tion are quite insensible in all the uses which can be made of this theory ; which was the first fruits of mathematical philosophy, and the effort of the genius of the great Galileo.

Gravity is a constant or uniform accelerating or retarding force, according as it produces the descent, or retards the ascent, of a body : and, all other forces being ascertained by the accelerations which they produce, they are conveniently measured by comparing their accelerations with the acceleration of gravity. This therefore has been assumed by all the latest and best writers on mechanical philosophy, as the unit by which every other force is measured. It gives a perfectly distinct notion of the force which retains the moon in its orbit, to say it is the 3600th part of the weight of the moon at the surface of the earth : i. e. if a bullet were here weighed by a spring steelyard, and pulled it out to the mark 3600, if it were then taken to the distance of the moon, it would pull it out only to the mark 1. This assertion is made from observing that a body at the distance of the moon falls from that distance -ˆ part of sixteen feet in a second. Forces therefore which are imperceptible are not compared, but the accelerations, which are their indications, effects, and measures. For this rea-son philosophers have been anxious to determine with precision the fall of heavy bodies, to have an exact value of the accelerating power of terrestrial gravity. This measure may be taken in two ways ; by taking the space through which the heavy body falls in a second ; orthe velocity which it acquires in consequence of gravity having acted on it during a second. The last is the proper measure; for the last is the immediate effect on the body. The action of gravity has changed the state of the body, by giving it a determination to motion downward : this both points out the kind and the degree or intensity of the force of gravity. The space described in a second by falling is not an invariable measure; for, in the successive seconds, the body falls through 16, 48, 80, 112, &c., feet, but the changes of the body's state in each second is the same. At the beginning it had no determination to move with any appreciable velocity ; at the end of the first second it had a determination by which it would have gone on for ever (had no subsequent force acted on it) at the rate of thirty-two feet per second. At the end of the second second, it had a determination by which it would have moved for ever, at the rate of sixty-four feet per second. At the end of the third second, it had a determination by which it would have moved for ever, at the rate of ninety-six feet per second, &c. &c. The difference of these determinations is a determination to the rate of thirty-two feet per second. This is therefore constant, and the indication and proper measure of the constant or invariably

PROJECTILES.

force of gravity. The space fallen through in the first second is of use only as it is one-half of the measure of this determination ; and, as halves have the proportion of their wholes, different accelerating forces may be safely affirmed to be in the proportion of the spaces through which they uniformly impel bodies in the same time. But we must always recollect that this is but one-half of the true measure of the accelerating force. Mathematicians of the first rank have committed great mistakes by not attending to this ; and it is necessary to notice it here, because cases will occur, in the prosecution of this subject, where we shall be very apt to confound our reasonings by a confusion in the use of those measures.

SECT. II. ††† OF THE MEASURE OF THE ACCELERATIVE POWER OF GRAVITY. The accurate measure of the accelerative power of gravity is the fall 16ˆ feet, if measured by the space, or the velocity of 32g feet per second, if the velocity be taken. It will greatly facilitate calculation, and will be sufficiently exact for every purpose, to take 16 and 32, supposing that a body falls sixteen feet in a second, and acquires the velocity of thirty-two feet per second. Then, because the heights are as the squares of the times, and as the squares of the acquited velocities, a body will fall one foot in one fourth of a second, and will acquire the velocity of eight feet per second. Let h express the height in feet, and call it the producing height; v the velocity in feet per second, and call it the produced velocity, the velocity due; and t the time in seconds. ††† The following formulae, which are of easy recollection, will serve, without tables, to answer all questions relative to projectiles. I. v ††† 8 V A, ††† 8 X 4 t, =. 32 t

III.

A = = 4 t

o

IV. A= ††† , = 16 *2

To give some examples of their use, let it be required,

1. To find the time of falling through 256 feet.

Here h ••• 256, ,/ 256 ••• 16, and ••• = 4. Answer 4”.

2. To find the velocity acquired by falling four seconds, t = 4 •••
32 X 4 = 128 feet per second.

3. To find the velocity acquired by falling 625 feet, h = 625 ••• *J
h = 25 ••• 8 ^/ h = 200 feet per second.

4. To find the height to which a body will rise when projected with the velocity of fifty-six feet per second, or the height through which a body must fall to acquire this velocity.

h ••• 7* = A, = 49 feet.

= 49 feet.

or 56a = 3136

5. Suppose a body projected directly downwards with the velocity of ten feet per second ; what will be its velocity after four seconds? In four seconds it will have acquired, by the action of gravity, the velocity of 4 x 32, or 128 feet,

and therefore its whole velocity will be 138 feet per second.

6. To find how far it will have moved, compound its motion of projection, which will be forty feet in four seconds, with the motion which gravity alone would have given it in that time, which is 256 feet ; and the whole motion will be 296 feet.

7. Suppose the body projected as already mentioned, and that it is required to determine the time it will take to go 296 feet downwards, and the velocity it will have acquired. Find the height x, through which it must fall to acquire the velocity of projection, ten feet, and the time y of falling from this height. Then find the time z of falling through the height 296 + x, and the velocity v acquired by this fall. The time of describing the 296 feet will be z ††† y, and -v is the velocity required. From such examples it is easy to see the way of answering every question of the kind.

Writers on the higher “parts of mechanics al-ways compute the actions of other accelerating and retarding forces, by comparing them with the acceleration of gravity ; and, to render their expressions more general, use a symbol, such as g for gravity, leaving the reader to convert it into numbers. Agreeably to this view, the general formulae will stand thus :

~ h, = gt,

Gravity, or its accelerating power, is estimated in all these equations, as it ought to be, by the change of velocity which it generates in a particle of matter in a unit of time. But many mathematicians, in their investigations of curvilineal and other varied motions, measure it by the deflection which it produces in this time from the tangent of the curve, or by the increment by which the space described in a unit of time exceeds the space described in the preceding unit. This is but

one-half of the increment which gravity would have produced, had the body moved through the whole moment with the acquired addition of velocity. In this sense of the symbol g, the equations stand thus :

II. t=

It is likewise very common to consider the accelerating force of gravity as the unit of com parison. This renders the expressions much more simple. In this way v expresses not the velocity, but the height necessary for acquiring it, and the velocity itself is expressed by ˆ v. To reduce such an expression_of a velocity to numbers, multiply it by J 2g, or by 2 */ g according as g is the generated velocity, or the space fallen through in the unit of time. This will suffice for the perpendicular ascents or descents of heavy bodies ; and we proceed to con-

sider their motions when projected obliquely. The circumstance which renders this an interesting subject is, that the flight of cannon shot and shells are instances of such motion, and the art of gunnery must in a great measure depend on

Fig. 1.

this doctrine. Let a body B (fig. 1) be projected in any direction, B C, not perpendicular to the horizon, and with any velocity. Let A B be the height producing this Telocity ; that is, let the velocity be that which a heavy body would acquire by falling freely through A B. It is required to determine the path of the body, and all the circumstances

of its motion in this path ?

1. By the continual action of gravity, the body will be continually deflected from the line BC, and will describe a curve line B V G, concave towards the earth.

2. This curve line is

a parabola, of which the vertical line ABE is diameter, B the vertex of this diameter, and B C a tangent in B. Through any two points, V G, of the curve draw VC, GH, parallel to AB, meeting B C in C and H, and draw V E, G K, parallel to BC, meeting AB in E, K. It follows, from the composition of motions, that the body would arrive at the points V, G, of the curve in the same time that it would have uniformly described B C, B H, with the velocity of projection ; or that it would have fallen through B E, BK, with a motion uniformly accelerated by gravity; therefore the times of describing BC, BH, uniformly, are the same with the time of falling through BE, B R. But, because the mo-tion along B H is uniform, B C is to B H as the time of describing B C to the time of describing BH, which we may express thus, BC : BH = T, BC :T, BH, = T, BE : T, BK. But, because the motion along B K is uniformly accelerated, we have B E : B K = T2, B E : T2, BK, = BC2 : BH4, = EV2 : KG2; therefore the curve BVG is such, that the abscissae BE, BK, are as the squares of the corresponding ordinates EV, KG; that is, the curve BVG is a parabola, and B C, parallel to the ordinates, is a tangent in the point B.

3. If the horizontal line A D d be drawn through the point A, it is the directrix of the parabola. Let B E be taken equal to A B. The time of falling through B E is equal to the time of falling through AB; but BC is described with the Telocity acquired by falling through AB: and therefore by number 4 of perpendicular descents, B C is double of A B, and E V is double of B E : therefore, E V2 = 4 B E2, = 4 BE x AB, = BE x 4AB, and 4AB is the parameter or latus rectum of the parabola BVG, and, AB being one fourth of the parameter, A D is the directrix.

4. The times of describing the different arches B V, V G, of the parabola are as the portions B C, B H, of the tangent, or as the portions AD, A d, of the directrix, intercepted by the same vertical lines AB, C V, HG; for the times of describing B V, B V G, are the same with those of describing the corresponding parts B C, B H, of the tangent, and are proportional to these parts, because the motion along B H is uniform ; and B C, B H, are proportional to A D, A d. Therefore the motion estimated horizontally is uniform.

5. The velocity in any point G of the curve is the same with that which a heavy body would acquire by falling from the directrix along d G.

Draw the tangent GT, cutting the vertical AB in T ; take the points a, f, equidistant from A and a, and extremely near them, and draw the verticles a b,fg ; let the points a,f, continually approach A and d, and ultimately coincide with them. B b will therefore ultimately be to g G in the ratio of the velocity at B to the velocity at G (for the portions of the tangent ultimately coincide with the portions of the curve? and are described in equal times) ; but B b is to G g as BH to TG : therefore the velocity at B is to that at G as BH to TG. But, by the properties of the parabola, B H2 is to T G2 as AB to d G ; and A B is to d G as the square of the velocity acquired by falling through A B to the square of the velocity acquired by falling through d G ; and the velocity in BH, or in the point B of the parabola, is the velocity acquired by falling along AB; therefore the velocity in TG, or in the point G of the parabola, is the velocity acquired by falling along d G.

The preceding propositions contain all the theory of the motion of projectiles in vacuo, or independent on the resistance of the air; and being a very easy and neat exhibition of mathematical philosophy, and connected with a very interesting practice, they have been much commented on, and have furnished matter for many splendid volumes. But the resistance of the air occasions such a prodigious diminution of mo-tion in the great velocities of military projectiles, that this parabolic theory, as it is called, is of little practical use. A musket ball, discharged with the ordinary allotment of powder, issues from the piece with the velocity of 1 670 feet per second : this velocity would be acquired by falling from the height of eight miles. If the piece be elevated to an angle of 45□□, the parabola should be of such extent that it would reach sixteen miles on the horizontal plain; whereas it does not reach much above half a mile-. Similar deficiencies are observed in the ranges of cannon shot. It is unnecessary, therefore, to enlarge upon this theory.

Facts prove, beyond all doubt, how deficient the parabolic theory is, and how unfit for directing the practice of the artillerist. A very simple consideration is sufficient for rendering this obvious to the most uninstructed. The resistance of the air to a very light body may greatly exceed its weight. Any one will feel this in trying to move a fan very rapidly through the air ; therefore this resistance would occasion a greater deviation from uniform motion than gravity would in that body. Its path, therefore, throueh thˆ

air may differ more from a parabola than a parabola itself deviates from the straight line. For these reasons, we affirm that the voluminous treatises which have been published on this subject are nothing but ingenious amusements for young mathematicians. All that seems possible to do for the practical artillerist is, to multiply judicious experiments on real pieces of ordnance, with the charges that are used in actual service, and to furnish him with tables calculated from such experiments.

SECT. III. ❖❖❖ OF THE CAUSES OF THE DEFICIENCY OF THE PARABOLIC THEORY.

It is, however, the business of the philosopher to enquire into the causes of such a prodigious deviation from a well founded theory ; and, hav-ing discovered them, to ascertain precisely the deviations they occasion. Thus we shall obtain another theory, either in the form of the parabolic theory corrected, or as a subject of independent discussion.

The motion of projectiles being performed in the atmosphere, the air is displaced, or put in motion. Whatever motion it acquires must be taken from the bullet. The motion communicated to the air must be in the proportion of the quantity of air put in motion, and of the velocity communicated to it. If, therefore, the displaced air be always similarly displaced, whatever be the velocity of the bullet, the motion communicated to it, and lost by the bullet, must be proportional to the square of the velocity of the bullet and to the density of the air jointly. Therefore the diminution of its motion must be greater when the motion itself is greater; and in the very great velocity of shot and shells it must be prodigious. From Mr. Robins's experiments it is plain that a globe of four inches and a half in diameter, moving with the velocity of twenty-five feet in a second, sustained a resistance of 315 grains, nearly three-quarters of an ounce. Suppose this ball to move 800 feet in a second, that is, thirty-two times faster, its resistance would be 32 X 32 times three-quarters of an ounce, or 768 ounces, or forty-eight pounds. This is four times the weight of a ball of cast iron of this diameter; and, if the initial velocity had been 1600 feet per second, the resistance would be at least sixteen times the weight of the ball. It is indeed much greater.

So great a resistance, operating constantly and uniformly on the ball, must take away four times as much from its velocity as its gravity would do in the same time. In one second gravity would reduce the velocity 800 to 768, if the ball were projected straight upwards. This resistance of the air would therefore reduce it in one second to 672, if it operated uniformly ; but as the velocity diminishes continually by the resistance, and the resistance diminishes along with the velocity, the real diminution will be somewhat less than 128 feet. We shall, however, find, that in ⬜⬜ne second its velocity will be reduced from 800 to 687. From this instance it is clear that ⬜⬜he resistance of the air must occasion great deviation from parabolic motion.

To judge accurately of its effect, we must consider it as a retarding force, as we consider

gravity. The weight W of a body is the aggre* gate of the action of the force of gravity g on each particle of the body. Suppose the number of equal particles, or the quantity of matter, of a body, to be M, then W is equivalent to g M. In like manner, the resistance R, observed in any experiment, is the aggregate of the action of a retarding force R' on each particle, and is equi—

W

valent to R' M : and as g is equal to ⬜⬜⬜ , so R'

R M

is equal to ⬜⬜⬜ . Let us keep this distinction la

view, by adding the differential mark ' to the let-ter R or r, which expresses the aggregate resistance.

If we thus consider resistance as a retarding force, we can compare it with any other sucu force by means of the retardation which it produces in similar circumstances. We would compare it with gravity by comparing the diminution of velocity which its uniform action produces in a given time with the diminution produced in the same time by gravity. But we have no opportunity of doing this directly ; for, when the resistance of the air diminisnes the velocity of a body, it diminishes it gradually, which occasions a gradual diminution of its own intensity. This is not the case with gravity, which has the same action on a body in motion or at rest. We cannot, therefore, observe the uniform action of the resistance of the air as a retarding force. We

must make the comparison in some other way. We can state them both as dead pressures. A ball may be fitted to the rod of a spring steelyard, and exposed to the impulse of the wind. This will compress the steelyard to the mark 3, for instance. Perhaps the weight of this ball will compress it to the mark 6. Half this weight would compress it to 3. We reckon this equal to the pressure of the air, because they balance the same elasticity of the spring. In this way we can estimate the resistance by weights whose pressures are equal to its pressure ; and we can thus compare it with other resistances, weights, or any other pressures. In fact, we are measuring them by all the elasticity of the spring. This elasticity in its different positions is supposed to have the proportions of the weights which keep it in these positions. Thus we reason from the nature of gravity, no longer considered as a dead pressure, but as a retarding force ; and we apply our conclusions to resistances which exhibit the same pressures, but which we cannot make to act uniformly. This sense of the words must be remembered whenever we speak of resistances in pounds and ounces.

The most convenient and direct way of stating the comparison between the resistance of the air and the accelerating force of gravity, is to take a case in which we know that they are equal. Since the resistance is here assumed as proportional to the square of the velocity, it is evident that the velocity may he so increased that the resistance shall equal or exceed the weight of the body. If a body be already moving downwards with this velocity, it cannot accelerate ; because the accelerating force of gravity is balanced by an equal retarding force of resistance. It follows

from this remark that this velocity is the greatest that a body can acquire by the force of gravity only. Nay, we shall see that it never can completely attain it ; because, as it aproaches to this velocity, the remaining accelerating force decreases faster than the velocity increases. It may therefore be called the limiting or terminal velocity by gravity.

Let a be the height through which a heavy oody must fall, in vacuo, to

acquire its terminal velocity in air. If projected directly upwards with this velocity, it will rise again to this height, and the height is half the space which it would describe uniformly, with this velocity, in the time of its ascent. Therefore, the resistance to this velocity being equal to the weight of the body, it would extinguish this velocity, by its uniform action, in the same time, and after the same distance, that gravity would. Now let g be the velocity which gravity generates or extinguishes during an unit of time, and let u be the terminal velocity of any particular body. The theorems

u* for perpendicular ascents give us g = ###, u

and a being both numbers representing units of space ; therefore, in the present case, we have

u* r' = -### . For the whole resistance r, or r' M,

is supposed equal to the weight, or to g M ;

wa and therefore r is equal to g, = #######- and 2 a =

##*

. There is a consideration which ought to

g

have place here. A body descends in air, not

by the whole of its weight, but by the excess of

its weight above that of the air which it displaces.

It descends by its specific gravity only as a stone

does in water. Suppose a body thirty-two times

heavier than air, it will be buoyed up by a force

equal to ### of its weight ; and, instead of acquir-

ing the velocity of thirty-two feet in a second, it will only acquire a velocity of thirty-one, even though it sustained no resistance from the inertia of the air. Let p be the weight of the body, and ###x that of an equal bulk of air : the accelerative force of relative gravity on each particle will be

g x 1 ; and this relative accelerating force

might be distinguished by another symbol y. But in all cases in which we have any interest,

and particularly in military projectiles, ### is so

small a quantity that it would be pedantic affectation to attend to it. It is much more than compensated when we make g = 32 feet, instead of 32ˆ, which it should be.

Let e be the time of this ascent in opposition to gravity. The same theorems give us e u = 2 a ; and, since the resistance competent to this terminal velocity is equal to gravity, e will also be the time in which it would be extinguished by the uniform action of the resistance ; for which reason we may call it the extinguishing time for this velocity. Let R and E mark the resistance and extinguishing time for the same body moving with the velocity 1.

As the resistances are as the squares of the ve-

locities, and the resistance to the velocity u is ##* 1

-### , R will be = -### . Moreover, the times in 2 a 2 a

which the same velocity will be extinguished by different forces, acting uniformly, are inversely as the forces, and gravity would extinguish the

velocity 1 in the time ### rz (in these measures) to ### , rz ### -. Therefore we have the following

2a

2a

proportion, ††† (= R) : ††† (= g) - _ : 2 a,

and 2 a is equal to E, the time in which the velocity 1 will be extinguished by the uniform ac-tion of the resistance competent to this velocity. The velocity 1 would in mis case be extinguished after a motion uniformly retarded, in which the space described is one-half of what would be uniformly described during the same time with the constant velocity 1. Therefore the space thus described by a motion which begins with the velocity 1, and is uniformly retarded by the resistance competent to this velocity, is equal to the height through which this body must fall in vacuo in order to acquire its terminal velocity in -air.

The following description may render all these circumstances more easily conceived by some readers. The terminal velocity is that where the resistance of the air balances and is equal to the weight of the body. The resistance of the air to any particular body is as the square of the velocity ; therefore let R be the whole resistance to the bo'dy moving with the velocity 1, and r the resistance to its motion with the terminal velocity u ; we must have r ~ R X w2, and this must be zr W, the weight. Therefore, to obtain the terminal velocity, divide the weight by the resistance to the velocity 1, and the quotient is the

square of the terminal velocity, or ††† ††† ††s : and

IX,

this is a very expeditious method of determining it, if R be previously known. Then the com-mon theorems give a, the fall necessary for pro
—

M2

ducing this velocity in vacuo ††† -††† , and the time

0

of the fall ~ ††† zz e, and e u zz 2 a, zz the

space uniformly described with the velocity u during the time of the

fall, or its equal, the time of the extinction by the uniform action of the resistance r ; and, since r extinguishes it in the time e, R which is u3 times smaller will extinguish it in the time u3e, and R will extinguish the velocity 1, which is u times less than u, in the time we, that is, in the time 2 a; and the body moving uniformly during the time 2 ►► ►►► E, with the velocity 1, will describe the space 2 a ; and if the body begin to move with the velocity 1, and be uniformly opposed by the resistance R, it will be brought to rest when it has described the space a ; and the space in which the resistance to the velocity 1 will extinguish that velocity by its uniform action is equal to the height through which that body must fall in vacuo in order to acquire its terminal velocity IP. air. And thus every thing is regulated by the

time E in which the velocity 1 is extinguished by the uniform action of the corresponding resistance, or by 2 a, which is the space uniformly described during this time, with the velocity 1. And E and 2 a must be expressed by the same number. It is a number of units, of time, or of length.

Thus, having ascertained these leading circumstances for a unit of velocity, weight, and bulk, we proceed to deduce the similar circumstances for any other magnitude ; and, to avoid unnecessary complications, we shall always suppose the bodies to be spheres, differing only in diameter and density. First, then, let the velocity be increased in the ratio of 1 to v.

v2 The resistance will now be ►►► , ~ r

“C> rt

The extinguishing time will be►►► , zr e, iz ►►► ►►►

t} 1)y

and e v ►►► 2 a; so that the rule is general, that the space along

which any velocity will be extinguished by the uniform action of the corresponding resistance is equal to the height necessary for communicating the terminal velocity to that body by gravity. Fore v is twice the space through which the body moves while the velocity vis extinguished by the uniform resistance 2dly, Let the diameter increase in the proportion of 1 to d. The aggregate of the resistance changes in the proportion of the surface similarly resisted, that is, in the proportion of 1 to d?. But the quantity of matter, or number of particles among which this resistance is to be distributed, changes in the proportion of \ to d3. Therefore the retarding power of the resistance changes in

1

the proportion of 1 to ••• .

When the diameter

was 1 the resistance to

must now be

2ad

a velocity 1 was ••• . It 2 a

The time in which this

diminished resistance will extinguish the velocity 1 must increase in the proportion of the diminution of force, and must now be EC/, or 2 ad, and the space uniformly described during this time with the initial velocity 1 must be lad; and this must still be twice the height necessary for communicating the terminal velocity w to

this body. We must still have g ••• - ••• - ; therefore w* ••• 2gat/, and w •••=. >

and

••/ 2ga *J~d. But u* = / 2ga. Therefore the terminal velocity w for this body is = u ••/ d; and the height necessary for communicating it is ad. Therefore the terminal velocity varies in the subduplicate ratio of the diameter of the ball, and the fall necessary for producing it varies in the simple ratio of the diameter. The extin-

•••p j guishing time for the velocity v must now be ••• '•••

v

3dly, If the density of the ball be '. icreased in the proportion of 1 to / ••, the number i ; -tides among which the resistance is to be distributed is increased in the same proportion, and therefore the retarding force of the resistance is equally diminished ; and, if the density of the air is in-VOL. XVIII.

creased in the proportion of i to n, the retarding force of the resistance increases in the same proportion : hence we easily deduce these general expressions.

The terminal velocity ••• ••

d••• n

\S

2gad.

The producing fall in vacuo r: a d -.

n The retarding power of resistance to any velo-

*

city = r = - ××× -; ××× 2adm

n

The extinguishing time for any velocity v = Edm

vn

Thus we see that the chief circumstances are regulated by the terminal velocity, or are conveniently referred to it.

To communicate distinct ideas, and render the deductions from these premises perspicuous, it will be proper to assume some convenient units, by which all these qualities may be measured ; and, as this subject is chiefly interesting in the case of military projectiles, we shall adapt our units to this purpose. Therefore let a second be the unit of time, a foot the unit of space and velocity, an inch the unit of diameter of a ball or shell, and a pound avoirdupois the unit of pressure, whether of weight or of resistance : therefore g is thirty-two feet. The great difficulty is to procure an absolute measure of r, or u, or a; any one of these will determine the others.

Sir Isaac Newton attempted to determine r by theory, and employed a great part of the second book of the Principia in demonstrating, that the resistance to a sphere moving with any velocity is to the force which would generate or destroy its whole motion in the time that it would uniformly move over eight-thirds of its diameter with this velocity as the density of the air is to the density of the sphere. This is equivalent to demonstrating, that the resistance of the air to a sphere, moving through it with a velocity, is equal to half the weight of a column of air hav-ing a great circle of the sphere for its base, and for its altitude the height from which a body must fall in vacuo to acquire this velocity. This appears from Newton's demonstration ; for, let the specific gravity of the air be to that of the ball as 1 to m ; then, because the times in which the same velocity will be extinguished by the uniform action of different forces are inversely as the forces, the resistance to this velocity would extinguish it in the time of describing eight-thirds md, d being the diameter of the ball. Now 1 is to m as the

weight of the displaced air to the weight of the ball, or as two-thirds of the diameter of the ball to the length of a column of air of equal weight. Call this length a ; a is therefore equal to two-thirds m d. Suppose the ball to fall from the height a in the time t, and acquire the velocity u. If it moved uniformly with this velocity, during this time, it would describe a space = 2 a, or four-thirds m d. Now its weight would extinguish this velocity, or destroy

this motion, in the same time, that is, in the time of describing four-thirds md; but the resistance of the air would do this in the time of describing eight-thirds m d ; that is, in twice the time.. The resistance therefore is equal to half the weight of the ball, or to half the weight of the column of air whose height is the heighf producing the velocity. But the resistance to different velocities are as the squares of the velocities ; and therefore as their producing heights, and, in general, the resistance of the air to a sphere moving with any velocity, is equal to the half weight of a co-lumn of air of equal section, and whose altitude is the height producing the velocity.

The result of this investigation has been acquiesced in by all Sir Isaac Newton's commentators. Many faults have indeed been found with his reasoning, and even with his principles ; and it must be acknowledged that although this investigation is by far the most ingenious of any in the Principia, and sets his acuteness and address in the most conspicuous light, his reasoning is liable to serious objections, which his most ingenious commentators have not completely removed. Yet the conclusion has been acquiesced in, but as if derived from other principles, or by more logical reasoning. The reasonings or assumptions, however, of these mathematicians are no better than Newton's ; and all the causes of deviation from the duplicate ratio of the velocities, and the causes of increased resistance, which the latter authors have valued themselves for discovering and introducing into their investigations, were actually pointed out by Sir Isaac Newton, but purposely omitted by him to facilitate the discussion in fe difficillima (See Schol. prop. 37. b. 2).

The weight of a cubic foot of water is 62J Ibs. and the medium density of the air js ˆ of water; therefore' let a be the height producing the velocity (in feet), and d the diameter of the ball (in inches), and TT the periphery of a circle whose diameter is 1 ; the resistance of the air will be =

5►►i !L a

340 X 7 X 144 X 2 X

-.i very nearly, =

ad9

pounds,

4928J X 64' ' ~~ 315417 pounds.

Example. ►►► A ball of cast iron weighing twelve pounds is four inches and a fialf in diameter. Suppose this ball to move at the rate'of 25-ˆ feet in a se-cond. The height which will produce this velocity in a falling body is 9| feet. The area of its great circle is 0-1 1044 feet, or ^^5 of one foot. Suppose water to be 840 times heavier than air, the weight of the air incumbent on this great circle, and 9J feet high, is 0-081151 Ibs. half of this is 0 0405755 or ˆjRfa, or nearly & of a pourrd. This should be the resistance of the air to this motion of the ball.

It is proper, in all matters of physical discussion, to confront every theoretical conclusion with experiment. This is particularly necessary in the present instance, because the theory on which this proposition is founded is extremely uncertain. Newton speaks of it with the most cautious diffidence, and secures the justness of the conclusions by the conditions which he as-

sumes in his investigation. He describes witn the greatest precision the state of the fluid in which the body must move, so as that the

demonstrations may be strict, and leaves it to others to pronounce whether this is the real constitution of our atmosphere It must be granted that it is not; and that many other suppositions have been introduced by his commentators and followers to suit his investigation (for little or nothing has been added to it) to the circumstances of the case.

Sir Isaac Newton himself, therefore, attempted to compare his proportions with experiment. Some were made by dropping balls from the dome of St. Paul's cathedral : and all these showed as great a coincidence with his theory as they did with each other : but the irregularities were too great to allow him to say with precision what was the resistance. It appeared' to follow the proportion of the squares of the velocities with sufficient exactness ; and, though he could not say that the resistance was equal to the weight of the column of air having the height necessary for communicating the velocity, it was always equal to a determinate part of it ; and might be stated = na, n being a number to be fixed by numerous experiments. One great source of uncertainty in his experiments seems to have escaped his observation : the air in that dome is almost always in a state of motion. In summei there is a very sensible current of air downwards, and frequently in winter it is upwards : and this current bears a very great proportion to the velocity of the descents. Sir Isaac takes no notice of this. He made another set of experiments with pendulums; and pointed out some very curious and unexpected circumstances of their motions in a resisting medium. There is hardly any part of his noble work in which his address, his patience, and his astonishing penetration, ap-pear in greater lustre. It requires the utmost intenseness of thought to follow him in these disquisitions. Their results were much more uniform, and confirmed his general theory; and it has been acquiesced in by the first mathematicians of Europe.

But the deductions from this theory were so inconsistent with the observed motions of military projectiles, when the velocities are prodigious, that no application could be made which could be of any service for determining the path and motion of cannon shot and bombs ; and although John Bernoulli gave, in 1718, a most elegant determination of the trajectory and mo-tion of a body projected in a fluid which resists in the duplicate ratio of the velocities (a problem which even Newton did not attempt), it has remained a dead letter. Mr. Benjamin Robins was the first who suspected the trr.e cause of the imperfection of the usually received theories ; and in 1737 he published a small tract, in which he showed clearly that even the Newtonian theory of resistance must cause a cannon ball, discharged with a full allotment of powder, to deviate farther from the parabola,

in which it would move in vacuo, than the parabola deviates from a straight line. But he farther asserted, from good reasoning, that in such great velocities the resistance must be much greater than this

theory assigns; because, besides the resistance arising from the inertia of the air which is put in motion by the ball, there must be a resistance arising from a condensation of the air on the anterior surface of the ball, and a rarefaction be-hind it : and there must be a third resistance, arising from the statical pressure of the air on its anterior part, when the motion is so swift that there is a vacuum behind. Even these causes of disagreement with the theory had been foreseen and mentioned by Newton (see the Scholium to prop. 37, Book II. Princip.) ; but the subject seems to have been little attended to. Some authors, however, such as St. Remy, Antonini, and Le Blond, have given most valuable collections of experiments, ready for the use of the profound mathematician.

SECT. IV. ××× OBSERVATIONS BY MR. ROBINS, ON

VELOCITY AND RESISTANCE. Two or three years after the appearance of his first publication, Mr. Robins discovered that ingenious method of measuring the velocities of military projectiles which has handed down his name to posterity with great honor : and, having ascertained these velocities, he discovered the prodigious resistance of the air, by observing the diminution of velocity which it occasioned. This made him anxious to examine what was the real resistance to any velocity whatever, in order to ascertain what was the law of its variation ; and he was equally fortunate in this attempt likewise. From his Mathematical Works, vol. i. p. 205, it appears that a sphere of four inches and a half in diameter, moving at the rate of twenty-five feet one-fifth in a second, sustained a resistance of 0-04914 Ib. or ^^ of a pound. This is a greater resistance than that of the Newtonian theory, which gave ig$^jgin the proportion of 1000 to 1211, or very nearly in the proportion of five to six in small numbers. And we may adopt as *a rule, in all moderate velocities, that the resistance to a sphere is equal to $|L of the weight of a column of air

having the great circle of the sphere for its base, and for its altitude the height through which a heavy body must fall in vacuo to acquire the velocity of projection. The importance of this experiment is great, because the ball is precisely the size of a twelve pound shot of cast iron ; and its accuracy may be depended on. There is but one source of error. The whirling motion must have occasioned some whirl in the air, which would continue till the ball again passed through the same point of its revolution. The resistance observed is therefore probably somewhat less than the true resistance to the velocity of twenty-five feet one-fifth, because it was exerted in a relative velocity which was kss than this, and is, in fact, the resistance competent to this relative and smaller velocity. Accordingly, Mr. Smeaton places great confidence in the observations of Mr. Rouse of Leicestershire, who measured the resistance ny the effect of the wind on a plane properly exposed to it. He does not tell us how the velocity of the wind was ascertained ; but our opinion of his penetration and experience leads us to believe that this point was well determined The resistance observed bv Mr. Rouse exceeds that

resulting from Mr. Robins's experiments nearly in the proportion of seven to ten. Chev. de Borda made experiments similar to those of Mr. Robins, and his results exceeded those of Robins in the proportion of five to six.

We must content ourselves, however, at present with the experimental measure mentioned above. To apply to our formulae, therefore, we reduce this experiment, which was made on a ball of four inches and a half diameter, moving with the velocity of twenty-five feet and one-fifth per second, to what would be the resistance to a ball of one inch, having the velocity a foot. ###,,. .### . ### 0-04919

This will give R = 4.52 > < 25.2i. being diminished in the duplicate ratio of the diameter and velocity. This gives R = . 0-00000381973 pound,

3*81973

or looooo' of a pound > The ##sarithm is >

4-58204. The resistance here determined is the same whatever

substance the ball be of; but the retardation occasioned by it will depend on the proportion of the resistance to the vis insita of the ball; that is, to its quantity of motion. This in similar velocities and diameters is as the density of the ball. The balls used in military service are of cast iron, or of lead, whose specific gravities are 7‘207 and 1 1-37 nearly, water being I. There is considerable variety in cast iron, and ttiis density is about the medium. These data will give us,

For Iron. For Lead. W, or weight of a bail one

inch in diameter . . Ibs. 0-13648

Log. of W …

E’

Log. of E …. M, or terminal velocity

Log-u

□□, or producing height

9-13509

3-04790

189,03

2-27653

558,3

0-21533 9-33310 1761 ‘,6 3-24591 237-43 2-37553 880,8

These numbers are of frequent use in all questions on this subject. Mr. Robins gives an expeditious rule for readily finding a, which he calls F, by which it is made 900 feet for a cast-iron ball of an inch diameter.

But no theory of resistance which he professes to use will make this height necessary for producing the terminal velocity. His F, therefore, is an empirical quantity, analogous indeed to the producing height, but accommodated to his theory of the trajectory of cannon-shct, which he promised to publish, but did not live to execute. We need not be very anxious about this ; for all our quantities change in the same proportion with R, and need only a correction by a multiplier or divisor, when R shall be accurately established.

The use of these formulae may be illustrated by an example or two.

Ex. 1. To find the resistance to a twenty-four pouno. ball moving with the velocity of 1670 feet in a second, which is nearly the velocity communicated by sixteen pounds of powder. The diameter is c603 inches.

Log. R … . + 4-58204 Log. cP … . -I-1-49674 Log. 1670J . + 6-44548

Log. 3344 Ibs. = r

2-52426

L2

But it is found, by unequivocal experiments on the retardation of such a motion, that it is 504 Ibs. This is owing to the above causes, the additional resistance to great velocities, arising from the condensation of the air, and from its pressure into the vacuum left by the ball.

Ex. 2. Required the terminal velocity of this ball?

Log.R Log. (P

+ 4-58204 + 1-49674

Log. resist, to veloc. 1 . . 6-07878 ••• a Log. W .... 1-38021 = 6

Diff. of a and b, = log. u* , 5-30143 Log. 4474 = u . 2-65071

We proceed to consider these motions through their whole course : and we shall first consider them as affected by the resistance only ; then we shall consider the perpendicular ascents and descents of heavy bodies through the air; and, lastly, their motion in a curvilineal trajectory, when projected obliquely. This must be done by the help of the abstruser parts of fluxionary mathematics. To make it more perspicuous, we shall consider the simply resisted rectilineal mo-

tions geometrically, in the manner of Sir Isaac Newton. As we advance, we shall quit this track, and prosecute it algebraically, having by this time acquired distinct ideas of the algebraic quantities.

We must remember the fundamental theorems of varied motions.

1. The momentary variation of the velocity is proportional to the force and the moment of time jointly, and may therefore be represented by •• v ~ft, where v is the momentary increment or decrement of the velocity v,f the accelerating or retarding force, and t the moment or increment of the time t.

2. The momentary variation of the square of the velocity is as the force, and as the increment or decrement of the space jointly ; and may be represented by••vv = ifs. The first proposition is familiarly known. The second is the 39th of Newton's Principia, B. I. It is demonstrated in the article OPTICS, and is the most extensively useful proposition in mechanics.

Having premised these things, let the straight line AC (fig. 2) represent the initial velocity V, and let C O, perpendicular to AC, be the time

Fig. 2.

F f

in which this velocity would be extinguished by the uniform action of the resistance. Draw through the point A an equilateral hyperbola A e B having OF, O C D, for its assymptotes ; then let the time of the resisted motion be represented by the line C B, C being the first instant of the motion. If there be drawn perpendicular ordinates ice,fg, DB, &c., to the hyperbola, they will be proportional to the velocities of the body at the instant ; K,g, D, Sec., and the hyperbolic areas A C K e, AC,/g, A C D B, &c., will be proportional to the spaces described during the times CK, Cg, C B, &c. For suppose the time divided into an indefinite number of small and equal moments, C c, Dd, &c., draw the ordinates ac, bd, and the perpendiculars 6/3, a a. Then, by the nature of the hyperbola, A C : ac = Oc :‘OC.and AC ††† ac;ac=Oc ††† OC : O C, that is, A a : a c zr C c : O C, and A a : Cc ††† ac : OC, = AC-ac : AC-OC; in like manner, B *3 : D d* =. *B D-*> D : B D-O D. Now Drf ††† Cc, because the moments uf time were

taken equal, and the rectangles AC-CO, BD-DO, are equal by the nature of the hyperbola ; therefore Aa : BjSrzAC-ac : BD-fcd: but as the points c, d, continually approach, and ultimately coincide with C, D, the ultimate ratio of A C’ a c to B D-6 d is that of A C2 to B D2 ; therefore the momentary decrements of AC and BD are as A C2 and B D8. Now, because the resistance is measured by the momentary diminution of velocity, these diminutions are as the squares of the velocities ; therefore the ordinates of the hyperbola and the velocities diminish by the same law; and the initial velocity was represented by AC; therefore the velocities at all the other instants ††r,g, D, are properly represented by the corresponding ordinates. Hence,

1. As the abscissa of the hyperbola are as the times, and the ordinates are as the velocities, the areas will be as the spaces described, and A C KC is to A c gf as the space described in th< > time C K to the space described in the time Cg (first theorem on varied motions).

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2. The rectangle AC OF is to the area ACDB as the space formerly expressed by 2 a, or E to the space described in the resisting medium during the time C D ; for AC being the velocity V, and O C the extinguishing time e, this rectangle is ~ e V, or E, or 2 a, of our former disquisitions ; and because all the rectangles such as AC OF, BDOG, &c., are equal, this corresponds with our former observation, that the space uniformly described with any velocity during the time in which it would be uniformly extinguished by the corresponding resistance is a constant quantity, *viz.* that in which we always had v ××× E, or 2 a.

3. Draw the tangent AK; then, by the hyperbola C K××× C O : now C K is the time in which the resistance to the velocity A C would extinguish it ; for the tangent coinciding with the elemental arc A a of the curve, the first impulse of the uniform action of the resistance is the same with its first impulse of its varied action. By this the velocity A C is reduced to a c. If this operated uniformly, like gravity, the velocities would diminish uniformly, and the space described would be represented by the triangle A C K. This triangle, therefore, represents the height through which a heavy body must fall in vacuo, in order to acquire the terminal velocity.

4. The motion of a body resisted in the duplicate ratio of the velocity will continue without endj and a space will be described which is greater than any assignable space, and the velocity will grow less than any that can be assigned ; for the hyperbola approaches continually to the assymptote, but never coincides with it. There is no velocity B D so small, but a smaller Z P will be found beyond it ; and the hyperbolic space may be continued till it exceeds any surface that can be assigned.

5. The initial velocity A C is to the final velocity B D as the sum of the extinguishing time and the time of the retarded motion is to the extinguishing time alone ; for A C : B D rr O D (or O C X C D) : O C : or V : v = e : e X t.

6. The extinguishing time is to the time of the retarded motion as. the final velocity is to the velocity lost during the retarded motion : for the rectangles A F O C, BDOG, are equal ; and therefore A V G F and B

V C D are equal and

VC : VAr = VG : VB; therefore t = e V~~v}

v

and e “=. t ˆ.

V ††† v

7. Any velocity is reduced in the proportion

m ††† n T, i ,. * /~i ††† . For, let AC :

of m to n in the time e BD ††† m : n; DC : CO = m

then DO : C O ††† m : n, and ††† n : ††, and DC ††† †††

C O, or t = e ††† ††† - . Therefore any velocity is n

reduced to one-half in the time in which the initial resistance would have extinguished it by its uniform action.

The chief circumstances of this motion, may thus be determined by the hyperbola, the ordinates and abscissae exhibiting the relations of the

times and velocities, and the areas exhibiting the relations of both to the spaces described. , But we may render the conception of these circumstances much more easy and simple, by expressing them all by lines, instead of this combination of lines and surfaces. We shall accomplish this purpose by constructing another curve LKP, having the line M L 8, parallel to O D for its abscissa, and of such a nature that if the ordinates to the hyperbola A C e K, fg, B D, &c. be produced till they cut this curve in L, p, n, K, &c., and the abscissa in L, t, h, S, &c., the ordinates ††, p, h, n, S, K, &c., may be proportional to the hyperbolic areas e A c je,/A eg, 3 A c K. Let us examine what kind of curve this will be. Make OC : OK = Oe : Og; then (Hamilton’s Conies, IV. 14. Cor.) the areas AC ice, e Kg *“are equal : therefore drawing ps, n t,*

perpendicular to O M, we shall have (by the assumed nature of the curve Lp K), M s = =$\Longrightarrow$ *s t ; and if the abscissa O D be divided into any num-ber of small parts in geometrical progression, (reckoning the commencement of them all from O), the axis V i of this curve will be divided by its crdinates into the same number of equal parts ; and this curve will have its ordinates LM, ps,nt, &c., in geometrical progression, and its abscissae in geometrical progression. Also, let K N, M V, touch the curve in K and L, and let O C be supposed to be to O c, as O D to O d, and therefore C c to D d as O C to O D ; and let these lines C c, D d, be indefinitely small ; then (by the nature of the curve) L o is equal to K r ; for the areas a A C c, b B D d are in this case equal. Also lo is to k r, as L M to K I, because cC :dD* $\Longrightarrow$ *CO : D O : Therefore IN:IK = rR:rA IK:ML = rc:o/* ML:MV=o/:oL and IN :MN = rK:oL. That is the subtangent I N, or M V, is of the same magnitude, or is a constant quantity in every part of the curve.

Lastly, the subtangent I N, corresponding to the point K of the curve, is to the ordinate K S as the rectangle B D O G or A C O F to the parabolic area BDCA. For let fg tin be an ordinate very near to B D S K ; and let A n cut the curve in n, and the ordinate K I in q ; then we have

Kg : qn= KI : IN, or Dg:?$\Longrightarrow$=DO : IN; but BD: AC = CO:DO; therefore BD.Dg:AC.9$\Longrightarrow$ = CO:IN: Therefore the sum of all the rectangles B D.Dg is to the sum of all the rectangles A C . q n, as CO to IN; but the sum of the rectangles B D $\Longrightarrow$ Dg is the space ACDB; and, because A C is given, the sum of the rectangles A C $\Longrightarrow$ q n is the rectangle of AC, and the sum of all the lines qn ; that is, the rectangle of AC and RL; therefore the space ACDB:AC.RL = CO : I N, and ACDB X IN = AC . CO $\Longrightarrow$ BL: and therefore I N : R L= AC . CO : AC D B

Hence it follows that QL expresses the area B V A, and, in general, that the part of the line parallel to O M, which lies between the tangent K N and the curve Tup K, expresses the corresponding area of the hyperbola which lies witlv

out the rectangle B D O G. And now, by the help of this curve, we have an easy way of conceiving and computing the motion of a body through the air. For the subtangent of our curve now presents twice the height through which the ball must fall in vacuo, in order to acquire the terminal velocity ; and therefore serves for a scale on which to measure all the other representatives of the motion.

It remains to make another observation on the curve L/> K, which will save us all the trouble of geographical operations, and reduce the whole to a very simple arithmetical computation. In constructing this curve we were limited to no particular length of the line L R, which represented the space A C D B ; and all that we had to take care of was, that when O C, O K, O g, were taken in geometrical progression, M s, M t, should be in arithmetical progression. The abscissae having ordinates equal to ps, nt, &c., might have been twice as long as is shown in the dotted curve which is drawn through L. All the lines which serve to measure the hyperbolic spaces would then have been doubled. But N I would also have been doubled, and our proportions would ‘have still held good ; because this subtangent is the scale of measurement of our figure, as E or 2 a is the scale of measurement for the motions.

Since then we have tables of logarithms calculated for every number, we may make use of them instead of this geometrical figure, which still requires considerable trouble to suit it to every case. There are two sets of logarithmic tables in common use. One is called a table of hyperbolic or natural logarithms. It is suited to such a ,curve as is drawn in the figure, where the subtangent is equal to that ordinaterw which corresponds to the side IT O of the square 7T0XO inserted between the hyperbola and its assymptotes. This square is the unit of surface, by which the hyperbolic areas are expressed; its side is the unit of length, by which the lines belonging to the hyperbola are expressed ; T v is••• 1, or the unit of numbers to which the logarithms are suited, and then I N is also 1. Now the square 0 IT O X being unity, the area B A C D will be some number; ir O being also unity, OD is some number : call it x. Then, by the nature of the hyperbola, OB:O7r=*-0:DB; that

is, x : 1 = 1 : ••• > so that D B is ••• . Now,

x x

calling D d i the area, B D d 6, which is the

called logarithms are just the lengths of the different parts of this line measured on a scale of equal parts.

Reasons of convenience nave given rise to another set of logarithms : these are suited to a logistic curve whose subtangent is only ^^ of the ordinate T v, which is equal to the side of the hyperbolic square, and which is assumed for the unit of number. We shall suit our applications of the preceding investigation to both these, and shall first use the common logarithms whose subtangent is 0-43429. The whole subject will be best illustrated by taking an example of the different questions which may be proposed : Recol—

tl?

lect that the rectangle A C O F is ►► = 2 a, or ►►► ,

or E, for a ball of cast iron one inch diameter,

M* d and, if it has the diameter d, it is - ►►► , or 2 a d,

or Ed.

I. It may be required to determine what will be the space described in a given time t by a ball setting out with a given velocity V, and what will be its velocity v at the end of that time. Here we have N I : M I = A C O F : BDC A; now N Fis the subtangent of the logistic curve ; M I is the difference between the logarithms of O D and O C ; that is, the difference between the logarithms of e + t and e; ACOFis2ad,

u3d or - , or E d. Therefore by common loga—

o _^^

rithms 0-43429 : log. e+t ►►► log.e space described,

e+t

—

or 0-43429 : log. ►►► -= 2 a d : S, e

and S. =

lad

0-43429

X log.

e + t

by hyperbolic logarithms S ••• 2 a d X log.

Let the ball be a twelve pounder ; the initial vel > city 1 600 feet, and the time twenty seconds.

We must first find e, which is ••• rj••• .

Therefore, log. 2 a ... + 3-03236 log. d (4, 5) . . + 0-65321 log. V. (1600) . . ••••3-20412

Log. of 3",03, = e . . 0-48145 And e + t is 23",o3, of which the log. is 1-36229 from which take the log. of e . 048145

fluxion (ultimately) of the hyperbolic area, is —. remains the log. of

0-88084

Now in the curve Lp K, M I has the same ratio to N I that B A C D has to 0 X O TT . Therefore, if there be a scale of which N I is the unit, the number on this scale corresponding to M T has the same ratio to 1 which the number measuring B A C D has to 1 ; and I i, which corresponds to BD db, is the fluxion (ultimately) of M I ;

Therefore, if M I be called the logarithm of x,•••

is properly represented by the fluxion of M I. In short, the line M I is

divided precisely as the line of numbers on a Gunter's scale, which is therefore a line of logarithms ; and the numbers

This must be considered as a common numbei by which we are to multiply ††† -, n.nr††. Therefore

-††† †††. add the logarithms of 2 ad . . + 3-68557

†† I ††

log.

log. 0-43429

. S. 9833 feet .

+ 9-94490

††† 9-63778

3.99269

For the final ve.ocity,

O D : O C ††† A C : B D, or e + t : c ††† V : v.

23",03 : 3",03 = 1600 : 21

PROJECTILES.

The ball has therefore gone 3278 yards, and iis velocity is reduced from 1600 to 210.

The gradual progress of the ball, during some seconds of its motion, is as follows : ††† T. S. Diff. V. Diff.

1383 2456

QQQ

3336

4080

4725 5294

_ ·

‘T:

645

1203 964

QnA

804

690

The first column shows the time of the motion ; the second the space described ; the third the differences of the spaces, showing the motion during each successive seconds ; the fourth the velocity at the end of the time t ; and the last the differences of velocity, showing its diminution in each successive second. At the distance of 1000 yards the velocity is reduced to one-half, and at the distance of less tnan a mile it is reduced to one-third. .

II. Required to determine the distance at which the initial velocity V is reduced to any Other quantity v. This question is solved in the very same manner by substituting the logarithms of V and v for those of e +t and e ; for A C :

BD= OD : OC, and therefore log. ˆ7 =

D D

. OD V .

1►►s-rrF>orl►►g–=1

e+t

Required to

determine the distance which in the velocity of 1780 of a twenty-four pound ball (which is the medium velocity of such a ball discharged with sixteen pounds of powder), will be reduced to 1500. Here d is 5-68, and therefore

the logarithm of 2 ad is . . +3-78671

V ~

Log.$\frac{}{}$ = 0-07433, of which the log. is +8-871 16 v

Log. 0-43429 .... $\frac{}{}$9-63778

Log. 1047-3, feet or 349 yards . 3-02009 This reduction will be produced in about seven-eighths of a second.

III. To determine the time which a ball, beginning to move with a certain velocity, employs in passing over a given space, and the diminution of velocity which it sustains from the resistance of the air ; proceed thus : $\frac{}{}$

—

2 ad : 8 = 0-43429: log -2$\frac{}{}$ = t. Then to log.

e + t

add log. e, and we obtain log. e + t, and

e + t ; from which if we take e we have t. Then, to find v, say e + t : e = V : v.

These examples may be concluded by applying this last rule to Mr. Robins's experiments on a musket bullet of three-fourths of an inch in diameter, which had its velocity reduced from 1670 to 1425 by passing through 100 feet of air. This we do to discover the resistance which it sustained, and compare it with the resistance to a velocity of one foot per second. We must first ascertain the first term of our analogy. The ball was of lead, and therefore 2 a must be multiplied by d and by m, which expresses the ratio of the density of lead to that of cast iron, d is

0-75, and m is = 1-577.

7-21

Therefore log. 2 a 3-03236 d 9-87506 m 0-19782

Log. 2 a dm 3-10524 and 2 a d m = 1274-2. Now 1274-2 : 100;

0-43429 : 0‘03408 = lo?.

e + t

Bute =

2adm

e y

= 0-763, and its logarithm = 9-88252, which, added to 0-03408, gives 9-91660, which is the log, of e + t, = 0-825, from which take e, and

there remains t = 0”-062, or ???- of a second,

1000

for the time of passage. Now, to find the remaining velocity, say 825 : -763 = 1670 : 1544, = v. But in Mr. Robins’s experiment the remaining velocity was only 1425, the ball having lost 245 ; whereas by this computation it should have lost only 126. It appears, therefore, that the resistance is double of what it would have been if the resistance increased in the duplicate proportion of the velocity. Mr. Robins says it is nearly triple. But he supposes the resistance to slow motions much smaller than his own experiment, so often mentioned, fully warrants.

The time e in which the resistance of the air would extinguish the velocity is 0”-763. Gravity, or the weight of the bullet, would have done it

. 1670 52’

in - - or 52 ; therefore the resistance is

times, or nearly sixty-eight times its weight, by this theory, or 5-97 pounds. If we calculate from Mr. Robins’s experiment, we must say log.

and e =

630-23

= 0’-3774, and

52

gives

1670 ” 0-3774

138 for the proportion of the resistance to the weight, and makes the resistance 12-07 pounds, fully double of the other.

With this velocity, which greatly exceeds that with which the air can rush into a void, there must be a statical pressure of the atmosphere equal to six pounds and a half. This will make up the difference ; and allows us to conclude that the resistance, arising solely from the motion communicated to the air, follows very nearly the duplicate

proportion of the velocity.

The next experiment, with a velocity of 1690 feet, gives a resistance equal to 157 times the weight of the bullet, and this bears a much greater proportion to the former than 1690 does to 1670a; which shows that, although these experiments clearly demonstrate a prodigious augmentation of resistance, yet they are by no means susceptible of the precision which is necessary for discovering the law of this augmentation, or for a good foundation of practical rules ; and it is still greatly to be wished that a more accurate mode of investigation could be discovered.

We have thus explained, in detail, the principles and the process of calculation for the simple case of the motion of projectiles through the air. The learned reader will think that we have been

unreasonably prolix, and that the whole might have been comprised in less room, by taking the algebraic method. We acknowledge that it might have been done even in a few lines. But we have observed, and our observation has been confirmed by persons well versed in such subjects, that in all cases where the fluxionary process introduces the fluxion of a logarithm, there is a great want of distinct ideas to accompany the hand and eye. The solution comes out by a sort of magic or legerdemain, we cannot tell either how or why. We therefore thought it necessary to furnish the reader with distinct conceptions of the things and quantities treated of. For this reason, after showing, in Sir Isaac Newton's manner, how the spaces described in the retarded motion of a projectile followed the proportion of the hyperbolic areas, we showed the nature of another curve, where lines could be found which increase in the very same manner as the path of the projectile increases ; so that a point describing the abscissa M I of this curve moves precisely as the projectile does. Then, discovering that this line is the same with the line of logarithms hn a Gunter's scale, we showed how the logarithm of a number really represents the path or space described by the projectile.

SECT.. V. ††† OF THE PERPENDICULAR ASCENTS AND DESCENTS OF HEAVY PROJECTILES.

Having thus enabled the reader to conceive distinctly the quantities employed, we shall leave the geometrical method, and prosecute the rest of the subject in a more compendious manner. We are next to consider the perpendicular ascents and descents of heavy projectiles, where the resistance of the air is combined with the ac-tion of gravity : and we shall begin with the descents.

Let u, as before, be the terminal velocity, and g the accelerating power of gravity : when the body moves with the velocity u, the resistance is equal to g ; and in every other velocity v, we

K v*

must have u* : v3 ††† g : *2-††† ††† = r, for the resist-tr

ance to that velocity. In the descent the body is urged by gravity g, and opposed by the resist-cr v*

ance ††_. : therefore the remaining accelerating

force, which we shall call /, is g †††

P U3 S V3 {? (u3 U8^

o o ~- o \ / f

u3

The fundamental theorem for varied motion is

vv

, . V V U

1 s = u v, and s = ††† ††††††† ††† x

J g - ⬚⬚⬚ - u3 f i v vv ⬚⬚⬚ X / ⬚⬚⬚ i r + C. Now the fluent of - = -⬚⬚⬚

E *J U V U ⬚⬚⬚ v

is ⬚⬚⬚ *hyper, log. of* ⬚⬚*Ju* ⬚⬚⬚ v3. For the fluxion

⬚⬚⬚ vit

of ⬚⬚/M* ⬚⬚⬚ v9 is ⬚⬚⬚ , . .. and this divided by ˆ u3 ⬚⬚⬚ v3

the quantity */u3 ⬚⬚⬚ v1, of which it is the fluxion, gives precisely ⬚⬚⬚ ⬚⬚⬚ -, which is therefore the fluxion of its hyperbolical logarithm. Therefore

y*

S= x L⁄w* ⬚⬚⬚ v1 + C. Where L means

the hyperbolic logarithm of the quantity annexed to it, and X may be used as to express its com-mon logarithm. See article FLUXIONS.

The constant quantity C for completing the fluent is determined from this consideration, that the space described is o, when the velocity is o :

C ⬚⬚⬚ -x

e

= o, and C = ⬚⬚⬚ x

g

IT

and the complete fluent S = ⬚⬚⬚ X

8

x x

H1

0-43429 g ⬛⬛⬛ - ⬛⬛r (pUUing M f⬛⬛r 0-43429, the modulus or subtangent of the com—

u3 *u3 mon logistic curve)* = ⬛⬛⬛ ⬛⬛⬛ *x X* -\ ⬛⬛⬛ -.

O

This equation establishes the relation between the space fallen through and the velocity acquired

by the fall. We obtain by it 2⬛⬛⬛.⬛⬛⬛

, or, which is still more

u3 ⬛⬛⬛ˆu’⬛⬛⬛v3

. Mx2gS u3

convenient for us, r-2 ⬛⬛⬛ =X ⬛⬛⬛ that is,

‘ ‘ it* 11* tt*

u’ u’ ⬛⬛⬛ r

equal to the logarithm of a certain number : therefore having found the natural number cor-⬛⬛

M x 2gS responding to the fraction - a ⬛⬛ , consider

it as a logarithm, and take out the number corresponding to it : call this n. Then, since n is

equal to

;, we have 72 u2 ••• rti;2••• ˆ

3

uˆ.n v3, or n v3•••u3x n ••• v, and v3 rz

To expedite all the computations on this subject, it will be convenient to have multipliers

ready computed for M x 2g, and its half,

viz. 27-794, whose log. is . . 1-44396

and 13-897 ….. 1-14293

But v may be found much more expeditiously by

/ u*~

observing that ⋁ •••i - ; is the secant of an

u3 ••• v3 arch of a circle whose radius is a, and whose

sine is v, or whose radius is unity and sine ~ ••• ;

therefore, considering the above fraction as a logarithmic secant, look for it in the tables, and then take the sine of the arc of which this is the secant, and multiply it by u: the product is the velocity required.

An example may be given of a ball whose terminal velocity is 689•• feet, and ascertain its velocity after a fall of 1848 feet. Here,

u3 ••• 475200, and its log. . ••• 5-67688

u ••• 689$ ….. 2-83844

g ••• 32 ….. 1-50515

S= 1848 … . . 3-26670

Then log. 27‘794 + 1-44396

log. S … . + 3-26670

log. u3 … . ###5-67688

Log. of 0-10809 ### lo . n

9-03378

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0-10809 is the logarithm of 1-2826 ### n, and n ### jfl v n ### 1

1 =: 0-2826, and ### = S23-62, = v> ;

n

and v### 323-6.

In like manner, 0-054045 (which is half of 0‘10809) will be found to be the logarithmic secant of 28##, whose sine 0-46947 multiplied by 639| gives 324 for the velocity. The process of this solution suggests a very perspicuous manner of conceiving the law of descent ; and it may be thus expressed : M is to the logarithm of the

1)

secant of an arch whose sine is ### and radius 1

u

as 2 a is to the height through which the body must fall to acquire the velocity v. Thus, to take the same example : ###

1. Let the height h be sought which will produce the velocity 323-62, the terminal velocity of

M2

the ball being 689-34. Here 2 a, or ### is 14850,

Q

323*62

and ### 0-46947, which is the sine of 28##.

689‘35

The logarithmic secant of this arch is 0-05407. Now M or 0-43429 : 0‘05407 = 14850 : 1848, the height wanted.

2. Required the velocity acquired by the body by falling 1848 feet. Say 14850 : 1848 = 0-43429 : 0-05407. Look for this number among the logarithmic secants. It will be found at 28##, of which the logarithmic sine is . 9-67161

Add to this the log. of M . . 2-83844

The sum

. 2-51005

is the logarithm of 323-62, the velocity required.

From these solutions we see that the acquired velocity continually approaches to, but never equals, the terminal velocity. For it is always expressed by the sine of an arch of which the terminal velocity is the radius.

The motion of a body projected downwards next merits consideration. While the velocity of projection is less than the terminal velocity; the motion is determined by what we have already said ; for we must compute the height necessary for acquiring this velocity in the air, and suppose the motion to have begun there. But, if the velocity of projection be greater, this method fails. We pass it over (though not in the least more difficult than what has gone be-fore) because it is of mere curiosity, and never occurs in any interesting case. We may just observe that, since the motion is swifter than the terminal velocity, the resistance must be greater than the weight, and the motion will be retarded. The very same process will give us for the space

described S = ††† x

tr ††† u

V being the

velocity of projection greater than u. Now as this space evidently increases continually (because the body always falls, but does not become in—

V2††† w2 finite in any finite time), the fraction

I

does not become infinite ; that is, u2 does not be-come equal to w2 : therefore, although the velo-vcity V is continually diminished, it never becomes so small as u. Therefore u is a limit of diminution as well as of augmentation.

The re’ation between the time of the descent

and the space described, or the velocity acquired, must now be ascertained. For this purpose we may use the other fundamental proposition of varied motions \fi𝍐𝍐𝍐‘v, which, in the present

case, becomes ˆ-~ˆ. i = v; therefore t ‘= 𝍐𝍐𝍐 -

”’

This fluent needs no constant quantity to complete it, or rather C =: o; for t must be 𝍐𝍐𝍐=: o when v 𝍐𝍐𝍐 o. This will evidently be the case ; for then

This rule may be illustrated by the same example. In what time will the body acquire the velocity 323‘62 ? Here u+v =1012-96, u𝍐𝍐𝍐v=.

365-72; therefore X -i𝍐𝍐𝍐 = 0‘2212t,and “

M 𝍐𝍐𝍐 V g

(in feet and seconds) is 21” -542. Now, for greater perspicuity, convert the equation t 𝍐𝍐𝍐

u /u--v

TJ-X \S — into a proportion : thus M : X

/u--v u

>/ - IT 𝍐𝍐𝍐 : t, and we have 0-43429 : u 𝍐𝍐𝍐 v g

0-22122 𝍐𝍐𝍐 21” -542 : 10” -973, the time required. We should remember that the numbers or symbols which we call logarithms are really parts of the line M I in the figure of the logistic curve, and that the motion of a point in this line is precisely similar to that of the body. The marquis Poleni, in a dissertation published at Padua in 1725, has with great ingenuity constructed logarithmics suited to all the cases which can occur.

It is easy to see that \/ - is the cotangent of the % complement of an arch whose radius is 1, and whose sine is ••• : For let KC (see diagram) be ;••• u, and B E ~ v ; then K D ••• u-fw, H P

D

and D A= u ••• v. Join K B and B A, and draw C G parallel to K B. Now G A is the tangent of \ B A, •••=. \ complement of H B. Then, by similarity of triangles, GA:ACz=AB:BK,

••• , j AC

i ••• v : */u+v and 7••• -

(=. cotan. i BA) =

therefore look

for ••• among the natural sines, or for log. •••among u a

the logarithmic sines, and take the logarithmic cotangent of the half complement of the corresponding arch. This, considered as a common number, will be the second term of our proportion. This is a shorter process than the former

By reversing this proportion we get the velocity corresponding to a given time. To compare this descent of 1848 feet in the air with the fall of the body in vacuo during the same time, say 21” -542* : 10” -973 = 1848 : 1926‘6, which makes a difference of seventy-nine feet.

COR. 1. The time in which the body acquires the velocity u by falling through the air is, to the time of acquiring the same velocity by falling

in vacuo, as u LA/ - ••• to ••; for it would

ua + V3\ 2Mgs Thprpforp ,et M hp tllA ˆqˆy — ••Tˆ'

2M# s number whose common logarithm is - ••• 6 ; we

u ••• v

acquire this velocity in vacuo during the time•••,

u -f and it acquires it in the air in the time ••• lj

O

2. The velocity which the body acquires by

u T *u--v felling through the air in the time •••JLA* jˆˆ

is, to the velocity which it would acquire in vacuo

during the same time as v to ••

for the velocity would acquire in vacuo during

u

the time ••• g

shall have n = ••• =, and v =

u'-ˆv* nr

and thus we obtain the relation of $ and v, as in the case of descents ;

but we obtain it still easier by observing that ˆ/tt’+V3 is the secant of an arch whose radius is u, and whose tangent is V, and that ˆ/ifi+v* is the secant of another arch of the same circle whose tangent is v.

Let the same ball be projected upwards with the velocity 411-05 feet per second. Required

the whole height to which it will rise ? Here ###

u

will be found the tangent of 30-48ˆ, the logarithmic secant of which is 0-06606. This, multiplied by ### ### , gives 2259 feet for the height. It

would have risen 2640 feet in a void.

Suppose this body to fall down again. We can compare the velocity of projection with the velocity with which it again reaches the ground. The ascent and descent are equal ; therefore

must be u u ### v u ### v

u+v \Xˆ “ˆ’ , which multiplies the constant factor

(because in any time ### the velocity w is acquired).

Next, let a body whose terminal velocity is u be projected perpendicularly upwards, with any velocity V. It is required to determine the height to which it ascends, so as to have any remaining velocity v, and the time of its ascent ; as also the height and time in which its whole motion will

be extinguished. We have now ### ### for

u1

the expression off; for both gravity and resistance act now in the same direction and retard the

motion of the ascending body ; therefore

in the ascent, is equal

/ ⬛⬛⬛⬛

to V -5 ⬛⬛⬛ i⬛⬛

the multi-

plier in the descent. The first is the secant of an arch whose tangent is V ; the other is the se-cant of an arch whose sine is v. These secants I, or the arches are the same ; therefore

the velocity of projection is to the final returning velocity as the tangent to the sine, or as the radius to the cosine of the arch. Thus suppose the body projected with the terminal velocity, or

V = u; thenv= -^= =. If V=689, w = 487.

>/2 Lastly, the relation of the space and the time

s (ua-f v9) ⬛⬛⬛ must be ascertained. Here ⬛⬛⬛ r = ⬛⬛⬛ ⬛⬛

s = ⬛⬛⬛ v v, and s = ⬛⬛⬛

and s = ⬛⬛⬛

and t = x

g

.

, and

C (see art. FLUXIONS). This must be = o at , the beginning of the motion, that is, when v=V,

u►►

that is, ►►► - ►►► x L N/“1 + Vs + C = o, or C=

►►►> J.

►►► X L*\X►►* +V*, and the complete fluent will

L *

bes = ►►► X

f

►►’ T /►►* +VS WS xx I ►►►* / _ v \

7 x >#y u> +v*>-Mgx

Let h be the greatest height to v-.-. ich the body will rise. Then s = h when v = o; and/i= ►►►

/

T ./

+

“►►►’+ Va _ ” v

‘ ~

u*

/ u* +\ ►►►” mg .._►► ►►

have \ \/ ►►► ; = s ►►► ►►► ; therefore X

M*4-*r ►►*

3 > tis an arch whose tangent = ►►► , and

radius 1 : therefore t = ►►► ►►► x arc. tan.

g

1?

►►► -4-C. This must be = o, when v = V, or u

u V . _, u

C ►►► ►►►x arc. tan. ►►► = o, and C = ►►► X arc.

g u g

V u

tan. ►►► - and the complete fluent is t = ►►► x

V v \

arc. tan. ►►► ►►► arc. tan. ►►► V The quantities u u /

within the brackets express a portion of the arch of a circle whose radius is unity ; and are therefore abstract numbers, multiplying ►►► , which we

have shown to be the number of units of time in which a heavy body falls in vacuo from ‘he height a, or in which it acquires the velocity ►►.

PROJECTILES.

From this expression of the time we learn that however great the velocity of projection, anf the height to which this body will rise, may be the time of its ascent is limited. It never cap exceed the time of falling from the height a in vacuo in a greater proportion than that of a quadrantal arch to the radius, nearly the proportion of eight to five. A twenty-four pound iron ball cannot continue rising above fourteen seconds, ,-ven if the resistance to quick motions did not increase faster than the square of the velocity. It probably will attain its greatest height in less than twelve seconds, let its velocity be ever so great. In the preceding example of the whole

u V

ascent v ~ o, and the time / rz ❖❖❖ x arc. tan. ❖❖❖

o

or ~ arc. 30❖❖ 48'. Now 30❖❖ 48' =. 1848', and the g

radius 1 contains 3483 : therefore the arch :=

which it will rise in the air is -of the height

❖❖❖ 0-5376; and ❖❖❖ 2l"'54. Therefore ❖❖r=21"-54 g

X 0-5376, -f-11"'58, or nearly 11 ❖❖ seconds. The body would have risen to the same height in a void in lOf seconds.

COR. 1. The time in which a body, projected in the air with any velocity V, will' attain its greatest height, is to that in which it would at-tain its greatest height in vacuo as the arch whose tangent expresses the velocity is to the tangent ;

u

for the time of the ascent in the air is ❖❖❖ x arch ;

g

the time of the ascent in vacuo is ❖❖❖ . Now ❖❖❖ is

cf fr

V u

zz tan. andV ⬚ ⬚ x tan. and ⬚ ~ ⬚ X tan. u u

From inspecting the diagram p. 153, it is evident that the arch A I is to the tangent A G as the sector I C A to the triangle C G A ; therefore the time of attaining the greatest height in the air is to that of attaining the greatest height in vacuo (the velocities of projection being the same) as the circular sector to the corresponding triangle. If therefore a body be projected upwards with the terminal velocity, the time of its ascent will be to the time of acquiring this velocity in vacuo as the area of a circle to the area of the circumscribed square.

2. The height H to which a body will rise in a void is to the height h to which it would rise through the air when projected with the same

velocity V as M-V⬚ to u2 x X ⬚ ˆ ⬚ ; for the

u3

V3

height to which it will rise in vacuo is ⬚ ⬚ , and

o

u*

the height which it rises in the air is -⬚ ⬚ X

Mg

; therefore H : h rr ⬚ ⬚ : ⬚ ⬚

M u”

If the body, therefore, be projected with its terminal velocity, so that V = M, the height to

to which it will rise in vacuo, or ⬚ in round

numbers.

We thought it necessary to treat of the perpendicular ascents and descents of heavy bodies through the air thus particularly, that the reader may conceive distinctly the quantities which he is thus combining in his algebraic operations, and may see their connexion in nature with each other. We shall also find that, in the present slate of our mathematical knowledge, this simple state of the case contains almost all that we can determine with any confidence.

SECT. VI. ××× OF THE OBLIQUE PROJECTION.

We would now proceed to the general problem to determine the motion of a body projected in any direction, and with any velocity. But our readers will believe that this must be a difficult subject, when they see the simplest cases of rectilineal motion abundantly abstruse : it is indeed so difficult that Sir Isaac Newton has not given a solution of it, and has thought himself well employed in making several approximations, in which the fertility of his genius appears in great lustre. In the tenth and subsequent propositions of the second book of his Principia he shows what state of density in the air will comport with the motion of a body in any curve whatever ; and then, by applying this discovery to several curves which have some similarity to the path of a projectile, he finds one which is not very different from what we may suppose to ob-tain in our atmosphere. But even this approximation was involved in such intricate calculations that it seemed impossible to make any use of it.

In the second edition of the Principia, published in 1713, Newton corrects some mistakes in the first, and carries his approximations much farther, but still does not attempt a direct investigation of the path which a body will describe in our atmosphere. This is somewhat surprising. In prop. 14, &c., he shows how a body, actuated by a centripetal force, in a medium of density varying according to certain law, will describe an eccentric spiral, of which he assigns the properties, and the law of description. Had he supposed the density constant, and the difference between the greatest and least distances from the centre of centripetal force exceedingly small in comparison with the distances themselves, his spiral would have coincided with the path of a projectile in the air of uniform density, and the steps of his investigation would have led him immediately to the complete

solution of the problem. For this is the real state of the case. A heavy body is not acted on by equal and parallel gravity, but by a gravity inversely proportional to the square of the distance from the centre of the earth, and in lines tending to that centre nearly ; and it was with the view of simpli-fying the investigation that mathematicians have adopted the other hypothesis.

Not long after the publication of this second ###edition of the Principia, the dispute about the ia-

vention of the fluxionary calculus became very violent, and the great promoters of that calculus upon the continent proposed difficult problems to the mathematicians. Challenges of this kind frequently passed between the British and foreigners. Dr. Keill of Oxford had keenly espoused the claim of Sir Isaac Newton to this invention, and had engaged in a very acrimonious altercation with the celebrated John Bernouilli of Basle. Bernouilli had published in the Acta Eruditorum Lipsiae, an investigation of the law of forces, by which a body, moving in a resisting medium, might describe any proposed curve, reducing the whole to the simplest geometry. This is perhaps the most elegant specimen which he has given of his great talents. Dr. Keill proposed to him the particular problem of the trajectory and motion of a body moving through the air, as one of the most difficult. Bernouilli very soon solved the problem in a way much more general than it had been proposed, *viz.* without any limitation either of the law of resistance, the law of the centripetal force, or the law of density, provided only that they were regular, and capable of being expressed algebraically. Dr. Brooke Taylor, the celebrated author of the Method of , Increments, solved it at the same time, in the limited form in which it was proposed. Other authors since that time have given other solutions; but they are all (as indeed they must be) the same in substance with Bernouilli's. Indeed they are all (Bernouilli's not excepted) the same with Newton's first approximations, modified by the steps introduced into the investigation of the spiral motions mentioned above ; and we still think it most strange that Sir Isaac did

not perceive that the variation of curvature, which he introduced in that investigation, made the whole difference between his approximations and the complete solution.

All the solutions given of this problem depend upon a particular law of resistance assumed, without proving that to be the law by which a body is resisted in its motion through the air. This resistance is supposed to be in the duplicate ratio of the velocity ; but even theory points out many causes of deviation from this law, such as the pressure and condensation of the air, in the case of very swift motions : and Mr. Robins's experiments are sufficient to prove that the deviations must be exceedingly great in such cases. Euler and all subsequent writers have allowed that it may be three times greater, even in cases which frequently occur ; and Euler gives a rule for ascertaining with tolerable accuracy what this increase and the whole resistance may amount to. Let II be the height of a column of air whose weight is equivalent to the resistance taken in the duplicate ratio of the velocity. The whole resistance will be expressed by H +

H* oooTg ••• This number 28845 is the height in feet

of a column of air whose weight balances its elasticity. We shall not at present call in question his reasons for assigning this precise addition. They are rather reasons of arithmetical conveniency than of physical import. It is enough to observe that, if this measure of the resistance is introduced into the process of inves-

tigation, it is totally changed: and it is not ••••••i much to say that with this complication it requires the knowledge and address of a Euler to make even a partial and very limited approximation to a solution.

Any law of the resistance, therefore, which is more complicated than what Bernouilli has assumed, namely, that of a simple power of the velocity, is abandoned by all the mathematicians, as exceeding their data : and they have attempted to avoid the error arising from the assumption of the duplicate ratio of the velocity either by supposing the resistance throughout the whole trajectory to be greater than what it is in general, or they have divided the trajectory into different portions, and assigned different resistances to each, which vary, through the whole of that portion, in the duplicate ratio of the velocities. Thus they make up a trajectory and motion which corresponds, in some tolerable degree, with what ? With an accurate

theory? No ; but with a se-ries of experiments. For, in the first place, every theoretical computation which we make proceeds on a supposed initial velocity ; and this cannot be ascertained with any thing approaching to precision by any theory of the action of gunpowder that we are yet possessed of. In the next place, our theories of the resisting power of the air are entirely established on the experiments on the flight of shot and she Is, and are corrected and amended till tlrey tally with the most approved experiments we can find. We do not learn the ranges of a gun by theory, but the theory by the range of the gun.

After all, therefore, the practical artillerist must rely chiefly on the records of experiments contained in the books of practice at the academies, or those made in a more public manner. Even a perfect theory of the air's resistance can do him little service, unless the force of gunpowder were uniform. But this is far from being the case.

The experiments of Mr. Robins and Dr. Hut-ton show, in the most incontrovertible manner, that the resistance to a motion exceeding 1100 feet in a second is almost three times greater than in the duplicate ratio to the resistance to merle-rate velocities. Euler's translator, in his comparison of the author's trajectories with experiment, supposes it to be no greater. Yet the coincidence is very great. The same may be said of the Chevalier de Borda's. Nay, the same may be said of Mr. Robins's own practical rules; and yet his rules are confirmed by experience.

But we must not infer, from all this, that the physical theory is of no use to the practical artillerist. It plainly shows him the impropriety of giving the projectile an enormous velocity. This velocity is of no effect after 200 or 300 yards at farthest, because it is so rapidly reduced by the prodigious resistance of the air. Mr. Ro-bins has deduced several practical maxims of the greatest importance from what we already know of this subject, and which could hardly have been even conjectured without this knowledge. And we must still acknowledge that this branch ot physical science is highly interesting to the philosopher; nor should we despair of carrying it to greater perfection.

PROJECTILES.

Certainly the most complete set of experiments made with a view of obtaining a rational theory of projectiles are those of Dr. Hutton, which were carried on at Woolwich during the years 1775, 1783, 1784, 1785, 1787, 1788, 1789, and 1791, the objects of which were very various, and some of the results highly important. The latter are thus enumerated by the author in the second volume of his Tracts : ###

‘ 1. It is made evident, by these experiments, that powder fires almost instantaneously, seeing that nearly the whole of the charge fires, though the time be much diminished.

* 2. The velocities communicated to the shot of the same weight, with different quantities of powder, are nearly in the subduplicate ratio of those quantities ; a very small variation, in de-fect, taking place when the quantities of powder become great.

‘3. And when shot of different weights are fired with the same quantities of powder the velocities communicated to them are nearly in the reciprocal subduplicate ratio of their weights.

‘4. So that, universally, shots which are of different weights, and impelled by the firing of different quantities of powder, acquire velocities ###which are directly as the square roots of the quantity of powder, and inversely as the square roots of the weight of the shot, nearly.

‘ 5. It would therefore be a great improvement in artillery to make use of shot of a long form, or of heavier matter ; for thus the momentum of the shot, when fired with the same weight of powder, would be increased in the ratio of the square root of the weight of the shot.

‘ 6. It would also be an improvement to diminish the windage ; for, by so doing, one-third or more of the quantity of powder might be saved.’ (This, however, must be understood only to be true within certain limits.)

1 7. When the improvements mentioned in the two last cases are considered as both taking place it is evident that about half the quantity of powder might be saved, which is a very considerable object. But, important as this saving may be, it seems still to be exceeded by that of the guns : for thus a small gun may be made to have the effect of one of two or three times its size, in the present way, by discharging a long shot of two or three times the weight of its

natural ball, or round shot: and thus a small ship might discharge shot as heavy as those of the greatest now made use of.'

The objects of the latter courses of experiments are thus detailed : *viz.* to ascertain,

'1. The velocities with which balls are projected by equal charges of powder, from pieces of the same weight and calibre, but of different lengths.

' 2. The greatest velocities due to the different charges of powder, the weight and length of the gun being the same.

' 3. The greatest velocity due to the different lengths of guns ; to be obtained by increasing the charge as far as the resistance of the piece is capable of sustaining.

'4. The effect of varying the weight of the piece; every thing else being the same.

' 5. The penetration of balls into blocks of wood.

' 6. The ranges and times of flight of balls, with the velocities, by striking the pendulum at various distances, to compare them with initial velocities, for determining the resistance of the medium.

' 7. The effects of wads, of ramming, of windage, &c.'

We shall now quote this author's expression for the resistance of the air, deduced from these experiments, and thence determine the ranges, times of flight, &c., of projectiles according to that hypothesis.

THEOREM. ††† The resistance of the air, to a ball projected into it with any considerable velocity, is expressed by the formula r ††† (-000007565 t>* ††† 00175 v) iP. But, for the smaller velocities, r ††† '0000044 d1 v* will be a sufficiently near approximation, where r represents the resistance in avoirdupois pounds, d the diameter of the ball in inches, v the velocity in English feet. See Hutton's Tracts, vol. iii. p, 232.

PROB. I. ††† To determine the height to which †††i ball, projected perpendicularly upwards, will ascend, being resisted by the atmosphere.

Putting a-to denote any variable and increasing height ascended by the ball ; v its variable and decreasing velocity there ; d the diameter of the ball, its weight being w ; m :r ‘000007565, and n∼=. -00175, the coefficients of the two terms in the above theorem. Then (m v* ††† nv) d* will be the resistance of the air against the ball in avoirdupois pounds, to which, if the weight of the ball be added, then (mv1 ††† n v) d2 -f-w will be the whole resistance to the ball’s motion, and

. (mv1 ††† nv)d* + w (mv1 ††† nv)

consequently = 2 ‘-

w w

d* -}∼ 1 =f> tne retarding force. Hence the general formula v v = %gfx becomes ††† v v = 2

(mv2 ††† nv) d? -4-w

g x x 5 ††† ! ††† making v negative, because the velocity is decreasing, where g= 16ˆ feet, or sixteen feet, the descent of a bodv in one second by gravity.

w vv

Hence x = ††† ††† X -. ; r††† †† ††† ; ††† =

29 (mv* ††† nv)d* + w

X ††† The fluent ef

2 gmd2

, ‘⬚⬚ ⬚⬚/

v* v -\ ⬚⬚⬚

m mar

which being taken, and corrected for the instant of the first velocity V, when x = 0, gives x =

2 gmd2

tan. ###

log. ### - + -. (arc. tan. (V### p) ### arc. m or q

p to rad. q) j where p = - ### , and p9 +

md2

But as part of this fluent, denoted by P### + the

difference of the two arcs to tan. (V ### p) and ### p, is always very small in comparison with the other preceding terms, it may be omitted without any material error in practical cases ; in which case we have,

4 g mtP

X hyp. log.

w md>

for the greatest height to which the ball will as-cend in air ; supposing its density uniformly the same as at the earth's surface. Now for the nu—

w merical value of the general coefficient -=,

and the term ; because the mass of the

ma*

ball to the diameter d is '5236 d3, if its specific gravity be s, its weight will be -5236 s d3 = w ;

therefore ˆ, = -5236 s d, and -ˆ- = 69259 sd;

this divided by 4 g or 64, gives 4gOT<p =

1082 s d for the value of the general coefficient, to any diameter d, and specific gravity s. And if we farther suppose the ball to be cast iron, the specific gravity of which, or the weight of a cubic inch, is -26855 Ibs., it becomes 290-sd for that

coefficient; also 69259 s d= 18600 d❓❓❓ -ˆ5,

the latter arc as inconsiderable ; p and q representing the same as before.

Example 1. ❓❓❓ Let it be proposed to find the time in which an iron ball, two inches in diameter, will acquire its greatest height, when projected with a velocity of 2000 feet per second,

and ??? = 231-5.

m Hence the preceding fluent becomes

V?? ??? 231-5 V + 18600 d x = 290-6 X hyp. log. ???

x = 669 d X com. log.

186004

V??_ 231-5 V+ 18600 d

I8600d

which is in general expression for the altitude in feet ascended by an iron bullet whose diameter is d, and projectile velocity V.

Example I. ??? Suppose a ball of cast iron, whose diameter is two inches, and, therefore, its weight If lb., to be projected upwards with a velocity of 2000 feet per second, to find the greatest height to which it will ascend.

Here, substituting for d, w, and V their respective values, we have

Vs ??? 231-5 V + 18600d , = 669 dxcom.log.- 1860Qd

= 2653 feet.

Emmple. 2. ??? Again, let the ball weigh twenty-four pounds, and, therefore, its diameter 5‘6, and velocity 2000 feet per second, as before ; then

V* ??? 231-5 V + 18600 d x ??= 669d X com.log. -

= 5782 feet, the height required.

In the first of these examples, where the height is found to be only about half a mile, the ball would ascend to nearly twelve miles in a non-resisting medium ; and hence we may see the immense effect of

atmospheric resistance to the motion of projectiles.

PROB. II. ००० To determine the time in which a ball will have acquired its greatest height, using the same formula of resistance as in the last case.

Here the general value of t, determined on principles similar to those above employed, gives

w / V ००० p v ००० p\

; (arc. tan. ००० arc. tan. *००० l००

\ q q s

V०००० p

X arc. tan. -, rejecting

Here००० = 115i = p,

and -_ =

- whence t =

, gives q = v/37153००० p* ००००

X (arc. tan. ००० - ^ = 11-81 se-V 9

2 g m q (P conds.

If we take the second example above to find the time, we shall have p = 115J as before, and

q = 299-4 ; therefore t =

2 g m qd*

X arc. tan.

= 16-89 seconds.

or t =

2 g m q d2

V￾￾￾p _

9

After the investigation of these problems, and some others of a similar nature, Dr. Hutton proceeds to the investigation of his principal one, *viz.* to determine the circumstances of ranges at different degrees of elevation; which we transcribe.

‘ Rules for the general solution of this problem would be best derived from experiments ; and these should be made at all elevations, and with all charges, and with various sizes of balls, observing both the ranges and times of flight in every experiment. Such experiments woulc’ give us the relations existing, in all cases, amongst these four terms, *viz.* the ranges, the times of flight, the velocity or charges, and the size of the balls. Numerous and various as are our experiments, as before related, and fruitful as they are in useful consequences, we have obtained but a small portion of those alluded to; nor do I know of any proper set of such experiments any where to be found. Such must, therefore, still remain a valuable desideratum ; the few that we have been able to make afford us but very few and imperfect rules, being chiefly as follows: ￾￾￾ 1. That the ranges with the one-pound balls, at an elevation of 15￾￾, are nearly proportional to the times of flight. 2. That the ranges with the three-pound balls, at 45￾￾ of elevation, are nearly as the times of flight, and also as the projectile velocities. Besides these inferences, it does not appear that the experiments are extensive enough to afford any more useful conclusion.

‘ By trials, however, amongst many of the numbers in art. 24, it appears that in most of them at an elevation between 45￾￾ and 30￾￾, the time of flight is nearly equal to one-fourth of the square root of the range in feet, in which respect it nearly agrees with the similar rule for the time of flight in the parabolic theory, at the angle of 45￾￾ for the greatest range, which time, it is well known, is equal to one-fourth of the square root of the said range in feet. Whence it is probable that, with the help of a few other ranges at several

elevations, some general relations might be evinced between the ranges and the times of flight, with the tangents of the elevation.

‘ But such experiments and enquiries as these, unfortunately, it is no longer in my power either to procure, or by any means to promote ; and

we can, therefore, only endeavour to render, without them, what service we can to the state, and to philosophy, by such means as are in our power.

‘There are some few theoretical principles which it may be useful to notice here, as first mentioned by professor Robison. Thus bajls of equal density, discharged at the same elevation with velocities which are proportional to the square roots of their diameters, will describe similar curves ; because then the resistances will be in proportion as the momentum or quantity of motion. For the resistance r is d1 v* nearly ; d being the diameter, and v the velocity. But v being as ––/ d, ua will be as d; consequently d* v2 will be as d? ; that is, r is as ––.*. But the momentum is as the magnitude or mass, which is as tP also, the cube of the diameter. Therefore the resistance is proportional to the momentum, when the velocity is as ˆ/ d, or the square root of the diameter of the ball. In this case, then, the horizontal velocity at the vertex of the curve will be proportional to the terminal velocity ; also the ranges, and heights, and all other similar lines in the curve, will be proportional to d, the diameter of the ball. And this principle may be of considerable use ; for thus, by means of a proper series of experiments on one ball, projected with different velocities and elevations, tables may be constructed, by which may be ascertained the motions in all similar cases.’

We shall have occasion to ad vert again to these valuable contributions of Dr. Hutton.

PART II.

OF THE PRACTICE OF GUNNERY, OR MILITARY PROJECTILES.

Having laid before our readers the substance of the latest and most inproved theories of projectiles, we proceed to give them a brief sketch of the most improved modern practice.

Mr. Robins, in his preface to his New Principles of Gunnery, states that he had met with only four authors who had treated experimentally on this subject. The first of these is Collado in 164$?, who has given the ranges of a falconet, carrying a three-pound shot, to every point of the gunner's quadrant, each point being the twelfth part, or 7►► 30'. But from his numbers it is manifest that the piece was not charged with its usual allotment of powder. The result of his trials shows the ranges at the point-blanc, and the several points of elevations as below.

Elevation

at

Range in

Points.

Deg.

paces.

0 or

0 .

. 268

1

7J .

. 594

2

15 .

. 794

3

22J .

. 954

4

30 .

. 1010

5

37| ###

. 1040

6

45 .

. 1053

7

52* .

. between the 3d and 4th

8

60 .

. between the 2d and 3d

9

67* .

. between the 1st and 2d

10

75 .

. between the 0 and 1st

821 ###

. fell very near the piece.

The next was by Wm. Bourne, in 1643, in his Art of Shooting in great Ordnance. His elevations were not regulated by the point; of the gunner's quadrant, but by degrees ; and he gives the proportions between the ranges at different elevations and the extent of the point-blanc shot, thus : if the extent of the point-blanc shot be represented by one, then the proportions of the ranges at several elevations will be as below *viz.* ###

BOURNE'S PROPORTION OF RANGES. Elevation. Ranee.

0## .... l 5 . ... . 2jj

10 ...,.., . 3i

15 >; ... 4| 20 ... . 4f

and the greatest random 5## ; which greatest random, he says, in a calm day is at 42## elevation ; but according to the strength of the wind, and as it favors or opposes the flight of the shot, the elevation may be from 43## to 36##. He does not say with what piece he made his trials, though from his proportion it seems to have been a small one. This however ought to have been mentioned, as the relation between the extent of different ranges varies extremely according to the velocity and density of the bullet.

After him Eldred and Anderson, both Englishmen, also published treatises on this subject. The former of these was many years gunner of Dover Castle, where most of his experiments were made, the earliest of which are dated 1611, though his book was not published till 1646, and was entitled The Gunner's Glass. His principles were simple, and within certain limits very near the truth, though they were not rigorously so. He has given the actual ranges of different pieces of artillery at small elevations, all under 10##. His experiments are numerous, and appear to be made with great care and caution ; and he has honestly set down some which were not reconcileable to his tnethod : upon the whoie he seems to have taken more pains, and to have had a juster knowledge of his business than is to be found in most of his practical brethren.

Galileo printed his Dialogues on Motion in the year 1646. In these he pointed out the general laws observed by nature in the production and composition of motion, and was the first who described the actions and effects of gravity on falling bodies : on these principles he determined that the flight of a cannon-shot, or of any othe ‘ projectile, would be in the curve of a parabola, unless so far as it should be diverted from that track by the resistance of the air. He also proposed the means of examining the inequalities which arise thence, and of discovering what sensible effects that resistance would produce in the motion of a bullet at some given distance from the piece. Notwithstanding these determinations and hints it seems, however, that those who came after Galileo never imagined that it was necessary to consider how far the operations of gunnery were affected by this resistance. Instead of this, they boldly asserted, without making the experiment, that no great variation could

rise from the resistance of the air in the flight of shells or cannon-shot. In this persuasion they supported themselves chiefly by considering the extreme rarity of the air, compared with those dense and ponderous bodies ; and at last it be-came an almost generally established maxim that the flight of these bodies was nearly in the curve of a parabola.

After the publication of Newton’s Principia it might have been expected that the defects of the theory would be ascribed to their true cause, the great resistance of the air to such swift motions; as in that work he particularly considered the subject of such motions, and related the result of experiments made on slow motions at least ; by which it appeared that in such motions the resistance increases as the square of the velocities, and he even hints a suspicion that it will increase above that law in swifter motions, as is now known to be the case. So far, however, were those who treated this subject scientifically from making a proper allowance for the resistance of the atmosphere that they still neglected it, or rather opposed it, and their theories accordingly differed most egregiously from the truth.

Huygens alone seems to have attended to this principle; for in the year 1590 he published a treatise on gravity, in which he gave an account of some experiments tending to prove that the track of all projectiles, moving with very swift motions, was widely different from that of a parabola. The rest of the learned generally acquiesced in the justness and sufficiency of Galileo's doctrine. Nor was any farther notice taken of these errors till the year 1716, at which time Mr. Ressons, a French officer of artillery, of great merit and experience, gave in a memoir to the Royal Academy, importing that, 'although it was agreed that theory joined with practice did constitute the perfection of every art, yet experience had taught him that theory was of very little service in the use of mortars : that the works of M. Blondell had justly enough described the several parabolic lines according to the different degrees of the elevation of the piece : but that practice had con-rinoed him there was no theory in the effect of gunpowder ; for having endeavoured, with the greatest precision, to point a mortar according to these calculations, he had never been able to establish any solid foundation upon them. ' One instance only occurs, in which D. Bernouill applies the doctrine of Newton to the motions of projectiles, in the Com. Acad. Petrop. torn. ii. p. 338, &c. Besides which nothing farther was done in this business till the time of Robins, who published a treatise in 1742, intitled New Principles of Gunnery, in which he treated particularly not only of the resistance of the atmosphere, but also of the force of gunpowder, the nature and effects of different guns, and almost every thing else relating to the flight of military projectiles; and indeed he carried the theory of gunnery nearly to its utmost perfection.

The first thing considered by Mr. Robins, and which is indeed the foundation of all other particulars relating to gunnery, is the explosive force of gunpowder M. de la Hire, in his History of the Academy of Sciences for the year 1702, supposed that this force may be owing to the in-

creased elasticity of the air contained in and between the grains, in consequence of the heat ana fire produced at the time of the explosion : a cause not adequate to the 200th part of the ef-fect. On the other hand, Mr. Robins determined, by irrefragable experiments, that this force was owing to an elastic fluid similar to our atmosphere, existing in the powder in an extremely condensed state, which being suddenly freed from the powder, by the combustion, expanded with an amazing force, and violently impelled the bullet, or whatever might oppose its expansion.

The intensity of this force of exploded gunpowder Mr. Robins ascertained in different ways, after the example of Mr. Ilawkesbee, related in the Philosophical Transactions, No. 295, and in his Physico-Mechanical Experiments, p. 81. One of these is by firing the powder in the air thus : ††† A small quantity of the powder is placed in the upper part of a glass tube, and the lower part of the tube is immerged in water, the water being made to rise so near the top that only a small portion of air is left in that part where the powder is placed ; then in this situation, the communication between the upper part of the tube and the external air being closed, the powder is fired by means of a burning glass, or otherwise; the water descends upon the explosion, and stands lower in the tube than before, by a space proportioned to the quantity of pow-der fired. Another way was by firing the powder in vacuo, *viz.* in an exhausted receiver, by dropping the grains of powder upon a hot iron included in the receiver. By this means a permanent elastic fluid was generated from the fired powder, and the quantity of it was always in proportion to the quantity of powder that was used, as was found by the proportional sinking of the mercurial gauge annexed to the air-pump. The result of these experiments was, that the weight of the elastic air thus generated was equal to three-tenths of the compound mass of the gunpowder which yielded it, and that its bulk when cold, and expanded to the rarity of the common air, was about 240 times the bulk of the powder; and consequently in the same proportion would such fluid at first, if it were cold, exceed the force or elasticity of the atmosphere. But as Mr. Robins found, by another ingenious experiment, that air heated to the extreme degree of the white heat of iron has its elasticity quadrupled, or is four times as strong, he thence inferred that the force of the elastic air generated as above, at the moment of the explosion, is at least four times 240, or 960, or, in round numbers, about 1000 times as strong as the elasticity or pressure of the atmosphere on the same space.

Having thus determined the force of the gunpowder, or intensity of the agent by which the projectile is to be urged, Mr. Robins proceeded to determine the effects it will produce, or the velocity with which it will impel a shot of a given weight from a piece of ordnance of given dimensions ; which is a problem strictly limited and perfectly soluble by mathematical rules, and is in general this : ††† Given the first force, and thn law of its variation, to determine the velocity with which it will impel a given body, in passing

through a given space, which is the length of the bore of the gun. In the solution of this problem Mr. Rebins assumes these two postulates, *viz.* 1. That the action of the powder on the bullet ceases as soon as the bullet is out of the piece ; and 2d. That all the powder of the charge is fired and converted into elastic fluid before the bullet is sensibly moved from its place : assumptions which for good reasons are found to be in many cases very near the truth. It is to be noted also, that the law by which the force of the elastic fluid varies is this, *viz.* that its intensity is directly as its density, or reciprocally proportional to the space it occupies, being so much the stronger as the space is less: a principle well known, and common to all elastic fluids. Upon these principles, then, Mr. Robins resolves this problem, by means of the thirty-ninth proposition of Newton's Prtncipia, in a direct way, and the result is equivalent to this theorem, when the quantities are expressed by algebraic symbols ; *viz.* the velocity of the ball.

cd

/223 ad? b

01 = 100V X log. - ;

w a

where v is the velocity of the ball, a the length of the charge of powder, b the whole length of the bore, c the specific gravity of the ball, or weight of a cubic foot of the same matter in ounces, d the diameter of the bore, w the weight of the ball in ounces.

For example, suppose a *2jj inches, b ††† 45 inches, c* 11345 ozs. for a ball of lead, and

/' 7 120

</n finch; then ????? 271 30\/ ??? xlog. ???

2269 7

= 1674 feet per second, the velocity of the ball.

Or, if the weight of the bullet be w = 1 ??? ozs. = E ozs. Then v = 100

/1115 X 189 .120 . .

V 29X32 Xl0g” T =1674 feCl’ aS ˆ fore.

‘ Having in this proposition,’ says Mr. Robins, ‘ shown how the velocity which any bullet acquires from the force of powder may be computed upon the principles of the theory laid down in the preceding propositions, we shall next show that the actual velocities with which bullets of different magnitudes are impelled from different pieces, with different quantities of powder, are really the same with the velocities assigned by these computations, and consequently that this theory of the force of powder, here delivered, does unquestionably ascertain the true action and modification of this enormous power.

‘ But, in order to compare the velocities communicated to bullets by the explosion with the velocities resulting from the theory by computation, it is necessary that the actual velocities with which bullets move should be capable of being discovered, which yet is impossible to be done by any methods hitherto made public. The only means hitherto practised by others for that purpose have been either by observing the time of VOL. XVIII.

the right of the shot through a given space, or by measuring the range of the shot at a given elevation, and thence computing on the parabolic hypothesis what velocity would produce this range. The first method labors under this insurmount-able difficulty, that the velocities of these bodies are often so swift, and consequently the time observed is so short, that an imperceptible error in that time may occasion an error in the velocity thus found of 200, 300, 400, 500, or 600 feet in a second. The other method is so fallacious, by reason of the resistance of the air (to which inequality the first is also liable), that the velocities thus assigned may not be perhaps the tenth part of

the actual velocities sought.

‘ To remedy then these inconveniences, I have invented a new method of finding the real velocities of bullets of all kinds ; and this to such a degree of exactness (wh;oh may be augmented too at pleasure) that in a bullet moving with the velocity of 1700 feet in a second, the error in the estimation of it need never amount to its 500th part ; and this without any extraordinary nicety in the construction of the machine.’

Mr. Robins then gives an account of the machine by which he measures the velocities of the balls, which machine is simply this : *viz.* a pendulous block of wood suspended freely by a horizontal axisr against which block are to be fired the balls whose velocities are to be determined.

‘This instrument thus fitted, if the weight of the pendulum be known, and likewise the respective distances of Us centre of gravity and of its centre of oscillation from its axis of suspension, it will thence be known what motion will be communicated to this pendulum by the percussion of a body of a known weight moving with a known degree of celerity, and striking it in a given point; that is, if the pendulum be supposed at rest before the percussion it will be known what vibration it ought to make in consequence of such a determined blow ; and, on the contrary, if the pendulum, being at rest, is struck by a body of a known weight, and the vibration which the pendulum makes after the blow is known, the velocity of the striking body may thence be determined.

‘ Hence then, if a bullet of a known weigh; strikes the pendulum, and the vibration which the pendulum makes in consequence of the stroke be ascertained, the velocity with which the ball moved i”s thence to be known.’

Our author then explains his method of computing velocities from experiments with this machine ; which method is rathei troublesome and perplexed, as well as the rules of Euler and Antoni, who followed him in this business ; but a much plainer rule is given in Hutton’s Tracts, vol. i. p. 119, where such experiments are explained at full length, and this rule is expressed by either of the two following formulas,

v = 5‘6727cg X - = 614-58fg xfi

bir oirn

the velocity; where v denotes the velocity of the ball when it strikes the pendulum, p the weight of the pendulum, b the weight of the ball, c the chord of the arc described by the vibration to the

M

radius/r-g the distance below the axis of motion to the centre of gravity, o the distance to the cen-tre of oscillation, t the distance to the point of impact, and n the number of oscillations the pendulum will perform in one minute, when made to oscillate in small arcs. The latter of these two theorems is much the easiest, both because it-is free of radicals, and because tta value of the radical ˆo, in the former, is to be first computed from the number n, or number of oscillations the pendulum is observed to make. With such machines Mr. Robins made a great number of experiments with musket barrels of
ِ different lengths, with balls of various weights, and with different charges or quantities of pow- ॡ der. He has set down the results of sixty-one of these experiments, which nearly agree with the corresponding velocities as computed by his theory of the force of powder, and which therefore establish that theory on a sure foundation.

From these experiments, as well as from the preceding theory, many important conclusions were deduced by Mr. Robins ; and indeed, by means of these, it is obvious that every thing may be determined relative both to the true the-ory of projectiles, and to the practice of artillery; for, by firing a piece of ordnance charged in a similar manner against such a ballistic pendulum from different distances, the velocity lost by passing through such spaces of air will be found, and consequently the resistance of the air, the only circumstance that was wanting to complete the theory of gunnery or military projectiles; and of this kind Dr. Hutton made a great number of experiments with cannon balls, and has thereby obtained the whole series of resistances to such a ball when moving with every degree of velocity, from 0 up to 2000 feet per second of time. In the structure of artillery they may likewise be of the greatest use ; for hence may be determined the best lengths of guns ; the proportions of the shot and powder to the several

lengths ; the thickness of a piece, so as it may be able to confine, without bursting, any given charge of powder ; as also the effect of wads, chambers, placing of the vent, ramming the .powder, &c. For the many other curious circumstances relating to this subject, and the various other improvements in the theory and practise of gunnery made by Mr. Ro-bins, consult the first volume of his Tracts, collected and published by Dr. Wilson in the year 1761, where ample information may be found.

In the year 1755, says Dr. Hutton, in conjunction with several able officers of the royal artillery and other ingenious gentlemen, I undertook a course of experiments with the ballistic pendulum, in which we ventured to extend the machinery to cannon shot of one, two, and three pounds weight. An account of these experiments was published in the Philosophical Transactions for 1778; and for which the Royal Society honored me with the prize of the gold medal. These were the only experiments that I know of which ha& been made with cannon balls for this purpose, although the conclusions to be deduced from such are of the greatest importance to those parts of natural philosophy which are dependent on the effects of fired gunpowder : nor do I know of any other practical method of ascertaining the

initial velocities within any tolerable degree of truth. The knowledge of this velocity is of the utmost comsequence in gunnery ; by means of it, together with the law of the resistance of the medium, every thing is determinable relative to that business ; for, besides its being an excellent method of trying the strength of different sorts of powder, it gives us the law relative to the different quantities of powder, to the different weights of shot, and to the different lengths and sizes of guns. Besides these, there does not seem to be any thing wanting to answer any enquiry that can be made concerning the fluht and ranges of shots except the effects arising from the resistance of the medium. In these experiments the weights of the pendulums employed were from 300 to nearly 600 pounds. In that paper is described the method of constructing the machines, of finding the centres of gravity and oscillation of the pendulum, and of making the experiments, which are all set down in the form of a journal, with all the minute and concomitant circumstances; also the investigation of the new and easy rule set down just above, fcr computing the velocity of the ball from the experiments. The charges of powder were varied from two to eight ounces, and the shot from one to nearly three pounds. And from the whole were clearly deduced the inferences we have already given.

In the year 1786 was published the first vo-lume of Dr. Button's Tracts, in which is detailed, at great length, another very extensive course of experiments which were carried on at Woolwich in the years 1783, 1784, and 1785, by order of the duke of Richmond, master general of the ordnance. The objects of this course \ve have also enumerated in the theoretic part of thir treatise.

These objects were obtained in a very perfect and accurate manner; excepting only the article of ranges, which were not quite so regular 'and uniform as might be wished. The balls too were most of them of one pound weight ; but the pow-der was increased from one ounce up till the bore was quite full, and the pendulum was from 600 to 800 Ibs. weight. The conclusions from the whole were as follow : ???

'1. That the former law, between the charge and velocity of ball, is again confirmed, *viz.* that the velocity is directly as the square root of the weight of powder, as far as to about the charge of eight ounces : and so it would continue for all charges, were the guns of an indefinite length. But as the length of the charge is increased, and bears a more considerable proportion to the length of the bore, the velocity falls the more short of that proportion.

' 2. That the velocity of the ball increases with the charge to a certain point, which is peculiar to each gun, where it i# greatest ; and that, by farther increasing the charge, the velocity gradually diminishes till the bore is quite full of powder. That this charge for the greatest velocity is greater as the gun is longer, but not greater however in so high a proportion as the length of the gun is ; so that the part of the bore filled with powder bears a less proportion to the whole in the long guns, than it does in the short ones;

the part of the whole which is filled being indeed nearly in the reciprocal subduplicate ratio of the length of the empty part. And the other circumstances are as in this table.

TABLE of Charges producing the greatest Velocity.

jGun.

Length of

Length

Part of the

Weight of

.mm.

the bore.

filled.

whole.

the powder

inches.

inches.

oz.

1

28-2

8-2

A

12

2

38-1

9-5

3 12

14

3

57-4

10-7

16

16

4

79-9

12-1

A

18

‘ 3. It appears that the velocity continually increases as the gun is longer, though the increase in velocity is but very small in respect of the in-i.rease in length, the velocities being in a ratio somewhat less than that of the square roots of the length of the bore, but somewhat greater than that of the cube roots of the length, and is indeed nearly in the middle ratio between the two.

‘4. The range increases in a much less ratio than the velocity, and indeed is nearly as the square root of the velocity, the gun and elevation being the same. And, when this is compared with the property of the velocity and length of yun in the foregoing paragraph, we perceive that very little is gained in the range by a great increase in the length of the gun, the charge being the same. And indeed the range is nearly as the fifth root of the length of the bore, which is so small an increase as to amount only to about one-seventh part more

range for a double length of gun.

‘ 5. It also appears that the time of the ball’s flight is nearly as the range ; the gun and elevation being the same.

‘ 6. It appears that there is no sensible difference caused in the velocity or range, by varying the weight of the gun, nor by the use of wads, nor by different degrees of ramming, nor by firing the charge of powder in different parts of it.

‘ 7. But a great difference in the velocity arises from a small degree of windage. Indeed with the usual established windage only, namely, about one-twentieth of the calibre, no less than between one-third and one-fourth of the powder escapes and is lost. And, as the balls are often smaller than that size, it frequently happens that half the powder is lost by unnecessary windage.

‘ 8. It appears that the resisting force of wood to balls fired into it is not constant. And that the depths penetrated by different velocities or charges are nearly as the logarithms of the charges; instead of being as the charges themselves, or, which is the same thing, as the square of the velocity.

‘ 9. These and most other experiments show that balls are greatly deflected from the direction they are projected in ; and that so much as 300 or 400 yards in a range of a mile, or almost one-fourth of the range, which is nearly a deflection of an angle of 15□□.

‘ 10. Finally, these experiments furnish us with the following concomitant data, to a tolerable de-gree of accuracy, namely, the dimensions and

elevation of the gun, the weight and dimensions of the powder and shot, with the range and time of flight, and the first velocity of the ball. From which it is to be hoped that the measure of the resistance of the air to projectiles may be determined, and thereby lay the foundation for a true and practical system of gunnery, which may be as well useful in service as in theory.’

‘Since the publication of those Tracts,’ says Dr. Hutton, ‘ we have prosecuted the experiments still farther from year to year, gradually extending our aim to more objects, and enlarging the guns and machinery, till we have arrived at experiments with the six-pounder guns, and pendulums of 1800 Ibs. weight. One of the new objects of

enquiry was the resistance the. atmosphere makes to military projectiles; to obtain which the guns have been placed at many different distances from the pendulum, against which they are fired, to get the velocity lost in passing through those spaces of air; by which, and the use of the whirling machine, described near the end of the first volume of Robins's Tracts, for the slower motions, I have investigated the resistance of the air to given balls moving with all degrees of velocity from 0 up to 2000 feet per second ; as well as the resistance for many degrees of velocity to planes and figures of other shapes, and inclined to their path in all varieties of angles; from which I have deduced general laws and formulas for all such motions.

' Mr. Robins made also similar experiments on the resistance of the air, but being only with musket bullets, on account of their smallness and of their change of figure by the explosion of the powder, I find they are very inaccurate, and considerably different from those above mentioned, which were accurately made with pretty considerable cannon balls of iron. For this reason we may omit here the rules and theory deduced from them by Mr. Robins, till others more correct shall have been established. All these experiments indeed agree in evincing the very enormous resistance the air makes to the swift motions of military projectiles, amounting in some cases to twenty or thirty times the weight of the ball itself; on which account the common rules for projectiles deduced from the parabolic theory are of little or no use in real practice ; for from these experiments it is clearly proved that the track described by the flight even of the heaviest shot is neither a parabola, nor yet approaching any thing near it, except when they are projected with very small velocities ; insomuch that some balls, which in the air range only to the distance of one mile, would in vacuo, when projected with the same velocity, range above ten or twenty times as far.'

Mr. Benjamin Thompson (the late count Rum-ford) instituted a very considerable course of experiments of the same kind as those of Mr. Robins, with musket barrels, which was published in the Philosophical Transactions, vol.71, for the year 1781. In these experiments the conclusions of Mr. Robins are generally confirmed, and several other curious circumstances in this business are remarked by Mr. Thompson. This gentleman also pursues a hint thrown out by Mr. Robins, relative to the determining the velocity of

a ball from the recoil ot the pendulous gun itself. Mr. Robins, in the eleventh proposition, remarks, that the effect of the exploded powder upon the recoil of a gun is the same whether the gun is charged with or without a ball ; and that the chord OT velocity of recoil with the powder alone, being Kubstracted from that of the recoil when charged with both powder and ball, leaves the velocity which is due to the ball alone. Thence Mr. Thompson observes that the inference is obvious, *viz.* that the momentum thus communicated to the gun by the ball alone, being equal to the momentum of the ball, this becomes known ; and therefore, being divided by the known weight of the ball, the quotient will be its velocity. Mr. Thompson sets a great value on this new rule, the velocities by means of which he found to agree nearly with several of those deduced from the motion of the pendulum; and in the other jases, in which they differed greatly from these, ie very inconsistently supposes that these latter Jnes are erroneous. In the experiments, however, contained in Dr. Hutton's Tracts, a great multitude of those cases are compared together, and the inaccuracy of that new rule is fully proved. Having in the ninth proposition compared together a numher of computed and experimented velocities of balls to verify his theory; Mr. Robins, in the tenth proposition, assigns the changes in the force of powder, which arise from the different state of the atmosphere, as to heat and moisture, both which he finds have some ef-fect on it, but especially the latter. In the eleventh proposition he investigates the velocity which the flame of gunpowder acquires by expanding itself, supposing it fired in a given piece of artillery, without either a bullet or any other body before it. This velocity he finds is upwards of 7000 feet per second. But the celebrated Euler, in his commentary on this part of Mr. Robins's book, thinks it may be still much greater, and in this proposition too it is that Mr. Robins declares his opinion above alluded to, *viz.* that the effect of the powder upon the recoil of the gun is the same in all cases whether fired with a ball or without one. In the twelfth proposition he ascertains the manner in which the flame of powder impels a ball which is laid at a considerable distance from the charge; showing here that the sudden accumulation and density of the fluid against the ball is the reason that the barrel is so often burst in those cases. In the thirteenth proposition he enumerates the various

kinds of powder, and describes the properest methods of examining its goodness. He here shows that the best proportion of the ingredients is when the saltpetre is three-fourths of the whole compound mass of the powder, and the sulphur and charcoal the other one-fourth between them, in equal quantities. In this proposition Mr. Robins takes occasion to remark upon the use of eprouvettes, or methods of trying powder ; condemning the practice of the English in using what is called the vertical eprouvette ; as well as that of the French, in using a small mortar with a very large ball, and a small charge of powder, and instead of these he strongly recommends the use of his ballistic pendulum for its great accuracy. But for still more despatch, he says, he should use another method, which however he

reserves to himself without giving any particular description of it.

The other, or second chapter of Mr. Robins's work, in eight propositions, treats ' of the resistance of the air, and of the track described by the flight of shot and shells.' And of these, the first proposition describes the general principles of the resistance of fluids to solid bodies moving in them. Here Mr. Robins discriminates between continued and compressed fluids, which immediately rush into the space quitted by a body in them, and whose parts yield to the impulse of the body without condensing and accumulating before it ; and such fluids as are imperfectly compressed, rushing into a void space, with a limited velocity, as in the case of our atmosphere, which condenses more and more before the ball as this moves quicker, and also presses the less behind it, by following it always with only a given velocity : hence it happens that the former fluid will resist moving bodies in proportion to the square of the velocity, while the latter resists in a higher proportion. The second proposition is ' to determine the resistance of the air to projectiles by experiments.' One of the methods for this purpose is by the ballistic pendulum, placing the gun at different distances from it, by which he finds the velocity lost in passing through certain spaces of air, and consequently the force of resistance to such velocities as the body moves with in the several parts of its path. And another way was by firing balls with a known given velocity, over a large piece of water, in which the fall and plunge of the ball could be seen, and consequently the space it passed over in a given time. By these means Mr. Robins determined the resistance of the air to several different velocities, alt which showed that there was a gradual increase of the resistance, over the law of the square of the velocity, as the body moved quicker. In the remaining propositions of this chapter he proceeds a little farther in this subject

of the resistance of the air ; in which he lays down a rule for the proportion of the resistance between two assigned velocities ; and he shows that when a twenty-four pound ball, fired with its full charge of powder, first issues from the piece, the resistance it meets with from the air is more than twenty times its weight. He farther shows that the track described by the flight of shot or shells is neither a parabola, nor nearly a parabola, unless they are projected with small velocities ; and that ‘ bullets in their flight are not only depressed beneath their original direction, by the action of gravity, but are also frequently driven to the right or left of that direction by the action of some other force:’ and, in die eighth or last proposition, he pretends to show that the depths of penetration of balls into firm substances are as the squares of the velocities. But this is a mistake ; for neither does it appear that his trials were sufficiently numerous or various, nor were his small leaden balls fit for this purpose ; and it has appeared, from a number of trials with iron cannon balls, that the penetrations are in a much lower proportion, and that the resisting force of wood is not uniform. See Dr. Hutton’s Tracts.

In the small tracts appended to the principles, in this volume. Mr. Robins piosecutes the sub-

ject of the resistance of the air much farther, and lays down rules for computing ranges made in the ai*. But these must be far from accurate, as they are founded on the two following principles, which are known, from numerous experiments, to be erroneous: *viz.* 1st, ‘ that till the velocity of the projectile surpasses that of 1100 feet in a second, the resistance may be esteemed to be in the duplicate proportion of the velocity. 2d, That if the velocity be greater than that of 1100 or 1200 feet in a second, then the absolute quantity of that resistance in these greater velocities will be near three times as great as it should be by a comparison with the smaller velocities.’ For instead of leaping at once from the law of the square of the velocities, and ever after being about three times as much, experiments prove that the increase of the resistance above the law of the square of the

velocity takes place at first in the smallest motions, and increases gradually more and more, to a certain point, but never rises so high as to be three limes that quantity, after which it decreases again. To Fender this evident, Dr. Hutton has inserted the following table of the actual quantities of resistances, which are deduced from accurate experiments, and which show also the nature of the law of the variations by means of the columns of differences annexed, reserving the detail of the experiments themselves to another occasion. These resistances are, upon a ball of 19-65 inches in diameter, in avoirdupois ounces, and are for all velocities from 0 up to that of 2000 feet per second of time.

The quantity of the resistance of the air to a ball of 1-965 inches in diameter.

Veloc. in feet.

Resist, in 1st. Dif-ounces. ferences.

2d. Differences.

0

0/000

K

0-‘006

10

0-025

15

0-054

20

o-ioo

25

0-155

30

0-23

40

0-42

50

0-67

100

2|

*J

5|

200

11

14

6

300

25

7

400

45

27

8

500

72

35

9

600

107

44

10

700

151

54

12

800

205

66

13

900

271

79

13

1000

350

92

12

1100

442

104

11

1200

546

115

9

1300

661

124

7

1400

785

131

4

1500

916

135

0

1600

1051

135

2

1700

1186

133

5

1800

1319

128

6

1900 1 1 447

122

JOOO ; 1560

1

If the terms of any arithmetical series be squared, the second differences will be equal : hence this table proves the truth of the former' part of Dr. Mutton's assertion. The additional tracts of Mr. Robins, in the latter part of this vo-lume, which contain many useful and important matters, are numbered and titled as follows, *viz.* Number 1, ' Of the resistance of the air. Num-ber 2, Of the resistance of the air ; together with the method of computing the motions of bodies projected in that medium. Number 3, An Account of the experiments relating to the resistance of the air; exhibited at different times before the Royal Society, in the year 1746. Number 4, Of the force of fired gunpowder, together with the computation of the velocities thereby communicated to military projectiles. Number 5, A comparison of the experimental ranges of can-non and mortars, with the theory contained in the preceding papers. Practical maxims relating to the effects and management of artillery, and the flight of shells and shot. A proposal for increasing the strength of the British navy, by changing all the guns, from the eighteen-pounders downwards, into others of equal weight, but of a greater bore.' With several letters, and other papers, ' On pointing, or the directing of the can-non to strike distant objects ; Of the nature and advantage of rifled barrel pieces,' &c.

' I have,' continues Dr. Hutton, ' dwelt thus long on Mr. Robins's New Principles of Gunnery, because it is the first work that can be considered as attempting to establish a practical system of gunnery, and projectiles, on good experiments, on the force of gunpowder, on the resistance of the air, and on the effects of different pieces of artillery. Those experiments are not however sufficiently perfect, both on account of the smallness of the bullets, and for want of good ranges to form a proper theory upon. I have supplied some of the necessary desiderata for this purpose, *viz.* the resistance of the air to cannon balls moving with all degrees of velocity, and the velocities

communicated by given charges of powder, to different balls, and from different pieces of artillery. But there are still wanting good experiments with different pieces of ordnance, giving the ranges and times of flight, with all varieties of charges, and at all different an-gles of elevation. A few, however, of those I have obtained, as in the following small table, which are derived from experiments made with a medium one-pounder gun, the iron ball being nearly two inches in diameter: ???

Powder.

Elevation of gun.

Velocity of ball.

Range.

Time of flight.

oz.

2

o

15

feet.

860

feet.

4100

9

4

1 ###

1230

5100

12

8

15

1640

6600

14J

12

15

1680

6700

15$

2

45

860

5100

21

Dr. Mutton’s second set of experiments were made with four bras? guns very nicely bored and cast on purpose, of different lengths, but

regular in all other respects, *viz.* of weight and bore.

The lengths of the bores of the guns were.

No. 1, 15 calibres, length of bore 28-5 inches.

2, 20 calibres . . 38-4

3, 30 calibres . . 57-7

4, 40 calibres . . 80-2

the calibre of each being 2ˆ5 inches, and the me-dium weight of the balls 16 oz. 13 dr.

The mediums of all the experimental velocities of the balls, with which they struck the pendulous block of wood, placed at the distance of thirty-two feet from the muzzle of the gun, for several charges of powder, were as in the following table,

TABLE OF INITIAL VELOCITIES.

increase with the charges of powder for each gun, and also how they increase as the guns are longer, with the same charge, in every instance.

By increasing the quantity ot the charges continually, for each gun, it was found that the velocities continued to increase till they arrived at a certain degree, different in each gun ; after which they constantly decreased again, till the bore was quite filled with the charge. The charges of powder when the velocities arrived at their maximum or greatest state were variousr as might be expected, according to the lengths of the guns ; and the weight of powder, with the length it extended in the bore, and the fractional part of the bore it occupied, are shown in the following table, of the charges for the greatest effect

: ◆◆◆

Powder.

The guns.

oz.

No. 1.

No. 2.

No. 3

No. 4

2

780

835

920

970

4

1100

1180

1300

1370

6

1340

1445

15.90

1680

8

1430

1580

1790

1940

12

1436

1640

14

1660

16

2000

18

2200

Gun, No.

Length of the bore.

The charge

Weight, oz.

Length.

Inches.

Part of whole

1 2

28-5 38-4

12 14

8-2 9-5

$

3

4

57-7 80-2

16 18

10-7 12-1

ft

3

m

placed in the first column, for all the four guns, the numbers denoting so many feet per second. Whence in general it appears how the velocities

Of the few experiments in this course made tc obtain the ranges and times of flight, the mediums are exhibited in the following table: ⬛⬛⬛

Guns.

Pow-der.

Balls.

Ekvat. gun.

Time of flight.

Range.

First vek)’ city.

Weight.

Diam.

oz.

oz. dr.

inch.

0

sees.

feet.

feet.

No. 2.

2

16 10

1-96

45

21-2

5109

863

ditto.

2

16 5

1-96

15

9-2

4130

868

ditto.

4

16 8

1-96

15

9-2

4660

1234

ditto.

8

16 12

1[illegible]96

15

14-4

6066

1644

ditto.

12

16 12

1-95

15

15-5

6700

1676

No. 3.

8

15 8

1-96

15

10-1

5610

1938

In this table are contained the following concomitant data, determined with a tolerable de-gree of precision ; *viz.* the weight of the powder, the weight and diameter of the ball, the initial or projectile velocity, the angle of elevation of the eun, the time in seconds of the ball's flight through the air, and its range, or the distance where it fell on the horizontal plane. From which it is hoped that some aid may be derived towards ascertaining the resistance of the me-dium, and its effects on other elevations, &c., and so afford some means of obtaining easy rules for the cases of practical gunnery ; though the completion of this enquiry, for want of time at present, must be referred to another work.

Another subject of enquiry, in the foregoing experiments, was, how far the balls would penetrate into solid blocks of elm wood, fired in the direction of the fibres. The following tablet shows the results of a few of the trials that were jss.de with the gun No. 2, with the most frequent

charges of two, four, and eight ounces of powder ; and the mediums of the penetrations, as placed in the last line, are found to be seven, fifteen, and twenty inches, with those charges. These penetrations are nearly as the numbers 2, 4, 6, or 1, 2, 3; but the charges of powder are as '2, 4, 8, or 1, 2, 4; so that the penetrations are proportional to the charges as far as to four ounces, but in a less ratio at three ounces ; whereas, by the theory of penetrations, the depths ought to be proportional to the charges, or, which is the same thing, as the squares of the velocities. So that it seems the resisting force of the wood is not uniformly or constantly the same, but that it increases a

little with the increased velocity of the ball. This may probably be occasioned by the greater quantity of fibres driven before the ball ; which may thus increase the spring and resistance of the wood, and prevent the ball from pe netrating so deep as it otherwise might do.

iPenetrations of balls into solid elm wood.

Powder 2

4

8 oz.

7

16-6 13-5

18-9 21-2 18-1 20-8 20-5

20

Means 7

15

The deductions and observations made on the former course are here

corroborated respecting the velocities and weights of the balls, &c. The velocity of the ball, however, increases with the increase of the charge only to a certain point peculiar to each gun, beyond which increase of the charge, the velocity of the ball diminishes till the bore is full of powder. That is to say, the velocity increases with the length of the gun, but not in equal proportion. The part filled with powder bears a less proportion to the whole bore in the long guns than in the shorter ones ; it is nearly in the inverse ratio of the square root of the empty part.

It appears that the velocity, with equal charges, always increases as the gun is longer ; though the increase in velocity is but very small in comparison to the increase in leng'h ; the velocities being in a ratio somewhat less than that of the square roots of the length of the bore, but greater than that of the cube roots of the same, and is indeed nearly in the middle ratio between the two.

It appears, from the table of ranges, that the range increases in a much lower ratio than the velocity, the gun and elevation being the same. And, when this is compared with the proportion of the velocity and length of gun in the last pa-

ragraph, it is evident that we gain extremely little-in the range by a great increase in the length of the gun, with the same charge of powder. In. fact, the range is nearly as the fifth root of; the length of the bore ; which is so small an increase, as to amount only to about a seventh part more range for a double length of gun. From the same table it also appears that the time of the ball's flight is nearly as the range ; the gun and elevation being the same.

It has been found, by these experiments, that no difference is caused in the velocity, or range/ by varying the weight of the gun, nor by the uso of wads, nor by different degrees of ramming, nor by firing the charge of powder in different parts of it. But that a very great difference in the velocity arises from a small degree in the windage ; indeed with the usual estahlished windage only, *viz.* about one-twentieth of the calibre, no less than between one-third and one-fourth of the powder escapes and is lost: and, as the balls are often smaller than the regulated size, it frequently happens that half the powder is lost by unnecessary windage.

It appears too that the resisting force of wood, to balls fired into it, is not constant : and that the depths penetrated by balls, with different

velocities or charges, are nearly as the logarithms of the charges, instead of being as the charges themselves, or, which is the same thing, as the square of the velocity. Lastly, these and most other experiments show, that balls are greatly deflected from the direction in which they are projected ; and that as much as 300 or 400 yards in a range of a mile, or almost one-fourth of the range.

A third series of experiments enabled this excellent mathematician to furnish. the three following tables of resistances, for three different sizes of balls, and for velocities between 100 feet and 2000 feet per second of time.

TABLE I.

TABLE II.

TABLE III.

Resistances to a ball 2-78

Resistances to a ball 3-55

Resistances to a ball of 1-965 inches

nches diameter, and 3 Ib.

nches diameter, and 6 Ib.

diameter, and 16oz. 13 dr. weight.

weight.

1 oz. 8 dr. weight.

Veloc.

Resistances.

Ist.Dif.

2d. Dif.

Veloc.

Res.

Difs.

Veloc,

Res.

Difs.

feet.

Ibs.

ozs.

feet.

Ibs.

feet.

Ibs.

100

0-17

2a

j

900

35

1200

115

200

0-69

II4

14

5J

950

41

6

1250

124

9 9

300

1-56

25

on

6

1000

47

1300

133

400

2-81

45

Seu

27

7

1050

53

7

1350

142

10

500

4-.50

72

35

8

100

60

I

7

1400

152

10

600 700

6-69 9-44

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1700

165

6

1800

82-44

1319

128

◆◆◆ 5

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5

1900

90-44

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122

◆◆◆ 6

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176

2000

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PROJECTILES.

It is remarkable thatj notwithstanding the decisive manner in which Dr. Hutton recommended the diminution of windage, it should not have been adopted in practice till very lately; and that in consequence principally of the representations of Sir Howard Douglas. This able officer, in part second of his Naval Gunnery, points out the extraordinary anomalies in the previously received system of windage, and expatiates with great good sense upon their prejudicial effects. He satisfactorily refutes the popular objections to any change, and then proceeds thus : ••• ‘ The preceding remarks on windage having been brought under the consideration of the master general of the ordnance in 1817, his lordship referred the paper to the consideration of a select committee of artillery officers, who stated in their report ‘ that they were very desirous that experiments should be made with a view to ascertain to what extent the benefits which I had anticipated could be realised.’ The committee, therefore, proposed to the master general to be permitted to make a course of experiments on this subject, commencing with field-artillery, and for that purpose recommended that a proportion of shot of various increased magnitudes should be provided. These measures having been approved, a course of experiments was instituted accordingly, ‘ founded upon the suggestions communicated by’ me.

‘ Having first adopted an opinion (asserted in my Observations, articles 49, 53), that the present mode of apportioning a part of the calibre is not so distinct and advantageous as a fixed quantum expressed in parts of inches for all natures (of ordnance), the

committee proceeded to determine what that quantum should be. After repeated trials with a six-pounder, a nine-pounder, and a twelve-pounder, at 300, 600, and 1200 yards, it was proved, ‘ that with charges of powder one-sixth less than usual, the larger shot and smaller windage produced rather the longest range.’ ‘ Recourse was also had to the ballistic pendulum, to discover the proportional excess of momentum of the larger balls over the smaller ; and the result, after a very satisfactory course of experiments, assisted by the scientific research and well known mathematical abilities of Dr. Gregory of the Royal Military Academy, corroborated the trials by ranges, leaving no doubt

of their accuracy. In consequence of these trials the committee fixed the quantity of windage for field-guns at one-tenth of an inch; the same which I had suggested.

‘ Now it is clear that this improvement may either be applied to save one-sixth part of the quantity of powder provided for field-service, without diminishing the power of range, and consequently to economise, without detriment, the means of transport for ammunition : or the alteration may be applied to produce longer ranges, if this be preferred to the economical consideration. This preference has very properly been given, and the established charges adhered to accordingly. A great collateral advantage has followed from this correction of windage. It was at first apprehended that the increased effects arising from the additional weight of shot and diminished windage would injure brass guns ; but it is quite the reverse. With the reduced quantum of windage guns are much less injured, and will last much longer than formerly; and this has been so well ascertained, that in consequence of this correction, it is now proposed to abandon the wooden bottoms to which shot were fixed for the purpose of saving the cylinder, substituting for them the paper cap taken off the end of the cartridge. This being

Sut over the ball is quite sufficient to keep it ###om rolling or shifting, whilst, by supporting or fixing it thus, the centre of the ball coincides with the axis of the cylinder, and the space for windage is reduced to a complete annulus, which admits of the percussion from the charge being equally received, and which prevents, or very much reduces, that injury or indentation which the cylinder receives when the ball touches it on the lower part only.’ ### Naval Gunnery, p. 82.

An abridged account of the experiments with the ballistic pendulum, to which Sir Howard Douglas refers, is given in Annales de Chimie et de Physique, tome ix. p. 289, &c. We shall transcribe the results of one day, May 19th, 1818. The day was dry, but cloudy ; the thermometer stood at 13-3 centigrade (56 Fahrenheit), the barometer at 29‘9 inches. The pendulum weighed 7008 pounds avoirdupois. The gun was a twelve-pounder ; its weight 2025 pounds ; its length 74-25 English inches; its calibre 4-62 inches. .

Number of the Experiments.

Weight of the Ball.

Diameter of the Ball.

Windage.

Charge of Powder.

Velocities obtained.

Ibs. oz. drs.

inches.

inch.

Ibs. oz. drs.

feet.

1

12 12 0

4-545

0-075

356

1548

2

12 12 7

4-54

0-080

356

1537

3

12 11 0

4-545

0-075

356

1588

4

12 10 1

4-54

0-080

356

1507

5

11 11 8

4-42

0-200

400

1572

6

11 10 4

4-418

0-202

400

1537

7

11 12 1

4-418

0-202

400

1563

8

11 12 1

4-418

0202

400

1529

1

Here it is evident that the velocity corresponding to a windage of 0-75, or fsths of an inch, is at a mean 1568 feet, rather exceeding 15oO feet, obtained when the windage was -20, or ,8Bths ;

though in the former case the charge was less by Jth part than the latter.

Assuming the correctness of the results, as tabulated above, we are by no means inclined to

agree with Sir Howard, however, in recommending an adherence to the established charges, *viz.* of a third of the weight of the ball, after the new rate of windage is completely adopted. Supposing that, caeteris paribus, the initial velocity varies as the square root of the charge, a four-pound charge with the new windage would propel a twelve-pound ball with an initial velocity of about 1720 feet, a velocity which would be very effective indeed if the ball were moving through a non-resisting medium, but which experiences a most rapid retardation as the projectile passes through the air. The experiments of

Dr. Hut-ton prove, not only that the resistance of the air becomes very enormous when the velocities ex-ceed 1300 feet, but that the law of the resistance no longer accords nearly with the square of the velocity, but, to be correctly exhibited, requires a higher exponent. The reason is very evident.

Woolwich experiments of 1817, and the result was uniformly and decidedly against the short guns. That additions to the length of the piece should occasion increased velocity of projection is obviously the joint effect of two causes. 1st, The expansive force of the inflamed gunpowder acts longer upon the ball in a long than in a short gun, and therefore communicates a greater velocity. 2dly, In short guns no small portion of the gunpowder is carried out of the muzzle without being at all inflamed. The lengths, however, must be limited by practical considerations, as well as by the theoretical ones deducible from our quotation a few pages back from Dr. Hutton.

Sir Howard Douglas, who has the happy faculty of confirming his theoretical positions by reference to historical facts, adduces some with a view to this question, which we make no ape—

1 t* ˆ ❓❓❓ < * t IT ❓❓❓ , t

Atmospheric air rushes into a vacuum with a logy for citing. ❓❓❓ ‘ Viewing the matter purely velocity of about 1346 feet per second, and it as an artillery question, there is no doubt that manifestly cannot make way for a ball moving preference should be given to long guns. As to

with a greater velocity than this without being condensed before it. In such cases, the air thus condensed in front of the ball, opposes its motion not only by a simple resistance, but by a force of elasticity proportional to the compression, and therefore rapidly increasing as the velocity of the projectile exceeds 1346 feet. This repulsion soon reduces the higher velocities of 1600 or 1700 feet to the limit of from 1350 to 1400, and consequently renders them of scarcely any use in either increasing the horizontal range, or the effective impetus of the ball, except at comparatively small distances from the mouth of the piece. This accords with the experience of our artillery officers when employed in Spain ; they found that balls fired with velocities of 1600

feet had scarcely any advantage over those propelled with velocities of 1400 in the destruction of distant objects.

Theorists have long known that the elastic force exerted by the air against small bodies, moving with considerable velocities, may become so great in proportion to the weight as not merely to destroy the motion communicated, but even to repel the bodies ; and this, indeed, is frequently experienced when small shot are thrown from a musket by large charges of pow-der, the shot being driven back in the contrary direction to that in which they were propelled. The same thing of course does not precisely happen in the practice of artillery ; but it is a fact strictly coincident with theory, that a smaller charge of powder, by giving the shot less initial velocity, will cause it to fly further than a greater charge, which would propel the ball with a velocity that exceeds a certain limit.

A military officer of some eminence, but defective, as we should conjecture, in mathematical knowledge, has recently proposed the use of short guns, especially in the service of the navy, strangely fancying that the loss of velocity and range, that would attend the shortening of the gun, would be more than compensated by some suggested peculiarities in the external configuration of the piece. This is utterly repugnant to correct theory, and we believe to correct practice also. The question was put to the test in the

its application to naval matters, I do not hesitate to recommend that a frigate which cannot carry eight feet twenty-four pounders, had better be fitted with long eighteen pounders, than with six feet or six feet and a half twenty-four pounders, or with any nature of carronade, exclusively. The very mortifying situation in which the gallant Sir James Yeo found himself in September, 1813, on Lake Ontario, shows the danger of the carronade system of armament. Sir James states, in his letter of the 12th of September, ‘ the enemy’s fleet of eleven sail, having a partial wind, succeeded in getting within range of their long twenty-four and thirty-two pounders ; and, having obtained the wind of us, I found it impossible to bring them to close action. We remained in this mortifying situation five hours, having only six guns in the fleet that would reach the enemy. Not a carronade was fired. At sun-set a breeze sprang up from the westward, when I manoeuvred to oblige the enemy to meet us on equal terms. This, however, he carefully avoided.’ ‘

‘ Captain Barclay states, in his letter of the 12th of September, 1813

:❓❓❓< The other brig of the enemy, apparently destined to engage the Queen Charlotte, supported in like manner by two schooners, kept so far to windward as to render the Queen Charlotte's twenty-four pounder corronades useless, whilst she and the Lady Prevost were exposed to a heavy and destructive fire from the Caledonian and four other schooners, armed with long and heavy guns.' '

Sir Howard next describes the action of the Phoebe with the American frigate Essex, as confirming the theoretical view of the business ; and adds : ❓❓❓ ' This brilliant affair, together with the preceding facts, cannot fail to dictate the necessity of abandoning a principle of armament exposed to such perils, and to teach the importance of adapting the tactics of an operation to the comparative natures and powers of arms.' ❓❓❓ ❓❓❓Naval Gunnery, p. 1 16.

On the whole, we trust we shall not be accused of any unworthy feeling, if we remark that all, or nearly all, which is truly valuable in this department of research has been the oroduce of

Britain. We have no wish to depreciate the labors of Bernouilli, Euler, and others, of whom we have already spoken in terras of commendation; and upon whose genius and attainments we often reflect with pleasure. Yet had it not been for the practical turn given to the investigation by Robins, and so incessantly kept in mind, and so skilfully and elaborately carried out to its professional applications by Dr. Hutton, the principles of gunnery would at this moment have been little better than a collection of barren speculative rules, calcxdated to mislead, rather than direct, the intelligent engineer.

In the notice we have taken of Robins's experiments, we do not perceive that we have described his celebrated ballistic pendulum. It consists of a large block of wood, annexed to the end of an iron stem, strongly framed, and capable of oscillating freely upon a horizontal axis. This machine being at rest, a piece of ordnance is pointed directly towards the face of the block, at any assigned distance, as twenty, thirty, forty, sixty, &c., feet, and then fired; the ball

discharged from the gun strikes and enters the block, communicating to it a velocity, which is to the velocity with which the ball was moving at the moment of. impact as the weight of the ball to the sum of the weights of ball and pendulum. Referring this velocity to the centre of oscillation of the pendulum, it will rise through an appreciable arc of vibration till such velocity is extinguished. The measure of that arc will lead to the determination of the velocity, because it is evidently equal to the velocity which a body would acquire by falling freely through the versed sine of the arc shown by the experiment.

Robins's largest ballistic pendulum weighed only ninety-seven pounds ; being employed to ascertain the velocities of balls weighing about an ounce each. The smallest pendulum constructed by Dr. Hutton weighed 600 pounds; and, as he pursued his experiments, the new pendulums were made successively larger and larger, till at last they reached the weight of about 2600 pounds. He also made several improvements in their construction, especially in their manner of suspension, and in that of measuring the semi-arc of vibration; employing this curious apparatus in ascertaining the velocities of balls varying in weight from one pound to six, and propelled with nearly all possible modifications of charge. It appears farther, from Annales de Chimie et de Physique, tome 5, that in recent experiments at Woolwich, conducted by Dr. Gregory and the select committee of artillery officers, a ballistic pendulum, weighing. 7400 pounds, was employed in determining the velocities of six, twelve, eighteen, and twenty-four pounders.

Of Rifled-barrelled Guns. ••• The greatest irregularities in the motion of bullets are owing to the whirling motion on their axis, acquired by the friction against the sides of the piece. The best method hitherto known of preventing these is by the use of pieces with rifled barrels. These pieces have the insides of their cylinders cut with spiral channels, as a female screw, varying

from the common screws only in this, that its threads or rifles are less deflected, and approach more to a right line ; it being usual for the threads with which the rifled barrel is indented to take little more than one turn in its whole length. The numbers of these threads are not determinate.

The usual method of charging these pieces is-this : ••• The proper quantity of powder being put down, a leaden bullet rather larger than

the bore of the piece is forcibly driven home to the pow-der ; and in its passage acquires the shape of the inside of the barrel, so that it becomes part of a male screw, exactly answering to the indents of the rifle. The rifled barrels made in Britain are often contrived to admit the charge and shot at the breech; and the ball acquires the same shape in its expulsion that is given to it by the more laborious operation of driving it in at the muzzle. From the whirling motion communicated by the rifles, it happens that, when the piece is fired, that indented zone of the bullet follows the sweep of the rifles, and thereby, besides its progressive motion, acquires a circular motion round the axis of the piece ; which circular motion will be continued to the bullet after its separation from the piece ; and thus a bullet discharged from a rifled barrel is constantly made to whirl round an axis which is coincident with the line of its flight. By this whirling on its axis, the aberration of the bullet, which proves so prejudicial to all operations in gunnery, is almost totally prevented : and accordingly such pieces are much more to be depended on, and will do execution at a much greater distance, than the other. But as it is in a manner impossible entirely to correct the aberrations arising from the resistance of the atmosphere, even the rifled barrelled pieces cannot be depended upon for more than one-half of their actual range at any considerable elevation. It becomes therefore a problem very difficult of solution, to know, even within a very considerable distance, how far a piece will carry its ball with any probability of hitting its mark, or doing any execution. The best rules hitherto laid down on this subject are those of Robins.

Of Carronades. ××× Mr. Gascoigne's improved gun, called a carronade, was, in June 1779, by the king in council instituted a standard navy-gun, and ten of them appointed to be added to each ship of war, from a first-rate to a sloop.

The carronade is mounted upon a carriage with a perfectly smooth bottom of strong plank, without trucks ; instead of which there is fixed on the bottom of the carriage, perpendicular from the trunnions, a gudgeon of proper strength, with an iron washer and pin at the lower end . This gudgeon is let into a corresponding groove cut in a second Carriage, called a slide-carriage ; the washer supported by the pin overreaching the under edges of the groove. This slide carriage is made with a smooth upper surface, upon which the gun-carriage is moved, and by the gudgeon always kept in its right station to the port ; the groove in the slide-carriage being of a sufficient length to allow the gun to recoil and be loaded within board. The slide-carriage, the groove included, is equally broad with the fore-PR GUI! CTl O.v ()[”

part of the gun-carriage, and about four times the length ; the fore part of the slide-carriage is fixed by hinge-bolts to the quick-work of the ship below the port, the end lying over the fill, close to the outside plank, and the groove reaching to the fore end ; the gudgeon of the gun-curriage, and consequently the trunnions of the gun, are over the fill of the port when the gun is run out; and the port is made of such breadth, with its sides bevelled off within board, that the gun and carriage may range from bow to quarter. The slide-carriage is supported from the deck at the hinder end, by a wedge or step-stool ; which being altered at pleasure, and the fore end turning upon the hinge-bolts, the carriage can be constantly kept upon an horizontal plane, for the more easy and quick working of the gun when the ship lies along. But see Sir Howard Douglas's remarks on this piece, already given.

Of Rifled Ordnance.❓❓❓ In 1774 Dr. Lind, and captain Alexender Blair of the sixty-ninth regiment of foot, invented a species of rifled field-

pieces. They are made of cast-iron ; and are not bored like the common pieces, but have the rifles moulded on the core, after which they are cleaned out and finished with proper instruments. Guns of this construction, which are intended for the field, ought not to be made to carry a ball of above one or two pounds weight at most; a leaden bullet of that weight being sufficient to destroy either man or horse. A pound-gun, of this construction, of good metal, need not weigh above 100 Ibs., nor its carriage above lOOlbs. more. It can therefore be easily transported from place to place, by a few men ; and

a couple of good horses may transport six of these guns and their carriages, if put into a cart. But this kind of ordnance has never been extensively used, we believe, in the British service. See our article ARTILLERY, for the latest official regulations for the proportion and disposition of the ammunition attached to the field pieces of our army : as also for the guns attached to the brigades of artillery. See also CANNON.

The PROJECTION OF THE SPHERE is a perspective representation of the circles on the surface of the globe; and is variously denominated, according to the different positions of the eye and plane of projection. There are three principal kinds of projection ; the stereographic, the orthographic, and gnomonic. In the stereographic projection, the eye is supposed to be placed on the surface of the sphere ; in the orthographic it is supposed to be at an infinite distance ; and in the gnomonic projection the eye is placed at the centre of the sphere. Other kinds of projection are, the globular, Mercator's developement, &c.

The chief application of the doctrine of these projections is to the constructing of maps and dials. In our article MAPS we have, therefore, entered at length into the principal projections ; *i.e.* 1. By development; 2. The orthographic; 3. The stereographic ; 4. The globular ; and 5. Mercator's.

In that of DIALLING the gnomonic is involved. See that article. It may, however, be thus ex- .libited more formally.

The eye, in this projection, is in the centre of he sphere, and the plane of projection touches the sphere in a given point parallel to a given circle : the plane of projection will represent the plane of a dial, whose centre being the projected pole, the semi-axis of the sphere will be the stile or gnomon of the dial.

PROP. I. THEORY I. ××× Every great circle is projected into a straight line perpendicular to the line of measures ; and whose distance from the centre is equal to die cotangent of its inclination, or to the tangent of its nearest distance from the pole of the projection.

Let BAD, fig. 1, be the given circle, and let the circle C B E D be perpendicular to BAD, and to the plane of projection : whose intersection C F with this last plane will be the line of measures. Now, since the circle C B E D is perpendicular both to the given circle BAD

and to the plane of projection, the common section of the two last planes produced will therefore be j:erpendicular to theˆlane of the circle C B E D

produced, and consequently to the line of measures : hence the given circle will be projected into that section ; that is, into a straight line passing through d, perpendicular to C d. Now C d is the cotangent of the angle C d A, the inclination of the given circle, or the tangent of the arch C D to the radius AC.

COROL. 1. A great circle perpendicular to the plane of projection is projected into a straight line passing through the centre of projection ; and any arch is projected into its correspondent tangent.

2. Any point, as D, or the pole of any circle, is projected into a point <f, whose distance from the pole of projection is equal to the tangent of that distance.

3. If two great . circles be perpendicular to each other, and one of them passes through the pole of projection, they will be projected into two straight lines perpendicular to each other.

4. Hence if a great circle be perpendicular to several other great circles, and its representation pass through the centre of projection ; then all these circles will be represented by lines parallel to one another and perpendicular to the line of measures, for representation of that first circle.

PROP. II. THEOR. II. If two great circles intersect in the pole of projection, their representations will make an angle at the centre of the

plane of projection, equal to the angle made by these circles on the sphere.

For, since both these circles are perpendicular to the plane of projection, the angle made by their intersections with this plane is the same as the angle made by these circles.

PROP. III. THEOR. III. Any less circle parallel to the plane of projection is projected into a circle whose centre is the pole of projection, and its radius is equal to the tangent of the distance of the circle from the pole of projection.

Let the circle P I (fig. 1) be parallel to the plane G F, then the equal arches PC, C I, are projected into the equal tangents G C, C H ; and therefore C, the point of contact and pole of the circle P I and of the projection, is the centre of the representation G, H.

COROL. If a circle be parallel to the plane of projection, and 45►► from the pole, it is projected into a circle equal to a great circle of the sphere ; and therefore may be considered as the primitive circle, and its radius the radius of projection.

PROP. IV. THEOR. IV. A less circle not parallel to the plane of projection is projected into a conic section, whose transverse axis is in the line of measures; and the distance of its nearest vertex from the centre of the plane of projection is equal to the tangent of its nearest distance from the pole of projection ; and the distance of the other vertex is equal to the tangent of the great distance.

Any less circle is the base of a cone whose vertex is at A, fig. 2 ; and this cone being pro-

duced, its intersection with the plane of projection will be a conic section. Thus the cone D A F, having the circle D F for it* base, being produced, will be cut by the plane of projection in an ellipse whose transverse diameter is df; and C d is the tangent of the angle CAD, and C / the tangent of C A F. In like manner, the ˆne AFE, having the side AE parallel to the line of measures df, being cut by the plane of projection, the section will be a parabola, of which f is the nearest vertex, and the point into which E is projected is at an infinite distance. Also the cone A F G, whose base is the circle F G, being cut by the plane of projection, the section will be a hyperbola ; of which f is the nearest vertex; and GA being produced gives d the other vertex.

COROL. 1. A less circle will be projected into an ellipse, a parabola, or hyperbola, accord-

ing as the distance of its most rauaote point ►► less, equal to, or greater than, 90►►.

2. If H be the centre, and K, k, /, the focus of the ellipse, hyperbola, or parabola ; then H K =

ˆA/for the ellipse; Hft = Ad + A/for

►►► &

the hyperbola ; and fn being drawn perpendi—

nE + Ff cular to AE fl =' ►►► ►►►- for the parabola.

PROP. V. THEOR. V. Let the plane TW, fig. 1, Plate PROJECTION OF THE SPHERE, be perpendicular to the p.ane of projection TV, and B C D a great circle of the sphere in the plane T W. Let the great circle B E D be projected into the straight line b e k. C Q S perpendicular to b k, and C m parallel to it and equal to C A, and make Q S equal to Q m ; then any angle Q S t is the measure of the arch Q t of the projected circle.

Join A Q : then, because C m is equal to C A, the angle Q C m equal to Q C A, each being a right angle, and the side Q C common to both triangles ; therefore Q m, or its equal Q S, is equal Q A. Again, since the plane A C Q is perpendicular to the plane TV, and />Q to the intersection C Q ; therefore b Q is perpendicular both to AQ and Q S : hence, since A Q and Q S are equal, all the angles at S cut the line 6 Q in the same points as the equal angles at A. But by the angles at A the circle B E D is projected into the line b Q. Therefore the angles at S are the measures of the parts of the projected circle b Q; and S is the dividing centre thereof.

COROL. 1 . Any great circle b Q t is projected into a line of tangents to the radius S Q.

2. If the circle b C pass through the centre of projection, then the projecting point A is the dividing centre thereof, and C b is the tangent of its correspondent arch C B to C A, the radius of projection.

PROP. VI. THEOR. VI. Let the parallel cir-cle G L H, fig. 1, be as far from the pole of pro - jection C as the circle FN I is from its pole ; and let the distance of the poles C P be bisected by the radius AO; and draw 6AD perpendicular to A O ; then any straight line b Q t drawn

through b will cut off the arches h, /, F, n, equal to each other in the representations of these equa circles in the plane of projection.

Let the projections of the less circles be described. Then, because B D is perpendicular to A O, the arches B O, D O, are equal ; but, since the less circles are equally distant each from its respective pole, therefore the arches F O, O H, are equal ; and hence the arch B F is equal to the arch DH. For the same reason the arches B N, D L, are equal ; and the angle F B N is equal to the angle L D II ; therefore, on the sphere, the arches F N, H L, are equal. And since the great circle B N L D is projected into the straight line bQnl, &c., therefore n is the projection of N, and / that of L : hence fn, h I, the projections of F N, H L, respectively, are equal.

PROP. VII. THEOR. VII. If Fn/c, hlg, fig. 2, be the projections of two equal circles, whereof one is as far from its pole P as the other from its pole C, which is the centre of projection ; and if the distance of the projected poles C, p, be di-

vided in o, so that the degrees in C o, op, be equal, and the perpendicular o S be erected to the line of measures g h. Then the line pn, C I, drawn from the poles C, p, through any point Q in the line o S, will cut off the arches F n, A /, equal to each other, and to the angle Q C p.

The great circle AO perpendicular to the plane of the primitive is projected into the straight line o S perpendicular to g h, by Prop. i. Cor. 3. Let Q be the projection of q ; and since p Q, C Q, are straight lines, they are therefore the representations of the arches P q, C q, of great circles. Now, since P^C is an isosceles spherical triangle, the angles P C Q, C P Q, are therefore equal ; and hence the arches P q, C q, produced will cut off equal arches from the given circles F I, G H, whose representations Yn, hi, are therefore equal : and, since the angle Q C p is the measure of the arch hi, it is also the measure of its equal F n.

COHOL. Hence, if from the projected pole of any circle a perpendicular be erected to the line of measures, it will cut off a quadrant from the representation of that circle.

PROP. VIII. THEOU. VIII. Let. Ynk, fig. 2, be the projection of any circle FI, and p the projection of its pole P. If Cg be the cotangent of C A P, and g B perpendicular to the line of measures g C, let C A P be bisected by A O, and the line o B drawn to any point B, and also p B, cutting F n k in d ; then the angle g o B is the measure of the arch F d.

The arch P G is a quadrant, and the angle g o A = gPA + oAP = gAC + oAP = gAC + CAo = gAo; therefore gA = go; consequently o is the dividing centre of g B, the representation of G A; and hence by Prop. V. the angle g o B is the measure of g B. But, since pg represents a quadrant, therefore p is the pole of g B ; and hence the great circle p d B, passing through the pole of the circles g B and F n, will cut off equal arches in both, that is, Yd = g B = angle g o B.

COROL. The angle g o B is the measure of the angle gp B. For the triangle gp B represents a triangle on the sphere, wherein the arch which g B represents is equal to the angle which the angle p represents ; because gp is a quadrant ; therefore g o B is the measure of both.

PROP. IX. PROB. I. To draw a great circle through a given point, and whose distance from the pole of projection is equal to a given quantity.

Let A D B, fig. 3, be the projection, C its pole or centre, and P the point through which a great circle is to be drawn : through the points P, C, draw the straight line PC A, and draw C E perpendicular to it : make the angle C A E equal to the given distance of the circle from the pole of projection C; and from the centre C, with the radius C E, describe the circle E F G : through P draw the straight line P I K, touching the circle E F G in I, and it will be the projection of the great circle required.

PROP. X. PROB. II. To draw a greit circle perpendicular to a great circle which passes through the pole of projection, and at a given distance from that pole.

Let A D B, fig. 3, be the primitive, and C I the given circle : draw C L perpendicular to C I,

and make the angle C L I equal to the given distance: then the straight line C P, drawn through I parallel to C L, will be the required projection.

PROP. XL PROB. III. At a given point in a projected great circle, to draw another great cir-cle to make a given angle with the former; and, conversely, to measure the angle contained between t\o great circles.

Let P, fig. 4, be the given point in the given great circle P B, and C the centre of the primitive : through the points P, C, draw the straight line P O G, and draw the radius of the primitive CA perpendicular thereto; join PA; to which draw A G perpendicular : through G draw B G D at right angles to G P, meeting P B in B ; bisect the angle C A P by the straight line AO ; join B O, and make the angle BOD equal to that given ; then, D P being joined, the angle B P D will be that required.

If the measure of the angle B P D be required, from the points B, D, draw the lines B O, D O and the angle B O D is the measure of B P D.

PROP. XII. PROB. IV. To describe the projection of a less circle parallel to the plane of projection, and at a given distance from its pole.

Let A D B, fig. 3, be the primitive, and C its centre : set the distance of the circle from its pole, from B to II, and from II to D ; and draw the straight line A E D, intersecting C E perpendicular to B C, in the point E : with the radius C E describe the circle E F G, and it is the projection required.

PROP. XIII. PROB. V. To draw a less circle perpendicular to the plane of projection.

Let C, fig. 5, be the centre of projection, and TI a great circle parallel to the proposed less circle : at C make the angles I C N, T C O, each equal to the distance of the less circle from its parallel great circle T I ; let C L be the radius of projection, and from the extremity L draw L M perpendicular thereto ; make C V equal to L M, or C F equal to C M; then, with the vertex V and assymptotes C N, CO, describe the hyperbola W VJv ; or, with the focus F and C V, describe the hyperbola, and it will be the perpendicular circle described.

PROP. XIV. PROB. VI. To describe the projection of a less circle inclined to the plane of projection.

Draw the line of measures dp, fig. 6, and at C, the centre of projection, draw C A perpendicular to dp, and equal to the radius of projection : with the centre A, and the radius A C, describe the circle D C F G ; and

draw R A E parallel to d p : then take the greatest and least distances of the circle from the pole of projection, and set them from C to D and F respectively ; for the circle D F ; and from A, the projecting point, draw the straight lines A Yf, and A D d ; then df will be the transverse axis of the ellipse : but if D fall beyond the line R E, as at G, then from G draw the line GAD d, and df is the transverse axis of an hyperbola: and if the point D fall in the line R E, as at E, then the line A E will not meet the line of measures and the circle will be projected into a parabola whose vertex is /: bisect df in II, the centre, and for tlie ellipse take half the difference of the lines A d, A/, which laid from H will give

K the focus ; for the hyperbola, half the sura of Ad, Ay being laid from H, will give k its focus: then with the transverse axis df, and focus K, or A, describe the ellipse d Mf, or hyperbola fm, which will be the projection of the inclined circle : for the parabola, make E Q equal to F f, and draw fn perpendicular to A Q, and make fk equal to one half of n Q : then with the ver-tex f, and focus k, describe the parabolaˆ/”?)?, for the projection of the given circle F E.

PROP. XV. PROB. VII. To find the pole of a given projected circle.

Let D M F, fig. 7, be the given projected cir-cle, whose line of measures is D F, and C the centre of projection; from C draw the radius of projection CA, perpendicular to the line of measures, and A will be the projecting point : join AD, AF, and bisect the angle DAF by the straight line A P ; hence P is the pole. If the given projection be an hyperbola, the angle fAG, fig. 6, bisected, will give its pole in the line of measures; and, in a parabola, the angle fA E bisected will give its pole.

PROP. XVI. PROB. VIII. To measure any portion of a projected great circle, or to lay off any number of degrees thereon.

Let E P, fig. 8, be the great circle, and I P a portion thereof to be measured : draw I C D perpendicular to I P ; let C be the centre, and C

B the radius of projection, with which describe the circle E B D ; make I A equal to I B ; then A is the dividing centre of E P; hence, A P be-ing joined, the angle IAP is the measure of the arch I P. Or, if IAP be made equal to any given angle, then I P is the correspondent arch of the projection.

PROP. XVII. PROB. IX. To measure any arch of a projected less circle, or to lay off any number of degrees on a given projected less circle.

Let F n, fig. 9, be the given less circle, and P its pole : from the centre of projection C draw C A perpendicular to the line of measures G H, and equal to the radius of projection ; join A P, and bisect the angle C A P by the straight line A O, to which draw A D perpendicular : describe the circle G *H, as far distant from the pole of projection C as the given circle is from its pole P; and through any given point n, in the projected circle Fn, draw Dn*, then H/ is the measure of the arch F n. Or let the measure be laid from H to I, and the line D / joined will cut off F n equal thereto.

PROP. XVIII. PROB. X. To describe the gnomonic projection of a spherical triangle, when three sides are given ; and to find the measures of either of its angles.

Let ABC, fig. 10, be a spherical triangle whose three sides are given : draw the radius C D, fig. 1 1, perpendicular to the diameter of the primitive EF; and at the point D make the angles C DA, C D G, AD I, equal respectively to the sides AC, BC, AB, of the spherical triangle ABC, fig. 10, the lines DA, D G, intersecting the diameter E F, produced if necessary in the points A and G ; make D I equal to D G ; then from the centre C, with the radius C G, describe an arch ; and from A, with the distance A I, describe another arch, intersecting the for-

mer in B ; join A B, C B, and AC B will be the projection of the spherical triangle, and the rectilineal angle A C B is the measure of the spherical angle A C B, fig. 10.

PROP. XIX. PROB. XI. The three angles of a spherical triangle being given, to project it, and to find the measures of the sides.

Let ABC, fig. 12, be the spherical triangle of which the angles are given: construct another spherical triangle E F G, whose sides are the supplements of the given angles of the triangle ABC; and with the sides of this supplemental triangle describe the gnomonic projection,

&c., as before. The supplemental triangle E F G has also a supplemental part E F g ; and when the sides G E, G F, which* are substituted in place of the angles A, B, are obtuse, their supplements g E, g F, are to be used in the gnomonic projection of the triangle.

PROP. XX. PROB. XII. Given two sides, and the included angle of a spherical triangle, to describe the gnomonic projection of that triangle, and to find the measures of the other parts.

Let the sides AC, C B, and the angle A C B, fig. 10, be given : make the angjes C D A, C D G, fig. 1 3, equal respectively to the sides A C, C B, fig. 10 ; also make the angle AC B, fig. 13, equal to the spherical angle AC B, fig. 10, and C B equal to C G, and ABC will be the projection of the spherical triangle.

To find the measure of the side A B : from C draw C L perpendicular to A B, and C M parallel thereto, meeting the circumference of the primitive in M; make LN equal to LM; join AN, B N, and the angle A B N will be the measure of the side A B. To find the measure of either of the spherical angles, as BAG : from D draw D K perpendicular to A D, and make K H equal to K D : from K draw K I perpendicular to C K, and let A B produced meet K I in I, and join H I : then the rectilineal angle K H I is the measure of the spherical angle BAG. By proceeding in a similar manner, the measure of the other angle will be found.

PROP. XXI. PROB. XIII. Two angles and the intermediate side given, to describe the gnomonic projection of the triangle ; and to find the measures of the remaining parts.

Let the angles CAB, AC B, and the side A C of the spherical triangle CD A, fig. 10, be given: make the angle C D A, fig. 13, equal to the measure of the given side AC, fig-10 ; and the angle ACB, fig. 13, equal to the angle AC B, fig. 10, produce AC to H, draw D K perpendicular to C K, and make the angle K H I equal to the spherical angle CAB: from I, the intersection of K I, H 1, to A draw I A, and let it intersect C B in B, and AC B, fig. 10. The unknown parts of this triangle may be measured by last problem.

PROP. XXII. PROB. XIV. Two sides of a spherical triangle, and an angle opposite to one of them given, to describe the projection of the triangle ; and to find the measure of the remaining parts.

Let the sides AC, CB, and the angle BAC of the spherical triangle ABC, fig. 10, be given : make the angles CD A, CDG, fig. 13, equal respectively to the measures of the given sides

AC, BC : draw DK perpendicular to AD, make K H equal to D K, and the angle K H I equal to the given spherical angle B AC : draw the perpendicular K I, meeting HI in I ; join A I ; and from the centre C, with the distance C G, describe the arch G B, meeting A I in B ; join C B, and ABC will be the rectilineal projection of the spherical triangle ABC, fig. 10; and the measures of the unknown parts of the triangle may be found as before.

PROP. XXIII. PROB. XV. Given two angles and a side opposite to one of them, to describe the gnomonic projection of the triangle, and to find the measures of the other parts.

Let the angles A, B, and the side B C of the triangle ABC, fig. 12, be given: let the supplemental triangle E F E be formed, in which the angles E, F, G, are the supplements of the sides B C, C A, A B, respectively, aud the sides E F, F G, G E, the supplements of the angles C, A, B. Now, at the centre C, fig. 13, make the angles CD A, C DK, equal to the measures of the sides G E, G F, respectively, being the supplements of the angles B and A ; and let the lines DA, D K, intersect the diameter of the primitive EF, in the points A and K: draw D G perpendicular to A D, make G H equal to D G, and at the point H make the angle G H I equal to the angle E, or to its supplement ; and let E I, perpendicular to C H, meet H I in I, and join A I : then from the centre C, with the distance C G, describe an arch intersecting A I in B ; join C B, and ABC will be the gnomonic projection of the given triangle ABC, fig. 12 : the supplement of the angle AC B, fig. 13, is the measure of the side AB, fig. 12; the measures of the other parts are found as before.

Although this method of projection has, for the most part, been applied to dialling only, yet, from the preceding propositions, it appears that all the common problems of the sphere may be more easily resolved by this than by the ordinary methods of projection.

PROIN, v. a. A corruption of prune. To lop; cut; trim.

I sit and proin my wings After flight, and put new strings To my shafts. Ben Jonson.

The country husbandman will not give the proining knife to a young plant. Id.

PROLAPSUS, in surgery, a term used to de-note the falling of peculiar parts of the body out of their natural situation, more particularly applied to the uterus, vagina, and rectum. See SURGERY.

PROLATE'. Lat. prolatum. To pronounce; to utter.

The pressures of war have somewhat cowed their spirits, as may be gathered from the accent of their words, which they prolate in a whining querulous tone, as if still complaining and crest fallen.

Howel.

Parrots, having been used to be fed at the prola-tion of certain words, may afterwards pronounce the same. Ray.

As to the prolate spheroidical figure, though it be the necessary result of the earth's rotation about its own axe, yet it is also very convenient for us.

Cheyne's Philosophical Principles.

PROLATE, inx geometry, is applied to A spheroid produced by the revolution of a semi-ellipsis about its larger diameter. See SPHEROID.

PROLEGOMENA, in philology, preparatory discourses fixed to a book, &c., containing something necessary to enable the reader the better to understand the book or science, &c.

PROLEP'SIS, ††. s. I Fr. prolepse ; Gr.

PROLEP'TICAL. $ wpoXˆic. A figure of

rhetoric, in which objections are anticipated: in the manner of a prolepsis.

This was contained in my prolepsis or prevention of his answer. Bramhall against Hobbes.

The proleplical notions of religion cannot be so well defended by the

professed servants of the altar.

Glanville. (This is a prolepsis or anachronism. Theobald.

PROLETARIAN, adj. Mean; wretched;’ vile; vulgar. A mean word whose etymology we do not find.

Like speculators should foresee, From pharos of authority, Portended mischiefs farther than Low proletarian ty thing-men. Hudibras.

PROLIFIC, adj.] Fr. prolifique ; Lat. PROLIF’ICAL. $ proles and facio. Every dispute in religion grew prolifical, and in ventilating one question, many new ones were started.

Decay of Piety.

Main ocean flowed ; not idle, but with warm Prolific humour soft’ning all her globe, Fermented the ––reat mother to conceive, Satiate with genial moisture.

Milton’s Paradise Lost.

Their fruits, proceeding from simpler roots, are not so distinguishable as the offspring of sensible creatures, and prolijicationt descending from double origins. Browne.

His vital power air, earth, and seas supplies, And breeds whate’er is bred beneath the skies ; For every kind, by thy prolific might, Springs. Dryden.

All dogs are of one species, they mingling together in generation, and the breed of such mixtures being prolific. Ray.

From the middle of the world, The sun’s prolific rays are hurled ; ‘Tis from that seat he darts those beams, Which quicken earth with genial flames.

Prior.

PRO’LIX, adj. -\ Fr. protixe ; Lat. prolirus.

PROLIX lous, ‘ Long ; tedious ; verbose :

PROLIX’ITY, i prolixious is a synonyme

PROLIX’ LY, adv. J coined by Shakspeare : prolixity and prolixness, tediousness; tiresome dila-tion.

Lay by all nicety and prolifiotu blushes.

Shakspeare.

It is true, without any slips of prolixity, or crossing the plain highway of talk, tfiat the good Anthonio hath lost a ship. Id.

According to the caution we have been so prolix in giving, if we aim at right understanding the true na-ture of it, we must examine what apprehension mankind make of it. Digby.

In some other passages I may have, to shun prolixity, unawares slipt into the contrary extreme.

Boyle. On these prolixly thankful she enlarged. Dryden.

If the appellant appoints a term too prolix, the judge may then assign a competent term. Ayliffie.

- ‘ Should I at large repeat

The bead-roll of her vicious tricks, My poem would be too prolix. Prim-.

Elaborate and studied prolixity in proving such

points as nobody calls in question. Waterland.

PROLOCUTOR,n.►►. Lat. prolocutor. The foreman ; the speaker of a convocation.

The convocation the queen prorogued, though at the expence of Dr. Atterburˆ‘s displeasure, who was designed their prolocutor. Swift.

PROL'OGUE, n. s. & v. a. Fr. prologue ; Gr. TrooXoyof ; Lat. prologus. Preface ; introduction to a discourse or performance : to introduce with a preface.

Come, sit, and a song.

••• Shall we clap into 't roundly, without hawking,

or spitting, or saying we are hoarse, which are the

only prologues to a bad voice? Shaktpeare.

If ray death might make this island happy,

And prove the period of their tyranny,

I would expend it with all willingness ;

But mine is made the prologue to their play. Id.

He his special nothing ever prologues. Id.

In her face excuse

Came prologue, and apology too prompt. Mlton.

From him who rears a poem lank and long, To him who strains his all into a song ; Perhaps some bonny 'Caledonian air, All birks and braes, though he was never there ; Or, having whelped a prologue with great pains, Feels himself spent, and fumbles for his brains ; A prologue interdashed with many a stroke ••• An art contrived to advertise a joke, So that the jest is clearly to be seen, Not in the words ••• but in the gap between : Manner is all in all, whate'er is writ, The substitute for genius, sense, and wit. Cowper.

PROLONG', v. a.) Fr. prolonger ; Lat. PRO LONG A'TION, n. s. $ pro and longus. To

Prome ; and there is here a royal menagerie of elephants. The ruins of the ancient city extend beyond the modern town, and contain a number of temples dedicated to Boodh. Long. 95•• E., lat. 18•• 50' N.

PROMETHEUS, the son of Japetus, supposed to have been the first discoverer of the art of striking fire by flint and steel ; which gave rise

to the fable of his stealing fire from heaven. This fable is variously related by different authors. Prometheus, as most say, being a man of subtle and crafty genius, in order to find out whether Jupiter was really worthy to be reckoned a god, slew two oxen, and stuffed one of the skins with the flesh, and the other with the bones of the victims, the latter of which was chosen by Jupiter. The god, resolved to be revenged upon all mankind for this insult, deprived them of the use of fire ; but Prometheus, with the assistance of Minerva, who had already aided him by her advice in forming the body of a man of tempered clay, contrived to ascend up to heaven, and, approaching the chariot of the sun, stole from thence the . sacred fire, which he brought down to earth in a ferula. Jupiter, incensed at this strange and audacious enterprize, ordered Mercury to carry him to Mount Caucasus, and chain him to a rock, where an eagle was eternally to prey upon his liver. This part of the history of Prometheus and his subsequent deliverance either by Hercules or Jupiter ‘himself, abounds with fictions, which are supposed to contain some ancient facts under this disguise. M. Bannier supposes that this is merely a continuation of the history of* the Titans. Prometheus, as he conjectures, was not exempt from the persecutions which harassed the other Titans. As he returned into Scythia, which he durst not quit so long as Jupiter lived,

lengthen out ; continue; draw out: hence, cor-that god is said to have bound him to Caucasus, ruptly, to put off a long time: prolongation is This prince, addicted to astrology, frequently re-

the act of lengthening or delaying.

To-morrow in my judgment is too sudden ; For I myself am not so well provided, As else I would be were the day prolonged.

Shakspeare.

Nourishment in living creatures is for the prolonga lion of life, Bacon’s Natural History,

tired to Mount Caucasus, as to a kind of observatory, where he contemplated the stars, and was, as it were, preyed upon by continual pining, or rather by vexation, on account of the solitary and melancholy life which he led. This is supposed to have given rise to

the fable of the eagle or vulture that incessantly preyed upon his liver.

This ambassage concerned only the prolongation of Herodotus, however, alleges, that Prometheus

days for payment of monies. Id. Henry VII.

Henceforth I fly not death, nor would prolong Life much. Milton.

The' unhappy queen with talk prolonged the night.

Dry den.

PROLU'SION, n. s. Lat. prolusio. Entertainment; performance of diversion.

It is memorable, which Famianus Strada, in the frst book of his academical prolusions, relates of Suarez. Hakewill.

PROME, or PROWE, a city of the Birman em-pire, is situated on the eastern bank of the Iria-waddy, in a fine fertile plain, and was formerly surrounded by two walls, the exterior of timber, and the interior of brick. It is larger than Rangoon, and carries on a considerable trade in timber, grain, oil, wax, ivory, iron, lead, and flag-stones. It is said to have been once the capital of a dynasty. At present, with the ad-

was put in prison for not being able to stop the overflowing of a river, which from its rapidity was called the eagle, or at least that he was obliged to fly with a part of his subjects to the mountains to escape the inundation, till a traveller, represented by Hercules, undertook to dam it up by a mount, and to kill the eagle, as it may be said, by making its course regular and uniform ; thus Prometheus was delivered by this hero from his prison, or retreat.

Diodorus Siculus says that Prometheus first discovered combustible materials fit for kindling and maintaining fire. Bannier is of opinion, that the origin of this fiction .was, that Jupiter, having ordered all the shops where iron was forged to be shut up, lest the Titans should make ust of it against him, Prometheus, who had retired into Scythia,

there established good forges ; hence came the ‘ Calybes,’ those excel-

joining territory, it forms the estate or appanage lent blacksmiths ; and, perhaps Prometheus also, of one of the king’s sons, called the prince of not thinking to find fire in that country, brought

some thither in the stalk of the ferula, in which it may be easily preserved for several days. As for the two oxen which Prometheus is said to have slain, that he might impose upon Jupiter, this part of the fable is said to be founded upon his having been the first who opened victims with a view of drawing omens from the inspection of their entrails. According to Le Clerc,. Prometheus is the same with Magog, the former being the son of Japetus, and the latter the son of Japhet, and grandson of Noah. Both Prometheus and Magog settled in Scythia ; the latter invented or improved the art of founding metals, and of forging iron, which the poets attributed to Prometheus ; and Diodorus too says, that he invented several instruments for making fire. The appellation Magog signifies vexation, as Prorruetheus was gnawed by a vulture.

PROMETHEUS and DAMASICHTHON, two sons of Codrus, king of Athens, who conducted colonres* into Asia Minor. ††† Paus. i. c. 3.

PROMINENT, adj.) Lat. prominent.

PROM’INENCE, or > Standing .out beyond

PROM’IKENCY, n. s. J another part; protuberant : the noun substantives both corresponding.

Whales are described with two prominent spouts on their heads,

whereas they have but one in the forehead, terminating over the windpipe.

Browne's Vulgar Errours.

She has her eyes so prominent, and placed so that she can see better behind her than before her.

More.

Two goodly bowls of massy silver, With figures prominent and richly wrought.

Dryden.

Some have their eyes stand so prominent, as the hare, that they can see as well behind as before them.

Ray.

It shows the nose and eyebrows, with the prominencies and fallings in of the features. Addison.

His evidence, if he were called by law To swear to some enormity he saw, For want of prominence and just relief, Would hang an honest man, and save a thief.

Coivper.

PROMIS'CUOUS,adj. > Lat. promisaais. PROMISCUOUSLY, adv. $ Mingled; confused; undistinguished : the adverb corresponding.

We beheld where once stood Ilium, called Troy promiscuously of Tros. Sandys' s Journey.

No man, that considers the promiscuous dispensations of God's providence in this world, can think it unreasonable to conclude, that after this life good men shall be rewarded, and sinners punished.

Tillotson.

Glory he requires, and glory he receives, Promiscuous from all nations.

Milton's Paradise Lost. Promiscuous love by marriage was restrained.

Roscommon.

In rushed at once a rude promiscuous crowd ; The guards, and then each other overbear, And in a moment throng the theatre. Dryden.

Here might you see

Barons and peasants on the' embattled field, In one huge heap promiscuously amast. Philips. The earth was formed out of that promiscuous mass of sand, earth, shells, subsiding from the water.

Woodward.

That generation, as the sacred writer modestly expresses it, married and gave in marriage without dis-VOL. XVIII.

cretion or decency, but promiscuously, and with no better a guide than the impulses of a brutal appetite,

Id.

Clubs, diamonds, hearts, in wild disorder seen, With throngss promiscuous strow the level green.

Pope. A wild, where weeds and flowers promiscuous

shoot. /#.

Unawed by precepts human or divine, Like birds and beasts promiscuously they join. Id. PROM'ISE,n.s.,t;.a.&v. n."| Fr. promise, PROM'ISEBREACH, I promesse ; Lat.

prommum. En-f gagement to (benefit: decla-J ration of bene-

PROM'ISEBREAKER,

PROM'ISER,

PROMIS'SORY, adj.

PROMIS'SORILY, adv.

fit to be conferred : hence grant, or hope of something promised; to

make such declaration or engagement ; assure by promise : the two compounds are sufficiently plain : a promiser is he who makes the engagement to benefit: promissory, of the nature of a promise.

0 Lord, let thy promise unto David be established.

1 Chronicles.

Now are they ready, looking for a promise from thee. Acts.

While they promise them liberty, they themselves are the servants of corruption. 2 Peter ii. 13.

As he promised in the law, he will shortly have mercy, and gather us together. 2 Mac. ii. 18.ˆ

1 eat the air, promise crammed ; you cannot feed capOHS so. Shakspeare.

His promises were, as he then was, mighty ; But his performance, as he now is, nothing. Id. Your young prince Mamillius is a gentleman of the greatest promise. Id. Winter's Tale.

Promising is the very air o' the' time : it opens the eyes of expectation : performance is ever the duller for his act. Shakspeare.

Will not the ladies be afraid of the lion 1 ??? I fear it, I promise you. Id.

Criminal in double violation Of sacred chastity, and of promisebreach. Id. He's an hourly promisebreaker, the owner of no one good quality worthy your entertainment. Id.

Who let this promiser in 1 did you, good Diligence t Give him his bribe again. Ben Jonton.

As the preceptive part enjoins the most exact vir-tue, so is it most advantageously enforced by the promissory, which is most exquisitely adapted to the same end. Decay of Piety.

What God commands is good ; what he promises is infallible. -Bp. Hall.

Whoever seeks the land of promise, shall find many lets. Id.

He that brought us into this field, hath promised us victory. Id. Contemplations.

If he receded from what he had promised, it would be such a disobligation to the prince that he would never forget it. Clarendon.

Nor was he obliged by oath to a strict observation of that which promissorily was unlawful. Browne.

Duty still preceded promise, and strict endeavour only founded comfort. Fell.

I could not expect such an effect as I found, which seldom reaches to the degree that is promised by the prescribers of any remedies.

Temple's Miscellanies.

Behold, she said, performed in every part My promise made ; and Vulcan's laboured art.

Dryden.

I dare promise for this play, that in the roughness of the numbers, which was so designed, you will sue

somewhat more masterly than any of my former tragedies. Id.

Fear's a large promiser ; who subject live To that base passion, know not what they give. Id.

More than wise men, when the war began, could promise to themselves in their most sanguine hopes.

Davenant.

The promissory lyes of great men are known by shouldering, hugging, squeezing, smiling, and bow-ing'. Arbuthnot.

Let any man consider how many sorrows he would have escaped had God called him to his rest, and then say whether the promise to deliver the just from the evils to come, ought not to be made our daily prayer. Wake.

All the pleasure we can take, when we met these promising sparks, is in the disappointment. Felton.

She bribed my stay, with more than human charms ; Nay promised, vainly promised, to bestow Immortal life. Pope's Odyssey.

Thy maidens, grieved themselves at my concern. Oft gave me promise of a quick return ; What ardently I wished, I long believed, And, disappointed still, was still deceived. Coicper.

And round the new discoverer quick they flocked In multitudes, and plucked, and with great haste Devoured ; and sometimes in the lips 'twas sweet, And promited well ; but, in the belly, gall. Poilok.

PROMISSORY NOTES are entirely on a par with hills, equally negotiable, and subject to the same duties.

PRO'MONT, n. s. } Fr. promontoire ; Lat. PROMONTORY. \promontorium. 'Promont, I have observed,' says Johnson, 'only in Suckling.' A headland; cape; high peninsula; or part of a peninsula.

Like ore that stands upon a promontory, And spies a far offshore where he would tread.

Skakspeare.

The land did shoot out with a great promontory.

Abbot.

The waving sea can with each flood Bathe some high promont. Suckling.

"" They, on their heads, Main promontories flung, which in the air Came shadowing, and opprest whole legions armed.

Milton.

Every gust of rugged winds, That blows from off each beaked

promontory. Id. If you drink tea upon a promontory that overhangs the sea, it is preferable to an assembly. Pope.

PROMOTE', v. a.ˆ\ Fr. promouvoir ; Lat.' PROMO'TER, n. s. tpromoveo, promotus. To PROMO'TION, ►► forward; to advance;

PROMOVE', v. a. J elevate ; prefer : promoter is used in an obsolete sense for informer ; approver : promotion is advancement ; preferment : promove, an obsolete synonyme of promote.

I will promote thee unto very great honour.

Numbers.

Shall I leave my fatness wherewith they honour God and man, and go to be promoted over the trees ?

Judges ix. 9. Many fair promotions Are daily given to ennoble those, That scarce, some two days since, were worth a noble.

Shakspeare.

The high promotion of his grace of Canterbury Who holds his state at door 'mongst pursuivants. Id, His eies be promoters, some tresspass to spie.

Timer.

Next to religion, let your care be to promote justice. Bacon

Informers and promoters oppress and ruin the estates of many of his best subjects. Drummoml.

Never yet was honest man, That ever drove the tale of love ;

It is impossible, nor can Integrity our ends promove. Suckling.

Nothing lovelier can be found, Than good works in her husband to - promote.

Miltmt.

Did I solicit thee From darkness to promote me ? Id.

My rising is thy fall,

And my promotion will be thy destruction. Id. Knowledge hath received little improvement from the endeavours of many pretended promoters.

Glanville. Making useless offers, but promoting nothing.

Fell.

Thou youngest virgin-daughter of the skies, Made in the last promotion of the blest : Whose palms, new plucked from paradise, In spreading branches more sublimely rise.

Dryden.

He that talks deceitfully for truth, must hurt it more by his example than he promotes it by his arguments. Atterbury.

Our Saviour makes this return, fit to be engraven in the hearts of all promoters of charity : Verily, I say unto you, inasmuch as you have done it unto one of the least of these my brethren, ye have done it unto me. Id.

Frictions of the extreme parts promote the flux of the juices in the joints. Arbuthnot.

PROMPT, adj. & v. a.~\ Fr. prompt ; Ital. PROMP'TER, n. s. pronto; Latin,

PROMP'TJTUDE, [promptus. Quick;

PROMPTLY, adv. ('ready; acute; easy;

PROMPTNESS, re. s. j unobstructed ; pert PROMPT'URE. j to assist; make

ready or perfect; instigate; incite: a prompter is a suggester; admonisher; reminder: promp-titude and prompter, readiness ; quickness ; aptitude ; prompture, suggestion ; obsolete.

Sitting in some place, where no man shall prompt him, let the child translate his lesson. Ascham. Tell him, I'm prompt

To lay my crown at's feet, and there to kneel.

Shakspeare.

My voice shall sound as you do prompt mine ear, And I will stoop and

humble my intents To your well practised wise directions. Id.

Were it my cue to fight, I should have known it Without a prompter. Id. Othello.

Though he hath fallen by prompture of the blood ; Yet hath he in him such a mind of honour, That had he twenty heads to tender down On twenty bloody blocks he'd yield them up.

Shakspeare.

None could hold the book so well to prompt and instruct this stage play, as she could. Bacon.

The reception of light into the body of the building was very prompt, both from without and from within.

Wetton.

If they prompt us to anger, their design makes use of it to a further end, that the mind, being thus disquieted, may not be easily composed to prayer.

Duppa .

He that does his merchandise chearfully, promptly, and readily, and the works of religion slowly, it is a sign that his heart is not right with God.

Taylor.

Very discerning and prompt in giving orders, as occasions required. Clarendon.

PRO

Prompt eloquence Flowed from their Hps in prose or numerous verse.

Milton. Rage prompted them at length and found them

arms. Id.

The inconcealable imperfections of ourselves will hourly prompt us of our corruption, and loudly tell us we are sons of earth. Browne.

He needed not one to prompt him, because he could say the prayers by heart. StiUingJleet.

I was too hasty to condemn unheard ; And you, perhaps, too prompt in your replies.

Dry den.

We understand our duty without a teacher, and acquit ourselves as we ought to do without a prompter.

L' Estrange.

Had not this stop been given him by that accidental sickness, his great courage and promptness of mind would have carried him directly forward to the enemy, till he had met him in the open plains of ###Persia. South.

Every one some time or other dreams he is reading books, in which case the invention prompts so readily that the mind is imposed on. Addison.

Still arose some rebel slave, Prompter to sink the state than he to save. Prior.

Firm and rigid muscles, strong pulse, activity, and promptness in animal actions, are signs of strong ###fibres. Arbuthnot.

To the stern sanction of the offended sky, My prompt obedience bows. Pope.

Kind occasion prompts their warm desires. Id.

The priestly brotherhood, devout, sincere, From mean self-interest, and ambition clear, Their hope in heaven, servility their scorn, Prompt to persuade, expostulate, and warn.

Cowper.

PROMPTUARY, n. s. Fr. promptuaire ; Lai. promptuarium. A storehouse ; repository ; magazine.

This stratum is still expanded at top, serving as the seminary or promptuary , that furnisheth forth matter for the formation of animal and vegetable bo-

Woodward. Lat. promulgo. To 1 publish ; make known . by open declaration : promulgation, the de-1 claration made ; pro-

dies.

PROMUL'GATE, or—

PROMULGE', v. a.

PROMULGATION, n. s.

PROMULGA'TOR,

PROMUL'GER. mulgator and promulger, he who makes it.

Those albeit I know he. nothing so much hateth as to promulgate, yet I hope that this will occasion him to put forth divers other goodly works.

Spenser.

The stream and current of this rule hath gone as far, it hath continued as long as the very promulgation of the gospel. Hooker.

Those to whom he entrusted the promulgating of the gospel, had far different instructions.

Decay of Piety.

External promulgation, or speaking thereof, did not alter the same, in respect of the inward form or quality. IVhite.

It is certain laws, by virtue of any sanction they receive from the promulgated will of the legislature, reach not a stranger, if by the law of nature every man hath not a power to punish offences against it.

Locke.

The very promulgation of the punishment will be part of the punishment, and anticipate the execution.

South.

The chief design of them is, to establish the truth of a new revelation in those countries, where it is first promuigea and propagated. Atterbury.

The promulger* of our religion, Jesus Christ and his apostles, raised men and women from the dead, not once only, but often. Id.

PRONAOS, in the ancient architecture, a porch to a church, a palace, or other spacious building. See PORCH.

PRONAPIDES, an ancient Greek poet of Athens, who was preceptor to Homer. He also, it is said, first taught the Greeks to write from the left to the right ; as they formerly wrote in the Oriental manner from right to left.

PRONAT1ON, among anatomists. The ra-dius of the arm has two kinds of motion, the one called pronation, the other supination. Pronation is that whereby the palm of the hand is turned downwards ; and supination, the opposite motion thereto, is that whereby the back of the hand is turned downwards.

PRONE', adj. -\ Lat. pronus. Bending

PRONE'NESS, n. s. ►► downwards; not erect;

PRON'ITY. J precipitous ; headlong ;

prepense; inclined: proneness and pronity, state of being prone.

The Holy Spirit saw that mankind is unto virtue hardly drawn, and that righteousness is the less accounted of by reason of the proneness of our affections to that which delighteth. Hooker.

The soul being first from nothing brought, When God's grace fails her, doth to nothing fall ;

And this declining prorteness unto nought, Is e'en that sin that we are born withal. Davies.

Of this mechanic pronity, I do not see any good tendency. More's Divine Dialogues.

There wanted yet a creature not prone,

And brute as other creatures, but endued

With sanctity of reason, might erect

His stature, and upright, with front serene

Govern the rest. Milton's Paradise Lost.

Down thither prone in flight He speeds. Id.

Upon these three positions in man, wherein the spine can only be at right lines with the thigh, arise those postures, prone, supine, and erect.

Browne.

He instituted this worship, because of the carnality of their hearts, and the jrroneness of the people to idolatry. Tillotsan.

Those who are ready to confess him in judgment and profession, are very prone to deny him in their doings. South.

If we are prone to sedition, and delight in change, there is no cure more proper than trade, which supplies business to the active, and wealth to the indigent. Addison.

How great is the proneness of our nature to com-ply with this temptation ! Rogers

Since the floods demand, For their descent a prone and sinking land : Does not this due declivity declare, A wise director's providential care ?

Blackmore.

The proneness of good men to commiserate want in whatsoever shape it appears. Atterbury.

Still prone to change, though still the slaves of state. Pope.

While storms remote but murmur on thy ear,

Nor waves in ruinous uproar round thee roll, Yet, yet a moment check thy pzone career,

And curb the keen resolve that prompts -thy soul.

Beattie.

All else was prone, irrational, and mute, And unaccountable, by instinct leil. Potlok,

PRONG, w. s. Belg. pronghen, to squeeze. Minshcu.••• -Goth, prionn. A fork.

The cooks make no more ado, but, slicing it into little gobbets, prick it on a prong of iron, and hang it in a furnace. Sandys.

Whacum his sea-coal prong threw by, And basely turned his back to fly. Hudibras.

Be mindful,

With iron teeth of rakes and prongs to move

The crusted earth. Drydens Virgil's Georgicks.

PUO'NOUN, n. s. Fr. pronom ; Lat. pro-nomen. A part of speech ; see the extract.

I, thou, he ; we, ye, they, are names given to persons, and used instead of their proper names, from whence they had the name of pronouns, as though they were not nouns themselves, but used instead of nouns. Clarke's Latin Grammar.

PRONOUNCE', v. a. & v. n. ˆ French pro-PRONOUN'CER, n. s. > noncer ; Latin

PRONUNCIATION, jpronuncio. To

speak; utter; utter solemnly or confidently; speak with confidence or authority : pronunciation is the act, art, or mode of utterance.

He pronounced all these words unto me with his mouth. Jer. xxxvi. 18.

I have pronounced the word, saith the Lord.

Jeremiah. She

So good a lady, that no tongue could ever Pronounce dishonour of her.

Shakspeare. Henry VIII.

How confidently soever men pronounce of themselves, and believe that they are then most pious, when they are most eager and unquiet ; yet ‘tis sure this is far removed from the true genius of religion.

Decay of Piety. Language of man pronounced By tongue of bruie, and human sense expressed.

Milton.

Sternly he pronounced the rigid interdiction. Id. The design of speaking being to communicate our thoughts by ready, easy, and graceful pronunciation, ail kind of letters have been searched out, that were serviceable for the purpose. Holder.

Though diversity of tongues continue, this would render the pronouncing them easier. Id.

It were easy to produce thousands of his verses, which are lame for want of half a foot, sometimes a vhole one, and which no pronunciation can make otherwise. Dryden.

Absalom pronounced a sentence of death against his brother. Locke.

Every fool may believe and pronounce confidently : but wise men will, in matters of discourse, conclude firmly, and in matters of fact, act surely.

South’* Sermons.

The pronouncer thereof shall be condemned in expenses. -Ayliffe.

We do not believe the character which a man gives us of another, unless we have a good opinion of his own : so neither should we believe the verdict which the mind pronounces, till we first examine whether it be impartial and unbiassed. Mason.

And God, beholding, saw The fair design, that from eternity His mind conceived, accomplished ; and, well pleased, His six days finished work most good pronounced, And man declared the sovereign prince of all.

Pollok.

PRONUNCIATION. Interweaving an English Lexicon with the other portions of our alphabet, we may be expected to say something on this

important part of a living language. It is that part of it, however, we apprehend, upon which instruction is least communicable by books ; and what constitutes elegant or even correct pronunciation is so much matter of fashion, and ever-changing modifications, that ‘ Pronouncing Dictionaries’ have, we confess, long given place in our library to many less laborious performances. Dr. Watts is said to have proposed in badinage, as a rule of English spelling and pronunciation, that the one should be as unlike the other as possible.

Mr. Walker, however, is clearly entitled to praise for his researches into this subject : yet he confesses that he was afraid to attempt all that he considered necessary, and in general contented himself with ascertaining, and exhibiting, existing, and what has been called polite asage. Nothing more than this, perhaps, can ever be accomplished ; and in this he was certainly successful; so that his Dictionary is regarded as the standard of English pronunciation. But he has evidently, after all, attempted too much. For it cannot surely be necessary to mark the sound of every word in the English language : it must be quite sufficient to mark those in which pronunciation is likely to err. Such words only should be marked by a different spelling, which deviate in any respect from the analog v of the language: the pronunciation of all the rest may be sufficiently indicated by the accent, with the assistance, occasionally, of the marks ~ and “, the first denoting that a vowel is long ??? the se-cond, that it is short : as, contemplate, alb. The reader will find the following particulars respecting English pronunciation and its marks worth consideration.

1 . The accent should be understood as falling on the letter

immediately preceding the mark or sign : as, ac’cent, n. accen’t, v. a. ; fa’vor, en-deav’or.

2. When the letter immediately preceding tho accentual mark is a vowel, it is long ; but, if a consonant immediately precede the mark, the preceding vowel is short : thus, fa’vor, fab’rio, which is equivalent to favor, fabric.

3. Final e renders the preceding vowel long, except when it is followed by a double consonant : as, mate, mete, mite, mote, mute, nature, remo’te, &c., pronounced as if marked, mate, mete, mite, mote, mute, na’ture, remo’te. But, when two or more consonants come between the final e and the preceding vowel, it is short : as, battle, babble, badge, &c.. pronounced as if marked battle, babble, bSdge. In such words as intes’tine, fu’tile, &c., the vowel preceding the final e is made short by Mr. Walker ; but in the opinion of the writer it is better to make all such instances conform to the rule ; and the long vowel sound is an improvement in all such connexions to the English language ; for it is, in general, both harsh to the ear and hard to the mouth, from having too few open and too many shut vowel sounds.

4. When the accent is not placed on a vowel, and when it is not followed by a final e in the same syllable, the vowel is to be always considered short; as, fatt’en, hab’it, &c., pronourced as if marked fatten, habit.

5. In monosyllables terminating with all, a has the same sound as aw or au: as, all, ball, call, &c., pronounced awl, bawl, caul. In all cases, when the accent is placed before the *, a is to be pronounced aw; when the accent is put after* , a is to be pronounced short : as, fa’lse, ma’lt, fa’lter; al’b, al’titude, cal’umny, cal’let; pronounced as if marked ××× fawls, mawlt, fawl-ter ; alb, al’titude, &c.

6. The following diphthongs have uniformly the long sound of a (except when one of the towels is in the italic character), ay, ai, ei, ey : as, Maid, pail, say, rein, they, &c., pronounced like made, pale, &c.

But, when one of the vowels is silent, the other vowel is short: as, plaid, raillery, mountain, &c., pronounced plad', ral'lery, mountin.

7. Au, aw, are to be uniformly considered as sounding the same as in caul, awl, except when the pronunciation of the words containing them is particularly indicated. For au before n is pronounced like a in far, and in the colloquial, words ca'nt and sha'nt, except when a different sound is particularly indicated : thus, aunt, askaunce, askaunt, haunt, &c., are pronounced like f an't, -j-can't.

8. Ea, ee, are generally pronounced like e long : as, annea'l, peel, fear, feed. The exceptions, however, are numerous, and are thus marked in some pronouncing dictionaries : bread', head', earl, pronounced bred, hed, erl.

9. Ew, eu, ue, are always pronounced like u long, except when a difference is particularly indicated : as, few, feud, due. But after r, ue, ew, are generally pronounced like oo : as, true, screw, pronounced troo, scroo.

10. Oa and oe always sound like long o, ex-cept when a difference is particularly indicated in the dictionary; as, moat, sloe, pronounced mote, slo.

11. Oy, oi, have uniformly the compound sound of o and i, except where a departure from rule is indicated : thus, joy, spoil, &c.

12. Oo has generally the same sound as in food, soon, fool, &c.

1 3. Before /, u has uniformly the sound of oo shortened, except when a difference is particularly indicated : as, bull, full, handful ; the sole difference between full and fool is, that the diphthong in the last is longer than in the first.

14. Ow, ou, uniformly sound as in our, now,, except when w or u is marked as silent, in which case the pronunciation is the same as long o : thus, flow, source, mould, pronounced, mold, sorce, flo. When ow terminates a word of more than one syllable, it is uniformly pronounced like long o : as in hollow, sorrow, &c.. pronounced hol'lo, sor'ro.

15. In monosyllables y anc1 ie are always pro-ftounced like long i ; but in words of more than one syllable they are pronounced like short e : as, try, tries, pronounced tri, tries, &c. ; carry, carries, pronounced carry, carries, &c.

16. Before nd^ i has uniformly the long sound ; as in mind, kind, &c. : but every other vowel before nd is uniformly short; as in hand, end, fond, fund.

17. Before Ik, a sounds aw, and I is silent; ss in balk, talk, pronounced bawk, tawk.

18. Before Im, a has the broad German sound, and / is silent ; as in calm, balm, &c.

19. Before // and Id, o is always long: as, poll, old, fold, cold, &c., pronounced pole, old, fojd, &c.

20. Before single r, a has uniformly what is termed the broad German sound, except in unaccented syllables, where it has the common short sound : as, far, part, partial ; ram'part, &c. ; and before double r, a has uniformly the short sound ; as in carry, tarry, &c.

21. Before a, o, u, C is always pronounced like K ; but before e, i, y, it is pronounced like S : as, card, cord, curd, pronounced kard, kord, kurd ; cement, city, cynic, pronounced sement, sitty, cinnic. When c ends a word or syllable, it always sounds the same as k ; as, mu'sic, flaccid, siccity, pronounced mu'sik, flak'sed, sik'sity : k after c is now very properly discarded, except in such words as back, pack : as, music, physic, &c., not musick, physick. It would be well to discontinue the k in every case, (i. e. in connexion with c), or to substitute it for c, which last letter is wholly superfluous in the English alphabet ; and, if k and s were made to supersede this double-sounding character, much inconvenience would be obviated.

22. Ch has three sounds, *viz.* tsh, as in chair, child, chin, &c. ; sh, as in chaise, chagrin, machine, &c. ; k, as in chaos, character, chorus, anchor, mechanic, epoch, &c. When ci, -ti, si, come before a, e, o, they are to be considered as sounding like sh, with some exceptions, as, special, occasion, diction, petition, captious, &c. pronounced speshal, okazhun, petishun, capshus : tious, cious, are always pronounced shus ; cion, sion, tion ××× shun; but short, as if put shn.

23. G, like C, has two sounds ; before a, o, u, I, r, or when terminating a syllable, it is hard ; as in game, go, gun, fig, fag, &c. ; before e, i, y, G is pronounced like J ; as in gem, genus, gin, gibe or gybe, gymnastic, age, eulogy, &c.; exceptions, however, occur, such as get, geld, &c. Such words as the following are not exceptions, because the g is properly the last letter of a syllable, and therefore has the hard

sound, *viz.* shaggy, shagged, ragged, rugged, dagger, anger, finger, &c. The intention in doubling the g in shaggy, beggar, &.C., was to indicate the hard sound. When gn begins or terminates a word, g is silent; as gnaw, gnat, condign, malign, feign, deign, sign ††† pronounced naw, nat, condine, ma-line, fain, dain, sine. The vowel preceding the silent g or gh is uniformly long ; as impugn, right, blight, &c. ††† pronounced impune rite, blite. Except in ghost, ghast, and their derivatives (pronounced gost, gast), gh is to be considered as uniformly silent : there are a few instances in which it is pronounced f, as in cough, &c. ††† and /c, as in lough ††† and g hard, as in burgh.

24. When kn begins a word, k is silent ; as, knab, knack, knee, know, &c. ††† pronounced nab, nak, nee, no.

25. II is always sounded at the beginning of words, except in heir, heiress, honest, honesty, honor, honorable, hospital, hostler, hour, humble, humor, humorous, humorsome. It is always silent after / †††; as in rhetoric, rhubarb

†††iiyrrh. When the final letter, and preceded by ;††. vowel, it is always silent; as in ah! oh! sir-rah ! When wh begins words, it is pronounced hoo ; as in whale, wheel ††† pronounced hooale, hooeel, in one syllable. In the Saxon vocabu-lary, such words are more properly spelled hu or hw.

26. The affix or, our, is uniformly pronounced ur ††† as in candor or candour, favor or favour ††† pronounced candur, favur. The shut or short vowel sounds in unaccented syllables cannot be distinguished as having any difference ; and \herefore it seems unnecessary to mark er as if it were pronounced ur in such words as lover, mo-ther, father, &c.

27. The affix some is uniformly pronounced sum ; as in han’dsome, deli’ghtsome ††† pronounced Jian’sum, deli’ghtsum. This affix is spelled in Saxon, som, sam, sum : and it would be well to return to

sum, or at least to discard the final e ; for, as we have so frequently intimated, spelling and pronunciation should coincide.

28. The affix ons is uniformly pronounced us ; as in covetous, righteous ††† pronounced cuv'etus, ri'ghtyus ; ous (like our for or) is the French mode of expressing the Latin affix on.

29. When w begins the word, it has the sound of oo ; as in ware, wet, wile, Sac. ††† pronounced ooare, ooet, ooile, in one syllable : u before e, i, o, has generally the same sound ; as, languish, banquet, languor, language ; pronounced lan'gwish, or langooish, ban'kwet, langwur, langwage.

30. S has two sounds, the one sharp and hissing, as in us, this ; the other precisely like z ; †††as in his, was, as, &c. Double s has uniformly the sharp hissing sound.

31. Th has two sounds ; the one as in thin, &c. ; the other as in thine. When not particularly indicated, th is always to be considered as haying the first sound ; but, when followed by final e in the same syllable, th has uniformly the second sound ; as in breathe, writhe, &c. When th is pronounced as t, the A is marked as silent ; thus, tAyme, astAma, pronounced time, ast'ma.

32. F and ph have the same sound; andy sometimes that oft; ; double /"has uniformly the sound off, orph, as in off, staff, &c.

33. Before on and ous, i generally sounds like y, at the beginning of a word or syllable ; as in minion, million, tedious, &c., pronounced mi-nyun, milyun, tedeyus.

34. When final e comes after / and r, it is to be pronounced as if put before them ; as in fickle, mingle, theatre, nitre, pronounced fikkel, mingul, theater, niter. This pronunciation is quite familiar, to the French (from whom the mode ot spelling and pronouncing such words was adopted), and other foreigners must remember that final e is never pronounced as a distinct syllable in the English language.

35. T is always silent between s and en or le ; as in hasten, listen, castle, &c., pronounced hay-sen, lissen, kassel.

36. X has two sounds, *viz.* ks and gs, except when particularly marked, it is to be understood us having the first sound.

37. Qu has always the sound of koo.

38. The verbal affix ed, is seldom pronounced RS a distinct syllable except after d; as feared,

confessed, pronounced feard, confessd ; but in such words us branded, commanded, &c., it is a distinct syllable.

The irregular character of English pronunciation has been (like that of English spelling), too often noticed, and is too manifest to require any comment : whether it be more or less anomalous ###ban that of other languages is a question of no importance ; but there is evidently much importance, i. e. utility, in rendering it as simple and regular as possible. Influential speakers (who have always least reason to dread petty criticism) should set the example of bringing English pronunciation to English spelling. The latter might be materially reformed (see oxir article GRAMMAR) without much trouble ; and the great desideratum is coincidence between the one and the other. It is in general, however, safer to make the pronunciation conform to the spelling, than to make the spelling conform to the pronunciation ; and to make the one correspond to the other ouoht evidently to be a rule with every sensible speaker and writer.

In all those words which are differently pronounced by respectable speakers, that mode is worthy of preference which is most agreeable to analogy and most conformable to orthography ; a##, yea, pronounced ye and yay; wound,, pronounced like found and woond ; break, pronounced breek and brake; oblige, pronounced oblige and obleege ; knowledge, pronounced nolerlge ;md nolledge, &c., Sec. The first of these modes of pronunciation is evidently that which should bo universally adopted. Influential speakers should endeavour to bring the general practice to analogy in all cases. It is unworthy of persons who have any respect for utility, to follow the blind guidance of mere custom, or to comply with the anomalous caprices of fashion. The only chance for simplicity, uniformity, and immutable stability to a living language, is to fol-low the guidance of reason. When learned or foreign words are adopted, they should be made to conform to the English idiom or manner of spelling and pronouncing. This plain sensible rule is surely better than pedantry or affectation : and in this \e might profit by the example of the French, in imitating whose language we have given such a motley character to our own.

PROOF, n. s. & adj. \ From PROVE, whicli

PROOF’LESS. S see. Experiment ;

evidence ; testimony ; hence firm temper ; impenetrability ; armour hardened in a high de-gree; the rough draught, or copy of a printed sheet : as an adjective, impenetrable ; capable of firm resistance ; taking to or against before the object : proofless is, not to be proved, or destitute of proof.

Though the manner of their trial should be altered, yet the proof of every thing must needs be by the testimony of such persons as the parties shall produce. Spenser.

This has neither evidence of truth, nor proof sufficient to give it warrant. Hooker.

That which I shall report will bear no credit, Were not the proof so high. Shakspeare.

He Bellona's bridegroom, tapt in proof, Confronted him. Id. Macbeth.

Nothing can be more irrational than for a man U

doubt of, or deny the truth of any thing, because it cannot be made out by such kind of proofs of which the nature of such a thing is not capable. They ought not to expect either sensible proof, or demonstration of such matters as are not capable of such proofs, supposing them to be true. Wilkiru.

One soul in both, whereof good proof This day affords. Milton.

Opportunity I here have had To try thee, sift thee, and confess have found thee Proof against all temptation, as a rock Of adamant. Id. Paradise Regained.

Some were so manifestly weak and proofless, that he must be a very

courteous adversary, that can grant them. Boyle.

Those intervening ideas, which serve to shew the agreement of any two others, are called proofs.

Dryden.

To me the cries of fighting fields are charms, Keen be thy sabre, and of proof my arms ; I ask no other blessing of my stars. Id.

He past expression loved,

Proof to disdain, and not to be removed. Id. Guiltless of hate, and proof against desire ; That all things weighs, and nothing can admire.

Id.

My paper gives a timorous writer an opportunity of putting his abilities to the proof. Addison.

Deep in the snowy alps, a lump of ice By frost was hardened to a mighty price ; Proof to the sun it now securely lies, And the warm dog-star's hottest rage defies. Id. When the mind is thoroughly tinctured, the man will be proof against all opposition. Collier.

Here for ever must I stay, Sad proof how well a lover can obey. Pope. I've seen yon weary winter-sun

Twice forty times return ; And ev'ry time has added proofs,

That man was made to mourn. Burns.

PROOF, in law and logic, is that degree of evidence which carries conviction to the mind. It differs from demonstration, which is applicable only to those truths of which the contrary is inconceivable. It differs likewise from probability, winch produces for the most part nothing more than opinion, while proof produces belief.

PROOF, in printing. See PRINTING.

PROOF, in spirituous liquors, is a little white lather which appears on the top of the liquor when poured into a glass. This lather, as it diminishes, forms itself into a circle called by the French the chaplet, and by the English the head or bubble.

PROOF OF ARTILLERY AND SMALL ARMS, is a trial whether they stand the quantity of powderˆ allotted for that purpose. Government

allows s eleven bullets of lead in the pound for the proof of muskets, and twenty-nine in two pounds, for service ; seventeen in the pound for the proof of carabines, and twenty for service ; twenty-eight in the pound for the proof of pistols, and thirty-four for service. When guns of a new metal, or of lighter construction, are proved, besides the common proof, they are fired 200 or 300 times, as quick as they can be, loaded with the common charge given in actual service. Proof of cannon is made to ascertain their being well cast, thˆir having no cavities in their metal, and, in a word, their being fit to resist the effort of their charge of powder. In making this proof, the piece is laid

upon the ground; supported only by a piece of wood in the middle, of about five or six-inches thick, to raise the muzzle a little ; and then the piece is fired against a solid butt of earth. The tools used in the proof of cannon are these : ††† The searcher, an iron socket with branches, from, four to eight in number, bending outwards a little, with small points at their ends : to this socket is fixed a wooden handle, from eight to twelve feet long, and one inch and a half in diameter. This searcher is introduced into the gun after each firing, and turned gently round to discover the cavities within ; if any are found they are marked on the outside with chalk ; and then the searcher with one point is introduced : about which point a mixture of wax and tallow is put, to take the impression of the holes ; and if they are found of one-fourth of an inch deep, or of any considerable length, the gun is rejected as un-serviceable. The reliever is an iron ring fixed to a handle, by means of a socket, so as to be at right angles; it serves to disengage the first searcher, when any of its points are retained in a hole, and cannot otherwise be got out.

A curious instrument for finding the princip U defects in pieces of artillery was invented by lieutenant-ge;ieral Desaguliers. This instrument discovers more particularly the defect of the piece not being truly bored; which is a very. important one ; for, when a gun is not properly bored, the most expert artillerist will not be able to make a good shot.

Every species of ordnance undergoes different kinds of proof before it is received into his majesty’s service. They are gauged as to their several dimensions, internal and external, as to the accuracy of the position of the bore, the chamber, the vent, the trunnions, &c. They arc fired with a regular charge of powder and shot, and afterwards searched to discover irregularities or holes produced by the firing. By means of engines, an endeavour is made to force water through them.

They are examined internally, by means of light reflected from a mirror.

PROOF OF MORTARS AND HOWITZERS is performed by placing them on the ground on woo I or bullets, of an elevation of 70►►. The mirror is the only instrument to discover their defects. To use it, the sun must shine ; the breech must be placed towards the sun, and the glass over ; against the mouth of the piece ; it illuminate i the bore and chamber sufficiently to discover the flaws in it.

PROOFS IN ENGRAVING. Proofs of prints were formerly a few impressions taken off in different stages of the engraver's process, that he might ascertain how far his labors had been successful, and when they were complete. The excellence of such impressions, worked with care under the artist's eye, occasioning them to be sought after, and liberally paid for, it has been customary, among our modern printsellers, to take off a number under this name, from every plate of considerable value. On retouching a plate, it has been also usual, among the same conscientious fraternity, to cover the inscription, which was immediately added after the first pioofs were obtained, with slips of papˆr, that a niunoer of secondary proofs migrit also be created.

PRO

PROP, v. a. & n. s. Belg. proppe, proppen. To sustain; support; uphold: a stay; support; pillar.

Again, if by the body's prop we stand, ►►► If on the body's life, her life depend,

As Meleager's on the fatal brand, The body's good she only would intend.

Danies,

That he might on many props repose, He strengths bis own, and who his part did take.

Daniel.

Like these, earth unsupported keeps its place, Though no fixi bottom props the weighty mass.

Creech.

Fairest unsupported flower From her best prop so far. Milton.

The current of his vict'ries found no stop, Till Cromwell came, his party's chiefest prop.

Waller. The props return

Into thy house, that bore the burdened vines.

Dryden.

PROPAEDEUTICS, from irpovcudtvta, to prepare for instruction : a term used in Germany to indicate the knowledge which is necessary or useful for understanding or practising an art or science, or which unfolds its nature and extent, and the method of learning it. It is applied, therefore, not only to special introductions to particular branches of study, but also to auxiliary sciences, logic, philology, &c., and the encyclo-paedic views of particular branches of science which facilitate an insight into the relations of the parts. Such a survey can be presented only by one who has studied a science in all its ramifications. The term propxdeutlcs is often, of course, merely relative ; thus philology belongs to the propaedeutics of history, while it is itself the main study of a certain class of scholars. The term, however, in its common use, is generally restricted to the body of knowledge, and of rules necessary for the study of some particular science ××× rules which originate in the application of the general laws of science or art to a particular department. Thus we find in the catalogues of lectures to be delivered in German universities, medical propaedeutics, &c., enumerated.

PROPAGANDA; a name generally given to those institutions by which Christianity is propagated in heathen countries, more particularly to those which were established in the seventeenth century, and especially that erected by the papal court, for the extension of its own

power and the Catholic religion among those who were not Christians or Catholics. It was called the congregatio de propaganda fide (society for propagating the faith), and was founded by Gregory XV. in 1622. It consisted of eighteen cardinals, and some papal ministers and officers of the college ; and its object was, to arrange and direct all measures relating to the extension of the Catholic faith and the extirpation of heretics. Connected with this was the collegium sen seminarium de propaganda fide, instituted by Urban VIII. 1627, for the education of missionaries. Each Society meet once a week, in the presence of the pope, in a palace built for the purpose. Converts to the Catholic church, V*ho had come to Rome, were instructed and

supported by them. Bishops, and other who had been expelled, were also received and supported. The Roman propaganda had a press celebrated for the numerous works which issued from it. Thence breviaries and missals were sent to all parts. Missionary societies, for the propagation of the Christian religion, have been formed in Protestant countries on this model. (See Missions.) In the time of the French revolution, secret societies, whose object was the propagation of democratical principles, were called propaganda. Propaganda has, therefore, come to signify any kind of institution for mak-ing proselytes.

PROFAGATE, v. a. & n. s. ˆ Lat. propago. PROP’AGABLE, adj. /To continue by

PROPAGATION, n. s. I generation or

PROP’AGATOR. 3 production ; to

diffuse ; extend ; promote : transport; increase ; to have offspring : propagable is, that may be propagated : propagation, the act of continuing or diffusing by successive production : propaga-tor, corresponding in sense.

I have upon a high and pleasant hill Feigned fortune to be throned : the base o’ the

mount

Is ranked with all deserts, all kind of natures, That labour on the bosom of this sphere To propagate their states. Shakspeare. Timon.

Some have thought the propagating of religion by arms not only

lawful, but meritorious.

Decay af Piety.

All that I eat, or drink, or shall beget, Is propagated curse ! Milton's Para<lise Lost.

No need that thou Should'st propagate, already infinite. And through all numbers absolute, though one.

Milton.

Is it an elder brother's duty so To propagate his family and name; You would not have yours die and buried with you ?

Otway.

From hills and dales the cheerful cries rebound, For echo hunts along, and propagates the sound.

Dryden.

Old stakes of olive trees in plants revive ; But nobler veins by propagation thrive. Id.

PROPEL', v. a. Lat. propello. To drive forward.

Avicen witnesses the blood to be frothy, that is propelled out of a vein of the breast. Harvey.

This motion, in some human creatures, may be weak in respect to the viscidity of what is taken, so as not to be able to propel it.

Arbuthnot on Aliments,

PROPEND', v. n. J Lat. propendeo, to PROPEN'DENCY, n. s. } hang forwards. To incline to any part; be disposed in favor of any thing. Not used.

PltOPENSE', adj. } Lat. propensus. In-PROPEN'SION, n. s. > clined ; disposed ; used PROPENSITY. * both of good and bad :

propensity is tendency ; particularly moral disposition ; natural tendency.

I have brought scandal In feeble hearts, propense enough before To waver, or fall off, and join with idols.

Milton.

It requires a critical nicety tc find out the genius or the propensions of a child. L'Estravge*

Let there DC but propensity, and bent of will to religion, and there will be sedulity and indefatigable industry. South.

So forcible are our propensions to mutiny, that we equally take occasions from benefits or injuries.

Government of the Tongve.

He assists us with a measure of grace, sufficient to overbalance the corrupt propensity of the will.

Roger t.

This great attrition must produce a great propen-rity to the putrescent alkaline condition of the fluids.

Arbuthnot.

It is, however, not to be omitted, that he appears always propense towards the side of mercy. Johnion.

PROPER, adj. -\ Fr. propre ; Lat.

PROP'ERLY, adv. {proprius. Peculiar;

PROP'ERNESS, n. s. i natural ; fit ; adapt—

PROP'ERTY, n. s. & v. a. J ed ; belonging to an individual; one's own; literal; mere; pure; pretty or beautiful ; and, in a low sense, tall ; stout; the adverb and noun substantive corresponding : property is,peculiar quality; disposition, or right ; possession held in one's own right ; any thing promised ; an appendage ; any thing peculiarly new or adapted :

to property is, to seize or retain as a right ; to invest with qualities or possessions ; but neither sense is now in use.

Moses was a proper child. Hebrews xi. 23.

Men of learning hold it for a slip in judgment, when offer is made to demonstrate that as proper to one thing, which reason findeth common unto many.

Hooker.

What special property or quality is that, which, being no where found but in sermons, maketh them effectual to save souls ? Id.

The bloody book of law You shall yourself read in the bitter letter, After your own sense ; yea, though our proper son Stood in your action. Shakspeare. Othello.

Proper deformity seems not in the fiend So horrid as in woman. Id. King Lear.

At last she concluded with a sigh, thou wast the propcrest man in Italy. Shaktpeare.

Here I disclaim all my paternal care, Propinquity, and property of blood, And, -as a stranger to my heart and me, Hold thee. Id. King Lear.

I will draw a bill of properties, such as our play ###rants. Shakspeare.

His reared arm

Crested the world ; his voice was propertied As all the tuned spheres.

Id. Antony and Cleopatra. I am too highborn to be propertied, To be a secondary at controul. Shakspeare. Our poets excel in grandity and gravity, smoothness and property, in quickness and briefness.

Cam den.

Of nought no creature ever formed ought, For that is proper to the Almighty's hand.

Davies.

'Tis conviction, not force, that must induce as-sent ; and sure the logic

of a conquering sword has no great property that way ; silence it may, but convince it cannot. Decay of Piety.

In our proper motion we ascend Up to our native seat. Milton.

What dies but what has life And sin ? the body properly hath neither. Id. If we might determine it, our proper conceptions would be all voted axioms. Glanville'i Scepsis.

Court the age With somewhat of your proper rage. Waller.

PllO

Now learn the difFrence at your proper cost, Betwixt true valour and an empty boast.

In Athens ali was pleasure, mirth, and play, All proper to the spring, and sprightly May. Id.

For numerous blessings yearly show'r'd, And property with plenty crowned, Accept our pious praise. Id.

The purple garments raise the lawyer's fees, High pomp and state are useful properties Id.

A proper goodly fox was carrying to execution.

L'Estrange.

Outward objects, that are extrinsecal to the mind and its own operations, proceeding from powers in-trinsecal and proper to itself, which become also objects of its contemplation, are the original of all knowledge. Locke.

Property, whose original is from the right a man has to use any of the inferior creatures, for subsistence and comfort, is for the sole advantage of the proprietor, so that he may even destroy the very thing that he has property in. Id.

They professed themselves servants of Jehovah, their God, in a relation and respect peculiar and pro-per to themselves. Nelson.

Those parts of nature, into which the chaos was divided, they signified

by dark names, which we have expressed in their plain and proper terms.

Biirnet's Theory of the Earth. There is a sense in which the works of every man, good as well as bad, are properly his own.

Rogers.

In debility, from great loss of blood, wine, and all aliment that is easily assimilated or turned into blood, are proper; for blood is required to make blood. Arbuthnot.

Greenfield was the name of the property man in that time, who furnished implements for the actors.

Pope.

The miseries of life are not properly owing to the unequal distribution of things. Swift.

No wonder such men are true to a government, where liberty runs so high, where property is so well secured. Id.

A proper name may become common, when given to several beings of the same kind ; as Caesar.

Watts.

A secondary essential mode is any attribute of a thing, which is not of primary consideration, and is called a property. Id.

PROPERTIUS (Sextus Aurelius), a celebrated Latin poet, born at Mevania, a city of Umbria. He went to Rome after the death of his father, a Roman knight, who had been put to death by order of Augustus, for having followed Antony's party. Propertius acquired great reputation by his abilities, and was patronised by Maecenas and Cornelius Callus. He had also Ovid, Tibullus, and other literati of his time, for his friends. He died in Rome 19 B. C. His four books of elegies are printed with almost all the editions of Tibullus and Catullus ; the best is the separate edition by J. Brouckhusius at Amsterdam, 1702 and 1714, 4to. PROPERTY. See LAW.

PROPHE'CY, n. *. PROPH'ET,

PROPH'ESY, v. a. &v. n. PROPH'ETESS, n. s. PROPHET'IC, adj.

PROPHET'ICAL, PROPHETICALLY, adv. PKOPH'ETIZE. v. n.

Fr. prophete ; Ita!. prof eta ; Span. Port, and Lat. prophet u , Gr. irpo(f>r}ri]f. One who predicts or foretels future events ; one who tevu'hes or preachc 3 ??? a prophecy

is a prediction ; declaration of something future : to prophesy, to foretel ; prognosticate ; foreshow ; utter predictions ; preach : prophetize, an obsolete synonyme : prophetess, the feminine of prophet : prophetic and prophetical, of the nature of prophecy ; the adverb corresponding.

I hate him, for he doth not prophesy good, bu*. evil. 1 Kings.

The elders of the Jews builded, and prospered through the prophesying of Haggai. Earn vi. 14. He hearkens after propftecies and dreams.

Shakspeare. Miserable England, I prophesy the fearful'st time to thee, That ever wretched age hath looked upon. Id. Methought thy very gait did prophesy A royal nobleness. Id. King Lear.

His champions are the prophets and apostles.

Shakspeare.

He shall split thy very heart with sorrow, And say poor Marg'ret was a prophetesi. Id. He is so prophetically proud of an heroical cudgel-ling, that he raves in saying nothing. Id. Some perfumes procure prophetical dreams.

Bacon.

The counsel of a wise and then prophetical friend was forgotten. Wottan.

That it is consonant to the word of God, so in singing to answer, the practice of Miriam the prophetess, when she answered the men in her song, will approve.. Peacham.

It buildeth her faith and religion upon the sacred and canonical scriptures of the holy prophets and apostles, as upon her main and prime foundation.

White.

Nature else hath conference With profound sleep, and so doth warning send By prophetizing dreams. Daniel's Civil War.

This great success among Jews and Gentiles, part of it historically true at the compiling of these articles, ,and part ot it prophetically true then, and fulfilled afterward, was a most effectual argument to give authority to this faith. Hammond.

O prophet of glad tidings ! finisher Of utmost hope ! Milton.

Till old experience do attain To something like prophetic strain. Id.

Poets may boast

Their work shall -with the world remain ; Both bound together, live or die, The verses and the pi ophesy Waller.

Some famous prophetic pictures represent the fate of England by a mole, a creature blind and busy, smooth and deceitful, continually working under ground, but now and then to be discerned in the surface. Stillingjieet.

He loved so fast,

As if he feared each day would be her last , Too true a prophet to foresee the fate, That should so soon divide their happy state.

Dry den.

The more I know, the more my fears augment, And *ears are oft prophetic of the event. Id.

She sighed, and thus prophetically spoke. Id. God, when he makes the prophet, does not unmake the man. Locke.

No arguments made a stronger impression on these Pagan converts, than the predictions relating to our Saviour in those old prophetic writings deposited among the hands of the greatest enemies to Christ-

anity, and owned by them to have been extant many

ges before his appearance. Addison.

If my love at once were crowned, Fair pi-cjiheteis, my grief would cease. Prior.

It was attested by the visible centering of all the old profhecies in the person of Christ, and by the completion of these prophecies since, which he himself uttered. Atterbury.

Received by thee, I prophesy, my rhimes, Mixed with thy works, their life no bounds shall see.

Tickel. Pleasure is deaf when told of future pain,

And sounds prophetic are too rough to suit

Ears long accustomed to the pleasing lute.

Cou'per

False prophetess ! the day of change was come ; Behind the shadow of eternity, He saw his "visions set of earthly fame, For ever set. Pollok.

PROPHECY. The prophecies in the Scriptures, upon which, if room permitted, we might enlarge, anord the most decisive evidence of the truth of Christianity, being in fact a kind of standing miracles, that have existed for ages, and still exist, in proof of the veracity of Scripture. We may specify, I. The prophecy of Noah (Gen. ix. 25, 26), respecting the degraded and enslaved state of the posterity of Ham ; fulfilled, first by the Jews in the slavery of the Canaanites ; afterwards by the Greek's in the destruction of Tyre, and by the Romans in that of Carthage ; and, in modern times, in the oppression of their posterity by the Saracens and Turks, and even to the present age by the slave trade. . II. The prophecy of the innumerable posterity of Abraham ; but more particularly of the wild, predatory, free, and independent state of his posterity by Ishmael (Gen. xvi. 10

12.), fulfilled in all ages, as well as in the present, by the unconquered state of the

Arabs. III. The remarkable prophecy of Moses (Deut. xxviii. 64 ??? 66) and of Hosea (iii. 4) against the Jews, which have been so literally fulfilled for upwards of 1800 years past ; notwithstanding which, while they have been scattered among all the nations on the globe, they continue still a distinct people, firmly and .rrevocably attached to their peculiar customs, though persecuted every where on that account. This is a phenomenon unparalleled in the history of mankind, and totally unaccountable upon the ordinary principles of human action ; and therefore only accountable upon the principle of their being still preserved a distinct people, till the period when they shall fulfil the remaining part of Hosea's prediction (iii. 26). IV. To these remarkable prophecies, we might add those of Daniel, respecting the four universal monarchies ; and those of St. Paul and St. John, which so clearly foretel the various fortunes of the Christian church ; with its progress from the age of apostolic purity, to that state of universal corruption under which it sunk for about 1000 years, together with its gradual restoration to puri-ty. But, for further information on all these subjects, we must refer the reader to bishop Newton's Dissertations on the Prophecies ; bishop Chandler's Vindication of Christianity; bishop Ilurd's Warburtonian Lecture ; bishop Sherlock's Discourses on Prophecy, &c. See THEOLOGY.

PROPHETS, among the Jews, were persons commissioned and inspired by God to declare his will and purposes to that people. Previous to the existence of that nation, there were other inspired prophets, particularly Enoch, Lamech,

and Noah. After the deluge, and before the giv-ing of the law, we find Melchizedek, Abraham, Isaac, Jacob, Joseph, Job, Elihu, and Moses. Under the law, we find several eminent prophets ; particularly Joshua, Samuel, Gad, Nathan, Ahi-jah, Elijah, Elisha, Micaiah, and some others whose names are not recorded ; and, among the canonical

books of the Old Testament, are preserved the writings of sixteen prophets, who are commonly styled the greater and lesser.

The GREATER PROPHETS, so called from the length and extent of their writings, are four, *viz.* ISAIAH, JEREMIAH, EZEKIEL, and DANIEL.

The LESSER PROPHETS, so named from the brevity of their prophecies, are twelve ; *viz.* HOSEA, JOEL, AMOS, OBADIAH, JONAH, MICAH, NAHUM, HABAKKUK, ZEPHANIAH, HAGGAI, ZE-CHARIAH, and MALACHI. See these articles in their order.

PROPHETS, SONS OF THE, in Scripture history, an appellation given to young men who were educated under a proper master, (who was commonly, if not always, an inspired prophet,) in the knowledge of religion and in sacred music, and thus were qualified to be public teachers. This seems to have been part of the business of the prophets on the Sabbath days and festivals.

PROPHYLACTIC, adj. Gr. KpojvXaKTUcoc, of 7rpo0uXa<r<7w. Preventive ; preservative.

Medicine is distributed into prophylactic, or the art of preserving health ; and therapeutic, or the art of restoring health. Watts.

PROPI'NQUITY, n. s. Lat. propinquitas. Nearness ; proximity of station, kind, time, or Mood.

Here I disclaim all my paternal care, Propinquity, and property of blood, And, as a stranger to my heart and me, Hold thee. Shahspeare. King Lear.

Thereby was declared the propinquity of their desolations, and that their tranquillity was of no longer duration, than those soon decayed fruits of summer.

Browne.

They draw the retina nearer to the crystalline hu-mour, and by their relaxation suffer it to return to its natural distance according to the exigency of the object, in respect of distance or propinquity.

Ray.

PROPITIATE, v. a. ˆ Lat. propitio.

PROPI’TIABLE, adj. j To conciliate;

PROPITIA’TION, n. s. | gain; induce to

PROPITI’ATOR, J favor ; appease ;

PROPI’TIATORV, adj. &n.s. ‘make gracious:

PROPI’TIOUS, propitiable, ap—

PROPI’TIOUSLY, adv. peasable ; such

PROPI’TIOUSXESS, n. s. J as may be induced to favor : propitiation is, the act or means of propitiation ; atonement made : propitiator, he who makes it : propitiatory, having the power to conciliate ; as a noun substantive, a mercy-seat, or throne of mercy : propitious, favorable ; kind; gracious ; partial : the adverb and noun substantive corresponding.

He is the propitiation for the sins of the whole v/orld. 1 John.

T’ assuage the force of this new flame,

And make thee more propitious in my need, I mean to sing the praises of thy name.

Spenser.

Let not my words offend thee, My Maker, le propitious, while I speak !

Milton.

So when a muse propitiously invites, Improve her favours, and indulge her flight?.

Roscomwm.

You, her priest, declare What off” rings may propitiate the fair, Rich orient pearl, bright stones that ne’er decay, Or polished lines which longer last than they.

Waller.

Is not this more than giving God thanks for their virtues, when a propitiatory sacrifice is offered for their honour ? Stilimgfleet.

All these joined with the propitiousness of climate to that sort of tree and the length of age it shall stand and grow, may produce an oak Temple.

Vengeance shall pursue the inhuman coast, Till they propitiate thy offended ghost. Dryden.

Would but thy sister Marciabe propitious To thy friend's vows. Addison's Cato.

Ere Phoebus rose he had implored Propitious Heaven. Pope's Rape of the Lock.

Let fierce Achilles, dreadful in his rage, The god propitiate, and the pest assuage. Pope. In allusion to the ancient worship, the apostle represents Christ as a propitiatory or mercy -seat, set forth by God for receiving the worship of men, and dispensing pardon to them. Macknight.

PROPITIATION. Among the Jews there were both ordinary and public sacrifices, as holocausts, &c., offered by way of thanksgiving; and extraordinary ones, offered by particular persons guilty of any crime, by way of propitiation. The Roman Catholics believe the mass to be a sacrifice of propitiation for the living and the dead. The reformed churches allow of no propitiation but that one offered by Jesus Christ on the cross.

PROPITIATORY, any thing rendering God propitious ; as propitiatory sacrifices, in contradistinction to eucharistical. Among the Jews the propitiatory was the cover or lid of the ark of the covenant ; which was lined both within and without with plates of gold, insomuch that there was no wood to be seen This propitiatcry was a type or figure of Christ, whom St. Paul calls the propitiatory ordained from all ages.

PRO'PLASM, n. s. Gr. irpo and irXaffpa. Mould; matrix.

Those shells serving as proplasms or moulds to the matter which so filled them, limited and determined its dimensions and figure. Woodward.

PROPO'NENT, n. s. Let. proponens. One that makes a proposal, or lays down a position.

For mysterious things of faith rely On the proponent, heaven's authority. Dryden.

PROPONTIS, or the Sea of Marmora, a part of the Mediterranean, dividing Europe from Asia ; it has the Hellespont or canal of the Dardanelles on the south-west, whereby it communicates with the Archipelago, and the ancient Bosphorus of Thrace, or Straits of Constantinople, on an north-east, communicating with the Black or Euxine Sea. It has two castles ; that on the side of Asia is on a cape, where formerly stood a temple of Jupiter ; that of Europe is on the opposite cape, and had anciently a temple of Serapis. It is 120 miles long, and in some places upwards of forty miles broad. Lempriere says, ‘ it is 175 miles long, and sixty-two broad ; ‘ and that ‘ it received its name from its vicinity to Pontus.’ ††† Class. Diet.

PROPORTION, n. s. & v. a. ~} Fr. propor-PROPOR’TIONABLE, adj. lion ; Latin,

PROPOR’TIONABLY, adv. proportio.

PROPORTION A L, adj. I Ratio : com—

PROPORTIONAL’ITY, n. s. [parative rela—

PROPOR’TIONALLY, adv. tion ; settled

PROPORTIONATE, adj. & v. a. relation or PROPOR’TIONATENESS, n. s. J graduation ; symmetry ; harmonic agreement ; form ; size : to adjust ; form symmetrically : proportionable, proportional, and proportionate, mean, having a settled comparative relation; suitable; the adverbs corresponding : proportionality and proportionateness, the state of being proportionate, or comparatively adjusted.

Nature had proportioned her without any fault, quickly to be discovered by the senses ; yet altogether seemed not to make up that harmony that Cupid delights in. Sidney,

Measure is that which perfecteth all things, because every thing is for some end ; neither can that thing be available to any end which is not proportionable thereunto : and to proportion as well excesses as defects are opposite. Hooker.

Let any man's wisdom determine by lessening the territory, and increasing the number of inhabitants, what proportion is requisite to the peopling of a re-gion in such a manner that the land shall be neither too narrow for those whom it feedeth, nor capable of a greater multitude. Raleigh.

It is good discretion not to make too much of any man at the first ; because one cannot hold out that vroportion. Lord Bacon.

All things received, do such proportions take, As those things have, wherein they are received ;

So little glasses little faces make, And narrow webs on narrow frames are weaved.

Davies.

By proportion to these rules, we may judge of the obligation that lies upon all sorts of injunous persons.

Taylor.

His volant touch

Instinct through all proportion*, low and high, Fled, and pursued transverse the resonant fugue.

Milton.

It must be mutual in proportion due Given and received. Id.

The serpent lives,

Lives, as thou said'st, and gains to live as man

Higher degree of life, inducement strong

To us, as likely tasting to attain

Proportional assent, which cannot be

But to be gods or angels. Id. Paradise Lost.

By this congruity of those faculties to their proper objects, and by the fitness and proportionate ness of these objective impressions upon their respective faculties accommodated to their reception, the sensible nature hath so much of perception, as is necessary for its sensible being. Hale.

Four numbers are said to be proportional, when the first containeth, or is contained by the second, as often as the third containeth, or is contained by the fourth. Cocker.

The parallelism and due proportionated inclination of the axis of the earth. More'i Divine Dialogues.

His commandments are not gnevous, because he offers us an assistance proportionable to the difficulty.

Tillotson.

No man of the present age is equal in the strength, proportion, and knitting of his limbs, to the Hercules of Farnese. Dryden.

Greater visible good does not always raise men's desires, in proportion to the greatness it is acknow-

ledged to have, though every little trouble sets us on work to get rid of it. Locke.

The mind ought to examine all the grounds of probability, and, upon a due balancing the whole, reject or receive it proportionally to the preponderancy of the greater grounds of probability, on one side or the other. Id.

The connection between the end and any means is adequate, but between the end and means proportionate. Grew.

All sense, as grateful, dependeth upon the equality or the proportionability of the motion or impression made. Id.

In proportion as this resolution grew, the terrors before us seemed to vanish. Taller.

The proportions are so well observed that nothing appears to an advantage, or distinguishes itself above the rest. Addison.

In the loss of an object, we do not proportion our grief to the real

value it bears, but to the value our fancies set upon it. Id.

It was enlivened with an hundred and twenty trumpets, assisted with a proportionable number of other instruments. Id.

Things nigh equivalent and neighbouring value By lot are parted ; but high heaven thy share, In equal balance weighed ‘gainst earth and hell, Flings up the adverse scale, and shuns proportion.

Prior.

If light be swifter in bodies than in vacuo, in the proportion the sines of which measure the refraction of the bodies, the forces of the bodies to reflect and refract light, are very nearly proportional to the densities of the same bodies. Newton.

The parts of a great thing are great, and there are propoˆionably large estates in a large country.

Arbuthnot.

Since every single particle hath an innate gravitation toward all others, proportionated by matter and distance, it evidently appears that the outward atoms of the chaos would necessarily tend inwards, and descend from all quarters towards the middle of the whole space. Bentley’s Sermons.

Harmony, with every grace,

Plays in the fair proportions of her face.

Mrs. Carter. Hast thou incurred

His anger, who can waste thee with a word,

Who poises and proportions sea and land,

Weighing them m the hollow of his hand,

And in whose sight all nation* ►►e<►►►

As grasshoppers, as dust, a diop, a drt-im ‘

L’ofFf/fr.

PROPORTION, the identity or similitude of two ratios. Hence quantities that have the same ratio between them are said to be

proportional ; e. gr. if A be to B as C to D, or 8 be to 4 as 30 to 15; A,B,C, D, and 8, 4, 30, and 15, are said to be in proportion, or are simply called proportionals. Proportion is frequently confounded with ratio, yet the two convey in reality very different ideas, which ought by all means to be distinguished. Ratio is properly that relation or habitude of two things whic'h determines the quantity of one from the quantity of another, without the intervention of any third ; thus we say the ratio of 5 and 10 is 2, the ratio of 12 and 24 is 2. Proportion is the sameness or likeness of two such relations ; thus the relations between 5 and 10 and 12 and 24 being the same, or equal, the four terms are said to be in proportion. Hence ratio exists between two number} but proportion requires at least three.

PROPORTION is also used for the relation between unequal things of the same kind, whereby their several parts correspond to each other with an equal augmentation or diminution.

PROPORTION, in architecture, denotes the just magnitude of the members of each part of a building, and the relation of the several parts to the whole ; e. gr. of the dimensions of a column, &c., with regard to the ordonnance of a whole building.

PROPOSE', v. a. & v. n.-ˆ Ital. proporre ;

PROPO'SAL, n. s. i Span, proponer ;

PROPO'SER, > Fr. proposer ; Lat.

PROPOSITION, [propono. To sub—

PROPOSI'TIONAL, adj. J mit to consideration ; offer : as a verb neuter, lay schemes : a proposal is the scheme laid ; design proposed ; offer to the mind : the proposer, he who forms or offers a proposal or scheme :

proposition, one of the three logical parts of an argument ; a sentence which affirms or denies any thing ; offer : the adjective corresponding.

Run thee into the parlour,

There shalt thou find my cousin Beatrice,

Proposing with the prince and Claudio.

Shakspeare.

The first proposition of the precedent argument is not necessary. White.

Chrysippus, labouring how to reconcile these two propositions, that all things are done by fate, and yet that something is in our own power, cannot extricate himself. Hammond.

The enemy sent propositions, such as upon delivery of a strong fortified town, after a handsome defence, are usually granted. Clarendon.

Raphael to Adam's doubt proposed, Benevolent and facile thus replied. Milton.

The compounding the representation of things, with an affirmation or negation, makes a proposition.

Hale.

Faith is the assent to any proposition, not made out by the deductions of reason, but upon the credit of the proposer, as coming from God. Locke.

My design is to treat only of those who have chiefly proposed to themselves the principal reward of their labours. Taller.

Upon the proposal of an agreeable object, a man's choice will rather incline him to accept than refuse it. South.

The work you mention will sufficiently recommend itself, when your name appears with the proposals. Addlson to Pope.

This truth is not likely to be entertained leadily upon the first proposal. Atterburit.

He provided a statute, that, whoever proposed any alteration to be

made, should do it with a rope about his neck : if the matter proposed were generally approved, then it should pass into a law ,- if it went in the negative, the proposer to be immediately hanged.

Swift.

In learning any thing there should be as little as possible first proposed to the mind at once, and, that being understood, proceed then to the next adjoining part. Watts.

If it has a singular subject in its prepositional sense, it is always ranked with universals. Id.

PROPOSITION, in logic, part of an argument wherein some quality, either negative or positive, is attributed to a subject.

PROPOSITION, in mathematics, is either some truth advanced and shown to be such by demonstration or some operation proposed and its so-

lution shewn. If the proposition be deduced from several theoretical definitions compared together, it is called a theorem ; if from a praxis, or series of operations, it is called a problem. PROPOUND', v. n. (Lat. propono. To PROPOUND'EB. S offer to consideration ;

propose : he who proposes any thing.

A spirit raised from depth of under-ground, That shall make answer to such questions, As by your grace shall be propounded him.

SJiaktpeare.

A king, when he presides in council, let him be-ware how he opens his own inclination too much in that which he pi-opoundeth ; for else counsellors will but take the wind of him, and, instead of giving free counsel, will sing him a song of placebo. Bacon.

To leave as little as I may unto fancy, which is wild and irregular, I will propound a rule. Wotton.

The parliament, which now is held, decreed Whatever pleased the king but to propound.

Daniel.

Dar’st thou to the Son of God propound To worship thee 1 Milton.

The existence of the church hath been propounded as an object of our faith in every age of Christianity.

Pearson.

The arguments which Christianity propounds to us are reasonable encouragements to bear sufferings patiently. Tillotwn.

PROPRETOR, a Roman magistrate, who, having discharged the office of pretor at home, was sent into a province to command there with his former pretorial authprity. It was also an. appellation given to those who, without havinjr been pretors at Rome, were sent extraordinarily into the provinces to administer justice,.with the authority of pretors.

PROPRI’ETY, n. s. ˆ Fr. proprietc,

PROPRIETARY, n. s. & adj. f proprietaire ;

PROPRIETOR, n. s. fLat. proprietas.

PROPRIETRESS. * Peculiar possession or right; hence accuracy; justness; correctness of behaviour : a proprietary is a possessor in his own right ; the adjective means belonging of right to a certain owner : proprietor, an owner ; possessor in his own right : proprietress, the feminine of that noun.

You must have promised to yourselves proprkty in

love, Know women’s heaits like straws do move.

Suckling.

Benefit of peace, and vacation for piety, render it necessary by laws to secure propriety. Hammond.

Hail, wedded love ! mysterious law, true source Of human offspring, sole propriety In Paradise ! of all things common else. Milton.

They secure propriety and peace. Dryden.

A big-bellied bitch borrowed another bitch’s ken-nel to lay her burden in ; the jtroprietress demanded possession, but the other begged her excuse.

L’Ettrange.

Man, by being master of himself, and proprietor of his own person, and the actions or labour of it, had still in himself the great foundation of property.

Loeke,

Common use, that is the rule of propriety, affords some aid to settle the signification of language. Id.

Though sheep, which are proprietary, are seldom marked, yet they are not apt to straggle. Greir.

Tis a mistake to think ourselves stewards in some of God's gifts, and proprietaries in others : they are

all equally to be employed, accortling to the designation of the donor. Government of the Torque.

PROPUGN' v. a. } Lat. propugno. To

PROPUGN A'TION, n. s. > defend , vindicate :

PROPCGN'ER. j defence : he who defends.

Thankfulness is our meet tribute to those sacred champions for yropugning of our faith. Hammond.

PROPUL'SION, n. s. Lat. propulsia. The act of driving forward.

Joy worketh by propulsion of the moisture of the brain, when the spirits dilate and occupy more room.

Bacon.

PROPYLEA (Greek irpoirvXata) ; the splendid entrance to a temple among the Greeks, a square before the temple, surrounded with a portico ; on the square in the open air stood the altar. The term was employed particularly in speaking of the superb vestibules, or porticoes, conducting to the Acropolis, or citadel of Athens, which formed one of the principal ornaments of the city. This magnificient work, of the Doric order, was constructed by Pericles, after the designs of Mnesicles, one of the most celebrated architects of his age. Pausanias says it was covered with white marble, remarkable for the size of the Mocks and the beauty of the workmanship. Stewart, in his Antiquities of Athens, Le Roy, in his ruins of Greece, and the Travels of Anacharsis the Younger, mention the relics of the propylaea.

PllORE', n.s. Lat. prora. The prow; the forepart of the ship. A poetical word, used for a rhyme.

There no vessel with vermilion prore,

Or bark of traffic, glides from shore to shore.

Pope.

PROROGUE', v. a. > Fr. proroger; Latin

PROROGATION, n. s. J prorogo. To protract ; prolong; put off; in a particular sense withhold the sitting of parliament : the noun substantive corresponding.

My life was better ended by their hate,

Than death prorogued, wanting of thy love.

Shahspeare.

By the king's authority alone they are assembled, and by him alone are they prorogued and dissolved ; but each house may adjourn itself. Bason.

He prorogued his government, still threatening to dismiss himself from publick cares. Dryden.

The fulness and effluence of man's enjoyments, in the state of innocence, might seem to leave no place for hope, in respect of any farther addition, but only of the prorogation and future continuance of what already he possessed. South.

It would seem extraordinary, if an inferior court should take a matter out of the hands of the high court of parliament, during a prorogation. Swift.

But Savage easily reconciled himself to mankind without imputing any defect to his work, by observing that his poem was unluckily published two days after the prorogation of parliament. Johnson.

PROROGATION differs from an adjournment of parliament in this, that by prorogation the session is ended, and such bills as passed in either house, or both houses, and had not the royal as-sent, must at the next assembly begin again.

PRORUPTION, n. s. Lat proruptus, pro-rumpo. The act of bursting out.

Others ground this disruption upon their continued o►► protracted time of delivery, whereat, excluding

but one a day, the latter brood, impatient, by a forcible vroruption, anticipate their period of exclusion.

Browne's Vulgar Errours.

PROSCRIBE', v. a. ˆ Latin proscribe. To PROSCRI'BER, n.s. > censure capitally; de-PRO'SCRIP'TION. j cree to death or destruction : the proscriber is he who makes or issues such a decree : proscription, the decree issued.

Robert Vere, earl of Oxford, through the malice of the peers, was banished the realm, and proscribed.

Spenser.

You took his voice who should be prickt to die, In our black sentence and proscription. Shakspeare.

For the title of protcriptioii, or forfeiture, the emperor hath been judge and party, and justiced himself. . Bacon.

I hid for thee

Thy murder of thy brother, being so bribed, And writ him in the list of my proscribed After thy fact. Ben Jonson.

Sylla's old troops

Are needy and poor ; and have but left t' expect From Catiline new bills and new proscriptions. Id.

Followed and pointed at by fools and boys, But dreaded and proscribed by men of sense.

RoiCfimmon. He shall be found, And taken or proscribed this happy ground.

Dryden.

The triumvir and proscriber had descended to us in a more hideous form, if the emperor had not taken care to make friends of Virgil and Horace.

Id.

Some utterly proscribe the name of chance, as a word of impious and profane signification ; and, in-deed, if taken by us in that sense in which it was used by the heathens, so as to make any thing casual, in respect of God himself, their exception ought justly to be admitted. South.

In the year 325, as is well known, the Arian doctrines were proscribed and anathematized in the fa-mous council of Nice, consisting of 318 bishops, very unanimous in their resolutions, excepting a few reclaimants. Waterland.

That he who dares, when she forbids, be grave, Shall stand proscribed, a madman or a knave, A close designer rot to be believed, Or, if excused that charge, at least deceived.

Courper.

PROSE, n. s. I Fr. prose ; Lat. prosa. Lan-PROSA ic, adj. S guage not restrained to harmonic sounds or numbers ; discourse not metrical : prosaic, the corresponding adiective. Things unattempted yet in prose or rhyme.

Milton.

The reformation of prose was owing to Boccace, who is the standard of purity in the Italian tongue, though many of his phrases are become obsolete.

Dryden.

A poet lets you into the knowledge of a device better than a prose writer, as his descriptions are often more diffuse. Addison.

Prose men alone for private ends, I thought, forsook their ancient friends.

Prior. My head and heart thus flowing through my

quill,

Verse man and prose man, term me which you will.

Pope.

I will be still your friend in prose : Esteem and friendship to express, Will not require poetic^dress. Swift

PROSELYTE BAPTISM.

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PROS'ECUTE, v. a. } Lat. proaequor, pro-PROSECU'TION, n. s. ^secutus. To pursue; PROS' ECUTOR. j persevere in endeavors

after any thing ; continue ; proceed ; particularly, to proceed by legal measures : prosecution is, pursuit; continuance of design or effort; egal suit : prosecutor, he who pursues or prosecutes legally or otherwise.

An infinite labour to prosecute those things, so far as they might be exemplified in religious and civil actions. Hocker.

I am beloved of beauteous Hermia ; Why should not I then prosecute my right 1

Shakspeare.

The same reasons, which induced you to entertain this war, will induce you also to prosecute the same.

Hay ward.

All resolute to prosecute their ire, Seeking their own and country's cause to free.

Daniel.

That which is morally good is to be desired and prosecuted; that which is evil is to be avoided.

Witkint.

He infested Oxford, which gave them the more reason to prosecute the fortifications. Clarendon.

I must not omit a father's timely care, To prosecute the means of thy deliverance By ransom. Milton's Agonittes.

With louder cries She prosecutes her griefs, and thus replies.

Dry den.

He prosecuted this purpose with strength of argument and close reasoning, without incoherent sallies.

Locke.

Many offer at the effects of friendship, but they do not last : they are promising in the beginning, but they fail, jade, and tire in the prosecution.

South.

Their jealousy of the British power, as well as their prosecutions of commerce and pursuits of universal monarchy, will fix them in their aversions towards us. Addison. PROSECUTION. See LAW. PROS'ELYTE, n.s. & v.a. Fr. proselite ; Gr. TrpoorjjXvroc. A convert ; one brought over to a new opinion : to convert.

Ye compass sea and land to make one proselyte.

Matthew.

Never any Pharisee was so eager to make a proselyte, as our late factors of Rome. Hall.

He that saw hell in's melancholy dream, Scared from his sins, repented in a fright, Had he viewed Scotland, and turned proselyte.

Cleaveland. Where'er you tread, Millions of proselytes behind are led, Through crowds of new-made converts still you go.

Granville.

Men become professors and combatants for those opinions they were never convinced of, nor proselytes to. Locke.

What numbers of proselytes may we not expect 1

Addison.

Men of this temper cut themselves off from the opportunities of

proielyting others, by averting them from their company. Government of the Tongue.

PROSELYTE, in theology, is used to denote any new convert. The term was frequent in the primitive church ; and the Jews likewise had their proselytes, who from Gentiles became Jews, following the precepts of the Mosaic law. It i” generally believed that among the Hebrews ther►► were two kinds of proselytes ; one called prose-

lytes of righteousness, or proselytes of the covenant, who became complete Jews, by submitting to the rite of circumcision, and were in all respects united to the Jewish church and nation. The other called proselytes of the gate, who did not embrace the Jewish religion, so as to be obliged to receive or observe the ceremonial law, and yet were suffered to live among the Jews under certain restrictions ; as that they should not practice idolatry, nor worship any other god beside the God of Israel ; that they should not blaspheme the God of Israel ; that they should keep the Jewish sabbath, so far at least as to refrain from working on that day. Besides forsaking idolatry, they were under an obligation to observe the seven precepts, which, as the Tal-mudists pretend, God gave to Adam, and afterwards to Noah, who transmitted them to posterity. The first of these precepts forbids idolatry, and the worship of the stars in particular ; the second recommends the fear of God ; the third forbids murder ; the fourth adultery ; the fifth theft ; the sixth enjoins respect and veneration for magistrates ; and the seventh condemns eating of rlesh with the blood.

Dr. Lardner, with whom Dr. Dodlridge and others also agree, is of opinion that there was but one sort of proselytes among the Jews. They were circumcised, and thus they became Jew* by religion, and were permitted to eat the passover, and to partake of all religious privileges, as the Jews by descent did. They were called ‘ strangers, or proselytes within the gates, and sojourners,’ as they were allowed to dwell or sojourn among the people of Israel. And they were so called, because, according to the law of Moses, they could not possess land. This is the sense of the word in all the texts of the New Testament where it is used. Dr. Lardner thinks that the notion of two kinds of Jewish proselytes cannot be found in any Christian writer before the fourteenth century or later. This learned writer pays no regard to what the later Jewish rabbins say of the method of initiating proselytes-by circumcision, baptism, and sacrifice. See Lardner’s works, and Doddridge on 1he Acts.

PROSELYTE BAPTISM. The Jews (see our article BAPTISM) are said from an ear\y period to-have practised the baptism of all the j proselytes from the heathen. We have given thd ingenious parallelism that has been drawn by .some writers between that supposed custom anl Christian baptism : the most modern and respectable authors, we may add, continue to qujte the constant practice, as it has been called, of the Jews in this matter ‘ before our Saviour’s time, as the foundation of infant baptism.’ The editor of the last edition of Dr. Gale’s Reply to Dr. Wall wholly disputes, however, the validity of this argument, and insists that no foundation can be found for it in authentic history. As we have not met elsewhere with so detailed an examination of the authorities commonly referred to, we subjoin his remarks on those of Di. Wall’s Introduction.

Dr. Wall, as this writer concedes, has rested on the authority of some considerable names. That is, he has transferred from the pages of Ainsworth, Hammond, Lightfoot, 80-., what they

state to be found in ‘ the books of the Jews,’ without appearing to have consulted the original authorities ; ‘ partly,’ as he states, ‘ because the quotations for that purpose are to be searched for in books with which I am not so well ac-

?uainted ; and partly because those few which shall produce will make it clear enough that there was such a custom.’ He repeatedly presses the importance of establishing this custom in the controversy with Antipaedobaptists. ‘ The apostles must know that baptism was usually given to infants.’ They would conceive the command to proselyte and baptize all nations to include infants as a matter of course ; Christ ‘ took into his hands baptism,’ says he, after Lightfoot, * such as he found it, adding with this, that he exalted it to a nobler purpose and to a larger use ;’ ??? and after Hammond, that ‘ The whole nation knew well enough that infants were wont to be baptized. There was no need of a precept for that which was always settled by com-mon use. Suppose there should at this time come out a proclamation in these words, Every one on the Lord’s Day shall repair to the public

assembly in the church : that man would reason weakly who should conclude that there were no prayers, sermons, psalms, &c., in the public assemblies on the Lord's Day, for this reason, because there was no mention of them in this proclamation ; for the proclamation ordered the keeping of the Lord's Day in the public assemblies in general; and there was no need that mention should be made of the particular kinds of divine worship there to be used, since they were, both before and at the time of the said proclamation, known to every body, and in com- ******non use. Just so the case stood as to baptism. Christ ordered it to be for a sacrament of the New Testament, by which all should be admitted to the profession of the gospel, as they were formerly to proselytism in the Jews' religion. The particular circumstances of it, as the manner of baptizing, the age of receiving it, which sex was capable of it, &c., had no need of being regulated or set down, because they were known to every body by common usage. It was, therefore, necessary, on the other side, that there should have been an express and plain order that infants and little children should not be baptized, if our Saviour had meant that they should not ; for, since it was ordinary in all ages before to have infants baptized, if Christ would have had that usage to be abolished, he would have expressly forbidden it; so that his and the Scriptures' silence in this matter does confirm and establish infant baptism for ever.'

I. Dr. Wall's first position is, that it is evident ' the custom of the Jews before our Saviour's time (and as they themselves affirm from the beginning of their law) was to baptize as well as circumcise any proselyte that came over to them from the nations.' ' This custom of theirs, he says, ' is fully and largely set forth by Maimonides, Isura Bia, cap. xiii. and xiv ;' from whom a long quotation states that the ancient Israelites entered into covenant with Jehovah by circumcision, dipping, and sacrifice ; that in all ages when an Ethnic is desirous of joining himstlf to Israel, ' and take upon him the

yoke of the law, he must be circumcised, and baptized, and bring a sacrifice ; or, if it be a wo-man, be baptized and bring a sacrifice,' with several particulars respecting the nature of the offering that was to be brought, the time of performing the baptism, the number of witnesses necessary, &c. Maimonides further asserts that the judges received no proselytes in David's days, lest they should have come of fear: nor in Solomon's, lest they should have come because of the great prosperity of Israel. ' Notwithstanding there were many proselytes,' he adds, ' that in David's and Solomon's time joined themselves in the presence of private persons ; and the judges of the great sanhedrim had a care

of them. They drove them not away after they were baptized out of any place; neither took they them near to them until their after-fruits appeared.'

The Babylonian Talmud says the same thing with regard to receiving proselytes by baptism, according to Dr. Wall, and only differs with the Talmud Hiersosol. Jevamoth as to the number of witnesses that should be present ; and here follow three quotations, which the doctor says are taken from the latter (published about A. D. 230), but which in point of fact are all from the former (compiled not earlier than A. D. 500), as Dr. Gill has long ago remarked. They are all from T. BAB Yebamot, fol. xlvi. 2, et Gloss. So that we have not, as yet, any authority earlier than the Babylonian Talmud, or a Collection of Jewish Traditions and Comments on the Law, published at the beginning of the sixth century of the Christian era. Leo Modena is then quoted to show that the modern Jews continue this practice.

The Gemara Babylon, tit. Cherithoth, and tit. Jabimoth (portions of this Talmud) are afterwards brought forward to prove that ' the books do speak of this washing or baptism as absolutely necessary ;' that ' he is no proselyte unless he be circumcised and baptized ;' the Talmud Tract Repudii (also a part of the Babylonian Talmud), as quoted by Godwin in his Moses and Aaron, states that Jethro, the father-in-law of Moses, was ' made a proselyte by circumcision and immersion in waters ;' the comment of Moses Kotsensis, a Jewish writer of the fourteenth century, that ' a purification by water' was necessary ; and Drusius, a learned Fleming of the sixteenth century, that ' of a woman proselyte were required only purification by water and oblation.' It is on this collection of authorities (and we have mentioned them all) that Dr. Wall remarks, ' This custom of the Jews continued after Christ's time, and after. their expulsion from the Holy Land ; and continues, as I showed from Leo Modena, to this day.'

He now cites the testimony of Arrian, who (A. D. 147) calls the Jews fie/3afiptvug, the. dipped ; and proceeds to show how the Jewish doctors ' prove the necessity of this washing and baptism from Moses' law ;' he says that many of them understand the command, Exod. xix. 10, for the people to sanctify themselves, as meaning to wash or baptize themselves ; that Aben Ezra., who died A. D. 1174, understands Jacob's injunction to his family on the subject cf meeting

God at Bethel, Genesis xxxv. 2, to refer to ‘ a washing of their whole bodies;’ he mentions Selden as showing from several Jewish commentators that when the washing of garments is mentioned, Lev. xi. xiv., and in various other places, the washing of the whole body is intended ; and again adverts to Maimonides and the Babylonian Talmud on the subject of the ‘ three things’ required of a proselyte, because they were originally required of the Jews. Of these, says Maimonides, ‘ Baptism was in the wilderness, just before the giving of the law, as it is written, Sanctify them to-day and to-morrow and let them wash their clothes.’ Dr. W. concludes his list of Jewish authorities with the words of It. Solomon, who lived in the twelfth century, ‘ Our rabbins teach that our fathers entered into covenant by circumcision and baptism, and sprinkling of blood.’

St. Gregory Nazianzen, Cyprian, Basil, and Tertullian, are then brought as early Christian witnesses of this baptism amongst the Jews. St. Gregory speaks of Moses giving a baptism or washing with water only, and that ‘ before that they were baptized with the cloud and the sea, as St. Paul reasons ;’ Cyprian of ‘ the baptism of ‘ the law and of Moses ;’ which Basil compares with that of John and Christ. ‘ Before them all, however,’ observes Dr. Wall, ‘ Tertullian complains of the devil aping or imitating the things of God,’ in the rites of Ceres and Apollo, which were accompanied with baptism ; and which ‘ divine baptism,’ so imitated, Dr. Wall says, must intend the Jewish baptism.

Such are the entire authorities of Dr. Wall for his first and most important position, that Jewish proselyte baptism was not only in existence before our Saviour’s time, but even from the beginning of the Mosaic dispensation.

II. Dr. Wall secondly proposes to show, that the infants of proselytes born previous to their conversion to Judaism were baptized with their parents, and admitted as proselytes. The Babylonian Talmud is here again his first authority ; then follows a passage from the text of the Mishna.

This is a compendium of Jewish traditions collected by R. Jehuda Hakkodesh, in the middle of the second century of the Christian era, and the most authentic depository of the oral law said to be delivered

by Jehovah to Moses, together with the written law, during the forty days he was in Sinai. When Moses returned to his tent, according to Maimonides, he was attended by Aaron, to whom he recited the text (which alone was written) and taught the interpretation which he thus received ; I7,leazar and Ithamar then entered, to whom he repeated the sacred communications; then the seventy elders, to whom he again repeated the whole ; afterwards entered the congregation at large, to whom it was once more repeated ; and being thus heard by Aaron four times, by his sons three times, by the seventy elders twice, and by the congregation once, it became firmly and proportionally fixed in their memories. Rabbi Moses Kotsensis, quoted by Dr. Wall in a former page, says, ‘ If the oral law had not been added to the written law, the whole law would have been ob-VOL. XVIII.

scure and unintelligible. For in me first place there are Scriptures contrary to each other ; and, in the next place, the written law is imperfect, and comprehends not all that is necessary to be known.’ ‘ He that has learned the Scripture and not the Mishna is a blockhead,’ according to one of the maxims of *he Gemara.

According to the Mishna, on which the Talmuds contain Glosses or Comments, a girl born of heathen parents and made a proselyte after she is three years and a day old, shall not have ‘ such and such privileges,’ as Dr. Wall quotes it. That is, as the whole passage runs, a certain matrimonial dowry. The Babylonian Tal-mud says, that if she be made a proselyte before that age she shall have it ; and the Gemara or Comment of this Talmud that ‘ they are wont to baptize such a proselyte in infancy upon the profession of the house of judgment; for this is for its good.’ The Mishna itself, as quoted by Dr. Wall, has not a word respecting baptism or dipping, or how the proselyte was to be made such, nor the Jerusalem Talmud on the place. ‘ But they are wont to baptize,’ says the above Gloss of the sixth century, ‘ because none is made a proselyte without circumcision or baptism.’ It then speaks of the appointment of three men as a kind of sponsors for the education of the child.

Maimonides quotes this passage, therefore Dr. Wall quotes him again here ; and from Selden the rule, originally found in the same Gemara or Gloss, that a male child was not to be considered capable of giving his own consent to become a proselyte until he was thirteen years old and a day; but a female might give her consent, or be proselyted in her own name, at twelve years and a day. .

The opinions of several Jewish and Christian doctors are then quoted, as to the power of infants to retract their baptismal vows ; and a quotation by Hammond of a ‘ saying’ from Maimonides (who quotes it from the Babylonian Talmud), that ‘ A heathen woman, if she be, made a proselyte when big with child, that child needs not baptism, for the baptism of the mother serves him for baptism.’ Children born to proselytes after their parents were baptized, ‘ they reckoned were clean by their birth.’

And these are all the proofs of Jewish infant-baptism produced by Dr. Wall, beginning v ith a Jewish Commentary of the sixth century, and confirmed by subsequent writers.

III. Dr. Wall, thirdly, undertakes to prove that gentile infants found exposed, or taken in war. were frequently ‘ baptized for proselytes.’ So says Maimonides ; and by Dr. Wall the baptism of such a child is said to be according to the rule of rabbi Hezekiah, set down in the Jerusalem Talmud. This rule, however, which he recites, relates entirely to the dipping for servitude, or otherwise, or a civil designation totally distinct from the baptism of proselytes, as Maimonides himself states, the former being repeated (anabaptisti cally) in case pf the servant ever becoming free ; that is, he was then dipped or dipped himself, for the ten thousandth time perhaps, with a different object in view. See Isuri Biah, c. xiii. ss. 11 and 12, &c.

And these are Dr. Wall’s authorities for his third conclusion.

IV. His fourth is entirely grounded on the preceding, *viz.* that the baptism of proselytes was called by the Jews a new birth, a regeneration, or being born again. He quotes the Babylonian Geraara and Maimonides in support of this, the latter of whom applies the same phrase to * a servant made free.’ Dr. Wall thinks that our Lord

adopted this' phraseology in his conversation with Nicodemus, that St. Paul alludes to it, 2 Cor. v. 16, 17, &c., and that the Fathers continued it in their manner of stating regeneration. This writer afterwards draws a sort of parallel between what he conceives to have been the Jewish and the early Christian modes of baptizing, with regard both to adults and infants ; he again quotes the Babylonian Talmud, in reply to Sir Norton Knatchbull, to prove ' the wise men pronounced' that until he were ' both circumcised and baptized no gentile could be a proselyte;' this, however, is the statement of but one side of a dispute ; and with rabbi Eliezer (who was on the other side) and who pronounced, even at this date, that a gentile circumcised and not baptized was an honorable proselyte, the decision is always held to rest. This is the en-tire amount of evidence produced, by the doctor.

' A more singular instance of confused quotations,' says this writer, ' passing current with the world for proofs, never perhaps was afforded, than in the authority this Introduction has been allowed in the baptismal controversy. Wall never, it is clear, examined the works on which he ultimately rests this important part of his argument (and upon which so many respectable writers .have rested their notions of the matter after him) ; he does not even seem to have paid the attention of an ordinary compiler to their dates. Thus a writer (Maimonides) of the latter end of the twelfth century, the Babylonian Tal-mud first published in the sixth century, and the Jerusalem Talmud (which he thinks he is quoting) of the third century, Moses Kotsensis who flourished in the fourteenth, and Drusius, a writer of the sixteenth century, are made to speak in succession as to the existence of a custom disputed in point of date, and evidently as if they were all speaking of the same period. After quoting the last writer he gravely says, ' this custom of the Jews continued after Christ's time, and after their expulsion from the Holy Land.'

PROSEMINA'TION, n. s. Lat. prosemino, proseminatus. Propagation by seed.

Touching the impossibility of trie-eternal succession of men, animals, or vegetables,. by natural propagation or prosemination, the reasons thereof shall be delivered. Hale.

PROSERPINACA, in botany, a genus of the trigynia order, and triandria class of plants ; natural order fifteenth, inundatse : CAL. tripartite superior : COR. none: there is one trilocular seed.

PROSERPINE, in fabulous history, the daughter of Jupiter and Ceres, and queen of hell. She was carried off by Pluto while gathering

flowers. Ceres, after a tedious search, intreated Jupiter to let her return from hell. To this request Jupiter consented, if she had tasted

nothing in hell ; but Ascalaphus informing him that he had seen her eat part of a pomegranate, she was sentenced to continue in Tartarus as Pluto's spouse ; but, to mitigate the grief of Ceres, Jupiter ordered her to spend six months on earth, and the other six months in the infernal regions. Some explain this fable to relate to the corn remaining six months in the earth.

PROSEUCHˆ, in antiquity [Gr. irpoaivxii, prayer], the places of prayer of the Jews, nearly the same as their synagogues. But the synagogues were originally in the cities, and were covered places ; whereas, for the most part, the proseuchae were out of the cities, and on the banks of rivers ; having no covering, except perhaps the shade of some trees or covered galleries.

PROSLAMBANOMENE, a musical note in the Greek system. As the two tetrachords of the Greeks were conjunctive, or, in other words, as the highest note of the first served likewise for the lowest note of the second, it is plain that a complete octave could not be formed. To remedy this deficiency, therefore, one note beneath the lowest tetrachord was added, as an octave to the highest of the last tetraehord. Thus, if we sup pose the first to have begun on B, the last mus have ended upon A, to which one note subjoined immediately beneath the lowest B in the diatonic order must have formed an octave. But it appears from authors who have scrutinised antiquity with some diligence, and perhaps with as much success as the data upon which they proceeded could produce, that the names of the notes in the Greek system, which originally signified their natural station in the scale of ascending or descending sounds, were afterwards applied to their positions in the lyre. Higher or lower, then, according to this application, did not signify their degree of acuteness or gravity, but their higher or lower situation upon this instrument.

PROS'ODY, n. s.) Fr. prosodie ; Gr. frpo—

PROSO'DIAN. $ ffo>►►ia. That part of

grammar which teaches the sound and quantity of syllables, and the measures of verse ; one skilled in prosody.

Some have been so bad prosodians, as from thence to derive malum, because that fruit was the first occasion of evil. Broic.ne.

Many of the rules and observations respecting prosody are taken from Sheridan's Art of Reading.

Murray.

PROSODY, in grammar, treats of the quantity of syllables, as well as their accent and sound ; it has also been held to include the laws of versification. Its most important and popular application is to quantity, although its Greek etymon, irpoffwdia (vpoG, wfy) would certainly teach us to include accent, and therefore both pause, and tune. We devote, however, a distinct article to VERSIFICATION, to which we refer the reader for much we should otherwise be here disposed to say on the latter topics ; and under QUANTITY will be found what relates peculiarly to that subject. See PRONUNCIATION.

PROSOP1S, in botany, a genus of the monogynia order, and decandria class of plants: CAL. hemispherical and quadridentate : stigma sim-ple ; the legume inflated and monospermous.

PROSOPOPOE'IA, n. s. Fr. prosopopee ; Or. wpo < TW7To;roua. Personification; a figure of rhetoric by which things are made persons.

These reasons are argued, and raised by the pro-sopopteia of nature speaking to her children.

Dry den.

PROS'PECT, ra. s. > Lat. prospectus. View

PROSPECTIVE, adj. J of something distant or future ; view delineated ; place of view ; series of objects brought under the eye : the adjective corresponding.

To be king,

Stands not within the protpeet of belief, No more than to be Cawdor.

Shakspeare. Macbeth. Man to himself

Is a large prospect, raised above the level Of his low creeping thoughts. Denham.

Eden and all the coast in prospect lay.

Milton.

The French king and king of Sweden are circumspect, industrious and prospective too in this affair.

Child.

Is he a prudent man, as to his temporal estate, that lays designs only for a day, without any prospect to, or provision for the remaining part of his life ?

Tillotson.

It is better to marry than to burn, says St. Paul ; a little burning felt pushes us more powerfully, than greater pleasures in prospect allure. Locke.

Against himself his gratitude maintained, By favours past, not future prospects gained.

Smith.

There is a very noble prospect from this place : on the one side lies a vast extent of seas, that runs abroad further than the eye can reach : just opposite stands the green promontory of Surentum, and on the other side the whole circuit of the bay of Naples.

Addison.

Present, sad prospect ! can he ought descry, But what affects his melancholy eye ; The beauties ‘of the ancient fabrick lost In chains of craggy hills, or length of dreary coast 1

Prior.

To say more of a man than one thinks, with a pros-ct of interest, is dishonest ; and without it foolish.

Pope.

Claude Lorrain, on the contrary, was convinced, that taking nature as he found it seldom produced beauty ; his pictures are a composition of the various draughts which he has previously made from various beautiful scenes and prospects. Reynolds. Prospects, however lovelv, may be seen

Till half their beauties fade. Cowper.

PROS’PER, v. a. & v. n.~v Fr. prosperer’, PROSPERITY, n. s. I Lat. prospero. To

PROSPEROUS, adj. \ make happy ; fa—

PROS’PEROUSLY, adv. i vor ; to be happy PROS’PEROUSNESS. J or successful :

prosperity and prosperousness mean success ; happiness ; good fortune : the adjective and ad-verb corresponding.

My word shall not return void, but accomplish that which I please, and it shall prosper in the thing whereunto I sent it. Isaiah.

Prosperity, in regard of our corrupt inclination to abuse the blessings of Almighty God, doth prove a thing dangerous to the souls of men. H►►oker.

Kind gods, forgive Me that, and prosper him.

Shakspeare. King Lear.

Prosperously I have attempted, and With bloody passage led your wars, even to The gates of Rome. Id. Coriolanus.

All things do prosper best, when they are advanced to the better ; a nursery of stocks ought to be in a more barren ground, than that wherennto you remove them. Bacon.

God’s justice reaps that glory in our calamities, which we robbed him of in our prosperity.

King Charles.

Surer to prosper, than prosperity Could have assured us. Milton.

She visits how they prospered, bud, and bloom. Id.

That neat kind of acer, whereof violins and musical instruments are

made, prospers well in these parts. Browne's Travels.

All things concur to prosper our design ; All things to prosper any love but mine. Dryden. Those, who are prosperously unjust, are intitled to panegyrick, but afflicted virtue is stabbed with reproaches. Id.

Prosperity which depends upon the caprice of others is of short duration. Johnson.

PROSSNITZ, or PROSTIEGOW, a trading town of the Austrian States in Moravia, the chief place of the district of Hanna, and situated in the midst of a very fertile tract. Nine miles S. S. W. of Olmutz.

PROSTATJE GLANDULE, prostate glands-. See ANATOMY.

PROSTERNATION, n. s. Lat. prosterno. Dejection; depression; state of being cast down ; or act of casting down. A word not adopted.

Pain interrupts the cure of ulcers, whence are stirred up a fever, watching, and prosternation of spirits. Wiseman.

PROSTITUTE, v. a., adj., & n. s. > French

PROSTITUTION, n. s. J prostiuer;

Span, and Port, prosititiuyr ; Lat. prostituo. To sell to wickedness ; expose to crimes for a reward : bribed or sold to vice : a hireling or mercenary so sold. Commonly used of women sold to whoredom. Prostitution, the act or habit of being prostituted.

Do not prostitute thy daughter, to cause her to be a whore. Leviticus xix. 29.

Who shall prevail with them to do that themselves which they beg of God, to spare his people and his heritage, to prostitute them no more to their own sinister designs ? Decay of Piety.

Marrying or prostituting, Rape or adultery. Milton's Paradise Lost.

It were unfit that so excellent and glorious a re-ward, as the gospel promises, should stoop down like fruit upon a full laden bough, to be plucked by every idle and wanton hand, that heaven should.be prostituted to slothful men.- Tillotson. At open fulsome bawdry they rejoice,

Base prostitute! thus dost thou gain thy bread.

Dryden.

An infamous woman, having passed her youth in a most shameless state of prostitution, now gains her livelihood by seducing others.

Addison's Spectator.

Affections, consecrated to children, husbands, and parents, are vilely prostituted and thrown away upon a hand at loo. ' Addison.

Their common loves, a lewd abandoned pack By sloth corrupted, by disorder fed, Made bold by want, and prostitute for bread.

.. Prior

No hireling she, no prostitute to praise. Pope. PROSTRATE, adj. & v. a. > Lat. prostra-PROSTRA'TION, n. s. } tus. Lying at

length ; a posture denoting adoration and humiliation ; hence lying at mercy : to lay flat ; throw down : the noun substantive corresponds, and means, also, dejection ; depression.

Once I saw with dread oppressed Her whom I dread ; so that with prostrate lying, Her length the earth in love's chief cloathing dressed.

Sidney.

A storm that all things doth prostrate, Finding a tree alone all comfortless, Beats on it strongly, it to ruinate. Spenser. The warning sound was no sooner heard, but the churches were filled, the pavement covered with bodies prostrate, and washed with tears of devout joy. Hooker.

Look gracious on thy prostrate thrall.

Shakspeare.

In the streets many they slew, and fired divers places, prostrating two parishes almost entirely.

Hayward.

He heard the western lords would undermine His city's wall, and lay his towers prostrate.

Fairfar.

Our prostrate bosomes forc't with prayers to trie, If any hospitable right, or boone Of other nature, such as have bin wonne By laws of other houses, them wilt give. Chapman.

Your lordships must give me leave to say that the poor Church of England humbly prostrates herself, next after his sacred majesty, at your lordships' feet ; and humbly craves your compassion and aid.

Bp. Hall.

Some have prostrated themselves an hundred times >n the day, and as often in the night. Duppa.

Grovelling and prostrate on yon lake of fire.

Wilton.

Nor is only a resolved prostration unto antiquity a powerful enemy unto knowledge, but any confident adherence unto authority. Browne.

Stake and bind up your weakest plants against the winds, before they come too fiercely, and in a moment prostrate a whole year's labour. Evelyn.

The truths, they had subscribed to in speculation, they reversed by a brutish senseless devotion, managed with a greater prostration of reason than of body. South.

The drops falling thicker, faster, and with greater force, heating down the fruit from the trees, prostrating and laying corn growing in the fields.

Woodward's Natural History. A sudden prostration of strength, or

weakness, attends this colick. Arbuthnot.

While prostrate here in humble grief I lie, Kind virtuous drops just gathering in my eye.

Pope.

The general idea of showing respect is by making yourself less ; but the manner, whether by bowing the body, kneeling, prostration, pulling off" the upper part of our dress, or taking away the lower, is a matter of custom. Sir J. Reynolds.

PROSY L'LOGISM, n.s. Proand syllogism. A prnsyl/ogism is when two or more syllogisms are so connected together that the conclusion of the for-mer is the major or the minor of the following.

Watts.

PROTAGORAS a celebrated Greek philosopher, born at Abdera. Being in his vouth em-cS in carrying wood to Aoaera, Democritus

met him one day, and, observing the logs packed up with mathematical exactness, took him under his protection, maintained him, and taught him philosophy. He afterwards himself taught with reputation at Athens, but was at length banished thence for the alleged impiety of his doctrines. Of this he was accused by different persons, and among others by one of his scholars, *viz.* Eual-thus, who asserted that in one of his books he had said, ' concerning the gods I am wholly unable to determine whether they have any existence or not ; for the weakness of the human understanding, and the shortness of human life, with other causes, prevent us from attaining this knowledge.' Similar opinions were also to be met with in some of his other writings, and, on this account, they were ordered to be collected and burnt in the market-place. He had unquestionably an inclination to scepticism. Adopting the doctrine of Democritus, that the atoms of which bodies are composed are in perpetual motion, Protagoras conceived that external objects are liable to such continual fluctuation that nothing can certainly be known of them; and hence he concluded that nothing can be pronounced to exist, but that which is at any instant perceived by the senses ; and that since these are perpetually varying, things themselves accordingly vary, so that, upon the same evidence, that of the senses, contradictory opinions may be advanced. On his banishment from Athens he visited the islands in the Mediterranean, where it is said that he was the first philosopher that

lectured for money. He died in a voyage to Sicily, in a very advanced age. He commonly reasoned by dilemmas, and left the mind in suspense with respect to all the questions he proposed. Plato wrote a dialogue against him. He nourished about A. A. C. 400.

PROTAT'ICK, adj. Fr. protatique ; Gr. Previous.

There are protatick persons in the ancients, whom they use in their plays to hear or give the relation.

Dry den.

PROTEA, in botany, the silver tree, a genus of the monogynia order, and tetrandria class of plants ; natural order forty-eighth, aggregatae. There is one quadrifid petal surrounding the germ : CAL. none ; the receptacle is paleaceous. There are thirty-six species, all natives of the Cape of Good Hope; of which the most remarkable are : ###

1. P. argentea, commonly called silver tree, with a strong upright stem, covered with purplish bark, dividing into several branches which grow erect, garnished with broad, shining, silvery leaves, which make a fine appearance when intermixed with other exotics. Through the whole year it exhibits its glossy white or silvery leaves. It has at first a very uncommon and beautiful appearance, and sometimes in the course of twelve or fifteen years reaches the height of twenty feet, which it never exceeds. These trees are generally planted near some faims, and very seldom grow wild.

2. P. conifera, with linear, spear-shaped, entire leaves, grows to the height of ten or twelve feet, with a straight regular stem. The branches naturally form a large regular head

The leaves are long and narrow, of a shining silver color ; and, as they remain the whole year, make a fine appearance in the green-house.

3. P. nitida, or wageboom, greatly resembles the first sort : the leaves are very silky and white, with erect purple branches. All these plants, being tender exotics, require to be continually kept in the green-house during winter. The second may be propagated by cuttings, which should be cut off in April, just before the plants begin to shoot ; the first and third sorts may be propagated by seeds.

PROTECT, v. a. \ Fr.proteger,protecteur;

PROTEC'TION, n. s. I Lat. protectus. To shel—

PROTEC'TIVE, adj. Mer ; defend : afford im—

PROTEC'TOR, n. s. i munity from evil ; and in

PROTEC'TRESS. J a modern sense (to avoid * calling a spade a spade'), to keep as a concubine : protection and protector follow these senses : protective is defensive ; sheltering : protectress, a woman who protects.

Drive toward Dover, friend, where thou shall meet Both welcome and protection.

Shakspeare. King Lear. The king

Had virtuous uncles to protect his grace.

Shakspeare.

Is it concluded he shall be protector? Id.

All things should be guided by her direction, as the sovereign patroness and protectress of the enterprise. Bacon.

Leave not the faithful side,

That gave thee being still shades thee and protects.

Milton.

Hither the' oppressed shall henceforth resort, Justice to crave, and succour at your court ; And then your highness, not for our's alone, But for the world's protector shall be known.

Waller. The law of the empire is my protection. Kettlewell.

Full in the midst of his own strength he stands, Stretching his brawny arms and leafy hands, His shade protects the plains. Drydens Virgil.

The obligations of hospitality and protection are sacred ; nothing can absolve us from the discharge of those duties. L'Estrange.

Behold those arts with a propitious eye,

That suppliant to their great protectress fly.

Addison.

The king of Spain, who is protector of the commonwealth, received information from the great duke.

Id.

If the weak might find protection from the mighty, they could not with justice lament their condition.

Swift.

The stately sailing swan guards his osier isle, Protective of his young. Thomson.

PROTIXTOR is also a title given to the representative of a Catholic nation, or religious order, at the court of Rome, who is often a cardinal.

PROTECTORATE, the office of protector ; applied in British history to the office held by Oliver Cromwell.

PROTEND', v. a. Lat. protendo. To hold out ; to stretch forth. Not used.

All stood with their protended spears prepared.

Dryden.

, PROTESILAI TURRIS, the sepulchre of Protesilaus, with a temple, at which Alexander sacrificed, situated at the south extremity of the Hellespont, next to the Chersonesus Thraciea.

PROTESILAUS, a king of part of Thessaiy, the son of Iphiclus, grandson of Phylacus, and brother of Alcimede, the mother of Jason. He was the first Greek who landed on the coast of Troy, and the first slain by the Trojans. (Homer, Ovid.) His wife Laodamia, to assuage her grief, requested of the gods that his shade might be permitted to visit her, and, obtaining her request, she expired in his embraces. (Hyginus.) Protesilaus was also called Phylacides, from Phylace, a town of Thessaiy, or rather from his grandfather Phylacus.

PROTEST, v. n., v. a.,&.n.s.ˆ Fr. protes—

PROT'ESTANT, n. s. & adj. i ter ; Span.

PROT'ESTANCY, n. s. \ and Port.

PROTEST A'TION, i protestor;

PROTES'TER. j Ital. protes—

tnre ; Lat. protestor. To make a solemn declaration of one's judgment or resolution ; more commonly used of an adverse judgment: to prove ; show ; call as witness : a protest is a solemn declaration of opinion ; particularly the solemn and expressed dissent of a peer of parliament from the opinion of the House of Lords : protestant, one who in any way solemnly proposes or objects his opinion ; but particularly one who adheres to the objections of the Reformed against the Church of Rome : protestant, as an adjective, relating to Protestants : protestancy, the profession or religion of Protestants : protestation is the dissent or resolution made or expressed : protester, he who makes or issues it.

He maketh protestation to them of Corinth, that the gospel did not by other means prevail with them, than with others the same gospel taught by the rest of the apostles. Hooker.

Here's the twin brother of thy letter ; but let thine inherit first, for, I protest, mine never shall.

Shakspeare.

The peaking cornuto comes in the instant, after we had protested and spoke the prologue of our comedy. Id.

But to your protestation ; let me hear

What you profess. Id. Winter's Tale.

Did I use

To stale with ordinary oaths my love

To every new protester 1 Id. Julius Caesar.

This is the first example of any protestant subjects that have taken up arms against their king a protes-iant. King diaries.

What miserable subdivisions are there in our protestancy I Bp. Hall. He protests against your votes, and swears

He'll not be tried by any bui his peers. Denham.

If the lords of the council issued out any order against them, some nobleman published a protestation against it. Clarendon.

Fiercely they opposed

My journey strange with clamorous uproar, Protesting fate supreme. Milton.

The conscience has power to disapprove and to protest against the exorbitances of the passions.

South.

Since the spreading of the protestant religion, several nations are recovered out of their ignorance.

Addison.

I smiled at the solemn protestation of the poet in the first page, that he believes neither in the fates or destinies. ###*###

What if he were one of the latest protesters against popery 1 and but one among many that set alxm## the same work?

PROTESTANTISM.

We receive but little advantage from repeated protestations of gratitude, but they cost them very much from whom we exact them in return.

Goldsmith.

Each peer has a right, by leave of the house, when a vote passes contrary to his sentiments, to enter his dissent on the journals of the house with the reasons for such dissent, which is usually styled his protest. 1 Comm. c. 2. Lord Clarendon relates that the first instances of protests, with reasons, in England, were in 1641 ; before which time they usually only set down their names as dissentient to the vote.

Tomlin e.

PROTEST, in commerce, is a writing executed by a notary public to secure to the holder of a bill recourse upon the indorsers when the drawer refuses to accept, or the acceptor fails to pay.

PROTEST, in parliament. Any of the lords in parliament have a right to protest their dissent from any bill passed by a majority ; which protest is entered in form. This is said to be a very ancient privilege. The commons have no right to protest.

PROTESTANTISM. The emperor Charles V. called a diet at Spires, in 1529, to request aid from the German princes against the Turks, and to devise the most effectual means for allaying the religious disputes which then raged in consequence of Luther's opposition to the established religion. The emperor being at Barcelona, at the meeting of this diet, his brother Ferdinand, archduke of Austria, was appointed to preside. In this diet it was decreed, by Ferdinand and other popish princes, that, in the countries which had embraced the new religion, it should be lawful to continue in it till the meeting of a council ; but that no Roman Catholic should be allowed to turn Lutheran ; and that the reformers should deliver nothing in their sermons contrary to the received doctrine of the church. This de-cree was justly considered as iniquitous and intolerable by the elector of Saxony, the langrave of Hesse, and other members of the diet. Nor was any one of them so simple, or so little acquainted with the politics of Rome, as to look upon the promises of assembling speedily a general council in any other light than an artifice to quiet the minds of the people ; since it was easy to perceive that a lawful council, free from the despotic influence of Rome, was the very last thing that a pope would grant in such a critical situation of affairs. Against this decree, therefore, six Lutheran princes (John and George, the electors of Saxony and

Brandenburg ; Ernest and Francis, the two dukes of Lunenberg; the land-grave of Hesse ; and the prince of Anhalt), with the deputies of thirteen imperial towns (Strasburg, Ulm, Nuremburg, Constance, Rottingen, Windsheim, Memmingen, Nortlingen, Lindau, Kempten, Heilbron, Wissemburg, and St. Gall), formally and solemnly protested, and declared that they appealed to a general council ; and hence the name of PROTESTANTS, which, from this penod, has been given to the followers of Luther. Nor was it confined to them ; for it soon after included the Calvinists, and has now of a long time been applied indiscriminately to all the churches, sects, and denominations, in whatever country they may be found, which lave separated from the see of Rome.

The” important period which was distinguished by this reformation of religion, is not, as Protestants contend, to be considered a? the period when the principles then embraced first made their appearance. Long, very long, had purity of doctrine and discipline slept beneath the overloaded ornaments and corruptions of the church of Rome ; and there was a time when that church herself might have boasted of her primitive purity and freedom from error, with other churches of Christ : never, indeed, was there a time, from the date of her first departure from sound principles, wherein there were not witnesses to the truth ; or some, more or less, who withstood the corruptions ai►►l depravity of their respective ages, maintained orthodox and primitive doctrine, and exhibited in their lives the genuine fruits of our most holy faith

We are not to wonder that Protestantism soon exhibited a variety of religious opinion and practice. The active spirit of enquiry, natural to men who had just broken loose from the despotism of popery, operating differently on different intellects and dispositions, almost necessarily produced a variety of sects; and, in some cases, gave birth to extreme wildness and extravagance of unscriptural doctrine and practice. Protestants, therefore, have been far from unanimous in all points of doctrine, worship, church government, or discipline : on the contrary, while they agree only in receiving the Scriptures as the supreme rule of their faith and practice, and in rejecting the distinguishing doctrines of the church of Rome, particulaily the authority ascribed by her members to tradition as a rule of faith, in many other respects they still differ not more widely from that church than they do from one another. And, to ascertain their doctrines, it will be necessary to examine their several libri symbolici, or the confessions i and articles of the different churches, sects, and parties,

into which professors of the reformed religion are now subdivided. The learned Chil-lingworth, addressing himself to a writer i.i favor of the church of Rome, speaks of the religion of Protestants in the following terms, worthy, as has been well observed, to be inscribed in letters of gold : ••• ‘ Know then, Sir, that when I say the religion of Protestants is, in prudence, to be preferred before yours; on the one side, I do not understand by your religion the doctrine of Bel-larmine, or Baronius, or any other private man amongst you, nor the doctrine of the Sorbonne, or of the Jesuits, or of the Dominicans, or of any other particular company among you, but that wherein you all agree, or profess to agree, ‘ The doctrine of the council of Trent .’ so accordingly, on the other side, by the religion of Protestants I do not understand the doctrine of Luther, or Calvin, or Melancthon, nor the confession of Augsburg, or Geneva, nor the catechism of Heidelberg, nor the articles of the church of England ••• no, nor the harmony of Protestant confessions ; but that wherein, they all agree, and which they all subscribe with a greater harmony, as a perfect rule of faith and action, that is, the Bible. The Bible, I say, the Bible only, is the religion of Protestants. Whatsoever else they believe besides it, and the plain

irrefragable, indubitable, consequences of it, well may they hold it as a matter of opinion ; but, as a matter of faith and religion, neither can they, with coherence to their own grounds, believe it themselves, nor require belief of it of others, without most high and most schismatical presumption. I, for my part, after a long, and (as I verily believe and hope) impartial search of the true way to eternal happiness, do profess plainly, that I cannot find any rest for the sole of my foot, but upon this rock only. I see plainly, and with my own eyes, that there are popes against popes, and councils against councils ; some fathers against other fathers, the same fathers against themselves ; a consent of fathers of one age, against a consent of fathers of another age. Traditive interpretations of Scripture are pretended, but there are few or none to be found : no tradition, but that of Scripture, can derive itself from the fountain, but may be plainly proved either to have been

brought in in such an age after Christ, or that in such an age it was not in. In a word, there is no sufficient certainty but of Scripture only, for any considering man to build upon. This, therefore, and this only, I have reason to believe. This I will profess : according to this I will live ; and, for this, if there be occasion, I will not only willingly, but even gladly, lose my life ; though I should Ve sorry that Christians should take it from me. Propose me any thing out of this book, and require whether I believe or no, and, seem it never so incomprehensible to human reason, I will subscribe it with hand and heart, as knowing no demonstration can be stronger than this, God hath said so, therefore it is true. In other things, I will take no man's liberjty of judging from him ; neither shall any man take mine from me.'

But though the Bible is, properly speaking, their only symbolic book, or the only sure foundation upon wnich all true Protestants build every article of the faith which they profess, and every point of doctrine, which they teach, whereby they may be said to unite in subscribing to the sixth article of the United Church of England and Ireland ; and though all other foundations, whether they be the decisions of councils, the confessions of churches, the rescripts of popes, or the expositions of private men, are considered by them as sandy and unsafe, or as in no wise to be ultimately relied on ; yet, on the other hand, they do by no means fastidiously reject them as of no use. For while they admit the Bible, or the Scriptures of the Old and New Testaments, to be the only infallible rule by which we must measure the truth or falsehood of every religious opinion, they are sensible that all men are not equally fitted to apply this rule, considered in all its latitude ; and that the wisest men want, on many occasions, all the helps of auman learning, to enable them to understand its precise nature, and to define its certain ex-tent. That is, the consistent Protestant must admit that all men are not equal judges of what nature, i. e. the national sense of propriety, taught the Corinthian ladies respecting the wearing of their liair, see 1 Cor. xi. 15, nor of the geographical question, whether the ' river of Egypt,' given as a boundary to Canaan in the

important grant, Gen. xv. 18, were or were not the river Nile: but it is an essential part of consistent Protestantism to maintain, with Chi".-lingworth, not only the fulness, but the plainness, of Scripture, as a rule in all things needful to salvation. ' He that would usurp an absolute lordship over conscience,' says this admirablp writer, 'need not put himself to the trouble and difficulty of abrogating and disannulling the laws made to maintain the common liberty ; for he

may frustrate them entirely, and compass his own design as well, if he can get the power and authority to interpret them as he pleases, and add to them what he pleases.' 'If you will stand to your rule, that Scripture is as perfect a rule of faith and practice as a writing can be, you must then grant it both so complete that it needs no addition, and so evident that it needs no interpretation ; for both these properties are requisite to a perfect rule, and a writing is capable of both these properties.' The helps adverted to are great and numerous, having been supplied, in every age of the church, by the united labors of learned men in every country, and, we may add, particularly in Protestant communions.

With regard to church government, it may be here remarked in general, that, however widely Protestants may differ in other respects, they all agree in rejecting a universal, visible, supreme head of the church, together with the infallibility of any church governors or councils whatsoever, from the days of the apostles. They all likewise agree in adopting the principle of the independency of every church, either in its national or congregational character; as subject to no spiritual head but Christ; as conceding no superiority, and claiming no preeminence of jurisdiction ; and as authorized to frame its own laws, and to regulate its own government : while, at the same time, a very great proportion of them equally concur in admitting the union of church and state, or the lawfulness of national establishments of religion. ' It is very remarkable,' says dean Comber, ' that a Romanist may turn Protestant without adding any one article to his faith; but a-Protestant cannot turn to Rome unless he embrace many new articles : for our doctrines are generally confessed by both sides to be true ; but those of the Roman church are rejected by our reformers-as novel additions, and such as have no good* foundations in Scripture nor genuine-antiquity : and therefore the Protestant doctrines are the surer and safer, as in which both sides agree. For example, we and they both hold there are two states after this life, heaven and hell ; but they add a third, which is purgatory ; and this we deny : we and they both say that sins are to be remitted by the merits of Christ's death ; but they add the merits of the saints, and their own satisfactions, with the merit of their own good works, which we deny to be expiatory, or such as can merit remission for us: we hold there be two sacraments, baptism and the eucharist : these they confess are the chief, but add five more, to which we affirm the name of sacraments doth not properly belong : we say that God alone is to be worshipped : they confess he is chiefly to be worshipped ; but, then, they say the blessed Virgin Mary, angels, and saints

are t3 be worshipped also; which additions we deny : we say Christ is our only mediator and advocate : they confess he is principally so, but add that saints and angels are so in an inferior manner ; which we utterly deny : we say Christ is really present in the sacrament of the altar: this they confess, but add he is corporally there, by the transubstantiation of the bread, &c. ; and this we deny : we say there are twenty-two books of the Old Testament canonical, and they confess these all to be so, but they add divers others, and call them canonical, which we affirm to be apocryphal : we say the Scriptures are the rule of faith ; and they will not absolutely deny it, but add their own traditions, which we reject. I could give more instances ; but these may suffice to show that the Protestant doctrines look mos.t like the ancientest, as being received by both parties ; but the Roman opinions are novel enlargements added to the old Catholic truths.’

PROTEUS, in mythology, a sea deity, the son of Oceanus and Tethys, or, as others say, of Neptune and Phcenice. From Neptune he received the gift of prophecy, and was often consulted on the coast of the Carpathian Sea by mortals. But on these occasions he was sometimes very shy, and shifted his votaries by assuming the shapes of various animals ; and, while they held him fast as a sea god, eluded their grasp in the form of a fish or a serpent, unless they previously bound him with fetters. Hercules, Aristeus, and many other heroes, consulted him. Some say he reigned long in Egypt. He had two sons, Telegonus and Polygonus ; and ihree daughters, Cabira, Fidothea, and Rhetia.

PROTEUS, in zoology, a genus of the class reptilia, order batraciens, of Cuvea, discovered in 1789 in the limestone caves of Carniola, and also in Mexico. The first protei described by Laurenti and Scopoli were not procured from the lake of Zirknitz, as has been commonly represented, nor from any of the caverns of Carniola, but were found accidentally by the peasants in small puddles of water near the mouths of certain caverns, a little distant from Sittich, on the road to Newstadt, in Lower Carniola, cast out of the caverns probably by the

overflowing of their water after heavy rains. It was not till the year 1 797 that these animals were discovered in the caverns of Maddalena. At present, the peasants of Adelsberg, when the season suits, go to fish for them, and preserve them alive, till they sell them to the curious, who visit Carniola, or convey them to Trieste, where they are sold for the small sum of two or three lire each.

Hermann and Schreibers wrote on the proteus, but described only its external parts, and contributed nothing to clear up the.-many doubts and conjectures respecting it. In this st?*►► > of uncertainty, Dr. Schreibers first had recourse to anatomy, as the only satisfactory modo of gaining correct information : but unfortunately he possessed only three protei which had been sent to him from Carniola, preserved in spirits ; which circumstance precluded him from giving that complete information which might otherwise have been expected from so eminent a naturalist. His description was published in 1801 ; and, among many exceller* ob-

servations, he points out the striking difference of form between the lungs of the sirena lacertina and those of the proteus. Next to Schreibers we have to notice two zoologists of the highest celebrity, MM. Cuvier and Rudolphi, both of whom examined the internal structure of this animal. The former first discovered, and accurately described, the organs of generation in the female, and established, on a solid foundation, that the proteus was not a larva, as many had supposed, but a perfect animal; an opinion now generally followed, and confirmed by the recent observations of Rudolphi, who has described the generative system in the male.

The sirena lacertina occupies the same class and order, and is another genus consisting only of one species. It is said, like the proteus, to retain through its whole life three gills on each side the neck, and to possess, at the same time, lungs internally. A most ample description of this curious reptile was furnished to the Edinburgh Philosophical Journal, by professor Con-figliachi, and Dr. Rusconi, to the fourth volume of which we must refer the reader for more ample information.

PROTHON'OTARY, n. s. Fr. protanotatre ►►► Lat. protonotarius. The head register.

Saligniaeus, the pope's prothtmotary, denies the Nubians professing of obedience to the bishop of Rome. Brerewood.

He had the prothonotariship of the chancery. Carew.

PROTHOXATORY [from vporof Gr. first, and notarius, Lat.] properly signifies first notary, and was anciently the title of the principle notaries of the emperors of Constantinople.

PROTHOXOTARY is used in England for a►► officer in the court of king's bench and common pleas ; the former of which courts has one, and the latter three. The prothonotary of the king's bench records all civil actions sued in that court, as the clerk of the crown-office does all criminal causes. The prothonotaries of the common pleas enter and enrol all declarations, pleadings, assizes, judgments, and actions ; they also make out all judicial writs, except writs of habeas corpus and distringas jurator, for which there is a particular office, called the habeas corpus office ; they likewise enter recognizances acknowledged, and all common recoveries ; make examplitications of records, &c.

PIIOTHOKOTARY, in the courts of Rome. There is a college of twelve prelates, called apostolical prothonotaries, empowered to receive the last wills of cardinals, to make all informations and proceedings necessary for the canonisation of saints, and all such acts as are of great consequence to the papacy ; for which purpose they have the right of admission into all consistories. They also attend on the pope, whenever he performs any extraordinary ceremony out of Rome.

PROTOCOL, n. s. Belg. protokol ; Fr. jrro-tocole ; Gr. jrpwroicoXXov, from Trpwrof and eoXXjj. The original copy of a writing ; the rough memo-randum of a diplomatic conference.

An original is stiled the protocol, or scriptura matrix ; and if the protocol, which is the root and foundation of the instrument, does not appear, the instrument is not valid.

PRO u

PROTOGENES, a celebrated ancient painter, born at Carnas, a city of Caria, subject to the Rhodians, who flourished about A. A. C. 300. He was at first employed in painting ships, &c., but soon acquired the highest fame for historical pieces. His most celebrated piece was Jalysus, the founder of Jalysus, a city of Rhodes. Apelles gave him fifty talents (about ►►10,000) for one picture, which the Rhodians purchased back from him at a still higher price. He lived very abstemiously.

PROTOPLAST, n.s. Gr.Trpwrocand TrXa-roe. Original ; thing first formed as a copy.

The consumption was the primitive disease, which put a period to our protoplasts, Adam and Eve.

Harvey.

PROTOTYPE, n. s. Fr. prototype ; Greek irpuTorvirov. The original of a copy ; arche-type; exemplar.

Man is the prototype of all exact symmetry.

Wotton.

The image and prototype were two distinct things ; and therefore what belonged to the exemplar could not be attributed to the image. Stittingjieet.

PROTRACT', v.a. & ►►. s.-\ Lat.pi-otractus.

PROTRAC'TOR, n. s. (To draw out; to

PROTRAC'TION, i delay ; to length—

PROTRAC'TIVE, adj. J en ; to spin lo

length : the derivations all corresponding.

Since I did leave the presence of my love, Many long weary days I have out-worn,

And many nights, that slowly seemed to move Their sad protract from evening until morn. Spenser.

Where can they get victuals to support such a multitude, if we do but protract the war ! Knolles.

Our works are nought else But the protractive tryals of great Jove, To find persistive constancy in men. Shakspeare.

Those delays

And long protraction, which he must endure, Betray the opportunity. Daniel.

As to the fabulous protractions of the age of the world by the

Egyptians, they are uncertain idle traditions. Hale.

He suffered their protractive arts, And strove by mildness to reduce their hearts.

Dry den.

PROTRACTOR, an instrument for laying down and measuring angles upon paper with accuracy and despatch ; and by which the use of the line of chords is superseded.

The, CIRCULAR PROTRACTOR is a complete circle-, and is superior by far to either the right-angled or semicircular, both in point of accuracy and despatch, especially when several angles are to be formed at the same point. The limb of this instrument is divided into 36►►, and each degree in some protractors is halved ; it has a subdividing scale or vernier, by which an angle may be laid down or measured to a single mi-nute. In the centre of the protractor is a mark, which, when an angle is to be protracted or measured, is to be laid upon the angular point, and O, or zero on the limb, upon the given line forming one side of the angle.

The RECTANGULAR PROTRACTOR is constructed in form of a right-angled parallelogram, which, when applied to a case of mathematical instruments, is substituted in place of the semicircular protractor and scale of equal parts.

H PRO

PROTREHTICAL, adj. Gr. 7rporp►►rnjcoc. Hortatory ; suasory.

The means used are partly didactical and protrep* tical ; demonstrating the truths of the gospel, and then urging the professors to be stedfast in the faith, and beware of infidelity. Ward on Infidelity.

PROTRUDE’, v. a. & v. n. > Lat. protrudo.

PROTRU’SION, n. s. \ To thrust forward ; thrust itself forward : the act of thrusting forward.

If the spirits be not merely detained, but protrude a little, and that motion be confused, there followeth putrefaction. Bacon.

When the stomach has performed its office upon the food, it protrudes

it into the guts, by whose pe-ristaltick motion it is gently conveyed along. Locke.

One can have the idea of one body moved, whilst others are at rest ; then the place it deserted gives us the Idea of purer space without solidity, whereinto another body may enter without either resistance or protrusion of any thing. Id.

They were hot left, upon the sea's being protruded forwards, and constrained to fall off from certain coasts by the mud or earth, which is discharged into it by rivers. Woodward.

His left arm extended, and fore finger protruded.

Garlick.

PROTU'BERANCE, n. ►►. } Is&.protubero. PROTU'BERANT, adj. S Something swelling out : prominence ; turner ; the adjective corresponding.

If the world were eternal, by tlie eo&thanal fall and wearing of waters, all the protuberances of the earth would infinite ages since foave been levelled, and the superficies of the earth rendered plain.

Hide.

Mountains seem but so many wens and unnatural protuberances upon the face of the earth.

More.

One man's eyes are more protuberant and swelling out, another's more sunk and depressed.

Glanmlle.

If the navel protuberqtes, make a small puncture with a lancet through the skin, and the waters wi)l be voided without any danger of a hernia succeeding.

Sharp's Surgery.

PROUD, adj. a Sax. Jjnut>e,)>pire ; Goth.

PROUD'LY, adv. 5 and Swed. prud. See PRIDE. Arrogant ; self-exalted ; haughty ; elated, taking of before the object of pride; daring ; presumptuous; ostentatious; salacious; exuberant; swelling (as ' proud

flesh’) ; lofty of mien or manner ; grand ; splendid : the adverb follows these senses.

By his understanding he siniteth through the proud. Job.

The patient in spirit is better than the proud in spirit. Eecles.

The blood foretold the giant’s fall, By this proud palmer’s hand. Drayton.

I better brook the loss of brittle life, Than those proud titles thou hast won of me.

Shakspeare.

He bears h imself more proudly Even to my person, than I thought he would. Id.

So much is true, that the said country of Atlantis, as well as that of Pen, then called Coya, as that of Mexico, then named Tyrambel, were mighty and proud kingdoms in arms, shipping, and riches. Bacon’s AT►►►► Atlantic.

A man is certainly proud of that knowledge he despises others for the want of. Mate*

The proud attempt thou hast repelled.

Milton. He like a proud steed reined, went haughty on. Id.

The swan Between her white wings mantling proudly rows.

Id.

Scaliger gave it (camphor) unto a bitch that was proud. Browne's Vulgar Errours.

Fortune, that, with malicious joy, Does man her slave oppress,

Proud of her office to destroy, Is seldom pleased to bless. Dryden's Horace. Storms of stones from the proud temple's height Pour down, and on our battered helms alight.

Dry den.

Ancus follows with a fawning air ; But vain within, and proudly pppular. Id. If thou beest proud, be most instant in praying for humility. Duty of Man.

Proudly he marches on, and void of fear ; Vain insolence. Addison.

When the vessels are too lax, and do not sufficiently resist the influx of the liquid, that begets a fungus or proud flesh. Arbuthnot.

Proud Sparta with their wheels resounds.

Pope.

The proudest admirer of his own parts might find it useful to consult with others, though of inferior capacity. Watts.

if it were a virtue in a woman to be proud and vain in herself, we could hardly take better means to raise this passion in her, than those that are now used in their education. Law.

What is all righteousness that men devise ! What ••• but a sordid bargain for the skies ? But Christ as soon would abdicate his own, As stoop from heaven to sell the proud a throne.

Cowper.

PROVE, v. a. & v. n. 1 Fr. prouver ; Ital.

PROVE'ABLE, adj. } provare ; Spanish pro-bar ; Lat. probo. To evince ; to show or attest by argument or testimony ; to try ; experience ; endure : as a verb neuter to make true ; be found experimentally ; succeed : proveable is, demonstrable ; that may be proved.

For the dai of the Lord schal declare, for it schal be schewid in fier, the fier schal prue the werk of ech man, what maner of werk it is.

Wiclif. 1 Cor. 3. Who so delyteth to prouen and assay,

Of waveryng fortune the vncertayne lot,

If that the aunswere please you not alway,

Blame ye not me. Sir T. More.

Wilt thou thy idle rage by reason prove ? Or speak those thoughts which have no power to more 1 Sandys.

Let the trumpet sound :

If none appear to prove upon thy person

Thy heinous, manifest, and many treasons,

There is my pledge : I'll prove it on thy heart

Shakspeare.

Delay not the present, but Filling the air with swords advanced, and darts, We prove this very hour. Id. Coriolanm.

Children prove, whether they can rub upon the breast with one hand, and pat upon the forehead with another. Bacon.

If the experiment proved not, it might be pretended that the beasts were not killed in the due time. Id.

Could sense make Marius sit unbound, and prove The cruel lancing of the knotty gout ? Davies.

In a set copy every fault is important, and may prove a rule of error. Bp. Hall.

So both their deeds compar'd this day shall proi*

Milton.

Thy overpraising leaves in doubt The virtue of that fruit, in thee first proved. Id.

Smile on me, and I will prove Wonder is shorter lived than love. Waller. Well I deserved Evadne's scorn to prove, That to ambition

sacrificed my love. Id.

Let him in arms the power of Turnus prove, And learn to fear whom he disclaims to love.

Dry den.

The sons prepare,

Meeting like winds broke loose upon the main, To piove by arms whose fate it was to, reign. Id. If it prove any thing, it can only prove against our author, that the assignment of dominion to the eldest is not by divine institution. Locke.

In spite of Luther's declaration, he will prove the tenet upon him. Atterbury.

When the inflammation ends in a gangrene, the case proves mortal. Arbuthnot.

Property, you see it alter, Or in a mortgage prove a lawyer's share, Or in a jointure vanish from the heir. Pope. PROVED'ITOR, or l It&Lproveditore. One PROVEDORE', n. s.] who undertakes to procure military supplies.

The Jews, in those ages, had the office of prove-dore. Friend.

PROVENDER, n.s. Tr.provende; Ital. pro-vendu ; Belg. provande. Dry food for brutes ; hay and corn.

Good provender labouring horses would have.

Tusser.

I do appoint him store of provender ; It is a creature that I teach to fight. Shakspeare. For a fortnight before you kill them, feed them with hay or other provender. Mortimer.

Whene'er he chanced his hands to lay On magazines of corn or hay, Gold ready coined appeared, instead Of paltry provender and bread.

Swift's Miscellanies.

PROVENCE, a cidevant province of France, bounded by Dauphine on the north, by the late Piedmontese on the east, by the Mediterranean on the south, and by the Rhone, which separated it from Languedoc, on the west, being 138 miles long and 100 broad. The air is cold near

the Alps, hot on the coast, and temperate in the middle. Since the revolution it has been divided into the following departments : ###

Sq. Miles. Population.

The Lower Alps . . 2845 146,000

The Var 2820 284,000

The Mouths of the Rhone 2272 320,000

Total . 7937 750,000 To these is to be added a portion of the department of the Vaucluse. The principal towns are Marseilles, Toulon, Aix, Aries, and Grasse. It was divided into the Upper and Lower Provence.

PROVERB, n. s. & v. a.) Fr. proverbe ;

PROVER'BIAL, adj. > Ital. proverbio ,

PROVER'BTALLY, adv. j Lat. prover'oium. A pithy saying; a saw ; an adage : the verb, to mention in, or provide with, a proverb, has been very properly disused : the adjective and adverb correspond with the noun substantive.

Thou hast delivered us for a spoil, and a proierb of reproach. Tab. HI. 4.

Let wantons, light of heart, Tickle the senseless rushes with their heels : For I am proverbed with a grandsire phrase ; I'll be a candle-holder and look on. Shakspeare. It is in praise and commendation of men, as

it is in gettings and gains ; for the proverb is true, that light gains make heavy purses ; for light gains come ###hick, whereas great come but now and then.

Bacon's Essays.

The sum of his whole book of proverbs is an exhor- .ation to the study of this practic wisdom.

Decay of Piety.

The proverbs of several nations were much studied by Bishop Andrews, and the reason he gave, was, because by them he knew the minds of several nations, which is a brave thing* Selden.

Am I not sung and proverbed for a fool In every street ; do they not say, how well Are come upon him his deserts 1 Milton.

He (Solomon), did wonderfully excel in ethics ; concerning which he spake three thousand proverbs, or moral aphorisms. Barrow.

It is proverbially said, formicae sua bilis inest, ha-bet et musca splenem ; whereas these parts anatomy hath not discovered in insects. Browne.

In case of excesses, I take the German proverbial cure, by a hair of the same beast, to be the worst in the world ; and the best, the monks diet, to eat till you are sick, and fast till you are well again.

Temple's Miscellanies.

The proverb says of the Genoese, that they have a sea without fish, land without trees, and men without faith. Addison.

Moral sentences and proverbial speeches are numerous in this poet. Pope.

People will, in a great degree, and not without reason, form their opinion of you, upon that which they have of your friends ; and there is a Spanish proverb which says, very justly, ' Tel' me with whom you live, and I will tell you who you are.'

Chesterfield.

PROVERBS, BOOK OF, a canonical book of the Old Testament, containing a part of the proverbs of Solomon. The first twenty-four chapters are the work of that prince ; the next five are a collection

made by order of king Hezekiah; and the authors of the two last are Agur, the son of Jakeh, and king Lemuel.

PROVIDE', v. a. ˆ Lat. provideo. To

PROV'IDENCE, n. s. procure, or supply,

PROV'IDENT, adj. I beforehand ; fur—

PROVIDEN'TIAL, punish ; get ready, tak—

PROVIDEN'TIALLY, adv. \ ing of or. with before PROV'IDENTLY, I the object : ' to pro—

PROVI'DER, n. s. J vide against' is to

take measures to counteract or escape ; ' provide for,' to take care of; maintain: ' provided that' means, conditioned that : providence is, forecast ; forethought ; timely care ; prudence ; frugality ; act of providing ; in a theological sense, God's care of all his creatures : providential and providentially are generally used in this last sense : provident is, prudent ; forecasting : providently corresponding : provider, he who provides.

God will provide himself a lamb for a burnt offering. Genesis.

The only people which, as by their justice and providence, give neither cause nor hope to their neighbours to annoy them, so are they not stirred with false praise to trouble others' quiet. Sidney.

Eternal providence exceeding thought, Where none appears can make himself a way.

Spenser.

States, which will continue, are above all things to uphold their reverend regard of religion, and to provide for the same by all means. Hooker.

This appointeth unto them their kinds of working, the disposition whereof, in the purity of God's own knowledge, is rightly termed providence. Id.

He hath intent, his wonted followers

Shall all be very well provided for. Shakspeare. I take your offer, and will live with you ;

Provided that you do no outrages. Id.

I saw your brother,

Most provident in peril, bind himself

To a strong mast that lived upon the sea. Id. Here's money for my meat,

I would have left it on the board, so soon

As I had made my meal, and parted thence

With prayers for the provider. Id.

A provident man provides for the future. Raleigh.

Providence is an intellectual knowledge, both foreseeing, caring for, and ordering all things, and doth not only behold all past, all present, and all to come ; but is the cause of their so being, which prescience is not. Id.

To make experiments of gold, be provided of a con-servatory of snow, a good large vault under ground, and a deep well. Bacon.

Providence for war is the best prevention of it.

Id. The king forthwith provides him o/a guard,

A thousand archers daily to attend. Daniel.

He happier seat provides for us. Milton.

The world was all before them, where to chuse

Their place of rest, and providence their guide. Id.

First crept

The parsimonious emmet, provident

Of future. Id.

Sagacity of brutes in defending themselves, providing against the inclemency of the weather, and care for their young. Hale.

Though the providence of God doth suffer many particular churches to cease, yet the promise of the same God will never permit that all of them at once shall perish. Pearson.

Orange with youth, experience has, In action young, in council old ; Orange is what Augustus was, Brave, wary, provident, and bold. Waller.

They could not move me from my settled faith in God and his providence. More's Divine Dialogues.

Nature having designed water fowls to fly in the air, and live in the water, she providently makes their feathers of such a texture that they do not Ad-roit the water. Boyk. He went,

With large expence and with a pompous train

Provided. Dryden.

Some men, instructed by the labouring ant, Provide against the* extremities of want. Id.

By thrift my sinking fortune to repair,

Though late, yet is at last become my care ;

My heart shall be my own, my vast expence

Reduced to bounds, by timely providence. Id.

Provided that he set up his resolution not to let himself down below the dignity of a wise man.

L'Estranytt.

Every animal is providentially directed to the use of its proper weapons. Ray on the Creation.

An earth well provided of all requisite things for an habitable world. Bvrnet'i Theory.

The lilies grow and the ravens are fed according to the course of nature, and yet they are made arguments of providence, nor are these things less providential, because regular. Burnei. My arbitrary bounties undenied ;

I give reversions, and/or heirs pnnide* Garth.

PRO

He will hire many dependents, whose wants he cannot provide for. Addison.

It happened, very providentially to the honour of the Christian religion, that it did not take its rise in .he dark illiterate ages of the world, but at a time when arts and sciences were at their height. Id. This thin, this soft contexture of the air,

Shows the wise author's providential care.

Blackmore.

An established character spreads the influence of such as move in a high sphere, on all around ; it reaches farther than their own care and providence can do. Atterbury.

A very prosperous people, flushed with great successes, are seldom so pious, so humble, so just, or so provident, as to perpetuate their happiness. Id.

Rome, by the care of the magistrates, was well provided with corn. Arbuthnot on Coins.

Fraudulent practices were provided agains't by laws.

Arbuthnot.

When the monasteries were granted away, the parishes were left destitute, or very meanly provided of any maintenance for a pastor.

Sieift's Miscellanies.

They were of good birth, and such who, although inheriting good

estates, yet happened to be well educated, and provided with learning. Swift.

PROVIDENCE. That there exists a divine providence, or, in other words, that the Deity attends to the affairs of this world, and directs their course, has been an opinion generally received among mankind, in all ages, and in all countries of the world. It has not, however, passed without opposition from philosophers in various ages, as well as the present. The most ancient of these were Democritus, Leucippus, and Epicurus. We think it totally unnecessary, however, to state the arguments on either side, as they would lead into a discussion of the much disputed doctrines about the origin of evil, liberty, and necessity, free-will, predestination, &c., which have been sufficiently noticed elsewhere. The weight of the argument indeed lies on the side of the affirmative, both for a general and particular Providence. Every argument that has been advanced in favor of the eternal self-existence, infinite power, wisdom, and goodness of God, is equally decisive in favor of his superintending care over all his works. See THEO-

PROVIDENCE, an island near the coast of Honduras, eleven miles long and four wide, and ce-lebiated in the history of the buccaneers, who fortified it for some years. Its western extremity, called the island of Santa Catalina, is separated from the rest of the island by a narrow channel, over which was thrown a bridge. It has been considered one of the best of the West India islands for fertility, and the salubrity of its climate ; to which may be added the facility of its fortification and defence, and the abundance ot its fine water.

PROVIDENCE, a post-town, port of entry, and semi-metropolis of Rhode Island, in a county of the same name ; fifteen miles N. N. W. of Bristol, thirty north by west of Newport, forty S. S. W. of Boston, and fifty-nine north-east of New London, is situated on both sides of Providence River, just above the mouth of the Seekhonk, or Pawtucket, and thirty-five miles from the ocean. It is a pleasantˆ well-built, and very thriving

town, well situated for trade, and has a flourishing commerce, and extensive manufactures. The shipping owned here in 1810, amounted to 14,465 tons. The river is navigable as far as the town for vessels of 900 tons. The two parts of the town are connected by an elegant bridge, ninety feet in breadth. In point of population, it is the first town in Ithode Island, and the third in New-England. It contains a court-house, a jail, a university, a public library of about 2000 volumes, a Friends' boarding-school and five pub-lic schoo's, seven

banks, including a branch of the United States bank, and eight houses of pub-lic worship : three for Congregationalists, two for Baptists, one for Episcopalians, one for Friends, and one for Methodists. Two of the Congregational, and one of the Baptist meeting-houses, and the Episcopal church, are among the handsomest edifices of the kind in the United States. Many of the private houses are elegant, and some of them very finely situated. Among the manufacturing establishments are four cotton manufactories, a large woollen manufactory, a paper-mill, a bleaching, dyeing, and calendering company. These manufactories are aided by three steam engines. Three newspapers are published here, one twice a-week, and two once a-week. A little to the east of the town there are two handsome bridges across the Seekhonk.

This town was originally settled, in 1636, by Roger Williams, to whom is ascribed the honor of having established the first political community in which perfect religious toleration was admitted. Brown University was originally founded at Warren in 1764, and removed to Providence in 1770. It received its present name in 1804 from Nicholas Brown, esq.,one of its principal benefactors. It is a respectable and flourishing seminary. Its funds are not large, having arisen solely from individual liberality. The college building is a spacious and elegant brick edifice, four stories high, 150 feet leng, forty-six broad, with a projection of iwenty-feet on each side ; and it contains forty-eight rooms for students, and six rooms for public purposes. It is delightfully situated on an eminence on the east side of the town, commanding a fine prospect. The librarj contains about 3000►►volumes, and the philosophical apparatus is resopctable.

The board of trustees is composed of thirty-sis members ; of whom twenty-two must be Baptists, five Friends, five Episcopalians, and four Congregationalists The number of fellows, or learned faculty, is twelve ; of these eight, including the president must be Baptists ; the other four may be of any denomination ; as also may be the professors and tutors. The executive government consists of the president, seven professors, and two tutors.

PROVIDENCE, NEW, an island of the West Indies, nearly in the centre of the great Bahama Bank, is twenty-five miles long and nine broad. The harbour of Nassau is on the north side, and is sheltered to the north by Hog Island; it is fit for vessels of thirteen feet. The town of Nassau is the seat of government of the Bahamas, and one of the best planned towns of the West In-dies ; the streets being wide and airy, and the houses well built. The trade here, particularly

with the United States, was at a late period very considerable. Its chief objects were live stock, and salt and fresh provisions ; which latter have been chiefly obtained from the more southern of the states. A considerable intercourse has likewise occasionally taken place between New Providence and the Island of Cuba ; particularly to the Havannah, where there was a brisk market for British manufactures, prize goods, &C-, through the facilities rendered by the licence trade. In May, 1803, there had been granted in this island, by the crown, no less than 23,079 acres of patented estates, for the purpose of cultivation. The population, in 1801, amounted to 1599 whites, 752 free people of color, and 3861 slaves, making a total of 6212 ; and in 1803 to 1758 whites, 817 people of color, and 2515 slaves, the total being 5090.

At Nassau, there are two parish churches, and an old fort near the west entrance of the harbour. The government house (built in 1804) is one of the best in the West Indies, and is finely situated on a hill that commands the town and harbour. Here also is Fort Fincastle, and a small light-house. The public buildings, courts of justice, &c., are handsome and commodious. The barracks situated in Fort Charlotte, a little to the west of Nassau, were erected at a great expense by the earl of Duumore, a late governor of the Bahamas. There is a very good road, extending for a considerable way along the coast of New Providence, and likewise one across the island from Nassau to the south. The island is situated between long. 77►► 10’ and 77►► 38’ W., lat. 25►► 3’N.

PROVIDENCE, NORTH, a town of Providence county, Rhode Island, on the West side of the Pawtucket. It lies on the north side of Providence, and contains several cotton manufactories, two banks, and an air furnace. Pawtucket village is in this township.

Also a town of Saratoga county, New York.

PROVIDENCE RIVER, a river of Rhode Island, formed by the Wanasquiatucket and Moshasick, which unite just above Providence. It flows into Narraganset Bay, at Bullock's Point, n > e or six miles below Providence.

PROVINCE, 7i. s. } Fr. province;

PROVINCIAL, adj. & n. s. > ItaL, Span., Port., PROVIN'CIATE, v. a. j and Lat. provincia.

A conquered region or tract of country ; a country governed by delegated authority ; hence any one's proper sphere or business : piovincial is, relating or belonging to a province ; unpolished ; rude ; not oecumenical : and, as a noun substantive, a spiritual delegate among the Jesuits and other religious orders : to provinciate ; to make into a province. Not used.

Those provinces these arms of mine did conquer.

Shakspeare.

The duke dare not more stretch This finger of mine, than he dare rack his own ; His subject am I not, nor here provincial. Id. When there was a design to provinciate the whole kingdom, Druina, though offered a canton, would not accept of it. Howel.

Over many a tract

Of heaven they marched, and man 7 a province wide.

Milton.

Some have delivered the polity of spirits, and !efta:i account even to tlieir provincial dominions. Browne. 1 am fit for honours's toughest task ;

.Nor ever yet found fooling was my province.

Otway.

►► > or can I alone sustain this day's province.

More.

vahgnanus was provincial of the Jesuits in the Indies. Stillingfleet.

Greece, Italy, and S;cily, were divided into commonwealths, till swallowed up and made provinces by Rome. Temple.

T is thme. whate'er is pleasant, good, or fair ; All nature is thy province, life thy care. Dryden.

They build and treat with such magnificence, That, like the ambitious monarchs of the age, They give the law to our provincial stage. Id.

The woman's province is to be careful in her ceco-nomy, and chaste in her affection. Taller.

He has caused fortified towns and large province* to be restored, which had been conquered long be-fore. Davenant.

A law made in a provincial synod is properly termed a provincial constitution. Ayliffe's Parergon. See them broke with toils, or sunk in ease,

Or infamous for plundered provinces. Pope.

A country sqiiire having only the provincial accent upon his tongue, which is neither a fault, nor in his power to remedy, must marry a cast wench. Swift.

Their understandings are cooped up in narrow bounds ; so that they never look abroad into other provinces of the intellectual world. Watts.

His mien was aukward ; graces he had none ; Provincial were his notions and his tone. Harte.

PROVINCE, in Roman antiquity, was a country of considerable extent, which, upon-being entirely reduced under the Roman dominion, was new-modelled according to the pleasure of the conquerors, and subjected to the command of annual governors, sent from Rome, being obliged to pay such taxes and contributions as the senate thought fit to demand. Of these countries, that part of France next the Alps was one, and retained the name of Provence till the Revolution. Nicod derives the word a procul vivendo, living afar off; but it is better derived from pro and vinco. I overcome.

PROVINCE, in geography, is a division of a kingdom or state, comprising several cities, towns, &c., all under the same government, and usually distinguished by the extent either of the civil or ecclesiastical jurisdiction. The church distinguishes its provinces by

archbishoprics ; in which sense, England is divided into two provinces, Canterbury and York.

PROVINCE ISLAND, a fertile island in the Delaware, six miles below Philadelphia.

PROVING ETO WN, a post town of Barnstaple county, Massachusets, near Cape Cod ; forty-four miles north-east of Barnstaple, and 116 south-east of Boston. It is situated on the hook of Cape Cod, three miles south-east of Race Point. The harbour, which is one of the best in the state, opens to the southward, and has sufficient depth of water for any vessels. The houses are of one story, and, in order to prevent their being buried in the sand, are set on piles, that the driving sands may pass under them. The inhabitants depend almost wholly on the fisheries for subsistence ; raise nothing m their lands, and ire dependent on Boston and the

neighbouring towns, for every vegetable production. They keep a few cows, which obtain a scanty subsistence from the beach grass and marshes.

PROVINS, a post-town of the department of the Seine-et-Marne, France, and the chief place of a subprefecture of the same name, containing 5600 inhabitants, and having a lower court of judicature, a chamber of commerce, an agricultural society, and a communal college. This town is situated on the declivity and at the foot of a lofty hill, watered by the little rivers of Durtein and Vouzie, which turn about sixty flour-mills in the neighbourhood. It is well built, and divided into the Upper and Lower Town ; most of the streets are wide, clean, and airy ; but it is not peopled in proportion to its size. It was fortified in ancient times, and there are still to be seen in the Upper Town the remains of a strong castle. Both parts of the town are

encompassed with walls in a pretty good state of preservation. It is also almost encircled with boulevards, which form majestic bowers over a fountain of mineral-water, of a ferruginous quality. In 1780 a canal was commenced, for the purpose of rendering the litle river Vouzie navigable ; the accomplishment of this enterprise, as the canal would communicate with the Seine near Bray, would be of the highest importance to this town.

Here are manufactures of linsey-woolsey, earthenware, and conserve of roses ; there are also numerous flour-mills, tan-yards, and bark mills, tile and lime-kilns. The trade consists in corn and flour for the Paris market, Provins roses for medicinal purposes, cultivated in this neighbourhood for centuries ; wool, leather, and mineral-waters. The most remarkable public places are, the mineral-spring, the walks, and the extremity of the hill, on which the town is built, the ruins of an ancient fort, supposed to be of Roman construction, from which there is a very extensive prospect. Provins is thirty-seven miles east of Melun, thirteen north-west of Nogent, and sixty-three south-east of Paris.

PROVI'SION, n. s. ~\ Fr. provision ; Lat.

PROVISIONAL, adj. f provisio, proviso. The

PROVISIONALLY, adv. 4 act of providing ;

PROVI'SO, n. s. J care ; things provided

or measures taken beforehand ; stock, particularly of food ; terms settled : provisional means provided for the present only ; temporary : the adverb corresponding : proviso, stipulation; expressed condition ; caution or care taken.

Kalander knew that precision is the foundation of hospitality, and thrift the fewel of magnificence.

Sidney.

This proviso is needful, that the sheriff may not have the like power of life as the marshal hath.

Spenser .

Mendoza advertised, that he would valiantly de-fend the city, so long as he had any provision of victuals. Knollet.

He doth deny his prisoners, But with proviso and exception, That we, at our own charge, shall ransom strait His brother-in-law. Shakxpeare. Henry IV.

Five days we do allot thee for provision, To shield thee from disasters of the world.

Shakspeare. He preserved all points of humanity, in taking

order and making provision for the relief of strangers distressed. Bacon.

This law was only to reform the degenerate Eng-glish, but there was no care taken for the reformation of the mere Irish, no ordinance, no provision made for the abolishing of their barbarous customs. Daisies on Ireland.

Under whose chin nature hath fastened a little bag, which she hath also taught him to use as a storehouse ; for in this, having filled his belly, he preserveth the remnant of his precision. Heylin.

He caused provisions to be brought in. Clarendon.

Provisions laid in large for man or beast Milton. In such abundance lies our choice,

As leaves a greater store of fruit untouched,

Still hanging incorruptible, till men

Grow up to their provision. Id.

Religion lays the strictest obligations upon men, to make the best provision for their comfortable subsistence in this world, and their salvation in the next.

Tillotsan.

The prudent part is to propose remedies for the present evils, and provisions against future events.

Temple.

The abbot of St. Martin was born, was baptised, and declared a man provisionally, till time should show what he would prove, nature had

moulded him so untowardly. Locke.

David, after he had made such vast provision of materials for the temple, yet, because he had dipt his hands in blood, was not permitted to lay a stone in that sacred pile. South.

Some will allow the church no further power than only to exhort, and this but with a proviso, too, that it extends not to such as think themselves too wise to be advised. Id.

The commenda semestris grew out of a natural equity, that, in the time of the patron's respite given him to present, the church should not be without a provisional pastor. Ayliffe.

PROVOKE', v. a. & v. n-\ Fr. provoquer ;

PROVOCATION, n. s. I Spanish provocar;

PROVO'CATIVE, \ l.&l.provocare,pro—

PROVO'KER, i voco. To excite ;

PROVO'KINGLY, adv. J rouse to energy ; rouse or excite to anger ; enrage ; offend ; challenge ; induce ; promote ; move : as a verb neuter, to produce anger; and (a Latinism) to appeal : provocation is, the act or cause which excites to anger ; excitement ; appeal : provocative, that which operates as an excitement of the appetite, in particular: provoker, one who excites anger or displeasure ; promoter : provokingly, in a way to excite anger.

The Lord abhorred them, because of the provoking of his sons. Deuteronomy xxxii. 19.

Ye provoke me unto wrath, burning incense unto other Gods. Jeremiah xliv. 8.

To provoke unto love and to good works. Hebrews.

The like effects may grow in all towards their pastor, and in their pastor towards every of them, between whom there daily and interchangeably pass in the hearing of God himself, and in the presence of his holy angels, so many he3 \enly acclamations, exultations, provocations, and petitions. Hooker.

Drink is a great provoker ; it provokes and unprovokes. Shakspeare.

It is a fundamental law, in the Turkish empire, that they may, without

any other provocation, make war upon Christendom for the propagation of their law. Baron.

When we see a man that yesterday kept a humiliation, to-day invading the possessions of his bre-

thren, we need no other proof how hypocritically and provokingly he confessed his pride.

Decay of Piety.

If we consider man in such a loathsome and provoking condition, was it not love enough that he was permitted to enjoy a being 1 Taylor.

Though often provoked, by the insolence of some of the bishops, to a dislike of their overmuch fer-vour, his integrity to the king was without blemish.

Clarendon.

Neither to provoke, nor dread New war provoked. Milton.

A practice which, to the shame of our age, is now so much in fashion, and with some men in vogue ; the invoking God's name, appealing to his testimony, and provoking his judgment, upon any slight occasion, in common talk, with vain incogitancy, or profane boldness. Barrow.

Arius and Pelagius durst provoke To what the centuries preceding spoke. Dryden. I neither fear, nor will provoke the war. Id.

He now provokes the sea-gods from the shore : With envy Triton heard the martial sound, And the bold champion for his challenge drowned.

Id.

Tempt not my swelling rage With black reproaches, scorn and provocation.

Smith.

We may not be startled at the breaking of the exterior earth ; for the face of nature hath provoked men to think of, and observe such a thing. Burnet.

As, in all civil insurrections, the ringleader is iooked on with a peculiar severity, so, in this case, the first provoker has double portion of the guilt.

Government of the Tongue.

There would be no variety of taste to solicit his palate and occasion excess, nor any artificial pro-vocatives to relieve satiety. Addison.

A provocation is every act, whereby the office of the judge or his assistants is asked ; a provocation including both a judicial and an extrajudicial ap-peal. Ayliffe.

One Petro covered up his patient with warm cloaths, and when the fever began a little to decline, gave him cold water to drink till he piovoked sweat.

Arbuthnot.

Agamemnon prtrookes Apollo against them, whom he was willing to appease afterwards. Pope.

If the performance of a writer thus distressed is not perfect, its faults ought surely to be imputed to a cause very different from want of genius, and must rather excite pity than provoke censure. Johnson.

When gifts perverted, or not duly prized, Pleasure o'ervalued, and his grace despised Provoke the vengeance of his righteous hand, To pour down wrath upon a thankless land ; He will be found impartially severe, Too just to wink, or speak the guilty clear.

Cowper.

Garrulity, attended with immoderate fits of laughing, is no uncommon case, when the provocation thereunto springs from jokes of a man's own making. Cumberland.

PROV'OST,n.s. } Sax. priapap:; Fr. pro-PROV'OSTSHIP. \ * vast ; Ital. provosto; Lat. praepositus. The chief of any body, civil or military : the office of a provost.

Kingston, provost marshal of the king's army, was deemed not only cruel, but inhuman in his executions.

Hay ward.

C. Piso first rose, and was afterwards advanced to the provostship of Rome by Tiberius. Hakewill.

He had particular intimacy with Dr. Potter, provost of Queen's College. Fell.

The PROVOST of a city or town is the chief municipal magistrate in several trading cities, particularly Edinburgh, Paris, &c., being much the same with mayor in other places. He presides in city courts, and, together with the bailies, who are his deputies, determines in all differences that arise among citizens. The provost of Edinburgh is called lord ; and the same title is claimed by the provosts of Perth and Glasgow. The former calls yearly conventions of the royal boroughs to Edinburgh by his missives, and is, ex officio, president of the convention when met.

PROVOST GENERAL of the marines, a cidevant French officer, whose duty it was to prosecute the marines when guilty of any crime, and to make report thereof to the council of war ; besides a marine provost in every vessel, who was a kind of jailor, *nd took the prisoners into his care, and kept the vessel clean.

PROVOST MARTIAL OF AN ARMY is an officer appointed to seize and secure deserters, and all other criminals. He is to hinder soldiers from pillaging, to indict offenders, and see the sentence passed on them executed. He also regulates the weights and measures, and the price of provisions, &c., in the army. For the discharge of his office, he has a lieutenant, a clerk, and a troop of marshalmen on horseback, as also an executioner.

PROVOST OF THE MARSHALS was a kind of lieutenant of the marshals of France : of these there were 180 seats in France ; their chief jurisdiction regarded highwaymen, footpads, house-breakers, &c.

PROVOST OF A UNIVERSITY or COLLEGE, a title given to the head of

King’s College, Cambridge, and of Trinity College, Dublin, and also to the president of a college in the United States.

PROW, n. s. Fr. proue ; Span proa ; Lat. prora. The head or forepart of a ship.

The sea-victory of Vespasian was a lady holding a palm in her hand, at her foot the prow of a ship. Peacham on Drawing:

Straight to the Dutch he turns his dreadful prow, More fierce th’ important quarrel to decide.

Dryden.

PROWESS, n. s.) Fr. prmtsse; Ital. pro—

PROTEST, adj.] dezza ; Span, proeza. Bravery ; military valor : prowest, bravest ; valiant : an obsolete barbarism.

Men of such prowess, as not to know fear in themselves, and yet to teach it in others that should deal with them ; for they had often made their lives triumph over most terrible dangers, never dismayed, and ever fortunate. Sidney.

I hope

That your wisdom will direct my thought, Or that your prowess can me yield relief. Spenser

They be two of the prowest knights on ground, And oft approv’d in many a hard assay, And eke of surest steel, that can be found, Do arm yourself against that day them to confound.

Id.

Nor should thy prowess want praise and esteem, But that ‘tis shewn in treason.

Shakspeare. Hen~i, VI. Those are they

First seen in acts of prowess eminent, And great exploits, but of true virtue void. Milton.

The fairest of her sex, Angelica, His daughter, sought by many protest knight. Id.

These were the entertainments of the softer nations, that fell under the virtue and prowess of the two last empires. Temple.

The vigour of this arm was never vain, And that my wonted prowess I retain, Witness these heaps of slaughter on the plain.

Dry den.

PROWL, t?. a. & v. n.) The old dictionaries

PROWL'ER, n. *. i write prole, which

(/asaubon derives from wpooXqc, ready, quick. Skinner, from prosier, a diminutive formed by liimr.elf from proier to prey, French ; ' perhaps,' snys Johnson, ' it may be formed, by accidental cwtruption, from patrol.' Thomson, Yr.proioler, to rove over.

The champion robbeth by night, And protoletk and filcheth by daie. Tvsser.

He prowls each place, still in new* colours deck't, Sucking one's ill, another to infect. Sidney.

Nor do they bear so quietly the loss of some par- ►►*eU confiscated abroad, as the great detriment which they suffer by some prowling vice-admiral or pub-lic minister. Raleigh.

As when a prowling wolf, VV l-orn hunger drives to seek new haunt for prey.

Milton.

On churchyards drear, The disappointed protvlert fall, and dig The shrouded body from the grave. Thomson.

PROX’IMATE, adj.-\ Lat. proximus. Next

PROX’IMATELY, adv. f in the series of ratioci—

PROX’IME, adj. t nation; near and im—

PROXIM’J~Y, n. s, J mediate : this is the signification of both adjectives ; the adverb and nounsubstantive corresponding.

When kingdoms have customably been carried by right of succession, according to -proximity of blood, the violation of this course hath always been dangerous. Hayward. If he plead proximity of blood.

That empty title is with ease withstood. Dryden.

Add the convenience of the situation of the eye, in respect of its proximity to the brain, the seat of ###common sense. Ray.

Writing a theory of the deluge, we were to shew the proximate natural causes of it. Burne .

I can call to my assistance Proximity, mark that ! and distance. Prior.

The consideration of our mind? which is incorporeal, and the contemplation of our bodies, which have all the characters of excellent contrivance ; these alone easily and proximately guide us to the wise au-thor of all things. Bentley.

Must we send to stab or poison all the popish princes, who have any pretended title to our crown by the proximity of blood 1 Swift.

A syllogysm is made up of three propositions, and these of three terms vanously joined : the three terms are called the remote matter of a syllogism, the three propositions the proximejor immediate matter of it. Watts’s Logich.

PROX’Y, n. s. Contracted from procuracy. Agency of another; the substitution of another: hence the appearance of a representative, or per-son substituted.

We must not think that we, who act only as their proxies and representatives, may do it for them.

Kettkwell.

A wise man will commit no business of importance to a proxy, where he may do it himself.

L’Ettraitge.

Xone acts a friend by a deputy, or can be f by proxy. Otiuilti

Had Hyde thus sat by proxy too, As Venus once was said to do, The painter must have searched th►► skies, To match the lustre of her eyes. Granvilk. PRUCE, n. s. From Pnissia or Pruzzi. Sec PRUSSIA. Prussian leather.

Some leathern buckles use Of folded hides, and leathern shields of pruce.

Dryden.

PRUDE, n. s. > Fr. prude’, Lat. prudential-PRU’DISH, adj. 5 A woman affectedly nice and scrupulous : affectedly grave or nice.

The graver prude sinks downward to a gnome, In search of mischief, still on earth to roam. Popt

Not one careless thought intrudes, Less modest than the speech of prudes. Stcijt. I know you all expect, from seeing me, Some formal lecture, spoke with prudish face.

Garrrick.

PRU’DENCE, n. s. } Fr. prudence ; Lat.

PRU’DENT, adj. | prudentia. Wisdom in

PRUDEN’TIAL, adj. I practice ; discretion :

PRUDEN’TIALLY, adv. (prudent is the corre—

PRUDEN’TIALS, n. s. spending adjective :

PRU’DENTLY, adv. J prudential is, according to rules of prudence, the adverb, and nounsubstantive corresponding : prudentials, max-ims or principles of prudence : prudently, discreetly ; judiciously.

I have seen a son of Jesse, that is a man of war, and prudent in matters., 1 Samuel xvi. 18.

I wisdom dwell with prudence. Proverbs.

These laws were so prudently framed, as they are found fit for all succeeding times. Bacon.

Under prudence is comprehended that discreet, apt, suiting, and disposing as well of actions as words, in their due place, time, and manner.

Peacham.

If the probabilities on the one hand should somewhat preponderate the other, yet if there be no considerable hazard on that side, which has the least probability, and a very great apparent danger in a mistake about the other : in this case, prudence will oblige a man to do that which may make most for his own safety. Wilkin*.

So steers the prudent crane Her annual voyage. Milton.

Prudence is principally in reference to actions t3 he done, and due means, order, season, and method of doing or not doing. Hale.

Being incapable rightly to judge the prudentiality" of affairs, they only gaze upon the visible success, and thereafter condemn or cry up the whole progression. Broune.

Motives are only prudential, and not demonstrative. Tillotton.

Such deep designs of empire does he lay O'er them, whose cause he seems to take in hand ;

And prudently would make them lords at sea, To whom with ease he can give laws by land.

Dryden\

He acts upon the surest and most prudential grounds, who, whether principles which he acts u on prove true or false, yet secures a happy issue to his actions. South.

If he acts piously, soberly, and temperately, he acts prudentially and safely. Id.

These virtues, though of excellent use, some prudential rules it is necessary to take with them in practice. Rogtri.

^^atly stanzas, in poetick measures, contain rules relating to common imidentials, as well as to religion.

Watt*.

Prwlent men lock up their motives ; letting familiars have a key to their heart as to their garden.

Shenstone. Adieu, dear amiable youth !

Your heart can ne'er be wanting : May prudence, fortitude, and truth,

Erect your brow undaunting. Byron.

PRUDENCE, in ethics, may be defined an ability of judging what is best, in the choice both of ends and means. According to the definition of Cicero, De Officiis, lib. i. c. 43, prudence is the knowledge of what is to be desired or avoided. Accordingly, he makes orudentia (De Legibus, lib. i.~) to be a contraction of providentia, or foresight. Plato calls this the leading virtue ; and Juvenal Stat. x. observes, Nullum numen abest si sit prudentia.

PRUDENTIUS, or AURELIUS PRUDENTIUS CLEMENS, a celebrated Christian poet, under Theodosius the Great, born in Spain, A. D. 348. He was first an advocate, and afterwards a judge ; he then became a soldier, and at length obtained an honorable employment at court. We have a great number of his poems, which, from the choice of his subjects, may be termed Christian Poems ; but "the style is barbarous, and very different from the purity of the Augustan age. The best editions of his works are those of Amsterdam, in 1667, with Heinsius's notes, and Paris in 1687, in usum Delphini.

PRUNE, v. ►►., v. n., &~\ Of unknown de-PRU'NER, \n. s. f rivation. ►►► Johnson.

PRU'NIMGHOOK, ►► Fr. provin, of Latin

PRU NINGKNIFE. J pjvptigo, an exuberant shoot. ††† Thomson. To lop ; divest trees of their superfluities ; dress ; prink : a dried plum ; one who crops trees : pruninghook and prun- . ingknife are instruments of his art.

His royal bird Pi unes the immortal wing, and cloys his beak.

Shakspeare.

Many birds prune their feathers ; and crows seem to call upon rain, which is but the comfort they receive in the relenting of the air. Bacon.

In drying of pears and prunes in the oven, and removing of them, there is a like operation. Id. So lopped and primed trees do flourish fair. Davies. Some sitting on the beach to †††prune theii painted breasts. Dray ton.

Lest thy redundant juice

Should fading leaves, instead of fruits, produce, The pruner's hand with letting blood must quench Thy heat, and thy exub'rant parts retrench.

Denham. What we by day

Lop overgrown, or prune, or prop, or bind, One night with wanton growth derides, Tending to wild. Milton's Paradise Lost.

Horace will our superfluous branches prune, Give us new rules, and set our harp in tune.

Waller.

Every scribbling man Grows a fop as fast as ere he can, Prunes up, and asks his oracle the glass, If pink or purple best become his face. Dryden.

Let thy hand supply the pnmingknife, And crop luxuriant stragglers. Id.

No plough shall hurt the glebe, no pntninghock ihe vine. <.

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The cyder land obsequious still to thrones, Her pruninghooks extended in*o swords. Philips. You have no less right to correct me than the same hand that raised a tree has to prune it. Pope.

PRUNELLA, in botany, self-heal, a genus of the gymnospermia order, and didynamia class of plants ; natural order fortieth, verticillatae. The filaments are bifurcated, with an anthera only on one point ; the stigma is bifid. The chief species is

P. vulgaris, the herb self-heal. The stem is erect, and eight or ten inches high. The leaves grow on foot-stalks, are ovato-oblong, slightly indented and somewhat hairy. The bracteae are heart-shaped, opposite, and fringed. The flowers are white and purplish, grow in dense spikes, and are terminal. The plant is perennial ; grows wild in meadows and pasture grounds, and flowers in June and July. It is recommended as a mild astringent and vulne-rary, in spit ting of blood and other haernorrhagies and fluxes ; and in gargles against aphthse and inflammations of the fauces. Its taste is slightly austere and bitterish ; and this is more perceptible in the flowery tops than in the leaves, though the latter are chiefly prescribed.

PRUNEL'LO, n. s. Barb. Lat. prunella. A kind of stuff of which clergymen s gowns are made.

Worth makes the man, and want of it the fellow , The rest is all but leather or prunella. Pope.

PRUNING, in gardening and agriculture, is the lopping off the superfluous branches of trees. Pruning, or the amputation of part of a plant with the knife or other instrument, says Mr. Loudon, is practised for various purposes, but chiefly on trees of the fruit-bearing kinds. Of two adjoining and equal sized branches of the same tree, if the one be cut off, that remaining will profit by the sap which would have nourished the other, and both the leaves and the fruits which it may produce will exceed their natural size. If part of a branch be cut off which would have carried a number of fruits, those which remain will fix better, and become larger. The objects of pruning may be reduced to the following : promoting growth and bulk ; lessening bulk ; adjusting the stem and branches to the roots ; renewal of decayed plants or trees ; and removal or cure of diseases.

Pruning, for promoting the growth and bulk of a tree, is the simplest object of pruning, and is that chiefly which is employed by nursery-men with young trees of every description. The art is to cut off all the weak lateral shoots, that the portion of sap destined for their

nourishment may be thrown into the strong ones. In some cases, besides cutting off the weak shoots, the strong ones are shortened, in order to produce three or four shoots instead of one. In general, mere bulk being the object, upright shoots are encouraged rather than lateral ones ; excepting in the case of trained trees, where shoots are encouraged.

Pruning for lessening the bulk of the tree is also chiefly confined to nursery practice, as tie-. cessary to keep unsold trees portable. It consists in little more than what ii technically tailed heading down ; that is, cutting off the leading

shoots within an inch or two of the mam stem, leaving, in some cases, some of the lower lateral shoots. Care is taken to cut to a leaf bud, and to choose such from among the side, upper, or under buds of the shoot, according as the succeeding year's shoots may be wanted, in radiated lines from the stem, or in oblique lines in some places to fill up vacancies. It is evident that this unnatural operation persisted in for a few years must render the tree knotty and unsightly, and in stone-fruits, at least, it is apt to generate canker and gum.

In rearing trees planted for timber, it is desirable to throw the timber produced, as much as possible, into long compact masses; and hence pruning is employed to remove the side branches, and encourage the growth of the bole or stem. Where this operation is begun when the trees are young, it is easily performed every two or three years, and the progress of the trees under it is most satisfactory ; when, however, it is delayed till they have attained a size, it will sometimes prove injurious. It is safer in such cases to shorten or lessen the size of lateral branches, rather than to cut them off close by the stem, as the

large wounds produced by the latter practice either do not heal at all, or not till the central part is rotten, and has contaminated the timber of the trunk. Where timber-trees are planted for shelter or shade, it is evident, pruning must be directed to clothing them from the summit to the ground, with side branches ; but in avenues, and hedge-row trees, it is generally desirable that the lowest branches should be a considerable distance from the ground. In all cases, the superfluous parts are to be cut off with a clean section, near a bud or shoot if a branch is shortened, or close to the trunk if it is entirely removed, in order that it may more easily heal.

Pruning for adjusting the stem and branches to the roots is almost solely applicable to transplanted trees, in which it is an essential operation ; and should be performed in general in the interval between removal and replanting, when the plant is entirely out of the ground ; if the roots have been broken or bruised,, in any of their main branches or ramifications, the pruner, estimating the quantity of root of which the plant is deprived by the sections of fracture and other circumstances, peculiar and general, will be able to form a notion of what was the bulk of the whole roots before the tree was undisturbed. Then he may state the question of lessening the top to adjust it to the roots, thus : ††† as the whole quantity of roots which the tree had before removal is to the whole quantity of branches which it now has, so is the quantity of roots which it now has to the quantity of top which it ought to have. In general, bearing-wood and weak shoots should be removed, and the stronger lateral and upright shoots, with leaf or shoot-eyes, left.

Pruning for renewal of the head is performed by cutting over the stem a little way, say its own thickness above the collar, or the surface of the ground. This practice applies to old osier-beds, coppice woods, and to young forest-trees. 5 >metimes also it is performed on old, or ill-

thriving fruit-trees which are headed down to the top of their stems. This operation is performed with the saw, and better after scarification, as in cutting off the broken limb of an animal. The live section should be smoothed with the chisel or knife, covered with the bark, and coated over with grafting-clay, or any convenient composition, which will resist drought and rain for a year. Those who are advocates for pruning when the sap is dormant, will not of course be able to perform the operation of scarification, and covering the section with bark.

Pruning for curing diseases has acquired much celebrity since the time of Forsyth, whose amputations and scarifications for the canker, together with the plaster or composition which he employed to protect the wounds from air, are treated of at large in his Treatise on Fruit-Trees. Almost all vegetable diseases either have their origin in the weakness of the individual, or in-duce a degree of weakness; hence to amputate a part of a diseased tree is to strengthen the remaining part, because, the roots remaining of the same force, the same quantity of sap will be thrown upwards as when the head and branches were entire. IT the disease is constitutional, or in the system, this practice may probably, in some cases, communicate to the tree so much strength as to enable it to throw it off; if it be local, the amputation of the part will at once re-move the disease, and strengthen the tree.

PRUNUS, in botany, a genus of the monogynia order, and icosandria class of plants ; natural order thirty-sixth, pomacese : CAL. quinquefid, inferior ; there are five petals ; the fruit is a plum, having a kernel with prominent sutures. There are thirty-three species, of which six are cultivated in Britain : they are originally natives of America and Siberia.

1. P. armeniaca, or apricot tree, grows twenty feet high, with a large spreading head, having reddish shoots, large nearly heart-shaped leaves, and close-sitting pale red flowers rising all along the sides of the young branches ; succeeded by large roundish fruit of a yellow and reddish color in different varieties. The fruit and kernels excite when eaten a continued head-ache : the kernels, infused in brandy, communicate an agreeable flavor.

2. P. avium, the great wild cherry-tree, grows forty or fifty feet high, having oval spear-shapt d leaves, downy underneath, with umbellate sessile clusters of white flowers, succeeded by small round fruit of different properties in the varieties.

3. P. Canadensis, the Canada dwarf bird cherry, grows but four or five feet high, branching horizontally near the ground with smooth branches ; broad, spear-shaped, rough, downy leaves, without glands ; and long clusters of white flowers, succeeded by small, round, berry-like, black fruit, ripe in autumn.

4. P. cerasus, the common cherry-tree, grows twenty ►►”>jt or more in height, garnished with oval clusters of lanceolate, smooth leaves, umbellate flowers, succeeded by clusters of red roundish fruit of different sizes and properties in the varieties. The cherry trees afford

an al-most endless variety ; all differing in some re-

DrauwnVv J.

gttude East 16 from Green-wiifli

tt on Steel “by J.Slmry.

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spect in the manner of shooting, leaves, flowers, or fruit : two in particular demand admission into the pleasure-garden ; the double-blossomed and the red-flowering. The pleasing show the common cherry tree makes when in Blow is known to all ; but that of the double-blossomed is much more beautiful. It blossoms like the other in-May ; the flowers are produced in large and noble clusters ; for each separate flower is as double as a rose, is very large, and placed on long and slender foot-stalks, so as to occasion the branches to have an air of ease and freedom. They are of a pure white ; and the trees are so profusely covered with them, that when viewed at a distance they have been compared to balls of snow. But by the multiplicity of the petals the organs of generation are destroyed ; so that those flowers which are really full are never succeeded by any fruit. The red-flowering cherry tree differs in no respect from the common cherry tree, only that the flowers are of a pale red color, and by many are esteemed on that account. Besides the ornament and utility afforded by the flowers and fruit of the cherry, its timber is a further inducement for propagating it ; more especially that of the small black wilding sort ; which will grow, in a soil and situation it affects, to be a large tree ; which, if taken in its prime, will yield perhaps not less than a ton of valuable materials; peculiarly adapted to the purposes of furniture. The grain is fine, and the coloi nearly approaching to that of

mahogany.

5. P. domestica, the common plum tree, grows twenty or thirty feet high, garnished with oval, spear-shaped leaves, and with the pedunculi for the most part single, terminated by flowers, succeeded by plums of many different colors, sizes, and shapes in the varieties.

6. P. insititia, wild plum, or bullace tree, grows twelve or fifteen feet high ; the branches somewhat spinous ; the leaves oval, hairy underneath ; and the pedunculi by pairs, terminated oy white flowers, succeeded by small, round, plum-like, fruit of different colors in the varieties.

7. P. padus, the common bird-cherry tree, grows fifteen or twenty feet high, of a shrub-like growth, with a spreading head, large, oblong, rough, serrated leaves, having two glands at the back of the base like the other, and with shorter, more compact clusters of flowers, succeeded by large red fruit. This grows wud in hedges in the north parts of England.

8. P. spinosa, black thorn, or sloe tree, grows ten or twelve feet high, very branchy and bushy quite from bottom, armed with strong, sharp spines, small, spear-shaped, smooth leaves, pe-

dunculi growing singly, terminated by flowers, succeeded by small round cherries in autumn. It grows wild every where in hedges and woods ; and is very proper for planting field hedges, being of very quick and close growth.

9. P. Virgimana, the Virginian bird-cherry, grows thirty feet high, dividing into a very branchy head, having a dark purple bark, oval, slightly serrated, shining green leaves, having two glands at the fore part of the base, and long clusters of white flowers, succeeded by small, round, berry-like, black fruit. All the different varieties of plums have at first been raised from the stones, and are afterwards preserved by budding and grafting on any plum-stock. The same method is applicable to cherries ; only these are grafted to most advantage upon stocks of the wild black and red cherry raised from the stones of the fruit. The apricot-trees are propagated by budding on any kind of plum-stocks.

PRU’RIENCE, n. s. 3 Latin prurio. An PRU’RIENCY. $ itching or great desire

or appetite to any thing.

There is a prurience in the speech of some, Wrath stays him, or else God would strike him dumb : His wise forbearance has their end in view, They fill their measure, and receive their due,

Cowper.

PRUSA, in ancient geography, a town situated at Mount Olympus in Mysia, built by Prusias, who waged war with Croesus and Cyrus. It was the capital of Bithynia, in Asia Minor.

PRUSIAS II., king of Bithynia, made an alliance with the Romans, but afterwards receiving Hannibal kindly, by his advice, made war on Eumenes, king of Pergamus, whom he defeated. Eumenes complained to the Romans, on which queen Flaminius was sent against him; whereupon Prusias rendered himself for ever infamous by offering to deliver up Hannibal, which that hero prevented by a voluntary death. Prusias then restored Eumenes his provinces ; but became such a servile flatterer of the Romans that his subjects dethroned him, made his son Nicomedes king ; and, on his flight to Nicomedia, assassinated him, A.A.C. 149.

PRUSIAS, in geography, a town of Bithynia, anciently called Cios, from a cognominal river, and giving name to the Sinus Cianus of the Pro-pontis ; rebuilt by Prusias the son of Zela after having bee., destroyed by Philip the son of-De- metrius. It stood on the Sinus Cianus, at the foot of Mount Arganthonius. Of this place was Asclepiades, surnamed Prusicus, the famous physician.

PRUSSIA.

PRUSSIA, an extensive kingdom of modern Europe, is by some writers said to have derived that name (through Prussia proper) from the Pruzzi, a tribe of the ancient Scythians or Sarmatians. Others suppose it derived from the word Russia, united with the Sclavonic word po, signifying near. Po-Rwssia, easily modified into

Prussia, would thus imply the people or country near Russia. This kingdom occupies a great part of northern Germany, bordering on the

south of the Baltic ; and extends, with little interruption, from the confines of Lithuania to those of the Netherlands : being washed at one extremity by the Neimen, and at the other by

the Rhine a;i < J the Moselle. Or it is bounced by Russia and the Baltic on the north : Poland on the east ; the Austrian empire and the kingdom of Saxony on the south ; the Netherlands on the west ; and the kingdom of Hanover, with the duchy of Mecklenburg, on the north-west. From north-east to south-west it measures about 750 miles. Its breadth is very unequal, and in some places it does not exceed 100 miles : in others it is 300. In one place it reaches from the Baltic to the southern point of Silesia, below 50 of latitude. The extremity of the grand duchy of the Lower Rhine, which now forms a part of the kingdom, also stretches nearly to the 49.

According to Hoffmann, the whole extent of the Prussian dominions includes an area of

115,7.95 English square miles, or 74,108,800 British statute acres. The population, in 1817, was lu,53G,70; which is about ninety-one persons for each square mile. The following statement shows the rapid increase of this population: In 1688 it was stated at 1,500,000; ir 1713 it was 1,620,000 ; at the death of Frederick William, in 1740, it had increased to 2,200,000 ; and in 1786 it was 5,800,000. On the accession of his present majesty, in 1797, the population of his dominions was 8,700,000.

Part of the Prussian monarchy, situated with-in the confines of Germany, forms a portion of the Germanic confederation. The other part is entirely independent of that body. The whole is now divided into ten provinces, i, e.

I. GERMAN PROVINCES.

Provinces. Extent in Eng. sq. miles. Population.

I.Brandenburg,… . 17,227 . 1,297,795

2. Pomerania … .13,018 . 700,766

3. Silesia 16,560 . 1,992,598

4. Duchy of Saxony … 10,411 . 1,214,219

5. Westphalia …. 8,648 . 1,074,079

6. Duchy of Juliers, Cleves, and Berg 3,634 . 935,040

7. Grand duchy of the Lower Rhine 6312 . 972,724

II. PROVINCES OUT OF GERMANY

Provinces. Extent in Eng. sq. miles. Population.

S. Eastern Prussia . >,..,.* ###, . 16,146 . 919,580

9. Western Prussia … 10,695 . 581,971

10. Grand duchy of Posen . . 12,374 . 847,800

Chief towns. No. of inhabitant-:.

Berlin

Stettin

Breslau

Magdeburg

Munster

Cleves

Cologne

236,830 20,000 90,090 44,049 13,000 5,000 64,099

Chief towns. No. of inhabitants. Konigsberg . . 67,94 1

61,902

Dantzic Posen

15,000

Total (exclusive of lakes and waters) 1 15,025 10,536,572

A level and rather low surface is the predominant character of this country ; but Silesia, which is divided from Moravia and Bohemia by the Carpathians, is frequently diversified by the rapid interchange of hill and valley. The eastern side, however, participates with the grand duchy of Posen in all the properties of an extensive .plain, which, with the other regions between it and the Baltic, constitute the grand basin of the Oder. According to Busching, the principal detached hills in Silesia are Spiltzberg and Gratzberg. The countries approaching the Bal-tic .are level and marshy. Many parts of the Prussian landscape, particularly Prussia Proper, abound with forests, and in the districts of Silesia bordering on Hungary noble woods clpthe the range of hills *.hat forms the barrier. The south-western regions, in the vicinity of the Rhine, also* contain many forests, and morasses and pools abound in various parts.

Most of the large rivers which intersect these dominions originate in foreign sources. The Oder and the Pregel, indeed, may be considered as Prussian rivers: the former, rising in the mountains in the northern part of Moravia, soon after enters the southern parts of Silesia, flows through the middle of that province, and crosses Brandenburg and Pomerania, falling into the Grass-Haff, after a course of nearly 400

miles. The Pregel originates near the south-east extremity of Prussia, and passes by Konigsberg into the northern end of the Frische-Haff. The Spree, rising in Saxony, flows through Berlin, and enters the Elbe. The Vistula and the Memel

likewise complete their course by flowing through ??? this kingdom ; the former into the Frische-HaflT, and the latter into the Curische-Haff. The Netze and the Warta are two considerable rivers running from east to west, through the grand duchy of Posen, till they unite above Landsberg, and afterwards pour their waters into the Oder. The Weser, the Rhine, and the Moselle, with some of their tributary streams, intersect Western Prussia. The Netze and the Vistula are united by a canal, which enters the latter river near Brom-berg. Smaller canals intersect some parts of the kingdom : as one which connects the capital with the Oder on the east, and another with the Elbe on the west.

The lakes and pools of Prussia are so numerous as to add* considerably to the insalubrity of the climate. These are chiefly in the eastern regions, and are supposed to exceed 400 in num-ber : many are also spread over the surface of Pomerania, Brandenburg, and the western regions. One of the largest of these is the Spelding-See, in the south-east of Prussia Proper ; and, including its several creeks, spreads more than twenty English miles. Besides these, the kingdom of Prussia presents many singular Haffs or sheets of water, at the estuaries of some of its principal rivers. One of these, denominated the Grass-Haff, is situated in the north-west point of Pomerania, at the mouth of the Oder. A second, the Frische-Haff, extends from Elbing to Konigsberg, and is only separated from the Baltic, to which it is nearly parallel, by a narrow slip of land. It is about

seventy English miles in length, and from three to ten in breadth; but not of sufficient depth to admit ships of large burden. The bank which separates it from the Baltic is said to have been thrown up by storms about the end of the twelfth century. Another of these gulfs commences a few miles north-east of the last, stretches northward, and enters the sea opposite Memel. This is the Curische-Haff, and is

broadest at its southern extremity, but very narrow towards the opposite end. Its length is nearly sixty English miles, and its greatest breadth about thirty. The space between it and the sea is likewise very narrow. It is subject to frequent storms.

Prussia, amidst great variety of climate, must oe considered as on the whole a cold and damp country. The lakes, forests, and marshes, render some places particularly unhealthy; as, for instance, Prussia Proper, where the autumn is often deluged with rain, and the winter is very long. Silesia is the most pleasant and healthy province, but in the south-western parts, which border on the Carpathians, the winters are severe. Some of the most favored districts produce the grape, but not in perfection. Brandenburg and Pomerania are principally sandy and marshy plains. The south-western regions enjoy a more favorable temperature.

Silesia is one of the most fertile of the old provinces, and portions of the lately acquired territory on the Rhine possess a genial soil as well as climate, requiring skilful culture to ren-der them very productive. But in Brandenburg the soil i? sandy and very barren : and other central pants of the country are marshy and totally unfit for culture.

We have not met with so able a sketch of the general agricultural state of Prussia as is furnished by Mr. Jacob in the course of his first Report on the Foreign Trade in Corn. He carefully examined the maritime, which are also the principal agricultural provinces of Prussia, i. e. East and West Prussia and Pomerania.

They appear by the official accounts, which he quotes, to have exported 447,183 quarters of wheat, and 1,218,916 quarters of rye, barley, and oats, beyond their own growth, in the iast nine years, up to the end of 1824 ; exclusive of the year 1818, the returns of which, for East Prussia, are wanting, but which probably were 350,000 quarters of wheat, and 340,000 quarters of the other grains. It is possible, however, that some portion of this quantity may have been produced in the internal contiguous provinces of Posen, Silesia, and Brandenburg

Before the year 1807 the landed estates in Prussia, as in most other parts of Europe, were in the possession of large proprietors. Many of them could only be held by such as were of noble birth ; and the merchant, the manufacturer, or the artisan, however much money he might have accumulated, could not invest it in such land until he had obtained a patent of nobility. These restrictions were removed by the king, about the year 1807, when the French had overrun the country.

A tenantry in orr sense of the term was then, as it still is, almost unknown. The land was worked by a class of persons in sonic respects slaves ; and in most respects but

little removed fron that condition. In many cases they had an hereditary kind of right to some use of the land, such as to grow one crop of corn according to a prescribed course, whilst the lord had the right of pasture between the crops. These peasants were sold with the land, or descended to the heir, and were bound to perform certain labor or services for the lord. They could not, on the other hand, be dismissed from their holdings, nor had their superior any power over the property they might happen to be able to accumulate.

The conditions upon which the peasants held their portions of land were very various, some having a greater, and others a less share of the use of them ; some doing greater, and others less service for them. By a series of legislative measures, which were enacted from 1807 to 1811, the whole of the enslaved peasants have become converted into freemen and freeholders. In some cases the holdings have been equally divided, and the peasant has his moiety in perpetuity. In cases where the lord's claims for personal services were more extensive, the peasant had a smaller share in the land. In some instances, compensations in money were settled by compact between the lords and the peasants, soms-times by the payment of a fixed sum, or by a security on the land allotted in perpetuity to the peasant, for the payment of such sum. Sometimes the peasant retained the whole of the land he had before used, paying to the lord the value of that portion which might otherwise have been given up to him. The successive measures by which the peasants were raised to the rank of freemen were not received by all with equal readiness. The lords were compelled, but the peasants were allowed to decline compliance ; and, even to the present day, some few prefer the ancient mode of their holdings to that which the laws have allowed.

Although the foundation is laid for a new and better order of things, yet its effects on the agriculture of the country have not hitherto been fully realised. The abolition of personal services, and of hereditary ownership of such services, has been too recent for the full operation of the change of the parties from the relation of master and slave, to that of employer and employed, to produce the effect which is its natural tendency. It is obvious that all the operations of agriculture are still performed by the laborers with a listlessness and slovenly indolence which was natural to their former character, and which

their new condition has not yet had time to re-move.

The land in the three maritime provinces, as indeed in almost the whole of Prussia, may be considered as either in very large portions belonging to the nobility, or to the new class of proprietors ; or as very small portions, such asunder the ancient system were deemed sufficient for half the maintenance of the family of a peasant. There are but very few of that middle class of capitalists, resembling our farmers, who can hire land to that extent, which one able man can most advantageously manage, and, after stocking and working it, pay for the hire to the proprietor

With some f< w exceptions, and those very few.

no rent is paid ; but each occupier, whether a large or a small one, is his own landlord. The deviations from this general view are to be found, for the most part, on the banks of the great rivers, where meadows, either for the purpose of fattening cattle, or of saving hay, for the supply of large towns near the mouths of these rivers, are let to tenants for money rents.

The value of land generally is low, as may be inferred from the low price of produce, and of rents for what little is rented.

According to official documents it appears that the three maritime provinces of East Persia, West Prussia, and Pomerania, including in the latter the late Swedish territory, contains about” 25,500,000 acres, or more than half the extent of England. By an official account, made up in 1821, the stock of cattle appeared to be as follows, at the latter end of the year 1819; *viz.*

556,839 horses and colts. 1,171,434 oxen, cows, and calves. 2,049,801 sheep and lambs, ??? and

617,310 swine.

The lowest estimate of the stock of cattle in England gives three times this number of horses, and more than four times the number of cows and sheep, to the same extent of land ; and most of those who have calculated on the subject have carried the proportion of cattle to surface in England much higher.

From this deficient stock of the animals, from which manure is derived, it will naturally be inferred that the increase of grain must be very small. Mr. Jacob was satisfied, from his observations, confirmed by the opinion of intelligent natives, that much of the land in cultivation could not yield on an average more than three times as much corn as the seed that had been sown. The calculations made by the most intelligent statistical enquirers, and the most observing calculators, have not estimated the average increase of the four kinds of grain, *viz.* wheat, rye, barley, and oats, taken together, to be more than four times the seed.

Course of cultivation.-ˆ-fhe general course of cultivation is to fallow every third year, by ploughing three times, when designed for rye, or five times if intended for wheat, and allowing the land to rest without any crop during the whole of the year, from one autumn to the next. Most of the land is deemed to be unfit for the growth of wheat under any circumstances. Where it is deemed adapted to that grain, as much as can be manured from their scanty supply of that article is sown with wheat, .and the remainder of the fallow ground with rye. The portion which is destined for wheat, even in the best farms, is thus very small ; and, as on many none is sown, the whole of the land devoted to wheat does not amount to one-tenth of that on which rye is grown. Of late years *he proportion of rye to wheat has been increasing. The first is an article of domestic consumption and of universal demand ; the far greater number of the inhabitants eat only bread made from it from necessity, and those who can afford wheaten bread eat commonly that of rye from choice. At the tables of the first families, .both in Germany and Poland,

though wheaten bread was always to be seen, Mr. Jacob remarked that the natives scarcely ever tasted it.

‘ From the time,’ says this gentleman, ‘ I left the Netherlands, through Saxony, Prussia, Po-land, Austria, Bavaria, and Wurtemberg, till I entered France, I never saw, either in the bakers’ shops, in the hotels, or private houses, a loaf of wheaten bread. In every large town, small rolls, made of wheaten flour, could be purchased, and they were to be

seen at the tables at which foreigners were seated. In the small towns and villages only rye bread can be obtained ; and travellers commonly take in their carriages sufficient wheaten rolls to supply them from one large town to the next. Wheat is only used by the natives for making what our English bakers would call fancy bread, or in pastry and confec tionary.'

Although the increase of wheat is greater than that of rye, yet, as it absorbs all the manure of the farm, and requires the land to be ploughed twice more, it is now deemed to be the least profitable of the two crops by many of the farmers. As the rye' receives the full benefit of the fallow, its increase is greater than that of the spring crops which follow it.

Barley and oats are sown in the spring which follows the harvesting the wheat and rye, and these complete the course, which is again followed by a whole year's fallow. By this rotation of crops, the land bears corn only two years out of three ; and the crop of the last year scarcely produces three times the quantity of the seed that was sown.

' Like others,' says our able reporter, ' I was prevailed upon to pay the closest attention to the details and face of the land of the most skilful, the most affluent, and most productive proprietors. I visited several noblemen, whose knowledge of and attention to agriculture was fully equal to that of any men in this or any other country ; and, if the produce of the land was not equal to that raised by our best farmers, the difference must be attributed rather to the soil and climate than to any deficiency either of capital, of skill, or of assiduity. On such property the wheat sown was very insignificant, and the proportion of that grain to rye had gra-dnaily declined of late years. One nobleman, who farmed his estate of 26,000 acres, of which two-thirds was tillage, and one-third woodland, grew but a few acres of wheat, and of late had sold no corn of any kind. From the ports of England being shut against corn, he had turned his attention to the production of fine wool. On this estate there is a flock of 1 3,000 merino sheep, yielding on an average two pounds and a half of fine wool, the annual sales of which amount to one-half more than the value of the sheep. Through the five winter months the sheep are fed with corn, chiefly rye, at the rate of one pound per day, which is estimated to be equal to three pounds of hay. The proprietor calculated, that sheep thus kept yielded nearly as much more wool as, added to the benefit which the manure of the animals received from that kind of food, was equal to the price he should have received for the coin, if lie luul sold it; and

that tha profit on this system was the value of the whole of the hay, which would have been otherwise consumed. Instead of selling, he finds it more profitable to buy corn. On the same property, the extent of land planted with potatoes was upwards of 1500 morgens, or about 1000 acres, the chief part of which were used in the distillery, which seems aa indispensable adjunct to every well-managed farm. The calculation made there was that two bushels of potatoes yielded as much ardent spirit as one of barley ; and that the residuum, after extracting the spirit, was equal in alimentary power, for the draft bullocks, which are fed with it, to two-thirds of its value before the wort was extracted from it. By the process on this estate nine bushels of potatoes are mixed with one of malt, to draw the wort, which is afterwards distilled, so as to produce a spirit containing eighty per cent, of alcohol, in which state it pays a duty, much complained of, of sixpence per gallon. It is reduced, before it is sold, till it retains fifty per cent, of alcohol ; and the price charged to the retailers is about fourteen-pence per gallon.

‘ Another person, of the same rank, who had turned his attention to the improvement of his property, boasted that his corn land already yielded nearly six fold for the seed that was sown, and could be further increased. He, too, cultivated potatoes very extensively, and, by converting them into starch and treacle, made that land yield a profit which, had it been devoted to corn, would have produced a loss. He had tried to make sugar from potatoes, and found it not advantageous ; but he assured me that treacle paid him well, and he could afford to sell it 18s. per cwt., whilst that from the West Indies cost 24s. I could perceive no difference between the sweetness of this treacle and that from the tropics, but it has less consistency. A nobleman whom I had before known, to whose hospitality I arn much indebted, and whose estate I viewed in detail, took the trouble to furnish me with the course of cultivation he pursued on the property on which he resides. Though cultivated with care, and though fairly productive, I readily give credit to what he assured me, ‘‘‘ that the whole benefit which he derived from the estate of 6300 acres, in his joint capacity of landlord and cultivator, had not exceeded the amount for which he had sold the annual clip of the wool of his flock

of 4000 sheep.

‘ On the several other estates that I viewed, the recurrence of corn crops was equally distant ; the superior portion of land devoted to green crops, and pasture, the same ; and the stock of cattle bore nearly a like proportion. These, however, were exceptions, few in number and confined in extent, when compared with the general condition of the estates of the three provinces.’

The new proprietors, he afterwards states, who have been raised to that condition by the aboli-iion of the ancient feudal tenures, though they can scarcely ever want the bare necessaries of life, have very little beyond them. If they hap-pen to be both industrious and economical, their own labor, on the small portion of land which they possess, will supply them with potatoes and

some little bread corn, as well as provision for their two oxen. They all grow a small patch of flax, and some contrive to keep five or six sheep. If disposed to labor beyond the time required for their own land, there is a difficulty in obtaining employment ; and in the winter months, which are long and severely cold, no agricultural work can be performed. The flax and the wool spun in their cottages must supply the clothing of the family ; and the fat of the animals they kill must be converted into soap and candles. Meat of any kind can be rarely afforded to be eaten by such families ; and only the few who are more prosperous than their neighbours can keep a cow to supply them with milk. They consume nearly all they produce, aud are considered happy if they have a sufficient surplus for sale to meet the demands of a few shillings annually for the payment of their triflin& taxes and local assessments. It was the universal opinion of all with whom I had any conversation on the topic that this description of peasants were hitherto in a worse condition than under the old tenures ; and as this was attributed to the depression of agriculture, and the want of capital, and of incitement to the large occupiers to em-ploy their spare time, it was not considered to be an impeachment of the wisdom which had planned and executed their emancipation.’

Low state of agriculture. ??? In general the soil of the maritime provinces of Prussia is so light that it maybe easily ploughed with two oxen, and those of diminished size and no great strength. On the smaller portions of land a single cow is not un-frequently seen drawing the plough ; the latter guided by the owner, while the cow is led by his wife. The more tenacious soils, on the banks of the streams,

are commonly but of small extent. There is indeed a large portion of land on the Delta, formed by the separation of the Nogat from the Fistula, between Derschau and Marienburg, which, under a good system of management, would be highly productive, and which requires greater strength to plough. Some others, especially near Tilsit, are of less extent ; but the whole of them, if compared with the great extent of the surface of the country, are merely sufficient to form exceptions to the general classification which may be made of the soil. The various implements of husbandry are quite of as low a description as the working cattle. The ploughs are ill constructed, with very little iron in them. The harrows are made of wood, without any iron, even for the tines or teeth. The waggons are mere planks, laid on the frame loose, and resting against upright stakes, fixed into its sides. The cattle are attached to these implements by ropes, without leather in any part of the harness. The use of the roller is scarcely known ; and the clods, in preparing the fallow ground, are commonly broken to pieces by hand with wooden mallets. In sowing, the seed is carried in the apron, or the skirts of the frock of the man who scatters it on the ground.

The monied value of the live stock on the farms is low. The best flocks of Merino sheep, exclusive of the wool, are averaged to be worth about 6s. or 6s. Qd. per head. Cows are worth from 30s. to 65s. A dairy which Mr. Jacob saw.

of the best description, was let to a dairyman at :i6s. per year. The owner told him he valued them at 75s. per head, and thought the average weight of the butter from each, the calf being taken from the mother vyhen ten days old, was about 120 Ibs. each year. The variation in the price of cows is much greater than in that of sheep, according to their race, to the soil on which they are pastured, and to the distance from large towns requiring supplies of milk and butter. The price of hay varies, according to the situation and quality, from 14s. to 20s. the ton.

Taxes. ??? The general burdens of the state in Prussia are the subject of complaints among all classes ; and although they may

appear to us to amount to a very small sum, rated by the num-ber of persons, they must be considered heavy in a country so destitute of little other capital than that of land, now vastly depreciated in value. The whole taxes in Prussia amount to about 10s. per head ; but the effective value of money, in exchange for commodities, may be considered to be double what it is with us.

The land is divided into six classes, the rent of the lowest of which is estimated to be about Id. per acre, and that of the highest about 4s. an acre. On this amount the grund steuer or land tax is twenty-five per cent., and averages in the three maritime provinces somewhat less than 3d. per acre. The gross amount collected in the three provinces annually, according to Hassel, is about ►►265,000 sterling. The local taxes do not fall wholly on the land. That for the disabled soldiers, and the families of such as fell in the conflicts, is in part borne by the cities and towns, though the chief weight falls on the land. The same, in some measure, is the case respecting the tax for roads, bridges, schools, and the poor. These are various in different districts, so that it is impossible to form any general estimate of their amount. In some parts of the country 1'iey appear to be equal to the grund steuer ; in others higher; and in others they do not amount to one-tenth. Among the cultivators there is much complaint of the heavy tax on the distilleries.

The military service is extremely onerous throughout Prussia, as every young man is compelled to serve three years, from the age of twenty to twenty-four, as a soldier. This, though not precisely a tax, and not peculiar to the agricultural class, is a burden which perhaps presses as much on the productive industry of the country as the heavier taxes that are collected in other countries. To this must be added the quartering of the troops, who are billeted on private houses ; and, however well discipline may be maintained amongst them, must be a great annoyance, and in most cases an expense, which, though apparently trifling in amount, becomes weighty to those whose means of supporting it are small. In a country where four-fifths of the inhabitants subsist wholly by producing food, and depend for the conveniencies besides bare food on the price which they can obtain for their surplusˆ the low rate at which that surplus can be disposed of musˆ be felt and observed in every rank of society.

The scale of living in the country we are con-

sidering corresponds with the low prices of the objects in which their

labor is employed. The working class of the inhabitants, amounting in the maritime provinces to upwards of 1,000,000, including both those who work for daily wages and those who cultivate their own little portions of land, cannot be compared to any class of persons in England. This large description of the inhabitants live in dwellings provided with few conveniencies, on the lowest and coarsest food ; potatoes, or rye, or buck wheat, are their chief, and frequently their only food ; linen, with flax of their own growth, and wool, spun by their* own hands, both coarse and both worn as long as they will hold together, furnish their dress ; whilst an earthen pot that will bear fire forms one of the most valuable articles of their furniture. As fuel is abundant they are warmed more by close stoves than by the shelter of their wooden or mud houses covered by shingles, which admit the piercing cold of the severe weather through abundant crevices. If they have bees and a plot of chicory, their produce serves as a substitute for sugar and coffee ; but too often these must be sent to market to raise the scanty pittance which the tax-gatherer demands. Though the price of whiskey is low, yet the farm produce is still lower ; and neither that, nor the bad beer which is commonly brewed, can be afforded by the peasantry as a usual drink. In common seasons this description of people suffer much in the winter; but in times of scarcity, such as followed the disastrous harvest of 1816, their distress and their consequent mortality is increased.

Since the acquisition of the Rhenish provinces, wine is one of the most important of the Prussian products. They yield various kinds of a good quality ; and the average quantity is estimated at 100,000 hogsheads.

The Prussian horses differ little from those of the adjacent districts, but are generally considered as inferior to the Polish : for the Prussian cavalry are chiefly supplied from that country. The domestic cattle are likewise the same as in the other parts of Northern Germany. Silesia, Saxony, and the provinces near the Rhine, are the best adapted for supporting a superior breed of sheep ; and the increase of Merinos has greatly augmented both the quantity and quality of the wool yielded by these districts. M. Krug has lately given the following estimate of the live stock in the entire Prussian States ;

Horses .

Cattle .

Sheep and Lambs

Swine .

Goats

Asses and Mules

Bee-hives

1,661,800

5,252,820

11,230,000

2,640,000

181,000

9,680

521,000

The mine-als of Prussia are found chiefly in the high ground of the Westphalian and Rhenish provinces, particularly in the mountainous district of the Harz. Iron, copper, lead, vitriol, alum, saltpetre, are all found here, and, in a smaller degree, silver. Salt from brine springs, and coal, are abundant in some p.utsof Prussian

Saxony ; but the expense of conveyance prevents the use of the latter for fuel. Amber is found jn several parts of Prussia Proper. The whole annual value of mineral produce in the states is about ►►2,000,000.

Timber can be exported only from the vicinity of rivers or canals. Hops, in like manner, are confined to particular districts. Wesfphalia

has long been noted for its hams ; Pomerania for its poultry. Game is abundant in many parts. The fisheries ire confined to the shores of the Baltic, the lakes, and the mouths of the great rivers. The general use of coffee, and the notion that the import of large quantities of it from abroad was a disadvantage, induced certain individuals, so far back as the year 1780, to attempt to find a substitute for it. Several plants were tried ; among which the root of succory was most successful, and is now cultivated to a great extent to mix with toffee.

Weaving is the general employment of the lower orders in Silesia and Westphalia, long noted for their linens, also in no sraal1 degree, in Pomerania. Woollens are inade, more or less, in almost every town or large village : in some parts of Silesia, and of the province of the Lower Rhine, they are manufactured in great quantities. Cotton manufactures are of recent introduction, and are found chiefly near the Rhine, at Berlin, at Erfurt, at Elberfeld, and in particular quarters of Silesia. These and hardware are the only fabrics carried on in collective establishments ; the Prussian linens and woollens being both made by individuals in their cottages. Next in importance is the leather manufacture, then earthenware, glass, paper, tobacco, starch, po-tash, aid vitriol. Brewing is also a pursuit of considerable importance.

Possessing on the Baltic the ports of Dantzic, Konigsberg, Memel, and Stralsund, the commerce of Prussia has kept fully pace with her interior cultivation ; and the maintenance of neutrality during so many years of war between Britain and France (from 1795 to 1806) was highly favorable to it. Subsequently, however, it suffered greatly, particularly in 1810, 1811,1812, ard has recovered but slowly. The last century was in Prussia the era of monopolies : one company had the exclusive right of manufacturing and selling tobacco ; another were the sole im-porters of salt ; while a third had a contract to supply Potsdam with firewood. Another abuse, remedied only since 1818, was the tax levied on the introduction of merchandise from one province of the kingdom to another. A third, and one not within the control of the government, is the heavy transit duty levied by the Dutch and Hanoverian governments on foreign goods imported by the Rhine, on the Ems and the Weser. The result is, that the commerce of Prussia, though conducted under many advantages, both maritime and inland, is in an early stage. The value of goods annually exported differs under different circumstances, but the great article of linen is steady in amount. The whole may probably be averaged between ––7,000,000 and ––8,000,000 sterling, or about a seventh of the exports of England. They consist, in addition to liner, of woollens and hardware, corn, wool, timber, pitch, tar, pola*!:. lintseed, tobacco,

wax; horses, horned cattle, hogs, salt meat, and, from a few maritime towns, the produce of the fisheries. Distilled spirits are also, like corn, an article of export from the eastern part of the kingdom. The imports comprise coffee, cotton, sugar, tea, and other produce of the colonies ; the wines, silk, fruit, and bay-salt of the south of Europe, printed cotton, and the finer hardware, tin, furs, and dye-stuffs. The chief trade takes place with Great Britain, whither Prussia sends her corn, and takes in return manufactures and colonial goods.

The religion of the royal family, and of the majority of the population of Prussia, is the Calvinist; but Christians of all denominations are admitted, on an equal footing, to public employment? The year 1817, the 300th anniversary of the reformation, was remarkable for the union or the Calvinists and Lutherans of the Prussian dominions, and of some other parts of Germany, into one religious community, under the name of Evangelical Christians. The relative num-ber of the different creeds is thus stated,

Calv'nists and Lutherans . .6,600,000

Catholics 3,600,000

Jews 75,000

Baptists .... ◆◆◆' * i 14,OOO

Moravian brethren .... 7,000 Unitarians, Pietists, and members of

the Greek church ... 4,000

The elementary schools in Brandenburg, Sax-ony, and part of Prussia Proper, are numerous, and well conducted. Silesia has also much improved in the means of education since the middle of last century ; but in other parts of the kingdom, particularly where the majority are Catholics, the government has as yet been unable to introduce much reform. The universities are those of Berlin, Halle, Breslau, Konigsberg; and here, and at Dantzic, Magdeburg, and a number of other towns, are academies (under the name of gymnasia, colleges, or high schools), in which are taught the classics and mathematics, the modern languages, drawing, &c. There are also, in the large towns, schools of surgery and midwifery distinct from the universities ; but for the study of medicine, in a comprehensive Sense, Vienna is the great resort of all Germany. Frederick II. established an academy of sciences at Berlin, and associations of a similar nature, but on a smaller scale, are established in most of the great towns.

Frederick II. also introduced the liberty of the press to that degree which led to the production of a number of books disfigured by declamation and extravagance. Others were, however, of a different character, and full of useful informa-tior . The result was the formation of that spirit of freedom which has for sometime back caused great disquietude to the executive, and produced, in 819, the restrictive enactments of the congress of Carlsbad. It is said that some of the best writers in the Prussian dominions have been Jews.

Several of the kings of Prussia have been economists. The farther of Frederick II., with a revenue of only ►►l,200,000,'/ound means to leave at

his death, in 1740, a well replenished treasury and a large army. His successor, notwithstanding expensive wars and improvements, left in 1785 a treasure of ––7,000,000. This disappeared in the reign of his successor, and prior to the year 1785. In the twelve succeeding years of peace, the standing army was numerous and expensive, and the misfortunes of 1806, and the great exertions made in 1813, 1814, and 1515, have all borne so hard on the Prussian finances, as to have led to the creation of a debt amounting to above ––45,000,000 sterling. After all her late acquisitions, the revenue of Prussia is not above ––7 500,000 : but there is no paper currency. Mr. Jacob, in his View of Germany, gives the following state of the revenue, and the proportions contributed by the different provinces of the monarchy, in 1819, *viz.* –––

East Prussia 8,100,000

West Prussia …. 3,750,000

‘Posen 3,100,000

Brandenburg …. 9,000,000

Pomerania ….. 3,000,000

Silesia 13,500,000

Saxony 10,417,000

Westphalia 8,431,000

Juliers, Cleves, and Berg . . 8,670,000

Lower Rhine …. 7,000,000

Guldens, or 74,968,000

Sterling ––7,528,003

The Prussian army was a subject of admiration to all foreigners, during great part of the eighteenth century. On the termination of his dreadful struggle, in 1763, Frederick II. determined to cultivate peace, and to trust to the gradual operation of time for the reinstatement of his finances and army. Such, with little deviation, was the policy of Prussia during forty years ; and the number of disciplined men belonging to the army during this period was carried to more than 200,000, without involving a permanent expense of more than half the num-ber. The battle of Jena was followed by the surrender of successive corps and garrisons, to the number of more than 100,000 ; and the loss of the financial resources of the kingdom reduced for a time the Prussian military establishment to utter insignificance. The humiliating peace of Tilsit restricted the means of its reinstatement; but, in 1813, the national ardor burst forth, and the old soldiers repaired to their standards, in a manner that excited universal admiration. They soon asserted in Silesia, their superiority over the raw levies of the French, and maintained their character in a more advanced stage of operations in Saxony and Champagne. At Ligny, in 1815, the army was 80,000 strong: the total number of Prussian troops under arms that year exceeded 200,000. Since then, the confirmation of peace, the complaint of heavy taxation, and the reductions of neighbouring powers, have led to a partial diminution of the military establishment ; but it still exceeds 150,000. At Berlin, Breslau, Konigsberg, and at Stolpe in Pomerania are military schools: where every branch of the service, whether

cavalry, artillery, or infantiy, is diligently a*, tended to.

Prussia had formerly a representative body, under the name of states. While the powers and privileges of the nobility were also very extensive, comprising, until lately, the local administration of justice. By degrees, the power of the crown reduced that of the aristocracy ; and the sovereign fcund means to conduct the public business independent of the states. Such was the state of political affairs during the eighteenth century. But the diffusion of knowledge awakened the attention of the middling ranks to the existence of a number of abuses, and to the necessity of electing a representative body : this feeling and hope prompted the memorable exertions in 1813, 1814, and 1815, for the overthrow of Buonaparte ; and great disappointment has been experienced by the better classes of society at the successive delays and evasions of the court, which as yet has done little more than new

model the executive departments. Each circle or district has its council for the transaction of public business, viz the collection of the direct taxes, regulation of local traffic, and superintendance of police. In the second place, each government has an administrative board, charged with a similar superintendance ; while, atthelieaa of each of the ten provinces, is a high president, who, like the prefet of a French department, serves as a medium or connecting link between the province and the ministers. These are nearly on the same footing as in England and France. The orders of knighthood are four. The noblesse or gentry, comprising 20,000 families, were formerly exempt from part of the taxes, and considered as entitled to a preference in public appointments ; but the disasters of 1806 taught government the folly of these preferences, and led also to the abolition of exclusive privileges in regard to trades, &c.

The first proceedings of the law take place be-fore justices, or courts of limited jurisdiction, nominated chiefly by the king, but in certain districts by the mediatised princes, or ecclesiastical dignitaries of the quarter ; the second stage of jurisdiction is the Oberlandes gerichte, or courts in each government ; and the final appeal is to the supreme courts at Berlin, consisting of a high tribunal and commission. Ecclesiastical affairs are managed by provincial consistories or commissions : and medical police is, in like manner, subject to a provincial commission, Commercial affairs are superintended by a board of merchants in several of the towns, particularly at Berlin, Konigsberg, and Swinemunde. The highest court for fiscal questions is the exchequer, or high chamber of reckoning at Berlin.

The Prussians are generally allowed to be a brave and industrious people. They have more military parade, more show, and higher pretensions, than any other people of northern Germany. Berlin is considered as the Paris of that part of the continent ; but, in other parts of old Prussia, the people have a tinge of gloom in their character. Some writers have ascribed this feature to the nature of their government, the strict and unceasing vigilance of which, and the constant and uniform obedience of the people,

have, doubtless, done much towards superin-ducing such a disposition in the inhabitants.

HISTORY. ††† On the expulsion of the Christians from the Holy Land, by Saladin, a settlement was given to the Teutonic knights in Prussia by Conrade duke of Masovia, the competitor of Boleslaus V. for the crown of Poland. Their first residence in this country was Culm; to which territory they were confined by the conditions of the donation, excepting what they could conquer from their pagan neighbours, all of which the emperor granted to them in perpetuity. Encouraged by this grant, the knights conquered the greatest part of the country which now goes by the name of Prussia ; and became very troublesome to POLAND : see that article. The Teutonic order continued in Prussia till 1531. Their last grand-master was Albert marquis of Brandenburg, nephewˆ to Sigismund I., king of Poland. He was preferred to this dignity in hopes that his affinity to Sigismund might procure a restitution of some of the places which had been taken from the order during the former unsuccessful wars with Poland ; but Al-bert, instead of endeavouring to obtain any favor from his uncle, refused to do homage to him, began to assert his independence, and to recover the whole of Prussia and Pomerania by force of arms. But, being foiled in every attempt, he was forced to resign the grand-mastership, instead of which his uncle gave him Ducal Prussia. It was now the interest of the house of Brandenburg to assist in the expulsion of the fraternity ; and accordingly, being at last driven out of Prussia and Pomerania, they transferred their chapter to Mariendal in Franconia ; but in that, and other provinces of the empire where they settled, little more than the name of the order once so famous now remains.

The other most considerable part of his Prussian majesty's dominions is the electorate of Brandenburg. Like other parts of Germany, it was anciently possessed by barbarians, of whom no history can be given. These were subdued by Charlemagne; but, being on every occasion ready to revolt, in 927 Henry the Fowler established margraves, or governors of the frontiers. The first margrave of Brandenburg was Sigefroy, brother-in-law to Henry, under whose. administration the bishoprics of Brandenburg and Havel-berg were established by Otho I. From this Sigefroy, to the succession of the house of Ho-henzollern, from whom the present elector is descended, there are reckoned eight different families, who have been margraves of Brandenburg ; namely, the family of the Saxons, of Walbeek, Staden, Plenck, Anhalt, Bavaria, Luxemburg, and Misnia. The margraves of the four first races had

continual wars -with the Vandals and other barbarous people ; nor could their ravages be stopped till the reign of Albert, sur-najned the Bear, the first prince of the house of Anhalt. He was made margrave by the emperor Conrad III., and afterwards elector by Frederick Barbarossa, about A. D. 1100. Afterwards the king of the Vandals dying, without issue, left the Middle Marche to the elector, who was possessed of the old Marche, Upper Saxony, the country of Anhalt, and part of Lusace. In 1332 this line

became extinct, and the electorate devolved to the empire. It was then given by the emperor Lewis of Bavaria to his son Lewis, who was the first of the sixth race. Lewis the Roman succeeded his brother ; and, as he also died without children, he was succeeded by Otho, his third brother, who sold the electorate to the emperor Charles IV. for 200,000 florins of gold. Charles IV. gave the Marche to his son Wenceslaus, to whom Sigismund succeeded. This elector, being embarrassed in his circumstances, sold the new Marche to the knights of the Teutonic order. Josse succeeded Sigismund ; but, aspiring to the empire, sold the electorate to William duke of Misnia ; who, next year sold it again to the emperor Sigismund. In 1417 Frederick VI., of Nuremberg, received the investiture of Brandenburg at Constance from the emperor Sigismund ; who, in 1415, had made him elector, and arch-chamberlain of the empire.

This prince, the first of the family of Hohen-zollern, found himself possessed of the Old and Middle Marches, but the dukes of Pomerania had usurped the Marche Ukraine. Against them, therefore, the elector immediately declared war, and soon recovered the province. As the New Marche still continued in the hands of the Teutonic knights, the elector took possession of Saxony, then vacant by the death of Albert the last elector of the Anhalt line. But the emperor gave the investiture of Saxony to the duke of Misnia; upon which Frederick voluntarily resigned his acquisitions. This elector made a division of his possessions by will. His eldest son, because he had attempted to search for the philosopher’s stone, was left only Vogtland. The electorate was given to his second son Frederick ; Albert, surnamed Achilles, had Franconia ; and Frederick the fat had the old March’e ; but by his death it returned to the electorate. Frederick I. was succeeded by his son Frederick, surnamed Iron-tooth. He might have been surnamed the Magnanimous, for he refused two crowns, *viz.* that of Bohemia, offered him by the pope, and that of Poland by the people ; but Frederick declared he would not accept of it unless Casimir, brother to Ladislaus the late king, refused it. This induced the states of

Lower Lusatia to make a voluntary surrender of their country to him. But, Lusatia being a fief of Bohemia, the king of that country made war on the elector to recover it. But by a treaty, in 1462, he was obliged to yield the sovereignty of Corbus, Peits, Sommer-feld, &c. Frederick then, having redeemed the New Marche from the Teutonic order for 100,000 florins, and still further enlarged his dominions, resigned the sovereignty in 1469, to his brother Albert, surnamed Achilles. Albert was at this time fifty-seven years old. Most of the exploits, for which he had the sirname of Achilles, had been performed while he was burgrave of Nuremberg. He had defeated and taken prisoner Lewis duke of Bavaria. He had gained eight battles against the Nurembergers, in one of which he fought singly against sixteen men. He had taken Greissenburg, as Alexander took the capital of the Oxydracae, and Frederick III. gave him the direction of almost the whole empire. He had also gained the prize at seventeen tourna-220

ments. From this pfnod nothing important occurred till 1594, when, John Sigis~ >und of Brandenburg, having married Anne the only daughter of Albert duke of Prussia, that duchy was joined to the electorate, with which it has continued united ever since; and gave pretensions to the countries of Juliers, Berg, Cleves, Marck, Ra-vensburg, and Ravenstein, to the succession of which Anne was heiress.

Sigismund died in 1619, and was succeeded by his son George William ; during whose government the electorate suffered the most miserable calamities. At this time a war commenced between the Protestants and Catholics, which lasted thirty years. The former, although leagued together, were on the point of being utterly destroyed by the Imperialists under Tilly and Wal-lenstein, when Gustavus Adolphus turned the scale in their favor, and threatened the Catholic party with utter destruction. But by his death, at the battle of Lutzen, the fortune of war was once more changed. At last, however, peace was concluded ; and, in 1640, the elector died, and was succeeded by his son Frederick William. This young prince, though only twenty years of age at his succession, applied himself to repair the losses and devastations occasioned by the dreadful wars which had preceded. He received the investiture of Prussia personally from

the king of Poland, on condition of paying 100,000 florins annually, and not making truce or peace with the enemies of that crown. His envoy likewise received the investiture of the electorate from Ferdinand III. The elector now concluded a truce for twenty years with the Swedes, who evacuated the greatest part of his estates, concluded a treaty with the Hessians, who delivered up a part of the duchy of Cleves ; and obtained of the Hollanders the evacuation of other cities. In the mean time the powers of Europe began to be weary of a war which had continued for so long a time with such unrelenting fury. The conferences were opened at Osnaburg and Munster, in 1645. France demanded that Pomerania should be ceded to Sweden, as an in-demnification for the expenses which the war had cost Gustavus Adolphus ; but, though the empire and the elector refused to give up Pomerania, it was at last agreed to give up to the Swedes Hither Pomerania, with the isles of Ru-gen and Wollin, and some other cities ; in return for which, the bishoprics of Halberstadt, Minden, and Camin, were secularised in favor of the elector, and ceded to him, with the lordships of Hochenstein and Richenstein, and the reversion of the archbishopric of Magdeburg. Thus was the treaty of W7estphalia concluded in 1648, which so long served as a basis for all the possessions and rights of the German princes. The elector Tthen concluded a new treaty with the Swedes, for the regulation of limits, and for the acquittal of some debts ; and next year the elec- .orate, Pomerania, and the duchy of Cleves, were evacuated by the Swedes. Notwithstanding these treaties, however, the Swedes soon after invaded Pomerania, but were entirely defeated by the eiector near Fehrbellin ; with the loss of UOOO killed, and many prisoners. He pursued Ins victory, gained many advantages over the

Swedes, and took the cities of Stralsund and Gripswald. On this the Swedes, to oblige the elector to evacuate Pomerania, which he had al-most totally subdued, invadeu Prussia, from Li vonia, with 16,000 men; burm. the suburbs of Memel, and took Tilse and Insterburg. The elector, to oppose the invaders, left Berlin on the 10th of January, 1679, at the head of 9000 men. The Swedes retired at his approach, and were very much harassed by his troops. So successful indeed was Frederick on this occasion, that the Swedes lost almost one-half of their army. At last, having crossed the bay of Frische-haff and Courland on the ice, he arrived on the 19th of January, with his infantry, within three miles of Tilse, the head quarters of the Swedes. The same day his general, Trefenfeldt, defeated two Swedish regiments near Splitter; and the Swedes abandoned Tilse. They were pursued into Courland by general Gortz, and defeated with such

slaughter that scarce 3000 of them returned to Livonia. Yet, notwithstanding these victories, the elector, pressed by the victorious generals of France, Turenne and Conde, was obliged to make peace with the Swedes. The conditions were, that the treaty of Westphalia should serve for a basis; that the elector should have the property of the customs in all the ports of Further Pomerania, with the cities of Camin, Gortz, Griessenburg, and Wilden-bruck ; while he gave up to the Swedes all that he had conquered from them. Frederick William passed his last years in peace. His great qualities had rendered him respected by all Eu-rope, and had even reached Tartary, whence he received an embassy courting his friendship. From 1684 to 1686 he received into his dominions 20,000 Protestants who fled out of France, after the revocation of the edict of Nantz, and who introduced new arts and manufactures, that were of the utmost benefit to the country. By this, however, he disobliged Louis XI V., for which reason he concluded an alliance with the emperor ; and, having furnished him with 8000 troops against the Turks in Hungary, the emperor ceded to him the circle of Schwibus in Silesia. In 1688 the elector Frederick William died, and was succeeded by his son Frederick III. This elector was remarkably fond of show and ceremony ; and the great object of his ambition seemed to be the regal dignity. To ob-tain this, he joined with the emperor in the alliance against France in which he was engaged by our William III. He also yielded up the circle of Schwibus, which had been given to his predecessor; and, in 1700, obtained from the emperor that dignity which he had so earnestly desired. The chief terms on which it was obtained were, that he should never separate from the empire those provinces of his dominions which depended on it; that he should not, in the emperor's presence, demand any other marks of honor than those which he had hitherto enjoyed; and that he should maintain 6000 men in Italy at his own expense, in case the emperor should be obliged to make war on account of the house of Bourbon's claim to the crown of Spain. Frederick I. continued all his life in strict alliance with the emperor

Frederick I. died in the beginning of 1713, and was succeeded by

Frederick William I., in almost every thing the reverse of his father. His dispositions were altogether martial ; so that he applied himself entirely to the augmentation of the army. His whim was to have it composed of men above tne ordinary size, and his officers made no scruple of picking up such men wherever they could find them However he was never engaged in any martial enterprise of consequence ; but having put his army on the most respectable footing, and fdled his coffers, he put it in the power of his son to perform those exploits which astonished all Europe. Frequent bickerings took place between the prince and the emperor, for which the persecution of the Protestants by some of the Catholic states of the empire afforded a pretence. But when Frederick William died, in 1740, this enmity broke out in full force.

Frederick II., immediately on his accession, seized upon Silesia, of which his ancestors, he said, had been unjustly deprived. But it cost him dear; for the empress queen, having overcome her momentary difficulties, formed against him the most formidable combination that had hitherto been known in Europe. The treaty was hardly concluded, by which she reluctantly yielded up Silesia, with a revenue of ►►800,000 a year, before she entered into another with Rus-sia. This treaty, called the treaty of Petersburgh, was apparently only defensive; but six secret articles were appended, one of which was, that if the king of Prussia should attack the empress queen, or Russia, or Poland, it should be held as a breach of the treaty of Dresden : another contained a plan for a partition of Prussia. The empress queen concluded also a treaty with France, on the 1st of May, 1756. Frederick, hearing of these machinations, resolved to be beforehand with his enemies, and, entering Saxony with a considerable army, demanded a free passage for his troops, on the principle of the king of Poland's professed neutrality ; which being refused, he blockaded the Saxon camp at Pirnn. To oppose the two Saxon armies, then in Bohemia, he placed one army under M. Schwerin and another under the celebrated M. Keith ; and soon after joined the latter : on the first of December, 1756, he attacked and defeated the Austrian general. On this the king of Poland quitted his German dominions, and the Prussians took up their quarters in Saxony, where they seized the revenues and raised recruits : in the archives of Dresden Frederick discovered the originals of the secret articles above-mentioned. Mean lime he was put to the ban of the empire; the circles were ordered to furnish their contingents : the French sent a large body of troops und*r prince de Soubise ; the Austrians raised 100,000 men under prince Charles of Lorrain and M. Brown; and the Czavina sent 60,000 under M. Apraxin into Ducal Prussia, with a strong fleet to co-operate

with them in the Baltic. The king of Sweden and the duke of Mecklenburgh also joined the combination ; while Prussia had not a single ally, except about 35,000 Hanoverians under the duke of Cumberland ; who were soon forced to yield to a superior army

of the French. In spring 1757 the Prussian? entered Bohemia in three divisions; one undts the king; another under general Schwerin; and the third under the prince of Bevern, from Lusatia, where he defeated an army of 28,000 Austrians. The Austrians then detached another body of 20,000 men from their main army; whereupon Frederick cut off all communication between that detachment and the main body, and, having quickly joined his two generals, attacked the Austrians near Prague and totally defeated them, but lost the brave general Schwerin. The Austrian general, also, was mortally wounded ; and about 40,000 of his troops took refuge in Prague, which was immediately invested by the king. The garrison made a sally; but were repulsed, as were also 12,000 of the inhabitants, who wished to quit it. In this desperate situation, Leopold count Daun took the command of the remains of Brown's army, and having collected 60,000 of them retired to a strong post near the town. Frederick sent against them only 32,000 men, who were defeated at Colin on the 18th of June, after a bloody battle. The king then raised the siege of Prague, left Bohemia, and retired into Saxony.

Meantime the Russians, under Apraxin and Permor, were committing the greatest cruelties in Ducal .Prussia. The Austrians entered Silesia, penetrated to Breslau, and besieged Schweidnilz. Another body of them took Zittau. An army of 22,000 Swedes also entered Prussian Pomerania, took Anclam and Demmein, and plundered the country : while the French devastated Halbert-stadt and the Old Marche of Brandenburgh. General Haddick laid Berlin itself under contribution. The Prussian general, Lehwald, with 30,000 men, attacked 30,000 Russians, who were strongly intrenched at Norkitten, but, though they performed prodigies of valor, were obliged to retire. At last, on the 5th of November 1757, the king of Prussia met, at Rasbach, with the united army of his enemies under prince Saxe-Hilburghhausen and general Soubise, amounting to 50,000 men. His army did not amount to above half that number of men, but inspired with the most enthusiastic patriotism, and encouraged by the presence of their king, they completely defeated the Austrians, with the loss of 3000 men killed ; eight generals, 250 officers, and 6000 men, prisoners, while night alone prevented their total destruction. But in Silesia the Austrians, after a siege of sixteen days, reduced Schweidnitz, and took

the Prussian garrison of 4000 men prisoners. They next attacked the army under the prince of Bevern, encamped at Breslau, on the 22d of November; but were repulsed with dreadful slaughter. Yet the Prussians, soon after, rashly deserted their strong post, and in two days the prince of Bevern, re-connoitering carelessly, was taken prisoner; Breslau of course surrendered, and all was going to wreck, when the king, by a rapid march, passing through Thuringia, Misnia, and Lusatia, entered Silesia on the 2d of December, and was joined by the prince of Bevern's corps and the garrison of Schweidnitz. He now approached Breslau, where the Austrians, trusting to their numbers (amounting to 70,000) while the Prus-PRUSSIA.

sians were scarcely 36,000 men, left their strong catup and advanced to battle. The two armies met on the 5th of December near Luthen. Count Daun occupied a plain with some small eminences, and caused his troops to scatter a great number of trees in the road of the Prussians. But Frederick overcame all these difficulties : attacked the enemy with the utmost impetuosity, took the post, and a total rout ensued, wherein the Austrians lost 6000 killed, 15,000 prisoners, and 200 cannons. The consequences were great ; Breslau surrendered on the 29th of December with a garrison of 13,000 men : the Russians retreated out of Ducal Prussia : general Lehwald expelled the Swedes out of Prussian Pomerania,and took part of Swedish Pomerania; and the king: took ample vengeance on Mecklenburg. To add to his good fortune, the French were now so successfully opposed by the Hanoverians, under prince Ferdinand, that he had no more trouble from them.

On the 3d of April, 1758, Frederick laid siege to Schweidnitz, which surrendered on the 16th. He then disposed his forces in the best manner for the defence of his dominions, placing one army under count Dohna on the side of Pomerania ; another between Wohlan and Glogau, to cover Silesia ; and a third in Saxony under his brother prince Henry, consisting of thirty battalions and forty-five squadrons, to make head against the empire. All these armies were connected by posts. Frederick next, making a feint of invading Bohemia, suddenly burst into Moravia, overrun the whole country, and laid siege to Olmutz on the 27th of May. But general Daun, seizing a strong hold where he could not be attacked, obliged the king to raise the siege ; which he did very unexpectedly, on the 1st of July, and marched in two columns into Bohemia. After laying Konigsgratz and the adjacent districts under contribution, he marched rapidly against the Russians, who had been employed in besieging Custrin, since the 15th of

August. Frederick arrived on the 25th within sight of the Russians, after fifty-six days march : when they raised the siege and retired to Zorndorff. The battle of Zorndoff began at 9 A. M., and continued till 7 P. M., with various success and dreadful slaughter. At one period the Prussians had given way and fled before an army half defeated ; but the king, by a rapid and masterly movement, brought his cavalry to the centre, and, falling on the Russian foot, put them into such confusion that they fired on each other, plundered their own baggage, and got so much intoxicated that the fire of the Prussians had dreadful effect. In a word, their loss, besides a vast train of artillery, amounted to 21,529 men, the military chest, &c., while that of the Prussians did not exceed 2000. The remains of the Russian army retreated to Landsperg; and the king marched to the relief of prince Henry. Here he met with a severe check. Marshal Daun had his camp advantageously situated at Stolpen, while the right wing of the king extended to Hochkirchen, by which he had a communication with prince Henry and protected Brandenburg. In this critical situation Daun surprised the Prussian camp at 5 A. M. on the 14th of October. The brave marshal Keith, and prince Francis of Brunswick, were killed on the spot ; and though the king did his utmost to encouraae his troops, and the victory was long doubtful, the king at last ordered a retreat, which he conducted in good order : but this bloody battle cost him 7000 men, with a great number of cannon. The Austrians lost 5000. Frederick next reinforced his army from that of prince Henry, and hastened to raise the siege of Neiss, which had been invested on the 4th of October. On the 24th he came to Gorlitz, where he defeated a party of Austrians, with the loss of 800 men ; and soon after relieved Cosel. The king then hastened to the relief of Dresden, which was badly fortified and garrisoned by only 12,000 men. It had large suburbs, but these had been burnt by Schmettau, the governor, on the 10th of November, to prevent their being taken by the Austrians under Daun, as then all defence of the city would have been vain. Upon the king's approach all the Austrian armies retired into Bohemia. He now took up his winter quarters in Saxony, where he levied the most exorbitant contributions. On the 23d of February, 1759, general Wobersow marched with a body of Prussians into Poland, where he destroyed several large Russian magazines. The successes of prince Henry, in the interim, cleared Franconia of their enemies ; but now the Russians once more approached. The king disgraced count Dohna, for not opposing them with sufficient zeal, and appointed general Wedel in his place ; who, on the 23d of July, with an army of not quite 30,000 men, attacked 70,000 Russians most advantageously posted at Zulichau. The Prussians fought with their usual bravery, but were defeated with the loss of 4700 killed or taken, and 3000

wounded. The consequences were that the Russians took Crossen and Frankfort on the Oder; on which the king joined Wedel with a large body of troops, leaving the rest of his army in Saxony, under prince Henry. But as Daun had sent 12,000 horse and 8000 foot, under Laudohn, to assist the Russians, the king was unwilling to venture a battle. This, however, became unavoidable; he therefore, on the 12th of August, attacked the enemy in their strong entrenchments with a heavy cannonade, forced the entrenchments with great slaughter, and took seventy-two cannon. The Russians made a stand at Cunnersdorf, but were driven from it, and from post to post to the last redoubts. For above six hours the Prussians ‘ were wholly successful ; and victory was completely in their power, if the king had not lost it by his impetuosity. General Saltikoff assembled the remains of the Russian army at an advantageous post where prudence and policy would have allowed them to remain. But, the king attempting to drive them from it, his fatigued troops were overpowered, and the Austrians, who had not been much engaged all day, assisting them, the fortune of the day was turned so completely that nothing but the night coming on saved the Prussians from total destruction. Their loss amounted to 20,000 men. After this defeat Frederick exerted himself to procure artillery from Berlin ; he recalled general Kleist with

6000 men from Pomerania ; detached 6000 from his own army to - defend Saxony; and with the remainder put himself between the Russians and Great Glogan ; thus obliging them to return to Poland, notwithstanding their victory. New misfortunes, however, attended the Prussian arms. General Finch, who had been sent with 12,000 Prussians to oppose Daun, having ad-venced too far, was surrounded and obliged to surrender. General Durceke, and another body of Prussians, were posted at the Elbe, opposite Meissen ; but were suddenly attacked by the Austrians, and lost 3000 men.

The year 1760 began with very unfavorable auspices. Since October 1756 forty generals had been killed in the Prussian service, exclusive of those wounded or taken : and most of Frederick’s veteran soldiers had fallen in battle, and their places were filled up by raw inexperienced troops. At this time Laudohn drew general Fouquet and a body of above 11,000 Prussians into a situation from which they could not es-cape ; and on the 23rd of June attacked them at

midnight, near Landshut, when, though they made a brave defence, 4000 were killed, 7000 taken, with fifty-eight cannon, and not above 300 escaped. The victory, however, cost the Austrians 12,000 men in killed and wounded. Lau dohn immediately followed it up by the capture of Glatz. Thence he march sd against Breslau, and invested it ; but, the king of Prussia having laid siege to the town on the 13th of July, Daun appeared within three miles on the 19th, and on the 21st had supplied it with sixteen battalions, which obliged the king to raise the siege. Breslau was also bombarded by Laudohn, but the approach of prince Henry obliged him to retire on the 5th of August. Meantime the king advanced into Silesia with his usual rapidity. This, however, did not prevent the junction of the ar-mies under Laudohn, Daun, and Lacy, which formed a line of encampments, extending no less than thirty miles. They now laid a plan to at-tack and surround the king's army in the night; but Frederick, having heard or -suspected their intention, quitted his camp privately, and took an advantageous post on the road through which Laudohn was to pass. A thick fog in the morning hid the Prussians till Laudohn saw them with surprise regularly drawn up for battle. An obstinate conflict ensued, wherein Laudohn was completely defeated, with the loss of 10,000 killed, wounded, and prisoners ; eighty-two cannon, and twenty-three colors. This victory compelled count Czernichew, who was advancing with 24,000 Russians to join Daun, to repass the Oder ; and soon after the king joined prince Henry at New Marche, and, attacking a corps under general Breck, took two battalions of Croats prisoners. About this time too general Hulsen defeated the imperial army in Saxony. But a body of 15,000 Austrians, under generals Lacy and Brentano, with the whole of the imperialists in Saxony, began their march in concert with the Russians towards Berlin. These armies amounted to 40,000 men. The Prussian generals Hulsen and Werner could not raise above 16,000. Berlin was therefore abandoned to its fate ; which, by the powerful mediation of several

foreign ministers, was better than could have been expected. The city, however, was obliged to pay the sums of 800,000 guilders, and 1 ,900ˆ000 crowns : the magazines, arsenals, and foundries were destroyed ; all the military stores, cannon, and other arms seized, and the king's palace plundered. The combined armies left Berlin in four days, dreading the vengeance of Frederick ; and on their return took Leipsic, Torgau, Meissen, and Wirtemberg. A detachment of French under M. Stainville laid Halberstadt under contribution. In East Pomerania the Russians besieged Colberg ; in West Pomerania the Swedes advanced, while Laudohn besieged Cosel ; and Daun watched

the king with a superior army. The Prussians did not amount to 50,000: the Austrians exceeded 86,000. The king therefore resolved to make a desperate effort. On the 3rd of November, 1760, he divided his forces into three columns, with one of which general Hulsen took post in a wood. With the other two columns, under himself and general Ziethen, the king attacked general Daun about 2 P. M., who received him with the fire of 200 cannon. The Prussians were thrice led on to the attack, but as often repulsed with dreadful slaughter; till, at length, general -Zeithen with the right wing attacked the enemy in the rear, repulsed them, and got possession of some eminences. Encouraged by this success, the Prussians advanced, mastered the Austrian entrenchments, and made way for their cavalry, which broke in with irresistible fury and threw the Austrians into irreparable confusion. It was now about 9 P. M., both armies were in darkness, yet the firing continued, till M. Daun was wounded ; and the command devolved on count O'Donnel, who ordered a retreat. This important victory cost the Prussians 10,000 killed and wounded, and 3000 prisoners. The loss of the Austrians in killed and wounded is unknown ; but 8000 were taken prisoners, among whom were four generals and 212 other officers. The consequences of this victory were that the king recovered all Saxony, except Dresden ; the Russians raised the siege of Colberg, and retired into Poland ; Werner defeated the Swedes, and drove them totally out of W7est Pomerania; Laudohn raised the blockade of Cosel, and retired into Austrian Silesia; Daun placed his army in Dresden, and other strong posts south and west of it; and the imperial army retired into Franconia. But, though these successes retrieved the king's affairs, they exhausted his strength; and in 1761 he was unable to make any vigorous efforts. He continued strongly encamped at Schweidnitz, but was closely watched by Daun and Laudohn. He however defeated the designs of the Russians against Breslaw, by sending general Platen to destroy their maga zines, who at the same time .cut off 4000 of their troops. But they retook Colberg on the 3rd of December ; and, the king having drawn 4000 men out of Schweidnitz, Laudohn took it by a coup de main. In the midst of these adverse circumstances, the empress Elizabeth, Frederick's inveterate enemy, died on the 2d of January 1762, and was succeeded by Peter III. his warm friend. The consequences were asuspen-224

tion of hostilities on the 16th of March, and a treaty of peace and

alliance on the 5th of May. Sweden maae peace too on the 22d of May. The arms of Prussia were now attended every where with success. Prince Henry drove the imperialists from several important posts in Saxony, wh'ch secured all the Prussian possessions there. The king was joined by the Russians ir the end of June } after which he drove M. Daun to the extremity of Silesia. He then penetrated deep into Bohemia, where the Russians committed the same crnelties on their late allies, the Austrians, that they had long practised on the Prussians. But the deposition and murder of Peter III. occasioned a new change. Catharine II. was prejudiced against Frederick ; but his private letters to Peter, wherein he had advised him to treat her well, being discovered, excited her gratitude ; ard, though she ordered her troops home, she adhered to the peace, and restored all the places taken during the war. The success of Frederick, however, continued : he totally defeated Laudohn ; retook Schweidnitz, with a garrison of 8000 men ; and, on the 29th of October, entirely routed the Austrians at Freyberg, vast numbers being killed, and 6000 taken prisoners. This decisive victory produced the peace of Hubertsburg, whereby every thing was settled in statu quo. After this Frederick turned his attention to the arts of peace ; which was hardly interrupted in 1778 by a difference with Austria, about Bavaria. No other remarkable events occurred during his life, but what are already mentioned in our article FREDERICK. He died August 17th, 1786, and was succeeded by his nephew, Frederick William II

Frederick the Great had bequeathed the most effectual securities to his successor for the preservation of his dominions, that human wisdom could provide or devise; and the new monarch, with these advantages, was not wanting to himself. But his uncle's predilection for the French language and French literature was not grateful to his subjects. Frederick-William began his reign with declaring in council, Germans we are, and Germans I mean we shall continue ; giving directions at the same time, that their native language should resume its natural rank and station. This was a very popular measure, and it was followed by another still more so. Observing that he had marked with great concern the progress of impiety and profaueness on the one hand, and of enthusiasm on the other, he declared, that he would not have his subjects corrupted either by fanatics or atheists, and strictly prohibited all publications tending to excite a contempt or indifference for religion. An opportunity soon occurred, in which he was also thought to have displayed such talents in negociation and in military arrangements, as proclaimed, him in every respec* a worthy successor of his uncle. The States of Holland, who had long been jealous of the power of the Stadtholder, and inclined to a republican

government without any permanent chief, had gained such ascendancy in the states general, that in 1786 and 1787 they divested the. prince of Orange of all his prerogatives. They proceeded even to the seizure and imprisonment of the princess, sister to the king of Prussia ; and, depending upon support from France, tieated vith insolence every power connected with taem in Europe. The court of Berlin did not witness these proceedings without indignation ; and the king formed his plan for restoring the power of the Stadtholder with such secresy and prudence, that, in the space of one month, the duke of Brunswick led 18,000 Prussians to Amsterdam The monarch's subsequent conduct was not such as the beginning of his reign gave reason to ex-pect. See the article POLAND. He was, on the whole, a weak voluptuous character, who dissipated his treasures, and, in the part which he took against the French republic, by no means added to the reputation of the Prussian arms.

Frederick William III. came to the crown in 1797, and acted for several years in concurrence with France. In-1806, however, his eyes were opened to the usurpations of Buonaparte; war was determined on, and the army led to the western frontier, with as much confidence as it' the French troops had been those of Louis XV. The result was the fatal battle of Jena ; and the capture, in succession, of almost every corps of the Prussian army ; the loss of Berlin, and soon after of every province of the kingdom, except Prussia Proper. The peace of Tilsit restored little more than half the states of the monarchy ; and during six years all the calamities of foreign occupation and exaction were accumulated on this ill fated country. Hence the ardor witli which the Prussians rushed to arms in 1813; their courage under the first reverses of the campaign, and their perseverance in its prosecution. The peace of Pans in 1814, confirmed by that of 1815, gave them their reward ; for, while the Prussian monarch did not obtain the restoration of the same extent of territory in Poland, he had an ample equivalent in Saxony and on the Lower Rhine. Since that period the closest ties of the Prussian court have been with Russia arid the Netherlands.

PRUSSIA PROPER is a division of the Prussian dominions, having on the one side the northern frontier of Poland, on the other the Baltic. Its form, though irregular, approaches to an oblong, extending from east to west ; its superficial ex-tent is nearly equal to that of Scotland. It is in a great measure agricultural, and is composed of the provinces of East and West Prussia, divided formerly by the Vistula, but now by a line a few miles to the east of that river.

East or Ducal Prussia lies between 19►► 20' and 24►► 15' of E.

long., and 52►► 32’ and 56►► 3 of N. lat. It has a superficial extent of 15,OOC square miles, with 856,000 inhabitants, of whom about a third are of Poash or Lithuanian origin.

It is divided into the governments of Konigsberg and Gumbinnen, the latter being the part of Lithuania allotted to Prussia on the partition of Poland. Two-thirds of the population are descendants of Swiss, French, or German protestants. The soil is tolerably productive, but the climate severe, and the spring and autumn changeable and foggy. A great degree of moisture is produced by the lakes, marshes, and vast forests ; yet the winds that brush the surface of this country almost without interrupticn purify the air. The forests are said to cove-nearly

3,400,000 acres. They contain bears, elks, and other wild animals common in Poland ; they also produce kermes, or, as it is here termed, Russian cochineal. The lakes, great and small, are said to be fully 300 in number. All these abound in fish. Corn of all kinds, as well as flax and hemp, are largely cultivated ; hops and inadder are reared in particular districts ; and potatoes are much used. Hogs are also reared in great numbers, and bees, in a domestic as well as wild state, are in great abundance. The horses are both numerous and of good breeds. The royal studs are now united at the town of Stallupohen, and are said to form the largest establishment of the kind in Europe. Iron ore is found in many of the marshes. Linen, woollen, and in a small degree leather and glass, are the manufactures. The commercial towns are Konigsberg and Memel. But the most singular article in this country is amber, currently sold for about three or four shillings the 1 cwt.. The district in which it is obtained from the sea is about twenty-five miles in length. It is thrown on the coast or fished like coral, after strong

north and north-west winds. It is manufactured at .Dantzic, Konigsberg, and Stolpe, and serves to make trinkets, scented powder, a spirituous acid, and a fine varnishing oil. Part of it is exported to Denmark and Italy, whence, after undergoing a farther process of

manufacture, it is sent to Turkey. The quantity annually collected in Prussia is about 200 tons.

West Prussia has an area of about 10,000 square miles ; its population is 560,000. . The foreign settlers here are far less numerous than in East Prussia. It is divided into the governments of Dantzic and Marienwerder. The small part to the right of the Vistula is full of lakes; but along the banks of that river the soil is fertile ; in other parts it is sandy and oarren. The agricultural products are similar to those of East Prussia ; but the number of cattle is larger. Manufactures, with the exception of linen, are backward ; but this province contains the well known commercial towns of Dantzic and Elbing, and possesses in the Vistula a grand channel of communication between Poland and the sea.

PRUSSIC, CYANIC, or HYDROCYANIC, ACID, in chemistry, was first discovered in the pigment commonly called Prussian blue, by Bergman, and first obtained separate by Scheele. The compound formed by this acid with iron was long known and used before its nature was understood. Macquer first found that alkalies would decompose Prussian blue, by separating the iron from the principle with which it was combined, and which he supposed to be phlogiston. Hence the prussiate of potash was long called phlogisticated alkali. Bergman, however, ranked it among the acids ; and, as early as 1772, Sage announced that this animal acid, as he called it, formed with the alkalies neutral salts. About the same time Scheele instituted a series of experiments to obtain the acid separate, and to ascertain its constituent principles. These, according to him, are ammonia and carbon ; and Beithollet showed that its triple base contains hydrogen and azote, nearly, if not precisely, in the proportions that form ammonia. Berthollet could find no oxygen in any of his experiments for decomposing this acid.

Scheele's method of p.eparing this acid is this: ××× Mix four ounces of Prussian blue with two of red oxide of meicuiy prepared by nitric acid, and boil them in twelve ounces by weight of water, till the whole becomes colorless ; then filter and add to it one ounce of clean iron filings, and six or seven drachms of sulphuric acid. Draw off by distillation about a fourth of the liquor, which will be prussic acid, contaminated with a portion of sulphuric ; to render it pure, it may be rectified by ledistilling it from carbonate of lime.

This prussic acid has a strong smell of peach blossoms, or bitter

almonds ; its taste is at first sweetish, then acrid, hot, and virulent, and excites coughing ; it has a strong tendency to as-sume the form of gas ; it has been decomposed in a high temperature, and by the contact of VOL. XVIII

light, into carbonic acid, ammonia, and carburetted hydrogen. It does not completely neutralise alkalies, and is displaced even by the carbonic acid : it has no action upon metals, but unites with their oxides, and forms salts for the most part insoluble ; it likewise unites into triple salts with these oxides and alkalies.

The peculiar smell of the prussic acid could scarcely fail to suggest its affinity with the poison of the leaves of the lauro-cerasus ; and M. S-chrader of Berlin has ascertained the fact, that these do contain a principle capable of forming a blue precipitate with iron ; and that with lime they afford a test of the presence of iron equal to the prussiate of that earth. Dr. Bucholz of Wei-mar, and Mr. Roloff of Magdeburgn, confirm this fact. The prussic acid appears to come over in the distilled oil.

The following communication to the Royal Society, by Dr. Madden, of Dublin, contains the first proofs of the deleterious effects of this poison upon mankind : ‘ A very extraordinary accident,’ says the Dr., ‘ has discovered to us a most dangerous poison, which was never before known to be so, though it has been in frequent use among us. This is a simple water, distilled from the leaves of the lauro-cerasus ; the water is at first milky, but the oil which comes over, being in a good measure separated from the phlegm, by passing it through a flannel bag, it becomes as clear as common water. It happene’d that a servant, who lived with a person who sold great quantities of this water, got a bottle of it from her mistress, and gave it to a shopkeepeer in town, who she thought might oblige her customers with it. Accordingly, in r few days, she gave about two ounces to a woman called Mary Whaley, who drank about two-thirds and went away. In a quarter of an hour after Mary Whaley had drunk the water, she complained of a violent disorder in her stomach, soon after lost her speech, and died in about an

hour, without vomiting or purging, or any convulsion. The shopkeeper sent word to her sistei of what had happened, who came to her upon the message, and affirmed that it was not possible the cordial could have occasioned the death of the woman ; and, to convince her of it, she filled out about three ounces and drank it. She continued talking, about two minutes longer, and was so earnest to persuade her of the liquor's being inoffensive, that she drank about two spoonfuls more, but was hardly seated in her chair when she died without the least groan or convulsion. A similar instance, fresh in the memory of every one, is that of Mr. Montgomery, who took one ounce and a half of this acid in Newgate, the night previous to his intended execution for forgery.

The following is the method usually adopted by M. Vauquelin to obtain this acid pure : ††† To a quantity of powdered Prussian blue diffused, in boiling water, let red nitric oxide of mercury be added till the blue color is destroyed. Filter the liquid, and concentrate by evaporation till a pellicle appears. On cooling, crystals of prussiate of mercury will be formed. Dry these, and put them into a tubulated glass retort, to the beak of which is adapted a horizontal tube about two feet long, and half an inch wide at its middle part. The first third part of the tube next the retort is filled with small pieces of white marble, the two other thirds with fused muriate of lime. To the end of this tube is adapted a small receiver, which should be artificially refrigerated. Pour on the-crystals muriatic acid, in rather less quantity than is sufficient to saturate the oxide of mercury which formed them. Apply a very gentle heat to the retort. Prussic acid, named hydrocyanic by M. Gay Lussac, will be evolved in vapor, and will condense in the tube. Whatever muriatic acid may pass over with it will be abstracted by the marble, while the water will be absorbed by the muriate of lime. By means of a moderate heat applied to the tube, the prussic acid maybe made to pass successively along; and, after being left some time in contact with the muriate of lime, it maybe finally driven into the receiver. As the carbonic acid evolved from marble by the muriatic is apt to carry off some of the prussic acid, care should be taken to conduct the heat so as to prevent the distillation of this mineral acid.

Prussic acid thus obtained has the following properties : ††† It is a colorless liquid, possessing a strong odor; and the exhalation, if incautiously snuffed up the nostrils, may produce sickness or fainting. Its taste is cooling at first, then hot, asthenic in a high degree, and it is a most deadly poison. Its specific gravity at 44††††† is 0-7058; at 64†† it is 0-6969. It boils at 81 i††, and congeals at about 3††. It then crystallises regularly, and affects sometimes the fibrous form of

nitrate of ammonia. The cold which it produces, when reduced into vapor, even at the temperature of 68►►, is sufficient to congeal it.

M. Gay Lussac analysed this acid by introducing its vapor at the temperature of 86►► into a jar, two-thirds filled with oxygen, over warm mercury. When the temperature of the mer-

cury was reduced to that of the surroundin: atmosphere, a determinate volume of the gaseou; mixture was taken and washed in a solution oi potash, which abstracts the prussic acid, and leaves the oxygen. A known volume was introduced into a Volta's eudiometer, with platina wires, and an electric spark was passed across the gaseous mixture. The combustion is lively, and of a bluish-white color. A white prussic vapor is seen, and a diminution of volume takes place, which is ascertained by measuring the residue in a graduated tube. This, being washed with a solution of potash or barytes, suffers a new diminution from the absorption of carbonic acid gas formed. Lastly, the gas which the alkali has left is analysed over %vater by hydrogen, and it is ascertained to be a mixture of .nitrogen and oxygen.

The following are the results referred to prussic acid vapor : ►►►

Vapor 100

Diminution after combustion . 78-5

Carbonic acid gas produced . 101-0

Nitrogen 46‘0

Hydrogen …. 55-0

During the combustion a quantity of oxygen disappears, equal to about one and a quarter of the vapor employed.

M. Gay Lussac also analysed prussic acid by passing its vapor through an ignited porcelain tube containing a con of fine iron wire, which facilitates the decomposition of this vapor, as it does with ammonia. No trace ot oxygen could be found in prussic acid. And again, by transmitting the acid in vapor over ignited peroxide of copper in a porcelain tube, he came to the same conclusion : ►►►

One volume of the vapor of ca bon,

Half a volume of hydrogen,

Half a volume of nitrogen, condensed into one volume ; or in weight,
Carbon … 44-39

Nitrogen … 51-71

Hydrogen … 3*90

lOO’OO

This acid, when compared with the other animal products, is distinguished by the great quantity of nitrogen it contains, by its small quantity of hydrogen, and especially by the absence of oxygen.

When this acid is kept in well-closed vessels, even though no air be present, it is sometimes decomposed in less than an hour ; though it has been occasionally kept for fifteen days without alteration. It begins by assuming a reddish-brown color, wnich becomes deeper and deeper, and it gradually deposits a considerable carbonaceous matter, which gives a deep color to both water and acids, and emits a strong smell of ammonia. If the bottle containing the prussic acid be not hermetically sealed nothing remains but a dry charry mass, which gives no color to water. Thus a prussiate of ammonia is formed at the expense of a part of the acid, and an azoturet of carbon. When potassium is heated in prussic acid vapor mixed with hydrogen or

nitrogen, there is absorption without inflammation, and the metal is converted into a gray spongy substance, which melts, and assumes a yellow color.

Supposing the quantity of potassium employed capable of disengaging from water a volume of hydrogen equal to fifty parts, we find after the action of the potassium, 1. That the gaseous mixture has experienced a diminution of volume amounting to fifty parts : 2. On treating this mixture with potash, and analysing the residue by oxygen, that fifty

parts of hydrogen have been produced : 3. And consequently that the potas- ⬜⬜⬜⬜⬜⬜⬜’,um has absorbed 100 parts of prussic vapor ; for there is a diminution of fifty parts, which would obviously have been twice as great, had ⬜⬜⬜iot fifty parts of hydrogen been disengaged. The yellow matter is prussiate of potash ; properly a prusside of potassium, analogous in its formation to the chloride and iodide, when muriatic and hydriodic gases are made to act on potassium.

The base of prussic acid, thus divested of its acidifying hydrogen, should be called, agreeably to the same chemical analogy, prussine. M. Gay Lussac styles it cyanogen, because it is the principle which generates blue.

The prusside or cyanide of potassium gives a very alkaline solution in water, even when a

eat excess of hydrocyanic vapor has been pre-zai at its formation. In this respect it differs

am the chlorides and iodides of that metal, vhich are perfectly neutral.

On subjecting prussic acid to the action of a alvanic battery, much hydrogen is disengaged it the negative pole ; and prussine or cyanogen the positive, which remains dissolved in the acid. This compound should be regarded as a hypoprussic or prussous acid. Since potash by heat separates the hydrogen of the prussic acid, we see that in exposing a mixture of potash and animal matters to a high temperature, a true prusside or cyanide of potash is obtained, formerly called the Prussian or phlogisticated al-kali. When prusside of potassium is dissolved in water, prussiate of potash is produced, which is decomposed by-the acids without generating ammonia or carbonic acid; but, when prusside of potash dissolves in water, no change takes place ; and neither ammonia, carbonic acid, nor hydrocyanic vapor is given out, unless an acid be added. These are the characters which distinguish a metallic prusside or oyanide from the cyanide of an oxide.

From the experiments of M. Magendie it appears that the pure prussic acid is the most violent of all poisons. When a rod dipped into it is brought in contact with the tongue of an animal, death ensues before the rod can be withdrawn. If a bird be held a moment over the mouth of a phial containing this acid, it dies. A French professor of chemistry left by accident, on a table, a flask containing alcohol impregnated with prussic acid ; the servant, enticed by the agreeable flaror of the liquid, swallowed a small glass of it. In two minutes she dropt down

dead, as if struck with apoplexy.

‘ Scharinger, a professor at Vienna,’ says Orfila, ‘ prepared a pure and concentrated prus-

sic acid ; he spread a certain quantity of it on his naked arm, and died a little time thereafter.’

Dr. Magendie has, however, ventured to introduce its employment into medicine. He found it beneficial against phthisis and chronic catarrhs. His formula is the following : ###

Mix one part of the pure prussic or hydrocyanic acid of M. Gay Lussac wilh eight and a half of water by’ weight. To this mixture he gives the name of medicinal prussic acid.

Of this he takes 1 gros. or 59 gr. Troy. Distilled water 1 Ib. or 7560 grs. Pure sugar 1## ox. or 708| grs.

And, mixing the ingredients well together, he administers a table-spoonful every morning and evening. A well written report of the use of the prussic acid in certain diseases, by Dr. Magendie, was communicated by Dr. Granyille to Mr. Brande, and is inserted in the fourth volume of the Journal of Science.

For the following ingenious and accurate process, for preparing prussic acid for medicinal uses, we are indebted to Dr. Nimmo of Glasgow :###

‘Take of the ferroprussiate of pocash 100 grains, of the protosulphate of iron eighty-four grains and a half; dissolve them separately in four ounces of water, and mingle them. After allowing the precipitate of the protoprussiate of iron to settle, pour off the clear part, and add water to wash the sulphate of potash completely away. To the protoprussiate of iron, mixed with four ounces of pure water, add 1 35 grains of the peroxide of mercury, and boil the whole till the oxide is dissolved. With the above proportions of peroxide of mercury, the protoprussiate of iron is completely decomposed. The vessel being kept warm, the oxide of iron will fall to the bottom ; the clear part may be poured off to be filtered through paper, taking care to keep the funnel covered, so that crystals may not form in it by refrigeration. The residuum may be treated with more water, and thrown upon the filter, upon which warm water ought to be poured, until all the soluble part is washed away. By evaporation, and subsequent rest in a

cool place, 1 45 grains of crystals of the prusside or cyanide of mercury will be procured in quadrangular prisms.

‘ The following is a new process for obtaining the prussic acid : ❖❖❖ Take of the prusside of mercury in fine powder one ounce, diffuse it in two ounces of water, and to it, by slow degrees, add a solution of hydrosulphuret of barytes, made by decomposing sulphate of barytes with charcoal in the common way. Of the sulphuret of barytes take an ounce, boil it with six ounces of water, and filter it as hot as possible. Add this in small portions to the prusside of mercury, agitating the whole very well, and allowing sufficient time for the prusside to dissolve, while the decomposition is going on between it and the hydrosulphuret as it is added. Continue the addition of the hydrosulphuret so long as a dark precipitate of sulphuret of mercury falls down, and even allowing a small excess. Let the whole be thrown upon a filter, and kept warm till the fluid drops through ; add more water to wash the

sulphuret of memiry, until eight ounces of fluid have passed thro igh the filter, and it has become tasteless. To this fluid, which contains the prussiate of barytes, with a small excess of hydrosulphuret of barytes, add sulphuric acid, di- “uted with an equal weight of water, and allowed to become cold, so long as su’~’: ate of barytes falls down. The excess of sulphureted hydrogen will be removed by adding a sufficient portion of carbonate of lead, and agitating very well. The whole may now be put upon a filter, which must be closely covered ; the fluid which passes is the hydrocyanic or prussic acid, of what is called the medical standard strength.’

Dr. Nimmo finds that prussme of mercury is capable of dissolving the mercurial peroxide. Hence the above proportions must be strictly observed, if we wish to obtain this powerful medicine of uniform strength. He conceives, therefore, that the ferroprussiate of potash should be taken for the basis of the calculation.

Scheele found that prussic acid occasioned precipitates with only the following three metallic solutions; nitrates of silver, and mercury, and carbonate of silver. The first is white, the second black, the third green, becoming blue.

The prussiates or hydrocyanates are all alkaline, even when a great excess of acid is employed in their formation ; and they are decomposed by the weakest acids.

Tlie hydrocyanate of ammonia crystallises in cubes, in small prisms crossing each other, or in feathery crystals, like the leaves of a fern. Its volatility is such that at the temperature of 71 ►►►► it is capable of bearing a pressure of 17-72 inches of mercury ; and at 97►► its elasticity is equal to that of the atmosphere. Its great volatility prevented M. Gay Lussac from determining the proportion of its constituents. M. Gay Lussac considers Prussian blue as a hydrated prusside of iron, or a cyanide having water in combination ; and M. Vauquelin, in a memoir lately read before the Academy of Sciences, regards Prussian blue as a simple hydrocyanate ot iron. He finds that water impregnated with prussine can dissolve iron without changing it into Prussian blue, and without the disengagement of any hydrogen gas, while Prussian blue was left in the undissolved portion. But prussic acid converts iron or its oxide into Prussian blue without the help either of alkalis or acids. He farther lays it down as a general rule, that those metals which, like iron, decompose water at the ordinary temperature of the atmosphere, form hydrocyanates ; and that those metals which do not possess this power, as silver and quicksilver, form only cyanides.

Prussic acid is easily separated from potash by carbonic acid, but, when oxide of iron is added to the compound, a triple salt is formed, usually called ferroprussiate of potash. The me-thod of preparing this salt practised by Klaproth is one of the best. It is as follows : ►►► Prepare pure potass, by gradually projecting into a large crucible, heated to whiteness, a mixture of equal Darts of purified nitre and crystals of tartar; when the whole is injected, let it be kept at a white heat for half an hour, to burn off the coal. Detach the alkali thus obtained from the

crucible, reduce it to powder, spread it on ?. muffle, and expose it to a white heat for half an hour. Dissolve it in six times its weight of water, and filter the solution while warm. Pour this solution into a glass receiver, placed in a sand furnace, heated to 170►► or 180►►, and

then gradually add the best Prussian blue in powder, injecting new portions of it as the former becomes gray, and supplying water as fast as it evaporates; continue until the added portions are no longer discolored ; then increase the heat to 212►►, and continue for half an hour. Filter the ley thus obtained, and saturate it with sulphuric acid moderately diluted ; a precipitate will appear : when this ceases, filter off the whole, and wash the precipitate. Evaporate the filtered liquor to about one quarter and set it by to crystallise : after a few days, yellowish crystals of a cubic or quadrangular form will be found mixed with some sulphate ot potass and oxide of iron ; pick out the yellowish crystals, lay them on blotting paper, and redissolve them in four limes their weight of cold water, to exclude the sulphate of potass. Essay a few drops of this solution with a solution of barytes, to see whether it contains any sulphuric acid: filter off the solution from the sulphat of barytes, which will have precipitated, and set it by to crystallise for a few days, that the barytes, if any should remain, may be precipitated. If the crystals now obtained be of a pale yellow color, and disco\er no bluish streaks, when sprinkled over with muriatic acid, they are fit for use, and should be kept in a well stopped bottle, which, to preserve them from the air, should be filled with alcohol, as they are insoluble in it.

M. Gay Lussac prepared a hydrocyanate of potash and silver, which was quite neutral, and which crystallised in hexagonal plates. The solution of these crystals precipitates salts of iron and copper, white. Muriate of ammonia does not render it turbid; but muriatic acid, by disengaging hydrocyanic acid, precipitates chloride of silver. Sulphureted hydrogen produces in it an analogous change. This compound, says M. Gay Lussac, is evidently the triple prussiate of potash and silver ; and its formation ought to be analogous to that of the other triple hydrocyanates. * And as we cannot doubt,’ adds he, ‘ that hydrocyanate of potash and silver is in reality, from the mode of its formation, a compound of cyanide of silver and hydrocyanate of potash, I conceive that the hydrocyanate of potash and iron is likewise a compound of neutral hydrocyanate of potash, and subcyanide of iron, which 1 believe to be combined with hydrocyanic acid in the white precipitate. We may obtain it perfectly neutral, and then it does not decompose alum ; but the hydrocyanate of potash, which is always alkaline, produces in it a light and flocculent precipitate of alumina. To the same ex-cess of alkali we must ascribe the ochry color of the precipitates which hydrocyanate of potash forms with the persalts of iron.’

M. Vauquelin has given the following very elegant process for obtaining pure hydrocyanic or prussic acid, from the cyanide or

prusside of mercury :-

Considering that mercury 1ms a strong attrac-

tion for sulphur, and that prussine unites easily to hydrogen, when presented in the proper state, he thought that sulphnreted hydrogen might be employed for decomposing dry cyanide (prusside) of mercury. He operated in the following way : He made a current of sulphureted hydrogen gas, disengaged slowly from a mixture of sulphuret of iron, and very dilute sulphuric acid, pass slowly through a glass tube slightly heated, filled with the mercurial prusside, and commu-cating with a receiver, cooled by a mixture of salt and snow.

As soon as the sulphureted hydrogen came in contact with the mercurial salt, this last substance blackened, and this effect gradually extended to the farthest extremity of the apparatus. During this time no trace of sulphureted hydrogen could be perceived at the mouth of a tube proceeding from the receiver. As soon as the odor of this gas began to be perceived, the process was stopped ; and the tube was heated in order io drive over the acid which might still remain in it. The apparatus being unluted, he found in the receiver a colorless fluid, which possessed all the known properties of prussic acid. It amounted to nearly the fifth part of the prusside of mercury employed.

This process is easier, and furnishes more acid, than M. Gay Lussac's, by means of muriatic acid. He repeated it several times, and always successfully. It is necessary merely to take care to stop the process before the odor of the sulphureted hydrogen begins to be perceived, otherwise the hydrocyanic acid will be mixed with it. However, we may avoid this inconvenience by placing a little carbonate of lead at the extremity of the tube. As absolute hydrocyanic acid is required only for chemical researches, and as it cannot be employed in medicine, it may be worth while, says M. Vauquelin, to bring to the recollection of apothecaries a process of M. Proust, which has perhaps escaped their attention. It consists in passing a current of sulphureted

hydrogen gas through a cold saturated solution of prussiate of mercury in water, till the liquid contains an excess of it ; to put the mixture into a bottle, in order to agitate it from time to time; and finally, to filter it.

If this prussic acid, as almost always happens, contains traces of sulphureted hydrogen, agitate it with a little carbonate of lead, and filter it again. By this process we may obtain hydrocyanic acid in a much greater degree of concentration than is necessary for medicine. It has the advantage over the dry prussic acid, of being capable of being preserved a long time, always taking care to keep it as much as possible from the contact of air and heat. Dr. Nimmo's directions for preparing the prusside of mercury ouˆht to be attended to.

PRUSSINE, or PRUSSIC GAS, in chemistry, the cyanogen of M. Gay Lussac, is a peculiar gas obtained by decomposing prusside of mercury by heat. The term cyanogen signifies the produce of blue ; but as the production of blue is never the result of the direct action of this substance on any other single body, but an indirect and unexplained operation of it in conjunction with iron, hydrogen, and oxygen, the

same reason which leads to the term cyanogen, would warrant us in calling it leucogen, erythro-gen, or chlorogen ; for it produces, white, red, or green, with other metals, as it produces blue with iron.

By digesting red oxide of mercury with prussian blue and hot water, we obtain a prusside perfectly neutral, which crystallises in long four-sided prisms, truncated obliquely. By repeated solutions and crystallisations, we may free it from a small portion of adhering iron. But M. Gay Lussac prefers boiling it with red oxide of mercury, which completely precipitates the oxide of iron, and he then saturates the excess of oxide of mercury with a little prussic acid, or a little muriatic acid. The prusside thus formed is decomposed by heat to obtain the radical. For common experiments we may dispense with these precautions.

When this cyanide is boilecl, with red oxide of mercury, it dissolves a considerable quantity of the oxide, becomes alkaline, crystallises no longer in prisms, but in small scales, and its solubility in water appears a little increased. When evaporated to dryness, it is very easily charred, which obliges us to employ a water bath. This compound was observed by M. Proust. When decomposed by heat, it gives abundance of prus ††† sine, but mixed with carbonic acid

gas. Proust says that it yields ammonia, oil in considerable abundance, carbonic acid, azote, and oxide of carbon. He employed a moist prusside. JIad it been dry, the discovery of prussine could hardly have escaped him. The prusside of mercury, when neutral and quite dry, gives nothing but prussine ; when moist, it furnishes only carbonic acid, ammonia, and a great deal of prussic acid vapor. When we employ the prusside made with excess of peroxide, the same products are obtained, but in different proportions, alongwith azote, and a brown liquid, which Proust took for an oil, though it is not one in reality. Hence, to obtain pure prussine, we must employ the neutral prusside in a state of perfect dryness. The other mercurial compound is not, however, simply a sub-prusside. It is a comoound of oxide of mercury and the prusside.

When the simple mercurial prusside is exposed to heat in a small glass retort, or tube, shut at one extremity, it soon begins to blacken. It appears to melt like an animal matter, and then the prussine is disengaged in abundance. This gas is pure from the beginning of the process to the end, provided always that the heat be not very high ; for, if it were sufficiently intense to melt the glass, a little azote would be evolved. Mercury is volatilised with a considerable quantity of prusside, and there remains a charry matter of the color of soot, and as light as lampblack. The prusside of silver gives out likewise prussine when heated ; but the mercurial prusside is preferable to every other.

Prussine or cyanogen is a permanently elastic fluid. Its smell, which it is impossible to describe, is very strong and penetrating. Its solution in water has a very sharp taste. The gas burns with a bluish flame mixed with purple. Its specific gravity, compared to that of air, is 1-8064. M. Gay Lussac obtained it by weigh-

ing at the same tempeiature, and under the same pressure, a balloon of .about two litres and a half (152-56 cubic inches), in which the vacuum was made to the same degree, and alternately full of air and prussine. 100 cubic inches weigh therefore 55-1295 grains.

Prussine is capable of sustaining a pretty high heat, without being decomposed. Water, with which M. Gay Lussac agitated it for some minutes, at the temperature of 68□□, absorbed about four times and a half its volume. Pure alcohol absorbs twenty-three times its volume. Sulphuric ether and oil of turpentine dissolve at least as much as water. Tincture of litmus is reddened by prussine. On heating the solution the gas is disengaged, mixed with a little carbonic acid, and the blue color of the litmus is restored.. The carbonic acid proceeds no doubt from the decomposition of a small quantity of prussine and wate□□. It deprives the red sulphate of manganese of its color, a property which prussic acid does not possess. This is a proof that its elements have more mobility than those of the acid. In the dry way it separates the carbonic acid from the carbonates.

Phosphorus, sulphur, and iodine, may be sublimed by the heat of a spirit-lamp in prussine, without occasioning any change on it. Its mixture with hydrogen was not altered by the same temperature, or bypassing electrical sparks through it. Copper and gold do not combine with it ; but iron, when heated almost to whiteness, decomposes it in part. The metal is covered with a slight coating of charcoal, and becomes brittle. The undecomposed portion of the gas is mixed with azote (contains free azote). In one trial the azote constituted 0444 of the mixture, but in general it was less. Platinum, which had been placed beside the iron, did not undergo any alteration. Neither its surface, nor that of the tube, was covered with charcoal like the iron.

In the cold, potassium acts but slowly on prussine, because a crust is formed on its surface, which presents an obstacle to the mutual action. On applying the spirit-lamp, the potassium becomes speedily incandescent ; the absorption of the gas begins, the inflamed disc gradually diminishes, and when it disappears entirely, which takes place in a few seconds, the absorption is likewiseatan end. Supposing we employ a quantity of potassium that would disengage fifty parts of hydrogen from water, we find that from forty-eight to fifty parts of gas have disappeared. On treating the residue with potash, there usually remains four or five parts of hydrogen, sometimes ten or twelve. M. Gay Lussac made a great number of experiments to discover the origin of this gas. He thinks that it is derived from the water which the prusside of mercury contains when it has not been sufficiently dried. Prussic acid vapor is then produced, which, when decomposed by the potassium, leaves half its volume of hydrogen. Potassium, therefore, absorbs a volume of pure prussine, equal to that ot the hydrogen which it would disengage from water.

The compound of prussine and potassium is yellowish. It dissolves in \aier without effer-

vescence, and the solution is strongly alkaline. Its taste is the same as that of hydrocyanate or simple prussiate of potash, of which it po►►sesses all the properties.

The gas being very inflammable, M, Gay Lus-sac exploded it in Volta's eudiometer, with about twice and a half its volume of oxygen. The detonation is very strong ; and the flame is bluish, like that of sulphur burning in oxygen.

It is now obvious that the action of potassium on prussine agrees with its action on prussic acid. We have seen that it absorbs fifty parts of the first, and likewise that it absorbs 100 parts of the second, from which it separates fifty parts of hydrogen. But 100 parts of prussic acid vapor, minus fifty parts of hydrogen, amount exactly to fifty parts prussine. Hence the two results agree perfectly, and the two compounds obtained ought to be identical, which agrees precisely with experiment.

The analysis of prussine being of great importance, M. Gay Lussac attempted it likewise by other methods. Having put prusside of mercury into the bottom of a glass tube, he covered it with brown oxide of copper, and then raised the heat to a dull red. On heating gradually the part of the tube containing the prusside, the prussine was gradually disengaged, and passed through the oxide, which it reduced completely to the metallic state. On washing the gaseous products with aqueous potash, at different parts of the process, he obtained only from 0-19 to 0-30 of azote, instead of 0-33, which ought to have remained according to the preceding analysis. Presuming that some nitrous compound had been formed, he repeated the experiment, covering the oxide with a column of copper filings, which be kept at the same temperature as the oxide. With this new arrangement, the results were very singular ; for the smallest quantity of azote which he obtained during the whole course of the experiment was 32'7 for 100 of gas, and the greatest was 34-4. The mean of all the trials was, ►►►

Azote …. 33-6 or nearly 1 Carbonic acid . 66-4 2

A result which shows clearly that prussine contains two volumes of the vapor of carbon, and one volume of azote.

In another experiment, instead of passing the prussine through the oxide of copper, he made a mixture of one part of the prusside of mercury, and ten parts of the red oxide, and after introducing it into a glass tube, close at one end, he covered it with copper filings, which he raised first to a red heat. On heating the mixture successively, the decomposition went on with the greatest facility. The proportions of the gaseous mixture were less regular than in the preceding experiment. Their mean was, ###

Azote …. 34-6 instead of 33-3 Carbonic acid ### 65-4 66-6

In another experiment he obtained, ###

Azote 32-2

Carbonic acid … 67-8 Now the mean of these results gives, ###

Azote 33-4

Carbonic acid . . - 66‘6

P R U S S I N ##.

No sensible quantity 01 water seemed to be formed during these analyses. This shows farther that what has been called a prussiate of mercury is really a prusside of that metal.

When a pure solution of potash is introduced into this gas, the absorption is rapid. If the al-kali be not too concentrated, and be not quite saturated, it is scarcely tinged of a lemon-yellow color. But, if the prussine be in excess, we ob-tain a brown solution, apparently carbonaceous. On pouring potash combined with prussine into a saline solution of black oxide of iron, and adding an acid, we obtain prussian blue. It would appear from this phenomenon that the prussine is decomposed the instant that it combines with the potash : but this conclusion is premature ; for, when this body is really decomposed by means of an alkaline solution, carbonic acid is always produced, together with prussic acid and ammonia. But on pouring barytes into a

solution of prussine in potash, no precipitate takes place, which shows that no carbonic acid gas is present. On adding an excess of quicklime, no trace of ammonia is perceptible. Since, then, no carbonic acid and ammonia have been formed, water has not been decomposed, and consequently no prussic acid evolved. How then comes the solution of prussine in potash to produce prussian blue, with a solution of iron and acid ? The following is M. Gay Lussac's ingenious solution of this difficulty : ###

The instant an acid is poured into the solution of prussine in potash, a strong effervescence of carbonic acid is produced, and at the same time a strong smell of prussic acid becomes perceptible. Ammonia is likewise formed, which remains combined with the acid employed, and which may be rendered very sensible to the smell by the addition of quicklime. Since, therefore, we are obliged to add an acid in order to form prussian blue, its formation occasions no farther difficulty.

Prussine rapidly decomposes the carbonates at a dull red heat, and prussides of the oxides are obtained. When passed through sulphuret of barytes, it combines without disengaging the sulphur, and renders it very fusible, and of a brownish black color. When put into water we obtain a colorless solution, but which gives a deep brown (maroon) color to muriate of iron. What does not dissolve contains a good deal of sulphate, which is doubtless formed during the preparation of the sulphuret of barytes.

On dissolving prussine in the sulphureted hydrosulphuret of barytes, sulphur is precipitated, which is again dissolved when the liquid is saturated with prussine, and we obtain a solution having a very deep brown maroon color. This gas does not decompose sulphnret of silver, nor of potash.

Prussine and sulphureted hydrogen combine slowly with each other. A yellow substance is obtained in fine needles, which dissolves in water, does not precipitate nitrate of lead, produces no prussian blue, and is composed of one volume prussine (cyanogen), and one volume and a half of sulphureted hydrogen. .

Ammoniacal gas and prussine begin to act on each other whenever they come in contact ; but

some hours are requisite to render the effect complete. We perceive a<t first a white thick vapor, which soon disappears. The diminution

of volume is considerable, and the glass in which the mixture is made becomes opaque, its inside being covered with a solid brown matter. On mixing ninety parts of prussine, and 227 ammonia, they combined nearly in the proportion of one to one and a half. This compound gives a dark orange-brown color to water, but dissolves only in a very small proportion. The liquid produces no prussian blue with the salts of iron. When prussic acid is exposed to the action ot a voltaic battery of twenty pairs of plates, much hydrogen gas is disengaged at the negative pole, while nothing appears at the positive pole. It is because -there is evolved at that pole prussine, which remains dissolved in the acid.

A portion of pure cyanide of mercury was heated by Faraday till perfectly dry, and then enclosed in a green glass tube, and, being collected to one end, was decomposed by heat, whilst the other end was cooled. The cyanogen soon appeared as a liquid, limpid, colorless, and very fluid ; not altering its state at 0►► Fahr. A tube containing it being opened in the air, the expansion within did not seem to be very great ; and the liquid passed with comparative slowness into the state of vapor, producing great cold. The vapor collected over mercury proved to be pure cyanogen. Liquid cyanogen, evolved in contact with moisture, does not mix with the water, but floats over it. In a few days the water and cyanogen react on each other, and carbonaceous matter is evolved. Faraday, Phil. Trans. 1823.

In the first volume of the Journal of Science and the Arts, Sir H. Davy has stated some interesting particulars relative to prussine. By heating prusside of mercury in muriatic acid gas, he obtained pure liquid prussic acid, and corrosive sublimate. By heating iodine, sulphui and phosphorus, in contact with prusside ol mercury, compounds of these bodies with prussine or cyanogen may be formed. That of io-dine is a very curious body. It is volatile at a very moderate heat, and on cooling collects in flocculi, adhering together like oxide of zinc formed by combustion. It has a pungent smell, and very acrid taste.

PRUTH, a considerable river of Europe, which rises in the palatinate of Marmarosch, Hungary, and forms the boundary between the Russian and Turkish dominions in Moldavia, falling into the Danube below Galatz. It is remarkable for the perilous situation of the Russian army under Peter I. in 171 if, from which it was extricated by a treaty with the Turkish vizier.

PRY, v. n. Perhaps of Span, perojar, to observe. To peep narrowly ; inspect curiously or impertinently.

He that prieth in at her windows, shall also hearken at her doors. Ecclus. xiv. 23.

I can counterfeit the deep tragedian,

Speak, and look back, and pry on every side,

Intending deep suspicion.

Skakspeare. Richard III. Nor need we with a prying eye survey

The distant skies to find the milky way. Creech,

I waked, and, looking round the bow'r, Searched ev'ry tree, and pry'd on every flow'r, If any where by chance 1 might espy The rural poet of the melody. Dryden.

We have naturally a curiosity to be prying and searching into forbidden secrets. L' Estrange.

All these I frankly own without denying ; But where has this Praxiteles been prying 1

Addison.

PRYNNE (William), an English lawyer, who greatly distinguished himself in the civil commotions under Charles I., was born at Swains-wick, in Somersetshire, in 1600. His Histrio-mastix. written against stage plays in 1632, containing some reflections that offended the court, he was sentenced by the star-chamber to pay a fine of ►►5000, to stand in the pillory, to lose his ears, and to perpetual imprisonment. Dur-ing his confinement, he wrote several more books; particularly, in 1 637, one entitled News from Ipswich, which

reflecting severely on the bishops, he was again sentenced by the star-chamber to another fine of ►►5000, to lose the remainder of his ears in the pillory, to be branded on both cheeks with S: L. for seditious libeller, and to be perpetually imprisoned in Caernarvon castle. Nothing however could intimidate the stubborn spirit of Prynne, he continued to write, and in 1640, being set at liberty by the house of commons, he entered London in a kind of triumph, was elected into parliament for Newport in Cornwall, and opposed the bishops with great vigor, being the chief manager of archbishop Laud's trial. In the long parliament he was zealous in the Presbyterian cause ; but, when the Independents gained the ascendancy, he opposed them warmly, and promoted an agreement with the king. When the army divided the house, and refused him entrance, he became a bitter enemy to them and their leader Cromwell, and attacked them with his pen so severely that he was again imprisoned : but he pleaded the liberty of the subject so successfully that he was enlarged. Being restored to his seat after Cromwell's death, with the other secluded members, he assisted in promoting the restoration, and was appointed keeper of the Tower records ; where he was very useful by the collections he published from them. He presented forty volumes of his works, in folio and 4to., to Lincoln's Inn library, of which society he was a member ; and, dying in 1669, was buried under the chapel.

PRYTANES, in Grecian antiquity, were the presidents of the senate, whose authority consisted chiefly in assembling the senate ; which, tor the most jpart, was done once every day The senate consisted of 500, fifty senators being elected out of each tribe : after which lots were cast, to determine in what order the senators of each tribe should preside ; which they did by turns, and during their presidentship were called prytanes. However, all the fifty prytanes of the tribes did not govern at once, but one at a time, *viz.* for seven days ; and, after thirty-rive days, another tribe presided for other five week* ; and so of the rest

PRZEMYSL, a circle and town of Austrian Poland, in the centre of that country, to the west of the circle of Lemberg. Its area is H20

square miles, population of the circle about 212,000, of the town 7500; the former consistv of a vast plain, traversed nearly throughout its extent by the river San ; and watered by a num-ber of other minor streams. The surface is occasionally diversified by gentle elevations and woods. The only manufacture is a coarse linen and leather. The town is the see both of a Greek and Catholic bishop.

PRZIBRAM, a town in the west of Bohemia, near silver and lead mines, nineteen miles south of Beraun, and thirty-three S. S. W. of Prague. Population 2300.

PRZIPICA, tbf. greatest river in the east of Poland, is joined partly by a canal, partly by the stream of the Muchawica, to the Bug and Vistula, the great rivers of the central part of that kingdom, and after flowing west falls into the Dnieper forty miles above Kiev.

PRZ1PCOVIUS (Samuel), a learned Socinian writer, born in 1590, who was driven from Poland with many others of that sect in 1658. He took refuge in Prussia, where he died in 1670, a►►ed eighty. His works are inserted in the collection of Sociman writers published in 1656, in 9 vols. folio.

PSALM, n. s ~\ Fr. psalme, pseannie ; dr,

PSALM'IST, (ˆ i|/a\/tof. A holy song : psalm -

PSAL'TEU, i ist is the author of such a

PSAL'TLRY. J song : psalms, a collection

of psalms : psaltery, a harp on which they are

played.

Praise with trumpets, pierce the skies, Praise with harps and psalteries.

Sandys's Paraph.

The choice and flower of all things profitable in other books, the psalms do both more briefly contain and more movingly express, by reason of that poetical form wherewith they are written. Hooker.

The trumpets, sacbut, psalteries, and fife, Make the sun dance. Shakspeare. Coriolantu. Sternhold was made groom of the chamber, for turning certain of David's psalmi into verse.

Peacham.

The sweet singer of Israel with his psaltery, loudly resounded the benefits of the Almighty Creator.

Id.

Those just spirits-that wear victorious palms, Hymns devote and holy psulms Singing continually Milton

In another psalm he speaks of the wisdom ana power of God in the creation. Kurnet.

How much more rational is this system of the psalmist, than the Pagan's scheme in Virgil, where one deity is represented as raising a storm, and another as laying it ! Addison.

Nought shall the psaltery and the harp avail. When the quick spirits their warm march forbear, And numbing coldness has unbraced the ear.

Prior.

She, her daughters, and her maids, meet together at all the hours of prayer in the day, and chaunt psalms, and other devotions, and spend the rest of their time in such good works, and innocent diversions, as render them fit to return to their isulms and prayers. Law.

PSALMS, BOOK OF, a canonical book of the Old Testament. Most of the psalms have particular titles, signifying either the name of the author, the person who was t? set u to music or sing it, the instrument that was to ie used, or

the subject and occasion of it. Many of the

Ssalms are inscribed with the names Korah, Je-uthun, &c., from the persous who were to sing them.

PSALMANAZAR (George), the name assumed by a very extraordinary character, born in France and educated in a Jesuit's College : upon leaving which, he led the life of a pilgrim. At Liege he entered into the Dutch service, and afterwards into that of Cologne. In the habit of a pilgrim he begged through several countries, in elegant Latin, and, accosting only gentlemen and clergymen, received liberal supplies,

which he spent as freely. In Germany he passed for a native of Formosa, a convert to Christianity, and a sufferer for it. At Sluys he fell in with brigadier Lauder, a Scots colonel, who introduced him to the chaplain ; who, to recommend himself to the bishop of London, took him over to that city. The bishop patronised him with credulous humanity, and a large circle of his great friends patronised him as a prodigy. He published a History of Formosa, and invented a character and language for that island, and translated the church catechism into it, which was examined by learned critics and approved. Some of the learned, however, doubted him, particularly Drs. Halley, Mead, and Woodward. He was allowed the use of the Oxford library, and employed in compiling the Universal History. Some errors in his History of Formosa first led him to be suspected as an impostor. He died in 1753, and in his last will confessed the imposture.

PSALMODY. The act or practice of singing holy songs was always esteemed a considerable part of devotion. The plain song was early used, being a gentle inflection of the voice, not much different from reading, like the chant in cathedrals ; at other times more artificial compositions, like our anthems. Sometimes a single person sung alone ; sometimes the whole assembly joined together, which was the most ancient and general practice. At other times, as in those of king David, the psalms were sung alternately, the congregation dividing themselves into parts, and singing verses in turns. There was a fourth way of singing, pretty common in the fourth century, which was, when a single person began the verse, and the people joined with him in the close ; this was often used for variety in the same service with alternate psalmody. The use of musical instruments, in the singing of psalms, seems to be as ancient as psalmody itself; the first psalm we read of being sung to the timbrel, *viz.* that of Moses and Miriam, after the deliverance of the Israelites from Egypt : and afterwards musical instruments were in constant use in the temple of Jerusalem. See ORGAN.

In the early ages of Christianity much was done by the priests to mystify the principles of the various branches of psalmody, and the arts and sciences in general, in order more effectually to keep the common people in ignorance, and consequently in superstition. To create the greater reverence for the church ‘and its priests, who were alone supposed capable of understanding its sacred mysteries, psalmody was carefully inculcated in the minds of youth as of divine

origin, and thoroughly to be understood only by actual inspiration.

Ecclesiastical modes of accentuation were adopted in the reading of the gospels, epistles, &c.; and, for the performance of those parts of the divine worship which were sung rather than thus musically or artificially declaimed (see article Music, p. 280), the authentic, and, 300 years afterwards, the plagal modes of the ancient Greeks were introduced into the church by Gregory VIII. He declared that, to ensure the perfect development of his principles of psalmody, he was duly inspired by God. These difficulties, together with the syllabic nature of their music, to suit the rythmical structure of the words, the exact performance of which required the utmost attention to acquire, excluded all participation on the part of the people in praising their Maker, but through the medium of the priests : a principle which, for ages, proved a most powerful engine of priestcraft. Of these ecclesiastical accentuations an idea may be formed, though but a faint one, for they are but mere shadows of them, by attending our cathedral service ; they were formerly expressed by a number of signs, termed pes flexus, pes sinuosus, pes gutturalis, quassus, resupinus, quilissimi, &c., each of which designated a peculiar inflexion of the human voice.

With the exception of the Metzian hymns, which, from their popularity, are supposed to have partaken much of the principles of natural melody, and written by Benoit, who established himself at Metz soon after the return of Charlemagne from Rome (a specimen of which style we have inserted in our article Music), the principles appertaining to syllabic music were maintained unimpaired, in the church of Rome, up to the eighteenth century, to the total exclusion of musical rhythm : and, notwithstanding the rapid progress of the arts and sciences after the extinction of the Bards and Druids, it was not before the first dawnings of the reformation that melody, independently of absolute prosodial quantity and accentuation, was generally introduced into the divine service, when, as may be expected, the grand distinction took place between the Protestant and Catholic modes of psalmody. The fauxbourdons of the Roman church are however still adopted by the Protestants of Germany and Switzerland, both in the modern as well as in the ancient modes ; a species of music brought to the highest pitch of excellence in the pontificate of Marcellus, by Pales-trina and others ; though of late, even amongst the Catholics themselves, such have been the mutations of their ideas relative to ecclesiastical music, these compositions have been allowed to be superseded by others totally of an opposite description, as the performance of the works of Haydn, Mozart, Rhigini, &c., has abundantly testified ; thus completing a revolution which, but fifty years ago, would not have been anticipated without

feelings of horror and disgust.

In the church of England the system of psalmodising in four parts has been of late generally superseded by adhering to one, in which all classes may with facility join. It is nevertheless susceptible of great improvement, as we shall endeavour presently to show. But.

as the understanding of the principles of music, like those of painting, depends more upon example than precept, one good specimen of either conveying more to the mind, the eye, or ear, than volumes, we have but little more to offer upon this subject than what has been stated in substance in our article Music.

With respect to the proper mode of singing, ihat is to be preferred which best tends to in-duce the people assembled for the purpose of praising their Maker to join with the greatest ease, devotion, and dignity : singing in parts constituting a system, which, whilst it precludes *he possibility of congregational psalmody, can only be effected with tolerable decency, by the hiring of persons to do that which we are in tact commanded to do for ourselves. The first point to be attended to is propriety of articula-* ion ; this is effected by warbling steadily on the rowel, and quickly pronouncing the consonant : singing being only a lengthening of the mode of speech. The necessity of this observation will immediately be felt in the singing of the follow-iig lines from Dr. Watts,

‘Their captive sons, exposed to scorn/ &c.,

if we endeavour to warble upon the consonant, no tone can be produced, neither can uny sense be given to the melody or words; dwelling, on the contrary, upon the vowels, and quickly pronouncing the consonants, the air is set in motion, a tune is formed, and the words thoroughly understood and felt, more especially when the congregation joins in the manner commended by the ritual, which the

reader will pardon us if we observe, consists neither in the boisterous vociferation, as if in glorification of our noisy powers, too often observed in dissenting meetings, nor in the gross indifference so prevalent in the church of England.

Of the two modes upon which all modern music is composed, the major one, being the simplest to understand, is to be preferred ; but great advantages will be obtained in the formation of psalm-tunes upon the other modes of the ancient Greeks, the adoption of which added greatly to the celebrity of their extraordinary, most powerful, and varied music, as compared with our own.; for the truth of this remark we need only refer the reader to our article Music, where the powers of the different Grecian modes are made evident in our practical illustration of the principles of Scottish music. The mixt Lydian mode, comprising the notes from G to G of our diatonic scale of C, making the half-tones fall between the third and fourth, and sixth and seventh intervals, instead of the third and fourth, and seventh and eighth, intervals of the octave, mingles well with the harmonic powers of the organ, though it is best felt when employed in the construction only of melody. The Lydian mode or measure, which has been supposed by many writers to have been lost to us, is precisely our scale of F major ; the same may be said of the Ionian, transposed a fourth lower than the Lydian measure. Excepting the ./ Eolian mode, which is our descending minor scale, these are the only modes capable of receiving the principles of harmonic support. The Dorian mode,

and the melodious Phrygian, are formed of materials entirely different from all others ; and, being remarkable as rejecting all harmonic support, are peculiarly serviceable for places of worship where there are no organs, or where the mode of worship rejects the use of musical instruments to accompany the singing of the psalms and hymns.

As the musical staff and clef were inserted to express the different compasses of the human voice, and as all appreciable musical sound is expressed within the limits of the octave, and one note, termed the ninth (the replication of the second of the scale), it follows that melody suitable for psalmody must, of all species of music, be the easiest to comprehend. The principal points of attention, in the Lydian and Ionian measures, are the situations of the two half-tones denominated in solmisation mi fa, and, in the disjoined tetrachordial order, C sound, forming the modern major scale, mi fa and si do, thus : CDEfGABc (the capitals denoting tones, and the Romans half-tones).

This scale, so simple in its construction, and so strictly conformable to the feelings of every one possessing a musical ear, is sufficient to explain the whole mysteries of modern psalmody : the alteration of one or the other of the half-tones constituting the means whereby modulation is effected into the dominant, sub-dominant, and relative minor of the primitive key, which are the utmost limits assigned for the composition of psalmody. The principles also of any well regulated melody in others of the Grecian modes are to be acquired with equal facility; the being habituated to the major and minor systems of sound causing the ancient modes in general to be only momentarily difficult to adopt. To prove this assertion we notice the known secular, for want of a sacred, melody, ‘ Scots wha hae,’ which is written in the mixt Lydian mode of the ancient Greeks.

On the variety of opinions published about the latter end of the sixteenth century upon the use and abuse of psalmody in churches, and of the efforts of many writers to prove the impropriety of its introduction in the reformed church, as a relic only of monkish superstition, we need not offer a comment. According to the Scriptures it has always formed, together with instrumental accompaniments, a part of the divine service : and, sanctioned by the most enlightened men of the age, it prevails universally. Upon the subject of interludes, voluntaries, &c., ‘ interruptions of the divine service,’ as they have often been fairly designated, we would observe that they were adopted in the church as early as the time of St. Ambrose, and that in cases where the organist confines himself to the performance of the sacred compositions of Handel, Graun, Mo-zart, Marcello, &c., and, in the composition of his interludes, strictly regulates his melodj according to the style of the psalm tune, improper associations of ideas could not be raised in the minds even of the most fastidious ; on the contrary, they are known to create a tone of feeling highly proper for the occasion. Having, in our article ORGAN, sufficiently explained our sentiments on the abuses of extemporaneous perfor

taances, and of the immoral tendency of introducing secular music into the church, we cannot better conclude this article, than by recommending to the heads of our ecclesiastical affairs, the establishment of one collection of psalm tunes to be sung throughout the established church : such a regulation would surely prove not less useful than one form of prayer ; at least the parishioners of one church would then have the advantage of joining in this part of the divine service with facility at another, which, from the strange mixture of musical styles observed at the different churches, is now become impossible.

The PSALTERY was a musical instrument much in use among the ancient Hebrews, who called it nebel ; but we know little or nothing of the precise form of the ancient psaltery. See Music.

PSAMMETICUS, or PSAMMETICUUS, a renowned conqueror, who subduing eleven other petty kings of Egypt became the founder of a new dynasty in the kingdom of Egypt, about 670 B. C. He is memorable likewise for taking the city of Azot, after a siege of twenty-nine years.

PSATYRIANS, a sect of Arians, who, in the council of Antioch, held in the year 360, maintained that the Son was not like the Father as to will ; that he was taken from nothing, or made of nothing ; and that in God generation was not to be distinguished from creation.

PSELLUS (Michael Constantine), a learned Christian of the eleventh century, was, by birth, a Constantinopolitan of consular rank, and flourished under the emperor Constantine Mono-machus. He was the chief instructor of the Constantinopolitan youth, and at the same time the companion and the preceptor of the emperor. Towards the close of his life, Psellus retired into a monastery, and soon afterwards died. His works, which have been much celebrated, are, Commentaries upon Aristotle's Logic and Physics ; a Compendium of Questions and Answers ; and an Explanation of the Chaldean Oracles.

PSEU'DO, n. s. From Gr. ˆcvfoc-A pre-fix, which signifies false or counterfeit : as pseu-do-apostle, a counterfeit apostle.

I will not pursue the many pseudographiex in use, but show of how great concern the emphasis were, if rightly used.

It is not according to the sound rules of pseudology, to report of a pious prince, that he neglects his devotion, but you may report of %

merciful prince, that he has pardoned a criminal who did not deserve it.

Arbuthnut.

PSHAW, inter}. An expression of contempt.

A peevish fellow has some reason for being out of humour, or has a natural incapacity for delight, and therefore disturbs all with pishes and pshawi.

Spectator,

PSIDIUM, the guava, or bay plum, a genua of the monogynia order, and icosandria class of plants ; natural order nineteenth, hesperideae : CAL. quinquefid, superior; there are five petals; the berry is unilocular and monospermous. There are two species :

1. P. pomiferum, the red guava; and 2. P. [lyriferoin, the white guava. The red guava

rises to twenty feet, and is covered with a smooth bark; the branches are angular, covered with oval leaves, having a strong midrib, and many veins running towards the sides, of a light green color, standing opposite upon very short foot-stalks. From the wings of the leaves the flowers come out upon foot-stalks an inch and a half long: they are composed of five large roundish concave petals, within which are a great number of stamina shorter than the petals, and tipped with pale yellow tops. After the flower is past, the germen becomes a large oval fruit, shaped like a pomegranate. A decoction of the roots of guava is employed with success in dysenteries : a bath of a decoction of the leaves is said to cure the itch and other cutaneous eruptions. Guayava, or guava, is distinguished from the color of the pulp into the two species above-mentioned, the white and the red ; and, from the figure of the fruit, into the round and the pear-fashioned or perfumed guava. The latter has a thicker rind, and a more delicate taste than the other. The fruit is about the bigness of a large tennis ball ; the rind or skin generally of a russet stained with red. The pulp within the thick rind is of an agreeable flavor, and interspersed with a num-ber of small white seeds. The rind, when stewed, is eaten with milk, and preferred to any other stewed fruit. From the same part is made marmalade ; and from the whole fruit is prepared the finest jelly in the world. The fruit is very astringent, and nearly of the same quality with the pomegranate ; so should be avoided by all who are subject to costiveness. The seeds

are so hard as not to be affected by the fermentation in the stomachs of animals ; so that when voided with the excrements they take root, germinate, and produce thriving trees. VVhole meadows in the West Indies are covered with guavas which have been propagated in this man-ner. The buds of guava, boiled with barley and liquorice, produce an excellent ptisan for diarrhoeas, and even the bloody flux, when not too inveterate. The wood of the tree, employed as fuel, makes a lively, ardent, and lasting fire.

PSITTACUS, the parrot, in ornithology, a genus belonging to the order picae. The bill is hooked from the base ; the upper mandible is moveable : the nostrils are round, placed in the base of the bill, which in some species is furnished with a kind of cere : the tongue is broad, and blunt at one end : the head is large, and the crown flat : the legs are short, the toes placed two before and two behind. It might seem surprising why this animal, which is not naturally a bird of prey, but feeds on fruits and vegetables, should have the crooked beak allotted to the hawk and other carnivorous birds : the reason seems to be that the parrot being a heavy bird, and its legs not very fit for service, it climbs up and down trees by the help of this sharp and hooked bill, with which it lays hold of any thing and secures itself before it stirs a foot ; and helps itself forward very much, by pulling its body on with this hold Of all animals, the parrot and crocodile are the only ones which move the upper jaw ; all creatures else moving the lower only. The parrot loves nothing so much as the seeds of the carthamus, or bastard saffron. Parrots

are found almost every where within the tropics ; and in their natural state they live on fruits and seeds, though, when tame, they will eat flesh, and even fish. In the East and West Indies they are very common, and in such warm climates are very brisk and lively ; here, however, they lose much of their vigor. They seldom make nests, but breed like owls in hollow trees : they lay two eggs. At particular times they fly in very large troops, but still they keep two and two together. This genus consists of infinite variety, not so much owing to mixture of species. Mr. Latham increased the genus from forty-seven to 163 ; and, since the time he wrote his Index, at least thirty more have been discovered. They are very generally divided into -three kinds: 1. The larger, which are as big as a moderate fowl, called macaos and cocketoons ; these have very long tails. 2. The middle-sized ones, commonly called parrots, which have short tails, and are a little larger

than a pigeon. And, 3. The small ones, which are called paroquets, and have long tails, and are not larger than a lark or blackbird.

1. P. ararauna, the b'ue and yellow macaw, is blue above, and yellow below, and the cheeks are naked, with feathery lines. It is about the same size with the last, and inhabits Jamaica, Guiana, Brasil, and Surinam.

2. P. aurora, the yellow amazon, is about twelve inches long, of a green color, with blue wing quills, and a white front; its orbits are snowy. It inhabits Mexico or Brasil, but in all probability the latter, from the one which Sa-lerne saw, and which pronounced Portuguese words.

3. P. Guineensis, the yellow lory, is about ten inches long, and is an inhabitant of Guinea. The bill is of a black color; the cere, the throat, and space about the eyes, are white ; above the eye there is a patch of yellow, and the rest of the head and neck is crimson. The breast is yellow, wipg coverts green, and the quills are blue, edged with yellow. Under the wings, belly, thighs, vent, and to the under part of the tail, the color is white, which last is tipped with red ; the legs are dusky, and the claws black.

4. P. macao, the red and blue macao, is red, except the wing quills, which above are blue, below red : the particular feathers are variegated with blue and green : the cheeks are naked and wrinkled. It is about two feet seven inches and a half long, and about the size of a capon. It inhabits Brasil, Guiana, and other parts of South America. It was formerly very common in St. Domingo, but is now rarely fourd there. It generally lives in moist woods, does not in general learn to speak, and its voice is particularly rough and disagreeable. The flesh is hard, black, and unsavory, but makes good soup, and is much used by the inhabitants of Cayenne and other places. This species, in common with other parrots, is subject to fits when tamed.

5. P. pullarius, red-headed Guinea paroquet, or Guinea sparrow, is about five inches and a half long. It inhabits Guinea, and is found in Ethiopia, the East Indies, and the island of Java, and sometimes in Surinam. It is green, with a red front, fulvous tail, black bar, and

cinereous orbits. The male of this species is peculiarly affectionate to the female.

6. P. severus, the Brasilian green macaw, is black, with a greenish splendor : the bill and eyes are reddish, and the legs are yellow. It is about one foot and five inches long, and is com-mon in Jamaica, Guiana, and Brasil. It is, however, comparatively rare; but is extremely beautiful, and of a very amiable and sociable temper when familiar and acquainted ; but it can neither bear strangers nor rivals ; its voice is not strong, nor does it articulate very distinctly the word ara.

PSOAS MUSCLE, in anatomy. See ANATOMY.

PSOK.V, a government of European Russia, between those of Livonia and Smolensko. Its superficial extent is about 22,000 square miles ; and the population about 700,OC\), almost all of Russ origin, and members of the Greek church. It is divided into eight circles or districts. The surface is level, and clayey or &andy, but tolerably fertile, producing flax and hemp, which, along with the timber of its forests, are exported to Narva and St. Petersburg!!. The manufactures are limited to the weaving of linen, and the preparation of leather. The climate is healthy, but cold. Pskov is watered by several rivers, and contains a large lake called the lake of Pskov.

PSKOV, or PLESKOV, a considerable trading town and archbishop's see of European Russia, the capital of the above government, is situated at the confluence of the Pskov itiver and the Velikaja. It is small, but contains a kremlin or citadel; a middle town and greater town; all distinct and surrounded by an earthen mound. Inhabitants 7000. Leather is the only manufacture.

PSOPHIA, in ornithology, a genus belonging to the order of gallinae. The bill is moderate ; the upper mandible convex ; the nostrils oblong, sunk, and pervious ; the tongue cartilaginous, flat, and fringed at the end; and the legs are naked a little above the knees. The toes are three before and one behind ; the last of which is small with a round protuberance beneath it, which is at a little distance from the ground. Latham only enumerates two species.

1. P. crepitans, the gold-breasted trumpeter. Its head and breast are smooth and shining green. By the Spaniards of Maynas it is called trompetero, and by the French at Cayenne agami, under which last Buffon describes it. It inhabits various parts of South America, Brasil, Guiana, Surinam, ⬚⬚c., but it is most plentiful in the Amayons country. It is about twenty inches long, being about the size of a large fowl, and lays eggs rather larger, of a blue green color. It is met with ir the Caribee islands, where it is called a pheasant, and its flesh is reckoned as good as that of a pheasant. The most characteristic and

remarkable property of these birds consists in the wonderful noise they make, particularly when urged by the keepers of the menagerie. Another very remarkable circumstance is, that they follow people through the streets, though perfect strangers. It is difficult to get rid of them ; for, if you enter a house, they will wait your return, and again join you,

though often after an interval of three hours. ‘ 1 have sometimes,’ says M. de la Borde, ‘ be-taken myself to my heels, but they ran faster, and always got before me ; and, when I stopped, they stopped also. I know one,’ continues he, * which invariably follows all the strangers who enter his master’s house, accompanies them into the garden, takes as many turns as they do, and attends them back again.’

2. P. undulata, the undulated trumpeter, is about the size of a goose. The upper part of the body is of a pale reddish brown color, beautifully undulated with black. The head is adorned with a dependent crest. On each side of the neck, beneath the ears, begins a list of black, widening as it descends, and meeting on the lower part before, where the feathers become greatly elongated, and hang loosely down. The under parts are generally white, the legs are of a dusky blue color like the bill. It is a native of Africa ; Latham’s specimen came from Tripoli.

PSORALEA, in botany, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, papilionacese : CAL. powdered, with callous points, and as long as the monospermous legumen. The most remarkable species are : ⁂

1. P. aculeata, the aculeated prickly psoralea, which rises with a shrubby branching stem three or four feet high, with ternate leaves, having wedge-shaped lobes terminating in a recurved sharp point, and

the branches terminated by roundish heads of blue flowers ; it grows in Ethiopia. These plants flower here every sum-mer ; the first sort greatest part of that season, and the others in July and August; all of which are succeeded by seeds in autumn. Keep them in pots in order for removing into the green-house in winter. They are propagated by seeds, sown in a hot-bed in the spring ; and, when the plants are two or three inches high, prick them in separate small pots, and gradually harden them to the open air, so as to bear it fully by the end of May or beginning of June. They may also be propagated by cuttings any time in summer, planted in pots, and plunged in a little heat, or covered close with hand-glasses, shaded from the sun and watered.

2. P. bituminosa, the bituminous trifoliate psoralea, rises with a shrubby stalk, branching sparingly about two or three feet high, with ternate or three lobed leaves of bituminous scent, and blue flowers in close heads; it grows in Italy and France.

3. P. primata, the pinnated psoralea, rises with a woody soft stem, branching five or six feet high, pinnated leaves of three or four pairs of narrow lobes terminated by an odd one, and at the axillas close-sitting blue flowers with white keels. It is a native of Ethiopia.

PSYCHE, a nymph whom Cupid married, and carried into a place of bliss, where he long enjoyed her society. Venus put her to death, because she had robbed the world of her son ; but Jupiter, at the request of Cupid, granted immortality to Psyche. The same Greek word, ˆf X1?' signifies a butterfly and the soul. Hence the former was used by the Greek artists as an emblem of the latter; and Cupid fondling or

burning a butterfly is the same as his caressing or paining Psyche or the human spirit. Indeed for almost all the ways in which Cupid is seen playing with butterflies, some parallel may be found in the representations of Cupid and Psyche. Thus, in an antique, the god of love is drawn in a triumphal car by two Psyches ; in another by two butterflies. By this might be shadowed forth his power over the beings of the air, of which the car is an emblem.

PSYCHOTRIA, in botany, a genus of the monogynia order and pentandria class of plants ; natural order forty-seventh, stellatae : CAL! quinquedentate, persisting, and crowning the fruit : COR. tubulated ; berry globose, with two hermi-spherical sulcated seeds. The species are four, viz.: ••• 1. P. aspatica. 2. P. emetica. 3. P. herbacea : and

4. P. serpens. They are all natives of Jamaica.

PSYLLI, a people in the south of Cyrenaica, so called from king Psyllus (Agathargides, quoted by Pliny) ; almost all overwhelmed by sand driven by a south wind (Herodotus). According to Pliny, Lucan, &c., they had something in their bodies fatal to serpents, and their very smell proved a charm against them.

PTARMIGAN, in ornithology. See TETRAO.

PTELEA, shrub-trefoil, a genus of the monogynia order and tetrandria class of plants : COR. tetrapetalous : CAL. quadripartite inferior ; fruit monospermous, with a roundish membrane in the middle. There are two species : ###

1. P. trifoliata, the Carolina shrub trefoil, has a shrubby upright stem, dividing into a branchy head eight or ten feet high, covered with a smooth purplish bark, trifoliate leaves, formed of ova1 spear-shaped folioles, and the branches terminated by large bunches of greenish-white flowers, succeeded by roundish bordered capsules. This is a hardy deciduous shrub, and a proper plant for the shrubbery and other ornamental plantations to increase the variety. It is propagated by seeds, layers, or cuttings.

2. P. viscosa, the viscous Indian ptelea, ri< ### with several strong shrubby stems, branch i i ####### erectly twelve or fifteen feet high, having a liglit brown bark, spear-shaped, stiff, simple leaves, and the branches terminated by clusters of greenish flowers. It is a stove plant, and is propagated commonly by seeds.

PTERIS, in botany, brakes or female fern, a genus of the order of filices, and cryptogsmia class of plants ; natural order fifty-fifth, filices. The fructifications are in lines under the margin. There are numerous species ; the most remarkable is the

P. aquilina, or common female fern. The root of this is viscid, nauseous and bitterish ; and, like all the rest of the fern tribe, has a salt, mucilaginous taste. It creeps under the ground in some rich soils to the depth of five or six feet, and is very difficult to be destroyed. Frequent mowings in pasture grounds, plentiful dunging in arable lands, but, above all, pouring urine upon it, are the most approved methods of killing it. It has, however, many good qualities to counterbalance the few bad ones. Fern cut while green, and left to rot upon the ground, is a good improver of land; for its ashts, if burnt.

will yield double the quantity of salt that most other vegetables will. Fern is also an excellent manure for potatoes ; for, if buried beneath their roots, it never fails to produce a good crop. Its astringency is so great that it is used in many places abroad, in dressing and preparing kid and chamois leather. In several places in the north the inhabitants mow it green, and, burning it to ashes, make those ashes up into balls, with a little water, which they dry in the sun, and make use of them to wash their linen with instead of soap. In many of the Western Isles the people gain a very considerable profit from the sale of the ashes to soap and glass makers. In Glenelg in Inverness-shire, and other places, the people thatch their houses with the stalks of this fern, and fasten them down with ropes made either of birch-bark or heath. Sometimes they use the whole plant for the same purpose, but that does not make so durable a covering. Swine are fond of the roots, especially if boiled in their wash. In some parts of Normandy the poor have been reduced to the miserable necessity of mixing them with their bread. And in Siberia, and some other northern countries, the inhabitants brew them in their ale, mixing one-third of the roots to two-thirds of malt. The ancients used the root of this fern, and the whole plant, in decoctions, and diet-drinks, in chronic disorders of all kinds, arising from obstructions of the viscera and the spleen. The country people still continue to retain some of its ancient uses ; for they give the powder of it to destroy worms, and look upon a bed of the green plant as a sovereign cure for the rickets in children.

PTEROCARPUS, in botany, a genus of the decandria order, anu diadelphia class of plants ; natural order thirty-second, papilionaceae : CAL. quinquedentate : CAPS, sulcated, filiaceous, vari-cose. The seeds are few and solitary. There are four species, *viz.* : ⬛⬛⬛

1. P. draco. 2. P. ecastaphyllum. 3. P. lu-natus : and 4. P. santolinus. The last is by some referred to the genus santalum. It is called red saunders ; and the wood is brought from the East Indies in large billets, of a compact texture, a dull red, almost blackish color on the

outside, and a deep bright red within. This wood has no manifest smell, and little or no taste. The principal use of red saunders is as a coloring drug ; with which intention it is employed in some formula?, particularly in the compound of tincture of lavender. It communicates a deep red to rectified spirit, but gives no tinge to aqueous liquors ; a small quantity of the resin, extracted by means of spirit, tinges a large one of fresh spirit, of an elegant blood-red. There is scarcely any oil, that of lavender excepted, to which it communicates its color.

PTERONIA, in botany, a genus of the polygamia aequalis order, and syngenesia class of plants ; natural order forty-ninth, compositae : receptacle full of multipartite bristles ; pappus a little plumy : CAL. imbricated.

PTEROSPERMUM, in botany, a genus of the polyandria order and monadelphia class of plants ; natural order thirty-seventh, columnifera* CAL. quinquepartite : COR. consists of five ob-long spreading petals. The filament? are about

fifteen, which unite towards tlie base into a tub*. The style cylindrical: CAPS, oval, woody, and quinquelocular, each bivalved, containing many oblong, corrpressed, and winged seeds. There is only one species, *viz.* : ###

P. pentapetes, a native of the East Indies , the wood of which is very hard, and very like that of the holly tree.

PTINUS, a genus of insects belonging to the ### > rder of coleoptera. The antennae are filiform : the last or exterior articulations are longer than-the others ; the thorax is nearly round, without a margin, into which the head is drawn back or received ; the feet are made for leaping. The most remarkable species are, ###

1. P. pectinicornis. This is produced from a worm that lodges in wood and the trunks of trees, such as the willow, where it makes deep round holes, turns to a winged insect, takes flight and roosts upon flowers. It is distinguished b\ its antennae pectinated on one side, whence it has the name of feathered. The elytra and thorax are of a deep clay-colored brown, the antenna? and legs are of a pale brown.

2. P. pertinax. The form of this insect resembles the preceding one, saving that its anten nae are filiform. It is all over of a deep blackish-brown color resembling soot. It attacks household furniture, clothes, furs, and especially animals dried and preserved in collections of

natural history, where it makes great havoc. \Vhen caught, this insect bends its legs, draws back its head, and lies as if it was dead till it thinks itself out of danger. It cannot be forced out of this state of inaction either by pricking or tearing ; nothing but a strong degree of heat can oblige it to resume ite motion and run away. There are many beautiful varieties of this genus; but they in general escape our attention by their minuteness, and living among hay, dried leaves, and divers other dusty matters, where they undergo their metamorphoses. The larvae of some are found in trunks of decayed trees, in old tables, chairs, &c.

PTI'SAN, n. s. Fr. ptisanne ; Gr. imaffavi]. A medical drink, made of barley decocted with raisins and liquorice.

Thrice happy were those golden days of old, When dear as burgundy the ptisan* sold ; When patients chose to die with better will, Than breathe and pay the apothecary's bill. Garth.

In fevers the aliments prescribed by Hippocrates were ptisans and cream of barley. Arbuthnot.

PTISAN is properly barley decorticated, or deprived of its husk, by beating in a mortar, as was the ancient practice ; though the cooling potion obtained by boiling such barley in water, and afterwards sweetening the liquor with liquorice root, is what at present goes by the name of ptisan ; and to render it laxative some add a little senna, or other simi ar ingredient.

PTOLEMAIS, in ancient geography, the largest and most considerable town of Thebais, or Higher Egypt, and equal to Memphis. It was governed in the manner of a Greek republic, and situated on the west side of the Nile, almost opposite to Coptos. Strabo. This town, which was built by Ptolemy Philadelphus, is now called Ptolometa. The walls and gates

still entire, and there are a vast number of Greek inscriptions, but only a few columns of the portico remain. There is likewise an Ionic temple, in the most ancient style of executing that order, of which Mr. Bruce took a drawing, which is preserved in the king's collection.

PTOLEMAIS, the port of Arsinoe, situated on the west branch of the Nile, which concurs to form the island called Nomos Heracleotes, to the south of the vertex of the Delta.

PTOLEMY (Claudius), a celebrated mathematician and astrologer, born at Pelusium, and surnamed by the Greeks most divine and most wise. He flourished at Alexandria in the second century, under Adrian and Marcus Aurelius, about A. D. 138. There are still ex-tant his Geography, and several learned works on astronomy. The principal of which are 1. The Almagest. 2. De Judiciis Astrologicis. 3. Planisphserium. His system of the world was for many centuries adopted by the philosophers and astronomers. See ASTRONOMY.

PTOLEMY, a son of Pyrrhus, king of Epirus, by Antigone, who was left governor of Epirus, while his father was absent in Italy, fighting against the Romans. He governed with great prudence, and was killed some time after in Pyrrhus's expedition against Sparta aud Argos.

PTOLEMY CERAUNUS, the eldest brother of Ptolemy Philadelphus, who fled to Seleucus king of Macedonia, who received him hospitably ; in return for which he assassinated him, and usurped his crown. He then invited Arsinoe, who was his widow and his own sister, to share the government with him ; but, as soon as he had her in his power, he murdered her and her children. He was at length defeated, killed, and torn limb from limb by the Gauls, A. A. C.

279.

PTOLEMY LAGUS, or SOTER, king of Egypt, a renowned warrior, who established the academy at Alexandria. He was the first of the Macedonian race of Egyptian monarchs, being a natural son of Philip II. of Macedon, by Arsinoe, who married Lagus while she was pregnant of him. He was one of Alexander's generals, and killed an Indian king in single combat; and to his courage Alexander owed the reduction of Aornus. He conquered Ccelosyria, Phoenicia, and part of Syria, and carried 100,000 prisoners to Egypt, whom he attached to him by liberal privileges. He wrote a History of Alexander, which was

much admired, but is lost. He died A. A. C. 284,. aged ninety-two.

PTOLEMY PHILADELPHUS, the second son of Ptolemy Soter. He was renowned as a conqueror, but more revered for his great virtues and political abilities. He established and augmented the famous Alexandrian library, which had been begun by his father. He greatly increased the commerce of Egypt, and granted considerable privileges to the Jews, from whom he obtained a copy of the Old Testament, which he caused to be translated into Greek, and deposited in his library. See SEPTUAGINT. He died 246 years B. C. aged sixty-four.

Ptolemy was also the name of eleven other kings of Egypt, of whose reigns we here only add the following brief chronological table, down to queen (,'!ponn*rn, the last of the race : ???

Years. A.M. 1. Ptolemy Sote-reigned 39 and died 372C

25 17 24 37 28

36J

20

6

banished.

3758 3783 3800 3824 3861 3888 3923 3943 3949

3953 3953 3974

2. Ptolemy Philadelphus

3. Ptolemy Euergetes

4. Ptolemy Philopater

5. Ptolemy Epiphanes

6. Ptolemy Philometor

7. Ptolemy Physcon

8. Ptolemy Lathyrus

9. Ptolemy Alexander I.

10. Ptolemy Alexander II.

11. Ptolemy Alexander III. 1

12. Ptolemy Auletes 13

13. Ptolemy Dionysius 3f

14. Cleopatra 17

PU’BERTY, n. s.ˆ Fr. puberte ; Lat. pu—

PUBES’CENCE, > berlas. The time of life

PUBES’CENT, adj. j in which the two sexes be-gin to be acquainted : pubescence is the state of puberty: pubescent, the corresponding adjective.

The cause of changing the voice at the years of puberty seemeth to be, for that when much of the moisture of the body, which did before irrigate the parts, is drawn down to the spermatical vessels, it leaveth the body more hot than it was, whence cometh the dilatation of the pipes. Bacon.

Solon divided it into ten septenaries : in the first is dedentition or falling of teeth, in the second pubescence. Browne.

That the women are menstruant, and the men pubescent at the year of twice seven, is accounted a punctual truth. Id.

All the carnivorous animals would have multiplied exceedingly, before these children that escaped could come to the age of puberty. Bentlei/ *s !$ermons.

PUBERTY, in law, is fixed at the age of twelve in females, and fourteen in males ; after which they are reckoned to be fit for marriage.

PUBES, in botany, the hair or down on the leaves of some plants. See HAIR.

PUBES, in anatomy. See ANATOMY.

Ital.

and Span, publico; Port, pubrico ; Lat. publico, publius. General; universal; open : belonging to a state or nation ; open : the great body of a people or of

PUB'LIC, adj. & n. s.

PUB'LICAN, n. s.

PUBLICATION,

PUBLIC-HOUSE,

PUB'LICLY, adv.

PUB'LICNESS, n. s.

PUBLIC-SPIR'ITED, adj.

PUB'LISH, v. a.

PUB'LISHER, n. s.

mankind ; open view or notice ; expoaure : publicly and publicness corresponding : publican is, in an ancient sense, a toll or tax-gatherer ; in a modern one, the landlord of a house of public entertainment, or public-house: publication is the act of publishing a thing, particularly a book published ; also an edition of a book : public-spirited is, having regard to the general good ; patriotic : to publish is, to make generally known ; make public ; proclaim ; send forth a book into the world : publisher, follows both the general and particular sense.

As Jesus sat at meat, many publicans and sinners came and sat down with him. Matt. ix. 10.

Joseph being a just man, and not willing to make her a public example, was minded to put her away privily. Matthew.

By following the law of private reason, where the law of public should take place they breed disturb-

For the instruction of all men to eternal hie, it is necessary that the sabred and saving truth of God be openly published unto them, which open publication of heavenly mysteries is by an excellency termed preaching. Id.

How will this grieve you, When you shall come to clearer knowledge, tnat You thus have published me ! Sltakspeare.

Love of you

Hath made me publisher of this pretence. Id. Sometimes also it may be private, communicating to the judges some things not fit to be publicly delivered. Bacon.

And for traducing such That are above us, publishing to the world Their secret crimes, we are as innocent As such as are born dumb. Massenger.

His commission from God and his doctrine tend to the impressing the necessity of that reformation which he came to publish. Hammond.

If I had not unwarily too far engaged myself for the present publishing it, I should have kept it by me.

Digby.

They were public hearted men ; as they paid all taxes, so they gave up all their time to their Country's service, without any reward Clarendon.

A dismal universal hiss, the sound Of public scorn. Milton.

Suppose he should relent, And publish grace to all. Id.

. f royal maids how wretched is the fate, Born only to be victims of the state ; Our hopes, our wishes, all our passions tried For public use, the slaves of others pride.

Granville.

The multitude of partners does detract nothing from each private share, nor does the pubiickness of it lessen propriety in it. Boyle.

The apostle doth not speak as the publisher of a new law, but only as a teacher and monitor of what his lord and master had taught before.

Kettlewell.

These were the public -spirited men of their age, that is, patriots of their own interest. Dryden.

Philosophy, though it likes not a gaudy dress, yet, when it appears in public, must have so much complacency as to be cloathed in the ordinary fashion.

Locke.

They have with bitter clamours defaced the public service of our church. White.

I am called off from public dissertations by a domestic affair of great importance, which is no less than the disposal of my sister Jenny for life.

Tatter, No. 75.

Those nations are most liable to be overrun and conquered, where the people are rich, and where, for want of good conduct, the' public is poor. Davenant.

All nations that grew great out of little or nothing, did so merely by the public mindedness of particular persons. South.

The public is more disposed to censure than to praise. Addison.

The income of the commonwealth is raised on such as have money to spend at taverns and public-houses.

Id.

This has been so sensibly known by trading nations, that great rewards are publickly offered foi its supply. Id.

Another public-spirited project, which the common enemy could not foresee, might set king Charles on tlie throne. Id.

The unwearied sun, from day to day, Does his Creator's power display, And publishes to every land The work of an almighty hand. Id. Spectator. A collection of poems appeared, in which the pub-

Other has given me some things that did not belong to me. Pri.tr.

A good magistrate must be endued with a public* spirit, that is, with such an excellent temper as sets him loose from all selfish views, and makes him endeavour towards promoting the common good.

A tterburij.

In public ‘tis they hide, Where none distinguish. Pope.

An imperfect copy having been offered to a bookseller, you consented to the publication of one more correct. Id.

The publication of these papers was not owing to our folly, but that of others. Swift.

Have we not able counsellors hourly watching over the public weal 1 Id.

It was generous and public-spirited in you to be of the kingdom’s side in this dispute, by shewing, without reserve, your disapprobation of Wood’s de-sign. Id. Then each, in its peculiar honours clad,

Shall publish even to the distant eye

Its family and tribe. Coiaper.

PUBLIUS, a praenomen very common among the ancient Romans. It was the prsenomen of the Scipios, Ovid, and many other eminent men.

PUCERON, in entomology, a common name given to several genera of animalcules or insects, most of which live on the young branches of trees, particularly the peach tree, and feed on the sap. The various genera and species of pucerons have each their favorite plant, on which they live and feed on its juices.

Earth pucerons differ from most of the other genera, by residing in the earth. In the month of March, if the turf be raised in several places in any dry pasture, there will be found, under some parts of it, clusters of ants*; and, on a farther search, it will be usually found that these ants are gathered about some pucerons of a peculiar species. These pucerons are large, and of a grayish color, and are usually found in the midst of clusters of ants. As the common abode of the other kinds of puceron is on the young branches or leaves of trees, and as their only food is the sap of these trees, these earth kinds are supposed to extract their food from the roots of grasses, and other plants, in the same manner that the others do from the leaves and branches. The

ants follow these and the other species, for the sake of the saccharine juices which they extract from plants, and which they evacuate very little altered from their original state in the vegetable.

Oak pucerons, a name given by naturalists to a very remarkable species of animal of the puceron kind. They bury themselves in the clefts of the oak and some other trees, and get into the crevices, where the bark is a little separated from the wood. They are larger than the other pucerons, the winged ones being nearly as large as a common house fly; those without wings are also larger than any other species of the. same genus. The winged ones are* black, and. the others of a coffee color. Their trunk is twice the length of their bodies, and, when walking, it is carried straight along the belly, trailing behind it with the point uj . When the puceron wishes to suck a part of a tree that is just before it, it draws up, and shortens the trunk, till it brings

it to a proper length and direction ; but, when it sucks in the common way, it crawls upon the inner surface of the bark, and the turned up end of the trunk, which resembles a tail, fixes itself against the wood that is behind it, and sucks there. The extremity of this trunk holds so fast by the wood, that, when it is pulled away, it frequently brings a small piece of the wood away with it. The ants are as fond of these as of the other species of pucerons, not feeding upon them, but on their dung, which is a liquid matter of a sweet taste. These creatures are the surest guides where to find this species of puceron ; tor, if we at any time see a number of these crawling up an oak and creeping into the clefts of the bark, we may be assured that in that place there are quantities of these oak pucerons. The ants are so extremely fond of the juices of the tree, when prepared by passing through the body of this animal, that when the puceron has a drop not yet evacuated, but hanging only in part out at the passage, an ant will often seize on it there.

PUCK’, n. s. I Scot, puck ; Goth. puke. A

PUCK’ER. $ sprite among the fairies; an imp, who seems chargeable

with mischievous disarrangements of ladies' work, dress, &c. : hence pucker, a disorderly fold : or from POKE, a bag, which see.

O gentle puck, take this transformed scalp

From off the head of this Athenian swain.

Shakspeare. Turn your cloaks,

Quoth he, for puck is busy in these oaks, And this is fairy ground. Corbet.

I saw an hideous spectre ; his eyes were sunk into his head, his face pale and withered, and his skin puckered up in wrinkles. Spectator.

A ligature above the part wounded is pernicious, as it puckers up the intestines and disorders its situation. Sharp.

PUCKHOLI, or PAXALI, a district to the north of the province of Lahore, situated about 34 of N. lat., and bounded on the west by the Indus. It is very little known beyond the description given of it in the sixteenth century by Abul Fazel. The common but hazardous road from Cashmere to the Indus lies through this district, which is chiefly held by predatory Afghaun tribes.

PUD'DER, n. s., v. n., & v. a. Commonly written POTHER, which see. A tumult ; turbulent and irregular bustle : to make such a bustle : to perplex ; confound.

Let the great gods,

That keep this dreadful pudder o'er our heads, Find out their enemies. Shakspeare. King Lear. What a pudder is made about essences, and how much is all knowledge pestered by the careless use of words ! Locke.

Mathematicians, abstracting their thoughts from names, and setting before their minds the ideas themselves, have avoided a great part of that perplexity, pudderhig and confusion, which has so much hindered knowledge. Id.

He that will improve every matter of fact into a maxim will abound in contrary observations, that can be of no other use but to perplex and pruider him. id.

PUD’DING, n. s. ˆ Fr. boudin ; Welsh pot’

PUD’DINGPIES, >ten (an intestine) Swed.

PUD’DINGTIME. jpuding; Span, pudln. A

kind of food variously compounded, but made

commonly of meal and suitable admixtures : it

seems to owe its name to being originally cooked

in the integuments of animals : a pudding pie

is a pudding containing meat : pudding time,

dinner time : hence, by a construction natural

enough, any critical time.

He’ll yield the crow a pudding one of these days ; the king has killed his heart. Shakspeare. Henry V. As sure as his guts are made of puddings.

Shakspeare.

Some cry the covenant, instead Of puddingpies and gingerbread. Hudibrat.

Mars that still protects the stout, In puddlngtimtt came to his aid. Id.

Sallads, and eggs, and lighter fare Tune the Italian spark’s guitar ; And, if I take Dan Congreve right, Pudding and beef make Britons fight. Prior. Mind neither good nor bad, nor right nor wrong, But eat your pudding, slave, and hold your tongue.

Prior.

PUD’DLE, n. s. & v. a.) Latin puteolus.

PUD’DLY, adv. } Skinner ; from old

Bavarian poll, dirt, Junius ; Ital. padula. A

small muddy lake ; a dirty plash : to plash ; be

mired ; the adverb corresponding.

As if I saw my sun-shine in a puddled water, I cried out of nothing but Mopsa. Sidney.

Thou didst drink

The stale of horses, and the gilded puddle Which beasts would cough at. Shakspeare.

His beard they singed off with brand of fire, And, ever as it biased, they threw on him Great pails of puddkd mire to quench the hair. Id. Limy, or thick puddly water killeth them.

Caret/;.

The Hebrews drink of the well-head, the Greeks of the stream, and the Latins of the puddle. Hall.

Treading where the treacherous puddle lay, His heels flew up ; and on the grassy floor He fell, besmeared with filth. Dryden's Virgil.

The noblest blood of Africk Runs in my veins, a purer stream than thine ; For, though derived from the same source, thy current Is puddled and defiled with tyranny. Dryden.

A physician cured madmen thus : they were tied to a stake, and then set in a puddle, till brought to their wits. L'Estrange.

Happy was the man, who was sent on an errand to the most remote streeet, which he performed with the greatest alacrity, ran through every puddle, and took care to return covered with dirt. Addison.

PU'DENCY, n.s. Lat. pudens. Modesty; shamefacedness.

A pudency so rosy, the sweet view on't Might well have warm'd old Saturn.

Shaksjjeare.

PUEBLA, or PUEBLA DE LOS ANGELOS (because, as we shall see, the angels were materially concerned in the erection of the capital), is one of the twelve intendencies into which Mexico or the former ' New Spain' is divided. It has a coast of about seventy-eight miles towards the Pacific; and, as it extends from 16►► 57' to 20►► 40' of N. lat., is wholly situated within the tropics. It is bounded on the north-east by Vera

Cruz, on the east by the intendancy of Oaxaca, on the south by the Ocean, and on the west by Mexico. Its greatest length from the mouth of the small river Tecoyame to near Mexitlan is 118 leagues, and its greatest breadth from Te-chuacan to Mecameca is 150 miles. Thegreater part of this province is traversed by the high Cordilleras of Anahuac. Beyond 18►► of latitude the whole country is a plain, eminently fertile in wheat, maize, agave, and fruits, and from 5900 to 6560 feet above the level of the sea. Here is the most elevated mountain of New Spain, the Popocatepetl. The volcano, first measured by Humboldt, is continually burning ; but for these several centuries it ha ; thrown nothing up from its crater but smoke and ashes. It is nearly 2000 feet higher than the most elevated summit of the old continent ; and there is only one higher mountain in the American continent. The population is uu-equally distributed, being concentrated on the plain which extends from the eastern declivity of the snowy Andes to the environs of Perote, especially between Cholula, La Puebla, and Tlascala. Almost the whole country, from the central table-land towards San Luis and Ygua-lapa, near the South Sea coast, is desert; but not ill adapted for sugar, cotton, and other productions of the tropics. The table-land of La Puebla exhibits vestiges of ancient Mexican civilisation. The great pyramid of Cholula is a curious monument.

‘ We left La Puebla on the 22d of March, and slept at San Martin,’ says Mr. Ward, the latest traveller in these regions, ‘ taking the road through Cholula to that place, in order to obtain a better view of the old Mexican Teocalli, or pyramid, of which Humboldt’s work contains so detailed a description. The base of this pyramid comprises a square of about 1 773 feet ; the height is fifty-four metres, or 177 feet. It is truncated, and, on the spacious platform in which it terminates, the conquerors have erected a chapel as if to mark the substitution of another creed, and another race, for the nation by whose united exertions this stupendous monument must have been raised. The whole mass is formed of alternate layers of unburnt bricks and clay, and is now overgrown with thick shrubs, amongst which clouds of

tortolas (a small wood pigeon) are found. Its structure is said by baron Humboldt to present a curious analogy with that of the temple of Belus at Babylon, and of the pyramids of Egypt. Its ob-ject was undoubtedly religious, but as its construction is ascribed to the Toltecs, a nation which preceded the Aztecs in their emigration towards the south, the exact nature of the rites to which it was dedicated can only be conjectured. It may have served for the performance of human sacrifices in the sight of the assembled tribe ; or as a place of defence in the event of an unexpected attack : ••• perhaps the two objects were combined, for, in the siege of Mexico, the most obstinate resistance was made in the vicinity of the great temple (which resembled in form, though not in size, the Teocallis of Cholula and Teotihuacen), from the summit of which the priests are said to have encouraged the warriors by whom the great staircase and platform were defended.

‘ The view from the pyramid of Cholula embraces the three great volcanoes, and the Malinche, with a finely cultivated country covering the intervening space. The town of Cholula lies immediately below the platform, reduced, like the rival state of Tlascala, which is separated from it by the Malinche, to a mere shadow of its former greatness ; but still indicating, by the size of its plaza, the extent of ground which the city formerly covered. The fertility of the plain around is very great, as from the vicinity of the two great mountains, Popocatepetl and Istaccihuatl, a constant supply of water for irrigation can be obtained ; it abounds in haciendas de trigo (corn estates), many of which, in good years, are said to produce wheat in the proportion of eighty to one to the seed. This fertility terminates a little beyond San Martin, where the passage of the mountains, that separate La Puebla from Mexico, commences.’

The progress of commerce has in this province been extremely slow. The flour trade, formerly very nourishing, has suffered from the enormous price of carriage from the Mexican table-land to the Havannah, and especially from the want of beasts of burden. That which Puebla carried on till 1710 with Peru, in hats and delf-ware, has entirely ceased. The intendancy has considerable salt-works near Chila, Xicotlan, and Ocotlan, in the district of Chiautla, as also near Zapotitlan. The beautiful marble known by the name of the Puebla marble is procured in the quarries of Totamehuacan and Tecali, at two and seven leagues distance from the capital. The indigenous inhabitants speak three languages, very different from each other, i. e. the Mexican, Totonac, and Tlapanec. Their industry is not much directed to the working of the mines, many of which are either abandoned or very partially worked. The population of Puebla was

estimated, in 1803, at 813,300 inhabitants. The ex-tent of surface is 2696 square leagues, which allows 301 inhabitants to each square league.

PUEBLA, LA, DE LOS ANGELOS, a city of Mexico, the capital of the intendancy of this name, is one of the number of American towns founded by European colonists ; for, in the plain of Acaxete or Cuitlaxcoapan, on the spot where this capital now stands, there were only, in the beginning of the sixteenth century, a few huts inhabited by the Indians of Cholula. The privilege of the town of Puebla is dated 28th September, 1531.

La Puebla stands on a plain 7381 feet above the level of the sea, and is, after Mexico, Guanaxuato, and the Havannah, the most considerable city of the former Spanish colonies. Its temples are sumptuous; and its streets wide, and drawn in a straight line from east to west, and from north to south. The public squares are large and handsome, and the edifices in a suitable style of architecture. The principal square is adorned on three sides with uniform porticoes, and shops filled with all kinds of commodities ; on the other is the cathedral, which has a very beautiful front, and two lofty towers.

‘ We remained,’ says Mr. Ward, ‘ during the

whole of the 22d at La Puebla, as the governor, whose hospitality and friendly disposition towards every Englishman of respectability who visits the town I have ever found the same, would not hear of our passing a shorter time with him than we had done at Jalapa with general Barragan. The delay afforded us an opportunity of seeing the cathedral, a magnificent building, in the construction of which the angels themselves are said to have taken a very active part. It is regarded by the Indians, and by a large proportion of the female Spanish population, as a well authenticated fact, that, during the time that the walls of the edifice were constructing, two messengers from heaven descended every night, and added to their height exactly as much as had been raised, by the united efforts of the laborers, during

the day. With such assistance the work advanced at a prodigious rate, and was brought to a conclusion in a much shorter space of time than could have been effected by human exertions alone. It is in grateful commemoration of this event that the name of the town, ‘ La Puebla de los Angelos,’ was assumed ; and as all the details of it are recorded with singular care in the convents, which have since been built upon this favored spot, there is little danger of their not being handed down to posterity, in all the purity in which they are now preserved.

‘ But, whether of divine or human origin, the cathedral is a very fine building, and the riches of the interior are worthy of a country that has produced, during the last two centuries, nearly two-thirds of the whole of the silver raised annually in the world. The lofty candlesticks, the balustrade, the lamps, and all the ornaments of the principal altar, are of massy silver ; and the effect produced by such magnificence, in conjunction with the beauty of the columns of native marble by which the roof is supported, is very striking. We were not, however, allowed to admire them long in peace, for, notwithstanding the presence of Madame Calderon, and two or three aides-de-camp of the governor, the curiosity excited by the first appearance of an English woman was so ungovernable that the great market-place, through which the carriage had passed, transferred in a moment by far the largest portion of its inmates to the cathedral, where the crowd soon became so great that, although no incivility was intended, it was quite impossible for us to remain. La Puebla contained, at that time, a Lazzaroni population nearly as numerous as that of the capital ; a naked and offensive race, whom you cannot approach without pollution, or even behold without disgust. I do not know any thing in nature more hideous than an old Indian woman, with all the deformities of her person displayed, as they usually are, by a dress which hardly covers a tenth part of her body ; and in La Puebla, in consequence of the numerous convents in which alms were distributed, these objects were particularly numerous. We were too happy to escape by a different .door from that by which ‘.ve had entered, and to take refuge in the carriage.’

Besides the cathedral, there are other churches

and convents, well built and adorned. There are also several colleges and charity schools, both for male and female pupils. Puebla was formerly celebrated for its fine manufactories of delf-ware and pots. At present the delf manufactories have declined, on account of the low price of the stoneware and porcelain imported at Vera Cruz. Hard

soap is still a considerable manufacture and object of commerce: it is also famous for its manufactures of iron and steel, particularly swords and bayonets.

Mr. Ward says ‘ La Puebla was formerly a town inferior only to the capital in extent and population. It contains at present about 60,000 inhabitants, and is an important place, as being the seat both of the richest bishopric in the country, and of the most extensive manufactures of cotton, earthenware, and wool. The streets, like those of Mexico, are rectangular, spacious, and airy. The houses low, but roomy, and the apartments mostly paved with porcelain, and adorned with Fresco paintings on the stuccoed walls. The country around is rich, but naked, being totally devoid of trees, with the exception of the Final, a pine forest (as the name implies), which extends from within a league and a half of Nopaluca, to about five leagues from the gates of La Puebla, where cultivation recommences. The whole distance is about twelve leagues. The road through the Final is extremely bar], and dangerous in unsettled times, the forest being the favorite haunt of banditti, who sometimes assemble there in considerable numbers for a coup de main.’ Seventy miles E. S. E. of Mexico, and 150 W.N. W. of Vera Cruz. Inhabitants 67,800.

PUENTE DEL ARCOBISPO, or ARCHBISHOP’S BRIDGE, a town in the west of Spain, on the Tagus, fifty-eight miles W. S.W. of Toledo. Population 1200. The name is derived from an old bridge over the riTer.

PUENTE DE DON GONZALO, a town of Cor-dova, Spain, belonging in part to the duke of Medina Celi. Population 4800. Fifteen miles west of Lucena.

PU’ERILE, adj. \ Fr. puerile ; Lat. pueri—

PUERIL’ITY, n. s. $ Us. Childish; boyish: state or time of boyhood ; childishness.

A reserve of puerility not shaken off from school.

Brou.ne.

Some men, imagining themselves possessed with a divine fury, often fall into toys and trifles, which arj only puerilities. Drijden.

I looked upon the mansion with a veneration mixt with a pleasure that represented her to me in thos : puerile amusements. Pope.

PUERPERAL FEVER. See MIDWIFERY.

PUERTO DEL BAYLIO BUCARELI, a bay on the west coast of the Prince of Wales's archipelago, discovered by Quadra in 1775, and containing a great number of small islands. Long. 226►► 12' to 227►► 5' E., lat. 55►► 14' to 55►► 40' N.

PUERTO DE BAZAN, a bay on the south-we-a coast, of the above archipelago. Long. 227►► 16' E., lat. 54►► 49' N.

PUERTO CORDOVA, a bay on the east coast of Prince William's Sound, between Hawkins's Is-land and the north-west coast of America. Long. 214►► 13' E., lat. 60►► 37* N.

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PUERTO CORDOVA Y CORDOVA, a large bay of the North Pacific, on the south side of the Prince of Wales's archipelago. Long. 227►► 28' to 228►► E., lat. 54►► 42' to 55►► 6' N.

PUERTO GRAVINA, an inlet on the north-western coast of America, in Prince William's Sound. For four miles it runs parallel to the neighbouring inlet of Port Fidalgo, and the intervening land is not more than four miles across. It then suddenly turns to the N. N. E. for about four miles and a half, when it terminates in a shallow flat in long. 214►► 45' E., lat. 60►► 44' N. At its entrance it is from four to six miles wide.

PUERTO REAL, an increasing town in the south-west of Spain, in Seville, five miles east of Cadiz, on the bay. The streets are airy, clean, and straight. At the beginning of last century it had not more than 1500 inhabitants : it now contains more than 10,000. This is the great depot of the salt made in the tanks that of the isle of Leon and bay of Cadiz.

PUERTO DE SANTA MARIA, or ST. MARY'S, the Portus Menesthei of the ancients, a sea-port of Spain, in Seville, five miles north-east of Cadiz, at the mouth of the Guadalete. The climate is excellent, having little either of the severity of cold in winter, or the scorching heat of summer, and the town is well built, well paved, and kept very clean. The Calle Ancha is about a mile in length, and resembles a superior English street in the number of shops and bustle. On the west side of

the town there is a very fine prospect of the bay and town of Cadiz, and the surrounding country. The church and monasteries are chiefly remarkable for a profusion of ornaments. The public walk is fine ; and there is a beautiful public garden on the bank of the Guadalete. The quay is also well contrived, but large ships cannot come up, on account of sand-banks at the mouth of the river. The only manufacture of consequence is linen and printed cotton, but the inhabitants are still more in pre- -aring the bay-salt of the adjoining salt-pans. Here is also a traffic in the conveyance of water from one of the fountains to Cadiz, for the sup-ply of the town and ships. St. Mary's is the residence of the captain-general and vicar-gene- ral of Andalusia, and of an official of the archbishop of Castile. Inhabitants 1 2,000.

PU'ET, re. s., or PEV/ET, which see. A kind of water fowl.

Among the first sort are coots, sanderlings and pewets. Carew.

The fish have enemies enough ; as otters, the cormorant, and the puet. Walton s Angler.

PUFF, n. s., v.n. &v. a.~) Belg. pof; Span. PUF'FINGLY, adv. >poufo, bufo; French

PUF'FY, adj. J bouffe ; Scot, buffie :

and there is an oriental puf (Pers.). and Sans. pu, wind ; all clearly words derived from the sound of wind blown from the mouth. A blast of wind through the lips ; a small blast of wind ; any thing light or porous ; or any thing used to sprinkle light dust with, as hair-powder, &c. : to puff is to blow in the way described : hence to swell the cheeks with wind ; breathe thick or hard ; swell with wind or air ; move with hurry or tumult (which produces puffing) ; sneer at; treat with scorn, or as light and trifling : as a verb

active to inflate ; drive or agitate; swell or elate with pride; the adjective and adverb follow these senses.

Think not of men above that which is written, that no one of you be puffed up one against another.

1 Corinthians iv. 6. His looke like a coxcomb up puffed with pride.

Ttisser.

Wherefore do you follow her, Like foggy South puffing with wind and rain 1

Shakspeare. Seldshown flamming

Do press among the popular throngs, and puff" To win a vulgar station. Id. Cnriolanus.

Have I not heard the sea, puffed up with winds, Rage like an angry boar chafed with sweat 1

ShakB/ieare.

This army, led by a tender prince, Whose spirit, with divine ambition pufft, Makes mouths at the invisible event. Id.

The Rosemary, in the days of Henry VII. with a sudden puff of wind stooped her side, and took in water at her ports in such abundance, as that she instantly sunk. Raleigh.

The attendants of courts engage them in quarrels of jurisdiction, being truly parasiti curiae, in puffing a court up beyond her bounds for their own advantage. Bacon.

Then came brave glory puffing by In silks that whistled, who but he 1

He scarce allowed me half an eye. Herbert Let him fall by his own greatness, And puff him up with glory, till it swell And break him. Denham's Siyhy.

The naked breathless body lies, To every puff of wind a slave, At the beck of every wave, That once perhaps was fair, rich, stout, and wise.

Flutman.

A new coal is not to be cast on the nitre, till the detonation be quite ended ; unless the puffing matter blow the coal out of the crucible. Boyle.

A true son of the church Came puffing with his greasy bald-pate choir, And fumbling o'er his beads. D'-yden.

The unerring sun by certain signs declares When the South projects a Stormy day, And when the clearing North will puff the clouds away. Dryden's Virgil's Georgics.

I can enjoy her while she's kind, But when she dances in the wind, And shakes her wings, and will not stay, I puff the prostitute away. Dry den.

An injudicious poet, who aims at loftiness, runs into the swelling puffy stile, because it looks like greatness. Id.

A puff of wind blows off cap and wig. L' 'Estrange.

The ass comes back again, puffing and blowing from the chase. Id.

Flattering of others, and boasting of ourselves, may be referred to lying ; the one to please others, and puˆthem up with self-conceit ; the other to gain more honour than is due to ourselves. Ray.

In garret vile, he with a warming puff Regales chill fingers. Philips.

Some puff at these instances, as being such as were under a different economy of religion, and consequently not directly pertinent to ours. South.

\Vhy must the winds all hold their tongue 1 If they a little breath should raise ;

Would that have spoiled the poet's song, Or puffed away the monarch's praise '(Prim-. Emphysema is a light puffy tumour, easily yielding to the pressure of your fingers, and ariseth again i-; the instant you take them off. Wiseman.

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I have been endeavouring very busily to raise a friendship, which the first breath of any ill-natured by -slander could puff away. Pope.

Who stands safest ? tell me, is it he That spreads and swells in puffed

prosperity 1 Id.

The Phaeacians were so puffed up with their constant felicity, that they thought nothing impossible.

Broome.

Honor’s a puff of noisy breath. Watts.

The pipe, with solemn interposing puff, Makes half a sentence at a time enough ; The dozing sages drop the drowsy strain, Then pause, and puff ††† and speak, and pause again.

Cowper.

PUFFENDORF (Samuel de), an eminent German lawyer, born in 1631 at Fleh, a village of Misnia, in Upper Saxony. He was son of Elias Puffendorf, minister of that place. After acquiring the sciences at Leipsic, he studied the public law, but refused to take the degree of doctor. He accepted the place of governor to the son of Mr. Coyot, then ambassador from Sweden to the court of Denmark. For this purpose he went to Copenhagen, but, the war being renewed soon after between Denmark and Sweden, he was seized with the ambassador’s family. During his confinement, which lasted eight months, as he had no books, he amused himself by meditating on what he had read in Grotius’s Treatise De Jure Belli et Pacis, and on Ilobbes’s political writings. Out of these he drew up a short system, with thoughts of his own, and published it at the Hague in 1660, under the title of Elementa Jurisprudentiae Universalis. The elector Palatine invited him to the university of Heidelberg, where he founded in his favor a professorship of the law of nature and nations, the first of that kind established in Germany. Puffendorf remained at Heidelberg till 1673, when Charles XI. of Sweden invited him to be professor of the law of nature and nations at Lunden ; which he accepted. Some years after the king sent for him to Stockholm, and made him his historiographer, and a counsellor. In 1688 the elector of Brandenburg obtained the king’s consent that he should come to Berlin, to write the history of the elector, William the Great ; and in 1694 made him a baron. He died in 1694, aged sixty-three, of an inflammation in his feet. Of his works, which are numerous, the following are the principal : ††† 1. A Treatise on the Law of Nature and Nations. 2. An Introduction to the History of the principal States in Europe. Both these were written in German, and have been translated into English. The former with Barbeyrac’s Notes. 3. The History of Sweden, from Gustavus Adolphus’s Expedition into

Germany to the Abdication of Queen Christina. 4. The History of Charles Gustavus, 2 vols. folio.

PUFFIN, n. s. Ital puffino. A water fowl.

Among the first sort we reckon the dipchick, murrs, creysers, curlews and puffins. Carew.

PUG, n. s. Sax. pij$a, a girl. Skinner. A kind name of a monkey, or any thing tenderly loved.

Upon setting him down, and calling him puy, 1 found him to be her favourite monkey. Addison.

PUGANTZ, or Baka Banya, a free town, at the foot of a lr.ll, on the north-west of Hungary,

twenty-nine miles east of Neutra, and seventy three E. N. E. of Presburg. Population 2400. It is the seat of a mine-office, connected with mines of gold and silver, inferior only to those of Cremnitz.

PUGET (Peter Paul), one of the greatest painters and sculptors France ever produced, was born at Marseilles in 1623. He was the disciple of Roman, an able sculptor; and went afterwards to Italy, where he studied painting and architecture. In 1657 a dangerous disorder obliged him to renounce the pencil, and devote himself to sculpture ; and, being invited to Paris, he obtained a pension of 1200 crowns, as naval sculptor and director of the works. He died at Marseilles in 1695, and left a number of admirable statues both in France and Italy.

PUG'GERED, adj. For puckered. Crowded ; complicated.

Nor are we to cavil at the red puggered attire of the turkey, and the long excrescency that hangs down over his bill, when he swells with pride.

More n gainst Atheism.

PU'GIL, n. s. Fr, pugille. What is taken up between the thumb and two first fingers.

Take violets, and infuse a good jrugil of them in a quart of vinegar. Bacon's Natural History.

PUGLIA, the ancient Apulia, a large tract on the coast of the Adriatic,

Naples, now forming the provinces of CAPITANATA, BARI, and OTRANTO, which see.

PUGNA'CIOUS, adj. i Lat. pugnax. In—

PUGN A'CIOUSLY, adv. J clinable to fight ; quarrelsome. We find no instance of the use of this word in our standard writers ; but our pugilistic gentlemen, and most of the monkey tribes, furnish illustrations of it.

PUIKA, or POYK, a river of Austrian Illyria, in Carniola, remarkable for the length of its course under ground. Entering a subterraneous cavern at Adelsberg, it finds its way beneath the surface of the earth eight miles to Planina, where it loses itself again almost immediately, and re-appears at a distance of five miles, under the name of the Laybach. The entrance at Adelsburg is in the form of a Gothic vault, and the appearance extremely grand. The noise of the water ceases for some time, as the traveller advances by a glimmering light; and, when he hears it again, the guides are accustomed to light up a straw fire, which shows that he is now arrived at almost impassable precipices, and that he stands on a natural bridge, while the river rolls below at a great distance. The travellers Valvasor and Keysler penetrated to a second bridge, about four miles from the mouth of the cavern, and saw the water eighty or 100 feet below them.

PUrSNE, adj. French puis ne. Commonly spoken and written PUNY, which see. Younger; later in time ; inferior ; subordinate ; small.

A puisne tiller, that spurs his horse but on one side, breaks his staff like a noble goose.

Shakspeare.

When the place of a chief judge becomes vacant, a. puisne judge who hath approved himself deserving, should be preferred. Bacon.

If he undergo any alteration '* must be in time, or of a puisne date to eteruity. Half.

PUIS’SANCE, n. s. I Fr. puissance. Power;

PUIS’SANT, adj. $ strength; force: powerful ; forcible.

PUKE. n. s. & v. n. > Teut. spucker, Vo—

PU’KER, n. s. J rait : hence an emetic ;

to vomit : a puker also means an emetic.

The infant Mewling and puking in the nurse’s arms. Shahspeure.

PULAWSKI, count Joseph; a distinguished Pole, who, after attempting in vain to restore the independence of his own country, entered the American service. Pulawski had followed the profession of the law, and, in 1768, was at the head of the patriots who formed the confederation of Bar. Eight noblemen only constituted the first assembly of that confederation, and of these, three were the sons and one the nephew of Pulawski. In 1771, at the head ot a few accomplices, he seized the person of the king, but the latter having procured his liberation, Pulawski was condemned to death, and obliged to save himself by flight. He soon after came to America, and offered his services to the United States of America against the mother country. Being appointed brigadier-general in the American service, he served both in the northern and the southern army. October 9, 1779, he was mortally wounded in the attack on Savannah, and died two days afterwards.

PUL, or PHUL, the first king of Assyria, upon the division of the empire after the death of Sardanapalus.

PULARUM ISLE, one of the smallest of the Banda Isles, named by early navigators Polaroon, in long. 1 29►► 45’ E., and lat. 5►► 35’ N. The English East India Company obtained possession of it in 1617, but were repeatedly expelled by the Dutch; and it was not until March 1665 that, it was formally delivered up by the Dutch.

PULCHERIA, a daughter of the emperor Ar-cadius, eminent for her virtues. She was mother of Valentinian III., and governed the empire fbt many years. She died A. D. 452, and was interred at Ravenna,

where her tomb is still visible.

PUL'CHRITUDE, n. s. Lat. pulchritudo. Beauty ; grace ; handsomeness ; quality opposite to deformity.

Neither will it agree unto the beauty of animals, wherein there is an approved pulchritude. Browne.

Pulchritude is conveyed by the outward senses unto the soul, but a more intellectual faculty is that which relishes it. More.

That there is a great pulchritude and comeliness ot proportion in the leaves, flowers, and fruits of plants, is attested by the general verdict of mankind.

Ray on the Creation.

By their virtuous behaviour they compensate the hardness of their favour, and by the pulchritude of their souls make up what is wanting in the beauty of their bodies. South.

PULCI (Lewis), an eminent Italian poet, born in Florence in 1431. He wrote a celebrated poem on a tournament held at Florence, in which Lorenzo de Medicis was victor, entitled Giostra de Lorenzo de Medicis. He had two brothers equally devoted to the Muses ; one of whom wrote an elegy, entitled Bernardo, on the death of the great Cosmo de Medicis. Lewis .lied about 1487.

PULE, v. n. Yr.piauler ; Ital. pipilare, of Lat. pipilo. To cry like a chicken ; whine.

To have a wretched puling fool, A whining mammet in her fortune's tender, To answer, I'll not wed.

Shakspeare. Romeo and Juliet. Let the songs be loud and cheerful, and not chirp-ings OT palings ; let the musick likewise be sharp and loud. Bacon.

Weak puling things unable to sustain Their share of labour, and their bread to gain.

Dryden .

When ice covered the water, the child bathed his legs ; and when he began this custom was puling and tender. Locke.

This puling whining harlot rules his reason. And prompts his zeal for Edward's bastard brood.

Roivt.

While yet thou wast a grovelling puling chit, Thy bones not fashioned, and thy joints not knit, The Roman taught thy stubborn knee to bow, Though twice a Caesar could not bendthee now.

Cowper.

PULEX, the flea, in entomology, a genus of insects belonging to the order of aptera. It has two eyes, and six feet fitted for leaping; the feelers are like threads; the rostrum is inflected, setaceous, and armed with a sting ; and the belly is compressed. Fleas bring forth eags, which they deposit on animals that afford them a proper food. Of these eg?s are hatched white worms of a shining pearl color, which feed on the scurfy substance of the cuticle, the downy matter gathered in the piles of clothes, or other similar substances. In a fortnight they come to a tolerable size, and are very lively and active ; and, if at any time disturbed, they suddenly roll themselves into a kind of ball. Soon after this they begin to creep, after the manner of silk worms, with a very swift motion. When arrived at their size, they hide themselves, and spin a silken thread out of their mouth, wherewith they form themselves a small round bag or case. Here, after a fortnight's rest, the animalcule bursts out, transformed into a perfect flea; leaving its exuvis in the bag. While it remains in the bag it is milk-white, till the second day before its eruption ; when it becomes colored, grows hard, and gets strength; so that upon its first delivery it springs nimbly away. The flea is covered all over with black, hard, and shelly scales or plates, which are curiously jointed, and folded over one another in such a manner as to comply with all the nimble motions of the creature. These scales are finely polished, and beset about the edges with short spikes, in a very beautiful and regular order. Its neck is finely arched, and resembles the tail of a lobster : the head also is very extraordinary ; for, from the snout part of it, proceed the two fore legs, and between these is placed the piercer or sucker, with which it penetrates the skin to get its food. Its eyes are very large and beautiful, and it has two short horns or feelers. It has four other legs joined all at the breast. These, when it leaps, fold short, one within another; and then, exerting their spring all at the same instant, they carry the creature tc a surprising distance. The legs have several joints, and are very hairy, and terminate in two long and hooked sharp claws. The piercer or

sucker of the flea is lodged between its for* legs, and includes a couple of darts or lancets : which, after the piercer has made an entrance, are thrust farther into the flesh, to make the blood flow from the adjacent parts, and occasion that round red spot, with a hole in the centre of it, vulgarly called a flea-bite. This piercer, its sheath opening sidewise, and the two lancets within it, are very difficult to be seen ; unless the two fore legs, between which they are hid, be cut off close to the head : for the flea rarely puts out its piercer, except at the time of feeding, but keeps it folded inwards ; and the best way of seeing it is by cutting off first the head and then the forelegs, and then it is usually seen thrust out in convulsions. By keeping fleas in a glass tube corked up at both ends, but so as to admit of fresh air, their several actions may be observed. They may also be thus seen to lay their eggs, not all at once, but ten or twelve in a day, for several days successively; which eggs will be afterwards found to hatch successively in the same order. The flea may easily be dissected in a drop of water; and thus the stomach and bowels, with their peristaltic motion, may be discovered very plainly, as also their testes and penis, with the veins and arteries. This blood-thirsty in-sect, which fattens at the expense of the human species, prefers the more delicate skin of women; but preys neither upon epileptic persons, nor upon the dead or dying. It loves to nestle in the fur of dogs, cats, and rats. The nests of river swallows are sometimes plentifully stored with them. Fleas are apterous ; walk but little, but leap to a height equal to 200 times that of their own body. This amazing motion is performed by means of the elasticity of their feet, the articulations of which are so many springs. Thus it eludes, with surprising agility, the pursuit of the person on whom it riots. See ENTOMOLOGY.

PCJLEX AQUATICUS of some authors, the monoculus pulex of Linnaeus, in entomology, is a species of the genus monoculus. See ENTOMOLOGY.

PULL, v. a. Sin. s. \ Sax. pulhan ; Belg.

PULL'ER, n. s. J op paolen. To draw towards one ; opposed to push ; tear ; rend ; pluck ; draw forcibly ; taking on, off", down, up, &c., before the object : the -act of pulling ; contest ; struggle.

He put forth his hand, and pulled the dove in.

Genesis viii. 9.

Pull them out like sheep for the slaughter, and prepare them for the day of slaughter. Jer. vii. 11.

He hath turned aside my ways, and pulled me in pieces ; he hath made me desolate. Lam. iii. 2.

What they seem to offer us with the one hand, the same with the other they pull back. Hooker.

Duke of Glo'ster, scarce himself;

That bears so shrewd a main ; two pulls at once ; His lady banished, and a limb lopt off. Shakspeare. Shameless Warwick, peace !

Proud setter up and puller down of kings. Id.

Although it was judged in form of a statute that be should be banished, and his whole .estate confiscated, and his houses pulled down, yet his case even then had no great blot of ignominy. Bacon.

He was not so desirous of wars, as without just cause of his own to pvll them upon him. Haytcard.

Ill fortune never crushed that man, whom good fortune deceived not ; I therefore have counselled my friends to place all things she gave them so as she might take them from them, not pull them.

Ben Jonson's Discoveries.

This wrestling pull between Corineus and Gogma-gog is reported to have befallen at Dover. Carew.

In political affairs, as well as mechanical, it is far easier to pull down than build up ; for that structure, which was above ten summers a building, and that by no mean artists, was destroyed in a moment.

Howei's Vocal Forest.

He begs the gods to turn blind fortune's wheel, To raise the wretched, And pull down the proud.

Roscommon. When bounteous Autumn rears his head,

He joys to pull the ripen'd pear. Dryden.

What censure, doubting thus of innate principles, I may deserve from men, who will be apt to call it pulling up the old foundations of knowledge, I cannot tell ; I persuade myself that the way I have pursued, being conformable to truth, lays these foundations surer. Locke.

Flax pulled in the bloom will be whiter and stronger than if let stand till the seed is ripe.

Mortimer.

They may be afraid to pull down miuisters and favourites grown formidable. Davenant.

When God is said to build or pull down, 'tis not to be understood of an house ; God builds and un-builds worlds. Burnet.

I awaked with a violent pull upon the ring, which was fastened at the top of my box. Gulliver.

A boy came in great hurry to pull off my boots.

fwift.

PUL'LET, n. s. French poulet. A young hen.

Brew me a pottle of sack finely. ††† With eggs, Sir ?

††† Simple of itself ; I'll no pullet sperm in my brew-age. Shahtfeare.

They died, not because the pullets would not feed ; but because the devil foresaw their death, he contrived that abstinence in them. Browne.

I felt a hard tumour on the right side, the bigness of a pullet's egg. Wiseman's Surgery.

PUL'LEY, n. s. Fr. poulie ; Ital. poleu ; Gr. TroXtw ? A small grooved wheel turning on a pi-vot or line. Here pullies make the ponderous oak ascend. Gay.

Nine hundred of the strongest men were employed to draw up these cords by many pulleys fastened on the poles, and in three hours I was raised and slung into the engine. Swift.

PULLEY, in mechanics, one of the five mechanical powers. See MECHANICS.

PULLICAT, or VALIACATA, a sea-port on the coast of the Carnatic, twenty-five miles north from Madras. The lake of Pullicat, on which it stands, appears to owe its existence to the sea's breaking through a low sandy beach, and overflowing the lands. Its communications with the sea are extremely narrow. This lake is in extent thirty-three miles from north to south, eleven miles across in the broadest part, and comprehends several large islands. The Dutch established themselves here in 1609, when they built a square fort named Geldria ; to which, after the loss of Negapatam, the chief government of their settlements oa the Coromandel Coast was transferred. Their imports were arrack, sugar, Japan copper, spices, and other articles, brought

from Batavia. In 1795 the British took possession of Pullicat, and it is now comprehended in the northern Arcot collectorship.

PULMANNUS (Theodore), or Poelman, a learned corrector of the sixteenth century, born at Cranenburgh, in the duchy of Cleves, about 1510. He superintended the printing and correcting of the Latin poets from ancient MSS., for the celebrated Plantin's press. He died about

1580.

PULMO, the lungs. See ANATOMY.

PULMONARIA, in botany, lungwort, a genus of the monogynia order, and pentandria class of plants ; natural order forty-first, asperifoliae : COE. funnel-shaped, with its throat pervious : CAL. prismatic and pentagonal. There are several species ; of which the most remarkable is

P. officinalis, common spotted lungwort, or Jerusalem cowslip. This is a native of woods and shady places in Italy and Germany ; but has been cultivated in Britain for medical use. The leaves are of a green color, spotted with white ; and of a mucilaginous taste, without any smell. They are recommended in phthisis, ulcers of the lungs, &c. ; but their virtues in these diseases are not warranted by experience.

PUL'MONARY, adj. \ L&.pulmo. Belong—

PULMON'IC. } ing to the lungs.

An ulcer of the lungs may be a cause of pulmoniclt consumption, or consumption of the lungs.

Harve it.

Often these unhappy sufferers, for want of sufficient vigour and spirit to carry on the animal regimen, drop into a true pulmonary consumption.

Blackmnre.

Cold air, by its immediate contact with the surface of the lungs, is capable of producing defluxions upon the lungs, ulcerations, and all sorts of pulmo-nick consumptions. Arbuthnot.

The force of the air upon the pulmonary artery is but small in respect to that of the heart. Id. '

PULO BALLY, an island in the eastern seas, about two miles round, with abundance of wood and water ; divided from the island of Bachian by a channel five miles wide.

PULO BANIAC ISLE, an island, about twenty-five miles in circumference, on the west coast of Sumatra, between 2►► and 3►► N. lat.

PULO BATU, an island about forty miles off the western coast of Sumatra, called, says Mr. Mars-den, by corruption, Mintaon. It is about forty miles long, and twelve broad", in long. 97►► 56' E., lat. 0►► 20' N.

PULO LAUT, an island in the eastern seas, at the south entrance of the Straits of Macassar, near the south-east coast of Borneo. It is of a triangular form, and about 100 miles in circumference : the chief produce is rice. The channel between this island and Borneo is about two miles broad, less or more, and from seven to eight fathoms deep. It forms a good harbour. Long. 116►► 24' E., lat. 3►► 45' S.

PULO NAKO-NAKO, a cluster of isles in the eastern seas, near the western coast of Nias. Large quantities of cocoa-nut oil are prepared here. They are governed by a rajah, who mo-nopolises the produce.

PULO SANDING, or SANDIAJCG, two islands in the Eastern seas, near the south-eastern extremity

LP, ?*. s. \ TT. pulpe ; l&t.pulpa. Any L'I-OUS, adj. > soft mass ; the soft part of LPY. 3 fruit: soft, pappy.

of the Nassau or Poggy Isles. They are both uninhabited, and the only productionˆ that grow on them worth notice is the long nutmeg, and some timber.

PULO TIMOAN, an island of the eastern seas, inhabited by a short race of Malays. Byron found them, in the year 1765, a surly set of people, who came down to the beach in great numbers, having a long knife in one hand, a spear headed with iron in the other, and a dagger by their side. They went on shore however ; but all they could procure was about a dozen fowls, and a goat and kid, in exchange for some pocket-handkerchiefs. The island is hilly and woody.

PULO VARELLA, an island in the Straits of Malacca, about twenty miles from the north-east coast of Sumatra. It is chiefly resorted to by the piratical inhabitants of the neighbouring islands. Long. 99►► 36' E., lat. 3►► 47' N.

PULO WAY, a Spice Island in the eastern seas, about nine miles west of Gorong Apee, is nearly circular, and about a mile and a half in diameter. It has a strong fort, and is esteemed healthy. Long. 130►►

26’ E., lat. 4[illegible] 9’ S.

PULP, M. s.

PUX-I

PULPY. } fruit: soft, pappy.

The jaw bones have no marrow severed, but a lit-little pulp marrow diffused.

Bacon’s Natural Hixtory. The savoury pulp they chew, and in the rind, Still as they thirsted, scoop the brimming stream.

Milton.

In the walnut and plums is a thick pulpy covering, then a hard shell, within which is the seed.

Ray on the Creation. The grub

Oft unobserved invades the vital core, Pernicious tenant, and her secret cave Enlarges hourly, preying on the pulp Ceaseless. Philips.

The redstreak’s pulpoits fruit With gold irradiate, and vermilion shines. Id. Putrefaction destroys the specifick difference of one vegetable from anothef , converting them into a pulpy substance of an animal nature. Arbuthnot.

The PULP of fruits, in pharmacy, is extracted by infusion or boiling, and passed through a sieve.

PUL’PIT, 7i. s. Fr. pulpitre ; Lat. pulpitum ; Ital., Span., and Port., pidpito. A raised place where a speaker stands.

Produce his body to the market-place, And in the pulpit, as becomes a friend, Speak in the order of his funeral. Shakspeare. Their late patron of famous memory (as their dear relique), enshrined in their La Flesche, was, after his death, in their pulpits proclaimed tyrant and worse. Bp. Hall.

We see on our theatres the examples of vice rewarded, yet it ought not to be an argument against the art, any more than the impieties of the pulpit in the late rebellion. Dryden.

Sir Roger has given a handsome pulpit cloth, and railed in the communion-table. Addison.

Bishops were not wont to preach out of the pulpic.

Ayliffe.

Pulpits their sacred satyr learned’to spare. And vice admired to find a flatt’rer there.

PULPH L/M, in the Grecian and Roman theatres, a place where the players performed their parts. It was lower than the scena, and higher than the orchestra.

PULPITUM was also a moveable desk or pulpit, from which disputants pronounced their dissertations, and authors recited their works.

PULSE’, n.s. From pull. Leguminous plants. Plants not reaped, but pulled or plucked.

With Elijah he partook, Or as guest with Daniel at his pulse.

Milton.

Mortals, from your fellows’ blood abstain ! While corn and pulse by nature are bestowed. ###

Dry den.

Tares are as advantageous to land as other pulses.

Mortimer.

~i Fr. pouls ; Span. >pulso ; Lat.

PUL’SE, n.s. & v. n.

PULSA’TION, n. s. ˆpulso ; Lat. putsus.

PUL’SION. J The vibratory motion

of the blood in an artery ; oscillation ; vibration : to beat as the pulse : pulsation is the vibratory stroke of the pulse ; any stroke beating against something opposing: pulsion is, the act of driving forward a fluid, as opposed to suction or traction.

Think you I bear the shears of destiny 1

Have I commandment on the pulse of life ?

Shakspeare.

These commotions of the mind and body oppress the heart, whereby it is choaked and obstructed m its pulsation. Harvey.

The prosperity of the neighbour kingdoms is not inferior to that of this, which, according to the pulse of states, is a great diminution of their health.

Clarendon.

This original of the left vein was thus contrived, to avoid the pulsation of the great artery. Browne.

Admit it might use the motion of pulsion, yet it could never that of attraction.

More’s Divine Dialogues. My body is from all diseases free ; My temp’rate pulse does regularly beat.

Dryden.

The heart, when separated wholly from the body in some animals, continues still to pulse for a considerable time. Ruy.

The vibrations or pulses of this medium, that they may cause the alternate fits of easy transmission and easy reflection, must be swifter than light, and by consequence above seven hundred thousand times swifter than sounds. Newton.

If one drop of blood remain in the heart at every pulse, those, m many pulses, will grow to a considerable mass. Arbuthnot.

By attraction we do not here understand what is improperly called so, in the operations of drawing, sucking, and pumping, which is really pvlsion and trusion. Bentley.

PULSE, in physiology. See PHYSIOLOGY and MEDICINE.

PULTKNEY (William), the celebrated opposer of Sir Robert Walpole, and afterward earl of Bath, was descended from one of the most ancient families in the kingdom, and was born in 1682. He estrly procured a seat in the house of commons, and distinguished himself against queen Anne's ministry. When king George I. came to the throne, he was made secretary at war; but the friendship between him and Sir Robert Walpole, the premier, was interrupted in 1725, by a suspicion that Walpole wished to

promote the interests of Hanover, to the prejudice of Great Britain. His opposition to Sir Robert was indeed carried to the most indiscriminate length. At last, in 1731, the king with his own hand struck out his name from the list of privy counsellors. But he still continued to attack the minister with a severity of eloquence aud sarcasm that worsted every antagonist; and Sir Robert was known to say, he dreaded his tongue more than another man's sword. At length, when Walpole resigned in 1741, Mr. Pulteney was restored to his place in the privy council, and was created earl of Bath ; a title purchased at the expense of his popularity. In 1760, in the close of the war, he published A Letter to two Great Men, recommending certain articles to be insisted on in a treaty of peace ; which, though the writer was then unknown, was greatly applauded, and went through several impressions. He died in 1764.

PULTENEY (Richard), M.D., was born at Loughborough in 1730. He became a surgeon and apothecary at Leicester, whence he communicated some papers on the sleep of plants, and the rare productions of Leicestershire, to the Royal Society, of which he was elected a member in 1762. Two years after he took his doctor's degree at Edinburgh, and went to settle at Bland-ford in Dorsetshire, where he died, October 1 3th, 1801. Dr. Pulteney published A General View of the Writings of Linnaeus, 4to. ; and Sketches of the Progress of Botany in England, 2 vols. 8vo. He left his museum to the Linnaean Society.

PULTUSK, or PULTOVSK, a celebrated town of Poland, on the Narew, thirty-four miles N. N. E. of Warsaw. It is the residence of the bishop of Plock, and has a Benedictine abbey and gymnasium. The Saxons were defeated here by the Swedes in 1703 ; and an important engagement took place here between the French and Russians, on 26th December, 1806. Population 2100.

PULVERIZE', v. a. \ Yr. pulveriser ; Lat.

PUL'VERABLE, adv. S pulveris. To reduce to powder or dust : possible to be reduced to dust.

If the experiment be carefully made, the whole mixture will shoot into fine crystals, that seem to be of an uniform substance, and are consistent enough to be even brittle, and to endure to be pulverized and sifted. Boyle.

In making the first ink, I could by filtration separate a pretty store of a black pulverable substance that remained in the fire. Id.

'Tis thine to cherish and to feed The pungent nose-refreshing weed : Which, whether pulverised it gain A speedy passage to the brain. Cowper.

PULVERISATION is performed on friable bodies by pounding or beating them in a mortar, &c. ; but, to pulverise malleable ones, other methods must be taken. To pulverise lead, or tin, the method is this : Rub a round wooden box all over the inside with chalk ; pour a little of the melted metal nimbly into the box ; when, shutting the lid, and shaking the box briskly, the metal will be reduced to powder.

PUL'VIL, n.s. ttv. a. Lat. pulvillum. Sweet scents.

Have you pulvilled the coachman and postilion that they may not stink of the stable ? Congreeee

The toilette, nursery of charms, Completely furnished with bright

beauty's arms, The patch, the powder-box, pulvil, perfumes. Gai/.

PUMEX, the pumice-stone, a substance frequently thrown out of volcanoes, very full of pores, in consequence of which it is specifically very light, and resembles the frothy slag produced in our iron furnaces. It is of two colors, black and white ; the former being that which it has when thrown out of the volcano. It is of a rough and porous consistence, being made up of slender fibres parallel to each other, and very light, so that it swims on water. Pumice-stone is used by silversmiths and other mechanics, for rubbing and smoothing the surface of metals, wood, pasteboard, and stones ; for which it is well fitted by its harsh and brittle texture ; thus scouring and carrying off all the inequalities.

Jameson arranges pumice under three species, *viz.* the glassy, common, and porphyritic. 1. Glassy pumice. Color smoke gray. Vesicular. Glistening pearly. Fracture promiscuous fibrous. Translucent. Between hard and semi-hard. Very brittle. Feels rough, sharp, and meagre. Specific gravity 0-378 to 1-44. It occurs in beds in the Lipari Islands.

2. Common pumice. Color nearly white. Vesicular. Glimmering pearly. Fracture fibrous. Translucent on the edges. Semi-hard. Very brittle. Meagre and rough. Specific gravity 0-752 to 0-914. It melts into a gray-colored slag. Its constituents, according to the analysis of Klaproth, silica 77'5, alumina 17-5, natron and potash 3, iron mixed with manganese 1-75. It occurs with the preceding.

3. Porphyritic pumice. Color grayish white. Massive. Minutely porous. Glimmering and pearly. Specific gravity 1-661. It contains crystals of felspar, quartz, and mica. It is associated with claystone, obsidian, pearlstone, and pitchstone porphyry. It occurs in Hungary, at Tokay, &c.

PUM'ICE, n. s. Lat. pumex, pumlcis.

So long I shot, that all was spent, Though pumice stones I hastily bent, And threw ; but nought availed. Spenser. Etna and Vesuvius, which consist upon sulphur, shoot forth smoke, ashes, and pumice, but no water.

Bacon.

Near the Lucrine lake, Steams of sulphur raise a stifling heat, And through the pores of the warm pumice sweat.

Addison.

The pumice is evidently a flag or cinder of some fossil, originally bearing another form, reduced to this state by fire : it is a lax and spungy matter full of little pores and cavities : of a pale, whitish, grey colour : the pumice is found particularly about the burning mountains. Hill's Materia Medica.

PUMP, n. s, v. n., bv.a. (Fr., Belg., and PUMP'ER. S Teut. pompe ;

Dan. pomp ; Gr. iropirat ? A hydraulic engine of extensive use and great variety of construction ; a kind of shoe : to work a pump ; to raise or throw any thing liquid, as by means of a pump : to examine artfully ; suck : a pumper is he who uses the pump literally, or who extracts the contents of another's mind.

Get good strings to your beads, new ribbons to your pumps. Shakrpeare.

Follow me this jest, now, till thou hast wo.- a out thy pump. /<*.

Thalia's ivy shews her prerogative over comical poesy ; her mask, mantle, and pumps, are ornaments belonging to the stage. Peacham.

The folly of him who pumps very laboriously in a ship, yet neglects to stop the leak. Decay of Piety.

In the framing that great ship built by Hiero, Athenxus mentions this instrument as being instead of a pump, by the help of which one man might easily drain out the water, though very deep.

Wilkiim's Deedalut.

The one's the learned knight, seek out, And pump them what they come about. Hudibras.

Ask him what passes

Amongst his brethren, he'll hide nothing from you , But pump not me for politics.

Otu'ay's Venice Preserved.

A pump grown dry will yield no water, unless you pour a little water into it first. More.

The flame lasted about two minutes, from the time the pumper began to draw out air. Boyle.

Pumps may be made single with a common pump handle, for one man to work them, or double for two.

Mortimer.

Not finding sufficient room, it breaks a vessel to force its passage, and. rushing through a larger chasm, overflows the cavities about it with a deluge, which is pumped up and emptied. Blackmore.

The water and sweat Splish splash in their pumps.

Swift's Miscellanies.

As an impartial traveller I must however tell, that in Stow-street, where I left a draw well, I have found a pump. Johnson.

PUMPS. For the theory and construction of a great variety of these useful machines, see HYDROSTATICS and HYDRAULICS, vol. xi. p. 511 to 523.

PUMPS, AIR. See AIR-PUMPS and PNEUMATICS, Index.

PUM'PION, n. s. Lat. pepo. A plant.

We'll use this gross watery pumpion, and teach him to know turtles from jays. Shakspeare.

PUMPION, or PUMKIN. See CUCURBITA.

PUN, n. s. & v. n. Johnson seems rather punning when he says, ' to pun is to grind or beat with a pestle; can pun mean an empty sound, like that of a mortar beaten, as clench, the old word for pun, seems only a corruption of clink?' Qu. Lat. punctum ? A quibble ; double meaning, or equivocation ; play on a word or words : to use a pun ; quibble.

The hand and head were never lost of those Who dealt in doggrel, or who punned in prose.

You would be a better man, if you could pun like Sir Tristram. Tutler.

It is not the word but the figure that appears on the medal : cuniculus may stand for a rabbit or a mine, but the picture of a rabbit is not the picture of a mine : a pun can be no more engraven than it can be

translated. Addison.

But fill their purse, our poet's work is done, Alike to them by pathos, or by pun. Pope.

PUNA, a rich city of Peru, in the province of Paucarolla, on the Lake Chucuito or Titicaca. It has a beautiful church for the whites, and another for the Indians ; but has suffered much by an insurrection of the Indians. The silver ores in the neighbourhood are rich ; but the mines filled with water. Fourteen miles north-west of Chucuito. Long. 70►► 26' W., lat. 16►► 20' S.

PUN 2

PUXA, a woody island, district, and city of South America. The island is situated at the mouth of the Guayaquil, is between six and seven leagues long, and about the same in breadth, and was once populous, containing 20,000 Indians. It was famous in the history of the conquest of Peru. The port of Puna serves for the lading place of large ships, which cannot get over the bar to Guayaquil ; the island abounds in mangrove trees. The city is poor, and decayed. The port is eight leagues from the city. Long. 70►► 58' W., lat. 2►► 50* S.

PUNCH, n. s. As some have thought of Lat. potus nauticus. Mr. Thomson suggests Sans, and Hind, punchiene, of pun, punna, a beverage, and cheene, ' which signifies both Chinese and sugar.' See Fryer, quoted below. A liquor made of spirits, sugar, water, lemons, &c. : the only wholesome ingredient, says Cheyne, being the water.

The West India dry gripes are occasioned by lime juice in punch. Arbuthnot on Aliments.

No brute can endure the taste of strong liquor, and consequently it is against all the rules of hieroglyph to assign those animals as patrons of punch.

Swift.

Punch is an Indian word expressing the number of ingredients. Fryer's Travels.

PUN'CH, n. s. Ital. puncinello. The buffoon or harlequin of a puppetshow.

Of raree-shows he sung, and punch's feats. Gay.

PUNCH, v,a. & n. s. j Fr. poinˆonner ;

PUN'CHEON, n. s. > Span, poison, pun—

PUXCH'ER. j zon, of Lat. puncto.

To cut a hole ; bore, or perforate with a sharp instrument : a puncheon and puncher are names for the instrument used : puncheon is also a liquid measure of eighty gallons.

When I was mortal my anointed body

By thee was punched full of deadly holes.

Shakspeare.

He granted liberty of coining to certain cities and abbies, allowing them one staple and two puncheons at a rate. Camden.

The fly may, with the hollow and sharp tube of her womb, punch and perforate the skin of the eruca, and cast her eggs into her body. Ray.

The shank of a key the punch cannot strike, because the shank is not forged with substance sufficient ; but the drill cuts a true round hole.

Moxon's Mechanical Exercises.

In the upper jaw are five teeth before, not incisors or cutters, but thick punchers. Grew.

By reason of its constitution it continued open, as I have seen a hole punched in leather. Wiseman.

A PUNCH is an instrument of iron or steel, used in several arts, for tne piercing or stamping holes in plates of metals, &c., being so contrived as not only to perforate, but to cut out and take away the piece.

A PUNCHEON, PUNCHIN, or PUNCHION, is a little block or piece of steel, on one end of which is some figure, letter, or mark, engraven either en creux or relievo, impressions whereof are taken on metal, &c., by striking it with a ham-mer on the end not engraved. There are various kinds of these puncheons used in the mechanical arts. Puncheon is also a common name for all those iron instruments used by stone-cutters, sculptors, blacksmiths, &c.. for the cutting, in-

;1 PUN

ciding. or piercing their several matters. Those of sculptors and statuaries serve for the repairing of statues when taken out of the moulds. The locksmiths use the greatest variety of puncheons; some for piercing hot, others for piercing cold ; some flat, some square, some round, others oval, each to pierce holes of its respective figure iri the several parts of locks.

PUNCTILIO, n.s.) Lat. ptmctulum. Nice—

PUNCTIL'IOUS, . > ty of behaviour; a nice—

PUNCTIL'IOUSNESS. 3 ness or exact point: punctilious, nice; exact; fastidious; superstitiously particular : the noun substantive corresponding.

If their cause is bad, they use delays to tire out their adversaries, they feign pleas to gain time for themselves, and insist on punctilwn in his proceedings.

Kettlewell.

Common people are much astonished when they hear of those solemn contests which are made among the great, upon the punctilios of a public ceremony.

Addison.

Some depend on a punctilious observance of divine laws, which they hope will atone for the habitual transgression of the rest. Rogers's Sermon*.

Punctilio is out of door the moment a daughter clandestinely quits her father's house. Clarissa.

PUNC'TO, n. s. Span, punto. Nice point of ceremony ; the point in fencing.

Vat be all you come for ?

❖❖❖ To see thee here, to see thee there, to see thee pass thy puncto.

Shakspeare. Merry Wives of Windsor.

The final conquest of Granada from the Moors, king Ferdinando displayed in his letters, with all the particularities and religious punctos and ceremonies that were observed in the reception of that city and kingdom. Boom's Henry Vll.

PUNCTUAL, adj. -\ Fr. punctuel. Com-PUNCTUAL'ITY, n. s. f prised, or consisting PUNCTUALLY, adv. t in a point : exact ; PUNC'TUALNESS, n. s. J nice ; scrupulous : the adverb and noun substantives corresponding.

A gentleman punctual of his word, when he had heard that two had agreed upon a meeting, and the one neglected his hour, would say of him, he is a young man then. Bacon.

For the encouragement of those that hereafter should serve other princes with that punctuality as Sophronio had done, he commanded him to offer him a blank, wherein he might set down his own condi ††† tions. Howel's Vocal Forest.

This earth a spot, a grain,

An atom with the firmament compared.

And all her numbered stars, that seem to rowl

Spaces incomprehensible ; for such

Their distance argues, and their swift return

Diurnal, merely to officiate light

Round this opacous earth, this punctual spot.

Milton.

This mistake to avoid, we must observe the punctual differences of time, and so distinguish thereof, as not to confound or lose the one in the other.

Browne's Vulgar Errours.

His memory was serviceable, but not officious ; faithful to things and business, but unwillingly retaining the contexture and punctualities of the words.

Fell.

Concerning the heavenly bodies, there is so much exactness in their motions, that they punctually come to the same periods to the hundredth part of a mi-nute. R’□□u “n the Creatiitt.

Though some of these punctualities did not so much conduce to preserve the text, yet all of them shew the infinite care that was taken that there might be no mistake in a single letter. Grew-.

I freely bring what Moses hath related to the test, comparing it with things as now they stand ; and, finding his account to be punctually true, I fairly declare what I find. Woodward.

The correspondence of the death and sufferings of our Lord is so punctual and exact, that they seem rather like a history of events past, than a prophecy of such as were to come. Rogers.

He was punctual and just in all his dealings.

Atterbury.

The most literal translation of the scriptures, in the most natural signification of the words, is generally the best ; and the same punctualness which de-baseth other writings, preserveth the spirit and majesty of the sacred text. Felton.

PUNCTUATION, n.s. Lat. punctum. The act or method of pointing a book or writing.

It ought to do it willingly, without being forced to it by any change in the words or punctuation.

Addison.

PUNCTUATION, in grammar, the art of pointing, or of dividing a discourse into periods, by points expressing the pauses to be made therein. The ancients were not entirely unacquainted with punctuation. Suidas says that the period and colon were discovered and explained by Thrasymachus, about A.A.C. 380; and Cicero says that Thrasymachus was the first who studied oratorical numbers, which consisted in the artificial structure of periods and colons. It appears from a passage in Aristotle that it was known in his time. Dr. Edward Barnard says it consisted in the different positions of one single point. At the bottom of a letter, thus (A.), it was equivalent to a comma; in the middle, thus (A.), to a colon; at the top (A'), it denoted a full period. Cicero, Quintilian, Seneca, Suetonius, ˆLlius Donatus, and St. Jerome, all mention that the Romans, as well as the Greeks, made use of points. Peculiar marks, however, were used in different ages. Of these marks of distinction, the Walcote inscription, found near Bath, may serve for a specimen ⬛⬛⬛

IVLIVSv VITALISv FABRI CESISv LEGv XXv Vv V STIPENDIORVMv &c.

After every word here, except at the end of a line, we see this mark v. There is an inscription in Montfaucon, which has a capital letter laid in an horizontal position, by way of interstitial mark. Our punctuation appears to have been introduced with the art of printing. In the fourteenth century no stops were used but arbitrary marks here and there. In the fifteenth century, we observe their first appearance. We find, from the books of this age, that they were not all produced at the same time ; those we meet with in use first being only the comma, the parenthesis,, the interrogation, and the full point. To these succeeded the colon, afterwards the semicolon, and, lastly, the note of admiration. The hyphen, the parenthesis, and quotation marks, are also a species of punctuation.

PUNCTL'LATE, v. a. Lat. punctulum. To matk with small spots.

The studs have their surface punclulaled, as 'f set all over with other studs infinitely lesser.

Woodward.

PUNCTUM STANS, a phrase by which the schoolmen vainly attempted to bring within the reach of human comprehension the positive eternity of God. Those subtle reasoners seem to have discovered that

nothing which is made up of parts, whether continuous or discreet, can be absolutely infinite, and that therefore eternity cannot consist of a boundless series of successive moments. Yet, as if such a series had always existed and were commensurate in duration with the Supreme Being, they compared his eternity to one of the moments which compose the flux of time arrested in its course ; and to this eternal moment they gave the name of punctum stans, because it was supposed to stand still, while the rest followed each other in succession, all vanishing as soon as they appeared.

PUNC'TURE, n.s. Lat. punctus. A small prick ; a hole made with a sharp point.

With the loadstone of Laurentius Guascus, whatsoever needles or bodies were touched, the wounds and punctures made thereby were never felt.

Browne's Vulgar Errours.

Nerves may be wounded by scission or punctures : the former way being cut through, they are irrecoverable ; but when pricked by a sharp-pointed weapon, which kind of wound is called a puncture, they are much to be regarded. Wiseman.

PUNDA, or PUNDV, a town of Hindostan, province of Bejapore, formerly belonging to the Mahrattas. Long. 74 3' E., lat. 15 20' N. There is another place of this name in the Northern Circars. Long. 84 40' E., lat. 18 14' N.

PUNDERPOOR, or PUNDEPORE, a town of the province of Bejapore, Hindostan, on the left bank of the Beemal. It is not large, but regular and well built, and has a handsome temple dedicated to Vishnu.

PUNDITS, or PANDITS, learned Brahmins devoted to the study of the Shanscrit language, and to the ancient sciences, laws, and religion of Hindostan.

PUN'GENT, adj. \ Lat. pungens. PrickPUN'GENCY, n. s. S ing ; acrid ; sharp : pungency is, power of pricking, or piercing ; keen-ness ; acridness.

An opinion of the successful ness of the work is as necessary to found a purpose of undertaking it, as the authority of commands, the persuasiveness of promises, pungency of menaces, or prospect of mischiefs upon neglect can be. Hammond.

The latter happening not only upon the pungent exigencies of present or impending judgments, but in ths common service of the church. Fell.

When he hath considered the force and pungency of these expressions applied to the fathers of that Ni-cene synod by the western bishops, he may abate his rage towards me. Still ingfleet.

1 1 consists chiefly of a sharp and pungent manner of speech ; but partly in a facetious way of jesting.

Dry den.

Do not the sharp and pungent tastes of acids arise from the strong attraction, whereby the acid particles rush upon and agitate the particles of the tongue 1

Newton's Optic*.

Any substance, which by its pungency can wound the worms will kill them, as steel and hartshorn. /□□□ Arbuthnot

Just where the breath of life his nostrils drew, □□□A charge of snuff the wily virgin threw ; The gnomes direct to every atom just, The pungent grains of titillating dust. Pope.

Thou canst set him on the rack, Inclose him in a wooden tower, With pungent pains on every side ; So Regulus in torments died.

Swift's Miscellanies.

PUNIC WARS. See CARTHAGE. PUNICA, the pomegranate tree, a genus of the monogynia order and icosandria class of plants ; natural

order thirty-sixth, pomacese : CAL. quinquefid superior; petals five; fruit a multilocular and polyspermous apple. 1. P. gra-nata, the common pomegranate, rises with a free stem, branching numerously all the way from the bottom, growing eighteen or twenty feet high ; with spear-shaped, narrow, opposite leaves; and the branches terminated by the most beautiful and large red flowers, succeeded by large roundish fruit as big as an orange, having a hard rind filled with soft pulp and numerous seeds. There is a variety with double flowers, remarkably beautiful ; and one with striped flowers.

2. P. anan, the dwarf American pomegranate, rises with a shrubby stem branching four or five feet high, with narrow short leaves and small red flowers, succeeded by small fruit; begins flower-ng in June, and continues till October. Both these species are propagated by layers : the young branches are to be chosen for this purpose, and autumn is the proper time for laying them. Those of the common sort may be trained either as half or full standards, or as dwarfs. But those designed for walls must be managed as directed for peaches. The dried flowers of the double-flowered pomegranate are possessed of an astringent quality; for which reason they are recommended in diarrhoeas, dysenteries, &c., where astringent medicines are proper. The rind of the fruit is also a strong astringent, and as such is occasionally made use of.

PUN'ISH, v. a. ~\ Lat. punio ; Fr. punis PUNISHABLE, adj. I sable, punition. To chas-PUN'ISHER, n. s. I ten ; afflict with penal-PUN'ISHMENT, (ties for a crime ; avenge

PUNI'TION, j or revenge with death :

PU'NITIVE, adv.) punishable, worthy of o-demanding punishment : punisher, he who inflicts it : punishment and punition, the penalty of crime : punitive, awarding or inflicting that penalty.

If you will not hearken I will punish you seven times more for your sins. Leviticus, xxvi. 18.

The house of endless pain is built thereby, In which ten thousand sorts of punishments The cursed creatures do eternally torment.

Spenser.

Theft is naturally punishable, but the kind of punishment is positive, and such lawful, as men shall think with discretion convenient to appoint.

Hooker.

Unless it were a bloody murtherer, I never gave them condign punishment.

Shakspeare.

Neither is the cylinder charged with sin, whether God or men, nor any punitive law enacted by ††† i her against its rolling down the hill.

Hammond’s Fundamentals.

He that doubts whether or no he should honour his parents, wants not reason, but punishment.

Holy day.

Their bribery is less punishable when bribery opened the door by which they entered, Taylor.

Will he draw out, For anger s sake, finite to infinite In punished man 1

This knows my punisher ; therefore as far From granting me, as I from begging peace.

Milton,

A greater power Now ruled him, punished in the shape he sinned.

Dry den.

Say, foolish one ††† can that unbodied fame, For which thou barterest health and happiness, Say, can it soothe the slumbers of the grave ††† Give a new zest to bliss, or chase the pangs Of everlasting punishment condign 1 Kirke White. PUNISHMENT OF CRIMES. Dr. Paley was the last, and we believe will be the final author of any celebrity, who will be found to vindicate the general spirit of our criminal jurisprudence, in which the punishment has been any thing but the prevention of crimes. It has been constructed upon no general system of legislation. Sometimes the magistrate is clothed with a species of vindictive justice, which it seems doubtful, at least, if ever the Supreme Being delegated to any creature ; at other times he is the minister of a particular order of men, a particular caste, or class ; as in the administration, for instance, of the appal-ling enactments of the game laws : again he feebly endeavours at the legitimate, perhaps

only, end of human legislation, the prevention of crimes, by punishments which, if they effected their object, are wholly dispropor tioned to the offence. It seems indeed to have been forgotten that the infliction of some kinds of punishment may in itself constitute a crime. Again, it has been forgotten that it is one thing to enact a law, and another to give it operation. The moral feelings will come into exercise among a people like our own, and predominate occasionally, and even steadily, beyond the force of attachment to any human institution. An ostensible and real equity will therefore be demanded in a body of laws, devolving on such a people to execute.

Dr. Paley, as Sir Samuel Romily has remarked, himself enumerates the several aggravations which ought to guide the magistrate in the selection of objects of condign punishment; and mentions principally three ??? repetition, cruelty, and combination ; which aggravations, Sir Samuel remarks, are as capable of being clearly and accurately described in written laws, and as proper to be submitted to the decision of a jury, as the crimes themselves. But Paley proceeds to say, that, 'by this expedient (meaning the multiplication of capital punishments), few actually suffer death, whilst the dread and dan-ger of it hangs over the crimes of many ;' and then that, ' the wisdom and humanity of this design furnish a just excuse for the multiplicity of capital offences, which the laws of England are accused of cieating, beyond those of other countries.' We may oppose to this extraordinary reasoning, the sagacious and sound observation of the marquis Beccaria, that, where the

consequences of crimes are problematical, additional force is rather given to the passions. With respect to the second remark of Dr. Paley, above noticed, it is impossible not to be surprised, with Sir Samuel Romilly, that, in this mode of administering the law, an apology should be found for the great number of our statutes creating capital

offences ; for certainly ‘ one would have imagined that one advantage of such a system, by which it is left to those who exercise the law to discriminate, and to find out the circumstances which are to characterize, to extenuate, or to aggravate offences, would be, that the laws, being extremely general, might be few in number, and simple and concise in their enactments. Were we to frame laws which should distinguish accurately the general character of different offences, and enumerate all the peculiar aggravations with which they might be attended, and should leave unforeseen and unnoticed no human action which was dangerous by its example, or heinous in its circumstances, we might, indeed, have a good excuse to offer for the multiplicity of our penal laws.’

One remark more from Sir Samuel Romilly. ††† The power of suspending the laws by granting pardons is exclusively in the king, and it is a prerogative of a very transcendental character. But in the exercise of that discretion, with which, in judicial practice, at least, the judge is invested in dispensing justice on his circuit, he is made the depositary of the royal clemency ; he administers the law; he suspends its execution. Still, however, it is through the king alone that lenity after sentence can reach the case of the prisoner. It must happen, therefore, that ‘ the convicts pardoned, so much exceeding in number those against whom the law is suffered to take its course, and the few who are executed, not the many who are pardoned, appearing to form the exceptions to a general rule, this prerogative assumes, in practice, an aspect of severity, not of mercy, and the crown seems to single out its victims for punishment, not to se-lect the objects to whom it should extend its clemency.’

On the practical consequences of this system we have not room to dwell : they are well stated in Mr. Buxton’s speech on the bill for mitigat-ing the criminal law, 23d May, 1821. Juries will not convict ; but, to save the criminal from the law they are sworn to administer, resort to the most palpable contradiction. We select an instance or two at random.

; Mary Whiting was indicted for stealing seven guineas and 34s., in the house of John Sun. Verdict, guilty of stealing to the value of 39s.

Jonathan Smith was indicted for stealing ††20 in money in the house of J. Marsh. Guilty of stealing to the value of 39s.

Joseph Court was indicted for stealing eight pairs of gold earrings, value ††3 16s. ; 121 other pairs of ditto, value ††74 10s. 6d.; forty-eight pairs of ditto, value††l2 12s. ; 204 pairsof ditto, value

►►36 9s.; twenty -four pairs of ditto, value ►►6 6s. ; 2488 gold beads, value ►►72 18s ; 864 colored beads, value ►►18 ; 144 pairs of gold earrings, value ►►20 8s. ; three pairs of gold

enamelled bracelets, value ►►‘9 ; eighteen pairs of gold ditto, value ►►ll 7s. 6d.; three small cases’ for bracelets, value 6s.; thirty-six gold seals, value ►►33 12s.; twelve gold lockets, value ►►3; and a parcel of shoes, value 14s. 8d. ; the property of Messrs. Mackenzie and Grey, in a lighter belonging to them on the Thames navigable river. Guilty of stealing to the value of 39s. !’

We can only add that the proposed alterations of Sir Samuel Romilly had in vain been advocated by Sir James Mackintosh and Mr. Bux-ton in parliament, until a distinguished member of the government, Mr. Secretary Peel, adopted in a great measure the views of that enlightend statesman : he has been obliged to leave much that is desirable (the entire subject of forgery, for instance) untouched, but he has done much, and excited the just confidence of the nation that he will not fail shortly to follow up this important subject, and do all that existing and long seated prejudices in high quarters will permit.

PUNK, n. s. Barb. Lat. putanica. A whore ; common prostitute.

She may be a punk ; for many of them are neither maid, widow, nor wife. Shakxpeare.

And made them fight like mad or drunk,

For dame religion as for pun*. Hudibras,

Near these a nursery erects its head,

Where unfledged actors learn to laugh and cry,

Where infant punks their tender voices try.

Dryden.

PUN’STER, n. s. From pun. A quibbler; a low wit.

His mother was cousin to Mr. Swan, gamester and punster of London. Arbuthnot and Pope.

PUNT, v. n. Ital. punto. A point. To play at basset or ombre.

One is for setting up an assembly for basset, where none shall be admitted to punt that have not taken the oaths. Addison.

When a duke to Jansen punts at White's, Or city heir in mortgage melts away, Satan himself feels tar less joy than they.

Pope.

PU'NY, adj. & n. *. Fr. puis ne. Young ; inferior; petty; an inexperienced person.

Is not the king's name forty thousand names 1 Arm, arm, my name ; a puny subject strikes At thy great glory. Shakspeare's Richard III.

Drive

The puny habitants ; or, if not drive, Seduce them to our party. Milton.

Jove at their head ascending from the sea, A shoal of puny powers attend his way. Dryden.

PUPA, in entomology, a term now used by zoologists for that state of insects formerly called aurelia, and chrysalis. See CHRYSALIS, and ENTOMOLOGY.

PUPIENAS (M. Claudius Maximus), a man of an obscure family, the son of a blacksmith, who, by his merit, raised himself to the highest offices in the Roman armies; and became successively a pretor, consul, prefect of Rome, and a governor of a province. On the death of Gordian I. and II., he was elected emperor together with Balbinus by the senate ; but, his colleague and he disagreeing, the pretorian guards murdered them both, A D. 326.

PUP

PU'PIL, n. s. lta.1. papilla ; Lat. pupula. The apple of the eye.

Looking in a glass, when you shut one eye, the pupil of the other, that is open, dilateth.

Bacon's Natural History.

The uvea has a musculous power, and can dilate and contract that round hole in it called the pupil of toe eye. More.

The rays, which enter the eye at several parts of the pupil, have several obliquities to the glasses.

Newton's Opticks.

PU'PIL, n. s. ~\ Fr. pupille ; Lat. pupillus—

PU'PILAGE, >A scholar; a ward: one

PU'PILARY, adj. j under the care of a tutor,

or guardian : pupilage, the state of being under

such care : pupilary, pertaining to a ward or

pupil.

Three sons he dying left, all under age, By means whereof their uncle Vortigern Usurp'd the crown during their pupilage; Which the infants' tutors gathering to fear, Them closely into Armorick did bear. Spenser. My master sues to her, and she hath taught her

suitor, He being her pupil, to become her tutor.

Shakspeare.

One of my father's servants, With store of tears, this treason 'gan unfold, And said my guardian would his pupil kill.

Fairfax.

Tutors should behave reverently before their pu-pils. L'Estrunge.

The severity of the father's brow, whilst they are under the discipline of pupilage, should be relaxed as fast as their age, discretion, and good behaviour allow. Id.

So some weak shoot, which else would poorly rise, Jove's tree adopts, and lifts him to the skies ; Through the new pupil soft'ning juices flow, Thrust forth the gems, and give the flow'rs to blow.

rjl. 7 ,

1 ickel.

PUPIL, in the civil law, a boy or girl not yet arrived at tbe age of puberty ; i. e. the boy under fourteen years, the girl under twelve.

PUPIL, in anatomy, a little aperture in the middle of the uvea and the iris of the eye, through which the rays of light pass to the crystalline humor, in order to be painted on the re-tina, and cause vision. See ANATOMY.

PUP'PET, n. s. } Fr. poupie ; Ital. puppa ; PUP'PETMAN, > Lat. pupus. A small wooden PUP'PETSHOW. 5 image ; a doll ; a wooden tragedian : puppetman is the master of a pup-pet or puppetshow.

Once Zelmane could not stir, but that, as if they had been puppets whose motion stood only upon her pleasure, Basilius with seviceable steps, Gynecia with greedy eyes, would follow her. Sidney.

Oh excellent motion ! oh exceeding puppet !

fihakspeare.

Divers of them did keep in their houses certain things made of cotton wool, in the manner of puppets. Abbot.

Tim, you have a taste 1 know, And often see a puppetshow. Swift.

Why is a handsome wife adored By every coxcomb but her lord 1 From yonder puppetman enquire, Who wisely hides his wood and wire. Id.

PUPPY, n. s. Fr. poupie ; Lat. pupus. A whelp ; progeny of a bitch ; a name of contempt for a fop or pert young person.

PUR

He ,,,.

Talks as familiarly of roaring lions, As maids of thirteen do of puppy dogs.

Shakspeare.

I found my place taken up by an ill-bred awkward puppy, with a money bag under each arm.

Addison.

Nature does the puppy's eyelid close, Till the bright sun has nine times set and rose.

Gay.

PURBACH (George), a German astronomer, born at the village of Purbach, in 1423. He studied philosophy, divinity, and astronomy, at Vienna, and paid particular attention to the lat-ter. He composed Astronomical Tables, and invented several mathematical instruments. He also translated Ptolemy's Almagests, and published several tracts of his own. He died in

1462.

PUR'BLIND, adj. From poreblind, which is still used in Scotland ; pore and blind. Near-sighted ; shortsighted.

Tis known to several

Of head piece extraordinary ; lower messes,

Perchance, are to this business purblind.

Shakspeare. Purblind man

Sees but a part o' the chain, the nearest links ; His eyes not carrying to that equal beam, That poises all above. Dryden and Lee's Oedipus.

PURCELL (Henry), a celebrated master of music. He was made organist to Westminster Abbey in the end of the reign of Charles II. His principal works have been published under the title of Orpheus Britannicus. He died in 1695, aged thirty-seven; and was interred in Westminster Abbey, where he has a monument.

PURCHAS (Samuel), an English divine, celebrated as the compiler of a valuable collection of voyages, was born in 1577, at Thackstead in Essex. After studying at Cambridge, he obtained the vicarage of Eastwood in Essex ; but, leaving that cure to his brother, he settled in London, to carry on :the great work in which he was engaged. He published the first volume in folio in 1613, and the last four twelve years after, under the title of Purchas his Pilgrimage, or Relations of the World, and the Religions observed in all ages and places. Meanwhile he was made rector of St. Martin's, Ludgate, in London, and chaplain to Dr. Abbot, archbishop of Canterbury. His Pilgrimage, and Hack-luyt's Voyages, led the way to other collections of that kind, and have been justly esteemed. But unhappily by his publishing he involved himself in debt. He died about 1628.

PUR’CHASE, v. a. & n. s. \ Fr. pourchasser.

PUR’CHASEABLE, adj. ►► To acquire; ob—

PUR’CHASER, n. s. j tain at any expense of labor, danger, &c. ; to buy for a price : purchaseable, that may be purchased or bought: purchaser, he who makes a purchase; a buyer.

His sons buried him in tbe cave which Abraham purchased of the sons of Heth. Genesis xxv.

I will be deaf to pleading and excuses, Nor tears nor prayers shall purchase out abuses ; Therefore use none. Shakspeare.

Upon one only alienation and change, the pvr chaser is to pass both licence, fine, and recovery.

Bacon

PURIFICA’TION, PU’EIFIER, PU’RIFY, v. a.,&v. n. PU’RITY, n. s.

A world who would not purchase with a bruise ?

Milton.

Money being the counterbalance to all things pur-chasable by it, as much as you take off from the value of money, so much you add to the price of things exchanged for it. Locke.

Most of the old statues may be well supposed to have been cheaper to their first owners, than they are to a modern purchaser. Addison.

Our thriving dean has purchased land ; A purchase which will bring him clear Above his rent four pounds a year. Swift.

PURE, adj. ~) French pur, pure ;

PURE'LY, adv. Belg. puer ; Italian,

PURE'NESS, n. ►►. Span, and Port, puro ;

>Lat. puna. Clean ; clear ; unmingled ;

free ; incorrupt ; chaste ; mere : hence morally or ritually clean ; holy ; guiltless : the adverb and noun substantive corresponding : purification, the act of cleansing or making pure : purifier, he who performs it : to purify, to make clear, clean, guiltless, free from guilt or corruption : purity is synonymous with pureness.

All of them were pure, and killed the passover.

Ezr

Who can say, I have made my heart clean, I am pure from my sin? Proverbs xx. 9.

I will purely purge away thy dross, and take away all thy tin. Isaiah.

As oft as I read those comedies, so oft doth sound in mine ear the pure fine talk of Rome. Ascham.

Thou purest stone, whose pureness doth present My purest mind. Sidney.

Could I come to her with any detection in my hand, I could drive her then from the ward of her purity, her reputation, and her marriage vow.

Shakspeare.

An essence eternal and spiritual, of absolute pureness and simplicity. Raleigh.

If any bad blood should be left in the kingdom, an honourable foreign war will vent or purify it.

Bacon's Henry VII.

Water is the symbol of purification of the soul from sin, and bread and

wine of Christ's body and blood ; therefore the symbols receive the names of what they sign. Taylor.

The lord of the castle was a young man of spirit, but had lately, out of pure weariness of the fatigue, and having spent most of his money, left the king.

Clarendon.

Hypocrites austerely talk, Defaming as impure what God declares Pure, and commands to some, leaves free to all.

Milton.

My love was such,

It could, though he supplied no fuel, burn ; Rich in itself, like elemental fire, Whose pureness does no aliment require.

Dryden.

If God gives grace, knowledge will not stay long behind ; since it is the same spirit and principle that purifies the heart, and clarifies the understanding.

South's Sermons. Her urn Pours streams select and purity of waters. Prior.

Upon the particular observations on the metallick and mineral bodies, I have not founded any thing v-ut what purely and immediately concerns the natural history of those bodies. Woodward. Death sets us safely on shore in our long expected

Canaan, where there are no temptations, no danger of falling, but eternal purity and immortal joys secure our innocence and happiness for ever.

WaJte

Her guiltless glory just Britannia draws From pure religion, and impartial laws. Tickel. I converse in full freedom with men of both parties ; and, if not in equal number, it is purely accidental, as having made acquaintance more under one ministry than another. Swift.

Pure and mixt, when applied to bodies, are much akin to simple and

compound ; so a guinea is pure gold, if it has in it no alloy. Watts's Logick.

From the body's purity, the mind Receives a secret aid. Thomson.

Hope, as an anchor firm and sure, holds fast The Christian vessel, and defies the blast. Hope ! nothing else can nourish and secure His new-born virtues, and preserve him pure.

Cowper.

PURTILE, n. s. Fr. pourfilee. A sort of ancient trimming for women's gowns.

A goodly lady clad in scarlet red, Purfted with gold and pearl of rich assay.

Spenser.

Emrold tuffs, flowers, purfled blue and white. Like saphire, pearl, in rich embroidery, Buckled below fair knighthood's bending knee.

Shakspeare.

Iris there with humid bow Waters the odorous banks that blow, Flowers of more mingled hue Than her purfted scarf can shew. Milton. In velvet white as snow the troop was gowned, Their hoods and sleeves the same, and purjled o'er With diamonds. Dryden.

PURFLEET, a village of England, in Essex, on the north bank of the Thames, famous for its extensive lime-works. It has also a large magazine of Gunpowder. It is four miles west of Grays, and nineteen east of London.

PURGE, v. a., v. n., & n. s. \ Fr. purger ; PURGA'TION, n. s. f Lat.pwrgo. To

PUR'GATIVE, adj. ►► cleanse; clari—

PUR'GATOKY, n. s. J fy ; scour ; evacuate the body; clear from guilt or charge: purgation is the act of purging in any way : purgative, having the power to purge or evacuate ; cathartic : purgatory, a place which the Romanists suppos^ to be devoted in the other world to cleansing men from impurities.

I will purge out from among you the rebels.

Ezek. xx. 38.

The blood of Christ [shall] purge our conscience from dead works to serve God. Heb. ix. 14.

Thou thy folk through pains of purgatory, Dost bear unto thy bliss. Spenser's Hymn on Love.

If any man doubt, let him put me to my purgation

Shakspeare.

To the English court assemble now From ev'ry region apes of idleness ; Now neighbour confines purge you of your scum. Id.

He, I accuse,

Intends t'appcar before the people, hoping To purge himself with words. Id.

This shall make t Our purpose necessary, and not envious ;

We shall be called purgers, not murtherers. Id. Sir Philip Calthrop purged John Drakes, the shoemaker of Norwich, of the proud humour.

Camden.

"" Purging medicines have their purgative virtue in a fine spirit, they endure not boiling without loss of virtue. Id.

Marquis Dorset was hasting towards him, to purge himself of some accusation. Id. Henry VII.

It is of good use in physick, if you can retain the purging virtue, and

take away the unpleasant taste of the purger. Bacon.

All that is filled, and all that which doth fill, All the round world to man is but a pill ; In all it works not, but it is in all Poisonous, or purgative, or cordial. Donne.

Simplicity and integrity in the inward parts may vurge out every prejudice and passion.

Decav of Piety.

‘ A certain monk saw some souls roasted upon spits like pigs, and some devils basting them with scalding lard ; but a while after they were carried to a cool place, and so proved purgatory. Bp. Taylor.

In this age there may be as great instances produced of real charity as when men thought to get souls out of purgatory. Stilting ‘fleet.

Pills, not laxatives, I like ;

Of these his gain the sharp physician makes,

And often gives a purge, but seldom takes.

Dryden.

We do not suppose the separation finished, before the purgation of the air began. Burnet.

Syphax, we’ll join our cares to purge away

Our country’s crimes, and clear her reputation.

Addison.

Air ventilates and cools the mines, and purge* and frees them from mineral exhalations.

Woodward.

He was no great friend to purging and clysters ; he was for mixing aloes with all purges. Arbuthnot. Lenient purgatives evacuate the humours. Wiseman.

PURGATION, in law, signifies the clearing a person’s self of a crime of which he is suspected and accused before a judge. This purgation is either canonical or vulgar. Canonical purgation is prescribed by the

canon law, and the form thereof in the spiritual court is usually thus : The person thus suspected takes his oath that he is innocent of the crime charged against him ; and at the same time brings some of his neighbours to make oath that they believe he swears truly. Vulgar purgation was anciently by fire and water, or else by combat, and was practised here till abolished by our laws.

PURGATION, in medicine, is an excretory mo-tion arising from a quick and orderly contraction of the fleshy fibres of the stomacli and intestines, whereby the chyle, corrupted humors, and excrements lodged therein, are protruded further, and at length quite excluded the body by stool.

PURGATORY is a place in which the just, after death, are supposed by the Roman Catholics to expiate certain offences which do not merit eternal damnation. Broughton has endeavoured to prove that this notion has been held by Pagans, Jews, and Mahometans, as well as by Christians ; and that in the days of the Maccabees the Jews believed that sin might be expiated by sacrifice, after the death of the sinner, cannot be questioned. Much abuse has been poured upon the church of Rome for her doctrine of purgatory, and many false representations have been made of the doctrine. The following view of it is taken from a work which is considered as a standard by the British Catholics : 1 . Every sin,

how slight soever, though no more than an idle word, as it is an offence to God, deserves punishment from him, and will be punished by him hereafter, if not cancelled by repentance here. 2. Such small sins do not deserve eternal punishment. 3. Few depart this life so pure as to be totally exempt from spots of this nature, and from every kind of debt due to God's justice. 4. Therefore few will escape without suffering something from his justice for such debts as they have carried with them out of this world ; according to that rule of divine justice, by which he treats every soul hereafter according to its works, and according to the state in which he finds it in death. From these propositions, which the Papist considers as so many self-evi- dent truths, he infers that there must be some third place of punishment ; for, since the infinite goodness of God can admit nothing into heaven which is not clean and pure from all sin both great and small ; and his infinite justice can permit none to receive the reward of bliss, who as yet are not out of debt, but have something in justice to suffer : there must of necessity be some place or state where souls departing this life, pardoned as to the eternal guilt or pain, yet obnoxious to some

temporal penalty, or with the guilt of some venial faults, are purged and purified before their admittance into heaven. Such is the Popish doctrine of purgatory.

PURIFICATION is a ceremony which consists in cleansing any thing from a supposed defile-ment. The Pagans, before they sacrificed, usually washed themselves in water ; and they were particularly careful to wash their hands, because with these they were to touch the victims consecrated to the gods. They likewise washed the vessels with which they made their libations. The Mahometans also use purifications previous to prayer; which are of two kinds, bathing, or washing the face, hands, and feet. The first is required only in extraordinary cases, as after having lain with a woman, touched a dead body, &c. But where water cannot be had, or when it may be of prejudice to a person's health, they are allowed to use fine sand, or dust, by clapping their open hands on the sand, and passing them over the parts, in the same manner as if they were dipped in water. There were also many legal purifications among the Hebrews. When a woman was brought to bed of a male child, she was esteemed impure for forty days ; and when of a female, for sixty : at the end 01 which time she carried a lamb to the door of the temple to be offered for a burnt-offering, and a young pigeon or turtle for a sin-offering ; and after this ceremony she was declared pure.

PURIM, or the Feast of Lots, a solemn festival of the Jews, instituted in memory of the deliverance they received, by means of Mordecai and Esther, from Haman's wicked attempt to destroy them.

PU'RITAN, n. s. \ From pure. A name

PUHITAN'ICAL, adj. > originally given to the

PU'RITANISM, n.s. j Dissenters of England,

from the great professions of purity in their

creed and practice : puritanical is relating to, or

resembling, the puritans : puritanism, their reli

gious systems or opinions.

The schism which the papists on the one hand, and the superstition which the puritans on the other, lay to our charge, are very justly chargeable upon themselves. Sanderson.

Such guides set over the several congregations will misteach them, by instilling into them puritanical and superstitious principles, that they may the more securely exercise their presbyterian tyranny.

Walton.

A serious and impartial examination of the grounds, as well of popery as puritanism, according to that measure of understanding God hath afforded me. Id.

PURITAN was a name formerly given in derision to the dissenters from the church of England, on account of their profession to follow the pure word of God, in opposition to all traditions and human constitutions. It was likewise given in the primitive church to the Novation schismatics, because they would never admit to communion any one who from dread of death had apostatised from the faith. See NOVA—

TJAXS.

PURL, n. s. & v. a. Supposed by Minsheu to be contracted from purfle. An embroidered and puckered border : to decorate with embroidery.

Himself came in next after a triumphant chariot made of carnation velvet, enriched with purl and pearl. Sidney.

The jagging of pinks is like the inequality of oak leaves ; but they seldom have any small purls.

Bacon. When was old Sherewood’s head more quaintly

curled, Or nature’s c adle more enchased and purled ?

Ben Jonson.

PURL, v. n. Swed. porln. To murmur. ††† Lye. To murmur ; to flow with a gentle noise. Tones are not so apt to procure sleep, as some other sounds ; as the wind, the purling of water, and humming of bees. Bacon.

All fish from sea or shoie Freshet, or purling brook, or shell or fin.

Milton.

My flow'ry theme,

A painted mistress, or a purling stream. Pope. Around the adjoining brook, that purls along The vocal grove, now fretting o'er a rock. Thomson.

PUR'LIEU, n. s. Form PURL, a border. The grounds on the border of a forest ; border ; enclosure ; district.

In the purlieus of this forest stands A sheepcote, fenced about with olive trees.

Shakspeare.

Such civil matters fall within the purlieus of religion. L'Estrange.

To understand all the purlieus of this place, ana to illustrate this subject, I must venture myself into the haunts of beauty and gallantry. Spectator.

He may be left to rot among thieves m some stinking jail, merely for mistaking the purlieus of the laws.

Swift.

PURLIEU, in law, signifies all that ground near any forest which, being made forest by king Henry II. Richard I. and king John, was afterwards by perambulations and grants of Henry III. severed again from the same, and made purlieu; that is to say, pure and free from the laws of the forest. The word is derived from the French pur, pure, and lieu, place.

PURLOIN', v. a. Of doubtful etymology. Skinner deduces it from French pour and lam-Mr.. Lye from Saxon punllouhnan, to lie hid. To

steal ; to take by theft.

Not purloining, but shewing all good fidelity.

Titus ii. 10.

He, that brave steed there finding ready dight, Purloined both steed and spear, and ran away full light. Spenter.

They, not content like felons to purloin, Add treason to it, and debase the coin.

Denham.

The Arimaspian by stealth Had, from his wakeful custody, purloined ‘The guarded gold. Milton.

Some writers make all ladies purloined, And knights pursuing like a whirlwind.

Hudibras.

When did the muse from Fletcher scenes purloin, As thou whole Eth’ridge dost transfuse to thine1?

Dryden.

It may seem hard to see publick purloiners sit upon the lives of the little ones, that go to the gallows.

L’ Estrange.

Your butler purloins your liquor, and the brewer sells your hogwash.

Arbuthnot’s History of John Bull. Prometheus once this chain purloined, Dissolved, and into money coined. Su-ift.

PURNEAH, a district forming the north-west division of Bengal. It is extremely fertile and well watered, producing remarkably fine cattle. It exports a great quantity of clarified butter, and is also celebrated for its sugar and indigo. The cattle are much used in the army, and for agricultural purposes : the northern mountains also produce valuable timber, which is cut in the hot weather, and afterwards floated down the rivers. It is supposed to contain nearly 1 ,500,000 of inhabitants, about one-third of whom are Mahometans. In 1722 the nabob Sief Khan, a friend of Cooly Jaffier Khan, was governor of Purneah, and had permission to conquer from the bordering rajahs as much territory

as he could, which wa►► to be exempt from any increase of revenue to the state. He made therefore very considerable additions to the district ; and, while other parts of Bengal were overrun by the Mahrattas, Purneah continued in a state of tranquillity and prosperity. In May 1760 Khadem Hussein, then in possession of this district, endeavoured to cut off a British detachment under the command of captain Knox, but after an engagement of six hours was repulsed. On the 25th of June he again encountered the British forces, and was defeated. At the peace this chief was compelled to retire to Oude, from which period Purneah has became a district of Bengal. Its principal towns are Purneah and Tajepore, its former capital was Deocote.

PURNEAH, the capital of the above district, is pleasantly situated on the eastern bank of the Seraw, and carries on a considerable trade. It is the residence of a judge, collector, &c. Long. 88►► 23’ E., lat. 25►► 45’ N.

PUR’PARTY, n. s. French pour and parti. Share ; part in division.

Each of the coparceners had an entire county allotted for her purparty. Davies on Ireland.

PUR’PLE, ►►. a., n. s. & adj. Fr. pourpre ; Lat. purpureus. Red tinctured with blue: a color among the ancients considered as the noblest, and as the regal color : to make purple : the color ; a purple dress.

The poop was beaten gold, Purple the sails, and so perfumed, that Tbe winds were love-sick with ‘em.

Shakspeare.

Whilst your purpled hands do reek and smoak, Fulfil your pleasure. Id.

Julius Cxsar.

Cruel and suddain, hast thou since Purpled thy nail in blood of innocence ?

Donne.

You violets, that first appear, By your pure purple mantles known ; What are you when the rose is blown ?

Wotton.

Not alone, while thou

Visit'st my slumbers nightly ; or when morn Purplet the East. Milton's Paradise Lost.

O'er his lucid arms A vest of military purple flowed Livelier than Melibcean, or the grain Of Sarra, worn by kings and heroes old.

Milton. I could change the color, and make it purplish.

Boyle.

I view a field of blood, And Tyber rolling with a purpk flood.

Dryden.

Aurora had but newly chased the night, And purpled o'er the sky with blushing light.

Id.

May be it has been sometimes thought harsh in those who were born in purple to look into abuses with a stricter eye than their predecessors ; but elected kings are presumed to come upon the foot of reformation. Davenant.

A small oval plate, cut off a flinty pebble, and polished, is prettily variegated with a pale grey, blue, yellow, and purple. Woodward.

Reclining soft in blissful bowers, Purpled sweet with springing flowers. Fenton. Not with more glories in the ethereal plain, The sun first rises o'er the purpled main. Pope.

Their mangled limbs

Crashi g at once, death dyes the purple seas With gore. Thomson's Summer.

PURPLE. See COLOR-MAKING, and DYEING—

PUR'PORT, n. s. & v. a. ˆ Fr. pourporte ;

PUR' POSE, n. s., v. a. & v. n. > of Lat. pro and

PUR'POSELY, adv. J porto. Design ;

tendency of a writing or discourse : to intend : purpose, the intention, design, or thins:, intended ; effect ; consequence ; instance : to purpose as a verb active is, to intend ; design : as a verb neuter to have a design : purposely, by design.

I am purposed, that my mouth shall not transgress.

Psalm xvii.

This is the purpose that is purposed upon the whole earth. Isaiah.

What David did purpose, it was the pleasure of God that Solomon his son should perform. Hooker.

Being the instrument which God hath purposely framed, thereby to work the knowledge of salvation in the hearts of men, what cause is there wherefore it should not be acknowledged a most apt mean ?

Id.

He with troops of horsemen beset the passages of purpose, that, when the army should set forward, he might in the streigrhts, fit for his purpose, set upon Jiem. K* >oUf4.

He quit the house of purpose, that their punishment Might have the freer course.

Shakspeare. King Lear. Change this purpose,

Which being so horrible, so bloody, must Lead on to some foul issue Shakspeare.

It is a purposed thing, and grows by plot, To curb the nobility. Id. Coriolanus.

There was an article against the reception of the rebels, purporting that if any such rebel should be required of the prince confederate, that the prince coafederate should command him to avoid the country.

Bacon's Henry VII.

The ground will be like a wood, which keepeth out the sun, and so continueth the wet, whereby it will never graze to purpose that year. Bacon.

The first purpose to sin opens the gates to Satan.

Bp. Hall.

That kind of certainty which doth not admit of any doubt, may serve us as well to all intents and purposes as that which is infallible. Wilkins.

And I persuade me God hath not permitted His strength again to grow, were not hi&purpose To use him farther yet. Milton's Agonizes.

The whole included race his purposed prey.

Milton.

Oaths were not purposed more than law, To keep the good and just in awe, But to confine the bad and sinful, Like moral cattle in a pinfold. Hudibras.

Their design is a war, whenever they can open it with a prospect of succeeding to purpose. Temple.

They, who are desirous of a name in painting, should read and make observations of such things as they find for their purpose. Dryden' s Dufresnoy.

'Tis common for double-dealers to be taken in their own snares, as for the purpose in the matter of power. L'Estrange.

Such first principles will serve us to very little purpose, and we shall be as much at a loss with, as without them, if they may, by any human power, such as is the will of our teachers, or opinions of our companions, be altered or lost in us. Locke.

That Plato intended nothing less is evident from the whole scope and purport of that dialogue.

Norrit.

He travelled the world, on purpose to converse with the most learned men. Guardian.

St. Austin hath laid down a rule to this very purpose. Burnet.

They in most grave and solemn wise unfolded Matter, which little purported, but words Ranked in right learned phrase. flows.

I have purposely avoided to speak any thing concerning the treatment due to such persons.

Addison.

Doubling my crime, I promise and deceive, ??? Purpose to slay, whilst swearing to forgive.

Prior.

He that would relish success to purpose, should keep his passion cool, and his expectation low.

Collier on Desire.

In composing this discourse, I purposely declined all offensive and displeasing truths. Atterbury.

The vulgar thus through imitation err, As oft the learned by being singular ; So much they scorn the crown, that if the throng, By chance go right, they purposely go wrong.

Pope.

Where men err against this method, it is usually on purpose, and to shew their learning. Swift.

I do this on purpose to give you a more sensible impression of the imperfection of your knowledge.

Watts. S 2

\Vhat the Romans have done is not worth notice, having had little occasion to make use of this art, and what they have of it to purpose being borrowed from Aristotle. Baker.

.PUR'PRISE, n. s. Old Fr. pourpris ; law Lat. purprisum, prensus. A close or enclosure; the whole compass of a manor.

The place of justice is hallowed ; and therefore not only the bench but the foot-pace and precincts, and purprise ought to be preserved without corruption. Bacon's Essays,

PURPURA, in natural history. See MUREX.

PUKPURIC ACID, in chemistry, acidum purpuricum : so called from its fine red color. The excrements of the serpent boa constrictor consist of pure lithic acid. Dr. Prout found that on digesting this substance thus obtained, or from urinary calculi, in dilute nitric acid, an effervescence takes place, and the lithic acid is dissolved, forming a beautiful purple liquid. The excess of nitric acid being neutralised with ammonia, and the whole concentrated by slow evaporation, the color of the solution becomes nf a deeper purple ; and dark red granular crystals, sometimes of a greenish hue externally, soon begin to separate in abundance. These crystals are a compound of ammonia with the acid principle in question. The ammonia \ras displaced by digesting the salt in a solution of caustic potassa, till the red coloi entirely disappeared. This alkaline solution was then gradually dropped into dilute sulphuric acid, which, uniting with the potassa, left the acid principle in a state of purity.

This acid principle is likewise produced from lithic acid by chlorine, and also, but with more difficulty, by iodine. Dr. Prout, the discoverer of this new acid, has, at the suggestion of Dr. Wollaston, called it purpuric acid, because its saline compounds have for the most part a red or purple color.

This acid, as obtained by the preceding process, usually exists in the form of a very fine powder, of a slightly yellowish or cream color ; and when examined with a magnifier, especially under water, appears

to possess a pearly lustre. It has no smell, nor taste. Its specific gravity is considerably above water. It is scarcely soluble in water. One-tenth of a grain, boiled for a considerable time in 1000 grains of water, was not entirely dissolved. The water, however, assumed a purple tint, probably, Dr. Prout thinks, from the formation of a little purpurate of ammonia. Purpuric acid is insoluble in alcohol and ether. The mineral acids dissolve it only when they are concentrated.

PURR, v. a. Teut. murren. To murmur as a cat or leopard ; both words probably from the sound.

Tray fast asleep, and puss a purring, All silent, not a murmur stirring. Fire Side.

PURRURY, a town and district of the province of Gundwanah and Hindostan, the residence of a Burdy chief, who is a tributary of Singrowla rajah. The town is large, but ihe country poor, and largely covered with forests.

PURSE, n. s. &c v. .a. i Fr. bourse ; Italian

Pu RSE'N F.T, ˆ borsa ; barb. Lat bursu;

PURSE'PROUD, adj. t Wei. pivrs. A small

bag in which money is contained : a net closed by a string, like a purse : to put into, or contract as, a purse; purse-proud is, puffed up with riches.

He sent certain of the chief prisoners, richly ap-parelled, with their purses full of money, into the city. Knolles.

She bears the purse too ; she is a region in Guiana, all gold and bounty.

Shakspeare. Merry Wives of Windsor. Thou cried'st,

And didst contract and purse thy brow together, As if thou then had'st shut up in thy brain Some horrible conceit. Id. Othello.

The illiberality of parents, in allowance towards their children, is a harmful error, and makes them base ; acquaints them with shifts ; makes them sort with mean company ; and makes them surfeit more when they come to plenty : and therefore the proof is best when men

keep their authority towards their children, but not their purte. Lord Bacon.

I pursed it up, but little reck'ning made, Till now, that this extremity compelled, I find it true. Milton. \

I am spell-caught by Philidel, And pursed within a net. Dryden.

Conies are taken by pursenets in their burrows.

Mortimer.

1 will give him the thousand pieces, and, to his great surprise, present him with another purse of the same value. Addison.

He was desirous of visiting Trent while the council was sitting ; but the scantiness of his pu-se defeated his curiosity. Johnson.

A PURSER is an officer aboard a man of war, who receives her victuals from the victualler, sees, that it be well stowed, and keeps an account of what he every day delivers to the steward. He also keeps a list of the ship's company, and sets down exactly the day of each man's admission, in order to regulate the quantity of provisions to be delivered out, and that the paymaster or treasurer of the navy may issue out the disbursements, and pay off the men, according to his men.

The purser is charged with the clothes and effects of persons who die on board ; and he sells the same before the mast to the rest of the crew, and is obliged to give a satisfactory account of the same to the executors or administrators of the deceased. It is his duty also to keep a regular slop-book, wherein he is to make distinct and separate entries of the particulars and value of the slop-clothes, bedding, dead men's clothes, &c., issued or supplied to the ship's company.

PUR'SLAIN, n. s. Lat. portulaca. A plant.

The medicaments, proper to diminish the milk, are lettuce, pursfain, and endive. Witenum't Surgery.

PURSUE', v. n. &v.a.^\ Fr. poursuivre ; PIJRSU'ABLE, / Lat. prosequor. To

PURSU'ANT, s follow ; chase ; fol—

PURSI/ER, n. s. i low hostilely ; imi—

PURSUIT'. J tate ; copy : as a

verb active, proceed : to go on : pursuable is that may be pursued : pursuant, done in consequence or prosecution of (a legal term) : pursuer, he or she who follows, particularly with hostility : pursuit, the act of following ; piosecu-tion ; endeavour ; attempt made.

When Abraham heard that his brother was taken captive, he armed his trained servants, and pursued.

Genesis xw. 14.

As righteousness tendeth to life ; so he that pur-tueth evil, pursueth it to his own death. Proverbs. Love like a shadow flies, when substance love pursues ; Pursuing that that flies, and flying what pursues.

Shakspeare. Fled with the rest,

And falling from a hill, he was so bruised, That the pursuers took him. Id. Henry IV.

Like a declining statesman left forlorn To his friends' pity and pursuers' scorn.

Denham.

He concluded with sighs and tears, to conjure them, that they would no more press him to give his conseit to a thing so contrary to his reason, the execution whereof would break his heart, and that they would give over further pursuit of it.

Clarendon. Insatiate to pursue

Vain war with heaven. Milton.

His swift pursuers from heaven's gates discern The advantage, and descending tread us down Thus drooping. Milton's Paradise Lost.

Arm, warriors, arm for fight ! the foe at hand, Whom fled we thought, will save us long pursuit.

Milton.

I have, pursues Carneades, wondered chymists should not consider.. Boyle.

I will pursue This ancient story, whether false or true.

Dry den.

This means they long proposed, but little gained, Yet, after much pursuit, at length obtained. Id.

When men pursue their thoughts of space, they stop at the confines of body, as if space were there at an end. Locke.

He has annexed a secret pleasure to the idea of any thing that is new or uncommon, that he might encourage us in the pursuit after knowledge, and en-gage us to search into the wonders of his creation.

Addison.

We happiness pursue ; we fly from pain ; Yet the pursuit, and yet the flight is vain.

Prior.

Its honours and vanities are continually passing before him, and inviting his pursuit. Rogers.

What nature has denied fools will pursue, s apes are ever walking upon two. Young.

PUR'SUIVANT, n. s. Fr. poursmvant. A state messenger ; an attendant on the heralds. How oft do they with golden pinions cleave

The flitting skies, like flying pursuivant! Spenser.

Send out a pursuivant at arms To Stanley's regiment ; bid him bring his power Before sun-rising. Shakspeare.

For helmets, crests, mantles, and supporters, I leave the reader to Edmond Bolton, Gerard Leigh, John Feme, and John Guillim Portismouth, pursuivants of arms, who have diligently laboured in armory. Camden.

The pursuivants came next,

And like the heralds each his scutcheon bore.

Dry den.

PURSUIVANT, in heraldry, is the lowest order of officers at arms. They are properly atten" ants on the heralds when they marshal public ceremonies. Of these in England there were formerly many ; but at present there are only four, *viz.* blue-mantle, rouge-cross, rouge-dragon, and port-cullice. In Scotland there is only one

kinˆ at arms, who is styled Lyon ; and has un-der rim six heralds, and as many pursuivants.

PUR'SY, adj. Fr. poussif ; Ital. pulsivo; of Lat. pulsus. Short-breathed and fat.

Now breathless Wrong

Shall sit and pant in your great chairs for ease, And pursy Insolence shall break his wind With fear and horrid flight. Shakspeare

An hostess dowager, Grown fat and pursy by retail Of pots of beer and bottled ale. Hudibrat.

By these, the Medes Perfume their breaths, and cure old pursy men.

Temple.

PURTENANCE, n. s. Fr. appertenance. The pluck of an animal.

Roast the lamb with fire, his head with his legs, and with the purtenance thereof. Exodus

The shaft against a rib did glance, And galled him in the purtenance. Hudibras. PURVES (James), a learned Arian preacher, born at a little village of Berwickshire, in 1734 His father was only a keeper of cattle, and intended James for the same profession. He meanwhile, having obtained the loan of some books on mathematics, made himself

master of geometry and trigonometry, and afterwards taught these sciences with other branches of mathematics, and assisted some public authors in compiling mathematical works, which have been well received. He joined a party of the ancient Cameronians, and in 1769, at oqe of their gene- -al meetings, was called to be a pastor among them. To qualify himself for this office he studied the Greek and Hebrew languages, and compiled a Hebrew Grammar, which is still in MS. These acquisitions led him into the study of the Arian Controversy, when he finall* adopted the opinions of Arius ; and afterward ;, became preacher to a small Arian congregation in Edinburgh ; where he also kept a school and a book shop, for many years before he died. His works are, 1 . A Humble Attempt to investigate the Scripture doctrine of the Trinity. 2. Observations on Prophetic Times, 2 vols. 3. A Treatise on Civil Government. 4. Observations on Socinian Arguments. 5. A Scriptural Catechism. 6. Correspondence with the Bu-chanites. 7. Dissertation on the Seals, Trumpets, &c. 8. Enquiry into the Nature of Faith and Regeneration. 9. Review of Paine's Age of Reason. 10. A Treatise on Sacrifices. 11. Review of some Religious Opinions, established by the Powers of the World, favorable to Despotism. 12. An Historic and Prophetic Representation of Events. 13. Scheme of the Lives of the Patriarchs. All these were published at Edinburgh within the last twelve years of his life, and evidence at least uncommon industry. He was three times married, and left a daughter by each wife. He died in 1789. PURVEY', v. a. & v. n.~\ Fr. pourvoir ; Lat. PURVEY'ANCE, n. s. tprovisus. To pro-PURVEY'OR, I vide with conve-PUR'VIEW. J niencies ; a sense

not now in use : procure ; buy in provisions : purveyance is provision ; or the procurement or exaction of it : purveyor, he who procures victuals ; a procurer of any kind : purview, proviso ; providing clause.

Give DO odds <c sour foes, but do piu-vey Yourself of sword before

that bloody day.

Upenser.

Whence, mounting up, they find purveyance meet Of all that princes royal court became. Id.

The purveys or victuallers are much to be con- ??? demned, as not a little faulty in that behalf.

Raleigh.

Some lands be more changeable than others ; as for their lying near to the borders, or because of grreat and continual purveyances that are made upon them. Bacon.

I the praise

Yield thee, so well this day thou hast purveyed.

Milton.

Though the petition expresses only treason and felony, yet the act is general against all appeals in parliament ; and many times the purview of an act is larger than the preamble of the petition. Hale. His house with all convenience was purveyed, The rest he found. Dryden.

These women are such cunning purveyors ! Mark where their appetites have once been pleased, The same resemblance in a younger lover Lies brooding in their fancies the same pleasures.

Id.

The stranger, ravished at his good fortune, ie introduced to some imaginary title ; for this purveyor has her representatives of some of the finest ladies.

Addlson.

What though from outmost land and sea purveyed, For him each rarer tributary life Bleeds not. Thomson.

And winged purveyors his sharp hunger fed With frugal scraps of flesh, and maslin bread.

Harte.

PU’RULENT, adj. Fr. purulent ; Lat. puru-lentus. Consisting of pus or the running matter of wounds.

A carcass of man is most infectious and odious to man, and purulent matter of wounds to sound flesh.

Bacon .

Nothing could be more proper, for the ripening of hard and purulent tumors, than dry figs.

Bp. Hall.

It is no easy thing always to discern, whether the suspected matter expectorated by a cough be really purulent, that is, such as comes from an ulcer.

Blackmore.

A n acrimonious or purulent matter, stagnating in some organ, is more easily deposited upon the liver than any other part. Arbuthnot.

It spsws a filthy froth Of matter purulent and white, Which happened on the skin to light, And there corrupting on a wound, Spreads leprosy. Swift.

PUS, n. s. Lat. pus. Corrupt animal matter > matter of a sore.

Acrid substances break the vessels, and produce an ichor instead of laudable put. Arbuthnot.

Pus, in medicine and surgery. See SURGERY.

PUSH, v. a., v. n. & n. s. Fr. pousser ; of Lat. pulsOfpello. To strike in the manner of a thrust ; drive ; impel ; for.ce ; urge ; make a thrust, effort, or attack : as a noun substantive, the ef-fort; thrust; attack made; exigence; trial; emergence.

If the ox push a man-servant, he shall be stoned.

Exodus.

Throueh thee will we nu►►h down our enemies.

Pfulms.

The king of the south shall push at him, and ticking of the north shall come against him. Daniel.

Ne might his corse be harmed With dint of sword or push of pointed spear.

. They, like resolute men, stood in the face of the breach, receiving them with deadly shot andpusA of pike, in such furious manner, that the Turks began to retire. Knollet.

Shew your mended faiths, To push destruction and perpetual shame Out of the weak door of our fainting land. ###

Shakspeare.

He gave his countenance against his name, To laugh with gybing boys, and stand the push Of every beardless vain comparative. Id.

We'll put the matter to the present push. Id. He that was praised to his hurt should have a push rise upon his nose ; as a blister will rise upon one's tongue, that tells a lye. Bacon.

Waters forcing way,

Sidelong had pushed a mountain from his seat, Half sunk with all bis pines. Milton.

He forewarns his care With rules to push his fortune or to bear. Dryden.

Arts and sciences, in one and the same century, have arrived at great perfection, and no wonder, since every age has a kind of universal genius, which inclines those that live in it to some particular studies ; the work then being pushed on by many hands, must go forward. Id.

Away he goes, makes his push, stands the shock of a battle, and compounds for leaving of a leg be-hind him. L'Estrangc.

'Tis common to talk of dying for a friend ; but, when it comes to the push, 'tis no more than talk.

Id.

A calf will so manage his head as though he would push with his horns even before they shoot.

Ray.

Ambition pushes the soul to such actions as are apt Vo procure honour to the actor. Spectator.

Lambs, though they never saw the actions of their species, push with their foreheads, before the budding of a horn. Addison.

Jove was not more pleased With infant nature, when his spacious hand Had rounded this huge ball of earth and seas, To give it the first push, and see it roll Along the vast abyss. Id.

The question we would put is not whether the sacrament of the mass be as truly propitiatory as those under the law 1 but whether it be as truly a sacrifice 1 if so, then it is a true proper sacrifice, and is not only commemorative or representative, as we are told at a push. Atterbury.

This terrible scene which might have proved dangerous, if Cornelius had not been pushed out of the room. Arbuthnot.

We are pushed for an answer, and are forced at last freely to confess, that the corruptions of the administration were intolerable. Swift.

When such a resistance is made, these bold talkers will draw in their horns, when their fierce and feeble pushes against truth are repelled with pushing and confidence. Watts.

PUSILLANIMITY, w.s.) Fr. punUani-PUSILLAN'IMOUS, adj. $ mite ; Lat. pusil—

lus and animus. Cowardice ; meanness of spirit ;

the adjective corresponding.

The property of your excellent sherris is the warm ing of the blood, which, before cold and settled, left the liver white and pale, the badge of pusillanimity and cowardice. Shattspeare.

PUT

The Chinese sail where they will, which sheweth that their law of keeping out strangers is a law of pusillanimity and fear. Bacon.

An argument fit for great princes, that neither by overmeasuring their forces they lose themselves in vain enterprizes ; nor, by undervaluing them, descend to fearful and pusillanimous counsels. Bacon.

What greater instance can there be of a weak p u-fillanimous temper, than for a man to pass his whole life in opposition to his owu sentiments ? Spectator.

It is obvious, to distinguish between an act of courage and an act of rashness, an act of pusillanimity, and an act of great modesty or humility.

South.

He became pusillanimous, and was easily ruffled with every little passion within; supine, and as openly exposed to any temptation from without.

Woodward's Natural History.

PUSS, n. s. Lat. pusio, a dwarf, Johnson conjectures ; but Belg. poes, is a cat. The fondling name of a cat.

A young fellow, in love with a cat, made it his humble suit to Venus to turn puss into a woman.

L'Estrange. Poor honest puss,

It grieves my heart to see thee thus ; But hounds eat sheep as well as hares. Gai/.

I will permit my son to play at apodidrascinda, which can be no other than our puss in a corner.

Arbuthnot and Pope.

Let puss practise what nature teaches. Watts.

Puss grew presently familiar, and would leap into my lap. Cowper.

PUSTERTHAL, a mountainous district of the Austrian states, in the Tyrol, on the borders of Carinthia, fifty miles long by eighteen broad. Its chief product is flax, and the manufactures linen and lace. It abounds in metallic ores, rock crystal, mineral waters, and warm baths. The population is 80,000, and the chief town Lienz.

PUSTULE, n. s. Fr. pustule ; Lat. pustula. A small swelling ; a pimple.

The blood, turning acrimonious, corrodes the vessels, producing hemorrhages, pustules, red, black, and gangrenous. Arbuthnot.

PUT, v. a., v. n. & n. s. Dan. putten, ‘ to plant,’ says Junius ; but Lat. poslto, and Ital. postare andpotta, seem a more natural etymology. To place; deposit; repose; trust; apply; use actively ; oblige ; urge : hence cause ; produce; consign, especially to writing; incite; instigate (taking upon) ; propose ; state ; offer ; place as an ingredient : this word takes a variety of prepositions, as by, down, forth, in, off”, on, upon, &c. ; but explained in their actual use : as a verb neuter, to put, is to go, or move ; steer a vessel ; germinate ; shoot ; taking forth, in, in for, off, over, &c. : as a noun substantive, put, is an action or signal of distress : hence, perhaps, a rustic ; low person ; and an excuse ; theft ; as is a put-ojf.

And alle men that herden puttiden in her herte, and seiden what manner child schal this be, for the hond of the Lord was with him. Wicliff Luk. i.

God planted a garden, and there he put man.

Gen. ii. 8. Re put forth his hand and pulled her in. Id. viii. 9.

If God be with me, and give me bread to eat, and raiment to put on, then shall the Lord be my God.

Id. xxviii. 20.

When she travailed, the one put out his hand.

Genetii.

If a man put in his beast, and feed m another man’s field ; of the best of his own shall he make restitution. Eiod. xxii. 6,

Rejoice before the Lord in all that thou puttest thine hands unto. Deut.

xii. 18.

She shall be his wife, he may not put her away.

Id. xxii.

Samson said, I will now put forth a riddle unto you. Judges.

The Philistines put nut his eyes. Id. xvii.

How wilt thou put thy trust on Egypt for chariots-7

2 Kings.

Cyrus made proclamation, and put it also in writing. 2 Chronicles^

The king of Egypt put Jehoahaz down at Jerusalem. Id.

None of vis put ojf our cloaths, saving that every one put them off for a washing. Nehem. iv. 23.

Whatsoever God doeth, nothing can be put to it, nor any thing taken from it. Ecclus. iii. 14.

The fig-tree putteth forth her green figs.

Canticles ii. 13. When he had put them all out he entereth in.

Mark v. 40.

As we were put in trust with the gospel, even so we speak, not as pleasing men, but God. 1 Thees.

Basilius, in his old years, marrying a young and fair lady, had of her those two daughters so famous in beauty, which put 6i/ their young cousin from that expectation. Sidney.

The greedy thirst of royal crown Stirred Porrex up to put his brother down.

Spenser.

The Turks were in every place put to the worst, and lay by heaps slain.

Knolles's History of the Turks. Taking his cap from his head, he said, this cap will not hold two heads, and therefore it must be fitted to

one, and so put it on again. Knolles.

The carpenters being set to work, and every one putting to his helping hand, the bridge was repaired

Id.

Before we will lay by our just born arms, We'll put thee down, 'gainst whom these arms we

bear,

Or add a royal number to the dead. Shakgpeare. I do but keep the peace, put up thy sword. Id,

This dishonours you no more, Than to take in a town with gentle words, Which else would put you to your fortune.

Id.

Was the crown offered him thrice ? ××× Ay, marry, was't, and he put it by thrice, Every time gentler than other. Id.

Mark now how a plain tale shall put you down.

Id.

Upon these taxations, The clothiers all put off The spinsters, carders, fullers, weavers. Id. Strangely visited people he cures, Hanging a golden stamp about their necks, Put on with holy prayers. Id. Macbeth.

So shall inferior eyes,

That borrow their behaviour from the great, Grow great by your example, and put on The dauntless spirit of resolution. Shakspeare. For the certain knowledge of that truth, I put you o'er to heaven, and to my mother. Id.

From Ireland am I come, To signify that rebels there are up, And p××t the Englishmen unto the sword. Id.

They have a leadei,

Tullus Aufidius, that will put you to't. Id. Why so earnestly seek you to put ××p that letter .

/(I*

PUT

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PUT

WJieii in swinish sleep, What cannot you and I perform upon

The' unguarded Duncan 1 what not put upon

His spungy officers, who shall bear the guilt

Of our great quell 1 Id. Macbeth.

Orders for sea are given ; They have put forth the haven. Shakspeare.
My good lord cardinal, they vent reproaches

Most bitterly on you, as putter on

Of these exactions. Id. Henry VIII.

They shall stand for seed ! they had gone down too, but that a wise burgher put in for them.

Shahspeare.

Whatsoever cannot be digested by the stomach is by the stomach either put up by vomit, or put down to the guts. Bacon.

Those that put their bodies to endure in health, nay, in most sicknesses, be cured only with diet and tendering. Id.

An excellent observation of Aristotle, why some plants are of greater age than living creatures, for that they yearly put forth new leaves ; whereas living creatures put forth, after their period of growth, nothing but hair and nails, which are excrements. Id.

It is the new skin or shell that putteth off the old ; so we see, that it is

the young horn that putteth off' the old. Id.

This came handsomely to put on the peace, because it was a fair example of a peace bought.

Id. Henry VII.

Wheresoever the wax floated, the flame forsook it, till at last it spread all over, and put the flame quite out. Bacon.

The nobility of Castile put out the king of Arragon, in favour of king Philip. Id. Henry VII.

There were no barks to throw the rebels into, and send them away by sea, they were put all to the sword. Bacon.

Having lost two of their bravest commanders at sea, they durst not put it to a battle at sea, and set up their rest wholly upon the land enterprize. Id.

It is to be put to question in general, whether it be lawful for Christian princes to make an invasive war, simply for the propagation of the faith. Id.

The wind cannot be perceived, until there be an eruption of a great quantity from under the water ; whereas, in the first putting up, it cooleth in little portions. Id.

It is manifest that the duke did his best to come down, and to put to sea. Id.

One Bell was put to death at Tyburn for moving a new rebellion. Hayward.

No ties,

Halsers, or gables need, nor anchor cast, Whom storms put in there, are with stay embraced.

Chapman. I boarded and commanded to ascend

My friends and soldiers, to put off and lend Way to our ship. Id.

Ambition, like a torrent, ne'er looks back ;

And is a swelling, and the last affection

A high mind can put off. Ben Jonson's Catiline. Others envy to the state draws, and put* on

For contumelies received. Id.

Sir Francis Drake came coasting along from Car-thagena, a city of the mainland to which he put over, and took it. Aˆbot.

Himself never put up any of the rent, but disposed of it by the assistance of a reverend divine to augment the vicar's portion. Spelman.

Avarice puts on the canonical habit.

Decay of Piety.

A nimbler fencer will put in a thrust so quick that the foil will be in your bosom, when you thought it ft yard off Digby.

Jonathan had died for being so, Had not just God put by the' unnatural blow.

Cowley.

It puts a man from all employment, and makes a man's discourses tedious. Taylo> '* Holy Living. In honouring God, put forth all thy strength.

Taylor.

Such as were taken on either side, were put to the sword or to the halter. Clarendon.

The great preparation put the king upon the resolution of having such a body in his way. Id.

Four speedy cherubims Put to their mouths the sounding alchemy.

Milton.

This question asked puts me in doubt. Id. I put not forth my goodness. Id.

I for his sake will leave Thy bosom, and this glory next to thee Freely put off, and for him lastly die. Id.

I must die Betrayed, captived, and both my eyes put out. Id.

He said, let the earth

Put forth the verdant grass, herb yielding seed, And fruit tree yielding fruit. Id.

In these he put two weights. Id.

When the wisest council of men have with the greatest prudence made laws, yet frequent emergencies happen which they did not foresee, and therefore they are put upon repeals and supplements of such their laws ; but Almighty God, by one simple foresight, foresaw all events, and could therefore fit laws proportionate to the things he made. Hale.

Soon as they had him at their mercy, They put him to the cudgel fiercely. Hudibras.

Nor put up blow, but that which laid Right worshipful on shoulder-blade. Id.

One hundred pounds only put out at interest, at ten per cent, doth in seventy years encrease to above one hundred thousand pounds. Child.

Although astrologers may here put in, and plead the secret influence of this star, yet Galen, in his comment, makes no such consideration. Browne.

I do not intend to be thus put ojf with an old song. More.

The discourse I mentioned was written to a private friend, who put me upon that task. Boyle.

I hope for a demonstration, but Themistius hopes to put me off with an harangue. Id.

The Canaanitish woman must put up a refusal, and the reproachful name of a dog, commonly used by the Jews of the heathen. Id.

We are put to prove things, which can hardly be made plainer. Tillotson.

Those who have lived wickedly before, must meet with a great deal more trouble, because they are put up<w changing the whole course of their life.

Id.

To put your ladyship in mind of the advantages you have in all these points, would look like a de - sign to flatter you. Templt

So nature prompts ; so soon we go astray, When old experience puts us in the way.

Dry den.

Put it thus ??? unfold to Statius straight, What to Jove's ear thou didst impart of late : He'll stare. Id.

I am as much ashamed to put a loose indigested play upon the publick, as I should be to offer brass money in a payment. Id.

When I drove a thrust, home as I could, To reach hi? traitor heart, he put it by, And cried, spare the stripling. .rd,

Now the cheerful light her fears dispelled, She with no winding turns the truth concealed, But put the woman off, and stood reveal'd. Ide

With copper collars and with brawny backs, Quite to put down the fashion of our blacks. Id.

You tell us that you shall be forced to leave off your modesty ; you mean that little which is left ; lor it was worn to rags when you put, out this medal.

Id.

I was not more concerned in that debate Of empire, when our universal state Was put to hazard, and the giant race Our captive skies were ready to embrace. Id.

He warned him for his safety to provide ; Not put to sea, but safe on shore abide. Id.

Some hard words the goat gave, but the fox put off all with a jest. L' Estrange.

The most wretched sort of people are dreamers upon events and putters of cases. Id.

Mercury had a mind to learn what credit he had in the world, and so put on the shape of a man. Id.

The stork found he was put upon, but set a good face however upon his entertainment. Id.

It is prudence in many cases, to put up the injuries of a weaker enemy, for fear of incurring the displeasure of a stronger. Id.

The stag's was a forced pnt, and a chance rather than a choice. Id.

The fox's put of is instructive towards the government of our lives, provided his fooling be made our earnest. Id.

Men may put government into what hands they please. Locke.

A sinew cracked seldom recovers its former strength, or the memory of it leaves a lasting caution in the man, not to put the part quickly again to robust employment. Id.

A man, not having the power of his own life, cannot put himself under the absolute arbitrary power of another to take it. Id.

There is great variety in men's understanding ; and their natural constitutions put so wide a difference between some men, that industry would never be able to master. Id.

They should seldom be put about doing those things, but when they have a mind. Id.

He has right to put into his complex idea, signified by the word gold, those qualities which upon trial he has found united. Id.

Fallacies we are apt to put upon ourselves, by taking words for things. Id.

Christ will bring all to life, and then they shall be put every one upon his own trial, and receive judgment. Id.

Feed land with beasts and horses, and after both put in sheep. Mortimer's Husbandry.

As for the time of putting the rams to the ewes, you must consider at what time your grass will maintain them. Mortimer.

A fright hath i►►it by an ague fit, and mitigated a fit of the gout. Grew's Cosmologia.

I expect an offspring, docile and tractable in whatever we put them to. Tatler.

This last age has made a greater progress than all ages before put together. Burnet.

Do men in good earnest think that God will be put off so ? or that the law of God will be baffled with a lie clothed in a scoff? South.

I put the case at the worst, by supposing, what seldom happens, that a course of virtue makes us miserable in this life. Spectator.

He replied, with some vehemence, that he would undertake to prove trade would be the ruin of the English nation ; I would fain have put him upon it.

Addison.

We should put forth all our strength, and, without having an eye to his preparations, make the greatest push we are able. Id.

My friend, fancying her to be an old woman of quality, put off" his hat to her, when the person pulling off his mask appeared a smock-faced young fellow. Id.

An old usurer, charmed with the pleasures of a country life, in order to make a purchase, called in all his money ; but, in a very few days after, put it out again. Id.

When I was at Venice, they were putting out curious stamps of the several edifices, most famous for their beauty or magnificence. Id.

I shall be hard put to it, to bring myself off. Id. Such national injuries are not to be put up, but when the offender is below resentment. Id.

An ordinary fleet could not hope to succeed against a place that has

always a considerable num-ber of men of war ready to put to sea. Id.

This scrupulous way would make us deny our senses ; for there is scarcely any thing but puts our reason to a stand. Collier.

If a man should put in to be one of the knights of Malta, he might modestly enough prove his six descents against a less qualified competitor. Id.

Queer country put* extol queen Bess's reign, And of lost hospitality complain. Brumston.

This put me upon observing the thickness of the glass, and considering whether the dimensions and proportions of the rings may be truly derived from it by computation. Newton.

It need not be any wonder why I should employ myself upon that study, or put others upon it.

Walker.

He seems generally to prevail, persuading them to a confidence in some partial works of obedience, or else to put off the care of their salvation to some future opportunities. Rogers.

Wherever he puts a slight upon good works, 'tis as they stand distinct from faith. Atterbury.

Teuta put to death one of the Roman ambassadors ; she was obliged, by a successful war which the Ro-mans made, to consent to give up all the sea coast.

Arbuthnot.

So many accidents may deprive us of our lives, that we can never say, that he who neglects to se-cure his salvation to-day, may without danger put it o/f till to-morrow. Wake.

We see the miserable shifts some men are put to, when that which was founded upon, and supported by idolatry, is become the sanctuary of atheism.

Bentley.

If without any provocation gentlemen will fall upon one, in an affair wherein his interest and reputation are embarked, they cannot complain of being put into the number of his enemies. Pope.

As Homer went, the ship put in at Samos, where he continued the whole winter, singing at the houses of great men, with a train of boys after him. Id.

When men and women are mixed and well chosen, and put their best qualities forward, there may be any intercourse of civility and good will. Swift.

These wretches put us upon all mischief, to feed their lusts and extravagancies. Id.

I only put the question, whether in reason it would not have been proper the kingdom should have received timely notice ? Id.

It is very hard that Mr. Steele should take up the artificial reports of his own faction, and then put them off upon the world as additional fears of a popish successor. Id.

There is no quality so contrary to any nature which one cannot affect, and put on upon occasion, in order to serve an interest. Id.

With this he put up to my lord, The courtiers kept their distance due, He twitched his sleeve. Id,

Homer says he puts oˆfthat air of grandeur which so properly belongs to his character, and debases himself into a dnll. Broome.

As danger did approach, her spirits rose,

And putting on the king dismayed her foes.

Halifax.

PUTAMINE.&, from putamen, a shell, the name of the twenty-fifth order of Linnaeus's fragments of a natural method ; consisting of a few genera of plants allied in habit, whose fleshy seed-vessel or fruit is frequently covered with a hard woody shell. See BOTANY.

PUTATIVE, adj. Fr. putatif, from Lat. puto. Supposed ; reputed.

If a wife commits adultery, she shall lose her dower, though she be only a putative, and not a true and real wife. Ayliffe.

PUTEANUS (Erycius), LL.D., or Erick Vandeput, a learned professor, born at Venlo, in Guelderland, in 1574. He was educated at Dort, and studied rhetoric and philosophy at Cologne, in the Jesuits' college He next studied law at Leuvain, and in 1597 went to Padua and Milan j at which last city he was chosen professor of eloquence in 1601. He was made historiographer to the king of Spain; and in. 1603 a patrician of Rome. In 1604 "he became LL. D. at Milan, and married. In 1606 he was called to Louvain, appointed successor to Justus Lipsius, and governor of the castle. He published many works, amounting to 5 vols. folio ; and died in 1646.

PUTEOLI, an ancient city of Italy, in Na-ples, and in the province of Campania, so called either from its wells, there being many hot and cold springs thereabouts ; or from its stench, putor, caused by sulphureous exhalations. (Livy, Varro, Strabo.) In a very remote age the Cu-means made it their arsenal and dockyard ; and to this naval establishment gave the sublime appellation of Dicearchea, or just power. The Romans, sensible of the utility of this port, took great pains to improve its natural advantages. Nothing remains of their works but a line of piers, vulgarly called the bridge of Caligula. The ruins of its ancient edifices are widely spread along the adjacent hills and shores. An amphitheatre still exists entire in most of its parts, and a temple of Serapis. In the neighbourhood are many relics of ancient grandeur; particularly the Campanian way, paved with lava, and lined on each side with venerable towers, the repositories of the dead, which are richly adorned with stucco in the inside.

PUTI CARAJA, in botany, a genus of Indian plants : CAL. five cleft : COR. has five equal petals, the pericarp a thorny legumen and two seeds, the leaves oval and pinnated, and the stem armed : SEEDS very bitter, and tonic.

PUTID, adj. Let. patidus. Mean; low; worthless.

He that follows nature is never out of his way ; whereas all imitation

is putid and servile.

L’ Estrange.

PUT-IN-BAY, a bay in the south-west part of Lake Erie, formed by the island of Edward, ten miles W. N. W. of Sandusky Bay. It is open to the north, and well-sheltered. The entrance is not more than a quarter of a mile wide, having on the western side a narrow rocky

point, about forty feet high ; where it joint the island the isthmus is so low as to be generally overflowed. From the point a block-house and strong battery defend the harbour, which has excellent anchorage.

PUTIVL,a town of the government of Kursk, European Russia, on the Sem. It is the chief place of a district or circle ; has a number of churches, a monastery, and 9000 inhabitants, who carry on a traffic chiefly in woollens and sink. Here is also a manufactory of vitriol, and some brick-works. It is 120 miles W. S. W of Kursk.

PUTLOG, n. s. From put and log. See the extract.

Putlogs are pieces of timber or short poles, about seven foot long, [put] to bear the boards they stand on to work, and to lay bricks and mortar upon.

Moxon’s Mechanical Exercises.

PUTNAM, a town of Washington county, New York, twenty-eight miles north of Sandy Hill. Population 499. It lies on lake Champlain.

PUTNAM, a county of the west part of Georgia. Population upwards of 1000. Chief town Eaton Town. ××× Also a county of New York.

Fr. putride ; Lat.

putridus. Rotten ;

corrupt ; stinking :

putredinous is an

(obsolete synonyme :

1 putrefaction signifies

the state of growing

J corrupt; rotten ; or

PUTREFACTION, PUTRED'INOUS, adj. PTJTREFAC'TIVE, adj. PU'TREFY, v. a. & v. n.

PUTRES'CENCE, 71. S. PUTRES'CENT, adj.

PT/TRID, adj.

PU'TRIDNESS.

foul ; act of making rotten : putrefactive, making rotten : to putrefy, to corrupt ; make rotten : as a verb neuter, to rot : putrescence, the state of rotting ; the adjective corresponding : putridness, rottenness.

From the sole of the foot, even unto the head, there is no soundness in it, but wounds and bruises, and putrefying sores. Isaiah i. 6.

To keep them here, They would but stink, and putrefy the air.

Shakspeare.

If the spirit protrude a little, and that motion be inordinate, there followeth putrefaction, which ever dissolveth the consistence of the body into much inequality. Bacon .

Many ill projects are undertaken, and private suits putrefy the public good. Id.

These hymns, though not revive, embalm and

spice The world, which else would putrify with vice.

Donne.

They make putrefactive generations conformable unto seminal productions. Browne's Vulgar Errours.

Now if any ground this effect from gall or cholor, because being the

fiery humour, it will readiest surmount the water, we may confess in the common putrescence, it may promote elevation. Browne.

The wine to putrid blood converted flows.

Waller.

A wound was so putrified as to endanger the bone.

Temple.

Putrid fever is that kind of fever in which the humours, or part of them, have so little circulatory motion that they fall into an intestine one, and putrefy, which is commonly the case after great evacua-> tions, great or excessive heat. Quincy.

PUTREFACTION.

2G7

Putrefaction is a kind of fermentation, or intestine motion of bodies, which tends to the destruction of that form of their existence which is said to be their natural state. Id.

All imperfect mixture is apt to putrefy, and watery tubstances are more apt to putrefy than oily.

Woodward's Natural History.

One of these knots rises to suppuration, and bursting excludes its putrefaction. Blackmore.

If a nurse feed only on flesh, and drink water, her milk, instead of turning sour, will turn putrid, and smell like urine. Arbuthnot.

Vegetable putrefaction is produced by throwing green vegetables in a heap in open warm air, and pressing them together, by which they acquire a pu-trid stercoraceous taste and odour. Id.

Such a constitution of the air, as would naturally putrefy raw flesh, must endanger by a mortification.

Id.

Aliment is not only necessary for repairing the fluids and solids of an animal, but likewise to keep the fluids from the putrescent alkaline state which they would acquire by constant motion. Id.

If the bone be corrupted, the putrefactive smell will discover it. Wiseman's Surgery.

The pain proceeded from some acrimony in the se-rum, which, falling into this declining part, putrefied.

Id.

Nidorous ructus depend on the foetid spirituosity of the ferment, and the putrid,iess of the meat.

Flayer on the Humours.

A piitredinous ferment coagulates all humours, as milk with rennet is turned. Id.

' Tis such a light as putrefaction breeds In fly-blown flesh, whereon the maggot feeds, Shines in the dark, but, ushered into day, The stench remains, the lustre dies away. Cowper.

His limbs,

With palsy shaken about him, blasted lie ; And all his flesh is full of putrid sores And noisome wounds, his bones of racking pains : Strange vesture this for an immortal soul. Pollok.

PUTREFACTION is one of the natural processes by which organized bodies are dissolved, and reduced to what may be called their original elements. Putrefaction differs from chemical solution ; because, in the latter, the dissolved bodies are kept in their state of solution by being combined with a certain agent from which they can-not easily be separated; but, in putrefaction, the agent which dissolves the body appears not to combine with it in any manner or way, but merely to separate the parts from each other. It differs also from the resolution of bodies by distillation with violent fire ; because in distillation new and permanent compounds are formed, but by putrefaction every thing seems to be resolved into substances much more simple and inde-structible than those which are the result of any chemical process. The bodies most liable to putrefaction are those of animals and vegetables, especially when full of juices. Stones, though by the

action of the weather they will moulder into dust, yet seem not to be subject to any thing like real putrefaction, as they are not resolved into any other substance than sand, or small dust, which still preserves itslapideous nature. In like manner vegetables of any kind, when deprived of their juices by drying, may be preserved for many ages without being subjected to any thing like a putrefactive process. The parts of animals also, by simple drying, may be preserved in a

sound state for a much longer time than they could be without the previous exhalation of their juices.

Putrefaction is generally allowed to be a kiw* of fermentation, or rather to be the last stage of that process ; which, beginning with the vinous fermentation, goes on through the acetous, to the stage of putridity, where it stops. In several respects, however, it differs so much from these processes, that it seems in some degree doubtful whether it can with propriety be called a fermentation or not. Both these vinous and acetous fermentations are attended with a considerable degree of heat : but in the putrefaction of animal matters especially, the heat is for the most part so small that we cannot be certain whether there is any degree of it or not produced by the process. A most remarkable difference is that the vinous fermentation produces ardent spirits, the acetous vinegar ; but putrefaction produces nothing but earth, and some effluvia, which, though most disagreeable, and even poisonous to the human body, yet, being imbibed by the earth and vegetable creation, give life to a new race of beings. It is commonly supposed, indeed, that volatile alkali is a production of the putrefactive process ; but this is disputed. The only thing in which the putrefactive fermentation agrees with the other kinds is, that in all the three there is an extrication of carbonic acid.

One reason why an animal body does not putrify while alive is its ventilation, as we may call it, by respiration ; and another is the continual accession of new particles, less disposed to putrify than itself, by the food and drink which is constantly taken in. But, if either of these ways of preventing the commencement of this process be omitted, then putrefaction will take place as well in a living as in a dead body. Bodies will not putrify in vacuo, because there the atmosphere has not access to impart its elastic principle. If the body is very dry, putrefaction cannot take place, because the texture is too firm to be decomposed by the weak action of the elastic principle. Putrefaction may also be prevented by the addition of certain substances. Thus various kinds of salts and acids harden the texture of

animal substances, and thus are successfully used as antiseptics. The same thing may be said of ardent spirits; while oils and gums of various kinds prove antiseptic by a total exclusion of air, which is necessary in some de-gree for carrying on the process of putrefaction. Many vegetables, by the astringent qualities they possess, harden the texture of animal substances, and thus prove powerfully antiseptic ; while, on the other hand, fixed alkaline salts, quicklime, and caustic volatile alkali, though they prevent putrefaction, yet they do it by dissolving the substances in such a manner that putrefaction could do no more had it exerted its utmost force. Sugar, though neither acid nor alkaline, is yet one of the most effectual antiseptics known : and this seems to be owing to its great tendency to run into the vinous fermentation, which is totally inconsistent with that of putrefaction ; and this tendency is so great that it can scarcely be counteracted by the tendency of animal substances to putrefy in any circumstances whatever.

PUY

In putrefaction the animal matter generally passes off' in the gaseous form ; and an inconsiderable quantity of earthy matter remains when the process is finished. The precise nature of these combinations has not, from the extreme offensiveness of the process, been accurately observed ; and they probably vary according to the nature of the animal matter, and the circumstances under which it is decomposed. Ammonia, formed by the union of the azote and hydrogen of the animal matter, is always disengaged in considerable quantity. Phosphureted hydrogen is likewise produced; and this gas, even when obtained pure, has the odor exclusively termed putrid. Sulphureted hydrogen forms another nart of the vapors disengaged from putrefying substances. Carbureted hydrogen and carbonic acid are likewise separated. And, lastly, it is probable that not only these binary combinations, but compound gases, consisting of three or more of these elements with oxygen, are formed and discharged. As this process must necessarily oe carried on at the surface of the earth, its products are diffused through the atmosphere, dissolved by water, and absorbed by the soil. They furnish the principal nutritious matter for the support of vegetables, and are again prepared for the nourishment of animals.

PUT'TINGSTONE, n.s. Putting and stone. That is, a stone thrown or placed by the hands.

In some parts of Scotland, stones are laid at the gates of great houses, which they call putting stones, for trials of strength. Pope.

PUT'TOCK, n. s. Lat. buteo. A buzzard. Who finds the partridge in the puttock's nest,

But may imagine how the bird was dead ?

Shakspeare.

The next are those which are called birds of prey, as the eagle, hawk, puttock, and cormorant.

Peacham.

PUTTY, n. s. FT. potee ; Sp. patea. A kind of powder on which glass is ground ; a cement of glass.

An object glass of a fourteen foot telescope, made by an artificer at London, I once mended considerably, by grinding it on pitch with putty, and leaning on it very easily in the grinding, lest the putty should scratch it. Newton.

PUTTY is compounded of whiting and lintseed oil, bearten together to the consistence of a thick dough. It is used by glaziers for fastening in the squares of glass in sash windows, and by painters for stopping up the crevices and clefts in timber, &c.

PUTUMAYO, or lea, a river of South America, which has its rise in the district of Ibarra, Quito, about eighty miles to the south of Popayan. Its course is S.S. E. about 300 miles, when, being joined by a branch of the Caquet, it takes the name of lea, and, after a south-east course of about 200 miles, joins the Amazons, in long. 50►► 40' W., lat. 3►► 30' S. It washes down considerable quantities of gold. There is a settlement of this name on the river.

PUY (Peter de), a learned French writer, born in Paris in 1583. He wrote twelve treatises, chiefly on political subjects ; such as, 1 . The Origin of the Salique Law : 2. The Liberties of the Gallican Church : 3. The History of the

Templars, &c. He died in 1652, aged seventy-two.

PUY, REVESSIO, a city and post town of high antiquity, and the principal place of the department of the Upper Loire, France, containing 13,000 inhabitants, and having an inferior court under the royal court of Riom; a board of manufactures, an agricultural society, and a communal college. It stands in a fine situation, in the centre of three broad and very fertile valleys, each watered by a river, and crossed by three great roads. Rising in the form of an amphitheatre on the south side of mount Anis, over-topped by the vertical rock of Corneil, and surrounded with volcanic rocks, richly cultivated fields, pretty country houses, gardens, shrubberies, fruit trees, and verdant meadows, this town presents a most picturesque appearance. It is generally well built, the houses being constructed of lava, which is very abundant in the neighbourhood ; the streets, which are paved with the same material, are wide and airy, but very steep and impassable for carriages.

Near the top of the hill appears the cathedral, the front of which is a mixture of ancient and Gothic architecture, presenting four rows of columns and porticoes with large arches, the middle one, which is most magnificent, being the entrance to the church. The ascent is by an immense flight of 1 18 steps, covered with a lofty vaulted roof, above which rises full half of the building. The steeple is of a pyramidal form, and very lofty ; built entirely of volcanic stone. In the lower part of the town is a very steep basaltic rock, which resembles a tower, and on the summit of it stands the church of St. Michael. This rock, which is 300 feet high, has the form of acone; and the steeple of thechurch, pointed and extremely slender, rises like an obelisk over all. The ascent to this building is by 260 steps cut in the rock.

Here are considerable manufactories of lace, thread, Mack lace and blond, common stuffs, woollen counterpanes, and skin bottles for wine, nail factories, a foundry, tan-yards, fulling-mills, and dyehouses. The trade consists in corn, lace, cloth, serge, iron goods, delf-ware, mules, horses, and cattle. The public library containing 5000 volumes, the museum of pictures, statues, and antiquities, are also worth no-tice ; as well as the tomb of Duguesclin, the promenade of Breuil, and the assembly room : an ancient building, in good preservation, once consecrated to Diana. About a mile and a half from Puy is the village of Espailly, remarkable for the ruins of its ancient castle, and some curious groups of basaltic prisms, called tlio organs of Espailly. This city is fifty-eight miles south of Montbrison, ninety south-west of Lyons, sixty-three north-west of Privas, eighty-seven south-east of Clermont, and 375 south of Paris.

PUY-DE-DOME, a department of France, is formed out of the former

province of Lower Auvergne, and derives its name from a high mountain which overtops the whole chain of the Domes Mountains that extend over this country. The principal place of this prefecture is Clermont-Ferrand, and it consists of five arrondissements, Clermont-Ferrand, Amb< rt, Issoirn,

Ii.iom, and Thiers, having a total population of 553,410 souls, on an area of 3295 square miles, and yielding a revenue of 22,428,000 francs. These are subdivided into fifty cantons and 438 communes. This forms part of the nineteenth military division, having a royal court at Riom, and a bishopric at Clermont, and consists of four electoral arrondissements, which send seven members to the chamber of deputies. The department is bounded by that of the Allier on the north, on the east by that of the Loire, on the south by those of the Upper Loire and Cantal, and on the west by those of the Creuse and the Correge.

This country presents, through almost its whole extent, mountains of remarkable elevation, among which are found rich hollows, beautiful valleys, and plains of the greatest fertility. The mountains are nearly all volcanic, and the whole chain extends, from south to north, over a space of fifteen or eighteen miles, in which are at least forty Puys, with their ancient craters, ravines, torrents of lava, prisms, and columns of basalt. Above these extends the smiling Limagne, the fertile soil of which is covered with orchards and vineyards, fruitful fields richly cultivated, and fine meadows intersected by a great number of rivulets and canals. The plains are filled with chestnut trees, the green foliage of which gives an indescribable charm to this delightful country. A number of artificial lakes, serving the purpose of watering the lands, are formed by a raised causeway resting on the sides of two neighbouring hills, which interrupts the course of the streams, and thus, swelling them insensibly, causes them to overflow

and fertilize the pastures; where feed vast herds of horses and cattle of every description. In the chain or rather group of the Domes and the Dores, which cover a great portion of the department, are every where discoverable the effects of former volcanic eruptions ; and the currents of lava yield most of the petrifactions dug for the building of houses : in-deed whole towns are constructed of it. The volcanic cinders are very favorable to vegetation. The soil is most cultivated with horses and mules, and yields more than a supply for its population. It contains 54,250 hectares of forest (chiefly oak and fir), and 22,000 hectares of vineyards, and the mean produce of every hectare of arable land is twenty-four francs twenty-eight centimes.

The productions of this department consist in corn of all sorts, chestnuts, very good hemp, fruit, good wine, wood, and excellent pasturage. The lakes and rivers abound in fish ; horses of a small kind are bred, as well as horned cattle and sheep. There are also mines of lead and antimony ; quarries of marble of different colors, granite, graystone, millstone, tripoli, puzzolani, basalt, and plaster, and pits of coal. There is a royal depot of standard measures at Parentianac, a royal sheep walk from Puy-de-D6me to St. Ge-nest, and a large botanical garden at Clermont. At Mont-d'or-les-Bains, at Chateaumont, at Chatel Guyon, at St. Myon, at St. Nectaire, at St. Marguerite au Tambour, at St. Mark, and at Chateldon, are establishments of mineral waters and warm baths. The principal manufactures are those of linen, camlets, tent cloths, Turkish

satins blond-lace, playing cards, sait-petre, chemicals, glue, candles, mercery goods, ironmon-gery, cutlery, kettles, and copper vessels. They have also cotton and wool-spinning manufactories, paper-mills, delf and other potteries, brass foundries, tan yards, numerous hydraulic saw-mills, &c. The trade consists in wines, corn, brandies, liqueurs, dry confectionary, walnut and hemp-seed oil, cattle, Auvergne cheeses, hemp, wool, linen, leather, paper, wood, fir-planks, coal, &c. This department is watered by the Allier, which is navigable, the Dore, the Dordogne, the Sioule, and the Morge ; it is also crossed by the great roads of Lyons, Limoges, and Moulins.

PUY-DE-DOME, a celebrated mountain in Auvergne, situated towards the centre of the chain of the Dome, which extends from north to south over a space of twenty-four miles, but varying considerably in breadth. This mountain is in the centre of the chain, and much higher than those around, appearing like a giant in the midst of his children ; one of the mountains in-deed, called the Little Puy-de-D6me, rises at

its side, and, being united at the base, seems to spring out of it. The Puy-de-D6me presents a majestic cone, exact in all its proportions, having an extensive hollow like a disk at its top. From the base to the summit, notwithstanding its steepness, it is covered with a verdure, on which numerous herds of cattle feed ; and the whole surface is a grass plat, except in two or three places, where the protuberances of white lava appear, and show that the mountain has been volcanic . This magnificent extent of verdure gives an inconceivable charm to a scene abounding in grandeur and beauty.

The ascent to the mountain is by two different roads, one on the south side, called the road of Alagnat, the other on the north, called the Gravouse. From the crest one of the finest and richest prospects in the world is unfolded to the view. Elevated nearly 6000 feet above the level of the sea, and nearly 4000 above that of Clermont, there is no limit to the sight for an immense distance ; below you are seen the forty neighbouring Puys, with their ancient craters, their ravines, currents of lava, and beds of black and red puzzolain. Farther distant is the whole country of Limagne, with its towns, villages, and hills without number ; on all sides are fields of every color, vineyards, houses, roads, and mountains stretching into the distance, till they are lost to the view, and including an extent of nearly 400 miles.

Although the Puy is or.ly a scorched rock, yet the rain and vapors that it incessantly imbibes give it an amazing fertility, which it communicates to all the neighbouring mountains ; all of them, with only one or two exceptions, being covered with grass. This mountain has been rendered immortal by the experiments of Pascal here on the weight of the atmosphere.

PUZZLE, v. a., v. n., & n. s. For postle (or apposail as it has been written) from pose. Skinner. To perplex ; entangle ; confound ; embarrass ; involve ; put to a stand ; teaze : be be-wildered, perplexed, or awkward : a puzzle ii a perplexity ; a perplexing occurrence ; embar-

rassment ; also a child’s toy designed to exercise ingenuity.

I say there is no darkness but ignorance, in which thou art more puzzled than the Egyptians in their fog.

Shaktpeare.

Men in great fortunes are strangers to themselves, and, while they are in the puzzle of business, they have no time to tend their health either of body or mind. Bacon’s Essays.

I shall purposely omit the mention of arguments which relate to infinity, as being not so easily intelligible, and therefore more apt to puzzle and amuse, than to convince. ll’itkiit*.

Both armies of the enemy would have been puzzled what to have done. Clarendon.

A very shrewd disputant in those points is dexterous in puxxling others, if they be not thorough-paced speculators in those great theories. More.

The servant is a puzzling fool that heeds nothing.

JJ Estrange.

These, as my guide .informed me, were men of subtle tempers, and puzzled politicks, who would supply the place of real wisdom with cunning and avarice. Tatler.

He is perpetually piizzled and perplexed amidst his own blunders, ana mistakes the sense of those he ⬛⬛⬛would confute. Addison.

I did not indeed at first imagine there was in it such a jargon of ideas, such an inconsistency of notions, such a confusion of particles, that rather p’azlg than connect the sense. Id.

Persons who labour under real evils will not puzzle themselves with conjectural ones. Clarissa.

She strikes each point with native force of mind, ‘Vhile puzzled learning blunders far behind. Young. Few angles ‘were there in her form, ‘tis true,

Thinner she might have been and yet scarce lose, Yet, after all, ‘twould puzzle to say where It would not spoil some separate charm to pare.

Byron.

PUZZULANA TERRA, or TERRA POZZOLANA, is a grayish kind of earth used in Italy for building under water. The best is found about Puteoli, Baiae, and Cumse, in Naples, from the first of which places it derives its name. It is a volcanic product, composed of heterogeneous substances, thrown out from the burning mouths of volcanoes in the form of ashes ; sometimes in such large quantities, and with so great violence, that whole provinces have been covered with it at a considerable distance. This volcanic earth is of a gray, brown, or blackish color ; of a loose, granular, or dusty and rough, porous or spongy texture, resembling a clay hardened by fire, and then reduced to a gross powder. Its specific gravity is from 2‘57 to 2-8 ; and it is in some degree magnetic : it scarcely effervesces with acids, though partially soluble in them. It easily melts per se ; but its most distinguishing property is, that it hardens very suddenly when mix-ed with one-third of its weight of lime and water; and forms a cement which is more durable in water than any other. According to Bergman’s analysis, 100 parts of it. contain from 55 to 60 of sileceous earth, 20 of argillaceous, 5 or 6 of calcareous, and from 15 to 20 of iron. It is found also in France, in the late provinces of Auvergne and Limoges.

PUZZUOLO, er POZZUOLI, the ancient Puteoli, a celebrated town of Italy, delightfully situated on a peninsula, in the centre of the noble bay of this name. In ancient times this was

the chief mart of the inhabitants of Cumx, and a rendezvous for merchants from Italy, Sicily, and Greece : the baths allured the most opulent Romans to its vicinity. But the devastations of war and earthquakes have long since greatly reduced it. Its population of about 1000 is now confined to the point which formed the ancient port. But in a square of the town stands a beautiful marble pedestal, covered with bas-reliefs, representing in allegorical figures the fourteen towns of Asia Minor that were destroyed by an earthquake, and rebuilt by Tiberius. The cathedral, which occupies the site of an ancient temple and is built chiefly of its materials, has a subterranean edifice attached, called the laby-rinth, divided into a number of apartments. On the hill behind the town are the remains of an amphitheatre of

considerable extent; but only the gates and portions of the vaults remain. Here are, however, massy remains of the temple of Jupiter Serapis, and of the mole that formed the ancient port. Several of its piers and arches still stand unshaken. At the end of this mole began the bridge of Caligula, which extended across part of the bay to Baife, no less than half a mile. Puzzuolo is still a bishop's see. In the neighbourhood is the plain of Solfotara. It is seven miles ###west of Naples.

PWLLHELY, a large market town of North Wales, in Carnarvonshire, seated on the coast between two rivers. It is contributary to Caernarvon in sending one member to parliament ; and lies six miles south of Nevin, twenty S. S. W. of Caernarvon, and 243| north-west of London.

PYANEPSIA, in antiquity, an Athenian ic##- tival celebrated on the seventh day of the month Pyanepsion. Plutarch ascribes the institution of this feast to Theseus, who, after the funeral of his father, on this day paid his vows to Apollo, because the youths who returned with him safe from Crete then made their entry into the city. On this occasion these young men, putting all that was left of their provisions into one kettle, feasted together on it, and made great rejoicing. The Athenians carried about an olive branch, bound about with wool, and crowned with all sorts of first fruits, to signify that scarcity and barrenness had ceased, singing in procession a song. And, when the solemnity was over, it was usual to erect the olive branch before their doors as a preservative against scarcity and want.

PYCNOSTYLE, in ancient architecture, a building where the columns stand very close to each other ; only one diameter and a half of the column being allowed for the intercolumniations. The pycnostyle chiefly belonged to the composite order, and was used in the most magnificent buildings.

PYDNA, an ancient city of Macedonia, originally called Citron, seated between the mouths of the Aliacmon and Lydius. In this city Cassand'er murdered the mother, widow, and son of Alexander the Great. A decisive battle was afterwards fought near it A. A. C. 168, between the Romans under Paulus JEmilius and the Macedonians under Philip V., in which the latter was defeated, and his kingdom was a few years after made a Roman province.

PYE (Henry lames), LL. D., an English

poet, Dr. Southey's predecessor in the laureate-ship, was born in London in 1745. After receiving a private education, he went to Magda-Jen College Oxford, and took the honorary de-gree of master of arts in 1766, and that of doctor of laws in 1772. He was for some time in the Berkshire militia, and embarrassed himself by standing a contest for the representation of the county. In 1790 he became poet laureat; and in 1792 a police magistrate. He died August llth, 1813. His principal works are, 1. Far-ringdon Hill, a poem. 2. Six odes of Pindar, translated into English verse. 3. The Progress of Refinement, a poem. 4. Poems on various subjects, 2 vols. 5. A Translation of the Poetics of Aristotle. 6. Lenore, a tale from the German of Burger. 7. The Democrat, 2 vols. 8. The Aristocrat, 2 vols. 9. Alfred, an epic poem. 10. Another collection of poems, 2 vols. 11. Comments on the Commentators on Shakspeare, 8vo. 12. A translation of the hymns and epigrams of Homer.

PYGMALION, in fabulous history, a king of Cyprus, who, being disgusted at the dissolute lives of the women of his island, resolved to live in perpetual celibacy ; but, having made a statue of ivory, he so much admired it that, at the high festival of Venus, he fell down before the altar of that goddess, and besought her to give him a wife like the statue he had made. At his return home he embraced his ivory statue, when he perceived that it became sensible by degrees, and was at last a living maid, who found herself in her lover's arms the moment she saw the light. Venus blessed their union ; and in nine months she was delivered of a son, named Paphos.

PYGMALION, king of Tyre, son of Belus, and brother of queen Dido, who founded Carthage. He succeeded his father, but became odious by his avarice and cruelty ; and murdered Sichatus, the husband of Dido, in a temple of which he was priest, on which Dido fled with her husband's treasure. He died in his fifty-first and forty-seventh of his reign. ††† Virg. 3Ln. i. 347. Justin, 18. c. 5.

PYG'MY, n. s. Fr. pygm'ce ; Gr. Trvy/iatoc-A dwarf; one of a nation fabled to be only three spans high ; any little thing or person.

They, less than smallest dwarfs in narrow room, Throng numberless

like that pygmean race Beyond the Indian mount. Milton.

If they deny the present spontaneous production of larger plants, and confine the earth to as pygmy births in the vegetable kingdom “as they do in the other ; yet surely in such a supposed universal decay of nature, even mankind itself that is now nourished, though not produced, by the earth, must have degenerated in stature and strength in every generation. Bentley.

Can place or lessen us or aggrandise 1

Pygmies are pygmies still, tho’ perched on Alps,

And pyramids are pyramids in vales. Young.

PYLADES, a son of Strophius, king of Pho-cis, by a sister of Agamemnon. He was educated with his cousin Orestes, with whom heformed the most inviolable friendship, and whom he assisted to revenge the murder of Agamemnon, by assassinating Clytemnestra and ˆEgysthus. He also accompanied him into Taurica Chersonesus; and Orestes rewarded him for his services by

giving him his sister Electra in marriage. Pylades had by her two sons, Medon and Strophius. The friendship of Orestes and Pylades became proverbial.

PYLORUS. See ANATOMY.

PYLOS, an ancient town of Messenia, on the west coast of Peloponnesus, at the foot of Mount ˆEgateus, opposite the island Sphacteria, in the Ionian Sea ; seated on the promontory of Cory-phasion, a name also given to the town. It was built by Pylus, at the head of a colony of Leleges from Megara,who were dispossessed of it by Ne-leus, the father of Nestor, who called it Nelea.

PYR’AMID, n. s. ~\ Fr. pyramide ; Gr.

PYBAM’IDAL, adj. i irvQapiQ. From irvp V

PYRAMID’ ICAL,

fire; because fire as-

PYRAMID’ICALLY, adv. i cends in the figure of

PYR’AMIS, n.s. j a cone. A solid geometrical figure, whose base is a polygon, and whose sides are plain triangles, their points meeting in one : the two adjectives and adverbs corresponding : pyramis is an obsolete form of the noun substantive.

Know, Sir, that I will not wait pinioned at your master’s court ; rather make my country’s high pyramids my gibbet, and hang me up in chains.

Slwkspeare. Antony and Cleopatra.

The form of a pyramis in flame, which we usually see, is merely by accident, and that the air about, by quenching the side of the flame, crusheth it, and extenuateth it into that form, for of itself it would be round, and therefore smoke is in the figure of a pyramis reversed ; for the air quencheth the flame, and receiveth the smoke. Bacon.

An hollow crystal pyramid he takes, In firmamental waters dipt above,

Of it a broad extinguisher he makes, And hoods the flames. Dryden.

The pyramidical idea of its flame, upon occasion of the candles, is what is in question. Locke.

Of which sort likewise are the gems or stones, that are here shot into cubes, into pyramidal forms, or into angular columns. Woodward.

Olympus is the largest, and therefore he makes it the basis upon which Ossa stands, that being the next to Olympus in magnitude, and Pelion being the least, is placed above Ossa, and thus they rise pi/ra- / iiidictillii. Broome’s Notes OH Odyssey.

Virtue alone outbuilds the pyramids ;

Her monuments shall last when Egypt’s fall.

Young.

PYRAMID, in geometry, a solid figure, whose base is a polygon, and whose sides are plain triangles, their several points meeting in one, called the vertex of the pyramid.

Hence the superficies of a given pyramid is easily found by measuring these triangles separately ; for their sum, added to the area of the base, is the surface of the pyramid required. It is no less easy to find the solid content of a given pyramid ; for, the area of the base being found, let it be multiplied by the third part of the height of the pyramid, or the third part of the base by the height, and the product will give the solid content, as is demonstrated by Euclid, lib. xii. prop. 7.

PYRAMIDS OF EGYPT. These celebrated buildings, ranked by the most ancient historians among the wonders of the world, have for many ages excited the attention of the curious and the criticism of the learned. The pyramids of Gee-

za or Gizeh, so denominated from a village of that name on the banks of the Nile, are the largest, and are distant from that river about eleven miles. The three which most attract the notice of travellers stand near one another on the west side of the river, almost opposite to Cairo, and not far from the spot whereon stood the ancient Memphis. The great appearance of antiquity which they display favors the supposition that the whole of these wonderful works must have been constructed at an earlier period than any other edifices that are to be seen in Egypt. Homer is silent respecting them ; but his silence is no proof that they were not in existence in his time. In the time of Herodotus as little was known concerning the second pyramid as before ‘ the late opening, with this exception, that in his time it was understood to be nearly in the state in which it was left when closed by the builders. These three pyramids are named after three kings, whose tombs they are supposed to be, *viz.* Cheops, Cephrenes, and Mycerinus. Of these the largest, that of Cheops, was faced with white marble, as was also the second, and its four sides face the four cardinal points. The ascent to the top is by steps, the lowermost being nearly four feet high and three broad ; the second of the same dimensions, but retiring inward from the i rst nearly three feet; and in the same manner the third row is placed upon the second, and the rest

in the same order to the top, which terminates in a small flat or square ; and they are so disposed that a line stretched from the bottom to the top would touch the angle of every step. From the time of Herodotus to the present day tnis pyramid has been measured by a great num-ber of travellers and learned men, and their different calculations have only increased the uncertainty. The following table will show, at least, how difficult it is to come at the truth.

GREAT PYRAMID.

Height. Width of one

of its sides.

French feet. French feet.

Herodotus . 800 … .800

Strabo . . 625 … .600 Diodorus Siculus 600 and a fraction . 700

Pliny … . … 708

Le Bruyn . . 616 . , . .704 Prosper Alpinus . 625 . .-.-‘ - . . 750 Thevenot . .520. ►► ‘►►►….-,. . 682 Niebuhr . . 440 … .710 Greaves . . 444 … .648 Belzoni . . 456 … .684

NUMBER OF LAYERS OF STONE WHICH FORM IT.

Greaves . . … . 207

Maillet 208

Albert Liewenstein …. 260

Pococke 212

Belon 250

Thevenot 208

According to Herodotus, the blocks of stone which served for the construction of the pyramids were obtained from quarries of oriental mountains on the frontiers of Arabia. This, however, is contrary to the observations of mo-dern travellers, who have ascertained that the

same chalky stone of which they are composed is the produce of the district in which they stand.

The second pyramid stands at about a bow-shot from the first, towards the south. Herodotus says, after having measured both, that it falls short of the other in magnitude ; tha it has no subterraneous chambers : and that the Nile is not conveyed into it by a channel, as he affirms it was into the former, but that it is of an equal altitude. Diodorus informs us that it resembles the first in its architecture, but is inferior to it in magnitude ; each side of the base containing a stadium, or 600 Grecian feet in length : so that by his computation each side is less than that of the former in length by 100 feet. Pliny makes the difference to be greater by forty-six feet.

On the north and west sides of this second pyramid are two very elaborate pieces of architecture, cut out of the rock in a perpendicular direction and squared by a chisel, about thirty feet in depth and about 1400 in length; supposed to be designed for the lodgings of the Egyptian priests.

The third pyramid stands at about the distance of a furlong from the second, on an advantageous rising of the rock, so that at a distance it appears equal to the former, though in fact much lower. Herodotus says that it is 300 feet on every side, and built of Ethiopic marble. Diodorus gives the same dimensions of its base, and adds that the walls were raised fifteen stories with black stone, like Thebaic marble, and the rest finished with such materials as the other pyramids are built with ; that this, though exceeded by the two former in magnitude, yet far excels them in respect to the structure, art, and magnificence of the marble ; and that, on the side towards the north, the name of Micerinus, the founder, is engraved : but this inscription has been effaced by time. Pliny writes to the same effect, except that he makes this pyramid 363 feet between the angles.

Very important discoveries in the interior of these enormous masses have been made within our own time by Messrs. Davison and Caviglio, and by M. Belzoni. The most celebrated, and perhaps the most arduous of M. Belzoni's labors, was' the opening of the pyramid of Cephrenes. Herodotus was informed that this pyramid had no interior chambers, and this no doubt operated in preventing that curiosity which had long be-fore opened the pyramid of Cheops. The account of his discovery we cannot give better than in Belzoni's own words.

On my return to Cairo, I again went to visit the celebrated pyramids of

Ghiza ; and, on viewing that of Cephrenes, I could not help reflecting how many travellers of different nations, who had visited this spot, contented themselves with looking at the outside of this pyramid, and \v <ni awav without enquiring whether any, and what chambers, exist in it ; satisfied perhaps with the report of the Egyptian priests, ‘ that the pyramid of Cheops only contained chambers in its interior.’ I then betran to consider about the possibility of opening this pyramid ; the attempt was peihaps presumptuous ; and the risk of iin-

dertaking such an immense work without success deterred me in some degree from the enterprise. I am not certain whether love for antiquity, an ardent curiosity, or amhition, spurred me on most in spite of every obstacle, but I determined at length to commence the operation. I soon discovered the same indications which had led to the development of the six tombs of the kings in Thebes, and which induced me to begin the operation on the north side. It is true, the situations of the tombs at Thebes, their form and epochs, are so very different from those of the pyramids, that many points of observation made with regard to the former, could not apply to the latter ; yet I perceived enough to urge me to the enterprise. I accordingly set out from Cairo on the 6th of February, 1818, under pretence of going in quest of some antiquities, at a village not far off, in order that I might not be disturbed in my work by the people of Cairo. I then repaired to the Kaiya Bey, and asked permission to work at the pyramid of Ghiza in search of antiquities. He made no objection, but said that he wished to know if there was any ground about the pyramid fit for tillage ; I informed him that it was all stones, and at a considerable distance from any tilled ground. He nevertheless persisted in enquiring of the cashief of the province, if there was any good ground near the pyramids; and, after receiving the necessary information, granted my request.

‘ Having thus acquired permission, I began ray labors on the 10th of February, at a point on the north side in a vertical section at right angles to that side of the base. I saw many reasons against my

beginning there, but certain indications told me that there was an entrance at that spot. I employed sixty laboring men, and began to cut through the mass of stones and cement which had fallen from the upper part of the pyramid, but it was so hard joined together, that the men spoiled several of their hatchets in the operation ; the stones which had fallen down along with the cement having formed themselves into one solid and almost impenetrable mass. I succeeded, howeTer, in making an opening of fifteen feet wide, and continued working downwards in uncovering the face of the pyramid ; this work took up several days, without the least prospect of meeting with any thing interesting. Meantime I began to fear that some of the Europeans residing at Cairo might pay a visit to the pyramids, which they do very often, and thus discover my retreat, and interrupt my proceedings.

‘ On the 17th of the same month we had made a considerable advance downwards, when an Arab workman called out, making a great noise, and saying that he had found the entrance. He had discovered a hole in the pyramid into which he could just thrust his arm and a djerid of six feet long. Towards the evening we discovered a larger aperture, about three feet square, ‘yhich had been closed in irregularly, by a hewn stone ; this stone I caused to be removed, and then came to an opening larger than the preceding, but filled up with loose stones and sand. This satisfied me that it was not the real but a forced passage, I found to lead inwards and towards the VOL. XVIII.

south ; ??? the next day we succeeded in entering fifteen feet from the outside, when we reached place where the sand and stones began to fall from above. I caused the rubbish to be taken out, but it still continued to fall in great quantities ; at last, after some days labor, I discovered an upper forced entrance, communicating with the outside from above, and which had evidently been cut by some one “who was in search of the true passage. Having cleared this passage, I perceived another opening below, which apparently ran towards the centre of the pyramid. In a few hours I was able to enter this passage, and found it to be a continuation of the lower forced passage, which runs horizontally towards the centre of the pyramid, nearly all choked up with stones and sand. These obstructions I caused to be taken out ; and at halfway from the entrance I found a descent which also had been forced ; and which ended at the distance of forty feet. I afterwards continued the work in the horizontal passage above, in hopes that it might lead to the centre ; but I was disappointed, and at last was convinced that it ended there ; and that, to attempt to

advance in that way would only incur the risk of sacrificing some of my workmen ; as it was really astonishing to see how the stones hung suspended over their heads, resting, perhaps, by a single point. Indeed one of these stones did fall, and had nearly killed one of the men. I therefore retired from the forced passage, with great regret and disappointment.

‘ Notwithstanding the discouragements I met with, I recommenced my researches on the following day, depending upon my indications. I directed the ground to be cleared away to the eastward of the false entrance ; the stones, en-crusted and bound together with cement, were equally hard as the former, and we had as many large stones to remove as before. By this time my retreat had been discovered, which occasioned me many interruptions from visitors : among others was the abbe de Forbin.

‘ On February 28th we discovered a block of granite in an inclined direction towards the cen-tre of the pyramid, and I perceived that the inclination was the same as that of the passage of the first pyramid, or that of Cheops ; consequently I began to hope that I was near the true entrance. On the 1st of March we observed three large blocks of stone one upon another, all inclined towards the centre : these large stones we had to remove as well as others much larger as we advanced, which considerably retarded our approach to the desired spot. I perceived, however, that I was near the true entrance, and, in fact, the next day about noon, on the 2nd ot March, was the epoch at which the grand pyramid of Cephrenes was at last opened, after being closed up for so many centuries that it remained an uncertainty whether any interior chambers did or did not exist. The passage I discovered was a square opening of four feet high and three and a half wide, formed by folir blocks of granite; and continued slanting downward at the same inclination as that of the pyramid of Cheops, which is an angle of 26►►. It runs to the length 01 104 feet five inches, lined the whole way with

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granite. I had much to do to remove and draw up the stones which filled the passage down to the portcullis or door of granite, which is fitted into a niche also made of granite. I found this door supported by small stones within eight inches of the floor, and in consequence of the narrowness of the place it took up the whole of that day and part of the next to raise it sufficiently to afford an entrance; this door is one foot three inches thick, and, together with the work of the niche, occupies six feet eleven inches, where the granite work ends : then commences a short passage, gradually ascending towards the centre, twenty-two feet seven inches, at the end of which is a perpendicular of fifteen feet: on the left is a small forced passage cut in the rock, and also above, on the right, is another forced passage which runs upwards and turns to the north thirty feet, just over the portcullis. There is no doubt that this passage was made by the same persons who forced the other, in order to ascertain if there were any others which might ascend above, in conformity to that of the pyramid of Cheops. I descended the perpendicular by means of a rope, and found a large quantity of stories and earth accumulated beneath, which very nearly filled up the entrance into the passage below which inclines towards the north. I next proceeded towards the channel that leads to the centre, and soon reached the horizontal passage. This passage is five feet eleven inches high, three feet six inches wide, and the whole length, from the above-mentioned perpendicular to the great chamber, is 158 feet, 8 inches. These passages are partly cut out of the living rock, and at halfway there is some mason's work, probably to fill up some vacancy in the rock; the walls of this passage are in several parts covered with inrcustations of salts.

' On entering the great chamber, I found it to be forty-six feet three inches long, sixteen feet three inches wide, and twenty-three feet six inches high; for the most part cut out of the rock, except that part of the roof towards the western end. In the midst we observed a sarcophagus of granite, partly buried in the ground, to the level of the floor, eight feet long, three feet six inches wide, and two feet three inches deep inside, surrounded by large blocks of granite, being placed apparently to guard it from being taken away, which could not be effected without great labor ; the lid of it had been opened ; I found in it only a few bones of a human skeleton, which merit preservation as curious reliques, they being in all probability those of Cephrenes, the reported builder of this pyramid. On the wall of the western side of the chamber is an Arabic inscription, a translation of which has been sent to the British Museum. It testifies that, ' this pyramid was opened by the Masters Mahomet El Aghar and Otman, and that it was inspected in presence of the Sultan Ali Mahomet the 1st, Ugloch.'

There are also several other inscriptions on the walls, supposed to be Coptic ; part of the floor of this chamber had been removed in different places, evidently in search of treasure, by some of those who had found their way into it. Under one of these stones I found a piece of metal something like the thick part of

an axe, but it is so rusty and decayed that it is almost impossible to form a just idea of its form. High up and near the centre there are two small square holes, one on the north and the other on the south, each one foot square ; they enter into the wall like those in the great chamber of the first pyramid. I returned to the before-men tioned perpendicular, and found a passage to the north in the same inclination of 26►► as that above : this descends forty-eight feet six inches, where the horizontal passage commences, which keeps the same direction north fifty-five feet, and halfway along it there is on the east a recess of eleven feet deep. On the west side there is a passage, twenty feet long, which descends into a chamber thirty-two feet long and nine feet nine inches' wide, eight and six feet high ; this chamber contains a quantity of small square blocks ot stone, and some unknown inscriptions written on the walls. Returning to the original passage, and advancing north, near the end of it is a niche to receive a portcullis like that above. Fragments of granite, of which it was made, are lying near the spot ; advancing still to the north I entered a passage which runs in the same inclination as that before-mentioned, and at forty-seven feet six inches from the niche it is filled up with some large blocks of stone, put there to close the entrance which issues out precisely at the base of the pyramid. According to the measurements, it is to be observed that all the works below the base are cut into the living rock, as well as part of the passages and chambers before-mentioned. Before I conclude I have to mention that I caused a range of steps to be built, from the upper part of the perpendicular to the passage below, for the accommodation of visitors.

' It may be mentioned that, at the time I excavated on the north side of the pyramid, I caused the ground to be removed to the eastward between the pyramid and the remaining portico which lies nearly on a line with the pyramid and the sphinx. I opened the ground in several places, and in particular at the base of the pyramid ; and in a few days I came to the foundation and walls of an extensive temple, which stood before the pyramid at the distance of only forty feet. The whole of this space is covered with a fine platform, which no doubt runs all round the pyramid. The pavement of this temple, where I uncovered

it, consists of fine blocks of calcareous stone, some of which are beautifully cut and in fine preservation; the blocks of stone that form the foundation are of an immense size. I measured one of twenty-one feet long, ten feet high, and eight in breadth (120 tons weight each) ; there are some others above ground in the porticoes which measured twenty-four feet in length, but not so broad nor so thick.'

The great pyramid of Gizeh was explored with extraordinary labor and peril by Mr. Davison, British Consul at Algiers, who accompanied Wortley Montague to Egypt, in the year 1763; and, in order to apprehend the importance of the recent discoveries, it is necessary to understand the extent to which that gentleman had carried his researches

One of his principal objects was to ascertain the depth of what had hitherto been denominated the Well. After descending, by means of a rope tied about his body, to the bottom of the first shaft, he found, on the south side, at the distance of eight feet from the lower extremity of that shaft, a second opening which reached in a perpendicular direction to the depth of only five feet ; and, at the distance of four feet and a half from the bottom of this shaft, he found a third opening, which was so much closed up by a large stone at the mouth as barely to admit the body of a man. Having with the utmost difficulty prevailed upon the Arabs who accompanied him to come down and hold the rope by which he was suspended, he proceeded in his descent, and about half way down he came to a grotto nearly fifteen feet long, four or five feet wide, and as high as a man of ordinary stature. From this place the shaft took a sloping direction for a little way, and then becoming more perpendicu-tar, he at length reached the bottom which was completely closed with sand and rubbish. Here he found a rope ladder, which had been used by Mr. Wood (author of the Ruins of Palmyra and Balbec), who had proceeded no farther than the grotto ; and, though it had been left there sixteen years before, was as fresh and strong as if perfectly new. The depth of the first of these shafts was twenty-two feet, of the second twenty-nine, and of

the third ninety-nine, making, with the addition of the five feet between the first and second shafts, a total descent of 155 feet.

Upon a subsequent visit, Mr. Davison next proposed to explore an opening which he had discovered at the top of the gallery : and for this purpose provided himself with several short ladders, capable of being fastened to one another by wooden pins, so as to extend, when thus united, to the length of twenty-six feet. Having mounted by the assistance of this ladder to the opening which he had observed, he found a passage two feet four inches square, which turned immediately to the right; but, on account of the dust and bats-dung with which it was covered to the depth often of a foot, it was with the greatest difficulty, and the constant hazard of suffocation, that he crawled along with his face to the ground. Upon reaching the end of this passage, he found on the right a straight entrance into a long, broad, and low room ; and, both by the length and direction of the passage through which he had entered, he knew it to be situated immediately above the large room, usually called the king's chamber. This chamber is four feet longer than the one below, but exactly of the same breadth, and its covering is composed of eight stones of beautiful granite. This place could not be found by Niebuhr, though informed of its situation by Mr. Meynard who had accompanied Mr. "Davison, and has never been visited since the time of the last-mentioned traveller, till the date of those recent discoveries which we now proceed to describe.

Captain or Mr. Caviglia, the master of a mercantile vessel in the Mediterranean trade, set out from Cairo on the 8th of January 1817, with a resolution to employ his utmost exertions in exploring the numerous passages and interior re-

cesses of the pyramids of Ghizeh. Conceiving that the descent of the Well in the great pyramid had never been thoroughly prosecuted, he entered the shaft, as Mr. Davison had done, with a lamp in his hand and a rope about his middle. He describes the different shafts nearly in the same manner as that gentleman does, but discovered the additional fact, that the interior was lined with masonry above and below the grotto, for the purpose, as was supposed, of supporting one of those insulated beds of gravel, which are frequently found in rock. He found nothing at the bottom but loose stones and rubbish ; and was compelled, by the excessive heat and foul air, to reascend the shaft with all possible expedition ; but, before he reached the grotto, all his lights were extinguished in rapid succession. Neither this

experience of the enervating heat and im-pure air of these subterranean channels (which have often been known to cause the stoutest man to faint, even in getting up as far as the gallery), or the various histories current in Cairo of persons who were supposed to have perished in these attempts, could deter this enterprising traveller from renewing his researches, with a degree of perseverance as unexampled as his success was unexpected. Having remarked that the ground at the bottom of the Well gave a hollow sound under his feet, he was convinced that there must be some concealed outlet below; and, having pitched his tent in front of the pyramid, he hired a number of Arabs to draw up the rubbish from the spot with baskets and cords. With the aid of an order from the Kiaya-Bey, and the payment of enormous wages, ‘ it is still,’ says Mr. Salt, ‘ almost inconceivable how he could so far surmount the prejudices of these people as to in-duce them to work in so confined a space, where a light after the first half hour would not burn, and where, consequently, every thing was to be done by feeling and not by sight ; the heat at the same time being so intense, and the air so suffocating, that, in spite of all precautions, it was not possible to stay below an hour at a time, without suffering from its pernicious effects. At length, indeed, it became so intolerable that one Arab was brought up nearly dead, and several others on their ascending fainted away ; so that, at last, in spite of the command laid upon them, they almost entirely abandoned their labor, declaring that they were willing to work but not to die for him.*

Disappointed in this pursuit, Mr. Caviglia applied his endeavours to clear the principal entrance of the pyramid, which had from time immemorial been so much obstructed as to ren-der it necessary for those who entered the passage to creep on their hands and knees : by this means he hoped to admit a freer passage for the air into the interior. In the course of these labors he made the unexpected discovery that the main passage leading from the entrance continued downwards, with the same degree of inclination, the same dimensions, and the same finish of work at the sides, as at the beginning of the channel. Having cleared out this inclined passage to the length of 150 feet, the air became so impure, and the heat so suffocating, that he experienced the same difficulties in preT 2

vailing with the Arabs to continue the work, and was himself attacked with spitting of blood, and other symptoms of impaired health. Still, however, persevering in his researches till he had excavated the passage to a distance of 200 feet, his labors were rewarded with the discovery of a door-way on the right side, from which a smell of sulphur was soon perceived to issue. Recollecting, that in his first visit to the pyramid, he had burned some sulphur at the bottom of the well, for the purpose of purifying the air, he conceived the probability of there being a communication by this door-way with the well. This conjecture was soon realised by the discovery that the channel opened directly upon the well, where he found the baskets, cords, and other implements, which had been left by the workmen. The opening of this communication afforded a complete circulation of air along the new passage, and up the shaft, so as greatly to facilitate his future operations. This new passage, however, did not terminate at this door-way; but, continued twenty-three feet farther, in the same line of inclination, till at length it took a horizontal direction for the space of above twenty-eight feet, and then opened into a spacious chamber immediately under the centre of the pyramid, and 100 feet below the base. This chamber, with the greatest part of the passage leading to it, is all cut out of the solid rock upon which the pyramid is built, and which projects into the body of the pyramid about eighty feet above the level of its external base. The chamber itself is sixty feet long, twenty-seven broad, with a high but flat roof; and, when first discovered, was nearly filled with loose stones and rubbish. The platform of the floor is irregular, nearly one-half of its length from the entrance being -quite level, and about fifteen feet from the ceiling ; while, in the middle space, it descends five feet lower, where there is an opening or hollow, resembling the commencement of another shaft or well ; and thence., to the western end, it rises so much that there is scarcely room, at the extremity, to stand upright between the floor and the ceilinjj. Some Roman characters, rudely formed, and marked by the flame of a candle, were observed on the walls ; but the mouldering of the rock had rendered them illegible. There was no vestige of any sarcophagus ; md it is supposed that this receptacle of the dead had been spoiled of its contents by the early Arabs, under Al Mamoun, the son of liaroun al Raschid. On the south side of this chamber is an excavated passage, just sufficient to admit a person creeping along on his hands and knees, and continuing horizontally for the space of fifty-five feet,, when it seems to terminate abruptly. Another passage, at the east end of the chamber, commencing with a

kind of arch, runs about forty feet into the solid body of the pyramid. Dr. Clarke says of the above well, ‘ We threvsr down some stones, and observed that they rested at about the depth which Greaves has mentioned (twenty feet) ; but being at length provided with a stone nearly as large as the mouth of the well, and about fifty pounds in weight, we let this fall, listening attentively to the result from the spot where the other stones rested. We were agreeably surprised by hearing, after a length of time which must have equalled some seconds, a loud and distinct report, seeming to come from a spacious subterraneous apartment, accompanied by a splashing noise as if the stone had been broken into pieces, and had fallen into a reservoir of water at an amazing depth.’ ‘ Thus,’ continues the doctor, ‘ does experience always tend to confirm the accounts left us by the ancients ! for this exactly answers to the description given by Pliny of this well.’ Now it is quite obvious, from Messrs. Davison and Caviglia’s better ‘ experience,’ that Dr. Clarke’s ‘ large stone’ could not, by any possibility, travel an inch beyond the bottom of the first shaft, or about twenty feet ; unless we are to suppose that, on reaching the first bottom, it took a horizontal roll due south eight feet, dropped down the second shaft of five feet; then look a second roll of about fixe feet, and finally tumbled down the third shaft : but even thus there would be no ‘ splashing,’ though ‘ the inundation of the Nile was nearly at its height ;’ as the new chamber discovered by Caviglia, which is even lower than the bottom of the well, is thirty feet above the level of the Nile at its greatest elevation.

Mr. Caviglia next proceeded to examine the chamber discovered by Mr. Davison, immediately above the king’s chamber, and found the dust and bats’ dung with which the floor was covered, increased to the depth of eighteen incites. He describes the sides and the roof of this upper apartment as coated with red granite of the finest polish, but its floor is very uneven, in consequence of its bein^j formed by the individual blocks of granite which compose trie roof of tlie chamber below. It is only four feet high ; and it is not easy to conjecture for what purpose it could have been intended. Nothing was discovered by Mr. Caviglia that could lead to a solution of the long contested question respecting the original design of these recesses ; but it is still considered as the most probable opinion that they were principally intended to secure the remains of the founder, or of the priests ; and it is also conjectured that, among the contents of the sarcophagus, discovered in the pyramid of Cephrenes, some human bones may have been mixed with those of the cow.

Few subjects have occasioned more specula-lation than the intent and use of the Egyptian pyramids. About forty years since, a German

professor published a volume to prove that these majestic remains of the most remote antiquity are nothing more than basaltic eruptions, magnificent sports of nature, and so many incontrovertible proofs of the general derangement which has taken place on the globe ! It is, indeed, a remarkable example of human vanity that these buildings, reckoned among the wonders of the world, should not have preserved more certain data of their origin. Pliny mentions a number of authors who in his time had written concerning them; and all, he informs us, disagree in their accounts of those who built them. Some modern writers maintain that they were erected by the Israelites, under the tyranny of the Pharaohs, and allege to this purpose the testimony of Josephus, Auliq. lib. i. cap. 5.

PYRAMIDS.

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According to Herodotus, and to Diodorus, the first pyramid was erected by Cheops, or Chemmis, a king of Egypt, who is said to have employed 360,000 men for twenty years in the structure. Cephrenes, brother and successor to the former king, is said to be the founder of the second pyramid ; and the third is said to have been built by Mycerinus, the son of Chemmis, according to Diodorus ; or, according toHerodotus, of Cheops. However, Herodotus says, that some ascribed the last to Rhodope, a courtezan, and the other two to the shepherd Philittion. The learned Greaves places the three kings who erected these pyramids in the twentieth dynasty ; Cheops having begun his reign in the year 3448 of the Julian period, 490 years before the first Olympiad, and 1266 years before the Christian era. He reigned fifty years, says Herodotus, and built this pyramid, as Diodorus observes, in the 180th Olympiad; whereas he might have said 1207. Cephrenes, the builder of the second, reigned fifty-six years ; and Mycerinus, the builder of the third, seven years. Bryant ascribes the structure of the pyramids to the Cuthites, or Arabian shepherds, who built Helio-polis, and who were the giants and Titans of the first ages.

The general opinion with regard to their intention and use is, that they were sepulchres and monuments of the Egyptian monarchs. This is expressly affirmed by Diodorus and Strabo, and the opinion is

confirmed by the Arabian writers. The reason, says Greaves, of their erecting these magnificent structures is founded in the theology of the Egyptians, who, as Servius shows in his comment upon Virgil (/Eneid, lib. iii.), believed that as long as the body endured so long the soul continued with it; and this was also the opinion of the Stoics. Upon this principle, that the bodies might neither be reduced to dust by putrefaction, nor converted into ashes by fire, they embalmed them, and laid them up in these stately repositories, where they might continue free from injury. Many, however, have objected to this account of the pyramids, and are of opinion that they were originally intended for some nobler purpose. If Cheops, says Dr. Shaw, or any other person who was the founder of the great pyramid, intended it only for his sepulchre, what occasion was there for such a narrow crooked entrance into it; for the well, as it is called, at the end of the entrance ; for the lower chamber; for the long narrow cavities in the walls of the upper room ; or, for the two anti-chambers and the lofty gallery, with benches on each side that introduce us into it. As the whole of the Egyptian theology was clothed in mysterious emblems and figures, it seems reasonable to suppose, he adds, that all these turnings, apartments, and secrets in architecture were designed for some purpose of religion, and that the deity, which was typified in the outward form of this pile, was to be worshipped within.

Major Fitzciarence, in his journey over land from India, reached Cairo shortly after the opening of the pyramid of Cephrenes had been accomplished by Belzoni ; and, with the zeal and enterprize of his profession, he determined to enter into the pyramid and examine for himself,

the wonders of the central chamber, so recently laid open. With less reverence, perhaps, for the august repository of the mighty dead than might have been felt by a contemporary of the Pharaohs, he brought away a few fragments from the domus exilis Plutonia, and among the rest some small pieces of bone, one of which proved to be the lower extremity of the thigh bone, where it comes in contact with the knee joint. This singular curiosity was presented by major Fitzciarence to his royal highness the prince Regent, who submitted it to the inspection of Sir Eve rard Home. Sir Everard, entertaining no doubt of its being part of a human skeleton, took it to the Museum of the College of Surgeons, that, by adjusting it to the same part of different sized skeletons, he might be enabled to form some estimate of the comparative stature of the ancient Egyptians and modern Europeans. On a closer and more laborious examination, however, the fragment

was found to agree with none of them ; and it finally appeared that, instead of forming any part of the thigh bone of a human subject, it actually made part of that of a cow.

The large sarcophagi, instead of being the depositories of the remains of the kings of Egypt, would hence appear to have been hollowed out and sculptured with such extraordinary skill and pains to receive the mortal exuviae of the tutelary deities ; and those immense masses in which they were entombed to have owed their boundless cost and magnificence to a reverential regard for 'the brutish forms' of Apis or Osiris. Probably also the kings of Egypt would order their bones to be placed with those of their gods, and thus give rise to the tradition delivered to us by Herodotus.

Some have supposed that these stupendous monuments were erected by the Egyptians as temples or altars to their god Osiris or the sun. It was natural, say they, to build them in that shape which the rays of the sun display when discovered to the eye, and which they observed to be the same in terrestrial flame, because the circumstance was combined in their imaginations with the attribute which they adored. If they were temples dedicated to the sun, it seems a natural consequence that they should likewise be places of sepulture for kings and illustrious men, as the space which they covered would be considered consecrated ground. This hypothesis is common, and is not contradicted by the present reasoning. But considering them as altars, and, as most travellers agree that they terminate in a square horizontal surface, they venture to assert that, in great and solemn acts of adoration, the Egyptians constructed fires, the flames of which, terminating in the vertex of the pyramid, completed that emanation of their deity which they admired and adored. The learned Bryant, having settled them to be temples consecrated to the deity, had no difficulty in transforming the sarcophagus into a. water-trough to hold the sacred element drawn up from the Nile ××× a conception about as felicitous as that which would have converted the supposed sarcophagus of Alexander into a bathing-tub ; a proof of which was in the holes in the bottom to let out the water!

Dr. Clarke rejects entirely all that the Greeks

have told us respecting the names of their founders, and the circumstances under which they were erected ; and has recourse, as he tells us, to Arabic or Jewish tradition, to prove that some of these vast piles were raised by the Israelites during their abode in Egypt, and that the particular pyramid which is now open was the tomb of the patriarch Joseph. Its being now open is, of course, accounted for by the fact that his bones were removed by his countrymen on their departure for Canaan ! ‘ On the whole,’ say the Quarterly Reviewers, ‘ we can find no reason for depriving Cheops, Cephrenes, and Mycerinus of the wicked renown of having raised the useless and oppressive piles which bear their name ; and though it is impossible to say when the first pyramids were erected, and whether some of them may be or may not be the work of the Israelites, it is utterly unlikely that any of them were raised by this people on their own account, or in honor of the patriarch Joseph.’

Before we take leave of these vase piles, we must advert to a circumstance which is too remarkable to be passed over. In all the pyramids that have been opened, which at Gizeh and Saccara amount at least to six, the entrance has been found at or near the centre on the northern face, and the passage thence to proceed invariably in a slanting direction downwards ; the angle of the inclination being always the same. Greaves, in his Pyramidographia, makes that of Cheops 26►►, and Caviglia 27►►, which, he says, is com-mon to all the sloping passages within the pyramid of Cheops. He found the same angle on opening one of the small pyramids to the south of that of Mycerinus, at the end of the passage of which were two chambers, leading one out of the other, both empty. Belzoni estimates the sloping passages of the pyramid of Cephrenes at 26►►. This coincidence cannot be referred to accident, and the able Reviewer, just quoted, suggests that these passages might have been used to correct their measurement of time. The adits, as we have observed,are invariably inclined downwards, in an angle of about 27►►, more or less, with the horizon, which gives a line of direction not far removed from that point in the heavens where the north polar star now crosses the meridian below the pole. The observation of the passage of this or some other star across this part of the meridian would give them an accurate measure of sidereal time : a point of the first importance in an age when no other instruments than rude solar gnomons, or something still more imperfect, were in use. Indeed, we know not of any me-thod that could more effectually be adopted for observing the

transit of a star with the naked eye than that of watching its passage across the mouth of this lengthened tube ; and some one or more of these luminaries, when on the meridian below the pole, must have been seen in the direction of the angular adits. Dr. Young, however, observes that the observation of the pole-star was at least extremely ill contrived for the determination of time, on account of the very slow apparent motion of that star.

The pyramids of Saccara, though second only in importance to those of Gizeh, so nearly resem-

ble them in every particular as to need no separate description.

At Dashouv is a large pyramid of brick, call-ed by Herodotus the pyramid of Asychis, and on which he reports was the following remarkable inscription : ††† 'Do not compare me with the pyramids of stone ; for I excel them as much as Jupiter excels the other gods : for those who built me thrust poles into a lake, and, collecting the mud which adhered to them, they made bricks of it, and thus they constructed me.' See EGYPT, SPHINX, and THEBES.

PYRAMUS, in ancient geography, a river of Cilicia, which rises on the north side of Mount Taurus, and runs into that part of the Mediterranean anciently called the Pamphylian Sea, between Issus and Magarassus.

PYRAMUS, in fabulous history, an unfortunate youth of Babylon, who fell in love with Thisbe, whom, as their parents disapproved of their union, he appointed to meet with in a wood ; but, finding her veil all bloody, concluded she had been torn to pieces by a wild beast, on which he killed himself; and Thisbe soon after coming to the spot, and finding him dying, fell upon his sword also. Ovid celebrates their unfortunate love.

PYRE, n. s. Lat. pyra ; Gr. Trwp. A pile to be burnt.

When his brave son upon the fun'ral pyre He saw extended, and his beard on fire. Dryden.

Divination was invented by the Persians, aud is seldom or never taken in a good sense ; there are four kinds of divination, hydromancy, pyromancy, aeromancy, geomancy. Ayliffe,

Pyrites contain sulphur, sometimes arsenick, al-ways iron, and

sometimes copper. Woodward.

With tender billet-doux he lights the pyre, And breathes three am'rous sighs to raise the fire.

Pope.

Let earth dissolve, yon ponderous orbs descend, And grind us into dust. The soul is safe ; The man emerges : mounts above the wreck, As tow'ring flame from nature's funeral pyre.

Young.

PYREIA, or PYRATERIA, in antiquity, temples consecrated to the sun, wherein a perpetual fire was kept. They were large enclosures built upon high eminences, without any covering. The Guebres, or worshippers of fire in Persia and the East Iridies, have still these pyreia.

PYREN7EUS, in fabulous history, a king of Thrace, who during a storm gave shelter to the nine Muses in his palace ; but afterwards attempted to offer them violence, upon which the goddesses took to their wings and flew away ; and Pyrenaeus, attempting to fly after them from the top of a tower, fell and was killed.

PYRENE, an ancient town of Gallia Celtica, near the source of the Istor : also a fountain near Corinth.

PYRENEES, DEPARTMENT OF THE LOWER, is formed out of the former provinces of Navarre and the Beam, France, and derives its name from its being situated at the western extremity ol the Pyrenees, The principal place of this prefecture is Pau; it is divided into five arrondissements or subprefectures, containing a total population of 399,454 souls, on an area of 3492

square miles, and yielding a territorial revenue of 15,392,000 francs. These are subdivided into forty cantons and 655 communes, and form

three electoral arrondissements, which send three members to the chamber of deputies. It is in the eleventh military division, having a royal court at Pau and a bishopric at Bayonne. This department is bounded on the north by the Landes and the Gers ; on the east by that of the Upper Pyrenees ; on the south by the Pyrenean Mountains, which separate it from Spain, and on the west by the ocean.

The surface of this country, generally mountainous and unequal, presents a great variety of productions, and agreeable and cli versified scenery. It abounds with rising grounds, covered with vines yielding excellent wine, beautiful valleys affording good pasturage, and uncultivated and wild plains. On the southern side runs a range of high mountains covered with wood, terminating westward in the Pyrenees ; these diminish gradually in elevation till they are lost in the sea. The soil is naturally dry and barren, and yields its produce only by dint of labor. The small plains and valleys produce rye, wheat, barley, oats, millet, and maize, on which the peo-ple chiefly subsist ; hay, and very soft and fine flax, which serves for the manufacture of the Beam linens. Great quantities of chestnuts are gathered here. Game of all kinds abounds, and thˆ forests furnish wood for masts, timber, and building. The climate is very temperate in the plains, but cold in the mountains ; yet every where very healthy. Horses and mules are used in agriculture, but the produce is insufficient for its inhabitants. There are 112,225 hectares of forests (chestnuts, oaks, pines, and firs), and 16,700 of vineyards, yielding on an average sixteen francs seven centimes per hectare of arable land. The productions are corn of all sorts, chestnuts, excellent fruit and wines, fine linen, gall nuts, salt and fresh water fish, particularly salmon, tunnies, turbots, lampreys, pilchards, and excellent trout, horses for cavalry, mules, sheep, and small horned cattle, and pigs. There are mines of silver, iron, and copper, and quarries of marble of every color, granite, slate, marl, sulphur, and cobalt ; mineral waters at Laurens, at Aas, and at Cambo, and a royal stud at Pau. The manufactures chiefly consist in Beam linens, cotton, handkerchiefs, table linen, woollen counterpanes, twine, coarse serge, stuffs for hoods, Tunisian caps, carpets, quills, chocolate, Andaye brandy, and cream of tartar; besides cotton spinning factories, tan-yards, manufactories of white and chamois leather, dyehouses, paper-mills, and dock yards for ship building. A considerable trade is carried on in these articles, as well as drugs, liquorice juice, resinous matters, timber, salt, fine wool, Bayonne hams, &c.

The chief rivers are the Adour, the Bidassoa, the Bidouze, the Nivelle, the Nive, and the gave d'Aleron, navigable; the Rixe, the Laran, the Luy de Beam, the Luy de France, the Gabas, the Caves de Pau, d'Aspe,

d'Ossau, and deMauleon. It is crossed by the great roads of Mont de Mar-san, Audi, Tarbes, and Bayonne.

PYRENEES, DEPARTMENT OF THE UPPER, is formed out of the Bigarre, a dependency of the

former province of Gascony, and takes its name from its natural situation in the Pyrenean Mountains. The principal town is Tarbes. It is divided into three arrondissements or subprefectures ; containing a total population of 211,979 souls, on an area of 2115 square miles, and yielding a revenue of 7,769,000 francs. It is subdivided into twenty-six cantons and 501 communes ; it is in the tenth military division ; forms part of the diocese of Bayonne, having its royal court at Pau, and consists of three electoral arrondissements, which send five members to the chamber of deputies. This department is bounded on the north by that of the Gers, on the east by that of the Upper Garonne, on the south by the Pyrenean Mountains, which divide it from Spain, and on the west by the department of the Lower Pyrenees.

This country is covered with lofty mountains, the tops of which are covered with perpetual Sflows ; some presenting bare peaks, towering into the clouds and receiving at their feet the waters of numerous torrents. The mountains next in size to these have their tops covered with ancient forests, which furnish excellent wood for building and other purposes : here are found a number of rare and useful plants, and excellent pasturage, feeding numerous flocks of goats and sheep. Among the mountains are scattered fertile plains, rich pastures, and vine covered hills, producing good red and white wine. The region of hills which succeeds to the large valleys is particularly well cultivated ; the plains produce a little wheat, some hay, rye, bartey, and especially millet. The climate is temperate in the plains, and very cold in the mountains. The inhabitants of the Upper Pyrenees are in general simple, brave, and generous ; the soil is partly cultivated with mules, and yields an insufficient supply for its inhabitants. There are 67,530 hectares of forests (chestnuts, oaks, beech, and fir), and 11,000 hectares of vineyards; the produce of each hectare of arable land being thirteen francs eighty-five centimes.

Beside the above-mentioned productions, buckwheat and maize are grown here ; mulberry trees, potatoes, figs, and herbs of different kinds ; honey and wax are made ; there are good fresh-water fish, particularly trout; horses suited for light cavalry, many mules and asses, a fine species of horned cattle, numerous flocks of sheep,

shepherds' dogs remarkable for their size and extraordinary strength, pigs, goats, poultry, especially geese, bees, &c. Iron mines are found ; and quarries of asbestos, granate, ochre, marble, granite, marie, fullers' earth, potters' clay, &c. There are establishments of mineral waters at Bagneres de Bigorre, Bareges, Cauterets, Luz, Cadeac, Capoerne, Siradan, and St. Marie. Manufactures are carried on here, of bolting-cloths, twine, serge, linen cloths, light stuffs, crapes, shawls, cudgels, agricultural instruments, cutlery ,.nails, leather, coarse paper, a-nd brandy; and there is a considerable trade in excellent butter, cheese, honey, provisions of all kinds, sheep and lambs, pigs, hams, poultry, wood, timber for coopers, hoops, wooden shoes, &c.

The principal rivers that water this department are the Adour, the Garonne, the Neste, the Gers,

the Gave de Pau, the Arros, and the Estreux ; and it is crossed by the great roads of Pau, Auch, and Mont-de-Marsan.

PYRENEES, DEPARTMENT OF THE EASTERN, is formed out of the ancient province of Roussillon, and takes its name from the eastern part of the Pyrenean Mountains, among which it is situated. The principal place of this prefecture is Perpignan, and it is divided into three arrondissements or subprefectures; containing a population of 133,446 souls, on a superficial extent of 1908 square miles ; and yielding a territorial revenue of 7,351,000 francs. These are subdivided into seventeen cantons and 248 communes, and consist of two electoral arrondissements, that send two members to the chamber of deputies. It forms part of the tenth military division, in the diocese of Carcassonne, and has a royal court at Montpelier. This department is bounded on the north by that of the Aude ; on the east by the Mediterranean ; on the south by the Pyrenean Mountains, which divide France from Spain ; and on the west by the department of the Arriege.

This country is intersected with lofty mountains, which join on the Pyrenean chain, and are the highest of all the range between the

Mediterranean and the Ocean. They are covered with snow and ice, and give rise to a great number of rivers, which, on account of their great declivity, are destitute of water for one part of the year ; but in the rainy season, or when the snows are melted, they become impetuous torrents, the overflowing of which often causes dreadful ravages. The surface is divided into three great basins by the Tet, the Tech, the Agly, and the Aude, and generally affords a fertile soil, suitable for every purpose of agriculture. There are commonly two harvests in those lands which are watered. The hedges are formed in a great measure of pomegranate trees; orange and citron trees flourish every where in the open field ; and the hills and uncultivated parts are covered with thyme, rosemary, creeping thyme, lavender, juniper, and mulberry trees. The climate is rather warm ; the winter here is a kind of spring; the heat is sometimes very great in summer, and in some cantons the air would be rather unhealthy, were it not often purified by a wind from the north-west called tramontane. The soil is cultivated with mules, and yields a full supply for its inhabitants : there are 47,229 hectares of forests, chiefly firs, pines, and beech ; and 35,500 hectares of vineyards, yielding an average produce of sixteen francs thirty centimes ou each hectare of arable land.

The productions are wheat, barley, millet, maize, vegetables, melons, excellent fruits, flax, hemp, oak, kermes, wood, salt-marshes, wine, fine honey, mulberries, olives, lavender, &c., small game, sea fish in abundance, mules, some cows, numerous flocks of merino sheep (famed for the flavor of their flesh and the fineness of their wool), poultry, bees, silk-worms, cachemire goats, &c. There are also mines of iron, antimony, and coal, and quarries of white and colored marble, limestone, &c. They have hot baths at Aries, Molitp:, Lapreste, Escaldes, and Vernet. The manufactures consist of common cloth, wool-

len stuffs and caps, corks, forged iron, and leather ; and a trade is carried on in all the above articles.

The principal rivers that water the department are the Tet, the Tech, the Gly, the Cantarana, the Reart, and the Segre ; and it is crossed by the great roads of Narbonne, Figuieres, and Pay-arda.

PYRENEES, a great chain of mountains separating France from Spain, and extending from the port of Vendres on the coast of the Mediterranean to the Atlantic Ocean near Fontarabia. It is about 210 miles long; its direction is nearly from S. S. E to N. N. \V. ; and” both

on the side of Spain and that of France it consists of several parallel ridges, varying in breadth from sixty to 120 miles. On the side of France these mountains project several branches, which run through those departments that are on the Spanish frontier. The two most considerable of these are that which crosses the departments of the Arriege and the Aude, and unites with the Alps near Castelnaudary, and that which, crossing the departments of the Upper Pyrenees and the Gers, terminates on the borders of the departments of the Landes and the Gironde. Next to the Alps these are the highest mountains in Europe ; they rise gradually to the top, which serves as a point of demarcation, and at the two extremities sink in elevation down to the level of the Ocean and the Mediterranean. The highest summits of the chain are, according to M. Humboldt, the top of Nethon about 10,722 feet above the level of the sea, Posets 10,584 feet, Mount Perdu 10,576, Le Cyhndre 10,374, the pic-du- Midi 8958, and Canigou 8946 feet.

The Pyrenees are less steep on the French side than on that of Spain ; the most elevated summits are covered with snow during a great part of the year, and at the height of 7200 the snows never melt, but occupy a zone of from 3000 to 3600 feet, that resists all the rays of the sun ; on the north and west, however, they al-most always melt. From Marbore to Maladetta there is a great number of glaciers, which the eye can distinguish afar off by their bluish tint, by their even appearance, and by the clefts which cross them. The air of the higher .mountains is as unwholesome as that of the lower ones is healthy. In the month of May impetuous cataracts precipitate themselves on all sides from the tops of the Pyrenees, and inundations caused by the sudden melting of the snows and the abundant rains soon fill up all the close valleys. Trees broken by the violence of the winds often choke the course of the torrents, or, carried away themselves, drag with them the crops and the houses hanging on the declivity of the mountains. Enormous masses of rocks, which appeared ira-moveable, are no%v dashed from steep to steep, carrying every thing before them. To these ava-lanches we may add those which are occasioned in the winter by the abundant snows, which the storms loosen from the summits and precipitate into the ravines, and which increasing in size as they advance, and dragging with them masses of stone and earth, sometimes form bridges over the torrents and fill up the valleys. Often they are accompanied with a tremendous hissing; nothing

can resist their force; and the agitation of the air which they produce is so violent that every obstacle to their progress is overturned. In the neighbourhood of Bareges whole villages have sometimes been thus overwhelmed.

No country is richer in natural productions than that of the Pyrenees; the geologist may find here numberless beauties, and ever fresh sources of instruction ; the mineralogist a multitude of the most cnrious minerals; the botanist, passing in the same day from the greatest heat to the most intense cold, meets in his way every species of plants, from those which grow in the Alps and in Sweden to those which flourish in Spain. lu the middle part mineral springs abound ; but, though some are of great efficacy, they are little used. The most celebrated, and which have establishments greatly frequented, are the baths of Molitg, Bareges, Bagneres, Aries, Vernet, La Preste, Ax, Cambo, Cauterets, Nossa, Olette, Nyer, and the warm springs of the Cerdagne, generally known by the name of Lascaldas.

Since the above has been prepared for press our attention has been directed to the Geological Conjectures of Mr. Charpentier, director of the Canton de Vaud mines, respecting the original form and construction of the Pyrenees. The following is an abstract of them as given in his Essai sur la Constitution Geogrostique des Pyrenees, a very sensible and distinguished performance.

‘ We have seen,’ says this writer, ‘ that the different formations are disposed in bands parallel to each other and parallel to the general direction of the Pyrenees ; that the granite forms only a single band, or, speaking more correctly, a chain or series of protuberances ; that each of the other fonnations constitutes in general two bands, one of which is situated to the north, the other to the south of the granitic chain, resting upon it in the order of their relative antiquity ; that many of these granitic protuberances are separated from one another by valleys, while others, on the contrary, are, as it were, agglutinated by rocks of later origin, which have filled up the spaces or vacuities by which they were formerly separated ; and, lastly, that it is commonly in the spaces which exist between two great protuberances that we observe the bands that occur to the south of the granitic chain, touching and mingling with those which occur to the north. These

facts entitle us to presume that the granitic formation, comprising that of mica-slate and primitive limestone, formed originally an uninterrupted chain, or rather an elongated line, having a direction from south-east to north-west, and being of a height, whether absolute or relative, much greater than at the present day ; that at a period anterior to the formation of the other rocks which recline upon it, this granitic chain has undergone degradations caused by a power (perhaps currents of water) which, acting horizontally from south to north, or from north to south, has broken its ridge in many parts, scooped it out to a great depth, and changed it into a series of more or less isolated eminences ; that the rocks formed after this revolution have been applied on each side against this central granitic chain, have fill-v<i up its deepest hollows, and have even covered its lowest protuberances; and that, lastly, immediately after this revolution, the ridge of the primitive formation was, without doubt, at thp same time that of the whole chain of the Pyrenees.

‘ Now, as we observe at the present day that the ridge of the Pyrenees, with the exception of a small number of places, is no longer the ridge of the granitic chain, which is found removed at some distance to the north ; but that this geographic ridge is composed of more modern rocks, which generally surpass the primitive formation in height, we are naturally led to presume that the Pyrenees have undergone a second very considerable degradation. The disposition of the rocks, and the external form of the mountains, appear to determine the period of this revolution. It is probable that it has taken place after the formation of the transition deposite, and before the excavation of the presently existing valleys, and consequently before the deposition of the trap formation, which, as we shall see in the se-quel, appears to be of a very late origin .

‘ Observation tends to induce a presumption that this degradation has principally attacked the ridge then existing, and all the northern aspect of the chain. We shall represent by a diagram the results which have given rise to this supposition.

‘ The figure shows the vertical and transverse

section A B C of the Pyrenees in the direction of their breadth, such as we presume it to have been before these mountains underwent the degradation of which we have been speaking. We see in this section the two declivities A B and A D of equal size ; the granite occupying the centre, and forming the ridge of the chain ; the transition

formation, and the secondary formation, distributed in nearly equal quantities upon the south and north sides, resting upon the granite. Let us now suppose that all the portion of these mountains situated between A, B, and C, has been destroyed by the effect of some power acting from north to south, in such a manner that there remains only the part situated between C, B, and D.

‘The necessary consequence of this degradation would be a considerable change in the external form of the whole chain of mountains, and especially in the disposition and distribution of the rocks with relation to the external form of the chain ; in short, this revolution would produce a multitude of results and accidents which are observed in the Pyrenees, and of which we shall recapitulate the chief.

‘ There would result from the destruction of all the parts situated between A, B, and C, 1st, That the ridge would be lowered ; and, further,

that its position would be removed more to the south, and that consequently the northern aspect B, C, would become longer and more sloping than the southern one B D. 2dly, That the granite, including the other primitive rocks, would no longer form the ridge of the central chain, to the north of which it would occur at a short distance. 3dly, That the southern bands of the secondary and transition formations would ob-tain a height which would in general surpass that of the granite and that of all the other rocks situated to the north of the primitive formation. 4thly, That these two southern bands would, in general, form the ridge of the whole system. 5thly, That the transition formation would be much more diffused, or, at least, would appear to a much greater extent, upon the north side than upon the southern declivity. 6thly, That the secondary formation would occupy

all the southern declivity, while, on the northern side, it would only form the low mountains at the foot of the chain.

‘ We here see how well the necessary results of the supposition which we have admitted ac-cord with the actual phenomena. Several othei observations would further lead us to presume, that, independently of the great revolution of which we have been speaking, the northern part of the Pyrenees must have undergone, previously to the formation of the present valleys, a new degradation of considerable extent; such, for example, are the generally softer and more rounded forms of the northern, compared with the southern mountains ; the more considerable number of basins in the French valleys than in those of the Spanish side ; and the immense deposites of transported rocks, of which the soil of the plains which extend from the north side of the Pyrenees is formed.’

PYRIFORMIS, banksia, in botany, a species of BANKSIA, which see. It was unknown to Linne ; and Gaertner, who has mentioned it, gives no specific character of it. It has solitary flowers, ovate downy capsules, and lance-shaped entire smooth leaves : CAPS, larger than in any other known species.

PYRMONT, a district in the north-west of Germany, between Hanover in the north, and the Prussian government of Minden, in Westphalia, in the south. It belongs to prince Waldec, with the title of a county, but has an area of only thirty-six square miles, with 4300 inhabitants ; of the prince’s income (about ––10,000), the larger half arises from the mineral springs of

PYRMONT, the chief town of the above principality. It contains 2000 inhabitants, and is situated in a pleasant valley, with public walks, and houses adapted to the accommodation of visitors. Thirty-three miles S. S. W. of Hanover, and sixteen south-east of Rinteln.

PYROCITRIC ACID, in chemistry. When citric acid is put to distil in a retort, it begins at first by melting ; the water of crystallisation separates almost entirely from it by a continuance of the fusion ; then it assumes a yellowish tint, ––––wbjch gradually deepens. At the same time there is disengaged a white vapor which goes over, to be condensed in the receiver. Towards

the end of the calcination a brownish vapor is seen to form, and there remains in the bottom of the retort a light very brilliant charcoal.

The product contained in the receiver consists of two different liquids. One of an amber-yel- low color, and an oily aspect, occupies the lower part ; another, colorless, and liquid like water, of a very decided acid taste, floats above. After separating them from one another, we perceive that the first has a very strong bituminous odor, and an acid and acrid taste ; that it reddens powerfully the tincture of litmus, but that it may be deprived almost entirely of that acidity by agitation with water, in which it divides it-self into globules, which soon fall to the bottom of the vessel, and are not long in uniting into one mass, in the manner of oils heavier than water.

In this state it possesses some of the properties of these substances ; it is soluble in alcohol, ether, and the caustic alkalis. However, it does not long continue thus ; it becomes acid, and sometimes even it is observed to deposit, at the end of some days, white crystals, which have a very strong acidity ; if we then agitate it anew with water, it dissolves in a great measure, and abandons a yellow or brownish pitchy mat-ter, of a very obvious empyrftumatic smell, and which has much analogy with the oil obtained in the distillation of other vegetable matters. The same effect takes place when we keep it under water; it diminishes gradually in volume, the water acquires a sour taste, and a thick oil remains at the bottom of the vessel.

This liquid may be regarded as a combination (of little permanence indeed) of the peculiar acid with the oil formed in similar circumstances.

This acid is white, inodorous, of a strongly acid taste. It is difficult to make it crystallise in a regular manner, but it is usually presented in a white mass, formed by the interlacement of very fine small needles. Projected on a hot body it melts, js converted into white very pungent vapors, and leaves some traces of carbon. When heated in a retort, it affords an oily-look- ing acid, and yellowish liquid, and is partially decomposed. It is very soluble in water and in alcohol; water at the temperature of 10►► C. (50►► F.) dissolves one-third of its weight. The watery solution has a strongly acid taste, it does not precipitate lime or barytes water, nor the greater part of metallic solutions, with the exception of acetate of lead and protonitrate of mercury. With the oxides it forms salts po^ sessing properties different from the citrates.

The pyrocitrate of potash crystallises in small needles, which are white, and unalterable in the air. It dissolves in about four parts of water. Its solution gives no precipitate with the nitrate of silver, or of barytes ; whilst that of the citrate of barytes forms precipitates with these salts.

The pyrocitrate of lime directly formed exhibits a white crystalline mass, composed of needles, opposed to each other in a ramification form. This salt has a sharp taste.

PYROLA, in botany, winter green, a genus of the monogynia order, and decandria class of plants; natural order eighteenth, bicorne*:

quinque partite ; petals five : CAPS, is quinquelocular, opening at the angles.

PYRO LIGNEOUS ACID, in chemistry, is the destructive distillation of any kind of wood an acid is obtained, which was formerly called acid spirit of wood, and since pyroligneous acid. Fourcroy and Vauquelin showed that this acid was merely the acetic, contaminated with empy-reumatic oil and bitumen. See ACETIC ACID, CHEMISTRY, and VINEGAR.

PYROLITHIC ACID, in chemistry. ►► When uric acid concretions are distilled in a retort, silvery white plates sublime. These are pyrolithate of ammonia. When their solution is poured into that of subacetate of lead, a pyroli-tliate of lead falls, which, after proper washing, is to be shaken with water, and decomposed by siilplmreted hydrogen gas. The supernatant liquid is now a solution of pyrolithic acid, which yields small aoicular crystals by evaporation. By heat, these melt arid sublime in white needles. They are soluble in four parts of cold water, and the sflution reddens vegetable blues. Boiling alcohol dissolves the acid, but on cooling it deposits it, in small white grains. Nitric acid dissolves without changing it. Hence, pyrolithic is a different acid from the lithic, which, by nitric acid, is convertible into purpurate of ammonia. The pyrolithate of lime crystallises in stalactites, which have a bitter and slightly acrid taste. It consists of 91-4 acid + 8-6 lime. Pyrolithate of barytes is a nearly insoluble powder. The salts of

potas'sa, soda, and ammonia, are soluble, and the former two crystallisable. At a red heat, and by passing it over ignited oxide of copper, it is decomposed, into oxygen 44-32, carbon 28-29, azote 16-84, hydrogen 10.'

PYRO MALIC ACID, in chemistry, when malic or sorbic acid, for they are the same, is distilled in a retort, an acid sublimate, in white needles, appears in the neck of the retort, and an acid liquid distils into the receiver. This liquid, by evaporation, affords crystals, constituting a peculiar acid, to which the above name has been given.

They are permanent in the air, melt at 118►► Fahrenheit, and on cooling form a pearl-colored mass of diverging needles. When thrown on red-hot coals, they completely evaporate in an acrid, cough-exciting smoke. Exposed to a strong heat, in a retort, they are partly sublimed in needles, and are partly decomposed. They are very soluble in strong alcohol, and in dou-ble their weight of water, at the ordinary temperature. The solution reddens vegetable blues, and yields white flocculent precipitates with acetate of lead and nitrate of mercury ; but produces no precipitate with lime water. By mixing it with barytes water, a white powder falls, which is redissolved by dilution with water, after which, by gentle evaporation, the pyroma-late of barytes may be obtained in silvery plates. These consist of 100 acid, and 185-142 barytes, or, in prime equivalents, of 5-2.0 + 9'75.

Pyromalate of potash may be obtained in feather formed crystals, which deliquesce. Pyromalate of lead forms first a white flocculent precipitate, soon passing into a semi-transparent jelly, which, by dilution and nitration from the

water, yields brilliant pearly looking needles. The white crystals that sublime in the original distillation are considered by M. Lassaigne as a peculiar acid.

PYROMETER, from ►►►P, fire, and /►►rpor, measure. To measure those higher degrees of heat to which the thermometer cannot be applied there have been other instruments invented by different philosophers : these are called pyrometers. The most celebrated instrument of this kind, and which has been adopted into general use, is that invented by the late ingenious Mr. Wedgwood.

This instrument is also sufficiently simple. It consists of two pieces, of brass fixed on a plate, so as to be six-tenths of an inch asunder at one

end, and three-tenths at the other; a scale is marked upon them, which is divided into 240 equal parts, each one-tenth of an inch ; and with this his gauge, are furnished a sufficient number of pieces of baked clay, which must have been prepared in a red heat, and must be of given dimensions. These pieces of clay, thus prepared, are first to be applied cold to the rule of the gauge, that there may no mistake take place in regard to their dimensions. Then any one of them is to be exposed to the heat which is to be measured, till it shall have been completely penetrated by it. It is then removed and applied to the gauge. The difference between its former and its present dimensions will show how much it has shrunk ; and will consequently indicate to what degree the intensity of the heat to which it was exposed amounted.

High temperatures can thus be ascertained with accuracy. Each degree of Wedgwood's pyrometer is equal to 130►► of Fahrenheit's.

Mr. Wedgwood sought to establish a correspondence between the indications of his pyrometer and those of the mercurial thermometer, by employing a heated rod of silver, whose expan-sions he measured, as their connecting link. The clay-piece and silver rod were heated in a muffle.

When the muffle appeared of a low red heat, such as was judged to come fully within the province of the thermometer, it was drawn forward toward the door of the oven ; and, its own door being then nimbly opened by an assistant, Mr. Wedgwood pushed the silver piece as far as it would go. But, as the division which it went to could not be distinguished in that ignited state, the muffle was lifted out, by means of an iron rod passing through two rings made for that purpose with care to keep it steady, and avoid any shake that might endanger the displacing of the silver piece.

When the muffle was grown sufficiently cold to be examined, he noted the degree of expansion which the silver piece stood at, and the de-gree of heat shown by the thermometer pieces measured in their own gauge ; then returned the whole into the oven as before, and repeated the operation with a stronger heat, to obtain another point of correspondence on the two scales.

The first was at 2►►►► of his thermometer, which coincided with 66►► of the intermediate one ; and, as each of these last had been before found to contain 20►► of Fahrenheit's, the 6G►► will contain

1 320 ; to which add 50, the degree of his scale to which the (0) of the intermediate thermometer was adjusted, and the sum 1370 will be the degree of Fahrenheit's corresponding to his 2□□□□.

The second point of coincidence was at 6ˆ□□ of his, and 92□□ of the intermediate ; which 92□□ being, according to the above proportion, equivalent to 1840 of Fahrenheit, add 50 as before to this number, and his 6i□□ is found to fall upon the 1890□□ of Fahrenheit.

It appears hence that an interval of 4□□ upon Mr. Wedgwood's thermometer is equivalent to an interval of 520□□ upon that of Fahrenheit ; and, consequently, one of the former to 1 30□□ of the latter; and that the (0) of Mr. Wedgwood corresponds to 1077$□□ of Fahrenheit.

From these data it is easy to reduce either scale to the other through their whole range ; and from such reduction it will appear, that an interval of nearly 480□□ remains between them, which the intermediate thermometer serves as a measure for; that Mr. Wedgwood's includes an extent of about 32,000 of Fahrenheit's degrees, or about fifty-four times as much as that between the freezing and boiling points of mercury, by which mercurial ones are naturally limited ; that if the scale of Mr. Wedgwood's thermometer be produced downwand in the same manner as Fahrenheit's has been supposed to be produced upward, for an ideal standard, the freezing point of water would fall nearly on 8□□ below (0) of Mr. Wedgwood's, and the freezing point of mercury a little below 8□□□□; and, that, therefore, of the extent of now measurable heat,, there are about five-tenths of a degree of his from the freezing of mercury to the freezing of water; 8□□ from the freezing of water to full ignition ; and 160□□ above this to the highest degree he has

hitherto attained.

Mr. Wedgwood concludes his account with the following table of the effects of heat on different substances, according to Fahrenheit's thermometer and his own : ???

Extremity of the scale of

his thermometer … Greatest heat of his small

air furnace

Cast-iron melts …. Greatest heat of a common

smith's forge …. Welding heat of iron greatest Welding heat of iron least . Fine gold melts …. Fine silver melts …. Swedish copper melts . . Brass melts … . . Heat by which his enamel

colors are burnt on . . Red heat fully visible in

daylight

Red heat fully visible in the

dark

Mercury boils

Water boils …..

Vital heat

Water freezes

Proof spirit freezes …

Fahr. Wedg.

32277??

21877

160

17977

130

17327

125

13427

95

12777

90

5237

32

4717

28

4587

27

3807

91

1857

6

1077

0

947

600

3

212

6

97

7

32

8

0

8

The point at which mercury congeals, consequently the limit of mercurial thermometers, about … 40 PYROMUCIC ACID. Tins acid, discovered in 1818 by M. Houton Labillardiere, is one of the products of the distillation of mucic acid. When we wish to procure it, the operation must be performed in a glass retort furnished with a receiver. The acid is formed in the brown liquid, which is produced along with it, and which contains water, acetic acid, and empyreu-matic oil ; a very small quantity of the pyro-mucic . acid remaining attached to the vault of the retort under the form of crystals. These crystals, being colored, are added to the brown liquor, which is then diluted with three or four times its quantity of water, in order to throw down a certain portion of oil. The whole is next filtered, and evaporated to a suitable de-gree. A great deal of acetic acid is volatilised, and then the new acid crystallises. On decanting the mother waters, and concentrating* them farther, they yield crystals anew ; but, as these are small and yellowish, it is necessary to make them undergo a second distillation to render them susceptible of being perfectly purified by crystallisation; 150 parts of mucic acid furnish about sixty of brown liquor, from which we can obtain eight to ten of puxe pyromncie acid.

This acid is white, inodorous, of a strongly acid tas\ >, and a decided action on litmus. Exposed to heat in a retort it melts at the temperature of 266►► Fahrenhei', then volatilises, and condenses into a liquid, which passes on cooling into a crystalline mass, covered with very fine needles. It leaves very slight traces of residuum in the bottom of the retort.

On burning coals, it instantly diffuses white pungent vapors. Air has no action on it. Wa-ter at 60►► dissolves one-twenty-eighth of its weight. Boiling water dissolves it much more abundantly, and on cooling abandons a portion of it, in small elongated plates, which cross in every direction.

PYROPHORUS. By this name is denoted an artificial product, which takes fire or becomes ignited on exposure to the air. Hence, in the German language, it has obtained the name of luft-zunder, or air-tinder. It is prepared from alum by calcination, with the addition of various inflammable substances. Homberg was the first that obtained it, which he did accidentally in the year 1680, from a mixture of human excrement and alum, upon which he was operating by fire. The preparation is managed in ftie following manner : ►►► Three parts of alum are mixed with from two to three parts of honey, flour, or sugar; and this mixture is dried over the fire in a glazed bowl, or an iron pan, diligently stirring it all the while with an iron spatula. At first this mixture melts, but by degrees it becomes thicker, swells up, and at last runs into small dry lumps. These are triturated to powder, and once more roasted over the fire, till there is not the least moisture remaining in them, and the operator is well assured that it can liquefy no more : the mass now looks like a blackish powder of charcoal. FOP the sake of avoiding the previous above men-PYROTECHNY.

tiofied operation, from four to five parts of burned alum may be mixed directly with two of charcoal powder. This powder is poured into a phial or matrass, with a neck about six inches long. The phial, which however must be filled three-quarters full only, is then put into a crucible, the bottom of which is covered with sand, and so much sand is put round the former that the upper part of its body also is covered with it to the height of an inch : upon this the crucible, with the phial, is put into the furnace, and surrounded with red-hot coals.

The fire, being now gradually increased till the phial becomes red-hot, is kept up for the space of about a quarter of an hour, or till a black smoke ceases to issue from the mouth of the phial, and instead of this a sulphureous vapor exhales, which commonly takes fire. The fire is kept up till the blue sulphureous flame is no longer to be seen ;

upon this the calcination must be put an end to, and the phial closed for a shoit time with a stopper of clay or loam. But, as soon as' the vessel is become so cool as to be capable of being held in the hand, the phial is taken out of the sand, and the powder contained in it transferred as fast as possible from the phial into a dry and stout glass made warm, which must be secured with a glass stopper.

We have made a very good pyrophorus by simply mixing three parts of alum with one of wheat-flour, calcining them in a common phial till the blue flame disappeared ; and have kept it in the same phial, well stopped with a good cork when cold.

If this powder be exposed to the atmosphere, the sulphuret attracts moisture from the air, and generates sufficient heat to kindle the carbonaceous matter mingled with it.

PYROTECHNY.

PYR'OTECHNY,n. *. Fr. pyrotechnic. The art of managing fire, or making fireworks.

Great discoveries have been made by the means of pyroteckny and chymistry, which in late ages have attained to a greater height than formerly.

Hate's Origin of Mankind.

PYROTECHNY, of Greek, irvp, fire, and rt-ˆvrj, art, is a term that has been applied to all kinds of artificial fireworks, including those of a military description ; but of late it has been more commonly restricted to those fireworks which are constructed for amusement, or are used in public demonstrations of joy : and it is in this sense we shall consider it in this article.

These are inventions which, though they seem to have been for ages familiar to the Chinese and other nations of the eastern world, were brought at a recent period only into Europe by way of Italy ; and the Italian and French artists long bore away the palm in their construction. The late Sir William Congreve, however, at the period of the peace of 1815, seemed suddenly to rise like one of his own rockets, above our foreign competitors ; and with the aid of his majesty's parks, the public purse, the sheet of water in St. James's park, and the never-to-be-forgotten Chinese bridge over the said water, to have attained the most brilliant honors in this art. We believe all his principal devices will be found included in the descriptive account of modern fireworks here following : ###

PART I.

SMALLER AND MISCELLANEOUS FIREWORKS.

1. Of the Chinese fire. ### In honor of the Chinese we begin with the brilliant fire sometimes called Chinese fire. Iron filings, when thrown into the fire, inflame and emit a strong light. This property, discovered perhaps by chance, gave rise to the idea of rendering the fire of rockets, and

other pyrotechnical inventions, much more brilliant than when gunpowder, or the substances of which it is composed, are alone employed. Nothing is necessary but to take iron filings, very clean and free from dust, and to mix them with the ordinary composition. It must, however, be observed, that works of this kind will not keep longer than a week ; because the moisture contracted by the saltpetre rusts the iron filings.

The Chinese have long been in possession of a method of rendering this fire much more brilliant and variegated in its colors; and we are indebted to father d'Incarville, a Jesuit, for having made it known. It consists in the use of a sim-ple ingredient, namely, cast iron reduced to a powder more or less fine : the Chinese gave it a name which is equivalent to that of iron sand. To prepare this sand take an old iron pot, and, having broken it to pieces on an anvil, pulverise the fragments till the grains are not larger than radish seed; then sift them through six graduated sieves, to separate the different sizes ; and preserve these six different kinds in a very dry place, to secure them from rust, which would render this sand absolutely unfit for the proposed end. We must here remark that the grains which pass

through the closest sieve are called sand of the first order ; those which pass through the next in size, sand of the second order ; and so on.

This sand, when it inflames, emits a light exceedingly vivid. It is very surprising to see fragments of this matter no bigger than a poppy seed form all on a sudden luminous flowers or stars, twelve and fifteen lines in diameter. These flowers are also of different forms, according to that of the inflamed grain, and even of different colors, according to the matters with which the grains are mixed. Rockets which contain the finest sand will not keep longer than eight days, and those which contain the coarsest, fifteen. The following tables exhibit the proportions of the different ingredients for rockets of from twelve to thirty-six pounds.

For red Chinese fire.

Calibres.

Salt petre.

Sulphur.

Charcoal.

Sand of the 1st order.

Ibs.

Ibs.

oz.

oz.

oz. dr.

12 to 15

1

3

4

7

18 to 21

1

3

5

7 8

24 to 36

1

4

6

8

For white Chinese jlre.

Calibres.

Saltpetre.

Bruised Gunpowder.

Charcoal.

Sand of the 3d order.

Ibs.

Ibs.

OZ.

oz. dr.

oz. dr.

12 to 15

1

12

7 8

11

18 to 21

1

11

8

It 8

24 to 36

1

11

8 8

12

When these materials have been weighed, the saltpetre and charcoal must be three times sifted through a hair sieve, in order that they may be well mixed : the iron sand is then to be moistened with good brandy, to make the sulphur adhere, and they must be thoroughly incorporated. The sand thus sulphured must be spread over the mixture of saltpetre and charcoal, and the whole must be mixed together by spreading it over a table with a spatula.

2. A shower of fire. ††† To form a shower of fire, mould small paper cartridges on an iron rod two lines and a half in diameter, and make them two inches and a half in length. They must not be choked, it being sufficient to twist the end of the cartridge, and having put the iron rod into it to beat it, in order to make it assume its proper form. When the cartridges are filled, which is done by immersing them in the composition, fold down the other end, and then apply a match. This will fill the surrounding air with an undulating fire. The following compositions are given as proper for meteors of this kind. 1 . Chinese fire. ††† Mealed gunpowder one pound, sulphur two ounces, iron-sand of the first order five ounces. 2. Ancient fire. ††† Mealed gunpowder one pound, charcoal two ounces. 3. A brilliant fire. ††† Mealed gunpowder one pound, iron-filings four ounces. The first of these compositions is thought to be the most beautiful.

3. Sparks, differing only from stars in their size and duration, are thus prepared : ††† Put into an earthen vessel an ounce of mealed gunpowder, two ounces of pulverised saltpetre, one ounce of liquid saltpetre, and four ounces of camphor reduced to powder; pour over this mixture some gum-water, or brandy in which gum has been dissolved, till the composition becomes of the consistence of thick soup. Then take some lint which has been soaked in brandy, or in vinegar, or even in a solution of saltpetre, and, being dried and unravelled, throw into the mixture such a quantity of it as is sufficient to absorb it entirely, taking care to stir it well. This composition maybe formed into small balls about the size of a pea, and being dried in the shade, and sprinkled with mealed powder, they will readily catch fire.

Sparks may also be made thus :❖❖❖ Take saw-dust of fir, poplar, &c., and boil it in water in which saltpetre has been dissolved. When the water has boiled some time, it is to be poured off, that the saw-dust may remain in the vessel. When nearly dry, it is to be spread out on a table, and sprinkled with sulphur sifted through a very fine sieve, to which may be added a' little mealed powder.

4. Golden rain. ❖❖❖ Some rockets, which, as they fall, make small undulations in the air, called by French writers fusses chevelues, and by us bearded rockets, finish with a kind of shower of fire, which is called golden rain, thus constructed: ❖❖❖ Fill the barrels of some goose quills with the composition of flying rockets (for which see onward), and place upon the mouth of each a little moist gunpowder, both to keep in the composition, and to serve as a match. If flying rockets be then loaded with these quills, the explosion of them will terminate in a beautiful shower of fire, to which the name of golden rain has been given.

5. Globes which burn on the water. ❖❖❖ To make a spherical fire ball, construct a hollow wooden globe of any size, and let its thickness be about one-ninth of its diameter. Into the upper hemisphere insert a right concave cylinder, the breadth of which may be equal to one-fifth of the diameter. A petard, loaded with good grained gunpowder, is to be introduced at the bottom of it, and to be placed horizontally ; then the aperture is closed with a wooden tompion dipped in pitch, and over the whole of this part a quantity of lead is melted sufficient to make the globe sink : if the globe be now placed in the water, the lead by its gravity will make the aperture tend directly downwards, and keep in a perpendicular direction the cylinder, to which fire must have been previously applied. To ascertain whether the lead, which has been added to the globe, renders its weight equal to that of an equal volume of water, rub the globe over with pitch or grease, and make a trial, by placing it in the water.

The composition with which the globe must be loaded is as follows : to a pound of grained powder add thirty-two pounds of saltpetre reduced to fine flour, eight pounds of sulphur, one ounce of scrapings of ivory, and eight pounds of saw-dust previously boiled in a solution of saltpetre, and dried in the shade, or in the sun. Or to two pounds of bruised gunpowder add twelve pounds of saltpetre, six pounds of sulphur, four pounds of iron filings, and one pound of Greek pitch.

It is not necessary that this composition should be beaten so fine as that intended for rockets : it requires neither to be pulverised nor sifted ; it is sufficient to be well mixed and incorporated. But, to

prevent it from becoming too dry, it will be proper to besprinkle it with a little oil, or any other liquid susceptible of inflammation.

6. Of globes which leap or roll on the ground. ••• Having constructed a wooden globe with a cylinder similar to the above described, and hav-ing loaded it with the same composition, introduce into it four petards, or even more, loaded with good grained gunpowder to their orifices, which must be well stopped with paper or tow

If a globe, prepared in this manner, be fired by means of a match, it will leap about, as it burns, on a smooth horizontal plane, according as the petards are set on fire. Instead of placing these petards in the inside, they may be affixed to the exterior surface of the globe ; which they will make to roll and leap as they catch fire. They may be applied iu any manner to the surface of the globe.

7. A similar globe may be made to roll about on a horizontal plane, with a very rapid motion. Construct two equal hemispheres of pasteboard, and adjust in one of them three common rockets filled and pierced like -:lying rockets that have no petard : these rockets must not exceed the interior breadth of the hemisphere, and ought to be arranged in such a manner that the head of the one shall correspond to the tail of the other. The rockets being arranged, join the two hemispheres, by cementing them together with strong paper, in such a manner that they shall not separate, while the globe is moving and turning, at the same time that the rockets produce their effect. To set fire to the first, make a hole in the globe opposite to the tail of it, and introduce into it a match. This match will communicate fire to the first rocket ; which, when consumed, will set fire to the second by means of another match, and so on to the rest ; so that the globe, if placed on a smooth horizontal plane, will be kept in continual motion. It is here to be observed that a few more holes must be made in the globe, otherwise it will burst.

The two hemispheres of pasteboard may be prepared in the following

manner : ??? Construct a very round globe of solid wood, and cover it with melted wax ; then cement over it several bands of coarse paper, about two inches in breadth, giving it several coats of this kind, to the thickness of about two lines. Or, which will be still easier and better, having dissolved, in glue water, some of the pulp employed by the paper-makers, cover with it the surface of the globe; then dry it gradually at a slow fire, and cut it through in the middle ; by which means you will have two strong hemispheres. The wooden globe may be easily separated from the pasteboard by means of heat ; for if the whole be applied to a strong fire the wax will dissolve, so that the globe may be drawn out: instead of melt-ed wax, soap may be employed.

8 Of aerial globes, called bombs. ??? These globes are called aerial because they are thrown into the air from a mortar, which is a short thick piece of artillery of a large calibre. And though these globes are of wood, and have a suitable thickness, namely, equal to the twelfth part of their diameters, if too much powder be put into the mortar they will not be able to resist its force ; the charge of powder therefore must be proportioned to the globe to be ejected. The usual quantity is an ounce of powder for a globe of four pounds weight ; two ounces for one of eight, and so on.

As the chamber of the mortar may be too large to contain the exact quantity of powdersuf-iicient for the fire-ball, which ought to be placed immediately above the powder, in order that it may be expelled and set on fire at the same time, another mortar may be constructed of wood, or of

pasteboard with a wooden bottom : it ought to be put into a large iron mortar, and to be loaded with a quantity of powder proportioned to the weight of the globe. This small mortar must be of light wood, or of paper pasted together, and rolled up in the form of a. cylinder, or truncated cone, the bottom excepted ; which, as already said, must be of wood. The chamber for the powder must be pierced obliquely, with a small gimlet ; so that, the aperture corresponding to the aperture of the metal mortar, the fire applied to the latter may be communicated to the pow-der which is at the bottom of the chamber, immediately below the globe. By this means the globe will catch fire, and make an agreeable noise as it rises into the air; but it would not succeed so well if any vacuity were left between the powder and the globe.

A profile or perpendicular section of such a globe is represented by

the right-angled parallelogram, the breadth of which is nearly equal to the height. The thickness of the wood, towards the two sides, is equal, as above said, to the twelfth part of the diameter of the globe; and the thickness of the cover is double the preceding, or equal to a sixth part of the diameter. The height of the chamber where the match is applied, and which is terminated by a semicircle, is equal to the fourth part of the breadth ; and its breadth is equal to the sixth part. We must here observe that it is dangerous to put wooden covers on aerial balloons or globes ; for these covers may be so heavy as to wound those on whom they happen to fall. It will be sufficient to place turf or hay above the globe, in order that the powder may experience some resistance.

The globe must be filled with several pieces of cane or common reed, equal in length to the interior height of the globe, and charged with a slow composition, made of three ounces of pounded gunpowder, an ounce of sulphur moistened with a small quantity of petroleum oil, and two ounces of charcoal; and in order that these reeds or canes may catch fire sooner, and with more facility, they must be charged at the lower ends, which rest on the bottom of the globe, with pulverised gunpowder moistened in the same man-ner with petroleum oil, or well besprinkled with brandy, and then dried. The bottom of the globe ought to be covered with a little gunpowder half pulverised and half grained ; which, when set on fire, by means of a match applied to the end of the chamber, will set fire to the lower part of the reed. But care must have been taken to fill the chamber with a composition similar to that in the reeds, or with another slow composition made of eight ounces of gunpowder, four ounces of saltpetre, two ounces of sulphur, and one ounce of charcoal : the whole must be well pounded and mixed. Instead of reeds, the globe may be charged with running rockets, or paper petards, and a quantity of fiery stars or sparks mixed with pulverised gunpowder, placed without any order above these petards, which must be choked at unequal heights, that they may perform their effect at different times.

These globes may be constructed in various other ways, which it would be tedious here to enumerate. We shall only observe that, when

loaded, they must be well covered at the top; they must be wrapped up in a piece of cloth dipped in glue, and a piece of woollen cloth must be tied round them, so as to cover the hole which contains the match.

9. Jets of fire. ??? Jets of fire are a kind of fixed rockets, the effect of which is to throw up into the air jets of fire, similar to jets of water. They serve also to represent cascades : for if a series of such rockets be placed horizontally on the same line, it may be easily seen that the fire they emit will resemble a sheet of water. When arranged in a circular form, like the radii of a circle, they form what is called a fixed sun. To form jets of this kind, the cartridge for brilliant fires must, in thickness, be equal to a fourth part of the diameter, and, for Chinese fire, only to a sixth part.

The cartridge is loaded on a nipple, having a point equal in length to the same diameter, and in thickness to a fourth part of it ; but, as it generally happens that the mouth of the jet becomes larger than is necessary for the effect of the fire, you must begin to charge the cartridge, as the Chinese do, by filling it to a height equal to a fourth part of the diameter with clay, which must be rammed down as if it were gunpowder. By these means the jet will ascend much higher. When the charge is completed with the composition you have made choice of, the cartridge must be close with a tompion of wood, above which it must be choked. The train or match must be of the same composition as that employed for loading; otherwise the dilatation of the air contained in the hole made by the piercer would cause the jet to burst. Clayed rockets may be pierced with two holes near the neck, in order to have three jets in the same plane.

If a kind of top, pierced with a number of holes, be added to them, they will imitate a bubbling fountain. Jets intended for representing sheets of fire ought not to be choked. They must be placed in a horizontal position, or inclined a little downwards. It appears to us that they might be choked so as to form a kind of slit, and be pierced in the same manner; which would contribute to extend the sheet of fire still farther. A kind of long narrow mouth might even be provided for this particular purpose.

Principal compositions for jets ofjire.

1st. Jets of five lines, or less, of interior diameter.

Chinese fire. ††† Saltpetre one pound, pulverised gunpowder one pound, sulphur eight ounces, charcoal two ounces.

White fire. ††† Saltpetre one pound, pulverised gunpowder eight ounces, sulphur three ounces, charcoal two ounces, iron sand of the first order eight ounces.

2d. Jets of from ten to twelve lines in diameter.

Brilliant fire. ††† Pulverised gunpowder one pound, iron filings of a mean size five ounces.

Whiteftre. ††† Saltpetre one pound, pulverised gunpowder one pound, sulphur eight ounces, charcoal two ounces.

Chinesejire. ††† Saltpetre one pound fourounces, sulphur five ounces, sand of the third order twelve ounces.

3d. Jets of fifteen or eighteen lines in diameter Chinese fire. ††† Saltpetre one pound tour ounces, sulphur seven ounces, charcoal five ounces, of the six different kinds of sand mixed twelve ounces. Pere d'Incarville, in his memoirs on this subject, gives various other proportions for the composition of these jets; but we must confine ourselves to what has been here said, and refer the reader to the author's memoirs, which will be found in the Manuel de 1'Artificier.

The saltpetre, pulverised gunpowder, and charcoal, are three times sifted through a hair sieve. The iron sand is besprinkled with sulphur, after being moistened with a little brandy, that the sulphur may adhere to it ; and they are then mixed together : the sulphured sand is then spread over the first mixture, and the whole is mixed with a ladle only; for if a sieve were employed, it would separate the sand from the other materials. When sand larger than that of the second order is used, the composition is moistened with brandy, so that it forms itself into balls, and the jets are then loaded: if there were too much moisture, the sand would not perform its effect.

10. Of fires of different colors. ††† It is much to be wished that, for the sake of variety, different colors could be given to these fireworks at pleasure ; but, though we are acquainted with several materials which communicate to flame various colors, it has hitherto been possible to introduce only a very few colors into that of inflamed gunpowder.

To make white fire, the gunpowder must be mixed with iron or rather steel filings.

To make red fire, iron sand of the first order must be employed in the same manner.

As copper filings, when thrown into a flame, render it green, it might be concluded that, if mixed with gunpowder, it would produce a green flame ; but this experiment does not succeed. It is supposed that the flame is too ardent, and consumes the inflammable part of the cop-per too soon. But it is probable that a sufficient number of trials have not yet been made ; for is it not possible to lessen the force of gunpowder in a considerable degree, by increasing the dose of the charcoal ?

However the following are a few of those materials which, in books on pyrotechny, are said to possess the property of communicating various colors to fireworks.

Camphor mixed with the composition makes the flame to appear of a pale white color.

Raspings of ivory give a cle'ar flame of a sil-ver color, inclining a little to that of lead ; or rather a white dazzling flame.

Greek pitch produces a reddish flame, of a bronze color.

Black pitch, a dusky flame, like a thick smoke, which obscures the atmosphere.

Sulphur, mixed in a moderate quantity, makes the flame appear bluish.

Sal ammoniac and verdigris give a greenish flame.

Raspings of yellow amber communicate to the flame a lemon color.

Crude antimony gives a russet color.

Borax ought to produce a blue flame ; for spi-rit of wine, in which sedative salt, one of the component parts of borax, is dissolved by the means of heat, burns with a beautiful green flame.

Much, however, still remains to be done in regard to this subject ; but it would add to the beauty of artificial fireworks, if they could be varied by giving them different colors : this would be creating for the eyes a new pleasure.

1 1 . Composition of a paste proper for representing animals, and other devices in fire. ††† It is to the Chinese also that we are indebted for this me-thod of representing figures with fire. For this purpose, take sulphur reduced to an impalpable powder, and, having formed it into a paste with starch, cover with it the figure you are desirous of representing on fire : it is here to be observed that the figure must first be coated over with clay, to prevent it from being burnt. When the figure lias been covered with this paste, besprinkle it while still moist with pulverised gunpowder; and, when the whole is perfectly dry, arrange some small matches on the principal parts of it, that the fire may be speedily communicated to it on all sides.

The same paste may be employed on figures of clay, to form devices and various designs. Thus, for example, festoons, garlands, and other ornaments, the flowers of which might be imitated by fire of different colors, could be formed on the frieze of a piece of architecture, covered with plaster. The Chinese imitate grapes exceedingly well, by mixing pounded sulphur with the pulp of the jujube instead of flour paste.

12. Of suns both fixed and moveable. ††† None of the pyrotechnic inventions can be employed with so much success, in artificial fireworks, as suns; of which there are two kinds, fixed and revolting : the method of constructing both is very simple.

For fixed suns, cause to be constructed a round piece of wood, into the circumference of which can be screwed twelve or fifteen pieces in the form of radii ; and to these radii attach jets of fire, the composition of which has been already described, so that they may appear as ra-dii tending to the same centre, the mouth of the jet being towards the circumference. Apply a match in such a manner that the fire communicated at the centre maybe conveyed, at the same time, to the mouth of each of the jets ; by which means, each throwing out its tire, there will be produced the appearance of a radiating sun. We here suppose that the wheel is placed in a position perpendicular to the horizon. These rockets or jets may be so arranged as to cross each

other in an angular manner ; in which case, instead of a sun, you will have a star, or a sort of cross resembling that of Malta. Some of these suns are made also with several rows of jets : these are called glories.

Revolving suns may be constructed in this manner : ††† Provide a wooden wheel, of any size at pleasure, and brought into perfect equilibrium around its centre, in order that the least effort may make it turn round. Attach to the circumference of it fire-jets placed in the direction of the circumference ; they must not be choked at the bottom, and ought to be arranged in such a ‘ VOL. XVIII.

manner that the mouth of the one shall be near the bottom of the other, so that when the fire ot the one is ended it may immediately proceed to another. It may easily be perceived that, when fire is applied to one of these jets, the recoil of the rocket will make the wheel turn round, unless it be too large and ponderous : for this reason, when these suns are of a considerable size, that is, when they consist for example of twenty rockets, fire must be communicated attht same time to the first, the sixth, the eleventh, and the sixteenth ; from which it will proceed to the second, the seventh, the twelfth, the seventeenth, and so on. These four rockets will make the wheel turn round with rapidity.

If two similar suns be placed one behind the other, and made to turn in a contrary direction, they will produce a very pretty effect of cross-fire. Three or four suns, with horizontal axes passed through them, might be implanted in a vertical axis, moveable in the middle of a table. These suns, revolving around the table, will seem to pursue each other. It may be easily perceived that, to make them turn around the table, they must be fixed on their axes, and these axes, at the place where they rest on the table, ought to be furnished with a very moveable roller.

13. To make crackers. ††† Cut some stout cartridge paper into pieces three inches and a half broad, and one foot long; one edge of each of these pieces fold down lengthwise about three-quarters of an inch broad ; then fold the double edge down a quarter of an inch, and turn the single edge back half over the double fold ; open it, and lay all along the channel, which is formed by the foldings of the paper, some meal powder; then fold it over and over till all the paper is doubled up, rubbing it down every turn; this being done, bend it backwards and forwards, two inches and ahalf, or thereabouts, at a time, as often as the paper will allow ; hold all these folds flat and

close, and, with a small pinching cord, give one turn round the middle of the cracker, and pinch it close ; bind it with packthread, as tight as you can ; then, in the place where it was pinched, prime one end and cap it with touch-paper. When these crackers are fired they will give a report at every turn of the paper ; if you would have a great number of bounces, you must cut the paper longer, or join them after they are made ; but, if they are made very long before they pinched, you must have a piece of wood with a groove in it, deep enough to let in half the cracker; this will hold it straight while it is pinching.

14. To make squibs. ××× First make the cases, of about six inches in length, by rolling slips of stout cartridge paper three times round a roller, and pasting the last fold ; tying it near the bottom as tight as possible, and making it air-tight at the end by sealing-wax. Then take of gunpowdei half a pound, charcoal one ounce, brimstone one ounce, and steel filings half an ounce (or in like proportion) ; grind them with a muller, or pound them in a mortar. Your cases being dry and ready, first put a thimble full of your powder and ram it hard down with a ruler ; then fill the case to the top with the aforesaid mixture, ramming it hard down in the course of filling two or

three times; when this is done point it with touch-paper, which should be pasted on that part which touches the case, otherwise it is liable to drop off.

%* The apparatus chiefly used in making fireworks consists of solid wooden cylinders, called formers, for rolling the cases on ; similar cylinders, either of wood or metal, for ramming down the composition ; moulds for holding the cases while filling; a machine for contracting the ca-vity of the cases ; another for grinding the mate-terials; and a particular apparatus for boring some cases after they are filled.

IMITATIVE FIREWORKS.

Take a paper that is blacked on both sides, or, instead of black, the paper may be colored on each side with a deep blue, which will be

still better for such as are to be seen through transparent papers. It must be of a proper size for the figure you intend to exhibit. In this paper cut out with a penknife several spaces, and with a piercer make a great number of holes, rather long than round, and at no regular distance from each other.

To represent revolving pyramids and globes, the paper must be cut through with a penknife, and the space cut out between each spiral should be three or four times as wide as the spirals themselves. You must observe to cut them so that the pyramid or globe may appear to turn on its axis. The columns that are represented in pieces of architecture, or in jets of fire, must be cut in the same manner, if they are to be represented as turning on their axes. In like manner may be exhibited a great variety of ornaments, cyphers, and medallions, which, when properly colored, cannotfail of producing a most pleasing effect. There should not be a very great diversity of colors, as that would not produce the most agreeable appearance.

When these pieces are drawn on a large scale, the architecture or ornaments may be shaded : and, to represent different shades, pieces of colored paper must be pasted over each other, which will produce an effect that would not be expected from transparent paintings. Five or six pieces of paper pasted over each other will be sufficient to represent the strongest shades.

To give these pieces the different motions they require, you must first consider the nature of each piece ; if, for example, you have cut out the figure of the sun, or of a star, you must construct a wire wheel of the same diameter with those pieces ; over this wheel you paste a very thin paper, on which is drawn, with black ink, the spiral figure. The wheel thus prepared is to be placed behind the sun or star, in such a manner that its axis may be exactly opposite the centre of either of those figures. This wheel may be turned by any method you think proper.

Now, the wheel being placed directly behind the sun, for example, and very near to it, is to be turned regularly round, and strongly illuminated by candles placed behind it. The lines that form the spiral will then appear, through the spaces cut out from the sun, to proceed from its centre to its circumference, and will resemble

sparks of fire that incessantly succeed each other The same effect will be produced by the star, or by any other figure where the fire is not to

ap-pear as proceeding from the circumference of the centre.

These two pieces, as well as those that follow, may be of any size, provided you observe (he proportion between the parts of the figure and the spiral, which must be wider in larger figures than in small. If the sun, for example, have from six to twelve inches diameter, the width of the strokes that form the spiral need not be more than one-twentieth part of an inch, and the spaces between them, that form the transparent parts, about two-tenths of an inch. If the sun be two feet diameter, the strokes should be one-eighth of an inch, and the space between one-quarter of an inch ; and, if the figure be six feet diameter, the strokes should be one-quarter of an inch and the spaces five twelfths of an inch. These pieces have a pleasing effect when represented of a small size, but the deception is more striking when they are of large dimensions.

It will be proper to place those pieces, when of a small size, in a box quite closed on every side, that none of the light may be diffused in the chamber : for which purpose it will be convenient to have a tin door behind the box, to which the candlesticks may be soldered, and the candles more easily lighted.

The several figures cut out should be placed in frames, that they may be put alternately in a groove in the forepart of the box ; or there may be two grooves, that the second piece may be put in before the first is taken out.

The wheel must be carefully concealed from the eye of the spectator.

Where there is an opportunity of representing these artificial fires by a hole in the partition, they will doubtless have a much more striking effect, as the spectator cannot then conjecture by what means they are produced.

It is easy to conceive that, by extending this method, wheels may be constructed with three or four spirals, to which may be given different directions. It is manifest, also, that on the same principle a great variety of transparent figures may be contrived, and which may be all placed before the same spiral lines.

To represent cascades of fire. ••• In cutting out cascades, you must take care to preserve a natural inequality in the parts cut out ; for if to save t;me you should make all the holes with the same pointed tool, the uniformity of the parts will not fail to produce a disagreeable effect. As these cascades are very pleasing when well executed, so they

are highly disgusting when imperfect. These are the most difficult pieces to cut out.

To produce the apparent motion of these cascades, instead of drawing a spiral you must have a slip of strong paper, of such length as you judge convenient. In this paper there must be a great number of holes near each other, and made with pointed tools of different dimensions.

At each end of the paper, a part, of the same size with the cascade, must be left uncut ; and towards those parts the holes must be made a greater distance from each other.

When the cascade that is cut out is placed be-

fore the scroll of paper just mentioned, and it is entirely wound upon the roller, the part of the pa-per that is then between being quite opaque, no part of the cascade will be visible ; but, as the winch is turned gently and regularly round, the transparent part of the paper will give to the cascade the appearance of fire that descends in the same direction; and the illusion will be so strong that the spectators will think they see a cascade of fire, especially if the figure be judiciously cut out.

PART II. OF ROCKET&

SECT. 1. ••• CONSTRUCTION OF THE CASES,

Rockets may be regarded as the grand basis of all fireworks, which are little more than modifications of their form, and of the materials of which they usually consist. A rocket is a cartridge or case made of stiff paper, which being filled in part with gunpowder, saltpetre, and charcoal, rises of itself into the air, when fire is applied to it. .

There are three sorts of rockets : small ones the calibre of which does not exceed a pound bullet ; that is to say, the orifice of them is equal to the diameter of a leaden bullet which weighs only a pound ; for the

calibres or orifices of the moulds or the models used in making rockets are measured by the diameters of leaden bullets. Middle sized rockets, equal to the size of a ball of from one to three pounds. And large rockets, equal to a ball of from three to 100 pounds.

To give the cartridges the same length and thickness, in order that any number of rockets may be prepared of the same size and force, they are pot into a hollow cylinder of strong wood, called a mould. This mould is sometimes of metal ; but at any rate it ought to be made of some very hard wood. This mould must not be confounded with another piece of wood, called the former or roller, around which is rolled the thick paper employed to make the cartridge. If the calibre of the mould be divided into eight equal parts, the diameter of the roller must be equal to five of these parts. The vacuity between the roller and the interior surface of the mould, that is to say three-eighths of the calibre of the mould, will be exactly filled by the cartridge.

As rockets are made of different sizes, moulds of different lengths and diameters must be provided. The calibre of a cannon is nothing else than the diameter of its mouth ; and we here apply the same term to the diameter of the aperture of the mould. The size of the mould is measured by its calibre ; but the length of the moulds for different rockets does not always bear the same proportion to the calibre, the length being diminished as the calibre is increased. The length of the mould for small rockets ought to be six times the calibre, but for rockets of the mean and larger size it will be sufficient if the length of the mould be five times or four times the calibre of the moulds. We shall give two tables, one of which contains the calibres of moulds below a pound bullet; and the other

the calibres from a pound to 100 pounds bullet.

For making the cartridges, large stiff paper is employed. This paper is wrapped round the roller, and then cemented by means of common paste. The thickness of the paper, when rolled up in this manner, ought to be about one-eighth and a half of the calibre of the mould, according to the proportion given to the diameter of the roller. But, if the diameter of the roller be made equal to three-fourths the calibre of the mould, the thickness of the cartridge must be a twelfth and a half of that calibre. When the cartridge is formed, the roller is drawn out, by turning it round, until it is distant from the edge of the cartridge the length of its diameter. A piece oi cord is then made to pass twice round the cartridge at the extremity of the roller. And into the vacuity

left in the cartridge another roller is introduced, so as to leave some space between the two, One end of the packthread must be fastened to something fixed, and the other to a stick conveyed between the legs, and placed in such a manner as to be behind the person who chokes the cartridge. The cord is then to be stretched by retiring backwards, and the cartridge must, be pinched until there remains only an aperture capable of admitting the piercer. The cord employed for pinching it is then removed, and its place is supplied by a piece of packthread, which must be drawn very tight, passing it several times round the cartridge, after which it is secured by means of running knots made one above the other.

Besides the roller, a rod is used, which being employed to load the cartridge, must be somewhat smaller than the roller, in order that it may be easily introduced into the cartridge. The rod is pierced lengthwise, to a sufficient depth to receive the piercer, which must enter into the mould, and unite with it exactly at its lower part. The piercer, which decreases in size, is introduced into the cartridge through the part where it has been choked, ‘and serves to preserve a cavity within it. Its length, besides the nipple or button, must be equal to about two-thirds that of the mould. Lastly, if the thickness of the base be a fourth part of the calibre of the mould, the point must be made equal to a sixth of the calibre. It is evident there must be at least three rods, pierced in proportion to the diminution of the piercer, in order that the pow-der which is rammed in by means of a mallet, may be uniformly packed throughout the whole length of the rocket. It may be easily perceived, also, that these rods ought to be made of some very hard wood, to resist the strokes of the mallet.

In loading rockets it is more convenient not to employ a piercer. When loaded on a nipple, without a piercer, by means of one massy rod, they are pierced with a bit and a piercer fitted into the end of a bit-brace. Care however must be taken to make this hole suited to the proportion assigned for the diminution of the piercer. That is to say, the extremity of the hole, at the choked part of the cartridge, ought to be at out a fourth of the calibre of the mould ; and the extremity of the hole which is in the inside for

about two-thirds of the length of the rocket ought to be a sixth of the calibre. This hole must pass directly through the middle of the locket. In short, experience and ingenuity will surest what is most convenient, and in what manner the method of loading rockets, which we shall here explain, may be varied.

After the cartridge is placed in the mould, pour gradually into it the prepared composition ; taking care to pour only two spoonfuls at a time, and to ram it immediately down with the rod, striking it in a perpendicular direction with a mallet of a proper size, and giving an equal number of strokes, for example, three or four each time that a new quantity of the composition is poured in. When the cartridge is about half rilled, separate with a bodkin the half of the folds of the paper which remains, and, having turned them back on the composition, press them down with the rod and a few strokes of the mallet, in order to compress the paper on the composition. Then pierce three or four holes in the folded paper, by means of a piercer, which must be made to penetrate to the composition of the rocket. These holes serve to form a communication between the body of the rocket and the vacuity at the extremity of the cartridge, or that part which has been left empty.

In small rockets this vacuity is filled with granulated powder, which serves to let them off: they are then covered with paper, and pinched in the same manner as at the other extremity. But in other rockets, the pot containing stars, serpents, and running rockets, is adapted to it, as will be shown hereafter. It may be sufficient however to make, with a bit or piercer, only one hole, which must be neither too large nor too small, such as a fourth part of the diameter of the rocket, to set fire to the powder, taking care that this hole be as straight as possible, and exactly in the middle of the composition. A little of the composition of the rocket must be put into these holes, that the fire may not fail to be communicated to it.

It now remains to fix the rocket to its rod, which is done in the following manner :††† When the rocket has been constructed as above described, make fast to it a rod of light wood, such as fir or willow, broad and flat at the end next the rocket, and decreasing towards the other. It must be as straight and free from knots as possible, and ought to be dressed, if necessary, with a plane. Its length and weight must be proportioned to the rocket ; that is to say, it ought

to be six, seven, or eight feet long, so as to remain in equilibrium with it, when suspended on the finger, within an inch, or an inch and a half of the neck. Before it is fired, place it with the neck downwards, and let it rest on two nails, in a direction perpendicular to the horizon. To make it ascend straighter and to a greater height, adapt to its summit a pointed cap or top, made of common paper, which will serve to facilitate its passage through the air.

These rockets, in general, are made in a more complex manner, several other things being added to them to render them more agreeable, such for example as a petard, which is a box of

tin-plate, filled with fine gunpowder, placed on the summit. The petard is deposited on the composition, at the end where it has been filled; and the remaining paper of the cartridge is folded down over it to keep it firm. The petard produces its effect when the rocket is in the air and the composition is consumed.

Stars, golden rain, serpents, saucissons, and several other amusing things, may also, as we have seen, be added to them. This is done by adjusting to the head of the rocket, an empty pot or cartridge, much larger than the rocket, in order that it may contain serpents, stars, and various other appendages, to render it more beautiful.

Rockets may be made to rise into the air without rods. For this purpose four wings must be attached to them in the form of a cross, and similar to those seen on arrows or darts. In length, these wings must be equal to two-thirds that of the rocket; their breadth towards the bottom should be half their length, and their thickness ought to be equal to that of a card. But this method of making rockets ascend is less certain, and more inconvenient, than that where a rod is used ; and for this reason it is rarely employed.

We shall now show the method of finding the diameters or calibre of rockets, according to their weight ; but we must first observe that a pound rocket is that just capable of admitting a leaden bullet of a pound weight, and so of the rest. The calibre for the different sizes may be found by the two following tables, one of which is calculated for rockets of a pound weight and below ; and the other for those from a pound weight to fifty pounds.

I, TABLE of the calibre of moulds of a pound weight and below

Ounces.

Lines.

Drachms.

Lines.

16

19|

14

7*

12

17

12

7

8

15

10

6*

7

14|

8

6*

6

Mi

6

51

5

13

4

**

4

12*

2

3J

3

It|

2

94

1

The use of this table will be understood merely by inspection ; for it is evident that a rocket of twelve ounces ought to be seventeen lines in diameter; one of eight ounces, fifteen lines ; one often drachms, six lines and one-third ; and so of the rest. On the other hand, if the diameter of the rocket be given, it will be easy to find the weight of the ball corresponding to that calibre, tor example, if the diameter be thirteen lines, it will be immediately seen, by looking for that number in the column of lines, that it corresponds to a ball of five ounces.

II. TABLE of the calibre of moulds from one to fifty pounds ball.

Pounas.

Calibre.

Pounds.

Calibre.

Pounds.

Calibre.

Pounds.

Calibre.

1

100

14

241

27

300

40

341

2

126

15

247

28

304

41

344

3

144

16

252

29

307

42

347

4

158

17

257

30

310

43

350

5

171

18

262

31

314

44

353

6

181

19

267

32

317

45

355

7

191

20

271

33

320

46,

358

8

200

21

275

34

323

47

361

9

208

22

280

35

326

48

363

10

215

23

284

36

330

49

366

11

222

24

288

37

333

50

368

12

228

25

292

38

336

13

235

26

296

39

The use of the second table is as follows : ††† If the weight of the ball be given, which we shall suppose to be twenty-four pounds, seek for that number in the column of pounds, and opposite to it, in the column of calibres, will be found the number 288. Then say, as 100 is to nineteen and a half so is 288 to a fourth term, which will be the number of lines of the calibre required ; or multiply the number found, that is 288, by nineteen and a half, and from the product, 56-16, cut off the last two figures : the required calibre therefore will be 56-16 lines, or four inches eight lines.

On the other hand, the calibre being given in lines, the weight of the ball may be found with equal ease : if the calibre, for example, be twenty-eight lines, say as nineteen and a half is to twenty-eight so is 100 to a fourth term, which will be 143-5 or nearly 144. But in the above table, opposite to 144 in the second column, will be found the number three in the first; which shows that a rocket, the diameter or calibre of which is twenty-eight lines, is a rocket of a three pounds ball.

SECT. II. ††† COMPOSITION OF THE POWDER FOR ROCKETS, AND THE MODE OF FILLING THEM.

The composition of the powder for rockets must be different, according to the different sizes ; as that proper for small rockets would be too strong for large ones. This is a fact respecting which almost ‘ all the makers of fireworks are agreed. The quantities of the ingredients which experience has shown to be the best are as follow : †††

For rockets capable of containing one or two ounces of composition. ††† To one pound of gunpowder add two ounces of soft charcoal ; or to one pound of gunpowder a pound of the coarse powder used for cannon ; or to nine ounces of gunpowder two ounces of charcoal ; or to a pound of gunpowder an ounce and a half of saltpetre, and as much charcoal.

For rockets of two or three ounces. ††† To four ounces of gunpowder add an ounce of charcoal ; or to nine ounces of gunpowder add two ounces of saltpetre.

For a rocket of four ounces. ††† To four pounds of gunpowder add a pound of saltpetre and four ounces of charcoal : you may add also, if you

choose, half an ounce of sulphur ; or to one pound two ounces and a half of gunpowder add four ounces of saltpetre and two ounces of charcoal ; or to a pound of powder add four ounces of saltpetre and one ounce of charcoal; or to seventeen ounces of gunpowder add four ounces of saltpetre and the same quantity of charcoal ; or to three ounces and a half of gunpowder add ten ounces of saltpetre and three ounces and a half of charcoal. But the composition will be strongest if to ten ounces of gunpowder you add three ounces and a half of saltpetre and three ounces of charcoal.

For a rocket of Jive or six ounces. ††† To two pounds five ounces of gunpowder add half a pound of saltpetre, two ounces of sulphur, six ounces of charcoal, and two ounces of iron filings.

For rockets of seven or eight ounces. ††† To seventeen ounces of gunpowder add four ounces of saltpetre and three ounces of sulphur.

For rockets of from eight to ten ounces. ††† To two pounds and five ounces of gunpowder add half a pound of saltpetre, two ounces of sulphur, seven ounces of charcoal, and three ounces of iron filings.

For rockets of from ten to twelve ounces. ††† To seventeen ounces of gunpowder add four ounces of saltpetre, three ounces and a half of sulphur, and one ounce of charcoal.

For rockets of from fourteen to fifteen ounces. ††† To two pounds four ounces of gunpowder add nine ounces of saltpetre, three ounces of sulphur, five ounces of charcoal, and three ounces of iron filings.

For rockets of one pound. ††† To one pound of gunpowder add one ounce of sulphur and three ounces of charcoal.

For a rocket of two pounds. ††† To one pound four ounces of gunpowder add two ounces of saltpetre, one ounce of sulphur, three ounces of charcoal, and two ounces of iron filings.

For a rocket of three pounds. ††† To thirty ounces of saltpetre add seven ounces and a half of sulphur and eleven ounces of charcoal.

For rockets of four, five, six, or seven pounds. ††† To thirty-one pounds of saltpetre add four pounds and a half of sulphur and ten pounds of charcoal.

For rockets of eight, nine, or ten pounds. †††

To eight pounds of saltpetre add one pound four ounces of sulphur and two pounds twelve ounces of charcoal.

We shall here observe, that these ingredients must be each pounded separately and sifted ; they are then to be weighed and mixed together, for the purpose of loading the cartridges, which ought to be kept ready in the moulds. The cartridges must be made of strong paper, doubled, and cemented by means of strong paste, made of fine flour and very pure water.

Of Mutches. ††† Before we proceed farther it will be proper to describe the composition of the matches necessary for letting the rockets off. Take linen, hemp, or cotton thread, and double it eight or ten times, if intended for large rockets ; or only four or five times, if to be employed for stars. When the matcli has been thus made as large as necessary, dip it in pure water, and press it between your hands, to free it from the moisture. Mix some gunpowder with a little water, to reduce it to a sort of paste, and immerse the match in it, turning and twisting it till it has imbibed a sufficient quantity of the powder; then sprinkle over it a little dry powder, or strew some pulverised dry powder upon a smooth board, and roll the match over it. By these means you will have an excellent match ; which if dried in the sun, or on a rope in the shade, will he fit for use.

SECT. III. ††† FORMATION OF ROCKETS.

The upper part of rockets is generally furnished with some composition, which takes fire when it has reached to its greatest height, emits a considerable blaze, or produces a loud report and whizzing noise. Of this kind are saucissons, maroons, stars, showers of tire, &c To make room for an artifice of this kind, the rocket is crowned with a part of greater diameter called a pot. The following is the method of making this pot, and connecting it with the rocket : †††

The mould for forming the pot, though of one piece, must consist of

twc cylindric parts of different diameters. That on which the pot is rolled up must be three diameters of the rocket in length, and its diameter must be three-fourths that of the rocket ; the ien.;!;i of the other ought to be equal to two of these diameters, and its diameter to seven-fifths that of the rocket. Having rolled the thick paper, intended for making the pot, twice round the cylinder, a portion of it must be pinched in that part of the cylinder which has the least diameter: this part must be pared in such a manner as to leave only what is necessary for making the pot fast to the top of the rocket, and the ligature must be covered with paper.

To charge such a pot, attached to a rocket. Having pierced three or four holes in the double paper which covers the vacuity of the rocket, pour over it a small quantity of the composition with which the rocket is filled, and by shaking it make a part enter these holes ; then arrange, in the pot, the composition with which it is to be charged, taking care not to introduce into it a quantity heavier than the body of the rocket. The whole must be secured bv means of a few

small balls of paper, and the pot covered trith paper cemented to its edges : let a pointed sum-mit be added to it, and the rocket is fit for use.

We shall now give an account of the different artifices with which such rockets are loaded.

1. Of serpents. ••• Serpents are small flying rockets without rods, which, instead of rising in a perpendicular direction, mount obliquely, and fall back in a zig-zag form without ascending to a great height. The composition of them is nearly the same as that of rockets ; and therefore nothing more is necessary than to determine the proportion and construction of the cartridge, which is as follows : ••• The length of the cartridge may be about four inches; it must be rolled round a stick somewhat larger than the barrel of a goose-quill, and, after being choked at one of its ends, fill it with the composition a little be-yond its middle, and then pinch it so as to leave a small aperture. The remainder must be filled with grained powder, which will make a report when it bursts. Lastly, choke the cartridge entirely towards the extremity ; and at the other extremity place a train of moist powder, to which, if fire be applied, it will be communicated to the composition, and cause the whole to rise in the air. The serpent, as it falls, will make several turns in a zig-zag direction, till the fire is communicated to the grained powder; on which it will burst with a

loud report before it falls to the ground.

If the serpent be not choked towards the mid-dle, instead of moving in a zig-zag direction, it will ascend and descend with an undulating motion, and then burst as before. The cartridges of serpents are generally made with playing cards. These cards are rolled round a rod of iron or hard wood, a little larger, as already said, than the barrel of a goose-quill. To confine the card, a piece of strong paper is cemented over it. The length of the mould must be proportioned to that of the cards employed, and the piercer of the nipple must be three or four lines in length. These serpents are loaded with bruised powder, mixed only with a very small quantity of charcoal. To introduce the composition into the cartridge, a quill, cut into the form of a spoon, may be employed ; it must be rammed down by means of a small rod, to which a few strokes are given with a small mallet.

When the serpent is half loaded, instead of pinching it in that part, you may introduce into it a vetch seed, and place granulated powder above it to fill up the remainder. Above this powder place a small pellet of chewed paper, and then choke the other end of the cartridge. If you are desirous of making larger serpents, cement two playing cards together; and, that they may be managed with more ease, moisten them a little with water. The match consists of a paste made of bruised powder, and a small quantity of water.

2. Marroons. ??? Marroons are small cubical boxes, filled with a composition proper for making them burst, and may be constructed with great ease.

Cut a piece of pasteboard, according to the method taught in geometry to form tne CUDP ; join these squares at the edges, leaving omv one

to be cemented, and fill the cavity of the cube with grained powder ; then cement strong paper in various directions over this body ; and wrap round it two rows of packthread, dipped in strong glue ; then

make a hole in one of the corners, and introduce into it a match. If you are desirous to have luminous marroons, that is to say, marroons which, before they burst in the air, emit a brilliant light, cover them with a paste the composition of which will be given hereafter for stars ; and roll them in pulverised gunpowder to serve as a match or communication.

3. Saucissons. ••• Marroons and saucissons differ from each other only in their form. The cartridges of the latter are round, and must be oiily four times their exterior diameter in length. They are choked at one end in the same manner as a rocket ; and a pellet of paper is driven into the aperture which has been left, in order to fill it up. They are then charged with grained powder, above which is placed a ball of paper gently pressed down, to prevent the powder from being bruised ; the second end of the saucisson being afterwards choked, the edges are pared on both sides, and the whole is covered with several turns of packthread, dipped in strong glue, and then left to dry. When you are desirous of charging them, pierce a hole in one of the ends, and apply a match, in the same man-ner as marroons.

4. Stars. ••• Stars are small globes of a composition which emits a brilliant light, which may be compared to the light of the stars in the heavens. These balls are not larger than a nutmeg or musket bullet, and when put into the rockets must be wrapped up in tow, prepared for that purpose. The composition of these stars is as follows : ••• To a pound of fine gunpowder well pulverised add four pounds of saltpetre, and two pounds of sulphur. When these ingredients are thoroughly incorporated, take about the size of a nutmeg of this mixture, and having wrapt it up in a piece of linen rag, Or of paper, form it into a ball ; then tie it closely round with a packthread, and pierce a hole through the middle of it, sufficiently large to receive a piece of prepared to*, which will serve as a match. This star, when lighted, will exhibit a most beautiful appearance ; besides the fire, as it issues from the two ends of the hole in the middle, will extend to a greater distance, and make it appear much larger.

If you are desirous to employ a moist composition in the form of a paste, instead of a dry one, it will not be necessary to wrap up the star in any thing but prepared tow ; because, when made of such paste, it can retain its spherical figure. There will be no need also of piercing a hole in it, to receive the match ; because, when newly made, and consequently moist, it may be rolled in pulverised gunpowder, which willadhere to it. This powder/when kindled, will serve as a match, arid inflame the composition of the star, which in falling will form itself into tears.

Another method of making rockets with stars. ††† Mix three ounces of saltpetre, with one ounce of sulphur, and two drachms of pulverised gunpowder; or mix four ounces of sulphur with the same Quantity of saltpetre and eight ounces

of pulverised gunpowder. When these materials have been well sifted, besprinkle them with brandy, in which a little gum has been dissolved, and then make up the star in the following man-ner : ††† Take a rocket mould, eight or nine lines in diameter, and introduce into it a nipple, the piercer of which is of a uniform size throughout, and equal in length to the height of the mould. Put into this mould a cartridge, and by means of a pierced rod load it with one of the preceding compositions ; when loaded, take it from the mould, without removing the nipple, the piercer of which passes through the composition, and then cut the cartridge quite round into pieces of the thickness of three or four lines. The cartridge being thus cut, draw out the piercer gently, and the pieces, which resemble the men employed for playing at drafts, pierced through the middle, will be stars, which must be filed on a match thread, which, if you choose, may be covered with tow.

To give more brilliancy lo stars of this kind, a cartridge thicker than the above dimensions, and thinner than that of a flying rocket of the same size, may be employed ; but, before it is cut into pieces, five or six holes must be pierced in the circumference of each piece to be cut. When the cartridge is cut, and the pieces have been filled, cement over the composition small bits of card, each having a hole in the middle, so that these holes may correspond to the place where the composition is pierced.

Remarks. ††† 1. There are several other methods of making stars, which it would be too tedious to describe. We shall therefore only show how to make etoiles a pet, or stars which give a report as loud as that of a pistol or musket. Make small saucissons, as taught in the third section ; only it will not be necessary to cover them with packthread : it will be sufficient if they are pierced at one end, in order that you may tie to it a star constructed according to the first method, the composition of which is dry ; for, if the composition be in the form of a paste, there will be no need to tie it. Nothing will be necessary in that case but to leave a little more of the paper hollow at the end of the saucisson which has been pierced, for the purpose of introducing the composition ; and to place in the vacuity, towards the neck of the saucisson, some grained powder, which will communicate

fire to the sau-cissoawhen the composition is consumed.

2. As there are some stars which in the end become petards, others maybe made which shall conclude with becoming serpents. But this may be so easily conceived and carried into execution that it would be losing time to enlarge further on the subject. We shall only observe that these stars are not in use, because it is difficult for a rocket to carry them to a considerable height in the air : they diminish the effect of the rocket or saucisson, and much time is required to make them.

SECT. IV. ??? OF COURANTINS OR ROCKETS

WHICH FLY ALONG A ROPE.

A common rocket, which however oug'>t not to be very large, may be made to run al tig an extended rope. For this purpose affix to the

rocket an empty cartridge, and introduce into it tˆe rope which is to carry it ; placing the head of the rocket towards that side on which you in-tend it to move : if you then set fire to the rocket, adjusted in this manner, it will run along the rope without stopping, till the matter it contains is entirely exhausted. If you are desirous that the rocket should move in a retrograde direction ; first fill one-half of it with the composition, and cover it with a small round piece of wood, to serve as a partition between it and that put into the other half; then make a hole below this partition, so as to correspond with a small canal filled with bruised powder, and terminating at the other end of the rocket : by these means the fire, when it ceases in the first half of the rocket, will be communicated through the hole into the small canal, which will convey it to the other end ; and, this end being then kindled, the rocket will move backwards, and return to the place from which it set out.

Two rockets of equal size, bound together by means of a piece of strong packthread, and disposed in such a manner that the head of the

one shall be opposite to the neck of the other, that when the fire has consumed the composition in the one it may be communicated to that in the other, and oblige both of them to move in a retrograde direction, may also be adjusted to the rope by means of a piece of hollow reed. But, to prevent the fire of the former from being communicated to the second too soon, they ought to be covered with oil-cloth, or to be wrapped up in paper.

Remark. ††† Rockets of this kind are generally employed for setting fire to various other pieces when large fireworks are exhibited; and to render them more agreeable, they are made in the form of different animals, such as serpents, dragons, &c. ; on which account they are called flying dragons. These dragons are very amusing, especially when filled with various compositions, such as golden rain, long hair, &c. They might be made to discharge serpents from their mouths, which would produce a very pleasing effect, and give them a greater resemblance to a dragon.

Rockets which, fy along a rope, and turn round at the same time. ††† Nothing is easier than to give to a rocket of this kind a rotatory motion around the rope along which it advances ; it will be sufficient for this purpose to tie it to another rocket, placed in a transversal direction. But the aperture of the latter, instead of being at the bottom, ought to be in the side, near one of the ends. If both rockets be fired at the same time, the latter will make the other revolve around the rope, while it advances along it.

Of rockets which burn in the water. ††† Tnough fire and water are two things of a very opposite nature, the rockets above described, when set on fire, will burn and produce their effect even in Ihe water ; but as they are then below the water the pleasure of seeing them is lost : for this rea-son, when it is required to cause rockets to burn as they float on the water, it will be necessary to make some change in the proportions of the moulds, and materials of which they are composed. In regard to the mould, it may be eight

or nine inches in length, and an inch in diameter : the former, on which the cartridge is rolled up, may be nine lines in thickness, and the rod for loading the cartridge must as usual be somewhat less. For loading the cartridge there is no need for a piercer with a nipple

The composition may be made in two ways ; for if it be required that the rocket, while burning on the water, should appear as bright as a

candle, it must be composed of three materials mixed together, *viz.* three ounces of pulverised and sifted gunpowder, one pound of saltpetre, and eight ounces of sulphur. But, if you are desirous that it should appear on the water with a beautiful tail, the composition must consist of eight ounces of gunpowder pulverised and sifted, one pound of saltpetre, eight ounces of pounded and sifted sulphur, and two ounces of charcoal. When the composition has been prepared according to these proportions, and the rocket has been filled in the manner above described, apply a saucisson to the end of it ; and having covered the rocket with wax, black pitch, resin, or any other substance capable of preventing the paper from being spoiled in the water, attach to it a small rod of white willow, about two feet in length, that the rocket may conveniently float.

If it be required that these rockets should plunge down, and again rise up, a certain quantity of pulverised gunpowder, without any mixture, must be introduced into them, at certain distances, such, for example, as two, three, or four lines, according to the size of the cartridge.

Remarks. ††† 1 . Small rockets of this kind may be made without changing the mould or composition, in several different ways, which, for the sake of brevity, we are obliged to omit. Such of our readers as are desirous of further information on this subject may consult those authors who have written expressly on pyrotechny.

2. It is possible also to make a rocket which, after it has burnt some time on the water, shall throw out sparks and stars ; and these after they catch fire shall ascend into the air. This may be done by dividing the rocket into two parts, by means of a round piece of wood, having a hole in the middle. The upper part must be filled with the usual composition of rockets, and the lower with stars, which must be mixed with grained and pulverised gunpowder, &c.

3. A rocket which takes fire in the water, and, after burning there half the time of i\f duration, mounts into the air with great velocity, may be constructed in the following manner : ††† Take a flying rocket, furnished with its rod, and by means of a little glue attach it to a water-rocket, but only at the middle, in such a manner, that the latter shall have its neck uppermost, and the other its neck downward. Adjust to their extremity a small tube, to communicate the fire from one end to the other, and cover both with a coating of pitch, wax, &c., that they may not be damaged by the water. Then attach to the flying rocket, after it has been thus cemented to the aquatic one, a rod of the kind described in the second article ; and suspend a piece of packthread to support a musket bullet made fast to the rod by means

of a needle or bit of iron wire.

When these arrangements have been made, set fire to the part after the rocket is in the vvat-,-r; and, when the composition is consumed, the fire will communicate through the small tube to the other rocket : the latter will then rise and lea ‘e the other, which will not be able to follow it, on account of the weight adhering to it.

SECT. V. ††† BY MEANS OF ROCKETS TO REPRESENT SEVERAL FIGURES IN THE Alii.

If several small rockets be placed upon a lar ,re one, their rods being fixed around the large cartridge which is usually attached to the head of the rocket, to contain what it is destined to carry up into the air ; and these small rockets be set on fire while the large one is ascending, they will represent in a very agreeable manner a tree, the trunk of which will be the large rocket, and the branches the small ones. If these small rockets take fire when the large one is half burned in the air, they will represent a comet ; and when the large one is entirely inverted, so that its head begins to point downwards, in order to fall, they will represent a kind of fiery fountain. If several serpents be attached to the rocket with a

piece of packthread, by the ends that do not catch fire .; and if the packthread be sutfe ed o hang down two or three inches, between every two, this arrangement will produce a variny of agreeable and amusing figures.

A rocket which ascends in the form of a screw. ††† A straight rod, as experience shows, makes a rocket ascend perpendicularly, and in a straight line : it may be compared to the rudder of a ship, or the tail of a bird, the effect of which is to make the vessel or bird turn towards that side to which it is inclined ; if a bent rod therefore be attached to a rocket, its first effect will be to make the rocket incline towards that

side to which it is bent; but, its centre of gravity bringing it afterwards into a vertical situation, the re-sult of these two opposite efforts will be that the rocket will ascend in a zig-zag or spiral form. In this case indeed, as it displaces a greater volume of air and describes a longer line, it will not ascend so high as if it had been impelled in a straight direction ; but, on account of the singularity of this motion, it will produce an agreeable effect. For the military Congreve rocket, see ROCKET.

PYRRHA, the daughter of Epimetheus and Pandora, and wife of Deucalion, king of Thessaly, in whose reign the flood happened. See DEUCALION. She was the mother of Amphyc-tion, Helen, and Protogenes, by Deucalion. Ovid, Met. i.

PYRRHICIIA, in antiquity, a kind of exercise on a horseback, or a feigned combat, for the exercise of the cavalry. It was thus called from its inventor Pyrrhus of Cydonia, who first taught the Cretans to march ia measure and cadence to battle, and to observe the time of the Pyrrhic foot. Others derive the name from Pyrrhus the son of Achilles, who instituted this exercise at the obsequies of his father. Aristotle says that it was Achilles himself who invented it. The Romans also called it ludus Trojanus, the Trojan game ; and Aulus Gellius, decursus. It is represented on medals by two cavaliers in front running with lancets, and the word decur-sio in the exergue.

PYRRHIC, in the Greek and Latin poetry, a foot consisting of two syllables, both short ; as deus. Among the ancients this foot is also called periambus ; by others hegemona.

PYRRHO, a Greek philosopher, born at Elis in Peloponnesus, who flourished about 300 B. C. He was the disciple of Anaxarchus, whom he accompanied as far as India, where he conversed with the Brahmins and Gymnosophists. He had made painting his profession before he studied philosophy. He established a sect whose fundamental principle was, that there is nothing true or false, right or wrong, honest or dishonest, just or unjust; or that there is no standard of any thing beyond law or custom, and that uncertainty and doubt belong to every thing. From this continual seeking after truth and never-finding it, the sect obtained the name of Sceptics or Pyrrhonians from the founder. Pyrrho died about the ninetieth year of his nge; his memory was honored with a statue at Athens, and a monument in his own country.

PYRRHUS I., or Neoptolemus, the first king of Epirus, the son of Achilles and Deidamia. See EPIRUS. He was killed by Orestes in the temple of Delphi.

PYRRHUS II., king of Epirus, the son of .flLacides and Phthia, and a lineal descendant of Pyrrhus I. ; celebrated for his war with the Romans. He conquered Antigonus, and reigned some time in Macedonia, but was at last killed at Argos, A. A. C. 272. See ROME.

PYR'RHONISM, n. s. [From Pyrrho, the founder of the sceptics.] Scepticism ; universal doubt.

As some ignorantly affect to be more knowing, so others vainly affect to be more ignorant than they are ; who, to show they have greater insight and penetration than other men, insist upon the absolute uncertainty of science ; will dispute even first principles ; grant nothing as certain, and so run it into downright Pyrrhonism ; the too common effect of abstracted debates excessively refined. Mason.

PYRUS, the pear-tree, a genus of the pentagynia order and icosandria class of plants ; natural order thirty-sixth, pomaces : CAL. quinquefid ; petals five ; fruit an apple, inferior, quinquelocular, and polyspermous. To this genus Linne has joined the apple and quince.

1. P. oommunis, the common pear-tree, rises with an upright large trunk, branching thirty or forty feet high, in some widely around, in others more erectly, and forming a conical head, oval, lanceolated, serrated leaves, and corymbous clusters of white flowers from the sides of the branches, succeeded by large fruit extended at the base. Under this species are comprehended almost endless varieties, all bearing the above description. They bear their flowers and fruit upon spurs, arising from the sides of the branches from two or three years old and upwards ; the same branches and spurs continuing fruitful for a great number of years. The sum-mer pears ripen in different sorts from the beginning of July until the middle or end of

September, and are generally fit to eat from the tree, or at least do not keep a week or two before they rot. The autumn pears come to perfection in October, November, and December ; some ripening nearly on the tree in October and November, others requiring to lie some time in the fruitery, while some will keep two months; but all the winter pears, though they attain their full growth on the tree by the end of October and in November, yet they do not acquire perfection for eating till from the end of November to April and May. Those of each class have different properties; some being melting, others breaking, some mealy, and some hard and austere, fit only for kitchen uses. As many of the finest sorts were first obtained from France, they are still continued in most catalogues by French names. All the varieties of the pear-tree are hardy, and will succeed in any common soil of a garden or orchard. They are propagated by grafting and budding upon any kind of pear stocks ; also occasionally upon quince stocks, and sometimes upon white thorn stocks ; but pear stocks are greatly preferable to all others for general use.

2. P. coronaria, the sweet scented crab of Virginia, grows twelve or fifteen feet high, having angular serrated leaves, pedunculated umbels of whitish red, sweet-scented flowers, succeeded by small round crabs, remarkably sour and austere. There is one variety, called the evergreen Virginian crab-tree.

3. P. cydonia, the quince, formerly ranked by ootanists as a distinct genus, but classed by Linne and his followers as a species of pyrus. It was formerly divided into three species, which must now rank as varieties ; *viz.*

i. P. cydonia lusitanica, the Portugal quince, with obverse oval leaves, woolly on their under side :

ii. P. cydonia maliforma, with oval leaves, wholly on their under side, and lengthened at their base : and

iii. P. cydonia oblonga, with an oblong fruit lengthened at the base. There are some other varieties of this fruit, propagated in fruit gardens, and in the nurseries for sale ; one of which is a soft eatable fruit, another very astringent, and a third with a very small fruit, cottony all over, which is scarcely worth keeping. These Mr. Miller supposed to be the seminal variations, but the three others to be distinct species. The Portugal quince is the most valuable; its pulp turns to a fine purple when stewed or baked, and becomes much softer

and less austere than the others ; it is therefore much fitter for making marmalade. These trees are all easily propagated, either by layers, suckers, or cuttings, which must be planted in a moist soil. Those raised from suckers are seldom so well rooted as those which are obtained from cuttings or layers, and are subject to produce suckers again in greater plenty ; which is not so proper for fruit bearing trees. These trees require very little pruning ; the chief thing to be observed is, to keep their stems clear from suckers, and cut off such branches as cross each other; likewise all upright luxuriant shoots from the middle of the tree should be taken off, that the head mav not

be too much crowded with wood, which is of ill consequence to all fruit trees. These sorts may also be propagated by budding or grafting upon stocks raised by cuttings ; so that the best sorts may be cultivated in this way in greater plenty than by any other method.

4. P. malus, the common apple-tree, grows twenty or thirty feet high, having oval serrated leaves and sessile umbels of whitish red flowers succeeded by large, roundish, and oblong frui►► concave at the base. The varieties of this species are amazingly great with respect to the differences of the fruit. Botanists say, that the wilding, or crab-apple of the woods and hedges is the original kind, and from the seeds of which the cultivated apple was first obtained. The varieties of this last no doubt are multiplied to some hundreds in different places, having been all first accidentally obtained from the seed or kernels of the fruit, and the approved sorts continued and increased by grafting upon crabs or any kind of apple stocks ; but, although the num-ber of varieties is very considerable, there are not above forty or fifty sorts retained in the nurseryman's catalogue. These varieties arrive at full growth in successive order from July to the end of October, improve in perfection after being gathered, and several of the winter kinds in particular, keep good for many months, even till the arrival of apples next summer. Among these various kinds of apples some are used for the dessert, some for the kitchen, and some for cyder making. All kinds of apples are propagated in the same manner as the pears, using apple stocks instead of pear stocks. They will succeed in any common soil of a garden or orchard, and in any free situation, except in a low and very moist soil, in which they are apt to canker, and very soon go off. In a friable loam they are generally very successful.

PYTHAGORAS, a celebrated philosopher of antiquity, respecting the time and place of whose birth critics are much divided. Dr. Bentley determines the date of his birth to be the fourth year of the forty-third

Olympiad ; Lloyd places it about the third year of the forty-eighth ; and Dodwell fixes it in the fourth year of the fifty-second. It is generally believed that he was born in the island of Samos, and that he flourished about A. A. C. 500. His father Mnesarchus, who is said by some to have been a lapidary, and by others a merchant of Tyre, appears to have been a man of some distinction, and to have bestowed upon his son the best education. Of his chil liiood and early education we know nothing, except that he was first instructed in his own country by Creophilus, and afterwards in Scyros by Pherecydes. Poetry and music, eloquence and astronomy, became his studies ; and in gymnastic exercises he often bore the palm for strength and dexterity. He first distinguished himself in Greece at the Olmpic games, and soon after he commenced his travels. He visited Egypt, where, through the interest of Polycrates, tyrant of Samos, he obtained the patronage of king Amasis, by whose influence, with his own assiduity : ;id perseverance, he gained the confidence of the priests ; from whom he learned their sacred mysteries,

theology, and system of symbolical learning. In Egypt, too, he became acquainted with geometry, and the solar system ; and made himself master of all the learning for which it was so famed among the nations of antiquity. It is said that he afterwards visited Persia and Chaldea, where from the Magi he learnt divination, the interpreting of dreams, and astronomy. He likewise travelled into India, conversed with the Gymnosophists, and acquired from them a knowledge of the philosophy and literature of the east ; and such was his ardor in the pursuit of science, that in quest of it, says Cicero, he crossed many seas, and travelled on foot through many barbarous nations. After he had spent many years in acquiring information on every subject, he returned to Samos, and attempted to institute a school for the instruction of his countrymen. Failing of success, he repaired to Delos, where he pretended to receive moral dogmas from the priestess of Apollo. He also visited Crete, where he was initiated into the most sacred mysteries of Greece. He went likewise to Sparta and Elis, and again assisted at the Olympic games ; where, in the public assembly,

he was saluted with the title of sophist, or wise man, which he declined. He returned to Samos, enriched with mythological learning and mysterious rites, and again instituted a school. His mysterious symbols and oracular precepts made this attempt more successful than the former ; but, meeting with some opposition, he retired to Magna Gracia, and settled at Crotona. Here he founded the Italic sect ; and his mental accomplishments, the fame of his travels, and his Olympic crown, soon procured him numerous pupils. His manly eloquence, and graceful delivery, attracted the most dissolute, and produced a remarkable change in the morals of the Cro-tonians. His influence was increased by the regularity of his own example, and its conformity to his precepts. He punctually attended the temples of the gods at an early hour; he lived upon the most simple food ; clothed himself like the priests of Egypt; and, by his frequent purifications and regular offerings, appeared superior in sanctity to the rest of mankind. He endeavoured to delight his scholars with verse and music, by playing on his harp, and singing the paeans of Thales. Bodily exercises also made a considerable part of his discipline. At Crotona he had a public school for the general benefit of the people, in which he taught them virtue, condemning vice, and instructing them in the duties of social life. He also had a college in his own house, which he denominated Koiwfiiov, in which there were two classes of students, *viz.* t????repiKot, or auscultantes, and fffuiTtpiKoi. The former were probationers, and were kept under a long examen. A silence of five years was imposed upon them ; which, according to Clemens Alexandrinus was to inure them to the pure contemplation of the Deity. The latter were called genuini, perfecti, mathematici ; and, by way of eminence, Pythagoreans. They alone were admitted to the knowledge of the arcana of Pythagoric discipline, and the use of ciphers and hieroglyphics. The authority of Pythagoras among his pupils was so great that

it was even deemed a crime to dispute his word ; and their arguments were considered as infallibly convincing, if they could enforce them by adding that the master said so. To give more weight to his exhortations, Pythagoras retired into a subterraneous cave, where his mother sent him intelligence of every thing which happened during his absence. After several months, he re-appeared on the earth with a grim and ghastly countenance, and declared in the assembly of the people that he was returned from Hades ; which gave rise to many other fabulous reports. At length his singular doctrines, and perhaps his strenuously asserting the rights of the people against their tyrannical governors, raised a powerful party against him ; which soon

obliged him to fly for his life. His friends fled to Rhegium ; and he himself, after being refused protection by the Locrians, fled to Metapontum, where he took refuge in the temple of the Muses, and where it is said he died of hunger about A. A. C. 497. The time, place, and manner of his death, however, are all very uncertain. After his death his followers paid the same respect to him as was paid to the gods ; they erected statues in honor of him, converted his house at Crotona into a temple of Ceres, appealed to him as a deity, and swore by his name. Pythagoras married Theano of Crotona, or of Crete, by whom he had two sons, Telagues and Mnesarchus, who, after his death, took the management of his school. He also had a daughter called Damo. Whether he left any writings behind him is disputed. The golden verses, which Hierocles illustrated with a commentary, have been ascribed to Epicharmus or Empedocles, and contain a brief summary of his popular doctrines. From his mysterious secrecy, our information concerning his doctrine and philosophy is very uncertain. The purpose of philosophy, according to his system, is to raise the mind to the contemplation of immutable truth, and the knowledge of divine and spiritual objects. Mathematical science was with him the first step to wisdom, because it inures the mind to contemplation, and takes a middle course between corporeal and incorporeal beings. The whole science he divided into two parts, numbers and magnitude ; and each of these he subdivided into two others, the former into arithmetic and music, and the latter into magnitude at rest and in motion ; the former comprehending geometry, and the latter astronomy. Arithmetic he considered as the noblest science; and an acquaintance with numbers as the highest good. He considered numbers as the principles of every thing ; and divided them into scientific and intelligible. Of the Monad, Duad, Triad, Tetrad, and Decad, various explanations have been given by various authors ; but nothing certain is known of them. Music followed numbers, and was useful in raising the mind above the dominion of the passions. He invented the harmonical canon, or monochord; and the music of the spheres was a fanciful doctrine of Pythagoras. He reduced geometry to a regular science. A geometrical point, which he defines to be a monad, or unity with position, he says, corresponds to unity in arithmetic, a line to two, a

superficies to three, and a solid to four. God he considered as the universal mind, diffused through all things, and the self-moving principle of all things (avToparuTnos ruv iravrwv), and of whom every human soul is a portion. Subordinate to the Deity there were, in the Pythagorean creed, three orders of intelligences, gods, demons, and heroes, of different degrees of excellence and dignity. These, together with the human soul, were considered as emanations from the Deity, the particles of subtle ether assuming a grosser clothing the farther they receded from the fountain. God himself was represented under the notion of monad, and the subordinate intelligences as numbers derived from, and included in, unity. Man was considered as consisting of an elementary nature, and a divine or rational sou/. His soul, a self-moving principle, is composed of two parts ; the rational, seated in the brain ; and the irrational, including the passions, in the heart. In both these respects he participates with the brutes. The sensitive soul perishes ; the other assumes an ethereal vehicle, and passes to the regions of the dead, till sent back to the earth to inhabit some other body brutal or hu-man. See METEMPSYCHOSIS. It was this notion which led Pythagoras and his followers to abstain from flesh, and to be so peculiarly merciful to animals of every description. This doctrine is thus beautifully represented by Ovid, who introduces Pythagoras as saying,

‘ Morte carent animae : semperque priore relicta Sede, HOT is domibus habitant, vivuntque receptae : Omnia mutantur ; nihil interit ; errat et illinc, Hue venit, hinc illuc, et quoslibet occupet artus Spiritus, eque feris humana in corpora transit, Inque feras noster : nee tempore deperit ullo, Utque novis fragilis signatur cera figuris, Nee manet ut fuerat, nee forraas servat easdem, Sed tainen ipsa eadem est, animam sic semper eandem, Esse, sed in varias doceo migrare figuras.’

‘What then is death, but ancient matter drest In some new figure, and a varied vest? ‘□□□Thus all things are but altered, nothing dies; Afld here and there the’ unbodied spirit flies, By time, or force, or sickness dispossessed, And lodges where it lights, in man or beast ; Or hunts without, till ready limbs it find, And actuates those according to their kind ; From tenement to tenement is tost, , The soul is still the same, the figure only lost : And, as the softened wax new seals receives, This face assumes, and that impression leaves ; Now called by one, now by

another name, 1 he form is only changed, the wax is still the same ; So death, thus called, can but the form deface, The' immortal soul flies out in empty space, To seek her fortune in some other place.'

PYTHEAS, an eminent philosopher, astronomer, and geographer, born in Massilia in the age of Aristotle. He distinguished himself by his travels, as well as by his writings, all of which are now lost, though some of them were extant so late as the fifth century. He entered the sea, then unknown, now called the Baltic, and sailed as far as Thule. He was the first who established a distinction of climate by the length of days and nights.

PYTHEUS, a Lydian, famous for his riches, who is said to have entertained Xerxes, and all his numerous army, when going to invade Greece.

PYTHIA, or PYTHONISSA, the priestess of Apollo at Delphi, by whom he delivered oracles. She was so called from Pythius, a name of that god. The Pythia was at first required to be a young girl ; but in latter times she was a woman of fifty years of age. The first and most famous Pythia was Phemonb'e. Oracles were at first delivered by her in hexameter verse. All the Pythias were to be pure virgins, and all of them delivered their oracles with great enthusiasm and violent agitations. See ORACLE and DELPHI.

PYTHIAN GAMES, in Grecian antiquity, sports instituted near Delphos in honor of Apollo, on account of his slaying the serpent Python. See APOLLO. These games, at their first institution, were celebrated only once in nine years; but afterwards every fifth year, from the number of the Parnassian nymphs who came to congratulate Apollo, and to make him presents on his victory. The victor was crowned with garlands.

PYTHON, in fabulous history, a monstrous serpent, produced by the earth after Deucalion's deluge. Juno, being exasperated at Latona, who was beloved by Jupiter, commanded this serpent to destroy her ; but, flying from the pursuit of the monster, she escaped to Delos, where she was delivered of Diana and Apollo ; the lat-ter of whom destroyed Python with his arrows, in memory of which victory the Pythian games were instituted. See APOLLO.

PYX, n. s. Lat. pyxis; Gr. 7rv►►te, a box, The box in which the Romanists keep the ho t. Pyxis is a small metal case for containing the consecrated species in the Catholic church. Anciently it was made in

fhe form of a dove, and suspended over the altar. Dr. A . Bees.

PYX. Lat. pyxis, from Gr. TTV►►IC-In archai-ology, a name given to the little casket in which the ancients often deposited their jewels and other ornaments. It was frequently of rich materials, and highly embellished ; its shape was a long square, and it is often found represented on Greek vases.

Q-

Q, the sixteenth letter of the alphabet, bor- ‘twod from the Latin or French, and for which the Saxons generally used cb, cw. The name of this letter is derived from Fr. queue, tail ; its form being that of an t) with a tail. The Q has this peculiar to it, that it is always followed by a U, and is therefore reckoned among the mutes. It is formed from the Hebrew a, koph ; which most other languages have borrowed ; though some of them have rejected it again, particularly the Greeks.

In effect, there is that resemblance between the Q and the C in some languages, and the K in others, that many grammarians, in imitation of the Greeks, banish the Q as a superfluous let-ter. Papias even affirms that all the Latin words now written with a Q were written among the ancient Romans with a C ; but we want better authority for this. For though, in many cases, some write indifferently quur, or cur ; cum, or quum ; quotidie, or cotidie, &c., yet it does not thence follow that they ever wrote cis, cae, cid, for quis, quae, quid. Far from this, the ancients sometimes substituted Q for C ; and wrote quojus, quoi, for cujus, cui, &c.

Varro, however, and some other grammarians, as we are told by Censorinus, &c., would never use the Q. The truth is, its use or disuse seems to have been so little settled and agreed on that the poets used the Q or C indifferently, as best suited their measures ; it being a rule that the Q joined the two following vowels into one syllable ; and that

the C imported them to be divided. Hence it is that Lucretius uses cuiret for three syllables, in lieu of quiret ; acua for aqua ; and that Plautus uses relicuum for reliquum ; as in

Quod dedi, datum non vellem relicuum non ; where the cuum must be two syllables, otherwise the trochiac verse will be lame of a foot. In the French the sound of the Q and K are so near akin, that some of their nicest authors think the former might be spared. Ramus adds that till the establishment of royal professors in the university of Paris, under Francis I., they always used Q in the Latin the same as in the French ; pronouncing kis, kalis, kantus, &c., for quis, qualis, quantus.

Some very learned men make Q a double letter as well as K and X. According to them, Q is evidently a C and U joined together, and they see the traces of the C U in the figure of the Q ; the V being only laid obliquely, so as to come within the cavity of the C ; as C <i \

Q, among the ancients, was a numeral letter, signifying 500 ; as in the verse,

Q velut A cum D quingentus vult numerare. A dash over it, as Q, denoted it to signify

500,000.

Q is also used as an abbreviation in several arts. Q. pi. in physicians' bills, stands for quantum placet, as much as you please ; q. s. for quantum sufficit, or as much as is necessary. See ABBREVIATION.

QUACK, v. n. & n. s. Belg. quacken ; Teuu kuacken; or from the sound. To cry as a goose or duck; be boisterously or chatteringly vain, hence, as a nounsubstantive, a vain and boastful pretender to medicinal, or other arts.

Many poor country vicars, for want of other means, are driven to their shifts ; to turn mountebanks, quacksalvers, and empyricks. ••• Burton.

Believe mechanick virtuosi Can raise them mountains in Potosi, Seek out for plants with signatures, To quack of universal cures. Hudibras.

Saltimbancoes, quacksalvers, and charlatans deceive the vulgar in

lower degrees ; were ˆEsop alive, the Piazza and the Pont Neuf could speak their fallacies.

Broivne.

The change, schools, and pulpits are full of quacks, jugglers, and plagiaries. L'Estrange. '

Ordinary quacks and charlatans are thoroughly sensible how necessary it is to support themselves by collateral assistances, and therefore always lay claim to some supernumerary accomplishments foreign to their profession. Taller.

Wild ducks quack where grasshoppers did sing.

King.

At the first appearance that a French quack made in Paris, a boy walked before him, publishing with a shrill voice, ' My father cures all sorts of distempers ; ' to which the doctor added in a grave manner, ' The child says true.' Addison.

Some quacks in the art of teaching pretend to make young gentlemen masters of the languages, before they can be masters of common sense.

Felton on the Classicks. Despairing quacks with curses fled the place, And vile attorneys, now an useless race. Pope.

QUADI, an ancient people of Germany, situated on the south-east of the mountains of Bohemia, on the banks of the Danube, and extending as far as the river Marus, or March, running by Moravia, which country they occupied.

QUADRA AND VANCOUVER'S ISLAND, an island on the north-west coast of North America, between Queen Charlotte's Sound and De Fuca's Straits. Nootka Sound lies not far from its south-west side. It was so named by Vancouver in honor of his meeting with signior Quadra, the officer who was commissioned by the court of Spain to cede, in the name of his court, the disputed territory of Nootka.

QUADRAGESIMAL, adj. Fr. quadragesimal; Lat. quadragesima. Lenten; belonging to or used in Lent.

I have composed prayers out of the church collects, adventual, quadragesimal, paschal, or pentecostal.

Sanderson.

QUAD’RANGLE, n. s. Lat. quadratus and angnlus. A square ; a surface with four right angles.

My choler being overblown With walking once about the quadrangle, I come to talk. Skakspeare. Henry VI.

The escurial hath a quadrangle for every month in the vear. Howtl,

It is full moon when, the earth being between the

I was placed at a quadrangular table, opposite to *□□□□□ □□M

Spectator sun and moon, we see all the enlightened part of the the mace-bearer. □□□ - - * -

Common salt, shooteth into little crystals, coming near to a cube, sometimes into square plates, sometimes into short quadrangular prisms. Grew .

Each environed with a crust, conforming itself to the planes, is of a figure quadrangular. Woodward.

QUADRANS, a farthing, the fourth part of a penny. Before the reign of Edward I. the smallest coin was a sterling, or penny, marked with a cross ; by the guidance of which a penny might be cut into halves for a halfpenny, or into quarters or four parts for farthings ; till, to avoid the fraud of unequal cuttings, that king coined halfpence and farthings in distinct round pieces.

QUAD’RANT, n. s.

QHADRAN’TAL, adj. QUAD’RATE, adj., n. s.,

Lat. quadrans. I The fourth parj ; &\the quarter; the

QUADRATIC, adj. \y. n. I quarter of a circle ;

QUADRATURE, n. s. J an instrument for

measuring altitudes : quadrate is square ; four-fold ; divisible into four parts ; suited ; fitted : a square ; in astrology, an aspect of the heavenly bodies, wherein they are distant from each other ninety degrees, and the same with quartile : as a verb neuter, to suit ; fit ; be

accommodated : quadratic, an algebraic term applied to such equations as retain, on the unknown side, the square of the root or the number sought: quadrature is the act of squaring; state of being square ; a quadration square ; the first and last quarter of the moon.

And ‘twixt them both a quadrate was the base, Proportioned equally by seven and nine ; Nine was the circle set in heaven’s place, All which compacted, made a goodly diapase.

Spenser.

Whether the exact quadrate or the long square be the better is not well determined ; I prefer the latter, provided the length do not exceed the latitude above one-third part. Wotton.

Some tell us that the years Moses speaks of were somewhat above the monthly year, containing in them thirty-six days, which is a number quadrate.

Hakewilt on Providence.

The word consumption, being applicable to a proper or improper consumption, requires a generical description, quadrate to both. Harvey.

The powers militant

That stood for heaven, in mighty quadrate joined Of union irresistible, moved on In silence their bright legions. Milton.

All things parted by the’ empyreal bounds, His quadrature from thy orbicular world. Id. In sixty-three years may be lost eighteen days, omitting the intercalation of one day every fourth year, allowed for this quadrant or six hours supernumerary. Browne.

The number of ten hath been extolled, as containing even, odd, long and plain, quadrate and cubical numbers. Id.

To our understanding a quadrate, whose diagonal is commensurate to one of the sides, is a plain contradiction. More.

The obliquity of the ecliptick to the equator, and from thence the diurnal differences of the sun’s right ascensions, which finish their variations in each quadrant of the circle of the er’iptick, being joined to the former inequality, arising from the excentricity, makes these quarterly and seeming irregular inequalities of natural davs. Holder on

Time.

moon ; new moon when, the moon being between us and the sun, its enlightened part is turned from us : and half moon, when the moon being in the quadratures, we see but half the enlightened part.

Locke.

Some had compasses, others quadrants. Toiler. Aristotle's rules for epick poetry, which he had drawn from his reflections upon Homer, cannot be supposed to quadrate exactly with the heroick poems which have been made since his time ; as it is plain his rules would have been still more perfect, could he have perused the ˆEneid. Addison.

Thin taper sticks must from one centre part ; Let these into the quadrant's form divide. Gait. Sir Isaac Newton discovered a way of attaining the quantity of all quadrible curves analytically, by his method of fluxions, some time before the year 1688. Derham.

To fill that space of dilating, proceed in straight lines, and dispose of those lines in a variety of pa-ralels : and, to do that in a quadrantal space, there appears but one way possible ; to form -all the intersections, which the branches make, with angles of forty-five degrees only. Id.

The speculations of algebra, the doctrine of infinites, and the quadrature of curves, should not intrench upon our studies of morality. Watts.

QUADRANT, in geometry, is the arch of a circle, containing 90□□, or the fourth part of the entire periphery. Sometimes also the space or area included between this arch and two radii drawn from the centre to each extremity thereof, is called a quadrant, or more properly a quadrantal space, as being a quarter of an entire circle.

QUADRANT is also a mathematical instrument of great use in astronomy and navigation, for taking the altitudes of the sun and stars, and for taking angles in surveying, &c. It is variously contrived, and furnished with different apparatus, according to the various uses it is intended for. See ASTRONOMY and NAVIGATION. The common surveying quadrant is made of brass, wood, or any other solid substance ; the limb of which is divided into 90□□, and each of these farther divided into as many equal parts as the space will allow, either diagonally or otherwise. On one of these semidiameters are fitted two

moveable sights ; and to the centre is sometimes fixed a label, or moveable index, bearing two other sights ; but in lieu of these last sights there is sometimes fitted a telescope ; also from the centre there is hung a thread with a plummet ; and on the under side or face of the instrument is fitted a ball and a socket, by which it may be put into any position. The general use of it is for taking angles in a vertical plane, comprehended under right lines going from the centre of the instrument, one of which is horizontal, and the other is directed to some visible point. But, besides the parts already described, there is frequently added on the face, near the centre, a kind of compartment, called the quadrat, or geometrical square. This quadrant may be used in different situations; for observing heights or depths, its plane must be disposed perpendicularly to the horizon ; but, to take horizontal distances, its plane is disposed parallel thereto. Again, heights and distances

may be taken two ways, *viz.* by means of the fixed sights and plummet, or by the label.

QUADRANT, GUNNER'S, called also gunners' square, is that used for elevating and pointing cannon, rro.-tars, &c., and consists of two branches, either of brass or wood, between which is a quad ran tal arch divided into 90►►, beginning from the shorter branch, and furnished with a thread and plummet. The use of the gunners' quadrant is extremely easy ; for if the longest branch be placed in the mouth of the piece, and it be elevated till the plummet cut the degree necessary to hit a proposed object, the thing is done. Sometimes on one of the surfaces of the long branch are noted the divisions of diameters and weights of iron bullets, as also the bores of pieces.

QUADRANT, GUNTER'S, so called from its inventor Edmund Gunter, besides the usual apparatus of other quadrants, has a stereographical projection of the sphere on the plane of the equinoctial. It has also a kalendar of the months, next to the divisions of the limb.

QUADRANT, HADLEY'S, is an instrument of great utility both in

navigation and practical astronomy. It is named from Mr. Hadley, who first published an account of it, though the invention originated with the celebrated Dr. Hooke, and was completed by Sir Isaac Newton. Its utility arises from the accuracy and precision with which it enables us to determine the latitude and longitude, and to it navigation is much indebted for the very great and rapid advances it has made of late years. It is easy to manage, and of extensive use, requiring no peculiar steadiness of hand, nor any such fixed basis as is necessary to other astronomical instruments. It is used for taking angles in maritime surveying, and with equal facility at the mast head as upon the deck, by which its sphere of observation is much extended ; for supposing many islands to be visible from the mast head, and only one from deck, no useful observation can be made by any other instrument. By this angles may be taken at the mast head from the one visible object with great exactness; and further, taking angles from heights, as hills, or a ship mast's head, is almost the only way of exactly describing the figure and extent of shoals. It has been objected to the use of this instrument for surveying, that it does not measure the horizontal angles, by which alone a plan can be laid down. This objection, though true in theory, may be reduced in practice by a little caution ; and Mr. Adams has given very good directions for doing so. No instrument has undergone, since the original invention, more changes than this quadrant. An essential and invaluable property, whereby it is rendered peculiarly advantageous in marine observations, is, that it is not liable to be disturbed by the ship's motion ; for, provided the mariner can see distinctly the two objects in the field of his instrument, no motion nor vacillation of the ship will injure his observation.

QUADRANT, MURAL. See ASTRONOMY.

QUADRANT OF ALTITUDE is an appendage of the artificial globe, consisting of a lamina, or slip of brass, the length of a quadrant of one of the

great circles of the globe, and graduated. At the end, where the division terminates, is a nut rivetted on, and furnished with a screw, by means whereof the instrument is fitted on the meridian, and moveable round upon the rivet to all points of the horizon. Its use is to serve as a scale in measuring of altitudes, amplitudes, azimuths, &c.

QUADRANTAL, in antiquity, the name of a vessel in use among the Romans for the measuring of liquids. It was at first called amphora ;

and afterwards quadrantal, from its form, which was square every way like a die. Its capacity was eighty libra, or pounds of water, which made forty-eight sextaries, two urnae, or eight congii.

QUADRATE, a mathematical instrument, called also a geometrical square, and line of shadows:- it is frequently an additional member on the face of the common quadrant, as also on those of Gunter's and Sutton's quadrants.

QUADRATE, in printing, a piece of metal used to fill up the void spaces between words, &c.

QUADRATURE, in astronomy, that aspect of the moon when she is 90►► distant from the sun ; or when she is in a middle point of her orbit, between the points of conjunction and opposition, namely, in the first and third quarters. See ASTRONOMY.

QUADRATURE, in geometry, denotes the reducing a figure to a square, or the finding of a square which shall contain just as much surface or area as a circle, an ellipsis, a triangle, &c., is the quadrature of a circle, ellipsis, &c. This question, especially among the ancient mathematicians, was a great postulatum. The quadrature of rectilineal figures is easily found, for it is merely the finding their areas or surfaces, i. e. their squares ; for the squares of equal areas are easily found by only extracting the roots of the areas thus found. The quadrature of, the curvilinear spaces is of more difficult investigation ; and in this respect extremely little was done by the ancients, except the finding the quadrature of the parabola by Archimedes. This he obtained in a very ingenious manner, by inscribing an isosceles triangle in the parabola, then two isosceles triangles on the equal sides of the former, four others on these, and so on, which he found to have a certain relation, decreasing in the proportion 1, ►►, ˆ, &c., the infinite sum of which series would therefore express the area of the parabola, or the area of all the triangles of which he thus conceived it to be composed ; and which sum he found to be one and one-third, or two-thirds of the circumscribing rectangle. After this time, a period of near 2000 years elapsed without producing the quadrature of a single curvilinear figure, although the subject seems to have engaged the attention of the most eminent mathematicians during that long interval, particularly the quadrature of the circle. This figure, being the most simple in appearance and construction of any contained under a curve line, was well calculated to excite the curiosity of mathematicians. Archimedes doubtless attempted the solution of this problem ; but, failing in producing the exact quadrature, he contented himself with giving ao

approximation, showing by the inscription and circumscription of a polygon of ninety-six sides, that the diameter being 1, the circumference was greater than 3#, but less than 3$.

It would be useless to attempt in this place to enumerate the various absurd quadratures which have been, from time to time, published by minor geometers, with all that conceit and confidence which seldom fail to accompany inferiority. Some attributed their success to divine inspiration; others to their own superior talents : some offered large sums of money to those who should discover any error in their investigation, while others expected great rewards from their government as a recompence for their discovery, foolishly attaching great importance to a problem, which, if it could be accurately solved, would serve no other purpose but to gratify the curiosity of mathematicians. Towards the year 1585, Metius, combatting the false quadrature of Simon Ducheue, gave the ratio of 113 to 355, which is very exact. Vieta found a still nearer approximation, carrying it to ten places of decimals, whereas the former is true only to six places.

Adrianus Romanus carried the approximation to seventeen figures, and Ludolph Van Ceulen to thirty-six ; which he published in his work, De Circulo et Adscriptis ; and of which Snellius published a Latin translation in 1619. He afterwards verified Van Ceulen's approximation by some theorems of his own invention, which greatly facilitated the computation, and which he published in 1621, under the title of Wille-hrordi Snellii Cyclometricus de Circuli Dimen-sione, &c.

Descartes gave a geometrical construction from which it was easy to draw an expression in the form of a series; and Huygens afterwards discovered some curious theorems connected with this subject, and formed some useful rules for approximating towards the length of the

circular arc.

A curious discovery connected with this subject was given by Wallis in his Arithmetica Infinitorum, in 1655 : where he shows that the ratio of a circle to the square of Its diameter is truly expressed by the infinite fraction.

33. 5*. T2. 9*. 11*. &c. 2. 4*. 6*. &. 102. 12s. &c.

Such was the progress which mathematicians had made towards the solution of this interesting problem prior to the invention of fluxions, which, by reducing the quadrature of all curves to one general principle, again revived the hopes of success with regard to the circle, notwithstanding some pretended demonstrations of its impossibility; and its quadrature was accordingly again attempted with the greatest eagerness. The quadrature of a space, and the rectification of a curve, were now reduced to that of finding the fluent of a given fluxion but still the problem was found to be incapable of a general solution in infinite terms. The fluxion of a given fluent was found to be always assignable, but the converse proposition, *viz.* of finding the fluent of a given fluxion, could only be effected in particular cases ; and amongst the

exceptions, to the great regret and disappointment of geometricians, was included the case of the circle with regard to every form of fluxion under which it could be obtained. Mr. Glenie in 1812 read a paper before the Royal Society to prove that the true geometrical quadrature of the circle was impossible ; which is now in-deed generally allowed.

QUADRATUS, a native of Athens, where he was educated, and became a disciple of the apostles. About A. D. 125, when the emperor Adrian visited Athens, and was initiated into the Eleusinian mysteries, a persecution of the Christians arose, wherein Publius bishop of Athens suffered martyrdom. Quadratus succeeded him, and wrote an Apology for the Christians, which he presented to the emperor, who thereupon stopt the prosecution. This work is lost, but was extant in the time of Eusebius, who says it showed the genius of the au-thor, and the true doctrine of the apostles. Quadratus was banished from Athens, but nothing certain is recorded of his death.

QUADRATUS, a surname of Mercury, because some of his statues were square.

QUADREL, in building, a kind of artificial stone, so called from its being square. The quadrels are made of a chalky earth, &c., and dried in the shade for two years. These were formerly in great request among the Italian architects.

QUADRIFRONS, AND QUADRICEPS, surnames of Janus, because he was represented with four heads and four faces.

QUADRIGA, in antiquity, a car or chariot drawn by four horses On the reverses of me-dals, we frequently see the emperor or Victory in a quadriga, holding the reins of the horses ; whence these coins are, among the curious, called nummi quadrigati and victoriati.

QUADRILATERAL, adj. Fr. quadrilatere ; Lat. quatuor and lutus. Having four sides.

Tin, incorporated with crystal, disposes it to shoot into a quadrilateral pyramid, sometimes placed on a quadrilateral base or column. Woodward.

QUADRILLE, agame played by four persons, with forty cards ; which are the remains of a pack, after the four tens, nines, and eights are discarded ; these are dealt three and three, and one round four, to the right hand player ; and the trump is made by him that plays with or without calling, by naming spades, clubs, diamonds, or hearts, and the suit named is trumps.

QUADRIO (Francis Xavier), a learned Je-suit, born in the Valteline in 1695. He afterwards became secular priest, and died at Milan in 1756. He published, 1. A Treatise on the Italian Poetry. 2. A History of Italian Poetry, in 7 vols. 3. Dissertations upon the Valteline, in 3 vols.

QUAD'RUPED, re. s. Fr. quadrupede ; Lat. quadrupes. An animal that goes on four legs.

The different flexure and order of the joints is not disposed in the elephant as in other quadrupeds,

Browne.

The fang teeth, eve teeth, or denies canini of some quadruped. Woodward on Fossils.

Most quadrupedes, that live upon herbs have incisor teeth to pluck and divide them. Arbuthnot.

The king of brutes, Of quadrupeds I only mean. Swift.

The cockney, travelling into the country, is surprized at many actions of the quadruped and winged animals. Watts's Logick.

QUADRUPEDS, in zoology, those animals which have four limbs or legs proceeding from the trunk of their body. See ZOOLOGY.

QUAD'RUPLE, adj. Fr. quadruple; Lat. quadruplus. Fourfold ; four times told.

A law, that to bridle theft doth punish thieves with a quadruple restitution, hath an end which will continue as long as the world itself continueth.

Hooker.

The lives of men on earth might have continued double, treble, or quadruple, to any of the longest times of the first age. Raleigh.

Fat refreshes the blood in the penury of aliment during the winter, and some animals have a quadruple caul. Arbuthnot on Aliments.

If the person accused maketh his innocence appear, the accuser is put to death, and out of his goods the innocent person is quadruply recompensed.

Swift.

QUˆE'RE. Lat. quttre. Enquire; seek; a word put when any thing is recommended to enquiry.

Queere, if it is steeped in the same liquor, it may not prevent the fly and grub.

Mortimer's Husbandry.

To QUAFF, v. a. Junius derives this word from the Greek Kvaˆt'iv in the ˆEolic dialect used for KvaOt&iv. Skinner from go off, as go off, guoff, quoff, quaff. It comes from Fr. coeffer, to be drunk, says Johnson : Swed. quafa, from Goth, kaf, deep. Thomson. To drink; swallow in large draughts.

QUAGGA (tquus quagga}. This animal, which /s an inhabitant of the southern parts of Africa, is not unlike the zebra ; its ears, however, are shorter, and it is not marked with stripes on its fore legs or hinder parts ; its rump is of a grayish color, and its belly, legs, and tail whitish. The quagga is a social animal, living in large troops, is far more tractable than the zebra, and is said to be occasionally used in the Cape of Good Hope for domestic purposes. Notwithstanding this mildness of character when domesticated, it is exceedingly fearless in its native plains, and is even said to be more than a match for the hycena, fighting desperately both with its hoofs and teeth. It will breed with the com-mon horse ; a mixed race of this kind, possessing great beauty of form, and retaining, in a great degree, the characteristic markings of the quagga, existed in England some years since. The quagga has received a variety of names from authors ; thus Pennant terms it the quacha, Masson the opeagha, and Sparrman calls it by the name here adopted. It should be remarked that Edwards has mistaken it for the female zebra.

QUAG'MIRE, n. s. Quake and mire. A shaking marsh; a bog that trembles under the feet.

The fen and quagmire, so inarish by kind, , Are to be drained. Tuiser

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The brain is of such a clammy consistence that it can no more retain motion than a quagmire.

Glanville't Scepsis.

The wet particles might have easily ever mingled with the dry, and so all had either been sea or quagmire. More.

QUAID, part. ' Of this participle I know not the verb,' says Johnson,. ' and believe it only put by Spenser, who often took great liberties, for quailed.' But it is nearer cowed both in sound and signification.

Dejected ; depressed : crushed.

Therewith his sturdy courage soon was quaid, And all his senses were with a sudden dread dismaid.

Spemer.

QUAIGH, or QUAFF, a kind of drinking ves-sel, peculiar to the Highlands, made of different pieces of wood, of various colors joined together by small hoops. They are made of various sizes, to hold from a gill, (or quartern) to a pint or even a quart of Scottish measure. The small ones have two handles (or lugs as they are called) projecting from the brim ; the large have four.

QUAIL, v. n. & v. a. Belg. quekn ; Teut. qual, is sickness. To languish ; lose spirits ; sink into dejection ; decline : crush ; quell.

After Solyman had with all his power in vain besieged Rhodes, his haughty courage began to qvaV., so that he was upon point to have raised his siege.

Knolles.

To drive him to despair, and quite to quail, He shewed him painted in a table plain The damned ghosts. Spenser.

This may plant courage in their quailing breasts, For yet is hope of life and victory. Shakspeare.

While rocks stand,

And rivers stir, thou can’st not shrink or quail ; Yea, when both rocks and all things shall disband, Then shalt thou be my rock and tower. Herbert.

To pass the quailing and withering of all things by the recess, and their reviving by the reaccess of the sun, the sap in trees precisely follows the mo-tion of the sun. Hahewill.

Three, with fi’ry courage, he assails ; Three, as kings adorned in royal wise ; And each successive after other quails, Still wond’ring whence so many kings should rise.

Daniel.

QUAIL, n. s. Fr. caille ; Ital. qvaglia ; Belg. qnackel ; barb. Lat. quaquila. A bird of game and passage.

His quails ever

Beat mine. Shakspeare. Antony and Cleopatra. Hen birds have a peculiar sort of voice, when they would call the male, which is so eminent in quails, that men, by counterfeiting this voice with a quail-pipe, easily draw the cocks into their snares.

Hay on the Creatinn.

A dish of wild fowl furnished conversation, concluded with a late invention for improving the quail' pipe. Addison.

A fresher gale

Sweeping with shadowy gust the field of corn, While the quail clamours for his running mate.

Thomson.

QUAIL, in ornithology. See PF,RDIX.

QUAIL-PIPES, or quail-calls, are made of a small leather purse, about two fingers wide, and four fingers long, in the shape of a pear ; this is stuffed half full of horse-hair, and a' the end of

X

it is placed a small whistle, made of the bone of a rabbit's leg, about two inches long, and the end formed like a flageolet, with a little soft wax. This is the end fastened into the purse; the other is closed up with the same wax, only a hole is opened with a pin, to make it give a distinct and clear sound. To make this sound, it must be held full in the palm of the hand, with one of the fingers placed over the top of

the wax ; then the purse is to be pressed, and the finger is to shake over the middle of it, to mo-dulate the sound it gives into a sort of shake. This is the most useful call ; for it imitates the note of the hen-quail, and seldom fails to bring a cock to the net if there be one near the place. The call that imitates the note of the cock, and is used to bring the hen to him, is to be about four inches long, and above an inch thick ; it is to be made of a piece of wire turned round and curled, and covered with leather ; and one end of it must be closed up with a piece of flat wood, about the middle of which there must be a small thread or strap of leather, and at the other end is to be placed the same sort of pipe, made of bone, as in the other call. The noise is made by opening and closing the spiral. QUAINT, adj. ~\ fr.coint; ofLat. comp~ QUAINT'LY, adv. >tus. Nice ; minutely ex~ QUAINT'NESS, n. s.jact; having petty elegance ; subtle ; sly ; fine-spun ; affected : Spenser uses it for quailed.

As clerkes been full subtle and quaint. Chaucer. Each ear sucks up the words a true love scattereth And plain speech oft, than quaint phrase framed is.

Sidney.

With such fair slight him Guyon failed : Till at the last, all breathless, weary and faint,

Him spying, with fresh onset he assailed, And kinding new his courage, seeming quaint, Struck him so hugely, that through great constraint He made him stoop. Spenser.

You were glad to be employed, To shew how quaint an orator you are.

Shakspeare.

1 never saw a better fashioned gown, More quaint, more pleasing, or more commendable.

Shakspeare.

Breathe his faults so quaintly, That they seem the taints of liberty, The flash and outbreak of a fiery mind. Id. When was old Sherewood's hair more quaintly

curled, Or nature's cradle more enchased andpurl'dl

Ben Jonson.

What’s the efficient cause of a king ? surely a quaint question ; yet a question that has been moved.

Holy day.

He his fabrick of the heav’ns Hath left to their disputes, perhaps to move His laughter at their quaint opinions wide Hereafter. Milton’s Paradise Lost.

He spends some passages about two similitudes ; cne of mine, and another quainter of his own.

Stilling feet. As my Buxoma

With gentle finger, streaked her milky care, I quaintly stole a kiss. Gay.

There is a certain majesty in simplicity, which is far above all the quaintness of wit. Pope.

1 o this we owe those monstrous productions, which under the name of trips, spies, amusements, and other conceited appellations, have overrun us ;

and I wish I could say, those quaint fopperies weie wholly absent from graver subjects. Swi/‘i.

QUAKE,v. n.&n.s. Sax. cjjacan ; Lat. (jnatio To shake ; to tremble with cold or fear ; to be yielding ; not solid or firm : a shudder.

The mountains quake at him, and the hills inelt, and the earth is burnt at his presence. Nahum. i. 5.

Dorus threw Pamela behind a tree, where she stood quaking like the partridge on which the hawk is ready to seize. Sidney.

Do such business as the better day Would quake to look on; Shakspeare. Hamlet.

As the earth may sometimes shake, For winds shut up will cause a quake ; So often jealousy and fear Stol’n to mine heart, cause tremblings there.

Suckling. The quaking powers of height stood in amaze.

Cowley.

In fields they dare not fight, where honour calls, The very noise of wars their souls does wound. They quake but hearing their own trumpets sound.

Dryden.

Next Smedley dived ; slow circles d.mpled o'ei-The quaking mud, that clos'd and op'd no more.

Pope.

QUAKERS. See FRIENDS. QUALIFY, v. a. & v. n.) Fr. qualifier ; QUALIFICATION, n. s. S of Lat. qvalis and facere. To fit or furnish ; make capable of; hence reduce ; assuage ; modify ; abate : as a verb neuter, fit one's self: qualification is, accomplishment ; fitness ; that which fits or qualifies; abatement; modification.

He balms and herbs thereto applied, And evermore with mighty spells them charmed,

That in short space he has them qualified, And him restored to health that would havedy'd.

Spenser.

That which ordinary men are fit for, I am qualified in ; and the best of me is diligence. Shakspeare.

1 do not seek to quench your love's hot fire, But qualify the fire's extreme rage, Lest it should burn above the bounds of reason.

Id.

I have drunk but one cup to-night, and that was craftily qualified too ; and behold what innovation it makes here. 1,1.

It hath so pleased God to provide for all living creatures, wherewith he hath filled the world, thai sucli inconveniences as we contemplate alar off ate found by tiiul, and the witness of r.ien's travels, to be so uualitie'l, as there is no poilion of the earth made in vain. Ruleiyh's Hilary of the World.

Place over them such governors, as maybe qualified in such manner as may govern the place.

Bacon.

They would report that they had records for twenty thousand years, which must needs be a very great untruth, unless we will qualify it, expounding their years not of the revolution of the sun, but of the moon. Abbot.

It hath no larinx or throttle to qualify the sound.

Browne.

So happy ‘tis you more in such a sphere, As your high majesty with awful fear In human breasts might qualify that fire, Which kindled by those eves had flamed higher.

Waller.

Children should be early instructed in the truo estimate of things, by opposing the good to the evil, and compensating or qualifying one thing with another. L’ Estrange*

Good qualifications of mind enable a magistrate to perform his duty, and tend to create a public esteem of him. Atterbury.

My proposition I have qualified with the word often ; thereby making allowances for those cases, whereby men of excellent minds may, by a long practice of virtue, have rendered the heights and rigours of it delightful. Id.

It is in the power of the prince to make piety and virtue become the fashion, if he would make them necessary qualifications for preferment. Swift.

After mentioning the corporation and test acts, and some others which do not relate to the point un-der consideration, it is enacted that persons who, after the passing of the act, have omitted to qualify in the manner prescribed by those acts, and who shall properly qualify before the 25th of the ensuing December, shall be indemnified against all penalties, forfeitures, incapacities, and disabilities ; and their elections, and the acts done by them, are declared to be good. Tomlin's Law Dictionary.

QUAL'ITY, n. s. Fr. qualiti; Lat. qualitas. Nature considered relatively ; property ; adjunct ; disposition of mind or temper; qualification; rank : hence persons of high rank collectively considered.

These, being of a far other nature and quality, are not so strictly or everlastingly commanded in scripture. Hooker.

It is with the clergy, if their persons be respected, even as it is with other men ; their quality many times far beneath that which the dignity of their place requireth. Id.

In the division of the kingdom, it appears not

which of the dukes he values most; for qualities are

so weighed, that curiosity in neither can make choice

of either's moiety. Shakspeare.

O, mickle is the powerful grace, that lies

In plants, herbs, stones, and their true qualities.

Id.

Let him be so entertained, as suits with gentlemen of your knowing to a stranger of his quality.

Id. Cymbelinc.

The attorney of the duchy of Lancaster partakes of both qualities, partly of a judge in that court, and partly of an attorney-general. Bacon.

The matter is, whether he be a man of such quality that the state allows him to have a dove-house.

Selden.

He had those qualities of horsemanship, dancing, and fencing, which accompany a good breeding.

Clarendon.

The masters of these horses may be admitted to dine with the lord lieutenant : this is to be done, what quality soever the persons are of. Temple.

One doubt remains, said I, the dames in green, What were their qualities, and who their queen ?

Dry den.

The power to produce any idea in our mind, I call quality of the subject, wherein that power is.

Locke.

Since the event of an action usually follows the nature or quality of it, and the quality follows the rule directing it, it concerns a man, in the framing of his actions, not to be deceived in the rule.

South.

I shall appear at the masquerade, dressed up in my feathers, that the quality may see how pretty they will look in their travelling habits. Addison.

People of quality are fine things, indeed, if they had but a little more money ; but for want of that they are often forced to do things they are ashamed of. Vanburgh.

No sensible qualities, as light and color, heat and

sound, can be subsistent in the bodies themselves ab solutely considered, without a relation to our eyes and ears, and other organs of sense : these qualities are only the effects of our sensation, which arise from the different motions upon our nerves from objects without, according to their various modification and position. Bentley.

Of all the servile herd, the worst is he, That in proud dullness joins with quality, A constant critick at the great man’s board, To fetch and carry nonsense for my lord.

Pope.

We, who are hearers, may be allowed some opportunities in the quality of standers-by. Swift.

To quality belongs the highest place, My lord comes forward ; forward let him come ! Ye vulgar ! at your peril give him room.

Young.

Nothing discovers the true quality and disposition of the mind more, than the particular kind of knowledge it is most fond of. Mason.

QUALM, n. s.) Sax. cpealm; Dan. and QUALM'ISH, adj. j Teut. quulm. A sudden fit of sickness ; sudden seizure of languor : the adjective corresponding.

Some sudden qualm hath struck me to the heart, And dimmed mine eyes, that I can read no further.

Shakspeare.

I am qualmish at the smell of leek. Id.

Compared to these storms, death is but a qualm, Hell somewhat lightsome, the Bermudas calm.

Donne.

I find a cold qualm come over my heart, that I faint, I can speak no longer. Howel.

All maladies

Of ghastly spasm, or racking torture qualms Of heart-sick agony. Milton's Paradise Lost.

For who, without a qualm, hath ever Ipoked On holy garbage, though by Homer cooked 1

Roscommon.

Thy mother well deserves that short delight, The nauseous qualms of ten long months and travail to delight. Dryden's Virgil.

You drop into the place, Careless and qualmish with a yawning face.

Dryden.

They have a sickly uneasiness upon them, shifting and changing from one error, and from one qualm to another, hankering after novelties.

L'Estrange.

The qualms or ruptures of your blood Rise in proportion to your food.
Prior.

When he hath stretched his vessels with wine to their utmost capacity, and is grown weary and sick, and feels those qualms and disturbances that usually attend such excesses, he resolves that he will hereafter contain himself within the bounds of sobriety.

Calamy.

QUANGSEE, a province of the south-west- ern frontier of China, bordering on Tonquin. East and north it is flat, but fertile, and yields rice for export. The rest of the province consists of lofty mountains, covered with wood, and containing mines of gold, silver, copper, and tin, which have only of late been allowed to be worked on condition of their paying forty per cent, to the emperor, and five per cent to the officers and troops employed in superintending them. The gold mines, however, were retained in the emperor in his own hands. The quang-lang tree, of the pith of which bread is made, is indigenous here ; as well as a species of cinna—

mon. Sir G. Staunton reckons the inhabitants at 10,000,000. The capital is called Kouelong or Queyling.

QUANTITY, n. s. } Fr. guantite ; Ital. quan—

QUAN'TITIVE, > tita ; Lat. quantitas. Ex—

QUAN’TUM, ►►.*. J tent; bulk; bigness or smallness of size or number ; part ; portion ; a large portion ; measure of time in pronunciation : quantitive is estimable by quantity : quantum, amount ; sum.

If I were sawed into quantities, I should make four dozen of such bearded hermites staves as master Shallow. Shakspeare.

So varying still their moods, observing yet in all Their quantities, their rests, their censures metrical.

Drayton.

This explication of rarity and density, by the composition of substance with quantity, may give little satisfaction to such who are apt to conceive therein no other composition or resolution but such as our senses shew us, in compounding and dividing bodies according to quantitive parts. Oigby.

The easy pronunciation of a mute before a liquid does not necessarily make the preceding vowel, by position, long in quantity ; as patrem. Holder.

Unskilled in hellebore, if thou shou’dst try

To mix it, and mistake the quantity,

The rules of physick wou’d against thee cry.

Dryden.

The warm antiscorbutical plants, taken in quantities, will occasion stinking breath, and corrupt the blood. Arbuthnot.

Quantity is what may be increased or diminished.

Cheyne.

The quantum of presbyterian merit, during the reign of that ill-advised prince, will easily be computed. Swift.

QUANTITY. ►►► To define what the ancient quantity was, in the age when its nature was not determinable merely from the mouldering manuscripts, or hieroglyphic symbols of our modern copyists; but when the criteria for the ear, which Quinctilian declares cannot be imitated except orally, were obtained from the only effectual source, the viva vox, is an arduous and almost hopeless task. From the ashes,

however, we have gleaned together with other antiquarians our quota; and from the scattered fragments, imperfect records, and broken monuments of the general ruin, have collected what we call our rules.

It is clear that in the ancient elocution there were not only fifteen vowel sounds, represented by six letters, but each of these was again susceptible of one of the three accents, the acute, the grave, or the circumflex. And though the Greeks remedied this in part, by two additional characters, yet to express the mere duration of their syllables, there is still an obvious deficiency. Every intelligent observer will admit that elocution is nothing but a species of music, since every thing implied by the duration of a syllable, the mood or general time of delivery, accent, emphasis, pause, tone, and cadence, are properties which may be very adequately expressed on paper, in musical composition, or, more completely, by a good organ. Hence the duration of a syllable is perfectly analogous to the relative difference between a minim and a crotchet ; the mood, to the general time, whether quick or slow, observed in the whole composition ; accent and emphasis, being an elevation or depression of the voice, are actually the variation from one note to another ; pause is, by musicians, under the term a rest, only changed in name ; while tone, implying all that modulation of the voice effected by the tranquil, plaintive or empassioned mind, is what the complete organ very nearly effects by its diapason, sesquialter, principal, and occasionally by the swell ; and the cadence is but the return of the air and notes to the same key to which the whole composition is set. We now easily perceive that of all that once gave eloquence to the orations of Cicero, and harmony to the strains of Virgil, we now retain but a concatenation of vowels and consonants, in fact, but a lifeless syllabication. Notwithstanding, however, this latitude for doubt, and the difficulties to which the question is liable, several with little hesitation define the quantity of a syllable to be the duration of the voice in pronouncing it. But whilst this, on the one hand, renders the whole poetic fabric consistent, it is, on the other, not a little at variance with the customary and established pronunciation of many who are amongst the principal advocates of prosodial orthoepy, as well as with the manner in which the Latin language is frequently pronounced among the moderns, and by the British nation. To youth we prescribe the laws of quantity, and we oblige them to pronounce the first syllable of profugus short, and that of copia long, because the former is a tribrac, and the latter a dactyl ; but we not only allow them, but accustom ourselves to pronounce nepos, fides, globus, and conjugium, as though these several syllables were respectively long,and are accused by foreigners not only of departing from the

genuine sound of the Greek and Latin vowels, but of violating the quantity of these languages more than any other European nation. The author of the Essay on the Harmony of Languages gives us a detail of the particulars by which this accusation is proved, so accurate as to give it claim to citation here. ‘ The falsification of the harmony by English scholars in their pronunciation of Latin, with regard to essential points, arises from two causes only : first, from a total inattention to the length of vowel sounds, making them long or short merely as chance directs; and, secondly, from sounding doubled consonants as only one letter. The remedy of the last fault is obvious. With regard to the first, we have already observed that each of our vowels has its general long sound, and its general short sound totally different. Thus, the short sound of e lengthened is expressed by the letter a, and the short sound of i lengthened is expressed by the letter e. And with all these anomalies, usual in the application of vowel characters to the vowel sounds of our own language, we proceed to the application of vowel sounds to the vowel characters of the Latin. Thus, in the first syllable of sidus and nomen, which ought to be long, and of miser and onus, which ought to be short, we equallj use the common long sound of the vowels ; but, in the oblique cases, sideris, nominis, miseri, oneris, &c., we use quite another sound, and that a short one. These strange anomalies are not ju common to us with our

southern neighbours the French, Spaniards, and Italians. They pronounce sidus, according to our orthography, seedus, and in the oblique cases preserve the same long sound of the i. Nomen they pronounce as we do, and preserve, in the oblique cases, the same long sound of the o. The Italians also, in their own language, pro nounce doubled consonants as distinctly as the ††† two most discordant mutes of their alphabet. It is a matter of curiosity to observe with what regularity we use these solecisms in the pronunciation of Latin. When the penultimate is accented, its vowel, if followed but by a single consonant, is always long, as in Dr. Foster’s examples. When the antepenultimate is accented, its vowel is, without any regard to the requisite quantity pronounced short, as in mira-bile, frigidus ; except

the vowel of the penultimate be followed by a vowel, and then the vowel of the antepenultimate is, with as little regard to true quantity, pronounced long, as in maneo, redeat, odium, imperium. Quantity is, however, vitiated, to make i short, even in this case, as in oblivio, vinea, viriura. The only difference we make in pronunciation between vinea and venia, is, that to the vowel of the first syllable of the former, which ought to be long, we give a short sound ; to that of the latter, which ought to be short, we give the same sound, but lengthened. U, accented, is always, before a single consonant, pronounced long, as in humerus, fugiens. Before two consonants no vowel sound is ever made long, except that of the diphthong au, so that, whenever a doubled consonant occurs, the preceding syllable is short.'

Mr. Pickbourn, the author of a Dissertation on the English Verb, justly observes (Monthly Magazine, No. 135), ' That scholars err in their pronunciation of, 1st, words of two syllables having the first short, as eques; 2dly, ###words of three syllables having the first long and the second short, as sidera; 3dly, poly-syllables accented on the antepenultimate; as juvenilibus, interea, &c. ; and, lastly, words ending in a long vowel, as domini, or in a long vowel and a single consonant, as dominis. These errors arise in part from the want of distinguishing between the long and short powers of the vowels, and, irr## part from the indistinct and confused notion which we have of accent. For, when it falls on a short syllable, we often make that syllable long; and, when it falls on a long one, we sometimes make it short. Accent does certainly affect quantity ; that is, it makes the accented syllable a little longer than it would be without it. But its operation is never so great as to make a short syllable become long, nor does the privation of accent make a long syllable become short ; for there are degrees of time both in long and short syllables. All short syllables are not equally short; nor are all long ones equally long.'

In justice to this part of the subject we may now offer a remark which we find in Dr. Valpy's excellent Greek Grammar. He differs in some de-gree from Mr. Pickbourn, when he observes, ' that the elevation of the voice does not lengthen the time of that syllable, so that accent and quantity

by the best critics are considered as perfectly distinct, and by no means inconsistent witn each other. In our language the accent falls on the antepenultimate equally in the words liberty and library, yet, in the former, the tone only is elevated, in the latter the syllable is also lengthened. The same difference exists in baron, and bacon, in

level and lever. In words of two and of three short syllables the difference between the French and English pronunciation is striking. The former make iambics and anapassts, the latter chorees and dactyls. The French say, fugis, fugimus; the English, fugis, fugimus. In many instances both are equally faulty ; thus we shorten the long is in favls, the plural of favus; they lengthen the short is in orls, the genitive of os. Indeed both may be said to observe neither accent nor quantity.' We have thus stated at length the manner in which ancient quantity is violated by the moderns, and more particularly by the English.

Three methods present themselves to enable us to preserve the prosodial quantity. 1st. To allow every vowel its prescribed duration, without altering the customary division of syllables ; as n6-ta, lo-cus, &c. ; but this will oblige us to throw the accent on the second syllable, as glo-bus, contrary to the laconic canon of Sanctius :

' Accentum in se ipsa monosyllaba dictio ponit. Exacuit sedem dissyllabon omne priorem. Ex tribus extollit primam penultima curta. Extollit se ipsam quando est penultima longa.'

This will very frequently occasion the following vowel to be long ; as, tS-ne-o, contrary to, ' Vocalis ante alteram in eadem dictione ubique brevis est.*

2dly. If, then, we must abandon the preceding method, we have the alternative left of uniting to the preceding vowel the succeeding consonant; as, not-a, loc-us. But still some difficulty occurs, for, first, this method would in many instances occasion pronunciations very harsh to our customary prepossessions ; as, gr&d-us, cad-o, pllc-o, stup-e-o, bon-us, jub-e-o, t►►n-e-o, man-e-o, num-e-rus, trlb-us, hon-os, fav-or, fiit-u-rus, jug-urn, fid-es, p►►t-o, tlm-or, tlm-e-o, vld-e-o, 'Homines tuentur ilium glob-um.' ' Per-taesum est con-jug-ii, &c. But is this really an objection ? Have not custom and long-established usage the power of warping the mind, and giv-ing it prejudices against that which in its unbiassed state it would have adjudged to be agreeable and elegant? This from innumerable instances we are assured to be a fact. And we may very reasonably enquire, is all this harshness of pronunciation of which we appear to be so sensible actually chargeable on the ancients ? Does it not arise rather from the mistaken ideas we have formed of the power of their vowels and consonants, which, if rectified, would render the harmony of pronunciation and prosodial quantity again consistent?

' E, in Latin, as well as Greek,' according to Ainsworth, ' was

pronounced ►►.' From the circumstance of their anciently writing TEI AFAGEI TYXEI for rrj ayaOij rvxn, it is to ij that he attributes the power of ►►. But since it is ambiguous, and the attempt inconclusive, to

exnlain the sound of one ancient vowel by an-nans U. Ferale ideo quia refert feralem illaiu

other, the most satisfactory and decisive method, ►►►*►►►' This also exnlams the reason t>f the La-as far as it can be done, is to have recourse to the more immutable sounds of nature.

The learned authors of the Port Royal Greek nunciation ci the Greek diphthong av, av, by

Grammar in order to convey the sound of the making it expressive of the barking of a dog.

Ions Greek vowel ►►, tell us ' it is a sound be-This is what is exactly preserved by nurses and

►►* i .1 _ ►► T* i-ii, '.,►►► ►►►►V. A stltit/4 %-nn +r\ tli ic r?Q\r in Hr*w wnw inic i►► tVio

avem.' This also explains the reason t>f the La-tin word bubulo expressing the cry of an owl. Aristophanes has handed down to us the pro-

tween the e and a ; and that Eustathius, who lived towards the close of the twelfth century,

children to this day in bow, wow. This is the sound of the same letters in the Latin tongue,

says that Bn 8n, is a sound made in imitation not only in proper names derived from Greek,

of the bleating of “a sheep ; to this purpose they but in every other wordˆ where thisˆ diphthong

quote the following verse of an ancient writer,

Cratinus : ###

‘ OF 77\i0ioc wcrwfp rp6/3arov,/?f;,|3i},X##ywv/3a(5(##a.

‘ Is fatuus perinde, ac ovis, be, b&, dicens incedit.

‘ He, like a silly sheep, goes crying baa.’

In a similar manner the sound of the long i confirms, by considering it equivalent to the is preserved to us by the word pipio, which sig-, Greek ##, and to the sounds in the Italian pur, nifies to pip like a chicken ; and, since their the French pour, and the English poor, we may note is nearly what we may express by pee-ep, suppose that the ancients pronounced lumen, the long power of that letter seems to have been according to our orthography, loomen, and al-equivocal to our ee. Eustathius likewise re-lowed the power of the middle ##, as in cube, to ” “### * T ‘ ### ###’ their short accented u, and that of u, as in cub,

occurs. Most nations in Europe, perhaps all but the English, pronounce audio and laudo, as if written owdio and lowdo ; the diphthong sound like ou in loud.’

Since the long u has been so fully proved to have been equivocal to 00, which Dr. Carey

marks on the 499th verse of Iliad I. that the word BXoi// Iffrlv o rrjg (cXtiptifyac ##/x0C /*t/*ijrucwc KO.TCL T##C 7raXai##e j3iy s’x” /*i/*Jjffiv 7rpo/3ara>v ˆumjc. Kporivoe, i. e. BXoif/, is, according to the ancients, an imitation of the sound of the clepsydra;

et BJ) imitates the bleating of sheep. The clepsydra was an instrument to measure time by water; and, it should be particularly observed, was occasionally employed to measure time for the regulations of orators, and in other recitations. Abstracting the o in BXoi|/ from the effect of position before ˆ/, it will, as we shall determine hereafter, have the power of our o ; and blops adequately imitates the noise of water running with intermissions out of a narrow-mouthed vessel ; and, with the French pronunciation, with equal propriety, is signified by the word glouglou ; but not quite so happily by us, by the word guggle. Ainsworth seems to consider that the long sound of o was equal to a. To determine this, it may be useful to quote the word glocio, to cluck as a hen (from icXu>►►a/), particularly since this word, amongst many others will prove an irrefragable proof that c, amongst the ancients, was equivocal to K, or hard, since glouk, glouk, is the sound produced by the hen after the period of incubation. The sound of the

to their short unaccented n, i. e. when the accent rested on the following consonant. Hence, instead of being compelled to divide num'-er-us, fut'-u-rus, stiip'-e-o, jub'-e-o, so as to throw the accent on the latter consonant of the first syllable, we may adopt a distribution more reconcileable, at least with our habits, and by placing the accent on the first vowel instead of the following consonant, may give the short Roman accented u the sound of u in tube, and pronounce nearly as usual, nu'-me-rus, fu'-tu-rus, ju'-be-o, &c. Relative to jugum and conjugium, we here avail ourselves of a remark from Dr. Carey. ' The word, which in England we pronounce jugum, is in reality yugum, as the Germans, in fact, at this day, pronounce it. Of this, indeed, there is little doubt, since IaKw/3 was properly yakob, and the Hebrew % before a vowel, had the power o(y. Now by these remarks being warranted, first, to place the accent on the first vowel of the root jii'-guin : secondly, to give the power of the middle u to the short Roman accented u ; and thirdly, that of y to j before a vowel, we may avoid nearly all the harshness for which these words would otherwise have been notorious ; as yu'-gum, con-yu'-gium. The same unpleasantry

long u is no less sincerely preserved by Plautus may be removed from glob'-us, since the long in Menoech. page 622, edit. Lambin, in making Roman o is considered to have been equal to ►►,

use of it to imitate the cry of an owl : ###

‘ ‘Men. Egon’ dedi 1 Pen. Tu, Tu, istic, inquam

vin’ afferri noctuam,

Que tu, tu, usque dicat tibi ? nam nos jam nos de-fessi sumus.’

‘It appears here,’ says Mr. Forster, in his De-

which is more exactly represented by our au ; for hora was probably pronounced haura, since it is borrowed from the Hebrew “MX, aur, and aurora from iv, “OX (propitious light), or owraura. Therefore the middle 0, as in note, may be ceded to the short Roman accented o, and for glob’-us,

fence of the Greek accents, page 129, that an we may? more agreeably, say glo’-bus., owl’s cry was tu, tu, to a Roman ear; tou, tou, Many writers have undertaken to assign the

to a French ; and too, too, to an English one.’ syllables which constitute the seat of the accent,

Lambin, who was a Frenchman, observes on the but few distinguish the accented vowel from the

passage, ‘ Alludit ad noctuae vocem tu, tu, seu accented consonant. And here, perhaps, the

tou, tou.’ On this Mr. Walker remarks, that the solution of the whole may be found. It is evi—

English have totally departed from this sound of dent, that mi’-les has the accent on the first sylla—

the u in their own language, as well as their pro-ble, and on the vowel of that syllable : hence it

nunciation of Latin. Ausonius confirms this is easily preserved long. And, it is equally ob—

power of u : ‘ Cecropiis ignota sonis, ferale sovious, that honorif icus has the accent on the an

tepen ultimate, and on the consonant / of that syllable ; and, therefore, it more rapidly inclines to an increased brevity.

Another difficulty to which we are liable in our apprehension of the nature of ancient quantity arises from that which is said to be long by position. From this some have deduced an objection against the attempt to conform the present pronunciation to quantity ; observing that, * if we would be consistent and unexcep-tionable in our adherence to prosodial metre, we have to recollect that the same word is often both long and short ; as ne'e, when single, or not followed by a consonant ; which by posiiton we find long, as Fulgura nee diri toties arsere cometoe. Then, if we invariably echo the quantity, we must, pro re natsi, say nee, and nee diri, *i.e.* neek, and neck diri. And the improbability that the ancients were so ready on every occasion to pronounce the same word both long and short would incline us to infer that we have no idea of what they meant by quantity.'

This has given rise to the remarks in Mr. Walker's Treatise on Classical Pronunciation, which, if they are not in every instance the most decisive, are at least the most ingenious that we have seen on the question.

' The long quantity,' says he, ' of the ancients, must arise either from a prolongation of the sound of the vowel, or from the delay of the voice, which the pronunciation of two or more consonants in succession are supposed naturally to require. Now vowels were said to be either long by nature, or long by position. Those vowels which were long by position were such as were succeeded by two or more consonants ; as the first o in sponsor. If the long quantity of the ancients was the same distinction of the sound of the vowel as we make in the words cadence and magic, then the a in mater and pater must have been pronounced like our a in paper and matter ; and those vowels which were long by position, as the a in Bacchus and cam-pus, must have been sounded by the ancients as we hear them in the words bake and came. But if the long quantity of the ancients was no more than a retardation of the voice on the consonants, or that duration of sound which an

assemblage of consonants is supposed naturally to produce, without making any alteration in the sound of the vowel, of such long quantity as this an English ear has not the least idea. Unless the sound of the vowel be altered, we have not any conception of a long or short syllable ; and the first syllables of banish, ban-ner, and banter, have, to our ears, exactly the same quantity. The same may be observed of senate, seminary, sentence, and sentiment;' and if, as an ingenious enquirer into this subject has asserted, the ancients pronounce both the consonants in callidus, fallo, &c., this seems to shorten, rather than lengthen, the vowel of the first syllable. ' If, however, the quantity of the ancients lay only in the vowel, which was lengthened and shortened in our manner by altering the sound, how strange must have been their poetical language, and how different from the words taken singly ! And, when these observations on the quantity of the ancients are collectively considered, shall we wonder that the learned and ingenious author of the Elements of Criticism should go so far as to assert that the dactyls and spondees of hexameter verse, with respect to pronunciation, are merely ideal, not only with us, but that they were so with the ancients themselves ? Few, however, will adopt an opinion which will necessarily imply that the Greek and Latin critics were utterly ignorant of the nature of their own language; and every admirer of those excellent writers will rather embrace any explanation of accent and quantity, than give up Dionysius of Halicarnassus, Cicero, Quinctilian, and Longinus. Suppose then, as a last refuge, we were to try to read a Greek or Latin verse, both by accent and quantity, and see what such a trial will produce.

' By quantity, let us suppose the vowel lengthened to express the long quantity ; and by the acute accent the rising inflexion ; thus : ###

Tftyre. tu patulae recubans sub tˆgmine fagi, Sylv6strem tenui musam meditaris avena. Tltyre, tu patulae rgcubans sub tegmlne fagi, Sylvestrem tenui musam meditaris avena. Te6tyre too patulee recubanes so6b teegmine fagi, Seelveestreem tenui mo6same meditaris avena.

MTJW aiiSt Qta,

evjjv, 77 pvp'i 'AˆaioiQ aXys tQi]Ki}.

IV aiiBe Qia, IlijXTJiafcai AˆiXˆof ij pvpi Aˆatoie a\y## i9rJKrj.

Mein-en a-eye-de The-ay, Pei-lei-e-a-dyo A-kil-lel—

ose. Ow-lom-en-ein, hei moo-re a-kay-o►►s al-ge 6th-ei—

kei.

‘ Now there are but four possible ways of pronouncing these verses, without going into a perfect song. One is, to pronounce the accented syllable with the railing inflexion, and the unaccented with the same inflexion in a lower tone ; which is the manner in which we pronounce our own words, when we give them the accent with the falling inflexion. The second is to pronounce the accented syllable with the rising inflexion, and the unaccented syllables with the same inflexion in a lower tone ; which we never hear in our own language. The third is to pronounce the accented syllable with the falling inflexion, and the unaccented syllables with the rising, in a lower tone. And the fourth to pronounce the accented syllable with the rising inflexion, and the unaccented with the falling, in a lower tone. None of these modes, but the first and last, do we ever hear in our own language ; the second and third seem too difficult to permit us to suppose that they could be the natural current of the human voice in any language. The first leaves us no possible means of explaining the circumflex ; but the last, by doing this, gives us the strongest reason to suppose that the Greek and Latin acute accent was the rising inflexion, and the grave the falling inflexion in a lower tone.’

Concerning the question whether the ancient poetry should be read chiefly according to accent or quantity, which has lately been much agitated, may we not then infer, that since the precise nature of accent does not seem to be determined,

and therefore if, in reading, either must give way to the other (for which, however, there is no absolute necessity), it is certainly better that what is in some degree uncertain should yield to that which is

more accurately ascertained. By reading according to quantity is not, however, meant the breaking down, splitting, or destroying the words by attending to the feet only ; but pronouncing the words of a verse so as to give, as much as possible, its due quantity, in real time, to every syllable. And as much as to this mode of reading, we can add an attention to accent, emphasis, tone, pause, and cadence, whether metrical or sentential, insomuch, doubtless, will the pronunciation be the more correct and harmonious.

The nature of quantity as observed in the English language is at once so simple, unique, and, in general, so well known, that any enlargement on this part of the subject is unnecessary. It is sufficient to observe that a vowel or syllable is, in the English language, long, and requires double the time of a short one, when the accent is on the vowel ; which occasions it to be slowly joined in pronunciation with the following letters ; as fall, bale, house, feature. And that a syllable is .short, and only of half the length of a long one, when the accent is on the consonant; which occasions the vowel to be quickly joined to the succeeding letters ; as Srt, ###bonnet, hunger.

QUANTONG, an extensive, fertile, and populous province of Southern China, on the sea coast, which bounds it E. S. S. Northward it is bounded by a high ridge of mountains, which separate it from Kyangsi. It contains the important port of Canton, and is the most commeT-cial of all the Chinese provinces. The mountains of the north frontier yield gold, copper, iron, and the timber called iron-wood : also a fine species of rose-wood and of osier. Southward, the country produces every kind of grain and fruits in profusion, and two crops in the year. A great number of ducks are bred in the waters. The governor resides at Chao-king, and has a considerable military and naval force on foot to suppress the piracy of the neighbouring seas, and keep in awe the rude mountain tribes. Sir George Staunton estimates the inhabitants at

21,000,000.

QUANTONG, a town of the province of Ava, in the Birman empire, on the south-east side of the Irrawaddy, and only twenty-five miles distant from the China frontier. The meaning of Quan-tongj or Canton, is, in Chinese, a port or mart ; a number of such names, thprefrre, occur on the boundaries of the empire, to wnich foreign merchants are allowed to repair. It is probable this town was either built or named by the Chinese ### it is still frequented by these merchants, who

bring porcelain, tea, silks, fruit, &c., hither, and exchange them for emeralds, rubies, iron, and brown cotton.

QUA'RANTAIN, n. s.) French qwmtntain.

QUARANTINE. $ The space of time

which a ship, suspected of infection, is obliged to forbear intercourse or commerce.

Pass youi quarantine among some of the churches round this town, where you may learn to speak, be-

fore you renture to expose your parts in a city congregation. Swift.

QUARANTINE may be ordered by the king, with advice of the privy council, at such times, and under such regulations, as he judges proper. Ships ordered on quarantine must repair to the place appointed, and must continue there during the time prescribed, generally six weeks ; and must have no intercourse with the shore, except for necessary provisions, which are conveyed with every possible precaution. When the time is expired, and the goods opened and exposed tr> the air as directed, if there be no appearance of infection they are admitted to port. Persons giving false information to avoid performing quarantine, or refusing to go to the place appointed, or escap-ing, also officers appointed to see quarantine performed deserting their office, neglecting their duty, or giving a false certificate, suffer death as felons. Goods from Turkey, or the Levant, may not be landed without a licence from the kin?, or certificate that they have been landed and aired at some foreign port. See SANITAK\ LAWS.

QUARLES (Francis), the son of Jame.v Quarles, clerk to the board of green cloth, and purveyor to queen Elizabeth, was born in 1592. He was educated at Cambridge ; became a mem-ber of Lincoln's Inn; and was for some time cup-bearer to the queen of Bohemia, and chronologer to the city of London. He went to Ireland as secretary to archbishop Usher; but the troubles in that kingdom forced him to return, and he died in 1644. His works both in prose and verse are numerous, and were formerly in great esteem, particularly his Divine Emblems.

QUARRE, n. s. Fr. quarre. A quarry. Not in use.

Behold our diamonds here, as in the quarre they stand. Drayton .

QUAR'REL, n. s. & v. n. ~\ Fr. querellt ; QUAR'RELOUS, adi > Lat. querelu. A

QUAR'RELSOME. j breach of concord ; dispute ; contest; cause of contest; ground of opposition or objection: Shakspeare uses it for a quarrelsome person : to quarrel is, to dispute ; debate , squabble ; scuffle ; combat ; disagree ; object t urge frivolous objections : the adjectives correspond.

Ilerodias had a quarrel against him, and would have killed him, but she could not. Mark vi. 19.

Wine drunken with excess, maketh bitterness of the mind, with brawling and quarreling. Ecclvs.

He thought he had a good quarrel to attack him.

Hutingshtd.

The quarrel which, in this present part, striveth against the current and stream of laws, was a long while nothing feared. Hooker.

1 love the sport well, biK I shall as soon quarrel at it as any man. Shakspeare.

If I can fasten but one cup upon him, VV ith that which he hath drank to night already, He'll be as full of quarrel and offence As my young mistress' dog. Id. Othello.

Better

She ne'er had known pomp, though't be temporal ; \ et if that qunrrel, fortune, do divorce It from the bearer, 'tis a suff'rauce panging As soul and body's sev'i ing. Id. Henry VIII.

QUARRYING.

Ready in gybes, quick answered, saucy, and As quarrelous as the weazel. Id. Cymbel'me.

Wives are young men's mistresses, companions for middle age, and old men's nurses ; so a man may have a quarrel to marry when he will. Bacon.

Cholerick and quarrelsome persons will engage one into their quarrels. Id. Essays.

If not in service of our God we fought, In meaner quarrel if this sword were shaken,

Well might thou gather in the gentle thought, So fair a princess should not be forsaken. Fairfax.

You and I may engage in this question, as far as either of us shall think profitable, without any the least beginning of a quarrel, and then that will competently be removed from such, as of which you cannot hope to see an end. Hammond.

It were a matter of more trouble than necessity to repeat in this quarrel what has been alledged by the worthies of our church. Holyday.

To admit the thing, and quarrel about the name, is to make ourselves ridiculous.

BramhaK against Hobbes.

Some things arise of strange and quarreling kind, The forepart lion and a snake behind. Cowley.

In a poem elegantly writ I will not quarrel with a slight mistake.

Roscommon

Beasts called sociable quarrel in hunger and lust ; and the bull and ram appear then as much in fury and war, as the lion and the bear. Temple.

I quarrel-not with the word, because used by Ovid.

Dry den.

The same zeal and faithfulness continues in your blood, which animated one of your noble ancestors to sacrifice his life in the quarrel

of his sovereign.

Id.

We are apt to pick quarrels with the world for every little foolery. L'Estrange.

There needs no more to the setting of the whole world in a flame than a quarrelsome plaintiff and defendant. Id.

I have no quarrel to the practice ; it may be a diverting way. Fetton on the Classicks.

I consider your very testy and quarrelsome people in the same light as 1 do a loaded gun, which may by accident go off and kill one. Shemtone.

QUAR'REL. Fr. quadreau; Ital. qitadrella, of Lat. quadrangula. An arrow with a square head.

It is reported by William Brito that the arcuba—

lista or arbalist was first shewed to the French by

our king Richard I. who was shortly after slain by

a quarrel thereof. Camden.

Twanged the string, out flew the quarrel long.

Fairfax.

QUAR'RY, n. s. \ Fr. quarre, of Lat. qua-QUAR'RYMAN. J drains. A square; an ar-row with a square head ; a place where stones are roughly squared : a quarryman is one who works in a quarry.

The same is said of stone out of tke quarry, to make it more durable. Bacon's Natural History.

The shafts and quarries from their engines fly, As thick as falling drops in April showers.

Fairfax.

As hard and unrelenting she, As the new-crusted Niobe ; Or, what doth mote of statue carry, A nun of the Platonick quarry. Cleaveland.

Pyramids and towers

From diamond quarries hewn, and rocks of gold.

tRltan.

He like Amphion makes those quarries leap Jnto fair figures from a confused heap. Waller.

Could necessity infallibly produce quarries of stone, which are the materials of all magnificent structures!

More. For them alone the heavens had kindly heat

In eastern quarries, ripening precious dew.

ˆDryden.

To take down a quarry of glass to scowre, sodder, band, and to set it up again, is three halfpence a foot. Mortimer.

As long as the next coal-pit, quarry, or chalk-pit will give abundant attestation to what I write, to these I may safely appeal. Woodward.

One rhomboidal bony scale of the needle-fish, out of Stunsfield quarry, the quarryman assured tne was flat, covered over with scales, and three foot long.

Id.

QUAR'RY, n. s. & v. a. Fr. querir, to seek. Skinner. Fr. curee, from Lat. euro. Thomson. A prey ; particularly the prey of the hawk : to prey upon.

She dwells among the rocks, on every side With broken mountains strongly fortified ; From thence whatever can be seen surveys, And stooping, on the slaughtered quarry preys.

Sandys.

Your wife and babes

Savagely slaughtered ; to relate the manner, Were on the quarry of these murdered deer To add the death of you. Shakspeare. Macbeth.

So scented the grim feature, and up turned His nostrils wide into the murky air, Sagacious of his quarry. Milton.

They their guns discharge ;

This heard some ships of ours, though out of view. And swift as eagles to the quarry flew. WaUer.

An hollow crystal pyramid he takes, In firmamental waters dipt above,

Of it a broad extinguisher he makes, And hoods the flames that to their quarry strove.

Dryden.

Let reason then at her own quarry fly, But how can finite grasp infinity 1 Id.

With cares and horrors at his heart, like the vulture that is day and night quarrying upon Prometheus's liver. L'Estrange.

QUARRY, among hunters, is sometimes used for a part of the entrails of the beast taken, given by way of reward to the hounds.

QUARRY, or QUARREL, among glaziers, a pane of glass cut in a diamond form. Quarries are of two kinds, square and long ; the acute angle in the square quarrels being 77►► 19', and 67►► 21' in the long ones.

QUARRYING, is the business of directing and conducting the sinking and management of the different kinds of quarries, pits, and shafts, as well as of the different sorts of work which are necessary to be undertaken, carried on, and performed in the several different descriptions of them ; such as those of separating-, getting up, and preparing the various sorts of materials for use in the arts, or in other ways. It is a practice which requires considerable knowledge and ex perience, to be fully master of it in all its bearings and intentions.

Limestone, chalk, and building stone, are generally found in strata either on or near the surface. When at a great depth it is not found worth while to work them. When stones of any kind are procured by uncovering the earth, and then working them out, they are said to be quarried ; but when

a pit or shaft is sunk, and the materials procured are worked under ground, they are said to be mined.

Quarrying slates, particularly those of the blue, green, and purple or blackish kinds, undergo “several different sorts of preparation in the quarrying, according to the purposes to which they are to be afterwards applied. They are separated and divided into very thin pieces or slates, where light neat coverings are required, or in much demand ; but for more strong and heavy coverings, in exposed situations, or other places, they are split into much thicker sheets, layers, or slates’, and are, of course, more clumsy in their appearance. Each sort in the business of quarrying is wrought in a separate manner, and packed up by itself; the different sorts hav-ing appropriate names.

White or brown slates are never divided and prepared in so fine a way as the other kinds, but separated into much thicker flakes or laminae, in this intention. The blue, green, and purple, or darkish sorts, are, for the most part, found capable of being split into very thin laminae or sheets ; but those of the white, or brownish freestone kinds, can seldom be separated or divided in any very thin manner, as the layers of the large masses of the stones are of a much thicker na-ture, they consequently form heavy, strong, thick coverings, proper for buildings in exposed climates and situations, and of the more rough kinds, such as barns, stables, and other sorts of out-houses. In the different operations and processes of this sort of quarrying, slate knives, axes, bars, and wedges, are chiefly made use of in the different intentions of splitting and cleaning the slates, they being separated into proper thicknesses by the axe, bar, and wedge, and afterwards chipped into their proper forms and shapes by the knife. All .the different inequalities which may appear upon any part of them are likewise removed by this last sort of implement.

In quarrying stone the work is usually performed in such a manner as to suit the different uses for which they are intended. Where flags are to be formed, they are split or riven into suitable thicknesses, and squared to different sizes, so as to be adapted to different applications.

These operations are executed in rather a rough way, as they are afterwards to be finished by the stone-mason. When for steps they have the proper breadths and depths given to them in a sort of squaring manner, being left to be completed as they may be wanted for particular uses and applications. Gate-posts are, for the most part, quarried so as have from about a foot to a foot and a half or more in the square. Trough-stones have the quarrying performed so as to be formed into various proper-sized squares or other forms, in a. rough manner, being left in these states to be afterwards hewn and hollowed out, in the intended parts, by the stone-masons. Stones for building purposes are usually raised and quarried out roughly into something of the square shape, being left in that state for the builders, who afterwards fit them so as to suit their own purposes and intentions.

The quarrymen commonly make use of large

hammers, with cutting ends on one side, the other being formed in a plain manner ; strong sharp crowbacs, and broad sharp iron wedges ; by which means these matters are, from the constant practice of the men, split and torn into such forms as are wanted with great ease and facility.

Quarry Cart is a name given to that sort o* cart which is principally employed in the work of quarries, and which is generally of a low, compact, strong kind, in its nature, form, ai;d manner of construction, in order to sustain heavy weights, and receive them without difficulty, or the danger of being destroyed. Carts for this purpose should always be made of well-seasoned wood, be well put togethe r, and have sufficient strength of timber in those parts where the main stress of the load is placed. Some quarry counties have well-formed carts of this nature, as many of those towards the northern boundaries of this kingdom.

Quarry Waggon, or truck, a small carriage of the low truck kind, which is much employed in the business of quarries, especially those of the slate kinds, for the purpose of holding and conveying the rough materials, which have been blown from the large massy rocks, or separated in other ways, out of or from the quarries and pits in which they are situated and contained, to the places where they are to receive their different preparations and shapes.

It is formed and constructed on a frame somewhat similar to that of the common barrow, and mounted on two low light iron wheels on

the fore part, having two feet behind, projecting from the frame, bent something in the manner of the letter S, and of sufficient length to let it stand or rest in a horizontal position while it is in the act of being loaded. These feet are usually made of iron, but they may be formed of other materials. A sort of inclined plane is formed from the bottoms of the quarries or pits, up which it is forced with great ease and facility by the workmen, or small animals of the horse kind, after being filled with these sorts of heavy materials. It is a very useful and convenient machine in this application, being met with in most of the slate quarries in the northern part of Lancashire, as well as in those of many other districts of the kingdom.

Quarryings are the small pieces which are broken or chipped off from the differents sorts of materials which are found and wrought in quarries, while they are undergoing their different preparations for various uses. These substances, where they are of the hard kind, such as those of the blue and limestone, as well as some other sorts, are extremely well calculated for the purpose of forming and repairing roads, as they are nearly, if not quite, in a state fit for immediate application in this way. Materials of these kinds ought, therefore, where they can be conveniently had, never to be neglected by those who have the care and management of roads, as they will save much expense and trouble, in a great number of instances.

Draining of quarries. ××× In order to accomplish this it will be necessary, in ascending from the quarry or pit, carefully to examine and ascertain

if, at any1 place higher on the declivity, any porous stratum, bed of rock, sand, or gravel, tails out, which may conduct and convey the water contained in it to the sand bed, which is below in the works; and, where any such bed is found, to cut or bore into it in such a manner as to form a drain that is capable of carrying away the whole or the greatest part of the water, and of course to clear or diminish the quantity contained in the quarry or pit, which would otherwise have continued to descend through such porous substrata or beds, and have

continued to fill the sands, or quarries and pits.

But a sufficient quantity to injure, hinder, and inconvenience the working of the quarries or pits, may yet continue to drain and ooze from the sides of the sand-beds, notwithstanding they should happen to dip towards the lower ground, in which case, however, the water may readily and with great ease be drawn off at some particular point in it. In order to effect this, and thereby remove the inconvenience of this nitrat-ing water, in descending from the quarries or pits along the declivity, it should be endeavoured to discover and ascertain at what particular point or place, in the low ground, the sand terminates or tails out, which is mostly best accomplished by means of proper levelling; and if there should be there any appearance of the water's having a natural outlet, it may, by means of making in it a deep drain, be far more readily and effectually drawn off and removed; as springs, for the most part, naturally pass and flow through narrow, winding, convoluted openings, or perforations; of course, whenever the orifices or passages are opened, enlarged, or made lower than before, the discharge of water becomes greater and more expeditious. Where, however, there happens to be a deep impervious layer or covering of clay, or other matter of a similar nature, placed above or upon the termination or tail of the sand, the drain need only be cut down to it or a little way into it, as by means of boring through it, or the remaining portion of it, a ready and easy outlet or passage may be given to the whole of the water that may be contained in the sand-bed or other porous stratum.

In regard to the removal of the water found and contained in the bottoms of such quarries, pits, or deep works, it must be drained off and got rid of in quite a different manner, as the level of the ground may probably be, or decline, nowhere lower than the mouths or openings of such quarries, pits, &c. ; as it is solely and particularly on the supposition, and in such cases as where the direction of the different strata and sand-beds have a dipping position with the natural inclination of the surface of the land, or lie nearly horizontally, that the method of proceeding which is stated above is practicable. But should they, for instance, lie in a reverse or contrary direction, there is but little possibility or chance of accomplishing the object, the re-rroval of the water, unless by discovering or hitting on their terminations, somewhere on the opposite sides of the hills or elevations, which in some cases may very nearly or exactly be found out, by ascertaining the precise inclination or direction of the materials of the quarries, pits, &c.,

and by a careful and exact use of the level. Bu(this will be much better comprehended, and a more full and perfect notion of its nature be afforded, by the section figure in the plate on draining quarries, pits, &c., in agriculture, given by Mr. Elkington, in his work on this subject.

The water which is found in the bottoms of these different kinds of undertakings, or which proceeds from the rocks or their sides, or in other ways in the course of working them, is commonly got quit of by means of some sort of engine or pump, in order to assist in working of which the water gained by cutting the drains already noticed may be particularly useful, especially where the usual stream for that purpose is insufficient for that purpose, in saving the great expense of working such machinery by the power of steam. But without the aid of a natural stream, which is capable of being converted to this purpose, it is rarely possible to find, by means of drains, or in any other way, a quantity of water sufficient to drive weighty machinery, in a situation of proper height to have the full and necessary command of it.

It has been remarked in Mr. Elkington's work on draining, in these cases, that the duke of Buccleugh's coal-works, near Langholm, in the county of Dumfries, afford a striking example OF the superior powers of water and machinery, when properly combined, where a command of the former can be had, and when the latter is constructed on proper principles, and conducted with that care and ingenuity which are requisite in such difficult undertakings.

Boring has been practised of late, with complete success, in the case of a colliery in the county of York, which had been wrought many years, and in which the water was raised about sixty yards by a steam-engine.

The actual working of quarries is an operation depending more on strength than skill. In quarrying sandstone, consisting of regular layers, the work is performed chiefly by means of the pick, wedge, hammer, and pinch or lever; recourse being seldom had to the more violent and irregular effects of gunpowder. But for some kinds of limestone, and for greenstone and basalt, blasting with gunpowder is resorted to ; and some of the rocks called primitive, such as granite, gneiss, and sienite, could scarcely be torn asunder without it.

The burning of lime may be considered as be longing to the subject of quarrying. See our article LIME. The operation is performed in what are called draw-kilns, or perpetual kilns. These should always be close to or near the quarry, and either situated at a bank, or furnished with

a ramp or inclined plane of earth for carting up the coal and lime to the top of the kiln. Lime-kilns inay be built either of stone or brick ; but the latter, as being better adapted to stand excessive degrees of heat, is considered as preferable. The outside form of such kilns is sometimes cylindrical, but more generally square. The inside should be formed in the shape of a hogshead, or an egg, opened a little at both ends, and set on the smallest; being small in circumference at the bottom, gradually wider towards th-; middle, and then contracting again towards

the top. In kilns constructed in this way, it is observed, fewer coals are necessary, in consequence of the great degree of reverberation created, above that which takes place in kilns formed in the shape of a sugar loaf reversed. Near the bottom, in large kilns, two or more apertures are made: these are small at the inside of the kiln, but are sloped wider, both at the sides and the top, as they extend towards the outside of the build ing. The uses of these apertures are for admitting the air necessary for supplying the fire, and also permitting the laborers to approach with a drag and shovel to draw out the calcined lime. From the bottom of the kiln within, in some cases, a small building called a horse is raised in the form of a wedge, and so constructed as to accelerate the operation of drawing out the burned limestone, by forcing it to fall into the apertures which have been mentioned above. In other kilns of this kind, in place of this building there is an iron grate near the bottom, which comes close to the inside wall, except at the apertures where the lime is drawn out. When the kiln is to be filled, a parcel of furze or faggots is laid at the bottom, over this a layer of coals, then a layer of limestone (which is previously broken into pieces, about the size of a man’s fist), and so on alternately, ending with a layer of coals, which is sometimes, though seldom, covered with sods or turf, in order to keep the heat as intense as possible. The fire is then lighted in the apertures; and when

the limestone towards the bot-tom is completely calcined, the fuel being considerably exhausted, the limestone at the top subsides. The laborers then put in an addition of limestone and coal at the top, and draw out at bottom as much as they find thoroughly burned ; and thus go on, till any quantity required be calcined. When limestone is burned with coals, from two bushels and a half to three and a half, on a medium three bushels of calcined limestour, are produced for every bushel of coal used.

A lime-kiln, on an improved plan, has been erected at Closeburn in Dumfrieshire, by Monteith- Instead of the wide and shallow circular kiln, these kilns are elliptical and deep. Some parts are added to it which are found of most important use. The first is a kind of roof or cover. The disadvantage of the want of some contrivance to protect kilns in stormy weather, has been long felt, and many attempts have been made to apply some kind of cover, but, we believe, none with such success as that used at Closeburn. The next addition is having cast-iron doors below, at th'e opening where the kiln is drawn. There is a grating through which the ashes fall while drawing the kiln, which makes that operation a much less disagreeable employment than formerly; and the ashes and small lime thus separated are excellent for agricultural purposes. There is often a great loss of fuel, from allowing lime-kilns to cool when there is no demand ; all that is necessary to be done is, to shut the cast-iron doors, above as well as be-low, and the dampers in the chimneys. The heat is thus preserved, and fuel saved, by keeping the kiln hot, tQ be ready for use as soon as wanted. Farmer's Magazine, vol. xvi. p. 134.

Booker's lime kiln (Dumfries Report, p. 594),. is of an oval form, twenty-two feet high, two feet wide at the bottom, nine feet in the middle, and gradually contracted to three feet at top. It is lined with brick, and, instead of being covered with a dome, Booker adopts a cover of cast-iron with a vent in it, which cover is placed on a ring of three feet diameter, built into, and fixed on the top of the kiln. The cover, by moving on a pivot, is easily thrown off when the kiln is to be charged, and, being put on during the process of calcination, it both increases the draught of air through the kiln, and, by acting as a reverberatory furnace, is attended with a considerable saving of fuel.

QUART, n. s. Fr. quart, of Lat. quartus. The fourth part ; a quarter; the fourth part of a gallon ; a quart measure.

AJbanact had all the northern, part, Which of himself Albania he did

call,

And Camber dkl possess the western quart.

Spenser,

When I have been dry, and bravely marching, it hath served me instead of a quart pot to drink in.

Shakspeare.

You'd rail upon the hostess of the house, And say you would present her at the leet, Because she bought stone jugs and no sealed quarts.

Id.

You have made an order that ale should be sold at three halfpence a quart. Swift's Miscellanies.

QUART, in English measure, the fourth part of the gallon, or two pints.

QUAR'TAN, n. s. Fr. quartaine ; Lat. quar-tana. The fourth day ague.

Call her the metaphysicks of her sex, And say she tortures wits, as quartans vex Physicians. Cleaveland.

It were an uncomfortable receipt for a quartan ague, to lay the fourth book of Homer's Iliads under one's head. Brovnie.

A look so pale no quartan ever gave, Thy dwindled legs seem crawling to the grave.

Dryden.

QUARTATION, n. s. Lat. quartus. A chymical operation, denned below.

In quartation, which refiners employ to purify gold, although three parts of silver be so exquisitely mingled by fusion with a fourth part of gold, whence the operation is denominated, that the resulting mass acquires several new qualities ; yet, if you cast this mixture into aqua fortis, the silver will be dissolved in the menstruum, and the gold, like a dark powder, will fall to the bottom. Doyle.

QUARTATION is an operation by which the

quantity of one thing is made equal to a fourth part of the quantity of another thing. Thus, when gold alloyed with silver is to be parted, we are obliged to facilitate the action of the aquafortis by reducing the quantity of the former of these metals to one-fourth part of the whole mass ; which is done by sufficiently increasing the quantity of the silver, if it be necessary. This operation is called quartation, and is preparatory to the parting ; and even many authors extend this name to the operation of parting. See ASSAY.

QLAK'TER,n.s. &v.a. ~\ Fr. quurtier, of
QUARTERAGE, | Lat. quartus. A
QUAR'TER-DAY, [fourth part; apart
QUAR'TER-DECK, f of the heavens con—
QuAR'TERLY,af7;. &.adv. | sidered as divided
QUAR'TERMASTER, n. s. J into the cardinal

points : hence, region ; district ; division ; station; abode: particularly military station, cantonment, or abode; hence a military cry for mercy, i. e. to be sent tc the captors' quarters ; mercy; friendship; kind treatment; a measure of eight bushels: to divide into four parts; divide in any way ; station ; lodge; diet; bear as an appendage to herald in arms, see below : quarterage is a quarterly allowance : quarter-day, one of the four days in the year on which rent is usually paid : quarter-deck, the short upper deck of a ship : quarterly, containing a fourth part ; or once in a quarter: quartermaster, he who regulates soldiers' quarters.

No leaven shall be seen in thy quarter*. Exodus. It is an accustomed action with her to seem thus washing her hands ; I have known her continue in this a quarter of an hour. Shakspeare. Macbeth.

I'll give thee a wind. ††† I myself have all the other, And the very points they blow, And all the quarters that they know, I' the shipman's card. Id.

Where is lord Stanley quartered ? ††† Unless I have mista'en his quarters much, His regiment lies half a mile South from the mighty power of the king.

Shakspeare. Friends, all but now,

In quarter, and in terms like bride and groom Divesting them for bed, and then, but now Swords out, and tilting one at other's breasts. Id.

Mothers shall but smile when they behold Their infants quartered by the hands of war. Id. They do best, who, if they can but admit love> yet make it keep quarter, and sever it wholly from their serious affairs. Bacon.

The first, being compounded of argent and azure, is the coat of Beauchamp of Hack in the county of Somerset, now quartered by the earl of Hertford.

Peacham.

The like is to be said of the populousness of their coasts and quarters there. Abbut.

They had settled here many ages since, and over-spread ail the parts and quarters of this spacious continent. Heylin.

The soil so fruitful that an acre of land well ordered will return 200

bushels or 25 quarter! of corn.

Id.

Thou canst defend as well as get, And never hadst one quarter beat up yet. Cowley.

He magnified his own clemency, now they were at his mercy, to offer them quarter for their lives if they gave up the castle. Clarendon.

His praise, ye winds ! that from four quarters blow, Breathe soft or loud. Milton's Paradise Loi > t.

He fed on vermin ;

And, when these failed, he'd.suck his claws, And quarter himself upon his paws. Hudibras.

He used two equal ways of gaining, By hindring justice or maintaining ; To many a whore gave privilege, And whipped for want of quarterage. Id.

However rarely his own rent-dayes occurred, the indigent had two and fifty quarter-dates returning in his year. Fell.

The moon makes four quarterly seasons within her little year or month of consecution. Holder.

Observe what stars arise or disappear, And the four quarters of the rolling year.

Dryden.

The q tarter* of the several chiefs they showed. Here Phenix, here Achilles, made abode. id,

Discover the opinion of your enemies, which is commonly the truest ; for they will give you no quarter, and allow nothing to complaisance. Id.

A bungling cobbler, that was ready to starve at his own trade, changes his quarter, a*nd sets up for a doctor. L'Estiange.

When the cocks and lambs lie at the mercy of cats and wolves, they must never expect better quarter, id.

Supposing only three millions to be paid, ‘tis evident that to do this out of commodities, they must, to the consumer, be raised a quarter in their price ; so that every thing, to him that uses it, must be a quarter dearer. Locke.

Thˆ quartermaster general was marking the ground for the encampment of the covering array. Taller.

The sons of the church being so much dispersed, though without being driven, into all quarters of the land, there was some extraordinary design of divine wisdom in it. Sprat.

You have quartered all the foul language upon me that could be raked out of Billingsgate. Spectator.

When the winds in southern quarters rise, Ships, from their anchors torn, become their sport, A.tid sudden tempests rage within the port.

Addison.

The usurer would be very well satisfied to have all the time annihilated that lies between the present moment and next quarter-day. Id.

Suppose the common depth of the sea, taking one place with another, to be about a quarter of a mile.

Burnet.

To the young, if you give any tolerable quarter, you indulge them in their idleness, and ruin them.

Collier.

From the obliquity of the ecliptick to the equator arise the diurnal differences of the sun’s right ascension, which finish their variations in each quadrant of the ecliptick, and this, being added to the former inequality from eccentricity, makes these quarterly and seemingly irregular inequalities of natural days.

Bentley.

Mr. Wharton, who detected some hundreds of the bishop’s mistakes, meets with very ill quarter from his lordship. Swift.

The quarter-deck is that above the upper-deck, reaching forward from the stern to the gangway, and supports the carronades, &c. Falconer.

QUARTER, in dry measure, is, eight bushels.

QUARTER, in heraldry, is applied to the parts or members of the first division of a coat that is quartered, or divided into four quarters.

QUARTER, FRANC, in heraldry, is a quarter single or alone ; which is to possess one fourth part of the field. It makes one of the honorable ordinaries of a coat. See HERALDRY.

QUARTERS, WINTER, sometimes mean the space of time included between leaving the camj. and taking the field; but more properly the places where the troops are quartered during the winter. The first business, after the army rs in winter quarters, is to form the chain of troops to cover the quarters well; which is done either behind a river, under cover of a range of strong posts, or under the protection of fortified towns. Hussars are very useful on this service. It should be observed, as an invariable maxim, in winter quarters, that the regiments be disposed in brigades, to be always under the eye of a general officer; and, if possible, let the regiments

be so distributed as to be each under the command of its own chief.

QUARTER BILL, a roll or list, containing the different stations to which all the officers and crew of the ship are quartered in the time of battle, and the names of all the persons appointed to those stations.

QUARTER OF A SHIP, that part of the ship's side which lies towards the stern : or which is comprehended between the aftmost end of the main chains and the sides of the stern, where it is terminated by the quarter pieces. On the quarter may be denned an arch of the horizon, contained between the line prolonged from the ship's stern and any distant object, as land, ships, &c. Thus, if the ship's keel lies on an east

and west line, the stern being westward, any distant object perceived on the north-west or south-west is said to be on the larboard starboard quarter.

QUARTERS, a name given at sea to the several stations where the officers and crew of a ship of war are posted in action. The number of men appointed to manage the artillery is al-ways in proportion to the nature of the guns, and the number and condition of the ship's crew. The lieutenants are usually stationed to command the different batteries, and direct their efforts against the enemy. The master superintends the movements of the ship, and whatever relates to the sails. The boatswain, and a sufficient num-ber of men, are stationed to repair the damaged rigging ; and the gunner and carpenter wherever necessary, according to their respective offices. The marines are generally quartered on the poop and forecastle, or gangway, under the direction of their officers ; although, on some occasions, they assist at the great guns, particularly in distant cannonading.

QUARTERS, HEAD, OF AN ARMY, the place ###where the commander-in-chief has his quarters. The quarters of generals of horse are, if possible, in villages behind the right and left wings, and the generals of foot are often in the same place ; but the commander-in-chief should be near the centre of the army.

QUARTER GUNNER, a petty officer under the direction of the gunner of a ship of war, whom he is to assist in every branch of his duty; as keeping the guns and their carriages in proper order, and duly furnished with whatever is necessary ; filling the powder into cartridges ; scal-ing the guns, and keeping them always in a condition for service. The number of quarter-gunners in any ship is always in proportion to the number of her artillery, one quarter-gunner being allowed to every four guns.

A QUARTER MASTER, in the army, is an officer, whose business is not only to look after the quarters of the soldiers, but their clothing, bread, ammunition, firing, &c. Every regiment of foot and artillery has a quartermaster, and every troop of horse one.

QUARTER MASTERS, in a ship of war, are petty officers appointed by the captain to assist in the several duties of the ship, as stowing the ballast and provisions in the hold, coiling the cables on their platforms, overlooking the steer-age of the ship, keeping the time by the watch-

glasses, and, in turn, overlooking the purser's steward in his delivery of provisions, &c.

QUARTER MASTER GENERAL is a considerable officer in the army ; and should be a man of great judgment and experience, and well skilled in geography. His duty is to make the marches and encampments of an army ; he should know the country perfectly, with its rivers, plains, marshes, woods, mountains, defiles, passages, &c. even to the smallest brook. Prior to a march, he receives the order and route from the commanding general, and appoints a place for the quartermasters of the army to meet him next morning, with whom he marches to the next camp ; where, having viewed the ground, he marks out to the regimental quartermasters the ground allowed each regiment for their camp : he chooses the head quarters, and appoints the villages for the generals of the army's quarters : he appoints a proper place for the encampment of the train of artillery : he conducts foraging parties, as likewise the troops to cover them against assaults, and has a share in regulating the winter-quarters and cantonments.

QUARTER NETTING, a sort of network, extended along the rails on the upper part of a ship's quarter. In a ship of war these are always double. The interval is sometimes filled with cork, or old sails ; but chiefly with the ham-mocks of the sailors, so as to form a parapet against the enemy's small arms in battle.

QUARTER SESSIONS, a general court held quarterly by the justices of peace of each county. This court is appointed by statute 2 Hen. V. c. 4, to be in the first week after Michaelmas day ; the first week after the Epiphany ; the first week after the close of Easter ; and in the week after the translation of St. Thomas a Becket, or the 7th of July. This court is held before two or more justices of the peace, one of whom must be of the quorum. The jurisdiction of this court, by 34 Edw. III. c. 1, extends to the trying and determining of all felonies and trespasses whatsoever, though they seldom, if ever, try any greater offence than small felonies within the benefit of clergy, their commission providing, that if any case of difficulty arises, they shall not proceed to judgment, but in the presence of one of the justices of the courts of king's bench or common pleas, or one of the judges of assize. But there are many offences, and particular matters, which by particular statutes belong properly to this jurisdiction, as the smaller misdemeanors not amounting to felony, relating to the game, highways, alehouses, bastard children, the settlement and provision for the poor, vagrants, servants' wages, apprentices, &c. The records or rolls of the sessions are committed to the custody of a special officer, denominated the custos rotulorum. In most corporation towns there

are quarter-sessions kept before justices of their own, within their respective limits, which have exactly the same autho- ††† rity as the general quarter-sessions of the county, except in a very few instances.

QUARTERSTAFF, n. s. Quarter ai††d staff, A staff of defence : so called, perhaps, from me manner of using it; one hand being placed at the middle, and the other equally between the

middle and the end. So says Dr. Johnson : Mr. Thomson, more probably, from quarter, a district, and staff; the quarterstaff being once a badge of authority amongst foresters.

His quurterstaff, which he could ne'er forsake, Huns; half before, and half behind his back.

Dry den.

Immense riches he squandered away at quarterstaff and cudgel play, in which he challenged all the country. Arbuthrwt.

QUAR'TILE, n. s. Lat. quartus. An aspect of the planets, when they are three signs or ninety degrees distant from each other, and is marked thus Q.

Mars and Venus in a quartik move

My pangs of jealousy for Ariel's love. Dryden.

QUARTO, n. s. Lat. quartus. A book in †††which every sheet, being twice doubled, makes four leaves.

Our fathers had a just value for regularity and systems; then folios and

quartos were the fashionable sizes, as volumes in octavo are now. Watts.

QUARTO-DECIMANI, an ancient sect in the Christian church, who taught that Easter should always be celebrated according to the custom of the Jews, on the fourteen day of the moon in the month of March, whensoever that day fell out. And hence they derived their name quarto-decimani.

QUARTZ, in mineralogy, a genus of siliceous earths, chiefly composed of silica. According to Kirwan, the quartz are in general the purest of the siliceous kind. Cronstedt gives the following characteristics of it:❀❀❀ 1. It is generally cracked throughout, even in the rock it-self, whereby, as well as by its own nature, it breaks into irregular and sharp fragments. 2. It cannot be easily made red hot, without cracking still more. 3. It never decays in the air. 4. Melted with potass, in a due proportion, it gives a more solid glass than any of the other siliceous stones. It is met with in clefts, fissures, and small veins in rocks ; it seldom forms large veins, and still more rarely whole mountains, without a mixture of heterogeneous substances. M. Magellan remarks that quartz is one of the principal kinds of stone which contain metals. In some of the Hungarian veins the gold is so minutely dispersed that it cannot be discerned by the best microscopes before it is separated by pounding and washing. The width of the veins, some of which are half a fathom, and some still more, repay the trouble and expenses, which the small quantity of gold would not otherwise counterbalance. Near Lauterberg, upon the Hartz, are veins of this stone from one to three fathoms wide, consisting of a loose sand, in which they find the copper ore in nests.

Rock crystals are generally found upon or among quartz, and are to be met with in all parts of the world. The greatest numbers are furnished to the European countries from Mount St. Gothard, in Switzerland.

Professor Jameson divides this mineral genus into two species : rhomboidal quartz, and indivisible quartz.

1. Rhomboidal quartz contains fourteen sub-species. 1. Amethyst. 2. Rock crystal. 3. Milk quartz. 4. Common quartz. 5. Prase.

6. Cat’s eyo. 7. Fibrous quartz. 8. Iron flint. 9. Hornstone. 10. Flinty slate. 11. Flint. 12. Calcedony. 13. Heliotrope. 14. Jasper.

2. Indivisible quartz contains nine sub-spe- cies. 1. Float-stone. 2.

Quartz sinter. 3, Hyalite. 4. Opal. 5. Menilite. 6. Obsidian.

7. Pitchstone. 8. Pearlstone. 9. Pumice-stone. See MINERALOGY.

QUASH, v. a. & v. n. French casser ; Belg. quassen ; Ital. squacciare, quassare ; Lat. quusso. To crush; squeeze; subdue; annul; make void.

‘Twas not the spawn of such as these That dyed with Punick blood the conquered seas And quashed the stern .ˆEacides. Rosccmmon.

The whales

Against sharp rocks, like reeling vessels quashed, Though huge as mountains, are in pieces dashed.

Waller.

A thin and fine membrane strait and closely adhering to keep it from quashing and shaking. Ray.

Our she confederates keep pace with us in quashing the rebellion, which had begun to spread itself among part of the fair sex. Addison’s Freeholder.

The water in this dropsy, by a sudden jerk, may be heard to quash. Sharp’s Surgery.

QUASI CONTRACT, in the civil law, an act without the strict form of a contract, but yet having the force thereof. In a contract there must be the mutual consent of both parties, but in a quasi-contract one party may be bound or obligated to the other, without having given his consent to the act wherby he is obliged. For example : I have done your business, in your absence, without your procuration, and it has succeeded to your advantage. I have then an action against you for the recovery of what I have disbursed, and you an action against me to make me give an account of my administration, which amounts to a quasi contract.

QUASSIA, in botany, a genus of the monogynia order, and decandria class of plants ; natural order fourteenth, gruinales. It was so named from Quassi, a negro slave, who discovered its virtues : CAL. pentaphyllous ; petals five ; nectarium, pentaphyllous ; there are from two to five seed cases, standing asunder, and mc~ nospermous. There are three species, the amara, simaruba, and excelsa or polygama.

1. Q. amara grows to the height of several feet, and sends off many

strong branches. The wood is of a white color and light ; the bark is thin and gray : the leaves are placed alternately on the branches, and consist of two pairs of opposite pinnae, with an odd one at the end : all the leaflets are of an elliptical shape, entire, veined, smooth, pointed, sessile, on the upper pagina of a deep green color, on the under paler : the common foot-stalk is articulated, and winged, or edged, on each side with a leafy membrane, which gradually expands towards the base of the pinnae : the flowers are all hermaphrodite, of a bright red color, and terminate the branches in long spikes: the bracteae or floral leaves are lance-shaped or linear, colored and placed alternately upon the peduncles ; the calyx is small, persistent, and five toothed ; the corolla consists of five lance-shaped equal petals, at the base of which is placed the nectary, or five roundish, colored, scales ; the filaments are ten, slender, somewhat longer than the corolla, and crowned

w;th simple anthera, placed transversely ; the receptacle is fleshy and orbicular ; the germen is ovate, divided into five parts, and supports a slender style, longer than the filaments, and terminating by a tapering stigma ; the capsules are five, two celled, and contain globular seeds. It is a native of South America, particularly of Surinam, and also of some of the West Indian Islands. The root, bark, and wood, of this tree have all places in the materia medica. The wood is most generally used, and is said to be a tonic, stomachic, antiseptic, and febrifuge.

It has been found very effectual in restoring digestion, expelling flatulencies, and removing habitual costiveness, produced from debility of the intestines, and common to a sedentary life. Dr. Lettsom, whose extensive practice gave him an opportunity of trying the effects of quassia in a great number of cases, says, ‘ In debility, succeeding febrile diseases, the Peruvian bark is most generally more tonic and salutary than any other vegetable hitherto known ; but in hysteri-cal atony, to which the female sex is so prone, the quassia affords more vigor and relief to the system than the other, especially when united with the vitriolum album, and still more with the aid of some

absorbent.' In dyspepsia, arising from hard drinking, and also in diarrhoeas, the doctor exhibited the quassia with great success. But, with respect to the tonic and febrifuge qualities of quassia, he says, ' I by no means subscribe to the Linnaean opinion where the author declares, ' me quidem judice chinchinam longe superat.' It is very well known that there are certain peculiarities of the air, and idiosyncrasies of constitution, unfavorable to the exhibition of Peruvian bark, even in the most clear intermissions of fever. In these cases quassia may often be substituted with success.'

2. Q. excelsa, or Q. polygama, was named by Sir Joseph Banks, Dr. Solander, and Dr. Wright, pricrania amara. It is now, however, always ranked under quassia. It is very common in the woodlands of Jamaica, is beautiful, tall, and stately, sometimes being 100 feet long, and ten feet in circumference, eight feet above the ground. The trunk is straight, smooth, and tapering, sending off its branches towards the top. The outside bark is pretty smooth, of a light gray or ash color, from various lichens. The bark of the roots is of a yellow cast, somewhat like the cortex simaruba. The inner bark is tough, and composed of fine flaxy fibres. The wood is of a yellow color, tough but not very hard. It takes a good polish, and is used as flooring. The leaves are sub-alternate ; the small leaves are in pairs, from five to eight, standing opposite to each other on short foot-stalks, and ending with an odd one. They are of an oblong oval shape, and pointed ; the ribs reddish, and the young leaves are covered with a fine brownish down. The flowers come out in bunches or clusters from the lower part of the last shoot before the leaves, and stand on round foot-stalks. The flowers are small, of a yellowish green color with a very small calyx. The male or barren tree has flowers nearly similar to the hermaphrodite, but in it there are only the rudiments of a style. The fruit is a smooth black drupa

round shaped, and of the size of a pea There is but little pulp, and the nut covers a round kernel. These drupae are generally three, sometimes two, and often only one, attached sidewise to a roundish fleshy receptacle. It flowers in October and November, and its fruit is ripe in December and January. Except the pulp of the fruit, every other part of this tree has an intensely bitter taste. In taste and virtues it is nearly equal to the quassia of Surinam, and is sold in London for the quassia amara ; and it may be safely used in all cases where that drug has been thought proper, whether as an antiseptic, or in cases of weakness in the stomach and bowels. It may either be given alone, or joined with the Jesuit's bark.

3. Q. simaruba is common in all the wood- ❖❖❖ lands in Jamaica. It grows to a great height and considerable thickness. The trunks of the old trees are black and a little furrowed. Those of the young trees are smooth and gray, with here and there a broad yellow spot. The inside bark of the trunk and branches is white, fibrous, and tough. It tastes slightly bitter. On cutting or stripping off this bark, no milky juice issues, as has been mentioned by various authors. The wood is hard and useful for buildings. It splits freely, and makes excellent staves for sugar hogsheads. It has no sensible bitter taste. The branches are alternate and spreading. The leaves are numerous and alternate. On the up-per side they are smooth, shining, and of a deep green color ; on the under side they are white. The flowers appear about the beginning of April. They are of a yellow color, and placed on spikes beautifully branched. The fruit is of that kind called a drupa, and is ripe towards the end of May. It is of an oval shape, is black, smooth, and shining. The pulp is fleshy and soft; the taste a nauseous sweet. The nut is flattened, and on one side winged. The kernel is small, flat, and tastes sweet. The natural number of these drupae is five on each common receptacle ; but, for the most part, there are only two or three ; the rest by various accidents prove abortive. The roots are thick, and run superficially under ground to a considerable distance. The bark is rough, scaly, and waited. The inside when fresh is a full yellow, but when dry paler. It has but little smell. The taste is bitter, but not very disagreeable. ❖❖❖ This is the true cortex simarubae of the shops. This tree in Jamaica is called mountain damson, bitter dam-son, and stave wood. On examining the fructification, Dr. Wright found this tree to be a species of quassia. Under that name he sent it to Europe, and Linnaeus adopted it into his sys-tem. There are male flowers on one tree and female flowers on another ; and this is invariably the case in Jamaica. Most authors who have written on the simaruba agree that in fluxes it restores the lost tone of the intestines, allays their spasmodic motions, promotes the secretion by urine and perspiration, removes that lowness of spirits attending dysenteries, and disposes the patient to sleep; the gripes and tenesmus are taken off, and the stools are changed to their natural color and consistence. In a moderate dose it occasions no disturbance or uneasiness ;

but in a large dose it produces sickness at stomach and vomiting. Negroes are less affected by it than white people. Dr. Cullen, however, says, ‘ We can perceive-nothing in this bark but that of a simple bitter ; the virtues ascribed to it in dysentery have not been confirmed by

my experience, or that of the practitioners in this country ; and, leaving what others are said to have experienced to be further examined and considered by practitioners, I can only at present say that my account* of the effect of bitters will perhaps explain the virtues ascribed to the simaruba. In dysentery I have found an infusion of chamomile flowers a more useful remedy.' QUATER'NARY, \ Lat. quaternarius, qua-QUATER'NION, or S . -jˆ number four.

Qb'ATER NITY. J

Air and ye elements, the eldest birth Of nature's womb, that in quaternion run Perpetual circle, multiform, and mix And nourish all things ; let your ceaseless change Vary to our great Maker still new praise. Milton.

The number of four stands much admired, not only in the qnaternily of the elements, which are the principles of bodies, but in the letters of the name of God. Browne.

The objections against the quaternary of elements and ternary of principles, needed not to be opposed so much against the doctrines themselves. Boyle.

I have not in this scheme cf theSe nine quaternion! of consonants, distinct known characters, whereby to express them, but must repeat the same.

Holder's Elements of Speech.

QUATRAIN, n. s. Fr. quatrain. A stanza of four lines rhyming alternately : as,

I have writ my poem in quatrains or stanzas of four in alternate rhyme, because I have ever judged them of greater dignity for the sound and number, than any other verse in use. Dryden.

QUATRE-BRAS, a hamlet of the Netherlands, in the province of Namur, about seven miles west of Ligny, remarkable for the memorable conflict occurring here between the British and French, on the 16th of June, 1815. It derives its name from the meeting of four roads. See WATERLOO.

QUATUORVIRI, in antiquity, formerly written IIII Viri, Roman magistrates, who had the care of conducting and settling the colonies sent into the provinces. There were also quatuorviri appointed to inspect the highways, to take care of repairs, Ike.

QUA’VER, v. n. Sax. cpavan. To shake the voice ; speak or sing with a tremulous voice ; tremble.

Miso sitting on the ground with her knees up, and her hands upon her knees, tuning her voice with many a quavering cough, thus discoursed. Sidney.

The division and quavering, which please so much in musick, have an agreement with the glittering of light playing upon a wave. Bacon.

A membrane, stretched like the head of a drum, is to receive the impulse of the sound, and to vibrate or quaver according to its reciprocal motions.

Ray. Now sportive youth

Carol incondite rhythms with suiting notes,

And tjuaver inharmonious. Philips.

We shall hear her quavering them half a minute ?fter us, to some sprightly airs of the opera.

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If the eye and the finger remain quiet, these colors vanish in a second minute of time, but if the finger be moved with a quavering motion, they appear again. Newton's Optictu.

QUAVER, in music, a measure of time equal to half a crochet, a fourth part of a minim, or an eighth part of a semibreve.

QUAY, 72. x. Fr. quai. See below. A key : an artificial bank to the sea or river, on which goods are conveniently unladen.

Kay, key, or quay, is a wharf or place by the wa-ter side, in a sea-port, for the loading and unloading of merchandise. The verb cajore, in old writers, according to Scaliger, signifies to keep in or restrain ; and hence came our term kay ; Ihe ground where keys are made being bound in with planks and posts.

Dr. A. Rees.

QUAY, or KEY, a long wharf, usually built of stone, by the side of a harbour or river, and hav-ing several storehouses for the convenience of 'ading and discharging merchant ships; with posts and rings whereby they are secured ; together with cranes, capsterns, and other engines, to lift the goods in or out of the vessels which lie along side.

QUEA'CHY, adj. Originally perhaps quacky, quaggy, or quashy. Unsound ; boggy. Not in use.

The boggy mears and queachy fens below.

Dray ton. Gxdwin's queachy sand. Id.

QUEAN, n. s. Sax. cpean, poricpen. A low or worthless woman; a strumpet.

As fit as the nail to his hole, or as a scolding quean to a wrangling knave. Shakspeare.

This well they understand like cunning queans, And hide their nastiness behind the scenes.

Dryden.

Such is that sprinkling which some careless quean Flirts on you from

her mop. Swift.

Now Tarn, O Tarn ; had they been queans A' plump and strapping in their teens ; Their sarks, instead o' creeshie flannen, Been snaw-white seventeen hunder linen !

Burns.

QUEA'SY, adj. Of uncertain etymology. Goth, kuesa, is to , sicken ; sicken with nausea ; fastidious; squeamish.

I, with your two helps, will so practise on Benedict, that, in despight of his quick wit and his queasy stomach, he shall fall in love with Beatrice.

Shakspeare.

He, queasy with his insolence, already Will their good thoughts call from him. Id

Whether a rotten slate and hope of gain, Or to disuse me from the queasy pain Of being beloved and loving, Out push me first. Donne.

The humility of Gregory the Great would not ad-mit the style of bishop, but the ambition of Boniface made no scruple thereof, nor have queasy resolutions been harboured in their successors ever since.

Browne's Vulgar Errours.

Without question, Their conscience was too queasy of digestion.

Dryden

Men's stomachs are generally so queasy in these cases, that it is not safe*to overload them.

Government ''''''''' 'he 'long tie.

Y

QUEBEC.

QUEBEC, the capital of Canada and of British America, is situated at the junction of Charles Hiver with the St. Lawrence, and is divided into the Old and New, or Upper and Lower towns. The former is on a rocky promontory, named Cape Diamond, the summit of which is 350 feet above the level of the river. On the highest part of the promontory is the citadel, composed of a whole bastion, a curtain, and half bastion, with a ditch, counterguard, covered way, and glacis to the south-west, with many other works, so that the fortifications may be considered as impregnable, both by nature and art, and require 5000 men to defend them properly.

The castle of St. Louis was burned down in 1834 ; the public buildings chiefly remarkable for their solidity and beauty are, a Catholic church; the ancient Jesuits' College, now occupied as a barrack tor the troops ; a seminary for the education of the Catholic clergy; a Protestant church court-house; the hotel-dieu, or civil hospital; a poor-house; a new jail; a convent of Ursulines, which has thirty-six sisters; a general hospital, &c. There are two market-places; a place d'armes, a parade, and an esplanade. The castle of St. Louis, situated on the summit of the rock, is a handsome stone building, seated near the edge of a precipice, something more than 200 feet high, and supported towards the steep by a solid work of masonry, rising nearly half the height of the edifice, and surmounted by a spacious gallery, whence there is a most commanding prospect over the basin, the island of Orleans, Point Levi, and the surrounding country. The whole pile is 162 feet long, by forty-five broad, and three stories high. This building has been repaired and improved on a grand scale. The new jail was completed in 1814, at an expense of ––l 5,000.

The Lower Town is the principal place of commerce, and occupies the ground at the foot of the promontory, which has been gradually gained, either by mining, or running out wharfs : it is considered unhealthy. The streets of both towns are in general irregular, uneven, and nar-row, and few of them paved : but some considerably improvements in the style of building have of late been made, as well as in the plan of the streets. The houses are of unequal heights, and often covered with boards, though the frequent fires have caused some to use tin or painted sheet iron. Next the river are very extensive warehouses, and vessels come close to the wharfs to discharge their cargoes ; at some of them the vessels remain afloat at low water, at others, which are not carried so far out, or where the river does not deepen so suddenly, the vessels lie dry at low water. The communication from the Lower to the Upper Town is by a winding

street, at the top of which is a fortified gate.

Mountain Street, where formerly the ascent was so steep as to make it difficult for a carriage, is now passable for all sorts of vehicles. John Street, Buade Street, Fabrique Street, and the greater part of Palace Street, may be considered as the mercantile part of the Upper Town, being inhabited chiefly by merchants, re-tail traders, artizans, and tavern-keepers. St.

Louis Street, running nearly parallel to St. John Street, is much more elevated, airy, and agreeable, and by far the pleasantest part of the town ; as such, most of the superior officers of the provincial government, and people of the first rank reside here.

On the south shore of the river, opposite Cape Diamond, is Point Levi, which with the former cape narrows the river to three-quarters of a mile ; but between these points and Orleans Island is a basin, five or six miles wide, capable of holding 100 sail of the line. The rise of tide at the equinoxes is twenty-five feet. Charles's River, which empties itself at the town, issues from a lake of the same name, twelve miles from Que-bec, and is only navigable for boats.

At Quebec the river begins to freeze in December, and some years the ice becomes solid and stationary, and carriages and horses cross side to side. The ice usually begins to break up in April, when a sudden thaw comes on, and generally clears the river in a few days. The first breaking up is accompanied by a noise like that of a heavy cannonade ; for the current being then increased, by the melting of the ice and snow, the masses of the former are driven against each other with great fury and noise. Between Quebec and Point Levi, on the opposite shore of the St. Lawrence, a great number of ferry-boats are continually passing. In the winter, when masses of ice are floating up and down with the tide, and often when there is a strong breeze, impelled at the rate of three or four knots an hour, this passage is singularly laborious ; yet it is very rare that accidents happen. It is not an uncommon thing to see several large canoes, laden with provisions for the market, crossing the river as nearly in a line as they are able to keep. They are provided with strong poles, having iron hooks at the end for grappling hold of the ice, and drag ropes ; the cargoes are generally secured by a strong lashing. When large sheets of ice oppose their progress, the men, by means of the poles and ropes, which they employ with uncommon ability, get the canoe upon it, and by main force drag it perhaps fifty or sixty yards, or until they find a

convenient opening to launch it again among the smaller fragments. Quebec exports grain, flour, timber, lumber, ashes, &c. In return, all the manufactures of Europe are imported. The annual value of the exports and imports amount to about ––1,000,000 sterling. Mr. Bouchette estimated the population of this city at 30 000 souls.

The French first chose the ground on which Quebec now stands for a settlement, in the year 1608. Its progress was slow, owing to the hostility of the natives. In 1629 it was taken by the English, but restored. In 1690 it was fortified, and from this period gradually improved. In 1711 an attempt was made by the English and Americans, under brigadier Hill, to surprise Quebec, but it proved abortive ; and it remained in possession of the French till the memorable year 1759, when it was taken by the English,-under the command of the brave Wolfe, who fell in the engagement : by the peace in 1763 it was ceded, with the rest of Canada, to this country. In 1775 the Americans made an

unsuccessful attempt against this city, with the loss of about 700 men, and their commander Montgomery.

Nothing can be more beautiful than the sum-mer views between Quebec and Montreal, both banks of the river being thickly dotted with villages and farm-houses, the latter extremely neat ; and in each of the former, however small, is a church.

QUECK, v. n. Sex. jepican, to wince. To shrink ; show pain ; complain. Not in use.

The lads of Sparta were accustomed to be whipped at altars, without so much as quecking. Bacon.

QUEDAH, or KIDDEH, a Malay principality in the peninsula of Malacca, on the west coast, along which it extends about 150 miles, between 5►► and 8►► N. lat., and immediately opposite Prince of Wales's Island. It presents a considerable plain, covered with close wood, through which winds a river navigable for small craft up to the foot of the mountains. From Trang to Purlis this coast is sheltered by many islands, the distance being twenty-four leagues, low, and covered with woods. The water is also remarkably shallow, ships being obliged to anchor a great distance from the shore. Along this tract eleven small rivers empty themselves into the sea. Inland this country is from twenty to thirty-five miles in breadth, but the cultivated land no where exceeds twenty miles from the shore.

The smaller rivers of Quedah are navigable for prows, and some of them for larger vessels. Qualla Mooda is a shallow rapid stream, convenient on account of its communication with the tin mines ; the annual produce of which is about 1000 peculs, and might be much more. The country to the south, being supplied with abundant moisture, is extremely productive of rice, and abounds with buffaloes, bullocks, and poultry. The other articles of commerce are tin, elephants' teeth, wax, &c. ; and the imports the same as at the other Malay ports, chiefly opium and Spanish dollars. It was a place of considerable trade before the establishment of Prince of Wales's Island.

The principal sea-port, called Quedah by strangers, and Quallah Batany by the natives, is in lat. 6►► N. Its river is navigable for vessels of 300 tons ; but the entrance is choked up by a mud bank; and the road, where ships of burden anchor, is above two leagues from the shore. At the mouth there was a small brick fort, now in ruins. Both shores are muddy, swampy, and covered with jungle. Seven miles up the river is Allistar, where the king resides, to which place all vessels can ascend whose draught of water permits to pass the bar.

In 1786 an agreement was entered into with the king of Quedah for the cession of Pulo Pe-nang, now Prince of Wales's Island, to the British ; and, in May 1792, a regular treaty of peace and amity, to continue as long as the sun and moon give light, was concluded ; by this the East India Company engaged to pay the king 6000 dollars annually, while they remained in possession of the island. In 1802 a new arrangement was entered into, by the conditions of which Yeng de per Tuan, king of Quedah, agreed to

make over to the East India Company all that part of his sea-coast between Qualla Karrican and the river side of Qualla Moodah, and measuring inland from the sea sixty orlongs ; which tract of country the company engaged to protect from all enemies and pirates. The king agreed to permit the free exportation of provisions, and other articles, to Prince of Wales's Island, and engaged not to permit any European to settle in his dominions. The treaty stipulated for the apprehension and delivery of insurgents, felons, debtors, and slaves ; and, in consideration of the benefits accruing to the company, they agreed to pay his majesty of Queda 10,000 dollars annually.

QUEDLINBURG, a large town of Prussian Saxony, on the Bude, thirty miles S.S.W. of Magdeburg. It is surrounded by an earthen mound, and divided into the Old and New Town, which has three suburbs. The abbey church is handsome, but the others are only remarkable as antiquities. Until 1802 there was a Lutheran abbey for ladies in this neighbourhood, which was admitted to rank with the principalities of the empire. In that year it was secularised. Here are manufactures of woollen, a high school, and several hospitals; and the poet Klopstock was born here.

QUEEN, n. s. & v. n. Sax. cpen, a woman, a wife, the wife of a king ; the wife or widow of a king; a female sovereign: to play the queen.

He was lapt

In a most curious mantle, wrought by the hand Of his queen mother. Shaltspeare. CymbeLine,

A threepence bowed would hire me, Old as I am, to queen it. Id. Henry VIII,

Have] a queen

Past by my fellow rulers of the world 1 Have I refused their blood to mix with yours. And raise new kings from so obscure a race ?

Dryden.

That queen Elizabeth lived sixty-nine, and reigned forty-five years, means no more than that the duration of her existence was equal to sixty-nine, and the duration of her government to forty-five annual revolutions of the sun. Locke. The meanest hind in fair Scotland

Mav rove their sweets amang ; But I, the queen of a' Scotland,

Maun lie in prison straug. Burns.

Within the garden's peaceful seen

Appeared two loyely foes Aspiring to the rank of queen,

The Lily and the Rose. Cowper.

QUEEN, in law. The queen of England is either queen regnant queen consort, or queen dowager. The queen regent, regnant, or sovereign, is she who holds the crown in her own right; as the first, and perhaps the second, queen Mary, queen Elizabeth, and queen Anne ; and such a one has the same powers, prerogatives, rights, dignities, and duties, as if she had been a king. But the queen consort is the wife of the reigning king; and she, by virtue of her marriage, is participant of divers prerogatives above other women. She is a public person, distinct from the king ; and not, like other married women, so closely connected as to have lost all legal or separate existence. For the queen is of ability to purchase lands, and to convey them, to make

leases, to grant copyholds, and do other acts of ownership, without the concurrence of her lord. She is also capable of receiving a grant from the kino1, which no other wife is from her husband. The queen of England has separate courts and officers, distinct from the king's, not only in matters of ceremony, but even of law ; and her attorney and solicitor-general are entitled to a place within the bar of his majesty's courts, together with the king's counsel. She may likewise sue and be sued alone, without joining her husband. She may also have a separate property in goods as well as lands, and has a right to dispose of them by will. In short, she is in all legal proceedings looked

upon as a feme sole, and not as a feme covert ; as a single, not as a married woman. For which the reason given is this: Because the wisdom of the common law would not have the king (whose continual care and study is for the public, and circa ardua regni) to be troubled and disquieted on account of his wife's domestic affairs; and therefore it vests in the queen a power of transacting her own concerns, without the intervention of the king.

The queen has also many exemptions, and minute prerogatives. For instance : she pays no toll ; nor is she liable to any amercement in any court. But in general, unless where the law has expressly declared her exempted, she is upon the same footing with other subjects ; being, to all intents and purposes, the king's subject, and not his equal. Nevertheless, it is equally treason to compass or imagine the death of our lady the king's companion, as of the king himself: and to violate of defile the queen consort amounts to the same high crime ; as well in the person committing the fact, as in the queen herself, if consenting. If, however, the queen be accused of any species of treason, she shall, whether consort or dowager, be tried by the peers of parliament.

The husband of a queen regnant, as prince George of Denmark was to queen Anne, is her subject ; and may be guilty of high treason against her : but, in the instance of conjugal infidelity, he is not subjected to the same penal restrictions.

QUEEN DOWAGER is the widow of the king, and as such enjoys most of the privileges belonging to her as queen consort : but it is not high treason to violate her chastity, or conspire her death, because the succession is not endangered thereby ; but no man can marry her without special license from the king, on pain of forfeiting his lands and goods.

QUEEN ANN'S COUNTY, a county of Maryland, bounded north by Kent ; east by Delaware ; south-east by Caroline county ; south by Talbot county; and west by Chesapeake Bay. The chief town is Antreville.

QUEEN-APPLE, n. s. Queen and apple. A species of apple.

Her cheeks with kindly claret spread, Aurora-like new out of bed, Or like the fresh queen-apple's side, Blushing at sight of Phrebus' pride. Sidney. The queen-apple is of the summer kind, and a good :yder-apple mixed with others. Mortimer.

The winter queening is good for the table. LI. QUEEN CATHERINE'S FORELAND, the north-east point of Terra del Fuego, at' the east entrance into the straits of Magellan, discovered by Frobisher in 1576.

QUEEN CHARLOTTE'S FORELAND, the south-east extremity of New Caledonia. Long. 167►► 14' E., lat. 22►► 15' N. Also the name of the south-west point of New Hanover, in the eastern seas ; discovered by captain Carteret in 1767. It is a high bluff point, and the land around has a great number of little hummocks or hills. Long. 148►► 27' E., lat. 2►► 29' S.

QUEEN CHARLOTTE'S ISLAND, an island in the Pacific, about six miles long and one broad, discovered in 1767 by captain Wallis. He describes it as sandy and level, full of trees, without Binder-wood, and abounding with scurvy-grass. The canoes appeared to be about thirty feet long, four feet broad, and three and a half deep. Two of these, being brought along-side of each other, were fastened at the distance of about three feet, by cross beams, passing from the larboard gunwale of one to that of the other, in the middle, and near to each end. The inhabitants were handsome, of a middle stature, and dark complexion, with long black hair. Long. 138►► 4' \V., lat. 19►► 18' S.

QUEEN CHARLOTTE'S ISLANDS, a group in the North Pacific Ocean, of which we know very little, except that they lie off the west coast of North America ; the largest being of a triangular form, about 170 miles long, and in some places sixty broad. These islands were observed by captain Cook, who imagined them to form part of the continent. They were first discovered to be islands by Dixon, in 1787. Being visited by captain Gray, of the United States, he called them Washington's Islands, and found several convenient harbours. Vancouver coasted along the shore, and observed that near the sea the land was elevated, but rose gradually into rug-ged and uneven mountains towards the interior of the principal island. He understood that the inhabitants cultivated a species of tobacco. Long, from 131►► to 133►► 7' W., lat. 52►► to 54►► 22' N.

QUEEN CHARLOTTE'S ISLANDS, another group discovered by captain Carteret in 1767, consisting of Egmont's Island or New Guernsey, Lor_ Howe's Island or New Jersey, and several others. Carteret sent a cutter, with the master and a party of men, on shore ; when a quarrel ensued, respecting the cutting down of a cocoa-tree, in which many Indians were killed, and, on the side of the English, the master and three of the seamen were wounded, and soon after died. Captain Carteret, being desirous to get in some water, veered the ship close to

the shore, but was himself induced to order several shots to be fired, by which several Indians seem to have been killed, before he could attain his purpose. These islands were discovered in 1595 by Mendana, the principal being called by him Santa Cruz. The others are very inconsiderable.

‘ The inhabitants of Egmont Island,’ says Carteret, ‘are extremely nimble, vigorous, and active, and seem to be as well qualified to live in the water as upon the land ; for they were in and

out of their canoes almost every minute. Tbe canoes that came out against us from the west end of the Island might probably, upon occasion, carry about a do/en men, though three or four manage them with amazing dexterity ; we saw, however, others of a large size upon the beach, with awnings or shades over them. We got two of their bows, and a bundle of their arrows, from a canoe; and with these weapons they do execution at an incredible distance. One of them went through the boat’s washboard, and dangerously wounded a midshipman in the thigh. Their arrows were pointed with flint, and we saw among them no appearance of any metal. The country in general is woody and mountainous, with many valleys intermixed. Several small rivers flow from the interior part of the country into the sea, and there are many harbours upon the coast. Long. 163►► 30’ to 165►► 10’ E., lat. 9►► 50’ to 11►► 20’ S.

QUEEN CHARLOTTE’S SOUND, a northern bay of the south island of New Zealand, where captain Cook erected a post with a union flag, and took possession of the country in the name and for the use of king’ George Til. In sailing either in or out with little wind, attention must be had to the tides, which flow about nine or ten o’clock at the full and change of the moon, and rise and fall between seven and eisrht feet. The variation of the compass was round, from good observation, to be 13►► 5’ E. The land about consists wluniy of high hills and deep valleys, well stored with a variety of hard timber, fit for all purposes except masts. The sea abounds with fish ; so that, without going out of the cove where they lay, the Endeavour’s crew caught

every day, with hooks and lines, a quantity sufficient to serve the ship's company: the inhabitants, amounting to about 400, had straggling houses along the shore. See ZEALAND, NEW.

QUEEN'S COUNTY, anciently called Leix, a shire in the province of Leinster and kingdom of Ireland, so named from queen Mary of England. It is about thirty miles in length by twenfy-five in breadth, contains about 146,000 inhabitants, 25,000 houses, and its superficies measures 235,000 acres. Here are nine baronies, *viz.* Ballyadams, Cullinagh, Maryborough East, Maryborough West, Portenehinch, Slieumargue, Stradbally, Tinnehinch, and Upper Ossory. The ecclesiastical subdivision is made into twenty-nine parishes, and twenty-three parts of parishes. The chief towns are Ballynakill, Maryborough (so named also from Mary queen of England), the Assizes Town, Mountrath, part of the elegant town of Portarlington, Stradbally, and Mountmellick. There are here many noble seats, and many resident gentry. Much of the boggy districts has been reclaimed, by which both the climate and soil have benefited. Between the King's and Queen's counties is that great natural boundary, seventeen miles in length, called the Sliebh-bloom Range, or the Ard-na- erin Mountains. The first appellation appears to signify the ' mountain dedicated to Beal's Day ;' the second means ' The height of Ireland.' In , the whole length of this great chain there is but one pass, called the Gap of Glandine, and even t.his a difficult one. A remarkable circumstance

relating to the Sliebh-Bloom mountains is, that the north side of the whole range is singularly fertile, while the south is completely barren. Here also are the sources of the only two rivers of consequence in the county, the Barrow and the Nore ; the former rendered navigable by deepening and by lateral cuts, but the latter un-manageable from its rapidity and sudden floods The Queen's County abounds in mineral productions; the great bed of coal, called the Leinster district, lies between the rivers Nore and Barrow, and rests upon limestone : this coal is of the non-flaming species called stone, and sometimes Kilkenny coal ; the vein reaching this last district. The limestone of this region exhibits many remarkable appearances; such as great dislocations, parallel disturbances in the coal strata, and an apparent change in their na-ture; the occurrence of irregular beds and veins of siderocalcite, or brown spar, traversing the limestone ; and, lastly, the vast caves discovered at or near the junction of the calcareous and coal strata. The soil of this county in general is gravelly, favorable for the growth of corn; and the pasture is found peculiarly adapted for the

cheese farmer, who sometimes deceives the factor by imposing his cheese as English-made. Queen's-County cheese is held in high estimation at home. The ancient families of this district were the O'More's, Fitzpatrick's, and Wandesford's. Many beautiful specimens of military and ecclesiastic antiquities still survive, amongst which the celebrated fortified rock called ' Dunamaze' should not be omitted : this still interesting place, formerly the citadel of the O'More's of Leix, was occupied as a post of defence and security as early as the third century. The ruins now visible were erected by the chieftain O'More. Ab-bey Leix and Aghaboe are the most interesting of the monastic remains. Queen's County returns three members to the imperial parliament, two for the county, and one for the borough of Portarlington.

QUEEN'S-COUNTY, a county of New-York, in the west part of Long Island ; bounded north by Long Island Sound ; east by Suffolk county ; south by the Atlantic; and west by King's county. Chief towns, Jamaica and North Hemp-

QUEENBOROUGH, a post and marke town, situate at the western extremity of the Isle of Sheppey, Kent, at the mouth of the Medway, forty-five miles east from London. The houses are neat, uniform, and regularly built. The church is a plain, ancient structure. Here is a small copperas manufactory; and in the town is a guildhall and a prison. This place is a distinct liberty, and it is governed by a mayor, four jurats, and two bailiffs. Its magistrates hold quarterly courts, and also general sessions every half year. It returned two members to parliament, the right of election being in the corporation and burgesses, the number about 150, but is now disfranchised. Market on Monday.

QUEENS FERRY, a royal borough and pa-rish on the south bank of the Firth, where the river is not above two miles broad ; nine miles west of Edinburgh. It was so named from the celebrated queen Margaret, wife of Malcolm

Canmore, who frequented this passage much, and patronised the town. It consists of one street, chiefly inhabited by seafaring people. Its chief manufacture is soap. This borough unites with Stirling, Dunfermltne, Culross, and Inver-keithing, in electing a representative in the imperial British parliament. It is governed by a provost, three bailies, dean of guild, and town council. It has two piers on the east and west, and the coast abounds with cod, haddocks, whit-ings, skate, flounders, herrings, lobsters, oysters, c Fctbs &c*

QUEENSTOWN, a neat place of Upper Canada, on the Niagara, under the ridge called Queenstown Heights. It is the depot for the merchandise brought from Montreal and Quebec, foi the Upper province, and is remarkable for the romantic beauty and grandeur of its situation. It has a good capacious harbour, a church, court-house, stores for .government and for the Indian department, wharfs, and barracks. Much commercial activity is displayed during the sea-son of navigation. Qaeenstown suffered much during the late war.

QUEER, adj. ‘ Of this word the original is not known,’ says Dr. Johnson : ‘ a correspondent supposes a queer man to be one who has a qusere to his name in a list.’ But there is a Teut. kuerh, of this signification. Odd; strange; particular; churlish.

He never went to bed till two in the morning because he would not be a queer fellow ; and was every now and then knocked down by a constable, to signalise his vivacity. Spectator.

QUEILING, or KOUEILING, a city of China, of the first rank, capital of QUANGSEE, (which see,) environed by mountains. Its name is derived from a species of oderiferous flower, abundant in the neighbourhood, A rapid river, but not navigable, flows under the walls. This city is fortified, but does not equal other Chinese capitals in wealth and population Long. 109►► 51’E., lat. 25►►12’N.

QUE1S, or QUEISS, a river of the Prussian states, which rises in Silesia, divides it from Lusatia, and falls into the Bober, above the town of Sagan. Its banks were, in September 1813, the scene of a battle between the French and Prussians.

QUELL, v. a. & n. s. } Sax. cpellan ; Dan.

QUEL’LER. $ qutde. To kill;

crush; subdue: hence, as a nounsubstantive, murder ; violent death : a queller is a conqueror. What cannot we put upon

His spungy followers, who shall bear the guilt

Of our great quell 1 Shakspgare. Macbeth.

What avails Valour or strength, though matchless, quelled with

pain,

Which all subdues, and makes remiss the hands Of mightiest. Milton’s Paradise Lost,

Hail, Son of the Most High, Queller of Satan, on thy glorious work Now enter. Id. Paradise Regained

This quelled her pride, but other doubts remainea, That, once disdaining, she might be disdained.

Dry den,

He is the guardian of the publick quiet, appointed to restrain violence, to quell seditions and tumults, and to preserve that peace which preserves the world.

Atterbiiry.

QUELPAERT, an island in the eastern seas, south of the peninsula of Corea. Ifcwas made known to Europeans in 1 635 by the wreck of a Dutch vessel here, called the Sparrow-hawk, The crew were carried to the capital of Corea, whence they with difficulty made their escape. The island was also coasted by La Perouse, in 1787. It is chiefly composed of a mountain, about 6000 feet high, whence the land slopes down to the sea. The jealous character of the nation prevents any considerable intercourse between it and Europeans. Long. 126►► 35’ E., lat. 33►► 14’ N. ‘

QUELQUE’CHOSE. n. s. Fr. quelquechose. A trifle ; a kickshaw. A word not adopted.

From country grass to comfitures of court, Or city’s quelquechoses, let not report My mind transport. Donne.

QUENCH, v. a. & v. n.~\ Saxon cpencan ;

QUENCH'ABLE, adj. f Goth, huaugicen.

QUENCH'ER, n. s. ►► To extinguish ; cool ;

QUENCH'LESS, adj. J allay : hence to destroy : as a neuter verb, to grow cool ; the adjectives and noun substantive corresponding.

The fire had power in the water, forgetting his own virtue ; and the water forgat his own quenching nature. Wisdom xix. 20.

Since stream, air, sand, mine eyes and ears conspire, What hope 'to quench, where each thing blows the

fire ? Sidney.

This is the way to kindle, not to quench.

Shukspeare.

But if all aim but this be levelled false, The supposition of the lady's death Will quench the wonder of her infamy. Id.

Dost thou think, in time She will not quench, and let instructions ente Where folly now possesses f id. Cymbeline.

Come, bloody Clifford, rough Northumberland, J dare your quenchlens fury to more rage.

Shafuspeare.

Mik quencheth wild-fire better than water, because it entereth better. Bacon's Natural History.

When death's form appears, she feareth not An utter quenching or extinguishment ;

She would be glad to meet with such a lot That so she might all future ill prevent. Davies. The judge of torments, and the king of tears, He fills a burnished throne of quenchless fire.

Crashaw.

Subdued in fire the stubborn metal lies ; One draws and blows reciprocating air ; Others to quench the hissing mass prepare.

Dry den.

You have already quenched sedition's brand, And zeal, which burnt it, only warms the land.

Id.

Covered with skin and hair keeps it waim, being naturally very cold, and also to quench and dissipate the force of any stroke, and retund the edge of any weapon. Ray.

Beseech God, that he will inflame thy heart with this heavenly fire of devotion ; and, when thou hast obtained it, beware that thou neither quench it by any wilful sin, or let it go out again for want of stirring it up and employing it. Duty ef Man.

When your work is forged, do not quench it in

water to cool it, but throw it down upon the flooi or

hearth to cool of itself ; for the quenching of it in

water will harden it. Sfoxan's Mechanical Exercises.

Every draught, to him that has quenched his thirst.

is but a further quenching of nature, a provision for iheum and diseases, a drowning of the spirits.

South.

His heart with wounds unnumbered riven, His back to earth, his face to heaven, Fallen Hassan lies ••• his unclosed eye Yet lowering on his enemy, As if the hour that sealed his fate, Surviving left his quenchless hate. Byron.

QUENTIN, (St.), a fine town in the north-east of France, and

department of the Aisne, is situated on the Somme, and near the canals of Crozat and St. Quentin. It stands on an eminence, in a strong position, but its fortifications have been long neglected. It contains a public square, in which is situated the hotel de ville, and the ancient cathedral, both in the Gothic style. It has long been noted for its linen, thread, cambric, lawn, gauze, and latterly for its cottons. In these a surprising number of hands are employed, and a great export trade carried on with Holland, Germany, and other foreign countries. The French were defeated here in a general engagement by the Spaniards, in 1557. Population 11,000. Twenty-two miles south of Cambray, forty south by east of Arras.

QUERCUS, the oak tree, a genus of the polyandria order and monoecia class of plants ; natural order fiftieth, amentaceas : CAL. nearly quinquefid : COR. none ; the stamina are from five to ten in number : FEMALE CAL. monophyllous, very entire, and scabrous : COR. none; the styles are from two to five, and there is an ovate seed. Dr. Rees describes eighty-four species of quercus ; the following are some of the most mportant.

Q. aegilops, the large prickly-cupped Spanish oak, grows seventy or eighty feet high, or more, with a very large trunk, and widely spreading head, having a whitish bark, large oblong-oval deeply serrated smooth leaves, the serratures bowed backwards, and large acorns placed in singularly large prickly cups. This is a noble species, nearly equal in growth to our common English oak.

Q. cerris, the smaller prickly-cupped Spanish oak, grows thirty or forty feet high, and has oblong, lyre-shaped, pinnatifid, transversely jag-ged leaves, downy underneath, and small acorns placed in prickly cups.

Q. coccifera, the scarlet or kermes oak, grows but fourteen or fifteen feet high, branching all the way, and of bushy growth ; with large oval, undivided, indented, spinous leaves ; and producing small glandular excrescences, called kermes or scarlet grain, used by the dyers. See Coccus and KERMES.

Q. esculus, of Pliny, or the cut-leaved Italian oak, grows about thirty feet high, having a purplish bark, oblong deeply sinuated smooth leaves, and long slender close-sitting acorns in very large cups.

Q. gramuntia, the Montpelier holly-leaved evergreen oak, grows forty or fifty feet high ; and has oblong-oval, close-sitting, sinuated spinous leaves, downy underneath, bearing a resemblance to the leaves of the holly.

Q. ilex, the common evergreen oak, grows forty or fifty feet high, having a smooth bark;

oval and oblong, undivided, serrated, petiolated leaves, downy and whitish underneath. The varieties are broad-leaved, narrow-leaved, and sometimes both sorts and other different shaped leaves on the same tree ; also sometimes with ###sawed and prickly leaves.

Q. Moluccensis, Moluccan oak, commonly called American live oak, grows about forty feet high, having oval, spear-shaped, smooth, entire leaves, and small oblong eatable acorns.

Q. phellos, the willow-leaved American oak, grows forty or fifty feet high, having long nar-row, smooth, entire leaves, like those of the willow. There is a variety called the dwarf willow-leaved oak.

Q. prinus, the chestnut-leaved American oak, grows fifty or sixty feet high ; having large oblong-oval smooth leaves, pointed both ways, the edges sinuated serrated, with the sinuses uniformly round.

Q. robur, the common English oak, grows from about sixty or seventy to 100 feet high, with a prodigiously large trunk, and monstrous spreading head ; oblong leaves, broadest towards the top, the edges acutely sinuated, having the angles obtuse. There is a variety, having the leaves finely striped with white. This species grows in great abundance all over England, in woods, forests, and hedge -rows.

The following are the dimensions of some of the finest oaks at Welbeck, as stated in a pamphlet by Hayman Rooke, esq., F. S. A. : ### The Green Dale Oak is said to be 700 years old. Girth of the trunk above the arch thirty-five feet ; height of the arch ten feet three inches ; width six feet three inches ; and height of the tree, to the top of the live stump, fifty-four feet. The Porters are two very large trees, and are so called from the circumstance of there formerly having been a gate placed between them. The first measures in circumference at the ground thirty-eight feet ; at a yard high twenty-seven feet ; at two yards twenty three feet ; total height ninety-eight feet six inches ; and solidity 848 feet ! The other in girth at the surface thirty- ‘ four feet ; at one yard high twenty-three feet ; at two yards twenty feet ; height eighty-eight feet ; and solidity 744 feet. The Duke’s Walking Stick, in girth at the ground twenty-one feet ; at one yard high fourteen feet ; stem seventy feet six inches; total height 111 feet; and solidity 440 feet. The Oak and Ash. Girth of both at the ground thirty-six feet ;~ of

the oak at one yard high eighteen feet ; at two yards fifteen feet four inches, and height ninety-two feet. The .ash is comparatively very small ; it leaves the oak at a small distance above the ground, and unites again at eight or nine feet high ; then branches out, and towers with it for some thirty or forty feet. Dr.Walker mentions an oak, at Loch Arkeg in Lochaber, which measured twenty-four feet six inches, at the height of four feet from the ground.

The English oak is as remarkable for its slowness of growth and longevity as for its bulk; the trunk has been often observed to have reached the size of not more than twenty inches, and sometimes not more than fourteen, in the space of fourscore years. In regard to bulk we have

an account of an oak belonging to lord Powis, growing in Broomfield wood, near Ludlow m Shropshire, in 1764. the trunk of which measured sixty-eight feet in girth, twenty-three in length, and which, reckoning ninety feet for the larger branches, contained in the whole 1455 feet of timber, round measure, or twenty-nine load and five feet, at fifty feet to a load. The Cowthorp oak, near Wetherby in Yorkshire, lays a claim to being the father of the forest. Dr. Hunter, who, in his edition of Evelyn, has given an engraving of it, says that within three feet of the surface it measures sixteen yards, and close to the ground twenty-six. In 1 776, though in a ruinous condition, it was eighty-five feet high, and its principal limb extended sixteen yards from the bole. The foliage was very thin. If this measurement was taken as the dimensions of the real stem, the size of this tree would be enormous ; but like most very large trees, its stem is short, spreading wide at the base, the roots rising above the ground like buttresses to the trunk, which is similar, not to a cylinder, but to the frustum of a cone. Mr. Marshman says, ‘ I found it in 1768 at four feet, forty feet six inches ; at five feet, thirty-six feet six inches ; and at six feet, thirty-two feet one inch.’ In the principal dimensions it is exceeded by the Bentley oak, of which the same writer gives the following account : ††† ‘ In 1 759 the oak in Holt forest, near Bentley, was at seven feet, thirty-

four feet. There is a large excrescence at five, and six feet, that would render the measure unfair. In 1778 this tree was increased half an inch in ten years. It does not appear to be hollow, but by the trifling increase I conclude it not sound.' These dimensions, however, are exceeded by those of the Boddington oak, near the turnpike road between Cheltenham and Tewkesbury, in the vale of Gloucester. The stem is remarkably collected at the root, the sides of its trunk being much more upright than those of large trees in general; and yet its circumference at the ground is about twenty paces ; measuring with a two foot rule It is more than eighteen yards. At three feet high it is forty-two feet, and where smallest, i. e. from five to six feet high, it is thirty-six feet. At six feet it swells out larger, and forms an enormous head, which has been furnished with huge, and probably extensive, arms. But time and the fury of the wind have robbed it of much of its grandeur, and the greatest extent of arm in 1783 was eight yards from the stem.

In the Gentlemarj's Magazine for May, 1794, we have an account of an oak tree growing in Penshurst Park in Kent, together with an engraving. It is called the bear or bear Qak, from being supposed to resemble that which Camden thought gave name to the county of Berkshire. The dimensions of the tree are these : ???

Ft. In.

Girth close to the ground . . 3.5 6

Girth one foot from the ground . 27 6

Girth five feet from the ground . 24 0

Height taken by shadow . . 73 0

Girth cf lowest, but not largest, limb 6 9

With respect to longevity, Linne" gives an account of an oak 260 years old ; but we have

had traditions of some in England (how far to be depended upon we know not) that have attained to more than double that age.

Q. rubra, the red Virginian oak, grows about sixty feet high, having a dark grayish bark, long obtusely sinuated leaves, with the sinuses terminated by bristly points, and have sometimes red spotted veins,

but generally dyeing in autumn to a reddish color, remaining on the trees late in the season.

Q. suber, the cork tree, grows thirty or forty feet high, having a thick, rough, fungous, cleft bark, and oblong-oval, undivided, serrated leaves, downy underneath. This species furnishes that useful material cork; it being the bark of the tree, which becomes of a thick fungous nature, under which, at the same time, is formed a new bark, and, the old one being detached for use, t.he tree still lives, and the succeeding young bark becomes also of the same thick spungy nature in six or seven years, fit for barking, having likewise another fresh bark forming under it, becoming cork like the others in the like period of time ; and in this manner these trees wonderfully furnish the cork for our use, of which are made the corks for bottles, bungs for barrels, and numerous other useful articles. The tree .grows in great plenty in Spain and Portugal, and from these countries we receive the cork. The Spaniards burn it, to make that kind of light black we call Spanish black, used by painters. The Spaniards line stone walls with cork, which not only renders them very warm, but corrects the moisture of the air. All the above species of quercus produce flowers annually in the spring, about April or May, of a yellowish color, but make no ornamental appearance, and are males and females separated in the same tree ; the males being in loose amentums, and the females sitting close to the buds in thick leathery hemispherical calyxes, succeeded by the fruit or acorns, which are oval nuts fixed by their base into rough permanent cups, and mostly sit quite close, and some on short foot-stalks, ripening in autumn, which in the common English oak are in great abundance, and often in tolerable plenty on some of the other sorts ; those of all the kinds serve for propagating their respective species ; they are also excellent food for swine and deer, the common acorns in particular. All the above species will prosper in any middling soil and open situation, though in a loamy soil they are generally more prosperous ; however there are but few soils in which oak will not grow ; they will even thrive tolerably in gravelly, sandy, and clayey land, as may be observed in many parts of this country of the “common oak. Besides the grand purposes to which the timber is applied in navigation and architecture, and the bark in tanning of leather, there are other uses to which the different parts of this tree have been referred. The Highlanders use the bark to dye their yarn of a brown color, or, mixed with copperas, of a black color. The acorns are a good food to fatten swine and turkeys. See OAK.

Q. marina, the sea oak, in botany, the name of one of the broad-leaved dichotomous sea fucuses. It is not agreed among the late botanists, what was the sea oak of Theophrastus ; Clusius and Czsalpinus

suppose it to have been a species of

the shrubby coralline; but Theophrastus says the sea oak had a long, thick, and fleshy leaf; whence we may conclude it to have been of the fucus class.

QUE'RELE, n. s. Fr. qutrelle ; Lat. querela. A complaint to a court. See QUARREL.

A circumduction obtains not in causes of appeal, but in causes of first instance and simple querele only.

Ayliffe.

QUERETARO, a city in the intendancy of Mexico, the largest after Mexico in this part of the republic. From north to south it is sheltered by a mountain ; and thence begins its celebrated glen, irrigated by a large river, the waters being introduced by means of hidden aqueducts, which are reduced to twelve currents running from the mother stream. Thus the water is let in upon 2000 houses, to which are attached gardens, abounding in a thousand kinds of fruits and flowers, European and American. It has three grand squares, from which the streets extend to the four cardinal points. Here is also a celebrated aqueduct for carrying the water to the tity, having forty arcnes of thirty-five yards high. The church is magnificent, and there are several convents. In this city are fabricated fine cloths, baizes, &c., and several tanneries. Humboldt also visited a great manufactory of cigars, in which 3000 people, including 1 ►►00 women were employed. Here are consumed 130 reams, and 2770 pounds of tobacco leaf. Queretaro is situated 6374 feet above the level of the sea. Humboldt estimates the population at 35,000. Nine-ty-five miles north-west of Mexico.

QUERFURT, a town of Prussian Saxony, in the government of Merseburg, on the river Quern. It was formerly the chief place of a principality. Population 2500. Fifteen miles west of Merseburg, and twenty-nine west of Leipsic.

QUERIA, in botany, a genus of the trigynia order, and triandria class of plants ; natural order twenty-second, caryophillei : CAL. pentaphyllous : COR. none: CAPS, unilocular and trivalved, with one SEED. There are two species, viz.: ††† 1. Q. Canadensis, and 2. Q. Hispanica.

QUERIMBA, the name of islands, extending along the eastern coast of Africa, to the south of Cape Delgado. When discovered by the Portuguese, they were inhabited by Arabs, who were nearly exterminated by their European visitors. The Querimbas have since been repeopled by Portuguese and their slaves from Mosambique. The principal island is four or five miles long, containing about thirty farm houses, and a small fort. It was lately plundered by the pirates of Madagascar.

QUERIMO'NIOUS, adj. \ lat. querimonia. QUERIMO'NIOUSLY, adv. S Querulous ; complaining : the adverb corresponding.

To thee, dear Thorn, myself addressing, Most querimonioitsly confessing. Denliam.

QUE RY, n. s. 8c v. a. > Lat. quart. A ques-QUE'RIST, n. s. > tion ; matter of enquiry : an enquirer; proposer of questions.

I shall propose some considerations to my gentle querist-Sjxctator.

I shall conclude, with proposing only some queries, in order to a farther search to be made by others.

Newton.

This shews the folly of this query, that might always be demanded, that would impiously and absurdly attempt to tie the arm of omnipotence from doing any thing at all, because it can never do its utmost.

Bentley.

Three Cambridge sophs,

Each prompt to query, answer, and debate. Pope. The juggling sea god when by chance trepanned By some instructed querist sleeping on the strand, Impatient of all answers, strait became A stealing brook. Swift's Mhcellaniti.

QUERN, n. s. Sax. cpeojin ; Dan. querno ; Swed. quarne. A hand-mill.

Skim milk, and sometimes labour in the quern, And bootless make the breathless huswife churn.

Shaktpeare.

Some apple coloured corn Ground in fair querns, and some did spindles turn.

Cltapman.

QUER'PO, n. s. Span, cuerpo. A dress close to the body ; a waistcoat.

I would fain see him walk in querpo, like a cased rabbit, without his holy fur upon his back. Dryden.

QUER'ULOUS, adj. (Lat. querulus. Mourn—

QUER'ULOISLY, adv. i ing; whining; complaining : the adverb corresponding.

Although they were a people by nature hard-hearted, querulout, wrathful, and impatient of rest and quietness, yet was there nothing of force to work the subversion of their state, till the time before-mentioned was expired. Hooker.

The pressures of war have cowed their spirits, as may be gathered from the very accent of their words, which they prolate in a whining kind of querulous tone, as if still complaining and crest-fallen.

HoweVs Vocal Forest.

Though you give no countenance to the complaints of the querulous, yet curb the insolence of the injurious. Locke. His wounded ears complaints eternal fill,

As unoiled hinges, querulously shrill. Young.

A querulous old woman's voice His humorous talent next employs ; He scolds and gives the lie. Covrper.

QUESNAY (Francis), a French physician and writer on political economy, was born in 1694, near Montfort 1'Amaury, in the isle of France. His father was a farmer, and he acquired the rudiments of his profession as a surgeon in the country, when, going to the metropolis, he be-came secretary to a society for the improvement of surgery. At length he obtained the situation of physician to madame de Pompadour, and through her interest became physician to the king. His simplicity of manners and disinterestedness are said to have formed a strong contrast with the characters of those around him ; towards the latter part of life he became the leader of the political economists of France. Quesnay, however, by no means anticipated the result of his doctrines ; and was much attached to the royal family, and especially to the king, who called him his thinker ' pen-seur.' He was author of a Philosophical Essay on the Animal Economy, 3 vols. 12mo. ; and various surgical and medical works, besides articles in the Encyclopedic, and tracts on Physiocrasy, or the Government most Advantageous to the Human Race, 1768, 8vo., &c.

QUESNE (Abraham marquis Du), admiral of the naval forces of France, was born in Normandy in 1610. He contributed to the defeat of the naval power of Spain before Gattari; was dangerously wounded before Barcelona in 1642, and on other occasions : he went into the service of the Swedes, and became vice-admiral ; gave the Danes an entire defeat, killed their admiral, and took his ship. He was recalled into France in 1647, and commanded the squadron sent to Naples. The naval affairs of France being much fallen, he fitted out divers ships for the relief of the royal army that blocked up Bourdeaux ; which was the principal cause of the surrender of the town. He was very fortunate in the last wars of Sicily, where he beat the Dutch thrice, and De Ruyter was killed. He also obliged the Algerines to sue for peace from France in a very humble manner. Asia, Africa, and Europe, felt the effects of his valor. He was a Protestant ; nevertheless

the king bestowed on him the land of Bouchet. He died in 1668.

QUESNEL (Pasquier), an able French di-vine, of the congregation of the Oratory, distinguished on account of the church dissensions to which his writings gave rise. He was born at Paris in 1634, and early devoted himself to literary studies. He gave offence to the court of Rome by an edition of the works of Leo the Great in 1675 ; but that which excited the greatest animosity was his New Testament, with moral reflections, in 8 vols. 8vo. ; from which 101 propositions being extracted, they were condemned by the celebrated bull, Unigenitus, as favoring the doctrines of the Jansenists. Father Quesnel retired to Brussels, and afterwards to Amsterdam, where he died in 1719. His New Testament was translated into English by Mr. Russell, and published in 1729,4 vols. 8vo. Dr. Adam Clarke strongly recommends it.

QUESNOY, a fortified town of French Flanders, having a population of 4000, besides a small garrison, and some trade in wood, silk, cottons, starch, and tobacco. It was taken by the Austrians in 1793, but retaken by the French in 1794. Twenty miles east by north of Cambray. It is also the name of another, but less remarkable town of French Flanders, on the Deule. Population 3700. Six miles north-west of Lisle.

QUEST, n.s. & v. n. -\ Fr. queste. Search ;

QUEST’ANT, I enquiry ; examination ;

QUEST’MAN, \ act of seeking : those

QUEST’MONGER, I who seek taken collec—

QUEST’RJST. J lively : to go in search :

a questantand questrist mean a seeker or searcher : a questman or questmonger, a starter of law-suits or prosecutions.

None but such as this bold apeunblest, Can never thrive in that unlucky quest.

Spenser. If lusty love should go in quest of beauty,

Where should he find it fairer than in Blanch ?

Shakspeare. What’s my offence ?

Where is the evidence that doth accuse me ?

What lawful quest have given their verdict up

Unto the frowning judge ? Id. Richard III.

O place and greatness ! millions of false eyes

Arc stuck upon thee ; volumes of report

Run with these false and most contrarious quettt Upon thy doings. Jd. Measure for Meust-fg.

See, that you come

Not to woo honour, but to wed it ; when The bravest questant shrinks, find what you seek, That fame may cry you loud. Shaktpeare.

Six and thirty of his knights, Hot questristx after him, met him at the gate, Are gone with him tow'rd Dover. Id.

Their principal working was upon penal laws, wherein they spared none, great nor small, bu* raked over all new and old statutes, having ever a rabble of promoters, questmonger ⬛⬛⬛⬛⬛, and leading jurors at their command. Bacon.

Gad not abroad at every quest and call Of an untrained hope or passion. Herbert

"An aged man in rural weeds, Following, as seemed, the quest of some stray ewe.

Milton.

There's not an African, That traverses our vast Numidian deserts In quest of prey, and lives upon his bow, But better practices these boasted virtues.

Addison.

Twould be not strange, should we find Paradise at this day, where Adam left it ;. and I the rather note this, because I see there are some so earnest in quest of it. Woodward,

The insolence of his mistress quickly disgusted him, and he went up to London in quest of more suitable employment. Johnson.

QUESTION, n.s.,v. n. & v.a.ˆ French and QUESTIONABLE, adj. I Span, ques—

QUES'TIONARY, ˆ> tion ; Ital.

QUES'TIONER, n. s. i questione;

QUESTIONLESS, adj. J Lat. qutzstio.-

Enquiry; interrogatory; examination; dispute; matter of dispute or debate ; controversy ; judicial trial; examination by torture; act of seeking : to question is to enquire ; debate by interrogatory ; and, as a verb active, examine one by questions ; doubt : questionable is, doubtful ; disputable ; suspicious : qxiestionary, enquiring ; questioner, he who enquires : questionless, doubtless : clear ; without or beyond enquiry.

There arose a question between some of John s disciples and the Jews about purifying. St. John.

Suddenly out of this delightful dream The man awoke, and would have questioned more ; But he would not endure the woful theme.

Spenser.

If we being defendants do answer, that the ceremonies in question are godly, comely, decent, profitable for the church, their reply is childish and un-orderly to say, that we demand the thing in question.

Hooker.

Your accustomed clemency will take in good worth the offer of these my simple labors, bestowed for the necessary justification of laws heretofore made questionable, because not perfectly understood.

Id. Dedication. This is not my writing, Though I confess much like the character But out of question 'tis Maria's hand.

Shakspeare.

As it more concerns the Turk than Rhodes, So may he with more facile question bear it ; For that it stands not in such warlike brace But altogether lacks the abilities That Rhodes is dressed in. <.

I pray you think you question with a Jew You may as well use question with the wolf, W hy he hath made the ewe bleat for the lamb

But hark you, Kate,

I must not have you henceforth question me

Whither I go. ” Id. Henry IV.

Be thy advent wicked or charitable,

Thou coraest in such a questionable shape,

That I will speak to thee. Id. Hamlet.

Questionless hence it comes that many were mis-fake n. Raleigh.

He that questions th much shall learn much, and content much ; but especially if he apply his questions to the skill of the persons whom he asketh.

Bacon’s Essays.

Unreasonable subtility will still seem to be reasoning ; and at least will question, when it cannot answer. Holyday.

It is questionable, whether the use of steel springs was known in those ancient times. Wilkins.

This construction is not so indubitably to be received as not at all to be questioned. Browne.

That persons drowned float the ninth day, when their gall breaketh, is a questivnable determination, both in the time and canise. Id. Vulgar Errours.

‘Tis time for him to shew himself, when his very being is called in

question, and to come and judge the world, when men begin to doubt whether he made it. Tillotson.

If it would purchase six shillings and threepence weighty money, he had proved the matter in question.

Locke.

Questionless duty moves not so much upon command as promise ; now that which proposes the greatest and most suitable rewards to obedience, and the greatest punishments to disobedience, doubtless is the most likely to enforce the one and prevent the other. South.

Such a presumption is only sufficient to put thf person to the rack or question, according to the civ: law, and not bring them to condemnation.

Ayliffe's Parergon O impotent estate of human life !

Where fleeting joy does lasting doubt inspire,

And most we question what we most desire.

Prior.

Nor are these assertions that dropped from their pens by chance, but delivered by them in places where they profess to state the points in question.

Atterbury's Preface.

How easy is it for a man to fill a book with quotations, as you have done, that can be content with any thing, however foreign to the question !

Waterland.

Our own earth would be barren and desolate, without the benign influence of the solar rays, which without question is true of all the other planets.

Bentley.

I grow laconick even beyond laconicism ; for sometimes I return only yes or no to questionary epistles of half a yard long. Pope to Swift.

In point of honour to be tried, Suppose the question not your own.

Swift.

It is questionable, whether Galen ever saw the dissection of a human body. Baker.

QUESTOR, or QU.ESTOR, in Roman antiquity, an officer who had the management of the public treasure. The questorship was the first office any person could bear in the commonwealth, and gave a right to sit in the senate. At first there were only two ; but afterwards two others were created, to take care of the payment of the armies abroad, of the sale of the plunder, booty, &c., for which purpose they generally accompanied the consuls in their expeditions ; on which account they were called peregrini, as the first and principal two were called urbani. The number of

questors was afterwards greatly increased. They had the care of the decrees of the senate ; and hence came the two officers of questor principis, or augusti, sometimes called candidatus principis, whose office resembled in most respects that of our secretaries of state ; and the questor palatii.

QUE'STUARY, adj. Lat. quastus. Studious of profit.

Although lapidaries and questuary enquirers affirm it, yet the writers of minerals conceive the stone of this name to be a mineral concretion, not to be found in animals. Browne.

QUEVEDO DE VILLEGAS (Francis), a celebrated Spanish poet, born at Madrid in 1570. He was descended from a noble family, and was made a knight of St. James ; but was thrown into prison by order of count Olivarez, whose administration he satirized in his verses, and was not set at liberty till after that minister's disgrace. Quevedo wrote some heroic, lyric, and facetious poems : he also composed several treatises on religious subjects, and translated some authors into Spanish. He died in 1645. Hii most celebrated works are, 1. The Spanish Par-nassus. 2. The Adventurer Buseon. 3. Visions of Hell Reformed, &c. His youth was spent in the service of his country in Italy, where he distinguished himself by his sagacity and prudence.

QUIB'BLE, n. s. & v. n.) Lat. quidlibet.

QUIB'BLER. \ A cavil ; pun : to

pun ; to play on the sound of words.

The first service was neat's tongues sliced, which the philosophers took occasion to discourse and quibble upon in a grave formal way. L' Estrange.

This may be of great use to immortalize puns and quibbles, and to let posterity see their forefathers were blockheads. Addison.

Having once fully answered your quibble, you will not, I hope, expect that I should do it again and

again.

Waterland.

Quirks or quibbles have no place in the search after truth. Watts.

QU1BERON, a town of France, on a long and narrow peninsula of the same name, which, with some islands, forms a noble bay, having two harbours defended by batteries. A British force landed here in 1746, but was repulsed. In June and July, 1795, a number of the French emigrants in England prevailed on the British government to land them in this bay ; but they were soon overpowered by the republican troops, suffered great loss in their flight, and those of their associates who were made prisoners underwent the sentence of the law against emigrants of being shot. Twelve miles north of Belle-Isle, twenty - three south-west of Vannes, and twenty-four S. S. E. of L'Orient.

QUICK, adj.&cn. s.~) Sax. epic; Swed.

QUICKEN, v. a. > quick ; Dan. and Belg.

QUICKENER, n. s.) quik; Goth. kuik. Alive; living ; a living animal or plant ; living or peculiarly sensible parts: to quicken is to make alive ; become living : quickener one who makes alive ; the adjective is almost obsolete.

If there be quick raw flesh in the risings, it is an old leprosy. Leviticus xiii. 10.

All they that go down into ihe dust shall kneel oefore him ; and no man hath quickened his own soul. Psalm xxii. 30.

Who shall judge the quick and the dead at his appearing. St. Paul.

They rub out of it a red dust, that converteth after a while into worms, which they kill with wine when they begin to quicken. Sandys's Journey.

Peeping close into the thick, Might see the moving of some quick,

Whose shape appeared not ; But were it fairy, fiend, or snake, My courage earned it to wake,

And manful thereat shot. S/>enser.

These hairs which thou dost ravish from my chin Will quicken and accuse thee ; I'm your host; With robbers hands, my hospitable favour You should not ruffle thus. Shakspeare. King Lear.

This my mean task would be As heavy to me, as 'tis odious ; but The mistress which I serve quickens what's dead, And makes my labours pleasures. Id. Tempest. If Stanley held that a son of king Edward had still the better right, it was to teach all England to say as much ; and therefore that speech toucheth the quick. Bacon.

As the sun makes ; here noon, there day, there

night,

Melts wax, dries clay, makes flowers, some quick, some dead Dalies.

Thence shall come,

When this world's dissolution shall be ripe, With glory and power to judge both quick and dead.

Milton. He throws

His influence round, and kindles as ne goes ; Hence flocks and herds, and men and beasts and

fowls With breath are quickened, and attract their souls.

Dryden.

Seized with sudden smart,

Stung to the quick, he felt it at his heart. Id. The heart is the first part that quickens, and the last that dies. Ray on the Creation.

For inclosing of land, the most usual way is with a ditch and bank set with quick. Mortimer.

The thought of this disgraceful composition so touches roe to the quick that I cannot sleep.

Arbuthnot's John Bull.

Scarifying gangrenes, by several incisions down to the quick, is almost universal, and with reason, since it not only discharges a pernicious ichor, but makes way for topical applications. Sharp.

QUICK, adj. & adv. QUICK'EN, v. a. QUICK'ENER, n. s. QUICK' LY, adv. QUICK'NESS, n. s. QUICKSIGHT'ED, adj.

From , quick, alive. Vivacious; active; nimble; swift ; sprightly ; ready: as an ad-verb, nimbly; spee-

QUICKSIGHT'EDNESS, n.s.J dily: to quicken is to hasten; accelerate ; sharpen ; excite : quickener, the thing or person that quickens or actuates : ⁂quickly and quickness correspond with quick: and quicksighted means sharp of sight ; of acute perception.

Though my senses were astonished, my mind forced them to quicken themselves ; because I had learnt of him how little favour he is wont to shew in any matter of advantage. Sidney.

Prayers whereunto devout minds have added a piercing kind of brevity, thereby the better to express that quick and speedy expedition, wherewith ardent affections, the wings of prayer, are delighted to present our suits in heaven. Hooker.

QUI

Ready in gybes, quick answered, saucy, and As quarrellous as the weazle.

Shakspeare. Cymbeline.

Thou comest to use thy tongue : thy story quickly.

Shakspeare.

Honour, that is gained and broken upon another, hath the quickest reflection, like diamonds cut with fascets ; and therefore let a man contend to excel any competitors of his in honour, in outshooting them, if he can, in their own bow. Bacon.

You may sooner by imagination quicken or slack a motion, than raise or cease it ; as it is easier to make a dog go slower, than to make him stand still.

Bacon's Natural History.

Others were appointed to consider of penal laws and proclamations in force, and to quicken the execution of the most principal. Hayward.

This shall your understanding clear, Those things from me that you shall hear, Conceiving much the quicker.

Drayton's Nymphid.

The best choice is of an old physician and a young lawyer ; because, where errors are fatal, ability of judgment and moderation are required ; but, where advantages may be wrought upon, diligence and quickness of wit. Wotton.

If passion work like a hot-reined horse,

'Twill quickly tire itself. Massinger.

What any invention hath in the strength of its motion is abated in the slowness of it ; and, what it hath in the extraordinary quickness of its motion, must be allowed for in the great strength that is required unto it. Wilhins.

A man of great sagacky in business, and he preserved so great a vigour of mind, even to his death, when near eighty, that some, who had known him in his younger years, did believe him to have much quicker parts in his age than before. Clarendon. Oft he to her his charge of quick return

Repeated. Milton's Paradise Lost.

Love and enmity, aversation and fear, are not able whetters and quickeners of the spirit of life in all animals. More.

Thy generous fruits, though gathered ere their

prime,

Still shewed a quickness ; and maturing time But mellows what we write to the dull sweets of rhime. Dryden.

They gave those complex ideas, that the things they were continually to give and receive information about, might be the easier and quicker understood.

Locke.

Though any commodity should shift hands never so fast, yet, if they did not cease to be any longer traffick, this would not at all make or quicken their vent. Id.

No body will deem the quicksighted amongst them to have very enlarged views in ethicks. Id.

The ignorance that is in us no more hinders the knowledge that is in others, than the blindness of a mole is an argument against the quichsightedness of an eagle. Id.

Ginger renders it brisk, and corrects its wildness, and juice of corinths, whereof a few drops tinge and add a pleasant quickness. Mortimer.

The animal, which is first produced of an egg, is a blind and dull worm : but that which hath its resurrection thence, is a quick-eyed, volatile, and sprightly fly. Crew's Cosmoloaia.

They endeavour by brandy to quicken their taste already extinguished. Tatler.

A man must have passed his noviciate in sinning before he comes to this, be he never so quick a proficient. Sv'ith.

Joy, like a ray of the sun, reflects with a greate*

QUI

ardour and quickness, when it rebounds upon a man from the breast of his friend. Id.

An argument of great force to quicken them in the improvement of those advantages to which the mercy of God had called them by the gospel. Rogers.

No article of religion hath credibility enough for them ; and yet these same cautious and quicksighted gentlemen can swallow down this sottish opinion about percipient atoms. Bentley.

Sees by degrees a purer blush arise, And keener lightnings quicken in her eyes. Pope. The desire of fame hath been no inconsiderable motive to quicken you in the pursuit of those actions which will best deserve it. Swift.

QUICKTIME, n.s. Lat. calx viva, quick and lime. Lime unquenched.

After burning the stone, when lime is in its perfect and unaltered state, it is called quicklime. Hill. QUICKLIME. See LIME and CHEMISTRY. QUICK'SAND, n. s. Quick and sand. Mov-ing sand ; unsolid ground.

Undergirding the ship, and fearing lest they should fall into the quicksands, they strake sail, and so were driven. Acts xxvii.

What is Edward, but a ruthless sea 1 What Clarence, but a quicksand of deceit ?

Shakspeare.

But when the vessel is on quicksands cast, The flowing tide does more the sinking haste.

Dry den.

I have marked out several of the shoals and quicksands of life, in order to keep the unwary from running upon them. Addison.

When ministry rests upon public opinion, it is not, indeed, built upon a rock of adamant ; it has however some stability. But, when it stands upon private humour, its structure is of stubble, and its foundation is on quicksand. Burke.

QUICK'SET, v. a. Quick and set. To plant with living plants. '

In making or mending, as needeth thy ditch, Get set to quickset it, learn cunningly which.

Tusser.

The batful pastures fenced, and most with quickset mound. Drayton.

A man may ditch and quickset three poles a day, where the ditch is three foot wide and two foot deep.

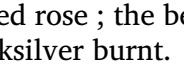 -V Mortimer.

Plant quicksets and transplant fruit-trees towards the decrease. Evelyn's Kalendar.

Nine in ten of the quickset hedges are ruined for want of skill. Swift's Miscellanies.

QUICK'SILVER, n. s.) Quick and silver. QUICK'SILTERED, adj. $ Mercury: overlaid with mercury.

Cinnabar maketh a beautiful purple like unto a red rose ; the best was wont to be made in Libya, of brimstone and quicksilver burnt. Peacham.

Metal is more difficult to polish than glass, and is afterwards very apt to be spoiled by tarnishing, and reflects not so much light as glass quicksilvered over does ; I would propound to use instead of the metal a glass ground concave on the foreside, and as much convex on the backside, and quicksilvered over on the convex side. Newton's Opticks.

Pleasures are few ; and fewer we enjoy ;

Pleasure, like quicksilver, is bright and coy ;

We strive to grasp it with our utmost skill,

Still it eludes us, and it glitters still :

If seized at last, compute your mighty gains,

What is it, but rank poison in your veins 1

Young.

QUICKSILVER, or mercury. See MERCURY.

QUID PRO QUO, in law, what for what, denotes the giving one thing of value for another; or the mutual consideration and performance of both parties to a contract.

QUID PRO QUO, or QUI PRO QUO, is also used in physic to express a mistake in the physician's bill, where quid is written for quo, i.'e. one thing for another ; or of the apothecary in reading quid for quo, and giving the patient the wrong medicine. Hence the term is in general extended to all blunders or mistakes committed in medicine, either in the prescription, the preparation, or application of remedies.

QUI'DAM, n. s. Lat. quidam. Somebody. Not used.

For envy of so many worthy quidams, which catch at the garland which to you alone is due, you will be persuaded to pluck out of the hateful darkness those so many excellent poems of yours which lie hid, and bring them forth to eternal light. Spenser.

QUID'DIT, n. s. ^ Fr. que dit, corrupted

QUID'DITY. i from quidlibet ; low Lat.

quidditas. A subtilty ; an equivocation : quiddity, essence; that which is a proper answer to the question, quid est ?

Why may not that be the skull of a lawyer ? where be his quiddlts now ? his quillets 1 his cases 1 and his tricks 1 Shakspeare.

Misnomer in our laws, and other quiddities, I leave to the professors of law. Camden's Remains.

He could reduce all things to acts, And knew their natures and abstracts, W'here entity and quiddity The ghosts of defunct bodies fly. Hudibras.

QUIES'CENCE, n. s. } Lat. quiesco. Rest;

QUIES'CENT, adj. \ repose; state of quiet :

the adjective corresponding.

Whether the earth move or rest, I undertake not to determine : my work is to prove that the common inducement to the belief of its quiescence, the testimony of sense, is weak and frivolous. Glunville.

Though the earth move, its motion must needs be as insensible as if it were quiescent. Id.

The right side, from whence the motion of the body beginneth, is the active or moving side ; but the sinister is the weaker or more quiescent side.

Browne's Vulgar Errours.

Sight takes in at a greater distance and more variety at once, comprehending also quiescent objects, which hearing does not. Holder.

If it be in some part movent, and in some part quiescent, it must needs be a curve line, and so no ra-dius. Grew.

Pression or motion cannot be propagated in a fluid

in right lines beyond an obstacle which stops part of

the motion, but will bend and spread every way into

the quiescent medium, which lies beyond the obstacle.

Newton's Opticks.

QUI'ET, adj., n. s., ˆ QUI'ETER, n. s. [v. a. QUI'ETISM,

Fr. quiet ; Span, and Port, quieto ; ml. quieto; Lat. quietus. At rest ; still ; peaceable ; smooth ; mild : as a noun substantive, rest ; tranquillity ;

QUI'ETLY, adv.

QUI'ETNESS, n. s.

QUI’ETSOME, adj.

QUI’ETUDE, n.s.

peace ; security : as a verb active, to calm ; lull; pacify: quietism is tranquillity, real or affected, of the mind and temper : quietly and quietness corresponding with the senses of quiet, adjective : quietsome is calm ; still (obsolete) : quietude, re-stillness.

They laid wait for him, and were quiet all the

tight.

Let it be in the ornament of a meek and quiet

spirit. 1 Pf ⬜⬜;⬜⬜⬜

This cruel quietness neither returning to mislike /ior proceeding to favour; gracious, but gracious still after one manner. Sidney.

Breaking off the end for want of breath, And sliding soft, as down to sleep her laid, She ended all her woe in quiet death. Spenser. Let the night be calm and quietsome, Without tempestuous storms or sad affray. Id. That which we ‘move for our better instruction sake, turneth into anger and choler in them ; they grow altogether out of quietness with it ; they answer fumingly. Hooker.

This life is best,

If quiet life is best ; sweeter to you, That have a sharper known.

Shahspeare. Cymbeline. Stop effusion of our Christian blood, And ‘stablish quietness on every side.

Shakspeare.

Although the rebels had behaved themselves quietly and modestly by the way as they went ; yet they doubted that would but make them more hungry to fall upon the spoil in the end. Bacon.

What miseries have both nations avoided, and what quietness and security attained by their peaceable union ! Hayward.

The lowest degree of faith, that can quiet the soul of man, is a firm conviction that God is placable.

Forbes.

From the equal distribution of the phlegmatick humour, the proper allay of fervent blood, will flow a future quietude and serenitude in the affections.

Wotton on Education.

Let no man for his own poverty become more oppressing in his bargain, but quietly, modestly, and patiently recommend his estate to God, and leave the success to him. Taylor.

Justly thou abhorrest That son, who on the quiet state of man Such trouble brought. Milton.

What is called by the poets apathy or dispassion, oy the sceptics indisturbanee, by the Molinists quiet-urn, by common men peace of conscience, seems all to mean but great tranquillity of mind. Temple. There fixed their arms, and there renewed their

name, And there in quiet rules. Dryden’s JEneis.

Putting together the ideas of moving or quieting corporeal motion, joined to substance, we have the idea of an immaterial spirit. Locke.

Indulgent quiet, power serene, Mother of peace, and joy, and love. Hughes. If we compare the quietness and chastity of the Bolognese pencil to the bustle and tumult that fills every part of a Venetian picture, without the least attempt to interest the passions, their boasted art will appear a mere struggle without effect.

Reynolds.

QUIETISTS, a religious sect, famous towards the close of the seventeenth century. They were so called from a kind of absolute rest and inaction, which they supposed the soul to be in, when arrived at that state of perrection, which they called the unitive life ; in which state they imagined the soul wholly employed in contemplating its God, to whose influence it was entirely submissive. In this state the soul no longer needs prayers, hymns, &c., being entirely occupied with the contemplation of the Deity. Molinos, a Spanish priest, is the reputed author

of Quietism ; though the Illuminati in Spain had certainly taught something like it before. The most celebrated patroness of Quietism was madam De la Mothe Guyon, a lady of excellent character; whose sentiments were refuted in 1697 by Bossuet. She was defended by the celebrated archbishop Fenelon, whose book, however, was condemned by Innocent XII. and the archbishop himself obliged to read the sentence, though he retained his opinions to the last. The Quietists spread through Italy, France, and the Netherlands. A sect similar to this had appeared at Mount Athos in Thessaly, near the end of the fourteenth century, called Hesychasts. They were a branch of the mystics, or those more perfect monks, who, by long and intense contemplation, endeavoured to arrive at a tranquillity of mind free from every degree of tumult and per turbation.

QUILL, n. s. Goth, koyle, a writing reed, or Lat. calamus ? The hard strong feather of which pens are made ; dart of a porcupine ; a reed of weavers and musicians.

The presumptuous damsel rashly dared The goddess' self to challenge to the field, And to compare with her in curious skill, Of works with loom, with needle, and with quill.

Spenser.

Birds have three other hard substances proper to them ; the bill, which is of a like matter with the teeth, the shell of the egg, and their quills.

Bacon's Natural History.

With her nimble quills his soul doth seem to

hover, And eye the very pitch that lusty bird did cover.

Drayton.

I will only touch the duke's own department in that island, the proper subject of my quill. Wotton.

His flying fingers and harmonious quill Strike seven distinguished notes, and seven at once they fill. Dry den.

Being rooted so little way in the skin, nothing near so deeply as the quills of fowls, they are the more easily ejaculated. Crete's Museum.

Those lives they failed to rescue by their skill, Their raose would make immortal with her qu M.

Garth.

Near these was the black prince of Monomotapa, by whose side was seen the quiM-darting porcupine. Arbuthnot and Pope.

From him whose quills stand quivered at his ear, To him that notches sticks at Westminster. Pope.

QUILLS are denominated from the order in which they are fixed in the wing ; the second and third quills, being the best for writing, as they have the largest and roundest barrels. Crow-quills are chiefly used for drawing. To harden a quill that is soft, thrust the barrel into hot ashes, stirring it till it is soft, then, taking it out, press it almost flat upon your knee with the back of a penknife, and afterwards reduce it to a roundness with your fingers. If you have a number to harden, set water and alum over the fire, and while it is boiling dip the barrels of the* quills for a minute, and then lay them by.

QUIL'LET, n. s. Lat. quidllbet. Subtilty ; nicety ; fraudulent distinction ; petty cant.

Why may not that be the skull of a lawyer? where be his quiddits now ? his quillets 1 his cases ? and hit tricks ? Shakspeare.

A great soul weighs in the scale of reason, what

it ir to judge of rather than dwells with too scrupulous a diligence upon little quillets and niceties.

Digby.

Ply her with love letters and billets, And bait them well for quirks and quillets.

Hudibras.

QUILLET (Claude), an eminent Latin poet in the seventeenth century, born at Chinon, in Tou-raine. He practised physic there with reputation ; but having declared against the pretended possession of the nuns of Loudun, in a MS. treatise, afterwards deposited in the library of the Sorbonne, he was obliged to retire into Italy, where he became secretary to the marshal d'Estrees, the French ambassador at Rome. In 1655 Quillet having published in Holland a La-tin poem, entitled Callipsedia, under the name of Galvidus Laetus, he there inserted some verses against cardinal Mazarine and his family; but retrenched what related to the cardinal in another edition, and dedicated it to him, Mazarine having, before it was printed, given him an abbey. He died in 1661, aged fifty-nine, after having given Menage all his writings, and 500 crowns to pay the expense of printing them ; but the abbe took the money and papers, and published none of them. His Callipaedia has been translated into English verse.

QUILLOTA, a province of Chili, bounded by Coquimbo on the north, on the east by Aconcagua, on the south by Melipilla, and on the west by the sea. It is twenty-five leagues in length, and sixteen in breadth. Its rivers are the Longotoma, Ligua, Aconcagua, and Limache, which flow down from the Cordillera west. This district is one of the most populous, and the most productive in gold of any in Chili. Its hemp and honey are also esteemed. It has a parish, with the churches of St. Dominic, St. Francis, St. Augustine, and a college formerly of the Jesuits. The province contains also the cities of Piazza, Plazilla, Ingenio, Casablanca, and Petrorca. Quillota contains likewise a number of ports, the most considerable of which are Papudo, Quintiro, 1'Erradura, Concon, and Valparaiso. They cultivate in this province all kinds of grain and vines, and fabricate much rigging, cords, thread, and soap. Inhabitants

14,000.

QUILLOTA, the capital of the above province, is pleasantly situated in a valley, on the borders of the river Aconcagua. Long. 71►► 18’ W., lat. 32►► 50’ S.

QUILOA, a city and sea-port of Eastern Africa, capital of a country of the same name. It is built on an island situated close to the mainland. Long. 39►► 47’ E., lat. 8►► 41’ S.

QUILT, n. s. & v. a. Fr. couette ; Ital. coltre ;

Belg. kulcht ; Lat. culcita, culcilra. A cover

made by stitching some soft substance between

layers of cloth or silk : to stitch in this manner.

The sharp steel arriving forcibly

On his horse neck before the quilted fell,

Then from the head the body sundred quite.

Spenser.

Quilts of roses and spices are nothing so helpful, as to take a cake of new bread, and bedew it with a little sack. Bacon.

A bag quilted with bran is very good, but it drieth ►►oo much. Id. Natural History.

Entellus for the strife prepares, Stripped of his quilted coat, his body bares, Composed of mighty bone. Dryden’s jEneit. In both tables the beds were covered with magnificent quilts amongst the richest sort. Arbuthnot.

She on the quilt sinks with becoming woe, Wrapt in a gown, for sickness and for show. Pope.

QUIMPER, or KIMPER CoRENTiu,a town of France, the capital of the department of Finisterre, is situated on the declivity of a hill, at the confluence of two navigable rivers, and divided into the Old and New Town. It is surrounded with a wall and towers, and is the see of a bishop. The objects of interest are the cathedral, exchange, public

library, and botanical garden. The river is capable of receiving vessels of 200 tons, while those of greater burden find safe anchorage in the neighbouring road of Benaudet. It has manufactures of stoneware, a good trade, and 7000 inhabitants. Thirty-four miles south-east of Brest, and 115 west of Rennes.

QUIMPERLE, a town of France, department of Finisterre, on the Isolle. It has two churches, manufactures of pottery, tobacco-pipes, and stoneware, and 4200 inhabitants : also paper-mills and tanneries. Twelve miles north-west of L'Orient, and twenty-eight east by south of Quimper.

QUIN (James), a celebrated performer on the English stage, bora at London in 1693. He was intended for the bar; but, on the death of his father, appeared on the stage at Drury-lane. In 1720 he exhibited his powers in Falstaff, and soon after appeared to great advantage in the character of Sir John Brute : but it was not un-til Booth's quitting the stage that Quin appeared to full advantage in the part of Cato. Garrick's eminence gradually withdrew the public attention from Quin, who obseiTed that ' Garrick like Whitefield, was a new religion, but all would come to church again ;' a remark which extorted a well-known epigram from his rival He continued a favorite performer until 1748, when, on some disgust between him and Rich the manager, he retired to Bath, and only came up annually to act for the benefit of his friend Ryan. While Quin continued upon the stage he constantly kept company with the literati of the age, particularly Pope, Swift, and lord Chesterfield. His judgment in reading the English language was such that Frederick prince of Wales appointed him preceptor to his children, and George III. afterwards gave him a pension, though he stood in no need of it. He died of a fever in 1766.

QUINARIUS was a small Roman coin, equal to half the denarius, and consequently worth about three pence three farthings of our money. See MONEY. It was called quinarius, because it contained the value of five asses, in the same manner as the denarius was named from its containing ten.

QUI'NAR\, adj. lat. quinarius. Consisting of five.

This quinary number of elements ought to have been restrained to the generality of animals and vegetables. Boyle—

QUINAUT (Philip), a celebrated French poet, born in Paris in 1635. He cultivated poetry

frow ins infancy, and sixteen dramatic pieces of of Carthago, nor that of Ibaˆae. The highest

his were acted between 1653 and 1666. He also studied the law, and made a fortune by marrying a rich widow. He died in 1688, after having enjoyed a handsome pension from Louis XIV. for many years.

QUINCE, n. s. Fr. coin ; Teut. quidden, from Cydon, in Crete. A tree and its fruit. See below.

They call for dattt and quinces in the pastry.

Shakspeare.

A quince, in token of fruitfulness, hy the laws of Solon, was given to the brides of Athens upon the day of their marriage. Peacliam on Drawing.

The quince tree is of a low stature ; the branches are diffused and crooked; the flower and fruit is like that of the pear tree ; but, however cultivated, the fruit is sour and astringent, and is covered with a kind of down : of this the species are six.

Miller.

QUINCE, in botany. See PYRUS.

QUINCH, v.a. The same with QTJECK, which see. To stir ; flounce ; as in resentment or pain.

Bestow all my soldiers in such sort as I have, that no part of all that

realm shall be able to dare to quinch. Spectator.

QUIN'CUNX, n. s. Lat. quincunx. A mode of planting trees, whereby they are disposed in a square, consisting of five trees, one at each corner, and a fifth in the middle, repeated ; so that viewed through an angle of the square or parallelogram, they represent equal or parallel alleys.

Brown produces several examples in his discourses about the quincunx. Ray on the Creation.

Of a pentagon or quincuncial disposition, Sir Tho-mas Browne produces several examples in his discourses about the quincunx. Id.

He whose lightning pierced the Iberian lines, Now forms my quincunx, and now ranks my vines.

Pope.

QUINCY, a post-town of Norfolk county, Massachusetts, eight miles south of Boston. It is a pleasant town, and contains a Congregational and an Episcopal church. The inhabitants are mostly employed in agriculture, but large quantities of boots and shoes are manufactured here. This town is famous for being the residence of the honorable John Adams, late president of the United States.

QUINDECEMVIRI, in Roman antiquity, a college of fifteen magistrates, whose business it was to preside over the sacrifices. They were also the interpreters of the Sybil's books ; which, however, they never consulted but by an express order of the senate.

QUINDIU, a high and craggy range of mountains of South America, in the province of Popayan, Colombia. By these mountains there is a passage, from the provinces of Popayan to Santa Fe, considered as one of the most difficult in the Andes. In the finest season it cannot be traversed in less than ten or twelve days, and consists chiefly of a thick uninhabited forest. Not even a hut is to be seen, nor are any means of subsistence to be found. Travellers always furnish themselves with a month's provisions, since it often happens that, by the melting of the snows, they can descend neither on the side

point, the Garito del Paramo, is 11,489 feet above the level of the sea. The pathway, which forms the passage of the Cordillera, is only twelve or sixteen feet in breadth, and has the appearance in several

places of an artificial gallery. See POPA.YAN.

Humboldt and Bonpland traversed this mountain in October 1801, followed by twelve oxen, which carried their collections and instruments, amidst a deluge of rain.

QUININA, or QUININE, in chemistry, a vegetable alkali, obtained from pale cinchona (bark), by the following process : ††† A pound of bruised bark is boiled in about a gallon of water, to which three fluid drachms of sulphuric acid have been previously added. A similar decoction is repeated with about half the quantity of liquid, and so on till all the soluble matter is extracted. The decoctions are then mixed together, and strained; and powdered slaked lime is added in a proportion somewhat greater than necessary to saturate the acid ; the precipitate that ensues (a mixture of quinine and sulphate of lime), is collected, dried, and boiled for some minutes in strong alcohol, which is then decanted off, while still hot, and fresh portions successively added for the repetition of the same operation, until it ceases to act on the residuum, which is then merely sulphate of lime. The different alcoholic solutions are then put into a retort or still, and considerably evaporated, during which, and especially on cooling, transparent plates of quinine are deposited. It is very insoluble in water, and its taste is very bitter. It unites with the acids, forming crystallisable salts. The sulphate is of a dull white color, silky and flexible : it is, like the alkali, soluble in alcohol ; it burns away without leaving any residuum. According to *Mons.* Pelletier and Caventou, it is composed of Quinine …100 Sulphuric acid . . 10-9147 but M. Baup describes a crystallised sulphate as well as a supersulphate. The first consists of

Quinine Sulphuric acid Water

1 prime

1

4

45 5 4-5

54-5

The acetate is remarkable for the manner in which it crystallises. Its crystals are flat needles, of a pearly lustre, grouped in silky bundles, or in stars.

Quinine is very soluble in ether. The sulphate of quinine, in doses of from six to twelve grains, has been found an effectual remedy against intermittent fevers. It is said that the red or yellow bark yields the most febrifuge quinine.

Quinine affords a large quantity of ammonia, when subjected to destructive distillation, and consequently contains azote as one of its elements. Analysed by Mr. Brande, it afforded, in 100 parts,

Carbon …. 73-80 Azote …. 13-00 Hydrogen …7-65 Oxygen … 5-55

100-00

QCJ!

337

QUI

According to Dumas and Pelletier, Carbon … .74-14 Hydrogen …6-77

Azote … .8-80 Oxygen …. 10-76

M. Baup adopts 45 as the prime equivalent of quinine. He states its sulphate as follows : ††† Supersulphate in rectangular prisms.

1 atom 45 … 61-644

2 10 … 13-698 16 18 . 24-658

100-000

QUINQUAGES’IMA, Latin quinquagesima. A Sunday, so called because it is the fiftieth day before Easter, reckoned by whole numbers : Shrove Sunday.

QUINQUAN’GULAR, adj. Lat. quinque and angulus. Having five corners.

Each talus, environed with a crust, conforming it-self to the sides of the talus, is of a figure quinquangular. Woodward.

Exactly round, ordinately quinquangular, or hav-ing the sides parallel.

More’s Antidote against Atheism.

QUINQUARTIC’ULAR, adj. Latin quinque and articulus. Consisting of five articles.

They have given an end to the quinquarticular controversy, for none have since undertaken to say more.

Sanderson.

QUINQUATRIA, or QUINQUATRUS, was a festival kept at Rome in honor of Minerva, which began on the 18th of March, or, as others will have it, on the 19th, and lasted five days. On the first day they offered sacrifices and oblations without the effusion of blood j the second, third, and fourth, were spent in shows of gladiators ; and on the fifth day they went in procession through the city. Scholars had a vacation during the solemnity, and presented their masters at this time with a gift or fee called Minerval. Boys and girls used to pray to the goddess Minerva for wisdom and learning, of which she had the patronage. Plays were acted, and disputations held, at this feast, on the subjects of polite literature. The quinquatria were so called because they lasted five days. There seems to be a strong resemblance betwixt this festival and the Panatherreea of the Greeks.

QUINQUENNALIS, in Roman antiquity, a magistrate in the colonies

and municipal cities of that empire, who had much the same office as the jedile at Rome.

QUINQUEREMIS, in the naval architecture of the ancients, a name given to a galley which had five rows of oars. They divided their vessels in general into monocrota, and polycrota. The former had only one tire of rowers ; the lat-ter had several tires of them. The quinque-remes of the ancients had 420 men in each ; 300 of whom were rowers, and the rest soldiers.

QUINQUEVIRI, in Roman antiquity, an order of five priests, peculiarly appointed for the sacrifices to the dead, or celebrating the rites of Erebus.

QUIN'SY, n.s. Corrupted from SQUINANCY, which see. A tumid inflammation in the throat, which sometimes produces suffocation.

The throttling quinsy, 'tis my star appoints, And rheumatisms I send to rack the joints. Dryden.

Great heat and cold, succeeding one another, occasion pleurisies and quinsies. Arbuthnol on Air. QUINSY. See MEDICINE. QUINT, n. s. Fr. quint. A set of five.

For state has made a quint Of generals he's listed in't. Hiulibras.

QUINTAIN, n. s. Fr. quintain. A tilting post for the game of quintin. See QUINTIN.

My better parts Are all thrown down ; and that, which here stands

up, Is but a quintain, a mere lifeless block. Shakspeare.

QUINTAINE, QUINTIN, an instrument used by the common people in the days of chivalry, to tilt against. It consisted of an upright post, on the top of which a cross-post turned upon a pivot ; at one end of the cross-post was a broad board, and at the other a bag of sand. The practice was to ride against the board with a lance, and at such speed as to pass by before the sand-bag could strike the titter on the back.

QUINTANA, in Roman antiquity, the fifth gate of the Roman camps, which were generally square, and had four other principal gates. The quintanawas near the questorium. The soldiers were here instructed in

the discipline of the Palaria. Upon the irruption of the Istri into the Roman camps, which they plundered, Livy says, ‘ Ad Questorium forum quintanamque per-venerunt.’

QUINTE, a bay and harbour on Lake Ontario, to the westward of Kingston. It is formed between the irregular peninsula of prince Edward county on the south, and the mainland of the midland district on the north. The length, through the various crooked turns it makes, is little short of fifty miles, but its breadth only between six and twelve miles. The isthmus formed between it and Lake Ontario, in the township of Murray, is not more than three furlongs broad. This inlet affords to vessels safe shelter from the heavy gales frequently of the lake.

QUINTES’SENCE, n. s.) Lat. quinta es-QUINTESSEN’TIAL, adj. } sentia. A fifth being ; see the extract from Watts ; extract containing all the virtues of any thing, the adjective corresponding.

To me what is this quintessence of dust? man delights not ms, nor woman neither. Shakspeare.

From their gross matter she abstracts the forms, And draws a kind of quintessence from things.

Dome*.

For I am a very dead thing, In whom love wrought new alchymy, For by his art he did express A quintessence even from nothingness, From dull privations and lean emptiness.

Donne.

Venturous assertions as would have puzzled tne authors to have made them good, specially considering that there is nothing contrary to the quintessential matter and circular figure of the heavens ; so neither is there to the light thereof. Hakeieill.

The ethereal quintessence of heaven Flew upward, spirited with various forms, That rolled orbicuh* and turned to stars.

Milton. Z

Paracelsus, by the help of an intense cold, teaches to separate the quintessence of wine. Boyle.

When the supreme faculties move regularly, the inferior passions and affections following, there arises a serenity and complacency upon the whole soul, infinitely beyond the greatest bodily pleasures, the highest quintessence and elixir of worldly delights.

South.

They made fire, air, earth and water, to be the four elements, of which all earthly things were compounded, and supposed the heavens to be a quintessence or fifth sort of body distinct from all these.

Watts'* Logick.

QUINTILE, in astronomy, an aspect of the planets when they are 72►► distant from one another, or a fifth part of the zodiac.

QUINTILIANS, a sect of ancient heretics, thus called from their prophetess Quintilia. In this sect the women were admitted to perform the sacerdotal and episcopal functions. They attributed extraordinary gifts to Eve, for having first eaten of the tree of knowledge. They added that Philip's four daughters, who were all prophetesses, were of their sect. In these assemblies the virgins entered in white robes, personat- 'ng prophetesses.

QUINTILIANUS, the father of the celebrated orator Marcus Quintilianus, was also an orator, and wrote many declamations. Ugolin of Parma published the first 136 in the fifteenth century ; nine others were published in 1563 by Peter Ayrault, and afterwards by Peter Pithou in 1580. There have also been nineteen other declamations printed under the name of Quintilian the orator ; but, in the opinion of Vossius, they were written neither by that orator nor his grandfather. QUINTILIANUS (Marcus Fabius), a celebrated Latin orator, and the first critic of his age, was a native of Calagurris, or

Calahorra, in Spain ; and was the disciple of Domitius Afer, who died A. D. 59. He taught rhetoric at Rome for twenty years with great applause, and practised at the bar. Some imagine, with but little foundation, that he was consul ; but it is certain that he was preceptor to the grandsons of Domitian's sister. There is still extant his excellent work, entitled Institutiones Oratoriae, which is a treatise on rhetoric, in twelve books, justly admired. The work was found by Poggius in an old _ tower. There is also attributed to Quintilian a dialogue De Causis corrupts Eloquentiae ; but it is more commonly ascribed to Tacitus.

QUINTIN, or QUINTAIN, n. s. Fr. quintaine. ' I know not whence derived.' Johnson. ††† Min-shew deduces it from Lat. quintus, and calls it a game celebrated every fifth year. Others trace it to Syr. chunet ; Gr. \ovrog ; which produced Lat. conto quintana. A tilting game. See QUINTAIN.

At quintin he, In honour of his bridaltee, Hath challenged either wide countee Come cut and long tail, for there be Six batchelors as bold as he, Adjuting to his company,, And each one nath his livery. Ben Jonson. Q-INTIN MATSYS, also called the farrier of

he made very uncommon progress. He was 9 diligent and careful imitator of ordinary life. His best known picture is that of the Two Misers in the gallery at Windsor. He died in 1529.

QUINTINIE (John De la), celebrated for his skill in horticulture, born at Poictiers in 1626. He was brought up to the law ; and acquitted himself so well at the bar as to acquire the es-teem of the chief magistrate. M. Tamboneau, president of the chamber of accounts, engaged him to undertake the preceptorship of his only son, which Quintinie executed to his satisfaction employing his leisure hours in the study of writers on agriculture. He gained fresh information with regard to his favorite pursuit by attending his pupil to Italy; for, all the gardens about Rome being open to him, he failed not to add practice to his theory. On his return to Paris M. Tamboneau gave up the management of his garden entirely to him ; and Quintinie applied so closely to it that he became famous all over France. Louis XIV. erected a new office purposely for him, that of director of the royal fruit and kitchen gardens ; and these gardens, while he lived, were the admiration of the curious. He twice visited London, and a paper of his was published in the Philosophical Transactions, on the culture of melons. In 1690 he published ' Instructions pour les Jardins Fruitiers et Potagers,' which obtained great popularity, was frequently

reprinted, and was translated into several modern languages. The last edition was the * Parfait Jardinier,' in 2 vols. 4to. The author died at Paris in the year 1700.

QUINTIUS FLAMININIUS, (Titus), a celebrated Roman general, who was consul A. U. C. 554. He acquired much military experience in the war against Hannibal ; and was afterwards sent against Philip V. of Macedon, whom he totally defeated on the confines of Epirus, and made all Locris, Phocis, and Thessaly, tributary to Rome. Yet he not only granted peace to Philip, but proclaimed all Greece free and independent at the Isthmian games. This step rendered him very popular among the Greeks, and paved the way for the universal dominion of the Romans. He was afterwards sent to Prusias, king of Bithynia ; who had given refuge to Hannibal, and by his address prevailed on the monarch to de-sert the greatest man of that age. Flaminius died suddenly.

QUFNTUPLE, adj. Lat. quintuples. Five-fold.

In the country, the greatest proportion of mortality, one hundred and fifty-six, is above quintuple unto twenty-eight the least.

Graunt's Bills of Mortality.

QUINTUS CALABER, a Greek poet, who wrote a large supplement to Homer's Iliad, in fourteen books, in which a relation is given of the Trojan war from the death of Hector to the destruction of Troy. He is supposed to have lived in the fifth century, but nothing certain can be collected either of his person or country. His poem was first made known by Cardinal Bessa-

Antwerp, had been a blacksmith nearly twenty rion, who discovered it in St. Nicholas's church,

years; when, falling in love with a painter's daughter, who was very handsome, and disliked his trade, he betook himself to painting, in which

near Otranto, in Calabria; whence the author was name Quintus Calaber. It was first published at Venice by Aldus.

QUIP, n. s. From WHIP, to clean by rubbing, which see. A sharp jest ; sarcasm. Quips, and cranks, and wanton wiles, Nods, and becks, and wreathed smiles. Milton. QUIPOS; a contrivance which supplied the place of writing among the Peruvians, at the time of the conquest of Peru by Pizarro, in the sixteenth century. It consisted of several threads of different colors attached to a cord, and tied in knots. Each color had its peculiar signification; and, if sense could not be conveyed by the colors, the knots were used. 13y this means calculations were carried on, enumerations of the population, historical documents and laws preserved, leagues and treaties indicated, &c. In each town there were officers whose duty it was to take care of the quipos. The defects of this species of writing were supplied by oral tradition and short poems. A similar contrivance was in use in Guiana.

QUIRE, n. s. & v. n.) Fr. choeur ; Ital. cho-QUIR'ISTER. $ ro. A body of singers ;

a chorus : the part of a church where the service is sung : to sing in concert : a chorister.

Myself have limed a bush for her, And placed a quire of such enticing birds, That she will light to listen to their lays.

Shahspeare.

There's not the smallest orb which thou beholdest But in his motion like an angel sings, Still quiring to the young-eyed cherubims. Id.

I am all on fire,

Not all the buckets in a country quire Shall quench my rage. Cleaveland.

Begin the song, and strike the lively lyre, Lo how the years to come, a numerous and well

fitted quire,

All hand in hand do decently advance, And to my song with smooth and equal measures

dance. Cowley.

At thy nativity a glorious quire Of angels in the fields of Bethlehem sung To shepherds watching at their folds by night, And told them the Messiah now was born.

Milton.

As in beauty she surpassed the quire, So nobler than the rest was her attire. Dryden.

The fox obscene to gaping tombs retires, And wolves with howling fill the sacred quires.

Pope.

The coy quiristers, that lodge within Are prodigal of harmony. Thomson's Spring.

QUIRE, n.s. Fr. quagur, cahir ; Ital. quader- ►►io ; Lat. quaternio. A bundle of paper containing twenty-four sheets.

This operation is called parting, and is repeated two or three times for the best papers. The-paper is now counted into quires, folded and packed up into rearos for market. Rees's Cyclopedia.

QUIRIA, a province of Immeretia, in Asia, on the shores of the Black Sea. It would appear to have been formerly flourishing. The residence of the prince is Titi Zighe, on the sea coast. The only considerable river is called Boas, passable for mules ; but it is the custom for those who can afford it to be carried on men's backs, in a chair. Lat. 4►► 36' N.

QUIRINALIA, in antiquity, a feast celebrated among the Romans in honor of Romulus. It was also called stultorum feriae, and was

celebrated on the 13th of the calends of March, our 17th of February.

QUIRINI (Angelo Maria), a learned cardinal, born in Venice in 1684. He was eminent as a philologer, historian, and antiquary. He was promoted to the cardinalate by Benedict XIII. He was a member of almost all the learned societies in Europe ; and wrote a great number of works. He died in 1 755, and left his valuable library to the Vatican ; to which an additional room was built to admit it.

QUIRINUS, the name given to Romulus after his deification.

QUIRITES, in Roman antiquity. In consequence of the agreement entered into by Romulus and Tatius, king of the Sabines, Rome was to retain its name from Romulus ; and the people were to be called Quirites, from Cures, the principal town of the Sabines, a name used in all public addresses to the Roman people. Dion. Hal. says that each particular citizen was to be called Romanus, and the collective body of them Quirites; yet it appears by this ancient form of words used at funerals, Ollus Quiris letho datus est, that each private citizen was also called Quiris. Quiris, according to Plutarch and others, signified, in the Sabine language, both a dart, and a warlike deity armed with a dart. This Quiris, or Quirinus, was either Mars or some other god of war ; and the worship of Quiris continued in Rome during the reign of Romulus; but after his death he was honored with the name Quirinus, and took the place of the god Quiris.

QUIRK, n.s. Of this word I can find no rational derivation. ××× Johnson. But see QUEER, and the Teut. querh. Quick stroke ; or fit ; sharp saying ; subtilty.

I've felt so many quirks of joy and grief, That the first face of neither on the start, Can woman me unto't. Shakspeare.

Some kind of men quarrel purposely on others to taste their valor ; belike, this is a man of that quirk.

Id.

I may chance to have some odd quirks and remnants of wit broken on me. Id.

Most fortunately he hath achieved a maid, That paragons description and wild fame, One that excels the quirks of blazoning pens. Id. Let a lawyer tell them he has spied some defect in an entail ; how solicitous are they to repair that er-ror, and leave nothing to the mercy of a law quirk !

Decay of Piety.

There are a thousand quirks to avoid the stroke of the law. L'Estrange's Fables.

Now the chapel's silver bell you hear, That summons you to all the pride of prayer ; Light quirks of music, broken and uneven. Pope. Conceits, puns, quirks, or quibbles, jests and repartees may agreeably entertain, but have no place in the search after truth. Watts on the Mind.

QUISQUALIS, in botany, a genus of the monogynia order, and decandria class jf plants ; natural order thirty-first, vepreculˆe : CAL. quinquefid and filiform; petals five; FHUIT, a quin-queangular plum. One species only, *viz.* Q. Indica, a native of the Molucca Isles.

QUIT, v. a. i Fr. quitter ; Ital.

QUIT'-RENT, n. s. -\quetare, quietare ;

QUIT'TANCE. n.s. & v. a. .) barb. Lat. quittarc

Z 2

To discharge an obligation ; free ; carry through ; perform ; repay ; absolve ; acquit ; abandon ; forsake ; resign : a quit-rent is, a small reserved rent : quittance is, discharge from debt or obligation ; recompense ; repayment : to repay.

We will be quii of thine oath, which thou hast made us to swear. Joshua ii. 20.

He fair the knight saluted, louring low, Who fair him quitted, as that courteous was.

Spenser.

'1 ney both did fail of their purpose, and got not so much as to quit their charges ; because truth, which is the secret of the most high God,

whose proper handy-work all things are, cannot be compassed with that wit and those senses which are our own.

Hooker.

Enkindle all the sparks of nature, To quit this horrid act.

Shakspeare. King Lear. Now I am remembered, he scorned at me ! But that's all one ; omittance is no quittance. Id.

Mine eyes saw him in bloody state, Rend'ring faint quittance, wearied and out-breathed, To Henry Monmouth. Id. Henry IV.

Embrace me then this opportunity, As fitting best to quittance their deceit.

Shakspeare.

Nor further seek what their offences be, Guiltless I quit, guilty I set them free. Fairfax. Far other plaints, tears, and laments, The time, the place, and our estates require,

Think on thy sins, which man's old foe presents Before that judge that quits each soul his hire. Id.

For our reward,

All our debts are paid ; dangers of law ??? Actions, decrees, judgments against us quitted.

Ben Jonson.

Never worthy prince a day did quit With greater hazard, and with more renown.

Daniel.

By this act, old tyrant,

I shall be quit with thee. Denham.

Thou art quit from a thousand calamities ; therefore let thy joy, which should be as great for thy freedom from them as is thy sadness when thou feel-est any of them, do the same cure upon thy discontent. Taylor.

Samson hath quit himself Like Samson, and heroicly hath finished A

life heroic, on his enemies Fully revenged, hath left them years of mourning.

Mi/ton.

One step higher ###

Would set me highest, and in a moment quit The debt immense of endless gratitude. Id.

Iron works ought to be confined to certain places, where there is no conveyance for timber to places of vent, so as to quit the cost of the carriage. Temple.

Such a tax would be insensible, and pass but as a small quit-rent, which every one would be content to pay towards the guard of the seas. Id.

Still I *hall hear and never quit the score, Stunned with hoarse Godrus' Theseid o'er and o'er.

Dry den.

Such variety of arguments only distract the understanding ; such a superficial way of examining is to quit truth for appearance, only to serve our vanity.

Locke.

Does not the air feed the flame 1 and does not the flame at the same time warm and enlighten the air ? and does not the earth quit scores with all the element* in the noble fruits that issue from it ?

South'i Sermons.

To John I owed great obligation; But John, unhappily, thought fit To publish it to all the nation ; Sure John and I are more than quit. Prior.

The prince, renowned in bounty as in arms, With pity saw the ill-concealed distress,

Quitted his title to Campaspe's charms, And gave the fair one to the friend's embrace. Id.

My old master, a little before his death, wished him joy of the estate

which was falling to him, desiring him only to pay the gifts of charity he had left as quit-rents upon the estate. Addison's Spectator.

To quit you of this fear, you have already looked death in the face ; what have you found so terrible in it 1 Wake.

QUIT-RENT (quietus redditus, i. e. quiet rent), is a certain small rent payable by the tenants of manors, in token of subjection, and by which the tenant goes quiet and free. In ancient records it is called white rent, because paid in silve money, to distinguish it from rent-corn, &c.

QUITCH'GRASS, ►►. s. Sax. cpice. Dog-grass.

They are the best corn to grow on grounds subject to quitchgrass or other weeds.

Mortimer' f Husbandry.

QUITE, adv. From QUIT. Completely; perfectly ; thoroughly.

He hath sold us, and quite devoured our money.

Genesis xxxi.

Those latter exclude not the former quite and clean as unnecessary. Hooker.

If some foreign ideas will offer themselves, reject them, and hinder them from running away with our thoughts quite from the subject in hand. Locke.

The same actions may be aimed at different ends, and arise from quite contrary principles. Addison.

QUITO, a presidency of Colombia, was originally an independent country, which remained distinct from all the neighbouring states, until a short time previous to the conquest of Peru by Francisco Pizarro; but its limits were not then exactly the same as at present. It is now bounded by Santa Fe on the north ; on the east it extends to Maynas, Macas, and Quixos, which reach to the Portuguese frontiers; on the west the Great Pacific washes it from the gulf of Puna to the government of Atacames ; and on the south the kingdom of Peru forms its boundary. Its length from north to south is about 600 miles, while its breadth exceeds 1800.

The chain of the Andes which pervades Quito, after having been divided near Popayan into three branches, unites in the district of Pastos, and stretches far beyond the equator. Its most lofty summits form two lines, separated by a series of valleys, from 10,600 to 13,900 feet in height, as far as the 3►► of S. lat., in which the chief towns of Quito are situated. On the west side of this vale or plain rise the mountains of Casitagua, Pichincha, Atacazo, Corazon, Ilinissa, Caruuirazo, Chimborazo, and Cunamhay ; and on the east are the peaks of Cayambe, Guamani, Antisana, Passuchoa, Ru-minari, Cotopaxi, Quelendama,Tunguragua, and cape Urcu, or the Altar ►►► all of which, excepting three or four, are higher than Mont Blanc, but on account of the great elevation of the plain on which they rest, their appearance is not so lofty as may be imagined ; the summit of Chimborazo

the most elevated, not being more than 11,959 feet above the plain of Tapia, which itself is 9481 feet above the level of the sea.

The temperature of the air is here so constant that the summits of those mountains which enter .ne region of perpetual snow have the line of congelation distinctly marked ; and the road from Guayaquil to Quito leads along the northern declivity of Chimborazo, amid scenes of the most majestic nature, and near the regions of eternal frost. Chimborazo, the most lofty of the American summits, towers in the form of a dome over the conical peaks and heads of the adjacent mountains, to the altitude of 21,441 feet above the level of the sea. PICHINCHA, which surmounts the city of Quito, was formerly a very active volcano ; but since the conquest its eruptions have not been frequent. See that article. Humboldt supposes the bottom of the crater is on a level with the city of Quito. Its edges are always covered with snow; and flames rise from its surface amid columns of dark smoke.

But of all the American volcanoes Cotopaxi is the most noted. It is situated to the south-east of Quito, twelve leagues distant from that city, and five leagues north of Latacunga, between the mountains of Ruminavi, the summit of which is rugged and jagged with separate

rocks, and Quelendama, whose peaks enter the regions of eternal frost. It has ejected such masses of scoria and immense pieces of rock, on the plain below, that they would of themselves, if heaped together, form an enormous mountain ; and in a violent eruption in 1774 its roarings were heard at Honda, at the distance of 200 leagues. In 1768 it sent forth such a volume of ashes that the light of the sun was obscured at Hambato till three in the afternoon, and the people were forced to use lanterns ; at the same time the cone was so heated that the mass of snow which covered it suddenly melted away ; and at Guayaquil, 150 miles distant, its eruptions were audibly distinguished.

The volcano of Sangai, or Mecas, is the most southern mountain of Quito, and is covered with snow ; but a continual fire issues from its sum-mit, attended by explosions which are heard 120 miles distant, and when the wind is fair are audible even at Quito. The country adjacent to this volcano is totally barren, being covered with cinders. In this desert the river Sangay rises, and, joining the Upano, flows into the Maranon under the name of the Payra. Sangia is 17,131 feet above the level of the sea. The Altar, or El Altar, is on the eastern crest, in the district of Riobamba, joining itself by a high desert to another peak called Collanes The Indians have a tradition that El Altar was formerly more lofty than Chimborazo, but that its summit suddenly fell in. By the latest observation it was found to be 17,256 feet above the level of the sea.

Tunguragua is seven leagues north of Riobamba. The figure of this volcanic mountain is conical, and very steep. Riobamba was destroyed by its dreadful eruptions. Some hot springs gush out through crevices in its sides, which has caused warm baths to be erected for the accommodation of invalids. Tunguragua is

1 6,500 feet above the level of the sea. Norm-west of Riobamba is Carguirazo, which just enters the lower period of congelation. New this mountain and Chimborazo is the road leading to Guayaquil, passing over such lofty deserts and such dangerous places, that many people perish in attempting to travel over it in bad weather, or in winter. The height of this mountain is 15,540 feet above the level of the sea.

In these mountainous regions the wind is often so violent that it tears off fragments of rocks The French academicians, in measuring their case, and taking the necessary angles, were often, it will be remembered, in danger of having their tents and huts blown over. In

this immense extent the population, therefore, is chiefly confined to the valley, formed on the very ridge of the main chain of the Andes, by the parallel summits making a prolonged series of small nar-row plains, extending from San Miguel de Ibarra to Loja, and to the country between those and Popayan, and from the western slope of the Cordillera to the ocean. The eastern governments are chiefly immense tracts, thinly scattered with missionary villages.

Quito Properis subdivided from north to south into nine districts, *viz.* San Miguel de Ibarra, Otabalo, Quito, Latacunga, Riobamba, Chimbo, Guayaquil, Cuenca, and Loxa or Loja.

The jurisdiction of Quito contains, independently of the city, twenty-five villages, or parishes.

The lands are covered with plantations, in the plains, breaches or valleys, and up the sides of the mountains, as far as vegeta ration will reach, so as to be productive of any return to the cultivator. The valleys, being hot, grow sugar-canes and cotton ; the plains, maize ; and the higher regions, wheat, barley, &c. European grain was introduced into Quito hy father Jose Rixi, a na-tive of Ghent in Flanders, who sowed some near the convent of St. Francis ; and the monks still show the vase in which the first wheat came from Europe, as a sacred relic. Above the regions which produce wheat, barley, potatoes, &c., are fed numerous flocks of sheep, which yield great quantities of wool ; and cows are reared also in great numbers for the sake of cheese and butter. Most of the villages of Quito are inhabited by Indians.

Th►► capital of this presidency is Quito. It is situated in long. 78►► 10* 15’ W., and lat. 0►► 13′ 27″ S., on the eastern slope of the western branch of the equatorial Andes, thirty-five leagues distant from the coasts of the South Sea The volcanic mountain Pichincha is the basis or. which the celebrated city rests. Its crevices are so numerous in the environs that many of the suburban houses are built on arches ; and from the acclivity of the ground the streets are very irregular and uneven. The city has in its vicinity the great plains Turubamba and Inna Quito, covered with country seats and cultivation ; and the junction of these plains forms a neck of land, on which some of the streets are built. The height of Quito above the level of the sea is 9510 feet; and it is backed by the conical sum-mit of Javirac, immediately under that of Pichincha,►►► Javirac being 10,239 feet above the ocean, consequently 729 feet higher than the city.

QUITO.

The temperature of the climate is such that neither heat nor cold is felt in extremes, though this may be experienced in a very short journey from it. The whole year is a perfect spring, with little or no variation ; pleasant gales constantly waft the odors of the cultivated plains towards the town, and these are seldom known to fail or to become boisterous. The rain alone descends occasionally with impetuosity, and prevents the usual out-of-door avocations. With such a climate, and in the midst of plenty, the city is hourly liable to earthquakes, and its inhabitants are frequently occupied in noticing, with the most awful apprehensions, the slightest variations in the phenomena of the heavens ; for from these they affect to judge of the approach of the subterraneous concussions-which have so frequently destroyed the place. Of these a very destructive one was experienced in 1775. In 1797, on the 4th of February, the face of the whole district was changed, and in the space of a second 40,000 persons were hurled into eternity. During this tremendous scene the ground opened in all directions, and vomited out sulphur, mud, and water. This earthquake affected the temperature of the air, which is now commonly between 40►► and 55►►, whereas it was usually 66►► or 68►► ; and s-ince that time violent shocks have frequently been experienced.

Quito is plentifully supplied with water from several streams, which flow from the sides of the mountains, and are conducted into the town by means of conduits. Several of these brooks unite in one spot, and form the small river Ma-changara, which washes the south parts of the city, and is crossed by a stone bridge. The principal streets are all paved, and the houses are large and convenient, being mostly of one story in height, built of unburnt bricks and clay, and cemented by a sort of mortar which was made use of anciently by the Indians, and which becomes exceedingly solid. The principal square of Quito is ornamented with the cathedral, the bishop’s palace, the town-hall, and the palace of the royal audience, and with a beautiful fountain in the centre. Four streets terminate at the angles of this square, which are broad, straight, and well built for about 400 yards, when the acclivities and breaches commence; on this account the luxury of

wheel-carriages is not to be had. Besides the great square, there are two others of considerable size, and several small ones. In these are situate the churches and convents, which are generally fine buildings. The hospital is a fine structure ; and there are several courts for the administration of justice, the exchequer, treasury, &c.

The population is estimated at 70,000 persons; among whom are many of high rank, descendants of the conquerors, or persons who came in the early periods from Spain. Notwithstanding the horror of earthquakes, and the constant state of anxiety they must feel, the inhabitants are gay, lively, and much addicted to pleasure, luxury, and amusement.

The clay and hot water vomited from the volcano diffuses much fertility in the vicinity, where a constant succession of fruits, flowers, and leaves appear during the whole year Corn is

reaped and sown at the same time ; and such is the goodness of the pasture tnat excellent mutton, beef, &c., are to be had here. Fine cheese is also made in the dairies, and so much is used, that 70,000 or 80,000 dollars' worth is annually consumed. Good butter is also found ; and foi the service of the table, whether in luxuries or necessaries, nothing appears to be wanting.

In this province some cotton goods are manufactured. These are exported to Peru; for which gold, silver, laces, wine, brandy, oil, copper, tin, lead, and quicksilver, are returned. The wheat of Quito is exported to Guayaquil ; and the coast of Guatimala sends indigo, iron, and steel, for which some of the products of Quito are returned by way of Guayaquil. The commerce of Quito is, however, mostly internal ; and this province contains no metallic veins which are worked, though many rich ones are supposed to exist ; and some mercury has been found between the villages of Cuenˆa and Azogue.

Quito is celebrated as having been the scene of the measurement of a degree of the meridian by the French and Spanish mathematicians, in the reign of Louis XV. The plain made choice of for the mensuration of the great base is 1592 feet lower than the city of Quito, and four leagues north-east of it, near the village Yuranqui, from which it has its name. It was in this desert valley, surrounded by the lofty summits of the central Andes, that these operations were carried on. In the church of the Jesuits is an alabaster slab, on which is engraven a Latin inscription, commemorating these labors, and enumerating the

signals, angles, and other circumstances connected with the measurement performed in these years.

QUITTER-BONE. See VETERINARY ART.

QUIVER, n. s. Goth, koja, kofe ; Lat. cavea. Corrupted from Fr. couvrir, or cover. A case or sheath for arrows.

As arrows are in the hand of a mighty man ; so are children of the youth. Happy is the man that hath his quiver full of them. Psalm cxxvii. 5.

As Dianne hunted on a day. She chanced to come where Cupid lay,

His quiver by his head. Spenser.

Those works, with ease as much he did,

As you would ope and shut your quiver-lid.

Chapman.

Diana's nymphs would be arrayed in white, their arms and shoulders naked, bows in their hands, and quivers by their sides. Peacham on Drav;ing.

'Tis chastity :

She that has that, is clad in compleat steel,

And like a quivered nymph with arrows keen,

May trace huge forests and unharboured heaths,

Infamous hills, and perilous sandy wilds. Milton.

Her sounding quiver on her shoulder tied, One hand a dart, and one a bow supplied. Dryden.

The thousand loves that arm thy potent eye, Must drop their quivers, flag their wings and die.

Prior.

From him whose quills stand quivered in his ear, To him who notches sticks at Westminster. Pope.

QUI’VER, v. n. kadj. Wei. chwyfiwr ; Span. quebar, or perhaps from quake. To quake ; shi-ver ; play with a tremulous motion : quick in motion ; nimble.

When I heard, my belly trembled; ray lips qui* vercd at the voice. Hub. iii. 16.

Zelmane would have put to her helping hand, but she was taken with such a quivering, that she thought it more wisdom to lean herself to a tree and look on.

Sidney. The birds chaunt melody on every bush,

The green leaves quiver with the cooling wind.

Shakspeare.

There was a little quiver fellow, and he would manage you his piece thus ; and he would about and about. Id.

O’er the pommel cast the knight, Forward he flew, and pitching on his head, He quivered with his feet, and lay for dead. Dryden.

With what a spring his furious soul broke loose, And left the limbs still quivering on the ground.

Addison. Kurydice with quiv’ring voice he mourned,

And Heber’s banks Eurydice returned. Gay. Dancing sunbeams on the waters played,

And verdant alders formed a quiv’ring shade.

Pope. The dying gales that pant upon the trees,

The lakes that quiver to the curling breeze. Id.

QUIXOS AND MACAS, the most easterly province of the audience of Quito, is bounded on the north by Popayan and the plains ; east by Portuguese Guiana ; on the west it is separated from Latacuuga and Ibarra by the Cordilleras of Cotopaxi, Cayambe, &c. ; and on the south it is limited by Maynas and Bracamoros. It is extremely mountainous, full of ravines, and abounding in rivers, some of which are very large, and all running into the Maranon. Impassable, ex-cept on foot, it was traversed by the missionaries, who, at the expense of great labors and fatigues, entered Mainas. Its temperature is cold, but it produces much cotton and fine tobacco ; the valleys and ravines are extremely fertile. In the south-west of Quixos is Los Canelos, a sort of spice resembling cinnamon growing there. The south part of Quixos is called Macas, and is separated into a distinct district, under that appellation, of which the chief town is Macas, or Sevilla de Oro.

QUOD'LIBET, n. s. Lat. quodlibet. A nice point ; a subtilty.

He who reading on the heart, When all his quodlibets of art Could not expound its pulse and heat, Swore, he had never felt it beat. Prior.

QUOJA, a country of Africa, at the back of Sierra Leone, between 8►► and 10►► of W. long., and between 6►► and 9►► of N. lat. It is well cultivated, but has little trade. The monarch is despotic, and his nobles enjoy extraordinaiy respect. On the tombs of their masters, slaves are frequently sacrificed, and numerous subjects on that of the king.

QUOIF, n. s. & v. a.) Fr. coeffe. Any cap

QUOIF'FURE. $ with which the head is

covered : to dress with a cap : quoiffure is, head-dress. See COIF.

Hence, thou sickly quoif,

Thou art a guard too wanton for the head,

Which princes, flushed with conquest, aim to hit.

Shahspeare.

She is always quoif ed with the head of an elephant, to shew that this

animal is the breed of that country. Addison.

The lady in the next medal is very particular in her quoiffure. Id. on Medals.

QUOIN, n. s. Fr. coin. A corner ; a wedge.

A sudden tempest from the desert flew With horrid wings, and thundered as it blew, Then, whirling round, the quoins together shook.

Sandy i.

Build brick houses with strong and firm quoins or columns at each end. Mortimer's Husbandry.

QTJOIN, or COIN, on board a ship, a wedge fastened on the deck, close to the breach of the carriage of a gun, to keep it firm up to the ship's side. Cantic quoins are short three legged quoin? put between casks to keep them steady.

QUOINS, in architecture, denote the corners of brick or stone walls. The word is particularly used for the stones in the corners of brick buildings. When these stand out beyond the brick-work, their edges being chamfred off, they are called rustic quoins.

QUOIT, n. s., v. n. & v. a. Belg. coete, gooed, thrown. Something thrown at a certain point or mark : to play at quoits or the discus ; to throw.

He plays at quoits well. Shakspeare. Henry IV.

Quoit him down, Bardolf, like a shove-groat shilling. Shakspeare. Noble youths for mastership would strive,

To quoit, to run, and steeds and chariots drive.

Dryden.

When he played at quoits, he was allowed his breeches and stockings. Arbuthnot and Pope.

QUON'DAM. Lat. quondam. Having been formerly. A ludicrous word.

This is the quondam king, let's seize upon him.

Shakspeare.

What lands and lordships for their owner know My quondam barber, but his worship now. Dryden.

QUOOK. Preterite of quake. Obsolete.

Freely up those royal spoils he took, Yet at the lion's skin he inly quook. Spenter.

QUO'RUM, n. s. Lat. quorum. A bench of justices ; such a number of officers as is sufficient to do business.

They were a parcel of mummers, and being himself one of the quorum in his own county, he wondered that none of the Middlesex justices took care to lay some of them by the heels. Addison.

QUORUM is often mentioned in English statutes, and in commissions of justices of the peace and others. It is thus called from the words of the commission, quorum A. B. unum esse volumus : ××× e. g. where a commission is directed to seven persons, or to any three of them, whereof A. B. and C. D. are to be two ; in this case, they are said to be of the quorum, because the rest can-not proceed without them; so a justice of the peace and quorum is one without whom the rest of the justices in some cases cannot proceed.

QUOTA, n.s. Lai.quotus. A share; anas-signed proportion.

Scarce one in this list but engages to supply a quota of brisk young fellows, equipt with hats and feathers. Addison.

QUOTE', v. a.~\ Fr. quoter; Ital. and Lat.

QUOTA'TION, > costa, a marginal note. To

QUO'TER. j cite an author or passage of

an author ; adduce the words of another by way of authority.

The second chapter to the Romans is here quoted only to paint the margent. Whityifte-

R

St. Paul qtutei one of their poets for this saying.

Stillin►►fleet.

He, that has but ever so little examined the citations of writers, cannot doubt how little credit the quotations deserve, where the originals are wanting.

Locke.

He ranged ,his tropes, and preached up patience, Backed his opinion with quotations. Prior.

He quoted texts right upon our Saviour, though he expounded them wrong. Atterbtiry.

I proposed this passage entire, to take off the disguise which its quoter put upon it. Id.

He will, in the middle of a session, quote passages out of Plato and Pindar. Swift's Miscellanies.

Some fos renown on scraps of learning dote, And think they grow immortal as they quote, To patchwork learned quotations are allied, Both strive to make our poverty our pride. Young.

Quotation, sir, is a good thing ; there is a community ot mind in it : classical quotation is the parole of literary men all over the world. Johnton.

QUOTH, verb imperfect. The only part of Sax. cpoSan ; Teut. queden, to say, retained in English, and now only used in ludicrous language. It is used by Sidney irregularly in the second person. Quoth I, means, say I, or said I : quoth lie, says he, or said he.

Enjoying, quuth you. Sidney.

Shall we, quoth he, so basely brook This paltry ass 1 Hudibras.

QUOTID'IAN, adj. & n. s. Fr. quotidien ; Lat. quotidianus. Daily ; happening every day ; a fever returning daily.

If I could meet that fancymonger, I would give

him counsel ; fo he seems to have the quotidian ft love. Shakspeart.

Quotidian things, and equidistant hence

Shut him for man in one circumference. Donne.

"Nor was this a short fit of shaking, as an ague, but a quotidian fever, always increasing to higher inflammation. King Charlet.

QUOTIENT, n. s. French quotient ; Latin quoties. The resulting sura in division.

In arithmetick, quotient is the number produced by the division of the two given numbers the one by the other. Cocker.

To make all the steps belonging to the same pair of stairs of an equal height, they consider the height of the room in feet and inches, ard multiply the feet by twelve, whose product, with the number of odd inches, gives the sum of the whole height in inches, which sum they divide by the number of steps they intend to have in that height, and the quotient shall be the number of inches and parts that each step shall be high. Moxon.

QUO-WARRANTO, in law, a writ which lies against a person or corporation that usurps any franchise or liberty against the king, in order to oblige them to show by what right and title he claims such franchise. This writ also lies for misuser or non-user of privileges granted. The attorney-general may exhibit a quo-warranto in the crown office against any particular persons, or bodies politic or corporate, who use any franchise or privilege without having a legal grant or prescription for the same ; and a judgment obtained upon it is final, as being a writ of right.

R.

R is called the canine letter, because it is uttered with some

resemblance to the growl or snarl of a cur ; it has one constant sound in English ; as, red, rose, more, muriatic ; in words derived from the Greek, it is followed by an h, as rhapsody : r is never mute, unless the second r may be accounted mute, where two are used ; as myrrh. R is a liquid consonant, being the seventeenth letter of our alphabet. Its sound is formed by a guttural extrusion of the breath vibrated through the mouth, with a sort of quivering motion of the tongue, drawn from the teeth and canulated with the tip a little elevated towards the palate. When not aspirated, it is always followed by a vowel at the beginning of words and syllables. R would seem to have a softer sound among the ancient Romans than among us, by its being frequently interposed to prevent the clashing of vowels ; as in rarus, opaioc, nurus from woe, mu-r►►x from nva$, mus muris from five Mvoc > f►►r Hetrusci they frequently wrote Thusci, and even Tusci ; and for sursum susum ; prorsus, prosus. In fact there was that similarity between the sound of the s and r, that, as the Romans avoided the doubling of their consonants, they dropped the r in such words ; the s supplying the place of both. Hence too it came to pass that, what they at first pronounced asa, asena, casmen, was afterwards ara, arena, carmen ; and those first

named Fusii and Valesii were afterwards called Furii and Valerii. Cicero tells us, the Papirii were first called Papisii ; and even fixes the time when the change was made, *viz.* in the year of Rome 415.

From the same softness of the sound of the r, it came to be used indifferently with the *, in many words; e. gr. Latiarius and Latialis, Palilia and Parilia, &c. ; but it still more frequently degenerated into* ; thus remures became changed into lemures ; interlego, perluceo, into intelligo and pelluceo; frater into fratellus, &c. As an abbreviation, in the notes of the ancients, R. or RO.‘signifies Roma ; R. C. Romana civitas. See ABBREVIATION. In the prescriptions of physicians, R. stands for recipe, i. e. take. As a numeral, R anciently stood for eighty ; and with a dash over it, thus R, for 80,000 ; but the Greek p , with a small mark over it, signified 100; with the same mark under it denoted 1000 X 100; thus’p, signified 100,000. In the He-brew numeration 1 denoted 200 ; and with two

horizontal points over it 1000 X 200; thus 1

=. 200,000.

RAAB, a country of Hungary, on the Danube and Raab rivers, has an area of 600 square miles, with 78,000 inhabitants, of whom about 1000 are Jews. It contains a number of hills, on whitu

vines are the culture, and produces corn and pasturage.

KAAB, GYOR, or Nagy-Gyor, the capital, is a considerable town, situated in a fine plain, and nearly surrounded by the Danube, the Raab,and the Rabnitz. It is fortified by nature and art ; and has a large glacis and open space between the town and the suburbs. Most of the houses are of stone, and some of them very handsome. It is a bishop's see, and contains 11,000 inhabitants. The chief manufacture is cutlery, particularly knives and swords. A theological academy was erected here in 1750 ; here also the Lutherans have a college. Raab was a place of strength in the time of the Romans ; but the present fortifications are modern. In the sixteenth and seventeenth centuries, when the Turks advanced into Hungary, it fell for a time into their hands and sustained a siege of some length from the French in 1809. Thirty-eight miles S. S. E. of Presburg, and sixty-six E. S. E. of Vienna.

RAAMSES, an ancient town of Egypt, said to have been built in the time of Joseph's ministry, as one of Pharaoh's storehouses.

RAASAY, or RAAZA, one of the Hebrides, lying between the mainland of Scotland and Skye, from which it is separated by a narrow sound. It is a rough, rocky, and indifferently fruitful island, with bold and dangerous shores, fifteen miles long by about two broad, and containing thirty-one square miles and a half. The west coast rises to a great height above the sea. Near the south end of it is Dunlan, a lofty hill, whence many rivulets descend.

RABATE', v. n. ~\ Fr. rabattre, rabat, RABA'TO, n. s. \rabater; Ital.

rabato.

RAB’BT,T, v. a. & n. s. j To reduce ; bring down ; particularly to bring down or recover a hawk to the fist : the rabato is the old folding down collar of a shirt or shift : to rabbet, among carpenters, is to reduce or pare down wood so as to make a joint ; and as a noun substantive the joint so made. In ship-carpentry, it signifies the letting in of the planks of the ship into the keel. I think your other rabato were better. Shakspeare.

They set the rabbets of the door within the rabbets of the door post. Moxen.

RAB’BI, n. s. \ Heb. ‘3”>. A doctor among RAB’BIN. S the Jews.

Be not ye called rabbi ; for one is your master, even Christ, and all ye are brethren.

Hat. xxiii. 18.

The Hebrew rabbins say that nature hath given rnan, for the pronouncing of all letters, the lips, the teeth, the tongue, the palate, and throat.

Camdens Remains.

RABBIN, or RABBI, was a title which the doctors of the law an;ong the Jews assumed, and literally signifies masters or excellents. There ###were several gradations before they arrived at the dignity of a rabbin ; which was not conferred till they had acquired the piofoundest knowledge of the law and the traditions. It does not, however, appear that there was any fixed age or previous examination necessary ; but when a man had distinguished himself by his skill in the v/ritten and oral law, and parsed through the

subordinate degrees, he was saluted a rabbin by the public voice. Among the modern Jews, the learned men retain no other title than that of rabbi or rabbins ; they have great respect paid them, have the first places or seats in their synagogues, determine all matters of controversy, and frequently pronounce upon civil affairs : they have even power to excommunicate the disobedient.

RABBINISTS, among the modern Jews, an appellation given to the doctrine of the rabbins concerning traditions, in opposition to the

Caraites; who reject all traditions. See KARA-ITES.

RAB'BIT, n. s. Belg. robbe; Swed. rof '; of Goth, rauf (also a pole). An animal that lives on plants, and burrows in the ground.

I knew a wench married, as she went to the gar-den for parsley to stuff a rabbit, Shalupeare.

A company of scholars going to catch conies, carried one with them which had not much wit, and gave in charge that, if he saw any, he should be silent for fear of scaring of them ; but he no sooner espied a company of rabbits, but he cried aloud, ecce multi cuniculi ; which he had no sooner said, but the conies ran to their burrows ; and he, being checked by them for it, answered, Who would have thought that the rabbits understood Latin ? Bacon.

RABBIT, in zoology. See LEPTJS. The buck rabbits will kill the young ones if they can get at them; and the does in the warrens prevent this by covering their stocks, or nests, with gravel or earth, which they close so artificially up with the hinder part of their bodies,v'that it is hard to find them out. They never suckle their young ones at any other time than early in the morning, and late at night : and always, for eight or ten days, close up the hole at the mouth of the nest, in this careful manner when they go out. After this they begin to leave a small opening, which they increase by degrees; till at length, when they are about three weeks old, the mouth of the hole is left wholly open that they may go out, as they are then big enough to take care of themselves. Those who keep rabbits, breed them in hutches; but these must be kept very neat and clean, else they will be always subject to diseases. Care must be taken also to keep the bucks and does apart till the latter have just kindled; when they are to be turned to the bucks. In choosing tame rabbits, pick the largest and fairest ; particularly the silvered -hair-ed ones, which sell better than any other. Their food may be colewort and cabbage leaves, car-rots, parsnips, apple rinds, green corn, and vetches ; also vine leaves, grass, fruits, oats, and oatmeal, milk thistles, sow thistles, and the like; but with these moist foods they must have a proportionable quantity of dry food, as hay, bread, oats, bran, &c., else they will grow pot-bellied, and die. Bran and grains mixed together are proper. In winter they will eat hay, oats, and chaff, and these may be given them three times a day ; but, when they eat green things, they must not drink at all, else they will fall into a dropsy. At all other times little drink may be allowed, but it must always be fresh. When any green herbs or grass are cut for their food, care must be taken that there be no hemlock among it ; as

it Is poison to them. Rabbits aie subject to two diseases; 1st, the rot, which is caused by too large a quantity of greens, or from giving them fresh gathered and wet with dew or rain. The greens therefore are always to be given dry ; and a sufficient quantity of dry food mixed with them : the best food is the shortest and sweetest hay that can be got, of which one load will serve 200 couples a year ; and, out of this stock of 200, 200 may be eaten in the family, 200 sold, and a sufficient number kept for breeding. The other disease is a sort of madness : this may be known by their wallowing and tumbling about with their heels upwards, and hopping in any odd manner into their boxes. This distemper is supposed to be owing to the rankness of their feeding ; and the general cure is the keeping them low, and giving them the prickly herb called tare-thistle to eat. The general computation of males and females is, that one buck rabbit will serve for nine does ; some allow ten to one buck. The wild rabbits are either to be taken by small cur dogs, or by spaniels bred up to the sport ; and the places of hunting those who straggle from their burrows is under close hedges or bushes, or among corn fields and fresh pastures. The owners use to course them with small greyhounds. The common method is by nets called purse nets, and ferrets. The ferret is sent into the hole to fetch them out ; but the purse net, being spread over the hole, takes them as they come out. The ferret's mouth must be muffled, and then the rab-bit gets no harm. A hay net or two may also be put up at a small distance from the burrows that are to be hunted; thus very few will escape. Some who have not ferrets smoke the rabbits out of their holes with burning brimstone and orpiment ; but this is very detrimental to the place, as no rabbit will for a long time afterwards come near it. See WARREN.

RAB'BLE, n. s. (Lat. rabula; barb. Lat.

RAB'BLEMENT. Srabulari; French racaille ; Belg. rapalje, rabbelan. A

tumultuous crowd ; an assembly of low people ; both nouns are thus applied.

A rude rabblement,

Whose like he never saw, he durst not bide, But got his ready steed, and fast away ‘gan ride,

Spenser.

Countrymen will ye relent and yield to mercy, Or let a rabble lead ye to youi deaths 1 Shakrpeare.

Go bring the rabble here to this place. ‘ Id.

The rabblement hooted, clapped their chopt hands, aud uttered a deal of stinking breath. Id.

Of these his several ravishments, betrayings, and stealing away of men’s wives, came in all those ancient fables, and all that rabble of Grecian forgeries.

Raleigh.

There will be always tyrants, murderers, thieves, traitors, and other of the same rabblement. Camden.

There is a rabble amongst the gentry, as well as the commonalty, a sort of plebeian heads, whose faucy moves with the same wheel as these men.

Sir T. Browne.

The better sort ahiors scurrility, And often censures what the rabble like. Roscommon.

That profane, atheistical, epicurean rabble, whom the whole nation so rings of, are not the wisest men :n the world. Souih.

To gratify the barbarous audience, 1 gave them a short rabble scene, because the mob are represented b/

Plutarch and Polybius with the same characters 01 baseness and cowardice. Dryden.

His enemies have only been able to make ill impressions upon the low and ignorant rabble, and to put the dregs of the people in a ferment.

Addison's Freehold es.

RABELAIS (Francis), a French writer of the sixteenth century, was born at Chinon, in Tou-raine about 1483. He was first a Franciscan friar, but quitting his religious habit studied phy-sic at Montpelier, where he took his degree of M. D. Some time after he came to Rome as physician in ordinary to cardinal John du Bel-lay, archbishop of Paris. On a second journey to Rome, he obtained, in 1536, a brief to qualify him for holding ecclesiastical benefices ; and, by the interest of cardinal Du Bellay, was received as a canon in the abbey of St. Maur, near Paris. His knowledge in physic rendered him doubly useful ; but, as he was a man of wit and humor, many ridiculous things are reported of him. He published several works; but his chief performance is a strange incoherent romance, called the History of Gargantua and Pantagruel, a satire. He died about 1553.

RAB'ID,ac?;. Lat. rabidus. Fierce; furious; mad.

A woman had her coat torn by a mad dog, which she a considerable time after sewed up, and bit off the thread with her teeth, and some time after died rabid from biting off that thread. (Hildanus Obs. Chir.) Also a man only kissing his children to take his leave of them when he had the rabies upon him, they all soon after died rabid.

Diseases of Barbadoes, p. 249.

RABIRIUS (Caius), a Roman knight, who lent an immense sum of money to Ptolemy Auletes, king of Egypt. The monarch afterwards not only refused to repay him, but confined him, and endangered his life. Rabirius escaped from Egypˆwith difficulty ; but, on his return to Rome, he was accused by the senate of having lent mo-ney to an African prince for unlawful purposes. He was ably defended by Ck-ero, and acquitted with difficulty.

RABIRIUS, a Roman poet in the age of Augustus. He wrote a poem on the victory over An-tony at Actium. Seneca has compared him to Virgil for elegance and majesty ; but Quintiliau does not speak so favorably of him.

RABIRIUS, an architect in the reign of Domitian. He built a celebrated palace for the emperor, of which the ruins are still seen at Rome.

RABNABAD, a low island in the bay ot Bengal, formed by the debris of

the river Ganges, and separated from the mainland by a narrow strait. It is fifteen miles in length, by five in breadth, and is covered with long grass and un-derwood, the habitation of deer and tigers. It is nearly inundated during the spring tides ; and is not inhabited. Long. 90►► 26' E., lat. 22►► N.

RACE,?i.s. Fr. race; Span, rafa; Ital. razza, of Lat. radix, a root. A family ; course of generations ; particular breed : also used for a taste of the root ; hence a strong taste or flavor. See the extract from Temple, and RACY.

A race of youthful and unhandled colts, Fetching mad bounds.

Shakspeare. Merchant of Venice

The race of mules, fit for the plough is bred.

Chajyman.

Of gardens there may be forms wholly irregular, that may have more beauty than of others ; but they must owe it to some extraordinary dispositions of na-ture in the seat, or some great race of fancy or judgment in contrivance. Temple.

He in a moment will create Another world ; out of man, a race Of men innumerable, there to dwell. Milton.

Male he created thee, but thy consort Female for race. Id.

Instead

Of spirits malign, a better race to bring Into their vacant room. Id.

High as the mother of the gods in place, And proud like her of an immortal race.

Dry den.

Hence the long race of Alban fathers come. Id. In the races of mankind, and families of the world, there remains not to one above another the least pretence to have the right of inheritance. Locke.

If they are all debased and willing slaves, The young but breathing to grow grey in bondage, And the old sinking to ignoble graves, Of such a race no matter who is king. Murphy.

RACE, n. s. & v. n. } Sax.riasf ; Goth. Swed. RACE'-HORSE, > and Isl. ras, of ram, ren—

RA'CER. j na, to run. ••• Thomson.

Contest in running; match between running animals ; course on the feet ; progress ; train : to run in a race: a race-horse or racer is a horse thus used : the latter is also applied to any ani-mal that runs a race.

It suddenly fell from an excess of favour, which many example have taught them never stopt his race till it came to a headlong overthrow. Sidney.

The flight of many birds is swifter than the race of many beasts. Bacon.

An offensive war is made, which is unjust in the aggressor ; the prosecution and race of the war car-neth the defendant to invade the ancient patrimony of the first aggressor, who is now turned defendant ; shall he sit down, and not put himself in defence?

Id.

The race of this war fell upon the loss of Urbin, which he reobtained. Id.

To describe races and games Of lilting furniture. Milton.

My race of glory run, and race of shame. Id.

The great light of day yet wants to run Much of his race though steep. Id.

The reason Hudibras gives, why those who can talk on trifles speak

with the greatest fluency, is, that the tongue is like a race-horse, which runs the faster the less weight it carries. Addiion.

Stand forth ye champions, who the gauntlet wield, Or you, the swiftest racers of the field ; Stand forth, ye wrestlers, who these pastimes grace, I wield the gauntlet, and I run the race. Pope.

A poet's foitn she placed before their eyes, And bad the nimblest racer seize the prize. Id.

He safe returned, the race of glory past, New to his friends' embrace. Id. Odyssey.

For every horse, mare, or gelding, bona fide, kept for the purpose of racing or running for any plate, prize, or sum of money, or other thing, or kept in training for any of the said purposes, whether in the stables of the proprietor or proprietors, or of any other person or persons, the sum of 21. 8s.

45 Geo. III. c. 13.

A poet hurts himself by writing prose, as a race-horse hurts his motions by condescending to draw in * team. Shenstone.

Away went Gilpin ××× who but he ? His fame soon spread around, He carries weight ! he rides a race ! 'Tis for a thousand pound ! Cowjw.

RACE, in general, signifies running with others in order to obtain a prize, either on foot, or on horseback, in chariots, &c. The race was one of the exercises among the ancient Grecian games, which was performed in a course containing 125 paces ; and those who contended in these foot races were frequently clothed in armour. Chariot and horse races also made a part of these ancient games. Races were known in England in very early times. Fitz-Stephen, who wrote in the days of Henry II., mentions the great delight that the citizens of London took in the diversion, from a generous emulation of showing superior skill in horsemanship. Races appear to have been in vogue in the reign of queen Elizabeth, and to have been carried to such excess as to in-jure the fortunes of the nobility, though it is probable that the parsimonious queen did not approve of it. In king James's reign places were allotted far the sport : Croydon in the south, and Garterly in Yorkshire, were celebrated courses. Camden also says, that in 1607 there were races near York, and the prize was a little

golden bell. RACE-HORSES. In preparing the race-horse for running, it is first necessary to examine whether he be low or high in flesh ; and whether he be dull and heavy, or brisk and lively abroad. If he appear dull and heavy, and there is reason to suppose it is owing to too hard riding, or, as the jockeys express it, to some grease that has been dissolved in hunting, and has not been removed by scouring, then the proper remedy is half an ounce of diapente given in a pint of good sack ; this will at once remove the cause, and revive the animal's spirits. After this, for the first week, he is fed with oats, bread, and split beans; giv-ing him sometimes the one, and sometimes the other as he likes best; and always leaving some in the locker, that he may feed at leisure when left alone. When the groom returns at the feeding time, whatever is left of this must be removed and fresh given ; thus he will soon become high spirited, wanton, and playful. Every day he must be rode out an airing, and every other day it will be proper to give him a little more exercise ; but not so much as to make him sweat much. The beans and oats in this case are to be put into a bag, and beaten till the hulls are all off, and then winnowed clean ; and the bread is to have the crust clean cut off. If the horse be in good flesh and spirits when taken up for its month's preparation, the diapente must be omitted ; and the chief business will be to give him good food, and so much exercise as will keep him in wind, without oversweating him or exhausting his spirit. When he takes large exercises afterwards, towards the end of the month, it will be proper to have some horses in the place to run against him. This will put him upon his mettle, and the beating them will give him spirits. This, however, is to be cautiously observed, that he has not a bloody heat given him for ten days or a fortnight before the plate is to be run for ; and that the last heat that is given him the day before the race, must be in his clothes : this

will make him run with much more vigor when stripped for the race,

and feeling the cold wind on every part. In the second week he should have the same food, and more exercise. In the last fortnight he must have dried oats, that have been hulled by beating. After this they are to be wetted in a quantity of whites of eggs, beaten up, and then laid out in the sun to dry ; and when dry, as before, the horse is to have them. This sort of food is very light of digestion, and very good for his wind. The beans this time should be given more sparingly, and the bread should be made of three parts wheat and one part beans. If he should become costive under this course, he must then have some ale and whites of eggs beaten together ; this will cool him, and keep his body moist. In the 'ast week the mash is to be omitted, and barley water given him in its place : every day, till the day before the race, he should have his fill of hay ; then he must have it given him more sparingly, that he may have time to digest it; and in the morning of the race-day he must have a toast or two of white bread soaked in sack, and the same just before he is let out to the field. This is an excellent method, because the two extremes of fulness and fasting are at this time to be equally avoided; the one hurting his wind, and the other occasioning faintness. After he has had his food, the litter is to be shaken up, and the stable kept quiet, that he may be disturbed by nothing till he is taken out to run.

The amusement of horse-racing gradually obtained its present celebrity. In 1599 private matches between gentlemen, who were their own jockeys and riders, were very common ; and, in the reign of James I., public races were established at various places, when the discipline and mode of preparing the horses for running, &c., were much the same as now. The most celebrated races of that time were called bell courses, the prize of the conqueror being a bell : hence, perhaps, the phrase of bearing the bell, applied to excellence. In the end of Charles I.'s reign, races were performed in Hyde Park. Newmarket was also a place for the same purpose, though it was first used for hunting. Racing was revived soon after the Restoration, and much encouraged by Chartes II., who appointed races for his own amusement at Datchet Mead, when he resided at Windsor. Newmarket, however, became the principal place. The king attended in person, established a house for his own accommodation, and entered horses in his own name. Instead of bells, he-gave a silver bowl or cup, value 100 guineas; on which prize the exploits and pedigree of the successful horse were generally engraved. William III. added to the plates, and founded an academy for riding: and queen Anne continued the bounty, adding several plates herself. George I., towards the end of his reign, discontinued the plates, and gave in their room 100 guineas. An act was passed in the 13th of George II. for suppressing races by

ponies and other small and weak horses, &c., by which all matches for any prize under the value of ––50 are prohibited, under a penalty of ––200 to be paid by the owner of each horse running, and ––100 by such as advertise the plate; and by

which each horse entered to run, if five years old, is obliged to carry ten stone ; if six, eleven; and if seven, twelve. It was also ordained that no person shall run any horse at a course, unless it be his own, nor enter more than one horse for the same plate, upon pain of forfeiting the horses; and also every horse-race must be begun and ended in the same day. Horses may run for the value of ––50 with any weight, and at any place: 13 Geo. II. cap. 19 ; 18 Geo. II. cap. 34. Be-renger's History and Art of Horsemanship. A plaintiff shall not be allowed to recover a wa-ger on such a horse-race as is illegal within the statute. 4 Term. Rep. 1. A match for ––25 a side is a match for ––50.

RACEMATION,K.s. Lat. racemus. Cluster, like that of grapes.

A cock will in one day fertilitate the whole racemotion or cluster of eggs, which are not excluded in many weeks after. Browne.

RACHORE, a district of Hindostan in the province of Bejapore. It is bounded on the north by the Ristnah, and on the south by the Tung-budra, and is extremely fertile. Its chief towns are Rachore and Anamsagur.

RACINE (John), of the French academy, treasurer of Moulins, and secretary to Louis XIV., was born at Ferre-Milon in 1639. He produced his Thebaide when very young ; and afterwards other pieces, which met with great success, though they appeared when Corneille was in his highest reputation. In his career, however, he did not fail to meet with opposition from envy and cabal. Owing to chagrin from this circumstance, and partly, it is said, from religious motives, he resolved to quit the theatre for ever, in his thirty-eighth year; he even formed a design of becoming a Carthusian friar, but at last married the daughter of the treasurer of Amiens, by whom he had seven children. He had been admitted a member of the French academy in 1673, and in 1677 he was nominated with Boileau, with whom he was ever in strict friendship, to write the history of Louis XIV. Boileau and Racine, after having for some time labored at this work, perceived that history was not their fort, and Racine spent the latter years of his life in composing an account of the house of Porl-royal, the place of his education ; which, though well drawn up, has not been published.

Having drawn up a memorial upon the miseries of the people, and the means of relieving them, he one day lent it to madame de Maintenon, when the king, coming in, commended the zeal of Racine, but disapproved of his meddling with things that did not concern him. The king's displeasure is said to have so mortified the poet that it brought on a fever, of which he died the 22d of April, 1699. The king sent often to him in his illness ; and after his death settled a handsome pension upon his family. ??? There is nothing in the French language written with more wit and elegance than his pieces in prose; and, besides his plays, several of his letters have been published. Racine's works were printed at Amsterdam in 1722, in 2 vols. 12mo., and a pompous edition was printed in 2 vols. 4to., in 1723.

RA'CINESS, n. s. From racy. The quality of being racy.

His images and descriptions of the scenes or operations of nature do not seem to be always copied from original form, nor to have the freshness, raciness, and energy of immediate observation. Johnson.

RACK, n.s., v. a. &cv.n.ˆ Belg. rakke, from RACK'-RENT, n. s.
>rekken, to extend,

RACK'-RENTER. j draw out, stretch ;

Goth, reckia. An engine of torture by stretching the limbs; any instrument of extension; a trail of clouds as driven by the wind : Shakspeare uses it for wreck : torment ; torture : to rack is to stream or extend out as clouds before the wind; to torment by the rack; torment in any way; screw; force; extend; defecate or draw off from the lees : rackrent is rent stretched to the utmost : rackrenter, he who pays it.

The landlords there shamefully rack their tenants, exacting of them, besides his covenants, what he pleaseth. Spenser.

They, racking and stretching Scripture further than by God was meant, are drawn into sundry inconveniences. Hooker.

Vex not his ghost ; O let him pass ! he hates him That would upon the rack of this rough world Stretch him out longer. Shakspeare. King Lear.

The great globe itself, Yea, all which it inherits, shall dissolve ; And, like this insubstantial pageant, faded, Leave not a rack behind. Id. Tempest.

We often see against some storm, A silence in the heavens, the rack stand still, The bold winds speechless, and the orb below As hush as death. Id. Hamlet.

Three giorious suns, each one a perfect sun, Not separated with the racking clouds, But severed in a pale clear-shining sky.

Shakspeare.

The winds in the upper region, which move the clouds above, which we call the rack, and are not perceived below, pass without noise. Bacon.

It is common to draw wine or beer from the lees, which we call racking, whereby it will clarify much sooner. Id.

Did ever any man upon the rack afflict himself, because he had received a cross answer from his mistress ? Taylor.

These bows, being somewhat like the long bows in use amongst us, were bent only by a man's immediate strength, without the help of any bender or rack that are used to others. Wilkins.

A fit of the stone puts a king to the rack, and makes him as miserable as it does the meanest subject. Temple.

The sisters turn the wheel, Empty the woolly, rack, and fill the reel.

Dry den.

As wintery winds contending in the sky, With equal force of lungs their titles try ; They rage, they roar : the doubtful rack of heaven Stands without motion, and the tide undiiven. I<l.

Let them feel the whip, the sword, the fire, And in the tortures of the rack expire. Id.

He took possession of his just estate, Nor racked his tenants with increase of rent. Id.

Hold, O dreadful sir, You would not rack an innocent old man.

Id. and Lee.

Unhappy most like tortured me, Their joints new set to be new racked again.

Cvwley.

The' apostate angel, though in pain, Vaunting aloud, but racked with deep despair.

Milton .

The wisest among the heathens racked their wits, and cast about every way, managing every little argument to the utmost advantage.

Tillotson's Sermons.

Though this be a quarter of his yearly income, and the publick tax takes away one hundred, yet this influences not the yearly rent of the land, which the rackrentei or undertenant pays. Locke.

Some roll their cask about the cellar to mix it with the lees, and, after a few days resettlement, rack it off. Mortimer.

It was worth the while for the adversary to rack invention, and to call in all the succours of learning and critical skill to assail them, if possible, and to wrest them out of our hands. Waterlund.

Have poor families been ruined by rackrents, paid for the lands of the church ?

Swift's Sfiscellaniet.

RACK, n. s. Sax. pftacca pruc ; Goth, rygg, the back-bone ; Gr. paˆic (s►►e RIDGE). Hence formerly a neck of mutton cut for the table ; and (probably from its similarity of shape) the grate in which hay is placed for cattle, or on which bacon is dried : others derive this last

word from Belg. rak; Swed. racke, range. See RANGE.

Their bulls they send to pastures far, Or hill, or feed them at full racks within.

May's Virgil.

The best way to feed cattle with it is to put it in racks, because of the great quantity they tread down.

Mortimer. He bid the nimble hours

Bring forth the steeds ; the nimble hours obey :

From their full racks the generous steeds retire.

Addison.

The RACK is an instrument of torture, fur* nished with pulleys, cords, &c., for extorting confession from criminals. The trial by rack is utterly unknown to the law of England ; though once, when the dukes of Exeter and Suffolk, and other ministers of Henry VI. had laid a design to introduce the civil law into this kingdom as the rule of government ; for a beginning they erected a rack for torture, which was called in derision the duke of Exeter's daughter, and still remains in the tower of London, where it was occasionally used as an engine of the state not of the law, more than once in the reign of queen Elizabeth. But when, upon the assassination of Villiers, duke of Buckingham, by Felton, it was proposed in the privy council to put the assassin to the rack, to discover his accomplices; the judges, being consulted, however, declared unanimously, to their own honor and that of the law, that no such proceeding was allowable by the laws of England. The marquis Beccaria (chap. 16) has proposed this problem, with a .gravity and precision truly mathematical : ' The force of the muscles, and the sensibility of the nerves of an innocent person being given, it is required to find the degree of pain necessary to make him confess himself guilty of a given crime?'

RACK, a spirituous liquor made by the Tartars of Tongusia. This kind of rack is made of mare's milk, which is left to be sour, and afterwards distilled twice or thrice between two earthen pots closely stopped ; whence the liquor runs through a small wooden pipe.

RACK. (Edmund), a celebrated writer on agriculture, was born in Norfolk, and a Quaker. lie

wrote many essays, poems, and letters, and some controversial tracts. He settled, about his fortieth year, at Bath in 1775, and was soon introduced to the most eminent literati of that place, among whom Dr. Wilson and Mrs. Macauley highly esteemed him for his integrity and abili-lities. In 1777 he published Mentor's Letters, a work which has run through many editions ; and laid the plan of an agricultural society, which was soon adopted by four counties. He still further advanced his fame by his papers in the Farmer's Magazine, and his communications to the Bath Society's papers. His last engagement was in the History of Somersetshire, where he wrote the topographical parochial surveys. This work, in 3 vols. 4to., was published in 1791, by his colleague the Rer. Mr. Collinson. Mr. Rack died of an asthma in February 1787, aged fifty-two.

RACKET, n. s. Fr. raquetta ; Teut. racket ; Ital. racchetta. The instrument with which a ball is struck at tennis : the noise of a racket-court ; hence any loud irregular noise.

That the tennis-court keeper knows better than I it is a low ebb of linen with thee, when thou keepest not racket there. Stukspeare.

When we have matcht our rackets to these balls, We will in France play a set, Shall strike his father's crown into the hazard. Id.

The body into which impression is made, either can yield backward or it cannot : if it can yield backward, then the impression made is a motion ; as we see a stroke with a racket upon a ball makes it fly from it. Digby on the Soul.

He talks much of the motives to do and forbear, how they determine a reasonable man, as if he were no more than a tennis-ball, to be tossed to and fro by the rackets of the second causes.

Bramhall against Hobbes.

Ambition hath removed her lodging, and lives the next door to faction, where they keep such a racket that the whole parish is disturbed and every night in an uproar. Swift.

RAC'KOON, n. s. Or racoon. A species of URSUS, which see.

The racoon is a New England animal, like a bad-ger, having a tail like a fox, being cloathed with a thick and deep fur : it sleeps in the day time in a hollow tree, and goes out a-nights, when the moon shines, to feed on the sea side, where it is hunted by dogs-Bailey.

RACONIGI, or RACONIS, a town of Piedmont, Italy, in the province of Saluzzo, on the river Grana, near its junction with the Maira. It is surrounded with a wall, and contains several good churches, but its chief ornament is a magnificent castle and park belonging to the prince of Carignano. Population 10,500, employed for the most part in the manufacture of silk. Ten miles south of Carignano, and twenty south of Turin.

RACOON, in zoology. See URSUS.

RA'CY, adj. Of RACE, a root, which see. Strongly flavored ; tasting strongly of the root.

Rich racy verses in which we The soil, from which they come, taste, smell, and see.

Cowley.

From his brain that Helicon distil,

Whose racy liquor did his offspring fill.

i_ Denftam.

The cyder at first is very luscious, but, if ground more early, it is more racy. Mortimer's Husbandry.

The hospitable sage, in sign Of social welcome, mixed the raci/ wine, Late from the mellowing cask restored to light, By ten long years refined, and rosy bright. Pope. RADCLIFFE (Dr. John), an eminent English physician, born at Wakefield in Yorkshire in. 1650. He was educated at Oxford, but recommended himself more by his ready wit

and vivacity than by his acquisitions in learning. He began to practise at Oxford in 1675 ; but never paid any regard to established rules, which he censured with great acrimony ; and, as this drew all the old practitioners upon him, he lived in a continual state of hostility with them. Yet his reputation increased so much that, before he had been two years in business, his practice was very extensive among persons of high rank. In 1684 he removed to London, and settled in Bow Street, Covent Garden, where in less than a year he had the first practice. In 1687 the princess Anne of Denmark made him her physician ; yet, when she and her husband joined the prince of Orange, Radclitfe excused himself from attending them, on pretence of the multitude of his patients. Nevertheless he was often sent for to king William, and incurred censure for his treatment of queen Mary, who died of the small-pox ; and soon after lost his place about the princess Anne by his attachment to the bottle. He also totally lost the favor of king William by his un-courtly freedom. In 1699, when the king showed hirn his swollen ancles, while the rest of his body was emaciated, and asked him what he thought of them .' 'Why truly I would not have your majesty's two legs for your three kingdoms,' replied Radcliffe. He continued increasing in business and insolence as long as he lived, and was continually at war with his brethren the physicians ; who considered him in no other light than that of an active ingenious empiric. He died in 1714; and, if he never attempted to write any thing himself, has perpetuated his memory by founding a fine library at Oxford.

RADCMFFE (Ann), a modern female novelist, born in London, July 9th, 1764. Her father's name was Ward, and at the age of twenty-three she married William Radcliffe, esq., a student at law, which profession, however, he never followed, but became proprietor of the English Chronicle. Mrs. Radcliffe's first performance was a romance, entitled the Castles of Athlen and Dumblaine, and the next the Sicilian Romance; but the first of her works which attracted much attention was the Romance of the Forest, which was followed by the Mysteries of Udolpho, a very popular and well conceived tale. Her last work, the Italian, produced her, it is said, the sum of ––1500. Besides these works she published a quarto volume of Travels through Holland and along the Rhine, in 1793. Mrs. Radcliffe suffered much in the latter part of her life from asthma, of which she died in London, January 9th, 1823.

RADDOCK, or RUDDOCK, n.s. From red. A bird ; the red breast.

The raddock would With charitable bill bring thee all this. Shaktpeare.

RA’DIANCE, n. s. -x All of Lat. radio. Lus—

RA’DIANT, adj. i tre ; glitter of light : raRA’DIATE, v. n. ˆdiant is, shining; bril—

RA’DIATED, adj. i liant with rays ; emit—

RADIA’TION, n. s. J ting rays : to radiate, to

ohine ; emit rays ; sparkle : radiated, adorned

with rays, or emitting rays : radiation, emission

of rays ; emission from a centre ; beamy lustre.

By the sacred radiance of the sun, By all the operations of the orbs, Here I disclaim all my paternal care.

Shaktpeare.

There was a sun of gold radiant upon the top, and before, a small cherub of gold with wings displayed.

Bacon.

Sound paralleleth in many things with the light and radiation of things visible. Id. Natural History.

Should I say I lived darker than were true, Your radiation can all clouds subdue, But one : ‘tis best light to contemplate you. Donne.

The sun

Girt with omnipotence, with radiance crowned. Of majesty divine.

Milton.

1 see the warlike host of heaven, Radiant in glittering arms and beamy pride, Go forth to succour truth below. Id.

Whether there be not too high an apprehension above its natural radiancy, is not without just doubt ; however it be granted a very splendid gem, and whose sparkles may somewhat resemble the glances of fire. Broime's I'tttgar Errours.

Though with wit and parts their possessors could never engage God to send forth his light and his truth ; yet now that revelation hath disclosed them, and that he hath been pleased to make them radiate in his word, men may recollect those scattered divine beams, and, kindling with them the topics proper to warm our affections, enflame holy zeal. Boyle.

Light radiates from luminous bodies directly to our eyes, and thus we see the sun or a flame ; or it is reflected from other bodies, and thus we see a man or a picture. Locke.

A glory surpassing the sun in its greatest radiancy,

Burnet.

The radiated head of the phoenix gives us the

meaning of a passage in Ausonius. Addison.

RADICAL, adj. ~\ Fr. radical; Lat. radix.

RADICAL'ITY, n.s. Original; primitive; im—

RAD'ICALLY, adv. ˆplanted by nature ; it has

RAD'ICATE, v. a. ("lately been used also in

RADICA'TION, n. s. \ the sense of effectual;

RAD'ICLE. J penetrating to the root :

radicality is, origination: radically follows the

senses of radical: to radicate is to plant or

root firmly : radication, the act of taking root :

radicle, that part of the seed which becomes the

root.

The differences, which are secondary, and proceed from these radical differences, are, plants are all figu-rateand determinate, which inanimate bodies are not.

Bacon.

Meditation will radicate these seeds, fix the transient gleam of light and warmth, confirm resolutions of good, and give them a durable consistency in the soul. Hammond.

They that were to plant a church, were to deal with men of various inclinations, and of different nabits of sin, and degrees of radication of those habits ; and to each of these some proper application was to be made to cure their souls. Id.

If the radical moisture of gold were separated, it might be contrived to bum without being consumed.

Wilhlns.

If the object stays not on the sense, it makes not impression enough to be remembered ; but, if it be repeated there, it leaves plenty enough of those images behind it to strengthen the knowledge of the object : in which radicated knowledge, if the memory consist, there would be no need of reserving those atoms in the brain. Glanmlle't Defence.

There may be equivocal seeds and hermaphroditi-cal principles, that contain the radicality and power of different forms ; thus in the seeds of wheat there lieth obscurely the seminality of darnel.

Browne's Vulgar Errour*.

Nor have we let fall our pen upon discouragement of unbelief, from radicated beliefs, and points of high prescription. Browne,

These great orbs thus radically bright,

Primitive founts, and origins of light,

Enliven worlds denied to human sight. Prior.

Radicle is that part of the seed of a plant v hicb, upon its vegetation, becomes its root. Quincy.

The sunbeams render the humours hot, and dry up the radical moisture. Arbuthnot.

Such a radical truth, that God is, springing up together with the essence of the soul, and previous to all other thoughts, is not pretended to by religion.

Bentlfy.

RADICAL. That which is considered as con-stitituting the distinguishing part of an acid, by its union with the acidifying principle or oxygen, which is common to all acids. Thus, sulphur is the radical of the sulphuric and sulphurous acids. It is sometimes called the base of the acid, but base is a term of more extensive application.

RADISH, in botany. See RAPHANTJS.

RADIUS, in anatomy. See ANATOMY.

RADNOR, NEW, or Maesyfed-newyold, a borough and market-town, the chief town of Radnorshire, situated on the river Sommergill, at the narrow entrance of a pass between two high pointed hills, is twenty-four miles north-west from Hereford, and 156 W. N.W. from London. The town was formerly defended by a strong castle, which has been destroyed. Owen Giyn-dower, in the reign of Henry IV., nearly burnt the place to the ground ; and it now only consists of one irregularly built street. It was a borough by prescription, till the reign of queen Elizabeth, when a charter was granted it, with many privileges, together with a manor containing eleven townships, and a jurisdiction extending ten or twelve miles in circuit. The church stands on an eminence above the town, and is a very small edifice. The town-hall is a mean building. The corporation consists of a bailiff, twenty-five burgesses, Sec., and, jointly with Rhaiader and Knighton, sends one member to parliament, elected by about 300 voters. The borough has a court of pleas for all actions without limitation, but the assizes are held at Pres-teigne. In the neighbourhood is a cataract, caUed Water-break-neck, which precipitously descends into a va?t hollow, surrounded by craggy declivities. Market on Saturday. Fair October 18th. It is a rectory, value ►►13, Patron, the king.

RADNOR, OLD, or MAESYFED-HFN, a parish two miles south-east from New Radnor, and sometimes called Pen-y-craig, from its situ, ation on the summit of a rock. The church is a large stone building,

consisting of a nave and chancel.

RADNORSHIRE.

RADNORSHIRE, a county of the principality, derives its name from Radnor the county town, but is called by the Welsh Sir Vaes-ivid. It is an inland county of South Wales, bounded by Herefordshire and a part of Shropshire on the east ; by Brecknockshire on the south ; by the same county and part of Montgomeryshire and Shropshire on the north, and is twenty-four miles in length from east to west, twenty-two in breadth from north to south, and about ninety miles in circumference. Radnorshire is divided into six hundreds, and fifty-two parishes.

This county was in the time of the Romans part of the country of the Silures, and contains several barrows; most of the mountains have cairns or large heaps of stones, probably intended as memoiials of the dead. One of the most celebrated remains of antiquity in this county is part of ;a work called by the Welsh Rlawdh Offa, or Offa's Dyke, from its having been cut by Offa king of Mercia, as a boundary between the English Saxons and the ancient Britons. This dyke may be traced from the mouth of the Wye to that of the Dee, through the whole ex-tent of the county. We are told that king Harold made a law that whatever Welshman should be found armed on the east side of the dyke should have his right hand cut off. There are the ruins of several castles, particularly those of Kevn Lyks, and of Tinbod, which last stood on the summit of a hill, and was destroyed in the year 1260 by Llewelyn, prince of Wales. The only religious house in this county was at Combehire, where Cadwathelan ap Madoc in 1143 founded a Cistercian abbey, which was dedicated to St. Mary ; and, at the suppression of religious houses by Henry VIII., had a revenue of ––28 17*. 4d. per annum.

The principal river of this county is the Wye, which skirts it from north-west to south-east, constituting the boundary between Brecknockshire and Radnorshire. The first tributary flood of any consequence that attends on its stream is Clarwen, with Clargwy, receiving as they do the Elain into their united channels before they

join the Wye. ⬜⬜This latter river in its progress is increased by the Ithor, drawing along with it the Dulas, the Clywedoc, and Cymran, all of which rise in Radnorshire; as do Edwy and Machwy, the last contributions the Wye derives from this county. The train of rivers which at-tend it from the Brecknockshire side is not so productive of interesting scenery and speculations connected with the mythological antiquities of the principality. The north-eastern and central parts of the county likewise abound in forests, which were once consecrated by all the natural awe of religious institutions, and as some say, by all the fictitious terrors of craftily pretended enchantment, though time has left few if any remains of the machinery, by the mouldering fragments of which we are enabled in some other places to weigh the credulity of the disciples against the wit and ingenuity of the instructors. The eastern part of Radnorshire is upon the whole a fine and beautiful country. The Lug is on this side the principal river. It rises in the interior of the county, and quits it for Hereford-ire at Prestain. Afterwards at Lemster it takes

in the Arro, the source of which is likewise in Radnorshire. But the Lug is rather to be considered as a Herefordshire river, from its longer course through the north of that county, the superior plenteousness of its streams, and the many brooks it brings with it. Radnorshire, in a picturesque point of view, is generally considered as the least interesting of the Welsh counties. If this is to be understood as applying to it on the whole, it is undoubtedly true ; for both its grandeur and beauty are, with a few exceptions, confined to its western side, on a narrow edge of the Wye, opposite Brecknockshire, and to that north-western nook which touches upon the counties of Montgomery and Cardigan, and participates in the irrefragable majesty of their character. But Radnorshire, independently of the Wye, has insulated scenes which vie with any thing to be found in the whole compass of the district that surrounds it. We need only mention the dingle through which the Machwy runs, the vale of Edwy, and the beauties of Cwm Elain, or the vale of Does, to illustrate the truth of these assertions. In the two last especially are realised those apparent contrarieties of luxuriance and barrenness, sylvan decoration and leafless horror, the blended description of which, in works of fancy, we are apt to criticise as out of nature. They certainly are so for the most part ; and our poets, to say nothing of our painters, cannot easily be acquitted of dealing in them too profusely and indiscriminately. But they do exist as exceptions to a general rule, and here seem almost to introduce the traveller into fairy land; particularly if his spirits have become languid, and the elasticity of his expectations has been

slackened by toiling over the eastern division of the county, where his imagination is neither kept alive by what is grand, nor his speculation as a philosopher or economist excited by the improvements of science, working on the capabilities of nature.

The proportion of mountain to vale is probably less here than in any county of Wales, ex-cept Pembrokeshire ; and the quantity of land ir. cultivation, compared with that which is unbroken, is certainly greater than in most, on a fair estimate of their respective dimensions. The mountains of Radnorshire are for the most part low and broad crowned, so that they might be convertible to purposes of husbandry, if there was not already a larger proportion of ground in tillage than the confined knowledge and deficient activity of the natives can turn to a lucrative account. The appearance of the farms, therefore is in too many places impoverished and hungry t but this is injuriously attributed to nature ; for the most intelligent and experienced inhabitants aver the quality of the soil to be generally good, though its tendency to fertility is kept down by slovenly management, local prejudice, and indolent habits. The inhabitants can live as their fathers have lived before them, and they have no desire to live better. The consequence of an agricultural system so imperfect is, that they de-pend principally on their sheep, for the wool of > which they find a ready market at Lemster ; and this, rather than any intrinsic difference, is the reason whv the price of good land in the heart

of Radnorshire bears so very disproportionate a ###elation to the current price in the adjoining counties of Herefordshire and Shropshire. Cattle and sheep are such staple articles that the rate at which farms let is, very much governed by their possessing or not possessing right of mountain : and, as the best land for tillage in general is not that which lies contiguous to these black and barren mountains, this circumstance occasions the apparent absurdity, that

some of the best land in the county is let at a lower rent than some of the worst. Such discouragement to the occupation of the more even and fertile districts, arising from the difficulty of consulting the general interests of agriculture, without sacrificing local objects, to which long cherished opinions, confirmed by the experience of partial benefit, have attached importance, must continue to depress the improvement and consequent value of land be-low the average standard of the times, and of the country at large. But more extensive and unprejudiced views, a broader calculation of advantages and disadvantages, a less servile adherence to established maxims, and a less timid investigation of their merits, are making way, though slowly, in these regions.

The language of Radnorshire is almost universally English. In learning to converse with their Saxon neighbours, they have forgotten the use of their vernacular tongue. It is uncommon to meet with a peasant who understands Welsh, though it seems to have been generally spoken, even in the eastern parts of this county, so lately as the middle of the seventeenth century. The angle of the county beyond Rhayader, to the north-west, is however to be excepted, where the few scattered people speak nothing else. But the features and the character of this corner participate entirely in those of Cardiganshire ; and, when we recollect how near OfFa's Dyke approaches to this spot, we should perhaps rather wonder that the Welsh language has lost so little ground, and not been obliged to recede still farther. Nay, in the south-east part of the county, about Cly-row, Paine's Castle, and other places in that neighbourhood, even beyond Offa's Dyke, the Welsh language is still understood, and-all are able to speak it, though they decidedly affect the English. About Presteigu no native understands Welsh, but it is partially known to all or most in the places five or six miles to the westward. It may indeed be suspected that the people in the oast of Radnorshire are not Welshmen, who by vicinity and intermarriages have gradually changed their speech for one more fashionable, but that they are the direct descendants of the English Marches, who, with their rapacious followers, occupied the limits between England and Wales, and were pouring in upon the natives of the Welsh shires from Hereford, Shropshire, and the English part, on every slight pretence of licentiousness, disaffection, or danger. By these means they might have driven the aboriginal Britons still further into the mountainous districts, and have established themselves in their seats. Radnorshire sends two members to the imperial parliament, *viz.* one for the shire, and one for the town of Radnor, which gives the title of earl to the family of Pleydell-Bouverie, and the village VOL. XVI II

of Llandnndod the title of earl of March (deriyeo from the Marches in South Wales) to that o* Lennox.

RAE, an ancient and immense city of Persia, was formerly the capital of that country. Its ruins cover a vast extent of ground. They do not. however, present any remarkable objects ; for having, like other Persian cities, been composed merely of bricks dried in the sun, it has crumbled into dust, and presents now only the appearance of mounds or hillocks of sand, covered with lacquered tile. In the centre stands a village, called Sheikh Abdul Azzeem, from a son of the seventh Imara, to whose memory a noble mosque and mausoleum have been erected. Rae was destroyed by the Tartars under Zinges Khan.

RAFF, v. a. } Sax. jieapan ; Isl.

RAF'FLE, v. n. & n. s. J rifa ; Swed. rifeva ; barb. Lat. rejfare ; Fr. rafle. To rob ; sweep ; huddle up, or huddle away. Spenser uses the participle passive raff for torn ; rent : to raffle is to cast dice for a prize : as a noun substantive, a species of lottery of this description.

Their causes and effects I thus raff up together.

Carew.

Letters from Hamstead give me an account there is a late institution there, under the name of raffling shop. Taller.

The toy brought to Rome in the third triumph of Pompey, being a pair of tables for gaming, made of two precious stones, three foot broad, and four foot long, would have made a fine raffle.

Arbuthnot on Coin*.

RAFFAELLE. See RAPHAEL.

RAFFLES (Sir Thomas Stamford), LL.D., was the son of Benjamin Raffles, a captain in the West India trade, and born at sea in the ship Anne, off Port Morant in Jamaica, July 6th, 1781. His father placed him for education with Dr. Anderson, of Hammersmith, whence he removed to a clerkship in the India house. In 1805 the interest of Mr. secretary Ramsay procured him the situation of assistant secretary to the government of Pulo Penang, in the straits of Malacca, whither he accompanied governor Dun-das. He here applied himself to the study of the Malay language ; was soon after appointed Ma-lay translator to

the government; and, in 1807, became secretary to the council aud registrar of the recorder's court ; the following year he was compelled, by indisposition, to retire to Malacca. In 1810 his reputation procured him the appointment of agent of the governor-general with the Malay states ; and the following year, on the reduction of Batavia and Java, he was nominated lieutenant-governor of the latter. Here he continued till 1816, having, in the interval, brought the hostilities commenced against the native chiefs to a successful termination. In 1816 he returned to England, bringing with him a Javanese prince and a most extensive collection of speci mens of the productions, &c., of the Eastern archipelago. The year following appeared his History of Java, in two thick quartos, with plates. He again sailed from Falmouth in the winter of 1817, having been nominated to the residency ot Bencoolen in Sumatra, with the honor of knighthood 3na the lieutenant-governorship of Fort

Marlborough. On reaching his government, in March 1818, lie set himself forthwith to remedy many abuses, and did much towards carrying into effect the abolition of slavery. He also distinguished himself by his arrangements with the Dutch commissioners in the interest of the sultan of Palembang, and by the occupation of the is-land of Singapore. On his last visit to the is-land, in 1823, he laid the foundation of the An-glo-Chinese college, but in the following year the impaired state of his constitution induced him to return to Europe. With this view he embarked on board the Fame, on the 2d of February 1824; but a fire breaking out in the ship, on the evening of the same day, the vessel and property of his own to the amount of nearly ––30,000 with many valuable papers, were destroyed at sea ; the crew and passengers saving their lives with difficulty, and landing in a state of utter destitution, about fifteen miles from Bencoolen. Of this calamity an account remains, in a letter written by Sir Thomas to a friend in England, dated the day after the accident. In April his family embarked again on board the Mariner, which landed them in London, in August. Sir Thomas, however, survived his return not quite two years, dying of an apoplectic attack in July 1826. In addition to the work alluded to, he left behind him a memoir of Singapore, in MS. ; besides editing Finlayson's Mission to Siam, 8vo., and Dr. Leyden's Malay Annals.

RAFFLESIA, a gigantic flower, discovered not many years since in the island of Sumatra ; it is there very rare, is parasitical, growing on the Cissar Augustifolius. It seems to consist of little else than flower and root. It is dioecius, and the female flowers are unknown. The calyx or corolla consists of a ventricose tube, crowned with a ring, and divided at the sum-mit into five equal lobes. The stamens are very numerous. The stem, which hardly rises above the root, is fleshy arid covered

with very large obtuse imbricated bracts. The diameter of the flower is three feet, and some parts of the calyx or corolla are three quarters of an inch in thickness. No other flower in the vegetable kingdom approaches near to these dimentions. There is a second species of the same genus, with a much smaller flower.

RAFT, n. s. Dan. rafte ; Swed. “-afft ; Lat. rails. A float of timber. Where is that son That floated with thee on the fatal raft 1 Shakspeare.

RAFTS are formed by various planks of timber, fastened together side by side, so as to be conveyed more commodiously to any short distance in a harbour or road than if they were separate. The timber and planks with which merchant-ships are laden, in the different parts of the Baltic sea, are attached together in this manner, in order to float them down the rivers and off to the shipping.

RAF’TER, n. s. } Sax. ruepten ; Belg. raj

RAF’TERED, adj. i ter ; Goth, rceftra, or roof tree. The cross or secondary timber of a house : furnished with rafters.

From the east, a Belgian wind His hostile breath through the dry rafters sent ; The flames impelled. Dryden.

No raftered roofs with dance and tabor sound, No noontide bell invites the country round. Pope.

The roof began to mount aloft, Aloft rose every beam and rafter, The heavy wall climbed slowly after.

Swift’s Miscellanies.

RAFTERS, in building, are pieces of timber which, standing by pairs on the reason or railing piece, meet in an angle at the top, and form the roof of a building. See ARCHITECTURE.

RAG, n. s. ˆ Sax. ppac, pnacoˆe,

RAG’GED, adj. > torn ; Swed. raca ; Gr.

RAG’GEDNESS, n. s. j paicoc-A piece of cloth torn from the rest ; any thing torn or tattered ; mean dress : the adjective and other noun substantive corresponding : ragged is also used for uneven ; broken ;

rugged.

Worn like a cloth, Gnawn into rags by the devouring moth. Sandys.

Fathers that wear rags, Do make their children blind ;

But fathers that bear bags, Shall see their children kind.

Shakspeare. King Lear. That some whirlwind bear Unto a ragged, fearful, hanging rock, And throw it thence into the raging sea.

Shakspeare.

Poor naked wretches, wheresoe'er you are, That bide the pelting of this pitiless storm ! How shall your houseless heads and unfed sides, Your looped and windowed ruggedness defend you ?

Id.

They tooke from me

Both coate and cloake, and all things that might be Grace in my habit ; and, in place, put on These tattered rags. Chapman.

The earl of Warwick's ragged staff is yet to be seen pourtrayed in their church steeple. Carew. Cowls, hoods, and habits, with their wearers tost, And fluttered into rags. Milton.

He had first matter seen undrest ; He took her naked all alone, Before one rag of form was on. Hudibras Content with poverty, my soul I arm ; And virtue, though in rags, will keep me warm.

Dryden.

What shepherd owns those ragged sheep ? Id. Rugged ; not smooth.

The wolf would barter 'away a ragged coat and a rawboned carcase, for a smooth fat one.

L'Estrange. Rags are a great improvement of chalky lands.

Mortimer.

The moon appears, when looked upon with a good glass, rude and ragged. Burnet.

Dressed in tatters.

As I go in this ragged tattered coat, I am hunted away from the old woman's door by every barking cur. Arbuthnot.

RAGAMUF'FIN, n. s. From rag and ►► I know not what else,' says Dr. Johnson. Query muffle, which pervades all the northern Ian guages ; from Goth. Aw/a, to conceal. A petty mean fellow.

I have led my ragamuffins where they were peppered ; there's not three of my hundred and fifty left alive ; and they are for the town's end to beg during life. Shakspeare. Henry IV .

Shall' we brook that paltry ass And feeble scoundrel, Hudib;as, With that more paltry ragamuffin, Ralpho, vapouring and huffing? Hudibras

Attended with a crew of ragamuffins, she broke into his house, turned all things topsy-turvy, and then set it on fire. Swift.

RAGE, n. s. & v. n. i Fr. rage, of Lat. rabies ; RAGE FUL, adj. } Anger ; fury, vehemence ; eagerness : to rage is to be heated with anger ; be in furious passion ; ravage : the adjective corresponding.

Why do the heathen rage ? Psalm ii. 1.

Wine is a mocker, strong drink is raging ; and whosoever is deceived thereby is not wise.

Proverbs.

This courtesy was worse than a bastinado to Zelmane ; so that again with rageful eyes she bad him defend himself ; for no less than his life would an-swer it. Sidney.

Desire not

T’ allay my rages and revenges with Your cold reasons. Shakspeare.

A popular orator may represent vices in so formidable appearances, and set out each virtue in so amiable a form, that the covetous person shall scatter most liberally his beloved idol, wealth, and the rage’ ful person shall find a calm. Hammond.

Who brought green poesy to her perfect age, And made that art which was a rage. Cowley.

Torment, and loud lament, and furious rage.

Milton. The madding wheels of brazen chariots raged.

Id.

Heart-rending news,

That death should license have to rage among The fair, the wise, the virtuous. Waller.

After these waters had raged on the earth, they began to lessen and shrink, and, the great fluctua-tions of this deep being quieted by degrees, the waters retired. Burnet.

You purchase pain with all that joy can give, And die of nothing but a rage to live. - Pope,

Then may his soul its free-born rage enjoy Give deed to will, and ev’ry pow’r employ.

Harte. The rose soon reddened into rage,

And, swelling with disdain, Appealed to many a poet’s page,

To prove her right to reign. Cowper.

RAGGSTONE, in mineralogy, is a genus of stones belonging to the class of siliceous earths. It is of a gray color ; the texture obscurely la-minar, or rather fibrous ; but the laminae or fibres consist of a congeries of grains of aquartzy appearance, coarse and rough. The specific gravity is 2-729 ; it effervesces with acids, and strikes fire with steel. Kirwan found it to contain a portion of mild calcareous earth, and a small proportion of iron. It is used as a whet-stone for coarse cutting tools. It is found about Newcastle, and many other parts of England.

RAGMAN'S ROLL, Rectius Ragimund's roll, so called from one Ragimund a legate in Scotland, who, calling before him all the beneficed clergyman in that kingdom, caused them on oath to give in the true value of their benefices ; according to which they were afterwards taxed by the court of Rome ; and this roll, among other records, being taken from the Scots by Edward I., was redelivered to them in the beginning of the reign of Edward III.

RAGOUT, n. s. Fr. ragout. Meat stewed and highly seasoned.

When art and nature join, th' effect will be Some nice ragout, or charming fricasy. King.

To the stage permit Ragouts for Tereus or Thyestes drest, Tis task enough for thee t' expose a Roman feast,

Dryden

No fish they reckon comparable to a ragout of snails. Addison.

RAGULED, or RAGGED, in heraldry, jagged or knotted. This term is applied to a cross formed of the trunks of two trees without their branches, of which they show only the stumps. Raguled differs from indented, in that the latter is regular, the former not.

RAGUSA, a town ana district 01 Austrian Dalmatia, containing the territory of the republic, with the islands of Curzola, Lagosta or Agosta, Mileda, Guipana, Mezzo, Calamata, &c, It is bounded by the Turkish frontier east, and by the Adriatic on the west. Its area is about 700 square miles ; population about 60,000. It contains no town of consequence, except the capital. Tracts along the banks of the Narenta are marshy and unhealthy ; but in general the climate is good, and the soil fertile. The rivers are the Narenta, Drino, Gliuta, and Ombla.

RAGTJSA, the chief town of the above district, and an archbishop's see, is situated on a peninsula on the Adriatic. The peninsula on which it stands forms two commodious harbours, sheltered by a hill from the north winds, which are so pernicious in the Adriatic; and the attacks of an enemy by land are rendered difficult by almost inaccessible rocks. The town itself is surrounded by a wall flanked with old towers ; but the harbours are protected by strong modern works. The streets are narrow, with the exception of the principal one which extends from north to south. The mansion of the chief magistrate, the cathedral, and some of the churches, are worth no-tice. The

inhabitants exhibit a heterogeneous mixture of northern and oriental dress and language, and their religious and other ceremonies are a combination of Catholic, Greek, and even Pagan rites. They weave silk and woollen stuffs, and build some shipping, and still carry on a traffic with the Levant and Italy.

This city was founded in the seventh century by fugitives from Epidaurus. Subject for some time to the Roman, afterwards to the Greek em-pire, it became independent; and, pursuing a pacific policy, paid a slight tribute to Venice and other maritime powers. It suffered severely from the great earthquake of 1767; but its commerce continued nearly as before, though it has been long eclipsed by that of the larger states of the south of Europe. The republic did not lose its independence until the successes of Buonaparte, who gave to marshal Marmont the title of duke of Ragusa. Of the men of note born here the most remarkable was Boscovich. It is 278 miles east by north of Rome, and ninety-four south-east of Spalatro.

RAGUSA, a populous town in the south part of the island of Sicily, in the Val di Noto, on the small river Ragusa. This town is said to contain 20,000 inhabitants, and the environs are very beautiful and fertile

RAJA, or RAJAH, the title of the Indian black princes, the remains of those who ruled there before the Moguls.

2 A2

RAJA.

RAJA, the ray fish, in ichthyology, a genus belonging to the order of chondropterygia. There are five spiracula below towards the peak ; the body compressed ; and the mouth is situated under the head. The most remarkable species are : ###

1. R. aspera, the rough ray, is found in Loch Broom in Scotland. The length from the nose to the tip of the tail is two feet nine inches. The tail is almost of the same length with the body. The nose is very short. Before each eye is a large hooked spine ; and behind each another, beset with lesser. The upper part of the body is of a cinereous brown mixed with white, and spotted with black ; and entirely covered with small spines. On the tail are three rows of great spines; all the rest of the tail is irregularly beset with lesser. The fins and under side of the body are equally rough with the upper. The teeth are flat and rhomboidal.

2. R. batis, the skate. This species is the thinnest in proportion to its bulk of any of the .eenus, and also the largest, some weighing nearly 200 pounds. The nose, though not long, is sharp pointed ; above the eyes is a set of short spines ; the upper part is of a pale brown, sometimes streaked with black : the lower part is white, marked with great numbers of minute black spots. The jaws are covered with small granulated but sharp-pointed teeth. The tail is of a moderate length ; near the end are two fins ; along the top of it is one row of spines, and on the edges are irregularly dispersed a few others. It is remarked that in the males of this species the fins are full of spines. Skates generate in March and April ; at which time they swim near the surface ##f the water, several of the males pursuing one female. They adhere so fast together in coition that the fishermen frequently draw up both together, though only one has taken the bait. The females begin to cast their purses, as the fishermen call them (the bags in which the young are included), in May, and continue doing it till September. In October they are exceedingly poor##and thin ; but in November they begin to improve, and grow gradually fatter till May, when they

are in the highest perfection. The males go sooner out of season than the fe-tnoles.

3. R. clavata, the thornback, is easily distinguished from the others by the rows of strong sharp spines disposed along the back and tail. In a large one seen by Mr. Pennant were three rows on the back, and five on the tail, all inclining towards its end. On the nose, and on the inner side of the forehead, near the eyes, were a few spines, and the others were scattered without order on the upper part of the pectoral fins. The mouth was small, and filled with teeth ; the upper part of the body was of a pale ash color, marked with short streaks of black, and the skin rough, with small tubercles like shagreen. The belly white, crossed with a strong semilunar car-tilage beneath the skin : in general the lower part was smooth, having only a few spines on each side. The young fish have very few spines on them ; their backs are often spotted with white, and each spot is encircled with black. This species frequent our sandy shores ; they

are very voracious, and feed on all sorts of flat fish ; are particularly fond of herrings and sand eels ; and sometimes eat crustaceous animals, such as crabs. These sometimes weigh fourteen or fifteen pounds, but with us seldom exceed that weight. They begin to generate in June, and bring forth their young in July and August, which (as well as those of the skate), before they are old enough to breed, are called maids. The thornback begins to be in season in November, and continues so later than the skate : but the young of both are good at all times of the year.

4. R. electrica, the torpedo, cramp fish, or electric ray, is frequently taken in Torbay ; has been once caught off Pembroke, and sometimes near Waterford in Ireland. It is generally taken, like other flat fish, with the trawl ; but there is an instance of its taking the bait. It commonly lies in water of about forty fathoms depth ; and in company with the congenerous rays. A gentleman o’f La Rochelle, on dissecting certain females of this species, on the 10th September, found in the matrices several of the foetuses quite formed, and nine eggs in no state of forwardness : superfoetation seems therefore ro be a pro perty of this fish. The food of the torpedo is fish, such as plaice, surmullets, &c. They will live twenty-four hours out of the sea, and but very little longer, even if placed in fresh water. They inhabit sandy places, and will bury themselves superficially in it, by flinging the sand over, by a quick flapping of all the extremities. In this situation the torpedo gives his most forcible snock, which throws down the astonished passenger

who inadvertently treads upon him. In our seas it grows to a great size, and weighs above eighty pounds. The tail is thick and round ; the caudal fin broad and abrupt. The head and body, which are indistinct, are nearly round ; attenuating to extreme thinness on the edges; below the body ‘Jie ventral fins form on each side a quarter of a ciicle. The two dorsal fins are placed on a trunk of the tail. The eyes are small, placed near each other ; behind each is a round spiracle, with six small cutaneous rags on their inner circumference. Mouth small ; teeth minute, spicular; five openings to the gills, as in others of this genus ; the skin every-where smooth ; cinereous brown above, white beneath.

5. R. fullonica, the fuller, derives its Latin name from the instruments fullers make use of in smoothing cloth, the back being rough and spiny. The nose is short and sharp. At the corner of each eye are a few spines. The membrane of nictitation is fringed ; teeth small and sharp. On the upper part of the pectoral fins are three rows of spines pointing towards the back, crooked like those on a fuller’s instrument. On the tail are three rows or strong spines ; the middle row reaches up part of the back. The tail is slender, and rather longer than the body. The color of the upper part of the body is cinereous, marked usually with numerous black spots ; the lower part is white. This, as well as most other species of rays, vary a little in color according to age. It grows to a size equal to the skate. It is common at Scarborough, where it is called the white hans or gullet.

6. R. pastinaca, the sting ray, does not grow to the bulk of the others ; the body is quite smooth, of shape almost round, and is of a much greater thickness and more elevated form in the middle than any other ray, but grows thin towards the edges. The nose is very sharp-point-ed, but short ; the mouth small, and filled with granulated teeth. The irides are of a gold color; behind each eye the orifice is very large. The tail is very thick at the beginning ; the spine is placed about a third the length of tail from the body ; is about five inches long, flat on the top and bottom, very hard, sharp-pointed, and the two sides thin, and closely and sharply bearded the vvhole way. The tail extends four inches be-yond the end of the spine, and grows very slender at the extremity. These fishes shed their spines, and renew them annually ; sometimes the new spine appears before the old one drops off; and the Cornish call this species cardinal trilost, or three-tailed, when so circumstanced. The color of the upper part of the body is a dirty yellow, the middle part of an obscure blue; the lower side white, the tail and spine dusky. The weapon with which nature has armed this fish has supplied the ancients with many tremendous fables relating to

it, which the reader may find in the works of fliny, jJilian, and Oppiau.

7. R. oxyrinchus, the sharp-nosed ray, nearly seven feet long, and five feet two inches broad. When just brought on shore it makes a remarkable snorting noise. The nose is very long, nar-row, and sharp-pointed, not unlike the end of a spontoon. The body is smooth, and very thin in proportion to the size ; the upper part ash-colored, spotted with numerous white spots, and a few black ones. The tail is thick; towards the end are two small fins ; on each side is a row of small spines, with another row in the middle, which runs some way up the back. The lower part of the fish is quite white. The mouth is very large, and furnished with numbers of small sharp teeth bending inwards.

8. R. squalicornia, the shagreen ray, increases to the size of the skate ; is fond of launces or sand eels, which it takes generally as a bait. The form is narrower than that of the common kinds ; the nose long and very sharp ; pupil of the eye sapphirine, on the nose are two short rows of spines ; on the corner of the eyes another of a semicircular form ; on the tail are two rows, continued a little up the back, small, slender, and very sharp ; along the sides of the tail is a row of minute spines, intermixed with innumerable little spiculee. The upper part of the body is of a cinereous brown, covered closely with shagreen-like tubercles, resembling the skin of a dog-fish ; the under side of the body is white ; from the nose to the beginning -of the pectoral fins is a tuberculated space. The teeth slender, and sharp as needles.

9. R. Banksiana, found often in the West Indian Seas, Sir Joseph Banks informs us, is sometimes so large that it requires seven pairs of oxen to drag it along the ground. A species of ray, probably the Banksiana, was killed on the coast of America, the capture of which is thus

described by Mr. Mitchell of New York, in a letter to the president of the New York Lyceum of Natural History : ###

‘ On the 9th day of September 1823 returned from a cruise off Delaware Bay the fishing smack Una. She had sailed about three weeks before from New York for the express purpose of catching an enormous fish, which had been reported to frequent the ocean a few leagues be-yond cape Henlopen. The adventurers of this bold

enterprise have been successful. The creature is one of the huge individuals of the family of raia, or, perhaps, may be erected, from its novelty and peculiarity, into a new genus, between the squalus and the acipenser. Its strength was such that, after the body had been penetrated by two strong and well formed gigs of the best tempered iron, the shank of one of them was broken off, and the other singularly bent. The boat containing the fishermen was connected, after the deadly instrument had taken hold, with the wounded inhabitant of the deep, by a strong warp or line. The celerity with which the fish swam could only be compared to that of the harpooned whale, dragging the boat after it with such speed as to cause a wave to rise on each side of the furrow in which he moved several feet higher than the boat itself. The weight of the fish after death was such that three pair of oxen, one horse, and twenty-two men, all pulling together, with the surge of the Atlantic wave to help, could not convey it far to the dry beach. It was estimated from this (a probable estimate) to equal four tons and a half, or perhaps five tons. The size was enormous ; for the distance from the extremity of one wing or pectoral fin to the other, expanded like the wing of an eagle, measures eighteen feet ; over the extremity of the back and on the right line of the belly sixteen feet ; the distance from the snout to the end of the tail fourteen feet; length of the tail four feet; width of the mouth two feet nine inches. The operation of combat and killing lasted nine hours. The achievement was witnessed by crowds of citizens on the shores of New Jersey and Delaware, and by the persons on board the flotilla of vessels in the bay and offing. During the scuffle, the wings, side-flaps, or vast alated fins of the monster lashed the sea with such vehemence that the spray rained around to the distance of fifty feet.'

The following interesting account of the capture of the colossal skate or ray is by lieutenant Lament of the ninety-first regiment : ###

' The first appearance of an animal of this species,' says the lieutenant, ' since I have been here (about eighteen months) was about twc months ago, when I was called out to the beach by some of the inhabitants, whom I found, on going there, to be assembled in great numbers to see what they called the sea devil. I confess my curiosity was not less excited than theirs when I saw floating close to the surface of the water, about twenty yards from me, a large mas. of living substance, of a dark color, but of tht shape and si/e of which I could not, at the time, form any proper idea, it being so very different from any thing I had ever before seen or heard

of, farther than that I supposed it to have been many times the size of what I now believe it was. No time was lost in setting out in pursuit of him, with harpoons, &c. ; and it was not long before he was come up with, and struck ###with one of the harpoons ; when he made off with great velocity, towing the boat after him. As he seemed to incline chiefly to the surface of the water, six or seven more harpoons were, with the assistance of several canoes that had come up, successively plunged into him, and all the boats made fast to each other, which he was obliged to pull after him, with several people in each. Such, however, was the great strength of this animal, that, after being fast in the manner I have described for upwards of four hours, and laking the boats out to sea attached to him, to a distance of about ten miles from the harbour, and having been pierced with so many wounds, lie was still able to defy every effort to bring him in. It had now got late, and was dark, and an attempt was made to force him up near enough to get another large harpoon into him : this was no sooner done than he darted off; and, by an almost unaccountable and seemingly-convulsive effort, in a moment broke loose from all his fetters, carrying away with him eight or ten harpoons and pikes, and leaving every one staring at his neighbour in speechless astonishment, confounded at the power of an animal which could thus snatch himself from them at a time when they conceived him completely in their power.

‘ Since then some of these animals have occasionally been heard of at a distance from the harbour ; and a few days ago, in coming over from fort Augusta with another gentleman, we fell in with one of them, which allowed us to get so near him that it was determined to set out the next morning to look for him. We did so; and took with us several large harpoons, muskets, pikes, &c., determined, if it were possible, to bring him in. He was descried, about eight o’clock, towards the top of the harbour, as usual floating near the surface, and moving slowly about. Having allowed the boat to get very close to him, he was struck with a harpoon, which was thrown at him in a most dexterous manner by lieutenant St. John, of the royal artillery. He immediately set out towards the mouth of the harbour, towing the boat after him with such velocity that it could not be overtaken by any of the others ; after going in this way for nearly an hour he turned back, which enabled

the other boats to lay hold ; and four of themwere tied, one after the other, to the one in which he was harpooned, with four or five people in each of them. By this means we hoped to tire him out the sooner. In about an hour and a half after he was first struck, a favorable opportunity offering, a large five-pointed harpoon, made fast to a very heavy staff, was thrown at him with such an elevation that it should fall upon him with the whole weight of the weapon. This, having been as well directed as the first, was lodged nearly in the rriJdle of his back. The struggle he made at this time to get away was truly tremendous,❑❑❑ plunging in the midst of the boats, ❑❑❑ darting from the bottom to the surface alternately❑❑❑ dashing the water and foam on every side

of him, ❑❑❑ and rolling round and round to extricate himself from the pole. This might be considered as having given him the coup de grace, although, at short intervals afterwards, he was struck with two more harpoons, and several musket-balls were fired into him. Still he was able to set out again, taking the four boats after him, which he carried along with the greatest ease. Having gone in this way for some time, he came to a stop, and laid himself to the bot-tom, when, with all the lines that were attached to him, it was quite impossible to move him. All expedients were nearly beginning to fail, when it was proposed to slacken the lines, which being done, had the desired effect, and he again set out. Having thus got him from the ground, inch by inch was gained upon him, till he was got near the surface, when he was struck with two large pikes. He now got rather faint; and, the boats closing on him on every side, the combat became general with pikes, muskets, and every weapon we had. In fact, to such a pitch were all excited on the occasion, that, had a cool spectator seen the affray, he would undoubtedly have imagined that it was his sable majesty himself that we had got amongst us. He was now towed ashore, being about five hours since he ❑❑❑was first struck. This it required all the boats to do, and then but very slowly. His appearance now showed the extraordinary tenacity of life of which this animal must be possessed, as his whole body was literally a heap of wounds, many of which were through and through, and he was not yet quite dead. This circumstance, with his great strength, is the cause of the name which has been given him by the fishermen here, as they have never been able to succeed in taking one of them, and were firmly of opinion that it was impossible to do so.

‘ This monster is of the flat fish kind. On measurement it was found to be in length and breadth nearly the same, about fifteen feet, and in

depth from three to four feet. It had the appearance of having no head, as there was no prominence at its mouth ; on the contrary, its exterior margin formed, as it were, the segment of a circle, with its arc towards the animal's body, and opening into a large cavity of about two feet and a half in width, without teeth, into which a man went with so much ease, that I do not exaggerate when I say that another might have done so at the same time. On each side of the mouth projected a mass of cartilaginous substance like horns, about a foot and a half long and capable of meeting before the mouth These feelers moved about a great deal in swimming, and are probably of use in feeding. On looking on this animal as it lay on the ground with its back upwards, it might be said to be nearly of equal dimensions on every side, with the exception of the two lateral extremities, extending to a point about four feet from the body, and a tail about five feet long, four inches and a half in diameter at the root, and tapering to the point. Above the root of the tail was the dorsal fin, and on each side of it a flat and flabby substance lying close to the body, of the appearance of riris. There were no other distinct fins, and its sole propelling power seemed to be its two late-RAJ

ral extremities, which became very flat and thin towards the point. As it shows these much in swimming, it gives the spectator an extraordinary idea of its size, as, when imperfectly seen, the conclusion naturally is, if the breadth is so great, how much greater must the length be. This animal was a female, and viviparous. On opening it a young one, about twenty pounds weight, was taken out, perfectly formed, and which has been preserved. Wishing to know what it fed ' upon, I saw the stomach opened, which was round, about eight inches in diameter, and quite empty. It was closely studded over with circular spots of a muscular substance. Under the stomach was a long bag, with transverse muscular layers from end to end, and which contained nothing but sorre slime and gravel. This muscular appearance of the digestive organs would lead one to suppose that it fed upon other fish, as is the general opinion here, though its having no teeth does not support that idea. Its weight was so great that it was

impossible to ascertain it at the time ; but some idea may be formed of it, when I assure you that it was with difficulty that forty men, with two lines attached to it, could drag it along the ground. Its bones were soft, and, with the exception of the jaw bones, could be cut with a knife. One ridge of bone ran from the mouth to the middle of the back, where it was met by another running transversely, from the extremities of which there were two larger ones converging: towards the tail.'

RAJABARY, a considerable trading town of Bengal, district of Dacca, on the western bank of the majestic river Megna. Long. 96►► 21' E., lat. 23►► 25' N. There are innumerable towns in Hindostanto which Rajah (a prince) is the praenomen.

RAJAMUNDROOG, a town and fortress of Hindostan, province of Bejapore, commands the entrance into the nuvigable river Mirjee. It was taken by the British troops under general Matthews in 1783, but afterwards ceded to Tippoo. Long. 73►► 30 E., lat. 14►► 30' N.

RAJAMUNDRY, an extensive district of Hindostan, province of the Circars, bounded on the north by Cicacole, on the south by Ellore, on the west by the territories of the Nizam, and on the east by the bay of Bengal. It is fertilised by the Godavery, which partly forms its southern boundary. At the distance of thirty-five miles from the sea it divides itself into two great branches, within which it forms the island of Nasur, comprehending a triangular space of 500 square miles. This district is celebrated for its sugar. The mountains also abound with teak timber. It contains a number of towns, the chief of which is Rajamundry ; but the principal sea-port is Coringa. This district was ceded by the Nizam Salabut Jung in 1753 to the French; but was taken from them by the British in 1765, and now constitutes one of the five collectorships of the province. The rajahs of this country are mentioned in the Mahometan histories as early as the thirteenth century.

RAJAMUNDRY, the capital of the above-men- tioned district, and residence of the British civil establishment, is situated on the north side of the Godavery, and formerly possessed a good brick

fort, now m ruins. Long. 81►► 54' E., lat. 16" 59' N.

RAIANIA, in botany, a genus of the hexandria order, and dioecia class of plants ; nature, order eleventh, sarmentaceae : MALE CAL. sexpar-

tite : COR. none : FEMALE CAL. as in the male : COR. none ; there are three styles ; the fruit is roundish with an oblique wing, inferior. There are three species : ###

1. R. cordata.

2. R. hastata,### and

3. R. quinquefolia.

RAJ CHOHAN,an extensive uncultivated district of Hindostan, province of Gundwaneh, situated between 23## and 24## N. lat. It produces little but rice and vegetables, but abounds with game. The greater part belongs to the rajah of Corair, a tributary of the Mahrattas. The chief town is Sonehut.

RAJEMAL, or RAJEMAHAL, an unproductive district of Bengal, situated on the western side of the river Ganges, about 25## N. lat. It is inhabited by a race of small people, probably the aborigines, who speak a distinct language, and, although idolaters, cannot be esteemed Hindoos. They have never been conquered; but about the year 1780 Mr. Cleveland subdued them by gentle measures. He formed a battalion of them, consisting of 300 men, who have proved exceed ingly useful. It was in this district that the ex periment was first tried of granting lands to the native invalid officers and soldiers ; and the traveller now passes with as much safety from human foes in this district as in any other part of India. It still, however, shelters a vast num-ber of tigers, bears, and wild beasts.

RAJEMAHAL, the royal residence, an ancient city of Bengal, on the western bank of the Ganges. The modern town consists only of one street, at the foot of a range of hills, and composed of stone houses, generally two stories in height, and the ruins of a palace. It carries on a small trade with the inhabitants of the hills, and quarries supply the neighbourhood with flags and millstones. An inundation of the Ganges formerly swept away a considerable part of it ; a conflagration destroyed another portion ; and the transfer of the seat of government to Decca completed its ruin.

Nothing can exceed the romantic prospect of Rajemahal, with the mountains at the back of the town, when a person, emerging from the Cossimbazar River and the flat country of Ben-gal, enters the Ganges at Sooty, and sails up that river. There is a tradition that this place was in very ancient times the seat of a Hindoo government, and was then called Raje Girhi, or Ghur. It was first noticed by the Mahometan

historians, in the year 1576, under the name of Agmahel (the house of fire), probably iu allusion to an early conflagration. In 1592 rajah Man Sing, governor of Bahar and Bengal, on the part of the emperor Akbar, fixed upon this place as the capital or the two provinces, and named it in compliment to his sovereign,Akbai-nagur Rajemahal. He in consequence erected a palace and a stone wall here, having bastions at the angles and gates ; and, having drawn hither all the public offices, the city soon rose in

splendor. In 1608 the Mogul governor, Islam Khan, was induced, in consequence of the invasion of the south-east of Bengal by the Portuguese, to transfer the seat of authority to Dacca. But in 1639 Shujaa, the son of Shah Jehan, again restored Rajemahal to its former dignity, and built an elegant palace here, some of the rooms of which arc standing. He also strengthened the fortifications, and spent large sums of money in rendering the city worthy of the royal residence : in the following year, however, nearly the whole was destroyed by a dreadful conflagration, in which many lives were lost, and the family of the prince with difficulty escaped. About the same time the Ganges changed its bed, and, pouring its torrents against the walls, washed away many of the edifices. In 1659 Aurungzebe took it after a short siege. After the expulsion of Shuja, the Mogul governor, Meer Joomla, fixed his residence at Dacca, since which period Rajemahal has steadily declined.

RAIKES (Robert), a printer and philanthro-pist of Gloucestershire, born in 1735. His father was proprietor of the Gloucester Journal, and the son succeeded him. Having realised a property, he employed it in relieving such objects as stood in need of his assistance ; but is best known for his institution of Sunday schools, which he planned conjointly with the Rev. Mr. Stock in 1781. See EDUCATION. Mr. Raikes died at Gloucester in 1811.

RAIL, n. s. Belg. ragle. A kind of bird.

Of wild birds CoTwall hath quail, rail, partridge and pheasant.

Carew's Survey of Cornwall.

RAIL, v. n. ˆ Fr. railler ; Belg. rallen ;

RAIL'ER, n.s. /Swed. ralla. To use reproach—

RAIL'LERY. Jful language; accuse; speak

to or mention in opprobrious terms ; formerly

taking on now ut : a railer is he who insultingly

accuses or defames : raillery, a diminutive of

railing; slight satirical speech or manner.

Angels bring not railing accusation against them.

2 Peter ii.

What a monstrous fellow art thou ! thus to rail on one that is neither known of thee, nor knows thee.

Shakspeare.

Till thou canst rail the seals from off my bone, 1 hou hut offendest thy lungs to speak so loud. Id.

The plain the forests doth disdain : The forests rail upon the plain. Drayton.

Let raille'-y be without malice or heat.

Ben Jcnson.

Thou art my blood, where Johnson has no part ; Where did his wit on learning fix a brand, And rail at arts he did not understand ? Dryden. If any is angry, and rails at it, he may securely.

Locke.

If I build my felicity upon my reputation, I am as happy as long as the railer will give me leave.

South' s Sermons.

Studies employed on low objects ; the very namino-of them is sufficient to turn them into raillery.

Add i son.

To these we are solicited by the arguments of the subtile, and the railleries of the profane.

Bentley's Sermons. Lesbia for ever on me rails, To talk of me she never fails. Swift,

Let not presuming impious railer tax Creative wisdom. Thomson's Summer.

RAIL, n. s. & v. n. Teut. rwgel ; Swed. regel. A cross beam fixed at the ends in posts ; a se-ries of rails; to enclose with rails; confine.

A man upon a high place without rails, is ready to fall. Bacon.

They were brought to London all railed in ropes, like a team of horses in a cart, and were executed some at London, and the rest at divers places. Id.

The hand is square, with four rounds at the corners ; this should first have been planched over, and railed about with ballisters. , .

A large square table for the commissio er < ne side being sufficient for those of either party, and a rail for others which went round. Clarendon.

If you make another square, and also a tennant, on each untennanted end of the stiles, and another mortess on the top and bottom raits, you may put them together. Moxon.

As the churchyard ought to be divided from other profane places, so it ought to be fenced in and railed.

Ayliffe,

Sir Roger has given a handsome pulpit-cloth, and railed in the communion table. Addison.

RAIL ROADS. These useful appendages to min-ing and various other works have been in use in the neighbourhood of Newcastle since the middle of the seventeenth century. They were first solely employed for transporting coals to a moderate distance from the pits, to the places where they could be shipped, being universally made of wood. ' And long,' says Dr. Anderson, ' had they been applied to this use, without

any idea having been entertained that they could be employed for more general purposes.' By degrees they were, however, carried to a farther extent ; the scarcity of wood, and the expense of their repairs, suggested the idea of employing iron for the purpose of improving these roads. At the first, flat rods of bar-iron were nailed upon the original wooden rails, or, as they were technically called, sleepers ; and this, though an expensive process, was found to be a great improvement. But, the wood on which these rested being liable to rot and give way, some imperfect attempts were made to make them of cast-iron, but these were found to be liable to many objections, until Mr. Outram, engineer, at Butterly Hall, Derbyshire, devoted his attention to this object. He contrived at the same time so far to diminish the expense, and improve the strength of the road, as to bring it to a de-gree of perfection that no one else had conceived possible. Having been carried into execution in a few cases, and found to answer, his plan has been improved upon and simplified by practice, till it is now evident that it admits of being carried much beyond even its present limits.

We cannot particularize the numerous existing rail-roads : but the chief lines that have been laid down are found in the neighbourhood of the river Wear, near Newcastle, in the coal and mining districts of Yorkshire and Lancashire, in Derbyshire, Staffordshire, and Shropshire ; and in the great mining districts along the vale of the Severn. Here it was that the inclined plane was first brought in aid of inland navigation. In Surrey there is a railway of considerable extent, that presents one of the few attempts that have been made to adapt rail-roads to general use. It

has not, upon the whole, succeeded, and the original design of continuing it to Portsmouth has been for some time abandoned. In the great mining districts on the west of the Severn, including South Wales, the rail-roads are very numerous ; and here, owing to the steepness and impracticable nature of the ground, they have been of essential utility in supplying the place of canals. In 1791 there was

scarcely a single railway in all South Wales, and in 1811 the completed rail-roads connected with canals, col-leries, iron, and copper-works in the counties of .Monmouth, Glamorgan, and Caermarthen, amounted to nearly 150 miles in length, exclusive of a great extent within the mines, of which one company in Merthyr-Tydvil has thirty miles under ground. In Monmouthshire the Sirhoway railway forms one of the first in Britain in point of magnitude. It first extends thirteen miles from Pilgwelly, near Newport, to the Sirhoway and Tredagar iron-works, whence it is continued five miles farther to the Trevil lime-works, in Brecknockshire, along with a branch to the west, to the Rumney and Union iron-works. This railway was made by the Monmouthshire Canal Company. A branch proceeds from Sirhoway eastwards to the Ebbwy works, and thence down the course of the Ebbwy to Crum-lin Bridge, whence it joins the canal f-om Newport ; and, from Sirhoway again, the Brinare railway is continued over the Black Mountain to the vale of the Uske at Brecon, and thence to Hay on the river Wye. In Glamorganshire the principal railways are the Cardiff and the Merthyr Tydvil, the Aberdare and the Swansea. In Caermarthenshire the principal railway is that which runs from Caermarthen to the lime-works near Llandebie, a distance of fifteen miles. Such are the chief railways in England and Wales.

In Scotland the duke of Portland's rail-road from Kilmarnock to Troin, a distance of ten miles, is the principal work of this kind yet executed ; but round Glasgow, and in the coal fields of Mid Lothian and Fife, are several minor lines.

It is supposed that on a railway well constructed, and laid with a declivity of fifty-five feet in a mile, one horse will readily take down waggons containing from twelve to fifteen tons, and bring back the same waggons with four tons in them. This delivity, therefore, suits well, when the imports are only one-fourth part of what is to be exported, if the empty waggons only are to be brought back, the declivity may be made greater ; or an additional horse applied on the returning journey will balance the increase of declivity. If the length of the railway were to be considered, it may, it is supposed, without much inconvenience, be varied from being level to a declivity of one inch in a yard, and by dividing the whole distance into separate stages, and providing the number of horses suitable for each portion of railway according to the distance and degree of declivity, the whole operation may be carried on with regularity and despatch. It is upon the whole believed that this useful contrivance may be varied so as to suit the surface of many difficult

countries, at a comparatively moderate expense. It may be constructed in a much more expeditious manner than navigable canals ; it may be introduced into many districts where canals are wholly inapplicable ; and in case of any change in the working of mines, pits, or manufactories, the rails may be taken up and laid down again in new situations at no very great expense or trouble.

In laying out a line of railway no further general rule can be laid down than that regard should in the first place be had to such a direction and such a declivity as may best suit the nature of the ground through which it passes, and the trade to be carried on upon it. If the trade be all or chiefly in one direction, the road should of course decline that way, so that the waggons, with their contents, may descend on this inclined plane as much as possible by their own weight. If the exports and imports be equal, the road should be on a level ; and, where the ground will not permit that declivity or level best suited to the trade, the line should be varied, and the inequalities made up, so as to bring it as near as possible to the proper standard. If the inequalities are such as to render this impracticable, the only resource lies in inclined planes ; for instance where the difference of level between the two extremities of the road is such as would render an equal declivity too steep, the road must then be carried either on a level or with the due degree of slope, as far as practicable, and then lowered by an inclined plane ; on which the waggons are let gently down by means of a brake, are dragged up by means of an additional power to that which draws them along the road, or at once let down and drawn up by means of a roller or pulley.

The distance between the opposite rails of a road varies generally from three feet to four and a half feet, according as a long and narrow, or a broad short waggon is preferred. A breadth of from nine to twelve feet therefore will be sufficient for a single road, and from fifteen to twenty for a double one. The sleepers consist of solid blocks of stone, of the weight of one or two hundredweight ; the base must be broad, and the upper surface present an even basis for the rail. They are to be placed along each side of the road, about three feet distant from each other from centre to centre ; the opposite ones being separated by the width between the opposite rails ; the ground under them being rammed or beaten down to form a firm foundation ; sometimes it is first laid with a coat of gravel or refuse metal. The space between them is also rammed or filled up with firm materials.

Two kinds of iron rails are in use, each of which has its warm advocates ; the flat rail or tram plate, which being laid on its side, the waggon-wheels travel over the broad and flat surface, the other is

termed an edge rail, the rails being laid edgeways, and the wheels travelling on their upper surfaces The flat rail, or tram plate, consists of a plate of cast iron, about three feet long, from three to five inches broad, and from half an inch to an inch thick; extending from sleeper to sleeper, and having a flaunche turn-up or crest on the inside, from two and a

half to four inches high. It bears on the sleepers at each end, where the rails are cast about half an inch thicker than in the middle, at least tiree inches, and as there is no intermediate tearing, except the surface of the road, the use of the flaunche is to resist the transverse strain arising from the weight of the waggon ; on this account it is often raised higher in the middle than at the sides, forming an arch, and, to strengthen the rail still farther, a similar flaunche, arched inversely, is added below. The weight of each rail is from forty to fifty pounds. These rails are merely laid to each otfier, end to end, all along each side of the road ; being kept in their places, and at the same time made fast to the sleepers, by an iron spike six inches long, driven through the extremity of each into a plug of oak fitted in the centre of each sleeper. This spike has no head, but the upper end of it forms an oblong square, about one inch broad, half an inch thick; and the hole in the rails, through which it passes, is formed by a notch, half an inch square, in the middle of the extremity of each rail ; the opposite notches of each rail forming, when laid together, an oblong square of one inch by half an inch, and slightly dove-tailed from top to bottom, so as to fit exactly the tapering head of the spike, which is driven clear below the upper surface of the rail. When the rails cross a road, the space between them and on each side must be paved up to the level of the top of the flaunches, that the carriages on the road may be enabled to pass clear over the rails. In single railways it is also necessary to have a place at intervals where the empty waggons in returning may be conducted off the road and allow the loaded ones to

pass. This place is termed a turn-out ; and the waggons are directed into it by a moveable pointer or rail, fixed at the intersection between the principal rail and the turn-out, moving on its extremity, so as to open a way into the turn-out, and shut that along the road. This is also used whenever one line of railway crosses another. These flat or tram roads are universal in Wales, and the principal ones used in Scotland,

In the collieries of the north of England the flat has been almost entirely superseded by the edge rail, and the latter are admitted to be decidedly superior in ease of draught, the edge of the bar presenting less friction, and being less liable to clog. The edge rail consists of a single rectangular bar of cast iron, three feet long, three or four inches broad, and from half an inch to an inch thick, set in its edge between the sleepers, and bearing on them at its ends. The upper side of the rail is {launched out to present a broad bearing surface for the wheels ; the under side is also cast thicker than the middle. But the greatest strength is attained by casting the rail not rectangular, but deeper in the middle than at the ends, which may be safely reduced to nearly one-third of the depth in the middle. The rails are set in a cast iron socket or chair, attached firmly to the sleeper. This socket embraces the extremities of the adjacent rails, which are here made to overlap, and a pin is driven at once through the rails and through the socket, so as to bind the whole together. Malleable

iron has of late been used in the construction of these rails. Mr. Birkinshaw of the Bedlington Iron-works has obtained a patent for broad top—

Eed malleable rails of a wedge form. The pecu-ar shape is given them in the rolling of the metal, by means of grooves cut in the rollers, corresponding with the requisite breadth and depth, and the curvature of the proposed rail. This seems a very great improrement.

The Westminster Review, No. VIII., assigns the merit of the invention of iron railways to Mr. Curr an engineer of Sheffield. ‘ We yet expect,’ continues the reviewer, ‘ to see them applied to some of the ordinary purposes of travelling. The first five miles of the Dover road are maintained at an annual expense of more than ––1000 a mile, and this is chiefly caused by the sharp wheels of heavy stage-coaches. There would be no difficulty in giving rails to this class of carriages, at least, as their rapidity is equable and their times fixed. A separate rail might be applied to waggons which are equally regular in motion if not in speed ; while an ordinary road might still be preserved for

vehicles of irregular rates and times.’

RAI’MENT, n. s. Abridged from ARRAI-MENT. Vesture ; clothes ; dress ; garment.

His raiments, though mean, received handsomeness by the grace of the wearer. Sidney.

O Protheus, let this habit make thee blush ! Be thou ashamed that I have took upon me Such an immodest raiment. Shakspeare.

Living both food and raiment she supplies.

Dryden

You are to consider them as the servants and instruments of action, and so give them food, and rest, and raiment, that they may be strong and healthful to do the duties of a charitable, useful, pious life.

Law.

RAIN, n. s., v. a., & v. n. \ Sax. fiaˆn,

RAIN’BOW, n. s. fnen, rienian ;

RAINWATER, {Belg. and Teut.

RAI’NY. Jregen; Goth.

rign. The water which falls in drops from the

clouds ; to fall in such drops ; ‘ it rains,’ signifying

that the water fells in this way from the clouds -,

to pour down as rain : rainbow, the iris ; the bow

formed on the clouds by the sun in showery

weather : rainwater, the water of the clouds ;

rainy, showery; wet; damp; likely to rain.

A continual dropping in a very rainy day, and a contentious woman, are alike.

Proverbs xxvii. 15.

Casting of the water in a most cunning manner, makes a perfect rainbow, not more pleasant to the eye than to the mind, so sensibly to see the proof of the heavenly iris. Sidney.

When shall we three meet again, In thunder, lightning, or in rain. Shakspeare.

That which serves for gain And follows but for form,

Will pack when it begins to rain And leave thee in the storm.

Id. King Lear.

Rain sacrificial whisperings in his ear, Make sacred even his stirrup.

Id. Timon of Athens. To add another hue unto the rainbow.

Shakspeare.

Court holy water in a dry house, is better than th►► rainwater out o' doors. Id. King Lear.

Our gayness and our guilt are all besmirched, With rainy marching in the painful field.

Shakspeare.

The rainbow is drawn like a nymph with large wings dispread in the form of a semicircle, the feathers of sundry colors. Peacham.

They sat them down to weep ; nor only tears Rained at their eyes, but high winds rose within.

Milton.

They could not be ignorant of the promise of God never to drown the world, and the rainbow before their eyes to put them in mind of it. Browne.

The lost clouds pour Into the sea an useless shower, And the vext sailors curse the rain, For which poor farmers prayed in vain.

Waller. We took distilled rainwater. Boyle.

Like a low hung cloud it rains so fast, That all at once it falls. Dryden's Knight's Tale. The wind is south-west, and the weather lowring, and like to rain. Locke.

Rain is water by the heat of the sun divided into very small parts ascending in the air, till, encountering the cold, it be condensed into clouds, and descends in drops. Ray. Rainwater is to be preferred before spring-water.

Mortimer.

This rainbow never appears but where it rains in the sun-shine, and may be made artificially, by spouting up water, which may break aloft, and scatter into drops, and fall down like rain ; for the sun shining upon these drops, certainly causes the bow to appear to a spectator standing in a true position to the rain and sun : this bow is made by refraction of the sun's light in drops of falling rain.

Newton.

The dome's high arch reflects the mingled blaze, And forms a rainbow of alternate rays. Pope.

Gay rainbow silks her mellow charms infold, And nought of Lyce but herself is old. Young. RAIN. See METEOROLOGY. RAINBOW, iris, is a meteor in form of a party-colored arch, or semicircle, exhibited in a rainy sky, opposite to the sun, by the refraction and reflection of his rays in the drops of falling rain. There is also a secondary, or fainter bow, usually seen investing the former at some distance. Among naturalists we also read of lunar rainbows, marine rainbows, &c.

This beautiful phenomenon has engaged the attention of all ages, and by some nations it has even been deified. The observations of the ancients and philosophers of the middle ages, concerning the rainbow, were such as could not have escaped the notice of the most illiterate husbandmen who gazed at the sky ; and their various hypotheses deserve no notice. Mauroly-cus was the first who pretended to have

measured the diameters of the two rainbows with much exactness ; and he reports that he found that of the inner bow to be 45►►, and that of the outer bow 56►► ; from which Descartes takes occasion to observe how little we can depend upon the observations of those who were not acquainted with the cause of the appearances. See OPTICS, In-dex. The moon sometimes exhibits the phenomenon of an iris or rainbow by the refraction of her rays in drops of rain. This phenomenon in the night-time is however very rare.

The marine or sea rainbow is a phenomenon which may be frequently observed in a much

agitated sea, and is occasioned by the wina sweeping part of the waves and carrying them aloft, which when they fall down are refracted by the sun's rays, painting the colors of the bow just as in a common shower. These bows are often seen when a vessel is sailing with considerable force, and dashing the waves around her, which are raised partly by the action of the ship and partly by the force of the wind, and, falling down, they form a rainbow ; and they are also often occasioned by the dashing of the waves against the rocks on shore. The colors of the marine rainbow are less lively, less distinct, and of shorter continuance, than those of the com-mon rainbow ; there are scarcely more than two colors distinguishable, a dark yellow on the side next the sun, and a pale green on the opposite si'de ; but they are much more numerous.

RAINGUAGE. See PLUVIOMETER.

RAINOLDS (John), D. D., an eminent English divine, born at Pinto in Devonshire in 1549, and sent to Merton College, Oxford, in 1562. He became fellow of Corpus Christi, where he took his degrees. In 1598 he was made dean of Lincoln, and in 1599 president of Corpus College. Queen Elizabeth offered him a bishopric, but he modestly refused it, saying in earnest, Nolo episcopali. He wrote and published a great number of works, and was one of the learned divines employed by James I. to translate the Bible. He was moderately inclined to puritanism. He died in 1607.

RAINY RIVER, a river of Illinois, which rises near the west border of Indiana, flows W. N.W., and joins the Illinois, long. 88►► 5' W., lat. 41►► 20' N.

RAINY LAKE, a lake of North America, divided by an isthmus near the

middle into two parts. The west part is called the Great Rainy Lake, the east the Little Rainy Lake, being the least division. It is in general very shallow in its depth. The broadest part of it is not more than twenty miles ; its length, including both, about 300 miles. In the west part the water is very clear and good, and some excellent fish are taken in it. A great many fowl resort here at the fall of the year. Moose deer are to be found in great plenty, and likewise the Carraboo, whose skin, for breeches or gloves, exceeds by far any other to be met with in North America.

RAIRY, a celebrated fortress of Hiudostan, in Bejapore. It is situated on the top of a steep hill, and was the favorite residence of the Mahratta chief Sevajee.

RAISE, v. a. 1 Swed. resa; Dan. reisa ,

RAIS'ER, n. s. $ Teut. reitzen ; Gr. tpiOifa ? To lift ; heave ; erect ; exalt ; set up ; advance ; excite ; irritate ; rouse : he who raises.

Raise not a false report. Exodus xxiii. 1.

Take his carcase down from the tree, cast it at the entering of the gate, and raise thereon a heap ot stones. Joshua viii.

He raiseth the stormy wind. Psalm cvii. 28.

Then shall stand up in his estate a rawer of taxes.

Daniel xi.

They neither found me in the temple disputing with any man, neither raising up the people. Acts.

It is sown in dishonour, it is raised in glory ; it is sown in weakness, it is raised in power.

1 Corinthians xv. 23

The spirits of the deceased, by certain spells and infernal sacrifices, were raised. Sandys's Journey, That eyeless head of thine was first framed flesh, To raise my fortunes. Shahspeare. King Lear.

He first raited head against usurping Richard.

Skakspeare.

Counsellors may manage affairs, which nevertheless are far from the ability to raise and amplify an estate. Bacon.

They that are the first raisers of their houses are most indulgent towards their children. Id.

And drinke the dark-deepe water of the spring, Bright Arethusa, the most nourishing Baiter of heards. Chapman.

He that boasts of his ancestors, the founders and raiser* of a family, doth confess that he hath less virtue. Taylor.

This gentleman came to be raised to great titles.

Clarendon. Thou so pleased,

Canst raise thy creature to what height thou wilt Of union. Milton.

He might taint

The' animal spirits, that from pure blood arise, Thence raise distempered thoughts. Id.

Ged vouchsafes to raise another world From him. Id.

He out of smallest things could without end Have raised incessant armies. Id.

The common ferryman of Egypt, that wafted over the dead bodies from Memphis, was made by the Greeks to be the ferryman of hell, and solemn stories raised after him. Browne.

The plate pieces of eight were raised three -pence in the piece. Temple's Miscellanies.

./Eneas then employs his pains In parts remote to raise the Tuscan swains.

Dryden. All gaze, and all admire, and raise a shouting

sound. Id.

These are spectres the understanding raise* to itself, to flatter its own laziness. Locke.

Miss Liddy can dance a jig, and raise paste.

Spectator.

The Persians gazing on the sun, Admired how high ‘twas placed, how bright it shone ; But, as his power was known, their thoughts were

rawed, And soon they worshipped what at first they praised.

Prior.

I should not thus be bound, If I had means, and could but raise five pound.

Gay.

Britain, once despised, can raise As ample sums, as Rome in Caesar’s days.

Arbuthnot.

Such a bulk as no twelve bards could raise, Twelve starveling bards in these degenerate days.

Pope.

Gods encountering gods, Jove encouraging them with his thunders, and Neptune raising his tempests.

Id.

Raiser of human kind ! by nature cast, Naked and helpless. Thomson’s Autumn.

Content if thus sequestered I may raise A monitor’s, though not a poet’s praise, And while I teach an art too little known, To close life wisely, may not waste my own.

Coutper.

RAI’SIN, n. s. Fr. raisin ; Arab, rasa ; Lat. racemus. A dried grape.

◆◆◆Raisins are the fruit of the vine suffered to remain on the tree till perfectly ripened, and then dried : grapes of every kind, preserved in this manner, are called raisins, but those dried in the sun are much

sweeter and pleasanter than those dried in ovons ; they are called jar raisin*, from their being imported in earthen jars. Hill.

Dried grapes or rai*ins, boiled in a convenient proportion of water, make a sweet liquor, which, being betimes distilled, affords an oil and spirit much like the raisins themselves. Boyle.

RAISINS. To obtain fine raisins tie two or three bunches of grapes together while yet on the vine, and dip them into a hot lixivium wood ashes, with a little of the oil of olives in it. This disposes them to shrink and wrinkle ; after this they are left on the vine three or four days separated on sticks in an horizontal situation, and then dried in the sun at leisure, after being cut from the tree. The finest and best raisins are those called in some places Damascus and Jube raisins ; which are distinguished from the others by their size and figure ; they are flat and wrinkled on the surface, soft and juicy within, and nearly an inch long ; and, when fresh and growing on the bunch, are of the size and shape of the large olive. The raisins of the sun are all dried by the heat of the sun ; and these with the jar raisins are the sorts used in medicine. However all the kinds have much the same virtues ; they are all nutritive and bal-samic ; they are allowed to be attenuant, are said to be good in nephritic complaints, and are an ingredient in pectoral decoctions : in which cases, as also in all others where astringency is not required of them, the stones should be carefully taken out.

RAKE, n. s., v. a., & v. n.-\ Sax. riace ; Belg.

RAKE’HELL, n. s. Iracche ; Swedish

RAKE’HELLY, adj. iraka (to scrape);

RA’KISH. 3 Teut. rechen. An

instrument with teeth designed to collect or scrape things together ; hence (Fr. racaille, the rabble) both a rake, a low worthless fellow,

and rakehell, according to Skinner, of the same signification : to rake is to gather or clear with a rake ; collect ; and hence heap ; scour : and, in nautical affairs, to fire so as to search a vessel : as a verb neuter, to search ; grope ; the adjectives both mean wild ; dissolute.

At Midsummer down with the brembles and

brakes, And after abroad with thy forkes and thy rakes.

Tusser.

Mow barlie, and rate it, and set it on cocks. Id.

When Pas hand reached him to take The fox on knees and elbows tumbled down : Pas could not stay, but over him did rake, And crowned the earth with his first touching crown.

Sidney.

Out of the frie of these rakehell horse-boys, growing up in knavery and villany, are their kern supplied. Spenser.

I scorn the rakehelln rout of our ragged rhimers, which without learning boast, without judgment jangle, and without reason rage and foam. Id.

An eager desire to rake together whatsoever might prejudice or any way hinder the credit of apocryphal books, hath caused the collector's pen so to run as it were on wheels, that the mind, which should guide it, had no leisure to think. Hooker.

What piles of wealth hath he accumulated !

How, i' th' name of thrift,

Does he rake this together ?

Shakspeare. Henry VIII.

RAL

If you hide the crown Even in your hearts, there will he rake for it.

Shakspeare.

The king, when he heard of Perkins' siege of Exeter, said in sport, that the king of rakehells was landed in the West, and that he hoped now to see him. Bacon.

No breaking of windows or glasses for spight, And spoiling the goods for a rakehelly prank.

Ben Jonson.

The blazing wood may to the eye seem great, But 'tis the fire raked up that has the heat, And kefcps it long. Suckling.

Harrows' iron teeth shall every where Rake helmets up. May's Virgil's Georgicks.

A sport more formidable

Had raked together village rabble. Hudibras. O that thy bounteous deity would please To guide my rake upon the chinking sound Of some vast treasure hidden under ground.

Dryden.

Another finds the way to dye in grain ; Or for the golden ore in rivers rakes, Then melts the mass. Id. Persius.

One is for raking in Chaucer for antiquated words, which are never to be revived, but when sound or significancy is wanting. Dryden,

The Belgians tack upon our rear, And raking chase-guns through our sterns they send.

Id.

Ill-gotten goods are squandered away with as little conscience as they were raked together.

L’Estrange.

It is as offensive as to rake into a dunghill. South. He examines his face in the stream, combs his rueful locks with a rake. Garth.

The next came with her son, who was the greatest rake in the place, but so much the mother’s darling, that she left her husband for the sake of this grace-less youth. Addisoii.

After having made essays into it, [as they do for coal in England, they rake into the most promising parts. Id.

Rakes hate sober grave gentlewomen. 4rbuthnot. Men, some to business, some to pleasure take, But every woman is at heart a rake. Pope.

The statesman rakes the town to find a plot.

Swift.

A rakehell of the town, whose character is set off with excessive prodigality, prophaneness, intemperance, and lust, is rewarded with a lady of great fortune to repair his own, which his vices had almost ruined. Swift.

As they rake the green appearing ground, The russet hay-cock rises. Thomson.

There seldom can be peculiarity in the love of a rakish heart. Clarissa.

To dance at publick places, that fops and rakes might admire the fineness of her shape, and the beauty of her motions. Law

The RAKE OF A SHIP is all that part of her hull which hangs over both ends of her keel. That which is before is called the fore-rake, or rake forward, and that part which is at the setting on of the stern-post is called the rake-aft, or afterward.

To RAKE A SHIP is to cannonade her on the stern, or head, so as that the balls shall scour the whole length of her decks ; which is one of the most dangerous incidents that can happen in a naval action. This is frequently called raking fore and aft, and is similar to what is called by engineers enfilading.

RALEIGH (Sir Walt* ‘??? ‘ourth son of Wal-

ter Raleigh, esq., of Fardel, in the parish of Cornwood in Devonshire, was born in 1552. About 1568 he was sent to Ariel College Ox-ford, but next year he embarked for France, being one of the 100 volunteers, commanded by Henry Champernon, who, with other English troops, were sent by queen Elizabeth to assist the queen of Navarre in defending the Protestants. In this service he continued five or six years; after which he returned to London. In 1577 or 1578 he embarked for the Low Countries with the troops sent by the queen to assist the Dutch against the Spaniards. On his return to England, his half-brother, Sir Humphrey Gilbert, having obtained a patent to colonise some parts of North America, he embarked in this adventure ; but meeting with a Spanish fleet, after a smart engagement, they returned without success in 1579. In 1580 Philip II. of Spain, having projected a conquest of England, sent troops to Ireland to assist the Desmonds in the Munster rebellion. Raleigh obtained a captaincy under lord Grey of Wilton, then deputy of Ireland, and embarked for that kingdom ; where he was greatly instrumental in

Eitting an end to the war. He returned to ngland, and attracted the notice of queen Elizabeth, owing, as Naunton says, in his Frag-menta Regalia, to an accidental piece of gallantry. The queen taking a walk, being stopped by a muddy place in the road, our young gallant took off his new plush mantle and spread it on the ground. Her majesty trod gently over the foot-cloth, surprised and pleased with the adventure. He was a handsome man, and remarkable for his address. The queen admitted him to her court, and employed him first as an attendant on the French ambassador Simier, on his return home, and afterwards to escort the duke of Anjou to Antwerp. During this excursion he became personally known to the prince of Orange : from whom on his return he brought special acknowledgments to the queen. In 1583 he embarked with his brother, Sir Humphrey, on a second expedition to Newfoundland, in a ship called the Raleigh, built at his own expense ; but was obliged to return on account of an infectious distemper on board. He then laid before the queen and council a proposal for exploring the continent of North America ; and in 1584 obtained a patent to possess such countries as he should discover. Accordingly he fitted out two ships at his own expense, which sailed in April, and returned 1o England in September, reporting that they had discovered a fine country called Windangocoa, to which the queen gave the name of Virginia. About this time he was elected member for Devon, and soon after was knighted ; and, to enable him to execute his plans, the queen granted him a patent for a licence on wine throughout the kingdom. In 1585 he sent a fleet of seven ships to Virginia, under his relation Sir Richard Grenville, who

left a colony at Roanah of 107 persons, under Mr. Lane ; and from this colony he first imported tobacco into England. He also obtained a grant of 12,000 acres of the forfeited lands in Cork, was made seneschal of Cornwall, and warden of the stanneries. In 1587 he sent another colony of 150 men to Vir-RAL

ginia, with a governor ano twelve assistants. About this ‘time he had the titles of captain of the queen’s guards, and lieutenant-general of Cornwall. From this period to 1594 he was continually engaged in projecting new expeditions, sending succors to colonies abroad, defending the kingdom from the insults of the Spaniards, and transacting parliamentary business with equal ability and resolution. In 1594 he obtained from the queen a grant of the manor of Sherborne in Dorsetshire, where he built a magnificent house; but fell under the queen’s displeasure on account of an intrigue with the daughter of Sir Nicholas Throgmorton, one of the maids of honor; he however married the lady. During his disgrace at court, he projected the conquest of Guiana in South America, and in 1595 sailed for that country; of which having taken possession, after defeating the Spaniards settled there, he returned to England and published an account of his expedition. In 1596 he was one of the admirals in the successful expedition against Cadiz, under the command of Howard and the earl of Essex; and in 1597 he sailed with them against the Azores. In 1 600 he was sent on a joint embassy with lord Cobham to Flanders, and at his return made governor of Jersey. Queen Elizabeth died in 1603, and with her Raleigh’s glory sunk. Upon the accession of James, Sir Walter lost his interest at court, was stripped of his preferments, and accused of a plot against the king. He was arraigned at Winchester, and on his trial shamefully insulted by Coke, the attorney-general, whose sophistical vociferations influenced the jury to convict him without the least proof of guilt. After a month’s imprisonment, however, in daily expectation of his execution, he was reprieved, and sent to the Tower, his estates being given to Car, earl of Somerset, the king’s favorite. During this confinement he wrote many of his most valuable pieces, particularly his History of the World. In

March 1615, after sixteen years imprisonment, he obtained his liberty, and immediately began to prepare for another voyage to Guiana. In August 1616 the king granted him a very ample commission for that purpose; and in July 1617 he sailed from Plymouth ; but the whole scheme was revealed to the Spaniards, and thus rendered abortive. He returned to England in 1618, where he was soon after seized, imprisoned, and beheaded ; not for any pretended misdemeanor on the late expedition, but in consequence of his former attainder. The truth is, he was sacrificed by the pusillanimous monarch to appease the Spaniards ; who, whilst Raleigh lived, thought every part of their dominions in danger. He was executed in Old Palace Yard, and buried in St. Margaret's adjoining, in his sixty-sixth year. His behaviour on the scaffold was manly, unaffected, cheerful, and easy. Being asked by the executioner which way he would lay his head, he answered, ' So the heart be right, it is Ho matter which way the head lies.' He was a man of unquestionable talents, extensive knowledge, undaunted resolution, and strict honor. He was the author of several works, which never hsve been printed

RALEIGH, a post town, the metropolis of North Carolina, in Wake county, ten miles from Wake court-house, twenty-seven north-west of Smithfield, the nearest point of navigation, sixty north of Fayetteville. It contains a state-house, a court-house, a jail, a governor's house, a mar-ket-house, a theatre, and state bank, two academies, one for males and one for females, two meeting-houses, and three printing offices, from each of which is issued a weekly newspaper. The situation of the town is pleasant and consi-siderably elevated.

RALLUS, the rail, in ornithology a genus belonging to the order of grallae. The beak is thickest at the base, compressed equal, acute, and somewhat sharp on the back near the point ; the nostrils are oval; the feet have four toes, without any web; and the body is compressed. Latham enumerates twenty-four species, besides some varieties. They are chiefly distinguished by their color. ' These birds,' says Buffon, ' constitute a large family, and their habits are dif ferent from those of the other shore-birds, which reside on sands and gravels. The rails, on the contrary, inhabit only the slimy margins of pools and rivers, especially low grounds covered with flags and other large marsh plants. This mode of living is common to all the water rails. The land rail frequents meadows, and, from the disagreeable cry or rather rattling in the throat o* this bird, is derived the generic name. In al1. the rails the body is slender, and shrunk at the sides ; the tail extremely short ; the head small ; the bill like that of the gallinaceous

kind, though much longer, and not so thick ; a portion of the leg above the knee is bare ; the three fore toes without membranes, and very long : they do not like other birds draw their feet under their belly in flying, but allow them to hang down ; their wings are small and very concave, and their flight is short. They seem to be more diffused than varied ; and they are dispersed over the most distant lands. Captain Cook found them at the Straits of Magellan; in different islands of the south hemisphere, at Anamoka, at Tanna, and at the isle of Norfolk. The principal species are : ###

1. R. aquaticus, or water rail, is a bird of a long slender body, with short concave wings. lUdelights less in flying than running, which it does very swiftly along the edges of brooks, covered with bushes : as it runs, it every now and then flirts up its tail, and in flying hangs down its legs. Its weight is four ounces and a half. The length to the end of the tail is twelve inches ; the breadth sixteen. The bill is slender, slightly incurvated, one inch and three quarters long : the upper mandible black, edged with red ; the lower, orange-colored : the head, hind part of the neck, the back, and coverts of the wings and tail, are black, edged with an olive brown ; the throat, breast, and upper part of the belly, are ash colored ; the sides under the wings, as far as the rump, finely varied with black and white bars. The tail is very short, consists of twelve black feathers ; the euds of the two middle tipt with rust color ; the feathers immediately beneath the tail white. The legs are placed far behind. and are of a dusky flesh-color. The toes very

x>ng, and divided to their very origin ; though the feet are not webbed, it takes the water ; will swim on it with much ease, but is often observed to run along the surface. ‘ Water rails,’ says Buffon, ‘are seen near the perennial fountains during the greatest part of the winter, yet, like the land rails, they have their regular migrations. The flesh of the water rail is not so delicate as that of the land rail, and has

even a marshy taste, nearly like that of the gallinule. It continues the whole year in England.

2. R. crex, or corn-crake, has been supposed by some to be the same with the water-rail, and that it differs only by a change of color at a certain season of the year : this error is owing to inattention to their characters and nature, both which differ entirely. The bill of this species is short, strong, and thick; formed exactly like that of the water-hen, and makes a generical distinction. It never frequents watery places ; but is always found among corn, grass, broom, or furze. It quits the kingdom before winter ; but the water-rail endures our sharpest seasons. They agree in their aversion to flight ; and the legs, which are remarkably long for the size of the bird, hang down whilst they are on wing ; they trust their safety to their swiftness on foot, and seldom are sprung a second time without great difficulty. The land rail lays from twelve to twenty eggs, of a dull white color, marked with a few yellow spots ; notwithstanding this, they are very numerous in this kingdom. Their note is very singular ; and like the quail it is decoyed into a net by the imitation of its cry, crek crek crek, by rubbing hard the blade of a knife on an indented bone. They are very numerous in Anglesea, where they appear about the 20th of April, supposed to pass over from Ireland, where they abound : at their first arrival it is common to shoot seven or eight in a morning. They are found in most of the Hebrides, and the Orkneys. On their arrival they are very lean, weighing only six ounces ; but, before they leave this island, grow so fat as to weigh above eight. The feathers on the crown of the head and hind part of the neck are black, edged with bay color : the coverts of the wings of the same color, but not spotted ; the tail is short, and of a deep bay ; the belly white, the legs ash-colored.

3. R. porzana, the gallinule, is not veiy frequent in Great Britain, and is said to be migra-tory. It inhabits the sides of small streams, concealing itself among the bushes. Its length is nine inches, its breadth fifteen : its weight four ounces five drachms. The head is brown spotted with black ; the neck a deep olive spotted with white : the feathers of the back are U ack next their shafts, then olive-colored, and edged with white ; the scapulars are olive, finely marked with two small white spots on each web ; the legs of a yellowish green. Their flesh is delicate, and much esteemed : those in particular which are caught in the rice fields in Piedmont are very fat, and of an exquisite flavor.

RAL LY, v. n. Fr. rattier. To re-ally ; bring disordered or dispersed troops together : as a verb neuter to come together with rapidity or

into order.

Publick arguing serves to whet the wits of hereticks, and, by showing weak parts of their doctrines, promps them to rally all their sophistry to fortify them with fallacy. Decay of Piety.

With rallied arms to try what may be yet Regained in heaven. Milton.

If God should show this perverse man a new heaven and a new earth, springing out of nothing, he might say, that innumerable parts of matter chanced just then to rally together, and to form themselves into this new world. TUlotson.

The Grecians rally, and their powers unite ;

With fury charge us. Drydens JEneh.

Luther deters men from solitariness ; but he does not mean from a sober solitude, that rallies our scattered strengths, and prepares us against any new encounters from without. Att* buru.

RAL'LY, v. a. Fr. r oilier ; of Lat. rwiculus , barb. Lat. ridiculare. To satirize ; banter.

If, after the reading of this letter, you find yoursel►► in a humour rather to rally and ridicule than to comfort me, I desire you would throw it into the fire.

Adduon.

Strephon had long confessed his amorous pain, Which gay Corinna rally'd with disdain. Gay.

RALPH (James), a political writer, born in America, and placed by his parents in a counting-house at Philadelphia. Fancying himself a poet, he deserted a wife and child, and accompanied Dr. Franklin to London, where he for some time lived at the expense of the latter. He attempted to get on the stage, offered to write for the booksellers, or copy for the law stationers, all without success. He then retired to a recluse village in Berkshire, where he commenced schoolmaster, borrowing his friend Franklin's name. Having finished his poem on Night, he returned to town ; and, as it met with some little success, he began to be employed by the booksellers ; but, having procured himself a niche in the Dunciad, they soon cast him off. He next began

play-writing, and his plays, the Fashionable Lady, &c., kept him from absolute want. About 1735 he became, by some means, joint manager with Henry Fielding in the Haymarket theatre ; but his emoluments do not seem to have raised him above poverty. His first political publication appeared in 1742, entitled The other side of the question, in answer to the duchess of Marlborough's Memoirs; and he was employed to write many others : about the end of Walpole's administration he was bought by a pension of ––200 per annum, which at the death of George II. was increased by lord Bute to ––600. Of the latter sum he did not enjoy above half a year's.income, being cut off by the gout in 1761. He was the author of numerous works. Those most esteemed are his Continuation of Guthrie's History of England, and the Review of the Reigns of Charles II. and James II.

RAM, n. s. & v. a. 1 Saxon nam; Danish RAM'MER, n. s. } ramme ; Belg. ram ; from Goth, ramun, robust. Thomson. ––– A male sheep; a tub ; hence the sign Aries, and the ancient instrument made with a head like a ram for battering : as a verb active, to batter with such an instrument ; drive violently ; fill or choke by ramming : a rammer is any instrument used in ramming.

Judas calling upon {he Lord, who without any rams or engines of war did cast down Jericho, gave a fierce assault against the walls. 2 Mac. xii. 15.

As when that devilish iron engine wrought In deepest hell, and framed by furies skill,

With windy nitre and quick sulphur fraught, And ramm––d with bullet round ordained to kill.

Spenser. The ewes, being rank, turned to the rams.

Shakspeare.

Let not the piece of virtue, Which is set as the cement of our love, To keep it builded, be the ram to batter The fortress of it. Id. Antony and Cleopatra. Bam thou thy faithful tidings in mine ears,

That long time have been barren. Shakspeare.

Having no artillery nor engines, and finding that he could do no good by ramming with logs of timber, he set one of the gates on fire. Bacon.

They mined the walls, laid the powder, and rammed the mouth, but the citizens made a countermine.

Haijicard.

Much like a well growne bell weather, or feltred ram he shews. Chapman.

You may draw the bones of a ram's head hung ###with strings of beads and ribbands. Peacham.

The ram having passed the sea, serenely shines, And leads the year. Creech's Haniliui.

This into hollow engines long and round, Thick rammed at the other bore with touch of fire Dilated and infuriate, shall send forth Such implements of mischief, as shall dash To pieces. Milton'a Paradise Lost.

A ram their offering, and a ram their meat.

Dry den.

The master bricklayer must try the foundations with an iron crow or rammer, to see whether the foundations are sound. Moxon.

Here many poor people roll in vast balls of snow, which they ram together, and cover from the sun-shine. Addison.

A ditch drawn between two parallel furrows, -was filled with some sound materials, and rammed to make the foundation solid. Arbuthnot.

A mariner loading a gun suddenly, while he was ramming in a

cartridge, the powder took fire, and shot the rammer out of his hand. Wiseman.

RAM, in zoology. See Ovis.

RAM, BATTERING, in antiquity, a military engine used to batter down the walls of besieged places. See ARTILLERY.

RAMA, or RAMLA, a town of Palestine, described by the Arabian geographers in the mid-dle ages as the capital of that country. It is situated in one of the most fertile districts of the Holy Land, though during Dr. Clarke's visit it was almost deserted, in consequence of the ravages of the plague. It seems doubtful if this was the city described under that name in Scripture. Rama and Lydda were the two first cities of the Holy Land which fell into the hands of the crusaders. The former was then in ita greatest splendor, exceedingly populous, adorned with stately buildings, and well fortified. It is twenty-five miles W. N. W. of Jerusalem.

RAMAH, in ancient geography, a town of Benjamin, near Gibeah, called also Ramah of Saul (I Sam. xxii.), six miles north of Jerusalem ; memorable for the story of the Levite and his concubine : taken and fortified by Baasah king of Israel, to annoy the kingdom of Judah. This Ramah his mentioned Isa. x. Jer. xxxi. and Matth. ii. and is to be distinguished from

RAMAH, or Ramah of Samuel, 1 Sam. xix. called also Ramathaim Zophim, 1 Sam. i. 1, which lay a great way to the west towards Joppa, near Lydda, 1 Maccab. ii., the birth-place of Samuel ; adjoining to the mountains of Ephraim, and the place of his residence, 1 Sam. xv. &c. ××× Josephus.

RAMAZINI (Bernardin), an Italian physician, born at Carpi, near Modena, in 1633. He was professor of physic in the university of Modena for eighteen years ; and in 1 700 accepted an invitation from Padua, where he was made rector of the college; and died in 1714. His works were collected and published in Lon-don, 1716; of which his treatise De Morbis Artificum is much esteemed.

RAM'BLE, v. n. & n. s. } Swed. ramb ;

RAM'BLER. J Lat. reambulo. To

wander; rove irregularly; a wandering excursion : a rambler is a rover.

This conceit puts us upon the ramble up and down for relief, till very weariness brings us at last to ourselves. L' Estrange.

Says the rambler, we must e'en beat it out. Id.

He that is at liberty to ramble in perfect darkness, what is his liberty better than if driven up and down as a bubble by the wind t Locke.

Shame contracts the spirits, fixes the rumblings of fancy, and gathers the man into himself. South.

Chapman has taken advantage of an immeasurable length of verse, notwithstanding which, there is scarce any paraphrase so loose and rambling as his.

Pope.

Never ask leave to go abroad, for you will be thought an idle rambling fellow. Swift.

She quits the narrow path of sense

For a dear ramble through impertinence. Id. O'er his ample sides, the rambling sprays

Luxuriant shoot. Thomson's Spring.

RAMBOUILLET, a town in the department of the Seine ajid Oise, France, has an elegant royal castle, situated between two forests, and frequently resorted to by the Bourbon princes on hunting parties. Rambouillet is also remarkable for its breed of Merinos brought here in 1 787. A canal has been dug from this place to Versailles. Population 2600. Thirty miles south-west of Paris.

RAMEAU (John Philip) a celebrated French musician, born at Dijon in 1683. He was made organist of the cathedral of Clermont, where he wrote most of his works ; the chief of which is his Demonstration du Principe de 1'Harmonie, 1750. He was appointed manager of the opera at Paris, and raised to the rank of nobility. He died in Paris in 1764.

RAMESES, king of the Lower Egypt, wh < r Jacob went thither with his family, about A.A.C. 1706. Ancient authors mention several other kings of Egypt of the same name ; and it is thought that one of those princes erected, in the temple of the sun at Thebes, the magnificent obelisk which the emperor Constantine caused to be removed to

Alexandria in the year 334.

RAMESES, in ancient geography, a town built by the Israelites during their bondage in Egypt, and from which the Exodus took place, and which must have been towards, and not far from the Arabian Gulph, seeing in the third station the Israelites arrived on its shore

RAM

RAM'IFY v. a. & v. n.~\ French ramifier ;

RAM'IFICAHOX, >Lat. ramus and

RA'MOUS, adj. jfacin. To make or

separate into branches; be parted into branches : ramification is, separation into branches, or the branches separated considered collectively : ra-mous, branchy.

By continuation of profane histories or other monuments kept together, the genealogies and ramifications of some single families to a vast extension may be preserved. Hale.

The mint, grown to have a pretty thick stalk, with the various and ramified, roots, which it shot into the water, presented a spectacle not unpleasant to be-hold. Boyle.

Which vast contraction and expansion seems unintelligible, by feigning the particles of air to be springy and ramom, or rolled up like hoops, or by any other means than a repulsive power. Newton.

A ramous efflorescence, of a fine white spar, found hanging from a crust of like spar, at the top of an old wrought cavern. Woodward.

As the blood and chyle pass together through the ramificatwns of the pulmonary artery, they will be still more perfectly mixed ; but if a pipe is divided into branches, and these again subdivided, the red and white liquors, as they pass through the ramifications, will be more intimately mixed ; the more ramifications, the mixture will be the more perfect.

Arbuthnot.

Whoever considers the few radical positions which the Scriptu-es afforded him, will wonder by what energetick operation he expanded them to such ex-tent, and ramified them to so much variety, restrained as he was by religious reverence from licentiousness of fiction. Johnson.

RAMILLIES, or RAMELIES, a village of the Netherlands, in South Brabant, famous for the victory obtained 23rd May 1706, by the allied forces under the duke of Marlborough over the French.

RAMMISSERAM ISLE, an island in the straits between the continent of Hindostan and Ceylon, eleven miles in length, by six in breadth. It is naturally of little value ; but forms the first part of what is believed by the Hindoos to have been a bridge, constructed by their god Ram, for the purpose of conquering Ceylon. It contains a large town called Panban ; and a celebrated temple, the entrance to which is through a lofty stone gateway, 100 feet in height. On the stones, many of which are very large, are carved in alto relievo figures of the Hindoo deities. The temple is said to be built in the same massy style, and the architecture resembles the Egyptian ; but no European has been permitted to enter it. The image of Ram is bathed every day with water brought 1000 miles from the Ganges, and the concourse of pilgrims is prodigious. The rajahs of Tanjore are said to have expended ––25,000 in some of their visits : each pilgrim pays according to his ability ; and the revenue, after paying the expenses of the temple, becomes the property of a family of Brahmins, the chief of whom is called the pandaram. The strait between the island and the shore is about a mile wide, but is only passable by small vessels. Early in the fourteenth century, the Mahometans carried their arms into this island, and erected a mosque. The island is now an appendage to the district of Ramnad, and pays a small VOL. XVIII

revenue to the ranee or queen of that place, one of the British tributaries. Long 79–– 21’ F lat. 9–– 17’N ‘

RAMMOliUN ROY (Raja), a Hindoo born at Bourduan, in the presidency of Bengal, in the year 1780, was the first of bis nation of any rank that not only abandoned the idolatries of his ancestors, but actually translated portions of the New Testament, and published his views of Christianity at Calcutta. Having acquired mucli notoriety, and excited a strong interest in the western world, he determined on

visiting England, where he met with a reception equal to his most sanguine expectations. He there fully explained his religious opinions, which inclined to Unitarianism ; but while he was wisely mindful of the chief end of human existence, he was feelingly alive to the best interests of his native country, and pressed his advice for that purpose upon those who had the ability of acting upon it. After a few years passed in England, this accomplished and remarkable person was attacked by a fever, at Stapylton Grove, near Bristol, and died, after an illness of but a few days, on the 27th September, 1833.

RAMNAD, a trading town and district of the south of India, and province of Marawar. It is governed by a Hindoo family, tributary to the British. The present ruler is a lady, styled the ranee, a considerable part of whose revenue arises from a tax laid upon every pilgrim passing through her territories to the sacred temple of Rammisseram.

RAMP, v. n. & n. s.~\ Fr. ramper ; Ital. ram—

RAMPAL'LIAN, n. s. {pare ; Lat. repo. To

RAMP'ANCY, f climb. To leap, climb,

RAMP'ANT, adj. J or spring: a leap or

spring : rampalhan is a low sordid wretch : rampancy, prevalency : rampant, prevailing ; passing

beyond restraint; exuberant ; the heraldic use is

explained below.

i They gape upon me with their mouth ; as a ramping and roaring lion. Psalm xxii. 13.

Foaming tarr, their bridles they would champ, And trampling the fine element, would fiercely ramp.

Spenser.

He is vaulting variable ramps, In your despight, upon your purse.

Shakspeare,

Away, you scullion, you rampallion, you fustilarian.

Id.

Upon a hull, that deadly bellowed, Two horrid lions rampt, and seized, and tugged.

Chapman,

The bold Ascalonite

Fled from the lion ramp, old warriors turned Their plated backs under his heel.

Milton’s Agonistes.

RAMPAKT, in heraldry, a term applied to a lion, leopard, or other beast that stands on its hind legs, and rears up its fore feet in the posture of climbing, showing only half its face, one eye, &c.

RAM’PART, or) Fr. rempart; Ital.

RAM’PIRE, n. s. &v. a. \riparo. An embankment or wall round a fortified place ; to fortify with such wall.

She felt it, when past preventing, like a river, no rampircs being built against it, till already it have overflowed. Sidney.

2 B

RAM

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RAM

Set but thy foot

Against our rampired gates, and they shall ope.

Shakipeare.

The marquis directed part of his forces to rampart the gates and ruinous places of the walls.

Hai/ward. Yo' have cut a way for virtue, which our great

men Held shut up, with all ramparts, for themselves.

Ben Jonton.

The son of Thetis, rampire of our host, Is worth our care to keep.. Dryden.

The Trojans round the place a rampart cast, And palisades about the trenches placed. Id. He who endeavours to know his duty, and practises what he knows, has the equity of God to stand as a mighty wall or rampart between him and damnation for any infirmities. South.

No standards, from the hostile rampartt torn, Can any future honours give To the victorious monarch's name. Prior.

RAMPART, in fortification, an elevated bank of earth raised around a place to resist the ene-my's great shot, and cover the buildings. A parapet is raised upon this bank or elevation, which looks towards the country. It is generally about three fathoms high, and ten or twelve

thick ; but this depends partly upon the quantity of earth which may be taken out of the ditch. A rampart with half moons has advantages from being low, because the muskets of the besieged can better reach the bottom of the ditch ; but care must be taken that it is not commanded by the covert-way. A rampart ought to be sloped on both sides ; that is, the mass of earth which composes the rampart ought always to be larger at bottom than at top ; it should be broad enough to allow the passing of waggons and cannon, independent of the parapet which is raised on it. See FORTIFICATION.

RAM'PIONS, 7i. s. Lat. rapunculus. A plant.

Rampion is a plant whose tender roots are eaten in the spring, like those of radishes. Mortimer.

RAMPOOR, a city and extensive district of Hindostan, situated on the banks of the Soosey or Cossila River. It contains the palace of the nabob Fyzoola Khan, and some other good houses ; but the greater part of the town contains only sun burnt brick houses, with thatched or tiled roofs. After the conquest of the Rohillas, by the Nabob Shuja Addowla, and the British, in the year 1774 this district, then valued at fourteen lacs of rupees per annum, was ceded to 4he Nabob Fyzoola Khan, son of Aly Mohammed, as a jagier or fief: and under his superintendence it doubled in population and value. He died in 1794 and was succeeded by his eldest son Mohammed Aly, who was very shortly after assassinated by Ghoolaum Mohammed his brother. A British force was in consequence sent against him, -and, after a severe contest, succeeded in compelling him to surrender. After this, the jagier was curtailed, and the town, with a revenue of ten lacs of rupees per annum, assigned for the support of the orphan son of the murdered prince. Ram being the name of one of the Hindoo demigods, there are innumerable places called after him.

RAMSAY (Allan), a Scottish pastoral poet, was born at Peebles in 1696, and brought up as

a barber in Edinburgh. His songs are in universal esteem ; and his dramatic performance, entitled the Gentle Shepherd, is allowed by the best judges to be unrivalled. Lord Gardenstone says, ' this excellent piece does honor td North Britain. There is no pastoral in the English language comparable to it, and I believe there is none in any language superior.'

RAMSAY (Allan), a portrait painter, the son of the preceding, was born at Edinburgh in 1709. He studied at Rome, and on his return settled at Edinburgh ; but, after residing there some years, removed to London, and was appointed painter to the king. At the close of life he went to Italy, and died, on landing at Dover, in 1784 He wrote a piece, entitled The Present State of the Arts in England, and a volume of essays, called The Investigator.

RAMSAY (Andrew Michael), commonly called Chevalier Ramsay, a Scottish writer, born of a good family in Ayr in 1686. He studied at Edinburgh, where he became tutor to the earl of Wemys's son. Travelling afterwards to Leyden, he fell in with one Poiret a mystic divine ; on which he went to Paris to consult archbishop Fenelon, who converted him from deism to the Roman Catholic faith in 1709. By this prelate's influence, he was appointed governor to the duke of Chateau Thierry, and the prince of Turenne ; and was made a knight of -the order of St. Lazarus. He died at St. Germain in 1743 in the office of intendant to the duke of Bouillon, prince de Turenne. His principal work is the Travels of Cyrus, which has been several times printed in English.

RAMSAY (Rev. James), was born at Fraser-burgh, in Aberdeenshire, in 1733. Having studied at King's College, Aberdeen, he was bound apprentice to Dr. Findlay, a physician in Fraser-burgh. He afterwards went to London ; studied two years under Dr. Macauley ; passed the usual trials at surgeons' hall ; and then went on board the Arundel, -commanded by captain, afterwards Sir Charles, Middleton (now lord Bar-ham), which was soon after met by a slave ship from -Guinea in great distress, an infectious fever having carried off a great number of the crew and slaves, besides the surgeon himself. Ramsay was the only surgeon in the fleet who would venture on board to prescribe for them, and he very fortunately escaped the infection, but broke his thigh bone in getting on board his own ship : this rendered him lame for life. On his return he was recommended to the bishop of London, by whom he was admitted into orders, and immediately sent out to St. Christopher's, where the governor presented him to two rectories worth ––700 a year. He soon published his Essay on the Treatment and Conversion of the African Slaves in the British Sugar Colonies ; and in 1763 married Miss Rebecca Akers, .the daughter of a respectable planter. All his exertions in favor of the slaves were, however, only productive of opposition, calumny, and acrimonious abuse from the planters. Vexed with such unmerited persecution he returned to Britain in 1777, visited his native country, where his mother, on whom he had settled an annuity, had died some time before. Being introduced to lord George Germaine, he was, in 1778, ap-RAM

pointed chaplain to admiral Barrington, and afterwards to admiral Rodney ; under both of whom he was present at several engagements. After this he took his farewell of St. Christopher's, resigned his benefices, and returned to England in 1781 ; where he republished his Essay above-mentioned. He died July 20th 1789, in his friend Sir C. Middleton's house; leaving a widow and three daughters. He published also at an early period, An Essay on the Duty and Qualifications of a Sea Officer ; 2. A Treatise on Signals ; and 3. A volume of Sea Sermons. The profits of these works he devoted to the .Magdalen and British lying in hospitals, and the marine society.

RAMSAY (David), an American physician and historical writer, was a native of Charlestown, South Carolina, and engaged in the practice of medicine at the place of his birth. He was a member of the congress of the United States from 1782 till 1785. Having gone to visit the patients in a lunatic asylum, in 1815, he was unfortunately killed by one of the insane inmates. Dr. Ramsay was the author of A History of the American Revolution, so far as respects the State of South Carolina, 1791, 2 vols. 8vo ; The Life of George Washington, 1807, 8vo. A Discourse delivered on the Anniversary of American Independence, 1800 ; and, A View of the Improvements made in Medicine during the Eigh-teeth Century, 1802, 8vo.

RAMSDEN (Jesse), F. R.S., an eminent optician, was born at Halifax in Yorkshire in 1738, and came to London as an engraver. Hav-ing to delineate several mathematical instruments, he finally constructed them himself, and married a daughter of Mr. Dollond, the celebrated optician. He first opened a shop in the Hay market, whence he removed to Piccadilly, where he remained until his death in 1800. Ramsden early obtained a premium from the board of longitude, for the invention of the curious machine for the division of mathematical instruments hereafter described : he also improved the construction of the theodolite, the pyrometer for measuring the dilatation of bodies by heat, the barometer for measuring the height of mountains, &c. ; also the refracting microme-ter and transit instrument and quadrant. He

made great improvements also in Hadley's quadrant atid sextant, and procured a patent for an amended equatorial. Such was his reputation, that his instruments were bespoken in every part of Europe ; and ultimately, though he employed sixty men, to obtain the execution of an order was a high favor.

RAMSDEN'S MACHINE FOR DIVIDING MATHEMATICAL INSTRUMENTS is an invention of the last century, by which these divisions can be performed with exceedingly great accuracy. On discovering the method of constructing this machineˆ its inventor, Mr. Ramsden of Piccadilly, received ––615 from the Board of Longitude ; engaging himself to instruct a certain number of persons, not exceeding ten, in the me-thod of making and using it from the 28th of October 1775 to 28th October 1777; also binding himself to divide all octants and sextants by the same engine, for as long time as

the commissioners should think proper. Tha following description of the engine is that given by Mr. Ramsden himself. 'This engine consists of a large wheel of bell-melal, supported on a mahogany stand, having three legs, which are strongly connected together by braces, so as to make it perfectly steady. On each leg of the stand is placed a conical friction-pulley, whereon the dividing-wheel rests; to prevent the wheel from sliding off the friction-pulleys, the bell-metal centre under it turns in a socket on the top of the stand. The circumference of the wheel is ratched or cut (by a method which Mr. Ramsden describes) into 2160 teeth, in which an endless screw acts. Six revolutions of the screw will move the wheel a space equal to one degree. Now a circle of brass being fixed on the screw arbor, having its circumference divided into sixty parts, each division will consequently answer to a motion of the wheel of ten seconds, six of them will be equal to a minute, &c. Several different arbors of tempered steel are truly ground into the socket in the centre of the wheel. The upper parts of the arbors that stand above the plane are turned of various sizes, to suit the centres of different pieces of work to be divided. When any instrument is to be divided, the centre of it is very exactly fitted on one of these arbors ; and the instrument is fixed down to the plan of the dividing wheel, by means of screws, which fit into holes made in the radii of the wheel for that purpose. The instrument being thus fitted on the plane of the wheel, the frame which carries the dividing-point is connected at one end by finger-screws with the frame which carries the endless screw ; while the other end embraces that part of the steel arbor which stands above the instrument to be divided, by an angular notch in a piece of hardened steel ; by this means both ends of

the frame are kept perfectly steady and free from any shake. The frame carrying the dividing point or tracer is made to slide on the frame which carries the endless screw to any distance from the centre of the wheel, as the radius of the instrument so divided may require, and may there be fastened by tightening two clamps ; and the dividing-point or tracer, being connected with the clamps by the double-jointed frame, ad-mits a free and easy motion towards or from the centre for cutting the divisions, without any lateral shake. From what has been said, it appears, that an instrument thus fitted on the dividing-wheel may be moved to any angle by the screw and divided circle on its arbor, and that this angle may be marked on the limb of the instrument with the greatest exactness by the dividing-point or tracer, which can only move in a direct line tending to the centre, and is altogether freed from those inconveniences that attend cutting by means of a straight edge. This method of drawing lines will also prevent any error that might arise from an expansion or contraction of the metal during the time of dividing. The screw frame is fixed on the top of a conical pillar, which turns freely round its axis, and also moves freely towards or from the centre of the wheel, so that the screw-frame may be entirely euided by the frame which connects it with the

centre ; by this means any eccentricity of the wheel and the arbor would not produce any error in the dividing ; and, by a particular contrivance, the screw when pressed against the teeth of the wheel always moves parallel to itself; so that a line joining the centre of the arbor and the tracer continued, will always make equal angles with the screw.’

RAMSEY, a town of Huntingdonshire, sixty-eight miles north of

London, and twelve north-east of Huntingdon. It was once famous for a very rich abbey, part of the gatehouse of which is still standing, and a neglected statue of Ail-win, the epitaph of whose tomb, which is reckoned one of the oldest pieces of English sculpture extant, styles him ‘ kinsman of the famous king Edward, “alderman of all England, and the miraculous founder of this abbey.’ It was dedicated to St. Dunstan, and its abbots were mitred, and sat in parliament ; and so many kings of England were benefactors to it that its yearly rents, says Camden, were ►►7000. The town was then called Ramsey the Rich ; but by the dissolution of the abbey it soon became poor, and even lost its market for many years, which is now held on Saturday. There is a charity school for poor girls.

RAMSEY, a town in the Isle of Man, on the north coast, with a noted and spacious haven.

RAMSGATE, a sea-port town of Kent, in the isle of Thanet, five miles south from Margate, with a very fine pier, seated near the Downs, between the North and South Foreland, ten miles north-east of Canterbury. It was formerly but an obscure fishing village, but since 1688 has been improved and enlarged by a successful trade to Russia and the Baltic, and has become a frequented bathing place. The harbour is very capacious, and was begun in 1750. It is formed by two piers ; that to the east is built of Pur-oeck stone, and extends into the ocean nearly 800 feet before it forms an angle ; its breadth on the top is twenty-six feet, including a strong parapet wall. The other, to the west, is constructed of wood as far as the low-water mark, but the rest is of stone. The angles, of which there are five in each pier, consist of 160 feet each, with octagons at the ends of sixty feet diameter, leaving an entrance of 200 feet into the harbour, the depth of which admits of a gradual increase of eighteen to thirty-six feet. It is defended by two batteries. It is now made a royal port in commemoration of his majesty’s visit in 1821. After the piers were nearly finished, the deposition of sand within the harbour became so considerable as to threaten its complete destruction, when it was advised by Mr. Smeaton to construct a basin within the harbour, to retain the tide water, and, letting it out again at every ebb, to carry off any deposition by this artificial current. This was accordingly done, and the beneficial effects were such as even to exceed expectation ; but as, notwithstanding these improvements, the harbour was found unsafe during easterly gales, an advanced pier was begun in 1787, the utility of which became apparent as the work advanced, and greatly facilitated the entrance of shipping in tempestuous weather. A military road was also completed under the cliif connecting the centre

and outward piers, for the embarkation of troops. About the same period a dry dock was erected, and storehouses for every necessary purpose. A new stone light-house has been since constructed on the head of the west pier, a handsome house for the business of the trustees, another for the residence of the harbour master, a watch-house, &c. From the light-house are displayed in the night, two lamps, with argand burners, when the water in the harbour is of the depth of ten feet; and in the day this notice is given by a rTag-staff from Sion Hill. A large stone building has been erected for a dock-house, and a wet dock near the basin, for the repair of vessels ; and no cost has been spared to render this harbour as useful as possible, in proportion to the dangerous navigation, in stormy weather, of the adjacent part of the channel. The pier forms the grand promenade. The bathing place, furnished with machines and accommodations in the same manner as at Margate, lies in front of a long line of high chalky rocks at the back of the pier. Warm salt-water, and also plunging and shower baths, are established here, with suitable conveniencies. The assembly-room is a neat building, near th►► harbour; with coffee, tea, billiard, card, and other rooms ; the whole being under the direction of the master of the ceremonies at Margate. Here are several good hotels, and numerous lodging-houses suited to every description of company. The libraries in the town are numerous, spacious, and valuable. It has a handsome chapel of ease, besides which there are several meeting-houses. The town is well paved, lighted, and watched, and has a court of requests for the recovery of small debts.

RAMUS, in general, denotes a branch of any thing, as of a tree, an artery, &c. In the anatomy of plants it means the first or lateral branches, which go off from the petiolum, or middle rib of a leaf. The subdivisions of these are called surculi ; and the final divisions, into the most minute of all, are by some called capillamenta; but both kinds are generally denominated sur-culus.

RAMUS (Peter), one of the most celebrated professors of the sixteenth century, was born in Picardy in 1515. A thirst for learning prompted him to go to Paris when very young, and he was admitted a servant in the college of Navarre. Spending the day in waiting on his masters, and the greatest part of the night in study, he made such surprising progress, that, when he took his degree of M. A., he offered to maintain a quite opposite doctrine to that of Aristotle. This raised him many enemies ; and the two first books he published, Institutiones Dialectics, and Aristotelicae Animadversiones, occasioned great disturbances in the university of Paris : and the opposition against him

was not a little heightened by his deserting the Romish religion, and professing that of the Reformed, Being thus forced to retire from Paris, he visited the universities of Germany, and received great ho-nors wherever he came. He returned to France in 1571, and lost his life miserably in the horrid massacre of St. Bartholemew's day. He published many works which Teissier enumerates.

Much is due to him for having with so much firmness and perseverance asserted the natural freedom of the human understanding. The logic of Ramus obtained great authority in the schools of Germany ? Great Britain, Holland, and France ; and long and violent contests arose between his followers and those of the Stagyrite, till his fame vanished before that of Descartes.'

RANA, the frog, in zoology, a genus belonging to the order amphibia reptilia. The body is naked, furnished with four feet, and without any tail. There are many species. The most remarkable are these :

1. R. aquatica, the water frog of Catesby has large black eyes, yellow irides, and long limbs ; the upper part of the head and body is of a dusky green, spotted with black ; and from each eye to the nose is a white line ; and a yellow line along the sides to the rump. They frequent rivulets and ditches, which they do not quit for the dry land. They spring five or six yards at a leap.

2. R. arborea, the green tree frog of Catesby, is of a slender shape and bright green color, marked on each side with a line of yellow : the eyes are black ; the irides yellow ; they have four toes before and five behind ; at the end of each toe there is a round membrane, concave beneath, and like the mouth of a leech. They lurk under the lower sides of leaves, even of the tallest trees, and adhere firmly, by means of the membranes at the ends of their toes sticking to the smoothest surface : a looking-glass was held before one, at four yards distance ; it reached it at one leap, and stuck closely to it. At night these frogs make an incessant chirping, and leap from spray to spray in search of insects. This species is common to America and the warmer parts of

Europe.

3. R. bufo, the toad, ˆlian and other ancient writers tell many ridiculous fables of the poison of the toad. This animal was believed by some old writers to have a stone iu its head fraught with great virtues medical and magical ; it was distinguished by the name of the reptile, and called the toad-stone, bufonites, crapaudine, krottenstein. See BUFO.

The most full information concerning the na-ture and qualities of this animal is contained in letters from Mr. Arscott and Mr. Pittfield to Dr. Milles, communicated to Mr.Pennant ; concerning a toad that lived above thirty-six years with them, was completely tame, and became so great a favorite that most of the ladies in the neighbourhood got the better of their prejudices so far as to be anxious to see it fed. Its food was insects, such as millepedes, spiders, ants, flies, &c., but it was particularly fond of flesh worms, which were bred on purpose for it. Itnever appeared in winter, but regularly made its appearance in spring, when the warm weather commenced, climbing up a few steps, and waiting to be taken up, ear-ned into the house, and fed upon a table. Before it attacked the insects, it fixed its eyes on them, and remained motionless for a quarter of a mi-nute, when it seized them by an instantaneous motion of its tongue darted on the insect, with siich rapidity that the eye could not follow it,

whereby the insect stuck to the tip of its tongue, and was instantly conveyed to its mouth. This favorite toad at last lost its life, in consequence of being attacked by a tame raven, which picked out one of its eyes ; and although the toad was rescued, and lived a year longer, it never recovered its health or spirit. Mr. Pennant's correspondent, among many other particulars, adds, that ' there are thirty males to one female, twelve or fourteen of whom I have seen clinging round a female : I have often disengaged her, and put her to a solitary male to see with what eagerness he would seize her. They impregnate the spawn as it is drawn out in long strings.'

4. R. cinerea, the cinereous frog, has a gibbous, cinereous, and smooth back ; the belly is yellow and granulated ; on each side, from the nose to the rump, there is a white line ; and there is the same on the outside of the thighs and legs ; the toes are bullated at their ends. They inhabit Carolina.

5. R. esculenta, the edible frog, differs from the common frog, in

having a high protuberance in the middle of the back, forming a very sharp angle. Its colors are also more vivid, and iis marks more distinct; the ground color being a pale or yellowish green, marked with rows of black spots from the head to the rump.

6. R. ocellata, the bull frog, a very large sp - cies, found in Pennsylvania, and some other parts of North America. The irides are of a dusky red, surrounded with a yellow ring. The auricles are covered with a thin circular skin, which forms a spot behind each eye. They have four toes on the fore feet, and five palmated toes be-hind. Their color is a dusky brown, mixed with yellowish green, and spotted with black. The belly is yellowish, and faintly spotted. These make a roaring noise like a bull, only more hoarse. Their size is superior to that of any other of the genus, and they can spring forward three yards at a leap ; and thus will equal in speed a very good horse at its swiftest course. They live in ponds or bogs with stagnant wa-ter ; but never frequent streams. In the day time they seldom make any great noise, unless the sky is covered ; but in the night time they maybe heard at the distance of a mile and a half. When they croak, they are commonly near the surface of the water, under the bushes, and have their heads out of the water. By going slowly, therefore, one may get up almost close to them be-fore they go away. As soon as they are quite under water, they think themselves safe, though it be ever so shallow. These creatures kill and eat young ducklings and goslings, and sometimes carry off chickens that come too near the water ; when beaten, they cry out almost like little children. As soon as the air begins to grow a little cool in autumn they hide themselves under the mud in the bottom of stagnant waters, and lie there torpid during the winter. As soon as the weather grows mild towards summer, they begin to get out of their holes and croak. They are supposed by the people of Virginia to be the purifiers of waters, and are respected as the ge-nii of the fountains. Some of them were brought to England alive several years ago.

7. R. pipal, the Surinam toad, is more ugly than even the common

one. The body is flat and broad ; the head small ; the jaws, like those of a mole, are extended, and evidently formed for rooting in the ground ; the skin of the neck forms a sort of wrinkled collar ; the color of the head is of a dark chestnut, and the eyes are small ; the back, which is very broad, is of a lightish gray, and seems covered over with a number of small eyes, which are round, and placed at nearly equal distances. These eyes are very different from what they seem : they are the animal's eggs, covered with their shell, and placed therefor hatching. These eggs are buried deep in the skin, and in the beginning of incubation but just appear ; and are very visible when the young animal is abou-t to burst from its confinement. They are of a reddish shining yellow color; and the spaces between them are full of small warts, resembling pearls. This is their situation previous to their coming forth ; but nothing is so surprising as the man-ner of their production. The eggs, when formed in the ovary, are sent, by some internal canals, which anatomists have not hitherto described, to lie and come to maturity under the bony substance of the back ; in this state they are impregnated by the male ; the skin, however, is still apparently entire, and forms a very thick covering over the whole brood ; but as they advance to maturity, at different intervals one after another, the egg seems to start forward from the back, becomes more yellow, and at last breaks ; when the young one puts forth its head; it still, however, keeps its situation until it has acquired a proper degree of strength, and then it leaves the shell, but still continues to keep upon the back of the parent. In this manner the pipal is seen travelling with her wondrous family on her back, in all the different stages of maturity. Some of the strange progeny, not yet come to sufficient perfection, appear quite torpid, and as yet without life in the egg; others seem just beginning to rise through the skin ; here peeping forth from the shell, and there having entirely forsaken their prison ; some are sporting at large upon the parent's back, and others descending to the ground to try their own fortune below. The male pipal is every way larger than the fe-male, and has the skin less tightly drawn round the body. The whole body is covered wkh pustules, resembling pearls ; and the belly, which is of a bright yellow, seems as if it were sewed up from the throat to the vent, a seam being seen to run in that direction.

8. R. rubeta, the natter jack, frequents dry and sapdy places ; it is found on Putney common, and also near Revesby abbey, Lincolnshire. It never leaps, neither does it crawl with the slow pace of a toad, but its motion is more like running. Several are found commonly together, and, like others of the genus, they appear in the evenings. The upper part of the body is of a dirty yellow, clouded with brown, and covered

with porous pimples of unequal sizes ; on the back is a yellow line-The upper side of the body is of a paler hue, marked with black spots, which are rather rough. On the fore feet are four divided tees; on the hind five, a little

webbed. The length of the body is two inches and a quarter ; the breadth one inch and a quarter ; the length of the fore legs one inch and a sixth ; of the hind legs two inches. This is the account given by Sir Joseph Banks.

9. R. temporaria, the common frog. This is, an animal so well known that it needs no description; but some of its properties are very singular. Its spring, or power of taking large leaps, is remarkably great, and it is the best swimmer of all four-footed animals. Its limbs are finely adapted for those ends, the fore members of the body being very lightly made, the hind legs and thighs very long, and furnished with very strong muscles. While in a tadpole state, it is entirely a water animal ; and, as soon as the frogs are released from their tadpole state, they immediately take to land ; and if the weather has been hot, and there fall any refreshing showsrs, the ground for a considerable space is perfectly blackened by myriads of these animalcules, seeking for some secure lurking places. Some phi losophers, not taking time to examine into this phenomenon, imagined them to have been gene rated in the clouds, and showered on the earth but, had they but traced them to the next pool they would have found a better solution of the difficulty. As frogs adhere closely to the backs of their own species, so we know they will do the same by fish. That they will injure, if not entirely kill carp, is a well-known fact. Not many years ago, on fishing a pond belonging to Mr. Pitt of Encomb, Dorsetshire, great numbers of the carp were found each with a frog mounted on it, the hind legs clinging to the back, and the fore legs fixed to the corner of each eye of the fish, which were thin and greatly wasted, teased by carrying so disagreeable a load. These frogs Mr. Pennant supposes to have been males disappointed of a mate. The croaking of frogs is well known ; and hence in fenny countries they are distinguished by ludicrous titles : thus they are stiled Dutch Nightingales, and Boston waites. Yet there is a time of the year when they become mute, neither croaking nor opening their mouths for a whole month ; this happens in the hot sea-son, and that is in many, places known to the country people by the name of the paddock moon. These, as well other reptiles, feed but a small space of the year. Their food is flies, insects, and snails. During winter frogs and toads remain in a torpid state ; the last of which will dig into the earth, and

cover themselves with al-most the same agility as the mole.

10. R. terrestris, the land frog of Catesby, has much the appearance of a toad ; above it is gray or brown, spotted with dusky ; below white, faintly spotted ; the irides are red ; and the legs short. They frequent the high lands, and are seen most frequently in wet weather and in the hottest time of the day ; they leap, feed on insects, particularly the fire-fly and ant. Sometimes the Americans bake and reduce this species to powder, which, mixed with orrice-root, is taken as a cure for a tympany.

RANCAGUA, a province of Chili, between the rivers Maypo and Cachapoal, and extending from tV e Andes to the sea. Its breadth is very unequal, being from seventeen to only eight

leagues. It contains the lakes Aculeu and Bu-calemu, and the lands are very fertile in grain. But it is thinly peopled, and the inhabitants, amounting only to 12,000, widely dispersed. It has mines of gold of superior quality.

RANCAGUA, the capital of the above province, also called Santa Cruz de Triana, is situated on the north shore of the river Cachapuel, fifty - three miles south of Santiago.

RANGE (D. A. J. Bouthillier), a learned French writer, born in Paris in 1626. At the age of twelve, so rapid was his progress, he published an edition of Anacreon in Greek, with notes, in 8vo. Having taken his degrees at Sorbonne, he wrote several theological pieces, but gave himself up to dissipation ; and at last retired into a monastery, where he died in 1700.

RANCH, v. a. Corrupted from wrench. To sprain ; to injure with

violent contortion. Dry-den uses it for to tear.

Against a stump his tusk the monster grinds, And ranched his hips with one continued round.

Dry den. Emeticks ranch, and keen catharticks scour.

Garth.

RAN’CID, adj. Lat. rancidus. Strong scented. See RANK.

The oil, with which fishes abound, often turns rancid, and lies heavy on the stomach, and affects the very sweat with a rancid smell. Arbuthnot.

RAN’COR, n. s. ˆ Old French rancoeur ; RAN’COROUS, adj. >Teut. ranken. InveteRAN’COROUSLY, adv.j rate malignity ; malice; implacability : the adjective and adverb corresponding.

His breast full of rancor like canker to freat.

Tusser.

As two brave knights in bloody fight With deadly rancour he enraged found.

Spenser. So flamed his eyen with rage and rancorout ire.

Id.

Rancour will out, proud prelate ; in thy face I see thy fury. Shakspeare. Henry VI.

Because I cannot

Duck with French nods and apish courtesy, I must be held a rancorous enemy. Shakspeare.

Such ambush Waited with hellish rancour imminent.

Milton.

No authors draw upon themselves more displeasure than those who deal in political matters, which is justly incurred, considering that spirit of rancour and virulence with which works of this nature abound. Addison’s Freeholder.

Presbyterians and their abettors, who can equally go to a church or conventicle, or such who bear a personal rancour towards the clergy. Swift.

The most powerful of these were Pharisees and Sadducees ; of whose chief doctrines some notice is taken by the evangelists, as well as of their rancorous opposition to the gospel of Christ. West.

RANDIA, in botany, a genus of the monogynia order, and pentandria class of plants : CAL. monophyllous : COR. salver-shaped ; berry unilocular, with a capsular rind. There are two species, *viz.* 1. R. aculeata; and 2. R. mitis.

RANDOLPH (Thomas), an eminent English poet of the seventeenth century, born in North-amptonshire in 1605. He was educated at Westminster and Cambridge, and was patronised

by some of the greatest men of his age ; particularly by Ben Jonson. He died in 1634. He wrote, 1 . The Muses' Looking-glass, a comedy. 2. Amyntas, or the Impossible Dowry, a pastoral, acted before the king and queen. 3. Aristip-pus, or the Jovial Philosopher. 4. The Conceited Pedlar. 5. The Jealous Lovers, a comedy. 6. Hey for Honesty, down with Knavery, a co-medy ; and several poems.

RANDOLPH (Sir Thomas), LL. D., was born in Kent in 1530. He was a student at Christ-Church, when Henry VIII. turned it into a cathedral. He became principal of Broad-gate Hall in 1549. Under queen Elizabeth he was employed in several embassies to Scotland, France, and Russia ; was knighted, and promoted to several considerable offices. He wrote An Account of his Embassage to the emperor of Russia, anno!568 ; and Instructions for Searching the Seaand Border of the Coast, from the Pechora to the Eastwards, anno 1588. He died in 1590, aged sixty.

RANDOLPH (Thomas), D. D., was the son of a barrister, the recorder of the city of Canterbury, where he was born about the commencement of the last century ; and went upon the foundation to Corpus Christi College, Oxford, of which society he eventually became president in 1748. Besides the benefices of Petham, Waltham, and Saltwood, all in the immediate neighbourhood of his native city, his distinguished talents as a theologian raised him to the Lady Margaret divinity chair, and the archdeaconry of Oxford, to which latter dignity he was elevated in 1768. He acquired considerable reputation by his

Vindication of the Doctrine of the Trinity, &c. A View of the Ministry of our Saviour Jesus Christ. 8vo. 2 vols ; The Christian's Faith a rational Assent; Citations from the Old Testament contained in the New; and a volume of Sermons, preached at St. Mary's, Oxford. He died in 1783, leaving behind him two sons.

RANDOLPH (right reverend John), the eldest, afterwards bishop of London, was born in 1749 ; became a student of Corpus Christi College, Oxford; M. A. 1774; B. D. 1782; D. D. by diploma 1783; prelector of poetry 1776; proo-tor 1781 ; regius professor of Greek 1782; and, in the same year, a prebendary of Salisbury ; canon of Christ Church, regius professor of divinity, and rector of Ewelme, in 1783 ; elevated to the bishopric of Oxford in 1799; translated to that of Bangorin 1807; and thence to London in 1809. He was elected F. R. S. in 1811. He passed a great part of his life in the University of Oxford, and enjoyed a considerable reputation for learning, and it is generally understood that, when he was elevated to the see of Oxford, the university was complimented with the nomination by the crown. By some, however, it has been insinuated that his opinions were somewhat too high and determined, to succeed so very mild and conciliating a prelate as Dr. Porteus. His publications are××× A Sermon preached at an Ordination at Christ Church, 1779, 1 Cor. xii. 31. Oxon. 1779, 4to. A Sermon preached at the Consecration of Dr. Lewis Bagot, in 1782, to the bishopric of Bristol, Acts ii. 42. Oxon, 1782, 4to. De Gracee linguae studio prselectio habita

in schola linguarum, Oxon. in. Non. Dec. A. D. MDCCLXXXII. 1783, 4to. Conscio ad Clerum in Synodo Provincial) Cantuariensis Provinciae, ad D. Pauli, die 26×× Novembris, A. D. 1790. A Sermon preached before the Lords spiritual and temporal, in the Abbey Church of Westminster, March 12, 1800, being the day appointed for a general fast. A Sermon preached before the Society for the

Propagation of the Gospel in foreign parts, 1803. A Charge delivered to the clergy of the diocese of Bangor, at his primary visitation in 1808, and published at the request of the Clergy. A Charge delivered to the Clergy of the diocese of London, at his Primary Visitation, 1810. The bishop died at Hardham, 28th July, 1813.

RANDOLPH, a post town of Orange county, Vermont, twelve miles W. S. W. of Chelsea, twenty-three south of Montpelier, and thirty-eight north of Windsor. This is a pleasant and valuable agricultural town, and has a small village, containing an academy, and a Congregational meeting-house. The town contains a large bed of iron ore. It is watered by the branches of White River, and has valuable mills and iron-works.

RANDOLPH, a county in the north-west part of Virginia, bounded north by Monongalia county, east and south-east by Pendleion county, south-west by Greenbrier and Kenhawa counties, and west by Harrison county. It is watered by the head waters of the Monongahela. Chief town, Beverly.

RANDOLPH, a county of the central part of New Carolina, a county of Ohio, and of Illinois.

RAN'DOM, n. s. & adj. Fr. random. Want of direction, rule, or method ; chance ; hazard : done by chance.

For, not to speake

At needy random ; but my breathe to breake , In sacred oath, Ulysses shall return. Chapman.

The striker must be dense, and in its best velocity : the angle which the missive is to mount by, if we will have it go to its furthest random, must be the half of a right one ; and the figure of the missive must be such as may give scope to the air to bear it. Digby.

Thy words at random argue inexperience.

Milton.

Fond love his darts at random throws, And nothing springs from what he sows.

Waller. Virtue borrowed but the arms of chance,

And struck a random blow ; 'twas fortune's work,

A nd fortune take the praise. Dryden.

In the days of old the birds lived at random in a lawless state of anarchy ; but in a time they moved ror the setting up of a king. L'Estrange's Fables.

Who could govern the dependence of one event upon another, if that event happened at random, and was not cast into a certain relation to some foregoing purpose to direct? Booth's Sermons.

'Tis one thing when a person of true merit is drawn as like as we can ; and another, when we make a fine thing at random, and persuade the next vain creature that 'tis his own likeness. Pope.

Let fortune's gifts at random flee, They ne'er shall draw a wish frae me, Supremely blest wi' love and thee,

In the Birks of Aberfeldy. Burns.

Nor will you be sensible of any disadvantage attending it, excepting one, *viz.* its making you mere

sensible of the weakness and ignorance of others, who are often talking in a random, inconsequential manner. Mason.

RANDOM-SHOT, in gunnery, is a shot made when the muzzle of a gun is raised above the horizontal line, and is not designed to shoot directly or point blank. The utmost random of any piece is about ten times as far as the bullet will go point-blank. The bullet will go farthest when the piece is mounted to nearly 45►► above the level of the range. See PROJECTILES.

RANGE, v. a., v. n.) Fr. ranger ; Dan.

RAN'GER,W.S. [&►►.*. J range; Welsh rheng. To order ; place in rank ; hence to course or rove over: and, as a verb neuter, rove at large; be placed in order, or in any particular direction : a rank; class; order; step; collection of steps or bars ; hence a fire-grate : excursion ; compass of excursion or course; hence extent of the course of a ball, in gunnery : a ranger, one that ranges, applied both to dogs and men.

As a roaring lion and a ranging bear, so is a wicked ruler over the poor people.

Proverbs xxviii. 15.

It was a vault ybuilt for great dispence, With many ranges reared along the wall, And one great chimney. Spensar.

They walk not widely, as they were woont, For fear of raungers and the great hoont, But privily prolling to and fro. Id. Pastora.lt.

‘Tis better to be lowly born, And range with humble livers in content, Than to be perked up in a glistering grief, And wear a golden sorrow.

Shakspeare. Henry VIII. Caesar’s spirit ranging for revenge, With Ate by his side come hot from hell, Shall in these confines, with a monarch’s voice, Cry havock, and let slip the dogs of war.

Shakspeare. You fled

From that great face of war, whose several ranges Frighted each other. Id. Antony and Cleopatra.

The implements of the kitchen are spits, ranges, cobitons, and pots. Bacon’s Physical Remains.

Ditect my course so right, as with thy hand to

show, Which way thy forests range, which way thy rivers

flow. Drayton.

The buttery must be visible, and we need for our ranges a more spacious and luminous kitchen.

Wotton’s Architecture.

The range and compass of Hammond’s knowledge filled the whole circle of the arts. Felt.

He saw not the marquis till the battle was ranged.

Clarendon.

The liturgy, practised in England, would kindle that jealousy, as the prologue to that design, and as the first range of that ladder which should serve to mount over all their customs. Id.

Somewhat raised,

By false presumptuous hope, the ranged powers Disband, and wandering each his several way-Pursues. Milton.

Other animals unactive range, And of their doings God takes no account. Id. The next range of beings above him are the immaterial intelligences, the next below him is the sensible nature. Hide.

Come, says the ranger, here's neither honour nor money to be got by staying. L' Estrange .

He was bid at his first coming to take oil' the range, and let down the cinders. /

Their father Tyrrheus did his fodder bring, Tyrrheus, chief ranger to the Latian king.

Dryden.

Men, from the qualities they find united in them, and wherein they observe several individuals to agree, range them into sorts for the convenience of comprehensive signs. Locke.

He may take a range all the world over, and draw in all that wide circumference of sin and vice, and center it in his own breast. South's Sermons.

Thanks to my stars, I have not ranged about The wilds of life, ere I could find a friend.

Addisnn.

From this walk you have a full view of a huge range of mountains, that lie in the country of the Grisons. Id.

The light which passed through its several interstices, painted so many ranges of colours, which were parallel and contiguous, and without any mixture of white. Newton.

To the copse thy lesser spaniel take, Teach him to range the ditch and force the brake.

Gay.

Let your obsequious ranger search around, Nor will the roving spy direct in vain, But numerous coveys gratify thy pain. Id.

These ranges of barren mountains, by condensing .he vapours and producing rains, fountains, and rivers, give the very plains that fertility they boast *f. Bentlei/‘s Sermons.

Far as creation’s ample range extends, The scale of sensual, mental powers ascends.

Pope.

A certain form and order, in which we have long accustomed ourselves to range our ideas, may be best for us now, though not originally best in itself.

Walts.

RANGE, in gunnery, the path of a bullet, or the line it describes from the mouth of the piece to the point where it lodges. If the piece lie in a line parallel to the horizon, it is called the right or level range ; if it be mounted to 45►►, it is said to have the utmost range ; all others between 0►► and 45►► are called the intermediate ranges. See PROJECTILES.

RANGER, a sworn officer of a forest, appointed by the king’s letters patent ; whose business is to drive back the deer out of the purlieus, &c., and to present all trespasses within his jurisdiction at the next forest court.

RANGOON, a city and principal port of the Burmhan empire in the province of Pegu. It was formerly called Dagoon, and is much celebrated in the wars of the Burmhans and Peguers. Standing on the north bank of the eastern branch of the Irrawaddy, at the distance of thirty miles from the sea, this town is almost wholly built of wood, and is about a mile in length by half a mile broad. At the river gate there is a battery erected, with a few pieces of cannon; but the place

could not stand the fire of a frigate for an hour. The streets are narrow, but straight, and paved with brick. The houses are raised several feet from the ground ; and those near the river are washed by spring tides. The under story of the others are kept clean by hogs, who wander about here without any owner. The population is said to amount to 30,000, composed of persons from all parts of the world, after the Burmhans and Peguers. The Chinese are very numerous and are all carpenters, and obtain employment in the dockyards. The river is

extremely commodious for the construction of ships. The spring tides rise twenty feet perpendicularly. The banks are flat and soft, -so that there is little occasion for docks, and the shipwrights, being active and athletic, turn to good account their timber, which is the finest in the world. It grows several hundred miles up the country, and is cut down during the dry season, and split into very thick planks. It is then floated down the rivers. Jt is known that ships can be built at Rangoon much cheaper than at Calcutta or Bombay. It is therefore resorted to by Europeans, who, however, generally procure their iron work, masts, and capsterns, from other places. Vessels of 600 tons burden, however, are often entirely constructed at Rangoon. All kinds of European goods are imported, and a variety of cloths from different parts of India ; here also are found tea, sugar-candy, and porcelain from China. The exports are chiefly tim-ber, wax, and ivory. The police is very exact ; and, after a certain hour of the night, ropes are drawn across the streets and a number of watch-men and firemen stationed in different places. Two miles and a half from the town stands the temple of Shoe Dagoon. In the vicinity are several convents, inhabited by the Rahaans, or priests, who in general are respectable people ; and, as the Burmans allow universal toleration, there is both a Portuguese and Arminian church in the town, which serve for Christians of all denominations. Rangoon rose into celebrity on the ruin of Pegu in the middle of the last century. It is now the residence of the viceroy of the province, and his council, and is considered the second city in the Burmhese empire. It has frequently been injured by fire: and is the only port in the empire which Europeans are allowed to settle at or trade with. Long. 96►► 9’ E., lat. 16►► 47’ N.

RANK,n.s.,o$.&v.n.-\ Sax. rxanc; Dan.

RANK’LE, v. n. (.Belg. a►►d Swed.

RANK’LY, adv. i rank, of Goth, rakia,

RANK’NESS, n.s. J to extend.❓❓❓ ‘-Thomson. Fr. ranee ; Lat. rancidus. High-growing; tall; luxuriant; fruitful; strong; string of scent; ill-flavored ; gross ; coarse ; festering : rankle is, to fester ; be inflamed ; breed corruption : rankly is, coarsely ; grossly : rankness corresponding.

Seven ears came up upon one stalk, rank and good. Genesis.

Down with the grasse, That groweth in shadow so ranhe and so stout.

Tusser. Seven thousand broad-tai’.ed sheep ‘grazed on his

downs ; Three thousand camels his rank pastures fed.

Sandys.

The storm of his own rage the fool confounds, And envy’s rankling sting the’ imprudent wounds.

Sandys. Rank smelling rue, and cummin good for eyes.

Spenser.

As when two boars with rankling malice met, Their gory sides fresh bleeding fiercely fret. Id.

It bringeth forth abundantly, through too much rankness, things less profitable”, whereby that which principally it should yield, being either prevented in place, or defrauded of nourishment, faileth.

Hooker.

Who would be out, being before his beloved mistress?

cured ; Tamed us to manners. Dryden.

The crane’s pride is in the rankness of her wing.

L’ Estrange.

Such animals as feed upon flesh, because such Kind of food is h-gh and rank, qualify it ; the one by swallowing the hair of the beasts they prey upon, the other by devouring some part of the feathers of the birds they gorge themselves with. Kay.

Where land is rank, ‘tis not good to sow wheat after a fallow. Mortimer’s Husbandry.

I have endured the rage of secret grief, A malady that burns and rankles inward.

Roue.

‘Tis pride, rank pride, and haughtiness of soul ; The Romans call it stoicism. Addison’s Cato.

The most plentiful season, that gives birth to the finest flowers, produces also the rankest weeds.

Addison.

The drying marshes such a stench convey, Such the rank steams of reeking Albula. Id. Thou shall feel, enraged with inward pains, The hydra’s venom rankling in thy veins. Id.

This power of the people in Athens, claimed at the undoubted privilege of an Athenian born, was the rankest encroachment, and the grossest degeneracy, from the form Solon left. Swift.

Hircina, rank with sweat, presumes To censure Phillis for perfumes.

Id. Miscellanies.

Byzantium’s hot-bed better served for use, The soil less stubborn, and more ran* the juice.

JSTcrtei

RANK, n. s., v. a. & v. n. Fr. rang ; Armor. renk ; Wei. rhenc. Row or order ; line of men abrea?t : class ; order ; subordination : degree,

and hence high degree of excellence, dignity, or eminence : to range ; place in any order or class : place methodically; be ranged.

West of this place down in the neighbour bottom, The rank of osiers, by the murmuring stream, Left on your right hand brings you to the place.

Shakspeare.

Fierce fiery warriours fight upon the clouds, In ranks, and squadrons, and right form of war, Which drizzled blood upon the capitol. Id

If sour woe delights in fellowship, And needly will be ranked with other griefs ; Why followed not, when she said Tybalt's dead. Thy father or thy mother? Id.

His horse-troupes, that the vantgard had, he

strictly did command, To ride their horses temperately, tokeepe their ranks,

and shun

Confusion. Chapman.

Heresy is ranked with idolatry and witchcraft.

Decay of Piety.

Much is said touching the ranking of dignities as well temporal as spiritual. Selden.

That state, or condition, by which the nature of any thing is advanced to the utmost perfection of which it is capable, according to its 7-071* and kind, is called the chief end or happiness of such a thing.

Wilkins

A sylvan scene, and, as the ranks ascend Shade above shade, a woody theatre. Milton.

In riew stood ranked of seraphim another row. Id.

If she walk, in even ranks they stand, Like some well-marshalled and obsequious band.

Waiter.

He could through ranks of ruin go, W ith storms above and rocks below.

Dryden's Horace.

Her charms have made me man, her ravished love In rank shall place me with the blessed above.

Dryden.

The wisdom and goodness of the maker plainly appears in the parts of this stupendous fabric, and the several degrees and ranks of creatures in it.

Locke.

He found many of the chief rank and figure overwhelmed in public and private vices. Davenant.

From straggling mountaineers, for public good, Go rank in tribes, and quit the savage wood. Tute.

These all are virtues of a meaner rank, Perfections that are placed in bones and nerves.

Addison.

The enchanting power of prosperity over private persons is remarkable in relation to great kingdoms, where all ranks and orders of men, being equally concerned in public blessings, equally join in spreading the infection. Atterbury.

Lepidus's house, which in his consulate was the finest in Rome, within thirty-five years was not in the hundredth rank. Arbuthnot.

'Mong the ranker grass Cull each salubrious plant, with bitter Concoctive stored, and potent to allay Each vicious ferment. SomerviUt.

Poets were ranked in the class of philosophers and the ancients made use of them as preceptors in music and morality. Broome.

Ranking all things under general and special heads renders the nature or uses of a thing more easy to be found out, when we seek in what rank of being it lies. Watts's Logic

Nor rank nor sex escapes the general frown, But ladies are ript uo, and cits knocked down.

Though hereditary wealth, and the rank which goes with it, are too much idolized by creeping sy-cophants, and the blind adject admirers of power, they are too rashly slighted in shallow speculations of the petulant, assuming, shortsighted, coxcombs of philosophy. Burke.

RANK, is a straight line made by the soldiers of a battalion or squadron, drawn up side by side : this order was established for the marches, and for regulating the different bodies of troops which compose an army.

RANK IN THE NAVY. The admiral, or commander-in-chief of his majesty's fleet, has the rank of a field-marshal ; admirals, with their flags on the main-top-mast-head, rank with generals of horse and foot ; vice-admirals with lieutenant-generals ; rear-admirals as major-generals ; commodores, with broad pendants, as brigadier-generals ; captains of post-ships, after three years from the date of their first commission, as colonels ; other captains, as commanding post-ships, as lieutenant-colonels ; captains, not taking post, as majors ; lieutenants as captains.

RANK OF ENGINEERS. Chief as colonel; director as lieutenant-colonel ; sub-director as major ; engineer in ordinary, as captain ; engineer extraordinary as captain-lieutenant ; sub-engineer as lieutenant ; practitioner-engineer as ensign.

RA'NN Y, n. s. From run. The shrewmouse.

The mus areneus, the shrewmouse or ranny.

Browne.

RAN’SACK, v.a. Sax. pan, and Swed. saka, to search for or seize. ††† Johnson. There is also a Goth, and Swed. ransaka, and Dan. ransage. To plunder ; pillage ; search ; violate.

A covetous spirit, Warily awaited day and night, From other covetous fiends it to defend, Who it to rob and ransack did intend. Spenser. With greedy force he ‘gan the fort assail, Whereof he weened possessed soon to be, And with rich spoil of ransacked chastity. Id. Their vow is made to ransack Troy.

Shakspeare.

Men, by his suggestion taught, Ransacked the centre, and, with impious hands, Rifled the bowels of the earth. Milton.

The ransacked city, taken by our toils, We left, and hither brought the golden spoils.

Dry den.

I ransack the several caverns, and search into the storehouses of water, to find out where that mighty mass of water, which overflowed the earth, is bestowed. Woodward. RAN’SOM, n. s. & v. a.) Fr. ranˆon ; RAN’SOMLESS, adj. $ Ital.rawzon. Price of redemption from captivity or punishment : to redeem by purchase: ransomeless, without ransome or price.

I will ransom them from the grave, and redeem them from death. Hosea xiii. 14.

How is’t with Titus Lartius 1 ††† Condemning some to death and some to exile, Ransoming him, or pitying, threat’ning the other.

Skahspeare.

Ransomeless here we set our prisoners free. Id. By his captivity in Austria, and the heavy ramom that he paid for his liberty, Richard was hindered to pursue the conquest of Ireland.

Davies on Ireland.

Has the prince lost his army or his liberty Tell me what province they demand for ransom.

Denham.

Ere the third dawning light Return, the stars of morn shall see him rise, The ransom paid, which man from death redeems, His death for man. Milton'* Paradite Lost.

To adore that great mystery of divine love, God's sending his only Son into this world to save sinners and to give his life a ransom for them, would be noble exercise for the pens of the greatest wits.

Tillotson.

This as a ransom Albemarle did pay, For all the glories of so great a life. Id.

RANT, v. a. & n. s. } Belg. randen, to raTe ,

RANT'ER, n. s. $ Sco. ranter, is a musician. To rave in violent or high sounding language : such language : a ranter, one who uses it

Nay, an thou'lt mouth, I'll rant as well as thou.

Shakspeare.

They have attacked me ; some with piteous moans, others grinning and only showing their teeth, others ranting and hectoring, others scolding and reviling.

Stilling/fleet.

This is a stoical rant, without any foundation in the nature of man or reason of things. A tterbury. Dryden himself, to please a frantic age,

Was forced to let his judgment stoop to rage ;

To a wild audience he conformed his voice,

Comply'd to custom, but not erred through choice ;

Deem then the people's, not the writer's sin,

Almansor's rage, and rants of Maximin.

Granville.

RANTIPOLE, adj. & v. n. Wantonly form-ed from rant. Wild ; roving ; rakish : to rove about. A low word.

What, at years of discretion, and comport yourself at this rtntipole rate

1

Congreve's Way of the World.

The eldest was a termagant imperious wench ; she used to rantipok about the house, pinch the children, kick the servants, and torture the cats and dogs.

Arbuthnot.

RANTZAN (Josias), count, a brave officer, born in Holstein in the beginning of the seventeenth century. He was made a marshal of France and governor of Dunkirk by Louis XIII. He was raised to be commander in-chief of the Danish army, under Frederick I. and Christian III. and by his valor the liberties of his country were secured against the efforts of Christian II. After having lost an eye, an ear, an arm, and a leg, in various battles, he died in 1665.

RAN'ULA, n. s. Lat. ranula.

Ranula is a soft swelling, possessing the salivals under the tongue : it is made by congestion, and its progress filleth up the space between the jaws, and maketh a tumour externally under the chin.

Wiseman's Surgery

RANUN'CULUS, n. s. Fr. rammcule. Crowfoot.

Ranunculuses excel all flowers in the richness of their colours : of them there is a great variety.

Mortimer.

RANUNCULUS, crowfoot, a genus of the polygamia order and polyandria class of plants ; natural order twenty-sixth, multisiliquce : CAL. pentaphyllous ; petals five, each with a melliferous pore on the inside of the heel ; the seeds naked. There are upwards of sixty different species of

this genus, six or eight of which claim general esteem as flowery plants for ornamenting the gardens, and a great number are common weeds in the fields, waters, and pasture ground. Of the garden kinds the principal sort is the Asiatic or Turkey and Persian ranunculus, which comprises many hundred varieties of large, double, most beautiful flowers of various colors ; but several other species, having varieties with fine double flowers, make a good appearance in a collection, though as those of each species consist only of one color, some white, others yel-low, they are inferior to the Asiatic ranunculus, which is large, and diversified a thousand ways in rich colors, in different varieties. However, the garden kinds in general effect a very agreeable diversity in assemblage in the flower compartments, &c., and they being all very hardy, succeed in any open beds and borders, 8cc.

1. R. Asiatica. The Asiatic species in all its varieties will succeed in any light, rich, garden earth ; but the florist often prepares a particular compost for the fine varieties, consisting of good garden mould or pasture earth, sward and all, with a fourth part of rotted cow dung, and the like portion of sea sand; and with this they prepare beds four feet wide and two deep : howerer, in default of such compost, use beds of any good light earth ; or, it may be made light and rich with a portion of drift sand and rotten cow-dung ; they will also thrive in beds of well wrought kitchen garden earth, and they often prosper in common flower borders. The seasons for planting the roots are in autumn and spring ; the autumn plantings generally flower strongest and soonest by a month at least, and are succeeded by the spring planting in May aud June. The autumnal planting is performed in October and early part of November. Some plant in the end of September to have a very early bloom ; but those planted in that month and beginning of October often come up with rank leaves soon after, in winter, so as to require protection in hard frosts ; those, however, planted about the middle or end of October, and beginning of November, rarely shoot up strong till towards spring, and will not require so much care of covering during winter; and the spring planting may be performed in the end of January or beginning of February as soon as the weather is settled; they will not require any .covering. Thus by two or three different plantings may be obtained a succession of these beautiful flowers in constant bloom from April till

the middle of June ; but the autumnal plants, for the general part, not only flower strongest, but the roots increase more in size, and furnish the best offsets for propagation. Prepare for the choicer sorts four-feet beds of light earth, and rake the surface smooth : then plant the roots in rows lengthwise the beds, either by drilling them in two inches deep, and six inches distance in the row, and the rows six or eight asunder ; or plant them by bedding-in, or by dibble-planting, the same depth and distance. Those designed for the borders should be planted generally towards the spring, in little clumps or patches, three, four, or five roots in each, putting them in either with a dibble or trowel, two or three inches deep,

and three or four asunder in each patch, and the patches from about three to five or ten feet distance, placing them rather forward in the border. All the varieties of this species propagate abundantly by offsets from the root, and new varieties are gained by seed. 1. By offsets. The time for separating the offsets is in summer, when the flower is past, and the leaves and stalks are withered : then, taking up all the roots in dry weather, separate the offsets from each main root, and, after drying the whole gradually in some shady airy room, put them up in bags till the autumn and spring seasons of planting ; then plant them as before, placing all the offsets in separate beds : many of them will blow the first year, but in the second they will all flower in perfection. 2. By seed. Save a quantity of seed from the finest semi-double flowers, and sow it either in August, March, or April ; it should be sowed in light rich mould, either in pots or in an east border, drawing very shallow flat drills five or six inches asunder, in which sow the seeds thinly, and cover them lightly with earth, giving frequent refreshments of water in dry weather, and in a month or six weeks the plants will rise with small leaves ; continue the light waterings in dry weather, to preserve the soil moist during their summer's growth to increase the size of the roots ; and in June, when the leaves decay, take up the roots and preserve them till the season for planting; then plant them in common beds, and they will flower the spring following, when all the doubles of good properties should be marked, and the singles thrown away. The juice of many species of ranunculus is so acrid as to raise blisters on the skin, and yet the roots may be eaten with safety when boiled.

RAP, v. a. & n.s. Sax. pnosppan ; Dan. and Swed. rap. To strike with a quick smart blow ; utter hastily : a quick smart blow. Knock me at this gate And rap me well, or I'll knock your knave's pate.

Shakspeare.

With one great peal they rap the door, Like footmen on a visiting day. Prior.

He was provoked in the spirit of magistracy, upon discovering a judge, who rapped out a great oath at his footman. Addison.

They that will not be counselled cannot be helped, and, if you will not hear reason, she will surely rap your knuckles. Frankliti.

RAP, v. a. From Lat. rapio. To snatch away ; seize; affect with rapture; strike with extasy.

These are speeches of men not comforted with the hope of that they desire, but rapped with admiration at the view of enjoyed bliss. Hooker.

He leaves the welkin way most beaten plain. And, rapt with whirling wheels, inflames the skyen, With fire not made to burn, but fairly for to shyne.

Spenser. What thus raps you ? are you well 1

Shakspea”e.

The government I cast upon my brother, And to my state grew stranger, being transported And rapt in secret studies. Id.

The rocks that did more high their foreheads raise To his rapt eye. Chapman.

You may safe approve, How strong in instigation to your love Their raptiny tunes are. Chapman’s Odyssey.

rl A P E.

Adulterous Jour, the king of Membrant, raped Fair Josian his dear love. Drayton.

Underneath a bright sea flowed Of jasper, or of liquid pearl, whereon W ho after came from earth, sailing arrived Wafted by angels, or flew o'er the lake Rapt in a chariot drawn by fiery steeds.

Milton.

Their husbands robbed, and made hard shifts To' administer unto their gifts All they could rap and rend and pilfer, To scraps and ends of gold and silver. Hudibras. I'm rapt with joy to see my Mercia's tears.

Addison's Cato.

How comest thou to go with thy arm tied up ? has old Lewis given thee a rap over thy fingers' ends ?

Arbuthnot.

It is impossible duly to consider these things, without being rapt into admiration of the infinite wisdom of the divine architect. Cheyne.

Rapt into future times, the bard begun, A virgin shall conceive, a virgin bear a son !

Pope.

RAPA'CIOUS, adj. -\ Fr. rapace ; Lat. RAPA'CIOUSLY, adv. frapax. Given to plun-RAPA'CIOUSNESS, n. s. ►►der or violence: the RAPACITY. * adverb and noun substantives corresponding.

Well may thy Lord, appeased, Eedeem thee quite from death's rapacious claim.

Miitf<n,

Any of these, without regarding the pains of churchmen, grudge them those small remains of ancient piety which the rapacity of some ages has scarce left to the church. Sprat.

Shall this prize,

Soon heightened by the diamond's circling rays, On that rapacious hand for ever blaze? Pope. RAPE, n. s. Sax. na>e; Goth, and Swed rep. A bunch or cluster. See ROPE.

The juice of grapes is drawn as well from the rape, or whole grapes plucked from the cluster, and wine poured upon them in a vessel, as

from a vat, where they are bruised. Roy.

RAPE, n. s. Fr. rapt ; Lat. raptus, rapio. Act of taking away ; violent defloration of chastity ; something snatched or taken violently. Where now are all my hopes? oh nevermore Shall they revive ! nor death her rapes restore !

Sandys.

You are both decyphered For villains marked with rape.

Shakspeare. Titus Andronicus. The parliament conceived that the obtaining of women by force into possession, howsoever afterwards assent might follow by allurements, was but a rape drawn forth in length, because the first force drew on all the rest. Bacon's Henry I'll.

Pear grew after pear, Fig after fig came ; time made never rape, Of any dainty there. Chapman's Odyisey.

Witness that night In Gibeah, when the hospitable door Exposed a matron, to avoid worse rajie. Milton.

Tell the Thracian tyrant's altered shape, And dire revenge of Philomela's rape.

Roscnrnmon. The haughty fair ••• Who not the rape ev'n of a god could bear.

Dryden.

RAPE OF WOMEN, in English law, from rapio. An unlawful and carnal knowledge of a woman, by force, and aeainst her will ; which is felony

by the common and statute law. Co. Litt. 190 The word rapuit (ravished) is so appropriated by law to this offence, that it cannot be expressed by any other; even the word caraaliter cognovit, &c., without it, will not be sufficient. Co. Litt. 124. 2 Inst. 180.

Rape was punished by the Saxon laws, particularly those of king Athelstan, with death ; but this was afterwards thought too hard, and in ts stead another severe, but not capital punishment was inflicted by William the Conqueror, *viz.* castration and loss of eyes ; which continued till after Bracton wrote, in the reign of Henry III. But, in order to prevent malicious accusations, it was then the law that the

woman should immediately after ‘ dum recens fuerit maleficium,’ go to the next town, and there make discovery to some credible persons of the injury she has suffered : and afterwards should acquaint the high constable of the hundred, the coroners, and the sheriff with the outrage. Afterwards, by statute Westm. c. 13, the time of limitation was extended to forty days. At present there is no time of limitation fixed ; for, as it is usually punished by indictment at the suit of the king, the maxim of law takes place that nullum tempus occurrit regi : but the jury will rarely give credit to a stale complaint. During the former period also it was held for law, that the woman (by consent of the judge and her parents) might redeem the oirender. from the execution of his sentence, by accepting himJbr her husband ; if he also was willing to agree to the exchange, not otherwise. But this is now not held for law ; and it is said that the election of the woman is taken away by the stat. Westm. 2, making the rape felony, although she consent afterwards.

By stat. Westm. 1, 3 Ed. I. c. 13, the punishment of rape was much mitigated : the offence itself being reduced to a trespass, if not prosecuted by appeal within forty days, and subjecting the offender only to two years’ imprisonment, and a fine at the king’s will. But, this lenity being productive of terrible consequences, it was soon found necessary to make the offence of forcible rape felony, which was accordingly done by stat. Westm. 2, 13 Ed. III. c. 34. And by stat. 18 Eliz. c. 7, it is made felony without benefit of clergy : as is also the abominable wickedness’ of carnally knowing and abusing any woman child under the age of ten years ; in which case the consent or non-consent is immaterial, as by reason of her tender years she is incapable of judgment and discretion.

Hale is of opinion that such profligate actions committed on an infant under the age of twelve years, the age of female discretion by the common law, either with or without consent, amount to rape and felony; as well since as before the statute of queen Elizabeth, 1 Hal. P. C. 631. That law, however, has in general been held only to extend to infants under ten ; though it should seem that damsels between ten and twelve are still under the protection of the stat. Westm. 1 , the law with respect to their seduction not having been altered by either of the subsequent statutes. 4 Comm. c. 15.

A male infant under the age of fourteen years

is presumed by law incapable to commit a rape ; and, therefore, it seems, cannot be found guilty of it. For though in other felonies malitia sup-plet sttatem, yet, as to this particular species of felony, the law supposes an imbecillity of body as well as mind. 1 Hal. P. C. 631. But it is no excuse or mitigation of the crime, that the woman at last yielded to the violence, and consented either after the fact or before, if such consent was forced by fear of death or duress ; or that she was a common strumpet, for she is still under the protection of the law, and may be forced : but it was anciently held to be no rape to force a man's own concubine ; and it is said by some to be evidence of a woman's consent, that she was a common whore. Alsv>, formerly, it was adjudged not to be a rape to force a wo-man, who conceived at the time ; because it was fmagined that, if she had not consented, she could not have conceived : though this opinion has been since questioned, by reason the previous violence is no way extenuated by such a subsequent consent : and if it were necessary to show the woman did not conceive, to make the crime, the offender could not be tried till such time as it might appear whether she did 'or not. 2 Inst. 190.

As to the facts requisite to be given in evidence and proved upon an indictment of rape, they are of such a nature, that though necessary to be known and settled, they are highly improper to be publicly discussed, except in a court of justice. And Mr. Peel has recently simplified the evidence necessary to be given there. Judge Hale observes that, though a rape is a most detestable crime, it is an accusation easily made, and hard to be proved; but harder to be defended by the man accused, although ever so innocent : and he mentions several instances of rapes, which at the time were apparently fully proved, but were afterwards discovered to have been malicious contrivances. 1 Hales's Hist. P. C. 625. 636. Aiders and abettors may be indicted as principal felons.

RAPHAEL, RAFFAELLE, or RAFFAELLO SANZIO, the most eninent of modern painters, was born at Urbino in 1483, being the son of a painter of no great reputation. He however cultivated with care the talents which his son Raphael exhibited at an early age, and was soon repaid by the assistance which he afforded him in several of his pieces. But, finding that the talents of his son merited still more skilful

instruction, he placed him under the care of Carvadini, better known by the name of Carnevale, till he was sufficiently advanced to be received into the school of Pietro Perugino.

This master was then in very high esteem, though his style was dry and meagre, in comparison with that of Masaccio, and others of the Florentine school. Raphael therefore soon be-came the rival, rather than the pupil of this f>rtist. His aptitude enabled him quickly to acquire his master's manner in the most perfect degree. Vasari speaks of an Assumption of the Virgin, painted at this period by Raphael, as being wrought with extreme beauty, and precisely like the work of Perugino.

In 1499, being then only sixteen years of age,

he quitted Perugino, and began soon after to execute designs of his own for the churches, and private persons. Among those early productions of his genius are, the Crowning of the Virgin, in the convent of the Eremitani ; the Crucifixion in the Dominican church, at Citta di Castello; and a Holy Family at Formio, in which the Virgin is represented as lifting a veil from the Infant who is asleep. About this time, his friend and fellow pupil, Pinturicchio, being employed by cardinal Piccolomini to ornament the library at Sienna, requested Raphael to become his coadjutor in that work. He assented, and the two artists began there ten large pictures, illustrative of the history of Pope Pius II., and Raphael drew the sketches and cartoons for the whole work. Previous to the completion of these paintings, however, he visited Florence, where the performances of Masaccio and Lionardo da Vinci attracted his attention, and contributed considerably to his improvement. In this city he also became acquainted with Fra Bartolomeo di St. Marco, who instructed him in the principles of coloring, and the chiaro-oscuro, for which in re-turn Raphael taught his friend the rules and practice of perspective. After a short stay at Florence, the death of his father obliged him to return to Urbino, where the duke engaged him to paint four pictures for his palace, which were much valued. In 1505 he removed to Perugia, being engaged there to paint the chapel of St. Severe ; and a crucifixion in the Camaldolian monastery. The latter he executed himself, but the former work he left to be completed by his old master ; in order that he might return to Florence, for the continuance of his studies, well persuaded that he had yet much to learn. He remained at Florence nearly two years, during which period he painted the Virgin with the Infant and St. John, for the ducal gallery ; and the Entomb-ing of

Christ, for the Franciscan church of Perugia. The reputation which Raphael acquired by these productions having reached Rome, he was invited thither by pope Julius II., who was at that time engaged in ornamenting the Vatican. At the beginning of 1508, the young Raphael presented himself to the pontiff, by whom he was cordially received, and immediately employed in painting a superb suite of apartments called La Segnatura. Here he began a set of pictures emblematical of theology, philosophy, poetry, and jurisprudence, the design of which so much pleased the pope that he ordered all the paintings on the walls of his palace to be obliterated, and replaced by the productions of Raphael. The works of former masters accordingly disappeared, with the exception of one piece by Perugino, which was saved through the earnest intercession of Raphael, out of respect to his old friend and preceptor. He was also employed by the rich banker, Agostino Chigi, for whose family chapel he painted some of his most beautiful pieces ; but his passion for a beautiful young woman, the daughter of a baker, who thence took the name of La Bella Fornarina, causing him to withdraw to her house, Chigi invited her to his palace, that the painter might continue his work without interruption. The painting of these rooms, which occupied nine years, was com ⬛⬛⬛

Dieted in 1517, and they obtained the name, which they still retain of the stanze of Raphael : he within the same period also painted the principal events in the history of Constantine ; twelve whole length figures of the apostles ; and several small pictures for the ceilings of the palace. He also found time to study architecture under his uncle Bramante, whom he succeeded in 1515, as superintendant of the building of St. Peter's church, with a salary of 300 gold crowns. The same year Raphael accompanied the pope to Florence, where he constructed a design for the facade of the church of St. Lorenzo : and another of a palace for the bishop of Troja. He also designed the Caffarelli palace at Rome, another for the marquis della Salticella ; a villa for the cardinal Giulio de Medici; a set of stables for the prince Ghigi; and a chapel in the church of St. Mario del Popolo. When he had completed the painting of the three principal apartments of the

Vatican, his powers were directed to the decoration of the arcades, now known by the name of the Loggie, the architecture of which, though begun by Bramante, was finished by his nephew. Here Raphael and his assistants painted thirteen ceilings> each containing four subjects taken from sacred history, the whole having been designed by himself. The entire series has been engraved, and is commonly known by the title of Raphael's Bible. About the same period he also designed the celebrated Cartoons for the tapestry hangings of the papal chapel. These designs> after having been wrought in Flanders, were bought by Charles I., and have long formed a part of the royal collections at Hampton Court. They have been engraved more than once, and recently in the first style by Mr. Holloway, after the laborious application of many vears. Besides his works in the Vatican, Raphael executed a number of frescoes, the Far-nesina, where he painted (he Triumph of Ga-latea, and designed a set of pictures of the Loves of Cupid and Psyche. Of his pieces in oil, the principal are a St. Cecilia, painted for the church of St. Giovanni in Monte, at Bologna ; Christ carrying the Cross, which is, or was, in the royal collection at Madrid ; St. Margaret and St. George now in the Louvre ; St John in the Desert; and a Holy Family, in the same repository ; and a Virgin with the Child in her lap at Loretto. The last, and perhaps the greatest work of this celebrated artist is the Transfiguration of Christ, which he painted for the cardinal de Medici. At the foot of Mount Tabor is an assembled multitude, among whom are some of the disciples endeavouring in vain to relieve a youth from the dominion of an evil spirit. The various emotions of the different parties in this groupe are most characteristic ; but the mind is soon carried beyond the touching scene below to the more sublime one above, where Christ appears elevated in the air, surrounded with glory, between Moses and Elias, while the three favored apostles kneel in devout astonishment on the ground. With this great work the labors and life of the painter terminated ; for while engaged upon it he was attacked by a disease, which, for want of proper treatment, carried him off on Good Friday, April 7th, 1520, when he had just completed his thirty-seventh year. His body lay in state in the room where he had been accustomed to study, and the picture of the Transfiguration was placed near the bier. The funeral was conducted with great pomp at the Pantheon, and cardinal Bembo, by the desire of the pope, wrote the following inscription for the tomb, which was soon afterwards erected to the me-mory of Raphael :

D. o. M.

RAPHAELI SANCTIO JOAN. F, URBINATI, PICTORI EMINENTISS.

VETERUMQUE .“EMULO,

CUJUS SPIRANTEIS PROPE IMAGINEIS SI CONTEMPLARE NATURES ATQUE ART’S FOZDUS FACILE

INSPEXERIS.

JULH II. ET LEONIS X. PONT. MAX. PICTURE

ET ARCHITECT. OPERIBUS GLORIAM AUXIT.

VIXIT. A. XXXVII. INTEGER INTEGROS

QUO DIE NATUS EST, EO ESSE DESIIT.

VII. ID. APRIL. M.D.XX.

ILLE HIC EST RAPHAEL, TIMUIT QUO SOSPITE VINCI RERUM MAGNA PARENS, ET MORIENTE MORI.

Raphael was of a mild and amiable character; but his immoderate attachment to his art induced him to decline matrimony, though cardinal Bibliena offered him one of his nieces. ‘ General opinion,’ says Fuseli, ‘ has placed Raphae” at the head of his art, not because he possessed a decided superiority over every other painter in every branch, but because no other artist ever united with his own peculiar excellence all the other parts of the art in an equal degree with him. The drama, or the representation of character in conflict with passion, was his sphere ; to represent which, his invention in the choice of the moment, his composition in the arrangement of his actors, and his expres-

sion in the delineation of their emotions, were and perhaps ever will be, unrivalled. To this he added a style of design dictated by the subject, a color correspondent thereto, all the grace which propriety permitted or sentiment suggested, and as much chiaro-oscuro as was compatible with his desire of perspicuity. It is therefore only when he forsook the drama to make excursions into the pure epic or sublime, that his forms became inadequate, and inferior to those of Michael Angelo. It is only in subjects where color becomes the ruling principle that he is excelled by Titian ; and he yields to Corregio only in that grace and chiaro-oscuro which is less the minister of propriety and

timent than its charming abuse or voluptuous excess, and sacrifices to the eye what is claimed by the mind.'

RAPHAIM, or REPIIAIM, a name mentioned by Moses, signifying Giants, as they really were, and an actual people too, situated in Basan or Batanea, beyond Jordan, separated from the Zan-zumnaim by the river Jabbok. Also a valley near Jerusalem, Joshua x.

RAPHANUS, radish, a genus of the siliquosa order, and tetradynamia class of plants ; natural order thirty-ninth, siliquosae: CAL. close; the siliqua torose, or swelling out in knots, subarti-culated, and round. There are two melliferous glandules between the shorter stamina and the pistil, and two between the longer stamina and the calyx. There is only one species, *viz.*

R. sativus, the common garden radish, of which there are several varieties. They are an-nual plants, which, being sowed in spring, attain perfection in two or three months, and shoot up soon after into stalk for flower and seed, which, ripening in autumn, the whole plant, root and top, perishes ; so that a fresh supply must be raised annually from seed in the spring, performing the sowings at several different times, from about Christmas until May, to continue a regular succession of young tender radishes throughout the season : allowing only a fortnight or three weeks interval between the sowings ; for one crop will not continue good longer than that space of time, before they will either run to seed, or become tough, sticky, and too hot to eat.

RAPHELENGIUS (Francis), a learned French orientalist, born at Laney, near Lisle, in 1539. He studied Greek and Hebrew at Paris ; but, the

civil wars breaking out, he came to England, and taught Greek at Cambridge. He afterwards went to the Netherlands, and corrected the press for the celebrated Plantin. He was afterwards appointed professor of Hebrew and Arabic in the university ot Leyden. He published a Chaldaic Dictionary, an Arabic Lexicon, and a Hebrew Grammar, which are much esteemed. He died in 1597, aged fifty-eight.

RAPHIDIA, in entomology, a genus of insects of the neuroptera order. See ENTOMOLOGY. The most remarkable species is the

R. ophiopsis. It has an oblong head, shaped like a heart, with its point joined to the thorax, and the broad part before. It is smooth, black, flattened, continually shaking, with short antennae, yellowish maxillae, and four palpi. Towards the middle of the upper part of the head, between the eyes are, the three stemmata, placed to a triangle. The thorax, to which this head is fastened, is narrow, long, and cylindrical. The abdomen, broader, is black like the rest of the body, with the segments margined yellow. The feet are of a yellowish cast. The wings, which are fastigiated, are white, diaphanous, veined, and as it were covered with a very fine network of black. This insect, in the figure of its head, resembles a snakˆe. It is found but seldom, and in woods only.

RAPHOE, a dilapidated village of Ireland, in the county of Donegal, but an ancient episco-

pal see; the bishop of which is suffragan or* Ar-magh. The cathedral was erected in the eleventh century. The episcopal castle was built in the reign of Charles I. at the expense of government. In the rebellion of 1641 it stood a long and vigorous siege; it has been since modernised. Twenty-one miles north-east of Donegal, and eleven south-west of Londonderry.

RAP’ID, adj. -\ Fr. rapide ; Lat. rapidus.

RAP’IDLY, adv. ˆ Quick; swift: the adverb

RAPID’ITV, n. s. i and noun substantive cor—

RAP’IDNESS. ˆresponding

Part shun the goal with rapid wheels.

Milton.

While you so smoothly turn and rowl our sphere, That rapid motion does but rest appear. Dryden.

Where the words are not monosyllables, we make them so by our rapidity of pronunciation. Addison.

To the lascivious pipe and wanton song, That charm down fear, they frolic it along, With mad rapidity and unconcern, Down to the gulf, from which is no return.

Cow, if i.

RA'PIER, n. s. } Fr. rapiere ; Teut. rapier, RA'PIER-FISH. S so called from the quickness of its motion. A small thrusting sword : for rapier-fish see below.

I will turn thy falsehood to thy heart, Where it was forged, with my rapier's point.

tihaktpeare.

The rapier-Jish, called xiphias, grows sometimes to the length of five yards : the sword, which ˆrows level from the snout of the fish, is here about a yard long, at the basis four inches over, two-edged, and pointed exactly like a rapier : he preys on fishes, having first stabbed them with this sword. Grew.

A soldier of far inferior strength may manage a rapier or fire-arms so expertly as to be an overmatch for his adversary. Pope.

RAPIER formerly signified a long old fashioned sword, such as those worn by the common soldiers ; but it now denotes a small sword, as contradistinguished from a broad sword.

RAPIN (Nicholas), an eminent French poet, born at Fontaney Le Comte, about 1540. He was made grand prevot by Henry III., displaced by the Leaguers, being a Protestant, but restored by Henry IV. Some of his best pieces are to be found in the Delices des Poetes Latins de France. He died at Fontaney in 1609.

RAPIN (Renatus),a Jesuit and eminent French writer, was born at Tours in 1621. He taught polite literature in the society of the Jesuits with great applause, and was justly esteemed one of the best Latin poets of his time. He died in Paris in 1687. He wrote, 1. A great

number of Latin poems, which have rendered him famous throughout all Europe ; among which are his Hortorum Libri Quatuor, reckoned his master-piece. 2. Reflections on Eloquence, Poetry, History, and Philosophy. 3. Comparisons between Virgil and Homer, Demosthenes and Cicero, Plato and Aristotle, Thucydides and Titus Livius. 4. The History of Jansenism 5. Several works on religious subjects. The best edition of his Latin poems is that of Paris in 1723, in 3 vols. 12mo.

RAPIN DE THOYRAS (Paul de), a celebrated historian, the son of James Rapin, lord of Thoy-ras, was born at Castres in 1661. After being educated under a tutor in his father's house, he
وه was sent to Puy Laurens, and thence to Saumur. In 1669 he returned to his father, studied the law, and was admitted an advocate : but, reflecting that his being a Protestant would prevent his advancement at the bar, he resolved to quit the law, and apply himself to the sword ; but his father would not consent to it. The revocation of the edict of Nantes in 1685, and the death of his father, which happened two months after, made him come to England ; but he soon after ھھھ went to Holland, and enlisted himself in the company of French volunteers at Utrecht, commanded by M. Rapin, his cousin-german. He attended the prince of Orange into England in 1688 ; and in 1689 lord Kingston made him an ensign in his regiment, with which he went into Ireland, where he gained the esteem of his officers at the siege of Carrickfergus, and had soon a lieutenant's commission. He was present at the battle of the Boyne, and was shot through the shoulder at the siege of Limerick. He was soon after captain of the company in which he had been ensign ; but, in 1693, resigned it to one of his brothers, in order to be tutor to the earl of Portland's son. In 1699 he married Mari-anne Testard ; but this neither abated his care of his pupil, nor prevented his accompanying him in his travels. Having finished his employment, he returned to his family, which he had settled at the Hague ; and here he continued some years. But, as he found his family increase, he

resolved to retire to some cheap country ; and accordingly removed, in 1707, to Wesel, where he wrote his History of England, and some other pieces. Though he was of a strong constitution, yet seventeen years close application (in composing that history) entirely ruined his health. He died in 1725. He wrote in French, 1. A Dissertation on the Whigs and Tories. 2. His History of England, printed at the Hague in 1726 and 1727, in 9 vols., 4to., and reprinted at Trevoux in 1728, in 10 vols. 4to. This last edition is more complete than that of the Hague. It has been translated into English, and improved ###with notes, by the Rev. Mr. Tindal, in 2 vols. folio. Lord Gardenstone observes, that < Mr. Hume has branded him as an author the most despicable both in style and matter.' ' The censure (adds his lordship) is invidious and unjust. His work contains an immense multitude of interesting circumstances wholly omitted by the Scottish author. From his situation, a classical composition was not to be expected. He wrote a more complete general history of England than had ever appeared in this country ; and, whatever be his faults, it would be ungenerous *o deny his uncommon merit.' Card. Miscell. p. 203.

RATINE, n.s. Fr. rapine; Lat. rapina. The act of plundering : violence ; force.

If the poverty of Scotland might, yet the plenty of England cannot, excuse the envy and rapine of the church's rights. King Charles.

The logic of a conquering sword may silence, but convince it cannot ; its efficacy rather breeds aver-VOL. XVIH.-PART 2.

sion and abhorrence of religion, whose first address is in blood and rapine. Decay of Piety.

11APP (John), a modern French general, was born of an obscure family at Colmar in 1772, and entered upon a military life in 1788. Hav-ing become a lieutenant, in the tenth regiment of chasseurs, he served as aid-de-camp to Dessaix in the campaigns of 1796 and 1797, and afterwards in Egypt. After the battle of Marengo he became aid-de-camp to Buonaparte ; and in 1802 was employed in the subjugation of Switzerland. Returning to Paris the following year, he accompanied Buonaparte into Belgium : at the battle of Austerlitz he defeated the Russian imperial guard, and took prisoner prince Repnin. In December 1805 he was a general of a division ; and appointed governor of Dantzic in 1807. After the campaign of 1812 he commanded the garrison of that city, which he defended with great skill and valor, but

he was at length obliged to capitulate. In 1814 he submitted to the Bourbons ; but joined Napoleon on his return ; and after all his vicissitudes died in 1823 in favor with Louis XVIIL, and a member of the chamber of Peers. Memoires du General Rapp appeared at Paris the same year, 8vo.

RAPPAHANNOCK, a navigable river of Virginia, which rises in the Blue Ridge, and runs E. S. E. about 130 miles. It flows into the Chesapeake, twenty-five south of Potomac. It passes by the towns of Falmouth, Fredericksburgh, Port Royal, Leeds, Tappahannock, and Urbanna : has four fathoms water to Hobb's Hole, and is navigable for vessels of 130 or 140 tons to Fredericksburgh, 110 miles from its mouth.

RAPPORT, n. s. Fr. rappat, rapport. Relation ; reference; proportion. A word introduced by Temple, but not copied.

Tis obvious what rapport there is between the conceptions and languages in every country, and how great a difference this must make in the excellence of books. Temple.

RAPTURE, n. s. } Lat. rapio. See RAP.

RAP'TURED, adj. > Violent seizure ; ecstacy ;

RAP'TUROUS.) transport ; violence of passion ; rapidity : raptured is ravished ; transported : rapturous, ecstatic ; transporting.

And thicke into our ship he threw his flash : That 'gainst a rocke, or flat, her keele did dash With headlong rapture. Chapman.

Could virtue be seen it would beget love, and advance it not only into admiration, but rapture.

Holy day.

The wat'ry throng,

Wave rolling after wave, where way they found, If steep, with torrent rapture; if through plain Soft-ebbing ; nor withstood them rock or hill.

Milton.

Musick, when thus applied, raises in the mind of the hearer great conceptions ; it strengthens devotion, and advances praise into rapture. Addiion.

Are the pleasures of it so inviting and rapturaia? is a man bound to look out sharp to plague himself.'

Collier.

Nor will he be able to forbear a rapturous acknowledgment of the infinite wisdom and contrivance of the divine artificer. Blackrnore.

You grew correct, that once with rapture writ.

Pot*.

He drew

Such maddening draughts of beauty to the soul, As for awhile o'erwhelmed his raptured thought With luxury too daring. Tltomson's Summer.

But can they melt the glowing heart,

Or chain the soul in speechless pleasure, Or through each nerve the rapture dart, Like meeting her, our bosom's treasure ?

Burns.

All love, half languor, and half fire, Like saints that at t►►e stake expire, And lift their raptured looks on high, As though it were a joy to die. Byron.

RAB.E, adj. -\ Fr. rare ; Lat. ranis .

RA'REE-SHOW, n. s. I Uncommon ; unfre-RARE'LY, adv. N quent ; scarce ; excel-RARE'NESS, n. s. i lent; incomparable; RA'RITY. ./thin; subtle: a raree-show is a rare show corruptly pronounced, and therefore written : rarely corresponds with rare ; as well as rareness and rarity, which are synonymes.

This jealousy

Is for a precious creature ; as she's rare, Must it be great ; and as his person's mighty Must it be violent. Shakspeare. Winter'* Tale.

Live to be the show and gaze o' the time ; We'll have thee, as our rarer monsters are, Painted upon a pole. Shaktpeare.

Haw rarely does it meet with this time's guise, When a man was willed to love his enemies. Id.

Sorrow would be a rarity must be loved, If all could so become it. Id. King Lear.

They are of so tender and weak a nature, as they affect only such a rare and attenuate substance, as the spirit of living creatures.

Tickling is most ii. the soles, arm-holes, and sides : tne cause is the thinness of the skin, joined with the rareness of being touched there ; for tickling is a light motion of the spirits, which the thinness of the skin, the suddenness and rareness of touch, doth further. Bacon.

To worthiest things, Virtue, art, beauty, fortune, now I see Rarenett or use, not nature, value brings.

Donne.

Bodies, under the same outward bulk, have a greater thinness and expansion, or thickness and solidity, which terms, in English, do not signify fully those differences of quantity ; therefore I will do it under the names of rarity and density. Digby.

On which was wrought the gods and giants fight, Rare work, all filled with terror and delight.

Coialey.

For the rareness, and rare effect of that petition, I'll insert it as presented. Clarendon.

The cattle in the fields and meadows green, Those rare and solitary, these in flocks Pasturing at once, and in broad herbs upsprung.

Milton.

So eagerly the fiend O'er bog or steep, through strait, rough, dense, or

rare,

With head, hands, wings, or feet, pursues his way.

Id.

His temperance in sleep resembled that of his meals ; midnight being the usual time of his going to rest, and four or five, and very rarely six, the hour <⬜⬜f his rising. Fell.

Above the rest I judge one beauty rare.

Dry den.

Of my heart I now a present make ; Accept it as when early fruit we send, And let the rareness the small gift commend. Id.

Far from being fond of any flower for its rarity, if I meet with any in a field which pleases me, I give it a place in my garden. Spectator.

I saw three rarities of different kinds, which pleased me more than any other shows of the place.

Addison .

It would be a rarity worth the seeing, could any one show us such a thing as a perfectly reconciled enemy.

South.

The dense and bright light of the circle will obscure the rare and weak light of these dark colours round about it, and render them almost insensible. Newton’s Opticks. Of raree-shows he sung, and Punch’s feats.

Gay.

This I do, not to draw any argument against them

from the universal rest or accurately equal diffusion

of matter, but only that I may better demonstrate

the great rarity and tenuity of their imaginary chaos.

Bentley’s Sermons.

The fashions of the town affect us just like a raree-show ; we have the curiosity to peep at them, and nothing more. Pope.

Vanessa in her bloom, Advanced like Atalanta’s star, But rarely seen, and seen from far. Swift. I cannot talk with civet in the room,

A fine puss gentleman that’s all perfume ;

The sight’s enough ††† no need to smell a beau †††

Who thrusts his nose into a raree-show? Cowper

RARE, adj. Sax. t>nene ; Goth. rar. Under-done by the fire.

New-laid eggs, with Baucis’ busy care,

Turned by a gentle fire, and roasted rare.

Dryden

RARE AND SCARCE BOOKS. We are not bib liomaniacs. See the article LIBRARY : and in undertaking what we have there promised, to f’ir-nish the reader with a few criteria of rare and scarce, as distinguished from useful books, we shall not, of course, detain him long.

Of the date of MSS. we have already given the general marks in the article of that name : printed books are rare according to the date or circumstances of their being printed ; the material on which they are printed ; the manner in which their circulation has been interrupted by authority or accident ; whether they are on large or small paper ; and the manner in which they have been illustrated. These have been called marks of absolute rarity.

Books are said to be comparatively or relatively rare which are of the first editions of particular places ; which have proceeded from the press of certain distinguished printers of the last three centuries, as the Aldi, the Stephenses, Elzevirs, Brindley, Baskerville, &c. ; which have never been offered to sale or have been sold under different titles ; and lastly which are local, or confined to particular classes of mankind in their interest ; such as the topography of certain places and districts, books treating of exploded arts or sciences, the history of particular acade-mists, catalogues of libraries, &c.

Some bibliographers have further distinguished books into those simply rare ; books precious but not rare ; and books both rare and precious. The first are such as from any circumstances are difficult to be procured : their value therefore is often wholly adventitious, and idle clergymen and noblemen are adding to this important list every

year by piinting one or two copies of an impression of a book on vellun ; illustrating it in some particular way, diversifying the binding, &c. Books precious, we are told, are those which haˆe been of very great expense in bringing out : such as splendid collections of architectural engravings ; large collections of uniform works on antiquities, &c., and why not Encyclopaedias ?

Books both rare and precious are thos < r "hich extend to an immense number of volumes on an important subject, or are executed with remarkable care or splendor, and are therefore seldom found perfect, as the Collections of Travels published by De Bry, the basis of which alone cost Mr. Grenville ►►240, and a copy of which was lately purchased, as Dr. Dibdin tells us, by the duke of Devonshire for ►►546. ' Ah ! it makes our heart rejoice,' says our author (and we unite in this feeling with him, only his fear is eur hope), 'to think of the 'good old times,' the golden days of the bibliomania, when colonel Stanley's copy was sold ; days I fear which are gone, never to return : Ramusio, de Bry, Hak-luyt, and Purchas, Caxton, De Worde, Pynson, and William Faques, were then contemplated and caressed as their beauties and merits entitle them to be !'

We add, as calculated to exhibit the earlier difficulties and gradual improvements in the art of printing, the following directions for ascertaining editions of the fifteenth century. 1 . The texture and thickness of the paper is to be regarded : as printed books were at first imitations of MSS., they were made to imitate vellum as near-ly as possible. 2. The unequal size and general clumsiness of the type. It was, however, soon improved in these respects. 3. The absence of title pages ; printer's name and abode ; date when printed ; signatures or letters marking the sheet ; and catchwords on the right hand page.

Title-pages first began to be printed separately about 1470, some say 1480, but were very rare until the beginning of the sixteenth century. 4. The infrequency of divisions, and of capital letters at the beginning of divisions, chapters, &c. The plan was at first to leave these to be filled up by illuminators who ornamented them with the gold and fine colors that enrapture our biblio-maniacs. 5. The little punctuation that appears, and particularly the omission of commas and semicolons. Books printed about the middle of the fifteenth century have no stops but periods. 8. The numerous abbreviations, as neqz, quibz, for neque and quibus ; Dns for Dominus and many others less intelligible. See Jungendre. Dissertatio de Notis Characterist. Librorum a Typograph. Incurabulo ad Ann. M.D. impres-sorum, Norimb. 1740. Dibdin's Bibliomania, Home's Introduction to 'Bibliography, &c.

Finally, the reader may contrast the scarce-ness of books in the dark ages with their present abundance. ' Many circumstances,' says Dr. Robertson (Charles V. vol. i.) ' prove the scarcity of books during these ages. Private persons seldom possessed any books whatever. Even monasteries of considerable note had only one missal. Murat. Antiq. vol. ix. p. 789. Lupus, abbot of Ferrieres, in a letter to the pope, A. D.

855, beseeches him to lend him a copy of Cicero de Oratore, and Quintilian's Institutions ; ' for,' says he, ' although we have parts of those books, there is no complete copy of them in all France.' Murat. Ant. v. iii. p. 835. The price of books became so high that persons of a moderate fortune could not afford to purchase them. The countess of Anjou paid for a copy of the Homilies of Haimon, bishop of lialberstadt, 200 sheep, five quarters of wheat, and the same quantity of rye and millet. Ilistoire Literaire de France, par des Religieux Benedictins, tow. vii. p. 3. Even so late as the year 1471, when Louis XI. borrowed the works of Rasis, the Arabian physician, from the faculty of medicine in Paris, he not only deposited in pledge a considerable quantity of plate, but was obliged to procure a nobleman to join with him as surety in a deed, binding himself, under a great forfeiture, to restore it. Gabr. Naudk Addit. a 1'Histoire de Loyus XI. par Comines, edit, de Fresnoy, torn. iv. p. 281. Many curious circumstances, with respect to the extravagant price of books in the middle ages, are collected by that industrious compiler, to whom I refer such of my readers as deem this small branch of literary history an object of curiosity. When any person made a present of a book to a church or a monastery, in which were the only libraries during several ages, it was deemed a donative of such value that he offered it on the altar, pro remedio animae suee, in order to obtain the, forgiveness of

his sins. Murat. vol. iii. p. 836. Hist. Liter, de France, torn vi. p. 6. Nouv. Trait, du Diplomat, par deux Benedictins, 4to. torn i. p. 481.' In these 'good old times,' to adopt Dr. Dibdin's phrase, we suppose the editor of an Encyclopaedia would have been at least a cardinal !

RAR'EFY, v. a. & n.) Fr. rarefier ; Lat. rant

RAREFAC'TION. J and/acio. To make thin

or subtle ; become thin or rare ; act of doing this or becoming so : extension of the parts of a body.

The water within being rarefied, and by rarefaction resolved into wind, will force up the smoke.

Wottan's Architecture Earth rarefies to dew ; expanded more The subtile dew in air begins to soar.

Dry den .

When exhalations, shut up in the caverns of the earth by rarefaction or compression, come to be straitened, they strive every way to set themselves at liberty. Burnct.

To the hot equator crowding fast, Where highly rarejied the yielding air Admits their steam. Thomson.

RARITAN, a river of New Jersey, formed by two branches, which unite about twenty miles above New Brunswick. It becomes navigable two miles above that city, at a place calltd Brunswick Landing. Flowing by New Brunswick and gradually becoming broader and deeper, it passes Amboy, and then widens into Raritan Bay, which is immediately connected with the ocean. It is navigable for sloops of eighty tons, as far as New Brunswick, seventeen miles. The general course of the Raritan is south of east. It is intended to connect this

river with the Delaware, by a canal which is to commence between New Brunswick and Washington, and join the Delaware at Croswick's Creek. The distance is twenty-nine miles.

RAS EL KHY MA, the chief town of the Pirates on the Persian Gulf. There is a suburb of bamboo huts. Here are several castles, one the residence of the chief, and another for naval stores. In 1809 the depredations of the pirates induced the British authorities to fit out an expedition against them. On the 13th of November Ras el Khyma was taken by storm, the ships burned, and the guns spiked : the British loss consisted of only one killed, and four wounded. In the course, however, of a few years, the enemy had repaired the place and its defences, and had again become so formidable that a new expedition was sent against them, which effected its object with the same success. Long. 55►► 30' E., lat. 25►► 49' N.

RAS'CAL, n. s.-\ Sax. naj-cal. ' A lean

RASCAL'LIOM, f beast,' says Johnson: pro—

RASCA L'ITY, i perly a lean deer. See the

RAS'CALLY, adj. J fine instance of its use so late as in Shakspeare, and the equivoque of Falstaff which can only be thus understood. A mean fellow ; a scoundrel : rascallion is synonymous : rascality and rascally correspond.

For the rascal commons, lest he cared. Spenser.

And when him list the rascal touts appal, Men into stones therewith he could transmew. Id.

A little herd of England's humorous deer, Mazed with the yelping kennels of French curs ! If we be English deer be then in blood, Not rascal-like, to fall down with a pinch ; But rather moody-mad and desperate stags, Turn on the bloody hounds with heads of steel, And make the cowards aloof at hay.

Shakspeare. Henry VI. The rascal people, thirsting after prey,

Join with the traitor. Id.

DOL. ††† You muddy rascal is that all the comfort you give me ?

FAL. ††† You make fat rascals mistress Doll.

Id. Henry IV.

Would’st thou not be glad to have the niggardly rascally sheep biter come by some notable shame ?

Shakrpeare. That proud dame

Used him so like a base rascalion,

That old Pig ††† what d’ ye call him ††† malicx,,

That cut his mistress out of stone,

Had not so hard a hearted one. Hudibras.

Pretended philosophers judge as ignorantly in their way, as the rascality in theirs. Glanville.

Did I not see you, rascal, did I not, When you lay snug to snap young Damon’s goat ?

Dry den. I have sense, to serve my turn, in store,

And he’s a rascal who pretends to more. Id.

Scoundrels are insolent to their superiors ; but it does not become a man of honour to contest with mean rascalt. L’Eitrange.

Jeroboam having procured his people gods, the next thing was to provide priests ; hereupon, to the calves he adds a commission, for the approving, try-ing, and admitting the rascality and lowest of the people to minister in that service. South.

The poor girl provoked told him he lyed like a rascal. Swift.

Our rascally porter is fallen fast asleep with the black cloth and sconces, or we might have been tacking up by this time. Id.

RASCIANS, or RAITZEN, a numerous and an cient Sclavonic tribe, inhabiting the south of Hungary. They are supposed to be the descendants of Christians who rled from the distric* of Rascia, in

Servia and Bosnia, when they were invaded by the Turks. They came into Hungary early in the fifteenth century, and received particular privileges. Some time after their arrival they were driven by the Turks farther nortl.. They are found at present in considerable numbers in the Banuat, in Sclavonia, and other parts of the south of Hungary. In Croatia they form a third of the population. They live in great simplicity, partly employed in agricultural and pastoral occupations, and partly in woollen and linen manufactures. Early marriage is customary among them, and their increase consequently considerable ; but they have never exhibited, during three centuries, Mr. Malthus's fearful propensity to multiply. The Uscocks and Morlachians ap-pear to be of the same descent, but are behind the Rascians in civilisation. Each of these tribes calls itself by the name of Srbi, or Servians, and all speak dialects of the Illyrian language. RASE, v. a.) Fr. raser, of Lat. rasus. ' I RA'SURE, n. s. \ would write rase,' says Johnson, ' when it signifies to strike slightly, per-stringere ; and raze, when it signifies to ruin, delere.' To skim ; strike on the surface ; blot out ; overthrow : rasure is the mark made by blotting or rubbing out.

He certifies your lordship tnat this night He dreamt the boar had rased off his helm.

Shakspeare

Though of their names in heav'nly records now Be no memorial, blotted out and rased. Milton.

Was he not in the nearest neighbourhood to death? and might not the bullet, that rased his cheek, have gone into his head ? South.

Such a writing ought to be free from any vitupera-tion of rasure. Ayliffe's Parergon.

RASH, ad;. ˆ Belg. and Teut. ratch;

RASH'LY, adv. > Swed. and Dan. rash.

RASH'NESS, n. s. j Hasty; violent; precipitate : the adverb and noun substantive corresponding.

Be not rash wun thy mouth, and let not thine heart be hasty to utter any thing before God ; for God is in heaven, and thou upon earth ; therefore let thy words be few. Ecdes.

This is to be bold without shame, rash without skill, full of words without wit. Ascham.

Who seeth not what sentence it shall enforce us to give against all churches in the world ; inasmuch as there is not one, but hath had many things established in it, which though the scripture did never command, yet for us to condemn were rashnest.

Hooker.

Blast her pride, O ye blest gods ! so will you wish on me, when the rash mood is on me.

Shakspeare.

This expedition was by York and Talbot Too rashly plotted. Id. Henry VI.

Men are not rashly to take that for done which is not done. Bacon.

Nature to youth hot rashness doth dispense, But with cold prudence age doth recompence.

Denltam.

Her rash hand in evil hour, Forth reaching to the fruit, she plucked, she eat.

Miltott

RAS

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RA1

The vain Moral by his own rashness wrought, Too soon discovered his ambitious thought, Believed me his, because I spoke him fair. Dryden.

He that doth any thing rashly, must do it willingly ; for he was free to deliberate or not.

L’ Estrange, Declare the secret villain,

The wretch so meanly base to injure Phaedra,

So rashly brave to dare the sword of Theseus.

Smith.

In so speaking, we offend indeed against truth ; vet we offend not properly by falsehood, which is a speaking against our thoughts ; but by rashness, which is an affirming or denying, before we have sufficiently informed ourselves. South.

RASH’ER, n. s. Lat. rasura. A thin slice of bacon.

If we grow all to be pork eaters, we shall not shortly have a rather on the coal’a for money.

Shakspeare. Merchant of Venice. White and black was all her homely cheer,

And rashers of singed bacon on the coals.

Dryden.

Quenches his thirst with ale in nut-brown bowls, And takes the hasty rasher from the coals. King.

RASP, v. a. & n. s. > Fr. rasper ; Ital. raspare ;

RASP’ATORY, n. s. 5 Span, raspar. To rub to powder wjth a rough file; the file used: a surgeon’s rasp.

Having prepared hard woods and ivory for the lathe with rasping, they pitch it between the pikes.

Moxon.

Case-hardening is used by file-cutters, when they make coarse files, and generally most rasps have formerly been made of iron and case-hardened.

Moxon’s Mechanical Exercises.

Some authors have advised the rasping of these bones ; but in this case it is needless. Wiseman.

I put into his mouth a raspatory, and pulled away the corrupt flesh, and with cauteries burnt it to a crust. Id. Surgery.

RASP, n.s. ˆ Ital.ro*po. A delicious berry

RASP'BERRY. S that grows on a species of the bramble; a raspberry.

Set sorrel amongst rasps, and the rarps will be the smaller. Bacon.

Raspberries are of three sorts ; the common wild one, the large red garden raspberry, which is one of the pleasantest fruits, and the white, which is little inferior to the red. Mortimer's Husbandry.

Now will the corinths, now the rasps supply Delicious draughts, when prest to vines. Philips.

RASPBERRY-TREE. See RUBTJS.

RASTADT, a town of Baden, the capital of the district of Murg, and the seat of one of the four grand courts of the duchy. Here is an excellent manufacture of fire arms ; but the town is chiefly noted as having been, in 1714 and 1798, the seat of diplomatic conferences. On this last occasion two of the French negociators, on their journey to Strasburg, were assassinated in a manner never fully explained, but supposed to have been the act of common robbers. In the campaign of 1796 the French obtained here an advantage over the Austrians. Twenty miles N. N. E. of Strasburg.

RASTALL (John), a printer and miscellaneous writer, bom in London about the end of the fifteenth century, and educated at Oxford. He married the sister of Sir Thomas More, with whom he was very intimate, and whose-writings

he strenuously defended. He died in 1536. Rastallwas a zealous Papist. He wrote, 1. Na-tura Naturata. Pits calls it an ingenious comedy describing Europe, Asia, and Africa, with cuts 2. The Pasty me of the People ; the Cronycles of diverse Realmys, and most especially of the realm of England, fol. 3. Ecclesia Johannis Rastal, 1542 ; one of the prohibited books in the reign of Henry VIII. 4. Legum Anglicanarum vocabula explicata. French and Latin. Lon-don 1567, 8vo.

RAT, n. s. Sax. naet; Fr. rat; Belg. ratte; Swed. and Span, ratio,; raton. An animal of the mouse kind that infests houses and ships: to ' smell a rat' is to suspect; be on the watch. Our natures do pursue

Like rats that ravin down their proper bane.

Shakspeare.

I have seen the time, with my long sword I would have made you-four tall fellows skip like rats. Id.

Quoth Hudibras, I smell a rat, Ralpho, thou dost prevaricate. Hudibrat.

Thus horses will knable at walls, and rats will gnaw iron. Browne's Vulgar Errourt.

If in despair he goes out of the way like a rat with a dose of arsenick, why he dies nobly. Dennis.

RAT, in zoology. See Mus.

RATAFIA is prepared from the kernels, &c. of several other kinds of fruits. Ratafia of cherries is prepared by bruising the cherries, and putting them into a vessel, wherein brandy has been long kept ; then adding to them the kernels of cherries with strawberries, sugar, cinnamon, white pepper, nutmeg, cloves ; and to 20 Ibs. of cherries ten quarts of brandy. The vessel is left open ten or twelve days, and then stopped close for two months before it be tapped. Ratafia of apricots is prepared two ways, *viz.* either by boiling the apricots in white wine, adding to the liquor an equal brandy, with sugar, cinnamon, mace, and the kernels of apricots ; infusing the whole for eight or ten days ; then straining the liquor, and putting it up for use : or else by infusing the apricots, cut in pieces, for a day or two, passing it through a straining bag, and then outting in the usual ingredients.

RATAN (calamus); a genus of palms, but widely d iff ring in habit from the rest of thnt family, and, in this respect, somewhat resembling the grasses. The species have all perennial, long, round, solid, jointed, unbranching stems, extremely tough and pliable, often ascending among the branches of trees, but without prickles or tendrils. They grow in profusion along the banks of rivers in tropical Asia and the neighbouring islands. All the species are very useful, and are applied to various purposes : the fruit and young stems of all furnish nutriment, and a drink is obtained from the li-quid which flows from wounds made in the spadix. One species is even cultivated for its fruit, which is about the size of a walnut, and covered with scales. Certain species furnish cables, cords, and withes of exceeding strength ; others are split into strips for making the seats and backs of chairs, baskets, and other l.ght and elegant articles of furniture; those which are larger

and firmer, and whose joints are more distant, afford elegant walking-sticks; in short,

the economical purposes to which the various species of ratans are applied, are very numerous, even in northern climates. A trade in ratans, to considerable extent, is carried on from several of the East India islands to China, which is the principal market for them.

RATE, n. s., v. a. & v. n.) Old Fr. rate ; Lat.

RA'TABLE, adj. \ rat us. Price fixed

or allowance settled ; tax ; degree ; value ; principle of value; quantity; manner: to value at a price ; make an estimate.

I am a spirit of no common rate ; The summer still doth tend upon my state.

Shakspeare.

The Danes brought in a reckoning of money by ores, per oras ; I collect out of the abbey-book of Bur-ton, that twenty ore were ratable to two marks of silver. Camden's Remains.

To which relation whatsoever is done agreeably, is morally and essentially good ; and whatsoever is done otherwise is at the same rate morally evil.

South.

You seem not high enough your joys to rate, You stand indebted a vast sum to fate, And should large thanks for the great blessings pay.

Dry den,

RATE, v. a. Isl. and Goth, reita. To chide hastily and vehemently.

Go rate thy minions, proud insulting boy ; Becomes it thee to be thus bold in terms Before thy sovereign ? Shahrpcare. Henry VI.

RATE, the name of the classes into which ships of war are divided in the navy, according to their force and magnitude : thus the fiist rate comprehends all ships of 100 guns and upwards ; second rate includes all sliips carrying from 90 to 98 guns, upon three decks; third rate consists of ships from 64 to 80 cannon ; fourth rates consist of ships from 50 to 60 guns, upon two decks and the quarter-deck. All vessels of war under the fourth rate are usually comprehended under the general names of frigates, and never appear in the line of battle. They are divided into two rates, *viz.* Ji/‘tfi rates, mounting from 32 to 40 or 44 guns ; and sixth rates, of from 20 to 30 guns.

RATH, n. s. Goth, and Swed. rod. A hill. Out of use.

There is a great use among the Irish, to make great assemblies upon a rath or hill, there to parly about matters and wrongs between townships or private persons. Spenser. RATH, adj.) Sax na$, soon. Early ; be-ll ATHER, adv. ►► fore the usual time: rather, the comparative of Sax. paS, meaning sooner, is more willingly ; with better liking.

This is he that I seide of, after me is comun a man, which was made bifore me, for he was rather than I. Wiclif. Jon i.

Almighty God desireth not the death of a sinner, but rather that he should turn from his wickedness and live. Common Prayer.

Thus is my summer worn away and wasted, Thus is my harvest hastened all to rathe,

The ear, that budded fair, is burnt and blasted, And all my hoped gain is turned to scathe.

Spenser. This is an art,

Which does mend nature, change it rather, but The art itself is mature. Shakspeare. Winter’s Tale

You are come to me in a happy time, The rather for I have some sport in hand.

ShaJttptan.

Rath ripe are some, and some of later kind, Of golden some, and some of purple rind. May.

Bring the rath primrose that forsaken dies, The tufted crow-toe and pale jessamine. Milton.

He sought through the world, but sought in vain. And, no where finding, rather feared her slain.

Dry den.

‘Tis rather to be thought that an heir had no such right by divine institution, than that God should give such right, but yet leave it undetenninate who such heir is. Locke.

‘Tis with reluctancy he is provoked by our impeni-tence to apply the discipline of severity ; he had r.ilher mankind should adore him as their patron and benefactor. Rogers.

RATIFY, v. a.-* Lat. ratumfacio. To con-RAT’IFIER, n.s. >rirm; settle : he who settles RATIFICATION, j or confirms : confirmation. We have ratified unto them the borders of Judaa.

I Mac.

There must be zeal and fervency in him which proposeth for the rest those suits and supplications, which they by their joyful acclamations must ratify.

Hooker.

They cry, ‘ chuse we Laertes for our king :’ The ratijiers and props of every word, (Japs, hands, and tongues applaud it to the clouds.

Shakspeare.

By the help of these, with him above To ratify the work, we may again Give to our tables meat, sleep to our nights. Id. Tell me, my friend, from whence hadst thou the

skill,

So nicely to distinguish good from ill ? And what thou art to follow, what to fly, This to condemn, and that to ratify ? Dryden.

God ratified their prayers by the judgment brought down upon the head of him whom they prayed against.

South.

RATIO, n. s. Lat. ratio. Proportion. Whatever inclination the rays have to the plane of incidence, the sine of the angle of incidence of every ray, considered apart, shall have to the sine of the angle of refraction a constant ratio. Cheyne.

RATIO, in arithmetic and geometry, is that relation of homogeneous things which determines the quantity of one from the quantity of another, without the intervention of a third. Two numbers, lines, or quantities, A and B, beirg proposed, their relation one to another may be considered under one of these two heads : ××× 1. How much A exceeds B, or B exceeds A ? And this is found by taking A from B, or B from A, and is called arithmetic ratio. 2. Or how many times, and parts of a time, A contains B, or B contains A? And this is called geometric reason or ratio (or, as Euclid defines it, it is the mutual habitude or aspect of two magnitudes of the same kind, according to quantity ; that is, as to how often the one contains, or is contained in, the other), and is found by dividing A by B, or B by A. And here note, that that quantity which is referred to another quantity is called the antecedent of the ratio ; and that to which the other is referred is called the consequent of the ratio ; as, in the ratio of A to B, A is the antecedent, and B the consequent. Therefore any quantity, as antecedent, divided by any quantity is a consequent, gives th××

ratio of that antecedent to the consequent. Thus

the ratio of A to B is ◆◆◆ , but the ratio of B to A

B 12

is ◆◆◆?◆◆◆ ; and in numbers, the ratio of 12 to 4 is ◆◆◆ A 4

= 3, or triple; but the ratio of 4 to 12 is ⬛⬛⬛ = ⬛⬛⬛ ,

or subtriple. And here note, that the quantities thus compared must be of the same kind ; that is, such as by multiplication may be made to exceed one the other, or as these quantities are said to have a ratio between them, which, being multiplied, may be made to exceed one another. Thus a line, how short soever, may be multiplied, that is, produced so long as to exceed any given right line ; and consequently these may be compared together, and the ratio expressed ; but as a line can never, by any multiplication whatever, be made to have breadth, that is, to be made equal to a superficies, how small soever ; these can therefore never be compared together, and consequently hare no ratio or respect one to another.

RATION, in the army, a portion of ammunition, bread, drink, and forage, distributed to each soldier in the army, for his daily subsistence, &c. The horse have rations of hay and oats when they cannot go out to forage. The rations of bread are regulated by weight. The ordinary ration of a foot soldier is a pound and a half of bread per day. The officers have several rations, according to their quality, and the number of attendants they are obliged to keep. When the ration is augmented on occasions of rejoicing, it is called a double ration. The ships' crews have also their rations, or allowances of biscuit and water, proportioned according to their stock. RATIONAL, adj. ~] Latin rationalis. RATIOC'INATE, v. n. I Having reason; agree- RATIOCINA'TION, n. s. \ able to reason ; wise : to RATIOCIN'ATIVE, adj. ˆratiocinate (not used) RA'TIONALIST, n. s. means, to reason or RATIONAL'ITY, [argue, ratiocination

RA'TIONALLY, adv. } corresponding : ratiocinative is argumentative : rationalist is, one who reasons or proceeds upon reason : rationality, power of reason ; or reasonableness : rationally follows the senses of rational.

He often used this comparison : the empirical philosophers are like to pismires ; they only lay up and use their store : the rationalists are like to spiders ; they spin all out of their own bowels : hut give me a philosopher, who, like the bee, hath a mid-dle faculty, gathering from abroad, but digesting that ⬚⬚⬚which is gathered by his own virtue. Bacon.

God decreed to create man after his own image, a free and rational agent. Hammond.

The discerning of that connexion or dependence which there is betwixt several propositions, whereby we are enabled to infer one proposition from another, which is called ratiocination or discourse. Wilhins. What higher in her society thou findest

Attractive, humane, rational, love still. Milton.

Some consecutions are so intimately and evidently connected to, or found in the premises, that the conclusion is attained quasi per saltum, and without any thing of ratiocinative process, even as the eye sees his object immediately, and without any previous discourse. Male's Origin of Mankind.

When the conclusion is deduced from the unerring

dictates of our faculties, we say the inference it rational. Glanville't Scepsis.

In human occurrences, there have been many well directed intentions, whose rationalitie►► will never bear a rigid examination.

Browne's Vulgar Errottrs.

Can any kind of ratiocination allow Christ all the marks of the Messiah, and yet deny him to be the Messiah 1 South.

Upon the proposal of an agreeable object, it may rationally be conjectured, that a man's choice will rather incline him to accept than to refuse it. South.

When God has made rationality the common portion of mankind, how came it to be thy enclosure? Government of the Tongue.

Such an inscription would be self-evident without any ratiocination or study, and could not fail constantly to exert its energy in their minds. Bentley.

If your arguments be rational, offer them in as moving a manner as the nature of the subject will admit ; but beware of letting the pathetic part swallow up the rational. Swift,

If it be our glory and happiness to have a rational nature, that is endued with wisdom and reason, that is capable of imitating the divine nature ; then it must be our glory and happiness to improve our

rea-son and wisdom, to act up to the excellency of our rational nature, and to imitate God in all our actions, to the utmost of our power. Lane.

RATS'BANE, n. s. Rat and bane. Poison for rats ; arsenic.

When murder's out, what vice can we advance. Unless the new-found pois'ning trick of France 1 And when their art of ratsbane we have got, By way of thanks, we'll send 'em o'er our plot.

Dry den.

He would throw ratsbane up and down a house, where children might come at it. L'Estrange.

I can hardly believe the relation of his being poisoned, but sack might do it, though ratsbane would not. Swift to Pope.

RATISBON, German Regensburg, an ancient city of Bavaria, long known as the place of meeting for the imperial diet. It is situated on the south bank of the Danube, opposite to the influx of the river Regen, from which its German name is derived, and is surrounded with an earthen mound, though not defensible against an army. It is built of stone, but the houses are very high and old; the streets narrow and crooked. The town-house partakes of the gloomy character of the rest of the town, and the apartment where the diet held its sittings is plain even to meanness. But the cathedral and the church of St. Emeran, the former a venerable Gothic pile and the latter containing a number of good paintings, are worth attenti on ; and after these the episcopal residence, a palace belonging to the prince of Tour and Taxis ; the Jesuits' college ; the arsenal, and the Haidpiatz, where tournaments were formerly given. Here is also a public drawing-school, two public libraries, and several hospitals.

When Ratisbon had the exclusive navigation of the Danube to Vienna, and upwards to Ulm, it was of course far more brisk as a trading town ; but it possesses still a considerable share of traffic in timber, corn, and salt. The town has extensive dockyards for the building of boats and lighters, and a number of breweries and distilleries, but few manufactures. It has long been a favorite residence of the respectable classes of so-

ciety ; and formerly the presence of the diet, which assembled here habitually, from 1 662, until the extinction of the body in 1805, contributed much to its support. The majority of the inhabitants are Catholics ; and llatisbon (reduced in 1817 to a bishopric) was long the see of an archbishop, who had a considerable territory, and was at the head of the abbey of St. Emeran, situated within the walls, and a small town of itself. In the river is an island, crossed by a bridge of great length, extending across the Danube, and connecting the city with its northern suburb, Stad-tham Hof. In April 1809, this country was the scene of obstinate contests between the French and Austrians. llatisbon is sixty-three miles N. N. E. of Munich, and 127 south-west of Prague. Population 20,000.

RATTEEN', n. s. FT. ratine ; Span, ratina. A kind of stuff.

We'll rig in Meath-street Egypt's haughty queen, And Antony shall court her in ratteen. Swift.

RATTLE, v. n., v. a. & n. s. J Belg. rutelen ;

RAT'TLESNAKE, H. s. $ or a frequentative

of Sax. neotan. To make a sharp, quick, or clattering noise ; speak clamorously or eagerly ; to move any thing so as to make a clatter ; to stun or drive with noise ; scold : the noise made ; loud and empty talk ; a child's toy : the rattlesnake is the genus crotalus of amphibia, serpentes. See CROTALUS.

The quiver rattleth against him. Job xxxix. 23. The noise of a whip, of the rattling of the wheels, of prancing horses, and of the jumping chariots.

Nahum iii. 2.

Sound but another, and another shall, As loud as thine, rattle the welkin's ear, And mock the deep-mouthed thunder.

Shakspeare.

The rattles of Isis, and the cymbals of Brasilea, nearly enough resemble each other. Raleigh.

He should be well enough able to scatter the Irish as a flight of birds, and rattle away this swarm of bees with their king. Bacon.

They had, to affright the enemies horses, big rattles covered with parchment, and small stones within ; but the rattling of shot might have done better service.

Hayward.

All this ado about the golden age is but an empty rattle and frivolous conceit. Hakewill.

Opinions are the rattles of immature intellects, but the advanced reasons have outgrown them.

Gtanville's Scepsis.

She loses her being at the very sight of him, and drops plump into his arms, like a charmed bird into the mouth of a rattlesnake. More's Foundling*

With jealous eyes at distance she hath seen Whispering with Jove the silver-footed queen ; Then, impotent of tongue, her silence broke, Thus turbulent in rattling tone she spoke. Dryden. Her chains she rattles, and her whip she shakes.

Id.

They want no rattles for their froward mood, Nor nurse to reconcile them to their food. Id.

Hearing /Esop had been beforehand, he sent for him in a rage, and rattled him with a thousand traitors and villains for robbing his house. L' Estrange.

The rattlesnake is so called from the rattle at the end of his tail. Grew's Museum.

There site assembles all her blackest storms, And the rude hail in rattling tempest forms.

Addison,

I’ll hold ten pound my dream is out ; I’d tell it you but for the rattle Of those confounded drums. Prwr

She that would sometimes rattle off her servants sharply, now, if she saw them drunk, never took notice. Arbuthnot.

Farewel then, verse, and love, and every toy, The rhymes and rattUs of the man or boy ; What right, what true, what fit we justly call, Let this be all my care, for this is all. Pope.

He is a man of pleasure, and a freethinker ; he is an assertor of liberty and property ; he rattles it out against popery. Swft.

RATTLESNAKE. See CROTALUS. RAV’AGE,v.a.&n. s. 3 Fr. ravager; barb RAV’AGER, n. s. $ Lat. brassiare. To lay

waste ; ransack ; pillage : the spoil or ruin thus made : ravager, he who makes it.

Some cruel pleasure will from thence arise, I’o view the mighty ravage of your eyes.

Dryden.

Would one think ‘twere possible for love To make such ravage in a noble soul 1 Addison. Those savages were not then what civilized mankind is now ; but without mutual society, without arms of offence, without houses or fortifications, an obvious and exposed prey to the ravage of devouring beasts. Bentley.

When that mighty empire was overthrown by the northern people, vast sums of money were buried to escape the plundering of the conquerors ; and what remained was carried off by those ravagers. Swift.

His blasts obey, and quit the howling hill, The shattered forest, and the ravaged vale.

Thomson.

Cambyses marched one army from Thebes, after having overturned the temples, ravaged the country, and deluged it with blood, to subdue Ethiopia ››› this army almost perished by famine, insomuch that they -‘›››epeatedly slew erery tenth man to supply

the remainder with food. Darwin.

RAU'CITY, 7j. s. Lat. raucus. Hoarseness ; loud rough noise.

Inequality not stayed upon, but passing, is rather an increase of sweetness ; as in the purling of a wreathed string, and in the raucity of a trumpet.

Bacon's Natural Histori/.

RAVE, v. n. } Fr. river ; Belg. reven ; RA'VINGLY, adv. J Lat. rabo. To be delirious ; talk irrationally or incoherently ; burst into furious exclamations.

Shall these wild distempers of thy mind, This tempest of thy tongue, thus rave, and find No opposition 1 Sandy's Paraphrase on Job.

In this depth of muses, and divers sorts of discourses, would she ruvinyly have remained. Sidney.

Our ravings and complaints are but like arrows shot up into the air, at no mark, and so to no purpose.

Temple.

Another partiality is as fantastical and wild, attributing all knowledge to the ancients or the moderns ; this raving upon antiquity, in matter of poetry, Horace has wittily exposed in one of his satires. Locke.

Her grief has wrought her into frenzy ! The images her troubled fancy forms Are incoherent, wild ; her words disjointed : Sometimes she raves for musick, light, and air ; Nor air, nor light, nor musick calm her pains.

Smith.

He swore he could net leave me, With ten thousand ravings. ** Rmre's Royal Convert

RAV

Wonder at my patience, Have I not cause to rave, and beat my breast, To rend my heart with grief, and run distracted 1

Addison.

Men who thus rave, we may conclude their brains are turned, and one may as well read lectures at Bedlam as treat with such.

Government of the Tongue.

It soon infecteth the whole member, and is accompanied with watching and raving. Wiseman.

Revenge, revenge, thus raving through the streets, I'll cry for vengeance. Southern's Spartan Dame.

RAVEL, v. a. & v. n. Belg. ravelen. To entangle ; perplex ; involve ; entwist one with another ; unweave ; undo knit-work ; to fall into perplexity or confusion ; work in a perplexed state.

Sleep, that knits up the raveled sleeve of care.

Shakspeare.

As you unwind her love from him, j.,est it should ravel, and be good to none, You must provide to bottom it on me. Id. It will be needless to ravel far into the records of elder times ; every man's memory will suggest many pertinent instances. Decay of Piety.

They but ravel it over loosely, and pitch upon disputing against particular conclusions, that, at the first encounter of them single, seem harsh to them.

Digby.

Give the reins to wandering thought, Regardless of his glory's diminution ; Till, by their own perplexities involved, They ravel more, still less resolved, But never find self-satisfying solution.

Milton.

If then such praise the Macedonian got, For having rudely cut the Gordian knot ; What glory's due to him that could divide Such raveled interests, has the knot untied, And without stroke so smooth a passage made, Where craft and malice such obstructions laid !

Waller.

The humour of ravelling into all/these mystical or intangled matters, mingling with the interest and passions of princes and of parties, and thereby heightened and inflamed, produced infinite disputes.

Temple.

RAVELIN, in fortification, was anciently a flat bastion placed in the middle of a curtain. See FORTIFICATION.

RA'VEN,n.s.,u.a. &v. n.~\ Saxon pfiaepn, RAV'ENOUS, adj. fpnsejnan, to rob;

RAV ENOUSLY, adv. ? Belg. raven ; Goth.

RAV ENOUSNESS, n. s. J and Swed. rqfn. A large black carnivorous fowl, whose cry is supposed ominous : to prey rapaciously : the adjective, &c., corresponding.

Benjamin shall raven as a wolf; in the morning he shall devour the prey, and at night he shall divide the spoil. Genesis.

They gaped upon me with their mouths, as a ravening and a roaring lion. Psalm xxii. 13.

The lion strangled for his lionesses, and filled his holes with prey, and his dens with ravin. Nahum.

The raven himself is hoarse That crokes the fatal entrance of Duncan Under my battlements. Shakspeare. Macbeth. Thriftless ambition, that will raven up hine own life's means. Skukspeare.

The cloyed will

That satiate yet unsatisfied desire, that tub Both filled and running, ravening first the lamb, Longs after for the garbage. Id. Cymbeline.

Thy desires Are wolfish, bloody, starved, and ravenout.

Shakspeare.

He made the greedy ravens to be Elias' caterer*, and bring him food. ' King Chtrlet.

As when a flock

Of ravenous fowl, through many a league remote, Against the day of battle, to a field Where armies lie encamped come flying, lured With scent of living carcasses.

Milton's Paradise Lost. To me, who with eternal famine pine, Alike is hell, or paradise, or heaven ; There best, where most with ravin I may meet.

Milton.

The ravenousness of a lion or bear are natural to them ; yet their mission upon an extraordinary occasion may be an actus imperatus of divine providence.

Hale.

I have seen a perfectly white raven, as to bill as well as feathers. Boyle on Colourt.

On several parts a several praise bestows, The ruby-lips, and well-proportioned nose, The snowy skin, the raven glossy hair, The dimpled cheek.

Dryden's Cymon and Iphigenia. The more they fed, they ravened still for more, They drained from Dan, and left Beersheba poor ; But when some lay preferment fell by chance, The Gourmands made it their inheritance. Dryden.

They might not lie in a condition exposed to the ravin of any vermin that may find them, being unable to escape. Ray.

What ! the kind Ismena, That nursed me, watched my sickness ! oh .she

watched me, As ravenous vultures watch the dying lion. Smith.

The raven once in snowy plumes was drest, White as the whitest dove's unsullied breast, His tongue, his prating tongue, had changed him

quite

To sooty blackness from the purest white. Addison. Convulsions rack man’s nerves, and cares his

breast,

His flying life is chased by ravening pains Through all his doubles in the winding veins.

Blackmore.

Hence Gildon rails, that raven of the pit, Who thrives upon the carcasses of wit. Young. RAVEN, in ornithology. See CORVUS. RAVENNA, a large town in the east of Italy, and states of the church, situated in a marshy district at the mouth of the Montone. In the time of the Lower empire it stood on a bay of the Adriatic, and had a considerable port, separated from the city by the Via Caesaris ; bu* this port is now filled up with mud, and the city, though still occupying its former site, as proved by the ancient monuments it contains, is now at a distance of three or four miles from the sea. The situation is pleasant, though unhealthy from the marshy nature of the ground. This has been partly remedied by carrying along the side of the town the rivers Montone and Ronco. In former times Ravenna was surrounded with lagunes : at present, though encircled with a mound, it is not a place of strength. Its streets are straight and broad, but gloomy ; and the town has a deserted aspect. The most interesting objects are the monuments of antiquity, in particular the ruins of the palace of Theodoric, and the Porta Aurea, a splendid gate of marble. Smaller monuments, as mosaics, bas reliefs, and statues, are found in

all parts of the town. The cathedral is a fine modern edifice, having its

nave supported by four ranges of columns of Grecian marble. The octagon church of St. Vitale, erected about the sixth century, is likewise supported by pillars of Grecian marble, brought from Constantinople. Another church, called the Rotonda, and situated outside of the town, was built in honor of Theodoric, by his daughter Amalasonda. Ravenna contains likewise the tomb of Dante. It was made a Roman colony by Augustus : Tiberius repaired its walls, and made other improvements; and the emperor Honorius made it the seat of his residence. Theodoric, king of the Ostrogoths, having, in the latter part of the fifth century, be-come master of Italy, fixed here the seat of his empire, and erected several buildings. Ravenna was also the residence of the imperial lieutenants it►► the reign of Justinian; and Longinus, the successor of Narses, took the title of exarch, borne by the governors of Italy during 175 years that they resided at Ravenna. The exarchate was brought to a close in the eighth century, by Pe-pin, father of Charlemagne, who made it over to the see of Rome. On Easter day, 1512, a battle was fought in the neighbourhood between the French and Spaniards, in which the former took Ravenna by assault, and plundered it in a manner which it never recovered. The town has given birth to several eminent men, and is still the see of an archbishop, and the residence of a papal legate. Its manufactures, chiefly of silk, are-inconsiderable, but it has a great annual fair. Population 12,000. Forty miles east of Bologna, and seventy north-east of Florence.

RAVENNA (John de), otherwise called Mal-phaghino, was born in Ravenna in 1352. He studied under Donatus the grammarian. After a wandering life, for some years, he settled at Pa-dua, where Sicco, one of his scholars, says he taught the Roman eloquence and moral philosophy, with applause and success beyond all the professors of that period. In 1397, his forty-fifth year, John was invited by the magistrates of Florence to settle in that city, where he taught many learned men. He died about 1418.

RAUGHT. The disused pret. and part. pass, of REACH* Snatched ; reached ; attained.

His tail was stretched out in wonderous length, That to the house of heavenly gods it raught,

And with extorted power and borrowed strength, The ever-burning lamps from thence it brought.

Spenser.

Grittus, furiously running in upon Schenden, violently raught from his head his rich cap of sables, and with his horsemen took htm. Knolles.

The hand of death has raught him.

Shakspeare.

RAVILLIAC (Francis), the assassin of Henry IV. of France, was a native of Angoulesme, and at the time of his execution about thirty-two years Of age. Ravilliac's parents lived upon alms. His father was an inferior retainer to the law, and his son had been bred up in the same profession. Ravilliac had set up a claim to an estate, but the cause went against him, which affected his mind. He afterwards kept a school, and received gifts of small value from the parents of those whom he taught. When he was put to the torture, he broke out into horrid execrations,

but always insisted that he acted from his own impulse, and that he could accuse nobody. On the day of his execution, after he had made the amende honourable before the church of Notre Dame, he was carried to the Greve ; and tied to a wooden engine in the shape of a St. Andrew's cross. His right hand, with the knife with which he did the murder fastened in it, was first burnt in a slow fire ; then the fleshy parts of his body were torn with red-hot pincers, and melted lead, oil, pitch, and rosin poured iuto the wounds. The people refused to pray for him ; and when, according to the sentence pronounced upon him, he came to be dragged to pieces by four horses, one of those that were brought appearing to be but weak, one of the spectators offered his own, with which the criminal was much moved : he is said to have then made a confession, which was so written by the greffier Voisin that not one word of it could ever be read. He was very earnest for absolution, which his confessor refused, un-less he would reveal his accomplices ; ' give it me conditionally,' said he, ' upon condition that I have told the truth,' which he did. His body was so robust, that it resisted the force of the four horses ; and the executioner was at length obliged to cut him into quarters, which the people dragged through the streets. The house in which he was born was demolished, and a column of infamy erected; his father and mother were banished from Angoulesme, and ordered to quit the kingdom upon pain of being hanged, if they returned, without any form of process ; his brothers, sisters, uncles, and other relations, were commanded to lay aside the name of Ravilliac,' and to assume some other. Such was the fate of this murderer, who, according to his own account, suffered

himself to be impelled to the act by the seditious sermons and books of the Jesuits, whom Henry, rather out of fear than love, had recalled and caressed. Neither the dying words of Ravilliac, nor so much of his process as was published, were credited, by his contemporaries. Various reports were circulated which it is unnecessary to recapitulate, as they were totally unsupported by any evidence. See FRANCE.

RAVISH, v. a. Fr. ravir ; Ital. rapire ; Lat. rapio. To constuprate by force; deflower by violence; take away violently; overcome the senses; hence transport with pleasure.

i e thou ravished always with her love.

Proverbs. They ravished the women and maids.

Lam. v. 11.

They are cruel and bloody, common ravishen of women, and murtherers of children. Spenser.

They cut thy sister's tongue, and ravished her.

Shakspeare.

These hairs which thou dost ravish from my chin, Will quicken and accuse thee. Id. King Lear.

Of his several ravishments, betrayings and stealing away of men's wives, came in all those ancient fables of his transformations and all that rabble of Grecian forgeries. Raleigh.

As all the housewiferies of deities are To heare a voice so ravishingly fair. Chapman. A ravisher must repair the temporal detriment to the maid, and give her a dowry, or marry her if she desire it. Taylor.

Tell them ancient stories of the ravishment of chaste maidens. Id. Rule of Holy Living.

What a ravishment was that, when, having found

out the way to measure Hiero's crown, he leaped out

of the bath, and, as if he were suddenly possest, ran

naked up and down ! Wilkins.

Can any mortal mixture of earth's mould

Breathe such divine enchanting ravishment ?

MUton. I owe myself the care,

My fame and injured honour to repair ;

From thy own tent, proud man, in thy despite,

This hand shall ravish thy pretended right.

Dry den. Turn hence those pointed glories of your eyes ;

For if more charms beneath those circles rise,

So weak my virtue, they so strong appear,

I shall turn ravisker to keep you here. Id.

I told them I was one of their knight errants that delivered them from ravishment. Id.

But when in beauty's light She meets my ravished sight, When through my very heart Her beaming glories dart ; 'Tis then I wake to life, to light, and joy.

Burns.

RAVITZ, or RAWITSCH, a fortified town of Prussian Poland, near the confines of Silesia. It has a wall and ditch ; four gates ; is regularly built, and the streets generally paved. Of the 8000 inhabitants 1200 are Jews ; the rest chiefly Lutherans. It has manufactures of woollen, linen, hats, and leather. The town was erected by fugitives from

Germany, during the thirty years' war. In 1704 Charles XII. of Sweden took up his winter quarters here; but in 1707 the Russians plundered and burned it down. In 1802 the greatest part was again burned by an accidental fire. Fifty-five miles south of Posen.

RAUJESHY, an extensive district of Bengal, situated principally between 24►► and 25►► of N. lat. It is intersected and watered in its whole length by the Ganges and other rivers. It produces four-fifths of the silk exported from Bengal, and contains Moorshudabad, Baulea, Commercolly, and Bogwangola, and 1,500,000 inhabitants. The zemindary of this district had been long possessed by a Hindoo family, the last of whom, dreading the tyranny of the nabob Moorshud Cooly JafHer Khan, terminated his own existence, and the zemindary was transferred about the year 1722 to a person named Ramje-won, whose family still retain it.

RAURICUM, in ancient geography, a town of the Raurici, situated over against Abnoba, a mountain from which the Danube takes its rise. It was a Roman colony, led by Lucius Munatius Plancus, the scholar and friend of Cicero ; called Colonia Rauriaca, by Pliny, Raurica, and Augusta Rauricorum. The town was destroyed in Julian's time.

RAUVOLFIA, a genus of the monogynia order, and pentandria class of plants ; natural order thirtieth, cortortse. It is named after the celebrated botanist Rauwolf.

RAUWOLF (Leonard), a learned physician and botanist of the sixteenth century, born in Augsburg. To acquire the knowledge of botany, he travelled through Syria, Arabia, and America. He published an Account of his Travels, which

was translated and printed in England in 1693. Being persecuted for his religious opinions, he retired to Linton, where he died in 1606. His Flora Orientalis was published at Levden

1755.

RAW, adj. -ˆ Sax. pneap; Teut. and RAW'BONED, / Belg. race, rauw; Goth. RAW'HEAD, n. s. > and Swed. ra. Uncooked ; RAW'LY, adv. I unwrought; bare or stripped R AW'XESS, n. s. * of skin ; sore ; unripe ; new ; crude ; bleak ; chill : rawboned is having bones scarcely covered with flesh: rawhead, a supposed spectre or hobgoblin : the adverb and

noun substantive following correspond with raw.

If there be quick raw flesh in the risings, it is an old leprosy. Leviticus xiii. 50.

Full of great lumps of flesh, and gobbets raw.

Spenser.

They carried always with them that weed, as their house, their bed, and their garment ; and, coming lately into Ireland, they found there more special use thereof, by reason of the raw cold climate.

Id. State of Ireland. All aloud the wind doth blow, And coughing drowns the parson's saw ;

And birds sit brooding in the snow, And Marian's nose looks red and raw.

Shakspeare. I have in my mind A thousand raw tricks of these bragging jacks.

Id.

Youthful still in your doublet and hose, this raw rheum atick day. Id.

Lean rawboned rascals ! who would e'er suppose They had such courage 1 Id.

Some crying for a surgeon, some upon the debts they owe, some upon their children rawly left.

Id. Henry V.

Why in that rawness left he wife and children, without leave taking 1 Id. Macbeth.

Some people, very raw and ignorant, are very unworthily and unfitly nominated to places, when men of desert are held back and unpreferred.

Raleigh's Essays.

Distilled waters will last longer than raw waters.

Bacon.

Charles V., considering the rawness of his seamen established a pilot major for their examination.

Hakewill. The fire digests the rawness of the night.

Bp. Hall. Contemplation. Sails were spread to every wind that blew, Raw were the sailors and the depths were new.

Dry den.

Hence draw thy theme, and to the stage permit Rawhead and bloody bones, and hands and feet, Ragouts for Tereus or Thyestes drest. Id.

The wolf was content to barter away a rawboned carcase for a smooth and fat one. L' Estrange.

Servants awe children, and keep them in subjection, by telling them of rawhead and bloody bones.

Locke.

People, while young and raw, and soft-natured, are apt to think it an easy thing to gain love, and reckon their own friendship a sure price of another man's ; but, when experience shall have once opened their eyes, they will find that a friend is the gift of God. So**-

RAWANKRAD, a noted long and narrow lake in the mountains of Thibet, to the north of the great Himmaleh range. It is connected with the lake Mansorawar, and gives rise to the

Suttelege. It is divided by an island and fed by several small rivers, and by the melting of the snow, with which the neighbouring mountains are always covered. In its vicinity is to be seen Mount

Cailas, a celebrated scene of Hindoo fable. It is situated about 31►► of N. lat., and was Tisited in the year 1812 by Mr. Moorcroft.

RAWLEY (William), D D., a learned di-vine, born at Norwich, about 1518. He studied at Benet College, Cambridge ; took his degree of A. B. in 1604; A.M. in 1608; B. D. in 1615; and D. D. in 1621. In 1609 he was chosen fellow; took orders in 1611, and was appointed rector of Landbeach in 16i6. Although he was chaplain to lord Verulam, and afterwards to king Charles I. and II., he never received any higher promotion. During the commonwealth he was ejected by the parliament; but survived their power, and was restored to his living, which he held till his death, June 18th, 1667. He was married and had a son

RAWLINS (Thomas), a dramatic writer, who was engraver for the mint under Charles I. and II. He wrote three plays, entitled Rebellion, Tom Essence, and Tunbridge Wells ; and died in 1670.

RAWLINSON (Richard), LL.D., an eminent English antiquary, educated at St. John's College, Oxford, where he took his degrees in 1713 and 1719. He made large collections for the continuation of Wood's Athense Oxonienses, and History of Oxford ; which, with notes of his own travels, he bequeathed to the university. He promoted the publication of many books of history and antiquities, with particular descriptions of several counties in England. In 1728 he translated and published Fresnoy's new mode of studying history, with a catalogue of the chief historians, 2 vols. 8vo. In 1750 he founded an Anglo-Saxon professorship at Oxford ; and bequeathed to that university a large collection of books and medals, and also his heart in a marble urn. He died at Islington in 1755.

RAWLINSON (Christopher, esq,), of Clarkhall, in Lancashire, another learned antiquary, was born in 1677, and educated at Queen's College, Oxford. He became eminent for his skill in Saxon and northern literature ; and published a beautiful edition of king Alfred's Saxon translation of Boethius de Consolatione, Oxford 1698, 8vo. He died January 8th, 1733, leaving a great collection of MSS.

RAWLINSON (Thomas), a learned collector of books, commemorated in Addison's Tatler, under the name of Tom Folio. He collected such a quantity of books that he took a large house on purpose for them. He died in 1725, aged forty-four, and the sale of his library lasted three months.

RAY (John), a celebrated botanist, was born at Black Notley in Essex,

in 1628. He received the first rudiments of education at the grammar-school at Braintree ; and in 1 644 was admitted into Catharine Hall, Cambridge, whence he afterwards removed to Trinity College in that university. He took the degree of M. A. and be-came at length a senior fellow of the college ; but his intense application to his studies having

injured his health, he was obliged to exercise himself by riding or walking in the fields, which led him to the study of plants. In 1660 !ia published his Catalogus Plantarum circa Canta-brigiam nascentium, and was ordained deacon and priest. In 1661 he made a tour through Britain along with Mr. Willughby, in search of rare plants; and in 1662 accompanied him in a tour through Holland, Germany, France, and Italy; and on his return was made F. R.S. In 1672 Mr. Willughby dying left Ray one of his executors, and tutor to his sons, with ––60 a year for life. For their use he composed his Nomenclator Classicus, in 1672. In 1673 he married a daughter of Mr. Oakley, of Launton, Oxfordshire; and published his Observations Topographical and Moral, &c., made in foreign countries; to which was added his Catalogus Stirpium in Exteris Regionibus Observatarum ; and about the same time his Collection of Unusual or local English Words, which he had gathered up in his travels through the counties of England. In 1697 he published the Wisdom of God manifested in the Works of the Creation, 8vo. The rudiments of this work were read in some college lectures ; and another collection of the same kind he enlarged and published under the title of Three Physico-Theological Discourses, concerning the Chaos, Deluge, and Dissolution of the World, 8vo. 1692. He died in 1705. He was modest, affable, and communicative ; and was distinguished by his probity and piety. He wrote a great number of other works ; the principal of which are, 1. Catalogus Plantarum Angliae. 2. Dictionariolum Trilingue se-cundum Locos Communes. 3. Historia Plan-tarurn, Species hactenus Editas, aliasque insuper noviter multas Inventas et Descriptas, Com-plectens, 3 vols. 4. Methodus Plantarum Nova, cum Tabulis, 8vo., and several other works on plants. 5. Synopsis Methodica Animalium, Quadrupedum et Serpentini Generis, 8vo. 6. Synopsis Methodica Avium et Piscium. 7. Historia Insectorum, Opus Posthumum. 8. Methodus Insectorum. 9. Philosophical Letters, &c.

RAY, n. s. &u.a. Fr. rale; Span, rago; Ital. raggio ; Lat. radius. A beam of light ; any lustre, natural or artificial ; a mental beam : as an obsolete verb active, to streak with ray-like lines.

Before a bubbling fountain low she lay, Which she increased with her

bleeding heart. And the clean waves with purple gore did ray.

Spenser. His horse is raied with the yellows. Shakspeare.

These eyes that roll in vain To find thy piercing ray, and find no dawn

Milton.

The least light, or part of light, which may be stopt alone, or do or suffer any thing alone, which the rest of the light doth not or suffers not, I call a ruij of light. Newtim.

Sol through white curtains shot a tim'rous ray, And op'd those eyes that must eclipse the day.

Pope .

Then kneeling down, to Heaven's Eternal King-, The saint, the father, and the husband prays ••• Hope " springs exulting on triumphant wing,' That thus they all shall meet in future days There ever bask in uncreated rays,

Nfo more to sigh, or shed the bitter tear, Together hymning their Creator's praise. Burns.

RAY, in optics. See LIGHT and OPTICS.

HAYS, INFLECTED, those rays of ˆight which, on their near approach to the edges of bodies, in passing by them, are bent out of their course, being turned either from the body or towards it. This property of the rays of light is generally termed diffraction by foreigners, and Dr. Hooke sometimes called it deflection.

RAYS, PENCIL OF, a number of rays issuing from a point of an object, and diverging in the form of a cone.

RAYS, REFLECTED, those rays of light, which, after falling upon the body, do not go beyond the surface of it, but are thrown back again.

RAYS, REFRACTED, those rays of light which, after falling upon any medium, enter its surface, being bent either towards or from a perpendicular to the point on which they fell.

RAYNAL (William Thomas), the celebrated abbe, was born in 1712: educated among the Jesuits, and had even become a member of their order; but was expelled for denying the supreme authority of the church. He afterwards associated with Voltaire, D'Alembert,and Diderot, and was by them employed to furnish the theological articles for the Encyclopedie . In this, however, he received the assistance of the abbe Yvon, to whom he did not give above a sixth part of what he received; which being afterwards discovered, he was obliged to pay Yvon the balance. His most celebrated work is his Political and Philosophical History of the European Settlements in the East and West Indies ; which has been translated into all the languages of Europe, and much admired. This work was followed in 1780 by another, entitled The Revolution of America, in which the abbe pleads the cause of. the Americans with zeal. The French government commenced a prosecution against him for the former of these works ; upon which he retired to Berlin, where Frederick the Great afforded him an asylum. The chief trait in Ray-nal's character was his love of liberty ; but, when he saw the length to which the French revolutionists were going, he made one effort to stop them in their career. In May, 1 791, he addressed a letter to the Constituent National Assembly, in which, after complimenting them upon tlif great things they had done, he cautioned them against the dangers of going farther. He lived not only to see his forebodings of public calamity realised, but to surfer his share of it. After being stripped of all his property, which was considerable, by the robbers of the revolution, he died in poverty, in March 1796, in the eighty-fourth year of his age. Besides the works above mentioned, he wrote, 1. A History of the Parliament of England. 2. A History of the Stadtholderate. 3. The History of the Divorce of Catharine of Arragon by Henry VIII. About the time of his death, he was preparing a new edition of all his works, with many alterations ; and he is said to have left among his MSS. A History of the Revocation of the Edict of Nantes, in 4 vols ; but during the bloody reign of Robespierre he burnt a great number of his MSS.

RAZE, n. s. Span, rayz, a root. A root of ginger. Written also race, but less properly.

1 have a gammon of bacon and two razes of ginger to be delivered. Stiaks] > eare. Henry IV.

RAZE, v.a. ˆ Fr. rase r ; Lat. rusits. See RA'ztRE,►►. s. J RASE. To overthrow; ruiu subvert ; efface : razure, the act or mark of razing. Will you suffer a temple, how poorly built soever but yet a temple of your deity, to be razed ?

Sidney.

It grieved the tyrant that so base a town should so long hold out, so that he would threaten to raze it.

Knolle*

He yoaketh your rebellious necks, Razeth your cities, and subverts your towns.

Slui/upeare.

Pluck from the memory a rooted sorrow, Raze out the written troubles of the brain. Id.

Oh ! your desert speaks loud , It well deserves with characters of brass A forted residence, 'gainst the tooth of time And razure of oblivion. la

He in derision sets

Upon their tongues a various spirit, to raze Quite out their native language ; and instead. To sow a jangling noise of words. Milton.

Shed Christian blood, and populous cities raze; Because they're taught to use some different phrase.

Waller.

We touched with joy The royal hand that razed unhappy Troy.

Uryden.

The place would be razed to the ground, and its foundations sown with salt. Addiicn't Spectator

RA'ZOR, n.s. J Fr. razoir; Lat. rasor. A

RA’ZORFISH. > knife used in shaving: a fish, so called from its shape.

Zeal, except ordered aright, useth the razor with such eagerness that the life of religion is thereby Jiazarded. Hooker.

These words are razors to my wounded heart.

Shakspeare.

New-born chins be rough and razourakle. Id.

The sheath or razor/ish resembleth in length and bigness a man’s finger. Carew.

Those thy boisterous locks, not by the sword

Of noble warrior, so to stain his honour,

But by the barber’s razor best subdued. Milton.

Razor makers generally clap a small bar of Venice steel between two small bars of Flemish steel, and weld them together, to strengthen the back of the razor. Moxon.

As1 in smooth oil the razor best is whet, So wit is by politeness sharpest set, Their want of edge from their offence is seen ; Both pain us least when exquisitely keen. Young.

REACCESS’,n.s. Re and access. Renewed visit.

Let pass the quailing and withering of all things by the recess, and their reviving by the reaccess of the sun. Hakemll.

REACH, v. a., v. n. & n. s. Sax. paecan ; Belg. vkken ; Goth, reckia. To attain ; penetrate or be adequate to ; arrive at ; touch, strike, or fetch, from a distance; hold out; give: as a verb neuter, be extended ; penetrate ; be far extended ; endeavour: as a noun substantive reach is power of touching, taking, or compassing; limit of faculties ; attainment; authority; range; extent: scheme ; device ; fetch.

He hath delivered them into your hand, and ye have “lain them in a rage, that reacheih up unto heaven 2 Chronicles xxvin.

Beach hither thy finger, and behold my hands ; and reach hither thy hand, and thrust it into my side. John xx. 27.

He reached me a full cup. 2 Endras xiv. 39.

These kinds of goodness are so nearly united to the things which desire them, that we scarcely perceive the appetite to stir in reaching forth her hand towards them. Hooker.

We hold that the power which the church hath lawfully to make laws, doth extend unto sundry things of ecclesiastical jurisdiction, and such other matters whereto their opinion is, that the church's authority and power doth not reach. Id.

Great men have reaching hands. Shakspeare.

Strain not my speech To grosser issues, nor to larger reach, Than to suspicion. Id. Othello.

ne duke of Parma had particular reaches and ends to his own underhand, to cross the design.

Bacon.

Some, under , types, have affected obscurity to amuse and make themselves admired for profound reaches. Howel.

Round the tree They longing stood, but could not reach.

Milton.

Thy desire leads to no excess that reaches blame.

Id. Lest he reach of the tree of life, and eat. Id.

The confines met of empyrean heaven, And of this world : and, on the left hand, hell With long reach interposed. Id. Paradise Lost. The new

world reaches quite cross the torrid zone in one tropick to the other. Boyle.

The coast so long desired

Thy troops shall reach, but having reached, repent.

Dry den.

What remains beyond this, we have no more a positive notion of, than a mariner has of the depth of the sea ; where, having let down his sounding line, he reaches no bottom. Locke.

When men pursue their thoughts of space, they are apt to stop at the confines of body, as if space were there at an end too, and reached no farther.

Id.

There may be in a man's reach a book containing pictures and discourses, capable to delight and instruct him, which yet he may never have the will to open. Id.

Through such hands The knowledge of the gods is reached to man.

Rowe.

Here imprecations reach not to the tomb, They shut not out society in death. Addison's Cato.

What are riches, empire, power, But larger means to gratify the will ; The steps by which we climb to rise and reach Our wish, and, that obtained, down with a scaffolding Of sceptres, crowns, and thrones : they've served

their end, And there like lumber to be left and scorned?

Congreve.

The best accounts of the appearances of nature, which human penetration can reach, come short of its reality. Cheyne.

It must fall perhaps before this letter reaches your hands. Pope.

Be sure yourself and your own reach to know, How far your genius, taste, and learning go. Id.

The influence of the stars reaches to many events, which are not in the power of reason. Swift.

REACT, v. a. } Re and act. To return REAC'TION, n. s. S an impulse or impression : the noun substantive corresponding.

Do not great bodies conserve their heat the longest, their parts heating one another ; and may not great, dense, and fixed bodies, when heated bevond a certain degree, emit light so copiously as by the emission and reaction of its light, and the reflections and refractions of its rays within its pores, to grow still hotter till it comes to a certain period of heat, such as that of the sun 1 Newton's Opticks.

The lungs being the chief instrument of sanguifica-tion, and acting strongly upon the chyle to bring it to an animal fluid, must be reacted upon as strongly.

Arbuthnot.

Cut off your hand, and you may do With t'other hand the work of two ; Because the soul her power contracts, And on the brother limb reacts.

Swift's Miscellanies.

READ, v.a,,v.n. &tn.s.~\ Sax. riaet> ; Teut. READ'ER, n. s. treden; Goth. reduy

READ'ERSHIP, Irada, to explain or

READ'ING. j divine. To peruse;

discover by marks or characters ; hence learn by observation of any kind ; to perform the act of reading ; be studious ; know by reading : as an obsolete noun substantive, counsel; saying: a reader is he who reads ; who is studious ; or whose office it is to read in public : readership, his office : reading is public recital ; study ; variation of copies.

It shall be with him, and he shall read therein, that he may learn to fear the Lord. Deut. xvii. 19.

Give attendance to reading, exhortation, and doctrine. 1 Timothy.

The man is blest that hath not lent To wicked read his ear. Sternhold.

This reade is rife that oftentime Great cumbers fall unsoft, In humble dales is footing fast, The trade is not so tickle. Spenser.

An armed corse did lye,

In whose dead face he read great magnanimity. Id. The Jews had their weekly readings of the law.

Hunker.

I have seen her take forth paper, write upon't, read it, and afterwards seal it. Shakspeure.

O most delicate fiend! Who is't can read a woman 1 As we must take the care that our words and sense be clear ; so, if the obscurity happen through the hearers or readers want of understanding, I am not to answer for them. Ben Junson.

'Tis sure that Fleury reads. Taylor.

Virgil's shepherds are too well read in the philosophy of Epicurus. Dryden.

Basiris' altars, and the dire decrees Of hard Eurestheus, every reader sees. Id. Till a man can judge whether they be truths or no, his understanding is but little improved : and thus men of much reading are greatly learned, but may be little knowing. Locke.

We have a poet among us, of a genius as exalted as his stature, and who is very well read in Longinus, his treatise concerning the sublime. Addison.

That learned prelate has restored some of the readings of the authors with great sagacity.

Arbuthnot on Coins.

The passage you must have read, though since slipt out of your memory. Pope.

Less reading than makes felons 'scape, Less human genius than God gives an ape, Can make a Gibber. Id.

I have read of an eastern king, who put a judge to death for an iniquitous sentence. Swift.

He got into orders, and became a reader in a parish church at twenty pounds a year. Id.

When they have taken a degree, they get into or-Id. Miscellanies.

READING. 39g

men to be elected, and invested them with ample

powers for the government of the town This charter was confirmed, after the restoration, by

I hat-lac TT ►►_J :. iL-I <f

ders, and solicit a readership. ia. Miscellanies. ruQri *V7* ”””
**►►►►►►►”►►►”””

Though readrng and conversation may furnish us ˆ ►► ” ancl ls the one now extant. By it uu :j r j ˆ-_ me omcers are declared to be

with many ideas of men and things, yet it is our own meditation must form our judgment.

Watts on the Mind.

READEPTION, n. s. Lat. re and adeplus. Recovery ; act of regaining.

Will any say that the readeption of Trevigi was matter of scruple ? Bacon.

READING, a borough, market and county, town in the county of Berks, is thirty-nine miles west by south from the metropolis, on the high road from London to Bath. It is of considerable extent and importance, and is unquestionably of very great antiquity; but whether it

-_ a mayor, twelve ermen, and the same number of capital burgesses ;

the mayor, and his deputy (the preceding

mayor)►► the senior alderman, the bishop of Salisbury> and ms chancellor) being !pges of the

peace for the borough, and empowered to hold sessions, and a court of record. Reading sent members to parliament from the time of th►► earliest records. Before 1716 the right of election was vested in the freeman not receiving alms, and in the inhabitants paying scot and lot ; but in that year it was limited, by a decision of the house of commons, to the inhabitants paying scot and lot only. The number of voters

is indebted for its origin to the Britons, the Ro-is large, and the mayor is the returning officer.

The town is situated on both banks of the river Rennet, which here separates itself into

mans, or the Saxons, is unknown. In 1389 a great council was held at Reading, at which the

and 14A1

viscounts

king and his barons were reconciled by John of several branches. It contains three parishes, Gaunt. Parliaments were held here in 1440 St. Giles, St. Mary, and St. Lawrence. Formerly ; in the former of which the order of it was a place of great trade in woollens, but was first established ; and in the that manufacture fell to decay during the seven-year following the parliament adjourned hither teenth century, and has never since revived. The from Westminster, on account of the plague, principal support of the town arises from its Edward IV.‘s marriage with Elizabeth, lady water communications with London, Bath, and Grey, was first acknowledged at Reading, in 1464 ; on which occasion she made her public appearance at the abbey, conducted by the duke of Gloucester and the earl of Warwick. In 1466

parliament was a second time adjourned to Reading, to avoid the plague. King Henry VIII.

Bristol. The articles exported are flour, timber, bark, straight hoops, and a variety of minor articles. Many improvements have been lately made in the internal navigation of the district. Its markets are held weekly, on Wednesday and Saturday, and there are four annual fairs.

frequently resided here at the dissolved abbey. The houses are mostly of brick, and the streets His son, king Edward VI., visited the town in regular, spacious, well lighted, and paved. 1552, when he was met by the mayor and alder-Within the lasU few years the town has greatly

men at Coley-Cross, and presented with two yokes of oxen. The same ceremony was repeated when Reading was visited by the bigot-ted Mary, and her husband, Philip of Spain. When, early in the reign of Charles 1., the plague raged with great violence in the metropolis, all the great courts of law were held here. In 1 642 Reading was a parliamentary post ; but the garrison, wanting ammunition, quitted the town, without resistance, on the approach of the king's horse. In consequence of this event it became a royal garrison, and continued to be so till taken by Essex in April 164;>, after a siege of eight days. The king, however, again recovered it in September, and held it till May 1 644, when he ordered the works to be demolished. Reading was afterwards frequently occupied as the head quarters of the parliamentary army, and much impoverished by the contributions levied upon it. In 1688 the army of king James II. was quartered in this town, but quitted it on the approach of the prince of Orange. In 1700 queen Anne visited Reading, when she was received by the corporation in state, and presented with forty broad pieces of gold in an elegant purse.

The first monarch who conferred upon Reading the privilege of separate jurisdiction was Henry III. His charter was confirmed by all his successors, but without any material alterations, till the reign of Henry VI., when the corporation is first mentioned by the title of the mayor and burgesses. Charles I. authorised alder-

increased in size, and a new town has sprung up to the westward of the old one. Along the Ox-ford and London roads, also, many well built rows of houses have been lately erected.

The principal public buildings and institutions in the town are the three churches of St. Lawrence, St. Mary, and St. Giles ; a handsome episcopal chapel recently erected by the Rev. George Hulme ; and several dissenting meeting-houses ; the town-hall and free-school, blue-coat school, green-school, foundation school, the school of industry, Lancasterian school, school for national education, the theatre, and the county gaol.

The ruins of the ancient monastery are also an object of considerable attraction. The church of St. Lawrence was chiefly erected towards the close of the sixteenth century, and is partly constructed of materials taken from the buildings of the abbey. St. Mary's church is more ancient than that of St. Lawrence, and its tesselated tower is much admired. St. Giles's church was probably constructed at the commencement of the twelfth century. The tower only is modern, the ancient one having been demolished during the civil war. This church has recently undergone complete repair. The meeting-houses belong to the Independents, Baptists, Quakers, Method ists, Unitarians, and Catholics.

The town hall and free-school form one building ; the free-school occupying the ground story, and the hall, court room, and offices, the floor above. The free-school was established in the

reign of Henry VII., by John Thorne, abbot of Reading, with the funds of a suppressed almshouse. The blue-coat school was founded in 1656

by Mr. Richard Aldworth, who bequeathed ––4000 for the support of a master, lecturer, and twenty boys. The green school, situated in Broad-street, is appropriated for the education of the daughters of decayed tradesmen, residents in the town, and of orphans, who have been left unprovided for by their parents. The theatre of Reading is a neat and convenient building, erected under the act for regulating provincial theatres. The gaol is built on the site of some of the abbey ruins. It is a large edifice, and contains commodious apartments for the keeper, a neat chapel, an infirmary, and a room for the reception of the magistrates, in the centre.

Reading has given birth to several persons of eminence, among whom may be named Sir Thomas White, founder of St. John's College, Oxford ; archbishop Laud ; John Blagrave, the mathematician; Sir Thomas Holt; Sir John Bernard ; James Merrick, the translator of the Psalms, &c. &c.

READING, a borough and capital of Berks county, Pennsylvania, on the Schuylkill, fifty-four miles north-west of Philadelphia. Population 3463. It is a very pleasant and flourishing town, and contains a court house, a jail, two banks, a large edifice for the public offices, and four houses of public worship : one for Lutherans, one for Calvinists, one for Roman Catholics, and one for Friends. It is chiefly settled by Germans.

READMIT', v. a. Re and admit. To let in again.

These evils I deserve, Yet despair not of his final pardon, Whose ear is ever open, and his eye Gracious to readmit the suppliant. Milton.

In an exhausted receiver, animals, that seem as they were dead, revive upon the readmission of fresh air. Arbuthnot.

After twenty minutes I readmitted the air.

Derliam.

READORN', v. a. Re and adorn. To decorate again, or anew.

The streams now change their languid blue, Regain their glory, and their fame renew, With scarlet honours readorn the tide. Blackmore.

READ'Y, adj., adv., & n. s.) Saxon paeˆ;

READ ILY, adv. > Goth, rad (apt,

READ’INESS, n. s. j prompt.)

Prompt; prepared; fit; willing; eager; quick; nimble ; hence, near ; at hand ; the adverb and nounsubstantive corresponding : ready is also sometimes used as an adverb : see the extract from the book of Numbers ; and as a nounsubstantive, in colloquial discourse, for ready money.

We will go ready armed before the children of Israel. Numbers.

Trouble and anguish shall prevail against him, as a king ready to the battle. Job xv. 24.

He will shew you a large upper room ; there make eady for us. Mar* xiv. 15.

This meue I now by mighty Theseus, That for to hunten is so desirous, 4nd namely at the grete hart in May, That in his bed ther daweth him ne day

That he n’is clad, and rede for to ride

With huute and home and bounties him beside.

Chaucer. Cant. Tales.

Men, when their actions succeed not as they would, are always ready to impute the blame thereof unto the heavens, so as to excuse their own follies. Spenser’s State of Ireland.

Sometimes the readiest way which a wise man hath to conquer, is to fly. Hooker’s Preface.

All things are ready, if our minds be so,

Perish the man whose mind is backward now !

Shakspeare.

I ain joyful to hear of their readiness. Id.

He would not forget the readiness of their king in aiding him when the duke of Eretagne failed him.

Bacon.

A cloud that is more show than moisture ; a cloud that is more ready to bestow his drops upon the sea, than on the land. Holyday.

They remained near a month, that they might be in readiness to attend the motion of the arm.

Clarendon. Death ready stands to interpose his dart.

Milton.

My tongue obeyed, and read'ly could name Whate'er i saw. Id.

The race elect,

Safe towards Canaan from the shore advance

Through the wild desert, not the readiest way.

Id.

Nature has provided for the readiness and easiness of speech. Holder.

These commodities yield the readiest money of any in this kingdom, because they never fail of a price abroad. Temple.

He overlooked his hinds ; their pay was just And ready ; for he scorned to go on trust.

Dry den.

One hand the sword, and one the pen employs And in my lap the ready paper lies. I '.

Proud of their conquest, prouder of their prey, They leave the camp, and take the readiest way.

Id.

The imagination is always restless, and the will, reason being laid aside, is ready for every evtrava-gant project. Locke.

I readily grant that one truth cannot contradict another. Id.

They who should have helped him to mend things, were readier to promote the disorders by which they might thrive than to set a-foot frugality. Davenant.

The ready way to be thought mad is to contend that you are not so. Spectator.

Their conviction grew so strong that they embraced the same truths, and laid down their lives, or were always in readiness to do it, rather than depart from them. Addison.

A pious and well-disposed mind, attended with a readiness to obey the known will of God, is the surest means to enlighten the understanding to a belief of Christianity. South.

Those very things which are declined as impossible, are readily practicable in a case of extreme necessity. Id.

Lord Strut was not flush in ready, either to go to law, or clear old debts. Arbuthnot.

Those, who speak in publick, are much better accepted, when they can deliver their discourse by the help of a lively genius and a ready memory, than when they are forced to read all. Watts.

For the most part there is a finer sense, a clearer mind, a readier apprehension, and gentler dispositions in that sex, than in the other. Law.

A ready consent often subjects a woman to contempt. ClariiSa.

REAFFIR'MANCE,n. s. Re and affirmance. A second confirmation.

Causes of deprivation are a conviction before the ordinary of a wilful maintaining any doctrine contrary to the thirty-nine articles, or a persisting therein without revocation of his error, or a reaffirmance after such revocation. Ayliffe.

REAGENTS, in chemistry, are such substances as enable the experimenter to draw conclusions as to the nature of the bodies examined by means of the alterations produced by the reagent. In the experiments of chemical analysis, the component parts of bodies may either be ascertained in quantity as well as quality by the perfect operations of the laboratory, or their quality alone may be detected by the operations of certain tests or reagents. Thus the infusion of galls is a reagent, which detects iron by a dark purple or black precipitate ; the prussiate of potash exhibits a blue with the same metal, &c. See TESTS.

RE-AGGRAVATION, in the Romish ecclesiastical law, the last monitory, published after three admonitions, and before the final excommunication. Before they proceed to excommunication, they always publish an aggravation, and a re-aggravation.

REAL, adj. -\ Fr. reel ; Lat. realis.

RE A I/IT Y, n. s. f Genuine ; true ; intrinsic ;

RE'ALIZE, v. a A relating to things, not to

RE'ALLY, adv. i persons; in law relating to

REAL'GAR, n.s.J things immoveable, as land, &c. ; reality is truth ; verity : something in-trinsically important: to realise, to bring into act or being ; sometimes to convert money into land ; sometimes to convert other property into money ⬛⬛⬛⬛⬛⬛ really corresponds with real : realgar is a mineral defined below.

Many are perfect in men's humours, that are not greatly capable of the real part of business ; which is the constitution of one that hath studied men more than books. Bacon.

Put realgar hot into the midst of the quicksilver, whereby it may be condensed as well from within as without. Id.

Nothing properly is his duty but what is really his interest. Wilkins.

Of that skill the more thou knowest,

The more she will acknowledge thee her head,

And to realities yield all her shows,

Made so adorn for thy delight the more. Milton.

We do but describe an imaginary world, that is but little a-kic to the real one. Glanmlle't Scepsis.

Thus we realize what Archimedes had only in hypothesis weighing a single grain against the globe of earth. Glanville.

We shall at last discover in what persons this holiness is inherent really, in what condition it is inherent perfectly, and consequently in what other sense it may be truly and properly affirmed that the church is holy. Pearson.

1 am hastening to convert my small estate, that is personal, into real. Child on Trade.

As a diocesan, you are. like to exemplify and realize every word of this discourse. South.

There cannot be a more important case of conscience for men to be resolved in, than to know certainly how far God accepts the will for the deed, and how far he does not ; and to be informed truly when men do really will a thing, and when they have really no power to do what they have willed. Id.

When I place any imaginary name at the head of a VOL. XVITI.

character, I examine every letter of it, that it may not bear any resemblance to one that is real.

Addison.

I would have them well versed in the Greek and Latin poets, without which a man fancies that he understands a critick, when in reality he does not comprehend his meaning. /^.

Realgar or sandaracha is red arsenick. Harru.

Imaginary distempers are attended with real at.d unfeigned sufferings, that*enfeeble the body, and dissipate the spirits. Blackmore.

The whole strength of the Arian cause, real or artificial ; all that can be of any force either to convince, or deceive a reader. Waterland.

The best account of the appearances of nature, in any single instance human penetration can reach, comes infinitely short of its reality and internal constitution ; for who can search out the Almighty's works to

perfection ? Cheyne.

I was really so diffident of it, as to let it lie by me these two years, just as you now see it. Pope.

These orators inflame the people, whose anger is really but a short fit of madness. Swift.

They even affect to be more pleased with dress, and to be more fond of every little ornament, than they really are. Law.

Why really sixty-five |is somewhat old. Young.

My neck may be an idea to you, but it is a reality to me. Beattie.

REAL, the name of a Spanish silver coin. See COINS.

REAL (Caesar Vichard de St.), a French writer, who distinguished himself at Paris by several ingenious productions, and died at Chamberry in 1692, at an advanced age. A complete edition of his works was printed in Paris, in 3 vols. 4to., 1745, and another in 6 vols. 12mo.

REAL (Gaspard de), lord of Curban and grand seneschal of Forcalquier, was born at Sisteron, in 1682, and became distinguished for his political abilities. He wrote a Treatise on Government, in 8 vols. 4to., Paris, 1762, which was much esteemed. He died in Paris in 1752.

REALGAR, in chemistry and mineralogy, the native sulphuret of arsenic.

REALISTS, a sect of school philosophers formed in opposition to the nominalists. See NOMINALISTS. Under the realists are included the Scotists, Thomists, &c. Their distinguishing tenet is that universals are realities, and have an actual existence out of an idea or imagination ; or, as they express it in the schools, a parte rei ; whereas the nominalists contend that they exist only in the mind, and are only ideas, or methods of conception. Dr. Odo, or Oudard, a native of Orleans, afterwards abbot of St. Martin de Tournay, was the chief of the realists He wrote three books of dialectics, where, on the principles of Boethius and the ancients, he maintained that the object of that art is things, not words.

REALM, n. s. Fr. roiaulme. A kingdom ; a king’s dominion.

Is there any part of that realm, or any nation therein, which have not yet been subdued to the crown of England 1 Spenser.

They had gathered a wise council to them

Of every realm that did debate this business.

Shaksjieare.

A son whose worthy deeds

Raise him to be the second in that realm. Milton.

Learn each small people's genius, policies, The ant's republick, and the realm of bees. Pope.

When few from famines or from plagues survive, Or earthquakes swallow half the realm alive.

Darwin.

RE'ALTY, n. s. Ital. realty ; of Lat. re-galitas. Loyalty to kings.

O heaven, that such resemblance of the Highest Should yet remain, whujreJaith and realty Remain not. Milton's Paradise Lost.

Realty means not in this place reality in opposition to show, but loyalty ; for the Italian dictionary explains the adjective reale by loyal. Pearce.

REAM, n. s. Sax. jieam ; Fr. rame ; Bel?. riem. A bundle of paper containing twenty quires.

All vain petitions mounting to the sky, With reams abundant this abode supply. Pope. REAN'IMATE, v. a. Lat. re and animo. To revive ; restore to life.

We are our reanimated ancestors, and antedate their resurrection. Granville's Scepsis.

The young man left his own body breathless on the ground, while that of the doe was reanimated.

Spectator.

REANNEX', v.a. Re and annex. To an-nex again.

King Charles was not a. little inflamed with an ambition to repurchase and reannex that duchy.

Bacon's Henry VII.

REAP, v. a. &►►.►►.'! Sax. jiepan ; Belg.

REAP'ER, n, s. > reepen ; Swed. repa.

REAP'INGHOOK. J To cut corn at harvest ;

to obtain or gather ; to harvest : the reaper is he

who reaps; and the reapinghook, his insku—

ment.

When ye reap the harvest, thou shalt not wholly reap the corners of thy field. Leviticus xix. 9.

They that sow in tears, shall reap in joy.

Psalms.

The hire of the labourers, which have reaped down your fields, is kept back by fraud. James.

From hungry reapers they their sheaves withhold.

Sandys.

They that love the religion which they profess, siay have failed in choice, but yet they are sure to eap what benefit tlie same is able to

afford.

Hooker.

From Ireland come I with my strength, And reap the harvest which that rascal sowed.

Shakspeare. What sudden anger's this1? how have I reaped it?

Id.

Our sins being ripe, there was no preventing of God's justice from reaping that glory in our calamities, which we robbed him of in our prosperity.

King Charles.

Some are bribed to vow it looks Most plainly done by thieves with reapinghooks.

Dry den.

Here Ceres' gifts in waving prospects stand, And nodding tempt the joyful reaper's hand.

Pope.

REAR, n. s.) Fr. arriere, of Lat. retro. REAR' WARD. S The hinder class ; hinder troop of an army, or the hinder line of a fleet : rearward is also used in these senses.

The standard of Dan was the rearward of the camp. Numbers.

He from the beginning began to be in the rearward, and before they left fighting was too far off.

Sidney.

The rear admiral, an arch pirate, was afterwards slain with a great shot. Knolles.

Why followed not, when she said Tybalt's dead, Thy father or thy mother ? But with a rearward following Tybalt's death, Romeo is banished. Shakspeare. Romeo and Juliet. He was ever in the rearward of the fashion.

Shakspeare.

Coins I place in the rear, because made up of both the other. Peacham.

Snowy-headed winter leads, Yellow autumn brings the rear. Waller.

Argive chiefs

Fled from his well-known face, with wonted fear, As when his thund'ring sword and pointed spear Drove headlong to their ships, and gleaned the rear. Dryden.

REAR, v. a. Sax. ariaenan ; Isl. reira. To raise up ; move or life upwards ; hence bring to maturity ; breed ; educate.

All the people shouted with a loud voice, for the rearing up of the house of the Lord. 1 Esdras.

Down again she fell unto the ground,

But he her quickly reared up again. Spenser.

No creature goeth to generate, whilst the female is busy in sitting or rearing her young. Bacon.

In adoration at his feet I fell Submiss ; he reared me. Id.

Who now shaH rear you to the sun, or rank

Your tribes. Id.

Into the naked woods he goes,

And seeks the tusky boar to rear,

With well-mouthed hounds and pointed spear.

Dryden .

They were a very hardy breed, and reared their young ones without any care.

Mortimer's Husbandry.

Charity decent, modest, easy, kind, Softens the high, and rears the abject mind. Prior.

They have in every town public nurseries, where all parents, except

cottagers and labourers, are obliged to send their infants to be reared and educated. Swift. He wants a father to protect his youth,

And rear him up to virtue. Southern.

They flourished long in tender bliss, and reared A numerous offspring, lovely like themselves.

Thomson.

No flesh from market-towns our peasant sought ; He reared his frugal meat, but never bought.

Harte.

REAR, adj. Sax. hrierie. Raw ; half-roasted ; early. A provincial word.

O'er yonder hill does scant the dawn appear, Then why does Cuddy leave his cot so rear? Gay.

REAR. GUARD is that body of an army which marches after the main body. The old grand guards of the camp always form the rear guard of the army, and are to see that every thing arrives safe at the new camp.

REAR'MOUSE, n.s. Sax. pjiejie mur. The leather-winged bat.

Some war with rearmice for their leathern wings To make my small elves coats. Shakspeare.

Of. flying fishes the wings' are not feathers, but a thin kind of skin, like the wings of a bat or rear-mouse. Abbot.

REASCEND', v. n. & v.a. Re and ascend. To climb again ; mount again.

When as the day the heaven doth adorn,

I wish that night the noyous day would end ;

And when as night hath us of light forlorn,

I wish that day would shortly reascend. Spanier,

Taught by the heav'nly muse to venture down The dark descent, and

up to reascend. Milton.

When the god his fury has allayed, He mounts aloft, and reascends the skies. Addison.

REA’SON, n. s., v. n. & v. a.ˆ\ Fr. raison; REASONABLE, adj. Lat. ratio. The

REASONABLENESS, n.s. power by

REA’SON ABLY, adv. J-which men deREA’SONER, n. s. | duce conclu —

REA’SONING, , sions from an

REA’SONLESS, adj. J argument; ratiocination ; discursive art ; hence cause, considered logically ; efficient or final cause ; reasonable or just claim, account, or practice ; moderation: to reason is to argue; hence to debate; discourse; make enquiry ; argue rationally or correctly ; and to examine rationally (a gallicism) : reasonable, reasonableness, and reasonably, correspond with reason as a noun substantive : reasoner is he who uses the faculty of reason ; an arguer : reasoning is argument ; logic : reasonless, devoid of reason ; causeless.

Stand still, that I may reason with you of all the righteous acts of the Lord. 1 Samuel xii. 7.

Jesus perceiving their thoughts, said, What reason ye in your hearts 1 Luke v. 22.

She perceived her only son lay hurt, and that his hurt was so deadly, as that already his life had lost use of the reasonable and almost sensible part.

Sidney.

I was promised on a time, To have reason for my rhyme : From that time unto this season, I received nor rhyme nor reason. Spenser. Reason is the director of man’s will, discovering in action what is good ; for the laws of well-doing are the dictates of right reason. Hooker.

I mask the business from the common eye For sundry weighty reasons.

Shakspeare. Macbeth. When valour preys on reason, It eats the sword it rights with. Shakspeare.

Are you in earnest 1 ??? Ay, and resolved withal To do myself this

reason and this right. Id.

Reason with the fellow, Before you punish him, where he heard this. Id.

Let all things be thought upon, That may with reasonable swiftness add More feathers to our wings. Id. Henry V. This proffer is absurd and reasonless. Shakspeare. That they wholly direct the reasonless mind, I am resolved ; for all those which were created mortal, as birds and beasts, are left to their natural appetites.

Raleigh's History of the World. It was a reasonable conjecture, that those countries which were situated directly under the tropic, were of a distemper uninhabitable. Id.

Spain is thin sown of people, partly by reason of the sterility of the soil, and partly their natives are exhausted by so many employments in such vast territories as they possess. Bacon.

Some man reasonably studied in the law, should be persuaded to go thither as chancellor. Id.

When she rates things, and moves from ground to

ground, The name of reason she obtains by this ;

But when by reason she the truth hath found, And standeth fixt, she understanding is. Daviei.

The parliament was dissolved, and gentlemen furnished with such forces, as were -held sufficient to hold in bridle either the malice or rage of reasonable people. Huyward.

REA

A good way distant from the nigra rupes, there are four several lands of reasonable quantity.

Abbot.

Such a benefit, as by the antecedent will of Christ is intended to all men living, though ail men, by rea-son of their own demerits, do not actually receive the fruit of il-White.

What the apostles deemed rational and probable means to that end, there is no reason or probability to think should erer in any produce this effect.

Hammond.

God brings good out of evil ,- and therefore it were but reason we should trust God to govern his own world, and wait till the change cometh, or the reason be discovered. Taylor.

Is it reasonable when I reprove any vicious person for dishonouring God, and dissuade him from his wicked courses, that he should tell me he will not be discouraged by my fine words, but if I will go to principles and first grounds he wild hear me ?

Bp. Taylor.

By indubitable certainty, I mean that which doth not admit of any reasonable cause of doubting, which is the only certainty of which most things are capable- Wilkint.

They thought the work would be better done, if those, who had satisfied themselves with the reasonableness of what they wish, would undertake the converting and disposing of other men.

Clarendon. Though brutish that contest and foul,

When reason hath to deal with force ; yet so

Most reason is that teason overcome. Milton.

Down reason tnen, at least vain reasoning down.

Id.

These reasons in love’s law have past for good, Though fond and reasonless to some. Id.

The passive reason, which is more properly reasonableness, is that order and congriuty which is impressed upon the thing thus wrought ; as in a watch, the whole frame and contexture of it carries a reasonableness in it, the passive impression of the reason or intellectual idea that was in the artist.

Hale.

To render a reason of an effect or phenomenon is to deduce it from

something else more known than itself. Boyle.

Virtue and vice are not arbitrary things, but there is a natural and eternal reason for that goodness and virtue, and against vice and wickedness.

Tillotson.

When any thing is proved by as good arguments as a thing of that kind is capable of, we ought not in reason to doubt of its existence. Id.

Tf we can by industry make our deaf and dumb per-son reasonably perfect in the language and pronunciation, he may be also capable of the same privilege of understanding by the eye what is spoken.

Holder's Elements of Speech.

Dim, as the borrowed beams of moon and stars To lonely, weary, wandering travellers, Is reason to the soul : and as on high, Those rolling fires discover but the sky, Not light us here ; so reason's glimmering ray Was lent, not to assure our doubtful way, But guide us upward to a better day. Dryden. Let it drink deep in thy most vital part ;

Strike home, and do me reason in thy heart. Id.

Chaucer makes Arcite violent in his love, and un-just in the pursuit of it ; yet when he came to die, ne made him think more reasonably. Id.

The papists ought in reason to allow them all the excuses they make use of for themselves ; such as *n invincible ignorance, oral tradition, and authority.

Stillinafleet. 2 D2

Reason, in the English language, sometimes is taken for true and clear principles ; sometimes for clear and fair deductions ; sometimes for the cause, particularly the final cause. Locke.

Erery man's reasoning and knowledge is only about the ideas existing in his own mind ; and our knowledge and reasoning about other things is only as they correspond with those our particular ideas.

Id.

By reason of the sickness of a reverend prelate, I have been overruled to approach this place.

Sprat.

If we commemorate any mystery of our redemption, or article of our faith, we ought to confirm our belief of it, by considering all those reasons upon which it is built ; that we may be able to give a good account of the hope that is in us.

Nelson.

When they are clearly discovered, well digested, and well reasoned in every part, there is beauty in such a theory-Buniet.

No man, in the strength of the first grace, can merit the second ; for reason they do not, who think so ; unless a beggar, by receiving one alms can merit .mother. South.

The most probable way of bringing France to rea- * < >►►, would be by the making an attempt upon the Spanish West Indies, and by that means to cut off all communication with this great source of riches.

Addison.

Love is not to be reasoned down, or lost In high ambition. ►►►.

The terms are loose and undefined ; and what less becomes a fair reasoner, he puts wrong and invidious names to every thing to colour a false way of arguing.

Id.

Due reverence pay To learned Epicurus ; see the way By which this reasoner of so high renown Moves through the ecliptick road the

rolling sun.

Blackmore.

Your reasonings therefore on this head, amount only to what the schools call ignoratio elenchi ; proving before the question, or talking wide of the purpose. Waterland.

In the lonely grove,

‘Twas there just and good he reasoned strong, Cleared some great truth, or raised some serious song.

Tickel.

It would be well, if people would not lay so much weight on their own reason in matters of religion, as to think every thing impossible and absurd which they cannot conceive : how often do we contradict *,he right rules of reason in the whole course of our lives ! reason itself is true and just, but the reason of every particular man is weak and wavering, perpetually swayed and turned by his interests, his passions, and his vices. Swift.

A law may be reasonable in itself, although a man does not allow it, or does not know the reason of the lawgivers. Id.

The church has formerly had eminent saints in that

sex ; and it may reasonably be thought that it is

purely owing to their poor, and vain education, that

this honour of their sex is for the most part confined

to former ages. Law.

On the whole it appears, and my argument shows

With a reasoning the court will never condemn.

That the spectacles plainly were made for the

nose, And the nose was as plainly intended for them.

Cowper.

REASON is that faculty or power of the mind whereby it distinguishes

good frorp evil, truth from falsehood.

REASSEM’BLE, v. a. Re and assemble, To collect anew.

There reassembling our afflicted powers, Consult how to offend our enemy. Milton.

REASSERT, t>. a. Re and assert. To assert anew ; to maintain after suspension or cessation. His steps I followed, his doctrine I reasserted.

Atterbury.

Young Orestes grown

To manly years should reassert the throne. Pope. REASSUME’, v.a. Lat. reassumo ; re and assume. To resume ; to take again.

Nor only on the Trojans fell this doom, Their hearts at last the vanquished reassume.

Denham.

To him the Son returned Into his blissful bosom reassumed, In glory as of old. Milton.

After Henry VIII. had reassumed the supremacy, a statute was made, by which all doctors of the civil law might be made chancellors. Ayliffe.

For this he reassumes the nod, While Semele commands the god. Prior.

REASSURE’, v. a. Fr. reassurer ; re and assure. To restore from terror; free from fear.

They rose with fear, Till dauntless Pallas reassured the rest.

Dryden.

REATE’, n. s. A kind of long small grass that grows in water, and complicates itself together.

Let them lie dry six months to kill the water-weeds ; as water-lillies, candocks, reate, and bulrushes. Walton.

REAVE’, v. a. Pret. reft. Sax. jisepian ; Dan. reve. To take away by stealth or violence. See BEREAVE.

Dismounting from his lofty steed, He to him leapt, in mind to reave his life.

Spenser

Who can be bound by any solemn vow To do a murderous deed, to rob a man, To force a spotless virgin’s chastity, To reave the orphan of his patrimony, And have no other reason for his wrong But that he was bound by a solemn oath ?

Shakspeare.

But these men knowing, having heard the voyce Of God, by some meanes, that sad death hath reft The ruler heere ; will never suffer left Their unjust wooing of his wife. Chapman.

Some make his meashy bed, but reave his rest.

Carew.

REAUMUR (Renatus Anthony Ferchault, sieur de), a celebrated French philosopher, born at Rochelle in 1683. After the usual course of school education, in the place of his birth, he began a course of philosophy at Poitiers, and of civil law at Bourges ; but soon relinquished the latter, to apply himself to mathematics, physics, and natural history. He repaired to Paris in 1703, and was received into the Academy of Sciences in 1708. From that hour he was wholly employed in natural history. The numerous discoveries he made in the various branches of science are too numerous to detail. He discovered the Turquois mines in the late province of Languedoc ; and his improvement on the art of converting iron into steel was rewarded by a pension of 12,000 livres. It was owing to his endeavours that there were es-REB

tablished in France manufactures of tin plates and of porcelain in

imitation of china-ware. We owe to him also a new thermometer, which bears his name, and is pretty generally used on the continent. Reaumur's is a spirit thermometer, having the freezing point at 0►►, and the boiling point at 80►►. He died in the seventy-sixth year of his age, on the 18th of October, 1757. He bequeathed to the Academy of Sciences his MSS., and his collection of natural productions. His chief works are, a number of Memoirs and Observations on different parts of Natural History ; printed in the collections of the Academy of Sciences. A large work printed separately in 6 vols. in 4to., entitled A Natural History of Insects ; which is much esteemed.

REAUMURIA, in botany, a genus of the pentagynia order and pentandria class of plants ; natural order thirteenth, succulents : CAL. hexa-phyllous ; petals five : CAPS, unilocular, quin-quevalved, and polyspermous. Species two only, annuals of Syria.

REBAPTIZE', v. a. Fr. rebaptiser; re and baptize. To baptize again.

In maintenance of rebaptization, their arguments are built upon this, that heretics are not any part of the church of Christ. Hooker.

Understanding that the rights of the church were observed, he approved of their baptism, and would not suffer them to be rebaptized. Aylijfe's Parergon.

REBATE', v. n. Fr. rebattre. To blunt; beat to obtuseness.

He doth rebate and blunt his natural edge

With profits of the mind, steady and fast.

Shahspeare.

The icy goat, the crab which square the scales ; With those of aries trine consent to hate The scales of libra, and her rays rebate. Creech.

My flagging soul flies under her own pitch, My senses, too, are dull and stupified, Their edge rebated. Dryden's Don Sebastian.

Their innocence unfeigned long joys afford

To the honest nuptial bed, and, in the wane

Of life, rebate the miseries of age. Philips.

REBATE, or REBATEMENT, in commerce, a term much used at Amsterdam, for discount allowed on the price of several commodities,

when the buyer, instead of taking time, advances ready money.

REBEC, or REBECK, a Moorish word signifying an instrument with two strings played on with a bow. The Moors first brought the rebec into Spain, whence it passed into Italy, and, after the addition of a third string, obtained the name of rebecca; whence the old English rebec, or fiddle with three strings.

Rebec, ribibe, and ribible seem to be different names of the same instrument, and are often indiscriminately used by Gower, Chaucer, and the more ancient bards.

As the head, or scroll-work, of old viols and violins used to be curiously carved, so seems to have been that of the rebec. Chaucer compares the face of an old woman, an old trot, to the head of a rebec. See the example above.

RE'BECK, n. s. Fr. rebec ; Ital. ribecca. A three-stringed fiddle.

Brother, quod he, here wonneth an old rebekke, That had almost as lefe to lese her nekke As for to geve a peny of hire good.

Chaucer. Cant. Tales.

Fr. rebelle ; Lat. rebellis. A revolter ; ××× one who opposes law-ful authority: to act in opposition to such

When the merry bells ring round, And the jocund rebecks sound, To many a youth and many a maid, Dancing in the checkered shade. Miuon.

REB'EL, n. s. & v. n.- REBEL'LION, n. s. REBELLIOUS, adj. REBEL'UOUSLY, adv. REBEL'LIOUSNESS, n. s. .

authority : rebellion is the revolt or insurrection made : rebellious means opposed to lawful authority : the adverb and noun substantive corresponding.

From the day that thou didst depart out of Egypt, until ye came unto this place, ye have been rebellious against the Lord. . Dent. is. 7.

This our son is stubborn and rebellious, he will not obey our voice. Id. xxi. 20.

The merciless Macdonel Worthy to be a rebel ; for to that The multiplying villanies of nature Do swarm upon him. Shakspeare. Macbeth.

Boys, immature in knowledge, Pawn their experience to the present pleasure, And so rebel to judgment. Shakspeare.

Such smiling rogues as these soothe every passion, That in the nature of their lords rebels ; Bring oil to fire. Id. King Lear.

He was victorious in rebellions and seditions of people. Bacon.

Where one shewed him where a nobleman, that had rebflliouily borne arms against him, lay very honorably in tombed, and advised the king to deface the monument ; he said, no, no, but I would all the rest of mine enemies were as honourably intombed.

Camdeii.

Who could ever yet shew me a man rebellioutly undutiful to his parents that hath prospered in himself, and his seed 1 Bp. Hall. Armed with thy might, rid heaven of these rebelled

Milton.

Of their names in heavenly records now Is no memorial, blotted out and razed By their rebellion from the books of life. Id.

Bent he seems

On desperate revenge, which shall redound Upon his own rebellious head. Id.

How could my hand rebel against my heart ? How could your heart rebel against your reason 1

Dryden,

Part of the angels rebelled against God, and thereby lost their happy state. Locke.

Thou, with rebel insolence, didst dare To own and to protect that hoary ruffian ; And, in despite even of thy father's justice, To stir the factious rabble up to arms. Rowe. This is not disobedience but rebellion; 'tis disclaiming the sovereignty of Christ, and renouncing all allegiance to his authority. Rogers.

Shall man from nature's sanction stray, A rebel to her rightful sway 1 Felton.

REBELLION (rebellio), among the Romans, was where those who had been formerly overcome in battle, and yielded to their subjection, made a second resistance ; but with us it is generally used for taking up arms traitorously against the king, whether by natural subjects, or others when once subdued ; and the word rebel is sometimes applied to him who wilfully breaks a law. There is a difference between enemies and rebels. Enemies are those who are out of the king's allegiance : therefore subjects of the king, either in open war, or rebellion, are not the

king's enemies, but traitors. And David, prince of Wales, who levied war against Edward I., because he was said to be within the allegiance of the king, had sentence pronounced against him as a traitor and rebel. Private persons may arm themselves to suppress rebels, enemies, &c.

REBELLIOUS ASSEMBLY is a gathering together of twelve persons or more, intending unlawfully, of their own authority, to attempt any change in the law or statutes of the realm; or to destroy the enclosures of any ground, or banks of any fish pond, pool, or conduit, to the intent the same shall lie waste and void ; or to destroy the deer in any park, or any warren of conies, dove-houses, or fish in ponds ; or any house, barns, mills, or bays ; or to burn stacks of corn ; or abate rents, or prices of victuals, &c.

REBEL'LOVV, v. n. Re and bellow. To bellow in return ; echo back a loud noise.

He loudly brayed with beastly yelling sound,

That all the fields rebellowed again. Spenser.

The resisting air the thunder broke, The cave rebellowed, and the temple shook. Dry den.

From whence were heard, rebellowing to the main, The roars of lions. Id. jEneia.

REBOUND', v. n. v. ►►. & n. s. Fr. rebondir. Re and bound. To spring back ; be reverberated ; fly back in consequence of motion impressed and resisted by a greater power ; reverberate : a reverberation.

Whether it were a roaring voice of most savage wild beasts, or a rebounding echo from the hollow mountains. Wisdom xvii.

I do feel,

By the rebound of yours, a grief that shoots

My very heart. Shakspeare. Antony and Cleopatra.

If you strike a ball sidelong, not full upon the surface, the rebound will be as much the contrary way ; whether there be any such resilience in echoes may be tried. Bacon.

It with rebounding surge the bars assailed. Hilton.

All our invectives at their supposed errors fall back with a rebounded force upon our own real ones.

Decay of Piety. Silenus sung, the vales his voice rebound,

And carry to the skies the sacred sound. Dryden .

The weapon with unerring fury flew, At his left shoulder aimed : nor entrance found ; But back, as from a rock, with swift rebound Harmless returned. Id.

Life and death are in the power of the tongue, and that not only directly with regard to the good or ill we may do to others, but reflexively with re-gard to what may rebound to ourselves.

Government of the Tongue.

Flowers, by the soft South West Opened, and gathered by religious hands, Rebound their sweets from the odoriferous pavement.

Prior.

Bodies which are absolutely hard, or so soft as to be void of elasticity, will not rebound from one another : impenetrability makes them only stop.

Newton's Opticks.

She bounding from the shelfy shore, Round the descending nymph the waves rebounding roar. Pope.

REBUFF', n. s. Fr. rebuffade, Ital. rebujfo. Repercussion ; quick and sudden resistance. By ill chance

The strong rebuff of some tumultous cloud,

Instinct with fire and nitre, hurried him

As manv miles aloft. Milton's Paradise Lost.

REBUILD', v.a. Re and build. To reedify ', restore from demolition ; repair.

The fines imposed there were the more questioned and repined against, because they were assigned to the rebuilding and repairing of St. Paul's church.

Clarendon

Fine is the secret, delkate the art, To raise the shades of heroes to our view, Rebuild fallen empires, and old time renew.

Tickel.

ilEBUKE', v. a. & n. s.) Fr. rcboucher, or REBU'KABLE, adj. $ Lat. repungo. To

chide ; reprehend ; repress ; censure : the censure given: rebukable is worthy of rebuke. Thy rebuke hath broken my heart. Psalm Ixix. The revellers are profound to make slaughter, though I have been a rebuker of them all. Hosea.

He was rebuked for his iniquity ; the dumb ass, speaking with man's voice, forbad the madness of the prophet. 2 Peter.

Why bear you these rebukes, and answer not ?

Shakspeare.

I am ashamed ; does not the stone rebuke me, For being more stone than it 1 Id.

Rebukable

And worthy shameful check it were, to stand On mere mechanick compliment. Id.

The proud he tamed, the penitent he cheered, Nor to rebuke the rich offender feared. Dryden.

He gave him so terrible a rebuke upon the forehead with his heel, that he laid him at his length.

L'Estrange.

The rebukes and chiding to children, should be in grave and dispassionate words. Locke.

Shall Gibber's son, without rebuke, Swear like a lord 1 Pope.

Should vice expect to escape rebuke, Because its owner is a duke ? Swift's Miscellanies.

RE'BUS, n. s. Lat. rebus. A word represented by a picture.

Some citizens, wanting arms, have coined themselves certain devices alluding to their names, which we call rebus; Master Jugge the printer, in many of his books, took, to express his name, a nightingale sitting in a bush with a scrole in her mouth, wherein was written jugge, jugge, jugge. Peacham.

The origin of the REBUS or name-device, as Camden styles it, is generally attributed to the priests of Picardy, who, it seems, anciently used to make certain libels, entitled de rebus quae ge-runtur, being satires on the transactions and manners of the day ; in which they made great use of these allusions, omitting and breaking words and supplying them with paintings. Cam-den tells us, the rebus was in great esteem among our forefathers ; and that he was nobody who could not hammer out of his name an invention by this wit-craft, and picture it accordingly.

The Sieur des Accords has made an ample collection of the most

famous rebuses de Picar-die, and Camden has done something of the same kind in his Remains. Abel Drugger's de-vice in Ben Jonson's Alchemist, and Jack of Newbury, in the Spectator, are known to every body. But the rebus, being once raised to sign-posts, grew out of fashion at court.

This fancy for representing the name by some device seems to have existed in the pure Augustan age : Cicero in a dedication to the gods, inscribed Marcus Tullius, with a little pe*,

called by the Latins cicer, by us a chich pea. And Julius Caesar, on some of his coins, used an elephant, called Caesar in the Mauritanian tongue.

REBUS, in heraldry, a coat of arms which bears an allusion to the name -of the person ; as three castles, 'for Castleton; three cups for Butler; three conies, for Conijoy ; bearings which are of great antiquity.

REBUT, v.n. Fr. rebuter. To retire back. Obsolete.

Themselves too rudely rigorous, Astonied with the stroke of their own hand, Do back rebut, and each to other yielded land.

Spenser.

REBUTTER (from the French bouter, to put back or bar) is the answer of defendant to plaintiff's surrejoinder; and plaintiffs answer to the rebutter is called a surrebutter. Rebutter is also where a man by deed or fine grants to warrany any land or hereditament to another; and the person making the warranty, or his heir, sues him to whom the warranty is made, or his heir or assignee, for the same thing ; if he who is so sued plead the deed or fine with warranty, and pray

judgment, if the plaintiff shall be received to de-mand the thing which he ought to warrant to the party against the warranty in the deed, &c., this is called a rebutter. And if I grant to a tenant to hold without impeachment of waste, and afterwards implead him for waste done, he may debar me of this action by showing my grant which is a rebutter.

RE'CAL, v. a. & n, s. Re and call. To call back ; call again ; revoke : revocation.

They who recall the church unto that which was at the first, must set bounds unto their speeches.

Hooker.

If Henry were recalled to life again, These news would cause him once more yield the ghost. Shukspeare.

Other decrees Against thee are gone forth, without recall.

Milton.

Tis done, and since 'tis done 'tis past recal; And, since 'tis past recal, must be forgotten.

Dryden. Neglected long, she let the secret rest,

Till love recalled it to her lab'ring breast. Id.

It is strange the soul should never once recal over any of its pure native ideas, before it borrowed any thing from the body ; never any other ideas, but what derive their original from that union. Locke.

To the churches, wherein they were ordained, they might of right be recalled as to their proper church, under pain of excommunication. AyLiffe.

If princes, whose dominions lie contiguous, be forced to draw from those armies which act against .France, we must hourly expect having those troops recalled which they now leave with us in the midst of a siege. Swift.

It is necessary to recall to the reader's mind, the desire Ulysses has to reach his own country.

Broome on Odyssey.

RECANATI, the ancient Recinetum, a town of Italy, in the Ecclesiastical States, and delegation of Ancona. It is finely situated on an eminence near the Musone, four miles south-west of Loretto, and forms with that town the see of a bishop. Its only objects of interest are a monument in bronze, at the town-house, and an aque-

duct leading to Loretto. The country around is extremely fertile. Inhabitants 4000. Four miles south-west of Loretto, and thirteen south of An-cona.

RECANT', v. a. k v. n. } Lat. recanto. To RECAN'TATION, n. s. > retract ; recall ; con-RECANT'ER. > tradict ; revoke a position : recantation and recanter corresponding. She could not see means to join this recantation to the former vow. Sidney.

He shall do this, or else I do recant The pardon that I late pronounced. Shakspeare.

The publick body, which doth seldom Play the recanter, feeling in itself A lack of Timon's aid, hath sense withal Of its own fall, restraining aid to T imon. Id. How soon would ease recant Vows made in pain as violent and void ! Milton. The poor man was imprisoned for this discovery, and forced to make a publick recantation.

Stillingfieet.

If it be thought that the praise of a translation consists in adding new beauties, I shall be willing to recant. Dryden.

That the legislature should have power to change the succession, whenever the necessities of the kingdom require, is so useful towards preserving our religion and liberty that I know not how to recant.

Swift.

RECAPITULATE, v. a. } Fr. recapituler ; RECAPITULATION, n. s. / Lat. re and capitu-RECAPIT'ULATORY, adj. J lum. To repeat again ; the repetition made ; repeating again.

He maketh a recapitulation of the Christian churches ; among the rest he addeth the isle of Eden by name.

Raleigh.

Hylobares judiciously and resentingly recapitulates your main reasonings. More's Divine Dialogues.

I have been forced to recapitulate these things, because mankind is not more liable to deceit, than it is willing to continue in a pleasing error.

Dry den.

Instead of raising any particular uses from the point that has been delivered, let us make a brief recapitulation of the whole. South.

Recapitulatory exercises. Garretson.

RECAR'RY, v. a. Re and carry. To carry back.

When the Turks besieged Malta or Rhodes, pigeons carried and recarried letters. Walton.

RECCO, a town of the Sardinian States, in the province of Genoa, on the sea coast. Inhabitants 2000. It carries on some traffic in linen; likewise in oil fruit, and other products of the country. Ten miles E. S. E. of Genoa.

RECEDE', v. n. Lat. recedo. To fall back ; retreat; desist.

I can be content to recede much from my own interests and personal rights. King Charles.

They hoped. that their general assembly would be persuaded to depart from some of their demands ; but that, for the present, they had not authority to recede from any one proposition. Clarendon.

A deaf noise of sounds that never cease,

Confused and chiding, like the hollow roar

Of tides receding from the insulted shore.

Dry den.

Ye doubts and fears !

Scattered by winds, recede, and wild in forests rovs

Prior.

All bodies, moved circularly, have a perpetual endeavour to recede from the centre, and every

moment would fly out in right lines, if they were not violently restrained by contiguous matter.

Bentley.

RECEIVE', v. a.-\ Fr. recevoir ; Lat. re—

RECEIPT', n. s. {cipio. To obtain or take

RECEIV'EDNESS. t that which is due ; take or

RECEIV'ER. 3 obtain in any sense or

way; embrace; admit; entertain: receipt is the act of receiving; reception; admission; welcome ; note of something received or to be taken, hence a medical or other prescription ; place of receiving : receivedness is general allowance ; custom : receiver follows all the senses of receive.

Let her be shut out from the camp seven days, and after that received in again. Numbers xii. 14.

What? shall we receive good at the hand of God, and shall we not receive evil? Job ii. 10.

Thou shall guide me with thy counsel, and afterward receive me to glory. Psalm Ixxiii. 24.

JesuS saw Matthew sitting at the receipt of custom.

Matthew.

A certain nobleman went into a far Country, to receive for himself a kingdom, and return. Luke.

He that doeth wrong, shall receive for the wrong done ; and there is no respect of persons. Colossians.

The same words in my lady Philoclea's mouth might have had a better grace, and perchance have found a gentler receipt. Sidney.

This is a great cause of the maintenance of thieves, knowing their receivers always ready ; for were there no receivers, there would be no thieves.

Spenser's State of Ireland.

It is of things heavenly an universal declaration, working in them, whose hearts God inspireth with the due consideration thereof, a habit or disposition of mind whereby they are made fit vessels, both for the receipt and delivery of whatsoever spiritual perfect-tion. Hooker.

Long received custom forbidding them to do as they did, there was no excuse to justify their act ; unless in the scripture, they could show some law that did licence them thus to break a received custom.

Villain, thou did'st deny the gold's receipt, And told me of a mistress.

Shakspeare. Comedy of Errours. On's bed of death

Many receipts he gave me, chiefly one Of his old experience the only darling.

Shakspeare.

If by this crime he owes the law his life, Why, let the war receive it in valiant gore. Id.

To one of your receiving, Enough is shown. td.

All the learnings that his time could make himre-ceiver of, he took as we do air. Id.

Lest any should think that any thing in this num-ber eight creates the diapason ; this computation of eight is rather a thing received, than any true computation. Bacon.

There is a receiver, who alone handleth the mo-nies. Id.

She from whose influence all impression came, But by receivers' impotencies lame. Donne.

Jove requite,

And all the immortal gods, with that delight Thou most desirest, thy kind receite of me ; Of friend to humane hospitality. Chapman.

What was so mercifully designed, might have been Improved by the humble and diligent receivers unto (heir greatest advantages. Hammond.

I'll teˆch him a receipt to make Words that weep, and tears that speak. Couley.

The signification and sense of the sacrament dispose the spirit of the receiver to admit the grace of the spirit of God there consigned. Taylor.

Abundance fit to honour, and receive Our heavenly stranger. Milton.

That Medea could make old men young again, was nothing else, but that, from a knowledge of simples, she had a receipt to make white hair black.

Browne's Vulgar Errours.

Others will, upon account of the receioednest of the proposed opinion, think it rather worth to be examined, than acquiesced in. Boyle.

The joy of a monarch for the news of a victory must not be expressed like the ecstacy of a harlequin, on the receipt of a letter from his mistress.

Dry den.

Wise leeches will not vam receipts obtrude, While growing pains pronounce the humours crude.

Id.

They lived with the friendship and equality of brethren; received no laws from one another, but lived separately. Locke.

The idea of solidity we receive by our touch. Id.

If one third of the money in trade were locked up, landholders must receive one third less for their goods ; a less quantity of money by one third being to be distributed amongst an equal number of receiver*. Id.

In all works of liberality, something more is to be considered, besides the occasion of the givers ; and that is the occasion of the receivers. Sprat.

Gratitude is a virtue, disposing the mind to an inward sense, and an outward acknowledgement of a benefit received, together with a readiness to re-turn the same, as the occasions of the doer shall require, and the abilities of the receiver extend to.

South.

These liquors which the wide receiver fill, Prepared with labour and refined with skill, Another course to distant parts begin. Blackmore.

Alkaline spirits run in veins down the sides of the receiver in distillations, which will not take fire.

Arbutlinot.

Scribonius found the receipt in a letter wrote to Tiberius, and was never able to procure the receipt during the emperor's life. Id. on Coins.

It must be done upon the receipt of the wound, before the patient's spirits be overheated. Wiseman.

The air that in exhausted receivers of air-pumps is exhaled from minerals, is as true as to elasticity and density of rarefaction, as that we respire in.

Bentley.

Some dryly plain, without invention's aid, Write dull receipts how poems may be made. Pope.

Wood's halfpence will be offered for six a penny, and the necessary receivers will be losers of two-thirds in their pay. Swift.

Free converse with persons of different sects will enlarge our charity towards others, and incline us to receive them into all the degrees of

unity and affection, which the word of God requires. Watts.

RECEIPT, or RECEIT, in commerce, an acquittance or discharge, in writing, intimating that the party has received a certain sum of money, either in full for the whole debt, or in part, or on account. Receipts are subject to stamp duties.

RECEIVER, receptor or receptator, in law, is commonly used in a bad sense for such as knowingly receive stolen goods from thieves, and conceal them. This crime is felony, and the punishment is transportation for fourteen years.

RECEIVERS, in chemistry, are vessels adapted to the necks or beaks of retorts, alembics, and

other distillatory vessels, to collect and contain the products of the distillation. They are made of glass, earthenware, and of metal. See LABORATORY.

RECEL'EBRATE, v. a. Re and celebrate. Te celebrate anew.

French air and English verse here wedded lie : Who did this knot compose, Again hath brought the lily to the rose ; And with their chained dance Recelebrates the joyful match. Ben Jonson.

RECENS1O was an account taken by the censors, every lustrum, of all the Roman people. It was a general survey, at which the equites, as well as the rest of the people, were to appear. New names were put upon the censor's list, and old ones cancelled. In short, it was a more so-lemn and accurate sort of probatio, showing who were fit for military service.

RECEN'SION, n.s. Lat.m-ensio. Enumeration ; review.

In this recension of monthly flowers, it is to be understood from its first appearing to its final withering. Evelyn. RE’CENT, adj. ˆ Lai.recens. New; not RE’CENTLY, adv. >of long existence: the RE’CENTNESS, n. s. j adverb and nounsub- stantive corresponding.

Among all the great and worthy persons, whereof the memory remaineth, either ancient or recent, there is not one that hath been transported to the mad de-gree of love. Bacon.

This inference of the recentness of mankind from the recentness of these apotheoses of gentile deities, seems too weak to bear up this supposition of the novitas humani generis. Hale.

The ancients were of opinion, that those parts, where Egypt now is, were formerly sea, and that a considerable portion of that country was recent, and formed out of the mud discharged into the neighbouring sea by the Nile. Woodward.

Those tubes which are most recently made of fluids are most flexible and most easily lengthened.

Arbuthnot.

A schirrus in its recency, whilst it is in its augment, requireth milder applications than the confirmed one. Wiseman.

Ulysses moves

Urged on by want, and recent from the storms, The brackish ouze his manly grace deforms. Pope. RECEPTACLE, n. s. Lat. receptaculum. A vessel or place into which any thing is received. This had formerly the accent on the first syllable.

The county of Tipperary, the only county palatine in Ireland, is by abuse of some bad ones made a receptacle to rob the rest of the counties about it.

Spenser’s State of Ireland.

When the sharpness of death was overcome, he then opened heaven as well to believing gentiles as Jews ; heaven till then was no receptacle to the souls of either. Hooker.

As in a vault, an ancient receptacle, Where for these many hundred years the bones Of all my buried ancestors are packt. Shakspemre. The eye of the soul, or receptacle of sapience, and divine knowledge.

Raleigh’s History of the World. Let paradise a receptacle prove To spirits foul, and all my trees their prey. Milton.

Their intelligence put in at the top of the horn, shall convey it into a little receptacle at the bottom.

Addison.

Though the supply from this great receptacle below be continual and alike to all the globe ; yet when it arrives near the surface, where the heat is not so uniform, it is subject to vicissitudes.

Woodward.

These are conveniences to private persons ; instead of being receptacles for the truly poor, they tempt men to pretend poverty, in order to share the advantages- Atterbury. RECEPTIBIL’ITY,n.*.x All of-Latin RECEP’TARY, i receptus. Possibi-RECEP’TION, >lity of receiving: RECEPTIVE, adj. I receptory is the RECEP’TORY. J thing received (obsolete) : reception, the act or manner of receiving ; admission ; and, in an obsolete sense, recovering: receptive is having the quality of admission : receptory, generally or commonly received.

The soul being, as it is, active, perfected by love of that infinite good, shall, as it is receptive, be also perfected with those supernatural passions of joy, peace and delight. Hooker.

He was right glad of the French king’s reception of those towns from Maximilian. Bacon.

This succession of so many powerful methods being farther prescribed by God, have found so discouraging a reception that nothing but the violence of storming or battery can pretend to prove successful. Hammond’s Fundamentals.

Causes, according still To the reception of their matter, act ; Not to the extent of their own sphere. Milton.

All hope is lost

Of my reception into grace. Id. Paradise Lost. The pretended first matter is capable of all forms, and thtf imaginary space is receptive of all bodies.

Gtanville.

The peripatetic matter is a pure unactuated power ; and this concei ed. vacuum a mere recepta-bility. ‘ Id.

In this animal are found parts official unto nutri-tion, which, were its aliment the empty reception, of air, provisions had been superfluous. Browne.

Although therein be contained many excellent things, and verified upon his own experience, yet are the►►e many also receptory, and will not endure the test. U.

They, which behold the present state of things, cannot condemn our sober enquiries in the doubtful appurtenances of arts and receptaries of philosophy.

Id.

To advance the spiritual concerns of all that could in any kind become receptive of the good he meant them, was his unlimited designment and endeavour.

Fell.

Both serve completely for the reception and communication of learned knowledge. Holder.

In some animals, the avenues, provided by nature for the reception of sensations, are few, ana the perception, they are received with, obscure and dull.

Locke.

RECEPTACULUM, in botany, one of the seven parts of fructification, defined by Linne” to be the base which connects or supports the other parts. See BOTANY.

RECESS’, n. s. \ Lat. recessus. Retire-RECES’SION. <mem; retreat; secession; departure; place of retreat or concealment; secret part or drawer, hence, perhaps, papers or memoranda deposited there : recession is the act of retreating.

On both sides they made rather a kind of recess, than a breach of treaty, and concluded upon a truce.

Bacon.

What tumults could not do, an army must ; my recess hath given them confidence that I may be conquered. King Charles.

I conceived this parliament would find work with convenient recessess for the first three years. Id.

This happy place, our sweet Recess, and only consolation left. Milton. The great seraphic lords and cherubim,

In close recess, and secret conclave sat. Id.

In the recess of the jury, they are to consider their evidence. Hale.

We come into the world, and know not how ; we live in it in a self-nescience, and go hence again, and are as ignorant of our recess. Glanville.

Whatsoever sign the sun possessed, whose recess or vicinity defineth the quarters of the year, those of our seasons were actually existent. Broume.

In their mysteries, and most secret recesses, and adyta of their religion, their heathen priests betrayed and led iheir votaries into all the most horrid unnatural sins. Hammond. The deep recesses of the grove he gained. Dryden.

Good verse, recess and solitude requires ; And ease from cares, and undisturbed desires. Id.

In the imperial chamber, the proctors have a florin taxed and allowed them for every substantial recess.

Ayliffe.

Fair Thames she haunts, and ev'ry neighb'ring

grove, Sacred to soft recess and gentle love. Prior.

Every scholar should acquaint himself with a superficial scheme of all the sciences, yet there is no necessity for every man of learning to enter into their difficulties and deep recesses. Watts.

RECHABITES, among the ancient Jews, a kind of religious order instituted by Jonadab the son of Rechab, comprehending only his own fa-mily and posterity. Their founder prescribed them three things : first, not to drink any wine ; not to build any houses, but to dwell in tents ; not to sow corn or plant vines. The Rechabites observed these rules with great strictness, as appears from Jer. xxxv. 6, &c. Whence St. Je-rome, in his thirteenth epistle to Paulinus, calls them monachi, monks. Jonadab, their founder, lived under Jehoash, king of Judah, contemporary with Jehu king of Israel : his father Rechab, from whom his posterity were denominated, descended from Raguel or Jethro, father-in-law to Moses, who was a Kenite ; whence Kenite and Rechabite are used as synonymous in Scripture. Serrurius distinguishes the ancient Rechabites descended from, and instituted by, Jethro, from the Rechabites of Jonadab. The injunction of Jonadab laid no obligation on the other Kenites, nor on the other descendants of Jethro. Benjamin de Tudela declares that he found this cele-icbrated family still existing in the neighbour- .iood of Mecca : and the recent publication of the Travels of Mr. Wolff in the East seems to confirm the fact of their present existence.

The Rechabites were mentioned to him under the name of Hybarri both by the Jews and Mahometans of Yemen : and making enquiry respecting them of some Jews whom he found leading an Arab life in the desert, one of them exclaimed, ' See there is one of them,' and turning his eyes, as directed, he saw a man standing by his horse's head dressed like an Arab, but having a far more striking countenance than this race

have generally. He accepted thankfully a bible in Arabic and Hebrew (reading both) ; but answered all questions ' in a voice of thunder.' When asked who he was, he read aloud the whole of the thirty-fifth chapter of Jeremiah, saying at the close ' I am a son of Rechab.' He invited the missionary to visit his tribe who lire in three caves near

Mecca, and amount to 60,000 in num-ber, and requested him to bring more bibles with him. Like their fathers, they dwell in huts, and neither sow the fields nor plant vineyards. They are circumcised, and profess pure Judaism ; having among them the books of the Pentateuch, Samuel, and Kings : as well as the greater and lesser prophets. They all speak Arabic and read Hebrew. They attacked, as they state, Mahomet, in the name of the law of Sinai, but were defeated; and have a tradition that he was poisoned by a girl of their tribe. The Jews of the neighbourhood are persuaded that these Beni Rechab are intended for their powerful succor on their return to Judea. The Arabs spoke of them with great respect, and as admirable horsemen : one of these always appearing suddenly before the Mahometan caravan on its arrival in the vicinity of Mecca, to receive an accustomed tribute, or its refusal. In either case he vanishes again like lightning ; but in the latter as the certain omen of a storm of well appointed cavalry, which bursts with resistless force on the heads of the Moslems.

RECHANGE', v. a. Fr. rechanger. Re and change. To change again.

Those endued with foresight, work with facility ; others are perpetually changing and rechanging their work. Dryden.

RECHA'RGE, v. a. Fr. recharger. Re and charge. To accuse in return ; attack anew.

The fault that we find with them is, that they overmuch abridge the church of her power in these things : whereupon they recharge us, as if in these things we gave the church a liberty which hath no limits or bounds. Hooker.

They charge, recharge, and all along the sea They drive, and squander the huge Belgian fleet.

RECHEAT', n. s. Re and cheat. Among hunters, a lesson which the huntsman winds on the horn, when the hounds have lost their game, to call them back from pursuing a counterscent.

That a woman conceived me, I thank her ; but that I will have a recheat winded in my forehead, or hang my bugle in an invisible baldrick, all women shall pardon me. SJiakspeare.

RECHERCHE ARCHIPELAGO, a cluster of islands, stretching about 126 miles in the south coast of New Holland, between 33►► and 34►► S. lat. They are almost all small, and many of them naked rocks : from the banks and shoals interspersed, the access to this part

of New Holland is dangerous.

RECIDIVATION, n. s. Lat. rcadtvw, Backsliding ; falling again.

Our renewed obedience is still more indispensably required, though mixed with much of weakness, frail-ties, recidivations, to make us capable of pardon.

Hammond's Practical Catechism.

RECIPE, n. s. Lat. recipe. A medical prescription.

I should enjoin you travel ; for absence doth in a kind remove the cause, and answers the physician's

ternate ; acting in vicissitude ; mutual : interchangeable mu-

first recipe, vomiting and purging ; but this would be too harsh. Suckling.

The' apothecary train is wholly blind, From files a random recipe they take, And many deaths of one prescription make.

Dry den.

RECIPIENT, n. s. Lat. recipient. A receiver ; that to which any thing is communicated. The form of sound words, dissolved by chymical preparation, ceases to be nutritive ; and, after all the labours of the alembeck, leaves in the recipient a fret-ing corrosive. Decay of Piety.

Though the images, or whatever else is the cause of sense, may be alike as from the object, yet may the representations be varied according to the nature of the recipient. Glanville

RECIPROCAL, adj. -\ Lat. reciprocus ; RECIP'ROCALLY, adv. j Fr. reciprogue. Al-RECIP'ROCALNESS, n.s. RECIP'ROCATE, v. n. RECIPROCA'TION, n. s.

tually : the adverb and nounsubstantive corresponding : to reciprocate is to act interchangeably or alternately : reciprocation, alternation ; action interchanged.

His mind and place

Infecting one another reciprocally. Shakspeare. Corruption is reciprocal to generation ; and they two are as nature's two boundaries, and guides to life and death. Bacon.

The reciprocalness of the injury ought to allay the displeasure at it. Decay of Piety.

What if that light, To the terrestrial moon be as a star, Enlightening her by day, as she by night, This earth 1 reciprocal, if land be there, Fields and inhabitants. Milton.

That Aristotle drowned himself in Euripus, as despairing to resolve the cause of its reciprocation or ebb and flow seven times a day, is generally believed.

Browne.

Make the bodies appear enlightened by the shadows which bound the sight, which cause it to re-pose for some space of time ; and reciprocally the shadows may be made sensible by enlightening your ground. Dryden.

One brawny smith the puffing bellows plies, And draws, and blows reciprocating air. Id.

Where there's no hope of a reciprocal aid, there can be no reason for the mutual obligation.

.L'Estrange.

Where the bottom of the sea is owze or sand, it is by the motion of the water, so far as the reciprocation of the sea extends to the bottom, brought to a level.

Bay.

From whence the quick reciprocating breath, The lobe adhesive, and the sweat of death. Sewel.

If the distance be about the hundredth part of an inch, the water will rise to the height of about an inch ; and, if the distance be greater or less in any proportion, the height will be reciprocally proportional to the distance very nearly : for the attractive force of the glasses is the same, whether the distance between them be greater or less ; and the

weight of the water drawn up is the same, if the height of it be re-c.iirrocally proportional to the height of the glasses.

Newton's Optics.

According to the laws of motion, if the bulk and activity of aliment and medicines are in reciprocal proportion, the effect will be the same.

Arliuthnot on Aliments.

In reciprocal duties, the failure oˆ one side justifies not a failure on the other. Clarissa. These two rules will render a definition reciprocal

with the thing defined ; which, in the schools, sig nifies, that the definition may be used in the place of the thing defined. Watts.

RECIPROCAL, in arithmetic, algebra, &c., is the quotient arising from the division of unity by any number or quantity. Thus the reciprocal]

of 2 is J, of 3 is 3, and of a is ⬚⬚⬚ . Hence the

reciprocal of a vulgar fraction may be found, by barely making the numerator and the denomina-tor mutually change places : thus the reciprocal

of $ is \ or 2 ; of ⬚⬚ is ⬚⬚ ; of ⬚⬚⬚ is ⬚⬚⬚ , &c. Hence

also, any quantity being multiplied by its reciprocal, the product is always equal to unity or 1; so J x ? = ⬚⬚ ⬚⬚⬚ l,and⬚⬚ x i = \⬚⬚⬚ lˆand

a b ab ⬚⬚⬚

. v _ ⬚⬚⬚ ⬚⬚⬚ i

i ˆ ⬚⬚⬚ ⬚⬚ ⬚⬚⬚ '* b a ab

RECIPROCAL FIGURES, in geometry, those which have the antecedents and consequents of the same ratio in both figures.

RECIPROCAL PROPORTION, in arithmetic, is when, in four numbers, the fourth is less than the second, by so much as the third is greater than the first ; and vice versa.

RECIPROCAL TERMS, among logicians, are those which have the same signification; and consequently are convertible, or may be used for each other.

RECITE’, v. a. & n. s.”| Fr. reciter; Lat.

RECI’TAL, n.s. \recito. To rehearse;

RECITA’TION, ‘ ˆrepeat; enumerate:

RECI’TATIVE, or, f narrative (obsolete):

RECITATI’VO, \ recital and recitation

RECI’TER. J mean rehearsal ; narration ; repetition : recitative, or recitative, a chaunt ; a tuneful pronunciation : reciter, he who recites or repeats.

If menaces of scripture fall upon men’s persons : it they are but the recitations and descriptions of God’s decreed wrath, and those decrees and that wrath have no respect to the actual sins of men ; why should terrors restrain me from sin, when present advantage invites me to if! Hammond.

The last are repetitions and recitals of the first.

Denham.

This added to all former recites or observations of ong-lived races, makes it easy to conclude, that health and long life are the blessings of the poor as well as rich. Temple.

He used philosophical arguments and natations.

He introduced the examples of moral virtue, writ in verse, and performed in recitative music. Dryden.

This often sets him on empty boasts, and betrays him into vain fantastic recital* of his own performances. Addison—

While Telephus’s youthful charms, His rosy neck, and winding arms, With endless rapture you recite, And in the tender name delight. To make the rough recital aptly chime, Or bring the sum of Gallia’s loss to rhime, Is mighty hard.

By singing peers upheld on either hand, Then thus in plain recitative spoke. Duncwd. The thoughts of gods let Granville’s verse rente. And

bring the scenes of opening fate to light, ft

RECITATIVE, or RECITATIVO, HI music, a species of harmonious recitation, forming the r dium between air and rhetorical declamation and

Id.

Prim:

REC

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REC

in which the composer or performer, rejecting the rigorous rules of time, imitates the inflexions, accent, and emphasis, of natural speech.

RECITATIVE, so called because its true province lies in narration and recital, was first introduced at Rome, in the year 1660, by Signer Emilia del Cavaliere, and was so powerfully recommended by its effect as to be speedily adopted in other parts of Italy, and, by degrees, through the rest of Europe. The beauty of this species of composition depends greatly on the character of the language in which it is used; as that is more or less accented and melodious, so the more or less natural and striking will be the effect of the recitative.

RECK, v. n. & v. a. ~\ Sax. riecan ; Swed.

RECK'LESS, adj. > reka ; Goth, rtekia. To

RECK'LESSNESS, n. s. j ralue ; care ; heed ; mind ; care for : reckless is, careless ; heedless : the noun substantive corresponding.

This son of mine, not recking danger, and neglecting the present good way he was in of doing himself good, came hither to do this kind office to my unspeakable grief. Sidney.

It made the king as reckless as them diligent. Id.

Over many good fortunes began to breed a proud recklessness in them. Id.

Thou's but a lazy loarde,

And recks much of thy swinke,

That with fond terms and witless words,

To blear mine eyes dost think. Spenser.

I reck as little what betideth me,

As much I wish all good befortune you.

Shakspeare. Do not you as ungracious parsons do,

Who shew the steep and thorny way to heaven ;

Yet like unthinking reckless libertine,

That in the soft path of dalliance treads,

Recks not his own rede. Id.

Next this was drawn the reckless cities flame, When a strange hell poured down from heaven there came. Cowley.

With that care lost

Went all his fear ; of God, or hell, or worse,

He recked not. Mllor..

Of night or loneliness it recks me not ;

I fear the dread events that dog them both,

Lest some ill-greeting touch attempt the person

Of our unowned sister. Id.

RECK’ON, v. a. & v. n. } Saxon riecan ;

RECK’ONER, n. s. ►► Belg. reckenan ;

RECK’ONING. jTeut. recken. See

RECK. To estimate as to value ; number ; count ; esteem ; assign in reckoning ; to compute ; calculate ; charge to, or in account ; taking on, upon, and with : a reckoner is a computer or calculator: reckoning, computation; account taken; esteem; estimate.

The priest shall reckon unto him the money according to the years that remain, and it shall be abated. Leviticus xxvii. 18.

There was no reckoning made with them of the money delivered into their hand. 2 Kings.

To him that worketh is the reward not reckoned of grace, but of debt. Romans iv. 4.

Canst thou their reckonings keep 1 the time compute When their swoln bellies shall enlarge their fruit !

Sandys.

ˆ Where we cannot be persuaded that the will of God is, we should so far reject the authority of men, as to reckon it noth’nsr. Hooker.

We shall not spend a large expence of time,

Before we reckon with your several loves,

And make us even with you. Shakspeare.

His industry is up stairs and down ; his eloquence the parcel of a reckoning. Id. Henry IV.

Reckoners without their host must reckon twice.

Camden. I call posterity Into the debt, and reckon on her head. Ben Jomon.

Varro’s aviary is still so famous that it is reckoned for one of those notables which men of foreign nations record. Wotton. Numb’ring of his virtues praise,

Death lost the reckoning of his days. Crashaw.

For him I reckon not in high estate ; But thee, whose strength, while virtue was her mate, Might have subdued the earth. Milton's Agonistes.

God suffers the most grievous sins of particular persons to go unpunished in this world, because his justice will have another opportunity to meet and reckon with them. Tillotson.

You reckon upon losing your friends' kindness, when you have sufficiently convinced them, they can never hope for any of yours.

Temple's Miscellanies.

The freezing of water, or the blowing of a plant, returning at equidistant periods, would as well serve men to reckon their years by, as the motions of the sun. Locke.

I reckoned above two hundred and fifty on the outside of the church, though I only told three sides of it. Addison.

A multitude of cities are reckoned up by the geographers, particularly by Ptolemy. Arbuthnot.

RECKONING, or a SHIP'S RECKONING, in navigation, is that account whereby at any time it may be known where the ship is, and on what course or courses she is to steer in order to gain her port; and that account taken from the log-board is called the dead reckoning. See NAVIGATION.

RECLAIM', v. a. \ Lat. reclamo. To re—

RECLAIM'ER, n.s. 5 form ; correct; adjust; bring to a desired standard ; tame : reclaimer is a contradicter.

He spared not the heads of any mischievous practices, but shewed sharp judgment on them for en-sample sake, that all the meaner sort, which were infected with that evil, might, by terror thereof, be reclaimed and saved. Spenser.

This errour whosoever is able to reclaim, he shall save more in one summer, than Themison destroyed in any autumn. Browne.

Reclaim your wife from strolling up and down To all assizes. Dryden's Juvenal.

The headstrong horses hurried Octavius, the trembling charioteer, along, and were deaf to his reclaiming them. Dryden.

Upon his fist he bore

An eagle well reclaimed. Id. Knight's Tale.

Are not hawks brought to the hand, and lions, tygers, and bears reclaimed by good usage 1

L' Estrange.

Minds she the dangers of the Lycian coast? Or is her tow'ring flight reclaimed, By seas from Icarus's downfal named 1 Vain is the call, and useless the advice. Prior.

Tis the intention of providence, in all the various expressions of his goodness, to reclaim mankind, and to engage their obedience.

Rogers's Sermons. Oh tyrant love !

Wisdom and wit in vain reclaim,

And arts but soften us to feel thy flame. Pope ,

The penal laws in being against papists have been found ineffectual, and rather confirm than reclaim men from their errors. Swift.

RECLAIMING, in ancient English customs, was a lord's pursuing, prosecuting, and recalling his vassal, who had gone to live in another place without his permission.

RECLAIMING is also used for the demanding of a person or thing, to

be delivered up to the prince or state to which it properly belongs; when, by any irregular means, it is come into another's possession.

RECLAIMING, in falconry, is taming a hawk, &c., and making her gentle and familiar. A partridge is said to reclaim, when she calls her young ones together, upon their scattering too much from her.

RECLINE', v. a., v. n. & adj. Fr. recl'mer ; Lat. reclino. To lean back, or sidewise ; rest ; repose : in a resting posture.

They sat reclined On the soft downy bank, damasked with flow'rs.

Milton. The mother Reclined her dying head upon his breast. Dry den.

While thus she rested, on her arm reclined, The purling streams that through the meadows

strayed, In drowsy murmurs lulled the gentle maid.

Addison.

RECLOSE', v. a. Re and close. To close again.

The silver ring she pulled, the door reclosed ; The bolt, obedient to the silken cord, To the strong staple's inmost depth restored, Secured the valves. Pope's Odyssey.

RECLUDE', v. a. Lat. recludo. To open. The ingredients absorb the intestinal superfluities, reclude oppilations, and mundify the blood.

Harvey.

RECLUSE', adj. & n.s. Fr. reclus ; Lat. re-clusus. Retired ; shut up ; a retired person.

This must be the inference of a mere contemplative ; a recluse that converses only with his own meditations. Decay of Piety.

It seems you have not lived with an obstinate recluse from the disputes and transactions of men.

Hammond.

I all the livelong day Consume in meditation deep, reduse, From human converse. Philips.

The nymphs—

Melissan, sacred and recluse to Ceres, Pour streams select, and purity of waters. Piior.

A RECLUSE, among the Roman Catholics, is a person shut up in a small cell of a hermitage or monastery, and cut off, not only from all conversation with the world, but even with the house. This is a kind of voluntary imprisonment, from a motive either of devotion or penance. The word is also applied to incontinent wives, whom their husbands procure to be thus kept in perpetual imprisonment in some religious house. Recluses were anciently very numerous. They took an oath never to stir out of their retreat; and, having entered it, the bishop set his seal upon the door ; and the recluse had every thing necessary for the support of life conveyed through a window. If he was a priest, he was allowed a small oratory with a window, which looked into the church, through

or avow knowledge; review : recognisance is, acknowledgment ;

which he might make his offerings at the mass, hear the singing, and answer those who spoke to him ; but this window had curtains before it, so that he could not be seen. He was allowed a little garden, adjoining to his cell, in which he might plant a few herbs, and breathe a little fresh air. If he had disciples, their cells were contiguous to his, with only a window of communication, through which they conveyed necessaries to him, and received his instructions. If a recluse fell sick, his door might be opened for persons to come in and assist him, but he himself was not to stir out.

RECOAGULATION, n.t. Re and coagulation. Second coagulation.

This salt, dissolved in a convenient quantity of water, does upon its recoagulaiion dispose of the aqueous particles among its own saline ones, and shoot into crystals. Boyle.

REC’OGNIZE, v. a.-\ Lat. recognosco. To

RECOG’NISANCE, n. s. /acknowledge; recover

RECOGNISEE’,

RECOGNISOR’,

RECOGNITION,

badge ; a legal bond described below : the re-cognisee is he in whose favor it is drawn ; the recognisor, he who gives it : recognition is, acknowledgment; review.

Apparent it is, that all men are either Christians or not ; if by external profession they be Christians, then are they of the visible church of Christ, and Christians by external profession they are all whose mark of recognizance hath in it those things mentioned, yet although they be impious idolaters and wicked hereticks. Hooker.

She did gratify his amorous works

With that recognizance and pledge of love,

Which I first gave her ; an handkerchief.

Shakspeare.

The English should not marry with any Irish, un-less bound by recognisance with sureties, to continue loyal. Davies.

The Israelites in Moses' days were redeemed out of Egypt ; in memory and recognition whereof they were commanded to observe the weekly sabbath.

White.

He brought several of them, even under their own hands, to recognize their sense of their undue procedure used by them unto him. Fell. The British cannon formidably roars,

While starting from his oozy bed,

The asserted ocean rears his leverend head,

To view and recognize his ancient lord. Dryden.

Every species of fancy hath three modes : recag-nition of a thing, as present ; memory of it, as past ; and foresight of it, as to come. Grev<.

Christ will recognize them at a greater. South.

RECOGNITION is a term used in the English law books for the first chapter of the statute 1 Jac. I., by which the parliament acknowledged

that, after the death of queen Elizabeth, the crown had rightfully descended to king James.

RECOGNIZANCE, in law, is an obligation of record, which a man enters into before some court of record or magistrate duly authorised, with condition to do some particular act ; as to appear at the assizes, to keep the peace, to pay a debt, or the like. It is in most respects like another bond ; the difference being chiefly this, that the bond is the creation of a fresh debt or obligation de novo, the recognizance is an acknowledgment of a former debt upo* record ––

the form whereof is, ‘ that A B doth acknowledge to owe to our lord the king, to the plaintiff, or to C D, or the like, the sum of ––10,’ with condition to be void on performance of the thing stipulated ; in which case, the king, the plaintiff, CD, &c., is called the cognizee, is cui cognoscitur ; as he that enters into the recognizance is called the cognizor, is cui cognoscit. This being certified to, or taken by, the officer of some court, is witnessed only by the record of that court, and not by the party’s seal ; so that it is not in strict propriety a deed, though the effects of it are greater than a common obligation ; being allowed a priority in point of payment, and binding the lands of the cognizor from the time of enrolment on record.

RECOIL’, v. n. & n. s. Fr. reculer. To rush or fall back ; fail ; shrink : a falling back.

Ye both forewearied be ; therefore a while I read you rest, and to your bowers recoil. Sptnser. The very thought of my revenges that way

Recoil upon me ; in himself too mighty.

Shaktpeare.

Who in deep mines for hidden knowledge toils, Like guns o'ercharged, breaks, misses, or recoils.

Denham. Revenge, at first though sweet,

Bitter ere long, hack on itself recoils. Milton. My hand's so soft, his heart so hard,

The blow recoils, and hurts me while I strike.

Dry den.

RECOIL, in gunnery, is the retrograde motion made by any piece of fire arms on being discharged. Cannon are always subject to a recoil, according to the sizes and the charge they contain, &c. Guns, whose vents are a little forward in the chase, recoil most. To lessen the recoil of a gun, the platforms are generally made sloping towards the embrasures of the battery. See PROJECTILES. The following is

A TABLE of the recoil of field guns on travelling carriages, on elm planks.

1 Shot

2 Shot

Case

Nature.

Charge.

atl►►30’ Eleva—

atl►►30’ Eleva—

Shot at 3►►45’Etion.

tion.

levation

Ibs. oz.

Feet.

Feet.

Feet.

12 Pr. Med.

4 0

12

25

8*

6 Pr. Heavy

2 0

7

11

r*

6 Pr. Light

1 8

12

21

10

3 Prs. Heavy

1 0

3

5

31

The recoil of sea-service iron-guns, on ship-carriages, upon a horizontal platform, is as follows : ###

Charge of Powder and Shot.

Ele-va- tion.

32

pounders.

24

pounders.

18

pounders.

Deg.

Ft. In.

Ft. In.

Ft. In.

J of Powder) and 1 Shot J

2

11 0

11 0

10 6

$ of Powder) and 2 Shot J

4

19 6

18 6

18 0

of Powder i and 2 Shot $

7

11 6

12 0

Recoil of land service iron mortars, on iron beds.

Ft. In.

13-inch with a charge of 6 Ibs. 4 2f

10-inch 3 Ibs. 2 10

2-inch 1 Ib. 9 oz. 3 10

RECOIN,' v. a.) Re and coin. To coin

RECOIN'AGE, n. s. J over again : the act of coin ing anew.

The mint gained upon the late statute, by the re-coinage of groats and half-groats, now twelvepences and sixpences. Bacon.

Among the Romans, to preserve great events upon their coins, when any particular piece of money grew very scarce, it was often recoined by a succeeding emperor. Addison.

RECOLLECT, v. a.) Lat. recollectus. To

RECOLLEC'TION, n. s. $ remember ; recover to memory or reason ; gather again ; the noun substantive corresponding.

It did relieve my passion much ;

More than light airs and recollected terms

Of these most brisk and giddy paced times.

Shakspeare.

Let us take care that we sleep not without such a recollection of the actions of the day as may represent any thing that is remarkable, as matter of sorrow or thanksgiving. Taylor.

Finding the recollection of his thoughts disturb his sleep, he remitted the particular care of the composition. Fell. The Tyrian queen

Admired his fortunes, more admired the man ;

Then recollected stood. Dryden's jEneis.

Recollection is when an idea is sought after by the mind, and with pain and endeavour found, and brought again in view. Locke.

Recollect every day the things seen, heard, or read, which made any addition to your understanding.

Watts's Logick.

RECOM'FORT, v. a. Re and comfort. To comfort or console again.

What place is there left, we may hope our woes to recomfort 1 Sidney.

Ne'er through an arch so hurried the blown tides. As the recomforted through the gates. Shakspeare. As one from sad dismay

Recomforted, and after thoughts disturbed,

Submitting to what seemed remediless. Milton.

RECOMMEND', v. a. ~\ Fr. recommender.

RECOMMEND'ABLE, adj. I Re and commend

RECOMMENDA'TION, n. s.V To praise earnestly;

RECOMMEND'ATORY, adj. i make acceptable :

RECOMMEND'ER, n. s. J recommendable is worthy of praise ; the act or mode of praising ; that which secures preference ; qualification : recommendatory, that which commends : recommender, he who commends.

They had been recommended to the grace of God.

Acts xiv.

Maecenas recommended Virgil and Horace to Augustus, whose praises helped to make him popular while alive, and after his death have made him precious to posterity. Dryden.

Poplicola's doors were opened on the outside, to save the people even the common civility of asking entrance ; where misfortune was a powerful recommendation ; and where want itself was a powerful mediator. Id.

A decent boldness ever meets with friends,

Succeeds, and even a stranger recommendt. Pope.

Verses recommendatory they have commanded me to prefix before my book. Swift.

RECOMMIT, v.u. Re and commit. To commit anew.

When they had bailed the twelve bishops, who were in the Tower, the house of commons expostulated with them, and caused them to be recommitted.

Clarendon.

RECOMPACT, v. a. Re and compact. To join anew.

Repair

And recnmpact my scattered body. Donne. REC'OMPENSE, v.a. & n.s. Fr. recompenser ; Lat re and compenso. To repay ; requite ; compensate ; redeem : as a nounsub- stantive, reward ; compensation ; equivalent.

If the man have no kinsman to recompense the trespass unto, let it be recompensed unto the Lord.

Numbers v. 8.

Hear from heaven, and requite the wicked, by recompensing his way upon his own head. 2 Chron. Recompense to no man evil for evil. Rom. xii. 17.

Thou'rt so far before, That swiftest wing of recompense is slow To overtake thee. Shakspeare.

Wise men thought the vast advantage from their learning and integrity an ample recompense for any inconvenience from their passion. Clarendon.

He is long ripening, but then his maturity, and the complement thereof, recompensed the slowness of his maturation. Hale.

Your mother's wrongs a recompense shall meet, I lay my sceptre at her daughter's feet. Dryden.

RECOMPILE'MENT, n. s. Re and compilement. New compilement.

Although I had a purpose to make a particular digest or reeompikment of the laws, I laid it aside.

Bacon.

RECOMPOSE', v.a.) Fr. recomposer. Re

RECOMPOSI'TION, n. s. } and compose. TO settle, quiet ; or adjust anew ; the nounsub- stantive corresponding.

Elijah was so transported, that he could not receive answer from God, till by musick he was recomposed.

Taylor.

We produced a lovely purple, which we can destroy or recompose at pleasure, by severing or reap-proaching the edges of the two irises. Boyle.

RECONCILE, v. a. ~] Fr. reconciler ;

RECONCILE'ABLE, adj. j Lat. reconcilio.

RECONCILE'ABLENESS, n. s. I To restore to

RECONCILE'MENT, (kindness or fa—

RECONCI'LER, j vor; restore to

RECONCILIATION. J consistency;

make consistent: the adjective and first noun substantive corresponding : reconcilement is renewal of kindness or favor ; agreement ; and synonymous with reconciliation : a reconciler, he who effects reconciliation ; a peacemaker.

So thou shall do for every one that erreth and is simple, so shall ye reconcile the house. Ezekiel.

He might be a merciful and faithful high priest to make reconciliation for sin. Hebrews ii. 17.

Injury went beyond all degree of reconcilement.

Sidney.

This noble passion, Child of integrity, hath from my soul Wiped the black scruples, reconciled my thoughts To thy good truth and honour. Sfuikspeare.

What we did was against the dictates of our own conscience ; and consequently never makes that act

recotwileable with a regenerate estate, which otherwise would not be so. Hammond.

J*arres concealed are half reconciled ; which if generally known, ‘tis a double task to stop the breach at home, and men’s mouths abroad. Fuller.

Many wise men who knew the treasurer’s talent it; removing prejudice, and reconciling himself to wavering affections, believed the loss of the duke was uu ??? seasonable. Clarendon.

Let him live before thee reconciled. Milton.

Creature so fair ! his reconcilement seeking, Whom she had displeased. Id. Paradise Lost.

He not only attained his purpose of uniting distant parties unto each other, but, contrary to the usual fate of reconcilers, gained them to himself.

Fell,

Part of the world know how to accommodate St. James and St. Paul, better than some lute reconcilers.

Norris.

Worldly affairs and recreations may hinder our attendance upon the

worship of God, and are not re-coticileabk with solemn assemblies. kelson.

Submit to Caesar, And reconcile thy mighty soul to life. Addisan.

The different accounts of the numbers of ships are reconcileable, by supposing that some spoke of the men of war only, and others added the transports.

Arbuthnot.

The bones, to be the most convenient, ought to have been as light as was reconcileabie with sufficient strength. Cheyne.

On one side great reserve, and very great resentment on the other, have inflamed animosities, so as to make all reconcilement impracticable. Swift.

Contending minds to reconcile. Id.

RECONDENSE', v. a. Re and condense. To condense anew.

In the heads of stills and necks of eolipiles, sucli vapours quickly are by a very little cold recondeiised into water. Boyle.

RECONDITE, adj. Lat. reconditus. Secret ; profound ; abstruse.

A disagreement between thought and expression seldom happens, but among men of more recondite studies and deep learning. Felton.

RECONDUCT, v. a. Fr. reconduit ; Lat. reconductus. Re and conduct. To conduct again.

Wanderest thou within this lucid orb, And strayed from those fair fields of light above, Amidst this new creation want'st a guide, To reconduct thy steps 1

Drydeifs State of Innocence.

RECONJOIN', v. a. Re and conjoin. To join anew.

Some liquors, although colorless themselves, when elevated into exhalations, exhibit a conspicuous colour, which they lose again when reconjoined into a liquor. Boyle.

To RECONNOITRE [Fr.] in military affairs, implies to view and examine the state of things, in order to make a report thereof. Parties

ordered to reconnoitre are to observe the country and the enemy : to remark the routes, conveniences, and inconveniences of the first; the position, march, or forces of the second. In either case they should have an expert geographer, capable of taking plans readily ; he should be the best mounted of the whole, in case the enemy happen to scatter the escort, that he may save his plans and ideas.

RECON'QUER, v. a. Fr. reconquerir. Re and conquer. To conquer again.

Chatterton undertook to reconquer Ogier. Davies. RECONVENE', v. a.. Re and convene. To assemble anew.

A worse accident fell out about the time of the two houses reconvening, which made a wonderful impression. Clarendon. RECON'SECRATE, v.a. Re and consecrate. To consecrate anew.

If a church should be consumed by fire, it shall, in such a case, be reconsecrated. Ayliffe's Parergon.

RECONVEY', v. n. Re and convey. To convey again.

.As rivers lost in seas, some secret vein Thence reconveys, there to be lost again. Denham. RECORD', v. a. & n. s. } Fr. recorder ; Lat. RECORD'ER, n. s. > recorder. To register ; celebrate ; recite : a register ; authentic memorial ; remembrance : a recorder is he whose business it is to keep records; the rolls of a city, &c. ; also a kind of flute.

I call heaven and earth to record this day against you, that I have set before you life and death.

Deut. xxx. 20.

Those things that are recorded of him, and his impiety, are written in the chronicles. 1 Esdras i.

The shepherds went among them, and sung an eclogue, while the other shepherds, pulling out recorders, which possest the place of pipes, accorded their music to the others voice. Sidney.

He shall record a gift Here in the court of all he dies possessed, Unto his son Lorenzo. Shakspeare.

Is it upon record 1 or else reported Successively, from age to age ? Id.

I never shall have length of life enough, To rain upon remembrance with mine eyes, That it may grow and sprout as high as heaven For recordation to my noble husband. Id.

I asked, what meant this wilful silence 1 His answer was, the people were not used To be spoke to except by the recorder. Id.

I but your recorder am in this, Or mouth and speaker of the universe,

A ministerial notary ; for ‘tis Not I, but you and fame that make the verse.

Donne.

They longed to see the day, to hear the lark Record her hymns, and chaunt her carols blest.

Fairfax. So even and morn recorded the third day. Milton.

An ark, and in the ark a testimony, The records of his covenant. Id.

Of such a goddess no time leaves record, Who burned the temple where she was adored.

Dryden.

If he affirms such a monarchy continued to the flood, I would know what records he has it from.

Locke.

Thy elder look, great Janus ! cast Into the long records of ages past ; Review the years in fairest action drest. Prior. The office of recorder to this city being vacant, five or six persons are soliciting to succeed him. Swift.

RECORD, TRIAL BY, is where a matter of record is pleaded in any action, as a fine, a judgment, or the like; and the opposite party pleads, nul tiel record, that there is no such matter of record existing. Upon this, issue is tendered and joined in the following form, ‘ and this he prays may be enquired of by the record; and the other does the like;’ and hereupon the

party pleading the record has a day given him to bring it in, and proclamation is made in court for him to ‘ bring forth the record by him in pleading alleged, or else he shall be condemned ;’ and, on his failure, his antagonist shall have judgment to recover. The trial, therefore, of this issue is merely by the record ; for, as Sir Edward Coke observes, a record or enrolment is a monument of so high a nature, and importeth in itself such absolute verity, that if it be pleaded that there is no such record, it shall not receive any trial by witness, jury, or otherwise, but only by itself. Thus titles of nobility, as whether earl or not earl, baron or not baron, shall be tried by the king’s writ or patent only, which is matter of record. Also, in case of an alien, whether alien, friend, or enemy, he shall be tried by the league or treaty between his sovereign and ours ; for every league or treaty is of record. And also, whether a manor be held in ancient demesne or not, shall be tried by the record of doomsday in the king’s exchequer.

The RECORDER is a person whom the mayor and other magistrates of a city or corporation associate with themselves, for their direction in matters of justice and proceedings in law ; on which account this person is generally a counsellor well skilled in the law. No recorder of London is mentioned before 1304. He is the first officer in order of precedence that is paid a salary, which originally was no more than ––10 sterling per annum, with some perquisites ; but it has from time to time been augmented to upwards of ––1000 per annum. This office has sometimes been executed by a deputy.

RECO11DE (Robert), M.U.,an English physician and antiquarian of the sixteenth century. He was educated at Cambridge, where he took his degrees, and was the first Englishman who wrote on Algebra. He was also well versed in the Saxon language, and collected many historical and other ancient MSS. His learning, however, unfortunately did not prevent his being imprisoned in the King’s Bench prison for debt, where he died in 1558.

RECOUCH’, v. a. Re and couch. To lie down again.

Thou mak'est the night to overvail the day ; Then lions' whelps lie roaring for their prey, And at thy powerful hand demand their food ; Who when at morn they all recouch again, Then toiling man till eve pursues his pain. Wotton.

RECOVER, v. a. bv.n.y Fr. recouvrir ;

RECOVERABLE, adj. > Lat. recupero. To

RECOV'ERY, n. s. J restore ; repair ;

renew ; regain ; release : grow healthy or free from disease or evil : recoverable is, possible to be regained : recovery, restoration ; act or power of regaining: in law, act of cutting off an entail.

Would my lord were with the prophet ; for he would recover him of his leprosy. 2 Kings v. 3.

The Spirit of the Lord is upon me, to preach the gospel to the poor, and recovering of sight to the blind. Luke iv. 18.

That they may recover themselves out of the snare of the devil, who are taken captive by him.

2 Timothy ii. 26.

These Italians, in despight of what could be done, recovered Tiliaventum. Knolles.

The forest is not three leagues ofi'; If we recover that, we're sure enough. Sliukspeare. A prodigal's course

Is like the sun's, but not like his, recocei-able, I fear. ,.

What should move me to,undertake the recovery of this, being not ignorant of the impossibility 1 Id.

The spirit of wantonness is sure scared out of him ; if the devil have him not in fee simple, with fine and recovery. Id.

Once in forty years cometh a pope, thatcasteth his eye upon the kingdom of Naples, to recover it to the church. Bacon.

They promised the good people ease in the matter of protections, by which the debts from parliament men and their followers were not recoverable.

Clarendon..

Adam, by this from the cold sudden damp Recovering, his scattered spirits returned. Milton.

The clouds dispelled, the sky resumed her light, And nature stood recovered of her fright. Dryilen.

Any other person may join with him that is injured, and assist him in recovering from the offender so much as may make satisfaction. Locke.

The sweat sometimes acid, is a sign of recovery after acute distempers. Arbuthnot on Aliments.

RECOVERY, or COMMON RECOVERY, in English law. Common recoveries were invented by the ecclesiastics to elude the statutes of mortmain ; and afterwards encouraged by the finesse of the courts of law, in order to put an end to all fettered inheritances, and bar not only estates-tail, but also all remainders and reversions expectant thereon. A common recovery is a suit or action, either actual or fictitious ; and in it the lands are recovered against the tenant of the freehold ; which recovery, being a supposed ab- ###udication of the right, binds all persons, and vests a free and absolute fee-simple in the recoverer. There must be three persons at least to make a common recovery, a recoverer, a recoveree, and a vouchee. The recoverer is the plaintiff or demandant, that brings the writ of entry. The recoveree is the defendant or tenant of the land, against whom the writ is brought. The vouchee is he whom the defendant or tenant voucheth or calls to warranty of the land in de-mand, either to defend the right, or to yield him other lands in value, according to a supposed agreement. And, this being by consent and permission of the parties, it is therefore said that a recovery is suffered.

The operation of this legal fiction not being generally well understood, judge Blackstone has endeavoured to explain it in detail.

‘ Let us,’ says he, ‘ in the first place, suppose David Edwards to be tenant of the freehold, and desirous to suffer a common recovery, in order to bar all entails, remainders, and reversions, and to convey the same in fee-simple to Francis Golding. To effect this, Golding is to bring an action against him for the lands ; and he accordingly sues out a writ, called a praecipe quod reddat, because those were its initials or most Dperative words, when the law proceedings were in Latin. In this writ the demandant, Golding, alleges that the defendant, Edwards (here called the tenant), has no legal title to the land ; but that he came into possession of it after one Hugh Hunt had turned the demandant out of it. The subsequent proceedings are made up into a

record or recovery roll, in which the writ and complaint of the demandant are first recited ; whereupon the tenant appears, and calls upon one Jacob Moreland, who is supposed, at the original purchase, to have warranted the title to the tenant; and thereupon he prays that the said Jacob Moreland may be called in to defend the title, which he so warranted. This is called the voucher, vocatio, or calling of Jacob Moreland to warranty ; and Moreland is called the vouchee. Upon this, Jacob Moreland, the vouchee, appears, is impleaded, and defends the title. Whereupon Golding, the demandant, desires leave of the court to imparl, or confer with the vouchee in private ; which is (as usual) allowed him. And soon afterwards the demandant, Golding, returns to court, but Moreland the vouchee disappears, or makes the default. Whereupon judgment is given for the demandant, Golding, now called the recoverer, to recover the lands in question against the te-nant, Edwards, who is now the recoveree ; and Edwards has judgment to recover of Jacob Moreland lands of equal value, in recompense for the lands so warranted by him, and now lost by his default ; which is agreeable to the doctrine of warranty. This is called the recompense, or recovery in value. But Jacob Moreland having no lands of his own, being usually the cryer of the court (who, from being frequently thus vouched, is called the common vouchee) it is plain that Edwards has only a nominal recompense for the lands so recovered against him by Golding ; which lands are now absolutely vested in the said recoverer by judgment of law, and seisin thereof is delivered by the sheriff of the county. So that this collusive recovery operales merely in the nature of a conveyance in fee-simple, from Edwards the tenant in tail, to Golding the purchaser.’

RECOUNT, v. a.) Fr. reconter. To relate

RECOUNT'MENT. j in detail ; tell distinctly : relation ; recital.

Bid him recsunt the fore-recited practices.

Sliakspfare.

When from the first to last, betwixt us too, Tears our recountments had most finely bathed ; As how I came into that desart place. Id.

Plato in Tirnxo produces an Egyptian priest, who recounted to Solon out of the holy books of Egypt the story of the flood universal, which happened long be-fore the Grecian inundation. Raleigh.

The talk of worldly affairs hindereth much, although recounted with a fair intention : we speak willingly, but seldom return to silence. Taylor.

Say from these glorious seeds what harvest flows, Recount our blessings, and compare our woes.

Dryden.

RECOURSE', n. s.) Fr. recours ; Lat. re—

RECOURSE'FUL, adj. $ cttrsns. Frequent passage ; return ; renewed attack or application ; hence the common sense of application for help or protection ; access : recourseful is, moving alternately.

The doors be lockt,

That no man hath recourse to her by night.

Shakspeare

In that recourseful deep. Druyton.

Thus died this great peer, in a time of great re. course unto him and dependance upon him, the hous►► and town full of servants and suitors. Walton

Preventive pnysic, by purging noxious humours and the causes of diseases, preventeth sickness in the healthy, or the recourse thereof in the valetudinary. Browne's Vulgar Errours.

The council of Trent commends the making recourse, not only to the prayers of the saints, but to their aid and assistance. Stillingjieet.

All other means have failed to wound her heart, Our last recourse is therefore to our art. Dryden. REC'REANT, adj. FT. recreant. Cowardly; meanspirited ; subdued ; fallen ; apostate.

Let be that lady debonaire, Thou recreant knight, and soon thyself prepare To battle. Spenser.

Dost

Thou wear a lion's hide 1 doff it for shame, And hang a calf's skin on those recreant limbs.

Shakspeare.

Who for so many benefits received Turned recreant to God, ingrate and false, And so of all true good himself despoiled.

Milton.

The knight, whom fate and happy chance shall

grace

From out the bars to force his opposite, Or kill, or make him recreant

on the plain, The prize of valour and of love shall gain. Dryden.

REC'REATE, v. n.ˆ Fr. recreer ; Lat. re—

RECREA'TION, n. s. >creo. To refresh; re—

RECRE'ATIVE, adj. j vive ; relieve after or avert weariness ; delight : the nounsubstantive and adjective corresponding.

The chief recreation she could find in her anguish was sometime to visit that place, where first she was so happy as to see the cause of her unhap. Sidney.

I'll visit

The chapel where they lie, and tears shed there, Shall be my recreation. Shakspeare. Winter's Tale.

Let the musick be recreative, and with some strange changes. Bacon.

Take a walk to refresh yourself with the open air, which inspired fresh doth exceedingly recreate the lungs, heart, and vital spirits. Harvey.

Let not your recreations be lavish spenders of your time ; but choose such as are healthful, recreative, and apt to refresh you ; but at no hand dwell upon them. Taylor.

He walked abroad, which he did not so much to recreate himself, as to obey the prescripts of his physician. Felt.

These ripe fruits recreate the nostrils with their aromatick scent. Mode's Divine Dialogues.

The access these trifles gain to the closets of ladies seem to promise such easy and recreative experiments., which require but little time or charge. Boyle.

You may have the recreation of surprising those with admiration who shall hear the deaf person pronounce whatsoever they shall desire, without your seeming to guide him. Holder's Elements of Speech.

Nor is that man less deceived, that thinks to maintain a constant tenure of pleasure, by a continual pursuit of sports and recreations : for all these things, as they refresh a man when weary, so they weary him when refreshed. South.

RECREATION ISLAND, a fertile island in the Southern Pacific Ocean,

discovered in the year 1722 by Roggewin. It is twelve leagues in circuit, and some of the ship's company obtained a quantity of antiscorbutic herbs here, but venturing into the country, were assaulted by the natives, who stoned some of them to death, and wounded almost all. Many of the islanders were killed in return bv their fire-arms. The

soil is elevated, and produces sugar-canes, cocoa nuts, pomegranates, Indian figs, &c. The inhabitants are well-made, robust, and full of vivacity ; their bodies were painted.

RECREMENT, n. s. \ Lat. recrementum.

RECREMEN'TAL, adj. J Dross ; spume ; superfluity : drossy.

The vital fire in the heart rerpires an ambient body of a yielding nature, to receive the superfluous serosities and other recrements of the blood. Boyle.

RECRIMINATE, v. n. & v. a. (Fr. recrimi-RECRIMINA'TION, n. s. \ ner ; Lat. re

and criminor. To return one accusation with another ; the accusation made in return.

It is not my business to recriminate, hoping sufficiently to clear myself in this matter. Stillingjieet. How shall such hypocrites reform the state,

On whom the brothers can recriminate? Dryden.

Did not Joseph lie under black infamy 1 ne scora-ed so much as to clear himself, or to recriminate the strumpet. South.

Public defamation will seem disobliging enough to provoke a return, which again begets a rejoinder, and so the quarrel is carried on with mutual recriminations. Government of the Tunyue.

RECRUIT, v. a., v. n., & n. s. Fr. rtcrutcr. To repair ; waste ; supply an army ; with new men ; raise new soldiers ; supply of any thing wasted. Pope has used it improperly for a substitute of something wanting ; a new soldier.

He trusted the earl of Holland with the command of that army, with

which he was to be recruited and assisted. Clarendon .

Increase thy care to save the sinking kind, With greens and flow’rs recruit their empty hives. And seek fresh forage to sustain their lives.

Drydei-. .

The pow’rs of Troy

With fresh recruits their youthful chief sustain : Not their’s a raw and unexperienced train, But a firm body of embattel’d men. ..

The French have only Switzerland besides theii own country to recruit in ; and we know the difficulties they meet with in getting thence a single regiment. Addition.

He was longer in recruiting his flesh than was usual ; but by a milk diet he recovered it.

Wiseman. Her cheeks glow the brighter, recruiting their

colour ; As flowers by sprinkling revive with fresh odour.

Grunville.

RECTAN’GLE, n. s. Fr. rectangle ; Lat. ectangulus. A figure which has one angle or more of ninety degrees: the adjective and ad-verb corresponding.

Bricks moulded in their ordinary rectangular form, if they shall be laid one by another in a level row between any supporters sustaining the two ends, then all the pieces will necessarily sink. Wotton.

If all Athens should decree, that in rectangle triangle the square, which is made of the side that sub-tendeth the right angle, is equal to the squares which are made of the sides containing the right angle, geometricians would not receive satisfaction without demonstration. Browne’s Vulgar Errours.

The mathematician considers the truth and properties belonging to a rectangle, only as it is in idea in his own mind. Locke.

RECTIFICATION.

RECTIFY, v. a. ~\ Fr. rectifier ; Lat. rectus

REC'TIFIABLE, adv. > and f ado. To make right ;

RECTIFICATION, j reform ; improve by repeated distillation : rectifiable is, capable of be-ing rectified : rectification, is rectifying; repeated distillation. See below.

That wherein unsounder times have done amiss, the better ages ensuing must rectify as they may.

Hooker.

It shall be bootless

That longer you defer the court, as well For your own quiet, ae to rectify What is unsettled in the king. Shakspeare.

At the first rectification of some spirit of salt in a retort, a single pound afforded no less than six ounces of phlegm. Boyle.

The natural heat of the parts being insufficient for a perfect and thorough digestion, the errors of one concoction are not rectijiable by another. Browne.

The substance of this theory I mainly depend on, being willing to suppose that many particularities may be rectified upon further thoughts. Burnet.,

If those men of parts, who have been employed in vitiating the age, had endeavoured to rectify and amend it, they needed not have sacrificed their good sense to their fame. Addison.

The false judgments he made of things are owned ; and the methods pointed out by which he rectified them. Atterbury.

RECTIFICATION is in fact a second distillation, in which substances are purified by their more volatile parts being raised by heat carefully managed. Sometimes indeed the rectifier has recourse to a third and even a fourth distillation, when he wishes his spirits or goods, as they are technically called, to be very clean and pure.

The objects of distillation, considered as a trade, are chiefly spirituous

liquors ; and the distillation of compound spirits and simple water, or those waters that are impregnated with the essential oil of plants, is commonly called rectification.

Malt spirit, and indeed spirits from other substances, must be brought into the state of alcohol, before it is adapted to internal uses, after which it is said to be more fit for all the various internal uses than even French brandy, it being by this purification a more uniform, hungry, tasteless spirit, than any other spirits which are frequently esteemed much better. A quarter of malt, according to its goodness and the season of the year, will afford from eight to fourteen gallons of alcohol. The malt distiller always gives his spirit a single rectification per se to purify it a little, and in this state, though certainly not at all adapted to internal uses, it is frequently and at once distilled into gin or other ordinary compound liquors for the common people. The Dutch never give it any farther rectification than this : ††† They distil the wash into low wines, and then at once into full proof spirit, from which they manufacture their celebrated Hollands' geneva, which they export to foreign countries. Malt spirit, in its unrectified state, is usually found to have the common bubble proof, which makes it a marketable commodity, and which is obtained by mixing with it a certain portion of the gross oil of the malt ; this indeed gives the rectifier much trouble if he require a very fine and pure spirit, but in general he does not concern himself about this, but mixes it still stronger by alkaline salts, and disguises its taste by the addition of flavoring ingredients. The spirit loses in these processes the vinous character which it had when it came out of the hands of the malt distiller, and is in all respects inferior, except in the disguise of a mixed flavor. The alkaline salts used by the rectifier, destroying the natural vinosity of the spirit, it is necessary to add an extraneous acid to give it a new one, and this is frequently what is denominated in the shops ' spiritus nitri dul-cis/ and the common method of applying it is the mixing it to the taste with rectified spirit; and it is said to be this that gives the English malt spirit a flavor something like brandy, which flavor is, however, very apt to fly off, and accordingly experienced manufacturers recommend the addition of a proper quantity of Glauber's strong spirit of nitre, to the spirit in the still. By this means the liquor comes over impregnated with it, the acid is more intimately mixed, and the flavor is retained. The action of the alkali is thus explained : ††† There is a greater attraction or affinity between the alkaline salt and the water than between the water and the spirit, of course the salt combines with the water contained in the spirit, and sinks with it to the bottom.

With the spirit-gauge of Messrs. Borie and Poujet, the different degrees

of spirituosity are very easily ascertained by means of silver weights of various sizes; the heaviest is inscribed with the words Hollands' proof, and the lightest three-sevenths. The other weights serve to mark the intermediate degrees between these two terms. Thus, if you screw to the end of the beam of the spirit gauge the weight denoting Hollands'-proof, and plunge it into three-fifths, the instrument will descend in the liquid below the degree marked on the scale Hollands'-proof, but it returns to that point on the addition of two-fifths of water, so that three-fifths spirit is thus transformed into Hollands'-proof spirit. If, on the contrary, you screw on the three-fifths weight, and plunge the spirit gauge into Hollands'-proof, it will rise in the liquor above the latter mark, and it may be easily carried down to that degree by the addition of alcohol or spirit of wine. When spirits are distilled for the purpose of extracting alcohol, or spirit of wine, the balneum marise is generally employed. The heat is then more gentle and more equal, and the produce of the distillation of superior quality.

Alcohol, or spirit of wine diluted, is used as a beverage. It is the dissolvent of resins, and constitutes the basis of drying varnishes. Spirit of wine serves as a vehicle for the aromatic principle of plants, and is then called spirit of this or that plant. The apothecary likewise employs spirit of wine to dissolve resinous medicines. These dissolutions are denominated tinctures. It forms the base of almost all the different sorts of beverage called liquors. It is sweetened with sugar, or rendered aromatic with all kinds of substances of an agreeable taste or smell. Spirit of wine preserves vegetable and animal substances from fermentation or putrefaction. To

this end it is used for preserving fruits, vegetables, and almost all the objects and preparations relating to the natural history of animals. All the liquors produced by the fermentation of saccharine substances, yield alcohol. But the quantity and quality vary according to the nature of the substances.

It is chiefly in consequence of the ascent of bodies of greater lixivity with certain bodies of greater volatility that there is so much difficulty here of imitating the foreign vinous spirits of other countries, as, for example, French brandies, and West-Indian rums. All these are remarkable by the character of the essential oil that ascends with the spirit, and which gives it the peculiar flavor by which one spirit differs from another. Now we can obtain an essential oil from any of the vegetables that furnish these different spirits; but we cannot, as we have seen, readily obtain a spirit altogether tasteless, and destitute of some sort of essential oil still combining with it. Could we do this, we could manufacture to perfection an artificial Cogniac brandy or Jamaica rum ; but, as we cannot wholly separate the inherent essential oil from tliO purest and most colorless and most insipid spii > we can obtain, when we add the essential oil with which we mean to flavor it, the union of the two oils gives us a different result, and betrays the artifice to those who are acquainted with the taste of the genuine material.

In order, then, to prepare the oil of wine, or of the grapes from which French brandies are distilled, which are generally the worst that the country affords ; the best being selected for the process of wine itself, as yielding a far ampler profit; take some cakes of dry wine-lees, dissolve them in six or eight times their weight of water, distil the liquor with a slow fire, and separate the oil, reserving, for only the nicest uses, that which comes over first, the succeeding oil being coarser and more resinous. Having procured this fine oil of wine, it may be dissolved in alcohol ; by which means it may be preserved a long time, fully possessed of all its flavor, but otherwise it will soon

grow rancid. With a fine essential oil of wine, thus procured, and a pure and tasteless spirit, French brandies may be imitated to some degree of perfection. The essential oil, it should be observed, must be drawn from the same kind of lees as the brandy to be imitated was procured from ; that is, in order to imitate Cogniac brandy, it will be necessary to distil the essential oil from Cogniac lees; and the same for any other kind of brandy. For as different brandies have different flavors, and as these flavors are entirely owing to the essential oil of the grape, it would be ridiculous to endeavour to imitate the flavor of Cogniac brandy with an essential oil procured from the lees of Bourdeaux wine. When the flavor of the brandy is well imitated, other difficulties are still behind. The flavor, though the essential part, is not the only one ; the color, the proof, and the softness, must also be regarded, before a spirit that perfectly resembles brandy can be procured. With regard to the proof, it may be easily accomplished, by using a spirit rectified above proof; which, after being intimately

mixed with the essential oil of wine, may be let down to a proper standard with fair water; and the softness may, in a great measure, be obtained by distilling and rectifying the spirit with a gentle fire ; and what is wanting of this criterion in the liquor when first made, will be supplied by time ; for it is time alone that gives this property to French brandies, they being, at first, acrid, foul, and fiery. But, with regard to the color, a particular method is required to imitate it to perfection, which may be effected by means of treacle or burnt sugar.

The spirit distilled from molasses or treacle is tolerably pure. It is made from common treacle, dissolved in water, and fermented in the same manner as the wash for the common malt spirit. But if some particular art be not used in rectifying this spirit, it will not prove so vinous as malt spirit, but less pungent and acrid, though otherwise much cleaner-tasted, as its essential oil is of a less offensive flavor. Therefore, if good fresh wine-lees, abounding in tartar, be well fermented with molasses, the spirit will acquire a greater vinosity and briskness, and approach nearer to the nature of foreign spirits. Where the molasses spirit is brought to the common proof strength, if it be found not to have a sufficient vinosity, it will be very proper to add some dulcified spirit of nitre ; and, if the spirit be clean worked, it may, by this addition only, be made to pass for French brandy. Great quantities of this spirit are used in adulterating foreign brandy, rum, and arrack. Much of it is also used in making cherry-brandy, and other cordials, by infusions ; but in them all many persons pfefer it to foreign brandies. Molasses, like all other spirits, is entirely colorless

when first extracted ; but rectifiers always give it as nearly as possible the color of foreign spirits.

In a similar manner we may imitate foreign spirits of all kinds. Thus, if Jamaica rum be our object instead of French brandy, it will only be necessary to procure some of the tops of the sugar canes, from which an essential oil being drawn and mixed with clear molasses spirit, will give it the real flavor ; or at least a flavor as true as a spirit not totally divested of all essential flavor of its own can possibly i ommunicate. The principal difficulty theiofore must still lie in procuring a spirit totally, or nearly, free from all flavor of its own.

To rectify their spirit into Holland gin, the Dutch distillers add to every twenty gallons of spirit of the second extraction, about the strength of proof-spirit, three pounds of juniper-berries, and two ounces of oil of juniper, and distil with a slow fire, till the feints begin to ascend ; then change the receiving-can. This produces the best Rotterdam gin. An inferior kind is made with a less proportion of berries, sweet fennel-seeds, and Strasburgh turpentine, without a drop of juniper-oil. This last is also a better sort, and though still inferior to that of Rotterdam, is produced in very large quantities at Welsoppe.

It is remarkable that no one method of com-binatory rectification, that is, of the rectification performed by means of salt, and other additions, is suited to all the several kinds of spirits ; scarcely indeed wil I any one way serve for any two ;

but the meihod of simple and careful distillation is equally suited to all. Molasses spirit, cyde< spirit, wine spirit, or brandy, rum, and arrack, are all improved by it ; and all of them are then known to be perfectly rectified, when, in the state of alcohol, they not only prove totally inflammable in a little vessel floating upon cold waters, but

when poured into the purest spring water they have not the least power of making any change in it, nor leave any marks of oiliness, or that unctuosity which, on the mixture of the less pure spirits, floats on the top, and in certain lights gives the rainbow colors. See DISTILLATION.

Fixed salts are rectified by calcination, dissolution, or filtration.

Metals are rectified, i. e. refined, by the coppel ; and reguluses by repeated fusions, &c. In a word, all rectifications are founded upon the same principle ; and consist in separating substances more volatile from substances less volatile ; and the general method of effecting this is to supply only the degree of heat which is necessary to cause this separation.

RECTIFIER, in navigation, an instrument consisting of two circles, either laid one upon, or let into the other, and so fastened together in their centres, that they represent two compasses, one fixed, the other moveable ; each of them divided into the thirty-two points of the compass, and 36►►, and numbered both ways, from the north and south, ending at the east and west in 90►►. The fixed compass represents the horizon, in which the north and all the other points of the compass are fixed and immoveable. The moveable compass represents the mariner's compass ; in which the north and all other points are liable to variation. In the centre of the moveable compass is fastened a silk thread, long enough to reach the outside of the fixed compass. But, if the instrument be made of wood, there is an index instead of the thread. Its use is to find the variation of the compass, to rectify the course at sea; having the amplitude or azimuth given.

RECTILIN'EAR, adj. } Fr. rectitude;

RECTILIN'EOUS, > Latin rectus and

REC'TITUDE, n. s. .) imea. Consisting of

right lines : rectitude is, literally, straightness ; hence, and more commonly, mental uprightness; integrity.

Theie are only three rectilineaus and ordinate figures, which can serve to this purpose ; and inordinate or unlike ones must have been not only less elegant, but unequal. Ray.

This image was oblong and not oval, but terminated with two rectilinear and parallel sides and two semicircular ends. Newton.

Calm the disorders of thy mind, by reflecting on the wisdom, equity, and absolute rectitude of all his proceedings. Atterbury.

RECTOR, n. s. } Fr. recteur ; Lat. rector.

REC'TORSHIP, > Ruler; iord ; governor;

REC'TORY. j parson of an unimpropriated parish : rectorship and rectory are both used for his office ; and the latter for his residence also.

Had your bodies

No heart among you "? or had your tongues no cry Against the rectorship of judgment'! Shakspeare.

A rectory or parsonage is a spiritual living, com posed of land, tithe, and other oblations of Lhe peo-ple, separate or dedicate to God in any congregation for the service of his church there, and for the maintenance of the governor or minister thereof, to whose charge the same is committed. Spelman.

God is the supreme rector of the world, and of all those subordinate parts thereof. Hale.

When a rector of a university of scholars is cho-sen by the corporation or university, the election ought to be confirmed by the superior of such university. Ayliffe't Parergon.

RECTOR is a term applied to several persons whose offices are very different : as, 1 . The rec-tor of a parish is a clergyman that has the charge and cure of a parish, and possesses all the tithes, &c. 2. The same name is also given to the chief elective officer in several foreign universities, particularly in that of Paris, and also in those of Scotland. 3. It is also applied to the head master of large schools in Scotland, as in the high school of Edinburgh. 4. Rector is also used in several convents for the superior officer who governs the house: and the Jesuits gave this name to the superiors of such of their houses as are either seminaries or colleges. 5. The head of Lincoln College, in Oxford, is also called rector.

RECTUM, in anatomy, the last of the large intestines. See ANATOMY.

RECTUS, in anatomy, a name common to several pairs of muscles, so

called on account of the straightness of their fibres. See ANATOMY.

RECUBATION, n.s.ˆ Lat. recubo. The

RECUM'BENCY, >act of lying or lean—

RECUM'BENT, adj. j ing : this both substantives signify, and the adjective corresponds.

Whereas our translation renders it sitting, it can-not have that illation, for the French and Italian translations express neither position of session or recubation. Browne.

When the mind has been once habituated to this lazy recumbency and satisfaction on the obvious surface of things, it is in danger to rest satisfied there.

Locke.

The Roman recumbent, or more properly accum-bent, posture in eating was introduced after the first Punick war. Arbuthnot.

RECUPERATORES, among the ancient Romans, were commissioners appointed to take cognizance of private matters in dispute between the subjects of the state and foreigners, and to take care that the former had justice done them. It came at last to be used for commissioners, to whom the praetor referred the determination of any affair between one subject and another.

RECUPERO (Alexander), a learned numis-matologist, was born about 1740 at Catanea, of a noble family. He travelled, with the name of Alexis Motta, through the principal cities of Italy, and employed himself in forming a collection of the Roman consular medals. The examination and classification of these stores engaged him more than thirty years, in the course of which he seems to have obtained an unrivalled acquaintance with the family history of the Ro-mans. His death took place at Rome, October, 1803. He wrote Institutio Stemmatica, sive de Vera Stemmatum praesertim Romanorum Natura atque Differentia ; Annales familiarum Roman,

rum ; and Annales Gentium Historico-Numis- maticae, sive de Origine Gentium seu Familiarum Romanorum Dissertatio : also treatises on the Roman weights, and manner of numbering. He was a member of the antiquarian academies of Veletra and Cortona.

RECUPERO (Joseph), brother of the preceding, was also a learned mineralogist. He embraced the ecclesiastical profession, and obtained a canonry in the cathedral of Catanea. He distinguished himself by his researches concerning Etna, and some details which he communicated to our countryman Brydone, relative to the probable age of the mountain. See JYTNA. He published an oryctographical chart of Etna; and left a work on the same subject in manuscript. His death took place in 1787.

RECUR', v. n. Fr. recourir ; Lat. recurro. To come back to the thought ; revive in the mind ; have recourse to (from the Fr. wordj.

If to avoid succession in eternal existence, they recur to the punctum stans of the schools, they will thereby very little help us to a more positive idea of infinite duration. Locke.

In this life the thoughts of God and a future state often ofter themselves to us ; they often spring up in our minds, and when expelled, recur again.

Calamy.

The second cause we know, but trouble not ourselves to recur to the first. Wake.

When any word has been used to signify an idea, that old idea will recur in the mind when the word is heard. Watts.

II ECU RE', v.a. Re and cure. To recover from sickness or labor. Not in use.

Through wise handling and fair governance, 1 \nm-recured to a better will, Purged from the drugs of foul intemperance.Spenser.

Phoebus pure In western waves his weary wagon did recure. Id.

Whatsoever fell into the enemies' hands, was lost without recure : the old men were slain, the young men led away into captivity. KnolUs.

Thy death's wound

Which he who comes thy Saviour shall recure, Not by destroying Satan, but his works In thee and in thy seed. Milton's Paradise Lott.

RECUR'RENT, adj.} Fr. recurrent; Lat.

RECUR'RENCE, n. s. (recurrens. Returning

RECUR'RENCY, I from time to time :

RECVR'SION. J return; this last is the

sense of all the noun substantives.

Next to lingering durable pains, short intermittent or swift recurrent pains precipitate patients unto consumptions. Harvey.

Although the opinion at present be well suppressed, yet, from some strings of tradition and fruitful recurrence of error, it may revive in the next generation. Browne's Vulgar Errours.

One of tne assistants told the recursions of the other pendulum hanging in the free air. Boyle.

RECURRENTS, in anatomy, a name given to several large branches of nerves sent out by the par vagum from the upper part of the thorax to the larynx. See ANATOMY.

RECURRIKG DECIMALS are those which repeat in the same order, at certain intervals. Thus, the fraction 5 is expressed by the recurring decimal 66666, &c.

It is curious that all fractions whose denomi-nator is 7 are expressed by compound recurring

decimals which have the same effective figures, though varied in their position. Thus,

\ ••• -142857142857, &c. ? = -285714285714, &c. ij •••

-428571428571, &c. 4 = -571428571428, &c. f =. -714285714285, &c. f ••• -857142857142, &c.

RECURVIROSTRA, in ornithology, a genus belonging to the order of gralla of Linnaeus, and that of palmipedes of Pennant and Latham. The bill is long, subulated, bent back, sharp, and flexible at the point. The feet are webbed, and furnished with three toes forwards, and a short one behind. Latham notes of this genus three species, *viz.* the alba, the Americana, and the avosettn. or the one commonly known.

1 . R. alba, or scolopax alba, is about fourteen inches and a quarter long, its color white, the inferior covers of its wings duskish, its bill orange, its legs brown. Edwards remarks that the bill of this bird is bent upwards, as in the avoset ; it is black at the tip, and orange the rest of its length ; all the plumage is white, except a tint of yellowish on the great quills of the wing and the tail. Edwards supposes that the whiteness is produced by the cold climate of Hudson's Bay, from which he received it, and that they resume their brown feathers during the summer. It appears that several species of this bird have spread further into America, and have even reached the southern provinces : for Sloane found this species in Jamaica ; and Fernandez seems to indicate two of them in New Spain, by the names chiquatototl and elotototl; the former being like our woodcock, and the latter lodging under the stalks of maize.

2. R. Americana, the American avoset, is rather larger and longer than the avoset. The bill is similar, and its color black : the forehead is dusky white : the head, neck, and upper part of the breast, are of a deep'cream color: the lower parts of the neck behind white : the back is black, and the under parts from the breast pure white : the wings are partly black, partly white, and partly ash-colored. These birds inhabit North America, and were found by Dainpier on the coast of New Holland.

3. R. avosetta is about the size of a lapwing in body, but lias very long legs. The substance of the bill is soft, and almost membranous at its tip : it is thin, weak, slender, compressed horizontally, and incapable of defence or effort. These birds are variegated with black and white, and during the winter are frequent on the eastern shores of Great Britain. They visit also the Severn, and sometimes the pools of Shropshire. They feed on worms and insects, which they scoop out of the sand with their bills. They lay two eggs, white, with a greenish hue, and large spots of black: these eggs are about the size of a pigeon's. They are found also in various parts of the continent of Europe, in Russia, Denmark, and Sweden, but they are not numerous.

They are also found in Siberia, but oftener about the salt lakes of the Tartarian desert, and about the Caspian Sea. They do not appear to wander farther south in Europe than

Italy. Whether from timidity or address, the avoset shuns snares, and is not easily taken.

RECUR'VOUS, adj. \ Lat. recurvus. Bent

RECUR'VATION, or ►► backward : the noun

RECUR'VITY, n. s. J substantive corresponding.

Ascending first into a capsulary reception of the breast bone by a serpentine recurvation, it ascendeth again into the neck. Browne.

I have not observed tails in all ; but in others I have observed long recumous tails, longer than their bodies. Derham.

RECUSANTS, in law, are such persons, whether papists or other, who refuse to go to church and to worship God after the manner prescribed by the Church of England. Popish recusants are papists who so refuse ; and a popish recusant convict is a Catholic convicted of such offence. See ROMAN CATHOLICISM.

RECUSE', v. n. Fr. recuser; Lat. recuso. To refuse. A juridical word.

All that are recusants of holy rites. Holyday.

The humility, as well of understanding as manners of the fathers, will not let them be troubled when they are "-ecused as judges. Digby.

They demand of the lords, that no recusant lord might have a vote in passing that act. Clarendon.

A judge may proceed notwithstanding my ap-peal, unless I recuse him as a suspected judge.

Ayliffe.

RED, adj. ~\ Saxon rie’B ; Welsh

RED’BREAST, n. s. rhud; Dan. red; Belg.

RED’COAT, | rood; Goth, riod; from

RED’DEN, v. a. & v. n.)>the Greek tpvS’poc. Of RED’DISH, adj. j the color of blood :

RED’DISHNESS, n. s. lone of the primitive RED’HOT, adj. J colors, which is subdivided into many ; as scarlet, vermilion, crimson : the redbreast is a bird named from its color : redcoat, a contemptuous name for a soldier : to redden is to make or grow red : reddish, somewhat red : the noun substantive corresponding : red-hot is heated to redness.

His eyes shall be red with wine, and his teeth white with milk. Genesis xlix. 12.

A bright spot, white and somewhat reddish.

Leviticus. Look I so pale 1

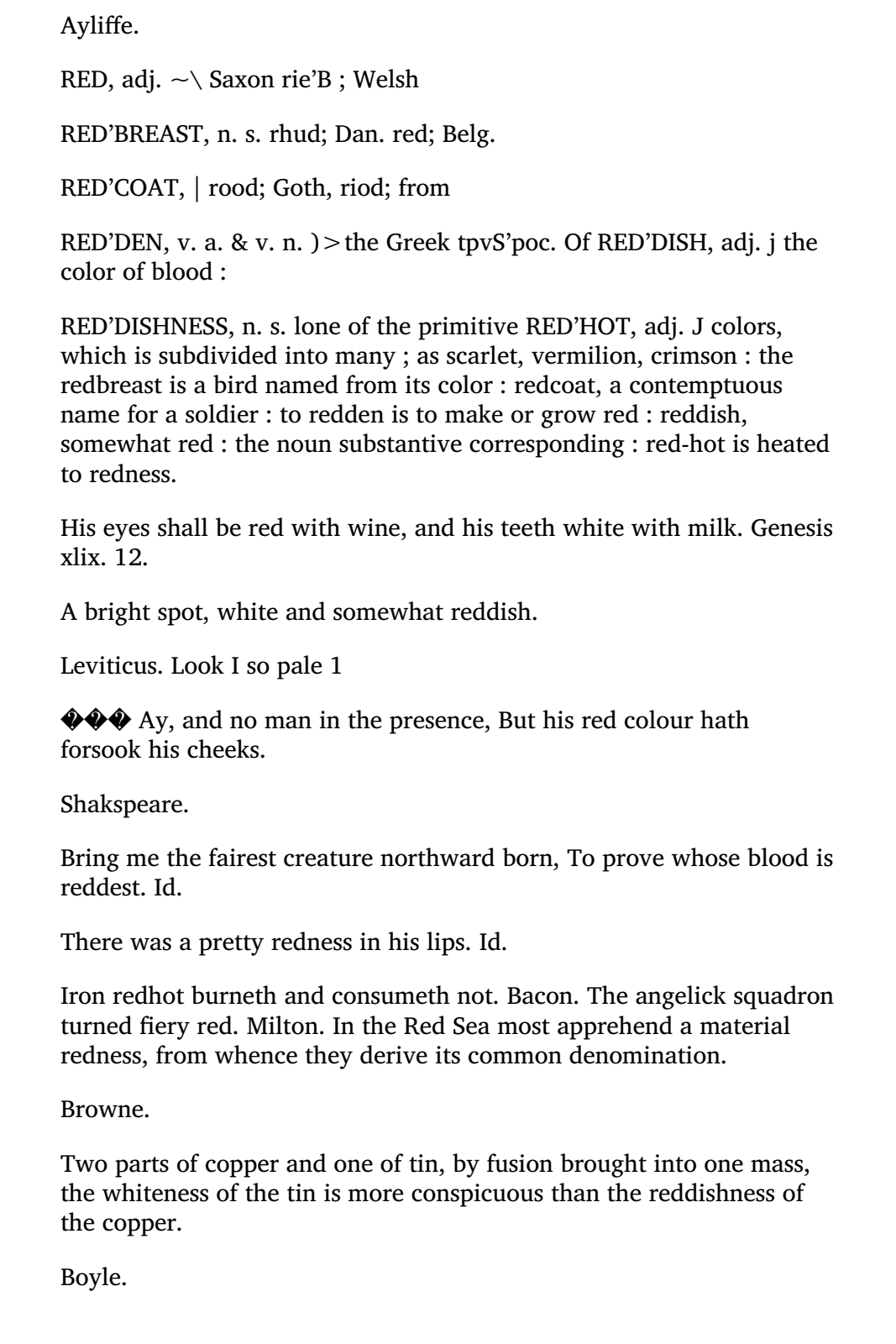

Ay, and no man in the presence, But his red colour hath forsook his cheeks.

Shakspeare.

Bring me the fairest creature northward born, To prove whose blood is reddest. Id.

There was a pretty redness in his lips. Id.

Iron redhot burneth and consumeth not. Bacon. The angelick squadron turned fiery red. Milton. In the Red Sea most apprehend a material redness, from whence they derive its common denomination.

Browne.

Two parts of copper and one of tin, by fusion brought into one mass, the whiteness of the tin is more conspicuous than the reddishness of the copper.

Boyle.

ne fearful passenger, who travels late, Shakes at the moonshine shadow of a rush, And sees a redcoat rise from every bush. Dryden.

In a heaven serene, refulgent arms appear Reddening the skies, and glittering all around, The tempered metals crash. Id. Mneid.

With shame they reddened, and with spight grew pale. Id. Juvenal.

The glowing redness of the berries vies with the verdure of their leaves. Spectator.

Turn upon the ladies in the pit, And, if they redden, you are sure ‘tis wit.

Addison.

The sixth red was at first of a very fair and lively scarlet, and soon after of a brighter colour, being very pure and brisk, and the best of all the reds.

Newton’s Optict.

Is not fire a body heated so hot as to emit light copiously? for what else is a redhot iron than fire? and what else is a burning coal than redhot wood ?

Id.

For me the balm shall bleed, and amber blow, The coral redden, and the ruby glow. Pope.

The redhot metal hisses in the lake. Id.

Why heavenly truth, ––nd moderation fair, were the red marks Of superstition’s scourge. Thomson’s Winter. The redbreast, sacred to the household gods, Pays to trusted man his annual visit. Ttionuon. And, instant, lo, his dizzy eye-ball swims Ghastly, and reddening darts a threatful glare . Pain with strong grasp distorts his writhing limbs, And Fear’s cold hand erects his bristling hair !

Beattie.

RED is one of the colors called simple or primary : being one of the shades into which the light naturally divides itself, when refracted through a prism.

RED BREAST. See MOTACILLA.

RED LAKE, a lake of North America, a comparatively small lake for this neighbourhood, but at the head of a branch of the Bourbon or Red River. Its form is nearly circular, about sixty miles in circumference. On one side is a tolerably large island. It is almost south-east from Lake Winnipeg, and south-west of the Lake of the Woods. Long. 95►► 10’ W., lat. 47►► 40’ N.

RED RIVER, or Natchitoches, a large rivet of Louisiana, North America, which derives its name from the rich fat earth or marl of that color, borne down by its floods. It rises about long. 105►► W., lat. 35►► K., and flows into the Mississipi, 240 miles above New Orleans, in Long. 91►► 48’ Wr., lat. 31►► 15 N. The navigation of the Red River is interrupted at a place called Rapide, 135 miles from its mouth, by a ledge of soft rock of the consistence of pipe-clay, which extends across the river, but might be easily removed. No difficulty, however, is experienced except in low water. About 500 miles from its mouth the voyager meets with a more serious obstacle, namely, the natural bridges or rafts formed by the accumulation of drift wood, under which the current of this great river passes for several miles. They have remained unbroken for so long a period that they have acquired a soil and a growtn of timber similar to the surrounding country.

The RED SEA (Sinus Arabicus), is a gulf of the Sea of Arabia, 500 leagues in length and seventy-five in its greatest breadth. It is entered from the gulf of Socotra by a channel, ten leagues wide, in which is the little island of Perim, or Mehun, three miles and a half distant from the Arabian shore, the channel between being the proper strait of Babelmandeb, or the Gate of Tears, alluding to its difficult navigation, and which is the most used, as it is without

danger, and has good anchorage, while the broa 1 passage between the coast of Africa and Perini has too great a depth of water, and, the current usually setting strong into the Bay of Zeila, it is dangerous to

be caught here in a calm.

The denomination of Red, given to this sea, is differently accounted for. Buffon accords with the idea that it received it from the color of the coral with which it abounds ; but this substance is in general whitish. Others derive it from Edom or Idumea, the ancient names of Upper Egypt washed by the sea, which, signifying red, they suppose to have been given it from the reddish color of the shore. The modern Arabian name is Bahr Suph, Sea of Algae, from the quantity of these plants that cover the rocks.

Of the sea of Arabia called by the ancients Mare Erythraeum, Quintus Curtius, after observing that the Ganges empties itself into it, adds, ‘ Mare certe quo (India) aluitur ne colore quidem abhorret a ceteris. Ab Erythra rege in-ditum est nomen : propter quod ignari rubere aquas credunt.’ Lib. viii. chap. 9. ‘ The sea washing India varies not from other seas. It derived its name from king Erythros ; on which account the ignorant believe the water to be red.’ Pratt’s translation. The weed named suph by the Hebrews is of a red hue between scarlet and crimson ; it abounds in the gulf of Suez. And it is remarkable that the name by which the Arabian Gulf at large is designated throughout the Old Testament is that preserved in the Arab. Bater Souf. By the septuagint the original word is rendered Qa\Xaoa 2i0, the Sea of Zeph ; Epv0pet Sakaaaav, the Erythrean Sea, and iff%anjv OaXaaffav, the further sea.

At its head the Red Sea forms two gulfs : the western is named the Gulf of Suez, the Heroo-polites sinus of the ancients, and the Bahr-el-Kolzum, or Bahr-el Suez, of the Arabs. The eastern gulf of Akaba is the ancient ˆElanites sinus, and the Bahr-el-Ailah of the Arabs. The tract which separates these gulfs is named the Desert of Sinai, into which Moses led the children of Israel.

It seems certain that the Red Sea formerly extended several miles farther to the north than it does at present ; it now heads about four miles above Suez, and beyond this, running ten miles to the north, is a depressed tract, the level of which is thirty-five feet below that of the sea, and which is only kept from being overflowed by an elevated ridge of sand. The soil of this sunk basin is sea sand and shells ; and it has several shallow ponds of salt water. The desic-cation of this basin is accounted for by supposing the waves to have accumulated a bar of sand, which, at length, rising above the level of the sea, a lake was formed, the waters of which have been carried off by evaporation. It is generally thought also that the Red Sea is thirty-four feet more elevated than the Mediterranean ; hence it would follow, that if the

Isthmus of Suez was cut through, the waters of the Red Sea would rush with rapidity into the Mediterranean, while those of the Atlantic running in through the Strait of Gibraltar, an accumulation and concussion would take place, the consequences of' \l>ich are incalculable. And even supposing

the levels of the two seas to be the same, as there is no tide in the Mediterranean, and a very-strong one in the Red Sea, this would alone cause a great body of water to flow from the latter into the former, if the, ..sthmuswas broken.

The tides in the Red Sea are considerable from its entrance facing the east, and there being no rivers to counteract the stream. The winds considerably affect these tides ; and it is not uncommon, in strong north westers, for the bottom to be left entirely dry on the ebb, between Suez and the opposite shore. The monsoons, which are strong and regular in the open sea of Arabia, are subject to variations in approaching the land In the gulf of Socotra their direction is usually from the east between October and May, and from the west the other six months ; while within the Red Sea, they blow directly up anu down, but with this variation, that the south-east winds blow without intermission in the lower part of the sea, from October to June, when the northerly winds begin and continue for four months. Towards the head of the sea, v the gulf of Suez, northerly winds, on the contraiy, prevail for nine months, and blow with great violence. The causes of these variations are evidently the positions of the sea of Arabia and the Mediterranean, with respect to the Red Sea. Thus the monsoon, which is from the east in the. gulf of Socotra, changes to the south-east and S. S. E. in the Red Sea, from this sea lying in a direction south-east and north-west; and is of longer continuance, from the atmosphere of thf-sea of Arabia being for a great part of the yea colder than that of the Red Sea. For a similar reason north-west winis are of longest duration at the head of the sea ; for the denser air of the Mediterranean is almost constantly flowing towards the more rarified atmosphere of the desert of Suez and Red Sea, and this cause is strongest in the months of June, July, and August, when the presence of the sun has most raised the temperature of these latter ; hence north-west winds blow with great violence towards the head of the sea during these months. Though these monsoon winds prevail with great regularity in the middle of the sea, close to the shores, there are, throughout the year, land and sea breezes: but they cannot be taken advantage of in navigating this sea, by reason of the reefs which line the shores, obliging ships to keep at too great a distance during the

night to profit by the land wind. The currents mostly run with the wind.

We have no knowledge of a single stream of fresh water reaching the Red Sea. The river Farat, laid down in the charts on the African coast, nearly opposite Judda, is probably only a creek. The Arabian coast is lined by a chain of mountains throughout its whole extent, whose base is from ten to thirty leagues from the sea ; the intermediate space being an arid sea sand, totally deprived of fresh water, and naturally producing only a few herbaceous plants, such as the mesembryanthem, euphorbia, stapelia, colo-quintia, &c. This barren waste, however, abounds with antelopes and other game ; and immediately beyond it the scene suddenly changes to an exuberant vegetation, and a profusion of spring water.

The climate of the Red Sea differs essentially at its extremities. At Mocha, with the exception of a few light showers about Christmas, lain is unknown ; and the thermometer, in July and August, rises to 112►► during the day, and never descends below 90►► at night. The dews arc, throughout the year, extremely heavy.

The African coast of the Red Sea is divided into Abyssinia, Baza, and Upper Egypt. The coast of Abyssinia, being generally avoided by ships navigating in this sea, was very imperfectly known until the visit of lord Valentia in 1804. It is now found to possess several good ports, but also to be of dangerous approach in several places from reefs and islands. From Has Firtnah, the north point of Asab Bay, on which is the negro town of Asab (Sabae), to lias Rattah or the Sister Hills, there are several curvatures and good anchorage.

Suez is a modern and a poor place, being ruined by the cessation of commerce during the occupation of Egypt by the French. It is situated on an inlet filled with banks, which dry at half tide, and crossed by a bar two miles and a half below the town, with but ten or eleven feet high water : inside the depths between the banks are eight and nine feet at low, and fifteen to sixteen feet high water springs. This forms a

kind of inner harbour, in which the country vessels lay when thty require careening, which is done in a cove or basin at the back of the town. The water used by the inhabitants and shipping is brought on camels from wells to the east of the town at a considerable distance. The ruins of Clysma are visible in a mount of rubbish south of Suez, now called Kolzum. In 1817 a small fleet of English ships arrived here direct from Bombay, in consequence of the desire of tlie pacha of Egypt to open a direct trade between India and that country.

The Arabian coast of the Red Sea includes Yemen or Tehama, and Hejaz. The coast from Cape Babelmandeb, at the entrance of the strait, to Mocha is clean and bold-to ; but from this to the north it is lined with reefs within, and through which the Arab vessels sail by day only.

Niebuhr thinks this was the point at which the Israelites crossed the Red Sea : it is a passage of twenty hours to Tor on the opposite side; but as he observes, and as we have noticed, there can be no doubt the sea formerly extended much farther north.

The natives point out the valley of Bedeah, and other points of the coast further southward, opposite Ayoun Mousa and the Hammam Fara-oun. Dr. Shaw objects, against the opinion which fixes the passage opposite Ayoun Mousa, that there is not sufficient depth of vater there to drown so many Egyptians, ××× an objection which would seem to apply with still greater force to the opinion of Niebuhr and others, who fix upon Suez as the point at which they crossed. But the fact is, that the waters have retired, and the coral shoals have increased so much in every part of the gulf that no decisive argument can be built on the present shallow-ness of the water. In former times, ships entered the harbour of Kolsoum, which stood higher up than Suez, but, in consequence of the retreat of the waters, that

harbour was deserted, and Suez, which was not in existence towards the end of the fifteenth century, rose on its ruins. Niebuhr crossed the creek at low water on his camel, near the supposed ruins of Kolsoum, and the Arabs, who attended him on foot, were only up to their knees ; hut no caravan, he says, could pass here without great inconvenience, and certainly not dry-foot. Nor could the Israelites, he remarks, have availed themselves of any coral rocks, as they are so sharp that they would have cut their feet. Moreover, if we suppose that the agency of the tides was employed by divine providence in favoring the passage of the Israelites, the east wind which, blowing all

night, divided the waters of the gulf in the middle, preserving a body of water above and below, and laying bare the channel between the walls,❁❁❁ was clearly supernatural. The wind here constantly blows six months north and six months south. And, as this unprecedented ebb of the waters must have been preternatural, not less so was the sudden tempestuous reflux by which the Egyptians were overwhelmed. Perhaps a thick fog, it is suggested, might hasten their destruction. The depth at high water now does not exceed from eight to ten feet, but the same causes which have enlarged the land on the eastern shore, have rendered the gulf shallower. The winds, blowing the sands of Arabia into the Red Sea, are constantly forming shallows among the rocks, and threaten in time to fill up the gulf. Dr. Shaw, however, displays his usual learning and ingenuity in fixing the passage of the Israelites opposite the desert of Shur. Supposing Rameses to have been Cairo, there are two roads, he remarks, by which the Israelites might have been conducted to Pihahhiroth on the coast ; the one through the valleys of Jendily, Rumeleah, and Baideah, which are bounded on each side by the mountains of the Lower Thebais; the other, more to the northward, having these mountains for several leagues on the right, and the desert on the left, till it turns through a remarkable breach or ravine in the northernmost range, into the valley of Baideah. The latter he presumes to have been the road taken by the Israelites. Succoth, the first station, signifies only a place of tents ; and Etham, the second station, he considers as probably on the edge of the mountainous district of the Lower Thebais. Here the Israelites were ordered to turn (from their line of march), and encamp before Pihahhiroth, *i.e.* the mouth of the gullet or defile, betwixt Mig-dol and the sea. This valley he supposes to be identified with that of Baideah, which signifies miraculous, and it is also still called Tiah Beni Israel, the road of the Israelites. Baal-tzephon, over against which they encamped, is supposed to be the mountain still called Jebel Attakkah, the mountain of deliverance. Over against Jebel Attakkah, at ten miles distance, is the desert of Sdur, or Shur, where the Israelites landed. This part of the gulf would, therefore, be capacious enough to cover a numerous army, and yet might be traversed by the Israelites in a night ; whereas, from Corondel to Tor, the channel is ten or twelve leagues broad, which is too great a distance to have been travelled by a multitude

with such incumbrances, and the passage from Suez appears as much too short. Having once entered this valley, it might well be said that the wilderness had ‘ shut them in,’ inasmuch as the mountains of Mokattem would deny them a passage to the southward ; those in the neighbourhood of Suez would be a barrier to the northward, towards the land of the Philistines ; the Red Sea was before them to the east, while Pharaoh with his army closed up the defile be-hind them. The valley ends in a small bay formed by the eastern extremities of the mountains.

Dennis Bay, in about 14□□ 35’, is according to the French a safe road with a watering place. Hodeida is a considerable town, and the sea port of Betelfakie, whence a great quantity of coffee is shipped. Cape Israel is a long projecting point, with a bay on the north sheltered by the island of Camaran. Loheia is at the north extremity of this bay, and is a large town without walls, but with several towers guarded by soldiers ; some of the houses are of stone, but the greater number are of mud thatched. The shore is here so shoal that ships cannot anchor nearer than two leagues to the town, and even boats cannot approach it at low water ; it has, however, a share of the coffee trade. Ghesan and Attui are towns further north. Camfida (Hejaz) is a considerable town, ten leagues north of which is Bender Dodja, where there is said to be good water. From hence to Cape Ibrahim the land is high with some small towns little known to Europeans.

Judda, the sea-port of Mecca, which is forty miles inland, is a large town with an extensive trade, as well with Europeans from India as with other parts of the Red Sea, particularly Cossire, Suez, and Tor. The harbour is formed by a great number of reefs, and the anchorage is three miles from the town. The town is tolerably built, and is governed by a vizier from Mecca.

The places in succession from Judda, of which we have any knowledge, are Yambo (Jambia), by the Arabs called Jembo el Bahr ; it is the port of Medina, a day’s journey inland, and is a considerable town, but partly in ruins, with a harbour between two reefs, but very contracted. The land over it is extremely high and rugged. It is a general rendezvous of the Arab vessels bound to and from Egypt, but is never visited by European ships, the natives being treacherous and inhospitable. Bareedy harbour, also formed by shoals, is fourteen leagues farther north.

Ras Aboo Mahomet (Pharan promont.) is the extremity of the peninsula that separates the gulfs of Akaba and Suez ; it is a very low sandy point, but with deep water close to it, and be-hind the point a chain of high hills runs through the peninsula to Mount Sinai. Before the centre of the entrance of the Gulf of Akaba, and north of Cape Mahomet, is the island Tiran, elevated in the middle. On the east shore of the en irance of the gulf is Calai el Moatloah (Pheni-cum oppidum), a large town, whose inhabitants have tne name of great robbers, and this gulf is infested by pirates. Near its head is Calaat el Akaba (./Elana), whence the gulf has received its name. El Akaba. i. e. the end (of the sea), Vol-

ney thinks it may be the Atsium Gaber of the Bible, which, as well as Ailah on the same gulf, which still retains its name, was a celebrated mart in the time of Solomon. Being in the possession of the Bedouin Arabs, who have no idea of commerce, they are never visited. El Akaba is said to be a Turkish fort, and to possess good water.

The gulf of Suez is entered between Ras Mahomet and the island of Shadwan, the channel being fo.ur leagues wide. Tor, the Elim of the Scripture, and the Phenicon of the Romans, is now a wretched village, inhabited by about 100 Greeks, and a few Arab fishermen. The ruins of a well built Turkish fort denote it to have formerly been of more consequence. The description of this place given in the Bible perfectly answers to its appearance at this day, ex-cept that three only of the twelve wells are now to be seen, about 200 yards from the beach, and the only verdure is two small clumps of date trees. The water of the wells is less brackish han that of Mocha or Judda, but is in very small quantity, and is only freshened by filtration through the sand of the beach. There are no kind of refreshments except fish, and they are far from abundant, to be procured here. The foot of the ridge of hills which runs through the peninsula is about a day's journey, or six leagues from Tor. Amongst them Mount Sinai raises its lofty head in two peaks, and to the religious mind recalls the scenes described by the sacred historian ; it is a vast mass of red granite with white spots. In the little dispersed spots of soil, almonds, figs, and vines, are cultivated, and numerous rills of excellent water gush from the crevices, and wander among these little gardens ; at its foot is a monastery of Greek monks. The coasts of this peninsula are lined with coral reefs, and covered with petrifications. The road or harbour of Tor is perfectly safe, being sheltered by reefs running off from the points of a semicircular bay, having a channel a mile and a half wide. Cape Jehan is eight or nine leagues north-west of Tor.

A mere enumeration of the vast number of islands and reefs, above and under water, scattered throughout the Red Sea, would be equally useless and tedious, we shall therefore confine ourselves to the notice of those which are most conspicuous and best known.

On the African shore are Dhalac Island, seven leagues long, with many islands and reefs near it. St. John's Island, five or six leagues south-east of Emerald Island, has a high hill at the south-east end. Shadwan, at the entrance of the gulf of Suez, is a large and high island.

Nearest to the Arabian shore is the island Ba-Vlmandeb, Perim, or Mehun, anciently Diodiri, tnree miles and a half from Cape Babelmandeb, and forming the lesser strait. It is four miles in circuit, of little elevation, but highest in the middle ; it is covered with large loose masses of black stone, except in some spots where a thin sea sand covers a coral rock, and exceeds even in sterility the neighbouring continent, a few aromatic plants, and a prickly and leafless shrub of the milky tribe, being the only vegetables : and even these are in so sma►►l a quantity, that if

the whole were collected'they would not make a fire sufficient to dress a dinner. The attempts of the English to procure fresh water on the island, by digging wells, were fruitless. A few small lizards are the only stationary animals found on the island, but in the season of incubation it is resorted to by vast numbers of gulls to breed ; its beaches are also frequented by green turtles in December and January. Though no vestige of habitations is seen on the island, it was evidently once resorted to, a cistern to hold water, built of stone and coated with mortar, still remaining perfect : it is possible this was a work of the Portuguese, when in 1513 they made an unsuccessful attack on Aden. A great number of granite bullets were also discovered by the English, in the water near the island. On the north-

west side of the island is a very snug harbour, nearly land-locked, for about four ships. Thfi Arroas are north-west eleven leagues from Mocha, nearly midway between the Arabian and Abyssinian coasts ; the great Arroa is elevated. Gebel Zeghir, five leagues north of the Arroa, and six leagues from the Arabian coast, is high, with three small islands on its north side. The Sabugar islands extend from lat. 15►► to 16►► 10'; they are high, rocky, and barren: the largest, named Gebel Zebayr, lias two conical hills Gebel Tar is of considerable height, as its name denotes (Gebel, mountain ►►► Tar, high), with a volcanic peak. Doohorab, a small low island in 16►► 15', covered with trees.

In their persons the Arabs of this neighbourhood exceed the middle size, but are generally thin ; they are excellent horsemen, expert in the use of the lance and matchlock, and generally brave. The wandering tribes, named Bedouins, are robbers by profession, and honestly avow their trade, while the Arab of cities, less candid, is equally a robber by extortion. The Arabs, however, possess the virtue of hospitality to strangers who demand their protection, and the eating together is the seal of safety from the Bedouin to his guest. The towns of the Arabs are built of stone or sun-dried bricks. The houses have two stories, with terraced roofs ; the front is occupied by the men and the back by the females, who are strictly guarded from the eyes of strangers, for which purpose the tent of the Bedouin is divided by a screen. The Arabs are abstemious in their diet, the common class making only one meal a day of doura, a species of millet, with milk or oil.

REDAR'GUE, v. a. Lat. redargue. To re-fute. Not in use.

The last wittily redargues the pretended finding of com, graved with the image of Augustus Caesar, in the-American mines. Hakewiilon Providence.

REDDITIO, was the third part of the sacrifice of the heathens, and consisted of the solemn act of putting in again the entrails of the victims, after they had been religiously inspected. See SACRIFICE.

REDDITION, n.s. From Lat. re ddo. Restitution.

She is reduced to a perfect obedience, partly by voluntary reddition and desire of protection, ana partly by conquest. Howel.

RED'DLE, 7i. s. From red. A sort of mineral.

Reddle is an earth of the metal kind, of a tolerablv close and even texture1: its surface is smooth and somewhat glossy, and it is soft and unctuous to the touch, staining the fingers very much: in England we have the finest in the world. Httl.

REDDLE, a soft, heavy, red marie, of great use m coloring; and being washed and freed from sand, is often sold by our druggists under the name of bole armeniac.

REDE, n.s. & v.a. Sax. riaeˆ. Counse.: advice. Not used.

I rede thee hence to remove, Lest thou the price of my displeasure prove.

Spenser.

Do not as some ungracious pastors do, Shew me the steep and thorny way to heaven ••• Whilst he a puft and reckless libertine, Himself the primrose path of dalliance treads, And recks not his own rede. Shakspeare. Hamlet.

REDE (William), a learned English prelate of the fourteenth century, who became bishop of Chichester in 1369. He was the first mathematician of his age. He erected the first library of Merton College, and built the castle of Amberley.

REDEEM', v. a. ~\ Lat. redimo. To

REDEEMABLE, adj. I ransom; buy off

REDEEM'ABLENESS, n. s. ! from captivity or

REDEEM'ER, [slavery; pay the

REDEMPTION, j penalty of; free by

REDEMP'TORY, adj. j paying any atonement or price : hence to compensate ; recompense ; and, in a theological sense, to buy again something that had been devoted to God ; deliver from the bondage of sin; save time by self-denial : redeemable is capable of redemption ; the noun substantive that follows corresponding : redeemer, he who ransoms or redeems ; the Saviour of the world : redemption, the act of redeeming ; price paid ; actual delivery of the redeemed : redemptory, adjective, paid for ransom.

The firstling of an ass thou shall redeem with a lamb. Exodus.

The kinsman said, I cannot redeem it for myself, lest I mar mine inheritance. Ruth iv. 6.

Redeem Israel, O God, out of all his troubles.

Psalm xxv.

Christ redeemed us from the curse. Gal. iii. 13.

The time redeeming. Ephes. v. 16.

The Almighty from the grave

Hath me redeemed ; he will the humble save.

Sandys.

She inflamed him so That he would algates with Pyrocles fight,

And his redeemer challenged for his foe, Because he had not well maintain'd his right.

Spenser. How if, when I am laid into the tomb,

I awake before the time that Romeo

Come to redeem me ? there's a fearful point.

Shakspeare.

This feather stirs, she lives ; if it be so, It is a chance which does redeem all sorrows That ever I have felt. Id. King Lear.

I every day expect an embassage From my redeemer to redeem me hence ; And now in peace my soul shall part to heaven.

Shaktpeare.

RED

I charge you, as you hope to have redemption, That you depart, and lay no hands on me. Id.

Omega sings the exequies, And Hector's redemptory price.

Chapman'* Iliad.

Which of you will be mortal to redeem Man's mortal crime 1 Milton.

plan's friend, his Mediator, his designed Both ransom and Redeemer voluntary. Id.

Utter darkness his place Ordained without redemption, without end. Id.

When saw we thee anyway distressed, and relieved thee ? will be the question of those to whom heaven itself will be at the last day awarded, as having ministered to their Redeemer. Boyle. Redeem from this reproach my wandering ghost.

Lirifden.

The Saviour son be glorified,* Who for lost man's redemption died. Id.

The salvation of our souls may be advanced, by firmly believing the mysteries of our redemption, and by imitating the example of those primitive patterns of piety. Nelson.

REDELIV'ER, v.a. Re and deliver. Tode liver back.

I have remembrances of yours. That I have longed long to redeliver. Shakspeare.

Instruments judicially exhibited are not of the acts of courts ; and therefore may be redelivered on the demand of the person that exhibited them.

Ayliffe's Parergon .

REDEMAND', v. a. Fr. redemander. Re and demand. To demand back.

Threescore attacked the place where they were kept in custody, and rescued them : the duke rede-inands his prisoners, but receiving

excuses resolves to do himself justice. Addison.

REDEMPTION, in theology, denotes the recovery of mankind from sin and death, by the obedience and sacrifice of Christ, who on this account is called the Redeemer of the world. See THEOLOGY.

REDEMPTION, in law, a right of reentering upon lands, 8cc., that have been sold and assigned, upon reimbursing the purchase-money, with legal costs.

REDENS, REDANS, or REDANT, in fortification, a kind of indented work in form of the teeth of a saw, with salient and reentering an-gles ; to the end that one part may flank or de-fend another. See FORTIFICATION.

REDFORD, EAST. See RETFORD, EAST.

REDI (Francis), an Italian physician and naturalist, born at Arezzo in Tuscany in 1626. His learning recommended him to the office of first physician to Ferdinand II. duke of Tuscany ; and he contributed towards compiling the Dictionary of La Crusca. He wrote upon vipers and upon the generation of insects. All his works are* in Italian ; and his language is so pure that the authors of the Dictionary of La Crusca have often cited them as standards of perfection. He died in 1697.

REDI (Thomas), an eminent Italian painter, born in Florence in 1685. His historical pictures adorn the churches in Etruria. He had also an excellent style of painting portraits. He died in

1726.

REDICULUS, a deity of the Romans, whose name is derived from redire, to return. The Ro-mans erected a temple to this imaginary deity on

the spot where Hannibal retired, when after approaching Rome to besiege it, he set out on his return.

REDINTEGRATE, adj. Lat. rcdintegratus. Restored ; renewed ; made new.

Charles VIII. received the kingdom of France in flourishing estate,

being redintegrate in those principal members which anciently had been portions of the crown, and were after dissevered -t so as they remained only in homage, and not in sovereignty.

Bacon.

He but prescribes a a bare chymical purification of nitre, what I teach as a philosophical redintegrutwn of it. Boyle.

REDNITZ, a river of Franconia, formed of the Upper and Lower Retzat, which unite five miles south of Roth. Joined by the Pegnitz, near Furth, it falls into the Maine below Bam-berg, being navigable in the lower part of its course. It has long been in view to effect a communication between this river and the Altmuhl, and by this means to unite the Danube with the Rhine. Charlemagne, during his war with the Avari, actually ordered this plan to be begun upon; but his attention was soon after drawn from it by an invasion of the Saxons ; but the remains of his works are still to be seen at a village in Pappenheim. ˆ

RED'OLENT, adj. Lat. redolent. Sweet of scent.

Thy love excels the joys of wine ; Thy odours, O how redolent !

Sandy s's Paraphrase.

We have all the redolence of the perfumes we burn upon his altars. !',□□□□□□.

Their flowers attract spiders with their redolency.

Mortimer.

REDONES, a nation of ancient Gaul, mentioned by Caesar (De Bell. Gall.), among the Armorici ; who inhabited that part of the country, now called Rennes and St. Malo, in the cidevant province of Brittany.

REDOUB'LE, v. a. & v. n. Fr. redoubles Re and double. To repeat in return, or often ; to become twice as much.

So ended she ; and all the rest around

To her redoubled that her undersong. Spenser. They were

As cannons overcharged with double cracks,

So they redoubled strokes upon the foe.

Shakspeare. Macbet

If we consider that our whole eternity is to take its colour from those hours which we here employ in virtue or vice, the argument redoubles upon us, for putting in practice this method of passing away our time. Addison's Spectator.

REDOUBT', n. s. ˆ Fr. reduit, redout ;

REDOUBT'ABLE, adj. > Ital. ridotta. The out—

REDOUBT'ED. j work of a fortification ;

a fortress : redoubtable is formidable : redoubled, dreaded ; awful.

So far be mine my most redoubted lord, As my true service shall deserve your love.

Shakspeare.

Every great ship is an impregnable fort, and our safe and commodious ports are as redoubts to secure them. Bacon.

The enterprising Mr. Linton, the redoubtable rival of Mr. Tonson, overtook me. Pope.

REDOUBT, in fortification. See FORTIFICATION.

REDOUND', v. n. Lat. redunda. To be sent back by reaction ; hence, reaction or accumulated action generally : and hence to conduce to an end.

The evil, soon

Driven back, redounded, as a flood on those From whom it sprung. Milton's Paradise Lost,

Nor hope to be myself less miserable, By those I seek, but others to make such As I, though thereby worse to me redound. Milton.

As both these monsters will devour great quantities of paper, there will no small use redound from them to that manufacture. Guardian.

The honour done to our religion ultimately redounds to God the author of it. Rogers's Sermon*.

REDRESS', v. a. &tn.s.-) Fr. redresser. To

REDRES'SIVE, adj.) set right ; amend ;

relieve : relief; amendment : the adjective corresponding.

She felt with me, what I felt of my captivity, and straight laboured to redress my pain, which was her pain. Sidney.

To seek reformation of evil laws is commendable, but for us the more necessary is a speedy redress of ourselves. Hooker.

No humble suitors press to speak for right ; No, not a man comes for redress to thee.

Shakspeare. In yonder spring of roses,

Find what to redress till noon. Milton.

Grief, finding no redress, ferment and rage, Nor less than wounds immedicable, Rankle, and fester, and gangrene To black mortification. Id.

Lighter affronts and injuries Christ commands us not to redress by law, but to bear with patience.

Kettlcwell.

A few may complain without reason ; but there is occasion for redress when the cry is universal.

Davetumt.

In countries of freedom, princes are bound to protect their subjects in liberty, property, and religion, to receive their petitions, and redress

their grievances.

Swift.

The generous band.

Who, touched with human woe. i-ediessive searched Into the horrors of the gloomy jail. Thornton.

REDRUTH, a market town and parish of Cornwall, four miles west of Truro, and 263 W. S. W. of London ; being situate in the midst of many productive mines. Besides the church of St. Uny, without the town, it has several meeting-houses, and two good charity schools. Markets are held on Tuesday and Friday.

RED’SEAR, v.n. Red and sear. A term of workmen.

If iron be too cold, it will not feel the weight of the hammer, when it will not batter under the ham-mer ; and, if it be too hot, it will redsear, that is, break or crack under the hammer. Moxon.

RED’SHANK, n. s. Red and shank. A contemptuous appellation for some of the people of Scotland ; perhaps, however, soldiers with red hose.

He sent over his brother Edward with a power of Scots and redshanks unto Ireland, where they got looting. Spenser.

REDSHANK. See SCOLOPAX. RED-START. See MOTACILLA. RED’STREAK, n. s. Red and streak. An ###pple.

Fr. reduire ; Lat.

reduce. To bring

back ; bring to a

[former state ; hence

ˆrestore to order or

dominion ; sub-

There arc several sorts of redstreals .- some sorts of them have red veins running through the whole fruit, which is esteemed to give the cyder the richest tine-ture- Mortimer.

Redstreah he quaffs beneath the Chianti vine, Gives Tuscan yearly for thy Scudraore's wine.

Smith.

REDUCE', v. a.

REDUCE'MENT, n. s.

REDTJ'CER,

REDU'CIBLE, adj.

REDU'CIBLENESS, n. s.

REDUC'TION,

REDUC'TIVE, n. s. & adj. \ due ; bring into a

REDUC'TTVELY, adv. J lower state; degrade ; impair : reducement is the act of reducing ; as is reduction : tne latter being also the name of a well-known arithmetical rule : a reducer is he who reduces : reducible, possible to be reduced : the noun substantive corresponding: reductive, having the power of reducing ; something possessed of this power (see the second extract from Hale) : the adverb corresponding.

They could not learn to digest that the man, which they had so long used to mask their own appetites, should now be the reducer of them into order.

Sidney.

Abate the edge of traitors, gracious lord'. That would reduce these' bloody days again.

Shakspeare.

The navy received blessing from Pope Sixtus, and was assigned as an apostolical mission for the reducement of this kingdom to the obedience of Rome.

Bacon.

If they be our superiors, then ‘tis modesty and reverence to all such in general, at least reductively.

Hammond* It were but just

And equal to reduce me to my dust, Desirous to resign and render back All I received. Milan.

Under thee, as head supreme, Thrones, princedoms, powers, dominions, I reduce.

Id,

Left desert utmost hell, Reduced in careful watch round their metropolis.

Id.

Some will have these years to be but months ; but we have no certain evidence that they used to account a month a year ; and, if we had, yet that reduction will not serve. Hale.

Thus far concerning these reductive! by inundations and conflagrations. Id. Origin of Mankind.

Every thing visibly tended to the reduction of his sacred majesty, and all persons in their several stations began to make way and prepare for it. Fell.

A diaphanous body, reduced to very minute parts, thereby acquires many little surfaces in a narrow compass. Bofle—

Spirits of wine, by its pungent taste, and especially by its redwibleness, according to Helmont. into alkali and water, seems to be as well of a saline as a sulphureous nature.

There is nothing so bad but a man may lay hold of something about it that will afford matter of ex-cuse ; nor nothing so excellent but a man may fasten upon something belonging to it whereby to reduce it.

Tdlotson.

Other niceties, though they arc not matter of conscience, singly and apart, are yet so reductivelu ; that is, though they are not so in the abstract, they be. co-ne so by affinity and connection. L Lthwge.

The ordinary smallest measure is looked on as an unit in number, when the mind by division would induce them into less fractions. Locke.

Actions that promote society and mutual fellowship, seem reducible to a proneness to do good to others, and a ready sense of any good done by others.

South.

The most prudent part was his moderation and indulgence, not reducing them to desperation.

Arbuthnot on Coins.

REDUCTION OF EQUATIONS, in algebra, is the clearing them from all superfluous quantities, bringing them to their lowest terms, and separating the known from the unknown, trll at length only the unknown quantity is found on one side, and known ones on the other. The reduction of an equation is the last part of the resolution of the problem. See ALGEBRA.

REDUN'DANT, adj. Lat. redundant. Su-psrabrancktnt ; exuberant; superfluous.

The cause of generation seemeth to be fulness ; for generation is from redundancy: this fulness ariseth from the nature of the creature, if it be hot, and moist and sanguine ; or from plenty of food.

Bacon. His head,

With burnished neck of verdant gold, erect Amidst his circling spires, that on the grass Floated redundant. Milton's Paradise Lost.

I shall show our poet's redundance of wit, justness of comparisons, and elegance of descriptions.

Garth.

Labour ferments the humours, casts them into their proper channels, and throws off redundancies.

Addison.

Where the author is redundant, mark those paragraphs to be

retrenched ; when he trifles, abandon those passages. Watts.

REDU'PLICATE, v.a.ˆ Re and duplicate.

REDUPLICA'TION, n. s. > To double : the act

REDT/PLICATIVE, adj. j of doubling : dou-ble.

This is evident when the mark of exclusion is put ; as when we speak of a white thing, adding the reduplication, as white ; which excludes all other considerations. Digby.

Some logicians mention reduplicative propositions ; as men, considered as men, are rational creatures ; i. e. because they are men. Watts's Logick.

REDWING. See TURDUS.

REE, v. a. Belg. ree, rede. To riddle ; sift.

After malt is well rubbed and winnowed, you must then ree it over in a sieve.

Mortimer's Husbandry.

REEC'HO, v. n. Re and echu. To echo back.

Around we stand, a melancholy train,

And a loud groan reechoes from the main. Pope.

REE'CHY, adj. Corruptly formed from REEK, which see. Smoky; sooty; tanned by smoke.

Let him, for a pair of reechy kisses, Make you to ravel all this matter out. Shakspeare. The kitchen malkin pins

Her richest lockram 'bout her reechy neck. Id.

REED, n. s. -\ Sax. neot> ; Belg. ried ; REED'ED, adj. (Teut. riet. A hollow knotted REED'EN, ►► stalk or cane which grows in REED'Y. J wet grounds: hence a small

pipe or arrow : reeded, reeden, and reedy, mean

consisting of, or covered with, reeds.

\Y here houses be reedf.d, Now pare off the moss, and go beat in the reed.

Tttsstr.

Youths loomed before their parents were, Whom foul Cocytus' reedless banks enclose. May.

I'll speak between the change of man and boy With a reed voice. Shaiupeare.

A rcadian pipe, the pastoral reed Of Hermes. Milton.

The knotty bulrush next in order stood, And all within of reeds a trembling wood.

Dry den .

Honey in the sickly hive infuse Through reeden pipes. Id. Virgil's Groraick*.

When the Parthian turned his steed, And from the hostile camp withdrew ; With cruel skill the backward reeJ, He sent ; and as he fled, he flew. Prior.

The' adjoining brook, now fretting o'er a rock, Now scarcely moving through a reedy pool.

Thomson.

REEDX in botany. See Anus DO and BAMBOO. There are two sorts of reeds, says Hasselquist, growing near the N.le. One of them has scarcely any branches ; but is furnished with numerous leaves, which are narrow, smooth, channelled on the upper surface ; and the plant is about eleven feet high. The Egyptians make ropes of the leaves. They lay them in water like hemp, and then make them into good strong cables. These, with the bark of the date trees, form almost the only

cable used in the Nile. The other sort is a small reed, about two or three feet high, full-branched, with short, sharp, lancet-shaped leaves. The roots, which are thick at the stem, creep and mat themselves together to a considerable distance.

REED, a term in the wes4. of England for the straw used by thatchers, which is wheat straw finely combed, consisting of stiff, unbruised, and unbroken stalks of great length, carefully separated from the straw used for fodder by the thresher, and bound in sheaves or nitches, each of which weighs twenty-eight pounds, and are sold from 2 Is. to 31s. per hundred nitches according to the season.

REED (Isaac), a late ingenious English critic, was a native of London, and born in 1742. He was educated for the law, and in the earlier part of his life practised as a conveyancer, but eventually gave himself up entirely to the cultivation of general literature, and was the author of a History of the English Stage, prefixed to his edition of the Biographia Dramatica ; the Repository, a collection of humorous and miscellaneous pieces, 4 vols. 1783; besides superintending the publication of lady Mary Wortley Montagu's poetical effusions, and an improved edition of Dodsley's Old Plays. He is, however, most advantageously known as superintending splendid editions of Shakspeare, in 10 and subsequently in 21 vols. 8vo., of which the latter is considered the most perfect extant. As a book collector, also, he displayed considerable judgment, and had amassed a library of classical and miscellaneous literature inferior to few private ones. It occupied thirty-nine days in its disposal by pub-lic auction on his death. In addition to these literary labors, the miscellany known by the name of the European Magazine, of which he wa*

partly the owner, was for many years carried on by him. His death took place in the commencement of 1807. REED-GRASS. See

ARUHDO.

REED'IFY, v. a. Fr. reedifier, re and edify. To rebuild ; build again.

The j-EoIians, who repeopled, rectified Ilium.

Sandys.

The ruined walls he did reedify. Spenter. This monument five hundred years hath stood, "Which I have sumptuously reedijied. Shakspeare.

REEF, in nautical affairs, a certain portion of a sail, comprehended between the top or bot-tom, and a row of eyelet holes parallel thereto. The intention of the reef is to reduce the surface of the sail in proportion to the increase of the wind ; for which reason there are several reefs parallel to each other in the superior sails, whereby they may be still farther diminished, in order to correspond with the several degrees of the gale. Thus the topsails of ships are usually furnished with four reefs, and there are always three or four reefs, parallel to the bottom on those mainsails and fore sails, which are extended upon booms. The topsails are always, and the courses generally, reefed with points, which are flat braided pieces of cordage, whose lengths are nearly double the circumference of the yard. These,'being inserted in the eyelet-holes, are fixed in the sail by means of two knots in the middle. In order to reef the topsails with more facility and expedition, they are lowered down and made to shiver in the wind ; the extremities of the reef are then drawn up to the yard arms by the reef-tackle, where they are securely fastened by the earings. The space of sail comprehended in the reef is then laid smoothly over the yard, in several folds, and the whole is completed by tying the points about the yard, so as to bind the reef close up to it.

In reefing a course, the after end of the point should be thrust forward between the head of the sail and the yard; and the fore end of the same point should come aft over the head of the sail, and also under the yard ; and, thus crossed over the head of the sail, the two ends should be tied on the upper side of the yard as tight as possible. When a sail is reefed at the bottom, it is generally done with knittles in the room of points ; or in large sails, such as the mainsails of cutters, pieces of line termed reef hanks are fixed in the eyelet holes.

Captain Malcolm Cowan, R. N, made an improvement both in the construction and the reefing of sails, which renders the operation of reefing the courses more easy and expeditious, with a less number of men than the old method requires.

REEF is also a name given to the perpendicular banks of coral so often met with in the South Seas.

REEK, n. s. I Sax. nee ; Belg. reuke ; Teut.

REEK'Y. S ranch. Smoke ; steam ; vapor : reeky is smoky; tanned.

'Tis as hateful to me as the reek of a lime kiln.

Shakspeare. like men, though buried in your dunghills,

They shall be famed, for there the sun shall

them, And draw their honours neking up to heaven. Id.

Shut me in a charnel house,' O'ercovered quite with dead men's rattling bones, With reeky shanks and yellow chapless skulls. Id.

I found me laid

In balmy sweat ; which with his beams the sun Soon dried, and on the reeking moisture fed.

Milton.]\or barns at home, nor reeks are reared abroad.

Dry den.

The covered reek, much in use westward, must needs prove of great advantage in wet harvests.

Mortimer.

Love one descended from a race of tyrants, Whose blood yet reeks on my avenging sword.

Smith.

REEL, v. n., v. a., & n. s. Sax. neol ; Isl. ralu ; Swed. rasla ; Scot. rele. To roll ; stagger ; roll in walking : as a verb active, take yarn off the spindle : a turning frame, upon which yarn is wound into skeins from the spindle.

They reel to and fro, and stagger like a drunken man. Psalms.

Grope in the dark, and to no seat confine Their wandering feet, and

reel as drunk with wine.

Sandys,

Him when his mistress proud perceived to fall, While yet his feeble feet for faintness reeled, She ‘gan call, help Orgoglio ! Spenser

What news in ‘his our tottering state? ††† It is a reeling world, And I believe will never stand upright, fill Richard wear the garland. Slmkspeare

It is amiss to sit

And keep the turn of tipling with a slave, To reel the streets at noon. Id.

It may be useful for the reeling of yarn. Wilkiru.

He with heavy fumes opprest, Keeled from the palace, and retired to rest. Pope.

Should he hide his face, The’ extinguished stars would loosening reel Wide from their spheres. ThinKton.

My heart turned sick, my brain grew sore, And throbbed awhile, then beat no more : The skies spun like a mighty wheel ; I saw the trees like drunkards reel. Byron.

REELECTION, n. s. Re and election. Repeated election.

Several acts have been made, and rendered ineffectual, by leaving the power of reelection open.

Swift.

REELING, in the manufactories, the winding of silk cotton, &c. into a skain, or upon a button, to prevent its entangling. It is also used for the charging or discharging of bobbins, or quills, to use them in the manufacture of different stuffs, as thread, silk, cotton, &c.

REENACr, v.a. Re and enact. To enact anew

Tiie construction of ships was forbidden to senators, by a law made by Claudius the tribune, and reeitacted by the Julian law of concessions.

Arbulhnot.

REENFORCE’, v. a. Re and enforce. To strengthen with new assistance or support. The French have reinforced their scattered men.

Shattsptare. Alone he entered The mortal gate o’ the city, which he painted

With shunless destiny ; aidless came off. And with a sudden reenforcement struck Cbrioli like a planet. Id. Citriolanus.

They used the stones to reenforce the pier.

Hay ward. What reenforcement we may gain from hope.

Milt mi.

The presence of a friend raises fancy, and reenforces reason. Collier.

The words are a reiteration or reenforcement of a corollary. Ward.

REENJOY’, v. a. Re and enjoy. To enjoy anew or a second time.

The calmness of temper Achilles reenjoyed is only an effect of the revenge which ought to have preceded. Pope.

REENTER, v. a. Re and enter. To enter again ; to enter anew.

With opportune excursion, we may chance Reenter heaven. Milton.

The fiery sulphureous vapours seek the centre from whence they proceed ; that is, reenter again.

Mortimer’s Husbandry.

REENTHRONE’, v. a. To replace in a throne.

He disposes in my hands the scheme To reenthrone the king. Southern.

REENTRANCE, n. s. Re and entrance. The act of entering again.

Their repentance, although not their first entrance, s notwithstanding the first Step of their reentrance into life. Hooker.

The pores of the brain, through the which the spirits before took their course, are more easily opened to the spirits which demand reentrance.

Glanville's Scepsis.

REEPHAM, a parish and market town of Norfolk seated on the river Eyne, thirteen miles north-west from Norwich, and 113 north by east from London. It is remarkable for having had anciently three churches, one in Reepham, another in Whitwell, and another in Hacton, two villages adjoining, all in one churchyard ; the two for-mer were long ago demolished, and the latter was burnt down, together with the greater part of the town, about the year 1500. The chief trade of this little town is in malt, and the market is held on Saturday.

REES (Abraham), D.D., F.R.S., and F.L.S. a late dissenting clergyman of distinguished literary and scientific rank, was the son of a nonconformist minister of the principality, and was born at, or in the neighbourhood of, Montgomery, in 174 3. He was first placed under Dr. Jenkins of Carmarthen, and afterwards at the Hoxton Academy founded by Mr. Coward, where his progress was so rapid that in his nineteenth year he was appointed mathematical tutor to the institution, and soon after resident tutor, in which capacity he continued upwards of twenty-two years. In 1768 he became pastor of the presbyterian congregation of St. Thomas's Southward, and continued in that situation till 1783, when he accepted an invitation to become minister of a congregation in the Old Jewry, with which he remained till his death. On the establishment of the New Dissenting College at Hackney, in 1786, Dr. Rees, vwho had seceded from Hoxton two years before, was e.ected to the situation of resident tutor in the natural sciences, which he held till the dissolution of the academy, on the death of Dr. Kippis. But Dr. Rees, though esteemed throughout his long life, as an able and learned Arian divine, was principally and most advantageously known in his literary capacity. In 1776 he was applied to by the proprietors of Chambers's Cyclopaedia as the person best qualified to superintend a new and enlarged edition of that compila-tion, which, after nine years' labor, he completed in four folio

volumes. After this the proprietors and our author projected a much improved edition ; and he had the satisfaction to see the Cyclopaedia, now generally known by his name, proceed with credit from the publication of its first volume in 1802 to its completion in forty-five volumes, 4to. His other works are, Economy Illustrated and Recommended, 1800 ; Antidote to the Alarm of Invasion, 1805; Practical Sermons, 2vols. 8vo., 1809---1812; The Principles of Protestant Dissenters stated and vindicated ; and a variety of occasional Sermons. Dr. Rees, we are told, obtained his diploma from the university of Edinburgh at the express recommendation of Dr. Robertson the historian. His death took place June 9th, 1825.

REESTAB'LISH, v. a. Re and establish. To establish anew.

To reestablish the right of lineal succession to paternal government is to put a man in possession of that government which his fathers did enjoy. Locke.

Peace, which hath for many years been banished the Christian world, will be speedily reestablished.

Smalridge.

The Jews made such a powerful effort for their reestablishment under Barchocab, in the reign of Adrian, as shook the whole Roman empire.

Addison.

REEVE, n. s. Sax. jenepa. A steward. Obsolete.

The reeve, miller, and cook, are distinguished.

Dry den.

REEVE (Clara), an ingenious modern autho-ress, was born at Ipswich in 1738. She possessed considerable learning, which she displayed in a translation of Barclay's Latin Romance of Argenis, published under the title of the Phoenix, or the History of Polyarchus and Argenis, 4 vols. 12mo., 1772; and the Progress of Romance. Her other works are, The Old English Baron ; The Two Mentors, a modern Story ; The Exile ; The School for Widows; A Plan of Education, and Memoirs of Sir Roger de Clarendon, 4 TO!S. She died at Ipswich in 1806.

REEXAM'INE,t;. a. Re and examine. To examine anew.

Spend the time in reexamining more duly your cause. Hooker.

RE-EXCHANGE, in commerce, a second payment of the price of exchange, or rather the price of a new exchange due upon a bill of exchange that is protested, and refunded the bearer by the drawer or indorser.

REFECT, v.a.) Lat. refectus. To re—

REF'ECTORY, n. s. $ fresh ; to restore after hunger or fatigue : an eating-room. Not in use.

A man in the morning is lighter in the scale, because in sleep some pounds have perspired ; and it also lighter unto himself, because he is refected. Browne's Vulgar JErrowi,

After a draught of wine, a man may seem lighter in himself from sudden refection, though he be heavier in the balance, from a ponderous addition.

Browne.

He cells and refectories did prepare. And large provisions laid of winter fare.

Dryden.

Fasting is the diet of angels, the food and refection of souls, and the richest aliment of grace. South.

For sweet refection due, The genial viands let my train renew. Pope.

REFECTION, among ecclesiastics, is a spare meal or repast, for the support of life : hence the hall in convents, and other communities, where the monks, nuns, &c., take their refections or meals in common,

is called the refectory.

REFEL’, v. a. Lat. refello. To refute ; to repress.

Friends, not to refel ye Or any way quell yer Ye aim at a mystery, . Worthy a history. Ben Jonson’s Gypsies.

It instructs the scholar in the various methods of discovering and refelling the subtile tricks of sophis-ters. Watts.

REFER’, v. a. & v. n. \ Fr. referer ; Lat.

REFEREE’, n. s. / refero. To send for

REF’ERENCE, > information or decisi—

REFEREN’DARY. i on ; reduce to a class

REFER’RIBLE, ndj. J or end ; as a verb-neuter, to respect ; appeal : a referee is one to whom reference is made : as also is (obsolete) referendary ; reference is dismission or deference to anotner tribunal ; relation; respect: referrible, capable of reference.

The knowledge of that which man is in reference unto himself, and other things in relation unto man, I may term the mother of all those principles which are decrees in that law of nature, whereby human actions are framed. Hooker.

The heir of his kingdom hath referred herself unto a poor but worthy gentleman. Shakspcare.

Jupiter was the son of ˆEther and Dies ; so called, because the one had reference to his celestial conditions, the other discovered his natural virtues.

Raleigh’s History of the World.

You profess and practise to refer all things to yourself. Bacon.

In suits it is good to refer to some friend of trust ; but let him chuse well his refei endaries.

Bacon’s Essays.

Unto God all parts of mine are alike, unto whom none are more referrible, and all things present, unto whom nothing is past or to come, but who is the same yesterday, to-day, and to-morrow. Browne.

The salts, predominant in quicklime, we refer ra-ther to lixivate, than acid. Boyle on Colours.

Christian religion commands sobriety, temperance, and moderation, in reference to our appetites and passions. Tillotson.

Referees and arbitrators seldom forget themselves.

L’ Estrange.

Of those places that refer to the shutting and opening the abyss, I take notice of that in Job.

Burnet.

It passed in England without the least reference hither. Swift.

i.EFERMENT’, v. a. Re and ferment. To ferment anew.

The’ admitted nitre agitates the flood, Revives its fires, and referments the blood.

Blackmore. VOL. XVIII.

REFINE’, v. n. & v. n.ˆ Fr. raffiner. Tc

REFI’NEDLY, adv. { purify; clear;

REFINE’MENT, n. s. (make subtle, ele—

REFJ’NEK. -Jgant, or accurate:

as a verb neuter, to improve in accuracy or delicacy; grow pure; affect nicety or scrupulous-ness : the adverb and noun substantives corresponding.

I will refine them as silver is refined, and will try them as gold is tried. Zechariah xiii. 9.

The rejiners of iron observe that that iron stone is hardest to melt which is fullest of metal ; and that easiest which has most dross. Bacon.

Queen Elizabeth’s time was a golden age for a world of refined wits, who honoured poesy with their pens. Peacham.

Love refines the thought, and hath his seat

In reason. Milton

Chaucer refined, on Boccace, and mended his stories. Dryden.

Will any dog

Refinedly leave his bitches and his bones

To turn a wheel 1 Id.

The red Dutch currant yields a rich juice to be diluted with a quantity of water boiled with refinea sugar. Mortimer.

The more bodies are of kin to spirit in subtilty and refinement, the more diffusive are they. Norris.

The pure limpid stream, when foul with stains, Works itself clear, and as it runs refines. Addison.

The flirts about town had a design to leave us in the lurch, by some of their late refinements. Id.

No men see less of the truth of things, than these great refiners upon incidents, who are so wonderfully subtle, and over-wise in their conceptions.

Id. Spectator.

The rules religion prescribes are more successful in public and private affairs than the refinements of irregular cunning. Roger*.

He makes another paragraph about our refining in controversy, and coming nearer still to the church of Rome. Atterbury.

Let a lord but own the happy lines ; How the wit brightens, how the sense refines !

Pope.

The same traditional sloth which renders the bodies of children, born from wealthy parents, weak, may perhaps refine their spirits. Swift.

From the civil war to this time, I doubt whether the corruptions in our language have not equalled its refinements. Id.

Some refiner* pretend to argue for the usefulness of parties upon such a government as ours. Id.

The religion of the gospel is only the refinement and exaltation of our best faculties. Law.

She judges of refinement by the eye, He by the test of conscience, and a heart Not soon deceived ; aware that what is base No polish can make sterling. Cowper.

REFINING, in metallurgy, is the purifying metals from any accidental alloys with which they may be mixed. Gold, having the property which no other metal has of resisting the action of sulphur, antimony, nitrous acid, and muriatic acid, may be purified by these agents from all other metallic substance's. These operations are distinguished by proper names, as purification of gold by antimony, parting, concentrated parting, dry parting. See ASSAYING and PARTING. As silver has also the property, which the less valuable metals have not, of resisting the action ot nitre, it may be refined by this salt : but the term refining is chiefly applied to the purification of

gold and silver by lead in the cupel. This is performed by the destruction, vitrification, and scorification, of all the extraneous and destructi-ble metallic substances with which they are alloyed. As gold and silver alone can resist the combined action of air and fire, there is a possibility of purifying gold and silver from all alloy of the other metals merely by the action of fire and air ; only by keeping them fused till all the alloy be destroyed ; but this purification would be very tedious and expensive, from the great consumption of fuel. Silver alloyed with copper has been exposed above sixty hours to a glass-house fire without being perfectly refined : the reason is, that, when a small quantity only of other metal remains united with gold or silver,

it is protected from the action of the air, which is necessary for its combustion. This refining of gold and silver merely by the action of fire, which was the only method anciently known, was very tedious, difficult, expensive, and imperfect ; but a much shorter and more advantageous method has been long practised. This consists in adding to the alloyed gold and silver a certain quantity of lead, and in exposing this mixture to the action of fire. The vessel in which the refining is performed is hollowed, but shallow, that the matter which it contains may present to the air the greatest surface possible. This form resembles that of a cup, and hence it is called a cupel. The surface ought to be vaulted, that the heat may be applied upon the surface of the metal during the whole time of the operation. Upon this surface a crust of dark colored pellicle is continually forming. In the instant when all the other metals are destroyed, the surface of the gold and silver is seen, and appears clean and brilliant. By this mark the metal is known to be refined. If the operation be so conducted that the metal sustains only the precise degree of heat necessary to keep it fused before it be perfectly refined, it fixes or becomes solid all at once in the very instant of the coruscation ; because a greater heat is required to keep gold or silver in fusion when they are pure than when alloyed with lead. The operation of refining may be performed in small or in large quantities, upon the same principles, but only with some differences in the management. As the refining of small quantities of gold and silver is performed in the same manner as these metals are assayed, the assay being only a very accurate refining, we refer to the articles ASSAYING and METALLURGY.

REFIT', v. a. Fr. refait. Re and fit. To repair ; to restore after damage.

Permit our ships a shelter on your shores, Refitted from your woods with planks and oars.

Dryden.

He will not allow that there are any such signs of art in the make of the present globe, or that there was so great care taken in the refitting of it up again at the deluge. Woodward.

REFLECT v. a. & v. n.-\ Lat. reflecto. To

REFLEC'TENT, adj. I throw or bend back ;

REFLEC'TION, n. s. V throw back light ;

REFLEC'TIVE, adj. i bend back; throw

REFLEC’TOR, n. s. ./back thought; consider ; throw reproach or censure : reflectent is

bending or flying back ; reproachful : reflection, the act of reflecting in any way ; that which is reflected ; consideration ; censure : reflective, throwing back ; applied both to literal images and thought : reflector, he who reflects or considers.

In dead men’s sculls, and in those holes, Where eyes did once inhabit, there were crept, As ‘twere in scorn of eyes, reflecting gems.

Sliakspeare.

The eye sees not itself,

But by reflection from other things. Id.

She shines not upon fools, lest the reflection should hurt her. Id.

We, his gathered beams

Reflected, may with matter sere foment. Milton. The imagination casts thoughts in our way, and forces the understanding to reflect upon them,

❖❖❖ Duppa.

The ray descendant, and the ray reflectent, flying with so great a speed that the air between them can-not take a formal play any way, before the beams of the light be on both sides of it ; it follows, that, according to the nature of humid things, it must first only swell. Digby on the Soul.

In every action reflect upon the end ; and, in your undertaking it, consider why you do it. Taylor.

Who saitb, who could such ill events expect? With shame on his own counsels doth reflect.

Denham.

The three first parts I dedicate to my old friends, to take off those melancholy reflections which the sense of age, infirmity, and death may give them.

Id.

There is scarce any thing that nature has made, or that men do suffer, whence the devout reflector cannot take an occasion of an aspiring meditation. Boyle on Colours. Bodies close together reflect their own colour.

Dryden.

Errors of wives reflect on husbands still. Id. This dreadful image so possessed her mind, She ceased all farther hope ; and now began To make reflection on the unhappy man. Id.

When the weary king gave place to night, His beams he to his royal brother lent, And so shone still in his reflective light. Id. When men are grown up, and reflect on their own minds, they cannot find any thing more ancient there than those opinions which were taught them before their memory began to keep a register of their actions. Locke.

Reflection is the perception of the operations of our own minds within us, as it is employed about the ideas it has got. Id.

This delight grows and improves under thought and rejkctim ; and, while it exercises, does also en-dear itself to the mind ; at the same time employing and inflaming the meditations. South's Sermons.

It is hard that any part of my land should be settled upon one who has used me so ill ; and yet I could not see a sprig of any bough of this whole walk of trees, but I should refleci upon her and her severity. Addison't Spectator

Into myself my reason's eye I turned ; And, as I much reflected, much I mourned. Prior.

He died ; and oh ! may no reflection shed Its pois'nous venom on the royal dead. Id.

In the reflective stream the sighing bride, Viewing her charms impaired, abashed shall hide Her pensive head. Id.

Inanimate, matter moves-always in a straight line, and never reflects in an angle, nor bends in a circle, which is a continual reflection, unless either by some

external impulse, or by an intrinsick principle of gravity. Bentley's Sermons.

What wounding reproaches of soul must he feel, from the reflections on his own ingratitude. Rogers.

Job's reflections on his once flourishing estate did at the same time afflict and encourage him.

Atierbury.

If the sun's light consisted but of one sort of rays, there would be but one colour, and it would be impossible to produce any new by reflections or refractions. Chetjne.

Neither do I reflect in the leist upon the memory of his late majesty, whom I entirely acquit of any imputation. Swift.

REFLECTING TELESCOPES. See OPTICS and TELESCOPES.

REFLECTION OF LIGHT. See OPTICS.

REFLECTING CIRCLE, an instrument for measuring angles to a very great degree of accuracy. It was invented by Mayer of Gottingen, principally with a view to do away the errors of the divisions of the limb ; and has since been much improved by the Chevalier de Borda, and M. J. H. de Magellan. See NAVIGATION.

RE'FLEX, adj. & n. s. -\ Lat. reflexus.

REFLEXIBIL'ITY, n. s. I Backward ; back—

REFLEX'IBLE, adj. \ ward direction :

REFLEX'IVE, adj. i reflexibility i? the

REFLEX’IVELY, adv.) quality of being

reflexible : reflexible, capable of being thrown back : reflexive, thrown backwards : the adverb corresponding.

There was no other way for angels to sin, but by reflex of their understandings upon themselves.

Hooker. I’ll say yon gray is not the morning’s eye,

‘Tis but the pale reflex of Cynthia’s brow.

Shakspeare.

That assurance reflexive cannot be a divine faith, but at the most an human, yet such as perhaps I may have no doubting mixed with. Hammond.

The motions of my mind are as obvious to the re-Jler act of the soul, or the turning of the intellectual eye inward upon its own actions, as the passions of my sense are obvious to my sense ; I see the object, and I perceive that I see it. Hale.

Solomon tells us life and death are in the power of the tongue, and that not only directly in regard of the good or ill we may do to others, but reflexively also in respect of what may rebound to ourselves. Government of the Tongue.

Eeflexibility of rays is their disposition to be reflected or turned back into the same medium from any other medium, upon whose surface they fall ; and rays are more or less reflexible which are turned back more or less easily. Newton.

The order and beauty of the inanimate parts of the world, the discernible ends of them, do evince by a reflex argument that it is the workmanship, not of blind mechanism or blinder chance, but of an intelligent and benign agent. Bentley.

Sir Isaac Newton has demonstrated, by convincing experiments, that the light of the sun consists of rays differently refrangible and reflerible ; and that those rays are differently rejler’Me that are differently refrangible. Cheyne.

REFLOAT’, n. s. Re and float. Ebb; reflux. The main float and refloat of the sea is by consent of the universe, as part of the diurnal motion.

Bacon.

REFLOUR'ISH, v. a. Re amd flourish. To flourish anew.

Viitue given for lost

Revives, reflourhhes, then vigorous most, When most unactive deemed. Milton'* Agonutet,

REFLUENT, adj. Lat. refluent. Running back ; flowing back.

Tell, by what paths,

Back to the fountain's head the sea conveys The refluent rivers, and the land repays. BUickmore.

The liver receives the refluent blood almost f ro n all parts of the abdomen. Arbuthnot.

RE'FLUX, n. s. Fr. reflux ; Lat. refluxus. Backward course.

Besides

Mine own that bide upon me, all from me Shall with a fierce reflux on me redound. Milton.

The variety of the flux and reflux of Euripus, or whether the same do ebb "and flow seven times a day, is incontrovertible. Browne.

REFORM', v.a. & v.n.ˆi Fr. reformer ; REFORMATION, n. s. > Lat. reformo. To REFORM'ER. J form on a better

model ; change from worse to better : reformation is the act of so changing; applied particularly to the religious change of several European nations from popery in the sixteenth century : y reformer is one who effects a beneficial change of things or persons ; one who particularly promoted the Protestant Reformation.

A sect in England, following the very same rule of policy, seeketh to re/brmeven the French reformation, and purge out from thence all dregs of popery.

Hooker

Never came reformation in a flood With such a heady current,

scowering faults ; Nor ever Hydra-headed wilfulness So soon did lose his seat, as in this king.

Shakspeare.

Our first reformers were famous confessors and martyrs all over the world-Bacon.

Public reformers had need first practise that on their own hearts which they purpose to try on others.

King Charles. May no such storm Fall on our times, where ruin must reform.

Denham.

Seat worthier of Gods was built With second thoughts, reforming what was old.

Milton.

Now lowering looks presage approaching storms, And now prevailing love her face reforms. Dryden. Satire lavishes vice into reformation. Id.

One cannot attempt the perfect reforming the languages of the world, without rendering himself ridiculous. Locke.

The complaint is more general than the endeavours to redress it : abroad every man would be a reformer, how very few at home ! Sprat.

It was honour enough to behold the English churches reformed ; that is, delivered from the reformers. South.

The pagan converts mention this great reformation of those who had been the greatest sinners, with that sudden and surprising change which the Christian religion made in the lives of the most profligate.

Addison.

Was his doctrine of the mass struck out in this conflict 1 or did it give him occasion of reforming in ??? his point? Atterbury.

The burden of the reformation lay on Luther’s snoulders. Atterbury.

The example alone of a vicious prince will corrupt an ace ; but that of a good one will not reform it.

REFORMATION.

REFORMATION. Amid the corruptions of the Christian church, from its first aberration from the simplicity of the gospel down to the council of Trent, there have ever been those who exhibited ‘ the faith and patience of the saints :’ and to these persons, who amid persecution, and contempt, and neglect, were indeed the salt of the earth, we are indebted, under God, for those efforts which, after many conflicts and trials, terminated in the reformation of the Christian profession in the sixteenth century ; and divested it of that gorgeousness, extravagance, and ceremonial formality, by which its purity and spirituality had been long obscured, and well nigh obliterated. The conflicts between truth and error, light and darkness, had endured, with more or less of violenc* and alternate success, from the time of Paulinus of Apulia to that of Wickliff; and thence down to those of the great Luther. It is true the powers of ignorance and of a corrupt religion held the minds of mankind in the deepest thraldom ; and few, comparatively, were those who felt their moral degradation, and sigh-ed after a holier and a more pure faith : yet were these few ‘ valiant for the truth,’ ‘ not counting ‘-heir lives dear unto themselves.’ Of these many who adhered to the gospel, and remained uncor- -upted amidst the growth of superstition; who deplored the miserable state to which Christianity was reduced by the alteration of its divine doctrines, and the vices of its profligate ministers ; opposed with vigor the tyrannical ambition both of the lordly pontiff and the aspiring bishops; and in some provinces privately^ in others openly, attempted the reformation of a corrupt and idolatrous church, and of a barbarous and superstitious age. This was, indeed, bearing witness to the truth in the noblest manner.

Before, however, we enter on a review of the various attempts which were thus made to cor- >ect the abuses of the Roman church, it will be ###lecessary to take a survey of its actual state, at the period to which we refer. That authority, to which the church could lay no claim for the purity of its members, was supported by its arrogant

pretensions ; availing itself of all notions, accidents, practices, and frauds, from which any advantage could be derived, till the whole monstrous accumulation assumed a coherent form, which well deserves to be called ‘ the mystery of iniquity.’ The scriptures, even in the Latin version, had long become a sealed book to the people : and the Roman see, in proportion as it extended its supremacy, discouraged or proscribed the use of such vernacular versions as existed. This it did, not lest the ignorant and half informed should mistake the sense of Scripture, nor lest the presumptuous and the perverse should deduce new errors in doctrine, and more fatal consequences in practice, from its distorted language ; but in the secret and sure consciousness that what was now taught as Christianity was not to be found in the written word of God. In maintenance of the dominant system, tradition,

or the unwritten word, was set up. This had been the artifice of the earliest heretics, who, when they were charged with holding doctrines not according to scripture, affirmed that some things had been revealed which were not committed to writing, but were orally transmitted. The pharisees before them pleaded the same supposititious authority for the formalities which they superadded to the law, and by which they sometimes superseded it, ‘ making the word of God of none effect,’ as our Saviour himself reproached them ; upon this ground the Romish clergy justified all the devices of man’s imagination with which they had corrupted the ritual and the faith of the western churches.

At one time relics, or entire bodies, used to be carried about the country and exhibited to the credulous multitude ; but this gainful practice gave occasion to such scandalous impostures that it was at length suppressed ; but what is still encouraged is sufficiently disgraceful to the Romanists.

I. State of the Romish church.❖❖❖ A. review of the then existing state of the Romish faith and practice will, at once, justify the efforts of those who sought to reform their abuses and restore the purity of its doctrine and discipline. The bodies of the saints were, at times, exposed in their churches, some dried and shrivelled, others reduced to a skeleton, clothed either in religious habits or in the most gorgeous garments ; ❖❖❖ a spectacle as ghastly as the superstition itself is degrading! The poor fragments of mortality, a scull, a bone, or the fragment of a bone, or tooth, or a tongue, were either set or mounted, according to the size, in gold or silver ; deposited in costliest shrines

of the finest workmanship, and enriched with the most precious gems. Churches soon began to vie with each ether in the number and variety of these imaginary treasures, which were sources of real wealth to their posessors : the instruments of our Lord's crucifixion were shown (the spear and the cross hav-ing, so it was pretended, been miraculously discovered) ; the clothes wherein he was wrapt in infancy ; the manger in which he was laid ; the vessels in which he converted water into wine at the marriage feast ; the bread which he brake at the last supper; his vesture, for which the soldiers cast lots. Such was the impudence of Ro-mish fraud, that portions were produced of the burning bush, of the manna which fell in the wilderness, of Moses's and Samson's honeycomb, of Tobit's fish, of the bkssed Virgin's milk, and of our Saviour's blood ! Enormous prices were paid by sovereigns for such relics; it was deem-ed excusable, not to covet merely, but to steal them ; and if the thieves were sometimes miraculously punished they were quite as often enabled by miracle to effect the pious robbery, - and bring the prize in triumph to the church for which it was designed. In the rivalry of deceit which the desire of gain occasioned, it often happened that the heud of the same saint was

shown in several churches, each church insisting that its own was genuine, and all appealing to miracles as the test. Sometimes the dispute was accomplished in a more satisfactory manner, by asserting a miraculous multiplication, and three whole bodies of one person have been shown ; the dead saint having tripled himself to terminate a dispute between three churches at his funeral ! The catacombs at Rome were an inexhaustible mine of relics.

With the reverence which was paid to relics, arising thus naturally at first, and converted by crafty priests into a source of lucre, saint worship grew up. If such virtue, resided in their earthly and perishable remains, how great must be the power wherewith their beatified spirits were invested in heaven ! The Greeks and Romans attributed less to their demigods than the Catholic church has done to those of

its members who have received their apotheosis. They were invoked as mediators between God and man; individuals claimed the peculiar protection of ××× hose whose names they had received in baptism ; and towns, and kingdoms, chose each their tutelary saint. But, though every saint was able to avert all dangers and heal all maladies, each was supposed to exert his influence more particularly :‘n some specific one, which was determined by vhe circumstances of his life or martyrdom, the accidental analogy of a name, or by chance and custom if these shadows of a cause were wanting. The virtue which they possessed they imparted to their images, in which, indeed, it was affirmed that they were really and potentially present, partaking of ubiquity in their beatitude. Church vied with church, and convent with convent, in the reputation of their wonder-working images, some of which were pretended to have been made without hands, and some to have descended from heaven ! But the rivalry of the monastic orders was shown in the fictions wherewith they filled the histories of their respective founders and worthies. While the monastic orders contended ×××with each other in exaggerating the fame of their deceased patriarchs, each claimed the Virgin Mary for its especial patroness. Some peculiar favor she had bestowed upon each ; she had appointed their rule of life, or devised the pattern of their habits, or enjoined them some new practice of devotion, or granted them some singular privilege. She had espoused their founder with a ring, or fed him like a babe at her breast. All therefore united in elevating her to the highest rank in the mythology of the Romish church ××× for so, in strict truth, must this enormous system of fa-ble be designated. They traced her in types throughout the Old Testament : She was the tree of life ; the ladder which Jacob had seen leading from heaven to earth; the rod which brought forth buds and blossoms, and produced fruit ; the ever burning bush ; the ark of the covenant ; the fleece upon which alone the dew of heaven descended. And though, indeed, being subject to death, she paid the common tribute of mortality; yet, having been born without sin, she expired without suffering, and her most holy body, loo pure a thing to see corruption, was translated immediately to heaven, there to be glorified. Her image was to be found in every church throughout Christendom ; and she was worshipped un-der innumerable appellations, * devotees believing that the one which they particularly affected was that to which the object of their adoration most willingly inclined her ear. By such representations and fables, the belief of the people became so entirely corrupted that Christ, instead of being regarded as our mediator and Redeemer, appeared to them in the character of a jealous God, whom it behoved them to propitiate through the mediation of his virgin mother; for through her alone could mercy and salvation be obtained.

The pantheon, which Agrippa had dedicated to Jupiter and all the gods, was by the pope, who converted it into a church, iBscribed to the blessed Virgin, and all the saints. The consequence of this persuasion brought into full view the weakness and strength of human nature; in some respects they degraded it below the beasts. The dearest and holiest ties of nature and society were set at nought by those who believed that the way to secure their own saltation was to take upon themselves the obligations of a monastic life. They regarded it as a merit to renounce all intercourse with their nearest friends and kin ; and, being by profession dead to the world, rendered themselves, by a moral suicide, dead in reality to its duties and affections. For the sake of saving their own souls, or of attaining a higher seat in the kingdom of heaven, they sacrificed, without compunction, the feelings, and, as far as depended upon them, the welfare and happiness of a wife, parent, or child ; yet when the conversion of others was to be promoted, these very persons, it is but justice to add, were ready to encounter any danger and to offer up their lives, not in doing good to others, but in inflicting the greatest possible quantity of discomfort and ac-tual suffering upon themselves. It was deemed meritorious to disfigure the body by neglect and filth, to attenuate it by fasting and watchfulness, to lacerate it with stripes, and to fret the wounds with cilices of horse hair. Linen was proscribed among the monastic orders ; and the use of the warm bath, which, being not less conducive to health than to cleanliness, had become general in all the Roman pi evinces, ceased throughout Christendom ; because, according to the morality of the monastic school, cleanliness itself was a luxury, and to procure it by pleasurable means was a positive sin. There were some saints who never washed themselves, and made it a point of conscience never to disturb the vermin who were the proper accompaniments of such sanctity ; in as far as they occasioned pain while burrow-ing ; or, at pasture, were increasing the stock of the aspirant's merits. The act of eating they made an exercise of penance, by mingling" whatever was most nauseous with their food. They bound chains round the body which ate into the flesh ; or fastened graters upon the breast and back ; or girded themselves with bandages of bristles intermixed with points of wire. Cases of horrid self-mutilation were sometimes discovered; and many perished by a painful and lingering suicide, believing that, in the torments which they inflicted upon themselves, they were offering an acceptable sacrifice to their Creator. Some be-came famous for the number of their daily ge-438

nuflections ; others for immersing themselves to the neck in cold water during winter while they recited the psalter. Thus there was created a largeand accumulating fund of good works, which, though supererogatory in the saints, were nevertheless not to be lost. The redemption which had been purchased for fallen man was held to be from external punishment only ; sin was not, therefore, to go unpunished, even in repentant sinners who had confesssed and received absolution. The souls of baptised children, it was held, passed immediately to heaven : but for all others,' ex-cept the few who attained to eminent holiness in their lives, purgatory was prepared ; a place, according to the popular belief, so near the region of everlasting torments, though separated from it, that the same fire pervaded both ; acting indeed to a different end, and in different degrees, but even in its mildest effect inflicting sufferings more intense than heart could think or tongue express, and enduring for a length of time which was left fearfully indefinite. Happily for mankind, the authority of the pope extended over this dreadful place. The works of supererogation were at his disposal, and his treasure was inexhaustible, because it contained an immeasurable and infinite store derived from the atonement. One drop of the Redeemer's blood being sufficient to redeem the whole human race, the rest which had been shed during the passion was given as a legacy to be applied in mitigation of purgatory, as the popes in their wisdom might think fit. So they in their infallibility declared, and so the people believed ! The popes were liberal of this treasure.

If they wished to promote a new practice of devotion, or encourage a particular shrine, they granted to those who should perform the one or visit the other an indulgence, that is a dispensation for so many years of purgatory ; sometimes for shorter terms, but often by centuries, or thousands of years, and in many cases the indulgence was plenary ••• a toll ticket entitling the soul to pass scot free. All persons, however, could not perform pilgrimages; and even the accommodating device of the church, which promised large indulgences for saying certain prayers before the engraved portrait of a miraculous image, was liable in numerous instances to be frustrated. The picture might not find its way to remote places, the opportunity of acquiring it might be neglected, or it might remain in the possession of its unthinking owner, a forgotten thing. The Romish church, in its infinite benevolence, considered this, and therefore sold indulgences, making the act of purchasing them, and thus contributing to its wants, a merit of itseff sufficient to deserve so inestimable a reward. It was taught, also, that merits were transferrible by gift or purchase : under this

persuasion large endowments were bestowed upon convents, on condition that the donor should partake in the merits of the community ; and few persons, who had any property at their own disposal, went out of the world without bequeathing some of it to the clergy for saying masses, in number proportioned to the amount of the bequest, for the benefit of their souls. The wealthy founded chantries, in which service was to be performed

for ever, to this end. Thus were men taught to put their trust in riches ; their wealth, being thus invested, became available to them beyond the grave ; and in whatever sins they indulged, provided they went through the proper forms and obtained a discharge, they might purchase a free passage through purgatory, or, at least, an abbreviation of the term and a mitigation of its torments while they lasted. But purgatory was not the only invisible world over which the authority of the church extended ; for to the pope, as to the representative of St. Peter, it was pretended that the keys of heaven and hell were given ; a portion of this power was delegated to every priest, and they inculcated that the soul which departed without confession and absolution, bore with it the weight of its deadly sins to sink it to perdition.

Of all the practices of the Romish church this is the one which has proved most injurious to religion and morals; and, if it be regarded in connexion with the celibacy of the clergy, the cause will be apparent why the state of morals is generally so much more corrupt in Catholic than in Protestant countries. Tables were actually set fortb, by authority, in which the rate of absolution for any imaginable crime was fixed, and the most atrocious might be committed with spiritual impunity for a few shillings. The church of Rome appears to have delighted in inting as well as in abos-ng human credulity, and to have pleased herself with discovering how far it was possible to subdue and degrade the human intellect, as an eastern despot measures his own greatness by the servile prostration of his subjects. If farther proof than has already appeared were needful, it would be found in the prodigious doctrine of transubstantiation. Strange as it may appear, the doctrine had become popular with the people for its very extravagance with the clergy because they grounded upon it their loftiest pretensions ; for if there were in the sacrament this actual and entire sole presence, which they denoted by the term transubstantiation, it followed thatdivine worship was something more than a service of prayer and thanksgiving an actual sacrifice was performed in it, wherein, they affirmed, the Saviour was

again offered up, in the same body which had suffered on the cross, by their hands. The priest, when he performed this stupendous function of his ministry, had before his eyes, and held in his hands, the maker of heaven and earth ; and the inference which they deduced from sa blasphemous an assumption was that the clergy were not to be subject to any secular authority, seeing that they could create God their Creator ! Let it not be supposed that the statement is in the slightest part exaggerated : it is delivered faithfully in their own words. If, then, such were the power of the clergy, even of the meanest priest, \vhat must be attributed to their earthly head, the successor of St. Peter? They claimed for him a plenitude of power; and it has been seen that he exercised it over the princes of Christendom in its fullest meaning According to the canons the pope was as far above all kings as the sun is greater than the moon. He was king of kings and lord of lords, though he subscribed himself the servant ot scr-R E I O R M A T I O N.

vants. The immediate and sole rale of the whole world belonged to him, by natural, jnoral, and divine right ; all authority depending upon him. As supreme king, he might impose taxes upon all Christians ; and the popes declared it was to be held as a point necessary to salvation, that every human creature is subject to the Ro-man pontiff. That he might lawfully depose kings was averred to be so certain a doctrine that it could only be denied by madmen, or through the instigation of the devil ; it was more pernicious and intolerable to deny it than to err concerning the sacraments. All nations and kingdoms were under the pope's jurisdiction ; for to him had God delivered over the power and dominion in heaven and earth. Nay, he might take away kingdoms and empires, with or without cause, and give them to whom he pleased, though the sovereign whom he should depose were, in every respect, not merely blameless but meritorious. It was reason enough for the change that the pope deemed it convenient. The spouse of the church was vice-God : men were commanded to bow at his name, as at the name of Christ; the proudest sovereigns waited upon him like menials, led his horse by the bridle, and held his stirrup while he alighted ; and there were ambassadors who prostrated themselves before him, saying, ' O thou that tak-est away the sins of the world, have mercy upon us !' The advocates of the papal power proclaimed that any secular laws which might be passed, against a

decree of the Roman Pontiff, were in themselves null and void : and that all pontifical decrees ought for ever to be observed, by all men, like the \vord of God ; to be received as if they came from the mouth of St. Peter himself, and held like canonical scripture. Neither the Catholic faith, nor the four evangelists, could avail those who rejected them, this being a sin which was never to be remitted. Christ had bestowed upon the pope, when he spake as such, the same infallibility which resided in himself. And were he utterly to neglect his duty, and by his misconduct draw down innumerable souls to hell with him, there to be eternally tormented, no mortal man might presume to reprove him for his faults.

Even this monstrous proposition was advanced, that, although the Catholic faith teaches all virtue to be good and all vice evil, nevertheless if the pope, through error, should enjoin vices to be committed, and prohibit virtues, the church would be bound to believe that vices were good and virtues evil, and would sin in conscience were it to believe otherwise. He could change the nature of things, and make injustice justice. Nor was it possible that he should be amenable to any secular power; for he had been called God l>y Constantine, and God was not to be judged by man : under God, the salvation of all the faithful depended on him, and commentators even gave him the blasphemous appellation of ‘our Lord God the pope !’ It was disputed in the schools whether he could not abrogate what the apostles had enjoined ; determine an opinion contrary to theirs, and add a new article to the creed ; whether he did not, as God, participate both natures with Christ : and whether lie were

not more merciful than Christ, inasmuch as he delivered souls from the pains of purgatory, whereas we do not read that this was ever done by our Saviour. Lastly, it was affirmed that he might do things unlawful, and thus could do more than God. All this was certain, because the -church was infallible. Where this fallibility resided the Romanists have differed among themselves, some vesting it in the pope, others requiring the concurrence of a general council. Infallible, however, it was determined that the Roman Catholic church must be, and thus the keystone was put to this prodigious structure of imposture and wickedness. No one acquainted with ecclesiastical history will consider this view of the morals and conditions of the Roman church as exaggerated or incorrect. We will therefore turn to a more grateful subject, and briefly trace the various efforts which were made to correct this lamentable state of things, and to bring back the church to its original [u-rity and discipline.

II. The early efforts at reform. ❖❖❖ As early as the reign of Charlemagne, Paulinus, a royal favorite, and the bishop of Aquilia, employed his voice and his pen to arrest the progress of these and similar corruptions. In the year 804 his honorable career was terminated, and in a few years later it devolved on the celebrated Claude of Turin to check the same abuses, to advocate the same truth, and to scatter more widely the seeds of future opposition and reform. The sovereignty of the Redeemer in his church was so maintained by this prelate as virtually to annihilate the ambitious pretensions of the Roman see. The worship of images he denounced as gross idolatry ; the childish veneration of relics he exposed to its deserved contempt : and, discarding prayer for the dead as the device of man, his zeal bowed to no authority in religion, opposed to the obvious meaning of the sacred Scriptures. Explaining the doctrine of justification by faith alone, with a force and perspicuity not unworthy of Luther, the papal scheme of merit was greatly broken and impeded by his la-bors. More than twenty years of his life were devoted to this warfare against the prevailing superstitions, and to the cause of Christian truth, as embraced by its earliest disciples.

The episcopal authority of Turin extended over the valleys of Piedmont, and that the faith defended by Claude was preserved on that local-ity through the ninth and tenth centuries is the testimony of Catholic writers. Before the close of this period the fires of persecution were kindled in that favored diocese, in the hope of consigning both the name and the doctrine of its distinguished reformer to oblivion. But in the hour of trial the disciple was often found to be worthy of his master ; while the zeal of such as were expelled their home increased by a natural process with the increase of suffering, never failing to convert the fact of their dispersion into the means of imparting a more extended influence to their obnoxious creed. It was in the century commencing with the year following that in which the poem “of the Troubadours, entitled La Nobla Leyczon, was completed, that Peter do Brugs, became distinguished in Provence and

Languedoc, as the intrepid advocate of certain reformed opinions; and his zeal, after the labor of twenty years, sustained the trial of martyrdom. On his decease his place was more than supplied by the learning and the invincible ardor of Henry the founder of the sect called Henricians. But, if Henry imbibed the zeal of his predecessor, he had also to share in his reward. The invective in which these preachers indulged on the manners of their age, and especially on the vices of the clergy, was not to be patiently endured. It roused the displeasure of the pontiffs and of their court ; and, in the name of Eugenius III., the person of Henry was seized and committed to prison, where, after a brief interval, his life was the sacrifice incurred by his unshaken integrity. Such are the measures which have been long and widely adopted to crush the leaders of reform, and experience has shown how little they are suited to diminish either the number or the ardor of its advocates. But if the Petrobrussians and Henricians were sufficiently numerous to excite the alarm of the church, it is certain they were but few and feeble when compared with their opponents.

It was towards the close of the century, in the former half of which they had flourished, that the ear of Europe became familiar with the name of Arnold of Brescia, as that of a more daring opponent of clerical ambition. This extraordinary man had suddenly risen from the lowest rank in the church, and there are facts included in his history which impart to it an unusual interest. He studied under the famous Abelard, and had probably adopted some of the speculations which exposed the lover of Eloise to the frown of the church. But with the skill of the master the disciple associated an independence and hardihood peculiar to himself. In the garb of a monk, and with a countenance which bespoke his decision and capacity, but which had already become marked with many cares, Arnold commenced his stormy career, as a preacher in the streets of Brescia. Arraigned before the prelect of the city, the reformer was condemned to die; and, deserted (perhaps of necessity) by his more powerful adherents, he perished at the stake, amid the idle gazings of the Roman populace. His ashes were given to the Tiber; but his opinions were not so easily consigned to oblivion. But ten years from that period had scarcely passed, when Peter Waldo, an opulent merchant of Lyons, became known in that city as an opponent of the Romish superstition, and a zealous advocate of what has since been designated the reformed faith. Waldo had witnessed the sudden decease of a friend at his table, and a disposition already favorable to religion was much confirmed by the affecting incident. Often scandalised by the manners of the clergy, his superior education had enabled him to consult the Latin Version of the Scriptures. From that source he derived the instruction which

taught him to separate from communion with the papal church. His morals had ever defied the breath of calumny; from this period his wealth ministered largely to the comforts of the poor ; and if his opposition to vice and error exposed him to the malice of interested men, his fearless

enforcement of the truths of the Gospel won the applause and the grateful attachment of multitudes. For a season he found his protection in his rank, in the influence of his connexions, and in the number of his followers. But the inroads of his zeal which had thus eluded every hostile purpose of the local authorities were, at length, deemed so serious an innovation as to require the most formal interference of the pa-pacy. In a council convened by Alexander III. Peter Waldo and his numerous disciples were presumed to be convicted of heresy, and until signs should be given of repentance they were cut off from all communion with the faithful. This sentence would probably have been little regarded, had it not, through the ferocity of the times, become no less destructive of civil than of religious communion. The Lyonese, who were not fully prepared to brave the wrath of the church, were constrained to refuse the hated sectaries even the remotest intercourse of social life. That flourishing city was, in consequence, deserted by a large, and by the most valuable, portion of its inhabitants ; but like the Hebrew tribes they were not to be lost in their dispersion. Waldo continued to publish his doctrine with great success, through Dauphiny, Picardy, and various of the German states, concluding a labor of twenty years in a province of Bohemia. His disciples, every where harassed by the hand of persecution, are still found associated with almost every continental sect, and by a benevolent arrangement of providence they were preserved as witnesses for the truth until the age of Luther. Aware of the assistance which he had derived from the Scriptures, and of the principles which assert them to be the property of the people no less than of the priest, it had been an object of early solicitude with Waldo to confer upon his followers a vernacular translation of the inspired volume. It was a novelty in mo-dern Europe, and contributed much to his unprecedented success in the work of reformation. The Noble Lesson* had long since supplied the devout with a valuable summary of Scripture history, and of the doctrines and the duties of the Gospel ; but such was the impulse given to the mind of multitudes by the possession of the Scriptures, that the numerous sectaries, however poor and despised, were generally capable of vindicating their peculiarities of custom or opinion by an appeal to that authority ; it was even their boast that there was scarcely a man or wo-man among

them who was not far better read in-the Bible than the doctors of the church. Waldo finished his career in 1179r and it was two years later that the pontiff, Lucian III., issued his memorable decree, condemning all manner or' heresy, by whatever name denominated. By the haughty Innocent III. every motive which superstition could supply was employed to arm the princes and the people of Europe against the pacific disciples of the Gospel. To extirpate

* La Noble Leyczon, or The Noble Lesson, is a poem in the language of the Troubadours ; the depository of opinions, and an expression of feelings, not unworthy of the professors of the Gospel in tb►► most favored period of its history.

them by fire and by the sword was the object distinctly proposed ; and the indulgences so impiously connected with the crusades into Asia were now as freely bestowed on such as became devoted to this murderous cause. Under the impulse of such motives towns were taken in succession, and their inhabitants slaughtered with an atrocity which spared neither age nor sex.

A volume might be occupied in detailing these atrocities, but it must be sufficient to observe, in the language of Mr. Gibbon, ' that pope Innocent III. surpassed the sanguinary fame of Theodore. It was in cruelty alone her soldiers could equal the heroes of the crusades, and the cruelties of her priests were far excelled by the founders of the inquisition, an office more adapted to confirm than to confute the belief of an evil principle.' The interval between the former half of the thirteenth century, with which these crusades were connected, and the middle of the following, in which Wycliflfe appeared, is one of unusual gloom in the history of true religion. The efforts of the Waldenses and Albigeois to restore its purity, and which has not been improperly designated the first reformation, appeared as a total failure, and through nearly 300 succeeding years the good which it was designed to confer on the nations of the western empire was effectually resisted. And riot only so, the machinery of despotism appeared to become every day more matured, and every struggle of its

victims but to place them more completely beneath it.

III. Rise and progress of Wickliffe' s doctrines in England. ••• The manifold and complicated evils of popery, however, reached their highest pitch about the thirteenth or fourteenth century. That astonishing system of spiritual tyranny, for instance, had now drawn within its vortex almost the whole government of England. The pope's haughty legate, spurning at all law and equity, made even the ministers of justice to tremble at its tribunal ; parliaments were overawed, and sovereigns obliged to temporise, while the lawless ecclesiastics, entrenched behind the authority of councils and decrees, set at nought the civil power, and opened an asylum to any, even the most profligate, disturbers of society. In the mean time the taxes collected, under various pretexts, by the agents of the see of Rome, amounted to five times as much as the taxes paid to the king. The insatiable avarice and insupportable tyranny of the court of Rome had given such universal disgust, that a bold attack, made about this time, on the authority of that court, and the doctrine of the church, was, at first, more successful than could have been expected in that dark and superstitious age. This attack was made by the famous John Wickliffe, who was one of the best and most learned men of the age in which he flourished. His reputation for learning, piety, and virtue, was so great, that archbishop Islip appointed him the first warden of Canterbury College, Oxford, in 1365. The lectures in divinity which he read in that university were much admired, though in these lectures he treated the clergy, and particularly the mendicant friars, with no little freedom and severity. A discourse which he published against

the pope's demand of homage and tribute from Edward III., for the kingdom of England, recommended him so much to that prince that he bestowed upon him several benefices, and employed him in several embassies. Edward III. had refused that homage to which king John bad subjected his successors, and Urban V. threatened that if it were not performed he would cite him to Rome, there to answer for the default. A sovereign of Edward's ability and renown was not thus to be intimidated ; the feeling of the country was with him, and the parliament, affirming that what John had done in this matter was a violation of his coronation oath, declared that, if the pope proceeded in any way against the king, he and all his subjects should with all their power resist him. The papal claims were defended by a monk, who ventured to challenge Wickliffe upon the subject, who coming forward with superior ability, and in a better cause, produced a conclusive reply ; in reward for which when an appeal concerning the

wardenship was decided against himT he was appointed professor of divinity, and, as a further mark of favor, the living of Lutterworth in Leicestershire was given him. Two years after his appointment to the divinity chair he was named, with other ambassadors, to meet the pope's representative at Bruges, and resist his pretensions to the presentation of benefices in England, an injurious practice,against which several statutes had been passed. The negociation lasted nearly two years, and it is probable that what he then had opportunities of discovering convinced him that the system of the papal court and its doctrines were equally corrupt. For on his return he attacked it in the boldest manner, maintained that the Scriptures contained all truths necessary to salvation, and that the perfect rule of Christian practice was to be found in them only ; denied the authority of the pope in temporal matteh ; proclaimed that he was that man of sin, the son of perdition, whom St. Paul prophetically describes, ' sitting as God in the temple of God, showing himself that he is God ;' and denounced him as antichrist. These opinions he openly preached and published, appealing to the Scriptures for their truth ; and they were propagated by his disciples, who attacked the friars in their own man-ner, preaching to the people, and 'going about, as he himself did, barefoot, and in plain fringe gowns. It was not long before he was accused of heresy, and orders came to Sudbury the primate, and Courtney the bishop of London, to have him arrested, and kept in close custody till they should receive further instructions. But the duke of Lancaster, John of Gaunt, who was then governing the kingdom during the latter days of his father, protected him with a high hand ; and he was still so popular in Oxford that, when a nuncio was sent thither, requiring the university, under pain of the severest penalties, to deliver him up for justice, the threat was disregarded. The archbishop, finding it impossible to proceed in the summary manner which the pope ordered, summoned him to appear within thirty days be-fore him and the bishop of London, at a synod held in St. Paul's; and Wickliffe, confident in his cause and in his protectors, hesitated not tj

obey. It is not, however, likely that any protection could long have

upheld him against the ecclesiastical authority, it a schism had not at this juncture occurred to weaken the papal power, and shake its very foundations. Wickliffe seized the advantage which was thus afforded him, and set forth a tract upon the schism, exposing the absurdity of ascribing infallibility to a divided church. While the doctrines of Wicklifie were propagated and opposed with much zeal at Oxford, and at other places, he being in a declining state of health resided, during the two last years of his life, at his living of Luttenvorth, in Leicestershire, employed in finishing his translation of the Bible and other works. Being seized with a stroke of the palsy, which deprived him of his speech December 28th, 1384, he expired on the last day of that year.

The invention of printing had, at this time, crented facilities for the diffusion of knowledge, unknown before ; and the struggle between the elements of darkness and the principles of light resembled, for a while, the smothering vapor which precedes the burst and the radiance of a clear and steady flame. Thousands were prepared by these antecedent causes to receive the truth in all its holy purity, and sacred influence. Already the rays of truth were emanating from the sacred volume in all directions; and men were beginning to start as from the slumbers of a dream, or the reveries of a distempered imagination. It must not, however, be supposed that this change of opinion escaped the notice of the dominant church ; or that it was negligent of that strong arm of power which it possessed, in order to suppress the growing heresy. Henry IV., at the instigation of the clergy, passed a statute, forbidding the propagation of the new doctrine by preaching, writing, teaching, or discourse ; and demanding of all persons the renunciation of their errors, on pain of being condemned for heresy, and burnt alive.

William Sautre, the parish priest of St. Osithes, in London, and formerly of St. Margaret's, at Lynn, in Norfolk, was the first victim under this new statute, and the first martyr for the reformation in England. The single question with which he was pressed was, whether the sacrament of the altar, after the pronouncing of the sacramental words, remained material bread or not. It was not sufficient for him to declare a firm belief that it was ‘ the bread of life which came down from heaven ;’ he was required to acknowledge that it ceased to be bread. Finding it in vain to protest that he attempted not to explain what is inexplicable, his final answer was that the bread, after consecration, remained very bread as it was before. He was then pronounced to be judicially and lawfully convicted as a heretic, and as a heretic to be punished ; and being, moreover, a relapsed heretic, to be degraded, deposed, and delivered over to the secular arm.

This being the first condemnation of the kind in England, Arundel was punctual in all its forms, that they miiiht serve for an exact precedent in future. They were, probably, derived from the practice of the accursed inquisitors in Languedoc ; and they were well devised for pro-

longing an impression of horror upon the expectant and awed spectators. Sautre was brought before the primate and six other bishops, in the cathedral of St. Paul's ; they were in their pontifical attire, and he appeared in priestly vestments with the paten and chalice in his hands Arundel stood up, and, in the name of the Father, and of the Son, and of the Holy Spirit (thus profaned in this inhuman progress), degraded him, first from his priestly order, and, in sign of that degradation, took from him the paten and chalice, and plucked the priestly casule from his back. The New Testament was then put into his hands, and taken from him ; the stole being at the same time pulled off, to degrade him from the office of deacon. By depriving him of the alb and maniple, his deprivation from the orderof subdeacon was effected. The candlestick, taper, and urceole, were taken from him as an acolyte ; the book of exorcisms, as ex-orcist ; the lectionary, as reader ; he then remained in a surplice as sexton, and, with the J-ey of the church door : these also were taken from him ; the priest's cap was then to be laid aside, the tonsure rased away, so that no outward mark whatever of his orders might remain ; the cap of, a layman was placed upon his head, and Arundel then delivered him, as a secular person, to the secular court of the high constable and marshal of England, there present, beseeching the court to receive favorably the said William Sautre, unto them thus committed ! For with this hypocritical recommendation to mercy the Romish church always delivered over its victims to be burnt alive. Sautre accordingly suffered martyrdom at the stake ; leaving a name which is still slandered by the Romanists, but which the church of England will ever hold in deserved respect.

At this time twelve inquisitors of heresy, for this dreadful name had been introduced in England, were appointed at Oxford, to search out heretics and heretical books. They presented as heresies 246 conclusions, deduced, some truly and some falsely, from the writings of Wickliffe 's followers, and of the Lollards; and they represented that Christ's vesture without seam could not be made whole again, unless certain great men, who supported the disciples of Wickliffe, were removed; particularising Sir John Old-castle, who, in right of his wife, was lord Cob-ham, a man of high birth, and at that time in favor with Henry V. Him they accused to the king of holding heretical opinions

concerning the sacrament, penance, pilgrimages, the adoration of images, and the authority of the Romish church, declaring their intention of proceeding against him as a most pernicious heretic.

In better reliance upon a good cause than upon popular favor and his own means of resistance, he wrote a paper, which he entitled the Christian belief of the lord Cobham; and with this he went to the king, trusting, it is said, to find mercy and favor at his hand. The writing began with the Apostle's creed, to which a larger declaration of his faith was added. Like Wickliffe, he expressed an opinion that the church was divided into three parts, the saints in heaven, the souls in purgatory, and the faithful on earth :

but he qualified this admission of a purgatory, by saying if any such place be in the Scriptures : the duty of the priests was that, secluded from all worldliness, they should conform their lives to the examples of Christ and his apostles, evermore occupied in preaching and teaching the Scriptures purely, and in giving wholesome examples of good living to the other degrees ; more modest also, more loving, gentle, and lowly in spirit should they be than any other people. The duty of the people was, ' to bear their good minds and true obedience to the foresaid ministers of God, their king, civil governors, and priests ;' justly to occupy every man his faculty, be it merchandise, handicraft, or the tilth of the ground, and so one to be helper to another. He then professed his full belief that the body and blood of Christ were verily and indeed contained in the sacrament of the altar under the similitudes of bread and wine ; that the law of God was most true and perfect, and that they which did not so follow it in their faith and works (at one time or other) could not be saved ; ' whereas he that seeketh it in faith, accepteth it, learneth it, delighteth therein, and performeth it in love, shall taste for it the felicity of-everlasting innocency. Finally, that God will ask no more of a Christian believer, in this life, than to obey the precepts of this most blessed law. If any prelate require more, or any othˆrkind of obedience than this, lie contemneth Christ, exalteth himself above God, and so becometh an

open antichrist.' He required that the king would cause this his confession of faith to be justly examined by the wisest and most learned men in the realm ; and that, if it were found in all parts agreeing to the truth, it might be so allowed, and he himself thereupon holden for none other than a true Christian ; or that it might be utterly condemned if it were found otherwise, provided always that he were taught a better belief by the word of God, which word he would, at all times, most reverently obey.

When the king allowed him in his presence to be personally cited, lord Cobham perceived that his destruction was determined on, and, rejecting the archbishop as his judge, appealed from him to the pope; this appeal being disallowed he was immediately committed to the tower, till the day appointed for his examination. On that day at the Dominican convent within Ludgate, many canonists and friars, the heads and leading persons of their respective orders, were convened to sit in judgment on him; while a number of priests, monks, canons, and friars, with a rabble of underlings, who were collected as spectators, insulted him as he came, for a horrible heretic, and a man accursed before God. These preparations, and the certainty of what was to ensue, could not shake the constancy of his resolved mind. But the taunts and mockery of the brutal audience who came there as to a spectacle, and anticipated with exultation the inhuman catastrophe, disturbed that equanimity which he had hitherto preserved ; and moved him, not to an unseemly anger, nor to aught unworthy of himself, but to an emotion than which nothing nobler iu its kind hath been imagined in fiction, or recorded in history. For when Arundel began the

tragedy, by offering him absolution and mercy, if he would humbly desire it, in due form an'rj manner, as the church ordained. ••• ' Nay, forsooth, will I not,' he replied, ' for I never trespassed against you, and therefore I will not do it!" Then kneeling on the pavement, and holding up his hands toward heaven, he exclaimed, 'I shrive me here unto Thee, my eternal, living God, that in my youth I offended thee, O Lord, most grievously in pride, wrath, and gluttony ; in covetousness, and in lechery ! Many men have I hurt in mine anger, and done many other horrible sins ! Good Lord, I ask Thee mercy !' He wept while he uttered this passionate prayer ; then, standing up, said with a mighty voice, ' Lo, good people, lo ! for the breaking of God's law and his commandments, they never yet cursed me ! but for thine own laws and traditions most cruelly do they handle both me and other men. And, therefore, botli they and their laws, by the promise of

God, shall utterly be destroyed !'

When they had recovered from the surprise which this awful appeal produced, they began to examine him concerning his belief. He replied*-, with the same intrepid spirit, 'I believe fully and faithfully in the universal laws of God. I believe that all is true which is contained in the Holy Scriptures of the Bible. Finally, I believe all that my Lord God would I should believe.' They pressed him with the murderous question, concerning material bread. He made answer, ' The Scriptures make no mention of this word material, and therefore my faith hath nothing to do therewith. But this I say, and believe, that it is Christ's body and bread.' They exclaimed against this with one voice ; and one of the bishops stood up and said, 'It was a heresy manifest, to say that it is bread after the sacramental words were spoken.' The noble martyr replied, ' St. Paul was, I am sure, as wise as you, and more godly learned, and he called it bread, 'the oread that we break,' saith he, ' is it not the partaking of the body of Christ?' And as for that virtuous man, Wickliffe, I shall say here, both before God and man, that before I knew that despised doctrine of his I never abstained from sin. But, since I learned therein to fear my Lord God, it hath otherwise, I trust, been with me, so much grace could I never find in all your glorious instructions ! One pope hath put down another, one hath poisoned another, one hath cursed another, and one hath slain another, and done much more mischief, as all the chronicles tell. Let all men consider well this, that Christ was meek and merciful ; the pope is proud and a tyrant ××× Christ was poor and forgave ; the pope is rich, and a malicious manslayer, as his daily acts do prove him. Rome is the very nest of antichrist, and out of that nest cometh all the disciples of him, of whom prelates, priests, and monks are the body, and these piled friars are the tail 1 Though he judge my body, which is but a wretched thing, yet am I certain and sure that he can do no harm to my soul, no more than could Satan upon the soul of Job. He who created that, will, of his infinite will and promise, save it; I have therein no manner of doubt. And, as concerning these articles before rehearsed, I will stand to them, even to the very death, by the

grace of my eternal God !' Turning to the spectators then, he spread his hands, and spake with a louder voice, ' Good Christian people, for God's love be well ware of these men ! for they will else beguile you, and lead you blinding into hell with themselves. For Christ saith plainly unto you, If one blind man leadeth another, they are like both to fall into the ditch !' Then', kneeling down before them, he prayed for his enemies : 1 Lord God eternal ! I beseech thee, of thy great mercy's sake to forgive my pursuers, if it be thy blessed will !' Being committed to the Tower, whence he escaped, a large reward was offered for taking lord Cobham, alive or dead ; so faithfully, however, was he sheltered, notwithstanding all who harboured him incurred the same danger with himself, that he eluded his persecutors for four years, until he was discovered, by means of lord Powis, in Wales. He now stood resolutely upon his defence, and would probably not have been taken alive, if a woman had not broken his legs with a stool. In this condition he was carried to London in a horse litter; and there, being hung by the middle in chains, was consumed in the flames praising God.

IV. The Bohemian reformers. ××× The historians of the Reformation too generally represent that great revolution to originate exclusively with Luther and his friends ; in Germany, however, as well as in England, the pure sentiments, the holy lives, and the triumphant deaths of the martyrs, from the twelfth to the fifteenth centuries, paved the way for their successors of the sixteenth. Before we enter on the history of the rupture between the German princes and the papacy, we shall briefly notice that of the Bohemian reformers. Bohemia partook of the general corruption, and was immersed in darkness and superstition, when Waldo and his friends sought an asylum in that kingdom, and in the year 1176 formed a colony at Saltz and Laun, on the river Eger. These Waldenses found the Bohemians scarcely less superstitious than the members of the church of Rome; but subsequently introduced among them the knowledge of the Christian faith in its purity, according to the word of God. On the introduction, however, of popery, through the influence of Charles IV., ignorance, profligacy, and corruption of manners, began to prevail among all orders of the people; the inquisition was introduced for the purpose of enforcing despotism in the civil government, and uniformity of opinion in matters of religion. The consequence was, that multitudes withdrew themselves from the public places of worship, and followed the dictates of their own consciences, by worshipping God in private houses, woods, and caves. Here they were persecuted, dragooned, drowned and killed ; and thus matters went on jntil the appearance of John Huss and Jerome cf Prague. John Huss,

who had been a student in the university of Ptague, where he had taken his degrees, and become a zealous disciple of Wickliff, was born in the village of Hussinetz, in 1373, of parents not in affluent circumstances. He was a person of eminent abilities, and of still more eminent zeal ; his talents were popular, his life irreproachable, and his manners the most affable and engaging. lie was the idol of the

populace ; but, in proportion as he attracted their esteem and regard, he drew upon himself the execration of the priests. The introduction of WicklifTs writings into the university of Prague gave great offence to the archbishop of Prague, who issued a decree that every person who was in possession of tnem snould bring the books to him, in order that such as contained any thing heretical might be burnt. Huss, and the members of the university, entered a protest against these proceedings, and on the 25th of June, 1-110, appealed from the sentence of the archbishop to the court of Rome. The affair was carried before pope John XXIII., who granted a commission to cardinal Colonna to cite Huss to appear personally before him at Rome, there to answer the accusations laid against him of preaching both errors and heresies. Huss desired to be excused a personal appearance, and so greatly was he favored in Bohemia, that king Wenceslaus, his queen, the nobility, and the university at large, joined in a request to the pope that he would dispense with such an appearance ; and, moreover, that he would not suffer the kingdom of Bohemia to be subject to the imputation of heresy, but per-mit them to preach the gospel with freedom in their places of worship, and that he would send legates to Prague to correct any presumed abuses, the expense of which should be defrayed by the Bohemians. Three proctors were despatched to Rome to tender Huss's apology to his holiness ; but the excuses alleged were deemed insufficient, and Huss, being declared contumacious, was accordingly excommunicated. This excommunication extended also to his disciples and friends ; he himself was declared a promoter of heresy, and an interdict was pronounced against him. Urban VI., who had succeeded to the pontificate on the death of Gregory XL, A. D. 1378, having rendered himself odious in the eyes of his subjects, the cardinals so resented his conduct that they set aside his election, and chose Clement VII. in his room. The adherents of both pontiffs were indefatigable in their exertions to support their respective pretensions, and much human blood was spilt in the contest. To terminate this disgraceful schism, a third pope, Alexander V., was elected, in the hope of inducing the resignation of the others. Neither of them, however, would give up nis power ; and the world now saw three popes ruling at one and the

same time. With a view to heal the fatal schisms, and repair the disorders that had sprung up during their continuance, as well as to bring about a reformation of the clergy, which was now loudly and generally called for, in the year 1414 the emperor Sigismund convened the council of Constance.

Hither, from all parts, princes and prelates, clergy and laity, regulars and seculars, flocked together (November 16th, 1414), to determine the dispute between the three contending factions for the papacy ; and thither Huss was cited to appear, in order to justify his conduct and writings. The emperor Sigismund, brother o Wenceslaus, encouraged Huss to obey the summons, and, as an inducement to his compliance sent him a passport with assurance of safe conduct, permitting him to come freely to the council, and pledging himself for his safe return

Huss consented ; but no sooner had he arrived within the pope's jurisdiction, than, regardless of the emperor's passport, he was arrested and committed close prisoner to a chamber in the palace. This violation of common law and justice was noticed by the friends of Huss, who had, out of the respect they bore his character, accompanied him to Constance. They urged the imperial safe conduct ; but the pope replied that he never granted any safe conduct, nor was he bound by that of the emperor.

Jerome of Prague was the intimate friend and companion of Huss ; inferior to him in age, experience, and authority, but his superior in all liberal endowments. He was born at Prague, and educated in that university. Having finished his studies he travelled into many countries of Europe. The universities of Prague, of Paris, of Cologne, and of Heidelberg, conferred upon him the degree of M. A. ; and, having made the tour of the continent, he visited England, where he obtained access to the writings of Wickliffe, which he copied out, and returned with them to Prague. As Jerome had distinguished himself by an active cooperation with Huss in all his opposition to the abominations of the times, he was cited before the council of Constance on the 17th April 1415, at the time his friend Huss was

confined in a castle near that city. Arriving shortly afterwards in Constance, or the neighbourhood, he learned how his friend had been treated, and what he himself had to expect ; on which he prudently returned to Iber-2ingen, an imperial city, whence he wrote to the emperor and council, requesting a safe conduct ; but, not obtaining one to his satisfaction, he was preparing to return into Bohemia, when he was arrested at Kirschaw, and conveyed to Constance. Every one knows the fate of these two eminent men. They were both condemned by the council to be burnt alive, and the sentence was carried into effect. Huss was executed on the 7th July 1415 ; and Jerome on the 20th of May 1416.

V. The reformation in Germany. ??? If, in the following sketch of the circumstances which preceded and produced the Reformation we seem to look principally to the efforts of the German reformer, it must be remembered that the great work, then generally designated, was begun in Germany, and that, although political and personal circumstances apparently produced the rupture between England and Rome, the minds of men had been previously prepared for a thankful embrace of it, by the writings of Luther ; that the political causes were only accidental ones, providentially concurring with those of a moral nature ; and that, so far from being considered as independent and isolated events, the Reformation both in England and Germany was one and the same event under different appearances and modifications.

With this caution we now proceed to state what to us appear to have been the more proximate causes of the Reformation, first begun in the early part of the sixteenth century.

In the first instance it was not against the Catholic dogmata, but against the abuses and the corruption of the papal court, as ‘ in the case of

indulgences,’ that Luther and others directed their zeal. Our intrepid reformer does not ap-pear at all to have originally contemplated an attack against transubstantiation, purgatory, praying for the dead, the use of images and pictures, the veneration of relics, tradition as a rule of faith, the invocation of saints, or even against the use and sale of indulgences. It was not against all or any of these Catholic tenets that the reformers, in the first instance, protested. The extreme laxity and even profligacy of the clergy had long been the source of painful regret to the wise and good, and of sarcasm, impious pleasure, and

contempt, to the wicked and the vain. Cardinal B►► llarmine, a writer, as all the world knows, but seldom disposed to say a syllable in disparagement of the church or the Ro-man court, confesses that, ‘ for some years before the Lutheran and Calvinistic heresies,’ as he expresses it, ‘ were published, there was not, ;is contemporary authors testify, any severity in ecclesiastical judicatories, any knowledge of sacred literature, any reverence for divine things ; theie was not almost any religion remaining.” Had the moral conduct of the head, and ministers of religion, been such as became their holy office, it is more than probable that no particular outcry would have been raised against the Catholic doctrines at that time. No, it was the base conduct of the clergy that first sounded the tocsin of religious war. This depravity had, naturally enough, become the subject of public ridicule, of reproach, and at last of contempt and open opposition. The universal cry was ‘ Reform ‘.’ and when this cry was rejected another still more powerful and dreadful was raised of ‘ Destruction !’

The holiness of the church became the first object of general attack ; and, unfortunately for herself, that which should have been her strongest hold was the most vulnerable part in the whole fortress. The outcry was not against the host, but against him by whom it was elevated. Holy images,, pictures, relics, and shrines, were never despised till they were abused and profaned by those to whose custody they had been previously consigned. The growing pride of the church of Rome, naturally engendered by the union of the spiritual and temporal power, was one of the strong symptoms of approaching revolt. Every prince bore the insolence and ambition of the Roman pontiff with a greater or less degree of impatience. Some of them dared to oppose it openly, and the university of Paris had more than once been made the organ of sovereign power to answer tne menaces of Rome, they had the courage to appeal to a future council, which they, without ambiguity, deemed superior to th pope. The eyes of men began to open. Tl►► impolitic violence of some popes; the scandalou.. lives of others ; the seventy years captivity zt Avignon ; the schism of forty other years which followed it, in which two and sometimes three popes appeared, each having a party, abusing and excommunicating each other, loading each other with the most revolting insults, and reproaching each other with the lowest vices►►► unexpected discoveries which covered both rivals, with ignominy at the same time ; tJl these wjˆ

surely account for the hatred and contempt which every where lurked secretly against the Romish hierarchy. Complaints and murmurs arose on every hand ; thousands of voices united in demanding a reformation of the church in its head and in its members, in its faith and in its manners. Next to the lordly pride of the Ro-man court we may reckon among the proximate causes of the Reformation the luxury, extravagance, and religious indifference of Leo X.

About the period of Luther's first attack on the religion of the Catholics, Rome was in profound peace ; and this interval of repose Leo X. occupied in expensive schemes for aggrandizing the family of theMedici ; in expending the splendor of the papal see ; and in lavishing presents on authors, artists, profane wits, and buffoons. To support the enormous expenses to which these propensities subjected the supreme pontiff required far greater resources than the now almost exhausted papal treasury supplied. Yet at no time was the Roman court in greater splendor, nor did the vicars of Christ ever exhibit a magnificence so imposing as that displayed during the pontificate of Leo X. Every decoration that art could suggest ; every wish that the most voluptuous appetite could engender; and every refinement that an unbounded love of science and literature could de-vise ; found a patron in that luxurious prince. This profusion and magnificence in the supreme pontiff was amply copied by the chiefs and the princes of the Roman court, who vied with each other in the grandeur and sumptuousness of their palaces, and the prodigality and gaiety of their entertainments ; nor did it deduct from the pressure to which this extravagance exposed the subjects of the papal dominion, that a considerable portion of the riches which were drained from the labor or the purses of the poor was lavished without discrimination on artists, painters, and sculptors. Divine providence, intending on the one hand to chastise the church for her profligacy of manners, and on the other to free the gospel of Christ from the errors and corruptions which had grown upon it, seems to have lulled the supreme pontiff to a fatal security, and to have struck with blindness those whom it designed to punish.

An admirer of the fine arts, from which he only sought fame and gratification, a crafty but presuming politician, prepossessed with contempt for the German rudeness of manners, under which he was

unable to discover that strength and manliness of character, all the energy of which he had to encounter, Leo X. was not qualified to enter the lists with Luther; and the arrogant weakness of the one opened numberless advantages to the intrepid firmness of the other. Whoever considers the characteristic national differences between the Italians and Saxons will perceive that divine providence had been secretly but effectually preparing for that great Reformation in the church. The Italians adhered strongly to a religion which captivated their senses, and permitted indulgence of their vices. A taste for luxury, pomp, and voluptu-tuousness, with that of the fine arts, was all their enjoyment; always oppressed, they were naturallv deceitful, cunning, dissimulating, and selfish ; every thing conducive to the enjoyment of taste, every thing flattering to the sensibility, physical and moral, had become the object o* Italian activity. But the calm, equal, persevering activity of the Saxons was directed to the abstract sciences, to philosophy, to historical researches When the Reformation burst forth, there was not 3 single theologian of Italy capable of encountering those of Saxony ; some of them had the presumption to attempt it, ••• a presumption always the associate of ignorance ; they were defeated and covered with confusion ; in revenge Italy boasted loudly of her poets and her painters ; they had not produced a Luther, but Saxony had not produced an Ariosto.

The recent invention of the art of printing operated in a very powerful manner to bring into circulation those principles which, at length, produced the Reformation. The revival of literature about this period under the especial patronage of Leo gave a stimulus to every effort of intellect. Hence the reproaches so profusely cast on the conduct of the clergy were carried by means of the press to every cottage, and were read with eagerness by both the pious and the profane ; by those who saw the decay of devotion in the people, and the licentiousness of the clergy, with sentiments of sorrow, and a wish to have them reformed ; and also by those who saw these evils with a malicious pleasure, and a secret desire for the ruin of the Roman court, and the destruction of the papal hierarchy.

The ill use which Tetzel and others made of the sale of indulgences is a cause of the Reformation which has been repeated by every writer on the subject since the days of Luther. The splendor and magnificence of the papal see have been already stated ; but we deferred to notice the enormous expenses to which the Roman government was subjected, in the completion of the astonishing fabric begun during the pontificate of Julius II., the church of St. Peter at Rome. To accomplish this stupendous undertaking large supplies were become indispensably needful ; and Leo X., as almost a last resource,

resorted to a measure which had been applied to as early as A. D. 1100, when Urban II. granted a plenary indulgence and remission of sins to all such persons as should join in the crusades to liberate the holy sepulchre from the hands of the infidels. In thus reviving an ancient practice Leo X. was not introducing any new mode of taxation ; yet he took no pains to secure the church from the disgrace which she subsequently sustained by the improper use of this extraordinary species of traffic. But the mere act of vending remittances of holy discipline was not all. The commissioners in this noble traffic were not chosen from among the ranks of wise, prudent, and honest men. John Tetzel, a Dominican friar, of the most, depraved habits and vicious principles, was appointed by Albert, archbishop of Mentz, to dispose of these dishonorable wares to the credulous and deluded people. Being determined to extend the benefit of his commerce as much as possible, he scrupled not to exceed the bounds of his commission, nor to extol his merchandise as abounding with every virtue that the most meritorious

sacrifice tfr service, could confer. To such an impious length did this agent of iniquity extend his blasphemies as to declare that these indulgencies would atone for every vice, ††† past, present, or to come, ††† and remit every punishment, both in this life and in the next, to which the most profligate wretch could be exposed !

This blasphemous and most ridiculous fraud was played off upon the people in every possible shape, while the infamous fabricator and vender wallowed in every species of luxury, debauchery and wickedness ; an abuse so flagrant could not but cause the honest indignation of every thinking person. Accordingly, when a knowledge of these practices came to the ear of Martin Luther, all the greatness of his soul was called into action, and he inveighed not, at first, against indulgences themselves, but against that torrent of corruption which Tetzel's abuse of them was bringing into Christendom. But it is not to be supposed that an institution of so long standing, in-grafted on so many prejudices and interests, and supported by such an

extraordinary weight of power and influence, could be overturned by any of the aforenamed causes, unless those causes had been called into action by some bold and intrepid spirit; some daring soul, impatient of the crown of martyrdom, and indifferent to every consideration that contributed not to advance the glory of his character, the immortality of his
नemory, and, above all, the interests of that religion to which he was devoted. Inspired by a zeal which could consume the most obdurate prejudice, and a courage that could brave the most potent authority, Luther carried every thing before him that retarded his designs. He knew when to advance, and when to make good a safe retreat ; when to trust the energies of his own mind, and when to profit by the adrice of others.

The Europeans, who till this time had been confined within the limits of the old world, had just launched beyond it ; the road to India and America had been lately discovered. While enterprising navigators were in this manner subduing an ocean that had been unconquerable, every mind seemed also desirous of being liberated from the narrow circle of ideas within which it had been confined for ages. The human race advanced perceptibly towards-the point of maturity of a new epoch. A change in the order of things, an approaching commotion, seemed at hand ; a rumbling was heard in the bowels of the volcano; ardent vapors burst forth and streamed through the obscurity. Such was the menacing fermentation which appeared in the political state of nations from the commencement of the sixteenth century. The minds of men had undergone a great change; worship had become the business of the senses and religion a mythology ; splendid ceremonies had superseded sim-ple prayers ; saints and images became the intercessors with an almost forgotten God, and the immediate objects of devotion. The populace and the ignorant adhered very strongly to this system of superstition, which captivated their

only the work of man’s hand ; he would at once, and entirely, reject a system in which he could no longer discover any trace of true religion.

Advancing to the period of the German reformation we find that the first attack on the church of Rome commenced in 1517 on the part of Martin Luther, who, on the 30th of September, delivered ninety-five propositions, in which he censured, in the boldest manner, the extravagant conduct and extortion of the papal commissioners for the sale of indulgences. These propositions were promulgated at Wittemberg, at the college of which he was doctor. Ignorant of a stipulation made between Leo X. and Albert of Brandenburgh, by

which the latter should re-tain one half of the profits arising from the sale of these indulgences, Luther addressed a letter of remonstrance to this elector; but, as might naturally have been supposed, no regard was paid to his complaints. Exasperated by this neglect, he next published to the world the propositions he had read in the church in Wittemberg. They contained many censures on the pope himself, but were rendered as palatable as possible by repeated expressions of obedience to the papal authority and the doctrines and decisions of the church. On the first appearance of these propositions Tetzel, the principal vender of the indulgences by the appointment of the elector of Mentz, endeavoured to defend a traffic in which he had so much personal interest. To effect this purpose, he published a set of counter propositions, and then publicly burne i those by Luther. The friends of Luther, in a similar spirit, rejoined, by burning 800 copies of Tet-zel's propositions in one of the public squares of Wittemberg. This conduct Luther had the moderation or good sense to lament ; and he affirmed that it was adopted without his knowledge.

Leo X., confiding in the professions of Luther, who had declared to him ' that he would regard whatever came from him as delivered by Christ himself,' took no immediate steps to curb the zeal of the reformers, nor to remove the cause of their just complaints. At length, however, the indolent pontiff was roused from his danger; and, in 1518, he summoned Luther to appear before him at Rome, within sixty days, there to answer the questions which should be propose 1 to him by Prierio, his virulent opponent. It required no extraordinary degree of penetration to perceive what must be the issue of the trial, wherein the judge and the plaintiff were one and the same person. Accordingly Luther made sufficient interest to have his cause heard in Germany. Tomaso de Vio, cardinal of Gaeta, the pope's legate at the diet of Augsburg, was empowered to summon Luther before him ; and, if he should persist in his errors, to-hold him in custody till farther instructions should be sent from Rome. It was of small consequence to Luther whether his cause should be heard before the prejudiced and interested Prierio at Rome or by the equally interested Dominical cardinal of Gaeta, in Germany. Whatever might have been the lenient principles at first cherished by

senses and lulled all their vices. But he who the pope, this precipitate and rash determination began to think and to 'examine would perceive, gave great and just cause of offence to Luther amid all this pomp and ceremonial observance, and his friends. No alternative, however, re-

mained ; and Luther, having obtained with great difficulty and delay a safe conduct from the emperor, repaired to Augsburg. Previously, however, to this, and after the pope had sent his monitory to the cardinal of Gaeta, a power had been delegated to that cardinal to hear his defence, and, in case of penitence and submission, again to receive him to the communion of the faithful. Encouraged by several powerful and determined patrons, Luther contemned the authority of the legate : and refused to make any concessions, or to violate his conscience, as he termed it, by disavowing what he knew to be the truth. He yielded, however, so far as to consent that his opinions should be submitted to such universities as he should name ; and promised in future to desist from impugning the discipline of indulgences, provided his adversaries were likewise to be silent concerning them. Luther, after different meetings, was permitted to depart ; when his friends judging from the bold or rash manner of his proceeding, and the known authority of his adversaries, that it would not be prudent for him to remain any longer in danger, advised a secret flight from Augsburg. Prior, however, to his departure, he published a solemn appeal from the supreme pontiff prejudiced and misled to the same pontiff when better informed. The abrupt departure of Luther from Augsburg naturally awakened the resentment of the cardinal, and he immediately addressed a letter to the elector of Saxony, to whose protection Luther fled, expressing his surprise and indignation at his conduct, at the same time requesting that, if he should continue to hold and defend his opinions, he might be sent to Rome, or at least banished from the elector's dominions. Frederick, the elector, replied in a respectful manner to the legate's letter, but. refused to condemn Luther before his opinions were proved to be erroneous. Every day increased the danger to which Luther was exposed by his intrepid zeal and perseverance ; but the power claimed by Leo X., in a bull he had just issued, reduced him to this most difficult alternative••• -either openly to acknowledge, as he had ever done, his perfect obedience to the holy see, by submitting his judgment to the decisions of the pope ; or at once renounce obedience to the vicar of Christ, and declare open war against the whole Christian world. With a boldness unparallelled,

he resolved on the latter, and immediately appealed from the pope to a general council. He was then at Wittemburg. To justify himself in this measure, he truly declared that general councils ‘ are superior in power to the pope, who, being a fallible man, might err, as St. Peter, the most perfect of his predecessors, had erred.’ He further remarked that the prophet forbids us to put our trust or confidence in man, even in princes, to whose judgment nothing ought less to be committed than the words of God ; protesting, however, at the same time, that he had no intention to speak any thing against the holy catholic and apostolic church, nor against the authority of the holy see. Leo X., still unwilling or afraid to push matters to extremities against this unruly son of the church, addressed a conciliatory message to the elector of Saxony This was accompanied by

a present which a very snort time oeiore would have had the most pleasing effects on the mind of the elector: it was the consecrated rose, which the pontiff had been in the habit of sending annually to those princes for whom he professed a more than usual affection and regard. This sa-cred and honorable present came too late. The rose had lost its fragrance with the half reformed elector.

VI. Decisive progress of the Reformation in Germany. ••• About this period Andrew Boden-stein, called by himself Carlostadt, from the place of his birth, having embraced the opinions of Luther, published a thesis in their defence. This called forth the learning and powerful abilities of Eckius. To enter into a detail of the disputes at Leipsic between Eckius, Carlostadt, and LiKher, would neither edify the reader nor illustrate the history. As usual both sides claimed the victory : before they entered upon the debate, which was conducted in the hall of the castle at Leipsic, in the presence of George, duke of Saxony, and a large concourse of other eminent persons, Eckius proposed to appoint suitable judges. Luther, with his characteristic boldness and impetuosity, replied that all the world might be the judge. If, however, these disputes had but little effect, while they were carried on by both parties in propria persona, when they were renewed in writing they called forth the efforts of many learned and eminent scholars; amongst whom were Melancthon and Erasmus, whose various publications awakened the spirit of enquiry, and forwarded, in a very powerful manner, the cause of the Reformation. After the fruitless disputes at Leipsic, Luther returned to Wittemburg, where Miltitz renewed his efforts to reconcile Luther to the pope and the church ; and prevailed upon him, by calling in the assistance of the society of the Augustine monks, to which Luther belonged to write

again to the pope, with a further and more explicit account of his conduct. Under the pretext of obedience, respect, and even affection for the pontiff, Luther conveyed the most determined opposition, the most bitter satire, and the most marked contempt; insomuch that it is scarcely possible to conceive a composition more replete with insult and offence than that which Luther affected to allow himself to be prevailed on to write by the representations of his own fraternity. After justifying the asperity with which he had commented on the misconduct of his adversaries, by the example of Christ and of the prophets and apostles, he thus proceeds : ‘ I must, however, acknowledge my total abhorrence of your see, the Roman court, which neither you nor any man can deny is more corrupt than either Babylon or Sodom, and according to the best of my information is sunk in the most deplorable and notorious impiety. For what has Rome poured out for many years past (as you well know) but the desolation of all things, both of body and soul, and the worst examples of all iniquity. It is indeed as clear as daylight to all mankind that the Roman church, formerly the most holy of all churches, is become the most licentious den of thieves, the most shameless ot all brothels, the kingdom of sin, of death, and of

hell: the wickedness of which not antichrist himself could conceive. The fate of the court of Rome is decreed ; the wrath of God is upon it; advice it detests; reformation it dreads; the fury of its impiety cannot be mitigated, and it has now fulfilled that which was said of its mother : ‘ We have medicined Babylon and she is not healed ; let us therefore leave her .’ It was the office of you and your cardinals to have applied a remedy; but the disorder derides the hand ot the physician, ‘nee audit currus ha-benas.’

Had the friends of the Roman court viewca this in the light in which some protestants have considered it, and not in fact completing ‘ the measure of his offences’ against the pope and the holy Catholic church, the bull of excommunication which Leo X. unwillingly issued against the author of it, would never have been put in force. Luther

and his adherents are conjured in it to return to their duty, and renounce their errors ; assuring them, that if they give manifest proof of their obedience, by destroying and disavowing their writings within six days, they should be graciously received to the bosom and protection of the church ; but that, should they persist in their errors and contumacy, after the tim►► specified, they should be proceeded against immediately as obstinate and perverse heretics, and receive the punishment which the law, in such cases, has provided. The bull of Leo X., instead of allaying these tumults, called forth all the zeal and energy of Luther, and his powerful and numerous friends. To such a pitch of exaspera-tion did this measure raise the intrepid and daring innovator, that he threw off, in the most unequivocal manner, all forms of respect, and even decency, towards the pope, the councils and the Catholic church. Refusing to appear to the pope's citation, he boldly exclaimed, ' I defer my appearing there until I am followed by 5000 horse and 20,000 foot ; then will I make myself believed.' No epithet of a severe and offensive nature was spared in representing the character and conduct of the pope and his whole court, lie once more appealed to a general council, and hesitated not to call the supreme pontiff, the lord, whose authority he had lately declared as inferior only to that of Jesus Christ, a tyrant, a heretic, an apostate, and antichrist, himself. He even summons the pope and his cardinals to re-pent of their sins and renounce their errors, or he would otherwise deliver over both them and their bull, with all their decretals, to Satan, that by the destruction of the flesh, their souls may be liberated in the coming of our Lord.

Not being in a capacity to carry his threat into execution in any other way, 'on the 10th of December 1520, he caused a kind of funeral pile to be erected without the walls of Wittemberg, surrounded by scaffolds, as for a public spectacle ; and, when the places thus prepared were filled by the members of the university and the inhabitants of the city, Luther made his appearance with many attendants, bringing with him several volumes containing the decrees of Gratian, the decretals of the popes, the constitutions called the Extravagants, the writings of Eckius, and of Emser, another of his antagonists, and, VOL. XVIII.

finally, a copy of the bull of Leo X. The pile being then set on fire, he, with his own hands, committed the books to the flames, exclaiming at the same time, 'Because ye have troubled the holy of the Lord, ye shall be burnt with eternal fire.' That there might be no mistake respecting the real sentiments of these zealous reformers, on the following day

Luther mounted the pul-pit and [openly declared that the conflagration they had just seen was a matter of small importance ; that it would be more to the purpose if the pope himself, or, in other words, the oapal see, were also burnt.

Every one must allow to Luther the merit of uncommon fortitude, zeal, and constancy. This was manifested in a conspicuous manner at the diet of Worms, which was assembled early in the year 1521, by the emperor Charles V. To this assembly Luther was summoned to appear, and he did not hesitate promptly to obey the summons, declaring to his friends, who were alarmed for his safety should he comply, that were he sure to encounter there as many devils as there were tiles on the houses, he would not disobey the call. He arrived at the city of Worms on the 16th of April, attended by a numerous and splendid retinue, and was conducted to the diet on the following day by the marshal count Pap-penhem, who informed him that he would not be permitted to address the assembly, but must give unequivocal answers to such questions as should be put to him. Being asked whether the books published in his name, the titles whereof were recited to him, were indeed his own publications ; and, also, if they were, whether he was prepared to retract what had been condemned by the pope's bull in them: He replied, that certainly the books were his, and that he should never deny them ; but that with respect to retracting any thing he had advanced in those books, it was a matter of such importance, that he requested a little time to consider before he gave his answer. Accordingly he was allowed till the following day to deliver a verbal and decided resolution. Encouraged by the plaudits and the advice of numerous friends, and urged on to constancy by the admiration of the populace, he again appeared before the diet at the time appointed. He delivered a very long and eloquent oration, in which he declared that some of his writings being published purely for the promotion of piety and good morals, he could not be expected to condemn what both friends and enemies allowed to be useful and innocent; ††† that others being directed principally against the tyranny of the papistical doctrines, which had given such general offence, he could not retract them without-betraying the cause of liberty and truth, which he had hitherto resolved to support; †††but that with respect to the third portion of his writings, which were those written directly against his various adversaries, he would confess he might have departed from that strict line of mildness and decorum which he ought to have observed ; and that as he made no extraordinary pretensions to sanctity, and was rather disposed to defend his doctrines than his manners, he should only reply in the words of the Saviour, ' If I have spoken evil, bear witness of the evil.

This was the only concession he appeared disposed to make, except that, if any of his doctrines could be proved to be opposed to the holy Scriptures, he himself would be the first to com-mit them to the flames. Addressing himself immediately to the emperor and the other princes who were present, he said that the true doctrine, when publicly acknowledged, was, at all times, to be regarded as a divine blessing ; but that to reject it would infallibly bring upon them many serious calamities. This harangue not being deemed a satisfactory answer, it was demanded of him to say, simply and unequivocally, whether he would or would not retract his opinions and writings. Now it was that all the native greatness and dignity of his soul became manifest, and he boldly replied in the following terms, as translated by Mr. Roscoe : ‘ Since your majesty, and the sovereigns now present, require a simple answer, I shall reply thus, without evasion and without vehemence. Unless I be convinced by the testimony of Scripture, or by evident reason (for I cannot rely on the authority of the pope and councils alone, since it appears they have frequently erred and contradicted each other), and unless my conscience be subdued by the word of God, I neither can nor will retract any thing, seeing that to act against my own conscience is neither safe nor honest.’ After which he added, in his native German, for he had previously spoken in Latin,’ Hierstehe; ich gati nicht anders ; Gott helff mir, Amen.’ ‘ Here I take my stand ; I can do no other ; God be my help ! Amen.’ Never through his whole life did Lu-ther appear to so much advantage as on this memorable occasion.’ The answer which Luther had given to the diet seemed to have placed the matter beyond all further dispute, and that nothing remained but to put the law against heretics in force upon him ; yet, through much persuasion, the emperor was induced to allow him to remain three days longer at Worms, and in the mean time several persons were permitted to use their best efforts in private to persuade him to obedience. But, every mild and lenient me-thod proving abortive, he was commanded to depart from the city and not to be found within the emperor’s

dominions after the expiration of twenty days. Some persons even advised the emperor to disregard the safe conduct which had keen granted, and, imitating the council of Constance, to destroy at once so dangerous a heretic ; but to the eternal honor of Charles V. he replied, that he would not give himself occasion to blush as the emperor Sigismund had done, in the case of John Huss. In thus nobly refusing to depart from the spirit of his religious profession, he was encouraged by Louis, the elector count Palatine, who declared that such an act would brand the German name with perpetual infamy ; and add-ed that it was intolerable that the empire should be for ever disgraced and reproached for not keeping the public faith merely to gratify the resentment of a few priests. Luther left the city of Worms on the 26th of April, accompanied by the imperial herald. He was met at the gate of the city by a numerous body of his friends, from whom he received the warmest congratulations and appla-ises ; he then proceeded on his journey to Wittemberg. OD the 26th of May, one month after his departure, the emperor, after repeated solicitations, issued a decree of the diet against him, in which he is represented ‘ as the devil in the semblance of a man, and the dress of a monk :’ and all the subjects of the imperial dominions are required to seize upon him and his adherents, to destroy their property, and burn their books and writings ; and all printers are forbid to publish any of their works without the consent of the ordinary. Luther, however, escaped the rage of his enemies, by a very fortunate and unlooked-for circumstance. Passing through a wood on his way to Wittemberg, with but a small band of attendants, he was seized by several persons in masks, employed by the elector of Saxony, and forcibly carried to the castle of Wartburg, where he remained in privacy for the space of nine or ten months, during which Leo X. died, and was succeeded by Adrian VI. This master piece of policy and humanity in Frederick was attended by several beneficial effects. Dur-ing this retreat Luther employed himself in composing many of those works which have since become, in a manner, the ground-work of the Reformation. Here, also, he translated a great part of the New Testament into the German language, and wrote numerous letters to various parts ; so that the work of the Reformation went on with a rapidity equal to his most sanguine wishes, notwithstanding the opposition it met with from the apostolic nuncios and others.

From this period the Reformation may properly be said to have taken effectual root. The subject which now chiefly engaged public attention was the expected call of a general council. The reformed party was solicitous for the measure, in the hope of reducing the prerogative of the pontiff; while the moderate and well-intentioned part of the

Catholics looked to it as the means of stopping the farther progress of schism. After many delays the unsteady and irresolute Clement had at last declared his assent to the long expected convocation. Whether he was sincere in this declaration, or as is more probable meant only an apparent concession to the wish of the German diet, the occurrence of his death, in the midst of the negociation, has left a matter of uncertainty. Alexander Farnese, to whom Clement had, in a manner, bequeathed the pontificate, succeeded him without opposition, and assumed the name of Paul III.

Paul proceeded, or affected to proceed, on the plan of making arrangements for the convocation of a council. But, as the reformed were now too numerous to be refused access to the council, Paul determined, as a preliminary step, to despatch a confidential person to confer with their leading men. His nuncio in Germany, Peter Paul Verger, a native of Istria, and a favorite of Paul's predecessor, was chosen for this commission. This person proceeded to Wittemberg to meet Luther. The interview was terminated, as might be expected, without any beneficial result. The pope now ordered his legate to declare to the diet of Spires, assembled in 1542, that he would, according to the promise he had already made, assemble a general council, and that Trent should be the place of its meeting, if the diet had no

objection to that city. Ferdinand and the princes who adhered to the cause of the pope gave their consent to this proposal ; but it was vehemently opposed by the protestants, both because the council was summoned by the authority of the pope only, and also because the place was within his jurisdiction, while they desired a free council, which should not be biassed by the dictates nor awed by the proximity of the pontiff. But this protestation produced no effect. Paul III. persisted in his purpose, and issued out his circular letters for the convocation of the council with the approbation of the emperor.

The emperor labored to persuade the protestants to consent to the meeting of the council of Trent; but, when he found them fixed in

their opposition to this measure, he began to listen to the sanguinary measures of the pope, and resolved to terminate the disputes by force of arms. The elector of Saxony and Landgrave of Hesse, who were the chief supporters of the protestant cause, upon this took proper measures to prevent their being surprised and overwhelmed by a superior force. But, before the horrors of war commenced, the great reformer Luther died in peace at Eisleben, his native place, February 14th, 1546. He had travelled to Eisleben from Wittemburg in the midst of winter, to endeavour to effect a reconciliation between the counts of Mansfield. Soon after entering Eisleben, he suffered an access of extreme debility, a circumstance not unusual with him in engaging in a matter of deep interest. But this attack was more serious than on former occasions. He recovered, however, and seemed to enjoy the hospitality which his friends were anxious to show him. His time was passed in attention to his customary hours of daily prayer; in the transaction of the business which had called him to Eisleben ; and in cheerful and good humored conversation. He partook twice of the Lord's Supper, and preached three or four times before the progressive advance of his malady led to the exhaustion of his frame ; after passing nearly three weeks at Eisleben, his illness was productive of a fatal termination, Luther expired, surrounded by friends, and placing the fullest trust in Him to the promotion of whose cause he had zealously and constantly devoted his powers. To the eternal honor of Luther we may add, that after having refused the offers of the court of Rome ; after having been so many years the father and almost the founder of a new church; after having been the friend, the adviser, the spiritual father of so many princes, who,through the Reformation, had been enriched with all the possessions of the clergy, of which he might if desirous have obtained a rich share, he lived and died in a state bordering on poverty, and left to his wife and children only the esteem due to his name. In the diet of Augsburg, which was soon after called, the emperor required the protestants to leave the decisions of these religious disputes to the wisdom of the council which now met at Trent. See TRENT.

A plague which broke out, or was said to do so, in the city of Trent, caused the greater part of the bishops to retire to Bologna ; by which means the council was in effect dissolved, nor

could all the entreaties and remonstrances of the emperor prevail upon the pope to reassemble it without delay.

In the year 1549 Paul III. died, and was succeeded by Julius III., who,

at the repeated solicitations of the emperor, consented to the reassembling of a council at Trent. A diet was again held at Augsburg under the cannon of an imperial army, and Charles laid the ecclesiastical affairs before the princes of the empire. On the dissolution of this meeting, in 1551, the emperor Charles V., being defeated at Inspruck, concluded a treaty with Maurice, elector of Saxony at Passau, which is considered by the protestants as the basis of their religious liberty. By this treaty it was provided that another diet should be called with a view to an amicable adjustment of all matters in dispute, and that until such adjustment the contending parties should enjoy the free and undisturbed exercise of their religion. Various circumstances delayed the promised meeting of the diet ; at length, however, it met at Augsburg, where it was opened by Ferdinand in the name of the emperor, and terminated those deplorable calamities which had so long desolated the empire. After various debates the following resolutions were agreed to on the 25th of September 1555; that the protestants who followed the confession of Augsburg should be, for tke future, considered as entirely free from the jurisdiction of the Roman pontiff, and from the authority and superintendance of the bishops ; that they were left at perfect liberty to enact laws for themselves relating to their religious sentiments, discipline, and worship ; that all the inhabitants of the German empire should be allowed to judge for themselves in religious matters, and to join themselves to that church whose doctrine and worship they thought the most pure and consonant to the true spirit of Christianity ; and that all those who should injure or persecute any person under religious pretences, and on account of their opinions, should be declared and proceeded against as public enemies of the empire, invaders of its liberty, and disturbers of its peace. Thus was the Reformation established in several of the states of the German empire, where it continues to this day ; nor have the efforts of the papacy been since able to suppress it, or even to prevent its growth.

VII. Progress of the Reformation in England.❀❀❀ Turning from Germany the cradle of the Reformation, and from those holy men to whom under God we owe the first revival of truth and science on the continent, the pious and Christian mind will delight to contemplate the various causes which were preparing the way in England for a religious revolution not less remarkable nor less beneficial than that effected by Luther. The growing cruelty, oppression, and ignorance of the clergy had already excited the just hatred of the people to no small extent ; but the enemies whom the wealth of the church tempted to assail it were far more dangerous than those who opposed its corrupt doctrines and superstitious practices. When, however, its wealth had

once become an object of cupidity to the government, the enemies whom its corruption

had provoked, and its cruelties incensed, were ready to league with any allies against it, and reform and spoliation went hand in hand. The accession of Henry VIII. to the throne of England promised to the world a reign of splendor, popularity, and peact . With every advantage of person, he united a high degree of bodily and mental accomplishment ; his understanding was quick and vigorous ;_ and his learning such as might have raised him to distinction, had he been born in humble life. Among the passions of Henry must be reckoned that which he had for the writings of St. Thomas Aquinas. His veneration for this vigorous champion of the Roman orthodoxy was carried so far that, Luther having contradicted St. Thomas with acumen, Henry thought himself bound to enter the lists and defend his master. He, therefore, wrote a Treatise, or Assertion of the Seven Sacraments, against Luther, who admitted with all the reformed churches of no more than two. The latter treated his new adversary as his equal, and ridiculed him ; but the pope, who perhaps really laughed at the book as much as Luther did, appeared so much delighted with his literary efforts in his favor, that he bestowed on Henry the title of ‘ defender of the faith.’ Little did the world imagine that Henry was so soon to become one of the most potent enemies of the papacy; and that the Reformation under his auspices would be introduced into England. A speech of the court fool upon that occasion has been preserved : l O, good Harry, let thousand I defend one another, and let the faith alone to defend itself.’ Henry had now been married eighteen years to Catherine of Arragon, who had been brought over from Spain to marry his eldest brother, prince Arthur, who died some months after his cohabitation with her. Henry had three children by this lady, one of whom was still living, while she herself was esteemed for her virtue and the gentleness of her disposition. It happened at length, that among the maids of honor that then waited on the queen, his attention was attracted by Anna Bullen, the daughter of a gentleman of distinction, though not of the nobility. The king, who never restrained one passion which lie desired to

gratify, saw and loved her ; but, after several efforts to induce her to comply with his criminal passion, he found that without marriage he could have no lopes of succeeding. This obstacle, therefore, ae undertook to remove ; his own queen was now become hateful to him, and, in order to procure a divorce, he pretended his conscience rebuked him for having so longed lived in incest with his present queen, formerly his brother's wife. In this perplexity, therefore, he applied to Clement VII., who owed him obligations, and from whom he expected a ready compliance, to dissolve the bull of the former pope, who had given him permission to marry Catherine, and to declare it was contrary to all laws both divine and human. Clement was now in the utmost perplexity. Queen Catherine was aunt to the emperor, who had lately made him a prisoner, and whose resentment he dreaded to rekindle, by thus injuring so near a relation; besides he could not, in honor, declare

the bull of the former pope illicit, for this would be entirely destroying the papal infallibility, On the i > ther hand, Henry was his protector and friend, the dominions of England were the chief source of his finances ; and the king of France, some time before, had got a bill of divorce in somewhat similar circumstances. In this exigence he thought the best method was to spin out the affair by negociation; whilst it depended, he was sure of two great friends, but, when it should be decided, of one great foe : and thus he argued, temporised, promised, recanted, and disputed, hoping that the king's passion would never hold out during the tedious course of an ecclesiastical controversy, or that the not improbable death of the queen, or some other of those accidents to which human affairs are subject, might extricate him from his embarrassment. During the negociations, on which Henry's happiness seemed to depend, he expected, in his favorite Wolsey, a warm defender, and a steady adherent; but Wolsey seemed to be in almost as great a dilemma as the pope himself. On the one hand he was to please his master, the king, from whom he had received a thousand marks of favor ; on the other hand he could not disoblige the pope, whose servant he more immediately was, and who had power to punish his disobedience. The king's resentment was consequently excited against the cardinal, who died soon after, in all the pangs of repentance and remorse.

Henry, by the advice of Cranmer, had the legality of his present marriage canvassed in the different universities of Europe. Almost all the colleges of Italy and France declared his present marriage against all law, divine and human ; and that, therefore, it was not, at first, in

the power of the pope to grant a dispensation. Among the places where it was most warmly opposed were Cambridge and Oxford ; but, at last, they also concurred in the same opinion. Thus fortified, the king was resolved to oppose even the pope himself, for his passion could by no means brook the delays and subterfuges of the holy see ; being therefore supported by his clergy, and authorised by the universities ; having seen the pope formerly degraded by a lay monarch, and Luther's doctrine followed by thousands; and yet still further instigated by the king of France, he, without further dispensation, annulled his marriage with queen Catherine ; and Cranmer, now become an archbishop, pronounced the decree.

The pope now thought himself obliged to hold no measures with the king; and, therefore, published a sentence declaring queen Catherine alone to be Henry's lawful wife, and requiring him to take her again, with a denunciation of censures in case of refusal. Henry, enraged that the pope should dare to thwart his passion, declared himself at once head of the church of England, and prohibited all intercourse with Rome ; the tribute of Peter-pence, and the interference of the pope in the collation to benefices. The people came into the king's proposal with joy, and took an oath, called the oath of supremacy ; all the credit of the pope, that had subsisted for ages, was now at once over

thrown, and few, except those who held to the religious houses, seemed dissatisfied. In this manner began the Reformation of England, and by such surprising methods providence brought about its designs.

Henry was very sensible that the parliament was, even from motives of interest, entirely devoted to him, and therefore he was resolved to make use of the opportunity, and render himself absolute. Being empowered to act as he thought proper, he went vigorously to work in the suppression of monasteries, colleges, and religious houses. To reconcile the people to these proceedings, Henry took care to have the counterfeit reliques exposed, the scandalous lives of the friars and nuns made public, and all their debaucheries detected. Whatever had served to engage the people in superstition, was publicly burnt ; but

what grieved the people most to see, were the bones of Thomas Becket, the saint of Canterbury, burnt in public, and his rich shrine, in which there was a diamond of great value, confiscated among the common plunder. But, though the king had entirely separated himself from Rome, yet he was by no means willing to be a follower of Luther. The invocation of saints was not yet abolished by him, but only restrained ; he ordered the Bible to be translated into the vulgar tongue, but not put into the hands of the laity. The publication of Tindal's Translation of the Bible was at this time, in its effects upon this nation, the most important volume that ever issued from the press. Under the patronage of Humphrey Monmouth, a wealthy and benevolent citizen, Tindal travelled into Germany, where he conferred with Luther and others of the great protestant divines, and then settling at Antwerp, as the best place for printing his book and securing its transmission to England, completed the New Testament. Tindal had perceived, he said, that it was impossible to establish the people in any truth, ex-cept the Scriptures were plainly laid before them in their mother tongue, that they might see the process, order, and meaning of the text. The Romanists understood perfectly well how little the practice of their church was supported by Scripture ; and that, if the ark of the covenant was admitted, Dagon must fall. No sooner therefore was it discovered that copies of this translation were industriously dispersed in England than it was prohibited, as being corrupted with articles of heretical pravity, and opinions erroneous, pernicious, pestilent, and scandalous ; tending to seduce persons of simple and unwary dispositions ; but a spirit had now been roused which no persecution could suppress; the book was therefore eagerly sought for and widely dispersed.

It was a capital crime to believe in the pope's supremacy, and yet equally heinous to be of the reformed religion, as practised' in Germany. Henry's opinions in religion were delivered in a law, which, from its horrid consequences, was termed the bloody statute, by which it was ordained that whoever, by word or writing, de-nied transubstantiation, that whoever maintained that the communion in both kinds was neces-raiy, or that it was lawful for priests to marry,

or that vows of chastity could innocently be broken, or that private masses were unprofitable, or that auricular confession was unnecessary, should be burnt or hanged as the court should determine. The kingdom, at that time, was in some measure divided between the, followers of Lu-ther and the adherents to the pope ; this statute, with Henry's former decrees, in 'some measure excluded both,

and therefore opened a wide field for persecution. Children were now compelled to accuse their parents and parents their children, wives their husbands and husbands their wives, unless they would share the same fate. The poor wretches, who saved their lives by abjuration, were, under the name of perpetual penance, condemned to perpetual bondage, being distributed to monasteries beyond the precincts of which they were never to pass, and where by their labor they were to indemnify the convent for their share of such food as was regularly bestowed as charity at the gate. The mark of the branding iron they were never to conceal ; they were to bear a faggot at stated periods, and once at the burning of a heretic ; for which every one who contributed a faggot was rewarded with forty days indulgence.

Among the martyrs of those days, Thomas Bilney is one whose name will ever be held in deserved reverence. He had been brought up from a child at Cambridge, where, laying aside the profession of both laws, he entered upon what was then the dangerous study of divinity ; and being troubled in mind repaired to priests, who enjoined him masses, fasting, watching, and the purchase of indulgences, till his scanty purse and feeble constitution were both well nigh exhausted. At this time hearing the New Testament, which Erasmus had just published, praised for its Latinity, he bought it for that inducement only ; and opened it upon a text, which finding his heart open, rooted itself there : ‘ This is a faithful saying and worthy of all acceptation, that Christ Jesus came into the world to save sinners, of whom I am chief.’ The comfort which these words conveyed was confirmed by the frequent perusal of a book which now became sweeter than honey, or the honeycomb ; and he began to preach, as he had learnt, that men should seek for righteousness by faith. It was not long before he was accused before Cuthbert Tonstal, then bishop of London, a man of integrity and moderation, though compelled to bear a part in proceedings which were utterly abhorrent to his natural disposition. The main accusations against him were, that he asserted Christ was our only mediator, not the Virgin Mary, nor the saints ; that pilgrimages were useless ; and that offerings to images were idolatry. Of these doctrines he was found guilty ; the sheriff, to whose custody he was delivered, happened to be one of his friends, and therefore treated him with every kindness which could be afforded during his imprisonment. The night before he was to suffer some friends who visited him found him at supper eating heartily, and with a cheerful countenance ; and one of them saying he was glad to see him refresh himself thus so shortly before he was to undergo so painful a death, he replied, ‘ I follow

the example of those, who, having a ruinous house to dwell in, hold it up by props as long as they may :' another observed that his pains would be short, and the spirit of God would support him in them, and reward him afterwards with everlasting rest. Bilney, upon this, put his finger into the candle, which was burning before him more than once. ' I feel,' said he, ' by experience, and have long known by philosophy, that fire is naturally hot; yet I am persuaded by God's holy word, and by the experience of some saints of God therein recorded, that in the flames they may feel no heat, and in the fire no consumption. And I constantly believe that, however the stubble of this my body shall be wasted by it, yet my soul and spirit shall be purged thereby ??? a pain for the time, ??? whereon followeth joy unspeakable;' and then he repeated the words of Scripture : * Fear not, for I have redeemed thee, and called thee by thy name ; thou art mine own ; when thou goest through the water, I will be with thee, and the strong floods shall not overflow^ thee. When thou walkest in the fire, thou shall not be consumed, and the flame shall not burn thee ; for I am the Lord thy God, the Holy One of Israel, thy Saviour.' This text he applied to himself and those who were present, some of whom, receiving the words as a legacy of a blessed mar-tyr, had them fairly written on tables, or in books, and derived comfort from them till their dying day. On the following morning he was led to execution, one of his friends exhorting him at the prison door, with few and secret words, to take ' his death patiently and constantly. Bilney answered, ' When the mariner is tossed upon the troubled sea, he beareth his perils better, in hope that he shall yet reach his harbour ; so, whatever storms I shall feel, my ship will soon be in its quiet haven; thereof, I doubt not, by the grace of God, ??? and I entreat you, help me with your prayers, to the same effect.' The place of execution was a low valley, surrounded with rising ground, without the bishop's gate. Having put off the layman's gown, in which after his degradation he had been clad, le knelt upon the sledge, and prayed with deep and quiet devotion, ending with the 143d Psalm, in which he thrice repeated the verse, ' Enter not into judgment with thy servant, O Lord, for in thy sight shall no man living be justified.' He then put off his jacket and doublet, and remained in his hose and shirt, and so was chained to the stake. The dry reeds were kindled ;

and in a few minutes Bilney, triumph-ing over death, .rendered up his soul, in the fulness of faith, and entered into his reward.

Those who adhered to the pope, or those who followed Luther, were now equally the objects of royal vengeance and ecclesiastical persecution. In the houses of parliament, parties were nearly equally divided ; there were on both sides men of great learning, ability, and address. After long consultation and debate certain articles were at length set forth in the king's name as head of the church of England ; it being in the preamble stated, ' among the chief cares appertaining to his princely office, diligently to provide that unity and concord in religious opi-

nions should increase and go forward ; and all occasion of dissent and discord, touching tne same, be repressed and utterly extinguished.' The articles were such as could satisfy neither party, both having struggled to introduce their own opinions, and each with considerable success, though on the whole to the manifest advantage of the reformers. The Bible and the three creeds were made the standards of faith, no mention being made of tradition, nor of the decrees of the church. Three sacraments ××× those of baptism, penance, and the altar ××× were said to be necessary to salvation ××× four being thus pretermitted ; but the corporal presence was declared, and the necessity of auricular confession. Images were allowed as useful, but they were not to be, worshipped; and saints might laudably be addressed as intercessors, though it was asserted that Christ is our only sufficient mediator. The existing rites and ceremonies were to be retained as good and laudable ; not as having power to remit sin, but as useful in stirring and lifting up our minds unto God, by whom only our sins can be forgiven. Lastly, prayers for the dead were advised as good and charitable; though the question of purgatory was said to be uncertain by Scripture, and the abuses which under that belief had arisen were to be put away. Thomas Cromwell, raised by the king's caprice from a blacksmith's son to be a royal favorite, and Cranmer, now become archbishop of Canterbury, with all their might assisted the Reformation. The pope had long threatened to issue a bull of deposition, but had hitherto delayed it because of the displeasure which he knew it would occasion to other sovereign princes. The manner in which Becket had been uncanonised put an end to this suspension ; and the bull was now fulminated, requiring the king and his accomplices to appear at Rome, and there give an account of their actions on pain of excommunication and rebellion, otherwise the pope deprived him of his crown, and them of their estates, and both of

Christian burial. He interdicted the kingdom ; absolved his subjects and their vassals from all oaths and obligations to them ; and offered his dominions to the king of Scotland, if he wou-ld go and take them. But ‘the throne of England was no longer to be shaken by such thunders. Even the Romish bishops joined in the declaration which Henry set forth, that Christ had forbidden his apostles or their successors to take to themselves the power of the sword, or the authority of kings ; and if the bishop of Rome, or any other bishop, assumed any such power, he was a tyrant and usurper of other men’s rights, and a subverter of the kingdom of Christ.

At length so many hundred persons were thrown into prison upon the six articles, that Henry himself thought it’ better to grant a general pardon, than to proceed against them all ; and this bloody act slept till his determination to put away Anne of Cleves, and marry Catherine Howard, drew on the fall of Cromwell, whom the duke of Norfolk, uncle to the bride elect, mortally hated. Now the six articles were enforced with extreme severity ; and Henrv as if to show his impartiality while he executed a*

heretics those reformers who went beyond the limits which he had laid down, put to death as traitors those Romanists who refused to acknowledge his supremacy.

The alterations in the reign of Henry were rather separations from the pope than a reformation of religious abuses : in the reign of his successor, Edward VI., the errors of Rome, in reality, began to be reformed. It was left to people’s choice to go to confession, which had hitherto been deemed an indispensable duty, or to neglect that practice. It was ordered that all images should be taken out of churches ; priests were allowed to marry ; the old mass was abo-Ushed ; and a new liturgy drawn up, which retrenched several abuses in the service of the church, and which is the same with that now used, excepting a few alterations. Gardiner and Bonner, refusing their consent to these momentous changes, were deprived of their sees and imprisoned; but no rigor was used towards them, nor did the protestants in any instance abuse their triumph by retaliating upon the papists for the persecution which they had endured. Immediately upon the death of the young king, two competitors put up for the

crown; Mary relying upon the justness of her pretensions, and the lady Jane Grey supported by the duke of Northumberland, her father-in-law. Mary was strongly bigoted to the popish superstitions. Her zeal had rendered her cruel, and she was not only blindly attached to her religious opinions, but even to the popish clergy who maintained them. On the other hand, Jane Grey was attached to the reformers ; though yet but sixteen, her judgment had obtained such a degree of perfection as few enjoy in their more advanced age. Queen Mary, however, obtained possession of her rightful throne without the loss of a single life ; so completely did the nation acknowledge her claim, whilst an after insurrection rashly planned, and worse conducted, served only to hasten the destruction of the lady Jane and her husband. Mary began by giving orders for the suppression of all married bishops and priests; the mass. was directed to be restored; the pope's authority was re-esta- blished with some restrictions ; the laws against heretics were renewed ; and the church and its privileges put on the same foundation in which they were before the alteration of Henry VIII. This was kindling up the fires of persecution anew ; at the head of these measures were Gardiner bishop of Winchester, and Bonner bishop of London. Gardiner began this bloody scene with Hooper and Rogers. Hooper had been bishop of Gloucester; Rogers was a clergyman who had shone among the most distinguished of the protestants. He was prebendary of St. Pauls, and refused all submission to the church of Rome, which he looked upon as antichristian. They were both condemned by the commissioners appointed by the queen, with the chancellor at the head of them. Rogers suffered in Smithfield. When he was brought to the stake he had it in his power to save himself, by recanting his opinions ; but neither hopes nor fears could prevail on him to desert his religion. When the faggots were r>laced around him he seemed no

way daunted at the preparation, but cried our ' I resign my life with joy, in testimony of th doctrine of Jesus ;' and washing his hands in th flames, as they blazed around him, took his death with so calm and resolute a patience, that many who were present blessed God for the support which had been vouchsafed him. Hooper had his pardon offered him upon the same terms, but he refused it with equal indignation. This old martyr, who was executed at Gloucester, was three-quarters of an hour in torment; the fire either from malice or neglect had not been sufficiently kindled, so that his legs and thighs were first burnt, and one of his hands dropped off before he expired ; yet the voice with which he called upon his Redeemer was not that of one impatient, or overcome with pain ; he remained still and calm, we

are told, to the last ; and at length, in the words of Fox, ‘ died as quietly as a child in his bed.’ No father in his household, no gardener in his garden, no husbandman in his vineyard, was ever more employed than Hooper had been in his diocese among h’is flock, going about the towns and villages teaching and preaching to the people there.

Saunders and Taylor, two other clergymen, whose zeal had been distinguished in carrying on the Reformation, were the next that suffered. And now Ridley bishop of London, and the venerable Latimer bishop of Worcester, were to receive the martyr’s crown. Ridley was one of the ablest champions of the Reformation: his piety, learning, and solidity of judgment, were admired by his friends and dreaded by his enemies. The night before his execution he invited the mayor of Oxford and his wife to see him die ; and when he saw them melted into tears he himself appeared quite unmoved. When he came to the stake where he was to be burnt, he found his old friend Latimer there before him, and began to comfort him in his sufferings, while Latimer was as ready to return the kind office. Ridley distributed such trifles as he had about him to those who were near him ; and many pressed about him to obtain something as a relic. They then undressed for the stake ; and Latimer, when he had put off his prison dress, remained in a shroud which he had put on, instead of a shirt, for that day’s office. When the fire was brought Latimer said, ‘ Be of good comfort, master Ridley, and play the man ! we shall this day light such a candle, by God’s grace, in England, as I trust shall never be put out !’ The venerable old man received the flame as if embracing it ; and having, as it were, bathed his hands in the fire, and stroked his face with them, died apparently without pain. Ridley endured a long martyrdom, and fell at Latimer’s feet. As the bodies were consumed the quantity of blood which gushed from Latimer’s heart astonished the beholders.

As soon as Cranmer perceived what course events were likely to take, after king Edward’s death, he gave orders that all his debts should be paid to the uttermost farthing, and cancelled the bills which were due to him from persons who were not in a condition to discharge them. This being done, he said he was ‘iis own man, and, with God’s help, able to answer all the world

and all worldly adversities. Those adversities soon came upon him ; he was attainted of treason, and adjudged guilty of it. Accordingly he was arraigned for blasphemy, incontinency, and heresy, before the same commissioners who condemned his fellow-prisoners : but he was dealt with very differently from any of the former sufferers; being removed to the house of the dean of Christ Church, and treated there rather as a guest than a prisoner. We have noticed the success of this treatment on a mind naturally timid. See our article CRANMER. He signed a recantation of his former opinions, and concluded it with a protestation that he had done it freely and only for the discharge of his conscience. The queen, however, was resolved to make him a sacrifice to her' resentments. She said it was good for his own soul that he repented ; but, since he had been the chief spreader of heresy over the nation, it was necessary to make him a public example; so the writ was sent down to burn him : and, after some stop had been made in the execution of it, new orders came for doing it suddenly. This seems to have been kept from Cranmer's knowledge. He, however, was gradually prepared by a better influence for the worst* and on being carried to St. Mary's where Dr. Cole vindicated the queen's justice in condemning Cranmer while he magnified his conversion and ascribed it to the workings of God's Spirit, the conduct of the archbishop far more surprised his enemies. A Romanist who was present, and who thought that his former life and wretched end deserved a greater misery, if greater had been possible, was yet, in spite of his opinions, touched with compassion at beholding him in a bare and ragged gown, exposed to universal contempt. ' I think,' said he ' that there was none that pitied not his case, and bewailed not his fortune, and feared not his own chance, to see so noble a prelate, so grave a counsellor, of so long continued honor, after so many dignities, in his old years to be deprived of his estate, adjudged to die, and in so painful a death to end his life.' In this hour of utter humiliation, and severe repentance, he certainly possessed his soul in patience ; never had his mind been more clear and collected, never had his heart been so strong. At the stake no cry was heard from him, save the exclamation of the proto-martyr Stephen, ' Lord Jesus, receive my Spirit !' He stood immovable as the tree to which he was bound, his countenance raised, looking to heaven, and anticipating that rest into which he was about to enter.

Bonner now seemed not satisfied with single deaths, but sent men in whole companies to the flames ; even women were not spared ; and in

Guernsey, when a woman condemned for heresy was delivered of a child in the midst of the flames, and some of the spectators humanely snatched it out, the magistrate, who was a papist, ordered it to be thrown in again, and it was consumed with the mother ! During the foui years that this persecution continued, it appears by authentic records that 280 persons were burnt alive ; tnc number of those who perished in pri-son i►► unknown. The loss of property in London alone, consequent upon the arrest or flight of

substantial citizens, and the general insecurity, was estimated at ►►300,000. Nor was it in wealth alone that the kingdom suffered; the spirit of the nation sunk ; and the character, and with it the prosperity, of the English would have been irrecoverably lost, if God in his mercy had not cut short this abominable tyranny. Mary was supposed to be with child ; but those appearances, which had so far deceived the queen herself that the cradle was made ready, proved to be the indications of a mortal disease. Not a week before her death three women and two men were burnt at Canterbury.

Elizabeth, immediately on her accession, made greater approaches to toleration than any prince who had hitherto reigned on any throne in Europe. Indulgence and forbearance, such as that age had never seen, were freely extended to all ; neither were there any violations of this unknown and unthought of generosity till repeated acts of treason endangered the safety both of her person and her throne. When the parliament met, the keeper of the great seal, Sir Nicholas Bacon, was directed, with a moderation at that time very unusual, to entreat the members to reunite all classes of the people by avoiding the extremes of both parties. In consequence of this advice, and in accordance with the known wishes of the queen, public worship was appointed in the vul-gar tongue ►►► the supremacy of the queen was restored ►►► the acts of Edward, concerning religion, were renewed and confirmed. No laws were made to punish the Romanist persecutors of the former reign ►►► no retaliation was attempted►►► no censure was passed ►►► no disapprobation expressed.

The first act of the new queen was to take Sir William Cecil into her council, and appoint him her principal secretary. When the bill for restoring the supremacy to the crown was debated in parliament, it was opposed by the bishops. Heath said, that, as concerning temporal government, the house could give her highness no further authority than she already had by right and inheritance, not by their gift, but by the appointment of God, she being their sovereign lord and lady, theii

king and queen, their emperor and empress. But spiritual government they could not grant, neither could she receive.

The bishop of Chester, speaking upon the same subject, asked of whom those men, who in this and other points dissented from the Catholic church, learned their doctrine ? ‘ They must needs answer,’ said he, ‘ that they learned it of the Germans. Of whom did the Germans learn it ? Of Luther. Well, then, of whom did Luther learn it ? He shall answer himself: he saith, that such things as he teacheth against the mass, and the blessed sacrament of the altar, he learned of Satan, the devil ; at whose hands, it is like, he did also receive the rest of his doctrines.’ The infamous persecutor, Story, went beyond this in the house of commons. He boasted of the part he had taken ; related with exultation how he had thrown a faggot in the face of an earwig, as he called him, who was singing psalms at the stake, and how he had thrust a thornbush under his feet to prick him : wished that he had

done more ; and said he only regretted that they should have labored at the ‘ young and little twigs, when they ought to have struck at the root ;’ words by which it was understood that he meant the queen. Even this unreasonable insolence did not provoke the government to depart from the temperate course which it had laid down. The measures adopted by the pope were, at chis time, not less impolitic than cruel and wicked. It is possible that Elizabeth would have been content to have allowed the people to retain their faith so long as her crown was independent. The measures of the pope, and the dissensions he fomented, however, gradually kindled in Elizabeth’s mind the most anxious apprehensions for her individual safety as well as that of her throne. The insurrection of Northumberland and Westmoreland was sanctioned by the pope, who, in his letters, exhorts them ‘ to persevere in the work, not doubting but that God would grant them assistance ; and that if they should die in asserting the Catholic faith, and the authority of the see of Rome, it were better for them, with the advantage of a glorious death, to purchase eternal life,

than by ignominiously living, with the loss of their souls, shamefully to obey the will of an ungovernable woman.' ††† Pii. V. Epist. p. 290. Soon after this pious exhortation the pope, in the thirteenth year of the reign of Elizabeth, fulminated the Bull of Excommunication ' out of the fulness of his apostolic power ;' declaring .he queen to be a heretic, and a favorer of heretics. ' We declare her/ said the pope, ' to be deprived of her pretended title to the kingdom aforesaid, and of all dominions, dignity, and privilege whatsoever : and also the nobility, subjects, and people of the said kingdoms, and all which have in any sort sworn unto her, to be for ever absolved from every such oath, and all manner of duty, of dominion, of allegiance, and obedience. We also command and interdict all and every the noblemen, subjects, and people, aforesaid, that they presume not to obey her, or her monitions, mandates, and laws, and those which shall do to the contrary we do likewise anathemise.' Irritated by this presumptuous and scandalous decree Elizabeth procured an act declaring it to be high treason to affirm that the queen was not a lawful sovereign, or to bring bulls, indulgences, or absolutions from the pope. Matters now threatened so complete a separation of England from Home that the pope declared it would be of so much benefit to Christendom that Elizabeth should be destroyed, that he was ready to aid in person, to spend the whole revenue of the apostolic see, all the chalices and crosses of the church, and even his very clothes, to procure her destruction, &c. A public disputation was at this time appointed, not, as in Mary's reign, to be concluded by burning those who differed in opinion from the ruling party, but with full liberty of speech, and perfect safety for the Romish disputants. Upon Heath's motion, the queen ordered it should be managed in writing, as the best means to avoid vain altercation; but, †††when it came to the point, the Romanists, upon some difference concerning the manner of proceeding, refused to dispute at all. for this contempt of the privy council, in whose presence

they had met, they were fined. Without delay Elizabeth then deprived the refractory bishops, Kitchen of Llandaff being the only one who conformed : there were but fourteen living, many having died in flie great mortality at the close of the preceding reign. The vacant see's were filled by Parker, Grindal, Cox, Sands, Jewel, Park-hurst, Pilkington, and others ; men worthy to be held in lasting remembrance and honor, who had either escaped, during the Marian persecution, by retiring to the continent or secreting themselves at home. Thus was gradually established, never more, we trust, to be subverted, the separation of England and all the members of her

hierarchy from the domination of Rome.

VIII. The Reformation in Denmark, France, 4'C. ††† In Denmark the Reformation was introduced as early as the year 1521, in consequence of the ardent desire of Christiern II. to have his subjects instructed in the doctrines of Luther.' His uncle Frederick, duke of Ilolstein and Sleswick, being appointed his successor, conducted the Reformation with much greater prudence than his predecessor. He permitted the Protestant doctors to preach publicly the sentiments of Luther, but did not venture to change the established government and discipline of the church. However, he procured the publication of a famous edict, by which every subject of Denmark was declared free either to adhere to the tenets of the church of Rome, or to the doctrine of Luther ; and the papal tyranny was totally destroyed by his successor Christiern III., who began by suppressing the despotic authority of the bishops, and restoring to their lawful owners a great part of the wealth and possessions which the church had acquired. This was followed by a plan of religious doctrine, worship, and discipline, laid down by Bugenhagius, whom the king had sent for from Wittemberg; and, in 1539, an assembly of the states at Odensee gave a solemn sanction to all these transactions, and settled that form of church government which has since been retained.

The first dawn of liie Reformation in France appeared, as we have before noticed, in the preaching of Waldo, who, in the twelfth century, brought to light some truths which had been long hidden amidst the ignorance and superstition of the Romish church ; and, though persecution soon attended his steps, it served but to scatter his principles, and disperse his followers over the face of Europe. Waldo himself appears to have proclaimed his opinions in various parts of the continent. The Albigenses, so called from the country about Toulouse, where they dwelt, embraced in a body the doctrine of reform. It was carried into Calabria, Bohemia, Germany, Flanders, Poland, Spain, and even the dominions of the grand sultan.

Calvin was born at Noyon, in Picardy, early in the sixteenth century ; when twenty years of age, he first preached the doctrines of the Reformation to his countrymen ; and, seven years afterwards (in 1536), printed his Institutes, which contain a full, and certainly a very able, statement of his opinions. This work was dedicated, in a preface written with remarkable elegance of style, to Francis I.; but it does not

seem to have pioduced much effect on the mind of that monarch. In 1553 Calvin edited an edition of Olivitan's tˆnslation of the Bible, which proved of great benefit to the church. In 1557, however, an attempt wfs made to establish an inquisition at Paris, after the plan of that in Spain, to put down heretical opinions ; but it did no effectual mischief. The king of Navarre, who was also a prince of the blood, and through whorti the title to the crown of France afterwards descended to his son Henry IV., became about this time a convert to the reformed doctrines. In 1562 the ever-memorable Charles IX. succeeded to his brother. As he was only nine years of age at that time, the government remained in the hands of Catherine. Two years after this period Calvin died. It does not ap-pear that this great man, except at an early period of his life, took directly any personal part in prosecuting the Reformation in France ; but it grew up under his inspection ; and his authority was the acknowledged human standard of faith and duty. In 1571 the Protestant church in France had reached its highest point of prosperity. A synod was held at Rochelle, where the queen of Navarre, Jean D'Albert, her son, afterwards Henry IV., and two princes of the royal family, attended. At that time the protes-tantshad 2150 churches, some of which contained 10,000 members". The deepest aversion, however, to the views of the Protestants had long dwelt in the minds of all connected with the court, except the few members of their own body ; and a plot for getting rid of the reformed religion had long been meditated. To the queen-mother, one of the family of Guise, the atrocious contrivance is due, of the means by which it was to be attempted. On the occasion of the marriage of Henry, with the sister of Charles IX., the whole body of Protestants were enticed to Paris. After the admiral De Coligny, the champion of the reformed cause, as he was really the head of the party, was fairly in the toils, the minds of the populace were exasperated against the Protestants by the contrivance of the Uuc de Guise ; and, by the command of the king, they were all given up to slaughter. The proclamation for their destruction was made on the night of St. Bartholomew ; and, at two o'clock in the morning, the work of death began. The king himself is said to have shot from a gallery many of the fugitives ; and neither age, rank, nor character, afforded any protection to the unfortunate victims. Henry of Navarre, the brother-in-law of Charles, the prince De Conde his uncle, and the king's physician, were alone exempted from destruction. Henry and De Conde were hurried from their beds, and

dragged, not without danger, before the king, who, when they refused to be converted, as the phrase ran, broke out into an excessive rage, declaring that he would be obeyed as the vicegerent of God ; that they must teach others to submit by their acquiescence ; and that it became them no longer to hold themselves in opposition to the holy mother. They were in consequence obliged to attend mass. The massacre was continued without cessation for three days, till the king became aghast at his own act, and his conscience

was so haunted with images of murder and death that he directed it should cease. Charles IX. survived this event only one year; he lived, however, to repent of his crimes, and to suffer for them. His death was of that kind which it has pleased God often to inflict upon eminent persecutors of his church. He was tormented in mind and body ; and sank into his untimely grave unhonored even by his former friends, and unregretted by every lover of his country. During the concluding period of this reign, the reformed church was at a very low ebb. There could be no security that the anniversary of St. Bartholomew would not be celebrated with a recurrence of the same disasters. The heads of the church were gone. Henry of Navarre himself seemed to have been in a sort of imprisonment, and the remainder of the scattered flock could scarcely be collected together. It was not till the year 1578 that another synod was held, and then no formal notice was taken of the late events. Henry III. succeeded his brother in 1574. During his reign the great conflict for independence and religious liberty was being carried on in the Low Countries ; and the successful issue of it gave respect and consideration to the Protestant cause wherever its supporters were found.

At length, in 1589, Henry IV. ascended the throne. Never had a prince been nurtured amidst greater dangers, concerned in more critical enterprises, or come to a throne more encompassed with difficulties. He had been well educated by his excellent mother, whose prudence and power he inherited, but not her piety. In the year 1572 he married Margaret, sister of Charles IX., from whom he was divorced. He married a second time Mary of Medicis. This was the first step by which he allied himself to the Catholics ; and it was doubted by some whether to it may not be traced another great error of his life, his abjuration of the Protestant faith, which took place in the year 1592. In the year 1598 he granted all his subjects full liberty of conscience by the famous edict of Nantes, and the Reformation seemed to be established throughout his dominions. During the minority of Louis XIV., however, this edict was revoked by cardinal Mazarine ; since

which time the Protestants have often been cruelly persecuted ; nor has the profession of the reformed religion in France been at any time so safe as in most other countries of Europe.

In the other parts of the continent the cause of the Reformation made a considerable, though secret, progress. Some countries threw off the Romish yoke entirely ; and in others a prodigious number of families embraced the principles of the reformed religion. It is certain indeed, and some Roman Catholics themselves do not hesitate to acknowledge it, that the papal doctrines and authority would have fallen into ruin in all parts of the world at once, had not the force of the secular arm been employed to support the tottering edifice. In several places the pope put a stop to the progress of the Reformation, by letting loose the inquisitors ; who spread dreadful marks of their barbarity through the greatest parts of Europe. These formidable ministers of

superstition put so many to death, and perpe-irated such horrid acts of cruelty and oppression, Jhat most of the reformed consulted their safety by a voluntary exile ; while others returned to the religion of Rome, at least in external appearance. The political results of the Reformation are thus summarily stated by Villiers : ††† Europe, plunged for several centuries in a stu-por and apathy interrupted only by wars, or rather by incursions and robberies, without any beneficial object to humanity, received at once a new life and a new activity; a universal and deep interest agitated the nations, their powers were developed, their minds expanded by new political ideas. Former revolutions had only exercised men’s arms ; this employed their heads. The people, who before had been only estimated as flocks passively subject to the caprice of their leaders, now began to act for themselves, and to feel their importance and ability. Those who embraced the reform made common cause with their princes for liberty ; and hence arose a closer bond, a community of interests and

of action, between the sovereign and his subjects. Both were for ever delivered from the excessive and burdensome power of the clergy, as well as from the struggle, so distressing to all Europe, between the popes and the emperors, for supreme power. Social order was now regulated and brought nearer to perfection. In one part of Europe the church ceased to form an extraneous state within the state ; from which it was easy to foretell that this change would one day be effected through the whole of it, and that its head would be reduced to the simple spiritual primacy. At length the Catholic clergy reformed

their conduct on the example < >f the Protestants, and gained in manpers, know! -dge, and esteem, as much as they lost in power and riches. Nor has science been less a gainer. It is little more than two centuries since Galileo, having discovered and collected incontestable proofs of the true motion of the earth, was condemned, ?t a heretic, to perpetual imprisonment, by the tribunal of the inquisition. The ancient system of Roman Catholicism was diametrically opposite to the progress of knowledge ; the Reformation, which has contributed to free the human mind from such an adversary, must ever be considered &s one cf the most fortunate epochs in the intellectual culture of modern nations. The opposite system of liberality, of examination, of free criticism, established by the Reformation, has be-come the aegis under which the Galileos of subsequent ages have been enabled securely to develope their exalted conceptions.'

The moral effects of the Reformation on the opinions and conduct of mankind must not be overlooked. The intention of the Reformers was, in principle, to free themselves from the despotism and infallibility of the popes ; to de-pend only on the Sacred Writings for the grounds of their belief ; and, in short, to overthrow the scholastic divinity, which was become the soul of the Roman theology, and the firm support of the hierarchy. Hence it follows that the Reformation, in its essence, must have had an immediate and powerful influence on the liberty of men's opinions, judgment, and actions. It at once stimulated them to think for themselves, and handed to them a perfect standard of faith and morals.

REFRACT, v.a. ˆ Lai. refractus ; Fr. re-REFRAC'TION, n. s. > fraction. To break the REFRAC'TIVE, adj. 3 natural course of rays : the noun substantive and adjective corresponding.

Refraction, in general, is the incurvation or change of determination in the body moved, which happens to it whilst it enters or penetrates any medium : in dioptricks, it is the variation of a ray of light from that right line, which it would have passed on in, had not the density of the medium turned it aside.

Harrit.

The image of the sun should be drawn out into an oblong form, either by a dilatation of every ray, or by any other casual inequality of the refractions.

Newton.

Those superficies of transparent bodies reflect the greatest quantity of light, which have the greatest refracting power ; that is, which intercede mediums that differ most in their refractive densities.

Id. Optics.

If its angle of incidence be large, and the refractive power of the medium not very strong to throw it far from the perpendicular, it will be refracted.

Cheiine's Philosophical Principles. Rays of light are urged by the refracting media.

Cheyne.

Refracted from yon eastern cloud, The grand etherial bow shoots up. Thomson.

REFRACTION is chiefly used with regard to the lays of light, and is an inflection or deviation of tne rays from their rectilinear course on passing

obliquely out of one medium into another of a different density.

That a body may be refracted, it is necessary that it should fall obliquely on , the second me-dium : in perpendicular incidence there is no refraction. Yet Vossius and Snellius imagined they had observed a perpendicular ray of light undergo a refraction ; a perpendicular object appearing in the water nearer than it really was : but this was attributing that to a refraction of the perpendicular rays, which was

owing to the divergency of the oblique rays after refraction, from a nearer point. Yet there is a manifest refraction even of perpendicular rays found in island crystal. Rohault adds, that though an oblique incidence be necessary in all other mediums we know of, yet the obliquity must not exceed a certain degree ; if it do, the body will not penetrate the medium, but will be reflected instead ot being refracted. Thus, cannon-balls, in sea engagements, falling very obliquely on the surface of ‘the water, are observed to bound or rise from it, and to sweep the men from off the enemy’s decks. And the same thing happens to the little stones with which children make their ducks and drakes along the surface of water.

The ancients confounded refraction with reflection; and it was Newton who first taught the true difference between them. He shows however that there is a good deal of analog;

between them, and particularly in the case of light.

The laws of the refraction of the rays of light in mediums differently terminated, i. e. whose surfaces are plane, concave, and convex, make the subject of dioptrics. By refraction it is that convex glasses, or lenses, collect the rays, magnify objects, burn. &c., and hence the foundation of microscopes, telescopes, &c. And by refraction it is that all remote objects are seen out of their real places ; particularly that the hea-

REFRACTION OF ASCENSION AND DESCENSIOS is an arc of the equator, by which the ascension and descension of a star, whether right or oblique, is increased or diminished by the refraction.

REFRACTION OF DECLINATION is an arc of a circle of declination, by which the declination of a star is increased or diminished by the refraction.

REFRACTION OF LATITUDE is an arc of a circle of latitude, by which the latitude of a star is in-

venly bodies are apparently higher than they are creased or diminished by the refraction.

in reality. The refraction of the air has many REFRACTION OF LONGITUDE is an arc of the

limes so uncertain an influence on the places of ecliptic, by which the longitude of a star is in-

celestial objects near the horizon, that, wherever refraction is concerned, the conclusions deduced from observations that are much affected by it will always remain doubtful, and sometimes too precarious to be relied on. See OPTICS.

The true law of refraction, *viz.* that the ratio of the sines of the angles made by the perpendicular (to the plane bounding the mediums) with the incident and refracted rays, is a constant and fixed ratio, was first discovered by Wille-brord Snell, professor of mathematics, at Ley-den. From this law it follows that one angle of inclination, and its corresponding refracted angle, being found by observation, the refracted angles corresponding to the several other angles of inclination are thence easily computed. Now Zahnius and Kircher have found that, if the angle of inclination be 70►►, the refracted angle out of air into glass will be 38►► 50’ ; on which principle Zahnius has constructed a table of these refractions for the several degrees of the angle of inclination ; a specimen of which here follows :►►►

\ngle of Inclination.

Refracted angle.

Angle of Refraction.

> o

O ‘ n

O t H

1

0 40 5

0 19 55

2

1 20 6

0 39 54

3

204

0 59 56

4

2 40 5

1 19 55

5

3 20 3

1 39 57

10

6 39 16

3 20 44

20

13 11 35

6 48 25

30

19 29 29

10 30 31

45

28 9 19

16 50 41

90

41 51 40

Hence it appears that, if the angle of inclination be less than 20►►, the angle of refraction out of air into glass is almost one-third of the angle of inclination ; and therefore a ray is refracted to the axis of refraction by almost a third part of the quantity of its angle of inclination. And on this principle it is that Kepler, and most other dioptrical writers, demonstrate the refractions in glasses ; though, in estimating the law of these refractions, he followed the example of Alhazen and Vitello, and sought to discover it in the proportion of the angles, and not in that of the sines, or cosecants, as discovered by Snell, as mentioned above.

REFRACTION OF ALTITUDE is the arc or portion of a vertical circle, by which the altitude of a. star is increased by the refraction of light.

creased or diminished by the refraction.

REFRACTION, TERRESTRIAL or ATMOSPHERICAL, is that by which terrestrial objects appear to be raised higher than they really are, in observing their altitudes. The quantity of this refraction is estimated by Dr. Maskelyne at one-tenth ; by Le Gendre at one-fourteenth ; by De Lambre at one-eleventh, and by others at the twelfth of the distance of the object observed, expressed in degrees of a great circle. But there can be no fixed quantity of this refraction, as it depends on the state of the atmosphere, which is very variable. Some very singular effects of this are related in the Philosophical Transactions for 1798, by W. Latham, esq., F. R. S. and A. S.

Many curious effects of atmospherical refraction have been noticed by ingenious men ; for which see Dr. Hutton's Dictionary, and the papers of Vince, Huddart, Lathem, &c., in the Philosophical Transactions. For more on the theory of atmospherical refraction, the reader may consult the treatises on astronomy by Vince, Gregory, Biot, Woodhouse, and Prony's Architectural Hydraulique. See also our article ASTRONOMV.

REFRACTORY, adj. > French refractaire ;

REFRAC'TORINESS, n. s. S Lat. refractarius. It is sometimes accented on the first syllable, but by Shakspeare on the second ; sullen ; obstinate ; perverse : sullenness ; obstinacy.

There is a law in each well-ordered nation, To curb those raging appetites that are Most disobedient and refractory. Shakspeare.

A rough hewn seaman, being brought before a wise justice for some misdemeanor, was by him ordered to be sent away to prison, and was refractory after he heard his doom, insomuch as he would not stir a foot from the place where he stood ; saying, it was better to stand where he was, than go to a worse place. Bacon's Apophthegms.

I did never allow any man's refractoriness against the privileges and orders of the houses.

King Charles.

It maketh them indocile and intractable, averse from better instruction, pertinacious in their opinions, and refractory in their ways. Barrow.

Great complaint was made by the presbyteriac gang, of refractoriness to obey the parliament's order.

Saunderion.

Refractory mortal ! if thou wilt not trust thy friends, take what follows ; know assuredly, before next full moon, that thou wilt be hung up in chains. Arbuthnot's History of John Bull.

These atoms of theirs may have it in them, but they are refractory and sullen ; and therefore, like men of the same tempers, must be hanged and buffeted into reason. Bentley.

REFRAIN', v. a. & v. ?;. Fr. refrener ; Lat. re and fr&num. To hold back; to keep from action : to forbear ; abstain.

Hold not thy tongue, O God, keep not still silence ; refrain not thyself. Psalm Ixxxiii. 1.

My son, walk not thou in the way with them, refrain thy foot from their path. Proverbs i. 15.

For my name's sake will I defer mine anger, and refrain for thee, that I cut thee not off. Isaiah.

In what place, or upon what consideration soever it be, they do it, were it in their own opinion of no force being done, they would undoubtedly refrain to do it. Hooker.

Nor from the holy one of heaven Refrained his tongue. Milton.

That they fed not on flesh, at least the faithful party before the flood, may become more probable, because they refrained therefrom some time after. Brvwne's Vulgar Errours.

Neptune atoned, his wrath shall now refrain, Or thwart the synod of the gods in vain. Pope.

REFRAN'GIBLE, adj.) Lat. re and fran—

REFRANGIBIL'ITY, n. s. Jgo. Capable of, or tending to, refraction : the noun substantive corresponding.

As some rays are more refrangible than others, Ihat is, are more turned out of their course, in passing from one medium to another ; it follows that, after such refraction, they will be separated, and their distinct colour observed. Locke.

Refrangibility of the rays of light is their disposition to be refracted or turned out of their way, in passing out of one transparent body or medium into another. Newton.

REFRANGIBILITY OF LIGHT is chiefly applied to the disposition of rays to produce different colors. See OPTICS.

REFRESH', v. a. ˆ Fr. refraischer, refres-REFRESH'ER, n. s. >cher; Lat. refrigero. To REFRESHMENT, j revive ; recreate ; relieve; improve ; refrigerate : a refresher is that which refreshes : refreshment, relief, or that which gives relief. A dew coming after heat refreiheth. Eccl. xliii. 22.

Service shall with steel sinews toil ; And labour shall refresh itself

with hope.

Shakspeare.

The rest refresh the scaly snakes, that fold The shield of Pallas, and renew their gold.

Dry den.

If you would have trees to thrive, take care that no plants be near them, which may deprive them of nourishment, or hinder refreshings and helps that they might receive. Mortimer.

Such honest refreshments and comforts of life, our Christian liberty has made it lawful for us to use.

Sprat.

His meals are coarse and short, his employment warrantable, his sleep certain and refreshing , neither interrupted with the lashes of a guilty mind, nor the aches of a crazy body. South.

He was full of agony and horrour upon the approach of a dismal death, and so had most need of the refreshments of society, and the friendly assistance of his disciples. South.

The kind refresher of the summer heats. Thomson.

REFRIG'ERATE, v. a. ~) Lat. refrigero. Rocks> deng) and caves> but j in none Of these REFRIG'ERANT, adj. | To cool; refrige-j,-nd pjace or refuge. Milton's Paradise /.< > <(.

REFRIGERA'TION, n. s. ! rant and refrige-xhe young vipers supposed to break through the

REFRIG'ERATIVE, adj. \ rative, as well as belly of the dam, will, upon any fright, for protection

REFRiG'ERATORY,arf/.&w.s. | refrigeratory, ad-run into it; for then the old one receives them in f REFRIGE'RIUM, n. s. j jective, mean her mouth, which way, the fright being past, they

cooling, or having the power to cool : refrigeration, the act of cooling, or state of being cooled ❖❖❖ refrigeratory, noun substantive, the part of old distilling vessels that was placed about the head of a still,

and filled with water to cool the condensing vapors; any thing internally cooling: refrigerium, cool refreshment; refrigeration.

In the cure of gangrenes, you must beware of dry heat, and resort to things that are refrigerant, with an inward warmth and virtue of cherishing. Bacon.

The great breezes, which the motion of the air in great circles, such as the girdle of the world produceth, do refrigerate; and therefore in those parts noon is nothing so hot, when the breezes are great, as about ten of the clock in the forenoon. Id.

Divers do stut ; the cause may be the refrigern* tion of the tongue, whereby it is less apt to move.

Id.

If the mere refrigeration of the air would fit it for breathing, this might be somewhat helped with bellows. Wiltons.

Whether they be refrigerated inclinatorily or somewhat equinoxically, though in a lesser degree, they discover some verticity. B-owne.

A delicate wine, and a durable refrigerato-y.

Mn timer.

It must be acknowledged, the ancients have talked much of annual refrigeriums, respites or Jatervals of punishment to the damned; as particularly on the festivals. South.

If it arise from an external cause, a]►►ply refrigerants, without any preceding evacuation Wiseman.

REFT, part. pret. of REAVE, whi►► h see. Deprived ; taken away. Obsolete.

Thus we well left, he better reft, In heaven to take his place, That like by life and death, at last, We may obtain like grace. Aacham's Schoolmaster. About his shoulders broad he threw

An hairy hide of some wild beast, whom he In savage forest by adventures slew,

And reft the spoil his ornament to be. Spenser.

Another ship had seized on us, And would have reft the fishers of

tl*eir prey.

bhahspeare.

Our dying hero from the continent Ravished whole towns, and forts from Spaniards reft, As his last legacy to Britain left. Walter.

REF'UGE, n. s. & v. a. French refuge ; Ital. Port, and Span, refugio ; Lat. refugium. Shelter or protection from danger or distress ; expedient: to shelter : a refugee is one who seeks a refuge.

They shall be your refuge from the avenger of blood. Joshua.

The Lord will be a refuge for the oppressed, a re-fuge in times of trouble. Psalm 'vs.. 9.

This last old man,

Whom with a cracked heart I have sent to Rome, Loved me above the measure of a father : Their latest refuge was to send him. Shakspeˆe.

Silly beggars,

Who, sitting in the stocks, refuge their shame That many have, and others must, sit there. Id.

Light must be supplied, among graceful refuge* by terracing any story in danger of darkness.

will return again; which is a peculiar way ofrefitge.

Brvwne.

Poor refugees, at first they purchase here ; And, soon as denizened, they domineer. Dryden.

Dreads the vengeance of her injured lord ; Even by those gods, who

refuged her, abhorred. Id.

This is become more necessary in some of their governments, since so many refugees settled among them. Addison.

Those, who take refuge in a multitude, have an Arian council to answer for. Atterbnry.

REFUGE, CITIES OF, were places provided as asyla, for such as against their will should happen to kill a man. Of these cities there were three on each side Jordan ; dn this side were Kedesh of Nephtali, Hebron, and Schechem ; beyond Jordan were Bezer, Golan, and Ramoth-Gilead. When any of the Hebrews, or strangers that dwelt in their country, happened accidentally to kill a man, they might retire thither, to be out of the reach of the relations of the deceased, and to prepare for their defence and justification before the judges. The manslayer underwent two trials : first before the judges of the city of refugte to which he had fled ; and secondly before the judges of his own city. If found guilty, he was put to death. If acquitted, he was not immediately set at liberty ; but, to inspire a degree of horror against even involuntary homicide, he was reconducted to the place of refuge, and obliged to continue there in a sort of banishment till the death of the high priest. If, before this time, he ventured out, the avenger of blood might freely kill him ; but after the high priest's death he was at liberty to go where he pleased without molest-ation. The cities of refuge were to be well supplied with water and necessary provisions ; to be of easy access; to have good roads leading to them, with commodious bridges where there was occasion. The width of the roads was to be thirty-two cubits or forty-eight feet at least. At all cross roads direction posts were erected, with an inscription pointing out the road to the cities of refuge. The 15th of Adar, which answers to our February, was appointed for the city magistrates to see that the roads were in good condition. No persons in any of these cities were allowed to make weapons, lest the relations of the deceased should be furnished with the means of gratifying their revenge.

REFUL'GENT, adj. } Latin refulgtns.

REFUL'GENTLY, adv. \ Bright; shining; glittering : the adverb corresponding.

He neither might, nor wished to know

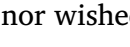 A more refulgent light. Waller.

So conspicuous and refulgent a truth is that of God's being the author

of man's felicity, that the dispute is not so much concerning the thing, as concerning the manner of it. Boyle.

Agamemnon's train, When his refulgent arms flashed through the shady

plain, Fled from his well-known face. Dryden's &neis.

REFUND', v. a. Lat. refundo. To pour or give back ; repay ; restore.

A governor that had pillaged the people, was, for receiving of bribes, sentenced to refund what he had wrongfully taken. L'Esirange.

Were the humours of the eye tinctured with any colour, they would refund that colour 'upon the ob-

ject, and so it would not be represented as in itseir it is. Kay.

Such wise men as himself account all that is past to be also gone ; and know that there can be no gain in refunding, nor any profit in paying debts.

South.

"How to Icarius, in the bridal hour, Shall I, by waste undone, rejuiid the dower 1

Pope.

REFUSE', -a. a., adj., & } Fr. refuser; ItaL REFU'SAL, n. s. [n. s. > recusare ; Lat. recu-REFU'SER. j so. To deny that

which is requested or demanded ; reject ; not to accept or comply : the adjective, which as well as the noun substantive has its accent on the first syllable, means refused ; left when the rest is taken : the noun substantive, something so left : refusal is, the act of refusing ; denial ; preemption ; option : refuser, he who refuses.

Every thing vile and refuse they destroyed. Samuel.

We dare not disgrace our worldly superiours wit1, offering unto them such refuse, as we bring unto God himself. Hooker.

If he should offer to chuse, and chuse the ri5nt casket, you should refuse to perform your father's will, if you should refuse to accept

him.

Shahspeare.

Many kinds have much refuse, which countervails that which they have excellent. Bacon.

Having most affectionately set life and death be-fore them, and conjured them to chuse one, and avoid the other, he still leaves unto them, as to free and rational agents, a liberty to refuse all his calls, to let his talents lye by them unprofitable.

Hammond.

Some few others are the only refusers and con-demners of this catholick practice. Taylor.

Wonder not then what God saw for you good If I refuse not, but convert, as you, To proper substance. Milton.

He never had vexatious law-disputes about hi dues, but had his tithes fully paid, and not of the most refuse parts, but generally the very best. Fell.

Down with the falling stream the refuse run, To raise with joyful news his drooping son.

Dryden.

Common experience has justly a mighty influence on the minds of men, to make them give or refuse credit to any thing proposed. Locke.

Please to bestow on him the refuse letters ; he hopes by printing them to get a plentiful provision.

Spectator.

This humourist keeps more than he wants, and gives a vast refuse of his superfluities to purchase heaven. Addison.

I know not whether it be more shame or wonder, to see that men can so put off ingenuity, as to descend to so base a vice ; yet we daily see it done, and that not only by the scum and refuse of the people. Government of the Tongue.

Women arc made as they themselves would

choose ; Too proud to ask, too humble to refuse. Garth.

God has borne with all his weak and obstinate refusals of grace, and has given him time day after day.

Rogers.

When employments go a begging fof want of hands, they shall be sure to have the refusal. Swift.

REFUTE', v. a. \ Fr. refuter ; Span, and REFUTATION, n. s. S Port, refutar ; Lat. refuto.

To prove false or erroneous : the noun substantive

corresponding.

Self-destruction sought, refutes That excellent thought in thee. Milton.

He knew that there were so many witnesses in these two miracles, that it was impossible to -refute such multitudes. Addison.

REGAIN', v. a. Fr. regaynar ; re and gain. To recover ; gain anew.

RE'GAL, adj. &n.s.\ Fr. Span, and Ital.

REGAL'ITY, n. s. } regal ; Lat. regalis.

Royal ; kingly : a kind of organ : regality is the noun substantive corresponding with regal as an adjective.

REGALE', v. a.) fr.regakr; Ital. re—

REGALE'MENT, n. s. $ galare. To refresh; entertain ; the entertainment

given.

I with warming puff regaled chilled fingers.

Philips.

The muses still require Humid regalement, nor will aught avail
Imploring Phoebus with unmoistened lips. Id.

REGALIA (Jura regalia); in general, the privileges connected with the sovereign power. They are either such as necessarily originate from the nature of government, or such as are accidentally attached to the sovereign. Of the former sort is the power of judicature; of the latter, such rights as that of collecting amber, which belongs to the king of Prussia. Some rights are now so intimately connected with the public order, that they belong to the former class, though many states have existed without them (e. g. the privilege of coining money, which was exercised by certain families in ancient Rome). As states and goverments have gradually grown up from rudeness and lawlessness, it may be easily imagined how much ignorance, in some cases, and force in others, have influenced the idea of regalia. Among some German tribes, the precious metals and stones were considered as belonging exclusively to the sovereign ; and even now a citizen has not, in all countries, the right to work mines on his own ground. Some tribes allowed their princes the sole privilege of hunting all the larger animals, except animals of prey ; some sovereigns declared all unclaimed property, as waifs, estrays, or newly formed land on the sea shore, &c., regalia. These regalia are also called majora, (comprehending what relates to the sovereign's power and dignity) and mitiora (what relates to his Jiscal or pecuniary prerogatives). ††† Regalia also denotes, in England, the regal insignia, the sceptre with the cross, sceptre with the dove, St. Edward's staff, four several swords, the globe, the orb with the cross, and other articles used at the coronation. ††† Regalia of the church denotes, in England, those rights and privileges which cathedrals, &c., enjoy by the concessions of kings. ††† Regalia is sometimes also used for the patrimony of a church. See CORONATION.

REGARD', v. a. & n. *.") Fr. regarder ; Ital.

REOARD'ABLE, adj. REOARD'ER, n. s. REGARD'FUL, adj. REGARD'FULLY, adv. REGARD'LESS, adj. REGARD'LESSLY, adv. REGARD'LESSNESS, n. s.

reguardo. To es-teem ; value ; no-tice ; attend to ; observe : observe religiously ; as a noun substantive, attention ; respect ;

account ; relation ; look ; aspect : regardable ;‘s, observable ; worthy of notice : regarder, he who pays attention or regard : regardful, observant ; attention : the adverb corresponding : regardless, heedless ; negligent ; devoid of attention or care : the adverb and noun substantive corresponding.

He that observeth the wind shall never sow, and he that regardeth the clouds shall never reap.

Proverbs.

To him they had regard, because long he had bewitched them. ylctsviii.il.

He that regardeth the day, regardeth it unto the Lord; and he that regardeth not the day, to the Lord he doth not regard it. Romans xiv. 6.

It is peninsula, which regardeth the mainland.

Sandys.

Mac Ferlagh was a man of meanest regard amongst them, neither having wealth nor power. Spenser. He likeliest is to fall into mischance,

That is regardless of his governance. Id.

Change was thought necessary, in regard of the great hurt which the church did receive by a number of things then in use. Hooker.

This aspect of mine,

The best regarded virgins of our clime

Have loved. Shakspeare. Merchant of Venice.

If much you note him,

You offend him ; feed, and regard him not.

Shakspeare. Throw out our eyes for brave Othello,

Even till we make th►► main and the aerial blue

An indistinct regard. Id. Othello.

Is this the Athenian minion, whom the world Voiced so regardfully? Id. Timon of Athens.

Bryan was so regardful of his charge, as he never disposed any matter, but first he acquainted the general. Hayward.

Tintoger, more famous for his antiquity than regardable for his present estate, abutteth on the sea. . ‘ Carew.

He denies

To know their God, or message to regard. Milton. How best we may

Compose our present evils, with regard

Of what we are and where. <.

Regardless of the bliss wherein he sat,

Second to thee, offered himself to die

For man’s offence. Id. Paradise Lost.

I cannot discover this difference of the badgei’s legs, although the regardable side be defined, and the brevity by most imputed unto the left. Browne.

He, surprised with humble joy, surveyed One sweet regard, shot by the royal maid. Dryden.

Let a man be very tender and regardful of every pious motion made by the spirit of God to his heart.

South.

The nature of the sentence he is to pronounce, the rule of judgment by which he will [proceed, requires that a particular regard be had to our observation of this precept. Atterbury.

Their business is to address all the ranks of mankind, and persuade them to pursue and persevere m virtue, with regard to themselves; in

justice and goodness with regard to their neighbours ; and piety towards God. f0""

We must learn to be deaf and regardless of ot.u things, besides the present subject of our meditation.

REGARDANT, in heraldry, signifies looking behind, and is applied to beasts represented on coats of arms, as in the annexed figure.

RECARDER, an ancient officer of the king's forest, sworn to make the regard of the forest every year ; that is, to take a view of its limits, to enquire into all offences and defaults committed by the foresters within the forest, and to observe whether all the officers executed their respective duties.

REGATA, or REGATTA, a kind of boat race, formerly annually held at Venice, when that city was the capital of an independent republic. The race was performed in gondolas by gondoliers. The competitors were chosen from the families of the first rank ; and no competitors at the ancient Olympic Games were ever more anxious for success. The course was about four miles. The gondolas, after starting, passed through the great winding canal, which divides the city into two parts, turned round a picket, and returning the same way, seized the prize, which was fixed at the acutest angle of the great canal, where it was visible by the spectators on both sides. On such occasions both the gondolas and the gondoliers were decorated in the most elegant and superb manner. Regattas, in imitation of the Venetian, have been often given on the Thames, and are still continued.

REGEN, a river in the interior of Germany, which rises on the

southern frontier of Bohemia, unites with the Little Regen, and falls into the Danube, near Ratisbon.

REGEN, CIRCLE OF THE, is a province of Bavaria, adjacent to Bohemia, having the circle of the Upper Maine on the north-west, and that of the Lower Danube on the south-west. It has an area of 3800 square miles. This province is hilly and woody, including part of the districts called the Fichtelberg and Bohemian forest ; yer it has several plains of considerable extent. The sale of timber and working in wood are considerable occupations. The fields also abound in game, and have mines of iron. Ratisbon, in the south of the circle, is the seat of the provincial administration ; and Amberg, in the north, that of the high court of justice. Inhabitants, of whom the great majority are Catholics, 358,000.

REGEN'ERATE, v. a. & adj. \ Lat. rege—

REGENERA'TION, n. s. $ nero. Re and

generate. To reproduce ; beget or create anew : as an adjective reproduced ; born anew to the Christian life : regeneration corresponding.

He saved us by the washing of regeneration, and renewing of the Holy Ghost. Titus iii. 5.

Thou ! the earthly author of my blood, Whose youthful spirit, in me regenerate, Doth with a twofold vigour lift me up, To reach at victory. Shakspeare. Richard II.

Albeit the son of this earl of Desmond, who lost his head, were restored to the earldom ; yet could not the king's grace regenerate obedience in that degenerate house, but it grew rather more wild.

Davies.

For from the mercy seat above, Prevenient grace descending, had removed The stony from their hearts, and made new flesh Regenerate grow instead. Milton.

No sooner was a convert initiated, but by an easy figure he became a new man, and both acted and looked upon himself as one regenerated and oorn a second time into another state of existence.

Add uon.

Through all the soil a genial ferment spreads, Regenerates the plants, and new adorns the meads.

Blachmore.

An alkali, poured to that which is mixed with an acid, raiseth an effervescence, at the cessation of which, the salts, of which the acid is composed, will be regenerated. Arbuthnot.

If you fulfil this resolution, though you fall sometimes by infirmity ; nay, though you should fall into some greater act, even of deliberate sin, which you presently retract by confession and amendment, you are nevertheless in a regenerate estate, you live the life of a Christian here, and shall inherit the reward that is promised to such in a glorious immortality hereafter. Wake.

RE'GENT, adj. &n. s. * Fr. regent ; Lat. reRE'GENCY, n. s. >gens. Governing; rul—

RE'GENTSHIP. j ing ; governor or niler : one exercising vicarious royalty : regency and regentship, his office or station.

As Christ took manhood, that by it lie might be capable of death, whereunto he humbled himself : so because manhood is the proper subject of compassion and feeling pity, which maketh the sceptre of Christ's regency even in the kingdom of heaven amiable.

Hooker. Lord regent, I do greet your excellence

With letters of commission from the king.

Shakspeare.

If York have ill demeaned himself in France, Then let him be denied the regentship. Id.

Regions they passed, the mighty regencies Of seraphim. Milton.

He togther calls the regent powers Under him regent. Id. Paradise Lott.

The operations of human life flow not from the corporeal molds, but from some other active regent principle that resides in the body, or governs it, which we call the soul. Hale.

This great minister, finding the regency shaken by the faction of so many great ones within, and awed by the terror of the Spanish greatness without, durst begin a war. Temple.

But let a heifer with gilt horns be led

To Juno, regent of the marriage bed. Dryden.

Men have knowledge and strength to fit them for action : women affection, for their better compliance ; and herewith beauty to compensate their subjection, by giving them an equivalent regency over men. Grew.

REGENT, one who governs a kingdom during the minority or absence of the king. In England the methods of appointing this guardian or regent have been so various, and the duration of his power so uncertain, that from hence it might almost be collected that his office is unknown to the common law ; and therefore, according to Sir Edward Coke, the surest way is to have him appointed by authority of the a real council in parliament. The earl of Pembroke, by his own authority, assumed the regency of Henry III., who was then only nine years old, but was declared of full age by the pope at seventeen, confirmed the great charter at eighteen, and took uppn him the administration of the government at twenty. A guardian and councils of regency were named for Edward III. by the parliament which deposed his father ; the young king being then fifteen, and not assuming the government till three years after. When Richard II. succeeded, at the age of eleven, the duke of Lan-REG

caster took upon him the management of the kingdom ti.11 the parliament met, which appointed a nominal council to assist him. Henry V. on his death bed named a regent and a guardian for his infant son Henry V7!., then nine months old : but the parliament altered his disposition, and appointed a protector and council, with a special limited authority. Both these princes remained in a state of pupilage till the age of twenty-three. Edward V., at the age of thirteen,

was recommended by his father to the care of the duke of Gloucester ; who was declared protector by the privy council. The statutes 25 H. VIII. c. 12, and 28 II. VIII. c. 7, provided that the successor, if a male and under eighteen, or if a female and under sixteen, should be till such age in the governance of his or her natural mo-ther (if approved by the king), and such other counsellors as his majesty should by will or otherwise appoint : and he accordingly appointed his sixteen executors to have the government of his son Edward VI., and the kingdom, which executors elected the earl of Hartford protector. And during the illness of George III. in the end of 1788, there were repeated debates in parliament, respecting a regency, the mode of settling it, and the most proper persons to fill it; but his majesty's recovery rendered it totally unnecessary. These debates were renewed in the end of 1810, and a limited regency for a year was committed to the prince of Wales, who, in consequence of the continued indisposition of his royal father, became regent with full power on the 18th of February 1812, till his father's death in 1820.

REGENT also signifies a professor of arts and sciences in a college, having pupils under his care ; but it is generally restrained to the lower classes, as to rhetoric, logic, &c. : those of philosophy being called professors. In the English universities it is applied to masters of arts under five years standing, and to doctors under two.

REGERMINA'TION, n. s. Re and germin-ation. The act of sprouting again.

REGGIO, Regium Julii, a large town in the south of Naples, and capital of Calabria Ultra, at the extremity of which it is situated, on the Faro di Messina, or strait which separates Sicily from the main land. It stands on an eminence, and its environs are delightful, abounding in the fruits of a tropical climate. It is the see of an archbishop, and several of the houses are constructed of the remains of ancient buildings. Its public edifices consist of a cathedral, eleven ' churches, seven convents, and two colleges. Many of the inhabitants are employed in the manufacture of silk, partly raised in the environs, and partly procured from the pinna marina : it is made into gloves, stockings, and other small articles of extreme fineness. Wine, oil, and fruit are likewise objects of export. Reggio was almost destroyed by the dreadful earthquake of February 1783. Population 16,500. Six miles south-east of Messina, in Sicily, and thirty-three ►►► >orth by west of Nicotera.

HEGGIO, anciently Regium Lepide, a town in

the no-th of Italy, the capital of a small duchy

of the same name, belonging to Modena. It is

surrounded with a rampart, and situated in a

delightful track on the Tessino. The streets are bordered with arcades or piazzas, and the houses tolerably built. The public edifices of interest are the cathedral with its paintings, the church of St. Prospero, that of the Augustine friars, the town house, the theatre, the Porta Nuova, the library of 30,000 volumes, and a mu-seum of natural history, formerly belonging to Spallanzani. The trade is trifling, but it has a considerable yearly fair. It was the birth place of Ariosto, and Buonaparte gave the title of duke of Reggio to marshal Oudinot. Population 13,000. Twelve miles W.N.W. of Modena, and fifteen south-east of Parma.

REGTCIDE, n. s. Lat. regicida, reqiciJium. A murderer of his king ; the murder of a king.

Were it not for this amulet, how were it possible for any to think they may venture upon perjury, sacrilege, murder, regicide, without impeachment to their saintship ? Decay of Piety.

I through the mazes of the bloody field Hunted your sacred life ; which that I missed Was the propitious error of my fate, Not of my soul : my soul's a regicide. Dryden.

Did fate or we, when great Atrides died, Urge the bold traitor to the regicide ?

Pope's Odyssey.

REGIFUGIUM was a feast celebrated at Rome on the 24th of February in commemoration of the expulsion of Tarquin II., and tlie abolition of regal power. It was also performed on the 26th of May, when the Rex Sacrorum, king of the sacrifices, offered bean flour and bacon, in the place where the assemblies were held. The sacrifice being over, the people hasted away with all speed, to denote the precipitate flight of Tarquin.

REGILL7E, or REGILLUM, an ancient town of Italy, in the country of

the Sabines, famous for a battle fought near it, A. U. C. 258, between 24,000 Romans and 40,000 Etrurians, headed by the Tarquins. The Romans obtained so complete a victory that hardly 10,000 of the Etrurians escaped. ††† Livy.

REGILLIANUS (Q. Nonius), a Dacian, who entered into the Roman army, and was promoted to the highest military honors under Valerian. He was elected emperor by the people in opposition to Gallienus, but was soon after murdered by the soldiers, A. D. 262.

REGILLUS, in ancient geography, a lake of Italy, in Latium, which had a communication with the Anio, east of Rome. Posthumius, the dictator, defeated the Latins near it. ††† Livy.

REG'IMJLN, n. s. Lat. regimen. Care in diet and living.

Yet should some neighbour feel a pain,

Just in the parts where I complain,

How many a message would he send !

What hearty prayers, that 1 should mend !

Enquire what regimen I kept,

What gave me ease, and how I slept ? Swift

REGIMEN, in medicine. See MEDICINE.

REGIMENT, n.s. \ Old Fr. regiment ;

REGIMEN'TAL, adj. S Ital. and Port, regimento. Established government ; polity ; a body of soldiers under a colonel : belonging to a regiment.

The corruption of our nature being presupposec

we may not deny but that the law of nature doth now require of necessity some kind of regimenc.

Hooker.

Higher to the plain we'll set forth, In best appointment, all our regiments. Shakspeare.

They utterly damn their own consistorian regiment, for the same can neither be proved by any literal texts of holy scriptures, nor yet by necessary inference out of scripture. White.

The regiment of the soul over the body is the regiment of the more ac ive part over the passive.

Hale.

The elder did whole regiments afford, The younger brought his conduct and his sword.

Walter. Now thy aid

Eugene, with regiments unequal prest,

Awaits. Philips.

REGIMENT, in military affairs, a term applied to any body of troops, which, if cavalry, consists of one or more squadrons, commanded by a colonel ; and, if infantry, of one or more battalions, each commanded in the same manner. The squadrons in cavalry regimerts are divided, sometimes into six, and sometimes into nine troops. The battalions of

British infantry are generally divided into teu companies, two of-which are called the flanks ; one on the right consisting of grenadiers, and another on the left formed of light troops. There is not, however, any established rule on this head ; as both cavalry and infantry regiments differ according to the exigencies of service in time of war, or the principles of economy in time of peace.

RE'GION, n. s. French region ; Latin regio. Tract of land; country; space; place; rank.

All the regions

Do seemingly revolt ; and, who resist, Are mocked for valiant ignorance. Shakspeare.

The DOW is bent and drawn, make from the shaft. ××× Let a fall rather, though the fork invade The reyum of my heart. Id. King Lear.

The gentleman kept company with the wild prince and Poius ; he is of too high a region ; he knows too flinch. Shakspeare.

The upper 'region* of the air perceive the collection of the matter of tempests before the air below.

Bacon.

Thus raged the goddess, and with fury fraught, The restless regions of the storms she sought.

Dryden.

REGISTER, n. s. & v. a. \ Fr. registre ; Lat.

REG'ISTRY. S registrant. A regular account of any thing ; he who keeps it : to record or enrol in a register : registry is the act of doing so ; the series of entries ; or the place where they are kept.

Joy may yon have and everlasting fame,

Of late most hard achievement by you done,

For which inrolled is your glorious name

In heavenly registers above the sun. Spenser.

Sir John, as you have one eye upon my follies, as you hear them unfolded, turn another into the register of your own. Shakspeare.

This island, as appeareth by faithful registers of those times, had ships of great content. Bacon. Such follow him, as shall be registered ;

Part good ; part bad ; of bad the longer scrowl.

ifttem. A. little fee was to be paid for the registry. Graunt.

Of these experiments our friend, pointing at the ~egister of this dialogue, will perhaps give you more particular account. Boyle.

I wonder why a registry has not been kept in tne college of physicians of things invented. Temple.

For a conspiracy against the emperor Claudius, it was ordered that Scriboaianus's name and consulate should be effaced out of all public registers and inscriptions. Addison.

The Roman emperors registered their most remarkable buildings, as well as actions. Id.

A REGISTER is a public book, in which are entered and recorded memoirs, acts, and minutes, to be had recourse to occasionally for knowing and proving matters of fact. Of "these there are several kinds; as, 1. Register of deeds in Yorkshire and Middlesex, in which are registered all deeds, conveyances, wills, &c., that affect any lands or tenements in these counties, which are otherwise void against any subsequent purchasers or mortgages, &c. : but this does not extend to any copyhold estate, nor to leases at a rackrent, or where they do not exceed twenty-one years. The registered memorials must be engrossed on parchment, under the hand and seal of some of the granters or grantees, attested by witnesses who are to prove the signing or sealing of them and the execution of the deed. But these registers, which in England are confined to two counties, are in Scotland general. Of these there are two kinds ; the one general, fixed at Edinburgh, under the direction of the lord register ; and the other is kept in the several shires, stewartries, and regalities, the clerks of which are obliged to transmit the registers of their respective courts to the general register. 2. Parish registers are books in which are registered the baptisms, marriages, and burials of each parish.

Among dissenters who admit of infant baptism, the minister is generally supposed to keep a register of the several children baptized by him. But as these are frequently lost, by the succession of new ministers to the same congregation ; or at best do not give an account

of the date of the births, which may have happened many weeks or months before baptism, it is now generally the custom among dissenters of all denominations to register the births of their children at the library in Redcross Street, Cripplegate, for which the charge is Is. This register is admitted in the courts of law.

REGISTERS were kept both at Athens and Rome, in which were inserted the names of children, as soon as they were born. Marcus Aurelius required all free persons to give in accounts of their children, within thirty days after the birth, to the treasurer of the empire, in order that they might be deposited in the temple of Saturn, where the public acts were kept. Officers were also appointed as public registers in the provinces, that recourse might be had to their list of names, for settling disputes, or proving any person's freedom.

REGISTERS, in chemistry, are holes, with stop-ples, contrived in the sides of furnaces, to regulate the fire ; that is, to make the heat more intense or remiss, by opening them to let in the air, or keeping them close to exclude it.

REGISTRY OF A SHIP is a printed instrument, containing the names of the owner and master, the name and exact description of the vesse., the place to which she belongs, when and where

built or captured, and, if a prize-ship, the date of condemnation, whether British, foreign, or British plantation built, her precise dimensions, tonnage, and the port at which she was registered.

REGIUM, REGIUM LEPIDI, or REGIUM LE-PIDIUM, in ancient geography, a town of Cisalpine Gaul, on the Via ˆEmilia, so called from ˆmilius Lepidus, who was consul with Caius F'aminius. It is now called Reggio.

REGIUS (Urban), a learned writer of the sixteenth century, born at Langenargen. He studied at Basil, and read lectures at Ingold-stadt. Being afterwards involved by some friends in debt, he was obliged to

sell his books and enlist as a soldier. From this situation he was rescued and restored to literature by professor Eccius ; and he obtained the poetical and oratorical crown from the emperor Maximilian. He afterwards became a protestant, and took re-fuge at Zell, where he died in 1541.

REGIUS PROFESSOR, in universities, a professor appointed by royal authority.

REG'LEMENT, n. s. Fr. reglement. Regulation. Not used.

To speak of the reformation and reglement of usury, by the balance of commodities and discommodities thereof, two things are to be reconciled.

Bacon's Essays,

REG'NANT, adj. Fr. regnant. Reigning; .uving sovereign authority ; predominant.

Princes are shy of their successors, and there may be reasonably supposed of queens -egiiant a little proportion of tenderness that way, more than in kings. Wotton.

The law was regnant, and confined his thought, Hell was not conquered when the poet wrote.

Walk-.

His guilt is clear, his proofs are pregnant, A traytor to the vices regnant. Swift's Miscellanies.

REGNARD (John Francis), a French comic poet, was born at Paris, February 8th, 1655 Having received a good education he went to Italy in 1676, or 1677. Being fond of play, and very fortunate, he was returning home with a considerable sum of money, when he was captured by an Algerine corsair, and being sold for a slave was carried to Constantinople. His skill in cookery here rendered him a favorite ; but at length he was ransomed, and returned to France, lie did not however remain; for in April 1681 he set off on a journey to Lapland, and returned through Sweden, Poland, and Germany. He then retired to Dourdan, eleven leagues from Paris, where he died in September 1/09. He wrote an account of his Northern Tour ; a num-ber of dramatic pieces, poems, and other works, which have been often published. ' REGNAULT (Noel), a learned French Je-suit, born at Arras, in 1683. He wrote, 1. Entretiens Physiques, 3 vols. 12rno. 2.

Origine Ancienne de la Physique nouvelle, 3 vols. 12mo. 3. Entretiens Mathematiques, 3 vols. 12mo. 4 Logique, 1 2mo.

REGNER, surnamed Lodbrog, a king of Denmark, who flourished in the ninth century. He was also a warrior, a poet, and a painter. His p:>ems are extant, but savour of the wildness and fanaticism of the age in which he lived.

TIEGNI, an ancient people of South Britain, who inhabited the country now called Surrey, Sussex, and the coast of Hampshire, and resided next to the Cantii, the ancient inhabitants of Kent. ††† Camden.

REGNIER (Mathurin), a French poet, was born at Chartres in 1573. He was brought up to the church, for which his debaucheries rendered him very unsuitable. Yet he obtained a canonry in the church of Chartres, with other benefices; and died in 1613. There is a neat Elzevir edition of his works, 12mo. 1652, Ley-den ; but the most elegant is that with notes by M. Brossette, 4to. 1729, London.

REGNIER DES MARETS (Francis Seraphin), a French poet, born at Paris in 1632. He distinguished himself early by his poetical talents, and in 1684 was made perpetual secretary to the French Academy on the death of Mezeray ; when he drew up the papers against Furetierre; the king gave him the priory of Grammont, and an abbey. He died in 1713. His works are French, Italian, Spanish, and Latin poems, 2 vols.; a French grammar; and an Italian translation of Anacreon's Odes, with some other translations.

REGNUM, in ancient geography, a town of South Britain, the capital of the Regni (Camden), situated by the Itinerary numbers, on the confines of the Belgae, in a place now called Ring-wood, in Hampshire, on the Avon, about ten miles from the sea.

REGORGE', v. a. Re and gorge. To vomit up; throw or swallow back; swallow largely.

It was scoffingly said, he had eaten ths king's goose ; and did then regorge the feathers.

Hay ward. Drunk with wine,

And fat regorged of bulls and goats. JUilwn.

As tides at highest mark regorge the flood, So fate, that could no more

improve their joy, Took a malicious pleasure to destroy. Dryden.

REGRAFT, v. a. Fr. regrefr. Re and graft. To graft again.

Oft ~egrafting the same cions, may make fruit greater. Bacon.

REGRANT, v. a. Re and grant. To grant back.

He, by letters patent, incorporated them by the name of the dean and chapter of Trinity church n Norwich, and regranted their lands to them.

Ayliffe's Parergvii.

REGRATE , v. a. From GRATE, which see. To offend ; shock ; also, from the French regrater, to engross ; forestall.

Neither should they buy any corn, unless it were to make malt thereof ; for by such engrossing and regrating, the dearth, that commonly reigned in England, hath been caused. Spenser.

The clothing of the tortoise and viper rather re-grateth than pleaseth the eye.

Derham's Physico -Theology.

REGREET, v. a. Re and greet. To resa lute ; greet a second time.

And shall these hands, so newly joined in love, I'n oke this seizure, and this kind regreet 1 Play fast and loose with faith ? Shahipeare.

RE'GRESS, n. s. & v. n. } Fr. regres ; Lit.

REGRESSION, n. s. S > egressus. Passage

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back ; power of passing back : to go back, or return; act of going back.

All being forced unto fluent consistencies, naturally regress into their former solidities. Browne.

To desire there were no God, were plainly to un-wish their own being, which must needs be annihilated in the subtraction of that essence which substantially supporteth them, and restrains from regression into nothing. Id.

‘Tis their natural place which they always tend to : and from which there is no progress nor regress.

Burnet.

REGRET, n. s.& v. a. Fr. regret, -egreter; Ital. regrettare, of low Lat. regravito. Vexation at some past event or action; bitter reflection; grief; sorrow; aversion: to grieve at; bemoan; be uneasy at. The last senses of both the nounsubstantive and verb active are, however, improper.

I never bare any touch of conscience with greater regret. King Charles.

A passionate regret at sin, a grief and sadness at its memory, enters us into God’s roll of mourners.

Decay of Piety.

Is it a virtue to have some ineffective regrets to ###damnation, and such a virtue too as shall balance all our vices ? Id.

Never any prince expressed a more lively regret for the loss of a servant, than his majesty did for this great man ; in all offices of grace towards his servants, and in a wonderful solicitous care for the payment of his debts. Clarendon.

Those, the impiety of whose lives makes them re-gret a deity, and secretly wish there were none, will greedily listen to atheistical notions. Glanvitle.

I shall not regret the trouble my experiments cost me, if they be found serviceable to the purposes of respiration. Boyle.

Though sin offers itself in never so pleasing a dress, yet the remorse and inward regrets of the soul, upon the commission of it, infinitely overbalance those faint gratifications it affords the senses.

South' s Sermons.

That freedom which all sorrows claim, She does for thy content resign ; Her piety itself would blame, If her regrets should waken thine. Prior.

Calmly he looked on either life, and here Saw nothing to regret, or there to fear ; From nature's temperate feast rose satisfied, Thank'd heaven that he had liv'd, and that he died.

Pope.

REGUER'DON, n. s. Re and guerdon. Reward ; recompense.

Stoop, and set your knee again my foot ;

And in reguerdon of that duty done,

I gird thee with the valiant sword of York.

Shakspeare. Long since we were resolved of your truth,

Your faithful service, and your toil in war ;

Yet never have you tasted of your reward,

Or been reguerdoned with so much as thanks. Id.

REG'ULAR, adj. & n. s. ˆ Fr. regulier ; REGULARITY, n. s. j Port, and Spanish

REG’ULARLT, adv. [regular; Ital. re—

REG’ULATE, v. a. \gulare; low Lat.

REGULA’TION, n. s-j regularis. Ac—

REGULA’TOR. J cording to rule;

or prescribed mode ; initiated ; orderly : in geometry, a regular body is a solid whose surface is composed of regular and equal figures, and whose solid angles are all equal, and of which there are, and can be, but five sorts : as a noun-

substantive, an order of Homish clergy : regii larly and regularity follow the senses of the adjective : to regulate is to adjust or direct by rule or method, the nounsubstantives corresponding.

I restrained myself to so regular a diet, as to eat flesh but once a day, and little at a time, without salt or vinegar. Temple.

So bold, yet so judiciously you dare,

That your least praise is to be regular. Driiden. Even goddesses are women ; and no wife

Has power to regulate her husband’s life. Id.

Nature, in the production of things, always designs them to partake of certain, regulated, established essences, which are to be the models of all things to be produced ; this, in that crude sense, would need some better explanation. Locke.

Being but stupid matter, they cannot but continue any regular and constant motion, without the guidance and regulation of some intelligent being. Ruu.

Regularity is certain, where it is not so apparent, as in all fluids ; for regularity is a similitude continued. Grew.

The regularity of corporeal principles sheweth them to come at first from a divine regulator. Id.

The common cant of criticks is, that tkough the lines are good, it is not a regular piece. Guardian.

The ways of heaven are dark and intricate ; ††† Our understanding traces them in vain, ††† Nor sees with how much art the windings run, Nor where the regular confusion ends. Addison

In the Romish church, all persons are said to be regulars, that do profess and follow a certain rule of life, in Latin styled regula. Ayliffe't Purei-gon.

With one judicious stroke On the plain ground Apelles drew A circle regularly true. Prior.

He was a mighty lover of regularity and order ; and managed all his affairs with the utmost exactness.

Atterbury.

Regulate the patient in his manner of living.

Wiseman.

There is no universal reason, not confined to hu-man fancy, that a figure, called regular, which hath equal sides and angles, is more beautiful than any irregular one. Bentley.

So when we view some well-proportioned dome, No monstrous height or breadth or length appear ; The whole at once is bold and regular. Pope

Strains that neither ebb nor flow, Correctly cold and regularly low. Id.

More people are kept from a true sense and taste ' of religion, by a regular kind of sensuality and indulgence, than by gross drunkenness. Laic.

A REGULAR FIGURE, in geometry, is one whose sides, and consequently angles, are equal ; and a regular figure with three 01 four sides is commonly termed an equilateral triangle or square, as all others with more sides are called regular polygons.

REGULBIUM, or REGULVIUM, an ancient town of the Cantii in Britain, mentioned in the Notitia Imperii, now called Reculver.

REGULUS (M. Attilius), a Roman consul during the first Punic war. He reduced Brundusium, and, in his second consulship, took sixty-four and sunk thirty galleys of the Carthaginian fleet, on the coasts of Sicily. Afterwards he landed in Africa ; and so rapid was his success,

that in a short time he made himself master of about 200 important places on the coast. The Carthaginians sued for peace, but he refused to grant it ; and soon after he was de-

featecl by Xantippus, and 30,000 of his men were killed, and 15,000 taken prisoners, Re-giilus himself was also taken, and carried in triumph to Carthage. He was then sent to Rome, to propose an accommodation ; and, if his commission was unsuccessful, he was bound by the most solemn oaths to return to Carthage. When he came to Rome, Regulus dissuaded his countrymen from accepting the terms which the enemy proposed ; and, when his opinion had influenced the senate, Regulus returned to Carthage agreeable to his oaths. The Carthaginians, hearing that their offers of peace had been rejected at Rome through the influence of Regulus, prepared to punish him with the greatest severity. His eyelids were cutoff, and he was exposed for some days to the excessive heat of the meridian sun, and afterwards confined in a barrel, whose sides were stuck with iron spikes, till lie died in the greatest agonies. His sufferings being heard of at Rome, the senate permitted his widow to inflict whatever punishment she pleased on some of the most illustrious captives of Carthage, who were in their hands. She confined them in presses filled with sharp iron points ; and was so exquisite in her cruelty that the senate at length interfered, and stopped her barbarity. Regulus died about A. A. C. 251.

REGULUS (Memmius), a Roman, made governor of Greece by Caligula. While Regulus governed this province, the emperor wished to bring the celebrated statue of Jupiter Olympius by Phidias to Rome ; but this was supernaturally prevented, according to ancient authors, the ship which was to convey it being destroyed by lightning.

REGULUS, in chemistry, diminutive of rex, a king : so called because

the alchemist expected to find gold, the king of metals, collected at the bottom of the crucible after fusion. The name regulus was given by chemists to metallic matters when separated from other substances by fusion. It was afterwards applied to the metal extracted from the ores of the semi-metals, which formerly bore the name that is now given to the semi-metals themselves. To procure the regulus or mercurial parts of metals, &c., flux powders were formerly used, as nitre, tartar, &c., to purge the sulphureous part adhering to the metal, by attracting it to themselves, and absorbing it.

REG U R'GITATE, v. a. & v. n.) Fr. regor—

REGURGITA'TION, n. s. S ger : Latin

re and gurges. To throw back ; pour back : be

poured back : the act of resorption or swallowing

back.

The inhabitants of the city remove themselves into the country so long, until for want of receipt and encouragement, it regurgitates and sends them back.

Graunt.

Nature was wont to evacuate its vicious blood, out of these veins, which passage being stopt, it regurgitates upwards to the lungs.

Harvey on Consumptions.

Reffurgilation of matter is the constant symptom.

Sharp,

Arguments of divine wisdom, in the frame of animate bodies, are the artificial position of many valves, all so situate as to give a free passage to the

blood in their due channels, but not permit them tc

regurgitate and disturb the great circulation.

Bentleu.

REHEAR’, v. a. ˆ Re and hear. To hear REHEARSE, v. a. ►► again; repeat; recite; REHEAR’SAL, w.s.J relate: rehearsal is thu

act of repetition or recital ; recital previous to a

public exhibition.

Rehearse not unto another that which is told. Ecclus.

Twice we appoint that the words which the minister pronounceth the whole congregation shall re-peat after him ; as first in the public confession of sins, and again in rehearsal of our Lord’s prayer after the blessed sacrament. Hooker.

What dream’d my lord 1 tell me, and I’ll requite it With sweet rehearsal of my morning’s dream.

Shakspeare. The chief of Rome, With gaping mouths to these rehearsals come.

Dryden.

Great master of the muse ! inspired The pedigree of nature to rehenr*e, And sound the Maker’s work in equal verse. Id. What respected their actions as a rule or adnioni ►►► tion, applied to yours, is only a rehearsal, whose zeal in asserting the ministerial cause is so generally known. South.

My design is to give all persons a rehearing, who have suffered under my unjust sentence. Addison.

Of modest poets be thou just, To silent shades repeat thy verse, Till fame and echo almost burst, Yet haidly dare one line re/tearse. 6’u-i/i But a’ your doings to rehearse, Your wily snares an fechtin fierce, Sin’ that day Michael did you pierce

Down to this time, Wadding a’ Lallan tongue or Erse,

In prose or rhyme. JS►►- m

The lover, in melodious verses, His singular distress rehearіet, Still closing with a rueful cry, Was ever such a wretch as 1 ! Cowper.

REHER, a district of Delhi, Hindostan, situated between lat. 28►► and 29►►. It formerly was the northern limit of Kuttaher or Rohilcund, and was ceded to the British by the nabob of Oude. It is bounded on the west by the Ganges, and watered by several other

rivers. The principal towns are Reher, Nijibabad, and Darnagur,

REHER, a town of Hindostan, formerly the capital of the above district, became in 1774 the property of a chief named Nijif Khan, who removed the seat of government to Nijibabad, in consequence of which Reher has declined. The town and district are now included in the British collectorship of Bareily. Long. 78►► 44' E., lat. 29►► 23' N.

REHOBOAM, the son of Solomon, king of Israel, succeeded his father about A. M. 3029. By his folly, in totally refusing the people any redress of grievances, he occasioned the revolt of the ten tribes. See 1 Kings xii. 1►►►24. After an unfortunate reign of seventeen years, during which his capital was invaded and the temple plundered of its treasures by Shishak, or Sesacus, king of Egypt, he died A. M. 3046.

REJANG, a country of Sumatra, divided to the north-west from the kingdom of Anak Sun-ger by the river Uri, near that of Kattaun ; which last, with the district of Labtm, bounds it on the

north side. The country of Musi is its limit to the eastward. Bencoolen River confines it on the south-east.

REICHEN BACH, one of the four governments of Prussian Silesia. It is in the west of that province, and ˆcomprises the county of Glatz, the principalities of Munsterberg, Brieg, and Schweidnitz, and a considerable part of the Jauer. Its area is 2500 square miles. It is divided into the circles of Frankenstein, Glatz, Hirchberg, Jauer, Nimptsch, Munsterberg, Rei-chenbach, Schweidnitz, Striegau, and Bolken-hayn-Landshut. Population 470,000.

This province is hilly, particularly in the county of Glatz; but has also

many plains, fertile in corn, fruits, hops, and occasionally mulberry-trees. Among the mountains wood forms an article of export. In general this is the most active part of Silesia, and consequently of the Prussian states. The chief manufactures are linen, glass, and hardware. The number of villages is very great. The province being very populous, it is necessary to import corn. In the county of Glatz, and the principality of Munsterberg, the Catholics form the majority ; but throughout the rest the Protestants.

REICHEN BACH, the chief town of the above government, is eleven miles south-east of Schweidnitz, and thirty south-west of Breslau. It has manufactures of cotton, canvas, starch, and a trade in woollens. A convention was concluded here in 1790 between Prussia and Austria. Inhabitants 3300. Long. 16►► 36’ 37’ E., lat. 50►► 39’ 15’ N.

REICHEN BACH, a town of Saxony, in the Vogtland. Its inhabitants, about 3000, are employed chiefly in the manufacture of woollens. Their mode of dyeing scarlet is much esteemed. This town suffered much from fire in 1681 and 1720. Thirteen miles N.N. E. of Plauen.

REICHENBACH, a river of the.canton of Berne, Switzerland, in the district of Oberland. It is small, but, when swelled by the melted snow of the Alps, pours a large mass of water over a tremendous precipice.

REICHENBERG, a thriving town of Bohemia, in the northern circle of Buntzlau, on the Neisse; the chief place of a lordship belonging to the count of Clam-Galla. It has three churches, and great manufacturing establishments for woollens, with fulling-mills and dyehouses. The value of the woollen, linen, and stockings, annually made, is estimated at more than half a million ; there is also a traffic in wool and yarn. In the neighbourhood are found precious stones of the finer and semi-transparent kinds. On the 21st of April, 1757, the Prussians, under the duke of Brunswick, obtained a victory here over the Austrians. Inhabitants 12,000. Fifty-two miles N.N. E. of Prague, and twenty-five N.N.E. of Jurg Bunzlau.

REICHENHALL, a town in the south-east of Bavaria, on the Sala, sixty-five miles E. S. E. of Munich, and eleven S. S.W. of Salzburg. It is of great importance on account of its salt-works, at which 16,000 tons of that mineral are annually produced.

REID (Thomas), D. D., a late eminent Scottish writer, was the son of the Rev. Lewis Reid.

He was born at Strachan in April, 1710, and educated first at the parish school of Kincardine O'Niel, whence he was sent to the Marischal college, Aberdeen, in his 12th year ; where he took his degree of M. A. and studied theology. After obtaining his license he cultivated mathematics under professor John Stuart, whose place he often supplied in his absence. After this he was preferred to the church of New Machar, and soon overcame the popular prejudice against him, on account of that patronage. On the 22d Nov. 1751, he was appointed professor of philosophy in King's College, Aberdeen ; an office for which he was peculiarly qualified. Soon after this he wrote his Essay on Quantity, published in the Philosophical Transactions, vol. 45; which is esteemed the finest specimen of metaphysical mathematics extant. About this time, too, he was made D. D., and published his celebrated Enquiry into the Human Mind, on the principles of Common Sense. On the death of Dr. Adam Smith, he was called to be professor of moral philosophy in the university of Glasgow, on the eleventh of June, 1764. In 1773 appeared in lord Kames's Sketches of the History of Man, a brief Account of Aristotle's Logic, with Remarks by Dr. Reid ; which is esteemed the best analysis yet given of that philosopher's writings. In 1785 he published Essays on the Intellectual Powers of Man, dedicated to Dr. Gregory and professor Stewart of Edinburgh ; and, in 1788, Essays on the active Powers of Man; both in 4to. He died in October 1796, aged eighty-seven. He had been married, and left one daughter. See METAPHYSICS.

REICHSTADT (duke of). The emperor, Francis I., bestowed the title of duke of Reichstadt on his grandson Napoleon Francis Joseph Charles (born March 20, 181 1), son of Napoleon and Maria Louisa, daughter to Francis I. and duchess of Parma. The letters patent (of July 22, 1818) granted the young prince the dignity of serene highness, with a rank next after the princes of the blood, and a particular coat of arms. The revenue of the lordship, consisting of the fourteen Tuscan estates, is about 400,000 guilders, or about 160,000 dollars. Whenever Lucca passed into the possession of the grand-duke of Tuscany, this lordship was to fall to the duke. The duke of Reichstadt resided at Vienna. Previously to his birth he was designated as king of Rome ; and a few days after his baptism he received the homage of the different authorities, whom the countess of Montesquieu, as governess of France, answered in his name. After the fall of Napoleon, he was placed under the care of his grandfather, who, at first, destined him for the church, but afterwards gave him a military education. He had excellent teachers as, for instance, Von Hammer. In Austrian and other German official papers, his name is given as Francis Joseph Charles

only. After much suffering from a lingering consumption, he died almost unremembered by the French nation, of which he had once been the idol, on the 22nd of July, 1832.

REJECT', v. a.) >. Lat. rejicio, rejectus. To REJEC'TION,W. s. j dismiss without compliance; refuse ; cast off: the act of casting off or aside.

REI'GLE. n. s. Fr. regie. A hollow cut to guide any thing.

A flood gate is drawn up and let down through the reigles in the side posts. Carew.

REIGN, v.n. &n. s. Fr. regner ; Span, and Port, reyne ; Ital. and Lat. regno. To exercise sovereign authority ; obtain power ; be predominant : royal authority ; sovereignty ; power

And he schal regne in the hous of Jacob with-outea ende, and of his rewme schal be noon'ende.

Wiclif. Luk. 1.

A king shall reign in righteousness, and princes rule in judgment. Isaiah xxxi. 1.

That, as sin reigned unto death, even so might grace reign, through righteousness, unto eternal life by Jesus Christ. Romans,

This, done by them, gave them such an authority, that, though he reigned, they in effect ruled, most men honouring them, because they only deserved honour. Sidney.

Tell me, shall Banquo's issue ever Reign in this kingdom 1 Shakspeare. Macbeth. More are sick in the summer, and more die in the winter, except in pestilent diseases, which commonly reign in summer or autumn. Bacon.

The year againe

Was turning round ; and every season's raigne Renewed upon us. Chapman.

Did he not first seven years, a lifetime reign?

Cowley. Great secrecy Deigns in their publick councils.

Addison.

Saturn's sons received the threefold reign Of heaven, of ocean, and deep hell beneath. Prior.

The following licence of a foreign reign, Did all the dregs of bold Socinus drain. Pope. That wrath which hurled to Pluto's gloomy reign, The souls of mighty chiefs untimely slain. Id.

Russel's blood Stained the sad annals of a giddy reign. Thornton.

This right arm shall fix Her seat of empire ; and your son shall reign.

A. Philips.

REIMBO'DY, v. n. Re and irabody. To embody again.

Quicksilver, broken into little globes, the parts brought to touch immediately reimbody. Boyle.

REIMBURSE', v. a. Fr. re, in, and bourse a purse. To repay ; repair loss or expense.

If any person has been at expence about the funeral of a scholar, he may retain his books for the reimbursement. Aylijffe.

Hath he saved any kingdom at his own expences to give him a title of reimbursing himself by the destruction of ours 1 Swift.

REIMPREG'NATE, v.a. Re and impregnate. To impregnate anew.

The vigour of the loadstone is destroyed by fire, nor will it be reimpregnated by any other magnet than the earth. Browne.

Religion, ot which the rewards are distant, and which is animated

only by faith and hope, will glide by degrees out of the mind, unless it be invigorated and “eimpressed by external ordinances, by stated ###alls to worship, and the salutary influence of example. Johnson.

REIN, n. s.&J Fr. resnes; Ital. redeni.

REINS, [y. a. \ The part of a bridle which

governs the horse’s head ; -used metaphorically

for any instrument of government : ‘ to give thf reins’ is to give licence : to rein, to govern ; restrain : reins, always in the plural, are from Lat. renes, Gr. p##v, the kidneys.

Whom I shall see for myself, though my reint be consumed. JQˆ

Every horse bears his commanding rein, And may direct his course as please himself.

Shakspeare.

The hard rein, which both of them have borne Against the old kind king. Id. King Lear.

Being once chaft, he cannot

Be reined again to temperance ; then he speaks

What’s in his heart. Id. Coriolamis.

He mounts and reins his horse. Chapman.

War to disordered rage, let loose the reins. Milton.

He, like a proud steed reined, went haughty on.

Id.

Take you the reins, while I from cares remove, And sleep within the chariot which I drove.

Dry den.

His son retained His father’s art, and warriour steeds he reined. Id.

With hasty hand the ruling reins he drew; He lashed the coursers, and

the coursers flew.

Pope.

When to his lust ˆEgisthus gave the rein, Did fate or we the' adultrous act constrain ? Id.

Strip them of those false colours that so often deceive us ; correct the sallies of the imagination, and leave the reins in the hand of reason. Mason.

REINDEER. See CERVUS.

REINECCIUS (Reinier), a learned German of the sixteenth century, born at Steinheim. He taught the belles lettres in the universities of Frankfort and Helmstadt. He published Historia Julia, and Historia Orentalis ; with some other tracts. He died in 1595.

REINESIUS (Thomas), a learned German physician and philosopher, born at Gotha in Thuringia in 1587. He settled as a physician at Altemberg, where he was elected a burgomaster. He was afterwards appointed counsellor to the elector of Saxony, and resided at Leipsic. He wrote some tracts on medicine, but his chief works are on philology and criticism. His most celebrated work is Variarum Lectionum Libri Tres; 4to. He died at Leipsic in 1587.

REINHOLD (Erasmus), a learned German astronomer and mathematician, born at Salfeldt in Upper Saxony in 1511. He wrote several mathematical and astronomical works ; and died in 1535.

REINSPIRE', v. a. Re and inspire. To inspire anew.

Time will run

On smoother, till Favonius reinspire

The frozen earth, and cloath in fresh attire

The lily and rose. Milton.

The mangled dame lay breathless on the ground, When on a sudden, reinspired with breath, Again she rose. Dryden.

REINSTAL', v.a. Re and instal. To seat

again.

Thy fathei

Levied an army, weening to redeem, And reinstal me in the diadem. Shakspeare. That alone can truly reinstall thee In David's royal seat, his true successor. Milton. REINSTATE', v. a. Re and instate. To jmr again in possession.

David, after that signal victory which had preserved his life, reinstated him in his throne, and restored him to the ark and sanctuary ; yet suffered the loss of his rebellious son to overwhelm the sense of his deliverance. Government of the Tongue.

Modesty reinstates the widow in her virginity.

Additon.

The reinstating of this hero in the peaceable possession of his kingdom was acknowledged. Pope.

REINTEGRATE, v. a. Fr. reintegrer; Lat. re and integer. To renew with regard to any state or quality ; repair ; restore.

This league drove all the Spaniards out of Germany, and reintegrated that nation in their ancient liberty. Bacon.

The falling from a discord to a concord hath an agreement with the affections, which are reintegrated to the better after some dislikes.

Id. Natural History.

REJOICE', v. n. & v. a. > Fr. rejouir, To

REJOI'CER, n. s. $ be glad; exult; receive pleasure from something

past; exhilarate ; make glad : the noun substantive corresponding.

Let them be brought to confusion that rejoice at mine hurt. Ptalm xxxv. 26.

I will comfort them, and make them rejoice from their sorrow. Jeremiah xxxi. 13.

This is the rejoicing city that dwelt carelessly, that said, there is none beside me. Zephaniah ii. 15.

Whatsoever faith entertains, produces love to God ; but he that believes God to be cruel, or a rejoicer in the unavoidable damnation of the greatest pait of mankind, thinks evil thoughts concerning God. Taylor's Rule of Holy Living.

They rejoice each with their kind. Milton.

We should particularly express our rejoicing by love and charity to our neighbours. Nelson.

Alone to thy renown, 'tis given, Unbounded through all worlds to go ;

\Yhile she great saint rejoices heaven, And thou sustains't the orb below. Prior.

I should give Cain the honour of the invention ; were he alive, it would rejoice his soul to see what mischief it had made. Arbuthnot.

REJOIN', v. a. &u. n. ˆ Fr. rejoindre. To

REJOIS'DER, n. s. S join or meet again ; to reply to an answer : rejoinder is the reply made.

Injury or chance rudely beguiles our lips Of all rejoindure. Shahspeare. Troilus and Cressida.

The quality of the person makes me judge myself obliged to a rejoinder. Glanville to Albiiis.

The grand signior conveyeth his galleys down to Grand Cairo, where they are taken in pieces, carried upon camels' backs, and rejoined together at Suez. Browne's Vulgar Errourt.

It will be replied that he receives advantage by this lopping of his superfluous branches ; but I re-join, that a translator has no such right. Dryden.

Thoughts, which at Hyde-park-corner I forgot, Meet and rejoin me in the nensive grot. Pope.

REJOINDER, in law, is the defendant's answer to the plaintiffs replication or reply. Thus, in the court of chancery, the defendant puts in an answer to the plaintiff's bill, which is sometimes also called an exception ; the plaintiffs answer to that is called a replication, and the defendant's answer to that a rejoinder.

REJOLT', n. s. Fr. rejaillir. Shock ; suc-cussion.

The sinner, at his highest pitch of enjoyment, is not pleased with it so much, but he is afflicted more ; and, as long as these inward rejolts and recotlings of

the mind continue, the sinner will find his account* of pleasure very poor. South.

REISRE (John James), M.D., a celebrated oriental scholar and critic, born in 1706, at a town in the duchy of Anhait. After the usual school education he went, in 1733, to Leipsic, where he studied five years, acquired the Arabic language, and translated and published a book in it. He next travelled on foot to Leyden, where he was employed in arranging the Arabian MSS. though but poorly compensated for it. He next translated from the German and French into Latin various Essays sent him by Dorville, whom he had visited in his journey, and who inserted these in the Miscellanea Critica. At Dorville's desire he also translated the whole of the Chariton from the Greek, and Abulfeda's Geography from the Latin. He continued eight years in Leyden, and received his degree in it, but left it on account of calumnies excited against him by Peter Burinan, whose translacion of Petronius Arbiter he rvad criticised. He then travelled through Germany, and settled at Leipsic, where he was made professor of Arabic, and continued for twelve years, writing for the booksellers. The Acta Eruditorum were greatly indebted to him. On the death of Haltansius, in 1756, he was made rector of the Academy at Leipsic, which placed him-above want. Previously to this he had published his Animadversiones in Auctores Graecos, in five vols, a work of deep erudition. In 1764 he married Ernes-Una Christina Muller, a woman of extraordinary abilities, whose learning, particularly in Greek, was hardly inferior to his own. She assisted him in all his literary labors, especially in his immortal work of the Edition of the Greek Orators : in 12 vols, 8vo. Thus Reiske spent the remainder of his life; and died in 1774, universally respected. The

numberof his publications is very great. The principal are those above-mentioned and the following : Dionysius Halicarnassensis, seven vols ; Plutarch, nine vols. ; Theocritus, &c.

REITERATE, t-.o. > Fr. reiterer ; Lat. re

REITEKA'TION, ►►. 5.) and Hero. To repeat again and aunm : repetition.

You nexei spoke what did become you less Than this . which lo 'eittnaie were sin. Sluilujieare.

\Vitli reneˆiiicil ciimes he might Heap on himself damnation. SlilUm.

It is uselul 10 have new experiments tried over again ; such leiterutions commonly exhibiting new phenomena. Bottle.

Although Christ hath forbid us lo use vain repetitions when we pray, yet lie hnth taught us that to reiterate ihe same requests will not be vain.

bmalriilge.

The words are a reiteration or reinforcement of an application, arising from the consideration of the excellency of Christ above Moses.

Ward of Infidelity.

REJUDGE', v. a. Re and judge. To reexamine; review; re-try.

The muse attends tliee to the silent shade ; 'Tis her's the brave man's latest steps to trace, Rejudge his acts, and dignify disgrace. Pope.

RETZ, or REITZ (Frederic Wolfgang), a Ger-man philologist, was born in Franconia, in 1733, and, after having completed his studies at Leip-

sic, oecame a pr’vate tutor, and then a corrector of the press in the printing-office of Breitkopf. He held the professorships of philosophy, Latin and Greek, and poetry, and was director of the library belonging to the university of Leipsic. Tie died February 2, 1?90. Reiz is principally known as the editor of Herodotus; but he published editions of other classics, and two Dissertations on Prosody.

REKINDLE, v. a. Re and kindle. To set on fire again.

These disappearing, fixed stars, were actually extinguished, and would for ever continue so, if not rekindled, and new recruited with heat and light.

Cheyne’f Philosophical Principles.

Rekindled at the royal cl.arms, Tumultuous love each beating bosom warms. Pope.

RELAND (Adrian), an eminent Orientalist, born at Ryp, in North Holland, in 1676; and educated three years under Surenhusius, from whom he acquired the Hebrew, Syriac, Chaldee, and Arabic languages. In 1701 he was, by the recommendation of king William, appointed professoi of Oriental languages and ecclesiastical antiquities in the university of Utrecht; and died of the small-pox in 1718. He was distinguished by his modesty, humanity, and learning ; an<* carried on a correspondence with the most eminent scholars of his time. His works are written in Latin ; *viz.* An excellent description of Palestine. Five dissertations on the Medals of the ancient Hebrews, and several other dissertations on different subjects. An Introduction to the Hebrew Grammar. The Antiquities of the Ancient Hebrews. On the Mahometan Religion.

RELAPSE’, ‘v. n. & n. s. Lat. relapsus. To slip back ; slide or fall back ; particularly from good to ill : relapse is regression ; falling back into evil ; return.

It was even as two physicians should take one sick body in hand ; of which, the former would purge and keep under the body, the other pamper and strengthen it suddenly ; whereof what is to be looked for, but a most dangerous relapse. Spenser.

Mark a bounding valour in our English ;

That being dead like to the bullet’s grazing,

Breaks out into a second course of mischief,

Killing in relapse of mortality.

Shahpeare. Henry V.

The oftener he hath relapsed, the more significations he ought to give of the truth of his repentance.

Taylor. This would but lead me to a worse relapse

And heavier fall. Milton.

We see in too frequent instances the relapses of those, who under the present smart, or the near apprehension of the divine displeasure, have resolved on a religious reformation. Rogers.

He was not well cured, and would have relapsed.

Wiseman.

RELATE', v. a. bv.n.'} Lat. relatw. To RELA'TERˆW. s. j tell ; recite ; utter ;

RELA'TION, n. s. { give vent by words

REL' ATI VE, adj.&n.s. \ (a sense only used by RELATIVELY, adv. \ Bacon); ally by kin-REL'ATIVENESS, n. s. J dred or marriage: as a verb neuter, have reference or respect : a relater is, a narrator; historian: relation, narration; tale: connexion; manner of connexion, or of belonging to a person or thing; respect; reference; alliance; kindred; person related by birth or

marriage : relative is, respecting ; considered as belonging to, or regarding, something else : ar? a noun substantive, somewhat respecting something else ; the pronoun that answers to an antecedent ; a kinsman or kinswoman : the adverb and noun substantive following correspond with relative as an adjective.

Learn the right joining of substantives with adjectives, and the relative with the antecedent.

Ascham's Schoolmaster. Your wife and babes

Savagely slaughtered ; to relate the manner, Were to add the death of

you.

Shakspeare. Macbeth. I'll have grounds

More relative than this. Id.

A man were better relate himself to a statue, than suffer his thoughts to pass in smother. Bacon.

Though capable it be not of inherent holiness, yet it is often relative. Holyday.

Tis an evil dutifulness in friends and relatives to suffer one to perish without reproof. Taylor.

Here I could frequent

With worship place by place, where he vouchsafed Presence divine ; and to my sons relate. Milton.

Fler husband, the relater, she preferred Before the angel. Milton't Paradise Lost.

Relations dear, and all the charities Of father, son, and brother, first were known.

Milton.

We shall rather perform good offices unto truth, than any disservice unto their relaters. Browne.

Under this stone lies virtue, youth, Unblemished probity and truth ; Just unto all relations known, A worthy patriot, pious son. Waller.

All those things that seem so foul and disagreeable in nature are not really so in themselves, but only relatively. More.

Confining our care either to ourselves and relatives.

Fell.

The drama presents to view, what the poem only does relate. Dryden.

I have been importuned to make some observations on this art, in relation to its agreement with poetry. Id.

Be kindred and relation laid aside, And honour's cause by laws of

honour tried. Id.

All negative or privative words relate to positive ideas, and signify their absence. Locke.

Relation consists in the consideration and comparing of one idea with another. Id.

Not only simple ideas and substances, but modes are positive beings ; though the parts of which they consist are very often relative one to another. Id.

When the mind so considers one thing that it sets it by another, and carries its own view from one to the other, this is relation and respect ; and the denominations given to positive things, intimating that respect, are relatives. Id.

As other courts demanded the execution of persons dead in law ; this gave the last orders relating to those dead in reason. Tatler.

Are we not to pity and supply the poor, though they have no relation to us ? No relation ! that can-not be : the gospel stiles them all our brethren ; nay, they have a nearer relation to us, our fellow-members ; and both these from their relation to our Saviour himself, who calls them his brethren.

Sprat.

These being the greatest good or the greatest evil, either absolutely so in themselves, or relatively so to us ; it is therefore good to be zealously affected for the one against the other. M-

In an historical relation, we use terms that are most proper. Burnet's

Theory of the Earth.

The ecclesiastical, as well as the civil goveraour, has cause to pursue the same methods of confirming himself ; the grounds of government being founded upon the same bottom of nature in both, though the circumstances and relative considerations of the persons may differ. South.

So far as service imports duty and subjection, all created beings bear the necessary relation of servants to God. Id.

The author of a just fable must please more than the writer of an historical relation. Dennis.

Wholesome and unwholesome are relative, not real qualities. Arbuthnot on Aliments.

Avails thee not,

To whom related, or by whom begot : A heap of dust alone remains. Pope.

The best English historian, when his style grows antiquated, will be only considered as a tedious relater of facts. Swift.

A she-cousin, of a good family and small fortune, passed months among all her relations. Id.

Consider the absolute affections of any being as it is in itself, before you consider it relatively or survey the various relatims in which it stands to other be-ings. Watts.

Our necessary relation* to a family, oblige all to use their reasoning powers upon a thousand occasions. Id. Dependants, friends, relation*,

Savaged by woe, forget the tender tie. Thomson.

Our intercession is made an exercise of love and care for those amongst whom our lot is fallen, or who belong to us in a nearer relation : it then becomes the greatest benefit to ourselves, and produces its best effects on our own hearts. Law.

Of the eternal relation* and fitnesses of things we know nothing ; all that we know of truth and falsehood is, that our constitution determines us in some cases to believe, in others to disbelieve. Beattie.

RELATIVE PRONOUNS, in grammar, are those which answer to some

other word foregoing, called the antecedent ; such are the Latin pronouns qui, quae, quod, &c. : in English, who, which, what, &c. The word answering to these relatives is often understood, as, I know whom you mean, for I know the person whom you mean.

RELAX', v. a. & v. n.) Lat. relaxo. To

RELAXA'TION, n. s. 5 slacken ; to make less tense; remit; ease; to be mild; remiss: the nounsubstantive corresponding.

They childishly granted, by common consent of their whole senate, under their own seal, a relaxation to one Bertelier, whom the eldership had excommunicated. Hooker.

The sinews, when the southern wind bloweth, are more relaxed. Bacon's Natural History.

Cold sweats are many times mortal ; for that they come by a relaxation or forsaking of the spirits.

Bacon.

Adam, amazed,

Astonished stood, and black, while horrour chill Ran through his veins, and all his joints relaxed.

Milton.

It served not to relax their serried files. Id.

The sea is not higher than the land, as some imagined the sea stood upon heap higher than the shore ; and at the deluge, a relaxation being made, it overflowed the land. Burnet.

In the book of games and diversions, the reader's mind may be supposed to be relaxed.

Addison's Spectator.

As God has not so devoted our bodies to toil, but that he allows us some recreation ; so doubtless he indulges the same relaxation to our minds.

Government of the Tongue. If in some regards she chose To curb poor

Paulo in too close ; In others she relaxed again, And governed with a looser rein. Prior. Many who live healthy in a dry air, fall into all the diseases that depend upon relaxation in a moist one. A rbuthnot.

The statute of mortmain was at several times relaxed by the legislature. Swift.

The relaxation of the statute of mortmain is one of the reasons which gives the bishop terrible apprehensions of popery coming on us. Id. Nor praise relax, nor difficulty fright.

Vanity of Wi*het.

RELAY', n. s. Fr, relais. Horses on the road to relieve others.

RELEASE', v. a. Fr. relascher, relaxer, of Lat. relaxo. To set free from confinement, servitude, pain, or penalty ; free from obligation ; quit ; let go ; relax : the nounsubstantive corresponding.

Every creditor that lendeth aught unto his neighbour shall release it. Deuteronomy.

The king made a great feast, and made a release to the provinces, and gave gifts. Esther ii. 18.

Pilate said, Whom will ye that I release unto you?

Matthew.

It may not seem hard, if in cases of necessity, certain profitable ordinances sometimes be released, rather than all men always strictly bound to the general rigour thereof. Hooker.

The king would not have one penny abated, of what had been granted by parliament ; because it might encourage other countries to pray the like release or mitigation. Bacon.

Too secure, because from death released some days.

Milton.

You released his courage, and set free A valour fatal to the enemy. Dryden.

Why should a reasonable man put it into the power of fortune to make him miserable, when his ancestors have taken care to release him from her ?

Id.

He had been base, had he released his right, For such an empire none but kings should fight.

Id.

O fatal search ! in which the lab'ring mind, Still pressed with weight of woe, still hopes to find A shadow of delight, a dream of peace, From years of pain, one moment of release. Prior. If solitude succeed to grief,

Release from pain is slight relief ;

The vacant bosom's wilderness

Might thank the pang that made it less. Byron.

RELEASE, in law, is a discharge or conveyance of a man's right in lands or tenements, to another that hath some former estate in possession. The words generally used therein are, ' remised, released, and for ever quit-claimed.' And these releases may enure, either, 1. By way of enlarging an estate, as, if there be tenant for life or years, remainder to another in fee, and he in remainder releases all his right to the particular tenant and his heirs, this gives him the estate in fee. But in this case the relessee must be in' possession of some estate for the release to work upon ; for, if there be a lessee for years, and, before he enters and is in possession, the lessor releases

to him lUl his right in the reversion, such release is void for want of possession in the relessee. 2. By way of passing an estatP, as, when one of two coparceners releaseth all his right to the other, this passeth the fee-simple of the whole. In both these cases there must be a privity

of estate between the relessor and relessee; that is, one of their estates must be so related to the other as to make but one and the same estate in law. 3. By way of passing a right, as if a man be disseised, and releaseth to his disseisor all his right ; hereby the disseisor acquires a new right, which changes the quality of his estate, and renders that lawful which before was tortious. 4. By way of extinguishment : as if my tenant for life makes a lease to A for life, remainders to B and his heirs, and I release to A ; this extinguishes my right to the reversion, and shall enure to the advantage of B's remainder as well as of A's particular estate. 5. By way of entry and feoffment: as if there be two joint disseisors, and the disseisee releases to one of them, he shall be sole seised, and shall keep out his former companion ; which is the same in effect as if the disseisee had entered, and thereby put an end to the disseisin, and afterwards had enfeoffed one of the disseisors in fee. When a man has in himself the possession of lands, he must at the common law convey the freehold by feoffment and livery, which makes a notoriety in the country: but if a man has only a right or a future interest he may convey that right or interest by a mere release to him that is in possession of th□□□ land : for the occupancy of the relessee isˆk" mat-ter of sufficient notoriety already.

RELEGATION, n. s. Fr. relegation; Lat. relegatio. Exile ; judicial banishment.

According to the civil law, the 'extraordinary punishment of adultery was deportation or relegation.

Ayliffe.

RELENT, v. n. & v. a.) Fr. ralentir. To

RELENT'LESS, adj. $ soften ; grow less

rigid or hard ; melt ; as a verb neuter, to slacken ; remit ; mollify, but rarely used : the adjective corresponds with the verb active.

1 have marked in you a relenting truly, and a slacking of the main career, you had so notably be-gun, and almost performed. Sidney.

Apace he shot, and yet he fled apace, And oftentimes he would relent his pace, That him his foe more fiercely should pursue.

Spenser.

Can you behold My tears, and not once relent ?

Shakspeare. Henry VI.

In some houses, sweetmeats will relent more than in others. Bacon.

Crows seem to call upon rain, which is but the comfort they seem to receive in the relenting of the air. Id.

The workmen let glass cool by degrees in such re- . lentinys of fire, as they call their nealing heats, lest it should shiver in pieces by a violent succeeding of air. D'gby on Bodies.

Undoubtedly he will relent and turn

From his displeasure. Milton.

Only in destroying, I find ease

To my relentless thoughts. Id. Paradise Lost.

Salt of tartar brought to fusion, and placed in a' cellar, will in a few minutes begin to relent, and have its surface softened by the imbibed moisture of

the air, wherein, if it be left long, it will totally be dissolved. Boyle.

Why should the weeping hero new Relentless to their wishes prove ? Prior.

All nature mourns, the skies relent in showers, Hush'd are the birds, and closed the drooping How'i* ; If Delia smile, the flowers begin to spring. The skies to brighten, and the birds to sing. Pope.

He sung, and hell consented To hear the poet's prayer ;

Stern Prosperine relented, And gave him back the fair. Id.

RELHAM (Richard), F.R.S. and L.S., a respectable divine and naturalist, was educated at Cambridge, and became a fellow of King's College. In 1791 he obtained the rectory of Hun-ningsby, in Lincolnshire. His works are, Flora Cantabrigensis, in which he describes his discovery of a new species of lichen and of the athamanta libanotis ; and Tacitus de Moribus Germanorum et de Vita Agricolse, 8vo.

RELI'ANCE, n. s. From RELY, which see.

REL’IC, or \ Fr. relique ; Lat. reliquia.

REL’ICK, n. x. > Strictly that which remains;

REi/iCLY,adu. j that which is left after the loss or decay of the rest: often applied to the body after death, and to any thing kept as a religious memento.

Up dreary dame of darkness queen, Go gather up ‘the reliques of thy race, Or else go them avenge. Spenser.

The fragments, scraps, the bits, and greasy re-liqttes,

Of her o’ereaten faith are bound to Dioraede.

Shakspeare.

Thrifty wench scrapes kitchen stuff, And barrelling the droppings and the snuff Of wasting candles, which in thirty year, Relickly kept, perhaps buys wedding cheer. Donne.

What needs my Shakespeare for his honoured

bones,

The labour of an age in piled stones ? Or that his hallowed reliques should be hid Under a starrypointed pyramid? Milton.

Nor death itself can wholly wash their stains, But long contracted filth even in the soul remains; The relichs of inveterate vice they wear, And spots of sin. Dry den’ t JEneis.

This church is very rich in relicks ; among the rest, they show a fragment of Thomas a Becket, as indeed there are very few treasuries of relicks in Italy that have not a tooth or a bone of this saint.

Adduon on Italy. Shall our relicks second birth receive?

Sleep we to wake, and only die to live? Prior.

Thy relicks, Rowe, to this fair shrine we trust, And sacred place by Dryden’s awful dust ; Beneath a rude and nameless stone he lies, To which thy tomb shall guide enquiring eyes.

Pope.

RELICS, in the Romish church, the remains of the bodies or clothes of

saints or martyrs, and the instruments by which they were put to death, devoutly preserved, in honor of their me-mory : revered, and carried in procession. The respect which was due to the martyrs and teachers of the Christian faith in a few ages increased almost to adoration. Relics, therefore, were, and still are preserved on the altars of the Romanists whereon mass is celebrated. The city of Co-lo*❓❓❓ was famous for its relics. Many precious refics w*re also discovered and exposed to ndi-

cule in England, upon abolition of the monasteries ; such as the parings of St. Edmund's toes, the girdle of the Virgin Mary, &c. The honoring the relics of saints, on which the church of Rome afterwards founded the superstitious and lucrative use of them, as objects of devo-votion, as a kind of charms or amulets, principally appears to have originated in the very ancient custom of assembling at the cemeteries or bury ing-places of the Christain martyrs, for the purpose of commemorating them, and of performing divine worship. The practice of depositing relics of saints and martyrs under the altars in churches, was at last thought of such importance, that St. Ambrose would not consecrate a church because it had no relics; and the council of Constantinople in Trullo ordained, that those altars should be demolished under which there were found no relics. The rage for procuring relics for this and similar purposes became so excessive that, in A. D. 300, Theodosius the Great was obliged to pass a law, forbidding the people to dig up the bodies of the martyrs, and to traffic in their relics. Such was the origin of that respect for sacred relics which was afterwards perverted, and became the occasion of innumerable processions, pilgrimages, &c. In the end of the ninth century, it was not sufficient to reverence departed saints, and to confide in their intercessions and succours, to believe them endued with a power of healing diseases, working miracles, and delivering from all sorts of calamities and dangers ; their bones, their clothes, the

apparel and furniture they had possessed during their lives, the very ground which they had touched, or in which their carcasses were laid, were treated with veneration, and supposed to retain the virtue of healing disorders both of body and mind, and of defending such as possessed them against the assaults and devices of the devil. In consequence of this, a new and lucrative trade was opened both in Europe and in the east. Public credulity was imposed upon, and relics of saints were multiplied without number ; while the Greeks found a rich prey in the superstition of the Latin re-lic-hunters. The Roman Catholics in Great Britain do not acknowledge any worship to be due to relics, but merely a high veneration and respect, by which means they profess to honor God, who, they say, has often wrought very extraordinary miracles by them. Relics are forbidden to be used or brought into England by several statutes; and justices of peace are empowered to search nouses for popish relics, which, when found, are to be defaced and burnt, &c.

REL'ICT, n. s. Old Fr. relicte ; Lat. relicta. A widow ; a wife desolate by the death of her husband.

If the fathers and husbands were of the household of faith, then certainly their relicts and children can-not be strangers in this household.

Sprat't Sermons. Chaste relict !

Honoured on earth, and worthy of the love

Of such a spouse as now resides above. Garth.

RELIEF (Relevamen; in Domesday, Relevatio, Relevium), signifies a certain sum of money,

which the tenant holding by knight's seivice, grand serjeantry, or other tenure (for which homage or legal service is due), and being at full age at the death of his ancestor, paid unto his entrance.

RELIEF, CHURCH OF, or RELIEF, PRESBYTERY OF, a set of Presbyterians, in Scotland, who dif-fer from the established church only as to the submission to the law of patronage. See An-VOWSON, PATRONAGE, and PRESENTATION. Many violent settlements, as they are called, of unpopular clergymen in various parishes in Scotland, had repeatedly taken place, in consequence of the rigorous exercise of the law of patronage, which was always a very unpopular measure

among strict Presbyterians ; and some of these presentees had been so exceedingly unpopular that they were obliged to be settled in their churches and benefices by the force of military power. Grievances of this kind had repeatedly taken place, and been often complained of, before any attempt was made for relief from them, till 1752; when the Rev. Mr. Thomas Gillespie, minister of Garnock, in Fifeshire, was deposed by the General Assembly of the Church of Scotland, and for no other fault, but merely, from a scruple of conscience, refusing to have any hand in a violent settlement of this kind, where the presentee was to be settled in opposition to the inclination of the parishioners. This disobedience to the supreme ecclesiastical court was punished with a formal and solemn deposition. Mr. Gillespie was soon after joined in communion by Mr. Thomas Boston of Jedburgh, and several other clergymen of the Church of Scotland, particularly the Rev. James Baine, minister of Paisley, who was settled in a relief church of Edinburgh ; all of whom differed from the established church in nothing but the rigorous exercise of the law of patronage, which the church holds to be lawful and expedient, and their opponents to be highly criminal. On this principle these dissenting clergymen constituted themselves into a society, with Presbyterian powers, under the name of the Presbytery of Re-lief; and being soon followed by great numbers of people, who considered patronage as a piece of unjustifiable ecclesiastical, or rather civil tyranny, imposed on the church of Scotland by a tory party in the reign of queen Anne, merely to be avenged of the Presbyterian Whigs for their zeal against the house of Stuart ; they, in a few years, erected churches of Relief (meaning thereby relief from the oppression of patronage) in a great number of parishes throughout Scotland. For farther particulars respecting this sect, we refer the reader to a treatise entitled Historical Sketches of the Church, published in 1774, by the Rev. James Smith, who succeeded Mr. Gillespie in the Relief Church at Dunfermline, but who afterwards returned to the established church, and died minister of a chapel in connexion with the establishment in Dundee.

RELIEVE’, v. a.-\ Fr. relief, reliever ; Span.

RELIEV’ABLE, adj. I relievar; Ital. relievo; Lat.

RELIEF’, n.s. \relevo. To raise up; re—

RELIEV’ER, n. s. ivive; support; succor;

RELIE’VO. J ease ; free from pain, or

painful duty ; hence change a military guard ; to

right legally ; recommend or set off by interposition : the adjective and noun substantives corresponding: relievo is (from the Italian) the prominence of a figure or picture.

For this relief, much thanks ; ‘tis bitter cold, And I am sick at heart. Shakspeare. Hamlet.

Honest soldier, who hath relieved you 1 ??? Bernardo has my place. Give you good night.

Shakspeare. Thoughts in my unquiet breast are risen,

Tending to some relief of our extremes. Milton.

Neither can they, as to reparation, hold plea of things, wherein the party is relievable by common law. Hale.

Parallels, or like relations, alternately relieve each other ; when neither will pass asunder, yet are they plausible together. Browne.

He found his designed present would be a relief, and then he thought it an impertinence to consider what it could be called besides. Fell.

So should we make our death a glad relief

From future shame. Dryden*s Knight’s Tale.

A convex mirrour makes the objects in the middle come out from the superficies : the painter must do so in respect of the lights and shadows of his figures, to give them more relievo and more strength.

Dry den. From thy growing store

Now lend assistance, and relieve the poor ;

A pittance of thy land will set him free. Id.

Relieve the sentries that have watched all night.

Id.

As the great lamp of day,

Through different regions does his course pursue, And leaves one world but to revive a new ; While, by a pleasing change, the queen of night Relieves his lustre with a milder light. Stepney.

The figures of many ancient coins rise up in a much more beautiful relief than those on the modern ; the face sinking by degrees in the several declensions of the empire, till about Constantine's time, it lies almost even with the suˆice of the medal.

Additcm.

Since the inculcating precept upon precept will prove tiresome, the poet must not encumber his poem with too much business ; but sometimes relieve the subject with a moral reflection. Id.

He is the protector of his weakness, and the reliever of his wants. Rogers's Sermon.

Not with such majesty, such bold relief, The forms august of kings, or conquering chief, E'er swelled on marble, as in verse have shined, In polished verse, the manners, and the mind.

Pope.

' To RELIEVE THE SENTRIES is to put fresh men upon that duty from the guard, which is generally done every two hours, by a corporal who attends the relief; to see that the proper orders are delivered to the soldier who relieves. To RELIEVE THE TRENCHES is to relieve the guard of the trenches, by appointing those, for that duty who have beerˆ there before.

RELIEVO, or RELIEF, in sculpture, &c., is the prefecture of a figure from the ground or plane on which it is formed ; whether that figure be cut with the chisel, moulded, or cast. There are three kinds or degrees of relievo, *viz.* alto, basso, and demi-relie\ o. The alto relievo, called also haut-relief, or high relievo, is when the figure is formed

after nature, and projects as much as the life. Basso relievo, bass-relief, or low relievo, is when the work is raised a little from the ground, as in medals, and the frontis-

pieces of buildings; and particularly in the histories, festoons, foliages, and other ornaments of friezes. Demi relievo is when one half of the figure rises from the plane. When, in a basso-relievo, there are parts that stand clear out, detached from the rest, the work is called a demi-basso. In architecture, the relievo of the ornaments ought always to be proportioned to the magnitude of the building it adorns, and tj the distance at which it is to be viewed.

RELIEVO, or RELIEF, in painting, is the de-gree of boldness with which the figures seem, at a due distance, to stand out from the ground of the painting. The relievo depends much upon the depth of the shadow, and the strength of the light ; or on the height of the different colors, bordering upon one another; and particularly on the difference of the color of the figure from that of the ground ; thus, when the light is so disposed as to make the nearest part of the figure advance, and is well diffused on the masses, yet insensibly diminishing, and terminating in a large spacious shadow, brought off insensibly, the relievo is said to be bold, and the clair obscure well understood.

RELIGHT, v. a. Re and light. To light anew. His power can heal me, and relight my eye. Pope.

RELIG'ION, n. s. \ Fr. religion; Lat RELIG'IOUS, adj. & n. s. ˆreligio. See below. RELIG'IOUSLY, adv. 3 Virtue, as founded upon piety and the expectation of future rewards and punishments ; a system of revealed faith and worship: religionist, a bigot; a. religious per-son : the adjective and adverb corresponding in sense with religion : religious is also used for exact ; strict : and, as a noun substantive, for a man professedly devoted to religion.

It is a matter of sound consequence, that all duties are by so much the better performed, by how much the men are more religious, from whose abilities the same proceed. Hooker.

When holy and devout religious Christians Are at their beads, 'tis hard to draw them from

thence ; So sweet is zealous contemplation ! Shakspeare.

These are their brethren whom you Goths behold Alive and dead, and for their brethren slain Heligiously they ask a sacrifice. Id.

The privileges, justly due to the members of the two houses and their attendants, are religiously to be maintained. Bacon.

For, who will have his work his wished -end to

win. Let him with hearty prayer religiously begin

Dray ton.

He that is void of fear, may soon be just, And no religion binds men to be traitors.

Ben J onion.

He God doth late and early pray, More of'his grace than gifts to lend ;

And entertains the harmless day With a religious book or friend. ffotlon.

Certain fryars and religious men were moved with some zeal, to draw the people to the Christian faith.

Abbot.

Equity in law is the same that spirit is \i\ religion, what every one pleases to make it : sometimes they go according to conscience, sometimes according to law, sometimes according to the rule of court.

Sttden.

By religion, I mean that general habit of reverence towards the divine nature, whereby we are enabled and inclined to worship and serve God af-ter such a manner as we conceive most agreeable to his will, so as to procure his favour and blessing.

Wilkins.

One spake much of right and wrong, Of justice, of religion, truth, and

peace And judgment from above. Milton.

Their lives Religious titled them the sons of God. Id.

The Christian religion, rightly understood, is the deepest and choicest piece of philosophy that is.

More.

If we consider it as directed against God, it is a breach of religion ; if as to men, it is an cffence against morality. South.

France has vast numbers of ecclesiasticks, secular and religion*. Addition's State of the War.

What _the protestants would call a fanatick is in the Roman church a religious of such an order ; as an English merchant in Lisbon, after some great disappointments in the world, resolved to torn capuchin.

Add} son.

By her informed, we best religion learn, Its glorious object by her aid discern. Bluckmore.

The lawfulness of taking oaths may be revealed to the quakers, who then will stand upon as good a foot .for preferment as any other subject ; under such a motley administration, what pullmgs and hawlings, what a zeal and bias there will be in each religionist to advance his own tribe, and depress the others.

Swift.

Religion or virtue, in a large sense, includes duty to God and our neighbour ; but, in a proper sense, virtue signifies duty towards men, and religion duty to God. Watts.

Her family has the same regulation as a religious house, and all its orders tend to the support of a constant regular devotion. Law.

But I am staggered when I consider that a case may happen in which the established religion may be the religion of a minority of the people, that minority, at the same time, possessing a majority of the pioperty, out of which the ministers of the establishment are to be paid. Bp. Watson.

RELIGION. Religion is, according to Cicero, derived from relegere, to reconsider; but according to Servius, and most modern grammarians,

from religare, to bind fast. The reason assigned by the Roman orator for deducing the term from relego is given in these words, ‘ qui au-tem omnia, quae ad cultum deorum pertinerent, di ligenter retractarent, et tanquam relegerent, sunt dicti religiosi ex relegendo.’ The reason given by Servius for his derivation of the word is ‘ quod mentem religio religet.’ If Cicero’s etymology be the true one, the word religion will denote the diligent study of whatever pertains to the worship of the gods ; but according to the other derivation, which we prefer, it denotes that obligation which we feel on our minds from the lelation in which we stand to some superior power. Religion is sometimes distinguished from theology, in that the former chiefly regards a number of practical duties, and the latter a system of doctrinal truths. But theology, fully considered, embraces both doctrine and practice. Mankind are distinguished from the brutal tribes, and elevated to a higher rank, by the rational and moral faculties with which they are endowed ; but tney are still more widely distinguished from the inferior creation, and more highly exalted above them, by being made capable of religious notions and sentiments. The slightest knowledge of history is sufficient to in-form us that religion has ever had” a powerful influence in moulding the sentiments and manners of men. It has sometimes dignified, and sometimes degraded, the human character. In one region or age it has been favorable to civilisation and refinement ; in another it has occasionally cramped the genius, depraved the minds, and deformed the morals of men. The varieties of religion in this general view of the term are almost innumerable ; and the members of every distinct sect must view all who differ from them as more or less mistaken with re-r spect to the most important concerns of man : wherever, however, human society consists, we are certain of finding religious opinions and sentiments. The great variety of religions that have been established among mankind may be reduced to four classes, *viz.* the Jewish, the Christian, the Pagan, and the Mahometan.

The first two claim our attention as the great divisions of Revealed Theology. See THEOLOGY. The last two are treated of in this work under the articles POLYTHEISM and MAHOMETANISM.

RELINQUISH, v. a. 3 lat. relinquo. To

RELIN’QUISHMENT, n. s. 5 forsake ; abandon ; leave ; desert : the noun substantive corresponding.

Goveinment or ceremonies, or whatsoever it be which is popish, away with it: this is the thing they require in us, the utter reimquuhment of all things popish. Hooker.

The English colonies grew poor and weak, though the English lords grew rich and mighty ; for they placed Irish tenants upon the lands relinquished by the English. Davies.

The habitation there was utterly relinquished.

Abbot.

The ground of God's sole property in any thing is, the return of it made by man to God ; by which act he relinquishes and delivers back to God all his right to the use of that thing, which before had been freely granted him by God. South's Sei-mons.

That natural tenderness of conscience which must first create in the soul a sense of sin, and from thence produce a sorrow for it, and at length cause a relinquishment of it, is took away by a customary repeated course of sinning. Suuth.

REL'ISH, n. s., v. a., & } Fr. relecher, to li►►k REL'ISHABLE. [v. n. j again. Minsheuand Skinner. Taste ; the effect of any thing on the palate ; used particularly of a pleasing taste ; liking ; delight ; sense : to relish is, to give a taste ; to taste ; have a liking ; have a pleasing taste or flavor; give pleasure.

The king-becoming graces As justice, verity, temperance, stableness, Devotion, patience, courage, fortitude; I have no relish of them. Shakspeare. Macbeth

I love the people ;

Though it do well, I do not relish well Their loud applause. Shakspeare.

Had I been the finder-out of this secret, it would not have relished among my other discredits. Id.

The ivory feet of tables were carved into the shape , of lions, without which, their greatest dainties would not relish to their palates.

Hakewill on Providence.

REL

Much pleasure we have lost, while we abstained From this delightful fruit, nor known till now True relish, tasting. Milton.

How will dissenting brethren relish it 1

What will malignants say 1 Hudibras.

Under sharp, sweet, and sour, are abundance of immediate peculiar relishes or tastes, which experienced palates can easily discern. Boyle oti Colours.

On smoaking lard they dine ; A sav'ry bit that served to relish wine. Dryden.

Could we suppose their relishes as different there as here, yet the manna in heaven suits every palate.

Locke.

We have such a relish for faction, as to have lost that of wit. Additon's Freeholder.

Some hidden seeds of goodness and knowledge give him a relish of such reflections as improve the mind, and make the heart better. Additon.

When liberty is gone,

Life grows insipid, and has lost its relish. Id.

A theory which, how much soever it may relish of wit and invention, hath no foundation in nature.

Woodward.

He knows how to prize his advantages, and relish the honours which he enjoys. Atterbvry.

It preserves some relish of old writing. Pope.

The pleasure of the proprietor, to whom things be-come familiar, depends, in a great measure, upon the relish of the spectator. Seed.

You are to nourish your spirit with pious readings, and holy meditations, with watching, fastings, and prayers, that you may taste, and relish, and desire that eternal state which is to begin when this life ends. Law.

Men of nice palates would not reliih Aristotle, as drest up by the schoolmen. Baker.

RELIVE', v. n. Re and live. To revive; to live anew. Not used.

The thing on earth, which is of most avail,

A.ny virtue's branch and beauty's bud,

Reliven not from any good. Spenier.

RELOVE', v. a. Re and love. To love in return. Not used.

To own for him so familiar and levelling an affection as love, much more to expect to be reloved by him, were not the least saucy presumption man could be guilty of, did not his own commandments make it a duty. Boyle.

RELU'CENT, adj. isA. relucens. Shining; transparent ; pellucid.

In brighter mazes, the relucent stream

Plays o'er the mead. Thomson's Summer.

RELUCT, v. a. ˆ Latin reluctor. To RELUCT'ANCE, or] struggle again or hard-RELUCT'ANCY, n. o-I ly : the nounsubstan- RELUCT/AKT, adj. (live means repugnance; RELUCT/ATE, v. n. resistance ; unwilling- RELUCT'ATION, n. s. J ness : reluctant ; unwilling : reluctate, to resist ; struggle against.

The king prevailed with the prince, though not without some reluctation. Bacons Henry VII.

Adam's sin, or the ˆurse upon it, did not deprive him of lib rule, but left the creatures to a rebellion or rxluctation . Bacon.

We. with studied mixtures, force our relucting appetites, and, with all the spells of epicurism, conjure them up, that we may lay them again.

Decay of Piety.

In violation of God’s patrimony, the first sacrilege is looked upon with some horrour, and men devise colours to delude their reluctating consciences ; but, when they have once made the breach, their scrupulosity soon retires. M.

It savours

Reluctance against God, and his just yoke

Laid on our necks. Miltot.

Reluctant ; but in vain ! a greater power

Now ruled him. Id. Paradise Ijost.

A little more weight added to the lower of the marbles, is able to surmount their rehtctancy to separation, notwithstanding the supposed danger of thereby introducing a vacuum. Boyle.

Bear witness, heaven, with what reluctancy Her helpless innocence I doom to die. Drudrn.

Many hard stages of discipline must he pass through, before he can subdue the reluctances of his corruption. Roger*.

How few would be at the pains of acquiring such an habit, and of conquering all the reluctancies and difficulties that lay in the way towards virtue.

Atterbury.

Some refuge in the muse’s art I found ; Reluctant now I touched the trembling string, Bereft of him who taught me how to sing. Ticket.

If therefore you find in yourself a secret disinclination to any particular action or duty, and the mind begins to cast about for excuses and reasons to justify the neglect of it,□□□ consider the matter well : go to the bottom of that reluctance ; and search out what it is that gives the mind this aversion to it.

Mason.

RELUME’, v. a. > To light anew ; rekin-RELU’MINE. } die.

Once put out thy light ; I know not where is that Promethean heat, That can thy light relumine. Shakspeare. Othello. Relumine her ancient light, nor kindle new. Pope. RELY’, v. n. > Re and lie. To lean RELI’ANCE, n. s.] upon with confidence ; put trust in ; depend upon ; with on ; the nounsub- stantive corresponding.

His days and times are past, And my reliance on his fracted dates Has smit my credit. Shakspeare. Timon.

Thus Solon to Pisistratus replied, Demanded, on what succour he relied, When with so few he boldly did engage ? He said he took his courage from his age.

Denham.

Go in thy native innocence ! rely On what thou hast of virtue ; summon all ! For God towards thee has done his part, do thine.

Milton.

Egypt does not on the clouds rely, But to the Nile owes more than to the sky. Waller.

Fear relies upon a natural love of ourselves, and is complicated with a necessary desire of our own preservation. TiUatttm.

Such variety of arguments only distract the understanding that relies on them. Locke.

Though reason is not to be relied upon as universally sufficient to direct us what to do ; yet it is generally to be relied upan and obeyed, where it tells us what we are not to do. ** ”’

That pellucid gelatinous substance, which pitches upon with so great reliance and positiveness, is chiefly of animal constitution. Woodward.

They afforded a sufficient conviction of this truth, and a firm reliance on the promises contained in it.

Roger*.

No prince can ever rely on the fidelity of that man who is a rebel to his Creator.

The pope was become a party in the cause, and could not be relied upm for a decision. Atterbury.

Resignation in death, and reliance on the divine mercies, give comfoit to the friends of the dying.

Cluritia.

REMAIN’, v. n., r. a. & n. s. } Lat. remaneo.

REMAIN’DER, adj. & n. s. i To be left out of a larger quantity or number ; continue ; not to be comprised : to await; be left to : as a uoun-substantive, relic ; memento ; the body as left by the soul (generally used in the plural) : remainder, refuse left ; that which is left ; remnant : in law, the last chance of inheritance.

Bake that which ye will bake to-day ; and that which remaineth over lay up until the morning.

Exodus xvi. 23. That that remains shall be buried in death.

Job xxvii. 15.

If what you have heard shall remain in you, ye shall continue in the Son. I John ii. 24.

Such end-had the kid ; for he would weaned be Of craft, coloured with simplicity ; And such end, pardie, does all them remain That of such falsers friendship shall be fain.

Spenser.

Now somewhat sing, whose endless souvenance Among the shepherds may for aye remain. Id.

A most miraculous work in this good king, Which often since my here remain in England, I’ve seen him do. Shakspeare. Macbeth.

His brain

Is as dry as the remainder bisket After a voyage. Id. As You Like It.

The gods protect you, And bless the good remainders of the court !

Shakspeare. Shew us

The poor remainder of Andronicus. Id. A fine is levied to grant a reversion or remainder, expectant upon a lease that yieldeth no rent.

Bacon.

It may well employ the remainder of their lives to perform it to purpose, I mean the work of evangeli-cal obedience. Hammond.

Mahomet's-crescent by our feuds encreast, Blasted the learned remainders of the East.

Denham.

The easier conquest now Remains thee, aided by this host of friends, Back on thy foes more glorious to return. Milton. . He for the time remained stupidly good. Id.

Childless thou art, childless remain. Id.

There are two restraints which God hath put upon human nature, shame and fear ; shame is the weaker, and hath place only in those in whom there are some '???emaiiiders of virtue. TMotson.

What madness moves you, matrons to destroy The last remainders of unhappy Troy 1 Dryden.

That a father may have some power over his children is easily granted ; but that an elder brother has so over his brethren remains to be proved. Locke.

Could bare ingratitude have made any one so diabolical, had not cruelty come in as a second to its assistance, and cleared the villain's breast of all remainders of humanity ! South.

If he, to whom ten talents were committed, has squandered away five, he is concerned to make a double improvement of the remainder. Rogers.

If these decoctions be repeated till the water comes off clear, the

remainder yields no salt. Arbuthnot.

I grieve with the old, for so many additional inconveniences, more than their small remain of life seemed destined to undergo. Pope.

But fowls obscene dismembered his remains, And dogs had torn him. Id. Odusseii.

Of six millions raised every year, for the service of the publick, one third is intercepted through the several subordinations of artful men in office, before the remainder is applied to the proper use. Swift.

REMAINDER, in law, is an estate limited in lands, tenements, or rents, to be enjoyed after the expiration of another particular estate. As if a man seised in fee simple grants lands to A for twenty years, and, after the determination of the said term, then to B and his heirs for ever : here the former is tenant for years, remainder to the latter in fee. In the first place, an estate for years is created out of the fee, and given to A, and the residue and the remainder of it is given to B. Both their interests are in fact only one estate ; the present term of years, and the remainder afterwards, when added together, being equal only to one estate in fee. Blackstone.

The word remainder is no term of art, nor is it necessary in passing a remainder. Any words sufficient to show the intent bf the party, will create a remainder; because such estates take their denomination of remainder from the man-ner of their existence after they are limited. See Fearne on Remainders.

There is this difference between a remainder and a reversion : in case of a reversion the estate granted, after the limited time, reverts to the grantor or his heir? ; but by a remainder it goes lo some third person, or a stranger.

REMAINS (ORGANIC).

REMAINS, ORGANIC. One of the first observations which were made after the distinction of rocky masses, in reference to their component parts, was the almost invariable order of relative position which the different species maintain with respect to each other. Different rocks are seen piled upon one another in mountain ranges ; and, in digging into the depths of the earth, a perpetual and varying succession of

strata is discovered. But no change of place has been found between the upper and lower orders of the series. The lines of junction of the different species, and the strata into which they are individually divided, are parallel to one another. From hence the conclusion seems striking ; first, that their com-

ponent parts must formerly have been in a state of fluidity ; and, secondly, that the lower rocks in position must have been the first in formation Their division, therefore, into t A-O grand classes, distinguished no less by their relative position than by the obvious characters of their composition, is scientific. A crystalline texture, and the absence of extraneous fossils, mark the series which is lowest in position, and justify the name of primordial ; while the earthy composition of the higher series, and the different bodies which they envelope, from fragments of the preceding class to remains of organised bodies, authorise no less for these the appellation of secondary. Both these divisions of rocks ore traversed bv

fissurei which ar? fillrii with matters wholly foreign to their constitution. These veins are allowed by all to be of posterior formation to the masses between which they are interposed. Sometimes veins of different substances cut through each other, and in this case it is obvious that the one which is cut must have been of older formation than the one which traverses it. The disorder and various degrees of inclination of the planes of the strata point to some great revolution which must have broken their surfaces by the elevation of the upper or the depression of the lower ridge. Geologists all agree in this unavoidable inference, though they differ from each other as to the nature of the cause.

In the science of geology, of late, observation has certainly greatly superseded useless speculation, and the classification of the different formations of the earth’s surface, the distinction and description of different individuals of a series, the analysis of minerals, and the investigation of their properties, have taken the place of useless cavils about remoter causes. It is by such gradual means that we may hope to penetrate the secrets of time ; step by step to unravel the long series

of past events ; to harmonise philosophy with history.

There is not a more interesting or important department of this science than that which involves the consideration of organic remains ; varying as much in regard to the state in which they are found as in their respective species. Sometimes the most delicate bodies are little changed by the processes which they have undergone ; sometimes they are completely impregnated with stony mat-ter; and often exhibit mere casts of the original substance. Uniting perhaps in himself more extensive knowledge of every department of nature than any other existing individual, it has been the arduous undertaking of M. Cuvier not only to class the different species, and compare them with their existing analogues, but carefully to asT certain the superpositions of the strata in which their remains occur, and their connexion with the different animals and plants which they enclose.

He has particularly illustrated the fossil remains of quadrupeds ; and the highest degree of importance attaches to this class of fossils. They indicate more clearly than others the nature of the revolutions they have undergone. The important fact of the repeatea irruptions of the sea upon the land is by them placed beyond a doubt. The remains of shells and of other bodies of marine origin might merely indicate that the sea had once existed where these collections are found. Thousands of aquatic animals may have been left dry by a recess of the waves, while their races may have been prp□□□□rv?d in more peaceful parts of the ocean. But a change in the bed of the sea, and a general irruption of its waters, must have destroyed all the quadrupeds within the reach of its influence. Thus entire classes of animals, or at least many species, must have been utterly destroyed. Whether this actually has been the case we are more easily able to determine from the greater precision of our knowledge with respect to the quadrupeds, and the smaller limits of their number. It may be decided at VOL. XVIII.

once whether fossil bones belong to any species which still exirts, or to one that is lost ; but it is impossible to say whether fossil testaceous animals, although unknown to the zoologist, may not belong to genera yet undiscovered in the fathomless depths of the sea.

This indefatigable observer of nature, from mature consideration of the subject, after a display of the most complete knowledge of the osteology of comparative anatomy, and after a learned comparison of the description of the rare animals of the ancients, and the fabulous products of their imaginations, draws the following instructive conclusion : ••• ‘ None of the larger species of quadrupeds, whose remains are now found imbedded in regular rocky strata, are at all similar to any of the known living species. This circumstance is by no means the mere effect of chance, or because the species to which these fossil bones have belonged are still concealed in the desert and uninhabited parts of the world, and have hitherto escaped the observation of travellers, but this astonishing phenomenon has proceeded from general causes, and the careful investigation of it affords one of the best means for discovering and investigating the nature of those causes/

The method of observation adopted is susceptible, he contends, of the utmost accuracy. ‘ Every organised individual forms an entire sys-tem of its own, all the parts of which mutually correspond and concur to produce a certain definite purpose by reciprocal reaction, or by combining towards the same end. Hence none of these separate parts can change their forms without a corresponding change on the other parts of the same animal, and consequently each of these parts taken separately indicates all the other parts to which it has belonged. Thus, if the viscera of an animal are so organised as only to be fitted for the digestion of recent flesh, it is also requisite that the jaws should be so constructed as to fit them for devouring their prey ; the claws must be constructed for seizing and tearing it to pieces ; the teeth for cutting and dividing its flesh ; the entire system of the limbs, or organs of motion, for pursuing and overtaking it ; and the organs of sense for discovering it at a distance. Hence any one who observes merely the print of a cloven foot, may conclude that it has been left by a ruminant animal ; and regard the conclusion as equally certain with any other in physics or in morals. Consequently, this single foot-mark clearly indicates to the observer the forms of the teeth, of the jaws, of th* vertebra, of all the leg bones, thighs, shoulders, and of the trunk of the body of the animal that left the mark.’

It is from this connexion of all the different parts of an animal that the smallest piece of bone may become the sure index of the class and species of the animal to which it has belonged ; and it is from an indefatigable and ingenious application of this rule that our author has been enabled to class the fossil remains of seventy-eight different quadrupeds, of which forty-nine are distinct species, hitherto unknown to naturalists. The bones are generally dispersed, seldom

occurring in complete skeletons, and

still more rarely is the fleshy part of the animal preserved.

But one of the most important and interesting of the observations for which we are indebted to the precision of the French naturalist is the distinction of two different formations amongst secondary strata. These consist of alternate deposits from salt and fresh water ; and are characterised by the nature of the shells which are found imbedded in them. The country about Paris is founded upon chalk. This is covered with clay and a coarse limestone, containing marine petrifactions. Over this lies an alternating series of gypsum and clay, in which occur the remains of quadrupeds, birds, fish, and shells, all of land or fresh water species. Above this interesting stratum lie marl and sandstone, containing marine shells, which are covered with beds of limestone and flint, which again contain petrifactions of fresh water remains. The upper bed of all is of an alluvial nature, in which trunks of trees, bones of elephants, oxen, and rein-deer, intermingled with salt water productions, seem to suggest that both salt and fresh water have contributed to its accumulation. This alternate flux and reflux of the two fluids is a most extraordinary phenomenon, and promises to lead to an important conclusion respecting the general theory of the earth. We are inclined to think that something analogous to the process which produced these changes may be perceived in operations which are going on in our own time, and in gradual alterations which have been effected within the memory of one generation.

The following extract from the accurate descriptions of the indefatigable De Luc will better explain our ideas. We have selected one from among many instances which are afforded by an attentive examination of our own coasts. ‘ Slapton Lee occupies the lower part of a combe, which at first formed a recess in the bay, but, the sea before it being shallow, the waves brought up the gravel from the bottom along the coast, and the beach thus produced passed at length quite across this recess, which it closed : since then, the fresh water proceeding from the combe has almost entirely displaced the salt

water within this space, because the former arriving there freely, and passing through the gravel of the beach, repels the small quantity of the sea water which filtrates into it. Slapton Lee, which is about two miles in length and a quarter of a mile in its greatest breadth, is a little brackish, on account of its communications with the sea water, as well through the gravel in common seasons, as when there is any opening in the beach ; however, it contains fresh water fish, carp, tench, and pike. The sediments of the land waters are tending to fill up this basis, and wherever the bottom is sufficiently raised the reeds are beginning to grow.'

Such may have been the process which formed a fresh water deposit upon a marine basis. By extending the analogy further, we can have little difficulty in conceiving that the barrier thus raised by the action of the waves may have been easily destroyed again, even by an extraordinary exertion of the same power which raised it, or by some other of those violent revolutions whose

effects are marked upon the face of the wholf earth. Thus a way was opened for the return of the waters of the ocean, which again deposited their sediments and the remains of their living tribes, and thus gave rise to the upper salt water strata. The same causes again acting excluded once more the waves of the sea, and gave time for the deposit of the upper fresh water formation. Such an explanation appears to us simple and satisfactory. It accounts for the phenomena of nature by nature's laws. But, however this may be, the sagacity which first pointed out the distinction cannot be -too much praised. The discovery has already stimulated the exertions of others, and there is reason to suppose that the phenomenon is not only not confined to the environs of Paris, but is of pretty general occurrence in secondary countries. A similar formation has been observed in the Isle of \ ight ; and has been most scientifically described and compared with the French strata by a member of the Geological Society.

It is remarkable that those coarse limestone strata which are chiefly employed at Paris for building, are the last formed series which indicate a long and quiet continuance of the water of the sea above the surface of the continent. About them indeed there are found formations containing abundance of shells and other productions of the sea, but these consist of alluvial materials, sand, marie, sandstone, or clay, which rather indicate transportations that have taken place with some degree of violence than strata formed by quiet depositions ; and, where some regular rocky strata of inconsiderable extent and

thickness appear above or below these alluvial formations, they generally bear the marks of having been deposited from fresh water. All the known specimens of the bones of viviparous land quadrupeds have either been found in these formations from fresh water, or in the alluvial formations ; whence there is every reason to conclude that these animals have only begun to exist, or at least to leave their remains in the strata of our earth since that retreat of the sea which was next before its last irruption. It has also been clearly ascertained, from an attentive consideration of the relation of the different remains with the strati in which they have been discovered, that oviparous quadrupeds are found in much older strata than those of the viviparous class. Some of the former have been observed - in and even beneath the chalk. Dry land and fresh waters must therefore have existed before the foundation of the chalk strata. No bones of mammiferous quadrupeds are to be found till we come to the newer formations, which lie over the coaise limestone strata incumbent on the chalk. Ueterminate order may also be observed in the succession of these. The genera which are now unknown are the lowest in position : unknown species of known genera are next ia succession : and lastly, the bones of species, apparently the same with those which are now in existence, are never found but in the latest alluvial depositions.

The more we learn respecting the secondary strata of the globe, the more interesting becomes the investigation. The bold outline of the pri-

mitive ranges, their cloud-capi summits and majestic forms, are calculated to rivet the attention ; hut they rather force the fancy to speculate upon their formation than lead the judgment by internal evidences to their origin. It is in the curious observations above recited that we seem to approach the history of our own state. The study of secondary formations is as yet scarcely commenced. The labors of Cuvier have thrown a new light upon their high importance ; already by his exertions has the history of the most recent changes

been ascertained, in one particular spot, as far as the chalk formation. This, which has hitherto been conceived to be of very modem origin, is shown to have owed its deposition to causes connected with the revolution and catastrophe before the last general irruption of the waters over our present habitable world. Our author well observes that these posterior geological facts, which have hitherto been neglected by geologists, furnish the only clue by which we may hope, in some measure, to dispel the darkness of the preceding times. ‘ It would certainly be exceedingly satisfactory to have the fossil organic productions arranged in chronological order, in the same manner as we now have the principal mineral substances. By this the science of organization itself would be improved ; the development of animal life; the succession of its forms ; the precise determinations of those which have been first called into existence, the simultaneous production of certain species and their gradual extinction; ††† all these would perhaps instruct us fully as much in the essence of organisation as all the experiments that we shall ever be able to make upon living animals : and man, to whom only a short space of time is allotted upon the earth, would have the glory of restoring the history of thousands of ages which preceded the existence of the race, and of thousands of animals which never were ‘contempora-neous with his species.’

In the present state of science respecting them we cannot, we conceive, assist the geological student better than by presenting to him an ample classification of existing organic remains. We depend in the first instance largely on the abstract of Cuvier’s researches furnished in the notes of Mr. Jameson to M. Kerr’s translation of the Essay on the Earth.

CLASS I.††† MAMMALIA.

Order I. ††† DIGITATA.

Family. ††† Glires.

Cavia. ††† The slaty limestone of Oeningen, near Schaffhausen, affords remains of a species of this genus. Cuvier conjectures it to belong to the cavia porcellus or Guinea pig, or more likely to an unknown species of this tribe, or of that entitled arvicola.

Mus, mouse. ††† In the slaty limestone rocks at Walsch, in the circle of Saatz, Bohemia, there are fossil remains of a species of this tribe nearly allied to the mus terrestris ; smaller remains occur in alluvial strata at Kostritz, in Germany, and in the limestone of Corsica.

Lagomys. ††† Occurs in fissures of the third se-

condary limestone in the rock of Gibraltar and Corsica. It nearly resembles the 1. alpinus cl Siberia.

Lepus, hare. ††† Two species occur in fissures of the limestone rocks of Cette ; one of them bears a strong resemblance to the common rabbit, the other is one-third less.

Family. ††† Terte

Ursus, bear. ††† 2. U. Spelaeus. ††† The size of a horse, and different from any of the present existing species. 2. U. Arctoideus.††† A smaller species, also extinct. Both species are fossil, and remains of them are found in great abundance in limestone caves in Germany and Hungary. The caves vary much in magnitude and form, and are more or less deeply incrusted with calcareous sinter, which assumes a great variety of singular and often beautiful forms. The bones occur nearly in the same state in all these caves : detached, broken, but never rolled ; they are somewhat lighter and less compact than recent bones, but slightly decomposed, contain much gelatine, and are never mineralised. They are generally enveloped in an indurated earth, which contains animal matter ; sometimes in a kind of alabaster or calcareous sinter, and by means of this mineral are sometimes attached to the walls of the caves. It is worthy of re-mark that these bones occur in an extent of upwards of 200 leagues.

Cuvier thinks that rather more than three-fourths of the bones in the caves of Gaylen-reuth, Bavaria, belong to species of bears now extinct ; one-half, or two-thirds of the remaining fourth belong to a species of hya3na, which oc-curs in a fossil state in other situations. A very small number of these remains belong to a species of the genus lion or tiger; and another to animals of the dog or wolf kinds ; and, lastly, the smallest portion belongs to different species of smaller carnivorous animals, as the fox and pole-cat. Cuvier is inclined to conjecture that the animals to which they belonged must have lived and died peaceably on the spot where we now find them. This opinion is rendered highly probable from the nature of the earthy matter in which they are enveloped, and which, according to Laugier, contains an intermixture of animal matter with phosphate of lime, and probably also phosphate of iron. Remains of the fossil bear also occur in limestone caves in England.

Canis, hytena, and -wolf. ••• Several species oc-cur in the caves already mentioned ; one very closely resembles the Cape hyaena, and is about the size of a small brown bear; another species is allied to the dog or wolf; and a third species is almost identical with the common fox. A fossil species also resembling the common fox has been found in the gypsum quarries near Paris; and in the same formation there are fossil remains of a genus intermediate between canis and viverra. Remains of the wolf were found at Cannstadt in Germany, along with those of the elephant, rhinoceros, hyaena, horse, deer, and hare. In the alluvial deposites there are remains of the hyiena. Blumenbach has described the remains of a fossil hyaena, nearly resembling

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the canis crocuta, which was found in marl along with the remains of the lion and the elephant, between Osterode and Herzberg in Hanover. Professor Buckland's account of the Kirkdale cave of hyaenas will be found in our article GREAT BRITAIN, vol. x. p. 596.

Bones of hyaenas hare been found in similar caves in other parts of Great Britain, *viz.* at Crawly Rocks near Swansea, :nthe Mendip Hills at Clifton, at Wirksworth in Derbyshire, and at Oreston, near Plymouth. In some of these there is evidence of the bones having been introduced by beasts of prey ; but in that of Hut-ton Hill, in the Mendips, which contains rolled stones, it is probable they were washed in.

Felis, tiger. ••• One species occurs in the limestone caves of Germany, and appears to be nearly allied to the jaguar; another species, nearly allied to the tiger, is found in alluvial soil along with fossil remains of the elephant, rhinoceros, hyaena, and mastodon.

Viverra, weasel. ••• Two species occur in the German limestone caves ; the one is allied to the common pole-cat, and the other to the zorille, a pole-cat belonging to the cape of Good Hope. Another species allied to the ichneumon, but double its size, occurs in the

gypsum quarries Around Paris.

Family. ††† Bruta .

Bradypus, slom. ††† Two fossil species have been described, which are nearly allied not only to the two living species, but also to the myrme-cophaga, or ant eater. They are the following : ††† 1. Megalonix. ††† This remarkable fossil animal appears to have been the size of an ox. Its remains were first discovered in limestone caves in Virginia in the year 1796. 2. Megatherium. ††† This species is the size of the rhinoceros, and its fossil remains have hitherto been found only in South America. The first, and most complete skeleton, was sent from Buenos Ayres by the marquis Loretto, in the year 1789. It was found in digging an alluvial soil, on the banks of the river Luxan, a league south-east of the village of that name, about three leagues W. S. W. of Buenos Ayres. Plate I. fig. 1, REMAINS, ORGANIC, gives a faithful representation of this remarkable skeleton, which is now preserved in the Royal Cabinet of Madrid. A second skeleton of the same animal was sent to Madrid from Lima, in the year 1795; and a third was found in Paraguay. Thus it appears that the remains of this animal exist in the most distant parts of South America. It is very closely allied to the megalonix, and differs from it principally in size, being much larger. Cuvier is of opinion that the two species, the megalonix and megatherium, may be placed together, as members of the same genus, and should be placed between the sloths and ant-eaters, but nearer to the former than to the latter. It is worthy of remark that the remains of these animals have not been hitherto found in any other quarter of the globe besides America, the only existing country which affords them.

Order II. ††† MARSUPIALIA.

Didelpfiis, opossum. ††† One species of this extraordinary tribe has been found in a fossil state in the gypsu.n quarries near Paris. It does not

belong to any of the present existing species, and is therefore considered as extinct. Cuvier remarks that, as all the species of this genus are natives of America, it is evident that the hypothesis advanced by some naturalists, of all the fossil organic remains of quadrupeds having been flooded from Asia to northern countries, is erroneous.

Order III. ††† SOZIDUNGULA.

Equus adamaticus, equus caballus 1 ††† Fossil teeth of a species of horse are found in alluvial soils associated with those of the elephant, rhinoceros, hyaena, mastodon, and tiger ? These teeth are larger than those of the present horse, and to all appearance belong to a different species which inhabited the countries where they are now found, as Great Britain, along with elephants, rhinoceroses, &c.

Order IV. ††† BISULCA.

Cervus, deer. ††† 1. Fossil elk of Ireland. ††† This, the most celebrated of all the fossil ruminating animals, is certainly of a different species from any of those that at present live on the earth's surface, and may therefore be considered as extinct. It was first found in Ireland, where it generally occurs in shell marl and in peat-bogs. It has also been found in superficial alluvial soil in England, Germany, and France.

In plate I. fig. 2, we have given a drawing of the head and horns of this animal. It was duˆ put of a marl pit at Dardisdoun, near Drogheda, in Ireland. Dr. Molyneux, in the Philosophical Transactions, informs us that its dimensions were as follows : †††

Ft. In. From the extreme tip of each

horn . . ; . . a. b. 10 10 From the tip of the right horn

to its root … . c. d. 5 2 From the tip of one of the inner

branches to the tip of the opposite branch … e. f. 3 7.J The length of one of the palms,

within the branches . . g. h. 2 6 The breadth of the palm, within

the branches … i. k. 1 10†† The length of the right brow

antler d. 1. 1 2

The beam of each horn at some ,

distance from the head, in

diameter … . m. 0 2T'5 in circumference, . 08. The beam of each horn, at its

root, in circumference . d. Oil

The length of the head, from

the back of the skull to the

extremity of the upper jaw, n. o. 2 0 Breadth of the skull . . p. q. 1 0

We saw a fine specimen of the horns of this animal in the summer of 1828 at Knole, the seat of the duke of Dorset. It is exalted among the trophies of the chase in the hall of his grace, but not claiming we suppose to have been hunted by a duke of Dorset. A splendid and nearly perfect skeleton of this animal has been lately dug out of a marl pit in the Isle of Man, and is now preserved in the Regium Museum of Edinburgh.

2. Fossil deer of Scania,††† Found in a peat-

fc

REMAINS (ORGANIC).

moss in Scania. It appears fram the description of the horns to be an extinct, or at least, an unknown species.

3. Fossil deer of Somme. ††† The horns, the only parts hitherto discovered, show that this animal, although nearly allied to the fallow-deer, must have been much larger than the fallow-deer. The horns occur in loose sand in the val-ley of Somme in France, and in Germany.

4. Fossil deer of Etampes. ††† Allied to the rein-deer, but much smaller, not exceeding the roe' in size. The bones were found in abundance near Etampes in France, imbedded in sand.

5. Fossil roe of Orleans. ††† Found in the vicinity of Orleans. It occurs in limestone, along with bones of the palaeotherium. It is the only instance known of the remains of a living species having been found along with those of extinct species. But Cuvier enquires, May not the bones belong to a species of roe, of which the distinctive characters lie in parts hitherto undiscovered ?

6. Fossil roe of Somme. ††† Very nearly allied to the roe. Found in

the peat of Somme.

t. Fossu red deer or stag. ††† Resembling the red deer or stag. Its horns are found in peat-bogs, or sand pits in Scotland, England, France, Germany, and Italy.

8. Fossil fallow deer. ††† Found in peat-bogs and marl pits in Scotland and France.

Bos, OJT, ††† 1. Aurochs. ††† Cuvier considers this as distinct from the common ox, and it differs from the present varieties in being larger. Skulls and horns of this species have been found in alluvial soil in England, Scotland, France, Germany, and America.

2. Common ox. ††† The skulls of this species also differ from those of the present existing races, in being larger, and the direction of the horns being different. They occur in alluvial soil in many different parts of Europe, and are considered by Cuvier as belonging to the original race of the present domestic ox.

3. Large buffalo of Siberia. ††† The skull of this animal is of great size, and appears to belong to a species not at present known. It is not the common buffalo, nor can it be identified with the large buffalo of India, named arnee. Cuvier conjectures that it must have lived at the same time with the fossil elephant and rhinoceros, in the frozen regions of Siberia.

4. Fossil ox, resembling the musk ox of America.††† More nearly resembling the American musk ox than any other species, and have hitherto been found only in Siberia.

These fossil remains of deer and oxen may be distinguished into two classes, the unknown and the known ruminants. In the first class Cuvier places the Irisn elk, tne small deer of Etampes, the stag of Scania, and the great buffalo of Siberia ; in the second class he places the common stag, the common roe-buck, the fallow deer, the aurochs, the ox which seems to have been the original of the domestic ox, the buffalo with approximated horns, which appears to be analogous to the musk ox of Canada ; and there remains a dubious species, the great deer of Somme, which much resembles the common fallow-deer.

‘ From what has been ascertained in regard to the strata,’ says Mr. Jameson, in which these remains have been found, it would appear that the known species are contained in newer beds than the unknown. Further, that the fossil remains of the known species are those of animals of the climate where they are now found : thus the stag, ox, aurochs, roedeer, fallow deer, now dwell, and have always d %velt,in cold countries; whereas the species which are regarded as unknown appear to be analogous to those of warm countries: thus the great buffalo of Siberia can only be compared with the buffalo of India, the arnee. M. Cuvier concludes that the facts hitherto collected seem to announce, at least as plainly as such imperfect documents can, that the two sorts of fossil ruminants belong to two orders of alluvial deposites, and consequently to two different geological epochas; that the one have been, and are now, daily becoming enveloped in alluvial matter; whereas, the others have been the victims of the same revolution which destroyed the other species of the alluvial strata; such as mammoths, mastodons, and all the multungula, the genera of which now exist only in the torrid zone.

Order V. ††† MULTUNGULA.

Rhinoceros antiqmtatis. ††† Only one fossil species has hitherto been discovered, which differs from the five living species, not only in structure, but in geographical distribution. It was first noticed in the time of Grew, in alluvial soil near Canterbury. Sir E. Hone describes, in the Philosophical Transactions for 1817, a nearly perfect head of this species, which was found in a cave in limestone, near Plymouth. Similar remains have been found in many places of Germany, France, and Italy. In Siberia, not only single bones and skulls, but the whole animal, with the flesh and skin, have been discovered.

Hippopolamus. ††† Two fossil species have been ascertained by Cuvier. The one, which is the largest, is so very nearly allied to the species at present living on the surface of the earth, that it is difficult to determine whether or no it is not the same. Its fossil remains have been found in alluvial soil in France and Italy. The second fossil species, and the smallest, not being larger than a hog, is well characterised, and is entirely different from any of the existing species of quadrupeds.

Tapir. ††† The tapir, until lately, was considered as an animal peculiar to the new world, and confined to South America ; but the recent discovery of a new species in Sumatra proves that it also occurs in the old world. Two fossil species of this genus have been discovered in Eu-rope. The one is named the small, the other the gigantic tapir,

and both have been found in different parts of France, Germany, and Italy.

Elephas jubatus, or primigenus, elephant or mammoth. ††† Of this genus two species are at present known as inhabitants of the earth. The one, which is confined to Africa, is named the African elephant ; the other, which is a native of Asia, is named the Asiatic elephant. Only one fossil species has hitherto been discovered. It is the mammoth of the Russians. It differ* from

both the existing species, but agrees more nearly with the Asiatic than the African species. It appears to have been clothed in fur, and provided with a mane. Its bones have been found in many different parts of this island; as in the alluvial soil around Loudon, in the > county of Northampton, at Gloucester, at Trenton, near Stafford, near Harwich, at Norwich, in the island of Sheppy, in the river Medway, in Salisbury Plain, and in Flintshire in Wales; and similar remains have been dug up in the north of Ireland. Bones of this animal have been dug up in Sweden, and Cuvier conjectures that the bones of supposed giants, mentioned by the celebrated bishop Pon-toppidan as having been found in Norway, are remains of the fossil elephant. Torfseus roen-t.ons a head and tooth of this animal dug up in tiie island of Iceland. In Russia, in Europe, Poland, Germany, France, Holland, and Hungary, teeth and bones of this species of elephant have been found in abundance. Humboldt found teeth of this animal in North and South America. But it is in Asiatic Russia that they occur in greatest abundance. Pallas says, that from the Don or the Tanais to Tichutskoi-noss, there is scarcely a river the bank of which does not afford remains of the mammoth; and these are frequently Imbedded in, or covered with alluvial soil containing marine productions. The bones are generally dispersed, seldom occuring in complete skeletons, and still more rarely do we find the fleshy part of the animal preserved. One of the most interesting instances on record of the preservation of the carcase of this animal is thus given by M. Cu-vier : †††

‘ In the year 1799, a Tungusian fisherman observed a strange

shapeless mass projecting from an ice-bank, near the mouth of a river in the north of Siberia, the nature of which he did not understand, and which was so high in the bank as to be beyond his reach. He next year observed the same object, which was then rather more disengaged from among the ice, but was still unable to conceive what it was. Towards the end of the following summer, 1801, he could distinctly see that it was the frozen carcase of an enormous animal, the entire flank of which, and one of its tusks, had become disengaged from the ice. In consequence of the ice beginning to melt earlier, and to a greater degree than usual in 1803, the fifth year of this discovery, the enormous carcase became entirely disengaged, and fell dow from the ice craig on a sand-bank forming part of the coast of the Arctic Ocean. In the month of March of that year the Tungusian carried away the two tusks, which he sold for the value of fifty rubles ; and at this time a drawing was made of the animal of which I possess a copy.

‘ Two years afterward*, or in 1806, Mr. Adams went to examine this animal, which still remained on the sand hank where it had fallen from the ice, but its body was then greatly mutilated. The Jukuts of the neighbourhood had taken away considerable quantities of its flesh to feed their dogs ; and the wild animals, particularly the white bears, had also feasted on the carcase ; yet the skeleton remained quite entire,

except that one of the fore legs was gone. The entire spine, the pelvis, one shoulder-blade, and three legs, were still held together by their liga-ments, and by some remains of the skin ; and the other shoulder-blade was found at a short distance. The head remained, covered by the dried skin, and the pupil of the eye was still distinguishable. The brain also remained within the skull, but a good deal shrunk and dried up ; and one of the ears was in excellent preservation, still retaining a tuft of strong bristly hair. Th►► upper lip was a good deal eaten away, and the under lip was entirely gone, so that the teeth were distinctly seen. The animal was a male, and had a long mane on its neck.

‘ The skin was extremely thick and heavy, and as much of it remained as required the exertions of ten men to carry away, which they did with considerable difficulty. More than thirty pounds weight of the hair and bristles of this animal were gathered from the wet sand-bank, having been trampled into the mud by the white bears while devouring the carcase. Some of the hair was presented to our Museum of Natural History by M. Targe, censor in the Ly-ceum of

Charlemagne. It consists of three distinct kinds. One of these is stiff black bristles, a foot or more in length ; another is thinner bristles, or coarse flexible hair, of a reddish-brown color ; and the third is a coarse reddish-brown wool, which grew among the roots of the long hair. These afford an undeniable proof that this animal had belonged to a race of elephants inhabiting a cold region, with which we are now unacquainted, and by no means fitted t > dwell in the torrid zone. It is also evident that this enormous animal must have been frozen up by the ice at the moment of its death. Mr. Adams. who bestowed the utmost care in collecting all the parts of this animal,-proposes to publish an exact account of its osteology, which must be an exceedingly valuable present to the philosophical world. In the mean time, from the drawing I have now before me, I have every reason to believe that the sockets of the teeth of this northern elephant have the same proportional lengths with those of other fossil elephants, of which the entire skulls have been found in other places.'

Sus proavitus, hog. ††† Only single bones and teeth of this tribe have been hitherto met with ; some of these appear to belong to the sus scrofa, or common hog; while others are of a dubious nature. They are found in loam, along with the remains of the elephant and rhinoceros, and even imbedded in peat mosses.

MASTODON. Mammoth of Blumenbach. ††† This is entirely a fossil genus, no living species hav-ing hitherto been discovered in any part of the world. It is more nearly allied to the elephant than to any other animal of the present creation ; it appears to have been an herbivorous animal ; and the largest species, the great mastodon of Cuvier, was equal in size to the elephant.

Five species are described by Cuvier. 1. Great mastodon, mammoth ohioticum of Blumenbach.††† This species has been hitherto found in greatest abundance in North America, near the river Ohio, and remains of it have been dug up

in Siberia. It lias been frequently confounded with the mammoth or fossil elephant, and in North America it is named mammoth. In plate II. we have given an engraving of one of the grinding teeth of this animal. 2. Mastodon with narrow grinders. ††† The fossil remains

of this species have been dug up at Simorre and many other places in Europe, and also in America. 3. Little mastodon with small grinders. ††† This species is much less than the preceding, and was found in Saxony and Montabusard. 4. Mastodon of the cordilleras. ††† This species was discovered in South America by Humboldt. Its grinders are square, and it appears to have equalled in size the great mastodon. 5. Hum-boldien mastodon. ††† This, which is the smallest species of the genus, was found in America by Humboldt.

All the fossil species of quadrupeds we hare just enumerated have been found in the alluvial soil which covers the bottoms of yalleys, or is spread over the surface of plains. All of them are strangers to the climate where these bones now rest.

Palaotherium, i. e. ancient large animal or beast. A new and entirely fossil genus found by Cuvier in the rocks around Paris. The following are the characters of the genus and the species : †††

Denies 44. Primores utrinque 6. Laniarii 4, acuminati paulo longiores, tecti. M olares 28, utrinque 7, Superiores quadrati;

inferiores bilunati. Nasus productior, flexilis. Palmae et plantae tradactylae. 1. P. Magnum. Statura Equi.

Statura Suis ; pedibus strictis,

Statura Suis; pedibus latis,

2. P. Medium, subelotigatis.

3. P. Crassum. brevioribus.

4. P. Curtum. Pedibus ecurtatis patulis.

5. P. Minus. Statura Ovis; pedibus strictis, digitis lateralibus minoribus.

Besides these five species found in the gyp-sum quarries around Paris, remains of others have been discovered in other parts of France, either imbedded in the fresh-water limestone, or in alluvial soil. Cuvier enumerates and describes the following species: †††

6. P. Giganteum. Statura rhinocerotis.

7. P. Tapiroides. Statura bovis ; molarium in-feriorum colliculis fore rectis, transversis.

8. P. Buxovillanum. Statura suis ; molaribus inferioribus extus sub gibbosis.

9. P. Aurelianensi. Statura suis; molarium in-feriorum angulo intermedio bicorni.

10. P. Occitanum. Statura ovis ; molarium in-feriorum angulo intermedio bicorni. Anoplotherium, i. e. beast without weapons,

referring to its distinguishing character, the want

Molares 28, utrinques 7. Anteriores compressi

Posteriores superiores quadrati. Inferiores

bilunati. Palmae et plantae didactylae, ossibus metacarpi e*

metatarsi discretis ; digitis accessoriis in qui”-

busdam.

1. A. Commune. Digito accessorio duplo breviori, in palmis tantum ; cauda corporis

longitudine crassissima. Magnitude asini aut equi minoris. Habitus elongatus et depressus lutrse. Versimiliter natatorius.

2. A. Secundarium. Similis precedent!, sed

Statura suis. E tibia et molaribus aliquot cognitum.

3. A. Medium. Pedibus elongatis, digitis, accessoriis nullis. Magnitude et habitus elegans Gazellae.

4. A. Minus. Dinito accessorio utrinque, in

palmis et plantis, intermedios fere ae-quante. Magnitude et habitus leporis.

5. A. Minimum. Statura caviae cobayae, e maxilla tantum cognitum.

Habitatio omnium, olim in regione ubi nunc Lutetia Parisiorum.

Order VI. ††† PALMATA.

Family. Glires.

Castor, beaver. ††† Two species are found in alluvial soil of different kinds : ††† the one, which is the castor fiber, or common beaver, has been found in marl pits and peat bog, in Perthshire and Berwickshire, in Scotland, and also in France ; the other (on the shores of the sea of Azof by M. Fischer) differs from the former and is named castor trogontherium.

Family. Per a.

Phoca, seal.††† A species of seal nearly three times the size of the common seal, or phoca vi-tulina, has been found in the coarse marine limestone of the department of the Maine and Loire. Another species of this geuus, but somewhat less than the common, is also described by Cuvier.

Family. Bruta.

Lamantin. ††† Two species have been found imbedded in the coarse marine limestone of the department of the Maine and Loire.

CLASS II.††† AVES.

Sturnus, starling.††† Occurring in the formations around Paris.

Coturnix, quail.-ˆVones of this tnbe have been also found in the strata near Paris.

Sterna, tern.††† Bones of terns are occasionally found along with those of the quail.

Grails, wadders.††† Bones of birds resembling

of canine teeth. This also is another fossil ge-tnose of tne order grallae have been found near nus first discovered by Cuvier. The following paris m the solid rocksˆ are its characters : †††

Denies 44, seria continua. Primores utrinque 6.

Laniarii primoribus giores,

similes, ceteris non lon-

4I1S ill UIC 3U11VA ••v/^i••-•• ,

Pelkanus1 pelican.••• Bones resembling those of the pelican tribe occur in the Paris formaUons. Fossil remains of birds are also said to have occurred in the limestone of Solenhoff and Pappen heim.

CLASS 111.••• AMPHIBIA.

Order. ••• REPTILIA.

Testudo, tortoise. ••• Remains of this genus are met with in different parts of Europe ; and tortoises, of unknown species, are found imbedded in coarse marine limestone in the environs of Brussels : also in the coarse chalk or limestone of the hill of Saint Peter, near Maestricht. They are irregularly distributed throughout the masses of the rock, along with different marine productions, and bones of the gigantic monitor. All of them are remains of sea-tortoises, named chelonii by French zoologists ; but of different species from those at present known. An unknown species of tortoise has been found in the limestone slate of Claris; and remains of unknown species have been dug out of the rocks of the vicinity of Aix. Fossil fresh-water species have also been found in the gypsum quarries near Paris.

Crocodilus, crocodile. ••• Two extinct species of fossil crocodiles, nearly allied to the gavial (Lat. gangeticus), or gangetic crocodile, occur in a pyritical bluish-gray compact limestone, at the bottom of the cliffs of Honfleur and Havre : one of these species at least is found

in other parts of France. It would also appear that the. skeleton of a crocodile, discovered at the bottom of a cliff of pyritical slate, about half a mile from Whitby, by captain William Chapman, belongs to one of these species. Fragments of heads of crocodiles found in the Vicentine may be referred to the same species. The remains of an unknown species of fossil crocodile was found near Newark, in Nottinghamshire, by Dr. Stukely. The supposed crocodiles found along with fish in the copper slate, or bituminous marl slate, of Thuringia, are reptiles of the genus monitor. All these fossil remains of oviparous quadrupeds belong to old floetz strata, far older than the flcetz rocks that contain unknown genera of true quadrupeds, such as the palaeotheriums and ano-plotheitums ; which opinion, however, does not oppose the finding of the remains of crocodiles with those of these genera, as has been done in the gypsum quarries.

Monitor. ••• In the quarries of Maestricht there occur remains of a large fossil monitor. This, which is one of the most celebrated of all the fossil species of oviparous quadrupeds, occurs in a soft limestone which contains flint, and the same kinds of petrifications as are observed in the chalk near Paris. It had engaged the attention of enquirers in 1766, and up to the present day has not ceased to be an object of discussion and investigation. Some have described it as a crocodile, others as a whale ; and it has even been arranged along with fishes. Cuvier, after a careful studv of its osteology, ascertained that it must have formed an intermediate genus between those animals of the lizard tribe which have a long and forked tongue, and those which have a short tongue and the palate armed with teeth. The length of the skeleton appears to have been nearly twenty-four feet. The head is a sixth of the whole length of the animal ; a proportion approaching very near to that of the crocodile, but differing much from that of the monitor, the

head of which animal forms hardly a twelftn part of the whole length. The tail must have been very strong, and its width at its extremity must have rendered it a most powerful oar, and have enabled the animal to have opposed the most agitated waters. From this circumstance, and from the other remains which accompany those of this animal, Cuvier is of opinion that it must have been an inhabitant of the ocean.

Salamandra, salamander. ••• In the valley of Altmuhl, near Aichsted and Pappenheim, and at Aeningen, there is a formation of calcareous slate, belonging to the Paris formation, rich in

petrifactions. One of the most remarkable of these is that described by Scheuchzer, under the name homme fossile, and which some naturalists, as Gesner, maintained to be the siluris glanis of Linnaeus, but which is, in reality, nothing more than an unknown and probably extinct species of salamander or proteus. It was found imbedded in the limestone of Aeningen.

Bufa, toad. ••• Remains of an animal of this tribe occur in the slaty limestone of Aeningen. Dr. Karg, who has published a long description of the Aeningen quarries, is of opinion, that this petrifaction is that of a common toad ; whereas Cuvier is inclined to refer it to some species nearly allied to the bufo calamita.

Fossil saurus of Cuvier. ••• Only one specimen of this remarkable fossil animal has hitherto been found, and is now in the cabinet of the king of Bavaria. In regard to this specimen, it may be remarked, that some naturalists have taken it for a bird, others for a bat, but Cuvier is of opinion that it belongs to the class amphibia. Its true nature is still unascertained, although it appears more nearly allied to the class mammalia than to any of the others in the system.

CLASS IV.••• PISCES.

‘ The accuracy of La Cepede’s list of the fossil fishes of Bolca, Aeningen, and Hessia, has been much questioned by naturalists,’ says Mr. Jameson, ‘ and Cuvier has hitherto paid but little attention to this branch of geology. He only enumerates in a very general way the few met with in the gypsum quarries around Paris. Five species are mentioned. The first described belongs to a new genus allied to that named amia, and is conjectured to be a fresh-water species. The second is nearly allied to two fresh-water ge-nera, *viz.* the mormyrus of La Cepede, natives of the river Nile, and the paecilia of Bloch, natives of the fresh waters of Carolina. The third appears to be a species of sparus, different from any of the present species. The fourth and fifth are very dubious. The bituminous marl slate of Germany abounds in fossil fishes. Schlottheim mentions a fossil fish found in this rock, as being five feet in length, and six inches broad, which he conjectures to belong to the genera cyprinusor Salmo. Petrified specimens, supposed of the salmo arcticus, are found in a bluish-gray clay in West Greenland. Single bones, as vertebrae, teeth, also scales of fishes, are found in the shell limestone, chalk, and in the rocks of the Paris formation.

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Thus far we have travelled with the able translation of Cuvier's Essay edited by Mr. Jameson, and have only to regret that he did not complete the catalogue of existing remains in that work. Two or three important classes must be gleaned from other sources.

CLASS V.□□□ AVES.

The remains of birds are rarely found in a fossil state. Bones, which may be considered as referable to this class, are, however, imbedded in the calcareous schist of Oeningen, and in the oolitic schist of Stonesfield. The foot of a bird has been found incrusted in gypsum, near Montmartre ; Blumenbach describes the bones of a water-fowl in the Pappenhcim stone ; and Faujas St. Fond has figured two feathers found in the calcareous stone of Vestena Nuova.

Cuvier, however, has not only ascertained the existence of fossil remains of this class, but has furnished the student with information to aid him in his investigations with respect to these fossils. The foot, he observes, in birds, has a single bone in the place of the tarsal and metatarsal bones. Birds, too, form the only class in which the toes all differ as to the number of joints, and in which this number, and the order of the toes which have them, is nevertheless fixed. The great toe has two ; the first toe, reckoning on the inside, three; the middle, five ; and the outermost five. The crocodile has the same number of phalanges ; but, as these have a tarsal and metatarsal bone, they cannot be mistaken. Some birds have no great toes, but, in these, the other toes preserve the usual order : the ostriches and cassowars have three toes. Although the crocodile has the same number of phalanges, yet, as every one of the toes is supported by a particular metatarsal bone, the distinction is easily made. From an attention to the specific characters, Cuvier ascertained the existence of the remains of five or six different species of birds in the plaster quarries near Paris. Among

these are the bones of a pelican, less than pelicanus onocratulus, and larger than P. carbo ; of one of the larger curlews, with a -naked neck (Tantalus, Gmelin) ; of a woodcock, a starling, and a sealark(Alouettede Mer). He also describes and figures a bird, found in the quarries of Montmartre, which appears to have fallen on its belly on the newly-formed uypsum, without having been quite involved in it; and having, probably whilst in this state, been deprived of its head and the whole of the right leg. The result of a careful examination of this fossil is, that it belongs to some exotic quail, rather larger than the one known in France. And here perhaps we may best introduce the ornithocephulus, although naturalists are not agreed as to its correct place. It is entirely a fossil genus. Cuvier refers it to the amphibia ; others, as Blumenbach, to birds; Collini describes it as a fish ; while Sommering arranges it, as a bat, with the mammalia. The skull is enormous in proportion t? the skeleton, the jaws themselves being longer than the body, and furnished with sharp incurvated teeth. The head of the O. longirostris resembles that of the cur-lew tribe, while the brevirostris more nearly re-tembles the bat, particularly the vespertilio

murinus. The orbits of the eyes are disproportionably large, and hence it is thought probable that, like the bat, it was a nocturnal animal, while, from the size of its jaws, it is likely that it fed on small flying insects. There are four legs (the hinder ones being of considerable length), and a distinct tail. There are no tarsal bones, only metatarsal bones and claws. Two species are described by Sommering, the largest about a foot long, named O. longirostris ; the other, which is less, O. brevirostrit. See plate II. figs. 1 & 2.

CLASS VI.❖❖❖ INSECTA.

Insects also are of rare occurrence as fossils. Scheweigga mentions a perfect scorpion, different from the common genus, found in a piece of amber ; ants of the present species have also been found in amber : supposed larvae of the libellula and ephemera genera have likewise been mentioned, and the elytra of coleopterous insects as occurring in

the StonesfieW slate.

CLASS VII.••• RELIQUA OCEANA.

We are compelled to rank under this general head all the Crustacea, mollusca, radiarii, and polypi of authors. Of the first the mutilations are so great, and they are so enclosed, that often nothing is to be seen but parts of the thorax or upper surface of the body : the antennae and feet are commonly broken and separated from the body ; while the under surface, or numerous pieces of the plastron, or sternum, giving attachment to feet composed of many articulations, present also the external parts of the mouth. The want of the antennae and feet induced Des-marest to restrict the distinctions to characters obtained from the shell or thorax. The various prominences of the latter, he continues, are not irregular and accidental ; on the contrary, in all the genera the disposition of these inequalities is constant, and subjected to certain laws. We have been the more inclined, he remarks, to admit these relations, that it is known at a certain period of the year all the Crustacea, after having lost their old solid envelope, are covered with a delicate skin, which hardens in its turn, and at the end of a few days changes into a crust equally resisting with that which it substitutes ; and we might presume that in the first moments the new skin moulded itself to a certain point upon the internal organs, and that its ossification was subsequently influenced by the motions peculiar to these organs, or by the greater or less development of each of them. He describes on this plan twenty genera, and a considerable number of species from different parts of Europe, Asia, and Africa. Many occur in Great Britain, principally in England in the chalk formations, as well as in the plastic clay of Sheppey and other places.

Mollusca. ••• Fossil shells are perhaps the most abundant of all organic remains: and occur from the size of several feet in diameter to microscopic objects. They are divided into univalve, bivalve, and multivalve shells.

Univalve shells with but one chamber are call-ed unilocular, and of these between seventy and eighty genera have been specified ; while of the mul~ tiioculur, or many chambered univalves, not mow

than twenty-five occur. Dr. Montfort, author of an important work, Conchyliologie System-atique, has, indeed, with much discrimination separated the multilocular univalves into many more genera : the microscopic shells into sixty ; and those which are within the power of the naked eye, being those which had been included in nautilus, ammonites, belemnites, orthoceratites, spirula, scaphites, nummulites, and sidero-lites, into forty genera; forming almost every shell, marked by a slight difference, into a distinct genus. These separations, although perhaps founded on accurate discrimination, appear, as Mr. Parkinson observes, to be too frequent; their multiplicity bears too much on the memory, and deprives it of the aid which it seeks to de-rive from classification. A more intimate knowledge of their nature and characteristics seems to be necessary before an appropriate arrangement of them can be adopted. The larger tribe has been separated into twenty-two genera, all of which have been found in a fossil state : whilst one genus only, nautilus, is known to exist in a recent state. Two opinions are entertained respecting this great disproportion between the number of fossil and of recent shells of this tribe. Some suppose that those genera, of which only fossil shells are found, have become extinct ; ###whilst others believe that these shells are still existing in a recent state : but are pelagian shells, their inhabitants constantly residing at the bottom of the deep. This opinion is entertained by some of the latest French writers.

An examination of these shells proves, however, according to Mr. Parkinson, that, so far from their inhabitants having been destined to a constant residence at the bottom of the ocean, they possessed, beyond all other testaceous animals, the power of rising up to, and remaining at, the surface of the sea. Supposing them still to live, they would occasionally, as the nautilus is, be seen at the surface ; but, not a single instance being known of a shell of these genera having been thus seen, their existence may be reasonably doubted. The apparatus enabling the animal to raise or sink himself at pleasure is plainly discoverable in the fossil shell of the nautilus : but the most important part of this organ, the continuous siphuncle, is not discoverable in the dried specimens of the recent shell. The shell is formed of a number, more or less, of chambers, divided by pierced septa. The ani-mal resides in the largest and last formed chamber; an elastictube, proceeding from the animal, passes through the pierced septa and the several chambers, and terminates in the first. Now, assuming that the office of this tube is analogous with that of the swimming bladder of fishes, it is by no means difficult to conceive how the required changes of situation may be produced. The weight of the shell is so

counterbalanced by the empty chambers, that the siphuncle passing through these chambers, accordingly as it is dilated with gaseous or with aqueous fluids, will alter the specific gravity of the whole mass, and cause it either to swim or to sink. Supposing

the animal to be lying at the bottom of tlie sea, saturated with food, and the siphuncle filial with a fluid ; as the food is digested and decomposed, detached gas may pass into the siphuncle, and gradually take the place of the water ; when, in proportion as the specific gravity of the whole mass is thus diminished, it will rise, probably into that region of the waters in which the food of the animal most abounds. Here, on obtaining sufficient food, or on alarm from an enemy, the animal admits water into the siphuncle, and immediately sinks. In all the other genera of this tribe, an apparatus, formed of vacant chambers and a membraneous siphuncle, exists, capable of producing similar effects with those produced by that of the nautilus ; but necessarily differing in some respects, from variety of modification of the form and structure peculiar to each genus. The siphuncle is often very well displayed in sections of the orthoceratite, and in these this tube will be found to have been capable of being dilated to a very considerable ex-tent.

With the nautilus agree in general at a ratio the orthoceratite, the belemnite, and the bacu-lite species : other abundapt tribes of multilvers are the ammonites and nummulites ; the former being the vulgar petrified serpents ; and whole masses of limestone being entirely made up of the latter : as, for instance, that with which the pyramids of Egypt are built.

Bivalve fossils are so varied in their forms that we can only refer the reader fora description of them to Mr. Parkinson's Introduction, or some other of the various treatises on fossil con-chology. The multivalves are of unfrequeut occurrence.

Radiaria. ••• Of the echinus, or sea urchin family, a great variety is met with in several of the newer rocks. Some of the species resemble those at present met with in our seas The asterias or sea star family, from their delicacy and frail structure, are rarely met with. The crinoidea, or encrinite family, abound in many strata, and in vast abundance, but very rarely in a living state. Blumenbach first conjectured their affinity to the radiaria ; and Miller, in his late work on the crinoidea, has removed every doubt as to their true place in the system. The entrochites and encrinites belong to this family.

Polypi. ??? We may include under this head the different kinds of simple animals named polypi, and their coverings, termed polyparia The corals are polyparia, and many of these occur in a fossil state. The alcyonia and sponges are likewise to be included. In the fresh state the for-mer are nearly as soft as sponge, but have openings on the surface, through which polypi project. They occur frequently in flints. Sponges are composed of horny fibres connected together by means of an animal jelly, but no distinct polypi have been detected in them. They occur in a fossil state, and are abundant in the flint and chalk formations. We add from Mr. Parkinson's work

REMAINS (ORGANIC).

A TABLE OF BRITISU FOSSIL SHELLS. Ea:h Genus and each Species being placed in the order of the Strata in which they occur

Genera. I'KODUCTUS.

CONULARIA.

AM PLEXUS. PENTAMERUS.

ORTIIOCERA.

NAUTILUS.

AMMONITES.

Species.

Strata.

MOUNTAIN LIMESTONE.

longispinus

ditto

Flemingii

ditto

spinulosus

ditto

scoticus

ditto

spinosus

ditto

aculeatus scahriculus

Limestone rock(coal measures), ditto

aculeatus

ditto

MOUNTAIN LIMESTONE.

quadrisulcata

ditto

teres

ditto

MOUNTAIN LIMESTONE.

coralloides

ditto

MOUNTAIN LIMKSTONE.

Knightii

ditto

Ifevis

ditto

Aylesfordii

ditto

MOUNTAIN LIMESTONE.

annulata

ditto

circularis

ditto

striata

ditto

gigantea

ditto

cordiformis

ditto

undulata

Gray limestone (coal measures).

Breymi

Limestone shale.

Steinhaurii

Coal shale.

conica

Alum shale.

MOUNTAIN LIMESTONE.

discus

ditto

pentagonus

ditto

bilobatus

ditto

tuberculatus

ditto

complanatus

Slaty limestone.

truncatus

Blue lias.

striatus

ditto.

intermedius

Blue lias and crag.

lineatus

Lower oolite.

sinuatus

ditto

obesus

ditto

simplex

Green sand.

undulatus

ditto

inaequalis

Chalk marl

elegans

ditto

Comptoni

ditto

imperialis

London clay

centralis

ditto

ziczac

ditto

MOUNTAIN LIMESTONE.

striatus

ditto

sphaericus

ditto

Walcotii

Alum shale. Lower oolite. Upper

oolite.

Henslowi

Gray limestone, Isle of Man.

Listeri

Coal shale.

annulatus

Alum shale. Lower oolite.

i

ellipticus planicosta

White lias clay. 4 Upper lias clay. Marston or lias marb'e.) Chalk marl.

I communis

White lias clay.

armatus

Lias clay.

angulatus

ditto

Bucklandii

Blue lias.

Coneybeavi

ditto

Genera .

AMMONITES.

NAUTELLIPS1TES. AMMONELLIPSITES.

EUOMPHALUS.

Species.

Strata

Greenoughi

Blue lias

fimbriatus

ditto

obtusus

ditto

Henleyi

ditto

Loscorabi

ditto

Birchi

ditto

Brooki

ditto

Bechei

ditto

Brongniarti

Lower oolite.

Banksii

ditto

Blagdeni

ditto

Brocchii

ditto

Sowerbii

ditto

Browni

ditto

Gervillii

ditto

Strange ways i

ditto

falcifer

ditto

nodosus

Clay under the lower oolite.

discus

Cornbrash.

Calloviensis

Kelloway rock.

Koenigi

ditto

Duncani excavatus

Clunch clay under coral rag, or Oxford clay Calcareous grit beneath coral rag.

vertebralis

ditto

plicatilis

ditto

splendens

Coral rag. Chalk marl.

jugosus

Clay under the lower oolite.

elegans

ditto

concavus

ditto

cordatus

Kentish rag.

rotundus

Kimmeridge clay.

Lamberti

ditto

Leachi

ditto

omphaloides

ditto

triplicatus

Portland freestone;

stellaris

ditto

giganteus

ditto

Goodhalli

Green sand, Devon.

Nutfieldiensis

Green sand.

monile

ditto

inflatus

ditto

auritus

ditto

rostratus

Chalk marl.

minutus

ditto

varians

ditto

Mantelli

ditto

rusticus

Lower chalk.

biplex

Blue clay, Suffolk.

decipiens

ditto.

acutus

Blue clay, Sheppejr.

binus

Crag.

quadratus

ditto

serratus

ditto

MOUNTAIN LIMESTOMB,

ovatus

ditto

MOUNTAIN LIMESTONE.

funatus

ditto

compressus

ditto

MOUNTAIN LIMESTOSB.

pentangulus

ditto

catillus

ditto

nodosus

ditto

discors

ditto

rugosus ditto

angulosus ditto

Genera. CIRRUS.

PLANORBIS.

REMAINS (ORGANIC).

Species. Strata.

493

SPIRIFER.

TEREBBATULA.

GRYPH7EA

CARDIUM.

acutus nodosus leachi plicatus

aequalis euomphalus

radiatus

hemistoma

lens

cylindricus

obtusus

cuspidatus

trigonalis

oblatus

glaber

obtusus

striatus

pinguis

Mantiae

Wilsoni

lateralis

biplicata

crumena

punctata

subrotunda

ornithocephala

acuta

resupinata

lam pas

digona

obovata

intermedia

obsoleta

concinna

media

tetraedra

carnea

inconstans

dimidiata

ovata

pectinata

lyra

semiglobosa

subundata

plicatilis

octoplicata

obliqua

ovoid es

lata

incurva dilatata

hybernicum

elongatum

hillanum

proboscideum

umbonatum

semigranulatum

nitens

Parkinsoni

MOUNTAIN LIMESTONE.

ditto

Lower oolite. Chalk marl.

ditto

MOUNTAIN LIMESTONE. ditto

< Lower oolite. Green sand. Above the London I clay.

Green sand.

London clay.

Above the London clay.

iditto

ditto MOUNTAIN LIMESTONE.

ditto

ditto

ditto

ditto

ditto

ditto

ditto MOUNTAIN LIMESTONE.

ditto

ditto

Mountain limestone. Clay of upper oolite. Mountain limestone. Green sand. Chalk marl. Coal shale. Blue lias marble (Marston). Marly sandstone of lower oolite. Ditto. Cornbrash. Chalk marl. Upper lias clay. Cornbrash. Lower oolite.

ditto

ditto

Lower oolite. Oxford clay. Cornbrash. Cornbrash.

Cornbrash. Green sand. Cornbrash. Crag. Clay in oolite.

ditto

ditto

Great oolite. Upper chalk. Kimmeridge clay. Green sand, Devon. Green sand ditto?

Green sand. Chalk marl. Upper chalk.

ditto

ditto

ditto Green sandstone in alluvium.

ditto

MOUNTAIN LIMESTONE. Blue lias. Kelloway stone. Crag.

< Under oolite. Clunch clay.

(Portland freestone. London, day, alluvia. MOUNTAIN LIMESTONE.

ditto

ditto Green sand, Devon.

ditto

ditto London clay.

ditto Crag

41)4

REMAINS (OR G A N I C).

Genera.

HELIX.

LINGULA.

UNIO.

PLAGIOSTOMA.

TROCHUS,

MODIOLA

MELANIA.

HELICINA. CARDITA.

MYA.

Species.

Strata.

S 4th LIMESTONE, above the MOUMIAIN

(LIMESTONE.

carinatus

ditto

Gentii

Green sand.

globosus

Above the London clay. COAL SHALE.

mytilloides

ditto

tenuis

London clay

ovalis

Crag.

COAL SHALE.

acutus

ditto

uniformis

ditto

subconstrictus

Coal shale, alluvial clay.

hybridus

Magnesian limestone.

Listeri

Magnesian limestone. Crag.

crassissimus

Lias. Portland freestone.

crassiusculus

London clay.

LIAS.

gigantea

White lias. Blue lias.

pectinoides

Blue lias.

punctata

ditto

ovalis

Fullers' earth.

cardiiformis

Upper oolite.

obscura

Kelloway rock.

rigida

Portland freestone.

spinosa

Lower chalk. Upp;:r chalk.

LIAS.

anglicus

Blue lias

abbreviatus

Under oolite.

concavus

ditto

dimidiatus

ditto

duplicatus

ditto

elongalus

ditto

punctatus

ditto

agglutinaus

London clay.

Benettiae

ditto

lasvigatus

Crag.

similis

ditto

LIAS.

laevis

ditto

depressˆ elegans

Alum shale. London clay, ditto

parallela

Upper oolite

pallida

Green sand.

LIAS.

striata

ditto

Heddingtonensis

Upper oolite.

sulcata

London clay.

LIAS.

compressa

ditto

LIAS.

lirata

Lias. Cornbrash.

obtusa

Under oolite.

similis

ditto

lunulata

ditto

producta

Ditto. Cornbrash

abrupta

Great oolite.

striata

ditto

deltoidea tuberculata

Cornbrash, Kelloway stone. Green sand.

LIAS.

scripta

Lias. Kelloway rock.

anguliferi

Fullers' earth bed, near Bath.

literata mandibula

Gray limestone, near Scarborough . Green sand.

plana

S’and under London c’ay.

intermedia

London clav.

subangulata

ditto

lata (“rag.

Genera. PECTLN.

REMAINS (ORGANIC).

Species-Strata.

495

ASTARTE.

TRIGONIA

CUCULUEA.

NERITA. LUTRARIA

MYTILUS. OSTREA.

fibrosus

barbatus

equivalvis

obscura

lens

similis

rigida

arcuata

lamellosa

orbicularis

quadricostata

qninquesostata

Beaveri

cornea

lurida

elegans

excavata

lineata

cuneata planata plana obliquata

costata

striata

clavellata

gibbosa

duplicata

daedalea

spinosa

eccentrica

affinis

oblonga

decussata

carinata

fibrosa

glabra

laevigata sinuosa

gibbosa ambigua ovalis lirata

amplus pectinatus antiquorum alaeformis

acuminata

Marshii palmetta

deltoidea

gregaria

expansa

undulata

Meadii

caniliculata

tener

UNDER OOLITE.

Under oolite. Cornbrash. Kellowav rock.

ditto

ditto

Stonesfield slate. Cornbrash. Forest marble.

ditto

Coral rag. .

Chicksgrove limestone. Green sand Green sand.

ditto

ditto

Chalk marl. London clay. UNDER OOLITK.

ditto

ditto

ditto

{ Oaktree clay over Sussex marble, or Kimrr.e-j ridge clay. Portland stone. Indurated marl at Gun ton Crag, ditto UNDER OOLITE.

ditto

ditto

ditto Tisbury limestone.

ditto Green sand, Devon.

ditto

ditto

ditto UNDER OOLITE.

ditto

ditto Green sand, Devon.

ditto

Green sand. UNDER OOLITE.

ditto

Chilmarsh, near Tisbury. MIDDLE or GREAT OOLITE. Middle oolite Cornbrash.

Cornbrash. Upper' oolite. Limestone at Norton edge. MIDDLE OOLITE.

ditto

Kimmeridge clay. Crag.

ditto

GREAT OOLITE.

S Fullers' earth of great oolite. Clay over oolite, \ and on Wooburn sand. Cornbrash. Oxford clay.

< Oxford clay. Kimmeridge clay. Clay over S►►^ \ sex marble. Coral rag. Green .'and. Tisbury limestone, Farley, near Salisbury. Somersetshire. Upper chalk. Charlton.

496

Genera. OSTREA.

VENUS.

REMAINS (ORGANIC).

ISOCARDIA.

PINNA. VERMICULARIA.

SOLARIUM. HAMITES.

CHAMA.

CORBULA.

ARCA.

Species .

Strata.

gigantea

London clay.

pulchra

London clay and gravel.

flabellula

ditto

%* Fossil oysters occur also in the lias formation.

CORNBRASH.

varicosa

ditto

lineolata

Green sand.

planus

ditto

angulata

ditto

equalis

Green sand. Crag.

incrassata

London clay.

margaritacea

ditto

gibbosa

Crag.

rustica

ditto

lentiformis

ditto

turgida

ditto

CORNBRASH.

minima

ditto

tener

Kelloway stone.

rostrata sulcata

Upper oolite. London clay (only a single individual).

CORNBRASH.

lanceolata

Neighbourhood of Scarborough.

margaritacea

London clay.

UPPER OOLITE.

ovata

ditto

concava

Green sand.

umbonata

Chalk marl.

crassa

London clay.

UPPER OOLITE.

conoideum

ditto

discoideum

London clay.

patulum

ditto

GREEN SAND, DEVON.

spinulosus

ditto

tenuis

Chalk marl.

rotund us

ditto

attenuatus

ditto

compressus

ditto

adpressus

ditto

maximus

ditto

intermedius

ditto

gibbosus

ditto

armatus

ditto

spiniger

ditto

nodosus

ditto

tuberculatus

ditto

turgidus

ditto

plicatulis

ditto

GREEN SAND, DETOX.

canaliculata

ditto

haliotidea

ditto

recurvata

ditto

conica

ditto

plicata

ditto

digitata

ditto

GREEN SAND, DEVOX.

laevigata

ditto

globosa

ditto

pisum

London clay.

gigantea

ditto

revoluta

ditto

GREEN SAND.

carinata

ditto

subacuta

Chalk marl.

Branderi

Crag.

appendiculata

ditto

REMAIN S (ORGANIC).

497

Genera

Species.

Strata.

PERNA.

GREEN SAND.

VIVIPARA.

aviculoides

Blue marl under green sand. GEEEN SAND.

extensa ?

ditto

fluviorum

Sussex marble.

lenta

London clay.

concinna

ditto

suboperta

Crag.

DIANCHORA.

GREEN SAND.

striata

ditto

lata

Lower chalk.

TURRILITES.

GREEN SAND.

costata

Green sand. Chalk mari.

obliqua

Green sand.

tuberculata

Chalk marl.

undulata

ditto

SCAPHITES.

GREEN SAND.

equalis

ditto

obliquus

Chalk marl.

NUCULA.

CHALK MARL.

pectinata

ditto

minima

London clay.

,

similis

ditto

Cobboldiae

Crag.

lanceolata

ditto

Isvigata

ditto

MAGAS.

Chalk.

pumilis

Upper chalk.

INFUNDIBULUM.

LONDON CLAY, SAND USDER.

echinulatum

ditto

obliquum

ditto

rectum

ditto

tuberculatum

ditto

spinulosum

ditto

rectum

Crag.

PECTUNCULUS.

LONDON CLAY.

plumstediensis

ditto

costatus

ditto

decussatus

ditto

EMARGINULA.

LONDON CLAY.

crassa

ditto

reticulata

London clay. Crag.

CYPRˆA.

LONDON CLAY.

oviformis

ditto

OLIVA.

LONDON CLAY.

Branderi

ditto

Salisburiana

ditto

ANCILLA.

LONDON CLAY.

aveniformis

ditto

turritella.

ditto

CASSIS.

LONDON CLAY.

striata

ditto

carinata

ditto

bicatenatus

Crag.

AMPULLARIA.

LONDON Cuiv.

acuta

ditto

patula

ditto

sigaretina

ditto

NATICA.

LONDON CLAY*

glaucinoides

ditto

similis

ditto

ROSTELLARIA.

depressa

Crag. LONDON CLAY.

lucida

ditto

rimosa

ditto

macroptera

ditto

You XVIII.

REMAINS (ORGANIC).

Strata.

Genera.

Species.

SCALARIA.

LONDON CLAT.

semicostata

ditto

acuta

ditto

similis

Crag.

TEREBELLUM.

LONDON CLAT.

fusiforme

ditto

SERAPHS.

LONDON CLAT.

convolutus

ditto

PLEUROTOMA.

LONDON CLAT.

attcnuata

ditto

exorta

ditto

rostrata

ditto

acuminata

ditto

comma

ditto

semicolon

ditto

colon

ditto

CERITHIUM.

LONDON CLAT.

melanoides

ditto

geminatum

ditto

pyramidale

ditto

funatum

ditto

funiculatum

ditto

intermedium

ditto

dubium

ditto

cornucopia

ditto

FUSU&

giganteum

ditto LONDON CLAT.

longoevus

ditto

bifasciatus

ditto

◆◆◆”

acuminatus

ditto

asper

ditto

rugosus

ditto

bulbiformis

ditto .

VOLUTA.

LONDON CLAT.

magorum

ditto

luctator

ditto

ambigua

ditto

spinosa

ditto

costata

ditto

magorum

Lambert!

ditto London clay. Crag

MUREX

LONDON CLAT

latus

ditto

Bartonensis

ditto

trilineatus

ditto

coniferus

ditto

regularis

ditto

carinella

ditto

fistulosus

ditto

-

gradatus

ditto

tuberosus

ditto

minax

ditto

tubifer

ditto

cristatus

ditto

coronatus

ditto

rugosus

ditto

curl us

ditto

striatus

Crag.

contrarius

ditto

rugosns

ditto

-

corneus

ditto

costellifer.

ditto

echinatus

ditto

/ENERICARDIA.

LONDON CLAT.

planicosta

ditto

deltr’dea

ditto

carinata

ditto

senili

Crag.

Genera.

SANGUINOLARIA. SOLEN. TEREDO. BALANUS.

BUCCINUM.

EBURNA.

TELLINA.

PHOLAS. PHASIANELLA

LYMNEA. CYCLAS.

CLASS VIII.••• VEGETABLE FOSSIL REMAINS.

Mr. Parkinson thus ably traces not only the geology but genealogy of these remains. When vegetable matter is accumulated in so large a quantity that the compactness of the mass may in a great degree exclude the atmospheric air from the internal parts of the mass, a considerable and peculiar change is effected : the vegetable matter soon loses its green and acquires a brownish color; its flavor and odor are changed, and heat is to be produced, terminating, unless air is freely admitted, in combustion. The vegetable matter, thus changed into hay, acquires, among its other new properties, that of powerfully resisting any further change upon exposure to the atmosphere. But, should vegetable matter be thus accumulated in a situation in which moisture has almost constant access to it, a very different result ensues. Another process takes place, by which the vegetable matter, as the process goes on, loses its original forms, and becomes a soft magma, of a dark color and peculiar appearance ; no traces of its former mode of existence being discoverable, except in the accidental presence of such vegetable matter as shall not have undergone a complete conversion. When dried, it forms a readily combustible substance, of a reddish-brown color, readily absorbing and tenaciously retaining water, and yielding, whilst burning, a strong bituminous odor. This is the substance termed peat, immense accumulations of which are formed in various parts, fa-REMAINS (ORGANIC)

Species.

Str.lt.l.

LONDON CLAY.

Hollowaysii

ditto

LONDON CLAY.

aftinis

ditto

LONDON CLAT.

antenautae

ditto

LONDON CLAY.

tesselatus

ditto ###

crassus

ditto

CRAG.

elongatum

ditto

granulatum

ditto

rugosum

dittto

reticosum

ditto

CRAG.

glabrataO. R. TIL

ditto

CRAG.

obliqua

. ditto

ovata

ditto

obtusa

ditto

CRAG.

cylindricus

ditto

SAND above LONDON CLAY.

orbicularis

ditto

minuta

ditto

angulosa

ditto

SAND above LONDON CLAY.

fusiformis

ditto

minima

ditto

SAND above LONDON CLAY.

deperdita ?

ditto

cuneiformis

ditto

obovata.

ditto.

vorable to the collection of water and the growth of the sphagnum palustre, a plant by the conversion of which the supply of this substance is chiefly supported. In the peat-bogs or mosses, as the natural magazines of this substance are called, trunks of trees are often found imbedded, and partaking of the nature of the surrounding bituminous mass. This change is effected in different degrees ; the deeper in the mass, and consequently the longer exposed to the process of bituminisation, the more perfect is the conversion. Some pieces are found to have nearly lost their ligneous appearance, their respective lines and markings having been molten down in different degrees during their bituminisation; whilst others, in which the nature of the substance is also entirely altered, are found still to retain almost all their characteristic markings. This substance has long been known by the designation of bituminous wood.

‘ Wood of a very different character, called moss fir, is also frequently found in the peat mosses or bogs. It much resembles, in its color and general external appearance, ordinary decayed fir-wood ; but on examination it appears that the fibre of the wood is strongly imbued with re-sin, and that all its interstices are filled with resinous matter. It is so highly inflammable as to be employed, by the poor of the districts in which it is found, not only as fuel, but as torches As the real nature of this substance is not perhaps known, it would be very desirable that further enquiries might be made respecting it; it

might then he determined whether the opinion which is here offered be correct or not. From its retaining the color and appearance of decayed wood, it is conjectured to be wood which, by fxposure to the atmosphere, had sustained the abstraction of all its constituent parts, except the resin and ligneous fibre impregnated therewith ; and, from its having been thus rendered almost an entirely resinous mass, it has not been affected by the bituminisating process. Subterranean collections of bituminised wood and other vegetable matter are found at various depths in different parts of the world. The substance thus found is generally a compact, light, glossy, combustible substance ; of a dark brown color, and frequently almost black ; splitting longitudinally into plates of various thicknesses, breaking transversely with an imperfect conchoidal fracture, with a shining resinous lustre, and sometimes yielding the appearance of the markings of wood. This is the suturbrand of Iceland, the Bovey coal of this country, and the common brown coal of Thomson.

‘ The fossil wood, now described, ‘.nay be said to pass into jet, which is found, especially in the neighbourhood of Whitby in Yorkshire, in a state very nearly approximating to that of Bovey coal. It exists in plates, generally from half an inch to about an inch in thickness, between which a film of carbonate of lime, with pyrites, is disposed : excepting that it more frequently shows marks of ligneous texture, its characters may be said to be those of jet; its color, velvet black ; internal lustre, shining, resinous ; fracture perfect, large, conchoidal ; fragments, sharp edged, soft, rather brittle; easily frangible ; \ery Jiglit. Jet is found in other situations, in a different form; resembling in’ its shape, and the markings of its surface, parts of the branches or trunks, of trees, but rarely possessing, internally, any marks of vegetable origin; a circumstance easily accounted for, if its previous softening be admitted-‘

Cannell coal is said to differ from jet chiefly in its holding a greater portion of earth in intimate mixture with it. It never manifests

internally any traces of vegetable structure, but sometimes bears on its surface evident marks of impressions formed on it whilst in a soft state.

Common coal is composed of a similar bituminous matter, divided by films of calcareous spar mingled with pyrites, intersecting each other ###nearly at right angles : its fracture is thus rendered small grained, and uneven, and its fragments mostly cubical or trapezoidal. By this division and enclosure of the inflammable bituminous matter in combustible s##pta, the ascension and combustion of this substance are rendered more slow, and better adapted to the purposes for which it is destined. Traces of vegetable structure are very rarely discoverable in coal, except in the impressions of cactuses and of various dorsiferous and succulent plants.

But professor Jameson, speaking of the coal found in the neighbourhood of Edinburgh, says, * the coal, which is> black coal, occurs in beds, seldom more than a few inches in thickness, and is generally contained in the bituminous shale or slate clay, rarely in the sandstone. By the gra-

dually increasing mixture of clayey matter, it passes into bituminous shale. The accompanying bituminous shale and slate clay contain impressions of ferns, a fact which has been adduced in support of the opinion which maintains the vegetable origin of black coal. We are inclined to call in question the supposed vegetable origin of tins kind of coal, ˆnd a.e rather disposed to consider it as an original chemical formation ; and that the occurrence of vegetable impressions in the adjacent rocks no more proves its vegetable origin, than the existence of fossil quadrupeds in the gypsum of Paris proves that rock to have been formed from the debris of animals of the class mammalia.

To these opinions it may be sufficient to op-pose the following deductions of Dr. M'Culloch, from his experiments on certain products obtained from the distillation of wood, &c. The Dr. considers himself as authorised to state that, ' examining the alteration produced by water on common turf, or submerged wood, we have all the evidence of demonstration that its action is sufficient to con vert them into substances capable of yielding bitumen on distillation. That the same action having operated through a longer period has produced the change in the brown coal of Bovey is rendered extremely probable by the geognostic relations of that coal. From this to the harder lignites, suturbrand and jet, the transition is so gradual that there seems no

reason to limit the power of water to produce the effect of bituminisation in all these varieties ; nor is there aught in this change so dissonant from other chemical actions as to make us hesitate in adopting this cause.' Satisfied that jet, the bituminous lignite which approaches the nearest to coal in its chemical characters, is the result of the action of water on vegetable matter, Dr. M'Culloch was induced to try if this substance could, by heat under pressure, be converted into coal ; the result of his experiment was, that the produce exhibited the true characters of coal, having not merely the color and inflammability, but the fracture of coal and its odor on burning. These experiments and observations, taken with those of Mr. Hatchett, appear to be sufficient to set the question, as to the vegetable origin of coal, at rest. The vegetable origin of naphtha, petroleum, aud asphaltum, is not yet positively ascertained.

Amber, from its being found generall;. in beds of fossil wood ; the blue clay resin, found at Hishsate and at Sheppey among the pyritified wood ; and the retinasphaltum of Mr. llatchett, discovered among the Bovey coal, may either owe their origin to the changes effected in vegetable matter during its subterraneous deposition, or may be vegetable resins, the original product of the trees which they accompany, and which, from their resinous nature, may have resisted the bituminizating process. The argillaceous ironstone nodules which accompany coal, contain, with the remains of many oilier unknown vegetables, parts of various cryptogamous plants, the recent analogues of a very few of which have been said to be found in some of the tropical regions. On these nodules being broken, the preserved remains are generally discovered on each

of the broken sides of the nodule ; not, as might been just advanced. In a quarry of sandstone be expected, displaying different sides of the belonging to the coal formation on which Glaseow vegetable, but the same side of the leaf: for is built, and in the neighbourhood of that city instance, on each broken surface ; in one, in alto it is stated that 'the quarrymen came upon the]]]in the other in basso relievo. The explanation of cast of a tree in situ just as it had been Krowin<r this curious circumstance, which long puzzled The trunk is about twenty-six inches in diameter' the oryctologists, is found in the vegetable matter, not quite round but somewhat oval so that the during its passing through the bituminous change, north and south diameter is several Indies having become softened, and having filled its longer

than the east and west diameter The ??? own mould with its melted and softened sub-body of the tree itself is composed of sandstone stance ; the nodule, on being broken, showing precisely similar to the rest of the quarry ??? on one side the surface of the adherent bitumi-but the bark has been converted into perfect nous cast, and, on the other, the corresponding cherry coal, which adheres firmly to the tree, and mould. In the argillaceous and bituminous renders it easy to remove the rock with which it slate forming the floors and roofs of coal mines is incrusted. About three feet of the bottom are vast collections of the black bitumini-part of the tree has been uncovered ; this portion

is situated about forty feet below the surface of the earth in a solid quarry of sandstone. The upper part of the trunk and branches has not been discovered : indeed, it is some time since

zed remains of gramina, junci, cryptogami, and of numerous other plants, agreeing in their general characters with those of succulent plants, but differing from the recent ones known in Europe

by their vast magnitude, and by the richness of the upper portion of the quarry was removed! the ornamental markings which appear on their The roots may be seen dipping down into the trunks. earth precisely as the roots of living trees do.

‘ Description,’ says Mr. Parkinson, ‘ cannot Four very large roots may be seen issuing from

succeed in an attempt to give an idea of the beauty and varieties of the figures which are dis-

the trunks, and extending, some of them, about a foot before they are lost in the surrounding

played on the surface of many of those fossils, stone. There is nothing to indicate the species and which have been supposed to owe their of tree of which the mould has been here pre-markings to the bark of different trees of supposed antediluvian existence. Some are

ornamented by regularly disposed straight plain ribs, disposed longitudinally or transversely over their whole surface ; some by the decussation of nearly straight lines obliquely disposed ; and many by the alternate contact and receding of gently waving lines, forming areas regularly, but most singularly varying in their forms, and having in their centres tubercles and depressions from which spines, or setae, have in all probability proceeded. In others, lines obliquely disposed intersect each other at angles, varying in their acuteness in different specimens, in, it would seem, an almost endless variety ; forming surfaces apparently covered with squamae disposed in an imbricated manner, and frequently in quincunx order.'

Accounts have been given of the trunks of trees whose cortical markings were entirely unknown, having been found in the sandstones of Staffordshire, Derbyshire, Lancashire, and in-deed in all those parts in which the coal formations have been explored. Having been favored, says Mr. Parkinson, with the opportunity of examining severalspecimens of this nature, through the kindness of Thomas Botfield, esq., of Bewd-ley in Worcestershire, I am enabled to say that these are not generally the remains of trees, but

served. From the appearance of the roots it is obvious that it was not a fir ; it had more resemblance to a beech : the bark has been so completely bituminised, that its usual characters are effaced. The petrifaction, however, is not without its value ; it demonstrates that the sandstone has been formed at a period posterior to the existence of large trees, and that the water-worn appearance of the quartz pebbles of which the sandstone is composed is not a deceitful indication.' Hence the ingenious observer is led to observe, that ' if the sandstone, which constitutes so great a proportion of the coal beds, be a formation posterior to the earth being covered with wood, we can entertain no doubt that this is the case also with the slate clay and the coal which alternate with this sandstone. Indeed, if the coal formation exists as a portion of the old red sandstone, we can entertain no reasonable doubt that the old red sandstone itself has been formed after the earth was covered with wood.' Annals of Philosophy, Nov. 1820.

' The size which these fossil plants have attained, compared with that of the cactuses known in Europe, must, as in the fossil last mentioned, lead to a doubt as to this opinion of their agreement with the recent cactus. But, to be enabled to form a correct judgment on this point, it is necessary to know the state in which these plants

of succulent plants, the firm cortical parts of exist where the soil and climate are such as to

which, having been converted by the bituminisating process into jet, have formed that firm tube which is often found, in these instances, filled with sandstone, agreeing with that of the general matrix, and possessing the space left by the waste of the internal succulent part of the plant. The description of the last announced fossil of this kind, found in the neighbourhood of Glasgow, agrees exactly with the general account of these supposed fossil trees, and will, it is presumed, corroborate the opinion which has

allow them to develope themselves in their native luxuriance. The researches of the celebrated Humboldt, in the equinoctial regions, supply us on this head with the most appropriate and satisfactory information. The following detached observations of that philosopher will show not only the size to which these plants may arrive, but the vast tracts which, under favorable circumstanres, they may overrun, as well as the great probability of their having been the first vegetable clothing of the earth. ‘ The hill of calcareous

breccia, which we have just regarded as an island in the ancient gulph, is covered with a thick forest of columnar cactus and opuntia, some thirty or forty feet high, covered with lichens, and divided into several branches in the form of candelabras, wearing a singular appearance. Near Maniquarez, and Punta Araya, we measured a cactus, the trunk of which was four feet nine inches in circumference. The European, acquainted only with the opuntia in our hot-houses, is surprised to see the wood of this plant become so hard from age, that it resists for centuries both air and water, and that the Indians of

Cumana employ it in preference for hords and doorposts. Cumana, Coro, the island of Mar-garetta, and Curacao, are the places in South America that abound most in the plants of the family of the nopals. There, only, a botanist can compose a monography of the genus cactus, the species of which vary not only in their flowers and fruits, but in the form of their articulated stem, the number of costae, and the disposition of the thorns : the divisions of property are marked by hedges formed of the agave and cac-tus. At San Fernando, S. A., the soil abounds in aquatic plants with sagittate leaves, and he remarks that some of these succulent plants are from eight to ten feet high. In Europe their assemblage would be considered a little wood.' He also mentions a kind of bamboo which the Indians call jagua, which is found near San Fernando, more than forty feet in height. These, he observes, cannot but remind the admirer of fossils of the vast fossil bamboos which are found in the sandstones accompanying coal. Speaking of a rock of considerable height and magnitude, he observes, ' Euphorbium, cacalia, kleinia, and cactus, which are become wild in the Canary Islands, as well as in the south of Europe and the whole continent of Africa, are the only plants we see on this arid rock, being plants which draw their nourishment rather from the air than from the soil in which they grow.' He also remarks, ' it is not, in general, by mosses and lichens that vegetation in the countries near the tropics begins. In the Canary Islands, as well as in Guinea and in the rocky coasts of Peru, the first vegetables that prepare the mould for others are the succulent plants.'

We now follow Mr. Parkinson's description of I. CALCAREOUS VEGETABLE FOSSILS. ††† Lime is not very frequently the mineralising matter of vegetable fossils ; it is however sometimes found introduced into the remains of wood in the form of spar, and sometimes it becomes, in the form of limestone, the internal substance of fossil reeds and of various succulent plants.

1. Calcareous spat hose wood previously decayed.††† Color light brown, surface rough and dull, but susceptible of polish ; fracture dull, uneven, and rather spicular ; interstices filled with nearly colorless spar. The line heincr removed from this fossil, by muriatic acid, a considerable portion of light-colored flocculent substance is deposited. Found in alluvia and in the oolite formation.

2. Calcareous spat hose wood previously bitunii- †††nscd ††† Color darkish red brown ; surface commonly rough, but partially glossy ; fracture dull,

uneven, and rather spicular, veined with spar of a lightish brown color. Found in the clay of bituminous slate accompanying the lias. The lime being removed, by the muriatic acid, a considerable volume of dark brown powder remains, which, when dried, is remarkably combustible, burning %vith a flume resembling that of some of the pyrophori. On the brown spar being subjected to the action of diluted muriatic acid, the bituminous matter with which it is colored rises in a film to the surface of the solution. The polished surface of both these fossils being examined with a lens, the spathose substance is seen to have permeated the minutest woody fibres in all their directions. The powder deposited during the solution of both these fossils is undoubtedly the woody fibre reduced to this state of minute division, in consequence of its penetration in every direction by the spathose crystallisation.

II. SILICEOUS VEGETABLE FOSSILS. ††† The mineralisation of vegetable substances is most frequently effected by those impregnations in which silex is the principal constituent; the fossils thus formed being remarkable for the correctness with which” their forms and markings have been preserved.

1. Siliceous wood. ††† Its color is generally grayish and yellowish white, thence passing into ash gray, grayish black, and different shades of brown. Its internal lustre is glistening, its fracture more or less perfect conchoidal, showing the ligneous texture. The fragments sharp-edged and translucent. It is harder than opal, and easily frangible.

It is found in many parts of the world, but some of the finest specimens are obtained in the neighbourhood of Schemnitz and at Telkabanya in Hungary.

It is frequently found in this islana in the diluvian detritus, and in almost the whole of the green sand formation. Very large fragments are found in the Portland stones, the interstices*of which are often beautifully sprinkled with quartz crystals. Interesting specimens are also discovered in the gritstone of the same formation in the blackdown pits of Devonshire, which are frequently rendered very, interesting by the delicate amianthine form in which the silex is disposed. Specimens are also found in the sands of Bedfordshire. It is but rarely found in chalk ; it however forms the nucleus of a flint nodule which is said to have been obtained in Berkshire.

The varieties of siliceous wood depend not only on the nature of the combinations forming the lapideous matter of which it is chiefly

constituted, but also, as has been already observed, on the state of thfe wood previous to its petrifaction. When the fossil is light colored, and of a shivery texture, the wood may be presumed to have been previously in a decayed state, or, as it is termed, rotten wood ; and when close, compact, and dark-colored, it may have suffered previous biturainisation.

A. Chakhedonic wood. ††† In the most common form in which this variety appears, the color is of a yellowish-white, thf, substance resembling that of withered wood. The surface r:ugh and

splintery, the splinters frequently so minute as to be wafted with the slightest breath. The internal part solid, chiefly formed of the t-anslucent s.liceous matter, which fills the interstices and such cavities as may have been formed by the teredines and other insects, and also sometimes invests the ends of the specimen in a mammillated or stalagmitic form. Specimens occur in which previous bituminisation also appears to have laken place, and in which the clear siliceous substance appears as if it had transuded into the cavities, and had exuded at the ends of the specimens. Hither must be referred those amorphous specimens which possess a rough surface, scarcely any lustre, with patches of apple-green color and of a quartzose hardness, intermixed with others of a light or light gray color, considerably softer. When cut and polished, the white parts display evident marks of vegetable texture ; either that of very fine grained woods, or of some of the palms or reeds, the spaces between being filled with siliceous matter, either translucent or of an apple-green color.

B. Jasperine wood displays all the colors and appearances belonging to common jasper, . so disposed as to mark the existence of ligneous texture, and frequently so varied as to give the resemblance of different woods. It is usually opaque, but sometimes translucent at the edges, and sometimes in patches, where it appears as jasper agate. Its fracture passes from conchoidal to flat and earthy ; its internal lustre is generally dull, but sometimes approaching to resinous; its interstices are frequently set with minute crystals. The texture of the wood is discoverable in some very rare specimens of he-liotrope, or bloodstone.

C. Opaline wood occurs in pieces of a yellowish or yellowish-white color, passing into different shades of brown : surface generally marked by the ligneous structure, and possessing a resinous lustre. The fracture more or less approaching to perfect conchoidal, showing the ligneous marking and a glistening lustre. Fragments sharp-edged, and somewhat translucent: the surface sometimes dull, like wood, and the internal substance transparent. It is considered by Dr. Thomson as consisting of wood penetrated by opal, and as being so intimately connected with opal that it would perhaps be better to unite them.

D. Pitchstone wood. ••• Specimens of fossil wood, evidently showing its original texture, and answering to the characters of pitchstone, are frequently seen : its colors are yellow, brown, reddish brown, red, black, white, and gray, with various intermediate shades ; fracture is flattish, imperfectly large conchoidal ; lustre varying between dull, vitreous, and resinous. The woody texture is to be traced also in numerous lapideous substances bearing the intermingled characters of pitchstone, opal, jasper, chalcedony, jasper-agate, &c.

III. ALUMINOUS VEGETABLE FOSSILS.

1 . Bituminous slate, schistus, and shale, containing vegetable remains, are frequently met with in the neighbourhood of coal. These remains, as have been already mentioned, are of various gram ina, cryptogami, and succulent plants. On allowing some of these bodies to remain in water,

their substance becomes softened down, in <] is resolved into a mass in which-the vegetaole matter is obvious.

2. Aluminous wood. ••• The wood which has been thus named by different authors, by its proneness to combustion, and by the other properties which they describe it to possess, should be considered as pyritous wood, having obtained its change in the ferruginous clay in which it has been imbedded. The mineralising matter of metallic fossil vegetables is most commonly the pyrites or sulphurets and carbonates of “iron, copper, zinc, or lead.

I. FERRUGINOUS FOSSIL WOOD.

1. Pyritical. ††† In this fossil the sulphuret of iron pervades the charcoal into which the vegetable matter has been converted. When first found it generally possesses metallic brilliancy, is sufficiently hard to scratch glass, emits sparks on collision with steel, and displays the forms and markings pointing out its vegetable origin ; but it soon begins to suffer from decomposition, when its characters change, and it finally resolves into a saline flocculent substance.

2. Carbonated. ††† In these specimens, which are of different shades of brown color, and generally of a uniform substance, the marks of the vegetable origin are easily observable, although not so distinct as in the specimens of the preceding species before the commencement of the decomposition.

II. FERRUGINOUS FOSSIL SEEDS, &c. Innumerable seeds, seed-vessels, &c., have been

found by Mr. Crow and others, ir* the blue clay of Sheppey in the state of pyrites. Most of these belong to plants unknown to our botanists ; the existing plants, to which the others seem to approximate, are some of those of the warmer climates.

III. CUPREOUS FOSSIL WOOD.

1. Pyritical. ††† This fossil is distinguishable from the ferruginous pyritical wood, by the pyrites being of rather a darker color, but chiefly by the blue, or green color which partially pervades the fossil. In some specimens, in which the general appearance is that of bituminous wood, the metallic impregnation can only be detected by the weight of the fossil and the blue or green hue on its surface.

2. Wood converted into carbonate and hydrate of copper. ††† Cupreous wood in this state forms very beautiful specimens, displaying, not only on its surface, but in its substance, mingled with the charred wood, the most vivid blue and green colors, with patches of the carbonate in the state of malachite. The finest specimens of cupreous wood are obtained from the copper mines of Siberia.

3. Wood mineralised by lead. ††† Specimens of wood containing galena, the sulphuret of lead, have been chiefly discovered in Derbyshire. The leaves of plants, except those of gramina, junci, and of the cryptogamia, are seldom found in a mineralised state. The lobes and pinnulae of ferns, as has been before mentioned, are frequently found in a bituminised state in nodules of ironstone, and in immense quantities with the remains of gramina and ††‘iccu.ent plants in the

schistose and slaty coverings of coal.

REMAINS (ORGANIC).

Among the numerous remains of plants very few are found which agree in their specific characters with any known species, and many indeed differ so much as to render it difficult to determine even the genus under which they should be placed. The leaves of trees are only found in substances which appear to be of modern formation. Among these are said to have been found those of the willow, the pear-tree, mulberry-tree, and of several others. These have been found in fossil calcareous stone, chiefly in that of Oeningen, and in the calcareous tufa bordering those lakes and rivers which abound in calcareous matter. Leaves are sometimes found in sandstone which somewhat resemble those of trees, but which most probably have belonged to aquatic plants. In the gray chalk, small white ramose forms are found, which pervade the chalk, and have the appearance of being of vegetable origin. Wood and other vegetable substances are frequently found in clay and limestone in the state of charcoal. It cannot always be ascertained by what means this change has been effected ; but in that which is found in the blue clay, and in other situations in which pyrites prevail, the change may safely be attributed to the decomposition of the pyrites with which those substances had been impregnated.

Mosses, Conferva, fyc. ??? Rounded pebbles, called moss agates are frequently found on the coast of the North Riding of Yorkshire : and Dr. M'Culloch describes them as having been found on the shore at Dunglas in Scotland, containing substances which have the appearance of vegetables.

Daubenton and Blumenbach had expressed their conviction of the vegetable origin of these substances; still many considered them as entirely mineral : but Dr. M'Culloch, pursuing this enquiry with his usual zeal and acuteness, observes, that deception is very likely to arise in these specimens, from the well known metallic arborizations emulating the vegetable forms, becoming blended with the real vegetable; and from the actual investment of the whole plant with

carbonate of iron ; but the most common source of deception and obscurity, in the Dr.‘s opinion, ‘will be found in the whimsical and fibrous disposition occasionally assumed by chlorite, its color often imitating the natural hue of a plant as perfectly as its fibrous and ramified appearance does the disposition and form of one.’ All the plants that have been discovered in this state of envelopment in quartz appear to belong to certain species of thecryptogamia class, chiefly byssi, confervae, juntrermanniae, and the mosses. The stones found at Dunglas, Dr. M’Culloch observes, ‘con.ain remains of organized substances of an epocha at least equally ancient with that in which the vegetable remains found in the floetz strata existed. As the species ascertained by Daubenton have, in all probability, been preserved in recent formations of chalcedony,’ so the Dr. thinks that ‘ those which he describes have been preserved in the chalcedonies of former days.’ The moss agates of the Yorkshire coast appear to be of the ancient, whilst other specimens prove the correctness of Dr. M’Culloch’s opinion, that some of these fossils are of recent formation.

The remarks of Dr. M’Culloch on the mode in which these curious investments were accomplished, deserve particular attention : ‘ The remains are, in fact (if Imay use such an expression), embalmed alive. To produce this effect, we can only conceive a solution of silex in water, so dense as to support the weight of the substance involved, a solution capable of solidifying in a short space of time, or capable at least of suddenly gelatinizing previously to the ultimate change by which it became solidified into stone.’ Dr. M’Culloch describes and figures a congeries of tubuli contained in an oriental agate similar substances are found in the pebbles on the Yorkshire coast.

A knowledge of the vegetable fossils peculiar to the different strata will, in all probability, open to us considerable stores of instruction; we may thereby learn, not only the nature of the several vegetable beings of the earlier ages of this planet, but may ascertain the order in which the several tribes were created : and, reckoning upon the considerable advance which has been made in our knowledge of the structure of the earth, and upon the eagerness with which enquiries respecting the organic remains of former periods are pursued, the attainment of such knowledge, it may be presumed, is not far distant. At present we know of no vegetable remains of earlier existence than those which belong to the coal formation ; and these appear to be chiefly deriv-ad from various grasses and reeds, and plants of the cryptogamous and succulent tribes, many of which are not known to exist on the surface of the earth at present. From the latter of these the

coal itselt appears to have chiefly proceeded. In the mountain limestone above the coal, and in the different members of this formation existing between this and the blue lias, vegetable remains appear to be of but rare occurrence ; so that particulars of such as have been discovered in these situations may furnish much useful information, and especially with respect to those fossils which are supposed to have derived their origin from wood.

It has been assumed that wood, or parts of trees, have been found in coal and in the accompanying coal-measures, but some confirmation of these accounts seems to be required. The description of these fossils has seldom been so particular and exact as to yield positive evidence of their original nature ; and, as has been already shown, the instances are by no means infrequent in which the traces, and even the remains, of cactuses and other succulent plants, had given rise to the belief of the existence of fossil trees in these strata. This opinion may therefore have obtained seeming confirmation from the ligneous hardness which large plants of this kind might have acquired, and which, perhaps, might be traced in their mineralised remains. The earliest stratification in which fossil wood exists is not perhaps at present determined ; but it seems that the earliest appearance in this island of fos-sil wood, which by its uniformity of character appears to belong to a particular bed, is - the spathose bituminous wood of the blue lias, as found at Lyme in Dorsetshire, and in the neighbourhood of Bath. In the next formation, and

particularly in that of the green sand, siliceous the animals to which they belonged met their

fossil wood occurs frequently. Very delicate specimens are found in the sandstone, the whet-stone of the Blackdown hills of Devonshire. The specimens of fossil wood found in the Portland stone are frequently of very considerable size, and bear all the characteristic marks of wood : these are also siliceous, and are often beautifully sprinkled on their interior surfaces with quartz crystals. Siliceous fossil wood is also found in other situations, as in the sands of Wooburn in Bedfordshire : it also occurs at Folkstone in Kent, in that part of the green sand where it approximates to the superincumbent marl, in which it is also found. Trarps of wood are hardly ever discovered in

the chalk itself, and so rarely in the accompanying flint nodules, that the knowledge of but one specimen, an instance of this occurrence, is known to the writerof these pages. But in the blue clay, incumbent upon this immense accumulation of chalk, fossil wood, pierced with teredines, and impregnated with calcareous spar, is exceedingly abundant : and in almost every sunken part of this bed, and even of the whole surface of this island, the remains are discoverable of vast forests which have suffered little other change than that of having undergone different degrees of bituminisation.

By these facts, concludes Mr. Parkinson, we learn that, at some very remote and early period of the existence of this planet, it must have abounded with plants of the succulent kind, and, as it appears from their remains, in greut variety .of form and luxuriancy of size These, from

fate in the very places where they now lie bu-ried. Hence it may be considered as an axiom, that man, and other animals, whose bones are not found intermixed with them, did not co-exist in time and place. The same mode of reasoning would further justify us in the conclusion, that, if those catastrophes which overwhelmed a great proportion of the brute creation were general, as geognostic observations in various parts of the world render probable, the creation of man must have been posterior to that of those genera and species of mammalia which perished by a general cataclysm, and whose bones are so thickly disseminated in the more recent formations of rocks.

* The human skeletons from Guadaloupe are called Galibi by the natives of that island ; a name said to have been that of an ancient trihe of Caribs of Guiana, but which, according to a plausible conjecture, originated in the substitution of the letter / instead of r, in the word Caribbee. No mention is made of them by any author except general Ernouf, in a letter to M. Faujas St. Fond, inserted in vol v. 1805 of the Annales du Museum; and by M. Lavaisse, in his Voyage a la Trinidad, &c., published in 1813. The former of these gentlemen writes, that, on that part of the windward side of the Grande-Terre called La Moule, skeletons are found enveloped in what he terms ‘ Masses de madrepores petrifies,’ which being very hard, and situated within the line of high water, could not be worked without great difficulty, but that

what is discoverable of their structure, beset with he expected to succeed in causing some of these

seta? and spine?, were not formed for the food of masses to be detached, the measurements of

animals ; nor, from the nature of the substances which he states to be about eight feet by two

of which they were composed, were they fitted and a half.

to be applied to the various purposes to which ‘ The block brought home by Sir Alexander

wood, the product of the earth at a subsequent Cochrane exactly answered this account with

period, has been found to be so excellently adapt-regard to the measurements ; in thickness it was—

ed, by man. Their remains, it must also be about a foot and a half. It weighed nearly two

tons ; its shape was irregular, approaching to a flattened oval, with here and there some conca—

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cuhar economical modification of its combustibi-peared, occupying the place where the thigh

litv, is rendered an invaluable article of fuel, bone had been situated, the lower part of which

If this be admitted to be the origin of coal, a was therefore wanting. Except the few holes

satisfactory cause will appear for the vast abund-evidently made to assist in raising the block the

anceof ve-etable matter with which the earth masons here declared, that there was no mark of

must have been stored in its early ages: this a tool upon any part of it; and, indeed tl

vast, and in any other view useless, creation, will whole had very much the appearance of a hv

thus be ascertained to have been a beneficent ar-nodule disengaged from a ###^? ###*

rangement by Providence for man, the being of The situation of the

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remarked, are now found in conjunction with that substance which nature has, in all probability, formed from them ; and which, by the pe-

a creation of a later period.

CLASS IX.### HOMO.

Remains of the human species are not found n secondary strata ; but in the clay of the fissures of rocks they are not infrequent, and they have been found in alluvial soil at Koestretz in Germany. Mr. Konig's account of the most celebrated fossile skeleton yet discovered (and the British Museum) is thus

superficial, that its presence in the rock on the coast had probably been indicated by the projection of some of the more elevated part* of the left fore-arm.

<The skull is wanting; a circumstance wnu is the more to be regretted as this istic part might possibly have thrown on the subject under cons least, have settled the q

'AH thdrcumstances under which the known deposit.ons of bones occur,' says this gentleman 'both in alluvial beds and in the caverns and fissures of fle-tz li'-.-stone' tend to prove, that

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REMAINS (ORGANIC).

of vertical. The vertebra; of tht neck were lost with the head. The bones of the thorax bear a.i the marks of considerable concussion, and are completely dislocated. The seven true ribs of the left side, though their heads are not in connexion with the vertebrae, are complete ; but only three of the false ribs are observable. On the right side only fragments of these bones are seen ; but the upper part of the seven true ribs of this side are found on the left, and might at first sight be taken for the termination of the left ribs. The right ribs must therefore have been violently broken, and carried over to the left side, where, if this mode of viewing the subject be correct, the sternum must likewise lie concealed below the termination of the ribs. The small bone dependent above the upper ribs of the left side appears to be the right clavicle. The right os humeri is lost ; of the left nothing remains except the condyles in connexion with the fore-arm, whieh is in the state of pronation ; the radius of this side exists nearly in its full length, while of the ulna the lower part only remains, which is considerably pushed upwards. Of the two bones of the right fore-arm the inferior terminations are seen. Both the rows of the bones of the wrists are lost, but the whole metacarpus of .the left hand is displayed, together with part of the bones of the fingers : the first joint of the fore finger rests on the upper ridge of the os pubis, the two others, detached from their metacarpal bones, are propelled downwards, and situated at the

inner side of the femur, and below the foramen magnum ischii of this side. Vestiges of three of the fingers of the right hand are likewise visible, considerably below the lower portion of the fore-arm, and close to the upper extremity of the femur. The vertebras may be traced along the whole length of the column, but are in no part of it well defined. Of the os sacrum the superior portion only is distinct : it is disunited from the last vertebra and the ilium, and driven upwards. The left os ilium is nearly complete ; but shattered, and one of the fragments depressed below the level of the rest : the ossa pubis, though well defined, are gradually lost in the mass of the stone. On the right side the os innomi-natum is completely shattered, and the fragments are sunk ; but, towards the acetabulum, part of its internal cellular structure is discernible.

‘ The thigh bones and the bones of the leg of the right side are in good preservation, but, being considerably turned outwards, the fibula lies buried in the stone, and is not seen. The lower part of the femur of this side is indicated only by a bony outline, and appears to have been distended by the compact limestone that fills the cavities both of the bones of the leg and thigh, and to the expansion of which these bones probably owe their present shattered condition. The lower end of the left thigh bone appears to have been broken and lost in the operation of detaching the block ; the two bones of the leg, however, on this side are nearly complete : the tibia was split almost the whole of its length a little below the external edge, and the fissure, being filled up with limestone, now presents

itsel as a dark colored straight line. The portion of the stone which contained part of the bones of the tarsus and metatarsus was unfortunately broken ; but the separate fragments are preserved.

‘ The whole of the bones, when first laid bare, had a mouldering appearance, and the hard surrounding stone could not be detached, without frequently injuring their surface ; but, after an exposure for some days to the air, they acquired a considerable degree of hardness. Sir H. Davy, who subjected a small portion of them to chemical analysis, found that they contained part of their animal matter, and all their phosphate of lime. Here follows an exact description of the rock, in which the fossile skeleton is found. The attention of geologists being now directed towards this object, it may be expected that a scientific examination of the circumstances under which this limestone occurs will not fail ere long to fix its age, and assign to it the place it is to occupy in the series of rocks. All our present

information respecting the Grande Terre of Guadaloupe amounts to this, that it is a flat limestone country, derived principally from the detritus of zoophytes, with here and there single hills (mornes) composed of shell limestone ; while Guadaloupe, properly so called, separated from the upper part by a narrow channel of the sea, has no traces of limestone, and is entirely volcanic.' See plate II. fig. 3.

Since the above has been prepared we have happened of the accounts of an old acquaintance, Mr. Trimmer, of some organic remains found near Brentford, Middlesex ; the spot mentioned will be familiar to many of our readers. He is describing in order the remains of two fields, not contiguous.

' The first,' he says, ' is about half a mile north of the Thames at Kew Bridge ; its surface is about twenty-five feet above the Thames at low water. The strata here are, first, sandy loam from six to seven feet, the lowest two feet slightly calcareous. Secondly, sandy gravel, a few inches only in thickness. Thirdly, loam slightly calcareous, from one to five feet : between this and the next stratum peat frequently intervenes in small patches, of only a few yards wide and a few inches thick. Fourthly, gravel containing water; this stratum varies from two to ten feet in thickness, and is always the deepest in the places covered by peat; in these places the lower part of the stratum becomes an heterogeneous mass of cray, sand, and gravel, and frequently exhales a disagreeable muddy smell. Fifthly, the main stratum of blue clay, which lies under this, extends under London and its vicinity ; the average depth of this clay has been ascertained, by wells that have been dug through it, to be about 200 feet under the surface of the more level lands, and proportionally deeper under the hills, as appears from lord Spencer's well, at Wimbledon, which is 567 feet deep. This stratum, besides figured fossils, contains pyrites and many detached nodules; at the depth of twenty feet there is a regular stratum of these nodules, some of which are of very considerable size.

' In the first stratum, ns far as my observation

has extended, no remains of an organised body has ever been found, and, as my search has not been very limited. I may venture to say it contains none In the second stratum snail shells, and the shells of river fish have been found, and a few bones of land animals, but of inconsiderable size, and in such a mutilated state that it cannot be ascertained to what class they belong. In the third stratum the horns and bones of the ox, and the horns, bones, and teeth of the deer, have been found, and also, as in the second stratum, snail shells, and the shells of river fish. In the fourth stratum were found teeth and bones of both the African and Asiatic elephants, teeth of the hippopotamus, bones, horns, and teeth of the ox. A tusk of an elephant measured, as it lay on the -ground, nine feet three inches, but, in attempting to remove it, it broke into small pieces. When this stratum dips into the clay, and becomes a mixed mass, as before stated, it is seldom without the remains of animals. In the fifth stratum, namely, the blue clay, the extraneous fossils are entirely marine, with the exception of some specimens of fruit and pieces of petrified wood, the latter of which may be considered as marine, because, when of sufficient size, they are always penetrated by teredines. The other fossils from this stratum are nautili, oysters, pinnae marinse, ►►rabs, teeth and bones of fish, and a great variety of small marine shells ; this stratum has been penetrated hitherto in this field only to the depth of thirty feet, throughout which the specimens found were dispersed without any regularity.

‘ The second field is about one mile to the westward of the former, one mile north of the Thames, and a quarter of a mile to the eastward of the river Brent; its height above the Thames at low water is about forty feet. The strata are, first, sandy loam, eight or nine feet, in the lowest three feet of which it is slightly calcareous. Secondly, sand, becoming coarser towards the lowest part, and ending in sandy gravel from three to eight feet. Thirdly, sandy loam highly calcareous, having its upper surface nearly level, but gradually increasing in thickness, from a feather-edge to nine feet. Below this are two strata of gravel and clay, as in the other field ; but, as these strata have been only occasionally penetrated in digging for water, nothing therefore is known with respect to them but that they exist there. In the first stratum, as in the other field, no organic remains have been observed. In the second, but always within two feet of the third stratum, have been found the teeth and bones of the hippopotamus, the teeth and bones of the elephant, the horns, bones, and teeth of several species of deer, the horns, bones, and teeth of the ox, and the shells of river fish.

‘ The remains of hippopotami are so extremely abundant, that, in turning over an area of 120 yards in the present season, parts of six

tusks have been found of this animal, besides a tooth and part of the horn of a deer, part of a tusk, and part of a grinder of an elephant, and the horns, with a small part of the skull, of an ox. One of these horns I had an opportunity of measuring as it lay on the ground, and found it to be four feet and a half in length, and five

inches in diameter at the large end ; it was found impracticable to move it otherwise than in fragments, which I have preserved, and have hopes of being able to put a considerable part of it together. The immense size of this horn is rendered more remarkable by another horn from the same spot, which measures but six inches in length. Though this stratum is so extremely productive of the remains of animals, yet there are but few good cabinet specimens from it, owing, it is presumed, to their having been crushed at the time they were buried, and to the injury they have since received from moisture. It is necessary to remark that the gravel-stones in this stratum do not appear to have been rounded in the usual way by attrition, and that the bones must have been deposited after the flesh was off, because, in no instance have two bones been found together which were joined in the living animal; and further, that the bones are not in the least worn, as must have been the case had they been exposed to the wash of a sea-beach.

‘ In the third stratum, *viz.* calcareous loam, have been found the horns, bones, and teeth of the deer, the bones and teeth of the ox, together with snail-shells, and the shells of river-fish.

‘ Brentford, in the neighbourhood of which are the fields I have mentioned, is situated on the north bank of the Thames, and is six miles west of London. The fall of the Thames from Brentford to its mouth at the Nore is estimated at seven feet.’ ××× Philosophical Transactions.

We close with a late ingenious speculation of baron Humboldt’s on the occurrence of tropical animals and plants, in a fossile state, in the frozen regions of the earth.

Speaking of the heat of the body of our planet he says, ‘ It is perhaps in the internal heat of the earth, a heat which is indicated by experiments made with the thermometer, and the phenomena of volcanoes, that the cause of one of the most astonishing phenomena which the knowledge of petrifactions presents to us resides. Tropical forms of animals, arborescent ferns, palms and bamboos, occur

imbedded in the frozen regions of the north. The primitive world every where discloses to us a distribution of organic forms, which is in opposition to the presently existing state of climates. To solve so important a problem, recourse has been had to a great number of hypotheses, such as the approach of a comet, the change of obliquity of the ecliptic, the increase of intensity of the solar heat. None of these hypotheses has been able to satisfy at the same time the astronomer, the natural philosopher, and the geologist. As to my own opinion on the subject, I leave the earth's axis in its position, I admit no change in the radiation of the solar disk, a change by which a celebrated astronomer thought he could explain the good and bad harvests of our fields ; but I imagine that in each planet, independently of its relations to a central body, and independently of its astronomical position, there exist numerous causes of development of heat, whether by the chemical processes of oxidation, or by the precipitation and changes of capacity of bodies, or by the augmentation of the electro-magnetie

intensity, or the communication between the internal and external parts of the globe.

' When, in the primitive world, the deeply fissured crust of the earth exhaled heat by these apertures, perhaps during many centuries, palms, arborescent ferns, and the animals of warm climates, lived in vast expanses of country. According to this system of things, which I have already indicated in my work entitled Essai Geognostique sur le Gisement des Roches dans les deux Hemispheres, the temperature of volcanoes is the same as that of the interior of the earth, and the same cause which now produces such frightful ravages would formerly have made the richest vegetation to spring in every zone, from the newly oxidised envelope of the earth, and from the deeply fissured strata of rocks. If, in order to account for the distribution of the tropical forms that occur buried in

the northern regions of the globe, it is assumed that elephants covered with long hair, now immersed in the polar ice, were originally natives of those climates, and that forms resembling the same principal type, such as that of lions and lynxes, may have lived at the same time in very different climates, such a mode of explanation would yet be inapplicable to the vegetable productions. For reasons which vegetable physiology discloses, palms, bananas, and arborescent monocotyledonous plants, are unable to support the cold of the northern countries ; and, in the geognostical problem which we are here examining, it appears to me difficult to separate the plants from the animals ; the same explanation ought to embrace the two forms.' (Tableaux de la Na-ture), as quoted in the Edinburgh Philosophical Journal, September, 1828.

REMAKE', r. a. Re and make. To make anew.

That, which she owns above her, must perfectly remake us after the image of our maker. Gtancilte.

REMAND'. Lat. re and mando. To send back ; call back.

The better sort quitted their freeholds and fled into England, and never returned, though many laws were made to remand them back. Duvies.

Philoxenus, for despising some dull poetry of Dionysius, was condemned to dig in the quarries ; from whence being remanded, at his return Dionysius produced some other of his verses, which as soon as Philoxenus had read, he made no reply, but, calling to the waiters, said, Carry me again to the quarries. Government of the Tongue.

REM'ANENT, n. s. Old Fr. remanant ; Lat. -emanens. Now contracted to remnant. The part remaining.

Her majesty bought of his executrix the remanent of the last term of three years. Bacon.

REMARK', v. a. &n. s. A Fr. ˆtmarquer, or

REMARK'ABLE, adj. I perhaps re and mark.

REMARK'ABLEXESS,TI. sA-To note; observe

REMARK’ABLY, adv. i particularly; distin—

REMARK’ER, n. s. } guish : the note or

observation made or taken : remarkable is, wor-thy of note ; observable : the noun substantive and adverb corresponding: remarker, an observer.

So did Orpheus plainly teach that the world had beginning in time, from the will of the most high God, whose remarkable words are thus converted.

Raleigh.

They signify the remarkablenest of this punishment of the Jews, as signal revenge from the crucified Christ. Hammond.

The prisoner Sarnson here I seek. ??? His manacles remark him, there he sits. Milton.

It is easy to observe what has been remarked, that the names of simple ideas are the least liable to mistakes. Locke.

‘Tis remarkable that they Talk most who have the least to say. Prior.

He cannot distinguish difficult and noble speculations from trifling and vulgar remarks. Collier.

Such parts of these writings as may be remarkably stupid should become subjects of an occasional criticism. Watts.

If the remarker would but once try to outshine the author, by writing a better book on the same subject, he would soon be convinced of his own insufficiency.

Id.

REMBANG, a large town on the north coast of Java, containing many good houses, and advantageously situated close to the sea, which washes the walls of a fort. Formerly the Dutch built their principal vessels and kept a considerable garrison here. A quantity of sea salt is produced in the neighbourhood.

REMBRANDT (V7an Ryn). This celebrated painter was the son of a miller, and was born at a village near Ley den in 1606. lie obtained

the name of Van Ryn, from his having spent the youthful part of his life on the borders of the Rhine. He was at first placed under Jacob Van Zwanenburg, with whom he continued three years ; and after this studied under Peter Last-man, with whom, however, he staid only six months. For the same length of time he was the scholar of Jacob Pinas ; from whom he acquired that taste for strong contrasts of light and shadow which he ever after so happily cultivated. He, however, formed his own style entirely, by studying and imitating nature, and his amazing power in representing every object with truth, force, and life, has never since been equalled. By the advice of a friend, Rembrandt was prevailed on to carry one of his early performances to the Hague ; where a dealer instantly gave him 100 florins for the picture. This incident not only served to make the public acquainted with his abilities, but contributed to make him more sensible of his own talents. He soon after this settled in Amsterdam, that he might follow his profession with more advantage. Business crowded on him immediately, so as scarcely to allow him time to gratify the demand for his paintings ; and he had such a number of pupils that wealth flowed in plentifully. He received from each of his scholars 100 florins a-year for their instruction ; and he also raised a considerable sum by the sale of the copies they made after his pictures and designs ; which he always retouched in several parts, to increase their value, and to make purchasers ‘.►►lieve them his own. By this traffic, and an artful

ment of the sale of his etchings, he gained at least every year 2500 florins. His style of painting, in the first years of his practice, was very different from that of his latter time ; his early performances being highly finished, with a neat pencil, resembling those of Mieris; while his latter style of coloring and handling was strong, bold, and with a degree of force, in which he has not been excelled by any artist; a picture of his maid servant, placed at the window of his house in Amsterdam, is said to have deceived the passengers for several days. De Piles, when he was in Holland, not only ascertained the truth of this fact, but purchased the portrait, which he esteemed one of the finest ornaments in his cabinet. Rembrandt’s local colors are

extremely good ; he perfectly understood the principles of the chiaro-oscuro ; and it is said that he generally painted in a chamber so contrived as to admit but one ray of light, and that from above. The lights in his pictures were painted with a body of color unusually thick, as if it were his intention rather to model than to paint ; but he knew the nature and property of each particular tint so thoroughly that he preserved them in full freshness, beauty, and lustre.

His genuine works are rarely to be met with, and afford incredible prices. Many of them, however, are in the collections of our English nobility. The etchings of Rembrandt are exceedingly admired, and collected with great care and expense for the cabinets of the curious in most parts of Europe ; but it is remarked that none of his prints are dated earlier than 1628, nor later than 1659, though there are several of his paintings dated in 1660, and particularly the portrait of a Franciscan Friar. There, is, perhaps, no branch of collectorship that exhibits more caprice than that of prints in general, or those of Rembrandt in particular. Instances of this may be adduced in the Juno without the crown ; the Coppenol with a white back ground ; the Joseph with the face unshaded, and the good Samaritan, with the horse's tail white, which are regarded as inestimable ; whilst the same subjects, w ithout these distinctions, are considered as of lit tie comparative value. Strutt says that, in consequence of a commission from an eminent collei tor, he bid forty-six guineas for the Coppenol, vith the white back ground, that is, in its unfinished state; though at the same sale he bought a beautiful impression of that plate in a perfect con lition, for fourteen guineas antl a half. Rembrandt is supposed to have taken advantage of this humor in collectors, by altering and obliteratj ˆ parts of his plates to render them objects of equity. He also suffered himself to be solicited before he would consent to part with his work; and it is a fact that the print of Christ healing the sick, usually denominated the ' hundred guilders,' was so called because he refused to sell it under that price. At present a good impression is worth from fifty to sixty guineas. The rarest and most expensive of Rembrandt's portraits are those of Uten-bogard, called the Gold Weigher, and, in France, the Banker; Van Tol, the advocate, and burgomaster Six, *ach of which is estimated at fifty guineas. This great artist died at Amsterˆnm

in 1674, or according to some accounts in 1688. His personal character was far from amiable ; he was avaricious, and not very scrupulous in his means of getting money. He was also fond of low company, by which his taste and principles became degraded,

REMEDIOS, NUESTRA SENORA DE Los, a reduced city of New Granada, and capital of the province of Rio del Hacha, has a good parish church, and is defended by a castle of regular construction. It was taken and sacked by Francis Drake in 1596. Seventy-three miles east by north of Santa Martha, and 104 north west of Maracaibo. It was formerly famous for its pearl fisheries.

REM'EDY,n.s.&7;.a.-v Fr. remede; Ital. REME'DIABLE, adj. I Span, and Port, re-REME'DIATE, . \medio; Lat. remedi-REM'EBJLESS, iu/n. Antidote; agent

REM'EDELESSNESS, n. s. J or instrument of cure ; medicine ; that which counteracts any evil ; taking of, for, or against, before the object; reparation : to cure or heal ; repair or remove mischief: remediable is capable of renewing; remediate, medicinal : remediless, cureless ; admitting no remedy: the noun substantive cor responding.

In the death of a man there is no remedy.

Wisdom ii. 1 . Sad ˆEsculapius

Imprisoned was in chains remediless. Spenser. Sorry we are that any good and godly mind should be grieved with that which is done ; but to remedy their grief lieth not so much in us as in themselves.

Hooker.

All you, unpublished virtues of the earth. Spring with my tears ; be aidant and remediate In the good man's distress. Shahspeare. King Lear.

Things, without all remedy, Should be without regard. Id. Macbeth.

The war, grounded upon this general remediless necessity, may be termed the general, the remediless, or the necessary war. Raleigh.

What may be remedi/ or cure To evils, which our own misdeeds have wrought

MUtfn.

We, by rightful doom remediless, Were lost in death, till he that dwelt above High-throned in secret bliss, for us frail dust Emptied his glory. fd.

Here hope began to dawn ; resolved to try, She fixed on this her

utmost remedy. Dryden.

There is no surer remedy for superstitious and desponding weakness, than first to govern ourselves by the best improvement of that reason which providence has given us for a guide ; and then, when we have done our own parts, to commit all chearfully, for the rest, to the good pleasure of heaven, with trust and resignation. L' Estrange.

Civil government is the proper remedy for the inconveniences of the state of nature. Locke.

Flatter him it may, as those are good at flattering who are good for nothing else; but, in the mean time, the poor man is left under a remediless delusion.

Soul /i

O how short my interval of woe ! Our griefs how swift, our remedies how slow. Prior.

The difference between poisons and remedies is easily known by their effects ; and common reason soon distinguishes between viitue and vice. Swift

I, v. a.-v OI

REMEM'BERER, n. s. (_Ital. remembrare ; Lat. REMEM'BRANCE, irememoror. To keep REMEMBRANCER. J or bear in mind ; preserve from forgetfulness ; put in mind ; mention : a rememberer is one who remembers : remembrance, memory ; retentiveness of memory ; recollection; reminiscence; memorial; memento; note of something past or absent; honorable memory : remembrancer, one who reminds ; an officer of his majesty's exchequer.

Remember not against us former iniquities.

Psalm Ixxix. 8.

He having once seen and remembered me, even from the beginning began to be in the rierward.

Sidney.

Remember thee !

Ay, thou poor ghost, while memory holds a place In this distracted brain. Remember thee !

Shahpeare.

Joy, being altogelher wanting, It doth remember me the more of sorrow. Id. Though Cloten then but young, time has not worn

him From my remembrance. Id. Cymbeline.

A sly knave, the agent for his master, And'the remembrancer of her, to hold The hand fast to her lord. Id.

Rosemary and rue keep Seeming and savour all the winter long ; Grace and remembrance be unto you both.

Shakapeare.

Keep this remembrance for thy Julia's sake. Id. Let your remembrance still apply to Banquo ; Present him eminence, both with eye and tongue.

Id.

All are digested into books, and sent to the remembrancer of the exchequer, that he may make processes upon them. Bacon.

It grieves me to be remembered thus By any one, of one so glorious. Chapman. A brave master to servants, and a rememberer of the least good office ; for his flock he transplanted most of them into plentiful soils. ××× Wotton.

If ever we have found any word or act of God cordial to us, it is good to fetch it forth oft to the eye. The renewing of our sense and remembrance makes every gift of God perpetually beneficial.

Bp. Hall's Contemplations.

I would only remember them in love and prevention, with the doctrine of the Jews, and the example of the Grecians. Holy day.

God is present in the consciences of good and bad ; he is there a remembrancer to call our actions to mind, and a witness to bring them to judgment.

Taylor.

Had memory been lost with innocence, We had not known the sentence nor the' offence ; Twas his chief punishment to keep in store The sad remembrance what he was before. Denham.

These petitions, and the answer of the common council of London, were ample materials for a conference with the lords, who might be thereby remembered of their duty. Clarendon.

He brings them back, Remembering mercy and his covenant sworn.

Milton.

I hate thy beams,

That bring to my remembrance from what state I fell ; how glorious once above thy sphere. Id.

Thee I have heard relating what was done, Ere my remembrance. Id.

Cry unto God ; for you shall be remembered of him. Barclay.

Those proceedings and remembrances are in the Tower, beginning with the twentieth year of Ed-ward I. Hale.

Would I were in my grave ; For, living here, you're but my cursed remembrancers : I once was happy. Otway't Venice Preserved.

Sharp remembrance on the English part, And shame of being matched by such a foe, Rouse conscious virtue up in every heart. Dryden.

This is to be remembered, that it is not possible now to keep a young gentleman from vice by a total ignorance of it ; unless you will all his life mew him up. Locke.

Remembrance is when the same idea recurs, without the operation of the like object on the external sensory. Id.

A citation ought to be certain, in respect of the person cited ; for, if such certainty be therein omitted, such citation is invalid, as in many cases hereafter to be remembered.

This ever grateful in remembrance bear, To me thou owest, to me the vital air. Pope. We are said to remember any thing when the idea of it arises in the mind with a consciousness that we have had this idea before. Watts.

Sorrows remembered sweeten present joy. Pollok.

REMEMBRANCERS, anciently called clerks of the remembrance, certain officers of the exchequer, whereof three are distinguished by the names of the king's remembrancer, the lord treasurer's remembrancer, and the remembrancer oi the first fruits. The king's remembrancer enters in his office all recognizances taken before the barons for any of the king's debts, for appearances or observing of orders ; he also takes all bonds for the king's debts, and makes out processes thereon. He likewise issues processes against the collectors of the customs, excise, and others, for their accounts ; and informations upon penal statutes are entered and sued in his office, where all proceedings in matters upon English bills in the exchequer chamber remain. He makes out the bills of compositions upon penal laws, takes the statement of debts, and into his office are delivered all kinds of indentures and other evidences which concern the assuring any lands to the crown. He every year in crastino animarum reads in open court the statute for election of sheriffs; and likewise openly reads in court the oaths of all the officers, when they are admitted. The lord treasurer's remembrancer is charged to make out processes against all sheriffs, escheators, receivers, and bailiffs, for their accounts. He also makes out writs of fieri facias, and extent for debts due to the king, either in the pipe or with the auditors; and process for all such revenue as is due to the king on account of his tenures. He takes the account oi sheriffs ; and also keeps a record, by which it appears whether the sheriffs or other accountants pay their proffers due at Easter and Michaelmas ; and at the same time he makes a record, whereby the sheriffs or other accountants keep their prefixed days ; there are likewise brought into his office all the accounts of customers, comptrollers, and accountants, to make entry thereof on re-cord ; also all estreats and amercements are certified here, &c. The

remembrancer of the first fruits takes all compositions and bonds for the

payment of first fruits dad tenths; and makes out process against such as do not pay the same.

REMER'CIE, v. a. Fr. remercier. To thank. Obsolete.

Offering his service and his dearest life For her defence, against that earle to fight ; She him remercied, as the patron of her life.

Spenser.

REM'IGRATE, v. n. > Lat remigro. To

REMIGRA'TION, n.s. $ remove back again: removal back again.

The Scots, transplanted hither, became acquainted with our customs, which, by occasional emigrations, became diffused in Scotland. Hale.

Some other ways he proposes to divest some bo-dies of their borrowed shapes, and make them remi-grate to their first simplicity. Boyle.

REMIND', v. a. Re and mind. To put in mind ; to force to remember.

When age itself, which will not be defied, shall begin to arrest, seize and remind us of our mortality by pains and dulness of senses ; yet then the pleasure of the mind shall be in its full vigour. South.

The brazen figure of the consul, with the ring on his finger, reminded me of Juvenal's majoris pondera gemmae. A ddiion .

REMINIS'CENCE, n. s.) Lat. reminiscens.

REMINISCEN'TIAL, adj. S Recollection ; recovery of ideas ; relating to memory.

I cast about for all circumstances that may re-vive my memory or reminiscence.

Hale's Origin of Mankind.

Would truth dispense, we could be content with Plato, that knowledge were but remembrance, that intellectual acquisition were but reminiscential evocation. Browne.

For the other part of memory, called reminiscence, which is the retrieving of a thing at present forgot, or but confusedly remembered, by setting the mind to ransack every little cell of the brain ; while it is thus busied, how accidentally does the thing sought for offer itself to the mind ! South.

REMIREMONT, a town in the north-east of France, situated on the Moselle, among the Vosges mountains. It is the centre of the traffic of a large mountain district, and has some cotton manufactures and iron works. It had formerly a celebrated abbey for ladies of superior birth. The environs produce cherries and timber. Inhabitants 4000. Fourteen miles south-east of Epinal.

Fr. remis ; Lat. re-missus, remitto. Slack; negligent ; not intense or earnest ; not strict : (ˆremissible is, admitting of forgiveness: remission is, relaxation ; abatement; the giving back or relapse of a disease ; release ; forgiveness : the adverb and noun substantive follow the sense of remiss as negligent ; lax : to remit is, to relax ; resign ; defer ; forgive ; send back ; send money to a distance : as a verb neuter, to slacken ; abate : remittance, the act of sending money to a distance ; the sum of money sent : a remitter, he who sends it; and, in law, a restitution to the possession of lands by a more ancient title.

REMISS", adj. REMISS'IBLE, REMIS'SION, n. s. REMISS'LY, adv. REMISS'NESS, n. s. REMIT', v. a. & v. n. REMITTANCE, n. s REMIT"TOR.

He that blasfemeth agens the Holy Cost , hath not reinissioun into withoute ende, but he schal be gilli of eveilastynge trespas. Widif. Mark 3.

Whose soever sins ye remit, they are remitted unto them ; and whose soever sins ye retain, they are retained. John xx. 23.

How should it then be in our power to do it coldly or remisily ? so that our desire being natural, is also in that degree of earnestness whereunto nothing can be added. Hooker.

Mad ire and wrathful fury makes me weep, That thus we .die, while remits traitors sleep.

Shakspeare.

My pennance is to call Lucetta back. And ask remission for my folly past. Id.

Future evils,

Or new, or by remistness new conceived, Are now to have no successive degrees. Id.

At my lovely Tamora's intreats, I do remit these young men's heinous faults. Id. Error misclaim, and forgetfulness do now and then become suitors for some remission of extreme rigour.

Bacon.

The bishop had certain proud instructions in the front, thougn there were a pliant clause at the foot, that remitted all to the bishop's discretion. Id.

In grievous and inhuman crimes, offenders should be remitted to their prince to be punished in the place where they have offended. Hayward.

You said, if I returned next size in Lent, I should be in remitter of your grace ; In the' interim my letters should take place Of affidavits. Donne.

Many believe the article of remission of sins, but they believe it without, the condition of repentance, or the fruits of holy life. Toy/or.

No great offenders 'scape their dooms ; Small praise from lenity and remissnets comes.

Denham.

There was not an equal concurrence in the prosecution of this matter

among the bishops ; some of them proceeding more remissly in it. Clarendon. So willingly doth God remit his ir►► Milton.

That plea With God or man will gain thee no remission. Id.

These nervous, bold, those languid and reroisj ; Here cold salutes, but there a lover's kiss.

Roscommcm.

If when by God's grace we have conquered the first difficulties of religion, we grow careless and re-miss, and neglect our guard, God's spirit will not al-ways strive with us. Tillotson.

Your candour in pardoning my errors, may make me more remiss in correcting them. Dryden.

With suppliant prayers their powers appease ; The soft Napaean race will soon repent Their anger, and remit the punishment. Id.

The' Egyptian crown I to your hands remit ; And, with it, take his heart who offers it. Id.

This bold return with seeming patience heard,

The prisoner was remitted to the guard. Id..

This difference of intension and remission of the

mind in thinking, every one has experimented in

himself. Locke—

The magistrate can often, where the public good demands not the execution of the law, remit the punishment of criminal offences by his own authority, but yet cannot remit the satisfaction due to any private man. Locke.

As, by degrees, they remitted of their industry, loathed their business, and gave way to their pleasures, they let fall those generous principles, which had raised them to worthy thoughts. South.

Not only an expedition, but the remission of a

duty or tax, were transmitted to posterity after this manner. Addison.

A compact among-private persons furnished out the several remittances. Id. on Italy.

I remit me to themseives, and challenge their natural ingenuity to say, whether they have not sometimes such shiverings within them ?

Government of tlie Tongue.

n September and October these diseases do not abate or remit in proportion to the remission of the sun's heat. Woodward.

The great concern of God for our salvation is so far from an argument of remi$sness in us, that it ought to excite our utmost care. Rogers'* Sermons.

Jack, through the remissness of constables, has al-ways found means to escape. Arbuthnot.

Another ground of the bishop's fears is the remission of the first fruits and tenths. Swift.

When our passions remit, the vehemence of our speech remits too. Broome's Notes on the Odyssey.

REM'NANT, n. s. & adj. Corrupted from REMANENT, which see. Residue ; that which is left ; or that remains ; remaining.

Poor key-cold figure of a holy king ! Thou bloodless remnant of that royal blood, Be't lawful that I invocate thy ghost ? Shakspeare. It seems that the remnant of the generation of men were in such a deluge saved. Bacon.

I was intreated to get them some respite and breathing by cessation, without which they saw no probability to preserve the remnant that had yet escaped. King Charles.

The remnant of my tale is of a length To tire your patience. Dryden's Knight's Tale.

A feeble army and an empty senate, Remnants of mighty battles fought in vain.

Addison. It bid her feel

No future pain for me ; but instant wed A lover more proportioned to her bed ; And quiet dedicate her remnant life To the just duties of an humble wife. Prior. See the poor remnants of these slighted hairs ; My hands shall rend what even thy rapine spares.

Pope.

The frequent use of the latter was a remnant of popery, which never admitted scripture in the vulgar tongue. Swift.

REMO (St.), a sea-port of the Sardinian states, in the Genoa territory. It is built on an eminence rising gently from the Mediterranean. The gardens of orange and lemon trees with which it is surrounded render it a most delightful spot. The cathedral churches and college, are the only public edifices worth notice. The port is shallow, and admits only small vessels. In 1745, this place was bombarded by the British. Population 7500. Twenty-two miles east by north of Nice, and sixty-six south-east of Genoa.

REMOLTEN,parf. Re and molt. Melted again.

It were good to try in glass works, whether the crude materials, mingled with the glass already made and remolten, do not facilitate the making of glass with less heat. Bacon.

REMON'STRATE, v. n. } Fr. remonstrer ;

REMON'STRANCE, n. s. S Latin remonstro. To represent strongly ; show reason in strong terms : show ; discovery (not in use) ; strong representation.

The same God which revealeth it to them, would also give them power of confirming it unto others, either

with miraculous operation, or with strong and invincible remonstrance of sound reason. Hooker. You may marvel why I would

not rather

Make rash remonstrance of my hidden power,

Than let him be so lost. Shakspeare.

A large family of daughters have drawn up a remonstrance, in which they set forth that, their father having refused to take in the Spectator, they offered to abate the article ot bread and butter in the tea table. Addison's Spectator.

Importunate passions surround the man, and will not suffer him to attend to the remonstrances of justice. Rogers.

REM'ORA, n. s. Lat. remora. A let or obstacle : a fish or worm that sticks to ships, and retards their passage.

Of fishes you shall find in arms the whale, herring, roach, and remora. Peaeham on Blazoning.

The remora is about three-quarters of a yard long ; his body before three inches and a half over ; thence tapering to the tail end ; his mouth two inches and a half over : his chops ending angularly ; the nether a little broader, and produced forward near an inch ; his lips rough with a great number of little prickles.

Grew.

REMORA, the sucking fish, a species of ECHENEIS, which see.

REMORSE', n. s.) Fr. remords ; Lat. re—

REMORSE'FUL, adj. >morsus. Pain of guilt;

REMORSE'LESS. J reproach of conscience : hence tenderness ; pity : the adjective corresponding.

Many little esteem of their own lives, yet for remorse of their wives and children, would be withheld.

Spenser.

The rogues slighted me into the river, with as lit-tle remorse as they would have drowned a bitch's blind puppies. Shakspeare.

O Eglamour, think not I flatter, Valiant and wise, remorseful, well accomplished.

Id.

Eurylochus straight hasted the report Of this his fellows most remorseful fate. Chapman.

Not that he believed they could be restrained from that impious act by any remorse of conscience, or that they had not wickedness enough to design and execute it. Clarendon.

Where were the nymphs, when the remorseless deep Closed o'er the head of your lov'd Lycidas ?

Milton.

Curse on the' unpardoning prince, whom tears can

draw To no remorse ; who rules by lion's law. Dryden.

O the inexpressible horrour that will seize upon a sinner, when he stands arraigned at the bar of divine justice ! when he shall see his accuser, his judge, the witnesses, all his remorseless adversaries !

South's Sermons.

REMOTE', adj. ˆ Lat. remotus. Distant; REMOTE'LY, adv. > alien; abstracted; fo-REMOTE'NESS, n. s. 3 reign : the adverb and noun substantive corresponding.

Their rising all at once was as the sound

Of thunder heard remote. Milton.

An unadvised transiliency from the effect to the remotest cause. Glanville.

It is commonly opinioned that the earth was thinly inhabited, at least not remotely planted before the flood. Browne.

The joys of heaven are like the stars, which by reason of our remoteness appear extremely little.

Boyle.

Titian employed brown and earthly colours upon the forepart, and has reserved his greater light for rem, teness and the back part of his landscanes.

Uryden.

Two lines in Mezentius and Lausus are indeed ‘???emotely allied to Virgil’s sense, but too like the tenderness of Ovid. Id.

In this narrow scantling of capacity, it is not all ‘???emote and even apparent good that affects us.

Locke.

If the greatest part of bodies escape our notice by their remoteness, others are no less concealed by their minuteness. Id.

How, while the fainting Dutch remotely fire, And the famed Eugene’s iron troops retire, In the first front amidst a slaughtered pile, High on the mound he died. Smith.

Remote from men, with God he passed his days ; Prayer all his business ; all his pleasure, praise.

Parnel.

His obscurities generally arise from the remoteness of the customs, persons, and things he alludes to.

Addisun.

In quiet shades, content with rural sports, Give me a life remote from guilty courts. Granville.

REMOVE’, v. a.,v.n.,&} FT. remuer ; Lat.

REMO’TION, n. s. REMO’VABLE, adj. REMO’VAL, n. s. REMOVED’, adj. REMO’VEDXESS, n.s. REMO’VER.

[n. s.

removeo. To put from its place ; } place at a dis- ††† tance : as a verb J neuter, to change J place ; to so from

place to place : as a noun substantive remove is

††† i i u c

synonymous with removal, and means change of

place; state of being removed ; departure; act of changing place or putting away ; step m a scale of gradation ; a small distance : remotion also is the act of removing, or state of being removed : removed, removedness, and remover, correspond with remove verb active : removable is such as may be removed.

H. mno††††l away the speech of .He trusty, and taketh ††, th, undUa nLg of ,he aged. ^ ^

To heare, from out the high-haired oake of JoVC, Counsaile from him, for means to his remote To his loved country. Chavman.

He longer in this paradise to dwell

Permits not ; to remove tbee I am come,

And send thce from the garden forth to till

The ground. Milton’s Paradise Lost.

This place should be both school and university, not needing a remove to any other house of scholar-ship. Milton.

What is early received in any considerable strength of impress, grows into oar tender natures ; and therefore is of difficult remove.

Glanville’s Scepsis.

The consequent strictly taken, may be a fallacious illation, in reference to antecedency or consequence ; as to conclude from the position of the antecedent unto the position of the consequent, or from the remotion of the consequent to the remotion of the antecedent. Browne’s Vulgar Errouri.

So looked Astrea, her’remooe designed, On those distressed friends she left behind. Waller.

A short exile must for show precede ; The term expired, from Candia they remove, And happy each at home enjoys his love. Dryden.

The sitting still of a paralytick, whilst he prefers it to a removal, is voluntary. Locke.

Thev are farther removed from a title to be innate, and the doubt of their being native impressions on the mind, is stronger against these moral principles than the other. *&

In all the visible corporeal world, quite down from us, the descent is by easy steps, and a continued se-ries of things, that in each remove differ very little one from the other. * < *

If the removal of these persons from their postr. has produced such popular commotions, the continuance of them might have produced something more fatal. Addison.

A freeholder is but one remove from a legislator, and ought to stand up in the defence of those laws.

In such a chapel, such curate is removeable at the

Spenser.

of one extremity with another, the world, seeking to procure a remedy, hath purchased a mere exchange of the evil before felt.

Hooker.

All this safety were remotion, and thy defence absence. Shakspeare.

Good God remove

The means that makes us strangers ! Id.

Rosaline, this favour thou shall wear; rlold, take you this, my sweet, and give me thine, So shall Biron take me for Rosaline : And change your favours too ; so shall your loves Woo contrary, deceived by these removes. Id.

Your accent is something finer than you could purchase in so removed a dwelling. Id.

I have eyes under my service, which look upon his removedness. ”’”

Let him, upon his removes from one place to another, procure recommendation to some person ofc quality residing in the place whither he removeth.

Bacon’s Essays.

Hasty fortune maketh an enterpriser and remover, but the exercised fortune maketh the able man.

Bacon.

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by

away by violence.

Arbuthnot.

the

You, who fill ~

Let kings no more with gentle mercy sway, But every monarch be the scourge of God, If from your thoughts Ulysses you remove, Who ruled his subjects with a father’s love. Pope.

Whether his removal was caused by his own fears or other men's artifices, supposing the throne to be vacant, the body of the people was left at hbertv to chuse what form of government they pleased.

OU'tft,

His horse wanted two removes, your horse wanted

, id.

nails.

REMOUNT, v. n. Fr. remonter. To mount

Stout Cymon soon remounts, and cleft in two IT- ††† i > u A Dri/ den.

His rivals head.

The rest remounts with the ascendln?.laj)?^',” is washed down into rivers, and

REMPHAN, an idol or Pagan god, whom St. Stephen says the Israelites worshipped in the wilderness as they passed from Egypt to the land of promise. ••• Acts vii. 43. That the martyr here quotes the words of the prophet Amos (ch. v. 26), all commentators are agreed. But, if this coincidence between the Christian preacher and the Jewish prophet be admitted, it follows that Chiun and Remphanare names of the same deity. Selden and other critics concluded that Chiun, and of course Remphan, is the planet Saturn Because Chiun is written Ciun, Cevan, Ceuan, Chevvin ; all of which are modern oriental names of that planet. But others, and particularly the late learned Dr. Doig, by various etymological arguments (which we need not quote), render it much more probable, that it was the affTpcucvtav or ffHpioc of the Greeks, the canis or stella cani-cularis of the Romans, and the dog-star of mo-dern Europe. What confirms his interpretation is, that the idol consecrated by the Egyptians to Sothis, or the dog-star, was a female figure with a star on her head ; and hence the prophet upbraids his countrymen with having borne the star of their deity.

REMS AND FILS, one of the twelve departments of the kingdom of Wurtemberg, to the east of that of the Rothenberg. Its area is 540 square miles ; population 126,000. It is divided into the five bailiwics of Germind, Goppingen, Schorndorf, Lorch, and Geislingen. The chief town is Goppingen.

REMU’NERATE, v. a.~\ Fr. remunerer ;

REMUNERATION, n. s. •• Latin remtmero. To

REMUNERATIVE, adj. j reward ; repay ; requite ; recompense : the noun substantive and adjective corresponding.

Is she not then beholden to the man. That brought her for this high good turn so far 1 Yes ; and will nobly remunerate. Shakspeare.

Money the king thought not fit to demand, because he had received satisfaction in matters of so great importance ; and because he could not remunerate them with any general pardon, being prevented therein by the coronation pardon. Bacon.

Bear this significant to the country maid Jaque-netta ; there is remuneration; for the best ward of mine honour is rewarding my dependants.

Shakspeare.

He begets a security of himself, and a careless eye on the last remunerations.

Browne's Vulgar Errourt.

The knowledge of particular actions seems requisite to the attainment of that great end-of God, in the manifestation of his punitive and remunerative justice. Boyle.

A collation is a donation of some vacant benefice in the church, especially when such donation is freely bestowed without any prospect of an evil remuneration. Ayliffe.

REMURIA, festivals established at Rome by Rorrrulus to appease the manes of his brother Remus. They were afterwards called lemuria, and celebrated yearly.

REMUR'MUR, v. a. Re and murmur. To utter back in murmurs ; repeat in low hoarse sounds.

Her fellow nymphs the mountains tear With loud laments, and break the yielding air ;

The realms of Mars remurmvred all around, And echoes to the Athenian shores rebound.

Dryden.

His untimely fate, the' Angitian woods In sighs remurmured to the Fucine floods. Id.

Her fate is whispered by the gentle breeze,

And told in sighs to all the trembling trees ;

The trembling trees, in every plain and wood. Her fate remurmur to the silver flood. Popr.

REMUS, the twin brother of Romulus, was exposed together with his brother by the cruelty of his grandfather. In the contest which happened between the two brothers, about building a city, Romulus obtained the preference, and Remus, for ridiculing the rising walls, was put to death by his brother's orders, or by Romulus himself. See ROMULUS. The Romans were afflicted with a plague after this murder, upon which the oracle was consulted, and the manes of Remus appeased by the institution of Remuria.

REMY (Si.,) a town of France, in the depart ment of the mouths of the Rhone, situated in a fertile plain, covered with meadows and gardens. It is chiefly remarkable for its circular prqnao-nade, and, about a mile from the town, there are a Roman triumphal arch and a mausoleum, both of remote antiquity, and in tolerable preservation. The environs produced formerly a vast quantity of olive oil. At present the chief article of trade is the wine supplied by the vines on the neighbouring hills. Marie is also found in the environs. Inhabitants 5100. Forty-two miles north-west of Marseilles.

RENAIX, or RONSE, a large inland town of theNetherlands, in East Flanders. It has extensive woollen manufactures, and a considerable commercial intercourse ; but the only public buildings of -interest are a magnificent chateau, an hospital, and three churches. Inhabitants 10,000. Seven miles south of Oudenarde, and twenty-two south by west of Ghent.

REN'ARD, n. s. Fr. renard, a fox. The name of a fox in fable.

Before the break of day, Renard through the hedge had made his way.

Dryden.

RENAUDOT (Theophrastus), M. D., an eminent French physician, born in London in 1583. He settled in Paris, became first physician to the dauphin, and was the first who published a gazette in France. He also wrote the lives of the celebrated prince of Conde, of marshal Gas-sion, and of cardinal Mazarin. He died in Paris in 1653.

RENAUDOT (Eusebius), grandson of the doctor, was born in Paris in

1646. He was educated under the Jesuits, and at Harcourt College; and became famous for his skill in oriental history and languages. In 1700 he attended cardinal Noailles to Rome, where Clement V. made him prior of Fossay. He wrote many learned dissertations, published in the Memoirs of the Academy of Inscriptions, of which he was a member, as well as of the French Academy,‘and the Academy delaCrusca. He died in 1720.

RENCOUNTER, n. s. & v. n. Fr. rencontre. Clash ; collision : to clash ; encounter.

Virgil’s friends thought fit to alter a line in Venus’s speech that has a relation to the rencounter.

Addium.

You may as well expect two bowls should grow ###ensible by rubbing, as that the rencounter of any bodies should awaken them into perception.

Collier.

So when the trumpet sounding gives the sign, The justling chiefs in rude rencounter join : So meet, and so renew the dextrous fight ; Their clattering arms with the fierce shock resound.

Granville.

RENCOUNTER, in single combats, is used by way of contradistinction to duel. When two persons quarrel and fight on the spot, without having premeditated the combat, it is called a rencounter.

RENCOUNTER, in heraldry, an spithet applied to an animal whose face stands right forward as if coming to attack the per-son, as in the annexed figure : ⬆⬆⬆

REND, v. a. pret. and part. pass. rent. Sax. rienuan ; Goth, renna. To tear with violence ; lacerate.

He rent a lion as he would have rent a kid, and he had nothing in his hand. Judges xiv. 4.

I will not rend away all the kingdom, but give one tribe to thy son. 1 King* xi. 13.

Will you hence

Before the tag return, whose rage doth rend

Like interrupted waters, and o'erbear

What they are used to bear? Shakspeare.

This council made a schism and rent from the most ancient and purest churches which lived before them. White.

By the thunderer's stroke it from the root is rent, So sure the blows which from high heaven are sent.

Cowley.

What you command me to relate, Renews the sad remembrance of our fate, An empire from its old foundations rent. Dryden. Thou viper

Hast cancelled kindred, made a rent in nature,

And through her holy bowels gnawed thy way,

Through thy own blood to empire. Id.

Look round to see

The lurking gold upon the fatal tree ; Then rend it off. Id. JEneis.

Is it not as much reason to say, when any monarchy was shattered to pieces, and divided amongst revolted subjects, that God was careful to preserve monarchial power, by rending a settled empire into a

multitude of little governments 1 Locke.

He who sees this vast rent in so high a rock, how the convex parts of one side exactly tally with the concave of the other, must be satisfied that it was the effect of an earthquake. Addison.

When its way the' impetuous passion found, I rend my tresses, and my breast I wound. Pope.

REN'DER, v. a. & n. s. Fr. rendre ; Span. rendir. To return; payback; restore* give on demand ; give generally ; yield ; surrender ; exhibit a surrender.

Will ye render me a recompense 1 Joel iii. 4.

The sluggard is wiser in his own conceit than seven men that can render a reason. Proverbs.

I heard him speak of that same brother,

And he did render him the most unnatural

That lived 'mongst men. Shakspeare.

Newness

Of Gloten's death, we being not known, nor mustered Among the bands, may drive us to a render. Id.

My rendering my person to them, may engage their affections to me. King "Charles.

Saint Augustine renders another reason, for which the apostles observed some legal rites and ceremonies for a time. White.

One, with whom he used to advise, proposed to him to render himself upon conditions to the earl of Essex. Clarendon.

Let him look into the future state of bliss or misery, and see there God, the righteous judge, ready to render every man according to his deeds.

Locke.

Render it in the English a circle ; but 'tis more truly rendered a sphere.

Bumet'.s Theory of the Earth.

Because the nature of man carries him out to ac-tion, it is no wonder if the same nature renders him solicitous about the issue. South't Sermont.

Hither the seas at stated times resort, And shove the loaden vessels into port ; Then with a gentle ebb retire again, And render back their cargo to the main. Addison.

Logick renders its daily service to wisdom and ××irtue. Watts.

Love Can answer lo××e, and render bliss secure.

Thomson.

Would he render up Hermione, And keep Astyanax, I should be blest ! A. Philips.

Mr. Hook, in his Philos. Exper., p. 306, imagines this to be a dilatable or compressible tube, like the air bladders of fish, and that, by contracting or permitting it to expand, it renders its shell buoyant or the contrary. Darwin.

RENDEZVOUS', n. s. & v. n. Fr. rendezvous. Assembly ; meeting appointed ; appointed sign of meeting; to meet at any appointed place.

A commander of many ships should rather keep his fleet together than have it severed far asunder ; for the attendance of meeting them again at tht next rendezvous would consume time and victual.

Ealeigk's Apology.

The philosopher's-stone and a holy war are but the rendezvous of cracked brains, that wear their feather in their head instead of their hat. Bacon .

The king appointed his whole army to be drawn together to a rendezvous at Marlborough.

Clarendon.

This was the general rendezvous which they all got to, and, mingling more and more with that oily liquor, they sucked it all up. Burnei.

RENEALMIA, in botany, wild pine-apple, a genus of the monogynia order, and monandria class of plants : COR. trifid ; nectarium oblong :

CAL. mouophyllous ; anthera sessile, opposite to the nectarium; the berry fleshy. Species one only, a native of Surinam.

RENEGADF,n.s. } Fr. renegat ; Span.

RENECA'DO.) renegade. An apostate ;

a rerolter.

Some straggling soldiers might prore renegadoet, but they would not revolt in troops.

Decay of Piety.

There lived a French renegado in the same place where the Castilian and his wife were kept prisoners.

Addison.

If the Roman government subsisted now, they would have had renegade seamen and shipwrights enough.

RENEGE', v. a. Lat. renego. To disown

Obsolete.

RENEW’, v. a. ˆ Re : RENEW’ABLE, adj. /-now. REMEW’AL, n. s.) store ;

Re and new ; Lat. re-To renovate ; re—

_, _. ., repeat: the adjective and noun substantive corresponding.

The body percussed hath, by reason of the percussion, a trepidation wrought in the minute parts, and so reneweth the percussion of the air. Bacon.

In such a night

Medea gathered the enchanted herbs, That did renew old ,/Eson. ShaLtpeare.

The last great age, foretold by sacred rhymes, Reneu’t its finished course, Saturnian times Roll round again. Dryden’t Virgil Ptttoralt.

Renewed to life, that she might daily die, I daily doomed to follow Dryden.

RENFREW [Gael. Rein Froach, i. e. the heath divison], an ancient royal borough of Scotland, the capital of Renfrewshire, and the seat of she sheriff’s court, and of a presbytery. It is seated on the Cathcart, which runs into the Clyde five miles above Glasgow. King Robert II. had a palace in it. The town consists of one narrow street, half a mile long, with some small lanes. It was made a royalty by king Robert, and has charters from king James VI. and queen Anne. It is governed

by a provost, two bailies, and sixteen counsellors ; who send a delegate to join with those from Glasgow, Dumbarton, and Rutherglen, in electing a representative in the imperial parliament. It has a salmon fishery on the Clyde, from Scotstown to Kelly bridge. Its chief manufactures are, a soap and candle work ; a bleachfield,and about 200 looms are employed in muflins for Paisley. It formerly stood on the banks)f the Clyde, and vessels of considerable burden were built close to the town ; but the river, changing its course nearly opposite to Scotstown, took a semicircular direction, leaving Kiug's Inch on the north, and came into its present course above the ferry. To supply this deficiency a large canal has been made along the old bed of the river, from the Clyde to the town, by which large vessels come up and unload at spring tides. It is three miles north of Paisley, six west of Glasgow, and forty-five east of Edinburgh.

RENFREW, or RENFREWSHIRE, a county of Scotland, about twenty-eight miles long from east to west, and from ten to twenty-four broad, bounded on the east by Lanarkshire, south by Ayrshire, west by the Clyde, which separates it from Dumbartonshire, and north by Cunning-ham. The surface is beautifully variegated with hills and valleys, woods and rivers, populous towns, villages, and gentlemen's seats. A considerable part of the soil is moorish and barren ; but along the banks of the Clyde, the Gryfe, the White and Black Carts, it is fertile. The general scenery is romantic and delightful. It abounds with coals, ironstone, and other minerals. Its chief towns are Paisley, Greenock, Port Glasgow, and Renfrew. It is divided into seventeen parishes. This county is sometimes called the barony, because it was anciently the inheritance of the royal house of Stuart ; and still affords the title of baron to the prince of Wales.

RENI (Guido or Guy), an illustrious Italian painter, born at Bologna in 1595. He first studied under Denis Calvert, and afterwards under the Caracci. He imitated Lewis Caracci, but afterwards formed a peculiar style of his own, that secured him the admiration of his contemporaries and of posterity. He was much honored, and lived in splendor ; but afterwards ruined himself by gaming. He died in 1642. There are several of his designs in print, etched by himself.

RENITENT, adj. Lat. renitens. Acting against any impulse elastically.

RENNEL, (John), was born in 1742, and, at thirteen, was sent on board a ship-of-war as a midshipman, and served in India. In 1766, he entered into the East India company's military service, and was

afterwards appointed surveyor-general of Bengal. He soon after gave to the world his Bengal Atlas, and an Account of the Ganges and Burrampooter. He returned to England in 1782, and published a Map of India, accompanied by a memoir. Besides the works already mentioned, he was the author of Memoir on the Geography of Africa, with a map (1790); the Marches of the British Army in the Peninsula of India (1792); Elucidation of African Geography (1793) ; a second and third Memoir of the Geography of Africa (1799) ; the Geographical System of Herodotus explained (4to , 1800); Observations on the Topography of the Plain of Troy. He died in 1830.

RENNELL (Thomas), B.D., F.R.S., son of Dr. Rennell, dean of Winchester, master of the (emple, &c., and grandson, by the mother's side, of Sir William Blacksione, was born at Winchester in 1787. At an early age he was placed at Eton, where he distinguished himself by his progress in classical literature, and obtained Dr. Buchanan's prize for the best Greek Sapphic ode on the Propagation of the Gospel in India. He joined at this period three of his contemporaries in the publication of a series of essays, under the name of the Miniature, which went through two editions. In 1806 he removed to King's College, Cambridge, and gave additional proof of his literary attainments, by gaining, in 1808, Sir William Browne's annual Greek medal for an ode entitled Veris Comites, as well as by his contributions to the Museum Criticum. Having taken orders, he became assistant preacher to his father at theTemple church.and in 1811 published his Animadversions on the Unitarian Translation of the New Testament, under the designation of A Student in Divinity, and about the same time became editor of the British Critic. In 1816 he was elected Christian advocate in the university of Cambridge, and the bishop of London conferred on him in the same year the vicarage of Kensington. In the former capacity he produced his Remarks on Scepticism as it is connected with the subjects of Organization and Life. Mr. Rennell was the rather induced to enter into this inquiry as he had himself made no slight progress in the study of anatomy. It was first printed in 1819, and went rapidly through six editions. His last work, undertaken in the same character, was entitled Proofs of Inspiration, or the Grounds of Distinction

between the New Testament and the Apocryphal Volume. In 1823 he obtained the mastership of St. Nicholas' hospital, with a stall in Salisbury cathedral ; and in the same year a pamphlet appeared from his pen addressed to H. Broug-ham, esq., M. P., on the subject of a speech made by that gentleman at Durham, taken in connexion with some articles in the Edinburgh review. In the autumn of this year he married a Miss Delafield of Kensington ; not many weeks after which a violent attack of fever terminated in a gradual decline, which carried him off in June the following year, just as he had completed his new translation of Munter's Narrative of the Conversion of Count Struensee. In private life he was highly esteemed.

REN-NES, a large town of France, the former capital of Brittany, and now of the department of the Ille and Vilaine, is situated in a large plain, at the confluence of these two rivers. The latter divides the town into two parts, connected by bridges. That built on the left bank of the river, and called the Lower Town, is almost on a level with the surface of the water, and subject consequently to inundations. 'The Upper Town, on the right bank, stands on an eminence, and forms the most considerable part of the city. Since a dreadful fire in 1720, by which nearly 900 houses were consumed, Ren-nes has been rebuilt on a regular plan ; but a few of the narrow streets and high antiquated houses remain ; and in the suburbs there is a number of wooden structures. The square called the Palais de Justice was constructed on the model of the Place Vendome at Paris, and had once a bronze statue of Louis XIV. Of the Place d'armes the Hotel de Ville forms the western facade; this, as well as the Place de la grande Cohue, and the Place de la Pompe, are all worth notice. The principal promenades are the Cours and the Tabor ; the former nearly a mile long.

The principal public edifices are the cathedral, dedicated to St. Peter; the building, formerly the house of meeting for the parliament of Brittany ; the town-hall, arsenal, and a college formerly belonging to the Jesuits. Here i►► also a small university, famous for the study of law ; also a society of arts and sciences. It has besides a college royal, an academy, a school of medicine and surgery, and a drawing school ; a public library, museum, physical cabinet, chemical laboratory, botanical garden, &c. The trade is promoted by the Vilaine being navigable for large vessels towards its mouth, and for barges of

considerable burden to this place. The objects of commerce are corn, cattle, hemp, flax, and timber ; lead, wax, and butter. The manufactures consist of blankets, sail-cloth, hats, thread, stockings, gloves, and hardware. Ren-nes is the ‘see of a bishop, and the seat of a court of appeal for four adjoining departments. It has likewise criminal and commercial courts. Inhabitants 30,000. Eighty miles north of Nantes, and 220 west of Paris.

REN’NET, n. s. f Properly Fr. rainette, a REN’NETIXG. \ little queen. A kind of apple.

A golden rennet is a very pleasant and fair fruit,

of a yellow flush, and the best of bearers for all sf ts of soil ; of which there are two sorts, tlie large sort and the small. Mortimer.

Ripe pulpy apples, as pippins and rennetingt, are of a syrupy tenacious nature. Id.

REN’NET, n. s. See RUNNET, and below.

A putredinous ferment coagulates all humours, as milk with rennet is turned. ††† Flayer on the Humours.

RENNET, in rural economy, a term applied to the coagulum prepared from the stomach of a young calf for the purpose of making cheese. See DAIRY.

RENNIE (John), F. R. S., the celebrated engineer, was born near Linton in East Lothian, in 1760, and was the son of a respectable farmer, who placed him with an eminent mill-wright. After serving out his articles, he commenced business on his own account, but in 1783 was induced to remove to London, where he distinguished himself by the construction of the Albion mill. His next work of magnitude was the erection of machinery in Whitbread’s brewery. His reputation from this time increased, until he was regarded as standing at the head of the English civil engineers. Among his works may be mentioned Ramsgate harbour, Waterloo and Southwark bridges (as to construction), the Breakwater at Plymouth, and the Bell Rock light-house. No one has effected greater performances in the difficult branches of his profession. Although in some respects a self-taught man, he acquired the respect of the most distinguished men of science and learning in his day. His death took place at his house in Stamford Street, Blackfriars, October 4th, 1821, in his sixty-first year, and he

was buried with the respect due to his eminent talents in St. Paul's cathedral.

REN'OVATE,v.a. > Lat. renew. To renew;

RENOVA'TION, n. s. 5 restore to the first state : the noun substantive corresponding.

Sound continueth some small time, which is a renovation, and not a continuance ; for the body percussed hath a trepidation wrought in the minute parts, and so reneweth the percussion of the air.

Bacon's Natural History. To second life

Waked in the renovation of the just, Resigns him up, with heaven and earth renewed.

Milton^

All nature feels the renovating force Of winter, only to the thoughtless eye In ruin seen. Thomson's Winter.

RENOUNCE', v. a. &v.n. 1 Fr. renoncer ; RENOUNCE'MENT,►►. s. > Lat. renuncio. To RENUN'CIATION. J disown ; abne—

gate ; abjure : Dryden's use of the word, as a verb neuter, has never been followed : the noun substantive corresponding.

This woild I do renounce; and in your sights Shake patiently my great affliction off. Shakspeare.

I hold you as a thing enskied and sainted ; By your renouncement, an immortal spirit. Id. Pride and passion, and the opinions of the world must not be our counsellors ; for we renounced them at our baptism. ftt&mtU.

From Thebes my birth I own ; and no disgrace Can force me to renounce the honour of my race.

lh\l .' ►►►:

RENTS.

On this firm principle I ever stood; He of my sons, who fails to make it good, By one rebellious act renounces to my blood. Td. He that loves riches, can hardly believe the doctrine of poverty and renunciation of the world.

Taylor.

RENOWN', n. s. & v. a. Fr. renommee; Lat. renomen. Fame ; celebrity ; praise widely spread ; to make famous.

These were the renowned of the congregation, princes of the tribes, heads of thousands. Numbers.

She

Is daughter of this famous duke of Milan, Of whom so often I have heard renown. Shakspeare.

Let us satisfy our eyes With the memorials and the things of fame, That do renown this city. Id.

That thrice renowned and learned French king, finding Petrarch's tomb without any inscription, wrote one himself; saying, Shame it was that he who sung his mistress's praise seven years before her death, should twelve years want an epitaph.

Peacham. The rest were long to tell, though far renowned.

Milton.

'Tis of more renown To make a river, than to build a town. Waller.

Nor envy we Thy great renown, nor grudge thy victory. Dryden.

Soft elocution does thy style renown, Gentle or sharp according to thy choice, To laugh at follies or to lash at vice. Id.

Ilva,

An isle renowned for steel and unexhausted mines.

Id.

In solemn silence stand Stern tyrants, whom their cruelties renown And emperors in Parian marble frown. Addison. A bard, whom pilfered pastorals renown. Pope.

Nor far beneath her in renou-n is she Who, through good breeding, is ill company ; Whose manners would not let her larum cease, Who thinks you are unhappy when at peace.

Young.

And when recording History displays Feats of renown, though wrought in ancient days ; Tells of a few stout hearts, that fought and died, Where duty placed them, at their country's side ; The man that is not moved with what he reads, That takes not fire at their heroic deeds, Unworthy of the blessings of the brave, Is base in kind, and born to be a slave. Cowper.

RENSSELAER, a county of New York, United States, bounded north by Washington county, east by Vermont and Massachusetts, south by Colombia county, and west by the Hudson. The eastern part is hilly, and in some parts mountainous : indeed the general character of the country is broken and hilly ; but the valleys are extensive, and the alluvial flats of considerable extent, warm and fertile. The wet uplands are covered with a luxuriant growth of lofty white pine, variously intermixed with hemlock, maple ash, cherry, beech, and birch; and the skilful farmer finds all the varieties of soil which these contrarieties of forest vegetation would indicate. It sends four members to the house of assembly. The chief towns are Troy and Lansinburgh.

RENT, v. n. [now written rant, yet probably from rend]. To roar; to bluster: we still say, u tearing fellow.

He ventured to dismiss his fear, That partings wont to rent and tear, - And give the desperatest attack To danger still behind his back. Hudibras.

RENT, v. a. & n. s. t Fr. rente ; Ital. rendita ; RENT'ER. J low Lat. reddendum. Revenue ; annual payment ; to hold as a tenan*. See below : a renter is he who pays rent.

Idol ceremony,

What are thy rents ? what are thy comings in? O, ceremony, shew me

but thy worth ! Shakspears

Such is tlje mould, that the blest tenant feeds On precious fruits, and pays his rent in weeds.

Waller.

The estate will not be let for one penny more or less to the renter, amongst whomsoever the rent he pays be divided. Locke.

When a servant is called before his master, it is often to know, whether he passed by such a ground, if the old man who rents it is in good health.

Addison's Spectator. I bought an annual rent or two, And live just as you see I do. Pope.

Folks in mudwall tenement, Present a peppercorn for rent. Prior.

Anticipated rents, and bills unpaid, Force many a shining youth into the shade, Not to redeem his time, but his estate, And play the fool, but at a cheaper rate. Cowper.

RENTS are classed by Blackstone among incorporeal hereditaments. The word rent or render, redditus, according to him, signifies a compensation or return, it being in the nature of an acknowledgment, given for the possession of some corporeal inheritance. See 1 Inst. 144. It is defined to be a certain profit issuing yearly out of lands and tenements corporeal. It must be a profit; yet there is no occasion for it to be, as it usually is, a sum of money : for spurs, capons, horses, corn, and other matters may be rendered, and frequently are rendered, by way of rent. It may also consist in services or manual operations; as, to plough so many acres of ground, to attend the king or the lord to the wars, and the like ; which services, in the eye of the law, are profits. This profit must also be certain ; or that which may be reduced to a certainty by .either party. It must also issue yearly ; though there is no occasion for it to issue every successive year ; but it may be reserved every second, third, or fourth year : yet, as it is to be produced out of the profits of lands and tenements as a recompense for being permitted to hold or enjoy them, it ought to be reserved yearly, because those profits do annually arise, and are annually renewed. It must issue out of the thing granted, and not be part of the land or thing itself; wherein it differs from an exception in the grant, which is always of part of the thing granted. Plowd. 13 : 8 Rep. 71. It must, lastly, issue out of lands and tenements corporeal ; that is, from some inheritance whereunto the owner or grantee of the rent may

have recourse to distrain. Therefore a rent, strictly speaking, cannot be reserved out of an advowson, a common, an office, a franchise, or the like; but a grant of such annuity or sum (e. g. by a lessee of tithes, or other incorporeal hereditament) may operate as a personal contract, and oblige the grantor to pay tho money reserved, or subject him to an action of

debt for the amount of the rent agreed upon ; though it doth not affect the inheritance, and is no legal rent in contemplation of law. And the king might always reserve a rent out of incorporeal hereditaments; the reason of which is, that he, by his prerogative, can distrain on all the lands of his lessee. 1 Inst. 47, a. in n.

I. Of the different kinds of rent. ❖❖❖ There are, at common law, three kinds of rent : rentser- vice, rent-charge, and rent-seek.

Rent-service is so called, because it hath some corporeal service incident to it ; as, at the least, fealty, or the feudal oath of fidelity. 1 Inst. 142. For, if a tenant holds his land by fealty, and 10s. rent ; or by the service of ploughing the lord's land and 5s. rent ; these pecuniary rents, being connected with personal services, are therefore called rent-service. And for these, in case they be behind, or arrere, at the day appointed, the lord may distrain of common right, without reserving any special power of distress ; provided he hath in himself the reversion, or future estate of the lands and tenements, after the lease or particular estate of the lessee or grantee is expired. The services are of two sorts, either expressed in the lease or contract, or raised by implication of law. When the services are expressed in the contract, the quantum must be either certainly mentioned, or be such as, by reference to something else, may be reduced to a certainty ; for, if the lessor's demands be uncertain, it is impossible to give him an adequate satisfaction or compensation for them, as the jury can-not determine what injury he has sustained. Co. Litt. 96, a : Stil. 397 : 2 Ld. Raym. 1160.

A rent-charge is where the owner of the rent has no future interest, or

reversion expectant, in the land ; as where a man, by deed, maketh over to others his whole estate in fee simple, with a certain rent payable thereout ; and adds to the deed a covenant or clause of distress, that if the rent be arrere, or behind, it shall be lawful to distrain for the same. In this case the land is liable to the distress, not of common right, but by virtue of the clause in the deed : and therefore it is called a rent-charge, because in this man-ner the land is charged with a distress for the payment of it. 1 Inst. 143. A clear rent-charge must be free from the land-tax. Doug. 602.

Where a man, seised of lands, grants by deed-poll, or indenture, a yearly rent to be issuing out of the same land, to another in fee, in tail, for life or years, with a clause of distress ; this is a rent-charge, because the lands are charged with a distress by the express grant or provision of the parties, which otherwise it would not be. So, if a man make a feoffment in fee, reserving rent, and if the rent be behind, that it shall be lawful for him to distrain ; this is a rent charge, the word ‘ reserving ‘ amounting to a grant from the feoffee. Litt. ►► 217 : Co. Litt. 170 a: Plowd. 134.

An annuity is a thing very distinct from a rent-charge, with which it is frequently confounded : a rent-charge being a burden imposed upon and issuing out of lands ; whereas an annuity is a yearly sum chargeable only upon the person of the grantor. Therefore if a man by deed grant to another the sum of ►►20 per

annum, without expressing out of what lands it shall issue, no land at all shall be charged with it; but it is a mere personal annuity: which is of so little account in the law, that, if granted to an eleemosynary corporation, it is not within the statutes of mortmain ; and yet a man may have a real estate in it, though his security is merely personal. 2 Comm. c. 3. See 1 Inst

144.

Rent-seek, redditus siccus, or barren rent, is in effect nothing more than a rent reserved by deed, but without any clause of distress. A rent-seek is so called because it is unprofitable to the grantee ; as, before seisin had, he can have no remedy for recovery of it ; as where a man seised in fee grants a rent in fee for life or years, or where a man makes a feoffment in fee or for life, remainder in fee reserving

rent, without any clause of distress, these are rent-seek ; for which, by the policy of the ancient law, there was no remedy, as there was no tenure between the grantor and grantee, or feoffor and feoffee ; consequently, no fealty could be due. Litt. ►► 215, 218 : Cro. Car. 520 : Kelw. 104 : Cro. Eliz.

656.

Though a rent is an incorporeal hereditament it is susceptible of the same limitations as other hereditaments. Hence it may be granted or devised for life, or in tail, with remainders or limitations over. But there is this difference between an intail of lands, and an intail of rent ; that the tenant in tail of lands, with the immediate reversion in fee in the donor, may, by a common recovery, bar the intail and reversion : See title Recovery. Whereas the grantee in tail of the rent de novo, without a subsequent limitation of it in fee, requires, by a common recovery only a base fee, determinable upon his decease, and failure of the issues in tail : but if there is a limitation of it in fee, after the limitation in tail, the recovery of the tenure in tail gives him the fee-simple. The reason of this difference is, that it would be unjust that the conveyance of a grantee of a rent should give a longer duration or existence to the rent, than it had in its original creation. It is true that the barring of an estate-tail in land is equally contrary to the intention of the grantor. But a rent differs materially from land. The old principles of the feudal law looked upon every modification of landed property, which was considered to be against com-mon right, with a very jealous eye. Now a rent-charge was supposed to be against common right ; the grantee of the rent-charge being subject to no feudal services, and being a burden on the tenant who was to perform them. Upon this principle the law, in every instance, avoided giving, by implication, a continuation to the rent, beyond the period expressly fixed for its continuance. Thus, if a tenant in tail of land die without issue, his wife is entitled to dower for her life out of the land, notwithstanding the failure of the issue ; but the widow of a tenant in tail of rent is not entitled to her dower against the donor. So if a rent is granted to a man and his heirs, generally, and he dies without an heir, the rent does not escheat, but sinks into the land. It is upon this principle that, when there is not a limitation over in fee, a tenant in tail of

tent acquires by his recovery no more than a base fee ; as has been already stated : but if there is a limitation in fee ; after the particular limitation in tail, the grantor has substantially limited the rent in fee ; and, therefore, it is doing him no injustice, that the recovery should give the donee who suffers it an estate in fee simple.

1 Inst. 298, a. in n.

There are also other species of rents, which are reducible to these three. Rents of assize are the certain established rents of the freeholders and ancient copyholders of a manor, which can-not be departed from or varied. 2 Inst. 19. Those of the freeholders are frequently called chief rents, redditus capitales ; and both sorts are indifferently denominated quit-rents, quieti redditus, because thereby the tenant goes quit and free of all other services. When these payments were reserved in silver or white money, they were anciently called whiterents, or blanch-farms, redditus albi ; in contradistinction to rents reserved in work, grain, or baser money, which were called redditus nigri, or black mail.

2 Inst. 19. Rackrent is only a rent of the full value of the tenement, or near it. A fee-farm rent is a rent-charge issuing out of an estate in fee ; of at least one-fourth of the value of the lands, at the time of its reservation : for a grant of lands, reserving so considerable a rent, is in-deed only letting lands to farm in fee simple, instead of the usual methods for life or years. 1 Inst. 143. It seems that the quantum of the rent is not essential to create a fee-farm. See 1 Inst. 145 b. n. 5 : And also, whether a fee-farm must necessarily be a rent-charge ; or may not also be a rent-seek; and Doug. 605. These are the general divisions of rent ; but the difference between them (in respect to the remedy for recovering them) is now totally abolished ; and all persons may have the like remedy by distress for rents-seek, rents of assise, and chief-rents (if paid for three years within twenty years preceding the act, or if created since), as in case of rents reserved upon lease. Stat. 4 Geo. II. c. 28 ►► 5.

II. Modes of recovering rent. ►►► By stat. 8 Ann. cap. 14, No goods, upon any tenements leased, shall be taken by any execution, unless the party, at whose suit the execution is sued out, shall, be-fore the

removal of such goods, pay to the landlord of the premises, or his bailiff, all money due for rent for the premises ; provided the arrears do not amount to more than one year's rent : and, in case the arrears shall exceed one year's rent, then the party, paying the said landlord, or his bailiff, one year's rent, may proceed to execute his judgment: and the sheriff is required to levy and pay to the plaintiff, as well the money paid for rent, as the execution money. ►► 1 . The act contains a proviso to prevent prejudice to the crown, in recovering and seizing debts, fines, and forfeitures. ►► 8. See Ogilvy, v. Wingate, Parl. Cas.

It shall be lawful for any person having rent due on any lease for life, years, or at will, determined to distrain for ruch arrears after determination of the leases : provided, That such distress T'H aiAi'if within six calendar months after the determination of such lease, and during the continuance of such landlord's title, and during

the possession of the tenant from whom such ar* rear became due. Stat. 8, Ann. c. 14, sec. 6, 7. The above clauses were made to remedy the de-fect of the common law, under which the power of distress ceased wifh the tenure. 1 Inst. 162, t— in n.

By stat. 4 Geo. II., cap. 28, in case any tenant for life or years, or other person who shall come into possession of any lands, &c., under or by collusion of such tenant, wilfully hold over, after the determination of such term, and after de-mand made in writing for delivering possession, such person holding over shall pay double the yearly value of the lands, &c., so detained, sec. 1 .

In all cases between landlord and tenant, on half a year's rent being in arrear, the landhold having a right by law to reenter for non-payment, may without any formal demand or re-entry, serve adecla-ration in ejectment; and in case of judgment or nonsuit for not confessing lease, entry, and ouster, it shall appear that half a year's rent was due before a declaration served, and no sufficient distress to be found ; and that the lessor in ejectment had power to reenter; the lessor in ejectment shall recover judgment. Sec. 2. Lessees, &c., filing a bill in equity, shall not have an injunction against proceedings at law, unless they shall, within forty days after answer filed, bring into court such money as the lessors in their an-swer shall swear to be in arrear, over and above all just allowances, and costs taxed, there to re-main till the hearing of the cause, or to be paid to the lessors on good security, subject to the decree of the court; and in case such bill shall be duly filed, and execution executed, the lessors shall be accountable for only

so much as they shall really make of the premises from the time of their re-entry; and, if the same shall happen to be less than the usual rent reserved, the lessees shall not be restored to the possession until they shall make up the deficiency to the lessors. Sec. 3. If the tenant, at any time before trial, tende ††† or pay into court all arrears with costs, proceed ††† ings on ejectments shall cease. Sec. 4.

Previous to the above statute, the courts, botii of law and equity, had exercised a discretionary power of staying the lessor from proceeding at law, in cases of forfeiture for non-payment of rent, by compelling him to take the money really due to him.

By stat. 11 Geo. II., c. 19, it shall be lawful for the landlord, where the agreement is not by deed, to recover a reasonable satisfaction for the tenements occupied by defendants, in an action on the case, for the us††i and occupation of what was held ; and if, in evidence on the trial, any parol demise or agreement, not by deed, whereon a certain rent was reserved, shall appear, plantiff may make use thereof as an evidence of the quantum of the damages. Sec. 14.

If any tenant holding tenements at a rackrent, or where the rent reserved be full three-fourths of the yearly value of the premises, who shall be in arrear for one year's rent, desert the premises, nnd leave the same uncultivated or unoccupied, so as no sufficient distress can be had to countervail the arrears ; it shall be lawful for two justices of the peace (having no interest in the premises) toco upon and view the same, and to affix, on the mos

notorious part, notice in writing, what day (at the distance of fourteen days at least) they will re-turn to take a second view ; and if, on such se-cond view, the tenant, or some person on his be-half, shall not appear and pay the rent in arrear, or there shall not be sufficient distress on the premises, the justices may put the landlord in possession, and the lease to such tenants as to any demise therein contained only shall become void. Sec. 16. In case any tenant give notice of his intention to quit, and shall not accordingly deliver up the

possession at the time in such notice contained, the tenant, his executors, or administrators, shall pay to the landlord double the rent which he should otherwise have paid. Sec. 18.

By slat. 11 Geo. II. c. 19, above quoted, landlords are empo\vered to follow goods fraudulently and clandestinely removed off the premises within thirty days: but this apples to the goods of the tenant only, and not to those of a stranger. See the statutes 56 Geo. III. c. 88, and 58 Geo. III. c. 39, to amend the law of Ireland respecting the recovery of tenements from absconding, overholding, or defaulting tenants, and - for protection of the tenant from undue distress, by which many provisions cf the English acts are extended to Ireland.

The general remedy for rent is by distress, under the restrictions and directions of the statutes : but there are also other remedies particularised by Blackstone, 3 Comm. c. 15, which it will be sufficient here to notice in a summary manner.

By action of debt, for the breach of the express contract. This is the most usual reme-dy, when recourse is had to any action at all for the recovery of pecuniary rents : to which species of render almost all free services are now reduced since the abolition of the military tenures : But for a freehold rent, reserved on a lease for life, &c., no ‘action of debt lay, by the common law, during the continuance of the freehold, out of which it issued ; for the law would not suffer a real injury to be remedied by an action that was merely personal. 1 Roll. Abr. .595. But by stat. 8 Ann. c. 14, sec. 4, an ac-tion of debt is given for rents on leases for life or lives, as upon a lease for years : and by stat. 5 Geo. III. c. 17, which enables ecclesiastical persons to lease tithes and other incorporeal inheritances, action of. debt is given (by sec. 3) for recovery of rent on such leases ; and perhaps the first of these statutes extends to leases of incorporeal hereditaments. See 1 Inst. 47, a in //.

The rent in a lease must be reserved to the lessor, or his heirs, &c., and not to a stranger. See 1 Inst. 213, 6. The principle which gave rise to this rule is, that rent is considered as a retribution for the land, and is therefore payable to those who would otherwise have had the land. It is to be observed that remainder men in a settlement, being at first view neither feoffors, donors, lessors, nor the heirs of feoffors, donors, or lessors, there seems to have been, for some time after the statute of Uses, a doubt whether the rents of leases, made by virtue of powers contained in settlements, could be reserved to them. In Chudleigh’s case, 1 Rep. 159, it is

positively said, that if a feoffment in fee be made to the use of one for life, remainder to another in tail with several remainders over, with a power to the tenant for life to make leases, reserving the rent to the reversioners, and the tenant for life accordingly make leases; neither his heirs, nor any of the remainder-men, shall have the rent. But, in Harcourt v. Pole, 1 Anders. 273, it was adjudged that the remainder-men might distrain in these cases : and in T. Jones' 35, the dictum in Chudleigh's case is de-nied to be law. The determination in Harcourt v. Pole will appear incontrovertibly right, if we consider that Both the lessees and remainder-men derive their estate out of the reversion or original inheritance of the settler ; and therefore the law, to use Coke's expression in Whitlock's case> 8 Rep. 71, will distribute the rent to every one to whom any limitation of the use is made. 1 Inst. 214, a in n; and see Id. 213, b in n.

III. Respecting the demand of rent. ••• With respect to the necessity of demanding rent, there is a material difference between a remedy by re-entry, and a remedy by distress, for non-payment of the rent ; for, where the remedy is by way of re-entry for non-payment, there must be an ac-tual demand made, previous to the entry, otherwise it is tortuous ; because such condition of re-entry is in derogation of the grant, and the estate at law being once defeated, is not to be restored by any subsequent payment : and it is presumed that the tenant is there residing on the premises, in order to pay the rent for preservation of his estate, unless the contrary appears by the lessor's being there to demand it. Therefore, unless there be a demand made, and the tenant thereby, contrary to the presumption, appears not to be oh the land ready to pay the rent, the law will not give the lessor the benefit of re-entry, to defeat the tenant's estate, without a wilful default in him ; which cannot appear without a demand has been actually made on the land. So, if there had been a nomine paenae given to the lessor for non-payment, the lessor must demand the rent before he can be entitled to the penalty.

Where the remedy for recovery of rent is by distress, there needs no demand previous to the distress; though the deed says that if the rent be behind, being lawfully demanded, that the lessor may distrain ; but the lessor, notwithstanding such clause, may distrain when the rent becomes due. So it is, if a rent-charge be granted to A, and if it be behind, being lawfully demanded, that then A shall distrain; be may distrain without any previous demand.

But this general distinction must be understood with these 'estiictions : ••• That if the king makes a lease, reserving rent, with a Clause of re-entry for non-payment, he is not obliged to make any demand

previous to his re-entry ; but the tenanc is obliged to pay his rent for the preservation of his estate, because it is beneath the king to attend his subject to demand his rent. ,

But this exception is not to be extended to the duchy lands, though they be in the hands of the king ; for the king must make a demand before he can reenter into such lands, by the stat. 1 Hen. IV. c. 18, which provides, that, when the duchv lands come to the king, they shall not be

under such government and regulations as the demesnes and possessions belonging to the crown. Moor 149, 160. So, if a prebendary make a lease, rendering rent, and if the rent be in ar-rear and demanded, that it shall be lawful for the prebendary to reenter; if the reversion in this case comes to the king, the king must in this case demand the rent, though he shall be by his prerogative excused of an implied demand : for the implied demand is the act of the law, the other the express agreement of the parties, which the king's prerogative shall not defeat. Therefore, in case of the king, if he makes a lease reserving rent, with a proviso, if the rent be in arrear for such a time (being lawfully demanded, or demanded in due form), that then the lease shall be void ; it seems that not only the patentee of the reversion in this case, but also the king himself, whilst he continues the reversion in his own hands, is obliged to make an actual demand by reason of the express agreement for that purpose. Dyer 87, 210. But if the king, in cases where he need not make a de-mand, assigns over the reversion, the patentee cannot enter for non-payment, without a previous demand, because the privilege is inseparably annexed to the person of the king.

Another exception is, where the rent is payable at a place off the land, with a clause that if the rent be behind, being lawfully demanded at the place off the land, or where the clause is, if the rent be behind, being lawfully demanded of the person who is to pay it; that then he may distrain ; in these cases, though the remedy be by distress only, yet the grantee cannot distrain without a previous demand : because

here the distress and demand being not complicate, but different acts, to be performed at different places and times, the demand must be previous to the distress; for distress is an act of grace, not of common right, and therefore must be used in the manner that it is given.

And there seems to have been formerly another exception admitted, that where the remedy was by way of entry, for non-payment, yet there needed no demand, if the rent were made payable at any place off the land ; because they looked on the money payable off the land to be in nature of a sum in gross, which the tenant had at his own peril undertaken to pay; but this opinion has been entirely exploded, for the place of payment does not change the nature of the service, but it remains in its nature a rent, as much as if it had been made payable on the land ; therefore, the presumption is, that the te-nant was thereto pay it, unless it be overthrown by the proof of a demand; and without such de-mand, and a neglect or refusal, there is no injury to the lessor, consequently the estate of the lessee ought not to be defeated. But when the power of re-entry is given to the lessor for non-payment, without any further demand, there it seems that the lessee has undertaken to pay it, whether it be demanded or not ; and there can be no presumption in his favor in this case ; because by dispensing with the demand he has put himself under the necessity of making an actual proof that he was ready to tender and pay the rent. Dyer 68.

There is another exceptron, when the remedy is by distress, and that is, when the tenant was ready on the land to pay the rent at the day, and made a tender of it ; there it seems there must be a demand previous to the distress ; because, where the tenant has shown himself ready on the day by the tender, he has done all that in reason can be required of him ; for it would put the tenant to endless trouble to oblige him every day to make a tender; it being altogether uncertain when the lessor will come for his rent, when he has omitted to receive it the day he appointed by the lease for payment and receipt ; wherefore as the lessee must expect the lessor, and be ready to pay it at the day appointed, or else the lessor may distrain for it without any demand ; so where the lessor has lapsed the day of payment, and was not on the land to receive it, he must give the tenant notice to pay it before he can distrain ; for the tenant shall be put to no trouble where it appears that he has omitted nothing on his part. And where the tender was made by a tenant on the land at the day, there a demand on the land is sufficient to justify a distress after the day ; because the demand in such case is of equal notoriety with the tender. But if the

tenant had tendered the rent on the day to the person of the lessor, and he icfused it, it seems, by the better opinion, that the lessor cannot distrain for that rent, without a demand ot the person of the tenant ; because the demand ought to be equally notorious to the tenant, as the tender was to the lessor. Hob. 207 : 2 Roll. Abr. 427. So, if the services by which the te-nant holds be personal, as homage, fealty, &c., the demand must be of the person of the tenant ; because this service is only performable by the very person of the tenant, therefore a demand, where he is not, would be improper. Hut. 13 : Hob. 207.

Again, if the rent be rent-seek, and the tenant be ready at the last instant of the day of payment to pay the rent, and the granter is not there to receive it, he must afterwards demand it of the person of the tenant on the lands, before he can have his assise ; but in the case of a rent-charge, after such tender of the tenant on the land, the grantee may afterwards demand the rent on the land, because he has his remedy by distress, which is no more than a pledge for the rent ; but in this case, if the grantee cannot find the tenant on the land to demand the rent, he may, on the next least on which the rent is payable, demand all the arrears on the land ; and, if the tenant is not there to pay it, he has failed of his duty, and is guilty of wilful default which amounts to a denial; and, thai denial being a disseisin of the rent, the grantee may have his assise, and by that shall recover the arrears.

If a lease be made, reserving rent, and a bond given for performance of covenants and payment of the rent, the lessor may sue the bond without demanding the rent. If there be several things demised in one lease, with several reservations, with a clause, that, if the several yearly rents reserved be behind or unpaid in part, or in all, by the space of one month, after any of the days en which the same ought to be paid, that ther. it shall be lawful for the lessor, into such of the

premises, whereupon such rents, being behind, is or are reserved, to reenter; these are in the na-ture of distinct demises, and several

reservations; consequently there must be distinct demands on each demise to defeat the whole estate demised. Also, as to the necessity of a demand of the rent, there is a difference between a condition and a limitation ; for instance, if tenant for life (as the case was by marriage settlement with power to make leases for twenty-one years, so long as the lessee, his executors, or assigns, shall duly pay the rent reserved) make a lease pursuant to the power ; the tenant is at his peril obliged to pay the rent without any demand of the lessor; because the estate is limited to continue only so long as the rent is paid ; therefore, for non -performance, according to the limitation the estate must determine ; as if an estate be made to a woman dum sola fuerit, this is a word of limitation which determines her estate on marriage.

IV. Of the time and place of demanding rent. ××× Rent is regularly due and payable upon the land whence it issues, if no particular place is mentioned : but, in case of the king, the payment must be either to his officers at the exchequer, or to his receiver in the country. And, strictly, the rent is demandable and payable before the time of sun-set of the day whereon it is reserved ; though perhaps not absolutely due till midnight. If the lessor dies before sun is set on the day upon which the rent is demandable, it is clearly settled that the rent unpaid is due to his heir, and not to his executor : but if he dies after sun-set, and before midnight, it seems to be the bet-ter opinion that it shall go to the executor, and not to the kin. 1 P. Wms. 178.

There is a material difference between the reservation of a rent payable on a particular day, or within a certain time after ; and the reservation of a rent payable at a certain day, with a condition that, if it be behind, by the space of any given time, the lessor shall enter; in both cases a tender on the first or last day of payment, or on any of the intermediate days, to the lessor himself, either upon or out of the land, is good : but, in the former case it is sufficient, if the lessee attends on the first day of payment at the proper place ; and, if the lessor does not at-tend there to receive the rent, the condition is saved. In the latter case, to save the lease it is not sufficient that the lessee attends on the first day of payment, for he must equally attend on the last day.

The other effects of this question of the time of the rent becoming due are now in equal measure superseded by the statute regulations already alluded to. But the following determinations on the subject may, notwithstanding, be requisite to be known. 1. The time for payment of rent, and consequently for a demand, is such a convenient time before the sun-setting of the last day as will be sufficient to have the money counted ; but if the tenant meet the lessor on the land at

any time of the last day of payment, and tenders the rent, that is sufficient ten-der, because the money is to be paid indefinitely on that day, therefore a tender on the day is suf-ficienl. 2. If a lease is made, rendering rent at Michaelmas, between the hours of one and five

in the afternoon, with a clause of re-entry, and the lessor comes at the day, about two in the afternoon, and continues to five, this is sufficient. Cro. Eliz. 15. The demand may be by attorney. 4 Leon. 479. But the power must be special, for such land and of such tenant : demand must be proved by witnesses, and must be made of the precise sum due. 3. If a lease be made, reserving rent on condition that if the rent be behind at the day, and ten days after (being in the mean time demanded), and no distress to be found upon the land, that the lessor may reenter; if the rent be behind at the day, and ten days after, and a sufficient distress be on the land till the afternoon of the tenth day, and then the lessee takes away his cattle, and the lessor demands the rent at the last hour of the day, and the lessee does not pay it, and there is not any distress on the land ; yet the lessor cannot enter, because he made no demand in the mean time between the day of payment, and the ten days, which by the clause he was obliged to do. 4. As to the place of demanding rent, there is a difference between a remedy by re-entry and distress ; for when the rent is reserved, on condition that, if it be be-hind, that the lessor may reenter, in such case the demand must be upon the most notorious place on the land ; therefore, if there be a house on the land, the demand must be at the fore door thereof, because the tenant is presumed to be there residing, and the demand being required to give notice to the tenant that he may not be turned out of possession, without a wilful default, snch demand ought to be in the place where the end and intention will be best answered. 5. And it seems the better opinion that it is not necessary to enter the house, though the doors be open, because that is a place appropriated for the peculiar use of the inhabitant, into which no person is permitted to enter without his permission ; and it is reasonable that the lessor . shall go no further to demand his rent than the te-nant should be obliged to go, when he is bound to tender it ; and a tender by the tenant at the door of the house of the lessor is sufficient, though it be open, without entering ; therefore, by parity of reason, a demand by the lessor at the door of the tenant, without entering, is sufficient. But when the demand is only in order for a distress, there it is sufficient, if it be made on any notorious part of the land, because this is only to entitle him to his remedy for his rent ; therefore, the whole land being equally debtor, and chargeable with the rent, a demand on it, without going to any particular part of it, is

sufficient. Co. Lilt. 153.

RENTERING, in the manufactories, is the same with fine-drawing. It consists in sewing two pieces of cloth edge to edge, without doubling them, so that the seam scarcely appears; and hence it is denominated fine-drawing. It was originally a French word derived from the Latin retrahere, because the seam is drawn m or covered. In the East Indies, if a piece of fine muslin be torn, and afterwards mended by the fine-drawers, it will be impossible to discover where the rent was. In this country the dexterity of the fine drawers is not so great, but it is still such as to enable them to defraud the

revenue, by fastening a head or slip of English cloth on a piece of Dutch, Spanish, or other foreign cloth ; or a slip of foreign cloth on a piece of English, so as to pass the whole as of a piece ; and thus avoid the duties, penalties, &c. The trick was first discovered in France by M. Savary.

RENTERING, in tapestry, is the working new warp into a piece of tapestry damaged by rats or otherwise, and on this warp to restore the ancient pattern or design. The warp is to be of woollen, not linen. Among the titles of the French tapestry makers is included that of renterers.

REORDAIN’, v. a. > Fr. reordiner. Re

REORDINA’TION, n. s. $ and ordain. To or-dain again: the nounsubstantive correspond ing.

He proceeded in his ministry without expecting any new mission, and never thought himself obliged to a reordination. Atterbury.

REPA’CIFY, v. n. Re and pacify. To pa-cify again.

Henry, who next commands the state, Seeks to repacify the people's heat. Daniel.

REPAIR', v. a., v. n., & n. s. *) Fr. reparer ;

REPAIR'ER, n. s. \ Latin reparo :

REP'ARABLE, adj. \ Ital. reparare,

REP'ARABLY, adv. f To restore or

REPARA'TION, n. s. j amend after in—

REPARA'TIVE. J jury ; supply

loss ; revisit : as a nounsubstantive, the supply or restoration made ; resort ; abode : reparation is the act of repairing : the other derivatives correspond.

Let the priests repair the breaches of the house.

2 Kings. Before the curing of a strong disease,

Ev'n in the instant of repair and health,

The fit is strongest. Shakspeare. King Lear.

May all to Athens back again repair. Shakspeare.

The parts in man's body easily reparable, as spirits, blood, and flesh, die in the embracement of the parts hardly reparable, as bones, nerves, and membranes.

Bacon.

The king should be able, when he has cleared himself, to make him reparation. Id.

He saw Ulysses ; at his ships repaire,

That had been brusht with the enraged aire.

Chapman.

New preparatives were in hand, and partly repa-ratiset of the former beaten at sea. W otton.

An adulterous person is tied to restitution of the -???njury, so far as

is reparable, and can be made to the wronged person ; to make provision for the children begotten in unlawful embraces. Taylor.

All automata need a frequent repair of new strength, the causes whence their motion does proceed being subject to fail. Wilhins.

The fines imposed were the more repined against, because they were assigned to the rebuilding and repairing of St. Paul's church. Clarendon.

The king sent a proclamation for their repair to their houses, and for a preservation of the peace.

Id.

Heaven soon repaired her mural breach. Milton. To be revenged,

And to repair his numbers thus impaired. Id.

He cast in his mind for the repair of the cathedral church. Fed.

When its spirit is drawn from wine.it will not by the reunion of Us constituent liquors be reduced to its pristine nature ; because the workmanship of na-ture, in the disposition of the parts was too elabo-

rate to be imitable, or reparable by the bare apposi tion of those divided parts to each other. Boyle.

Suits are unlawfully entered, when they are vindictive, not reparative ; and begun only for revenge, not for reparation of damages. Kettleweli.

Temperance, in all methods of curing the gout, is a regular and simple diet, proportioning the daily repairs to the daily decays of our wasting bodies.

Temple's Miscellanies. Depart from hence in peace, Search the wide world, and where you please repair.

Dryden.

So 'scapes the insulting fire his narrow jail, And makes small outlets into open air ;

There the fierce winds his tender force assail, And beat him downward

to his first repair. Id.

O sacred rest !

O peace of mind ! repairer of decay, Whose balms renew the limbs to labours of the day.

Id.

He that governs well, leads the blind, but he that teaches, gives him eyes ; and it is a glorious thing to have been the repairer of a decayed intellect.

Saulh's Sermons.

When the organs of sense want their due repose and necessary reparations, the soul exerts herself in her several faculties. Addison.

Antoninus Philosophus took care of the reparation of the highways. Arbuthnot on Coins.

Tis fix'd ; the irrevocable doom of Jove : Haste then, Cyllenius, through the liquid air, Go mount the winds, and to the shades repair. Pope.

REPAN'DOUS, adj. Lat. repandut. Bent upwards.

Though they be drawn repandoui or convexedly crooked in one piece, yet the dolphin that carrieth Arion is concavously inverted, and hath its spine depressed in another. Browne.

REPARTEE', n. s.&v. a. French repartie. Smart reply or saying : to make smart replies.

The fools overflowed with smart repartees, and were only distinguished from the intended wits by being called coxcombs. Dryden.

Cupid was as bad as he ; Hear but the youngster's repartee. Prior. High flights she had, and wit at will, And so her tongue lay seldom still : For in all visits, who but she, To argue, or to repartee 1 Id.

REPASS', v. a. & v. n. Fr. repasser. To pass again ; pass or travel back : go back.

Well we have passed, and now repassed the seas, And brought desired help. Shakspeare. Henry VI.

We shall find small reason to think that Abraham passed and repassed those ways more often than he was enforced so to do, if we consider that he had no other comforter in this wearisome journey than the strength of his faith in God. Raleigh.

Five girdles bind the skies, the torrid zone Glpws with the passing and repassing sun. Dryden.

If his soul hath winged the destined flight, Homeward with pious speed repass the main, To the pale shade funereal rites ordain. P< >/ >►►.

REPAST', n. s. & v. n. } Fr. repas ; Lat. re 'REPAS'TURE. 3 and pastas. A meal;

act of taking food ; food taken ; entertainment.

Go, and get me some repast ; I care not what, so it be wholesome food.

Shakspea~t.

To his good friends I'll ope my arm, And, like the kind life-rendering pelican, Repast them with my blood. Id.

He from forage will incline to play ; But if thou strive, poor soul, what art thou then ? Food for his rage, repasture for his den. Id.

Sleep, that is thy best repast,) Yet of death it bears a taste And both are the same thing at last.) Denham.

From dance to sweet repatt they turn Desirous ; all in circles as they stood, Tables are set. Milton's Paradise Iˆost.

What neat repast shall feast us, light and choice, Of Attick taste, with wine. Milton.

The day

Had summoned him to due repatt at noon. Dryden. Keep regular hours for repast and sleep. Arbuthnot.

REPAY', v. a.) Fr. repayer. Re and pay.

REPAY'MENT, n. s. } To pay back; requite; revenge : the act of paying back in any way.

According to their deeds he will repay recompense to his enemies ; to the islands he will repay recompense. Isaiah lix. 18.

The poorest service is repaid with thanks.

Shakspeare.

If you repay me not on such a day, Such sums as are expressed in the condition, Let the forfeit be an equal pound of your fair flesh.

Id.

The false honour, which he had so long enjoyed, was plentifully repaid in contempt. Bacon.

He clad

Their nakedness with skins of beasts, or slain ; Or as the snake with youthful coat repaid. Milton.

I have fought well for Persia, and repaid The benefit of birth with honest service. Rowe.

The centesima usura it was not lawful to exceed ; and, what was paid over it, was reckoned as a repayment of part of the principal. Arbuthnot.

Fav'ring heav'n repaid my glorious toils With a sacked palace and barbarick spoils. Pope.

REPEAL', v. a. & n. s. Fr. rappeller ; Lat. re and uppello. To recall (out of use) ; abrogate : a revocation.

Laws that have been approved, may be again repealed, and disputed

against by the authors themselves. Hooker's Preface. I will repeal thee, or be well assured,

Adventure to be banished myself. Shakspeare. If the time thrust forth

A cause for thy repeal, we shall not send

O'er the vast world to seek a single man. Id.

The king, being advertised that the over-large grants of lands and liberties made the lords so insolent, did absolutely resume all such grants ; but the earl of Desmond above all found himself grieved with this resumption or repeal of liberties, and declared his dislike. Danes on Ireland.

Adam soon repealed The doubts that in his heart arose. Milton.

Statutes are silently repealed when the reason ceases for which they were enacted. Dri/den.

If the presbyterians should obtain their ends, I could not be sorry to find them mistaken in the point which they have most at heart, by the repeal of the test ; I mean the benefit of employments.

Swift

REPEAT', v. a. ~\ Lat. repeto, repeter. REPEAT'EDLY, adv. ˆTo iterate ; use again ; do REPEAT'ER, n. s. for try again; recite: re-REPETI'TIOX. 3 peatedly is, over and

over ; more and more ; more than once : repeater, a particular kind of watch, see WATCH-MA K JUG : in 'a. general sense corresponding, as well as repetition, with the verb.

The psalms, for the excellency of their use, de serve to beoftener repeated ; but, that their multitude permitteth not any oftener repetition. Hooker.

These evils thou repeatest upon thyself, Have banished me from Scotland. Shakspcare. If you conquer Rome, the benefit, Which you shall thereby reap, is such a name, Whose repetition will be dogged with curses. Id.

He, though his power Creation could repeat, yet would be loth Us to abolish. Milton.

He repeated some lines of Virgil, suitable to the occasion. Waller't Life.

Neglecting for Creiisa's life his own, Repeats the danger of the burning town. Waller.

Beyond this place you can have no retreat ; Stay here, and I the daagei will repeat. Dryden. Where sudden alterations are not necessary, th►► same effect may be obtained by the repeated force of diet with more safety to the body. Arbuthnot.

The frequent repetition of aliment] is necessary for repairing the fluids and solids. Id.

And are not these vices, which lead into damnation, repeatedly, and most forcibly cautioned against ?

Stephens.

REPEL', v. a. & v. n.) Lat. repello. To REPEL'LENT, n.s. < i drive back any thing

or person ; resist force by force : that which has

repelling power.

Neither doth Tertullian bewray this weakness in striking only, but also in repelling their stroke* with whom he contendeth. Hooker.

Stand fast ; and all temptation to transgress repel.

Milton.

Your foes are such as they, not you, have made, And virtue may repel, though not invade. Dryden.

From the same repelling power it seems to be, that flies walk upon the water without wetting their feet.

. Newton.

In the cure of an erysipelas, whilst the body abounds with bilious humours, there is no admitting of repellents, and by discutients you will encrease the heat. Wiseman.

With hills of slain on every side, Hippomedon repelled the hostile tide. Pepe.

REP*ENT’, v. n. kv.a.y Fr. repentir ; Ital.

REPENT’ANCE, n. s. f-pentir, of Lat. pani—

REPENT’ANT, adj.) tea. To think on any

thing past with sorrow; regret; bemoan sin; change the mind from fear or conviction of error ; change the mind generally ; to remember with sorrow : the adjective and noun substantive corresponding.

God led them not through* the land of the Philistines, lest peradventure the people repent when they see war, and they return. Exodus xiii. 17.

Judas, when he saw that he was condemned, repented himself. Matthew xxvii. 3.

Nineveh repented at the preaching of Jonas.

Id. xii. 41.

-In regard of secret and hidden faults, unless God should accept of a general repentance for unknown sins, few or none at all could be saved. Perkint.

Repentance so altereth a man through the mercy of God, be he never so denied, that it maketh him pure. Whitgiftt.

Poor Enobarbus did before thy face repent.

Shakspeare. I repent me that the duke is slain. Id.

Who by repentance is not satisfied, Is not of heaven nor eaitli ; for these are pleased; By penitence the’ Eternal’s wrath’s appeased. W

After I have interred this noble king,

And wet his grave with my repentant tears,

I will with all expedient duty see you. Id.

Repentance is a change of mind, or a conversion rrom sin to God : not some one bare act of change. out a lasting durable state of new life, which is called regeneration. Hammond.

Thou, like a contrite penitent Charitably warned of thy sins, dost repent These vanities and giddinesses : lo I shut my chamber-door ; come, let us go. Donne.

Nor had I any reservations in my own soul, when I passed that bill ; nor repentingt after.

King Charles.

I will clear their senses dark What may suffice, and soften stony hearts To pray, repent, and bring obedience due. Milton. Thus they, in lowliest plight, repentant stood. Id. His late follies he would late repent. Dryden.

My father has repented him ere now, Or will repent him, when he finds me dead. Id.

Upon any deviation from virtue, every rational creature so deviating, should condemn, renounce, and be sorry for every such deviation ; that is, repent of it. South.

This is a confidence, of, all the most irrational ; for upon what ground can a man promise himself a future repentance, who cannot promise himself a futurity ? Id. Each age sinned on ;

Till God arose, and great in anger said,

Lo ! it repenteth me that man was made. Prior.

Relentless walls ! whose darksome round contains Repentant sighs and voluntary pains. Pupe.

Still you .may prove the terror of your foes ; Teach traitors to repent of faithless leagues.

A. Philips.

The first step towards a woman's humility, seems to require a repentance of her education. Law.

REPEOTLE, v. a. Re and people; Fr. re-peupler. To stock anew with people.

An occurrence of such remark, as the universal Hood and the rtpeopling of the world, must be fresh in memory for about eight hundred years ; especially considering that the peopling of the world was gradual. Hale's Origin of Mankind.

REPERCUSS', v. a.} Lat. repercutio, re-REPERCUS'SION, n. s. >percussus. To beat REPERCUS'SIVE, adj. j back ; drive back : act of driving back; rebound; the adjective corresponding.

Air in ovens, though it doth boil and dilate itself, and is repercussed, yet it is without noise.

Bacon.

In echoes there is no new elision, but a repercut-aton. Id.

And repercussive rocks renewed the sound.

Pattiion.

By repercussion beams ingender fire, Shapes by reflection shapes beget ;

The voice itself when stopped does back retire, And a new voice is made by it. Cowley.

They various ways recoil, and swiftly flow By mutual repercussions to and fro. Blachmore.

Amid Carnarvon's mountains rages loud The repercussive roar, with mighty crush Tumble the smitten cliffs. Thomson.

REPINE', v. n. Re and pine. To fret; vex oneself; be discontented: taking afand against.

Of late,

When corn was given them gratis, you repined.

Shahspeare.

The fines imposed were the more repined against because they were assigned to the rebuilding of St. Paul's church. Clarendon.

If you think how many diseases, and how much poverty there is in the world, you will fall down upon your knees, and, instead of repining at one affliction, will admire so many blessings received at the hand of God. Temple.

The ghosts repine at violated night, And curse the' invading sun, and sicken at the sight.

Dryden.

REPLACE', v. a. Fr. replacer, re and place. To put again in a former place ; place anew.

The earl being apprehended, upon examination cleared himself so well, as he was replaced in hi? government. Bacon.

The bowls, removed for fear, The youths replaced ; and soon restored the chear.

Dryden.

REPLANT, v. a. Fr. replanter; re and plant. To plant anew.

Small trees being yet unripe, covered in autumn with dung until the spring, take up and replant in good ground. Bacon.

REPLAIT/jU.a. Re and plait. To fold one part often over another.

In Raphael's first works, are many small foldings often replaited, which look like so many whipcords.

Dryden.

REPLENISH, v. a. & v. n. Old Fr. repteni ; Lat. repleo, from re and plertus. To stock ; fill ; consummate ; recover fulness.

Multiply and replenish the earth. Genesis i. 28.

We smothered

The most replenished sweet work of nature, That from the prime creation e'er she framed.

Shakspeare.

The humours in men's bodies encrease and decrease as the moon doth ; and therefore purge some day after the full ; for then the humours will not replenish so soon. Bacon.

The woods replenished with deer, and the plains with fowl. Heylin.

The waters With fish replenished, and the air with fowl.

Milton.

REPLETE', adj. > REPLE'TION, n. s. J

Fr. replete ; Lat. repletus. Full ; filled completely, or to exuberance : the noun substantive corresponding.

The world's large tongue Proclaims you for a man replete with mocks ; Full of comparisons and wounding flouts.

Shakspeare.

The tree had too much repletion, and was oppressed with its own sap ; for repletion is an enemy to generation. Bacon.

His words, replete with guile, Into her heart too easy entrance won. Milton.

All dreams

Are from repletion and complexion bred ; From rising fumes of undigested food. Dryden. In a dog, out of whose eye, being wounded, the aqueous humour did copiously flow, yet in six hours the bulb of the eye was again replete with its humour, without the application of any medicines. Ray.

The action of the stomach is totally stopped by too great repletion. Arbuthnot on Aliments.

How each would trembling wait the mournful sheet, On which the

press might stamp him next to die , And, reading here his sentence, how replete

With anxious meaning, Heavenward turn his eye .

REPLEVIN, v. u. } Low Lat. replegio, of REPLEV'Y. \ re and plevir, or Fr. ple—

gir, to give a pledge. To take back or set at liberty, upon security, any thing seized. ††† A le-gal term.

That you're a beast, and turned to grass,

Is no strange news, nor ever was ;

At least to me, who once, you know,

Did from the pound replevin you. Hudibrag.

REPLEVIN, in law, a remedy granted on a distress, by which the first possessor has his goods restored to him again on his giving security to the sheriff that he will pursue his action against the party distraining, and return the goods or cattle if the taking them shall be adjudged lawful. In a replevin the person distrained becomes plaintiff; and the person distraining is called the defendant or avowant, and his justification an avowry. At the com-mon law replevins are by writ, either out of the king's bench or common pleas ; but by statute they are by plaint in the sheriff's court, and court baron, for a person's more speedily obtaining the goods distrained. If a plaint in reple-jvin be removed into the court of king's bench, &c., and the plaintiff make default and become nonsuit, or judgment is given against him, the defendant in replevin shall have the writ of re-torno habendo of the goods taken in distress.

REPLEVY, in law, is a tenant's bringing a writ of replevin, or replegiari facias, where his goods are taken by distress for rent; which must be done within five days after the distress, otherwise at the five days' end they are to be appraised and sold.

REPLICATION, n. s. Lat. replico. Rebound ; repercussion. Not in use. Reply.

Tyber trembled underneath his banks To hear the replication of your sounds Made in his concave shores. Shakspeare.

To be demanded of a spunge, what replication should be made by the son of a king? Id.

This is a replication to what Menelaus had before offered, concerning the transplantation of Ulysses to Sparta. Broome.

REPLY', v. n., v. a. & n. s.) Fr. repliquer. REPLI'ER, n. s. S To answer; make

a return to an answer ; return for answer ; the return made : replier, he who answers.

O man ! who art thou that repliest against God?

Romans ix.

. If I sent him word it was not well cut, he would send me word he cut it to please himself; if again, it was not well cut, this is called the reply churlish.

SJiakspeare.

At an act of the commencement, the answerer gave for his question, that an aristocracy was better than a monarchy : the replyer did tax him, that, being a private bred man, he would give a question of state.

Bacon's Apophthegms. Perplexed The tempter stood, nor had what to reply. Milton.

His trembling tongue invoked his bride ; With his last voice Eurydice he cried : Eurydice the rocks and river-banks replied.

DryAf.n.

Would we ascend higher to the rest of these lewd persons, we should find what reason Castalio's painter had to reply upon the cardinal,

who blamed him for putting a little too much colour into St.

Peter and Paul's faces : that it was true in their lifetime they were pale mortified .men, out that since they were grown ruddy, by blushing at the sins of their successors. Atterbury's Sermons.

To whom, with sighs, Ulysses gave reply ;

Ah, why ill-suiting pastime must I try ? Pope.

One rises up to make replies to establish or confute what has been offered on each side of the question.

Watts.

REPOL'ISH, v. a. Fr. rcpolir ; re and polish. To polish again.

A sundred clock is piecemeal laid Not to be lost, but by the maker's hand Repolished, without error then to stand. Donne. REPORT,!;, a. &n.s. \ fr.rapporttr. To give REPORTER, n. s. ►►back; uoise by popu- REPORT'INGLY, adv. J lar i umor ; give report; the report or account given ; sound ; repercussion : a reporter is a relater; one who gives an account : the adverb corresponding with the verb. Report, say they, and we will report it.

Jeremiah.

There is a king in Judah ; and now shall it be reported to the king. tiehimiah vi. 7. Timotheus was well reported of by the brethren.

Act* xvi.

Approving ourselves as the ministers of God, by honour and dishonour, by evil report and good re~ port' 2 Corinthiant iv.

Is it upon record? or else reported successively from age to age ? Shakspeare. Richard III.

My body's marked

With Roman swords ; and my report was once First with the best of note. Id. Cymbeline.

There she appeared ; or my reporter devised well for her. Shakspeare.

Others say, thou dost deserve ; and I Believe it better than reportingly. Id.

In Ticinum is a church with windows only from above, that reporteth the voice thirteen times, if you stand by the close end wall over against the door.

Bacon.

The stronger species drowneth the lesser : the re-port of an ordnance the voice. Id. Natural History.

Rumours were raised of great discord among the nobility ; for this cause the lords assembled gave order to apprehend the reporters of these surmises.

Hayward.

Sea nymphs enter with the swelling tide ; From Thetis sent as spies to make report, And tell the wonders of her sovereign's court.

Waller.

The lashing billows make a long ieport, And beat her sides. Dryden's Ceyx and Alcyone.

If I had known a thing they concealed, I should never be the reporter of it. Pope.

After a man has studied the general principles of the law, reading the reports of adjudged cases will richly improve his mind. Watts.

REPOSE', v. a. & v.n. } Lat. repono. To REPO'SAL, n. s. i lay to rest ; lodge ;

place as in confidence ; to rest ; sleep : the rest or sleep taken ; confidence placed ; cause of rest reposal, the act of reposing.

Dost thou think,

If I would stand against thee, would the-eposn/ Of any trust, virtue, or worth in thee, Make thy words faithed ? Shahspeare.

Rome's readiest champions, repose .you here, Secure from wordly chances and mishaps ; Here lurks no treason, here no envy swells. Id And, for the ways are dangerous to pass,

I do desire thy worthy company,

Upon whose faith and honour 1 repose. Id.

Within a thicket I reposed ; when round T ruffled up fall'n leaves in heap ; and found. Let fall from heaven, a sleep interminate. Chapman.

I say nothing of thy hid treasures, which thy wis-dom hath reposed in the bowels of the earth and sea.

Bp. Halt. Have ye chosen this place,

After the toil of battle, to repose

Your wearied virtue ? Milton's Paradise Lost.

I repose upon your management, what is dearest to me, my fame. Dryden's Preface to Annus Mirab.

After great lights must be great shadows, which we call reposes ; because in reality the sight would be tired, if attracted by a continuity of glittering objects. Id. Dufresnoy. I all the livelong day

Consume in meditation deep, recluse

From human converse ; nor at shut of eve

Enjoy repose. Philips.

Pebbles, repoied in those cliffs amongst the earth, being not so dissoluble and more bulky, are left be-hind. Woodward.

That prince was conscious of his own integrity in the service of God, and relied on this as a foundation for that trust he reposed in him, to

deliver him out of his distresses. Rogers.

. edging or of replacing : the place of deposit.

The mind of man not being capable of having many ideas under view at once, it was necessary to ..ave a repository to lay up those ideas. Locke.

He can take a body to pieces, and dispose of them, to us not without the appearance of irretrievable confusion, but with respect to his own knowledge into the most regular and methodical repositories.

Rogers'* Sermons.

Others reposite their young in holes, and secure themselves also therein, because such security is wanting, their lives being sought. Derham.

REPOSSESS', v. a. Re and possess. To possess again.

How comes it now, that almost all that realm is repossessed of them 1 Spenser's State of Ireland.

Her suit is now to repossess those lands, Which we in justice cannot well deny. Shakspeare.

Nor shall my father repossess the land, The father's fortune never to return.

Pope's Odyssey.

REPREHEND', v. a. ~) Lat. repre-REPREHEND'ER, n. s. hendo. To re
—

REPREHEN'SIBLE, adj. \ prove ; chide ;

REPREHEN'SIELENESS, n. s. Vblame; detector REPREHEN'SIBLY, adv. charge with fault:

REPREHEN'SION, n. s. \ the derivatives

REPREHEN'SIVE, adj. J all corresponding.

All as before his sight, whose presence to offend with any the least unseemliness, we would be surely as loth as they, who most reprehend

or devide that we do. Hooker.

These fervent reprehendert of things, established by public authority, are always confident and bold-spirited men. Id.

Pardon me for reprehending thee, For thou hast done a charitable deed. Shakspeare.

They like dumb statues stared ; Which when I saw, I reprehended them ; And asked the mayor, what meant this wilful silence t Id.

This color will be reprehended or encountered, by imputing to all excellencies in compositions a kind of poverty. Bacon.

To a heart fully resolute, council is tedious, but reprehension is loathsome. Id.

He could not reprehend the fight, so many strewed

the ground. Chapman.

The admonitions, fraternal or paternal, of his fel►► low Christians, or the governors of the church ; then more public reprehensions and increpations.

Hammond.

I nor advise, nor reprehend the choice Of Marcley-hill. Philips.

What effect can that man hope from his most zealous reprehensions, who lays himself open to recrimination ? Government of the Tongue. REPRESENT, v. a.ˆ Fr. representer; Lat REPRESENTATION, / represento. To exh.- REPRESEN'TATIVE, S bit ; describe ; show : REPRESEN'TER, I a representative is one REPRESENT'MENT. J bearing a delegated character or power : the other derivatives corresponding with the rerb.

One of his cardinals admonished him against that unskilful piece of ingenuity, by representing to him, that no reformation could be made, which would not notably diminish the rents of the church.*

Decay of Piety.

When it is blessed, some believe it to be the natural body of Christ ; others, the blessings of Christ, his passion in representment, and his

grace in real exhibition. Taylor.

Before him burn

Seven lamps, as in a zodiac rejrresenling The heavenly fires. Milton's Paradise. Lost.

Where the real works of nature, or veritable acts of story, are to be described, art being but the imitator or secondary representer, must not vary from the verity. Browne.

We have met with some, whose reals made good their representments. Id. Vulgar Errours.

Jf images are worshipped, it must he as gods, which Celsus denied, or as representations of God ; which cannot be, because God is invisible and incorporeal. Siillingjteet.

Difficulty must cumber this doctrine, which supposes that the perfections of God are the, representatives lo us of whatever we perceive in the creatures.

Locke.

This bank is thought the greatest load on the Genoese, and the managers of it have been represented as a second kind of senate. Addison.

A statue ofVimour whispering an idiot in the ear, who was the representative of credulity.

Id. Freeholder.

They relieve themselves with this distinction, and yet own the legal sacrifices, though representative, to be proper and real. Atterbvry.

This council of four hundred was chosen, one hundred out of each tribe, and seems to have been a body representative of the people ; though the people collective reserved a share of power. Swift.

My muse officious ventures On the nation's representeri. Id.

REPRESS', v. a. & n. s. ~\ Lat. repressua ;

REPRESSION, n. s. > Fr. i-fprimer. To

REPRESSIVE, adj. } crush ; put down ;

subdue : act of repressing : repressive is the bet-ter word for this last sense.

Discontents and ill blood having used always to repress and appease in person, he was loth they should find him beyond sea. Bacon’s Henry VII.

Some, taking dangers to be the only remedv agains;

druigers, endeavoured to set up the sedition again ; out they were speedily repressed, and thereby the sedition suppressed wholly. Haywurd.

No declaration from myself could take place, for the due represtion of these tumults. King Charles. How can I

Repress the horror of my thoughts, which fly

The sad remembrance ? Denham.

Such kings

Favour the innocent, repress the bold. And, while they flourish, make an age of gold.

Waller.

Loud outcries of injury, when they tend nothing to the repress of it, is a liberty rather ###assumed by rage and impatience than authorised by justice.

Government of the Tongue.

Thus long succeeding critics justly reigned, Licence repressed, and useful laws ordained : Learning and Rome alike in empire grew. Pope.

REPRIEVE', v.a. & n.s. Fr. reprendre, re-pris ; Lat. re and privo. To respite ; to give a respite; particularly from a sentence of death: the respite given.

He cannot thrive,

Unless her prayers, whom heaven delights to hear, And loves to grant, reprieve him from the wrath Of greatest justice. Shakspeare.

I hope it is some pardon or reprieve For Claudio. Id. Measure for Measure.

All that I ask is but a short reprieve, Till I forget to love, and learn to grieve. Denham.

The morning Sir John Hotham was to die, a reprieve was sent to suspend the execution for three days. Clarendon.

Company, though it may reprieve a man from his melancholy, yet cannot secure him from his conscience. South.

Having been condemned for his part in the late rebellion, his majesty had been pleased to reprieve him, with several of his friends, in order to give them their lives. Addison.

He reprieves the sinner from time to time, and continues and heaps on him the favours of his providence, in hopes that, by an act of clemency so undeserved, he may prevail on his gratitude and repentance. Rogers's Sermons.

REPRIEVE, in criminal law (from Fr. reprendre, i. e. to take back), is the withdrawing of a sentence for an interval of time ; whereby the execution is suspended. This, says judge Blackstone, may be, first, ex arbitrio judicis, either be-fore or after judgment: as, where the judge is not satisfied with the verdict, or the evidence is suspicious, or the indictment is insufficient, or he is doubtful whether the offence be within clergy ; or sometimes if it be a small felony, or any favorable circumstances appear in the criminal's character, to give time to apply to the crown for either an absolute or conditional par-don. These reprieves may be granted or taken off by the justices of gaol-delivery, although their session be finished, but this rather by usage than of right. Reprieves may also be ex necessitate legis : as where a woman is capitally convicted, and pleads her pregnancy. Though this is no cause

to stay judgment, yet it is to respite the execution till she be delivered. This is a mercy dictated by the law of nature, in favorem prolis; and therefore no part of the bloody proceedings in the reign of queen Mary I. hath been more justly detested than the cruelty exercised in the

island of Guernsey, of burning a woman big with child ; and when, through the violence of the flames, the infant sprang forth at the stake, and was preserved by the by-standers, after some deliberations of the priests who assisted at the sacrifice, they cast it into the fire as a young heretic : a barbarity which they never learned from the laws of ancient Rome ; which direct, with the same humanity as our own, quod praegnantis mulieris damnata pcena differatur quoad pariat : which doctrine has also prevailed in England as early as the first memorials of the English law will reach. When this plea is made, in stay of execution, the judge must direct a jury of twelve matrons or discreet women to enquire into the fact j and if they bring in their verdict quick with child (for barely with child, unless it be alive in the womb, is not sufficient), execution shall be staid generally till the next session; and so, from session to session, till either she is delivered, or proves by the course of nature not to have been with child at all. But if she once hath had the benefit of this reprieve, and been delivered, and afterwards becomes pregnant again, she shall not be entitled to the benefit of a farther respite for that cause. For she may now be executed before the child is quick in the womb ; and shall not, by her own incontinence, evade the sentence of justice. Another caxise of regular reprieve is, if the offender become non compos between the judgment and the award of execution : for regularly, though a man be com-pos when he commits a capital crime, yet, if he become non compos after, he shall not be indicted ; if after indictment, he shall not be convicted ; if after conviction, he shall not receive judgment; if after judgment, he shall not be ordered for execution ; for furiosus solo furore punitur ; and the law knows not but he might have offered some reason, if in his senses, to have stayed these respective proceedings. It is therefore an invariable rule when any time intervenes between the attainder and the award of execution, to demand of the prisoner what he hath to allege why execution should not be awarded against him ; and, if he appears to be insane, the judge in his discretion may and ought to reprieve him. Or the party may plead, in bar of execution, either pregnancy, the king's pardon, an act of grace, or diversity of person, *viz.* that he is not the same that was attainted. In this last case a jury shall be impannelled to try the identity of his person ; and not whether guilty or innocent, for that

has been decided before. And in these collateral issues the trial shall be instanter ; and no time allowed the prisoner to make his defence or produce his witnesses, un-less he will make oath that he is not the person attainted : neither shall any peremptory challenges of the jury be allowed the prisoner, though formerly such challenges were held to be allowable whenever a man's life was in question. If neither pregnancy, insanity, non-identity, nor other plea, will avail to avoid the judgment, and stay the execution consequent thereupon, the last and surest resort is in the king's most gracious pardon ; the granting of which is the sole prerogative of the crown. See PARDON.

REPRIMAND', v. a. & n. s. Fr. repriman-2 M

aer ; Lat. reprimo. To chide ; check ; reprehend ; reprove : reproof given.

He enquires how such an one's son and wife do, whom he has not seen at church ; which is understood as a secret reprimand to the person absent.

Addison's Spectator.

Germanicus was severely reprimanded by Tiberius, for travelling into Egypt without his permission.

Arbuthnot.

They saw their eldest sister once brought to her tears, and her perverseness severely reprimanded.

Law.

REPRINT', v. a. Re and print. To print again ; to renew the impression

of any thing.

The business of redemption is to rub over the defaced copy of creation, to reprint God's image upon the soul, and to set forth nature in a second and a fairer edition. South.

My bookseller is reprinting the Essay on Criticism.

Pope.

REPRISE,' n. s. I Fr. reprise. The act of

REPRI'SAL. $ taking something in retaliation of injury: the thing taken.

The English had great advantage in value of re-prisiils, as being more strong and active at sea.

Hayward.

Your care about your banks infers a fear Of threatening floods and inundations near ; If so, a just reprise would only be Of what the land usurped upon the sea. Dryden.

Sense must sure thy safest plunder be, Since no reprisals can be made on thee. Dorset.

REPRISAL, or RECAPTION, is a species of remedy allowed to an injured person. This happens when any one hath deprived another of his property in goods or chattels personal, or wrongfully detains one's wife, child, or servant : in which case the owner of the goods, and the husband, parent, or master, may lawfully claim and retake them, wherever he happens to find them ; so it be not in a riotous manner, or attended with a breach of the peace. The reason is, that it may often happen that the owner may have this only opportunity of doing himself justice : his goods may be afterwards conveyed away or destroyed, and his wife, children, or servants, concealed or carried out of his reach, if he had no speedier remedy than the ordinary process of law. If therefore he can gain possession of his property again, without force or terror, the law will justify his proceeding. But, as the public peace is a superior consideration to any one man's private property, it is provided that this natural right of recaption shall never be exerted where such exertion must occasion strife and bodily contention, or endanger the peace of society. In such cases the loser must have recourse to an action at law.

REPROACH’, v. a. & n. s. -\ Fr. and Span.

REPROACH’ABLE, adj. ˆreprocAe,ofLat.

R’EPROACH’FUL, ireprobatio. To

REPROACH’FULLY, adv. J censure opprobriously ; upbraid : the adjectives and noun substantive corresponding.

I will that the younger women marry, and give none occasion to the adversary to speak reproachfully. 1 Timothy v. 14.

If ye be reproached for the name of Christ, happy are ye. 1 Peter iv. 14.

With his reproach and odious menace, The knight emboiling in his haughty heart, Knit all his forces. Spenser.

If black scandal or foul-faced reproach Attend the sequel of your imposition, Your mere enforcement shall acquittance me.

Shakrpeare

0 monstrous ! what reproachful words are these !

Id.

Shall I then be used reproachfully? Id.

To make religion a stratagem to undermine government is contrary to this superstructure, most scandalous and reproachful to Christianity. Hammond.

That shame There sit not, and reproach us as unclean. Milton.

Thy punishment

He shall endure, by coming in the flesh To a reproachful life and cursed death. Id.

The French writers do not burthen themselves toe much with plot, which has been reproached to them as a fault. Dryden.

An advocate may be punished for reproachful language in respect of the parties in suit. Ayliffie.

The very regret of being surpassed in any valuable quality, by a person of the same abilities with our selves, will reproach our own laziness, and even shame us into imitation. Rogers.

To be idle and to be poor have always been reproaches, and therefore every man endeavours with his utmost care to hide his poverty from others, and his idleness from himself. Johnson.

REP'ROBATE, adj., n. s., &) Lat. repro-REPROBA'TION, n. s. [v. a. S bus. Lost to virtue or to grace ; abandoned : the noun substantive corresponding.

They profess to know God, but in works deny him, being abominable, and to every good work reprobate. Titus i. 16.

What if we omit This reprobate, till he were well inclined ?

Shakspeare.

This sight will make him do a desperate turn , Yea curse his better angel from his side, And fall to reprobation. Id. Othello.

1 acknowledge myself for a reprobate, a villain, .a traytor to the king, and the most unworthy man that ever lived. Raleigh.

What should make it necessary for him to repent and amend, who either without respect to any de-gree of amendment is supposed to be elected to eternal bliss, or, without respect to sin, to be irreversibly reprobated ? Hammond.

All the saints have profited by tribulations ; and they that could not bear temptations became reprobates. Taylor.

God, upon a true repentance, is not so fatally tied to the spindle of absolute reprobation as not to keep his promise, and seal merciful pardons. Maine.

Strength and art are easily outdone By spirits reprobate. Milton.

You are empowered to give the final decision of wit, to put your stamp on all that ought to pass for current, and set a brand of reprobation on clipt poetry and false coin. Dryden.

A reprobated hardness of heart does them the office of pfosophy towards a contempt of death.

L' Estrange.

God forbid, that every single commission of a sin, though great for its kind, and withal acted against conscience for its aggravation, should so far deprave the soul, and bring it to such a reprabate condition, as to take pleasure in other men's sins.

South.

Such an answer as this is reprobated and disallowed of in law ; I do not believe it, unless the deed appears. Ayliffe.

Drive him out

To reprobated exile round the world, A caitive vagabond, abhorred, accursed. Southern.

If there is any poor man or woman, that is more than ordinarily wicked and reprobate, Miranda has her eye upon them. Law.

REPROBATION, in theology, is applied to that decree or resolve which God hath taken from all eternity to punish sinners who shall die in impenitence. This opinion was adopted by St. Augustine and other fathers ; as well as by Cal-vin and most of his followers. The church of England, in the thirty-nine articles, teaches something like it ; and the church of Scotland, in the confession of faith, maintains it. Reprobation respects angels as well as men, and respects the latter either fallen or unfallen. See PREDESTINATION.

REPRODUCE', v. a. i Fr. reproduce ; re REPRODUCTION, n. s. 5 and produce. To produce again or anew : the act of doing so, or thing produced.

If horse dung reproduceth oats, it will not be easily determined where the power of generation ceaseth.

Browne.

am about to attempt a reproduction in vitriol, in which it seems not unlikely to be performable.

Boyle.

Those colours are unchangeable, and, whenever all those rays with those their colours are mixed again, they reproduce the same white light as before.

Newton's Opticks.

REPROVE', v. a.~\ Fr. reprouver ; re and

REPROV'ABLE, adj. f prove. To refute ; con—

REPROV'ER, n. s. f vince ; blame to the face ;

REPROOF'. J reprehend ; blame for :

rcprovable is, culpable ; blameable : reprover,

he who reproves : reproof, blame to the face ;

"eprehension ; censure.

For Crist pleside not to hymsilf as it is writun, the reprovet of men, dispisynge thee felden on me.

Wiclif. Romaynes. I will not reprove thee for thy sacrifices.

Psalm 1. 8.

He shall reprove the world of sin and of righteousness. St. John. Reprove, rebuke, exhort. 2 Tim. iv. 2. This is the sin of the minister, when men are called to reprove sin, and do not. Perkins.

What if they can better be content with one that can wink at their faults, than with him that will reprove them ? Whiigifte.

There is no slander in an allowed fool, though he do nothing but rail ; nor no railing in a known discreet man, though he do nothing but reprove.

Shahspeare. My lords,

Reprove my allegation if you can. Id.

Good Sir John, as you have one eye upon my follies, turn another into the register of your own, that I may pass with a reproof the easier.

Id. Merry Wives of Windtor. You reprove one of laziness, they will say, dost thou make idle a coat ? that is, a coat for idleness.

Carew.

Next to the not deserving a reproof is the well taking of it. Bp. Hall's Contemplations.

If thou dost find thy faith as dead after the reception of the sacrament as before, it may be thy faith was not only little, but reprovahle. Taylor.

What if thy son

Prove disobedient, and, reproved, retort, Wherefore didst thou beget me ? Milton,

This shall have from every one, even the reprooen of vice, the title of living well. Locke.

Let the most potent sinner speak'out, and tell us, whether he can command down the clamours and revilings of a guilty conscience, and impose silence upon that bold reprover? Soitth.

Fear not the anger of the wise to raise ; Those best can bear reproof, who merit praise.

Pope.

He reproves, exhorts, and preaches to those, for whom he first prays to God. Law.

Let my obedience then excuse

My disobedience now. Nor some reproof yourself refuse

From your aggrieved Bow-wow. Cowper. REPRUNE', v.a. Re and prune. To prune a second time.

Reprune apricots and peaches, saving as many of the young likeliest

shoots as are well placed.

Evelyn's Kalendar.

REPS, a district of Transylvania, inhabited by ancient Saxon families, and lying adjacent to the north-east corner of Fogaras. Its area is 210 square miles ; population about 26,000. It is adapted partly for corn and partly for pasture : other tracts are covered with forests. The chief river is the Aluta.

REPS, or Kohalom, the chief place of the above district, a small neat town with 2200 inhabitants. Sixteen miles north of Fogaras.

RE'PTILE, adj. & n. *. Lat. reptile. Creeping upon many feet ; an animal that so creeps. In Gay's lines reptile is confounded with serpent.

Terrestrial animals may be divided into quadrupeds or reptiles which have many feet, and serpents which have no feet. Locke.

Holy retreat ! sithence no female hither, Conscious of social love and nature's rites, Must dare approach, from the inferior reptile, To woman, form divine. Prior.

Cleanse baits from filth, to give a tempting gloss, Cherish the sully'd reptile race with moss. Gay. Ye proud and wealthy, let this theme

Teach humbler thoughts to you, Since such a reptile has its gem,

And boasts its splendour too. Cowper.

It is as if the dead could feel The icy worm around them steal, And shudder, as the reptiles creep To revel o'er their rotting sleep, Without the power to scare away The cold consumers of their clay. Byron. REPTILES, in zoology, the modern name among naturalists for the class of animals principally described by Linne as AMPHIBIA. See that article. The objections to this classification of the great Swedish naturalist seem well sustained. If we regard as amphibia all aquatic animals which are able to live for a time on land, or those land animals which can remain for a time under water, all animals are amphibious ; for even man and most of the mammalia can dive If, on the other hand, the word amphibious fc taken etymoloeically, and understood to denot►► an equal power of subsisting in air and water, it is applicable to no class of animals. Although reptiles can remain longer under water than the mammalia, or birds, they are obliged, as their 2M2

respiratory organs are only calculated for breathing air, to come sooner or later to the surface ; and they are drowned, like any warm-blooded animal, if detained in the water beyond that time. To enable an animal to exist equally in air and water it should have lungs and gills ; that is, it should have the power of breathing air, like the mammalia and birds, and of breathing wat* r, like fishes ; and it should be able to use either of these methods, to the exclusion of the other. But we know of no such animals. The larvae of frogs and salamanders, the proteus anguinus, and the siren lacentina, have indeed branchiae and lungs ; but, as far as our knowledge hitherto goes, none of these could live wholly out of water. The lungs of the tadpole, and of the larvae of salamanders, are designed for the service of those animals in their subsequent stage of existence ; but do not give them the power of living in air : and the lungs, either of the proteus or siren, do not seem sufficient to enable them to dispense with the office of the branchial appendages. Among his amphibia Linnaeus places reptiles that never go into the water, and some fishes which never quit it. He could not fail to experience great difficulties in naming so ill-conceived a class : the genera comprehended are too ill-assorted to admit of their having a common name. Daubenton first divided them into two classes, naming one oviparous quadrupeds, and the other serpents. Lacepede adopted these two classes, and placed between them a third, that of oviparous bipeds. Hermann, in his Tabulae affinitatum Animalium, proposed to substitute, for the term amphibia, that of cryerozoa. Cuvier rejects the Linnaean term for that of reptiles. See ZOOLOGY.

REPTON (Humphrey), a private gentleman, distinguished by his skill in the art of gardening, was a native of Bury, in Suffolk, where he was born in 1752. Having acquired the friendship of the late Mr. Windham, he in 1783 accompanied that gentleman to Ireland, and obtained a lucrative situation in the castle of Dublin : this, however,

he shortly after gave up. On his return to London he applied himself to the improvement of gardens and pleasure grounds professionally, and published several works on landscape gardening. He died in 1818, leaving several sons, one of whom was married to a daughter of the earl of Eldon.

REPUB'LTC, n. s. t Fr. republique ;

REPUBLICAN, adj. & n. s. J Lat. respublica. Commonwealth ; common interest ; state in which the power is lodged in more than one : republican, governed by the people; a person who holds the eligibility of this form of government.

Those that by their deeds will make it known, Whose dignity they do sustain ; And life, state, glory, all they gain,

Count the republic's, not their own. Ben Jonson.

These people are more happy in imagination than the rest of their neighbours, because they think themselves so ; though such a chimerical happiness is not peculiar to republicans. Addison.

They are indebted many millions more than their whole republic is worth. Id. State of tbe War.

REPUBLIC, or commonwealth a popular

state of government, or a nation where the petv pie have the government in their own hands.

REPU'DIATE, v. a. Fr. repudier ; Lat. re-pudio. To divorce ; reject ; put away.

Let not those that have repudiated the more inviting sins, shew themselves philtered and bewitched by this. Government of the Tongue.

It was allowed by the Athenians, only in case of repudiation of a wife. Arbuthnot on Coins.

Here is a notorious instance of the folly of the atheists, that while they repudiate all title to the kingdom of heaven, merely for the present pleasure of body, and their boasted tranquillity of mind, besides the extreme madness in running such a desperate hazard after death, they

unwittingly deprive -hemselves here of that very pleasure and tranquillity they seek for. Bentley's Sermons.

R EP UG'NANT, adj. ˆ Fr. repugnant ; Lat.

REPUG'NANCY, n. s. >repugnans. Disobedi—

REPUG'NANTLY, adv. j ent; contrary; opposite ; inconsistent : the noun substantive and ad-verb corresponding.

But, where difference is without repugnancy, that which hath been can be no prejudice to that which is.

Hooker.

There is no breach of a divine law, but is more or less repugnant unto the will of the lawgiver, God himself. Perkins.

His antique sword,

Rebellious to his arm, lies where it falls,

Repugnant to command. Shatupeare. Hamlet.

Why do fond men expose themselves to battle, And let the foes quietly cut their throats, Without repugnancy ? Id. Timon.

They speak not repugnantly thereto. Browne.

That which causes us to lose most of our time, is the repugnance which we naturally have to labour.

Dry den .

Thus did the passions |act without any of their present jars, combats, or repugnancies, all moving with the beauty of uniformity and the stillness of composure. South's Sermons.

Why, I reject the other conjectures, is, because they have not due warrant from observation, but are clearly repugnant thereunto. Woodward.

Your way is to wrest and strain some principles maintained both by them and me, to a sense repugnant with their other known doctrines. Waterland.

It is no affront to omnipotence, if, by reason of the formal incapacity

and repugnancy of the thing, we aver that the world could not have been made from all eternity. Bentley.

REPU'LLULATE, v. n. Fr. repnlluler ; Lat. re and pullulo. To bud again.

Though tares repullulate, there is wheat still left in the field. HnweVs Vocal Forest.

REPULSE', v. a.& n. s. y Fr. repulse ; Lat.

REPUL'SION, ˆrepulsa. To beat

REPUL'SIVE, adj. j or drive back; the

being driven off or back from any attempt : repulsion is the act or power of repelling ; the adjective corresponds.

The Christian defendants still repulsed them with greater courage than they were able to assail them.

Knolles.

This fleet, attempting St. Minoes, were repulsed, and, without glory or gain ††† returned unto England.

Hayward.

My repulse at Hull seemed an act of so rude dis-loyalty, that my enemies had scarce confidence enough to abet it. King Charles.

By fate repelled and with repulses tired. Denham.

M~an complete to have discovered and repulsed Whatever wiles of foe or seeming friend. Milton.

The parts of the salt or vitriol recede from one another, and endeavour to expand themselves, and remove as far asunder as the quantity of water, in which they float, will allow ; and does not this endeavour imply, that they have a repulse force by which they fly from one another, or that they attract the water more strongly than one another ?

Newton's Optics.

Air has some degree of tenacity, whereby the parts attract one another ; at the same time, by their elasticity, the particles of air have a power of repulsion or flying off from one another. Arbuthnot.

REPULSION, in physics, is that property of bodies whereby they recede from each other, and, on certain occasions, mutually avoid coming into contact. This, as well as attraction, has been considered as one of the primary qualities of all matter, and been much used in explaining the phenomena of nature ; thus the particles of air, fire, steam, electric fluid, &c., have all been said to have a repulsive power with respect to one another ; because, when they are compressed into a small space, they ex-pand with great force ; but as to fire, light, and electricity, our experiments fail ; nay, the supposition of a repulsive power among the particles of the electric fluid is at least a moot point. See ELECTRICITY. Even in those fluids air and steam, where a repulsive power manifestly exists, it is demonstrable that the repulsion can-not be a primary quality, since it can be increased to a great degree by heat, and diminished by cold ; but it is impossible that a primary quality of matter can be increased or diminished by any external circumstances whatever. The repulsion of electrified bodies is, explained under the article ELECTRICITY ; that of others is less subject to investigation ; and the most that can be said of it is, that iu many cases it seems to be the consequence of a modification of heat, as in others of electricity.

REPUR'CHASE, v. a. Re and purchase. To buy again.

Once more we sit on England's royal throne, Repurchased with the blood of enemies ; What valiant foe-men, like to autumn's corn, Have we mowed down in top of all their pride!

Shakspeare.

If the son alien those lands, and repurchase them again in fee, the rules of descents are to be observed, as if he were the original purchaser. Hale.

REPUTE’, v. a. & n.

REP’UTA BLE, adj.

REP’LTABLENESS, n. s.

REP’ITABLY, adv.

REPUTA’TION, n. s.

REPUTE’LESS, adj.

ed character or opinion ; credit ; honor : the last, or the meaning of repute, noun substantive, being

) Fr. reputer ; Lat. | reputo. To hold ; [ˆ think ; account ; es- { teem : hence, as a substantive,

Id.

you have lost no reputation at all, unless vou yourself such a loser.

Opinion, that did help me to the crown,

Had left me in reputelets banishment,

A fellow of no mark nor livelihood. Men, such as chuse

Law practice for mere gain, boldly repute

Worse than embrothel’d strumpets prostitute.

Dmrnt.

He who reigns

Monarch in heaven, till then, as one secure, Sat on his throne, upheld by old repute. ‘ Milton.

If the grand vizier be so great, as he is reputed, in politics, he will never consent to an invasion of Hungary-Temple.

\ ersoy, upon the lake of Geneva, has the reputation of being extremely poor and beggarly.

Addison.

If ever any vice shall become reputable, and be glorified in as a mark of greatness, what can we then expect from the man of honour, but to signalize himself? Rogers' a Sermons.

To many such worthy magistrates, who have thus reputably filled the chief seats of power in this great city, I am now addressing my discourse.

Atterbury'i Sermons.

A third interprets motions; looks, and eyes ; At every word a reputation dies. Pope.

In the article of danger, it is as reputable to elude an enemy as defeat one. Broome.

REQUENA, a trading town of Cuenca, in Spain, on the border of Valencia. Its inhabitants, about 6000, are largely engaged in the manufacture of silks.

REQUEST', n. s. & v. a. Fr. requeste ; Lat. requisitus. Petition ; entreaty ; solicitation ; de-mand ; state of being desired ; hence repute ; credit : to request is to ask ; entreat ; solicit.

Haman stood up to make request for his life to Esther. Either.

It was to be requested of Almighty God, by prayer, that those kings would seriously fulfil all that hope of peace. Knolles.

But ask what you would have reformed, I will both hear and grant you your request!.

Shakspeare

Aufidius will appear well in these wars, his great opposer Coriolanus being now in no request of his country. Id

Ask him to lend

To this, the last request that I shall send, A gentle ear.

All thy request for man, accepted son ! Obtain ; all thy request was my

decree.

Whilst this vanity of thinking, that men are obliged to write either systems or nothing, is in request, many excellent notions are suppressed.

Boyle.

Knowledge and fame were in as great request as wealth among us now. Temple.

In things not unlawful great persons cannot be

Denham.

Milton

I character ; establish-properly said to request, because, all things considered they must not be denied. South s txrmons.

REQUESTS, COURT OF (curia requisitionum),

also that of reputation : reputable, is of good re-was a court of equity, of the same nature with

pute ; honorable : the noun substantive and ad-the court of chancery, but inferior t<

verb following corresponding : reputeless, disre-pally instituted for the relief of such petitioners

putable; disgraceful. as in conscionable cases addressed themselves

TL . - ??? j - hv sunnlication to his maiesty. Of this court

1 he king was reputed a prince most prudent. oy suppi j , } c;ctpH V.v

Shakspeare. the lord privy-seal was chief judge, assisted by

Reputation is an idle and most false ‘imposition ; the masters of

request. t began aboi

oft got without merit, and lost without deserving : Hen. VII., according to Sir J uhus s Caesar s

REQ

tale upon this subject; though Mr. Gwyn asserts that it began from a commission first granted oy Henry VJII. This court having assumed great power to itself, so that it became burthen-some, Mich. Anno 40 and 41 Eliz. in the court of common pleas it was adjudged upon solemn argument, that the court of requests was no court of judicature, &c., and by statute 16 & 17 Car. I. c. 10, it was taken away. There are still however courts of requests, or more properly courts of conscience, constituted in London and other trading and populous districts for the recovery of small debts. The first of these was established in London at so early a' period as the reign of Henry VIII. by an act of their common council ; which, however, was certainly insufficient for that purpose, and illegal, till confirmed by stat. 3 Jac. *I.e.* 15, which has since been explained and amended by stat. 14 Geo, II. c. 10. The constitution is this : two aldermen and four commoners sit twice a week to hear all causes of debt not exceeding the value of 40s., which they examine in a summary way, by the oath of the parties or other witnesses, and make such order therein as is consonant to equity and good conscience. The time and expense of obtaining this summary redress are very inconsiderable, which makes it a great benefit to trade ; and thereupon divers trading towns and other districts have obtained acts of parliament for establishing in them courts of conscience upon nearly the same plan as that of London. By 25 Geo. III. c. 45, which is confined to prosecutions in courts of conscience in London, Middlesex, and the borough of Southwark, and by 26 Geo. III. c. 38, which extends the provisions of the former act to all other courts instituted for the recovery of small debts, it is enacted that, after the 1st day of September 1786. no person whosoever being a debtor or defendant, and who has been or shall be committed to any gaol or prison by order of any court or commissioners authorised by any act or acts of parliament for constituting or regulating any court or courts for the recovery of small debts, where the debt does not exceed 20s., shall be kept or continued in custody, on any pretence whatsoever, more than twenty days from the commencement of the last mentioned act ; or from the time of his, her, or their commitment to prison ; and, where the original debt does not amount to or exceed the sum of 40s., more than forty days from

the co mmencement of the said act, or from the time of his, her, or their commitment as aforesaid ; and all jailers are thereby required to discharge such persons accordingly. And by sect. 2, if it shall be proved to the satisfaction of the court that any such debtor has money or goods, which he has wilfully and fraudulently concealed, the court shall have power to enlarge the aforesaid time of imprisonment for debts under 20s. to any time not exceeding thirty days, and for debts under 40s. to any time not exceeding sixty days ; which said ground of farther detention shall be specified in the said commitment. And that (by sect. 3) at the expiration of the said respective times of imprisonment, every such person shall immediately be discharged, without paying any sum of money, or other reward or gratuity what-534 REQ

soever, to the jailer of such jail on any pretence whatsoever ; and every jailer demanding or receiving any fee for the discharge of any such person, or keeping any such person prisoner after the said respective times limited by the said act, shall forfeit ––5, to be recovered in a summary way before two justices of the peace ; one moiety hereof to be paid to the overseers of the poor of the parish where the offence shall be committed, and the other to the informer.

HEQUICK'EN, v. a. Re and quicken. To reanimate.

By and by the din of war 'gan pierce His ready sense, when straight his doubled spirit liequickened what in flesh was fatigate, And to the battle came he. Shakspeare. Coriolanus.

RE'QUIEM, n. s. Lat. requiem. A hymn in which they implore rest for the dead.

The midwife kneeled at my mother's throes, With pain produced and nursed for future woes ; Else had I an eternal requiem kept, And in the arms of peace for ever slept. Sandys.

We should profane the service of the dead, To sing a requiem and such peace to her, As to peace-partec1 souls. Shakspeare.

REQUIRE', t. a. -\ Fr. reqturer-, Lat—

REQUIR'ABLE, adj. I requiro, requisitus.

RE'QUISITE, adj. & n. s. ˆ>To demand ; ask

RE'QUISITELY, adv. i as of right ; enjoin ;

RE’QUISITENESS, re. s. J make or show necessary ; need : the adjective corresponding : requisite is, necessary ; needful ; naturally required : the adverb and noun substantive corresponding.

The king’s business required haste. 1 Samuel.

Ye me require

A thing without the compass of my wit ; For both the lineage and the certain sire, From which I sprung, are from me hidden yet.

Spenser.

We do require them of you. so to use them, As we shall find their merits. Shakspeare.

Cold calleth the spirits to succour, and therefore they cannot so well close and go together in the head, which is ever requisite to sleep. Bacon.

This the very law of nature teacheth us to do, and this the law of God reqtnreth also at our hands.

Spelman. This implied Subjection, but required with gentle sway. Milton.

High from the ground, the branches would require Thy utmost reach. Id.

It contains the certain periods of times, and all circumstances requirable in a history to inform.

Hate.

Discerning how exquisitely the several parts of scripture are fitted to the several times, persons, and occurrences intended, we shall discover not only the sense of the obscurer passages, but the requisiteness of their having been written so obscurely. Boyle.

Oft our alliance other lands desired, And what we seek of you, of us required. Dryden

But why, alas ! do mortal men complain”! God gives us what he knows our wants require, And better things than those which we desire. Id.

Kes non parta labore, sed relicta, was thought by a poet to be one of

the requisites to a happy lite. Id.

God, when he gave the world in common to mankind, commanded man also to labour ; and the pe-nury of his condition required it. Locke.

When God new-motlulled the world by the introduction of a new religion, and that in the room of

one set up by himself, it was requisite that he should recommend it to the reasons of men with the same authority and evidence that enforced the former.

South.

God on his part has declared the requisites on ours ; what we must do to obtain blessings is the great business of us all to know. Wake.

REQUITE', v. a. > Fr. requiter. To repay;

REQDI'TAL, n. s. $ retaliate ; recompense : requital is, return of any good or bad office ; retaliation ; reward.

When Joseph's brethren saw that their father was dead, they said, Joseph will requite us all the evil we did. Genesis.

An avenger against his enemies, and one that shall requite kindness to his friends. Eccles.

Should we take the quarrel of sermons in hand, and revenge their cause by requital, thrusting prayer in a manner out of doors under colour of long preaching ? Hooker.

Since you

Wear out your gentle limbs in my affairs, 3e bold, you do so grow in my requital, As nothing can unroot you. Shakspeare.

If he love me to madness, I shall never requite

him.

Id.

I have ta'en a cordial, Sent by the king of Haly in requital Of all my miseries, to make me happy. Denham.

He asked me for a song, And in requital op'd his leathern scrip, And shewed me simples of a thousand names, Telling their strange and vigorous faculties. Milton,

Him within protect from harms ; He can requite thee for he knows the charms That call fame on such gentle acts as these. Id.

No merit their aversion can remove, Nor ill requital can efface their love. Waller.

In all the light that the heavens bestow upon this lower world, though the lower world cannot equal their benefaction, yet with a kind of grateful return it reflects those rays, that it cannot recompense ; so that there is some return however, though there can be no requital. South's Sermons.

Great idol of mankind we neither claim The praise of merit, nor aspire to fame ! 'Tis all we beg thee to conceal from sight Those acts of goodness which themselves requite : O let us still the secret joy partake, To follow virtue ev'n for virtue's sake. Pope.

Unhappy Wallace,

Great patriot hero ! ill requited chief! Thornton. RESALE', n. s. Re and sale. Sale at second hand.

Monopolies and coemption of wares for resale, where they are not

restrained, are great means to enrich.

Bacon.

RESALUTE’, v. a. Fr. resaluer ; Lat. resa-luto. To salute or greet anew.

We drew her up to land, And trod ourselves the resaluted sand. Chapman.

To resolute the world with sacred light, Leucothea waked. Milton.

RESAIL’, v.n. Re and sail. To sail back. From Pyle resailing, and the Spartan court, Horrid to speak ! in ambush is decreed. Pope.

RESCIND’, v. a. J Fr. rescinder ; Lat. re-RESCIS’SION, n.s.] scindo. To cut off; abrogate : the act of cutting off; abrogation.

If any infer rescission of their estate to have been for idolatry, that the governments of all idolatrous nations should be also dissolved, it followeth not.

Bacon .

It is the imposing a sacramental obligation upon him, which being the condition, upon the performance whereof all the promises of endless bliss are made over, it is not possible to rescind or disclaim the standing obliged by it. Hammond.

I spake against the test, but was not heard ; These to rescind, and peerage to restore. Dry den.

RESCOUS, or RESCUE (rescussus), in law, an illegal taking away, and setting at liberty, a distress taken, or a person arrested, by process, or course of law. This is properly a rescous in fact. If one distrains beasts for damage feasant in his ground, and, as he drives them along the highway towards the pound, they enter into the owner’s house, and he withholds them there, and will not deliver them upon demand ; this detainer is a rescous in law. For a rescous, or the taking of goods by force,when, in a distress, they are in the custody of the law, is considered as an atrocious injury. The distrainer may bring an ac-tion on the case for this injury, and shall therein, if the distress were taken for rent, recover treble damages. In case of the forcible delivery of a person arrested from the officer who is taking him to prison, the plaintiff has a similar remedy by action on the case, or of rescous ; or,

if the sheriff makes a return to such rescous to the court out of which the process issued, the rescuer will be punished by attachment.

RESCRIBE', v. a.) Fr. rescrire; Lat. reRE'SCRIPT, n. s. $ scribo. To write back, or return in writing; transcribe: a rescript is an edict of some sovereign authority.

One finding a great mass of money digged under ground, and, being somewhat doubtful, signified it to the emperor, who made a rescript thus : Use it. Bacon'i Apophthegms.

Calling for more paper to rescribe them, he shewed him the difference betwixt the ink-box and the sand-box. Howel.

Whenever a prince on his being consulted rescribe* or writes back Toleramus, he dispenses with that act otherwise unlawful. Ayliffe'i Parergon.

The popes, in such cases where canons were silent, did, after the manner of the Roman emperors, write back their determinations, which were stiled rescript* or decretal epistles, having the force of laws. Id.

RESCRIPT, in the civil law, is a judgment delivered by an emperor or pope on some difficult question or point of law, to serve as a decision thereof for the future. The papal rescripts never obtained either in England or France, when contrary to the liberties of the English and Gallican churches ; but were declared abusive. Among the ancient Romans the contending parties, and even the magistrates themselves, frequently consulted the emperor on the measures they were to take in certain difficult cases ; and the answers returned by the emperor on such consultations were called rescripts. These had not, indeed, the full force of laws ; but they were deemed a strong prejudice or presumption : and in succeeding ages they had the force of perpetual laws.

Justinian has inserted a great number of rescripts in the code ; and by that means given them the authority they would otherwise want. The author of the life of the emperor Macrinus observes, of that prince, that he would have his officers judge by laws, not by rescripts ; esteem-

ing it absurd to admit the wills of ignorant men, such as Commodus and Caracalla, for rules of judging ; and Trajan never gave any rescripts at all, being loth to countenance a custom, where what was frequently granted as a favor, in particular cases, might be afterwards pleaded as a precedent.

RES'CUE, v. a. & n. s. Old Fr. rescorre ; Lat. re exctasus ? To set free from violence, restraint, or danger: deliverance from a state of this kind.

Sir Scudamore, after long sorrow, in the end met with Britoraartis, who succoured him and reskewed his love. Spenser.

My uncles both are slain in rescuing me.

Shakspeare.

We're beset with thieves ; Rescue thy mistress, if thou be a man. Id.

How comes it, you Have help to make this rescue? Id.

He that is so sure of his particular election as to resolve he can never fall, if he commit those acts against which scripture is plain that they that do them shall not inherit eternal life, must necessarily resolve that nothing but the removing his fundamental error can rescue him from the superstructivc.

Hammond's Fundamentals.

Dr. Bancroft understood the church excellently, and had almost rescued it out of the hands of the Calvinian party. Clarendon.

Who was that just man, whom had not heaven Retcved, had in his righteousness been lost ?

Milton. Riches cannot rescue from the grave,

Which claims alike the monarch and the slave.

Dry den.

We have never yet heard of a tumult raised to rescue a minister whom his master desired to bring to a fair account. Davenant.

RESEARCH’,n.s. &?;.►►. Fr. recherche. Enquiry ; search : to examine ; enquire.

It is not easy to research with due distinction, in the actions of eminent personages, both how much they may have been blemished by the envy of others, and what was corrupted by their own felicity.

WottorCs Buckingham.

By a skilful application of those notices, may be gained in such researches the accelerating and better-ing of fruits, emptying mines, and draining fens.

Glanville’s Scepsis.

I submit those mistakes, into which I may have fallen, to the better consideration of others, who shall have made research into this business with more felicity. Holder.

A felicity adapted to every rank, such as the researches of human wisdom sought for, but could not discover. Rogers.

RESEAT’, v. a. Re and seat. To seat again. When he’s produced, will you reseat him

Upon his father’s throne ? Dryden.

RESEDA, dyer’s-weed, yellow-weed, weld, or wild woad ; a genus of the order of trigynia, and dodecandria class of plants ; natural order fifty-fourth, miscellaneae : CAL. monophyllous and partite : petals lanciniated: CAPS.unilocular, and opening at the mouth. There are fourteen species, of which the most remarkable is the ►►►

R. luteola, or common dyer’s weld, growing naturally in waste places in many parts of Britain. The young leaves are often undulated; the stalk is a yard high, or more, terminated \ith a long naked spike of yellowish-green

flowers ; the plant is cultivated and much used for dyeing silk and wool of a yellow color. It will grow with very little trouble, without dung, and on the very worst soils. It is therefore commonly sown with, or immediately after, barley or oats, without any additional care, except drawing a bush over it to harrow it in. The reaping of corn does it little or no hurt, as it grows but little the first year ; and the next summer it is pulled and dried like flax. Much care and nicety, however, are requisite so as not to injure either the seed or stalk ; or, which sometimes happens, damaging both, by letting it stand too long, or pulling it too green. To avoid these inconveniences a better method of culture has been devised. This new method is to plough and harrow the ground very fine, without dung, as equally as possible, and then sowing a gallon of seed upon an acre some time in August. In about two months it will be high enough to hoe, which must be carefully done, and the plants left about six inches asunder. In March it is to be hoed again, and this labor is to be repeated a third time in May. About the close of June, when the flower is in full vigor, and the stalk is become of a greenish-yellow, it should be pulled ; a sufficient quantity of stems being left growing for seed till September. By these means the flower and stalk, both of them being carefully dried, will sell at a good price to the dyers, who employ it constantly, and in large quantities ; add to this, that the seed being ripe, and in perfect order, will yield a very considerable profit. In a tolerable year, when the seasons have not been unfavorable, the advantages derived from this vegetable will answer very well ; but if the summer should be remarkably fine, and proper care is taken in getting it in, there will be a very large produce upon an acre. The crop being, as has been shown, so early removed, the ground may be conveniently prepared for growing wheat the next year. Upon the whole it is in its nature a very valuable commodity in many respects, as it serves equally for woollen, linen, or silk ; dyeing not only a rich deep yellow, but also, properly managed, all the different shades of yellow with brightness and beauty; and, if these be previously dipped blue, they are by the weld changed into a very pleasing green, which our artists can also diversify into a great variety of shades.

RESEI’ZER, n. s. One that seizes again.

RESEI’ZURE, n. s. Re and seizure. Repeated seizure ; seizure a second time.

Here we have the charter of foundation ; it is now the more easy to judge of the forfeiture of reseixure; deface the image, and you divest the right. Bacmi.

RESEND’, v. a. Re and send. To send back ; to send again. Not in use.

I sent to her, by this same coxcomb, Tokens and letters, which she did resend.

Siiakspeare.

RESEM’BLE, v. n. } Fr. resembler. To com-RESEM’BLANCE, w.s. $ pare ; exhibit or represent as like something else ; be like: rese.ublance is, likeness; similitude.

These sensible things, which religion hath allow ed, are resemblance! formed according to things spiritual,

whereunto they serve as a hand to lead, and a way to diiect. Hooker.

The torrid parts of Africk are resembled to a lib-bard’s skin, the distance of whose spots represents the disperseness of habitations. Brerewood.

Most safely may we resemble ourselves to God, in respect of that pure faculty which is never separate from the love of God. Raleigh.

Fairest resemblance of thy Maker fair, Thee all things living gaze on. Milton.

One main end of poetry and painting is to please ; they bear a great resemblance to each other.

Dryden’s Dufresnoy.

The quality produced hath commonly no resemblance with the thing producing it ; wherefore we look on it as a bare effect of power.

Locke.

They are but weak resemblances of our intentions, faint and imperfect copies, that may acquaint us with the general design, but can never express the life of the original. Addison.

I cannot help remarking the resemblance betwixt him and our author in qualities, fame, and fortune.

Pope.

So chymists boast they have a power, From the dead ashes of a flower, Some faint resemblance to produce, But not the virtue. Swift's Miscellanies.

But deep this truth impressed my mind ••• Through all his works abroad,

The heart, benevolent and kind, The most resembles God. Burnt.

My dog ! what remedy remains, Since, teach you all I can,

I see you, after all my pains, So much resemble Man 1

Cowper.

RES EN, a town of Assyria on the Tigris, mentioned by Moses as having been 'built by Nimrod ; thought to be the Larissa of Xenophon. It is probable that the Greeks asking of what city those were the ruins of which they saw, the Assyrians might answer Laresen, Of Resen ; which word Xenophon expressed by Larissa, a more familiar sound to a Greek ear.

RESENIUS (Peter John), a learned Danish counsellor and professor, born at Copenhagen in 1623. He studied four years at Leyden, was made counsellor of the German nation at Padua, and syndic of the university. On his return to Denmark he was made president of Copenhagen, counsellor justice, and counsellor of state, and ennobled. He wrote several works, the chief of which is his Edda Islandorum. He died in

RESENT, v. a. ~} Fr. resentir. To take

RESENT'ER, n. s. I well or ill; to take ill is

RESENT'FUL, adj. [the common usage: a

RESENT'FULLY, adv. Presenter is one who

RESENT'INGLY, j deeply feels an injury:

RESENT'MENT, n. s. j resentful, malignant;

soon provoked to anger, and long retaining it :

the adverb corresponding: resentingly means

with deep sense or impression ; with malignity:

resentment, strong perception of good or ill ;

deep feeling of anger.

A serious consideration of the mineral treasures of his territories, and the practical discoveries of them by way of my philosophical theory, he then so well resented, tkat afterwards, upon a mature digestion of my whole design, he commanded me to let your lordships understand how great an inclination he hath to umber so hopeful a work. Bacon.

The earl was the worst philosopher, being a greal resenter, and a weak dissembler of the least disgrace.

WuttOH.

Thou with scorn

And anger would'st resent the offered wrong.

Miltm.

What he hath of sensible evidence, the very grand work of his demonstration is but the knowledge of his own resentment ; but how the same things appear to others, they only know that are conscious to

them ; and how they are in themselves, only he that made them-Glanville's Scepsis.

To be absent from any part of publick worship he thus deeply resented. Fell.

Hylobares judiciously and resentingly recapitulates your main reasonings. More's Divine Dialogues.

He retains vivid resentments of the more solid morality. More.

Can heavenly minds such high resentment show, Or exercise their spite in human woe? Dryden.

Such proceedings have been always resented, and often punished in this kingdom. Davenant.

I cannot, without some envy, and a just resentment against the opposite conduct of others, reflect upon that generosity wherewith the heads of a struggling faction treat those who will undertake to hold a pea in their defence. iStinft.

Though it is hard to judge of the hearts of people, yet, where they declare their resentment and uneasiness at any thing, there they pass their judgment upon themselves. Late.

RESERVE', v. a. &n.s.^| Fr. reserver ; RESERVATION, n. s. I Lat. reservo. To RESERV'ATORY, | keep ; save ; re—

RESERVED', adj. Xtam > lav UP *n

RESERV'EDLY, adv. store : reservation

RESERV'EDNESS, n. s. I is, the act of so do-RESERVOIR'.) ing ; custody ; state

of being treasured up, or the thing treasured ; place in which any thing is reserved : the adjective, adverb, and noun substantive corresponding: reservoir (from old Fr. reservoir) is a synonyme of reservatory.

David houghed all the chariot horses, but reserved of them for an hundred chariots. 2 Samuel.

Will he reserve his anger for ever 1 will he keep it to the end ? Jeremiah.

I could add many probabilities of the names of places ; but they should be too long for this, and I reserve them for another. Spenser.

Reserve thy state, with better judgment check This hideous rashness. Shakspeare.

Ourself by monthly course, With reservation of an hundred knights, By you to be sustained, shall our abode Make with you by due turns. Id.

He willed me,

In heedful ‘st reservation, to bestow them As notes, whose faculties inclusive were More than they of note. /A

Observe their gravity

And their reservedness, their many cautions Fitting their persons. Ben Jenson’s Catiline.

By formality, I mean something more than ceremony and compliment, even a solemn reservedness, which may well consist with honesty. Wotton.

Nor had I any reservations in my own soul when I passed that bill, nor repentings after.

King Charles.

The breach seems like the scissures of an earthquake, and threatens to swallow all that attempt to close it and reserves its cure only for omnipotence.

Decay of Piety.

We swear with Jesuitical equivocations and men-tal reservations. Sanderson against the Covenant.

There was great wariness and reservedness, and so great a jealousy of each other that they had no mind to give or receive visits. Clarendon.

Flowers lleserved from night, and kept for thee in store.

Milton.

This is academical reservation in matters of easy truth, or rather sceptical infidelity against the evidence of reason. Browne.

The virgins, besides the oil in their lamps, carried likewise a reserve in some other vessel for a continual supply. Tillotson.

Nothing reierved or sullen was to see, But sweet regards. Dryden.

The assent may be withheld upon this suggestion, that I know not yet all that may be said : and therefore, though I be beaten, it is not necessary I should yield, not knowing what forces there are in reserve behind. Locke.

To all obliging, yet reserved to all, None could himself the favour'd lover call. Walsh.

Dissimulation can but just guard a man within the compass of his own personal concerns, which yet may be more effectually done by that silence and re-fei-vedness that every man may innocently practise.

South's Sermons.

However any one may concur in the general scheme, it is still with certain reserves and deviations, and with a salvo to his own private judgment.

Addison's Freeltolder.

There is not a spring or fountain, but are well provided with huge cisterns and reservoirs of rain and snow-water. Addison.

Ere guardian thought cou'd bring its scattered aid, My soul surprized, and from herself disjoined, Left all reserve, and all the sex behind. Prior.

How I got such notice of that subterranean reser-eatory as to make a computation of the water now concealed therein, peruse the propositions concerning earthquakes. Woodward.

I must give only short hints, and write but obscurely and reservedly, until I have opportunity to express my sentiments with greater copiousness and perspicuity. Id.

Each has some darling lust, which pleads for a reserve, and which they would fain reconcile to the expectations of religion. Rogers.

He speaks reservedly, but he speaks with force ; Nor can a word be changed but for a worse. Pope.

Who sees pale Mammon pine amidst his store, Sees but a backward steward for the poor ; This year a reservoir, to keep and spare ; The next, a fountain spouting through his heir. Id.

Conceal your esteem and love in your own breast, and reserve your kind looks and language for private hours. Swift.

Fame is a bubble the reserved enjoy, Who strive to grasp it, as they touch, destroy.

Young.

RESERVE, or CORPS DE RESERVE, in military affairs, the third or last line of an army, drawn up for battle ; so called because they are reserved to sustain the rest as occasion requires, and not to engage but in case of necessity.

A RESERVOIR is chiefly used for a place where water is collected and reserved, in order to be conveyed to distant places through pipes, or supply a fountain, or jet d'eau.

RESETTLE, v. 9. Re and settle. To set-tle again.

Some roll their cask to mix it with the lees, and, after a resettlement, they rack it. Mcrtimer.

To the quieting of my passions, and the resettle* ment of my discomposed soul, I consider that grief is the most absurd of all the passions. A 'orris.

Will the house of Austria yield the least article, even of usurped

prerogative, to resettle the minds of those princes in the alliance, who are alarmed at the consequences of the emperor's death ? Swift.

RE'SIANT, adj.) Fr. resseant. Resident ;

RESIANCE, n. s. J present in a place.

Solyman was come as far as Sophia, where the Turks' great lieutenant in Europe is always resiant, before that the Hungarians were aware. Knolles.

The king forthwith banished all Flemings out of his kingdom, commanding his merchant adventurers, which had a resiauce in Antwerp, to return.

Bacon's Henry VII. The Allobroges here resiant in Rome.

Ben Jonton.

RESIDE', v. n. ~\ Fr. resider; Lat. reside,

RESIDENCE, ►►. s. (resideo. To have abode;

RES'IDENT, ►►live; dwell; also (from

RESIDENTIARY. j resido) to sink ; subside : the derivatives follow both senses

Within the infant rind of this small flower, Poison hath residence, and medicine power.

Shakspeare. Romeo and Juliet.

Separation is wrought by weight, as in the ordinary residence or settlement of liquors. Bacon.

How can God with such reside 1 Milton.

Something holy lodges in that breast, And with these raptures moves the vocal air, To testify his hidden residence. Id.

There was a great familiarity between the confessor and duke William ; for the confessor had often made considerable residences in Normandy.

Hate's Law of England.

Our clearest waters, and such as seem simple unto sense, are much compounded unto reason, as may be observed in the evaporation of water, wherein, besides a terreous residence, some salt is also found. Browne's Vulgar Errours.

Wasps and hornets will fly about, and use their wings, a good part of an hour after they have lost their heads ; which is to be imputed to the residence of their soul in them still, and the intireness of the animal spirits not easily evaporating through tfeeir crustaceous bodies.

More. The Immortality of the Soul, b. ii. ch. x—

Christ was the conductor of the Israelites into the land of Canaan, and their residentiary guardian.

More.

Oil of vitriol and petroleum, a drachm of each, turn into a mouldy substance ; there residing in the bottom a fair cloud and a thick oil on the top.

Boyle.

In no fixed place the happy souls reside; In groves we live, and lie on mossy beds. Dryden.

1 am not concerned in this objection, not thinking it necessary that Christ should be personally present or resident on earth in the millenium.

Burnet's Tfieory of the Earth.

Caprea had been the retirement of Augustus for some time, and the residence of Tiberius for several years. Addison.

The pope fears the English will suffer nothing like a resident or consul in his kingdoms. Id.

He is not said to be resident in a place who comes thither with a purpose of retiring immediately ; so also he is said to be absent who is absent with his family. Ayliffe's Parergon

RE'SIDUE, 7i. s. Fr. residu ; Lat. residuum. The remaining part ; that which is left.

Tis enough to lose the legacy, or the residuary advantages of the estate left him by the deceased.

Ayliffe.

The causes are all such as expel the most volatile parts of the blood, and fix the residue.

Arbuthnot on Aliments.

RESIEGE*. *. a. Fr. re and siege. To seat again. Obsolete.

In wretched prison long he did remain, Till they outreigned had their utmost date,

And then therein resieged was again, And ruled long with honourable state. Spenser.

RESIGN’, v. a. ˆ Fr. resigner ; Lat. RESIGN A’TION, n. s. >res/gno. To give up RESIGN’MENT. J a claim or possession ;

yield ; submit ; give up confidence : the noun

substantives corresponding.

Your crown and kingdom indirectly held.

Shakspeare.

I’ll to the king, and signify to him That thus I have resigned to you my charge. Id.

Uo that office of thine own good will ; The resignation of thy state and crown. Id.

He intended to procfire ˆ.resignation of the rights of the king's majesty's sisters and others, entitled to the possession of the crown. Hayward.

Phoebus resigns his darts, and Jove His thunder, to the god of love. Denham.

Desirous to resign and render back All I received. Milton.

What more reasonable than that we should in all tilings resign up ourselves to the will of God ?

Tillotson.

Happy the man who studies nature's laws, His mind possessing in a quiet state, Fearless of fortune, and resigned to fate. Dryden.

Those, who always resign their judgment to the last man they heard or read, truth never sinks into those men's minds ; but, cameleon-like, they take the color of what is laid before them, and as soon lose and resign it to the next that comes in their way.

Locke.

There is a kind of sluggish resignation, as well as poorness and degeneracy of spirit, in a state of slavery, that very few will recover themselves out of it.

Addison.

Ev'ry Ismena would resign her breast ; And ev'ry dear Hippolytus be blest. Prior.

A firm, yet cautious, mind, Sincere, though prudent ; constant, yet resigned.

Pope. Thou Power Supreme, whose mighty scheme

These woes of mine fulfil, Here, firm, I rest, they must be best.

Because they are Thy will. Then all I want (Oh ! do thou grant

This one request of mine !) Since to enjoy thou dost deny,

Assist me to resign. Burns.

And with one prayer to Mary Mother, ••• And, it may be, a saint or

two, As I resigned me to my fate. They led me to the castle gate. Byron.

RESILIENCE, n. s.\ Lat. resilio. The RESIL'IEXCY, n. s. J act of starting or leaping back.

If you strike a ball sidelong, the rebound will be as much the contrary way ; whether there be any such resilience in echoes, that is, whether a man shall hear better if he stand aside the body repercussing, ˆhan if he stand wV-ere he speaketh, may be tried. Biici'n's Natural History.

RES'IN, n. s. I Fr. resine; Lat. retwa.

RES'INOUS, adj. J The fat sulphurous parts of vegetables: resinous, containing resin; consisting of resin.

Those vegetable substances that will dissolve in water are gums, those that will not dissolve and mix but with spirits or oil are resins. Quincy.

Resinous gums, dissolved in spirit of wine, are let fall again if the spirit be copiously diluted.

Boyle on Colours.

RESIN, in natural history, a viscid juice oozin►► either spontaneously, or by incision, from several trees, as the pine, fir, &c. Resins are distinguished from gums by being inflammable, and soluble only in ardent spirits.

RESIN. The name resin is used to denote solid inflammable substances, of vegetable origin, soluble in alcohol, usually affording much soot by their combustion. They are likewise soluble in oils, but not at all in water ; and are more or less acted upon by the alkalis.

All the resins appear to be simple volatile oils, rendered concrete by their combination with oxygen. The exposure of these to the open air, and the decomposition of acids applied to them, evidently lead to this conclusion.

There are some among the known resins which are very pure, and perfectly soluble in alcohol, such as the balsam of Mecca and of capivi, turpentines, e'etm, &c. ; others are less pure, and contain a small portion of extract, which renders them not totally soluble in alcohol ; such are mastic, sandarach, guaiacum, labdanum, and

dragon’s blood.

VV hat is most generally known by the name of resin simply, or sometimes of yellow rosin, is the residuum left after distilling the essential oil from turpentine. If this be urged by a stronger fire, a thick balsam, of a dark reddish color, called balsam of turpentine, comes over ; and the residuum, which is rendered blackish, is called black resin, or colophony. See CHEMISTRY, Index.

Resins are employed for many purposes in the arts. The cheapest are used for torches, and to cover the outsides of ships and boats. The fine transparent resins compose varnishes. Some of them are employed medicinally, and enter into the composition of ointments and plasters ; or internally, as the resins of scammony and jalap, which are purgative. Other resins, as benjamin and storax, are employed as perfumes. They all become harder by exposure to a moderate heat; and it is upon this that the art of the japanner depends. If the surface to be japanned be covered with common tar only, and exposed to the temperature of 300►► for a length of time, the coating becomes hard and infusible. At the same temperature, any other resin, applied in the same way, would assume a similar hardness.

RESIST’, v. a. & n. s. *} Fr. resister ; Lat. RESISTANCE, or | resisto. To oppose ;

RESISTANCE, n. s. lˆact against : make RESISTIBIL’ITY, n. s. { opposition : resist-RESIST’IBI.E, adj. | mice, or resistence, is

RESIST’LESS. J the act ; resistibility.

the quality or power of resisting : the adjective

corresponding.

Submit to God , resist the devil, and he will flee.

James ix.

Demetrius, seeing that the land was quiet, and that no resistance was made againt him, sent away all his forces. 1 Mac.

All the regions

Do seemingly revolt ; and, who resist, Are mocked for valiant ignorance, And perish constant fools. Shaktpeare. Coriolanws.

Our own eyes do every where behold the sudden and resistless assaults of death. Raleigh.

The resistance of bone to cold is greater than of flesh ; for that the flesh shrinketh, but the bone re-tisteth, whereby the cold becometh more eager.

Bacon.

It is from corruption, and liberty to do evil, meeting with the resistibility of this sufficient grace, that one resists it. Hammond.

To do ill our sole delight, As being the contrary to his high will Whom we resist. Milton.

All at once to force resistless way. Id.

That is irresistible ; this, though potent, yet is in its own nature resistible by the will of man ; though it many times prevails by its efficacy.

Hate’s Origin of Mankind.

Whether the resistibilitti of Adam’s reason did not equivalence the facility of Eve’s seduction, we refer unto schoolmen. Browne.

Music so softens, and disarms the mind, That not an arrow does resistance find. Waller.

She changed her state ; Resistless in her love as in her hate. Dryden.

The idea of solidity we receive by our touch, and it arises from the resistance which we find in body to the entrance of any other body into the place it possesses. Locke.

The name body, being the complex idea of extension and resistibility , together, in the same subject, these two ideas are not exactly one and the same.

Id.

But that part of the resistance which arises from the vis inertia: is proportional to the density of the matter, and cannot be diminished by dividing the matter into smaller parts, nor by any other means than by decreasing the density of the medium.

Newton’s Optics.

Though thine eyes resistless glances dart, A stronger charm is thine, a generous heart. Logic.

Some forms, tho’ bright, no mortal man can bear, Some none resist, though not exceeding fair.

Young.

RESOLVE’.t;. a., v.n.Si w. s.-v Lat. resolvo.

RESOL’VEDLY, adv. I To inform ; free

RESOL’VEDNESS, n. x. *> from doubt

RESOLV’ENT, n. s. i or difficulty ;

RESOLV’ER. J solve ; clear ;

fix ; dissolve ; melt ; reduce : as a verb neuter, to

determine ; be settled or dissolved : resolve is

fixed determination : the derivatives correspond

with these senses.

In all things then are our consciences best resolved, and in most agreeable sort unto God and nature resolved, when they are so far persuaded as those grounds of persuasion will bear. Hooker.

Give me some breath, Before I positively speak in this ; I will resolve your grace immediately. Shakspeare.

Long since we were resolved of your truth, Your faithful service, and

your toil in war. Id.

Have I not hideous death within my view? Retaining but a quantity of life, Which bleeds away, even as a form of wax Renolreth from its figure ‘gainst the fiie? Id.

I’m glad you thus continue your resolve, To suck the sweets of sweet philosophy. Id,

He always bent himself rather judiciously to resolve, than by doubts to perplex a business.

Hayicard.

I resolve the riddle of their loyalty, and give them opportunity to let the world see they mean not what they do, but what they say. King Charles.

This resolvedness, this high fortitude in sin, can with no reason be imagined a preparative to its remission. Decay of Piety.

Good or evil actions, commanded or prohibited by laws and precepts simply moral, may be resolved into some dictates and principles of the law of nature, imprinted on man’s heart at the creation. White.

Thy resolutions were not before sincere ; consequently God, that saw that, cannot be thought to have justified that unsincere resolver, that dead faith.

Hammond. When he sees

Himself by dogs, and dogs by men pursued, He strait revokes his bold resolves, and more Repents his courage, than his fear before.

Good proof

This day affords, declaring thee resolved To undergo with me one guilt. Milton.

The effect is wonderful in all, and the causes best resolvable from observations made in the countries themselves, the parts through which they pass.

Browne’s Vulgar Errours.

Into what can we resolve this strong inclination of mankind to this error? it is altogether unimaginable but that the reason of so universal a consent should be constant. Titlotson.

Three is not precisely the number of the distinct elements whereinto mist bodies are resoluble by fire.

Boyle.

Resolve me, strangers, whence and what you are ?

Dry den.

I run to meet the alarms, Resolved on death, resolved to die in arms. Id. Ye immortal souls, who once were men, And now resolved to elements again. Id.

Let men resolve of that as they please : this every intelligent being must grant, that there is something that is in himself that he would have happy.

Locke.

A man may be resolvedly patient unto death ; so that it is not the mediocrity of resolution which makes the virtue ; nor the extremity which makes the vice. Grew.

Pride is of such intimate connection with ingratitude, that the actions of ingratitude seem directly resolvable iuto pride, as the principal reason ‘of them.

South.

Caesar’s approach hath summoned us together, And Rome attends her fate from our resolves.

Addison.

Happiness, it was resolved by all, must be some one uniform end, proportioned to the capacities of human nature, attainable by every man, independent of fortune. Itogers.

As the serum of the blood is resolvable by a small heat, a greater heat coagulates it, so as to turn it horny like parchment. Arbuthiwt.

Resolving is bringing a fluid, which is now concreted, into the state of fluidity again. Id.

When the blood stagnates in any part, it first coagulates, then resolves and turns alkaline. Itl.

Lactescent plants, as lettuce and endive, contain wholesome juice, resolvent of the bile, anodyne and cooling. Jil.

No man condemn me who has never felt A woman's power, or tried the force of love ;

All tempers yield and soften in those fires, Our honours, interests, resolved down, Run in the gentle current of our joys. Southern. In the beginning of inflammation they require repellents ; and, in the increase, somewhat of resolvents ought to be mixed. Wiseman.

The decretals turn upon this point, and resolve all into a monarchical power at Rome. Baker.

RES'OLUTE, adj. -v Fr. resolu. Firm ;

RES'OLUTELY, adv. ' determined ; fixed ;

RES'OLUTENESS, n. s. ►► constant : the adverb

RES'OLUTION. J and noun substantives

corresponding : resolution is also the act of clearing or analysing difficulties : dissolution.

The rest of the Helots, which were otherwise scattered, bent thitherward with a new life of resolution ; as if their captain had been

a root, out of which their courage had sprung. Sidney.

Be bloody, bold, and resolute; laugh to scorn The power of man ; for none of woman born Shall harm Macbeth. Shaktpeare.

I' the' progress of this business, Ere a determinate resolution, The bishop did require a respite. Id.

O Lord, resolution! of future reforming do not al-ways satisfy thy justice, nor prevent thy vengeance for former miscarriages. King Charles.

In the hot springs of extreme cold countries, the first heats are unsufterable, which proceed out of the resolution of humidity congealed. Digby.

They, who governed the parliament, had the resolution to act those monstrous things. Clarendon.

What reinforcement we may gain from hope, If not what resolution from despair. Milton.

To the present impulses of sense, memory, and instinct, all the sagacities of brutes may be reduced ; though witty men, by analytical resolution, have chymically extracted an artificial logick out of all their actions. Hale.

In matters of antiquity, if their originals escape due relation, they fall into great obscurities, and S'ich as future ages seldom reduce into a resolution.

Browne.

We resolutely must, To the few virtues that we have, be just.

Rtiscommmi.

All that my 7 esoluteness to make use of my ears, not tongue, could do, was to make them acquiesce.

Boyle.

A man, who lives a virtuous life, despises the pleasures of sin ; and, notwithstanding all the allurements of sense, persists resolutely in his course.

Tillotson.

The unravelling and resolution of the difficulties that are met with in the execution of the design, are the end of an action. Dryden.

We spend our days in deliberating, and we end them without coming to any resolution. L'Estrange.

How much this is in every man's power, by making resolutions to himself, is easy to try. Locke.

The mode of the will, which answers to dubita-tion, may be called suspension ; that which answers to invention, resolution; and that which, in the phan-tastick will, is obstinacy, is constancy in the intellectual. Grew.

Some of those facts he examines, some he resolutely denies ; others he endeavours to extenuate, and the rest he distorts with unnatural turns.

Swift.

RESOLUTION, in medicineˆ and surgery, the disappearing of any tumor without coming to suppuration, or forming an abscess.

RESOLUTION BAY, a bay on the west coast of

St. Christina, one of the Marquesas Islands, in the South Pacific, has sometimes been called th►► Port of Mendana. It was discovered by that Spanish circumnavigator in 1595; and, as well as the islands, received his name. It obtained the name of Resolution Bay, in consequence of captain Cook's anchoring there the 7th of April, 1774, in his second voyage. The country is well inhabited. Along the top of the hill to the north, which seems steep, appear villages enclosed by palisadoes. The valleys in this bay are full of trees. Long. 139►► 8' W., lat. 9►► 55' S.

RES'ONANCE, n. s. Lat. resono. Sound ; resound.

His volant touch

Fled and pursued transverse the resonant fugue.

Milton.

An ancient musician informed me that there were some famous lutes that attained not their full season-ing and best resonance, till they were about fourscore years old. Boyle.

RESORT’, v. n. & n. s. Fr. ressartir ; Qu. Lat. sortior, to decide by lot? To have recourse ; appeal ; hence go or repair to ; fall back to : act of visiting ; concourse ; assembly.

A little lowly hermitage it was, Downe in a dale, hard by a forest’s side, Far from resort of people that did pass In traveil to and froe. Spenser. Faerie Queene.

Join with me to forbid him her resort. Shakspeare.

Some know the resorts and falls of business, that cannot sink into the main of it. Bacon.

In the very time of Moses’ law, when God’s special commandments were most of all required, some festival days were ordained, and duly observed among the Jews, by authority of the church and state, and the same was not superstitious ; for our Saviour himself resorted unto them. White.

The king thought it time to resort to other counsels, and to provide force to chastise them, who had so much despised all his gentler remedies.

Clarendon. The sons of light

Hasted, resorted to the summons high. Milton.

The inheritance of the son never resorted to the mother or to any of her ancestors, but both were totally excluded from the succession. Hale.

In fortune’s empire blindly thus we go, We wander after pathless destiny,

Whose dark resorts since prudence cannot know, In vain it would provide for what shall be.

Dryden.

Hither the heroes and the nymphs retort. P►►pr.

The like places of resort are frequented by me i out of place. Swift.

RESOUND’, v. a. Fr. resonner ; Lat. resono. To echo ; sound back ; return as sound, or celebrate in sound ; be echoed back.

The sweet singer of Israel with his psaltery loudly resounded the

innumerable benefits of the Almight/ Creator. Peacham.

With other echo late I taught your shades,

To answer and resound far other song. Milton. The sound of hymns, wherewith thy throne

Incompassed, shall resound thee ever blest. Id.

What resounds in fable or romance of Uther's sons.

Id.

What is common fame, which sounds from al! quarters of the world, and resounds back to them again, but generally a loud, rattling, impudent lye.

South.

And AlbioD' "iffs resound the rural lay. Pope

The man for wisdom's various arts renowned, Long exercised in woes, oh muse ! resound. Id.

RESOURCE', n. s. Fr. ressource ; Skinner derives it from Fr. resoudre, to spring up ; Lat. re and sors. Thomson. Some new or unexpected means that offer ; resort ; expedient^

Pallas viewed

His foes pursuing, and his friends pursued ; Used threatnings, mixed with prayers, his last resource ; With these to move their minds, with those to fire

their force. Dryden.

RESOW, v. a. Re and sow. To sow anew. Over wet at sowing time breedeth much dearth, insomuch as they are forced to resow summer corn.

Bacon.

RESPEAK’, v. n. Re and speak. To an-swer.

The great cannon to the clouds shall tell, And the king’s rowse the heaven shall bruit again, Respeaking earthly thunder. Shakspeare. Hamlet. RESPECT, v. a. & n . s. ˆ French respecter ; RESPEC’TABLE, adj. I Lat. respectus. To

RESPEC’TER, n. s. \ regard ; have rela—

RESPECT’FUL, adj. ˆ tion to ; look to—

RESPECT’FULLY, adv. fward; regard with RESPECTFULNESS, n. s. esteem or reve-RESPEC’TIVE, adj. | rence : as a noun—

RESPEC’TIVELY, adv. J substantive, attention ; regard; honor; consideration; relation; venerated character : respectable, venerable : respecter, one who has partial respect or regard : respectful, attentive ; ceremonious ; manifesting a degree of reverence : the adverb and noun substantive corresponding: respective, particular ; relative ; worthy of reverence ; careful (the last two senses obsolete) : and the adverb corresponding.

The Lord had respect unto Abel and his offering.

Genesis.

It is not good to have respect of persons in judgment. Proverbs.

There is nothing more terrible to a guilty heart than the eye of a respected friend. Sidney.

Whatsoever secret respects were likely to move them, for contenting of their minds, Calvin returned.

Hooker.

Respective and wary men had rather seek quietly their own, and wish that the worst may go well, so it be not long of them, than with pain and hazard make themselves advisers for the common good.

Id.

Among the ministers themselves, one being so far in estimation above the rest, the voices of the rest were likely to be given for the most part respectively with a kind of secret dependency. Id.

Claudio, I -quake,

Lest thou should'st seven winters more respect Than a perpetual honour. Shahspeare.

You have too much respect upon the world ; They lose it that do buy it with much care. Id. Many of the best respect in Rome, Groaning under this age's yoke, Have wished that noble Brutus had his eyes. Id. Since that respects of fortune are his love, shall not be his wife. Id. King Lear.

What should it be, that he respects in her, But I can make respective in myself? Shakspeare. Honest Flaminiuo, you are very respectively welcome. Id.

If there had been no other choice, but that Adam bad been left to the universal, Moses would not then

have said, eastward in Eden, seeing the world hath not East nor West, but respectively. Raleigh.

He was exceedingly respective and precise. Id.

In orchards and gardens we do not so mnch respect beauty, as variety of ground for fruits, trees, and herbs. Bacon.

You must use them with fit respects, according to the bonds of nature ; but you are of kin to their persons, not errors. Id.

The impressions from the objects of the senses do mingle respectively every one with his kind.

Bacon's Natural History. The blest gods do not love Ungodly actions ; but respect the right, And in the works of pious men delight. Chapman.

The duke's carriage was to the gentlemen of fair respect, and bountiful to the soldier, according to any special value which he spied in any.

Walton’s Buckingham.

There have been always monsters amongst them, in respect of their bodies. Wilhins.

Palladius adviseth, the front of his house should so respect the South, that in the first angle it receive the rising rays of the winter sun, and decline a little from the winter setting thereof. Browne.

I have represented to you the excellency of the Christian religion, in respect of its clear discoveries of the nature of God, and in respect of the perfection of its laws. Tillotson.

In judgment-seats, not men’s qualities, but causes only ought to be respected. Kettleworth.

To your glad genius sacrifice this day, Let common meats respectfully give way. Dryden.

-<►►neas must be drawn a suppliant to Dido, with respect in his gestures, and humility in his eyes.

Id. Dufresnoy.

He that will have his son have a respect for him, must have a great reverence for his son. Locke.

Whoever tastes, let him with grateful heart Respect that ancient loyal house. Philips.

The same men treat the Lord’s Day with as little respect, and make the advantage of rest and leisure from their worldly affairs only an instrument to promote their pleasure and diversions. Nelson.

Good and evil are in morality, as the East and West are in the frame of the world, founded in and divided by that fixed and unalterable situation which they have respectively in the whole body of the universe. South’s Sermons.

The principles of those governments are respectively disclaimed and abhorred by all men of sense and virtue in both parties. Addison.

I found the king abandoned to neglect ; Seen without awe, and served without respect.

Pnor.

Will you be only, and for ever mine? From this dear bosom shall I ne’er be torn ? Or you grow cold, respectful, or forsworn ? Id.

The medium intended is not an absolute, but a respective medium ; the proportion recommended to all is the same : but the things to be desired in this proportion will vary. Rogers.

I always loved and respected Sir William. Swift.

Neither is any condition more honourable in the sight of God than another ; otherwise he would be a respecter of persons ; for he hath proposed the same salvation to all. Id.

RESPIRE’, t;. n. Fr. respirer ; Lat. respiro. To breathe ; catch breath : hence to pause ??? rest.

Till breathless both themselves aside retire, Where foaming wrath , their cruel tusks they whet, And trample the’ earth the wmles they may respire.

Spe>ittr

Apollonsus of Tyana affirmed that the ebbing and flowing of the sea was the respiration of the world, drawing in water as breath, and putting it forth again. Bacon.

Syrups or other expectoratives do not advantage in coughs, by slipping down between the epiglottis ; for, as I instanced before, that must necessarily occasion a greater cough and difficulty of respiration.

Harvey on Consumptions.

I, a prisoner chained, scarce freely draw The air imprisoned also, close

and damp, Unwholesome draught ; but here I feel amends, The breath of heaven fresh blowing, pure, and sweet, With day-spring born ; here leave me to respire.

Milton. Till the day

Appear of respiration to the just,

And vengeance to the wicked. Id.

The ladies gasped, and scarcely could respire ; The breath they drew no longer air but fire. Dryden-

Wisdom and eloquence in vain would plead One moment's respite for the learned head ; Judges of writings and of men have died. Prior

RESPLENDENT, adj.ˆ Latin resplendent.

KESPLEN DENTLY, adv. v Bright ; shinincr ;

RESPLEN'DENCY, n. s. 3 lustrous : the nour substantive corresponding.

There all within full rich arrayed he found, With royal arras and resplendent gold. Spenser.

The ancient electrum had in it a fifth of silver to the gold, and made a compound metal, as fit for most uses as gold, and more resplendent. Bacon.

Rich in commodities, beautiful in situation, resplendent in all glory. Camden's Remains.

Son ! thou in whom my glory I behold In full resplendence, heir of all my might. Milton.

Empress of this fair world, resplendent Eve ! Id.

To neglect that supreme resplendency that shines

The author of nature foreknew the necessity of in God> f?r those dim representations of it in the

lains and dews to the present structure of plants, and the uses of respiration to animals ; and therefore created those correspondent properties in the atmosphere. Benttey's Sermons.

Hark ! he strikes the golden lyre ; And see ! the tortured ghosts respire, See shady forms advance. Pope's St. Cecilia.

RESPIRATION. See ANATOMY and PHYSIOLOGY-Though the muscles of respiration, having a mixed motion, are in some measure dependent on the will, yet no human being, after having once respired, can live many moments without -:t. In an attempt to hold one's breath, the olood soon begins to distend the veins, which cannot empty their contents into the heart, and we are able only during a very little time to re-sist the stimulus to inspiration. In drowning, the circulation seems to be stopped upon this principle ; and, in hanging, the pressure made on the jugular veins co-operates with the stoppage of respiration in bringing on death Amphibious animals respire by means of lungs : but they can suspend their motion even whilst they are in the air; as has been observed with regard to frogs, which stop their respiration at pleasure. See PHYSIOLOGY.

RES'PITE, n. s. & v. a. Fr. respit. Reprieve ; suspension of a capital sentence ; pause : to suspend ; delay ; relieve by delay.

The fox then counselled the' ape for to require Respite till morrow to answer his desire. Spenser.

This customary war, which troubleth all the world, giveth little respite or breathing time of peace, doth usually borrow pretence from the necessity, to make itself appear more honest. Raleigh.

Some pause and respite only I require, Till with my tears I shall have quenched my fire.

Denhum.

An act passed for the satisfaction of the officers

creature, is as absurd as it were for a Persian to offer his sacrifice to a parhelion instead of adoring.

Boyle.

Every body looks most splendid and luminous in the light of its own colour ; cinnaber in the homogeneal light is most resplendent, in the green light it is manifestly less resplendent, in the blue light still less. Newton's Opticks.

Resplendent brass and more resplendent dames.

Pope.

RESPOND , v. - RESPON'DENT, n. s RESPONSE', RESPONSIBLE, adj.

~] French respondre > I Lat. respondeo. To j answer ; correspond : ! a respondent is he

RESPON'SIBLENESS, n.s. f who formally or le-RESPON'SION, gaily answers in a

RESPON'SIVE, adj. \ recitation dispute or

RESPON'SORY. J suit : response, the

answer made : responsible is, answerable ; accountable ; capable of giving answer or satisfaction ; pecuniarily competent : the nounsubstantive corresponding : responsion, the act of answering (not used) : responsive, making answer ; corresponding : responsory, containing answer.

The oracles, which had before flourished, began to droop, and, from giving responses in verse, descended to prose, and within a while were utterly silenced.

Hammond.

Heathens, who have certainly the talent of natural knowledge, are responsible for it. Id.

How becomingly does Philopolis exercise his of-fice, and seasonably commit the*opponent with the respondent, like a long practised moderator 1 More.

The necessity of a proportion of money to trade depends on money as

a pledge, which writing cannot supply the place of ; since the bill I receive from one man will not be accepted as security by another, he not knowing that the bill is legal, or that the man bound is honest or responsible. Locke.

In giving an answer, the respondent should be in

of the king's army, by which they were promised pay-court, and personally admonished by the judge to ment in November following :' till which time they answer the judge's interrogation.

❖❖❖ ❖❖❖ - ❖❖❖❖❖❖❖ Ayliffes Parergon.

A certificate is a responsive letter, or letter by way

Id.

were to respite it, and be contented that the common soldiers and inferior officers should be satisfied upon their disbanding. Clarendon.

I had a hope to spend Quiet, though sad, the respite of that day, That must be mortal to us both. Milton.

In what bower or shade

Though find'st him, from the heat of noon retired, To respite his day-labour with repast, Or with repose. Id. Paradise Lost.

of answer.

Mere natural piety has taught men to receive the responses of the gods with all possible veneratkm.

Government of the Tongue.

He as much satisfies the itch of telling news ; he as much persuades his hearers; and all this while he has his retreat secure, and stands not responsible for the truth of his relations. '"'❖❖❖

To make his parishioners kneel and join in the ttponses, he gave every one of them a hassock and common prayer book. Addinon.

Sing of love and gay desire , Responsive to the warbling lyre. Fenton. Be there Demodocus the bard of fame, Taught by the gods to please, when high he sings The vocal lay responsive to the strings. Pope.

To every theme responds thy various lay ; Here rolls a torrent, there meanders play.

Broome.

Let the respondent not turn opponent ; except in retorting the argument upon his adversary after a di-rect response ; and even this is allowed only as a confirmation of his own response. Watts.

RESSIUS (Rutger), a learned professor of Greek at Louvain, of the sixteenth century. Erasmus gives him a high character. He published many works, particularly a correct edition of the Aphorisms of Hippocrates. He died in

1545.

REST,n. s.,adj.,i. a., &[illegible]} Sax.riej-t:;Dan.

REST'FUL, adj. [v.n. trust; Belg. rust.

REST'LESS, adj. , (Quiet ; stillness ;

REST'LESSLV, adv. J repose ; sleep ; cessation from toil ; that on which any thing rests ; remainder ; place of repose ; hope : as an adjective, others; those not previously included: as a verb neuter, to be quiet, or in slumber ; be acquiescent ; lean ; sleep ; be asleep ; cease

from labor ; die ; be left or remain : as a verb ac-tive, to lay to rest ; place as a support : the adjectives and adverb following correspond with the common senses of rest.

Six days shalt thou do thy work, and on the seventh day thou shalt rest. Exodug xxiii. 12.

The ark went before to search out a resting place for them. Numbers x. 33.

There the weary be at rest. Job ili. 17.

He will not rest content, though thou givest many gifts. Proverbs.

Learn of me, for I am meek and lowly in heart ; and you shall find rest unto your souls. Matthew. Is not iny arm of length,

That reacheth from the restful English court, As far as Calais to my uncle s head 1 Shakspeare.

Putrefaction asketh rest; for the subtle motion, which putrefaction requireth, is disturbed by any agitation. Bacon.

A man may think, that a musket may be shot off as well upon the arm, as upon a rest ; but when all is done, good counsel setteth business straight. Id.

There resteth the comparative ; that is, its being granted, that it is either lawful or binding, yet whether other things be not preferred before it, as extirpation of heresies. Id. Forth pricked Clorinda from the throng,

And ‘gainst Tancredie set her spear in rest.

Fairfax.

He was stout of courage, strong of hand, Bold was his heart, and restless was his spright. Id.

Let him keep the rest, But keep them with repining restlessness! Let him be rich and weary, that at least, If goodness lead him not, yet weariness May toss him to my breast. Herbert.

The root cut off, from whence these tumults rose, He should haveresf, the commonwealth repose.

Daniel.

Kestleaness and intermission from sleep, grieved persons are molested with, whereby the blood is dried. Harvey.

Where can a frail man hide him ? in what arms Shall a short life enjoy a little rest 1 Fanshaw.

When you enter into the regions of death, you rest from all your labours and your fears. Taylor.

Could we not wake from that lethargick dream, But to be restless in a worse extreme 1 Denham.

This answer would render their counsels of less reverence to the people, if upon those reasons, they should recede from what they had, with that confidence and disdain of the house of peers, demanded of the king ; they therefore resolved to set up their rest upon that stake, and to go through it, or perish in the attempt. Clarendcm .

What cause moved the Creator, in his holy rest, So late to build ? Milton.

Sustained by him with comforts, till we end

In dust, our final rest and native home. Id.

All things retired to rest. Mind us of like repose, *(*.

Over the tent a cloud shall rest by day. hi.

From work

Resting, he blessed the seventh day. <.

Fal'n he is ; and now

What rests, but that the mortal sentence pass On his transgression ? Id. Paradise Lost.

Ease to the body some, none to the mind From restless thoughts, that like a deadly swarm Of hornets armed, no sooner found alone, But rush upon me thronging, and present Times past, what once 1 was, and what I'm now.

Milton .

The trembling restlessness of the needle, in any but the north point of the compass, manifests its inclination to the pole ; which its wavering and its rest bear equal witness to. Bnt/le.

As the vexed world, to find repose, at last, Itself into Augustus' arms did cast ; So England now doth, with like toil opprest, Her weary head upon your bosom rest. Waller.

Religion gives part of its reward in hand, the present comfort of having done our duty ; and, for the rest, it offers us the best security that heaven can give. Tilloismi.

Plato, and the rest of the philosophers, acknowledged the unity, power, wisdom, goodness, and providence of the supreme God. Stillingjieet.

Oft with holy hymns he charmed their ears ; For David left him, when he went to rest, His lyre. Dryden's Parson.

With what a load of vengeance am I prest, Yet never, never, can I hope for rest ; For when my heavy burden I remove, The weight falls down, and crushes her I love.

Dry den.

Their vizors closed, their lances in the rest Or at the helmet pointed, or the crest ; They speed the race. Id. Knight's Tale.

The power in glory shone, By her bent bow and her keen arrows known, The rest a huntress. Id.

Armed like the rest, the Trojan prince appears, And by his pious labour urges theirs. Dnide-n.

There yet survives the lawful heii Of Sancho's blood, whom, when I shall produce, I rest assured to see you pale with fear. Id.

On him I rested, And, not without consid'ring; fixed my fate. Id.

He's proud, fantastic, apt to change, Restless at home, and ever prone to range. Id.

Every creature has a share in the common blessings of providence , and every creature should rest well satisfied with its proportion in them.

L' Estrange.

All things past are equally and perfectly at rest; and to this wav of consideration of them are ah

one, whethe: they were befor: the world, or but yesterday. Locke.

Sometimes it rests upon testimony, when testimony of right has nothing to do ; because it is easier to believe, than to be scientifically instructed. Id.

Take the handle in your right hand, and, clasping the blade of it in your left, lean it steady upon the rest, holding the edge a little aslant over the work, so as a corner of the thin side of the chissel may bear upon the rest, and the flat side of the chissel may make a small angle with the rest. Moxon.

The Christian chuseth for his day of rest the first day of the week, that he might thereby profess himself a servant of God, who on the morning of that day vanquished Satan. Nelson.

Like the sun, it had light and agility ; it knew no rest but in motion, no quiet but in activity.

South's Serrtumt, To urge the foe to battle ; Prompted by blind revenge and wild despair, Were to refuse th' awards of providence, And not to rest in heaven's determination. Addison.

What tongue can speak the restless monarch's

woes. When God and Nathan were declared his foeg 1

Prior,

Upon so equal terms did they all stand, that no one had a fairer pretence of right than the rest.

Woodward.

We find our souls disordered and restless, tossed and disquieted by passions, ever seeking happiness in the enjoyments of this world, and ever missing what they seek. Atterbury.

The protestants, harving well studied the fathers, were now willing to rest their cause, not upon scripture only, but fathers too ; so far at least as the three first centuries. Waterland.

My tost limbs are wearied into rest. Pope.

I sought my bed, in hopes relief to find, But restlessness was mistress of my mind. Harte.

Here rests his head upon the lap of earth, A youth to fortune and to fame unknown. Cray,

But hawks will rob the tender joys That bless the lintwhite's nˆst ;

And frost will blight the fairest flowers,

And love will break the soundest rest . Burns.

REST, in military affairs, an instrument in the snape of a fork, formerly used to support the old heavy musket, when the men were ordered to present and fire. Sometimes these rests were armed with a weapon called a swine's feather, which was a sort of sword blade that issued from the ttaff of the rest, at the head ; this being placed before the musketeers when loading, served, like the stakes placed before the archers and the lancers, to keep off the cavalry. Rests were of different lengths, according to the heights of the men who were to use them ; and, when the musket was shouldered on the march, were carried in the right hand, or hung upon it, by means of a loop.

RESTAG'NATE, v. n.) Re and stagnate.

RESTAC'NANT, adj. $ To stand without now : remaining without flow or motion.

Upon the tops of high mountains, the air, which bears against the restagnant quicksilver, is less pressed by the less ponderous incumbent air.

Boyle.

The blood returns thick, and is apt to restagnate.

Wiseman .

RESTAURATION, n. s. Lat. restauro. The net of recovering to the former state.

Adam is in us an original cause of our nature, V0r,. XVI If.

and of that corruption of nature which causeth death , Chnst as the cause original of restauratimt to life.

Jfooker.

U my dear father ! restavration hang Thy medicine on my lips ; and let this kiss Repair those violent harms, that my two sisters Have in thy reverence made. Stiakspeare.

Spermatical parts will not admit a regeneration, much less will they receive an integral restanration.

Browne.

RESTEM”, t>. a. Re and stem. To force back against the current.

How they restem

Their backward course, bearing with frank appearance Towards Cyprus. Shakspeare. Othello.

RES’TIFF, adj. } Fr. restef; Ital. restive.

RES’TIVENESS, n. s. ►► Or from REST. Unwilling

RES”TY, adj. J to stir; resolute against

going forward ; stubborn ; being at rest : the noun substantive corresponding ; and resty being a synonyme of restiff.

Come, our stomachs

Will make what’s homely savoury, weariness

Can snore upon the flint, when resty sloth

Finds the down pillow hard. Shakspeare.

Overt virtues bring forth praise ; but secret virtues bring forth fortune ; certain deliveries of a man’s self, which the Spanish name

disemboltura partly expresseth, where there be not stands nor restmeness in a man's nature ; but the wheels of his mind keep way with the wheels of his fortune.

Bacon.

That it gave occasion to some men's further re*. tiveness is imputable to their own depraved tempers.

King Charles.

Palsies oftenest happen upon the left side ; the most vigorous part protecting itself, and protruding the matter upon the weaker and restive side.

Browne's Vulgar Errmirs.

All, who before him did ascend the throne, Laboured to draw three restive nations on.

Roscommon.

Some, with studious care, Their restiff steeds in sandy plains prepare.

Dryden.

This restiff stubbornness is never to be excused under any pretence whatsoever. L'Estrange.

Have not other hands been tried and found resty 1 but we stick at nothing. Davenant.

Men of discretion, whom people in power may with little ceremony load as heavy as they please, find them neither resty nor vicious. Swift.

Every great genius seems to ride upon mankind, like Pyrrhus on his elephant ; and the way to have the absolute ascendant of your resty nag, and to keep your seat, is, at your first mounting, to afford him the whip and spurs plentifully ; after which you may travel the rest of the day with great alacrity. Once kick the world, and the world and you live together at a reasonable good understanding. Id.

RESTIO, in botany, a genus of the triandria order, and dicecia class of plants: MALE CAL. an ovate spike of membranaceous scales : COR. pro-per, hexapetalous, and persistent: FEMALE CAL. and COR. as in the male ; the germ roundish, and sex-fulcated ; styles, three erect and

persistent : CAPS, roundish, “with six plaits, and is rostrated and trilocular: SEEDS oblong and cylindrical. Twenty-eight species, all natives of the Cape, several resembling rushes, and used in making rones, &c.

RESTITUTION, n. s. Lat. restitutio. The act of restoring what is lost or taken away ; or of restoring a former state.

He restitution to the value makes ;

Nor joy in his extorted treasure takes. Sandys.

To subdue an usurper should be no unjust enterprise or wrongful war, but a restitution of ancient rights unto the crown of England, from whence they were most unjustly expelled and long kept out.

Spenser on Ireland.

He would pawn his fortunes To hopeless restitution, so he might Be called your vanquisher. Shakspeare. Coriolanus.

Whosoever is an effective real cause of doing a neighbour wrong, by what instrument soever he does it, is bound to make restitution. Taylor.

In case our offence against God hath been complicated with injury to men, it is but reasonable we should make restitution. Tillotson.

In the woody parts of plants, which are their bones, the principles are so compounded as to make them flexible without joints, and also elastick ; that so their roots may yield to stones, and their trunks to the wind, with a power of restitution. Grew.

A great man, who has never been known willingly to pay a just debt, ought not all of a sudden to be introduced, making restitution of thousands he has cheated : let it suffice to pay twenty pounds to a

friend who has lost his note. Arbuthnot.

RESTITUTED MEDALS, or COINS, is a term used by antiquaries for such coins and medals as were struck by the emperors, to retrieve the memory of their predecessors. Hence, in several medals, we find the letters REST. This practice was first begun by Claudius, by his striking afresh several medals of Augustus. Nero did the same ; and Titus struck restitutions of most of his predecessors. GalUenus struck a general restitution of all the preceding emperors on two medals ; the one bearing an altar, the other an eagle, without the rest.

RESTITUTOR, m numismatology, was a title very frequently applied to the emperors on coins, by the people to whom they restored any privileges, or on whom they conferred any political favors. In such cases, the emperor is commonly represented in the act of lifting up a figure symbolical of the country that has received the benefit, as in the annexed figure, where the female with the ears of corn in her hand is symbolical of Africa, who is raised up by the emperor Adrian.

RESTORE', v. a.

RESTO'RABLE,

RESTORA'TION, n. s. ►► Lat. restauro. To

RESTO'RATIVE, n. s. & adj.) give or bring back what has been lost or taken away ; retrieve ; cure : the derivatives corresponding.

Restore the man his wife. Genesis xx. 7.

He shall restore in the principal, and add the fifth part more. Leviticus vi. 5.

I will kiss thy lips ;

Haply some poison yet doth nang upon \hem,

To make me die with a restorative. Shakspeare.

These artificial experiments are but so many essays, whereby men attempt to restore themselves from the first general curse inflicted upon their labours. Wilkins's X.'uthematirai Magick.

-\ Fr. restaurer ; f Ital. restorare ;

Their tastes no knowledge works, r.t least of evil ; But life preserves, destroys life's enemy, Hunger, with sweet restorative delight. MUt-rn,

Loss of Eden, till one greater man Restore it, and regain the blissful seat. Id. Next to the Son

Destined restorer of mankind, by whom

New heaven and earth shall to the ages rise. Id. Hail, royal Albion, hail to thee,

Thy longing people's expectation ! Sent from the gods to set us free

From bondage and from usurpation ××× Behold the different climes agree,

Rejoicing in thy restoration. Dryden's Albion.

She lands him on his native shores, And to his father's longing arms restores. Dryden. I foretel you, as the restorer of poetry. Id.

Asses' milk is an excellent mtorotice in consumptions. Mortimer.

God saw it necessary by such mortifications to quench the boundless rage of an insatiable intemperance, to make the weakness of the flesh the physick and restorative of the spirit. South's Sermons.

In his Odyssey, Homer explains, that the hardest difficulties may be overcome by labour, and our fortune restored after the severest afflictions. Prior.

The change is great in this restoration of the man. from a state of spiritual darkness to a capacity of perceiving divine truth. Rogers.

He prescribes an English gallon of asses' milk, especially as a restorative. Arbuthnot.

Garth, faster than a plague destroys, restores.

Granville.

By cutting turf without any regularity great quantities of restorable h"<* ire made utterlv desperate.

Swift.

The Athenians, now deprived of the only person that was able to recover their losses, repent of their rashness, and endeavour in vain for his restoration.

Id.

Here are ten thousand persons reduced to the necessity of a low diet and moderate exercise, who are the only great restorers of our breed, without which the nation would in an age become one great hospital. Id.

RESTORATION, a small island m the South Pacific, on the east coast of New Holland, discovered by captain Bligh in 1789. It is about a league in circuit ; the trees are small, and the soil scanty. Oysters are plentiful, and it abounds in water.

RESTORATION COVE, a bay visited by Vancouver, on the north-west coast of North America, in Burke's Canal, not far from Fitzhugh's Sound. It was discovered on the 29th May, 1792, the anniversary of the Restoration. The breadth at the entrance, in a north and south direction, is about a mile and a quarter, and its depth from the centre of the entrance, in a north-east direction, three-quarters of a mile. The soundings, though deep, are regular, from sixty fathoms at the entrance, to five and ten fathoms close to the shore. The land on the opposite side of the arm is about two miles and a half distant. Skins were here offered for sale of the animal whence the wool is procured of which the garments made by the inhabitants of North-west America are formed. They appeared too long to belonsr to "any animal of the canine race; and were, exclusively of the head or tail, fifty inches lon-j, and thirty-six inches broad, exclusively of the legs. The wool seemed to be afforded princi-RES

pally on the back, and towards the shoulders, where a kind of crest is formed by long bristly hairs, that protrude themselves through it ; and the same sort of wool forms an outer covering to the whole animal, entirely hiding the fine wool, which is short, and of a very different

description. All the skins seen by Vancouver were white, or rather of a cream color ; the felt was thick, and appeared of a strong texture.

Vancouver was here visited by the inhabitants, in great numbers ; and they appeared in general to be a friendly race of people, disposed for traffic, and honest. They discovered great vivacity in their manners. The women wore a hideous wooden appendage in an incision of the under-lip.

RESTORATIVE, in medicine, is a remedy proper for restoring and retrieving the strength and vigor both of the body and animal spirits. All under this class, says Quincy, are rather nutrimental than medicinal ; and are more administered to repair the wastes of the constitution than to alter and rectify its disorders.

RESTRAIN', v. a. -\ Fr. restreindre ; Lat.

RESTRAIN'ABLE, adj. I restringo. To withhold ;

RESTRAiNED'LY,a < foAkeeporpull in; repress ;

RESTRAIN'ER, n. s. i hinder ; abridge ; limit :

RESTRAINT', J restrainable is, governable ; capable of restraint : restrainedly, with restraint or latitude : restrainer, he who withholds or restrains restraint, the act of withholding; repression; limitation; prohibition.

There is no restraint to the Lord to save, by many or by few. 1 Samuel xiv. 6.

We restrain it to those only duties, which all men, by force of natural wit, understand to be such duties as concern all men. Hooker.

If she restrained the riots of your followers, 'Tis to such wholesome end as clears her.

Shakspeare.

Merciful powers !

Restrain in me the cursed thoughts, that nature Gives way to in repose. Id. Macbeth.

His horse with a half checked bit, and a head stall of sheep's leather, which being restrained to keep him from stumbling, hath been often burst, and now repaired with knots. Shakspeare.

She will well excuse,

Why at this time the doors are barred against you. Depart in patience,

And about evening come yourself alone, To know the reason of this strange restraint.

Shakspeare.

That Christ's dying for all is the express doctrine of the scripture is manifested by the world, which is a word of the widest extent, and although it be sometimes used more restrainedlij , yet never doth signify a far smaller disproportionable part of the world.

Hammond.

What moved our parents, to transgress his will For one restraint, lords of the world besides 1

Milton.

Therein we must not deny a liberty ; nor is the hand of the painter more restrainable than the pen of the poet. Browne.

If nothing can relieve us, we must with patience submit unto that restraint, and expect the will of the restrainer. Browne's Vulgar Errours.

If all were granted, yet it must be maintained within any bold restraints, far otherwise than it is received. Browne.

The law of nature would be in vain, if there were nobody that, in the state of nature, had a power to execute that law, and thereby preserve the innocent and restrain offenders. Locke.

It is to no purpose to lay restraint* or give privileges to men, in such general terms, as the particular persons concerned cannot be known. Id.

Upon what ground can a man promise himself a future repentance, who cannot promise himself a futurity ; whose life depends upon his breath, and is so restrained to the present that it cannot secure to itself the reversion of the very next minute. South.

I think it a manifest disadvantage, and a great restraint upon us.

Felton on the Classics.

Not only a metaphysical or natural, but a moral universality also is to be restrained by a part of the predicate ; as all the Italians are politicians ; that is. those among the Italians, who are politicians, are subtle politicians ; i. e. they are generally so.

Watts's Loj/ic.

RESTRICT', v. a. ˆ Lat. restricts. To

RESTRICTION, n. s. I limit ; confine : the

RESTRICTIVE, adj. ►► derivatives corre—

RESTRIC'TIVELY, adv. J spending.

The two latter indicate phlebotomy for revulsion, restringents to stench, and incrassatives to thicken the blood. Harvey.

They who would make the restrictive particle be-long to the latter clause, and not to the first, do not attend to the reason. Stillingfleet.

Iron manufacture, of all others, ought the least to be encouraged in Ireland ; or, if it be, it requires the most restriction to certain places. Temple.

This is to have the same restrictions with all other recreations, that it be made a divertisement, not a trade. Government of the Tongue.

All speech, tending to the glory of God or the good of man, is aright directed ; which is not to be understood so restrictively, as if nothing but divinity, or necessary concerns of life, may lawfully be brought into discourse. Id.

Each other gift, which God on man bestows, Its proper bounds and due restriction knows ; To one fixed purpose dedicates its power. Prior.

Celsus's rule, with the proper restrictions, is good for people in health. Arbuthnot.

I applied a plaster over it, made up with my com-mon restrictive powder. Wiseman t Surgery. I'll no say men are villains a' ;

The real hardened wicked, Wha hae nae check but human law,

Are to a few restricted. Burn*.

RESUBLIME’, v. a. Re and sublime. To sublime another time.

When mercury sublimate is resublimed with fresh mercury, it becomes mercurius dulcis, which is a white tasteless earth, scarce dissolvable in water, and mercurius dulcis resublimed with spirit of salt returns into mercury sublimate. Newton.

RESULT, v. a. & n. s. 1 Fr. resulter; Lat.

RESULT’ANCE, n. s. J resulto. To fly or come back ; follow as a consequence : resilience ; consequence ; the act of resulting.

Rue prospers much, if set by a fig-tree ; which is caused, not by reason of friendship, but by extraction of a contrary juice ; the one drawing juice fit to result sweet the other bitter. Bacon’s Natural History.

Sound is produced between the string and the air, by the return or the result of the string, which was strained by the touch to his former place. Baron.

Such huge extremes, when nature doth unite, Wonder from thence results, from thence delight.

Den ham, 2 N 2

Pleasure and peace do naturally rerult from a holy and good life. Tillotson’t Sermons.

Buying of land is the result of a full and satiated gain : men in trade seldom lay money out upon land, till their profit has brought in more than trade can employ. Locke.

Upon the dissolution of the first earth, this very face or things would immediately refill. Burnet.

These things are a result or judgment upon tart.

South.

The horror of an object may overbear the pleasure -exulting from its greatness. Addison.

With many a weary step, and many a groan, Up the high hill he heaves a hug* round stone ; The huge round stone, resulting with a bound, Thunders impetuous down, and smokes along the ground. Pope's Odyssey.

Rude, passionate, and mistaken results have, at certain times, fallen from great assemblies. Swift.

“”heir effects are often very disproportionable to the principles and parts that result from the analysis.

Baker.

RESUME', v. a. i Lat. resume*. To take

RESU'MABLE, adj. > back or again : resumable,

RESUMPTION, n.s.) recoverable ; what may be

taken back : resumption, the act of taking back.

That opportunity,

Which then they had to take from's, to resume We have again. Shahtpeare. Cymbeline.

Wearied, forsaken, and pursued at last, All safety in despair of safety placed, Courage he thence resumes, resolved to bear All their assaults, since 'tis in vain to fear.

Denham.

If there be any fault, it is the resumption or the iwelling too long upon his arguments. Id.

He'll enter into glory and resume his seat.

Milton.

This was but an indulgence, and therefore returnable by the victor, unless there intervened any capitu iation to the contrary. Hule

At this, with look serene, he raised his head, Reason resumed her place, and passion fled.'

Dry den.

They resume what has been obtained fraudulently, by suiprise, and upon wrong suggestions.

Davenant.

The universal voice of the people seeming to call for some kind of resumption, the writer of these papers thought it might not be unseasonable to publish a discourse upon grants. Id.

RESURVEY', v. a. Re and survey. To re-riew ; survey again.

I have, with cursory eye, o'erglanced the articles ; Appoint some of your council presently To sit with us, once more with better heed To returvey them. Shakspeare. Henry V.

RESURRECTION, n. s. Fr. resurrection; Span, and Port, resurecion ; Lat. resurrectio. Revival from the dead ; return from the grave.

The Sadducees were grieved, that they taught and preached through Jesus the resurrection from the dead. Acts iv. 2.

Nor after resurrection shall he stay

Longer on earth, than certain times t' appear

To his disciples. Milton.

Perhaps there was nothing ever done in all past ages, and which was not a publick fact, so well attested as the resurrection of Christ. Watts.

RESURRECTION, in theology, is that event the belief of which constitutes one of the principal articles in the Christian creed : and of which the wisest of the heathen philosophers had not the

most distant conception. Among the Jews, th* belief of a future and

separate existence for a long time was deemed no essential article of their creed ; but from different passages in Jsaiah, Daniel, Ezekiel, and Job, many inferred the reality of a general resurrection. This resurrection appears to have been a general opinion among the Pharisees ; for although the Sadducees believed that there was no resurrection, neither angel nor spirit, yet the Pharisees confessed both. This resurrection of the dead to judgment is now generally, and almost universally, maintained by Christians. Numberless fanciful conjectures have been made respecting the manner in which the resurrection is to be accomplished ; the identity of the matter of the bodies raised, with that of those which died ; the place and state of the souls during their separation from the body, &c.; but, as no decisive opinion can be formed on these subjects, we think it totally unnecessary to take up room with mere unsupported hypotheses. See THEOLOGY.

RESUS'CITATE,r. a. \ Lat. resuscito. To

RESUSCITA'TION, n. s. i stir up anew ; revive : the noun substantive corresponding.

We have beasts and birds for dissections, thougn divers parts, which, you account vital, be perished and taken forth, resuscitating of some that seem dead in appearance. Bacon.

Your very obliging manner of enquiring after me, at your resuscitation, should have been sooner answered ; I sincerely rejoice at your recovery.

Pope.

RESUSCITATION, in medicine. See DROWNING. RETAIL, v. a. & n. s.) Fr. retailer ; Ital. re-RETAIL'ER, n. s. \taglio. To redivids ###

sell in small quantities; detail : such sale or division : a retailer is a dealer in goods by retail.

He is furnished with no certainties, More than he haply may retail from me.

Shak&peare.

From these particulars we may guess at the rest, as retailers do of the whole piece, by taking a view of its ends. Hakeirilt.

All encouragement should be given to artificers ; and those who make

should also vend and retail their commodities. Locke.

The author, to prevent such a monopoly of sense, is resolved to deal in it himself by retail. Addison.

The sage dame, By names of toasts, retails each battered jade.

Pope. We force a wretched trade by beating down the

sale, And selling basely by retail. Swift's Miscellanies.

History, which ought to record truth and to teach wisdom, often sets out with retailing fictions and absurdities. Robertson. History of Scotland.

RETAIN', v. a. & v. n. } Fr. retenir ; Span, re—

RETAIN'ER. S tener ; Ital. ritenere ;

Lat. retineo. To keep as a possession ; keep in use, in service, or in pay : as a verb neuter, to belong to ; depend on : a retainer is an adherent ; dependent ; act of keeping dependents.

As they did not like to retain God in their knowledge, God gave them over to a reprobate mind.

Romans i. 22.

Receive him that is rame own bowels ; whcm I would have retained with me. Philemon xii. 13.

Where is the patience now, That you so oft have boasted to retain ?

You now are mounted, Where powers are your retainer*. Id.

By another law, the king's officers and farmers were to forfeit their places and holds, in case of unlawful retainer, or partaking in unlawful assemblies. Bacon's Henry VII.

Though the' offending part felt mortal pain, The' immortal part its knowledge did retain.

Denham.

Be obedient, and retain Unalterably firm his love entire. Milton.

In animals many actions depend upon their living form, as well as that of mixtion, and, though they wholly seem to retain to the body, depart upon disunion. Browne.

Although they retain the word mandrake in the text, yet they retract it in the margin. Id.

These betray upon the tongue no heat nor corrosiveness, but coldness, mixed with a somewhat languid relish retaining to bitterness. Boyle.

The vigour of this arm was never vain ;

And that my wonted prowess I retain,

Witness these heaps of slaughter. Dryden.

Whatever ideas the mind can receive and contemplate without the help of the body, it is reasonable to conclude it can retain without the help of the body too. Locke.

A Benedictine convent has now retained the most learned father of their order to write in its defence.

Additon.

A combination of honest men would endeavour to extirpate all the profligate immoral retainers to each side, that have nothing to recommend them but an implicit submission to their leaders. Id.

' One darling inclination of mankind affects to be a retainer to religion ; the spirit of opposition, that lived long before Christianity, and can easily subsist without it. Swift.

RETAINING FEE, the first fee given to a serjeant or counsellor at law, in order to prevent his pleading on the contrary side.

RETAKE’, v. a. Re and take. To take again.

A day should be appointed, when the remonstrance should be retaken into consideration. Clarendon.

RETALIATE, v. a.) Lat. re and talio. To

RETALIATION. \ return by giving like

for like ; repay ; requite : requital.

They thought it no irreligion to prosecute the severest retaliation or revenge ; so that at the same time their outward man might be a saint, and their inward man a devil. Smith.

God, graciously becoming our debtor, takes what is done to others as done to himself, and by promise obliges himself to full retaliation. Calami’s Sermons.

It is very unlucky to be obliged to retaliate the injuries of authors, whose works are so soon forgotten that we are in danger of appearing the first aggressors.

Swift.

RETARD’, v. a. Fr. retarder; Lat. retardo. To hinder ; to obstruct in swiftness of course.

Out of this a man may devise the means of altering the colour of birds, and the retardation of hoary hairs. Bacon.

This disputing way of enquiry is so far from advancing science that it is no inconsiderable retarder.

Glanvilte.

Some years it hath also retarded, and come far later than usually it was expected. Browne.

Nor kings nor nations One moment can retard the’ appointed hour.

Dryden.

RETCH’LESS, adj. Written wretchless, properly also RECKLESS, which see. Careless

He struggles into breath, and cries for aid ; Then helpless in his mother's lap is laid : He creeps, he walks, and, issuing into man, Grudges their life from whence his own began ; Retchlets of laws affects to rule alone. Dryden.

RETEC'TION, n. s. Lat. retectus. The act of discovering to view.

This is rather a restoration of a body to its own colour, or a retection of its native colour, than a change. Boule.

RETENTIVE, adj.) Fr. retentif; ~Lat.

RETEN'TIVENESS, n. s. fretentus. Having the

RETEN'TION.) power of retaining

or withholding ; having memory : the noun substantive corresponding.

It keepeth sermons in memory, and doth in that respect, although not feed the soul of man, yet help the retentive force of that stomach of the mind.

Hooker.

No woman's heart So big to hold so much ; they lack retention.

Sliakspeare. I sent the old and miserable king

To some retention and appointed guard. Id.

Have 1 been ever free, and must my house

Be my retentive enemy, my gaol 1 Id.

To remember a song or tune, our souls must be in harmony continually running over in a silent whisper those musical accents, which our retentive faculty is preserver of. GlanviUe.

Retention is the keeping of those simple ideas, which fiom sensation or reflection the mind hath received. Locke.

The backward learner makes amends another way expiating his want of docility with a deeper and -a more rooted retention. South.

In Tot'nam fields the brethren with amaze Prick all their ears up, and forget to graze ; Long Chancery-lane retentive rolls the sound, And courts to courts return it round and round.

Pope

RETFORD, EAST, a borough, market town, and parish of Nottinghamshire, near the river Idle, seven miles north from Tuxford, and 141 north by west from London. The town is well built, has a free grammar-school, a hospital, and an almshouse ; also a town-hall, in which the sessions for the town are held. The county assizes are held here, alternately with Nottingham. The church, called the Corporation, is a neat Gothic building, with a handsome square tower. The environs of this town abound in hop plantations, and a canal to the Trent passes near it. The manufactures are chiefly those of hats and sail-cloth. It is incorporated under two bailiffs, a steward, and twelve aldermen, and sends two members to parliament ; the right of election is in the corporation and freemen. The market on Saturday is well supplied with hops, corn, malt, and provisions.

RETIARII, in antiquity, gladiators who fought in the Roman amphitheatre. They were dressed in a short coat, having a fuscina or trident in the left hand, and a net in the right. With this they endeavoured to entangle their adversaries, that they might then with their trident despatch them : on their heads they wore only * hat, tied under the chin with a broad riband.

RETICULA, or RETJCILE, in astronom

is a contrivance for measuring the exact quantity of eclipses. This instrument, introduced bv the Academy of Sciences at Paris, is a little frame consisting of thirteen fine threads, parallel and equidistant from each other, placed in the focus of the object-glasses of telescopes; that is, in the place where the image of the luminary is painted in its full extent ; consequently the diameter of the sun or moon is hereby seen divided into twelve equal parts or digits ; so that, to find the quantity

of the eclipse, there is nothing to do but to number the luminous and the dark parts. As a square reticule is only proper for . the diameter, not for the circumference, of the luminary, it is sometimes made circular by drawing six concentric equidistant circles. This represents the phases of the eclipse perfectly. See ASTRONOMY.

RETIC'ULATED, adj. Latin reticulatus. Made of network; formed with interstitial vacuities.

The intervals of the cavities, rising a little, make a pretty kind of reticulated work.

Woodward on. Fossils.

RETICULUM, Lat, i. e. a little or casting net, was applied by the Romans to a particular mode of constructing their buildings. In the city of Salino are still to be seen remains of some walls, evidently of Roman origin from the reticu-lum. This structure consists of small pieces of baked earth cut lozengewise, and disposed with great regularity on the angles, so as to exhibit to the eye the appearance of cut diamonds ; and was called reticular from its resemblance to fishing nets. The Romans always concealed it under a coating.

RET'IFQRM, adj. Lat. retiformis. Having the form of a net.

The uveous coat and inside of the choroides are blackened, that the rays may not be reflected backward to confound the sight ; and, if any be by the retifcrm coat reflected, they are soon choaked in the black inside of the ueva. Ray.

RETIMO, sometimes called Rhetzmo, a se,a-port of Candia, situated on the north coast of the island, about forty miles west of the town of Candia. It extends a considerable way along the shore, and has still a citadel, on a sharp projecting rock, built, as well as a fort at the other end of the town, for the protection of the har bour. The latter is now in ruins, and the port itself almost blocked up with sand. The population amounts to about 6000, employed for the most part in agriculture and the culture of the vine, or in making soap from olive oil. Long. 24►► 21' E., lat. 35►► 20' N.

RETINA, in anatomy, the expansion of the" optic nerves over the bottom of the eye, where the sense of vision is first received. See ANATOMY and OPTICS.

RETI'NUE, n. s. Fr. retenue ; Ital. ritenuti, of Lat. retineo. A number attending upon a principal person ; a train.

Not only this your ill-licensed fool,

But other of your insolent retinue,

Do hourly carp and quarrel. Shakspeai*

What followers, what retinue can’st thou gain, Or it thy heels the dizzy multitude,) onger than thou can’st feed them on thy cost

Mition.

There appears

The long retinue of a prosperous reigu, A series of successful years. Dryden.

RETIRADE, in fortification, a kind of retrenchment made in a body of a bastion, or other work, which is to be disputed inch by inch after the defences are dismantled. It usually consists of two faces, which make a re-enterkig angle. When a breach is made in :i bastion, the enemy may also make a retirade or new fortification behind it.

RETIRE’, v. a.,v. n. & n. s. j Fr. retirer ;

RETIRED’NESS, n. s. \ Lat. retraho ?

RETIRE’MENT. j To withdraw;

retreat; go off; leave company; take away : as a noun substantive (obsolete), retreat ; recession ; place of privacy : retiredness corresponding : retirement is the act of withdrawing ; private abode or habit ; state of being withdrawn.

Set up the standard towards Zion, retire, stay not.

Jeremiah.

He brake up his court, and retired himself, his wife, and children into a forest thereby. Sidneu.

He, our hope, might have retired his power ??? And driven into despair an enemy’s hate.

Shakspeare.

I heard his praises in pursuit, But ne'er, till now, his scandal of retire. Id. There may be as great a variety in retiring and withdrawing men's conceit in the world, as in obtruding them. Buctin. The battle and the retire of the English succours were the causes of the loss of that dutchy. Id.

The mind contracts herself, and shrinketh in, And to herself she gladly doth retire. Davies.

The parliament dissolved, and gentlemen charged to retire to their country habitations. Hayward. Like one, who in her third widowhood doth profess

Herself a nun, ty'd to retiredness, So affects my muse now a chaste fallowness.

Dunne.

Language most shews a man : speak that I may see thee ; it springs out of the most retired and in-most parts of US. Ben Junson.

After some slight skirmishes, he retired himself into the castle of Farnham. Clarendon.

My retirement there tempted me to divert those melancholy thoughts. Denham't Dedication.

Thou open'st wisdom's way, And giv'st access, though secret she retire. Milton.

Eve, who unseen

Yet all had heard with audible lament, Discovered soon the place of her retire. Id Short retirement urges sweet return. .1'.

Hydra-like, the fire Lifts tip his hundred heads to aim his way ;

And scarce the wealthy can one-half retire, Before he rushes in to share the prey. Dryden. Some, accustomed to retired speculations, run natural philosophy into metaphysical notions and the abstract generalities of logick. L►►cke.

While you, my lord, the rural shades admire, And from Britannia's publick posts retire, Me into foreign realms my fate conveys. Addison.

Caprea had been the retirement of Augustus for some time, and the residence of Tiberius for many years. v Id.

The ol 1 lillow scuttled out of the room, and retired. Arbuthnot.

How could he have the leisure and retiredness 01 the cloister, to perfo-m all those acts of devotion in.

when the burthen of the reformation lay upon his shoulders ? Atterbury.

Performed what friendship, justice, truth require, What could he more, but decently retire? Swift.

An elegant sufficiency, content, Retirement, rural quiet, friendship, books, Progressive virtue, and approving heaven.

Thomson.

is made by dissolving two ounces of borax in a pint of boiling water, and adding to the solution as much slaked lime as will make it into a thin paste; this, with a common painter's brush, may be spread over several retorts, which when dry, are then ready for the proper pre-servmg coating. The intention of this first

He has sold a small estate that he had, and has c►►ating is, that the substances thus spread over erected a charitable retirement, for ancient poor peo-readily vitrifying in the fire, may prevent anv of nle to live in nravf>r anrl niptw r tho r! infill Inn-rv,.,►►►►► _ c ►► ►►►>

ple to live in prayer and piety.

RETOLD’, part. pass, of retell. told again.

Upon his dead corpse there was such misuse By those Welchwomen done, as may not be Without much shame retold or spoken of.

Shahspeare.

RETORT, v. a. & re. s. } Lat. retortus. To

RETORT’ER, n. s. ►► throw or curve back;

RETOR’TION. 3 rebound

argument or censure : the censure or repartee ;

a chemical vessel. See below. substantives correspond.

His virtues, shining upon others, Heat them, and they retort that heat again To the first giver. Shakspeare.

i .. ‘it* ‘ ►►► J f’‘►►*“fc any ui

the distilling matters from pervading the retort Related or but do m no wise prevent it from cracking. Whenever I want to use any of the above coated retorts, after I have charged them with the substance to be distilled,.! prepare a thin paste, made with common linseed oil and slakedlime well mixed, and perfectly plastic, that it may be easily spread : with this let the retorts be covered all over, except that part of the neck which is to return in be inserted into the receiver; this is readily done with a painter’s brush : the coaflng will be suf-

All the noun-ficiently dry in a day or two, and they will then be fit for use. With this coating I have for several years worked my stone retorts, without any danger of their breaking, and have frequently

I HH grr’, ►►► K ***** used the same retort four or five times; observing

I said his beard was not cut well, he was in the nartirnWW t►► ^ot i, ,,;*K *k ‘ i-

mind it was ; this is called the retort courteous.

Id.

It would be tried how the voice will be carried in an horn, which is a line arched ; or in a trumpet, which is a line retorted; or in some pipe that were sinuous. Bacon.

His proof will easily be retorted, and the contrary proved. Hammond.

He passed through hostile scorn ; And with retorted scorn his back he turned. Hilton.

Recent urine distilled yields a limpid water ; and what remains at the bottom of the retort is not acid nor alkaline. Arbuthnot.

The respondent may shew how the opponent’s argument may be retorted against myself. Watts.

When, by repeated evaporations, the whole of the soda and neutral salts are separated, remove the remaining liquor to* a tubulated glass retort, adapt a receiver to it, and, when this is properly luted, pour some concentrated sulphuric acid upon the liquor within the retort, and proceed to distillation.

Parkes’s Chemical Catechism.

RETORTS, in chemistry, are vessels employed for many distillations, and most frequently for those which require a degree of heat superior to that of boiling water. This vessel is a kind of bottle with a long neck, so bent that it makes, with the belly of the retort, an angle of about sixty degrees. From this form they have probably been named retorts. The most capacious part of the retort is called its belly. Its upper part is called the arch or roof of the retort, and the bent part is the neck. They differ in form and materials : when pierced with a little hole in their roof, they are called tubulated retorts. They are made of common glass, stoneware, and iron. See CHEMISTRY and LABORATORY. In the Transactions of the Society for Encouragement of Arts, we find a paper containing a method for preventing stone retorts from breaking ; or stopping them when cracked, during any chemical operation, without removing any of the contents. ‘ I have

always found it necessary,' says the writer, ' to use a previous coating li/r filling up the interstices of the eartli or stone,

particularly to coat it over with the last mentioned composition every time it is charged with fresh materials : before I made use of this expedient, it was an even chance, in conducting operations in stone and earthen retorts, whethei they did not crack every time, by which means great loss has been sustained. If at any time during the operation the retort should crack, spread some of the oil composition thick on the part, and sprinkle some powder of slaked lime on it, and it immediately stops the fissure, and prevents any of the distilling matter from pervading; even phosphorus will not penetrate through it. It may be applied without any danger, even when the retort is red hot; and, when it is made a little stiffer, is more proper for luting vessels than any I ever have tried ; because, if properly mixed, it will never crack, nor will it indurate so as to endanger the breaking the necks of the vessels when taken off.'

RETOSS', v. a. Re and toss. To toss back.

Tossed and relost the ball incessant flies. Pope.

RETOUCH', v. a. Fr. retoucher. To touch anew ; improve by new touches.

He furnished me with all the passages in Aristotle and Horace, used to explain the art of poetry by painting ; which, if ever 1 retouch this essay, shall be inserted. Dry den.

Lintot, dull rogue ! will think your price too

much ; ' Not, Sir, if you revise it and retouch.' Pope.

RETRACE' v. a. Fr. retracer. To trace back; or again.

Then if the line of Turnus you retrace, He springs from Inachus of Argive race. Dryden.

RETRACT, v. a. & v. n.) Fr. retracter ;

RETRACTA'TION, n. s. > Lat. retractus. To

RETRACT'ION. 3 recall ; recant ; to

take back; resume; to unsay: retractation is, change of declared

opinion ; recantation : retraction, act of withdrawing a declared opinion or claim ; a change of measures ; declaration of change.

There came into her head certain verses, which i:

the had had present commodity, she would have adjoined as a retraction to the other. Sidney.

Were I alone to pass the difficulties,

Paris should ne'er retract what he hath done,

Nor faint in the pursuit. Shakspeare.

If his subtilities could have satisfied me, I would as freely have retracted this charge of idolatry, as I ever made it. Stillingfleet.

These words are David's retractation, or laying down of a bloody and revengeful resolution. South.

They make bold with the deity, when they make him do and undo, go forwards and backwards by such countermarches and retractations as we do not repute to the Almighty. Woodward.

She will, and she will not, she grants, denies, Consents, retracts, advances, and then flies.

Gramille.

RETREAT,' n. s. & v. a. French retraite. [Written formerly retraict and retrait.] Act of retiring ; state or place of retirement or security : to go back ; go to a private abode.

Upon her eyelids many graces sat, Under the shadow ot' her even brows,

Working bellgards and amorous retraite, And every one her own with grace endows.

Spenier.

The earl of Lincoln, deceived of the country's concourse unto him, and seeing the business past retraitt, resolved to make on where the king was, and give him battle. Bacon.

This place our dungeon, not our safe retreat Beyond its potent arm. Milton.

No thought of flight, None of retreat. Id.

Others more mild Retreated in a silent valley, sing Their own heroic deeds. Id.

That pleasing shade they sought, a safe retreat From sudden April showers, a shelter from the heat.

Dryden.

He built his son a house of pleasure, and spared no cost to make a delicious retreat. IS Estrange. There is no such way to give defence to absurd doctrines, as to guard thorn round with legions of obscure and undefined words ; which yet make these retreats more like the dens of robbers, than the fortresses of fair warriors. Locke.

Holy retreat, sithence no female thither Must dare approach from the inferiour reptile To woman, form divine. Prior.

Having taken her by the hand, he retreated with his eye fixed upon her. Arbuthnot and Pope.

But beauty's triumph is well-timed retreat, As hard a science to the fair as great. Pope.

RETREAT, in a military sense. An army or body of men are said to retreat when they turn their backs upon the enemy, or are retiring from the ground they occupied : hence every march in withdrawing from the enemy is called a retreat. That which is performed in sight of an active enemy, who pursues with a superior force, is the most important ; and is a manoeuvre the most calculated to display the

prudence, courage, and address, of an officer who commands. The most famous retreat in ancient history was that of Xenophon.

RETREAT is also a beat of the drum, at the firing of the evening gun; at which the drum-major, with all the drums of the battalion, ex-cept such as are upon duty, beats from the camp-colors on the right to those on the left, on the parade of the encampment : the drums of ;ii! the

guards beat also , the trumpets at the same time sounding at the head of their respective troops. This is to warn the soldiers to forbear firing) and the sentinels to challenge, till the break of day that the reveille is beat. The retreat is likewise called setting the watch.

RETRENCH', v. a. & v. n. t Fr. retrancher. RETRENCHMENT, n. s. I To cut off; pare away ; confine ; live within narrow limits, as to expense : the act of lopping away ; entrenchment.

The pruner's hand must quench Thy heat, and thy exuberant parts retrench.

Deitham.

Nothingcan.be added to the wit of Ovid's Metamorphoses ; but many things ought to have been retrenched. Dryden.

In some reigns they are for a power and obedience that is unlimited ; and in others are for retrenching, within the narrowest bounds, the authority of the princes, and the allegiance of the subject.

Addison't Freeholder.

The want of vowels in our language has been the general complaint of our politest authors, who nevertheless have made these retrenchments, and consequently encreased our former scarcity. Addison.

\Ve ought to retrench those superfluous expenses to qualify ourselves for the exercise of charity.

Atterbury.

Can I retrench 1 yes, mighty well, Shrink back to my paternal cell, A little house, with trees a-iow, And, like its master, very low. Pope.

RETRENCHMENT, in the art of war, any kind of work raised to cover a post, and fortify it against the enemy.

Fr. retribuer ; Lai. retribuo. To pay back ; make repayment of; all t: e derivatives corresponding.

The king thought he had not remunerated his people sufficiently with good laws, which evermore was his retribution for treasure. Bacon's Henry VII.

In good offices and due retributions, we may not be pinching and niggardly : it argues an ignoble mind, where we have wronged to higgle and dodge in the amends. Hall.

All who have their reward on earth, the fruits Of painful superstition, and blind zeal, Nought seeking but the praise of men, here find Fit retribution, empty as their deeds. MiHon.

Both the will and power to serve him are his upon so many scores, that we are unable to retribnte, unless we do restore ; and all the duties we can pay our Maker are less properly requitals than restitutions. Boyle.

There is no nation, though plunged into never such gross idolatry, but has some awful sense of deity, and a persuasion of a state of retribution to men after this life. South.

It is a strong argument for a slate of rettibittwn hereafter, that in this world virtuous persons are very often unfortunate, and vicious persons prosperous. Addiscm's Spectator.

Something strangely retributive is working.

Clarissa.

RETRIEVE', v. a. Fr. rttrouver. To re* cover ; restore ; repair ; regain.

With late repentance now they would retrieve The bodies they forsook, and wish to live. Dryden, Philomela's liberty retrieved,

Cheers her sad soul. Philips

RETRIB'UTE, v. a.- RETRIB'UTER, n. s, RETRIBTJ'TION, RETRIB'UTOR, adj. RETRIB'UTIVE.

O reason ! once again to thee I call ; Accept my sorrow, and retrieve my fall. Prior.

If one, like the old Latin poets, came among them, it would be a means to retrieve them from their cold trivial conceits, to an imitation of their predecessors. Berkeley to Pope.

RETROCES'SION, n. s. Lat. retrocessum. The act of going back.

These bursts of light, and involutions of darkness, these transient and involuntary excursions and retrocessions of invention, having some appearance of deviation from the common train of nature, are eagerly caught by the lovers of a wonder. Johnson.

RETROCOPULATION, n. s. Retro and copulation. Postcoition.

From the nature of this position, there ensueth a necessity of retrocoputation. "Browne.

RETROGRADE, adj. & t; re.) Fr. retro—

RET'ROGRESSION, n. s. $ grade : Lat.

retro and gradior. Going backward ; opposite

or contrary; to go backward : the act of doing

so.

Your intent

In going back to school to Wittenberg, It is most retrograde to our desire. Sluikspeare . Princes, if they use ambitious men. should handle

it so, as they be still progressive, and not retrograde.

Bacon. Their wand’ring course, now high, now low, then

hid,

Progressive, retrograde, or standing still, In six thou seest. Milton’s Paradise Lost.

The account, established upon the rise and descent of the stars, can be no reasonable rule unto distant nations, and by reason of their retrogression, but temporary unto any one. Browne.

Two geomantick figures were displayed ; One when direct, and one when retrograde.

Dryden .

As for the revolutions, stations, and retrogradations of the planets, observed constantly in most certain periods of time, it sufficiently demonstrates, that their motions are governed by counsel. Ray.

RETROMIN’GENCY, n. s. > Latin retro RETROMIN’GENT, adj. S and mingo.

The quality of staling backwards : the adjective corresponding.

The last foundation was retromingency, or pissing backwards ; for men observing both sexes to urine backwards, or aversly between their legs, they might conceive there were feminine parts in both.

Browne’s Vulgar Errours.

By reason of the backward position of the feminine parts of quadrupeds, they can hardly admit the substitution of masculine generations, except it be in retromingents. Browne.

RETROSPECT, n. s. } Lat. retro and spe-RETROSPEC’TION. ⬜⬜rio. Look thrown

RETROSPECTIVE, adj. j upon things behind or things past : act or faculty of looking back ; looking backwards.

As you arraign his majesty by retrospect, so you condemn his government by second sight.

Addison’s Freeholder. In vain the grave, with retrcspective eye. Would

from the’ apparent what conclude the why.

Pi’; e.

Can’st thou take delight in viewing This poor isle’s approaching ruin, When thy retrospection vast Sees the glorious ages past ?

Happy nation were we blind, Or had only eyes behind. Svtfl.

RETUND’, v. a. Lat. retundo. To blunt; turn.

Covered with skin and hair keeps it warm, being na’urally a very cold part, and also to quench and dissipate the force of any stroke that shall be dealt it, and refund the edge of any weapon. Ray—

RETURN’, v. n., v. a., fcc-v Fr. retourner ; RETURS’ABLE, adj. [n. s. * re and turn. To HETURX’ER, n.s. i come or go back;

RETURN’LESS, adj.) come again ; come

again to the beginning of a series ; retort ; recriminate ; answer : to repay ; give or send back ; transmit ; give account of: as a noun substantive, the act of coming, going, restoring, or paying back ; revolution ; retrogression ; profit ; advantage ; remittance : returnable is, in law, allowed to be reported back : returner, he who pays money : returnless, not admitting return.

Return him a trespass offering. 1 Samuel vi. 3. Thy Lord shall return thy wickedness upon thine own head. 1 Kingi ii. 44.

At the return of the year, the king of Syria will come up. Id. xx. 22.

Whoso rolleth a stone, it will return upon him.

Proverbt xxvi. I am in blood

Stept in so far, that, should I wade no more, Returning were as tedious as go o’er. Shakspeare.

The thing of courage,

As rouzed with rage, with rage doth sympathize ; And, with an accent tuned in self-same key, Returns to chiding fortune. Id.

The king of France so suddenly gone back ! ××× Something since

his coming forth is thought of, That his return was now most necessary. Id.

Within these two months, I do expect return Of thrice three times the value of this bond. Id.

Weapons hardly fall under rule ; yet even they have returns and vicissitudes ; for ordnance was known in the city of the Oxidraces in India, and is what the Macedonians called thunder and lightning.

Bacon’s Essays.

As for any merchandise you have bought, ye shall have your return in merchandise or gold. Bacon.

As to roots accelerated in their ripening, there is the high price that those things bear, and the swiftness of their returns; for, in some grounds, a radish comes in a month, that in others will not come in two, and so make double returns. Id.

But well knew the troth

Of this thine own returne, though all my friends, I knew as well should make returnleste ends.

Chapman.

The fruit, from many days of recreation, is very little ; but from these few hours we spend in prayer, the return is great. Taylor.

Instead of a ship, he should levy money, and ******* turn the same to the treasurer for his majesty’s use.

Clarendon. On their embattled ranks the waves return.

Kiti*.

With the year

Seasons return, but not to me return* Day, or the sweet approach of even or morn. Id. When answer none returned, I set me down. Id. Reject not then what offered means ; who knows But God hath set before us, to return thee Home to thy country and his sacred house ? Id.

Probably one fourth part more died of the plagut than are returned. Gravnt’s Bills of Mortality.

It may be decided in that court where the verdict is returnable. hale.

If you are a malicious reader, you return upon me that I affect to be thought more impartial than I am. Dry den.

When forced from hence to view our parts he

mourns ; Takes little journies, and makes quick returns. Id.

A flaw is in thy ill -baked vessel found ; Tis hollow, and returns a jarring sound. Id.

If they returned out of bondage, it must be into a state of freedom. Locfe.

Brokers cannot have less money by them than one twentieth part of their yearly returns. Id.

The chapmen, that give highest for this, can make most profit by it, and those are the returners of our money. td.

Either of the adjoining sides of the front of an house or groundplot is called a return side.

Moxon's Mechanical Exercises. The other ground of God's sole property in any thing is the gift, or rather the return of it made by man to God. South.

Ungrateful lord !

Would'st thou invade my life, as a return. For proffered love 1 Rowe.

He shall have an attachment against the sheriff, directed to the coroner, and returnable into the king's bench. Aylifft.

Returns, like these, our mistress bids us make, When from a foreign prince a gift her Britons take.

Prior.

Since these are some of the returns which we made to God, after obtaining our successes, can we reasonably presume that we are in the favour of God ?

Atterbwry.

This is breaking into a constitution to serve a present expedient ; the remedy of an empirick, to stifle the present pain, but with certain prospect of sudden returns. Swift.

He said ; and thus the queen of heaven returned, Must I, oh Jove, in bloody wars contend ? Pope. The all of thine that cannot die Through dark and dread Eternity,

Returns again to me, And more thy buried love endears Than ought, except its living years. Byron.

RETURN, RETURNA, or RETOURNA, in law, is used in divers senses. 1. Return of writs by sheriffs and bailiffs is a certificate made by them to the court, of what they have done in relation to the execution of the writ directed to them. This is written on the back of the writ by the officer, who thus sends the writ back to the court whence it issued, to be filed. 2. Return of a commission, a certificate or answer sent to the court whence the commission issues, concerning what has been done by the commissioners. 3. Returns, or days in bank, are certain days in each term, appointed for the return of writs, &c.

RETZAT, the name of two rivers and a creek of Bavaria : the latter has an area of 3400 square miles, and 520,000 inhabitants. The capital is Anspach.

RETZIA, in botany, a genus of the monogynia order, and pentandria class of plants, natural order twenty-ninth, campanaceae: CAPS bilocular: COR. cylindrical, villous without, stigma bifid.

REU, the son of Peleg, father of Serug, and great-grandfather of Abraham. He was born

about the time of the division of the earth, arid died in his 207th year.

REUCHLIN, or CAPNIO (John), LL. D. a learned German, born at Pforzheim, in 1 450. He went to Paris with the bishop of Utrecht, where he studied grammar under John de Lapide, rhetoric under Gaguinus, Greek under Tipher-nus, and Hebrew under Wesselus. He became doctor of philosophy at Basil in 1749, and LL.D. of Orleans ; where he taught Greek, and published a grammar, lexicon, and

vocabularies, in that language. He next went to Rome, where Hermolaus Barbarus persuaded him to change his name to Capnio, which in Greek means the same as Reuchlin in German, i. e. smoke. He was made ambassador to Frederick III., who granted him matiy favors, but after that emperor's death he was banished, and went to Worms, where the, elector palatine employed him to defend his cause at Rome, where he made a celebrated oration before the pope on the rights of the German princes and churches. He revived the study of Hebrew, and died in 1522. The Epistolae Obscurorum Virorum are ascribed to him.

REVE', n. s. Sax. gejiepa, a governor. The bailiff of a franchise or manor.

Thereve, the miller, and the mincing ladvpiioress, speak in character. Dryden.

REVEAL', v. a. ˆ Fr. reveler ; Lat. revelo. REVEAL'ER, n. s. S-To show; discover; lay REVELA'TION. J open : the noun substantives corresponding.

The sufferings of this life are not to be compared with the glory which shall be revealed in us.

Romans viii. 18.

Be ashamed : speaking again that which thou hast heard, and revealing of secrets. Ecclus. xli. 23.

The habit of faith in divinity is an argument of things unseen, as a stable assent unto things inevident, upon authority of the divine revealer.

Browne's Vulgar Errourt.

Light was the wound, the prince's care unknown, She might not, would not, yet reveal her own.

Waller.

He brought a taper ; the revealer light Exposed both crime and criminal to sight. Dryden.

Thy throne is darkness in the abyss of light, A blaze of glory that forbids the sight ; O teach me to believe thee thus concealed, And search no further than thyself revealed. Id.

The answer to one who asked what time was, si non rogas intelligo ††† that is, the more I think of time, the less I understand it ††† might persuade one, that time, which reveals all other things, is itself not to be discovered. Locke.

When the divine revelations were committed to writing, the Jews were such scrupulous reverers of them, that they numbered even the letters of the Old Testament. Decay of Piety.

As the gospel appears in respect of the law to be a clearer revelation of the mystical part, so it is a far more benign dispensation of the practical part.

†††Sprat.

The lives of the revealers may be justly set over against the revelation, to find whether they agree.

Atterbury.

REVEILLE, a beat of drum about break of day, to give notice that it is time for the soldiers to arise, and that the sentries are to forbear c/iai-lenging.

REVELATION.

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v. n. -\

HEV'ELLER, n.s. ˆFr. reveiller, to awake ; Lye REV'ELRY, i from Belg. raveelen, to rove

REVEL-ROUT'. J loosely about, which is countenanced by the old phrase, revel-rout. Perhaps all are from Lat. re and vigilia. To feast with clamorous merriment : and (of Lat. revello), to drive back : revelry is, jollity ; mirth : reveller, one who indulges in revels : revel-rout, a tumult ; tumultuous festivity.

My honey love,

Will we return unto thy father's house, And revel it as bravely as the best. Shakspeare.

We shall have revelling to-night ; I will assume thy part in some disguise. Id.

Let them pinch the unclean knight, And ask him, why, that hour of fairy revel, In their so sacred paths he dares to tread ? Id.

Fairies, black, grey, green, and white, ??? You moonshine revellers, attend your office. Id.

Forget this new-fallen dignity, And fall into our rustic revelry. Id.

Were the doctrine new,

That the earth moved, this day would make it true; For every part to dance and revel goes, They tread the air, and fall not where they rose.

Donrte. He can report you more odd tales

Of our outlaw Robin Hood,

That revelled here in Sherewood,

Though he ne'er shot in his bow. Ben Jonson.

Those who miscarry escape by their flood revelling the humours from their lungs. Harvey. There let Hymen oft appear

In saffron robe with taper clear,

And pomp, and feast and revelry,

With mask and antick pageantry. Milton.

For this his minion, the revel-rout is done. Rowe.

Venesection in the left arm does more immediate revel, yet the difference is minute.

Friend's History of Physic.

Unwelcome revellers, whose lawless joy Pains the sage ear, and hurts the sober eye. Pope. While youth's hot wishes in our red veins revel,

We know not this ??? the blood flows on too fast ; But as the

torrent widens towards the ocean, We ponder deeply on each past emotion. Byron.

REVEL, a town of France, in the department of the Upper Garonne, is situated not far from the great canal of Languedoc. It has a population of 3800, who manufacture woollens, linen, stockings, and caps. During the civil wars of the sixteenth century it was taken and fortified by the Calvinists, but afterwards dismantled. Thirty miles south-east of Toulouse.

REVELATION is the act of revealing or making a thing public that was before unknown ; it is also used for the discoveries made by God to his prophets, and by them to the world ; and more particularly for the books of the Old and New Testament. See BIBLE, CHRISTIANITY, MIRACLE, PROPHECY, RELIGION, and THEOLOGY. The principal tests of the truth of any revelation are, the tendency of its practical doctrines ; its consistency with itself, and with the known attributes of God; and some satisfactory evidence that it cannot have been derived from a human source. In every revelation confirmed by this evidence many doc-t'mes are to be looked for which human reason cannot fully comprehend ; and these are to be

believed on the testimony of God, and suffered to produce their practical consequences. Thij kind of belief has place in arts and sciences, a-* well as in religion. Whoever avails himself of the demonstrations of Newton, Bernouilli, and others, respecting the resistance of fluids, and applies their conclusions to the art of ship-building, is as implicit a believer, if he understand not the principles of fluxions, as any Christian ; and yet no man will say that his faith is not productive of important practical consequences.

This is a subject respecting which we have felt a strong desire to be at once plain and copious in the present work ; and, for reasons which will appear at the close, what may seem briefly discussed in this article will be resumed in that of THEOLOGY. As a country we are recovering ❖❖❖ and but recovering ❖❖❖ in common with the other nations of Europe from the storm of infidelity and every sort of discord which began in revolutionary France. During its progress not only new and excellent expositions and defences of the evidences of our faith have appeared in England and placed the whole subject in renewed and living light, but one of the greatest moral experiments upon infidelity that was ever tried, or that perhaps ever can be tried, may be said to have been completed. Lardner and Paley and Porteus

and Watson (to say nothing of existing writers) must on the other hand have lived in vain, if the evidences of Christianity may not be popularised with more facility, and left to their own fair effect upon the minds of men with more confidence than ever ; while on the other hand it will in-deed appear that nations are never to profit by experience, if the international history of Eu-rope for the last thirty years shall not give new scope to the arguments for Christianity, and show the true tendencies of atheism.

Connected with these great facts, and by no means inferior to any other consideration in our view of its importance, is the interesting situation of this country at the present period, with regard to education and the circulation of the Bible. How mightily calculated to act upon each other are the noble engines which are every-where at work to promote these objects ! But the more we attempt to educate all classes, and especially those neglected groupes of society to whom education and all its advantages are novelties, the more in all the ardor of novelty must we expect to see the spirit of enquiry rising about us ××× and the real taste of truth mingling with much of the pride of supposed discoveries in morals and religion. Each class of society, too, will act strongly, and, on the whole, beneficially on every other ; while all classes will be stimulated more than ever to discuss every thing they have believed or are taught to believe. The cultivation of the ir.jnd educes enquiry : but sorry we are to add that some distinguished promoters of liberal enquiry have been, at any rate, imagined, to be indisposed to religion; and to slight its evidences. Here arises therefore a double reason for the plain and full exhibition of them : it is due at once to science and religion.

We should state the presumption in favor of revealed religion (to trace the argument fairly from its origin) in the following way. There is a God and He is infinitely benevolent. In the boundless heavens, the teeming earth, the cheerful seas, He has opened volumes of truth and wisdom inviting every eye. We have read them with attention, we claim the privilege of thinking and reasoning about them with

impartiality and independence of mind ; and whether by the light of science we search the arcana of nature, or confine ourselves to those observations on her works which may be as easily made by the ploughman as by the philosopher, no one truth is supported by such variety of proof as the being of a beneficent Author of all : springs of happiness, evidently designed, open every where at our feet, and supply the unquestionable sources of natural religion.

One thing however is left unsatisfied ××× the human mind. Nature teaches us to ask questions about her God which she cannot answer. This is an anomaly. Every thing seems to lead up to man : he has a more exquisitely finished form than any creature of his size, and a power of reflection, and therefore of anticipation, possessed by no other creature : he arrives at the position with which we have commenced ; he finds it the capital truth of nature, without which all the conclusions of science are half-truths only, but he cannot proceed. The very being of nature's God seems to include a hearty determination in God to make his creatures happy, by adapting an object to every faculty of enjoyment; and all their senses are faculties of enjoyment. But here is an appetite for truth unprovided for: either therefore this must re-main an inexplicable mystery, or rather a contradiction to the whole series of facts that argue a benevolent designer in the works of nature, or nature herself suggests the highest probability of a further revelation from God ; and here we rest the connexion between natural and revealed religion. We have some hope of all who ' desire to retain God in their knowledge,' and would reason with all who avow that desire. The Bible professes to contain that revelation from God which every consistent deist must be enquiring for ××× it demands ' a reasonable service' only, from its most devout admirers, and can therefore have nothing to fear from an investigation of its claims. He who hates a man for not being a Christian is not himself a Christian, lord Littleton has well said. Weak Christians and violent sceptics are each likely to be improperly affected by the revival of the deistical controversy, ××× the former by undue apprehensions, the latter by a premature exultation; but, whether the triumphs of the one or the fears of the other are to be realised, we deem it a paramount duty to request both, as much as possible, to suppress mere emotions, and in the spirit of untrembling deliberation to allow the arena to be cleared and the conflict to be fairly and openly decided.

But to return : ××× By revealed, as distinguished from natural religion, we are to understand that knowledge of religion which was originally communicated in a supernatural way. A revelation

of this kind must either be by an immediate infallible inspiration, or illumination of every particular person, for informing and directing him with regard tp the knowledge and practice of religion ; or by God's making an extraordinary discovery of himself and of his will to some person or persons, who should be commissioned to communicate it to others. In the former case it could not be properly called extraordinary or supernatural revelation ; for if it were a universal infallible light, imparted to every single person in every nation and every age, from the beginning of the world, it would be as common and familiar to every one as the com-mon light of reason, and by being universal would cease to be extraordinary. Whereas, if there be such a thing as revealed religion, or if it has pleased God to make discoveries of his will to mankind with respect to religious truth and duty, in a way of extraordinary revelation, the most natural mode of doing it, and that which is best accommodated to the present state of mankind, seems to be that the revelation should be communicated to some person or persons, to be by them communicated to others in his name ; at the same time furnishing them with sufficient proofs and credentials, to show that they were indeed sent and inspired by him, and that the doctrines and laws which are the matter of such revelation, and which they are authorised to publish to the world in his name, were really and originally communicated by revelation from him. This method admits of sufficient proof being; given to satisfy well -disposed minds, and of provision being made for instructing men, unless it be their own fault, in the knowledge of religion, and engaging them to the practice of the duties which it requires ; and at the same time there is room for the exercise of reason in examining the nature of the evidence, and the trial of men's sincerity and diligence, of their impartial love of truth, and their openness to receive it.

Two principal questions present themselves to our consideration with regard to this kind of revelation. Its usefulness and expediency, and even the necessity of it in the present state of mankind, and its-proofs and evidences.

It is acknowledged by lord Bolingbroke, a writer of distinguished rank among the opposers of revelation (Works vol. ii. p. 468, ed. 4to.), ' that an extraordinary action of God upon the human mind, which the word ' inspiration' is now used to denote, is not more inconceivable than the ordinary action of mind upon body, or body on mind ;' and ' that it is impertinent to deny the existence of any phenomena, merely because we cannot account for it.' Moreover as God can, if he thinks

proper, communicate his will to mankind, he can also do it in such a manner as to give to those to whom it is originally and immediately made a full and certain assurance of its being a true divine revelation. Besides, God can commission those to whom he has made an extraordinary revelation of his will to communicate to others what they have received from him; and can furnish them with such credentials of their divine mission as am sufficient to prove that he sent them, and that tb*

doctrines and laws which they deliver in his name were indeed received from God. He can also undoubtedly, if he thinks fit, enable such persons to perform the most wonderful works in his name, as a proof that he sent them ; works of such a nature and so circumstanced as manifestly to transcend all human power, and bear the evident marks of a divine interposition. He can also endue them with supernatural gifts, and enable them to deliver express predictions of future contingent events, which no human sagacity could foresee, and which yet shall be accomplished in the proper season. See PROPHECY. It should also be further observed, upon this subject, that not only they who live in the age when the revelation was first published to the world may have such proofs of it as may be sufficient to convince them of its' divine authority and original, but that it may be transmitted with such evidence to those who live in succeeding ages as may lay them under an obligation to receive and submit to it as a revelation from God. Although oral tradition is not a very sure conveyance, yet it is undeniable that writings may be transmitted with such a degree of evidence as to leave no room for reasonable doubt. Such is the fact with regard to the revelation contained in the holy scriptures; nor is it difficult to prove that we have greater evidence of the safe transmission of these sacred writings, without any general and material corruption and alteration, than we have concerning other books, the genuineness of which is universally acknowledged. To this kind of argument it can only be objected that moral evidence is uncertain, and historical human testimony fallible ; but to the objection the reply is obvious, that this kind of evidence may be, and

frequently is, so circumstanced, that the man would scarcely be thought in his senses who should seriously deny or .doubt of it. It is by moral evidence, and the testimony of fallible men, capable of deceiving and of beinˆ deceived, that a man who has never been at Paris or Rome knows that there are such cities, and yet he can no more reasonably doubt of it than if he had seen them with his own eyes. It is by moral evidence that we have all oui laws and records, and the assurance of any past facts.

The great subject of present consideration, the usefulness and advantage of divine revelation, and the necessity of it in the present state of mankind, for supporting and promoting the interests of religion and virtue in the world, may thus be stated : ††† Such a revelation will be of great use even with regard to those truths and principles which lie at the foundation of all piety, or are common to what is called natural and revealed religion. Such are the truths which relate to the excellent and unparalleled nature, the perfections and attributes of the one supreme God. A divine revelation may also be very useful in establishing the belief of the providence of God, and in communicating instruction to all those who allow that some kind of religious worship and homage should be rendered to him. What kind of worship will be most acceptable to the Supreme Being, and what rites are most proper to be used in his service? are questions

which unassisted reason cannot positively and with certainty determine. The doctrine of the immortality of the soul, and of a future state of retribution, is unquestionably of very great importance to mankind ; and the natural and moral arguments to prove it have certainly great weight; but they are assailed by difficulties and objections which weaken the evidence, and may occasion suspicion and doubt, if natural reason be our only guide and umpire. Accordingly some of the most eminent ancient philosophers either denied this doctrine, or expressed themselves doubtfully concerning it. If then God himself should, by a well-attested revelation, assure us that death shall not put an utter end to our being ; that the present life is only the first stage of our existence ; that we shall be raised again from the dead; and that God / will call all men to an account, and reward or punish them in a future state according to their behaviour in this ; and should also signify to us the nature of those rewards and punishments, and the qualifications of the persons on whom they should be conferred or inflicted ; this must needs be of high advantage, and tend to give us satisfaction in a point of considerable importance, for encouraging men in the practice of virtue, and

delivering them from vice and wickedness. Moreover, we are led by the light of nature and reason to entertain some hope that God will show mercy to sinners upon their repentance and amendment ; but how far this mercy shall extend, whether he will pardon sins of every kind, even the most heinous, frequently repeated, and long persisted in, merely upon repentance and amendment ; and whether his pardon in this case will be only a mitigation or remission of the threatened penalty, without a full restitution to grace and favor, and how far he will reward an obedience attended with failures and defects : ††† these things might create anxious doubts and perplexities in all thoughtful minds ; especially when it is further considered that reason leads us to regard God as just as well as merciful, a wise and righteous governor, who will therefore exercise his pardoning mercy in such a way as seemeth most fit to his rectoral wisdom, and will best answer .the ends of moral government. A revelation from God satisfying mankind, and especially anxious penitents, with regard to these interesting questions, and assuring them by express promise, as well as by its representations of the placability of God, and of the provision which he has made for the pardon of repenting transgressors, in perfect consistence with all the attributes of his nature and laws of his government, must be a very great benefit to the world. The assistance promised and certified by revelation to those who use their own earnest endeavours in the performance of their duty must further evince its importance and utility. The benefits and uses of a divine revelation further extend to those laws and duties which we owe to God, our neighbours, and ourselves, and which are comprehended under the class of moral obligations. But though revelation is thus eminently useful, and even necessary, it is not designed to supersede the use of our own rea>on, or to render the exercise of it needless, but t*††

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guide, improve, and perfect it. Revelation, so far t’rom discarding or

weakening any argument that can be justly brought from reason, in proof of any truths relating to religion or morality, adds to them the attestation of a divine authority or testimony, which is of great weight. This ooth gives us a farther degree of certainty with regard to those things which are in some degree discoverable by the light of reason, and also furnishes us with a sufficient ground ˆf assent with respect to those things which mere unassisted reason, if left to itself, would not have discovered, and which yet it may be of the highest importance for us to know.

This leads us to the next subject of enquiry proposed : ••• What are the proofs and evidences by which it may be known that such a revelation has been actually communicated to mankind ? In general we may observe that it has been the sense of mankind, in all ages and nations, that God has made a revelation of his will to man ; and this prevalent opinion has been probably derived from a tradition of some extraordinary revelation or revelations, communicated in the earliest times to the first ancestors of the human race, though in process of time it has been in a great measure corrupted and lost : or at least we may hence conclude that men have generally thought that a revelation from God to man was both possible and probable ; and that this was agreeable to the ideas they had formed of the wisdom and goodness of God, and of his concern for mankind. It would lead us far beyond our present limits particularly to state the proofs that have been alleged for the divine authority of the Jewish and Christian revelation; both of which refer to and confirm the original revelation made to mankind. See the article THEOLOGY.

Of the Christian revelation, however, we may here remark, cursorily, that it is founded on a part of the Jewish, and has been opposed by the Jewish race : that is, the Messiah promised in the one revelation is declared to have come in the other. All the rest of the Jewish revelation, or that which related peculiarly to the Jewish people, is set aside ; and only that part of it in which the world in general was interested, and that relating to the advent, offices, and character of the Messiah, are retained. It must be owned indeed that the Jews ever looked on this to be as peculiar to themselves as any of the rest : the Messiah was promised to them ; he was to be their deliverer, their restorer, &c., and under this character he actually appeared. But, upon this new revelation taking place, a new scene was opened, different from what many of them apprehended, because they misinterpreted the prophecies relating to the Messiah. The ceremonial part of their institution, local and temporary in its establishment and use, was abolished ; and the Messiah appeared, not as they erroneously imagined, to be the restorer of their civil sovereignty and liberties,

which were now fallen into the hands of the Romans, but to restore and reestablish mankind in general, who had lost their original righteousness, and were become slaves of sin ; to preach repentance and remission ; and at last to suffer death, that all

who believed in him might not perish, but have everlasting life.

Now here it must be remembered that the Jewish infidel quoad Christianity establishes and advocates our faith in the old and more ancient scriptures. Between us and him, our most inveterate opponent, as to the evidences of Christianity, there is no difference, either as to the authenticity or inspiration of the greater part of our holy books. It is at most only a difference of interpretation. While the expansive character of the Christian dispensation opens it to new and far more comprehensive and irrisistible arguments from reason and the general benevolence of providence.

REVELATION OF ST. JOHN. See APOCALYPSE.

REVEL, or Kolyvan, a town of European Russia, the capital of Esthonia, is situated on a small bay of the gulf of Finland, and has an excellent harbour, defended by the works of the town, and by batteries on some islands at its mouth. The town is further fortified by a mound and ditch, as well as by a citadel on a rock, and divided into three parts, called the town, suburb, and Domberg. The houses are of brick, and tolerably well bu\lt ; but the streets are narrow and irregular. Of the churches, thirteen in number, six are for the Greek faith, and the others for the Lutheran. These churches, and several of the other ancient edifices, bear Danish inscriptions, and coats of arms. Here is a military academy, a public library, and several schools, infirmaries, and poor houses. A small palace adjacent to the shore has gardens open to the public.

The population, about 13,000, arc descended from German and Russian settlers, Swedes, Finns, and Esthonians. The average number of merchantmen that arrive in a year is about 200. The exports are corn, timber, hemp, and spirituous liquors from the interior. The imports bay salt, sugar, coffee, and British manufactures. Some glass and leather are made on the spot. Revel was founded by the Danes in 1218, conquered at a subsequent date by the Swedes, and taken from the latter, in 1710, by the Russians. It is 200 miles west of St. Petersburgh, and 1 80 west by north of Riga.

REVELLO, a town of Piedmont, situated on a mountain, and fortified both by nature and art. It contains 5000 inhabitants, and has several well built churches, a palace and an old ruined castle. Nine miles north-west of Saluzzo.

REVENGE', n. s. ~] Fr. revenger, reven—

REVEN'GER, j chcr; Span, venger ;

REVENGE'FUL, adj. I Ital. vendicare, of Lat.

REVEXGE'FULLY, adv. f vindico. To return

REVENGE'MEXT, n. s. \ or recompense an in—

llEVEx'ciMiLY, adv. J jury ; wreak one's wrongs on the wrong doer : the passion of vengeance ; return of an injury. Dr. Johnson suggests a correct rather than an established distinction when he says, ' revenge is an act of passion ; vengeance of justice. Injuries are revenged ; crimes are avenged.' A revenger is, a vindictive person ; one who wreaks vengeance : revengeful, vindictive ; malicious : the adverb corresponding : revengement, an old synonyme of revenge, noun substantive : revengingly, vindictively.

I will make mine arrows drunk with blood j from the beginning of revenges upon the enemy.

Devi, xxxii. 42.

O Lord, visit me, and revenge me of my persecutors. Jeremiah. Edom hath revenged himself upon Judah.

Ezekiel xxv. 12

Who shall come to stand against thee, to be revenged for the unrighteous men 1 Wisdom xii. 12.

So shall the great revenger ruinate Him and his issue by a dreadful fate. Sandys.

They often tread destruction's horrid path, , And drink the dregs of the revenger's wrath. Id.

May be, that better reason will assuage The rash revenger's beat ; words well disposed ' Have secret power to appease inflamed rage.

Spenser. It may dwell

In her son's flesh to mind revengement, And be for all chaste dames an endless monument.

Id.

Come, Antony and young Octavius, Revenge yourselves alone on Cassius. Shaltspeare.

It is a quarrel most unnatural, To be revenged on him that loveth thee. Id.

Revenges burn in them ; for their dear causes Would to the bleeding and the grim alarm, Excite the mortified man. Id. Macbeth.

May my hands

Never brandish more revengeful steel Over the glittering helmet of my foe. Shakspeare.

1 do not know,

Wherefore my father should revengers want, Having a son and friends. Id.

I've belied a lady,

The princess of this country ; and the air on't Reiengingly enfeebles me. Id Cymbeline.

By the perclose of the same verse, vagabond is understood for such a one as travelleth in fear of revengement. Raleigh.

Deformed persons are commonly even with nature ; for, as nature has

done ill by them, so they do by na-ture ; being void of natural affection, they have their revenge of nature. Bcctm.

What had this been but to thrust themselves into the hands of the revenger of all wicked insolencies,

Bp. Hall.

Moses will not revenge this wrong, God will ; yet will he not deal with them himself, but he sends the fiery serpents to answer for him. Id.

Into my borders now Jarbas falls, And my revengeful brother scales the walls.

Denham.

What will not ambition and revenge descend to?

Milton.

Morocco's monarch

Had come in person, to have seen and known iniured world's revenger and his own. Wa

ller.

The injured

Jl our hard fortune no compassion draws, The gods are just, and will revenge our cause.

Dry den.

Your fury of a wife, Not yet content to be revenged on you, The' agents of your passion will pursue.

The satyr in a rage

Forgets his business is to laugh and bite, And will of death and dire revenges write. Repenting England, this revengeful day, To Philip's manes did an offering bring. He smiled revengefully, and leaped Upon the floor : thence gazing at the skies, His eye-balls fiery red, and

glowing vengeance ; Gods, I accuse you not. Id. and Lee's Oedipui.

What government can be imagined without ju- ###urial proceedings? and what methods of judicature

Id.

Id.

without a religious oath, which supposes an omniscient being, as conscious to its falsehood or truth, and a revenger of perjury 1 Bcntlei, .

Not unappeased, he passed the Stygian gate, Who leaves a brother to revenge his fate. Pope.

Draco, the Athenian lawgiver, granted an impunity to any person that took revenge upon an adulterer.

Broome.

REVENUE, n. s. Fr. revenu; Lat. revenio Income ; annual profits.

They privily send over unto them the revenuei wherewith they are there maintained. Spenser.

She bears a duke's revenues on her back, And in her heart scorns our poverty. Shakspeare. Only I retain

The name and all the' addition to a king ;

The sway, revenue, beloved sons, be yours. Id.

Many offices are of so small revenue, as not to fui-nish a man with what is sufficient for the support of his life. Temple.

If the woman could have been contented with golden eggs, she might have kept that revenue on still. L" Estrange.

His vassals easy, and the owner blest, They pay a trifle and enjoy the rest : Not so a nation's revenues are paid ; The servant's faults are on

the master laid. Swift.

When men grow great from their revenue spent. And fly from bailiffs into parliament. Young.

REVENUE, in law, is properly the yearly rent which accrues to any man from his lands and possession ; but is generally used for the revenues or profits of the crown.

The fiscal prerogatives of the king, or such as regard his revenue, that is, those which the constitution has vested in the royal person, in order to support his dignity and maintain his power, are very learnedly treated of by Blackstone, in the eighth chapter of the first volume of his Commentaries. It will be sufficient to observe here that almost the whole of these were, in the late king's reign, consolidated and taken as the property of the country : his late majesty, soon after his accession, having accepted the limited sum of ––800,000 per annum for the support of his civil list (charged also with three life-annui- ties, to the princess of Wales, the duke of Cumberland, and the princess Amelia, to the amount of ––77,000), the hereditary and other revenues being made a part of the aggregate fund, which was charged with the payment of the whole annuity to the crown. The expenses formerly defrayed by the civil list were those that in any shape relate to civil government : as the expenses of the household ; all salaries to officers of state, to the judges, and each of the king's servants ; the appointments to foreign ambassadors ; the maintenance of the queen and royal family ; the king's private expenses, or privy purse; and other very numerous outgoings, as secret service money, pensions, and other bounties; which sometimes have so far exceeded the revenues appointed for that purpose that application has been made to parliament to discharge the debts contracted on the civil list; as particularly in 1724, when 1,000,000 was granted for that purpose by the statute 11 Geo. I. c. 17; and in 1769 and 1777, when 1,500,000 and ––600,000 were appropriated to the like use, by the statutes 9 Geo. III. c. 34, and 17 Geo. III. c. 47. Many of these expenses are now charged on tlib

consolidated fund, and the civrl list comprehends the support of his majesty's household. The civil list is, indeed, properly the whole of he king's revenue in his own distinct capacity ; the rest being rather the revenue of the public, or its creditors, though collected and distributed again in the name and by the officers of the crown. See ENGLAND.

REVENUE, in hunting, a fleshy lump formed chiefly by a cluster of whitish worms on the head of the deer, supposed to occasion the casting of their horns by gnawing them at the root.

REVERB' v. a. -\ FT. reverberer ;

REVER'BERANT, adj. I Latin reverbero.

REVER'BERVTE,u.a. Scv.n. /> To resound ; beat

REVERBERA'TION, n. s. i back : reverberate

REVER'BERATORV, adj. j is the more usual verJb, and signifies also to heat so that the flame is reverberated upon the matter to be melted or cleaned : reverberation is the act of beating or driving back : reverberatory, driving back.

Reserve thy state, with better judgment check This hideous rashness :

The youngest daughter does not love thee least ; Nor are those empty hearted whose loud sound Reverbt no hollowness. Shakipeare. King Lear.

Hollow your name to the reverberate hills, And make the babbling gossip of the air Cry out Olivia. Id. Twelfth Night.

Start

And echo with the clamour of thy drum, And even at hand a drum is ready braced, That shall reverberate all as well as thine.

Shakspeare.

As the sight of the eye is like a glass, so is the ear a sinuous cave, with a hard bone, to stop and reverberate the sound. Bacon.

To the reflection of visibles small glasses suffice ; but to the

reverberation of audibles are required greater spaces. Id.

The rays of royal majesty reverberated so strongly upon Villerio that they dispelled all clouds.

Howel.

Crocus martis, that is, steel corroded with vinegar or sulphur, and after reverberated with fire, the loadstone will not attract. Browne.

Good lime may be made of all kinds of flints, but they are hard to burn, except in a reverberatory kiln.

Moxon.

The first repetitions follow very thick ; for two parallel walls heat the sound back on each other, like the several reverberations of the same image from two opposite looking-glasses. Addison.

As we, to improve the nobler kinds of fruits, are at the expence of walls to receive and reverberate the faint rays of the sun, so we, by the help of a go<Jd soil, equal the production of warmer countries.

Stcift.

REVERBERATORY FURKACE. See CHEMISTRY and LABORATORY.

REVERE>.a. RE V'ERENCE, n. s. & v, a. REV'ERENCER, n. s. REV'EREKD, adj. REV'ERENT, REVEREN'TIAL, REVEREN'TIALLY, adv. REV'ERENTLY, REVE*RER, n. s. the clergy and to fathers

Fr. reverer; Lat. revereor. To venerate ; regard with honor or awe : rever- -ence is, veneration ; respect; act of courtesy or obeisance , bow : a title that has been given both to to reverence seems

synonymous wun to revere : a reverencer, or reverer, one who feels or manifests reverence : reverend is, venerable ; deserving or commanding respect ; an honorary epithet of the clergy : reverent is, humble ; testifying reverence or submission : reverential, proceeding from, or expressive of, reverence : the adverbs corresponding.

And afterward we hadden fadres of our fleische techeris, and we with reverence dredden hem.

Wiclif. Ebrewis xii.

Onias, who had been high priest, reveiend in conversation, and gentle in condition, prayed for the Jews. 2 Mac. xv. 12.

Now lies he there, And none so poor to do him reverence. Shakspeare.

Many now in health Shall drop their blood, in approbation Of what your reverence shall incite us to. Id. O my dear father ! let this kiss Repair those violent harms that my two sisters Have in thy reverence made. Id.

Those that I reverence, those I fear, the wise ; At fools I laugh, not fear them. Id.

Reverend and gracious senators. Id.

Chide him for faults, and do it reverently. Id.

All this was ordered by the good discretion Of the right reverend cardinal of York.

Id. .Henry VI II.

When quarrels and factions are carried openly it is a sign the reverence of government is lost.

Bacon’s Essays. His disciples here,

By their great master sent to preach him every where, Most rtverently received. Drayton.

That oaths made in reverential fear Of love and his wrath may any forswear. Donne.

He led her easily forth,

Where Godfrey sat among his lords and peers ; She reverence did, then blushed as one dismayed.

Fairfax.

In your prayers use reverent postures, and the ‘.’”est gestures of humility, remembering thai we

speak to God, in our reverence to whom we cannot. exceed. Taylor.

Higher of the genial bed,

And with mysterious reverence I deem. Milton. While they pervert pure nature's healthful rules To loathsome sickness, worthily since they God's image did not reverence in themselves. Id.

A reverend sire among them came, Who preached conversion and repentance. Id.

They forthwith to the place Repairing, where he judged them, prostrate fell Before him reverent. Id. Paradise I^ost.

The Jews, reverentially declining the situation of their temple, place their beds from north to south.

Brnicne*

To nearest ports their shattered ships repair, Where by our dreadful cannon they lay awed ;

So reverently men quit the open air, When thunder speaks the angry gods abroad.

Druden.

A poet cannot have too great a reverence tor readers. Id.

Upstarts the beldam, And reverence made, accosted thus the queen, fJ.

A parish priest was of the pilgrim train, An awful, reverend, and religious man, His eyes diffused a venerable grace, And charity itself was in his face. Id.

The least degree of contempt weakens religion ; it properly consisting in a reverential esteem of tiling* sacre'l. Sixitlt

When, the divine revelations were committed to writing, the Jews were such scrupulous revere? s of them that it was the business of the Masorites, to number not only the sections and lines, but even the words and letters of the Old Testament.

Government of the Tongue.

An emperor often stamped on his coins the face or ornaments of his colleague, and we may suppose Lucius Verus would omit no opportunity of doing honour to Marcus Aurelius, whom he rather revered as his father, than treated as his partner in the em-pire. Additon's Remarks on Italy.

Then down with all thy boasted volumes, down ; Only reserve the sacred one : Low, reverently low, Make thy stubborn knowledge bow : To look to heav'n be blind to all below. Prior.

Jove shall again revere your power, And rise a swan, or fall a shower. Id.

The reason of the institution being forgot, the after-ages perverted it, supposing only a reverential gratitude paid to the earth as the common parent. Woodward's Natural History.

The fear acceptable to God is a filial fear ; an awful reverence of the divine nature, proceeding from a just esteem of his perfections, which produces in us an inclination to his service, and an unwillingness to offend him. Rogers.

Rev' ~end old man ! lo here confest he stands.

Pope.

Meet then the senior, far renowned for sense. With rev'rent awe, but decent confidence. Id.

All look up, with reverential awe, At crimes that 'scape, or triumph o'er the law. Id.

The Athenians, quite sunk in their affairs, had little commerce with the rest of Greece, and were become great reverencers of crowned heads. Swift.

He presents every one so often before God in his prayers that he never thinks he can esteem, reverence, or serve those enough, for whom he implores so many mercies of God. Law.

With deep-struck reverential awe,

The learned sire and son 1 saw,

To Nature's God and Nature's law

. They gave their lore,

This all its source and end to draw,

That to adore. Burns.

That had been just replied the reverend bard, But done, fair youth, thou ne'er hadst met me here. I ne'er had seen yon glorious thione in peace.

Pollok.

REVERSE', v.u.,v.n.,~\ Latin reversus. REVER'SAL, n. s. [Sc n. s.j To turn complete-REVER'SIBLE, adj. My over, or upside

REVER'SION, n. s. 1 down ; turn back ;

REVER'SIOXARY, adj. J put one thing in the place of another ; subvert ; hence to contradict ; repeal ; turn to the contrary; recal; re-new (obsolete) : as a verb neuter, to return : as u nounsubstantive, change; vicissitude; an opposite ; that side of a coin on which the head is not placed : reversible. is, capable of being reversed or changed : reversion, right of succession: state of beins; to be possessed after the death of a present possessor : the adjective corresponding.

Well knowing true all he did rehearse, And to his fresh remembrance did reverse The ugly view of his deformed crimes. Spenser. Belter it was, in the eye of his undeistandinp, that sometimes an erroneous sentence definitive should prevail, till the same authority, perceiving such oversight, might afterwards corrector reverse it, VOL. XVII 1.

than that strifes should have respite to grow and not come speedily unto some end. Hooker't Preface. As were our England in reversion his,

And he our subjects next degree in hope.

Sltakspeare.

The king, in the reversal of the attainders of his partakers, had his will. Bacon'* Henry VII.

As the Romans set down the image and inscription of the consul, afterward of the emperor, on the one side, so they changed the reverse always upon new events. Camden.

A decree was made that they had forfeited their liberties ; and albeit they made great moans, yet could they not procure this sentence to be reversed.

Hay ward.

A life in reversion is not half so valuable as that which may at present be entered on. Hammond.

He was very old, and had outlived most of his friends ; many persons of quality being dead who had for recompence of services, procured the reversion of his office. Clarendon.

Michael's sword staid not ;

But with swift wheel reverse, deep ent'ring shared Satan's right side. Milton.

Our guard upon the royal side ; On the reverse our beauty's pride. Waller.

A pyramid reversed may stand upon his point, if balanced by admirable skill. Temple's Miscellanies. The strange reverse of fate you see ;

I pitied you, now you may pity me. Dryden. So many candidates there stand for wit,

A place at court is scarce so hard to get ;

In vain they crowd each other at the door ;

For ev'n reversions are all begg'd before. Id.

Those seem to do best, who, taking useful hints from facts, carry them in their minds to be judged of, by what they shall find in history to

confirm or reverse these imperfect observations. Locke.

Though grace may have reversed the condemning sentence, and sealed the sinner's pardon before God, yet it may have left no transcript of that pardon in the sinner's breast. South.

Count Tariff appeared the reverse of Goodman Fact. Addison.

Several reverses are owned to be the representations of antique figures. Id. on Ancient Medals.

With what tyranny custom governs men ! it makes that reputable in one age, which was a vice in another, and reverses even the distinctions of good and evil. Rogers.

There are multitudes of reversionary patents and reversionary promises of preferments. Arbuthiwt.

These now controul a wretched people's fate ; These can divide, and these reverse the state. Pope.

Fame's a reversion in which men take place, O late reversion! at their own decease. Young.

By a strange reverse of things, Justinian's law, which for many ages was neglected, docs now obtain, and the Theodocian code is in a manner antiquated .

Baker.

Whoever feels pain in hearing a good character of his neighbour will feel a pleasure in the reverse. And those who despair to rise in distinction by their virtues are happy if others can be depressed to a le-vel with themselves. Franklin.

REVERSAL OF JUDGMENT, in law. A judgment may be falsified, reversed, or voided, in the first place, without a writ of error, for matters foreign to or dehors the record, that is, not apparent upon the face of it; so that they cannot be assigned for error in the superior court, which can only judge from what appears in the record it-self; and therefore, if the whole record be not certified, or not truly certified, by the inferior

court, the party injured thereby in both civil and criminal cases may allege a diminution of the record, and cause it to be rectified. 2dly, A judgment may be reversed by writ of error, which lies from all inferior criminal jurisdictions to the court of king's bench, and from the king's bench to the house of peers, and may be brought for notorious mistakes in the judgment or other parts 'of the record. The effect of falsifying or reversing an outlawry is, that the party shall be in the same plight as if he had appeared upon the capias : and, if it be before pleaded, he shall be put to plead to the indictment ; if, after conviction, he shall receive the sentence of the law ; for all the other proceedings, except only the process of outlawry for his non-appearance, re-main good and effectual as before. But, when judgment pronounced upon conviction is falsified or reversed, all former proceedings are absolutely set aside, and the party stands as if he had never been at all accused, restored in his credit, his capacity, his blood, and his estates ; with regard to which last, though they be granted iway by the crown, yet the owner may enter upon the grantee, with as little ceremony as he might enter upon a disseisor. But he still remains liable to another prosecution for the same offence : for, the first being erroneous, he never was in jeopardy thereby.

REVERSION, in the law of England, has two significations: the one of which is an estate left, which continues during a particular estate in being ; and the other is the returning of the land, &c., after the particular estate is ended ; and it is further said to be an interest in lands, when the possession of it fails, or where the estate which was for a time parted with returns to the granters, or their heirs. But, according to the usual definition of a reversion, it is the residue of an estate left in the granter, after a particular estate granted away ceases, continuing in the granter of such an estate. The difference between a

remainder and a reversion consists in this, that the remainder may belong to any man except the granter; whereas the reversion returns to him who conveyed the lands, &c.

REVERT', v. a., v. n., & n. s. Lat. reterto. To change ; turn to the contrary ; reverberate ; return ; fall back : as a musical term, recurrence ; revertible ; returnable.

My arrows,

Too slightly timbered for so loud a wind,

Would have reverted to my bow again.

Sfukspeare.

If his tenant and patentee should dispose of his ˆift, without his kingly assent, the lands shall revert to the kiug. Bacon.

Hath not musick her figures the same with rheto-nck ? what is a revert but her antistrophe?

Peacha.ii on Mu irk.

Wretched her subjects, gloomy sits the queen, Till happy chance revert the cruel scene ; And apish folly, with her wild resort Of wit and jest, disturbs the solemn court. Prior. The stream boils

Around the stone, or from the hollowed bank

Reverted plays in undulating flow. Thomson.

HEVERIE', or) French reverie. Loose REVERY', n. s. J' musing; irregular thought.

Rewry is when ideas float in our mind, without any reflection or regard of the understanding.

Locke*

If the minds of men were laid open, we should see but little difference between that of the wise man and that of the fool ; there are infinite reveries and numberless extravagancies pass through both.

Addison.

I am really so far gone as to take pleasure in reveries of this kind. Pope.

REVEST', v. a. Fr. revestir. revetir ; Lat-revestio. To clothe again.

Her nathless,

The' enchanter finding fit for his intents, Did thus revest, and deckt with due habiliments.

Spenser.

The effectual power of words the Pythagoreans extolled ; the impious Jews ascribed all miracles to a name, which was engraved in the revestiary of the temple. Camdent Remains.

When thou of life renewest the seeds, The withered fields revest their chearful weeds.

Wotton.

REVICTION, n. s. Lat. revictum. Return to life.

If the Rabines' prophecy succeed, we shall conclude the days of the phenix, not in its own, but in the last and general flames, without all hope of re-viclion. Browne.

REVICT'UAL, v. a. Re and victual. To stock anew with victuals.

It hath been objected, that I put into Ireland, and spent much time there, taking care to revictual myself, and none of the rest. Raleigh's Apology.

REVIEW, v. a. & n. s. \ Re and view. To REVIEWER, n. s. $ look back; see or

consider again; retrace; in modern literature to give a public character of a book after having examined it more or less : the noun substantive corresponding.

I shall review Sicilia ; for whose sight I have a woman's longing. Shakspeare.

So swift he flies, that his reviewing eye Has lost the chasers, and his ears the cry.

Denham.

He with great indifference considered his reviews and subsequent editions. Fell.

Segrais says, that the /Eneis is an imperfect work, and that death prevented the divine poet from reviewing it ; and, for that reason he had condemned it to the fire. Dryden.

We make a general review of the whole work, and a general review of nature ; that, by comparing them, their full correspondency may appear.

Burnet'i Theory oj the f.arth.

The works of nature will bear a thousand views and reviews ; the more narrowly we look into them, the more occasion we shall have to admire.

Atterburu's Sermons.

Shall I the long laborious scene review, And open all the wounds of Greece anew. l\>pe.

I did not suspect, till the reviewers told me so, that you are made up of artifice and design, and that your ambition is to delude your hearers.

Cowper's Private Correspondence.

REVIEW, in military affairs, is the drawing out all or part of the army in line of battle, to be viewed by the kincr, or a general, that they may know the condition of the troops.

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REVIEW, COMMISSION OF, is a commission sometimes granted in

extraordinary cases, to re-vise the sentence of the court of delegates, when it is apprehended they have been led into a material error. This commission the king may grant, although the statutes 24 and 25, Henry VIII., declare the sentence of the delegates definitive : Because the pope, as supreme head by the canon law, used to grant such commission of review ; and such authority as the pope heretofore exerted is now annexed to the crown, by statutes 26 Henry VIII. c. 1, and Eliz. c. 1. But it is not matter of right, which the subject may demand ex debito justitiae ; but merely a matter of favor, and which therefore is often denied.

REVILE', v. a. & n. s.) Re and vile. To

REVI'LER, > reproach ; vilify : the

REVI'LINGLY, adv. . j reproach given: the other noun substantive and the adverb corresponding.

Fear not the reproach of men, neither be afraid of their revilings. Isaiah li. 7.

Asked for their pass by every squib,

That list at will them to revile or snib. Spenser.

I read in 's looks

Matter against me ; and his eye reviled Me as his abject object. Shakspeare. Henry VIII.

I heard thee in the garden, and of thy voice Afraid, being naked, hid myself, ??? to whom The gracious Judge, without revile, replied. Milton.

The bitterest rentiers are often half-witted people. Government of the Tongue.

She still beareth him an invincible hatred, revileth him to his face, and raileth at him in all companies.

Swift.

REVILLA GIGEDO, a large island on the coast of north-west America, first circumnavigated by Vancouver, and so called in honor of Conde de Revilla Gigedo, viceroy of New Spain. It is about fifty miles in length, and twenty-five in breadth. Here Vancouver was, before he

was aware, surrounded by the natives in their canoes, and in imminent danger of being murdered. After various fruitless efforts to conciliate the inhabitants, he at length gave the order to fire, when they all immediately fled, but two British sailors were badly wounded with spears. Long. 228►► 27’ to 229►► 15’ E., lat. 55►► 6’ to 55►► 55’ N.

REVILLA GIGEDO, CANAL DE, a channel on the north-west coast of North America, so called by Vancouver, and formed by the island of Revilla Gigedo on the west, and by the continental shore of North America and the island of Gravina on the east.

REVISE’, v. a. Scn.s.ˆ Lat. revisus. To

REVI’SAL, n.s. > review; overlook: a

REVI’SION.) review or reexamination : this is also the general sense of revisal : revision is the act of revising.

His sending them sheet by sheet when printed, and surveying the revises. Fell.

The revisal of these letters has been a kind of examination of conscience to me ; so fairly and faithfully have I set down in them the undisguised state of the mind. Pope.

Lintot, dull rogue ! will think your price too

much : ‘ Not, Sir, if you revise it, and retouch.’ Id*

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To return to life, vi-gor, or activity ; to renew ; to quicken ;

REVIS’IT, v. a. Fr. revisiter; Lat. cvit* revisilo. To visit again.

Thee I revisit safe,

And feel thy sovereign vital lamp ; but thou Revisitest not these eyes, that rowl in vain, To find thy piercing ray, and find no dawn.

Milton.

Let the pale sire revisit Thebes, and bear These pleasing orders to the tyrant's ear. Pope.

REVIVE', v. n. &cv. a. "\ Fr. revivre ; Lat.

REVI'VER, n. s. j revivo, re and vivijicn

REVIV'IFICATE, v. a.

REVIVIFICA'TION, n.s.

REVIVIS'CENCY.

rouse : to revivificate is to call to life : revivification, the act of doing so : reviviscency, renewal of life.

The Lord heard Elijah, and the soul of the child came unto him again, and he revived.

1 Kingt xvii. 22.

God lighten our eyes, and give us a little reviviny in our bondage. Ezra ix. 8.

Noise of arms, or view of martial guise, Might not revive desire of knightly exercise.

Spenser.

I should revive the soldiers' hearts ; Because I ever found them as myself. Shakspeure. So he dies ;

But soon revives : death over him no power

Shall long usurp. Milton.

I revive At this last sight, assured that man shall live. Id.

What first ./Eneas in this place beheld Revived his courage, and his fear expelled. Dry-ien.

The memory is the power to revive again in our minds those ideas which after imprinting have been laid aside out of sight. Locke.

As long as an infant is in the womb of its parent, so long are these

medicines of revivification in preparing. Spectator.

Scripture makes mention of a restitution and reviviscency of all things at the end of the world.

Burnet.

He’ll use ine as he does my betters, Publish my life, my will, tny letters, Revive the libels born to die, Which Pope must bear as well as I.

REUNITE , v. a. 3 Re and unite.

REU’NION, n. s. i again ; make one a second time ; join what is divided : the noun substantive corresponding.

By this match the line of Charles the Great Was reunited to the crown of France. Stiakspeare.

She, that should all parts to reunion bow, She that had all magnetick force alone, To draw and fasten sundry parts in one. Donne.

REVOKE’, v. a. -v Fr. revolver ; Span

REVO’CAELE, adj. I and Port, revocar

REVO’CABLENESS, n. s. >Lat. revoco. To re—

REVOCA’TION,

REVOKE’MENT.

revocable is that which may be recalled or repealed : the noun substantive corresponding : revocation, the act of recalling, or state of being recalled ; repeal : revokement (disused) is its synonyme.

What reason is there, but that those grants and privileges should be revoked, or reduced to the first intention 1 Spenser.

She strove their sudden rages to revoke,

That at the last suppressing fury mad,

They ‘gau abstain. ’”

When we abrogate a law as being ill made, lie

Sieift. To join

peal ;

1 pi ass ;

reverse ; re-draw back :

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whole cause for which it was made still remaining, do we not herein revoke our very own deed, and upbraid ourselves with folly, yea all that were makers of it with oversight and error 1 Hooker.

One, that saw the people bent for the revocation of Calvin, gave him notice of their affection. Id.

Let it be noised,

That through our intercession, this revokement And pardon conies. Shakspeare. Henry VIII. Howsoever you shew bitterness, do not act any thing that is not revocable. Bacon's Essays.

Seas are troubled, when they do revoke Their flowing waves into themselves again. Davies.

A law may cease to be in force, without an express revocation of the lawgiver. White.

His successor, by order, nullifies Many his patents, and did revocate And reassume his liberalities. Daniel's Civil War.

Elaiana's king commanded Chenandra to tell him that he had received advice of his revocation.

Hovel's Vocal Forest. Without my Aurengzebe I cannot live ; Revoke his doom, or else my sentence give.

Dryden .

If a grievance be inflicted on a person, he may appeal; it is not necessary to pray a revocation of such a grievance. Aylijfe.

REVOLT, v. n. > Fr. revolter ; Ital. revol-REVOL'TER, n. s. > tare ; of Lat. re and voluto. To fall off from one to another ; change : a desertion ; rebellion : Shakspeare uses it for revolter.

This people hath a revolting and a rebellious heart ; they are revolted and gone. Jeremiah v. 53. All will revolt from me, and turn to him.

Shakspeare.

You are already love's firm votary, And cannot soon revolt and change your mind. Id.

You ingrate revolts,

You bloody Neros, ripping up the womb Of your dear mother England. Id.

Our daughter hath made a gross revolt. Id. He was greatly strengthened, and the enemy as much enfeebled by daily revolts. Raleigh.

Thou single hast maintained Against revolted multitudes the cause of truth.

Milton.

Fair honour that thou dost thy God, in trusting He will accept thee to defend his cause, A murderer, a revolter, and a robber. Id.

If all our levies are made in Scotland or Ireland, may not those two parts of the monarchy be too powerful for the rest, in case of a revolt ?

Addison’s State of the War.

He was not a revolter from the truth which he had once embraced. Atterbury’s Sermons.

Those who are negligent or revolters shall perish.

Swift.

REVOLVE’, v. n. & v. a.) Lat. revolvo. REVOLU’TION, n. s. } To roll in a circle ;

fall back ; roll any thing round ; consider ; meditate on : revolution is the act of revolving ; course of, or space measured by, that which revolves ; rotation ; backward motion ; change in the government of a country. Used among us particularly for the change produced by the admission of king William and queen Mary.

You may revolve what tales I told you Of courts, of princes, of the tricks of war.

Shakspeare.

Then in the east her turn she shines, Revolved on heaven’s great axis. Hilton.

On their orbs impose Such restless revolution, day by day Repeated. Id. Paradise Lost.

Fear

Comes thund’ring back with dreadful revolution On my defenceless head. Milton.

Meteors have no more time allowed them for their mounting, than the short revolution of a day.

Dryden.

The late revolution, justified by its necessity, and the good it had produced, will be a lasting answer.

Davenant.

On the desertion of an appeal, the jurisdiction does ipso jure revolvt to

the judge a quo.

Ayliffe's Parergon.

The Persian wept over his army, that within the revolution of a single age, not a man would be left alive. Wake.

They do not revolve about any common centre.

Cheyne.

Each revolving year, The teeming ewes a triple offspring bear. Pope.

If the earth revolve thus, each house near the equator must move a thousand miles an hour.

Watts'* Improvement of the Mind . They will be taught the diurnal revolution of the heavens. Watts.

Winds of the north '. restrain your icy gales, Nor chill the bosom of these happy vales ! Hence in dark heaps, ye gathering clouds, revive ! Disperse, ye lightnings ! and ye mists dissolve !

Darwin.

REVOM'IT, v. a. Fr. revomir. Re and vo-mit. To vomit again.

They might cast it up, and take more, vomiting and revomiiing what they drink. Hakewill.

REUS, a considerable town of Catalonia, Spain, situated in a fertile plain, six miles from the sea. The harbour is near a village called Salon, and is joined to the town by a canal. It is one of the two towns of Spain that have risen into importance in modern times. Manufactures of silk, cottons, leather, hats, brandy and liquors, have been progressively established ; and the population now exceeds 20,000. Eight miles west from Tarragona.

REUSS, a principality of Upper Saxony, divided into two parts, of which the one adjoins Prussia, the other Bavaria. The area of the whole is about 600 square miles ; general hilly, and better adapted for pasture than tillage. The hills are productive of copper and lead ; also a few of iron, silver, alum, and vitriol. The more extensive manufactures are woollen and linen, the smaller cottons, leather, and hardware. The chief town is Gera. The north-east corner ol" this principality is watered by the Elster, the south-west by the Saale. The

princes of Reuss are of an old family, repeatedly divided and subdivided. At present it consists of two principal lines, the elder and younger ; the latter having an income of ––40.000 sterling, the elder of about ––13,000. They both have votes in the diet of the Germanic confederation ; and there exists a deliberative body in this petty principality under the name of states. The prevailing religion is the Lutheran. Population 85,000.

REUSS, one of the largest rivers of Switzerland, issues from the lake Luzendro, in Mount St. Gothard, and flows through the Waldstad tersee, passing by Lucerne, until it falls into the

Aar, near Bruck. It has a great number of waterfalls, and receives mountain streams in rapid succession. Below the valley of Urseren on this stream is the Devil's Bridge, consisting of a single arch, of eighty feet span, at a spot where the water has a fall of 100 feet. It abounds in fine salmon, and becomes navigable at Lucerne.

REUTLINGEN, an ancient town of Wirtemberg, Germany, on the river Echetz, nineteen miles south by east of Stutgard. After being long a free town, it was incorporated with the dominions of Wirtemberg and its population about 8000.

REVUL'SION, n. s \ Fr. revulsion; Lat.

REVUL'SIONARY, adj. S revulsus. The act of drawing the blood or humors from remote parts of the body : having the power of revulsion.

There is a way of revulsion to let blood in an adverse part. Bacon's Natural History.

His flux of blood breaking forth again with greater violence than it had done before, was not to be stopped by outward applications, nor

the revulsives of any kind. Fell.

I had heard of some strange cures of frenzies, by casual applications of fire to the lower parts, which seems reasonable enough, by the violent revulsion it may make of humours from the head. Temple.

Derivation differs from revulsion only in the measure of the distance, and the force of the medicines used : if we draw it to some very remote or contrary part, we call it revulsion ; if only to some neighbouring place, and by gentle means, we call it derivation. Wiseman of Tumours.

REWARD', v. a. & n. s. } Re and award.

REWARD'ABLE, adj. > Skinner. To give

REWARD'ER, n. s. j in return ; repay ;

recompense ; the recompense given ; used sometimes, but not frequently, for a recompense of evil : rewardable is worthy of reward : rewarder, he who bestows recompense.

Thou hast rewarded me good, whereas I have rewarded thee evil. 1 Sam. xxiv. 17.

They rewarded me evil for good. Psalm xxxv. 12.

Rewards and punishments do always presuppose something willingly done well or ill ; without which respect, though we may sometimes [receive good, yet then it is only a benefit and not a reward. Hooker.

Men's actions are judged, whether in their own nature rewardable or punishable. Id.

A liberal rewarder of his friends. Shahspeare.

God rewards those that have made use of the sin-gle talent, that lowest proportion of grace which he is pleased to give ; and the method of his rewarding is by giving them more grace. Hammond.

The action that is but indifferent, and without reward, if done only upon our own choice, is an act of religion, and rewardable by God, if done in obedience to our superiors. Taylor.

There is no more reason to reward a man for believing that four is more than three, than for being hungry or sleepy ; because these things do not proceed from choice, but from natural necessity. A man

must do so, nor can he do otherwise. Wilkins.

To judge th' unfaithful dead, but to reward His faithful, and receive them into bliss. Milton.

Men have consented to the immortality of the soul and the recompenses of another world, promising to themselves some rewards of virtue after this life.

Tillotson.

To myself 1 owe this due regard, A'ot to make love my gift, but my reward. Dryden.

As the Supreme Being is the only proper judge of our perfections, so is he the only fit rewarder of them- . Addison.

Ill judges, as well as reiuarders, have popular assemblies been, of those who best deserved from them.

Smjt.

The Supreme Being rewards the just, and punishes the unjust. Broome on the Odyssey.

REWO'RD, v.a. Re and word. To repeat in the same words.

Bring me to the test,

And I the matter will reword ; which madness Would gambol from. Shakspeare. Hamlet.

REYES, a city of the Caraccas, Colombia. The inhabitants carry on a lucrative trade in cacao, tobacco, and in neat cattle. Forty mil►►i S. S. W. from Caraccas. It is also the name of several other settlements in South America.

REYN (John de), an eminent historical and portrait painter, born at Dunkirk in 1610. He was a disciple of Vandyke, and was so attached to his master that he followed him to London, where it is thought he continued as long as he lived. In Britain he is mostly known by the name of Lang Jan. He died in 1678. The scarcity of his works is said to be occasioned by so many of them being imputed to Vandyke.

REYNEAU (Charles " Rene), a member of the French Academy, and an

eminent mathematician, born at Bressac, in Anjou, in 1650. He taught philosophy at Toulon, and became professor of mathematics at Algiers, in 1683. He published a famous work, entitled Analyses Demonstrated, in which he reduced into a body the theories of Newton, Descartes, Leibnitz, &c. He died in 1722, aged seventy-two.

REYNER (John), a learned divine, bora a Lincoln, and educated at Emanuel College, Cambridge, of which he was a fellow. He was ejected from his living for nonconformity in 1662; and died at Nottingham, where he had practised physic. His writings are chiefly theological.

REYNOLDS (Sir Joshua), an eminent English painter, born at Plympton, his father being master of the grammar school of that town. At an early age he evinced a fondness for drawing, which induced his father finally to place him at the age of seventeen with Hudson, then the first portrait painter in London. He remained with him only three years, and then upon some trifling disagreement returned into Devonshire. One of his first performances, at this period, was the picture of a boy reading by a reflected light, which was sold fifty years afterwards for thirty-five guineas. He now practised at Plymouth Dock, and, while there, obtained an introduction to the noble family of Mount Edgecumbe, and became acquainted with captain, afterwards admiral lord Keppel. That officer being about to sail in 1749, for the Mediterranean, offered to take Reynolds thither, which invitation he gladly accepted. While at Minorca he was much employed in painting portraits, by which means he increased his finances sufficiently to enable him to visit Rome, in which capital and in other parts of Italy he remained about three years. At the latter end of 1752 he returned to Lon-don, and the first specimen he then gave of hi*

improvements was the head of his pupil, Giu-seppe Marchi, painted in a Turkish dress. The picture attracted so much notice that Hudson :ame to see it, and, after examining it for some ime, he said, ‘ Reynolds, you don’t paint so well as you did when you left England.’ Notwithstanding this invidious remark, and the depraved state of public taste, Reynolds quickly rose into high reputation as a portrait painter, and the whole length of his friend, commodore Reppel, gained him great popularity. Soon after this, he added to his celebrity, by his picture of Miss Greville and her brother, as Psyche and Cupid, executed in a style which had not been seen in England since the days of Vandyck. He rapidly acquired opulence, and, being universally regarded as at the head of his profession, he kept a splendid table, which was frequented by the first company in the kingdom. In 1762 he produced his celebrated picture of Garrick between tragedy and comedy, for which the earl of Halifax paid 300 guineas. On the institution of the Royal Academy, in 1768, the presidentship was unanimously conferred on Reynolds, who, at the same time, received the honor of knighthood. Although it was no prescribed part of his duty to read lectures, yet his zeal for the advancement of the fine arts induced him to deliver annual or biennial discourses be-fore the academy on the principles and practice of painting. Of these he pronounced fifteen, from 1769 to 1790, which were published in two sets, and form a standard work. In 1 775 Sir Joshua Reynolds was chosen a member of the Imperial Academy at Florence, on which occasion he sent his portrait, drawn in his academical dress, to be placed in the gallery of painters in that city. In the summer of 1781, Sir Joshua, accompanied by a friend, made a tour in Holland and the Netherlands, chiefly with a view to examine the works of the celebrated masters of the Dutch and Flemish schools. Two years afterwards, on the suppression of some of the religious houses in the Low Countries, he again visited Flanders, where he purchased some pictures by Rubens. In 1784 he succeeded Allan Ramsay, as painter to the king, and, in the autumn of the next year, Sir Joshua ‘ again paid a visit to Flanders, to attend a sale of pictures collected from the dissolved monasteries; of which, particularly those of Rubens, he purchased many of great value. About the same time he was employed en a commission from the empress of Russia, to paint for her an historical picture, the subject of which being left to himself, he chose that of the infant Hercules strangling the serpents. In return for this piece, the empress sent him 1500 guineas, and a gold box, with her picture set in diamonds. He continued to follow his profession, of which he was enthusiastically fond, till in 1789 he lost the sight of one of his eyes. An unhappy difference soon after arose between him and the members of the Royal Academy, in consequence of which he

resigned not only his presidentship but also his place as a member. He was afterwards however induced by the mediation of the king to resume his post. He was a distinguished member of the celebrated club which-contained

the names of Johnson, Garrick, Burke, an<i others of the first rank of literary eminence, and seems to have been universally loved and respected by his associates. He was also a mem-ber of the London Antiquarian and Royal Societies, and of several other literary institutions abroad. In 1791 he partly lost the sight of his remaining eye, which exceedingly depressed him. He was not, however, a prey to lingering illness, being carried off by a disease in the liver in 1792, in his sixtieth year. He died unmarried, and was interred in St. Paul's cathedral. He formed a splendid collection of works of art, which, after his death, was sold for ––16,947 7s. 6d., and the whole of his property amounted to about ––80,000, the bulk of which he left to his niece, who married lord In-chiquin, afterwards marquis of Thomond. As a writer he obtained great credit by his Discourses, which are elegant and agreeable compositions, although sometimes vague and inconsistent. He also added notes to Dufresnoy's Art of Painting, and gave three papers on painting to the Idler. The whole of The Literary Works of Sir Joshua Reynolds were edited by Mr. Malone in 2 vols. 4to., 1797, with a Life of the Author.

REYS, POINT OF CAPE DE LOS, a conspicuous promontory on the west coast of North America, which from the north or south, at the distance of five or six leagues, appears insulated. Its highest part terminates in steep cliffs, nearly perpendicular to the sea, which oeats against them with great violence. Long. 237–– 24' E., lat. 38–– 36' N.

REZZONICO (Gaston Delia Torre), count, was born at Parma, in 1740. He made early acquisitions in literature, was admitted a mem berof the academy of Arcadi,and was appointed by the duke of Parma president of a new academy of fine arts, which he had established. He was afterwards however deprived of his places ; and he left Parma, and travelled through France, England, and other parts of Europe. He wrote several works both in prose and poetry, but the latter are most admired, and rank him among the best Italian poets. He died in Rome, in 1798. A collection of his poems was printed at Parma, in 2 vols.

RHABAR'BARATE, adj. Lat. rhabarburn Impregnated or tinctured with rhubarb.

The salt humours must be evacuated by the seu-nate, rhabarbarate and sweet manna purgers, with acids added, or the purging waters. Floyer.

RHABDOLOGY, or RABDOLOGY, in arithmetic, a name given by Napier to a method of performing some of the more difficult operations of that science by means of certain square rods. Upon these are inscribed the simple numbers ; and by shifting them, according to certain rules, these operations are performed by simply adding or subtracting the numbers as they stand upon the rods. See Napier's Rhabdologia, printed in 1617. See also the article NAPIER'S Rons.

RHAB'DOMANCY, n. s. Greek, Paj3►►oc and fiavriia. Divination by a wand.

Of peculiar rhabdomaiicy is that which is used ic mineral discoveries, with a forked hazel, common.l>

called Moses s rod, which, freely held forth, will stir and play if any mine be under it.

Browne's Vulgar Erruurt.

RHADAMANTHUS, in fabulous history, the son of Jupiter and Europa, born in Crete. He became king of Lydia, and reigned over the Cyclades, and several Greek cities of Asia, with so much justice and impartiality that the poets make him one of the three judges of hell. According to Plato, JEacus judged the Europeans ; and Rhadamanthus, who had left Crete, and fix-ed his residence in Asia, the Asiatics, among whom were also comprehended the Africans. The stern Rhadamanthus superintends in Tartarus the execution of the sentences which his brother Minos pronounces, after shaking the fa-tal urn in

which are contained the destinies of all mortals. His office is described by Virgil, ./Eneid, lib. iv : ###

‘ Gnossius haec Rhadamanthus habet durissima regna Castigatque auditque dolos, subigitque fateri, Qua; quisque apud superos, furto Istatus inani Distulit in seram commissa piacula mortem.’

RHˆETI, or RˆTI, an ancient warlike nation of Italy, in Etruria. They were driven from their country by the Gauls.

RHˆETIA, in ancient geography, a country in the north of Italy, between the Alps and the Danube. Its chief towns were Coria, Tridentum (now Trent), Belunum, and Feltria. It was divided into two parts, called Rhaetia Prima, which extended from the sources of the Rhine tc those of the Licus, a small river which runs into the Danube, and Rhaetia Secunda, or Rhaetia Vindelicia, which extended from the Licus to the Oenus, another small river towards the east. The ancient inhabitants of Rhaetia rendered themselves formidable to the Romans, by their frequent invasions ; -but were at last conquered by Drusus the brother of Tiberius, and others under the succeeding emperors. Strab. iv. Plin. iii. c. 20.

RHAMA, or RAMA, an incarnate deity of the first rank, in the Hindoo mythology. Sir William Jones believes he was the son of Cush, grandson of Ham, and the first monarch in that part of Asia ; and that he was the Dionysos of of the Greeks, whom they named Eugenes, when they represented him horned, as well as Lyaios and Eleutherios the deliverer, and Triambos, or Dithyrambos, the triumphant. ‘ Most of those titles,’ says Sir William, ‘ were adopted by the Romans.’ The festival of Rhama is held on the ninth day of the new moon of Chaitra, on which the war of Lauca is dramatically represented, concluding with an exhibition of the fire ordeal by which the victor’s wife Sita gave proof of her connubial fidelity. There are three Rharuas mentioned in the Indian mythology, who are described as youths of perfect beauty. The third Rhama is the eighth Avatar. Like all the Avatars, Rhama is painted with gemmed Ethiopian or Pai thian coronets ; with rays encircling his head ; jewels in his ears, two necklaces, one straight and one pendant on his bosom, with dropping gems ; garlands of well-disposed many-colored flowers, or collars of pearl, hanging down below his waist, &c. It is Rama Chandra, and his lovely Sita, who are the favorite subjects of heroic and amatory poetry : he is described in the Ramayana as Rama ‘of ample shoulders; brawny arms, extending to the knee; neck shell-formed ; chest circular and full, with auspicious marks; body hyacinthine ; with eyes and lips of sanguine hue ; the lord of the world ; a moiety of Vishnu himself;

the source of joy to Iksh-waku's race.' His faithful wife Sita is one of the most interesting females in Hindoo poetry. Rama is also called Raghuva, or son of Raghu. Kaka-paksha-dara, or crow-winged, is an epithet given to the Ramas, and to other warriors, from a certain mode of shaving the head, leaving the hair over the ears only, resembling crow's wings. Shyamula, or blue'-bodied, is an appellation of Rama, as well as of Krishna, and of their common prototype, Vishnu; all being represented of hyacinthine hue. It may be here remarked, that several incidents in the Sri-Bha- gavat (a history of Krishna), and in the Ramayana, told similarly of their several heroes, seem to mix or approximate, though perhaps scarcely to identify, the characters of Krishna and Ratna. Each won a wife by bending an unyielding bow, a story not very unlike that of Ulysses. Each is described as. overcoming the demon Kumbakarna, and others. Krishna descended into hell ; so did Sita, the sakti, or energy of Rama.

RHAMNUS, in ancient geography, a town of Attica, famous for a temple of Amphiaraus, and a statue of Nemesis, thence called Rhamnusia. This statue was made by Phidias, out of a block of fine Parian marble, which the Persians had brought to erect as a monument of their expected conquest of Greece. Paus. i. Plin. 36.

RHAMNUS, the buckthorn, in botany, a genus of the monogynia order and pentandria class of plants ; natural order forty-third, dumosae : CAL. tubulous, with five minute scales surrounding the stamina: COR. none: the fruit is a berry. There are thirty species ; of which the most remarkable are,

1. R. alaternus, the common alaternus, is an evergreen, a native of the south of Europe. There are several varieties, the most remarkable are the broad-leaved and the jagged-leaved alaternus, which have all been confounded with the phillyrea.

2. R. Alpinus, rough-leaved frangula, or berry-bearing alder, is also a deciduous shrub, and native of the Alps. It differs in no respect from the common sort, except that it has no thorns, and that it will grow to be rather taller, with tough, large, and doubly laciniated leaves. The smooth-leaved Alpine frangula is a variety of this species, with smooth leaves, and of a lower growth.

3. R. catharticus, or common purging-buck- thorn, growing naturally in some parts of Britain. This grows to the height of twelve or fourteen feet, with many irregular branches at the extremities. The leaves are oval-lanceolate, finely serrated on the edges, their nerves converging together. The flowers grow in clusters, one on each foot-stalk, white,

and in this species divided into four segments ; the fruit is a round black berry, containing four seeds. The juice of the berries is astrong purgative, and is made use of for making the common syrup of buckthorn kept in

the shops. The bark is emetic ; the juice of the unripe berries, with alum, dyes yellow, of the ripe ones a fine green; the hark also dyes yellow. The green color yielded by the berries, called verde vessie, is much esteemed by miniature painters. Of this species there are two varieties, *viz.* the dwarf buckthorn, a shrub of about a yard high, of a greenish color but little show; and the long-leaved dwarf buckthorn, which is a larger shrub, with leaves somewhat larger, but in other respects very similar to the dwarf buckthorn.

4. R. frangula, or berry-bearing alder, is a deciduous shrub, a native of England and most of the northern parts of Europe, and affords several varieties.

5. R. insectorius, or narrow-leaved buckthorn, is an evergreen shrub or tree, and native of Spain. It grows to ten or twelve feet and sends forth several branches from the bottom to the top. They are covered with a blackish or dark-colored bark, and each of them is terminated by a long sharp thorn. The fruit continues on the trees all winter, making a beautiful appearance among the narrow-clustered leaves at that season.

6. R. lotus, the Lybian lotus, has the leaves, prickles, flowers, and fruit, of the zizyphus; only with this difference that the fruit is here round, smaller, and more luscious, and at the same time the branches, like those of the paliurus, are neither so much jointed nor crooked. It is proper, however, to distinguish between these shrubs and a herb often mentioned by the ancients un-der the name of lotus, which,

Homer says, was the food of the horses of Achilles, and Virgil mentions as proper to increase the milk of sheep. See LOTUS.

7. R. oleoides, the olive-leaved buckthorn, is an evergreen shrub, a native of Spain, and grows to eight or ten feet. It sends forth numerous branches, each of which is terminated by a long sharp spine. The flowers are small, of a whitish green color, and are succeeded by round black berries.

8. R. paliurus, or thorn of Christ, is a deciduous shrub or .tree, a native of Palestine, Spain, Portugal, and Italy. It will grow to nearly the height of fourteen feet, and is armed with sharp thorns, two of which are at each joint, one of which is about half an inch long, straight and upright ; the other is scarcely half that length, and bent backward ; and between them is the bud for next year's shoot. June is the time of flowering, and the flowers are succeeded by a small fruit, surrounded by a membrane. ' This plant,' says Hanbury, ' is probably the sort of which the crown of thorns for our Blessed Saviour was composed. The branches are very pliant, and the spines of it are at every joint strong and sharp. It grows naturally about Jerusalem, as well as in many parts of Judea ; and the ancient pictures of our Saviour's crucifixion confirm this.'

9. R. zizyphus, or jujub, is the species in which the lac insect fonns its cells, and produces the wax called gum lac.

RHAMPHASTOS, in ornithology, the tou-can, a genus belonging to the order of pica;.

The bill is very large, and serrated outwardly. The nostrils are situated behind the base of the beak ; and in most of the species the feet are toed, with two toes forward, and two backwards. The tongue is long, narrow, and feathered on the edges. Mr. Latham enumerates fifteen different species. We can only afford room for a description of the red beaked toucan, which will serve as a type of the rest. This bird, is about the size of a jackdaw, and of a similar shape, with a large head to support its monstrous bill. This bill, from the angles of the mouth to its point, is six inches and a half in "length, and its breadth in the thickest part is a little more than two. Its thickness near the head is one inch and a quarter ; and it is a little rounded along the top of the upper chap, the under side being rounded also ; the whole of the bill extremely slight, an<J but little thicker than parchment. The upper part is of a bright yellow, except on each side, which is of a fine

scarlet color ; as is also the lower part, except at the base, which is purple. Between the head and the bill there is a black line of separation all round the base of the bill ; in the upper part of which the nostrils are placed, and almost covered with feathers ; which has occasioned some to say that the toucan has no nostrils. Round the eyes, on each side of the head, is a space of bluish skin, void of feathers ; above which the head is black, except a white spot on each side joining to the base of the up-per part of the bill. The hinder part of the neck, the back, wings, tail, belly, and thighs, are black. The under side of the head, throat, and the beginning of the breast, are white. Between the white on the breast, and the black on the belly, is a space of red feathers, in the form of a new moon, with its horns upwards. The legs, feet, and claws, are of an ash color ; and the toes stand like those of parrots, two before and two behind. It is said that this bird, though furnished with so formidable a beak, is harmless and gentle, being easily made tame so as to sit and hatch its young in houses. It feeds on vegetable?, and prefers pepper. Its bill is hollow, and very light, so that it cannot peck or strike smartly therewith. Its tongue is long, thin, and flat ; and is moved up and down, and often extended five or six inches from the bill. It is of a flesh color, and fringed on each side with very small filaments, exactly resembling a feather. It is probable that this long tongue has greater strength than the thin hollow beak that contains it. This bird builds its nest in holes of trees, which have been previously scooped out for this purpose. No bird secures its young better from injury than the toucan. It has not only birds, men, and serpents, to guard against, but a numerous tribe of monkeys. The toucan, however, scoops out its nest into the hollow of a tree, leaving only a hole large enough to go in and out at. There it sits, with its great beak, guarding the entrance ; and, if a monkey ventures a visit, the toucan skives him such a welcome that he is glad to es-cape* The toucan is only found in the warn, climates of South America, where it is in great request, ooth for the delicacy of its flesh, which is tender and nourishing, and for the beauty of i's plumagt particularly the feathers of the breast.

RHA

RHAMPSINITUS, an opulent king of' Egypt, who succeeded Proteus. He built a large stone tower at Memphis, where he deposited his riches, of which he was robbed by the artifice of the architect. ††† Herodotus.

RHAMSES, or RAMISES, a powerful king of Egypt, who, with an army of 700,000 men, conquered Ethiopia, Libya, Persia, and other eastern kingdoms. Pliny says Troy was taken in his reign. Some suppose him tlie same with Sesos-tris.

RHAPIS, in botany, a genus of the monogynia order, and hexandria class of plants ; natural order first, palmae : CAL. monophyllous ; trifid spatha: COR. monopetalous and trifid. There are two species, *viz.* ††† R. arundinacea, simple leaved rhapis, a native of Carolina ; and R. flabelliformis, or ground ratan, a native of China.

RHAPSODI, or RHAPSODISTS, in antiquity,] > ersons who travelled from place to place, singing parts of Homer's poems. They were clothed in red when they sung the Iliad, and in blue when they sung the Odyssey. They performed in the theatres, and sometimes strove for prizes in contests of poetry, singing, &c. After the two antagonists had finished their parts, the two pieces or papers they were written in were joined together again : whence the name, *viz.* from pcnrriit, suo, to sew, and wSrj, canticum, a song. But there seem to have been other rhapsodi of liigher antiquity than these, who composed heroic poems, or songs in praise of heroes and great men, and sung their own compositions from town to town, for a livelihood ; of which profession, it is said, was Homer himself. Hence some critics, instead of the former origin, derive the word rhapsodist from pa/3††w a††nv,lo sing with a laurel-rod in the hand, which, it seems, was the badge of the primitive rhapsodi. Philochorus, again, derives the word from paTrrav rag w&zc, q-d. ffwriOevai, to compose songs or poems ; as if they were the authors of the poems they sung. This opinion, to which Scaliger inclines, reduces these rhapsodi to the second kind. It is probable that these rhapsodists were all of the same class, whatever distinction some authors may imagine among them ; and that their business was to sing or re-tiearse poems, either of their own or other peo-ple's composition, as might best serve their purpose, which was gaining a pecuniary advantage by them.

RHAPSODOMANCY, an ancient kind of divination, performed by

taking a passage of a poet at hazard, and reckoning it as a prediction of what was to come to pass. There were various ways of practising this rhapsodomancy. Sometimes they wrote several papers or sentences of a poet on so many pieces of wood or paper, shook them together in an urn, and drew out one which was accounted the lot ; sometimes they cast dice on a table whereon verses were written, and that whereon the die lodged contained the prediction. A third method was by opening a book, and taking some verse at first sight. This method they particularly called the sortes Praenestinae; and afterwards made use of sortes Ifomericae, series Virgilianse, &c.

RHAPSODY, n. s. | Gr. patywlta; pawrw,

RHAP'SODIST. j to sew, and w5►►j, a song.

Any number of parts joined together, without necessary or due connexion : a writer in this un connected way.

Such a deed, as sweet religion makes A rhapsody of words. Shakspeare. Hamlet.

This confusion and rhapsody of difficulties was not to be supposed in each single sinner.

Hammond.

He that makes no reflections on what he reads only loads his mind with a rhaf&ody of tales fit for the entertainment of others. Locke.

The words slide over the ears, and vanish like a rhapsody of evening tales. Walls on the Mind.

Ask our rhapsodists, if you have nothing but the excellence and loveliness of virtue to preach, and no future rewards or punishments, how many vicious wretches will you ever reclaim 1 Wattt.

RHAYADER-GWY, or Gowv, a market-town of Radnorshire, on the river Wye. It is divided into four streets in the form of a cross, and anciently had a very considerable castle, part of the foundations of which may be still traced. In the centre of the town stands the hall, a handsome square building of stone, erected in 1768. The church is a respectable modern structure, in the form of an oblong square, with a quadrangular stone tower and turrets. At the upper end of the town, near the parsonage house, is a new-built free-school, and there is also

a meeting-house for dissenters. The town is governed by abailiff,and joins with New Radnor in sending a member to parliament. In the town is a small manufacture of coarse cloth. Market on Wednesday.

RHAZIS, or RHASES, a celebrated Arabian physician and chemist, of great learning and experience, born at Rhei, in Chorosana, in 852 Dr. Mead translated his work on the Small-Pox ; the rest of his works were printed in folio, in

1548.

RHEA, in the mythology, the daughter of Coelus and Terra, sister and wife of SATURN ; the same with CYBELE or OPS! See these articles.

RHEA AMERICANA, in ornithology, the American ostrich, is very little smaller than the com-mon one : the bill is sloped like that of a goose, being flat on the top and rounded at the end : the eyes are black, and the lids furnished with hairs : the head is rounded, and covered with downy feathers ; the neck is two feet eight inches long, and feathered ; from the tip of one wing to that of the other extended, the length is eight feet ; but from the want of continuity of the webs of the feathers, and their laxity of texture, the bird is unable to raise itself from the ground ; it is, however, capable of greatly assisting itself by their motion in running, which it does very swiftly. The legs are stout, bare of feathers above the knees, and furnished with three toes, all placed forwards, each having a straight ‘and stout claw as in the cassowary ; on the heel is a callous knob, serving as a back toe. The general color of plumage is dull gray mixed with white, inclining to the latter on the under parts; the tail is very short and not conspicuous, being entirely covered with long, loose, and floating feathers, originating from the lower part of the back

and rump, and entirely covering it ; the bill and legs are brown. Molina says the body in some is white, in others black. It is fond of flies, which it catches with great dexterity, and will also, like the common ostrich, swallow bits of iron, and any other trash offered to it. In com-mon with the ostrich of the old world, it lays a number of eggs, from forty to sixty, in the sand, each of them holding a quart ; but it differs from that bird in many particulars, especially in wanting the callosity on the sternum, and spurs on the wing. With these last the common ostrich is known to defend itself; in defect of them this one uses the feet with such address as to become at once a furious and dangerous antagonist. The female calls its young ones together with a kind of whistling note somewhat similar to that of a man : when young it is very tame, frequently following the first creature it meets with. The flesh is said to be very unpalatable. They are found in various parts of South America, from Patagonia to Guiana.

RHEEDE(N.),esq., an eminent botanist of the sixteenth century. He was governor of Malabar, and published a well known work, entitled Hor-tus Malabaricus. We have seen no memoir of him.

RHEEDIA, in botany, a genus of the monogynia order, and polyandria class of plants : COR. tetrapetalous : CAL. none : the fruit is a trisper-mous berry.

RHEGIUM, in ancient geography, a very ancient city of Italy. It was a city cf the Brutti, a colony of Chalcidians from Euboea, surnamed Julium, from a fresh supply of inhabitants sent thither by Augustus, after driving Sextus Pompeius out of Sicily (Strabo) ; and thus was in part a colony, retaining still the right of a municipium. Virgil (1. iii. v. 414) thus describes it : ###

H*c loca, vi quondam, et vasta convuka rum## (Tantum aevi longinqua valet mutare vetustas) Dissiluisse ferunt, cum protinus utraque tellus Una foret ; venit medio vi pontus, et undis Hesperium Siculo latus abscidit ; arvaque et urbes Littore diductas angusto interluit aestu.

RHEIMS, or REIMS (anciently Remi), a large city of France, in the department of the Marne. It stands in a fine plain, on the banks of the Vesle, surrounded by a chain of low hills, covered with vineyards. The space enclosed by the walls is very large, but a large part of it, particularly on the south-west side, is occupied by gardens. The form of the city is oblong, having its length from south-east to north-west,

and it is surrounded with a ditch and earthen mound, planted on both sides with double rows of trees ; the fortifications of the city were levelled in 1812. The closely built part is a regular oval, of which the square called the Place Royale may be considered the centre. The streets in general are wide and straight; in the old quarters, however, they are often winding and narrow. One of the finest leads in a straight line, across the whole width of the town, from the eastern to the western gate, passing through the centre of the royal square. The Place St. Remy, at the southern extremity of the town, though of an irregular shape, is pleasant. The houses throughout Rheims want in general height ; hence there is little that is striking in their appearance. But

. the city has six fine gates. Two of them, viz the Porte de Ceres, and the Porte de Mars, have retained their Roman names. The town is supplied with water by pipes from the Vesle. The cathedral, a vast Gothic edifice of the twelfth century, is one of the finest specimens of that kind of architecture in France. The portal is a chef d'ceuvre, except that the frontispiece is loaded with a profusion of indifferent sculptures. In this church the ceremony of anointing or consecrating the kings of France formerly took place. A second object of interest formerly was the church of-St. Nicaise, with its arch and pil-lar, said to shake on the ringing of one of the bells. In that of St. Reme was deposited the holy oil of the French kings ; brought from hea-ven, it is said, by a dove ; and preserved through the feuds of the Revolution by at least an equal miracle. The episcopal palace is a fine building; as also the Hotel de Ville. Here are traces of an amphitheatre, and the remains of a Roman triumphal arch : three hospitals ; a small university ; a royal college, and a high school. The archbishop is primate of France. Inhabitants 35,000. The manufactures are cotton, woollens, and hats. It was the birth place of Colbert.

RHEINFELS, or RHINFELS, a fortress of the Prussian grand duchy of the Lower Rhine, stands on an island in the Lower Rhine, at St. Goar, between Coblentz and Bacharach. It was besieged by the French in 1672, but without success : in 1794 'it was taken and dismantled by them. Over against it stands New Catzeneln-bogen, a very strong castle on a high rock.

RHEINGAU, or RHINGAU, a district of the duchy of Nassau, Germany, on the north bank of the Rhine. It extends from Biberach to Rudesheim, and is about twelve miles long and four broad, producing the best quality of Rhenish wioe.

RHEINTHAL, i. e. the Valley of the Rhine, a district of the canton of St. Gall, Switzerland, lying along the Rhine, from the lake of Constance to the lordship of Sax. It is about sixteen miles long and four broad, having in the immediate neighbourhood of the Rhine a gravelly soil, and the population thin ; but at a greater distance flax, vines, fruit, and maize, are all raised with success. The chief employment consists in spinning and weaving cotton and flax. The majority are Calvinists, but there are a good many Catholics, and both sects in many places use the same church. The chief town is Rheineck. Inhabitants 15,000. This is also the name of a small track in Baden, extending along the right bank of the Rhine, near Rheinfelden.

RHENANUS (Beatus), a learned German, born at Sckelestat in 1485, whence he removed to Basil, where he corrected the press with Frobenius, and contracted a friendship with Erasmus. He wrote The Life of Erasmus : Notes upon Tertullian, and other classics ; but his chief work rs his Res Germanise, in 2 vols. folio. He died at Strasburg in 1547.

RHENE, in ancient geography, a small island in the ˆgean Sea, about 200 yards from Delos, whence it is sometimes called Delos Minor. Jt is about eighteen miles in circumference. ††† Thucyd. 3. Strabo x.

IIHENI'S, inancient geography, the Rhine, a large river of Germany, celebrated in ancient history. It rises among the Alpes Lepontis, or Orisons; and, first traversing the Lacus Acro-nius, divides the Rhaeti and Vindelicii from the llelvetii, and then the Germani from the Gauls and Belgae ; and running from south to north for the greater part of its way, and at length bending its course west, it empties itself by three mouths into the German Ocean, *viz.* the western, or Helias ; the northern, or Fleuvus; and the middle between both these, which retains the original name, Rhenus (Pliny and Ptolemy). Mela and

Tacitus mention two channels, and as many mouths, the right and left ; the former running by Germany, and the latter by Gallia Bel-gica: and thus also Asinius Pollio, and Virgil ; the trench of Drusus not being made in their time, whereby the middle channel was much drained and reduced, and therefore overlooked by Tacitus and Mela. See RHINE.

RHESE (John David), M.D., was born in the isle of Anglesea, in 1534, and elected fellow of Christ Church College, Oxford, in 1555. He took his degree at Sienna, and was so complete a master of the Italian language as to be appointed moderator of the school at Pistoia, in Tuscany. He died at Brecknock about 1609.

RHESUS, in fabulous history, king of Thrace, son of the Strymon by the Muse Terpsichore, or, according to some, of Eioneus and Euterpe. After many warlike exploits in Europe, he went to assist Priam, king of Troy, against the Greeks. The Trojans were anxious for his arrival, as an oracle had declared that Troy should never be taken if the horses of Rhesus drank the waters of the Zanthus, and ate the grass of Troy. Dio-medes and Ulyssus were therefore sent to intercept Rhesus : they entered his camp in the night, killed him, and carried off his horses. ††† Homer.

RHETICUS (George), a learned German astronomer, born at Feldkirk, in the Tyrolese, in 1514. He became professor at Wirtemberg, but left his chair to improve himself under Co-pernicus ; after which he resumed his chair. He went to Poland, and afterwards to Cassaria, in Hungary, where he died in 1576.

RHETORES, amongst the Athenians, were ten orators elected by lot to plead public causes. The orators at Rome were not unlike the Athenian rhetores.

RHETORIANS, a sect of heretics in Egypt, so denominated from Rhetorius, their leader.

RHETORIC, n. s. -\ Fr. rhetorique ;

RHETOU’ICAL, adj. I Gr. pr)ropiKt).

HHETOR’ICALLY, adv. V The art of speak—

RHETOR’ICATE, v. n. I ing with ele—

RHETORI’CIAN, n. s. & adj. J gance ; the power of persuasion ; oratory. See ORATORY. Rhetorical and rhetorician, adjective, mean,

pertaining to, or befitting this art : the adverb corresponding: to rhetoricate is, to play the orator; address the passions: a rhetorician, one who teaches or practises rhetoric.

RHETORIC is the art of clothing the thoughts in the most agreeable and suitable form, to produce persuasion, to excite the feelings, to com-nnuiicate pleasure. Speech is addressed to the understanding, the will, and the taste; it treats

of the true, the beautiful, and t!;e good ; and is, therefore, didactic, critical, and pathetic or practical. These different objects are often united in the same work, which, therefore, partakes of ali the three characters above mentioned, but, at the same time, one or the other character so far prevails as to give a predominant temper to the whole. In a narrower sense, rhetoric is the art of persuasive speaking, or the art of the orator, which teaches the composition and delivery of discourses intended to move the feelings or sway the will of others. These productions of the rhetorical art are designed to be pronounced, in the presence of hearers, with appropriate gesture and declamation ; and they often, therefore, require a different style of composition and arrangement from those works which are intended for readers, or simply to be read and not oratorically declaimed, and which are embraced in the jurisdiction of rhetoric in its widest sense. The Romans distinguished three kinds of eloquence ××× the demonstrative, occupied with praise or blame, and addressed to the judgment; the deliberative, which acts upon the will and the inclinations by persuasion or dissuasion; and the judicial or forensic, which is used in defending or attacking. The Greeks divided discourses according to their contents as relating to precepts (Xoyovc), manners (××}0××/), and feelings (iraOri), and as, therefore, calculated to instruct, to please, and to move ××× a division easily reconcileable with the former. The Ro-mans had, also, a corresponding division into the genus dicendi tenue, mediocre and sublime. Another division of eloquence, founded on the subject to which it relates, is into academical, sacred (pulpit eloquence), and political. The two latter only allow of the lofty flights of eloquence. In the wider sense, as above explained, rhetoric treats of prose composition in general, whether in the form of historical works, philosophical disseriations, practical precepts, dialogues, or letters, and, therefore, includes the consideration of all the qualities of prose composition, purity of style, structure of sentences, figures of speech, &c. ; in short, of whatever relates to clearness, preciseness, elegance, and strength of expression. In the narrower sense of rhetoric, as the art of persuasive speaking, it

treats of the invention and disposition of the mat-ter. The latter includes the arrangement of the parts, which are the exordium or introduction, narration (when necessary), proposition and division, proof or refutation, and conclusion or peroration, and the elocution, which relates to the style, and requires eloquence, purity, and precision. The delivery, or pronunciation, also falls here. Aristotle, Cicero, and Quintilian are the principal writers on rhetoric among the ancients ; and the most valuable English works on this subject are, Campbell's Philosophy of Rhetoric, Blair's Lectures on Rhetoric, and the Elements of Rhetoric by Holmes.

RHEUM, n.s. { Fr. rheume ; Gr. pivpa. The RHEVM'Y, adj. S thin watery matter about the mouth, eyes, Sec. : abounding in rheum.

RHEVM, in botany, rhubarb, a genus of the monoeynia order, and enneandria class of plants; natural order twelfth, holoracex ; CAL. none :

COR. sexfid and persistent : and there is one tri-quetrous seed. There are five species, *viz.*

1 . R. Arabicum, the currant rhubarb of Mount Libanus, has a thick 'fleshy root, very broad leaves, full of granulated protuberances, and with equal foot-stalks, and upright firm stems three or four feet high, terminated by spikes of flowers, surrounded by a purple pulp.

2. R. compactum, the Tartarian rhubarb, with a large, fleshy, branched root, yellow within ; crowned by very large, heart-shaped, somewhat lobated, sharply indented, smooth leaves, and an upright large stem, five or six feet high, garnished with leaves singly, and branching above ; having all the branches terminated by nodding panicles of white flowers. This has been supposed to be the true

rhubarb ; which, however, though of superior quality to some sorts, is accounted inferior to the rheum palmatum.

3. R. palmatum, palmated-leaved true Chinese rhubarb, has a thick fleshy root, yellow within ; crowned with very large palmated leaves, being deeply divided into accumulated segments, expanded like an open hand ; upright stems, five or six feet high or more, terminated by large spikes or flowers. This is the true foreign rhubarb, the purgative quality of which is well known.

4. R. rhaponticum, common rhubarb, has a large, thick, fleshy, branching, deeply-striking root, yellowish within ; crowned by very large, roundish, heart-shaped smooth leaves, on thick, slightly furrowed foot-stalks ; and an upright strong stem, two or three feet high, adorned with leaves singly, and terminated by thick close spikes of white flowers. It grows in Thrace and Scythia,buthas been long in the English gardens. Its root affords a gentle cathartic. It is, however, of inferior quality to the Chinese. The young stalks of this plant, in spring, are cut and peeled, and used for tarts.

5. R. undulatum, the undulated, or waved-leaved Chinese rhubarb, has a thick, branchy deep-striking root, yellow within ; crowned with large, oblong, undulate, somewhat hairy leaves, having equal foot-stalks, and an upright firm step, four feet high ; garnished with leaves singly, and terminated by long loose spikes of white flowers. All these plants are perennial in root, and the leaves and stalks are annual. The roots being thick, fleshy, and generally divided, strike deep into the ground ; are of a brownish color without, and yellow within: the leaves rise in the spring, generally come up in a large head folded together, gradually expanding themselves, having thick foot-stalks ; and grow from one to two feet high, or more, in length and breadth, spread-_ng all aiound ; amidst them rise the flower stems, which are garnished at each joint by one leaf, and are of strong and expeditious growth, attaining their full height in June, when they flower; and are succeeded by large triangular seeds, ripening in August. Some plants of each sort merit culture in gardens for variety; they afford a contrast by their luxuriant foliage, spikes, and flowers : and, as medical plants, they demand culture both for private and public use. They are propagated by seeds sown in autumn, soon after they are ripe, or early in spring, in an open

bed of deep light earth. Those for medical use should be sown where they are to remain, that the roots may grow large. Scatter the seeds

thinly, either by broad-cast, or in drills one foot and a half distant. The plants will rise in spring, but not flower till the second or third year. When they are two or three inches high, thin them to eight or ten inches: those designed to stand, should be hoed out to one foot and a half or two feet distant. Keep the ground clean between them ; and in autumn, when the staHcs decay, cut them down, and dig between the rows. The roots remaining increase in size annually; and in the second or third year, will shoot up stalks, flowers, and perfect seeds. In three or four years the roots will be large ; but the oldest are preferred. Rhubarb is a mild cathartic. See MEDICINE and PHARMACY.

RHEU'MATISM, n.s. > Fr. rheumatisme ;

RHEUMAT'IC, adj. $ Lat. rheumatismus ;

Gr. pew/iartff/toc. A distemper supposed to proceed from acrid humors : partaking of rheumatism or proceeding from rheum.

The moon, the governess of floods, Pale in her anger, washes all the air, That rheumatic diseases do abound. Shakspeare.

The throtling quinsey, 'tis my star appoints, And rheumatisms I send to rack the joints. Dryden.

Rheumatism is a distemper affecting chiefly the membrana communis musculorum, which it makes rigid and unfit for motion ; and it seems to be occasioned almost by the same causes, as the mucilaginous glands in the joints are rendered stiff and grilt} in the gout. Quincij.

The blood taken away looked very sizy or rheuma ††† tic. Flayer.

RHEUMATISM. See MEDICINE, Index.

RHEXIA, in botany, a genus of the monogynia order, and octandria class of plants ; natural order seventeenth, calycanthymae : CAL. quadrifid with four petals inserted into it ; anthera declining: CAPS, quadrilocular, within the belly of the calyx. Species seven, natives of America and the West Indies.

RHIANUS, an ancient Greek historian and poet of Thrace, originally a slave ; who flourished about A. A. C. 200. He wrote an account of the war between Sparta and Messenia, which lasted twenty years ; and a history of the principal events and revolutions in Thessaly. Of this work only a few verses are extant.

RHIGAS, or RIGAS (M.), a modern Greek patriotic author, was born in 1753, at Velestini, a town of Thessaly. He studied in the colleges of his country, and was early distinguished for his acquirements. Early in life he was sent to Bucharest, and resided there till 1790, partly engaged in commercial pursuits. He first conceived the project of a secret society, in opposition to the Turks, and associated among the discontented chiefs. He now went to Vienna, where he met with a number of rich Greek merchants ; and, extending his correspondence to other parts of Europe, commenced a Greek journal, translated the Travels of Anacharsis the younger, and other French works; and composed a treatise on military tactics, and another on natural philosophy; he likewise drew up a grand chart of all Greece, in twelve divisions, noting not only the

present, but also the ancient names of all celebrated ptocus. At length he was denounced by one of Ins associates to the Austrian government as a conspirator against the state ; arrested at Trieste, and ordered to be delivered up to the Ottoman Porte : but he was, with his companions, drowned in the Danube, his conductors fearing the vengeance of Passwan Oglou. This took place in May 1798, when Rhigas was about fi ve-and-forty years of age.

RHINANTHUS,in botany, elephant's head, a genus of the angiospermia order, and didynamia class of plants ; natural order fortieth, person-ata; : CAL. quadrifid, ventricose : CAPS, bilocular, obtuse, and compressed. Species ten, natives of the Cape, the Levant, and of Egypt.

RHINE, one of the greatest rivers of Europe, and the next in rank after the Danube and the Wolga, has its source in the central and highest part of Switzerland, on the north-east of Mount St.Gothard. Striking or! to the north-east, it first receives the two rivers called by the Germans the Middle and Hither Rhine. The united waters now pass the town of Coire or Chur, be-come navigable, and hold a northern course to the lake of Constance, which they traverse. Issuing hence with a copious stream the Rhine flows to the west, and receives the Aar, the Reusa, and the Lirumat, whose waters combine all the chief

streams of West and Central Switzerland. It now continues to flow to the west, until it reaches Bale, when it takes a northern direction, and receives the Neckar and Maine on the side of Germany, and the Moselle from France. Entering the kingdom of the Netherlands, it turns suddenly to the west, and divides into two great branches, of which the southern takes the name of Waal, receives the Maese, and flows into the German Ocean by Dort, Rotterdam, and Williamstadt. The northern, or less considerable branch, divides first above, and afterwards below Arnheim ; and the name of Rhine is finally retained only by a small slow stream, which passes Utrecht and Leyden in its way to the sands near Catwyk, through which it reaches the sea. From its source to Mentz this great river is known as the Upper Rhine, and from Mentz to Holland as the Lower Rhine. Its course altogether is about 700 miles.

Its waters are of a beautiful limpid green : its stream, rapid in the early part of its course, becomes afterwards deep and tranquil. In Switzerland the scenery of its banks is often sublime ; and below Schaffhausen it forms a cascade, which, though not the highest, is in mass of waters the largest in the southern part of Europe. From Bale to Strasburg, and even to Germersheim, a number of islands appear in the river; but at Ment7. the banks of the Rhine assume a most beautiful aspect. From that city to Cologne they penetrate the finest part of Germany : castles, towns, and villages embellish every part of the prospect; hills rise from the banks, covered with vineyards to their summits ; while towers and forts, the remains of remote ages, are frequently reflected by the water.

By the Rhine the” timber of Suabia is conveyed to the Netherlands, and colonial produce transported from the coast to the interior of Germany

and Switzerland, and the passage-boats up and down afford a very commodious conveyance. The navigation is sometimes difficult, but seldom hazardous. At Cologne vessels from 100 to 150 tons burden, generally drawn by horses, ara seen ; but they use their sails when the wind is favorable. A spirited beginning has also been made on this river in steam navigation.

RHINE, THE CIRCLE OF, is a province of Ba varia, situated to the west of the river of this name, between Weissemburg on the south and Worms on the north. It consists of a tract of territory on the Upper Rhine, ceded by France in 1814, assigned by the congress of Vienna to

Austria, and made over by the latter to Bavaria. Its form approaches to a square ; the area being about 1800 square miles, intersected by branches of the Vosges mountains. The more favorable aspects exhibit vineyards, while the rugged summits are often romantically crowned with the ruins of castles. The province contains mines of quicksilver, iron, and coal, a few hardware manufactures, extensive pastures, and in the valleys wheat, oats, and barley. It is divided into four districts, of which the chief towns are Frankenthal, Landau, Kaiserslautern, and Deux Fonts. The Rhine is its eastern boundary. Of the other rivers the chief are the Queich and Lauter. Population 308,000.

The RHINE also gives name to a province of the grand duchy of Hesse, situated to the north of the Bavarian circle of the Rhine. Its area is about 1000 square miles. The valleys and small plains produce corn, flax tobacco, and vines : and the hills contain in certain parts mines of iron and salt; in others very good pasturage. The manufactures are of linen, cotton, and leather, which give rise to a brisk traffic.

RHINE, LOWER, the Prussian grand duchy of, is composed of territories taken in 1814 from France and the grand duchy of Berg, and assigned by the congress of Vienna. Justice has been since administered by the laws of France ; but the provincial administration is that of the Prussian dominions. This duchy is bounded on the north by the province of Cleves and Berg, on the east by Nassau and Hesse-Darmstadt, on the south by the French, on the west by the Dutch frontier. It lies between .6►► 0’ and 8►► 37’ of E. long., and between 49►► 20’ and 51►► 8’ N. lat., having an area of 5700 square miles, and 950,000 inhabitants, and is included in the same military division as Westphalia. It is divided into the governments of Aix-la-Chapelle, Coblentz, and Treves. The capital is Aix-la-Chapelle.

This country is hilly, and the climate has sufficient warmth for vines in particular situations ; but in the elevated tracts of the Hundsruck, the Eiffel, and Westerwald, the cold checks the growth of every thing but wood. The wine is best along the banks of the Rhine, Aar (or Ahr), and Moselle. On the whole, though it has extensive valleys, this duchy has no great extent cf fertile soil. The lower ranks subsist, in a great measure, on potatoes. The other products are hops, tobacco, flax, potash, and in the hilly districts minerals. Grazing is followed more on the east than on the west of the Rhine. The manufactures of coarse woollens, leather, and

tol>i.vco, are chiefly confined to the districts around Aix-la-Chapelle and Neuwied. On the east of the Rhine mining, and the preparing of metals, afford employment.

RHINE, CIRCLE OF THE LOWER, was one of the ten former circles of the German empire. Its figure was very irregular. The princes who chiefly had possessions here were the electors of Mentz, Treves, and Cologne, and the elector palatine. It is now divided among the states of Baden, Bavaria, Hesse-Darmstadt, Nassau, Prussia, and Hanover.

RHINE, CIRCLE OF THE UPPER, another abolished division of the German empire. It was cut in two by the circle of the Lower Rhine, and-like it was very irregular in its outline. The area of the two circles exceeded 20,000 square miles. The members of the imperial body who had possessions in the circle of the Uppecwere more numerous than those in the Lower Rhine. The western half, contiguous to Alsace, was repeatedly invaded by the French, and remained in their hands from 1794 to 1814. Since that period this circle has been divided between Bavaria, Hesse-Cassel, Hesse-Darmstadt, &c.

RHINE, LOWER (Bas Rhin), a considerable department of France, consisting of the north part of Alsace, and forming an oblong track, extending from north to south. The eastern side is formed by the Rhine, the western by the Vosges Mountains, which are nearly parallel to the course of the river. The surface, about 1900 square miles, is diversified with hills, forests, and small valleys, all pretty well cultivated. On the mountains, and in the vicinity of the Rhine, *he soil is bare and stony, and in some places marshy ; but in general it is fertile, and the average produce of corn exceeds the consumption. The products are wheat, barley, oats, flax, hemp, tobacco, madder, and rapeseed. In the mountains are mines of iron, copper, coal, and salt. The pastures are extensive, and vines are cultivated in some parts. The chief manufactures are hardware and linen. Co ton has been introduced since the close of the eighteenth century, and there are likewise fabrics of pottery, sˆlass, china-ware, paper, &c. Situated to the east of the Vosges, the natural limit of France, this department is

principally inhabited by Germans, and French is spoken only in the large towns. The Lutherans are computed at 160,000, the Calvinists at 25,000, and the rest, with the exception of the Jews, are Catholics. The department is divided into four arrondissements, *viz.* Strasburg the capital, Saverne, Bar, and Weissemburg. The treaty of Paris in 1815 curtailed it of Landau, and of a tract to the north of Weissemburg. Inhabitants 440,000.

RHINE, UPPER (Haul Rhin), another department of the north-east of France, of an oblong form, the Rhine flowing along its eastern limit, and the long cliain of trie Vosges extending on its western side. Its extent is about 1700 square miles. It contains the southern division of Al-sace, and has a stony soil on the mountains, but the plains and valleys are fertile. Its chief rivers, after the Rhine, are the 111, the Laber, the Lauch, and the Largue. It has likewise several canals, and two lakes. Corn, hemp, flax, rape-

seed, wines, and tobacco, are raised in large quantities. Cherries are so abundant that the liquor called cherry water forms a considerable export. The mineral products are iron, coal, and, to a small extent, copper, lead, and antimony. Of coal, the quantity annually produced is about 1000 tons; of iron about 5000 tons. Linen, woollen, and latterly cottons, are the manufactures ; and, on a small scale, paper, leather, and glass. The inhabitants (in number 320,000) are almost all of German descent. The Protestant part are computed at 57,000 ; the Jews at 10,000; the Baptists at 3000; Catholics at 250,000. The department is divided into the arrondissements of Colmar, Altkirch, Neufbrisach, and Befort.

RHINOC'EROS, n. s. Fr. rhinocerot ; Gr. piv and ttpac-A beast of the East, armed with a horn on his nossel.

Approach thou like the rugged Russian bear, The armed rhinocerot, or Hyrcanian tyger ; Take any shape but that, and my firm nerves Shall never tremble. Shakspeare. Macbeth.

If you draw your beast in an emblem, shew a landscape of the country natural to the beast ; as to the rhinoceros an East Indian landscape, the crocodile, an Egyptian. Penchant.

RHINOCEROS, in zoology, a genus of quadrupeds belonging to the order of belluae. The name is entirely Greek ; but Aristotle takes no notice of them, nor any other Greek writer till Strabo, nor Roman till

Pliny. It is probable they did not frequent that part of India into which Alexander had penetrated, since it was nearly 300 years after that Pompey first brought them to Europe. From this time till the days of Heliogabalus they were frequently exhibited in the Roman spectacles, and have often been transported into Europe in more modern times ; but they were long very ill represented, and very imperfectly described, till some that arrived in London in 1739 and 1741 were inspected ; by which the errors and caprices of former writers were detected. There are two species, *viz.*

1. R. bicornis, long known in Europe only by the double horns which were preserved in various cabinets. Dr. Sparman, in his voyage to the Cape of Good Hope, killed two of these animals, which he dissected and very minutely describes. The horns, he says, in the live animal are so mobile and loose, that, when it walks carelessly along, one may see them waggle about, and hear them clash and clatter against each other. In the Philosophical Transactions we have a description of the double-horned rhinoceros of Sumatra, by Mr. Bell, surgeon in the service of the East India Company at Bencoolen. It was a male ; the height at the shoulder was four feet four inches ; at the sacrum nearly the same : from the tip of the nose to the end of the tail eight feet five inches. From the appearance of its teeth and bones it was but young, and probably not near its full size. The shape was much like that of the hog. The general color was a brownish ash ; under the belly, between the legs and folds oi the skin, a dirty flesh-color. The head much resembles that of the single-horned rhinoceros; the eyes were small, of a brown color , :he membrana nictitans thick and strong : the skin sur

rounding the eyes was wrinkled ; the nostrils were wide ; the upper lip was pointed, and hanging over the under. ‘There were six molares, or grinders, on each side of the upper and lower jaw, becoming gradually larger backward, particularly in the upper; two teeth in the’front of each jaw ; the tongue was quite smooth ; the ears were small and pointed, lined and edged with short black hair, and situated like those

of the single-horned rhinoceros. The horns were black, the larger was placed immediately above the nose, pointing upwards, and was bent a little back ; it was about nine inches long. The small horn was four inches long, of a pyramidal shape, flattened a little, and placed above the eyes, rather a little more forward, standing in a line with the larger horn immediately above it. They were both firmly attached to the skull, nor was there any appearance of joint or muscles to move them. The neck was thick and short, the skin on the under side thrown into folds, and these folds again wrinkled. The body was bulky and round, and from the shoulder ran a line, or fold, as in the single-horned rhinoceros, though it was but faintly marked. There were several other folds and wrinkles on the body and legs ; and the whole gave rather the appearance of softness ; the legs were thick, short, and remarkably strong ; the feet armed with three distinct hoofs, of a blackish color, which surrounded half the foot, one in front, the others on each side. The soles of the feet were convex, of a light color, and the cuticle on them not thicker than that on the foot of a man who is used to walking ; the testicles hardly appeared externally ; the penis was bent backward and opened about eighteen inches below the anus. The whole skin of the animal is rough, and covered very thinly with short black hair. The animal had not that appearance of armor which is observed in the single-horned rhinoceros.

‘2. R. unicornis, the length of which, says Buffon, from the extremity of the muzzle to the origin of the tail, is at least twelve feet, and the circumference of the body is nearly the same. Their food in a natural state is thistles and thorny shrubs, which they prefer to the soft pasture of meadows ; but they are fond of the sugar cane, and eat grain of all kinds. ‘The rhinoceros,’ says Button, ‘at the ai;e of two years, is not taller than a young cow that has never produced. But his body is very long and very thick. His head is disproportionally large. From the ears to the horn there is a concavity, the two extremities of which, namely, the upper end of the muzzle, and the part near the ears, are considerably raised. The horn is black, smooth at the top, but full of wrinkles directed backward at the base. The nostrils are situated very low, being not above an inch from the opening of the mouth. The under lip is pretty similar to that of the ox ; but the upper lip has a greater resemblance to that of the horse, with this advantageous difference, that the rhinoceros can lengthen this lip, move it from side to side, roll it about a staff, and seize with it any object he wishes to carry to his mouth. The tongue of the young rhinoceros is soft, like that of a calf. His ryes, in figure, resemble those of the hog, but

situated lower, or nearer the nostrils, than in any other quadruped. His ears are large, thin at the extremities, and contracted at their origin by a kind of angular rugosity. The neck is very short, and surrounded with two large folds of skin. The shoulders are very thick, and at their juncture there is another fold of skin, which descends upon the fore legs. The legs are round, thick, strong, and their joint bent backwards. This joint, which, when the animal lies, is covered with a remarkable fold of the skin, appears when he stands. The tail is thin, and proportionally short. It becomes a little thicker at the extremity, which is garnished with some short, thick, hard hairs. The female exactly resembles the male in figure and grossness of body. The skin is every where covered more or less with incrustations in the form of galls or tuberosities, which are pretty small on the top of the neck and back, but become larger on the sides. The largest are on the shoulders and crupper, are still pretty large on the thighs and legs, upon which they are spread all round, and even on the feet. But between the folds the skin is penetrable, delicate, and as soft to the touch as silk, while the external part of the fold is equally hard with the rest. This tender skin between the folds is of a light flesh color; and the skin of the belly is nearly of the same color and consistence. These galls or tuberosities should not be compared, as some authors have done, to scales. They are only simple indurations of the skin, without any regularity in their figure or symmetry in their respective positions. The flexibility of the skin in the folds enables the rhinoceros to move with facility his head, neck, and members. The whole body, except at the joints, is inflexible, and resembles a coat of mail. Dr. Pardons remarks that this animal listened with a deep and long continued attention to any kind of noise ; and that, though he was sleeping or eating, he raised his head, and listened till the noise ceased. These animals never assemble or march together in troops like elephants. Being of a more solitary and savage disposition, they are more difficult to hunt and to overcome. They never attack men, however, except when they are provoked, when they are very furious and formidable ; but as they see only before them, and as they turn with great difficulty, they may be easily avoided. The skin of these animals is so extremely hard as to resist sabres, lances, javelins, and even musket balls, the only penetrable parts being the belly, the eyes, and about the ears. Hence the hunters generally attack them when they lie down to sleep. Their flesh is considered as excellent by the Indians and Africans, but especially by the Hottentots ; antl, if they were trained when young, they might be rendered domestic, in which case they would multiply more easily than .the elephant. They inhabit Bengal, Siam, Cochin-China, the isles of Java and Sumatra, Congo, Ethiopia, and the country as low as the Cape. They love shady forests,

the neighbourhood of rivers, and marshy places. They wallow in the mire like hogs, and thus give shelter in the folds of their skins to scorpions, centipedes, and other insects. Buffou and Edwards deny this ; but it is cenerally

thought to be tru►►. They bring forth only one young at a time, about which they are very solicitous. Their skin, flesh, hoofs, teeth, and even dung, are used in India medicinally. The horn, especially that of a virgin rhinoceros, is considered as an antidote against poison. This species is supposed to be oryx or Indian ass of Aristotle ; and the bos unicornis or fera mono-ceros of Pliny. Many writers also consider it as the unicorn of scripture.

RHIZOBALUS, in botany, a genus of the tetragynia order, and polyandria class of plants ; natural order twenty-third, trihilatse : CAL. monophyllous, fleshy, and downy : COR. consisting of five petals, which are round, concave, fleshy, and much larger than the calyx ; the stamina are very numerous, filiform, and longer than the corolla; the styli are four, filiform, and of the length of the stamina; the pericarp has four drupae, kidney-shaped, compressed with a fleshy substance inside, and in the middle a flat large nut containing a kidney-shaped kernel. Of this there is only one species.

R. pekia. The nuts which are sold in the shops as American nuts are flat, tuberculated, and kidney-shaped, containing a kernel of the same shape, which is sweet and agreeable.

RHIZOPHORA, the m?ngrove, or candle of the Indians, in botany, agenus of the monogynia order, and dodecandria class of plants ; natural order twelfth, holoraceae : CAL. quadripartite: COR. partite: SEED one very long, and carnous at the base. These plants are natives of the East and West Indies, and often grow forty or fifty feet high.

They grow only in water, and on the banks of rivers, where the tide flows up twice a day. They preserve the verdure of their leaves throughout the year. From the lowest branches issue long roots, which hang down to the water, and penetrate into the earth. In this position they resemble so many arcades, from five to ten feet high, which serve to support the body of the tree, and even to advance it daily into the bed of the water. The most natural way of propagating these trees is to suffer the several slender small filaments which issue from the main branches, to take root in the earth. The most common method, however, is that of laying the small lower branches in baskets of mould or earth till they have taken root. The bark is very brown, smooth, pliant when green, and generally used in the West India Islands for tanning of leather. Below this bark lies a cuticle or skin, which is lighter, thinner, and more tender. The wood is nearly of the same color as the bark ; hard, pliant, and very heavy. It is frequently used for fuel. The wood is compact ; almost incorruptible ; never splinters; is easily worked ; and, were it not for its enormous weight, would be commodiously employed in almost all kinds of works. To the roots and branches of mangroves that are immersed in the water oysters frequently attach themselves. The red mangrove grows on the sea-shore, and at the mouth of large rivers; but does not advance, like the former, into the water. It generally rises to the height of twenty or thirty feet, with crooked, knotty branches, which proceed from all parts of the trunk. The bark is slender, of a brown color, and, when

young, is smooth, and adheres very closely to the wood ; but, when old, appears quite cracked, and is easily detached from it. Under this bark is a skin as thick as parchment, red, and adhering closely to the wood, from which it cannot be detached, till the tree is felled and dry. The wood is hard, compact, heavy, of a deep red, with a very fine grain. The pith or heart of the wood being cut into small pieces, and boiled in water, imparts a very beautiful red to the liquid, which communicates the same color to wool and linen. From the fruit of this tree, which when ripe is of a violet color, and resembles some grapes in taste, is prepared an agreeable liquor, much esteemed by the inhabitants of the Carribee Islands. This species is generally called rope mangrove, from the use to which the bark is applied by the inhabitants of the West Indies. This bark, which, by reason of the great abundance of sap, is easily detached when green, from the wood, is beaten or bruised betwixt two stones, until the hard and woody part is totally separated from that which is soft and tender. This last, which is the true cortical substance, is twisted into ropes of all sizes, which are exceedingly strong, and not apt to rot in the water.

RHODANUS, a river of Gallia Narbonensis, rising in the Rhsetian Alps, and falling into the Mediterranean Sea, near Marseilles. It is now called RHONE, which see.

RHODE ISLAND, or, more properly, RHODE ISLAND AND PROVIDENCE PLANTATIONS, one of the United States of North America, is bounded north and east by Massachusetts, south by the Atlantic, and west by Connecticut. Lon;?. 71►► 6’ to 71►► 52’ W., lat. 41►► 17’ to 41►► 42’ N. ; forty-nine miles long, and twenty-nine broad ; containing 1580 square miles.

The counties, number of towns, population, and chief towns, are exhibited in the following Table :►►►

Counties.

Towns.

Popul.

Chief Towns.

Bristol . . Kent . . Newport Providence Washington

3 4 7 10 7

31

5,466 12,784 16,534 47,014 15,414

Bristol. East Greenwich. Newport. Providence. South Kingston.

97,212

The most considerable towns are Providence, Newport, Bristol, Warren, South Kingston, East Greenwich, Smithfield, and the villages of Pav.- tucket, and Pawtuxet. The harbours are Newport, Providence, Wickford, Pawtuxet, Bristol, and Warren. There are thirty-one banks in this state.

There is a college at Providence, and a large Friends' boarding school recently established at the same place. There are seven academies in the state, at Bristol, Cumberland, East Greenwich, Newport, Smithfield, South Kingston, and Wickford. Public and private schools are supported in a greater or less degree, in various places. But public schools are not supported by law in Rhode Island, as in the other New England States. The number of congregations of

she several denominations of Christians in this state is stated as follows: ••• Baptists fiuy-seven ; Friends eighteen ; Congregationalists eleven ; Episcopalians five ; Moravians one ; Jews one.

The legislature is composed of a council of twelve, including the governor and lieutenant-go- vernor, all chosen annually, and a house of representatives, consisting of seventy-two members, chosen twice a year; *viz.* on the third Wednesday in April, and on the fourth Tuesday in August. Judges and other civil officers are appointed yearly. The legislature meets at Newport twice a year, at Providence once, and once a year alternately at East Greenwich and South Kingston. This state sends two representatives to congress.

The rivers are Pawtucket, Providence, Pawtuxet, Pawcatuck, and Wood River. Narraganset Bay extends up from south to north Between the mainland on the east and west, and embosoms many pleasant and fertile islands ; among which are Rhode Island, from which the state derives its name, Canonicut, Prudence, Patience, Hope, Dyer's and Hog Islands. Block Island, off the coast in the Atlantic, is the most southerly land belonging to the state.

The face of the country is mostly level, except in the north-west part, which is hilly and rocky. The soil is generally better adapted to grazing than tillage. A large proportion of the western and north-western part of the state has a thin and lean soil ; but the islands and the country bordering on Narraganset Bay are of great fertility, and are celebrated for their fine cattle, their numerous flocks of sheep, and the abundance and excellence of their butter and cheese ; cedar, rye, barley, oats, grasses, and culinary roots and plants are in great abundance and perfection. The rivers and bays swarm with a variety of excellent fish. Iron ore is found in large quantities in several parts, and some copper ; there is also an abundance of limestone, particularly in the county of Providence.

The manufactures of Rhode Island are extensive. They consist chiefly of iron, cotton, woollen, paper, and hats. The exports consist chiefly of flax-seed, lumber, horses, cattle, beef, pork, fish, poultry, onions, butter, cheese, barley, grain, spirits, and cotton and linen goods. They amounted, in 1816, to 612,794 dollars. The climate of this state is as healthy as that of any part of America ; and it is more temperate than the climate of any of the other New England states, particularly on the islands, where the breezes from the sea have the effect not only to mitigate the heat in summer, but to moderate the cold in winter. The summers are delightful, especially on the island of Rhode Island.

RHODE ISLAND, Indian name Aqucdneck Island, from which the state takes its name, situated in Narraganset Bay. Long. 71►► 20' W., !at. 41►► 25' N. It is about fifteen miles from north to south, and three and a half wide, and is divided into three townships, Newport, Ports-

rr.outh, and Middletown. It is a noted resort for invalids from southern climates. The island \s exceedingly pleasant and healthful. Travellers, with propriety, call it the Eden of America. It suffered much by the revolutionary war. VOL. XVIII.

Some of its most ornamental country seats were destroyed ; and their fine groves, orchards, and fruit trees, wantonly cut down. The soil is of a superior quality. Between 30,000 and 40,000 sheep are fed on the island, besides neat cattle and horses. There is a valuable coal mine on the north-west part of the island.

RHODES, a celebrated island in the Archipelago, the largest and most easterly of the Cyclades, was known in ancient times by the names of Asteria, Ophiasa, jEthrea, Trinacria, Corym-bia, Poessa, Attabyria, Marcia, Oloessa, Stadia, Telchinis, Pelagia, and Rhodus. In latter ages, the name of Rhodus, or Rhodes, prevailed, from the Greek word rhodon, a rose : the island abounding very much with these flowers. It is about twenty miles distant from the coasts of Lycia and Caria, and 120 miles in compass.

Pliny and several other ancient authors assert that Rhodes was formerly covered by the sea, but gradually raised its head above the waves, and became an island. Philo ascribes this event to the decrease of the waters of the ocean. If his conjecture be not without foundation, most of the isles of the Archipelago, being lower than Rhodes, must have had a similar origin. But it is much more probable that the volcanic fires which in the fourth year of the 135th Olympiad raised Therasia and Thera, known at present by the name of Santorin, from the depths of the sea, and have in our days thrown out several small islands adjacent, also produced in some ancient era Rhodes and Delos. The first inhabitants of Rhodes, according to Diodorus Siculus, were called the Telchinae, who came originally from the island of Crete. These, by their skill in astrology, perceiving that the island was soon to be deluged, left their habitations, and made room for the Heliades, or descendants of Phobus, who took possession of the island, and excelled all other men in learning, invented navigation, &c. In after ages, however, being infested with great serpents which bred in the island, they consulted the oracle in Delos, which advised them to admit Phorbus, a Thessalian, with his followers into Rhodes. This was done, and Phorbus, hav-ing destroyed the serpents, was, after his death, honored as a demigod. Afterwards a colony of Cretans settled in the island, and, a little before the Trojan war, Tlepolemus the son of Hercules was made king of it, and governed with great justice. After

the Trojan war all the ancient inhabitants were driven out by the Dorians, who continued to bfe masters of the island for many ages.

A little before the expedition of Xerxes into Greece a republican form of government prevailed here ; during which theRhodians applied themselves to navigation, and became very powerful by sea, planting several colonies in distant countries. In the time of the Peloponnesian war the republic of Rhodes was rent into two factions, one of which favored the Athenians, and the other the Spartans ; but at length, the latter prevailing, democracy was abolished, and aristocracy introduced. About 351 B.C. we find the Rhodians oppressed by Mausolus king of Caria, and at last reduced bv Artemisia his widow. In

this emergency they applied to the Athenians ; by whose assistance they regained their liberty.

From the period above-mentioned to that of Alexander the Great the Rhodians enjoyed uninterrupted tranquillity. To him they voluntarily submitted ; and were on that account highly favored by him : but no sooner did they hear of his death than they drove out the Macedonian garrisons, and once more became a free people. About this time happened a dreadful inundation at Rhodes; which, being accompanied with riolent storms of rain, and hailstones of an extraordinary size, beat down many houses, and killed numbers of the inhabitants. As the city was built in the form of an amphitheatre, and no care had been taken to clear the pipes and conduits which conveyed the water into the sea, the lower parts were instantly laid under water. Many of the inhabitants fled to their ships. But the wall on a sudden bursting, we are told, asunder, and the water discharging itself into the sea, they were delivered from all farther danger. The Rhodians soon retrieved their losses by trade.

During the warsamongthe successors of Alexander, they observed a strict neutrality ; whereby they enriched themselves so much that

Rhodes became one of the most opulent states of the age ; insomuch that they undertook the piratic war, and, at their own charge, cleared the seas of the pirates who had for many years infested the coasts of Europe and Asia. But, as the most advantageous branches of their commerce were derived from Egypt, they were more attached to Ptolemy, than to any of the neighbouring princes. When therefore Antigonus, having engaged in a war with Ptolemy about Cyprus, demanded succors of them, they intreated him not to compel them to declare war against their ancient ally. Antigonus immediately ordered one of his admirals to sail with his fleet to Rhodes, and seize all the ships that came out of the harbour ; but the Rhodians, equipping a number of galleys, fell upon the enemy, and obliged them to retire with great loss. Hereupon Antigonus threatened to besiege their city with his whole army ; and the only terms of accommodation to which he would hearken were, that the Rhodians should declare war against Ptolemy, and admit his fleet into their harbour. The Rhodians now sent ambassadors to all their allies, and to Ptolemy in particular, imploring their assistance ; and the preparations on both sides were immense. Antigonus, being near eighty years of age, committed the management of the war to his son Demetrius, surnamed Poliorcetes, or the taker of towns, who appeared before Rhodes with 200 ships and 170 transports, having on board 40,000 men, and 1000 other vessels laden with provisions and warlike engines ; so that the whole sea between the continent and the island was covered with vessels.

Having landed his troops beyond the reach of the enemy's machines, Demetrius detached several small bodies to lay waste the country, employing the timber to fortify his camp with strong ramparts. The Rhodians, on their part, prepared for a vigorous defence. Many commanders, who had signalised themselves on other occasions, came to Rhodes to try their skill against Deme-

trius. The besieged taking an account of those who who were capable of bearing arms, fo mid that the citizens amounted to 6000, and the foreigners to 1000. Liberty was promised to all the slaves who should distinguish themselves by any glorious action, and the public engaged to pay the masters their ransom. A proclamation was likewise made, declaring, that whoever died in defence of his country should be buried at the public expense ; that his parents and children should be maintained out of the treasury ; that fortunes should be given to his daughters ; and his sons should be crowned at the great festival of Bacchus. Demetrius, having planted his engines, began to batter with incredible fury the walls on the side of the harbour; but was for eight

days successively repulsed, and the besieged set fire to some of the most powerful of his engines. He now, therefore, ordered a general assault to be made ; but this also was repulsed with great slaughter. In a similar assault, next day, he was again forced to retire, after having lost a great number of men, and some officers. Having seized and fortified an eminence, near the city, Demetrius caused several batteries to be erected, which incessantly discharged against the walls stones of 150 Ibs. weight ; so that the towers began to totter, and several breaches were open-ed : but the Rhodians, unexpectedly sallying out, drove the enemy from this post, and overturned their machines. Their enterprising foe now ordered a scalade by sea and land at the same time; the attack was commenced with great fury ; but the besieged defended themselves with the greatest intrepidity and success. After the combat had lasted many hours, with great slaughter on both sides, Demetrius retired : but soon returned with new vigor to attack the fortifications which defended the harbour. Here he caused a vast quantity of burning torches and firebrands to be thrown into the Rhodian ships ; and at the same time galled them with showers of darts, arrows, and stones. However, the Rhodians put a stop to the fire ; and having, with great expedition, manned three strong ships, drove with such violence against the vessels on which the enemy's machines were planted that they were shattered in pieces, and thrown into the sea. Excestus, the Rhodian admiral, encouraged by this success, now attacked the enemy's fleet, and sunk many vessels, but was himself taken prisoner. Demetrius on this ordered a machine of a new invention to be buil., which was thrice the height and breadth of those he had lost. But as it was entering the harbour, a dreadful storm arising, drove it against the shore, with the vessel on which it had been reared. The besieged, while the tempest was still raging, made a sally against the post of the Demetrians ; and, though repulsed several times, carried it, obliging 400 of them to lay down their arms.

After this victory Demetrius framed the famous engine called helepolis; much larger than any military engine hitherto invented. See HELEPOLIS. It was moved upon eight strong and large wheels, whose fellies were strengthened with strong iron plates. To facilitate and vary its movements, castors were placed under it, whereby it was turned in an instant to that side

which the workmen and engineers desired. From each of the four angles a large pillar of wood was carried to about the height of 100 cubits, inclining to each other ; the machine consisting of nine stories, whose dimensions gradually lessened. The first story was supported by forty-three beams, and the last by no more than nine. Three sides of the machine were plated over with iron, to prevent its being damaged by fire. In the front of each story were windows defended with shutters covered with skins stuffed with wool. This machine was moved forwards by 3000 of the strongest men of the whole army ; but the art with which it was built greatly facilitated the motion. Demetrius caused likewise to be made several testudoes or penthouses, to cover his men while they advanced to fill up the trenches and ditches, and invented a new sort of galleries, through which those that were employed at the siege might pass and repass. He employed all his seamen in levelling the ground over which the machines were to be brought up, to the space of four furlongs. The number of workmen employed amounted to 30,000.

The Rhodians, observing these formidable preparations, raised a new wall within that which ihe enemy intended to batter. To accomplish ihis, they pulled down the wall of their theatre, the neighbouring houses, and even some temples, after having solemnly vowed to build more magnificent structures in honor of the gods, if the city were preserved. At the same time they sent out nine of their best ships to seize such of the enemy's as they could meet with, and thereby distress them for want of provisions. As these were commanded by their bravest sea-of- ficers, they soon returned with an immense i ooty, and many prisoners. Among other vessels, they took a galley richly laden, on board of which they found a great variety of valuable furniture, and a royal robe, which Phila herself had wrought and sent as a present to her husband Demetrius. The Rhodians sent the furniture, the royal robe, and the accompanying letter, to Ptolemy, which highly exasperated Demetrius. The statues of Antigonus and his son Demetrius, however, were still allowed to remain in the city. Mining and countermining were now tried : and one Athenagoras, a Milesian, who had been sent to the assistance of the Rhodians by Ptolemy, promised to betray the city to the Demetrians. But this was only to ensnare them ; for Alexander, a Macedonian whom Demetrius had sent with a body of troops to take possession of a post agreed on, no sooner appeared but he was taken prisoner by the Rhodians, who were waiting for him under arms. Athenagoras was crowned by the senate with a crown of gold, and presented witli five talents of silver. Demetrius now placed all his hopes of reducing the city on his battering engines. Having therefore levelled the ground, he brought

up his helepolis, with four testudoes on each side. Two others of an extraordinary size, bearing battering rams, were likewise moved forwards by 1QOO men. Each story of the helepolis was filled with engines for discharging stones, arrows, and darts. When all things were ready his men assaulted the city o : all sides. But, in the heat of the attack, ambassadors arrived from Cnidus, soliciting Demetrius to suspend further hostilities, and giving him hopes that they should prevail upon thf Rhodians to submit to a capitulation. A mo mentary suspension of arms took place ; but, the Rhodians refusing the conditions offered, the at-tack was renewed. At this crisis a fleet which Ptolemy had freighted with 300,000 measures of corn and pulse arrived very seasonably. A few days after came in safe two other fleets : one sent by Cassander, with 100,000 bushels of barley ; the other by Lysimachus, with 400,000 bushels' of corn, and as many of barley. The Rhodiau troops now suddenly sallied out, and set fire to the enemy's batteries ; built a third wall in the form of a crescent, which took in all that part that was most exposed to the enemy ; and drew a deep trench behind the breach. They also detached a squadron of their best ships under Amyntas, who, meeting with some privateers commissioned by Demetrius, took both the ship; and the men, among .whom were Timocles, the chief of the pirates, and several officers of distinction of the fleet of Demetrius. These were soon followed by a numerous fleet of small vessels loaded with corn and provisions, sent them by Ptolemy, with 1500 men, under Antigonus, a Macedonian of great experience. While the Rhodians were thus signalizing themselves in the defence of their country, a second embassy arrived from Athens and the other cities of Greece, soliciting Demetrius to make a peace. A cessation of arms was agreed upon, but, the terms offered by Demetrius being once more rejected by the Rhodians, hostilities were renewed ; and Demetrius formed a detachment of 1500 of his best troops, under Alcimus and Mancius, two officers of experience, ordering them to enter the breach at midnight, and possess themselves of the strong posts about the theatre. To facilitate the execution of so dangerous an undertaking, he amused the enemy with false attacks by sea and land. Accordingly the detachment entered the breach, and fell upon those who defended the ditch with such vigor that, having slain the mest part of them, they advanced to the theatre, and seized on the post adjoining. The darkness of the night prevented the Rhodians from dislodging the enemy. Next day they fought like men in despair, the enemy defending their post several hours without giving ground. At length the Rhodians, breaking into the enemy's battalion, and killing both their commanders, the rest were easily put into disorder, and all to a man either killed or taken prisoners. The Rhodians also lost many of their best commanders ; and among the rest Damotetis, their chief

magistrate. Demetrius was making preparations for a new assault, when he received letters from his father, enjoining him to conclude a peace with the Rhodians upon the best terms he could obtain : at the same time ambassadors arrived from the jˆEtolian republic, soliciting the contending parties to put an end to the war. Demetrius, how ever, was preparing once more to bring forward his helepolis, when a Rhodian engineer rendered it altogether useless. He undermined the tract of ground over which it was to pass; and when it came to the place it sunk so deeply into the

2? 2

ground that it was impossible to draw it out again. This misfortune decided the enemy to make peace on the following conditions : ??? That the republic of Rhodes should be maintained in the full enjoyment of their ancient rights, privileges, aud liberties, without any foreign garrison ; that they should renew their alliance with Antigonus, and assist him in his wars against all states and princes except Egypt ; and that, for the effectual performance of the articles stipulated, they should deliver 100 hostages, such as Demetrius should make choice of. Thus was the siege raised, after it had continued a whole year: the Rhodians amply rewarded all those who had distinguished themselves in the service of their country. They also set up statues to Ptolemy, Cassander, and Lysimachus ; to all of whom they paid the highest honors, especially to the first. Demetrius at his departure presented them with the helepolis, and all the other machines which he had employed in battering the city : from the sale of which, with some additional sums of their own, they are said to have erected the famous colossus-The Rhodians after this applied themselves entirely to commerce, by which means they be-came masters of the sea, and much more opulent than any of the neighbouring nations. However, they could not avoid a war with the Byzantines, who, being obliged to pay a tribute of eighty talents to the Gauls, resolved to lay a toll on all ships that traded to the Pontic Sea. This resolution provoked the Rhodians, who first despatched

ambassadors to the Byzantines, complaining of the new tax ; but they persisted in their resolution : and the Rhodiaus declared war, engaging the king of Pergamus to assist them : the Byzantines were now so intimidated that they agreed to relinquish the toll. About this time happened the earthquake, which threw down the colossus, arsenal, and a great part of the city walls of Rhodes ; on which occasion the Rhodians sent ambassadors to all the Grecian princes and states, to whom their losses were so much exaggerated, that they obtained immense sums of money. B. C. 203 the Rhodians engaged in a war with Philip V. of Macedon.

Philip had invaded the territories of Attalus king of Pergamus ; and, because the Rhodians seemed to favor their ancient friend, sent Hera-elides, by birth a Tarentine, to set fire to their fleet ; at the same he despatched ambassadors into Crete, in order to stir up the Cretans against them. Philip at first gained an inconsiderable advantage in a naval engagement ; but the next year was defeated with the loss of 11,000 men, while the Rhodians lost but sixty men, and Attalus seventy. After this he carefully avoided coming to an engagement at sea either with Attalus or the Rhodians. The combined fleet, in the mean time, sailed towards JEgina in hopes of intercepting him : but, having failed in their purpose, they sailed to Athens, where they concluded a treaty with that people ; and, on their return, drew all the Cyclades into a confederacy against Phlip. The allies, however, wasted their time in these negociations ; and Philip, having divided his force* into two bodies, sent one, under the command of Philocles, to ravage

the Athenian territories , and, putting the other aboard his fleet, gave it orders to sail to Me-ronea, a city in the north of Thrace. He then marched towards that city himself, took it by assault, and reduced a great many others; so that the confederates would, in all probability, have had little reason to boast of their success, had not the Romans come to their assistance. In the war between the Romans and Antiochus the Great king of Syria, the Rhodians were very useful allies to the former. The best part of their fleet was indeed destroyed by a treacherous contrivance of Polyxeniades the Syrian admiral; but they soon fitted out another, and defeated a squadron commanded by the celebrated Hannibal, after which, in conjunction with the Romans, they utterly destroyed the Syrian fleet commanded by Polyxeniades ; which, together with the loss oe the battle of Magnesia, so dispirited Antiochus, that he submitted to whatever conditions the Romans pleased. For these services the Rhodians were rewarded with the provinces of Lycia and Caria; but, tyrannizing over the people in a

terrible manner, the Lycians applied to the senate for protection. This was readily granted ; but the Rhodians were so much displeased that they secretly favored Perseus in the war which broke out between him and the Roman republic. For this offence the two provinces above-mentioned were resumed ; but the Rhodians, having banished or put to death those who had favored Perseus, were again admitted into favor, and greatly honored by the senate. In the Mithridatic war their alliance with Rome brought upon them the king of Pontus with all his force; but, having lost the greatest part of his fleet before the city, he was obliged to raise the siege. In the war which Pompey made on the Cilician pirates the Rhodians assisted him with their naval force, and had a great share in his victories. In the civil war between Caesar and Pompey they also assisted the latter. After his death they sided with Caesar; which drew upon them the resentment of C. Cassius, who advanced to Rhodes with a powerful fleet. When the Rhodians sent ambassadors, promising to stand neuter, and recal the ships which they had sent to assist the triumviri, Cassius insisted upon their delivering up their fleet, and putting him in possession of their harbour. This the Rhodians refused, and began to put themselves in a condition to stand a siege ; but first sent Archelaus, who had .taught Cassius Greek, to intercede with his disciple. Archelaus could not prevail upon him to moderate his demands ; the Rhodians, therefore, hav ing created Alexander, a bold and enterprising man, their praetor, equipped a fleet of thirty-three sail, and sent it out under Mascus, an experienced naval officer, to offer Cassius battle. Both fleets fought with incredible bravery, and the victory was long doubtful ; but the Rhodians, overpowered by numbers, were at length forced to return home, two of their ships being sunk and the rest much damaged. Tins was the first time that the Rhodians were fairly overcome in a naval fight. Cassius, who had beheld it from a neighbouring hill, having refitted his fleet, which had been no less damaged than that of the Rhodians, repaired to Loryma, a stronghold of

the Rhodians on the continent. This castle he took by assault ; and hence conveyed his land forces, under Fannius and Lentulus, over into

the island. His fleet consisted of eighty ships of war and above 200 transports. The Rhodians no sooner saw it appear, but they went out again to meet the enemy. The second engagement was far more bloody than the first ; many ships were sunk, and great numbers of men killed on both sides. But victory once more declared for the Romans, who immediately blocked up the city of Rhodes both by sea and land. As the inhabitants had not had time to furnish the city with sufficient provisions for a siege, some of them fearing that, if it were taken either by assault or by famine, Cassius would put all the inhabitants to the sword, as Brutus had lately done at Xanthus, privately opened the gates, and put him in possession of the town, which he nevertheless treated as if it had been taken by assault. He commanded fifty of the chief citizens to be brought before him, and sentenced them to die; others to the number of twenty-five, who had commanded the fleet or army, because they did not appear when summoned, he proscribed, and commanded the Rhodians to deliver up to him all their ships, and whatever money they had in the public treasury. He then plundered the temples ; and is said not to have left one statue in the whole city, except that of the sun ; boasting, at his departure, that he had stripped the Rhodians of all they had. From private persons he extorted above 8000 talents.

On the death of Cassius, Marc Antony restored the Rhodians to their ancient rights and privileges, bestowing upon them the islands of Andros, Naxos, Tenos, and the city of Myndus. But these the Rhodians so oppressed with taxes that Antony, though a great friend to the republic, was obliged to divest her of the sovereignty. From this time to the reign of the emperor Claudius we find no mention made of the Rhodians. That prince, as Dion informs us, deprived them of their liberty for having crucified some Roman citizens. However, he soon restored them to their former condition. Tacitus adds, that they had been as often deprived of, or restored to, their liberty, by way of punishment or reward for their different behaviour, as they had obliged the Romans with their assistance in foreign wars, or provoked them with their seditions at home. Pliny, who wrote in the beginning of Vespasian’s reign, styles Rhodes a beautiful and free town. But Vespasian obliged it to pay a yearly tribute, and reduced the whole island to a Roman province. The pretor who governed it resided at Rhodes, as the chief city under his jurisdiction.

The island continued subject to the Romans till the reign of the emperor Andronicus) when Villaret, grand master of the knights of Jerusalem, then residing at Cyprus, finding himself much exposed to the attacks of the Saracens, resolved to exchange that island for Rhodes. Andronicus the eastern emperor possessed little more in it

than a castle : nevertheless he refused to* grant the investiture of the island to Villaret. The latter, therefore, without spending time in fruitless negociations, sailed directly for Rhodes,

where he landed his troops, j, .-ovisions, and warlike stores, in spite of the opposition made by the Saracens, who then united against the com-mon enemy. As Villaret foresaw that the capital must be taken before he could reduce the island, he instantly laid siege to it. The inhabitants defended themselves obstinately; upon which the grand master thought proper to turn the siege into a blockade ; but soon found himself so closely surrounded by the Greeks and Saracens that he could get no supply either of forage or provisions. But having at length obtained this by means of large sums borrowed of the Florentines, he came out of his trenches and attacked the Saracens, with a full resolution either to conquer or die. A bloody conflict en-sued, in which a great number of the bravest knights were killed ; but at length the Saracens gave way, and fled to their ships ; upon which the city was immediately attacked and taken. The Greeks and other Christians had their lives and liberties given them, but the Saracens were all cut to pieces. The reduction of the capital was followed by that of all the other places of inferior strength throughout the island ; and, in four years after their landing, the whole was subjugated, and the conquerors took the title of the Knights of Rhodes.

For many years those knights continued the terror of the Saracens and Turks, and sustained a severe siege from Mahomet II., who was compelled to abandon the enterprise ; but at length the Turkish sultan Solyman resolved at all events to drive them from it. He attacked the city with a fleet of 400 sail, and an army of 140,000 men. The trenches were soon brought close to the counterscarp, and a strong battery raised against the town ; which, however, did but little damage. Unfortunately for the besieged, their continual fire caused such a consumption of gunpowder that they began to feel the want of it ; the perfidious d'Amarald, whose province it had been to visit the magazines, having amused the council with a false report that there was more than sufficient to maintain the siege. Solyman therefore thought it now advisable to set his numerous pioneers at work, digging of mines, and, ashamed and exasperated at his ill success, called a general council, in which he made some stinging reflections on his vizier, for having represehted the reduction of Rhodes as a very easy enterprise. To avoid the effects of the sultan's resentment, Mustapha proposed a general assault on several sides of the town at once. This war immediately approved of, and the time appointed for

the execution of it was on the 24th. Accordingly the town was assaulted at four different parts, after having suffered a continual fire for some t> me from their artillery. But the Rhodians were no less diligent in repulsing them with their cannon and other fire arms, melted lead, boiling oil, &c. The Turks at last, alike beset by the fire of the artillery and the arms of the Rhodian knight.*, were forced to abandon the attack with a considerable loss. In these attacks there fell about 15,000 of Solyman's best troops, besides several officers of distinction. Solyman was so discouraged by his ill successes that he was on the point of raising the siege, and would have a".-

tually done so, had he not been divei ted from it by intelligence that the far greater part of the knights were either killed or wounded. This having determined him to try his fortune oncemore,the command of his forces was turned over to the bashaw Achmed, with orders to push the attack with all imaginable vigor. Achmed instantly obeyed, raised a battery of seventeen large cannon against the bastion of Italy, and quickly after made himself master of it, obliging the garrison to retire into the city. The grand master was now forced to demolish two of the churches, to prevent the enemy's seizing on them ; and, with their materials, caused some new works and entrenchments to be made. The Turks, however, gained ground every day : at length, on the 30th of November, the last assault was to be given. The bashaw Pyrrus, who commanded it, led his men directly to the entrenchments, and this attack would have proved one of the most desperate that had yet been made, had not a vehement rain intervened, which carried away all the earth which the enemy had reared to serve them as a rampart ; so that being now exposed to a continual fire they fell in such great numbers that the bashaw could no longer make them stand their ground. This last repulse threw the sultan into such a fury that none of his officers dared to come near him ; and the shame of his having now spent nearly six whole months with a numerous army before the place, and having lost such myriads of his brave troops with so little advantage, had made him quite desperate. Pyrrus at length, having given it time to cool, ventured to propose offering the town a

capitulation. This being relished by the sultan, letters were immediately despatched in his name, exhorting the city to submit, and threatening the knights with the most dreadful effects of his resentment if they persisted in their obstinacy. Other agents were employed in different places : to all of whom the grand master ordered his men to re-turn this answer, that his order never treated with infidels but with sword in hand. At last, however, he called a council of all the knights, and informed them himself of the condition of the place. These all agreed, particularly the engineer Martinengo, that it was no longer defensible, and that no other resource was left but to acfcept the sultan's offers These were in fact so advantageous that they immediately exchanged hostages ; and Achmed, the sultan's minister, who knew his master's impatience to have the affair concluded, finally agreed with them upon the following terms : 1. That the churches should not be profaned. 2. That the inhabitants should not be forced to part with their children to be made janissaries. 3. That they should enjoy the free exercise of their religion. 4. That they should be free from taxes during five years. 5. That those who had a mind to leave the island should have free leave to do so. 6. That, if the gtand master and his knights had not a sufficient number of vessels to transport themselves and their effects into Candia, the sultan should supply t'aat defect. 7. That they should have twelve days allowed them, from ihe signing of the articles, to send all their effects on board. 8. That '.hey should have the liberty of carrying away

their relics, chalices, and other sacred utensils belonging to the great church of St. John, together with all their ornaments and other effects. 9. That they should likewise carry with them all the artillery with which they were wont to arm the galleys of the order. 10. That the islands belonging to it, together with the castle of St. Peter, should be delivered up to the Turks. 11. That, for the more easy execution of these articles, the Turkish army should be removed at some miles distance from the capital. 12. That the aga of the janissaries, at the head of 4000 of his men, should be allowed to go and take possession of the place. From this time the island of Rhodes has been subject to the Turks; and, like other countries subject to that tyrannical yoke, has lost all its former importance.

Rhodes is separated from the south-west extremity of Anatolia by the channel of Rhodes, from three to four leagues wide. The north coast is low, but rises inland to a high mountain, flat at top. The soil is in general sandy, but well wat&red and tolerably fertile, producing corn, wine, oil, fruits, honey, &c. The island abounds with hares,

woodcocks, partridges, snipes, and wild ducks. The climate is mild and healthy, the winter having neither frost nor snow, and the summer heals are tempered by' the westerly sea breezes in that season.

The chief town, of the sarqe name, is situated on the north-east point of the island, and built amphitheatrically on the side of a hill ; it is surrounded by thick walls with towers, which give it an appearance of much greater strength than it possesses. The streets are narrow and crooked, and the houses mean. It has two ports ; the smallest, named Dasca, has its entrance from the east, and is covered by several rocks, leaving only a channel for one vessel at a time ; it has also jetties, but is filling up daily, and at present can only receive small merchant vessels. The second port, named Rhodes, faces the west, on which side it is sheltered, but is open to the north and north-east. It receives vessels of eighteen feet draft, and here Turkish vessels of war have been built of the pines the island affords.

The other places of any note are Lindo, on the east, at the head of a deep bay and at the foot of a high mountain, on the site of the ancient Lindus, celebrated for its temple of Minerva, of which some remains are still to be seen on the summit of the hill behind the town. On the south side of the bay is good anchorage, in eight to twelve fathoms, opposite a little village named Massary, where is shelter from the south-west winds, which often blow with violence during winter. Uxiticho is on the south-east. Cape Tranquille is the south point of the island. Off it is the isle of St. Catherine. Limonia (Teut-lussa), Karki (Chalce), Piscopia (Telos), Nisari (Nysirus), and Madona, are between Rhodes and Stancho. Nisari, the most considerable, produces wheat, cotton, and wine, and has warm springs.

In the centre of the island of Rhodes rises mount Artemira, the ancient Atabyrus, a steep and lofty summit, commanding a most extensive view, not only over the island, but over all the surrounding seas and coasts. It is, in fait, u

pinnacle of a range oi mountains, on which grow those forests of pine which supplied the ancient navies of the Rhodians, and were long sent in great quantities to the arsenal at Constantinople. They are now, however, greatly thinned. Beneath this range rises a tract of lower hills, which still produce some of that perfumed wine so much prized by the ancients. This culture might easily be greatly extended, as a great part of the hills fitted for it are at present neglected. The tract beneath, forming the greater portion of the island, slopes gradually down to the sea, and being watered by numerous streams, descending from the higher regions, is capable, under proper cultivation, of producing luxuriant crops. Rhodes, which might be the granary of the neighbouring islands, was very lately obliged to import a considerable portion of the grain which it consumes. The pacha, having assumed the monopoly of this article, found it his interest to perpetuate the poverty on which it depended. The consequence is, that a great part of the sland is almost entirely waste. ‘ In travelling over it,’ says Savary, ‘ you have the mortification of passing through several fine valleys, unadorned with either cottage or hamlet, and discovering no marks of cultivation. Wild roses hang around the foot of the rocks ; beds of flowering myrrh perfume the air; tufts of laurel roses adorn the banks of the rivulets with their gaudy flowers. The husbandman here suffers the earth to waste her strength in pouring forth a profusion of weeds and useless plants, without taking pains to direct her fertility, and to enjoy her fa-vors. Besides corn, there is a deficiency of olives for the consumption ; and the quantity of cotton raised is barely sufficient for the supply of the island. The exportation of wine, figs, and other fruit, is, however, considerable.

Savary found the capital inhabited chiefly by the Turks ; and five towns and forty-one villages inhabited by Greeks. The families in the island he states at 4700 Turks, 2500 Greeks, and 100 Jews, making in all 7300 families, which, at five persons to each family, would amount to 36,500. Mr. Turner, a more recent traveller, calculates the whole number at 20,000. The Greeks, he says, inhabit forty-two villages, containing, in the whole, 14,000 of that nation. The rest of the population, consisting entirely of Turks and Jews, reside in the capital. But see our article GREECE, vol. x. 640.

RHODIGINUS (Lucius Ccelius), a learned Venetian, born at Rovigo, in 1450. He was the instructor of the celebrated Julius Caesar Scaliger. He wrote many works, the chief of which is Antiquse Lectiones, first

printed at Basil. He died in Padua in 1525, aged seventy-five.

RHODIOLA, rose wort, in botany, a genus of the octandria order and dicecia class of plants, natural order thirteenth, succulents : MALE CAL. quadripartite : COR. tetrapetalous : FEMALE CAL. quadripartite: COR. none; nectaria four; pistils four ; and there are four polyspermous capsules. There are two species,

1. R. minor, a native of the Alps, has purplish flowers, which come out later than those of the rhodiola rosea ; it is also of a. smaller size.

2. R. rosea grows naturallv in the clefts of the

rocks and rugged mountains of Wales, Yorkshire, and Westmoreland. It has a very thick fleshy root, which, when cut or bruised, sends out an odor like roses. It has thick succulent stalks like those of orpine, about nine inches lo.-g, closely garnished with thick succulent leaves indented at the top. The stalk is terminated by a cluster of yellowish herbaceous flowers, which have an agreeable scent, but are of short continuance. Both species are easily propagated by parting their roots, and require a shady situation, and dry undunged soil. The fragrance of the second species, however, is greatly diminished by cultivation.

RHODIUM, in chemistry, a metal first discovered by Dr. Wollaston among the grains of crude platinum. The mode of obtaining it in the state of a triple salt combined with muriatic acid and soda has been given under the article PAL-LADIUM. This may be dissolved in water, and the metal precipitated by zinc in the shape of a black powder. This powder exposed to heat continues black; but with borax it acquires a white metallic lustre, though it remains infusible. Sulphur and arsenic, however, render it fusible, and may afterwards be expelled by continuing the heat. The button, however, is not malleable. Its specific gravity appears not to exceed 11.

Rhodium unites easily with every metal that has been tried, except mercury. With gold or silver it forms a very malleable alloy, not oxidised by a high degree of heat, but becoming incrusted with a black oxide when slowly cooled. One-sixth of it does not perceptibly alter the color of gold, but renders it much less fusible. Neither nitric nor nitro-muriatic acid acts on it in either of these alloys ; but if it be fused with three parts of bismuth, lead, or copper, the alloy is entirely soluble in a mixture of one part nitric acid with two parts of muriatic.

The oxide was soluble in every acid Dr. Wollaston tried. The solution

in muriatic acid did not crystallise by evaporation. Its residuum formed a rose-colored solution with alcohol. Muriate of ammonia and of soda, and nitrate of potash, occasioned no precipitate in the muriatic solution, but formed with the oxide triple salts, which were insoluble in the alcohol. Its solution in nitric acid likewise did not crystallise, but silver, copper, and other metals precipitated it. The solution of the triple salt with muriate of soda was not precipitated by muriate, carbonate, or hydrosulphuret of ammonia, by carbonate or ferroprussiate of potash, or by carbonate of soda. The caustic alkalis, however, throw down a yel-low oxide, soluble in excess of alkali ; and a solution of platina occasions in it a yellow precipitate.

The title of this product to be considered as a distinct metal was at first questioned ; but the experiments of Dr. Wollaston have since been confirmed by Descotils.

RHODIUS (John), an ancient Danish physician, born at Copenhagen in 1587. He published Notes on Scribonius Largus, and other works ; and died in Padua in 1659.

RHODODENDRON, dwarf rose-bay, in bo-tany, a genus of the monogynia order, and clecan-dria class of plants, natural order eighteenth

bicornes : CAL. quinquepartite : COR. funnel-shaped ; stamina declining ; CAPS, quinquelocular. There afe *en species ; the most remarkable are.

1. R. chamaecistus, or ciliated-leaved dwarf rose-bay, a low deciduous shrub, a native of Germany. It grows to the height of about three feet ; the branches are numerous, produced irregularly, and covered with a purplish bark. The leaves are oval, spear-shaped, small, and in the

under surface of the color of iron. The flowers are produced at the end of the branches in bunches, are of a wheel-shaped figure, pretty large, of a fine crimson color, and handsome appearance. They appear in June, and are succeeded by oval capsules containing ripe seeds in September.

2. R. chrysanthemum, a new species, discovered by professor Pallas in his tour through Siberia. In-Siberia this species is used with great success in gouty and rheumatic affections.

3. R. Dauricum, the Daurian dwarf rose-bay, is a low deciduous shrub, and native of Dauria. Its branches are numerous, and covered with a brownish bark. The flowers are wheel-shaped, large, and of a beautiful rose-color : they appear in May, and are succeeded by oval capsules full of seeds, which in England do not al-ways ripen.

4. R. ferrugineum, with smooth leaves, hairy on their under side, is a native of the Alps and Appennines. It rises with a shrubby stalk nearly three feet high, sending out many irregular branches covered with a purplish bark, and closely garnished with smooth spear-shaped en-tire leaves, whose borders are reflexed backward ; the upper side is of a light lucid green, their under side of an iron color. The flowers are produced at the ends of the branches, are funnel-shaped, cut into five segments, and of a pale rose color. These plants are propagated by seeds ; but, being natives of barren rocky soils and cold situations, they do not thrive in gardens, and for want of their usual covering of snow in the winter are often killed by frost in this country.

5. R. hirsutum, with naked hairy leaves, grows naturally on the Alps and several mountains of Italy. It is alow shrub, which seldom rises two feet high, sending out many ligneous branches, covered with a light brown bark, garnished closely with oval spear-shaped leaves, sitting pretty close to the branches. They are entire, having a great number of fine iron-colored hairs on their edges and under side. The flowers are produced in bunches at the end of the branches in May, having one funnel-shaped petal cut into five obtuse segments, and of a palered color. They make a good show, and are succeeded by oval capsules, containing ripe seeds, in August.

6. R. maximum, the American mountain laurel, is an evergreen shrub, and a native of Virginia, where it grows naturally on the highest mountains, and on the edges of cliffs, precipices, ►►< r., where it reaches the size of a moderate tree, though with us it seldom rises higher than six fpet. The flowers continue by succession sometimes more than two months, and are succeeded by oval cnpsules full of

seeds.

7. R. ponticum, the pontic dwarf rose-bay, is an evergreen shrub, a native of the east, and of most shady places near Gibraltar. It grows to the height of four or five feet. The leaves are spear-shaped, glossy on both sides, acute, a►►d placed on short foot-stalks on the branches ; the flowers, which are produced in clusters, are bell-shaped, and of a fine purple-color. They appear in July, and are succeeded by oval capsules containing seeds, which in this climate seldom attain to maturity.

RHODOMAN (Laurence), alearned German, born at Sassowerf, in Upper Saxony, in 1546. He studied at the college of Ilfield six years ; and became an eminent Greek scholar. He wrote Greek verses, which are much admired. He translated the Greek poem of Quintus Calaber into Latin. He also translated Diodorus Siculus into Latin. He became professor of history in the university of Wirtemberg ; and published several other works. He died in 1606 at Wirtemberg.

RHODOPE, a high mountain of Thrace, extending across the country, in an east direction, nearly to the Euxine Sea.

RHODOPE, in fabulous history, the wife of Ha:- mus king of Thrace; who, preferring herself to Juno in beauty, was metamorphosed into the above mountain. Ovid vi. 87, &c.

RHODOPE, a celebrated Grecian courtezan, who was fellow servant with /Esop at the court of the king of Samos. She was carried to Egypt by Xanthus, and purchased by Charaxes of Mi-tylene, the brother of Sappho, who married her. She afterwards sold her favors at such a price that she collected a sum of money, with which she built one of the pyramids. jElian says that one day, as she was bathing, an eagle carried away one of her sandals, and dropped it near king Psammetichus at Memphis, on which he made enquiry after the owner, and married her. RHODUS. See RHODES. RHOE, two of the Shetland Isles of Scotland, thus distinguished : Little Rhoe, lies near Mickle Rhoe, and contains about fourteen inhabitants, whose sole employment is fishing. Mickle Rhoe lies on the south of Mainland, and belongs to the parish of Belting. It is about twenty-four miles in circumference, and its inhabitants are chiefly employed in cultivating the fertile spots of the island, and in fishing. They also rear a number of sheep and black cattle, which have excellent pasture among the heath.

RHOECUS, in fabulous histfry : 1. One o.” the giants, killed by Bacchus in the war against the gods ; 2. A centaur, who attempted to offer violence to Atalanta : also killed by Bacchus, at the marriage of Pirithous. Ovid. Met. xii. 301. RHOMB, n.s. “) Fr. rAowifce; Lat. rhombus ; RHOM’BIC, >Gr. po/i|3oe. A quadran—

RHOM’BOID, n. s. j gular figure, formed by two equal and right cones joined together at their base : rhombic is, shaped as a rhomb : rhomboid, a figure approaching that shape.

See how in warlike muster they appear, In rhombs and wedges; and half moons and wings.

Milton.

Many other sorts of stones are regularly figured ‘ the asteria in form of a star, and they are of a rhom-liick fi-nuc. Grew

Many other sorts of stones are regularly figured ; and they are of a rhombick figure ; talk, of such as are rhomboid. Grew.

Another rhomboidal selenites, of a compressed form, had many others infixed round the middle of it.

Woodward.

RHOMBOID, in geometry, a quadrilateral figure whose opposite sides and angles are equal,

RHOMBOIDES, in anatomy, a thin, broad, and obliquely square fleshy muscle, situated be-

extensive. This department belongs to the dideˆ- cese and jurisdiction of the royal court of Lyons, and is divided into two arromlissements, Lyons' the capital, and Villefranche. Inhabitants

330,000.

RHONE, MOUTHS OF THE, Bouches du Rhone a department of France, formed of a part of Provence, and bounded by the Mediterranean and the departments of the Card, the Vaucluse, and the Var. Its superficial extent is about 2000 square miles, traversed by a branch of the

tween the basis of the scapula and the spina Alps, and for the most part an undulating plain~ dorsi, so called from Us figure. Its general use watered by the Rhone, the Durance, and other

is to draw backward and upward the subspinal portion of the basis scapulae.

RHOMBUS, in geometry, an oblique-angled parallelogram, or quadrilateral figure whose sides are equal and parallel, but the angles unequal, two of the opposite ones being obtuse and two acute.

rivers. The climate is mild, producing wine, fruit, olives, soda, sumach, and silk-worms; along the coast are made quantities of salt. The wine made, though large in quantity, is used chiefly for home consumption. The culture of the olive was formerly extensive; but the winter

[illegible] , of 1788 and 1789 destroyed a vast number of

WE, an important river of the south of trees, and reduced the produce of the department

Europe, rising in the central and highest part of to a fourth of its former amount. Silk

Switzerland, at the foot of Mount Furca, and about five miles from the source of the Rhine. It flows in a western direction through the Swiss canton of the Valais, here called the valley of the Rhone, after which, swelled by numerous mountain streams, its turbid waters mingle with those of the lake of Geneva. Issuing in a purer stream, the Rhone now flows southward, and forms the boundary between France and Savoy, until approaching Chamberry, it turns to the west and north, and, reaching Lyons, is joined by the Saone, a river of equal length of course, but of less copious stream. From Lyons the Rhone holds a south course, all the way to the Me-

ported annually to the amount of ––40,000, and wool to the value of ––30,000. The department has pasture for sheep, but little for large cattle. Butter is almost unknown; there is likewise a deficiency of wood, and of corn. It belongs to the diocese and jurisdiction of the royal court of Aix ; and is divided into the arrondissements, *viz.* Marseilles the capital, Aix, and Tarascon. Population 293,000.

RHOPIUM, in botany, a genus of the triandria order and gynandria class of plants : CAL. monophyllous and sex partite : COR. none, and no stamina; the three antherae are each attached to one of the styli : CAPS, tricoccous and sexlocular,

ditenranean, receiving a number of streams east each cell containing two seeds. Species one only,

and west : the largest of these are the Isere and Durance. After a course of nearly 500 miles, the Rhone discharges itself, by three mouths, into the gulf of Lyons. It is subterraneous for sixty paces. It is not so long as the Loire, but exceeds all other rivers in France in size. A canal connecting the Rhone and the Rhine is completed as far as Strasburg, and navigable to the distance of eighty-five leagues : the length hence to the Rhine is but trifling. The navigation down the stream takes place with great ease ; the upward can be performed only by draught or steam. It deposits so large a quantity of earth at its mouth that a light-house, built on the shore in 1737, is now three miles distant from it.

RHONE, a department of France, including the former provinces of Beaujalois and Lyonnois, and bounded by those of the Saone and Loire, the Ain, the Isere, and the Loire. It has a superficial extent of 1050 square miles, somewhat mountainous, and, owing to the vicinity of the Alps, the climate is more inclined to cold than heat. But the southern part, along the Rhone, furnishes excellent fruit, and wine, called from the exposure of many of the vineyards, cote-rotie. North-east part, along the borders of the Saone, there are extensive meadows ; and in the central part corn is produced. The inhabitants of the mountainous districts are employed in spinning and weaving of cotton. The manufactures, particularly in Lyons and its vicinity, are

viz. R. meborea, a native of Guiana. This isa shrub rising about three or four feet in height. The flowers grow in the form of a corymbus ; they are of a yellowish-green color ; the capsules are black.

RHOPOLA, in botany, a genus of the monogynia order and tetandria class of plants : CAL. none ; petals four, oblong, obtuse, and narrowing at the base ; stamina four, inserted in the corolla, and having large antherae ; unilocular, and containing one seed. There is only one species, *viz.* R. montana, a shrubby plant growing in Guiana, and remarkable for the great number of branches sent off from its trunk in every direction, and for the fetid smell of its wood and bark.

RHOTAS, an extensive district of Hindostan, province of Bahar. It is chiefly situated between the rivers Soane and Caramnassa. The southern part is hilly and covered with wood ; but the northern parts level, well watered, and fertile. The principal towns are Sassaram, Serris, Bogwanpore, and Rhotas.

RHOTAS, a fortress of Hindostan, the capital of the district of this name, province of Punjab. It is situated on the western side of the Jhylum or Hydaspes, and is said to be very strong ; it has not Been visited by any European, but was seen at a distance by Mr. Elphinstone, in the year 1809. Long. 72►► 55’ E., lat. 31►► 55’ N.

RHOTAS, or ROTASGVB, a celebrated fortress of Hindostan, in Bahar, on the top of a table

mountain. The only entrance is a very narrow road, cut through a steep ascent of two miles, and defended by three gates at a distance from each other. The edge of the mountain is surrounded by a parapet, at the back of which are collected heaps of stones, for the purpose of rolling down on the assailants. The surface is ten miles square, containing a town, and several reservoirs of Water, to irrigate the fields, were it requisite; but, as the climate is considered unhealthy, they are abandoned', and the fortifications are falling to decay.

RHOTENAMER (John), an eminent Italian painter, born in 1564. He studied after Tin-toret, and settled at Venice. His works are remarkable for brilliant coloring and high finishing.

KHOXALANi, an ancient nation who resided on the north bank of the Palus Maeotis, between Europe and Asia, on the confines of both.

RHU'BARB, n. s. Lat. rJiabarbara. A medicinal root, referred by botanists to the dock.

What rhubarb, senna, or what purgative drug Would scour these English hence 1 Shakspeare.

Having fixed the fontanel, I purged him with an infusion of rhubarb in small ale. Wiseman.

RHUBARB. See RHEUM.

RHUMB, in navigation, a vertical circle of any given place, or intersection of such a circle with the horizon ; in which last sense rhiwnb is the same with a point of the compass.

RHUMB LINE, the line which a ship describes when sailing in the same collateral point of the compass, or oblique to the meridians.

RHUNKEN, or RHUNKENIUS (David), a celebrated German critic, was born at Stolpen in Pomerania, in 1723. Intended for the clerical profession, he passed some time at the university of Konigsberg, devoting himself to classical literature; he then removed to Wittemberg, where he took the degree of LL. D., and afterwards to Leyden, where Hemsterhuis procured him the situation of a tutor, and through his advice he published an edition of the Greek Lexicon of

Timaus. He subsequently went to Paris, and in 1757 became assistant to Hemsterhuis at Ley-den : and in 1761 he succeeded Oudendorp as professor of Latin and of history. He died much regretted in 1798. His chief works are a eulo-gium on his friend Hemsterhuis ; an edition of Rutilius Lupus on Rhetoric; and of the history of Velleius Paterculus.

RHUS, sumach, in botany, a genus of the trigynia order and pentandria class of plants ; natural order forty-third, dumosae : CAL. quinquepartite ; petals five ; berry monospermous. Species thirty-five, of which the most remarkable are,

1. R. Canadensis, with winged spear-shaped leaves, grows naturally in Canada, Maryland, and several other parts of North America. It has smooth branches of a purple color, covered with a gray pounce. The leaves are composed of seven or eight pairs of lobes, terminated by an odd one ; the lobes are spear-shaped, sawed on their edges, of a lucid green on their upper surface, but hoary on their under, and are smooth. The flowers are produced at the end of the branches in large panicles, composed of

several smaller, each standing upon separate foot-stalks ; they are of a deep red color, and the whole panicle is covered with a gray powde”

2. R. Carolinianum, with winged leaves grows naturally in Carolina. This is by the gardeners called the scarlet Carolina sumach ; it rises commonly to the height of seven or eight feet, dividing into many irregular branches, which are smooth, of a purple red color, and covered over with a grayish powder, as are also the foot-stalks of the leaves. The leaves are composed of seven or eight pairs of lobes, terminated by an odd one; these are not always placed exactly opposite on the midrib, but are sometimes alternate. The upper side of the lobes is of a dark green, and their under hoary but smooth. The flowers are produced at the end of the branches in very close panicles, which are large and of a bright red color.

3. R. copallinum, the narrow leaved sumach, grows naturally in most parts of North America, where it is called beach sumach, probably from the place where it grows. This is of humble growth, seldom rising above four or five feet high in Britain, dividing into many spreading branches, which are smooth, of a light brown color, closely garnished with winged leaves, composed of four or five pairs of narrow lobes, terminated by an odd one ; they are of a light green on both sides, and in autumn change to purplish. The midrib, which

sustains the lobes, has on each side a winged or leafy border, which runs from one pair of lobes to another, ending in joints at each pair, by which it is easily distinguished from the other sorts. The flowers are produced in loose panicles at the end of the branches, of a yellowish herbaceous color. The resin called gum copal is produced from this shrub. See COPAL.

4. R. coriaria, the elm leaved sumach, grows naturally in Italy, Spain, Turkey, Syria, and Palestine. The branches are used instead of oak bark for tanning of leather ; and it is said that the Turkey leather is all tanned with this shrub. It has a ligneous stalk, which divides at bottom into many irregular branches, rising eight or ten feit ; the bark is hairy, of an herbaceous brown color; the leaves are winged, composed of seven or eight pairs of lobes, terminated by an odd one, bluntly sawed on their edges, hairy on their under side, of a yellowish green color, and placed alternately on the branches : the flowers grow in loose panicles on the end of the branches, which are of a whitish herbaceous color, each panicle being composed of several spikes of flowers sitting close to the foot-stalks. The leaves and seeds are used in medicine, and esteemed very astringent and styptic.

5. R. typhinum, Virginian sumach, or vinegar plant, grows naturally in almost every part of North America. It has a woody stem, with many irregular branches, which are generally crooked and deformed. The young branches are covered with a soft velvet-like down, resembling greatly that of a young stag's horn, both in color and texture, whence it has the appellation of stag's horn ; the leaves are winged, compose'! of six or seven pairs of oblong heart-shaped lobes, terminated by an odd one, ending in acute

points, hairy on their under side, as is also the mid rib. The flowers are produced in close tufts at the ends of the branches, and are succeeded by seeds, enclosed in purple woolly succulent covers; so that the bunches are of a beautiful purple color in autumn ; and the leaves, in autumn, change to a purplish color at first, and' before they fall to feuillemort. This plant has been long cultivated in the north of

Germany, and is lately introduced into Russia. It has obtained the name of the vinegar plant from the double reason of the young germen of its fruit, when fermented, producing either new, or add-ing to the strength of old weak vinegar, whilst its ripe berries afford an agreeable acid, which might supply the place, when necessary, of the citric acid. The powerful astringency of this plant in all its parts recommends it as useful in several of the arts. The ripe berries boiled with alum make a good dye for hats. The plant in all its parts may be used as a succedaneum for oak bark in tanning, especially for the white glove leather. It will likewise answer to prepare a dye for black, green, and yellow colors ; and with martial vitriol it makes a good ink. The milky juice that flows from incisions made in the trunk of branches, makes, when dried, the basis of a varnish little inferior to the Chinese. Bees are remarkably fond of its flowers ; and it affords more honey than any of the flowering shrubs. The natives of America use the dried leaves as tobacco.

These five species of rhus are hardy plants, and will thrive in the open air here. The second and fourth sorts are not quite so hardy as the others, so must have a better situation, otherwise their branches will be injured by severe frost in the winter. They are easily propagated by seeds, which if sown in autumn the plants will come up the following spring; but, if sown in spring, they will not come up till the next spring ; they may be either sown in pots or the full ground. If they are sown in pots, in autumn, the pots should be placed under a common frame in winter, where the seeds may be protected from hard frost ; and in spring, if the pots are plunged into a very moderate hot-bed, the plants will soon rise, and have thereby more time to get strength before winter. When the plants come up they must be gradually hardened to bear the open air, into which they should be removed as soon as the weather is favorable, placing them where they may have the morning sun ; in the summer they must be kept clean from weeds, and in dry weather watered. Toward autumn it will be proper to stint their growth by keeping them dry, that the extremity of their snoots may harden ; for, if they are replete with moisture, the early frosts in autumn will pinch them, which will cause their shoots to decay almost to the bottom if the plants are not screened from them. If the pots are put under a common frame in autumn it will secure the plants from injury ; for, while they are young, and the shoots soft, they will be in danger of suffering, if the winter prove very severe ; but in mild weather they must always enjoy the open air, therefore should never be covered but in frost. The spring following, just before the plants begin to shoot, they should be shaken out

of the pots, and carefully separated, so as not to tear the roots ; and transplanted into a nursery, in rows three feet asunder, and one foot distance in the rows. In this nursery they may stand two years to get strength, and then may be transplanted where they are to remain.

6. R. vernix, the toxicodendron, poison tree, or poison ash grows naturally in Virginia, Pennsylvania, New England, Carolina, and Japan, rising with a strong woody stalk to the height of twenty feet and upwards; though in this country it is seldom seen above twelve, the plants being extremely tender. The bark is brown, inclining to gray ; the branches are garnished with winged leaves composed of three or four pairs of lobes terminated by an odd one. The lobes vary greatly in their shape, but for the most part they are oval and spear-shaped. The foot-stalks be-come of a bright purple towards the latter part of summer, and in autumn all the leaves are of a beautiful purple before they fall off. All the species of sumach abound with an acrid milky juice, which is reckoned poisonous; but this property is most remarkable in the vernix. The most distinct account of it is to be found in professo- Kalm's Travels in North America. ' An incision,' says he, ' being made into the tree, a whitish yellow juice, which has a nauseous smell, comes out between the bark and the wood. The tree is not known for its good qualities, but greatly so for the effect of its poison ; which, though it is noxious to some people, yet does not in the least affect others. And therefore one person can handle the tree as he pleases, cut it, peel off its bark, rub it or the wood upon his hands, smell at it, spread the juice upon his skin, with no inconvenience to himself: another dares not meddle with the tree while its wood is fresh ; nor can he venture to touch a hand which has handled it, nor even to expose himself to the smoke of a fire made with this wood, without soon feeling its bad effects; for the face, the hands, and frequently the whole body, swell excessively, and are affected with a very acute pain. Sometimes bladders or blisters arise in great plenty, and make the sick person look as if infected by a leprosy. In some people the cuticle peels off in a few days, as when a person has scalded or burnt any part of his body. The leaves of this tree have been used medicinally in paralysis and herpetic affections. Dr. Fresnoi was the first who attempted its use in these diseases; and, in order that others should not suffer by his experiments, he began upon himself by taking an infusion of one of the three leaflets of which each leaf consists; and as this dose produced no sensible effect, he increased the number to twelve. His urine and perspiration were increased in quantity, and he had some pains in his belly. He relates seven cases, in which he cured herpetic disorders, and five of paralysis. The natives distinguish this tree in the dark by its extreme coldness to the touch. The juice of

some kinds of sumach, when exposed to the heat of the sun, becomes so thick and clammy that it is used for bird lime, and the inspissated juice of the poison ash is said to be the fine varnish of Japan. A cataplasm made with the fresh juice of the poison ash, ap-RIA

plied to the feet, is said to kill the vermin called by the West Indians chigers.

RHYME, n. s. “\ Fr. rhythme ; Gr. pwˆ/ioc—

RHY’MER, f An harmonical succession

RHYM’STER, ►► of sounds, particularly at

RHYTH’MICAL, adj. J the close of .lines or

verses ; poetry ; the rhyming word ; to agree or

harmonize in sound : make verses : a rhymer, one

who makes them ; rhythmical is, harmonious.

All his manly power it did disperse, As he were warmed with enchanted rhimes, That oftentimes he quaked. Faerie Queene.

I was promised on a time, To have reason for my rhyme ; But from that time unto this season, I had neither rhyme nor reason. Spenser.

Scalled rhymers will ballad us out o’ tune.

Skakspeare.

The guiltiness of my mind drove the grossness of the foppery into a received belief, in despight of the teeth of all rhyme and reason, that they were fairies.

Id.

It was made penal to the English to permit the Irish to graze upon their lands, to entertain any of *heir minstrels, rhimers, or news-tellers.

Uuvies on Ireland. The youth with songs and rhimes : Some dance, some hale the rope. Denham.

Who would not sing for Lycidas? he knew Himself to sing, and build the lofty rhyme. Miltm.

For rhyme the rudder is of verses, With which like ships they steer their courses.

Hudibras.

He was too warm on picking work to dwell, But fagotted his notions as they fell, And, if they rhimed and rattled, all was well.

Dry den.

Milton's rhime is constrained at an age, when the passion of love makes every man a rhimer though not a poet. Id.

Now sportive youth,

Carol incondite rhythms with suiting notes, And quaver inharmonious. Philips.

If Cupid throws a single dart, We make him wound the lover's heart ; But, if he takes his bow and quiver, 'Tis sure he must transfix the liver ; For rhime with reason may dispense, And sound has right to govern sense. Prior. I speak of those who are only rhimsters. Dennis. There marched the bard and blockhead side by

side, Who rhymed for hire, and patronized for pride.

Pope.

What wise means to gain it hast thou chose ? Know, fame and fortune both are made of prose. Is thy ambition sweating for a rhyme, Thou unambitious fool, at this late time 1 Young. RHYMER (Thomas the), was a native of the parish of Earlstown in Berwickshire. His real name and title were Sir Thomas Learmouth. He lived at the west end of Earlstown in the thirteenth century, and was contemporary with one of the earls of March, who lived in the same place.

RIAL, or RYAL. See COINS. RIAZAN, a large province of European Rus-sia, lying to the south of the government of Vla-dimir, and to the east of that of Moscow, extending from lat. 53►► 40' to 55►► 0' N., and from long. 38►► 25' to 41►► 45' E. Its area is above 1 3,000 square miles, ar.d level country, with a few elevation?.

RIB

The north contains a number of woods and marshes, but the rest of

the country produces wheat, oats, barley, and other corn ; hemp and flax. The number of cattle is rather below the average proportion in Russia, but the breed of horses is good, and great attention is paid to bees. Woollen and linen are made for domestic use, and a few iron, glass, and leather articles for export. The imports are also very limited, the only one of importance being salt. In former times an independent duchy, this government became a province ot the empire, under the name of Pereslavl-Riasanskoi, and received its present name from Catherine II. It is divided into twelve circles. Population

1,000,000.

RIAZAN, the capital of the above government, is situated on the Oka, 123 miles S. S. E. of Moscow. It is the see of a Greek bishop, and has an unusual number of churches. The episcopal palace was formerly that of the duVes ; but the best building of the town is that for the government offices and courts of justice. Here are manufactures of iron, linen, woollen, leather needles, and glass ; but the town is small. Inhabitants 5000. It is one of the most ancient towns of Russia.

RIB, n.s.bv.a. Sax. rubbe; Dan. Swed. and Belg. rib ; Teut. r ibbe ; Goth. rif. A bone in the side of the body ; a side timber of a ship : to furnish with ribs.

Was I by rocks engendered ; ribbed with steel ; Such tortures to resist, or not to feel ? Sandys.

Why do I yield to that suggestion, Whose horrid image doth unfix my hair, And make my seated heart knock at my ribs, Against the use of nature ! Shahspeare. Macbeth. Remember

The nat’ral brav’ry of your isle, which stands

As Neptune’s park, ribbed and paled in

With rocks unscaleable, and roaring waters.

Shahspeare.

The ships with shatter’d ribs scarce creeping from the seas. braijton.

It was a happy change to Adam, of a rib for a helper. , Bp. Hall.

He opened my left side, and took From thence a rib, with cordial

spirits warm And life-blood streaming fresh. Miltpn.

Sure he, who first the passage tried,

In hardened oak his heart did hide,

And ribs of iron armed his side. Dryden.

The ribs are of two sorts ; the seven upper are called true ribs, because their cartilaginous ends are received into the sinus of the sternum : the five lower are called false ribs, because they are softer and shorter, of which only the first is joined to the extremity of the sternum, the cartilaginous extremities of the rest being tied to one another, and thereby leaving a greater space for the dilatation of the stomach and entrails : the last of these short ribs is shorter than all the rest ; it is not tied to them, but sometimes to the musculus obliquus descendens.

Quincy.

Hung on each bough a single leaf appears, Which shrivelled in its infancy remains, Like a closed fan, nor stretches wide its veins, But, as the seasons in their circle run, Opes its ribbed surface to the nearer sun. day.

At thy firmest age Thou hadst within thy bole solid contents.

That might have ribbed the sides and planked the aeck Of some flagged admiral. Cowper.

RIBS. See ANATOMY.

RIBADENEIRA (Prter), a Spanish Jesuit, born in 1527. He wrote wfth purity of style in his native tongue. His most valuable work is his

Account of the writers ‘among the Jesuits. He died at Madrid in 1611, aged eighty-four.

RIB’ALD, n. s.) Fr. ribauld ; Ital. ribuldo;

RCB’ALDRY. S Goth, ribaulder means a camp follower. A loose, mean, or brutal wretch : ribaldry is the talk of such wretches—

That lewd ribbald, with vile lust advanced,

Laid first his filthy hands on virgin clean,

To spoil Ixer dainty corse so fair and sheen.

Speruer. You ribauld nag of Egypt,

The breeze upon her, like a cow in June,

Hoists sails, and flies. Shakspeare.

Mr. Cowley asserts that obscenity has no place in wit ; Buckingham says, ‘tis an ill sort of wit which has nothing more to support it than barefaced ribaldry. Dryden.

In the same antique loom these scenes were

wrought,

Embellished with good morals and just thought, True nature in her noblest light you see, Ere yet debauched by modern gallantry To trifling jests and fulsom ribaldry. Granville.

Ne’er one sprig of laurel graced these ribbalds, From slashing Bentley down to pidling Tibbalds.

Pope.

If the outward profession of religion were once in practice among men in office, the clergy would see . their duty and interest in qualifying themselves for lay-conversation, when once they were out of fear of being choaked by ribaldry or profaneness. Swifti

RIB’ AND, n. s. Fr. rubande, ruban. Generally now written ribbon. A fillet of silk, worn for ornament.

Quaint in green, she shall be loose enrobed, With ribbands pendant, flaring ‘bout her head.

SJiakspeare.

A ribband did the braided tresses bind, The rest was loose. Dryden's Knight's Tale.

See ! in the list they wait the trumpet's sound ; Some love device is wrought in ev'ry sword, And ev'ry riband bears some mystick word.

Granville.

No dimness of eye, and no cheek hanging low, No wrinkle, or deep-furrowed frown on the brow ! Her forehead indeed is here circled around With locks like the riband with which they are bound. Cowper.

So playful love on Ida's flowery sides With riband-rein the indignant lion guides : Pleased on his brindled back the lyre he rings, And shakes delirious rapture from the strings.

Darwin.

RIBAND-MAKING. See SILK MANUFACTURE.

RIBERA, a Spanish poet, called the Scarron of Spain, from the humor and ludicrous scenes with which his writings abound. His works were published at Madrid, in 1648.

RIBES, the currant and gooseberry tree, a genus of the monogynia order and pentandria class of plants; natural order thirty-sixth, pomaceae. There are five petals, and stamina inserted ;nto the calyx ; the style is bifid ; the berry polyspermous, inferior. The currant and gooseberry were long considered each as a separate ××× ribes the currant, and grossularia the

gooseberry ; but they are now joined together, the grossularia being made a species of ribes ; all the currant kinds having inermous or thorn less branches, and racemous clusters of flowers and fruit; and the gooseberry spinous branches, and flowers and fruit for the most part singly.

1. R. cynosbati,the prickly fruited gooseberry tree, has a shrubby stem and branches armed with spines, mostly at the axillas, and prickly fruit in clusters.

2. R. grossularia, the common gooseberry tree, rises with a low

shrubby stem, dividing low into a very branchy bushy head, armed” with spines ; trilobate smallish leaves, having hairy ciliated foot-stalks, and small greenish flowers, succeeded by hairy berries. It consists of many varieties of different sizes and colors.

3. R. nigra, the black currant tree, has a shrubby stem dividing low into many branches, forming a bushy head five or six feet high ; broad trilobate leaves of a strong smell, and hav-ing racemose clusters of oblong greenish flowers, succeeded by thin clusters of blackberries. The fruit of this species being of a strong flavor is not generally liked ; it is, however, accounted very wholesome : there is also made of it a syrup of high estimation for sore throats and quinsies. There is a variety called the Pennsylvania black currant, having smaller shoots and leaves, not scented, and small fruit, but of little value ; the shrub is esteemed only for variety and shrubberies. All the varieties of currants bear fruit both in old and young wood all along the sides of the branches and shoots, often upon a sort of small sprigs and snags, the berries hanging in numerous long pendulous clusters.

4. R. reclinata, the reclinated broad-leaved gooseberry tree, rises with a low shrubby stem, and reclinated somewhat prickly branches, trilo bate broadish leaves, and small greenish flowers, having the pedunculi furnished with triphyllous bractea.

5. R. rubra, common red currant tree, &c., has a shrubby stem, dividing low into many branches, forming a bushy head, five or six feet high or more, without thorns ; broad trilobate leaves, and smooth pendulous clusters of plane greenish flowers, succeeded by small clusters of berries. It grows naturally in woods and hedges in most parts of Europe, and comprises all sorts of red and white currants ; as, common small red currant ††† large bunched red currant ††† Champagne pale red currant ††† common small white currant ††† large white Dutch currant ††† yellow blotched leaved currant ††† silver striped leaved ††† gold striped leaved ††† gooseberry leaved. All these sorts are varieties of the common red currant; it being the parent from which all the others were first obtained from the seed, and improved by culture. They all flower in the spring, and the fruit ripens in June and July, and by having the trees in different situations and modes of training, such as plantations of standard in the open quarters for the general supply, others trained against walls or pales of different aspects, the fruit may be continued ripe in perfection from about the middle of June until November, provided the later crops are defended with mats or nets from the birds.

6. R. uva crispa, the smooth gooseberry, has a shrubby stem, and branches armed with spines; trilobate leaves ; pedicles having monophyllous bractea, and smooth fruit. All the above species, both currant and gooseberry kinds, and their respective varieties, are very hardy shrubs, that prosper almost any where, both in open and shady situations, and iuany common soil ; bearing plentifully in any exposure, though in open and sunny situations they produce the largest and fairest fruit, ripening to a rich vinous flavor. It is eligible to plant them in different situations and aspects, to have the fruit as early and late as possible. They are commonly planted in the kitchen garden as dwarf standards, in open quarters ; sometimes in rows, eight or ten feet by six asunder, and sometimes in single ranges round the outward edge of the quarters, eight feet asunder ; often in single cross rows ; in all of which methods they should be trained up to a single stem a foot high, then suffered to branch out all around into bushy heads, keeping the middle open, and the branches moderately thin, to ad-mit the sun and free air. They are likewise trained against walls or palings, like other wall trees, when they will produce fine large fruit ; but it is proper to plant a few both against south, north, east, and west walls, to obtain the fruit ripe both early and late. Both currants and gooseberries are of an acid and cooling nature, and as such are sometimes used in medicine, especially the juice reduced to a jelly by boiling with sugar. From the juice of currants also wine is made.

RIFROAST, v. a. Rib and roast. To beat soundly. A burlesque word.

That done, he rises, humbly bows, A nd gives thanks for the princely blows ; Departs not meanly proud, and boasting Of his magnificent ribroasting. Butler.

I have been pinched in flesh, and well ribroasted under my former masters ; but I'm in now for skin and all. L' Estrange.

RICARDO (David), M. P. and F. R. S., the iate celebrated writer on political economy, was of Jewish extraction, and born in London, April 12th, 1772. His father was a Dutch Jewish stockbroker ; and the son was early sent to Holland for education. He offended his friends while young, it is said, by uniting himself in marriage with Miss Wilkinson, a quakeress, and was thus, with few resources, left to achieve his own fortune. He soon however established a character for probity and talent ; and, becoming a member of the Stock Exchange, gradually accumulated a large property. In 1810 heappeared as a writer in the Morning Chronicle, on the subject of the depreciation of the currency ; and afterwards embodied his ideas in a distinct work, the leading ideas of which he had the satisfaction to see adopted and confirmed in the Report of the Bullion Committee* He now published An Essay on Rent, in which he advocated the Malthusian principles, concerning population ; he also entered on an examination of the affairs of the Bank of England, and suggested a plan for an economical currency. But his most important production was his treatise on Political Economy and Taxation, which has been ranked by Mr

M'Culloch and other writers with the celebrated work of Dr. Adam Smith. See our article POLITICAL ECONOMY. In 1819 Mr. Ricardo obtained a seat in parliament for the borough of Portarlington, and displayed as a senator that sound good sense which generally distinguishes his publislr-ed works. He died of inflammation of the brain, arising from an abscess in the ear, at his seat, Gatcomb Park, near Minchin Hampton in Gloucestershire, September llth, 1823. Mr. Ricardo is said to have adopted the religious principles of Unitarianism, but usually attended the established church. We have, on the other hand, heard from a near connexion of Mr. Ricardo's that he suggested, among other improvements, a sort of intermediate faith between Judaism and Christianity ; holding that Jesus Christ was a worthy man and an excellent teacher, whose precepts should therefore be regarded with great respect ; but that ' he assumed too much' in his pretension to be the son of God : and therefore that the blame of his unhappy catastrophe was to be divided between his enemies and himself.'

RICAUT, or RYCAUT (Sir Paul), an eminent English traveller, of the date of whose birth we find no account ; but in 1661 he was appointed secretary to the earl of Winchelsea, who was sent ambassador extraordinary to the Ottoman Porte. During his continuance in that station, he wrote, The present State of the Ottoman Em-pire, in 3 books: London, fol. 1670. He afterwards

resided eleven years as consul at Smyrna, where, by order of Charles II., he composed The present state of the Greek and Armenian Churches, anno Christi 1678. On his return, lord Clarendon, being appointed lord-lieutenant of Ireland, made him his principal secretary for Leinster and Connaught ; James II. knighted him, and made him one of the privy council in Ireland, and judge of the court of admiralty ; all which he held to the Revolution. He was employed by king William as resident at the Hanse Towns in Lower Saxony, where he continued ten years; but, being worn out with age and infirmities, he obtained leave to return in 1700, and died the same year. He continued Knolles's History of the Turks, and also Platina's Lives of the Popes.

RICCATI (Vincent), a celebrated Italian Je-suit, born at Castel Franco, in the Trevisan, in 1707. He became a professor of mathematics at Bologna ; and published a learned work on the Integral Calculus, in 3 vols. 4to. He died in 1775, aged sixty-eight.

RICCI (Laurence), a learned Italian Jesuit, born in Florence, in 1703, of a distinguished fa-mily. He was chosen general of the order in 1758, but had the misfortune to be the last per-son who ever held that office ; as the order was abolished in 1773. Ricci and some others were immediately sent to the castle of St. Angelo in Rome, where he died in 1775.

RICCI (Matthew), another learned Italian Je-suit, born at Macerata, in 1552. He went to the East Indies when young, and was sent as a missionary to China, where he acquired the Chinese language, and was favored by the emperor so much that he was allowed to build a church at Pekin. He died in that city in 1610; and left

some curious Memoirs respecting China behind him.

RICCI (Sebastian), an eminent Italian painter, born at Belluno, in 1659. The imperial court employed him to adorn the palace of Schoenbrun ; after which he came to London, where he was much employed, and amassed money : but he returned to Venice, where he died in 1734. Mark Ricci his nephew was also eminent in painting history, architecture, and landscapes. He died in 1730.

RICCIA, in botany, marsh liverwort, a genus of the natural order of algae, and cryptogamia class of plants : CAL. none, but a vesicular cavity within the substance of the leaf: COR. none : the anthera are cylindrical, and sessile, placed on the germen, which is turbinated ; the style is filiform, perforating the anthera ; and the seed case is spherical, crowned with the withered antherae ; the SEEDS are hemispherical and pedicellated . Species eleven, five of which are indigenous to our own country.

RICCOBONI (Lewis), an Italian dramatic writer, and actor, born at Modena, in 1677. He wrote several comedies ; besides a work entitled Reflexions Historiques et Critiques sur les Theatres de L'Europe ; 1738, 8vo. He died in 1753, aged seventy-six.

RICE, n. s. Lat. oryza ; Gr. opv►►a ; Sans. nz ; Arab, urooz. One of the esculent grains, cultivated in most eastern countries.

nice is the food of two-thirds of mankind ; it is kindly to human constitutions, proper for the consumptive, and those subject to haemorrhages.

Arbuthnot.

If the snuff get out of the snuffers, it may fall into a dish of ri.-e milk. Swift.

RICE. See ORYZA. This plant is cultivated in many parts of the east, in South Carolina, in America, and also in Spain, Italy and Piedmont. It is a plant that grows to the height of about two feet and a half, with a stalk not unlike that of wheat, but fuller of joints, and with leaves resembling that of the leek. It branches out into several stems, at the top of which the grain grows in clusters, and each of them is terminated with an ear or beard, and enclosed in a yellow rough husk. When stripped of this, they appear to be of an oval shape, of a shining white color, and almost transparent. It is probably a plant that cannot be reared in this climate. The following is the Chinese method of cultivating it : ►►► ' Much of the low grounds in the middle and southern provinces of the empire is appropriated to the culture of this grain. It constitutes, in fact, the principal part of the food of the inhabitants. A great portion of the surface of the country is well adapted for the production of rice, which, from the time the seed is committed to the soil till the plant approaches to maturity, requires to be immersed in a sheet of water. Many and great rivers run through the several provinces of China : the low grounds bordering on those rivers are annually inundated, by -which means a rich mud or

mucilage is brought upon their surface that fertilises the soil. The periodical rains which fall near the sources of the Yellow and the Kiang Rivers, not very far distant from those of the Ganges and the Burum-pooter, aiming the mountains bounding India to the north, and China to the west, often swell those rivers to a prodigious height, though not a drop of rain should have fallen on the plains through which they afterwards flow. After the mud has lain some days upon the plains in China preparations are made for planting them with rice. For this purpose, a small spot of ground is enclosed by a bank of clay ; the earth is ploughed up ; and an upright harrow, with a row of wooden pins in the lower end, is drawn lightly over it by a buffalo. The grain, which had previously been steeped in dung diluted with ani-mal water is then sown very thickly on it A thin sheet of water is immediately brought over it, either by channels leading to the spot from a source above it, or when below it by means of a chain pump, of which the use is as familiar as that of a hoe to every Chinese husbandman. In a few days the shoots appear above the water. In that interval, the remainder of the ground intended for cultivation, if stiff, is ploughed, the lumps broken by hoes, and the surface levelled by the harrow. As soon as the shoots have attained the height of six or seven inches, they are plucked up by the roots, the tops of the blades cut off, and each root is planted separately, sometimes in small furrows turned with the plough, and sometimes in holes made in rows by a drili ing stick for that purpose. The roots are about six inches asunder. Water is brought over them a second time. For the convenience of irriga-tion, and to regulate its proportion, the rice fields are subdivided by narrow ridges of clay, into small enclosures. Through a channel, in each ridge, the water is conveyed at will to every subdivision of the field. As the rice approaches to maturity, the water by evaporation and absorption disappears entirely'; and the ripe crop covers dry ground. The first crop or harvest, in the southern provinces particularly, happens towards the end of May or beginning of June. The instrument for reaping is a small sickle, dentated like a saw, and crooked. Neither carts nor cattle are used to carry the sheaves off from the spot where they are reaped ; but they are placed regularly in frames, two of which, suspended at the extremities of a bamboo pole, are carried across the shoulders of a man, to the place intended for disengaging the grain from the stems which had supported it. This operation is performed, not only by a flail, as is customary in Europe, or by cattle treading the corn in the manner of Orientalists, but sometimes also by striking it against a plank set upon its edge, or beating it against the side of a large tub scollop-ed for that purpose ; the back and sides being much higher than the front to prevent the grain from being dispersed. After being winnowed, it is carried to the granary. To

remove the skin or husk o’f rice, a large strong earthen ves-sel, or hollow stone, in form somewhat like that which is used elsewhere for filtering water, is fixed firmly in the ground ; and the grain placed in it is struck with a conical stone fixed to the extremity of a lever, and cleared, sometimes in deed imperfectly, from the husk. The stone is worked frequently by a person treading upon the end of the lever. The same object is attain-RIC

also by passing the grain between two flat stones of a circular form, the upper of which turns round upon the other, but at such a distance from it as not to break the intermediate grain. The operation is performed on a large scale in mills turned by water ; the axis of the wheel carrying several arms, which, by striking upon the ends of levers, raise them in the same manner as is done by treading on them. Sometimes twenty of these levers are worked at once. The straw from which the grain has been disengaged is cut chiefly into chaff, to serve as provender for the very few cattle employed in Chinese husbandry. The labor of the first crop being finished, the ground is immediately prepared for the reception of fresh seeds. The first operation undertaken is that of pulling up the stubble, collecting it into small heaps, which are burnt, and the ashes scattered upon the field. The former processes are afterwards renewed. The second crop is generally ripe late in October or early in November. The grain is treated as before ; but the stubble is no longer burnt. It is turned under with the plough, and left to putrefy in the earth. This, with the slime brought upon the ground by inundation, is the only manure employed in the culture of rice.’

RICH, adj. ˆ Fr. riche ; Ital. ricco ; Sax.

RICH’ED, I pica. Ric is also a common

RICH’ES, n. s. s northern affix, denoting rich,

RiCH’LY,adu.i as in Alaric, Frederic, &c.

RICH'NESS. 3 Wealthy ; abounding in money or possessions ; opulent ; plentiful : all the derivatives corresponding.

f he rich shall not give more, and the poor no less.

Exodus.

Of virtue you have left proof to the world ; And virtue is grateful with beauty and richness adorned. Sidney.

I am as rich in having such a jewel, As twenty seas, if all their sand were pearl.

Shahspeare.

In Belraont is a lady richly left, And she is fair, of wondrous virtues. Id.

Of all these bounds.

With shadowy forests, and with champaigns riched, With plenteous rivers and wide skirted meads, We make thee lady. Id. King Lear.

The instrumentalness of riches to charity has rendered it necessary by laws to secure propriety.

Hammond.

Women richly gay in gems Milton.

Earth, in her rich attire,

Consummate lovely smiled. Id.

Groves whose rich trees wept odorous gums and balm. Id.

The gorgeous East with richest hand Pours on her sons barbaric pearl and gold. Id.

In animals, some smells are found more richly than in plants. Browne's Vulgar Ei~roitrs.

So we the Arabian coast do know At distance, when the spices blow, By the rich odour taught to steer, Though neither day nor star appear. Waller.

Richwus his soul, though his attire was poor, As heaven had cloathed

his own ambassador.

Dry den.

The lively tincture of whose gushing blood Should clearly prove the richness of his food. Id.

Several nations of the Americans are rich in land, and poor in all the comforts of life. Locke.

liichet, do not consist in having more gold ami sil-

ver, but in having more in proportion than our neighbours, whereby we are enabled to procure to ourselves a greater plenty of the conveniences of life than comes within their reach, who, sharing the gold and silver of the world iu less proportion, want the means of plenty and power, and so are poorer. Id.

There are who fondly studious of increase, Rich foreign mold on their ill-natured land Induce. Philips.

Chemists seek riches by transmutation and the great elixir. Sprat.

I amused myself with the richness and variety of colours in the western parts of heaven. Spectator.

This town is famous for the richness of the soil.

Addison.

There is such licentiousness among the basest of the people, that one would not be sorry to see them bestowing upon one another a chastisement which they so richly deserve. Addison.

If life be short, it shall be glorious, Each minute shall be rich in some great action.

JtotM.

He may look upon the rich as benefactors, who have beautified the prospect all around him. Seed.

What riches give us, let us first enquire ; Meat, fire, and cloaths ; what more 1 meat, cloaths, and fire. Pope.

After a man has studied the laws of England, the reading the reports of adjudged cases will richly improve him. Watts.

Matilda never was meanly dressed in her life ; and nothing pleases her in dress but that which is very rich and beautiful to the eye. Law.

Sauces and rich spices are fetched from India.

Baker. Can all the wealth of India's co '

Atone for years in absence lost 1

Return, ye moments of delight.

With rimer treasures bless my sight ! Burns.

RICH (John), a pantomimic actor of the las: century, attracted general admiration in his youth by the performance of Harlequin. In expressing the feelinqs of the mind by dumb show, his power was inimitable, and superseded much of the necessity of vocal language. He rendered pantomime so fascinating that, with the assistance of an indifferent company, he secured a large share of the public attention, though opposed by the dramatic genius of Garrick. In 1733 he removed his company from Lincoln's-inn-fields to Covent Garden, where he was manager till his death, in December 1761, during the run of a grand spectacle. His education had been so neglected that he could neither write nor speak with common propriety. Among other peculiarities he had a habit of addressing persons to whom he was speaking, by the appellation of ' Mister,' and, on his applying this to Foote, the latter an-grily asked him, why he could not call him by his name ? ' Don't be offended,' Rich replied, ' I sometimes forget my own name.' ' Indeed !' said Foote, ' I knew you could not write your own name ; but I could not have supposed you should forget it.'

RICHARD OF CIRENCESTER, thus namea from his birth-place, was a Benedictine and an English historian of the fourteenth century. No traces remain of his history ; except that he be-came a monk of the abbey of St. Peter, Westminster, in 1350, and that his name occurs in various documents of that monastery in 1387, 1397, and 1399. Towards the close of his life

he visited Rome ; but returned to Westminster, and died there in 1401. He wrote Historia ab Hengista ad an. 1348, in two parts, still remaining a MS.; his principal work is a Description of Britain, first published in Latin at Copenhagen, in 1767, and more recently in Latin and English, with a commentary and maps by Mr. Hatcher, 1809, 8vo.

RICHARD (Louis Claude Marie), one of the most eminent modern botanists, was born at Versailles September 4th, 1754, and the son of Jhe keeper of the royal gardens at Auteuil. He studied at the college of Vernon, and the Mazarin College, Paris. Here he partly supported himself by making drawings for architects, and at the same time assiduously applied himself to botany, anatomy, and zoology. While very young, he presented several memoirs -to the Academy, which attracted the notice of Jussieu, who gare him the use of his library and cabinet. In 1781 he sailed from France on a voyage of research to French Guyana with the title of naturalist to the king, and returned in 1789, bringing with him a herbal of 1000 plants, most of which were newly discovered, beside other collections in natural history. During the political disturbances of the period his labors were neglected ; but, when the school of medicine was established, he was appointed professor of botany ; and, on the formation of the Institute, he was a member of the first class in the section of zoology. He was also a corresponding member of the Royal Society of London, and of the legion of honor. He died June 7th, 1821. The researches of Richard were chiefly directed to the comparative anatomy of plants, on which he published a number of valuable Memoirs, besides which he was the au-thor of Demonstrations Botaniques, ou Analyse du Fruit considere en general, 1803, 8vo.

RICIIARDIA, in botany, a genus of the monogynia order, and hexandria class of plants; natural order forty-seventh, stellatae : CAL. sex-partite : COR. monopetulous, and subcylindrical; and there are three seeds. Species one only, a herb of Vera Cruz.

RICHARDS (Nathaniel), a dramatic writer in the reign of Charles I., and a fellow of Caius College, Cambridge, where he took his degree of A. B. in 1634. He wrote a tragedy entitled Messalina, published in

1640, which was acted with applause. He also wrote some poems, published in 1645.

RICHARDSON (Jonathan), a celebrated painter of heads, was born about 1665, and was placed by his father-in-law apprentice to a scrivener, with whom he lived six years; when, obtaining his freedom by the death of his master, he at twenty years old became the disciple of Reilly ; with whom he lived four years, whose niece he married, and of whose style he acquired enough to maintain a solid and lasting reputation even during the lives of Kneller and Dahl, and to remain at the head of the profession when they died. He died suddenly at his house in Queen's square on May 28th, ˆ1745, in the eightieth year of his age. His so'n was also a man of learning, as appears from the works they published conjunctly. The father, in 1719, published two discourses: 1. An Essay on the Art of VOL. XVIII.

Criticism as it relates to painting ; 2. An Argu ment in behalf of the Science of a Connoisseur, bound in 1 vol. 8vo. In 1722 came forth An Account of some of the statues, bas-reliefs, drawings, and pictures, in Italy, 8cc., with Remarks by Mr. Richardson, senior and junior. The son made the journey ; and from his notes, letters, and observations, they both at his return compiled this work. In 1731 they published a very thick 8vo., containing explanatory notes and remarks on Milton's Paradise Lost, with the life of the author, and a treatise on the poem. Besides his pictures and commentaries, we have a few etchings by his hand, particularly two or three of Milton, and his. own head. The sale of his collection of drawings, in February 1747, lasted eighteen days, and produced about ►►2060.

RICHARDSON (Samuel), a celebrated English novel writer, born in 1688. He was educated as a printer, and, though he is said to have understood no language but his own, yet he acquired great reputation by his three novels, entitled Pamela, Clarissa, and Sir Charles Grandison. A stroke of the palsy carried off Mr. Richardson, after a few days' illness, upon the 4th of July 1761. Besides the works abovementioned, he is the author of an /Esop's Fables, a Tour through Britain, 4 vols., and a volume of Familiar Letters upon business and other subjects. The most eminent writers, both of our own and of other countries, have paid their tribute to the transcendant talents of Mr. Richardson, whose works have been published in almost every language and country of Eu-rope. Dr. Johnson, in his introduction to the ninety-seventh number of the Rambler, which was written by Mr. Richardson, observes that the reader was indebted for that day's

entertainment to an author, ‘ from whom the age has received greater favors; who has enlarged the knowledge of human nature, and taught the passions to move at the command of virtue.’ In his life of Rowe, he adds, ‘ It was in the power of Richardson alone to feach us at once esteem and detestation ; to make virtuous resentment overpower all the benevolence which wit, and elegance, and courage, naturally excite ; and to lose at last the hero in the villain.’

RICHELET (Caesar Peter), a French writer, born in 1631, at Chemin in Champagne. He was the friend of Patru and Ablancourt. He compiled a dictionary of the French language, of which the best edition is that of Lyons, 3 vols. folio, 1728. He also collected a small dictionary of rhymes He died in 1698.

RICHELIEU (John Armand du Plessis de), cardinal of Richelieu and Fronsac, bishop of Lucon, &c., was born at Paris in 1585. At the age of twenty-two he obtained a dispensation to enjoy the bishopric of Lucon in 1607. Returning to France, he applied himself to preaching ; and his reputation procured him the office of almoner to the queen Maryde Medicis. His abilities in the management of affairs advanced him to be secretary of state in 1616: and the king soon cave him the preference to all his other secretaries. On the death of the marquis of Ancre Richelieu retired to Avignon, where he employed himself in composing various theologica1

works. The king having recalled him to court, he was made a cardinal in 1622, and two years after first minister of state, and grand master of the navigation. In 1626 the Isle of Rhe was preserved by his care, and Rochelle taken, hav-ing stopped up the haven by the famous dike which he ordered to be made there. He accompanied the king to the siege of Cazal, and contributed to the raising of it in 1629. He also obliged the Huguenots to tht peace of Alets, which proved the ruin of that party : he took Pomeral, and succored Cazal, when besieged by Spinola. In the mean time the nobles found fault with his conduct, and endeavoured to persuade the king to discard him. The cardinal, however, instead of being disgraced, from that moment became more powerful than ever, and obtained a greater ascendancy over the king's mind ; and he now resolved to humble the excessive pride of the house of Austria. For that purpose he concluded a treaty with Gustavus Adolphus king of Sweden to carry the war into the heart of Germany. He also entered into a league with the duke of Bavaria ; secured Lorrain ; raised a part of the princes of the em-pire against the emperor ; treated with the Dutch to continue the war against Spain ; favored the Catalans and Portuguese till they shook off the Spanish yoke ; and, after having carried on the war with success, was about to conclude it by a peace, when he died in Paris on the 4th of December, 1 642, aged fifty-eight. He was interred in the Sorbonne, where a magnificent mausoleum was erected to his memory. This great politician made the arts and sciences flourish ; form-ed the botanical garden at Paris, called the king's garden ; founded the French Academy ; established the royal printing-house ; erected the pa-lace afterwards called Le Palais Royal, which he presented to the king; and rebuilt the Sorbonne with a magnificence that appears truly royal. Besides his books of controversy and piety, there go under the name of this minister A Journal, in 2 vols. 12mo. ; and a Political Testament, I2mo. ; all treating of politics and state affairs. Cardinal Mazarine pursued Richelieu's plan, and completed many of the schemes which he had begun, but left unfinished.

RICHLIEU, CHAMBLY, or Sorel River, a river of Lower Canada, which flows from Lake Champlain in a northerly course, and joins the St. Lawrence.

RICHLIEU ISLANDS, a cluster of islands in the St. Lawrence, situated at the south-west entrance of Lake St. Peter, nearly 100 in number. Several of them are cleared, and afford good pasturage for cattle. They lie very low, and abound in wild fowl.

RICHMOND, a market town, borough, and parish of Yorkshire, pleasantly situate on the river Swale, which encompasses nearly half the the town. It sends two members to the imperial parliament. It has a market on Saturday, two churches, and many handsome houses of stone. It had anciently a castle, built by Alan, earl of Richmond, one of the followers of William the Conqueror. It is forty-four miles north-west of York, sixty south-east of Lancaster, and 234 . N. W. of London.

RICHMOND, a rich, populous, and elegant village of England, in Surrey, seated on the bank of the Thames. It was anciently called Sheen, which in the Saxon signifies resplendent. It had a royal palace, in which Richard II. and Edward I., II., and III. resided, and the latter died in it. In 1497 it was burnt, but Henry VII. rebuilt it in 1501, and gave the place its present name, from his title of earl of Richmond, before he was king. He and his grand-daughter queen Elizabeth died in it. .Richmond is famous for its beautiful royal gardens, which in summer are open to the public every Sunday ; as well for its elegant and extensive park. It has also a fin►► observatory. An elegant stone bridge of five arches was here erected over the Thames in 1777. It is nine miles W. S.W. of London.

RICHMOND, a county of Virginia, bounded on the north by Westmoreland county, on the north-east by Westmoreland and Northumberland counties, on the south-east by Lancaster county, and on the south-west by the Rappahannock.

RICHMOND, a city, port of entry, and the metropolis of Virginia, in Henrico county, on the north side of James River, between fifty and sixty miles, by the course of the river, above City Point, and 150 miles from its mouth, immediately below the falls, at the head of tide water, and opposite Manchester, with which it is connected by two bridges : twenty-five miles north of Petersburg. The city was formerly divided into two sections, the upper or western part, called Shock oe Hill, and the lower part Richmond, separated by Shockoe Creek, a small rivulet

; but these distinctions are now going out of use, and the sections are united together. The situation is highly picturesque, beautiful, and healthy ; and Richmond is one of the most flourishing, wealthy, and commercial cities in the United States.

It contains about 800 houses built of brick, many of them elegant, and about 600 built of wood; a glass-house, a sugar refinery, an iron foundry, a rolling and slitting mill, a cotton manufactory, eight tobacco warehouses, two insurance offices, three banks, including a branch of the United States bank ; a capital, or state-house, a house for the governor, an armory, a peniten-tiary, a court house, a jail, an alms house, two market houses, a public library containing about 3000 volumes, a museum, a Lancasterian school, and eight houses of public worship ; two for Episcopalians, one for Presbyterians, one for Baptists, two for Methodists, one for Friends, and a Jews' synagogue.

The falls extend nearly six miles, in which distance the river descends eighty feet. A canal with three locks is cut on the north side of the river, terminating at the town in a basin of about two acres. Few cities, situated so far from the sea, possess better commercial advantages than Richmond, being at the head of tide water, on a river navigable for batteaux 220 miles above the city, and having an extensive and fertile back country, abundant in the production of tobacco, wheat, corn, hemp, coal, &c. It has an extensive inland trade, and its foreign commerce is considerable. The shipping owned here, in 181o, amounted to 9943 tons. James River i? navi-

gable to Warwick for vessels drawing fifteen or sixteen feet water, and to Rockets, just below Richmond, for vessels drawing ten feet. The exports of the city consist of tobacco, flour, coal, and various articles of produce.

The Virginia armory is an extensive establishment, and there are annually manufactured in it upwards of 4000 stands of arras, 300 rifles, and 1000 cavalry swords and pistols. The peni-tentiary is under good regulations, and contained, in 1818, 170 prisoners. The new court house is a very spacious and elegant edifice. The capitol is built on a commanding situation on Schockoe Hill, and is a very conspicuous object to the surrounding country. The design was taken from La Maison Quaree at Nismes, and. the model was obtained by Mr. Jefferson, ###while minister there. The edifice, however, falls greatly short of the model. Richmond is at present in a very flourishing and improving state. In 1811, on the 26th of December, the theatre at Richmond took fire during an exhibition, and, in the conflagration, seventy-two persons lost their lives, among whom were George William Smith, esq., governor of the state, and other persons of respectability. An elegant Episcopal church of brick, styled the Monumental Church, has since been erected on the spot, with a monument in front, commemorative of the melancholy event.

RICHTER (Otto Frederick Von), an oriental traveller of modern times, was born in Livonia, in 1792. He went to Moscow at the age of sixteen to study modern Greek, and afterwards to Heidelberg, where he applied'himself to the Ara-bic and Persian. He then travelled in Switzerland andltaly, and continued his studies under the celebrated Hammer, at Vienna. He now went with Lindemann, the secretary to the Swedish embassy, to Egypt, where they were well received by Mohamed Ali ; and, having travelled up the Nile as far as Ibrim, returned to Alexandria with a rich collection of drawings, &c. At Cairo, in August, 181.5, they narrowly escaped destruction during a mutiny of Ali's troops. They then proceeded by sea to Jaffa, and thence to Acre, where they separated, and Richter alone travelled through Palestine, Syria, Asia Minor, and the Isles, and then went to Constantinople to deposit his collections. Having done so, he re-embarked, and, arriving at Smyrna, was there seized with a fever, which terminated his life, August 13th, 1816. M. Ewers, his tutor, published O. F. Von Richter's Wallfahrten im Mor-genlande, Berlin, 1822, 8vo, with a folio atlas.

RICINUS, or palma Christi, in botany, a genus of the monodelphia order and moncecia class of plants ; natural order thirty-eighth, tri-coccae : MALE CAL. quinquepartite : COR. none: the stamina numerous : FEMALE CAL. tripartite : COR. none : but three bifid styles : CAPS, trilocular, and a single SEED. There are six species. The most remarkable are these :

1. R. Americanus grows as tall as a small tree, and deserves a place in

every curious gar-den. It expands into many branches ; the leaves are sometimes two feet in diameter, and the stem as large as a middle-sized broom staff; towards the top of the branch it has a cluster of flowers,

something resembling a bunch of giapcs: the flowers are small and staminous, but on the body of the plant grow bunches of rough triangular husks, each containing three speckled seeds, generally somewhat less than horse beans ; the shell is brittle, and contains white kernels of a sweet, oily, and nauseous taste. Of the ricinus there are many varieties ; all of them fine majestic plants, annual, or at most biennial, in this country ; but in their native soil they are said to be perennial both in root and stem. They are propagated by seeds sown on a hot-bed, and require the same treatment as other tender exotics.

2. R. communis, or common palma Christi. This tree is of speedy growth, as in one year it arrives at its full height, which seldom exceeds twenty feet. The trunk is subligneous; the pith is large ; the leaves broad and palmated ; the flower spike is simple, and thickly set with yellow blossoms in the shape of a cone ; the capsules are triangular and prickly, containing three smooth gray mottled seeds. When the bunches begin to turn black, they are gathered, dried in the sun, and the seeds picked out. They are afterwards put up for use as wanted, or for exportation. Castor oil is obtained either by expression or by decoction. A large iron pot or boiler is first prepared, and half filled with water. The nuts are then beaten in parcels in deep wooden mortars, and after a quantity is beaten it is thrown into the iron vessel. The fire is then lighted, and the liquor is gently boiled for two hours, and kept constantly stirred. About this time the oil begins to separate, and swims on the top, mixed with a white froth, and is skimmed off till no more rises. The skimmings are heated in a small iron pot, and strained through a cloth. When cold, it is put up in jars or bottles for us,e. Castor oil, thus made, is clear and well flavored, and if put into proper bottles will keep sweet for years. The expressed castor oil soon turns rancid, because the mucilaginous and acrid parts of the nut are squeezed out with the oil. On this account the preference is given to well prepared oil by decoction. An English gallon of the seeds yields about two pounds of oil. This oil is fit for all the purposes of the painter, or for the apothecary in ointments and plasters. As a medicine, it purges without stimulus, and is so mild as to be given to infants soon after birth, to purge off the meconium. All oils are-noxious to insects, but the castor oil kills and expels them. See PHARMACY and MATERIA MEDICA.

RICIUS (Paul), a converted Jew, who flourished in the sixteenth century, and taught philosophy at Pavia with great reputation. The emperor Maximilian appointed him one of his physicians. He is famous for his dispute with Eckius xipon the nature of celestial bodies.

RICK, n. s. See REEK. A pile of corn or hay regularly heaped up and sheltered.

Mice and rats do great injuries in the field, houses, barns, and corn ricks. Mortimer's Husbandry.

In the North they bind them up in small bundles and make small riclat of them in the field. Id.

An inundation O'erflowed a farmer's barn and stable ;

Whole ricks of hay and stacks of corn

Were down the sudden current born. Swift.

RIC'KETS, n.s. Lat. rachitis, of Gr. the spine. A disorder of the spine.

In some years, liver-grown, spleen, and rickets are put together, by reason of their likeness.

Graunt's Bills of Mortality.

O were my pupil fairly knocked o' th' head, I should possess the estate, if he were dead ; He's so far gone with the rickets and the evil, That one small dose will send him to the devil.

Dry ilen.

So when at school we first declaim, Old Busby walks us in a theme,' Whose props support our infant vein, And help the rickett in the brain

; But when our souls their force dilate, Our thoughts grow up to wit's estate. Prior.

The rickets is a distemper in children, from an unequal distribution of nourishment, whereby the joints grow knotty, and the limbs uneven ; its cure is performed by evacuation and friction. Quincy.

In a young animal, when the solids are too lax, the case of rickety children, the diet should be gently astnngent. Arbuthnot.

RICKETS. See MEDICINE. RICKMANSWORTH, a market town and parish of Herts, situate on the river Colne, two miles and a half west from Watford, and seventeen north-west from London. The number of rivulets in and about the town are employed to 'urn several flour, silk, cotton, and paper mills, and many of the females of the town manufacture straw bonnets for London. The church is a spacious building, and there is also a charity school and two almshouses. The town is governed by two constables and two headboroughs. Market-day, Saturday.

RICOCHET, in gunnery, is when guns, how-itzers, or mortars, are loaded with small .charges, and elevated from five to twelve degrees, so that, when fired over the parapet, the shot or shell rolls along the opposite rampart. This is called ricochet firing, and the batteries ricochet batteries. At the battle of Rosbach, in 1757, Frederick king of Prussia had several six-inch mortars made with trunnions, and mounted on travelling carriages, which fired obliquely on the enemy's lines, and amongst their horse, loaded with eight ounces of powder, and at an elevation of one degree fifteen minutes, which did great execution ; for the shells rolling along the lines, with burning fuzes, the soldiers did not dare preserve their ranks for fear of their bursting.

The first gun in a ricochet battery should be so placed as to sweep the whole length of the rampart of the enemy's work, at three or four feet from the parapet, and the rest should form as small an angle with the parapet as possible. For this purpose the guns should be pointed about four fathoms from the face of the work toward the interior. In the ricochet of ordnance in the field, the objecis to be fired at being principally infantry and cavalry, the guns should seldom be elevated above three degrees, as otherwise the ball would be apt to bound too high, and defeat the object intended. See FORTIFICATION.

RICOT1A, in botany, a genus of the siliquosa order and tetradynamia class of plants ; natural order thirty-ninth, silaquosae. The siliqua is

unilocular, oblong, and compressed, with plain valvules.

RID’, v.a. l Sax. prieVoan. In the

RID’DANCE, n.s. \ preterite ridded or rid; in

the passive participle rid. Tw set free ; redeem ;

clear ; hence drive away ; despatch : the noun

substantive corresponding.

I will bring you out from under their burthens, and rid you out of their bondage. Exodus vi. 6. Rid me, and deliver me out of great waters.

Psalm cxliv.

They were not before so willing to be rid of their learned pastor, as now importunate to obtain him again from them, who had given him entertainment.

Hooker.

Deliverance from sudden death, riddance from all adversity, and the extent of saving mercy towards all men. Id.

I must rid all the seas of pirates. Shakspeare. Having the best at Barnet field, We’ll thither straight ; for willingness rids away.

Id.

Ah deathsmen ! you have rid this sweet young prince. Id.

I have too grieved a heart To take a tedious leave : thus losers part. ××× A gentle riddance. Id.

Upon the word slept forth Three of thy crew, to rid thee of that care.

Ben Jonsun. I can put on

Thy terrors, as I put thy mildness on, Image of thee in all things , and shall soon, Armed with thy might, rid heaven of these rebelled.

Milton.

Those blossoms, and those dropping gums, That lie bestrewn, unsightly and unsmooth, Ask riddance, if we mean to tread with ease. Id.

Did saints for this bring in their plate ? For when they thought the cause had need on't, Happy was he that could be rid on't. Hudibras.

The god, uneasy till he slept again, Resolved at once to rid himself of pain. Dryden. By this the cock had a good riddance of his rival.

L'Estrange.

The greater visible good does not always raise men's desire, in proportion to the greatness it appears to have ; though every little trouble moves us, and sets us on work to get rid of it. Locke.

The ladies asked, whether we believed that the men of any town would, at the same conjuncture, have loaden themselves with their wives ; or rather, whether they would not have been glad of such an opportunity to get rid of them 1 Addison.

RID'DLE, n. s., v. a., &) Danish ride ;

RID'DLIKGLY, adv. [v. n. $ Swed. rid a ; Goth. reida ; Sax. riae'eelj-, from nae'&an, to divine. An enigma ; puzzle ; puzzling question : to solve a riddle ; speak enigmatically : in the! manner of a riddle.

How did you dare To trade and traffic with Macbeth, In riddles and in charms of death ? Shakspeare.

Be plain good son, and homely in thy drift ; Riddling confession finds but riddling shift. Id.

Though like the pestilence and old fashioned love Riddlingly it catch men, and doth remove Never, till it be starved out, yet their state is poor.

ljuitl.t:.

The Theban monster that proposed Her riddle, and him who solved it not devoured ; That once found out, and solved, for grief and sptght Cast herself headlong from the Ismenian steep.

Milton.

Twas a strange riddle of a lady ; Not love, if any loved her : hey day ! So cowards never use their might, But against such as will not fight. Hudibras.

Riddle me this, and guess if you can, Who bears a nation in a single man? Dryden.

It was the maxim of a very wise prince, that ‘ he who knows not how to dissemble, knows not how to reign :’ and I desire that you would receive it as mine, that he who knows not how to riddle, knows aot how to live. Fitzosborne’s Letters.

RIDE, v. n. & v. a. J Sax. riiˆan; Dan. RI’DER, n. s. \ ride; Swed. rida ; Goth.

reida. To travel on horseback ; or be drawn by horses ; manage a horse ; be borne in a vehicle or vessel ; be supported by something subservient ; to set on so as to be borne ; to manage at will : a rider is the party carried, or who manages a horse.

The horse and bis rider hath he thrown into the sea. Lrodus.

Am not I thine ass, upon which thou hast ridden 1

Numbers.

Skill to ride seems a science, Proper to gentle blood ; some others feign To manage steeds, as did this vaunter ; but in vain.

Spenser.

The sea was grown so rough that the admiral was not able longer to ride it out with his gallies ; but was enforced to slip his anchors, and run his gallies ca ground. Knolles.

Brutus and Cassius

Are rid, like madmen, through the gates of Rome.

Shakspeare.

Were you but riding forth to air yourself, Such parting were too pretty. Id.

Infected be the air whereon they ride. Id.

The horses 1 saw well chosen, ridden, and furnished. Id.

On the western coast

Rideth a puissant army. Id.

They were then in a place to be aided by their ships, which rode near in Edinburgh Frith.

Hay ward. They ride the air in whirlwind. Milton,

Waiting him his royal fleet did ride, And willing winds to their low'r sails denied.

Dryden.

Men once walked where ships at anchor ride. Id. Inspired by love, whose business is to please, He rode, he fenced, he moved with graceful ease.

Id.

Through storms of smoke and adverse fire he rides, While ev'ry shot is levelled at his sides. South.

I would with jockies from Newmarket dine, And to rough riders give my choicest wine.

Bramstone.

Upon this chaos rid the distressed ark, that bore the small remains of mankind. Burnet.

It is provided by another provincial constitution, that no suffragan bishop shall have more than one riding apparitor, and that archdeacons shall not have so much as one riding apparitor, but only

a foot passenger. Ayliffe's Parergon.

The strong camel and the gen'rous horse, Restrained and awed by man's inferior force, Do to the rider's will their rage submit, And answer to the spur, and own the bit. Prior.

Humility does not make us servile or insensible nor oblige us to be ridden at the pleasure of every coxcomb. Collier.

Good housewives all the -winter's rage despise, Defend ###! HM l.e ridinghord's disguise. Gay.

The palliolum was like our ridivghoods, and served both for a tunick and a coat. Arbuthnot.

Let your master ride on before, and do you gallop after him. Suift't Directions to the Groom.

The nobility could no longer endure to be rUden by bakers, cobblers, and brewers. Swift .

RIDGE, n. s. 1 Sax. pnijs ; Dan. rig; Teut.

RID'GY, adj. f mgge, the back. The top of the back ; anˆ protuberance, or mound : to form a ridge : rising in a ridge.

Thou visitest the earth ; thou waterest the rM<ru thereof abundantly ; thou settles! the furrows thereof. pM/m IXT> 10>

As when a vulture on Imaus bred, Whose snowy ridge the roving Taitar bounds, Dislodges from a region scarce of prey. Milton.

Part rise in crystal wall, or ridge direct, For haste. jj

Thou from heaven

Feign'dst at thy birth was given thee in thy hair, Where strength can least abide, though all thy hairs, Were bristles ranged like those that ridge the back Of chafed wild boars, or ruffled porcupines. Id. He thought it was no time to stay ;

But in a trice advanced the knight

Upon the bare ridge belt upright. Hudibras.

About her coasts unruly waters roar, And, rising in a ridge, insult the shore. Dryden.

Far in the sea, against the foaming shore, There stands a rock, the raging billows roar Above his head in storms ; but, when ‘tis clear, Uncurl their ridgy backs, and at his feet ap;>ear.

Id.

The highest ridges of those mountains serve fo ††† the maintenance of cattle for the inhabitants of the vallies. Ray.

Wheat must be sowed above furrow fourteen days before Michaelmas, and laid up in round high warm ridges. Mortimer.

Ridge tiles or roof tiles, being in length thirteen inches, and made circular breadthways like an half cylinder, whose diameter is about ten inches or more, and about an inch and half a quarter in thickness, are laid upon the upper part or ridge of the roof, and also on the hips. Moxon.

The body is smooth on that end, and on this ‘tis set with ridges round the point. Woodward.

Then holding the spectacles up to the court †††

Your lordship observes they are made with a

straddle As wide as the ridge of the nose is ; in short.

Designed to sit close to it, just like a saddle.

Cmeptr.

RIDICULE, n. s. & v. a.-\ Fr. ridicule;

RIDI’CTJLER, / Lat. ridiculum.

RIDIC’ULOUS, adj. > Wit or banter that

RIDIC’ULOUSLY, adv. i provokes laugh—

RIDIC’ULOUSNESS, n.s. J ter : a ridiculer, one who ridicules : the adjective, adverb, and noun substantive corresponding. Thus was the building left

Ridiculous ; and the work confusion named.

Milton.

What sport do Tertullian, Minucius, and Arno-bius make with the image consecrated to divine worship ! from the meanness of the matter they are made, the casualties of fire, and rottenness they are subject to, on purpose to represent the ridiculousness of worshipping such things. Sfillingfleet.

I wish the vein of ridiculing all that is serious and good may have no worse effect upon our state, than knight errantry had (n theirs. Temple.

Kpicurus's discourse c. ncerning the original ol

the world M so ridiculously merry, that the design of his philosophy was pleasure and not instruction.

South.

He often took a pleasure to appear ignorant, that he might the better turn to ridicule those that valued themselves on their books. Addisoii.

Sacred to ridicule his whole life long, A►►od the sad burden of some merry song. Pope.

Those, who aim at ridicule, Should fix upon some certain rule, Which fairly hints they are in jest. Swift.

The ridicitler shall make only himself ridiculous. Earl of Chesterfield.

RIDING on horseback. See HORSEMANSHIP.

RIDING, in geography. Yorkshire is divided into three ridings, *viz.* the

east, west, and north ridings. In all indictments in that county, both the town and riding must be expressed.

RIDING, in naval affairs, is the state of a ship's being retained in a particular station, by means of one or more cables with their anchors, which are for this purpose sunk into the bottom of the sea, &c., in order to prevent the vessel from being driven at the mercy of the wind or current. A rope is said to ride, when one of the turns by which it is wound about the capstern or windlass lies over another, so as to interrupt the operation of heaving.

RIDING ATHWART, the position of a ship which lies across the direction of the wind and tide, when the former is so strong as to prevent her from falling into the current of the latter.

RIDING BETWEEN THE WIND AND TIDE, the situation of a vessel at anchor, when the wind and tide act upon her in direct opposition, in such a manner as to destroy the effort of each other upon her hull ; so that she is in a manner balanced between their reciprocal force, and rides without the least strain on her cables. When a ship does not labor heavily, or feel a great strain when anchored in an open road or bay, she is said to ride easy On the contrary, when she pitches violently into the sea, so as to strain her cables, masts, or hull, it is called riding hard, and the vessel is termed a bad reader. A ship is rarely said to ride when she is fastened at both the ends, as in a harbour or river, she being then moored.

RIDLEY (Nicholas), bishop of London, was descended of an ancient family, and born in the beginning of the sixteenth century, at Wilmont-swick, in Northumberland. From the grammar school at Newcastle-upon-Tyne he was sent to Pembroke Hall in Cambridge, in 1518, where he was supported by his uncle Dr. Robert Rid-ley, fellow of Queen's College. In 1522 he took his degree of A. B. ; two years after was elected fellow, and in 1525 he commenced M. A. In 1527, having taken orders, he was sent by his uncle for further improvement to the Sorbonne at Paris ; thence he went to Louvain, and continued abroad till 1529. On his return to Cambridge he was chosen under treasurer of the university; and. in 1533, was elected senior proctor. He afterwards proceeded B. D., and was chosen chaplain of the university, orator, and magister glomeripe. At this time he was much admired as a preacher and disputant. He lost his uncle in 1536, but was soon after

patronised by Cranmer, archbishop of Canterbury, who made him his domestic chaplain, and presented him to the vicarage of Herne in east Kent. In 1540, having commenced D. D., he was made king's chaplain, and elected master of his new college in Cambridge. Soo_n after he was collated to a prebend in the church of Canterbury; but was afterwards accused in the bishop's court, by Bishop Gardiner, of preaching against the doctrine of the six articles. The matter being referred to Cranmer, Ridley was acquitted. In 1545 he was made a prebendary of Westminster Abbey; in 1547 he was presented by the fellows of Pembroke Hall to the living of Soham, in the diocese of Norwich ; and was consecrated bishop of Rochester. In 1 540 he was translated to the see of London ; in which year he was one of the commissioners for examining bishop Gardiner, and concurred in his deprivation. In 1552, returning from Cambridge, he unfortunately paid a visit to the princess, afterwards queen Mary ; to whom, prompted by his zeal for reformation, he expressed himself with too much freedom; and she was scarcely seated on the throne when Ridley was doomed a victim to her revenge. He was burnt alive with Latimer at Oxford, on the 16th of October, 1555. He wrote, 1. A Treatise concerning Images in Churches. 2. A Brief Declaration of the Lord's Supper. 3. Certain Godly and Comfortable Conferences between Bishop Ridley and Mr. Hugh Latimer, during their Imprisonment. 4. A Comparison between the Comfortable Doctrine of the Gospel, and the Traditions of the Popish Religion, and other works.

RIDLEY (Dr. Gloster), was of the same fa-mily with the bishop, and was born at sea in 1702, on board the Gloucester East Indiaman, educated at Winchester school, and thence elected to a fellowship of New College, Oxford, where he proceeded B. C.L.April 29th, 1729. Dur-ing a vacancy, in 1728, he joined with Mr. Tho-mas Fletcher (afterwards bishop of Kildare), Mr. (afterwards Dr.) Eyre, Mr. Morrison, and Mr. Jennens, in writing a tragedy called The Fruitless Redress, each undertaking an act on a plan previously concerted. When they delivered in their several proportions, few readers would have known that the whole was not the production of a single hand. This tragedy, which was offered to Mr. W'ilks, but never acted, is still in MS. with another called Jugurtha. Dr. Ridley in his youth was much addicted to theatrical performances. Midhurst, in Sussex, was the place where they were exhibited ; and the company of gentlemen actors to which he belonged consisted chiefly of his coadjutors in the above tragedy. For a great part of his life he had no other preferment than the small college living of Westow in Norfolk, and the donative of Poplar in Middlesex, where he resided. To these his college added the donative of Rom-ford in Essex. In 1740 and 1741 he preached

Eight Sermons at Lady Moyer's Lecture, which were published ki 174:?, 8vo. In 1763 he published the Life of Bishop Ridley, in 4to., by subscription. In 1765 he published his Review of Philip's Life of Cardinal Pole; and in 1768,

in reward for his labors in this controversy, and Rome, he began to execute the functions of I..,

ID another which The Confessional produced, he office ; and by affability, candor iSuitv and

was presented by archbishop Seeker to a golden impartiality in the aSdSXTffiˆ

prebend m the cathedral church of Salisbury, attained a high degree of pomSihy Bu? ht

⬛⬛uffhtlin ' g ⬛⬛⬛⬛⬛⬛ " "" f11 contiˆd his invectiveˆinst L vices of

daughters. the great. tm at ˆ he ˆ

'/⬛⬛- '⬛⬛⬛ , ' Wulch See' An esculent manded and displaced. From this time it was

gram, differing from wheat in having a flatter his constant endeavour to inspire thT

spike, and the corn larger and more naked. with a fondness for their ancient liberties-for

August shall bear the form of a young man of a which purpose he caused to be hune

fierce aspect, upon his head a garland of wheat and - -*-
“f-Peacham.

RIEGO (Raphael del), a modern Spanish patriot, was of a noble family, in Asturias. He entered early into the army, and served duriuf

most public places emblematic sive of the former splendor and present decline of Rome, and to these he added frequent har-rangues upon the same subject. Having by

these means collected a number of followers, he ˆi * t

the invasion of Spain by Buonaparte. Being at last resolved to seize the supreme power”

AKic. * T’Ko OnfU rtf “\T~., u~ ; xinˆr*

taken prisoner, the constitutional general Abis-bal on his liberation gave him a staff appoint-

The 20th of May, being Whitsunday, he’ fixed upon to sanctify his enterprise; and asserted

ment ; and, when his chief betrayed the cause of that all he acted was by particular inspiration of

independence, Riego retired from the service, the Holy Ghost. About nine he came out of

In 1820 he proclaimed at the head of a batta-the church bareheaded, accompanied by the

lion the Spanish constitution, and, traversing a pope’s vicar, surrounded by 100 armed men. A

large extent of country, shut himself up in a vast crowd followed him with acclamations,

fortress with a small number of troops. Aware The conspirators carried three standards before

however of the danger of delay, he sallied forth him, on which were wrought devices, intimating

from the Isle of Leon with a few hundred fol-that his design was to reestablish liberty, justice, lawers, made his way through the forces that op-

posed him, visited several large towns, fought obstinately, lost the greater part of his troops, and retired to the mountains. At last the provinces ranged themselves under his banners, and he was ultimately appointed a deputy to the Cortes of 1822, of which assembly he became president, displaying in this arduous post botli a firmness and a conciliatory spirit which did him honor. When Ferdinand refused to maintain the constitution, Riego again appeared in arms to assert the liberty of his country ; but was taken prisoner after the surrender of Cadiz to the French, and, being conveyed to Madrid, was executed as a traitor, October 7th, 1823. His -widow sought refuge in England, and died at Chelsea, June 19th, 1824.

RIENZI (Nicholas Gabrini de), was born at Rome. Though his father was a vintner, and his mother a laundress, they gave th►►ir son a liberal education ; and to a good natural understanding he joined great assiduity, and made considerable, proficiency in ancient literature. He had a strong memory : and retained much of Cicero, Valerius Maximus, Livy, the two Senecas, and Caesar. He passed whole days among the inscriptions in Rome, and soon was esteemed a great antiquary. lie also insinuated himself into the favor of the administration, and was nominated one of the deputies sent to pope Clement VI., who resided at Avignon. The intention of this deputation was to make Clement sensible how prejudicial his absence was to the interest of Rome. While employed in this embassy he took the liberty to tell the pope that the grandees of Rome were avowed robbers, thieves, adulterers, and profligates ; who authorised the most horrid crimes. To them he attributed the desolation of Rome ; of which he drew so lively a picture that the pope, incensed against the Roman nobility, made Rienzi his apostolic notary, and sent him back loaded with favors. Having returned to

and peace. In this manner he proceeded directly to the Capitol, where he mounted the rostrum ; ﬁﬁﬁand expatiated on the miseries to which the Ro-mans were reduced : telling them ‘ that the happy hour of their deliverance was at length come, and that he was to be their deliverer, regardless of the dangers to which he was exposed for the service of the Holy Father and the peo-ple’s safety.’ After which he ordered the laws of what he called the good establishment to be read ; ‘ assured that the Romans would resolve to observe these laws, he engaged in a short time to reestablish them in their ancient grandeur.’ These laws promised plenty and security, and the humiliation of the nobility, who were deemed common oppressors. Such laws could not fail of being agreeable to the people, and enraptured with the pleasing ideas of a liberty to which they had long been strangers, and the hope of gain, they entered most zealously into the fanaticisms of Rienzi. They resumed the authority of the Romans ; they declared him sovereign of Rome ; and granted him the power of life and d’eath, of rewards and punishments, of enacting and repealing the laws, and treating with foreign powers ; in a word, they gave him full and supreme authority in all the territories of the Romans. Rienzi, arrived at the summit of his wishes, pretended to be very unwilling to accept of their offers, except upon two conditions : the first that they should nominate the pope’s vicar (the bishop of Orvieto) his copartner; the second that the pope’s consent should be granted. The people granted his request, but paid all the ho-nors to him ; the bishop appeared a mere sha-dow, Rienzi was seated in his triumphal chariot. He seized upon the palace, where he continued after he had turned out the senate; and, the same day, he began to dictate his laws from the Capitol.’ This election, though not very pleasing to the pope, was ratified by him ; nevertheless, Rienzi, as he owed his elevation to the1 people, chose the title of tribune, as their

magistrate. It was conferred on him and his copartner, with the addition of deliverers of their country. His behaviour in his elevation was at first such as commanded esteem and respect, not only from the Romans, but from the neighbouring states. The troubles of a throne few but princes can properly appreciate, and Rienzi soon found that his exalted station only rendered him a more easy mark for the shafts of envy and hatred, and of distrust. The pope conceived his designs to be contrary to the interests of the holy see ; and the nobles conspired against him ; they succeeded, and Rienzi was forced to quit an authority he had possessed little more than six months, and to make a precipitate flight. He now went to Prague, to Charles king of the Romans, whom the year before he had summoned to his tribunal, and who, he foresaw, would deliver him up to a pope highly incensed against him. He was accordingly soon after sent to Avignon, and there thrown into prison, where he continued three years. The disturbances in Italy, occasioned by the number of petty tyrants that had established themselves in the ecclesiastical territories, and even in Rome, occa-si6ned his enlargement. Innocent VI., who succeeded Clement, sensible that the Romans still entertained an affection for Rienzi, thought him a proper instrument to assist him in reducing these petty tyrants ; and therefore not only gave him his liberty, but appointed him governor and senator of Rome. He met with many obstacles to the assumption of this newly granted authority; all which however he overcame. But giving way to his passions, which were immoderately warm, and attempting to revenge himself on some of his former enemies, he excited a general resentment against him, and he was murdered, October 8th, 1354. ‘ Such was the end of Nicholas Rienzi, one of the most renowned men of the age ; who, after forming a conspiracy apparently the most extravagant, and executing it in the sight of almost the whole world ; after causing plenty, justice, and liberty, to flourish among the Romans ; after protecting potentates, and terrifying sovereign princes; after reestablishing the ancient majesty and power of the Roman republic, and filling all Europe with his fame during the seven months of his first reign ; after having compelled his masters themselves to confirm him in the authority he had usurped against their interests ††† fell at the end of his second, which lasted not four months, a sacrifice to the nobility, whose ruin he had vowed, and to those vast projects which his death prevented him from putting into execution.’

RIESENGEBIRGE, i. e. the Giants’ Mountains, a name under which is comprehended all that part of the great Sudetic chain which begins *n the borders of Lusatia, and separates Bohemia and Moravia from Silesia, till it joins the Carpathians. This term however is properly confined to that*

part of the range which lies between the sources of the Neisse and the Bober ; a track of no great length, but containing the loftiest mountains of the north or central part of Germany, being almost every where about 3000 feet In'height. Of these, the Schnee- ergt has a height of 5-270 English feet; the

great Sturmhaube of 5030, and the lesser Sturmhaube nearly as much. From the top of the first, Breslau (distant seventy miles to the north-east) and Prague (at nearly the same distance to the south-west) are visible. The valleys are picturesque, and produce the finest Alpine plants, but are not well adapted to corn, and the inhabitants are miserably poor.

RIETI, an old town of Italy, in the States of the church, the capital of a delegation of the same name, and situated on the Velino. It is not well built, but is the see of a bishop, and has, besides its cathedral, a number of churches and convents. It has some manufactures of woollens, and in the environs the culture of woad for dyeing is much followed. In 1785 this town was much damaged by an earthquake. Inhabitants 6500. Twenty-five miles S. S. E. of Spoleto, and thirty-seven N. N. E. of Rome.

RIFE, adj. ˆ Saxon nype ; Belg. rijf;

RIFE'LY, adv. >Swed. ref. Prevalent; a—

RIFE'NESS, n. s. j bounding : the adverb and nounsubstantive corresponding: used of epide-mical distempers.

While those restless desires, in great men rife, To visit so low folks did much disdein, This while, though poor, they in themselves did reign. Sidney.

Guyon closely did await Advantage ; whilst his foe did rage most rife ; Sometimes athwart, sometimes he strook htm straight, And falsed oft his blows. Spenser.

The plague was then rife in Hungary. Knolles.

It was rifely reported that the Turks were coming in a great fleet. Id. History.

Blessings then are plentiful and rife, More plentiful than hope. He:bert.

Space may produce new worlds ; whereof so rife There went a fame in heaven, that he ere long Intended to create. Milton's Paradise Lcil.

Before the plague of London, inflammations of the lungs were rife and mortal. Arbuthnot on Air.

He ascribes the great rifeness of carbuncles in the summer, to the great heats. Id.

Secure beneath the storm Which in Ambition's lofty land is rife, Where peace and love are cankered by the worm Of pride,' each bud of joy industrious to deform.

Beattie.

RI'FLE, v. a. ˆ Fr. riffer; rifler ; Belg. rijfe—

RI'FEER, n. s. S ten ; Swed. rifla. To rob; pillage ; plunder ; take away.

Stand, Sir, and throw us what you have about you ; if not, we'll make you, Sii, and rifle you.

Shakspeare.

Men, by his suggestion taught, Ransacked the centre, and with impious hands Rifled the bowels of their mother earth. For treasures better hid. Milton's Paradise Lost.

You have rifled my master ; who shall maintain me ? L' Estrange.

A commander in the parliament's rebel army rifled and defaced the cathedral at Litchfield. South.

Mine is thy daughter, priest, and shall remain, And prayers, and tears, and bribes shall plead in

vain, Till time shall rifle every youthful grace. Pope.

RIFLE, in military affairs, a kind of gun, which has the inside of its barrel cut with from three to nine or ten spiral grooves, so as to make it resemble a female screw, varying from a com-mon screw only in this, that its grooves or rifle*

aie less deflected, and approach more to a right line, it being usual for the grooves with which the best rifled barrels are cut, to take about one whole turn in a length of thirty inches. The number of these grooves diners according to the size of the barrel and fancy of the workman ; and iheir depth and width are not regulated by any invariable rule. There are also different methods of charging pieces of this kind, but the usual one is as follows : ††† After the powder is put in, a leaden bullet, somewhat larger than the bore of the gun, is taken, and it, having been well greased, is laid on the mouth of the piece, and rammed down with an iron rammer. The softness of the lead giving way to the violence with which the bullet is impelled, that zone of the bullet which is contiguous to the piece, varies its circular form, and acquires the shape of the inside of the barrel, so that it becomes the part of a male screw, exactly fitting the indents of the rifle. And hence it happens that, when the piece is fired, the indented zone of the bullet follows the sweep of the rifles, and thereby, besides its progressive motion, acquires a circular one round the axis of the barrel, which motion will be continued to the bullet after its separation from the piece ; by which means a bullet discharged from a rifled barrel is constantly made to whirl round an axis which is coincident with the line of its flight.

In Germany and Switzerland, an improvement is made in the abore method, by cutting a piece of very thin leather in a circular shape, larger than the bore of the barrel. This circular piece being greased on one side is laid upon the muzzle with its greasy side downwards, and the bullet, being placed upon it, is then forced down the barrel with it : by which means the leather encloses the lower half of the bullet, and by its interposition between the rifles, prevents the lead from being cut by them. But in those barrels where this method is practised, the rifles are generally shallow, and the bullet ought not to be too large. The rifle-barrels, which have been made in England, where they are not very com-mon, are contrived to be charged at the breech, the piece being, for this purpose, made larger there than in any other part. The powder and bullet are put in through the side of the barrel by an

opening, which, when the piece is loaded, is filled up with a screw. By this means, when the piece is fired, the bullet is forced through the rifles, and acquires the same spiral motion as in the former kind of pieces ; but these are neither safe nor so certain as the others.

To enable these pieces to be loaded with greater expedition, it has been proposed to have the balls cast with projections to them, by making corresponding hollows round the zone of the bullet-mould ; by this means the balls may be fitted so accurately to the rifles as to leave scarcely any windage ; while the friction will be less than it is either when the ball is put in at the breech, or forced in at the muzzle. And, to render them in this respect still more complete, the sweep of the rifles should be in each part exactly parallel to each other; for then, after the bullet is once put in motion, it will slide out of the barrel without any shake, and with a much

smaller degree of friction than if the threads of the rifles have not all of them the same degree of incurvation. The foreigners are so exact in this respect that they try their pieces in the following manner : ❓❓❓ They first pour melted lead into them, and, letting it cool, they procure a leaden cylinder of perhaps two or three diameters in length, exactly fitted to one part of the inside of the piece ; then if this leaden cylinder, being gently pushed by the rammer, will pass from one end of the barrel to the other, without any sensible strain or effort, they pronounce the piece perfect ; but if it any where sticks, or moves hard, they esteem it defective.

RIFLEMEN, marksmen armed with rifles. They formed the most formidable enemies during the war in America, being posted along the American ranks, and behind hedges, &c., for the purpose of picking off the British officers ; many of whom fell by the rifle in our contest with that country. Most of these were hunters and back woodsmen, who could hit a dollar at eighty paces, and were not therefore likely to miss their aim. In the attack of New Orleans, a band of these men posted behind a breached redoubt rendered it perfectly impregnable. One of these men having claimed the honor of killing a British officer, another asserted that he himself had shot him in the breast. ‘ I am sure I hit him in the head,’ replied the other, and on examination he was found shot through both in the breast and head, though the British troops never approached nearer the rampart than 150 yards. This has been called murderous practice, and some persons have questioned how far it ought to be admitted in civilised warfare; but is not war itself a murderous practice ? A citizen of Boston being asked, after the

affair at Lexington, ‘how he dared to take aim at a British officer as he would at a mad dog ? ‘ replied that, ‘ having made up his mind to fight, he thought he had better take aim to prevent waste of time and ammunition.’ Our infantry, on the contrary, never take aim, but, like the heroes of Chalk Farm, generally fire over their opponents’ heads. ‘The musket in such hands/ observes colonel James, ‘ is by no means so formidable a weapon as the old English bow. A brigade of rifles has indeed been added to our war establishment, but it is throughout the line that the system of firing is defective.’

RIFT, n.s,v. a., & v. n. Goth. rift. From RIVE. A cleft; breach ; opening : to cleave; to burst.

He pluckt a bough, out of whose rift there come Small drops of gory blood. Spenser.

She did confine thee

Into a cloven pine, within which rift

Imprisoned, thou didst painfully remain.

Shakipcare. To the dread rattling thunder

Have I given fire, and ri/ted Jove’s stout oak

With his own bolt. Id. Tempest.

I’d shriek, that even your ears

Should rift to hear me. Id. Winter’s Tale.

In St. James’s fields is a conduit of brick, unto which joineth a low vault ; at the end of that is a round house, with a small slit or rift ; and in the conduit a window : if you cry out in the rift, it makes a fearful roaring at the window. Bacon.

Some trees are best for ship-timber, as oaks that

gvow in moist grounds ; for that maketh the timber tough, and not apt to rift with ordnance.

Bacon’ ‘ > Natural History. Either tropick

‘Gan thunder, and both ends of heaven ; the clouds From many a horrid rift abortive poured Fierce rain, with lightning mixt. Milton.

At sight of him the people with a shout Rifted the air. Id. Agoniste*.

Some pick out bullets from the vessels’ sides, Some drive old oakum through each seam and rift.

Dry den.

On rifted rocks, the dragon’s late abodes, The green reed trembles. Pope’s Meisiah.

RIG, v. a.) From rig or ridge, the back. RIG’GING, n. s. \ To dress ; accoutre ; fit with tackle : the tackle of a ship : ‘ cloaths are proverbially said .to be for the back, and victuals for the belly.’ Johnson.

My mmde for Egypt stoode ; When nine faire ships I rigged forth for the flood.

Chapman. He bids them rig the fleet. Denham.

To plow the deep, To make fit rigging, or to build a ship. Creech.

He, like a foolish pilot, hath shipwrecked My vessel gloriously rigged. Millon’s Ayonistes. His battered rigging their whole war receives, All bare, like some old oak with tempests beat, He stands, and sees below his scattered leaves.

Dryden.

Jack was rigged out in his gold and silver lace, with a feather in his cap ; and a pretty figure he made in the world. L’Estrange.

The sinner shall set forth like a ship launched into the wide sea, not only well built and rigged ; but also carried on with full wind. South.

He rigged out another small fleet, and the Achseans engaged him with theirs. Arbuthnot.

RIGA, the capital of Livonia, European Rus-sia, is situated in a large plain on the Dwina or Duna, nine miles from the sea. It was, in a commercial sense, the second city of Russia, until the rapid increase of Odessa. The port is both spacious and safe ; and the town stands on

the right, the suburbs on the left bank of the river. Without being a regular fortress, Riga has considerable strength: the entrance of the river is guarded by the fortress of Dunamunde. The principal public buildings are the town-house, exchange, house of assembly for the states of Livonia, the arsenal, the hospital of St. George, and the Catharinenhof. The church of St. Peter is remarkable for its fine tower. The Baltic being frozen during winter, vessels are laid up in dock here during several months. The Dwina is crossed by a bridge of pontoons, which rise and fall with the tide. Its breadth is forty feet, but its length less than 2600 feet, forming in summer a fashionable promenade. At the beginning of winter the pontoons ar& removed, and the piles being raised by the frost, are drawn on shore where they remain till spring, the river being, during this interval, passed on the ice. The shipping in the river indicates great activity. The export trade is chiefly managed by English and Scotch houses, whose principal articles of commerce are timber, flax, hemp, and corn. The majority of the inhabitants are Germans and Livonians, the Russians being comparatively few. Canals are the grand desiderata of Russian sea-ports, and a new one is now excavating here

for communication with the interior. Th% average number of vessels arriving yearly at Riga, is between 700 and 800 ; the computed value of the exports ►►1,000,000 sterling, of which fully the half are* sent to British ports. The manufactures are insignificant, being confined to starch, sugar, and small articles. The imports, if not equal in value to the exports, are more varied, comprising groceries, printed cottons, woollens, silk, and wine, bay-salt and fish. Bay salt, imported chiefly from Spain, is sent up the Dwina. In respect to religion, the majority are Lutherans, or members of the Greek church. There is -here a lyceum or academy ; a high school, with a provision for maintaining and educating poor children ; a public library, a cabinet of natural history, and a literary society, all recently formed. Riga has suffered much both by fire and sieges.

The GULF of RIGA is a considerable bay of the Baltic, between Courland, Livonia, and Esthonia. It is also called the Gulf of Livonia.

RIGALTIUS (Nicolas), an ingenious French author, the son of a physician, born in Paris; 1577. He was educated among the Jesuits. His first work, Funus Parasiticum, printed in 1596, procured him the friendship oi Th anu> ; who, when he died in 1617, appointed him a tutor to his children. He was appointed to arrange the royal library along with Isaac Casau-bon, whom he succeeded as librarian. He was next made procureur-general of the supreme court of Nancy, counsellor of the parliament of Metz, and intendant of that province. He wrote many learned works, but is chiefly valued for his critical notes upon Cyprian and Tertullian. He died in 1654.

RIGAUD (Hyacinth), an eminent ‘ >(nch painter, born at Perpignan, in 1663, and generally called the Vandyck of France. He was director of the Academy of Paintings, and died in 1743.

RIGBY (Richard), esq., an eminent political character, born about 1722. His father was a woollen-draper in London ; and having been appointed factor of the South Sea Company, un-der the assiento contract with Spain, had accumulated a fortune, and purchased the estate of Mistley Hall in Essex, worth ►►1100 a-year. Dying, in 1730, he was succeeded by his only son, Richard ; who, on becoming of age, was returned for Sudbury, after a most expensive election, and was soon courted by both parties in parliament. He became attached to the duke of Bedford, who, being appointed lord lieutenant of Ireland, took

Mr. Rigby with him as his secretary. Under the duke's administration, the affairs of Ireland were managed so much to the satisfaction of the king, that he appointed Rigby to the lucrative sinecure place of master of the rolls. The duke, at his death, left him one of his executors, with a large legacy. On the 20th of April, 1763, Mr. Rigby was made a privy counsellor of Great Britain, under the duke of Grafton. On the 6th January, 1768, he was appointed one of the vice-treasurers of Ireland, a sinecure of ––3000 a-year, but this he soon resigned for the office of paymaster-general of the forces, a place worth ––16,000 a-year

which he held from June 14th, 1768, till March t762 ; so that for fourteen years, his annual in-come was not less than ––20,000. The dissolution of lord North's administration put an end also to Mr. Rigby's political existence. He avoided farther interference with all parties, but this did not prevent his being called upon by both to give an account of his administration of the public money. Mr. Rigby compromised matters, and paid ––10,000 for the interest of the unsettled balance, a circumstance totally without precedent. He died April 6th, 1788, leaving baly one natural daughter.

RIGGING OF A SHIP, a general name given to all the ropes employed to support the masts, and to extend or reduce the sails, or arrange them to ihe disposition of the wind. The former, which are used to sustain the masts, remain usually in a fixed position, and are called standing rigging ; such are the shrouds, stays, and back-stays. The latter, whose office is to manage the sails, by communicating with various blocks or pulleys situated in different places of the masts, yards, shrouds, &c., are comprehended in the general term of running rigging ; such are the braces, sheets, haliards, clue-lines, brails, &c. See SHIPS.

RIG GISH, adj. From rig, an old word for a whore. Johnson. Wanton : whorish.

Vilest things

Become themselves in her, that the holy priests Bless her, when she is riggish. Shakspeare.

RIGHT, adj., adv., inter}., n. s.,~} Sax. rust;

RIGHT'EOUS, adj. [& v. a. Belg.reght ;

RIGHT'EOUSLY, adv. \ Teut. recht ;

RIGHTEOUSNESS, n. s. \ Ital. retto ;

RIGHT'FUL, adj. ˆLat. rectus.

RIGHT'FULLY, adv. Fit; proper;

RIGHT'FULNESS, n. s. just; true;

RIGHT'LY, adv. becoming;

RIGHT'NESS, n. s. J preferred

(hence the ' right hand') ; convenient : as an ad-verb, direct ; according to rule ; in a great de-gree : as a nounsubstantive, justice ; truth ; correctness; just claim; interest; property; immunity : ' to rights' is, to a right or proper position : to right, to do justice to : righteous, just ; honest; equitable: the adverb and nounsub- stantive corresponding : rightful, having the right or a just claim : the adverb and nounsubstantive corresponding : rightly, according to right or to iustice; exactly: Tightness corresponding.

And he took hvm hy the righthond and heuyde hym up. Wiclif. Dedis. 3.

That be far from thee, to slay the righteous with the wicked ; and that the righteous should be as the wicked. Genesis.

The Lord God led me in the right way.

The people passed over right against Jericho.

Joshua iii. 16.

Their heart was not right with him, neither were they stedfast in his covenant. Psalm Ixxviii. 37.

A thousand shall fall at thy side, and ten thousand at thy right hand; but it shall not come nigh thee. Id. xci. 7.

Ye shall he driven out right forth, and none shall gather up him that wandereth. Jeremiah xlix. 5.

We wish one end ; but differ in order and way, that leadeth rightly to that end. Ascham.

But still although we fail in perfect riyhtfulnesf, Seek we to tame these superfluities, Nor wholly wink though void of purest sightfulness.

Sidney.

Nor would, for gold or fee Be won, their rightful causes down to tread.

Spenser.

The scripture, ascribing to the persons of men righteousness, in regard of their manifold virtues, may not be construed, as though it did thereby clear them from all faults. ??? Hooker.

The proud tyrant would many times say, that whatsoever belonged unto the empire of Rome, was of right his, for as much as he was possessed of the imperial scepter, which his great grandfather Mahomet had by law of arms won from Constantine.

Knalles.

You are right, justice, and you weigh this well ; Therefore, still bear the balance and the sword.

Shakspeare. The citizens,

Let them but have their rights, are ever forward In celebration of this day with shews. Id.

How will this grieve you,

When you shall come to clearer knowledge, that You thus have

published me ! gentle, my lord, You scarce can right me thoroughly. */d.

Right noble princes, I'll acquaint OUT duteous citizen. Id.

1 cannot joy, until I be resolved Where our right valiant is become. Id.

Some will mourn in asbes, some coal black, For the deposing of a rightful king. Id.

The rank of osiers, by the murmuring stream, Left on your right-hand brings you to the place. Id.

Let my jealousies be your dishonour ; You may be rightly just, whatever I shall think.

Id.

The Roman citizens were, by the sword, taught to acknowledge the pope their lord, though they knew not by what right. , Raleigh.

Insects have voluntary motion, and therefore imagination ; for ants go right forward to their hills, and bees know the way from a flowery heath to their hives. Bacon.

Persons of noble blood are less envied in their rising ; for it seemeth but right, done to their birth.

Id.

Sounds move strongest in a right line, which nevertheless is not caused by the right nets of the line, but by the shortness of the distance.

Id. Natural History. When I had climbed a height Rough and right hardly accessible ; 1 might Behold from Circe's house, that in a grove Set thicke with trees stood, a bright vapour move.

Chapman.

The senate will smart deep For your upbraidings : I should be right sorry To have the means so to be venged on you, As I shall shortly on them. Ben Jonson.

I mention the right honourable Thomas Howard, lord high marshal. Peacham on Drawing.

His faith perhaps in some nice tenets might Be wrong ; his life I'm sure was in the right.

Cowley.

If the injured person be not righted every one of them is wholly guilty of the injustice, and bound to restitution. ' Taylor.

Their only thoughts and hope was to defend their own rights and liberties, due to them by the law.

Clarendon.

On his right

The radiant image of his glory sat, His only Son. Milton.

This way, right down to Paradise descend. Id.

One rising, eminent

In wise deport, spake much of right and wrong, Of justice, of religion, truth, and peace, And judgment from above. Id. Paradise Lost.

Subdue by force, all who refuse Right reason for their law ; and for their king Messiah, who by right of merit reigns. Milton.

Each of his reign allotted, rightlier called Pow'rs of fire, air, water, and earth beneath. Id.

Descend from heaven, Urania ! by that name If rightly thou art called. Id. Paradise Lost.

Right many a widow his keen blade, And many fatherless hath made.

Hudibrai. It is not with certainty to be received concerning the right and left hand, that men naturally make use of the right, and that the use of the other is a digression. Browne.

You, with strict discipline instructed right, Have learned to use your arms before you fight.

Roscommon.

I could not expedient see,

On this side death, to right our family. Waller.

God hath a sovereign right over us, as we are his

creatures, and by virtue of this right, he might,

without injustice, have imposed difficult tasks : but

in making laws, he hath not made use of this right.

Tillutson.

Some seeking unto courts, and judicial endeavours to right ourselves, are still innocent. Kettleworth.

Our calendar wants to be reformed, and the equinox rightly computed ; and, being once reformed and set right, it may be kept so, by omitting the additional day at the end of every hundred and thirty-four years. Holder on Time.

The custom of employing these great persons in all great offices passes for a right. Temple.

The left foot naked, when they march to fight, But in a bull's raw hide they sheathe the right.

Dry den.

Take heed you steer your vessel right, my son, This calm of heaven, this mermaid's melody, Into an unseen whirlpool draws you fast, And in a moment sinks you. Id.

The pris'ner freed himself by nature's laws, Born free, he sought \i \sright. Id.

Make my father known, To right my honour, and redeem your own.

Id.

Kill my rival too, for he no less Deserves ; and I thy righteous doom will bless. Id. Here wretched Phlegias warns the world with

cries,

Could warning make the world more just or wise ; Learn righteonsness, and dread the' avenging deities.

Id.

My right to it appears, By long possession of eight hundred years. Id.

Descriptions, figures, and 'fables, must be in all heroick poems ; every poet hath as much right to them, as every man hath to air. Id.

Henry, who claimed by succession, was sensible that his title was not found, but was rightfully in Mortimer, who had married the heir of York.

Id. Preface to Fables. Should I grant, thou didst not rightly see ; Then thou wert first deceived. Dtvfen.

cases, the right of succession could not have been certainly determined. Id.

The idea of a right lined triangle necessarily carries with it an equality of its angles to two right.ones.

Id.

A man can never have so certain a knowledge, that a proposition which contradicts the clear principles of his own knowledge, was divinely revealed, or that he understands the words rightly, wherein it is delivered ; as he has, that the contrary is true.

Id.

Good men often suffer, and that even for the sake of righteousness. Nelson.

It is not necessary for a man to be assured of the righteousness of his conscience, by such an infallible certainty of persuasion as amounts to the clearness of a demonstration ; but it is sufficient if he knows it

upon grounds of such a probability as shall exclude all rational grounds of doubting. South.

Agrippa is severally ranged in sets of medals among the emperors ; as some among the empresses have no other right. Addisun.

Seldom your opinions err ; Your eyes are always in the right. Prior. Gather all the smiling hours ; Such as with friendly care have guarded Patriots and kings in rightful wars. Id.

We invade the rights of our neighbours, not upon account of covetousness, but of dominion, that we may create dependencies. Collier on Pride.

These strata failing, the whole tract sinks down to rights in the abyss, and is swallowed up by it.

Woodward.

Like brute beasts, we travel with the herd, and are never so solicitous (for the rightness of the way, as for the number or figure of our company.

Rogers'i Sermons.

A time there will be, when all these unequal distributions of good and evil shall be set right, and the wisdom of all his transactions made as clear as the noon-day. Atterbury.

Right, cries his lordship, for a rogue in need To have a taste is insolence indeed ; In me 'tis noble, suits by birth and state. Pope.

Is this a bridal or a friendly feast 1 Of whom their deeds I rightlier may divine, Unseemly flown with insolence or wine. Id. If my present and past experience do exactly coincide, I shall then be disposed to think them both right. Seattle.

RIGHTS, BILL OF, in law, is a declaration delivered by the lords and commons to the prince and princess of Orange, 13th of February 1688 ; and afterwards enacted in parliament, when they became king and queen. It sets forth that king James did, by the advice of divers evil counsellors, endeavour to subvert the laws and liberties of this kingdom, by exercisirg a power of dispensing with and suspending of laws; by levying money for the use of the crown, by pretence of prerogative, without the consent of parliament; by prosecuting those who petitioned the kitfg, and discouraging petiticns ; by raising and

keeping a standing army in time

of peace; by violating the freedom of election of

Might and right are inseparable in the opinion of mernbers to serve in parliament; by violent prosecutions in the court of king's bench, and

the world. L'F.itrange.

To understand political power right, and derive it from its original, we must consider what state all men are naturally in, and that is a state of perfect freedom to order their actions, and dispose of their possessions and persons. Locke.

There being no law of nature, nor positive law of God, that determines which is the right heir in all

causing partial and corrupt jurors to be returned on trials, excessive bail to be taken, excessive fines to be imposed, and cruel punishments to be inflicted ; all of which were declared to be illegal. And the declaration concludes in tl ese remarkable words ; and they do claim, demai tl,

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and insist upon, ' all and singular the premises, as their undoubted rights and liberties.' And the act of parliament itself (1 W. & M. stat. 2 cap. 2), recognizes ' all and singular the rights and liberties asserted and claimed in the said declaration to be the true, ancient, indubi'able

rights of the people of this kingdom.'

RIG'ID, adj. ~\ Fr. rigide ; Lat. rigidus.

RIGID'ITY, n. s. f Stiff ; inflexible ; unpliant ;

RIG'IDLY, adv. ►► severe; cruel; the noun—

RIG'IDNESS, n. s. J substantives and adverb corresponding.

This severe observation of nature, by the one in her commonest, and by the other in her absolutest forms, must needs produce in both a kind of rigidity, and consequently more naturalness than gracefulness. Walton's Architecture.

His severe judgment giving law, His modest fancy kept in awe ; As rigid husbands jealous are, When they believe their wives too fair. Denham. ,

Queen of this universe ! do not believe Those rigid threats of death ; ye shall not die.

Milton.

A body that is hollow may be demonstrated to be more rigid and inflexible than a solid one of the same substance and weight. Ray on the Creation.

Cressy plains

And Agincourt, deep tinged with blood, confess What the Silures vigour unwithstood Could do in rigid fight. Philips.

Rigidity is said of the solids of the body, when, being stiff or impliable, they cannot readily perform their respective offices ; but a fibre is said to be riyid when its parts so strongly cohere together, as not to yield to that action of the fluids, which ought to overcome their resistance in order to the preservation of health. Arlmthnot.

RIG'LET, n. s. Fr. re-let, of Lat. regula. A flat thin square piece of wood, used by printers and others.

The pieces that are intended to make the frames ror pictures, before they are moulded, are called riglets. Moxon.

RIG'OL, n. s. [perhaps a corruption of RIN-GLE]. A circle. Used in Shakspeare for a dia-dem.

This sleep is sound ; this is a sleep, That, from his golden rigol, hath divorced So many English kings. Shakspeare. Henry IV.

RIGOLL, or REGAL, a kind of musical instrument, consisting of several sticks bound together, only separated by beads, and struck with a ball at the end of a stick. Such is the account which Grassineau gives of this instrument. Skinner, upon the authority of an old English dictionary, represents it as a clavichord ; possibly founding his opinion on the nature of the office of the tuner of the regals. Sir Henry Spelman derives the word rigoll from the Italian rigabello, a musical instrument, ancienily used in churches instead of the organ. Walther, in his description of the regal, makes it/ to be a reed-work in an organ, with metal and also wooden pipes and bellows adapted to it. He adds that the name of it is supposed to be owing to its having been presented by the inventor to some king. From an account of the

regal used in Germany, and other parts o. Europe, it appears to consist of pipes and keys on one side, and1 the bellows and wmd chest on the other. Lord Verulam distinguishes between the regal and the organ, in a manner which shows them to be instruments of the same class. Upon the whole, there is reason to conclude that the regall or rigoll was a pneumatic and not a stringed instrument. Marsennus relates that the Flemings invented an instrument, les regales de bois, consisting of seventeen cylindrical pieces of wood, decreasing gradually in length, so as to produce a succession of tones and semi-tones in the diatonic series, which had keys, and was played on as a spinet ; the hint of which, he says, was taken from an instrument in use among the Turks, consisting of twelve wooden cylinders, of different lengths, strung together, which being suspended and struck with a stick, having a ball at the end, produced music. ??? Hawkins's Hist. Mus. vol. ii. p. 449.

RIG'OR, n. s. \ Lat. rigor. Cold ; stiff—

RIG'OROUS, adj. > ness ; straitness ; grimly ;

RIG'OROUSLY, adv. j applied to the cold fit of

some diseases ; rage : the adjective and adverb

corresponding.

He at his foe with furious rigour smites,

That strongest oak might seem to overthrow ; The stroke upon his shield so heavy lights

That to the ground it doubleth him full low.

Spenser.

It may not seem hard, if in cases of necessity certain profitable ordinances sometimes be released, rather than all men always strictly bound to the general rigour thereof. Hooker.

He shall be thrown down the Tarpcian rock With rigorous hands ; he hath resisted law; And therefore law shall scorn him further trial Than the severity of public power. ‘ Shahtpeare.

Driven by the necessities of the times and the temper of the people, more than led by his own disposition to any height and rigour of actions.

King Charles.

Nature has got the victory over passion, all his rigour is turned to grief and pity. Denham ‘s Sophy.

Heat and cold are not, according to philosophical rigour, the efficients ; but are names expressing our

passions.

Glanvilte.

He resumed his rigours, esteeming his calamity such a one as should not be outlived, but that it be-came men to be martyrs to. Fell.

The rest his look Bound with Gorgonian rigour, not to move. Milton.

Lest they faint

At the sad sentence rigorously urged, For I behold them softened, and with tears, Bewailing their excess, all terror hide. Id. The stones the rigour of their kind expel, And supple into softness as they fell.

Dryden.

Does not looseness of life, and want of a due sobriety in some, drive others into rigours that are unnecessary ? Sprat.

The base degenerate age requires Severity and justice in its rigour : This awes an impious boid offending world.

Addison.

Are these terms hard and rigorous, beyond our capacities to perform ? Jb□□m’t Sermons.

Rigors, dullness, and a fever, attend every such new suppuration. Blackmort.

Rigwr makes it difficult for sliding virtue to recover Qutrittm.

RILL, n. s. & v. a. } Lat. rivulus. A small RILL’ET, n.s. $ brook ; a streamlet : to

run in small streams.

The’ industrious muse thus labours to relate, Those ritlets that attend proud Tamer and her state.

Drayton.

A creeke of Ose, between two hills, delivering a little fresh rillet into the sea. Carew.

May thy brimmed waves from this Their full tribute never miss, From a thousand petty rills, That tumble down the snowy hills. Milton. lo !

Apollo, mighty king, let envy, Ill-judging and verbose, from Lethe's lake, Draw tuns immeasurable ; while thy favour Administers to my ambitious thirst The wholesome draught from Aganippe's spring Genuine, and with soft murmurs gently rilling Adown the mountains where thy daughters haunt.

Prior.

On every thorn delightful wisdom grows, In every rill a sweet instruction flows ; But some, untaught, o'erhear the whispering rill, In spite of sacred leisure blockheads still. Young. There, as meek Evening wakes her temperate

breeze, And moon-beams glimmer through the trembling

trees,

The rillt that gurgle round shall sooth her ear, The weeping rocks shall number tear for tear.

Darwin.

RIM, n. s. Sax. nitna ; Teut. rent. A bor-der ; margin ; boundary.

We may not affirm that ruptures are confinable unto one side, as the peritoneum or rim of the belly may be broke ; or its perforations relaxed in either. Browne's Vulgar Errours.

The drum-maker uses it for rimbs. Mortimer. It keeps off the same thickness near its centre ; while its figure is capable of variation towards the rim. Grew.

RIME, n. s. Sax. {?nim. Hoar frost: also of Goth, rimma, a hole ; chink.

Breathing upon a glass giveth a dew ; and in rime frosts you shall find drops of dew upon the inside of glass windows. Bacon.

The air is now cold, hot, dry, or moist ; and then thin, thick, foggy, rimy, or poisonous. Harvey.

Though birds have no epiglottis, yet can they contract the rime or chink of their larinx, so as to prevent the admission of wet or dry indigested.

Browne's Vulgar Erroiin.

In a hoar frost, a rime is a multitude of quadrangular prisms piled

without any order one over another. Grew.

RIMINALDI (Orazio), an eminent historical painter, born at Pisa in 1598. His chief paintings are Samson destroying the Philistines, the Brazen Serpent, and the Assumption of the Virgin. He died in 1638.

RIMINI, the ancient Ariminum, a large town of tbe Ecclesiastical States, Italy, situated on the Marecchia, near its embouchure. It had formerly a good harbour ; but the sea has now retired to the distance of a mile and a half; and the town is surrounded by a plain, opening on the one side to the Adriatic, and bounded on the other by a range of hills, which terminate in the great chain of the Appennines. It communicates with the sea by means of a canal which is almost choked at the mouth. Its streets are straight, and contain several churches and family mansions

of beautiful marble. In the principal square is a marble fountain, with a statue of pope Paul V., and in the middle of the market place a pedestal, from which tradition says that Caesar harangued his army.

The cathedral and several churches of Rimini are ornamented with marble, procured from the ruins of the old harbour. That of St. Francis, a fine edifice of the fifteenth century, has a profusion of sculptures, statues, and bas reliefs. Ri-mini contains several valuable remains of Roman architecture. At the entrance of the town, on the side of Pesaro, stands a triumphal arch of Augustus, adorned with Corinthian columns, from which a broad street extends to an elegant bridge over the Marecchia, begun by Augustus, and completed by Tiberius. It is 220 feet in length, and consists of five arches of white stone or marble, found ir *he neighbourhood. Its execution is remarkably <*>lid and elegant. Ri-mini was called Ariminum from the river Ariminus, which washed its walls, and formed at one time a small independent republic. At present its chief pursuit is supplying the interior with fish. It is the see of a bishop. Twenty-eight miles S. S. E. of Ravenna, fifty north-west ot Ancona, and 150 north of Rome.

RIM'PLE, or RUMPLE, v. a. To pucker ; contract into folds. See CRUMPLE and RUM-PLE.

The skin was tender, also rimpled and blistered.

Wiseman.

RIND, n. s. & v. n. Sax. pin's ; Belg. and Teut. rin.de. Bark; husk: to

bark; peel.

Therewith a piteous yelling voice was heard, Crying, O spare with guilty hands to tear My tender sides in this rough rind embar'd.

Spenser.

Within the infant rind of this small flower Poison hath residence, and medicine power.

Shalupeare.

Thou can'st not touch the freedom of this mind With all thy charms, although this corporal rind Thou hast immanacl'd. Milton.

These plants are neither red nor polished, when drawn out of the water, till their rind have been taken off. Boyle.

This monument thy maiden beauty's due, High on a plane-tree shall be hung to view ; On the smooth rind the passenger shall see Thy name engraved, and worship Helen's tree.

Dry den.

RING, v. a., v. n., &n. s.) Sax. pninjan ;

RING'ER, n.s. J Isl. hringa ; Belg.

ringen. To strike a bell or other sonorous body, ⍰⍰⍰so as to produce sound ; to sound in this way; to practise ringing with bells ; resound ; tin-kle ; be filled with a report : a number of tuned bells; the sound of them; any loud sound.

Ring the alarum bell. Shakspeare. Macbeth.

Ere to black Hecat's summons The shard-born beetle, with his drowsy hums, Hath rung night's yawning peal, there shall be done A deed of dreadful note. Shakspeare.

Hercules, missing his page, called him by hii name aloud, that all the shore rang of it. Bacon.

Stop the holes of a hawk's bell, it will make no ring, but a Hat noise or rattle. Id.

The king, full of confidence, as he had been victorious in battle, and had prevailed with his parliament, and had the ring of acclamations

fresh in his

ears, thought the rest of his reign should be but play.

Id. Henry Vll. The heavens and all the constellations rung.

Milton.

Ring out ye crystal spheres, And let your silver chime Move in melodious time ;

And let the base of heaven's deep organ blow. Id. Signs for communication may be contrived at pleasure ; four bells admit twenty-four changes in ringing ; each change may, by agreement, have a certain signification. Holder.

At Latagus a weighty stone ae Hung ; HIS face was flatted, and his helmet rung. Dryden.

My ears will ring with noise ; I'm vexed to death : Tongue-kill'd, and have not yet recover'd breath.

Id.

The particular ringing sound in gold, distinct from the sound of other bodies, has no particular name.

Locke.

Easy it might be to ring other changes upon the same bells. Harris's Miscellanies.

That profane, atheistical, epicurean rabble, whom the whole nation so

rings of, are not indeed what they vote themselves, the wisest men in the world.

South.

A squirrel spends his little rage, In jumping sound a rolling cage ; The cage is either side turned up, Striking a ring of bells a-top. Prior.

With sweeter notes each rising temple rung, A Raphael painted ! and a Vida sung ! Immortal Vida ! Pope.

RING, n. s. & v. a.~} Sax. prunˆ ; Dan. Swed. RING'BONE, n. s. Teut. and Belg. ring. A RING'DOVE, circle ; circular line, parRING'ER, ticularly of metal ; circu—

RING' LEADER, ,-lar course; circle of perRING'LET, sons: to encircle; fit'with

RING'STREAKED, rings : the ringbone is de-RING'TAIL, n. s. fined in the extract : ring-RISG'WORM. J dove, a kind of pigeon

so called from the ring of feathers round its neck : ringleader, the head of a ring or knot of riotous persons : ringlet, a small ring : ringstreaked, streaked circularly : ring-tail, a kind of kite : ringworm, a circular tetter.

He removed the he goats that were ringstreaked and spotted, and all the she goats that were speckled.

Genesis xxx. 35. In this habit

Met I my father with his bleeding ring*, Their precious gems now lost. Shakspeare.

A quarrel ??? About a hoop of gold, a paltry ring. Id.

Talbot,

Who, ringed about with bold adversity, Cries out for noble York and Somerset. Id. Death, death ; oh amiable lovely death ! Thou odoriferous stench, sound rottenness,

Arise

And I will kiss thy detestable bones,

And put my eye-balls in thy vaulted brows,

And ring these fingers with thy houshold worms.

Id.

You demy puppets, that By moonshine do the green ringlets make, Whereof the ewe not bites. Id. Tempest.

He caused to be executed some of the ringleaders or the Cornish men, in sacrifice to the citizens.

Bacon's Henrii VII.

Her golden tresses in wanton ringlets waved, As the vine curls her tendrils. Miliun.

The Italians, perceiving themselves almost environed, cast themselves into a ring, and retired back into the city. Hai/ward.

The rings of iron, that on the doors were hung, Sent out a jarring sound, and harshly rung.

Dry den.

Round my arbour a new ring they made," And footed it about the sacred shade. Id.

Pigeons are of several sorts, wild and tame ; as wood-pigeons, dovecote pigeons, and ringdoves.

Mortimuf. Chaste Diana,

Goddess presiding o'er the rapid race, Place me, O place me, in the dusty ring, Where youthful charioteers contend for glory.!

Smith.

I have seen old Roman ri7igs so very thick about, and with such large stones in them, that 'tis no wonder a fop should reckon them a little cumbersome in the summer. Addison.

The nobility escaped ; the poor people, who had been deluded by these ringleaders, were executed.

Id.

Bubbles of water, before they began to exhibit their colours to the naked eye, have appeared through a prism girded about with many parallel and horizontal rings. Newton.

It began with a serpigo, making many round spots, such as are generally called ringworms.

Wiseman's Surgery.

Silver the lintels, deep projecting o'er ; And gold the ringlets that command the door.

Pope.

Some eagle got the ring of my box in his beak, with an intent to let it fall and devour it. Swift.

Ringbone is a hard callous substance growing in the hollow circle of the little pastern of a horse, just above the coronet : it sometimes goes quite round like a ring, and thence it is called the ringbone.

Farrier's Dictionary. . 'Twos not her golden ringlets bright

Her lips like roses wet wi' dew, Her heaving bosom lily-white ; ###

It was her een sae bonnie blue. Bum.

RING. The episcopal ring (which nukes a part of the pontifical apparatus, and is esteemed a pledge of the spiritual marriage between the bishop and his church) is of very ancient standing. The fourth council of Toledo, held in 633, appoints that a bishop condemned by one council, and found afterwards innocent by a second, shall be restored by giving him the ring, staff, &c. From bishops, the custom of the ring has passed to cardinals, who have sometimes paid enormous sums pro jure annuli cardinalitii.

RING, in astronomy and navigation, an instrument used for taking the sun's altitude, &c. It is usually of brass, about nine inches diameter, suspended by a little swivel : at the distance of 45## from the point of which is a perforation, which is the centre of a quadrant of 90## divided in. the inner concave surface. To use it, let it be held up by the swivel, and turned round to the sun, till his rays, falling through the hole, mark a spot among the degrees, which shows the altitude required. This instrument is preferred to the astrolabe, because the divisions are here larger than on that instrument.

RING-OUSEL, in ornithology, a species of turdus.

RING-TAIL. See FAICO.

RINGWOOD, a large market town and parish

of Hampshire, on the Avon, with a market on Wednesday, and a considerable manufacture of knit worsted hose. Many of the houses and the church are well built. This town has long been celebrated for the excellence of its ale, of which it exports considerable quantities ; it also trades in leather, druggets, and some narrow cloths. Near it the duke of Monmouth was taken after his defeat at Sedgmoor, in 1685. It is fourteen miles N. N. E. of Pool, thirty south-west of Winchester, and ninety-one west by south of London.

RINSE, v. a. a From Teut. rein, pure, clear.

RINS'ER, n. s. J To wash ; cleanse : a washer.

Whomsoever he toucheth, and hath not rinsed his hands in water, he shall be unclean.

Leviticus xv. 11.

This must move us humbly to sue unto God, and earnestly to intreat him, to wash us throughly from our wickedness, and cleanse us from our sins : yea to purge and rinse the fountain thereof, our unclean and polluted hearts. Perkins.

This last costly treaty

Swallowed so much treasure, and like a glass Did break i' the rinsing. Shakspeare. Henry VIII.

They cannot boil, nor wash, nor rinse, they say, 1 With water sometimes ink, and sometimes whey, > According as you meet with mud or clay. King.)

RIO DEL REY, a river of South Western Africa, falling into the gulf of Benin. Its mouth is broad ; but a great part is shallow, there being only an open channel in the middle navigable by large vessels. Its early course is unknown ; but it is reported to come from the north, and to receive' some considerable streams. The country on each side is marshy but fertile. The Cal-bonˆos, as they are called, of this neighbourhood, are a numerous and barbarous race, going almost naked, and smearing themselves with a red paint. They are said to be much corrupted by the slave trad e. The chief trade in the river carried on here is by the Portuguese and Dutch, who procure slaves "and a small quantity of ivory. The mouth is in long. 8►► 5' E., lat. 4►► 30' N.

Rio GRANDE, a province of Brasil, is bounded by the capitania of St. Paul's on the north, Matto Grosso on the west, and the Rio de la Plata on the south. It may be called the granary of Brasil, and wheat is shipped here to all the ports on the coast. Farming, however, is carried on in a slovenly manner; the grain is always rough and foul, and is packed in raw hides, which are sewed up like sacks, so that it frequently swells and heats on the passage. ►►► province is extremely populous ; in a

This

circuit of twenty leagues the inhabitants are estimated at 100.000. Their principal occupations are, the breeding of cattle, drying and preparing of hides, and the making of charque, or what is called in the river Plata jug-beef, or beef dried and salted in a particular way. It is in taste somewhat similar to bung-beef, and constitutes the general food of the sailors and lower orders, forming part of almost every cargo sent out from this province. The quantity of hides exported hence is almost incredible ; they furnish many vessels with entire cargoes, which are carried to the northern ports, and thence embarked for Europe. The annual average may be estimated at not less than 300,000. Tallow is

another considerable article, which in general is shipped in the crude state. The greater part is consumed in other parts of Brasil. It is packed in waste raw hide packages. Horns and horse-hair form an inferior branch of commerce. The above are the staple productions of Rio Grande, which give employment to perhaps 100 sail of coasters. During the old system, so lately as within these few years, a most lucrative trade was here carried on with the Spaniards, who came in numbers, and most eagerly bought up the tobacco, and such of the English manufactures as could be transported on horseback at great prices. Thus Rio Grande and its vicinity became very enviable situations, where considerable fortunes were made.

The neighbourhood of the capital is unpleasant, being surrounded with sand and sand-hills of no inconsiderable size, formed by the wind, and frequently brought by it into every part of the houses. The cattle bred in this capitania are very numerous. The large river Uruguay rises here, and empties itself into the river Plata, a little above Buenos Ayres. There are numerous others of less consequence, and much wood. Some attempts were lately made, by miners sent from Villa Rica, to work gold washings, and in the neighbourhood of the capital they have coal, a specimen of which Mr. Mawe mentions. In various parts jaguars and beasts of prey are very common ; among the granivorous animals are capivaras of great size, deer, and armadillos, which are excellent eating. Of birds the ostriches of the dark colored species go about in immense flocks. There are also eagles, hawks, and other birds of prey. The inhabitants are, generally speaking, athletic, and robust, and excellent horsemen. It is singular to Europeans that in this fine climate, where the thermometer is frequently below 40°° Fahrenheit, and where are bred as fine cows as any irt the world, and every convenience is at hand for dairies, neither butter nor cheese is made, ex-cept on particular occasions. In some places the grapes are good, and probably wine will soon be made from them, as the restraint laid by the mother country is now removed. The port through which the commerce of Rio Grande is carried on is situated about 32°° south ; it is dangerous to enter, first from its being shoal water, and next, from a violent sea always running, and the shifting of the sands. There is notwithstanding a great trade carried on from this place to all the ports of Brasil. The principal town is de fended by many forts, some of which are upon islets. Since it was taken from the Spaniards, by general Coimbra, the Portuguese have much strengthened it, and now there is a very considerable force of cavalry, horse artillery, and foot soldiers.

RIOM, a large and central town of France, in the department of the Puy de Dome, delightfully situated on a declivity, which commands a

view of the Limagne d'Auvergne. . It has a cour royale, is regularly built, being traversed diametrically by two principal streets, which cross each other in the middle of the town : these and the other streets are all paved with basalt. The whole town is built of this sort of stone,

ll<e dark color of which gives it a gloomy appearance. Formerly a place of some strength, lliom has still a small arsenal, but its earthen mound is planted with trees, and forms a promenade. Its only public structures worth notice are the theatre and fountains. Its trade is confined to hardware, linen, groceries, and the products of the surrounding country. Inhabitants 14,000. Fifty miles south by west of JVIoulins.

Itl'OT, n. s. & t>. n. "1 Old Fr. riotte ; barb.

RI'OTER, | Lat. riotum. Turn ult ;

RI'OTISE, I uproar; wild or loose

RI'OTOUS, adj. f mirth : to riot is, to reR/OTOUSLY, adv. j vel ; luxuriate ; be tuRi OTOUSNESS, n. s. J multuous : ' to run riot,' to act without restraint or control : riotise is an obsolete synonyme of riot : the adjective, adverb, and noun substantive corresponding.

Let us walk honestly as in the day ; not in rifting and drunkenness, Bamant xiii. 13.

He that gatheieth by defrauding his own soul, gatliereth for others that shall spend his goods riutaiuly. Ecdus. xiv. 4.

From every work he challenged essoin For contemplation sake ; yet otherwise His life he led in lawless riotise. Spenser.

What needs rae tell their feasts and goodly guise, In which was nothing riotous nor vain. Id.

W hen his headstrong riot hath no curb, When rage and hot blood are his counsellors, When means and lavish manners meet together, Oh ! with what wings shall his affection fly Tow'ard fronting peril and opposed decay.

Shakspeare. Henry IV. When all our offices have been opprest

With riotous feeders,

I have retired me to a wasteful cock,

And set mine eyes at flow. Shakipeare.

Now he exacts of all, wastes in delight,

Riots in pleasure, and neglects the law. Daniel. All now was turned to jollity and game,

To luxury and riot, feast and dance. Milton.

John came neither eating nor drinking, that is, far from the diet of Jerusalem and other riotous places, but fared coarsely. Browne.

With them no riotous pomp nor Asian train, T' infect a navy with their gaudy fears ; But war severely like itself appears. Dryden.

One man's head runs riot upon hawks and dice.

L'Estrange. Thy life a long dead calm of fixed repose :

No pulse that riots, and no blood that glows.

Pope.

You never can defend his breeding, Who, in his satyre's running riot, Could never leave the world in quiet. Swift.

RIOT, in law. The riotous assembling of twelve persons, or more, and not dispersing upon proclamation, was first made high treason by stat. 3 and 4 Edw. VI. c. 5, when the king was a minor, and a change of religion had to be. effected ; but that statute was repealed by stat. 1 Mar. c. 1, among the other treasons created since the 25 Edw. III. ; though the prohibition was in substance re-enacted, with an inferior degree of punishment, by stat. \ . Mar. stat. 2, c. 12, which made the

same offence a single felony. These statutes specified and particularised the nature of the riots they were meant to suppress ; ××s, for example, such as were set on foot with intention to offer violence to the privy council, VOL. XVI II.

or to change the laws of the kingdom, or for certain other specific purposes ; in which cases, if the persons were commanded by proclamation to disperse, and they did not, it was by the stat. of Mary made felony, but within the benefit of clergy; and also the act indemnified the peace officers and their assistants, if they killed any of the mob in endeavouring to suppress such riot. This act was made at first only for a year, and afterwards continued for queen Ma'ry's life. And by stat 1 Eliz. c. 16, when a reformation in religion was to be, once more attempted, it was revived and continued during her life also, and then expired. From the accession of James I. to the death of queen Anne it was never thought expedient to revive it ; but in the first year of Geo. I. it was judged necessary, in order to support the execution of the act of settlement, to renew it, and at one stroke to make it perpetual, with large additions. For, whereas the former acts expressly defined and specified what should be accounted a riot, the stat. 1 Geo. I. c. 5, enacts generally, that if any twelve persons are unlawfully assembled to the disturbance of the peace, and any one justice of the peace, sheriff, under sheriff, or mayor of a town, shall think proper to command them by proclamation to disperse, if they contemn his orders, and continue together for one hour afterwards, such contempt shall be felony without benefit of clergy. And farthei, if the reading of the proclamation be by force opposed, or the reader be in any manner wilfully hindered from the reading of it, such opposers and hinderers are felons without benefit of clergy ; and all persons to whom such proclamation ought to have been made, and knowing of such hindrance, and not dispersing, are felons without benefit of clergy. There is the like indemnifying clause, in case any of the mob be unfortunately killed in the endeavour to disperse them, copied from the act of queer. Mary. And, by a subsequent clause of the new act, if any person so riotously assembled, begin, even before proclamation, to pull down any church, chapel, meeting-house, dwelling-house, or out houses, they shall be felons without benefit of clergy. Riots and unlawful assemblies must have three persons at least to constitute them. An unlawful assembly is, when three of more do assemble themselves together to do an unlawful act, as to pull down enclosures, to destroy a warren, or the game therein ; and part without doing it, or making any motion towards it. A riot is where three or more actually do a-n unlawful act of violence, either with or

without a common cause or quarrel ; as, if they beat a man,or hunt and kill game in another's park, chase, warren or liberty ; or do any other unlawful act with force or violence ; or even do a lawfnl act, as removing a nuisance, in a violent and tumultuous manner. The punishment of unlawful assemblies, if to the number of twelve, may be capital, according to the circumstances that attend it ; but from the number of three to eleven is by fine and imprisonment only. The same is the case in riots and routs by the com-mon law ; to which the pillory in very enormous cases has been sometimes superadded. And by the stat. 13 Hen. IV. r. 17, any two justices,

together with the sheriff 01 under sheriff of the county, may come with the posse comitatus, if need be, and suppress any such riot, assembly, or rout, arrest the rioters, and record upon the spot the nature and circumstances of the whole transaction ; which record alone shall be a sufficient conviction of the offenders. In the interpretation of which statute it hath been holden that all persons, noblemen, and others, except women, clergymen, persons decrepit, and infants under fifteen, are bound to attend the justices in suppressing a riot, upon pain of fine and imprisonment ; and that any battery, wounding, or killing the rioters, that may happen in suppressing the riot, is justifiable.

RIOU'S ISLAND, or ROOAHOOGA, an island of the Pacific, about twenty-four miles in circumference, was discovered in 1792 by lieutenant Hergest, of the Daedalus store-ship. It is composed of steep and rugged rocks rising to a considerable height, and forming a lofty mountain in the middle. The western is the most fruitful side. Long. 139►► 9' W., lat. 8►► 54' S.

RIP, v. a. Sax. pnypan. To tear; lacerate ; cut asunder by a continued stroke.

Thou wilt dash their children, and rip up their women with child. 2 Kings viii. 12.

Let it be lawful for me to rip up to the very bot-tom, how and by whom your discipline was planted, at such time as this age we live in began to make first trial thereof. Hooker.

You rip up the original of Scotland. Spenser. You bloody Neros,

ripping up the womb Of your dear mother England, blush for shame.

Shakspeare.

Esculapius, because ripped from his mother's womb, was feigned to be the son of Apollo.

Hayward.

They ripped up all that had been done from the beginning of the rebellion. Clarendon.

Rip this heart of mine Out of my breast, and shew it for a coward's.

Otway.

The beast prevents the blow, And upward rips the groin of his audacious foe.

Dryden.

The relations considering that a trial would rip up old sores, and discover things not so much to the Deputation of the deceased, they dropt their design.

Arbulhnot.

The conscious husband, whom like symptoms seize, Charges on her the guilt of their disease ; A fleeting fury acts a madman's part, *le'll rip the fatal secret from her heart. Granville.

RIPE, adj., v. n., & v. a. ˆ Sax. rupe ; Belg.

RI'PEN, v. n. & v. a. > ryp ; Teut. reif.

RIPE'NESS, n. s. r Brought to perfection in growth ; mature ; finished ; complete ; qualified : to ripe and ripen are used as synonymes both in the verb neuter and active forms', and mean to grow or make mature : the noun substantive corresponding.

Afore the sour grape is ripening in the flower.

Isaiah xviii. 5.

Their fruit is improntable, not ripe to eat.

Wisdom iv. 5.

Beasts are in sensible capacity as ripe even as men themselves, perhaps more ripe. Hooker.

To this purpose were those harmonious tunes of psalms devised for us, that they, which are either in years but voung, or touching perfection of virtue

as yet not grown to ripenem, might, when the) thin* they sing, learn. Id.

He was a scholar, and a ripe and good one.

Shaktpeurt.

I by letters shall direct your course, When time is ripe. Id. Henry IV.

He is retired, to ripe his growing fortunes, To Scotland. Shukspeure.

There was a pretty redness in his lips, A little riper and more lusty red Than that mixed in his cheeks. Id.

Those happiest smiles.

That played on her ripe lip, seemed not to know What guests were in her eyes, which parted thence, As pearls from diamonds dropt. Id.

This is the state of man ; to-day he puts forth The tender leaves of hope, to-morrow blossoms, And bears his blushing honours thick upon him ; The third day comes a frost, a killing frost ; And when he thinks, good easy man, full sureiy His greatness is a ripening, nips his root ; And then he falls as I do. Id.

This royal infant promises Upon this land a thousand thousand blessings, Which time shall bring to ripeness. Id.

Slubber not business for my sake, Bassanio ; But stay the very riping of the time. Id.

The pricking of a fruit before it ripeneth, ripens the fruit more suddenly. Bacon’s Natural History.

Though no stone tell thee what I was, yet thou, In my graves inside, see what thou art now ; Yet thou’rt not so good, till us death lay To ripe and mellow there, we’re stubborn clay.

Donne.

Time, which made them their fame outlive, To Cowley scarce did ripeness give. Denhan.

So may’st thou live, till, like ripe fruit, thou drop Into thy mother’s lap, or be with ease Gathered, not harshly plucked, for death mature.

Milton.

I to manhood am arrived so near, ###And inward ripeness doth much less appear, That some more timely happy spirits indu’th. Id.

At thirteen years old he was ripe for the university. Fell.

O early ripe ! to thy abundant store, What could advancing age have added more 1

Dryden

When to ripened manhood he shall grow, The greedy sailor shall the seas forego. Id.

While things were just ripe for a war, the cantons, their protectors, interposed as umpires in the quarrel. Addism.

The genial sun

Has daily, since his course begun, Rejoiced the metal to reh’ne, And ripened the Peruvian mine. Id.

They have compared it to the ripeness of fruits.

Wiseman,

Little matter is deposited in the abscess, before i: arrives towards its ripeness. Sharp’s Surgery.

Melons on beds of ice are taught to bear, And strangers to the sun yet ripen here. Granville.

Be this the cause 01 more than mortal hate, The rest succeeding times shall ripen into fate.

Pope.

Here elements have lost their uses ; Air ripens not, nor earth produces.

Swft.

RIP HAT, or RIPHATH, the second son of Gomer, and grandson of Japhet. In most copies he is called Diphath in the Chronicles. The resemblance of the two Hebrew letters ˆ (resh) andT (daleth) is so great, that they are very often con-

founded. The learned are not agreed about the country that was peopled by the descendants of Riphath. Eusebius considers it to have been the country of the Sauroraatse ; the Chronicon Alexandrinum that of the Garamantae ; Josephus Paphlagonia. Mela assures us that anciently the people of this province were called Riphataei, or Iliphaces ; and others think he peopled the Montes Riphai ; and this opinion seems the most reasonable, because the other sons of Gomer peopled the northern countries towards Scythia, and beyond the Euxine Sea.

RIPLEY, an English alchymist of the fifteenth century. He published 1. A Compend of Alchymie, &c., and 2. Aurum Potabile, or The Universal Medicine. He died in 1490.

RIPLEY, a market town and parish in the West Riding of Yorkshire, situate on the river Nidd, four miles north-west from Knares-borough, and 215 north by west from London. Some few remains of a castle are still standing here, and the church is an ancient building. The place is noted for its abundant produce of the liquorice plant. Market on Friday.

RIPPON, a pleasant, well-built, and populous borough and market town of Yorkshire, in the West Riding; famous for its manufactures of hardware. It is an ancient town, noted in history long before the Roman conquest, and was famous for its religious houses. It has a

magnificent church, with three lofty spires. In the days of popery this church was noted for a straight passage leading into a closely vaulted room, which could be made wider or narrower at pleasure, so as to admit or prevent the entrance of any one. This passage was called St. Wilfrid's Needle, and was used to try the chastity of any woman suspected of incontinence. The town is composed of several crooked lanes, there being but five regular built streets in the place. It sends two members to parliament. The market-place is accounted one of the finest squares of the kind in England, and is adorned with an obelisk, erected by John Aislabie, the chancellor of the exchequer in the reign, of George I. Two extensive cotton mills have been erected of .late years and employ a number of hands; and here are also annual and well attended races. It is seated on the Ure, or Yore ; twenty-eight miles north-west of York, and 209 N.N. W. of London.

RISANO, a town of Austrian Dalmatia, at the head of the gulf of Cattaro, eight miles north of Cattaro. The inhabitants boast of having preserved the ancient Roman habits, and are certainly remarkable for their intrepidity. Population 1800,

RISBOROUGH, or MONKS'-RISBOROCGH, a market town and parish of Buckinghamshire, four miles and a half south-west from Wen-dover, and thirty-seven from London. It received the name of Monks'-Risborough from its oeing assigned to the monks of Canterbury, by Eschevine, bishop of Dorchester, and there was an adjoining parish called Prince's-Risborough, where, according to tradition, Edward the black prince had large possessions. Market on Saturday.

UISDON (Tristram), an English antiquary,

born near Great Torrington, in Devonshire, about 1580. He was educated at Oxford ; after which he retired to his family seat at Winscot, where he published The History and Antiquities of Devonshire ; of which many copies are ex-tant. Edmund Curll, the bookseller, printed a mutilated edition of it in 1714, in 2 vols. 8vo. Risdon died in 1640, aged sixty.

RISE, v. n. & n. s.) Pret. rose; part. risen.

RIS'EN, adj. } Sax. jiij-an ; Belg. rusen ;

Goth. risa. To get or grow up ; ascend ; spring ; swell ; begin ; be excited or produced ; increase ; be revived from death : the noun substantive and adjective corresponding.

If the bright spot stay in his place, it is a rising of the burning. Leviticus xiii. 21.

If any man hate his neighbour, lie in wait, and rise up against him, and smite him mortally, and fleeth unto one of those cities, the elders of his city shall fetch him thence. Deuteronomy.

As wild asses in the desart, go they forth to their work, ruing betimes for a prey. Job xxiv. 5.

He maketh the sun to rise on the evil and the good. Matthew .

After I am risen again, I will go before you.

Id. xxvi.

As they ‘gan his library to view And antique registers for to avise, There chanced to the prince’s hand to rise An ancient book. Spenser.

He, riting with, small honour from Gunza, and fearing the power of the Christians, was gone.

K no ties.

Never a wife leads a better life than she does ; do what she will ; go to bed when she list ; rise when she list. Shakspeare .

Some rise by sin, and some by virtue fall. Id. It has its rise from the lazy admonitions of those who give rules, and propose examples, without joining practice with their instructions. Id.

If they rise not with their service, they will make their service fall with them. Bacon.

In leaping with weights, the arms are first cast backwards and then forwards, with so much the greater force ; for the hands go backward before they take their rise. Id.

In the ordinary rises and falls of the voice, there fall out to be two beemolls between the unison and the diapason. Id.

The isle of ˆEaea, where the palace stands Of the’ early riser, with the rosy hands, Active Aurora ; where she loves to dance.

Chapman.

Ris not the consular men and left their places So soon as thou sat’st

down ; and fled thy side ?

Ben Jonson. That is to live, To rest secure, and not rise up to grieve.

Daniel's Civil War.

Only he spoke, and every thing that is, Out of the fruitful womb of nothing rites. Cowley.

Such a rise, as doth at once invite A pleasure, and a reverence from the sight.

Denham.

Raised so high, from *hat convenient rise She took her flight, and quickly reached the skies.

Creech. Thy mansion wants thee, Adam, rise. Milton.

True in our fall, False in our promised rising. Id. Paradise Lost.

Whether the sun

Rise on the earth, or earth rise on the sun. Milton. Hisjh winds began to rise. I-.I.

At our heels ail hell should rise, With blackest insurrection. Id.

The stars of morn shall see him rise . Out of his grave. Id.

He affirmeth that tunny is fat upon the rising of the Pleiades, and departs upon Arcturus.

Browne’s Vulgar Errowrt. Your author always will the best advise, Fall when he falls, and when he rises, rise.

Roscommon. To rise i’ the world,

No wise man that’s honest should expect. Otway.

Indeed you thanked me; but a nobler gratitude

Rose in her soul ; for from that hour she loved me.

Id.

Phoebus ! stay ;

The world to which you fly so fast, From us to them can pay your haste With no such object, and salute your rise ††† With no such wonder, as De Mornay’s eyes.

Waller.

Upon a breach with Spain, must be considered the present state of the king’s treasure, the rise or fall that may happen in his constant revenue by a Spanish war. Temple.

With Vulcan’s rage the rising winds conspire, And near our palace rolls the’ flood of fire. Dryden.

The hill submits itself

In small descents, which do its height beguile ; And sometimes mounts, but so as billows play, Whose rise not hinders, but makes short our way.

Id.

Bullion is risen to six shillings and five pence the ounce ; i. e. that an ounce of uncoined silver will exchange for an ounce and a quarter of coined silver.

Locke.

Ash, on banks or rising grounds near rivers, will thrive exceedingly. Mortimer’s Husbandry.

All wickedness taketh its rise from the heart, and the design and intention with which a thing is done, frequently discriminates the

goodness or evil of the action. Nelson.

From such an untainted couple, we can hope to have our family rise to its ancient splendour of face, air, countenance, and shape. Tatter.

A thought rose in me, which often perplexes men of contemplative natures. Spectator.

Numidia's spacious kingdom lies Ready to rise at its young prince's call. Addison.

The great duke rises on them in his demands, and will not be satisfied with less than a hundred thousand crowns, and a solemn embassy to beg pardon.

Id. on Italy,

Those, that have been raised by some great minister, trample upon the steps by which they rue to rival him. South.

If two plane polished plates of a polished looking-glass be laid together, so that their sides be parallel, and at a very small distance from one another, and then their lower edges be dipped into water, the wa-ter will rise up between them. Newton,

No more shall nation against nation rise, Nor ardent warriours meet with hateful eyes. Pope.

The bishops have had share in the gradual rise of lands. Swift.

The archbishop received him sitting ; for, said he, I am too old to rise. Earl of Orrery.

RIS'IBLE, adj. Fr. risible', Lat. risibilis. Having the faculty or power of laughter, or of exciting laughter.

How comes lowness of stile to be so much the propriety of satyr that without it a poet can be no more a satyrist, than without risibility he can be a man] Dryden.

We are in a merry world, laughing is our business; as if, because it has been made the definition of man that he is risible, his manhood consisted in nothing else. Government of the Tongue.

Whatever the philosophers may talk of their risibility, neighing is a

more noble expression than laughing. Arbuthnot.

RISK, n. s. & v. a. > Fr. risque ; Span, ries—

RISK'ER. \ go. Hazard ; danger ;

chance of harm : to place in danger ; risker corresponding.

He thither came, t' observe and smoak

What-courses other riskers took. Butler.

Some run the risk of an absolute ruin for the gaining of a present supply. L'Estrange.

When an insolent despiser of discipline, nurtured into contempt of all order by a long risk of licence, shall appear before a church governor, severity and resolution are that governor's virtues. South.

Who would hope new fame to raise,

Or risk his well-established praise,

That, his high genius to approve,

Had drawn a George, or carved a Jove 1 Addison.

By allowing himself in what is innocent, he would run the risk of being betrayed into what is not so.

Atterbury.

An innocent man ought not to run an equal risk with a guilty man. Clarissa.

RITCHIE (Joseph), an English traveller, one of the unfortunate victims of the passion for African discovery, was born at Otley in Yorkshire, and obtained a situation in the office of the English consul at Paris, where he first be-came acquainted with the plans of the African association. In conjunction with captain G. F. Lyon he went to Tripoli; and, in March 1819, the party set out for Mourzouk, in Fezzan, under the escort of Mukni the bey. They resided at Mourzouk some months in distress, arising from the want of funds, and the treacherous conduct of the bey. To this hardship and vexation Mr. Ritchie fell a sacrifice in November of this year. Captain Lyon returned to England, and in 1821 published A Narrative of Travels in Northern Africa, in 1818, 19, and 20, accompanied by Geographical Notices of Soudan,

and of the Course of the Niger, 4to.

RITE, n. s.) Fr. rit ; Lat. ritus.

RIT'UAL, adj. & n. s. 5 Solemn act of religion ;

RIT'UALIST, n.s. j external observance; ritual is solemnly ceremonious ; a book of solemn ceremonies : ritualist, he who is skilled in rituals.

The ceremonies, we have taken from such as were before us, are not things that belong to this or that sect, but they are the ancient ritet and customs of the church. Hooker.

Is is by God consecrated into a sacrament, a holy rite, a means of conveying to the wrrthy receiver the benefits of the body and blood of Christ. Hammond's Fundamentals.

When the prince her fun'ral rites had paid. He ploughed the Tyrrhene seas. Dryden.

A heathen ritual could not instruct a man better than these several pieces of antiquity in the particular ceremonies, that attended different sacrifices.

Addison's Remarks on Italy. Instant I bade the priests prepare

The ritual sacrifice, and solemn prayer. Pri</r.

If to tradition were added certain constant ritual and emblematical observances, as the emblems wera

expressive, the memory of the thinj, recorded woiad remain. Forbes.

RITSON (Joseph), a celebrated antiquary, was born in 1752, at Stockton-upon-Tees, in the county of Durham, and was brought up to the profession of the law. But his literary enquiries were by no means confined within the limits of his profession ; and he was, perhaps, the most successful of those persons by whom the investigation of ancient English literature and antiquities was cultivated in the latter part of the eighteenth century. He died October, 1803. The following is a list of Mr. Ritson's publications : ××× 1 . Observations on Johnson's and Steevens's Edition of Shakspeare ; 2. Quiss Modest, in defence of ditto; 3. Cursory Criticisms on Malone's Edition of Shakspeare ; 4. Observations on Warton's History of English Poetry ; 5. Descent of the Crown of England, in a large Sheet; 6. Spartan Manuel ; 7. Digest of the Proceedings of the Savoy Court; 8. Office of Constable explained; 9. Jurisdiction of the Court Leet; 10. A Collection of English Songs, 3 rols. ; 1 1 . Ditto of Scottish Songs, 2 vols.; 12. English Anthology, 3 vols.; 13. Mmot's poems, 2 vols.; 14. Metrical Romances, 3 vols. ; 15. Bibliographia Poetica ; and, 16. Treatise on Abstinence from Animal Food.

RITTBERG, a small principality of the government of Minden, belonging to Prussia. It lies on the Ens, contains an area of sixty-five square miles, and has about 12,000 inhabitants, chiefly Catholics. A number of these are spin-ners and weavers ; and the district requires an annual import of provisions.

RITTENHOUSE (David), an eminent American mathematician, was the son of a farmer in Pennsylvania. His parents put him apprentice to a watch-maker ; and astronomy became the object of his enquiries ; and, by procuring a few books on the subject, he soon made great progress in the science. The first public display lie gave of his ingenuity was in 1768, when he completed his New Orrery, which gave universal satisfaction ; and the trustees of the college of Philadelphia conferred on him the honorary de-gree of M. A. Not long after this he communicated, by his friend Dr. Smith, to the American Philosophical Society, a Projection of the transit of Venus, calculated from Halley's Tables; in consequence he was appointed by them, with several others, to make the necessary preparations for observing the transit at his house at Norristown. This transit happened on the 3d of June, 1769 ; and Mr. Rittenhouse obtained the applause of the astronomers of Europe, who esteemed his observation of this singular phenomenon extremely accurate and ingenious. After the American war he successively filled the offices of treasurer of the state of Pennsylvania, and director of the national mint. He succeeded the venerable - Franklin as president of the American Philosophical Society, which office he filled with high reputation. He died in June 1796.

RITTERHUSIUS (Conrad), a learned Ger-man civilian, born at Brunswick in 1560. He was professor of civil law at Altdorf, anoj published a variety of works, particularly as a civilian ; together with an addition of Oppian in Greek juid Latin : he was moreover an excellent critic ;

his notes upon many eminent authors having been inserted in the best editions of them. He died in 1613.

RITZKBUTTEL, a bailiwic belonging to Hamburgh, containing the harbour df Cuxhaven, and lying near the North Sea, between the Elbu and the Weser. Its area, without including the small island of Neuwerk, is twenty square miles, and its population 4000. It is very fertile.

RITZEBUTTEL, the chief place of'the above bailiwic, is a neat small town, with 1500 inhabitants. Fifty-four miles W.N.W. of Hamburgh, and one south of Cuxhaven.

IlI'VAGE, n. s. French rivage. A bank ; a coast. Not in use.

Think

You stand upon the rivage, and behold A city on the' inconstant billows dancing ; For so appears this fleet. Shaktpeare.

RI'VAL, n. s. v.a. &~\ Lat. rivalis. A com-RIVAL'ITY, n.s. [v. n. f petitor; one who is in HI'VALRY, ►► pursuit of the same

RI'VALSHIP. J thing which another

man pursues : to oppose ; be competitors : the

noun -substantives corresponding.

She saw her father was grown her adverse party, and yet her fortune such as she must favour her rival. Sidney.

France and Burgundy, Great rivals in our younger daughter's love.

Shahspeure. Had I but the means To hold a rival place with one of them, I should be fortunate. Id.

Burgundy,

We first address'd toward you, who with this king Have rivaled for our daughter. Id.

Oh love ! thou sternly dost thy pow'r maintain, And wilt not bear a rival in thy reign ; Tyrants and thou all fellowship disdain. Dryden.

You bark to be employed, While Venus is by rival dogs enjoyed. Id.

Ambitious fool ! with horny hoofs to pass O'er hollow arches of resounding brass ; To rival thunder in its rapid course, And imitate inimitable force. Id. JEnei*.

Those that have been raised by the interest of some great minister, trample upon the steps by which they rise, to rival him in his greatness, and at length step into his place. South.

It is the privilege of posterity to set matters right between those antagonists, who, by their rivalry for greatness, divided a whole age. Addison.

Your rival's image in your worth I view; And what I lov'd in him, esteem in you. Granvilk.

O thou, too great to rival or to praise, Forgive, lamented shade, these duteous lays. Lee had thy fire, and Congreve had thy witi And copyists here and there, some likeness hit ; But none possessed thy graces, and thy ease ;] n thee alone 'twas natural to please ! Harte.

A man truly zealous for his fraternity, is never so irresistibly flattered, as when some rival calling is mentioned with contempt. Johnton.

RIVE, v.a. & v. n.,preter. rived ; part, riven. Sax. nyFrJ broken ; Fr. river, to rivet. To split ; cleave ; to divide by a blunt instrument : to be split.

At his haughty helmet So hugely struck, that it the stivl ;!id me And cleft his head. Spenier.

Through riven clouds and molten firmament, The fierce three-forked engine making way, Both lofty towers and highest trees hath rent. Id

O Cicero !

I have seen tempests, when the scolding winds Have rived the knotty oaks ; but ne'er till now Did I go through a tempest dropping fire.

Slialttpeare.

Ten thousand French have ta'en the sacrament, To rive their dangerous artillery Upon no Christian soul but English Talbot. Id.

The neighbouring forests, formerly shaken and riven with the thunderbolts of war, did envy the sweet peace of Druina. Howel's Vocal Forest.

As one he stood, escap'd from cruel fight, Sore toiled, his riven arms to havock hewn. Milton.

Had I not been blind, I might have seen Yon riven oak, the fairest of the green. Dryden.

Let it come ; Let the fierce lightning blast, the thunder rive me.

Howe.

Fieestone rives, splits, and breaks in any direction.

Woodward.

RIVEL, v. a. Sax. jepiple'o ; Belg. huyfelen, rumpled. To contract into wrinkles. Not in use. Then drooped the fading flowers, their beauty fled, \nd closed their sickly eyes and hung the head, And, riveled up with heat, lay dying in their bed.

Dryden.

Alum stipticks, with contracting power, Shrink his thin essence like a riveled flower. Pope. RIVER, n. s. ~\ Fr. riviere ; Lat. rivus.

UIV'ER-DRAGON, n.s. I A land-current of water; RIV'ERET, [a considerable stream

RIV’ER-GOD, (running into the sea: a

RIV’ER-HORSE, | river-dragon is a poeti—

RIV’ULET. j cal name for the crocodile: riveret and rivulet diminutives of river: river-god, the tutelary deity of a river: river-horse, the hippopotamus.

It is a most beautiful country, being stored throughout with many goodly riven replenished with all sorts of fish. Spenser.

Bringing all their riverets in, There ends ; a new song to begin. Dray ton.

Thus with ten wounds The river-dragon, tamed at length, submits To let his sojourners depart.

Milton’s Paradise Lost. Rose,

As plants ambiguous between sea and land, The river-horse and scaly crocodile. Milton.

By fountain, or by shady rivulet, He sought them. Id.

The first of these rivers has been celebrated by the Latin poets for the gentleness of its course, as the other for its rapidity. Addison on Italy.

1 saw the rivulet of Salforata, formerly called Al-bula, and smelt the stench that arises from its water, which Martial mentions. Id.

The veins, where innumerable little rivulets have their confluence intd the common channel of the blood. Bentley.

His wig hung as strait as the hair of a river-god rising from the water. Arbutknot and Pope.

I would have a man’s wit rather like a fountain, that feeds itself invisibly, than a river, that is supplied by several streams from abroad. Sicift.

RIVET, n. s. &v.a. Fr. river, to rivet ; Ital. ribnto. A fastening pin clenched at both ends : to drive in or clench a rivet ; fasten uith ;\ rivet ; i’.t-‘ten strongly.

The armourers accomplishing the knights,. With busy hammers

closing riveis up, Give dreadful note of preparation. Shafa > peare.

You were to blame to part with A thing stuck on with oaths upon your fingei, And rivetted with faith unto your flesh. Id.

This man,

If all our fire were out, would fetch down new Out of the hand of Jove ; and rivet him To Caucasus, should he but frown. Ben Jonson.

What one party thought to rivet to a settledness, by the influence of the Scots, that the other rejects.

King Char lex.

Thus hath God not only rivetted the notion of himself into our natures, but likewise made the belief of his being necessary to the peace of our minds and happiness of society. TMatson.

The verse in fashion is, when numbers flow So smooth and equal, that no sight can find The rivet where the polished piece was joined.

Dryden.

Till fortune's fruitless spite had made it known, Her blows not shook but rivetted his throne. Id.

Where we use words of a loose and wandering signification, hence follow mistake and error, which those maxims, brought as proofs to establish propositions, wherein the terms stand for undetermined ideas, do by their authority confirm and rivet.

Locke.

In rivetting, the pin you rivet in should stand upright to the place you rivet it upon ; for, if it do not stand upright, you will be forced to set it upright after it is rivetted. Monm.

They provoke him to the rage

Of fangs and claws, and, stooping from your horse,

Rivet the panting savage to the ground. Addison.

Rivet and nail me where I stand, ye powers !

Congrne.

A similitude of nature and manners, in such a de-gree as we are capable of, must tie the holy knot, and rivet the friendship between us. AttfHum/. This instrument should move easy upon the rivet.

Sharp.

RIVINA, in botany, American nightshade, a genus of the monogynia order, and tetrandria class of plants. The perianth is four-leaved, colored, and permanent, the leaflet oblong-egged and obtuse : COR. none. There are four or eight filaments, shorter than the calyx, approaching by pairs, permanent: the antherse are small. The germ is large and roundish ; the style very short ; the stigma simple and obtuse. The berry is globular, sitting on the green reflected calyx, one-celled, with an incurved point. There is one rugged seed. This plant is called solonoides by Tournefort, and piercea by Miller. It grows naturally in most of the islands of the \Yest Indies. The juice of the berries of the plant will stain paper and linen of a bright red color, and many experiments made with it to color flowers have succeeded extremely well in the following manner : the juic►► of the berries was pressed out, and mixed with common water, putting it into a phial, shaking it well together for some time till the water was thoroughly tinged ; then the flowers, which were white and just fully blown, were cut off, and their stalks placed into the phial ; and in one night the flowers have been finely variegated with red: the flowers on which the experiments were made were the tuberose and the double white nar-ROADS,

RIVOLI, a town of Piedmont, Italy, at the foot of the Alps, on the great road which leads over Mount Cenis into Savoy. It has some manufactures of linen, woollens, and silk. On an eminence stands a castle, in which Victor Amadeus II. of Sardinia, after having abdicated his throne in favor of his son, and endeavoured to resume it, died, in 1732, a state prisoner. The prospect from this eminence, and in particular the view of Turin, through a spacious al-ley of trees, is most imposing. Population 5100. Nine miles west of Turin.

KIVOLI, a small-place in the north-east of Lombardy, on the Adige, twelve miles north-west of Verona. It is only remarkable as the scene of one of Buonaparte’s victories. At Arcole, in the preceding

November, his plans had been repeatedly baffled by the Austrians ; but here they had complete success (14th and 15th January, 1797) both on the field and in the pursuit.

RIZZIO (David), an Italian musician, who about 1563 attended the Piedmontese ambassador to Scotland, where, by his professional skill, he obtained great favor with Queen Mary. She appointed him her French secretary, and showed him such marks of distinction as gave offence to lord Darnley and other nobles, who, with great brutality, assassinated him in her presence. See MARY and SCOTLAND. Tradition assigns to Rizzio the amelioration, not to say the invention, of the Scottish music ; and it is unquestionable that his skill in the performance of the national melodies on the lute tended not a little to their general improvement and popularity ; but many of the airs which have been ascribed to Rizzio, as Cowden Knovves, Gala Water, and others, are easily traced to more remote periods.

ROACH, ra. s. From Lat. rutilus, red-haired. A river fish.

A roach is a fish of no great reputation for his dainty taste : his spawn is accounted much better than any other part of him : he is accounted the water sheep for his simplicity and foolishness ; and it is noted that roaches recover strength, and grow in a fortnight after spawning. Walton's Angler.

If a gudgeon meet a roach, He dare not venture to approach ! Yet still he leaps at flies. Swift.

ROAD, n.s. Sax. ria1* ; Fr. rade, route. From RIDE. Properly a horse or carriage way; large way ; path ; inroad : place for ships to anchor in ; journey ; course.

About the island are many roads, but only one harbour. Sandy's Journey.

Cason was desirous of the spoil, for he was, by the former road into that country, famous and rich.

Knolles. I should be still

Peering in maps for ports and roads ;

And every object that might make me fear

Misfortune to my ventures. Sltakspeare.

The Volscians stand

Ready, when time shall prompt them, to make road Upon's again. Id. Cwwlunut.

With easy roads he came to Leicester,

And lodged in the abbey. Id. Henry VIII.

The king of Scotland, seeing none came in to Perkin, turned his enterprize into a road, and wasted Northumberland with fire and sword.

Bacon.

Would you not think him a madman, who, whilst

he might easily ride on the beaten road way, should trouble himself with breaking up of gaps?

Suckling.

To God's eternal house direct the way, A broad and ample road. Milton.

He from the east his flaming road begins. Id, The liberal man dwells always in the road. Fell. To be indifferent whether we embrace falsehood or truth is the great road to error. Locke.

In all our journey through the Alps, as well when we climbed as when we descended them, we had still a river running along with the road.

Addiion.

Could stupid atoms, with impetuous speed, By different roads and adverse ways proceed, That there they might encounter, here unite.

Blackmore.

Some taken from their shops and farms, others from their sports and pleasures ; these at suits of law, those at gaming tables ; some on the road, others at their own fire-sides. Lava.

ROAD, in navigation, a bay, or a place of anchorage, at some distance from the shore, whither ships or vessels occasionally repair to receive

intelligence, orders, or necessary supplies ; or to wait for a fair wind, &c. The excellence of a road consists chiefly in its being protected from the reigning winds and the swell of the sea ; in having a good anchoring-ground, and being at a competent distance from the shore. Those which are not sufficiently enclosed are termed open roads.

A ROAD is an open way, or public passage, forming a communication between one place and another. Of all the people in the world, the Romans took the most pains in forming roads ; and the labor and expenses they were at in rendering them spacious, firm, straight, and smooth, are incredible. They usually strengthened the ground by ramming it, laying it with flints, pebbles, or sands, and sometimes with a lining of masonry, rubbish, bricks, 8cc., bound together with mortar. In some places in the cidevant Lionnois, F. Menestrier observes that he has found huge clusters of flints cemented with lime, reaching ten or twelve feet deep, and making a mass as hard and compact as marble; and which, after resisting the injuries of time for 1600 years, is still scarcely penetrable by all the force of hammers, mattocks, &c. ; and yet the flints it consists of are not bigger than eggs. The most noble of the Roman roads was the Via Appia, which was carried to such a vast length that Procopius reckons it five days' journey to the end of it, and Lipsius computes it at 350 miles : it is twelve feet broad, and made of square freestone, generally a foot and a half on each side ; and, though this has lasted for above 1800 years, yet in many places it is several miles together as entire as when it was first made. The ancient roads are distinguished into military, subterraneous roads, &c. The military roads were grand roads, formed by the Romans for marching their armies into the provinces of the empire ; the principal of these Roman roads in England are Watling Street, Ikonild Street, Foss Way, and Erminage Street. Double roads, among the Romans, were roads for carriages, with two pavements, the one for those going one way, and the other for those returning the other : these were separated from

each .other by a causeway raised in the middle, paved with bricks, for

the conveniency of foot-passengers ; with borders and mounting stones from space to space, and military columns to mark the distance. Subterraneous roads are those dug through a rock, and left vaulted ; and that of Puzzuolinear Naples, which is nearly half a league long, is fifteen feet broad, and as many high.

MODERN ROADS. ††† If the modern roads of Great Britain, and particularly those of England, do not as yet equal the most firm and durable of the ancient undertakings of this kind, it cannot be from the want of attention to the subject, either on the part of the legislature or the people. Our turnpike acts would of themselves make an ample volume ; parliamentary enquiries into the general subject of road-making, as well as into its local applications, have often been adverted to ; and commissioners for carrying into effect the decisions of the national wis-dom comprise the names of almost every respectable squire and beneficed clergyman (!) and lawyer of the country.

M. Dupin, the ablest perhaps of modern writers on the commercial power of England, is far more enamoured with our road-making system than we can profess ourselves to be ; he calculates that in the South of England alone we have an extent of public road, unequalled for its conveniences, that measures 46,000 leagues, and attributes it entirely to the well organised public spirit of the country. He contrasts in this respect the conduct of the British government, too, with that of France : the former not only granting the inhabitants a credit and funds, but leaving them to carry on themselves those works in which they are so materially interested ; whilst in the latter the government obliges the inhabitants to pour their funds into its own treasury, to enable it to execute after its own manner, and when it shall seem good in its own eyes, that which concerns only the governed. * How very far,' he says, ' are we from participating in the spirit of the administration and the parliament of Great Britain ! We, who scarcely confide to the zeal of the inhabitants the repair of a village footpath ! We, who, before a basket of pebbles can be thrown upon the smallest departmental road, require imperatively that the future expense of this basketful shall be carried to the budget of the arrondissement, then to that of the department, then submitted to the grand council of bridges and highways, sitting in a bureau at Paris, at the distance of 200 leagues from the situation of the work !'

He holds up to deserved ridicule the ' lenteurs savantes d'une comptabilite profonde,' and the ' formalites bureaucratiques,' which must be encountered before a public work of any description can be undertaken in France; the consequences of which are, that, with a strong corps of engineers des ponts et chaussees scattered over every

part of the country, the few new works which are commenced proceed with all imaginable leisure, and the old ones are suffered gradually to decay. Matters of this kind, he says, are very d ifferently managed in England. There houses, ships, carriages, and machines, are kept constantly in the best condition, and have an

appearance of freshness, neatness, nay, tf brilliancy, which is only adopted partially, and that even by a small number of people, on the continent. It is remarkable, he adds, that the most economical nations, and those the most enlightened as to their pecuniary interests, such as the Dutch, the Swedes, and the English, adopt, with common consent, the system of constant repair; while the Italians, the Portuguese, the Spaniards, &c., the worst calculators, and the most improvident, wait generally till an edifice falls into ruins before they think of beginning to repair it. It is the same in England, he observes, with regard to the roads ; they are habitually kept solid, smooth, and easy, equally economical for the transport of commerce, and the convenience and expedition of travelling. But in France, ‘ even in the midst of profound peace,’ says M. Dupin, ‘ scarcely can the government be prevailed upon to assign, for the maintenance of our roads, the third part of the sums which are furnished by the inhabitants of England alone ••• a country that does not equal in surface a third part of France.’

All this may contribute to put our readers in good humor with what is often a dry and dusty subject; but, while we shall shortly endeavour to do justice to the real modern improvements in road-making, we conceive that this writer admires, through ignorance of its details, some of the worst parts of our system. It is a dear and bad system, and a third part of the immense expenditure it involves would appear fully equal, on a better plan of administration, to accomplish the complete intersection of the country with good roads. The surveyor of parish roads is chosen from ten men named by a vestry meeting ; or, if necessary, more than one are appointed, the selection being in the justices at the quarter-sessions. The works and the money are under the management of the surveyor, and the control is in the local magistracy. A surveyor may perform the office gratuitously, but it is in the power of the parish to name and pay a salaried and professional one. The business is neglected by all ; and it is doubly neglected when the commissioners are numerous, or it falls into the hands of some one who makes an interest for himself, in power or patronage, or something else ; or, finally, every thing is transacted by an attorney, not always the most honorable member of his profession. As to hired surveyors, their collu-sions with the contractors are numerous; and

while the wretched but cunning people who form vestries contrive to waste and spoil the funds, from the spoil of which they all in turn contrive to derive a profit, there is either no efficient control, or there is no control at all, as the accounts are passed under the direction of the attorney, himself dependent on the vestry and the parish for his favor and his profits. It is unquestionable that double the money is often raised for these roads that would be required under a prudent direction, free from all local interests.

Bergman quotes this general view of the subject ; we shall extract from M. Dupin a passage grounded on the recent parliamentary enquiries. It is introduced by the following

Table of the public roads of England, their length, and the cost of repairing them.

Public Carriage Roads in England.

Years ending in October.

1812.

1813.

1814.

Paved Streets and Turnpike Roads .

Miles.

19,114 95,105

Miles.

19,132*

95,142ˆ

Miles.

19,178 95,184

Total length ….

Contributions in labor Contributions in money Taxes levied for the roads .

Total …. Expense of preparing documents, &c.

114,219

114,275

114,362

►►515,508

271,512 570,754

539,522 276,947 613,604

551,241 287,059 621,512

►►1,357,774

21,499

1,430,073 - 26,252

1,459,812 25,700

Thus it appears that the average annual expenses of all the roads in England were, from 1811 to 1814, as follows: ►►►

Contributions in labor . . ––535,423 Ditto in money . . ––– 278,506

Sums raised by rate … 601,954

––1,415,883

This gives us ––12 7s. 6d. for the average annual expense of maintaining each mile of open road. In this calculation I have deducted,' says our author, ' from the total amount of the expense of road labor, the three days' labor which is allowed for turnpike roads ; while six are allowed for open parish roads.

' According to a report made to the house of commons on the 10th of June, 1821, the total amount of the sums levied in a single year on turnpike roads amounts to ––970,618. This gives the average value of ––47 18s. for the support of each mile of paved street and turnpike road. By adding the contributions in labor, the expense will amount to about ––51 per mile. This revenue, immense as it is, is not sufficient for the construction of new roads, and the support of those that are already established. The different trusts have contracted debts, for which the rentals of each county are responsible. The total amount of the debts, at the period of the enquiry of which the report to which we have above alluded gives the result, was ––3,874,254, that is to say, that these debts then equalled four years' revenue. It is affirmed that if the same calculation were made for Wales, Scotland, and Ireland, the general amount of the debt of the turnpike roads would amount to ––7,000,000 sterling.' ––– vol. i. p. 86.

The fact is that our modern improvements Liave been introduced in despite of a bad system ––– and, in their most decided feature, the simple methods of Mr. M'Adam exhibit the triumph of real genius and intelligence over cumbrous contrivances to make bad roads ––– and unmake good ones, that surveyors and inspectors may be paid.

1 ()/ the purposes of roads and of laying down the line. ––– Roads, rivers, and canals have been culled the veins and arteries of a country ; ail its other improvements flow and circulate by

means of them. Our legal system respecting them dates from the reign of Charles II., but it was not until the middle of the last century that scientific enquiry was directed toward them.

Before carriages of burden were generally used, little more was

required than a hard horse path. All marshy grounds were therefore shunned, and the inequality or circuit of the road was of much less consequence than when carriages, instead of pack-horses, began to be employed. When carriages were first employed, they probably were light and narrow, and did not require to have roads of any considerable breadth. And, when these had once been traced, indolence and habit prevented any great exertions to lay them out in better lines. Heavier carriages and greater traffic made wider and stronger roads necessary ; the ancient track was pursued; ignorance and want of concert in the proprietors of the ground, and, above all, the want of some general effective superintending power, continued this wretched practice. At length turnpikes were established, and laws passed investing magistrates with authority to alter established lines, so that now the chief obstacle to the improvement of the lines of public roads is the expense.

In laying out roads, observes Mr. London, a variety of circumstances require to be taken into consideration ; but the principal are evidently their line or direction, and its inclination to the horizon. The most perfect line, according to Marshall, is that which is straight and level. But this is to be drawn in a country only which is perfectly flat, and where no obstructions lie in the way : joint circumstances that rarely hap-pen. Where the face of the country, between two points or places to be connected by a road, is nearly but not quite level, by reason of gentle swells which rise between them, a straight line may be perfect, ††† may be the most eligible, under these circumstances. But where the intervening country is broken into hill and dale, or if one ridge of hill only intervenes, a straight line of carriage road is seldom compatible with perfection. In this case, which is nearly general, the best skill of the surveyor lies in tracing the midway between the straight and the level line. The line of perfection, for agricultural

purposes, is to be calculated, by the time and exertion, jointly considered, which are required to convey a given burden, with a given, power of draught, from station to station. On great public

roads, where expedition is a principal object, time alone may be taken as a good criterion. A regular method of finding out the true line of road between two stations, where a blank is given, where there is no other obstruction than what the surface of the ground to be got over presents, is to ascertain, and mark at proper distances, the straight line ; which is the only certain guide to the surveyor. If the straight line be found to be ineligible, each mark becomes a rallying point, in searching on either side of it for a better. If two lines of equal facility, and nearly of equal distance from the straight line, present themselves, accurate measurements are to determine the choice. If one of the two best lines which the intervening country affords is found to be easier, the other shorter, the ascent and the distance are to be jointly considered ; the exertion and the time required are to be duly weighed.

That part of a road which is coated with stones is called the ‘ metalled’ part. Although in some places, Paterson observes, it may be of little consequence, either to the traveller, or to the public in general, which way the bendings are turned, provided the level is nearly obtained, ††† yet a great deal may depend upon those turns or bendings for the real benefit and advantage of the road. In bending it one way, you may have no metals that will stand any fatigue, un-less at a great distance and expense ; while, in turning it the other way, you may have metals of the very best quality, in the immediate vicinity. In the one way, too, you may be led over ground of a wet bottom, where even, with twelve or fourteen inches deep of metals, there would be difficulty in keeping a good road ; while, in the other, you may have such a dry bottom that the road would be much easier upheld with seven or eight inches of metals. So that the tract that may appear most eligible to the eye, at first sight, may not always be the one that should be adopted. ‘ A combination of all the requisites I have already mentioned should be studied, as far as possible ; and, where these cannot be found all to unite, the one possessing the most of these advantages, and subject to no other material objection, should, of course, be adopted.’ Treatise on Roads, p. 19.

Roads, Edgeworth observes, should be laid out, as nearly as may be, in a straight line; but to follow with this view the mathematical axiom, that a straight line is the shortest that can be drawn between two points, will not succeed in making the most commodious roads ; hills must be avoided, towns must toe resorted to, and the sudden bends of rivers must be shunned. All these circumstances must be attended to; therefore a perfectly straight road cannot often be found of any great length. It may perhaps appear surprising that there is but little difference in the length between a road that has a gentle bend, and

one that is in a perfectly straight line. A road ten miles long, and perfectly straight, can scarcely be found any where,

but if such a road could be found, and if it were curved, so as to prevent the eye from seeing further than a quarter of a mile of it, in any one place, the whole road would not be lengthened more than 15Q yards. It is not proposed to make serpentine roads merely for the entertainment of travellers ; but it is intended to point out, that a strict adherence to a straight line is of much less consequence than is usually supposed ; and that it will be frequently advantageous to deviate from the direct line, to avoid inequalities of ground. It is obvious that, where the arc described by a road going over a hill is greater than that which is described by going round it, the circuit is preferable ; but it is not known to every overseer that within certain limits it will be less laborious to go round the hill, though the circuit should be much greater than that which would be made in crossing the hill. Where a hill has an ascent of no more than one foot in thirty, the thirtieth part of the whole weight of the carriage, of the load, and of the horses, must be lifted up, whilst they advance thirty feet. In doing this, one-thirtieth part of the whole load continually resists the horses' draught; and, in drawing a waggon of six tons weight, a resistance equal to the usual force of two horses must be exerted.

A perfectly level road, it has been often said is not the best for every species of draught. Slight and short alternations of rising and falling ground are serviceable to horses moving swiftly ; the horses have time to rest their lungs and different muscles : and of this experienced drivers know well how to take advantage. Marshal concurs in this opinion, as well as Walke. Telford, and most engineers ; and Paterson considers that it would not be proper to line a road upon a perfect level, even to the length of one mile together, although it could be quite easily obtained. It is a fact, he says, well known to most people, at least every driver of loaded carriages knows by experience, that where a horse, dragging a load over a long stretch of road, quite level, will be exhausted with fatigue ; the same length of a road, having here a gentle acclivity, and there a declivity, will not fatigue the animal so much. This is easily accounted for. On a road quite level the draught is always the same, without any relaxation ; but, on a gentle ascent, one of his powers is called into exercise ; on the descent, another of his powers is called into action, and he rests from the exercise of the former. Thus are his different muscular powers moderately exercised, one after another ; and this variety has not the same tendency to fatigue.

Cutting through low hills to obtain a level is recommended by some, who, as f aterson observes, will argue ‘ that where the hill of ascent is not very long it is better, in that case, to cut through it in a straight line, and embank over the hollow ground on each side, than to wind along the foot of it. This, however, should only be done where the cutting is very little indeed, and an embankment absolutely necessary. Few people, except those who are well acquainted, are aware of the great expense of cutting and embanking ; and, the more any one becomes acquainted with road-making, the more,

it may be presumed, will he endeavour to avoid those levels on the straight line that are obtained only by cutting and embanking, and will either follow the level or the curved line round the hill ; or, where this is impracticable, will ascend the hill, and go over it by various windings, avoiding always abrupt or sudden turnings.’ Treatise, &c. p. 15.

According to Walker, Minutes of Evidence oefore a Committee of the House of Commons, 1819, a dry foundation and clearing the road from water are two of the main objects. ‘ For obtaining the first of these objects it is essential that the line for the road be taken so that the foundation can be kept dry, either by avoiding low ground, by raising the surface of the road above the level of the ground on each side of it, or by drawing off the water by means of side drains. The other object, *viz.* that of clearing the road of water, is best secured by selecting a course for the road which is not horizontally level, so that the surface of the road may in its longitudinal section form in some degree an inclined plane ; and when this cannot be obtained, owing to the extreme flatness of the country, an artificial inclination may generally be made. When a road is so formed, every wheel track that is made, being in the line of the inclination, becomes a channel for carrying off the water, much more effectually than can be done by a curvature in the cross section or rise in the middle of the road, without the danger, or other disadvantages, which necessarily attend the rounding a road much in the middle. I consider a fall of about one

inch and a half in ten feet to be a minimum in this case, if it is attainable without a great deal of extra expense.'

The ascent of hills, as observed by Marshal, is of course one of the most difficult parts of laying out roads. According to theory, he says, an inclined plane of easy ascent is proper ; but as the moving power on this plane is ' neither purely mechanical, nor in a sufficient degree rational, but an irregular compound of these two qualities, the nature and habits of this power' require a varied inclined plane, or one not a uniform descent, but with levels or other proper places for rests. According to the road act the ascent or descent should not exceed the rate or proportion of one foot in height to thirty-five feet of the length thereof, if the same be practicable, without causing a great increase of distance. Mr. Telford, Minutes before the Committee of the House of Commons, &c., 1819, referring to those which he has lately made through the most difficult and precipitous districts of North Wales, says, ' the longitudinal inclinations are in general less than one in thirty ; in one instance for a considerable distance there was no avoiding one in twenty-two, and in another, for about 200 yards, one in seventeen ; but, in these two cases, the surface of the roadway being made peculiarly smooth and hard, no inconvenience is experienced by wheeled carriages. On flat ground the breadth of the roadway is thirty-two feet ; where there is side cutting not exceeding three feet, the breadth is tvyenty-eight; and, along any steep ground and precipices, it is twenty-two, all

clear within the fences ; the sides are protected by stone walls, Abreast and retaining walls, and parapets ; great pains have been bestowed on the cross drains, also the draining the ground, and likewise in constructing firm and substantial foundations for the metalled part of the roadway.'

In order to preserve a moderate inclination, or such a one as will admit of the descent of carriages without locking their wheels, a much longer line will generally be required than the arc of a hill. In reaching the summit, or highest part to be passed over, the line in many-cases must be extended by winding or zigzag-ging it, so as never to exceed the maximum degree of steepness. Two inches in six feet is the slope of the celebrated Simplon road. If this were extended in a straight line, on each side, it would require an enormous mound, and an immense expense ; but by being conducted in a winding direction, up the hill on one side, and down the other, the same end is gained at a moderate cost. Such works show the wonderful power and ingenuity

of man.

In laying out a road towards a river, or any place requiring a bridge or embankment, an obvious advantage results from approaching them at right angles ; and the same will apply in re-gard to any part requiring tunnelling or crossing by an aqueduct, &c. : all crossings and intersections should indeed be made at right angles.

2. Of the width, and form of roads. ••• It is contended, by the author of the Landed Property of England, that the plan of all public roads should admit of their being divided into three travellable lines, namely : 1 . A middle road of hard materials for carriages and horses in winter and wet seasons : 2. A soft road, formed with the natural materials of the site, to be used in dry weather, to save the unnecessary wear of the hard road, and to favor the feet of travelling animals ; as well as for the safety, ease, and pleasantness of travelling in the summer season : and 3. A commodious path, for the use of foot passengers, at all seasons. But in these cases, he thinks, modern practice has simplified too much. Instead of these three requisites of a public road, we generally find a parliamentary or turnpike road (away from the environs of great towns) consisting simply of one uniform broadway of hard materials ; upon which horses stumble, and carriages jolt, the year round : while travellers on foot are seen wading to their ankles in mud, or in dust, according to the state of the wind and weather. His notions of what the nature of a public road ought to be is, that within the fences of a lane or road there should be a raised footpath, a convex hard road, a soft summer road, and channels to carry off the water collected by the carriage roads; the footpath being cut across in proper places, to permit the water, which falls on that side of the middle road, to pass off freely into the ditch at that side, as well as to prevent horsemen from riding along the path ; the opposite hedge-bank being perforated, to let off, into the other drain on the contrary side, the waters which may collect on that side of the lane or road. Mr. Telford, Mr. Walker, and most other engineers, consider seventy feet a sufficient

width for roads near the largest towns and cities, and that ten or twenty feet of this may in some ###,ases be paved. The London Commercial lload, constructed by the last-named engineer, is of this width and character, and there are fifteen feet of gravel road at each side for light carriages OP horses. It has been executed for sixteen years, and has given the greatest satisfaction ; but Mr. Walker thinks that considerable improvement would be found from paving the sides of a road, upon which the heavy traffic is great, in both directions, and leaving the middle for light carriages; the carmen or drivers, walking upon the footpaths or sides of the road, would then be close to their horses, without interrupting or being in danger of accidents from light carriages, which is the case when they are driving upon the middle of the road ; and the unpaved part, being in the middle or highest part of the road, would be more easily kept in good repair. But unless the heavy traffic in both directions is great, one width, say ten or twelve feet, in the middle of the road, well paved, will be found sufficient for all ordinary wear. The width of many of the present roads is, besides, such, that ten or twelve feet can be spared for paving, while twice that width would leave too little for the gravelled part. Although the first cost of paving is great he does not think that any other plan can be adopted so good and so cheap in those places where the materials got in the neighbourhoo'l are not sufficient for supporting the roads. A coating of whinstone is, for instance, more durable than the gravel with which the roads round London are made and repaired ; but much less so than paving ; although the freight and carriage of the whinstone, and of the paving-stones, which form the principal items of the expense, are nearly the same.

Proportioning the breadth of roads to the traffic for which they may be employed, has, perhaps, not been sufficiently attended to. In remote places, where there is but little traffic, the waste of ground occasioned by superfluous width of roads, is an error : there being many places where roads of twenty feet breadth would suit the public convenience, as well as if they were twice as broad ; and it is clear that, if a road is one pole or perch wider than is necessary, there is a waste of 320 perches in a mile, equal to two acres of ground, which, at the rate of ##3 per acre, would, if the road had been once well made, keep half a mile of such road as is here alluded to in good repair. According to Paterson, the breadth of the road and the width of the metals, or paved part, should depend on circumstances different from the former. For a few miles in the vicinity of such cities as London or Edinburgh, the most proper breadth at which a road should be formed, he thinks, is from sixty to seventy feet, and the metals from twenty-five to thirty-five feet; while, in the neighbourhood of such

towns as Newcastle and Perth, it will be sufficient that it be formed forty feet broad, and that the width of the metals be about eighteen or twenty feet. These are the breadths presumed to be the most eligible in such situations. But rules cannot be given to suit every situation : the breadth ought to be regulated according to the

extent of the run of commerce, or traffic, upon the road. As a general rule however, for public roads over the different counties of Great Britain, I should suppose, he says, the following might in most cases be adopted. Take for instance the road betwixt Edinburgh and Glasgow, or betwixt Edinburgh and Aberdeen, by the way of Dundee. These roads are formed :n general from thirty-five to forty feet wide ; and the breadth of the metals is from fourteen to sixteen feet for the most part. Such roads as these would be found to answer very well, in general, over the kingdom. A breadth sufficient for the general purposes of country travelling, according to M'Adam, is sixteen feet of solid materials, with six feet on each side formed of slighter materials. The Bristol roads, he says, are made with stone about the width of sixteen feet.

Narrow roads, it is well observed by Fry, are almost always in bad condition, which is to be accounted for from the circumstance of every carriage being obliged to go in the same ruts ; and, as each rut is generally only six inches wide, one foot of the road only is worn by the wheels instead of the whole breadth of it ; which would be the case if the road were of a proper width, and if it were well ccnstructed. If a road be laid out from twenty to thirty feet wide, so flat as that a carriage may stand nearly upright on every part of it, and if moderate care be taken by the surveyor to prevent the first formation of ruts, such a road will be worn by the wheels nearly alike on every part of it : provided also that the ground on each side, for at least four or five feet, be moderately flat, so as not to excite fear in the drivers of carriages ; but if there be deep ditches close to the sides of the road, or if the circumjacent land fall off very abruptly to the depth of two or three feet, whereby fear of approaching the edges would operate on the minds of the drivers, every driver will instinctively avoid the danger on either hand ; and a road so circumstanced will, in spite of any care of the surveyor, inevitably be worn into ruts in the middle. There is a remarkable instance of this kind in a piece of road on Durdham Down, near Bristol. This road is a causeway over a piece of soft ground ; and, although it is from twenty to twenty-five feet wide, yet, as the ground falls away abruptly on both sides of it, it has been found impossible, for more than twenty years past, to his

knowledge, to prevent deep ruts being formed along the middle of it ; notwithstanding the Down itself consists of hard limestone; and the other roads upon the Down are as fine and even as any roads in England. Were this piece of road widened out on each side, in an easy slope about five feet, by rubbish of any kind, and by the scrapings of the soau it-self, whereby the instinctive operation of fear of approaching the sides of the present road would be obviated, that piece of road would be found to wear as fairly as the other roads on the same Down.

When roads run through marshy ground, observes Mr. Edgeworth, ‘ the substratum must be laid dry by proper drainage ; and where the road is liable, from the flatness of the country, to be at times under water, the expense of raising it above the water must besubm.tted to in the

rirst instance. All drains for carrying off water should be under the road, or at the field side of the fences, and these drains should be kept open by constant attention, and should be made wide at the outlet.' Telford and Walker recommend the side drains to be in every instance on the field side of the fence. In cases, Telford observes, where a road is made upon ground where there are many springs, it is absolutely necessary to make a number of under and cross drains to collect the water and conduct it into the side drains, which should always be made on the field side of the fences. The orifices of these cross drains should be neatly and substantially finished in masonry. ' Before the materials are put on, run a drain along the middle of the road, all the way, from two to three feet deep ; then fill it \% ith stones up to the surface, making those at 1 ottom of a pretty good size, and those at the top full as small as the road materials. And, in order that the quantity of stones used for the said drain may be as little as possible, and every way to save expense, it may be made as narrow as it can possibly be dug. From this leading drain make a branch here and there to convey off the water to the canals on the sides of the road.' ††† Paterson. This mode of draining he has found from experience to be so beneficial that a road so drained would be better and more durable with eight inches, than it would otherwise be with twelve inches of materials. And not only so, but tnat on such a road there would be a saving on the incidental repairs, ever afterwards, of about one-half of the labor, and at least one-third of the material. ' All moisture from under the road materials should be carried off by such drains. Where such drains are wanting, the road, on the return of a thaw, throws up to the surface all the water it had imbibed ; and in many places the materials, swelling up, become quite loose and open. This is a natural consequence, where the material is not thick, and where the soil under the road is not perfectly dry. But, where a road is dried in the way described, it will be uniformly seen that the water, instead of spewing out on the return of a thaw, is sucked in by the drains, so leaving the surface of the road quite dry. It may be observed, at such times, that the places of the road where a few roods of such drain had been introduced, presented to the eye, at a quarter of a mile distance, quite a contrast to the other parts of the road ; the one opaque and dry, from the moisture being sucked in, the other all wet and glistering, from its being thrown out to the surface.' ††† Pa-tersoris Letters, &c., 44, 48, 84.

Embankments and bridges of different degrees of magnitude, are

required in most lines of road. Large bridges we must leave to engineers ; no department of their art having attained higher perfection. \Ve here confine ourselves entirely to such stone arches as may be designed by road-surveyors, and built by country masons. In many cases cast-iron might be substituted for stone with economy and advantage as to water-way ; but, though the principle of constructing both cast and wrought iron bridges is perfectly simple, the execution, and especially the putting up, requires more skill, and is attended with

much more risk than the erection of other bridges.

One low arch is thought by Mr. Loudon to be in general the most desirable description of common road-bridges. But most of the country bridges, as Clarke observes, consist of several small, high, semicircular arches : where there is a single arch, the stream passes without interruption ; if there are two or three in the same situation, the space through which the water is to pass is necessarily contracted by tne width of piers. Ice, and large bodies carried down by the floods, frequently stop up the small arches, and the accumulated water carries away the bridge ; but, if such accidents should not happen, the constant currents rushing against those piers wash out the mortar, loosen the stones, and very soon undermine the work if it is not extremely well put together, which is seldom the case. Unless the river or stream is narrow, or the banks very high, a semicircle is an inconvenient shape for an arch ; it has been adopted on account of the insufficiency of the abutments, and because the pressure is more perpendicular ; but scientific engineers, in all countries, now construct their bridges with wide openings, and make the arches either semi-ellipses, or segments of large circles ; so that the space above the highest floods is comparatively little, and the ascent over the bridge inconsiderable. In country bridges in Ireland, Clarke continues, the foundations are invariably, and often intentionally, defective : the mason considers himself an honest man if his bridge lasts seven years ; whereas, from the durability of materials in that country, it ought to endure for ages. Whatever is under water is out of sight, and is generally composed of loose stones, thrown promiscuously together, on which the masonry is erected, and all the pains and expense are bestowed on the cut-waters and wings, when the heaviest stones, and those accurately jointed, ought to be laid in the foundations. The greatest attention should be paid to the quality of the materials : the stones should be large, and laid in level courses, in the best mortar, composed of sharp sand, free from loam, and quicklime, accurately mixed together ; the coping of the parapet is generally so slight that it

is broken down as soon as built, and the entire parapet quickly follows ; it ought to be of large heavy stones, roughly hammered, and there should be substantial quoins at the ends of the parapets with an immovable stone over them. Arches not exceeding eight feet span may be semicircular; tunnels not exceeding eighteen inches wide may be covered with strong flags, and either flagged or paved under, and there ought to be across either end a deep long stone, sunk below the surface of the current, and under the walls, to prevent the water from undermin-ing the work.

Fences along the sides of roads aˆe essential in all enclosed countries ; and all engineers and road-makers agree that they should never be allowed to rise to a greater height than what is necessary for a fence. To give free admission tp the sun and air, by keeping the fences low, Marshall considers as providing an expensive, yet most accurate method of cleaning roads, incomparably more so than washing or scraping. The

legislature, Edgeworth observes, has limited, in several instances, the height of hedges to five feet ; but this limitation is neglected or evaded. Even were it strictly adhered to, it would not be sufficient for narrow roads ; the hedges would be still too high, for it is the sweeping power of the wind which carries off dust in dry weather, and which takes up moisture in wet. In fact, roads become dry by evaporation ; and, when they are exposed to the sun and wind, the effect of heat and ventilation are more powerful than any surface drainage that could be accomplished. Wal-ker observes that the advantage of having the hedge next the road consists in its greater safety to the traveller, particularly if a ditch of any considerable depth is necessary, and in the hedge being supported in its growth from the ground under the road, without drawing upon the farmer’s side of the ditch. The fences, Telford observes, form a very material and important subject, with regard to the perfection of roads ; they should in no instance be more than five feet in height above the centre of the road, and all trees which stand within twenty yards from the centre of

it ought to be removed. I am sure that twenty per cent, of the expense of improving and repairing roads is incurred by the improper state of the fences and trees along the sides of it, on the sunny side more particularly ; this must be evident to any person who will notice the state of a road which is much shaded by high fences and trees, compared to the other parts of the road which are exposed to the sun and air. My observations, with regard to fences and trees, apply when the road is on the same level as the adjacent fields ; but in many cases, on the most frequented roads of England, more stuff has been removed from time to time than was put on ; the surface of the road is consequently sunk into a trough or channel from three to six feet below the surface of the fields on each side ; here all attempts at drainage, or even common repairs, seem to be quite out of the question ; and by far the most judicious and economical mode will be to remove the whole road into the field which is on the sunny side of it. ××× Examination be/ore the House of Commons, fyc.

3. Of the foundation of roads. ××× Edgeworth, Marshall, and all the practical engineers before Mr. M'Adam differ with him as to the base of roads. The author of Landed Property in England would prepare the ground by striking off the protuberances, and filling up the hollow parts : the footpath and the higher side of the soft road being raised with the earth which is required to be taken off the bed of the hard road ; whose base or foundation ought to be formed with neculiar care. Every part is required, as he says, to be firm and sound : dry earth, or hard materials, being rammed into every hollow and yielding part. In a dry situation, as across a gravelly or stony height, little more, he says, is required than to remove the surface mould, and lay bare the rock, or bed of gravel beneath it : and, then, to give the indurate base a round or a shelving form, as the lying of the ground may require. In this way, a travelable road may be made, and kept up, at one-tenth of the expense incurred by the ordinary practice in this case ;

which is to gather up the surface-soil into a ridge, and, on this soft spongy bed, to lay, coat after coat, some hard materials, ××× fetched perhaps from a distance. But M'Adam contends that a stratum of hard materials covering a morass will last longer than a similar stratum laid on rock ; indeed, according to this able engineer, it may be questioned whether a properly made road on a bog, which yields by its elasticity, will not last longer than one on a firm surface. In Ireland this is said to be found actually the case : ' For the same cause,' as Fry observes, ' that a stone placed upon a woolpack would

bear a greater pressure before it would be broken, than it would if placed on an anvil.' ††† Essay on Wheel Carriages, &c. Edgeworth and many others have recommended covering the base of an unsound road with faggots, branches, furze, 01 heath. Flat stones, he adds, if they can be had, should then be laid over the faggots, and upon them stones of six or seven pounds' weight, and, lastly, a coat of eight or ten inches of pounded stone. If the practicability of consolidating a mass of stones of six or eight ounces weight and under each, so as to act as one plate or flooring, be admitted, then the faggots and flat stones must at least be useless, and the stones of six or seven pounds' weight injurious; because, whenever the. upper stratum has worn down a few inches, some of these stones, and eventually the greater number will be worked up to the surface, and the road destroyed or put in a state to require lifting, breaking, and relaying. A basement of trees, bavins, or bushes, was made use of by Walker when the ground was soft. They carry off the water previous to the materials of the road being so consolidated as to form a solid body, and to be impervious to water. Bushes are, however, not advisable to be used, unless they are so low as always to be completely moist. When they are dry and excluded from the air they de-cay in a few years, and produce a sinking in the road ; a thickness of chalk is useful for the same purpose in cases where bushes are improper : the chalk mixing with the gravel or stones becomes concreted, and presents a larger surface to the pressure.

Mr. M'Adam would lay his ' metals' at once on the earth, provided it were even a bog, ' if a man could walk over it.' In his examination before the house of commons he says, ' the Somersetshire morass is so extremely soft that when you ride in a carriage along the road you see the water tremble in the ditches on each side ; and the vibration so great that it will break you in.' Yet here he would use no large foundation stones, ' nor faggots, nor any material larger than will weigh six ounces. If a road be made smooth and solid, it will be one mass, and the effect of the substrata, whether clay or sand, can never be felt in effect by carriages going over the road ; because a road well made unites itself in a body like a piece of timber or a board.' And we may now introduce

4. Mr.]\1' Adam's system. ††† This able and ingenious engineer agrees with many of his predecessors that a good road may be considered as an artificial flooring, forming a strong, solid, smooth-surfaced stratum, sufficiently flat to

admit of carriages standing upright on any part of it, capable of carrying a great weight, and presenting no impediment to the animals or machines which pass along it. In forming this flooring, he has, however, gone one material step beyond his predecessors in breaking the stone to a smaller size, and in forming the entire stratum of this small-sized stone. It is in this point, of making use of one small size of stones throughout the stratum, that the originality of Mr. M'Adam's plan consists. It is doubted by some whether this would be durable in the northern districts at the breaking up of frosts, and especially in the case of roads not much in use, or consisting of a stratum less consolidated, and more penetrable by water. ' The durability of roads,' he says, ' will of course depend on the strength of the materials of which they may be composed, but they will all be good while they last, and the only question that can arise respecting the kind of materials is one of duration and expense, but never of the immediate condition of the roads.' ††† Remarks on Roads, &c. p. 11.

Roads can never be rendered perfectly secure, according to this gentleman (see his report to the board of agriculture), until the following principles be fully understood, admitted, and acted upon : namely, that it is the native soil which really supports the weight of traffic ; that while it is preserved in a dry state it will carry any weight without sinking ; and that it does, in fact, carry the road and the carriages also ; that this native soil must previously be made quite dry, and a covering impenetrable to rain must then be placed over it to preserve it in that dry state ; that the thickness of a road should only be regulated by the quantity of materials necessary to form such impervious covering, and never by any reference to its own power of carrying weight. The erroneous opinion, so long acted upon, that by placing a large quantity of stone under the roads, a remedy will be found for the sinking into wet clay, or other soft soils ; or, in other words, that a road may be made sufficiently strong, artificially, to carry heavy carriages, though the sub-soil be in a wet state, and by such means to avert the inconveniences of the natural soil receiving water from rain, or other causes, seems to have produced most of the defects of the roads of Great Britain. At one time Mr. M'Adam had formed the opinion that this practice was only a useless expense ; but

experience has convinced him that it is likewise positively injurious.

In confirmation of this, if strata of stone of various sizes be placed as a road, it is well known to every observant road-maker that the largest stones will constantly work up by the shaking and pressure of the traffic ; and that the only mode of keeping the stones of a road from motion is to use materials of a uniform size from the bottom. In roads made upon large stones, as a foundation, the perpetual motion, or change of the position of the materials, keeps open many apertures, through which the water passes. It has also been found that roads placed upon a hard bottom wear away more quickly than those which are placed upon a soft soil. This has been apparent upon roads where motives of eco-

nomy, or other causes, have prevented the road being lifted to the bottom at once ; the wear has always been found to dimmish, as soon as it was possible to remove the hard foundation. As to the fact, already adverted to, that a road lasts much longer over a morass than when made over rock, the evidence produced before the committee of the house of commons showed the comparison, on the road between Bristol and Bridgewater, to be as five to seven in favor of the wearing on the morass, where the road is laid on the naked surface of the soil, against a part of the same road made over rocky ground.

Water, with alternate frost and thaw, are the great evils to be guarded against in the base of a road : consequently nothing can be more erroneous than providing a reservoir for water under the road, and giving facility to the water to pass through the road into this trench, where it is acted upon by frost to the destruction of the road. As no artificial road can ever be made so good and so useful as the natural soil in a dry state, it is only necessary to procure and preserve, according to M'Adam, this dry state of so much ground as is intended to be occupied by a road. The first operation is to be the reverse of digging a trench. The road should not be sunk below, but rather raised above the ordinary level of the adjacent ground; care should at any rate be taken that there be a sufficient fall to take off the water, so that it should always be some inches below the level of the ground upon which the road is intended to be placed : this must be done, either by making drains to lower ground, or if that be not practicable, from the nature of the country, then the soil upon which the road is proposed to be laid must be raised by addition, so as to be some inches above the level of the water.

Having secured his soil from underwater, the road-maker is next to secure it from rain by a solid road made of clean dry stone or flint, so selected, prepared, and laid, as to be perfectly impervious to water ; and this cannot be effected unless the greatest care be taken that no earth, clay, chalk, or other matter, that will hold or conduct water, be mixed with the broken stone ; which must be so prepared and laid as to unite with its own angles into a firm, compact, impenetrable body. The thickness of this body is immaterial, as to its strength for carrying weight; this object is already obtained by providing a dry surface, over which the road is to be placed as a covering or roof, to preserve it in that state : experience having shown that if water passes through a road, and fill the native soil, the road, whatever may be its thickness, loses its support, and goes to pieces. In consequence of an alteration in the line of the turnpike-road, near Rownham-ferry, in the parish of Ashton, near Bristol, it was necessary to remove the old road. This road was lifted, and re-laid very skilfully in 1806 ; since which time it has been in contemplation to change the line, and consequently it has been suffered to wear very thin. At present it is not above three inches thick in most places, and in none more than four : yet, on removing the road, it was found that no water had penetrated, nor had the frost affected it during

the winter preceding, and the natural earth beneath the road was found perfectly dry. Various new roads have been constructed on this principle within the last few years ; the great north road from London, by Hoddesdon, in Hertford-shire ; two pieces of road on Durdham Down, and at Rownham-ferry, near Bristol ; with several private roads in the eastern parts of Sussex, are amongst the best specimens. None of these roads exceed six inches in thickness ; and, although that on the great north road is subjected to a heavy traffic, it has not given way, nor was it affected by the severe winters it has experienced, and when other roads between that and London became impassable, by

breaking up to the bottom, and the mail and other coaches were obliged to reach London by other routes. Improvement of roads, says M'A. (in 1824), upon the principle I have endeavoured to explain, has been rapidly extended during the last four years. It has been carried into effect on various roads, and with every variety of material, in seventeen different counties. These roads being so constructed as to exclude water, consequently none of them broke up during the late severe winter (1819-20); there was no interruption to travelling, nor any additional expense by the post-office in conveying the mails over them, to the extent of upwards of 1000 miles of road.'

We may add that several large streets and thoroughfares of the metropolis have been unpaved, and laid down again on the principles of Mr. M'Adam. The result has not been uniformly successful ; but in the cases where the paving system has been renewed, we believe the base has been M'Adamised, and so a substantial improvement has, on the whole, been obtained.

ROAM, v. n. & v. a. i Ital. rwnigare ; Goth.

ROAM'ER, n. s.) ruma. See ROOM. To

wander without any certain purpose ; to ramble ; rove ; to play the vagrant. ' Imagined to come from the pretences of vagrants, who said they were going to Rome.'

Five swmraers have I spent in farthest Greece, Roaming clean through the bounds of Asia.

Shaktpeare.

Now fowls in their clay nests were couched, And now wild beasts came forth the woods to roam.

Milton.

The lonely fox roams far abroad, On secret rapine bent, and midnight fraud. Prior. What were unenlightened man,

A savage roaming through the woods and wilds

In quest of prey. Thomson's Summer.

ROAN, adj. Sax. noon; Fr. rouen ; Ital. roano ; Span, ruano. Of a bay sorrel or sorrel gray color.

Roan horse is a horse of a bay, sorrel, or black colour, with grey or white spots interspersed very thick. Furrier's Dictionary.

ROANNE, a considerable trading town of France, on the left bank of the Loire, where that river is only forty miles north-west of Lyons. In the beginning of the last century it was a mere village ; and it owes its increase to its hav-ing become an entrepot for goods sent from the east and south-east of France, to Orleans, Nantes, Paris, &c. It has now 7000 inhabitants. The streets stretch out in various directions into the country, and the most remote parts of them are intermixed with trees. In the interior, however,

it has tolerably straight streets, and go-xl houses; and manufactures of linen, cotton, small iron wares, &c.

ROANOKE, a river of North Carolina, formed by the union of the Staunton and the Dan, the former of which rises in Virginia, and the latter in North Carolina, and flows into Albemarle Sound, long. 76►► 56' W., lat. 35►► 58' N. It is navigable for vessels of considerable burden thirty or forty miles, and for boats of thirty or forty tons to the falls, seventy miles ; and for boats of five tons for the distance of 200 miles above the falls. The country watered by this river is extremely fertile. Below the falls vast quantities of Indian corn are raised ; and the planters are among the wealthiest in the state. Exertions are making to improve the navigation of this river by constructing canals around the falls : opening a water communication between Norfolk, Valentia, and the interior of North Carolina, and the southern part of Virginia.

ROAR, v. n. & n. s.) Saxon rianan ; Goth.

ROAR'ER, n. t. J runtir. To cry as a

lion or wild beast; bellow; cry in distress; make a loud noise : the cry or noise made : a roarer is a noisy man.

The young lions roared upon him, and yelled.

Jeremiah ii. 15. Roaring bulls he would make him to tame.

Spenser.

Warwick and Montague, That in their chains fettered the kingly lion, And made the forest tremble when they roared.

Shakspeare. At his nurse's tears,

He whined and roared away your victory, That pages blushed at him. Id. Coriolanus. Where be your gibes now? your gambols? you-songs ! your flashes of merriment, that were wont to set the table in a roar ? Id. Hamlet.

The English roarers put down all. Howet. Deep throated engines belched, whose roar Imbowelled with outrageous noise the air. Milton.

Oft on a plat of rising ground, I hear the far-off curfew sound, Over some wide-watered shoar, Swinging slow with sullen roar. Id.

When cannons did diffuse, Preventing posts, the terror, and the news ; Our neighbour princes trembled at their roar.

Waller.

The death of Daphnis woods and hills deplore, J They cast the sound to Libya's desart shore ; f The Libyan lions hear, and hearing roar. i

Dryden. j

Sole on the barren sands the suffering chief Roared out for anguish) and indulged his grief-Id.

The waters, listening to the trumpet's roar, Obey the summons, and forsake the shore. Id.

The roar

Of loud Euroclydon. Philips.

Consider what fatigues I've known, How oft I crossed where carts and coaches roared.

Gay.

Loud as the wolves on Orcas' stormy steep, Howl to the roaring of the northern deep. Pope.

The wonted roar is up, And hiss continual through the tedious night.

Thomson. Earth shakes beneath them, and Heaven roa'-t

above ; But nothing scares them from the course they love.

RP'RY, adj. Better, rory; Lat. rores. Dewy. On l►►banon his foot he set, And shook his wings with roary May dews wet.

Fairfax.

ROAST, v. a. & part . adj. Saxon jerioj-rofc,

roasted ; Fˆ. rostir, rotir ; Teut. rosten, from

Lat. rostrum, a grate. To dress meat before the

fire : originally, to broil it : to heat ; vex ; tease :

to rule the roast* is, to preside; manage.

Where champions ruleth the roast, Their daily disorder is most. Tusser’s Husbandry.

Roasted in wrath and fire, He thus o’ersized with coagulate gore, Old Priam seeks. Shakspeare.

The new made duke that rules the roast. Id.

In eggs boiled and roasted there is scarce difference to be discerned. Bacon’s Natural History.

He lost his roast beef stomach, not being able to touch a sirloin. Addison.

And, if Dan Congreve judges right, Roast beef and ale make Britons fight. Prior. Alma slap-dash is all again In every sinew, nerve, and vein ; Runs here and there, like Hamlet’s ghost, While every where she rules the roatt. Id.

Roasting and boiling are below the dignity of your office. Swift's Directions to the Cook.

Here elements have lost their uses, Air ripens not, nor earth produces ; Fire will not roast, nor water boil. Swift.

ROASTING, in metallurgy, the dissipation of the volatile parts of ores by heat. See METALLURGY.

ROB, n. s. Sax. j\o)>e ; Port. roob. Inspissated juices.

The infusion, being evaporated to a thicker consistence, passeth into a jelly, rob, extract, which ###contain all the virtues of the infusion.

Arbuthnut on Aliment*.

ROB, v. a. “) Old Fr. robber ; Ital. rob—

KOB'BER, re. s. > bare ; Teut. rauber. To de—

ROB'BING. j prive of any thing by unlawful violence; to thieve; plunder; takeaway : hence set free : the nounsubstantives corresponding.

Thievi s for their robbery have authority, When judges steal themselves. Stiakspeare.

Is't not enough to break into my garden, And, like a thief, to come to rob my grounds, But thou wilt brave me with these sawcy terms ?

Id.

Our house is hell, and thou, a merry devil, Didst roh it of some taste of tediousness. Id.

Better be disdained of all, than fashion a carriage to rob love from any. Id.

These hairs, which thou dost ravish from my chin, Will quicken and accuse thee : I'm your host ; W' ith robbers' hands, my hospitable favours You should not ruffle thus. Id.

Procure, that the nourishment may not be robbed and drawn away. Bacon's Natural History.

Our sins being ripe, there was no preventing of God's justice from reaping that glory in our calamities, which we robbed him of in our

prosperity.

King Charles. Had’st thou not committed Notorious murder on those thirty men At Ascalon ;

Then, like a robber, strip’d’st them of their robes. Milton’s Agonistes.

Some more effectual way might be found, for suppressing common thefts and robberies. Temple.

I have not here designed to rob him of any part of that commendation which he has so justly acquired VOL. XVIII. ###

from the whole author, whose fragments only fall to

my portion. Dry den.

Bold Prometheus did aspire,

And stole from heaven the seeds of fire ;

A train of ills, a ghastly crew,

The robber’s blazing track pursue. Id. Horace.

Public robbers are more criminal than petty and common thieves. Davenant.

The robber must run, ride, and use all the desperate ways of escape ; and probably, after all, his sin betrays him to the gaol, and from thence advances him to the gibbet. South.

The water-nymphs lament their empty urns, Bceotia, robbed of silver Dirce, mourns. Addison.

ROB, in pharmacy, is the juice of fruits purified and inspissated till it is of the consistence of honey.

ROBBERY, the rapina of the civilians, is the felonious and forcible taking from the person of. another of goods or money to any value, by violence, or putting him in fear. 1. There must be a taking, otherwise it is no robbery. A mere attempt to rob was indeed held a felony, so late as Henry IV.‘s time ; but afterwards it was taken to be only a misdemeanor, and punishable with fine and imprisonment ; till the statute of 7 Geo. II. c. 21, which makes it a felony (transportable for

seven years), unlawfully and maliciously to assault another, with any offensive weapon or instrument ; or by menaces, or by other forcible or violent manner, to demand any money or goods, with a felonious intent lo rob. If the thief, having once taken a purse, returns it, still it is a robbery ; and so it is, whether the taking be strictly from the person of another, or in his presence only : as where a robber, by menaces and violence, puts a man in fear, and drives away his sheep or his cattle before his face. It is immaterial of what value the thing taken is : a penny, as well as a pound, thus foi-cibly extorted, makes a robbery. Lastly, the taking must be by force, or a previous putting in fear; which makes the violation of the .person more atrocious than privately stealing. This species of larceny is debarred of the benefit of clergy, by statute 23 Hen. VIII. c. 1., and other subsequent statutes ; not indeed in general, but only when committed in a dwelling-house, or in or near the king's highway. A robbery, therefore, in a distant field, or footpath, was not punished with death, but was open to the benefit of clergy, till the statute of 3 and 4 W. & M., c. 9. which takes away clergy from both principals and accessories before the fact, in robbery, wheresoever committed.

If a man force another to part with his property, for the sake of preserving his character from the imputation of having been guilty of an unnatural crime, it will amount to a robbery, even though the party was under no apprehension of personal danger. If any thing is snatched suddenly from the head, hand, or person of any one, without any struggle on the part of the owner, or without any evidence of force or violence being exerted by the thief, it does not amount to robbery. But if any thing be broken or torn in consequence of the sudden seizure, it would be evidence of such force as would constitute a robbery : as where a part of a lady's hair was torn away bv snatching a diamond pin

from her head, and an ear was torn by pulling off an earring; each of these cases was determined to be a robbery. The hundred in which a robbery is committed is liable to pay the da-mage when it is committed between the rising and setting of the sun, on any day except Sunday, in case the robbers are not taken in forty days ; hue and cry being made after the robber. The property taken must be of some value. Therefore, in a case where the prisoner had obtained a note of hand from a gentleman, by threatening with a knife, held to his throat, to take away his life, and it appeared that she had furnished the pa-per and ink with which it was written, and that the paper was never out of her possession, this was holden not to be a robbery; the judges being(of opinion that the note was of no value to the prosecutor, and not within the proviso of statute 2 G?eo. II. c. 5. sect. 3 : making the stealing a chose in action felony.

ROBE, n. s. & v. a. Fr. robbe ; Ital. robba ; low Lat. rauba ; Span, ropa, quod a Gr. PWTTOC, i. e. mercy. ††† Minsheu. A gown of state ; a dress : to invest with robes-Through tatter'd cloaths small vices do appear ; Eabes and furred gowas hide all. Shakspeare.

What Christian soldier will not be touched with a religious emulation, to see an order of Jews do such service for enlarging the Christian borders ; and an order of St. George only to robe and feast, and perform rites and observances ? Bacon.

The last good king, whom willing Rome obey'd Was the poor offspring of a captive maid ; Yet he those robes of empire justly wore, Which Romulus, our sacred founder, wore. Dryden.

There in long robes the roya! magi stand ; The sage Chaldaeans rob'd in white appeared, And Brachmans. Pope's Temple of Fine.

Robed in loose array she came to bathe. Thomson.

ROBERT I. or ROBERT BRUCE. See BRUCE and SCOTLAND?

ROBERT OF GLOUCESTER, the oldest of the English poets. He flourished in the reign of Henry II. Camden quotes many of his old English rhymes, and speaks highly in his praise. He died in the beginning of king John's reign, at an advanced age.

ROBERTS (Rev. Peter), M. A., aWelsh divine, SUH! writer on British history, was a native of North Wales, and received his education at Trinity College, DubHn. Having taken orders, he obtained the living of

Halkin, in the county of Flint. He published, Letters to M. Volney, in answer to his book on the Revolution of Empires, 8vo. ; A Harmony of the Epistles, 4to. ; A Sketch of the Early History of the Ancient Britons, 8vo. ; and A Review of the Policy and Peculiar Doctrines of the Modern Church of Rome, 1809, 8vo. But his best work is The Chronicle of the Kings of Britain, 1810, 4to, a translation from the ancient Welsh Chronicles, with copious notes and illustrations. -His death took place in 1819.

ROBERTS' ISLANDS, two large islands of the Pacific, discovered by Henguist, in 1792. The largest has no convenient landing place, and seems only to be inhabited by tropical oceanic birds. The north-west side of the island has a more favorable aspect ; and, although its shores are rocky, a number cf trees are produced.

There are also some coves and bays, which afford good anchorage and shelter. Long. 2 19►► 47 E., lat. 7►► 5' S.

ROBERTELLS (Francis), a learned Italian, of the sixteenth century, who was successively professor of philosophy and rhetoric at Lucca, Pisa. Bologna, and Padua. He wrote commentaries on several of the Greek and Latin poets, and several other works. He died in 1567.

ROBERTSON (William), D. D., a learned divine, born in DubHn, in 1705. He took the degree of M. A. at Glasgow, whence he returned to Ireland, and, entering into orders, obtained several considerable livings. All these, however, he resigned in 1764 ; and, in 1766, published his apology, with reasons for what he had done. He presented a copy of his work to the University of Glasgow, upon which the professors gave him the degree of D. D. The company of merchant tailors, patrons of the grammar-school of Wol-verhampton, presented him with the mastership of it, in which office he died in 1783.

ROBERTSON (William), D. D. and F. R. S., of Edinburgh, a late celebrated historian and clergyman of the church of Scotland, born in Edinburgh in 1721. He was educated at the school of Dalkeith, and afterwards at the University of Edinburgh. In 1743 he was appointed minister of Gladsmuir. On the death of his parents he took his sisters and a younger brother, afterwards a respectable jeweller in Edinburgh, under his care, though his living did not then exceed ►►lO() a-year, and maintained them till they were all settled in the world. In 1751 he married the daughter of the Rev. Mr. Nisbet, one of

the ministers of Edinburgh. About this period he began to attain eminence as an orator, and not long after became a leading member in the General Assembly. In 1755 he preached a ser-mon before the Society for Propagating Christian Knowledge, on the state of the world previous to the appearance of Christ, the only one he ever published, and which was much admired. In February. 1759, he published his celebrated History of Scotland, in 4to., which was received with unbounded applause. While this work was in the press, he was translated from Gladsmuir to Edinburgh. In 1759 he was appointed chaplain of Stirling Castle ; in 1761 one of his majesty's chaplains; and in 1762 principal of the University of Edinburgh. In 1764 the of-fice of king's historiographer for Scotland was revived in his favor, with a salary of ––200 a-year. About 1761 he began, and in 1769 published his celebrated History of Charles V. in 4to. In 1 775 the Dr. published his History of America, for which excel lent work he'received ––4500. In 1780, after having for nearly thirty years acted the most conspicuous part in the supreme ecclesiastical court, he retired from the General Assembly. In 1790 he published his Historical Disquisition concerning ancient India. He died at Edinburgh, June llth, 1793. As an author, his style has been universally admired ; as a minister of the gospel, he was a faithful pastor, and justly merited the esteem and veneration of his flock. His conversation was cheerful, entertaining, and instructive ; his manners affable, pleasing, and endearing.

ROBERVALLIAN LINES, a name given to certain lines used for the transformation of figures ; thus called from their inventor Roberval, vn eminent French mathematician, who died in 1675, aged seventy-six. The abbe Gallois, in the Memoirs of the Royal Academy, 1693, observes that the method of transforming figures, explained at the latter end of Roberval's Treatise of Indivisibles, was the same with that afterwards published by James Gregory, in his Geo-metria Universalis, and also by Barrow in his Lectiones Geometricae; and

that, by a letter of Torricelli, it appears that Roberval was the inventor of this manner of transforming figures, by means of certain lines, which Torricelli therefore called Robervallian lines.

ROBESPIERRE (Maximilian Isidore), the most cruel, perhaps, of the demagogues of the Trench revolution, was born at Arras in 1759. Having lost his father in childhood, he was taken under the protection of the bishop of Arras, who sent him to the college of Louis le Grand ; after which he studied the law, and was admitted an advocate in the council of Artois. Early in life he published a Treatise on Electricity, and another on Crimes and Punishments, in which he denied the right of society to put offenders to death. He was, at the beginning of the revolution, elected a member of the states-general, where he obtained the name of ‘ incorruptible,’ by his constant and consistent testimony against political corruption. The Jacobin club raised him to power, v>hen a scene of blood followed, to which hardly a parallel can be found in history. See our article FRANCE. Robespierre and his creatures established the terriole committee of public safety, which spread dismay and death throughout France. At length a confederacy was formed against the tyrant, who was arrested July 9, 1794, but not till his lower jaw was broken by a pistol shot in an abortive attempt at suicide. He suffered the next day under the guillotine, amidst the execrations of the multitude. Buonaparte is stated to have said at St. Helena, that Robespierre displayed in his con ‘ duct more extensive and enlightened views than have been generally ascribed to him ; and that he intended to reestablish order after he had overturned the factions ; but, not being powerful enough to arrest the progress of the revolution, he suffered himself to be carried away by the torrent. As a proof of this, the ex-emperor asserted, that when with the army at Nice, he had seen in the hands of Robespierre’s brother, letters, in which that demagogue expressed an intention to put an end to the reign of terror. It may, perhaps, be reasonable to conclude that something like principle guided him in the first instance, until, unable to govern the elements of disorder, contending around him, the cruelty of perplexed cowardice at length became his only instrument.

ROBIGALIA, festivals held by the ancient Romans, on the 25th of April, when incense was offered, along with the entrails of a sheep and a dog, in honor of

ROBIGUS AND ROBIGO, a Roman god and goddess, who joined in the preservation of corn from blight.

ROB’IN, 7i. s. l Lat. rubecida. A

ROBIN-RED-BREAST. $ bird so named from his red breast ; a ruddock.

Up a grove did spring, green as in May, When April had been moist : upon whose bushes The pretty robins, nightingales, and thrushes Warbled their notes. Suckling.

The robin-red-breast till of late had rest, And children sacred held a martin’s nest. Pope.

ROBINIA, false acacia, in botany, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, papilionaceae. The calyx is quadrifid ; the legumen gibbous and elongated. There are nine species. The most remarkable are,

1. R. caragnana. The leaves are conjugated, and composed of a number of small fdlioles, of an oval figure, and ranged by pairs on one com-mon stock. The flowers are leguminous, and are clustered on a filament. Every flower consists of a small bell shaped petal, cut into four segments at the edge, the upper part being rather the widest. The keel is small, open, and rounded. The wings are large, oval, and a little raised. Within are ten sta*rina, united at the base, curved towards the top, and rounded at the sum-mit. In the midst of a sheath, formed by the filaments of the stamina, the pistil is perceivable, consisting of an oval germen, terminated t>y a kind of button. This germen becomes afterwards an oblong flattish curved pod, containing four or five seeds, of a size and shape irregular and unequal ; yet in both respects somewhat resembling a lentil. This tree grows naturally in the severe climates of Northern Asia, in a sandy soil mixed with black light earth. It is particularly found on the banks of great rivers, as the Oby, Jenisia, &c. It is very rarely met with in the inhabited parts of the country, because cattle are very fond of its leaves, and hogs of its roots ; but it is so hardy that the severest winters do not affect it. Gmelin found it in the neighbourhood of Tobolsk, buried under fifteen feet of snow and ice, yet had it not suffered the least damage. Its culture consists in being planted or sown in a lightish sandy soil, which must on no account have been lately manured. It thrives best near a river, or on the edge of a brook or spring ; but presently dies if planted in a marshy spot, where the water stagnates. The Tongusian Tartars, and the inhabitants of the northern parts of Siberia, are very fond of the fruit of this tree, it being almost the only sort of pulse they eat. The roots, being sweet and succulent, are very well adapted to fattening hogs ; and the fruit is greedily eaten by all sorts of poultry. Linne assures us that, after the pinus fol. quinis,

erroneously called the cedar tree of Siberia, this tree, of all that are to be found in Siberia, is most worthy of cultivation.

2. R. ferox is a beautiful hardy shrub, and, on account of its robust strong prickles, might be introduced into this country as a hedge plant with much propriety. It resists the severest cold of St. Petersburgh, and rises to the height of six or eight feet ; does not send out suckers from the root, or ramble so much as to be with difficulty ken* within bounds. Its flower* are

yellow, and the general color of the plant a light pleasing green.

ROBINS (Benjamin), an eminent English mathematician, born at Bath in 1707. His parents were unable to give him a proper education ; but he procured a recommendation to Dr. Pemberton of London, by whose aid he not only acquired a high knowledge of mathematics, but even commenced teacher of the science. He tried many laborious experiments in projectiles, to ascertain the resistance of the air, a principle which he considered as too much overlooked by writers on gunnery. He also studied the mechanic arts, as depending on mathematical principles ; and applied his discoveries to the construction of mills, &c. An attempt being made to explode the method of fluxions, Mr. Robins published, in 1735, A Discourse concerning the Nature and Certainty of Sir Isaac Newton's Method of Fluxions. Some objections being made to his manner of defending Sir Isaac, he wrote two or three additional discourses. In 1738 he defended Newton against an objection urged in a Latin piece, entitled Matho, sive Cosmotheoria puerilis ; and, in 1739, published Remarks on Euler's Treatise of Motion, Dr. Smith's System of Optics, and Dr. Jurieu's Discourse of Vision. In 1739 he published three anonymous political pamphlets, two of which, on the convention with Spain, were much admired, and procured him a very honorable post ; for, a committee being appointed to enquire into Sir Robert Walpole's conduct, Mr. Robins was chosen secretary. In 1742 he published his celebrated treatise, entitled New Principles of Gunnery, containing the result of many experiments. See PROJECTILES. A treatise being afterwards published in the Philosophical Transactions, in opposition to some of his opinions, he presented an account of his work to the society, wherein he took notice of those experiments ; and several of his Dissertations on the Resistance of Air were read, and his

experiments exhibited before the Royal Society, for which they honored him with their gold medal. In 1748 appeared Lord Anson's Voyage round the World, which, though the title bears the name of Mr. Walter, is ascribed to Mr. Robins. Mr. Wralter, chaplain of the Centurion, had brought it down to his departure from Macao, when he proposed to print it by subscription. But it was first thought necessary to have it reviewed and corrected by an able judge, and this task devolved on Robins, who was authorised to write the whole anew. Hence the entire introduction, the style, and many dissertations in the work, are the sole compositions of Mr. Robins ; Mr. Walter's original MS. containing little more than notes of the wind and weather, currents, courses, bearings, distances, qualities of the anchoring grounds, and such particulars as commonly fill up a sailor's account. No work of this kind ever met with a more favorable reception ; four large impressions were sold within the year, and it has been translated into most of the languages of Europe. Mr. Robins was soon after desired to compose an apology for the defeat at Preston-Pans ; which was prefixed to the report of the boaid of general officers, on their examination

into the conduct of L. G. Sir J. Cope. This was esteemed a master-piece. He afterwards contributed to improve the observatory at Greenwich-; and, finally, went out as engineer-general to the East India Company. He arrived in the East Indies in 1750, but fell a sacrifice to the climate in 1751.

ROBINSON (Anastasia), an eminent musician and singer on the stage, afterwards countess of Peterborough. She was the daughter of a portrait-painter, and was born in 1662. She first appeared at the concerts ; afterwards at the opera ; where her salary and emoluments amounted to ––2000 a-year. She died in 1750, aged 88 years.
ROBINSON (Sir Richard), archbishop of Ar-magh and lord Rokeby, was descended from the Robinsons of Rokeby, in Yorkshire, and born in 1709. He was educated at Westminster, and sent thence to Christ Church, Oxford, in 1726. Dr. Blackburne, archbishop of York, made him his chaplain ; and soon after rector of Elton in Yorkshire, and prebendary of Grindal. In 1751 he accompanied the duke of Dorset, lord lieute-rtant of Ireland, to that kingdom, as his chaplain ; and was soon made bishop of Killala. In 1759 he was translated to Leighlin and Fern; in 1761 to Kildare; and in 1765, the duke of Northumberland being lord lieutenant, he was promoted to be primate of all Ireland, lord almoner, and vice-chancellor of the university of Dublin. In 1777 the king created him baron Rokeby: in 1783 prelate to the order of St.

Patrick ; and in 1785 one of the lords justices. His brother, Sir William, dying in 1785, he succeeded to the title of baronet. He was a public spirited prelate ; and, at his own expense, erected a most princely palace at Armagh, and an elegant library. In these works he spent no less than ––30,000 for the benefit of the public. He died at Clifton, near Bristol, in 1794.

ROMINSON (Robert), a celebrated dissenting clergyman, born at Swaffham, in Norfolk, October 8th, 1735. His father died in his infancy, and his maternal grandfather, Robert Wilkin, of Milden-hall, esq., who had been displeased with his daughter's marriage, cut him off with half a guinea from his maternal inheritance. His uncle, however, a rich farmer, took him home, and placed him under the rev. Joseph Brett, at Scarming school, in Norfolk, where lord chancellor Thurlow was his school-fellow. He became a disciple of George Whitfield in 1750, and commenced preacher in 1755, but left the Methodists in 1758, and settled at Norwich with a small congregation of Independents. Soon after he became a Baptist, and in 1759 was invited to Cambridge, where he had a small congregation, and a very poor living : but in 1774 the former had increased to 1000. He was even attended by many members of the university. In 1764 his auditors built him a new and elegant meeting-house. He was also invited to lecture in the adjacent villages. He died 9th June, 1790, with the reputation of a man of abilities and integrity. His Plan of Lectures on the Principles of Nonconformity has been thought very acrimonious against the church of England. His chief work is his History of Baptism, and oi the Baptists, published since his death.

ROBINSON (Thonras), a respectable Calvinistic ––iivine, was born at Wakefield, in Yorkshire, in 1749. After receiving the rudiments of a classical education at the foundation school, he removed to Trinity College, Cambridge, and obtained a fellowship of that society in 1772. He was the author of the Christian System unfolded, 8vo., 3 vols. ; and the very popular Scripture Characters, 8ro., 4 vols. He also published some sermons, &tc., and died in 1813 at Leicester, in which town he

held the living of St. Mary's for thirty-five years.

ROBISON (John), professor of natural history in the university of Glasgow, was born at Bog-hall, in the county of Stirling, in 1739. He was sent to Glasgow to receive his education, and was soon distinguished for the rapid progress which he made in classical learning. He went, while very young, to the university, where he enjoyed the benefit of the instructions of professors Simson, Leechman, Moore, Smith, and others. Dr. Robert Simson was his tutor in mathematics, and in this class Mr. Robison was soon distinguished beyond any of his fellow students. Among other branches Mr. Robison made himself well acquainted with the modes of algebra; but from professor Simson he derived a peculiar disposition to the study of geometry. Among his fellow students were the celebrated Mr. Windham, with whom he formed an intimate friendship, which continued to the end of his life ; Richardson, afterwards eminent as a critic and A professor: and Dr. Gillies, distinguished by his illustrations of Grecian history and politics. Mr. Robison was designed by his parents for the clerical profession ; but, though deeply impressed with the truths of religion, he had a great aversion to the professional study of theology. His friends therefore looked round for some situation in which his mathematical talents might be turned to advantage. Dr. Dick, professor of natural philosophy, being in want of an assistant, Mr. Robison, then not nineteen years of age, was recommended by Dr. Smith as a proper person to discharge that office. Dr. Dick, however, thought him too young, and three years after he went to sea as mathematical tutor to Mr. Knowles, eldest son of admiral Knowles. His pupil being appointed lieutenant on board the Royal William, Mr. Robison, at his own request, was rated midshipman. Here he spent the three following years, and devoted himself particularly to the study of the art of seamanship, and was sometimes employed in making surveys of coasts and rivers. In this capacity his merit seems to have attracted the no-tice of lord Anson, then at the head of the admiralty board, by whom he was" sent, in 1762, to Jamaica, in order to make trial of Harrison's time-keeper. But on returning from this mission he found his prospects of advancement completely blasted. Lord Anson had died ; the vessel on board of which was his pupil, Mr. Knowles, had roundered at sea, and himself with all the crew perished. Admiral Knowles had retired to the country, inconsolable for the loss of his son. He determined, therefore, to return to Glasgow ; and admiral Knowles soon after placed under his care his remaining son. At Glasgow he renewed

his studies with great assiduity, but his instructors were changed. Dr. Simson was dead ; Dr. Smith had left Glasgow to travel with the duke of Buccleugh. But the place of the latter gentleman had been well supplied by Dr. Reid, and Mr. Robison had also an opportunity of attending the lectures of Mr. Miller on civil law, and of Dr. Black on chemistry. When Dr. Black, in 1769, was called to Edinburgh, Mr. Robison was appointed by the university of Glasgow to succeed him as lecturer on chemistry; and he read lectures on that science for three years with great applause. In 1770 Sir Charles Knowles having gone to Russia, on the invitation of the empress Catharine, then intent on the improve- . ment of her marine, invited Mr. Robison to accompany him as his official secretary, with a salary of ––250 a year. As he was still attached to the navy and to his former patron, and as, though lecturing on chemistry, he did not enjoy the rank of a professor, Mr. Robison made no hesitation in accepting the proposal. In 1772 he was appointed, by the Russian admiralty, inspector general of the corps of marine cadets : an academy consisting of upwards of 400 young gentlemen and scholars, under the tuition of about forty teachers. While in this situation, Mr. Robison presented to the admiralty college a plan for rendering more useful the magnificent docks at Cronstadt by means of a steam-engine, which was adopted and executed with success after he had left Russia. Being attached, by his office, to that island, he found it, particularly in winter, to be a dismal solitude, where he was nearly cut off from all society. On this account, having held the appointment about four years, he determined to resign it, and to accept of an invitation from the magistrates and town-council of Edinburgh to be professor of natural philosophy in their university. This situation he filled with great honor to himself as well as benefit to the students of the university till his death, which happened in 1805.

Although Dr. Robison labored under a dis tressing and painful disorder, during the la.*- eighteen years of his life, his mind was in genera active. He is well known to be author of a the most important mathematical and philoso phical articles in the third edition of the Encyclopaedia Britannica, and the supplement to that work. Several of these papers were afterwards thrown into a different form, and published under the title of Elements of Mechanical Philosophy. In 1797 this gentleman published a work entitled Proofs of a Conspiracy against all the Religions and Governments of Europe, carried on in the Secret Meetings of Free-Ma- sons, Illuminati, and Reading Societies, a work full of declamation and absurdity, but which, owing to the furor of the times, made a great impression, and rapidly passed through several editions. In 1803 Mr. Robison performed a very acceptable

service to the public, by giving them an edition of Dr. Black's lectures on the Elements of Chemistry, in 2 vols. 4to. When the Royal Society of Edinburgh was incorporated by charter, in 1783, he was chosen by that learned body to be their general secretary, and discharged that office to their entire satisfaction, till a tew

days before his death, when the state of 1m health obliged him to resign it. To their transactions he has contributed several very interesting papers, of which the following is, we believe, a correct list : ††† 1. The orbit and motion of the Georgium Sidus determined directly from . observations, vol. i. p. 305. 2. Observations on the places of the Georgian planet made at Edinburgh, with an equatorial instrument, ii. p. 37. 3. On the motion of light, as affected by refracting and reflecting substances, which are also in motion.

ROBUST, adj. -\ Fr. robuste ; Lat. ro—

ROBUST'IOUS, ˆbustus. Strong; sinewy;

ROBUST'N ESS, n. s. 5 vigorous ; violent ; requiring strength : the nounsubstantive corresponding.

It offends me to hear a robustiout periwig-pated fellow tear a passion to tatters, to very rags, to split the ears of the groundlings. Shakspeare.

These redundant locks, Robustious to no purpose, clustering down, Vain monument of strength. Milton's Agcmistes.

While I was managing this young robustious fel-low, that old spark, who was nothing but skin and bone, slipt through my fingers. Dryden.

The tenderness of a sprain remains a good while after, and leaves a lasting caution in the man, not to put the part quickly again to any

robust employment.

Locke.

Beef may confer a robustness on my son’s limbs, but will hebetate his intellectuals.

Arbuthnot and P< >pe. Romp-loving miss Is hauled about in gallantry robust . Thomson.

ROCA, a name given to an archipelago of small desert islands on the coast of Venezuela, Colombia. They extend about twenty-three miles from east to west, and ten from north to south. The most northern is worthy of note, from a lofty mountain of white stone, which it has at the west extremity. The others are low, and that which is nearest to the one just mentioned small and flat, producing nothing but grass. These islands are in long. 66►► 45’ W., lat. J 1►► 55’ N.

ROC’AMBOLE, n. s. Span, rocambole. See GARLIC.

Rocambole is a sort of wild garlick, otherwise called Spanish garlick ; the seed is about the bigness of ordinary pease. Mortimer.

Garlick, rocambole, and onions, abound with a pungent volatile salt. Arbuthnvt on Aliments.

ROCHE-AL’UM, n. s. Fr. roche. A rock. A purer kind of alum.

Roche-alum is also good. Mortimer’s Husbandry.

ROCHDALE, a market-town of Lancashire, seated in a valley on the Roch, at the foot of the Yorkshire hills. It has flourishing manufactures of serges, bays, and other woollen and cotton goods. Over the river is a neat stone bridge of three arches. The town consists principally of one long street. Here are also several chapels for Dissenters, and a well endowed school for thirty boys ; likewise a theatre and two assembly rooms : a new market-place has been added, and the whole town lighted with gas. The church stands upon a remarkable eminence, to \vliich the ascent from the lower part of the town is by a flight of 118 steps. The manufactories extend about ten miles north of the town, which is fifty-

five miles W.N.W. of York, and 197 N.N.VV. of London. It returns one member to parliament.

ROCHEFORT, a town in the department of ihe Lower Charente, France, situated in a marshy tract on the right bank of the Charente, about five miles from its embouchure. Though founded only in the latter half of the seventeenth century, it is a place of size, containing about 15,000 inhabitants. Its form is that of a segment of a circle, of which the walls form the circumference, and the river the chord. In the interior the streets are broad, and laid out on a plan of perfect regularity. Nearly in the centre of the town is a spacious Place d'Armes. The objects of interest are the arsenal, cannon foundry, barracks, magazine of naval stores, the docks, the civil and marine hospital, and the navigation school. The harbour, one of the great naval stations of France, is protected by five forts, and well locked in by the land. It is capable, from its depth, of admitting vessels of great size: but line of battle ships take out their lower deck guns to enter the river. At low water vessels are seldom in less than four fathoms depth in this harbour. The docks for building and refitting of vessels, and the stores for their equipment, are very complete. The trade is limited, in great measure, to the coasting and colonial traffic. Here are, however, manufactures of cordage, stoneware, and oil ; and also for refining sugar. The ramparts of the town are planted with trees, and form an agreeable walk. Fevers are said to be occasioned here in the autumn by bad water, and the extent of marshes. Since draining a part of the latter they have become less frequent. Twenty miles south-east of La Rochelle, and 100 north of Bourdeaux.

ROCHEFORT, a town of France, in the department of the Maine and Loire, on the river Louet. Population 2400. Nine miles south-west of Anders.

ROCHEFOUCAULT, a town of France, department of the Charente, on the Tardiore, with a castle, which conferred, before the revolution, the title of duke. It has manufactures of leather and linen, and its chief trade is in these articles and in wood. Inhabitants 2400. Twenty miles north-east of Angouleme, and fifty-eight south of Poitiers.

ROCHEFOUCAULT (Francis duke of), prince of Marsillac, governor of Poictou, was born in 1603. He was the son of Francis, the first duke of Rochefoucault, and wrote two celebrated works, the one a book of Maxims, and the other, Memoirs of the Regency of Queen Anne of Austria. In the civil war he signalised himself at the battle of St. Antoine. After the civil wars were ended, his house became the rendezvous of all the literati of Paris and Versailles. He died at Paris in 1680, aged sixty-eight.

ROCHEJAQUELIN (Henry de la), a French royalist, distinguished in

the war of La Vendee. He was born in 1773, and was the son of the marquis de la Rochejaquelin, a nobleman of Poitou. Having been educated at the military school of Soreze, he became one of the constitutional guard of Louis XVI. His father quitted France, and our young hero Paris, after the insurrection of the 10th of August 1792. He re-

sided with hU relative, the marquis de Lescure, near Parthenay, in March 1793, when, the inhabitants of the surrounding country rising in arms in favor of the royal cause, La Rochejaquelin putting himself at their head, they attacked and defeated the republicans under general Queti-neau, at Aubiers. The marquis de Lescure now took the field with the royalists, who were at first very successful; but on the 18th of October they were defeated at Chollet, and their generals, Lescure, Bonchamps, and d'Elbee, mortally wounded. La Rochejaquelin was at this time chosen commander-in-chief of the Vendeans, and was obliged, against his own judgment, to retreat beyond the Loire. He continued, under great disadvantages, for some time to oppose the republicans ; but was at length killed in defending the vil- .ageof Nouaille, March 4th, 1794. In the recent memoirs of the marchioness de la Rochejaquelin, the widow of his younger brother, this young soldier is represented as resembling a knight of chivalry ; and, after making all allowances for the friendship of his historian, he appears to have possessed extraordinary qualifications for the part he played.

ROCHELLE, LA, a town of Lower Charente, France, the capital of that department, is situated in a plain at the bottom of a gulf of the Atlantic. Its form is nearly oval, and its length from north to south, exclusive of the suburbs, about three-quarters of a mile ; its breadth above half a mile. The fortifications of the celebrated Vauban are in good condition, and consist of nineteen large bastions, and eight half moons, enclosed by a moat and covered way. On the side of the sea it has a massy old wall, flanked with large towers. The streets are broad, and in general straight, and the houses spacious throughout the town :

they are almost all supported in front by arcades, which, by concealing the pe-destrians, cause an apparentdulness in the streets. The Place d'Armes, or Place du Chateau, consists of a spacious area planted with trees, and commands a fine view of the roadstead. The principal public buildings are the cathedral, hospital, orphan-house, and exchange : here are also several scientific institutions, a navigation school, and a cabinet of natural history.

La Rochelle has an excellent road, and a haven, formed by a dike and basin for merchant vessels. Its entrance is defended by two old Gothic towers of great height, and is crossed by a ponderous iron chain. The trade to the colonies in wines, brandy, flour, linen ; taking in return sugar, coffee, cotton, and all kinds of produce, is considerable. To ports of Europe the chief articles of export are brandy and bay salt; its imports from them are trifling. Glass, stoneware, and sugar, are the chief manufactures.

La Rochelle was, in the thirteenth century, for some time in the possession of the English. In the sixteenth it became a strong hold of the Protestants, and governed itself for some time as a republic. It was several times besieged by the Catholics without success, until 1637, when it was taken by Louis XIII. after a siege of thirteen months, during which the inhabitants suffered all the horrors of famine. It was to exclude all its supplies at this time that cardinal

Richelieu caused the construction of a mole across the roadstead, about a mile and a half i& length : the remains of which are still visible. Its fortifications were razed on that occas on, but they were reerected under Louis XIV. The town was the birth-place of the naturalist Reaumur, and is seventy-eiˆht miles south of Nantes, and 335 south-west of Paris.

ROCHESTER, a city of Kent, situated on the Medway, seven miles and a half north of Maid-stone, and thirty south-east from London. It was a Roman station, and many Roman coins have been found about it. It has three parish churches, besides the cathedral. This city was made a bishop's see by king Ethelbert in 604, and was called by the Saxons Roffcaster : whence its present name. In 676 it was sacked by Eldred king of Mercia ; in 839 and 885 besieged by the Danes, but rescued by king Alfred. About 100 years after it was besieged by king Ethelred, and compelled to pay ††100. In 999 it was taken and plundered by the Danes, In 1088 it was besieged and taken by William Rufus. In king John's time it was taken from the barons after three months'

siege ; and in 1256 its castle, founded by William the Conqueror, was stormed and taken by the barons, under the French king's son. In the reign of Henry III. it was besieged by Simon Montford, who burnt its then wooden bridge and tower, and spoiled the church and priory. In 1281 its old wooden bridge was carried off by the ice in a sudden thaw after a frost which had made the Medway passable on foot. Another was built in the reign of Richard II., but pulled down again on a rumor of an invasion from France. It was afterwards restored, but so often required expensive repairs, by rea-son of the rapid course of the river under it, that in the reign of Edward III. it was resolved to build a new bridge of stone ; which was begun, and completed, at the expense of Sir John Cob-ham and Sir Robert Rnolles, Edward Ill's generals, out of the spoils they had taken in France. The town is governed by a mayor, recorder, twelve aldermen, twelve common-coun- cil men, a town clerk, and inferior officers. To its cathedral belong a dean and six prebendaries. The present castle of Rochester was one of those founded by William the Conqueror, to keep in awe his new subjects ; but there seems every reason to believe that a prior one existed on the same site, frequent mention being made of the Castrum Roffense in the Saxon annals. He committed to Odo, bishop of Baieux, the execution of the new work, and the custody of the fortress ; but, that prelate proving unworthy of his trust, he was afterwards seized, and sent as a prisoner to the castle of Rouen, in Normandy, where he continued to the accession of William Rufus, who restored him to his dignities and possessions ; a favor which he shortly after ungratefully repaid by raising an insurrection in favor of the king's brother, Robert, duke of Normandy. Rufus, upon this, laid siege to Rochester castle, and, having forced the garrison to surrender, banished the bishop from his dominions. During this siege the buildings sustained considerable injury, which the king enjoined bishop Gundulph and the prior of Rochester to repair

perhaps on account of their having shown some attachment to the rebellious cause. Gundulph accordingly not only renovated the walls, but laid the foundation of the great square tower, which yet

perpetuates his name, and entitles him to rank among the most eminent architects of Anglo-Norman times. Several estates in this county hold of Rochester castle by the ancient tenure of castle guard. On St. Andrew's day, old style, a banner is hung out at the house of the receiver of rents ; and every tenant who does not then discharge his arrears is liable to have his rent doubled, on the return of every tide of the Medway, till the whole is discharged.

Rochester castle stands at the south-western angle of the city, on an eminence rising abruptly from the river Medway, which preserve from at-tack on the west, whilst its south, east, and north sides were defended by a broad and deep ditch. The outward walls, which formed an irregular parallelogram, 300 feet in length, were strengthened by several square and round towers ; but these, as well as the walls themselves, are now verging to a state of ruin. The most perfect are on the east side, and at the south-east angle ; that at the angle was semicircular, and rose boldly from the ditch, which is now almost filled up. The principal entrance was on the north-east, and was defended by a tower gateway, with outworks at the sides. The keep, or great tower already mentioned, as founded by bishop Gundulph, occupies the south-east portion of the castle area. It is of a quadrangular form, seventy feet square at the* base, and is so planned that its angles correspond with the four cardinal points of the compass. The walls on the outside are built inclining inwards from the base, and were in general twelve or thirteen feet thick. Near the centre, on each side, is a pilaster buttress, ascending from the base to the roof; and at the angles are projecting towers, three of them square, and the fourth semicircular, which rise twelve feet above the roof. The entrance to this part of the castle was most difficult and intricate, and displayed much architectural ingenuity. ' The first ascent was by a flight of twelve steps, leading to an arched gate and covered way ; beneath which a flight of seven steps led forward to a draw-bridge, that connected with the arched gateway of the entrance tower; this opened into a vest'bule, between which and the keep there were no other avenues of communication than by a third arched passage in the thickness of the wall. This latter, being the immediate inlet to the body of the keep, was defended by a massive gate and portcullis, the hinges and grooves of which yet remain ; and in the roof are openings for the purpose of showering down destruction on the assailants.'

The interior of the keep is divided into two nearly equal parts by a strong wall, with arched door-ways of communication on each floor. In '.he centre of this wall is a circular hole for a well of considerable depth, neatly wrought, and open from the bottom to the very top of the keep, f his tower consisted of three floors, independent of the

basement story ; but these floors were removed when the castle was dismantled in the reign of James I. The lowest apartments were

two dark and gloomy rooms, in which the garrison stores were probably deposited. At th►► north-east angle is a circular winding staircase, which ascends to the summit ; and near it is a small arched door-way, leading to a narrow vaulted apartment underneath the little tower, supposed to have been a dungeon for criminals. The first floor appears to have been allotted for the accommodation of servants and inferior attendants; the second floor contained the state apartments ; and the third was designed for a chapel, and for bed-rooms for the family. The roof of the keep is now entirely destroyed ; but it most probably consisted of a platform on a level with the top of the wall within the parapet; the latter was about five feet high, and had embrasures about two feet wide.

The cathedral is situated on the east of the castle, and a little south of the High Street. From the mixed style of its architecture it appears to have been the work of different ages. It is in the form of a cross, and is divided into a nave, aisles, two transepts, and a choir, with a low tower, and a spire rising at the intersection of the nave and great transept. The greater part of the nave and west front display the massive character of the early Norman and Saxon architecture. The west entrance is particularly wor-thy of attention . the remaining parts of the cathedral are comparatively plain in their exterior. Entering the nave by the western door, the massive Norman style is conspicuous in the first five columns on each side, all of them supporting circular arches, decorated with zig-zag mouldings. The roof is of timber, with knees supported on corbels, the fronts of which are carved into figures of angels sustaining shields, on which are the arms of the city, the see, and the priory of Rochester, as well as those of the archbishopric of Canterbury. The great tower is supported by four obtusely-pointed arches, resting on solid masonry, environed by slender columns of Petworth marble. The cathedral extends in length 306 feet from east to west. The breadth of the nave, with the side aisles, is seventy-five feet, and that of the choir nearly the same. The western transept is 122 feet, and the eastern ninety feet long ; the west front is ninety-four feet wide, and the great tower 156 feet high. Several of the monuments in the cathedral are curious from their antiquity and workmanship.

For the maintenance of the bridge certain lands are allotted by parliament, to which Rochester has sent members from the first. The

town-house, built in 1687, for the courts, assizes, and sessions, and the charity school, are two of the best public buildings here. In the cemetery, on the north side of the cathedral, is the church belonging to the parish of St. Nicholas. The present fabric, consisting of a nave and two side aisles, was erected about the year 1620. At the entrance into the High Street next the bridge, are the remains of St. Clement's church, now converted into dwelling-houses, the parish having been united with that of St. Nicholas. The town-hall, erected in 1687, is a handsome brick structure, supported by stone Doric columns. The entrance to the hall is by a spacious staircase.

the ceiling of which, as well as that of the hall, is curiously ornamented. Here the city business is transacted, and the assizes for the county are sometimes held. The clock-house was built in 1686, at the expense of Sir Cloudesley Shovel, who also gave the clock. At the bottom of Chaldegate Street stands a large and commodious poor-house. The main street is wide, and well paved. The town, within the walls, consists of one main street, but within its liberties many buildings have been erected, and improTements have been made, and are still making. A mathematical school was founded here, and an almshouse for lodging six poor travellers every night, and allowing them 4d. in the morning when they depart, except persons contagiously diseased, rogues, and proctors. The Roman Watling Street runs through this town from Shooter's Hill to Dover. The mayor and citizens hold an admiralty court once a year for regulating the oyster-fishery in the creeks and branches of the Medway within their jurisdiction, and for prosecuting offenders. The bridge was repaired in 1744, and pallisadoed with new iron rails. Mar-ket on Fridays.

ROCHESTER, a post-town of Strafford county, New Hampshire, on the west side of Salmon Fall River, twenty-two miles north-west of Portsmouth. Near the centre of the town there is a village called

Norway Plains, containing a meeting-house, court-house, and several stores. There is also a cotton manufactory in the town. One term of the court of common pleas is held here annually. ††† Also a post-town of Plymquth county, Massachusetts, on Buzzard's Bay, twenty miles south-west of Plymouth, and forty-eight south of Boston. Here are some iron works. ††† And a post town of Ulster county, New York, twenty miles south-west of Kingston.

ROCHESTER, EARL OF. See WILMOT.

ROCH'ET, n. s. Fr. rochet; low Lat. roche-tum, from roccus, a coat. A surplice ; the white upper garment of a priest.

What zealous phrenzy did the senate seize, That tare the ratchet to such rags as these !

Cleaveland.

ROCHFORD, a market-town and parish of Essex, situated in a small rivulet called the Broomhill, over which it has two wooden bridges. It is fifteen miles east by south from Billericay, and thirty-nine east from London. The houses are for the greater part irregular and ill-built. The parish church stands half a mile from the town, and is a plain building. The market-house is a mean timber structure, in which the petty sessions for the Rochford division of Essex are held. This place is rendered remarkable on record for its lawless court. See LAWLESS COURT. The market is on Thursdays for cattle, corn, and provisions. Raleigh, in this vicinity, though now an inconsiderable village, was formerly a market town, and the head of the barony of Suene, a powerful Anglo-Saxon Dane, who is reported to have built a castle here, of which some important earth-works still remain. These consist of a mount, of an oval shape at the base, which is environed by a double ditch and ram part.

ROCK, n. s. 1 Fr. roc, roche; Ital. rocca; ROCK'DOE, Span, roca ; Port, rocha ; (A ROCK'LESS, I Gr. pw††. ††† Minsheu.) A mass ROCK'RUBY,)-of stone; a stony mass fixed ROCK'SALT, j in the earth ; protection; de-ROCK'WORK, I fence : a rock-doe is a doe ROCK'V, adj. J that frequents the rocky heights of the Alps : reckless, devoid of rocks : rock-ruby, the garnet ; a hard stone : rock-salt, mineral salt : rockwork, strong or rugged work in imitation of rocks ; a natural wall of rock : rocky, abounding with rocks ; strong ; stony.

Val de Compare presenteth her rocky mountains.

Sandys.

The splitting rocks cow'r'd in the sinking sands. And would not dash me with their ragged sides.

Shakspeare.

I, like a poor bark, of sails and tackling reft, Rush all to pieces on thy rocky bosom. Id.

There be rock herbs ; but those are where there is some mould. Bacon's Natural Hittory.

Though the reeds of Egypt break under the hand of him that leans on them, yet the rock of Israel will be an everlasting stay. King Charles.

Such destruction to withstand, he opposed the

rocky orb Of ten-fold adamant, his ample shield. Milton.

Distilling some of the tincted liquor, all that came over was as limpid and colourless as rock water, and the liquor remaining in the vessel deeply ceruleous.

Boyle.

Make the bold prince Through the cold north and rocky regions run.

Walltr.

A crystal brook Is weedless all above, and feckless all below.

Dryden.

The rallies he restrains

With rocky mountains. Id.

Nature lodges her treasures in rocky ground.

Locke.

Pigeons or doves are of several sorts ; as wood pigebns and rock pigeons. Mortimer' '* Husbandry. The rock-doe breeds chiefly upon the Alps : a creature of admirable swiftness ; and may probably be that mentioned in the book of Job : her horns grow sometimes so far backward as to reach over her but-tocks. Grew's Museum.

These lesser rocks, or great bulky stones, are they not manifest fragments ? Burnet.

The garden is fenced on the lower end, by a natural mound of rockwork. Addisen.

Of amber a nodule, invested with a coat, called rock amber. Woodward on Foisilt.

Hock-ruby is of a deep red, and the hardest of all the kinds. Id.

Two pieces of transparent rock-salt ; one white, the other red. Id.

Ye darksome pines, that o'er yon rocks reclined, Wave high, and murmur to the hollow wind. Pope.

Till a' the seas gang dry my dear, And the rocks melt wi' the sun : I will luve thee still, my dear, While the sands o' life shall run. Burns.

ROCK, n. s. Goth, and Swed. rock; Ital. roc-ca ; Span, rucca. A distaff from which wool is spun ; a roll of flax or wool.

A learned and a manly soul I purposed her ; that should with even powers, The rock, the spindle, and the sheers controul Of destiny, and spin her own free hours.

Ben Jonso*.

On the rock a scanty measure place Of vital flax, and turn the wheel apace. Dryden. Flow from the rock, my flax, and swiftly flow, Pursue thy thread, the spindle runs below. Parnel. ROCK, v. a. \ Fr. rocquer ; Dan. rokke. To ROCK'ER,W.S. i shake; agitate; to move backwards and forwards ; lull by rocking ; be agitated ; reel to and fro : the noun substantive corresponding.

Come, take hand with me, And rock the ground whereon these sleepers be.

Shakspeare. Sleep rock thy brain, And never come mischance between us twain. Id.

Leaning her head upon my breast, My panting heart rocked her asleep. Suckling.

My bloody resolutions, Like sick and {reward children, Were rocked asleep by reason . Denham. If, by a quicker rocking of the engine, the smoke were more swiftly shaken, it would, like water, vibrate to and fro. Boyle.

The wind was laid ; the whispering sound Was dumb ; a rising earthquake rocked the ground.

Dryden.

His fellow, who the narrow bed had kept, Was weary, and without a rncker slept. Id.

While his secret soul on Flanders preys, He rocks the cradle of the babe of Spain. Id. A living tortoise, being turned upon its back, could help itself only by its neck and head, by pushing against the ground to rock itself as in a cradle, to find out the side towards which the inequality of the ground might more easily permit to roll its shell.

Ray on the Creation. The rocking town

Supplants their footsteps ; to and fro they reel Astonished. Philips.

like this rocking of the battlements. Young. Ae night the storm the steeples rocked, Poor labour sweet in sleep was locked, While burns, wi' snawy wreeths up-choked,

Wild eddying swirl, Or through the mining outlet bocked,

Down headlong hurl. Burns.

ROCK BASINS are cavities or artificial basins of different sizes, from six feet to a few inches diameter, cut in the surface of the rocks for the purpose, as is supposed, of collecting the dew and rain pure as it descended from the heavens, for the use of ablutions and purifications, prescribed in the Druidical religion ; these, especially the dew, being deemed the purest of all fluids. There are two sorts of these basins, one with lips or communications between the different basins, the other simple cavities. The lips are as low as the bottom of the basins, which are horizontal, and communicate with one somewhat lower, so

contrived that the contents fell by a gradual descent through a succession of basins either to the ground, or into a vessel set to receive it. The basins without lips might be intended for reservoirs to preserve the rain or dew in its original purity without touching any other vessel, which was perhaps used for the Druid to drink, or wash his hands, previous to officiating at any high ceremony. Some of those basins are so formed as to receive the head and part of the human body ; one of this kind is found on a rock called king Arthur's bed, in the parish of North Hall in Cornwall, where are also others,

called by the country people Arthur's troughs, in which they say he used to feed his dogs. ROCK CRYSTAL. See CRYSTAL. ROCK SALT. See SALT. ROCK'ET, n. s. Ital. rocchetto. An artificial firework. See PYROTECHNY, and below.

When bonfires blaze, your vagrant works shall rise In rockeis, till they reach the wondering skies.

Garth.

Every rocket ended in a constellation, strewing the air with a shower of silver spangles. Addismi.

ROCK'ET, n. s. Lat. eruca. A plant, of a peculiarly fetid smell.

Rocket is one of the sallet furniture. Mortimer. ROCKETS, SIR WILLIAM CONGREVE'S, are a modern species of war rockets, called after the name of their inventor. They differ of course from the common rocket, as well in their magnitude and construction as in the powerful nature of their composition ; which is such, that without the incumbrance of any ordnance (the rocket itself containing the propelling power) balls, shells, case-shot, and carcasses, may be projected to the distance of from 1000 to 3000 yards, which renders them a most efficacious species of artillery.

They are of various dimensions, as well in length as in calibre, and are differently armed according as they are intended for the field, or for bombardment; carrying, in the first instance, either shells or case shot, which may be exploded at any part of their flight, spreading death and destruction amongst the columns of the enemy ; and in the second, where they are intended for the destruction of building, shipping, stores, &c.,they are armed with a peculiar species of composition, which never fails of destroying every combustible material with which it comes in contact. The latter, called carcass-

rockets, were first used at Boulogne, their powers having been previously demonstrated in some experiments made at Woolwich by Sir William Congreve in the presence of Mr. Pitt and several of the cabinet minsters. Sir Sidney Smith was ordered to command the expedition intended for this purpose ; but from the lateness of the season, it being near the end of November before the preparations were completed, nothing was done that year. In 1806 Sir William renewed his proposition for the attack of Boulogne by rockets, which was ordered to be put in execution after lord Moira, at that time master-general of the ordnance, and lord Howick, first lord of the admiralty, had satisfied themselves of the efficacious nature of the weapon. The attack was accordingly made under the command of commodore Owen, late in October 1806; having been put off during the summer months in consequence of the negociations for peace. The town was set on fire by the first discharge, and continued burning for nearly two days : it was supposed, also, that some shipping were destroyed, but the greater part of the rockets certainly went over the basin into the town. Carcass-rockets have since been used in various expeditions under the immediate inspection of their inventor.

After the siege of Copenhagen they were ordered by lord Chatham, the master-general of the ordnance, to be reported upon by a commit-

tee of field-officers of artillery who had witnessed their effect in that bombardment, and who pronounced them to be ‘ a powerful auxiliary to the present system of artillery.’ Indeed the powers of this weapon are now established upon the best of all testimonies, that of the enemy ; a striking instance of which occurred at the siege of Flush-ing, where general Monnet, the French com-mandant, made a formal remonstrance t^o lord Chatham respecting the use of them in that bombardment.

It is not, however, in bombardment only that this species of artillery may be advantageously employed; their powers in the field having been demonstrated to be equally irresistible. The crown prince of Sweden was the first general who bore testimony to their effects in

this service; a small corps of rocketeers, under the command of captain Bogue of the British artillery, having been attached to a division of the allied armies, which, in the ever memorable battle of Leipsic, gloriously maintained the honor of the British arms. They were afterwards employed with great effect when the British army, under the command of the duke of Wellington, crossed the Adour. In consequence his royal highness the prince regent commanded the formation of a rocket corps, which took. place on the 1st of January 1814, by augmentation to the regiment of royal artillery.

The form of all the different kinds of these rockets is cylindrical, and they are composed of strong metallic cases, armed, as we have before stated, either with carcass composition for bombardment and conflagration, or with shells and case-shot for field service. They are, however, of various weights and dimensions, from the eight-inch carcass, or explosion rocket, weighing nearly 3 cwt., to the six pound shell-rocket, which is the smallest size used in the field. The sticks which are employed for regulating their flight are also of different lengths, according to the size and service of the rocket ; and which, for the convenience of carriage, are stowed apart from the rocket, and so contrived as to consist of two or more parts, which are connected to it, and to each other, when requisite, with the ut-most expedition.

The ammunition is divided into three classes, heavy, medium, and light; the former including all those of above forty-two pounds, which are denominated according to their calibre, as eight-inch, seven-inch, six-inch, &c., rockets ; the me-dium include all those from forty-two pound to twenty-four pound rocket ; and the light from the eighteen-pounder to the six-pounder inclusive. The carcass-rockets are armed with strong iron conical heads, containing a composition as hard and solid as iron itself, and which, when once inflamed, bids defiance to any human effort to extinguish it ; and consequently involves, in an inextinguishable flame, every combustible material with which it conies in contact. The forty-two-pounder and thirty-two-pounder carcass-rockets are those which have hitherto been chiefly employed in bombardments : the penetration of the thirty-two pound carcass-rocket in common ground is nine feet ; and in some instances where they have been employed, they

have been known to pierce through several floors, and through the sides of houses : this is the smallest rocket used in bombardment, and the largest employed in the field ; the more usual size for the latter service being the twenty-four, eighteen, twelve, and six-pounders. The

ranges of the eight-inch, seven-inch, and six-inch rockets are from 2000 to 2500 yards ; and the quantity of combustible matter, or bursting powder, from twenty-five pounds to fifty pounds; and from their weight, combined with less diameter, they possess a greater power of penetration than the heaviest shells, and are therefore equally efficient for the destruction of bomb-proofs, or the demolition of strong buildings; so that the facility of application, on which the inventor has hitherto rested the merit of the rocket system, is not its only excellence ; for it thus appears that it actually will propel heavier masses than can be done by any other means, that is to say, masses, to project which it would scarcely be possible to cast, much less to transport mortars of sufficient magnitude. The largest rocket that has yet been constructed has not, we believe, exceeded 3 cwt. ; but Sir William Congreve had in contemplation others of much superior magnitude, weighing from half a ton to a ton weight, which, being driven in very strong cast-iron cases, may possess such force that, when fired along trenches cut to the foot of the glacis, from the nearest point of the third parallel, against the revetement of any fortress, e?en unimpaired by a cannonade, it shall, by its mass and form, pierce the same; and, having pierced it, shall with one explosion of several barrels of gunpowder, with which it is loaded, blow such portion of the masonry into the ditch, as may, with very few rounds, complete a practicable breach.

The forty-two and thirty-two pounders are those, as we have before stated, which have hitherto been principally used in bombardment, and which, for the general purposes of that service, are found quite sufficient, as they will con-vey from seven pounds to ten pounds of combustible matter each, and have a range of upwards of 3000 yards. The thirty-two pounder rocket may be considered as the medium rocket, being the smallest used in bombardment as a carcass or explosion rocket, and the largest used with shot or shell in the field ; but as the twenty-four pounder is very nearly equal to it in all its applications in the latter service, being quite equal to the propelling of the Cohorn shell, or twelve pounder shot, it is, from the saving in weight, generally preferred to the thirty-two-pounder. The eighteen-pounder, which is the first of the light nature of rockets, is armed with a nine-pound shot or shell; the twelve-pounder with a six-pound ditto ; the nine-pounder with a gre-nade ; and the six-pounder with a three-pound shot or shell. From the twenty-four-pounder to the nine-pounder rocket, inclusive, a description of case-shot rocket is formed of each nature, armed with a quantity of musket or carbine balls, put into the top of the cylinder of the rocket.

The rocket light ball, invented by Sir William Congreve, is a species of

light ball thrown into the air by means of one of his rockets ; where, having reached the summit of the rocket's usceni.

it is detached from it by an explosion, and remains suspended in the air by a small parachute, to which it is connected by a chain. A permanent and brilliant light is thus obtained, and suspended in the air for five minutes at least, so as to afford time and light sufficient to observe the motions of an enemy either on shore or at sea ; where it is particularly useful in chasing, or for giving distant and more extensive night signals. It is to be observed that nothing of this kind can be obtained by the projectile force of either guns or mortars, because the explosion infallibly destroys any construction that could be made to produce the suspension in the air.

The floating rocket carcass is another of the inventor's applications of his rocket, and of the parachute, for the purpose of conveying combustible matter to distances far beyond the range of any known projectile force ; at the same time that it is cheap, simple, and portable. Like the light ball it is thrown into the air attached to a rocket, from which being liberated at its greatest altitude, and suspended to a small parachute, it is driven forward by the wind, and will, in a moderate breeze, afford ranges at least double those of the common carcass ; and may, therefore, for naval purposes, from a blockading squadron, be thrown in great quantities, by a fair wind, against any fleet or arsenal, without the smallest risk, or without approaching within range either of guns or mortars. Thus, in a blockade, a few years back, of the Russian fleet at Baltic Fort, it might have been continually used, at all events, with great prospect of success, and certainly where no other means of annoyance could be applied. The rocket containing this carcass is not larger than the thirty-two pounder carcass-rocket ; and the whole expense, added to the rocket, does not exceed five shillings ; nor are the approaches of

the carcass itself necessarily visible by night, as it may be so arranged as not to inflame till some time after it has settled. It is evidently, therefore, capable of becoming a very harassing weapon, with a great chance of doing as much mischief as any other carcass amongst large fleets and flotillas, by lodging unperceived in the rigging, or lighting on extensive arsenals, m situations where no other means of annoyance whatever exists.

ROCKINGHAM, a market town of Nor-thamptonshire, eighty-three miles from London, situated on the river Welland. It has a charity school, a market on Thursday, and a fair on September 8th, for five days. William the Conqueror erected a castle here, which was garrisoned by Sir Lewis Watson, for king Charles I., who was created in 1644, baron Rockingham. Its forest was reckoned one of the largest and richest in the kingdom ; it extended in the time of the ancient Britons almost from the Welland to the Nen, and was noted formerly for iron works, great quantities of flags, i. e. the refuse of the iron ore, being met with in the adjacent fields. It extended, according to a survey in 1641, nearly fourteen miles in length, from the west end of Middleton Woods to the town of Wandsford, and five miles in breadth, from Brig-stock to the Welland ; but is now dismembered into parcels, by the interposition of fields and

towns, and is divided into three bailiwics. In several of its woods a quantity of charcoal is made of the tops of trees. Market on Thursday.

ROCKIXGHAM, a township of the United States, on the Connecticut, Windham county, Vermont.

ROCKINGHAM, a county of the United States, in the south-east part of New Hampshire, bounded north-east by Strafford county, east by the Atlantic, south by Massachusetts, and west by Hillsborough county. Chief towns, Portsmouth, Exeter, and Concord.

ROCKINGHAM, a county of the central part of Virginia, bounded north-east by Hardy and She-nahdoah counties, south-east by Orange and Albemarle counties, south-west by Augusta county, and W. N. W. by Pendleton county. Also a county of the United States, on the north side of North Carolina. It lies west of Caswel county, and is watered by the Dan. There is a mineral spring in this county, which is much resorted to.

ROCKY MOUNTAINS, or STONY MOUNTAINS, a long and broad

range of mountains of North America. Long. 112►► W. They divide the waters which flow east into the Missouri and Mississippi, from those which flow west into the Pacific Ocean.

ROCKY RIVER, a river of Ohio, which runs into lake Erie, nine miles west of the Cuyahoga.

ROCKY, or ROCK RIVER, or ROCHE, a river which rises in the north-west territory, runs through the north-west part of the Illinois territory, and flows into the Mississipi, 160 miles above the Illinois. Length about 200 miles.

ROD, ra. s. Belg. roede. A long twig or pole ; any thing long and slender ; a sceptre ; an instrument of measurement, or of correction.

If he be but once so taken idly roguing, he may punish him with stocks ; but if he be found again so loitering, he may scourge him with whips or rods.

Spenser on Ireland.

She had all the royal makings of a queen ; As holy oil, Edward Confessor's crown, The rod and bird of peace. k

Shakspeare. Henry VIII. I am whipt and scourged with -►►/s, Nettied, and stung with pismires, when I hear Of Bolingbroke. Id. Henry IV.

In this condition the rod of God hath a voice to be heard, and he, whose office it is, ought now to expound to the sick man the particular meaning of the voice. Hammond.

Grant me and my people the benefit of thy chastisements : that thy rod, as well as thy staff, may comfort us. King Charles.

The past'ral reed of Hermes or his opiate rod.

Milton.

Some chuse a hazel rod of the same year's shoot, and this they bind on to another straight stick of any wood, and, walking softly over those places where they suspect the bowels of the earth to be enriched by metals, the wand will, by bowing towards it, discover it. Boyle.

They trembling learn to throw the fatal dart, And under rods of rough centurions smart. Dryden.

Let the fisherman

Increase his tackle, and his rod retie. Gaii. As soon as that sentence is executed, these rodt, these instruments of divine displeasure, are thrown into the HII-. Atterhnry.

Decempeda was a measariEg rod for taking the dimensions of buildings, and signified the same thing as pertica, taken as a measure of length. Arbuthnot. Haste, ye Cyclops, with your forked rod*,

This rebel love braves all the gods,

And every hour by love is made

Some heaven-defying Encelade. Granville.

A wit's a feather, and a chief a rod; An honest man's the noblest work of God. Pope.

O gentle sleep, 1 cried, Why is thy gift to me alone denied ? Mildest of beings, friend to every clime, Where lies my error, what has been my crime? Beasts, birds, and cattle, feel thy balmy rod ; The drowsy mountains wave, and seem to nod : The torrents cease to chide, the seas to roar, And the hushed waves recline upon the shore.

Harte.

RODNEY (George Brydges, lord Rodney), w*as born in 1718. His father was a naval officer, commanding, at the time of his son's birth, the yacht in which the king, attended by the duke of Chandos, used to pass to or from Hanover, and he asked and obtained leave to call his infant son George Brydges. The royal and noble god-fathers advised captain Rodney to educate his boy for his own profession, promising

to promote him as rapidly as the merit he should display, and the regulations of the navy, would permit In 1751, accordingly, we find him in the rank of a commodore, sent out to make accurate discoveries respecting an island which was supposed to lie about 50►► N. lat., and about 300 leagues west of England ; hut he returned without having seen any such island. In the war which soon folio wed this voyage of discovery, he was promoted to the rank of a rear-admiral, and was employed to bombard Havre de Grace; which in 1759 and 1760 he considerably damaged, together with the shipping. In 1761 he was sent on an expedition against Martinico, which was reduced in the beginning of 1762, and about the same time St. Lucia surrendered to captain Harvey. In reward for his services, he was created K. B. ; but, in consequence of extravagance, his circumstances be-came so embarrassed that he was obliged to fly from his country. He was in France when that court took a decided part with America against Great Britain ; and the king of Frapce through the duke de Biron offered him a high command in the French navy, if he would carry arms against his own country ; an offer which he rejected with indignation. When the divisions which the mutual recriminations of admiral Keppel and Sir Hugh Palliser excited in the British navy made it difficult for the ministry to procure experienced and popular commanders for their fleets, lord Sandwich offered him the chief command off the Leeward Isles, and he hoisted his flag, December 1779, on board the Sandwich. His first exploit was in January 1780, when he took nineteen Spanish transports bound to Cadiz from Bilboa, with a sixty-four gun ship and five frigates. On the 16th of January he fell in with the Spanish fleet, consisting of eleven sail of the line, under don John de Langara ; of which one was blown up during the engagement, five were taken and carried into Gibraltar, among which was the admiral's ship;

and the rest were much shattered. In Apn' 1780, he fell in with the French fleet, under admiral Guichen, at Martinico, whom he engaged ; though from the shattered state of his own fleet, and the unwillingness of the enemy to risk another action, he took none of their ships. His successful efforts during 1780 were generally applauded. He received the thanks of both houses of parliament, and addresses of thanks from various parts of Great Britain, and from the islands to which his victories were more particularly serviceable. In 1781 he continued his exertions, with much success, in defending the West India Islands ; and, along with general Vaughan, he conquered St. Eustatius. On the 12th of April, 1782, be came to a close action with the French fleet under count de Grasse ; during which he sunk one ship, and took five,

of which the admiral's ship, the Ville de Paris, was one. Peace was made in 1782; but, as a reward for his numerous services, he received a pension of ––2000 a-year for himself and his two successors. He had long before been created a baronet, and was justly promoted to the peerage, by the title of baron Rodney of Stoke, Somersetshire, and made vice-admiral of Great Britain. Lord Rodney had been twice married ; first to the sister of the earl of Northampton ; and secondly, to the daughter of John Clies, e?q. with whom he did not reside for several years before his death, which happened on the 24th of May, 1792. In 1783 the house of Assembly, in Jamaica, voted ––1000 towards erecting a marble statue to him, as a mark of their gratitude and veneration for his gallant services.

RODOMONTA'DE, n. *. Fr. rodomontade,. From a boastful boisterous hero of Ariosto, called Rodomonte. An empty noisy bluster or boast : a rant.

The libertines of painting have no other model but a rodomontade genius, and very irregular, which violently hurries them away. Dryden's Dufresnoii.

He talks extravagantly in his passion, but, if I would quote a hundred passages in Ben Jonson's Cethegns, I could shew that the rodomontades of Al-manzor are neither so irrational nor impossible, for Cethegus threatens to destroy nafcure. Dryden.

He only serves to be sport for his company ; for in these gamesome days men will give him hints, which may put him upon his rodomontades.

Government of the Tongue.

ROE,n.s. Sax. rxa, rxa-fceon ; Goth, and Swed. ra. A species of deer.

They were as swift as the roes upon the mountains.

1 Chronicles.

Run like a roe or hart upon The lofty hills of Bitheron. Sandys.

He would him make

The roe bucks in their flight to overtake. Spenser. Thy greyhounds are fleeter than the roe.

Shukspeare.

Procure me a Troglodyte footman, who can catch a roe at his full speed. Arbuthnot and Pope.

ROE, n. s. Properly roan or rone ; Dan. rarm, rawn ; Teut. rogen. The eggs of fish.

Here comes Romeo Without his roe, like a dried herring. Shakspearc.

ROE, the seed or spawn of fish. That of the male fishes is usually distinguished by the name

of soft roe, or milt ; and that of the female, hard roe, or spawn. So inconceivably numerous are these ovula, or small eggs, that M. Petit found 342,144 of them in a carp of eighteen inches; but M.Leuwenhoeck found in a carp no more than 211,629. This last gentlemen observes that there are four times this number in a cod ; and that a common one contains 9,344,000 eggs.

ROE, in zoology. See CERVUS.

ROE (sir Thomas), an able statesman and ambassador, born at Low Leyton, in Essex, about 1580. He was admitted into Magdalen College, Oxford, in 1593. After studying at the inns of court, and travelling to France, he was made esquire to queen Elizabeth. In 1604 he was knighted by king James I. and soon after sent to make discoveries in America. In 1614 he was sent ambassador to the great mogul, at whose court he continued four years. In 1620 he was chosen M. P. for Cirencester, and in 1621 sent ambassador to the grand signior : in which post he continued under Osman, Mustapha I., and Amurath IV. Of the transactions there he sent a true and faithful relation to the king and prince Henry ; which was printed at London in 1622, in 4to. He also wrote a curious account of his transactions at the Porte, which

remained in MS. till 1740; when it was published, under the title of the (Negociations of sir Thomas Roe, in his Embassy to the Ottoman Porte ; from 1621 to 1628, in folio. He also made a large collection of Greek and oriental MSS. which he presented to the Bodleian Library. He brought over the fine Alexandrian MS. of the Greek Bible, as a present to Charles I. from Cyril, patriarch of Constantinople ; since transcribed and published by Dr. Grabe. In 1620 he was sent to mediate a peace between the kings of Poland and Swe-den. This he effected, and acquired such credit with Gustavus Adolphus, that, after the victory of Leipsic, the king sent him a present of ––2000. In 1640 he was chosen M. P. fpr the university of Oxford. In 1641 he was sent ambassador to Ratisbon ; and on his return was made chancellor of the garter, and a privy-counsellor. He died in November 1644.

ROEBUCK (John), M.D., was born at Sheffield in Yorkshire, in the year 1718. After the usual course of the grammar school at Sheffield, his parents being dissenters, they placed their son under the tuition ojF Dr. Doddridge, theis master of an academy at Northampton. He was next sent to the university of Edinburgh, where he studied medicine and chemistry ; and he afterwards spent some time at the university of Leyden ; at which last place he obtained a degree in medicine, in 1743. He left Leyden, after having visited some parts of the north of Germany about the end of 1744. Soon after his return, he settled as'a physician at Birming- , ham, where he met with great encouragement. Strongly attached to chemistry, he fitted up a small laboratory in his own house, in which he spent every spare moment of his time. His first discoveries were certain improved methods of refining gold and silver, and particularly an ingenious mode of collecting the smaller particles of these precious metals, which had been formerly lost in the practical operations of many of'

the manufactures. By other chemical processes, carried on about tne same time in his little laboratory, he discovered also improved methods of making sublimate, hartshorn, and sundry other articles of equal importance. In order to render these employments useful to himself and the pub-lic, he chose hisˆssociate Mr. Samuel Garbet of Birmingham. They erected an extensive laboratory at Birmingham, for the purposes above mentioned ; which was productive of many advantages to the manufactures of that place, and of much emolument to themselves. In 1747 the doctor married Miss Ann Roe of Sheffield. In 1749 Messrs. Roebuck and Garbet established a manufacture of oil of vitriol at Prestonpans : and, by conducting their operations with secrecy, they were enabled to preserve the advantages of their

ingenuity and industry for a long period of years; and not only served the public at a much cheaper rate than had ever been done formerly, but realised in that manufacture a greater annual profit from a smaller capital than had been done in any similar undertaking. Dr. Roebuck next projected the establishment of cast iron works on an extensive and improved plan ; and under his direction, with the assistance of Mr. Smeaton, and Mr. James Watt, the magnificent works at Carron were finished in the end of 1759. For some time after the establishment of the Carron works Dr. Roebuck continued to give his attention and assistance in the general management andsuper-intendance of them ; but, when the business sunk by degrees into a matter of ordinary detail, he was unfortunately induced to become lessee of the duke of Hamilton's extensive coal and salt works at Borrowstouness. The coal there was represented to exist in great abundance, and to be of superior quality ; but the perpetual succession of difficulties and obstacles, which occurred in the working and raising of the coal, was such as has been seldom experienced in any work of that kind. The result was that, after many years of labor and industry, there were sunk in the coal and salt at Borrowstounness, not only his own, and the considerable fortune brought him by his wife, but the regular profits of his more successful works ; together with sums of money borrowed from his relations and friends, which he was never able to repay. He died on the 17th of July, 1794. Dr. Roebuck left behind him many works, but few writings. A comparison of the Heat of London and Edinburgh, read in the Royal Society of London, June 29th, 1775 ; Experiments on Ignited Bodies, read there 16th of February 1776; Observations on the Ripening and Filling of Corn, read in the Royal Society of Edinburgh, 5th of June, 1784, ►►► are all the writings of his, two political pamphlets excepted, which have been published.

ROELLA, in botany, a genus of the monogynia order and pentandria class of plants ; natural order twenty-ninth, campanacese : COR. funnel-shaped, with its bottom shut up by sta-miniferous valvules : stigma bifid : CAPS, bilocular, and cylindrical inferior.

ROEMER (Olaus), a celebrated Danish astronomer and mathematician, born at Arthusen in Jutland, 1644; and at eighteen years of age sent to the University of Copenhagen. lie studied

mathematics and astronomy, and became so ex-pert in those sciences

that when Picard was sent by Louis XIV., in 1671, to make observations in the north, he engaged him to return with him to France, and had him presented to the king, who made him tutor to the dauphin, and gave him a pension. He was joined with Pi-card and Cassini in making astronomical observations ; and in 1672 he was admitted a member of the Academy of Sciences. During the ten years he resided at Paris, he gained great reputation by his discoveries : and first found out the velocity with which light moves, by the eclipses of Jupiter's satellites. In 1681 Roemer was recalled to Denmark, by Christian V., who made him professor of astronomy at Copenhagen ; and chancellor of the exchequer, &c. He became counsellor of state, and burgomaster of Copenhagen under Frederick IV. He died September 19th, 1710, aged sixty-six. Horrebow, his disciple, professor of astronomy at Copenhagen, published in 4to., 1753, various observations of Roemer, with his system, under the title of Astronomiae. He had also printed various astronomical observations, &c., in several volumes of the Memoirs of the Royal Academy of Sciences at Paris, 1666.

ROER, or RUHR. There are two rivers of this name in the west of the Prussian states; the one flowing through the provinces of the Lower Rhine, and Cleves, and Berg, passes by Duren and Juliers, and falls into the Maese. The other, rising near Winterburg in Westphalia, flows westward, till it joins the Rhine between Rnhrort and Duisburg. It is navigable by means of sluices, but rapid and frequently overflows its banks.

ROGA, in antiquity, a present which the emperors made to the senators, magistrates, and even to the people; and the popes and patriarchs to their clergy. These rogse were distributed by the emperors on the first day of the year, on their birth day, or on thenatalis dies of the cities; and by the popes and patriarchs in passion-week. Roga is also used for the common pay of the soldiers.

ROGATIO, or ROGATION, in the Roman jurisprudence, a demand made by the consuls or tribunes of the Roman people, when a law was proposed to be passed. Rogatio is also used for the decree itself made in consequence of the people's givinar their assent to this demand ; to distinguish it from a senatus consultum, or de-cree of the senate.

ROGATION, n. s. .Fr. rogation, from Lat. rogo. Litany; supplication.

He pcrfecteth the rogations or litanies before in use, and addeth unto them that which the present necessity required. Hooker.

Supplications, with this solemnity for appeasing of God's wrath, were of the Greek church termed litanies, and rogations of the Latin. Taylor.

ROGER OF HEXIIAM, an ancient English historian, educated in the monastery of Hexham in Northumberland. He was elected prior of it about 1138. He wrote a history of the campaign of the Scottish army, under David I.,

king of Scots, when the battle of the standard was fought.

ROGER OF HOVEDEN, a learned man of the thirteenth century, born in Yorkshire, most probably at the town of that name, now called How-den, some time in the reign of Henry I. After he had received the first parts of education, in his native country, he studied the civil and canon law, which were then become the most lucrative branches of learning. He became domestic chaplain to Henry II., who employed him to transact several ecclesiastical affairs ; in which he acquitted himself with honor. But his most celebrated work was, his Annals of England, from A. D. 731, when Bede's Ecclesiastical History ends, to A. D. 1202. This work, which is one of the most voluminous of our ancient histories, is more valuable for the sincerity with which it is written, and the great variety of facts which it contains, than for the beauty of its style, or the regularity of its arrangement.

ROGERS (Charles), F. R. S., an eminent antiquarian, born in London, August 2d, 1711. In 1731 he obtained an office in the custom-house, and in 1747 was promoted to be clerk of the certificates. In 1752 he was admitted a member of the society of antiquaries; and soon after F. R. S. He published a most elegant and expensive work, exhibiting specimens of the man-ner of the different masters. This work was so much admired, that copies of it were placed in his majesty's library, and in those of the emperor of Germany, the empress of Russia, the late king of France, the British museum, &c. &c. He also published a translation of Dante's Inferno in 1782, 4to. ; and several curious papers. He died January 2d, 1784.

ROGERS (John), D. D. an eminent English divine, born in 1679, at Ensham, in Oxfordshire, where his father was vicar. He was educated at Oxford, and in 1693 was admitted of Corpus Christi College, and became fellow in 1706. In 1710 he became B. D., and in 1716 rector

of Wrington ; when he married Miss L. Hare, sis-ter of lord Coleraine. In 1719 he engaged in the Bangorian controversy ; and published A Discourse on the Visible and Invisible Church of Christ ; in 8vo. Dr. Sykes having published an answer, he replied in a Review of the Discourse. He gained so much credit by these works that the university of Oxford conferred on him by diploma the degree of D. D. In 1726 he was made chaplain to the prince of Wales, afterwards George II ; when he published A Defence of Christianity against Collins's Scheme of Literal Prophecy. In October 1728 he was made vicar of St. Giles's in London : but died 1st of May, 1729.

ROGGERVELDT, UPPER, MIDDLE, AND LITTLE, three districts in the north part of the colony of the Cape of Good Hope, occupying a table land formed at the summit of the great range of mountains from which it derives its name. It contains the largest and best breed of horses in the colony; but the temperature is cold, so that the inhabitants are under the necessity of coming down for four months to the toot of the mountains. See CAPE OF Goon Horv;.

ROGUE, n. i. & v. n. *} ' Of uncertain ety—

RO'GUERY, n. s. j raology,' says John—

ROGUESHIP, lˆson. Qu. Lat. urrogol

Ro'or ISH, adj. | A wandering beggar;

RO'GUISHLY, adv. a vagrant; a dishonest

RO'GUISHHESS, n. s. J person ; a name of

slight tenderness : to play the rogue : the other

derivatives corresponding.

For fear lest we, like rogues, should be reputed, And for ear-marked beasts abroad be bruited.

Spmser.

If he be but once so taken idly roguing, he may punish him with the stocks. Id. on Ireland.

Though the persons, by whom it is used, be of better note than the former roguish sort ; yet the fault is no less worthy of a marshal. Spenser.

Thou killest me like a rogue and a villain.

Shakspeare.

I never knew a woman love man so. ••• Alas, poor rogue, I think indeed she loves. Id.

You rogue, here's lime in this sack too ; there's nothing but roguery to be found in villainous man.

Id.

The scum of people and wicked condemned men spoiled the plantation ; for they will ever live like rogues, and not fall to work, but be lazy and do mischief. Bacon's Essays.

To live in one land is captivity, To run all countries wild a roguery. Donne. He rogued away at last, and was lost. Carew. Like the devil did tempt and sway 'em To rogueries, and then betray 'em. Hudibrat. If he call rogue and rascal from the garret, He means you no more mischief than a parrot.

Dryden.

Say, in what nasty cellar under ground, Or what church porch your rogueship may be found 1

Id.

The most bewitching leer with her eyes, the most roguish cast ; her cheeks are dimpled when she smiles, and her smiles would tempt an hermit.'

Id. Spanish Fryar,

The kid smelt out the roguery. L' Estrange. A rogue upon the highway may have as strong an arm, and take off a man's head as cleverly as the executioner ; but then there is a vast disparity, when one action is murther, and the other justice. South.

I am pleased to see ray tenants pass away a whole evening in playing their innocent tricks ; our friend Wimble is as merry as any of them, and shews a thousand roguish tricks on these occasions. Addison.

The rogue and fool by fits is fair and wise, And even the best, by fits, what they despise. Pope.

The roguery of alchymy, And we, the bubbled fools,

Spend all our present stock in hopes of golden rules.

Swift.

He gets a thousand thumps and kicks, Yet cannot leave his roguish tricks. Id.

I see thee dancing o'er the green, Thy waist sae jimp, thy limbs sae clean, Thy tempting looks, thy roguish een ⁂

By heaven and earth I love thee ! Burns. ROHAN (Peter), Chevalier de Ghie, a brave Frenchman who flourished under Louis XI., who, for his valor, made him marshal of France, in 1475. He was one of the four lords who governed the kingdom during that king's illness, in 1484. In 1486 he defended Picardy against the archduke of Austria. He commanded the vanguard at the battle of Fournoue, in 1495 ; and Louis XII. appointed him his prime counsellor, and general of the army in Italy. But

all his merits were disregarded by the queen Anne of Austria, who, taking umbrage at hiii, tor having stopped her equipage, persecuted him with the most unrelenting violence, and subjected him by an iniquitous process to damages of 31,000 livres. This brave but illused general died April 22d, 1613.

ROHAN (Henry duke of), prince of Leon, and peer of France, was bora at the castle of Blein, in Brittany, in 1579 ; and gained the affection of Henry IV. by his bravery at the siege of Amiens, when only in his

sixteenth year. After Henry's death, he became the chief leader of the Protestants in France, in defence of whose rights he carried on three wars against Louis XIII. The first ended to the advantage of the Protestants ; the second and third were occasioned by the sieges of Rochelle. The duke at last procured for them an honorable peace in 1629. After this he retired to Venice, and that republic appointed him their commander-in-chief against the Impesialists ; but Louis XIII. recalled him, and sent him ambassador to Switzerland and the Orisons. After many victories he drove the Spaniards and Imperialists out of the Valteline, in 1633 ; and defeated the former again at Dike Koma, in 1636. In 1637 he concluded a treaty with the Orisons : but afterwards, joining the duke of Saxe Weimar against the Imperialists, he was wounded at the battle of Rhinfeld, February 28th 1638; and died 13th of April, aged fifty-nine. Though so much engaged in wars, he wrote several treatises : as 1. The Interests of Princes : Cologn, 1660, 12mo. 2. The Perfect General; 12mo. 3. On the Corruption of the Ancient Militia. 4. On the Government of the thirteen Provinces. 5. Memoirs containing the history of France, from 1610 to 1629. 6. Political Discourses on State affairs, from 1612 to 1629, 8vo. Paris, 1644. 7. Memoirs and Letters on the War of the Valteline, in 3 vols. 12mo. Geneva, 1759.

ROHAULT (James), a celebrated Cartesian, the son of a merchant of Amiens, where he was born in 1620. He became well skilled in the mathematics, and taught them at Paris where he became acquainted with M. Clerselier, an advocate, whose daughter he married. He taught philosophy in the same city with uncommon applause. He died in Paris in 1675. He wrote in French, 1 . A Treatise on Natural Philosophy, 2. The Elements of the Mathematics. 3. A Treatise on Mechanics, which is very curious. 4. Philosophical Conversations ; and other works. His Physics were translated into Latin, by Dr. Samuel Clarke, with notes, in which the Cartesian errors are corrected upon the Newtonian sys-tem.

ROHILCUND, or RAHILKHAND, in Sanscrit Kuttair, is a tract of Hindostan situated east of the Ganges, between 28►► and 30►► N. lat., and 78►► to 80►► E. long. Commencing in the vicinity of the Lolldong Pass, at the foot of the Kemaoon Hills, it extends south-eastward to the t wn of Pillibeet. On the north it is bounded by the Sewalic and Kemaocn Hills, and on the south by the dominions of Oude, the principal rivers being the Ganges and Ramgunjya : the latter traverses Rohilcund nearly in its whole ex-

tent, and joins the Ganges at Kanoge. On tlie eastern side the Dewah, or Goggra, issues from the Kemaoon Mountains, and runs past the town of Pillibeet, where, during the height of the rains, the timber of the adjacent forests is embarked for Patna, Calcutta, arid other large towns. There are many smaller streams which contribute to its fertility, being distributed by means of canals and reservoirs; water is also found by digging a few feet. Rohilcund is calculated to be one of the richest natural districts of the East; and was, when ceded to the British by the nabob of Oude, in 1801, one of the most desolate regions in Hindostan. The chief articles raised are grain of all sorts, sugar-cane, indigo, cotton, and tobacco.

Tn the early periods of the Mogul empire Rohilcund contained the cities of Shahabad, Shahje-anpoor, Bareily, Bissowlee, Budayoon, Owlah, Moradabacl, and Sumbul : which last communicated its name to a great part of the district. During the existence of the Patan dynasty, many princes of that family kept their court, for a series of years, in Budayoon, where, as in many other parts of Rohilcund, are still to be seen ihe remains of magnificent edifices and mausoleums. TheRohillas were originally an Afghaunor Patan race, who emigiated from the province of Cahul. About 1720 the Afghaun chiefs, Bisharut Khan and Daood Khan, accompanied by a band of their countrymen, came to Hindostan in quest of military service. They were first entertained by Madhoo Sah, the zemindar of Serowly, who maintained, by predatory incursions, a large party of banditti. While plundering an adjacent village, Daood Khan captured a youth of the Jaut tribe, whom he converted to the Mahomrr/edan religion, named Ali Mahommed, and adopted. Daood Khan was succeeded as principal leader of the Rohillahs by tins youth, who, in consequence of the distracted state of Hindostan, soon established his power over this territory. He died in 1748, and left six sons ; but was succeeded in the chieftainship by Hafez Rehmut. ‘ In 1774 the combined forces of the Rohillahs were totally defeated by the British army at the battle of

Cutterah, where Hafez Rehmut was slain, and with this event terminated the Rohillah sway.

ROIST, v. n. } Goth, rosta ; Goth, and Swed.

ROI'STER,W.S. S raust. Of this word the most probable etymology, says Dr. Johnson, is from Isl. rister, a violent man. To behave turbulently ; to act at discretion ; to be at free quarter ; to bluster : vociferation. Thomson.

I have a routing challenge sent amongst The dull and factious nobles of the Greeks, Will strike amazement to their drowsy spirits.

Shaltspeare. Among a crew of roist'ring fellows,

He'd sit whole evenings at the alehouse. Swift.

ROLAND (M.), one of the celebrated founders of the French Revolution, was born in 1732, at Le Clos de la Platiere, twelve miles from Villefranche. His family was ancient and noble. He was educated for the church ; but, not choosing the clerical profession, he went to Rouen, where his relation M. Godinot wa* inspector of manufactures, and proposed to him to VOL. X\7IU.

follow this branch ot administration. Elf agreed and soon was distinguished for activity, industry, and disinterestedness. Government soon gave him a higher office, with an income which satisfied his wishes. While in Italy, he wrote letters to Madame Philepon, afterwards his wife, by the medium of his brother, a Benedictine prior, containing Observations on the Men, Manners, and Manufactures of Italy, which were afterwards published. He was soon after entrusted with a considerable part of the Encyclopsedia. At the commencement of the revolution M. Roland was appointed inspector for Lyons : he was a member of all the academies in the south of France ; and had drawn up the Cahiers of Lyons, on the convocation of the states general, at the express desire of the society of agriculture. After faithfully discharging the duties of his mission, he returned to his native province. Returning some time after to Paris, he became intimate with the celebrated Brissot, who introduced him to the Jacobin ctub. He was soon nominated a member of the committee of correspondence. Much jealousy had been excited about this time by the suspicious conduct of the covtrt; and, some of the Girondists being consulted about the formation of a patriotic administration, Roland was pointed out by the committee of the Place Vendome as a man

every way qualified ; and his writings were referred to as proofs of his attachment to liberty. The king approved, and Brissot was sent to Madame Ro-land, to discover whether her husband would accept of - the important office of minister of the Home Department. Roland accepted of the appointment ; and the next day Roland appeared at court, to be presented, take the oaths, and enter on his new office ; but the courtiers were astonished, to find him not in an elegant court habit, but in his ordinary dress. At length the menacing attitude assumed by the court of Vienna produced a crisis. Servan, the minister at war, proposed to the assembly the formation of a camp of 20,000 men under the walls of Paris. This scheme was adopted with enthusiasm, as well as another against the clergy. All the six ministers supported these decrees, but the king made use of the veto which the constitution had given him, and refused his assent; on which, after sending a letter to the king, Roland gave in his resignation. The constituent assembly unanimously voted that he had ‘ retired with the thanks and gratitude of his country.’ His resignation had a prodigious effect on the minds of the public, and rendered the conduct of the court suspected. At length, on the 10th of Au-gust, the palace being taken, and the king and royal family made prisoners, citizens Roland, Claviers, and Servan, were restored to their offices, and three new ones appointed, *viz.* Danton to that of justice, le Brun, to that of the foreign affairs, and Monge to the marine. But, in September 1792, sanguinary men murdered a num-ber of the clergy and aristocracy, without trial or form of justice. Roland and all his friends of the Girondist party disapproved of these crimes, and endeavoured to bring the murderers to justice, and thus lost their populaiity. Roˆ land’s house, formerly reverenced as sacred, w%f

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now treated with outrage by the mob. The barbarity and injustice of

the mountain party in the convention soon afterwards arrived at its utmost pitch. On the 31st of May, 1793, Roland was denounced, with others of the Girondist party. Roland endeavoured to conceal himself, by advice of his wife; who did not suspect her danger, but she was arrested soon after, imprisoned, and guillotined. Roland on this left the asylum of a friend, who had hitherto concealed him ; and, repairing to a spot on the great road leading to Rouen, he there committed suicide, leaving a paper containing the following lines : ••• ‘ Whoever you may be that find me lying here, respect my remains ; they are those of a man who devoted his whole life to being useful, and who died, as he lived, virtuous and honest.’

ROLAND, BRECHE DE, a remarkable fissure in the central part of the Pyrenees, above the village of Gavarnie. A wall of rocks, from 300 to 600 feet in height, extends in the form of a crescent, convexly towards France. In the middle is a breach, 300 feet wide, said, by tradition, to have been made by the famous Roland. The great mountain of Marbore rises over it like a citadel, and the elevation is so great that it has been for ages without a trace of Vegetation.

ROLANDRA, in botany, a genus of the polygamia segregata order, and syngenesia class of plants ; natural order forty-ninth, composite. COMMON CAL. consisting of distinct flosculi, between each of which are short squamae, the whole forming a round head : PARTIAL CAL. bivalved. COR. small and funnel-shaped, the tube small as a thread, the laciniae short and acute. The stamina are five ; the style bifid. It has no other seed vessel except the partial calyx, which contains a long three-sided seed. Of this there is only one species, *viz.*

R. argentea ; a native of the West Indies, found in copes and waste lands.

ROLL, v. a., v. n., &N Fr. and Teut. rolle;

ROLL’ER, n. s. [n. s. j Arm. roll ; Welsh rhol.

ROLL’ING-PIN,

ROLL’ING-PRESS,

ROLL’Y-POOLY.

its surface successively to the grpund ; to move in a circle ; form by rolling into masses ; form in a stream or by a current or a course of pressure; be moved as a cylinder or circle; run or revolve ; be tossed to and fro ; fluctuate ; be moved by violence : as a noun substantive, the

act of rolling or state of being rolled ; the thing rolled; a round body; mass; in particular a rolled writing or sheet of MS.; public writing; register ; office : a roller is, any thing revolving on its own axis ; bandage : rollingpin, a pin on or by which paste is rolled : rolling-press, the press of copper-plate printers : rolly-pooly, a corruption of ‘ roll ball into the pool,’ a game. Mr. Thomson says from Fr. rouler poulie, to turn a pulley ; or Ital. ruollo, a waltz.

Darius made a decree, and search was made in the house of the rolls, where the treasures were laid up. Ezra vi. 1.

Who shall roll us away the stone from the door of the sepulchre ? Mark xvii. 3.

He fashioned those harmonious orbs that roll In restless gyves about the Arctick pole. Sandys.

- To turn or move any thing by application of 1 the different parts of

Beasts only cannot discern beauty ; and let theis be in the roll of beasts that do not honour it.

Sidneit.

His chamber all was hanged about with rolls And old records, from ancient times derived.

Spenser. Cromwell is made roaster

O’ th’ rolls, and the king’s secretary. Shakspeare.

These signs have marked me extraordinary, And all the courses of my life do shew, I am not in the roll of common men. Id.

The roll and list of that army doth remain. Davles.

Grind red lead, or any other colour, with strong wort, and so roll them up into long rolls like pencils.

Peacham.

Of that short roll of friends writ in my heart, There’s none that sometimes greet us not. Donne.

When a man tumbles a roller down a hill, the man is the violent enforcer of the first motion ; but, when it is once tumbling, the property of the thing itself continues it. Hammond.

Heaven shone and rolled her motions. Milton. Thou, light,

Revisitest not these eyes, which roll in vain,

To find the piercing ray, and find no dawn. Id.

Wave rolling after wave in torrent rapture. Id.

Down they fell By thousands, angel on archangel rolled. Id.

The rolls of parliament, the entry of the petitions, answers, and transactions in parliament, are extant.

Hale.

Our nation is too great to be ruined by any but it-self; and, if the number and weight of it roll one way upon the greatest changes that can happen, yet England will be safe. Temple.

I'm pleased with my own work, Jove was not more With infant nature, when his spacious hand Had rounded this huge ball of earth and seas, To give it the first push, and see it roll Along the vast abyss. Dryden.

When thirty rolling years have run their race. Id.

Please thy pride, and search the herald's roll, Where thou shall find thy famous pedigree. Id.

In human society, every man has his roll and station assigned him. L' Estrange.

The long slender worms, that breed between the skin and flesh in the isle of Ormuz and in India, are generally twisted out upon sticks or rollers.

Kay on the Creation.

To keep ants from trees, encompass the stem four fingers' breadth with a circle or roll of wool newly plucked. Mortimer.

They make the string of the pole horizontal towards the lathe, conveying and guiding the string from the pole to the work, by throwing it over a roller.

Moions Mechanical Exercises.

Reports, like snow-balls, gather still the farther they roll. Government of the Tongue.

Large rolls of fat about his shoulders clung. And from his neck the double dewlap hung.

Addison.

Here tell me, if thou dar'st, my conscious soul, What different sorrows did within thee roll. Prior.

Busy angels spread The lasting roll, recording what we said. Id.

Let us begin some diversion ; what d'ye think of rouliipouly or a country dance? Arbuthnot.

By this rolling, parts are kept from joining together. Wiseman.

Fasten not your roller by tying a knot, lest you hurt your patient. Wiseman's Surgery.

The pin should be as thick as a rollingpin.

Wiseman.

Tis a mathematical demonstration, that these twenty-four letters admit of so many changes in

their order, and make such a long roll of differently ranged alphabets, not two of which are alike, that they could not all be exhausted, though a million millions of writers should each ymte above a thousand alphabets a-day, for the space of a million millions of years. Bentley.

A small Euphrates through the piece is rolled, And little eagles wave their wings in gold. Pope.

Twice ten tempestuous nights I rolled, resigned To roaring-billows and the warring wind. Id.

Storms beat, and rolls the main ; Oh beat those storms, and roll the

seas in vain ! Id.

In her sad breast the prince's fortunes roll, And hope and doubt alternate seize her soul. Id.

The eye of time beholds no name So blest as thine, in all the rolls of fame. Id.

Lady Charlotte, like a stroller, Sits mounted on the garden roller.

Swift's Miscellanies.

Listening senates hang upon thy tongue, Devolving through the maze of eloquence A roll of periods, sweeter than her song. Thomson.

BOLL, in law, signifies a schedule of parchment, which may be rolled up by the hand. In these schedules all the pleadings, memorials, and acts of court, are entered and filed by the proper officer ; which being done, they become records of the court. Of these there are in the exchequer several kinds, as the great wardrobe roll, the cofferer's roll, the subsidy roll, &c.

ROLL, MUSTER, that in which are entered the soldiers of every troop, company, regiment, &c. As soon as a soldier's name is written down on the roll, he is punishable if he desert.

A ROLL OF PARCHMENT denotes the quantity of sixty skins. The ancients made all their books up in the form of rolls ; and in Cicero's time the libraries consisted wholly of such rolls.

ROLLS, MASTER OF THE. See MASTER.

ROLLS OFFICE, is an office in Chancery Lane, London, appointed for the custody of the rolls and records in chancery.

ROLLS OF PARLIAMENT are the MS. registers or rolls of the proceedings of our ancient parliaments, which, before the invention of printing, were all engrossed on parchments, and proclaimed openly in every county. In these rolls are also contained many decisions of very difficult points of law, which were frequently in former times referred to the decision of that high court.

ROLLE (Michael), an eminent French mathematician, born atAuvergne, 1652. His great mathematical skill procured him a place in the Academy of Sciences, and a pension. In 1690 he published a treatise on Algebra, and died in

ROLLI (Paul) was born in Rome in 1687. He was the son of an architect, and a pupil of the celebrated Gravina. An intelligent English no-Pieman, having brought him to London, introduced him to the royal family as a master of the Tuscan language. Rolli remained in England till the death of queen Caroline his protector. He returned to Italy in 1747, where he died in 1767, in the eightieth year of his age, leaving behind him a very curious collection in natural history, &c., and a valuable and well chosen library. His principal works first appeared in London in 1735, in 8vo. They consist of odes in blank verse, elegies, songs, Sec., after the man-

ner of Catullus. There is likewise a Collection of Epigrams, printed at Florence in 1776, in 8vo., and preceded by his life by the abbe Fondini. There are likewise by him translations into Italian verse of Milton's Paradise Lost, London, folio, 1735; and of Anacreon's Odes, London, 1739, in 8vo.

ROLLIN (Charles), a justly celebrated French writer, was the son of a cutler in Paris, and was born in 1661. He studied in the college Du Plessis, in which he obtained a bursary, through the interest of a Benedictine monk of the White Mantle, whom he had served at table. After having studied humanity and philosophy at this college, he applied to divinity three years at the Sorbonne ; but he did not prosecute this study, and never rose in the church higher than to the rank of a priest. He afterwards became professor of rhetoric in the same college; and in 1688 succeeded Horson, his master, as professor of eloquence, in the royal college. In 1694 he was chosen rector, and continued in that office two years. By virtue of his office he delivered the annual panegyric upon Louis XIV. He made many very useful regulations in the university ; and particularly revived the study of the Greek language, which had been much neglected. He substituted academical exercises in the place of tragedies. Upon the expiration of the rectorship, cardinal Noailles engaged him to superintend the studies of his nephews, who were in the college of Laon ; and in this office he was employed, when, in 1699, he was with great reluctance

made coadjutor to the principal of the college of Beauvais. This college was then a kind of desert, with very few students, and without any manner of discipline : but Rollin's great reputation and industry soon repeopled it, and made it a flourishing society. In this situation he continued till 1712; when, the controversy between the Jesuists and the Jansenists drawing towards a crisis, he fell a sacrifice to the prevalence of the former. Father le Tellier, the king's confessor, a furious agent of the Jesuits, infused into his mas-ter prejudices against Rollin, whose connexions with cardinal de Noailles would alone have sufficed to have made him a Jansenist ; and on this account he lost his share in the principality of Beauvais. His edition of Quintilian with his own notes appeared in 1715, in 2 vols. 12mo., with an elegant preface, setting forth his method and views. In 1710 themniversity of Paris chose Rollin again Rector : but he was displaced in about two months by a lettre de cachet. The university had presented to the parliament a petition, in which it protested against taking any part in the adjustment of the late disputes ; and their being congratulated in a public oration by Rollin, on this step, occasioned the letter which ordered them to choose a rector of more moderation. He now composed his treatise upon the Manner of Studying and Teaching the Belles Lettres, which was published in 2 vols. in 1726, and two more in 1728, 8vo. The work was exceedingly successful, and its success encouraged its author to undertake his Histoire Ancienne, Sec., or Ancient History of the Egyptians, Carthaginians, Assyrians, Babylonians, Medes and Persians, Macedonians and Greeks, which he finished in 13 vols

8vo., and published between 1730 and 1738. Rollin was one of the most zealous adherents of deacon Paris ; and, before the enclosure of the cemetery of St. Medard, this distinguished character might have

been often seen praying at the foot of his tomb. This he confesses in his Letters. He published also lesser pieces; containing different Letters ; Latin Harangues, Discourses, Complimentary Addresses, &c., Paris 1771, 2 vols. 12mo. He died in 1741.

ROLLING, the motion by which a ship rocks from side to side like a cradle, occasioned by the agitation of the waves. Rolling, therefore, is a sort of revolution about an imaginary axis passing through the centre of gravity of a ship : so that the nearer the centre of gravity is to the keel the more violent will be the rolling motion ; because the centre about which the vibrations are made is placed so low in the bottom that the resistance made by the keel, to the volume of water which it displaces in rolling, bears very little proportion to the force of the vibration above the centre of gravity,, the radius of which extends as high as the mast heads. But, if the centre of gravity is placed higher above the keel, the radius of vibration will not only be diminished, but an additional force to oppose the motion of rolling will be communicated to that part of the ship's bot-tom which is below the centre of gravity. It may, however, be necessary to remark that the construction of the ship's bottom may also contribute to diminish this movement considerably. Many fatal disasters have happened to ships arising from violent rolling.

ROLLING, in gardening and husbandry, the operation of drawing a roller over the surface of the ground, with the view of breaking down the clods, rendering it more compact, and bringing it even and level. This is a practice that becomes necessary both upon the tillage and grass-lands, and which is of much utility in both sorts of husbandry. In the former case, it is made use of with different intentions, as for the purpose of breaking down and reducing the cloddy and lumpy parts of the soil in preparing it for the Deception of crops. It is also of great use in many cases of light soils, in rendering the surface more firm, even, and solid, after the seed is put in. It is likewise found beneficial to young crops in spring, in various instances. It is said, by the author of Practical Agriculture, that in the cases of stiff, heavy, and adhesive ###soils of different kinds, it may frequently be made use of with the first-mentioned intention with very great advantage ; but it should only be employed when such lands are tolerably dry, for, when drawn over the ground under the contrary circumstances, little benefit can be afforded in the way of pulverisation, while much mischief must be produced by the poaching of the horses, and the plastering the earth round the implement. But, by using it ' in the manner just directed, all the lumpy or cloddy parts of the surface soil may be effectually crushed and reduced into a fine powdery state, fit for the reception of the seed. It is likewise supposed that, in cases where lands have been

left rough after ploughing, for the purpose of more effectually destroying weeds, it may be of utility, by being

employed before the harrows, to give them more power in laying hold of and reducing the soil, and by the pulverisation that it affords, and the more perfect retention of moisture that it causes, in consequence of the surface being rendered more close and compact, the seed-weeds are produced more abundantly, and more readily destroyed. It is likewise in these last methods, says Mr. Donaldson, that it proves so highly beneficial in all | cases where grass-seeds are sown ; as well as-by the equality and smoothness of surfape that are thereby produced ; and it is well observed, by the same writer, that if no other benefit were derived from rolling lands in tillage than smoothing the surface, even that in harvest is of material consequence, more especially where the crops ate cut down with the scythe, which is general in most of the southern districts of the kingdom, and which the increasing scarcity of laborers must soon, in all probability, introduce into those of the north. See RURAL ECONOMY.

ROLLING TACILLE, a pulley or purchase fastened to that part of a sail-yard which is to the windward of the mast, in order to confine the yard close down to the leeward when the sail is furled : it is used to prevent the yard from hav-ing too great a friction against the mast in a high sea, which would be equally pernicious ta both.

ROLLIUS (Reinhold Henry), a learned Ger-man philologist, who, in 1779, published a very useful work, entitled The Lives of the Philosophers, Orators, Poets, Historians, and Philologers.

ROLLO, the conqueror of Normandy, was a Norwegian duke, banished from his country by Harold Harfager, who conquered Norway in 870, on account of his piracies. He first retired with his fleet among the islands of the Hebrides to the north-west of Scotland, whither the flower of the Norwegian nobility had fled for refuge when Harold had become master of the kingdom. He was thert received with open arms by those warriors, who, eager for conquest and revenge, waited only for a chief to lead them on. Rollo, setting himself at their head, sailed towards .England, which had been long a field open to the violence of the northern nations. But the great Alfred had some years before established such order, in this part of the island, that Rollo, aftei several fruitless attempts, despaired of forming there such a settlement as should make him amends for the loss of his own country. He pretended therefore to have had a supernatural dream, which

promised him a glorious fortune in France, and which served at least to support the ardor of his followers. The weakness of the government in that kingdom, and the confusion in which it was involved, were still more persuasive reasons. Having therefore sailed up the Seine to Rouen, he immediately took the capital o►► thac province, then called Neustria, and maicing it his magazine of arms, he advanced up to Paris, to which he laid siege in form. This war at length ended in the entire cession of Neustria, which Charles the Simple was obliged to give up to Roho and his Normans, to purchase a peace. Roho received it in perpetuity to himself and his

posterity, as a feudal duchy dependent on the crown of France. The interview between Charles and this new duke gives a curious picture of these Normans ; for Rollo would not take the oath of fealty to his sovereign lord any other way than by placing his hands within those of the king, and absolutely refused to kiss his feet, as custom then required. It was with great difficulty he was prevailed on to let one of his warriors perform this ceremony in his stead ; but the officer to whom Rollo deputed this service suddenly raised the kind's foot so high that he overturned him on his back : a piece of rudeness which was only laughed at, to such a degree were the Normans feared and Charles despised. Soon after Rollo was persuaded to embrace Christianity, and was baptised by the archbishop of Rouen in the cathedral. See NOR-MANDY.

ROLLOCK (Robert), the first principal of the college of Edinburgh, was the son of David Rollock of Powis, near Stirling. He was born in 1555. He was sent to St. Andrews, and admitted a student in St. Salvator's College. His progress in the sciences was so rapid that he had no sooner taken his degree of M. A. than he was chosen a professor of philosophy, and read lectures in St. Salvator's College. The magistrates of Edinburgh, on the erection of the university in that city, in 1582,

made choice of Mr. Rollock to be principal and professor of divinity. In 1593 principal Rollock and others were appointed, by the states of parliament, to confer with the popish lords. In 1595 he was nominated one of the commissioners for the visitation of colleges; to enquire into the doctrine and life of the masters, the discipline used by them, the state of their rents, &c., and to report to the next assembly. In 1597 he was chosen moderator of the general assembly ••• the highest dignity in the Scottish church : and he had the influence to get some great abuses redressed. Being one of fourteen ministers appointed to take care of the affairs of the church, he procured an act of the legislature, restoring to the prelates their seats in parliament. He had to reconcile to this measure, not only such ministers as abhorred all kinds of subordination in the church, but likewise many of the lay lords, who were not fond of such associates in parliament. He died in Edinburgh on the 28th of February, 1598, aged forty-three. His works are, 1. A Commentary on the first Book of Beza's Questions. 2. Another on the Epistle to the Ephesians, 4to., Edinburgh, 1598.

3. A third on Daniel, 4to.,_ Edinburgh, 1591.

4. Analysis of St. Paul's Epistle to the Romans, 8vo., Edinburgh, 1594. 5. Questions and Answers concerning the Covenant of Grace and the Sacraments, 8vo., Edinburgh, 1599. 6. A Treatis on Effectual Calling, 8vo., Edinburgh, 1597. 7. A Commentary on the Epistles to the Thessa-lonians and Philemon, 8vo., Geneva, 1597. 8. A Commentary on fifteen select Psalms, 8vo., Geneva, 1598. 9. A Commentary on the Gos-

pel of St. John, with a Harmony of the Fo—' Evangelists upon the Death, Resurrection, an* Ascension of Jesus Christ, &c., Geneva, 1590 10. Sermons on Several Places of St. Paul's Epistles, 8vo., Edinburgh, 1598. 11. A Commentary on the Epistle to the Colossians, 8vo., Geneva, 1602. 12. Analysis of the Epistle to the Hebrews, 8vo., Edinburgh, 1605. 13. Analysis of the Epistle to the Galatians, 8vo., Lon-don, 1602. 14. A Commentary upon the First Two Chapters of the First Epistle of Peter, 8vo., London 1603. 15 and 16. A Treatise on Justification, and another on Excommunication, both in 8vo., London, 1604. All these works, except the sermons, are in Latin.

ROLLRICH, or ROLLRICH STONES, an ancient monument in Oxfordshire, in the parish of Chipping Norton, near Long Compton, suu-posed to be the remains of a British temple.

ROLPAH, a town of Hindostan, capital of a district of the same name, in the province of Nepaul. Little more is known about it than that it is situated in the mountains, in a woody country, and governed by a chief who pays an annual tribute to the Nepaul rajah. Long. 82►► 5' E.. lat 29►► 22' N.

ROM'AGE, n. s. Fr. ramage, or Goth, ro-mo ; Swed. rom. A tumult; a bustle; a tumultuous search; clamor. Commonly written RUMMAGE, which see.

This is the main motive Of this post haste, and romage in the land.

Shakspeare.

ROMAGNA, the former name of a province of the states of the church, bounded by the Adriatic, the duchy of Urbino, Bologna, and the Ferrarese. It is about forty-five miles in length and thirty in breadth, and fertile in corn, wine, olives, and silk. Its pastures are also good in certain parts, and in others there are minerals. The capital is Ravenna.

ROMAINE (Rev. William), a popular English divine, born at Hartlepool, in Durham, in 1714; and educated first at Hertford College, Oxford, and afterwards at Christ-church, where he made himself master of the Hebrew, and be-came a zealous Hutch insonian. He was ordained in 1737, and in 1738 attacked bishop Warburton's Divine Legation of Moses. In 1738 he preached a sermon before the university against the bishop's doctrine. In 1739 he was chosen lecturer of St. Dunstan's West, and in 1740 preached at St. George's. He was now become so popular that the churches were crowded. He was next appointed professor of astronomy at Gresham College, but soon resigned it. In 1764 he was elected rector of St Andrew's, and St. Anne's, Blackfriars. He died in 1765, with the character of a powerful preacher. His works, consisting of sermons and practical tracts, were published in 8 vols. 8vo, 1766. He also published Calasio's Hebrew Concordance, in 4 vuls. folio, 1743.

ROMAN CATHOLICISM. By the church of Rome, as distinguished from Christian churches of other denominations and communions, is meant that great body of professed Christians who, united to the bishop and see of Rome, ‘ground their faith upon the authority of the cnurch, as on a rule of faith, sure and unerring.’ Poperv, Papal superstition, Papists, and Romanists, are among the various appellations that have been given, in different ages, to the system of this society and its members, who commonly view them as terms of reproach. Catholics, or Roman Catholic Christians, is the only name by which they designate themselves; but the members of other communions cannot recognise their claim to the first of these ; and Roman Catholics is now that by which they are designated among us, in law and parliament. We therefore adopt it as at once fair to other parties and to themselves inoffensive.

PART I.

HISTORY OF THE CHURCH OF ROME. That the church of Rome is, in regard to her de’scent,apostolical,andwas, forsome centuries, a pure as well as a true church, Protestants readily ad-mit; but that she was either the mother or mistress of all churches, or that she was, at any time, the only true church, they deny. In the following historical view of the Roman Catholic church we shall consider it in its three different states, as it subsisted and still subsists, from the period of Constantine’s conversion down to the present .‘ime. The first, which may be characterised as the period of its rise, reaches from the establishment of the Christian religion under Constantine down to the establishment of the papal power, in 606, when pope Boniface III. assumed the title of Universal Bishop ; or, 756, when Pepin, king of France, invested pope Sfephen II. with the temporal dominion of Rome and the neighbouring territories, upon the ceasing of the exarchate of Ravenna. The second period embraces the interval from the close of the first down to the Reformation. During this time Rome maintained a supremacy and dominion over the minds and consciences of men, to which all Europe submitted with implicit obedience. The establishment and long uninterrupted continuance of this power may justly be considered as among the most extraordinary circumstances in the history of mankind. The third period refers to the decline of this tremendous power, which was first ###weakened by the Reformation, and has since been gradually yielding to the influence of the Reformed doctrines and the general diffusion of knowledge among the nations of the earth.

I. Rise of the papal power.### The progress of Christianity, during the lifetime of its divine founder, was confined within narrow bounds.

The Holy Land was alone the scene of his labors and of his life and death ; no sooner, however, had he ascended to his throne, than, in the plenitude of his divine power and grace, he sent bis Holy

Spirit to qualify the apostles to be the heralds of his glorious gospel to the world. In the execution of their mission they encountered various difficulties ; exposed to poverty, humiliation, persecution, they always realized the prediction of their master that they were sent ‘ as sheep among wolves.’ The hand of power, however, could not crush them, nor the fear of death arrest their zeal ; in due time the once infant church had daily added to its members, character, rank, wealth, and influence ; so much so as to excite the apprehensions both of the existing priesthood and magistrates ; who endeavoured to overwhelm the rising cause by most cruel persecutions ××× renewed at intervals, with more or less severity, du-ring the reigns of all the Pagan emperors. It was found in vain, however, for their enemies to kindle and rekindle the flames of persecution ; like the children of Israel, in the days of Pharaoh, ‘ the more they afflicted them the more they multiplied and grew,’ until they diffused themselves through all ranks of society, and acquired such an influence, even in matters of state and government, as materially to assist or depress the various competitors for the Roman empire. The extraordinary occurrences of ihe life of Constantine produced an entire change in the whole of ihe Christian profession. Its friends were now no longer called to endure patiently the hatred of the world, to take up their cross and press after a conformity to Christ in his sufferings, and through much tribulation to enter his kingdom : so long as the Christians were persecuted by the heathen, on account of their faith and practices, they were driven to the gospel as their only source of consolation and support; but such is the depravity of human nature, that, when they long enjoyed an interval from persecution, they became worldly and even profligate in their morals and litigious in their tempers. But now that the restraint was wholly taken off by Con-stantiue, churches endowed, and riches and ho-nors liberally conferred on the clergy ; when he authorised them to sit as judges upon the consciences and faith of others, he confirmed them in the spirit of this world, ××× the spirit of pride, avarice, dominion, and ambition ; the indulgence of which has, in all ages, proved fatal to the pu-rity and happiness of the professed followers of Christ. Now they began to new model the Christian church, the government of which was as far as possible arranged conformably to the government of the state. The emperor himself assumed the title of bishop, and claimed the power of regulating its external affairs ; and he and his successors convened councils in which

they presided, and determined all matters of discipline. The bishops corresponded to those magistrates whose jurisdiction was confined to single cities; the metropolitans to the proconsuls or presidents of provinces ; the primates to the emperor's vicars, each of whom governed one of the imperial provinces. This constitution of things was an entire departure trom the order of we - ship established, under divine direction by thf>

apostles of Christ in the primitive churches. In fact, scarcely any two things could be more dissimilar than was the simplicity of the gospel dispensation and the hierarchy established under Constantine the Great.

It cannot be a subject of surprise, therefore that when Christianity had thus been corrupted, the bishop of Rome began to be distinguished by a preeminence over the prelates. During the first two centuries, says Mosheim, the pre-emi- nence of the bishop of Rome was a preeminence of order and association, and not of power and authority ; now, however, a great variety of causes contributed to establish this superiority; but chiefly that grandeur and opulence by which too many professors of Christianity form ideas of preeminence and dignity, and which they generally confound with the reasors of a just and legal authority. The bishop of jtome surpassed all his brethren in the magnificence and splendor of the church over which he presided ; in the riches of his revenues and possessions ; in the number and variety of his ministers ; in his credit with the people ; and in his sumptuous and splendid manner of living.

In the year 366 Liberius, bishop of Rome, died, and a violent contest arose respecting his successor. The city was divided into two factions, one of which elected Damasus to that high dignity, while the other chose Ursicinus, a deacon of the church. The party of Damasus prevailed, and got him ordained. Ursicinus, enraged that Damasus was preferred before him, set up separate meetings, and, at length, he also obtained ordination from certain obscure bishops. This occasioned great disputes among the citizens, which gave rise to a dangerous

schism, and to a sort of civil war within the city of Rome, which was carried on with the utmost barbarity and fury, and produced the most cruel massacres and desolations. This inhuman contest ended in the victory of Damasus ; but whether his cause was more just than that of Ursicinus is a question not so easily to be determined ; neither of the two, indeed, seems to have been possessed of such principles as constitute a good Christian, much less of that exemplary virtue that should distinguish a Christian bishop. And this state of things continued to increase in progressive enormity, until it ultimately brought forth that system of spiritual tyranny which so long enslaved the greatest part of the civilised world. Notwithstanding, however, the pomp and splendor that surrounded the Roman see, it is certain that the bishops of that city had not acquired, in this century, that preeminence of power and jurisdiction in the church which they afterwards enjoyed. In the ecclesiastical commonwealth they were, indeed, the most eminent order of citizens; but still they were citizens as well as their brethren, and subject, like them, to the edicts and laws of the emperors. All religious causes of extraordinary importance were examined and determined either by judges appointed by the emperors or in councils assembled for that purpose ; while those of inferior moment were decided in each district by its respective bishop. The ecclesiastical laws were enacted either by the emperor or by councils. None of the bishops acknowledged that they derived their authority from tbe permission and appointment of the bishop of Rome, or that they were created bishops by the favor of the apostolic see ; on the contrary, they all maintained that they were the ambassadors and ministers of Je-sus Christ, and that their authority was derived from above. Several of those steps, however, by which the bishops of Rome mounted afterwards to the summit of ecclesiastical power and despotism, were laid at this period, partly by the imprudence of the emperors, partly by the craftiness of the Roman prelates themselves, and partly by the inconsiderate zeal and precipitate judgment of certain bishops. Constantine having transferred the seat of government from Rome to Byzantium, and having there built a city, called, after himself, Constantinople, employed all his efforts to augment the beauty and magnificence of the new metropolis of the world, and raised up the bishop of this new metropolis as a formidable rival to the Roman pontiff, and a bulwark which menaced a vigorous opposition to his growing authority.

It is worthy of remark that the progress of papal power and papal superstition have ever kept pace. The rites and institutions by which the Greeks, Romans, and other nations, had formerly testified their religious veneration for fictitious deities were now adopted, with some

slight alterations, by Christian bishops, and professedly employed in the service of the true God. Gorgeous robes, mitres, tiaras, wax tapers, crosiers, processions, lustrations, images, gold and silver vases, and many such circumstances of pageantry, were equally to be seen in the heathen temples and in the Christian churches. No sooner had Constantine the Great abolished the superstition of his ancestors, than magnificent churches were every where erected for the Christians, which were richly adorned with pictures and images, and bore a striking resemblance to the pagan temples, both in their outward and inward form. One of the earliest corruptions of the church grew out of the reverence which now began to be paid to the memory of departed saints. Hence there arose a train of error and fraud which ended in the grossest creature worship. But it is the condition of humanity that the best things are those which seem most easy to be abused. The prayer which was preferred with increased fervency at a martyr's grave was at length addressed to the martyr himself: virtue was imputed to the remains of his body, the rags of his apparel, even to the instrument of his sufferings ; relics were required as an essential part of the church furniture ; it was decreed that no church should be erected unless some treasures of this kind were deposited within the altar, and so secured there that they could not be taken out without destroying it. It was made a part of the service to pray through the merits of the saints whose relics were there deposited, and the priest when he came to this passage was enjoined to kiss the altar. Thus an enormous train of different superstitions were gradually substituted in the place of true religion and genuine piety.

Perhaps, however, this odious revolution was owing to a variety of causes. A ridiculous precipitation in receiving new opinions, a preposter

our desire of imitating the pagan rites, and of blending them with the Christian worship, and that idle propensity which the generality of mankind have towards a gaudy and ostentatious religion, all contributed to establish the reign of superstition upon the ruins of

Christianity. Accordingly, frequent pilgrimages were undertaken to Palestine as well as to the tombs of the martyrs, as if there alone the sacred principles of virtue and the certain hopes of salvation were to be acquired. The reins being once let loose to superstition, absurd notions and idle ceremonies multiplied every day. Quantities of dust and earth brought from Palestine, and other places remarkable for their supposed sanctity, were handed about as the most powerful remedies against the violence of wicked spirits, and were sold and bought every where at enormous prices. The public processions and supplications by which the pagans endeavoured to appease their gods were now adopted into the Christian worship, and celebrated with great pomp and magnificence in several places. The virtues that had formerly been ascribed to the heathen temples, to their lustrations, and to the statues of their gods and heroes, were now attributed to Christian churches, to water consecrated by certain forms of prayer, and to images of holy men. And the same privileges that the former enjoyed, under the darkness of paganism, were conferred upon the latter under the light of the gospel, or rather under that cloud of superstition that was obscur-ing its glory. It is true that, as yet, images were not very common ; nor were there any statues at all. But it is, at the same time, as undoubtedly certain, as it is extravagant and monstrous, that the worship of the martyrs was modelled by degrees, according to the religious services that were paid to the gods before the coming of Christ. Rumors were artfully spread abroad of prodigies and miracles to be seen in certain places (a trick often practised by the heathen priests), and the design of the reports was to draw the populace in multitudes to these places, and to impose on their credulity. Nor was this all ; certain tombs were falsely given out for the sepulchres of saints and confessors ; the list of the saints was augmented with fictitious names, and even robbers were converted into martyrs. Some buried the bones of dead men in certain retired places, and then affirmed that they were divinely admonished by a dream that the body of some friend of God lay there. Many, especially of the monks, travelled througli the different provinces, and not only sold, with the most front-less impudence, their fictitious relics, but also deceived the eyes of the multitude with evil spirits or genii.

A whole volume would be requisite to contain an enumeration of the various frauds which art-ful knaves practised with success to delude the icnorant, when true religion was almost entirely superseded by horrid superstition. It would also be almost endless to enter into a minute de-tail of all the different parts of public worship, and to point out the changes to which they were subject. The public prayers had lost much of that solemn and majestic simplicity that characterised

thcT. in the primitive times, and which

now began to degenerate into a vain and swelling bombast. The sermons, or public discourses addressed to the people, were composed according to the rules of human eloquence, and rather adapted to excite the stupid admiration of the populace who delight in vain embellishments, than to enlighten the understanding or to reform the heart. It would even seem as if all possible means had been industriously used, to give an air of folly and extravagance to the Christian assemblies ; for the people were permitted, and even exhorted by the preacher himself, to crown his talents with clapping of hands and loud acclamations of applause, a recompense which was hitherto peculiar to the actors on the theatre and the orators in the forum.

A variety of circumstances at this time c >ncurred to augment the power and authority of the Roman pontiff, though he had not yet assumed the dignity of supreme lawgiver and judge of the whole Christian church. Among all the prelates who ruled the church of Rome, during this century, there was not one who ass rtec; the authority and pretensions of the Roman pontiff with such vigor and success as Leo, surnamed the Great. He commenced his pontificate with the most zealous exertions. In the year 445 he quarrelled with Hilary, bishop of Aries, for opposing the power of the papal see, and obtained an edict from the emperor Valentinian, which put an end to the ancient liberties of the Gallican churches, and enforced those appeals to Rome which gradually subjected all the western churches to the jurisdiction of the pretended successors of St. Peter. During the pontificate of Leo, the fourth general council was held at Chalcedon in the year 451, in which the famous canon was enacted, which rendered the see of Constantinople equal to the see of Rome in all respects, except precedency. This canon was evidently intended to check the growing power, and to oppose the daily encroach-ments of the bishop of Rome. Leo opposed with vehemence the passing of these decrees, and his opposition was seconded by that of many other prelates. But their efforts were vain, as the emperors threw in their weight into the balance, and thus supported the decisions of the Grecian bishops. Neither Leo nor his immediate successors were, therefore, able to overcome all the obstacles that were laid in their way, or the various checks which were given to their ambition. Many examples might be alleged ii* proof of this assertion, particularly the case ot the Africans, whom no threats or promises could engage to submit the decision of their controversies, and the determination of their causes, to the

Roman tribunal.

From this time till the close of the sixth century the history of the Roman church presents nothing worthy of notice but the increasing wickedness and superstition of its members, especially of the clergy, whose vices were now carried to the most enormous lengths ; the writers of this century, whose probity and virtue render them worthy of credit, are unanimous in their accounts of the luxury, arrogance, avarice, and voluptuousness of the sacerdotal orders. If, before these times, the lustre of religion was clouded with superstition, and its divine prt-

cepts adulterated with a mixture of human inventions, this evil, instead of diminishing, increased daily. The happy souls of departed Christians were invoked by numbers, and their aid implored by assiduous and fervent prayers ; while none stood up to censure or oppose so preposterous a worship. The question, how the prayers of mortals ascended to the celestial spirits (a question which afterwards produced much wrangling, and many idle fancies) did not as yet occasion any difficulty ; for the Christians of this century did not imagine that the souls of the saints were so entirely confined to the celestial mansions, as to be deprived of the privilege of visiting mortals, and travelling when they pleased, through various countries. They were further of opinion that the places most frequented by departed spirits were those where the bodies they had formerly animated were interred ; and this opinion, which the Christians borrowed from the Greeks and Romans, rendered the sepulchres of the saints the general rendezvous of suppliant multitudes. The images of those who, during their lives, had acquired the reputation of uncommon sanctity, were now honored with a particular worship in several places. A singular and irresistible efficacy was also attributed to the bones of martyrs, and to the figure of the cross, in defeating the attempts of Satan, removing all sorts of calamities, and in healing, not only the diseases of the body, but also those of the mind. We shall not enter here into a particular account of the public supplications, the

holy pilgrimages, the superstitious services paid to departed souls, the multiplication of temples, altars, penitential garments, and a multitude of other circumstances that snowed the decline of genuine piety, and the corrupt darkness that was eclipsing the lustre of primitive Christianity. Divine worship was now daily rising from one degree of pomp to another, and degenerating more and more into a gaudy spectacle ; only pro-per to attract the stupid admiration of a gazing populace. The sacerdotal garments were embellished with a variety of ornaments, with a view to excite in the minds of the multitude a greater veneration for the sacred order. A new method also of proceeding with penitents was now introduced into the Latin church. Grievous offenders, who had formerly been obliged to confess their guilt in the face of the congregation, were now delivered from this mortifying penalty, and obtained from Leo the Great a permission to confess their crimes privately, to a priest appointed for that purpose. The external form of church government continued without any remarkable alteration during the course of this century. But the bishops of Rome and Constantinople, who were considered as the most eminent and principal rulers of the Christian church, were engaged in perpetual disputes about the extent and limits of their respective jurisdictions, and seemed both to aspire at the supreme authority in ecclesiastical matters.

In the year 588 John, bishop of Constantinople, surnamed the Faster, on account of his extraordinary abstinence and austerity, assembled, liy his own authority, a council at Constantino-i'!o, to enquire into an arrnsation brought against

Peter, patriarch of Antioch ; and upon this oft. casion assumed the title of oecumenical, or universal bishop. Now, although this title had been formerly enjoyed by the bishops of Constantinople, and was also susceptible of an interpretation that might have prevented its givinw umbrage or offence to any, yet Pelagius, the then bishop of Rome, suspected, both from the time and the occasion of John's renewing his claim to it, that he was aiming at a supremacy over all the Christian churches ; and, therefore, he opposed his claim in the most vigorous manner in letters to that purpose, addressed to the emperor, and to such persons as he judged proper to second his opposition.

To Pelagius succeeded Gregory the Great, under whose administrations missionaries were sent from Rome to Britain; of this event the following account is given : ••• Being one day led into the market-place of Rome with a great concourse of persons, to look at

a large importation of foreign merchandise, which had just arrived, among other articles, there were some boys exposed for sale like cattle. There was nothing remarkable in this, for it was the custom every where in that age, and had been so from time immemorial ; but he was struck with the appearance of the boys; their fine clear skins, the beauty of their flaxen or golden 'hair, and their ingenuous countenances ; so that he asked from what country they came ; and when he was told from the island of Britain, where the inhabitants in general were of that complexion and comeliness, he enquired if the people were Christians, and sighed for compassion at hearing that they were in a state of pagan darkness. Upon asking further to what particular nation they belonged of the many among whom that island was divided, and being told that they were An-gles, he played upon the word with a compas-sionate and pious feeliner, saying, ' well may they be so called, for they are like angels, and ought to be made coheritors with the angels in heaven.' Then demanding from what province they were brought, the answer was, ' from Deira,' and in the same humor he observed, that rightly might this also be said, for de Dei ira, from the wrath of God they were to be delivered. And when he was told that their king was named ./Ella, he replied, that Hallelujah ought to be sung in his dominions. This trifling sprung from serious thought, and ended in serious endeavours. From this day the conversion of the Anglo-Saxons be-came a favorite object with Gregory ; and, when he was elected to the papacy, he took the first opportunity of beginning the good work on which he was intent. The letter written by Gregory to the emperor Maurice at Constantinople, in consequence of John, the patriarch of that city, assuming the title of universal bishop, casts so much light upon the history of that age that we shall give our readers an extract : ••• ' Every man that has read the Qospel knows that, even by the words of our Lord, the care of the whole church is committed to St. Peter the apostle, the prince of all the apostles ; and yet he is not called universal apostle, though this holy man, John, my fellow priest, labors to be called universal bishop '. I am compelled to cry out, O

the corruption of times and manners ! Behold the barbarians are become lords of al! Europe ; cities are destroyed ; castles are beaten down ; provinces are depopulated ; there is no husbandman to till the ground. Idolaters rage and domineer over Christians ; and yet priests, who ought to lie weeping upon the pavement, in sackcloth and ashes, covet names of vanity, and glory in new and profane titles. But, far from Christians be this blasphemous name, by which all honor is taken from all other priests, while it is foolishly arrogated by one.' Gregory, with all his flattery, was unable to prevail upon the emperor Maurice to second his views ; and the former, as might be expected, became not a little dissatisfied with his most religious lord. Soon after this the emperor was dethroned by one of his centurions, who first murdered him, and then usurped the crown. This wretch, whose name was Phocas, was one of the vilest of the human race, a monster, stained with those vices that serve most to blackep human nature : other tyrants had been cruel from policy ; ??? the cruelties of Phocas are not to bje accounted for, but on the hypothesis of the most diabolical and disinterested malice. He caused five of the children of the emperor Maurice to be massacred before the eyes of the unhappy father, whom he reserved to the last, that he might be a spectator of the destruction of his children be-fore his own death.

The empress Constantine and her three daughters had taken refuge in one of the churches of the city under sanction of the patriarch of Constantinople, who defended them for a time with great spirit and resolution, not permitting them to be dragged by force from their asylum. The consequence was, that they instantly became the helpless victims of his fury, and suffered on the same spot on svhich the late emperor and his five sons had been recently murdered. What should we expect would be the reception which the accounts of all this series of horrid cruelty would meet with at Rome, from a man so renowned for piety, equity, and mildness of disposition as pope Gregory was ? If we look into his letters of congratulation, we find them stuffed with the vilest and most venal flattery; insomuch that, were we to learn the character of Phocas only from this pontiffs letters, we should certainly conclude him to have been rather an angel than a man. ' As a subject and a Christian,' says Gibbon, ' it was the duty of Gregory to acquiesce in the established government ; but the joyful applause with which he salutes the fortune of the assassin, has sullied, with indelible disgrace, the character of the saint. His object in this abject behaviour was, tha* he might, by means of the influence of the emperor, defeat the attempt of the patriarch to assume the title of universal bishop. This he plainly told to Leontia, the new empress, representing to her what blessings she might expect from St. Peter in heaven, provided they

obliged the patriarch to relinquish the title, which the pope considered derogatory to the honor, dignity, and interests of his see. In this object he succeeded ; for Phocas enacted a law by which he prohibited the bishop of Constantinople from

styling himself oecumenical, or general patriarch, declaring that this title belonged to none but the bishop of ancient Rome. Although Gregory did not himself assume the appellation of universal bishop, which, after anathematizing in his letter to the emperor, would have been too gross a violation of all decency to have been borne even in this age, yet his successor, Boniface III., did not hesitate to assume this very title; and the grant of this to Boniface's dignity by the emperor Phocas might be said to establish the ecclesiastical power of the papal see. The succeeding pontiffs used all sorts of methods to maintain and enlarge the authority and preeminence which they had acquired by a grant from the most odious tyrant that ever disgraced the annals of history. We find, however, in the most authentic accounts of the transactions of this century, that not only several emperorˆ and princes, but also whole nations, opposed the ambitious views of the bishops of Rome. Besides all this, multitudes of private persons expressed publicly, and without the least hesitation, their abhorrence of the vices, and particularly of the lordly ambition, of the Roman pontiffs : and it is highly probable, that the Valdenses or Vaudois had already in this century retired into the valleys of Piedmont, that they might be more at liberty to oppose the tyranny of those imperious prelates.

Little of particular notice occurs during the seventh and eighth centuries ; we may, however, cursorily observe that infallibility was first claimed by pope Agatho, in 678. In 710 the emperor Justinian, having met the pope at Nicomedia, gave to the world the first example of kissing the pontiff's foot. This act of great personal veneration became the precedent for the continued ceremony. That corruption of manners which dishonored the clergy in the former centuries, instead of diminishing in this, discovered itself under the most odious characters. The endowments of the churches and monasteries, and the revenues of the bishops, were hitherto considerable; but in this century a new and ingenious method was found out of acquiring much greater riches to the church, and of increasing its wealth through succeeding ages. An opinion prevailed universally at this time, though its authors are not known, that the punishment which the righteous Judge of the world has reserved for the transgressions of the wicked, was to be prevented and annulled, by liberal donations to God, to the

saints, to the churches, and to the clergy. In consequence of this notion the great and opulent, who were generally speaking the most remarkable for their flagitious and abominable lives, offered, out of the abundance which they had received by inheritance or acquired by rapine, rich donations to departed saints, their ministers upon earth, and the keepers of the temples that were erected in their honor, in order to avoid the sufferings and penalties annexed by the priests to transgression in this life, and to escape the misery denounced against the wicked in a future state. This new and commodious method of making atonement for iniquity was the principal source of those immense treasures which from this period began

to ilow in upon the clergy, the churches, and monasteries, and continued to enrich them through succeeding ages down to the present time. Emperors, kings, and princes, signalised their superstitious veneration for the clergy, by investing bishops, churches, and monasteries, in the possession of whole provinces, cities, castles, and fortresses, with ah the rights of sovereignty that were annexed to them under the dominion of their former masters. Hence it came to pass that they who by their holy profession were appointed to proclaim to the world the vanity of human grandeur, and to inspire into the minds of men, by their example, a noble contempt of .‘ublunary things, became themselves scandalous spectacles of worldly pomp, ambition, and splendor ; were created dukes, counts, and marquises ; judges, legislators, and sovereigns ; and not only gave laws to nations, but also upon many occasions gave battle to their enemies at the head of numerous armies of their own raising.

The Roman pontiff now acted in all respects like a temporal prince, of whose enormous power history records this shocking and remarkable instance : ??? Charles Martel was succeeded in his office of mayor of the palace to Chijderic III. by his son Pepin. In the exercise of that high office, he was possessed in reality of the royal power and authority ; but, not content with this, he aspired to the titles and honors of majesty, and formed the design of dethroning his sovereign.

For this purpose the states of the realm were assembled by Pepin, A. D. 751; and, though they were devoted to the interests of this ambitious usurper, they gave it as their opinion that the bishop of Rome was previously to be consulted, whether the execution of such a project was lawful or not. In consequence of this, ambassadors were sent by Pepin to Zachary, the reigning pontiff, with the following question : ‘‘‘ ‘ Whether the divine law did not permit a valiant and warlike people to dethrone a pusillanimous and indolent monarch, who was incapable of discharging any of the functions of royalty, and to substitute in his place one more worthy to rule, and who had already rendered most important services to the state ?’ The situation of Zachary, who stood much in need of the aid of Pepin against the Greeks and Lombards, rendered his answer such as the usurper desired ; who in return conferred on Zachary the domains of Ravenna, which could not have been secured from the degraded Childeric. Thus by his spiritual authority the pope deposed a sovereign who had committed no crime ; receiving from the usurper, in return, the lemporal jurisdiction. When this favorable decision of the Roman oracle was published in France, the unhappy Childeric was stripped of royalty without the least opposition; and Pepin, without the smallest resistance from any quarter, stepped into the throne of his master and his sovereign. This decision was solemnly confirmed by Stephen II., the successor of Zachary, who undertook a journey into France in the ‘year 754 in order to solicit assistance against the Lombards ; and who at the same time dissolved the obligation of the oath of fidelity and allegiance which Pepin had sworn to Childeric, and

violated by his usurpation in the year 751 ; and, to render his title to the crown as sacred as possible, Stephen anointed and crowned him, with his wife and two sons, and, by the authority of St. Peter, forbade the French lords, on pain of excommunication, to choose a king of another race. Thus did these two ambitious men support one another in their schemes of rapacity and injustice. The criminality of the pope was indeed greatly aggravated by the pretence of religion. ‘ It is you,’ said he, addressing Pepin, ‘ whom God hath chosen from all eternity ; for whom he did predestinate, them he also called, and whom he called them he also justified.’ This compliance of the Roman pontiffs proved an abundant source of opulence and credit to the church. When Aistulphus meditated the conquest of Rome and its territory, and formed the ambitious project of reducing all Italy under the yoke of the Lombards, the terrified pontiff, Stephen II., addressed himself to his powerful patron and protector Pepin, represented to him his deplorable condition, and implored his assistance. The French

monarch embarked with zeal in the cause of the suppliant pontiff, crossed the Alps A. D. 754 with a numerous army and, having twice defeated Aistulphus, obliged him by a solemn treaty to deliver up to the see of Rome the exarchate of Ravenna, Pentapolis, and all the cities, castles, and territories, which he had seized ‘ in the Roman dukedom Pepir. then caused an instrument to be drawn up, signed by himself and his sons, by which he ceded for ever to the holy see all the places thus yielded up by the Lombard king, including the exarchate, which he had taken from the emperor of Constantinople. He afterwards caused the instruments of donation, with the keys of all the cities, to be laid on the tomb of St. Peter in Rome. Stephen thus became proprietor of the exarchate and its dependencies ; and, by adding rapacity to his rebellion, was established as a temporal monarch. Thus was the sceptre added to the keys, the sovereignty to the priesthood ; and thus were the popes enriched with the spoils of the Lombard kings, and of the Roman emperors. The question concerning images, which had long agitated both the eastern and western churches, was, at this time, far from being put to rest either at Rome or Constantinople, but still gave occasion to the assembling of council af er council, one council annulling what the other had decreed. During the reign of the emperor Constantine Copronymus (who employed all his influence in abolishing and extirpating the worship of images) a synod was held at Constantinople, A. D. 754, to determine the controversy. The fathers being met to the num-ber of 330, after considering the doctrine of scripture and the opinions of the fathers, decreed that every image, of whatsoever materials, made and formed by the artist, should be cast out of the Christian church as a strange and abominable thing; notwithstanding Paul I., who was at that time pope of Rome, sent a legate to Constantinople, to admonish the emperor to restore thp sacred images and statues to the churches, threatening him with excommunication in case of refusal. But Copronymus treated his message with the contempt it deserved

II. The Papal power in full exercise. ••• On the decease of Paul I , A. D. 768, the papal chair was filled for a year by Constantine, who

condemned the worship of images, and was, therefore, tumultuously deposed, and Stephen IV. substituted in his room, who was a furious defender of them. He immediately assembled a council in the Lateran church, where the renowned fathers abrogated all Constantino's decrees, deposed all the bishops that had been ordained by him, annulled all his baptisms and chrisms, and, as some historians relate, after having beaten and used him with great indignity, made a fire in the church and burnt him to death. After this they annulled all the decrees of the synod of Constantinople, ordered the restoration of statues and images, and anathematised that execrable and pernicious synod, giving this curious reason for the use of the images : that if it was lawful for emperors, and those who had deserved well of their country, to have their images erected, but not lawful to set up those of God, the condition of the immortal God would be worse than that of man. Thus the reign of superstition strengthened and enlarged itself until the time of Irene, the empress of Constantinople and her son Constantine, about the close of this century. Irene was the wife of Leo IV., who, in 775, after the death of Constantine, was declared emperor. Having strenuously exerted himself for the extirpation of idolatry out of the Christian church, he was poisoned by his perfidious wife, who was a zealous supporter of image worship. Under Irene's influence and authority was convened what is termed the seventh general council, held at Nice, the number of bishops present being about 350. They pronounced anathemas upon all who should not receive images, or who should apply what the Scriptures say against idols to the holy images, or who should call them idols, or who should wilfully communicate with those who rejected and despised them ; adding, according to custom, ' Long live Constantine, and Irene his mother,' and anathematising all heretics, and the council that roared against venerable images. ' The holy trinity/ it said, ' hath deposed them.' Irene and Constantine approved and ratified these decrees, the result of which was, that idols and images were erected in all the churches, and those who opposed them were treated with great severity.

On the death of Pepin, king of France, in the year 768, his dominions were divided between his two sons, Charles and Carloman, the latter of whom dying two years afterwards, Charles became sole monarch of that country. In his general character he somewhat resembled our English Alfred, and is deservedly ranked amongst the most illustrious sovereigns that have appeared ††† a rare instance of a monarch who united his own glory with the happiness of his people.

In private life he was amiable; an affectionate father, a fond husband, and a generous friend. Though engaged in many wars, he was far from

neglecting the arts of peace, the welfare of his subjects, or the cultivation of his own mind. But, with all these amiable traits in

the character of Charlemagne, a superstition! attachment to the see of Rome unhappily mingled itself, and led him to engage in theological disputes and quibbles unworthy of his character. He distinguished himself in the controversy concerning the worship of images, and sought to withdraw Adrian from an approval of the decrees of the second Nicene council. With this A-iew he, in the year 794, assembled at Frankfort on the Main a council of 300 bishops, in order to reexamine this important question, by which the worship of images was unanimously condemned. At this period a new at-tack was made upon the patrimony of St. Peter. Adrian, who had succeeded Stephen in the papal chair, maintained a steady attachment to Charlemagne, which provoked Dideric, king of the Lombards, to invade the state of Ravenna, and to threaten Rome itself. Charlemagne recompensed his attachment, by marching with a large army to his succor; and having gained many considerable advantages over Dideric, and recovered the cities which he had taken, he visited the pope at Rome, confirming the grants made by his father Pepin, to which he added new donations, and formed a perpetual league of friendship between the growing power of France and the established supremacy of the western church. On this occasion he expressed his piety, by the humiliating ceremony of kissing each of the steps as he ascended to the church of St. Peter. By thus consulting the favor of the Roman pontiffs, clergy, and consequently that of the people, Charlemagne opened for himself a passage to the empire of the west and to the supreme dominion over the city of Rome and its territory, upon which the western empire seemed to depend.

In the year 796 Leo III., who had succeeded Adrian in the papacy, transmitted to Charles the Roman standard, requesting him to send some person to receive the oath of fidelity from the Romans, an instance of submission with which that monarch was highly flattered. Accordingly, in the year 800, we find Charles at Rome, where he passed six days in private conferences with the pope. On Christmas day, as the king assisted at mass in St. Peter's church in the midst of the ecclesiastical ceremonies, and upon his knees before the altar, the pope advanced, and put an imperial crown upon his head. As soon as the people perceived it, they exclaimed, * Long life and victory to Charles Augustus, crowned by the hand of God,' ' Long live the great and pious emperor of the Romans.' The supreme pontiff then conducted him to a magnificent throne, which had been prepared for

the occasion, and, as soon as he was seated, paid him those honors which his predecessors had been accustomed to pay to the Roman emperors. Leo now presented him with the imperial man-tle, on being invested with which, Charles returned to his palace amidst the acclamations of the multitude. Succeeding generations, grateful for the services which Charlemagne had rendered to Christianity, canonized his memory and turned this bloody warrior into an eminent saint. In the twelfth century Frederick I., emperor of the Romans, ordered Paschal II., whom he had

raised to the pontificate, to enrol the name of this mighty conqueror among the tutelary saints of the church. Indeed Charlemagne merited '.his honor ; for to have enriched the clergy with large and magnificent donations, and to have extended the boundaries of the church, no mat- ,ter by what methods, was then considered as the highest merit, and as a sufficient pretension to the honor of saintship. But, in the esteem of those who judge of the nature and character of sanctity by the decisions of the gospel, the sainted emperor will appear utterly unworthy of that object. The favors that were conferred by the pontiff on the French monarch imperiously called for an adequate return ; and it is due to Charlemagne to say that he was by no means deficient in gratitude. The Greek emperor had abdicated or forfeited his right to the exarchate of Ravenna, and the sword of Pepin, the father of Charles, had no sooner wrested it from the grasp of Aistulphus, than he conferred it on the Horn an pontiff, as a recompense ' for the remission of his sins, and the salvation of his soul.' The splendid donation was granted in supreme and absolute dominion, and the world beheld a Christian bishop invested with the prerogatives of a temporal prince ; ??? the choice of magistrates, and the exercise of justice, the imposition of taxes, and the wealth of the palace of Ravenna. ' Perhaps,' says Gibbon, ' the humility of a Christian priest should have rejected an earthly kingdom which it was not easy for him to govern without renouncing the virtues of his profession; but humility does not appear to have been a very prominent trait in tKe characters of the Roman pontiffs ; and the

profuse liberality of the French kings at this time was not much calculated to promote it among them.' Before we narrate those events which, during the ninth and succeeding centuries, raised the papal see to its greatest height of power and arrogance, we must observe that, although hitherto the approbation of the emperor was necessary in order to the consecration of the person chosen to the pontificate, after the time of Charles the Bald, a new scene of things arose. That prince, having obtained the imperial dignity by the good offices of the bishop of Rome, returned this eminent service by delivering the succeeding pontiffs from the obligation of waiting for the consent of the emperors, in order to their being installed in their office. And thus we find that from the time of Eugenius II., who was raised to the pontificate A. D. 824, the election of the bishop of Rome was carried on without the least regard to law, order, and decency ; and was generally attended with civil tumults and dissensions, until the reign of Otho the Great ; who put a stop to these disorderly proceedings. Among the prelates that were raised to the pontificate in the ninth century there were very few who distinguished themselves by their learning, prudence, or virtue ; or, who were studious of those particular qualities that are essential to the character of a Christian bishop. On the contrary, the greatest part of them are only known by the flagitious actions that have transmitted their names with infamy to our times ; and all seem to have vied with each other in their ambitious

efforts to extend their authority, and render their dominion unlimited and universal. It is here that we may place, with propriety, an event which is said to have interrupted the much vaunted succession of regular bishops in the see of Rome, from the first foundation of that church to the present time. Between the pontificate of-Leo IV., who died in the year 855, and that of Benedict III. a certain woman, who artfully disguised her sex for a considerable time, is said, by learning, genius, and dexterity, to have made good her way to the papal chair, and to have governed the church with the title and dignity of pontiff about two years. This extraordinary person is yet known by the title of Pope Joan. The period was now arrived in which the clergy aspired to the right of disposing of crowns, which they founded on the ancient Jewish practice of anointing kings. They had recourse to the most miserable fictions and sophisms to render themselves independent. They refused to take the oath of fidelity, because sacred hands could not without abomination, submit to hands impure ! One usurpation led to another ; abuse constituted right ; a quibble appeared a divine law ; ignorance sanctified every thing, and the most enormous

usurpations of the clergy obtained a ready sanction from the slavish superstition of the laity.

The history of the following ages shows in a multitude of deplorable examples the disorders and calamities that sprung from the ambition of the aspiring pontiff's ; it represents these despotic lords of the church laboring, by the aid of their impious frauds, to overturn its ancient government, to undermine the authority of its bishops, to engross its riches and revenues into their own hands ; nay, what is still more horrible, it represents them aiming perfidious blows at the thrones of princes, and endeavouring to lessen their power and to set bounds to their dominion. The ignorance and corruption that dishonored the Christian church in this century were great be-yond measure.

About the year 877 pope John VIII. convened a council at Troyes in France, one of the canons of which is sufficiently remarkable to be adduced as a specimen of the spirit of the times. It expressly asserts that ' the powers of the world shall not dare to seat themselves in the presence of the bishops unless desired.' Thus the power and influence of the pontiffs, in civil affairs, rose, in a short time, to an enormous height, through the favor and protection of the princes in whose cause they had employed the influence which superstition had given them over the minds of the people. The increase of their authority in religious matters was not less rapid or less considerable ; and it arose from the same causes. The Roman pontiffs, elate with their overgrown prosperity and the daily acces-sions that were made to their authority, were eagerly bent upon persuading allj and had in-deed the good fortune to persuade many, that the bishop of Rome was constituted, by Jesus Christ, supreme legislator and judge of the church universal ; and that, therefore, the bishops derived all their authority from the Roman pontiff, nor could the councils determine any thing without

Ms permission and consent. After the death of Lando, who only enjoyed the dignity for a short time in the year 914, John X. obtained the pontifical chair through the intrigues of a celebrated prostitute,

Theodora, with whom he had long been intimate, notwithstanding his elevated station in the church. As John was indebted for his rank and elevation in the church to the intrigues of one infamous woman so he lost his dignity and life through those of another. This was Marozia, the daughter of his former mistress Theodora. Marozia, exasperated that she did not succeed her mother in the confidence of the pope, resolved to destroy him and his brother Peter; who, at this time, was in habits of the strictest intimacy with him. She communicated the bloody design to her husband, and prevailed on him not only to approve but to be the instrument of carrying it into execution. Accordingly this wretch, on a certain day, when this pope and Ids brother were together in the Lateran palace, broke in at the head of a band of ruffians, killed Peter before his brother's face ; and then, seizing the pope, dragged him to prison, where he soon afterwards died. This licentious pontiff was succeeded by Leo VI., who sat but seven months in the apostolic chair, which was filled after him by Stephen VII. The death of the latter, which happened in the year 931, presented to the ambition of Marozia an object worthy of its grasp ; and accordingly she raised to the papal dignity John XI., who was the fruit of her lawless amours with one of the pretended successors of St. Peter, Sergius III., whose adulterous commerce with that infamous woman gave an infallible guide to the Roman church. John XI., who was thus placed at the head of the church by the credit and influence of his mother, was pulled down from this summit of spiritual grandeur, A.D. 933, by Alberic his half brother. Upon the death of Agapetus II., which happened in the year 956, Alberic II., who, to the dignity of Roman consul joined a degree of authority and opulence which nothing could resist, raised to the pontificate his son Octavian, who was yet in the early bloom of youth, and destitute of every quality that was required for discharging the duties of that high and important office. This unworthy pontiff, who assumed the name of John XII., was as unhappy as his promotion had been scandalous. Being degraded in the most ignominious manner from his high office by Otho the Great, Leo VIII. was appointed to fill his place. After this he several times conspired against the life of the new pope, and was as frequently pardoned ; till at length he contrived to set himself again on the papal throne. John instantly assembled a council of prelates and cardinals, who condemned the council that had deposed him, and passed different sentences of condemnation on all those who had been accessary to the elevation of his rival. John did not long survive the holding of this council ; for, having engaged in a criminal connexion with a married woman, the injured husband, who caught him in the act, put an end to the life and debaucheries of his holiness by some violent blows which he gave him on his temples.

The Roman pontiff, who before this period

had pretended to the right of creating saints by his sole authority, gave in this century the first specimen of this ghostly power ††† for in the preceding ages there is no example of his having exercised this privuege alone. This specimen ††† was given in the year 993 by John XV., at a council held at the Lateran palace, who, after hearing read an account of the life and supposed miracles of Ulderic, bishop of Augusta, declared, with the approbation of his bishops, that from thenceforth Ulderic might be worshipped and invoked as a saint in heaven reigning with Christ This is the first instance on record of the solemn canonisation of a pretendedly meritorious character, a practice which soon contributed to crowd the Roman calendar with saints, and loaded the church with wealth by the rich offerings with which the superstitious multitude were encouraged to propitiate the favor of these new mediators between God and man. The administration of John XV. was as happy as the troubled state of the Roman affairs would permit ; but the tranquillity he enjoyed was not so much the effect of his wisdom and prudence as of his being a Roman by birth and a descendant from noble and illustrious ancestors.

Several learned writers have observed that, in this century, certain bishops mentioned publicly that the Roman pontiffs were not only bishops of Rome, but of the whole world ; an assertion which hitherto none had ventured to make ; and that even among the French clergy it had been affirmed by some that the authority of the bishops, though divine in its origin, was conveyed to them by St. Peter, the prince of the apostles. It was no doubtful mark of the progress and strength of the Christian cause that the European kings and princes began so early as this century to form the project of a holy war against the Mahometans, who were masters of Palestine; they considered it as an intolerable reproach upon Christians that the very land in which the divine author of their religion had received his birth, exercised his ministry, and made expiation for the sins of mortals, should be abandoned to the enemies of the Christian name. They also looked upon it as highly just and suitable to the majesty of the Christian religion to avenge the calamities and injuries, the persecution and reproach, which its professors had suffered under the Mahometan yoke. The bloody signal was accordingly given towards the conclusion of this century by the Roman pontiff Sylvester II., and that in the first year of his pontificate ; and this signal was an epistle, written in the name of the church of Jerusalem, to the church universal throughout the world ; in which the European powers are solemnly exhoited and

entreated to succor and deliver the Christians in Palestine. The exhortations of the pontiff were, however, without, ef-fect, except upon the inhabitants of Pisa, who are said to have obeyed the papal summons with the utmost alacrity, and to have prepared themselves immediately for a holy campaign. The see of Rome after the death of Sylvester II., which happened in the year 1003, was filled successively by John XVII., John XVIII., Benedict VIII., and John XIX., noifc of whose pontificates were distinguished by am memorable

events ; they were not, however, chargeable with dishonoring their high stations by that licentiousness and immorality that rendered so many of their successors infamous ; their lives were virtuous ; at least their conduct was decent. But their examples had. little effect upon Benedict IX., a most abandoned profligate and a wretch capable of the most horrid crimes, whose flagitious conduct drew upon him the just resentment of the Romans; who, in the year 1038, degraded him from his office.

A. D. 1048 Bruno, bishop of Toul, was appointed to the pontificate. This prelate is known in the list of the popes by the name of Leo IX., and his private virtues, as well as his public acts of zeal and piety in the government of the church, were deemed meritorious enough to entitle him to a place among the saintly order. But, if we de-duct from these pretended virtues his vehement zeal for augmenting the opulence and authority of the church of Rome, and his laudable severity in correcting and punishing certain enormous vices which were common among the clergy dur-ing his pontificate, there will remain little in the life and administration of this pontiff that could give him any pretensions to his distinction. Being taken prisoner by his enemies, and led captive to Benevento, dismal reflections upon his unhappy fate preyed upon his spirits, and threw him into a dangerous illness : so that after a year’s imprisonment he was sent to Rome, where he concluded his days on the 19th of April 1054.

Before the pontificate of Nicholas II., A. D. 1058, the popes were chosen not only by the suffrages of the cardinals, but also by those of

the whole Roman clergy, the nobility, the burgesses, and the assembly of the people. To increase the papal influence, and to limit that of the lower clergy and of the people as far as was possible, this artful and provident pontiff had a law passed by which the cardinals were empowered, upon a v acancy in the see of Rome, to elect a new pope without any prejudice to the ancient privileges of the Roman emperors in this important matter. Not that the rest of the clergy, with the burgesses, and people, were wholly excluded from all part in this election, since their consent was solemnly demanded, and also esteemed of much weight ; but, in consequence of this new regulation, the cardinals acted the principal part in the creation of the new pontiff; though they suffered for a long time much opposition both from the sacerdotal order and the Roman citizens, who were constantly either reclaiming their ancient rights, or abusing the privilege they yet retained, of confirming the election of every new pope by their approbation and consent

In the following century an end was put to all these disputes by Alexander II., who was so fortunate as to complete what Nicolas had only be-gun, and who transferred and confirmed to the cardinals the right of electing to the apostolic see, excluding the nobility, the people, and the rest of the clergy, from all concern in this important matter. Passing over the contentions between Henry IV. and Alexander we come to ###he turbulent pontificate of Hildebrand, originally i monk of the order of Clugny, who found means

to obtain a cardinal's hat. He wa? a man of a restless, fiery, and enterprising disposition ; but chiefly remarkable for his furious zeal for the pretensions of the church. He was born at Soana, in Tuscany, of obscure parents, brought up at Rome, and had been frequently employed by that court to manage various political concerns which required dexterity and resolution ; and he rendered himself famous in all parts of Italy for his zeal and intrepidity. Hildebrand had interest enough to procure himself to be elected to the pontifical chair in 1073, on the same day that Alexander was interred, by the title of Gregory VII. ; and the papacy has not produced a more extraordinary character. ' AH that the malice or flattery of a multitude of writers have said of this pope,' says Voltaire, ' is concentrated in a portrait drawn of him by a-Neapolitan artist, in which Gregory is represented as holding a crook in one hand and a whip in the other, trampling sceptres under his feet, with St. Peter's net, and fishes on either side of him.' Gregory was installed by the people of Rome, without consulting the emperor, as had hitherto been customary. But, though Henry had

not been consulted upon the occasion, Gregory prudently waited for his confirmation of the choice before he assumed the chair. He obtained it by this mark of submission : the emperor confirmed his election : and the new pontiff was not dilatory in pulling off the mask ; for in a little time he raised a storm which fell with violence upon the head of Henry, and shook all the thrones in Christendom. He began his pontificate with excommunicating every ecclesiastic who should receive a benefice from a layman, and every layman by whom such benefice should be conferred. This was engaging the church in an open war with all the sovereigns of Europe. It was evident, indeed, that Gregory formed the project of making himself lord of Christendom, by at once dissolving the jurisdiction which kings and emperors had hitherto exercised over the various orders of the clergy, and by subjecting to the papal authority all temporal princes, rendering their dominions tributary to the see of Rome : and, however romantic the undertaking may ap-pear, it was not altogether without success. The pretensions of the Romish church had at this time, says Mr. Southey, been carried to the highest pitch by Gregory VII., one of those restless spirits who obtain an opprobrious renown in history for disturbing the age in which they live. The Romanists themselves acknowledge now the inordinate ambition of this haughty pontiff, who may be deemed the founder of the papal dominion ; but, during many centuries, lie was held up as an object of admiration to the Christian world, and still holds his place as a saint in the Romish calendar. His sanctity, the legends of that church relate, was prefigured in childhood, by sparks proceeding from his garments and a lambent light which appeared to is-sue from his head. He himself affirmed that, in a dream, there went forth fire from his mouth and set the world in flames ; and his enemies, who vilified him as a sorcerer, admitted that such a vision was appropriate to one who was indeed a firebrand. Anothei of his dreams was that ho

saw St. Paul clearing out dung from his church, wherein cattle had taken shelter, and calling up-on him to assist him in the work ; and certain persons who were keeping vigils in St. Peter’s church beheld,

in a waking vision, St. Peter and Hildebrand laboring at the same task. By such artifices his reputation for sanctity was established among the people, while he obtained promotion for his activity and talents ; till at length, rather by intrigne and popular outcry than by canonical election, he was chosen pope. Hitherto the popes had recognised the supremacy of the emperors, by notifying to them their election before they were consecrated, and having that ceremony performed in the presence of an imperial envoy. Hildebrand conformed to this, being conscious that his elevation was informal, and glad to have it thus ratified. The first use he made of the power which he had thus obtained was to throw off all dependence “upon the temporal . authority, and establish a system whereby Rome should again become the mistress of the world. A grander scheme never was devised by human ambition, and, wild as it may appear, it was at that time, in many points, so beneficial that the most upright man might conscientiously have labored to advance it. Whether the desire of benefiting mankind had any plo.ce among the early impulses of Hildebrand may be well doubted, upon the most impartial consideration of his conduct; but in preparing the way for an intolerable tyranny, and for the worst of all abuses, he began by reforming abuses and vindicating legal rights. Such a government Ilildebrand would have founded ; and Christendom, if his plans had been accomplished, would have become a federal body, the kings and princes of which should have bound themselves to obey the vicar of Christ, not only as their spiritual, but their temporal lord; and their disputes, instead of being decided by the sword, were to have been referred to a council of prelates annually assembled at Home. Unhappily, the personal character of this extraordinary man counteracted the pacific part of his schemes ; and he became the firebrand of Europe, instead of the peacemaker. Hitherto the princes of Christendom had enjoyed the right of nominating bishops and abbots, and of giving them investiture by the ring and crosier. The popes, on their part, had been accustomed to send legates to the emperors to entreat their assistance, to obtain their confirmation, or to desire them to come and receive papal sanction. Gregory, now resolving to push the claim of investitures, sent two of his legates to summons Henry to appear before him as a delinquent, because he still continued to bestow investitures, notwithstanding the papal decree to the contrary : adding that, if he failed to yield obedience to the church, he must expect to be excommunicated and dethroned. This arrogant message, from one whom-he regarded as his vassal, greatly provoked Henry, who abruptly dismissed the legates, and lost no time in convoking an assembly of princes and dignified ecclesiastics at Worms ; where, after mature deliberation they came to this conclusion

: that, Gregory having usurped the chair of St. Peter by indirect means, infected the church of God with

many novelties and abuses, and deviated from his duly to his sovereign in several instances, the emperor, by the supreme authority derived from his predecessors, ought to divest him of his dignity, and appoint a successor. In the articles of accusation it was, among other things, imputed to Gregory that he was an apostate monk, an incendiary, a sacrilegist, a murderer, a liar, an abettor of adultery and incests. Henry, consequently, sent an ambassador to Rome, with a formal deprivation of Gregory : who, in his turn, convoked a council, at which were present 110 bishops, who unanimously agreed that the pope had just cause to depose Henry, to annul the oath of allegiance which the princes and states had taken in his favor, and to prohibit them from holding any correspondence with him on pain of excommunication. Hildebrand's language was, that, if kings presumed to disobey the edicts of the apostolic see, they were cut off from participating in the body and blood of Christ, and forfeited their dignities. For if that see had power to determine and judge in things celestial and spiritual, how much more in things earthly and secular ! The church, he affirmed, had power to give or take away all empires, kingdoms, duchies, principalities, marquisates, countries, and possessions of all men whatsoever. A sentence of deprivation was immediately fulminated against the emperor and his adherents : ' In the name of Almighty God and by your authority,' said Gregory, addressing the members of his council, ' I prohibit Henry from governing the Teutonic kingdom and Italy ; I release all Christians from their oath of allegiance to him ; and I strictly forbid all persons to serve or attend him as king.' This is the first instance of a pope presuming to deprive a sovereign of his crown ; but, unhappily, it was too nattering to ecclesiastical pride to be the last. Gregory well knew what consequences would result from the thunders of the church. The bishops in Germany immediately came over to his party, and drew with them many of the nobles. The Saxons took the opportunity of revolting: even the emperor's favorite Guelf, a nobleman to whom he had given the duchy of Bavaria, supported the malcontents with that very power which he owed to his sovereign's bounty ; and the princes and prelates who had assisted in deposing Gregory gave up their monarch to be tried by the pope, who was requested to come to Augsburg for that purpose. To avoid the odium of this impending trial Henry submitted to the degradation of preparing to throw himself at the feet of the pontiff, to solicit absolution. It was some time before the pontiff would admit the monarcli into his presence; and when the

order was issued for that purpose, it was on the condition that hu should enter at the outer gate of the fortress without attendants ; and at the next gate he was required to divest himself of the ensigns of royalty, and put on a coarse woollen tunic, in which dress, and barefooted, he was suffered to stand for three whole days at the third gate, exposed to the severity of the weather, fasting and imploring the mercy of God and the pope. The pope from one of the windows of his castle, where he. was seated with the countess Matilda,

whose close intimacy with Gregory led to too well founded suspicions of his virtue, enjoyed the exquisite pleasure of seeing an emperor in sackcloth and bareheaded at his gate. At length the persons of distinction who were with Gregory, affected at the sufferings of the king, began to complain of the severity of his holiness, which they said was more becoming a tyrant than an apostolical father or judge : these reports were carried to the pope, who, on the fourth day, admitted the king, and after much difficulty granted him absolution. That Gregory had formed the audacious plan of subjecting all the thrones of Europe to the Roman see is undoubtedly evident, both from his own epistles and also from other authentic records of antiquity. The nature of the oath he drew up for the king or emperor of the Romans, from whom he demanded a profession of subjection and allegiance, shows abundantly the arrogance of his pretensions. The despotic views of this lordly pontiff were, however, attended with less success in England than in any other country. William the Conquerer was a prince of great spirit and resolution ; extremely jealous of his rights, and tenacious of the prerogatives he enjoyed as a sovereign and independent monarch ; and, accordingly, when Gregory wrote him a letter demanding the arrears of the Peter-pence, and at the same time summoning him to do homage for the kingdom of England as a fief of the apostolic see, William granted the former, but refused the latter with a noble obstinacy : declaring: that he held his kingdom of God only, and his own sword. Nothing was transacted in the church but by his directions : by his sole authority he banished or imprisoned the bishops whom he did not like, without waiting for a canonical

sentence. He went still farther, and set himself in some measure above the popes, by forbidding his subjects to receive their orders or acknowledge their authority, without his permission. ‘ I will never,’ said the monarch, ‘ suffer any person who refuses me the securities of a subject to enjoy estates in my dominions.’ He separated the ecclesiastical from the civil courts, with which they had hitherto been conjoined ; and he deprived the clergy of many of their lands, and subjected the rest to military service. Obliged to yield to the obstinacy of the English monarch, whose name struck terror into the boldest hearts, the restless pontiff addressed his imperious mandates where he imagined they would be received with more facility. Had the success of that pontift been equal to the extent of his insolent views, all the kingdoms of Europe would have been, at this clay, tributary to the Roman see, and its princes the soldiers or vassals of St. Peter, in the person of his pretended vicar upon earth. But, though his most important projects were ineffectual, many of his attempts were crowned with a favorable issue ; for, from the time of his pontificate, the face of Europe underwent a considerable change, and the prerogatives of the emperors and other sovereign princes were much diminished. The first idea of reconquering Palestine from the Arabs and the Turks, by an army of Christians, is attributed to Gregory VII. To him also may be ascribed the origin of indulgencies ; of those VOL. XVIII.

pardons for another life, whatever crimes might be commited in this ; of those bills of exchange on heaven, for which, in the end, the popes paid so dearly on earth, and the traffic in which, carried to a disgusting excess, became the first accidental cause of the Reformation. Mosheim has thus summed up the character of this celebrated pontiff : ‘ He was/ says that author, ‘ a man of uncommon genius, whose ambition in forming the most arduous projects was equalled by his dexterity in bringing them into execution; sagacious, crafty, and intrepid, nothing could escape his .penetration, defeat his stratagems, or daunt his courage; haughty and arrogant, beyond all measure ; obstinate, impetuous, and intractable, he looked up to the summit of universal empire with a wishful eye, and labored up the steep as-cent with uninterrupted ardor and invincible perseverance. Void of all principle, and destitute of every pious and virtuous feeling, he suffered little restraint in his audacious pursuits from the dictates of religion or the remonstrances of conscience.’

The death of Gregory neither restored peace to the church nor tranquillity to the state ; the tumults and divisions which he had

excited still continued, and they were augmented from day to day by the same passions to which they owed their origin. During the pontificate of Urban II., successor to Gregory, the project of reconquering Palestine from the Mahometans was renewed by the enthusiastic zeal of an inhabitant of Amiens, who was known by the name of Peter the Hermit, and who suggested to the Roman pontiff the means of accomplishing what had been unluckily suspended. If we examine the motives that engaged the Roman pontiffs, and particularly Urban II., to kindle this holy war, which in its progress and issue was so detrimental to almost all the countries of Europe, we shall probably be persuaded that its origin is to be derived from the corrupt notions of religion which prevailed in these barbarous times. It was thought inconsistent with the duty and character of Christians to suffer that land that was blessed with the ministry, and distinguished by the miracles of the Saviour of men, to remain under the dominion of his most inveterate enemies. It was also looked upon as a very importanch branch of true piety to visit the holy place of Palestine ; which pilgrimages, however, were extremely dangerous while the despotic Saracens were in possession of that country.

Urban was, indeed, inferior to Gregory in fortitude and resolution ; he was, however, his equal in arrogance and pride, and surpassed him greatly in temerity and imprudence. Gregory had never carried matters so far as to forbid the bishops and the clergy to take the oath of allegiance to their respective sovereigns. This rebellious prohibition was reserved for the audacity of Urban, who published it as a law in the council of Clermont. In the same spirit he seduced Conrad, the son of Henry IV., into rebellion against his father, by persuading him that it was lawful for subjects to break their oath of allegiance to all such as were excommunicated by the pope. Two years afterwards, in 1099. both Conrad and the pope died ; the latter beinj

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ROMAN CATHOLICISM.

succeeded in the papal chair by Paschal II. (another Gregory), and the former by his younger brother Henry, as king of Italy. Paschal, unwilling to let pass unimproved the present success of the papal faction, renewed in a council assembled at Rome, A. D. 1102, the decrees of his predecessors against investitures, and the excommunications they had thundered out against Henry IV. ; and used his most vigorous endeavours to raise up on all sides new enemies to that xmfortunate emperor. Henry, however, opposed with great constancy and resolution the efforts of this violent pontiff, and eluded with much dexterity and vigilance his perfidious stratagems. But his heart, wounded in the ten-derest part, lost all its firmness and courage, when, in the year 1106, an unnatural son, under the impious pretext of religion, took up arms against his person and his cause. Henry V., so was this monster afterwards named, seized his father in a most treacherous manner, and obliged him to abdicate the empire; after which the unhappy prince retired to Liege, where, deserted by all his adherents, he departed this life in the year 1106. It has been a matter of dispute, whether it was the instigation of the pontiff, or the ambitious and impatient thirst after dominion that engaged Henry V. to declare war against his father; nor is it, perhaps, easy to decide this ###question. One thing, however, is certain, and that is, that Paschal II. dissolved the oath ot fidelity and obedience that Henry had taken to his father; and not only so, but adopted the lause, and supported the interest of this unna-ural rebel with the utmost zeal, assiduity, and fervor. The revolution that this caused in the empire, was, however, much less favorable to the views of Paschal, than that lordly pontiff expected. The pope had the mortification to find that the new emperor was determined, equally with his predecessors, to maintain his right to investitures.

Nor was the king of England more disposed to a surrender of his rights. On a reference by Anselm, archbishop of Canterbury, to the pope, on the subject of doing homage for the temporalities of his see,

the messengers returned with an answer, in which the pope insisted on this point, and supported it by the strangest distortion of scripture : * I am the door ; by me if any man enter in he shall be saved. He that entereth not by the door into the sheep-fold, but climbeth up some other way, the same is a thief and a robber.' ' If kings,' says the pope, ' take upon themselves to be the door of the church, whosoever enter by them become thieves and robbers, not shepherds. Palaces belong to the emperors, churches to the priest ; and it is written, ' render unto Caesar the things that are Caesar's, and unto God the things that are God's.' How shameful is it for the mother to be polluted in adultery by her sons ! If, therefore, O king, thou art a son of the church, as every Catholic Christian is, allow thy mother a lawful marriage, that the church may be wedded to a legitimate husband, not by man, but by Christ. It is monstrous for a son to beget his father, a man to create his God : and that priests are called Gods, as being the vicars of Christ, is manifested in scripture.'

Such arguments were more likely to incense than satisfy a prince of Henry Beauclerc's understanding, lie commanded Anselm either ts? do homage or leave the kingdom, and Anseln with equal firmness replied that he would do neither. A second reference to Rome ensued : two monks were deputed thither by the primate, three bishops by the king. The pope on this occasion acted with a consummate duplicity, for which the motive is not apparent. To the bishops he said that, as their king was in other respects so excellent a prince, he would consent to his granting investitures ; but he would not send him a written concession lest it might come to the knowledge of other princes, and they should thereby be encouraged to despise the papal authority. By the monks he sent letters to Anselm, exhorting him to persist in his refusal. Both parties made their report before the great council of the realm ; the prelates solemnly asseverating that they faithfully repeated what had passed between them and the pope, the monks producing their letters. On the one part it was contended that oral testimony might not be admitted against written documents ; on the other, that the solemn declaration of three prelates ought to outweigh the word of two monks and a sheet of sheep's skin with a leaden seal. To this it was replied that the gospel itself was contained in skins of parchment. If, however, it was not easy to determine what had been the real decision of the pontiff, his double dealing was palpable ; and Anseira may have been influenced by a proper feeling of indignation when he so far conceded to the king as no longer to refuse communion with those bishops who had received investiture from his hands. At length, by Henry's desire, Anselm went to Rome to negociate there in person ;

and the matter ended in a compromise, that no laymen should invest by delivery of the ring and crosier, but that prelates should perform homage for their temporalities. During these disputes no council had been held in England, and therefore a great de-cay of discipline was complained of. The marriage of the clergy was what Anselm regarded as the most intolerable of all abuses. This real abuse had grown out of it, that the son succeeded by inheritance to his father's church, a custom which, if it had taken root, would have formed the clergy into a separate caste. This, therefore, was justly prohibited ; but it was found necessary to dispense with a canon which forbade the ordination or promotion of the sons of priests, because it appeared that the best qualified, and the greater part of the clergy were in that predicament. Canons, each severer than the last, were now enacted for the purpose of compelling them to celibacy. Married priests were required immediately to put away their wives, and never to see, or speak to them, ex-cept in cases of urgent necessity, and in the presence of witnesses. They who disobeyed were to be excommunicated; their goods forfeited, and their wives reduced to servitude, as slaves to the bishop of the diocese. The wife of a priest was to be banished from the parish in which her husband resided, and condemned to slavery it sheever held anv intercourse with him; and no

.voman might dwell with a clergyman, except she were his sister ov his aunt, or of an age to which no suspicion could attach. In 1107 the pope presided in a council at Troyes, consisting of the bishops from many places, who proved themselves to be wholly subservient to the ambition of the court of Rome, by confirming all the decrees relating to the pretended papal right to investitures.

Henry set out for Rome at the head of a formidable army, and effected a compromise, A. D. 1110. This transitory peace, however, was followed by greater tumults and more dreadful wars than had yet afflicted the church. Immediately after the conclusion of the treaty Rome was filled with the most vehement commotions, and a loud

clamor was raised against the pontiff, who was accused of having violated, in a scandalous manner, the duties and dignities of his station ; and having prostituted the majesty of the church by his ignominious compliance with the demands of the emperor. To appease these commotions, Paschal assembled in the year 1 1 12 a council in the Lateran church, and not only confessed, with contrition and humility, the fault he had committed in concluding such a convention with Henry, but submitted the question to the determination of the council, who accordingly took that treaty into consideration, solemnly annulled it, and sanctioned the excommunication of the emperor. Hostilities were carried on by both parties till 1117, when Henry resolved to bring matters to a crisis, and set out a second time for Italy at the head of a numerous army. But in the midst of these warlike preparations, which drew the attention of Europe, and portended great and remarkable events, the military pontiff yielded to his fate, and concluded his days, A.D. 1118. A few days after the death of Paschal, John of Gaieta, a Benedictine monk of Mount Cassin and chancellor of the Roman church, was raised to the pontificate under the title of Gelasius II. In opposition to this choice, Henry elected to the same dignity Maurice Burdin, archbishop of Braga, in Spain, who assumed the denomination of Gregory VIII. ; upon this Gelasius, not thinking himself safe at Rome, or indeed in Italy, set out for France, and soon after died at Clugni. The cardinals who accompanied him in his journey, elected to the papacy immediately after his decease, Guy, archbishop of Vienne, count of Burgundy, who was nearly related to the emperor, and is distinguished in the list of the Roman pontiffs by the name of Calixtus II. The elevation of this eminent ecclesiastic was in the issue extremely fortunate. Remarkably distinguished by his illustrious birth, and still more by his noble and heroic qualities, this magnanimous pontiff continued to oppose the emperor with courage and success. He made himself master of Rome, threw into prison the pontiff that had been chosen by the emperor, and fomented the civil commotions in Germany. But his fortitude and resolution were tempered with moderation, and accompanied with a spirit of generosity and compliance, which differed much from the obstinate arrogance of his lordly predecessors. Accordingly, he lent an ear to prudent” councils, and was willing to

relinquish a part of the demands upon which the former pontiffs had so vehemently insisted, that he might restore the public tranquillity, and satisfy the ardent desires of so many nations, who groaned under the dismal effects of these deplorable divisions. Calixtus did not long enjoy the fruits of the peace to which he had so much contributed by

his prudence and moderation, for he died A. D. 1120.

The warm contest between the emperors and the popes, which was considered as at an end since the time of Calixtus II., was unhappily renewed under the pontificate of Adrian IV., who was a native of England, and whose original name was Nicholas Breakspear. Frederick I., surnamed Barbarossa, being placed in 1152 on the imperial throne, publicly declared his resolution to maintain the dignity and privileges of the Roman empire in general, and more particularly to ren-der it respectable in Italy ; nor was he at all studious to conceal the design he had formed of reducing the overgrown power and opulence of the pontiffs and clergy within narrow limits. Adrian, perceiving the danger that threatened the majesty of the church and the authority of the clergy, prepared himself for defending both with vigor and constancy. The first occasion of trying their strength was offered at the coronation of the emperor at Rome, in the year 1155, when the pontiff insisted on Frederick performing the office of equerry, by holding the stirrup to his holiness. This humbling proposal was at first rejected with disdain by the emperor. An open rupture between the emperor and the pontiff was expected as the inevitable consequence of such measures, when the death of Adrian, which happened on the 1st of September, 1159, suspended the storm.

Guy, cardinal of St. Calixtus, was elected pontiff A. D. 1164, under the auspices, of the emperor, by the title of P_aschal III. In the mean time Alexander III., who had been chosen by the cardinals, recovered his spirits, and, returning into Italy, maintained his cause with uncommon resolution and vigor, and not without some promising hopes of success. He held at Rome, in the year 1167, the Lateran council, in which he solemnly deposed the emperor, whom he had upon several occasions before this period publicly loaded with anathemas and execrations ; dissolved the oath of allegiance which his sub jects had taken to him as their lawful sovereign, and encouraged and exhorted them to rebel against his authority, and to shake off his yoke. But soon after this audacious proceeding Frederick made himself master of Rome; upon which the insolent pontiff fled to Benevento, and left the apostolic chair to Paschal his competitor. The affairs of Alexander soon after took a more prosperous turn, and the emperor, after .having, dur-ing the space of three years, been alternately defeated and victorious, was at length so fatigued with the hardships he had suffered, and so dejected at a view of the difficulties he had yet to overcome, that, in the year 1177, he concluded a treaty of peace at Venice with Alexander, and a truce with the rest of his enemies. It was not only by force of arms, but also by uninterrupted efforts of dexterity and artifice, by wi;e counsel 2 U2

and pmder.t laws, that Alexander III. maintained the pretended rights of the church and extended the authority of the Roman pontiffs. For, in the third council of the Lateran, held at Rome A. D. 1179, the following decrees, among many others upon different subjects, were passed by his ad-vice and authority : ††† 1st. That, in order to put an end to the confusion and dissensions which so often accompanied the election of the Roman pontiffs, the right of election should not only be invested in the cardinals alone, but also that the person in whose favor two-thirds of the college of cardinals voted should be considered as the lawful and duly elected pontiff.' This law is still in force ; it was, therefore, from the time of Alexander that the election of the pope acquired that form which it still retains, and by which not only the people, but also the Roman clergy, are excluded entirely from all share in the honor of conferring that important dignity. 2dly. A spiritual war was declared against heretics, whose numbers increasing considerably about this time created much disturbance in the church in general, and infested, in a more particular manner, several provinces in France, which groaned un-der the fatal dissensions that accompanied the propagation of their errors. 3dly, The right of recommending and nominating to the saintly order was also taken away from councils and bishops ; and canonisation was ranked among the greater and more important causes the cognizance of which belonged to the pontiff alone. To all this we must not forget to add, that the power of erecting new kingdoms, which had been claimed by the pontiffs from the time of Gregory VII., was not only assumed but also exercised by Alexander in a remarkable instance ; for, in the year 1179, he conferred the title of king and the ensigns of royalty upon Alphonso I. duke of Portugal, who under the pontificate of Lucius II. had rendered his province tributary to the Roman see. It was during this pontificate that the claims of the Roman priesthood of exemption from temporal jurisdiction, became, in the person of Thomas a Becket, matter of serious dispute between the king of England and Alexander; the latter refusing to ratify the constitutions of Clarendon ; by which it was enacted ' that no appeal in spiritual causes should be carried before the holy see ;' and, ' that churchmen accused of any crime

should be tried in the civil courts.' Although the papal sanction was refused, still much was gained by even the agitation of the question, and by the proof which it afforded of 4he independence of the English, and its superiority over all papal doctrines and spiritual canons. Rapin says that above 100 murders had been committed by ecclesiastics, not one of whom was so much as punished with degradation ; hence the necessity of the king's determination.

In reviewing the state of the church in this century it will appear surprising that the religion of Jesus was not totally extinguished. Relics, which were for the most part fictitious, or at least uncertain, attracted more powerfully the confidence of the people than the merits of Christ. The opulent, whose circumstances enabled them to erect new temples, or to repair or

embellish the old, were looked upon as the happiest of mortals, and were considered as the most intimate friends of the Most High. While they whom poverty rendered incapable of such pompous acts of liberality contributed to the multiplication of religious edifices by their bodily labors, expecting to obtain eternal salvation by these voluntary and painful efforts. This universal reign of ignorance and superstition was dexterously improved to fill the coffers of the church. Indeed all the various ranks and orders of the clergy had each their peculiar method of fleecing the people. The bishops, when they wanted money for their private pleasures, or for the exigences of the churches, granted to their flocks the power of purchasing the remission of the penalties imposed upon transgressors by a sum of money, which was to be applied to certain religious purposes ; or, in other words, they published indulgences, which became an inexhaustible source of opulence to the episcopal orders ; until the Roman pontiffs, casting an eye upon the immense treasures that the inferior rulers of the church were thus accumulating by the sale of indulgences, thought proper to limit the power of the bishops in this respect, and assumed al-most entirely this profligate traffic to themselves. In consequence of this new measure the court of Rome became the general magazine of indulgences; and the pontiffs, when either the wants of the church or the demon of avarice prompted them to look out for new subsidies, published not only a universal, but also a complete, or what they called a plenary, remission of all the temporal pains and penalties which the church had annexed to certain transgressions. They went still farther, and not only remitted the penalties which the civil and ecclesiastical laws had enacted against transgressors, but audaciously usurped the authority which belongs to

God alone, and impiously pretended to abolish even the punishments which are reserved in a future state for the workers of iniquity ; a step this which the bishops, with all their avarice and presumption, had never once ventured to take.

To justify these measures of the pontiffs a most monstrous and absurd doctrine was now invented, which was modified and embellished by St. Thomas in the following century, and which contained among others the following opinions : ‘ That there actually existed an immense treasure of merit, composed of the pious deeds and virtuous actions which the saints had performed, beyond what was necessary for their own salvation, and which were therefore applicable to the benefit of others ; that the guardian and dispenser of this precious treasure was the Roman pontiff ; and that, of consequence, he was empowered to assign to such as he thought pro-per a portion of this inexhaustible source of merit suitable to their respective guilt, and sufficient to deliver them from the punishment due to their crimes.’ It is a most deplorable mark of the power of superstition that a doctrine so ab-surd in its nature and so pernicious in its effects should yet be retained and defended in the church of Rome. The most illustrious and resolute pontiff that filled the papal chair during this century, and whose exploits make the great-ROMAN CATHOLICISM

est noise in Europe, was Lotharius of Segni, cardinal deacon, otherwise known by the name of Innocent III. This pontiff, who was placed at the head of the church in the year 1 1 98, followed the steps of Gregory VII., and riot only usurped the despotic government of the church but also claimed the empire of the world, and thought of nothing less than subjecting the kings and princes of the earth to his sceptre. He was a man of learning and application ; but his cruelty, avarice, and arrogance, clouded the lustre of the good qualities which his panegyrists have thought proper to attribute to him. In Asia he gave a king to the Armenians ; in Europe he usurped the same extravagant privilege in the year 1204, and conferred the regal dignity upon Primislaus duke of Bohemia. The same year he sent to Johannicius, duke of Bulgaria and Walachia, an extraordinary legate, who in the name of the pontiff invested that prince with the ensigns and honors of royalty ; while, with his own hand, he crowned Peter II. of Arragon, who had rendered his dominions subject and tributary to

the church, and saluted him publicly at Rome with the title of king. We omit many other examples of this frenetic pretension, which might be produced from the letters of this arrogant pontiff, and many other acts of despotism, which Europe beheld not only with astonishment, but also, to its eternal reproach, with the ignominious silence of obedience. The ambition of this pope was not satisfied with the distribution and government of these petty kingdoms. He extended his views farther, and resolved to render the powei and majesty of the Roman see formidable to the greatest European monarchs. When the empire of Germany was disputed, towards the commencement of this century, between Philip duke of Suabia, and Otho IV. third son of Henry the Lion, he espoused at first the cause of Otho, thundered out his excommunications against Philip, and upon the death of the latter, which happened in the year 1209, placed the imperial diadem upon the "head of his adversary. But as Otho was by no means disposed to submit to this pontiff's nod, or to satisfy to the full his ambitious desires, he incurred, of consequence, his lordly indignation ; and Innocent, declaring him by a solemn excommunication unworthy of the empire, raised in his place Frederick II. his pupil, the son of Henry VI. and king of the two Sicilies, to the imperial throne in the year 1212. If a prince attempted to withdraw from this authority, received from heaven, the pontiff anathematised him, expelled him out of the communion of the faithful, and his deluded subjects avoided him like a pestilence. In general he went and solicited the pardon of the irritated vice-god, appealed to him by the most abject submission, and by the acknowledgment of all his rights which the arrogant pontiff demanded ; after which the repentant sovereign was reestab- lished in his charge and his honors ; and at each similar attempt the power of the popes, sanctioned and increased, became still more strengthened. In the third canon of the fourth Lateran council1 , which washolden by this pope in 1215, entitled De Hereticis, the church excommunicates and anathematises every hereby which opposed the faith which had been established in that church, and condemns all heretics by whatever name they are called. The secular legislatures, whatever be their power or titles, are admonished, and if necessary are, in order to be considered faithful to the church, to exert themselves to the most to exterminate all those whom the church defines to be heretics. If the princes to whom this decree of the church shall come neglect to obey they are subject to excommunication. If it be notified to the pope that the contumacy of any prince be continued more than one year, his vassals maybe absolved from their allegiance and his territory be allotted to another who shall exterminate heretics and maintain the faith in its purity. ' Under this young and ambitious priest/ says Gibbon, ' the successors of St. Peter attained the full

meridian of their greatness ; and in a reign of eighteen years he exercised a despotic command over the emperors and kings whom he raised and deposed over the nations; whom an interdict of months or years deprived, for the offence of their rulers, of the exercise of Christian worship. In the councils of Lateran he acted as the ecclesiastical, almost as the temporal, sovereign of the east and west. But of all the European princes none felt in so dishonorable and severe a manner the despotic fury of this insolent pontiff as John, surnamed Sans Terre, king of England.' See our article ENGLAND.

Innocent may boast of the two most signal triumphs over sense and humanity, the establishment of transubstantiation by the councils of Lateran in 1215, and the origin of the inquisition. At his voice two crusades, the fourth and the fifth, were undertaken : but, except a king of Hungary, the princes of the second order were alone at the head of the pilgrims ; the forces were inadequate to the design; nor did the effects correspond with the hopes and wishes of the pope and the people. Innocent did not confine his efforts to the holy land, he promoted a crusade against the Albigenses. He first attempted to convert them by his missionaries, one of whom was murdered, which was the sig-nal for the display of all his wrath ; he did not even deign to institute an enquiry, but ordered the whole race to be pursued with fire and sword, and to be treated with more severity than the Saracens themselves. About 200,000 lives were sacrificed in the terrible war in a few months, and barbarities practised, before unheard of; but the perpetration of them was applauded or rewarded by the cruel pontiff, and the infernal spirit by which they had been actuated was impiously called zeal in supporting the cause of God and of the church. In the year 1216 Innocent undertook a journey to Pisa ; but on his arrival at Perugia he was attacked with a violent disorder, which put an end to his life in a few days. Mr. Berington observes of this pope that ' the prerogative of the holy see, built up by adulation and misjudging zeal, filled his mind; and the meteor of universal empire gleaming on his senses did not permit the operation of a dispassionate and unbiassed judgment. No tears were shed when Innocent fell, but those which religion wept, too justly pained by the inordinate exertions and worldly views of her first minister.'

In the year 1227 Ilugolin, bishop of Ostia, whose advanced age had not extinguished the fire of his ambition, nor diminished the firmness and obstinacy of his spirit, was raised to the pontificate, assumed the title of Gregory IX., and kindled the feuds and dissensions that had already secretly subsisted between the church and the empire, into an open and violent flame. He wrote to the emperor, Frederick II., exhorting him to fulfil the solemn promises which he had made to embark a sufficient army for the relief of the Christians in the east, adding the severest menaces if he should decline the undertaking. Frederick, obedient to the order, at length embarked for Palestine; but, not having sued for absolution before his departure, he was still the object of Gregory's resentment, who took every method to render his expedition fruitless, and to excite civil wars in his Italian dominions. Frederick, having received information of these perfidious and violent proceedings, returned into Europe in the year 1229, defeated the papal -*rmy, retook the places he had lost in Sicily and in Italy, and in the succeeding year made his peace with the pontiff from whom he received a public and solemn absolution. The peace, however, was but of a short duration ; for the emperor could not tamely bear the insolent proceedings and the imperious temper of Gregory. He therefore broke all measures with that headstrong pontiff, which drew the thunder of the Vatican anew upon the emperor's head in the year 1239. Frederick was excommunicated publicly with all the circumstances of severity that vindictive rage could invent, and was charged with the most flagitious crimes, and the most impious blasphemies, by the exasperated pontiff. The emperor on the other hand defended his injured reputation by solemn declarations in writing, and appealed for a more efficient vindication to his sword. To extricate himself from his perplexities, the pope convened, in the year 1240, a general council at Rome, with a view of deposing Frederic by the unanimous suffrages of the cardinals and prelates that were to compose that assembly. But the emperor disconcerted that audacious project by defeating in the year 1241 a Genoese fleet, on board of which the greatest part of these prelates were embarked, and by seizing with all their treasures those reverend fathers, who were all committed to close confinement. This disappointment, together with the approach of the emperor and his victorious army, gave such a shock to the pope, that he was seized with an illness which put an end to his life in a fe*v oays, after he had been at the head of the church nearly fifteen years. It was during this pontificate that the inquisition was established. See INQUISITION.

After the death of Clement IV., in 1268, the Roman see was vacant for

nearly three years, owing to the intrigues of the cardinals, assembled at Viterbo, who all aspired to the dignity themselves and opposed the election of any other. They ultimately chose Theobald, who was at that time with the crusaders in the east. As he had been an eye witness of the miserable condition of the Christians in that country, he had nothing so much at heart as the desire of

contributing to their relief; and, immediately after his consecration, he summoned a council at Lyons in the year 1274, in which the relief ana maintenance of the Christians in Palestine, and the reunion of the Greek and Latin churches, were the two points that were to come principally under deliberation. This assembly is acknowledged as the fourteenth general council, and is rendered particularly remarkable by the new regulations that were introduced into the manner of electing the Roman pontiff, and more especially by the famous law which is still in force, and by which it was enacted that the cardinal electors should be shut up in the conclave during the vacancy of the pontificate. Theobald, who had assumed the title of Gregory X., died soon after the termination of the council, having held the Roman see four years and four months. During sixteen years several popes successively occupied the papal chair, but nothing occurs in their history worthy of special notice. Innocent V., who succeeded Gregory, was, before his exaltation, an eminent divine and diligent writer, but died soon after his consecration. Adrian V. died at Viterbo before his consecration. Petro Juliani, formerly a learned physician at Lisbon, succeeded Adrian. He was killed by the roof of his apartment falling in upon him, A. D. 1277. After a delay of six months Nicholas III. was elected. He was a great patron of the Franciscans. To him succeeded Martin IV. a French cardinal, through the intrigue of Charles, king of Sicily, under whose influence his whole conduct was regulated. He died A, D. 1285. llonorius IV7. now filled the vacant see; he was in no respect distinguished either by talent or fortune. He was succeeded, A. D. .1288, by the cardinal bishop of Preneste, and assumed the name of Nicholas IV., during whose pontificate the Holy Land which had been rescued by the crusaders from the Turks was now irrecoverably lost. The death of Nicholas IV. in 1292 was followed by a vacancy of two years in the see of Rome, in consequence of the disputes that arose among the cardinalˆ about the election of a new pope. These disputes were at length .terminated, and the contending parties united their suffrages in favor of Peter, surnamed De Murrone, from a mountain where he had hitherto lived in the deepest solitude, and with the ut-most austerity. This venerable old man, who was in high renown on account of the remarkable sanctity of his life and conversation, was

raised to the pontificate in the year 1294, and assumed the name of Celestine V. But the austerity of his manners being a tacit reproach upon the corruption of the Roman court, and n,ore especially upon the luxury of the cardinals, rendered him extremely disagreeable to a degenerate and licentious clergy ; several of the, cardinals therefore, and particularly Benedict Caietan, advised him to abdicate the papacy which he had accepted with such reluctance; and they had the pleasure of seeing their advice followed with the utmost docility. The good man resigned his dignity in the fourth month after his election, and died in the year 1296, in the castle of Fumone, where his tyrannic and suspicious successor kept him in captivity.

III. Decline of the papal power. ••• The acts of the papal omnipotence during its course, were the humiliation, urged to excess, of all Christian princes and people ; rebels supported and encouraged every where against the legitimate authority, when that of the pope was in opposition to it ; sovereigns dispossessed and excommunicated as well as their subjects ; crowns taken away, given, sold, according to the interests or passions of the pontiff: the bishops and clergy of all the Catholic countries subjected to his will, receiving from him the investiture of their charges, and holding them almost exclusively of him ; so that the hierarchy every where formed a state within a state, under the dominion of a foreign despotic chief, who by its means disposed of all the consciences, and of nearly all the riches of a country. The decline of this injurious power, like its progress, has been gradual and almost imperceptible. The commencement of this important change may be dated from the quarrel between the French king and Benedict Caietan, who, after persuading Celestine V. to resign, was advanced to the pontificate by the title of Boniface VIII. A. D. 1 294. The beginning of the following year he was enthroned at Rome with great solemnity and parade; in the procession from St. Peter's, where he was consecrated and crowned, to the Lateran, for the purpose of being enthroned, he was mounted on a white horse richly caparisoned, with the crown on his head, whilst the king of Apulia held the bridle in his right hand, and the king of Hungary in the left,

both on foot. His subsequent conduct corresponded to the haughty grandeur of his installation. From the moment that he entered upon his new dignity he laid claim to a supreme and irresistible dominion over all the powers of the earth, both spiritual and temporal ; terrified kingdoms and empires with the thunder of his bulls ; called princes and sovereign states before his tribunal to decide their quarrels; augmented the papal jurisprudence with a new body of laws ; declared war against the family of C'olonna, who disputed his title to the pontificate ; in a word exhibited to the world a lively image of the tyrannical administration of Gregory VII., whom he surpassed in arrogance. Boniface added to the public rites and ceremonies of the church the famous jubilee, which is still celebrated at Rome with the utmost profusion of pomp and magnificence. In the bull issued on this occasion it was enacted, as a solemn law of the church, that those who every hundredth year confessed their sins, and visited with sentiments of contrition and repentance the church of St. Peter and St. Paul at Rome, should obtain thereby the remission of their various offences. As this jubilee added to the splendor and augmented the revenues of the church, later popes have rendered its return more frequent, and fixed its celebration to every twenty-fifth year. The most important event, however, which transpired during this pontificate, was the contest with Philip the Fair, to which we have already alluded. This prince, who was endowed with a bold and enterprising spirit, soon convinced Europe that it was possible to set bounds to the overgrown arrogance of the

bishop of Rome, .although many crowned heads had attempted it without success. Boniface sent Philip the haughtiest letters imaginable, in which he asserted that the king of France, and all other kings and princes, were obliged by a divine command to submit to the authority of the popes, as well in all political and civil matters as in those of a religious matter. The king answered him with great spirit, and in terms express, ve of the utmost contempt. The pope rejoined with more arrogance than ever; and, in the famous bull unam sanctum, which he published A. D. 1302, asserted that Jesus Christ had granted a twofold power to his church, or, in other words, the spiritual and temporal sword ; that he had subjected the whole human race to the authority of the Roman pontiff, and that all who dared to dispute it were to be deemed heretics, and excluded from all possibility of salvation. Irritated by the insolence of the pontiff, Philip caused him to be apprehended in his own states by a few soldiers under the conduct of the chancellor Nogaret. Boniface died a few weeks after of an illness occasioned by the rage and anguish into which these insults

had thrown him. Benedict XI., who succeeded, learned prudence by the fatal example of his predecessor Boniface, and pursued more moderate and gentle measures. He repealed of his own accord the sentence of excommunication that had been thundered out against the king of France and his dominions. Benedict died A. D. 1304, upon which Philip, by his artful intrigues in the conclave, obtained the see of Rome for Bertrand de Got, archbishop of Bordeaux, who was accordingly elected to that high dignity on the .5th of June, 1305. Bertrand assumed ihe name of Clement V., and at the king's request remained in France, and removed the papal residence to Avignon, where it continued during the space of seventy years. There is no doubt that the continued residence of the popes in France greatly impaired the authority of the Roman see. The French pontiffs finding they could draw but small revenues from their Italian dominions, which were now torn in pieces by faction and ravaged by sedition, were obliged to contrive new methods of accumulating wealth. For this purpose they not only sold indulgences to the people more frequently than they had formerly done, whereby they made themselves extremely odious to several potentates, but also disposed publicly of scandalous licenses of all sorts at an excessive price. John XXII., who succeeded Clement, was remarkably shrewd and zealous in promoting this abominable traffic, and was the first to assume the triple crown ; his reign was one continued scene of confusion and contention between him and Lewis of Bavaria who claimed the imperial crown. To him sue ceeded Benedict XII., a man of great probity, who Sought to correct the abuses and to redress the grievances of the church as far as practicable. His successor in 1342 was Peter Roger, who assumed the name of Clement VI. The character of this pontiff may be inferred from the bull of anathema issued against the emperor Lewis of Bavaria, in which he thus expresses himself :'' May God strike him with imbecility

d madness ; may heaven overwhelm him with its thunders ; may the anger of God, with that of St. Peter and St. Paul, fall upon him in this world and in the next ; may the whole universe revolt against him ; may the earth swallow him up alive ; may his name perish from the earliest generations ; and may his memory disappear ; may all the elements be adverse to him ; may his children, delivered into the hands of his enemies, be crushed before the eyes of their father, &c.'

Innocent VI., the successor of Clement, whose name was Stephen Albert, possessed more integrity and moderation. He was a Frenchman, and before his election had been bishop of Ostia. He made it his business to correct abuses, and also abolished the heavy impositions laid upon the clergy when preferred to any new benefice or dignity. He retrenched all the unnecessary expenses of the papal court, contenting himself even with a small number of attendants; he obliged the cardinals to follow his example, urging them to bestow the super-abundance of their wealth in relieving the necessities of the poor. To Innocent succeeded Urban V., A. D. 1 362, whose pontificate presents nothing worthy of notice. He is said to be the first who wore the triple crown. Gregory XI., nephew to pope Clement VI., earnestly desired to remove the seat of the papal see back from Avignon to Rome, but was prevented by the disturbances in Italy. He greatly opposed Wycliff; and in his will frankly acknowledged his fallibility; he died at Rome A. D. 1378. After the death of Gregory, the cardinals were assembled to consult about choosing a successor, when the people of Rome, unwilling that the vacant dignity should be conferred on a Frenchman, came in a tumultuous manner to the conclave, and with clamors, accompanied with outrageous menaces, insisted that an Italian should be advanced to the pppedom. The cardinals, terrified by this uproar, immediately proclaimed Bartholomew Pregnano, who was a Neapolitan, and archbishop of Bari, and assumed the name of Urban VI. This new pontiff, by his impolitic behaviour, entailed upon himself the odium of people of all ranks, and especially of the leading cardinals. These latter therefore, tired of his insolence, withdrew from Rome to Anagni, and thence to Fondi, a city in the kingdom of Naples, where they elected to the pontificate Robert, count of Geneva, who took the name of Clement VII., and declared at the same time that the election of Urban was nothing more than a mere ceremony which they had found themselves obliged to perform in order to calm the turbulent rage of the populace. Urban remained at Rome : Clement went to Avignon in France. His cause was espoused by France and Spain, Scotland, Sicily, and Cyprus, while all the rest .of Europe acknowledged Urban to be the true vicar of Christ. Thus the union of the Latin church under one head was destroyed at the death of Gregory XI., and was succeeded by that memorable dissention commonly known by the name of the Great Western Schism.

This dissension was fomented with such dreadful success, and arose to such a shameful height, di.Mt for the space of fifty years the church had

two or three different heads at the same time: each of the contending popes forming plots, and thundering out anathemas, against his competitors. During these dissensions the fires of persecution were not permitted to die away. In England archbishop Arundel, at the instigation of the popes, became both a persecutor and a traitor; he urged Henry IV., who had usurped the throne by the aid of the clergy, to pass a statute whereby all who propagated the doctrines of Wickliff, by preaching, writing, teaching, or discourse, were required to renounce their heresies, deliver in all their heretical books, and submit themselves to the church, on pain of being delivered over to the secular arm, and burnt alive. To give further efficacy to this bloody statute, Arundel set forth several provincial constitutions, whereby any persons preaching doctrines contrary to the determination of the church, or calling in question what the church had determined, were to be excommunicated, ipso facto, on the first offence, and declared heretics for the second. Whoever read the books of Wickliff or his disciples, without a licence from one of the universities, was to suffer as a promoter of heresy. The greater excommunication was to be incurred by advancing propositions, even in the schools, which tended to subvert the Catholic faith. It was declared heresy to dispute the utility of pilgrimages, or the adoration of images, and of the cross. The proceedings against offenders in this case were to be as summary as in cases of treason. And, because it was difficult to retain the true sense of Scripture in translations, whoever should translate it, or read such translations, particularly Wickliffe's, without the approbation of his ordinary, or of a provincial council, was to be punished as a promoter of heresy. That this statute was not suffered to become obsolete may easily be imagined, as may be seen, under the articles REFORMATION and WICLIFF. The hopes that Urban's death would end the divisions of the Romish church, or at least forward a reconciliation, were soon disappointed. The cardinals then in Rome chose Peter lomacelli, a Neapolitan cardinal priest, who succeeded to the papacy as Boniface IX., whose determined resolution it was to maintain his dignity. He and Clement renewed the excommunication against each other and their respective friends ; and were more adverse to peace than any of their adherents. Many from a sense of the evils of this separation made proposals for restoring tranquillity. Among these were the proposals of ' the university of Paris, that both should resign ; or that the matter should be left to arbitration ; or that a general council should decide it. Neither of the rival pontiffs was inclined to this, though they acted very artfully towards each other, and endeavoured to deceive one another. Boniface retired to Perusa. and Clement died at Avignon, A. D. 1394. The cardinals at Avignon proceeded to a new election, and bound themselves by oath that the newly elected pontiff

should faithfully labor to restore peace, even by the method of cession, if that should be approved of by the majority of suffrages in tits college of cardinals. Cardinal Peter de Luna,

who took the name of Benedict XIII., being promoted, so far from fulfilling the fair promises he had made though confirmed by an oath, defeated all pacific endeavours by an unparalleled obstinacy. After various changes of fortune, Benedict sent a legation to Boniface, with overtures towards an accommodation ; but the death of the latter terminated the treaty. Upon the death of Boniface IX. the cardinals of his party raised to the pontificate, in the year 1404, Cosmo de Meliorate, who assumed the name of Innocent VII., and held that high dignity during the short space of two years only. After his decease Angelo Corraris, a Venetian cardinal was chosen in his room, and ruled the Roman faction under the title of Gregory XII. A plan of reconciliation was, however, formed, and the contending pontiffs bound themselves each by an oath to make a voluntary renunciation of the papal chair, if that step should be deemed necessary to promote the peace and welfare of the church ; but they both scandalously violated this obligation. Benedict besieged in Avignon by the king of France, in the year 1408, saved himself by flight, retiring first into Catalonia his native country, and afterwards to Perpignan. Hence eight or nine of the cardinals who adhered to his cause, seeing themselves deserted by their pope, went over to the other side, and, joining publicly with the cardinals who supported Gregory, they agreed together to assemble a council at Pisa on the 25th of March 1 409, 1.: order to heal the divisions and factions that had so long rent the papal empire. This council, however, which was designed to close the wounds of the church had an effect quite contrary to that which was generally expected, and only served to open a new breach, and excite new divisions. Its proceedings indeed were vigorous, and its measures were accompanied with a just severity. A heavy sentence of condemnation was pronounced, on the 5th day of June, against the contending pontiffs, who were declared guilty of heresy, perjury, and contumacy, unworthy of the smallest tokens of honor or respect, and

separated, ipso facto, from the communion of the church. This step was followed by the election of one pontiff in their place. The election took place on the 15th of June, and fell upon Peter of Candia, known in the papal list by the name of Alexander V. ; but all the decrees and proceedings of this famous council were treated with contempt by the condemned pontiffs, who continued to enjoy the privileges and to perform the functions of the papacy, as if no attempts had been made to remove them from that dignity. Benedict held a council at Perpignan ; and Gregory assembled one near Aquileia, in the district of Friuli. The latter, however, apprehending the resentment of the Venetians, made his escape in a clandestine manner from the territory of Aquileia, arrived at Caieta, where he threw himself upon the protection of Ladislaus, king of Naples, and in 1412 fled thence to Remini.

Thus was the Catholic church divided into three great factions, and its government violently carried on by three contending chiefs, who Joaderi each other with reciprocal maledictions

calumnies, and excommunications. Alexander V., who had been elected pontiff at the council of Pisa, died at Bologna in 1410, and the sixteen cardinals who attended him in that city immediately filled up the vacancy, by choosing as his successor Balthasar Cossa, a Neapolitan destitute of all principles both of religion and probity, who assuming the title of John XXIII. soon afterwards appealed to all Christian princes to appoint a general council, to put a stop to the reigning evils, and to unite the whole church under one head. The choice of the place was left to the emperor, who fixed on Constance. Here the council was opened on the 1st of November, 1414. The pope appeared in person, attended by a great number of cardinals and bishops at this famous council ; which was also honored with the presence of the emperor Sigismund, and of a great number of German princes, and with that of the ambassadors of all the European states, whose monarchs or regents could not be personally present at the decision of this important controversy. After the members of the council had, deliberated, some acknowledged the legality of the council of Pisa ; while the greater number disowned it, decreeing at the same time that John XXIII. as well as Gregory XII. and Benedict XIII. should entirely renounce his claims to the pontificate. Thus was John mortified by disappointment at the moment he expected a triumph ; but what inflicted a still deeper wound on his feelings was the resolution with which they vindicated the privileges of the council. Conscious of their strength, they declared that the

representatives of the church, in general council assembled, were superior to the sovereign pontiff; not only when schism prevailed, but at all other times whatever. This was one of their earliest acts.

Although John was disheartened by this rigorous sentence, he yet prepared to appear before the council ; and there to maintain that he could not be deposed except on the score of heresy. The dissuasion of his friends, however, altered his determination; at their instance, too, he was induced to resign the papal dignity, on condition that his competitors would do the same. A renunciation to this effect was accordingly drawn up by the council, publicly read, and subscribed in due form by himself. Notwithstanding this solemn act, by which he bound himself to God, and to the council, that he would voluntarily give peace to the church by his abdication of the pontificate, and not leave Constance before the council had concluded ;t►► sittings, did he forswear himself, and violate his promise. John's flight from Constance in disguise created some consternation : his friend" in the council maintaining that its functions ceased on the retreat of the pope ; while the majority contended for the superiority of the council over every person, not even excepting the pope, in matters relating to faith, the extirpation of schism, and the general reformation of the church. Negociations ensued between the council and John, from which it appeared that his only object was to gain time ; and that, if nothing favorable to his views occurred, he might engender strife amongst its members, ami

cause its dissolution. The council, however, no way disconcerted, although worn out by his excuses, delays, and equivocations, issued citation after citation for John's appearance before them ; and, at last, reduced him to a perfect submission to its authority, and to an acknowledgment that it could not err ; and that he had no right whatever to the pontifical dignity! Gregory XII. withdrew his claims to the papal chair; while Benedict XIII. was deposed by a solemn decree of the council. After the extinction of this papal triumvirate, Martin V. became the object of their choice ; against whose election, however,

Benedict protested to the latest hour of his life. After the death of Benedict a new competitor was set up for the pontificate by two of the cardinals, under the title of Clement VIII. But he was afterwards prevailed on to resign, and to leave Martin in undisturbed possession. With his resignation the long disgrace and degradation of the church may be said to have terminated. The great purpose of holding the council of Constance was the healing of the schism by which the church had been so long disturbed, and this was happily accomplished. In the fourth and fifth sessions it was solemnly declared that the Roman pontiff was inferior and subject to a general assembly of the universal church. Before the meeting of this council there were great commotions in several parts of Europe, especially in Bohemia, concerning religious matters.

One of the persons principally implicated in these disputes was John Huss, who lived at Prague in the highest reputation, on account of the sanctity of his manners, the purity of his doctrine, and his uncommon erudition and eloquence. A fouler plot does not stain the page of history than the treatment which he received at the hands of the Constantian fathers. Whatever faults may be attributed to this eminent ecclesiastic ††† if manly independence in maintaining his opinions, and ardent zeal in exposing the vices which disgraced the conduct of the _ clergy can be considered faults ††† they vanish before the recollection of the death to which he was consigned. He was deemed a disobedient son of the church by refusing to renounce his eyesight, and to submit his will and judgment without reservation to the will and judgment of the holy mother. In a word, he refused to yield a servile obedience to ecclesiascal despotism, and therefore his doom was sealed. The leading charge against him was, ††† his requiring that the laity as well as the clergy should partake of the communion in both kinds. This it was which led him to the stake, where his friend, Jerome of Prague, shortly after perished, for having maintained the same principles. The safe conduct of the former was of the most unqualified description, Jerome's was not so ; and therefore he had comparatively less cause of complaint, although this can never justify the cruel punishment to which he was subjected. The pretended safe conduct which the council sent him was so loosely worded, that the fathers could not be charged with a direct violation of frith. ' That no violence may be done to you,

we give you by these presents a plenary safe-conduct, saving nevertheless justice, as fair as it is incumbent on us, and as the orthodox faith requires.' Relying, however, on the principle of faith, so

insidiously pledged by them, he inconsiderately repaired to Constance, where he soon paid the forfeit of his rashness in the tragical exhibition spoken of.

Before sentence had been pronounced against John Huss and Jerome of Prague, the famous Wickliff, whose opinions they were supposed to adopt, and who was long since dead, was called from his rest before this ghostly tribunal. On the 4th of May, in the year 1415, a long list of propositions, invidiously culled out of his writings, was examined and condemned, and an order was issued out to commit all his works, together with his bones, to the flames. On the 14th of June following the assembled fathers passed the famous decree which took the cup from the laity in the celebration of the eucharist ; and ordered ‘ that the Lord’s supper should be received by them only in one kind, i. e. the bread, and rigorously prohibited the communion in both kinds. On the 19th of September of this council it was decreed ‘ that the safe-conduct granted to heretics by an emperor, king, or any other secular prince, shall not prevent any ecclesiastical judge from punishing such heretics, even if they come to the place of judgment relying on such safeguard, and would not otherwise come thither.’ After this specimen of the proceedings of the council of Constance, it can-not be a matter of surprise that its members separated without effecting the professed object of their meeting, the reformation of the churcli of Rome. Martin V., who succeeded John, was ,no sooner raised to the pontificate than he employed his authority to elude and frustrate every effort that was made to set this salutary work on foot; and made it appear most evidently by the laws he enacted, that nothing was more foreign from his intention than the reformation of the clergy, and the restoration of the church to its primitive purity.

Thus this famous council, after sitting three years and six months, was dissolved on the 22nd of April, 1418, and the members postponed to a future assembly of the same kind, which was to be summoned five years after this period, their design of purifying the church. But not five years only, but almost thirteen, elapsed without the promised meeting. The remonstrances, however, of those whose zeal for the reformation of the church interested them in this event, prevailed at length over the pretexts and stratagems that were employed to put it off; and Martin summoned a council to meet at Ilavia, whence it was removed to Sienne. This council had for its object the union of the Greek and Latin churches, and the reformation of the church, both in its head and members. One of the few decrees made by this synod was directed against the Hussites, WicklifIStes, and other dissentients from the church of Rome ; inasmuch as it granted indulgencies to such as extirpated heretics ; all exemptions and safe-conducts, by what-soˆver

persons vouchsafed, to the contrary not

withstanding. After some other business of trifling import was transacted, Martin contrived to have the assembly transferred to Basil.

This event occurred in the year 1431, and may be said to have been the only transaction of consequence in which he was engaged before his death, with the exception of the negociation which he opened with the Greek emperor and the patriarch of Constantinople, in order to put an end to existing differences between the t\vo churches. The pontiff did not live to be a witness of the proceedings of this assembly, being carried off by a sudden death on the 21st of February, 1431, just about the time when the council was to meet. He was immediately succeeded by Gabriel Condolmerio, a native of Venice, and bishop of Sienna, who is known in the papal list by the title of Eugenius IV. This pontiff approved all the measures of his predecessor, in relation to the assembling of the council of Basil, which was accordingly opened on the 23rd of July, 1431, under the superintendence of cardinal Julian Caesarini, who performed the functions of president in the place of Eugenius. It was now manifest that the assembled fathers were in earnest, and firmly resolved to answer the end and purpose of their meeting; Eugenius, therefore, much alarmed at the prospect of a Reformation, determined to dissolve the council.

The council, however, proceeded vigorously with their measures of reform. On the 25th of March, 1436, a confession of faith was read, which every pontiff was to subscribe on the day of his election ; it was voted that the number of cardinals should be reduced to twenty-four ; and the papal impositions, called expectatives, reservations, and provisions, were annulled. These measures, with others of a like nature, provoked Eugenius to the highest degree, and induced him to form a design either of removing this troublesome and enterprising council into Italy, or of setting up a new council in opposition to it, which might fix bounds to its zeal for the reformation of the church ; and this occasioned a warm and violent contest. The council summoned Eugenius to appear at Basil on the 26th day of July, 1437,

in order to give an account of his conduct ; but the pontiff, instead of complying with the requisition, issued a decree by which he pretended to dissolve it, and to assemble another at Ferrara. This, indeed, was treated with the utmost contempt by the council, which, with the consent of the emperor, the king of France, and several other princes, continued its deliberations at Basil, and on the 28th of September, in the same year, pronounced a sentence of contumacy against the rebellious pontiff: but in the year 1438 Eugenius in person opened the council which he had summoned to meet at Ferrara, and at the second session thundered out an excommunication in return against the fathers assembled at Basil. In the mean time the latter, after declaring the superiority of councils over the pope to be an article of the Catholic faith, proceeded to depose Eugenius from the papacy, as disobedient to the commands of the church, and an obstinate heretic, and raised to the papal throne Amadeus, duke of

Savoy, who assumed the name of Felix V. Trig election was the occasion of the revival of the western schism, and it was at this time even more extensive than before, as the flame was kindled not only between rival pontiffs, but also between the contending councils of Basil and Florence. The rival popes and rival councils anathematised each other, laying claim to the true apostolic powers. Eugenius was supported by France, Italy, Spain, Portugal, Hungary, and England: Felix by the people of Savoy, the Swiss, and the dukas of Bavaria and Austria. The German princes chose to preserve a neutrality till the year 1447, when they declared for Eugenius. In the midst of the public rejoicings, on this occasion, he died in his sixty-fourth year. On his death Thomas de Sarzano, bishop of Bologna, was elevated to the pontificate, under the denomination of Nicholas V., under whom the European princes, and more especially the king of France, exerted their warmest endeavours to restore tranquillity, and their efforts were crowned with success. In 1449 Felix V. resigned the papal chair, and returned to his delightful hermitage at Rissalle, while the fathers of the council of Basil assembled at Lausanne ratified his voluntary abdication, and, by a solemn decree, ordered the universal church to submit to the jurisdiction of Nicholas as their pontiff. On the other hand Nicholas proclaimed this treaty of peace with great pomp on the 18th of June, in the same year, and set the seal of his approbation and authority to the acts and decrees of the council of Basil. This pontiff distinguished himself in an extraordinary manner, by his love of learning, and by his ardent zeal for, the propagation of the arts and sciences ; what was still more laudable, he was remarkable for his moderation, and for the meek and pacific spirit that discovered itself

in all his conduct and actions. In the year 1453 Nicholas received intelligence of the capture of Constantinople by Mahomet II. ; and some historians mention this fact as the greatest affliction that befel the pope, but Gibbon thinks differently. ‘ The Roman pontiff,’ says he, ‘ was exasperated by the falsehood or obstinacy of the Greeks. Instead of employing in their favor the arms and treasures of Italy, Nicholas V. had foretold their approaching ruin, and his honor seemed engaged in the accomplishment of his prophecy. Perhaps he was softened by the last extremity of their distress ; but his compassion was tardy, his efforts were faint and unavailing, and Constantinople had fallen before the squadrons of Genoa and Venice could sail from their harbours.’ From this time he spent the remainder of his pontificate in endeavours to allay the civil wars and commotions which took place in Italy ; to reconcile the Christian princes who were then at war with one another ; and to unite them against the enemies of the Christian church. In his efforts he was completely unsuccessful, and the disappointment is said to have hastened his death, which happened in 1455, after he had completed the eighth year of his pontificate.

.Eneas Sylvius Piccolomini, who succeeded in 1453 to the pon*ificate, under the title of Pius II., rendered his name illustrious, not only by

his extensive genius, and the important transactions that were carried on during his administration, but also by the various and useful productions with which he enriched the republic of letters. He, however, deplored the mistaken law which compelled the clergy to celibacy, and the intolerable consequences to human happiness and virtue arising from its enactment. The genius and learning of ./Eneas Sylvius would have shed a lustre over the age which gave him birth, had they continued tp be employed in the sphere in which they had at first acquired for him celebrity. In his character of ambassador from the Roman see to different potentates, he acquired the credit of a diplomatist ; but it was by his advocacy of the rights and privileges of general councils, and his opposition to papal encroachment and usurpation that he rendered his name illustrious. As secretary to the

council of Basil, he was the boast of literature ; but, as if he had changed his nature with his name, he disgraced it as Pius II. No longer was his voice raised to elevate the council above the pope, but to recommend blind submission to his authority. It would appear that he gloried in his inconsistency, since he even went so far as to procure a partial repeal of the Pragmatic sanction from the French monarch, which had been solely instituted with the design of curtailing the power of the pope within the Gallican territory ; and published, in his pontifical capacity, a solemn retractation in the year 1463 of his defence of the council of Basil.

To Pius succeeded Paul II., of whose pontificate history relates nothing worthy of record. His successor Sixtus IV. was the instigator of a conspiracy to assassinate Giuliano and Lorenzo de Medici, and to change the government of Florence. The assassination was to take place in the principal church, where a cardinal legate was present, and the signal for it was to be the elevation of the host : Giuliano was killed on the spot ; Lorenzo was wounded by two priests, who had undertaken his murder, but escaped ; the archbishop of Pisa, who in the mean time had attempted to overpower the magistrates and possess himself of the seat of government, failed in his attempt, and was hung in his pontifical robes from one of the windows of the palace. For this act of justice Sixtus excommunicated Lorenzo, and the magistrates of Florence. The bull issued on this occasion has been justly designated one of the most extraordinary specimens of priestly arrogance, that ever insulted the common sense of mankind. Alexander VI., a Spaniard by birth, whose name was Roderic Borgia, succeeded in 1492 to the papal chair. The life and actions of this man show that there was a Nero among the popes, as well as among the emperors. The crimes and enormities that history has imputed to him exhibit him as not only destitute of religious and virtuous principles, but even regardless of decency. By Vanazza, a Roman lady, with whom he had continued an illicit connexion for many years, he had five children : his second son was Caesar Borgia, a monster of debauchery and cruelty, who is said to have quarrelled with his elder brother for the favors of his sister Lucretia, and to have killed him and thrown his

body into the Tiber. Notwithstanding his infamous character he was the favorite of his rather, who trampled with contempt on every obstacle which the demands of justice, the dictates of reason, and the remonstrances of religion laid in his way, in order to aggrandise his family. The profligate career of this execrable hypocrite and tyrant

was continued till the year 1503, when the prison which he and his son Caesar had prepared for others, and particularly for Adrian, a wealthy cardinal, who stood in the way of their avarice and ambition, by a happy mistake, terminated his own days. See BORGIA.

On the death of Alexander, Pius III. occupied the papal throne for only one month ; at whose decease the vacant chair was obtained, through fraud and bribery, by Julian De la Ro-vere, who assumed the denomination of Julius II. To the odious list of vices with which he dishonored the pontificate we may add the most extravagant and frenetic passion for war and bloodshed. He began his military enterprises by entering into a war with the Venetians, after having strengthened his cause by an alliance with the emperor and the king of France. His whole pontificate, in short, was one continued scene of military tumult ; nor did he ever suffer Europe to enjoy a moment's tranquillity as long as he lived; fortunately death carried off this audacious pontiff in 1512, in the midst of his ambitious and vindictive projects.

Leo X., of the family of Medicis, ascended the papal throne after the death of Julius. He was a protector of men of learning, and was himself learned as far as the darkness of the age would admit; but wholly indifferent to religion : his time being divided between conversation with men of letters, and the pursuit of pleasure. He had an invincible aversion, we are told, to whatever was accompanied with solitude and care, and was remarkable for his prodigality. He did not, however, lose sight of the grand object which the generality of his predecessors had so much at heart ××× that of promoting the opulence of the Roman see ; for he took the utmost care that nothing should be transacted in the Lateran council (which Julius had assembled and left sitting) that had the least tendency to favor the reformation of the church. He went still farther ; and in a conference which he had with Francis I., king of France, at Bologna, engaged that monarch to abrogate the Pragmatic sanction which had been so long odious to the popes, and to substitute, in its place, another body of laws under the title of the Concordat.

It was in the reign of Leo X.that those events transpired which form an era in the history of the Romish church, and indeed in the annals of the world, resulting in the Protestant REFORMATION. For some time there had been a season of comparative tranquillity, and the pontiffs thought themselves thoroughly confirmed in their assumption of power. We must not, however, conclude from this apparent tranquillity and security, that their measures were unanimously applauded, or that their chains were worn without reluctance ; for,

not only private persons, but also the most powerful princes and sovereign states exclaimed loudly against the despotic dominion

of Rome ; the arrogance, tyranny, and extortion of her legates, the unbridled licentiousness and enormous crimes of the clergy and monks of all denominations, the inordinate severity and partiality of the papal laws; and demanded pubiicly, as their ancestors had done before them, a reformation of the church in its head and members. But these complaints and demands had not hitherto been carried so far as to produce any good effect ; since they came from persons who did not entertain the least doubt about the supreme authority of the pope, and who, therefore, instead of attempting, themselves, to bring about that reformation which was so ardently-desired, remained entirely inactive, and looked for redress to the court of Rome, or a general council. If any thing seemed likely to destroy the gloomy empire of superstition, and to alarm the security of the lordly pontiffs , it was the restoration of learning in Europe, and the number of men of genius that suddenly arose, under the benign influence of that revolution. The efforts of man cannot eternally prevail against the course of nature. A commerce with distant countries, and the knowledge of a new world, had disposed men to receive new ideas. The art of printing, uniting with the invention of making paper from rags, incalculable advantages to the human race, and the highest which the mind ever received from the hand of industry, multiplied knowledge to infinity, and prevented its longer concealment. The time, therefore, was now arrived, when the papal power was about to receive a shock which it has not been able to, and never will, recover. Having devoted the article REFORMATION to the details of this important era, we must only glance at them here. The profusion of Leo had rendered it necessary to devise means for replenishing his exhausted treasury, and one of these was the sale of indulgences. The commissioners appointed for this traffic exaggerated in Germany the efficacy of their wares, until Luther, a friar of Wittemberg, warmly protested against this abuse, and published a set of propositions in which he called in question the authority of the pope to remit sins. Luther was of humble origin ; his talents alone had raised him to the situation which he filled as professor of philosophy and theology at the university of Wittemberg. Supported, however, by indefatigable zeal, and an enlarged acquaintance with the Holy Scriptures, the

fathers, and ecclesiastical antiquities, he overwhelmed the scholastics in every encounter, and covered their science with confusion and ridicule. In his individual character, which had such influence on the reformation, was seen an irresistible union of energy and uprightness. Ardent and calm ; high spirited, and at the same time humble ; irritable and warm in his language when provoked by injurious treatment; mild and inimical to every species of violence in actions ; jovial, open, of ready wit, and even a pleasant companion of the great ; studious, sober, and a stoic in himself; courage-ous and disinterested, he exposed himself with tranquillity to every risk, in support of what he believed to be the truth. Such a man must have been filled with indignation at the approach of the shameless Tetzel. At length, at the express desire of the emperor Maximilian, Le►► summoned Luther to appear before the court of Rome. Permission was, however, subsequently granted for the cardinal of Gaeta to hear his defence at Augsburg. Nothing satisfactory was determined ; and the pope, in 1518, published a bull, asserting his authority to grant indulgences, which would avail both the living and the dead in purgatoiy. Upon this the reformer appealed to a general council, and thus open war was declared, in which the abettors of Luther appeared with a strength little calculated upon.

And thus began the Reformation. It found a multitude of minds prepared to receive it, and many enlightened and eloquent men disposed to become its apostles. The learned and moderate Melancthon and Carlostadt, both of \Vittem-berg; in Switzerland Zuing'ius; and in France Calvin, all contributed to the great work. Leo X. engaged all the force of the pen, as well as of civil power, to impede its progress ; but in the midst of these efforts he was seized with an illness, which at first was considered as a slight cold only, but which put an end to his life in a few days. This event happened on the 1st of December, 1521, when Leo was in the forty-sixth year of his age, and the ninth of his pontificate. Upon his death the conclave was divided about the choice of a successor. The younger members were attached to Julio cardinal de Medici, the nephew of Leo ; but the old cardinals were averse from choosing a pontiff out of the powerful family of the Medici, and yet they were not agreed in their views. By a manoeuvre, which was merely designed to gain time, the party o Julio voted for cardinal Adrian in the preparatory scrutiny. The other party closed with them, and thus a stranger to Italy, and a man unqualified for the office, was elected, no less to their own surprise than to the astonishment of Eu-rope. Whilst he demanded a zealous execution of the imperial edict against Luther and his followers, Adrian declared a disposition to exercise his spiritual authority for the reformation of the

church ; but notwithstanding the just claims on respedt which resulted from the pontiff's general conduct, he was very unpopular. He resigned his life and the anxieties of his elevated station in December, 1523, after he had possessed the papal dignity only one year and ten months, and was succeeded by cardinal de Medici, under the name of Clement VII. High expectations were formed of a pope, whose great talents and long experience in business seemed to qualify him no less for defending the spiritual interests of the church, than for conducting its political operations with the prudence requisite at such a difficult juncture ; and who, besides these advantages, had in his hands the government of Florence, and the wealth of the family of Medici. But, Clement having excited the anger of Charles V., the general of the imperial army, in conjunction with his allies, determined to attack and plunder Rome. The resolution was bold, and the execution of it no less rapid. The mi-sery and horror of the scene that followed may be more easily conceived than described. The pillage and cruelty that were exercised on this, occasion, exceeded, it is said, those of the Hun.-.,

Vandals, or Goths, in the fifth and sixth centuries. The booty, in ready money alone, amounted to 1,000,000 of ducats. Clement, who had shut himself up in the castle of St. Angelo, being deprived of every resource, ?md reduced to such extremity of famine as to feed on asses' flesh, was obliged to capitulate on such conditions as the conquerors were pleased to prescribe. He agreed to pay 400,000 ducats to the army ; to surrender to the emperor all the places of strength belonging to the church ; and, besides giving hostages, remaining a prisoner himself until the chief articles were performed. At length, however, the progress of the confederates in Italy and other political considerations, induced the emperor to concert measures for setting the pope at liberty, on consideration of his allowing 100,000 crowns for the use of the army, paying the same sum at the distance of a fortnight, and at the end of three months 150,000 more.

During a period of six years, Henry VIII. of England had been suing the court of Rome for a divorce from Catharine of Arragon ; but the

pope negociated, promised, retracted, and concluded nothing. Cranmer's sentence at length annulled the king's marriage with Catharine ; her daughter was declared illegitimate, and Ann Boleyn acknowledged queen of England. Clement, who had already seen so many provinces and kingdoms revolt from the holy see, be-came apprehensive lest England should follow their example, and determined to give Henry such satisfaction as might still retain him within the bosom of the church. But the violence of the cardinals, devoted to the emperor, hurried him with a fatal precipitation to issue a bull rescinding Cranmer's sentence, enforcing Henry's marriage with Catharine, and declaring him excommunicated, if, within a time specified, he did not return to her. Henry was enraged ; the resistance he met with in the accomplishment of his wishes from the court of Rome led him to question its jurisdiction ; and the more this was examined the weaker it appeared. From this to question its discipline and doctrines was only another step, and the nation was prepared for it. An act of parliament was therefore passed, abolishing the papal power and jurisdiction in England. By another act the king was declared supreme head of the church, and all the authority of which the popes were deprived was vested in him.

The successes that had attended the allies in their opposition to Clement inspired with new vigour and resolution all the friends of the reformation. Soon after his sentence on Henry, Clement fell into a languishing distemper, which closed his pontificate, after a duration of ten years and ten moi.ths, on the 25th of September, 1 534. He was succeeded by Alexander Farnese, who assumed the name of Paul III., and whose first object was to crush the progress of the reformation. He was, like his predecessor, enraged at the innovations in Germany, and equally averse from any scheme for reform, either in the doctrines of the church, or the abuses of the pa-pal court. In 1 5H8 he issued his bull of excommunication against Henry VIII. of England, and required all Christian princes, whatever had been their oaths, to render no assistance to Henry.

The year 1540 was rendered memorable by the establishment of the order of the Jesuits. These uew soldiers of the church did every thing which could be hoped for from human powers, directed by the most profound zeal, prudence, perseverance, and genius. They soon obtained possession of courts, of nations, of confessions, of pupils, of the education of youth, of missions. Nothing appeared to them impossible in extending the dominion of the holy see to places where it did not exist, or in consolidating it where it was maintained.

Represented as ambitious, fo-menters of trouble, corrupt men, and even as rebels, by their adversaries, they opposed the stoical severity of their lives, their zeal, and services to the Roman see, and their studious austerity, to these accusations. In a few years the society established itself in every Catholic country ; and, acquiring prodigious wealth, soon be-came the confessors of almost every Catholic prince, and the spiritual guides of nearly every person of rank or influence.

The church and court of Rome, since the remarkable period when so many kingdoms and provinces withdrew from their jurisdiction, have perhaps derived more influence and support from the labours of this single order than from all their other emissaries and ministers. About this time the pope, finding it impossible to avoid any longer calling a general council, sent John Mo-rone, bishop of Modena, to announce to the diet of the empire at Spires his determination of assembling such a council, and published a bull, nominating three cardinals to preside as his legates. These legates repaired to Trent, on the 1st of November, 1542, where they remained several months ; but, as no other persons appeared there except a few prelates from the ecclesiastical states, the pope recalled them and prorogued the council. On the 13th of December, 1545, the council was again opened at Trent ; though as yet only twenty-five bishops had arrived, and these were Italians or Spaniards. The council showed great eagerness in condemning the opinions of the Protestants ; but it was soon after dissolved. In this council, protracted through many years, the church of Rome increased, in the view of Protestants, instead of diminishing, every acknowledged evil. Nothing was altered ; no error retracted ; no compliance with the popular demand for reformation was made. ‘ This was the issue and aim of the Trent reformation,’ remarks Richerus, ‘ that no respect should be had’ to truth, but to show and outward pomp only ; and that all things should be referred to the splendor and profit of the Ro-man court.’

As the pope advanced in years he grew more strongly attached to his family, and more jealous of his authority ; but, in the midst of the schemes for the aggrandisement of the latter, he died A. D. 1540, in the eighty-second year of his age, and after he had held the Roman see more than fifteen years. He was succeeded by Julius III., formerly known as John Maria Del Monte. One of his first acts gave great offence to every decent person ; he conferred a cardinal’s hat, with ample ecclesiastical revenues, upon a youth of sixteen, born of obscure parents, and known

by the name of Ape, from his having been entrusted with the care of an animal of that species in the cardinal Del Monte's family. When Julius was reproached by the cardinals for introducing such an unworthy member into the sacred college, a person who had neither learning, nor virtue, nor merit of any kind, he imprudently replied, by asking them, ' What virtue or merit they had found in him that could induce them to place him (Julius) in the papal chair ? ' Having also one day ordered a cold peacock for his supper, and not perceiving it on the table, he expressed his anger in a most horrible blasphemy. One of his cardinals remonstrating with his holiness on the violence of his passion, his reply was, ' If God could be so very angry about an apple, as to turn our first father out of paradise, why should it not be lawful for me, who am his vicar, to be in a passion for a peacock ? ' The subsequent conduct of Julius corresponded with his shameless behaviour at the commencement of his pontificate; and he died, lamented by none, in 1555, having held the papal see about five years. His successor was Marcellus II., who died within a month of his consecration.

Cardinal Caraffa, who took the name of Paul IV., was the next occupant of the papal throne. The Roman courtiers, from the known austerity of his character, anticipated a severe and violent pontificate. Paul, however, began his government by ordering his coronation to be conducted with greater pomp and ceremony than usual, and, when he was asked in what manner he chose to live, he haughtily replied, ' as becomes a great prince.' He used great pomp in his first consis-tory, when he allowed audience to the ambassadors of Mary, queen of England, who came to tender her obedience to the papal see, on which occasion he gave the title of a kingdom to Ireland. He maintained, with undiminished rigor, the pretensions of the church of Rome. When Sir Edward Rarne notified the accession of Elizabeth to this pope, he answered that England was held in fee of the apostolic see ??? that the queen could not succeed, being illegitimate ??? and that she was presumptuous, in assuming the crown; but that if she renounced her pretensions and, submitted her case entirely to him, he would do every thing, which, without his consent, could not be done consistently. ' He never talked,' says Father Paul, ' with ambassadors,

without thundering in their ears that he was superior to all princes ; that he would admit none of them on a footing of familiarity with himself; that it was in his power to change kingdoms, and that he was the successor of those who deposed kings and emperors.' Paul finally perfectly organized the inquisition.

Shortly after the pope was very desirous of convincing the world that he had sincerely at heart a correction of abuses ; and with this view ordered all bishops to proceed to their own dioceses, and all who had embraced a monastic life to return to their monasteries. It was now almost too late, however, to act upon a new course of practice, and Paul was Mnable to re-medy these evils, as he died in August 1559 in the eighty-fourth year of his age, after a pontifi-

cate of little more than four years. Pius IV", whose original name was John Angelo Di Me-dici, was chosen to succeed Paul, after a delay of more than four months. Soon after his accession he despatched a nuncio to England with secre. instructions and a conciliatory letter ; offering tc annul the sentence against the marriage of Elizabeth's mother, to allow the use of the cup to the English, and to confirm the English liturgy : but Elizabeth had already decided on her course; and the nuncio was informed that he could not be permitted to set foot in England. Pius now issued a bull for reassembling of the council at Trent, which met in January 1562. Attempts were soon made to abridge the authority of the pope, which created in his holiness perpetual anxiety, and he was on the point of suddenly dissolving the assembly. In 1563 it was brought to an end, but not until decrees were passed, designed as an acknowledgment of the subordination of the council to the holy see. When information of the dissolution of the council was brought to Pius, he received it with great joy, and ordained a solemn thanksgiving on the occasion ; and, in a very short time, he published a bull of confirmation, requiring all the prelates and princes to receive and enforce the decrees of the council, prohibiting persons from writing any explication or commentary of them ; and commanding the catholics 'every where to have recourse, in all doubtful cases, to the apostolic see.

Pius IV. died in 1565, in the sixty-seventh year of his age, and after a pontificate of nearly six years. The news of the fact was received, it is said, with great joy by the Roman people on account of the severity and oppression of his goverment. His successor was cardinal Ghislieri, who took the title of Pius V., early displayed great zeal and diligence in promoting a reformation in the manner and morals of all ranks. He

exhibited, however, a furious zeal against the Protestants, by persecuting them with the same savage severity which rendered him odious in his former character of inquisitor. He also incited Philip II. to attempt by wa% and massacre their extermination ; and induced him to intrust the expedition designed for this purpose to the ferocious duke of Alva. In 1568 Pius published his famous bull, entitled In Caena Domini, which it was usual to publish at Rome on Maundy Thursday every year, till it was suppressed by pope Clement XIV. By this bull anathemas were pronounced against such persons as should appeal to general councils from the decrees of the popes ; and against those princes who should impose restraints on ecclesiastical jurisdiction or exact contributions from the clergy. It was, however, never received in any kingdom out of Italy. He also issued a bull of excommunication against Elizabeth, queen of England, absolving her subjects from their allegiance. ‘ We declare her, out of the fulness of the apostolic power, to be a heretic, and a favorer of heretics : he said, we moreover declare her to be deprived of her pretended title to the kingdom aforesaid, and of all dominion, dignity, and privilege whatsoever; and also the nobility, subjects, and peop.e of the said kingdom, and all who have in

any sort sworn unto her, to be for ever absolved from every such oath, and all manner of duty, of dominion, allegiance, and obedience. We also command and interdict all and every tht noblemen, subjects, and people aforesaid that they presume not to obey her, or her monitions, mandates, and laws ; and those who shall do to the contrary we do likewise anathematize.’ (See Butler’s Mem. 1. 187). Pius was carried off by an attack of the stone in 1572, when he was about the age of sixty-eight, after a pontificate of little more than six years.

Gregory XIII. was unanimously elected his successor. It was during this pontificate that the massacre of the Protestants at Paris took place. See REFORMATION : 60,000 Protestants, according to Sully, fell in this awful massacre ; and that it did not extend to the extermination of every individual, was, under divine providence, to be

attributed to the caution of some who left the capital in time, the intrepidity of others, and the generous feeling of many of the Catholic officers, who refused to obey commands which they said belonged rather to executioners than to soldiers. This deed of blood was as assuredly approved by the pope as it was executed by the mandate of his priests. It was celebrated as an act of religion at Rome, and justified as a holy deed by the partisans of Rome. The solemn thanksgiving made was accompanied with a jubilee to all Christendom; for which one of the reasons was that they should thank God for the slaughter of the enemies of the church lately executed in France. In the oration of Muretus, pronounced in the presence of the supreme pontiff, Gregory XIII., that memorable night, in which this accursed slaughter was committed, is blessed. The king, the queen, and the royal family are extolled for their share in the transaction, and the pope himself is styled most blessed Father for going in procession, to return thanks to God and St. Louis for the welcome news when brought to him. After the death of Gregory, in 1585, the papal chair was filled by Sixtus V. (Felix Pe-retti Di Montalto), who in pride, magnificence, intrepedity, strength of mind, and in other great virtues and vices, surpassed most of his predecessors. It had been usual, for the sake of acquiring popularity, on the election of a new pope, to set the imprisoned criminals at liberty ; but the first act of Sixtus was to order four persons to be hanged, on whom were found, a few days before, prohibited weapons. This system of rigor he pursued with the most inexorable severity, never, in a single instance, pardoning a criminal. Instead of censuring the assassination of Henry III., King of Navarre, by the do-minican Clement, Sixtus commended and approved of the action in a long, public, and official oration. That a monk had slain a king in the midst of his people he considered ‘ Ra-rum insigne et memorabile facinus. Facinus non sine Dei optimi maxitni particular! providentia, et dispositione.’ And then he goes on to say that it was not only done with the special providence and appointment of God, but by the suggestions and assistance of his Holy Spirit ; a greater work than Judith’s slaying Holofernes. In 1588 Philip equipped his invincible armada;

and Sixtus seconded the enterprise with all his spiritual authority. He renewed the bulls of Pius and Gregory against Elizabeth ; and once more excommunicated and absolved her subjects from their allegiance. This celebrated pontiff died in August 1590, having rejgned five years and four months. The rigor of his administration, his improvement of the city of Rome, the vast treasures he accumulated, his foundation of the Vatican library, and his fixing the

num-ber of cardinals at seventy, have all contributed to gain him immortal reputation, and have thrown great splendor about his name. Though we cannot look upon him as the model of a great prince, and much less of an irreproachable prelate, yet was his life and administration distinguished by many noble acts, particularly in his encouragement of sacred literature. In 1590 Six-tus published an edition of the Latin Vulgate, which by a bull he commanded should be received every where, and in all cases for true, legitimate, authentic, and undoubted ; and that all future editions should be made conformable to this, not the least syllable being changed, added, or omitted, on pain of the greater excommunication. Notwithstanding this denunciation, however, Clement VIII., not very long after, revoked the decree of Sixtus, suppressed his edition, and published another of his own, in which he made more than 2000 corrections.

In 1592 the papal chair was filled by Hippo-lito Aldobrandini, under the name of Clement VIII. Clement yielded to none of his predecessors in zeal for the extension of the Romish faith ; in this spirit he prepared the oath to be taken by the bishops and archbishops, which contains the words ‘jura, honores, privilegia, et auctoritatem, Rom. ecclesis, domini nostri Papae et successorum, conservare, defendere, au-gere, promovere curatio ; Hereticos, schismati-cos, et rebelles eidem domini nostro, pro posse persequar.’ (Pont. Rom. Clem. VIII. Antwerp 1627, p. 59). In 1600 Clement issued a bull to prevent James I. from ascending the throne of England, declaring that ‘ when it should happen that that miserable woman (queen Elizabeth) should die, they (her subjects) should admit none to the crown, though ever so nearly allied to it by blood, except they would not only tolerate the Catholic religion, but promote it to the utmost of their power, and would, according to ancient custom, undertake upon oath to perform the same.’ He was succeeded in the year 1605 by Leo XI. of the house of Medicis, who died a few weeks after his election, and thus left the papal chair open to Camillo Borghese, by whom it was filled under the denomination of Paul V. No one of his predecessors exceeded this pontiff in zeal for advancing the ecclesiastical authority, or showed himself more violent in endeavouring to execute his vengeance upon such as encroached upon his prerogative. Paul died at Rome in January 1621, in the sixty-ninth year of his ape, after a pontificate of nearly sixteen years. Gregory XV., who was raised to the pontificate in 1621, seemed to be of a milder disposition, though he was not less defective in equity and clemency towards those who had separated themselve> from the church. This pope instituted the f<u>

mous college, ‘De propaganda fide;’ and endowed it with ample revenues for the mainten-unce of persons to be educated for foreign mission. Urban VIII., who previously bore the name of Maffei Barberini, and who, by his interest in the conclave, succeeded Gregory in the papal throne in 1623, was a man of letters, an eloquent writer, an elegant poet, and a generous and munificent patron of learning and genius; but nothing can equal the rigor and barbarity with which he treated all who bore the name of Protestants. The Bull, In caena Domini, written in 1610 by Paul V., and promulgated by Urban in 1627, contains the whole elixir of ultramon-tane orthodoxy. It excommunicates heretics, schismatics, &c. ; all who dare to appeal to a future council against the bulls and briefs of the pope ; all princes who dare to levy taxes without the permission of the pope; those who make treaties of alliance with Turks or heretics; and those who complain to the secular judges against the wrongs and injuries received from the court of Rome.

In 1643 he issued a bull of deposition against Charles I. in Ireland : where, two years before, not fewer than 100,000 Protestants were massacred, and to those who had joined the rebellion of 1641 the same holy pontiff granted a plenary indulgence. In this dreadful massacre, as in that of France on St. Bartholomew’s day, no ties of nature or of friendship could prevent the papists from imbruing their hands in the blood of their nearest Protestant relations. He may however be considered as a good and equitable ruler, compared with Innocent X., of the family of Pam-phili, who succeeded him in the year 1644. This unworthy pontiff, to a profound ignorance, joined the most shameful indolence and the most notorious profligacy ; for he abandoned his person, his dignity, the administration of his temporal affairs, and the government of the church, to the disposal of Donna Olympia, a woman of corrupt morals, insatiable avarice, and boundless ambition. He was succeeded in the papal chair, in the year 1655, by Fabio Chigi, who assumed the title of Alexander VII., and who, though less odious than his predecessor, nevertheless possessed all the pernicious qualities that are necessary to constitute a true pope, and without which the papal jurisdiction and majesty cannot be maintained. Benedict Odeschalchi, who is known in the list of pontiffs

by the denomination of Innocent XL, and was raised to that high dignity in the year 1677, began his high career with abolishing abuses, and suppressing many gross superstitions then prevailing in the church of Rome. This respectable pontiff acquired a very high and permanent reputation by the austerity of his morals, his uncommon courage and resolution, his dislike of the grosser superstitions that reigned in the Romish church, his attempts to reform the manners of the clergy, and to abolish a number of those fictions and frauds that dishonor their ministry, and also by other solid and eminent virtues. He had a contest with the French king about the right of disposing of benefices and church lands, claimed by that monarch, and confirmed to him by an assembly of the clergy, which nearly terminated in a

separation of the Gallican church from th►► Roman communion. It was on this occasion that Louis summoned the famous assembly of bishops which met at Paris in the year 1682, and drew up the four celebrated propositions declaring the power of the pope to be merely spiritual and inferior to that of a general council, and maintaining the inviolability of the rules, institutions, and observances of the Gallicau church. These propositions were to the following purport : ►►► 1. That neither St. Peter nor his successors have received from God any power to interfere, directly or indirectly, in what concerns the temporal interest of princes and sovereign states ; that kings and princes cannot be deposed by ecclesiastical authority, nor their subjects freed from the sacred obligation of fidelity and allegiance, by the power of the church or the bulls of the Roman pontiff. 2. That the decrees of the council of Constance, which maintained the authority of general councils as superior to that of the popes in spiritual matters, are approved and adopted by the Gallican church. 3. That the rules, customs, institutions, and observances which have been received in the Gallican church are to be preserved inviolable. 4. That the decisions of the pope, in points of faith, are not infallible, unless they be attended with the consent of the church.

Innocent died in 1689, having presided over the Roman see twelve years and a half. During this pontificate Louis XIV. was induced to revoke the edict of Nantz. On occasion of this disgraceful act Bossuet breaks out ►►► ‘ Let me indulge the movement of my heart, and dwell on the piety of our monarch ; let me address this new Constantine, this new Theodosius, this other Marcian, this other Charlemagne, in the words with which the 630 fathers expressed their sentiments to the emperor at the council of Chalcedon : ►►► ‘ You

have strengthened the faith, you have exterminated the heretics ; it is the most meritorious act of your reign. King of Heaven ! preserve the king of the earth ! It is the ardent de-sire of the church ; it is the ardent desire of the assembly, of her pastors, and of her bishops/ Innocent XII., a man of uncommon merit and eminent talents, whose name was Pignatelli, and who, in the year 1691, succeeded to the papal chair, was unwearied in his endeavours to reform (lie corrupt manners of the clergy, though he found that the entire accomplishment of the Herculean task was a consummation which all his prudence and resolution were unable to effect. He was anxiously devoted to the interests of the poor, arid the wealth which many of his predecessors had been accustomed to accumulate, o'r to bestow on worthless relatives, he devoted to the public benefit, employing it in the erection of hospitals and other useful institutions. Innocent died in the year 1700 at the advanced age of eighty-five, after presiding over the church about nine years. The corruptions that had been complained of in preceding ages, both in the higher and inferior orders of the Romish clergy, were rather increased than diminished during this century, as the most impartial writers of that communion candidly confess. The bishops were rarely indebted for their elevation to their eminent learning, or

mperior merit. The intercession of potent patrons, services rendered to men in power, connexions of blood, and simoniacal practices were, generally speaking, the steps to preferment ; and, what was still more deplorable, their promotion was sometimes owing to their vices. Their lives were such as might be expected from persons who had risen in the church by such unseemly means ; for had they been obliged, by their profession, to give public examples of those rices winch the holy laws of the Gospel so solemnly and expressly condemn, instead of exhibiting 'patterns of sanctity and virtue to their flock, they could not have conducted themselves otherwise than they did. Some indeed there were who, sensible of the obligations of their profession,

displayed a truly Christian zeal in administering useful instruction, and exhibiting pious examples to their flock, and exerting their utmost vigor and activity in opposing the vices of the sacred order in particular, and the licentiousness of the times in general. But these rare patrons of virtue and piety were either ruined by the resentment and stratagems of their envious and exasperated brethren ; or were left in obscurity, without that encouragement and support which were requisite to enable them to execute effectually their pious and laudable purposes.

Clement XI., originally John Francis Albani, was chosen to succeed Innocent in the pontifical office. He redressed some grievances, discountenanced vice and criminality of every kind, performed acts of beneficence, gave an example of devotional regularity, and filled vacant offices and preferments with men of merit. But a revival of the contest between the Jansenists and the Jesuits had for some time conspired with politics and wars to disturb the tranquillity of Rome. For the more effectual repression of Jansenism, a new apostolical constitution was issued in the year 1705, condemning such errors with menaces of papal indignation. The anti-Jansenist ordinance, as it commenced with the terms unigenitus Dei filius, was quickly known throughout Christendom by the appellation of the bull ‘ unigenitus. ‘ This bull put an end to all hope of a reconciliation between the church of Rome and the Protestants, as in most of those points which had occasioned the separation it represented the doctrines of that church in the very same light in which they had been regarded by the first reformers. This bull is also known by the name of the constitution.

The dissensions and tumults excited in France by this edict were violent in the highest degree. A considerable number of bishops, and a large oody composed of persons eminently distinguished by their piety and erudition, both among the clergy and laity, appealed to a general council. It was more particularly opposed by the cardinal de Noailles, archbishop of Paris, who, equally unmoved by the authority of the pontiff and by the resentment and indignation of Louis XIV., made a noble stand against the despotic proceedings of the court of Rome. The issue of this famous contest was favorable to the bull, which was at length rendered valid by the authority of the parliament, and was rescistered among the iaws of the state. This contributed, in some

measure, to restore the public tranquillity; but it was far from diminishing the number of those who complained of the despotism of the pontiff. In 1712, when by virtue of the treaty of Alt-Rastadt

certain places were to be surrendered to some Protestant princes, pope Clement XI., in a letter to the emperor Charles VI., denounced the Protestants as ‘an execrable sect,’ and, in the plenitude of his pretended supremacy, declared every thing which either was, or could be construed or esteemed to be, in any way, obtrusive of, or in the least degree prejudicial to, the Ro-mish faith or worship, or to the authority, jurisdiction, or any rights of the church whatever, ‘ to be; and to have been, and perpetually to remain hereafter, null, unjust, reprobated, void, and evacuated of all force from the beginning: and that no person is bound to the observance ot them, although the same have been repeated, ra tified, or secured by oath.’ Clement died in 1721, at the age of seventy-one. The election 01 Michael Angelo Conti, who took the name of Innocent XIII., as successor of Clement, was very unexpected. His noble descent and his personal accomplishments had raised him to the highest offices, the duties of which he had always discharged with reputation and honor. But the infirmities of age prevented him from distinguishing himself as pope. Innocent died the 3d of March 1724. Cardinal Vincent Orsini, eldest son of the duke of Gravina, who now succeeded to the pontificate as Benedict XIII., took every opportunity of recommending a strict regard to moral and social duties, and a steady practice of Christian virtues. His dislike of pomp and magnificence, his concern for the morals of the clergy, and his care for the poor, however commendable, did not obtain for him or his plan the support of the cardinals and the other great men of his court. He held a provincial council in the Lateran church, chiefly for a reform of the conduct of the clergy ; and the assembly voted for an enforcement of some decrees that had been enacted by the council of Trent, but which had fallen into disuse. On another occasion he rose above the bigotry of his predecessors, by expressing a wish for the diffusion of scriptural knowledge ; and, with that view, he permitted the people in general to peruse the sacred volume, and encouraged the multiplication of copies in the modern languages. A grand scheme of religious comprehension was formed by this respectable ruler of the Romish church : it was of no less magnitude than the union of the four communities that divided Christendom. He proposed that four councils should be holden at different places at the same time, each consisting of a certain number of representatives of the Romish, Greek, Lutheran, and Calvinist churches, with a president of one or other church in each assembly. He did not, however, carry his scheme into execution. Benedict was indefatigable in his official duties : he continued to pray and preach, attend to all pontifical and sacerdotal functions, and direct the conduct of subordinate prelates and ministers of the church. He frequently visited the poor, and relieved them by his bounty, selling

for that purpose the presents which he received. lie habituated him-

self to the plainest fare, and lived in the most frugal manner, like a hermit in his cell, that he might more liberally bestow upon others the blessings of fortune. He died in the eighty-second year of his age and the sixth of his pontificate. Yet so overpowering were the principles of his church over the mind of this naturally moderate and well disposed man that, from evidence communicated to a committee of the Irish parliament by father John Kennesy, it appears that his holiness, in compliance with the request of the Romish archbishops and bishops of Ireland (who had conspired with others of the Romish communion to place the pretender on the throne), issued his bull to facilitate their intention, and sent them an indulgence for ten years, in order to raise a sum of money, to be speedily applied to restore James III. This bull provided that every communicant, confessing and receiving upon the patron days of every respective parish, and any Sunday from the 1st of May to September, having repeated the Lord's prayer five times, and once the apostles' creed, upon paying two pence each time, was to have a plenary indulgence for all his sins. And, under this bull, it appears that the sum of ►►1500 sterling was ready to be remitted to the pretender's agent in Flanders, at the time the treasonable conspiracy was detected by the vigilance of the Irish government ! Clement XII., of the Corsini fa-mily, was now chosen in 1730, after a long contest, to succeed the mild and humble Benedict. He quickly reformed some abuses which had crept into the administration of the Roman state, and then directed his attention to foreign affairs. This pontiff was a man of respectable abilities ; had a regard for justice ; was cautious and prudent, yet not destitute of spirit ; economical without being meanly parsimonious ; easy of access, without rendering himself indecorously familiar. He had a taste for the polite arts, and was an encourager of literary merit. Dying in February, 1740, in the eighty-eighth year of his age, he was succeeded by Prosper Laurence Lambertini, archbishop of Bologna, who entered upon his high office under the designation of Benedict XIV.

In the administration of the church, Benedict was mild and conciliatory. He was aware of the relaxed morality of the clergy in the catholic states ; but, however he might wish to check their

licentiousness, he did not take any strong or violent measures for that purpose. At the solicitation of those princes iwho were displeased at the intrigues and offended at the mal-practices of the Jesuits, he promised to exert his authority for the reform of that order, and the bull which he issued for this purpose was one of the last acts of his life. He died in 1758, when he had attained the age of eighty-three years. He was an erudite theologian, as his numerous works evince, and a liberaj patron of learning and the arts. Cardinal Rezzonico, bishop of Padua, who succeeded him as Clement XIII., had a greater reputation for piety, and was more zealous for the high claims of the church, but he was not so generally esteemed as his predecessor. During his pontificate the Jesuits became peculiarly obnoxious. Their enemies in vain solicited the dissolution of that order while Clement filled the papal chair; but they conceives strong hopes of success when a prelate of a more philosophical character was chosen pontiff. This was a Franciscan monk, Francis Lawrence Ganganelli, who obtained the purple in the year 1769, and thought proper to assume the name of his immediate predecessor. The Jesuits affected to believe (and probably many of them really thought) that Clement would not dare to suppress their order. But, in the fifth year of his pontificate, a bull for the annihilation of the society was promulgated, its colleges were seized, and its revenues confiscated. Lorenzo Ricci, the refractory general of the order, was sent to the castle of St. Angelo, and died in confinerrent. The French complimented Ganganelli on this occasion by restoring the Venaissin to the holy see. In 1775 Clement published a bull of indulgence, which fully proves that this spiritual traffic was as yet officially and publicly recognised by the church of Rome. Clement did not long enjoy his tranquillity ; for he died in the autumn of the following year at the age of sixty-eight. It was supposed that he had been poisoned, but this suspicion has not been verified. Of all the occupants of the papal throne, for some centuries, Ganganelli seems to be one of the most unprejudiced, can-did, and liberal.

The government of the church after his death was consigned to John Angelo Braschi, who had been created cardinal by Ganganelli, and was regarded as a moderate man. He commenced his administration as Pius VI. with acts of benevolence and charity, and with the selection of deserving men for various offices. He also issued a bull, dated April 1778, in which he declared that ‘ the faithful should be excited to the reading of the Holy Scriptures, for these are the most abundant sources which ought to be left open to every one, to draw from them purity of morals and of doctrine.’ At this time the emperor Jo-seph of Austria, who was himself a freethinker, manifested a strong inclination to abridge the papal power in his dominions. In 1781 he

be-gan with imposing restrictions upon the operations of bulls and rescripts sent from Rome. He further displeased the pontiff by ordering that no money should be sent into foreign countries for masses; that no dignity should be solicited at Rome without his permission ; that pilgrimages should be discontinued ; and that the number of images and ornaments in churches should be diminished. The disgust felt by Pius at this conduct was not allayed by the liberal edict of Joseph, granting full toleration to all the Protestants in his dominions, as well as to all members of the Greek church: the dissolution of a great number of monasteries, with the conversion of the buildings into colleges, hospitals, or barracks, increased the indignation of the pope. The see of Rome lost in consequence the presentation to bishoprics in Lombardy and other Austrian dependencies ; its nuncios were deprived of their power and jurisdiction in Germany, and the lustre of the papacy was visibly eclipsed.

There seemed to be a general disposition in Catholic Europe, during this pontificate, to diminish the authority of the papal see ; so that

the modern bishops of Rome exhibit little more than an empty shadow of the authority of the ancient pontiffs. The sovereign princes and states of Europe who embrace their communion no longer tremble at the thunder of the Vatican, but treat their anathemas with indifference. They indeed load the holy father with pompous titles, and treat him with all the external marks of veneration ; yet they have given a mortal blow to his authority, by the prudent and artful distinction they make between the court of Rome and the Roman pontiff. For, under the cover of this distinction, they buffet him with one hand and salute him with the other. In 1796, when Buonaparte was every where victorious, Pius commited an act of aggression by suffering the Neapolitan cavalry who were hastening to the succor of the enemies of France to pass through the territories of the church, and even directed their march. When the pontiff was under the

necessity of throwing himself on the clemency of the conqueror, he would not even grant him an armistice but on very severe conditions. The pope was compelled to renounce the friendship of the coalesced powers, and to shut up his ports against them; to surrender to the French the cities of which they already had possession, as well as the citadel of Ancona; to pay nearly ––1,000,000 sterling ; and to deliver 100 pictures, busts, vases, statues, &c., and 500 MSS., to be selected by commissioners who should be sent to Rome for that purpose. Europe beheld with astonishment and regret this pontiff, a venerable old man, degraded, insulted, expelled from his capital, and harassed with removals from place to place. During his pontificate he is said to have deserved, by his good government and pub-lic spirit, the respect and affection of his subjects. Pius died at Brianˆon, in April 1799, in the eighty-second year of his age.

After the church had subsisted for some time without a head, the fugitive members of the sa-cred college held a conclave at Venice, by desire of the emperor of Germany : and the cardinal Di Chiaramonte, being honored with their suffrages, began to act as pontiff under the title of Pius VII. Immediately on his election he announced his succession to Louis XVIII. as the lawful king of France, though then in exile : yet, in the following year, he entered into a con-cordat with Buonaparte. Rome being recovered by the arms of the allies, Pius was soon enabled to unite temporal power with spiritual authority. With him, therefore, Buonaparte condescended to treat ; when this fortunate warrior, having acquired the dignity of first consul or sovereign of France, wished to show himself a friend to religion. It was stipulated between them that the catholic, apostolic, and Romish religion, should be freely and publicly exercised in France ; that a new division of dioceses should take place: that, as soon as the first consul should have nominated bishops, the pope should confer upon them the canonical institution; that the prelates should appoint, for parochial ministers, such persons as the consul should approve : that no council or synod should meet without the consent of the government; that no papal legate or nuncio should act, and no bull or brief be operative without the same consent. Ten archbishops ana fifty bishops were assigned to the whole republic ; and it was required that they should be natives 01 France, aged at least thirty years. The subserviency of ecclesiastics of all descriptions to the civil power, in doctrine as well as in discipline, formed a leading feature in this arrangement. The secularization of certain German churches and chapters in 1803, by the diet of Augsburg, which distributed some of them as indemnities to secular Protestant princes, gave occasion to many despatches from Rome in the years 1803,

1804, and 1805, and particularly to an instruction to the papal nuncio resident at Vienna in

1805, in which Pius VII. says, that the church had not only taken care to prohibit heretics from confiscating ecclesiastical possessions ; but that she had moreover established, as the penalty of the crime of heresy, the confiscation and loss of all property possessed by heretics. This penalty, as far as concerns the property of private individuals, is decreed, he says, by a bull of Innocent III. cap. Vergentes X. de Haereticis : and, as far as concerns sovereignties and fiefs, it is a rule of the canon law, cap. Absolutus XVI. de Haereticis, that the subjects of a prince manifestly heretical are released from all obligation to him, dispensed from all allegiance and all homage. To be sure, his holiness goes onto say, we are fallen into such calamitous times that 'it is not possible for the spouse of Jesus Christ to practice, nor even expedient for her to recal her holy maxims of just rigor against the enemies of the faith. But, although she cannot exercise her right of deposing heretics from their principalities and declaring them deprived of their property, yet can she not for one moment allow that they should rob her of her property to aggrandise and enrich themselves ! What an object of derision would she become to heretics and infidels, who, in mocking her grief, would say, that they had found out a way of making her tolerant ! Essai Historique sur la Puissance Temporale des Papes. torn. II. p. 320.

The church, however, was destined to be dealt with on very different principles by one of her ' dear sons.' Early in 1809, while Buonaparte was at Vienna, he caused proclamation to be made in the public squares and market place of that city, that from the 1st of June the papal territory should be united with the French empire ; and that Rome should at the same time be declared a free and imperial city. This decree, which fixed the annual revenue of the pope at 2,000,000 of francs, was grounded on three propositions : first, that the territories of Rome were fiefs bestowed by the emperor Charlemagne, the predecessor of the emperor Napoleon, on the bishops of Rome, to maintain the peace of his subjects ; second, that ever since that time the union of temporal and spiritual power has been, and still is, the source of dissension ; and third, that the temporal pretensions of the pope are irreconcileable with the security of the French army, the repose and prosperity of the nations subject to the sway of - Napoleon, and the dignity and inviolability of his empire. The pope protested against this violence, excommunicating Buonaparte and all who adhered to him in his invasion of the papal

slates, but all without effect ; though he continued to exercise the functions of his office without further interruption, but with little opportunity for energetic conduct, till the subversion of the Napoleon dynasty, when he resumed the full possession of his authority. In his proclamation issued at Cezena on the 5th of May, previously to his return to Rome, his holiness applied to himself the ancient title of God's vicar on earth, and spoke of his temporal sovereignty as essentially connected with his spiritual supremacy.

The papal see, after enjoying a short tranquillity, was visited with repeated shocks in the revolutions of Spain, Portugal, and Naples. With respect to these events, particularly the latter, Pius acted a cautious part. Fearing probably that the aroused energies of these nations would involve the papacy in new difficulties, he declared the states of the church open to the passage of all friendly troops; but denouncing, in the strongest terms, the disorderly and factious. The constitutional government of Naples, which gave the pope the greatest cause for uneasiness, was, however, overturned by the power of Austria ; and the invasion of Spain, by the armies of France, succeeded for a time in reestablish- ing Romish tyranny and superstition in the whole of the peninsula. The subdued countries, however, present an appearance which promises any thing rather than continued repose. Pius VII. died August 20, 1823, and was succeeded hy Leo XII.

PART II. DOCTRINES OF THE ROMAN CATHOLICS.

Thus have we traced historically the rise, progress, and comparative decline, of this great domination : the writer as a Protestant, and a Protestant clergyman, will, in the estimation of Catholic readers, perhaps, seem unduly biassed, and occasionally to display the advocate. Recollecting how large a portion of his countrymen are Catholics, the editor, therefore, thinks it fair to subjoin without comment the last authentic compendium of the principles of their church in the Declaration of the English Catholic bishops, dated May, 1826. It must only be understood that the Catholics now speak for themselves.

DECLARATION OF THE CATHOLIC BISHOPS, THE

VICARS APOSTOLIC, AND THEIR COADJUTORS,

IN GREAT BRITAIN.

I. On the general character of the doctrines of faith professed by the Catholic church. ††† The doctrines of the Catholic church are often characterised as erroneous, unscriptural, and unreasonable. All those doctrines, and only those doctrines, are articles of Catholic faith, which are revealed by Almighty God. Whatsoever is revealed by God, who knows all things as they are in themselves, and who cannot deceive us by teaching falsehood for truth, is most true and certain ; though it may entirely surpass the comprehension of created minds.

On the authority of divine revelation, the Catholic believes, as doctrines of faith, that in one God there are three distinct persons, the Father, the Son. and the Holy Ghost; that

Jesus Christ, who died on the cross for the salvation of all mankind, is the second peison of the Blessed Trinity, true God and true man ; that there is no remission of sin, nor salvation, but through him ; that the sacraments of baptism and penance are divinely appointed means for the remission of sin ; that in the mass a true, proper, and propitiatory sacrifice is offered to God for the living and the dead; that the souls detained in purgatory are helped by the suffrages of the faithful ; that the saints reigning together with Christ are to be honored and invocated ; that at the last day our bodies will be raised from death, and that Christ will come to judge all men according to their works; that eternal happiness will be the reward of the good, and eternal misery the punishment of the wicked. If these, and other doctrines of Catholic faith, are really revealed by Almighty God, they are not erroneous, but most true and certain ††† they are not unscriptural, but agreeable to the tru,e sense of the written word of God ††† the belief of them is not unreasonable, because it is reasonable to believe whatever is true, and taught by the God of truth. The Catholic is fully persuaded that all the articles of his faith are really revealed by Almighty God. Is he not at liberty to think so, as well as others are to think the contrary ; and in this empire especially, where liberty of thought is so loudly proclaimed and lauded ? Is it reasonable or charitable to condemn him for thinking so, when he may have good and solid grounds for his conviction, and may feel that his eternal salvation depends on his firm belief of all the doctrines which Christ has taught ?

II. On the grounds of the certitude which a Catholic has that all the doctrines which he believes, as articles of Catholic faith, are really revealed by Almighty God. ††† Catholics are often charged with grounding their faith on mere human authority, and not on the word of God. Catholics deny this, because they are convinced, that their faith is grounded on the word of God, proposed to them by the authority of that ministry, which Christ established, and appointed to teach his revealed doctrines to all nations.

The Catholic believes all those doctrines which God has revealed. The question, what are those doctrines which God has revealed, is a question of fact. It appears reasonable that the existence of a fact should be ascertained by the evidence of testimony.

The body of the doctrines, precepts, and institutions, which were delivered by Christ to his apostles, constitutes the new or the Christian law ; as the body of the doctrines, precepts, awl institutions, which were delivered by the A.- mighty to Moses, constituted the old law. The true and certain knowledge of what is commanded by any law is generally communicated and obtained by the authoritative promulgation of the law. By the ordinance of God, the doctrines and precepts of the old law were made known to the Israelites and Jewish people, by Moses, and the priests in succession, till the end of the law. By the ordinance of God, the doctrines and precepts of the new law were to be made known to all nations, in all ages, by the

apostles and their successors, to the consummation of the world.

On the spiritual authority of the apostles and theii successors, who were divinely commissioned to promulgate and teach the law of Christ to all nations ; and on the uniform and universal testimony, belief, and practice of all Christian churches from the beginning, the certitude of the Catholic is grounded, that all the doctrines which he believes as articles of Catholic faith, and all the sacred precepts and rites which he observes as the ordinances of Christ, were really revealed and instituted by Almighty God ; and are the same as were originally

delivered by Christ to his apostles, and by them promulgated over all nations.

The Catholic is fully satisfied that this me-thod which he follows, for ascertaining what are the revealed doctrines of divine faith, is the right rule, and that it leads him to the unity of truth. Is he not at liberty to follow a rule which gives such satisfaction and security to his mind ? Is it fair for others who, by following a different rule, are led into a countless variety of contradictory doctrines on matters of Christian belief, to disturb the tranquillity of the Catholic on this head, or to condemn him for his submission to the authority of a ministry which he is convinced was established by Christ for the purpose of bringing all nations to the certain knowledge of his law, and to the unity of faith ? Is not this rule perfectly natural and reasonable ? Can any human legislator condemn the principle and rule of the Catholic in this regard ?

III. On the Holy Scriptures. ??? In England the Catholic church is held out as an enemy to the reading and circulating of the Holy Scriptures. Whereas the Catholic church venerates the Holy Scriptures as the written part of the word of God ; she has in all ages been the faithful guardian of this sacred deposit ; she has ever labored to preserve the integrity of these inspired writings, and the true sense, in which they have been universally understood, at all times from the apostolic age.

The Catholic church has never forbidden or discouraged the reading or the circulation of authentic copies of the sacred Scriptures, in the original languages. She binds her clergy to the daily recital of a canonical office, which comprises a large portion of the sacred volume, and to read and expound to the faithful, in the vernacular tongue, on Sundays, the epistle or gospel of the day, or some other portion of the divine law.

As to translations of the Holy Scriptures into modern languages, the Catholic church requires that none should be put into the hands of the faithful but such as are acknowledged by ecclesiastical authority to be accurate, and conformable to the sense of the originals. There never was a general law of the Catholic church prohibiting the reading of authorised translations of the Scriptures ; but, considering that many, by their ignorance and evil dispositions, have perverted the meaning of the sacred text to their own destruction, the Catholic church has thought it prudent to make a regulation that the faithful should be guided in this matter by the advice of their respective pastors.

Whether the Holy Scriptures, which ought never to be taken in hand but with respect, should be made a class-book for children, is a matter of religious and prudential consideration, on which the pastors of the Catholic church have a right to decide with regard to their own flocks; and we hold that in this matter none have a right to dictate to them. The Catholics in England, of mature years, have permission to read authentic and approved translations of the Holy Scriptures, with explanatory notes; and are exhorted to read them in the spirit of piety, humility, and obedience.

Pope Pius VII., in a rescript dated April 18th, 1820, and addressed to the Vicars Apostolic in England, earnestly exhorts them to confirm the people committed to their spiritual care, in faith and good works ; and, for that end, to encourage them to read books of pious instruction, and particularly the Holy Scriptures, in translations approved by ecclesiastical authority; because, to those who are well disposed, nothing can be more useful, more consoling, or more animating, than the reading of the sacred Scriptures, understood in their true sense ††† they serve to confirm the faith, to support the hope, and to inflame the charity of the true Christian.

But when the reading and the circulation of the Scriptures are urged and recommended as the entire rule of faith, as the sole means by which men are to be brought to the certain anc1 specific knowledge of the doctrines, precept? and institutions of Christ ; and when the Scrip ††† tures so read and circulated are left to the interpretation and private judgment of each individual : then such reading, circulation, and interpretation, are forbidden by the Catholic church, because the Catholic church knows tha. the circulation of the Scriptures, and the interpretation of them by each one's private judgment, was not the means ordained by Christ for the communication of the true knowledge of his law to all nations ††† she knows that Christianity was established in many countries before one book of the New Testament was written ††† that it was not by means of the Scriptures that the apostles and their successors converted nations, or any one nation to the unity of the Christian faith ††† that the unauthorised reading and circulation of the Scriptures, and the interpretation of them by private judgment, are calculated to lead men to contradictory doctrines on the primary articles of Christian belief; to inconsistent forms of worship, which cannot all be constituent parts of the uniform and sublime system of Christianity ; to errors and fanaticism in religion, and to seditions and the greatest disorders in states and kingdoms.

IV. On the charge of idolatry and superstition. ❖❖❖ Ignorance or malice has gone so far as to charge the Catholic church with idolatry, in the sacrifice of the mass ❖❖❖ in the adoration (as it is called) of the Virgin Mary, and in the worship of the saints, and of the images of Christ and of the s'aints; and with superstition, in invoking the saints, and in praying for souls in purgatory. Now idolatry consists in giving to any creature that supreme adoration, honor, or worship, which is due only to Almighty God. The

Catholic church teaches that idolatry is one of the greatest crimes that can be committed against the majesty of God : and every true member of this church shudders at the idea of such a crime, and feels grievously injured by so horrid an imputation.

But it is said that Catholics adore the elements of bread and wine in the mass : that they adore the Virgin Mary ; that they adore the cross ; and that they worship the saints and the images of Christ and of the saints. Before we repel these horrid imputations, in the sense in wh ich they are made, we must explain the different meanings of the words adoration, honor, and worship, that the calumnious charge, and its denial, may be understood in the same explained sense.

We find that in the language of the sacred Scripture, in Hebrew, Greek, and Latin,* as well as in the language of the ancient liturgies of the Christian church, these words, adoration, honor, and worship, are ambiguous terms, and are used in different senses, according to the nature of the object to which the act, implied by the term, is directed, and according to the intention of him who performs the act. Hence we find them used as relating sometimes to God, and sometimes to creatures. Although, in modern times, the exclusive idea of that supreme homage, which is due only to God, is attached by some to the words adoration and worship ; yet these words may still be retained by others, in a different meaning, without affording the remotest cause for the imputation of idolatry. In this different meaning they are still retained, in the unchanged language of the ancient liturgies used in the Catholic church.

The words adoration and worship are equally referred sometimes to God, and sometimes to creatures, as is the word honor. Now because we are commanded in Scripture to honor God, and to honor the king; and children are commanded to honor their parents : it does not follow that the honor due to the king, or to parents, is the same as that which we owe to God. To God we owe supreme and sovereign honor, such as it would be a crime to pay to any creature. To the king we owe the highest civil honor. To parents children owe the honor of filial respect and obedience. How unjust would it be to say that, because a subject honors his king, he pays him that supreme and sovereign honor which is due only to God ! The same is to be said of the terms adoration and worship, as used in former times, and sometimes used at present in the language of the Catholic church. To adore, even according to modern usage, often means no more than to express extreme affection or respect. To worship (in the translation of the Bible, published at Oxford) is therein used to signify inferior as well as supreme worship. In the first book of Chronicles xxix. 20, we read in that edition, that the assembly bowed

*See in Hebrew (Prov. iii. 9, and Exod. xx. 12), (Dent, xxviii. 47, and 48), (Ps. xcvi. 9 and 1, alias 3d Kings i. 23). In Greek, Gen, xxiv. 26, and Gen. xhx. 8. In Latin Adorare, Ps. xxviii. 2, and G*n. xxiii. 7, and 4th alias 2 Kings ii. 15.

down their heads and worshipped the Lord (Jehovah) and the king. Did they worship the king with the same supreme worship which they paid to God? Certainly not. When a man says, to the woman he takes to wife, ‘ with my body I thee worship,’ can this be called idolatry? Surely nothing can be more unfair than arguments drawn from ambiguous terms, construed in a sense disavowed by those against whom the arguments are employed. .

Wre answer therefore that, if by the terms adoration, honor, and worship, be understood that supreme adoration, honor, and worship which is due only to God; Catholics do not adore, nor honor, nor worship any other than the one, only, true, and living God, the Creator and Sovereign Lord of the universe: they do not, in this sense, adore, nor honor, nor worship the Virgin Mary, nor any of the saints, nor the cross, nor images, nor any other creature whatsoever.

In the mass, Catholics do offer supreme adoration, not to the elements of bread and wine, which they hold not to be present after the consecration; but to Jesus Christ, the Son of God, whom they believe

to be truly, really, and substantially present, under the appearances only of bread and wine, after the consecration, and change thereby of the elements into his body and blood. To adore Christ, by an act of supreme adoration, is no idolatry ; because he is truly God, and consequently a legitimate object of supreme worship.

But if Catholics, using the ancient language of the Christian church, are said, 1st. To worship the saints ; this worship must be understood to be only an inferior worship, honor, and respect, paid to them proportionate to the limited perfections and excellences which -God has bestowed upon them ; but this worship is infinitely below that supreme worship which they pay to God. Catholics acknowledge no perfection or excellence in any saint, not even in the Blessed Virgin Mary, which they do not profess to be the work and gift of God in them. So that, in honoring the saints, they celebrate the works of God, and consequently give glory to him. Whatever act of religious veneration we pay to the saints is ultimately referred to God. 2nd. To adore the cross : this word, if applied to the cross itself, means no more than an inferior and relative respect paid to the instrument of our redemption ; but if in view of the cross it be applied to Christ himself, then it means, as it ought to mean, an act of supreme adoration. 3d. To worship the images of Christ or of the saints : the word is here again understood by Catholics only of an inferior and relative respect shown to images, in consideration of the respect due to the objects which they represent, and to which the respect shown to t'ne images is referred. In this sense respect ********** shown to the statue or to the throne of the king, in consideration of the majesty of the personage to whom they relate. An insult offered to ' his statue would be considered as intended to be offered to the king himself. In this sense a son respects the image or picture of his parent ; a parent that of his child; a friend that of his

friend ; not for any intrinsic virtue in the material substance or work of art, but because it relates to, and brings to his mind, the object of his respect and affection.

To condemn this relative regard for images, or pictures, would be to condemn the very feelings of nature. To charge the Catholic with idolatry, because the term worship, meaning only an inferior and relative regard, is found in the ancient and modern liturgies of his church, is not consistent with candor or charity. The charge that the Catholic church sanctions the praying to images is a calumny, and carries with it an imputation of stupidity too gross to be noticed. Catholics sometimes pray before images, because they serve to collect their thoughts, and fix their attention in their meditations and prayers; but they are not, on that account, to be supposed to be so void of reason and sense as to pray to the image : for they know that in it there is no virtue or power; and that it can neither see, nor hear, nor help them.

Catholics do solicit the intercession of the angels and saints reigning with Christ in heaven. But in this, when done according to the principles and spirit of the Catholic church, there is nothing of superstition, nothing which is not consistent with true piety. For the Catholic church teaches her children not to pray to the saints, as to the authors or givers of divine grace; but only to solicit the saints in heaven to pray for them, in the same sense as St. Paul desired the faithful on earth to pray for him.

Catholics, according to the faith and pious practice of the Christian church from the age of the apostles, do pray for the release and eternal rest of departed souls, who may be detained for a time in a state of punishment on account of their sins, but in this we cannot discover even the shadow of superstition. By invoking the intercession of the saints in heaven, and by praying for the suffering souls in purgatory, Catholics exercise acts of that communion of charity which subsists between the members of the mystical body of Christ : the principle of which communion they profess to believe, when they say, ‘ I believe the holy Catholic church, the communion of saints.’

After this explanation and declaration, we hope that our countrymen will never be so un-iust or so uncharitable as to charge Catholics with idolatry or superstition, nor be so illiberal as to attempt to give a color to these injurious charges, by fixing an exclusive meaning to terms, which in the language of Scripture, Christian antiquity, and common usage, bear different senses, in different circumstances.

V. On the power of forgiving sins, and the precept of confession. ††† The Catholic church is charged with impiety, in usurping the power of forgiving sins, and with spiritual tyranny, in imposing on the people the yoke of confession. The Catholic church cannot be charged

with impiety, for exercising powers given by Christ to his apostles and to their lawful successors ; nor with tyranny, in enforcing the observance of the precept of Christ.

Catholics believe that Christ granted to his

apostles, and to the priests of his church, power to forgive sins, by the administration of the sacraments of baptism, and penance, to those who are duly disposed to receive this grace. They believe that the sacrament of penance is an institution of Christ, no less than the sacrament of baptism. The belief of both rests on the same foundation. In both these sacraments, sin is forgiven by the ministry of man. . Be baptised every one of you, for the remission of sins, Acts. ii. 38; whose sins you shall forgive, they are forgiven, John xx. 23. But no actual sin can be forgiven at the mere will of any pope, or any priest, or any person whomsoever, without a sincere sorrow for having offended God, and a firm resolution to avoid future guilt, and to atone for past transgressions. Any person who receives absolution, without these necessary dispositions, far from obtaining the remission of his sins, incurs the additional guilt of hypocrisy and profanation.

The obligation of sacramental confession to t: priest is not an imposition of the church, but a precept of Christ. Without the voluntary confession of the penitent, the power of forgiving or retaining sins could not be exercised, with discretion and judgment, by the minister of the sacrament of penance. The confession of sins could never have been introduced had it not been received from the beginning as a divine ordinance for the remission of sin. It has been practised from the earliest ages of Christianity. It is attended with the most salutary effects. Besides being a means of obtaining the remission of sin, “t affords relief to the troubled conscience, and opportunities of reclaiming deluded sinners from mischievous projects, and of causing reparation to be made for injuries done to persons, property, or character. It may be ridiculed by such as blaspheme those things which they know not (2 Pet. ii. 12), but will be ever cherished as a merciful and salutary institution by those who are sincerely sorry for their sins, and earnestly sue for pardon.

VI. On Indulgences. ††† The Catholic church is charged with encouraging guilt, by giving leave to commit sin, and granting an anticipated pardon for sins to come by indulgences. The Catholic church rejects with abhorrence the imputation that, by granting an indulgence, she grants permission to commit sin, or a pardon for sins

to come. An indulgence, in the sense of the Catholic church, is no pardon for sin at all ; it is only a remission of the whole or of a part of the temporal punishment which the justice of God often reserves to be undergone by the sinner, after the guilt of the sin has been remitted. The power of granting [the remission of this temporal punishment was given by Christ to St. Peter and his successors, and has been exercised from the earliest ages. An indulgence, so far from exempting sinners from works of penance and piety, is an encouragement to the performance of such works, since they are prescribed as conditions for gaining the benefit of an indulgence.

Surely, theref re, the doctrine of the Catholic church concerning the sacrament of penance, confession, and indulgencies, does not tend
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relax Christian morality, nor to encourage guilt, nor facilitate the commission of crime, but ra-ther to put an end to sin, and to promote the exercise of every Christian virtue amongst men.

VII. On the obligation of an oath. ??? Catholics are charged with holding that they are not bound by any oath, and that the pope can dispense them from all the oaths they may have taken. We cannot sufficiently express our astonishment at such a charge. We hold that the obligation of an oath is most sacred ; for by an oath man calls the almighty Searcher of hearts to witness the sincerity of his conviction of the truth of what he asserts, and his fidelity in performing the engagement he makes. Hence, whosoever swears falsely, or violates the lawful engagement he has confirmed by an oath, not only offends against truth, or justice, but against religion. He is guilty of the enormous crime of perjury.

No power in any pope, or council, or in any individual or body of men, invested with authority in the Catholic church, can make it law-ful for a Catholic to confirm any falsehood by an oath ; or dispense with any oath by which a Catholic has confirmed his duty of allegiance to his sovereign, or any obligation of duty or justice to a

third person. He who takes an oath is bound to observe it, in the obvious meaning of the words, or in the known meaning of the person to whom it is sworn.

VIII. On allegiance to our sovereign, and obedience to the pope. ••• Catholics are charged with dividing their allegiance between their temporal sovereign and the pope. Allegiance relates not to spiritual but to civil duties; to those temporal tributes and obligations which the subject owes to the person of his sovereign, and to the authority of the state. By the term spiritual, we here mean that which in its nature tends directly to a supernatural end, or is ordained to produce a supernatural effect. Thus the office of teaching the doctrines of faith, the administration of the sacraments, the conferring and exercising of jurisdiction purely ecclesiastical, are spiritual matters. By the term temporal we mean that which in its nature tends directly to ..ne end of civil society. Thus the right of making laws for the civil government of the state, the administration of civil justice, the appointment of civil magistrates and military officers, are temporal matters.

The allegiance which Catholics hold to be due and are bound to pay to their sovereign, and to the civil authority of the state, is perfect and undivided. They do not divide their allegiance between their sovereign and any other power on earth, whether temporal or ecclesiastical. They acknowledge in the sovereign, and in the constituted government of these realms, a supreme, civil, and temporal authority, which is entirely distinct from, and totally independent of, the spiritual and ecclesiastical authority of the pope and of the Catholic church. They declare that neither the pope, nor any other prelate or ecclesiastical person of the Roman Catholic church, has in virtue of his spiritual or ecclesiastical character any right, directly or indirectly, to any civil or temporal jurisdiction, power, superiority, preeminence, or authority, within this

realm ; nor has any right to interfere, directly or indirectly, in the civil government of the United Kingdom, or any part thereof; nor to oppose, in any manner, the performance of the civil duties which are due to his majesty, his heirs, and successors, from all or any of his majesty's subjects; nor to enforce the performance of any spiritual or ecclesiastical duty, by any civil or temporal means. They hold themselves bound in conscience to obey the civil government of this realm, in all things of a temporal and civil nature, notwithstanding a*ny dispensation or order to the contrary had, or to be had, from the

S>pe or any authority of the church of Rome, ence we declare that, by rendering obedience in spiritual matters to the pope, Catholics do not withhold any portion of their allegiance to their king, and that^heir allegiance is entire and undivided ; the civil power of the state, and the spiritual authority of the Catholic church, being absolutely distinct, and "being never intended by their divine author to interfere or clash with each other. ' Render unto Caesar the things that are Caesar's, and to God the things that are God's.'

IX. On the claim of British Catholics to the property of the church establishment in England. ××× British Catholics are charged with entertaining a pretended right to the property of the established church in England. We consider such a charge to be totally without foundation. We declare that we entertain no pretension to such a claim. We regard all the revenues and temporalities of the church establishment as the property of those on whom they are settled by the laws of the land. We disclaim any right, title, or pretension, with regard to the same.

X. On the doctrine of exclusive salvation. ××× Catholics are charged with uncharitableness, in holding the doctrine of exclusive salvation. Catholics are taught by their church to love all men, without exception : to wish that all may be saved, and to pray that all may be saved and may come to the knowledge of the truth, by which they may be saved. If the Almighty himself has assigned certain conditions, without the observance of which man cannot be saved, it would seem to be an act of impiety to attempt to annul those divinely-established conditions: and an act of great uncharitableness towards a fellow-man, to tell him that he may be saved without complying with the conditions prescribed by the Almighty.

The doctrinal principle of exclusive salvation belongs to the law of Christ. Has not Christ, who commands the belief of his revealed doctrines, pronounced, that he that believeth not shall be condemned ? Mark xvi. 16. Has not Christ, who instituted baptism for the remission of sins, declared that except a man be born again, oj" water and of the Holy Ghost, he cannot enter into the kingdom of God? Johniii. 5. Has not St. Paul enumerated a list of crimes, such as adultery, idolatry, hatred, seditions, heresies, murders, drunkenness, &c., of which he declares that they who do such things shall not obtain the kindom of God ? Gal. v. 21. Are not these exclusive conditions ?

Whoever professes the law of Christ must profess the principle and doctrine of exclusive salvation. It is not the Catholic, it is God him-

self who will exclude from Heaven those who are not duly qualified for it by faith and good works.

But the Catholic, whilst he is bound to admit, and with firm faith to believe, this doctrinal principle, is bound also by the divine commandment not to judge. He is not allowed therefore to pronounce sentence of condemnation on individuals, who may live and die out of the external communion of the Catholic church : nor to pronounce sentence of condemnation against those who may die in an apparent state of sin. All those he leaves to the righteous judgment of the great Searcher of hearts, who at the last day will render to every man according to his works. But surely charity, as well as truth, must forbid one Christian to deceive another in a matter of such infinite importance as the eternal salvation of his soul. He who should persuade his neighbour that no condition for salvation is required on the part of man would deceive him. He who admits that any one such condition is required by the Almighty, admits the principle of exclusive salvation.

XI. On keeping faith with heretics. ××× Catholics are charged with holding the principle that they are not bound to keep faith with heretics. As Catholics we hold, and we declare, that all Catholics are bound by the law of nature, aud by the law of revealed religion, to observe the duties of fidelity and justice to all men, without any exception of persons, and without any distinction of nation or religion.

British Catholics have solemnly sworn that ‘ they reject and detest that unchristian and impious principle that faith is not to be kept with heretics or infidels.’ After this, the imputation of their holding this principle cannot but be felt be them as grievously injurious to their religious and moral character.

Conclusion. ××× Having, in the foregoing declaration, endeavoured to state, in the simplicity of truth, such doctrines of our church as are most frequently misrepresented or misunderstood in this country, and to explain the meaning in which Catholics understand the terms by which

these doctrines are expressed in the language of their church ; we confidently trust that this declaration and explanation will be received by all our fellow-subjects in a spirit of candor and charity ; and that those who have been hitherto ignorant of, or but imperfectly

acquainted with, our doctrines of faith, will do us the justice to acknowledge that, as Catholics, we hold no religious principles, and entertain no opinions flowing from those principles, which are not perfectly consistent with our duties as Christians and as British subjects.

This declaration we, the undersigned, approve and publish as an exposition of our principles and doctrines on the subjects to which it refers.

-j-WILLIAM, Bishop of Halia, Vic. Apost.

in the London District. -f-PETER BERNARDIN, Bishop of Thespia,

Vic. Apost. in the Western District. -f-THOMAS, Bishop of Bolina, Vic. Apost.

in the Northern District. + THOMAS, Bishop of Cambysopolis, Vic.

Apost. ‘in the Midland District. -f-ALEXANDER, Bishop of Maximianopolis,

Vic. Apost. in the Lowland District in

Scotland. -f-RANALD, Bishop of Aeryndela, Vic.

Apost. in the Highland District in Scot

land. -f-PETER AUGUSTINE, Bishop of Siga,

Coadjutor in the Western District. -|- JAMES, Bishop of Usvla, Coadjutor in the

London District. -|- THOMAS, Bishop of Europum, Coadjutor

in the Northern District. -f-ALEXANDER, Bishop of Cybistra, Coadjutor in the Lowland District in

Scotland. May 1826.

The ceremonials of this church, differing as they do in different countries, will be best seen by consulting the breviary, which, as adapted to the customs and language of each, differs in many minor particulars. For the greater ceremonies see also our articles BAPTISM and MASS.

ROMANCE’, n. s. Fr. roman ; Ital. romanza ; Span, romance. [From the Roman or Roman-ish dialect of the Troubadour.] A fable of the middle ages ; a tale of wild adventures in war or love ; a fiction : to romance is to tell a fiction or lie : the nounsubstantive that follows corresponding.

What resounds In fable or romance of Uther’s son. Milton.

A brave romance who would exactly frame, First brings his knight from some immortal dame.

WMer.

Some romances entertain the genius, and strengthen it by the noble ideas which they give of things ; but they corrupt the truth of history. Dryden.

The allusion of the daw extends to all impostors, vain pretenders, and romancers. L’Estrange.

Shall we, cries one, permit This lewd romancer, and his bantering wit 1 Tate.

Philosophers have maintained opinions, more ab-surd than any of the most fabulous poets or romantick writers Keit.

Zeal for the good of one’s country a party of men have represented as chimerical and romantick.

Addison.

A staple of romance and lies, False tears and real perj uries, Where sighs and looks are bought and sold, And love is made but to be told. Prior.

‘ This is strange romancing. Pamela.

The dun umbrage, o’er the falling stream, Romantick hangs. Thomson’s Spring.

ROMANIA, RuMELiA,or RUM-ILI. See Ru—

MELIA.

RO’MANIZE, v. a. From Fr. roman. To latinize ; fill with modes of the

Roman speech ; to Johnsonize.

He did too much ramanize our tongue, leaving tne words he translated almost as much Latin as he found them. Dryden.

Bulls or letters of election only serve in the Romish countries. Ayliffe't Parergon.

ROMANO (Julius), a celebrated painter, the disciple of Raphael, who left him one of his

heirs. He was superior to most painters in his knowledge of antiquity, and was well skilled in architecture. He embellished Mantua with many of his performances both in painting and architecture; and died in that city in 1545, aged fifty-four.

ROMANO, a town of Austrian Italy, near the Oglio. It is surrounded with a wall, and defended by a castle. Population 3200. Twenty-six miles east of Milan.

ROMANO, a town of Piedmont, five miles

south of Ivrea. Inhabitants 2000. It stands on an eminence near the Chiusella, over which is a bridge. This was considered so important a pass when the French crossed the Alps, in 1800, that a bloody conflict took place here between them and the Austrians.

ROMANS, a town of the department of the Drome, France, on the Isere, eleven miles north-east of Valois. It has manufactures of silk and woollen, tanneries, and presses for making olive-oil.

ROME, a city of Italy, on the Tiber, holds perhaps the most important place in history of any of the capitals of the world, as having been formerly the metropolis of one of the largest empires, and subsequently the centre of the most extensive ecclesiastical jurisdiction to which the human race ever submitted. The history of ancient Rome will, of course, first claim our attention. That of modern or ecclesiastical Rome is chiefly embraced in the rise and progress of ROMAN CATHOLICISM, which see.

PART I. ANCIENT ROME, REGAL.

HISTORY. ††† The ancient Romans derived their origin from ˆEneas, the Trojan hero ; and, though some historians pretend to treat his voyage into Italy as a fable, yet no sufficient reasons for rejecting this account have been offered, nor has any more probable history of the origin of the Roman name been given. When the Greeks, by treachery or other means, were become masters of Troy, ./Eneas, with the forces under his command, retired into the fortress of the city and defended it bravely for some time ; but at length, as we are told, he conveyed away his gods, his father, wife, and children, with every tlnng valuable, and, followed by a crowd of Trojans, fled to Mount Ida. Hither all his countrymen, who were anxious to preserve their liberty, flocked to him. His army thus augmented, and advantageously posted, continued for some time waiting for the departure of the Greeks, who were expected to return home as soon as they had pillaged the country. But these, after they had enriched themselves with the spoils of Troy and the neighbouring towns, turned their arms against the fugitives on the mountain. .Eneas, to avoid the hazard of being forced from his last refuge, had recourse to negociation. Peace was granted, on condition that he with his followers should quit the Trojan territories; and the Greeks, on their part, promised not to molest him in his retreat. Upon this assurance, ˆEneas equipped a fleet, to seek a settlement in some foreign land. At his departure he left his eldest son Ascanius with the Dasylites, a people of Bithynia, who desired to have him for their king. But the young prince did not remain long with them; for when Scamandrius (or Astyanax) with the rest of the sons of Hector, whom Neop- ‘olemus permitted to return home from Greece,

repaired to him, he put himself at their head, and led them back to their native country. Our hero, having crossed the Hellespont, now

arrived in the peninsula of Pallene, where he built a city, called .ZEneia, and left in it a part of those who had followed him. Thence he sailed to Delos, and to Cythera, where he erected a temple to Venus. He built another to her in Zacynthus, in which island he likewise instituted games, called the races of ./Eneas and Venus : the statues of both, Dionysius says, were standing to his time. In Leucas, where the Trojans landed, was also to be seen in his time a temple erected to Venus, the mother of ˆEneas. Nor were Actium and Ambracia without similar monuments of his arrival. At Dodona were found brazen vases upon which the name of the Tro-jan hero, who had made an offering of them to Jupiter, was engraven in old characters. Near Buthrotos, in Epirus, a Trojan camp which had escaped the injuries of time retained the name of Troja. All these antiquities, still subsisting in the reign of Augustus, were then looked upon as proofs of ./Eneas's voyage to Epirus : ' and that he came into Italy,' adds Dionysius, ' we have the concurrent testimony of all the Ro-mans.'

The first land of Italy which ./Eneas made, after crossing the Ionian Sea, was Cape Minerva, in lapygia ; and here he went on shore. Afterwards, coasting along the south-east of Italy and the east and south sides of Sicily, he arrived with his fleet at the port of Drepanum in that island. Elymus and JEgestus, who had escaped from Troy a little before him, had brought a Trojan colony to this place. ./Eneas augmented it by a number of his followers, whom, pleased to have found a safe resting place after many dangers and fatiguing voyages, he willingly left behind him. ./Eneas next steered his course for Italy across the Tyrrhenian Sea. To the cape where he first landed he gave the name Palinurus, from one of his pilots who fell overboard. The little island of Leucasia, whither he sailed next, got its name from a daughter of ./Eneas's sister, who died there. The port of Misenum, the 'island of Prochyta, and the promontory of Cajeta, where he successively arrived, were so called from' being the burial places, the first of a noble Trojan his companion, the second of his kinswoman, and the third of his nurse. At length the Trojan prince and his chosen band finished their tedious . and painful voyages, on the coast of the since

famous Latiura. This was a small territory on the east side of the Tiber, containing a part of the present Campagna di Roma: Latinus was the king of it ; his capital, Laurentum ; his subjects, a people who, till his time called Aborigines, had from him taken the name of Latins. Here, far removed from their implacable enemies, the Greeks, ./Eneas and his followers undertook to raise a second Troy : they fortified a camp near the mouth of the Tiber, gave it the name of Troy, and flattered themselves with the hopes of a quiet settlement. When ./Eneas arrived in Italy Latinus was engaged in a war with the Rutuli, a neighbouring people, in which he was attended with but very indifferent success, when news was brought him that a foreign army had made a descent on his coasts, pillaged his dominions, and were fortifying themselves in a camp near the sea. Hereupon he marched against them with all his forces ; but finding them, as he drew near, well armed, and regularly drawn up, he thought it advisable to forbear engaging troops that appeared so well disciplined, and to desire a parley. In this conference, Latinus understanding who they were, and being at the same time struck with terror, and touched with compassion for those brave but unfortunate men, entered into a treaty with them, and assigned them a tract of land for a settlement, on condition that they should employ their arms and exert their valor in defence of his dominions, and look upon the Rutuli as a com-mon enemy. This condition VEneas readily accepted ; and complied with his engagement so faithfully that Latinus came at length to repose an entire confidence in the Trojans ; and, in proof of it, gave him Lavinia, his only child, in marriage, thus securing to him the succession to the throne.

./Eneas, to testify his gratitude to Latinus and affection for Lavinia, gave her name to his camp, and called it Lavinium. The Trojans followed the example of their leader ; and, by making alliances with Latin families, became, in a short time, one and the same people with the Latins. In the mean time Turnus, the queen’s nephew, who had been brought up in the palace under the eye of Latinus, and entertained hopes of marrying Lavinia, and succeeding to the throne, seeing the princess bestowed on a stranger, and all his views defeated, went over to the Rutuli , and, by stirring them up, brought on a battle between tnem and the Latins, in which both he and Latinus were killed. Thus ./Eneas, by the death of his father-in-law, and by that of a troublesome rival, came into the quiet possession of the kingdom of Latium, which he governed with great wisdom, and transmitted to his posterity. ./Eneas reigned three years, during which he established the worship of the gods, and to the religion of the La-tins added that of

Troy. The two Palladiums, which had been the protectors of that city, be-came the tutelary deities of Lavinium, and in after ages of the whole Roman empire. The worship of Vesta was likewise introduced by ./Eneas ; and virgins, from her called Vestals, were appointed to keep a fire continually burning in honour of that goddess. Jupiter, Venus,

and many otheir deities who had been revered in Troy, became known to the Latins by ./Eneas. Meantime the Rutuli, ancient enemies of the Latin name, entering into an alliance with Mezentius, king of the Tyrrhenians, took the field to drive out those new comers. ./Eneas marched out against them at the head of his Trojans and Latins. Hereupon a battle ensued, which lasted till night ; when ./Eneas being pushed to the banks of the Numicus, which ran close by Lavinium, and forced into that river, was there drowned. The Trojans concealed his body ; and, pretending that he had vanished on a sudden, made him pass for a deity among his credulous subjects, who erected a temple to him under the title of Jupiter Indiges.

Upon the death of ./Eneas, his son Euryleon, called also Ascanius and lulus, succeeded ; but as he did not think it advisable to venture a battle in the beginning of his reign, with a formidable enemy, who promised himself great success from the death of ./Eneas, he tried whether he could, by treaty, put an end to so dangerous a war. But the haughty Mezentius demanded of the Latins, as one of the conditions of a peace, that they should pay him yearly, by way of tribute, all the wine produced in the territory of Latium. Ascanius rejected the proposal with indignation; and having caused all the vines throughout his dominions to he consecrated to Jupiter, and thus put it out of his power to comply with the enemy's request, he resolved to make a vigorous sally, and try whether he could, by force of arms, bring the insulting Tyrrhenian to more reasonable terms. The main body of the enemy's army was encamped at some distance from Lavinium ; but Lausus, the son of Mezentius, with the flower of their youth under his command, lay entrenched at the gates of the city. The Trojans, marching out in the night, attacked the post where Lausus commanded, forced his entrenchments, and obliged his troops to save themselves by flying to the main body of the array encamped on the plain ; but the unexpected arrival and overthrow of their advanced guard struck them with sach terror, that instead of stopping the flight of their companions, they fled with them, in great disorder, to the neighbouring mountains. The Latins pursued them, and in the pursuit Lausus was killed ; whose death so discouraged Mezentius that he

immediately sued for peace ; which was granted him, upon condition that for the future the Tiber should be the boundary between the Latin and Etrurian territories. In the mean time Lavinia, who had been left with child by ./Eneas, entertaining a strong jealousy of the ambition of her son-in-law, retired to the woods, and was there delivered of a son, who, from his father, and the place of his birth, had the name of ./Eneas Sylvius ; but as the queen's flight, who had disappeared on a sudden, raised suspicions at Lavinium prejudicial to the reputation of Ascanius, he caused search to be made after Lavinia, calmed her fears and prevailed upon her to return to the town with her son, whom he ever after treated as a brother. Lavinium grew every day more populous ; and as it was in reality the patrimony of Lavinia, and the

inheritance of her son Sylvius, Ascanius resolved to resign it to them, and build elsewhere another city for himself. This he made the place of his residence, and the capital of his new kingdom, calling it Alba Longa ; Alba, from a white sow, which we are told ˆEneas had found in the place where it was built; and Longa, to distinguish it from another town of the same name in the country of the Marsi ; or rather because it extended, without having much breadth, the whole length of a lake near which it was built. It was thirty years after the building ofLa-vinium that Ascanius fixed his abode at Alba ; and there he died, after a reign of about thirty-eight years, twelve of which he had resided at his new settlement. He left a son called lulus ; so that between him and Sylvius lay the right of succession to the Latin throne ; the latter being the son, and the former the grandson, of ./ Eneas. The Latins not thinking it their interest to continue divided, as it were, into two states, resolved to unite Alba and Lavinium into one sovereignty ; and as Sylvius was born of Lavinia the daughter of Latinus, and had thereby an undoubted title to the kingdom of his grandfather, whereas the other was but the son of a stranger, the Latins bestowed the crown on Sylvius ; and, to make lulus some amends, decreed to him the sovereign power in affairs of religion ; a power which thenceforth continued in his family. Sylvius was succeeded by thirteen kingsof the same race, who for nearly 400 years

reigned at Alba; but we scarcely know any thing of them besides their names, and the years of their respective reigns, ˆneas Sylvius died, after a reign of twenty-nine years. His son ./Eneas Sylvius II. governed La-tium thirty-one years.

Latinus Sylvius, who succeeded him, swayed the sceptre fifty-one years ××× Alba reigned thirty-nine; Capetus, by Livy named Atys, twenty-six; Capys twenty-eight; and Capetus II. thirteen. Tiberinus, who succeeded him, engaged him in a war that proved fatal to him ; for in a battle, which was fought on the banks of the Albula, he was forced into that river and drowned. From him the river took the name of Tiber, which it has borne ever since. Agrippa succeeded Tiberinus after a reign of eight years ; and left the throne, which he had held forty-one years, to Alladius, who reigned nineteen, and was succeeded by Aventinus, who left his name to the hill Aventinus, where he was interred. Procas, who succeeded him, and reigned twenty-three years, was the father of Numitor and Amulius ; and at his death bequeathed the throne to his eldest son Numitor. But Amulius, who surpassed his brother in courage, drove him from the throne ; and, to secure it to himself, murdered ./Egestus, Numitor's only son, and consecrated his daughter Rhea Sylvia to the worship of Vesta, by which she was obliged to perpetual virginity. But this precaution proved ineffectual ; for, as the vestal was going to a neighbouring spring to fetch water for the performance of a sacrifice to Mars, she was met and violated by a man in a military habit, like that in which the god Mars is represented. Some authors think that this counterfeit Mars was a lover come thither by her appointment ; others charge Amulius himself with using this violence to iiis niece* not so much to gratify his desires as to have a pretence to destroy her. For ever after he caused her to be carefully watched, till she was delivered of two sons; and then, exaggerating her crime in an assembly of the people, he prevailed upon them to sentence her to death, and to condemn the fruit of her amour to be thrown into the Tiber. The sentence against Rhea was, according to some authors, changed by Amulius, at the request of his daughter Antho, into perpetual confinement, but executed against the twins ; who being laid in a wooden trough, and carried to the foot of Mount Palatine, were there turned adrift on the Tiber, which at that time overflowed its banks. But the wind and stream proved both so favorable that at the fall of the water the two infants were left safe on the strand, and were there found by Faustulus, the chief of the king's shepherds, and suckled by his wife Acca Laurentia, who for her disorderly life was called Lupa ; and this gave rise to the fabulous miracle of their being nursed by a she wolf. As Faustulus was probably well acquainted with the birth of the twins, he took more than

ordinary care of their education, and sent them to Gabii to be instructed in Greek literature. As they grew up there appeared something in their mien and air which commanded respect; and the ascendant which they assumed over the other shepherds made them dreaded, we are told, in the forests. A qu.arrel happening between the herdsmen of Amulius and those of Numitor, the two brothers took the part of the former against the latter ; and, blood being shed in the fray, the adverse party, to be revenged on the twins Romulus and Remus, on the festival of Lupercalia, surprised Remus, and carried him before Numitor, to be punished according to his deserts. But Numitor, feeling himself touched in the prisoner's favor, asked him where he was born, and who were his parents. His answer immediately struck Numitor with a lively remembrance of his two grandsons ; their age, which was about eighteen years, agreed with the time when the two infants were exposed upon the Tiber ; and there needed HO more to change his anger into tenderness. In the mean time Romulus, eager to res-cue his brother, and pursue those that carried him off, was preparing to be revenged on them ; but Faustulus dissuaded him from it ; and, on that occasion, disclosing to him his birth, awakened in his breast sentiments worthy of his extraction. He resolved to attempt the deliverance of his mother and grandfather from oppression. With this view he assembled the country people, and engaged them to come to the city on an appointed day, and enter it at different gates, provided with arms which they were to conceal. Meantime Numitor made the same discovery to Remus concerning his parents, ant1 the oppressions they groaned under; which so fired him that he was ready to embark in any enterprise. But Numitor only desired him t< acquaint his brother with what he had heard and to send him to his house Romulus came; and was followed by Faustulus, who took with him the trough or skiff in which the twins had been exposed, to show it to Numitor; but, a*

the shepherd betrayed an air of concern and earnestness in his looks, he was stopped at the gates of the city, led before Arnulius, and examined concerning his burden. It was easily known by its make and

an inscription, which was still legible ; and therefore Faustulus owned what it was, and confessed that the twins were living; but, to gain time, pretended that they were feeding flocks in a remote desert. In the mean time, the usurper's death being resolved on, Remus undertook to raise the city, and Romulus to invest the king's palace. The country people came at the time appointed, and formed themselves into companies, each consisting of 100 men. They had no other ensigns but bundles of hay hanging upon long poles, which the Latins at that time called manipuli ; and hence came the name of manipulares, originally given to troops raised in the country. With this tumultuous army Romulus beset the avenues of the palace, forced the guard, and having killed the tyrant, after he had reigned forty-two years, restored his grandfather Nu mi-tor to the throne. Affairs being thus settled at Alba, the two brothers, by the advice of Numitor, undertook the founding of a new colony. The king bestowed on them those lands near the Tiber where they had been brought up, supplied them with all manner of instruments for breaking up ground, with slaves, and beasts of burden, and granted full liberty to his subjects to join them. Hereupon most of the Trojans, of whom there still remained fifty families ia Augustus's time, chose to follow the fortune of Romulus and Re-mus, as did also the inhabitants of Pallantium and Saturnia, two small towns. For the more speedy carrying on of the work, it was thought proper to divide those who were to be employed in the building of the city into two companies, one under the command of Romulus, the other of Remus; but this division, which was designed purely with a view to the public welfare, and that the two parties might work by way of emulation, gave birth to two factions, and produced a jealousy between the two brothers, which broke out when they came to choose a place for the building of their new city ; for Remus was for the Aventine, and Romulus for the Palatine mount. Upon which, the matter being referred to their grandfather, he advised the contending parties to have recourse to the gods, and to put an end to the dispute by augury, to which he was himself greatly addicted. The day appointed for the ceremony being come, the brothers posted themselves each upon his hill ; and it was agreed that whoever should see the first light, or the greatest number of vultures, should gain his cause. After the two rivals had waited some time for the appearance of a favorable omen, Romulus affirmed that he had seen twelve ; but Remus, having actually seen six, suspected deceit ; ana, being told that Romulus had not seen the twelve vultures till after he had seen six, he insisted on the time of hi"s seeing them, and the other on the number of birds he had seen. This widened the breach, and, their parties being divided, while each man espoused the cause of his leader, the dispute grew so warm that,

from words, they came at length to blows. The shepherd Faustulus, who was equally fond of both

the brothers, endeavouring to part the combatants, was killed. Some writers tell us that Remus likewise lost his life in the fray; but the greater number place his death later, and say that he was killed by one Fabius, for having, in derision, leaped over the walls of the new city : but. the more common report, according to Livy, was, that Remus fell by the hand of his brother!

Romulus, being now head of the colony, by having subdued his brother's party, applied his thoughts wholly to the building of the city. He chose Mount Palatine for its situation, and performed all those ceremonies which the superstition of the Etrurians had introduced. He first offered sacrifices to the gods ; ordered all the people to do the same ; and decreed that eagles should be the auspices of his new colony. After this, great fires were kindled before their tents, and all the people leaped through the flames to purify themselves. They next dug a trench round the spot where the assemblies of the people were afterwards held, and threw into it the first fruits of whatever they were allowed to make use of for food ; every man of the colony was ordered to cast into the same trench a handful of earth, Drought either from his own or some neighbouring country. The trench they called Mundus, that is, the world, and made it the cen-tre round which the city was to be built. Ther. Romulus, yoking a bull and a cow to a plough, the coulter whereof was brass, marked out, by a deep furrow, the whole compass of the city These two animals, the symbols of marriage, by which cities are peopled, were afterwards slain upon the altar. All the people followed the plough, throwing inwards the clods of earth which the plough-share sometimes turned outwards. Wherever a gate was to be made, the plough was lifted up, and carried ; and hence came the Latin word porta, a gate, derived from the verb portare, to carry. As Mount Palatine stood by itself, the whole was enclosed within the line made by the plough, which formed almost the figure of a square ; whence, by Dionysius Halicarnassensis, it is called RomaQuad-rata. As to the exact year of the foundation of Rome, Fabius Pictor, the most ancient of all the Roman writers, places it in the end of the seventh Olympiad ; that is, according to Usher, in the year of the world 3256, of the flood 1600, and 748 before the Christian era. The Romans began to build, as Plutarch and others say, on the 21st of April ; which day was consecrated to Pales, goddess of the shepherds ; whence the festival of Pales, and that of the foundation of the city, were afterwards jointly celebrated at Rome.

Rome, as left by its rude founder, consisted of about 1000 houses, or huts; and was properly speaking a mere village, whereof the principal inhabitants followed the plough ; being obliged to cultivate with their own hands the ungrateful soil of a barren country. Even the walls of Romulus's palace were made of rushes, and covered with thatch. As every one had chosen his ground to build upon, without any regard to the regularity and beauty of the whole, the streets were both crooked and narrow. In short, till it was rebuilt after the burning-ot it by the Gauls,

Rome was rather a disorderly heap of huts than a city. Romulus next assembled the people, and desired them to choose what kind of government they would obey. Monarchy was the unanimous voice of the Romans, and Romulus was elected king. After this he applied himself to the establishment of good order and subordination among his subjects. He put on a habit of distinction for himself, appointed twelve lictors to attend him as guards, divided his subjects, who at this time consisted only of 33,000 men, into curiae, decuriae, patricians, plebeians, patrons, clients, &c. After this he formed a senate, consisting of 100 persons, chosen from among the patricians ; and a guard of 300 young men called celeres, who attended the king, and fought either on foot or on horseback, as occasion required. The king's office at home was to take care of religious affairs ; to be the guardian of laws and customs ; to decide the weightier causes between man and man, referring those of smaller moment to the senate ; to call together the senators and assemble the people ; first delivering his own opinion concerning the affair he proposed, and then ratifying by his consent what was agreed on by the majority. Abroad, and in the time of war, he was to command the army with absolute authority, and to take care of the public money. The senate were to be judges in matters of small importance, and to debate and resolve upon such public affairs as the king proposed by a plurality of voices. The people were allowed to create magistrates, enact laws, and resolve upon any war which the king proposed : but in all these things the consent of the senate was necessary. Romulus next proceeded to settle tha religious affairs of his people. Many of the Trojan and Phrygian deities were added to those whom the aborigines already worshipped. He chose priests, instituted festivals, and laid the foundation of a regular system of religion ; after which, as his colony was still thinly peopled, he opened an asylum for fugitive slaves, homicides, outlaws, and debtors. These, however, he did not at first receive within the walls, but appointed for their habitation the hill Saturnius, called afterwards Capitolinus, on which he erected a temple to a divinity of his own

invention, whom he named ihe Asylean god, under whose protection all criminals were to live securely. But afterwards, when the city was enlarged, the asylum was enclosed within the walls, and those who dwelt in ti were included among the citizens of Rome. When Romulus had thus settled every thing, a supply of women was still wanting to perpetuate its population. The neighbouring nations refused to give their daughters in marriage to such a crew of vagabonds as had settled in Rome ; wherefore Romulus, by the advice of his grandfather Numitor, and with the consent of the senate, proclaimed a solemn feast and public games in honor of the Equestrian Neptune, called Consus. This occasioned a great concourse of people, who flocked from the adjacent parts to behold those pompous shows, together with the new city. But, in the midst of the solemnity, the Romans, rushing in with their swords drawn, seized all the young women, to the number of 683, for whom Romulus chose husbands. Among all those who

were tnus seized, only one manied woman named Hersilia, was found; and Romulus kep; her for himself.

This violence soon brought on a war with the neighbouring nations. Acron, king of Caenina, a city near Latium, having entered into a league with the inhabitants of Crustuminum and An-temnae, invaded the Roman territories. Romulus marched against them without delay, defeated the confederate army, killed their king in single com-bat, decreed himself a triumph, and consecrated the spoils of Acronto Jupiter Feretrius, under the name of Opima Spolia. The city of Caenina was razed to the ground, and the inhabitants transplanted to Rome, where they were admitted to the privilege of citizens. The king then marched with one legion (consisting at this time of 3000 foot and 300 horse) against the Crustumini and Antemnates, both of whom he defeated in battle, and transplanted the inhabitants to Rome ; which being incapable of holding such a number, Romulus took in the hill Saturnius, on the top of which he built a citadel, committing the care of it to a noble Roman named Tarpeius. The citadel was surrounded on all sides with ram parts and towers, which equally commanded the city and country. From the foot of the hill Saturnius a wall was carried on quite to the Tiber, and a gate opened in it named Carmentalis, from Carmenta the mother of Evander, who either lived there, or had

some chapel or altar erected to her. Romulus had now become so formidable to his neighbours, and had so well established his reputation for clemency, that several cities of Etruria voluntarily submitted to him. Ccelius, an Etrurian general, led his troops to Rome, and settled on a hill near the city, from him named Mount Ccelius. The Sabines, however, not dismayed at this increase of the Roman forces, sent a deputation to Romulus, demanding a restitution of the young women who had been carried off; and upon his refusal marched to Rome with an army of 25,000 foot and 1000 horse, under their king Titus Tatius. Romulus, having received supplies from Numitor and from Etruria, likewise took the field, with 20,000 foot and 800 horse, with whom he seized an advantageous post, and fortified himself so strongly that he could not be attacked. The Sabine monarch then began to be apprehensive of the event; but was extricated out of his difficulties by the treachery of Tarpeia, daugh r to the governor of the citadel, who agreed to be-tray that fortress to him on condition of being rewarded with what the Sabines wore on their left arms, meaning their bracelets. But when they became masters of this important place they crushed Tarpeia under their bucklers, pretending that thus they discharged their promises, as thev wore their bucklers also on their left arms. Trie possession of the citadel enabled the Sabines to carry on the war with more success; but at last, in a general engagement, they were driven back into the citadel, whither they were pursued by the Romans; but the enemy, rolling down great stones from the top of the hill, wounded Romulus on the head, so that he was carried insensible out of the field of battle, while, in the mean time, his troops were repulsed, and pursued to the very gates of Rome. Ho-vever the king, soon

recovering, encouraged his routed troops, andˆ drove the enemy hack into the citadel. But, while the two nations were thus fiercely contending, the women, for whose cause the war had been commenced, undertook the office of mediators ; and, having obtained leave from the se-nate, marched in a body to the camp of the Sabines, where they pleaded the cause of their husbands so effectually that a

treaty of union between the two nations was set on foot, and a peace was at last concluded, on the following terms: ††† 1. That the two kings should reside and reign jointly at Rome. 2. That the city should still, from Romulus, be called Rome, but the inhabitants Quirites, a name till then peculiar to the Sabines. 3. That the two nations should be-come one ; and that the Sabines should be made free in Rome, and enjoy all the privileges of Roman citizens. t As Rome was chiefly indebted for this increase of her power and splendor to the Sabine women, honorable privileges and marks of distinction were allowed them. Every one was commanded to give way to them ; in capital causes they were exempted from the jurisdiction of the ordinary judges ; and their children were allowed to wear a golden ball hanging from their necks, and a particular kind of robe called praetexta, to distinguish them.' , The two kings reigned with great harmony for five years ; during which time the only military exploit they accomplished was the reduction of the city of Cameria, at a small distance from Rome. 4000 of the Camerini were transplanted to Rome, and a Roman colony sent to repeople Cameria; soon after which the' Sabine king was murdered by the Lavinians on account of his granting protection to some of his friends, who had ravaged their territories. The Lavinians, fearing the resentment of Romulus, delivered up the assassins into his hand ; but he sent them back unpunished : which gave occasion to suspect that he was not displeased with the death of his colleague. Soon after the death of Tatius Rome was afflicted with famine and pestilence, which encouraged the Camerini to revolt ; but Romulus, marching against them suddenly, defeated them with the loss of 6000 men. 'After which he attacked the Fidenates, whose city stood about five miles from Rome, took their capital, and made it a Roman province. This drew upon him the resentment of the Veientes, a powerful nation in the neighbourhood, who claimed Fidenae as within their jurisdiction ; but their forces being defeated in two engagements, and a great number of them taken prisoners, they were obliged to sue for peace. Romulus granted them a truce for 100 years, on condition that they delivered to him seven small towns on the Tiber, together with some salt pits near the mouth of that river, and sent fifty of their chief citizens as hostages to Rome. The prisoners taken in this war were all sold for slaves. The remaining part of the reign of Romulus was spent in making laws for the good of his people ; but towards the end of his reign he began to behave in an arbitrary man-nei. He paid no longer any regard to the senate, but assembled them only for form's sake to ratify his commands. The senate therefore conspired o destroy him, and accomplished their purpose

while he was reviewing his troops. A violen storm of hail and thunder dispersed the army ; and the senators taking this opportunity, whfn they were left alone with the king, killed him, and conveyed his body out of sight. Some say that, to conceal the murder, they cut his body in pieces, each of them carrying away a part under his robe ; after which they told the people that their king was on a sudden surrounded by flame, and snatched up into heaven. This did not satisfy the soldiery, and violent disturbances were about to ensue, when Julius Proculus, a senator of distinction, having assembled the curiae, told them, with an oath, that Romulus had appeared to him, and enjoined him to acquaint the people that their king was returned to the gods from whom he originally came, but that he would continue to be propitious tp them under the name of Quirinus.

Romulus reigned, according to the common computation, thirty-seven years ; but some historians make his reign only about seventeen ; and it seems unaccountable that nothing important should have been recorded of him during a, period of twenty years. The death of Romulus was certainly followed by an interregnum, during which the senators, to prevent anarchy, seem to have taken the government into their own nands; and a portion of this may have been confounded with the reign of Romulus. Tatius had added another 100 to that body, and these 200 senators divided themselves into decuries or tens. These drew lots which should govern first; and the decury to whose lot it fell enjoyed the supreme authority for five days ; yet in such a manner that one person only of the governing decury had the ensigns of sovereignty at a time. To these another decury succeeded, each of them sitting op the throne in his turn, &c. But the people, soon growing weary of such frequent changes of masters, obliged the senate to resolve on the election of a king. Some difficulties, however, occurred ; the Romans did not choose to be subject to a Sa-bine ; and the Sabines, as they had been subject to Romulus after the death of Tatius, insisted that the king should be chosen out of their na-tion. At last it was agreed that the king should be a Sabine, but that the Romans should make the choice. In consequence of this determination, the Romans elected Numa Pompilius, who had married Tatia, the daughter of Tatius. Numa, devoted entirely to philosophy and superstition, and wandering from solitude to solitude, had impressed the people with a great opinion of his sanctity : he at first rejected the offer of the kingdom ; but, being at last prevailed upon, he set out for Rome, where he was received with loud acclamations, and had his election unanimously confirmed by the senate. His reign is not memorable for battles or conquests. He was averse to war; and made it his study to soften the manners of the Romans, rather than to

exalt them to superiority over their neighbours. He dismissed the celeres, encouraged agriculture, and divided the citizens into distinct bodies of tradesmen, so as to abolish the distinction between Romans and Sabines. In tin? division ihe musicians held the first rank, lx*-

rause they were employed in the office of religion. The goldsmiths, carpenters, curriers, dyers, taylors, &c., formed also distinct communities, and were allowed to make bye-laws among themselves, to have their own festivals, particular sacrifices, &c. ••• Numa is said to have had pretty just notions of the Supreme Being ; he nevertheless added innumerable superstitions to those he found in Rome. He divided the ministers of religion into eight classes, appointing to each their office with the greatest precision ; erected a temple to Janus, the symbol of prudence, which was to remain open in time of war, and to be shut in time of peace. Another temple was erected to Bona Fides ; and he invented a new kind of deities called Dii Termini, or boundaries, which he caused to be placed on the borders of the Roman state, and of each man's particular lands. ••• The last reformation which Numa undertook was that of the kalendar. These are the most remarkable transactions of his reign, which is said to have continued forty -three years : though some think that its duration could not be above fifteen or sixteen.

Numa's death was followed by a short interregnum ; after which Tullus Hostilius, the son or grandson of the famous Hersilia, was unanimously chosen king. Being of a bold and fiery temper, he did not long continue to imitate his peaceful predecessor. The Albans, indeed, soon gave him an opportunity of exercising his martial disposition. Ccelius, or Cluilius, who was at the head of the Alban republic, jealous of the growing greatness of Rome, privately commissioned some of the most indigent of his subjects to waste the Roman territory ; in consequence of which a Roman army entered the territories of Alba, engaged the robbers, killed many, and took a great number prisoners. A war soon commenced, in consequence of this, between the two nations ; but, when the armies came in sight of each other, their ardor

cooled, neither of them seeming inclined to come to an engagement. This inaction raised a great discontent in the Alban army against Cluilius ; insomuch that he came to a resolution of giving battle to the Romans next morning, or of storming their trenches if they should decline it. Next morning, however, he was found dead in his bed; after which the Albans chose in his stead Metius Fuffetius, a man remarkable for his hatred to the Roman name, as Cluilius had been before him. Fuffetius, however, continued in the same state of inactivity as his predecessor, until he received certain intelligence that the Veientes and Fidenates had resolved to destroy both Ro-mans and Albans when they should be weakened by a battle. Fuffetius then resolved to come to an accommodation with the Romans; and, hav-ing obtained a conference with Tullus, both seemed equally desirous of avoiding the calamities of war. But, to establish the peace on the best foundation, Tullus proposed that the chief families in Alba should remove to Rome, or, if they were unwilling to leave Alba, that one com-mon council should be established to govern both cities, under the direction of one of the two sovereigns. Fuffetius took aside those who attended him, to consult uith them about the pro-VOT. \ [II.

posal ; but they, though willing to come to an accommodation with Rome, absolutely refused to leave Alba. The only difficulty remaining, then, was to settle which city should have the superiority; and, as this could not be determined by argument, Tullus proposed to determine it by single combat betwixt himself and Fuffetius. This proposal, however, the Alban general declined ; and it was at last agreed that three champions should be chosen out of each camp to decide the difference. This produced the famous combat between the Horatii and Curiatii, by which the sovereignty was decided in favor of Rome. See HORATII. Tullus now resolved to call the Fidenates to an account for their treacherous behaviour during the war with Alba, and therefore cited them to appear before the senate ; but they refused to appear, and took up arms in conjunction with the Veientes. Fuffetius, in obedience to the orders of Tullus, joined him with the Alban troops ; but the day before the battle he acquainted the principal officers with his design, which was to stand neuter till fortune had declared for one side, and then to join with the conqueror. This design being approved, Fuffetius, during the engagement, retired with his forces to a neighbouring eminence. Tullus perceived his treachery ; but, dissembling his uneasiness, told his men that Fuffetius had possessed himself of that hill by his order, and that he was thence to rush down upon the enemy. The Veientes, in the mean time, were dismayed, and the Romans obtained the victory. After the battle, ,Tullus returned

privately to Rome in the night ; and, having consulted with the senate about the treachery of Fuffetius, returned to the camp by break of day. He then detached Horatius, who had conquered the three Curiatii, with a chosen body of horse and foot, to demolish Alba, as had been concerted at Rome. In the mean time, he commanded both the Roman and Alban troops to attend him unarmed, but gave private orders to the Romans to bring their swords concealed under their garments. When they were assembled, he laid open the treachery of Fuffetius, and ordered him to be torn in pieces by horses. His accomplices were all put to the sword; and the inhabitants of Alba carried to Rome, where they were admitted to the privileges of citizens, and some of them even admitted into the senate. Tullus now turned his arms against 'Fidenae, which he again reduced under the Roman yoke ; and took Medulia, a strong city of the Latins ; after which he waged a successful war with the Sabines, whose union with the Romans seems to have ceased with the time of Numa. This was the last of his martial exploits ; after which we hear no more of him, but that he became extremely superstitious in his advanced years, giving ear to many foolish stories, and for which he appointed nine days expiatory sacrifices. As to the manner of his death authors are not agreed. Some tell us that he was killed by lightning, together with his wife, children, and his whole family ; while others say that he was murdered with his wife and children by Ancus Martius. He died after a reign of thirty-three years, leaving the city greatly increased, but the dominions much tire

&arr.e as they had been in the time of Romulus.

After a short interregnum, Ancus Martius, the grandson of Numa by his daughter Pompilia, and Numa Martius, his relation, was unanimously chosen by the people and senate. Though naturally inclined to -var, he began his reign with attempting to restore the ceremonies of Numa, which had been neglected under Tullus Hostilius. He endeavoured alsx> to draw the attention of his people to husbandry and the peaceful arts; advising them to lay aside all sorts of violence, and to return to their former employments. This gained him the affection of his subjects, but brought upon him the contempt of the neighbouring nations. The Latins, pretending that their treaty with Rome was expired, made inroads into the Roman territories.

Ancus, after using the ceremonies directed by Numa, took the field with an army consisting entirely of new levied troops, and reduced the cities of Polito-rium, Tillena, and Ficana, transplanting the inhabitants to Rome. A new colony of Latins repeopled Polytorium ; but Ancus retook the place next year, and entirely demolished it. He then laid siege to Medulia ; which, though it had been ruined by Tullus Hostilius, was now stronger than ever. It submitted after a siege of four years, when Ancus found himself obliged to undertake a second expedition against Ficana, which he had before reduced ; and it w-as not without the utmost difficulty that he reduced it a second time. After this he defeated the Latins in a pitched battle; vanquished the Fidenates, Veientes, and Sabines ; and having taken in the hill Janiculum to be included within the walls, and built the port of Ostia,hedied in the twenty-fourth year of his reign.

Ancus Martius left two sons, one an infant, and the other about fifteen years of age. Both of these he put under the tuition of Tarquin, the son of Lucumo, a merchant in Corinth, who fled from that city to secure his wealth from Cypselus, a tyrant of the place. He settled in Tarquinii, one of the principal cities in Etruria ; but finding that he could not there attain to any of the principal posts in the city, on account of his foreign extraction, he removed to Rome, where he had been gradually raised to the rank of patrician and senator. The death of Ancus Martius gave him an opportunity of assuming the regal dignity and setting aside his pupils; and in the beginning of his reign he took care to strengthen his party in the senate by adding 100 more to that body. These were called senatores minorum gentium, because they were chosen out of the plebeians ; however, they had the same authority in the senate as the others, and their children were called patricians. Tarquin was not inferior to any of his predecessors, either in his inclination or abilities to carry on a war. He recommenced hostilities with the Latins ; from whom he took the cities of Apiolae, Crustuminum, Nomentum, and Collatia. The inhabitants of Apiolae were sold for slaves; but those of Crustominum and Nomentum, who had submitted after their revolt, were treated with great clemency. The inhabitants of Collatia were disarmed, and obliged to pay a large sum of money ; the sovereignty of it being given

to Egerius. the son of Arunx, Tarquin’s brothei , whence he took the name of Collatinus, which he transmitted to his posterity. Corniculum, another city of Latium, was taken by storm, and reduced to ashes. This progress having greatly alarmed the Latins, several of them joined their forces to oppose such a formidable enemy ; but, being defeated

in a bloody battle near Fidenae, they were obliged to enter into an alliance with Rome : upon which the Latins, having held a national conference, entered into a league with the Etrurians, and again took the field with a very numerous army. But Tarquin, having defeated the confederate armies in two very bloody battles, obliged the Latin cities to submit to dependence on Rome ; and, having entered the city in triumph, built the circus with the spoils taken from the enemy. The war with the Latins was scarcely ended when another commenced with Etruria. This was accounted the most powerful nation in Italy, and was then divided into twelve tribes or lucumonies. These appointed a national assembly, in which it was decreed that the whole force of Etruria should be employed against Tarquin ; and, if any city presumed only to stand neuter, it should be for ever cut off from the national alliance. Thus a great army was raised, with which they ravaged the Roman territory, and took Fidenae by the treachery of some of its inhabitants. Tarquin, not being in a condition to oppose them at first, was obliged to submit to (heir ravages for a whole year ; after which he took the field with all the forces he could raise. The Roman army was divided into two bodies, one under the king, the other under his nephew Collatinus. The latter, having divided his forces to plunder the enemy, was defeated ; but Tarquin, in two engagements, vanquished the army which opposed him. He then marched against Fidenae, where he gamed a third battle ; after which he took the city. The citizens suspected of betraying it to the enemy were whipped to death ; the rest were banished, and their lands divided by lot among the Roman soldiers. Tarquin now hastened to oppose the new army of the Etrurians, before their forces could be properly collected; and having come up with them at Eretum, about ten miles from Rome, defeated them with greater slaughter, for which victory he was decreed a triumph by the senate : while the enemy were glad to sue for peace ; which Tarquin granted, upon the sole condition of their owning his superiority. Accordingly, the Etrurians sent him all the ensigns of royalty which were in use among them, *viz.* a crown of gold, a throne of ivory, a sceptre with an eagle on the top of it, a tunic embroidered with gold and adorned with figures of paim branches, together with a purple robe enriched with flowers of several colors Tarquin, however, would not .wear these magm ficent ornaments till the senate and people had consented to it by an express law. He then ap plied the regalia to the decoration of his triumph and never afterwards laid them aside. In this triumph he appeared in a gilt chariot, drawn by four horses, clothed in a purple robe, and a tunic embroidered with gold, a crown on his head, and a sceptre in his hand, attended by twelve lictors

with their axes and fasces. Tarquin, having now obtained some respite from war, began to ornament the city. He built the walls with hewn stone, and erected those famous common sewers which have deservedly been ranked among the wonders of the world. Home now contained four hills within its compass, *viz.* the Palatinus, Tarpeius, Quirinalis, and Coelius. In the valleys between these hills the rain water and springs uniting formed great pools which laid under water the streets and public places. The mud made the way impassable, and rendered the city unhealthy. Tarquin freed the city from this nuisance, by conveying off these waters by subterraneous channels into the Tiber. In doing this it was necessary to cut, through hills and rocks, a channel large enough for a navigable stream, and covered with arches strong enough to bear the weight of houses, which were frequently built upon them. All these arches were made of hard stone, and neither trouble nor expense wa►► spared to make the work durable. Their height and breadth were so considerable that a cart loaded with hay could easily pass through them under ground. The expense of constructing these sewers was never so thoroughly understood as when it became necessary to re-pair them : for then the censors gave no less than 1000 talents to the person appointed for this purpose. Besides these great works, Tarquin adorned the forum, surrounding it with galleries, in ‘which were shops for tradesmen, and building temples in it for the youth of both sexes, and halls for the administration of public justice. He next engaged in a war with the Sabines, on pretence that they had assisted the Etrurians. Both armies took the field, and came to an engagement on the confines of Sabinia, without any considerable advantage on either side ; neither was any thing of consequence done during the whole campaign. Tarquin, then considering with himself that the Roman forces were very deficient in cavalry, resolved to add some new bodies of knights to those already instituted by Romulus. But this project met with great opposition from the superstitious augurs, as the original division of horse into three bodies had been determined by auguries ; and Actius Naevius, the chief of the diviners at that time, violently opposed the king’s will. On this occasion credulous historians say that Tarquin, at the word of

Naevius, cut a flint with a razor.

This adventure, whatever was the truth of it, caused Tarquin to abandon his design of increasing the number of bodies of horse, and content himself with augmenting the number in each body. He then renewed the war with the Sabines, ravaged their country, defeated them in three pitched battles, obliging them at last to submit to him, and put him in possession of their country. In the decline of life he employed himself in further decorating the city, building temples, &c. He was assassinated in his palace, in the eightieth year of his age, by the sons of An-cus Martius, whom he had originally deprived of the kiugdom.

After the death of Tarquin I., his widow Tanaqml preserved the kingdom to her son-in- law Servius Tullius, by artfully giving out that

the king was only stunned, and would soon recover; upon which the sons of Ancus went voluntarily into banishment. The second day after his decease, Servius Tullius heard causes from the throne in the royal robes, and attended by the lictors; but ;is he pretended only to supply the king's place till he should recover, and thought it incumbent on him to revenge the wicked attempt upon his life, he summoned the sons of Ancus to appear before his tribunal ; and, on their non-appearance, caused them to be declared infamous, and their estates to be confiscated. After he had thus managed matters for some time, in such a manner as to engage the affections of the people, the death of Tarquin was published as a thing that had newly happened, and Servius Tullius assumed the ensigns of royalty, having none to dispute with him. The new king showed himself every way worthy of the throne. No sooner were the Etrurians informed of Tarquin's death, than they shook off the yoke ; but Servius quickly reduced them to obedience, depriving them of their lands, which he shared among the poor Roman citizens who had none. For this he was decreed a triumph by the people, in spite of the opposition of the senate, who could never be brought to approve of his election to the kingdom, though he was soon after legally chosen by the tribes. Afte Servius had obtained the sanction of the popular voice, he marched a second time against tl.<' revolted Etrurians ; and, having again vanquished them, was decreed another triumph. He then applied himself to the enlarging and adorning Ihe city. He also added to the city the hilis Esquilinus and Viminalis, fixing his own palace on the Esquilinus, to draw inhabitants thither. He likewise added a fourth tribe, which he called Tribus Esquilina, to those instituted by Romulus. He divided also the

whole Roman territory into distinct tribes, commanding that there should be at least one place of refuge in each tribe, situated on a rising ground, and strong enough to secure the effects of the peasants in case of a sudden alarm. These strong holds he called pagi, i. e. villages ; and he commanded that each of them should have their peculiar temple, tutelary god, and magistrates. In the mean time, his two wards, Lucius Tarquin ius and Arunx, the grandchildren of Tarquin I., being grown up, to secure their fidelity, he married them to his daughters. And though the elder of these daughters, who was of a mild and tractable disposition, resembled in character the younger of his pupils, as the elder of his pupils did the younger of his daughters, who was of a violent and vicious temper, yet he thought it advisable to give his elder daughter to Tarquin, and the younger to Arunx; as thus he matched them according to their ages ; and hoped that the elder Tullia's sweet disposition would temper Tarquin's impetuosity, and the younger Tullia's vivacity rouse the indolence of Arunx. During the public rejoicing for these marriages, the twelve lucumonies of Etruria, uniting their forces, attempted to shake off the Roman yoke, but were in several battles defeated by Servius, and obliged to submit on the conditions granted by his predecessor. For this success . Servius

was honored with a third triumph. The king, being thus disengaged from a troublesome war, put in execution that master-piece of policy which Rome made use of ever after, and which established a perpetual order and regularity in all the members of the state, with respect to wars, the public revenues, and the suffrages of the comitia. The public supplies had hitherto been raised upon the people at so much a head, without any distinction of rich and poor ; whence it likewise followed that, when levies were made for the war, the rich and poor were equally obliged to ta<ce the field, according to the order of their tribe ; and, as they all served at their own expense, the poorer sort could hardly bear the charges of a campaign. Besides, as the most indigent of the people saw themselves burdened with the same taxes as the

rich, they pretended to an equal authority in the comitia ; so that the election of kings and magistrates, the making of peace or war, and the judging of criminals, were given up into the hands of a populace who were easily corrupted, and had nothing to lose. Servius formed a projed. to remedy these evils, and put it in execution, by enacting a law, enjoining all the Roman citizens to bring in an account in writing of their own names and ages, and of those of their fathers, wives, and children. All heads of families were also commanded to deliver in, upon oath, a just estimate of their effects, and to add to it the places of their abode, whether in town or country. Whoever did not bring in an account of his effects was to be deprived of his estate, to be beaten with rods, and publicly sold for a slave. Servius, from these accounts, undertook to ease the poor by burden-ing the rich, and to please the latter by increasing their power. To this end he divided the Roman people into six classes ; the first class consisted of those whose estates and effects amounted to the value of 10,000 drachmae, or 1 00,000 asses of brass ; the first way of computing being used by the Greeks, and the latter by the Latins, This class was subdivided into eighty centuries, or companies of foot. To these Servius joined eighteen centuries of Roman knights, who fought on horseback ; and appointed this body of horsemen to be at the head of the first class, because the estates of these knights exceeded the sum necessary to be admitted into it. However, the public supplied them with horses ; for which a tax was laid upon widows, who were exempt from all other tributes. This first class, including infantry and cavalry, consisted of ninety-eight centuries. The second class comprehended those whose estates were valued at 7500 drachmae, or 75,000 asses of brass. It was subdivided into twenty centuries, all foot. To these were added two centuries of carpenters, smiths, and other artificers. In the third class were those who were esteemed worth 5000 drachmae, or 50,000 asses. This class was subdivided into twenty centuries. The fourth class was those whose effects were rated at the value of 2500 drachms, or 26,000 asses, and was divided into twenty centuries ;, to which were added two other centuries of trumpeters and blowers of the horn, who supplied (he whole army with this martial music.

The fifth class included those whose substance did not amount to more than 1250 drachmae, or 12,500 asses; and this class was divided into thirty centuries. The sixth class comprehended all those who were not worth so much as those of the fifth class ; they exceeded in number any other class, but nevertheless were reckoned but as one century. The king drew from these regulations all the advantages he had expected. Levies for the army were no longer raised by tribes, nor

were taxes laid on at so much a head, but all was levied by centuries. When an army of 20,000 men, or a large supply of money, was wanted for the war, each century furnished its quota both of men and money ; so that the first class, which contained more centuries, though fewer men, than all the others together, furnished more men and more money for the public service than the whole Roman state besides. And by these means the Roman armies consisted for the most part of the rich citizens of Rome ; who, as they had lands and effects to defend, fought with more resolution, while their riches enabled them to bear the expense of the campaign. As it was but just the king should make the first class amends for the weight laid on it, he gave it almost the whole authority in public affairs, changing the comitia by curiae, in which every man gave his vote, into comitia by centuries, in which the majority was not reckoned by single persons, but by centuries, how few soever there might be in a century. Hence the first class, which contained more centuries than the ××× other five taken together, had every thing at its disposal. The votes of this class were first taken ; and if the ninety-eight centuries happened to agree, or only ninety-seven of them, the affair was determined ; because these made the majority of the 193 centuries which composed the six classes. If they disagreed, then the second, the third, and the other classes in their order were called to vote, though there was very seldom any occasion to go so low as the fourth class for a majority of votes ; so that, by this good order, Servius brought the affairs of the state to be determined by the judgment of the most considerable citizens, who understood the public interest much better than the blind multitude, liable to be imposed upon and easily corrupted. And now the people being divided into several orders, according to the census or valuation of their estate, Servius resolved to solemnise this prudent regulation by some public act of religion, that it might be the more respected and the more lasting. Accordingly all the citizens were commanded to appear, on a day appointed, in the Campus Martins, a large plain lying between the city and the Tiber, formerly consecrated by Romulus to the god Mars. Here, the centuries being drawn up in battalia, a solemn lustration or expiatory sacrifice was performed in the name of all the people. The sacrifice consisted of a sow, a sheep, and a bull, whence it took the name of suovetaurilia. The whole ceremony was called lustrum, a luendo ; that is, from praying, expiating, clearing, or perhaps from the goddess Lua, who presided over expiations, and to whom Servius had dedicated a temple. The king, considering that in

the space of five years there might be such alterations in the fortunes of private persons as to entitle some to be raised to a higher class and reduce others to a lower, enjoined that the cen-sus should be renewed every five years.

As the census was usually closed by the lustrum, the Romans henceforth began to compute time by lustrums, each lustrum containing the space of five years. However, the lustrums were not always regularly observed, but often put off, though the census had been made in the fifth year. Some writers say that Servius at this time coined the first money that had appeared at Rome. The government of the city being thus established, Servius, touched with compassion for those whom an unsuccessful war had reduced to slavery, thought that such of them as had, by long and faithful services, deserved and obtained their freedom, were much more worthy of being made Roman citizens than foreigners who were admitted without distinction. He therefore gave the freed men their choice, either to return to fheir own country or continue at Rome. Those who chose to continue he divided into four tribes, and settled them within the city ; and though they were distinguished from the plebeians by their old name of liberti, or freed men, yet they enjoyed all the privileges of free citizens. The senate took offence at the regard which the king showed to such low people, who had but lately shaken off their fetters ; but Servius, by a most humane and judicious discourse, entirely appeased the fathers, who passed his institution into a law which subsisted ever after. This wise king, having thus established order among the people, undertook at last to reform the royal power itself; his equity, which was the main spring of all his resolutions, leading him to act contrary to his own interest, and to sacrifice one-half of the royal authority to the public good. His predecessors reserved to themselves the cognizance of all causes, public and private; but Servius, finding the duties of his office too much for one man to discharge well, committed the cognizance of ordinary suits to the senate, and reserved that only of state crimes to himself. All things being now regulated, both in the city and country, Servius formed a scheme for attaching the Sabines and Latins to the Romans, by social ties, strengthened by religion. He summoned the Latin and Sabine cities to send their deputies to Rome, to consult about an af-fair of great importance. When they were come, he proposed to them the building of a temple in honor of Diana, where the Latins and Sabines should meet once a-year, and join with the Ro-mans in offering sacrifices to that goddess ; that this festival should be followed by a council in which all disputes between the cities should be amicably

determined ; that there proper measures ohould be taken to pursue their common interest; and lastly, in order to draw the common people thither, a fair should be kept, at which every one might furnish himself with what he wanted. The king's design met with no opposition : the deputies only added to it that the temple should be an inviolable asylum for the united nations; and that all the cities should contribute toward >..'i►► expense of building it. It being left to the

king to choose a proper place for it, he pitched upon the Aventine Hill, where the temple was built, and assemblies annually held in it. The laws which were to be observed in these general meetings were engraved on a pillar of brass, and were to be seen in Augustus's time in the Latin tongue, but in Greek characters. But now Servius was grown old ; and the ambition of Tarquin his son-in-law increased in proportion as the king advanced in years. His wife used her utmost endeavours to check the rashness and fury of her husband, and to divert him from all criminal enterprises ; while her younger sister was ever instigating Arunx, who placed all hi;, happiness in a private life, to the most villanous attempts. She was continually lamenting her fate in being tied to such an indolent husband, and wishing she had either continued unmarried, or were a widow. Similitude of temper and manners formed by degrees a great intimacy between her and Tarquin. At length she proposed nothing less to him than the murdering of her father, sister, and husband, that they two might meet and ascend the throne together. Soon after they paved their way to an incestuous marriage, he by poisoning his wife, and she her husband ; and then had the assurance to ask the king's and queen's consent to their marriage. Servius and Tarquinia, though they did not give it, were silent, through too much indulgence to a daughter in whom now was their only hope of posterity. But these criminal nuptials were only the first step towards a yet greater iniquity. The wicked ambition of the new married couple first showed itself against the king : for they publicly declared that the crown belonged to them ; that Servius was a usurper, who, being appointed tutor to Tarquin's grandchildren, had deprived his pupils of their inheritance ; that it was high time for an old man, who was but little able to support the weight of public affairs, to give place to a prince who was of a mature age, &c. The patricians, whom Servius had humbled during the whole of his reign, were easily gained over to Tarqtin's party ; and by the help of money, many of the poorer citizens were also brought over. The king, being informed of their treasonable practises, endeavoured to dissuade his. daughter and son-in-law from such proceedings,, which might end in their ruin ; and exhorted them to wait for the

kingdom till his death. But they, despising his counsels and paternal admonitions, resolved to lay their claim before the senate, which Servius was obliged to summon. Tarquin reproached his father-in law with having ascended the throne without a previous interregnum; and with having bought the votes of the people, and despised the suffrages of the senate. He then urge.d his own right of inheritance to the crown, and the injustice of Servius, who, being only his guardian, had kept possession of it, when he himself was of an age to govern. Servius answered that he had been lawfully elected by the people ; and that, if there could be an hereditary right to the kingdom, the sons of Ancus had a much better one than the grandsons of the late king, who must himself have been a usurper. He then referred the whole to an a<-c mMv of thf [‘co|->e ; which being

immediately proclaimed, all over the city, the forum was soon filled ; and Servius harangued the multitude in such a manner as gained all their affections. They all cried out with one voice, ‘ Let Servius reign ; let him continue to make the Romans happy.’ Amidst their clamors, these words were likewise heard : ‘ Let Tarquin die ; let him perish.’ This language so frightened him, that he retired to his house in great haste ; while the king was conducted back to his palace with the acclamations of the people. The ill success of this attempt cooled Tarquin’s ardent desire of reigning, but his ambition made him act a new part. He undertook to regain the favor of his father-in-law by caresses, submissions, and protestations of a sincere regard and affection for him ; insomuch that the king was sincerely reconciled to him, and tranquillity reestablished in the royal family. But it was not long ere Tarquin, roused by the continual reproaches of his wife, began to renew his intrigues ; and had no sooner gained a considerable party, than he clothed himself in the royal robes, and, causing the fasces to be carried before him by some of his domestics, crossed the forum, and, entering the temple where the senate used to meet, seated himself on the throne. Such of the senators as were in the faction he found already in their places (for he had given them private notice to be there early) ; and the rest, being summoned to

a►►seroble in Tarquin's name, made what haste they could to the appointed place, thinking that Servius was dead, since Tarquin assumed the title and functions of king. When they were all assembled, Tarquin made a long speech, reviling his father-in-law, and repeating the invectives against him which he had so often uttered, calling him a slave, an usurper, a favorer of the populace, and an enemy to the senate and pa- ►►►tricians. While he was speaking Servius arrived; and, rashly giving way to the motions of his courage, without considering his strength, drew near the throne to pull Tarquin down from it. This raised a tumult in the assembly, which drew the people into the temple ; but nobody ventured to part the rivals. Tarquin, therefore, being more strong and vigorous, seized the old man by the waist, and, hurrying him through the temple, threw him down from the top of the steps into the forum. The king raised himself up with some difficulty : but all his friends had abandoned him ; two or three of the people only, touched with compassion, lent him their arms to conduct him to the palace. As they were leading him on so slowly, the cruel Tullia appeared in the forum, whither she had hastened in her chariot on the first report of what had passed in the senate. She found her husband on the top of the steps of the temple ; and was the first who saluted him king. The example was immediately followed by the senators of Tarquin's party. Nor was this enough for the unnatural daughter ; she took aside her husband, and suggested to him that he would never be safe so long as the usurper of his crown was alive. Hereupon Tarquin instantly despatched some of his domestics to take away the unfortunate Servius's life. The orders for this -jarricide were no sooner given than Tullia

mounted her chariot again, with an air of triumph, to return home. In the way to her house, which was through a narrow street, called Vicus Cyprius, the assassins had left the king's body, which was still panting. At this sight the charioteer, struck with horror, checked his horses : but Tullia forced him to go on : and the blood of the father is said to have dyed the wheels of the chariot, and even the clothes of the inhuman daughter ; whence the street was called ever after Vicus Sceleratus.

The new king proved a most despotic and cruel tyrant; and was surnamed the proud, on account of his haughty behaviour. All controversies whatever were decided by himself and his friends; and he banished, fined, and even executed, whom he pleased. The census and lustrum, the division of citizens into classes and centuries, were abolished ; and all kinds of assemblies, even those for amusement and

recreation, were prohibited. Nay, to such a height did Tarquin carry his insolence and tyranny, that the most virtuous of the senators went into voluntary banishment ; while many of those who remained were cut off on various pretences, that the king might enjoy their estates. Tarqnin, sensible of the danger in which he stood by thus losing the affections of his people, provided a sufficient number of soldiers, by way of guard, to prevent attempts upon his person ; and gave his daughter to Octavius Mamilius, one of the most considerable men among the Latins, to strengthen his interest by a foreign alliance. Mamilius accordingly procured many friends to his father-in-law, but he had nearly lost them again by his haughty behaviour. He desired the Latins to call a national council at Ferentinum, where he would meet them on a day appointed by himself. The Latins accordingly met ; but, after waiting for several hours, Tarquin did not appear. On this, one Turnus Herdonius, an enterprising and eloquent man, who hated Tarquin, and was jealous of Mamilius, made a speech, in which he inveighed against the haughty behaviour of Tarquin, set forth the contcmjt which he had put upon the Latins, and concluded with desiring the council to break up and return home without taking any further notice of him. Mamilius, however, prevailed upon them to return the day following ; when Tarquin made his appearance, and told the assembly that his design in calling them together was to claim his right of commanding the Latin armies, which he said was derived from his grandfather, but which he desired to be confirmed! to him by them. These words were scarcely out of his mouth, when Herdonius, rising up, entered into a detail of Tarquin's tyranny and arbitrary behaviour at Rome, which, he said, the Latins would soon feel in an equal degrej, if they complied with Tarquin's demand. To this speech the king made no reply at that time, but promised to answer him next day. In the mean time, however, he bribed the domestics of Herdonius to admit among his baggage a large quantity of arms : and then, telling the Latins that Herdonius's opposition proceeded only from Tarquin's hav-ing refused him his daughter in marriage, accused him of having laid a plot to cut off all the de-ROME.

puties there present, and to usurp a jurisdiction over the Latin cities ; as a proof of which he appealed to the arms hid among the baggage of Herdonius. The accused, conscious of his innocence, desired that his baggage should be searched ; which being accordingly done, and the

arms found, he was hurried away without being allowed to make any defence, and thrown into a basin at the head of the spring of Ferentinutn, where he was drowned. In consequence of this treachery, Tarquin was looked upon by the Latins as their deliverer, and declared general of the Latin armies ; soon after which the Hernici and two tribes of the Volsci entered into an alliance with him. To keep these confederates together, Tarquin, with their consent, erected a temple to Jupiter Latialis on a hill near the ruins of Alba, where he appointed certain feasts called Ferise Latinae to be held on the 27th of April, where the several nations were to sacrifice together, and on no account to commit hostilities against each other during their continuance. The king then proceeded to make war on the rest of the Volsci who had refused to enter into an alliance with him. Some depredations which they had committed in the territories of the Latins served for a pretence to begin the war; but, as Tarquin had no confidence in the Romans, his army was composed only of a small body of them, who were incorporated among the Latin auxiliaries. However, he defeated the enemy, took one of their cities by storm, and gave the booty to his soldiers. He next turned his arms against the Sabines, whom he entirely defeated in two engagements, and made the whole nation tributary ; for which exploits he decreed himself two triumphs, and on his return to Rome employed the populace in finishing the sewers and circus which had been begun by his grandfather Tarquin I. In the mean time, Tarquin's persecutions of his own subjects daily drove some of the most considerable into banishment. A great number of patricians took refuge in Gabii, a city of Latium, about thirteen miles from Rome ; where the inhabitants, touched with compassion for their misfortunes, not only received them with kindness, but began a war with Tarquin on their account.

The Gabini seem to have been the most formidable enemies whom the Romans had hitherto met with ; since Tarquin was obliged to raise a prodigious bulwark to cover the city on the side of Gabii. The war lasted seven years; during which time, by the devastations committed by the two armies, a great scarcity of provisions took place in Rome. The people grew clamorous ; and Tarquin, being unable either to quiet them or to reduce the Gabini, fell upon the following dishonorable and treacherous expedient : ××× His son Sextus pretended to be on very bad terms with his father, and openly inveighed against him; on which he was proclaimed a rebel, and publicly beaten in the forum. This being reported at Gabii, by persons sent thither on purpose, the Inhabitants became very desirous of having Sex-tus among them ; and accordingly he soon went thither, having previously obtained a solemn promise from the inhabitants never to deliver

him up to his father. Here he made frequen, inroads into the Roman territories, and always came back laden with spoil, his father sending against him only such weak parties as must infallibly be worsted. By this means he soon came to have such a high degree of credit among the Gabini that he was chosen general of their army. Finding his authority sufficiently established, he despatched a slave to his father for instructions ; but Tarquin, unwilling to return an explicit answer, took the messenger into the garden, where he struck off the heads of the tallest poppies. Sextus understood that by this hint the king desired him to put to death the leading men in the city of Gabii, which he immediately did; and, while the city was in confusion on account of this massacre, he opened the gates to his father, who took possession of it. The inhabitants dreaded every barbarity from the haughty tyranny of the Roman monarch : however on this occasion he consulted his policy rather than his revenge ; granted them their life, liberty, and estates, and even entered into a treaty of alliance with them. The articles were written on the hide of an ox, which was extant in the time of Augustus, in the temple of Jupiter Fidius.

After this he made his son Sextus king of Gabii; sending off his two other sons, Titus and Arunx, the one to build a city at Signia, the other at Cicaeurn, a promontory of the Tyrrhene Sea, to keep the Volsci in awe ; and for some time Tarquin enjoyed a profound peace; the Romans being accustomed to oppression, and the yoke of an imperious master, making no opposition to his will. During this interval Tarquin met with the celebrated adventure of the Sibyl, whose i books were ever afterwards held in high estimation at Rome, and Tarquin appointed two persons of distinction to take care of them. These were called Duumviri : but their number was afterwards increased to ten, when they were called Decemviri; and then to fifteen, when they were termed Quindecemviri. At this time also the written civil law had its origin among the Romans, all the statutes enacted by the kings being collected into one body ; which, from Pa-‘pirius, the name of the collector v►►as called the Papirian law. The temple of the capitol was-also finished ; for which purpose the most skilful architects and workmen were brought from Etruria, the populace being obliged to serve them in the most laborious parts. We now come to the important revolution which put an end to the regal power at Rome, and introduced a republican form of government, to which this city is allowed to owe the greatest part of her grandeur. Tarquin had left himself no friends among the rich citizens, by reason of his oppressions ; and the populace were equally disaffected on account of their being obliged to labor in his public works. Among the

many persons of distinction who had been sacrificed to the avarice or suspicions of Tarquin was M. Junius, who had married the daughter of Tarquin I. This nobleman had a son named L. Junius, who escaped the cruelty of the tyrant by pretending to be an idiot, and hence received the agnomen of Brutus. Soon after the finishing of the works

above mentioned, a violent plague happening to break out at Rome, Tarquin sent his sons Titus and Arunx to consult the oracle of Del-phi; and the princes took Brutus along wˆth them, to divert themselves with his supposed folly. Brutus chose for his offering to the Del-phic Apollo a stick of elder ; which occasioned much laughter. However, he had the precaution to enclose a rod of gold within the stick ; and to this probably it was owing that the priestess gave the princes the following riddle, that he who should first kiss his mother should succeed Tarquin in the government of Rome. This answer had been given to their enquiries concerning the succession ; upon which the two brothers either drew lots which of them should kiss their mo-ther at their return, or agreed to do it at once, that both might reign jointly : but Brutus, imagining the oracle had another meaning, fell down and kissed the earth, the common mother of all living. This the priestess had probably meant, and had given the answer on purpose to have another proof of Brutus's ingenuity. On the return of the princes to Rome, they found their father engaged in a war with the Rutuli. The treasury being exhausted by the sums which Tarquin had expended in his public works, he had marched to Ardea the capital of that nation, which lay about twenty miles from Rome, in hopes of taking it without opposition. Contrary to his expectation, however, he was obliged to besiege it in form ; and this constrained him to lay a heavy tax upon his subjects. As the siege was carried on very slowly, the general officers frequently made entertainments for one another. One day, when Sextus Tarquinius was entertaining his brothers, the conversation happened to turn upon their wives : every one extolled the good qualities of his own; but Collatinus bestowed such extravagant praises on his Lucretia, that the dispute ended in a kind of quarrel. It was then resolved that they should mount their horses and

surprise their wives by their unexpected return. The king's daughters-in-law were employed in feasting and diversion, and seemed much disconcerted by the appearance of their husbands; but Lucretia, though the night was far advanced, was found, witli her maids about her, spinning and working in wool. She was not at all discomposed by the company whom her husband brought with him, and they were all pleased with the reception she gave them. As Lucretia was very beautiful, Sextus Tarquinius conceived a passion for her, which resolving to satisfy at all events, he soon returned to Collatia in the absence of Lucretia's husband, and was entertained by her with great civility and respect. In the night-time he entered Lucretia's apartment, and threatened her with immediate death if she did not yield to his desires. But finding her not to be intimidated, he told her that, if she still persisted in her refusal, he would kill one of her male slaves, and lay him naked by her when she was dead, and then declare to all the world that he had only revenged the injury of Collatinus. On this the virtuous Lucretia (who, it seems, dreaded violation less than infamy) submitted to the desires of Sextus; but resolved not to outlive his violence. She

dressed herself in mourning, and took a poniard under her robe, having previously written to her husband to meet her at her father Lucretia's house, where she refused to discover the cause of her grief, except in a full assembly of her friends aud relations. Here, addressing herself to her husband Collatinus, she acquainted them with the whole affair ; exhorted them to revenge the injury ; and protested that she would not outlive the loss of her honor. Every one present gave her a solemn promise that they would revenge her quarrel ; but, while they endeavoured to comfort her, she suddenly stabbed herself to the heart, with the dagger which she had concealed. This action inflamed, beyond measure, the minds of all present. Brutus, laying aside his pretended folly, drew the bloody dagger out of Lucretia's body ; and, showing it to the assembly, swore by the blood upon it that he would pursue Tarquin and his family with fire and sword ; nor would he ever suffer that or any other family to reign in Rome. The same oath was taken by all the company ; who were so much surprised at the apparent transition of Brutus from folly to wisdom, that they did whatever he desired of them. By his advice the gates of the city were shut, that nobody might go out of it to inform Tarquin of what was going forward; which, as Lucretius had been left governor of the city by Tarquin, was put in execution without difficulty. The corpse of Lucretia was then exposed to public view ; and Brutus having made a speech to the people, in which he explained the mystery of his

conduct in counterfeiting folly for many years past, proceeded to tell them that the patricians were come to a resolution of deposing the tyrant, and exhorted them to concur in the same design. The people testified their approbation, and called out for arms ; but Brutus did not think proper to trust them with arms till he had first obtained a decree of the senate. This was easily procured : the senate enacted that Tarquin had forfeited all the prerogatives belonging to the regal authority, condemned him and all his posterity to perpetual banishment, and devoted to the gods of hell every Roman who should hereafter, by word or deed, endeavour his restoration ; and this decree was unanimously confirmed by the curiae.

Tarquin being thus deposed, the form of the government became the next object. Lucretius was declared Interrex ; but Brutus, being again consulted, declared, that though it was by no means proper for the state to be without supreme magistrates, yet it was equally necessary that the power should not be centered in one man, and that it should not be perpetual. For this reason he proposed that two magistrates, called consuls, should be elected annually ; that the state should thenceforth have the name of republic ; that the ensigns of royalty should be abolished ; and that the only ensigns of consular dignity should be an ivory chair, a white robe, and twelve lictors for their attendants. He also proposed that the title of rex, or king, should be given to him who superintended reli',nous matters, who should thenceforth be called rex sacro-runi, or king of sacred things. This scheme tic-ing approved of, Brutus and Collatinus were

proposed by Lucretius as the two first consuls, and unanimously accepted by the people, who thought it impossible to find more implacable enemies to theTarquins. They entered on their office A. A. C. 508 ; and the monster Tullia, perceiving that now ail was lost, left the city, and retired to her husband at Ardea. She was suffered to depart, though the populace hooted at her, and cursed her as she went along. Tarquin, in the mean time, being informed by some who had got out of Rome before the gate was shut, that Brutus was raising

commotions to his prejudice, returned in haste to the city, attended only by his sons and a few friends ; but finding the gates shut, and the people in arms on the walls, he returned again to the camp : here again, to his surprise, he found that the consuls had taken the opportunity of gaining over the army to their interest ; so that, being refused admittance into the camp also, he was forced to fly for refuge, at the age of seventy-six, with his wife and three sons to Gabii. Here he continued for some time ; but, not finding the Latins forward to revenge his cause, he retired into Etruna; where, it being the country of his mo-ther's family, he hoped to find more friends. The Romans now congratulated themselves on their happy deliverance from tyranny. However, as Tarquin had by his policy procured himself many friends abroad, these now became enemies to the R man name ; and, by the defection of the allies the Roman dominions were left in much the same state as they had been in the time of Romulus. Though almost constantly victorious in war for 143 years, they had not yet gain-ed land enough to supply their city with provisions. The main strength of the state lay in the number of the citizens of Rome ; which, by transplanting the inhabitants of the conquered cities, had so prodigiously increased, that it put the Romans in a condition of usurping the authority over other nations, the most inconsiderable of which had an extent of territory far exceeding theirs. By frequent depreciations they so harassed the states of Latium and Etruria that many of them were constrained to enter into treaties with Rome, by which they obliged themselves to furnish her with auxiliaries whenever she should invade and pillage the lands of her other neighbours. Submissions of this kind the Romans called making alliances with them, and these useful alliances supplied the, want of a large territory ; but now, upon the change of her government, all the allies of Rome forsook her at once, and either stood neuter, or espoused the cause of the banished king. The new consuls in the mean time took the most effectual methods for securing the liberties of the republic. The army employed in the siege of Ardea marched home under Herminus and Horatius, who concluded a truce with the Ardeates for fifteen years. The consuls then again assembled the people by centuries, and had the decree of Tar- (|um's banishment confirmed ; and many of the laws of Servius Tullius were revived to the great joy of the people. Tarquin, however, having made Tarquinii the seat of his residence, en-nged the inhabitants to send an embassy to jiome, with a submissive letter for himself, directed to the Roman people. The ambassadors represented in such strong terms to the senate how reasonable it was to let the king be heard before he was condemned, that the consuls inclined to bring these agents before the people, and to leave the decision to the curiae ; but Valerius, who had

been very active in the revolution, strenuously opposed this, and by his influence in the senate got it prevented. Mean time, Tarquin prevailed on the inhabitants of Tarquinii to send a second embassy to Rome, demanding the estates of the exiles, but with private instructions to get the consuls assassinated. The restoration of the estates of the exiles was opposed by Brutus, but Collatinus was for complying with it ; whereupon Brutus accused his colleague of treachery, and of a design to bring back the tyrant. The matter was referred to the people, where it was carried by one vote in favor of the Tarquins. But whilst the people were employed in loading carriages with the effects of the exiles, and in selling what could not be carried off, the ambassadors drew some of the nearest relations of the consuls into a plot with them. These were three young noblemen of the Aquilian fa-mily (the sons of Collatinus's sister), two of the Vitellii (whose sister Brutus had married) ; and Titus and Tiberius, the two sons o►► Brutus. They all bound themselves by solemn oaths, with the dreadful ceremony of drinking the blood of a murdered man and touching his entrails. They met at the house of the Aquilii, where they wrote letters to Tarquin and gave them to the ambassadors. But their proceedings were overheard by one Vindicius a slave, who immediately communicated the whole to Valerius ; upon, which all the criminals were apprehended. Brutus stood judge over his own sons ; and notwithstanding the intercession of the whole assembly, and the tears of his children, commanded them to be beheaded ; nor would he depart till he saw the execution of the sentence. Having performed this piece of heroic barbarity, he quitted the tribunal, and left Collatinus to perform the rest.

Collatinus, being inclined to spare his nephews, allowed them-a day to clear themselves: and caused Vindicius, the only witness against them, to be delivered up to his masters. This roused the indignation of the people, especially of Valerius, who had promised to protect the witness, and therefore he refused to deliver him up to the lictors. The multitude called for Brutus to re-turn ; which when he had done, he told them that he had executed his two sons inconsequence of his own paternal authority, but that it belonged to the people to determine the fate of the rest. Accordingly, by a decree of the curise, all the delinquents suffered as traitors, except the ambassadors. Vindicius had his liberty granted him ; and was presented with 25,000 asses of brass, in value about ►►80 14s. 7d. of our money. The decree for restoring the estates of the exiled Tarquins was annulled, their palaces were destroyed, and their lands divided among the peo-ple.' The public only retained a piece of ground near the Campus Martius, which the king had usurped, and which they consecrated to Mars. The severity of

struck such terror Into the Romans, that scarcely any person durst oppose him ; and therefore he openly accused Collatinus before the people, and without ceremony deposed him from the -consulship, banishing him at the same time from Rome. The multitude refused to hear Collatinus in his own defence ; so that the consul was on the point of being driven out with ignominy and disgrace, when Lucretius interposed, and prevailed upon Brutus to allow his colleague to resign his fasces, and retire. Brutus then, to remove all suspicions of personal enmity, procured him a present of twenty talents out of the public treasury, to which he added fire of his own. Collatinus then retired to Lavinium, where he lived in peace, and died of old age. Valerius was chosen in his room ; and the two consuls lived in great harmony. But Tarquin first engaged the Volsci and Tarquinienses to join their forces to support his rights. Brutus commanded the horse and Valerius the foot. The two armies having met, Brutus advanced with his cavalry, at the same time that Arunx was coming forward with the enemy's horse, the king following with the legions. Arunx no sooner discovered Brutus than he made towards him with all the fury of rage. Brutus advanced towards him with no less speed ; and as both were actuated only by motives of hatred, without thoughts of self-preservation, both were pierced through with their lances. The battle continued with the utmost fury till night, when it could not be known which side had got the victory, or which had lost the greatest number of men. The Volsci returned home, and Valerius, having caused the dead to be numbered, found that they had lost 11,300 men, and the Romans only one short of that number. Valerius being left without a colleague in the consulship, and having delayed to choose one, began to be suspected of aspiring at the sovereignty ; and these suspicions were countenanced by his building a fine house on the steep part of the hill Palatinus. But of this Valerius was no sooner informed than he caused this house to be pulled down, and immediately called an assembly of the people for the election of a consul, in which he left them entirely free. They chose Lucretius; and complimented Valerius with a large

ground plot, where they built him a house. The new consul died a few days after his promotion, so that Valerius was .once more left sole governor. In this interval, Valerius gave the people so many striking proofs of his attachment to their interest, that they bestowed upon him the surname of Poplicola, or popular. When Poplicola's consulship expired, the Ro-mans elected him a second time, and joined with him T. Lucretius, the brother of Lucretia. They began by restoring the census and lustrum ; and found the number of Roman citizens above puberty to be 1 30,000. A haughty embassy was received from Porsena king of Clusium in Etruria, commanding them either to take back the Tarquins to Rome, or to restore them to their estates. To both these demands the consuls returned an absolute refusal. The imminent danger of the city procured Valerius a third consulship ; and with him was joined Horatius Pnl-Vilius. While the Romans were making the most vigorous preparations, Porsena, attended by his son Arunx and the exiles, marched towards the city at the head of a formidable army, which was quickly joined by a body of Latins under Mamilius, the son-in-law of Tarquin. The consuls and the senate took all imaginable care to supply the common people with provisions, and they ordered the country people to lodge their effects in the fort Janiculum, the only fortified place possessed by the Romans on that side the Tiber. Porstna, however, soon drove the Romans out of this fort ; upon which the consuls made all their troops pass the river, to defend the bridge, while Porsena advanced to engage them. The victory was long doubtful ; but at last the Romans fled. Horatius Codes, nephew to the consul, with Sp. Lartius and T. Herminius, who had commanded the right wing, posted themselves at the entrance of the bridge, and for a long time bravely defended it : but at last, their defensive arms being broken, they retired ; and then, Horatius desiring them to advise the consuls to cut the bridge at the other end, he for a while sustained the attack of the enemy alone. At last, being wounded, and the signal given that the bridge was almost broken down, he leaped into the river, and swam across it through a shower of darts. The Romans, for this eminent service, erected a statue to him in the temple of Vulcan, gave him as much land as he, with one yoke of oxen, could plough in one day ; and each of the inhabitants, to the number of 300,000, gave him the value of as much food as each consumed in a day. The city was not yet fully invested ; but it was very difficult to find provisions for such a multitude. Porsena, hearing of their difficulties, told them that he would supply them with provisions if they would take back their old masters ; but to this they replied that hunger was a less evil than slavery. But the constancy of the Romans was on the point of failing when a young patrician, named Mutius Cordus, with the consent of the senate and consuls, undertook to assassinate Porsena.

He got access to the Etrurian camp, and made his way to the king's tent. It happened to be the day on which the troops were reviewed, and Porsena's secretary, magnificently dressed, was sitting on the same tribunal with the king. Mutius, mistaking him for Porsena, instantly leaped upon the tribunal, and killed him. He then attempted to escape; but, being seized and brought back, he owned his de-sign ; and, with a countenance expressive of desperate rage and disappointment, thrust his hand which had missed the blow into a fire, and there held it for a considerable time. On this Porsena, changing his resentment into admiration, granted him his life and liberty, and even restored him his dagger. Mutius took it with his left hand, having burnt the other; and from this time had the name of Scaevola, or left-handed. He then, to induce Porsena to break up the siege, told him that 300 young Romans, as/ resolute as himself, had sworn to take away his life or perish. This had the desired effect : Porsena sent deputies to Rome, whose only demands were that the Romans should restore the estates of the Tarquins, or give them an equiva-ROME.

lent, and the seven small towns formerly taken from the Veientes. The latter of these demands was cheerfully complied with ; and, a truce being agreed on, deputies were sent to the Etrurian camp to plead the Roman cause against the Tarquins, and with them ten young men and ten virgins, as hostages for performing the other article. The reception which Porsena gave the deputies raised the jealousy of the Tarquins ; who refused to admit Porsena for a judge between them and the Remans. But the king, without any regard to their opposition, resolved to satisfy himself whether the protection he had given the Tarquins was just. Mean time, news were brought that the young women whom the Romans had sent as hostages had swam across the Tiber, and were returned to Rome. They had gone to balhe in the river, and Cloelia, turning her eyes towards Rome, ventured to swim across the river, and encouraged her companions to follow her. The return of the hostages gave Poplicola great uneasiness, lest it should be imputed to want of fidelity in the Romans. To remove all suspicions, he sent a deputation to the Etrurian camp, assuring the king that Rome had no share in the foolish attempt of the young women; and promising to send them immediately back to the camp whence they had fled. Porsena was easily appeased ; but, the news of the speedy return of

the hostages being known in the camp, the Tarquins, without any regard to the truce, or respect to the king their protector, lay in ambush on the road to sui prise them. Poplicola, having put himself at the head of the Roman troops who escorted them, sustained the attack of the Tarquins, though sudden and unexpected, till his daughter Valeria rode full speed to the Etrurian camp, and gave notice of the dan-ger her father and companions were in ; when Arunx, the king's son, flying with a body of cavalry to their relief, put the aggressors to the rout. This treachery in the Tarquins gave Porsena a bad idea of their cause. He therefore assembled the chief commanders of the Etrurians ; and, having heard in their presence the complaints of the Romans against the Tarquins, he was so struck with horror at the recital of the crimes of the Tarquins that he immediately ordered them to leave his camp, and renounced his alliance with them. He then ordered the ten young virgins to be brought before him, and enquired who was the first author of the enterprise. Clcelia, with an air of intrepidity, confessed that she alone was guilty. Upon this the king, extolling her resolution above the bravery of Horatius and Mutius, made her a present of a very fine horse with sumptuous furniture. After this he concluded a peace with the Romans, and restored to them all their hostages, declaring at the same time that their bare word was to him a sufficient security for the performance of the articles.

Porsena, being about to return to Clusium, gave, before his departure, a further testimony of his friendship for the Romans. Knowing that Rome was greatly distressed for want of provisions, he ordered his soldiers to leave behind them their tents and provisions, and to carry nothing will them but their arms. As his camp

abounded with all sorts of provisions, Rome was hereby much relieved. The senate erected a statue of Porsena near the comitium, and sent an embassy to him with a present of a throne of ivory, a sceptre, a crown of gold, and a triumphal robe. Thus the Romans escaped the greatest danger they had hitherto been in. However the Sabines revolted, and continued the war for some time with great obstinacy : but, being defeated in several engagements, they were at last obliged to submit ; and scarcely was this war ended when another began with the Latins, who now declared for Tarquin. Before they began this war, however, an embassy was sent to Rome the purport of which was, that the Romans should raise the siege of Fidense which had revolted, and receive the Tarquins : who, on their part, should grant a general amnesty. The ambassadors were to allow the Romans

a whole year to consider on these overtures; and to threaten them with a war in case they refused to comply with them. The chief view of Tarquin and his partisans, in promoting this embassy, was to lay hold of that opportunity to raise a sedition in the city. To the ambassadors, therefore, of the Latins, he joined some of his own emissaries, who, on their arrival in the city, found two sorts of people disposed to enter into their measures : to wit, the slaves, and the meaner citizens. The slaves were to murder their masters, and the lower citizens to massacre the patricians. The conspiracy was ripe for execution, when Tarquin's agents and relations, Publius and Marcus Tarquinius, being terrified with frightful dreams, had not courage to proceed in their design till they had consulted a diviner, and asked him what success they might expect in a project they had formed. The soothsayer answered, Your project will end in your ruin ; disburden yourselves of so heavy a load. Hereupon, fearing lest some of the other conspirators should be beforehand with them in informing, they went immediately to S. Sulpitius, the consul, and discovered the whole matter. The consul greatly commended them, assembled the senate, and gave the Latin ambassadors their audience of leave, with an answer to their proposals; which was, that the Romans would neither receive the Tarquins nor raise the siege of Fidense, being all ready to sacrifice their lives in defence of their liberties, and willing to undergo any dangers rather than submit to the government of a tyrant. The ambassadors being dismissed, with this answer, Sulpitius laid open to the fathers the dreadful conspiracy. It struck them with horror ; but they were all at a loss how they should apprehend and punish the guilty ; since, by the law of Poplicola, there was an appeal to the people in all capital cases, and the two witnesses, who were strangers, might be excepted against by Roman citizens. In this perplexity they left the whole conduct of this critical affair to Sulpitius, who took a method which he thought would equally serve to prove the guilt and punish the guilty. He engaged the two informers to assemble the conspirators, and to appoint a rendezvous at midnight in the forum, as if they intended to take the last measures for the execution of the enterprise. In the mean time he used all proper

measures to secure the city, and ordered the Roman knights to hold themselves ready, in the houses adjoining to the forum, to execute the orders they should receive. The conspirators met at the time and place appointed by the two Tarquins ; and the knights, upon a signal agreed on beforehand, invested the forum, and blocked up all the avenues to it so closely that it was impossible for any of the conspirators to escape. As soon as it was light the two consuls appeared with a strong guard on the tribunal. The people were convened by curiae, and told of the conspiracy. The accused were allowed to make their defence, if they had any thing to offer against the evidence : but, not one of them denying the fact, the consuls repaired to the senate, where sentence of death was pronounced against the conspirators. This decree of the senate being read, and approved by the assembly, the conspirators were delivered up to the soldiers, who put them all to the sword. The peace of Rome was thought sufficiently secured by this stroke of severity ; and therefore, though all the conspirators were not punished with death, it was judged pro-per not to make any farther enquiries. The two informers were rewarded with all the privileges of Roman citizens, 100,000 asses, and twenty acres of laud. Three festival days were appointed for expiations, sacrifices, and public games, &c. But as the people were conducting Manlius Tullius, the consul, from the circus, he fell from his chariot, and died in three days. The city of Fidense still held out during the following consulship of T. jEbutius and P. Veturius ; but was taken the next year by T. Lartius, who, with Q. Glcelius, was raised to the consular dignity. The Latins, enraged at the loss of this town, begat, to complain of their leading men ; which opportunity Tarquin and Mamilius improved so far as to make all the Latin cities, twenty-four in number, enter into an alliance against Rome, and to bind themselves by oath never to violate their' engagements. The Latins made vast preparations, as did likewise the Romans ; but the latter could procure no assistance from their neighbours. To add to their distress the poorer sort of people, and the debtors, refused to serve; alleging their poverty and the fruitless hazards they ran in defending a city where they were oppressed and enslaved by their creditors. This spirit of mu-tiny spread among the inferior classes, most of them refusing to enlist unless their debts were all remitted by a decree of the senate. The senate assembled to deliberate on these troubles. Some were for a free remission of all debts, as the safest expedient; others urged the dangerous consequences of such a condescension, advising them to enlist only such as were willing to serve. At length it was decreed that all actions for debts should be suspended till the end of the war. But this the indigent debtors thought only a suspension of their misery, and therefore it had not the intended effect. The senate might indeed have

prosecuted the ringleaders ; but Poplicola's law, called the Valerian law, which allowed appeals to the people, was a protection for the seditious, who were sure of being acquitted. The senate, therefore, to elude the effect of a privilege that put such a restraint upon their power, resolved

to create one supreme magistrate, who, with the title of dictator, should have absolute power for a time; but, at this could not be done without striking at the Valerian law, and transferring the power of the people in criminal cases to a magistrate superior to all law, it was necessary to use artifice to obtain the consent of the curiaj. They therefore represented to them that, in such a crisis, when they had domestic quarrels to de-cide and a powerful enemy to repulse, it was expedient to put the commonwealth under a single governor, who, superior to the consuls themselves, should be the arbiter of the laws ; that his power should have no limits; but, lest he should abuse it, they ought not to trust him with it above six months. The people agreed, not foreseeing the consequences ; but the great difficulty was to find a man qualified for so great a trust. T. Lartius, one of the consuls, seemed to be the most unex-ceptionable; but the senate, fearing to offend his colleague, gave the consuls the power of choosing a dictator, but obliged them to name one of themselves, not doubting but Cloelius would yield to the superior talents of his colleague. Lartius, however, with the same readiness, named Cloelius ; and the only contest was, which of the two should raise the other to the supreme authority. Each persisted obstinately in remitting the dignity to his colleague, till Cloelius suddenly abdicated the consulship, and, as an interrex, proclaimed Titus Lartius dictator : who was therefore obliged to take upon him the government of the republic.

Lartius began his administration by creating u general of the Roman horse : an office whicli lasted only during the dictatorship. Sp. Cassius, formerly consul, and honored with a triumph, was the person advanced to this dignity. Having thus secured the Roman knights, the dictator resolved, in the next place, to make the people respect and fear him. With this view he never appeared in public without being attended by twenty-four lictors, to whose fasces he again added the axes which Poplicola had taken from them. This was alone sufficient to awe the seditious, and, without executions, to spread consternation throughout Rome. He then ordered a census to be taken. Every one brought in his name, age, estate, &c., and there were found to be 150,700 men capable of bearing arms. Out of these the dictator formed four armies : the first he commanded himself; the second he

gave to Clcelius his late colleague ; the third to Sp. Cassius, his general of the horse ; and the fourth he stationed at Rome, under his brother Sp. Lartius. The Latins not being forward in their preparations, all their hostilities this campaign amounted only to sending a detachment into the Roman territory to lay it waste. The dictator gained some advantage over this party; and the great humanity witli which he treated the prisoners and wounded disposed the Latins to listen to overtures for a suspension of hostilities. A tnice was agreed on for a year; when, seeing the republic restored to tranquillity, Lartius resigned the dictatorship. The next consulship of Sempronius Atratinus and Minutius Augurinus produced nothing memorable. But the following year the truce expired, when Aulus Poslhuimus

and T. Virginius took possession of the consulship. Both Romans and Latins were now busied in preparing for war. The nobility of Latium who were mostly in the interest of the Tarquins, having excluded the citizens from the Latin diets, carried all before them in these assemblies ; whereupon many of them removed with their families to Rome. The Latins being bent upon war the senate empowered the two consuls to name one of themselves dictator ; and Virginius readily yielded the office to Posthumius, as the more able commander. Having created ./Ebutius Elva his general of horse, the new dictator divided his army into four bodies, and left one of them, under the command of Sempronius, to guard the city ; with the other three, commanded by himself, Virginius, and JEbutius, he marched out against the Latins, who, with an army of 40,000 foot and 3000 horse, under Sextus and T. Tarquinius and Mamilius, had already taken Corbio, a strong hold belonging to Rome. Post- . humius encamped on a sleep hill near the lake Regillus, and Virgilius on another hill over-against him. JEbutius was ordered to march silently in the night, with the cavalry and light-armed infantry, to take possession of a third hill and intercept the provisions of the Latins. Be-fore jEbutius had fortified his camp, however, he was vigorously attacked by T. Tarquinius, whom he repulsed three times with great loss, the dictator having sent him a reinforcement. After this *Ebutius intercepted two couriers sent by the*

Volsci to the Latin generals, and by their letters discovered that a great army of the Volsci and llernici were to join the Latin forces in three days. Upon this Posthumius drew his three bo-dies of troops together, amounting in all to 24,000 foot and 1000 horse, with a design to en-gage the enemy before the arrival of their succors ; and the Latins, who were much superior in numbers, did not decline the engagement. T. Tarquinius, at the head of the Roman exiles and deserters, was in the centre, Mamilius in the right wing, and Sextus Tarquinius in the left. In the Roman army the dictator commanded in the centre, Ebutius in the left wing, and Virginius in the right. The dictator's body first advanced ; and, as soon as it began to march, T. Tarquinius, singling out the dictator, ran full speed against him. But the latter wounded him with a javelin in the right side. Upon this the first line of the Latins advanced to cover their general ; but, he being carried out of the field, they made but a faint resistance, and began to retire, when Sextus Tarquinius brought them back to the charge, and renewed the fight with such vigor that the victory in the centre was still doubtful. Both parties, encouraged by their leaders, fought with incredible bravery. After a long and bloody contest the two generals agreed to determine the doubtful victory by a single combat. Accordingly Ebutius with his lance wounded Mamilius in the breast; and Mamilius with his sword wounded ./Ebutius in the right arm. Neither of the wounds was mortal; but, both the combatants falling from their horses, put an end to the com-bat. Marcus Valerius, the brother of Poplicola, HOW endeavoured, at the head of the Roman

horsef to break the enemy's battalions ; but was repulsed by the cavalry of the Roman royalists. Mamilius appeared again in the van, with a considerable body of horse and light-armed infantry. Valerius, with his two nephews, the sons of Poplicola, and a chosen troop of volunteers, attempted to break through the Latin battalions, to engage Mamilius ; but, receiving a mortal wound in his side, fell from his horse, and died. His body was carried off by Poplicola's sons, and delivered to Valerius's servants, who conveyed it to the Roman camp ; but the young heroes, being afterwards overpowered by numbers, were both killed on the spot. Upon their death the left wings of the Romans began to give ground, but Posthumius, with a body of Roman knights, fly-ing to their assistance, charged the royalists with such fury that they were, after an obstinate resistance, obliged to retire in confusion. Mean time Titus Horminius, having rallied those who had fled, fell upon some close battalions of the enemy's right wing, which still kept their ground under Mamilius, killed him with his own hand, and put his detachment to flight ; but received himself a wound, of which he died soon after. Sextus Tarquinius in the mean time

maintained the fight with great bravery, at the head of the left wing, against Virginius ; and had even broken through that wing of the Roman army, when the dictator attacked him with his victorious squadrons. Sextus then threw himself in despair into the midst of the Roman knights, and sunk under a multitude of wounds. The death of the three generals was followed by the entire defeat of the Latin army. Their camp was taken and plundered, and most of their troops cut in pieces ; for, of the 43,000 men who came into the field, scarcely 10,000 returned home. The next morning the Volsci and Hernici came, according to their agreement, to assist the Latins ; but, finding upon their arrival how matters had fallen out, sent ambassadors to the dictator, to congratulate him on his Tictory, and assure him tha*. they had come to assist the Romans. Posthumius, producing their couriers and letters, showed them, however, that he was apprized of their treachery. But, out of regard to the law of nations, he sent them back unhurt, with a challenge to their generals to fight next day ; but the Volsci and their confederates, not caring to en-gage a victorious army, decamped, and returned to their respective countries. The Latins, having now no alternative but an entire submission, sent ambassadors to Rome, yielding themselves to the judgment of the senate; and, as the Ro-mans had long made it a maxim to spare the nations that submitted, the motion of T. Lartius prevailed; the ancient treaties with the Latins were renewed, on condition that they should restore the prisoners, deliver up the deserters, and drive the Roman exiles out of Latium. Thus ended the last war which the Romans waged on account of their banished king; who, being now abandoned by the Latins, Etrurians, and Sabines, retired into Campania, to Aristodemus, tyrant of Cumae, and there died in the ninetieth year of his age, and fourteenth of his exile.

PART II. ROME, REPUBLICAN.

Those domestic feuds now took place which continued more or less during the republic. The first disturbances were occasioned by the

oppression of the plebeians who were debtors to the patricians. The senate chose f o the consulate Appius Claudius, who violently opposed the pretensions of the plebeians ; but gave him for his colleague P. Servilius, of a contrary disposition. The consequence was, that the consuls disagreed ; the senate could not determine ; ajid the people were ready to revolt. In the midst of these disturbances, an army of the Volsci advanced : the people refused to serve; and, had not Servilius procured some troops who served out of personal affection, the city would have been in great danger. The Volsci next engaged in alliance with the Heniici and Sabines. Mean time, the disputes at Rome continued with such violence that the plebeians absolutely refused to march against the advancing enemy. In this extremity Servilius promised that, when the Volsci were repulsed, the senate would remit the debts of the plebeians. This having engaged them to serve, the consul marched out at their head, defeated the enemy, and took their capital, giving it up to be plundered by his soldiers. This step of Servilius, however, furnished Appius with a pretence for refusing him a triumph, as a man who aimed at popularity by the excessive indulgence of the army. Incensed at this injustice, and encouraged by the people, Servilius decreed himself a triumph, however, in spite of Appius. After this he marched against the Aurunci, who had entered Latium ; and, in conjunction with Posthumius Regillensis, utterly defeated them, But neither the services of the general nor his soldiers could mollify the senate and patricians. Appius even imprisoned all those who had been set at liberty during the war. The prisoners cried for relief to Servilius; but he could not obtain the accomplishment of those promises which the senate nevei meant to perform. Perceiving therefore that he had thus lost all his interest with the plebeians, he joined the patricians against them ; until the former, rushing into the forum, made such a tumult that no sentence pronounced by the judges could be heard, and the utmost confusion prevailed. Several proposals were made to accommodate matters ; but, through the obstinacy of Appius, they came to nothing. In the mean time, it was necessary to raise an army against the Sabines ; but the people refused to serve. Manlius Valerius, brother to Poplicola, once more prevailed upon them to march ; having previously obtained assurances from the senate that their grievances should be redressed. But no sooner had victory declared in favor of the Romans than the senate, apprehending that the soldiers at their return would challenge Valerius, who had been nominated dictator, for the performance of their promises, desired him and the two consuls to detain them in the field. The consuls obeyed ; but the dictator, whose authority did not depend on the senate, disbanded his army, and invested 400 of the plebeians with the dignity of knights.

After this he claimed the accomplishment of the promises made by the senate : but, instead ot performing them, he had the mortification to hear himself loaded with reproaches ; on whicb he resigned his office. No sooner were thes* transactions known in the army than the soldiers to a man, deserted the consuls and other officers and retired to a hill called afterwards Mom Sacer, three miles from Rome. Here the senate sent a deputation to the malcontents ; but they were treated with contempt. All things indeed tended to a civil war, when matters were compromised by the institution of tribunes of the people, who had power to prevent the passing of any law that might be prejudicial to them, and whose persons were declared sacred : and all the Romans were to engage themselves, and their posterity, never to repeal this law. The people, after these regulations, erected an altat to Jupiter the Terrible, on the top of the hill where their camp had stood ; and when they had offered sacrifices, and consecrated the place of their retreat, they returned to Rome, led by their new magistrates. Thus the Roman constitution, which had been monarchic, and thence had passed into an aristocracy, began to verge towards a democracy. The tribunes obtained permission from the senate to elect two persons as their assistants, who should ease them in the great multiplicity of their affairs. These were at first called plebeian aediles ; and afterwards simply ffidiles.

The consul Cominius next led an army against the Volsci ; defeated them, and took Longula and Polusca ; after which he besieged Corioli, their strongly fortified capital. He carried this place, and gained a victory over the Antiates the same day ; but Caius Marcius, an eminent patrician, had the glory of both actions. The troops detached by the consul to scale the walls of Corioli being repulsed in their first assault, Marcius rallied them, drove back the enemy within their walls, and, entering the city, made himself master of it. He then put himself in the foremost ranks of the consul's army, just about to engage the Antiates, and there he behaved with equal bravery. The next day the consul, having erected his tribunal before his tent, called the soldiers together. His whole speech was a panegyric upon Marcius. Putting a crown upon his head, he assigned him a tenth part of the spoil ; and, in the name of the republic, made him a present of a horse finely caparisoned, giv-ing him leave at the same time to choose out any ten of the prisoners for himself; and as much money as he could carry away. Of all these offers, Marcius accepted only the horse, and one captive of the ten, an old friend of his family. The consul now bestowed on him the surname of Coriolanus, thereby transferring from himself to Marcius all the honor of the conquest. On his return to

Rome, Cominius disbanded his army ; and war was succeeded by works of religion, public games, and treaties of peace. A census and a lustrum closed the events of this memorable consulship. At this period there ap peared to be in Rome only 110,000 men fit to bear arms : a number by many thousands less than at the last enrolment, great numbers h:ivu:^

fled to avoid being made siaves to theircreditors. Fuller the consulship of T. Geganius and P. Minucius Rome was terribly afflicted by a fa-mine, occasioned chiefly by the neglect of ploughing and sowing during tne late troubles; for the sedition had happened after the autumnal equinox. The senate despatched agents into Etruria, Campania, the country of the Volsci, and even into Sicily, to buy corn, when those who emharked for Sicily, having been retarded by a storm, were constrained to pass the winter at Syracuse. At Cumae, the tyrant Aristodemus seized the money brought by the com-missaries; and they themselves with difficulty saved their lives by flight. The Volsci, also, far from being disposed to assist the Romans, would have marched against them, if a sudden and destructive pestilence had not defeated their purpose. In Etruria alone the Roman commis-saries met with success. They sent a considerable quantity of grain to Rome in barks ; but, this being consumed, the misery became excessive. During this distress a deputation came from Velitra, a Volscian city, where the Romans had formerly planted a colony, representing that nine parts in ten of its inhabitants had been swept away by a plague, and praying the Ro-mans to send a new colony to repeople it. The senate granted the request, pressed the departure of the colony, and named three leaders to conduct it. The people, however, began to fear that the place might be still infected ; and this apprehension became so universal that not one of them would consent to go. On this the senate published a decree that all the citizens should draw lots ; and that those to whose lot it fell to be of the colony should instantly march for Ve-litne, or suffer the severest punishment; at last, ??? lierefore, fear and hunger induced compliance; and the senate a few days after sent a second colo-ny to Norba,a city of Latium. But the patricians

were di*appointed as to the benefit they expected from these measures. The plebeians who re-m.iined in Rome grew more and more disaf-tpctnd to the senate. At first they assembled in small companies to vent their complaints ; and ;>i length, in one great body, rushed into the fo-rum, calling upon the tribunes for help; when these officers did but heighten the general discontent. Spurius Icilius, their chief, inveighed bitterly against the senate ; and exhorted others to speak freely their thoughts ; calling particularly, and by name, upon Brutus and Sicinius. the ringleaders of the former sedition, now aediles. These men also added fuel to the fire : and, the more to inflame the spirits of the multitude, enumerated all the past insults which the people had suffered from the nobles. Brutus concluded his harangue with loudly threatening that, if the plebeians would follow his advice, he would soon oblige those who had caused the present calamity to find a remedy for it. The next day the consuls, greatly alarmed, and apprehending from the menaces of Brutus some mischievous event, thought it advisable to convene the senators. Some were for employing soft words and promises. But Appius's advice prevailed, that the consuls should call the people together, assure them that the patricians had not brought upon them the miseries they suffered, and engage on the

part of the senate that all possible care should be taken to provide for their necessities ; while they should reprove the disturbers of the public peace. But, when the consuls assembled the people, they were interrupted by the tribunes. A dispute ensued, in which no one could be well understood by the audience. The consuls contended, that, as the superior magistrates, their authority extended to all assemblies of the citizens. On the other hand, it was urged, that the assemblies of the people were the province of the tribunes, as the senate was that of the consuls. The dispute grew warm, and each party was ready to proceed to violence ; when Brutus, having put some questions to the consul, closed the assembly. Next day he proposed a law, which was carried, that no person should interrupt a tribune when speaking to the people; by which means the power of the popular party was increased, and the tribunes became formidable opponents both to the consuls and patricians. An opportunity soon offered for the parties to try their strength. A great fleet of ships laden with corn from Sicily, a great part of which was a present from king Gelon to the Romans, and the rest purchased by the senate with the public money, raised their spirits : when Coriolanus incurred their resentment, by insisting that it should not be distributed till the grievances of the senate were removed. Forthis the tribunes summoned him to a trial before the

people. On the day appointed all persons were anxious for the issue, and a vast concourse from the adjacent country assembled at the forum. Coriolanus presented himself before the people with a high degree of intrepidity. His graceful person, his persuasive eloquence, the cries of those whom he had saved from the enemy, inclined the auditors to relent. But being confounded with a new charge, which he did not expect, of having embezzled the plunder of Antium, the tribunes immediately took the votes, and Coriolanus was condemned to exile. This sentence against their bravest defender, struck the whole body of the senate with sorrow and consternation. Coriolanus alone, in the midst of the tumult, seemed unconcerned. He returned home, followed by .the lamentations of the most respectable senators and citizens, to take leave of his wife, children, and mother. Thus recommending his children to their care, he left the city, without followers or fortune, to take refuge with Tullus Attius, a man of gr< >at power among the Volscians, who took him under his protection, and induced the Volsci to break the league which had been made with Rome. For this purpose Tullus sent many of his citizens thither, to the games then celebrating; but at the same time gave the senate private information that the strangers had dangerous intentions. This had the desired effect; the senate issued an order that all strangers, whoever they were, should depart from Rome at sunset. This order Tullus represented to his countrymen as an infraction of the treaty, and procured an embassy to Rome, complaining of the breach, and demanding back the territories belonging to the Volscians, of which they had been violently dispossessed : a message treated by the senate with contempt. War being declared on both sides, Conolanus and Tullus were now made genera

of the Volscians ; and invaded the Roman territories, laying waste the lands of the plebeians, but leaving; those of the senators untouched. Mean time, the levies went on at Rome very slowly; the two consuls, who were reelected by the people, seemed but little skilled in war, and feared to encounter a general whom they kneV to be their superior in the field. The allies also showed their fears, and slowly

brought in their succors. Fortune followed Coriolanus in every expedition ; and he became so famous for his victories that the Volsci left their towns defenceless to follow him into the field. The very soldiers of his colleague's army came over to him. Thus finding himself unopposed in the field, and at the head of a numerous army, he at length invested the city of Rome. It was then that the senate and the people unanimously agreed to send deputies to him, with proposals of restoration, in case he should draw off his army. Coriolanus received these proposals at the head of his officers, and refused them with the sternness of a general that knew he was to give the law. Another embassy was now sent, conjuring him not to exact from his native city ought but what became Romans to grant. But Coriolanus still persisted in his demands, and granted them but three days to deliberate. All that was left was another deputation more solemn than either of the former, composed of the pontiffs, priests, and augurs. These, clothed in their sacred habits, and with a grave and mournful deportment, issued from the city, and entered the camp of the conqueror : but in vain ; they found him severe and inflexible as before. Wheo the people saw them return ineffectually, they gave up the commonwealth as lost. The temples were filled with old men, women, and children, who, prostrate at their altars, put up ardent prayers for the preservation of their country : nothing was to be heard but anguish and lamentation, nothing to be seen but affright and distress. At length it was suggested that what could not be effected by the intercession of the senate, or the abjuration of the priests, might be brought about by the tears of his wife, or the commands of his mother. This measure was approved by all; and the senate itself gave it their sanction. Ve-turia, the mother of Coriolanus, therefore, undertook the embassy, and set forward from the city, accompanied by the principal matrons of Rome, Volumnia his wife, and his two children. Coriolanus, who at a distance discovered this mournful train of females, was resolved to give them a denial ; but, when told that his mother and his wife were among the number, he instantly came down to meet them. At first the salutations and embraces of the interview took away the power of words ; and the rough soldier could not refrain from sharing in their distress. Coriolanus seemed much agitated by contending passions ; while his mother seconded her persuasive eloquence by sighs and tears : his wife and children hung round him, intrealing for protection and pity; and the fair train, her companions, added their lamentations, and deplored their own and their country's distress. The patriot for a moment was silent, feeling the strong conflict between honor and inclination : at length, as if roused from a dream, he flew to take up his

mother, who had fallen at his feet, crying out, ‘ O my mother, thou hast saved Rome, but lost thy son.’ He gare orders to draw off the army, pretending to the officers that the city was too strong to be taken. Tullus, who envied his glory, was not remiss in aggravating the lenity of his conduct. Upon their return, Coriolanus was slain in an insurrection of the people, and afterwards honorably buried, with ineffectual repentance.

The year following, the two consuls of the former year, Manlius and Fabius, were cited by the tribunes to appear before the people. The Agrarian law, which had been proposed some time before, for equally dividing the lands of the commonwealth, was the object invariably pursued, and they were accused of having put it off. The consuls made many delays and excuses, till at length they were obliged to have recourse to a dictator ; and they fixed upon T. Quinctius Cincinnatus, a man who had for some time given up all views of ambition, and retired to his little farm, where the deputies of the senate found him holding the plough. Reappeared but little elevated with the addresses of ceremony and the pompous habits they brought him; and, upon declaring to him the senate’s pleasure, he testified rather a concern that his aid should be wanted. However he departed for the city, where both parties were strongly inflamed against each other, resolved to side with neither. By threats and well timed submission he prevailed upon the tribunes to put off the disputed law for a time, and carried himself so as to be a terror to the multitude. Having thus restored that tranquillity which he so much loved, he again gave up the splendor of ambition, to enjoy his little farm. Cincinnatus was not long retired, however, when a fresh exigence of the state required his assistance. The ˆEquiand the Volsci, who, though worsted, were still for renewing the war, made new inroads into the territories of Rome. Minutius, one of the consuls who succeeded Cincinnatus, was sent to oppose them ; but his army was driven into a defile between two mountains, from which, except through the lines of the enemy, there was no egress. This the ./Equi had the precaution to fortify: by which the Roman army was so hemmed in on every side, that nothing remained but submission to the enemy, or famine. Some knights, who found means of getting away privately through the camp of the Volsci, were the first that brought the account of this disaster to Rome. Nothing could exceed the consternation of all ranks. The s nate at first thought of the other consul ; but, not having sufficient experience of his abilities, they unanimously turned their eyes upon Cincinnatus, and resolved to make him dictator. He was found, as before, by the messengers in the field. Being called upon to nominate his master of

the horse, he now chose a poor man named Tarquitius; and, upon entering the city, entreated all those who were able to bear arms to repair before sun-set to the Campus Martius. He put himself at their head, and, marching all night with great expedition, he arrived before day within sight of the enemy. Upon his ap proach the soldiers raised a loud shout, to apprize the consul's army of the relief that was at

hand ; the Jiqui, not a little amazed, saw themselves between two enemies ; and when they perceived Cincinnatus making the strongest entrenchments beyond them, to prevent their escape, a furious combat ensued ; until, attacked on both sides, they begged a cessation of arms. They offered the dictator his own terms ; when he #ive them their lives, but obliged them, in token of servitude, to pass under the yoke. Their captains and generals he made prisoners. Thus, naving rescued a Roman army from inevitable ⬚⬚⬚Destruction, having defeated a powerful enemy, naving taken and fortified their city, and, still ⬚⬚⬚more, having refused any part of the spoil, he ⬚⬚⬚ resigned his dictatorship, after having enjoyed it but fourteen days. The senate would have enriched him ; but he declined their offers.

Still this repose from foreign invasions did not lessen the tumults of the city. The clamors for trie Agrarian law continued, and raged yet more fiercely, when Sicinius Dentatus came forward to enumerate his hardships. See DENTA-TUS. Notwithstanding his speech had great effect on the people, the Agrarian law was postponed by a number of young patricians who made a riot and broke the balloting urns. The repunlic of Rome had now near sixty years been fluctuating between the contending orders that composed it till, at length each side, as if weary, were willing to respire a while. The citizens, therefore, of every rank, now began to complain of the arbitrary decisions of their magistrates, and wished to be guided by a written body of laws : in which both the senate and the people concurred. It was therefore agreed that ambassadors should be sent to the Greek cities in Italy, and to Athens, to bring home such enactments thence as by experience had been found most equitable ; and three senators, Posthumius,

Sulpicius and Manlius, were fixed upon for the commission and galleys assigned to convey them. While they were abroad, a dreadful plague de-popi lated Rome for about a year. The ambassadors at the close of that period returned, bringing home a body of laws, collected from all the civili7Pd states of Greece and Italy, which being afterwards formed into ten tables, and two more being added, constituted that celebrated code, called the Laws of the Twelve Tables, fragments of which are still extant. The tribunes now required that a body of men should be chosen to digest these laws into proper form. After long debatesˆ whether this choice should not be partly made from the people as well as the patricians, it was at last agreed that ten of the principal senators should be elected, whose power, continuing for a year, should be equal to that of kings and consuls, and their decision final. The persons chosen were Appius and Genutius, who had been elected consuls for the ensuing year ; Posthumius, Sulpicius, and Manlius, the three ambassadors; Sextus and Romulus, former consuls ; with Julius Veturius, and Horatius, senators of the first consideration. The decemviri, being now invested with absolute power, agreed to take the reins of government by turns, and each to dispense justice for a day. For the first year these magistrates attended their duty with extreme application ; and, their work bejng VOL. XVIII.

finished, it was expected that they would give up office ; but having known the charms of power, they were now unwilling to resign it; and, rp-gardless either of the approbation of the senate ‘ or the people, resolved to continue in the de-cemvirate. A conduct so inconsistent and arbitrary produced discontents ; and these again fresh acts of tyranny. The city was become al-most a desert, with respect to all who had any thing to lose. Yet not one citizen was sufficiently assured to strike for his country’s freedom; these tyrants continued to rule without control, constantly guarded by their lictors,anda numerous crowd of dependents. In this situation of the state, the jEqui and Volsci projected new incursions, and advanced within ten miles of Rome. But the decemviri, being in possession of the military as well as civil power, divided their army into three parts ; of which one continued with Appius in the city, to keep it in awe ; the other two were commanded by his colleagues, and were led, one against the ./ Equi, and the other against the Sabines. The Roman soldiers had now adopted a method of punishing the generals whom they disliked, by suffering themselves to be vanquished in the field. They put it in practice upon this occasion, and shamefully abandoned their camp on the approach of the enemy. Never was the news of a victory more

joyfully received at Rome than the tidings of this defeat : the generals, as always, were blamed for the treachery of their men : some demanded that they should be deposed ; others that a dictator should lead the troops to conquest ; among the rest Sicicius Dentatus, an old tribune, spoke his sentiments with his usual openness ; and, treating the generals with contempt, showed the faults of their discipline in the camp and of their conduct in the field. Appius, in the mean time, was not remiss in observing the popular disposition. Dentatus, in particular, was mark-ed out for vengeance, and, under pretence of do-(ing him particular honor, was appointed legate, and put at the head of the supplies which weie sent from Rome to the army. The office of le-gate was held sacred among the Romans, as in it were united the authority of a general with the reverence due to the priesthood. Dentatus proceeded to the camp with alacrity, where he was received with all the external marks of respect ; but the generals soon found means of revenge. Appointed to head 100 men and examine a more commodious place for encampment, the soldiers, who were given as his attendants, were. assassins, and led him out of the way into the bosom of a retired mountain. Dentatus. too late perceiving the treachery of the decemviri, was resolved to sell his life dearly ; he therefore placed his back against a rock, and defended himself against those who pressed on him, killing no fewer than fifteen of the assailants, and wounding thirty. The assassins, terrified at his amazing bravery, now showered in their javelins upon him, all which he received on his shield ; and the combat, though so unequal in numbers, was long managed with doubtful success, till at length his assailants ascending the rock against which he stood, poured down stones on the brave old soldier from above, and crushed him to

death. The decemviri, pretending to join in the general sorrow for so brave a man, decreed him a funeral, with military honors : but the greatness of their apparent distress, compared with their known hatred, only rendered them still more detestable to the people.

A transaction still more atrocious inspired the citizens with a resolution to break all measures of obedience. Appius, who remained at Rome, sitting one day on his tribunal to dispense justice, saw a maiden of exquisite beauty passing to one of the public schools, attended by her nurse. Conceiving a violent passion for her, he resolved to obtain the ˆgratification of his desires ; and though he found she was the daughter of Virginius a centurion, then with the army in the field, and had been contracted to Icilius, formerly a tribune of the people, he resolved to break this match and espouse her himself. The laws of the Twelve tables, however, had forbidden the patricians to intermarry with the plebeians ; and he could not infringe these. A yet more criminal course was therefore determined on. He engaged one Claudius, who had long been the minister of his pleasures, to assert that Virginia was his slave, and to refer the cause to his tribunal for decision. Claudius behaved according to his instructions ; and, entering into the school where she was playing among her female companions, seized upon her as his property, and was only prevented from dragging her away by fyrce by the people drawn together by her cries. At length, after the opposition was over, he led the weeping virgin to the tribunal of Ap-pius, and there alleged his claim. He asserted that she was born in his house, of a female slave, who sold her to the wife of Virginius, who had been barren . That he had several credible evidences to prove the truth of what he said; but that, until they could come together, it was but reasonable the slave should be delivered into his custody. Appius seemed to be struck with the justice of his claim. He observed that, if the reputed father himself were present, he might indeed be willing to delay the delivery of the maiden for some time ; but that it was not lawful for him, in the present case, to detain her from her master. He therefore adjudged her to Claudius, as his slave, to be kept by him till Virginius should be able to prove his paternity. This sentence was received with loud clamors and reproaches ; the women, in particular, came round Virginia, as if willing to protect her from the judge ; while Icilius, her lover, boldly opposed the decree, and obliged Claudius to take refuge under the tribunal of the decemviri. All things now threatened an open insurrection ; when Ap-pius thought proper to suspend his judgment till the arrival of Virginius, who was then about eleven miles from Rome. The day following was fixed for the trial : in the mean time Appius sent letters to the generals to confine Virginius, as his arrival in town might only serve to kindle sedition. These letters, however, were intercepted by thejcenturion’s friends, and, pretending the death of a near relation, he obtained permission to leave the camp, and flew to Rome. The next day he appeared before the tribunal, to the astonishment of Appius, leading his weeping daughter

by the hand, both being habited in

the deepest mourning. Claudius, the accuser, was also there, and began by making his de-mand. Virginius next spoke: he represented that his wife had many children ; that she had been seen pregnant by numbers ; that, if he had intentions of adopting a supposititious child, he would have fixed upon a boy rather than a girl ; that it was notorious to all that his wife had herself suckled her own child ; and that it was surprising such a claim should be now made, after fifteen years had elapsed. While the father this spoke Virginia's persuasive innocence seemed to add weight to all his remonstrances. The people were entirely satisfied of the hardship of his case, till Appius interrupting him, under a pretence of being sufficiently instructed in the merits of the cause, finally adjudged her to Claudius, and ordered the lictors to carry her off. Virginius seemed to acquiesce in the sentence. He only mildly intreated Appius to be permitted to take a last farewell of one whom ne had long considered as his child. With this tne decemvir complied, when the father, with tne most poignant anguish, taking his almost expiring daughter in his arms, for a while supported her head upon his breast, and wiped away her tears : happening to be near the shops that surrounded the forum, he now snatched up a knife that i'aj on the shambles, and buried the weapon in ner breast; then holding it up, reeking with the blood of his daughter, 'Appius, he cried, 'by this blood of innocence, I devote thy heac to the infernal gods.' Thus saying, with the blooey knife in his hand, and threatening destruction to whomsoever should oppose him, he ran through the city, wildly calling upon the people to striKe for freedom, and thence went to the camp, spreai.- ing a like flame. Followed by a number or ins friends, he informed the soldiers of all that was done, holding the bloody knife in his hand, ana asked their pardon, and that of the gods, ro having committed so rash an action. The armv already predisposed, instantly with shouts ae-clared their approbation of the deed ; and. oe-camping, left their generals behind, to take their station once more upon mount Aventine. Ine other army, which had been to oppose the Jsa-bines, came over in large parties to join them. Appius, in the mean time, did all he could to quell the disturbances of the city : but, fir.aingr the tumult incapable of control, at first attempted to find safety by flight; then encouraged by Oppius, one of his colleagues, he ventured to assemble the senate, and urged the punishment of all deserters. The senate, however, foresaw the dangers and miseries that threatened the state, in case of opposing the army; they tbeie-fore despatched messenger* to them, offering to restore the former mode of government. IP this proposal all the people

joyfully assented, and the army gladly tendered their submission. Appius, and Oppius one of his colleagues, botn died by their own hands in prison. The other eight decemvirs went into voluntary exile.

The tribunes now grew more turbulent : they proposed two laws ; one to permit plebeians to intermarry with patricians, and the other to permit them to be admitted to the consulship These proposals the senators received with ii.- dignation, and seemed resolved to undergo the

almost extremities rather than enact them. However, finding this resistance only increase the public commotions, they at last consented to pass the law concerning intermarriages. But the people were thus appeased only for a short time ; returning to their old custom of refusing to enlist upon the approach of an enemy, the consuls were forced to hold a private conference with the chief of the senate ; where, after many debates, Claudius proposed to create six or eight governors in the room of consuls, whereof one-half at least should be patricians. This project was eagerly embraced by the people ; yet, though many of the plebeians stood, the choice wholly felt upon the patrician candidates. These new magistrates were called military tribunes ; they were at first but three, afterwards four, and at iengtn six. They had the power and ensigns of consuls; yet, that power being divided among a j. amber, each singly was of less authority. The nrst that were chosen only continued in office about three months, the augurs having found something amiss in the ceremonies of their election. Consuls once more, therefore, came into office; and, to lighten the weight of business wmch they were obliged to sustain, a new office was erected, namely, that of censors, to oe chosen every fifth year. Their business was to take an estimate of the number and estates of the people, and to distribute them into their proper classes ; to enquire into their lives and manners ; to degrade senators for misconduct : to dismount knights ; and to displace plebeians from their tribes into inferior ones, in case of misdemeanor. The two first censors were Papirius and Sempronius, both patricians ; and from this

order they continued to be elected for nearly 100 years. This new creation served to restore peace for some time; and the triumph gained over the Volscians by Geganius the con-sul added to the universal satisfaction. But some time after, a famine pressing hard upon the poor, the usual complaints against the rich were renewed ; and these, as before, proving ineffectual, produced new seditions. The consuls were accused of neglect in not having laid in proper quantities of corn ; they, however, disregarded the murmurs of the populace, content with exerting all their care in attempts to supply the pressing necessity : and appear to have done all that could be expected from active magistrates. Yet Spurius Mselius, a rich knight, who had bought up all the corn of Tuscany, outshone tnem in liberality. This demagogue, hoping to oecome powerful by the contention in the state, .distributed corn in great quantities among the poor, till his house became the asylum of all sucn as wished to exchange a life of labor for one of lazy dependence. When he had thus gained a sufficient number of partizans, he procured large quantities of arms to be brought into his house, and formed a conspiracy, by which he was to obtain supreme command, while some of the tribunes, whom he had corrupted, were to act under him. Minucius discovered the plot, and, informing the senate, they resolved to create a dictator, who should quell the conspiracy, without appealing to the people. Cincinnatus, now eighty years old, was chosen once more to

rescue his country from impending danger. He began by summoning Mselius ; who refused to obey. He next sent Ahala, the master of his horse, to compel his appearance ; who, meeting him in the forum, and pressing him to follow to the dictator's tribunal, upon his refusal Ahala killed him on the spot. The dictator applauding his officer, now commanded the conspirator's goods to be sold, his house to be demolished, and his stores to be distributed among the people. But the tribunes were enraged at the death of Mselius; and, to punish the senate, at the next election, instead of consuls, insisted upon restoring their military tribunes. With this the senate were obliged to comply. The next year, however, the government returned to its ancient channel, and consuls were chosen.

The Ve-entes had at this period long been the rivals of Rome, and had ever taken the opportunity of its internal distresses to ravage its territories ; they had even threatened its ambassadors sent to complain of these injuries with outrage. In war they had been extremely formidable, and had cut off almost all the Fabian family ; who, to the number of 306 persons, had voluntarily undertaken to defend the

frontiers against them. It was therefore determined that the city of Veii should be demolished ; and the Roman army set down before it, prepared for a protracted resistance. The strength of the place may be inferred from the continuance of the siege, which lasted ten years. Various was the success, and many were the commanders : the besiegers' works were often destroyed, and many of their men cut off, until the undertaking seemed to threaten depopulation to Rome itself; so that a law was mada for all the bachelors to marry the widows of the soldiers who were slain. To carry on this siege with greater vigor Furius Camillus was created dictator. Upon his appointment numbers of the people flocked to his standard, confident of success, and he at once prepared to mine the works of the enemy. Certain of the result, he sent to the senate, desiring that all who chose to share in the plunder of Veii should immediately repair to the army : and, entering the breech at the head of his men, the city was instantly filled with his legions. Thus, like a second Troy, was the city of Veii taken, after a ten years' siege, and with its spoils enriched the conquerors ; while Camillus himself was decreed a triumph after the man-ner of the kings of Rome, having his chariot drawn by four milk-white' horses. His usual good fortune attended Camillus in a new expedition against the Falisci ; he routed their army, and besieged their capital Falerii, which tnreat-ened a long and vigorous resistance. Here a schoolmaster, who had tne care or me emtdren belonging to the principal men of the city, having decoyed them into the Roman camp, offered to put them into the hands of Camillus, as the surest means of inducing the citizens to surrender. But the general, struck with the treachery of a wretch whose duty it was to protect innocence, and not to betray it, immediately ordered him to be stripped, his hands tied behind him, and in that ignominious manner to be whipped into the town by his pupils. This generous behaviour in Camillus effected more than his arms:

the magistrates immediately submitted to the senate, leaving to Camillus the conditions of their surrender ; who only fined them in a sum of money, and received them under the protection and the alliance of Rome.

The tribunes at home still, however, were full of accusations against Camillus. To their other charges they added that of his having concealed a part of the plunder of Veii, particularly two brazen gates, for his own use ; and appointed a day on which he was to appear before the people. Camillus, finding the multitude exasperated, and detesting their ingratitude, resolved not to wait the ignominy of this trial ; but, embracing his wife and children, prepared to depart from Home. He had passed one of the gates when, turning his face to the capitol, and lifting up his hands to heaven, he entreated' all the gods that his countrymen might one day be sensible of their injustice. He then passed forward to Ardea, where he afterwards learned that he had been fined 1500 asses. The Romans indeed soon had reason to repent their persecution of this general ; for now a more formidable enemy than ever they had encountered threatened the republic : an inundation of Gauls, under their leader Brennus. One Cceditius pretended to have heard a miraculous voice, saying, ' Go to the magistrates, and tell them that the Gauls draw near.' His warning was despised ; but, when the event showed the truth of his prediction, Camillus erected a temple to the unknown Deity, and the Romans invented for him the name of-Aius Locutius. Meseengers arrived repeatedly with the news of the devastations of the enemy ; but the Romans behaved as if an invasion had been impossible. At last envoys arrived at Rome, imploring assistance against an army of Gauls, which now oesieeed Clusium. Here Arunx, one of the chief citizens, having been guardian to a young noble, and having educated him in his own nouse. ne fell in love with his guardian's wife ; ana upon tne first discovery of the intrigue, conveyed ner away. Arunx endeavoured to ob-tain reparation for the injury; but the magistrates weie bribed, and

the injured guardian, to espouse the cause of this lover, applied to the Galli iSenones to engage in this quarrel, acquainting them with the great plenty of Italy Upon this the Senones resolved to follow him , and, a numerous army being formed, they passed the Alps, under the conduct of their Etrurian guide, and, leaving the Celt* unmolested in Italy, fell upon Umbria, and possessed themselves of all the country from Ravenna to Pjce-num. They were fchout six years in set'ling themselves in their tiew acquisitions : at length Arunx brought the Senone* Before Clusium, his wire and her lover having shut themselves up in that city. The senate, therefore, sent an embassy of three young patricians of the Fabian family to bring about an accommodation : but these ambassadors, forgetting their character, put themselves at the head of the besieged in a sally, in which Q. Fabius, their chief, slew with his own hand one of the principal officers of the Gauls. Hereupon Brennus, calling the gods to witness the perfidiousness of the Romans, and immediately raising the siege, marched leisurely to Rome,

having sent a herald before him to demand that those ambassadors, who had so manifestly violated the law of nations, should be delivered up to him. The senate was now greatly perplexed between their regard for the law of nations and their affection for the Fabii. The wisest of them thought the demand of the Gauls to be but just : however, as it concerned persons of great consequence and popularity, the con-script fathers referred the affair to the people ; who by their curiae were so far from condemning the three brothers, that, at the next election of military tribunes, they were chosen the first. Brennus, looking upon this promotion of the Fabii as a high affront, hastened his march to Rome. The six military tribunes, Q. Fabius,. Cseso Fabius, Caius Fabius, Q. Sulpitius, Q. Servilius, and Sextus Cornelius, marched out to meet him at the head of 40,000 men, but without either sacrificing to the gods or consulting the auspices : ceremonies essential among a peo-ple that drew their courage and confidence from these signs. The Gauls were 70,000 strong. The two armies met near the river Allia, about sixty furlongs from Rome ; when the Romans extended their wings so far as to make their centre very thin. Their best troops, to the num-ber of 24,000 men, they posted between the river and the adjoining hills ; the rest on the hills. At first the Gauls attacked the latter, who being soon put into confusion, the forces in the plain were struck with such terror that they fled without drawing a sword : and most of the soldiers, instead of returning to Rome, ran off to Veii : some were drowned as they endeavoured to swim across the Tiber ; many fell in the pursuit by the sword of the conquerors : and some got

to Rome, which they filled with terror and consternation. The day after the battle, Brennus marched his troops into the neighbourhood of the capital, and encamped on the banks of the Anio. Here his scouts brought him word that the gates of the city were open, and not a Roman to be seen on the ramparts. He advanced slowly, however, fearing an ambuscade, which gave the Romans an opportunity to throw into the capitol all the men who were fit to bear arms, with abundant provisions. They had not sufficient forces to defend the city : the old men, women, and children, therefore, fled to tne neighbouring towns. At length Brennus, having spent three days in taking various precautions, tnterel it the fourth day after the battle. The fjates he found open, the walls without defence, and the houses without inhabitants. Rome appeared like a mere desert; but he could not believe, either that all the Romans were lodged in the capitol, ••• or that so numerous a people snouid '••oandon the place of their nativity. On the other hand, he could no where see any armed men but on the walls of the citadel. Having first secured all the avenues to the capitol with bodies 01 guards, he at last gave the rest of his soldiers leave to disperse themselves over the city and plunder it. Brenuus himself advanced into the forum with the troops under his command, in order ; and was there struck with admiration, at the unexpected sight of the venerable old men who had devoted themselves to death, according

to tVe Ronua superstition, for tne salvation of their country. They were a portion of the priests and the most ancient of the senators who had been honored with consulardignity,or who had 1 > eeu decreed triumphs. Their magnificent habits, -.he majesty of their countenances, the silence they kept, their modesty and constancy at the approach of his troops, made him take them for so many deities. The Gauls for a great while kept at an awful distance from them. At length a soldier, bolder than the rest, having out of curiosity touched the beard of M. Papirius, the old man, not being used to such familiarity, gave him a blow on the head with his ivory staff, and ihe soldier in revenge immediately killed him. The rest of the Gauls,

following his example, slaughtered the whole of the companions of Papirius without mercy. After this the enemy set no bounds to their rage ; dragging such of the Romans forth as had concealed themselves in their houses, and putting them to the sword in the streets without distinction of age or sex. Brennus then invested the capitol ; but, being repulsed with great loss, to be revenged on the Romans he resolved to lay the city in ashes. Accordingly, by his command, the soldiers set fire to the houses, destroyed the temples and public edifice?, and razed the walls to the ground. Thus was Rome in fact demolished : nothing was to be seen on its site but a few hills covered with ruins and a wide waste, in which the Gauls who ;n\e►►ted the capitol were encamped. Brennus, finding he should never be able to take a place which nature had so well fortified, except by farr.ine, turned the siege into a blockade, and sent out parties to pillage the fields, and raise contributions. One of these appeared before Ardea, where Camillus had now spent two years in private life. Notwithstanding the affront he had received at Rome, the love he bore his country was notdiminished, and, the senate of Ardea lieing rr:et to deliberate on the measures to be taken with relation to the Gauls, Camillus desired to be admitted into the council. Here he prevailed upon the Ardeates to arm their youth in their ewn defence, and refuse the Gauls ad-rr’t’arce into their city, and finally marched out in ? ve.-y dark night, surprised the Gauls drowned in wine, and made a, dreadful slaughter of there. Those who escaped under shelter of the niaht fell next intc the hands of the peasants, by whom they were massacred without mercy. This defeat revived the courage of the Romans, especially of those who had retired to Veii. There was net one of them who did not condemn the exile of Camillus, and they now resolved to choose him for their leader. Accordingly, they sent ambassadors beseeching him to take into his protection the fugitive Romans, and the wrecks of the defeat at Allia. But Camillus would not accept of the command of the troops till the people assembled by curiae had legally conferred it upon him; and to communicate with them was difficult, the capitol being invested on all sides. But Pontius Cominius, a man of mean birth, but bold, and very ambitious, undertook it. He put on a light habit, covered with cork, and, throwing himself into the Tiber above Rome in the beginning of the night, suffered himself to be carried down the stream. At length he came to the foot of the capitol, and, landing at a steep place where the Gauls had not posted sentinels, mounted with great difficulty to the rampart of the citadel ; and, having made himself known to the guards, was admitted into the place, and conducted to the magistrates. The remnant of the senate being immediately assembled, Pontius gave them an account of Camillus’s victory ; and in the name of all the Romans at Veii

demanded that great captain for their general. The curiae being called together, the act of condemnation passed on Camillus was now abrogated; he was unanimously named dictator, and Pontus, being despatched with the decree, reached the army in safety. Thus was Camillus, from banishment, raised at once to be sovereign magisjjate of his country. His promotion was no sooner known, but soldiers flocked from all parts to his camp ; insomuch that he soon saw himself at the head of above 40,000 men, partly Romans and partly allies, who all thought themselves invincible. In the interim, while taking measures to raise the blockade of the citadel, some Gauls perceived on the side of the hill the print of Pontius's hands and feet. They observed likewise that the moss on the rocks was in several places torn up. From these marks they concluded that somebody had lately gone up to and returned from the capitol, and made their report to Brennus of what they had observed ; when he immediately conceived the design, which he imparted to none, of surprising the place by the same way that it had been ascended. With this view he chose out of the army such soldiers as had dwelt in mountainous countries, and been accustomed from their youth to climb precipices. These he ordered, after he had well examined the nature of the place, to ascend in the night the way that was marked out for them, climbing two abreast, that one might support the other in getting up. By these means with much difficulty they advanced from rock to rock, till they arrived at the foot of the wall; and proceeded with such silence that they wera not discovered or heard, either by the sentinels who were upon guard in the citadel, or eren hv their dogs. But a flock of geese kept in a court of the capitol in honor of Juno, and near her temple, had been spared from religious feeling, and were alarmed at their first approach ; so that, running up and down, .they awoke, with their cackling, Manlius, a soldier, who some years before had been consul. He sounded an alarm, and was the first who mounted the rampart, where he found two Gauls. One of these aimed a blow at him with his battle-ax; but Manlius ir, return cut off his right hand, and pushed his companion with his buckler headlong from the top of the rock. In his fall he drew several others down ; and in the meantime the Romans, crowding to the place, pressed upon the approaching enemy, and tumbled them over one another. As the nature of the ground would not suffer them to make a regular retreat, or even to fly, most of them, to avoid the swords of the enemy, threw themselves down the precipice, so that very few got safe back, Manlius was finally rewarded, and the captain of the Roman guard throw a

down the precipice. The Romans extended their punishments and rewards even to the brutes. Geese were ever after had in honor at Rome, and a flock of them always kept at the expense of the public. A golden image of the bird was erected, and a goose every year carried in triumph upon a soft litter finely adorned ; whilst dogs were held in abhorrence, and the Romans every year impaled one of them on a branch of elder. The blockade of the capitol had already lasted seven months ; so that the want of provisions was very severely felt both by the besieged and besiegers. Camillus, since his nomination to the dictatorship, being master of the country, had posted strong guards on all the roads ; so that Brennus, who besieged the capitol, was himself besieged, and suffered the same inconveniences which he inflicted on the Romans. Be-side? a plague raged in his camp, which was placed in the midst of the ruins of the demolished city; and so great a number of them died in one Cjiiarter that it was afterwards called Busta Gallica, or the place where the dead bodies, of the Gauls were burnt. In the mean time the capitol was reduced to the last extremity, and ignorant of the steps Camillus was taking to relieve them. That great general, on the other hand not knowing the extreme want endured in the capitol, only waited for a favorable oppor-tum'y to fall upon the enemy ; but, in the mean time suffered them to pine away in their infected camp. The senate, at last, not knowing what was become of Camillus, resolved to enter upon a ncgociation, and empowered Sulpitius, one of the mlNtary tribunes, to treat with the Gauls; who made no great difficulty in coming to terms. In a conference, therefore, between Brennus and Suloiuus, an agreement was made ; that the Ro-mans were to pay to the Gauls 1000 Ibs. of gold (about ––45,000 sterling), and the latter to raise the siege c f the capitol, and quit all the Roman territories On the day appointed, Sulpitius brought the sui~ agreed on, and Brennus the scales and weigni–– Historians state that the weights of the Gauls were false, and their scales untrue ; which Sulpitius complaining of, Brennus, instead of redressing the injustice, threw his sword and belt itito the scale where the weights were ; and, when tne tribune asked him the meaning of so extraorcinary a behaviour, the only answer he gave was. VaeVictis! 'Woe to the conquered!' Sulpitius was so stung with this haughty answer that ne was for carrying the gold back into the capito., and sustaining the siege to the last ex-tremitv ; but other Romans thought it advisable to put 'ip with the affront. During these disputes ot the

deputies among themselves and with the Gauls, Camillus advanced with his army to the verv gates of Rome ; and, being there informed of wtiat had taken place, he commanded the main oody to follow him, and, arriving at the place of parley, exclaimed ‘ Carry back your gold ;nto the capitol ; and you, Gauls, retire with your scales and weights. Rome must not be redeemed with gold, but with steel.’ Brennus rep.ied, ‘ that he contravened a treaty which was concluded and confirmed with mutual oaths.’ ‘ Be it so ;’ answered Camillus, ‘yet it is of no force having been made by an inferior magistrate,

without the privity or consent of the dictator. I, who am vested with the supreme authority over the Romans, declare the contract void.’ At these words, both sides drawing their swords, a confused scuffle ensued, in which the Gauls, af-ter an inconsiderable loss, were forced to retire to their camp; which they abandoned in the night, and, having marched eight miles, encamped on the Gabinian way. Camillus pursued them as soon as it was day, and gave them a tola! overthrow, the Gauls, according to Livy, making but a faint resistance. It was not, says that author, so much a battle as a slaughter. Many of the Gauls were slain in the action, more in the pursuit ; but the greater number were cut off, as they wandered up and down in the fields, by the inhabitants of the neighbouring villages. In short, there was not one single Gaul left to carry to his countrymen the news of this catastrophe. The camp of the barbarians was plundered; and Camillus, loaded with spoils, returned in triumph to the city, the sol* diers styling him another Romulus, the Father of his country, and the Second Founder of Romp. As the houses of Rome were now all razed, the tribunes of the people renewed, with more warmth than ever, an old project which had occasioned great disputes. They had formerly proposed a law for dividing the senate and government between the cities of Veii and Rome. This idea was revived ; nay, most of the tribunes were for entirely abandoning their old ruined city, and making Veii the sole seat of the em-pire. But the senate took the part of Camillus, and, being desirous to see Rome rebuilt, continued him, contrary to custom, a full year in the office of dictator ; during which time he made it his whole business to suppress the inclination of the people to remove to Veii. Having assembled the curiae, he prevailed on them to lay aside all thoughts of leaving Rome ; and, when the dictator reported the resolution of the people to the senate, while L. Lucretius, who was to give the first opinion, was beginning to speak, it happened that a centurion, then marching by the senate-house, cried out aloud, ‘ Plant your colors, ensign ; this is the best place to stay in.’ These words were considered as dictated by the gods ; and Lucretius,

taking occasion from them to urge the necessity of staying at Rome : ‘ A happy omen!’ cried he, ‘ I adore the gods who gave it.’ The whole senate applauded his words ; and a decree was passed without opposition for rebuilding the city. Though the tribunes were defeated by Camillus in this point, they resolved to exercise their authority against another patrician, who had indeed deserved punishment. This was Q. Fabius, who had violated the law of nations, and thereby provoked the Gauls, and occasioned the burning of Rome. His crime being notorious, he killed himself to avoid punishment. On the other hand, the republic gave a house situated on the capitol to M. Manlius. as a monument of his valor, and of the gratitude of his fellow-citizens. Camillus closed this year by laying down his dictatorship : whereupon an interregnum ensued, during which he governed the state alternately with P. Cornelius Scipio; and it fell to his lot to preside at the election of

new magistrates when L. Valerius Poplicola, L. Virginius Tricos us, P. Cornelius Cossus, A. Manlius Capitolirus, L. ./Emilius Mamercinus, and L. Posthumius Albinus, were chosen. The first care of these magistrates was to collect all ??? the ancient monuments of the religion and civil laws of Rome which could be found among the ruins of the demolished city. The laws of the twelve tables, and some of the laws of the kings, had been written on brass, and fixed up in the forum ; and the treaties made with several nations had been engraved on pillars erected in the temples. Pains were therefore taken to gather up the ruins of these precious monuments ; and what could not be found was su p-plied by memory. The pontifices, on their part, took care to reestablish the religious ceremonies, and made also a list of lucky and unlucky days. And now the governors of the republic applied themselves wholly to rebuild the city.

But Rome was scarcely restored when her’ citizens were alarmed by the news that all her neighbours were combining her destruction. The JEqui, Volsci, Etrurians, and even her old friends the Latins and Hernici, entered into an alliance against her. The republic, under this

terror, nominated Camillus dictator a third time. He divided his new levies into three bodies. The first, under the command of A. Manlius, he ordered to encamp under the walls of Rome ; the second he sent into the neighbourhood of Veii ; and marched himself at the head of the third, to relieve the tribunes, who were closely besieged in their camp by the forces of the Volsci and Latins. Finding the enemy encamped near Lanuvium, on the declivity of the hill Marcius, he posted himself behind it, and, by lighting fires, gave his countrymen notice of their arrival. The Volsci and Latins, when they understood that Camillus was at the head of an army newly arrived, were so terrified that they shut themselves up in their camp, which they fortified with trees cut down in haste. The dictator observing that this barrier was of green wood, and that every morning there arose a great wind, which blew fall upon the enemy's camp, formed the design of taking it by fire. With this view he ordered one part of his army to go by break of day with firebrands to the windward side of the camp, and the other to make a brisk attack on the opposite side. Bv these means the enemy were entirely defeated, and their camp taken. Camillus then commanded his men to extinguish the flames, and to save the booty, with which he rewarded his army. Then leaving his son in the camp to guard the prisoners, and entering the country of the ./Equi, he made himself master of their capital, Bola. Thence he marched against the Volsci; whom he entirely reduced, after they had waged war with the Romans for the space of 107 years. He next penetrated into Etruria, to relieve Sutrinum, a town in alliance with Rome. But, notwithstanding all the expedition Camillus could use, he did not reach the place before it had capitulated. The Sutrini being greatly distressed for want of provisions, and exhausted with labor, had surrendered to the Etrurians, who had granted them nothing but their lives

and clothes. In this destitute condition they had left their own country, and were going in search of new habitations, when they met Camillus. The unfortunate multitude no sooner saw the Romans than they threw themselves at the dictator's feet, who desired them to take a little rest, and refresh themselves, adding that he would soon dry up their tears, and transfer their sorrows to their enemies. The latter did not dream that the dictator could come so speedily from such a distance ; and therefore were whollv employed in plundering the houses, or feasting on the provisions they found in Sutrium. Many of them were, therefore, put to the sword, while an incredible number were toade prisoners; and the city was restored to its ancient inhabitants, And now, after these glorious exploits, which were

finished in so short a time, Camillus entered Rome in triumph a third time ; resigned his dictatorship, and the public chose six new military tribunes, Q. Quinctius, Q. Servius, L. Julius, L. Aquilius, L. Lucretius, and Ser. Sulpitius. During their administration the country of the .Suqui was laid waste, in order to put it out of their power to revolt anew ; and the two cities of Cortuosa and Contenebra, in the lucumony of the Tarquinienses, were taken from the Etrurians. At this time it was thought proper to repair the capitol, and add new works to that part of the hill which the Gauls had endeavoured to scale. These works were esteemed very beautiful, as Livy informs us, even in the time of Augustus. And now, Rome being reinstated in her former flourishing condition, the tribunes, who had been for some time quiet, be-gan to renew their seditious harangues, and re-vive the old quarrel about the division of the conquered lands. As for the military tribunes, they owned that their election had been defective ; and voluntarily laid down their office. So that, after a short interregnum, during which M. Manlius, Ser. Sulpitius, and L. Valerius Poti-tius, governed the republic, six new military tribunes, L. Papirius, C. Sergius, L. .Similius, L. Menenius, L. Valerius, and C. Cornelius, were chosen for the ensuing year, which was spent in works of peace. A temple, which had been vowed to Mars during the war, was built and consecrated by T. Quinctius. As there had hitherto been but few Roman tribes beyond the Tiber which had a right of suffrage in the comitia, four new ones were added, under the name of the Stellatina, Tramontina, Sabatina, and Ar-niensis; so that the tribunes were now in all twenty-five, which enjoyed the same rights and privileges.

The expectation of an approaching war induced the centuries to choose Camillus one of the military tribunes for the next year. His colleagues were Ser. Cornelius, Q. Servilius, L. Quinctius, L. Horatius, and P. Valerius. As all these were moderate and considerate men, they agreed to invest Camillus with the sole management of affairs in time of war ; and in full senate transferred their power into his hands. It had already been determined in the senate to turn the arms of the republic against the Etrurians ; but, upon intelligence being received that the Antiates had entered the Pomptin territory, and obliged the

Romans wh.-> had taken possession ot it to retire, it was thought necessary to humble them first. The Antiates had joined the Latins and Hernici near Satricum ; so that the Romans, being ap-palled at their prodigious numbers, showed themselves backward to engage; which Camillus perceiving, he mounted his horse, and riding through all the ranks of the army, encouraged them by a suitable harangue ; after whicli he dismounted, took the next standard bearer by the hand, and led him towards the e:ieray, crying out, Soldiers, advance. The soldiery now fell Ofi the euemy with incredible fury. Camillus, to increase their eagerness, commanded a standard to be thrown into the middle of the ene-my's battalions ; which made those who were fighting in the first ranks, exert all their resolution to recover it The Antiates gave way, and were entirely defeated : the Latins and Hernici separated from the Volsci, and returned home : while the Volsci, seeing themselves abandoned by their allies, took refuge in the city of Satricum ; which Camillus immediately invested, and took by assault, when theVolsci surrendered at discretion. He then left his army under the command of Valerius ; and returned to Rome to solicit the consent of the senate, and make the necessary preparations for the siegeof Antium. But, while he was proposing this affair, deputies arrived from Nepet and Sutrium, cities in alliance with Rome, demanding succors against the Etrurians, who threatened to besiege them. Hereupon the expedition against Antium was laid aside, and Camillus commanded to hasten to the relief of the allied cities, with the troops which Servilius had at Rome. Camillus immediately set out for the new war; and, upon his arrival before Sutrium, found it not only besieged but almost taken, the Etrurians having made themselves masters of some of the gates, and all the avenues of the city. But the inhabitants hearing that Camillus was come, recovered their courage, and, by barricadoes in the streets, prevented the enemy from making themselves masters of the whole. Camillus, dividing his army into two bodies, ordered Valerius to march round the wails, while he charged the Etrurians in the rear ; on which the latter betook themselves to flight through a gate which was not invested. Ca-nulius's troops made a dreadful slaughter of them within the city, while Valerius made equal navoc without the walls. Camillus hastened to the relief of Nepet, which had submitted to the Etrurians. He took it by assault, put all the Etrurian soldiers to the sword, and condemned the authors of the revolt to die by the axes of the lictors. Thus ended Camillus's military tribune-ship, in which he acquired no less reputation than he had done in the most glorious of his dictatorships.

In the following magistracy of six military tribunes, a dangerous

sedition is said to have taken place through the ambition of Marcus Manlius, who had saved the capitol from the <iauls. He envied Camillus, magnified his own t-xploits beyond those of the dictator, concerted measures with the tribunes, and strove to gain the afiections of the multitude by advocating the law, and that for the relief of insolvent

debtors, of whom there was now a great number. The senate, alarmed at this opposition, created A. Cornelius Cossus dictator, for which the war with the Volsci afforded them a fair pretence. Manlius still continued to inflame the people against the patricians. Besides the most un bounded personal generosity, he held assemblies at his own house (in the citadel) where he slandered the senators, affirming that they appropriated to their own use all the gold which was to have been paid to the Gauls. Upon this he was committed to prison ; but the people made such disturbance that the senate released him. At last he was publicly accused of aspiring to be king ; but the Romans, grateful for his having delivered the capitol, could not condemn him The military tribunes, however, having appointed the assembly to be held without the city, obtained their wish; and Manlius was thrown headlong from the capitol ; the people, who lamented his fate, imputing a plague, which broke out soon after, to the anger of the gods on that account.

The Romans, having now triumphed over the Sabines, the Etrurians, the Latins, the Hernicˆ the jEqui, and the Volscians, began to look for greater conquests. They accordingly turned their arms against the Samnites, a people about 100 miles east from the city, descended from the Sabines, and inhabiting a large tract of southern Italy. Valerius Corvus and Cornelius were consuls. The first was one of the greatest commanders of his time, and surnamed Corvus, from the circumstance of being singularly assisted by a crow in a single combat, in which he fought and killed a Gaul of a gigantic stalare. To his colleague's care it was consigned to lead an army to Samnium, the enemy's capital while Corvus was sent to relieve Capua, the capital of the Campanians. The Samnites were the bravest men the Romans had ever yet encountered, and the contention between the two nations was managed on both sides with the most determined resolution. But the fortune of Rome prevailed ; and the Samnites at length fled. The other con-sul, having led his army into a defile, was in danger of being cut off, had not Decius, a tribune, possessed himself of a hill wnicri commanded the enemy ; so that the Samnites. being attacked on both sides, were defeated with great slaughter, no fewer than 30,000 of tnem being left

dead upon the field. Some time after this victory, the soldiers who were stationed at Capua mutinying, forced Quintus, an old ana eminent soldier, to be their leader ; ana came within eight miles of Rome. The senate immediately created Valerius Corvus dictator, ana sent him with another detachment to oppose them. The two armies were now drawn up against each other, while fathers and sons beheld themselves prepared to engage in opposite courses ; but Corvus, knowing his influence among the soldiers, instead of going forward to meet the mutineers in a hostile manner, went with [the rno< cordial friendship to embrace and expostulate with his old acquaintances. His conduct had the desired effect. Quintus ouly desired to have their defection forgiven. A war between the Romans and Latins followed soon after; and as their

habits, arms, and language, were the same, the most exact discipline was necessary to prevent confusion in the engagement. Orders, therefore, were issued by the consul Manlius, that no soldier should leave his ranks under pain of death. With these injunctions, both armies were drawn out in array, when Metius, the general of the enemy's cavalry, pushed forward and challenged any knight in the Roman army to single combat. For some time there was a general pause, no soldier offering to disobey his orders, till Titus Manlius, the consul's son, burning with shame to see the whole body of the Romans intimidated, boldly sallied out against his adversary. Manlius killed his adversary ; and, despoiling him of his armor, returned in triumph to his father's tent, where he was giving orders relative to the engagement. Doubtful of the reception he should find, he came, with hesitation, to lay the enemy's spoils at his feet, and insinuated that what he did was entirely from a spirit of hereditary vir-tue. But his father, turning away, ordered him to be led forth before the army, and there to have his head struck off on account of his disobeying orders. The whole army was struck with horror at this unnatural mandate ; but when they saw their young champion's head struck off, and his blood streaming upon the ground, they could no longer contain their execrations. His dead body, adorned with the spoils of the vanquished

enemy, was buried with all the pomp of military greatness. Mean time the battle joined with mutual fury ; and, as the two armies had often fought under the same leaders, they combated with all the animosity of a civil war. The Latins chiefly depended on their bodily strength ; the Romans on their invincible courage. Forces so nearly matched seemed only to require the protection of their deities to turn the scale of victory; and the augurs had foretold that, whatever part of the Roman army should be distressed, the commander of that part should de-vote himself for his country. Manlius commanded the right wmsr, and Decius led on the left. Both sides fought for some time with doubtful success, but at last the left wing of the Roman army began to give ground. Decius having resolved to devote himself for his country, and to offer his own life to save his army, after the usual superstitions, mounting on horseback, drove furiously into the midst of the enemy, carrying terror and consternation wherever he came. He fell covered with wounds. The Roman army considering this as an assurance of success, and the superstition of the Latins being equally influenced by his resolution, a total rout ensued, and scarcely a fourth part of the enemy survived the defeat. This was the last battle that the Latins had with the Ro-mans ; they were forced to beg a peace upon hard conditions; and two years after, their strongest city, Paedum, being taken, they were brought ‘uider final submission to the Roman power.

About this time the Romans sustained a signal disgrace in their contests with the Samnites. The senate having denied that nation peace, Pontius their general resolved to gain by stratagem what he had frequently lost by force. Leading his army into a defile called Claudium, and taking possession of all its outlets, he sent

ten of his soldiers, habited like shepherds, to throw themselves in the way the Romans were to march. The consul met them, and demanded the route the Samnite army had taken ; with seeming indifference they replied, that they were gone to Luceria, in Apulia, and were then besieging it. The Roman general marched directly by the shortest road, through the defiles, and was not undeceived till he saw his army surrounded. Pontius, thus having them entirely in his power, first obliged the Romans to pass un-der the yoke, stripped of all but their garments ††† he then stipulated that they should wholly quit the territories of the Samnites, and that they should continue to live upon terms of former confederacy. The Romans were constrained to submit to this treaty, and marched into Capua disarmed and half naked. But after this the power of the Samnites declined every day, while that of the Romans continually increased. Under Papirius Cursor, at different

times consul and dictator, repeated triumphs were granted. Fabius Maximus also had his share in conquering them ; Decius, the son of Decius who devoted himself, followed the example of his fa-ther. See DECIUS. The success of the Romans against the Samnites alarmed all Italy. The Tarentines, who had long plotted against the republic, now declared themselves; and invited into Italy Pyrrhus king of Epirus. The offer was readily accepted by that ambitious monarch. Their ambassadors carried magnificent presents, and told him that they only wanted a general of fame and experience ; and that they could furnish 20,000 horse and 350,000 foot. As soon as the news of this deputation were brought to the Roman camp, ˆEmilius, who had hitherto made war on the Tarentines but gently, in hopes of adjusting matters by negociation, began tc commit all sorts of hostilities. He took cities, stormed castles, and laid the whole country waste, burning and destroying all before him. The Tarentines brought their army into the field, but VEmilius obliged them to take refuge within their walls. However, he used the prisoners with great moderation, and even sent them back without ransom. These highly extolled the generosity of the consul, many of the inhabitants were brought over to the Roman party, and they all began to repent of their hav-ing sent for Pyrrhus. But, in the mean time, the Tarentine ambassadors arriving in Epirus, pursuant to the powers they had received, made an absolute treaty with the king ; who sent be-fore him the famous Cyneas, with 3<XX: mei,, to take possession of the citadel of larer.ium. This minister deposed Agis, whom tne Taien-tines had chosen to be their governor. He likewise prevailed opon the Tarentines to deliver up the citadel into his hands ; and sent messengers to Pyrrhus, pressing him to hasten his departure. Mean time, TEmilius resolved to quarter his troops in Apulia, near the territory of Tarentum But being obliged to pass through defiles, witk the sea on one side and hills on the other, he was attacked by the Tarentines and Epirots from barks fraught with balistae, and from archers and slingers on the hills. Hereupon jEmilius placed the Tarentine prisoners between him and

vhe enemy ; which the Tarentines perceiving, soon left off, so that the

Romans took up their winter quarters in Apulia. The next year TEmilius was continued in command with the title of proconsul ; and was ordered to make war upon the Salentines, who had declared for the Tarentines. The Romans now enlisted the proletarii, who were the meanest of the people, and had never before been suffered to bear arms. In the mean time Pyrrhus arrived at Tarentum, after having narrowly escaped shipwreck. The Tarentines, who were entirely devoted^ to their pleasures, expected that he should take all the fatigues of the war on himself, and expose only his Epirots to danger. But, his ships arriving one after another with his troops, he began to reform the disorders that prevailed. He shut up their theatre, public gardens, porticoes, and places of exercises, and prohibited all masquerades, plays, &c. They were utter strangers to military exercise ; but Pyrrhus, having caused a register to be made of all the young men fit for war, picked out the strongest, and incorporated them among his cwn troops, exercising them daily for several hours. And because many, who had not been accustomed to such severity, left their native country, Pyrrhus, by a public proclamation, declared all such capitally guilty. In the mean time P. Valerius Laevinus, the Roman consul, entering the country of the Lucanians, who were in alliance with the Tarentines, committed great ravages there : and, having taken and fortified one of their castles, waited in that neighbourhood fcr Pyrrhus. Pyrrhus therefore took the field with his Epirots, some recruits of Tarentum, and ctke-Italians ; and marched towards those parts vhe'e Laevinus was waiting for him. The Ro-c?'iis were encamped on the other side of the river Siris; and Pyrrhus appearing on the oppo-sv'.e bzjik, wished to reconnoitre the enemy's camp and see what appearance they made. He crossed the river, attended by Megacles, and havintr observed the consul's intrenchments, the manner in which he had posted his advanced guards, and the good order of his camp, he was greatly surprised. On his return he changed his resolution of attacking them ; and waited for the arr;val of the confederates. In the mean time he posted strong guards along the river, and sent out scouts to watch the motions of the consul. Some of these being taken by the Ro-mans, the consul led them through his camp, and, having showed them to his army., sent them back to the king, telling them that he had many other troops to show them in due time. Lsevinius, being determined to draw the enemy to a battle before Pyrrhus received the reinforcements he expected, marched to the banks of the Siris ; and there, drawing up his infantry in battalia, ordered the cavalry to file off, and march a great way about, to find a passage at some place not defended by the enemy. Accordingly they passed the river without being observed ; and, falling upon the guards which Pyrrhus had posted on the banks

over asainst the consular army, gave the infantry an opportunity of crossing the river on bridges which Lsevinus had prepared. Before they got over Pyrrhus, hastening from his camp,

hoped to cut the Roman army in pieces while passing the river ; but the cavalry covering the infantry, and standing between them and the Epirots, gave them time to form themselves. On the other hand Pyrrhus drew up his men as fast as they came from the camp, and performed such deeds of valor that the Romans found him worthy of the great reputation he had acquired. As the cavalry alone had hitherto engaged, Pyrrhus, who confided most in his infantry, hastened back to the camp, to bring them to the charge ; and, having changed habits with Megacles, led his phalanx against the Roman legions with incredible fury. Laevinus sustained the shock with great resolution, so that the victory was for many hours warmly disputed. Both parties several times gave way, but rallied again, and were brought back to the charge by their commanders. Megacles, in the attire of Pyrrhus, was in all places, and well supported the character he had assumed. But his disguise at last proved fatal to him : for a Roman knight, named Dexter, taking him for the king, followed him wherever he went; and at last killed him, stripped him ot his armour, and carried it in triumph to the consul, who, by showing to the Epirots the spoils of their king, so terrified them that they began to give way. But Pyrrhus, appearing in the first files of his phalanx, and riding through all the lines, undeceived his men, and inspired them with new courage. The advantage seemed to be equal on both sides, when Laevinus ordered his cavalry to advance ; which Pyrrhus observing drew up twenty elephants in the front of his army, with towers on their backs full of bowmen. The sight of these dreadful animals chilled the bravery of the Romans, who had never before seen any. However they still advanced, till their horses, unable to bear the smell of them, and frightened at the strange noise they made, threw their riders, or carried them on full speed. In the mean time the archers, discharging showers of darts from the towers, killed many of the Romans, while others were trod to death by the elephants. Notwithstanding the disorder of the cavalry, the legionaries still kept their ranks, till Pyrrhus attacked them at the head ot the Thessalian horse. The onset was so furious that they were forced to retire in disorder. But an elephant, which had been wounded, having caused a great disorder in Pyrrhus’s army, this accident favored the retreat of the Romans, and gave them time to repass the river, and take re-fuge in Apulia. Pyrrhus remained master of the field, and had the pleasure to see the Romans fly before him : but the victory cost him dear, a great number of his

best officers and soldiers having been slain in the battle. His first care after the action was to bury the dead, and herein he made no distinction between the Romans and his Epirots. Pyrrhus next broke into the countries in alliance with the Romans, plundered the lands of the republic, and made incursions eveu into the neighbourhood of Rome. Many cities opened their gates to him, and he soon made himself master of the greatest part of Campania. While in that fruitful province he was joined by the Samnites, Lucanians, and Messapians, whom he had long expected. He then marched to lay

siege to Capua ; but Laevinus, having already received a reinforcement of two legions, threw some troops into the city; which obliged Pyrrhus to drop his design, and, leaving Capua, to, march to Naples. Laevinus followed him, harassing his troops on their march ; and at length, by keeping his army in the neighbourhood, forced him to give over all thoughts of attacking that city. The king then took his route towards Rome by the Latin way, surprised Fregella, and, marching through the country of the Her-uici, sat down before Praeneste. There, from the top of a hill, he saw Rome. But be was soon forced to retire by the other consul T. Corunca-nius, who, having reduced Etruria, was just returned with his victorious army to Rome. He therefore raised the siege of Praeneste, and hastened back into Campania ; where, to his surprise, he found Laevinus with a more numerous army than that which he had defeated on the banks of the Siris. The consul went to meet him, to try the fate of another battle ; but Pyrrhus, pretending that the auguries were not favorable, retired to Tarentum, and put an end to the campaign. To this city the Romans sent him an embassy, consisting of Cornelius Dolabella, who had conquered the Senones, Fabricius, and ˆ.milius Pappus, to demand a surrender of the prisoners, either by way of exchange, or at a proper ranson ; for Pyrrhus had taken 1800 prisoners, most of them Roman knights and men of distinction. Pyrrhus was disappointed when he found that they did not come with proposals of peace, of which he was very desirous, but he treated them with magnificence. He released 200 of the prisoners without ransom, and suffered the rest, on their

parole, to return to Rome to celebrate the Saturnalia. Having thus gained the good will of the ambassadors, he sent Cyneas to Rome with proposals of peace on these terms: ††† 1. That the Tarentines should be included in the treaty. 2. That the Greek cities in Italy should enjoy their laws and liberties. 3. That the republic should restore to the Samnites, Lucanians, and Bruttians, all the places taken from them. By the eloquence of the ambassadors, together with well applied bribes, he nearly effected his errand ; but Appius Claudius, blind as he was, came down to the senate, and his oratorial influence had the effect to determine that Rome would enter into no terms with Pyrrhus while he remained in Italy. This resolution they followed up by despatching the consuls P. Sulpicius Saverrio, and P, Decius Mus, into Apulia, where they found Pyrrhus encamped near Ascu-lum. A battle ensued, in which Decius was slain, and Pyrrhus wounded and defeated, with the loss of many of his troops. Sulpicius appeared in the field next day ; but, finding the Epirots had withdrawn to Tarentum, he put his troops into winter quarters in Apulia. Both armies, early in the spring, took the field anew. The Romans were commanded this year by the consuls C. Fabricius and Q. ./Emilius Pappus ; who no sooner arrived in Apulia than they led their troops into the territory of Tarentum. Pyrrhus, who had received considerable reinforcements from Epirus, met them near the frontiers, and encamped at a small distance. While the

consuls were waiting for a favorable opportunity, a messenger from Nicias, the king’s physician, delivered a letter to Fabricius ; wherein the traitor offered to take off his master by poison for a suitable reward. The virtuous Roman immediately wrote to Pyrrhus, warning him, without discovering the criminal, to take care of himself, and to be upon his guard against the treacherous designs of those about him. Pyrrhus, out of gratitude, released immediately, without ransom, all the prisoners he had taken. But the Romans, disdaining to accept a recompense for not committing the blackest treachery, sent to Pyrrhus an equal number of Samnite and Tarentine prisoners. As the king of Epirus grew every day more weary of the war, he sent Cyneas again to Rome, to try if he could prevail upon the senate to barken to an accommodation upon terms consistent with honor, but in vain. Meantime ambassadors arrived at his camp from the Syracu-sians, Agrigentiues, and Leoutines, imploring his assistance to drive out the Carthaginians, who threatened their states with utter destruction. Pyrrhus, who wanted only some pretence to leave Italy, laid hold of this ; and, appointing Milo governor of Tarentum, with a strong garrison, he set sail for Sicily with 30,000 foot, and 25,000 horse, on

board a fleet of 200 ships. Here he was at first attended with great success ; but the Sicilians, disgusted at the enormo Js extortions of his ministers, had submitted partly to the Carthaginians, and partly to the Mamertines. When Carthage heard of this change, new troops were raised all over Africa, and a numerous army sent into Sicily to recover the cities which Pyrrhus had taken. As the Sicilians daily deserted from him, he was not in a condition, with his Epirots alone, to withstand so powefrul an enemy ; and therefore, when deputies came to him from the Tarentines, San.nites, Bruttian?, and Lucanians, representing tc him that, without his assistance, they must fall a sacrifice to the Romans, he laid hold of ti.s… op-oortunity to return to Italy. His flee was attacked by that of Carthage ; and his army, after their landing, by the Mamertines. But Pyrrhus having, by his bravery, escaped a.. t.►►*;.ger, marched along the sea snore, to react. Tu/ entum that way. As he passed through me county of the Locrians, who had massacred the croops he had left there, he not only exercised a., soas of cruelty on the inhabitants, but plunae;eu the -temple of Proserpine. The immense riches which he found there were, by his order, sent to Tarentum by sea ; but the ships that carried them being dashed against the rocks by a tempest, and the mariners all lost, this prouu prince, considering it as a judgment from the gods, caused all the treasures which the sea haa thrown upon the shore to be carefully gathered up, and replaced in the temple : and put all tnose to death who had advised him to plunder the tem-ple. Pyrrhus at length arrived at Tarentum; but of the army he had carried into Sicily he brought back into Italy only 2000 horse and not 20,000 foot. He therefore reinforced them with the best troops he could raise in the countries of the Samnites, Lucanians, and Bruttians; and nearing that the two new consuls, Curius Dentatus and

Cornelius Lentulus, had divided their forces, the one invading Lucania and the other Samnium, he likewise divided his army into two bodies, marching with his Epirots against Dentatus, in hopes of surprising him in his camp near Bene-ventum. But the consul went out of his entrenchments with a strong detachment of legionaries to meet him,

repulsed his vanguard, put many. of the Epirott to the sword, and took some of their elephants. Curius then marched his army into the Taurasian fields, and drew it up in a plain wide enough for his own troops, but too narrow for the Epirot phalanx. But the king's eagerness to try his skill with so renowned a commander, made him engage at that great disadvantage ; the consequence of which was that the Romans obtained a complete victory. Oro-sius and Eutropius tell us that Pyrrhus's army consisted of 80,000 foot and 6000 horse, including his Epirots and allies ; whereas the consular army was scarcely 20,000 strong. Some say that the king's loss amounted to 30,000 men ; others reduce it to 20,000. All agree that Curius took 1200 prisoners and eight elephants. This victory, which was the most decisive Rome had ever gained, brought all Italy under subjection, and paved the way for those vast conquests which followed. Pyrrhus being not in a condition, after this great loss, to keep the field, retired to Tarentum, attended only by a small body of horse, leaving the Romans in full possession of his camp ; which they so much admired that they made it ever after a model by which to form their own. And now he resolved to leave Italy, but concealed his design. Accordingly he despatched ambassadors into jEtolia, Illyricum, and Macedon, demanding supplies of men and money ; and, having at last pretended to be in a great rage at the dilatoriness of his friends in sending him succors, acquainted the Tarentines that he must go and bring them over himself. However he left behind him a strong garrison in the citadel of Tarentum under Milo. After these precautions Pyrrhus set sail from Epirus, and arrived safe at Acroceraunium with 8000 foot and 500 horse ; after having spent to no purpose six years in Italy and Sicily.

Though, from the manner in which Pyrrhus took his leave, his Italian allies had little reason to expect any further assistance from him, yet: they continued to indulge vain hopes, till certain accounts arrived of his being killed at the siege of Argos. This threw the Samnites into despair : so that they put all to the issue of a general battle, in which they were defeated with such dreadful slaughter that the nation was almost exterminated. This overthrow was soon followed by the submission of the Lucanians, Bruttians, Tarentines, Sarcinates, Picentes, and Salentines,; so that Rome now became mistress of all the nations from the remotest parts of Etruria to the Ionian Sea, and from the Tyrrhenian Sea to the Adriatic. All these nations, however, did not enjoy the same privileges. Some were entirely subject to the republic; others retained their old laws and customs. Some were tributary ; and others allies, who were oblged to furnish troops at their own expense, when the Romans required. Some had the privilege of Roman

citizenship,

their soldiers being incorporated in the legions; while others had a right of suffrage in the elections made by the centuries. These different degrees of honor, privileges, and liberty, were founded on the different terms granted to the conquered nations when they surrendered, and were afterwards increased according to their fidelity, and the services they did the republic. The Romans now became respected by foreign nations, and received ambassadors from Ptolemy Philadelphus king of Egypt, and from Apollonia, a city of Macedon. Sensible of their own importance, they granted protection to whatever nation requested it of them ; not with a view of serving one party, but that they might subject both. In this manner they assisted the Mamertines against Hiero, king of Syracuse, which brought on the wars with the Carthaginians, which terminated in the total destruction of that ancient republic, as related under CARTHAGE.

The interval between the first and second Punic wars was by the Romans employed in reducing the Boii and Ligurians, who had revolted. These were Gaulish nations, who had always been very formidable to the Romans, and now gave one of their consuls a notable defeat. However, he soon after defeated them with great slaughter; though it was not till some time after that, and with great difficulty, that they were totally subdued. During this interval, also, the Romans seized on the islands of Sardinia, Corsica, and Malta, and in 219 B. C. the two former were reduced to the form of a province. Papirius, who had subdued Corsica, demanded a triumph; but, not having interest enough to obtain it, he took a method entirely new to do himself justice. He put himself at the head of his victorious army, and marched to the temple of Jupiter Latialis, on the hill of Alba, with all the pomp that attended triumphant victors at Rome. He made no other alteration in the ceremony but that of wearing a crown of myrtle instead of a crown of laurel, and this on account of his having defeated the Corsicans in a place where there was a grove of myrtles. The example of Papinus was afterwards followed by many generals to whom the senate refused triumphs. The next year, when M. ./Emilius Barbula and M. Juntas Pera were consuls, a new war sprung up in a kingdom out of Italy. Illyricum, which bordered upon Macedon and Epirus, was at this time governed by Teuta, the widow of king Agron, and guardian to her son Pinaeus, A minor. Her pirates had taken and plundered many ships belonging to the Romans, and her troops were then besieging the island of Issa, in the Adriatic, whose inhabitants were under the protection ef the public. Upon the complaints

therefore of the Italian merchants, and to protect the people of Issa, the senate sent tvo ambassadors to the Illyrian queen, Lucius and Caius Coruncanus, to demand of her that she would restrain her subjects from infesting the sea with pirates. She answeeed them haughtily ; they replied in a similar strain, which provoked Teuta to such a degree that she caused them to be murdered on their return. When so notorious an infraction of the law of nations was known at Rome, the

people dtmay.dea vengeance; and the senate having erected, as usual in such cases, statues three feet high to their memory, ordered a fleet to be equipped, and troops raised, with expedition. But Teuta sent an embassy to Rome, assuring the senate that she had no hand in the murder of the ambassadors, and ‘offering to deliver up to the republic those who had committed it. The Romans, being threatened with a war from the Gauls, were ready to accept this satisfaction ; but the Illyrian fleet having gained some advantage over that of the Achseans, and taken the island of Corcyra near Epirus, this success made Teuta believe herself invincible, and she disregarded her promise to the Romans ; she even sent hei fleet to seize on the island of Issa, which they had taken under their protection. Hereupon the consuls, P. Posthumius Albinus and Cn. Fulvius Centumalus, embarked for Illyricum : Fulvius having the command of the fleets, which consisted of 100 galleys; and Posthumius of the land forces, which amounted to 20,000 foot, besides a small body of horse. Fulvius appeared with his fleet before Corcyra, and was put in possession both of the island and city by Demetrius of Pharos, governor for queen Teuta. Nor was this all ; Demetrius made the inhabitants of Apollonia drive out the Illyrian garrison, and admit into their city the Roman troops. The Andyaeans, Parthini, and Atintanes, soon after submitted to Posthumius, being induced by the persuasions of Demetrius to shake off the Illyrian yoke. The consul, being now in possession of most of the inland towns, returned to the coast, where, with the assistance of the fleet, he took many strong holds, among which was Nutria, a place of1 great strength, with a numerous garrison. The loss of the Romans was

repaired by the capture of forty Illyrian vessels, which were returning home with booty. At length the Roman fleet appeared before Issa, which, by Teuta's order, was still closely besieged, notwithstanding her losses. However, upon the approach of the Roman fleet, the Illyrians dispersed ; but the Pharians, who served among them, followed their countryman Demetrius, and joined the Romans, to whom the Is-sani submitted. Sp. Corvilius and Q. Fabius Maximus being again raised to the consulate, Posthumius was called from Illyricum, and refused a triumph for having been too prodigal of blood at the siege of Nutria. His colleague Fulvius was appointed to command the land forces as proconsul. Hereupon Teuta retired to one of her strong holds called Rhizon, and thence early in spring sent an embassy to Rome. The senate refused to treat with her ; but granted the young king a peace upon condition: 1. That he shouid pay an annual tribute ; 2. That he should surrender part of his dominions ; 3. That he should never aufier above three of his ships of war at a lime to sail beyond Lyftus. The places he yielded to the Romans by this treaty were the islands of Corcyra, Issa, and Pharos, the city of Dyrrhachium, and the country of the Atintanes. Soon after Teuta abdicated the regency, and Demetrius succeeded her. Before this war was ended, the Romans were alarmed by new morions of the Gauls, and the great progress which the Carthaginians made m Spain. At this time also the fears of the people were excited by a prophecy said to be taken out o the Sybilline books, that the Gauls and Greeks should one day be in possession of Rome. This prophecy, however, the senate found means to elude, by burying two Gauls and two Greeks alive, and then telling the multitude that the Gauls and Greeks were now in possession of Rome. The Romans now made vast preparations against the Gauls. Some say that the num-ber of forces raised by their republic on this occasion amounted to no fewer than 800,000 men. Of this incredible multitude 248,0f>0 foot, and 26,000 horse, were Romans or Catn-panians ; yet the Gauls, with only 50,000 foot and 20,000 horse, forced a passage through Etruria, and took the road towards Rome. Here they at first defeated one Roman army ; but, being soon after met by two others, they were utterly defeated, with the loss of more than 50,000 men. The Romans then entered their country, which they cruelly ravaged ; but a plague breaking out obliged them to return home. This was followed by a new war, in which those Gauls who inhabited Insubria and Liguria were totally subdued, and their country reduced to a Roman province. These conquests were followed by that of Istria ; Dimalum, a city of importance in Illyricurn ; and Pharos, an island in the Adriatic Sea. The second Punic war for some time retarded the conquests of the Romans, and even threatened their state with entire destruction; but Hannibal being at last recalled from

Italy, and entirely defeated at Zama, they made peace upon such advantageous terms as gave them an entire superiority over that republic, which they not long after entirely subverted. See CARTHAGE.

The successful issue of the second Punic war had greatly increased the extent of the Roman empire. They were now masters of all Sicily, the Mediterranean Islands, and great part ot Spain ; and, through the dissensions of the Asiatic states with the king of Macedon, a pretence was now found for carrying their arms into these parts. The Gauls, however, continued their incursions, but now ceased to be formidable; while the kings of Macedon were first obliged to submit to a disadvantageous peace, and at last totally * subdued. See MACEDON. The reduction of Macedon was soon followed by that of all Greece, either under the name of allies or otherwise ; while Antiochus the Great, to whom Hannibal fled for protection, by an unsuccessful war, first gave the Romans a footing in Asia. See SYRIA. The Spaniards and Gauls continued to be the most obstinate enemies. The former, particularly, were rather exterminated than reduced ; and even this required the utmost care and vigilance of Scipio ˆEmilinus, the conqueror ot Carthage, to execute. See SPAIN and NUMAN-TIA. Thus the Romans attained to a height of power superior to any other nation ; but no”1 3 sedition broke out, which we may say was never terminated but with the overthrow of the republic. This had its origin from Tiberius Sem-oronius Gracchus, descended from a family which though plebeian, was as illustrious as any

in the commonwealth. His father had been twice consul, was a great general, and had been honored with two triumphs. But he was still more renowned for his domestic virtues and probity than for his birth or valor. He married Cornelia, the daughter of the first Scipio Africanus, the pattern of her sex, and the prodigy of her age; and had by her several children, of whom three arrived to maturity of age, Tiberius Gracchus, Caius Gracchus, and a daughter, Sempronia, who was married to Scipio Africanus Junior, or ˆEmilianus. Tiberius, the

eldest, was deemed the most accomplished youth in Rome, with respect to the qualities both of body and mind. He made his first campaigns under his brother-in-law, and distinguished nirnself by his courage and prudence. When he returned to Rome he applied himself to the study of eloquence ; and at thirty years of age was accounted the best orator of his day. He married the daughter of Appius Claudius, who had been consul and censor, and was the chief author and negociator of that peace with the Numantines which the senate, with the utmost injustice, disannulled. He stood for the tribune-ship of the people ; which he no sooner obtained than he resolved to attack the nobility in the most tender parts. They had usurped lands unjustly, cultivated them by slaves, to the great detriment of the public ; and had lived for about 250 years in an open defiance to the Licinian law, by which it was enacted that no citizen should possess more t'nan 500 acres. This law Tib. Gracchus resolved to revive. As he first drew it up it was very mild ; for it only enacted, that those who possessed more than 500 acres of land should part with the overplus ; and that the full value of the said lands should be paid them out of the public treasury. The lands thus purchased by the pub-lic were to be divided among the poor citizens ; and cultivated either by themselves or by freemen, who were upon the spot. He allowed every child to hold 250 acres. This law, even in so mild a shape, was strenuously opposed by the senate, and by one of his fellow tribunes Marcus Octavius Caecina. The consequence was, that he procured the deposition of the latterˆ and, irritated by opposition, he had influence . enough to have the law revived as it was at first passed, without abating any thing of its severity. There was no exception in favor of the children in families ; or reimbursement promised to those who should part with the lands they possessed above 500 acres. The Licinian law being thus revived with one consent, both by the city and country tribes, Gracchus caused the people to appoint three commissioners, to hasten its execution. The commission was held by Gracchus, his father-in-law Appius Claudius, and his brother Caius Gracchus. These three spent the whole summer in travelling through the Italian provinces, to examine what lands were held by any person above 500 acres, in order to divide them among the poor citizens. On a strict enquiry they found that the lands taken from the rich would be enough to content all the poor citizens. But the following circumstance eased Gracchus of this difficulty. Attalus Philometer, king of Pergamus, having oequeathed his dominions and effects to the Romans, Gracchus immediately got a new law passed, enacting tha. this money should be divided among the poor citizens who could not have lands, and that the disposal of the revenues of Pergamus should not be in the senate, but in the comitia. By these steps Gracchus most effectually humbled

the se-nate. In order to continue his power ,he projected, and indeed almost effected, his reelection to the office of tribune; but the patricians, being determined to < fleet his fall, took advantage of a re-port that nad been circulated of his intention of aspiring to sovereignty, and slew him in a tumult on the day of election.

The death o Gracchus did not put an end to the tumult. Above 300 of the tribune's friend? lost their lives also ; and, their bodies were thrown with that of Gracchus, into the Tiber. Nay, the senate carried their revenge beyond the fatal day which had stained the capitol with Roman blood. They sought for all the friends of the late tribune, and without any form of law assassinated some, and forced others into banishment. These disturbances were for a short time interrupted by a revolt of the slaves in Sicily, occasioned by the cruelty of theirmasters ; but, they being soon reduced, the contests about the Sempronian law, as it was called, again took place. Both parties were determined not to yield ; and therefore the most fatal effects ensued. The first thing of consequence was the death of Scipio Africanus the younger, who was privately strangled in his bed by some of the plebeian party, about 129 B.C. Cains Gracchus, brother to Tiberius, not only undertook the revival of the Sempronian law, but proposed a new one, granting the rights of Roman citizens to all the Italian allies, who could receive no share of the lands divided in consequence of the Sempronian law. The effects of this were much worse than the former ; the flame spread through all Italy ; and the nations who had made war with the republic in its infancy again commenced enemies more formidable than before. Fragellae, a city of the Volsci, revolted ; but, being suddenly attacked, was obliged to submit, and was razed to the ground. Gracchus, however, still continued his attempts to humble the senate and the patricians : the ultimate consequence of which was, that a price was set on his head and that of Fulvius his confederate, no less than their weight in gold, to any one who should bring them to Opimius the chief of the patrician party. Thus the custom of proscription was begun by the patricians, of which they themselves soon had enough, and they certainly merited it. Gracchus and Fulvius were sacrificed, but the disorders of the republic were not so easily cured.

The inroad of the Cimbri and Teutones put a stop to the civil discords for some time longer ; but, they being defeated, nothing prevented the troubles from being revived with greater fury than before, except the war with the Sicilian slaves, which had again commenced with more dangerous circumstances than ever. But this being ended, about 99 B. C., no farther obstacle remained. Marius the conqueror of Jugurtha (see NUMIDIA) and the Cimbri undertook the caus2 jf the plebeians

against the senate and

patricians. Having associated himself with Apuleius and Glaucia, two factious men, they carried their proceedings to such a length that an open rebellion commenced, and Marius himself was obliged to act against his allies. Peace, however, was restored by the massacre of Apuleius and Glaucia, with a great number of their followers ; upon which Marius left the city. While factious men thus endeavoured to tear the republic in pieces, the attempts of the well meaning to heal those divisions served only ti-in- volve the state in calamities still more grievous. The consuls observed that many individuals of tne Italian allies lived at Rome, and falsely pretended to be Roman citizens. By means of them the plebeian party had acquired a great deal of power, as the votes of these pretended citizens were always at the service of the tribunes. The consuls, therefore, passed a law, commanding all those pretended citizens to return home. This was so much resented by the Italian states that a universal defection took place. A scheme was then formed by M. Livius Drusus, a tribune of the people, to reconcile all parties; but this only made matters worse, and procured his own assassination. His death seemed a signal for war. The Marsi, Peligni, Samnites, Campanians, and Lucanians, and all the provinces from the Liris to the Adriatic, revolted at once, and formed themselves into a republic in opposition to that of Rome. The haughty Romans were now made thoroughly sensible that they were not invincible ; they were defeated in almost every engagement ; and must soon have yielded, had they not fallen upon a method of dividing their enemies. A law was passed, enacting that all the nations in Italy, whose alliance with Rome was indisputable, should enjoy the right of Roman citizens. This drew off several nations from their alliance ; and, Sylla taking upon him the command of the Roman armies, fortune soon declared in favor of the latter. Yet the success of Rome against the allies served only to bring greater miseries upon herself. Marius and Sylla became rivals ; the former adhering to the people, and the latter to the patricians. Marius associated with one of the tribunes named Sulpitius, in conjunction with whom he raised such

disturbances that Sylla was forced to retire from the city. Having thus driven off his rival, Marius got himself appointed general against Mithridates, king of Pontus. See PONTUS. But the soldiers refused to obey any other than Sylla. A civil war ensued, in which Marius was driven out 19 his turn, and a price set upon his head and that of Sulpitius, and their adherents. Sulpitius was soon seized and killed ; but Marius escaped. In the mean time, however, the cruelties of Sylla rendered him obnoxious both to the senate and people ; and Cinna, a furious partisan of the Marian faction, being chosen consul, cited him to give an account of his conduct. Upon this Sylla set out for Asia ; Marius was recalled from Africa, whither he had fled ; and, immediately on his landing in Italy, was joined by a great number of shepherds, s.aves, and men of desperate fortunes ; so that he SMon had a considerable army. Cinna, whom the senators had deposed and driven out of Rome, solicited and obtained a powerful army from tne

allies ; and being joined by Sertorius, a most able and experienced general, the two, in conjunction with Marius, advanced towards the capital; and, as their forces daily increased, a fourth army was formed under Papirius Carbo. The senate raised some forces to defend the city ; but, these being vastly inferior in number and inclined to the contrary side, they were obliged to open their gates to the confederates. Marius entered at the head of a numerous guard, composed of slaves, whom he called his Bar-divans, and whom he designed to employ in revenging himself on his enemies. The first order he gave these assassins was, to murder all who came to salute him and were not answered with the like civility. As every one was forward to pay his compliments to the new tyrant this order proved the destruction of vast “numbers. At last, these Bardiaeans abandoned themselves to such excesses in every kind of vice that Cinna and Sertorius ordered their troops to fail upon them ; which, being instantly put in execution, they were all cut off to a man. By tne destruction of his guards Marius was reduced to the necessity of taking a method c.f gratifying his revenge somewhat more tedious, thousn equally effectual. A conference was held be’tween the four chiefs, in which a resolution was taicen to murder without mercy all the senators wno had opposed the popular faction. A general slaughter commenced, which lasted five days, during which the greatest part of the obnoxious senators were cut off, their heads stuck upon poles over against the rostra, and their bodies dragged with hooks into the forum, where they were left to be devoured by dogs. Sylla’s house was demolished, his goods confiscated, and he himself declared an enemy to his country; however his wife and children escaped. This massacre

was net confined to the city of Rome. The soldiers were dispersed over the country in search of those who fled ; and many gave up their friends who had fled to them for shelter.

This slaughter being over, Cinna named himself and Marius consuls for the ensuing year ; and these tyrants seemed resolved to begin the new year as they had ended the old one : but, while they were preparing to renew their cruelties, Sylla, having proved victorious in the east, sent a long letter to the senate, giving an account of his many victories, and his resolution of returning to Rome to revenge himself of his enemies. This letter occasioned a universal terror. Marius, dreading to enter the lists with such a renowned warrior, gave himself up to excessive drinking, and died. His son was associated with Cinna in the government, though not in the consulship, and proved a tyrant no less cruel than his father. The senate declared Valerius Flaccus general of the forces in the east, and appointed him a considerable army ; but the troops, all to a man, deserted him and joined Sylla. Soon after Cinna declared himself consul a third time, and took for his colleague Papirius Carbo ; but the citizens, dreading .the tyranny of these monsters, fled in crowds to Sylla, who was now in Greece. To him the senate sent deputies, begging that he would have comoassion on his country, and not carry, his resentment to

t ich a length as to begin a civil war : but he replied that he was coming to Rome full of rage and revenge; and that all his enemies should perish, either by the sword or the axes of the executioners. Upon this several very numerous armies were formed against him ; but were every where defeated, or went over to the enemy. Pompey, afterwards styled the Great, embraced the party of Sylla. The Italian nations took some one side and some another. Cinna was killed in a tumult, and young Marius and Carbo succeeded him ; but the former, having ventured an engagement with Sylla, was by him defeated, and forced to fly to Praeneste, where he was closely besieged. Thus was Rome reduced to the lowest degree of mi-sery ; when one Pontius Telesinus, a Samnite, projected the total ruin of the city. He had

joined, or pretended to join, the generals of the Marian faction with an army of 40,000 men; and therefore marched towards Praeneste, as if he designed to relieve Marius. By this manoeuvre he drew Sylla and Pompey away from the capital ; and then, decamping in the night, overreached these two generals, and by break of day was within ten furlongs of the Collatine gate. He now, declaring himself as much an enemy to Marius as to Sylla, told his troops that it was not his design to assist one Roman against another, but to destroy the whole race. ‘ Let fire and sword,’ said he, ‘ destroy all ; let no quarter be given ; mankind can never be free as long as one Roman is left alive.’ Never had this proud metropolis been in greater danger ; nor ever had any city a more narrow escape. The Roman youth marched out to oppose him, but were driven back with great slaughter. Sylla himself was defeated, and forced to fly to his camp. Telesinus advanced with increased confidence ; but, in the mean time, M. Crassus having defeated the other wing of his army, he attacked the body where Telesinus commanded, and by putting them to flight saved his country. Sylla having now no enemy to fear, marched first to Atemnoe, and thence to Rome. From the former citv he carried 8000 prisoners to Rome, and caused them all to be massacred at once in the circus. His cruelty next fell upon the Praenes-tmes, 12,000 of whom were massacred without rcercy. Young Marius had killed himself, to avoid falling into his hands. Soon after the inhabitants of Norba, a city of Campania, find- \ng themselves unable to resist the forces of the tyrant, set fire to their houses, and all perished in the flames. The taking of these cities put an end to the civil war, but not to the cruelties of Sylla. Having assembled the people in the comitium, he told them that he was resolved not to spare a single person who had borne arms against him. This cruel resolution he put in execution with the most unrelenting vigor; and, having at last cut off all those whom he thought capable of opposing him, Sylla caused himself to be declared perpetual dictator. This revolution happened about 80 B. C., and from this time we may date the loss of the Roman liberty. Sylla indeed resigned his power in two years ; but the citizens of Rome, having once submitted, were ever after ready to summit to a master

Though individuals retailed lie same enthusiastic notions of liberty as before, yet the minds of the generality seem from this time to havp inclined towards monarchy. New masters were indeed already prepared for the republic.

Caesar and Pompey had eminently distinguished themselves by their martial exploits, and were already rivals. Sertorius, one of the generals

of the Marian faction, and the only one of them possessed either of honor or probity, had retired into Spain, where he erected a republic independent of Rome. Pompey and Metellus, two of the best reputed generals in Rome, were sent against him ; but, instead of conquering, they were on all occasions conquered by him. At last Sertorius was treacherously murdered { and the traitors, who after his death usurped the command, being totally destitute of his abilities, were easily defeated by Pompey: and thus that general reaped an undeserved honor from concluding the war with success. The Spanish war was scarcely ended when a very dangerous one was excited by Spartacus, a Thracian gladiator. For some titm> this rebel proved very successful : but at last was defeated and killed by Crassus. The fugitives, however, rallied again, to the number of 5000 ; but, being defeated by Pompey, the latter took occasion to claim the glory due to Crassus. Being thus become extremely popular, he was chosen consul along with Crassus. Both generals were at the head of powerful armies, and a contest instantly began betwixt them. With difficulty they were in appearance reconciled, but began to oppose one another in a new way. Pompey courted the favor of the people, by re—instating the tribunes in their ancient power, which had been greatly abridged by Sylla. Crassus, though very covetous, entertained the populace with surprising profusion at 10,000 tables, and distributed corn among their families. He was the richest man at this time in Rome, his estate being valued at upwards of 7000 talents, i. e. ►►1,355,250 sterling. Pompey, however, still had the superiority; and was therefore proposed as a proper person for clearing the seas of pirates. He was to have an absolute authority for three years over all the seas within the pillars of Hercules, and over all the countries for 400 furlongs from the sea. He was empowered to raise as many soldiers and mariners as he thought proper; to take what sums of money he pleased out of the public treasury, without being accountable; and to choose out of the senate fifteen senators to be his lieutenants, and execute his orders when he himself could not be present. The sensible part of the people were against investing one man with so much power ; but the unthinking multitude rendered all opposition fruitless. This law being agreed to, Pompey executed his commission so much to the public satisfaction that on his return a new law was proposed, appointing him general of all the forces in Asia ; and, as he was still to retain the sovereignty of the seas, he was now in fact made sovereign of alt the Roman empire. Cicero and Caesar supported this law, the former aspiring at1 the consulate, and the latter pleased to see the Romani

appointing themselves a master. Pompey, however, executed his commission with fidelity and success, completely conquering Pontus, Albania, Iberia, &c., which had been begun by Sylla and Lucullus. But, while Pompey was thus aggrandising himself, the republic was on the point of being subverted by a conspiracy formed by Lu-cius Sergius Catiline. He was descended from an illustrious family ; but having ruined his estate, and rendered himself infamous by a series of detestable crimes, he associated with a num-ber of others in similar circumstances. Their scheme was to murder the consuls with the greatest part of the senators, set fire to the city, and seize the government. This design miscarried twice ; but was not dropped by the conspirators. At last it was discovered by a young knie-ht, who had revealed the secret to his para-mour. Catiline then openly took the field, and raised a considerable army : but was defeated and killed about 62 B. C. In the mean time Caesar continued to advance in popularity and in power. Soon after the defeat of Catiline he was created pontifex maximus ; and after that was sent into Spain, where he subdued several nations that had never been subject to Rome. Mean time Pompey returned from the east, and was received with the highest honors; but he affected extraordinary modesty, and declined accepting a triumph. His aim was to assume a sovereign authority without seeming to desire it. He therefore renewed his intrigues, and spared no pains to increase his popularity. Csesar, on kis return from Spain, found the sovereignty divided between Crassus and Pompey. No less ambitious than either, Caesar proposed that they should put an end to their differences, and take him for a partner. In short, he projected a triumvirate (Pompey, Crassus, and himself), in which should be lodged the whole power of the senate and people; and they bound themselves by mutual oaths to stand by each other, and suffer nothing to be undertaken or carried into execution without the unanimous consent of all the three. Thus was the liberty of the Romans a second time taken away ; nor did they ever afterwards recover it, though few perceived this, at the time, except Cato. The association of the triumvirs was for a long time kept secret ; and nothing appeared to the people except the reconciliation of Pompey and Crassus, for which the state reckoned itself indebted to Caesar.

The first consequence of the triumvirate was the consulship of Julius Caesar, obtained by the favor of Pompey and Crassus. Ceesar set himself to engage the affections of the people ; and this he did, by an agrarian law, so effectually, that he was in a manner idolised. This law was in itself very reasonable and just; nevertheless the senate, perceiving the design with which it was proposed, thought themselves bound to op-pose it. But their opposition proved fruitless : the consul Bibulus, who showed himself most active in his endeavours against it, was driven out of the assembly with the greatest indignity ; so that Caesar was reckoned sole consul. The next step taken by Caesar was to secure the knights, and for this purpose he abated a third of the rents which they annually paid into the VOL. XVT1T.

treasury ; after which he gorerned Rome with an absolute sway during the time of his consulate. The reign of this triumvir, however, was ended by his expedition into Gaul, where his military exploits acquired him the highest reputation. Pompey and Crassus therefore be-came consuls, and governed as despotically as Caesar. On the expiration of their first consulate, the republic fell into a kind of anarchy. At last, however, this confusion was ended by raising Crassus and Pompey again to the consulate. This was no sooner done than a new partition of the empire was proposed. Crassus was to have Syria and all the eastern provinces, Pompey was to govern Africa and Spain, and Caesar to be continued in Gaul for five years. The law was passed by a great majority ; upon which Crassus undertook an expedition against the Parthians.. Caesar applied with great assiduity to the completing of the conquest of Gaul ; and Pompey staid at Rome to govern the republic. The affairs of the Romans were now hastening to a crisis. Crassus”, having oppressed all Ihe provinces of the east, was totally defeated and killed by the Parthians ; after which the two great rivals, Caesar and Pompey, were left alone. Matters, however, continued pretty quiet, till Gaul was reduced to a Roman pio-vince. The question then was, whether Caesar or Pompey should first resign the command of their armies, and return to the rank of private persons. As both parties saw that whoever first laid down his arms must of course submit to the other, both refused. As Caesar, however, had amassed immense riches in Gaul, he was now in a condition not only to maintain an army capable of vying with Pompey, but even to buy over the leading men in Rome to his interest. One of the consuls, named ./Ernilius Paulus, cost him no less than 1500 talents, or ––310,625 sterling ; but the other, named Marcellus, could not be gained at any price. Pompey had put at the head of the tribunes one Scribonius Curio, a young patrician of great abilities, but so

exceedingly debauched and extravagant that he owed upwards of ►►4,500,000 of our money. Caesar, by enabling him to satisfy his creditors, and supplying him with money to pursue his debaucheries, secured him in his interest; and Curio, without seeming to be in it, did him the most essential service. He proposed that both generals should be recalled ; being assured that Pompey would never consent to part with his army, so that Caesar might make this a pretence for continuing in his province at the head of his troops: and thus, while both professed pacific intentions, both continued ready for the most obstinate and bloody war. Cicero took upon himself the office of mediator; but Pompey would hearken to no terms of accommodation. In the year 49 B. C.the senate passed a decree by which Pompey was invested with the command of the troops of the republic, Caesar divested ot his office, and Lucius Domitius appointed to succeed him : the new governor being empowered to raise 4000 men to take possession of hi* province. War being thus resolved on, th►► senate and Pompey began to prepare for opposing-Caesar. They ordered 30,000 Roman soldier*

to be assembled, with as many Roman troops as Pompey should think proper: the expense of which was defrayed from the public treasury. The governments of provinces were bestowed upon such as were remarkable for their attachment to Pompey. Caesar, however, took care of his own interest : three of the tribunes who had been his friends were driven out of Rome, and arrived in his camp disguised like slaves. Caesar showed them to his army in this ignominious habit; and, setting forth the iniquity of the senate and patricians, exhorted his men to stand by their general under whom they had served so long with success ; and, finding by their acclamations that he could depend on them, he resolved to begin hostilities immediately.

Caesar's first design was to make himself mas-ter of Ariminum, a city bordering upon Cisalpine Gaul, but he resolved to keep his design private. At that time he himself was at Ravenna, whence he sent a detachment towards the Rubicon, desiring the officer who commanded it to wait for him on the banks of that river. The next day he assisted at a show of gladiators, and made a great entertainment. Towards the close of the day he rose from table, desiring the guests to stay till he came back ; but, instead, of returning to the company, he set out for the Rubicon, having left orders to his most intimate friends to follow him through different roads, to avoid being observed. Having arrived at the Rubicon, which parted Cisalpine Gaul from Italy, the misfortunes of the empire occured to his mind, and made him hesitate. Turning then to Asinius Pollio, ' If I do not cross the Rubicon,' said he, ' I am undone ; and, if I do cross it, how many calamities shall I by this means bring upon Rome !' Having thus spoken, he mused a few minutes ; and then, crying out ' the die is cast,' he threw himself into the river, and, crossing it, marched with all possible speed to Ariminum, which he reached and surprised before day-break. Thence, as he had but one legion with him, he despatched orders to the army he had left in Gaul to cross the mountains and join him. The activity of Caesar struck the opposite

party with the greatest terror. Pompey, no less alarmed than the rest, left Rome with a desire to retire to Capua, where he had two legions draught-ed formerly out of Caesar's army. He communicated his intended flight to the senate ; but acquainted them that, if any magistrate or senator refused to follow him, he should be treated as an enemy to his country. In the mean time Caesar, having raised new troops in Cisalpine Gaul, sent Marc Antony with a detachment to seize Aretium, and some other officers to secure Pisaurum and Fanum, while he himself marched at the head of the thirteenth legion to Auximum, which opened its gates to him. From Auximum he advanced into Picenum, where he was joined by the twelfth legion from Transalpine Gaul. As Picenum submitted, he led his forces against Corfinium, the capital of the Peligni, which Domitius Ahenobarbus defended with thirty cohorts. But Caesar no sooner invested it than the garrison betrayed their commander, and delivered him up with many senators, who had taken refuge in the place, to Caesar, who granted

them their lives and liberty. Pompey, thinking himself no longer safe at Capua after the reduction of Corfinium, retired to Brundusium, to carry the war into the east, where all the governors were his creatures. Caesar followed him close ; and, arriving with his army before Brundusium, invested the place on the land side, and undertook to shut up the port by a staccado of his own invention. But, before the work was completed, the fleet which had conveyed the two consuls with thirty cohorts to Dyrrhachium being returned, Pompey resolved to make his escape, which he did with all the dexterity of a great officer. He kept his departure very secret ; but made all necessary preparations for facilitating it. Walling up the gates, he dug deep and wide ditches cross all the streets, except only two that led to the port ; in the ditches he planted sharp pointed stakes, covering them with hurdles and earth. After these precautions, he gave express orders that all the citizens should keep within doors, lest they should betray his design ; and then, in three days, embarked all his troops, ex-cept the light armed infantry, whom he had placed on the walls ; these likewise, on a signal given, abandoning their posts, repaired with great expedition to the ships. Caesar, perceiving the walls unguarded, ordered his men to scale them, and make what haste they could after the enemy. In the heat of the pursuit they would have fallen into the ditches which Pompey had prepared for them, had not the Brundusians warned them of the danger. In the haven they found all the fleet under sail, except two vessels, which had run aground in going out of the harbour. These Caesar took, made the soldiers on

board prisoners, and brought them ashore. Seeing himself, by the flight of his rival, thus master of all Italy from the Alps to the sea, Caesar wished to follow and attack Pompey before he received his supplies from Asia. But, being destitute of shipping, he resolved to go to Rome, and settle the government there ; then pass into Spain to expel Pompey's troops, who had possession of that great peninsula, under Afranius and Petreius. Before he left Brundusium he sent Scribonius Curio with three legions into Sicily, and ordered Q. Valerius, one of his lieutenants, to get together what ships he could, and cross over with one legion into Sardinia. Cato, who commanded in Sicily, upon the first news of Curio's landing there, abandoned the island, and retired to the camp of the consuls at Dyrrhachium ; and Q. Valerius no sooner appeared with his small fleet off Sardinia, than the Caralitini (the inhabitants of what is now called Cagliari), drore out Aurelius Cotta, who commanded there for the senate, and put Caesar's lieutenant in possession both of their city and island. In the mean time Caesar advanced towards Rome, and on his march wrote to all the senators then in Italy, desiring them to repair to the capital, and assist him with their counsel. Above all, he was desirous to see Cicero ; but could not prevail upon him to re-turn to Rome. As Caesar drew near the capital, he quartered his troops in the neighbouring mu-nicipia ; and then advancing to the city, out of respect to ancient custom, he took up his quarters in the suburbs, whither the vhole city

crowded to'see the conqueror of Gaul, who had been absent nearly ten years. Such of the tribunes of the people as had fled to him for refuge reassumed their functions, mounted the rostra, and endeavoured to reconcile the people to the head of their party. Marc Antony particularly, and Cassius Longinus, moved that the senate should meet in the suburbs, that Caesar might give them an account of his conduct. Accordingly, such of the senators as were at Rome assembled ; when Caesar made a speech in justification of all his proceedings, and concluded his harangue with proposing a deputation to Pompey, with offers of an amicable accommodation. He even desired the senate, to whom he paid great deference, to nominate some of their venerable

body to carry proposals of peace to the consuls, and the general of the consular army ; but none of the senators would take upon him that commission. He then, to provide himself with money for carrying on the war, had recourse to the public treasury. Metellus, one of the tribunes, opposed him : but Caesar, laying his hand on his sword, threatened to kill him, and Metellus withdrew. Caesar took out of the treasury, which was ever after at his command, an immense sum; some say 300,000 pounds weight of gold. \Vith this supply of money he raised troops all over Italy, and sent governors into all the provinces subject to the republic. Caesar now made Marc Antony commander-in-chief of the armies in Italy, sent his brother C. Antonius to govern Illyricum, assigned Cisalpine Gaul to Licinius Crassus, appointed M. ˆmilius Lepidus governor of the capital ; and, having got together some ships to Cruise in the Adriatic and Mediterranean seas, he gave the command of one of his fleets to P. Cornelius Dolabella, and of the other to young Hortensius, son of the famous orator. As Pompey had sent governors into the same provinces, a war was thus kindled in al-most all the parts of the known world. However, Caesar would not trust any of his lieutenants with the conduct of the war in Spain, which was Pompey's favorite province, but took it upon himself; and, having settled his affairs at Rome, returned to Ariminum, and assembled his legions there.

In Transalpine Gaul he was informed that the inhabitants of Marseilles had resolved to refuse him entrance into their city, and that L. Domitius Ahenobarbus, whom he had generously pardoned and set at liberty after the reduction of Corfinium, had set sail for Marseilles with seven galleys, having on board a great number of his clients and slaves, with a design to raise the city in favor of Pompey. Caesar sent for the fifteen chief magistrates of the city, and advised them to follow the example of Italy, and submit. The magistrates returned to the city, and soon after informed him that they were to stand neu-ter; but in the mean time Domitius, arriving with his small squadron, was received into the city, and declared general of all their forces. Hereupon Caesar invested the town with three legions, and ordered twelve galleys to be built at Arelas to block up the port. But as the siege proved tedious he left C. Trebonius to carry it on, and D. Brutus to command the fleet, while

he continued his march into Spain, where he began the war with all the valor, ability, and success of a great general. Pompey had three generals in this peninsula, which was divided into two Roman provinces. Varro commanded in Farther Spain ; and Petreius and

Afranius, with equal power, and two considerable armies in Hither Spain. Caesar, while yet at Marseilles, sent Q. Fabius, with three legions, to take possession of the passes of the Pyrenees, which Afranius had seized. Fabius executed his commission with great bravery, entered Spain, and left the way open for Caesar, who quickly followed him. As soon as he had crossed the mountains, he sent out scouts to observe the enemy ; by whom he was informed that Afranius and Petreius having joined their forces, consist ing of five legions, twenty cohorts of the natives, and 5000 horse, were advantageously posted on a hill of an easy ascent, in the neighbourhood of Ilerda, in Catalonia. Upon this Caesar advanced within sight of the enemy, and encamped in a plain between the Sicoris and Cinga, now the Segro and Cinca. Between the eminence on which Afranius had posted himself and the city was a small plain, and in the middle of it a rising ground, which Caesar attempted to seize, to cut off the communication between the ene-my's camp and Ilerda, whence they had all their provisions. This occasioned a sharp dispute between three of Caesar's legions and an equal number of the enemy, which lasted five hours with equal success, both parties claiming the victory. But Afranius's men, who had first seized the post, maintained it. Two days after this battle, continual rains, with the melting of the snow on the mountains, so swelled the two rivers between which Caesar was encamped that they overflowed, broke down his bridges, and laid under water the neighbouring country to a great distance. This cut off the communication between his camp and the cities that had declared for him ; and reduced him to such straits that his troops were ready to die for famine, wheat being sold in his camp at fifty Roman denarii per bushel, that is, ––l 12s. \d. sterling. He tried to rebuild his bridges, but in vain, the violence of the stream rendering all his endea-dours fruitless. Upon the news of Caesar's distress, many of the senators, who had hitherto stood neuter, hastened to Pompey's camp. Of this number was Cicero ; who, without regard to the remonstrances of Atticus, or the letters Caesar himself wrote to him, desiring him to join neither party, left Italy, and landed at Dyrrhachium, where Pompey received him with great joy. But the joy of Pompey's party was not long-lived. For Caesar, after having attempted several times in vain to rebuild his bridges, caused boats to be made with all possible expedition ; and while the enemy were diverted by endeavouring to intercept the succors that were sent him from Gaul, he laid hold of that opportunity to convey his boats in the night in carriages twenty-two miles from his camp ; where with wonderful quickness a great detachment passed the Sicoris, and encamping on the opposite bank, unknown to the enemy, built i bridge in two days, opened a communicatioN

with the neighbouring country, received the supplies from Gaul, and relieved the wants of his soldiers. Caesar, being thus delivered from danger, pursued the armies of Afranius and Petreius with such superior address, that he forced them to submit without coming to a battle, and thus became master of all Hither Spain. The two generals disbanded their troops, sent them out of the province, and returned to Italy, after having solemnly promised never to assemble forces again, or make war upon Caesar. Upon the news of the reduction of Hither Spain, the Spaniards in Farther Spain, and one Roman legion, deserted from Varro, Pompey's governor in that province, which obliged him to surrender his other legion and all his money. Caesar, having thus reduced Spain in a few months, appointed Cassius Longinus to govern the two provinces with four legions, and then returned to Marseilles, which was just surrendering after a most vigorous resistance. Though the inhabitants had by their late treachery deserved a severe punishment, yet he granted them their lives and liberty ; but stripped their arsenals of arms, and obliged them to deliver up all their ships. From Marseilles Caesar marched into Cisalpine Gaul; and thence to Rome, where he laid the foundation of his future grandeur.

He found the city in a very different state from that in which he had left it. Most of the senators and magistrates were fled to Pompey at Dyrrhachium. However, there were still praetors there ; and among them M. ./Emilius Lepidus, afterwards a triumvir. The praetor, to ingratiate himself with Caesar, nominated him dictator by his own authority, and against the inclination of the senate. Caesar accepted the new dignity ; but neither abused his power as Sylla had done, nor retained it so long. During the twelve days of his dictatorship, he governed with great moderation, and gained the affections both of the people and patricians. He recalled the exiles, granted the rights and privileges of Roman citizens to all the Gauls beyond the Po, and, as pontifex maximus, filled up the vacancies of the sacerdotal colleges with his own friends. But the chief use he made of his office was to

preside at the election of consuls for the next year, when he got himself and Servilius Isauricus, one of his most zealous partizans, promoted to that dignity. And now being resolved to follow Pompey, and carry the war into the east, he set out for Brundusium, whither he had ordered twelve legions to repair. But on his arrival he found only five. The rest being afraid of the dangers of the sea, and unwilling to engage in a new war, had marched leisurely, complaining of their general for allowing them no respite, but hurrying them continually from one country to another. However Caesar did not wait for them, but set sail with omy five legions and 600 horse in the beginning of January. While the rest were waiting at Brundusium for ships to transport them over into Epirus, Caesar arrived safe with his five legions in Chaonia, the north part of Epirus, near the Ceraunian mountains. There he landed his troops, and sent the ships back to Brundusium to bring over the legions left behind.

The war he was now entering upon was the most difficult he had yet undertaken. Pompey had for a whole year been assembling his troops from all the eastern countries. When he left Italy he had only five legions ; but, since his arrival at Dyrrhachium he had been reinforced with one from Sicily, another from Crete, and two from Syria : 3000 archers, six cohorts of slingers, and 7000 horse, had been sent him by princes in alliance with Rome. All the free cities in Asia had reinforced his army with their best troops ; Greece, Asia Minor, Syria, Palestine, Egypt, and all the nations from the Mediterranean to the Euphrates, took up arms in his favor. He had almost all the Roman knights in his squadrons, and his legions consisted mostly of veterans inured to the toils of war. He had also under him some of the best commanders of the republic, who had formerly conducted armies themselves. As for his navy, he had above 500 ships of war, besides a far greater number of small vessels, which were continually cruising on the coasts, and intercepted such ships as carried arms or provisions to the enemy. He had likewise above 200 senators, who formed a more numerous senate than at Rome. Cornelius Lentulus and Claudius Marcellus, the last year's consuls, presided in it at Thessalonica, where he built a stately hall for that purpose. There, on the motion of Cato, it was decreed that no Ro-man citizen should be put to death but in battle, and that no city subject to the republic should be sacked. They also decreed that they alone represented the Roman senate, and that those who resided at Rome were encouragers of tyranny, and friends of a tyrant. Many persons of eminent probity, who had hitherto stood neuter, now flocked to Cato from all parts. His cause was generally called the good cause, while Caesar's adherents were looked upon as enemies to their

country and abettors of tyranny. As soon as Caesar landed, he marched to Oricum, in Epirus, which was taken without opposition. The like success attended him at Apollonia, and these two conquests opened a way to Dyrrhachium, where Pompey had his magazines of arms and provisions. But the fleet which he had sent back to Brundusium, to transport the rest of his troops, had been attacked by Bibulus, one of Pompey's admirals, who had taken thirty and inhumanly burnt them with the seamen OP board. Bibulus, with 110 ships of war, had also taken possession of all the harbours between Salonium and Oricum; so that the legions at Brundusium could not venture to cross the sea without great danger of falling into the enemy's hands. By this news Caesar was so much embarrassed that he made proposals of accommodation upon very moderate terms, viz., that both Pompey and he should disband their armies within three days, renew their former friendship, and return together to Italy. These proposals were sent by Verbullius Rufus, an intimate friend of Pompey, whom Caesar had twice taken prisoner. Pompey, however, answered that he would not hearken to any terms, lest it should be said that he owed his life and return to Italy to Caesar's favor. Caesar again sent one Vatinius to confer with Pompey about a treaty of peace.

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Labienus received the proposals ; but, while they were conferring together, a party of Pornpey's men discharged their darts at Vatinius and his attendants. Some of the guards were wounded, and Vatinius narrowly escaped with his life. In the mean time Caesar advanced towards Dyrrhachium ; but, Pompey unexpectedly appearing, he halted on the other side of the Apsus, where he entrenched himself. Pompey, however, durst not cross the river" in Caesar's sight ; so that the two armies continued for some time quiet in their respective camps. Caesar wrote repeatedly to Marc Antony, who commanded the legions in Italy, to come to his assistance ; but received no answer. He then sent Posthumius, one of his lieutenants, with pressing orders to Marc Antony, Gabinius, and Calenus, to bring the troops to him at all events. Gabinius, unwilling to expose all the hopes of his general to

the hazards of the sea, marched a great way about by Illyricum. But the Illyrians, who had declared for Pompey, fell unexpectedly upon him and killed him and all his men. Marc Antony and Calenus went by sea, and were in danger from one of Pompey's admirals ; but brought their troops safe to shore at Nyphaeum, near Apollonia. As soon as it was known that Antony was landed, Pompey marched to prevent his joining Caesar. But Caisar, hastening to the relief of his lieutenant, joined him be-fore Pompey came up. Then Pompey retired to an advantageous post near Dyrrhachium, called Asparagium, and there encamped. Caesar, hav-ing thus at length got all his troops together, offered Pompey battle, and kept his army drawn up in sight of the enemy. But, Pompey declining an engagement, he turned towards Dyrrhachium, as if he designed to surprise it. Pompey, following him at some distance, and letting him draw near to the city, encamped on a hill called Petra, which commanded the sea, and whence he could be supplied with provisions from Greece and Asia, while Caesar was forced to bring corn by land from Epirus. This put Caesar upon a new design, which was to surround an army far more numerous than his own, and, by shutting them up within a narrow tract of ground, distress them as much for want of forage. Accordingly, he drew a line of circumvallation from the sea quite round Pompey's camp, and kept him so closely blocked up that, though his men were presently supplied with provisions from sea, yet the horses of his army died in great numbers for want of forage. At length, being reduced to the utmost extremity for want of forage, Pompey resolved to force the enemy's lines. By the advice, therefore, of two deserters he embarked hts archers, slingers, and light armed infantry, and, marching by land at the head of sixty cohorts, went to attack that part of Caesar's lines which was next to the sea. He set out from his camp in the dead of the night ; and, arriving at the post he designed to force by day-break, he began the attack by sea and land at the same time. The ninth legion, which defended that part of the lines, made a vigorous resistance ; but being attacked in the rear by Pompey's men, who came by sea, and landed between Caesar's two lines, they fled with such precipitation that the succors Marcellinus sent

them could not stop them. The ensign who carried the eagle at the head of the routed legion was mortally wounded ; but before he died consigned the eagle to the cavalry, desiring them to deliver it to Caesar. Pompey's men pursued the fugitives, and made such a slaughter of them that all the centurions of the first cohort were cut off except one. And now Pompey's army broke in like a torrent upon the posts Caesar had fortified, and were advancing to attack

Marcellinus, who guarded a neighbouring fort; but Marc Antony coming very seasonably to his relief with twelve cohorts they retired. Soon after Caesar arrived with a strong reinforcement and posted himself on the shore, whence he observed an old camp, made within the place where Pompey was enclosed. Upon his quitting it Pompey had taken possession of it, and left a legion to guard it. This post Caesar resolved to reduce. Accordingly he advanced secretly, at the head of thirty-three cohorts, in two lines ; and, arriving at th►► camp before Pompey could have notice of hi►► march, attacked it with great vigor, forced the first entrenchment, notwithstanding the brave resistance of Titus Pulcio, and penetrated to the second, whither the legion had retired. But here his right wing, in looking for an entrance intt the camp, marched along the outside of a trench which Caesar had formerly carried on from the left angle of his camp, about 400 paces, to a neighbouring river. This trench they mistook for the rampart of the camp ; and, being thus led away from their left wing, they were soon after prevented from rejoining it by the arriva of Pompey, who came up at the head of a legion and a large body of horse. Then, that legion which Caesar had attacked, taking courage, made a brisk sally, drove his men from the first entrenchment which they had seized, and put them in great disorder while they were attempting to pass the ditch. Pompey, falling upon them with his cavalry in flank, completed their defeat ; and then, flying to the enemy's right wing, which had passed the trench, and was shut up between that and the ramparts of the old camp, made a most dreadful slaughter of them. This trench was filled with dead bodies ; many falling into it in that disorder, and others passing over them and pressing them to death. In this distress Caesar did all he could to stop the flight of his legionaries but to no purpose : the standard-bearers themselves threw down the Roman eagles when Caesar endeavoured to stop them, and left them in the hands of the enemy, who on this occasion took thirty-two standards : a disgrace which Caesar had never suffered before. He was himself in no small danger of falling by the hand of one of his own men, whom he took hold of when flying, bidding him stand and face about; but the man, apprehensive of the danger he was in, drew his sword, and would have killed him, had not one of his guards prevented the blow by cut-off his arm. Caesar lost on this occasion 960 foot, 400 horse, five tribunes, and thirty-two centurions.

This loss and disgrace greatly mortified Caesar, but did not discourage him. After he had, by his lenity and eloquent speeches, recovered the spirit of his troops, he decamped, and retired ►►u.

good order to Apollonia, where he paid the array and left his sick and wounded. Thence he irarched into Macedon, where Scipio Metellus, Pompey's father-in-law, was encamped. He met with great difficulties on his march, the countries through which he passed refusing to supply his army with provisions. On his entering Thessaly he was met by Domitius, one of his lieutenants, whom he had sent with three legions to reduce Epirus. Having got all his forces together, he marched directly to Gomphi, the first town of Thessaly, which had been formerly in his interest, but now declared against him. Whereupon he attacked it with so much vigor that though the garrison was very numerous, and the walls were of an uncommon height, he made himself master of it in a few hours. Thence he marched to Metropolis, another town of Thessaly, which surrendered ; as did all the other cities of the country, except Larissa, of which Scipio was master. On the other hand, Pompey, being continually importuned by the senators and officers of his army, left his camp at Dyrrhachium, and followed Caesar, firmly resolved not to give him battle, but rather to distress him by straitening his quarters, and cut-ing off his convoys. As he had frequent opportunities of coming to an engagement, but always declined it, his friends and subalterns began to put ill constructions on his dilatoriness. These, with the complaints of his soldiers, made him at length resolve to venture a general action. With this design he marched into a large plain neai the cities of Pharsalia and Thebes; which las* was also called Philippi, from Philip V. of Macedon. Pompey pitched his camp on the declivity of a steep mountain, in a place altogether inaccessible. He was himself of the opinion that it was better to destroy the enemy by fatigue and want; but his officers forced him to call a council of war, when all to a man were for venturing a general action. The event of this battle was in the highest degree fortunate for Caesar ; who resolved to pursue his advantage and follow Pompey to whatever country he should select. Hearing, therefore, of his being at Amphipolis, he sent off his troops before him, and then embarked on board a little frigate in order to cross the Hellespont; but in the middle of the strait, he fell in with one of Pompey's commanders, at the head of ten ships of war. Csesar, no way terrified at the superiority of his force, bore up to him and commanded him to submit. The other instantly obeyed, awed by the

terror of Caesar's name, and surrendered himself and his fleet at discretion.

Caesar continued his voyage to Ephesus, then to Rhodes ; and, being informed that Pompey had been there before him, he made no doubt but that he was fled to Egypt ; wherefore he set sail for that kingdom, and arrived at Alexandria with about 4000 men. Upon his landing he received accounts of Pompey's miserable end, who had been assassinated by order of the treacherous king ; and soon after one of the murderers came with his head and ring. But Caesar turned away from it with horror, and soon after ordered a magnificent tomb to be built to his memory cm the spot where he was murdered ; and a tem-

ple near the place to Nemesio. There were at that time two pretenders to the crown of Egypt : Ptolemy, the acknowledged -king, and the celebrated Cleopatra his sister, who, by the incestuous custom of the country, was also his wife, and, by their father's will, shared jointly in the succession. However she aimed at governing alone ; but, the Roman senate having confirmed her brother's title, she was banished into Syria with Arsinoe her younger sister. Caesar, however, gave her new hopes of obtaining the kingdom, and sent both for her and her brother to plead their cause before him. Photinus, the young king's guardian, who had long borne the most inveterate hatred both to Caesar and Cleopatra, disdained this proposalˆ and backed his refusal by sending an army of 20,UOO men to besiege him in Alexandria. Caesar bravely -repulsed the enemy; but, finding the city of too great extent to be defended by so small an army as 4000 men, he retired to the palace, which commanded the harbour, to make a stand. Achilles, who commanded the Egyptians, attacked him there with vigor, and endeavoured to make himself master of the fleet before the palace. On this Caesar burnt the whole fleet, in spite of every effort to prevent it. He next took the Isle of Pharos, the key to Alexandria, by which he was enabled to receive the supplies sent him from all sides ; and in this situation he determined to withstand the united force of all the Egyptians. In the mean time Cleopatrj, having heard of the turn in her favor, got herself introduced into his chamber, an 1 her caresses did not fail to fix him in her inn rest. While Cleopatra was thus employed, her <ister Arsinoe was engaged in the camp in pursuing a separate interest. She had, by the assistance of one Ganymede, made a large party in the Egyptian army in her favor; and soon after, having caused Achilles to be murdered, GanymeJe took the command in his stead. Ganymede's principal effort in carrying on the siege was to let in the sea upon those canals which supplied the palace with fresh water; but

this inconvenience Caesar remedied by digging a great number of wells, His next endeavour was to prevent the junction of Csesar's twenty-fourth legion, which he twice attempted in vain. He soon after made himself master of a bridge which joined the Isle of Pha-ros to the continent, from which post Cresar resolved to dislodge him. In the heat of action some mariners joined the combatants ; but, seized with a panic, instantly fled, and spread a general terror through the army. All Caesar's endeavours to rally his forces were in vain, the confusion was past remedy, and numbers were drowned or put to the sword in attempting to escape; on which, seeing the irremediable disorder of his troops, he retired to a ship. But he was no sooner on board than such crowds entered at the same time that he was apprehensive of the ship's sinking, and, jumping into the sea, swam 200 paces to the fleet before the palace. The Alexandrians, finding their efforts to take the palace ineffectual, now endeavoured to get their king out of Caesar's power. For this purpose they made use of their customary arts of dissimulation, professing the utmost desire

for peace, and only wanting the presence of their lawful prince to give a sanction to the treaty. Caesar, though sensible of their perfidy, gave them their king, as he was under no apprehension from a boy. Ptolemy, however, instead of promoting peace, made every effort to prolong hostilities. In this manner Caesar was hemmed in for some time ; and was only at last relieved from this mortifying situation by Mithridates Pergamenus, one of his faithful partisans ; who, collecting a numerous army in Syria, marched into Egypt, and, joining with Caesar, attacked the camp, and made a great slaughter of the Egyptians. Ptolemy himself, attempting to es-cape on board a vessel that was sailing down the river, was drowned by the ship's sinking ; and Caesar thus became sole master of all Egypt. He now therefore appointed that Cleopatra, with her younger brother, then an infant, should jointly govern, according to the intention of their father's will ; and banished Arsinoe with Ganymede. For a while he also relaxed from his usual personal activity, captivated with the charms of Cleopatra, and passing whole nights in feasts with her. He even

proposed to attend her up the Nile into Ethiopia; but the brave veterans who had followed his fortune boldly reprehended his conduct. Thus roused from his lethargy, he left Cleopatra, by whom he had a son, afterwards named Cesarion, to oppose ‘ Pharnaces king of Pontus. Here he was attended with the greatest success ; and, having settled affairs in this part of the empire, embarked for Italy, where he arrived sooner than his enemies expected. He had been, during his absence, created consul for five years, dictator for one year, and tribune of the people for life. But Antony, who governed in Rome for him, had filled the city with riot and debauchery. By his moderation and humanity Caesar soon restored tranquillity, and then prepared to march into Africa, where Pompey’s party had rallied under Scipio and Cato, assisted by Juba king of Mauritania. But the vigor of his proceedings was near being retarded by a mutiny in his own army. Those veteran legions, who had hitherto conquered all that came before them, began to murmur at not having received the reward which they had expected, and now insisted upon their discharge. Caesar however quelled the mutiny ; and then, with his usual rapidity, landed with a party in Africa, the rest of the army following soon after. After many skirmishes, he invested Tapsus, supposing that Scipio would attempt its relief; which accordingly happened. Scipio, joining with Juba, advanced with his army, and, encamping near Caesar, they came to a general engagement. Caesar’s success was as usual; the enemy received a complete and total overthrow, with little loss on his side. Juba, and Petreius his general, killed each other in despair ; Scipio, attempting to escape by sea into Spain, fell among the enemy, and was slain ; so that, of all the generals of that undone party, Cato alone was now remaining. This extraordinary man, naving retired to Africa after the battle of Pharsalia, had led the wretched remains of that army through burning deserts and tracts infected with serpents, and was now in Utica, which he had

been left to defend. Still, however, in love with even the show of a Roman government, he had formed the principal citizens into a senate, and conceived a resolution of holding out the town. He accordingly assembled his senators upon this occasion, and exhorted them to stand a siege; but, finding his admonitions ineffectual, stabbed himself with his sword. See CATO.

Upon Gate’s death, the war in Africa being completed, Caesar returned in triumph to Rome, and astonished the citizens at the magnificence of ic, and at the number of the countries which he had subdued. It lasted four days ; the first was for Gaul, the second for Egypt, the third for

his victories in Asia, and the fourth for that over Juba in Africa. To every one of his soldiers he gave a sum equivalent to about ––150 of our money, double that sum to the centurions, and four times as much to the superior officers. The citizens also shared his bounty ; to every one ot whom he distributed ten bushels of corn, ten pounds of oil, and a sum of money equal to about two pounds sterling. After this he entertained the people at about 20,000 tables, treated them with the combats of gladiators, and filled Rome with a concourse of spectators from every part of the world. The people now seemed eager only to find out new modes of homage and adulation for their new master. He was created magister morum, or master of the morals of the

Eeople ; received the titles of emperor and ither of his country ; his person was declared sacred ; and, in short, upon him alone were devolved for life all the great dignities of the state. It must be owned that no sovereign could make a better use of his power. He began by repressing vice and encouraging virtue; he communicated the power of judicature to the senators and the knights alone, and by many sumptuary laws restrained the scandalous luxuries of the rich. He proposed rewards to all who had many children ; and took the most prudent methods of repeopling the city. Having thus restored prosperity to Rome, he once more found himself under a necessity of going into Spain, to oppose an army which had been raised there under the two sons of Pompey, and Labienus his former general. He proceeded in this expedition with his usual celerity, and arrived before the enemy thought he had left Rome. Cneius and Sextus, Pompey's sons, profiting by their unhappy father's example, resolved to protract the war ; so that the first operations of the two armies were spent in sieges and fruitless attempts. At length Caesar, after taking many cities from the enemy, and pursuing young Pompey with unwearied perseverance, compelled him to come to a battle upon the plains of Munda. After a most obstinate engagement, Caesar gained a complete victory ; and, having now subdued all his enemies, returned to Rome for the last time to receive new dignities and honors. Still, however, he showed great moderation in the use of his power ; he >eft the consuls to be named by the people ; he enlarged the number of senators ; he pardoned ah who had been in arms against him ; but deprived them of the power of resistance. He even set up once more the statues of Poinpey. The rest of this extraordinary man's life was certainly de-728

voted to the advantage of the state. He adorned the city with magnificent buildings ; he rebuilt Carthage and Corinth, sending colonies to both; he undertook to level several mountains in Italy, to drain the Pontine marshes, and designed to cut through the Isthmus of the Peloponnesus. Thus he formed mighty projects and designs beyond the limits of the longest life ; but the gieatest of all was his intended expedition p-gainst the Parthians, by which he designed to revenge the death of Crassus ; then to pass through Hyrcania, and enter Scythia along the banks of the Caspian Sea ; thence to open himself a way through the immeasurable forests of Germany in Gaul, and so return to Rome. These were the plans of this great man ; but the jealousy of a few individuals soon put an end to them. The senate, with an adulation which marked the degeneracy of the times, continued to load Caesar with fresh honors, and he continued with avidity to receive them. They called the month Quintilis July after him; to which indeed he was entitled by his reform of the kalendar; they stamped money with his image ; they ordered his statue to be set up in all the cities of the empire ; instituted public sacrifices on his birth-day ; and talked, even in his lifetime, ot enrolling him in the number of their gods. Antony, at one of their public festivals, foolishly ventured to offer him a diadem; but he repeatedly refused it, and received at every refusal loud acclamations from the people. One day, when the senate gave him some particular order, he neglected to rise from his seat; and from that moment it began to be rumored that he intended to make himself king ; for, though in fact he already possessed supreme power, the people could not bear his assuming the title. Whether he ever really designed to wear that empty honor must now for ever remain a secret ; certain it is that the unsuspecting openness of his conduct marked something like a confidence in his own innocence. When informed by those about him of the jealousies of many who envied him, he said that he had rather die once by treason than live continually in the apprehension of it; and disbanded his company of Spanish guards. Yet a deep-laid conspiracy was formed against him, composed of no less than sixty senators. At the head of this conspiracy was Brutus, whose life Caesar had spared after the battle of Pharsalia, and Cassius, who had been pardoned soon after, both praetors for the year. Brutus gloried in being descended from that Bnitus who first gave liberty to Rome ; and, from a wish to follow his example, broke all the ties of gratitude, and joined in a conspiracy to destroy his benefactor : Cassius was impetuous nnd proud, and hated Caesar more than his cause. He had often sought an opportunity of assassination, rather from private than public motives. The

conspirators, to give a color of justice to their proceedings, remitted the execution of their design to the ides of March, the day on which it was reported that Caesar was to be offered the crown. The augurs had foretold that this day would be fatal to him ; and the night preceding he heard his wife Calphurnia lamenting in her rttfep; and, being awakened, she confessed to

him that she dreamed of his being assassinated in her arms. These omens had almost changed his intention of going to the senate ; but one of the conspirators, coming in, prevailed upon him to do so, telling him of the reproach which would attend his staying at home till his wife had lucky dreams. As he went to the senate, a slave, who hastened to him with information of the conspiracy, attempted to come near him, but could not for the crowd. Artemidorus, a Greek philosopher, who had discovered the whole plot, delivered him a memorial containing his information ; but Caesar gave it to one of his secretaries without reading it. As soon as he had taken his place in the senate, the conspirators came near, under a pretence of saluting him ; and Cimber approached in a suppliant posture, to sue for his brother's pardon, who was banished. All the conspirators seconded him, and Cimber, apparently to apply with the greater submission, took hold of the bottom of his robe, so as to prevent his rising. This was the signal. Casca, who was behind, stabbed him slightly in the shoulder. Caesar instantly turned round, and *"ith the style of his tablet wounded him in the arm. But, the rest of the conspirators enclosing him round, he received a second stab from an unknown hand in the breast, while Cassius wounded him in the face. He still defended himself vigorously, rushing among them, and throwing down such as opposed him, till he saw Brutus among the conspirators, who, coming up, struck his dagger in his thigh. From that moment Caesar thought no more of defending himself; but, looking upon this assailant steadily, cried out, 'And you, too, my son Brutus?' Then covering his head, and spreading his robe before him to fall with decency, he sunk down at the base of Pompey's statue, after receiving twenty-three wounds, in the fifty-sixth year of his age, and fourth of his dictatorship.

As soon as the conspirators had despatched Caesar, they addressed the senate to vindicate their motives, and to excite them to join in procuring their country's freedom ; but all the senators who were not accoinplices fled. The people also, being alarmed, ran tumultuously through the city ; some actuated by their fears, and more by a desire of plunder. In this confusion, the conspirators retired to the capitol, and guarded its accesses by a body of gladiators. It was in vain they

alleged they only struck for freedom, and that they killed a tyrant who usurped the rights of mankind ; the people, accustomed to luxury and ease, little regarded their professions. The friends of the late dictator now found that this was the time for gratifying their ambition under the veil of justice. Antony, who was a lieutenant under Caesar, was a man of moderate abilities and of excessive vices ; ambitious of power, but well skilled in war. He was consul for that year ; and resolved with Lepidus to seize the sovereign power. Lepidus therefore took possession of the forum with a band of soldiers ; and Antony, being consul, was permitted to command. They first possessed themselves of all Caesar's papers and money ; next they convened the senate, to determine whether Caesar had been a legal magistrate

or a usurper, and whether those who killed him merited reward or punishment. There were many of those who had received their promotions from Caesar, and had acquired large fortunes in consequence of his appointments ; to vote him a usurper therefore would have endangered their property ; and yet to vote him innocent might endanger the state. In this dilemma they tried to reconcile extremes : they approved all the acts of Caesar, but granted a general pardon to the conspirators. This decree did not satisfy Antony, as it granted security to a number of men who were the avowed enemies of tyrrany, and who would be foremost in opposing his schemes. As therefore the senate had ratified all Caesar's acts, without distinction, he formed a scheme upon this of making him rule when dead. Being possessed of Caesar's books, he prevailed \ipon his secretary to insert whatever he thought proper. l►►y these means, great sums of money, which Caesar never would have bestowed, were ordered to be distributed among the people; and every man who was averse to republican principles was sure of finding a gratuity. He then demanded that Caesar's funeral obsequies should be performed; which the senate could not decently forbid, as they had never declared him a tyrant. Accordingly the body was brought forth into the forum with the utmost solemnity ; and Antony began to excite the passions of the people. He first read Caasar's will, in which he had left Octavius, his

sister's grandson, his heir, permitting him to take the name of Caesar ; and three parts of his private fortune Brutus was to inherit in case of his death. The Roman people were left the gardens which he had on the other side the Tiber; and every citizen was to receive 300 sesterces. This last bequest greatly increased the people's affection for Caesar; they considered him as a father, who, after doing them the greatest good while living, thought of benefiting them after his death. As Antony continued reading, the multitude were moved, and lamentations were heard from every quarter. Antony now began to address the assembly in a more pathetic strain ; he presented before them Caesar's bloody robe, and, as he unfolded it, took care they should observe the number of stabs in it ; he then displayed an image of the body of Caesar, all covered with wounds. The people could now no longer contain their indignation ; they unanimously cried out for rerenge; 'and the multitude ran with flaming brands from the pile to set fire to the conspirator's houses. They, however, being well guarded, repulsed the multitude ; but, perceiving their rage, they thought it safest to retire from the city. Divine honors were then granted to the fallen dictator ; and an altar was erected on the place where his body was burnt, where afterwards was erected a column inscribed, To THE FATHER OF HIS COUNTRY. In the mean time Antony, having gained the people by his zeal in Caesar's cause, next endeavoured to bring over the senate, by a seeming concern for the freedom of the state. He therefore proposed to recall Sextus, Pompey's only remaining son, who had concealed himself in Spain, and to grant him the

command of all the fleets of the empire. His next step was the quelling a sedition of the people, who rose to revenge the death of Caesar, and putting their leader Amathus to death, who pretended to be the son of Marius. He after this pretended to dread the resentment of the multitude, and demanded a guard. The senate granted it; and, under this pretext, he drew round him a body of 6000 resolute men, attached to his interests. Thus he continued every day making rapid strides to absolute power ; all the authority of government was lodged in his hands and those of his two brothers, who shared among them the consular tribunitian and praetorian power. His vows to revenge Caesar's death seemed postponed or forgotten; and his only aim was to confirm himself in that power which he had thus artfully acquired. But an obstacle to his ambition soon arose in Octavius, or Octavianus Caesar, the grand nephew and adopted son of Caesar, who was ait Apollonia when his kinsman was slain. He was then about eighteen years old, and had been sent to that city to improve himself in Grecian

literature. Upon the news of Caesar's death, notwithstanding the earnest dissuasions of his friends, he returned to Rome to claim the inheritance, and revenge the death of his uncle. But Antony, whose projects were only to aggrandise himself, gave him but a cold reception, and, instead of granting him the fortune left him by Caesar's will, delayed the payment of it upon various pretences. Octavianus, instead of abating his claims, sold his own patrimonial estate to pay such legacies as Caesar had left, and particularly that to the people. By these means he gained a degree of popularity, which his enemies vainly labored to diminish. The army near Rome, who had long wished to see the conspirators punished, began to turn from Antony to his rival, whom they saw more sincerely bent on gratifying their desires. An-tony having procured also the government of Hither Gaul from the people, two of the legions that he had brought home from his former government of Macedonia went over to Octavianus. This produced, as usual, interviews, complaints, recriminations, and pretended reconciliations, which only widened the difference; so that at length both sides prepared for war. Thus the state was divided into three distinct factions ; that of Octavianus, who aimed at procuring Caesar's inheritance and revenging his death ; that of Antony, whose sole view was to obtain absolute power; and that of the conspirators, who endeavoured to restore the republic Antony, being raised by the people to his new government of Cisalpine Gaul, contrary to the inclinations of the senate, resolved to enter upon that province immediately, and oppose Brutus, who commanded a small body of troops there, while his army was yet entire. He accordingly left Rome, and, marching thither, commanded Brutus to depart. Brutus, being unable to oppose him, retired with his forces ; but, being pursued by Antony, he was a*, last besieged in the city of Mutina, of which he sent word to the senate. In the meanwhile, Octavianus, who by this time had raised a body of 10,000 men, returned to Rome ; and being resolved, befoie

he attempted to take vengeance on the conspirators, if possible to diminish the power of Antony, began by bringing over the senate to

second his designs. In this he succeeded by the credit of Cicero, who had long hated Antony. Accordingly, by his eloquence, a decree was passed, ordering Antony to raise the siege of Mutina, to evacuate Cisalpine Gaul, and to wait the further orders of the senate upon the banks of the Rubicon. Antony treated the order with contempt; and, instead of obeying, began to show his displeasure. On this the senate declared him an enemy to the state, and sent Octavianus, with the army he had raised, to curb his insolence. The consuls, Hirtius and Pansa, joined also their forces ; and, thus combined, they marched at the head of a numerous army, against Antony into Cisalpine Gaul. After one or two ineffectual conflicts, both armies came to a general engagement ; in which Antony was defeated, and compelled to fly to Lepidus, who commanded a body of forces in Further Gaul. This victory, however, which promised the senate so much success, produced effects very different from their expectations. The two consuls were mortally wounded ; but Pansa, previous to his death, called Octavianus to his bed-side, and advised him to join with Antony, telling him that the senate only desired to depress both, by opposing them to each other. The advice of the dying consul sunk deep on his spirits; so that from that time he only sought a pretext to break with them. Their giving the command of a part of his army to Decimus Brutus, and their denying him a triumph soon after, served to alienate his mind entirely from the senate, and made him resolve to join Antony and Lepidus. He was willing, however, to try the senate thoroughly, before he came to an open rupture ; wherefore he sent to demand the consulship, which was refused. He then privately sent to sound the inclinations of Antony and Lepidus, concerning a junction of forces, and found them as eager to assist as the senate was to oppose him. Antony was in fact the general of both armies, and Lepidus was only nominally so, his soldiers refusing to obey him upon the approach af the former. Wherefore, upon being assured of the assistance of Octavianus upon their arrival in Italy, they soon crossed the Alps with an army of seventeen legions, breathing revenge against all who had opposed their designs. The senate now began, too late, to perceive their error in disobliging Octavianus ; and therefore gave him the consulship which they had so lately refused ; and, to prevent his joining with Antony, flattered him with new honors, giving him a power superior to all law. The first use Octavianus made of his new authority was to procure a law for the condemnation of Brutus and Cassius ; after which he joined his forces with those of Antony and Lepidus. The meeting of these three usurpers of their country's freedom was near Mutina, upon a little island of the river Panarus. Their mutual suspicions were the cause of their meeting in this place. Lepidus first entered, and, finding all things safe, made the signal for

the other two to approach. Their conference lasted three days ; and the result of

it was, that the supreme authority should be lodged in their hands, under the title of the triumvirate, for five years ; that Antony should have Gaul, Lepidus Spain, and Octavianus Africa and the Mediterranean Islands. As for Italy, and the eastern provinces, they were to remain in common until their general enemy was entirely subdued. But the last article of their union was a dreadful one. It was agreed that all their enemies should be destroyed ; of which each presented a list. In these were comprised not only the enemies but the friends of the triumvirate, since the partisans of the one were often found among the opposers of the others. Thus Lepidus gave up his brother Paulus to the vengeance of his colleaugue ; An-tony permitted the proscription of his uncle Lucius ; and Octavianus delivered up the great Cicero. The most sacred rights of nature were violated ; 300 senators, and above 2000 knights, were included in this terrible proscription ; their fortunes were confiscated, and their murderers enriched with the spoil. Rome soon felt the effects of this infernal union, and the horrid cruelties of Marius and Sylla were renewed. As many as could escape the cruelty of the triumvirs, fled into Macedonia to Brutus, or found refuge with young Pompey, who was now in Sicily, and covered the Mediterranean with his numerous navy. Their cruelties were not aimed at the men alone ; but the softer sex were also marked as objects of avarice or resentment. They made out a list of 1400 women of the richest in the city, who were ordered to give in an account of their fortunes to be taxed. But this was so firmly opposed by Hortensia, that they were content to tax only 400. However, they made up the deficiency by extending the tax upon men ; nearly 1 00,000, as well citizens as strangers, were compelled to furnish supplies to the subversion of freedom. At last, both the avarice and vengeance of the triumviri seemed fully satisfied, and they went into the senate to declare that the proscription was at an end ; and thus having deluged the city with blood, Octavianus and Antony, leaving Lepidus to defend Rome in their absence, marched with their forces to oppose the conspirators, who were now at the head of a formidable army in Asia.

Brutus and Cassius, the principal conspirators upon the death of Caesar, being compelled to quit Rome, went into Greece, where they persuaded the Roman students at Athens to declare in the cause of freedom ; then, parting, the for-mer raised a powerful army in Macedonia and the adjacent countries, while the latter went into

Syria, where he became master of twelve legions, and reduced his opponent Dolabella to such straits that he killed himself. Both parties soon after joining, at Smyrna, the sight of such a formidable force began to revive the declining spirits of the party, and to unite the two generals still more closely. The Rhodians and Lycians having refused their usual contributions, the conspirators made their reduction their first business. The Lycians, rather than submit, burned themselves alive in Xanthus; the humanity of Brutus could save only 150 from the flames. AS Antony and Octavianus were now advanced

into Macedonia, they soon after passed over into Thrace, and advanced to Philippi, near which the forces of the triumvirs were posted. A battle soon ensued, in which the .republicans were defeated, and Cassius killed. Previous to this battle Brutus is said to have seen a spectre, which warned him of the issue. Brutus, when he became sole general, assembled the dispersed troops of Cassius, and animated them with fresh hopes of victory. As they had lost all they possessed, by the plundering of their camp, he promised them 2000 denarii each man to make up their losses. Still, however, he had not confidence to face the adversary, who offered him battle next day. His aim was to starve his enemies, who were in extreme want of provisions, their fleet having been lately defeated. But his single opinion was overruled by the rest of his army, and he was, after a respite of twenty days, obliged to comply with their solicitations to try the fate of the battle. Fortune again declared against him ; and the two triumviri expressly ordered by no means to suffer the general to get off, lest he should renew the war. His friend Lucilius giving himself as Brutus, he effected his escape ; but however, finding all hopes of retrieving his affairs lost, he slew himself the same night.

After Brutus's death the triumviri acted as sovereigns, and divided the Roman dominions among them. However, though there were apparently three who thus participated the power, only two were actually possessed of it. Lepidus was admitted merely to curb the jealousy of An-tony and Octavianus, and possessed neither interest in

the army nor authority among the people. Their first care was to punish those whom they had formerly marked for vengeance. The head of Brutus was sent to Rome to be thrown at the foot of Caesar's statue. His ashes, however, were sent to his wife Porcia, Cato's danghter, who afterwards killed herself by swallowing burning coals. Of all those who had a hand in Caesar's death, not one died a natural death. The power of the triumviri being thus established, upon the ruins of the commonwealth, Antony went into Greece. Thence he passed over into Asia, where all the monarchs of the east, who acknowledged the Roman power, came to pay him obedience. Among other sovereigns Cleopatra came to him at Tarsus, and he was so captivated by her charms that he returned to Egypt with her, and gave himself up to love. While he thus remained idle, Octavianus, who undertook to lead back the veteran troops and settle them in Italy, was assiduously employed in providing for their subsistence. He had promised them lands at home, as a recompense for their past services ; but they could not receive new grants without turning out the former inhabitants. In consequence of this, multitudes of women, with children in their arms, whose ten-der years and innocence excited universal compassion, daily filled the temples and the streets with their distresses. Numbers of husbandmen and shepherds came to deprecate the conqueror's intention, or to obtain a habitation in some other part of the world : amongst this number was Virgil the poet, who in an humble manner

begged permission to retain his patrimonial farm. Virgil obtained his request, but the rest of his countrymen of Mantua and Cremona were turned out without mercy. Italy and Rome now felt the most extreme miseries ; the insolent soldiers plundered at will ; while Sextus Pompey, being master of the sea, cut off all foreign communication, and prevented the people's receiving their usual supplies of corn. To these mischiefs were added the commencement of another civil war. Fulvia, the wife of Antony, who had been left at Rome, had felt for some time all the rage of jealousy, and resolved to try every method of bringing back her husband from the arms of Cleopatra. She considered a breach with Octavianus as the only probable means of rousing him from his lethargy ; and accordingly, with the assistance of Lucius Antonius, her brother-in-law, who was then consul, and entirely devoted to her interest, she began to sow the seeds of dissension. The pretext was, that Antony should have a share in the distribution of lands as well as Octavianus. To negociations succeeded war, and Octavianus, being victorious, generously pardoned the conquered, but obliged Fulvia to quit Italy. Antony, learning what was passing, resolved to oppose

Octavianus without delay. He accordingly sailed at the head of a considerable fleet from Alexandria to Tyre, thence to Cyprus and Rhodes, and had an interview with Fulvia at Athens. He blamed her for occasioning the late disorders, expressed the utmost contempt for her person, and, leaving her upon her death-bed at Sicyon, hastened into Italy to fight Octavianus. They met at Brundu-dusium. Antony's forces were numerous, but mostly newly raised ; but he was assisted by Sextus Pompeius, who was daily coming into power. Octavianus was at the head of those veterans who had always been irresistible, but who seemed not disposed to fight against Antony, their former general. A negociation was therefore proposed, and a reconciliation effected. All offences were mutually forgiven ; and a marriage was concluded between Antony and Octavia, the sister of Octavianus. A new division of the Roman empire was made between them ; Octavianus was to have the command of the west, Antony of the east, while Lepidus was to have the provinces in Africa. As for Sextus Pompeius, he was permitted to retain all the islands he had already possessed ; together with Peloponnesus : he was also granted the privilege of demanding the consulship in his absence, and of discharging that office by any of his friends. It was also stipulated to leave the sea open, and pay the people what corn was due out of Sicily. Thus a general peace was concluded. This calm was continued for some time : Antony led his forces against the Parthians, over whom his lieutenant Ventidius had gained great advantages, while Octavianus drew the greatest part of his army into Gaul, where there were some disturbances ; and Pompey went to se-cure his newly ceded province. It was on this quarter that fresh motives were given for renewing the war. Antony, who was obliged by treaty to quit Peloponnesus, refused to evacuate it till Pompey had satisfied him for such debts as were due to him from the inhabitants. This Pompey

refused ; but immediately fitted out a new fleet, and renewed his former enterprises, by cutting off such corn and provisions as were consigned to Italy. Thus the grievances of the poor were again renewed ; and the people, instead of three tyrants, were now

oppressed by four. In this exigence, Octavianus, who had long meditated diminishing the number, resolved to begin by getting rid of Pompey. He was master of two fleets ; one of which he had caused to be built at Ravenna ; and another which Menodorus, who revolted from Pompey, brought to his aid. His first attempt was to invade Sicily ; but being overpowered in his passage by Pompey, and his fleet afterwards shattered in a storm, he was obliged to defer his design till the next year. During this interval he was reinforced by a fleet of 120 ships, given him by Antony, with which he resolved once more to invade Sicily. He was again disabled and shattered by a storm : which so raised the vanity of Pompey that he began to style himself the son of Neptune. However, Octavianus having refitted his navy and recruited his forces, he gave the command of both to Agrippa, his faithful friend, who proved himself worthy of the trust. He began his operations by a victory over Pompey ; and, though he was shortly after worsted, he soon after gave his adversary a complete and final overthrow. Pompey resolved to fly to Antony, from whom he expected refuge, as he had formerly obliged that triumvir by protecting his mother. However he tried once more, at the head of a small body of men, to make himself independent, and surprised Antony's officers who had been sent to accept of his submissions. But he was at last abandoned by his soldiers, and delivered up to Titus, Antony's lieutenant, who caused him to be slain. The death of this general removed one very powerful obstacle to the ambition of Octavianus, and he resolved to get rid of the rest of his associates. An offence was soon furnished by Lepidus, that served as a pretext for depriving him of his share in the triumvirate. Being at the head of twenty-two legions, with a strong body of cavalry, he supposed that his power was more than equivalent to the popularity of Octavianus. He therefore resolved to add Sicily to his province ; pretending a right, as having first invaded it. His colleague having previously expostulated without success, and knowing that his secret intrigues and largesses had entirely attached the army to himself, went alone to the camp of Lepidus, deprived him of all his authority, and banished him to Circaeum. There remained now but one obstacle to his ambition, *viz.* Antony, whom he resolved to remove, and began to render his character as contemptible as he could at Rome. In fact Antony s own conduct contributed greatly to promote the object of his rival. He had marched against the Parthians with a prodigious army ; but was forced to return with the loss of the fourth part of his forces, and all his baggage. This greatly diminished his reputation ; but his making a triumphal entry into Alexandria, soon after, entirely disgusted the citizens of Rome. However Antony, totally disregarding the business of the state, spent whole

months in the company of Cleopatra, who studied every art to increase his passion, and retain him in her chains. Not contented with sharing in her company all the delights which Egypt could afford, Antony was resolved to enlarge his sphere of luxury, by granting her several of those kingdoms which belonged to the Roman empire. He gave her all Phoenicia, Ccelo-Syria, and Cy-prus ; with a great part of Cilicia, Arabia, and Judea; gifts which he had no right to bestow, but which he pretended to grant in imitation of Hercules. This complication of vice and folly at length exasperated the Romans ; and Octavianus took care to exaggerate all his faults. At length he resolved to send Octavia to Antony, as if with a view of reclaiming her husband, but in fact to furnish a sufficient pretext of declaring war against him. Accordingly, Antony ordered her to return without seeing her. Octavianus had now a sufficient pretext for declaring war ; and informed the senate of his intention. But he deferred it for a while, being then employed in quelling an insurrection of the Illyrians. The following year was taken up in preparations against Antony. Antony ordered Canidius with his army to march into Europe; while he and Cleopatra followed to Samos, to prepare for carrying on the war with vigor. The kings who attended him endeavoured to gain his favor more by their entertainments than their warlike preparations; and the provinces strove rather to please him by sacrificing to his divinity, than by their alacrity in his defence. In short, his best friends now began to forsake him. His delay at Samos, and afterwards at Athens, where he carried Cleopatra to receive new honors, was extremely favorable to the arms of Octavianus ; who was at first scarcely in a situation to oppose him, had he gone into Italy ; but he soon found time to put himself in a condition for carrying on the war. All Antony's followers were invited over to join him with great promises of rewards. Their armies were suitable to the em-pire they contended for. The one was followed by all the forces of the east ; the other by the strength of the west. Antony's force composed a body of 100,000 foot and 12,000 horse; his fleet amounted to 500 ships of war. The army of Octavianus mustered only 80,000 foot, but equalled his adversary's in number of cavalry ××× his fleet was but half as numerous as Antony's ; however his ships were better built, and manned with better soldiers. The great decisive engagement, which was a naval one, was fought near Actium, a city of Epirus, at the entrance of the gulph of Ambracia. Antony ranged his ships before the mouth of the gulph ; and Octavianus drew up his in opposition. The two land ar-mies on opposite sides of the gulph, were drawn up only as spectators. The battle began on both sides with great ardor; nor was

there any advantage on either side till of a sudden Cleopatra fled from the engagement attended by sixty sail ; what increased the general amazement was to behold Antony himself following soon after Yet the engagement continued with great obstinacy till 5 P. M., when Antony's forces submitted. The land forces soon after followed the example of the navy ; and all yielded without

striking a blow the fourth day after the battle. When Cleopatra fled Antony pursued her in a five-oared galley ; and, coming along side of her ship, entered without seeing or being seen by her. She was in the stern, and he went to the prow, where he remained for some time silent, holding his head between his hands. In this manner he continued three whole days ; during which, either through indignation or shame, he neither saw nor spoke to the queen. At last, when they arrived at the promontory of Tenarus, Cleopatra's female attendants reconciled them, and every thing went on as before. Still, however, he had the consolation to suppose his army continued faithful ; and accordingly despatched orders to his lieutenant Canidius to conduct it into Asia. When however he arrived in Africa, he was informed of their submission to his rival. This account so transported him with rage that he was hardly prevented from killing himself ; at length, at the entreaty of his friends, he returned to Alexandria. Cleopatra, however, seemed to retain that fortitude in her misfortunes which had abandoned her admirer. Having amassed considerable riches, by confiscation and other acts of violence, she formed a very singular project, to convey her whole fleet over the isthmus of Suez into the Red Sea, and thus save herself with all her treasures in another region beyond the reach of Rome. Some of her vessels were actually transported thither, pursuant to her orders ; but the Arabians having burnt them, and Antony dissuading her from the design, she abandoned it for the more improbable scheme of defending Egypt. She made all preparation for war ; at least hoping thereby to obtain better terms from Octavianus. In fact, she had always loved Antony's fortunes rather than his person ; and if she could have fallen upon any method of saving herself, though even at his expense, she would have

embraced it. She even still had some hopes from the power of her charms, though she was almost forty ; and was desirous of trying upon Octavianus those arts which had been so successful with the greatest men of Rome. Thus in the three embassies which were sent from Antony to his rival in Asia, the queen had always her secret agents, charged with particular proposals in her name. Antony desired only that his life might be spared, and to pass the rest of his days in obscurity. To these proposals Octavianus made no reply. Cleopatra sent him also public proposals in favor of her children; but at the same time privately resigned him her crown, with all the ensigns of royalty. To the queen's public proposal no answer was given ; to her private offer he replied, by giving her assurances of his favor in case she sent away Antony or put him to death. When these negociations came to the knowledge of Antony, his jealousy and rage were heightened to the utmost. He built a solitary house upon a mole in the sea ; where he passed his time, shunning all commerce with mankind, and professing to imitate Timon the man-hater. But his furious jealousy drove him even from this retreat ; for hearing that Cleopatra had many secret conferences with one Thyrsus, an emissary from Octavianus, he seized upon him, and, having ordered him to be cruelly

scourged, sent him back to his patron. Meanwhile, the war was carried vigorously forward, and Egypt was once more the theatre of the contending armies of Rome. Callus, the lieutenant of Octavianus, took Paretonium, which opened the whole country to his incursions. Octavianus himself was in the mean time advancing with another army before Pelusiurn, the governor of which gave him possession of the place. Antony, upon his arrival, sallied out to oppose him, fighting with great desperation, and putting the enemy's cavalry to flight. This slight advantage revived his declining hopes, and he reentered Alexandria in triumph. Then, going to the palace, he embraced Cleopatra, and presented her a soldier who had distinguished himself in the late engagement. The queen rewarded him very magnificently ; presenting him with a head-piece and breast-plate of gold. With these, however, the soldier went off the next night to the other army. Antony could not bear this defection; he resolved, therefore, to make a bold expiring effort by sea and land, but previously offered to fighi his adversary in single combat. Octavianus coolly replied that Antony had ways enough to die besides single combat. At day-break Antony posted the few troops he had remaining upon a rising ground near the city : whence he sent orders to his galleys to en-gage the enemy. There he waited to be a spectator of the combat ; and, at first, he saw them

advance in good order ; but his approbation was turned into rage, when he saw his ships only sa- ‘ luting those of Octavianus, and both fleets uniting, and falling back into the harbour. At the same time his cavalry deserted him. He tried, however, to lead on his infantry ; which were soon vanquished, and himself compelled to re-turn into the town. His anger was now ungovernable ; he could not help crying out aloud as he passed that he was betrayed by Cleopatra, and delivered by her to those who, for her sake alone, were his enemies. In these suspicions he was not deceived ; for it was by secret orders from the queen that the fleet had passed over to the enemy. Cleopatra had for a long while dreaded the effects of Antony’s jealousy; and had some time before prepared a method of obviating any sudden sallies it might produce. Near the temple of Isis she had erected a building, which was seemingly designed for a sepulchre. Hither she removed all her treasure and most valuable effects, covering them over with torches, faggots, and other combustible matter. This sepulchre she designed to answer a double purpose ; as well to screen her from the sudden resentments of Antony, as to make Octavianus believe that she would burn all her treasures in case he refused her proper terms of capitulation. Here, therefore, she retired from Antony’s fury ; shutting the gates, which were fortified with bolts and bars of iron : but in the mean time gave orders to spread a report of her death. This news, which soon reached Antony, recalled all his former love. He now lamented her deam with the same violence he had but a few minutes before seemed to desire it; and called one of his freed men, named Eros, whom he had engaged by oath to kill him whenever fortune should

drive him to this last resource. Eros, being commanded to perform this promise, drew the sword, but turning his face plunged it into his own bosom, and died at his master’s feet. Antony for a while hung over his faithful servant, and, commending his fidelity, took up the sword, with which stabbing himself in the belly, he fell backward upon a little couch. Before he died he learned that Cleopatra was yet alive, and had himself carried to die in her presence. Octavianus was

extremely desirous of getting Cleopatra into his power; having a double motive for his solicitude on this occasion: one to prevent her destroying the treasures she had taken with her into the tomb; the other to preserve her person as an ornament to grace his triumph : and by stratagem at last he obtained his object. In the mean time Octavianus made his entry into Alexandria, and treated the inhabitants with lenity. Two only of particular note were put to death upon this occasion ; Antony's eldest son Antyllus, and Caesariq,, the son of Julius Caesar. The rest of Cleopatra's children he treated with great gentleness. When slie was recovered from an illness, he came to visit her in person. Cleopatra had been preparing for this interview, and made use of every method she could think of to propitiate the conqueror, and to gain his affection, but in vain. She then ordered an asp to be secretly conveyed to her in a basket of fruit, sent a letter to Octavianus, informing him of her purpose of suicide, and desired to be buried in the same tomb with Antony-She died at the age of thirty-nine, after having reigned twenty-two years. Her death put an end to the monarchy in Egypt.

Having settled the affairs of Egypt, Octavianus left Alexandria in the beginning of September, in the year of Rome 720, with a design to return through Syria, Asia Minor, and Greece, to Italy. Onhis arrival at Antioch, he found thereTiridates, who had been raised to the throne of Parthia, in opposition to Phrahates, and ambassadors from Phrahates, who were come to solicit the assistance of the Romans against each other. Octavianus gave a friendly answer both to Tiridates and the ambassadors of Phrahates, without intending to help either, but with a design to weaken both. After this, having appointed Messala Corvinus governor of Syria, he marched into Asia, and took up his winter quarters. He spent the win-ter in settling the several provinces of Asia Minor and the adjacent islands : and early in spring passed into Greece, whence he set out for Rome, which he entered in the month Sextilis, afterwards called August, in three triumphs, which were celebrated for three days together. And now Octavianus was at the height of his wishes, sole master of the whole Roman empire. But, to persuade the people that they still enjoyed their ancient government, he continued the old magistrates, with the same name, pomp, and ornaments : but they were to have no military power; only their old jurisdiction of deciding finally all causes, except such as were capital ; and, though some of these last were left to the governor of Rome, yet the chief he referred to himself. He likewise won the hearts of the populace by the cheapness of provisions and plentiful markets, which he encouraged ; he frequently entertained them with shows and sports ; and by these means kept them in good humor, and made them forget

his usurpation and their own slavery. The senate he filled with his own creatures, raising the number of senators to 1000. Several poor senators were supplied with money to discharge the public offices, and he affected a high regard for that body ; but divested it of all power. To prevent them from raising new disturbances in the distant provinces, he prohibited any senator to travel out of Italy without leave, except such as had lands in Sicily or Narbonne Gaul. Before he ended his sixth consulship, he took a census of the people, forty-one years after the last ; and in this the number of the men fit to bear arms amounted to 463,000, the greatest that had ever been found. He now raised many public buildings, repaired the old ones, and added various stately ornaments to the city, which at this time was, if we may credit ancient writers, about fifty miles in compass, containing nearly 4,000,000 of souls. And now Octavianus, entering upon his seventh consulship with M. Agrippa, and finding all things ripe for his design, went to the senate-house ; and there offered to resign his authority, and to put all again into the hands of the people upon the old plan of the republic; but they interrupted him while he was speaking, and after he had done unanimously besought him to take upon himself alone the whole government of the empire. He, with a seeming reluctance, yielded at last to their request, and accepted of the sovereignty for ten years. With this new authority the senate conferred upon him the name of Augustus. Yet, that he might seem to share his power with the senators, he refused to govern all the provinces : assigning to the senate such as were quiet and peaceable. Over the provinces were set such as had been consuls or praetors, with the title of proconsul and propraetor.

PART III. ROME, IMPERIAL.

Thus ended the greatest commonwealth, and began the greatest empire, that had ever been known : an empire which comprehended the greatest, and by far the best part of Europe, Asia, and Africa, being near 4000 miles in length, and about half as much in breadth. As to its an-nual revenues, they had been reckoned to amount to ––40,000,000 of our money. But the Romans now ran headlong into all manner of luxury and effeminacy. The people were become a mere mob. The nobility were indeed more po-lite than formerly, but idle, venal, vicious, void of patriotism, and solely intent on gaining the favor of the emperor. Augustus, absolute mas-ter of the empire, took all methods to ingratiate himself with his soldiers, by whose means he nad attained such a height of power. He kept twenty-five legions constantly on foot, amounting to 170,650 men. At sea he had two powerful navies. As to the civil government, he enacted several new laws, and reformed some old ones; and, as he affected to do nothing

without the advice of the senate, to the rest of

his titles they added that of father of his country. Augustus next turned his arras against the Spanish nation called Cantabrians and Asturians, who had never been fully subdued. The war terminated, as usual, in favor of the Romans ; and these brave nations were forced to receive the yoke, though not without the most violent resistance. By this and his other conquests the name of Augustus became so celebrated that his friendship was courted by the most distant monarchs. Phrahates, king of Parthia, made a reaty with him upon his own terms ; gave him four of his own sons, with their wives and children, as hostages, and delivered up the Roman eagles and other ensigns, which had been taken from Crassus at the battle of Carrhae. He received also an embassy from a king of India, with a letter written in the Greek tongue, in which the Indian monarch informed him that, ‘ though he reigned over 600 kings, he had so great a value for the friendship of Augustus, that he had sent this embassy on so long a journey on purpose to desire it of him ; and that he was ready to meet him at whatsoever place he pleased to appoint ; and that upon the first notice he was ready to assist him in whatever was right.’ This letter he subscribed by the name of Porus, king of India. Of the ambassadors who set out from India three only reached Augustus, who was then in the island of Samos, the others -dying by the way. One of the number was named Zarmar, a gymnosophist, who followed the emperor to Athens, and there burnt himself in his presence ; it being customary for the gymnosophists to put an end to their lives in this manner, when they thought they had lived long enough. Soon after this the Roman dominions were extended southward over the Garamantes, a people whose country reached as far as the Niger. All this time the emperor continued to make new regulations for the good of the state ; and among other things caused the Sibylline oracles to be reviewed. Many of them he rejected; but such as were reckoned authentic he caused to be copied by the pontifices, and lodged them >n golden cabinets, which he placed in the temple of Apollo.

The Roman empire had now extended itself so far that it seemed to have arrived at the li-mits prescribed to it by nature; and it soon after began to be attacked by those nations which in process of time were to overthrow it. The Germans, in which name the Romans included a great number of nations dwelling in the northern parts of Europe, began to make incursions into Gaul. Their first attempt happened in the year 17 B. C., when they at first gained an inconsiderable advantage, but were soon driven back with great loss. Soon after this, the Rhseti, who inhabited the country bordering on the lake of Constance, invaded Italy where they committed dreadful devastations, putting all the males to the sword without distinction of rank or age. Against these barbarians Augustus sent Drusus, the se-cond son of the empress Li via ; who. though very young, gained a complete victory with very little loss. Those who escaped took the road to Gaul, being joined by the Vindelici, another na-tion in the neighbourhood ; but Tiberius, the

elder brother of Drusus, marched against them, and overthrew them so completely, that the Rhaeti, Vindelici, and Norici, three of the most barbarous nations in those parts, were obliged to submit. To keep their country in awe, Tiberius planted two colonies in Vindelicia, opening a road thence into Noricum and Rhaetia. One of 1 the cities which be built for the defence of his colonies was called Drysomagus ; the other Augusta Vindelicorum; now called Memmingen and Augsburg. Augustus, who had long since obtained all the temporal honors which could well be conferred upon him, now began to as-sume those of the spiritual kind also ; being in the year 13 B. C. created pontifex maximus : au office which he continued to hold till his death ; as did also his successors in the time of Theodosius. By virtue of his office, he corrected a very gross mistake in the Roman kalendar ; for the pontifices having, for the space of thirty-six years, that is, ever since the reformation by Julius Caesar, made every third year a leap year, instead of every fourth, twelve days had been inserted instead of nine, so that the Roman year consisted of three days more than it ought to have done. These three days having been thrown out, the form of the year has ever since been regularly observed, till the Gregorian or New Style came to be adopted throughout Europe, and is still known by the name of the Old Style among us. On this occasion he gave his own name to the mouth of August, as Julius Caesar had formerly done to July. In the year 11 B.C. Agrippa died, and was succeeded in his employment of governor of Rome by Tiberius ; but, before investing him with this ample power, the emperor caused him to divorce his wife Agrippina (who had

already brought him a son, and was then big with child), to marry Julia, the widow of Agrippa, and daughter of the emperor. Julia was a princess of an infamous character, as was known to every body, excepting Augustus himself; however, Tiberius made no hesitation. The emperor now sent his two step-sons, Tiberius and Drusus, against the northern nations. Tiberius reduced the Pannonians, who had attempted to shake off the yoke after the death of Agrippa. Drusus performed great exploits in Germany ; but, while he was considering whether he should penetrate further into these northern countries, he was seized with a violent fever, which carried him off in a few days. He was succeeded in the command by Tiberius, who is reported to have done great things, but certainly made no permanent conquests in Germany. However, he was honored with a triumph, and had the tribunitial power for five years conferred upon him ; which was no sooner done than, to the great surprise of Augustus and the whole city, he desired leave to quit Rome, and retire to Rhodes. A profound peace now reigned throughout the whole empire ; and in conse-quenceof this the temple of Janus was shut, which had never before happened since the reign of Numa Pompilius. During this pacific interval, the Saviour of mankind was born in Judaea, 748 years after the building of Rome. Three years after Tiberias returned to the city, by permission of Augustus, but in a short time his grandsons

Lucius Caesar and Caius Caesar died, not without suspicion of being poisoned by Livia. Augustus was exceedingly concerned at their death, and immediately adopted Tiberius as his son ; he adopted also Agrippa Posthumus, the third son of the famous Agrippa ; and obliged Tiberius to adopt Germanicus, the son of his brother Drusus, though he had a son of his own named Drusus. As to Agrippa, who might have been an occasion of jealousy, Tiberius was soon freed from him by his disgrace and banishment, which soon took place, but on what account is not known. The northern nations now began to be formidable : and, though it is pretended that Tiberius was al-ways successful against them, yet about this time they gave the Roman legions a most terrible overthrow : three legions and six cohorts, under Quintilius Varus,

being almost entirely cut in pieces. Augustus set no bounds to his grief on this occasion. Tiberius, however, was soon after sent into Germany ; and for his exploits there was honored with a triumph. Augustus now took him for his colleague in the sovereignty ; after which he sent Germanicus against the northern barbarians, and Tiberius into Illyricum. This was the last of his public acts; for, having accompanied Tiberius part of his journey, he died at Nola in Campania, in the seventy-sixth year of his age, and fifty-sixth of his reign. Livia was suspected of having hastened his death by poisoned figs.

TIBERIUS. ××× Tiberius, who succeeded to the empire, resolved to secure himself on the throne by the murder of Agrippa, whom accordingly he caused to be put to death by a military tribune. Though this might have been a sufficient evidence of what the Romans had to expect, the death of Augustus was no sooner known than the two ×××Consuls first took an oath of fidelity to the emperor, and then administered it to the senate, the jwople, and the soldieiy. Tiberius behaved in a dark mysterious manner, ruling with absolute sway, but seeming to hesitate whether he should accept the sovereign power or not. He had scarcely taken possession of the throne, when news was brought him that the armies in Pannonia and Germany had mutinied. In Pannonia they were terrified into submission by an eclipse of the moon ; but the revolt of the German legions threatened more danger. After Germanicus had granted all their demands, and quieted them, as he supposed, fresh disturbances broke out. He then thought it necessary to provide for the safety of his family, by sending his lady Agrippina from the camp with many of the wives of other officers. This made such a deep impression on the mutineers that they intreated Germanicus to recal his wife; and the soldiers of their own accord seized and massacred the ringleaders of the revolt. Still, however, two of the legions continued disobedient; but, on hearing of the return of their companions to their duty, those who had remained true rose and massacred the whole of the revolters. The sedition being thus quelled, Germanicus led his army into Germany, where he performed various exploits ; but was still far from freeing the empire from its dangerous and troublesome enemy. A. D. 19 he died, of poison

as was supposed, given by Piso, his partner ;n the government of Syria, to which Germanicus had been promoted after his return from the north. In the mean time Tiberius, though he affected to court the favor of the people by various methods, yet showed himself in general such a cruel and blood-thirsty tyrant that he became the object of

universal abhorrence. Though he had hated Germanicus, he punished Piso with death ; and about a year after, having no object of jealousy to keep him in awe, he began daily to diminish the authority of the senate : this was much facilitated by their own adulation ; so that, while he despised then meanness, he enjoyed its effects. A law subsisted which made it treason to form any injurious attempt against the majesty of the people. Tiberius assumed to himself the interpretation and enforcement of this law. All freedom was now therefore banished from convivial meetings, and suspicion reigned amongsl the dearest relations. The law of offended majesty being revived, many persons of distinction fell a sacrifice to it. In the beginning of these cruelties, Tiberius took into his confidence Sejanus, a Roman knight, by birth a Volscian, who gained his confidence by the mosi refined dissimulation, being an overmatch for his master in his own arts. He was made by the emperor captain of the praetorian guards, one of the most confidential trusts in the state. The servile senators, with ready adulation, set up the statues of the favorite beside those of Tiberius, and seemed eager to pay him similar honors. It was from such humble beginnings that this minister even ventured to aspire at the throne, and was resolved to make the emperor's foolish confidence one of the first steps to his ruin. However, he considered that cutting off Tiberius alone would rather retard than promote his designs, while his son Drusus and the children of Germanicus were yet remaining. He therefore began by seducing Livia, the wife of Drusus, whom he prevailed upon to poison her husband. Tiberius, in the mean time, not much regarding his son, bore* his death with great tranquillity. Sejanus resolved to make his next attempt on the children of Germanicus, who were undoubted heirs to the empire. However, he was frustrated, both by the fidelity of their governors, and thp chastity of Agrippina their mother. On this he resolved upon removing Tiberius out of the city. He began to insinuate to him the numerous inconveniences of the city, the fatigues of attending the senate, and the seditious temper of the citizens. Tiberius, either prevailed upon by his persuasions, or pursuing the natural turn of his temper, which led to indolence and debauchery, quitted Rome, therefore, in the twelfth year of his reign, and went into Campania, under pretence of dedicating temples to Jupiter and Augustus. After this he never returned to the capitol ; but spent the greatest part of his time in the island of Caprea, a place rendered infamous by his pleasures. He spent whole nights at the table; and his luxuries of other kinds were still more detestable. From the time of his retreat, he also became more cruel, and Sejanus endeavoured to increase his distrusts. Every day he found his aim succeeding; the-ROME.

wretched emperor's terrors were an instrument by which he levelled every obstacle. He so contrived to widen the breach between the emperor and the sons of Germanicus, that at length Nero and Drusus were declared enemies of the state, and starved to death in prison ; while Agrippina their mother was sent into banishment. In this manner Sejanus proceeded, removing all who stood between him and the em-pire : the number of his statues exceeded even those of the emperor ; and he was more dreaded than even the tyrant who enjoyed the throne. But the rapidity of his rise was only preparatory to the greatness of his downfall. All we know of his first disgrace with the emperor is that Satrius Secundus was the man who had the boldness to accuse him : Antonia, the mother of Germanicus, seconded the accusation : but he was very near despatching Tiberius, when his practices were discovered. The emperor ordered the senate to put him in prison ; but they went beyond their orders, and directed his execution. His body was ignominiously dragged about the streets, and his whole family executed with him, Sejanus's death seemed only to kindle the emperor's rage for further executions. The prisons were crowded with pretended accomplices in the conspiracy of Sejanus : but Tiberius began to grow weary of particular executions ; he therefore gave orders that all the accused should be put to death without examination, and often feasted his eyes with the tortures of the wretches put to death before him. In the mean time the frontier provinces were invaded with impunity by the barbarians. Maesia was seized on by the Dacians and Sarmatians ; Gaul by the Germans, and Armenia by the king of Parthia. Tiberius, however, was so much a slave to his appetites, that he left the provinces entirely to the care of his lieutenants, and they were intent rather on the accumulation of private fortunes than the safety of the state. At length, in the twenty-second year of his reign, he began to feel the approaches of dissolution, and nominated Caligula for his successor: soon after he fell into such faintings, as all believed were fatal. It was in this situation that, by Macro's advice, Caligula prepared to secure the succession. He received the congratulations of the court, caused himself to be acknowledged by the praetorian soldiers, and went forth from the emperor's apartment amidst the applauses of the multitude ; when on a sudden he was informed that the emperor was recovered, had begun to speak, and desired to eat. Macro, however, who was hardened in crimes, ordered that the dying emperor should be

despatched, by smothering him with pillows ; or, as other historians state, by poison. Thus died Tiberius, in the seventy-eighth year of his age, after reigning twenty-two. The Romans were, at this time, arrived at the highest pitch of effeminacy and vice: the wealth of almost every nation of the empire, having, for some time, circulated through the city, brought with it the luxuries peculiar to each ; so that Rome presented a detestable picture of pollution. In the eighteenth year of this monarch's reign, Christ was crucified.

CALIGULA. ††† No monarch ever came to the VOL. XVIII.

throne with more advantages than Caligula. He received the congratulations of the people on every side, all equally pleased with being free from the cruelties of Tiberius, and in hoping new advantages from the virtues of his successor. Caligula at first certainly took every method to impress them with the expectation of a happy change. Amidst the rejoicings of the multitude, he advanced mourning, with the dead body of Tiberius, which the soldiers brought to be burnt at Rome. Upon his entrance into the city, he was received with new titles of honor by the senate ; for though left co-heir with Gemellus, grandson to Tiberius, they set aside Gemellus, and declared Caligula sole successor to the empire. Having performed the funeral solemnities of Tiberius, he hastened to the islands of Pandataria and Pontia, to remove the ashes of his mother and brothers, exposing himself to tempestuous weather to give a lustre to his piety. Having brought them to Rome, he instituted annual solemnities in their honor, and ordered September to be called Germanicus, in memory of his father. He conferred the same honors upon his grandmother Antonia which had been given to Livia ; and ordered all informations to be burnt that any way exposed the enemies of his family. He even refused a paper that was offered him, tending to the discovery of a conspiracy against him ; alleging that he was conscious of nothing to deserve any man's hatred, and therefore had no fears. He caused the institutions of Augustus, which had beet, disused in the reign of Tiberius, to be revived undertook to reform many abuses in the state, and severely punished corrupt governors. He banished the spintriae or inventors of abominable recreations from Rome ; attempted to restore the ancient manner of electing magistrates by the suffrages of the people ; and gave them a free jurisdiction, without any appeal to himself. Although the will of Tiberius was annulled by the senate, and that of Xivia suppressed by Tiberius, yet he caused all their legacies to be punctually paid ; and, to make Gemellus amends for missing the crown, he caused him to be elected prin ceps juventutis, or principal

of the youth. He restored some kings to their dominions who had been unjustly dispossessed by Tiberius, and gave, them the arrears of their revenues. And, that he might appear an encourager of every virtue, he ordered a female slave a large sum of money, for enduring the most exquisite torments without discovering the secrets of her master. So many concessions, and such apparent virtue, could not fail of receiving just applause. A shield of gold, bearing his image, was decreed to be carried annnally to the capitol, attended by the senate and the sons of the nobility singing in praise of the emperor's virtues. It was likewise ordained that the day on which he was appointed to the empire should be called Pubitia; implying that, when he came to govern, the city received a new foundation. But in less than eight months all this show of virtue and clemency vanished ; while furious passions, unexampled avarice, and capricious cruelty, began to rule his mind. As most of the cruelties of Tiberius arose from sus ||| picion, so most of those committed by Caligula took their rise from prodigality. Some assert

that a disorder, which happened soon after his accession to the empire, deranged his understanding. Indeed madness itself could scarcely dictate cruelties more extravagant, or inconsistencies more ridiculous, than are imputed to him. Gemellus he obliged to kill himself. Silenus, the emperor's father-in-law, was the next that was put to death upon slight suspicion; and Gerincus, a senator of noted integrity, refusing to witness falsely against him, shared his fete. After these followed a crowd of victims to the emperor's avarice or caprice. Among the num-ber of those who were thus sacrificed was Macro, the late favorite of Tiberius, and the person to whom Caligula owed the empire. Not long after, he assumed divine honors, and gave himself the names of such divinities as he thought most agreeable to his nature. For tin's purpose he caused the heads of the statues of Jupiter and some other gods to be struck off, and his own to be put in their places. He frequently seated himself between Castor and Pollux, and ordered that all who came to their temple to worship should pay their adorations only to him ; nay, at last, he altered their temple to the form of a portico, which he joined to his palace, that the very gods, as he said, might serve him in the quality of porters. He was not less

notorious for the depravation of Iris appetites than for his ridiculous presumption. Neither person, place, nor sex, were obstacles to the indulgence of his lusts. There was scarcely a lady of any quality in Rome that escaped him; and, indeed, such was the degeneracy of the times, that there were very few who did not think this disgrace an honor. He is said to have committed incest with his three sisters, and at public feasts they lay with their heads upon his bosom. Of these he prostituted Livia and Agrippina to his vile companions, and then banished them as adultresses and conspirators. As for Drusilla, he took her from her husband Longius, and kept her as his wife. Her he loved so affectionately, that, being sick, he appointed her heiress of his empire and fortune ; and when she happened to die before him made her a goddess. Yet to mourn for her death was a crime, as she was become a goddess; while to rejoice for her divinity was capital, because she was dead. Nay, even silence itself was an unpardonable insensibility, either of the emperor's loss, or his sister's advancement. But of all his vices, his prodigality was perhaps the most remarkable. The most notorious instance of this fruitless profusion was the vast bridge at Puteoli, which he undertook in the third year of his reign. He caused a great number of ships to be fastened to each other, so as to make a floating bridge from Baiae to that place, across an arm of the sea three miles and a half broad. The ships being placed in two rows, in form of a crescent, were secured to each other with anchors, chains, and cables, over these were laid vast quantities of timber, and upon that earth, so as to make the whole resemble one of the streets of Rome. He next caused several houses to be built upon his new bridge, for the reception of himself and his attendants, into which fresh water was conveyed by pipes from land. At night, the number of

torches and other illuminations witn Vnich thin expensive structure was adorned, cast such a gleam as illuminated the whole bay, and all the neighbouring mountains. Expenses like these would have exhausted the most abounded wealth : in fact, after reigning about a year, Caligula found his revenues exhausted ; and a treasure of about ––18,000,000 of our money, which Tiberius had amassed, entirely spent in extravagance and folly. Now, therefore, his prodigality put him upon new methods of supplying the exchequer ; and, as before his profusion, so now his rapacity became boundless. He put in practice all kinds of rapine and extortion. Every thing was taxed, to the very wages of the meanest tradesmen. He had poisoned many who had named him for their heir, to have the immediate possession of their fortunes, and set up a brothel in his own palace, from which he gained considerable sums by prostitution. He also kept a public gaming-

house. On one occasion, having had a series of ill luck, he saw two rich knights passing through the court ; on which he rose, and, causing both to be apprehended, confiscated their estates : then, rejoining his companions, he boasted that he had never had a better throw in his life. Another time, wanting money foi a stake, he went down and caused several noblemen to be put to death ; and then, returning, told the company that they sat playing for trifles while he had won 60,000 sesterces at a cast. Such insupportable and capricious cruelties produced many conspiracies against him ; the issue of which was only deferred by his intended expedition in the third year of his reign against the Germans and Britons. His mighty preparations, however, ended in nothing. Instead of conquering Britain and Germany, he only gave refuge to a banished prince ; and led his army to the sea-shore in Batavia. At last a plan for taking him off was concerted under the influence of Cassius Cherea, tribune of the praetorian bands, joined by Valerius Asiaticus, whose wife the emperor had debauched, Annius Vincianus, Clemens the prefect, and Calistus, whose riches made him obnoxious to the tyrant. While these were deliberating upon the most certain method of destroying him, an unexpected incident gave new strength to the conspiracy. Pompedius, a senator of distinction, having been accused before the emperor, of having spoken of him with disrespect, one Quintilia, an actress, was cited to confirm the accusation. Quintilia, however, was possessed of an uncommon degree of fortitude. She denied the fact, and, being put to the torture at the informer's request, bore the severest torments with unshaken constancy. After several deliberations, it was at last resolved to attack him during the continuance of the Palatine games : he was accordingly slain in a little vaulted gallery that led to the bath, in the twenty-ninth year of his age, after a reign of three years, ten months, and eight days. With him his wife and infant daughter also perished ; one being stabbed by a centurion, the other having its brains dashed out agaia: the wall. His coin was also melted down by a decree of the senate ; and such precautions were taken

that all seemed willing that neither his features nor his fame might be

transmitted to posterity.

CLAUDIUS. ❖❖❖ As soon as the death of Caligula was made public, it produced the greatest confusion in Rome. The conspirators, who only aimed at destroying a tyrant, all retired without naming a successor, to private places. Some thought the report of the emperor's death was an artifice of his own, to see how his enemies would behave : and in this interval of suspense, the German guards pillaged the city under pretence of revenging the emperor's death. All the conspirators and senators that fell in their way received no mercy. However, they grew calm by degrees, and the senate was permitted to assemble, to deliberate upon what was necessary to be done. In this deliberation, Saturninus, who was then consul,, insisted much upon the benefits of liberty ; and his language was highly pleasing to the senate ; but the populace and the army opposed them. The former remembered the donations and public spectacles of the emperors. The latter were sensible they could have no power but in a monarchy. In this opposition of interests and opinions, chance at last decided the fate of the empire. Some soldiers, running about the palace, discovered Claudius, Caligula's uncle, concealed in a secret place. Of this personage, hitherto despised for his imbecility, they resolved to make an emperor ; and accordingly carried him upon their shoulders to the camp, where they proclaimed him at a time when he expected death. The senate went soon after in a body, to render him homage : when the first who fell a sacrifice to the jealousy of this new monarch was Cherea. He met death with all the fortitude of an ancient Roman. Lupus, his friend, suffered with him ; and Sabinus, one of the conspirators, laid violent hands on himself. Claudius was fifty years old when he began to reign : and the complicated diseases of his infancy had affected all the faculties of his body and mind. Yet the commencement of his reign gave the most promising hopes. He be-gan by passing an act of oblivion for all former words and actions, and disannulled the cruel edicts of Caligula. He forbade all persons, under severe penalties, to sacrifice to him as they had done to the late emperor ; was assiduous in hearing and examining complaints; and frequently administered justice in person ; temper-ing by his mildness the severity of the law. He took a more than ordinary care that Rome should be continually supplied with corn and provisions, securing the merchants against pirates. He was not less assiduous in his buildings, in which he excelled almost all that went before him, and constructed an aqueduct, called after his own name, much surpassing any other in Rome both for workmanship and its plentiful supply of water, which it brought from forty miles distance, furnishing the highest parts of the city. He made also a haven at Ostia, of such immense expense that his

successors were unable to maintain it. But his greatest work of all was the draining of the lake Fucinus, the largest in Italy, and bringing its water into the Tiber, to strengthen the current of that river. For effect-tog this, among other difficulties, he mined

through a mountain of stone three miles broad, and kept here 30,000 men employed for eleven years. To this solicitude for the internal advantages of the state, he added that of a watchful guardianship over the provinces. He even undertook to gratify the people by foreign conquest. The Britons, who had, for nearly 100 years, been left in sole possession of their own island, began to seek the mediation of Rome, to quell their intestine commotions. The principal man who desired to subject his native country to the Roman dominion was one Bericus, who persuaded the emperor to make a descent upon the island, magnifying the advantages that would attend the conquest of it. Plautius the praetor was accordingly ordered to pass over into Gaul, and made preparations for this expedition ; and the Britons, under their king Cynobelinus, were several times overthrown. These successes soon after induced Claudius to go into Britain in person, upon pretence that the natives were still seditious, and had not delivered up some Roman fugitives who had taken shelter among them ; but, for an account of the exploits of the Romans in this island, see ENGLAND. But Claudius soon began to lessen his care for the public, and to commit to his favorites all the concerns of the empire. The chief of his directors was his wife Messalina; whose name has hence become a common appellation for women of abandoned character. However, she was not less remarkable for her cruelties than her licentiousness ; and destroyed many of the most illustrious families of Rome. Subordinate to her were the emperors' freedmen ; Pallas, the treasurer; Narcissus, the secretary of state ; and Cal-listus, the master of the requests. These entirely governed Claudius ; so that he was only left the fatigues of ceremony, while they possessed all the power of the state. It would be tedious to enumerate the various cruelties which these insidious advisers obliged the feeble emperor to commit : those against his own family will suffice. Appius Silanus, a person of great merit, who had been married to the emperor's motherin-law, was put to death upon the suggestions of Messalina. After him he slew both his sons-in- law, Silanus and Pompey, and his two nieces the Livias, one the daughter of Drusus the other of Germanicus ; without permitting them to plead in their defence, or even without assigning any cause. Great numbers of others fell sacrifices to the jealousy of Messalina and her minions. Every thing was put to sale : they took money for pardons and penalties ; and

accumulated by these means enormous sums. These disorders in the ministers produced conspiracies against the emperor. Statius Corvinus and Gallus Assinius formed one conspiracy: two knights privately combined to assassinate him ; but the revolt which gave him the greatest uneasiness, and which was punished with the most unrelenting severity, was that of Camillus, his lieutenant-general in Dalmatia. This general, incited by many of the principal men in Rome, openly rebelled, and assumed the title of emperor. Nothing could exceed the terrors of Claudius, upon being informed of this revolt ; so that, when Camillus commanded him by letters to

relinquish the empire, he seemed inclined to give obedience. However, his fears were soon removed ; for the legions which had declared for Camillus, being terrified by some prodigies, soon after killed him. The cruelty of Messalina and het minions upon this occasion seemed to have no bounds. They so wrought upon the emperor's fears and suspicions that numbers were executed without trial or proof; and scarcely any who were but suspected escaped. By such cruelties as these his favorites endeavoured to establish his and their own authority. He now became a prey to jealousy and disquietude, and his only relief seemed to be in inflicting tortures Suetonius says that there were no fewer than thirty-five senators, and above 300 knights, executed in this reign. In this manner was Claudius urged on by Messalina to commit every kind of enormity. After appearing for some years insatiable in her desires, she at length fixed her own affections upon Caius Silius, the most beautiful youth in Rome. Her love for this young Roman se Tied to amount to madness. She obliged him to rfivorce his wife Junia Syllana ; she gave him immense treasures and valuable presents; the very imperial ornaments were transferred to his house; and the emperor's slaves and attendants had orders to wait upon the adulterer. Nothing was wanting to complete their insolence but their being married ; and this was also effected. They relied upon the emperor's imbecility for their security, and only waited till he retired to Ostia to put their project in execution. Some time before there had been a quarrel between Messalina and Narcissus, the emperor's first freed-man, who watched for an opportunity of ruining the empress. He communicated to Claudius what had happened, and urged him to revenge without delay. Nothing could exceed the consternation of Messalina and her companions upon being told that the emperor was coming. Every one retired in the utmost confusion. Silius was taken. Messalina took shelter in some gardens which she had seiied upon, having expelled Asiaticus the owner and put him to death. Thence she sent Britannicus, her only son by the emperor, with Octavia her daughter,

to intercede for her. She soon after followed him ; but Narcissus had fortified the emperor against her arts, and she was obliged to return in despair. Silius was instantly put to death in the emperor's presence ; and Narcissus, without authority, ordered that Messalina should share the same fate. Claudius was informed of her death in the midst of his banquet without the least appearance of emotion. The emperor, being now a widower, declared publicly that he would remain single for the future, and would forfeit his life if he broke his resolution. But his resolution was but of short continuance. His freedmen, after some deliberation, fixed upon Agrippina, the daughter of his brother Germanicus, for his wife. This woman was more practised in vice than even the former empress. As the late declaration of Claudius seemed to be an obstacle to his marrying, persons were suborned to move in the senate that he should be compelled to take a wife, as a mat-ter of great importance to the commonwealth. When this decree passed, Claudius had scarcely

patience to wait a day before the celebration for his nuptials. Having now received a new director, he submitted with more implicit obedience than in any former part of his reign. Agrippina's chief aims were to secure the succession in favor of her young son Nero, and to set aside the claims of Britannicus. For this purpose she married Nero to the emperor's daughter Octavia, a few days after her own marriage. Not long after this she urged the emperor to strengthen the succession, in imitation of his predecessors, by making a new adoption ; and caused him to take in her son Nero to divide the fatigues of government. Her next care was to increase her son's popularity by giving him Seneca for a tutor. This subtle woman pretended the utmost affection for Britannicus, whom, however, she resolved o destroy ; and, shortly after her accession, she procured the death of several ladies who had been her rivals. She displaced the captain of the guard ; and appointed Burrhus to that command ; a person of great military knowledge and strongly attached to her interests. From that time she took less pains to disguise her power. In the twelfth year of Claudius she persuaded him to restore liberty to the Rhodians, of which he had deprived them some years before ; and to remit the taxes of the city Ilium, as having been the progenitors of Rome. Her design in this was to increase the popularity of Nero, who pleaded the cause of both cities with great approbation. Such an immoderate use of her power at last awakened the emperor's suspicions. Agrippina's imperious temper began to grow insupportable to him; and he declared, when heated with wine, that it was his fate to suffer the disorders of his wives and to be their executioner. This expression

engaged all her faculties to prevent tlie blow. Her first care was to remove Narcissus, ###whom she hated upon many accounts. This minister at length thought fit to retire, by a voluntary exile, into Campania. The unhappy emperor seemed regardless of the dangers that threatened his destruction. His affection for Britannicus every day increased, which sewed also to increase the vigilance and jealousy of Agrippina. She now, therefore, resolved to poison her husband, and determined upon a poison to destroy his intellects, and yet not suddenly to terminate his life. This not having the desired effect, however, she directed a wretched physician to thrust a poisoned feather down his throat, under pretence of making him vomit, and thus despatched him.

NERO. ### Claudius being destroyed, Agrippina took every precaution to conceal his death from the public until she had settled her measures for securing the succession. A strong guard was placed at all the avenues of the palace, while she amused the people with various reports; at one time giving out that he was still alive, at another that he was recovering. In the meanwhile, she made sure of the person of young Britannicus, under a pretence of affection for him. At last, when all things were adjusted, the palace gates were thrown open, and Nero, accompanied by Burrhus, prefect of the prattorian guards, issued to receive the congratulations of the peo-ple and the army. The cohorts, then attending,

proclaimed him with the loudest Reclamations, though not without making some enquiries after Britannictis. He was carried in a chariot to the rest of the army ; wherein, having made a speech suited to the occasion, and promising them a donation, he was declared emperor by the army, the senate, and the people. Nero’s first care was to show all possible respect to the deceased emperor, to cover the guilt of his death. His obsequies were performed with a pomp equal to that of Augustus ; the young emperor pronounced his funeral oration, and he was canonised among the gods. The funeral oration, though spoken by Nero, was drawn up by Seneca ; and this was the first time a Roman

emperor needed the aid of another's eloquence. Nero, though but seventeen years of age, began his reign with general approbation. As he owed the empire to Agrippina he submitted to her directions with the most implicit obedience. On her part she seemed resolved on governing with her natural ferocity, and considered her private animosities as the only rule to guide her in public justice. Immediately after the death of Claudius she caused Silanus, the proconsul of Asia, to be assassinated. The next object of her resentment was Narcissus, Claudius's favorite ; a man notorious for the greatness of his wealth and the number of his crimes. He was obliged to put an end to his life by Agrippina's order. This bloody outset would have been followed by many more severities had not Seneca and Burrhus opposed them. These worthy men, although they owed their rise to the empress, were above being the instruments of her cruelty. They therefore combined together, and, gaining the young emperor on their side, formed a plan of power both merciful and wise. The beginning of Nero's reign, while he acted by their counsels, has al-ways been considered as a model for princes. In fact, the young monarch knew so well how to conceal his innate depravity that his nearest friends could scarcely perceive his virtues to be assumed. He appeared just, liberal, and hu-mane. His condescension .and affability were not less than his other virtues ; so that the Ro-mans began to think that his clemency would compensate for the tyranny of his predecessors. In the mean time Agrippina, who was excluded from any share in government, attempted to recover her power. Perceiving that her son had fallen in love with a freed-woman named Acte, and dreading the influence of a concubine, she tried every art to prevent his growing passion. The gratification of his passion, therefore, in this instance, only served to increase his hatred for the empress. Nor was it long before he gave evident marks of his disobedience by displacing Pallas her chief favorite. Upon this occasion she first perceived the total declension of her authority ; which threw her into the most ungovernable fury. She said that Britannicus, the real heir to the throne, was still living, and in a condition to receive his father's empire which was now possessed by an usurper. She threatened to go to the camp, and there expose his baseness and her own, invoking all the furies to her assistance. These menaces alarmed the suspicions of Nero ; who had begun to give way to his natural depravity. He, therefore, determined upon the death of Britannicus, and contrived to have him poisoned at a public banquet. Agrippina, however, took every opportunity of obliging and flattering the tribunes and centurions ; she heaped up treasures with a rapacity beyond her natural avarice; all her actions seemed calculated to raise a faction, and make herself formidable to the emperor. Whereupon Nero commanded her German guard to be taken from her, and obliged

her to lodge out of the palace. He also forbid particular persons to visit her, and went himself but rarely and ceremoniously to pay her his respects. She now therefore began to find that, with the emperor's favor, she had lost the assiduity of her friends. As Nero increased in years, his crimes increased. He took pleasure in running about the city by night, disguised like a slave. In this habit he entered taverns and brothels, attended by the lewd ministers of his pleasures, attempting the .lives of such as opposed him, and frequently endangering his own. After his example numbers of profligate young men infested the streets likewise; so that every night the city was filled with tumult and disorder. However the people bore all these levities with patience, having occasion every day to experience his liberality, and having also been gratified by the abolition of many of their taxes. The provinces wjere no way affected by these riots ; foi except disturbances on the side of the Parthians, which were soon suppressed, they enjoyed the most perfect tranquillity. But those sensualities, which, for the first four years of his reign, produced but few disorders, in the fifth became alarming. He first began to transgress the bounds of decency, by publicly abandoning Octavia his wife, and taking Poppaea, the wife of his favorite Otho. This was another grating circumstance to Agrippina, who vainly used all her interest to disgrace Poppaea, and reinstate herself in her son's lost favor. This last began her arts by urging him to divorce his wife and marry herself. She insinuated the dangerous designs of Agrippina ; and by degrees accustomed his mind to reflect on parricide without horror. His cruelties against his mother began rather by various circumstances of petty malice than by any down right injury ; but at last, finding these ineffectual to break her spirit, he resolved on putting her to death. After attempting poison and other modes ineffectually, he sent a body of soldiers to her house, who killed her with several wounds. He vindicated his conduce next day to the senate ; who not only excused but applauded his impiety. Nero now gave a loose to his appetites, that were not only sordid but inhuman. There semed an odd contrast in his disposition ; for, while he practised cruelties sufficient to make the mind shudder with horror, he was fond of those amusing arts that soften and refine the heart. He was particularly addicted, even fro.n childhood, to music, and not totally ignorant of poetry. But chariot-driving was his favorite pursuit. He enclosed a space in the valley of the Vatican, and exhibited his dexterity to the whole of his subjects. Their piaises stimulatei! him still more to these pursuits ; so that he no.v

resolved to appear as a singer upon the stage His first public appearance was at games of his own institution, called juveniles ; where he advanced upon the stage, tuning his instrument to his voice. A group of tribunes and centurions attended behind him ; when his old governor Burrhus stood by his hopeful pupil, with indignation in his countenance, and praises on his lips. He was desirous also of becoming a poet; but he was unwilling to undergo the pain of study. Nor was he without his philosophers also; he took a pleasure in hearing their debates after supper. Furnished with such talents as these, he was resolved to make the tour of his empi►►e, and give the most public display of his abilities. The place of his first exhibition, upon leaving Rome was Naples. The crowds there were so great, and the curiosity of the people so earnest in hearing him, that they did not perceive an earthquake that happened while he was singing. His desire of gaining the superiority over the other actors was truly ridiculous. While he continued to perform, no man was' permitted to depart from the theatre upon any pretence whatsoever. Some were so fatigued with hearing him that they leaped privately from the walls, or pretended to fall into fainting fits, in order to be carried out. Vespasian, afterwards emperor, happening to fall asleep on one of these occasions, very narrowly escaped with his life. After being fatigued with the praises of his countrymen, Nero resolved upon going over into Greece, to receive new theatrical honors. There he exhibited in all the games, and obtained from the meanness of the Greeks 1800 crowns. His entry into Rome on his return was attended with more splendor than a triumph. So many honors only inflamed his desires of acquiring new ; he at last began to take lessons in wrestling; willing to imitate Hercules in strength, as he had rivalled Apollo in activity. He also caused a lion of pasteboard to be made with great art, against which he undauntedly appeared in the theatre, and struck it down with a blow of his club. But his cruelties outdid all his other extravagancies, a complete list of which would exceed our limits. He often said that he had rather be hated than loved. When one said in his presence, that the world might be burned when he was dead ; ' Nay,' replied Nero, ' let it be burnt while I am alive.' In fact, a great part of the city of Rome was burnt soon after. This remarkable conflagration took place in the eleventh year of Nero's reign. Nero, who was then at Antium, did not return to the city till he heard that the flames were advancing to his palace, which, after his arrival, was

burnt down to the ground, with all the houses adjoining to it. However Nero, affecting compassion for the multitude bereft of their dwellings, laid open the field of Mars, and all the great edifices erected there by Agrippa, and even his own gardens ; he likewise caused tabernacles to be reared in haste for the reception of the forlorn populace. From Ostia too, and the neighbouring cities, were brought by his orders all sorts of furniture and necessaries ; and the price of corn was considerably lessened. But these bounties, however generous and popular, were bestowed in vain, because a report was spread abroad that, during the time of this general conflagration, he mounted his domestic stage, and sung the destruction of Troy, comparing the desolation of Rome to that of Troy. At length, on the sixth day, the fury of the flames was stopped at the foot of mount Esqui-line, by levelling with the ground a vast num-ber of buildings. But scarcely had the alarm ceased, when the fire broke out anew with fresh rage, but in places more wide and spacious ; whence fewer persons were destroyed, but more temples and public porticoes were overthrown. As this second conflagration broke out in certain buildings belonging to Tigellinus, they were both ascribed to Nero; and it was supposed that, by destroying the old city, he aimed at the glory of building a new one, and calling it by his name. Of the fourteen quarters into which Rome was divided, four remained entire, three were laid in ashes, and, in the seven other, remained here and there a few houses, miserably shattered and half consumed. Among the many ancient and stately edifices, which the rage of the flames utterly consumed, Tacitus reckons the temple dedicated by Servius Tullius to the moon ; the temple and great altar consecrated by Evander to Hercules ; the chapel by Romulus to Jupiter Stator; the court of Numa, with the temple of Vesta, and in it the tutelar gods peculiar to the Romans. In the same fate were involved the inestimable treasures acquired by so many victories, the wonderful works of the best painters and sculptors of Greece, and, what is still more to be lamented, the ancient writings of celebrated authors, till then preserved entire. The fire began the same day on which the Gauls formerly burnt it to the ground. Upon the ruins of the demolished city Nero founded a palace, which he called his golden house ; though it was not so much admired on account of an immense profusion of gold, precious stones, and other inestimable ornaments, as for its vast extent, containing spacious fields, large wildernesses, artificial lakes, thick woods, orchards, vineyards, hills, groves, &c. The ground that was not taken up by the foundation of Nero’s own palace, he assigned for houses, which were not placed at random, and without order, but the streets were laid out regularly, spacious, and straight ; the edifices restrained to a certain height, of about seventy feet ; the courts were

widened ; and to all the great houses, which stood by themselves, and were called isles, large porticoes were added, which Nero engaged to raise at his own expense, and to deliver to each proprietor the squares about them clear from all rubbish. Thus the city in a short time rose out of its ashes with new lustre, and more beautiful than ever. The emperor used every art to throw the odium of this conflagration upon the Christians, who were at that time gaining ground in Rome. Nothing could be more dreadful than the persecution raised against them upon this false accusation, of which an account is given under the article HISTORY. Hitherto, however, the citizens of Rome seemed comparatively exempted from his cruelties, which chiefly fell upon strangers and las nearest connexions ; but a conspiracy

formed against bin; oy Piso, a man of great power and integrity, which was prematurely discovered, opened a new train of suspicions that destroyed many of the principal families in Rome. Piso, Lateranus, Fennius Rufus, Subrius Flavius, Sulpicius Asper, Vestinus the consul, and numberless others, were all executed. , But the two most remarkable personages who fell on this occasion were Seneca the philosopher, and Lucan the poet, his nephew. It is not known whether Seneca was really concerned or not. He was ordered to put himself to death, which he did, by opening his veins in a warm bath. Thus was the whole city filled with slaughter and frightful instances of treachery. No master was secure from the vengeance of his slaves, nor even parents from the baser attempts of their children. Not only throughout Rome, but the whole country round, bodies of soldiers were seen in pursuit of the suspected and the guilty. Whole crowds of wretches loaded with chains were led every day to the gates of the palace, to wait their sentence from the tyrant. He always presided at the torture in person, attended by Tigellinus, captain of the guard, who, being the most abandoned man in Rome, was become his principal minister and favorite. Nor were the Roman provinces in a better situation than the capital. The example of the tyrant influenced his governors, who gave instances of their rapacity and cruelty in every part of the empire. In the seventh year of his reign the Britons

revolted, under the conduct of their queen Boadicea (see ENGLAND) ; hut were at last so completely defeated that ever after, during the continuance of the Romans among them, they lost not only all hopes, but even all desire of freedom. A war also was carried on against the Parthians for the greatest part of this reign, conducted by Corbulo ; who, after many successes, had dispossessed Tiridates, and settled Tigranes in Armenia in his room. Tiri-datos, however, was soon after restored by an invasion of the Parthians into that country ; but, being once more opposed by Corbulo, the Ro-mans and Parthians came to an agreement that Tiridates should continue to govern Armenia, upon condition that he should lay down his crown at the foot of the emperor's statue, and receive it as coming from him ; all which he performed. This ceremony Nero desired to have repeated to his person ; wherefore he invited Tiridates to Rome, granting him the most magnificent supplies for his journey. Nero attended his arrival with very sumptuous preparations. He received him seated on a throne, accompanied by the senate standing round him, and the whole army drawn out with all imaginable splendor. ??? Tiridates ascended the throne with great reverence ; and approaching the emperor, fell down at his feet, and in the most abject terms acknowledged himself his slave. Nero raised him up, telling him with equal arrogance, that he did well, and that by his submission he had gained a kingdom which his ancestors could never acquire by their arms. He then placed the crown on his head, and, after the most costly ceremonies and entertainments, he was sent back to Armenia, with incredible sums of money to defray the expenses of his return. In the twelfth year of Nero's reign

the Jews revolted, having been severely oppressed by the Roman governor. Florus was arrived at that degree of tyranny that by public proclamation he gave permission to plunder the country, provided he received half the spoil. These oppressions drew such a train of calamities after them, that the sufferings of all other nations were slight in comparison to what this devoted people afterwards endured, as is related under the article JEWS. In the mean time Nero proceeded in his cruelties at Rome with unabated severity. The valiant Corbulo, who had gained so many victories over the Parthians, could not escape his fury. Nor did the empress Poppaea herself escape ; whom, in a fit of anger, he kicked when she was pregnant, by which she miscarried and died. At last the Romans began to grow weary of such a monster, and there appeared a general revolution in all the provinces. The first appeared in Gaul, under Julius Vindex, who commanded the legions there, and publicly protested against the

tyrannical government of Nero. He appeared to have no other motive for this revolt than that of freeing the world from an oppressor ; for when it was told him that Nero had set a reward upon his head of 10,000,000 of sesterces, he made this gallant answer, ‘ Whoever brings me Nero’s head, shall, if he pleases, have mine.’ But, to show that he was not actuated by motices of private ambition, he proclaimed Sergius Galba emperor, and invited him to join in the revolt. Galba, who was then governor of Spain, was equally remarkable for his wisdom in peace, and his courage in war. But, as all talents under corrupt princes are dangerous, he for some years lived in obscurity, avoiding aL opportunities of signalising his valor. He now, therefore, either through the caution attending old age, or from a total want of ambition, appeared little inclined to join with Vindex. In the mean time Nero, who had been apprised of the proceedings against him in Gaul, appeared totally regardless of the danger, flattering himself that the suppression of this revolt would give him an opportunity of fresh confiscations. But the revolt of Galba, the news of which arrived soon after, affected him in a very different manner. The reputation of that general was such that, from the .moment he declared against him, Nero considered himself as undone. He resolved to massacre all the governors of provinces, to destroy all ex-iles, and to murder all the Gauls in Rome, as a punishment for the treachery of their countrymen. In short, in the wildness of his rage, he thought of poisoning the whole senate, of burning the city, and turning the lions kept for the purposes of the theatre out upon the people. These designs being impracticable, he resolved at last to face the danger in person. But his very preparations served to mark the infatuation of his mind. His principal care was to provide waggons for the convenient carriage of his musical instruments ; and to dress out his concubines like Amazons, with whom he intended to face the enemy. While Nero was thus frivolously employed, the revolt became general. Not only the armies in Spain and Gaul, but also the legions in Germany, Africa, and Lusitania, declared against him. Virginius Rufus alone, who commanded

at►► army on tne Upper Rhine, for a while continued in suspense ; during which his forces, without his permission, falling upon the Gauls, routed them with great slaughter, and Vindex slew himself. But this ill success no way advanced the interests of Nero ; he was so detested by the whole empire that he could find none of the armies faithful to him. He therefore called for Locusta to furnish him with poison ; and, thus prepared for the worst, he retired to the Servilian gardens, with a resolution of flying into Egypt. He accordingly despatched the freedmen in whom he had the most confidence, to prepare a fleet at Ostia; and in the mean while sounded, in per-son, the tribunes and centurions of the guard, to know if they were willing to share his fortunes. But they all excused themselves under divers pretexts. Thus destitute of every resource, all the expedients that cowardice, revenge or terror could produce, took place in his mind by turns. He at one time resolved to take refuge among the Parthians ; at another, to deliver himself up to the mercy of the insurgents ; one while he determined to mount the rostrum, to ask pardon for what was past, and to conclude with promises of amendment tor the future. With these gloomy deliberations he went to bed ; but waking about midnight, he was surprised to find his guards had left him. The praetorian soldiers, in fact, having been corrupted by their commander, had retired to their camp, and proclaimed Galba emperor. Nero immediately sent for his friends to deliberate upon his present exigence ; but his friends also forsook him. He went from house to house, but all the doors were shut against him, and none were found to answer his enquiries ; his very domestics followed the general defection ; and, having plundered his apartment, escaped different ways. Being now reduced to desperation, he desired that one of his favorite gladiators might come and despatch him ; but even in this request there was none found to obey. ‘ Alas !’ cried he, ‘ have I neither friend nor enemy ?’ And then, running desperately forth, he seemed resolved to plunge headlong into the Tiber. But just then, his courage failing him, he made a sudden stop, as if willing to recollect his reason ; and asked for some secret place, where he might reassume his courage, and meet death with becoming fortitude. In this distress, Phaon, one of his freedmen, offered him his country house, about four miles distant, where he might for some time remain concealed. Nero accepted his offer ; and arrived with difficulty in safety. During this interval the senate, finding the praetorian guards had taken part with Galba, declared him emperor, and condemned ?/ero to die more majorum ; that is, to be stripped naked, his head fixed in a pillory, and in that posture to be scourged to death. Nero was so terrified on hearing this, that he set a dagger to his throat, with which, by the assistance of Epaphroditus, his freed man and secretary, he gave

himself a mortal wound. He expired in the thirty -second year of his age and the fourteenth of his reign. See NERO.

GALBA. ••• Galba was seventy-two years old when he wag declared emperor, and was then in Spain with his legions. However, he soon found

that his being raised to the throne was but an inlet to new disquietudes. His first embarrassment arose from a disorder in his own army ; for, upon his approaching the camp, one of the wings of horse repenting of their choice, prepared to re-volt, and he found it no easy matter to reconcile them to their duty. lie also narrowly escaped assassination from some slaves, who were presented to him by one of Nero's freedmen with that intent. The death of Vindex also served to add to his disquietudes. But hearing from Rome that Nero was dead, and the empire transferred to him, he immediately assumed the title and ensigns of command. In his journey towards Rome, he was met by Virginius Rufus, who, finding the senate had decreed him the government, came to yield him obedience. This general had more than once refused the empire himself, which was offered him by his soldiers ; alleging that the senate alone had the disposal of it, and from them only he would accept the honor. Galba, having been brought to the empire by his army, was at the same time desirous to suppress their power to commit any future disturbance. His first approach to Rome was attended with one of those rigorous strokes of justice whicli ought rather to be denominated cruelty than any thing else. A body of mariners, whom Nero had taken from the oar and enlisted among the legions, went to meet Galba three miles from the city, and with loud importunities demanded a confirmation of what his predecessor had done in their favor. Galba, who was rigidly attached to the ancient discipline, deferred their request to another time. But they, considering this delay as equivalent to an absolute denial, insisted in a very disrespectful manner ; and some of them even had recourse to arms, whereupon Galba ordered a body of horse attending him to ride in among them, and thus killed 7000 of them ; and afterwards ordered them to be decimated. His next step to curb the insolence of the soldiers was his discharging the German cohort, which had been established by the former emperors as a guard to their persons. These he sent home to their own country unrewarded, pretending they were disaffected to his person. He seemed to have two other objects also in view ; namely, to punish those vices which had come to an enormous height in the last reign with the strictest severity ; and to replenish the exchequer, which had been quite drained by the

prodigality of his predecessors. But these attempts only brought on him the imputation of severity and avarice ; for the state was too much corrupted to admit of such an immediate transition from vice to virtue. The people had long been maintained in sloth and luxury by the prodigality of the former emperors, and could not think of being obliged to seek for new means of subsistence, and to retrench their superfluities. They began, therefore, to satirise the old man, and turn the simplicity of his manners into ridicule. By ill-judged frugalities, at such a time, Galba began to lose his popularity ; and he, who before his accession was esteemed by all, when become emperor, was considered with contempt. Shortly after his coming to Rome, the people were presented with a most grateful spectacle, which was that of Lo

custa, ˆElius, Policletus, Petronius, and Petinus, all bloody ministers of Nero's cruelty, drawn in fetters through the city, and publicly executed. But Tigellinus, who had been more active than all the rest, was not there. The crafty villain had taken care for his own safety, by the large-ness of his bribes ; and, though the people cried out for vengeance against him at the theatre and at the circus, yet the emperor granted him his life and pardon. Helotus, the eunuch, also, who had been the instrument of poisoning Claudius, escaped, and owed his safety to the proper application of his wealth. Thus, by the inequality of his conduct, he became despicable. At one time showing himself severe and frugal, at another remiss and prodigal ; condemning some illustrious persons without any hearing, and pardoning others though guilty : in short, nothing was done but by the mediation of his favorites ; all offices were venal, and all punishments redeemable by money. While affairs were in this unsettled posture at Rome, the provinces were yet in a worse condition. The success of the armies in Spain in choosing an emperor induced the legions in the other parts to wish for a similar opportunity. Many seditions were kindled and factions promoted in different parts of the empire, particularly in Germany. There were then in that province two Roman armies ; the one had lately attempted to make Virginius Rutus

emperor, and was commanded by his lieutenant ; the other was commanded by Vitellius, who long had an ambition to obtain the empire for himself. The former of these armies, despising their present general, and considering themselves as suspected by the emperor for haringbeen the last to acknowledge his title, resolved now to be foremost in denying it. Accordingly, when they were summoned to take the oaths of homage and fidelity, they refused to acknowledge any other commands but those of the senate. This refusal they backed by a message of the praetorian bands, importing that they were resolved not to acquiesce in the election of an emperor created in Spain, and desiring that the senate should proceed to a ‘ new choice. Galba, being informed of this commotion, was sensible, that, besides his age, he was less respected for want of an heir. He resolved, therefore, to put what he had formerly designed in execution, and to adopt some person whose virtues might deserve such advancement, and protect his declining age from danger. His favorites, understanding his determination, instantly resolved to give him an heir of their own choosing ; so that there arose a great contention among them upon this occasion. Otho made warm application for himself; alleging the great services he had done the emperor, as being the first man of note who came to his assistance when he had declared against Nero. However, Galba, being fully resolved to consult the public good alone, rejected his suit; and, on a day appointed, ordered Piso Lucinianus to attend him. The character given by historians of Piso, is, that he was every way worthy of the honor designed him. He was no w*y related to Galba ; and had no other interest out merit to recommend him to his favor. Taking this youth, therefore, by the hand, in the

presence of his friends, he adopted him to succeed in the empire, giving him the most wholesome lessons for guiding his future conduct. Piso’s conduct showed that he was highly deserving this distinction ; and in all his deportment there appeared such modesty, firmness, and equality of mind, as bespoke him rather capable of discharging than ambitious of obtaining the imperial dignity. Bui, the army and the senate did not seem equally disinterested upon this occasion ; they had been so long used to bribery and corruption that they could now bear no emperor who was not in a capacity of satisfying their avarice. The adoption therefore of Piso was but coldly received ; for his virtues were no recommendation in a nation of universal depravity. Otho now finding his hopes of adoption wholly frustrated, and still further stimulated by the immense load of debt which he had contracted by his riotous way of living, resolved upon obtaining the empire by force,

since he could not by peaceable succession. In fact his circumstances were so very desperate that he was heard* to say, that it was equal to him whether he fell by his enemies in the field, or by his creditors in the city. He therefore raised a moderate sum of money, by selling his interest to a person who wanted a place ; and with this bribed two subaltern officers in the praetorian bands, supplying the deficiency of largesses by promises and plausible pretences. Having thus, in less than eight days, corrupted the fidelity of the soldiers, he stole secretly from the emperor while he was sacrificing; and, assembling the soldiers, in a short speech urged the cruelties and avarice of Galba. Finding these his invectives received with universal shouts by the whole army, he threw off the mask, and avowed his intentions of dethroning him. The soldiers, ripe for sedition, immediately seconded his views: taking Otho upon their shoulders, they instantly proclaimed him emperor; and, to strike the citizens with terror, carried him with their swords drawn into the camp. Galba, in the mean time, being informed of the revolt of the army, seemed utterly confounded, and in want of resolution to face an event which he should have long foreseen. In this manner the poor old man continued wavering and doubtful ; till at last, being deluded by a false report of Otho's being slain, he rode into the forum in complete armour, attended by many of his followers. Just at the same instant a body of horse sent from the camp to destroy him entered on the opposite side, and each party prepared for the encounter. For some time hostilities were suspended on each side; Galba confused and irresolute, and his antagonists struck with horror at the baseness of their enterprise. At length, finding the emperor in some measure deserted by his adherents, they rushed in upon him, trampling under foot the crowds of people that then filled the forum. Galba, seeing them approach, seemed to recollect all his former fortitude ; and, bending his head forward, bid the assassins strike it off if it were for the good of the people. This was quickly performed ; and his head, being set upon the point of a lance, was presented to Otho, who ordered it to be contemptuously carried round

the camp ; his body remaining exposed in the streets till it was buried

by one of his slaves. He died in the seventy-third year of his age, after a short reign of seven months.

OTHO. ••• No sooner was Galba thus murdered than the senate and people ran in crowds to the camp, contending who should be foremost in extolling the virtues of the new emperor, and depressing the character of him they had so unjustly destroyed. Each labored to excel the rest in his instances of homage ; and the less his affections were for him, the more did he indulge all the vehemence of exaggerated praise. Otho, finding himself surrounded by congratulating multitudes, immediately repaired to the senate, where he received the titles usually given to the emperors ; and thence returned to the palace, seemingly resolved to reform his life, and assume manners becoming the greatness of his station. He began his reign by a signal instance of clemency, in pardoning Marius Celsus, who had been highly favored by Galba ; and, not contented with barely forgiving, heacjvanced him to the highest honors; asserting that ‘ fidelity deserved every reward.’ This act of clemency was followed by another of justice, equally agreeable to the people. Tigellinus, Nero’s favorite, he who had been the promoter of all his cruelties, was now put to death ; and all such as had been unjustly banished, or stripped, at his instigation, during Nero’s reign, were restored to their country and fortunes. In the mean time the legions in Lower Germany, having been purchased by the large gifts and specious promises of Vitellius their general, were at length induced to proclaim him emperor ; and, regardless of the senate, declared that they had an equal right to appoint to that high station with the cohorts at Rome. The news of this conduct in the army soon spread consternation throughout Rome ; but Otho was particularly struck with the account, as being apprehensive that nothing but the blood of his countrymen could decide a contest of which his own ambition only was the cause. He now therefore sought to come to an agreement with Vitellius ; but, this not succeeding, both sides began their preparations for war. News being received that Vitellius was upon his inarch to Italy, Otho departed from Rome with a vast army to oppose him. But, though he was very powerful with regard to numbers, his men, being little used to war, could not be relied on. He seemed by his behaviour sensible of the disproportion of his forces ; and he is said to have been tortured with frightful dreams, and the most uneasy apprehensions. It is also reported that one night, fetching many profound sighs in his sleep, his servants ran nastily to his bed side, and found him stretched on the ground. He alleged he had seen the ghost of Galba, which had, in a threatening manner, beat and pushed him from his bed ; and he afterwards used many expiations to appease it. However this be, he

proceeded with a great show of courage till he arrived at the city of Brixellum, on the Po, where he remained, sending his forces before him under his generals Suetonius and Celsus, who made what haste they could tc give the enemy battle. The army of Vitellius, which consisted of 70,000 men,

was commanded by his generals Valens and Cecina, he himself remaining in Gaul in or-der to bring up the rest of his forces. Thus both sides hastened to meet each other with so much animosity and precipitation that three considerable battles were fought in three days : one near Placentia, another near Cremona, and a third at a place called Castor ; in all which Otho had the advantage. But these successes were but short lived ; for Valens and Cecina, who had hitherto acted separately, joining their forces, and reinforcing their armies with fresh supplies, resolved to come to a general engagement. Otho, who by this time had joined his army at a little village called Bedriacum, finding the enemy, notwithstanding their late losses, inclined to come to a battle, resolved to call a council of war to determine upon the proper measures to be taken. His generals were of opinion to protract the war ; but others, whose inexperience had given them confidence, declared that nothing but a battle could relieve the miseries of the state ; protesting, that fortune and all the gods with the divinity of the emperor himself, favored the design, and would undoubtedly prosper the enterprise. In this ad-vice Otho acquiesced ; he had been for some time so uneasy under the war that he seemed willing to exchange suspense for danger. However, he was so surrounded with flatterers that he was prohibited from beinst personally present in the engagement, but prevailed upon to reserve himself for the fortune of the empire, and wait the event at Brixellum. The affairs of both armies being thus adjusted, they came to an engagement at Bedriacum ; where, in the beginning, those on the side of Otho seemed to have the advantage. At length the superior discipline of the legions of Vitellius turned the scale of victory. Otho's army fled in great confusion towards Bedriacum, being pursued with a miserable slaughter all the way. In the mean time Otho waited for the news of the battle with great impatience, and seemed to tax his messengers with delay. The first account of his defeat was brought him by a soldier, who had escaped from the field of battle. However Otho, who was still surrounded by flatterers, was desired to give no credit to a base fugitive, who was guilty of falsehood only to cover his own cowardice. The soldier, however, still persisted in the veracity of his report ; and, finding none inclined to believe him, immediately fell upon his sword, and expired at the emperor's feet. Otho was so much

struck with the death of this man, that he cried out, that he would cause the ruin of no more such valiant and worthy soldiers, but would end the contest the shortest way ; and therefore, having exhorted his followers to submit to Vitellius, he put an end to his own life.

VITELLIUS. ••• It was no sooner known that Otho had killed himself than all the soldiers repaired to Virginias, the commander of the Ger-man legions, earnestly entreating him to take upon him the reins of government ; or at least intreating his mediation with the generals of Vitellius in their favor. Upon his declining tneir request, Rubrius Gallus, a person of considerable note, undertook their embas? ˆ to the gene-

rals of the conquering army ; and soon after obtained a pardon for all the adherents of Otho. Vitellius was immediately after declared emperor by the senate ; and received the marks of distinction which now followed the strongest side. At the same time Italy was severely distressed by the soldiers, who committed such outrages as exceeded all the oppressions of the most calamitous war. Vitellius, who was yet in Gaul, resolved, before he set out for Rome, to punish the praetorian cohorts, who had been the instruments of all the late disturbances in the state. He therefore caused them to be disarmed, and deprived of the name and honor of soldiers. He also ordered 150 of those who were most guilty to be put to death. As he approached towards Rome, he passed through the towns with all imaginable splendor; his passage by water was in painted galleys, adorned with garlands of flowers, and profusely furnished with the greatest delicacies. In his journey there was neither order nor discipline among his soldiers'; they plundered wherever they came with impunity ; and he seemed no way displeased with their licentiousness. Upon his arrival at Rome he entered the city, not as a place he came to govern with justice, but as a town that became his own by the laws of conquest. He marched through the streets mounted on horseback, all in armor ; the senate and people going before him, as if captives of his late victory. He the next day made the senate a speech, in which he magnified his own actions, and

promised them extraordinary advantages from his administration. He then harangued the people, who, being now long accustomed to flatter all in authority, highly applauded their new emperor. In the mean time his soldiers, being permitted to satiate themselves in the debaucheries of the city, grew totally unfit for war. The principal affairs of the state were managed by the lowest wretches. Vitellius, more abandoned than they, gave himself up to all kinds of luxury and profuseness : but gluttony was his favorite vice, so that he brought himself to a habit of vomiting, in order to renew his meals at pleasure. His entertainments, though seldom at his own cost, were prodigiously expensive ; he frequently invited himself to the tables of his subjects, breakfasting with one, dining with another, and supping with a third, all in the same day. In this manner did Vitellius proceed ; so that, Josephus tells us, if he had reigned long, the whole empire would not have been sufficient to have maintained his gluttony. Those who had formerly been his associates were now destroyed without mercy. Going to visit one of them in a violent fever, he mingled poison with his water, and delivered it to him with his own hands. He never pardoned those money-lenders who came to demand payment of his former debts. One of the number coming to salute him, he immediately ordered him to be carried off to execution ; but shortly after, commanding him to be brought oack, when all his attendants thought it was to pardon the unhappy creditor, Vitellius gave them soon to understand that it was merely to have the pleasure of feeding his eyes with his torments. Having; condemned another to

death, he executed his two sons with him, only for their presuming to intercede for their father. A Roman knight being dragged away to execution and crying out that he had made the emperor his heir, Vitellius desired to see the will, where finding himself joint heir with another, he ordered both to be executed, that he might enjoy the legacy without a partner. By continuing such vices and cruelties as these he became odious, and the astrologers prognosticated his ruin. A writing was set up in the forum, in the name of the ancient Chaldeans, giving Vitellius warning to depart this life by the kalends of .October. Vitellius received this information with terror, and ordered all the astrologers to be banished from Rome. A woman having foretold that, if he survived his mother, he should reign many years in happiness, he put her to death, by refusing her sustenance, under the pretence of its being prejudicial to her health. But he soon saw the futility of such prognostics ; for his soldiers, by their cruelty and rapine, having become insupportable to the inhabitants of Rome, the legions of the east began to revolt, and soon after resolved to make Vespasian

emperor. Vespasian, who was commander against the Jews, had reduced most of their country, except Jerusalem, to subjection ; but the death of Nero, and the succession of Galba, gave a temporary check to his conquests as he was obliged to send his son Titus to Rome. Titus, however, being detained by contrary winds, received news of Galba's death before he sailed. He then resolved to continue neuter during the civil war between Otho and Vitellius ; and when the latter prevailed he gave him his homage with reluctance. But, being desirous of acquiring reputation, he determined to lay siege to Jerusalem. The murmurings against Vitellius increased every day, while Vespasian endeavoured to advance the discontents of the army, who began at length to fix upon him as the per-son most capable of terminating the miseries of his country. Not only his own legions, but those in Mcesia and Pannonia, declared themselves for Vespasian. He was also proclaimed emperor at Alexandria, the army there confirming it with extraordinary applause. Still, however, Vespasian declined the honor; till at length his soldiers compelled him, with threats of immediate death. He now called a council of war : where it was resolved that his son Titus should carry on the war against the Jews ; and that Mutianus, one of his generals, should, with great part of his legions, enter Italy ; while Vespasian should levy forces in all parts of the east, to reinforce them in case of necessity. Mean time Vitellius resolved to make an effort to defend the empire ; and his chief commanders, Valens and Cecina, were ordered to make all preparations to resist the invaders. The first army that entered Italy was under Antonius Primus, who was met by Cecina near Cremona, whom he prevailed upon to change sides, and declare for Vespasian. His army, however, quickly repented of what they had done ; and imprisoning their general, though without a leader, attacked Antonius. The engagement continued the whole night : iu tl.e morning, after a short renast, both armies en-

gaged a second time ; when the soldiers of Antonius saluting the rising sun, according to cus-tom, the Vitellians supposing that they had received new reinforcements, betook themselves to flight, with the loss of 30,000 men. Soon after, freeing Cecina from prison, they prevailed upon him to intercede with tjje conquerors for pardon ; which they obtained, though not without the most horrd barbarities committed in Cremona. When Vitellius was informed of the defeat of

his army, his insolence was converted into extreme timidity. At length he commanded Julius Priscus and Alphenus Varus. with some forces that were in readiness, to guard the passes of the Apennines, to prevent the enemy's march on Rome. But, being persuaded to repair to his army in person, his presence only increased the contempt of his soldiers. After a short continuance in the camp, and hearing the revolt of his fleet, he returned to Rome. Every day rendering his affairs more desperate, he made offers to Vespasian of resigning the empire. One Sabinus, who had advised him to resign, perceiving his desperate situation, resolved, by a bold step, to oblige Vespasian, and seized upon the capitol. But he was premature in his attempt ; for the soldiers of Vitellius attacked him with great fury, and, prevailing by their numbers, soon laid that building in ashes. During this conflagration, Vitellius was feasting in the pa-lace of Tiberius, and beholding with satisfaction the horrors of the assault. Sabinus was taken prisoner, and shortly after executed. Domitian, Vespasian's son, afterwards emperor, escaped by flight, in the habit of a priest ; and all the rest, who survived the fire, were put to the sword. But this success served little to improve the affairs of Vitellius. He vainly sent messenger after messenger to bring Vespasian's general, Antonius, to a compromise. This commander gave no answer to his requests, but continued his march towards Rome. Being arrived before the walls of the city, the forces of Vitellius were resolved upon defending it to the utmost extremity. Attacked on three sides with the greatest fury ; the army within, sallying upon the besiegers, defended it with equal obstinacy. The battle lasted a whole day, till at last the besieged were driven into the city, and a dreadful slaughter made of them in the streets. In the mean time, the citizens stood by apparently unconcerned, as if they had been in a theatre, and clapped their hands, first at one party's success, and then at the other's. As either turned their backs, the citizens would fall upon and plunder them. But, what was still more remarkable, during these dreadful slaughters both within and without the city, the people celebrated one of their riotous feasts, called the Saturnalia ; so that in various parts might be seen the strange mixture of mirth and misery, profligacy and slaughter; in a word, all the horrors of civil war, and all the licentiousness of the most abandoned security ! During this complicated scene, Vitellius retired to his wife's house, upon mount Aventine, designing to fly to the army commanded by his brother at Tarracina. But he changed his mind, and returned to his palace. There, after wandering disconsolate, he hid himself in an

obscure corner, whence he was soon taken by a party of soldiers. Still,

willing to add a few hours to his miserable life, he begged to be kept in prison till the arrival of Vespasian at Rome, pretending that he had secrets of importance to discover. But his intreaties were vain ; the soldiers binding his hands behind him, and throwing a halter round his neck, led him along, half naked, into the public forum, upbraiding him as they proceeded with all the bitter reproaches that malice could suggest, or his own cruelties deserve. They also tied his hair backwards, as was usual with the most infamous malefactors, and held the point of a sword under his chin, to prevent his hiding his face from the public. Personal indignations were heaped upon him. Some cast dirt and filth upon him as he passed, others struck him with their hands, or ridiculed, the defects of his person. At length, being despatched, they dragged his dead body through the streets with a hook, and threw it, with air possible ignominy, into the Tiber. Such was the miserable end of this emperor, in the fifty-seventh year of his age, after a short reign of eight months and five days.

VESPASIAN. ❖❖❖ The conquering army of Vespasian now pursued their enemies throughout the city, where neither houses nor temples afforded them refuge. Not only the enemy suffered thus, but many of the citizens, who were obnoxious to the soldiers, were dragged from their houses, and killed. They next began to seek for plunder ; the rabble joining in these outrages : some slaves discovered the riches of their masters ; some were letected by their nearest friends ; and the whole city was filled with outcry and lamentation. At length, however, upon the arrival of Mutianus. these slaughters ceased, and the state began to wear the appearance of former tranquillity. Vespasian was declared emperor by the unanimous consent both of the senate and the army, and messengers were despatched to him into Egypt, desiring his return. But the winter being dangerous for sailing he deferred his voyage. The dissensions in other parts of the empire also retarded his return ; for Claudius Civilis, in Lower Germany, excited his countrymen to revolt, and destroyed the Roman garrisons. To give his rebellion, however, an air of justice, he caused his army to swear allegiance to Vespasian, though he soon disclaimed all submission to his government ; and having overcome one or two of the lieutenants, and being joined by such Romans as refused obedience to the new emperor, he boldly advanced to give Cerealis, Vespasian’s general, battle. After some temporary reverses Cerealis not only routed the enemy but took and destroyed their camp. The engagement, however, was not decisive; several others ensued, and an accommodation at length took place, when Civilis obtained peace for his countrymen and pardon for himself. During these commotions in Germany the Sarmatians, a barbarous nation in the north-east of the

empire, suddenly passed the Iser, and marched into the Roman dominions with such celerity as to destroy several garrisons, and an army under Fonteius Agrippa. Ilowever, they were driven back by Rubrius Callus into their native forests ; while several attempts were

made to confine them by garrisons and forts. But these hardy nations, having once found the way into the empire, never after desisted from invading it. Before Vespasian set out for Rome, he gave his son Titus the command of the army that was to besiege Jerusalem ; he then went forward, and was met many miles from Rome by all the senate and nearly half the inhabitants. Nor did he in the least disappoint their expectations; being equally prompt to reward merit and pardon his adversaries ; in reforming the manners of the citizens and setting them the best example in his own. In the mean time Titus carried on the war against the Jews with that vigor which ended in the total destruction of the city. See JEWS. After this his soldiers would have crowned him as conqueror; but he refused the honor, alleging that he was only an instrument in the hand of heaven, that manifestly declared its wrath against the Jews. At Rome, however, all mouths were filled with his praises. His return, therefore, in triumph, with his father, was celebrated with all possible magnificence and joy. Among the rich spoils were vast quantities of gold taken out of the temple, with the book of the Jewish law. A triumphal arch was erected on this occasion, which remains almost entire to this day, and on which were inscribed all the victories of Titus over the Jews. Vespasian likewise built a temple to Peace, wherein were deposited most of the spoils ; and, having now calmed all the commotions in the empire, he shut the temple of Janus, which had been open -about five or six years. Vespasian, having thus given security and peace to the empire, resolved to correct numberless abuses which had grown up under his predecessors. To effect this with greater ease, he joined Titus with him in the consulship and tribunitial power, and in some measure admitted him a partner in all the highest offices of the state. He began with restraining the licentiousness of the army, and forcing them back to their pristine discipline. He abridged the processes that had been

carried to an unreasonable length in the courts of justice. He rebuilt such parts of the city as had suffered in the late commotions ; particularly the capitol, which he restored to more than its former magnificence, lie likewise built an amphitheatre, the ruins of which are still an evidence of its ancient-grandeur. The other ruinous cities of the em-pire also shared his paternal care; he improved such as were declining, adorned others, and built many anew. In such acts as these he passed a long reign of clemency and moderation ; so that it is said no man suffered by an unjust or a severe decree during his administration. Julius Sabinus seems to have been the only person who was treated with greater rigor than usual by this emperor. Sabinus was commander of a small army in Gaul, and had declared himself emperor upon the death of Vrtellius. His army, however, was soon after overcome by Vespasian's general, and he himself compelled to fly. For some time he wandered through the provinces, but, finding the pursuit every day become closer, he was obliged to hide himself in a cave : in which he remained concealed for no less than nine years, attended all the time by his faithful wife, who

purchased provisions for him by day, and repaired to him in the night. She was at last discovered in the performance of this pious office, and Sabinus was carried to Rome. Great intercession was made to the emperor on his behalf; Empona herself appearing with her two children, imploring her husband's pardon. But Sabinus had been too dangerous a rival, and he was executed. This seems to be the only instance in which Vespasian resented past offences. He caused the daughter of Vitellius, his avowed enemy, to be married into a noble family, and he himself provided her a suitable fortune. One of Nero's servants coming to beg pardon for having once rudely thrust him out of the palace, and insulted him when in office, Vespasian took his revenge by serving him just in the same manner. When any conspiracies were formed against him, he disdained to punish the guilty, saying, that they deserved rather his contempt for their ignorance than his resentment; as they seemed to envy him a dignity of which he daily experienced the uneasiness. His liberality towards the encouragement of arts and learning, was not less than his clemency. He settled a constant salary of 100,000 sesterces upon the teachers of rhetoric. He was particularly favorable to Josephus, the Jewish historian. Quintilian the orator, and Pliny the naturalist, flourished in his reign, and were highly esteemed by him. He was no less an encourager of all other excellencies in art ; and invited the greatest masters and artificers from all parts of the world1, making them considerable presents. Yet all his numerous acts of generosity

and magnificence could not preserve his character from the imputation of rapacity and avarice. He revived many obsolete methods of taxation : and even bought and sold commodities himself, to increase his fortune. He is charged with advancing the most avaricious governors to the provinces, to share their plunder on their return to Rome. He descended to some very dishonorable imposts, even to the laying a tax upon urine. When his son Titus remonstrated against the meanness of such a tax, Vespasian, taking a piece of money, demanded if the smell offended him ; and then added that this very money was produced by urine. But, in excuse for this, the exchequer, when Vespasian came to the throne, was so much exhausted that he informed the senate that it would require a supply of ⬆⬆300,000,000 (of our money) to reestablish the commonwealth. But, while the provinces were thus obliged to contribute to the support of the power, he took every precaution to provide for their safety; so that we find but two insurrections in this reign. In the fourth year of his reign Antiochus, king of Co-magena, holding a private correspondence with the Parthians, the declared enemies of Rome, was taken prisoner in Cilicia, by Pyrrhus the governor, and sent bound to Rome. But Vespasian generously gave him residence gtLacedae-mon, and allowed him a revenue suitable to his dignity. About the same time the Alani, a barbarous people inhabiting along the river Tanais, abandoned their barren wilds, and invaded the kingdom of Media. Thence passing into Armenia, after great ravages, they ovei threw king

Ti'idates with prodigious slaughter. Titus was seM to chastise their insolence ; but the barbarians retired at the approach of a Roman army, loaded with plunder. These incursions, however, were but a transient storm, the effect of which were soon repaired by the emperor's moderation and assiduity. He now formed and established a thousand nations, which had scarcely before amounted to 200. He had during his whole reign a particular regard to Britain ; his generals, Petilius Cerealis, and Julius Fron-tinus, brought the greatest part of the island into subjection ; and Agricola, who succeeded soon after,

completed what they had begun. See ENGLAND. In this manner, having reigned ten years, loved by his subjects, and deserving their affection, he was surprised by an indisposition at Campania, which he at once declared would be fatal, crying out in the spirit of Paganism, ‘methinks I am going to be a god.’ Removing thence to the city, and afterwards to a country seat near Reate, he was there taken with a flux, which brought him to the last extremity. However, perceiving his end approach, and just going to expire, he cried out that an emperor ought to die standing; wherefore, raising himself upon his feet, he expired in the hands of those that sustained him.

TITUS VESPASIAN. ††† Titus, being joyfully received as emperor, began his reign with every virtue that became an emperor and a man. Du-ring the life of his father there had been many imputations against him ; but, upon his exaltation to the throne, he seemed entirely to take leave of his former vices, and became an example of the greatest moderation and humanity. He had long loved Berenice, sister to Agrippa king of Judea, a woman of the greatest beauty and allurements. But, knowing that the connexion with her was disagreeable to the people of Rome, he sent her away, notwithstanding their mutual passion and the many arts she used to induce him to change his resolution. He next discarded all those who had been the former ministers of his pleasures, and forbore to countenance the companions of his looser recreations, though he had formerly taken great pains in their selection. This moderation, added to his justice and generosity, procured him the love of all good men, and the appellation of the delight of mankind, which all his actions seemed calculated to ensure. As he came to the throne with all the advantages of his father’s popularity, he was resolved to use every method to increase it. He therefore took particular care to punish all informers, false witnesses, and promoters of dissension, condemning them to be scourged in public, dragged through the theatre, and banished to the uninhabited parts of the em-pire, and sold as slaves. His courtesy and readiness to do good have been celebrated even by Christian writers ; his principal rule being never to send any petitioner away dissatisfied. One night, recollecting that he had done nothing beneficial to mankind the day preceding, he said, ‘ My friends, to day I have lost a day.’ In this reign, an eruption of mount Vesuvius did considerable damage, overwhelming many towns, and sending its ashes into countries more than 100 miles distant. Upon this memorable occasion,

Pliny the naturalist lost his life; for, being impelled by too eager a

curiosity to observe the eruption, he was suffocated in the flames. There happened also about this time a fire at Rome, which continued three days and nights successively, which was followed by a plague, in which 10,000 men were buried in a day. The emperor, however, did all that lay in his power to re-pair the damage sustained by the public ; and, with respect to the city, declared that he would take the whole loss of it upon himself. These disasters were in some measure counterbalanced by the successes in Britain, under Agricola. This excellent general, having been sent into that country towards the end of Vespasian's reign, showed himself equally expert in quelling the refractory, and civilising those who had formerly submitted to the Roman power. The Ordovices, or inhabitants of North Wales, were the first that were subdued. He then made a descent upon Mona, or the island of Anglesea, which surrendered at discretion. Having thus rendered himself master of the whole country, he took every method to restore discipline to his army, and to introduce some politeness among those whom he had conquered. He exhorted them, both by advice and example , to build temples, theatres, and stately houses. He caused the sons of their nobility to be instructed in the liberal arts ; he had them taught the Latin language, and induced them to imitate the Roman modes of dressing and living. Thus, by degrees, this barbarous people began to as-sume the luxurious manners of their conquerors, and in time even outdid them in all the refinements of sensual pleasure. For the success in Britain, Titus was saluted emperor the fifteenth time; but he did not long survive his honors, being seized with a violent fever, at a little distance from Rome. Perceiving his death approach, he declared that during the whole course of his life he knew but of one action which he repented of; but that action he did not think proper to express. Shortly after he died (not without suspicion of treachery from his brother Domitian, who had long wished to govern), in the forty-first year of his age, having reigned two years two months and twenty days.

DOMITIAN. ††† The love which all ranks of people bore to Titus facilitated the election of his brothei Domitian, notwithstanding the ill opinion many had already conceived of him. His ambition was already but too well known, and his pride soon appeared upon his coming to the throne, having declared that he had given the empire to his father and brother, and now received it again as his due. The beginning of his reign was universally acceptable to the people, as he appeared remarkable for clemency, liberality, and justice. He carried his abhorrence of cruelty so far as once to forbid the sacrificing of oxen. His liberality was such that he would not accept of the legacies that were left him by such as had children. His justice was such that he

would sit whole days and reverse the partial sentences of the ordinary judges. He was very liberal in repairing the libraries which had been burnt, and recovering copies of such books as had been lost, sending on purpose to. Alexandria to transcribe them. But he so< ###

began to show the natural deformity of his mind. No emperor before him entertained the people with such various and expensive shows. D ring these diversions he distributed rewards ; Bitting as president himself, adorned with a purple robe and crown, with the priests of Jupiter and the college of Flavian priests about him. The meanness of his occupations in solitude were a just contrast to his exhibitions in public. He usually spent his hours of retirement in catching flies, and sticking them through with a bodkin. His vices seemed every day to increase with the duration of his reign. His ungrateful treatment of Agricola seemed the first symptom of his natural malevolence. Domitian was always particularly fond of obtaining a military reputation, and therefore jealous of it in others. He had marched some time before into Gaul, upon a pretended expedition against the Catti, a people of Germany ; and, without ever seeing the enemy, resolved to have the honor of a triumph upon his return to Rome. For that purpose he purchased a number of slaves, whom he dressed in German habits ; and at the head of this miserable procession he entered the city, amidst the apparent acclamations and concealed contempt of all his subjects. The successes, therefore, of Agricola in Briton affected him with an extreme degree of envy. This admirable general routed the Caledonians; overcame Galgacus, the British chief, at the head of 30,000 men ; and, afterwards sending out a fleet to scour the coast, first discovered Great Britain to be an island. See SCOTLAND. He likewise discovered and subdued the Orkneys, and thus reduced the whole into a civilised province of the Roman empire. When the account of these successes was brought to Domitian he received it with a seeming pleasure, but real uneasiness. He thought Agricola’s rising reputation a reproach upon his own inactivity ; and, instead of attempting to emulate, he resolved to suppress the merit of his services. He ordered him, therefore, the external marks of his

approbation, and took care that triumphant ornaments, statues, and other honors, should be decreed him ; but at the same time he removed him from his command, under a pretence of appointing him to the government of Syria. Agricola surrendered up his government to Sallustius Lucullus, but soon found that Syria was otherwise disposed of. Upon his return to Rome, which was privately and by night, he was coolly received by the emperor; and, dying some time after in retirement, it was supposed that his end was hastened by Domitian's direction. Domitian soon after found the want of so experienced a commander in the many irruptions of the barbarous nations that surrounded the empire. The Sarmatians in Europe, joined with those in Asia, made a formidable invasion : at once destroying a whole legion, and a general of the Romans. The Dacians, under Decebalus their king, made an irruption, and overthrew the Romans in several engagements, so that every season became memorable for some remarkable overthrow. At last, the state making a vigorous exertion of its internal power, the barbarians were repelled, partly by money, which enabled them to make invasions afterwards to greater advantage. But

Domitian was resolved not to lose the honor of a triumph, and took the surname of Germanicus, for his conquest over a people with whom he never contended. In proportion as he merited ridicule, his pride every day demanded greater homage. He would permit his statues to be made only of gold and silver ; assumed to himself divine honors; and ordered that all men should treat him with the same appellations which they gave to the divinity. His cruelty was not behind his arrogance : he caused numbers of illustrious senators and others to be put to death upon the most trifling pretences. Sa-lustius Lucullus, his lieutenant in Britain, was destroyed only for having given his own name to a new kind of lance. Junius Rusticus died for publishing a book in which he commended Thrasea and Priscus, two philosophers who opposed Vespasian's coming to the throne. Such cruelties as these naturally produced rebellion. Lucius Antonius, governor in Upper Germany, assumed the ensigns of imperial dignity. As he was at the head of a formidable army, his success remained long doubtful ; but, a sudden overflowing of the Rhine dividing his army, he was set upon at that juncture by Normandus, the emperor's general, and totally routed. 'Domitian's severity was greatly increased by this success. To discover those who were accomplices with the adverse party, he invented new tortures. During these cruelties, he never pronounced sentence without a preamble full of gentleness and mercy. He was particularly terrible to the senate, the whole body of whom he

frequently threatened entirely to extirpate. At one time, he surrounded the senate-house with his troops, to the great consternation of the senators. At another he resolved to amuse himself with their terrors in a different manner. Having invited them to a public entertainment, he received them all very formally at the entrance of his palace, and conducted them into a spacious hall, hung round with black, and illuminated by a few melancholy lamps, that diffused light only sufficient to show the horrors of the place. All around were to be seen nothing but coffins, with the names of each of the senators written upon them, together with other objects of terror, and instruments of execution. While the company beheld all the preparations with silent agony, several men, having their bodies blackened, each with a drawn sword in one hand and a flaming torch in the other, entered the hall, and danced round them. After some time, when the guests expected nothing less than instant death, the doors were set open, and a servant informed them that the emperor gave all the company leave to withdraw. These cruelties were rendered still more odious by his lust and avarice. Frequently, after presiding at an execution, he would retire with the lewdest prostitutes, and use the same baths. His avarice, the consequence of his piofusion, knew no bounds. He seized upon the estates of all against whom he could find the smallest pretensions. He particularly exacted large sums from the Jews : and was excited against them, not only by avarice, but by jealousy. A prophecy had^ been long current in the east, that a person of the line of David should rule the world. Where-752

upon, this suspicious tyrant commanded all the Jews of the lineage of David to be diligently sought out, and put to death. Two Christians of that line, grandsons of St. Jude the Apostle, were brought before him ; but finding them poor, and no way ambitious, he dismissed them, considering them as too mean for his jealousy. Yet his persecution of the Christians was more severe than even that of Nero. By his letters and edicts they were banished and put to death with tortures. The predictions of astrologers also, concealing his death, kept him in the most tormenting disquietude. Every omen and prodigy gave him fresh anxiety. But a period was soon put to this monster’s cruelty. Among those whom he at once caressed and suspected was his wife Domitia, whom he had taken from .Tilius Lama, her for-mer husband. This woman, however, was be-come obnoxious to him for having placed

her affections upon one Paris, a player ; and he resolved to despatch her, with several others. It* was his custom to put down the names of all such as he intended to destroy in his tablets. Domitia, fortunately happening to get a sight of tllem, was struck at finding her own name in the catalogue of those fated to destruction. She showed the fatal list to Norbanus and Petronius, prefects of the praetorian bands, who were also set down ; as well as to Stephanus, the comptroller of the household, who joined in the conspiracy. These, after many consultations, fixed on the 18th of September for their attempt. Domitian was apprehensive of that day, and was now more particularly upon his guard. He had some time before secluded himself in the most secret recesses of his palace ; and at midnight was so affrighted as to leap out of his bed, inquiring of his attendants what hour it was. Upon their falsely assuring him that it was an hour later than that which he was taught to apprehend, quite transported, as if all danger was past, he prepared to go to the bath. Just then, Parthenius his chamberlain came to inform him that Stephanus desired to speak to him upon an affair of importance. The emperor, having ordered his attendants to retire, Stephanus entered with his left hand in a scarf, which he had worn thus for some days, to conceal a dagger. He began by giving information of a pretended conspiracy, and exhibited a paper in which the particulars were specified. While Domitian was reading the contents, with eager curiosity, Stephanus drew his dagger and struck him in the groin. Domitian caught hold of the assassin, and threw him upon the ground, calling out for assistance. He demanded also his sword ; but a boy, running to fetch it, found only the scabbard, for Parthenius had removed the blade. The struggle with Stephanus continued : Domitian still kept him under, and at one time attempted to wrest the dagger from his hand, at another to tear out his eyes. But Parthenius, with his freed man, a gladiator, and two subaltern officers, coming in, ran all furiously upon the emperor, and despatched him. In the mean time, some of the officers of the guard, being alarmed, came to his assistance, but too late ; however, they slew Stephanus on the spot. NERVA. ××× When it was publicly known that Domitian was slain} the ;oy of the senate was so

great that, being assembled with the utmost haste they began to load his memory with every reproach. His statues were commanded to be taken down; and a decree was made that all his inscriptions should be erased, his name struck out of the registers of fame, and his funeral omitted. The people looked on his death with indifference ; the soldiers alone, whom he had enriched by largesses, regretted his

death. The senate, therefore, resolved to provide a successor before the army could have an opportunity of appointing one ; and Cocceius Nerva was chosen the very day on which the tyrant was slain. Nerva was of an illustrious family, by birth a Spaniard, and above sixty-five years old when called to the throne. He was, at that time, the most remarkable man in Rome, for his virtues, moderation, and respect to the laws. When the senate went to pay him their submissions, he received them with his accustomed humility ; while Arius Antonius, his most intimate friend, congi itulated him on his accession to the em-pire , and indeed no emperor had ever shown himself more worthy of the throne ; his only fault being that he was too indulgent to his insidious courtiers. However, an excess of indulgence and humanity were faults that Rome could easily pardon: being long accustomed to tyranny, they regarded Nerva's gentle reign with rapture. Upon coming to the throne he solemnly swore that no senator of Rome should be put to death, by his command, during his reign ; and conferred great favors upon his particular friends. His liberality was so extensive that he was constrained to sell his gold and silver plate, with other rich moveablet, to enable him to continue it. He released the cities of the empire from many severe impositions, which had been laid upon them by Vespasian ; took off a rigorous tribute upon carriages ; and restored those to their property who had been unjustly dispossessed by Domitian. During his short reign he made several good laws. He prohibited the castration of male children ; which had been condemned by his predecessor, but not wholly removed. He put all those slaves to death who had, during the last reign, informed against their masters. He permitted no statues to be erected to honor him, and converted into money such of Domitian's as had been spared by the senate. He sold many rich robes, and much of the splendid furniture of the palace, and retrenched several unreasonable expenses at court. He had so little regard for money, that when Herodes Atticus had found a large treasure, and wrote to him how to dispose of it, he received for answer that he might use it; but the finder, still informing the emperor that it was a fortune too large for a private person, Nerva, admiring his honesty, wrote him that then he might abuse it. A life of such generosity and mildness was not, however, without enemies. Calpurnius Crassus, with some others, formed a dangerous conspiracy to destroy him ; but Nerva would use no severity ; he rested satisfied with banishing those who were culpable, though the senate were for inflicting more rigorous punishments. The most dangerous insurrection against his interests va* from the praetorian bands ; who, headed by Cas-ROME.

parius Olianus, insisted upon revenging the late emperor's death. Nejva, whose kindness to good men rendered him still more obnoxious to the vicious, did all in his power to stop the progress of this insurrection; he presented himself to the mutinous soldiers, and, opening his bosom, desired them to strike there, rather than be guilty of so much injustice. The soldiers, however, paid no regard to his remonstrances ; but, seizing upon Petronius and Parthenius, slew them in the most ignominious manner ; and even compelled the emperor to approve of their sedition, and to make a speech to the people, in which he thanked the cohorts for their fidelity. So disagreeable a constraint upon the emperor's inclinations was, in the end, attended with one good effect, as it caused the adoption of Trajan. Nerva perceived that, in the turbulent disposition of the times, he stood in need of an assistant in the empire, who might contribute to keep the licentious in awe. For this purpose, setting aside all his own relations, he fixed upon Ulpius Tra-jan, an utter stranger, who was then governor in Upper Germany, to succeed him. He then sent off ambassadors-to Cologne, where Trajan resided, intreating his assistance in punishing those from whom he had received such an insult. The adoption of this admirable man, proved so great a curb to the licentiousness of the soldiery that they continued in perfect obedience during the rest of this reign ; and Casparius, being sent to him, was either banished or put to death. The adoption of Trajan was the last public act of Nerva. In about three months after, having put himself in a violent passion with one Regulus a senator, he was seized with a fever, of which he soon after died, after a short reign of one year four months and nine days. He was the first foreign emperor who reigned in Rome, and was justly reputed a prince of great generosity and moderation. lie is also celebrated for his wisdom, one great instance of which he gave in the choice of his successor.

TRAJAN. ••• Trajan's family was originally from Italy, but he himself was born in Seville in Spain. He very early accompanied his father, who was a general of the Romans, in his expeditions along the Euphrates and the Rhine ; and, while yet very young, acquired considerable reputation for military accomplishments. He inured his body to fatigue ; he made long marches on foot ; and labored to acquire all that skill in war which was necessary for a commander. When he was made general of the army in Lower Germany, which was one of the most considerable employments in the empire, it made no alteration in his way of living ; and the commander no way differed

from the private tribune, except in his superior wisdom and virtues. The great qualities of his mind were accompanied with all .the advantages of person. His appearance was majestic; he was at the middle period of life, being forty-two years old; and possessed a modesty that seemed peculiar to him. Upon the whole, Trajan is distinguished as the greatest and best emperor of Rome. Others may have equalled him in war, and some have been his rivals in clemency and goodness ; but he seems the only prince who united these talents, and VOL. XVIII.

who appears equally to engage our admiration and regard. Upon being informed of the death of Nerva, he prepared to return to Rome, whither he was invited by the united entreaties of the state. He began his march with a discipline that was long unknown in the armies of the em-pire. The countries through which he passed were neither ravaged nor taxed ; and he entered the city, not in a triumphant manner, though he had deserved it often, but on foot, attended by the civil oflicers of the state, and followed in silence by the soldiers. It is almost unnecessary to enter into a detail of this prince's merits. His application to business, his moderation to his enemies, his modesty in exaltation, his liberality to the deserving, and his frugality in his own expenses, have all been the subject of panegyric among his contemporaries, and the admiration of succeeding ages. Upon giving the prefect of the praetorian band the sword, according to cus-tom, he made use of this remarkable expression, ' Take this sword, and use it, if I have merit, for me ; if otherwise, against me.' After which he added, ' That he who gave laws was the first who was bound to observe them.' His failings were his love of women, which, however, never hurried him beyond the bounds of decency; and his passion for war, to which he had been bred up from childhood. The first war he was engaged in after his coming to the throne was with the Dacians, who, during the reign of Domitian, had committed numberless ravages upon the provinces. He raised a powerful army and marched rapidly into those barbarous countries, where he was vigorously opposed by Decebalus, the Dacian king, who long withstood his boldest efforts ; but was at last entirely reduced, and his kingdom made a Roman province. On his re-turn to Rome, he entered the city in triumph ; and the rejoicings for his victories lasted 120 days. Having thus given peace and prosperity to the empire, Trajan continued his reign, loved, honored, and almost adored by his subjects. He adorned the city with public buildings ; freed it from such men as lived by their vices ; entertained persons of merit with the utmost familiarity ; and so little feared his enemies that he could scarcely believe he had any. It had

been happy for this great prince's memory if he had shown equal clemency to all his subjects; but, about the ninth year of his reign, he was persuaded to look upon the Christians with a suspicious eye. The veneration which he professed for the Pagan religion led him to oppose every innovation, and the progress of Christianity alarmed him. A law had been passed in which all Heterise, or societies dissenting from the established religion, were considered as illegal, and as nurseries of sedition. Under this law, the Christians were persecuted in all parts of the empire. Great numbers of them were put to death, as well by popular tumults as by edicts and judicial proceedings. At length Trajan receiving from Pliny, the proconsul in Bithynia, his celebrated accounts of the innocence and simplicity of the Christians, he suspended their punishments. But a total stop was put to them upon Tiberia-nus the governor of Palestine's sending him word that he was wearied out with executing

the laws against the Galileans, who crowded to execution in such multitudes that he was at a loss how to proceed. Upon this information, the emperor gavejorders that the Christians should not be sought after ; but if any offered themselves, they should suffer. Thus the rage of persecution ceased, and the emperor turned the force of his arms against the Armenians and Parthians, who began to throw off all submission to Rome. While he was employed in these wars, there was a dreadful insurrection of the Jews, in all parts of the empire. This wretched people ever expecting some signal deliverer, took the advantage of Trajan's absence to massacre numbers of the Greeks and Romans. This negan in Cyrene, a Roman province in Africa ; thence extended to Egypt, and next to the island of Cyprus. These places they in a manner dis-peopled. Their barbarities were such, it is said, that they ate the flesh of their enemies, wore their skins, sawed them asunder, cast them to wild beasts, made them kill each other, and studied new torments to destroy them. But these cruelties were soon reversed : the governors of the respective provinces, making head against their tumultuous fury, treated them with a retaliation of cruelty, and put them to death, not as human beings, but as wild beasts. As the Jews had practised their cruelties in Cyprus particularly, a law was enacted, by which it was made criminal for any Jew to set foot on the island. During these bloody transactions, Trajan was prosecuting his successes in the east. His first march was into Armenia, the king of which country had disclaimed all alliance with Rome, and received the ensigns of royalty and dominion from the monarch of Parthia. However, upon the news of Trajan's expedition, he abandoned his country to the invaders; while most of his governors and nobility came submissively to the emperor, acknowledging themselves his subjects and making him the most costly presents. Having thus taken possession of the country, and gotten the king into his power, he marched into Parthia; and, first entering the opulent province of Mesopotamia, reduced it to a Roman province. Thence he went against the Parthians, marching on foot at the head of his army ;

crossing the ri-vers, and conforming to all the severities of discipline imposed on the meanest soldier. He now conquered Syria, Chaldea, and the famous city of Babylon. Here, attempting to cross the Euphrates, he was opposed by the enemy, who were resolved to stop his passage : but he secretly caused boats to be made upon the adjoining mountains ; and, bringing them to the water side, passed his army with great expedition, but not without great slaughter on both sides. Thence he traversed tracts of country which had never before been invaded by a Roman army, and pursued the march of Alexander the Great in this direction. Having passed the Tigris, he advanced to the city Ctesiphon, which he took, and opened a passage into Persia. After subduing all the country on the Tigris, he marched south to the Persian Gulf, where he subdued a monarch possessed of a considerable island made by the divided streams of that river. Here, win-vt coming on, he was in danger of losing the

greatest part of his army. lie therefore, with indefatigable pains, fitted out a fleet, and, sailing down the(gulph, entered the Indian Ocean, conquering, even to the Indies, and subduing a part of them to the Roman empire. Prevented from pursuing further conquests by the revolt ot many of the provinces he had already subdued, and by the scarcity of provisions, increasing age also contributing to damp the ardor of his enterprize, he now returned along the Persian Gulf, and sending the senate an account of the nations he had conquered, the names of which alone composed a long catalogue, he prepared to punish those which had revolted. He began by laying the famous city of Edessa, in Mesopotamia, in ashes ; and soon not only retook such places as had thrown oft' the Roman yoke, but made himself master of the most fertile kingdoms of all Asia. In this train of successes he scarcely met with a repulse, except before the city Atra, in the deserts of Arabia. He finally resolved to give a master to the countries he had subdued. With this resolution he once more repaired to Ctesiphon, in Persia; and there, with great ceremony, crowned Parthanaspates king of Parthia, to the great joy of all his subjects. He established another king also over Albania, near the Caspian. Then, placing governors and lieutenants in other provinces, he resolved to return to Rome in a more magnificent manner than any of his predecessors. He accordingly left Adrian general in the east ; and continued his journey towards the capital, where the most magnificent preparations were made for his arrival. He had not got, however, farther than the province of Cilicia, when he found himself too weak to proceed. He therefore caused himself to be carried on shipboard to the city of Seleucia, where he died of apoplexy. During his indisposition, his wife

Plotina constantly attended him, and, knowing his dislike to Adrian, forged the will by which he succeeded. Trajan died in the sixty-third year of his age, after a reign of nineteen years, six months, and fifteen days. How high-ly he was esteemed by his subjects appears by their manner of blessing his successors, wishing them the fortune of Augustus and the goodness of Trajan. His military virtues, however, produced no real advantages to his country ; and all his conquests disappeared, when the powei was withdrawn that enforced them.

ADRIAN. ××× Adrian was by descent a Spaniard, and his ancestors were of the same city where Trajan was born. He was nephew to Trajan, and married to Sabina his grand-niece. When Trajan was adopted by Nerva, Adrian was a tribune of the army in Moesia, and was sent by the troops to congratulate the emperor on his advancement. His brother-in-law, who desired to congratulate Trajan himself, supplied Adrian with a carriage that broke down on the way : but Adrian was resolved to lose no time, and performed the rest of the journey on foot. This assiduity was very pleasing to the emperor; but he disliked Adrian for other reasons. He was expensive, involved in debt, inconstant, capricious and envious. These faults, in Trajan's opinion, could not be compensated either by his learning or his talents. His great skill in the

Greek and Latin languages, his intimate acquaintance with the laws of his country and the philosophy of the times, were no inducements to Trajan : who, being bred a soldier, wished a military man to succeed him, and therefore would not appoint a successor. His death, therefore, was concealed for some time by Plotina his widow, till Adrian had sounded the inclinations of the army, and found them firm in his interests. They then produced a forged instrument, importing that Adrian was adopted to succeed in the empire. By this artifice he was elected by all orders of the state, though then general at Antioch. Adrian's first care was to write to the senate, excusing himself for assuming the empire without their previous approbation ; imputing it to the hasty zeal of the army. He then began to pursue a course quite

opposite to that of Trajan, declining war, and promoting the arts of peace. He was satisfied with preserving the limits of the empire, and no way ambitious of extensive conquest. He therefore abandoned all the conquests which Trajan had made, judging them to be of no advantage to the empire; and made the Euphrates its boundary, placing the legions along its banks to prevent the incursions of the enemy. Having thus settled the affairs of the east, and leaving Severus governor of Syria, he took his journey by land to Rome, sending the ashes of Trajan thither by sea. Upon his approach to the city, he was informed of a magnificent triumph that was preparing for him ; but this he modestly declined, desiring that these honors might be paid to Trajan's memory. In consequence a most superb triumph was decreed, in which Trajan's statue was carried as a principal figure in the procession, who is thus said to have been the only man that ever triumphed after he was dead ! His ashes were placed in a golden urn, upon the top of a column 140 feet high. On this were engraven the particulars of all his exploits in basso-relievo, a work of immense labor, still remaining. These testimonies of respect to the memory of his predecessor did great honor to the heart of Adrian. His virtues, however, were contrasted by a strange mixture of vices. He wanted strength of mmd to preserve his general rectitude of character. As an emperor, however, his conduct was most admirable, as all his pub-lic transactions appear dictated by the soundest policy, and the most disinterested wisdom. See ADRIAN.

ANTONINUS Pius AND ANTONINUS PHILOSOPHUS. ••• Adrian was succeeded by Marcus Antoninus, afterwards surnamed the Pious, whom he had adopted some time before his death. See ANTONINUS Pius. From the beginning of his reign we may date the decline of the Roman empire. From the time of Caesar to that of Trajan scarcely any of the emperors had either abilities or inclination to extend the limits of the empire, or even to defend it against the barbarous nations who surrounded it. During all this space only some inconsiderable provinces of the north of Italy, and part of the island of Britain, had been subjugated. However, as yet, nothing was lost; but the degeneracy and corruption of the people had sown those seeds of dissolution which the empire quickly began to feel. The disorders

were grown to such a height that even Trajan himself could not cure them. Indeed his eastern conquests could scarcely have been preserved though the republic had been existing in all its glory. Dacia, being nearer to the centre of government, was more easily preserved ; and remained long subject to Rome. During the twenty-three years of the

reign of Antoninus few remarkable events happened. Historians are excessive in their praises of his justice, generosity, and other virtues, both public and private. He put a stop to the persecution of the Christians, and re.luced the Brigantes, a tribe of Britons, who had revolted. However, during his reign, several calamities befel the empire. The Tiber, overflowing its banks, laid the lower part of Rome underwater. The inundation was followed by a fire, and this by a famine, which swept off great numbers, though the emperor took the ut-most care to supply the city from the most distant provinces. At the same time the cities of Narbonne in Gaul, and Antioch in Syria, with the great square in Carthage, were destroyed by fire ; however the emperor soon restored them. He died in the year 163, much lamented by his subjects, and was succeeded by Marcus Aurelius, surnamed the Philosopher, whom he had adopted towards the latter end of his reign. For the transactions of this emperor see ANTONINUS PHILOSOPHUS. Nerva, Trajan, Adrian, and the Antonines, are stiled by historians the five good emperors.

COMMODUS. ❓❓❓ After the death of Marcus Aurelius his sonCommodus succeeded to the imperial throne without opposition. He was in every respect unworthy of his father, and was generally believed to have been the son, not of Marcus Aurelius, but of a celebrated gladiator, with whom the empress Faustina was said to be intimate. According to Mr. Gibbon, however, ‘ Commodus was not, as has been represented, a tiger born with an insatiate thirst of human blood, and capable, from his infancy, of the most inhuman actions. Nature had formed him of a weak, rather than a wicked disposition. His simplicity and timidity rendered him the slave of his attendants, who gradually corrupted his mind. His cruelty which at first obeyed the dictates of others degenerated into habit, and at length be-came the ruling passion of his soul.’ But it is certain that the actions of this emperor were flagitious almost beyond a parallel. Many strange instances of his cruelty are related by the ancients. He is said to have cut asunder a corpulent man whom he saw walking along the street; partly to try his own strength, in which he excelled ; and partly out of curiosity, to see his entrails drop out at once. He took pleasure in cutting off one of the feet, and putting out one of the eyes, of such as he met in his rambles through the city ; telling the former, after he had thus maimed them, that now they belonged to the nation Monopodii one-footed ; and the latter, that they were now become Luscinii, one-eyed Some he murdered because they were negligently dressed ; others because they seemed to be trimmed with too much nicety. He pretended to great skill in surgery, especially at letting blood : but sometimes, instead of curing those

whom he visited, or who were prevailed upon io recur to him, he cut off, by way of diversion, their ears and noses. His lewdness and debaucheries were equally remarkable. He is said to hare been exceedingly well skilled in archery, and to have performed incredible feats in that art ; tc have run an elephant through with his spear, and to have killed in the amphitheatre 100 lions, one after another, each at one blow. He entered the lists with the common gladiators, and came off conqueror 735 times ; whence he subscribed himself the conqueror of 1000 glad-diators. The public transactions of this reign were few. This emperor concluded a peace with the Marcomanni, Quadi, See., and promised to abandon all the castles and fortresses held by the Romans in their country, excepting such as were within five miles of the Danube. With the other German nations whom his father had reduced, he concluded a very dishonorable peace ; nay, of some he purchased it with money. Soon after his return to Rome his sister Lucilla, perceiving that he was universally abhorred for his cruelty, formed a conspiracy against his life. Among the conspirators were many senators. It was agreed that they should fall upon the emperor while he was going to the amphitheatre through a narrow and dark passage ; and that Claudius Pompei-anus, to whom Lucilla had betrothed her daughter, should give the first blow. But he, instead of striking at once, showed him the naked dagger, and cried out, ‘ This present the senate sends you :’ so that the guards had time to rescue the emperor, and to seize the conspirators, who were put to death. Commodus now banished his sister to the island of Capreae, where he soon after caused her to be murdered. His favorite minister was one Perennis ; who in cruelty seems to have been nothing inferior to those of the most tyrannical emperors. During the first part of the reign of Commodus he ruled with an absolute sway ; but at last was torn in pieces by the enraged soldiery. He was succeeded by a freed man named Cleander ; and the new minister abused his power more flagrantly than even his predecessor. All things were openly set to sale : offices, provinces^ public revenues, justice, and the lives of men both innocent and guilty. The minister, who ruled the emperor without control, infused such terrors into his mind that he changed the captains of his guards almost continually. One Niger enjoyed the dignity only six hours ; another only five days ; and others a still

shorter space. Most of those officers lost their lives with their employments ; being accused of treason by Cleander, who continually solicited, and at last obtained, that important post. A. D. 187 happened a remarkable revolt. One Maternus, a common soldier, having fled from his colors, and, being joined by many other deserters, grew in a short time so powerful that he over-ran and plundered great part of Gaul and Spain ; stormed the strongest cities ; and struck the emperor and people of Rome with such terror that troops were raised, and armies despatched against them. Pescennius Niger was sent against him in Gaul, where he became very intimate with Severus, then governor of Lyons, who wrote a letter to the emperor, commending the prudtr*

and gallant behaviour of Niger in pursuing the rebels. Maternus, being reduced to great straits, divided his men into several small bands, and marched them by different roads into Italy, with intent to murder the emperor during the festival of Cybele, and to seize upon the empire. They all arrived at Rome undiscovered ; and several of his men had already mixed with the emperor's guards, when others of his own party betrayed him. He was immediately seized and executed ; and his death put an end to the disturbances which some of his followers had begun to raise in other provinces. In the same year broke out the most dreadful plague, says Dio Cassius, that had been known. It lasted two or three years ; and raged with the greatest violence at Rome, where it often carried off 2000 persons a day. The following year a dreadful fire, which consumed a great part of the city, was kindled by lightning ; and a dreadful famine followed, occasioned, it is said, by Cleander, who, having in view nothing less than the sovereignty itself, bought up underhand all the corn, to raise the price of it, and gain the affections of the soldiers and people by distributing it among them. Others say that Papinus Dionysius, whose duty it was to supply the city with provisions, contributed towards the famine, to make the people rise against Cleander. The populace ascribed all their calamities to this hated minister ; and one day, while they were celebrating the Circen-sian games, a troop of children, having at their head a young woman of an extraordinary stature and fierce aspect, entering the circus, began to utter many bitter invectives and dreadful curses against Cleander ; which being answered by the people in the same style, the mob rose, and flew to the place where Cleander resided with the emperor, demanding his head. Hereupon Cleander ordered the praetorian cavalry to charge the multitude ; which they did, driving them with great slaughter into the city. But the populace, discharging showers of stones, bricks, &c., from the tops of houses and

windows, and the city guards at the same time taking part with the people, the praetorian horse were put to flight ; nor was the slaughter ended till the emperor caused the head of Cleander to be struck off and thrown out to the enraged populace. The emperor himself did not long survive Cleander ; being cut off by a conspiracy of Marcia his favorite concubine, Laetiis captain of the guards, and Eclectus his chamberlain.

HELVIUS PERTINAX. ••• No sooner was the death of Commodus known than the senate assembled, and, declaring him a public enemy, ordered his statues to be broken to pieces, his name to be rased out of all public inscriptions, and his bodˆy to be dragged through the streets and thrown into the Tiber. But Helvius Pertinax, whom the conspirators had previously designed for the empire, and who had already assumed it, prevented this last outrage by telling the senators that Commodus was already buried. This extraordinary personage had already passed through many changes of fortune. He was the son of an enfranchised slave called JElius, who gave Urn as much learning as to qualify him for a shopkeeper. He then became a schoolmaster

afterwards studied the law, and then became a soldier ; in which station his behaviour raised him to be captain of a cohort against the Parthians. After this he went through the usual gradation of military preferment in Britain and Moesia, until he became the commander of a legion under Aurelius. ••n this station he performed such services against the barbarians that he was made consul, and successively governor of Dacia, Syria, and Asia Minor. In the reign of Commodus he was bani'shed ; but soon after recalled, and sent into Britain to reform the abuses in the army. In this employment he was opposed by a sedition among the legions, and left for dead among many that were slain. However he got over this danger, severely punished the mutineers, and established discipline among the troops he was sent to command. Thence he was removed into Africa, where the sedition of the soldiers had like to have been again fatal to him. Removing from Africa, and fatigued with an active life, he betook himself to

retirement : but Commodus made him prefect of the city ; which office he possessed when the conspirators fixed upon him to be emperor. His being advanced by Commodus only made him dread becoming an object of his suspicion. When, therefore, the conspirators repaired to his house by night he considered them as messengers of death ; and, upon Laetus entering his apartment, Pertinax said that he had long expected to end his life in that manner, and wondered that the emperor had deferred it so long : and it was not until he was urged that he would accept of the empire. Being carried to the camp he was immediately proclaimed : soon after the citizens and senate consented ; the joy for the election of a new sovereign not being superior to that for the death of the old. The provinces followed the example of Rome ; so that he began his reign with universal satisfaction in the sixty-eighth year of his age. Nothing could exceed the general wisdom and justice of this monarch's reign. He punished all those who had served to corrupt the late emperor, and disposed of his private possessions to public uses. He attempted to restrain the licentiousness of the praetorian bands, and put a stop to the injuries and insolences they committed against the people ; sold most of the buffoons and jesters of Commodus's slaves; frequented the senate as often as it sat ; and never refused an audience even to the meanest of the people. His success in foreign affairs was equal to his internal policy. When the barbarous nations abroad had certain intelligence that he was emperor they immediately laid down their arms, well knowing what they were to expect from so experienced a commander. His great fault was avarice ; and that hastened his ruin. The prsetorian guards, whose manners he had attempted to reform, having been long corrupted by the profusion of their former monarchs, began to hate him for his parsimony. They therefore resolved to dethrone him; and for that purpose declared Maternus, an ancient senator, emperor. Maternus, however, was too just to the merits of Pertinax to concur in their designs, and fled out of the city. They then nominated Falco, another senator ; whom the senate itself would have ordered for execution had not Pertinax interposed. The praetorians then resolved to seize upon the emperor and empire at once. They accordingly, in a tumultuous manner, marched through the streets of Rome, and entered the palace without opposition. The greatest part of the emperor's attendants forsook him ; whilst those who remained earnestly entreated him to fly to the body of the people. However he rejected their advice ; declaring that it was unworthy of his imperial dignity, and all his past actions, to save himself by flight. Having thus resolved to face the rebels, he had some hopes that his presence would awe them. But his virtues and dignity availed little against a tumultuous rabble, nursed up in vice, and the ministers of former tyranny. Not only the emperor, but Eclectus, and

some of his attendants, who attempted to defend him, were slain. Thus, after an excellent reign of three months, Pertinax fell a sacrifice to the licentious fury of the army : from his adventures he was called the ‘ tennis-ball of Fortune.’ The soldiers, having committed this outrage, retired wilh great precipitation ; and, getting out of the city, quickly fortified their camp, expecting to be attacked by the citizens. Two days having passed without any attempt of this kind, they became more insolent ; and, to make use of the power they possessed, made proclamation that they would sell the em-pire to any who would purchase it at the highest price. In consequence of this infamous proclamation only two bidders were found, *viz.* Sulpi-cianus and Didius Julianus; the former prefect of the city, and son-in-law to Pertinax ; the latter a great lawyer, and the wealthiest man in the city ; both consular persons. Didius was sitting with some friends at dinner when the proclamation was published ; and, being charmed with the prospect of unbounded power, immediately rose from the table and hastened to the camp. Sulpi-cianus was there before him ; but, as he had more promises than treasure to bestow, the offers of Didius, who produced immense sums of ready money, prevailed.

JULIAN I. ××× Didius Julianus was received into the camp by a ladder, and they instantly swore to obey him as emperor. From the camp he was attended by his electors into the city ; the whole body of his guards, which consisted of 10,000 men, ranged around him in such order as if they had prepared for battle. The citizens, however, refused to confirm his election ; and cursed him as he passed. Upon being conducted to the senate house, he addressed the few senators that were present in a very laconic speech : ‘ Fathers, you want an emperor ; and I am the fittest person you can choose.’. Even this was unnecessary, as the senate durst not re-fuse their approbation. His speech being backed by the army, to whom he had given about a million of our money, succeeded. The choice of the soldiers was confirmed by the senate, and Didius was acknowledged emperor, in the fifty-seventh year of his age. It should seem by this weak monarch’s conduct, when seated on the throne, that he thought the government of an em-pire rather a pleasure than a toil. He gave him-758

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self up to ease and inactivity, utterly regardless of the duties of his

station. He was mild and gentle indeed ; but that avarice, by which he became opulent, still followed him in his exaltation ; so that the very soldiers who elected him began to detest him. The people also, against whose consent he was chosen, were no less inimical. Whenever he issued from his palace they poured forth their imprecations against him ; crying out that he was a thief and had stolen the empire. Didius, however, patiently bore it all. While Julian was thus contemptuously treated at home, two valiant generals in different parts of the empire disclaimed his authority, and resolved to seize the throne. These were, Pescennius Niger, governor of Syria ; and Septi-mius Severus, commander of the German legion. Niger was beloved by the people for his clemency and valor ; and his proposing Pertinax for his model, and resolving to revenge his death, gained him universal esteem. He easily induced his army in Syria to proclaim him emperor ; and his title was soon after acknowledged by all the kings and potentates in Asia, who sent their ambassadors to him. The pleasure of being thus treated as a monarch, retarded his endeavours to secure his title. Satisfied with the homage of those about him. he neglected the opportunity of suppressing his rivals ; and gave himself up to luxury and feasting at Antioch. The conduct of Severus, an African by birth, was very different. Being proclaimed by his army, he began by promising to revenge the death of Pertinax, and took upon him his name. He next secured all the strong places in his province; and then resolved to march with his whole force directly to Home. In the mean time Didius Julianus. who disregarded the attempts of Niger, was greatly alarmed at those of Severus. He first procured the senate to proclaim him a traitor. He then attempted to make the necessary provisions to oppose him, but found nothing but disappointment. The cohorts that elected him were enervated by vice and luxury ; the people detested his cause ; and the cities of Italy had long been disused to the arts of war. The unfortunate Didius, unequal to the task of empire, and confounded with the multiplicity of councils, could take no other resolution out that of awaiting his rival's coming to Rome. Accordingly, soon after being informed of his approach, he obtained the consent of the senate to send his ambassadors, offering to make him a partner of the empire. But Severus rejected this offer, conscious of his own strength, and of the weakness of the proposer. The senate soon .appeared of the same sentiments; alleging that he who could not defend the empire was not worthy to govern it. Didius vainly endeavoured to reduce them to their duty, first by entreaties, and then by threats ; but these served only to hasten his destruction. The senate being called together, as was formerly practised by the consuls, they unanimously decreed that Severus should be proclaimed. They then commanded Didius to be slain, and sent assassins to the pa-

lace, where they found him disarmed, and weeping among a few friends that still adhered to his interest. When thˆy began to prepare for their

fatal errand he expostulated with them, demanding what crime he had committed? The executioners, neither able nor willing to enter into the merits of the cause, led him into the secret baths of the palace, and, obliging him to stretch his neck forwards, struck off his head, and placed it up in those courts where he had formerly pleaded with great success.

SEVERCS. ††† The senate then sent ambassadors to Severus, yielding him obedience, granting him the ensigns and the usual titles of empire, and informing him of the death of Didius. Severus, who was now about forty-seven years of age, received them with all proper respect ; and, entertaining them honorably, continued his march towards Rome. As he came near the city, his first exertion of power was to have all the praetorian soldiers who had sold the empire come forth unarmed to meet him. These, though sensible of their danger, had no other resource but corrcpliance ; and accordingly came forward with branches of laurel to welcome his approach. Severus soon showed how little capable their submission was to atone for their past offences : after upbraiding them with their crimes, he commanded them to be stripped of their military habits, deprived of the honor of soldiers, and banished 100 miles from Rome. He then entered the city in a military manner, took possession of the palace, and promised the senate to conduct himself with clemency and justice. But, though he united great vigor with the most refined policy, his African cunning was not relished. He is celebrated for wit, learning, and prudence; but blamed for infidelity and cruelty. He seemed equally disposed to the greatest acts of virtue and the most bloody severities. He seized all the children of such as had employment or authority in the east, and detained them as pledges for their fathers' loyalty. He next supplied the city with corn ; and then with all possible expedition marched against Niger, who was still considered as emperor of the east. One chief obstacle to his march was, the leaving be-hind him Clodius Albinus, commander of the legions in Britain, whom he wished to secure in his interests. For this end he gave him hopes of succeeding to the empire ; insinuating that ††† he himself was declining, and his children were but infants. He wrote in the same style to the senate, gave, him the title of Caesar, and ordered money to be coined with his image. These artifices serving to lull Albinus into false security, Severus marched against Niger with all

his forces. After some undecisive conflicts, the last great battle fought between these extraordinary men was upon the plains of Issus, on the very spot where Alexander had formerly conquered Darius. The neighbouring mountains were covered with vast numbers of people, who wished to be spectators of an engagement that was to determine the empire of the world. Severus was conqueror; and Niger's head, being struck off, was insultingly carried through the camp on the point of a lance. This victory secured Severus in the throne. But the Partnians, Persians, and some neighbouring nations took up arms, under pretence of vindicating Niger's cause. The emperor marciied against them in person, had many

engagements with them, and obtained such signal victories over them as enlarged the empire, and established peace in the east. Severus now turned his views against Albinus, whom he resolved to destroy. For this purpose he sent assassins into Britain, under a pretence of bringing him letters, but in reality to despatch him. Albinus, apprised of their designs, recurred to open force, and proclaimed himself emperor. Nor was he without a powerful army to support his pretensions ; of which Severus being sensible, bent his whole force to oppose him. From the east he continued his course across the straits of Byzantium, into the most western parts of Europe, without intermission. Albinus went over to meet him with his forces into Gaul ; the campaign on both sides was carried on with great vigor. Fortune seemed variable ; but at last a decisive engagement was fought, one of the most desperate recorded in the Roman history. It lasted from morning till night, without any seeming advantage on either side ; at length the troops of Severus began to fly, and, he himself happening to fall from his horse, the army of Albinus cried out, Victory. But the engagement was renewed with vigor by Laetus, one of Severus's commanders, who came up with a body of reserve, designing to destroy both parties and make himself emperor. This attempt turned out entirely to the advantage of Severus. He charged with such fury and exactness that he soon obtained the victory ; and, pursuing them into the city of Lyons, took Albinus prisoner, and cut off his head ;

treating his dead body with insults that could only flow from a mean and revengeful temper. All the senators who were slain in battle he ordered to be quartered, and such as were taken alive were immediately executed. Having thus secured himself in the empire, upon his return to Rome he loaded his soldiers with rewards and honors, giving them such privileges as strengthened his own power, while they destroyed that of the state ; for the soldiers, who had hitherto showed the strongest inclination to an abuse of power, were now made arbiters of the fate of emperors. Being thus se-cure of his army, he resolved to give way to his natural turn for conquest, and to oppose his arms against the Parthians, who were then invading the frontiers. Having therefore previously given the government of domestic policy to one Plautianus, a favorite, to whose daughter he married his son Caracalla, he set out for the east, and prosecuted the war with his usual expedition and success. He forced submission from the king of Armenia, destroyed several cities in Arabia Felix, landed on the Parthian coasts, took and plundered the famous city Ctesiphon, marched back through Palestine and Egypt, and at length returned to Rome in triumph. During this interval Plautianus, who was left to direct the affairs of Rome, began to think of aspirin? to the empire himself. Upon the emperor's return he employed a tri-l une of the praetorian cohorts to assassinate him ai d his son Caracalla. The tribune informed Severus of his favorite's treachery. He at first received it as an improbable story, and as the artifice of some who envied his favorite. But he was at last persuaded to permit the tribune to

conduct Plautianus to the emperor's apartments. The tribune went and amused him with a pretended account of his killing the emperor and his son, desiring him, if he wished to see them dead, to come with him to the palace. As Plautianus ardently desired their deaths, he gave credit to this relation ; and, following the tribune, he was conducted at midnight into the innermost recesses of the palace. But what must have been his disappointment, when, instead of finding the emperor murdered, as he expected, he beheld the room lighted up with torches, and Severus, surrounded by his friends, prepared in array to receive him. Being asked by the emperor, with a stern countenance, what had brought him there at that unseasonable time, he was utterly confounded, and, not knowing what excuse to make, confessed the whole, entreating forgiveness. The emperor seemed inclined to pardon him, but Caracalla spurned him away in the midst of his supplications, andwithhis sword ran him through the body. After this Severus spent a considerable time in visiting some cities in Italy, permitting none of

his officers to sell places of trust or dignity, and distributing justice with the strictest impartiality. He took such an exact order in managing his exchequer that, notwithstanding his great expenses, he left more money behind him than any of his predecessors. His armier also were kept upon the most respectable footing , so that he feared no invasion. Being equally attentive to the preservation of all pans of the em-pire, he resolved to make his last expedition into Britain, where the Romans were in danger of being destroyed. Wherefore, after appointing his sons Caracalla and Geta joint successors in the empire, and taking them with him, he landed in Britain, to the great terror of such as had incurred his resentment. Upon his progress into the country, he left Geta in the south part of the province, which had continued in obedience, and marched with Caracalla against the Caledonians. In this expedition his army suffered prodigious hardships in pursuing the enemy; they were obliged to hew their way through intricate forests, to drain extensive marshes, and form bridges over rapid rivers : so that he lost 50,000 men by fatigue and sickness. However, he supported all these inconveniences with the greatest bravery ; and prosecuted his successes with such vigor that he compelled the enemy to sue for peace, which, it is said, they obtained upon the surˆ render of a considerable part of their country. Having made peace, and built his celebrated wall, he retired to York ; where, partly through age and fatigue, partly through grief at the vices of Caracalla, he found himself fast declining, having already lost the use of his feet. To add to his distress, he was told that the soldiers had revolted, and declared his son emperor. In this exigence he seemed once more to recal his natural vigor ; he got himself immediately put into his litter, and commanded the new emperor, wuu the tribunes and centurions, to be brought befoie him. Though all were willing to court the favor of the young emperor, such was the authority o. Severus that none dared to disobey. They appeared before him confounded and tremblinsr. and implored pardon upon their knees. Upon

which, putting his hand to his head, he cried out, ‘ Know that it is the

head that governs, and not the feet.' However soon perceiving his disorder to increase, and knowing that he could not outlive it, he called for poison ; which being refused him, he loaded his stomach with food, which, not being able to digest, soon brought him to his end, in the fifty-sixth year of his age, after an active though cruel reign of about eighteen years.

CARACALLA. ××× Caracalla and Geta, being acknowledged as emperors by the army, began to show a mutual hatred to each other even before their arrival at Rome. Their only agreement was, in resolving to deify Severus their father ; but soon after each sought to attach the senate and army to his own interest. They weretof very opposite dispositions ; Caracalla was fierce and cruel to an extreme ; Geta was mild and merciful ; so that the people soon found the dangerous effects of being governed by two princes of equal power and contrary inclinations. But this opposition was short ; for Caracalla, resolved to govern alone, furiously entered Geta's apartment, and, followed by ruffians, slew him in his mother's arms. Having committed this detestable murder, he issued with great haste from the palace, crying out, that his brother would have slain him ; and that he was obliged, in self-de- fence, to retaliate the intended injury. He then took refuge among the praetorian cohorts, and in a pathetic tone began to implore their assistance, still making the same excuse for his conduct. To this he added a much more prevailing argument, promising to bestow upon them the largesses usually given upon the election of new emperors, and distributing among them almost all the treasures which had been amassed by his father. By such persuasives the soldiers did not hesitate to proclaim him sole emperor, and to stigmatise the memory of his brother Geta as a traitor. The senators were induced, through favor or fear, to approve what had been done by the army ; Caracalla wept for the death of his brother whom he had slain ; and, to carry his hypocrisy to the utmost extreme.ordered him to be adored as a god. After this ne continued to mark his course with blood. Whatever was done by Domitian or Nero fell short of this monster's barbarities. Lsetus, who first advised him to murder his brother, was the first who fell a sacrifice to his jealousy. His own wife Plau-tina followed. Papilian, the renowned civilian, was beheaded for refusing to write in vindication of his cruelty; answering the emperors request, by observing, ' That it was much easier to commit a parricide than to defend it.' He commanded all governors to be slain whom his brother had appointed; and destroyed no less than 2000 persons who had adhered to the party. Whole nights were spent in the execution of his bloody decrees ; and the dead bodies of people of all ranks were carried out of the city in carts, where they were burnt in heaps,

without any of the ceremonies of a funeral. He once ordered his soldiers to set upon a crowded audience in the theatre, only for discountenancing a charioteer whom he happened to favor. Perceiving himself uated by ××he people, he said that he could insure

his own safety, so that he neither valued their reproaches, nor feared their hatred. This safety which he so much trusted in was the protection of his soldiers. He had exhausted the treasury, drained the provinces, and committed a thousand acts of rapacity, merely to keep them stedfast in his interests ; and, being disposed to trust himself with them particularly, he resolved to lead them upon a visit through all the provinces of the empire. He first went into Germany ; where he dressed himself in the habit of the country. Thence he travelled into Macedonia, where he pretended to be a great admirer of Alexander the Great; and, among other extravagancies, caused a statue of that monarch to be made with two faces ; one of which resembled Alexander and the other himself. He called himself Alexander ; walked as he was told that monarch had walked ; and, like him, bent his head to one shoulder. Shortly after, arriving at Lesser Asia and the ruins of Troy, as he was viewing the tomb of Achilles, he took it into his head to resemble that hero ; and, one of his freed men happening to die at that time, he used the same ceremonies that were performed at the tomb of Patroclus. Passing thence into Egypt, he massacred in the most terrible manner the inhabitants of Alexandria, on account of the satires they composed on him. See ALEXANDRIA. Going thence into Syria, he invited Artabanns, king of Parthia to a conference, which he ended by a most ‘infernal piece of treachery. Upon his re-turn towards Rome, his vices seemed inexhaustible ; for, having been guilty of parricide, he now resolved to marry the mother of Geta whom he had slain. One day seeing her drop her veil, which disclosed her naked bosom, which was extremely beautiful, he told her that he would possess those charms if it were lawful. To this unnatural request the worthless woman answered that he might enjoy all things who possessed all. Whereupon, setting aside all respect for his deceased father, he celebrated his nuptials with her in public, totally disregarding the censures and sarcasms of mankind. However, though he disregarded shame, he was not insensible to fear. He was continually consulting astrologers what death he should die. He sent one of his confi-dants, named Maternianus, to consult all the astrologers in the city concerning his end. Maternianus considered this as a proper time to ge rid of Macrinus, the emperor’s commander in Mesopotamia. He therefore informed him by letter, as if from the astrologers, tnat Macrinus had a design against his life ; and advised

him to put the conspirator to death. This letter was sent sealed, and made up, amongst many others, to be delivered to the emperor, as he was preparing for a chariot-race. However he gave the packet to Macrinus to read over, and to inform him of the contents when at leisure. In perusing these letters, when Macrinus came to that which regarded himself, he was filled with surprise and terror. He reserved the letter to himself, and acquainted the emperor with the substance of the rest. He then set about the most probable means of compassing his death. He applied to one Martialis, a man of great strength, and a centurion of the guard?, who hated the emperor

on account of the death of a brother, whom Ca-lacalla had ordered to be slain. Macrinus exhorted him to revenge his brother's death by killing the tyrant. Martialis readily undertook the dangerous task. Accordingly, as Caracalla was riding out one day near a city called Carrae, he withdrew privately, upon a natural occasion, with only one page to hold his horse. This was the opportunity Martialis had long and ardently desired ; wherefore, running to him as if he had been called, he stabbed the emperor in the back, so that he died immediately. Martialis returned to his troop ; but, retiring, he endeavored to se-cure himself by flight. But his companions missing him, and the page telling what had been done, he was pursued by the German horse and cut in pieces. During the reign of this execrable tyrant, which pontinued six years, the em-pire was every day declining; the soldiers were entirely masters of every election ; and, as there were various armies in different parts, so there were as many interests all opposite to each other. Caracalla, by satisfying their most unreasonable appetites, destroyed all discipline among them, and all subordination in the state.

MACRINUS. ??? The soldiers, after a suspense of two days, fixed upon Macrinus, who took care to conceal his being privy to Caracalla's murder. The senate confirmed their choice, and likewise that of his son Diadumenus, whom he took as a partner. Macrinus was fifty-three years old when he entered upon the government. He was of obscure

parentage ; some say by birth a Moor, who, by the mere rotation of office, being first made prefect of the praetorian bands, was now, by treason and accident, called to fill the throne. Little is recorded of this emperor, except his engaging in a bloody, though undecided, battle with Artabanus king of Parthia, who, finding his real enemy dead, made peace, and returned into Parthia. See PARTHIA. Something is also said of the severity of this emperor's discipline ; for to such a pitch of licentiousness was the Roman army now arrived that the most severe punishments were unable to restrain the soldiers ; and yet the most gentle inflictions were looked upon as severity. It was this rigorous discipline ; with the artifices of Mcesa, grandmother to Heliogabalus the natural son of Caracalla, that caused the emperor's ruin. Heliogabalus was priest of a temple dedicated to the sun, in Emˆsa, a city of Phoenicia; and, though but fourteen years old, was greatly loved by the army for the beauty of his person, and the memory of his father, whom they still considered as their benefactor. This was soon perceived by the grandmother ; who, being very rich in gold and jewels, gave liberal presents among them, while they frequently repaired to the temple, both from the garrison in the city and the camp of Macrinus. This intercourse growing every day" more frequent, the soldiers, disgusted with the severities of Macrinus, began to think of placing Heliogabalus in his stead. Accordingly, sending for him to their camp, he was imediately proclaimed ; and such were the hopes of his virtues that all men began to affect his interests. Macrinus, who was pursuing his pleasures at Antioch, gave but little attention to the first report : only sending his lieutenant Julian, with some legions, to quell the insurrection. However these, like the rest, soon declared for Heliogabalus, and slew their general. Macrinus found he had treated the rebellion too slightly ; he therefore resolved, with his son, to march directly against the seditious legions, and force them to their duty. Both parties met on the confines of Syria : the battle was for some time 'furious and obstinate ; but at last Macrinus was overthrown, and obliged to fly. His principal aim was to get to Rome, where he knew his presence was desired ; wherefore he travelled through the provinces of Asia Minor with the utmost expedition and privacy, but unfortunately fell sick at Chalcedon. There those who were sent in pursuit overtook and put him to death, together with his son Diadumenus, after a short reign of one year and two months.

HELIOGABALUS. ††† The senate and citizens of Rome being obliged to submit to the appointment of the army, as usual, Heliogabalus ascended the throne at the age of fourteen. One at so early an age, invested with unlimited power and surrounded with

flatterers, could act only as they directed. This young emperor having it in his power to indulge all his appetites, he studied only their gratification. As he is described by historians he apppears a monster of sensuality. His short life is a tissue of effeminacy, lust, and extravagance. He married, in four years, six wives, and divorced them all. He built a tem-ple to the sun ; and, willing that his god should have a wife as well as himself, he married him to Pallas, and shortly after to the moon. His palace was a place of rendezvous for all the prostitutes of Rome, whom he frequently met naked, calling them his fellow-soldiers, and companions in the field. He was so fond of the sex that he carried his mother with him to the senate-house, and demanded that she should always be present when matters of importance were debated. He even went so far as to build a senate-house for women, with suitable orders, habits, and distinctions, of which Jiis mother was made president. They met several times ; all their debates turning upon the fashions of the day and the different formalities to be used in giving and receiving visits. To these follies he added great cruelty and boundless prodigality : he said that such dishes as were cheaply obtained were scarcely worth eating. His suppers, therefore, generally cost 6000 crowns, and often 60,0t)0. He was always dressed in cloth of gold and purple, enriched with precious stones, and yet never wore the same habit twice. His palace, his chambers, and his beds, were all furnished of the richest stuffs, covered with gold and jewels. V\ henever he took horse, all the way between his apartment and the place of mounting was covered with gold and silver dust strewn at his approach. These excesses were soon perceived by his grandmother Maesa, whose intrigues had first raised him to the throne ; so that she thought to lessen his power by dividing it. For this purpose, under a pretence of freeing him from the cares of public business, she persuaded him to adopt his cousin-german, Alexander Severus,ashis successor ; and likewise to make him his partner in the consul-762

ship. Heliogabalus, having thus raised his cou-sin, had scarcely given him his power, when he wished again to take it away ; but the virtues of this young prince had so greatly endeared him to the people and the army, that the attempt had like to have been fatal to the tyrant. The praetorian soldiers, mutinying, attempted to kill him as he was walking in his gardens ; but he escaped by hiding himself from their

fury. However, upon returning to their camp, they continued the sedition ; requiring that the emperor should remove such persons from about him as oppressed the subjects, and contributed to contaminate him. They required also the being permitted to guard the young prince themselves, and that none of the emperor's favorites or familiars should be permitted to converse with him. Heliogabalus was reluctantly obliged to comply ; and, conscious of the danger he was in, made preparations for death, when it should arrive, in a manner truly whimsical and peculiar. He built a lofty tower, with steps of gold and pearl, whence to throw himself headlong in case of necessity. He also prepared cords of purple silk and gold to strangle himself with ; he provided golden swords and daggers to stab himself with ; and poison to be kept in boxes of emerald, in order to obtain what death he chose best. Thus fearing all things, but particularly suspicious of the designs of the senate, he banished them all out of the city : he next attempted to poison Alexander, and spread a report of his death ; but, perceiving the soldiers begin to mu-tiny, he immediately took him in his chariot to the camp, where he experienced a fresh mortification, by finding all the acclamations of the army directed only to his successor. This not a little raised his indignation, and excited his desire of revenge. He returned towards the city, threatening the most severe punishments against those who had displeased him, and meditating fresh cruelties. However the soldiers were unwilling to give him time to put his designs in execution : they followed him directly to his palace, pursued him. from apartment to apartment, and at last found him concealed in a privy ; a situation very different from that in which he expected to die. Having dragged him thence through the streets, with the most bitter invectives, and having despatched him, they attempted once more to squeeze his pampered body into a privy ; but, not effecting this, they threw it into the Tiber, with heavy weights, that none might afterwards find or give it burial. This was the miserable and ignominious death of Heliogabalus, in the eighteenth year of his age, after a detestable reign of four years. His mother also was slain at the same time by the soldiers ; as were also many of the opprobrious associates of his criminal pleasures.

ALEXANDER SEVERUS. ††† Alexander being without opposition declared emperor, the senate, with their usual adoration, were for conferring new titles upon him ; but he modestly declined them all, alleging that titles were only honorable when given to virtue. This outset was a happy omen of his future virtues ; and few princes in history have been more commended by their contemporaries, or indeed more deserved com-

mendation. To the most rigid justice he added the greatest humanity. He loved the good, and was a severe reprover of the lewd and infamous His accomplishments were equal to his virtues He was an excellent mathematician, geometrician, and musician ; he was skilled in painting =*nd sculpture; and in poetry few of his time could equal him. In short, such were his talents, and such the solidity of his judgment, that, though but sixteen years of age, he was considered as a wise man. The first part of his reign was spent in a reformation of the abuses of his predecessor. He restored the senators to their rank : nothing being undertaken without the most sage advisers, and most mature deliberation. Among the number of his advisers was his mother Mammaea, a woman eminent for her virtues and accomplishments, and who made use of her power to secure her son the affections of his subjects, and to procure them the most just administration. He was a rigid punisher of such magistrates as took bribes, saying that it was not enough to deprive such of their places ; for, their trusts being great, their lives in most cases ought to pay for a breach of them. On the contrary, he thought he could never sufficiently reward such as had been remarkable for their justice and integrity, keeping a register of their names, and sometimes asking such of them as appeared modest and unwilling to approach him why they were so backward in demanding their reward, and why they suffered him to be in their debt? His clemency extended even to the Christians, who had been punished in the former reigns with unrelenting barbarity. Upon a contest between them and a company of cooks and vintners, about a piece of public ground, which the one claimed as a place for public worship, and the other for exercising their respective trades, he decided the point by his rescript, in these words : ‘ It is better that God be worshipped there in any manner than that the place should be put to uses of drunkenness and debauchery.’ His abilities in war were equal to his assiduity in peace. The empire, which from the remissness and debauchery of the preceding reigns now began to be attacked on every side, wanted a person of vigor and conduct to defend it. Alexander faced the enemy wherever the invasion was most formidable, and for a short time deferred its ruin. His first expedition, in the tenth year of his reign, was against the Parthians and Persians, whom he opposed with a powerful army. The Persians werr routed in a decisive engagement with great slaughter; the cities of Ctesiphon and Babylon were once more taken, and the Roman empire was restored to its former limits. Upon his return to Antioch his mother Mammaea sent for the famous Origen, to be instructed by him in the principles of Christianity; and, after dis coursing with him for some time upon the subject, dismissed him, with a proper safeguard, to his native city of Alexandria. About the

same time that Alexander was victorious in the east, Furius Celsus, his general, obtained a signal victory over the Mauritanians in Africa. Varius Macrinus was successful in Germany, and Junius Palmatus returned conqueror from Armenia.

ROME.

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However these victories only hastened the decline of the empire, which was wasted by the exertion of its own strength. About the thirteenth year of his reign, the Upper Germans, and other northern nations, began to pour down immense swarms of people upon the more southern parts of the empire. They passed the Rhine and the Danube with such fury that all Italy was thrown into consternation ; when the emperor made what levies he could, and went in person to stem the torrent ; which he speedily effected. It was in the course of his successes against the enemy that he was cut off by a mutiny among his soldiers. The legions encamped about Moguntia, having been abominably corrupted during the reign of Heliogabalus, and trained up in all kinds of rapine and disobedience, required the most strict command. Alexander could neither endure their tumultuary obedience, nor they his regular discipline. They exclaimed that they were governed by an avaricious woman, and a meanspirited boy ; and resolved upon electing an emperor capable of ruling alone. In this general revolt, Maximinus, an old commander, held frequent conferences with the soldiers, and inflamed the sedition. At length they sent an executioner into Alexander's tent ; who immediately struck off his head, and shortly after that of his mother. He died in the twenty-ninth year of his age, after a prosperous reign of thirteen years and nine days.

ROME UNTIL THE MURDER OF GoRDIAN I.

AND II. ••• The tumults occasioned by the death of Alexander being appeased, Maximinus, who had been the chief promoter of the sedition, was chosen emperor. This extraordinary man was born of very obscure parentage, being the son of a herdsman of Thrace. At first he followed his ' father's profession, and only exercised his personal courage against robbers. Soon after he enlisted in the Roman

army, where he became remarkable for his great strength, discipline, and courage. He was no less than eight feet and a half high ; and of strength corresponding to his size. His wife's bracelet served him for a thumb ring ; and his strength was so great that he was able to draw a carriage which two oxen could not move. His diet was as extraordinary as the rest of his endowments ; he generally ate forty pounds of flesh it is said every day, and drank six gallons of wine. With a frame so athletic, he was possessed of a mind undaunted in danger, neither fearing nor regarding man. The first time he was made known to the emperor Severus was upon his celebrating games on the birth-day of his son Geta. Maximinus was then a rude countryman, and requested the emperor to be permitted to contend for the prizes which were distributed. Severus, unwilling to infringe the military discipline, would not permit him to combat, except with slaves, aeainst whom his strength appeared astonishing. He overcame sixteen in running, one after the other; he then keot up with the emperor on horseback ; and, having fatigued him in the course, he was op-poseo. to seven of the most active soldiers, and overcame them with the greatest ease. From tha* time he was noticed, and taken into the emperor's body-guards, in which his assiduity

and prompt obedience were remarked. In the reign of Caracalla he was made a centurion, and distinguished himself in this station by his strict attention to morals and discipline. When made a tribune, he still retained the hardy simplicity of his life ; eat as the meanest sentinel ; spent whole days in exercising his troops ; and now and then wrestled with eight or ten of the strongest men in the army. When Macrinus was made emperor, he refused to serve under a prince that had betrayed his sovereign ; and retired to Thrace, his native country, where he followed commerce and purchased some lands. Upon the accession of Heliogabalus, this bold veteran once more returned to the army ; but was disgusted at the effeminacy of the emperor; who, hearing amazing instances of his strength, asked him if he were equally capable in combats of another nature ? This question was so little suited to the temper of Maximinus that he left the court. Upon the death of Heliogabalus he again returned to Rome, and was received with great kindness by Alexander, who recommended him to the senate, and made him commander of the fourth legion, which consisted of new raised soldiers. Maximinus performed his duty with great exactness and success. Nor was his valor less apparent against the Germans ; so that he was unanimously reckoned the boldest, bravest, and most virtuous soldier in . the empire. He soon, however, forfeited these titles, when raised to the throne ; and be-came the most

cruel tyrant upon earth. The senate and people of Rome were the first that incurred his resentment, they absolutely refusing to confirm the election made by the army, and he became the first emperor who reigned without their concurrence. The Christians felt the weight of his resentment; and were persecuted in several parts of the empire. His cruelty particularly extended to the rich, whose lives aod estates be-came a frequent sacrifice to his avarice and suspicion. Being ashamed of the meanness of his extraction, he commanded all such as were acquainted with him and his parentage to be slain. In the midst of these cruelties his military operations were carried on with a spirit becoming a better monarch. He overthrew the Germans in several battles, and wasted their country with fire and sword. To attach the soldiers firmly to him, he increased their pay ; and, in every duty of the camp, he himself took as much pains as the meanest sentinel. In every engagement, where the conflict was hottest, Maximinus was always seen fighting in person. In the mean time his cruelties r<ul so alienated the minds of his subjects that several conspiracies were formed against him. Magnus, a consular person, and some others had agreed in a plot to break down a wooden bridge, as soon as the emperor had passed it, and thus to abandon him to the enemy. But this, being discovered, gave Maximinus an opportunity of indulging his natural severity, who upon this pretext alone caused above 4000 to be slain. Shortly after some of Alexander's old soldiers, withdrawing themselves from the camp, proclaimed one Quartianus emperor ; but shortly after, in the spirit of the times, the person who had been the promoter of his Advancement, murdered Kim <v

his bed, and carried his head toMaximinus; who received the present .kindly, but put the bearer to a cruel death, for his complicated treason and treachery. These partial insurrections were followed by a spirit of general discontent throughout the empire. The provinces of Africa were the first that showed their detes-ration of the tyrant. They first slew his procurator ; and afterwards resolved to throw off all expectation of pardon, and create a new emperor. Gordian was theti proconsul, a person of great fame for his virtues, and highly

reverenced for a blameless life of near eighty. Him, ˆherefore, they determined to elect ; and accordingly the soldiers and natives, assembling together, tumultuously entered his house. Gordian, who at first supposed they were come to kill him, being made sensible of their intentions, refused their offer, alleging his great age. But they constrained him to accept of the dignity ; and he, with his son Gordian, who was forty-six years of age, were declared emperors. The old man immediately wrote to the senate, declaring that he had unwillingly accepted of the empire, and would only keep his authority till he had freed their common country from the tyranny of its present oppressor. The senate very joyfully confirmed his election, adjudging Maximinus an enemy and traitor to the state. The citizens also showed an equal zeal in the cause: they flew upon such as were the reputed friends of Maxi-ir.inus, and tore them to pieces. So great an alteration being made in the city against Maximinus, the senate made all necessary preparations for their security, ordering Maximinus's governors to be displaced. This order was differently received in different parts; in some provinces the governors were slain ; in others the messengers of the senate ; so that all parts of the empire felt the civil war. In the mean time, when Maximinus was informed of these charges against him, his rage appeared ungovernable. He roared like a savage beast, and violently struck his head against the wall. At length, his fury having somewhat subsided, he called his whole army together ; and, in a set speech, exhorted them to revenge his cause, giving them the strongest assurances that they should possess the estates of all such as had offended. The soldiers unanimously promised to be faithful ; they received his harangue with their usual acclamations ; and, thus encouraged, he led them towards Rome, breathing slaughter and revenge. However, he found many obstacles to his impetuosity ; and, though he desired nothing so much as despatch, his marches were incommodious and slow. The tumultuous and disobedient armies of the em-pire were at present very different from the legions that were led on by Sylla or Csesar ; they were loaded with baggage, and followed by slaves and women, rather resembling an eastern caravan, than a military battalion. To these inconveniences was added the hatred of the cities through which he passed, the inhabitants abandoning their houses apon his approach, and securing their provisions in proper hiding places. However, his affairs be-gan to wear a favorable appearance in Africa ; tor Capelianus, governor of Numidia, raised a body of troops in his favor, and inarched against

Gordian, towards Carthage ; where he fought the younger Gordian, slew him, and destroyed his army. The father, hearing of the death of

his son, together with the loss of the battle, strangled himself in his own girdle.

ROME UNTIL THE MURDER OF MAXIMTNUS.

Capelianus pursuing his victory entered Carthage ; where he gave a loose to pillage and slaughter, under a pretence of revenging the cause of Maximinus. The news of these successes was soon brought to the emperor, who now increased his diligence, and flattered himself with a speedy opportunity of revenge. He led on his large army by hasty journeys into Italy, threatening destruction to all his opposers. Nothing could exceed the consternation of the senate upon the news of this defeat. They now saw themselves not only deprived of the assistance of Gordian and his son, but also opposed by two formidable tyrants, each commanding a victorious army, directly marching towards Rome. In this afflicting exigence, they, with great solemnity, met at the temple of Jupiter, and after the most mature deliberations chose Pupienus and Balbinus emperors conjointly. These were men who had acquired the esteem of the public both in war and peace, having commanded ar-mies, and governed provinces with great .reputation; and being now appointed to oppose Maximinus, they made what levies they could. With these, Pupienus marched to stop the progress of the invaders, leaving the city to a fresh and unlocked for calamity. This was occasioned by two of Maximinus's soldiers, who, entering the senate house, were slain by two senators. This quickly gave offence to the body of the praetorian soldiers, who instantly resolved to take revenge, but were opposed by the citizens ; so that nothing was seen throughout Rome, but tu-mult, slaughter, and cruelty. In this universa' confusion, the calamity was increased by the soldiers setting the city on fire. Nevertheless, Maximinus himself was not more fortunate Being informed of the new election of emperors, his fury was renewed, and he passed the Alps, expecting, upon' entering Italy, to refresh his fatigued and famished army in that fertile country. Approaching Aquileia he was astonished to find it prepared for the most obstinate resistance, and resolved to hold out a regular siege. At last a mutiny in his army rescued the declining empire from destruction. The soldiers being long harassed by famine and fatigue, and hearing of revolts on every side, resolved to terminate their calamities by the tyrant's death, and slew both him and his son, whom he had made his partner in the empire, after a usurpation of about three years, in the sixty-fifth year of his age.

PUPIENUS AND BALBINUS. ••• The tyrant being dead, and his body thrown to birds of prey, Pupienus and Balbinus continued emperors without opposition. But the praetorian soldiers, notorious

for mutiny and treason, resolved on further change. The dissensions between the new made emperors themselves also contributed to 4hei-downfall : for though both were remarkable for wisdom and age, yet they could not restrain their mutual jealousy. Pupienus. claimed the supe-

riority for his great experience ; while Balbinus was equally aspiring upon account of his family and fortune. In this ill-judged contest, the praetorian soldiers, who were enemies to both, set upon them in their palace, at a time when their guards were amusing themselves with the Capi-toline games. Pupienus, perceiving their tumultuous approach, sent with the utmost speed for assistance from his colleague : but he, out of suspicion that something was designed against himself, refused to send such of the German guards as were next nis person. Thus the seditious soldiers found an easy access to both the emperors ; and, dragging them from the palace to the camp, slew them both.

GORDIAX III. ००० In the midst of this sedition, as the mutineers were proceeding ‘ along the streets of the capital, they met Gordian, the grandson of him who was slain in Africa, and declared him emperor. This prince was but sixteen years old, but his virtues seemed to compensate for his want of experience. His learning was equal to his virtues ; and he had 62,000 volumes, we are told, in his library. His respect for Misithaeus, his governor and instructor, was such that he married his daughter, and profited by his counsels throughout his reign. The first four years were attended with the utmost prosperity ; but in the fifth he was alarmed with accounts from the east, that Sapor, king of Persia, had furiously invaded the confines of the Roman empire, and, having taken Antioch, had pillaged Syria, and all the adjacent provinces. The Goths also invaded the empire on their side, pouring down like a flood from the north, and attempting to fix their residence in the kingdom of Thrace. To oppose both, Gordian prepared an army; and having gained some victories over the Goths, whom he obliged to retire, he turned his arms against the Persians, whom he defeated upon several occasions. But his only successful

general died suddenly, and things then proceeding from bad to worse, Philip, an Arabian chief, was at first made ˆus equal in the empire, and shortly after invested with the sole power. Gordian was, by his order, slain, in the twenty-second year of his age, after a successful reign of nearly six years.

PHILIP. ††† Philip, having thus murdered his benefactor, was acknowledged emperor by the army. The senate confirmed his election, and gave him the title of Augustus. He was about forty years old when he came to the throne ; being the son of an obscure Arabian, who had been a captain of banditti. He associated with him in the empire his son, a boy of six years of age ; and, to secure his power at home, made peace with the Persians, and marched his army towards Rome. On his way, having conceived a desire to visit his native country of Arabia, he built there a city called Philippopolis : and thence returning to Rome was received as emperor with all the usual marks of submission. To put the people in good humor, he caused the secular games to be celebrated, with a magnificence" superior to any of his predecessors. But, the Goths having invaded the empire, Marinus, Philip's lieutenant, who was sent against them, revolted, and caused himself to be declared emperor. This

revolt, however, was of short duration; and Decius was appointed by Philip to command in his room. However, the army was scarcely arrived at Verona, when it revolted in favor of Decius, and setting violently upon Philip, a sentinel, with one blow, cleaved his head asunder, separating the under jaw from the upper. Such was the deserved death of Philip, in the forty-fifth year of his age, after a reign of about five years: Decius being universally acknowledged as his successor, A. D. 348.

DECIUS AND HIS SON. ††† The activity and wis-dom of Decius in some measure arrested the hastening decline of the empire. The senate seemed to think so highly of his merits that they voted him not inferior to Trajan ; and in-deed he seemed in every instance to consult their dignity, and the welfare of the people. He permitted them to choose a censor, as in the flourishing times of Rome ; and Valerian, his general, a man of such strict morals that his life was said to be a continual censorship, was chosen to that dignity. But no virtue could now prevent the approaching downfall of the state : the obstinate disputes between the Pagans and the Christians within the empire, and the unc?asing irruptions of barbarous nations from without, enfeebled it beyond remedy. To stop these, a persecution of the

Christians, now a most numerous body, was impolitically and cruelly begun ; thousands were put to death, and all the arts of cruelty tried in vain to lessen their growing number. This was succeeded by dreadful devastations from the Goths, in Thrace and Mcesia. These irruptions Decius went to oppose in per-son ; and, coming to an engagement, slew 30,000 of these barbarians in one battle. But, in pursuing his victory, he was, by the treachery of Gallus his own general, led into a defile, where the Goths had secret information to attack him. In this disadvantageous situation, Decius first saw his son killed with an arrow, and soon after his whole army put to the rout. Wherefore, resolving not to survive his loss, he put spurs to his horse, and plunging into a quagmire was swallowed up. He died in the fiftieth year of his age, after a short reign of two years and six months; leaving the character of an excellent prince.

GALLUS AND ˆ,MILIANUS. ††† Gallus, who had thus betrayed the army, had the address to get himself declared emperor by that part of it which had survived the defeat ; he was forty-five years old when he began to reign, and was descended from an honorable family. He now agreed to pay a considerable annual tribute to the Goths ††† and, having thus purchased a short remission from war, returned to Rome, to give a loose to his pleasures. Nothing could he more deplorable than the state of the provinces at this time. The Goths and other barbarous nations, not satisfied with their late bribes, broke in upon the eastern parts of Europe. On the other side the Persians and Scythians committed unheard of ravages in Mesopotamia and Syria. The emperor, regardless of every national calamity, was lost in debauch and sensuality ; and the Pagans were allowed a power of persecuting the Christians through all parts of tie state : these calamities

were succeeded by a pestilence that seemed to have spread over the earth, and continued raging for several years; and all these hy a civil war, which followed soon after, between Gallus and his general *Emilianus, who, having gained a victory over the Goths, was proclaimed*

emperor by his army. Gallus, hearing this, prepared to oppose his dangerous rival. Both armies met in Mcesia, and a battle ensued, in which .Emilianus was victorious, and Gallus, with his son, slain. He died in the forty-seventh year of his age, after an unhappy reign of two years and four months. jEmilianu;, after his victory over Gallus, expected to be acknowledged emperor ; but was miserably disappointed. The senate refused to acknowledge him; and an army stationed near the Alps chose Valerian, their own commander, to succeed to the throne. .ˆEmilianus's soldiers began to consider their general as an obstacle to the public tranquillity, and slew him to avoid a civil war.

VALERIAN. ††† Valerian being universally acknowledged as emperor, although arrived at the age of seventy, set about reforming the state with a spirit that seemed to mark a good mind and unabated vigor. But reformation was then grown almost impracticable. The disputes between the Pagans and Christians divided the empire as before ; and a dreadful persecution of, the latter ensued. The northern nations over-ran the Roman dominions in a more formidable manner than ever; and the empire began to be usurped by a multitude of petty leaders, each of whom, neglecting the general state, set up for himself. To add to these calamities, the Persians, under Sapor, invaded Syria; and, coming into Mesopotamia, took'the unfortunate Valerian prisoner, as he was preparing to oppose them. Nothing can exceed the indignities and cruelties practised upon this unhappy monarch. Sapor used him as a footstool for mounting his horse, and, adding the bitterness of ridicule to his insults, observed that an attitude like that to which Valerian was reduced, was the best statue that could be erected in honor of his victory. This life of insult and suffering continued for seven years, and was at length terminated by the cruel Persian's commanding his prisoner's eyes to be plucked out, and causing him to be flead alive. ,

THE REIGN OF THE THIRTY TYRANTS. ††† The news of the defeat of the Roman army by the Persian, and the captivity of Valerian, no sooner reached the barbarous nations at war with Rome than they poured on all sides into the Roman territories in incredible multitudes. The Goths and Scythians ravaged Pontus and Asia, committing every where dreadful devastations; the Alemanni and Franks, having overrun Rhsetia, advanced as far as Ravenna, putting all to fire and sword ; the Quadi and Sarmatians seized on great part of Dacia and Pannonia ; while other barbarous nations, invading Spain, made themselves masters of Tarraco, and other places in that province. In the mean time Gallienus, the son of Valerian, having promised to revenge his father's captivity, and repress the barbarians, was chosen emperor. He was then in Gaul; but hastened into Italy, whence he

drove out the

barbarians. In Dacia and Pannonia, also, they were driven back by Regillianus, who gained several victories in one day. But in the mean time, one Ingenuus, a man of great reputation in war, and universally beloved both by the peo-ple and soldiery, caused himself to be proclaimed emperor in Pannonia, where he was generally acknowledged as well as in Mcesia. Gallienus no sooner heard of his revolt, than he marched from the neighbourhood of Ravenna, where he then was, into Illyricum, engaged Ingenuus, and put him to flight. Some say that Ingenuus was killed after the battle by his own soldiers ; others affirm that he put an end to his own life to avoid falling into the hands of Gallienus, who used his victory with a cruelty hardly paralleled. His letter to Verianus Celer, one of his officers, will show his disposition : ‘‘‘ ‘ I shall not be satisfied,’ says he, ‘ with your putting to death only such as have borne arms against me, and might have fallen in the field ; you must in every city destroy all the males, old and young ; spare none who have wished ill to me ; none who have spoken ill of me the son of Valerian, the father and brother of princes. Ingenuus emperor ! Tear, kill, cut in pieces without mercy; you understand me ; do then as you know I would do, who have written to you with my own hand.’ In consequence of these cruel orders, a most dreadful havoc was made among that unhappy people; and, in several cities, not one male child was left alive. The troops who had formerly served under Ingenuus, and the inhabitants of Mcesia who had escaped the general slaughter, provoked by these cruelties, proclaimed Regillianus emperor. He was a Dacian by birth, descended from king Decebalus whom Trajan had conquered; and had, by several gallant actions, gained reputation in the Roman armies. After he was proclaimed emperor, he gained great advantages over the Sarmatians; but was soon after murdered by his own soldiers. These revolts were quickly followed by many others. Indeed it is not surprising, at a time when the reins of government were held with so loose a hand, that a crowd of usurpers should start up in every province of the empire. The great number of usurpers who pretended to the empire about this time have been distinguished by the name of the thirty tyrants. There were, however, only twenty : *viz.* Cyriades, Macrinus, Balista, Odenatus, and Zenobia, in the east ; in Gaul and the western provinces Posthumius, Lollianus, Victorinus and his mother Victoria, Marius, and Tetricus; in Illyricum, and on the confines of the Danube, Ingenuus, Regillianus, and Aureolus ; in Pontus Saturninus ; in Isauria Trebellianus ; in Thessaly Piso; in Achaia Valens; in Egypt ˆ.milianus; and in Africa Celsus. Several of these pretenders to the

empire, however, though branded with the opprobrious appellation of tyrants, were eminent for virtue, and almost all of them possessed a considerable share of vigor and ability. The principal reason assigned for their revolt was the infamous character of Gallienus, whom neither officers nor soldiers could bear to serve. Many of them were forced by the soldiers to assume the imperial dignity much against their will. ‘ You

have lost,’ said Saturninus to his soldiers, when they invested him with the purple, ‘ a useful commander, and have made a wretched emperor.’ The apprehensions of Saturninus were justified by the event. Of the twenty usurpers above-mentioned, not one died a natural death ; and in Italy and Rome Gallienus alone continued to be acknowledged emperor. That prince indeed honored Odenatus prince of Palmyra with the title of Augustus, who continued to possess an independent sovereignty in the east all his lifetime, and on his death transmitted it to .iis wife Zenobia.

The consequences of these numerous usurpations were the most fatal that can be conceived. The elections of these precarious emperors, their life and death, were equally destructive to their subjects and adherents. The price of their elevation was instantly paid to the troops by an immense donative drawn from the exhausted people. When they fell, they involved armies and provinces in their fall ; and, whilst the forces of the state were dispersed in private quarrels, the defenceless provinces lay exposed to every invader. The bravest usurpers were compelled”, by the perplexity of their situation, to conclude dishonorable treaties with the barbarians, and even to submit to shameful tributes, and introduced such numbers ofbarbarians into the Roman service as seemed sufficient at once to overthrow the empire. But when the empire seemed thus ready to sink at once, it suddenly revived on the death of Gallienus, who was murdered by Martian, one of his own generals, while he besieged Aureolus, in Milan. His death gave general satisfaction to all, except his soldiers, who hoped to reap the reward of their treachery by the plunder of Milan. But, being in

some measure kept within bounds by the largesses of Martian, Flavius Claudius was nominated to succeed, and joyfully accepted by all orders of the state, and his title confirmed by the senate and the people.

CLAUDIUS II. ❖❖❖ Claudius, some say, was born in Dalmatia, and descended from an ancient fa-mily there ; others that he was a Trojan ; and others that he was son to the emperor Gordian. But, whatever might have been his descent, his merits were by no means doubtful. He was a man of great valor and conduct, having performed the most eminent services against the Goths, who had long continued to make irruptions into the empire. Now about fifty-five years old, he was equally remarkable for the strength of his body and the vigor of his mind. Thus endowed he once more seemed to restore the glory of Rome. His first success, upon being made emperor, was against Aureolus, whom he defeated near Milan. His next expedition was to oppose the Goths, against whom he led a very numerous army. These barbarians had made their principal and most successful irruptions into Thrace and Macedonia, swarmed over all Greece, and had pillaged the famous city of Athens, which had long been the school of all the polite arts to the Romans. The Goths, however, destroyed all monuments of taste and learning with the most savage alacrity. It was upon one of these occasions that, having heaped together a large

pile of books to burn them, one of the commanders dissuaded them from the design, alleging that the time which the Grecians wasted on books would only render them more unqualified for war. But the empire trembled not only on that side, but on every quarter. Above 300,000 of these barbarians (the Heruli, the Trutangi, the Viturgi, and many other uncivilised nations) came down the Danube with 2000 ships, spreading terror and devastation on every side. In this state of universal dismay Claudius alone continued unshaken. He marched his disproportioned army against the savage invaders ; and though but ill prepared for such an engagement, as the forces of the empire were then employed in different parts of the world, he came off victorious, and made an incredible slaughter of the enemy. The whole of their great army was either cut to pieces or taken prisoners ; houses were filled with their arms ; and scarcely a province of the empire that was not furnished with slaves from those that survived the defeat. These successes were followed by many others in different parts of the empire ; so that the Goths, for a considerable time after, made but a feeble opposition. He some time after marched against the revolted Germans, and overthrew them with considerable slaughter. His last

expedition was to oppose Tetricus and Zenobia, his two puissant rivals in the empire. But on his march, as he approached near Sirmium, in Pannonia, he was seized with a pestilential fever, of which he died in a few days, to the great regret of his subjects, and the irreparable loss of the empire. His reign, which was not quite two years' continuance, was active and successful ; and such is the character given of him by historians that he is said to have united in himself the moderation of Augustus, the valor of Trajan, and the piety of Antoninus.

AURELIAN. ××× Immediately after the death of Claudius the army made unanimous choice of Aurelian, master of the horse, and esteemed the most valiant commander of his time. However his promotion was not without opposition on the part of the senate, as Quintillus, the brother of the deceased emperor, put in his claim, and was for a while acknowledged. But his authority was of very short duration ; finding himself abandoned by those who at first instigated him to declare for the throne, he-chose to prevent the severity of his rival by a voluntary death, and, causing his veins to be opened, expired, after having reigned but seventeen days. Aurelian, being wow universally acknowledged, assumed ths command with a greater show of power than his predecessors had for some time enjoyed. This active monarch was born of obscure parentage in Dacia, and was about fifty-five years old at his coming to the throne. He had spent the early part of his life in the army, and risen through all the gradations of military duty. He was of unshaken courage and amazing strength. In short, his valor and expedition were such, that he was compared to Julius Casar, and only wanted mildness and clemency to be every way his equal. The whole of his reign was spent in repressing the irruptions of the northern nations, in humbling every pretender to the empire, and punishing the monstrous n-768

regularities of his subjects. He defeated the Marcomanni, that had invaded Italy, in three several engagements, and totally destroyed their army. He was not less successful against Zenobia, the queen of the east, a woman of the most heroic qualifications, who had long disclaimed the Roman power, and established an empire of her own. Aurelian having thus brought peace to the empire, endeavoured, by the rigors of justice, to bring back virtue also. Against the Christians, however, he drew up several letters and edicts, which showed that he

intended a very severe persecution; but, if we may believe the historians of the times, he was diverted just as he was going to sign them by a thunderbolt, which fell so near his person that all the people judged him to be destroy edj It is certain that his severities, at last, were the cause of his destruction. Menesthus, his principal secretary, apprehending his displeasure, forged a roll of the names of several persons, whom he pretended the emperor had marked out for death. The scroll thus contrived was shown with an air of the utmost secrecy to some of the persons concerned ; and as the emperor passed with a small guard from Uraclea, in Thrace, towards Byzantium, the conspirators set upon him aod slew him with little resistance, in the sixtieth or sixty-third year of his age.

TACITUSJ ••• The army now referred the choice of emperor to the senate ; and, on the other side, the senate declined it; so that a space of nearly eight months elapsed in these negociations. At length, the former made choice of Tacitus, a man of great merit, and no way ambitious of the honor. One of the first acts of his government was the punishment of those who had conspired against the late emperor. During this short reign, the senate seemed to have a large share of authority, and the historians of the times are liberal of their praises of such emperors as were thus willing to divide their power. Tacitus was fond of learning, and the memory of such men as had deserved well of their country. He particularly esteemed the works of Tacitus the historian, commanding that they should be placed in every public library throughout the empire. A reign begun

with such moderation and justice only wanted continuance to have made the empire happy ; but, after enjoying the empire about six months, he diec of a fever, in his march to oppose the Persians and Scythians, who had invaded the eastern parts of the empire.

PROBUS. ••• Upon the death of Tacitus the army was divided; one part of it chose Florianus, brother to the deceased ; but the majority were for some time undetermined. At last Probus was called to the throne, being born of noble parentage at Sirmium in Pannonia, and bred up a soldier from his youth. He first repressed the Germans in Gaul, of whom he slew 400,000. He then marched into Dalmatia, to subdue the Sarmatians. Thence he led his forces into Thrace, and forced the Goths to sue for peace. He afterwards turned his arms towards Asia, subdued the province of Isauria, and, marching onward, conquered a people called the Blemyes. Narses also, king of Persia, submitted to him. His diligence was not less conspicuous in

suppressing intestine commotions. Proculus, a per-son remarkable only for his great attachment to women, set up against the emperor ; but was compelled to fly, and at length delivered up by the Germans. At the same time Bonosus (a remarkable votary of Bacchus, being able to drink as much wine as ten could do) rebelled, and, being overcome, hanged himself in despair. Pro-bus, when he saw him immediately after, said, ‘ there hangs not a man, but a cask.’ The Goths and Vandals, however, finding the emperor engaged in quelling domestic disputes, renewed their accustomed inroads, but were conquered in several engagements. In his last expedition he led his soldiers against the Persians ; and going through Sirmium, the place of his nativity, there employed several thousands in draining a fen that was incommodious to the inhabitants. The fatigues of this undertaking, and the great restraint that was laid upon the soldier’s manners, produced a conspiracy, which ended in his ruin ; for, taking the opportunity as he was marching into Greece, they set upon and stew him, after he had reigned six years and four months with general approbation.

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A reader sboulil sit down to a book, especially of the miscellaneous kind, as a well-behaved visitor does to a ban-

quet. The master of the feast exerts himself to satisfy his guests ; but if, after all his care and pains, something should appear on the table that does not suit this or that person's tastr, they politely pass it over without notice, and commend other dishes, that they may not distress a kind host. Traittlaliox.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPEDIA METROPOLITANA, ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

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LONDON ENCYCLOPEDIA.

ROME.

CARUS, NIMERIAX, AND CAUixus. — Carus, who was praetorian prefect to the deceased emperor, was chosen by the army to succeed him ; and he, to strengthen his authority, united with him his two sons Carinus and Numerian in command ; the former of whom was as remarkable for his vices, as the latter was for his virtues. Carus had scarcely time to punish the murderers of the late monarch, when he was alarmed by a fresh irruption of the Sarmatians, over whom he gained a signal victory. The Persian monarch also made, some attempts upon the empire ; but Carus assured his ambassadors that, if their master persisted in his obstinacy, all his fields should shortly be as bare as his own bald head: a dreadful battle ensuing, he once

more gained a complete victory. But he was

shortly after struck dead by lightning in his tent, with many others around him. Numerianus was

inconsolable for his death ; and brought a dis-

order upon his eyes, we are told, with weeping.

The peculiarity of his situation, after some time,

excited the ambition of Aper, his father-in-

law, who supposed that he could now, with-

out danger, aim at the empire himself. He

therefore hired a villain to murder the emperor

in his litter ; and, to conceal the fact, gave out that he was alive, but unable to endure the light.

In this manner was the dead body carried about

for some days, Aper continuing to attend it with

the utmost respect, and to take orders as usual.

However, the offensiveness of its smell, at length

discovered the treachery, and excited a univer-

sal uproar. In the midst of this tumult, Dio-

clesian, one of the most noted commanders of

his time, was chosen emperor, and with his own

hand slew Aper, having thus, as it is said, ful-

filled a prophecy, that he should be emperor

after he had slain a boar, alluding to the name

of his rival. Carinus did not long survive his

father and brother; for givirig himself up to his

vices, and opposing the new-made emperor, the competitors led their forces into Moesia ; where, Dioclesian being victorious, Carinus was slain by a tribune of his own army, whose wife he had formerly abused.

DIOCLESIAN AND MAXIMIAN. — Dioclesian received his name from Dioclea, the town in which he was born ; and was about forty years old when he was elected emperor. He pardoned all who had joined Carinus. Conscious also that the weight of the empire was too heavy for one alone to sustain, he took in Maximian, his general, as a partner in the throne. There never was a period in which the empire had more tt*-inerous or formidable enemies to oppose, ˆn

Gaul the peasants and laborers made a dar.-geruus insurrection, under Amandus and Heliz.-nus, but were subdued by Maximian. Achilleus, who commanded in Egypt, proclaimed himself emperor; and it was not without many-bloody engagements that he was overcome.

In Africa, the Roman legions, joined with many of the natives, seized upon the public revenues,

and plundered those who continued in their duty. These were also subdued by Maximian. About the same time a principal commander in Britain, named Carausius, then proclaimed himself emperor, and possessed himself of the island. To oppose this general, Maximian made choice of Constantius Chlorus, whom he created Cassar, and married to Theodora his daughter-in-law. About this time also Narses, king of Persia, began a dangerous war, and invaded Mesopotamia. The Persians, however, were overcome in a decisive engagement, and their camp plundered and taken. There only remained, of all the enemies of the empire, those who lay to the northward, the Goths, Sarmatians, Alani, Quadi, &c., who poured down in incredible numbers. During this period, as if the external miseries of the empire had not been sufficient, the tenth and last great persecution raged against the Christians. It exceeded all the former in severity ; and, such was the zeal with which it was pursued, that, in an ancient inscription, we are informed that they had effaced the name and superstition of the Christians. .Their attempts, however, were but the malicious efforts of an expiring

party ; for Christianity soon after was established by law. In the midst of the troubles raised by this persecution, and of the contests that struck at the internal parts of the state, Dioclesian and Maximian surprised the world by resigning their dignities on the same day, and both retiring into private stations. Historians are much divided concerning the motives that thus induced them to give up those honors which they had purchased with so much danger. When some attempted to persuade Dioclesian to resume the empire, he replied, * That, if they knew his present happiness, they would rather endeavour to imitate than disturb it.' Maximian, his partner in the empire and in resignation, was by no means so contented. He conducted various intrigues for a return to power, and endeavouring to force his own daughter, and destroy her husband, he was detected', and condemned to die by whatever death he should think proper ; Lactantius tells us that he chose hanging.

CONSTANTIUS CHLORUS, AND GALERIUS. — Upon the resignation of the two emperors the

two Caesars \vcrc universally acknowledged as their successors. They agreed to divide the empire, Constantius being appointed to govern the western paits; namely, Italy, Sicily, the greatest part of Africa, together with Spain, Gaul, Britain, and Germany : Galerius had the eastern parts; to wit, lllyricum, Pannonia, Thrace, Macedonia, all the provinces of Greece, and the Lesser Asia, with Egypt, Syria, Judea, and all the countries eastward. The greatness of the division, however, soon induced the emperors to take in two partners more, Severus and Maximin, who were made Caesars, and assisted in the conducting of affairs : so that the empire now was under the guidance of four persons, all invested with supreme authority. We are informed

l>ut of few particulars of the reign of Constantius, except a detail of his character, which appears

in every light most amiable. In the second year of his reign he went over into Britain ; and, leaving his son Constantine as a kind of hostage in the court of his partner in the empire, took up his residence at York. Here, when ill past recovery, he sent for him, and, raising himself

up in his bed, gave him his dying instructions.

In the mean time Galerius, Constantius's partner, being informed of Constantine's advancement, testified the most ungovernable rage; declaring Severus emperor in opposition. About this time also another pretender to the empire started u]>. This was Maxentius, who was very much favored by the soldiers, whom he permitted to pillage at discretion. To oppose Maxentius Severus led a numerous army towards Rome; but his soldiers, considering against whom they were to fight, immediately abandoned him. To revenge his death Galerius marched into Italy, resolving to destroy the whole senate. His soldiers however, upon approaching the capital, began to waver ; when he had recourse to entreaties, imploring them not to abandon him ; and, retiring, made Licinius, the son of a poor laborer in Dacia, Caesar, in the room of Severus. Soon after lie was seized with a disorder which baffled all the skill of his physicians, and carried him off after he had languished in torments for nearly a year. His cruelty to the Christians was one of the many crimes alleged against him; but he abated much of his severities against them

in his illness.

MAXENTIUS. — Constantine, being thus deli-
yered from his greatest opponent, now possessed
more power than any of his rivals. The empire
was at that time divided between him and three
others : Maxentius, who governed in Rome, a
person of a cruel disposition, and a stedfast sup-
porter of paganism; Licinius, who was adopte I
by Galerius, and commanded in the east; ami
Maximin, who had formerly been declaredCaesar
with Severus, and who also governed some of
the eastern provinces. For some time all things
seemed to wear a peaceful appearance: till either
ambition or the tyrannical conduct of Maxentius
induced Constantine to engage in an expedition
V> expel that commander from Rome, and to
make the proper preparations for marching into
Italy. Upon this occasion he formed a resolu-
tion which produced a mii>hty change in tin i.n-
lilics as well as the morals of mankind, and gave
a new turn to the councils of the wise and the
pursuits of the ambitious. See in his life, article CO.\>TAXTINK, the account of his conversion to
Christianity. After this he consulted with several
of the principal teachers of Christianity, and made

a public avowal of that persuasion, thus attaching to his interest his soldiers, who were mostly Christians. He lost no time in entering Italy with 90,000 foot and 8000 horse ; and soon advanced to the very gates of Rome. Maxentius, who had long given himself up to ease and debaucheries, now began to make preparations when it was too late. lie first put in practice all the superstitious rites which paganism taught to be necessary ; and then consulted the Sibylline books, whence he was informed that on that day the great enemy of Rome should perish. Tiu> prediction, which was equivocal, he applied to Constantino; wherefore, leaving all things in tinbest posture, he advanced from the city with an army of 100,000 foot and 18,000 horse" The engagement was for some time fierce and bloody : till, his cavalry being routed, victory declared upon the side of his opponent, and he himself was drowned in his flight by the breaking down of a bridge, as he attempted to cross the river Tiber. Constantine, in consequence of this victory, entering the city, disclaimed all the praises which the senate and people were ready to ofler, ascribing his success to a superior power, lie

even caused the cross, which he was said to have-

seen in the heavens, to be placed at the right of all his statues, with this inscription : ‘ That, un-

der the influence of that victorious ensign, Con-

stantine had delivered the city from the yoke of

tyrannical power.’ He afterwards ordained that

no criminal should for the future sufl’er death l>\ the cross; and edicts were soon after issued, de-

claring that the Christians should be eased from

their grievances, and received into places of trust

and authority. Thus the new religion soon pre-

vailed over the whole empire.

CONSTANTINE AND LiciNirs. — While this

great change was proceeding, Maximin, wh •

governed in the east, marched against Licinius with

a very numerous army ; but a general engagement

ensued, in which Maximin suffered a total defeat.

Maximin, however, having escaped the carnage,

once more put himself at the head of another ar-

my, resolving to try the fortune of the field ; but death anticipated his designs. Conslantine arid

Licinius being now undisputed possessors and part-

ners in the empire, all things promised a peaceable

continuance of their friendship and power. I’.i-

gan writers ascribe the rupture that unexpectedly

took place between these two potentates to Con-

stantine ; while the Christians, on the other hand,

impute it to Licinius. Both sides exerted al1

their power, as usual, to prevail, and, at the head of very formidable armies, came to an enp

ment near Cybalis, in Pannonia. Previous to

the battle Constantine, in the midst of the

Christian bishops, begged the assistance ot

Hi iven; while Licinius, with equal zeal, called

upon the pagan priests to intercede with the gods.

Constantine, after an obstinate resistance from

the enemy, became victorious ; took their camp ;

and, after some time, compelled Licinius to sue

for a short truce. It was indeed short : but we hav«

ROME.

pursued the rest of the history of the first of the Christian emperors in the article referred to. He

conceived and executed the bold measure of

transferring the seat of the empire from Rome to

Constantinople. The empire had long before

been in the most declining state; but this gave

precipitation to its downfall : it never after re-

sumed its former splendor. The inhabitants of

Rome, though with reluctance, submitted to the

change ; nor was there for several years any dis-

turbance in the state, until the Goths renewed

their inroads on the Danube. Constantine, however, soon repressed their incursions, and so straightened them that nearly 100,000 of their number perisbed. The government of the empire was afterwards divided as follows : — Constantine, the emperor's eldest son, commanded in Gaul and the western provinces; Constantius governed Africa and Illyricum; and Constans ruled in Italy. Dalmatius, the emperor's brother, was sent to defend those parts that bordered upon the Goths; and Annibalianus, his nephew, had the charge of Cappadocia and Armenia Minor. The latter part of the reign of Constantine was peaceful and splendid ; ambassadors from the remotest Indies came to acknowledge his authority ; the Persians, who were ready for fresh inroads, upon finding him prepared to oppose, sent humbly to desire his friendship and forgiveness. He died at above sixty years old, and had reigned above thirty years.

COXSTANTINE'S SONS. — After the death of Constantine, the army and senate proclaimed his three sons emperors, without taking any notice of Dalmatius, and Annibalianus, who were

soon after murdered, with Julius Constantinus the late emperor's brother, and all their friends and adherents. Thus the family of Constantine was reduced to the three sons and three nephews ; Gallus and Julian, the sons of Julius Constantius, and Nepotianus, the son of Eutropia, Constantine's sister. Of these Gallus owed his life to a malady, from which no one thought he could recover; and Julian to his infancy, boiim then only seven years of age. The three brothers divided among themselves the dominions of the deceased princes; but did not long agree. In 340 Constantine, having in vain solicited Constans to yield part of Italy to him, raised a considerable army ; and under pretence of marching to the assistance of his brother Constantius, who was then at war with the Persians, made himself master of several places in Italy. Hereupon Constans detached part of his army against him ; and Constantine, being drawn into an ambuscade near Aquileia, was cut off with his whole forces. .His body was thrown into the Ansa ; but, being afterwards discovered, was sent to Constantinople, and interred near

that of his father. By the defeat and death of his brother, Constans remained sole master of all the western empire, in the quiet possession of which he continued till the year 350. This year Magnentius, the son of a native of Germany, finding Constans despised by the army on account of his indolence and inactivity, resolved to murder him, and set up for himself, Having gained over the chief officers of the army, he seized on the Imperial palace at Autun, and distributed among the populace what s-uns he found ; which induced not only the city, but the neighbouring country, to espouse his cause. Constans being informed of what had passed, and finding himself unable to resist the usurper, fled towards Spain. He was overtaken, however, by Gaiso, whom Magnentius had sent after him with a body of troops, and despatched at Helena, near the foot of ihe Pyrenees.

CONSTANTIUS. — Constantius had been engaged in a war with the Persians, in which little adrantage had been gained on either side ; but, the Persians now giving no more disturbance, he marched against the usurpers ; for besides Mag-

nentius there were at this time two other pre

tenders to the western empire. Veteranio, gene-

ral of the foot in Pannonia, had on the first news of the death of Constans, caused himself to be

proclaimed emperor by the legions under his

command. He was a native of Upper Moesia,

and advanced in years when he usurped the

sovereignty ; but so illiterate that he then first

learned to read. The third was Flavius Popi-

lius Nepotianus, who claimed right as nephew

of Constantine the Great. Having assembled a

company of gladiators and men of desperate

fortunes he assumed the purple on the 3d of

June 350, and in that attire presented himself

before the gates of Rome. The prefect Ani-

cetus, who commanded there for Magnentius,

sallied out against him with a body of Romans ;

who were soon driven back into the city. Soon

after Nepotianus made himself master of the

city itself, which he filled with blood and

slaughter. Magnentius, being informed of what

had happened, sent against this new competitor

his chief favorite Marcellinus. Nepotianus re-

ceived him with great resolution ; a battle en-

sued between the soldiers of Magnentius and

the Romans who had espoused the cause of Nepotianus ; but the latter being betrayed by a senator, named Heraclitus, his men were put to flight, and he himself killed, after having enjoyed the sovereignty only twenty-eight days. Marcellinus ordered his head to be carried on the point of a lance through the principal streets of the city ; put to death all those who had declared for him ; and, under pretence of preventing disturbances, commanded a general massacre of all the relations of Constantine. Soon after, Magnentius himself came to Rome to make the necessary preparations for resisting Constantius, who was exerting himself to the utmost to revenge the death of his brother. In the city he behaved most tyrannically: put to death many persons of distinction ; seized their estates ; and obliged, the rest to contribute half of what they were worth towards the expense of the war Having thus raised great sums, he assembled ar army of Romans, Germans, Gauls, Franks, Britons, Spaniards, &c. ; but, dreading the uncertain issues of war, he despatched ambassadors to Constantius with proposals of accommodation.

Constantius set out from Antioch about the beginning of autumn ; and, passing through Constantinople, arrived at Hfraclea, where he was met by the deputies of Magnentius, and others from Veteranio, who had agreed to support each other in case the emperor would hearken to no

terms. The deputies of Magnentius proposed a match between him and Constantina, the sister of Constantius, and widow of Annibaliauus ; offering, at the same time, to Constantius the sister of Magneiitius. Tˆe emperor would hearken to no terms with Magnentius ; but, that he might not have to oppose two enemies at once, concluded a separate treaty with Veteranio, by which he agreed toˆake him for his partner in the empire. But, wnen Veteranio ascended the tribunal along with Constantius, the soldiers Eul'ed him down, saying they would acknowidge no emperor but Constantius. On this Veteranio threw himself at the emperor's feet, and implored his mercy. Constantius received him with great kindness, and sent him into Bithynia, where he allowed him a maintain-

ence suitable to his quality. Now master of all Illyricum, and of the army commanded by Veteranio, Constantius resolved to march against Magnentius. In the mean time, however, on advice that the Persians were preparing to invade the eastern provinces, he married his sister Constantina to his cousin german Callus ; created him Caesar on the 15th of March ; and allotted him for his share not only all the east, but likewise Thrace and Constantinople.

About the same time Magnentius gave the title of Caesar to his brother Decentius, whom he despatched intoGau! to defend that country against the barbarians who had invaded it; for Constantius had not only stirred up the Franks and Saxons to break into that province by promising to relinquish to them all the places they should conquer, but had sent him large supplies of men and arms for that purpose. On this encouragement the barbarians invaded Gaul with a great army, overthrew Decentius in a pitched battle, committed every where dreadful ravages, and reduced the country to a most deplorable situation. Mean

time Maenentius, having assembled a numerous army, left Italy, and, crossing the Alps, advanced into the plains of Pannonia, where Constantius, whose main strength consisted of cavalry, was waiting for him. Magnentius, hearing that his competitor was encamped at a small distance, invited him by a messenger to the extensive plains of Sciscia on the Sauve, there to decide which of them had the best title to the empire. This challenge was by Constantius received with great joy; but, as his troops marched towards Sciscia in disorder, they fell into an ambuscade, and were put to flight. With this success Magnentius was so elated that he rejected all terms of peace ; after some time, a general engagement ensued at Mursa, in which Magnentius was entirely defeated, with the loss of 24,000 men. Constantius, though victor, is said to have lost 30,000. All authors agree that the battle proved fatal to the western empire, and greatly contributed to its speedy decline. After his defeat at Mursa, Magnentius retired into Italy, where he recruited his scattered forces as well as he could. But in the beginning of the following

year, 352, Constantius, having assembled his

troops, surprised and took a strong castle on the

Julian Alp?, belonging to Magnentius, without

Jlie loss of a m;m. After this the emperor ad-

vanced in order to force the rest ; upon which

M-uiienlius was struck with such terror that he

immediately abandoned Aquileia, and ordered

the troops that guarded the other passes of the

Alps to follow him. Thus Constantius, entering

Italy without opposition, made himself master

of Aquileia. Thence he advanced to 1'avia.

where Magnentius gained a considerable ad-

vantage over him. Notwithstanding this loss,

Constantius reduced the whole country bordeunc

on the Po, and Magnentius's men deserted i> >

him in whole troops, delivering up to him tlif

places they had garrisoned; by which the tyrant

was so disheartened that he left Italy, and retired with all his forces into Gaul. Soon after this,

Africa, Sicily, and Spain, declared tor Constan-

tinus; upon which Magnentius sent a senator,

and after him some bishops, to treat of a j.eace;

but the emperor treated the senator as a spv, and

sent back the bishops without an answer. Find-

ing his affairs now desperate, and that there \ a>

no hopes of pardon, Magnentius recruited his army in the best manner he could, and despatched an assassin into the east to murder GallusCssar. The assassin gained over some of Gallus's guards ; but the plot being discovered they were all seized and executed as traitors. In 353 the war against Magnentius was carried on with more vigor than ever, and at last happily ended by a battle fought in that part of Gaul afterwards called Dauphiny.

Magnentius, being defeated, took shelter in Lyons: but the few soldiers who attended him, despairing of any further success, resolved to purchase the emperor's favor by delivering up to him his rival. Accordingly they surrounded the house where he lodged ; upon which the tyrant, in despair, slew with his own hand his mother, hte brother Desiderius, whom he had created Caesar, and such of his friends and relations as were with him ; and then, fixing his sword in a wall, threw himself upon it. After the death of Magnentius, his brother Decentius, finding himself surrounded on all sides by the emperor's forces, chose also to strangle himself. Thus Constantius was left sole master of the Roman empire. His panegyrists say that after his vic-

tory he behaved with the greatest humanity, for-
giving and receiving into favor his greatest
enemies, other historians tell us that he now
became haughty, imperious, and cruel, of which
many instances are given. In this year, 353, the
empire was subject to very grievous calamities.
Gaul was ravaged by the barbarians beyond the
Rhine, and the disbanded troops of Magnentius :
at Rome the populace rose on account of a
scarcity of provisions. In Asia the Isauriau
robbers over-ran Lycaonia and Pamphylia and
laid siege to Seleucia. At the same time the
Saracens committed dreadful ravages in Mesopo-
tamia; the Persians also invaded the prov,
of Anthemitsia on the Euphrates. But the Eas-
tern provinces were not so much harassed by
barbarians as by Gallus Caesar himself, who
ought to have protected them. That prince \
naturally of a cruel, haughty, and tyrannical
disposition ; but, elated with his successes acamst
the Persians, he at last behaved like a madman.
His cruelty is said to have been heiulit.Miwl by
the instigations of his wife Constantinn, who is
ROME.

by Ammianus styled tlie Megwra, or ‘fury of her sex ;’ and lie adds that her ambition was equal to her cruelty. Thus all the provinces and cities in the east were filled with blood and misery. No man, however innocent, was sure to live or enjoy his estate a whole day; for, Callus’s temper being equally suspicious and cruel, those who had any private enemies took care to accuse them of crimes against the state. At last the emperor being informed from all quarters of his conduct, and also that he aspired to the sovereignty, resolved upon his ruin. He wrote letters to Gallus and Constantina, inviting them both into Italy, and they durst not venture to disobey the emperor’s express command. Constantina, who was well acquainted with her brother’s temper, set out first, leaving Gallus at Antiocli : but she hfd scarcely entered the province of Bithynia, when she was seized with a fever which put an end to her life. Gallus, now despairing of being able to appease his sovereign, thought of openly revolting; but most of his friends deserted him, so that he was at last obliged to submit unreservedly to Constantius.

He advanced, therefore, according to his orders; but at Pitavium was arrested, and stripped of all the ensigns of dignity. Thence he was carried to Flanona, in Dalmatia. He confessed most of the crimes laid to his charge ; but urged as an excuse the evil councils of his late wife. The emperor, provoked at this plea, and instigated by the enemies of Gallus, signed a warrant for his execution. All this time the emperor had been engaged in a war with the Germans; and, though he gained no advantage, the barbarians thought proper to' make peace with him. This, however, w:is but short lived. No sooner was the Roman army withdrawn, than they began to make new inroads. Against them Constantius despatched Arbelio with the flower of the army; but he fell into an ambuscade, and was put to flight with great loss. This, however, was soon retrieved by the valor of Arintheus, who became famous in the reign of Valens, and of two other officers, who falling upon the enemy, without waiting the orders of their general, put them to flight, and obliged them to leave the Roman territory. The tranquillity of the empire, which ensued on this repulse of the Germans, was soon interrupted

by a pretended conspiracy, but by which in the end a true one was produced. Sylvanus, a leading man among the I' ranks, commanded in Gaul, and had there performed great exploits against the barbarians. He had been raised to his post by Arbetio, only with a design to remove him from the emperor's presence, in order to accomplish his ruin, which he did in the following manner : one Dynames, leaving Gaul, begged of Sylvanus letters of recommendation to his friends at court ; which being granted, the traitor erased all but the subscription. He then inserted directions to the friends of Sylvanns for the carrying on a conspiracy ; and delivering these forged letters to the prefect Lampridius, they were by him shown to the emperor. Thus Sylvanus was in a manner forced into revolt, and caused Inmself to be proclaimed emperor. In the mean time, Dynames having forged another letter, the fraud was discovered, and an enquiry set on foot, which brought to light the whole matter. Sylvanus was declared innocent, and letters sent to him by the emperor confirming him in his post : they were scarcely despatched,

when the news arrived of Sylvanus having revolted. Thunder-struck at this news, Constantius despatched against him Ursicinus, an officer of great valor, who, pretending to be Sylvanus's friend, cut him off by treachery. The barbarians, who had been hitherto kept quiet by the brave Sylvanus, no sooner heard of his death than they broke, with greater fury than ever, into Gaul ; and took and pillaged about forty cities, and among the rest Cologne, which they levelled with the ground ; while the Quadi and Sarmatians, entering Pannonia, destroyed every thing with fire and sword. The Persians overran, without opposition, Armenia and Mesopotamia : Prosper and Mausonianus, who had succeeded in the government of the east, being more intent upon pillaging than defending the provinces committed to them. Constantius, not thinking it advisable to leave Italy, raised his cousin Julian to the dignity of Caesar.

Julian seems to have been a man of extraordinary talents ; for though hitherto entirely buried in obscurity, and conversant only with books, no sooner was he placed at the head of an army

than he behaved with the greatest bravery and skill. He was appointed governor of Gaul; but before he set out Constantius gave him in marriage his sister Helena. He, however, limited his authority ; gave him written instructions how to behave ; ordered the generals who served under him to watch his actions, and strictly enjoined Julian himself not to give any largesses to the soldiery. Julian set out from Milan on the 1st of December 355, the emperor himself accompanying him as far as Pavia ; whence he pursued his journey to the Alps, attended only by 360 soldiers. On his arrival at Turin he was first acquainted with the loss of Cologne. He arrived at Vienne before the end of the year 355. In 356 the barbarians besieged Autun. Julian marched to his relief, but found the siege raised : on which he pursued the barbarians to Auxerre and Troies, and put them to flight with a handful of men. From Troies he hastened to Rheims, where the main body of the army, commanded by Marcellus, awaited his arrival. Thence he took his route towards Decempagi (now Dieuze), on the Seille in Lorrain, to oppose the Germans who were ravaging that province. But the enemy

attacking his rear had nearly cut off two legions.

A few days after he defeated the Germans,

though with great loss to his own army : the vic-

tory, however, opened him a way to Cologne.

Here he caused the ancient fortifications to be

repaired, and the houses rebuilt ; after which he

took up his winter quarters at Sens. Constan-

tius entered Germany on the side of Rhuitia, laid

waste the country far and wide ; and obliged the

barbarians to sue for peace. He enacted two

laws : 1. declaring idolatry capital ; and, 2.

granting the effects of condemned persons to their

children and relations within the third degree.

In the beginning of 357 the barbarians besieged

Julian a whole month in Sens : Marcellus, the

commander-in-c'iief, never once offering to assist

him. Julian, lu>-.%vver, >o valiantly dr.

himself with the few forces he had that the bar-

barians at last retired. After this Constantms

declared Julian commander-in-chief of all the

forces in Gaul ; appointing under him one Seve-

rus, an officer of great experience, and of a quite different disposition from Marcellus. On his

arrival Julian raised new troops, and supplied

them with arms which he found in an old arsenal. The emperor, resolving to put a stop to the terrihle devastations committed chiefly by the Alemans, wrote to Julian to march directly against them. At the same time he sent Barbatio, the successor of Sylvanus, with 25,000 or 30,000 men, out of Italy, in order to enclose the enemy between two armies. The Leti, however, a German nation, passing between the armies, advanced as far as Lyons, hoping to surprise that wealthy city ; but, meeting with a warmer reception than they expected, contented themselves with ravaging the country all round it. On the first notice of this expedition Julian detached strong parties to guard the passages through which he knew the barbarians must return. Thus they were all cut off except those who marched near the camp of Barbatio ; who was so far from cutting off their retreat that he complained by a letter to Constantius of some officers for attempting it. These officers, among whom was Valentinian, afterwards emperor of the west, were, by the orders of Constantius, cashiered for their disobedience. The other barbarians either fortified

themselves in the countries which they had seized, or took shelter in the islands formed by the Rhine. Julian resolved first to attack the latter ; and with this view demanded some boats of Barbatio; but he, instead of complying with his request, immediately burnt his boats, as he did on another occasion the provisions which had been sent to both armies, after he had plentifully supplied his own. Julian, not in the least disheartened with this unaccountable conduct, persuaded some of the most resolute of his men to wade over to one of the islands. Here they killed all the Germans who had taken shelter in it. They then seized their boats, and pursued the slaughter in several other islands, till the enemy abandoned them ail, and retired, with their wives and booty, to their respective countries. On their departure Barbatio attempted to form a bridge of boats on the Rhine ; but the enemy, apprised of his intention, threw a great number of huge ‘rees into the river; which, being carried by the stream against the boats, sunk several of them. The Roman general then retired ; but the barbarians, falling unexpectedly upon him, cut off

numbers of his men, and returned loaded

with booty. Elated with this success they assem-

bled in great numbers under the command of

Cliiiodomarius, a prince of great renown among

them, and six oilier kinjs. They encamped in

the neighbourhood of Strasburg. Here they

were encountered by Julian, who put them to

flight with the l«»s «f 6000 or 8000 of their men slain in the field, ami •mmbrr drowned

in the river; while Julian himself lost only 243

m*n and four tribunes. In this •K-II> >II (‘)modo-

marius was taken and sent \< > IJoiiif, where he

foon alter died. After the battle Julian advaniiJ

with all his army to Mayence, where he built a

bridge over the Rhine, and, having with difficulty

prevailed upon his army to follow him, entered

Germany. Here he ravaged the country, till, being

prevented by snow from advancing, he began to

repair the fort of Trajan, about three or four

leagues from Frankfort. The barbarians, now

alarmed, sent deputies to treat of a peace ; but

this Julian refused to grant upon any terms. lie

consented, however, to a truce of seven months,

upon their promising to store with provisions

the fort he was building. In 358 he took the

field against the Franks, who were divided into several tribes, the most powerful of which were the Salii and Chamavi. The first of these he soon subdued ; after which he allotted them lands in Gaul, incorporating great numbers into his cavalry. He next mardned against the Chamavi, whom he defeated and obliged to retire beyond the Rhine. Afterwards he rebuilt three forts on the Meuse, which had been destroyed by the barbarians ; but, wanting provisions, he ordered 600 or 800 vessels to be built in Britain to bring corn from thence into Gaul. Julian continued in the country of the Chauiavi till the expiration of his truce with the Alemans , and then, laying a bridge of boats over the Rhine, entered their country with fire and sword. At last two of their kings came in person to sue for peace; which Julian granted on their promising to set at liberty the captives they had taken ; to supply a certain quantity of corn when required ; and to furnish wood, iron, and carriages, for repairing the cities they had ruined. The prisoners released amounted to upwards of 20,000. Soon after the vernal equinox Constantius marched against the Quadi and Sarmatians, whose country

lay beyond the Danube. Having crossed that river he laid waste the territories of the Sarmatians ; who thereupon came in great numbers, together with the Quadi, pretending to sue for peace. Their true design was to surprise the Romans; but the latter, suspecting it, fell upon them sword in hand. This obliged the rest to sue for peace in earnest, which was granted on the delivery of hostages. The emperor then marched against the Limigantes, i.e. the si who, in 334, had driven the Sarmatians out of their country. They used the same artifice as the Sarmatians and Quadi had done, coming in great numbers to the emperor under pretence of submission, but prepared to fall upon him unexpectedly. Observing their manner, and distrusting them, he caused his troops to surround then* insensibly while he was speaking. The Li mi gantes then displeased with the conditions he offered them, laid their hands on their swords . on which they were attacked by the soldii and, finding it impossible to escape, made with tury towards the tribunal, where they were cut in peices. After this the emperor rava

their territories, and obliged them to quit the

country, which was then restored to the Samia-

lian-. This yenr a iian-lity eml>as>y arrived from

Sapor king ot" Persia, -vitii a letter, in which that monarch styled himself ' king of kings', brother

of the sun and moon,' &c., acquainting the em-

peror that, though he niiˆlit insist on having all

the countries beym 1 t ',-.• SiryiiH-n i> M.uedon

delivered up to him, lie would be contented with

Armenia and Mesopotamia, which had been un-

justly taken from his grandfather Narses; adding

that, unless justice was done him, he would

assert his right by arms. Constantius wrote in

answer that as lie had maintained the Roman

dominions in their full extent when lie was pos-

sessed only of the east, he could not suffer them

to be curtailed now he was master of the whole

empire. In a few days, however, he sent ano-

ther message with presents; being desirous at

least to put off the war till he had secured the

northern provinces. This embassy proved un-

successful, as did also another which was sent

soon after.

In 359 Julian continued his endeavour for re-

lieving Gaul ; erected magazines in different places; visited the cities which had suffered most, and gave orders for repairing the fortifications. He then crossed the Rhine, and pursued the war in Germany with such success that the barbarians submitted to his own terms. in the mean time the emperor, having received intelligence that theLimigantes had quitted the country in which he had placed them, hastened to the banks of the Danube, in order to prevent their entering Pannonia, and nearly extirpated them. This year Constantius instituted a court of inquisition against all those who consulted heathen oracles. Paulus Catena, a cruel informer, was despatched into the east to prosecute them ; and Modestus, equally remarkable for his cruelty, was appointed judge. His tribunal was erected at Scythopolis in Palestine, whither persons of botli sexes, and of every rank and condition, were daily dragged in crowds from all parts, and torn in pieces by racks, or publicly executed.

In 359 Sapor .king of Persia began hostilities. During the campaign, however, he made little progress ; having only taken two Roman forts,

and destroyed the city of Amida, the siege of which is said to have cost him 30,000 men. On the first news o? the invasion, Constantius had sent Ursicinus into the east ; but his enemies prevented him from receiving the supplies necessary for carrying on the war. On his return, he was charged witli the loss of Amida, and all the disasters that had happened during the campaign. Two judges were appointed to enquire niio his conduct ; but they left the matter doubtf u . On this Ursicinus was so much exasperated tlut he appealed to the emperor, and, in the heat «>f passion, let fall some unguarded expressions, for which he was deprived of all his employments. Constantius resolved to march next year in persou against the Persians, and wrote to Julian to send him part of his forces, without considering that by so doing he would have left Gaul exposed. Julian resolved to comply with the emperor's orders, but to abdicate the dignity of Ca;sar, that he might not be blamed for the consequences. Accordingly he suffered the best soldiers to be draughted: they were, however, unwilling to leave him, and at last pro-

claimed him emperor. Whether this was done absolutely against Julian's consent is uncertain ; but he wrote to the emperor, and persuaded the whole army also to send a letter, in which they acquainted Constuntius with what had happened, and entreated him to acknowledge Julian as his partner. But this was positively refused by Constantius, who began to prepare for war. Julian, then, causing his troops to take an oath of allegiance to himself, with surprising expedition made himself master of the whole of Illyricum, and the important pass separating that country from Thrace. Constantius was thunder-struck with this news ; but, hearing that the Persians had retired, he marched with all his forces against his competitor. On his arrival at Tarsus in Cilicia, however, he was seized with a feverish distemper, occasioned chiefly by perplexity of miud; and, at the foot of Mount Taurus, breathed his last, on the 13th of November, 361, in the forty-fifth year of his age.

JULIAN. — By the death of Constantius, Julian became master of the empire without a rival. He had been educated in the Christian religion ; but, having secretly apostatized long before, as

soon as he saw himself master of Illyricum, he openly caused the temples of the gods to be re-opened. When the messengers arrived at Naissus in Illyricum, to acquaint him with Constantius's death, they found him consulting the entrails of victims concerning the event of hi* journey : and he immediately set out for Constantinople. At Heraclea he was met by almost all the inhabitants of this metropolis, into whicli he made his public entry on the llth of December 361, attended by the senate, magistrates, and nobility. Here he was again declared emperor by the senate ; and, as soon as that ceremony was over, caused the obsequies of Constantius to be performed with great pomp. His first care was to enquire into the conduct of the late emperor's ministers. Several of these, having been found guilty of enormous crimes, were condemned and executed ; particularly a noted informer Catena, and another named Apodamus, were sentenced to be burnt alive. Along with these, however, was put to death Ursula, a man of unexceptionable character, to whom Julian himself was highly indebted. He next set about

reforming the court : reduced the officers called agentes in rebus, from 10,000 to seventeen; and discharged thousands of cooks, barbers, &c., who by their large salaries drained the exchequer. The curiosi, whose office it was to inform the emperor of what had passed in the different provinces, were all discharged. Thus he was > enabled to ease the people of the heavy taxes with which they were loaded, by abating a fifth part of them throughout the empire. Julian next invited to court the philosophers, magicians, &c., from all parts ; but did not raise any persecution against the Christians. On the contrary, he recalled from banishment the orthodox bishops who had been exiled during the former reign ; with a design, however, as is observed both by the Christian and Pagan writers, to sow dissensions in the church. As the Persians were now preparing to carry on the war with vigor, Julian resolved to march against them in person. But before he set out he formed at Constantinople a large harbour to shelter the ships from the south wind, built a magnificent porch leading to it, and erected a fine library, in which he lodged liis books. In May 362 he de-

parted for Antioch ; and on the 1st of January,

363, renewed in that city the sacrifices of Ju-

piter for the safety of the empire. Duriiiij Ins

stay he continued his preparations for the Per-

sian war, consulting the oracles, aruspices, ma-

gicians, 8tc. Those of Delphi, Delos, and

Dodona, assured him of victory. The aruspices,

indeed, and most of his courtiers and officers,

did all that by in their power to divert him from his expedition ; but the flattering answers of the

oracles, and the desire of adding the Persian mo-

narch to the many kings he had already seen

humbled at his feet, prevailed. Many nations

sent deputies offering their assistance; whose

offers he rejected, telling them that the Romans

were to assist their allies, but stood in no need of any assistance from them. He likewise rejected,

and in a very stern manner, the offers of the Sa-

racens ; answering, when they complained of his

stopping the pension paid them by other empe-

rors, that a warlike prince had steel, but no gold.

However, he wrote to Arsaces, king of Armenia,

enjoining him to keep his troops in readiness to

execute the orders he should transmit to him.

Julian now sent orders to his troops to cross the Euphrates, designing to enter the enemy's country before they had notice of his march ; and proceeded himself to Litarba. Thence he went to Beraa, where he halted a day, and exhorted the council to restore the worship of the gods ; as he did also at Batnae ; and was well pleased with the inhabitants for having before his arrival restored that worship. He now pursued his journey to Hierapolis, the capital of Euphratesiana, which he reached on the 9th of March.

As he entered this city, fifty of his soldiers were killed by the fall of ;i porch. He left Hierapolis on the 13th of March ; and, having passed to Euphrates on a bridge of boats, came to Batna a city of Osrhoene, about ten leagues from Hierapolis. From Batnae he proceeded to Carrhat; where, in the famous temple of the moon, it is said he sacrificed a woman. While he continued in this city, he received advice that a party of the enemy's horse had broken into the Roman territories: on which he resolved to leave an army in Mesopotamia, while he advanced on the other side of the country into the Persian dominions. This array consisted, ac-

cording to some, of 20,000, others say of

30,000, chosen troops. It was commanded by

Procopius, and Sebastian, a famous Manichean

who had been governor of Egypt. These two

were to join Arsaces king of Armenia, to lay

waste the plains of Media, and meet the empe-

ror in Assyria. To Arsaces Julian himself wrote,

threatening to treat him as a rebel if he did not execute the orders given him ; and telling him

that the God he adored would not be able to

•creen him from his indignation. There were

two roads leading from Carrhae to Persia ; the

one to the left by Nisibis ; the other to the right through Assyria, along the banks of the Euphrates.

Julian chose the latter, but caused magazines to

be erected on both roads : and, after having

viewed his army, set out on the 25th of March.

He passed the Abora, which separated theˆRo-

nian and Persian dominions, near its conflux

with th« Euphrates ; after which he broke down

the bridge, that his troops might not desert. As he proceeded on his march, a soldier and two

horses were struck dead by lightning ; and a

lion of an extraordinary size was despatched by

the soldiers. These omens occasioned great

disputes among the aruspices. Having passed

the Abora, Julian entered Assyria, which he laid

waste; a step which was judged very impolitic.

As he met with no army to oppose him, he ad-

vanced to the walls of Ctesiphon, the metropolis

of the Parthian empire ; and here, having caused

the canal to be cleared, formerly dug by Trajan,

he conveyed his fleet to the banks of the Tigris,

passed that river, and drove the enemy into the

city with the loss of a great number of men : he himself, in the mean time, losing only seventy-

five. Julian had now advanced so far into the

enemy's country that he found it necessary to

think of a retreat, as it was impossible for lum to winter there. For this reason heˆnade no at-

tempt on Ctesiphon, but began to march back

along the banks of the Tigris. In the mean

time the king of Persia was assembling a for-

midable army ; but, desirous of putting an end

to so destructive a war, sent very advantageous

proposals of peace to Julian. These he impru-

dently rejected ; and soon after, deceived by

treacherous guides, quitted the river, and entered

into an unknown country totally laid waste by

the enemy. A still worse step he was persuaded

to take by these guides, viz. to burn his fleet,

lest it should fall into the hands of the enemy. As soon as it was set on fire, the whole army cried out that the emperor was betrayed, and that the guides were traitors. Julian ordered them immediately to be put on the rack, upon which they confessed the treason ; but it was too late. The fleet was in flames, and no part was saved except twelve vessels designed to be made use of in the building of bridges. The emperor thus finding himself in a strange country, and his army greatly dispirited, called a council, in which it was resolved to proceed for Corduene south of Armenia. But they had not proceeded far when they were met by the king of Persia, at the head of a very nj-merous army. Several sharp encounters took place; and, though the Persians were always defeated, the Romans reaped no advantages, beiig reduced to the last extremity for want of provisions. In one of these attacks, when the Romans were suddenly assailed, the emperor, eager to repulse the enemy, hastened to the field without his armor when hereceived a mortal wound by a dart, which pierced through his side to his liver.

Of this wound he died the same night, 26th of June, 363, in the thirty-second year of his aˆu, after having reigned scarcely twenty months.

JOVIAN. — As Julian had declined naming any successor, the army unanimously chose Jovian, a very able commander, whose father had lately resigned the post of comes domesticorum. The valor and experience of Jovian, however, were not sufficient to extricate the Roman army from the difficulties in which they had been plunged. Famine raced in the camp to such a degree that not a sinule man would have been left had not the Persians unexpectedly sent proposals of peace, which were received with great joy. The

terms were, that Jovian should restore to the Persians the five provinces which had heen taken from them in the reign of Dioclesian, with several castles, and the cities of Nisibis and Singara. After the conclusion of the treaty, Jovian pursued his march homeward. When he arrived at Anlioch he revoked all the laws made by Julian against Christianity ; espoused the cause of the orthodox Christians against the Arians ; and re-

called all those who had been formerly banished, particularly Athanasius. But he did not live to make any great alterations, or even to visit his capital as emperor ; for in his way to Constantinople he was found dead in his bed, on the 17th of February, 364, in his thirty-third year, when he had reigned only seven months and forty days.

VALENTINIAN AND VALENS. — Valentinian was now chosen emperor. Immediately on his accession, the soldiers with great clamor required him to choose a colleague. In a few days he named his brother Valens ; and, as the empire was threatened on all sides with an invasion of the barbarous nations, he thought proper to divide it. This famous partition was made at Mediana in Dacia: when Valens had for his share the whole of Asia, Egypt, and Thrace; and Valentinian all the west ; that is, Illyricum, Italy, Gaul, Spain, Britain and Africa. After this Valens returned to Constantinople, where the beginning of his reign was disturbed by the revolt of Procopius, a relation of Julian. On the death of that emperor, he had fled into Taurica Chersonesus for fear of Jovian ; but returned in dis-

guise, where, having gained over Eugenius, a eunuch of great wealth, disgraced by Valens, and some officers who commanded the troops sent against the Goths, he got himself proclaimed emperor. At first he was joined only by the lowest of the people, but at length he was acknowledged by the city of Constantinople. On the news of this revolt, Valens despatched some troops against the usurper ; but these were gained over, and Procopius continued for some time to gain ground. It is probable he would finally have succeeded, had he not become so much elated with his good fortune that he grew tyrannical. In consequence of this he was first abandoned by some of his principal officers; and soon after defeated in battle, taken prisoner, and put to death. This revolt produced a war betwixt Valens and the Goths. The latter, having been solicited by Procopius, had sent 3000 men to his assistance. On hearing the news of the usurper's death, they marched back : but Valens detached against them a body of troops, who took them all prisoners. Athanaric, king of the Goths, expostulated with Valens ; but that emperor proving

obstinate, both parties prepared for war. In 367 and 369 Valens gained great advantages over his enemies : and obliged them to sue for peace. The rest of this reign contains nothing remarkable, except the cruelty with which Valens persecuted the orthodox clergy. The latter sent eighty of their number to lay their complaints before him ; but he, instead of giving them any relief, determined to put them all to death. A persecution was also commenced against the magicians, which occasioned the destruction of many innocent persons ; for books and persons of all ranks were seized wilh such terror at his severity on this point, that many burnt their libraries, lest books of magic should have been secretly conveyed into them. In 373 the Goths, whom Valens had admitted into Thrace, advanced from that province to Macedon and Thessaly. They afterwards blocked up Constantinople, plundered the suburbs, and at last totally defeated and killed the emperor. The day after the battle, hearing that an immense treasure was lodged in Adrianople, the barbarians laid siege to that place : but were repulsed with great slaughter. Great numbers of them after

this were cut in pieces by the Saracens, whom Maria their queen had sent to the assistance a the Romans ; so that they were obliged to abandon this design likewise, and retire from the neighbourhood of the capital In the beginning of the reign of Valentinian the province of Libya Tripolitana was grievously oppressed by the barbarians of the desert, and almost equally so by Romanus its own governor. His conduct was so exceedingly oppressive that the inhabitants sent a deputation to Valentinian, complaining of their unhappy situation, and desiring redress. Palladius was accordingly sent to inquire into the state of the province; but he made a false report to the emperor, and thus the unhappy province was left a prey to the merciless invaders and rapacious governor. During the rest of this reign the barbarians continued their inroads into the empire. Valentinian expired in the year 375, the fifty-fifth of his age, and twelfth of his reign.

GRATIAN AND THEODOSIUS. — At the death of Valens trie eastern and western empires again fell into the hands of a single person. This was Gratian, who had held the empire of the west

after the death of Valeutinian. He repulsed many barbarous nations who threatened the empire with dissolution; but, finding himself pressed on all sides, he, on the 19th of January 379, declared Theodosius his partner in the empire, and committed to his care all the provinces which had been governed by Valens. Theodosius is greatly extolled by historians for his extraordinary valor and piety ; and has even been honored with the surname of the Great. From the many persecuting laws, however, made in his time, it would seem that his piety was misguided ; and that, if he was naturally humane and compassionate, superstition often obscured these virtues. He certainly was a man of great military talent, and the state of the empire called for all his abilities. The provinces of Dacia, Thrace, and Illyricum, were already lost ; the Goths, Taisali, Alans, and Hunns, were masters of the greatest part of these provinces, and had ravaged and laid waste the rest. The Iberians, Armenians, and Persians, were in arms, and ever ready to take advantage of the distracted state of the empire. The few soldiers who had survived the late defeat kept within the strong holds of

Thrace. In the year 379 many victories are said to have been obtained by Theodosius ; but the accounts of these are so contradictory that no stress can be laid upon them. In February 380 he was seized with a dangerous malady, so that Gratian was obliged to carry on the war

alone. Apprehending that the neighbouring barbarians might break into some of the provinces, he concluded a peace with the Goths, which was confirmed by Theodosius on his recovery. But they had no sooner heard that Gratian had left Illyricum, than they passed the Danube, and, breaking into Thrace and Pannonia, advanced as far as Macedon, destroying all with fire and sword. Theodosius, drawing together his forces, marched against them, and gained a complete victory. In 381 Athanaric, the most powerful of all the Gothic princes, being driven out by a faction at home, recurred to Theodosius, by whom he .was received with great tokens of friendship. He went out to meet him, and attended him with a numerous retinue into the city. The Gothic prince died the same year ;

and Theodosius caused him to be buried after the Roman manner, with such pomp and solemnity that the Goths, who attended him in his flight, returned home with a resolution never more to molest the Romans. Nay, out of gratitude to the emperor, they took upon them to guard the banks of the Danube, and prevent the empire from being invaded. In 383 Maximus revolted against Gratian in Britain ; and in the end murdered him, and assumed the empire of the West himself. Gratian had now divided his dominions with his brother Valentinian II., whom he allowed to reign in Italy and West Illyricum, reserving the rest to himself. Maximus therefore, immediately after his usurpation, sent deputies to Theodosius, assuring him that he had no designs on the dominions of Valentinian. As Theodosius at that time found himself in danger from the barbarians, he not only therefore forebore to attack Maximus, but even acknowledged him for his partner in the empire. It was not long, however, before the ambition of the usurper prompted him to break his promise. In 387 he passed the Alps on a sudden ; and, meeting with

no opposition, marched to Milan, where Valentinian usually resided. The young prince fled to Aquileia ; and thence to Thessalonica, to implore the protection, of Theodosius ; who,, in answer, informed him that he was not surprised at the usurper's progress, as he had protected, and Valentinian had persecuted, the orthodox C'liristians. At last he prevailed on the young prince to renounce Arianism, and promised to assist him with all the forces of the east. He first, however, sent messengers to Maximus, desiring him to restore the provinces he had taken from Valentinian, and content himself with Gaul, Spain, and Britain. But the usurper would hearken to no terms. This year he besieged and t ok Aquileia, Quaderna, Bononia, Mutina, .mm, Plncentia, and many other cities in Italy. In 388 he was acknowledged in Rome, and in all the provinces of Africa. Theodosius, therefore, finding a war inevitable, made preparations for it. His army consisted chiefly of Goths, Ilunns, Alans, and other barbarians, whom he was glad to take into the service, to prevent their raising disturbances on the frontiers.

lie defeated Maximus in two battles, took him

prisoner, and put him to death; and, the usurper

having left his son Victor in Gaul, the »-ni|><-r'>r despatched against him Arbogastes., who took

him prisoner, dispersed his troops, anil put him

also to death. This victory was used by Theo-

dosius with great moderation. In 389 he took

a journey to Rome, and abolished idolatry.

The next year was remarkable for the destruction

of the celebrated temple of Serapis in Alexan-

dria ; which, according to the description of

Ammianus Marcellinus, surpassed all others in

the world, that of Jupiter Capitolinus excepted.

Not satisfied with the destruction of the Alexan-

drian temples, the zealous Theophilus, bishop of

Alexandria, encouraged the people to pull down

all the other temples, chapels, &c., set apart for

the pagan worship, and the statues of the gods to

be either burnt or melted. Of the innumerable

statues which at that time were in Egypt, he

spared but one, viz. that of an ape, to expose the ;ii religion to ridicule. On his return to

Constantinople, Theodosius ordered such tem-

ples as were yet standing to be thrown down,

and the Arians to be every where driven out of

the cities.

In 392 Valentinian II. was treacherously murdered by Arbogastes his general ; who, instead of seizing on the sovereignty himself, chose to confer it upon Eugenius. This new usurper, though a Christian, was greatly favored In the Pagans, who were all apprized that he only bore the title of emperor, while the whole power lodged in Arbogastes who pretended to be greatly attached to their religion. The aruspices informed him that he was destined to the empire of the whole world ; that he would soon gain a complete victory over Theodosius, who was as much hated as Eugenius was beloved by the gods, &c. But, though Eugenius seemed to favor the Pagans, yet he wrote to St. Ambrose. The holy man did not answer his letter till he was pressed by some friends to recommend them to the new prince; and then he wrote to this infamous usurper with all the respect due to an emperor. Soon after his accession, Eugenius sent deputies to Theodosius ; and they are said to have been received by him in a very gracious manner. He did not, however, enter into any

alliance with him, but immediately began his military preparations. In 394 he set out from Constantinople, and was at Adrianople on the 15th of June that year. He bent his march through Dacia, and the other provinces between Thrace and the Julian Alps, with a design to force the passages of these mountains, and break into Italy before the army of Eugenius was in a condition to oppose him. On his arrival at the Alps, he found these passes guarded by Flavianus, prefect of Italy, at the head of a considerable body of Roman troops. These were utterly defeated by Theodosius, who thereupon crossed the Alps and advanced into Italy. lie was soon met by Eugeniits ; and a bloody battle ensued, without any decisive advantage on either side. The next day the emperor led his troops in person against the enemy, utterly defeated them, and took their camp. Eugenius was taken prisoner by his own men, and brought to Theodosius, who reproached him with the murder of \ alciitinian, with the calamities he had brought on the empire by his unjust usurpation, and with the putting his confidence in Hercules, and

not in the true God ; for on his chief standard he had displayed the image of that fabulous hero. Eugenius begged easnestly for his life ; but, while he lay prostrate at his feet, his own soldiers cut off his head, and, carrying it about on the point of a spear, showed it to those in the camp who had not yet submitted. At this they were thunderstruck ; but being informed that Theodosius was ready to receive them into favor they threw down their arms. Arbogastes, after this, despairing of pardon, fled to the mountains; Imt being informed that diligent search was made for him killed himself. His children, and those of Eugenius, took sanctuary in churches ; l>ut the emperor restored to them their paternal i states, and raised them to considerable employments. Soon after this, Theodosius appointed his son Ilonorius emperor of the west, assigning him for his share, Italy, Gaul, Spain, Africa, and West Illyricum. The next year he was seized with a dropsy, and made his will ; by which he bequeathed the empire of the East to Arcadius, and confirmed Honorius in the possession of the

West. He likewise confirmed the pardon he had granted to all those who had borne arms against him, and remitted a tribute which had proved very buidensome to the people. He died at Milan on the 17th January 395, in the sixteenth year of his reign and fiftieth of his age.

PART IV.

THE WESTERN EMPIRE.

We now trace, distinctly, the regular and rapid decline of the Western Empire. The death of Theodosius gave the finishing stroke to its prosperity ; his son Ilonorius, to whom he left this part of the empire, being possessed of no abilities. The barbarians appear to have been abundantly sensible of this. Theodosius died in January ; and before spring the GotUs were in arms. They were now headed by an experienced commander, their celebrated king ALAIUC (see that article), who would have proved formidable oven in better times of the empire. He first overran Greece: Athens, Corinth, Argos, and Sparta, yielding without resistance; and the pass of Thermopylae being betrayed to him. At last, in 397, he was oppesed by Stilicho, the general of

Honorius, a man of great experience in war. who

defeated him with great loss. Alaric, however,

found means to conclude a treaty with the ministers of Constantinople. In a subsequent conflict in

Italy the wife of Alaric was taken, with all the

wealth which had been amassed in plundering

Greece. The victory, however, was not so deci-

sive but that Alaric continued still formidable ;

and Stilicho chose rather to conclude a treaty

with him. Alaric, who was not very scrupulous

in his observance of this treaty, attempted in his

retreat to make himself master of Verona ; but

Stilicho, again coming up with him near that

place, gavehim a third terrible defeat : after which

he effected a retreat out of Italy, but not without the greatest difficulty and danger.

Italy being thus delivered, Honorius entered

Home in triumph, having Stilicho along with

Mini in the triumphal chariot. Soon after, how-

CUT, the emperor was obliged to leave the me-

tropolis and retire to Ravenna, to secure himself

from the barbarians, who now broke in upon the

empire on all sides. Gibbon accounts for it from a supposed revolution in the north-east parts of

China. ‘ About four years,’ he says ‘ after the victorious Toulon had assumed the title of khan

of the Gougen, another barbarian, the haughty Rhodogast, or Radagaisus, marched from the northern extremities of Germany almost to the gates of Rome, and left the remains of his army to achieve the destruction of the west. The Vandals, the Suevi, and the Burgundians, formed the strength of this mighty host : but the Alani, who had, found an hospitable reception in their new seats, added their active cavalry to the heavy infantry of the Germans ; and the Gothic adventurers crowded so eagerly to the standard of Radagaisus, that by some historians he has been styled the king of the Goths : 12,000 warriors, distinguished above the vulgar by their noble birth or their valiant deeds, glittering in the van ; and the wliole multitude, which was not less than 200,000 fighting men might be increased by the accession of women, of children, and of slaves to the amount of 400,000 persons. This formidable emigration issued from the same coast of the Baltic which had poured forth the myriads of the Cimbfi and Teutones to assault Rome and Italy in the vigour of the republic. After the departure of those barbarians, their

native country, which was marked by the vestiges of their greatness, long ramparts, and gigantic moles, remained during some ages a vast and dreary solitude ; till the human species was renewed by the powers of generation; and the vacancy was filled up by the influx of new inhabitants. The safety of Rome was intrusted to the counsels and the sword of Stilicho ; but such was the feeble and exhausted state of the empire that it was impossible to restore the fortifications of the Danube, or to prevent, by a vigorous effort, the invasion of the Germans. The hopes of the vigilant minister of Honorius were confined to the defence of Italy. He once more abandoned the provinces ; recalled the troops ; pressed the new levies, which were rigorously exacted, and pusillanrmously eluded ; employed the most efficacious means to arrest or allure the deserters ; and offered the gift of freedom, and of two pieces of gold, to all the slaves who would enlist. By these efforts he painfully collected from the subjects of a great empire an army of 30,000 or 40,000 men ; which, in the days of Scipio and Camillus, would have been

instantly furnished by the free citizens of the territory of Rome. The thirty legions of Stilicho were reinforced by a large body of barbarian auxiliaries ; the faithful Alani were personally attached to his service ; and the troops of Huns and of Goths, who marched under the banners of their native princes, Hultien and Sarus, were animated by interest and resentment to oppose the ambition of Radagaisus. The king of the confederate Germans passed, without resistance, the Alps, the Po, and the Appenines : leaving on one hand the inaccessible palace of Honorius, securely buried among the marshes of Ravenna; and, on the other, the (amp of Stilicho, who had fixed his head-quar-

ters alTicmum, or I'av ia, but who seems to have avoided a decisive battle till lie had assembled his distant forces. Many cities of Italy were pillaged, or destroyed ; and the sies;e of Florence by Radagaisus is one of the earliest events in the history of that celebrated republic, whose firm-

ness checked and delayed the unskilful fury of the barbarians. The senate and people trembled at their approach within 180 miles of Rome;

and anxiously compared the danger which they
had escaped with the new perils to which they
were exposed. Alaric was a Christian, and a
soldier, the leader of a disciplined army ; who
understood the laws of war, who respected the
sanctity of treaties, and who had familiarly
conversed with the subjects of the empire
in the same camps and the same churches.
The savage Iladagaisus was a stranger to the
manners, the religion, and even the language
of the civilised nations of the south. The
fierceness of his temper was exasperated by
cruel superstition ; and it was universally be-
lieved that he had bound himself by a solemn
vow to reduce the city into a heap of stones and
ashes, and to sacrifice the most illustrious of the itornan senators on the altars of those gods who
were appeased by human blood. Florence was
reduced to the last extremity. On a sudden
they beheld from their walls the banners of
Stilicho, who advanced with his united forces
to the relief of the faithful city; and who soon
marked that fatal spot for the grave of the bar-
1-urian host. The apparent contradictions of
those writers who variously relate the defeat of

Iladagaisus may be reconciled without offering much violence to their respective testimonies. Their extravagant assertion that not a single soldier of the Christian army was killed, or even wounded, may be dismissed ; but the rest of the narrative of Augustin and Orosius is consistent with the sta»e of the war and the character of Stilicho. Conscious that he commanded the last army of the republic, his prudence would not expose it in the open field to the headstrong fury of the Germans. The method of surrounding the eiiemy with strong lines of circumvallation, which he had twice employed against the Gothic king, was repeated on a larger scale, and with more considerable effect. The example of Caesar must have been familiar to the most illiterate of the Roman warriors ; and the fortifications of Dyrrhachium, which connected twenty-four castles by a perpetual ditch and rampart of fifteen miles, afforded the model of an intrenchment, which might confine and starve the most numerous host of barbarians. The imprisoned multitude of horses and men were gradually destroyed by famine, rather than by the sword ;

but the Romans were exposed, during the pro-
gress of such an extensive work, to the frequent
attacks of an impatient enemy. The despair of
the hungry barbarians would precipitate them
against the fortifications of Stilicho ; the ge-
neral might sometimes indulge the ardour of his
brave auxiliaries, who eagerly pressed to assault
the camp of the Germans ; and these various
incidents might produce the sharp and bloody
conflicts which dignify the narrative of Zosimus,
and the Chronicles of Prosper and Marcel) inus.
A seasonable supply of men and provisions had
been introduced into the walls of Florence; and
the famished host of Radagaisus was in its turn
besieged. The proud monarch of so many war-
like nations, after the loss of his bravest warriors, was reduced to confide either in the faith of a
capitulation, or in the clemency of Stilicho. But
the death of the royal captive, who was igno-
miniously beheaded, disgraced the triumph of
Rome and of Christianity; and the short delay
of his execution was sufficient to brand the
conqueror with the guilt of cool and deliberate
cruelty. The famished Germans who escaped
the fury of the auxiliaries were sold as slaves, at the contemptible

price of as many single pieces

of gold : but the difference of food and climate

swept away great numbers of those unhappy

strangers ; and it was observed that the inhuman

purchasers, instead of reaping the fruit of their

labors, were soon obliged to add to it the ex-

pense of interring them. Stilicho informed the

emperor and the senate of his success ; and de-

seived a second time the glorious title of Deli-

verer of Italy.'

' The fame of Stilicho's victory,' continues

this historian, ' has encouraged a vain persuasion

that the whole army, or rather nation, of Ger-

mans, who migrated from the shores of the

Baltic, miserably perished under the walls of

Florence. Such indeed was the fate of Rada-

gaisus himself, of his brave and faithful com-

panions, and of more than one-third of t r

various multitude of Sueveb and Vandals, of

Alani and Burgundians, who adhered to the

standard of their general. The union of such

an army might excite our surprise, but the causes

of separation are obvious and1 forcible; they

were the pride of birth, the insolence of valor, ;ho jealousy of command, the impatience of subordi-

nation, and the obstinate conflict of opinions, of interests, and of passions, among so many kings and warriors, who were untaught to yield or to obey. After the defeat of Iladagaisus, two parts of the German host, vfhich must have exceeded the number of 100,000 men, still remained in arms between the Appenines and the Alps, or between the Alps and the Danube. It is uncertain whether they attempted to revenge the death of their general : but their irregular fury was soon diverted by the prudence and firmness of Stilicho, who opposed their march, and facilitated their retreat ; who considered the safety of Rome and Italy as the great object of his care, and who sacrificed with too much indifference the wealth and tranquillity of the distant provinces. The barbarians acquired from the junction of some Pannonian deserters the knowledge of the country and of the roads, and the invasion

of Gaul, which Alaric had defined, was executed by the remains of the great army of Radagaisus. when the limits of Gaul and Germany were shaken by the northern emigration, the Franks bravely encountered the single force of the Vandals ; who had again separated their troops from the standard of their barbarian allies. They paid the penalty of their rashness : and 20,000 Vandals, with their king Godegisdus, wen' slain in the field of battle. The whole people must •have been extirpated, if the squadrons of the

ROME.

Alani, advancing to their relief, had not trampled down the infantry of the V ranks ; who, after an honorable resistance, were compelled to relinquish the unequal contest. The victorious confederates pursued their march; and on the last •day of the year, in a season when the waters of the Rhine were most probably frozen, they entered without opposition the defenceless provinces of Gaul. This memorable passage of the Suevi, the Vandals, the Alani, and the Burgundians, who never afterwards retreated, may be considered as the fall of the Roman empire in

the countries beyond the Alps ; and the barriers which had so long separated the savage and the civilised nations of the earth were from that fatal moment levelled with the ground. While the peace of Germany was secured by the attachment of the Franks and the neutrality of the Alemanni, the subjects of Rome, unconscious of their approaching calamities, enjoyed a state of quiet and prosperity which had seldom blessed the frontiers of Gaul. This scene of peace and plenty was suddenly changed into a desert, and the prospect of the smoking ruins could alone distinguish the solitude of nature from the desolation of man. The flourishing city of Mentz wasp surprised and destroyed ; and many thousand Christians weie inhumanly massacred in the church. Worms perished after a long and oostinate siege : Strasburg, Spires, Rheims, Tournay, Arras, Amiens, experienced the most cruel oppression of the German yoke ; and the consuming flames of war spread from the banks of the Rhine over the greatest part of the seventeen provinces of Gaul. That ri h and extensive country, as far as the Ocean, the Alps, and the

Pyrenees, was delivered to the barbarians, who drove before them in a promiscuous crowd the bishop, the senator, and the virgin, laden with the spoils of their houses and altars.'

In the midst of these calamities, a revolt happened in Britain, where one Constantino, a common soldier, was raised to the imperial throne, merely for the sake of his name. He governed Britain with great prosperity; passed over into Gaul and Spain, the inhabitants of which submitted without opposition, being glad of any protector whatever from the barbarians. Honorius, incapable of defending the empire, or repressing the revolt, was obliged to acknowledge him for his partner in the empire.

In the mean time Alaric, with his Goths, threatened a new invasion, unless he was paid a certain sum of money ; and Stilicho, having advised a compliance with this demand was accused, after all his services, of corrupt motives, and put to death. The money, however, not being readily sent, Alaric laid siege to Rome, and would have taken it, had not the emperor finally complied with his demand. The ransom of the city was 5000 Ibs. of gold, 30,000 of silver, 4000 silk garments,

3000 skins dyed purple, and 3000 Ibs. of pepper.

On tliis occasion, the heathen temples were

stripped of their remaining ornaments, and

among others of the statue of Valor; which the

Pagans did not fail to interpret as a presage of the speedy ruin of the state. Alaric, having received

this treasure, departed for a short time ; but soon after he again blocked up the city with a nume-

rous army ; and again an accommodation with

Honorius was set on foot. However, Rome- w.i ,

a third time besieged, and at last taken and plun-

dered. Procopius says that there was not in the

whole city one house left entire ; and both St.

Jerome und Philostorgius assert that the great

metropolis of the empire was reduced to a heap

of ashes and ruins. Though many of the Goths,

pursuant to the orders of their general, refrained

from shedding the blood of such as made no re-

sistance ; yet others more cruel and blood-thirsty,

massacred all they met : so that in some quarters

the streets were seen covered with dead bodies,

and swimming in blood. However, not the least

injury was offered to those who fled to the

churches ; nay the Goths themselves conveyed

thither, as to places of safety, such as they were desirous should be spared. Many of the statues

of the gods, that had been left entire by the em-

perors as excellent pieces of art, were on this

occasion destroyed, either by the Goths, who,

though mostly Arians, were zealous Christians,

or by a dreadful storra of thunder and lightning

which fell at the same time upon the city, as if it had been sent on purpose to complete with them

the destruction of idolatry. Some writers, how-

ever, affirm that the city suffered very little at this time, not so much as when it was taken by

Charles V. Alaric did not long survive the taking

of Rome, being cut off by a violent fit of sick-

ness in the neighbourhood of Rhegium.

After his death the affairs of Honorius seemed

a little to revive by the defeat and death of Con-

stantine and some other usurpers ; but the pro-

vinces of Gaul, Britain, and Spain, were now

almost entirely occupied by barbarians, in which

state they continued till the death of Honorius,

which happened in the year 423, after an unfor-

tunate reign of twenty-eight years.

VALENTIMAN III. — After some usurpations

which took place on his death, his nephew Va-

lentinian III. was declared emperor of the west,

and his mother, Placidia, regent during his mi-

nority. He was scarcely seated on the throne, when the empire was attacked by the Huns under the celebrated Am LA (see that article). The empress then had two celebrated generals, Bonifacius and Aetius ; who by their union might have saved the empire ; but, unhappily, through the treachery of Aetius, Bonifacius revolted, and a civil war ensued. Aetius, notwithstanding his treachery, was pardoned, and put at the head of the forces. He defended it against Attila with great spirit and success, notwithstanding the deplorable situation of affairs, till he was murdered by Valentinian with his own hand. In the mean time, the provinces, except Italy itself, were totally over-run by the barbarians. Genseric, king of the Vandals, ravaged Africa and Sicily ; the Goths, Suevians, Burgundians, &c., had taken possession of Gaul and Spain ; and 'the Britons were oppressed by the Scots and Picts, so that they were obliged to call in the Saxons to their assistance. In the year 455 Valentinian was murdered by one Maximus, whose wife he had ravished. MAXIMUS immediately assumed the empire;

hut felt such violent anxieties that he designed to resign it, and fiy out of Italy, to enjoy the

quiet of a private life. However, being dissuaded from this by his friends, and his own wife dying soon after, he forced the empress Eudoxia to marry him. Kudoxia, who had tenderly loved Valentinian, provoked beyond measure at being married to his murderer, invited Genseric king of the Vandals into Italy. This proved a most fatal scheme ; for Genseric immediately appeared before Rome ; a violent tumult ensued, in which Maximus lost his life; and the city was taken and plundered by Genseric, who carried off what had been left by the Goths. A vessel was loaded with costly statues ; half the covering of the capitol, which was of brass plated over with gold ; sacred vessels enriched with precious stones ; and those which had been taken by Titus out of the temple of Jerusalem ; all of which were lost with the vessel in its passage to Africa.

MARJOUIA-SUS. — Nothing could now be more

deplorable than the state of the Roman affairs ; nevertheless, the Western empire continued to exist for some few years ; and even seemed to revive for a little under Marjorianus, who was declared emperor in 458. He was a man of great courage, and possessed of many other excellent qualities. He defeated the Vandals, and drove them out of Italy. With great labor he fitted out a fleet, of which the Romans had been long destitute. With this he designed to pass over into Africa ; but, it being surprised and burnt by the enemy, he himself was soon after murdered by one Ilicimer, a Goth, who had long governed every thing with an absolute sway. After the death of Marjorianus, Athemius was raised to the empire : but, beginning to counteract Riciiner, the latter openly revolted, and besieged and took Rome ; where be committed innumerable cruelties, among the rest putting to death the emperor Anthemius, and raising one Olybius to the empire.

The transactions of Olybius's reign were very few, as he died soon after his accession. On his death Glycerius usurped the empire. He was

deposed in 474, and Julius Nepos had the name of emperor. He was driven out the next year by his general Orestes, who caused his son Romulus Augustulus to be proclaimed emperor. But the following year, 476, the barbarians who served in the Roman armies, and were distinguished with the title of allies, demanded, as a reward for their services, the third part of the lands in Italy ; pretending that the whole country, which they had so often defended, belonged of right to them. As Orestes refused to comply with this insolent demand, they resolved to do themselves justice, as they called it ; and, openly revolting, chose one Odoacer for their leader. Odoacer was, according to Ennodius, meanly born, and only a private man in the guards of the emperor Augustulus, when the barbarians, revolting, chose him for their leader. However he is said to have been a man of uncommon ability. He marched against Orestes anil his M,U Aaguttutolj who still refused to give them any share of the lands in Italy. As the Roman troops were inferior, both in number and valor, to the barbarians, Orestes took n fuˆc in Pavia,

ut that time one of tin; l>cst iWtilird cities in

Italy ; but Odoacer, investing the place without

loss of time, took it soon after by assault,

gave it up to be plundered by the soldiers,

and then set fire to it. Orestes being taken

prisoner, and brought to Odoacer, he carried

him to Placentia, and there caused him to be

put to death on the 28th of August, the day on

which he had driven Nepos out of Ravenna,

and obliged him to abandon the empire. From

Placentia Odoacer marched straight to Ravenna,

where he found Paul, the brother of Orestes,

and the young emperor Augustulus. The former

he immediately hut to death ; but sparing Augus-

tulus, in consideration of his youth, he stripped him of the ensigns of the imperial dignity, and confined him to Lucullanum, a castle in Campania; where

he was treated with great humanity, and al-

lowed a handsome maintenance. Rome readily

submitted to the conqueror, who immediately

caused himself to be proclaimed king of Italy,

but would not assume the purple. Thus

failed the very name of an empire in the west.

Britain had been long abandoned by the Ro-

mans ; Spain was held by the Goths and Sue-

vans ; Africa by the Vandals : the Burgundians, Goths, Franks, and Alans, had erected several tetrarchies in Gaul ; at length Italy itself, with its proud metropolis, which for so many ages had given law to the rest of the world, was enslaved by a contemptible barbarian, whose family, country, and nation, are not well known to this day.

PART V.

EASTERN, OR COXSTA-NTINOPOLITAN EMPIRE.

From the death of Theodosius to the time when the Roman empire in the west was totally destroyed by the Goths, we find little remarkable in the history of Constantinople ; or during the reigns of Theodosius II., Marcian and Leo I and II., except that Leo II., who had been associated by his maternal grandfather, (Leo I.) resigned in favor of his father Zeno, whom lie crowned with his own hands. When the western empire ended in Augustulus, the FasU-rn was usurped by Basiliscus, who had driven out Zeno the lawful emperor. Zeno fled into Isauria, where he was pursued by Illus and Treconde*,

two of the usurper's generals ; who, having easily

defeated the few troops he had with him, forced

the unhappy prince to shut himself up in a castle, which they immediately invested. But in a short

time Basiliscus having become obnoxious to the

people by his cruelty, avarice, and other bad

qualities, his generals joined with Zeno, whom

they restored to the throne. After his restoration,

Zeno having got Baisliscus into his power, con-

fined him in a castle of Cappadocia, together

with his wife Zenonide, where they both perished

with hunger and cold, A. D. 478, after Basilis-

cus had reigned about twenty months. During

the time of this usurpation a fire happened at

Constantinople, which consumed great part of

the city, with the library containm;' 1 '20,001) M>

lumes ; amon,- which were the works of Homer,

written, it is slid, on ll .; of -i d;

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120 feet long. Zeno was not improved by his

misfortunes. He still continued the same vicious

courses which had given occasion to the usurpa-

tion of Basiliscus ; yet, though other conspiracies

were formed against him, he had the good for-

tune to escape them. He engaged in a war

with the Ostrogoths, in which he proved unsuccessful, and was obliged to yield the provinces of Lower Uacia and Mcesia to them. In 484 Theodoric, their king, made an irruption into Thrace, and advanced within fifteen miles of Constantinople ; but the following year they retired in order to attack Odoacer king of Italy, of which country Theodoric was proclaimed king in 493. The emperor Zeno died in 491, in the sixty-fifth year of his age, and seventeenth of his reign. The Roman empire had long been on the decline, before it fell a prey to the Goths. The ancient valor and military discipline, which had rendered the Romans superior to other nations, had now greatly degenerated. But what proved of the greatest detriment was the allowing vast swarms of barbarians to settle in the different provinces, and to serve in the empire in separate and independent bodies. This had proved the immediate cause of the dissolution of the western empire; but, as it affected the eastern I ‘arts less, the Constantinopolitan empire continued for near 1000 years after the western was totally dissolved. The weak administrations of Zeno, and Anastasius I., who succeeded him,

rapidly reduced the eastern empire; and it might possibly have fallen soon after the western one, had not the wise and vigorous conduct of Justin, and his partner Justinian, revived in some measure the ancient martial spirit. Justin ascended the throne in 518. In 521 he engaged in a war with the Persians, who had long been very formidable enemies. Against them he employed the famous Belisarius ; but nothing remarkable happened till after the accession of Justinian.

Ji ‘STIXIAX I. — This prince was the nephew of Justin, and was by him taken as his partner in the empire in 527 ; the same year Justin died, in the seventy-seventh year of his age, and ninth of his reign. Justinian, being now sole master of the empire, bent his whole force against the Persians. The latter proved successful in the first engagement; but were soon after utterly defeated by Belisarius on the frontiers of Persia, and by Dorotheus in Armenia. The war continued with various success during the first five years of Justinian’s reisrn- In the sixth a peace was concluded, stipulating, 1. That the emperor should pay the king of Persia 1000 IDS. weight of gold. 2. That both princes should restore the places

they had taken during the wars. 3. That the commander of the Roman forces should no longer reside at Daras, on the Persian frontiers, but at Constantma in Mesopotamia. 4. That the Iberians, who had sided with the emperor, should be at liberty to return to their own country or stay at Constantinople. This peace, concluded in 532, was styled eternal ; but proved of very short duration.

About this time happened at Constantinople one of the greatest civic tumults recorded in history. It began among the different factions in the circus, but ended in an open rebellion. The

people, highly dissatisfied with the conduct of John the praefectus pratorii, and of Trebonianus then questor, forced Hypatius, nephew to the emperor Anastasius, to accept the empire, and proclaimed him with great solemnity. As these two ministers were greatly abhorred on account of their avarice, Justinian immediately discharged them, hoping thus to appease the tumult ; but this was so far from answering the purpose that

the people only grew more outrageous ; and, most of the senators joining them, the emperor was so much alarmed that he had thoughts of abandoning the city. But the empress Theodora persuaded him rather to part with his life than his empire, and he resolved to defend himself to the utmost. In the mean time the rebels, having attempted in vain to force the gates of the palace, carried Hypatius in triumph to the circus, where, while he was beholding the sports from the imperial throne, amidst the shouts and acclamations of the people, Belisarius, who had been recalled from Persia, entered the city with a considerable body of troops. Being BOW apprised of the usurpation of Hypatius, he marched strait to the circus ; fell sword in hand upon the disarmed multitude ; and, with the assistance of a band of Heruli, headed by Mundus, governor of Illyricum, cut about 30,000 of them in pieces Hypatius the usurper, and Pompeius, another nephew of Anastasius, were taken prisoners, and carried to the emperor, by whose orders they were both beheaded, and their bodies cast into the sea. Their estates were confiscated ‘with

those of such senators as had joined with them ;

but the emperor caused great part of their lands

and effects to be afterwards restored, together

with their honors and dignities, to their children.

Justinian, having now no other enemy to contend

with, turned his arms against the Vandals in

Africa, and the Goths in Italy ; both which pro-

vinces he recovered out of the hands of the bar-

barians. But before Belisarius had time to re-

establish fully the Roman power in Italy, he was

recalled to carry on the war agahist Cosrhoes

king of Persia, who, regardless of the late treaty, entered the Roman dominions at the head of a

powerful army. The same year a new peace

was concluded upon the following conditions : —

1. That the Romans should, within two months,

pay to the Persian king 5000 Ibs. weight of gold,

and an annual pension of 500 Ibs. 2. That the

latter should relinquish all claim to the fortress

of Daras, and maintain a body of troops to

guard the Caspian gates, and prevent the barba-

rians from breaking into the empire. 3. That

upon payment of that sum Cosrhoes should im-

mediately withdraw his troops from the Roman

dominions. The treaty being signed, and the

stipulated sum paid, Cosrhoes began to march back again ; but by the way plundered several cities. Justinian hereupon resolved to renew the war with vigor; but had scarcely for that purpose despatched Belisarius into the east before he was obliged to recal him, in order to oppose the Goths, who had gained great advantages in Italy. The Persian war was carried on with indifferent success till A. D. 558, when a peace wa> concluded, upon the emperor again paying an immense sum to the e?:o!r.y. The same year

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the Huns, passing the Danube in the depth of u inter, marched in two bodies for Constantinople; and, laying waste the countries through which they passed, came, without opposition, within 150 furlongs of the city. But Belisarius, marching out against them with a handful of men, put them to flight ; the emperor, however, agreed to pay them an annual tribute, upon their promising to defend the empire against all other barbarians. This was the last exploit performed by Belisarius, who, on his return to Constantinople, was dis-

graced, stripped of his employments, and confined to his house, on pretence of a conspiracy. See BELISARIUS. In 565 a real conspiracy was formed against Justinian, which he happily escaped, and the conspirators were executed ; but the emperor did not long survive, being carried off by a natural death in 556, in the thirty-ninth year of his reign.

JUSTINIAN'S SUCCESSORS, TO THE FIRST TURKISH INVASION. — During the reign of Justinian the majesty of the Roman empire seemed to revive. He recovered the provinces of Italy and Africa out of the hands of -the barbarians, by whom they had been held for a number of years ; but after his death they were soon lost, and the empire tended fast to dissolution. In 569 Italy was conquered by the Lombards, who held it for the space of 200 years. Some amends, however, were made for this loss by the acquisition of Persian Armenia, the inhabitants of which being persecuted on account of the Christian religion, which they professed, revolted to the Romans. This produced a war between the two nations, who continued to weaken each other, till at las'. the Persian monarchy was overthrown, and that

of the Romans greatly reduced by the Saracens. These new enemies attacked the Romans in 632, and pursued their conquests with incredible rapidity. Within four years they reduced Egypt, Syria, and Palestine. In 648 they became masters of Mesopotamia, Phoenicia, Africa, Cyprus, Aradus, and Rhodes ; and having defeated the Roman fleet, commanded by the emperor Constans II. in person, they concluded a peace on condition of keeping the vast extent of territory they had seized, and paying for 1000 nummi a-year. An expedition against the Lombards was about this time undertaken, but with very little success, a body of 20,000 Romans being almost entirely cut off by one of the Lombard generals. In 671 the Saracens ravaged several provinces, made a descent in Sicily, took and plundered the city of Syracuse, and overran the whole island, destroying every thing with fire and sword. In like manner they laid waste Cilicia; and, having passed the winter at Smyrna, entered Thrace in the winter of 672, and laid siege to Constantinople itself. Here, however, they were repulsed with great loss : but next

spring they renewed their attempt, in which they

met with the same bad success : many of their

ships being burnt by the sea fire, as it was called, because it burnt underwater ; and in their return

home their fleet was wrecked off the Scyllsean

promontory. At last a peace was concluded for

thirty years, on condition that the Saracens

should retain all the provinces they had seized ;

and that they should pay to the emperor and his

successors 3000 pounds weight of gold, fifty

slaves, and as many choice horses. This peace

was scarcely concluded when the empire was in-

vaded by the Bulgarians ; who, breaking into

Thrace, defeated the Roman army, and ravaged

the country far and wide. Constantine IV., in

678, agreed to pay them an annual pension,

rather than continue a doubtful war ; and allowed

them to settle in Lower Mcesia, from them called

Bulgaria.

In 687 they were attacked by Justinian II.,

who entered their country without provocation ;

but they, falling suddenly upon him, drove him

out, and obliged him to restore the towns ami

captives he had taken. In 697 Justinian was

deposed; and in his exile fled to Trebelis, king

of the Bulgarians, by whose aid he was restored

to his throne ; but, soon forgetting this favor, he invaded the country of the Bulgarians, with a

design to wrest from them those provinces which

he had yielded to them. In this expedition he

was attended by no better success than his in-

gratitude deserved, his army being defeated, and

himself obliged to make his escape in a vessel

to Constantinople. The Bulgarians, continuing

their inroads and ravages at different times, ge-

nerally defeated the Romans who ventured to

oppose them, till A. D. 800, the seventh of the

reign of Nicephorus I., when they surprised the

city of Sardica, and put the whole garrison, con-

sisting of 6000 men, to the sword. The empe-

ror marched against them with a considerable

army ; but the enemy retired at his approach ;

and he, instead of pursuing them, returned to

Constantinople. Two years after he entered Bul-

garia at the head of a powerful army, destroying

every thing with fire and sword. The king ofl'eivd

to conclude a peace with him upon honorable

terms ; but Nicephorus, rejecting his proposals,

continued to waste the country, destroying the

cities, and putting all the inhabitants, without

distinction of sex or age, to the sword. The kiny; was so much affected with these cruelties, that.

he sent a second embassy to Nicephorus, offering

to conclude a peace with him upon any terms.

But, Nicephorus dismissing the ambassadors with

scorn, the Bulgarian monarch attacked the Roman

camp, forced it, and cut off almost the whole

army, with the emperor himself, and a great

number of patricians. His successor, Michael I.,

likewise engaged in a war with the Bulgarians ;

but, being utterly defeated, resigned the empire.

After this the Bulgarians continued to be very

formidable enemies till the year 979, when they

were vigorously attacked by Basilius II. The

Bulgarians were now governed by a kir.g named

Samuel ; who having ravaged the Roman terri-

tories, ‘Basilius sent against him Nicephorus

Uranus at the head of a powerful army. Uranus,

leaving his baggage at Larissa, reached by long

marches the Sperchius, and encamped with his

whole army over against the enemy, who lay on

the opposite bank. As the river was greatly

swelled, with the heavy rains that had lately

fallen, Samuel, not imagining the Romans would

attempt to pass it, suffered his troops to roam in large parties about

the country. But Uranus,
having at length found out a place where tho
river was fordable, passed it in the night, fell

•upoi. the Bulgarians, who lay for the most part
asleep : cutting great numbers in pieces, and
making himself master of their camp. Samuel
and his son were dangerously wounded ; and
would have been taken, had they not concealed
themselves among the dead. The next night
they stole away to the mountains of ./Etolia,
The following year the emperor entered Bulgaria
at the head of a numerous and well disciplined
army ; defeated Samuel in a pitched battle, and
took several strong cities. The emperor himself,
however, at last, narrowly escaped being cut ofi
in a narrow pass. From this danger he was
relieved by the arrival of Nicephorus Xiphias,
governor of Philippopolis, with a body of troops .
who, falling upon the enemy's rear, put them tc
flight. Basilius pursued them close ; and, having
taken an incredible number of captives, caused
their eyes to be pulled out, leaving to every hun-

dred a guide with one eye, that he might conduc.

them to Samuel. This shocking spectacle sc

affected the king that he fell into a deep swoon,

and died two days after. The emperor, pursuing

his conquests, in the space of two years made

himself master of most of the enemy's strong

holds. He defeated also the successor of Samue.

in several engagements ; and, having at last killed him in battle, the Bulgarians submitted without

reserve. The vast treasures of these princes

were by Basilius distributed among his soldiers.

Soon after the royal family surrendered them-

selves to the emperor, by whom they were re-

ceived with the utmost respect. Ibatzes, how-

t- ver, a person nearly allied to the family, who had

the whole course of the war, refused to submit.

At last Eustathius Daphnomelus, whom Basilius

hud lately appointed governor of Achridus, the

chief city of Bulgaria, undertook to secure him.

ˆ ithout communicating his design to any, he

repaired, with two persons in whom he could

confide, to the mountain on which Ibatzes had

fortified himself. He hoped to pass undis-

covered among the many strangers who flocked

thither to celebrate the approaching feast of the Virgin, for whom Ibatzes had a great veneration. In this he found himself mistaken ; for he was known by the guards, and carried before the prince. To him he pretended to have something of importance to communicate ; but, as soon as Ibatzes had retired with him into a remote place, Daphnomelus threw himself suddenly upon him, and with the assistance of the two men whom he had brought with him, put out his eyes ; and got safe to an abandoned castle on the top of the hill. Here they were immediately surrounded by the troops of Ibatzes ; hut Daphnomelns exhorting them now to submit to the emperor, by whom he assured them they would be well received, they congratulated Daphnomelus on his success, and suffered him to conduct the unhappy Ibatzes a prisoner to Basilius. The emperor was no less surprised than pleased at the success of this bold attempt; and rewarded Daphnomelus with the government of Dyrrhachium, and all the rich moveables of his prisoner. After this, having accomplished the entire reduction of Bulgaria, he returned to Constantinople with an incredible

number of captives. All this time the Saracens

had at intervals invaded the Roman dominions, and even attempted to make themselves master of the capital. Their internal divisions., however, rendered them now much less formidable enemies than they had formerly been ; so that some provinces were recovered for a time out of their hands. In 1040 the empire was first invaded by the Turks ; an enemy w ho, though not very powerful at that time, by degrees gathered strength sufficient to overthrow both the Roman and Saracen empires. See TURKEY. Cutln-*

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tan, having been refused a passage throu Media, in his retreat from Arabia, by Stephen the Roman governor, forced his passag'e and defeated the Roman army with so much ease that he told his uncle the province might be easily conquered. Tangrolipix accordingly sent Asan, another nephew, with an army of 20,000 men to reduce Media. The young prince entered that country, and committed every where dreadful ravages ; but, being drawn into an ambush by

the Roman generals, he was cut off with his whole army. Tangrolipix, not discouraged, sent a new army into Media of nearly 100,000 men who, after having ravaged the country without opposition, laid siege to Artza, a place of great trade. Not being able to reduce it by any other means they set it on fire ; and 150,000 of the inhabitants perished either by the flames or the sword. After this Abraham Halim, half brother to Tangrolipix, hearing that the Romans, reinforced with a body of troops under Liparites governor of Iberia, had taken the field, marched against them, and the two armies engaged with incredible fury. The victory continued Ion.: doubtful ; but at length inclined to the Romans, who nevertheless did not think proper to pursue the fugitives, as their general Liparites was taken prisoner. The emperor despatched ambassadors with rich presents, and a large sum of money to redeem him, and at the same time to conclude an alliance with Tangrolipix. The presents the sultan received ; but immediately returned them together with . the money to Liparites, whom he set at liberty without ransom. Not long aftei

Tangrolipix sent an ambassador to Constantinople : who having exhorted the emperor to submit to his master, and acknowledge himself his tributary, was ignominiously driven out o' the city. Tangrolipix, highly affronted at this entered Iberia, while the emperor Constantim Monomachus was engaged in a war with the Patzinacae, a Scythian nation. Having ravaged that country, he returned to Media, and laid siege for forty days to Mantzichierta, a place defended by a numerous garrison. The next spring Tangrolipix returned, and ravaged Iberia with the utmost cruelty, sparing neither sex nor age. But, on the approach of the Roman army, he retired to Tauris, leaving 30,000 men on the frontiers of the empire. Till the time of this emperor the provinces bordering on the countries of the barbarians had maintained, at their own charge, forces to defend them : and were on that account exempted from paying tribute ; but, as Monomachus exacted from them the same sums that were paid by others, they were no longer in a condition to defend themselves.

C

R O M E.

From COXSTANTINE Drt-AS TO THE CAPTURE

CONSTANTINOPLE BY THE LATINS. In 1067

died the emperor Constantine Ducas, having left

the empire to his three sons, Michael, Andronicus, and Constantine ; but, as they were all very

young, he appointed the empress Eudocia regent,

after having required of her an oath never to

marry. He likewise obliged the senators solemnly

to swear that they would acknowledge none for

their sovereign but his three sons. No sooner,

however, was he dead than the Turks, hearing

that the empire was governed by a woman, broke

into Mesopotamia, Cilicia, and Cappadocia.

The empress was no way in a condition to oppose

them, the greater part of the army having been

disbanded in her husband's life-time : and a discontented party existed at home, who observed

that the state of affairs required a man of courage and address at the helm, instead of a weak woman. Eudocia therefore determined to marry

some person of merit, capable of defeating her

enemies : and when one Romanus Diogenes, a

man of illustrious birth and beautiful person,

was brought forth to receive sentence of death,

she only gently upbraided him with his ambition

and set him at liberty. Soon after she appointed

him commander-in-chief of her forces. In this

station he acquitted himself so well that the

empress resolved to marry him if she could

recover the writing in which her oath was contained out of the hands of the patriarch.

In order to this she applied to a favorite eunuch ; who told the patriarch that the empress

was so taken with his nephew Bardas, that she

was determined to marry and raise him to the

empire, provided the patriarch absolved her from

her oath, and convinced the senate of the law-

fulness of her marriage. The patriarch, dazzled

with the prospect of his nephew's promotion,

readily undertook to perform both. He first ob-

tained the consent of the senate, by representing

to them the dangerous state of the empire, and

exclaiming against the rash oath which the jea-

lousy of the late emperor had extorted from the

empress. He then publicly discharged her from

it, and restored the writing to her, exhorting her

to marry some deserving object, who, being en-

trusted with an absolute authority, might be ca-

pable of defending the empire. Thus discharged

from her oath, the empress, a few days after,

married Romanus Diogenes. Being a man of

great activity and military talent, he took the

command of the army, and passed over into

Asia, recruiting and inuring his forces on his

march to military discipline. On his arrival,

being informed that the Turks had surprised and

plundered Neocaesarea, and were retiring with

their booty, he hastened after, and came up \ith

them on the third day, when he cut off great

numbers of them, and easily recovered the booty.

After this he pursued his inarch to Aleppo,

which he retook, together with Ilierapolis, where

he built a strong castle. In his return, he was met by a numerous body of Turks, who at-

tempted to cut off his retreat ; and he pretended

to decline an engagement through fear ; but at-

tacked them afterwards \itli such vigor that In-

put them to flight at the first onset. After this several towns submitted to him ; but, ih«- K

l>ein_r spent, he returned to Constantinople. The

following year lie passed over into Asia in the

spring; and, being informed that the Turks had

sacked Iconium, marched at once against them ;

when they retired in great haste. The Arrrenians,

however, encouraged by the approach of the emperor's army, fell upon them in the plains of Tarsus, put them to night, and stripped them both of their baggage and booty. The spring following the emperor once more entered Asia at the head of a considerable army. When the two armies drew near each other, Axan, the Turkish sultan, son of the famous Tangrolipix sent proposals to Romanus for a peace. These were imprudently rejected, and a desperate engagement ensued ; when, in spite of the utmost efforts of the emperor, his army was routed, and he himself wounded and taken prisoner. When this news was brought to Axan, he could scarcely believe it ; but, being convinced by the appearance of the royal captive in his presence, he tenderly embraced -and consoled him. ' You shall have no occasion,' said he, ' to complain of your captivity : I will not use you as my prisoner, but as an emperor.' The Turk wa«. a< good as his word. He lodged Romanus in a royal pavilion ; assigned him attendants, with an equipage suitable to his quality; and discharged such prisoners as he desired. After he

had for some days entertained his captive with extraordinary magnificence, a perpetual peace was concluded, and the emperor dismissed wit'i the greatest marks of honor. He then set out with the Turkish ambassador for Constantinople, where the peace was to bev ratified ; but by the way he was informed that Eudocia had been driven from the throne by John the brother ot Constantine Ducas, and Psellus a leading man in the senate, who had confined her to a moinstery, and proclaimed Michael Ducas, his eldest son, emperor. On this intelligence Romanus retired to a strong castle near Theodosiopolis, where he hoped soon to be joined by his friends and adherents. But John, who had taken upon him to act as guardian to the young prince, sent Andronicus with a considerable army against him ; on which he was obliged to fly to Adana, in Cilicia, where he was closely besieged, and at last compelled to surrender. Andronicus carried his prisoner into Phrygia, where he fell dangerously ill, being, as was suspected, secretly poisoned. Here, at any rate, John ordered his eyes to be put out ; which was done with such

cruelty that he died soon after, in 1071, having reigned three years and eight months.

Axan was no sooner informed of the tragical end of his friend and ally than he resolved to irnade the empire; and that not only with a di-si_n to plunder as formerly, but to conquer, and keep what he conquered. The emperor de-spatched against him Isaac Comnenus, with a considerable army ; but he was defeated and taken prisoner by Axan. Another army \a< sent off under John Ducas, the emperor's uncle, who gained some advantages; but one I i>flius revolted with the troops under his command, • d himself to be proclaimed emperor, and reduced several cities in Phrygia and Cappa-dotia. Against him John marched with all his

forces, suffering the Turks m the mean time to pursue their conquests ; but, coming to an en-gagement with the rebels, his army was entirely defeated, and himself taken prisoner. Notwith-standing this victory, Urselius was so much alarmed at the progress of the Turks that he

not only released his prisoner, but joined with him against the common enemy, by whom they were both defeated and taken prisoners. Axan, however, was now prevented from pursuing his conquests by Cutlu-Moses, nephew to the late Tangrolipix. He had revolted against his uncle ; but, being defeated by him in a pitched battle, had taken refuge in Arabia, whence he returned at the head of a considerable army to dispute the sovereignty. But, while the two armies were preparing to engage, the khalif of Babylon interposed his authority, and, by his mediation, an agreement was concluded that Axan should enjoy undisturbed the monarchy lately left him by his father, and that Cutlu-Moses should possess such provinces of the Roman empire as he or his sons should conquer. Both the Turkish princes thus turned their forces against the empire; and, before 1077, made themselves masters of Media, Lycaonia, Cappadocia, and Bithynia, fixing their capital at Nice. During all this time the emperors of Constantinople, as well as their subjects, seemed to be in a manner infatuated. They took no notice of the great progress of these barbarians : the generals were ambitious

only of seizing the tottering empire ; and, after it was obtained, spent their time in oppressing their subjects, rather than in attempting to repulse the enemy. At last Alexius Comnenus, having wrested the empire from Nicephorus Botoniates, in 1080, began to prepare for opposing so formidable an enemy with vigor ; so that Solyman, the Turkish sultan, son and successor to Cutlu-Moses, despatched ambassadors with proposals of peace. These were at first rejected ; but Alexius was at last glad to accept them, on hearing that Robert Guischard, duke of Puglia and Calabria, was making great preparations against him in the west. To this expedition Robert was incited by Michael Ducas. That prince had been deposed by Nicephorus Botoniates, and towards the end of the usurper's reigu fled into the West, where he was received by Robert, who sailed with all his forces from Bruudusium ; and, landing at Buthrotum in Epirus, made himself master of that place, while his son Bohemond with part of the army reduced Aulon, a celebrated city of Albania. Thence they advanced to Dyrrhachium, which they in-

vested both by sea and land ; but met with a

most vigorous opposition from GeorgePalseologus,

whom the emperor had entrusted with the de-

fence of it. In spite of the utmost efforts of the enemy, this commander held out till the arrival

of the Venetian fleet, by whom Robert's navy

commanded by Bohemond was totally defeated,

the admiral himself having narrowly escaped.

After this victory the Venetians landed ; and,

being joined by Palaologus's men, fell upon

Robert's troops with such fury that they destroyed

their works, burnt their engines, and forced them

back to their camp. As the Venetians were now

masters at sea, the besieged were supplied with

plenty of provisions, while a famine began to

rage in the camp of the enemy : a calamity soon

followed by a plague, which in three months is

said to have destroyed 10,000 men. Robert,

however, did not abandon the siege, l.ut pushed

it with such vigor that the courage of the besieged began to fail ; and Palseologus sent repeated

messages to the emperor, stating that he should

be obliged to surrender. Ou this Alexius marched

in person to the relief of the city, but was de-

feated with great loss by Robert. The emperor

himself with great difficulty made his escape, leaving the enemy master of his camp. Soon after this defeat the city surrendered ; and Alexius, being destitute of resources, seized on the wealth of the churches and monasteries, which gave much offence to the clergy, and had nearly occasioned great disturbances in Constantinople. At the same time, entering into an alliance with Henry emperor of Germany, he persuaded him to invade the dominions of Robert in Italy. At first Henry met with great success ; but was soon overcome and driven out by Robert. Bohemond, in the mean time, reduced several places in Illyricura ; and, having defeated Alexius in two pitched battles, entered Thessaly, and set down before Larissa, till the emperor came to its relief. Soon after his arrival he drew a strong party of Bohemond's men into an ambuscade, and cut them almost all off. However, in a battle which was fought a few days after, Bohemond had the advantage ; but his troops mutinying he was obliged to return to Italy. Alexius in his absence recovered several cities ; and applied once more to the Venetians. By them he was assisted with a powerful fleet, which defeated that of Robert in two engagements ; but being

soon after surprised they were defeated with the

‘oss of almost all their navy. Robert is said to have used his victoiy with great barbarity. The

Venetians now equipped a second fleet; and,

joining that of the emperor, fell unexpectedly

upon Robert’s navy in Buthrotum, sunk most of

his ships, and took a great number of prisoners.

Robert, while making preparations to revenge

this defeat, was prevented by death ; and his son

Roger did not think proper to pursue so expen-

sive a war.

This conflict was scarcely ended when the

Scythians, passing the Danube, laid waste great

part of Thrace, committing every where the

greatest barbarities. Against them the emperor

despatched an army under the command of Pacu-

rianus and Branas. The latter engaged the enemy

contrary to the opinion of his colleague; and his

rashness caused the loss of the greater part of the army, who were cut off by the Scythians, toge-

ther with two generals. On this Talicius, an

officer who had signalised himseif on many occa-

sions, was appointed to the command. He fell

upon the enemy as they lay securely near Philip-

popolis, cut off great numbers of them, and

obliged the rest to retire in confusion. Next spring, however, they returned in such numbers that the emperor resolved to march against them in person. Accordingly he set out for Adrianople, and thence to Lardea. Here, contrary to the advice of his best officers, he ventured a battle ; in which he was totally defeated with the loss of vast C2

numbers of men, he himself escaping with difficulty. The next year he was attended with no Wtter success, his army being entirely defeated with the loss of his camp and baggage. But in 1084 he retrieved his credit ; and gave the Scythians such an overthrow that very few escaped. Notwithstanding they again invaded the empire in 1093. To this they were encouraged by an impostor called Leo, who pretended to be the eldest son of Ilomanus Diogenes. The young prince had been slain in a battle with the Turks ; but the Scythians only wanted a pretence to renew the war. By a stratagem, however, Leo was murdered ; and the Scythians, being afterwards overthrown in two great battles, were obliged to submit on the emperor's own terms. From 1083

the war had been carried on with the Turks with various success ; but now an association was formed in the west against these infidels. This was occasioned by the superstition of the Christians, who now meditated a crusade for the recovery of the Holy Land. Had the western princes been assisted by the emperor of the east in this undertaking, the Turks had undoubtedly, been unable to resist them ; but the Latins were looked upon by them as no less enemies than the Turks ; and indeed whatever places they took from the infidels they never thought of restoring to the emperors of Constantinople, but erected a number of small independent principalities ; which neither having sufficient strength to defend themselves, nor being properly supported by one another, soon became a prey to the Turks. In 1203 happened a dreadful fire at Constantinople, Occasioned by some Latin soldiers having plundered a mosque which the Turks had been suffered to build. For this reason they were attacked by the infidels ; who being much superior to them in number, the Latins were obliged to set fire to some houses

to make their escape. The rlame, spreading in an instant from street to street, reduced great part of the city to ashes. The emperor Isaac Angelus, who had been restored to his throne by the Latins, died soon after their departure from Constantinople, leaving his son Alexius sole master of the empire. The young prince, to discharge the large sums he had promised to the French and Venetians for their assistance, was obliged to lay heavy taxes on his subjects ; and this, with the great esteem and friendship he showed to his deliverers, raised a general discontent among the inhabitants of Constantinople, who were sworn enemies to the Latins. This encouraged John Ducas (surnamed Murtzuphlus from his joined and thick eyebrows) to attempt the sovereignty. Unhappily he found means to put his treacherous designs in execution, and strangled the young prince with his own hands. After this he presented himself to the people; told them what he had done, which he pretended was to secure their liberties ; and earnestly entreated them to choose an emperor who had courage to defend them against the Latins. On

this he was instantly saluted emperor, but his usurpation proved the ruin of the city. The Latins resolved immediately to revenge the death of the young prince; and, as they had been so often betrayed and retarded in tin ir exp-diiions to the Holy Land by the emperors of Constantinople, to make themselves masters of that city, and seize the empire. Accordingly they mustered all their forces in Asia, and, having crossed the straits, laid siege to Constantinople by sea and land. The tyrant, who was a man of great courage and experience, made a vigorous defence. The Latins, however, after having battered the walls for several days together with an incfedible number of engines, made a general assault on the 8th of April 1204. The attack lasted from break of day till 3 P.M., when they were forced to retire, after having lost some of their engines, and a great number of men. The assault was nevertheless renewed four days after ; when, after a warm dispute, the French planted their standard on one of the towers ; which the Venetians observing, they quickly made themselves masters of four other towers, where they likewise

displayed their ensigns. In the mean time three of the gates being broke down by the battering rams, and those who had scaled the walls having killed the guards and opened the gates, the whole army entered. The Greeks fled in the greatest confusion; and several parties of the Latins scouring the streets put all they met to the sword. Night put a stop to the dreadful slaughter, and next morning the Greeks entirely submitted ; at the same time they were ordered to retire to their houses, the city being given up to be plundered by the soldiers. The Latins strictly enjoined their men to abstain from slaughter, to preserve the honor of the women, and to bring the whole booty into one place, that a just distribution might be made : but the Greeks had concealed their most valuable effects during the night ; and many persons of the first rank had escaped, and carried along with them immense treasures. Yet the booty, without the statues, pictures, and jewels, amounted to a sum almost incredible. As for Murtzuphlus he made his escape in the night ; embarking in a small vessel with Euphrosyne, the wife of Alexius Angelus a late usurper, and her daughter Eudoxia,

for whose sake he had abandoned his wife.

FINAL DOWNFALL OF THE EASTERN EMPIRE. — Constantinople continued subject to the Latins for fifty-six years, from A. D. 1205 till 1261 : during which period Baldwin, earl of Flanders, Henry his brother, Peter de Courlenay, Robert, and Baldwin II. reigned successively as emperors. This last had reigned thirty-two years, when the Latins were expelled by Alexius Strategopulus, a person of illustrious family, and for his eminent services distinguished with the title of Caesar. He had been sent against Alexius Angelus despot of Epiius, who now attempted to recover some places in Thessaly and Greece, from Michael Palceologus, one of the Greek emperors, who, since the capture of Constantinople, had kept their court at Nice : and to try whether he could on his march surprise the imperial city. Alexius, having passed the straits, encamped at a place called Rhegium, where he was informed by the natives that a strong body of the Latins had been sent to the siege of Daphuksa, that the garrison was in great want of provisions, and that it would be easy to surprise Constantinople.

Hereupon the Greek general resolved at all

events to attempt it ; in which he was encouraged by some of the inhabitants, who, coming privately to his camp, ottered to be his guides. He approached in the ni^ht, and some of his men scaled the walls without being observed ; when, killing the sentries, they opened the gates to the rest of the army. The Greeks, rushing in, put all they met to the sword ; and, to create more terror, set fire to the city in four different places. The Latins, concluding from this that the enemy's forces were far more numerous than they really were, did not so much as attempt either to drive them out, or to extinguish the flames. In this general confusion Baldwin, quinine the ensigns of majesty, fled with Justinian the Latin patriarch, and some of his friends, to the sea-side; where, embarking in a small vessel, he sailed to Eubcea, and afterwards to Veni

full possession of Constantinople. When the news of this surprising and unexpected success was first brought to Michael he could scarcely

credit it ; but, receiving letters from Alexius himself with a particular account of the event, he ordered thanks to be returned in all the churches, and couriers to be despatched with the agreeable news to all parts of the empire. Soon after he set out for Constantinople with the empress, his family, the senate, and nobility, to take possession of the imperial city. Having passed the straits he advanced to the golden gate, and continued some days without the walls, while the citizens were making the necessary preparations to receive him with suitable magnificence. On the day appointed the golden gate, which had been long shut, was opened, and the emperor entered amidst the acclamations of the multitude to the great palace. He was preceded by the bishop of Cyzicus, who carried an image of the Virgin, and followed by all the great officers, nobility, and chief citizens, pompously dressed. Public thanks were again returned in the church of St. Sophia, at which the emperor assisted in person. After this the emperor carefully surveyed the city, a duty which greatly allayed his joy. He saw the stately palaces and

other magnificent buildings of the emperors lying in ruins ; many capacious buildings that had been erected by his predecessors, at an immense charge, destroyed by fire, and other accidents of war ; several streets abandoned by the inhabitants, and choked up with rubbish, &c. These objects only, however, excited in him a desire of restoring the city. In the mean time, looking upon Alexius as the restorer of his country, he caused him to be clad in magnificent robes ; placed with his own hand a crown on his head ; ordered him to be conducted through the city in triumph ; decreed that, for a whole year, his name should be joined in the public prayers with his own ; and commanded his statue to be erected on a stately pillar of marble. His next care was to repeople the city, many Greek families having withdrawn while it was held by the Latins. The former were recalled, and the latter were allowed many privileges to induce them not to remove. Great privileges were likewise granted to the natives of Venice and Pisa, which encouraged them to lay aside all thoughts of removing. Michael, however, being soon after

informed that the ci-devant emperor Baldwin II. had married his daughter to Charles king of Sicily, and given him Constantinople by way of dowry, he ordered the Genoese, who were become very numerous, to remove first to lleraclea, and afterwards to Galata. The P. sans and Venetians, who were not so numerous and wealthy, were allowed to continue in the city. .Michael, though he had caused himself to be proclaimed emperor, and was possessed of absolute sovereignty, was as yet only guardian to the young emperor John Lascaris, then about twelve years of age. But having now settled the state, and gained the affections both of natives and foreigners, he began to think of securing himself and his posterity in the empire ; and cruelly ordered the eyes of the young prince to be put out. This piece of barbarity involved him in great troubles. The patriarch immediately excommunicated him ; and he would probably have been driven from the throne, had he not engaged pope Urban IV. to espouse his cause, by promising to submit himself and his dominions to the Latin church. Thus, indeed,

he diverted the foreign storm ; but caused fresh domestic disturbances, not only in Constantinople, but throughout the empire. In 1283 Michael VII. died, and was succeeded by his son Andronicus II. His first step was to restore the ancient Greek ceremonies. But he thus involved himself in greater difficulties : though Michael had not been able fully to reconcile his Greek subjects to the Latin ceremonies, yet he had in some degree accomplished his purpose. The Latins had obtained a considerable footing in the city, and defended their ceremonies with great obstinacy; so that the empire was again thrown into a ferment. All this time the Turks had been continuing their encroachments on the empire. They were now, hewever, very successfully opposed by Constantine the emperor's brother : but his valor rendered him suspected, in consequence of which hewa; thrown into prison, along with several persons of distinction. On the removal of this great commander, the Turks, under the famous Othomaiv made themselves masters of several places in Phrygia, Caria, and Bithynia; and among the

rest of the city of Nice. To put a stop to their conquests, the emperor despatched against them

Philanthropenus and Libadarius, officers of great

experience. The former gained some advantages

over the enemy ; but, being elated with his suc-

cess, caused himself to be proclaimed emperor.

This rebellion, however, was soon suppressed,

Philanthropenus being betrayed by his own men :

but the Turks, taking advantage of the subsequent

commotions, not only extended their dominions

in Asia, hut conquered most of the islands in

the Mediterranean ; and infested the coasts of

the empire, to the utter ruin of commerce.

From this time the eastern empire tended fast to

dissolution. After the revolt of Philanthropenus,

the emperor could no longer trust his subjects,

and therefore hired the Massagetes: but they

were first defeated by his enemies, and after-

wards turned their arms against him. He next

applied to the Catalans, who behaved in the same

manner; and, having ravaged the few places he

had left hi Asia, returned into Europe, and called

the Turks to their assistance. This happened in

1292, and was the first appearance of the Turks

in Europe.

This enterprise, however, was unsuccessful. Having loaded themselves with booty, they offered to depart quietly if they were allowed a safe passage, and ships to transport them to Asia. To this the emperor readily consented, and ordered the vessels to be got ready with all possible expedition. But the Greek officers, observing the immense booty with which they were loaded, resolved to fall upon them in the ni^ht, and cut them all off. Of this wretched scheme, however, the Turks got notice, and prepared for their defence. They first surprised a strong castle in the neighbourhood, and then found means to acquaint their countrymen in Asia with their dangerous situation. Their brethren, having crossed the Hellespont in great numbers, ravaged the adjacent country, making excursions to the very gates of Constantinople : at last the emperor determined to march against them with all his forces, the people docking to him from all quarters. The Turks at first gave themselves over for lost; but finding the Greeks negligent of discipline, they attacked their army unexpectedly,

utterly defeated it, and made themselves masters of the camp. After this they continued for two years to ravage Thrace terribly ; but at last were defeated, and being afterwards shut up in the Chersonesus, were all cut in pieces or taken. Soon after new commotions took place in this unhappy empire, of which the Turks did not fail to take the advantage. 1327 they made themselves masters of most of the cities on the Maeander ; and among the rest of Prusa in Bithynia. The next year, however, Ottoman the founder of the Turkish monarchy being dead, the emperor recovered Nice, and some other important places. But these, with Abydus and Nicomedia, were lost in 1328 ; and in 1330 a peace was concluded upon condition that they should keep all their conquests. This peace they observed no longer than served their own purposes ; for new commotions breaking out in the empire, they pursued their conquests, and in 1357 had reduced all Asia. They next passed the Hellespont under Solyman the son of ()rchan, the successor of Olhoman, and seized a strong castle on the European side. Soon after

Orchan died, and was succeeded by Amurath I. He extended the conquests of his predecessors, and in a short time reduced all Thrace, making Adrianople the seat of his empire. Amurath was murdered soon after, and was succeeded by his son Bajazet I., who greatly enlarged his dominions by new conquests. In a short time he reduced Thessaly, Macedon, Phocis, Peloponnesus, M\»ia, and Bulgaria, driving out the petty princes who governed them. Elated with his frequent victories, he began to look upon the k emperor, Andronicus IV., to whom nothing was now left but the city of Constantinople and the neighbouring country, as his vassal. Accordingly he sent him a haughty message, commanding him to pay a yearly tribute, and send his brother Manuel to attend him in his military expeditions. This demand the emperor was obliged to comply with, but died soon after in 1387.

Manuel no sooner heard of his brother's death than he hastened to Constantinople, without taking leave of the sultan, or acquainting him with the reasons of his sudden departure. At

this Bajazet was so offended that he passed with great expedition from Bithynia into Thrace, ravaged the country adjoining to Constantinople, and at last invested the city both by sea and land. In this extremity Manuel had recourse to the western princes ; who sent him an army of 130,000 men, under Sigismund king of Hungary, and John count of Nevers. But, though the western troops proved at first successful, they were in the end defeated with great slaughter by Bajazet. As he found, however, that the citizens were determined to hold out to the last, he applied to John, the son of Andronicus IV. who had a better title to the crown than Manuel. With him he entered into a private agreement, by which Bajazet was to place John upon the Constantinopolitan throne, while John was to deliver up the city to the Turks, and remove the imperial seat to the Peloponnesus. At the same time he sent deputies to the inhabitants of Constantinople, offering to withdraw his army, and cease from further hostilities, provided they expelled Manuel and placed John upon the throne. This proposal rent the city into factions ; but

Manuel prevented the mischiefs which were ready to ensue by a voluntary resignation ; and, having conducted John to the palace, set sail for Venice. Thence he went to the courts of all the western princes to solicit their assistance against the Turks. He was every where received with the greatest demonstrations of esteem, and promised large supplies, all Christendom being now alarmed at the progress of the infidels. In the mean time Bajazet did not fail to put John in mind of his promise ; but, the citizens refusing to comply with such a scandalous treaty, the siege was renewed, and the city assaulted with more fury than ever. When it was already reduced to the last extremity, tidings were brought to the sultan that Tamerlane, the victorious Tartar, having over-run all the east with incredible celerity, had now turned his arms against the Turks, and was preparing to break into Syria. Alarmed at the danger that threatened him, Bajazet raised the siege in great haste, and advanced against Tamerlane with a numerous and well disciplined army ; but the Tartars totally defeated and took him prisoner, after having cut most of his men in pieces. Thus Constantinople

*was preserved for the present. But this relief was of short duration. In 1424, in the reign of John V., the son of Manuel, the city was besieged by Amurath II. The inhabitants defended themselves with great bravery ; but must in the end have submitted, had not the emperor prevailed upon the prince of Caramania to countenance an impostor and pretender to the Turkish throne. This obliged Amurath to raise the siege, and march with all his forces against the usurper. Having then no other enemies, he entered Macedon at the head of a powerful army ; and, having ravaged the country far and near, took and plun ‘ —ulniii-a, and most of ‘.ho < itii1**

of TEtolia, Phocis, and Bceotia. From Greece he marched into Servia ; reduced the greatest part of it ; and besieged the strong city of Belgrade ; but here he met with a vigorous repulse, no fewer than 15,000 Turks being slain by the Christians in one sally. In his retreat he was attacked by the celebrated John Hunniades, who cut off great numbers of his men. Not long

after he gained a still more complete victory over the enemy in the plains of Transylvania, with the loss of only 3000 of his own men, whereas 20,000 Turks were killed on the field of battle, and almost an equal number in the pursuit. Amurath, who was then at Adrianople, sent an army into Transylvania far more numerous than the former ; but they were attended with no better success, being cut off almost to a man by the brave Hungarian. He gained several other victories no less remarkable ; but was at last entirely defeated in 1448; and with this defeat ended all hopes of preserving the empire. The unhappy emperor was now obliged to pay an annual tribute of 300,000 aspers to the sultan, and to yield up to him some strong holds on the Euxine. However, as he doubted not but Amurath would soon attempt to become master of the capital, he renewed the union between the Greek and Latin churches, hoping that this would induce the western princes to assist him in the defence of the city. This produced great disturbances, which the emperor did not long survive ; as he died in 1448, leaving the empire,

now confined within the walls of Constantinople, to his brother Constantine XIII.

Amurath died in 1450, and was succeeded by his son Mohammed II. In the beginning of his reign he entered into an alliance with Constantine, and pretended a great desire to live in friendship with him ; but no sooner had he put an end to a war in which he was engaged with Ibrahim king of Caramania, than he built a strong fort on the European side of the Bosphorus, opposite to another in Asia ; in both of which he placed garrisons. These two castles commanded the Straits ; and the former, being but five miles from the city, kept it in a manner blocked up. This soon produced a misunderstanding between him and the emperor, which ended in the siege of the city. This commenced on the 6th of April, 1453 ; Mohammed's numerous forces covering the plains before it on the land side, and a fleet of 300 sail blockading it by sea. The emperor, however, had taken care to secure the haven, in which were three large ships, twenty small ones, and a great number of galleys. Mohammed began the siege by planting batteries, and raising works in several places

as high as the walls, whence the besieged were

incessantly galled with arrows. He had in his

camp a piece of ordnance of prodigious size,

which is said to have carried a stone ball of

100 Ib. With this piece the enemy made several

breaches in the walls ; which, however, were re-

paired with incredible expedition. Mohammed,

the better to carry on the siege, caused new levies to be made throughout his dominions, by which

his army was soon increased to near 400,000

men ; while the garrison consisted only of 9000

regular troops, viz. 6000 Greeks and 3000 Ge-

noese and Venetians. As the enemy continued

to batter the walls day and night, a great part of them was at last beaten down ; while the Turks,

however, were busy filling up the ditch, a new

wall was built. This threw the tyrant into a

prodigious rage, which was greatly heightened

when he saw his whole fleet worsted by five

ships, of which four were laden with corn from

Peloponnesus, and the other with provisions

from Chios. These made their way through the

Turkish fleet ; and, to the great joy of the Chris-

tians, got safe into the harbour. The Turks at-

tempted several times to force the haven ; but, all

their efforts proving ineffectual, Mohammed formed the design of conveying eighty galleys eight miles over land into it. This he accomplished by means of certain engines, the contrivance of a renegado; and, having then either taken or sunk all the Christian ships, he caused a bridge to be built over it with surprising expedition. Thus the city was laid open on that side likewise, and assaulted on all sides. Constantine, now feeling that he could not long hold oat against such a mighty and successful enemy, sent deputies to Mohammed, offering to acknowledge himself his vassal, by paying him yearly what tribute he should impose, provided he raised the siege and withdrew. The tyrant answered that he was determined to become master of the city : but if Constantine would deliver it up forthwith, he would yield to him the Peloponnesus, and other provinces to his brothers, which they should enjoy peaceably : but if he held out to the last extremity, and suffered it to be taken by assault, he would put him and the whole nobility to the sword, carry the inhabitants into captivity, and give up the city to plunder. These conditions were rejected by the emperor. The

siege was therefore renewed with vigor, and con-

tinued till the 25th of May; when a report

being spread in the Turkish camp that a large

army was advancing to the relief of the city under the celebrated John Hunniades, the soldiers

began to mutiny, and pressed Mohammed to

raise it. Mohammed was upon the point of

complying, when he was advised by Zagan, a

Turkish officer of great intrepidity, and an irre-

concileable enemy to the Christians, to attempl

immediately a general assault. To this he said

the soldiers would not be averse, provided the

sultan promised to abandon the city to be plun-

dered by them. Mohammed accordingly pub-

lished a proclamation throughout the camp, de-

claring that he gave up to his soldiers all the wealth of the opulent capital before them, requiring for

himself only the empty houses ; and they unani-

mously desired to be led to the attack. Here-

upon Constantine was summoned for the last

time to deliver up the city, with a promise of his life and liberty ; but to this he answered that

he was unalterably determined to defend tne

city or perish with it. The attack began at three

in the morning on the 29th of May ; such troops

being first employed as the sultan valued least,

and designed for no other purpose than to tire the Christians.' After the carnage had lasted some hours, the Janissaries and other fresh troops advanced in good order. The Christians making prodigious efforts twice repulsed the enemy :

but being in the end exhausted, they were no longer able to stand their ground ; and the enemy broke in several places into the city. In the mean time Justiriiani, the commander of the Genoese and a select body of Greeks, having received two wounds, one in the thigh and the other in the hand, was so disheartened that he caused himself to be conveyed to Galata. His men, dismayed at the sudden flight of their general, immediately quitted their posts and fled in the utmost confusion. The emperor, however, attended with a few of the most resolute of the nobility, still kept his post, striving with unparalleled resolution to oppose the multitude of barbarians that now broke in from every quarter. Being in the end overpowered with numbers, and seeing most of his friends fallen around him,

4 What !' cried he aloud, ' is there no Christian

left alive to strike off my head " Scarcely had he uttered these words, when one of the enemy,

not knowing him, cut him across the face with

his sabre ; and another coming behind him with

a blow on the back part of his head laid him

dead on the ground. The few Christians now.

left alive fled; and the Turks, meeting with no'1

further opposition, entered the city, and put all

they met without distinction to the sword.

Many thousands took refuge in the church of St.

Sophia, but they were all massacred in their

asylum. Most of the nobility were, by the sul-

tan's orders, cut off, and the rest kept for purposes more grievous than death. Many of the inhabit-

ants, among whom were some men of great

learning, escaped, however, while the Turks

were busied in plundering the city. These, em-

barking in the ships then in the harbour, arrived

safe in Italy ; where, with the study of the

Greek tongue, they revived the liberal sciences,

which had long been neglected in the west.

After the expiration of three days, Mohammed

commanded his soldiers to forbear all farther

hostilities on pain of death ; and thus put an

end to as cruel a pillage and massacre as any recorded in history. XThe next day he made his triumphal entry into Constantinople, and chose it for the seat of the Turkish empire, which it has continued to be ever since.

PART VI.

ROME, MODERN.

Modern Rome is built chiefly on the left or eastern bank of the Tiber, there being only a few streets on its western side. The walls are of a quadrangular figure, somewhat more than three miles each way, the circuit being in all about thirteen miles. While this is equal to the circumference of ancient Rome in its greatest splendor, there is this distinction perhaps between the ancient and modem city, that of the ‘ seven hills’ on which the former stood, several, viz. Mons Aventinus, Palatinus, Ccelius, and in some degree Mons Esquilinus, Viminalis, and Quirinalis, are covered with vineyards, corn fields, or villas, the clpsely peopled part being confined to the level ground between the eminences and the river. The length of this part is less than two miles, its breadth from a mile to a mile and a half.

The most regular part of Modern Rome i?

that adjacent to the north gate, or Porta del

Popolo, and the quarter of Borgo, on the right

of the river. The points from which it can best

be viewed are the Pincian Hill, Mount Jani-

culum, the tower of the Capitol, and the tops of

the columns of Trajan or Antonine.

The streets have, seldom any foot pavement ;

and are in general not wider than those of the

older parts of London. Some indeed are

wretchedly narrow and irregular, but the houses

are not high ; and a number of the streets are long and straight, and not unfrequently terminated by

an obelisk, fountain, or church. The great

drawback on the beauty of the city is the sin-

gular discrepancy of its buildings, a mansion

entitled to the name of palace being often

placed amidst a group of hovefs ; and the mean

appearance of the shops. Three of the finest

streets of the city diverge from the Piazza di

Popolo, near the northern gate, viz. the Corso,

extending to the foot of the Capitol ; the Strada

del Babbuina, ending in the Piazza di Spagna,

and the Strada di Ripetta, leading to the Tiber.

The Corso is the great public walk, and the

crowded scene of the carnival. It is perfectly

straight, about a mile in length, and has a foot

pavement on each side. Other fine streets are

i he Strada Felice, the- Strada Langara, the Strada Maggiore, and the Strada Pia. The houses are

partly of stone and brick, frequently covered

with stucco, and generally roofed with shingle.

Marble is less common here than in the north of

Italy.

The modern squares are numerous, adorned

with obelisks, fountains, &c. ; but also generally

of small size. In front of St. Peter's church is

a large oval area form, surrounded with a mag-

nificent colonnade ; and in the middle between

two fountains stands an Egyptian obelisk, of a

single piece of granite, seventy-eight feet in

height. The elegant Piazza Navona, a square

in the centre of the town, next in size to that of St. Peter, is of an oblong form, and adorned by

the church of St. Agnes, but its chief ornament

is the fountain in its centre. It consists of a

circular basin of seventy-three feet in diameter,

in the middle of which stands a rock surmount-

ed by an obelisk; on this rock recline four

figures representing four great rivers, from which

streams of water issue. – This is on the whole

the most superb fountain of the city. The

Piazza di Spagna, occupied largely by foreigners

of distinction, has also a fountain ; but its chief ornament is a noble flight of steps that ascend

from it to the church and square della Tririita

di Monte; the latter extending along the brow

of the Pincian Hill, and commanding a delight-

ful view. The Piazza di Monte Cavallo, one of

the finest in the city both for its situation and

buildings, stands on Mount Quirinal, and takes

its name from two marble horses placed on its

summit, said to be the work of Phidias and

Praxiteles. Between them stands an Egyptian

obelisk of granite, forty-five feet in height. Old

liiiiTii.init iuin now forms a small square, deco-

rated in the middle with a fine bronze eques-

trian statue of Marcus Antoninus, accounted a

master piece of ancient art. The Campidoglio

Moderno, or Modern Capitol, is ascended by a staircase adorned with statues : but all the statues of the forum have disappeared , and a few scattered porticoes, with here and there an insulated column, fragments of marble, capitals, and cornices, are now its only memorials. The Piazza di Campo Marzio, taking its name from the Campus Martius, is in a great measure covered with buildings.

The ancient wall of Rome is in many places in good preservation ; and among the ancient edifices the Pantheon and Coliseum are still conspicuous. For the present state and history of the latter see our article AMPHITHEATRE. At a short distance from it, near the Viminal and Quirinal hills, stands a portion of the baths of Dioclesian, converted into a convent. The principal hall forms the church, retaining its ancient walls, pillars, and vaults ; there remains also a large square, supported by 100 pillars, with a beautiful fountain in the middle. Of

the triumphal arches the only one remaining

entire is the remarkable one of Constantine,

with its pillars, statues, and bas reliefs. The

arch of Septimus Severus, also of marble, has

its bas reliefs much damaged : and that of Titus

has also suffered severely. Trajan's pillar is still covered with admirable bas reliefs, representing

his Dacian expedition. These reliefs contain

2500 figures of men, besides a number of ele-

phants, horses, and trophies. That in honor of

the emperor Marcus Aurelius is of equal height,

but of inferior execution.

Of the ancient aqueducts there remain the

Fontana Felice, on the Viminal Mountain, sup-

plied by the Aqua Claudia, and discharging itself

through a rock under an Ionic arcade : at a

considerable distance, and on the other side of

the Tiber, rises an arcade, supported by pillars

of granite, through which three streams descend

from the summit of an adjacent hill. 2. The

Fontana di Treri, an elegant building of Corin-

thian architecture, ornamented with statues, and

is perhaps the most finished structure of the kind

in Europe. It would be tedious to enumerate the

other fountains in Rome. The sewers of the

ancient city are now much obstructed by stones and earth ; but the Cloaca Maxima still merits attention. As to public baths, those great objects of Roman luxury, there remain of those of Caracalla little but the walls, and the baths of Titus, in tolerable preservation. The Palatine Mount is now a shapeless mass of rubbish. Of the various theatres and circuses of ancient Rome hardly a vestige remains : even the Circus Maximus can be traced only by the hollow scooped in the Aventine valley ; and many other monuments are of course obscured or demolished ; so that a stranger is generally disappointed on his first investigation of this capital. It has of late been proposed to make a temporary diversion of the Tiber for the purpose of antiquarian research ; but some attempts, in 1819 and 1820, to discover hidden relics, by means of a small vessel, with an apparatus for raising heavy bodies, have not succeeded.

Of the ancient roads, several, as the Via Latina, the Via Vitellia, the Via Aurelia, still serve to approach the Capitol ; and the catacombs, originally excavations made in digging out the earth used as bricks for building, are of great extent, pene-

tratingj it is said, to a length of several miles.

The oldest church of modern Rome is that

of St. Clement. The church of St. Piedro di

Vincoli is a noble hall, supported by twenty

pillars of Parian marble, and adorned with

elegant tombs. St. Martin's and St. Silves-

ter's are built of part of the materials of the baths of Titus. The church of St. Andrea, on Monte

Cavallo, though small, is highly finished. That of

St. Cecilia, in Trastevere, as well as those of St.

Maria in the same quarter, St. Sebastiano and

St. Piedro in Montorio, are all of great antiquity.

The last contains Raphael's famous picture of the

Transfiguration. The churches of St. Grisogono

and St. Giovanni e Paolo are splendidly adorned

with pillars. Santa Maria Egiznea, a building

of the Ionic order, is supposed to be the ancient

temple of Fortuna Virilis, and Santa Maria So-

pra Minerva a temple of that goddess : while the

church of Ava Coeli is said to occupy the site of the temple of Jupiter Capitolinus.

The Pantheon and seven patriarchal basilicae,

or cathedrals, are all of considerable antiquity.

The pantheon, built in the reign of Augustus,

and called from its form the rotunda, contains

busts of a number of eminent men. Of the cathedrals, Santa Maria Maggiore is situated on the Esquiline Mount, and has two fronts, each of modern architecture. St. Giovanni, in Laterone, is the regular cathedral of the diocese of Rome, It was founded by Constantine. Anothei cathedral, that of Santa Croce, in Gierusalemme, was erected by Constantine on the ruins of a temple of Venus, and is remarkable for its antique form, and beautiful retired situation. A third church, begun by Constantine but much extended since his reign, is that of St Paoli, out side of the city wall. The cathedral of St Lorenzo is also outside of the city, on the Via Tiburtina.

The original St. Peter's was also erected by Constantine, but had been giving way for some time previous to the middle of the fifteenth century, when Nicholas V. conceived the project of taking it down. The work, however, was feebly prosecuted, till the reign of Julius II.. That prelate proceeded with it on a grand scale, and succeeding popes contributed to its completion. The most celebrated architects of modern times, Bramante, Raphael, Michael Angelo, Vignola, Ma-

derno, and Bernini, have here displayed their talents. A circular court, formed by a vast colonnade, first strikes the eye of the spectator, and leads to the majestic front of the building, extending 400 feet in length, and rising to the height of 180. The eye is at the same time gratified with the majestic dome, rising from the central part of the church to a height from the ground of 324 feet. The interior of the church corresponds with its outward grandeur. Five portals open into the portico, a gallery extending across the width of the edifice, and resembling in size a cathedral. This magnificent entrance is paved with marble, covered with a gilded vault, and closed at either end by statues. Opposite to the five portals are five doors, leading into the church. On entering any of these the spectator

beholds the most spacious hall ever constructed by human art, expanding in magnificent perspective, its length being above 600 English feet. The aisles and altars are adorned with a number of ancient pillars ; the walls with festoons,

wreaths, tiaras, and other ornaments of marble.

The patriarchal chair of St. Peter is a throne,

elevated to the height of seventy feet. The high

altar has below it what is called St. Peter's Tomb ; above a magnificent canopy of brass, towering to

the height of 132 feet. A well lighted staircase

leads to the roof of St. Peter's, from which the

dome can be viewed with minuteness. The ac-

cess to every part of it, and even the ascent to

the cupola, is perfectly easy. The recent part

of the pile is the vestry or sacristi, a structure connected with the main building by a gallery,

and adorned with a number of pillars, statues,

paintings, and mosaics. It forms of itself a spa-

cious church.

- *The first visit paid to the church of St. Pe-*

ter's,' says the spirited author of ' Italy,' ' should not be made by the ordinary conveyance to all

such sights in Rome — a carriage. It should be

approached by pilgrim-steps, slow and difficult ;

and that great temple,

. U'here majesty,

Power, glory, strength, and beauty, all are hailed,

should be reached on foot, and sought through

those various details of misery, disorder, and

degradation, which distinguish alike all its ave-

nues, and are the elements out of which its grandeur sprang. Around the other great Basilica of Rome there reigns a saddening region of desolation ; and St. Paul's and St. John de Lateran rise on the dreary frontiers of the infected deserts they denominate, like temples dedicated to the genius of the mal-aria. But the approach to St. Peter's has another character : every narrow avenue is thickly colonised with a race of beings marked by traits of indigence or demoralisation ; and every dark dilapidated den teems with a tenantry, which might well belong to other purlieus than those of the church. It is thus that the altars of St. Peter's are approached, 93 they were raised, upon the necks of the people. Here the streets of the filthiest city in Europe are found filthiest ! Here forms, on which Love had set his seal, are equally disfigured by the neglect of cleanliness, or by meretricious ornament '.—and the young plebeian beauty, lying on the threshold of some ruinous fabric, withdrawing the bodkin from tresses it is dangerous to loosen, and submitting a fine head to the inspection of some ancient crone, smiles

on the passing stranger with all the complacency of a Du Barry, when she made her toilette for the good of the public, surrounded by the dignitaries of the church, who emulously canvassed for its offices. The streets leading immediately to St. Peter's occasionally exhibit a spacious but dilapidated palace, mingled with inferior buildings ; but many even of these have their facades of marble disfigured by washerwomen's lines; and an atmosphere of soapsuds indicates an attention to cleanliness, whose effects are nowhere % i-ible in Rome, but in the stench which issues from the laundresses' windows in the very finest of its streets. These discouraging avenues at last waded through, the Piazza de St. Pietro in Vaticano bursts upon the eye, more striking from the contrast that its beauty and magnificence present to the images of poverty and disgust which have preceded it.

' Nothing that art or judgment can dictate, or ciiticism or pretension utter, on this great object of universal wonder, has been left unsaid or unillustrated. The profoundest Virtuosi of the last age have commented on it ; the greatest poet of

the present age has sung it ; and from the folios of Piranesi to the portefeuille of the most juvenile traveller, views of its architecture are to be found. Little is now left to future visitants, but to enjoy, in silence, their own opinion (should they have any they may call their own), or at most to express the impression communicated to their own minds, on their first view of this supposed miracle of art. The first impression of the fayade of St. Peter on the writer of these pages was one of utter disappointment. It did not strike her by its magnitude ! — and in its want of simplicity and completeness (broken up as it is by pilasters, loggie, niches, balustrades, &c.), it did not affect her with pleasurable emotion. With none present to direct her judgment, and shame her ignorance, she turned involuntarily away, after a few minutes' observation, to contemplate objects infinitely more attractive to her unlearned apprehension. These were its beautiful semicircular colonnades ; its noble fountains dashing their pure bright waters into mid-air, sparkling with sun-beams, and diffusing freshness as they fall ; and that antique obelisk,

whose transfer from Heliopolis (where the son

of Sesostris raised it) to the circus of Nero,

where Caligula placed it, includes the history of

fallen empires, and of power not subdued, but

strangely transmuted. The impression made by

the fafade of- St. Peter's was never effaced.

The original design of Michael Angelo, shown

in the library of the Vatican, served but to con-

firm it ; and the opinion of one. whose judg-

ment, next to that of Michael Angelo's own,

might be trusted, left the decision of ignorance

sanctioned by the dictum of the presiding genius

of the art.

' But the magnitude of St. Peter's is never

justly estimated on a first or many following in-

spections ; which is the fault of its faultlessness : for besides that it is out of the span of human re-

cognition— beyond the test-of all received expe-

rience— the harmony of its proportions is so

perfect as to leave nothing for comparison ; there

fluttei colossal doves in cornices lofty as the

eagle's eyrie ; there frown saints

In bulk as huge

As whom the fables name of monstrous size,

the Briareus's of the martyrology ! — while che-

rubs, tall as Typhons, and letters to be read by the cubit, diminish the height of that cupola (the Ossa piled on Pelion of architecture), and lessen the vastness of those interminable naves, whose votive chapels might serve for metropolitan churches. But the temple of St. Peter, with all its unrivalled riches, surpassing the works of Memphian kings, is but a gigantic toy, and the

wanton, the incalculable profusion of its gems and precious stones, its statues and pictures, its mosaics and gold, its bronzes and marbles, its spotless freshness and unsullied lustre, separate it from the imagination, and leave it without one of those solemn associations which blend such edifices with a remembrance of the mysterious past, and give them an interest in the mind beyond what the eye can command/

' Among the number of its splendid mausoleums,' continues this writer, ' all raised to the memory of pontiffs and princes of the church, or to enshrine the ashes of kings and queens, there i.s one which affords a striking commentary on

the text of this mighty edifice. It is the tomb of the famous countess Matilda, the most powerful ally the church ever knew ; and her defence of the popes and their system, and the bequest of her valuable patrimony to the church, have obtained for her a monument in St. Peter's, to which her ashes were conveyed from Mantua by pope Urban VIII. Her effigy represents a stern and dogged-looking woman, one whose strong volition might have passed for genius — she holds the papal sceptre and tiara in one hand, and in the oilier the keys of the church ! at her feet lies her sarcophagus ! and its relievoes form the precious part of the monument. They represent the emperor Henry IV. at the feet of pope Gregory VII., where Matilda had assisted to place him. The abject, prostrate, half-naked emperor, surrounded by Italian princes and ecclesiastical barons, the witnesses of his shame and degradation, forms a fine contrast to the haughty and all powerful pope ; who seems ready to place his foot upon the imperial neck of the unfortunate sovereign, who, thus crouching in the dust, represented the Roman Caesars ! Such was the church in her great day ! — When the emperor Joseph II. visited St. Peter's, and

his conductors led him to this monument, he is said to have turned from it with an irouical smile, and a crimson blush of indignation ! It was then, perhaps, that his personal feelings prave new impulse to his philosophical reformation, urging him to decide on the fate of cowls, hoods, and habits, with their wearers ; and from that moment he may have considered

Relic beads,
Indulgences, dispenses, pardons, bulls,
The sport of winds.' Milton.

One of the most remarkable modern additions to St. Peter's is the beautiful mausoleum, the work of Canova, raised to the memory of James II., king of England, his queen, and his two sons. This monument, and these titles, were bestowed by the munificence of the prince regent of England.

We shall follow the writer just quoted through the Vatican and the other principal palaces.

The Palazzo Ponteficio del Vaticano, communicating with St. Peter's, is rather a congregation of palaces, than a single edifice ; and its architecture is as various as the ages and talents that

went to its completion. The genius of Bramante,

of Raphael, of San Gullo, of Fontana, of Bernini,

with many other eminent and scarcely inferior ar-

tists, has been concentrated on its progressive

erection ; and the talents of all ages, of all na-

tions, have contributed to lill its marble laby-

rinths. The elevation is divided into three lofty

stories, each story surrounded by a loggia, or open corridor, richly painted ; its countless halls, its

endless galleries, its beautiful chapels, its vener-

able library, its twenty courts (cortili), and 200

stair-cases, present a wilderness of building, out

of which the stranger, how frequent soever his

visits, can only recal those particular apartments

more eminently distinguished than others by

some miracle or miracles of art, from which they

take their name. The Carte du Pays he will

never master ; but, go where he may, he will

never forget the loggia of Raphael, the Borgia

suite, the Portico del Cortile, the Belvedere, and

the successive cabinets dedicated to various works

of antiquity, — the perfection of all that genius

ever conceived, or art and labor perfected. Such

are the halls of the animals, of the busts, of the muses, of the rotunda, the cabinets of the biga,

of the candelabras, and that vast covered space which takes the various names of corridore of inscriptions (dei Lapidi), of the belvedere, of the museo chiaramonti, and clementino. This gallery is divided by gates and columns, as if to make artificial stages in its interminable length, and afford stations for the imagination to repose on, or memory to refer to. The first portion (into which the library of the Vatican opens) is lined on either side with the rarest collection of inscriptions known in Europe. Those of the early Greek and Latin Christians, which have been found in the catacombs, occupy the left side; those of the heathen world are on the right, mingled with tombs, monuments, and sarcophagi, each in itself a study and a moral. The museo cliiaramonti succeeds, rich in monuments of antiquity, statues, busts, and basso-relievoes — the work of the Phidias's of other ages, arranged by the Phidias of the present. Here the living make their personal acquaintance with the dead, and the features of aCommodus, a Tiberius, and a Lucius Verus, become as familiar to the mind as their deeds and reigns. The Museo Pio-Cle-

mentino, the collection of the treasures accumulated by the late pope, changes the scene, and belongs to the edifices occupied by the deities and priestesses and emperors of the preceding gallery. Here are hung the appropriate ornaments of temples, theatres, basilicas, forums, circuses, baths, and palaces, all beautiful in design and perfect in execution ; and to these naturally follows the vestibule of the tombs — with the sarcophagus of a Scipio and the sepulchral effigies of some fair Roman dame, over whose death-couch love still hovers. In moving among these consecrated images of art and time, the mind of the spectator catches something of their calm and dignity; for there is in ancient sculpture a quietude of grandeur, a solemnity of grace, not found in the works of modern genius, and which belong, perhaps, to the originals they copied. This majesty of expression and tranquillity of form, so well known to the Egyptians, lost something of its monumental sobriety under the Greeks. It is frequently found among savages, but rarely appears amidst the artificial exaggeration of corrupt civilisation. The French, who,

up to the Revolution, were a nation of dancing-

masters, were the least graceful people of Europe;

and tne Apollo of Belvidere could never have

been imagined in the court of a Louis XV.

This gallery so rich and beautiful, through the

munificence of the late and present pope, was

but 'of bare walls' when Evelyn visited it in

1 643 ; and he observes that, as he passed

through it on his way to the Vatican library, it

was full of poor people, to the number of 1500

or 2000, ' to each of whom, in his passage to St.

Peter's, the pope gave a mezzo-grosso' (half a

farthing). This is a curious episode in the his-

tory of the palace of the Vatican — of that palace

whose uses and magnificence furnished Milton

with his splendid imagery alike of hell and hea-

ven— his' palace of Pandemonium, and that

' Where sceptred angels held their residence.'

The library of the Vatican, described as it me-

rits, would fill the pages of an ample volume.

The locale is a palace in itself; and its galleries and various chambers might be visited as a

splendid museum, had they no other attraction.

One of the most striking circumstances in the

greatest library of Europe is, that not a book is to be seen, although of MSS. alone there are said to be 30,000 volumes. The cases in which the collection is preserved give no indication of their contents ; and the whole edifice, all campo d'ore and ultra-marine, looks rather like some Gothic hall of grotesque festivity than the retreat of learning. The principal gallery, 317 palmi in length, is divided into naves, separated by pillars ; and the walls are painted with representations of the most celebrated ancient libraries, of general councils, and of the inventors of the characters of various languages. Low cabinets, richly and fantastically painted, surround this superb saloon, and contain the most precious of the MSS. ; and tables of Egyptian granite, marble sarcophagi, and other fragments of antiquity, are scattered over its centre. Two vast corridors to the right and left, divided into various apartments, open out of this main gallery. Here are modern book cases filled with choice works ; and objects of art, of great value and antiquity, are profusely scattered. In one of these is a picture of the design of the Facade of St. Peter's by Michael Angelo, far superior to

that which has been adopted. From the hall of the papyrus, painted by Mengs, opens another spacious gallery, ornamented with gold and mirrors, and containing the most precious books in the collection ; and cabinets devoted to medals, engravings, inscriptions, succeed, and terminate this wing. On the other side a suite of beautiful rooms, with columns of porphyry, are filled with book cases, decorated with Etruscan vases ; and the wall is decorated with a series of paintings illustrating the trials of the late and present po'pes, during the Revolution :— the crowning and restoration of Pius VII., closes these fasti of papal sensibility and endurance.

The Quirinal is a stupendous fabric, only less vast than the Vatican, and crowns the Quirinal hill, which commands a noble view of the city. Tope Pius VI. dul much to adorn both the palace and the Piazza del Monte Cavullo on which it stands. He removed the obelisk which stood near the mausoleum of Augustus, to the front of the palace; and, not being able to displace the Coliseum, he carried off all that was moveable from the forum, and transported that gigantic vase of oriental granite to the Monte*

Cavallo, which now receives the waters of its beautiful fountain. The state apartments of the Quirinal are sufficiently noble ; they were inhabited by the emperor of Austria and his family on his visit to Rome ; and in their gaudy dress when we saw them, bore testimony to the still unpaid-for honors offered to the imperial guests. The gardens of the Quirinal are spacious and delightful, but encumbered with stones and marbles, as usual, disputing the soilNvith nature and vegetation. But all that is bright and fair in the Quirinal is brightest and fairest in that chapel in which the pope himself pontificates on Sundays and other holydays. When lighted by the mid-day beams, it looks like the temple of the sun, which once occupied its site. ‘ Here,’ says lady Morgan, ‘ pictured saints appear as demi-gods ; and the high altar exhibits a cross, brilliant and beautiful as that which lies on a lady’s bosom. Here sounds that enchant, and odors that intoxicate, fill the air ; and mysteries are consummated with forms so beautiful, and amidst objects so alluring, that the rigid or the ignorant might doubt whether he wit-

nesses Christian ceremonies or heathen rites, and whether this is the temple of Apollo or the chapel of the pope.' The chapel of the Quirinal is on Sundays filled to suffocation. The tribunes on either side are occupied by the elegantes of London and Paris, Petersburgh and Vienna, Cracow or New York. In the central nave the throng is composed of abbots, priors, and dignitaries in grand costume — the mamelukes of the church ! Roman generals, all armed for the military service of the altar, the only service they have ever seen ; monks, guards, friars, Swiss soldiers, and officers of state ! Outside a cordon, drawn round the choir, are placed the foreign gentlemen. The choir, the scene of action, all brilliant and beautiful, is still a void. When the signal is given, the crowd divides ! and the procession begins ! Mutes and others form the avant-garde of the pageant, and lead the way.*

' Then comes personified infallibility ! feeble as womanhood ! helpless as infancy ! withered by time and bent by infirmity ; but borne aloft, like some idol of Pagan worship, on the necks of men, above

all human contact. The conclave follows, each of

its pririces robed like an eastern sultan ! Habits

of silk and brocade, glittering with gold and sil-

ver, succeeded by robes of velvet, and vestments

*of point lace, the envy of reigning empresses.**

- *We must find room for the note of our spirited*

guide. ‘ The details of the cardinal’s toilette, which, at my own very womanish desire, weie exhibited to

me, are minute, splendid, and numerous, beyond

description ; for every ceremony has its dress. On

some days the cardinals dress and undress as often

as the three Mr. Singletons in the farce. The ctolc.

or scarf, is now ;i sush superbly tissued : it is a sym-

bol ol the lost innocence of man — not of the cardi ROME.

29

The toilette of these church exquisites is perfect ; not a hair displaced, not a point neglected,

from the powdered toupee to ‘the diamond shoe-

buckle. The pope is at last deposited on his

golden throne : his ecclesiastical attendants fold

round him his ample caftan, white and brilliant

as the nuptial dress of bridal queens ! they

arrange his dazzling mitre : they blow his nose ;

they wipe his mouth, and exhibit the represen-

tation of Divinity in all the disgusting helpless-

ness of driveling caducity. His holiness being

thus cradled on a throne to which emperors

once knelt, the conservators of Rome, the ca-

ryatides of the church, place themselves meekly

at its steps; and the manikin, who represents

the Roman senate, takes his humble station

near that imperial seat, more gorgeous than any

the Ca-'sars ever mounted. Meantime the demi-

gods of the conclave repose their eminences in

their stalls on velvet cushions, and their cau-

datorj (or tail-bearers) place themselves at their

feet. In the centre stand, or sit, on the steps

of the high altar, the bishops with their superb

mitres and tissued vestments. Then the choir

raises the high hosannahs, the pope pontificates ;

and the temple of Jupiter never witnessed rites

so imposing or so splendid. Golden censers

fling their odors on the air ! harmony the most

perfect, and movements the most gracious,

delight the ear and eye ! At the elevation of

the host, a silence more impressive than even

this ' solemn concord of sweet sounds' succeeds;

all fall prostrate to the earth ; and the military, falling lower than all, lay their arms of destruc-

tion at the feet of that mystery, operated in

memory of the salvation of mankind.' When

the ceremony is concluded, the procession re-

turns as it entered. The congregation rush after;

and the next moment the ante-room of this reli-

gious temple resembles the saloon of the opera.

The abbots and priors mingle among the lay

nal's. The piviale is a mantle, like the ancient

Irish cloak : it is of massive gold tissue, insupporta-

bly heavy. This represents the pastoral robe of the patriarchs (for all in the church, Catholic or Protes-

tant, is borrowed from the Jews — Christ haying left

nothing to copy but virtue and self-denial). This

piviale was originally pluviale, and worn (as its

name imports) to keep out the weather, before gold

brocades were invented. The Soutane is a truly

eastern habit : it is of violet velvet or silk, and its long and flowing train is held up by the caudatori.

This was surely not ' the cloak' which St. Paul left behind him ' at Troas.' Next comes the golden pi-

anelli, and the manipolo, of embroidered satin,

which hangs on the arm, like a fine lady's reticule, and is the scrip of the patriarchal herdsman, in which he carried his bread and cheese. Then comes the

camicia, a dress of the richest point lace. I saw

three of these dresses belonging to one cardinal,

said to be worth £2000 ; and 1 know it for a fact, that more than one petty reigning sovereign has en-

deavoured to wheedle his eminence out of a camicia

worn upon state days. The mitres are of gold and

silver, upon white or red grounds, according to the cardinal's various ranks. In private society their

dress is a suit of black, edged with scarlet ; scarlet stockings, and a little patch of red, called the calotte, on the crown of their heads, with their cardinal hat '"uler the arm."

crowd, and the cardinals chat with pretty

women, sport their red .stockings, and ask their

opinions of the pope's pontification, as a mar-

veilleux of the opera at Paris takes snuff, and

demands of his chere-belle, ' Comment trouvez

vous ca, comtesse?'

The palace of the Lateran, though now un-

inhabited, is vast and imposing; and, though

little of the original building remains, it is suf-

ficiently antiquated to recal its ancient destina-

tion as the scene of much of the licentious dis-

sipation and fierce feuds of popes and anti-popes

in the dark ages. It commands a sublime view

of the waste its lords have made ; — of the Cam-

pagna, stretching to the base of the blue Alba-

nian hills ; its desert, here and there spotted with ancient ruins of the tombs of heroes, or imperial

aqueducts, with the walls of villas, and wreaks

of monuments which skirted the road from the

gates of the Lateran to the suburbs of Naples.

The church, or basilica, of San Giovanni Late-

rano, is the principal, and one of the oldest, ais we have seen, in Rome.

In the baptistery (Battisterio Lateranense)

adjoining the church, built by Constantine, he

is said to have been baptised by St. Sylvester.

It was ravaged by frequent invaders, and long

remained in the lower ages in a state of absolute

ruin and spoliation ; until, attracting the notice

of successive pontiffs, and particularly that of

Gregory XIII. and Urban VIII., it took that

character of richness which now distinguishes it.

The baptismal font is an ancient urn of basalt,

ornamented with gold and bronze. From its

bosom the waters of life are still dispensed to

the Jews, who annually seek regeneration at so

much per head. This edifice (its great anti-

quity, its superb columns of porphyry, and fine

cornices, all plunder from the ancient monu-

ments of Rome, excepted) has but little to

excite admiration. Two of its pictures, how-

ever, afford a curious historical evidence, worth

noticing. One represents the council of Nice

burning books written against the bishops. The

other the breaking of the statues in the Roman

temples (probably the rivals of the Apollo and

the Antinous) : a bishop, with the air of a con-

jurer, stands by, tossing his golden censer, and

.purifying the spot defiled by the works of Praxi-

teles and Phidias This was before a bull was

fulminated to prevent (but too late) the convert-

ing of marble statues into lime, to build dwel-

ling houses.

Opposite to the great entrance of the palace

stands the venerable chapel of the Scala Santa

(holy steps), once a part of the ancient building.

This chapel is the shrine of daily pilgrimage to

the peasantry, many of whom were ascending

its holy steps on their knees, on the several days that we passed by it. The veneration paid to

this flight of stairs arises from the five centre

steps, said to be part of the staircase of Pontius Pilate's house, which were sanctified by the

blood of Christ. None can ascend it but on

their knees ; and lateral steps are provided for

those whose piety may not lead them to genu-

flexion.

There are family mansions, here terraed pa-

lace?, in great numbers; but the far greater part

are less remarkable for their architecture, tlr.ui for their size and decorations : their spacious courts and porticos, their halls and lofty apartments, with the pillars, the marble, the statues, and the paintings, that place them on a level with royal residences in the north of Europe. The Palazzo Doria is one of the finest, presenting three large fronts, enclosing a spacious court. Its stair-case, supported by light pillars of oriental granite, leads to a magnificent picture gallery. The Palazzo Ruspoli has a still finer staircase, consisting of four flights, of thirty steps each, each step being composed of a single piece of marble, nearly ten feet long and two broad. The Corsini palace is also remarkable for its size, its furniture, and its gardens. The Palazzo Farnese occupies one side of a handsome square. Twelve massive pillars of Egyptian granite support the vestibule ; three ranges of arcades rise one above the other around a spacious court ; and noble apartments follow. The Palazzo Costaguti and Palazzo Mattei are chiefly rich in

paintings. The Borghese palace is remarkable for its porticoes, its columns, and its antiques. In the Palazzo Spada stands the celebrated statue of Pompey, at the foot of which Caesar is supposed to have fallen. The Barberini palace has been much improved by the present prince, but serves chiefly to remind the reflecting Protestant of the wretched policy by which the illegitimate children and nephews of the popes have been formerly enriched. Here once reigned the famous beauty and humorist, Cecca Buffbna, the mistress of cardinal Francisco Barberini, whose impudicity caused her to be publicly whipped in the streets of Rome.

Rome, like most other Catholic cities, is well supplied with inferior and antiquated hospitals. The largest, the Spedale di St. Spihto, is open indiscriminately to the poor of both sexes, the insane, and to foundlings. That of St. Michele is appropriated to the education of the children of the poor, but it receives likewise the sick and the aged. Here is also a house of correction.

The most splendid villas of Rome, as that of the Borghese, Farnesina, &c.,are situated within the walls. The first was built by cardinal Scipio

Borghese, the nephew of Paul V. ; and, with its

gardens and lake, occupies a space of nearly three

miles in circumference. The interior is filled

with antique and modern sculpture, pictures,

and mosaics — without, its grounds are covered

with casinos, temples, citadels, aviaries, and all

that a gorgeous and false taste, with wealth be-

yond calculation, could crowd together : Mont-

faucon says ‘ there is nothing better worth seeing

in Rome.’

The villa Pamfili-Doria, one of the finest in

the neighbourhood of Rome, was erected in the

seventeenth century, by the nephew of the Pamfili

pope Innocent X., whose extravagant passion

for his sister-in-law, Donna OlimpiaMaldachini,

u one of the most notable traits in his life. The grounds, woods, and gardens are truly delicious :

the palace itself has all the generic features of

such edifices, and is filled with oictures and

statues, dreary and neglected.

The Villa Albani, raised in the middle of the

last century by the late cardinal, and belonging

to the present cardinal Albani, is, according to

lady Morgan, the most perfect and freshest of all

Roman villas. ‘ It looks like some pure and

elegant Grecian temple-ˆ a little Pantheon ! de-

dicated to all the rural gods, with whose statues

(the most perfect specimens of antiquities) its

marble colonnades and galleries are filled. It

iniˆht be deemed too ideal for a human habita-

tion ; yet is sufficiently commodious to be on • ;

and, of all other villas, this alone realizes th •

preconceived image of fervid fancies of a true

Italian villa. Its walls are encrusted with bas-o-

relievoes — its corridors grouped with fauns ami

nymphs — its ceilings all azure and gold — its sa-

loons perfumed by breezes, loaded with the

odors of orange-flowers. Its gardens, studded

with temples, command a view, terminated by a

waving line of acclivities, whose very names are

poetry. When I visited it, a distant blue mist

veiled the intervening wastes of the Campagna,

and the dews and lights of morning lent their

freshness and lustre to a scene and fabric such

as Love might have chosen for his Psyche

when he bore her from the wrath of Venus.

But, when the first glimpse of this vision faded,

the true character of the Roman villa came fortli ; for artichokes and cabbages were flourishing

amidst fauns and satyrs, that seemed chiselled

by a Praxiteles ! The eminentissimo padrone of this splendid villa rarely visits its wonders but in the course of a morning drive : and his gardens are hired out to a Roman marketman, to raise vegetables during the spring and winter. In summer even the custode vacates his hovel, and the Villa Albani is left in the undisputed possession of that terrible scourge of Roman policy and Roman crimes — the Mai-aria ; th»> causes and effects all morally connected, and the strictest poetical justice every where visible.' Rome contains, beside its celebrated Propaganda Fide, several literary associations, as the Arcadian academy, the archaeological, the academia Tiberiana, the academy of the fine arts. A monthly publication, partaking of the nature of a review and magazine, appears under the title of Giornale Arcadico de Scienze, letere, ed arti; and, since 1819, there has been published weekly a Giornale encyclopedico, containing chiefly translations on scientific subjects, along with some pieces of poetry. Of the libraries of Rome, the largest, after the Vatican, are the Augustines', the Dominicans', and those of the Barberini, Chigi, Colonna, and Corsini families ; that of

Collegio Romano has a museum of antiquities and cabinet of natural history. The university library is called, from its founder, pope Alexander VII., the Alexandrine library; and the library del Erao contains a collection of medals and mathematical instruments, together with a museum.

In 1835 the inhabitants of Rome amounted to 13fi,000, a number which seems to have formed, with little variation, its population for about a century. Of these, no fewer than 9000 are said to be Jews, who are restricted to a particular quarter, the gates of which are closed every night. This place is very dirty, but a similar charge may be made against all modern Rome. The number of inhabitants connect'- 1

with the church, as priests, monks, or nuns, is computed at another 8000. The manufacturing establishments, though small, are in considerable variety, viz. -woollens, silks, velvets, hats, gloves, stockings, liquors, pommade, and artificial flowers.

Rome has a bank, and Monte di Pieta, or house for advancing money on deposited goods. Its

foreign trade is limited to imports of colonial articles, and a few manufactured goods : its exports consist of the produce of the adjacent country, viz. olive oil, alum, vitriol, puzzuolano sand, anise, &c.

No part pf the world has been more agitated by the French revolution and its consequences — none perhaps so much improved — as modern Rome. Its nobles were, at the latter end of the sixteenth century, a race of banditti : laying waste their native city, and carrying desolation and ruin into the bosom of domestic life. The people, always insurgents or slaves, were the most demoralised of Italy ; and though the dark and cruel despotism of the clever Sixtus V., whose love of blood induced him to envy Elizabeth the cutting off of Mary's head, stemmed for a time the torrent of iniquities, and broke for ever the spirit of the Roman barons, yet at his death the people were but the more debased by the loss of their ferocity. During succeeding periods, on the testimony of all travellers, the civil and religious state of Rome was an anomaly in human society. The court of the Quirinal,

like that of France under Louis XIII. and XIV., was directed by the intrigues of priests and courtiers : the cardinals governed by cabal, and all places were disposed of through their mistresses and their laquais. The princes or patricians, rich, idle, ignorant, and avaricious, were surrounded by dependents and parasites, the indigent followers of rank and opulence : the people, without domestic habits, lived like the commoners of nature, satisfied if bread and church ceremonies sustained life and amused it. The parasite came after the prince, and the beggar after the saint. The women of all ranks, divided into vestals and concubines, were either shut up in a convent, or let loose upon society, the mistresses of authorised paramours, and the wives of other women's lovers. The passions of all classes were unsubdued by education, unrestrained by law. Murder had its price, from a basket of figs to a purse of gold ; and the murderer his asylum, from the high altar of the church to the cabinet of the palace. Assassination was a deed of nightly occurrence. In the midst of all this conuption of private manners,

the inquisition placed its sbirri upon the intellect of the whole population. The capital punish-

ments were barbarous, but rarely inflicted ; and

if the people sometimes suffered the torture, or

submitted to the estrapado, they, in their turn,

occasionally hung up a cardinal, or derided the

vices of the conclave and the pontiff, through the

medium of Pasquino. In 1786 cardinal Tor-

tona so exasperated the people by his cruelties,

in his office of grand inquisitor, that they dragged him from his carriage, and hung him on a gibbet

in the street.

As there was no internal police, the public

depended on the works of the Tarquins and the

Caesars for their few accommodations : and the

conduits for water, miraculously constructed

during the darkest ignorance on the subject oi

hydraulics, were at the end of twenty centuries,

and are still, the principal means of purification

afforded for cleansing a city, which seems to

have benefited but little by the advantages lent

it by antiquity. The Cloacae Maxima; obtrude

their neglected openings in vain ; and streets

lined with palaces, and palaces walled with mar-

bles, have even now few sewers to carry off their

accumulated filth.

Before Italy was conquered, Rome entered into the revolutionary projects of France. Hugo de Basseville, a man of letters and talent, was chosen by the national convention to sound the disposition of those who were no longer the population worked on by the eloquence of the monk Arnoldo, or the tribune Rienzi. Pius VI., who had refused to acknowledge the French republic, watched with jealous vigilance the motions of this emissary ; and de Basseville affected to be occupied with the interests of the French academy at Rome. At length an imprudence on the part of de Basseville called forth the public opinion. After a dinner, given by him to the young men of the French academy, de Basseville drove with his wife and son to the Corso, permitting his footmen to mount the tricolored cockade. This was the signal of tumult. The street was accidentally or designedly filled with the common people and Trasteveriui ! A dreadful riot arose : de Basseville in vain sought to save himself by taking shelter at his banker's; he was pursued by the mob, and murdered. The

first stab was given by a soldier of the pontifical guard. The French academy was next attacked

and pillaged ; the houses of foreigners were

plundered ; and, during the tumult, the virgin,

whose name was the mot d'ordre, was seen in

several of the churches to open her eyes (lest the people should open theirs), and to give testimony

of the part she took in this crusade to her honor.

But if, in 1793, an emissary of the convention

was assassinated in Rome, in 1797 the Gauls of

the eighteenth century had passed the Rubicon,

conquered Romagna, the duchy of Urbino, and

tin Marsh of Ancona. The murder of general

Duphot at Rome, under the eyes of the accredited

ambassador of France, urged on the fate of the

' Niobe of Nations. The military occupation of*

Rome followed, and the proud capital of the

world became a French province, by the name

of the department of the Tiber !

Whatever reform, or feature of change, may

be found in the circles of Roman society, be-

longs almost exclusively to the Cittadini of the best description, including persons of liberal profes-

sion, artists, some of the employes, and the mer-

canti di campagna, or gentlemen farmers or

agriculturists, whose landed property has grown

out of the sales of the church estates during the

Revolution ; and who, though chiefly resident at

Rome, live by the produce of their farms. If

something of cleanliness and order is visible in

a Roman menage, if stairs are found .lighted at

night, and rooms look not dirty by day, the

innovation on ancient manners is only to be

found in the dwellings of this respectable class.

ROM I

It is in this class also that what little social in-

uirse is kept up at Rome is most frequent.

It was this class that chiefly participated in the

lu'tiunts of the recent changes; and they look

back to the past with a regret in which personal

interests and self-love may have no inconsider-

able influence. While the Roman shopkeeper

(who lolls and lounges in his bulk all day, and

asks a price a capriccio for his French and British wares), seeks his recreation at the pulicorda or

the comic opera ; while the inferior dealer knows

no enjoyment beyond stuffing, with twenty

others, into a hired calesh, on Sunday noons, and

driving through the hot and dirty streets, ' per

fare il pizzacarolo,' the cittadini have more re-

fined sources of recreation ; they hold a musical

academia in each other's houses, or assemble to assist at a ' tragedia alia tavola' (the reading round a table some favorite tragedy of Alfieri or Monti) ; or, if the higher order, they attend the conversazione of some mezza dama, or half lady; a class of provincial nobility, who come from the cities of La Marca, or the legations, to pass the winter at Rome, and who, if permitted by courtesy to visit a signora principessa, are never presumed to be of her circle, nor admitted to the house of such ambassadors as rightly understand the true Roman ' dignita ! '

' Apart from the great mass of the population, separated by the distinctions of ages, foul and

fatuous as an Indian fakeer, and sunk in th dusky niche of its splendid sty, vegetates the Roman patrician, or prince of the empire ! The morning is lounged away by the heir of the Gregories and the Clements in a dusty t;reat coat (the modern Roman toga), rarely changed at any season of the day for a better garb. An early, but not a princely dinner, follows ; succeeded by the siesta and the Corso, a funereal*

drive in a long narrow street, relieved in summer by a splashy course in the Piazza Navona. The prima sera is passed in some noble palace, where, at the end of a long suite of unlighted rooms, sits the signora principessa, twinkling her eyes before a solitary lamp, or pair of candles, whose glimmer is scarce visible in the gloomy space, which a fire never cheers ; while the caldanini, whose embers have expired in the atmosphere of her petticoat, is presented to the most distinguished of her visitors; and such a conversation ensues as minds without activity or resource may be supposed to supply : a sermon of the popular preacher, Padre Pacifico, if it be Lent ; a cecisbio faithless or betrayed, if at the carnival, fill up the time till the opera commences, or until the only two genuine Roman houses open to society in Rome light up their Rouge et noir tables, the sole object for which company is received or for which company go.'

ROMFORD, a market town of Essex, situated on the road from London to Colchester ; seventeen miles south-west of Chelmsford, and twelve E. N. E. of London. This town is sup-

posed by Stukeley to occupy the site of the Roman station Durolitum, and he conjectures that its present name is a contraction for Romanford, in which opinion he is supported by Mr. Lethieullier. Lysons, however, derives it from the Saxon words Rom and Ford (the Broad-Ford), in allusion to an ancient ford over a rivulet which flows past the western extremity of the town. Romford is first mentioned in the red book of the exchequer ; where it is said that, in 1166, Roger Bigod, duke of Norfolk, held ‘ the wood of Romford by serjeancy, and payment of 5s. a-year.’ It is next noticed in 1277, at which time the manor formed part of the possessions of Adam de Cretingy. It afterwards passed to Thomas de Brotherton, earl of Norfolk, from whom it descended by marriage to the Mowbrays, dukes of Norfolk ; but on the death of John, the fourth duke, without male issue, in 1477, it became vested in James lord Berkeley. The town of Romford consists chiefly of one long street running along the high road. Near the middle of the town stands the market-house and town-hall which were repaired in 1768, at the expense of the crown. The church, which is

a chapel of Hornchurch, is an ancient structure, probably erected about the commencement of the fifteenth century, when the inhabitants obtained a bull from the pope, authorising them to consecrate a cemetery adjoining the town, for the burial of their dead, who had previously been carried to Ilornchurch burying-ground. It is dedicated to the Virgin Mary and I '.d ward the Confessor, and consists of a nave, chancel, and north aisle, with a tower at the west end. In the east window of the chancel is a whole length on glass of Edward the Confessor. Not far from the church is a charity-school for forty boys, and another for twenty girls, founded and endowed in 1728; and at a short distance from the western end of the town are barracks for the accommodation of a regiment of cavalry, erected in 1795. Romford is governed by a bailiff and wardens, who, though forming no corporation, are empowered by letters patent to hold a weekly court for the trial of all causes, whether civil or criminal, high treason itself not excepted. The privilege of holding a weekly market was first granted to the inhabitants by king Henry III.

To the westward, about two miles, lies Hainauh

Forest, in which is a very remarkable tree, called

Fairlop-oak, which Gilpin informs us, in his

Remarks on Forest Scenery, is traced by tra-

dition ‘ half way up the Christian era.’ It is

thirty-six feet in girt near the base or root, and spreads its branches over a circumference of

300 feet. Round the Fairlop-oak, on the first

Friday in July, is held an annual fair. Markets

on Monday for hogs, Tuesday for calves, sheep,

and lambs, and Wednesday for corn, cattle,

poultry, butchers’ meat, &c.

ROMILLY (Sir Samuel), K. C., an eminent

modern chancery advocate, was the son of a jewel-

ler, of French extraction, who carried on business

in Frith Street, Soho. Here he was born, March

1st, 1757, and, receiving a private education,

was placed in the office of a solicitor, which he

quilted to study for the bar, to which he was

called in 1783. His chief practice was loner

confined to draughts in equity, but he gradually

rose to distinction in court, and agreeing in his

general politics with the whigs, during the administration of Mr. Fox and lord Grenville, he was appointed solicitor-general. In parliament he was highly distinguished by his talent in debate, and particularly by the eloquence with which he pleaded for a revision of the criminal code, with a view to the limitation of capital punishment. On this subject he also composed a very able pamphlet. Sir Samuel also published a remonstrance against the creation of the office of vice-chancellor ; and was in the height of his popularity, when a nervous disorder, produced by grief at the death of his lady, seems to have deprived him of reason, and in a fit of temporary frenzy he terminated his existence, November 2d, 1818.

ROMNEY, OLD, a Post town of Kent, once a place of note, and a sea-port at the mouth of the Rother, but the river having changed its course to Rye, and the sea having receded, it has long since fallen to decay. Here is an old church in the massive circular style.

ROMNEY, NEW, a borough and market town of Kent, seven miles south-west from Hithe, and seventy-one and a half south-east from London.

This place, though not so ancient as Old Romney, is recorded to have been a flourishing town at the time of the conquest, having had five parishes. The town consists chiefly of one broad, well-paved street, intersected by another smaller one. St. Nicholas' church is an ancient structure, consisting of three aisles and three chancels, with a square tower at the western extremity. The charitable institutions of the town are an hospital and a school-house. The market-house is a modern building, standing in the main street. The chief trade of this place is grazing cattle on Romney Marsh. This marsh is a rich tract of land of about 50,000 acres, defended from the encroachments of the sea, by an embankment three miles in length, twenty feet high, twenty feet broad at the top, and nearly 300 at the bottom. Towards the sea it is defended by piles and stakes, at an expense of about £4000 per annum, which is raised by an assessment on the proprietors of the marsh. This is called Dymchurch Wall, along which theie is a good road for carriages. The corporation consists of a mayor, twelve jurats, chamberlain, recorder, town-clerk, &c., and is one of the cinque-ports,

though its harbour has long been destroyed; the hall, where the courts of the Cinque-Ports are held, is near the church. It sent two members to parliament, the right of election being in the mayor, but was enfranchised by the Reform bill in 1832 Market-day, Thursday.

ROMNEY (George), a modern painter, was born in Lancashire, in 1734. After an attempt of his father to settle him in trade, he was placed with an artist, and in 1762 came to London. In 1765 he gained a prize from the Society for the Encouragement of Arts and Sciences, for a picture of the Death of King Kdmund, and in 1773 went to Italy for two years. On his return he enjoyed the most uninterrupted success in his profession, painting in one year portraits to the aniount of ˆ£3635. He also gave illustrations •a' tioydeli's Shakspeare. Romnev died in 1802.*

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He is not always happy in blending his shades particularly in his back-grounds, but his style of coloring is broad and simple, and in his flesh he was very successful.

ROMP, n. s. FT. ramper. To gambol ; a

rude, boisterous, playful girl : to play rudely or

boisterously.

She was in the due mean between one of your af-

fected courtesy ing pieces of formality, and your

romps, that have no regard to the common rules of

civility. Arbuthnot.

*In the kitchen, as in your proper element, you can laugh, squall, and romp in full security. * Swift.*

Romp loving miss

Is hauled about in gallantry robust. Thomson.

Men presume on the liberties taken in romping.

Clarissa.

ROMSEY, or RUMSEY, a market town and

parish of Hampshire, eight miles N.N.W. of

Southampton, and seventy-four west by south of

London. It is situated on the little river Test,

which falls into Southampton Bay, and was for-

merly noted for its monastery of Benedictines,

founded by king Edgar, and of which the daugh-

ter of king Stephen was an abbess. The church,

formerly belonging to the monastery, is a noble

edifice, built in the form of a cross, and arched

with stone in the Saxon style ; it contains several curious monuments. Besides the church, there

is a meeting house for Presbyterians ; an alms-

house for six widows ; a charity-school, and a free-school. There is also a town-hall, and an audit-house, below which are accommodations for the market people. The corporation consists of a mayor, recorder, six aldermen, and twelve capital burgesses. The principal trade of the town is in shalloons, sacking, and paper, and it has been noted for the excellence of its ale. The market, on Satu rday, is a good com market.

ROMULUS, the son of Rhea Silvia, the founder and first king of Rome. See ROME. On a medal of Antoninus Pius, he appears like Mars Gradivus, with a spear in one hand, and a trophy on the opposite shoulder. It is very probable that several of the supposed figures of Mars, with a trophy so placed, belong rather to Romulus, who was the inventor of trophies among the Romans.

The whole story of the birth of this hero is represented in a relievo at the villa Mellini in Rome. It is divided into four compartments. In the first Mars is going to Rhea as she sleeps by the Tiber. In the second she is sitting with her twins in her lap, whilst Amulius seems to

be upbraiding her. In the third the two infants, Romulus and Remus, are exposed on the banks of the river ; and the fourth represents them as cherished by the wolf, whilst Faustulus stands surprised at their strange situation. This work is but indifferent ; however, the particulars of it are to be met with in other works of better ages. The descent of Mars to Rhea is not uncommon ; and the circumstance of Romulus and Remus being suckled by the wolf is very common on medals, gems, and statues.

RONALDSEY, NORTH, the most northern isl.md of Orkney, two miles long, and one 1'ioiid ; six miles north of Sanely. The smfice is run, the soil sand, and clay. The coasts af-

ford sea waic, from wliicli many tons of kelp are made annually.

RONALDSEY, SOUTH, tiie most southern island of Orkney, about six miles long, and three broad; bounded by the German Ocean on the

east, by the Pentland Frith on the south and west, and by the Ferry of Water Sound, which separates it from Burray,on the north. The climate is excellent ; the surface is pnetty level ; the soil various, but fertile. It has several good harbours, which will admit ships of 600 tons, as Widevvall Bay on the west, and St. Margaret's Hope on the north. It is much frequented by lobster smacks. This island has three headlands ; viz. Barsick, Halero, and Stoic's Head.

RONCESVALLES, a valley in the province ot Navarre, Spain, between Fampeluna and St. Jean Pied du Port, surrounded by mountains, one of which, the Ronceval, is among the highest of the Pyrenees. This valley is celebrated for the defeat of Charlemagne by Loup, duke of Gasoony, assisted by the Saracens. A pillar erected on the spot, in commemoration of the victory, was destroyed by the French in 1794. The small town of this name is fourteen miles N. N. E. of Pampeluna.

RONDA, a large but uninteresting town of Granada, Spain, except in respect to its situation. This is most romantic, arid its natural curiosities are not few. It stands on the summit

of a rocky mountain, divided by a deep ravine

or fissure, which winds around the town, the

river rushing along its bottom. This ravine is

full of abrupt cliffs and crags, lightly covered

with earth : over the fissure there are two bridges, each of a single arch : one is at the height of 1 20

feet above the water, the other at that of 280

feet! This arch is 110 feet in span, and sup-

ported by pillars of masonry from the bottom of

the river. Seen from this elevation, the Gua-

diaro is dwindled to a brook. Hardly any scene

can he more striking than the view from below

this bridge, of part of the houses and spires of

the town, which seem to overhang the spectator.

The public walk is paved with marble, and bor-

dered with vine branches in trellises, which in

hot weather afford an agreeable shade. Leather,

and silk stuffs are manufactured here, and the

environs are well cultivated, and fertile in corn,

wine, and oil. Inhabitants 20,000. The plain

abounds in cattle, and the hills in game. The

Sierra de Honda, a chain of mountains which

takes its name from this town, is of considerable

height, and extends all the way to Gibraltar.

About a league south-east of the town is the

Cresta de Gallo, so called from the supposed resemblance to a cock's comb. It is frequently the first land discerned at sea, on approaching Cadiz, and contains mines of iron, tin, and lead.

RONDELETIA, in botany, a genus of the raonogynia order, and pentandria class of plants ; COR. funnel-shaped : CAPS, bilocular, inferior, and polyspermous, roundish, and crowned. Species eleven, natives of the West Indies.

RONDE, RHONDE ISLAND, or REDONDA, one of the Grenadines, or dependencies of the island of Grenada, in the West Indies ; situate about mid-way between Cariacou or Cariovacou, and the north end of Grenada, about six miles north of Grenada, .and eleven south-west of t'uriovacou. It contains about 500 acres of land applied to pasturage, and the cultivation of cotton. Lon?. 61° 39′ W., lat. 12° 19′ N.

RON'DLE, n. s. From round. A round mass.

RONDO (Italian), or Rondeau (French) A musical composition consisting of three stiains ; the first closing in the original key, while each of the others gradually conducts the ear in a natural easy manner back to the first strain.

The term Rondo, or going round, implies that the melody goes round after the second and third strain to the first, with which it concludes.

RON'ION, n. s. Fr. rognon, the loins. A fat bulky woman.

Give me, quoth I ;
Aroint thee, witch, the rump fed ronyon cries.
Shakspeare.

RONSARD (Peter) de, a French poet, born in Vendomois, in 1524. He was descended of a noble family, and was educated in Paris in the college of Navarre. He then became page to the duke of Orleans, and afterwards to king James V. Ronsard continued in Scotland with king James upwards of two years, and afterwards went to France, where he was employed by the duke of Orleans in several negociations. He accompanied Lazarus de Baif to the diet of Spires, and studied the Greek language with his son under Dorat. He cultivated poetry with such success that he acquired the appellation of the Prince of the Poets of his time. Henry II., Francis II., Charles IX., and Henry III. loaded him with favors. Having gained the first prize

of the Jeux Floraux, the city of Thoulouse caused a Minerva of massy silver of considerable value to be made and sent to him. This present was accompanied with a decree declaring him The French Poet, by way of distinction. Ronsard afterwards made a present of his Minerva to Henry II. Mary queen of Scots gave him a very rich set of table plate. He wrote hymns, odes, a poem called the Franciad, eclogues, epigrams, sonnets, &c. Ronsard, though it is doubtful whether he ever was in orders, held several benefices in commendam ; and he died at one of these, Saint-Cosme-les-Tours, in LOSS, being then sixty-one years of age. Ronsard's poems appeared in Paris in 1567, in six vols., 4to., and in 1604, in ten vols,, 12mo.

RONT, or { Goth, rian nant. An animal

RUNT, n.s. $ stinted in the growth.

My ragged rants all shiver and shake,
As done high towers in an earthquake ;
They wont in the wind, wag their wriggle tails,
Peark as a peacock, but nought it avails.

Spenser.

ROOD, n. s. From rod. the fourth part of

an acre in square measure.

I've often wished that I had clear,

For life, six hundred pounds a-year,

A terras-walk, and half a rood

Of land, set out to plant a wood. Swift.

No stately larch-tree there expands a shade

O'er half a rood of Lariss6an glade. Harte.

ROOD, n. s. Sax. jio&e; Goth. roda. The

cross; sometimes an image of a saint.

By the holy rood,

1 do not like these several councils.

ROOFS.

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ROOF, ;i. s.& v. a. > Sax. hjiop ; Goth. reef.

ROOI'Y, adj. \ In the plural Sidney has

rooves : now obsolete. The cover of a house ;

any covering : to cover with a roof.

Her shoulders be like two white doves,

Perching within square royal rooves. Sidney.

From the magnanimity of the Jews, in causes of

most extreme hazard, those strange and unwonted

resolutions have grown, which, for all circumstances, no people under the roof of heaven did ever match.

Hooker.

Return to her, and fifty men dismissed !

No, rather I abjure all roof, and chuse*

To wage against the enmity o' the' air. Shakspeare.

Swearing till my very roc/" was dry

With oaths of love. Id. Merchant of Venice.

Here had we now our country's honour roofed,

Were the graced person of our Banquo present.

Shakspeare.

Some fishes have rows of teeth in the roofs of their mouths; as pike, salmons, and trouts.

Bacon's Natural History. .

I'll tell all strictly true,

If time, and foode, and wine enough accrue

Within your roofe to us ; that freely we

May sit and banquet. Chapman.

Large foundations may be safely laid ;

Or houses roofed, if friendly planets aid. Creech.

He entered soon the shade

High rooft, and walks beneath, and alleys brown.

Milton.

In thy fane, the dusty spoils among,

High on the burnished root', thy banner shall be hung.

Dry den.

Snakes.

Whether to roo/y houses they repair,

Or sun themselves abroad in open air,

In all abodes of pestilential kind

To sheep. Id. Georgickt.

I have not seen the remains of any Roman build-

ings that have not been roofed with vaults or arches.

Addison.

A ROOF is the covering of a building, by which

its inhabitants or contents are protected from the

injuries of the weather. It is the essential part

of a house, and is often used to express the

whole. To come under a person's roof is to

enjoy his protection and society, to dwell with

him. Tectum was used in the same sense by

the Romans. To be within our walls rather ex-

presses the being in our possession : a roof

therefore is not only an essential part of a

house, but it even seems to be its characteristic

feature. See ARCHITECTURE & CARPENTRY.

The Greeks, who have perhaps excelled all

nations in taste, and who have given the most

perfect model of architectonic ordonnance with-

in a certain limit, never erected a building which

did not exhibit this part in the most distinct

manner ; and though they borrowed much of

their model from the orientals, as is evident to

any who compares their architecture with the ruins of Persepolis, and of the tombs in the mountains of Sciraz, they added that form of roof which their own climate taught them was necessary for sheltering them from the rains. The roofs in Persia and Arabia are flat, but tbose of Greece are without exception sloping. It seems therefore a gross violation of the true principles of taste in architecture (at least in the regions of Europe), to take away or to hide the roof of a house ; and it must be ascribed to that rage for novelty which is so powerful in the minds of the rich. Our ancestors seemed to be of a very different opinion, and turned their attention to the ornamenting of their roofs as much as any other part of a building. T'iey showed them in the most conspicuous manner, running them up to a great height, broke them into a thousand fanciful shapes, and stuck them full of highly dressed windows. We laugh at this, and call it Gothic and clumsy ; and our great architects, not to offend any more in this way, conceal the roof altogether by parapets, balustrades, and other contrivances. Our forefathers certainly did offend against the

maxims of true taste, when they enriched a part of a house with marks of elegant habitation, which every spectator must know to be a cumbersome garret : but their successors no less ofiVnd, who take off the cover of the house altogether, ana make it impossible to know whether it is not a mere skreen or colonnade. The architect is anxious to present a fine object, and a very simple outline discusses all his concerns with the roof. He leaves it to the carpenter, whom he frequently puzzles (by his arrangements) with coverings almost impossible to execute. Indeed it is seldom that the idea of i roof is admitted by him into his great compositions. A pediment is often stuck up in the middle of a grand front, in a situation where a roof cannot perform its office ; for the rain which is supposed to flow down its sides must be received on the top of the level buildings which flank it. This is a manifest incongruity. The tops of dressed windows, trifling porches, and sometimes a projecting portico, are the only situations in which we see the figure of a roof correspond with its office. Having thus lost sight of the principle, it is not surprising that

the draughtsman (for he should not be called architect) runs into every whim : and we see pediment within pediment, a round pediment, a hollow pediment, and, the greatest of all absurdities, a broken pediment, which is as ridiculous as a hat without its crown. But, when one builds a house, ornament alone will not do. Wf must have a cover ; and the enormous expense and other inconveniences which attend the concealment of this cover by parapets, balustrades, and screens, have obliged architects to consider the pent roof as proper, and to regulate its form. A high pitched roof will undoubtedly shoot off the rains and snows better than one of a lower pitch. The wind will not so easily blow the dropping rain in between the slates, nor will it have so much power to strip them off. It will exert a smaller thrust on the walls, both because its strain is less horizontal, and because it will admit of lighter covering. But it is more expensive, because there is more of it. It requires a greater size of timber to make it equally strong, and it exposes a greater surface to the wind.

There have been great changes in the pitch of roofs : our forefathers made them very high,

and we make them very low. It does not, however, appear that this change has been altogether the effect of principle. In the simple un-adorned habitations of private persons, every thing comes to be adjusted by an expen-

encc of Inconveniences which have resulted from too low pitched roofs ; and their pitch will always be nearly such as suits the climate and covering. Our architects, however, go to work on different principles. Their professed aim is to make a beautiful object. The sources of the pleasures arising from what we call taste are so various, so complicated, and so whimsical, that it is almost in vain to look for principle in the rules adopted by our professed architects. Much of their practice results from a pedantic venera-tion for the beautiful productions of Grecian architecture. Such architects as have written on the principles of the art in respect of proportions, or what they call the ordonnance, are much puzzled to make a chain of reasoning ; and the most that they have made of the Greek architec-ture is, that it exhibits a nice adjustment of

strength and strain. But, when we consider the extent of this adjustment, we find that it is wonderfully limited. The whole of it consists of a basement, a column, and an entablature ; the entablature exhibits .something of a connexion with the frame-work and roof of a wooden building; and it originated from this in the hands of the orientals, from whom the Greeks borrowed their forms and their combinations. We could easily show in the ruins of Persepolis, and among the tombs in the mountains (which were Ion:: prior to the Greek architecture), the fluted column, the base, the Ionic and Corinthian capital, and the Doric arrangement of lintels, beams, and rafters, all derived from unquestionable principle. The only addition made by tlie Greeks was the pent roof; and the changes made by them in the subordinate forms of things are such as might be expected from the exquisite judgment of beauty. But the whole of this is very limited ; and the Greeks, after making the roof a chief feature of a house, went no further, and contented themselves with giving it a slope suited to their climate. This we have followed,

because in the milder parts of Europe we have

no cogent reason for deviating from it ; and if

any architect should deviate greatly, in a build-

ing where the outline is exhibited as beautiful,

we should be disgusted : but the disgust, though

felt by almost every spectator, has its origin in

nothing but habit. In the professed architect or

man of education the disgust arises from pedantry ;

for there is not such a close connexion between

the form and uses of a roof as shall give precise determinations ; and the mere form is a matter

of indifference. We should not therefore repro-

bate the high-pitched roofs of our ancestors, par-

ticularly on the continent. It is there where we

see them in all the extremity of the fashion, and

the taste is by no means exploded as it is with us.

A baronial castle in Germany and France is sel-

dom rebuilt in the pure Greek style, or even like

the modern houses in Britain ; the high pitched

roofs are retained. We should not call them

Gothic, and ugly because Gothic, till we show

iheir principle to be false or tasteless. It will be found quite the reverse ; and that, though we can-

not bring ourselves to think them beautiful, we

ought to think them so. The construction of the

Greek architecture is a transference of the prac-

tices that are rtecessary in a wooden building to a building of stone. To this the Greeks have

adhered, in spite of innumerable difficulties.

Their marble quarries, however, put it in their

power to retain the proportions which habit had

rendered agreeable. But it is next to impossible

to adhere to these proportions with free-stone or

brick, when the order is of magnificent dimen-

sions. Sir Christopher Wren saw this ; for his

mechanical genius was equal to his taste. He

composed the front of St. Paul's church in Lon-

don of two orders, and he coupled his columns ;

and still the lintels which form the architrave

are of such length that they could carry no ad-

ditional weight, and he was obliged to truss them

behind. Had he made but one order, the archi-

trave could not have carried its own weight. It

is impossible to execute a Doric entablature of

this size in brick. It is attempted in a very no-

ble front, the Academy of Arts in St. Petersburg!).

But the architect was obliged to make the mu-

tules and other projecting members of the cor-

niche of granite, and many of them broke down

by their own weight. Here is surely an error

in principle. Since stone is the chief material of our buildings, ought not the members of ornamented architecture to be refinements on the essential and unaffected parts of a simple stone building ? There is almost as much propriety in the architecture of India, where a dome is made in imitation of a lily or of some other flower inverted, as in the Greek imitation of a wooden building. The principles of masonry, and not of carpentry, should be seen in our architecture, if we would have it according to the rules of just taste. Now this is the characteristic feature of what is called the Gothic architecture. In this no dependence is had on the transverse strength of stone. No lintels are to be seen ; no extravagant projections. Every stone is pressed to its neighbours, and none is exposed to a trassverse strain. The Greeks were enabled to execute their colossal buildings only by using immense blocks of the hardest materials. The Norraan mason could raise a building to the skies without using a stone which a laborer

could not carry to the top on his back. The architects studied the principles of equilibrium ; and, having attained a wonderful knowledge of it, they indulged themselves in exhibiting remarkable instances. \Ve call this false taste, and say that the appearance of insecurity is the greatest fault. But this is owing to our habits; our thoughts may be said to run in a wooden train, and certain simple maxims of carpentry are familiar to our imagination ; and in the careful adherence to these consists the beauty and symmetry of the Greek architecture. Had we been as much habituated to the equilibrium of pressure, this apparent insecurity would not have met our eye : we should have observed the strength, and we should have relished the ingenuity. The Gothic architecture is perhaps entitled to the name of rational architecture, and its beauty is founded on the characteristic distinction of our species. It deserves cultivation ; not the pitiful, servile, and unskilled copying of the monuments; this will produce incongruities and absurdities equal to any that have crept into the Greek architecture; but let us examine with

attention the nice disposition of the groins and spandrels ; let us study the tracery and knots, not as ornaments, but as useful members; let us observe how they have made their walls like honey-combs, and admire their ingenuity as we pretend to admire the instinct infused by the Great Architect into the bee. All this cannot be understood without mechanical knowledge ; a thing which few of our professional architects have any share of. Thus would architectonic taste be a mark of skill ; and the person who presents the design of a building would know how to execute it without committing it entirely to the mason and carpenter. The same principles of mutual pressure and equilibrium have a place in roofs and many wooden edifices ; and if they had been as much studied as the Normans and Saracens seem to have studied such of them as were applicable to their purposes, we might have produced wooden buildings as far superior to what we are familiarly acquainted with, as the bold and wonderful churches still remaining in Europe are still superior to the timid productions

of our stone architecture. The centres used in building the bridge of Orleans and the corn-market of Paris are instances of what may be done in this way. The last-mentioned is a dome of 200 feet diameter, built of fir planks; and there is not a piece of timber in it more than nine feet long, a foot broad, and three inches thick.

The Norman architects frequently roofed with stone. Their wooden roofs were in general very simple, and their professed aim was to dispense witli them altogether. Fond of their own science, they copied nothing from a wooden building, and ran into a similar fault with the ancient Greeks. The parts of their buildings which were necessarily of timber, were made to imitate stone-buildings ; and Gothic ornament consists in cramming every thing full of arches and spandrels. Nothing else is to be seen in their timber works, nay even in their sculpture. Look at any of the maces or sceptres still to be found about the old cathedrals ; they are all silver steeples. But there appears to have been a rivalship in old times between the masons and the carpenters. Many of the baronial halls are of prodigious width, and are roofed with timber : and the carpenters appeared to have borrowed much knowledge from the masons of those times, and their wide roofs are

frequently constructed with great ingenuity.

Their aim, like the masons, was to throw a roof

over a very wide builaing without employing

great logs of timber. We have seen roofs sixty

feet wide without having a piece of timber in

them above ten feet long and four inches square.

They are very numerous on the continent. Indeed

Britain retains few monuments of private mag-

nificence. Aristocratic state never was so great

with us ; and the rancor of our civil wars gave

most of the performances of the carpenter to the

flames. Westminster Hall exhibits a specimen

of the false taste of the Norman roofs. It con-

tains the essential parts indeed, very properly

disposed ; but they are hidden, or intentionally

covered, with n'hat is conceived to be ornamen-

tal; and this is an imitation of stone arches,

crammed in bet veen Siender pillars, which hang

down from the principal frames, trusses, or rafters. In a pure Norman roof, such as Tarna-

way Hall, the essential parts are exhibited as

things understood, and therefore relished. They

are refined and ornamented ; and it is here that

the inferior kind of taste, or the want of it, may appear. We do not mean to defend all the

whims of our ancestors, but we assert that it is

no more necessary to consider the members of a

roof as things to be concealed like a garret or

privy, than the members of a ceiling, which

form the most beautiful part of the Greek archi-

tecture. Should it be said that a roof is only a thing to keep off the rain, it may be answered,

that a ceijing is only to keep oft' thˆ dust, or the floor to be trodden under foot, and that we

should have neither compartments in the one, nor

inlaid work or carpets on the other. The struc-

ture of a roof may therefore be exhibited with

propriety, and made an ornamental feature.

This has been done even in Italy. The church

of St. Maria Maagiore in Rome, and several

others, are specimens ; but the forms of the

principal frames of these roofs, which resemble

those of our modern buildings, are very unfit for

agreeable ornament. Our imaginations have not

been made sufficiently familiar with the princi-

ples, and we are rather alarmed than pleased

with the appearance of the immense logs of tim-

bei which form the couples of these roofs, and

hang over our heads with eve»y appearance of

weight and danger. It is quite otherwise with

the ingenious roofs of the German and Norman architects. Slender timbers, interlaced with great symmetry, and thrown by necessity into figures which are naturally pretty, form altogether an object which no carpenter can view without pleasure. And why should the gentleman refuse himself the same pleasure of beholding scientific ingenuity? The roof is in fact the part of the building which requires the greatest degree of skill, and where science will be of more service than in any other part. The architect seldom knows much of the matter, and leaves the task to the carpenter. The carpenter considers the framing of a great roof as the touchstone of his art ; and nothing indeed tends so much to show his judgment and his fertility of resource. It must therefore be very acceptable to the artist to have a clear view of the principles by which this difficult problem may be solved in the best manner, so that the roof may have all the strength and security that can be wished for, without an extravagant expense of timber and iron. Mechanical science can give great assistance in this matter. The framing of carpentry, whether for roofs, floors, or any other purpose, affords one of the most elegant and

most satisfactory applica-

tions which can be made of mechanical science to the arts of common life. But the practical artist is seldom possessed even of the small portion of science which would almost insure his practice from all risk of failure ; and even our most experienced carpenters Jiave seldom any more knowledge than what arises from tneir experienc and natural sagacity. The most approved author in our language is Price, in his British Carpenter. Mathurin Jousse is in like manner the author most in repute in France : and the puM'oations of both these authors are*

void of every appearance of principle. It is not uncommon to see the works of carpenters of the greatest reputation tumble down, in consequence of mistakes from which elementary knowledge would have saved them. See ARCHITECTURE. In the .Middlesex Report on Architecture, it is observed, in speaking of the roofs of houses, that pantiles are so easily heated through by the sun, during the summer months, that the rooms

underneath are as hot as an oven ; while, in the winter season, in every common frost, these tiles are so completely frozen through as to become as cold as a covering of ice. These extremes must consequently have a very bad effect on the health of the inhabitants. The blue slates are so very thin as to be equally liable to the same objection, particularly as they are now laid on most of our fashionable houses, under Wyatt's patent. They are rather better when laid on in the common manner, that is, on double laths, but much better on boards. Plain tiles make a considerably more temperate covering for houses than either pantiles or slates, by reason of their being laid double and in mortar, and thereby forming a much thicker and closer roof. In this they are nearly equalled by the thick or stone slating of the midland counties; they might also be glazed of a slate color ; in which case they would make a roof more hancwome, temperate, and durable, than any other covering material now known.

Other substances have been had recourse to with this intention. In different parts of the

country, cements of various kinds, and coarse paper laid over with resin, tar, &c., and other similar matters, have been tried, but with no very promising success as to their application. In some parts of Devonshire, though slate is by no means difficult to be procured, a substitute for that sort of covering is, Mr. Vancouver asserts, getting very much into use, which is prepared in the following manner : — Three parts of whiting, five of sand, one of pounded charcoal, and one of bone-ashes, to a barrel of common tar, to which are added four pounds of black resin ; the two last materials are to be melted together, and, when boiling, the other ingredients are to be added in small quantities, keeping them constantly stirred and in motion over the fire, until the whole mass becomes of a consistence fit for use.

Then the roof, being previously covered over with sheathing-paper securely nailed dowp, is to be carefully and evenly spread with the liquid hot from the copper, to the thickness of about three-quarters of an inch; which will cost, at the cauldron, about thirty-five shillings for each square of ten feet. The same measure of the common slate roof will cost about thirty-two

shillings. The roofs for this sort of composition are pitched very flat, and, from the lightness of the scantling which is necessary in their construction, come considerably cheaper than those required for carrying slate or tiles. Materials of the reed and heath kinds have also been tried as coverings for the roofs of farm-houses and cottages, in places where they are capable of being procured in sufficient quantities for such purposes ; and, though they are considerably more durable than common straw thatch, they are subject to all the inconveniencies and objections of that sort of covering.

Thatch was formerly in general use for covering the roofs of all farm-buildings ; but it is objectionable on many accounts, particularly as a hid;ng-place for insects, birds, and vermin ; and as extremely perishable in its nature, subject to be much damaged by high winds, and of course liable to frequent repairs; and, above all, hishly dangerous from its combustible nature. But Mr. Middleton thinks that it keeps out the summer's heat and winter's cold more effectually than any other material now in use ; while, as

it is not quite 'so compact and sightly as slates or tiles, and the straw being of such value for other purposes, it will probably be superseded by them. Tiles, though little exposed to danger from fire, do not, by any means, constitute a good roof, being ill calculated for preserving grain or other farm produce. In summer, they admit a heat very unfriendly to hay, corn, or straw ; while, in winter, they are equally objectionable, on the ground of transmitting moisture in a high degree, while slates, though more expensi»e at first, are liable to none of these objections, especially when of the more thick kind. A roof covered with them, therefore, answers every useful purpose, and is very durable. Tor the construction of modern roofs, generally, see our article ARCHITECTURE, and more on the subject of farm-buildings under RURAL ARCHITECTURE.

ROOK, n. s. & v. n. ~\ Sax. pnoc ; Goth. rack.

ROOK'ERY, > A bird resemblinga crow.

ROOK'Y, adj. j and feeding on grain ;

hence a robber or cheat : also a common man of chess : rookery is a nursery of rooks : rooky, in-

habited by rooks.

Augurs, that understood relations, have,

By magpies, and by choughs, and rooks, brought forth The secretest man of blood. Shakspeare. Macbeth.

Light thickens, and the crow

Makes wing to the rooky wood. Shuhspeare.

They rooked upon us with design,

To out-reform and undermine. Hudibras.

Huge flocks of rising rook forsake their food,*

And, crying, seek the shelter of the wood. Dryttr.*

So have I seen a knight at chess,

His rooks and knights withdrawn,

His queen and bishops in distress,

Shifting about grow less and less.

With here and there a pawn. Id. Songs.

How any one's being put into a mixed herd of un-

ruly boys, and there learning to rouk at span-farthing, fits him for conversation, I do not see.

Locke on Kdiicati'ii.

I am, like an old rook, who is ruined by gaming,

forced to live on the good fortune of the pushing

young men. Wueherleii.

No lone house in Wales, with a mountain and a

rookery, is more contemplative than this court.

Pope.

The jay, the rook, the daw.

Aid the full concert. Thomson's Spring.

ROOK, in ornithology. See CORVUS. Rooks

are very destructive of corn, especially of wheat.

They search out the lands where it is sown,

and watching them more carefully than the

owners, they perceive when the seed first 1

to shoot up its blade ; and, as soon a<

h\M-. them directed t.

ROO

p'.7.ces where the grains lie ; and in three or four days they will root up such vast quantities that

a good crop is often thus destroyed in embryo.

After a few days, the wheat continuing to jrrow,

its blades appear green above ground ; and then

the time of danger from these birds is over : for then the seeds are so far robbed ot their mealy

matter that they are of no value to that bird.

The farmers, to drive away these mischievous

birds, dig holes in the ground, and stick up the

feathers of rooks in them, and hang up dead

rooks on sticks in several parts of the fields ;

but all this is of little use, for the living rooks will tear up the ground about the leathers, and

under the dead ones to steal the seeds. The

best remedy is, to watch well the time of the

corn being in the condition in which they feed

upon it ; and as this lasts only a few days, a boy should constantly watch the field from day-break

till the dusk of the evening. Every time they

settle upon the ground the boy should holloa,

and throw up a dead rook into the air : this will always make them rise, and they will soon be so

tired of this constant disturbance that they will

seek out other places of preying, and will leave

the ground even before the corn becomes unfit

for them. The reason of their rising at the

tossing up of the dead bird is, that they are

extremely apprehensive of danger, and are al-

v ays alarmed when one of them rises, and all

fly off at the signal.

ROOKE (Lawrence), an eminent English

astronomer, born at Deptford in Kent, in 1623 ;

and educated at King's College, Cambridge, and

at Oxford. In 1652 he was appointed Gresham

professor of astronomy; and was also one of the

founders of the Royal Society. He wrote as-

tronomical tracts. He died in 1662.

ROOKE (Sir George), a naval commander, de-

scended of an ancient and honorable family ir»

Kent, was born in 1650. His merit raised him

to be vice-admiral of the blue; in which station he served in the battle of La Hogue May 1692, and the next day he obtained still more glory by going into La llogue, and burning the enemy's fleet, which he completely destroyed, together with most of the transports and ammunition vessels ; and this under the fire of all the French batteries, and in sight of all the French and Irish troops ; yet this bold action cost the lives of only ten men. The vice-admiral's behaviour on this occasion so pleased king V> illiam that, having no opportunity at that time of promoting him, he settled a pension of £1000 per annum on him for life ; and afterwards, going to Portsmouth to view the fleet, went on board Rooke's ship, dined with him, and then conferred on him the honor of knighthood, he having a little before made him vice-admiral of the red. In consequence of other services he was in 1694 raised to the rank of admiral of the blue ; towards the close of the next year he was made admiral of the white; and was also appointed admiral and commander-in-chief in the Mediterranean. During king William's reign, Sir George was twice elected M. P. for Portsmouth; and upon the accession of queen Anne, in 1702,

he was constituted vice-admiral and lieutenant

of the admiralty of England, as also lieutenant

39 ROO

of the fleets and seas of this kingdom. Upon

the declaration of war against France, he was

ordered to command a fleet sent against Cadiz,

the duke of Ormond having the command of

the land forces. On his passage home, receiving

an account that the galleons, under the escort

of a strong French squadron, were in the har-

bour of Vigo, he resolved to attack them : and

on the llth October came before the harbour of

Kondondello, which the French commander had

put into the best posture of defence. But, not-

withstanding this, a detachment of fifteen En°—

hsh and ten Dutch ships of the line, with all the fire-ships were ordered in, and the army landed

near Rondondello. The whole service was per-

formed under Sir George's directions ; all the

ships were destroyed or taken, prodigious

damage was done to the enemy, and great wealth

acquired by the allies. For this action Sir

George received the thanks of the house of

commons, a day of thanksgiving was appointed

both by the queen and the states general, and

Sir George was promoted to a seat in the privy-

council ; yet, notwithstanding this, the house of

lords resolved to enquire into his conduct at

Cadiz. But he so fully justified himself that a

vote was passed, approving his behaviour. In

spring 1704 Sir George commanded the ships of

war which conveyed king Charles III. of Spain

to Lisbon. In July he attacked Gibraltar;

when, by the bravery of the English seamen,

the place was taken on the 24th, though the

town was extremely strong, and well furnished

with ammunition. The capture of this place

was conceived and executed in less than a week,

yet was then very little thought of; though it has since endured sieges of many months' continu-

ance, and more than once baffled the united

forces of France and Spain. Sir George soon

after retired to his seat in Kea£ He was thrice

married ; and by his second lady left one son.

He died in 1709 in his fifty-eighth year, and

was buried in Canterbury cathedral, where a

monument is erected to his memory.

ROOM, n.s. } Sax. nutn ; Goth. rum. Space;

ROOM'AGE, ˆ extent of place great or small ;

ROO'MY, adj. t unoccupied space; way : room-

age is an obsolete synonyme.

In evils that cannot be removed without the mani-

fest danger of greater to succeed in their room, wis-

dom, of necessity, must give place to necessity.

Hooker.

Make room, and let him stand before our face.

Shaktpeare.

If you will have a young man to put his travels in a little room, and in short time gather much, this he must do. Bacon.

Man, of all sensible creatures, has the fullest brain to his proportion, for the lodging of the intellective faculties : it must be a silent character of hope, when there is good store of roomagc and receipt where those powers are stowed. Wotton.

If when she appears in the room,

Thou dost not quake, and art struck dumb,

Know this,

Thou lovest amiss ;

And, to love true,

Thou must begin again, and love anew. Suckling

What train of servants, what extent of field,

Shall aid the birth, or give him room to build?

Creech.

With new wonder now he views,

To all delight of human sense exposed

In narrow room, nature's whole wealth. Milton.

For better ends our kind Redeemer died,

Or the fallen angels rooms will be but ill supplied.

Roscommon.

In a prince's court, the only question a man is to ask is, whether it be the custom of the court, or will of the prince, to be uncovered in some rooms and not in others'? Still ing fleet.

With roomy decks, her guns of mighty strength,

Deep in her draught, and warlike in her length.

Dry den.

This paternal regal power, being by divine right,

leaves no room for human prudence to place it any

where. Locke.

When this princess was in her father's court, she

was so celebrated that there was no prince in the

empire, who had room for such an alliance, that was not ambitious of gaining her into his family.

Atldison's Freeholder.

t puts us upon so eager a pursuit of the advan-

tages of life, as leaves no mum to reflect on the greaf author of them. Atterbury.

By contributing to the contentment of other men,

and rendering them as happy as lies in our power,

we do God's work, are in his place ana room.

Calamu's Sermon.*

The dry land is much too big for its inhabitants ; and that before they shall want room by encreasing

and multiplying, there may be new heavens and a

new eartli lientley.

It will afford me a few pleasant room, for such a friend as yourself. Pope.*

Will you not look with pity on me 1

Is there no hope 1 is there no room for pardon 1

A. Philips.

ROOME (Edward), an English writer, the

son of an undertaker in Fleet Street. He was

bred to the law, and became a violent party

writer. He wrote some papers entitled Pasquin,

wherein he offended Mr. Pope, who placed him

in the Dunciad. lie succeeded Mr. Hornecks,

as solicitor to the treasury, October 18th 1728,

and died December 10th 1729. His Jovial

Crew was first acted in 1731.

ROOS (John Hendrick), a Dutch painter,

born at Orteburgh in 1631. His landscapes

have uncommon beauty. He also painted port-

raits. He died in 1685.

Roos (Philip), his son, was born in 1665, and

excelled his father greatly. His brother, John

Mclchior, was also eminent in painting, and died

in 1731, aged seventy-two

ROOST, n. s. & v. n. Sax. pru>rr. That on

which a bird sits to sleep ; the act of sleeping ; to sleep as a bird ; lodge.

Sooner than the mattin-bell was rung,

He clapped his wings upon his roost and sung.

Dryden.

A fox spied out a cock at roost upon a tree.

L'Ettranee.

The cock roasted at night upon the boughs. Id.

Large and strong muscles move the wings, and

support the body at roott. Derham'i Phys. Theology.

ROOT, n. s., v. a., & v. n.) Goth. and ROOT'ED, £ Swed. rot ; Belg.

ROOT'EDLY, adv. J rocd. That part

of the plant which rests in the ground, and sup-

plies it with nourishment ; the original ; first an-

cestor : to fix the root ; strike deep ; fix deep : the adjective and adverb corresponding.

The multiplying brood of the ungodly shall not

take deep roonng from bastard slips, nor lay any fast foundation. Wisdom.

Having this way eased the church, as they thought,

of superfluity, they went on till they had plucked up even those things also which had taken a great deal stronger and deeper 7-oof. Hooker.

It -vas said,

That myself should be the root, and father

Of many kings. Slmkspeare. Macbeth.

Underneath the grove of sycamour,

That westward rooteth, did 1 see your son.

Shakspeure.

Pluck from the memory a rooted sorrow,

Raze out the written troubles of the brain. Id.

They all do hate him as rootedly as I. Id.

He's a rank weed,

And we musf rcot him out. Id. Henry Vlll.

The Egyptians think it sin to root up or to bite

Their leeks or onions, which they serve with holy

rite. Raleigh's History of the World.

When you would have many new roofs of fruit

trees, take a low tree, and bow it, and lay all his branches aflat upon the ground, and cast earth upon them, and every twig will take roof. Bacon.

After a yeat's rooting, then shaking doth the tree

good, by loosening of the earth. Id.

Why did my parents send me to the schools,

That 1 with knowledge might enrich my mind ?

S4nce the desire to know first made men fools,

And did corrupt the root of all mankind. Daviet.

The danger is great to them, who, on a weaker

foundation, do yet stand firmly rooted, and grounded in the love of Christ. Hammond's Fundamentals.

Deep to the roots of hell the gathered breach

They fastened. Milton.

Whence,

But from the author of all ill, could spring

So deep a malice, to confound the race

Of mankind in one root? Milton's Paradise Lost.

Not to destroy, but root them out of heaven.

Milton.

If any irregularity chanced to intervene, and

cause misapprehensions, ne gave them not leave to

root and fasten by concealment. Fell.

That the love of money is the root of all evil is a truth universally agreed in. Temple.

A flower in meadow ground, amellus called ;

And from one root the rising stem bestows

A wood of leaves. Dryden's Virgil' Georgicks.*

That love took deepest root which first did grow.

Dryden.

When ocean, air, and earth, at once engage,

And rooted forests fly before their rage,

At once the clashing clouds to battle move. Id.

Root up wild olives from thy laboured lands. Id.

They were the roots, out of which sprang two

distinct people, under two distinct governments.

Lor he.

In October, the hops will settle and strike root

against spring. Mortimer's Huibandry.

The coulter must be proportioned to the soil, be-

cause, in deep grounds, the weeds root the deeper.

Mortimer.

The layers will in a month strike rout, being

planted in a light loamy earth. Evelyn' Kalendnr.*

These subterraneous vaults would be found espe-

cially about the root of the mountains. Burnet.*

The great important end that God designs it for.

the government of mankind, sufficiently shows the

necessity of its being rooted deeply in the heart, an-i ROPE-MAKING.

41

put beyond the danger of being torn up by anyordi-.

nary violence. St>uth.

In vain we plant, we build, our stores increase,

If conscience roots up all our inward peace.

Granville.

You always joined a violent desire of perpetually

changing places with a rooted laziness.

Swift to Gay.

Those plants, whose roott are eaten, are carrots,

turnips, and radishes. Watts.

They have so rooted themselves in the opinions of

their party, that they cannot hear an objection with patience. Id.

Nor were the cole-worts wanting, nor the root,

Which after-ages call Hibernian fruit. Harte.

ROOT. See BOTANY.

ROOT, in algebra and arithmetic, denotes any

number which, multiplied by itself once or

oftener, produces any other number ; and is

called the square, cube, biquadrate, &c., root,

according to the number of multiplications.

Thus 2 is the square-root of 4, the cube-root

of 8, the biquadrate-root of 16, &c.

ROOT, SNAKE. See ARISTOLOCIIIA.

ROPE, B. s. & u. a. ˆ Sax. jiaj> ; Goth, rep ; ROPE'DANCER, Swed. reep ; Belg. reip,

ROPE'MAKER, I roop. A thick cord or

RO'PERY, n.s. >string; halter; cluster:

ROPE'TRICK, to range; draw out:

RO'PIXESS, «. s. I ropery is usedbyShaks-

RO'PY, adj. J peare for roguery : rope-

trick for a rogue's trick ; or, as Johnson thinks,

for tricks that deserve a halter : ropiness is vis-

cosity ; stringiness : ropy, glutinous ; viscous :

the other compounds the extracts will explain.

Thou drunken slave, I sent thee for a rope,

And told thee to what purpose. Shakspeare.

The ropemaker bears me witness,

That I was sent for nothing but a ropf. Id.

What saucy merchant was this, that was so full

of his ropery ? Id. Merchant of Venice .

She may perhaps call him half a score knaves or

so : an' he begin once, he'll rail in his ropetrickt.

Shakspeare.

An anchor let down by a rope, maketh a sound ;

and yet the rope is no solid body, whereby the sound can ascend. Bacon.

Such bodies partly follow the touch of another

body, and partly stick to themselves : and therefore rope and draw themselves into threads ; as pitch,

glue, and birdlime. Id.

Salvian, amongst public shews, mentions the Peta-

menarii ; probably derived from the Greek rtraiSai,

to fly, and may refer to such kind of ropedancers.

Wilkins.

Who would, not guess there might be hopes,

The fear of gallowses and ropes

Before their eyes, might reconcile

Their animosities a while. Hudibrtu.

In this close vessel place the earth accursed,

But filled brimful with wholesome water first,

Then run it through, the drops will ro;>« around.

Drijden.

Ask for what price thy venal tongue was sold ;

Tough, withered truffles, ropy wine, a dish

Of shotten herrings, or stale stinking fish. Id.

I cannot but confess myself mightily surprized,

that, in a book which was to provide chains for all mankind, 1 should find nothing but a rope of sand.

Locke.

Take care

Thy muddy bev'rage to serene, and drive

Precipitant the baser ropy lees. Philips.

Statius, posted on the highest of the two summits,

the people regarded > with terror, as they look upon a daring ropedancer, whom they expect to fall every

moment. Addison.

Hang yourself up in a true rope, that there may

appear no trick in it. Arbuthnol.

The contents separated from it are sometimes ropu,

and sometimes only a grey and mealy, light sub-

stance. BUtckmore.

ROPE-MAKING is an art of great importance,

and there are few that better deserve the atten-

tion of the intelligent observer. Hardly any

trade can be carried on without the assistance of

the rope-maker. Cordage makes the very sinews

and muscles of a ship ; and every improvement

which can be made in its preparation, either in

respect to strength or pliableness, must be of im-

mense service to the mariner, and to the com-

merce and defence of nations.

Rope-making has been denned the art of uniting animal or vegetable fibres into an aggregate line, so that the whole may concur in one joint action, and be employed under the forms of string, cord, cable, &c. Animal fibres, on account of their expense, are but seldom used, but those that are introduced into the employment are obtained either from the intestines or the hair. The intestines of sheep and lambs are manufactured into what is called cat-gut, of different sizes, for the use of musical-instrument-makers, for watch-makers, opticians, cutlers, turners, and a variety of other artificers. The tendrils of the ovary of the squalus canicula, or dog-fish, are chiefly employed in angling, more frequently single than in the combined state, known in the trade by the name of Indian -grass. Animal hair, as that from horses, is had recourse to where there is no great friction, and it forms a rope or cord much more durable than any that can be obtained from vegetables; it is impervious to moisture is capable of resisting all weathers, and is extremely elastic. Hence it is obvious that the rope-maker must derive his chief material from the vegetable kingdom ; which he does from

the inner bark of the hemp, or cannabis sativa ;

or from that of some of the species of flax, or

linum ; that of the L. usitassimum is the most

important. The treatment of both these plants

being nearly the same, we shall describe, as

nearly as we can, that relating to flax. The plant is rather common in most of the temperate parts

of Europe, flowering in July. The root is an-

nual, fibrous, and small; the stem is erect, round,

smooth, and leafy ; the flowers on stalks erect,

and of a sky-blue color. About the end of Au-

gust, when the flowers have attained their full

growth, and begin to turn yellow at bottom, and

brown at the top, and their seeds to ripen, it is a proper time to pull the plants up. They are

dried and threshed ; they are then to be put in

water till the bark readily separates from the

stalk, when they are taken out and dried, after

which they are in a proper state for the purpose

of being converted into flax by the hackler. We

may observe, though not strictly connected with

the subject in hand, thnt, as from the bark of the stalks is manufactured flax or Hnt, for making of

all sorts of linen cloth ; — from cloth, when worn

out, we make our paper ; from the seeds of the

plant linseed oil is expressed ; and even the re-

fuse, after the oil is extracted, forms oil-cakes, so valuable in fattening cattle, sheep, and other

live stock. From hemp, however, treated in a

similar way, we have the materials for cordage,

ropes, and cables. Russian hemp is most used,

but English hemp, when properly manufactured,

is superior to that introduced from the north.

The aim of the rope-maker is to unite the

strength of a great number of fibres, and the first part of his process is spinning of rope-yarns ;

that is, twisting the hemp in the first instance.

This is done in various ways, and with different

machinery, according to the nature of the in-

tended cordage. We shall confine our descrip-

tion to the manufacture of the larger kinds, such

as are used for the standing and running rigging

of ships. An alley, or walk, is enclosed for the

purpose, about 200 fathoms long, and of a

breadth suited to the extent of the manufacture.

It is sometimes covered above. At the upper

end of this rope-walk is set up the spinning-

wheel. The band of the wheel goes over several

rollers, called whirls, turning on pivots in brass

holes. The pivots at one end come through the frame, and terminate in little hooks. The wheel, being turned by a winch, gives motion in one direction to all the whirls. The spinner has a bundle of dressed hemp round his waist, with the two ends meeting before him. The hemp is laid in this bundle in the same way that women spread the flax on the distaff. There is great variety in this ; but the general aim is to lay the fibres in such a manner, that, as long as the bundle lasts, Ihere may be an equal number of the ends at the extremity, and that a fibre may never offer itself double, or in a bight. The spinner draws out a proper number of fibres, twists them with his fingers, and, having got a sufficient length detached, he fixes to the hook of a whirl. The wheel is now turned, and the skein is twisted, becoming what is called rope-yarn, and the spinner walks backwards down the rope-walk. The part already twisted draws along with it more fibres out of the bundle. The spinner aids this with his fingers, supplying hemp in due proportion, as he walks away from the wheel, and taking care that the fibres come in equally from both sides of his bundle, and

that they enter always with their ends, and not by the middle, which would double them. He should also endeavour to enter every fibre at the heart of the yarn. This will cause all the fibres to mix equally in making it up, and will make the work smooth, because one end of each fibre is, by this means, buried among the rest, and the other end only lies outward ; and this, in passing through the grasp of the spinner, who presses it tight with his thumb and palm, is also made to lie smooth. A good spinner endeavours always to supply the hemp in the form of a thin fiat skein, with his left hand, while his right hand is employed in grasping firmly the yarn that is twining off, and in holding it tight from the whirl, that it may not run into loops or kinks. It is evident that both the arrangement of the fibres, and the degree of twisting, depend on the skill and dexterity of the spinner, and that he must be instructed, not by a book, but by a master. The degree of twist depends on the rate of the wheel's motion, combined with the retrograde walk of the spinner. We may suppose him arrived at the lower end of the walk, or as

far as is necessary for the intended length of his yarn. He calls out, and another spinner imme-

diately detaches the yarn from the hook of the

whirl, and gives it to another, who carries it

aside to the reel ; and this second spinner at-

taches his own hemp to the whirl-hook. In the

mean time, the first spinner keeps fast hold of

the end of his yarn ; for the hemp, being dry,

is very elastic, and, if he were to let it go out of his hand, it would instantly untwist, and become

little better than loose hemp. He waits, there-

fore, till he sees the reeler begin to turn the reel, and he goes slowly up the walk, keeping the

yarn of an equal tightness all the way, till he

arrives at the wheel, where he waits with his

yarn in his hand till another spinner has finished

his yarn. The first spinner takes it off the whirl-

hook, joins it to his own, that it may follow it on the reel, and begins a new yarn. The second

part of the process is the conversion of the yarns into what may with propriety be called a rope,

cord, or line. That we may have a clear concep-

tion of the principle which regulates this part

of the process, we shall begin with the simplest

possible case — the union of two yarns into one

line.

When hemp has been split into very fine

fibres by the hatchet, it becomes exceedingly

soft and pliant, and, after it has lain for some

time in the form of fine yarn, it may be unreeled and thrown like flaxen yarn, so as to make

sewing-thread. It is in this way, indeed, that

the sail-makers' sewing-thread is manufactured,

and when it has been kept on the reel, or on

balls or bobbins, for some time, it retains its

twist as well as its uses require. But this is by no means the case with yarns spun for great

cordage. The hemp is so elastic, the number

of fibres twisted together is so great, and the

diameter of the yarn (which is a sort of lever on which the elasticity of the fibre exerts itself) is so considerable, that no keeping will make the

fibres retain this constrained position.

The end of a rope-yarn being thrown loose, it

will immediately untwist, and this with consi-

derable force and speed. It would, therefore,

be a fruitless attempt to twist two such yarns

together ; yet the ingenuity of man has contrived

to make use of this very tendency to untwist,

not only to counteract itself, but even to pro-

duce another and a permanent twist, which re-

quires force to undo it, and which will recover

itself when this force is removed. Every person

must recollect that, when he has twisted a pack-

thread very hard with his fingers between his two hands, if he slackens the thread by bringing his hands nearer together, the packthread will immediately curl up, running into loops or kinks, and -will even twist itself into a neat and firm cord. The component parts of a rope are called strands, and the operation of uniting them with a permanent twist is called laying or closing, the latter term being chiefly appropriated to cables and other very large cordage.

The process of laying or closing large cordage

is thus conducted : the strands of which the rope is composed consist of many yarns, and require a considerable degree of hardening. This cannot be done by a whirl driven by a wheel-band ; it requires the power of a crank turned by the hand. The strands, when properly hardened, become very stiff, and, when bent round the top, are not able to transmit force enough for laying the heavy and unpliant rope which forms beyond it. The elastic twist of the hardened strands must therefore be assisted by an external force. All

this requires a different machinery and a different

process. At the upper end of the walk is there-

fore fixed a tackle-board : this consists of a

strong oaken plank, called a breast-board, having

three or more holes in it and fitted with brass or iron plates. Into these are put iron cranks called

heavers, which have hooks or forelocks, and keys

on the ends of their spindles. They are placed

at such a distance from each other that the work-

men do not interfere while turning them round.

This breast-board is fixed to the top of strong

posts, well secured by struts or braces facing

the lower end of the walk. At the lower end is

another breast-board fixed to the upright post of

a sledge, which may be loaded with stones or

other weights. Similar cranks are placed in the

holes of this breast-board; the whole goes by

the name of the sledge.

The top necessary for closing large cordage is

too heavy to be held in the hand, it therefore has a long staff, which has a truck on the end. This

rests on the ground, but even this is not enough

in laying great cables. The top must be sup-

ported on a carriage, where it must lie very

steady, and it needs attendance, because thp

master workman has sufficient employment in attending to the manner in which the strands close behind the top, and in helping them by various methods. The top is therefore fixed to the carriage by lashing its staff to the two upright posts. A piece of soft rope or strap is attached to the handle of the top by the middle, and its two ends are brought back and wrapped several times tight round the rope in the direction of its twist, and bound down. This greatly assists the laying of the rope by its friction, which both keeps the top from flying too far from the point of union of the strands, and brings the strands more regularly into their places. The first operation is warping the yarns. At each end of the walk are frames called warping frames, which carry a great number of reels, or winches, filled with rope-yarn. The foreman of the walk takes off a yarn end from each, till he has made up the number necessary for his rope or strand, and, bringing the ends together, he passes the whole through an iron ring fixed to the top of a stake driven into the ground, and draws them through ; then a knot is tied on the end of the bundle, and a workman pulls it

through this ring till the intended length is

drawn off the reels. The end is made fast at

the bottom of the walk, or at the sledge, and

the foreman comes back along the skein of yarns,

to see that none are hanging slacker than the

vest. He takes up in his hand such as are slack

and draws them tight, keeping them so till he

ivuches the upper end, where he cuts the yarns

to a length, again adjusts then- tightness, and

joins them all together in a knot, to which he

fixes the hook of a tackle, the other block of

which is fixed to a firm post, called the warping-

post. The skein is well stretched by the tackle,

and then separated into its different strands.

Each of these is knotted apart at both ends.

The knots at their upper ends are made fast to

the hooks of the cranks in the tackle-board, and

those at the lower ends are fastened to the cranks in the sledge. The sledge itself is kept in its

place by a tackle, by which the strands are

again stretched in their places and every thing

adjusted, so that the sledge stands square on the

walk, and then a proper weight is laid on it. The tackle is now cast off, and the cranks are turned

at both ends in the contrary direction to the

twist of the yarns (in some kinds of cordage the cranks are turned the same way with the spinning twist). By this the strands are twisted and hardened up, and as they contract by this operation the sledge is dragged up the walk. When the foreman thinks the strands sufficiently hardened, which he estimates by the motion of the sledge, he orders the heavers at the cranks to stop. The middle strand at the sledge is taken off from the crank ; this crank is taken out, and a stronger one put in its place. The other strands are taken off from their cranks, and all are joined on the hook which is now in the middle hole; the top is then placed between the strands, and, being pressed home to the point of their union, the carriage is placed under it, and it is firmly fixed down ; some weight is taken off the sledge. The heavers now begin to turn at both ends; those at the tackle-board continue to turn as they did before, but the heavers at the sledge turn in the opposite direction to their former motion, so that the cranks at both ends are now turning one way. By the motion of the sledge-crank the top is forced

away from the knot, and the rope begins to close. The heaving at the upper end restores lo the strands the twist which they are constantly losing by the laying of the rope. The workmen judge of this by making a chalk mark on the intermediate points of the strands, where they lie on the stakes which are set up along the walk for their support. If the twist of the strands is diminished by the motion of closing they will lengthen, and the chalk mark will move away from the tackle-board ; but, if the twist increases by turning the cranks at the tackle-board, the strands will shorten and the mark will come nearer to it. As the closing of the rope advances the whole shortens, and the sledge is dragged up the walk. The top moves faster, and at last reaches the upper end of the walk, the rope being now laid.

In the mean time the sledge has moved several fathoms from the place where it was when the laying began. These motions of the sledge and top must be exactly adjusted to each other. The rope must lie of a .certain length, therefore the sledge must stop at a certain place. At that moment the rope should be laid ; that is, the top

should be at the tackle-board. In this consists

the address of the foreman. He has his attention

directed both ways. He looks at the strands,

and, when he sees any hanging slacker between

the stakes than the others, he calls to the heavers at the tackle-board to heave more upon that

strand. He finds it more difficult to regulate the

motion of the top. It requires a considerable

force to keep it in the angle of the strands, and it is always disposed to start forward. To pre-

rent or check this, some straps of soft rope are

brought round the staff of the top, and then

wrapped several times round the rope behind

the top, and kept firmly down by a lanyard or

bandage. This both holds back the top and

greatly assists the laying of the rope, causing the strands to fall into their places, and keep close

to each other, which is sometimes very difficult,

especially in ropes composed of more than three

strands. It will greatly improve the laying the

rope, if the top has a sharp, smooth, tapering

pin of hard wood, pointed at the end, projecting

so far from the middle of its smaller end that it gets in between the strands which are closing.

This supports them, and makes their closing

more gradual and regular. The top, its notches,

the pin, and the warp or strap, which is lapped

round the rope, are all smeared with grease or

soap, to assist the closing. The foreman judges

of the progress of closing chiefly by his acquaint-

ance with the walk, knowing that when the

sledge is a-breast of a certain stake the top should be a-breast of a certain other stake. When he

finds the top too far down the walk he slackens

the motion at the tackle-board, and makes the

men turn briskly at the sledge. By this the top

is forced up the walk, and the laying of the rope accelerates, while the sledge remains in the

same place, because the strands are losing their

twist, and are lengthening, while the closed rope

is shortening. When, on the other hand, he

thinks the top too far advanced, and fears that it will be at the head of the walk before the sledge has got to its proper place, he makes the men

heave briskly on the strands, and the heavers at

the sledge crank work softly. This quickens the

motion of the sledge by shortening the strands ;

and, by thus compensating what has been over-

done, the sledge and top come to their places at

once, and the work appears to answer the inten-

tion. When the top approaches the tackle-board

the heaving at the sledge could not cause the strands immediately behind the top to close well, without having previously produced an extravagant degree of twist in the intermediate rope. The effort of the crank must, therefore, be assisted by men stationed along the rope, each furnished with a tool called a woolder. This is a stout oaken stick, about three feet long, having a strap of soft rope-yarn or cordage, fastened on its middle or end. The strap is wrapped round the laid rope, and the workman works with the stick as a lever, twisting the rope round in the direction of the crank's motion. The woolders should keep their eye on the man at the crank, and make their motion correspond with his. Thus they send forward the twist produced by the crank, without either increasing or diminishing it, in that part of the rope which lies between them and the sledge. Such is the general and essential process of rope making. The fibres of hemp are twisted into yarns, that they vnay make a line of any length, and stick, among each other with a force equal to their own cohesion. The yarns are made into cords

of permanent twist by laying them ; and that we may have a rope of any degree of strength many yarns are united in one strand, for the same reason that many fibres were united in one yarn ; and in the course of this process it is in our power to give the rope a solidity and hardness which make it less penetrable by water, which would rot it in a short while. Some of these purposes are inconsistent with others : and the skill of a rope-maker lies in making the best compensation, so that the rope may, on the whole, be the best in point of strength, pliancy, and duration, that the quantity of hemp in it can produce. The following rule for judging of the weight which a rope will bear is not far from the truth. It supposes them rather too strong ; but it is so easily remembered that it may be of use. Multiply the circumference in inches by itself, and take the fifth part of the product, it will express the tons which the rope will carry. Thus, if the rope ha six inches circumference, six times six is thirty-six, the fifth of which is seven tons and one-fifth. It is usual in coWes,and in other cases, to have recourse to the operation of tarring. This is often done in the state of twine or yarn, as being t he best mode by which the hemp can be uniformly pene-*

trated. The yarn is made to wind off from one reel,, and, having passed through a vessel of liquid hot

tar, is wound on another reel ; the superfluous tar is taken off by passing through a hole surround-

ed with oakum : or it is sometimes- tarred in

skeins, %vhich are drawn by a capstern through a

tar-kettle, and a hole formed by two plates of

metal, held together by a lever, loaded with a

weight. There is this peculiarity to be noticed

— tarred cordage is weaker, when new, than

white, and the difference increases by the keep-

ing. From some very accurate experiments made

more than half a century ago, it was found that,

on newly-made cordage, the white was one-eighth

stronger than that which was tarred ; that, at the expiration of three months, the difference in

favor of the new was almost one-fourth ; and, in

about three years and a half, the difference was

as twenty-nine to eighteen. From these, and

other experiments, it was ascertained, 1. That

white cordage in continual service is one-third

more durable than that which is subjected to the

operation of tarring. 2. That H retains its

strength much longer while kept in tˆe ware-

house. 3. That it resists the ordinary injuries

*of the weather one*fourth longer. It may then be*

asked, Why is tar ever used by the rope-maker ? Because white cordage, when exposed to be alternately very wet and dry, is weaker than that which is tarred, and to this cables and ground-tackle are continually subjected. It has also been pretty well ascertained that cordage which is only superficially tarred is constantly stronger than that which is tarred throughout.

Before we conclude this article we may notice Mr. Chapman's method of making ropes and cordage, for which he obtained, some years since,

his majesty's letters patent. The specifications may be found in the ninth volume of the First Series of the Repertory. It is too long to be admitted in our work ; the following is, however, an outline of the whole : —

Rope-yams are spun either by hand, or by machinery : in the practice of the first method rope-walks are necessary, and the fibres of the hemp are drawn into the yarn of different lengths proportionate in a given degree to their position on the outside or inside of the yarn; accordingly, when this yarn is strained, and its diameter col-

lapses, the inside fibres of hemp bear the greatest •strain, and thus they break progressively from the inside. In the spinning by a mill the fibres are all brought forward in a position parallel to each other, previously to their receiving their twist. They are consequently all of one length ; and, when twisted, the outside fibres are most short-ened by forming the same number of spirals round a greater axis than the interior, and thus they must consequently break the -first, on the same principle that the outside yarns of strands of ropes manufactured in the old method break before the interior yarns ; and consequently with less strain than ropes of the improved principle, where the strands (or immediate component parts of the rope) have been formed in such a manner as that all the yarns shall bear equally at the time of the rope's breaking. Nevertheless yarns spun by a mill have been found stronger than common yarns, on account of the great evenness with which they are spun ; the manual labor in manufacturing is much less than in the common method : but on the other hand there is the expense of machinery, and the greater waste

of hemp in preparing it for being drawn out in the progressive stages of its advance to the spindle.

The method invented by Mr. Chapman differs

from both the preceding, in causing, by an easy

and simple contrivance, the fibres of the hemp to

be laid in the yarn in such a manner as the yarns themselves are laid in the strands of the rope

manufactured on the new principle. The ma-

chinery consists only of a spindle divided into

two parts, the upper containing apparatus to

draw forward the hemp from the spinner with

zwist sufficient to combine the fibres ; which

enables him to employ women, children, and in-

valids, and also to appropriate the rope-ground

solely to the purpose of laying ropes. The re-

maining parts of the invention consist chiefly

in giving from a stationary power internal mo-

tion to a loco-motive machine, viz. to the roper's

sledge, on which the strands and the rope itself

are twisted, by which contrivance they are ena-

bled to apply a water-wheel or steam-engine to

the whole process of making ropes of all kinds

whatevec.

Mr. Hudclart likewise obtained a patent for

an improved method of registering or forming

strands in the machinery for manufacturing of cordage ; which he effects in the following manner : — 1. By keeping the yarns separate from each other, and drawing them from bobbins which revolve to keep up the twist whilst the strand is forming. 2. By passing them through a register, which divides them by circular shells of holes ; the number in each shell being agree-

able to the distance from the centre of the strand, and the angle which the yarns make with a line parallel to it, and which gives them a proper position to enter. 3. A cylindrical tube which compresses the strand, and maintains a cylindrical figure to its surface. 4. A gauge to determine the angle which the yarns in the outside shall make with a line parallel to the centre of the strand when registering ; and, according to the angle made by the yarns in this shell, the length of all the yarns in the strand will be determined. 5. By hardening up the strand, and thereby increasing the angle in the outside shell, which compensates for the stretching of the yarns and the compression of the strand.

ROPE-YARN, among sailors, is the yarn of

any rope untwisted, but commonly made up of

junk : its use is to make sinnet, mats, &c.

ROQ'UELAURE, n. s. Fr. roqueluure. A

cloak for men.

Within the roquelaure's clasp thy bands are pent.

Gay.

RORAAS, an inland town of Norway, in the

bishopric of Drontheim. It stands on a high

mountain the most elevated inhabited situation

in the country. Frost and snow prevail during

almost the whole year. It contains 3000 inhab-

itants, principally occupied in the copper mines

of the neighbourhood. Sixty-seven miles S. S. E.

of Drontheim.

RO'RID, adj. Lat. roridus. Dewy.

A vehicle conveys it through less accessible cavi-

ties into the liver, from thence into the veins and so in a rorid substance through the capillary cavities.

*Browns Vulgar Errours.**

RORIDULA, in botany, a genus of the mo-

nogynia order, and pentandria class of plants :

COR. pentapetalous : CAL. pentaphyllous : CAPS.

bivalved ; the antherae scrotiform at the base.

Species one only, a Cape shrub.

ROSA (Salvator), a celebrated painter, born

in Naples in 1614. He was first instructed by Francis Francazano, a kinsman : but the death of his father reduced him to sell drawings sketched upon paper, one of which falling into the hands of Lanfranc, he took him under his protection, and enabled him to enter the school of Spagnoletto, where he was taught by Daniel Falcone, a distinguished painter of battles at Naples. Salvator had a fertile imagination. He studied nature with attention and judgment; and always represented her to the greatest advantage. He. was equally eminent for painting battles, animals, sea or land storms ; and he executed these different subjects in a Style altogether, unequalled. His pieces are exceedingly scarce and valuable ; one of the finest is that representing Saul and the witch of Endor, which was preserved at Versailles. He died in 1673 ; and, as his paintings are in few hands, he is more generally known by his prints ; of which he etched a great number. They are chiefly historical. He is said to have spent the early part of his life among a troop of banditti ; and that the rocky desolate scenes in which he was accustomed to take refuge furnished him with those romantic ideas in

landscape, in the representation of which he so

greatly excels. His robbers, as his detached

figures are commonly called, are supposed also

to have been taken from the life. He was also

a musician ; as appears from his musical MSS.

purchased at Rome by Dr. Burney.

ROSA, in botany, the rose, a genus of the po-

lygamia order, and icosandria class of plants ;

natural order thirty-fifth, senticosae : CAL. ur-

ceolated, quinquend, corneous, and straightened

at the neck ; petals five. The SEEDS are nume-

rous, hispid, and affixed to the inside of the

calyx. The different kinds of roses are very

numerous ; and botanists find it very difficult to

determine with accuracy which are species and

which are varieties. On this account Linnc,and

some other eminent authors, are inclined to

think that there is only one real species of rose, which is the rosa cauina, or dog-rose of the

hedges, &c., and that all the other sorts are ac-

cidental varieties of it. However, accordins to

the Linnaean arrangement, they stand divided

into fourteen species, each comprehending va-

rieties, which in some sorts are bat few, in others numerous. The supposed

species and their

varieties, according to the arrangement of Gme-

lin, are as follow : —

1. R. alba, the common white rose, grows five

or six feet high, having a green stem and

branches, armed with prickles, hispid peduncull,

oval smooth germina, and large white flowers.

The varieties are, large double white rose, dwarf

single white rose, maiden's-blush white rose, being

large, produced in clusters, and of a white and

blush red color.

2. R. alpma, the alpine inermous rose, grows

five or eight feet high, having smooth or un-

armed reddish branches, pinnated seven-lobed

smooth leaves, somewhat hispid pedunculi, oval

germina, and deep-red single flowers ; appearing

in May. This species, as being free from all

kind of armature common to the other sorts of

roses, is esteemed as a singularity ; and from

this property is often called the virgin or thorn-

less rose.

3. R. canina, the canine rose, wild dog-rose

of the hedges, or hep-tree, grows five or six feet high, having prickly stalks and branches, pin-

nated, five or seven-lobed leaves, with aculeated

foot-stalks, smooth pedunculi, oval smooth germina,.and small single flowers. There are two varieties, red-flowered and white-flowered. They grow wild in hedges abundantly all over the kingdom ; and are sometimes admitted into gardens, to increase the variety of the shrubbery collection.

4. R. Carolinensis, the Carolina and Virginia rose, &c., grows six or eight feet high, or more, having smooth reddish branches, very thinly aculeated ; pinnated seven-lcbed smooth leaves, with prickly foot-stalks; somewhat hispid pedunculi, globose hispid germen, and single red flowers in clusters, appearing mostly in August and September. The varieties are, dwarf Pennsylvanian rose, with single and double red flowers, and American pale-red rose. This species grows naturally in different parts of North America, and often continues in blow from August until October; and the flowers are succeeded by numerous red berry-like heps in autumn, causing a variety all winter.

5. R. centifolia, the hundred-leaved red rose, &c., grows from about three or four to six o

eight feet high, with pinnated three and five-lobed leaves ; and large very double red flowers, having very numerous petals, and of different shades in the varieties. The varieties are, common Dutch hundred-leaved rose, grows three or four feet high, with erect greenish branches, but moderately armed with prickles ; and large remarkably double red flowers, with short regularly arranged petals. Blush hundred-leaved rose, grows like the other, with large very double pale-red flowers. Provence rose grows five or six feet with greenish-brown prickly branches, and very large double globular red flowers, with large petals folding over one another, more or less in the varieties. The varieties are, common red Provence rose, and pale Provence rose ; both of which having larger and somewhat looser petals than the following sort : — cabbage Provence rose; having the petals closely folded over one another like cabbages. Dutch cabbage rose, very large. Childing Provence rose. Great royal rose, grows six or eight feet high, producing remarkably large, somewhat loose, but very elegant flowers. All these are large double

red flowers, somewhat globular at first blowing,

becoming gradually a little spreading at top, and

are very ornamental fragrant roses. Moss Pro-

vence rose, supposed a variety of the common

rose ; grows erectly four or five feet high, having brownish stalks and branches, very closely armed

with short prickles, and double crimson-red

flowers ; having the calyx and upper part of

the peduncle surrounded with a rough mossy-

like substance, effecting a curious singularity.

This is a fine delicate rose, of a high fragrance, which, together with its mossy calyx, renders it

a most beautiful flower.

6. R. cinnamonea, the cinnamon rose, grows

five or six feet high, or more, with purplish

branches thinly aculeated; pinnated five or seven

lobed leaves, having almost inermous petioles,

smooth pedunculi, and smooth globular germina;

with small purplish red cinnamon-scented flowers

early in May. There are varieties with double

flowers.

7. R. eglanteria, the eglantine rose or sweet

briar, grows five or six feet high, having green

branches, armed with strong spines sparsedly ;

pinnated seven-lobed odoriferous leaves, with

acute folioles and rough foot-stalks, smooth pe-

dunculi, globular smooth germina, and small

pale-red flowers. The varieties are, common

single flowered, semi-double flowered, double-

flowered, blush double-flowered, and yellow-

flowered. This species grows naturally in some

parts of England, and in Switzerland. It claims

culture in every garden for the odoriferous pro-

perty of its leaves : and should be planted in the borders, and other compartments contiguous to

walks, or near the habitation, where the plants

will impart their refreshing fragrance very pro-

fusely around ; and the young branches are ex-

cellent for improving the odor of nosegays and

bow-pots.

8. R. gallica, the gallican rose, &c., grows

from about three or four to eight or ten feet

high, in different varieties; with pinnated, three,

five, or seven-lobed leaves, and large red ami

other colored flowers in different sorts. This

species is very extensive in supposed varieties,

bearing the above specific distinction, several of

which have been formerly considered as distinct

species, but are now ranged among the varieties of the Galician rose, consisting of the following noted varieties: common red officinal rose, grows erect, about three or four feet high, having small branches, with but few prickles, and large spreading half-double deep red flowers. Rosa mundi (rose of the world) or striped red rose is a variety of the common red rose, growing but three or four feet high, having large spreading semi-double red flowers, beautifully striped with white and deep red. York and Lancaster variegated rose grows five, six, or eight feet high, or more; bearing variegated red flowers, consisting of a mixture of red and white; also frequently disposed in elegant stripes, sometimes in half of the flower, and sometimes in some of the petals. Monthly rose grows about four or five feet high, with green very prickly shoots; producing middle-fixed, moderately double, delicate flowers, of different colors in the varieties. The varieties are, common red-flowered monthly rose, blush-flowered, white-flowered, and stripe-flowered. All of which blow both early and late, and often produce flowers several months

in the year, as May, June, and July ; and fre-

quently again in August or September, and

sometimes, in fine mild seasons, continue till

November or December : hence the name

monthly rose. Double-virgin rose grows five

or six feet high, having greenish branches with

scarcely any spines ; and with large double pale-

red and very fragrant flowers. Red damask-rose

K'rows eight or ten feet high, having greenish

branches, armed with short aculea ; and mode-

rately double, fine soft red, very fragrant flowers.

White damask-rose grows eight or ten feet high,

with greenish very prickly branches, and whitish-

red flowers, becoming gradually of a whiter color.

Blush Belgic rose grows three or four feet high, or more ; having greenish prickly branches,

five or seven-lobed leaves, and numerous, very

double, blush-red flowers, with short petals,

evenly arranged. Red Belgic rose, having

greenish and red shoots and leaves, and fine

double deep-red flowers. Velvet rose grows

three or four feet high, armed with but few

prickles, producing large velvet-red flowers com-

prising semi-double and double varieties, all very

beautiful roses. Marbled rose grows four or five

feet high, having brownish branches, with but

few prickles ; and large, double, finely-marbled,

red flowers. Red-and-yellow Austrian rose

grows five or six feet high, having slender reddish branches, armed with short brownish aculea;

and with flowers of a reddish copper-color on

one side, the other side yellow. Yellow Austrian

rose grows five or six feet high, having reddish

very prickly shoots, and numerous bright-yellow

flowers. Double yellow rose grows six or seven

fpet high ; with brownish branches, armed with

numerous large and small yellowish prickles;

and large very double yellow flowers. Francfort

rose grows eight or ten feet high, is a vigorous

shooter, with brownish branches thinly armed

with strong prickles, and produces largish double

purplish-red flowers, that blow irregularly, and

have but little fragrance.

9. R. moschata, the musk-rose, supposed to be

a variety only of the ever-green musk-rose, has

weak smooth green stalks and branches, rising

by support from six to eight or ten feet high, or more thinly armed with strong spines, pinnated

seven-lobed smooth leaves, with prickly foot-

stalks, hispid peduncles, oval hispid germen ;

and all the branches terminated by large umbellated clusters of pure-white musk-scented flowers, in August, &c.

10. R. pim pinellifolia, the burnet-leaved rose, grows about a yard high, aculeated sparsedly ; small neatly pinnated seven lobed leaves, having obtuse folioles and rough petioles, smooth peduncles, a globular smooth germen, and small single flowers. There are varieties with red flowers, and with white flowers. They grow wild in England, &c., and are cultivated in shrubberies for variety.

11. R. sempervirens, the ever-green musk rose, has a somewhat trailing stalk and branches, rising by support five or six feet high or more, having a smooth bark armed with prickles ; pinnated five-lobed smooth shining ever-green leaves, with prickly petioles, hispid pedunculi, oval hispid germen ; and all the branches terminated by clusters of pure while-flowers of a musky fragrance ; appearing in the end of July, and in August. The ever-green property of this elegant species renders it a curiosity ; it also makes a fine appearance as a flowering shrub.

There is one variety, the deciduous musk-rose.

This species and variety flower in August, and

are remarkable for producing in numerous clus-

ters, continuing in succession till October or

November.

12. R. spinosissima, the most spinous, dwarf

burnet-leaved rose, commonly called Scotch rose,

grows but two or three feet high, very closely

armed with spines; small neatly pinnated seven-

lobed leaves, with prickly foot-stalks, prickly

pedunculi, oval smooth germen, and numerous

small single flowers, succeeded by round dark-

purple heps. The varieties are common white-

flowered, red-flowered, striped-flowered, and

marble-flowered. They grow naturally in Eng-

land, Scotland, &c. The first variety rises nearly

a yard high, the others about one or two feet, all of which are single-flowered ; but the flowers,

being numerous all over the branches, make a

pretty appearance in the collection.

13. R. villosa, the villose apple-bearing rose,

grows six or eight feet high, having strong erect

brownish-smooth branches, aculeated sparsedly

pinnated seven-lobed villose or hairy leaves

downy underneath, with prickly foot-stalks,

hispid peduncles, a globular prickly germen;

and large single red flowers, succeeded by large

round prickly heps, as big as little apples. This species merits admittance into every collection

as a curiosity for the singularity of its fruit,

both for variety and use ; for it, having a thick

pulp of an agreeable acid relish, is often made

into a tolerably good sweetmeat. The above

thirteen species of rosa, and their respective va-

rieties, are of the shrub kind ; all deciduous ex-

cept R. sempervirens, and of hardy growth, sue-

ceeding in any common soil and situation, and

flowering annually in great abundance from May

till October, in different sorts, though the general flowering season for the principal part of them

is June and July ; but in a full collection of the different species the blow is continued in con-

stant succession several months, even sometimes

from May till nearly Christmas ; producing their

flowers universally on the same year's shoots,

rising from those the year before, generally on

long pedunculi, each terminated by one or more

roses, which in their characteristic state consist

each of five large petals and many stamina ; but in the doubles the petals are very numerous; and in some sorts the flowers are succeeded by fruit ripening to a red color in autumn and winter, from the seed of which the plants may be raised : but the most certain and eligible mode of propagating most of the sorts is by suckers and layers ; and by which methods they may be increased very expeditiously. The white and red roses are used in medicine. The former distilled with water yields a small portion of a Lutyraceous oil, whose flavor exactly resembles that of the roses themselves. This oil and the distilled water are very useful and agreeable cordials. These roses also, besides the cordial and aromatic virtues which reside in the volatile parts, have a mild purgative one, which remains entire in the decoction left after distillation. The red rose, on the contrary, has an astringent and corroborating virtue.

ROSA, MOUNT, one of the Alpine heights, and next to Mont Blanc, the highest mountain in Europe. It stands between the canton of the Valais and Piedmont, to the east of Mont Cervin, Switzerland. Saussure calculated it to be 15,600

feet above the sea, or only seventy feet lower than Mont Blanc ; Sir George Shuckburgh calls it 15,240 feet above the Mediterranean. It consists of a number of lofty peaks, all rising from a centre somewhat like the leaves of a rose.

11OSALBA (Cariera), a Venetian lady, born in 1675, who became an eminent paintress. She painted portaits in crayons and miniatures, and was greatly employed by the English nobility. She died in 1755, aged eighty.

ROSAMOND, the daughter of Walter lord Clifford, and concubine of Henry II., was a lady of exquisite beauty, educated in the nunnery of Godstow. The popular story of her is as follows : — Henry II. loved her, and triumphed over her honor. To avoid the jealousy of his queen Eleanor he kept her in a labyrinth at Woodstock, and by his connexion with her had William Longsword earl of Salisbury, and Geoffrey bishop of Lincoln. On Henry's absence in France, however, tke queen discovered and poisoned her. The queen, it is said, discovered her apartment by a thread of silk. Some assert that she died a natural death ; and the story of her being poi-

soned is by them said to have arisen from the figure of a cup on her tomb. She was buried in the church of Godstow, opposite to the high altar, where her body remained till it was ordered to be removed with every mark of indignity by Hugh bishop of Lincoln in 1191. She was, however, by many considered as a saint after her death, and fabuloyus legends were invented about her.

RO'SARY, n. s. Lat. rosarium. A bunch of beads, on which the Romanists number their prayers.

No rosary this votress needs,
Her very syllables are beads. Cleave land,
Every day propound to yourself a rotary or a chaplet of good works, to present to God at night.
Taylor.

ROS'CID, adj. Lat. roscidus. Dewy; abounding with dew ; consisting of dew.

\V ine is to be forborn in consumptions, for the spirits of wine prey upon the roscid juice of the body.
Bacon.

The ends of rainbows fall more upon one kind of earth than upon another; for that earth is most

roscid. Jdt

ROSCIUS (Quintus), an eminent Roman actor, so highly celebrated in comedy that his name is applied as the best encomium to all modern comedians of great merit. He was intimate with Cicero and ./Esop the comedian ; and was so much admired by the Romans that they gave him a pension for life. His eyes being distorted he wore a mask at first on the stage ; but the Romans caused him to lay it aside, that they might enjoy his oratory more fully. Being calumniated by his enemies, Cicero, who had been his pupil, defended him in an elegant oration, which is still extant. Roscius wrote a treatise, in which he compared, with great talent, the profession of the orator with that of the comedian ; of both which he was a competent judge. He died about A. A. C. 60.

ROSCOMMON (Wentworth Dillon), earl of, a celebrated poet of the seventeenth century, born in Ireland, under the administration of the first earl of Strafford, who was his uncle, and from whom he received the name of Wentworth at his baptism. He passed his infancy in Ire-

land ; after which the earl of Strafford sent for him into England, and placed him at his own seat in Yorkshire, under the tuition of Dr. Hall, afterwards bishop of Norwich, who instructed him in Latin. On the earl of Stafford's impeachment he went to complete his education at Caen in Normandy ; and after some years travelled to Rome. He returned to England soon after the Restoration, and was made captain of the band of pensioners ; but a dispute with the lord privy-seal obliged him to resign his post, and revisit Ireland, where the duke of Ormond appointed him captain of the guards. Being attacked one night when coming out of a gaming house by three ruffians, he had despatched one of them, when a disbanded officer coming past generously took his part and disarmed the other, on which the third fled. The earl next day rewarded his brave assistant by resigning to him his post of captain of the guards. He returned to London, was made master of the horse to the dutchess of York, and married the lady Frances, eldest daughter of Richard earl of Burlington. He here distinguished himself by his writings.

In 1683 he was seized with the gout; and, being too impatient of pain, he permitted a French empiric to apply a repelling medicine to give him relief; which drove the distemper into his bowels, and put. a period to his life in January 1684. He was buried with great pomp in West-

minster-abbey. His poems, which are not nume--ous, are in the body of English poetry collected

by Dr. Johnson. His Essay on Translated Verse, and his translation of Horace's Art of Poetry, have great merit.

ROSCOMMOS, a county of Ireland, in the province of Connaught, hounded on the east by the counties of Leitrim, Longford, and Meath ; on the north by Sligo and Leitrim ; on the south by Galway ; and on the west by part of Galway and Mayo, being about forty-seven miles in length, and nine to twenty-nine in breadth. It is very fruitful, and in general level, having but few hills. It yields excellent corn, as well as pasturage ; but there are some extensive bogs. The chief town is Athlone, but the assizes are held at Roscommon, the shire town, situated sixty-nine miles W. N. W. of Dublin.

ROSCOE, William, was born in 1752. His parents were in an humble sphere of life, and could only afford him a common school education ; and even this was interrupted. At an early age, he was articled to an attorney in Liverpool ; and this obliged him to study the Latin language ; but he did not confine himself to what was necessary to his profession, and by dint of

hard study, he read and made himself master of the most distinguished Latin classics. In this he was assisted by a friend. He next studied the Italian and French languages, and in the former he became uncommonly proficient. He still found time to attend to his business, and to peruse the English poets. At the age of sixteen, he commenced poet, and composed Mount Pleasant, a descriptive poem. H iving finished his clerkship, he was taken into partnership, by Mr. Aspinall, an attorney of considerable practice ; and he carried on the whole of the business, to which he paid a strict attention. During this period he contracted a friendship with doctor Enfield and doctor Aikin. Painting and statuary were also objects of his attention, and, in 1773, he read, at the society in Liverpool, an ode on those subjects, and also sometimes read lectures there. When the question of the slave-trade was brought before the public, Mr. Roscoe took a warm part in favor of the abolition, and most cordially joined Mr. Clarkson in his endeavors. He wrote a reply to a Spanish Jesuit on that subject. His Scriptural Refutation of a Pam-

phlet on the Licitness of the Slave-Trade, and his Wrongs of Africa, appeared in 1788 ; and, in 1795, he brought out the work which has gained him so much celebrity — the Life of Lorenzo de Medici. About the year 1797, Mr. Roscoe retired from the practice of an attorney, and entered himself as a student of Gray's Inn, with a view to the bar. During this period, he had leisure for other studies, and published the Nurse, a poem, from the Italian, and wrote the Life and Pontificate of Leo X. Though the Life of Leo is not equal to his Lorenzo, it is a composition which displays talent and extensive research. Mr. Roscoe oeipg attached to the whig party, they supported him as a candidate to represent Liverpool, and he was successful, but at the next election was thrown out. lie had. some time before, entered into business at Liverpool as a banker, but in this was vmfor-*

tunate. He died in June, 1831. Mr. Roscoe was the author of several political pamphlets, and the great mover and supporter of several public works in Liverpool. To the botanic garden and to the Atheneum he lent much effective

assistance. His Life and Correspondence has

been published by his son.

ROSE, n. s. ~\ Fr. Dan. Swed. and

RO'SEATE, adj. ITeut. rose ; Lat. Ital. and

ROSED', fSpan.rosa. A flower. For

ROSE'MA RY, n. s. I the phrase 'to speak under

ROSENO'BLE, \>the rose,' see the extract

ROSE' WATER, / from Browne : roseate and

RO'SET, I rosed mean rosy ; red ;

RO'SIER, I blooming: rosemary (Lat.

RO'SY, adj. j ros marina], a weed ; a

herb : rosenoble, an ancient English gold coin

stamped with a rose : rose-water, water distilled

from the rose : roset, a red color : rosier (Fr.

rosier), a rose-bush: rosy, resembling the bloom,

color, or fragrance of the rose.

By desiring a secrecy to words spoke under the rote, we mean, in society and compotation,>from the an-

cient custom in symposiack meetings, to wear chaplets of rotes about their heads. Browne.

Attend him with a silver basin

Full of.rosewater. Shakipeare

Around their cell

Set rows of roi&nary with flowering stem. Dryden.

While blooming youth and gay delight

Sit on thy rety cheeks confest,

Thou hast, my dear, undoubted right

To triumph o'er this destined breast. Prior.

ROSE, in botany. See ROSA.

ROSE, CHINA. See HIBISCUS.

ROSE, DOG. See ROSA.

ROSE, GUELDER. See VIBURNUM.

ROSE, ROCK. See SISTUS.

ROSE ROOT. See RHODIOLA.

ROSEMARY. See ROSMARINI:S.

ROSEMARY, WILD. See LEDUM.

ROSES, CONSERVE OF. See PHARMACY.

ROSES, ESSESTIAL OIL OF, or OTTO OF ROSES,

an essential oil obtained from roses. It may be

made in the following manner: — A quantity of

fresh roses, for example forty pound., are put in*

*a still with sixty pounds of water, the roses being left as they are with their calyxes, but with th**

stems cut close. The mass is then well mixed

together with the hands, and a gentle fire is made under the still ; when the water begins to grow

hot, and fumes to rise, the cap of the still is put on, and the pipe fixed ; the chinks are then well

luted with paste, and cold water put on the re-

frigeratory at top : the receiver is also adapted at the end of the pipe ; and the fire is continued

under the still, neither too violent nor too weak.

When the impregnated water begins to come

over, and the still is very hot, the fire is lessened by gentle degrees, and the distillation continued

till thirty pounds of water are come over, which

is generally done in about four or five hours ;

this rose-water is to be poured again on a fresh

quantity (forty pounds) of roses, and from fifteen

to twenty pounds of water are to be drawn by

distillation, following the same process as before.

The rose-water thus made and cohobated will be

found, if the roses were fresh and good, and the

distillation carefully performed highly scented

with the ro>os. It is then poured into pans

either of earthenware or of tinned metal, and left

exposed to the fresh air for the night. The otto

or essence will be found in the morning con-

sealed, and swimming on the top of the water;

this is to be carefully separated and collected

either with a thin shell or a skimmer, and poured

into a vial. When a certain quantity has thus

been obtained the water and faeces must be

separated from the clear essence, which, with

respect to the first, will not be difficult to do, as the essence congeals with a slight cold, and the

water may then be made to run off. If, after

that, the essence is kept fluid by heat, the fceces will subside, and may be separated; but if the

operation has been neatly performed these will

be few. The remaining water should be used

for fresh distillations instead of common water,

at least as far as it will go.

The following is the method commonly pur-

sued in India, whence great quantities have been

exported : — ‘ Take a very large glazed earthen

or stone jar, or a large clean wooden cask ; fill it with the leaves of the flowers of roses, very well picked, and freed from all seeds and stalks ;

pour on them as much pure spring water as will

cover them, and set the vessel in the sun in the

morning at sun-rise, and let it stand till the

evening ; then take it into the house for the night; expose it, in this manner, for six or seven suc-

cessive days, and at the end of the third or

fourth day a number of particles, of a fine yellow oily matter, will float on the surface, which, in

two or three days more, will gather into a scum,

which is the otto of roses. This is taken up by

some cotton, tied to the end of a piece of stick, and squeezed with the finger and thumb into a

small phial, which is immediately well stopped ;

and this is repeated for some successive evenings,

or while any of this fine essential oil rises to the surface of the water.' Dr. Donald Monro, who

communicated this receipt to the Royal Society

of Edinburgh, says, that he has been informed,

that some few drops of this essential oil have

more than once been collected by distillation in

London, in the same manner as the essential oils

of other plants.

The ROSE-NOBLE was first struck in the reign

of Edward III. It was formerly current at 6s. 8J., and so called because stamped with a rose. See

COINS.

ROSEAU, or Charlotte Town, the capital of

Dominica, in the West Indies, about seven

leagues from Prince Rupert's Bay. It stands on

a point of land on the south-west side of the

island, which here forms Woodbridge's Bay on

the north, and Charlotteville Bay to the south.

Roseau contains more than 500 houses, besides

negro cottages. It was once a much larger place.

Long. 61° 27′ W., lat. 15° 25′ N.

ROS ETTA, a town of Egypt, on that branch

of the Nile called by the ancients the Bolbitine,

and which forms now one of the two great chan-

nels by which it enters the sea. It is called the

canal of Rosetta. This city appears to have

been built by one of the caliphs. In the thirteenth century it was an inconsiderable place ; but, as

the canal of Alexandria became impassable,

Rosetta rose into importance as a depot, and now

forms the medium point of communication be

tween that city and Cairo. The streets are nar-

row ; and each story projects over that beneath

till at the top the opposite houses nearly meet ;

but the houses are not, as in most other parts of Egypt, composed of mud, but of a dingy red

brick, often plastered over and while-washed.

Upon the whole, however, Rosetta has a neat

compact appearance for an eastern town, and its

environs are delightful, being completely embo-

somed in a grove of date, banana, and sycamore

trees. The orange, pomegranate, and henne, here

also blend their perfumes ; and the palm towers

over all, adding magnificence to luxuriance. The

intervals are filled with esculent plants. Nume-

rous birds inhabit these groves, particularly the

turtle-dove, which is held sacred, aud approaches

the habitations of mankind without dread. The

opposite side of the Nile exhibits the richest part of the Delta. The inhabitants of Rosetta and

the neighbourhood are milder and more civilised

than those of other parts of Egypt : they are chiefly employed in agriculture, and contain a smaller

proportion of the Bedouin tribes. Though less

turbulent, however, than the inhabitants of Alex-

andria or Cairo, yet, being less accustomed to

Christians, they view them with more hatred. Ro-

setta manufactures red cotton yarn, flax, linen,

and silk dyes, for the oriental dresses : and here is an extensive exportation of rice. The quay

is large and well built; the merchants being

chiefly Turks, and natives of Syria. Copts form

a considerable proportion of the population.

Long. 30° 2ff 35 E., lat. 31° 24′ 31′ N

ROSICRUCIANS, a name assumed by a

sect of hermetical philosophers, who arose in

Germany in the beginning of the fourteenth

century. They bound themselves together by

some solemn secret, which they all swore in-

violably to preserve; and obliged themselves, at

their admission intp the order, to a strict observ

ance of certain established rules. They pre

tended to a superior acquaintance with alt

sciences, and chiefly medicine. They pretended

to be masters of many important secrets ; and,

among others, of the philosopher's stone ; al)

*which they affirmed to have received by trad**

tion from the ancient Egyptians, Chaldeans, the

Magi, and GymnosophisU. The denomination

appears to be derived from chemistry. It is not

compounded, says Mosheim, as many imagine,

of the words rosa and crux, rose and cross, but

of ros, dew, and crux. Of all natural bodies

dew was deemed the most powerful solvent of

gold ; and the cross, in the chemical language, is equivalent to light, because the figure of a cross

+ exhibits at the fame time three letters, of

which the word LVX, or light, is compounded.

Hence a rosicrucian philosopher is x:e who, by

the assistance of the dew, seeks for light, or the philosopher's stone. See Gassend's Examen

1'hilosophiae Fluddanae, sect. 15, torn. iii. p. 261 ; and Renaudot's Conferences 1'ubliques, torn. iv.

87. At the head of these fanatics were

Robert Fludd, an English physician, Jacob

Behmen, a mystic writer, and , Michael Mayer.

The principles which serve as a kind of centre

of union to the rosicrucian society are the fol

lowing:— Thev all maintained that the

ROS

tion of bodies by fire is the only way by which

men arrive at the first principles of things.

They alt acknowledged a certain analogy and

harmony between the powers of nature and the

doctrines of religion, and believed that the

deity governed the kingdom of grace by the

same laws with which he ruled the kingdom of

nature ; and hence they used chemical denomi-

nations to express the truths of religion. They

all held that there is a sort of divine energy or soul, diffused through the frame of the universe,

which some-call the archeus, others the universal

spirit, &c. They all speak in the most super-

stitious manner of what they call the signatures

of things, of the power of the stars over all

corporeal beings, and their particular influence

upon the human race, of the efficacy of magic,

and the various ranks and orders of demons.

These demons they divided into two orders,

sylphs and gnomes ; from which system Pope

borrowed his beautiful machinery of the Rape

of the Lock. In fine, the rosicrucians and all

their fanatical followers agreed in throwing out

the most crude incomprehensible notions and

ideas, in the most obscure, quaint, and unusual

expressions. — Mosh. Eccl. Hist.

ROS'IN, n. s. & v. a. » Properly resin. Fr.

ROS'INY, adj. S resine ; Lat. resina.

Inspissated turpentine ; a juice of the pine : the

adjective corresponding.

The best soil is that upon a sandy gravel or rosiny sand. Temple.

The billows from the kindling prow retire,

Pitch, rosin, searwood on red wings aspire. Garth.

Bouzebeus who could sweetly sing,

Or with the rosined bow torment the string. Gay.

Tea contains little of a volatile spirit ; its rosin or fixed oil, which is bitter and astringent, cannot be extracted but by rectified spirits. Arbuthnot.

ROSINUS (John), a learned German anti-

quary, born at Eisenach, in Thuringia, about

1550. He was educated at the university of

Jena ; became rector of a school at Ratisbon, in

1579; and afterwards minister of a Lutheran

church at Wickerstadt, in Weimar. In 1592

he was called to Naumburgh cathedral, in Sax-

ony, and died there of the plague in 1626. He

published several works, the chief of which is

his Antiquitatum Romanarum, libri x. ; Basil,

1583; folio.

ROSMARINUS, rosemary, in botany, a genus of the monogynia order, and diandria class of plants ; natural order forty-second, verticillatae : COR. unequal, with its upper lip bipartite ; the filaments are long, curved, and simple, each having a small dent. There are two species, viz. : —

1. R. angustifolia, the narrow-leaved rosemary ; and,

2. R. latifolia, the broad-leaved rosemary.

This last has larger flowers and a stronger scent than the other. There are two varieties ; one of the first sort with striped leaves, called the silver rosemary ; and the other with yellow, called the gold-striped rosemary. These plants grow naturally in the south of France, Spain, and Italy ; where, upon dry rocky soils near the sea, they thrive prodigiously, and perfume the air in such a manner as to be smelt at a great distance from the land. However, they are hardy enough to bear the cold of our ordinary winters, provided they be planted upon a poor, dry, gravelly soil, on which they will endure the cold much bettc; than in a richer ground, where, growing more vigorously in summer, they are more apt to be injured by frost in winter ; nor will they have

such a strong aromatic scent on a dry and barren soil. They are propagated either by slips or cuttings. Rosemary has a fragrant smell, and a warm pungent bitterish taste, approaching to that of lavender ; the leaves and tender tops are strongest ; next to these the cup of the flower; the flowers themselves are considerably the weakest, but most pleasant. Aqueous liquors extract a great share of the virtues of rosemary leaves by infusion, and elevate them in distillation; along with the water arises a considerable quantity of essential oil, of an agreeable penetrating smell. Pure spirit extracts in great perfection the whole aromatic flayor of the rosemary, and elevates very little of it in distillation; hence the resinous mass left upon extracting the spirit proves an elegant aromatic, very rich in the peculiar qualities of the plant. The flowers of rosemary give over great part of their flavor in distillation with pure spirit ; by watery liquors their fragrance is much injured ; by beating destroyed.

ROSS, or ROSS-SHIRE, a county of Scotland, including Tayne and Cromarty, stretching eighty miles in length, and seventy-eight in breadth,

bounded on the north and north-east by Strath-

naver and Sutherland ; on the east by Cromarty

and the Murray Frith ; on the south by Inverness ; and on the west by the Atlantic Ocean. The

county of Ross takes up the whole breadth of

the island ; and, being much indented with bays

and inlets from both seas, appears of a very ir-

regular form. These bays afford safe harbouis

for shipping, especially that of Cromarty. The

valleys are fertilised by several rivers, among

which are the Beauly, the Conon, the Ockel,

the Charron, and the Braan; besides a number

of fresh water lakes, which abound in this

county. The valleys are generally covered with

wood ; and near Alfrag there are forests of fir,

well stocked with game. Great numbers of

black cattle, horses, sheep, and goats, are fed

upon the mountains ; and the sea, rivers, and

lakes, abound with fish and fowl. The lakes on

the west coast abound with herrings, particularly

Loch £u, about' nine miles long and three

broad; one part of this is formed by a bay or

inlet of the sea ; and the other is a lake of fresh water. Though the middle part of Ross, called

Ardross, is mountainous and barren, the north-

east part on the river Charron, and Frith of Tayne, are fruitful and abound with villages. Ardmeanach, part of the peninsula, betwixt the bays of Cromarty and Murray, is a barony, which of old bestowed a title on the king of Scotland's second son. The district of Glen-elchaig, on the south-west, belonged to the earl of Seaforth, chief of the Mackenzies ; but the last earl, having joined in the rebellion, was in 1719 defeated at Glenshiel in this quarter, with a small body of Spaniarde. His auxiliaries were taken ; he escaped to the continent ; but his

estate and honors were forfeited. The king's troop dismantled the castle of Yion-donnen, situated on an island in a bay that fronts the Isle of Sky, where he had erected his magazine. Uoss was chiefly peopled by the Mackenzies and Frasers, two warlike Highland clans. There are fisheries carried on along the coast ; but their chief traffic is in sheep and black cattle. The county sends a member to the imperial parliament ; and Tayne and Dingwall join with*

Dornock, Wick, and Kirkwall, in electing a representative for these boroughs.

Ross, an ancient and populous town of Herefordshire, 115 miles from London, with a good trade, on the river Wye. It was made a free borough by Henry III. It is famous for cyder. Its market and fairs are well stored with cattle and other provisions. At the west end of it there is a fine broad causeway, constructed by Mr. John Kyrle, the celebrated Man of Ross, who also raised the spire 100 feet, and enclosed a piece of ground with a stone wall, and sunk a reservoir in its centre, for the use of the inhabitants of the town. He died in 1714, aged ninety, with the blessing of all who knew him, both rich and poor.

Ross, NEW, a borough town of Ireland, in the county of Wexford, and province of Leinster, on the side of a hill sixty-seven miles from Dublin. It was formerly walled, and some of the gates still remain. It lies on the Barrow, which is here ‘ very deep, and ships of burden can come up to the quay. The church is large, but the custom-house and quay are both small. It is one of the staple ports for exporting wool ; beef and butter are the

principal articles export-

ed. It has a barrack for a troop of horse, and a

ferry into the county of Kilkenny. Near this

town is a charter-school. It was formerly forti-

fied, and adorned with many religious nouses,

among which was a crowded friary, built on the

summit of a hill in the town ; but, one of the

friars having killed a principal inhabitant, the

people rose, put the friars to death and destroy-

ed the friary ; on the site of which the monas-

tery of St. Saviour, for conventual Franciscans,

was afterwards erected by Sir John Devereux ;

and the east end of this last building is now the parish church. A friary for Eremites, following

the rule of St. Augustine, was also founded here

in the reign of Edward III. This town was the

scene of a very bloody battle, between the Irish

rebels and the king's troops, on the 5th of June,

1798. Each party was- alternately in possession

of the town, and the greater part of it was

burnt down during the contest. About 3000 of

the rebels were killed, but each party boasted of

victory. New Ross lies eleven miles north by

east of Waterford, and nineteen south of Wex-

ford.

Ross (Alexander), a very voluminous writer, who has been often confounded with the bishop of Edinburgh. His best work is his Uavatfitia, or, A View of all Religions. Butler, in his Hudibras, refers to the number and extent of his writings,

1 here was an ancient sage philosopher,
'fho had read Alexander Ross over.

! ROS

Uo>s (David), a celebrated English actor, Iwrn in 1728, he was disinherited by his father for going upon the stage. He had been%ducuU'il at Westminster school ; and made his first ap • pearance upon Covent Garden Theatre in 1753, where he continued till 1778, when he was left out of the engagement by the managers, and reduced to great distress; though he still had a small annuity from a mortgage on the Edinburgh Theatre, of which he was previously patentee. But one day he was agreeably surprised by receiving a bank note for £60, with an anony-mous line, mentioning that it came from an old school-fellow, and directing him to a banker from whom he would receive the same sum annually.

This was continued for life, but the generous

donor was still unknown, till the banker's clerk

inadvertently blundered out the name of admi-

ral Barrington. In 1788 he was laid aside from

the stage by breaking his leg. He liad married

the celebrated Fanny Murray. He died at

London, September 14th, 1790.

ROSSO, or MAIKE Rofx, an eminent Italian

painter, born at Florence in 1496. He was

entirely self taught, and acquired great skill,

both in history and portrait painting. In the

church of St. Salvator, at Rome, is a fine picture by him of the beheading of John the Baptist.

He died in 1541, aged forty-five.

ROSSANO, a town of Naples, in Calabria

Citra, situated on a rocky eminence. It is the

see of an archbishop, and the environs are fertile

in olives, capers, and saffron. It is said that, so lately as the sixteenth century, the inhabitants of

this town (about 70,000) spoke the Greek lan-

guage, and followed the rites of the Greek church,

i hirty miles north-east of Cosenza, and 110

N.N. E. of Regio.

ROS SOLIS, a spirituous liquor, composed of

burnt brandy, sugar, cinnamon, and milk ; and

sometimes perfumed with a little musk. It had its name from being at first prepared from the juice of the plant ros solis, or drosera.

ROSTOV, a town of European Russia, in the government of Jaroslav, on the lake Nero. It is divided into the town and suburb, and is above five miles in circumference. It contains an ancient cathedral, an archieptscopal palace, a seminary, and five churches ; and carries on a'i intercourse with Astracan, Moscow, and St. Petersburg. Of the lower classes a number are gardeners, and some of them go to Poland for employment. Inhabitants 5000. Forty miles S. S. W. of Jaroslav.

ROSTOV, a fortified town of the south-east of European Russia, on the Don, between Azov and Tscherkask.

ROSTRATED, adj. Lat. rottralta. Adorned with beaks of ships.

He brought to Italy an hundred and ten rostrated galleys of the fleet of Mithridates. Arbuthiwt.

ROSTRUM, TJ.J. Lat. rostrum. The scaffold whence orators anciently harangued.

Vespasian erected a column in Rome, upon whose

top was the prow of a ship, in Latin rostrum, which gave name to the common pleading place in Rome,

where orations were made, being built of the prows

of those ships of Antium which the Romans over-

threw. Peacham on Driiiring.

ROT

53

ROT

Myself shall mount the rostrum in his favour,

And strive to gain his pardon from the people.

Addison.

ROSTRUM, the beak, an important part of

the ancient ships of war, called by the Greeks

«/i/3o\ov, made of wood, fortified with brass, and

fastened to the prow so as to strike the enemy's

vessels and sink them. The first rostra were

long and high, but afterwards they were made

short and strong by the contrivance of Aristo, a

Corinthian : and placed so low that they could

pierce the enemy s ships under water. Also a

part of the Roman forum, wherein orations,

pleadings, funeral harangues, &c., were delivered.

The rostrum was a kind of chapel, furnished

with a suggestum, or eminence, where the orator

stood to speak. It was so called because at first

adorned with the rostra or beaks of the ships

taken from the Antialae in the first naval victory

obtained by the Romans.

ROT, v. 7i., v. a., & n. s. ˆ Saxon, noran ; ROT'TEN, adj. > Belg. and Swed.

ROT'TENNESS, n. x. j rotten. To putrefy ;

lose the cohesion of parts : make putrid : putri-

dity ; a disease among sheep : rotten and rotten-

ness corresponding in sense.

Who brass as rotten wood ; and steel no more

Regards than weeds. Sandi/s's Paraphrase.

They were left moiled with dirt and mire, by rea-

son of the deepness of the rotten way.

Knolles's History of the Turks.

A man may rot even here. Shahspeare.

From hour to hour we ripe and ripe,

And then from hour to hour we rot and rot. Id.

Trust not to ratten planks. Id.

O blus-breeding sun, drawn from the earth

Rotten humidity ; below thy sister's orb

Infect the air. Id. Timon.

Diseased ventures,

That play with all infirmities for gold,

VVhich rottenness lends nature ! Shakspeare.

No wood shone that was cut down alive, but such

as was rotted in stock and root while it grew.

Bacon .

There is by invitation or excitation ; as when a

-otten apple lieth close to another apple that is

sound ; or when dung, which is already putrefied, is added to other bodies. Id.

In an unlucky grange, the sheep died of the rot,

the swine of the mange, and not a goose or duckling throve. Ben Jonson.

They overwhelm their panch daily with a kind of

flat rotgut, we with a bitter dreggish small liquor.

Harvey.

The cattle must of rot and murrain die. Milton.

The wool of Ireland suffers under no defect, the

country being generally full-stocked with sheep, and

the soil little subject to other rot than of hunger.*

Temple.

Frowning Auster seeks the southern sphere,

And rot, with endless rain, the' unwholesome year.*

Dryden.

They serewood from the rotten hedges took,

And seeds of latent fire from flints provoke. Id.

Brandy scarce prevents the sudden rot

Of freezing nose and quick decaying feet. Philips.

Being more nearly exposed to the air and weather,

the bodies of the animals would suddenly corrupt and rot ; the bones would

likewise all rot in time, except those which were secured by the extraordinary

strength of their parts. Woodward.

*If the matter stiik and be oily, it is a certain sign of rottenness. tl'i*rmaii'i, Surgery.*

Ror, a well known disease in the liver of sheep,

and other domestic animals, producing general

marasmus, and generally evinced by the existence

of large quantities of the liver fluke, or fasciola hepatica, in this organ. It has been ascribed tc

a variety of causes : yet the real cause is still

doubtful. See SHEEP.

ROTA, a town in Andalusia, Spain, situated

on the north side of Cadiz Bay. It has a

castle and monastery, but is most remarkable for

the wine which is produced on the hills around.

It is called in England tent, and is considered

one of the best kinds produced in the peninsula.

Inhabitants 6000. Seven miles N. N. W. of

Cadiz.

ROTA ARISTOTEUCA, or Aristotle's Wheel,

a name given to a celebrated problem in me-

chanics concerning the motion or rotation of a

wheel about its axis ; so called because first

noticed by Aristotle. The difficulty is this :

while a circle makes a revolution on its centre,

advancing at the same time in a right line along

a plane, it describes, on that plane, a right line which is equal to its circumference. Now, if

this circle, which may be called the deferent,

carry with it another smaller circle, concentric

with it, like the nave of a coach wheel ; then thi>

little circle, or nave, will describe a line in the time of the revolution which shall be equal to

that of the large wheel or circumference itself;

because its centre advances in a right line as fast as that of the wheel does, being in reality the

same with it. The solution given by Aristotle

is no more than a good explication of the diffi-

culty. The great Galileo next attempted it, but

failed, as did also Tacquet, with no better suc-

cess. After the fruitless attempts of so many

great men, M. Dortous de Meyran, a French

gentleman, sent a solution to the Academy of

Sciences ; which being examined by Messrs de

Louville and Soulmon appointed for that pur-

pose, they made their report that it was satisfac-

tory. The solution, is to this effect : the wheel of a coach is only acted on, or drawn in a right line; its rotation or circular motion arises purely

from the resistance of the ground upon which it

is applied. Now this resistance is equal to the

force which draws the wheel in the right line,

inasmuch as it defeats that direction ; of conse-

quence the causes of the two motions, the one

right and the other circular, are equal. And

hence the wheel describes a right line on the

ground equal to its circumference. As for the

nave of the wheel, the case is otherwise. It is drawn in a right line by the same force as the

wheel ; but it only turns round because the

wheel does so, and can only turn in the same

time with it. Hence it follows, that its circular velocity is less than that of the wheel, in the

ratio of the two circumferences ; and, therefore,

its circular motion is less than the rectilinear one.

Since then it necessarily describes a right line

eq.ual to that of the wheel, it can only do it partly by sliding, and partly by revolving, the sliding

part being more or less as the nave itself is

smaller or larger.

ROTA LA, in botany; a genus of the mono-

gynia order and triandria class of plants : TAI

tridentate: COR. none: CAPS, trilocular and poly

spermous. Species one only ; an annual of the

East Indies.

ROTARI (Peter), an eminent Italian painter

of history and portraits, born at Verona about

1727. In 1756 he went to Petersburg, where he

painted the empress Catharine II. and others of

the imperial family.

ROTARY, adj. } Lat. rota. Whirling as

ROTA'TION, n. s. > a wheel : the act or state

ROTA'TOR. J of whirling : that which

gives a circular motion.

Of this kind is some disposition of bodies to rota-

tion from east to west ; as the main float and re-

float of the sea, by consent of the universe as part of the diurnal motion. Bacon.

By a kind of circulation or rotation, arts have their successive invention, perfection, and traduction from

one people to another. Hale.

The axle-trees of chariots take fire by the rapid ro-

tation of the wheels. Newton'i Optics.

This articulation is strengthened by strong mus-

cles ; on the inside by the triceps and the four little rotators. Wiseman.

In fond rotation spread the spotted wing,

And shiver every feather with desire. Thomson.

ROTATION is a term which expresses the mo-

tion of the different parts of a solid body round

an axis, and distinct from the progressive motion

which it may have in its revolution round a distant point. The earth has a rotation round its axis, which produces the vicissitudes of day and night; while its revolution round the sun, combined with the obliquity of the equator, produces the varieties of summer and winter. The mechanism of this kind of motion, or the relation which subsists between the intensity of the moving forces, modified as it may be by the manner of application and the velocity of rotation, is highly interesting, both to the speculative philosopher and to the practical engineer. The precession of the equinoxes, and many other astronomical problems of great importance and difficulty, receive their solutions from this quarter: and the actual performance of our most valuable machines cannot be ascertained by the mere principles of equilibrium, but require a previous acquaintance with certain general propositions of rotatory motion. When a solid body turns round an axis, retaining its shape and dimensions, every particle is actually describing a circle round this axis, and the axis passes through the centre of the circle, and is perpendi-

cular to its plane. In any instant of the motion,

the particle is moving at right angles with the

radius vector, or line joining it with its centre

of rotation. This subject is by no means a

speculation of mere curiosity, interesting to none

but mathematicians : one of the noblest arts prac-

tised by man is capable of receiving very great

improvement from a complete knowledge of it ;

we mean the art of Seamanship. The conside-

ration of it, therefore, might be pursued to a

considerable extent — but few professional seamen

have the preparatory knowledge accessary for the

purpose. m

i.'<)TK, n. a. Sax. not, merry; old Fr. ;<•/<•.

A harp ; a lyre. Obsolete : Fr. roulim

to bo the origin of rote, mere memory.

\Vcle routli he : in;_', and |'l;iycn on a n.u.

('Auurcr.

Worthy of great Phoebus' role,

The triumphs of Phlegrasan Jove he wrote,

That all the gods admired his lofty note. Spenser.

First rehearse this song by role,

To each word a warbling note. Shakspeare.

Speak to the people-

Words rated in your tongue ; bastards and syllables Of no allowance to your bosom's truth. Id.

He rather saith it by rote to himself, than that he can thoroughly believe it. Bacon's Essays.

All this he understood by rote,

And as occasion served would quote. Hvdibras.

Learn Aristotle's rules by rate,

And at all hazards boldly quote. Swift.

ROTHENBURG ON THE TAUBER, an old town of Bavarian Franconia, on a mountain near the Tauber. It has a high school and a public library, said to contain valuable manuscripts. It .contains, also, a square and several public buildings : the water in the fountains is raised by machinery from the river. Population 5700. Twenty-eight miles S. S. E. of Wurzburg.

ROTHERAM, or ROTHERHAM, a market-town and parish of the West Riding of York, situated near the conflux of the Rotherand Don, six miles north-east of Sheffield and 158 from London. The principal manufactures are those of iron and steel, and there is a very extensive brewery. At the village of Masborough, sepa-pated from this town by a bridge, there are very extensive manufactories of all kinds of cast and

wrought iron, and also of tinned plates and steel goods. The coal and iron are chiefly supplied from mines in the neighbourhood. The trade of Rotherham is materially assisted by the navigation of the Don. The streets are narrow and irregular and the church is a large building in the form of a cross. It had formerly an ancient chapel on the bridge over the Don. In the town are also two chapels for dissenters, a charity-school, and the Rotherham Independent Academy, for the education of young men proposing to become independent clergymen. Rotherham market is one of the most considerable in Yorkshire for fat cattle and sheep. Here is a commercial bank. Market on Monday.

ROTHERAM, or ROTHERHAM (John), M. I)., a celebrated English physician, the son of a dissenting clergyman, tutor of an academy at Renda!, where he was born in 1719. Under his father's instructions he acquired classical learning, and a very general knowledge of the sciences. In 1740 he was sent to the University of Edinburgh, where professor M'Laurin, observing his talents, advised him to give a course of lectures on experimental philosophy. These lectures

were well attended ; and the profits were devoted to the Royal Infirmary, then building in that city. After this he went to London, studied under Dr. Smellie ; and then began practice at Hexham; but soon after settled at Newcastle, where he was highly respected. In 1770 he published a work, entitled A Philosophical Enquiry into the Nature and Properties of Water, wherein he gave an analysis of the Newcastle and many other waters. Ho married Catharine, daughter of Nicholas Huberts, F.sq., of Hexliam, whom he left a widow with seven children, dying on the 18th of March, 17»7, aged •>ixly-

ROT &

ROTH ES AY, or ROTHSAY, formerly a borough of Scotland, capital of the island and county of Bute. It is well built, and excellently situated for commerce, having a good harbour with a safe anchorage at the bottom of an extensive bay, on the north-west side of the island ; opposite to Loch Steven in Cowal. It was erected into a royal borough in 1400, by king Robert III., when its castle was the royal residence. It was then a considerable town, but

afterwards declined greatly; so that in 1762 many of the houses were in ruins, and it had only one decked vessel, of no great burden. But under the auspices of the earls of Bute it has rapidly improved. A large cotton mill was erected in 1778. This borough united with Ayr, Irvine, Inverary,&c., in electing a representative, but is now deemed part of Bute. Duke of Rothesay was anciently a title of the prince of Scotland, and was accompanied with suitable revenues, powers, and privileges; and is stilJ one of the titles of the prince of Wales. The only relic of antiquity in this place is the castle, the remains of \vhich are so completely covered with ivy that its walls are hardly visible. The natives still point out the banqueting rooms, and bed-chambers of king Robert II. and III. who inhabited it. It afterwards became the chief residence of the Stuarts till 1685, when it was ournt by the duke of Argyle. It lies seventy miles west of Edinburgh.

ROTH MAN (Christopher), a learned German astronomer of the sixteenth century. He became astronomer to the landgrave of Hesse. He wrote

A Treatise on Comets ; and Letters on Astronomy to Tycho Brahe. He died in 1592.

ROTSCHEN-SALM. a sea-port of the Gulf of Finland, at the mouth of the Kymmene, eleven miles W. S. W. of Fredericksham. It has a harbour capable of containing the whole fleet of Russian galleys, and forty ships of the line, and is defended by two forts.

ROTTENSTONE, a mineral found in Derbyshire and used by mechanics for all sorts of finer grinding and polishing, and sometimes for cutting of stones. It is a species of tripoli.

ROTTERDAM, an important commercial city of Holland, on the Maese, which here resembles an arm of the sea. Its plan is triangular, the longest side (above a mile and a half in extent), stretching along the bank of the Maese, at about twenty miles from its mouth. The town is surrounded by a moat, and entered by six gates towards the land, and four towards the water, but has no fortifications. It is also traversed from north to west by the Rotte, a river, or broad canal, which here joins the Maese, and which seems to give name to the city. It

is further intersected more than most other towns in Holland, by canals, which divide the half of the town near the river into several insulated spots connected by bridges. Thus, the first stately row of houses facing the Maese, and called the Bootntjes, has behind it a broad and deep canal, parallel to the river. This section is succeeded by a triangular, and next by an oblong division, each containing several streets and quays. Large vessels unload in two great inlets from the Maese, one stretching to the west, and

) ROT

the other to the north. South-east of the town are two canals, with a basin and dock for the repair of shipping.

The canals are almost all bordered with trees. Next to the Boomtjes comes the Haring-vliet

The other streets are in general long and narrow, and several of them so similar that a stranger has much difficulty in distinguishing them. The houses are convenient, and the peculiar style of Dutch architecture is here usually prevalent.

In many the ground floor is not inhabited, but serves with its gate and arched passage as an

entrance to the warehouses. The principal public buildings are the exchange (finished in 1736), the church of St. Lawrence, from the top of which may be seen the Hague to the north-west, Leyden to the north, and Dort to the south-east; the old town-house, the admiralty, the , academy, the theatre, and the extensive buildings of the East India Company. Rotterdam contains also several commodious market-places, an English Episcopal and a Scotch Presbyterian church. Of scientific collections, it has a cabinet of antiquities, a cabinet of natural history, and a public library. It has also an academy of sciences, instituted in 1771. Rotterdam, as a commercial city, has superior accommodation to Amsterdam, the Maese being open, and the passage free from ice, earlier than in the Zuyder Zee, and a single tide sufficing to carry vessels to the German Ocean. It became a privileged town, and was surrounded with walls, as early as the thirteenth century, owing, like other towns in Holland and, Flanders, its increase to the facility of communicating by water not only with the sea, but with the interior. The

time of its greatest prosperity was the seven-

teenth and eighteenth centuries ; but after 1 795

the invasion of the French, and the war with

England suspended the commerce of Holland.

It had begun to recover in 1802, when it was

again rapidly depressed by the renewal of war ;

but has recently revived once more. The fol-

lowing is a list of the ports from which most of

the vessels arrived in 1817 : —

Riga . .	*272*
London	*253*
Harwich .	*110*
Petersburgh	*90*
Libau . .	*73*
Newcastle ,	*62*
Bergen . .	*45*
Dantzic .	

Hull . .

Kiel . .

Archangel

Lisbon .

Bourdeaux

Hamburgh

31

28

22

20

16

15

10

Here, as at Amsterdam, the far greater proportion of tonnage is employed in transporting the commodities of the Baltic, viz. corn, timber, flax, and hemp. In value, however, the merchandise from England, consisting of hardware, cottons, woollens, and other manufactures, exceeds the imports of any other country. From France the chief imports are wine and brandy ; and the trade with Brasil, as well as with Spanish America, is becoming more and more considerable. Population about 63,000.

Fourteen miles south-east of the Hague, and

thirty-six south by west of Amsterdam.

ROTUND', adj.) FT. rotonde ; Lat. rotun-

ROTIN'DITY, TI. s. S dits. Round ; circular;

spherical : the noun substantive corresponding.

ROU

Thou, all-shaking thunder,

Strike flat the thick rotundity o' the world.*

With the rotundity common to the atoms of all

fluids there is some difference in bulk, else all fluids would be alike in weiffht. Grew.

Who would part with these solid blessings for the

Jittle fantastical pleasantness of a smooth convexity and rotundity of a globe ? Rentiers Sermons.

The cross figure of the Christian temples is more

proper for spacious buildings than the rotund of the heathen : the eye is much better tilled at first enter-

ing the refund, but such as are built in the form of a cross give us a greater variety. Additon.

Rotundity is an emblem of eternity, that has

neither beginning nor end. Id. on Medalt.

ROVE, v. n. &, v. a. t Danish rtiffver, to

RO'VER, n. s.] range for plunder. To

ramble ; range ; wander : wander over : a rover is, a wanderer ; a robber ; pirate : at rover is an obso-

lete phrase for at random, without particular aim.

Thou'st years upon thee, and thou art too full

Of the wars surfeits, to go rave with one

That's yet unbruised. Shakspeare. Coriolanus.

This is the case of rovers by land, as some cantons in Arabia. Bacon's Holy War.

Roving the field, I chanced

A goodly tree far distant to behold,

Loaden with fruit of fairest colors. Milton.

Nature shoots not at roiert; even inanimates,

though they know not their perfection, yet are they not carried on by a blind unguided impetus ; but

that which directs them knows it. Glanville't Scepsis.

ˆrovidence never shoots at rovers : there is an ar-

row that flies by night as well as by day, and God is the person that shoots it. South s Sermons.

Men of great reading shew their talents on the

meanest subjects ; this is a kind of shooting at rovert.

Additon.

Cloacina, as the town she roved

A mortal scavenger she saw, she loved. Gay.

Faultless thou dropt from his unerring skill,

With the bare power to sin, since free of will ;

Yet charge not with thy guilt his bounteous love,

For who has power to walk has power to rooe.

Arbuthnot.

I viewed the' effects of that disastrous flame,

Which, kindled by the' imperious queen of love,

Constrained me from my native realms to rove.

Pope.

If we indulge the frequent rise and roving of passions, we thereby procure an unattentive habit.

Watts.

ROUBILLIAC (Louis Francis), an eminent modern sculptor, a native of France, who settled in England in the reign of George I. ; and long stood at the head of his profession. He executed a statue of Handel for Vauxhall, and another of Sir Isaac Newton for Trinity College, Cambridge; but was chiefly employed on sepulchral monuments, among which may be mentioned that of John duke of Argyle in Westminster-abbey ; of George I., and of the duke of Somerset, in the senate-house at Cambridge ; and his monuments for the duke and duchess of Montagu, at Warkton, in Northamptonshire. Lord Chesterfield said, ‘ Roubilliac was our only statuary, and that otbor artists were mere stone-cutters.’ He had some talent for poetry, and wrote some tolerable French satires. His death took place January 1 1, 1762, at his residence in iSt. Martin’s Lane.

ROUEN, a large and populous city in the north of France, once the capital of Normandy, at present of the department of the Lower Seine (see NORMANDY), is situated on the right bank of the Seine, in a fertile and pleasant country. Its form is an irregular oval, two miles in length and in one breadth. The streets, though in general straight, are very narrow, so that here is no room for foot pavement ; and, as the French have not yet adopted the plan of underground sewers, the eye is constantly offended with a stream of filth running along the middle of the street. A number of houses are of wood, built in an antiquated style, the walls often projecting as they ascend. The most agreeable part of the town is that which adjoins the Seine, the quays being spacious, and bordered with good houses, while the river and its islands, with the beautiful ‘ Cours,’ a walk extending along the opposite bank, the esplanade, and the neighbouring hill of St. Catherine, about 400 feet high, form an assemblage of pleasant objects. The squares arc small and insignificant; the one called the Marche aux Veaux contains the statue of the

warlike maid of Orleans, who was burned here by the English, as a sorceress, in 1430. The ramparts, being levelled and lined with trees, contain pleasant walks ; and the public roads leading to Paris, Havre, and other places, are bordered with trees. The objects of antiquarian research in this city have engaged our attention in th« article already referred to. The town-house, or municipality, is the chief civil edifice worth notice ; and the barracks are large and commodious. The great hospital is a handsome modern building ; and in public markets Rouen is not inferior to any city of France. Of the curiosities of the place, the most interesting, perhaps, is the bridge of boats over the Seine. Rouen is celebrated for its cotton manufactures, but here, as in other parts of France, the goods are less remarkable for taste in the pattern than durability. Rouen has likewise manufactures of woollens, linens, and, to a smaller extent, of paper, iron ware, hats, pottery, wax cloth ; also sugar refineries. Dyeing both of woollen and cotton is also conducted with care and success. The whole of its manufacturing industry is com-

puted to give employment to 50,000 persons,

young and old. The great disadvantages of

Rouen are the want of fuel, and the dearness of

provisions: at the distance of 100 miles to the

westward the family of a workman can be sup-

ported at a reduction of thirty per cent. But,

during the exclusion of British commerce under

Buonaparte, it flourished largely ; particularly

considering its further disadvantage in point of

navigation. It is forty-five miles east of Havre,

and eighty W. N. W. of Paris.

ROVEREDO, a large and fine town of the

Tyrol, Austria, on the left bank of the Adige, was once subject to Venice; but since 1509 it lias

been under the protection of the empire, and

enjoyed privileges which soon made it a staple

for the silk manufacture. This branch of in-

dustry was at its height about the middle o

the eighteenth century. The environs produce

tobacco, which, as well as the leather of t' •

town, forms an article of export. There are n«

public edifices of consequence, hut Roveredo is

a well built town, and Uie marble found in the

vicinity has been much used in the construction

of the houses. Twenty-eight miles north of Ve-

mna, and twelve south by west of Trent.

ROUGE', n.n. 1 r. rouge. Red paint.

ROUGH, adj. ~] Saxon, pnupse ;

ROUGH'CAST, v. a. & n. s. Swed. rugg ; Goth.

ROI'GH'DUAI r, n. s. . hrock. Rugged;

ROUGII'DRAW, v. n. of unequal sur-

ROUGH'EN, v. a. & v. n. 1 face ; coarse ; ROIGH'HEW, v. a. I hairy; hence

ROUGH'HEWX, part. adj. harsh; severe;

ROIGH'LY, adv. rude; terrible;

Roioii'xESS, n.s. stormy: roughcast

ROUGH'WORK. J is, a rude model,

or a kind of rough plaster mixed with pebbles :

to roughcast is, to mould or form in a rough way : rough-draft, rough-draw, and roughwork, are of

similar signification: to roughen is, to make or*

grow rough : the adverb and noun substantive

corresponding.

\<; .Mammon would there let him long remain,

Vor terror of the torments manifold,

In which the damned souls he did behold,

Jiut rouyhly him bespake. Spenser.

A tiend, a fury, pitiless and rough,

A wolf : nay worse, a fellow all in buff.

Shakspeare.

Come what come may,

Time and the hour run through the roughest day.

Id.

Some man must present a wall ; and let him have

some plaster, lome, or roughcast about him to signify wall. Id.

There's a divinity that shapes our ends,

R, >ughhew them how we will. Id. Hamlet.

Rebuked, and roughlu sent to prison,

The immediate heir of England ! was this easy ?

bhaltspeare.

A rouyhhewn seaman, being brought before a jus-

tice for some misdemeanour, was by him ordered

away to prison ; and would not stir ; saying, it Was better to stand where he was, than to go to a worse place. Bacon's Apopbtkegau.

Roughness is a needless cause of discontent ; se-

verity breedcth fear ; but roughness breedeth hate ; even reproofs from authority ought to be grave and

not taunting. Bacon.

Nor bodily, nor ghostly negro could

Roughcast thy figure in a sadder mould. Cleaceland.

The whole piece seems rather a loose model and

roughcast of what I design to do, than a complete

work. Digby.

I hope to obtain a candid construction of this

roiishheicn ill timbered discourse. Howel.

Strait with a band of soldiers tall and rough

On him he seizes. Cuu-leu't Davideii.

When our minds' eyes are disengaged,

They quicken sloth, perplexities unty,

Make roughness smooth, and hardness mollify.

Denham.

He gave not the king time to prosecute that

gracious method, but forced him to a quicker and

rougher remedy. Clarendon.

The fiend

O'er bog, or steep, through strait, rough, dense, pr rare,

Pursues his way. Milton.

Before the cloudy van,

In the rough edge of battle ere it joined,

. i an advanced. Id.

The whole world, without art and dress,

'Would be but one great yvilderness,

And mankind but a savage herd,

For all that nature has conferred •

This does but roughhew and design,

Leaves art to polish and refine, Hudibrai.

Divers plants contain a grateful sharpness ; as

lemons ; or an austere and inconcocted nwyhnesi, as sloes. Browne.

*The little roughness** or other inequalities of the*

leather agains the cavity of the cylinder, now and then put a stop to the descent or ascent of the*

sucker. Boyle.

A ropy chain of rheums, a visage rough,

Deformed, unfeatured, and a skin of buff. Dryden.

In merriment they weie first practised, and this

r

for one hundred and twenty years. Id.

.Mv elder brothers came

Roughilrauglita of nature, ill designed and lame,

Blown off, like blossoms never made to bear;

Till I came finished, her last laboured care. Id.

His victories we scarce could keep in view,

Or polish them so fast as he rovghdrew. Id.

Such difference there is in tongues, that the same

figure, which roughens one, gives majesty to another ; and that was it which Virgil studied in his verses.

When the diamond is not only found, but the

roughness smoothed, cut into a form, and set in gold, then we cannot but acknowledge that it is the per-

fect work of art and nature. Id.

Kind words prevent a good deal of that perverse-

ness which rough and imperious usage often produces

in generous minds. ‘ ”””•’

Thus you must continue, till you have rough-

wnntght all your work from end to end.

MOIOH’S Mecliuinctil Exercises.

A tobacco-pipe broke in my mouth, and the spit-

ting out the pieces left such a delicious roughness on my tongue, that I champed up the remaining part.

Spectator.

Roughness of temper is apt to discountenance the

timorous or modest. Addison.

Were the mountains taken all away, the remaining

parts would be more unequal than the roughest sea ; whereas the face of the earth should resemble that of the calmest sea, if still in the form of its first mass.

Burnet’s Theory.

The booby Phaon only was unkind,

A surly boatman rough as sea and wind. Prior.

Such a persuasion as this well fixed, will smooth

all the roughness of the way that leads to happiness, and render all the conflicts with our lusts pleasing.

Atterbury.

Hippocrates seldom mentiofls the doses of his me-

dicines, which is somewhat surprising, because his

purgatives are generally very rough and strong.

Arbuthnot on Coint

Most by the numbers judge a poet’s song,

And smooth or rough with them is right or wrong.

Pope.

Ah ! where must needy poet seek for aid,

When dust and rain at once his coat invade 1

His only coat ; when dust confused with rain,

Roughens the nap, and leaves a mingled stain.

Stcift.

The Swedes, Danes, Germans, and Dutch attain

to the pronunciation of our words with ease because our syllables resemble theirs in roughnets and fre-

quency of consonants. Id.

The broken landskip,

Ascending, roughens into rigid hills. Thomson.

Then what was left of roughnes in the grain*

Of British natures, wanting its excuse

That it belongs to freemen, would disgust

And shock me. Camper.

ROVIGNO, a maritime town of Austrian

Illyria, on the coast of Istria. It is built on a rock, which forms two good harbours ; but that

nearest the town is not considered secure, and

is resorted to chiefly by boats and barges. Ro-

vigno is only a mile in circumference, but very

populous, containing 10,000 inhabitants, whose chief employments are the pilchard fishery, ship-building, and the sale of wood. The environs produce olive oil and wine, and beautiful marble. Forty miles south of Trieste, and thirty-seven south-west of Fiume.

ROVIGO, a district of Austrian Italy, bounded by the delegations of Venice, Padua, Verona and Mantua, and separated by the Po from the States of the Church. Its superficial extent is about 550 square miles, traversed by a number of rivers ; and in many places marshy and unhealthy. It is, however, fertile throughout, the marshes producing fine crops of rice ; maize, flax, hemp, and silk, are the other objects of culture. The number of black cattle and horses reared is also large. This district was formerly called Polesino di Rovigo, from the number of canals by which it is intersected. In 1806 the title of duke of Rovigo was given by Buonaparte to Savary, his minister of police. Population 63,000.

ROVIGO, the capital of the above district, is situated on the Adigetto, a branch of the Adige,

and surrounded with a wall and moat : to the east is a fortified castle. The Palazzo del Podesta, the former residence of the chief magistrate, is situated in a large square, the principal ornament of which is a pillar of stone. The churches here are not worthy of notice. The town is the residence of the bishop of Adria. Population 9000. Eighteen miles N. N.E. of Ferrara, and thirty-five S.S.W. of Venice.

ROUILLE (Peter Julian), a learned French Jesuit, born at Tours, in 1681. He assisted father Catrou in writing the Roman History, in 21 vols. 4to., and died in Paris in 1740, aged fifty-nine.

ROULERS, a considerable town of the Netherlands, in West Flanders, situated on the Mandel. It has a linen manufacture, the principal product of the surrounding district being flax. The adjacent pastures are rich, and the breed of cattle good : butter is a large article of export. There is here a central school, with eight teachers. Twelve miles N.N. E. of Ypres, and eighteen south of Bruges.

ROUN'CEVAL, n. s. From Roncesval. a town at the foot of the Pyrenees. A species of

pea.

Dig garden,

And set as a daintie thy runcival pease. Tuuer.

ROUND, adj., n. »., v. a., v. n.,^\ Yr.rande;

RouND'-ABOUT,od;. \udv. Siprep. Ital. rondo;

ROUND'EL, n. s. Teut. Sw.

ROUND'ER, and Dan.

*ROUND'-HEAD, n. *. \~rund; Sp.*

ROUND'HOUSE, redondo.

ROUMMSH,

It'n M.'I v, adv. \ spherical;

Ror.M>'xi>s 'i. s. J without

angles ; smooth : hence unbroken ; plain ; clear ;

candid ; free ; quick ; brisk : a round is a circle or circular body ; a revolution ; rotation ; step of a ladder ; the rotary walk of an officer, or soldier, on guard : to round is to make circular or spheri-

cal; to divest of angles ; mould to smoothness;

raise into relief; move around ; surround ; encir-

cle: as a verb neuter, to grow or become round

in form; go round : round, as an adverb, signi-

fies every way ; in a revolution or rotation ; cir-

cuitously : as a preposition, about; on every side

of; all over: roundel is a round form or figure:

rounder, an enclosure ; circumvallation : round-

head, the old nick-name of the Puritans, from

their practice of cropping the hair : round-house,

a kind of watch-house : roundish, roundly, and

roundness, follow the senses of round, adjective.

The terror of God was upon the cities round about.

Genesis.

The whole period and compass of this speech was

delightsome for the roundness, and grave for the

strangeness. Spenser.

She called for a round sum out of the privy purse.

Hooker.

Inioin gainsayers, giving them roundly to under-

stand that where our duty is submission, weak oppo-

sitions betoken pride. Id.

Three thousand ducats! 'tis a good round sum.

Shakspeare.

Let his queen mother all alone intreat him

To shew his griefs ; let her be round with him. Id.

Hie thee hither,

That I may pour my spirits in thine ear,

And chastise with the valour of my tongue

All that impedes thee from the golden round,

Which fate and metaphysick aid doth seem

To have crowned thee withal. Id.

I'll charm the air to give a sound,

While you perform your antick round. Id.

Whence he once attains the upmost round,

He then unto the ladder turns his back,

Looks in the clouds, scorning the base degrees

By which he did ascend. – Id.

We are such stuff

As dreams are made on, and our little life

Is rmtnded with a sleep. Id. Tempest.

This distempered messenger of wet,

The many-coloured Iris, rounds thine eyes.

Shakspeare.

If you fondly pass our proffered offer,

'Tis not the runnier of your old faced walls

Can hide you from our messengers of war. Id.

I was called any thing, and I would have done

any thing indeed too, and roundly too. Id.

You'll prove a jolly surly groom,

That take it on you at the first so roundly. Id.

The queen, your mother, rounds apace ; we shall

Present our services to a fine new prince. Id.

Round dealing is the honour of man's nature ; and

a mixture of falsehood is alike allay in gold and

silver, which may make the metal work the better,

but it embaseth it. Racon.

Worms with many feet, which round themselves

into balls, are bred chiefly under logs of timber. Id.

The Spaniards, casting themselves into roundels,

and their strongest ships walling in the rest, made a flying march to Calais. Id.

Hirsute roots are a middle sort between the bul-

bous and fibrous ; that, besides the putting forth sap upwards and downwards, putteth forth in round.

Id.

All sounds whatsoever move round; that is, on

ROU t

ail sides, upwards, downwards, forwards, and back-

wards. Id.

This lord justice caused the earl of Kildare to be arrested, and cancelled such charters as were lately resumed, and proceeded every way so roundly and

severely as the nobility did much distaste him.

Daviet on Ireland.

Mr. de Mortier roundly said that, to cut off all

contentions of words, he would propose two means

for peace. . Hayu-ard.

In his satyrs Horace is quick, round, and pleasant, and has nothing so bitter, so not so good as Juvenal.

Peuchum.

A gentle round filled to the brink,

To this and t'other friend I drink. Suckling.

When the mind has brought itself to attention, it

will be able to cope with difficulties, and master

them, and then it may go on roundly. Id.

With the cleaving-knife and mawl split the stuff

into a square piece near the size, and with the draw-

knife round off the edges to make it fit for the lathe.

Mo.riw .

How then to drag a wretched life beneath

An endless round of still returning woes,

And all the gnawing pangs of vain remorse'!

What torment's this! Smith.

This is the last stage of human perfection, the ut-

most round of the ladder whereby we ascend to hea-

ven. Norru.

Your petitioner always kept hospitality, and drank

Such new Utopians would have a round of govern- confusion to the roundhead. Spectator.*

ment, as some the like in the church, in which every spoak becomes uppermost in his turn. Holyday.

No end can to this be found,

Tis nought but a perpetual fruitless round. Cowley.

He did foretel and prophesy of him,

Who to his realms that azure round hath joined.

Denharn.

Hollow engines, long and round, thick rammed.

Milton.

The outside bare of this round world. Id.

Knit your hands, and beat the ground

In a light fantastick round. Id.

In darkness and with dangers compassed round. Id.

One foot he centered, and the other turned

Round through the vast profundity obscure. Id.

To those beyond the polar circle, day

Had unbenighted shone, while the low sun,

To recompence his distance, in your sight

Had rounded still the' horizon, and not known

The east or west. Id. Paradise Lost.

They keep watch, or nightly rounding walk.

The queen of night,

In her increasing homes, doth rounder grow,

Till full and perfect she appeare in show. Browne.

His style, though round and comprehensive, was

incumbered sometimes by parentheses, and became

difficult to vulgar understandings. Fell.

From a world of phenomena, there is a principle

that acts out of wisdom and counsel, as was abun-

dantly evidenced, and as roundly acknowledged.

Afi) re's Divine Dialogues.

It is not every small crack that can make such a

receiver, as is of a roundish figure, useless to our ex-

periment. Boyle.

Painting is a long pilgrimage ; if we do not actually begin the journey, and travel at a round rate, we

shall never arrive at the end of it. Dryden.

They meet, they wheel, they throw their darts afar ; Then in a round the mingled bodies run ;

Hying they follow, and pursuing shun. Id.

All the rounds like Jacob's ladder rise ;

i he lowest hid in earth, the topmost in the skies.

Id.

Round the world we roam,

Forced frpm our pleasing fields and native home.

Id.

If nothing will please people, unless they be

greater than nature intended, what can they ex-

pect, but the ass's round of vexatious changes 1

L'Estrange.

Those sincerely follow reason, but for want of

having large, sound, roundabout sense, have not a full view of all that relates to the question.

Locke mi Understanding.

When silver has been lessened in any piece carry-

ing the public stamp, by clipping, washing, or rnund-

the laws have dcclaicd it not to be lawful money.

' I^cke.

They set a round price upon your head.

It is not easy to foresee what a round sum of money may do among a people who have tamely suffered

the Franche Compte to be seized on.

Id. Remarks on Italy.

Sir Roger heard them upon a round trot.

Addison.

The mouth of Vesuvius has four hundred yards in

diameter ; for it seems a perfect round. Id.

Some preachers, prepared only upon two or three

points, run the same round from one end of the year to another. Id.

The figures on our modern medals are raised and

rounded to a very great perfection. Id.

He affirms every thing roundly, without any art,

rhetorick, or circumlocution. Id. C. Tariff.

Many are kicked down ere they have climbed the

two or three first rounds of the ladder.

(jovernmeiit uf the Tongue.

At the best 'tis but cunning ; and, if he can in his own fancy raise that to the opinion of true wisdom, he comes round to practise his deceits upon himself.

Till by one countless sum of woes opprest,

Hoary with cares, and ignorant of rest,

We find the vital springs relaxed and worn ;

Compelled our common impotence to mourn.

Thus through the round of age to childhood we re-

turn. Prior.

The vilest cockle gaping on the coast,

That rounds the ample sea. Id.

Bracelets of pearl gave roundness to her arm,

And every gem augmented every charm. Id.

Pliny put a round number near the truth, rather

than a fraction. Arbuthnot on Coins.

Women to cards may be compared ; we play

A round or two ; when used, we throw away.

Granville.

Paraphrase is a roundabout way of translating, in-

vented to help the barrenness, which translators,

overlooking in themselves, have apprehended in our

tongue. Felton.

Can any one tell how the sun, planets, and satel-

lites were rounded into their particular spheroidical

orbs i. Cheyne.

If merely to come in, Sir, they go out ;

The way they take is strangely rou/idaoout. Pope.

They marched to some famed roundhouse. Id.

These accomplishments, applied in the pulpit, ap-

pear by a quaint, terse, florid style, rounded into pe-

riods and cadences, without propriety or meaning.

Swift's Miscellanies.

Roundness is the primary essential mode or differ-

ence of a bowl. Wattis I^gick.

ROUND, v. n. Sax. rtuman ; Germ, runtn ,

whence Chaucer writes it roun To whisper

Obsolete

ROU 60

Being come to the supping place, one of Kalen-

der's servants rounded in his ear ; at which he re-

tired. Sidney.

They're here with me already ; whispering, round-

ing,

Sicilia is a so forth ; 'tis far gone. Shaktpeare.

Cicero was at dinner, where an ancient lady

said she was but forty : one that sat by rounded him in the ear, she is far more out of the question : Cicero answered, I must believe her, for I heard her say so any time these ten years. .Bacon.

The fox rounds the new elect in the ear, with a

piece of secret service that he could do him.

*L' Estrange**

ROUN'DEL, n. s. (Fr. rondelet. A kind

ROUN'DELAY. J of poetry which com-

monly consists of thirteen verses, of which

eight are of one kind of rhyme and five of ano-

ther.

Siker, sike a roundle never heard I none,

Little lacket Perigot of the best,

And Willie is not greatly over-gone,

So weren his under-songs well addrest. Spenser.

To hear thy rimes and roundelayt,

Which thou wert wont in wasteful hills to sing,

I more delight than lark in summer days,

Whose echo made the neighbouring groves to ring.

Id.

Come now, a roundel and a fairy song.

Shakspeare.

The muses and graces made festivals ; the fawns,

satyrs, and nymphs did dance their roundelays.

Howel.

They listening heard him, while he searched the

grove,

And loudly sung his roundelay of love,

But on the sudden stopped. Dryden's Knight't Tale.

ROUNDS, in military matters, a detachment

from the main guard, of an officer or a non-com-

missioned officer and six men, who go round the

rampart of a garrison to listen if any thing be

stirring without the place, and to see the senti-

nels be diligent upon their duty, and all in order.

In strict garrisons the rounds go every half hour.

The sentinels are to challenge at a distance, and

to rest their armfc as the round passes. All

guards turn out, challenge, exchange the parole,

and rest their arms, &c.

ROUSE, n.s. Teut.rtwcA, half drunk. Hence

our word carouse. A dose of liquor rather too

large. Not in use.

They have given me a rouse already,

— Not past a pint as I am a soldier. Shakspeare.

No jocund health that Denmark drinks to-day,

>5ut the great cannon to the clouds shall tell ;

A nd the king's rouse shall bruit it back again,

Bespeaking earthly thunder. Id.

RousV, v. a., v. n.,&n. s. > Gothic reisa;

ROL'SER, n. t. { Swed. resa. See

RAISE. To wake up; wake from rest; excite

to action ; drive from a covert : as a verb neuter to awake from slumber or inaction ; be excited :

a rouser is the agent or instrument of rousing.

He stooped down, he couched as a lion, and as an

old lion ; who shall ronse him up ' Gen. xlix. 9.

As an eagle, seeing prey appear,

His hairy plumes doth route full rudely dight ;

So shaked he, that horror was to hear.

Faerie Queene.

The blood more >tirs,

To route a lion, than to start a hare. Shakspeare.

ROU

Then rouse that heart of thine,

And whatsoever heretofore thou hast assumed to be,

This day be greater. Chapman. '

The unexpected sound

Of dogs and men his wakeful ear does wound ;

Roused with the noise, he scarce believes his ear,

Willing to think the illusions of his fear

Had given this false alarm. Denham.

Men, sleeping found by whom they dread,

Rouse and bestir themselves ere well awake. Milton.

Blustering winds had roused the sea. Id.

At once the crowd arose, confused, and high ;

For Mars was early up, and roused the sky.

Dry den.

I'll thunder in their ears their country's cause,

And try to rouse up all that's Roman in them.

Addlson.

Richard, who now was half asleep,

Routed ; nor would longer silenoe keep. Prior.

The heat with which Luther treated bis adversa-

ries, though strained too far, was extremely well

fitted by the providence of God to route up a people, the most phlegmatick of any in Christendom.

Atterbury.

Now Cancer glows with Phoebus' fiery car,

The youth rush eager to the sylvan war ;

Swarm o'er the lawns, the forest walks surround,

Rouse the fleet bait, and cheer the opening hound.

ftp.*

Melancholy lifts her head ;

Morpheus rouses from his bed. Id. St. Cecilia.

And when they .smiled because he deemed it near,

His heart more truly knew that peal too well

Which stretched his father on a bloody bier,

And routed the vengeance blood alone could quell

He rushed into the field, and, foremost fighting, fell Byron.

ROUSE (John), an English antiquary of the

fifteenth century, who was born in Warwick-

shire; and lived at Guy's Cliff, near Warwick.

.He wrote, 1. A Chronicle of the Kings of Eng-

land ; and 2. The Antiquities of Warwick. lie

died in 1491.

ROUSSEAU (James), an eminent painter, born

in Paris in 1630. He studied first under Swane-

velt, after which he travelled into Italy, practising in perspective, architecture, and landscape. On

his return home he was employed at Marly. He distinguished himself in painting buildings, and, from his knowledge of perspective, Louis XIV. employed him to decorate his hall at St. Germame-en-Laie, where he represented the operas of Lulli. Being a Protestant, he quitted France on the persecution of his brethren, and retired to Switzerland. Louis invited him back : he refused, but sent his designs, and recommended a proper person to execute them. After a short stay in Switzerland, he went to Holland ; whence he was invited to England by Ralph duke of Montagu, to adorn his new house in Bloomsbury. Some of his pictures, both in landscape and architecture, are at Hampton Court ; and he etched some of his own designs. He died in Soho Square, London, in 1693.

ROUSSEAU (Jean Baptistc), a celebrated French poet, born in Paris in April, 1671. His father, who was a shoemaker, in good circumstances, had him educated in the first colleges of Paris. He distinguished himself while young by several short poetical pieces, ami was admitted as an eleve, into the Academy of Inscriptions

and Belles Lettres, in 1701. He attended marshal Tallard into England as his secretary, and contracted a friendship with St. Evremond. On his retum to Paris he was admitted at court, till in 1708, he was prosecuted as the author of some couplets, in which the characters of several persons were calumniated, in consequence of which he was banished in 1712 by a decree of the parliament of Paris. After this sentence he lived in foreign countries, where he found illus,-trious protectors. The count de Luc, ambassador of France in Switzerland, took him with him to Baden in 1714, and presented him to prince Eugene, who took him to Vienna, and introduced him to the emperor. Rousseau lived about three years with prince Eugene ; but having lost his favor, by satirising one of his mistresses, he retired to Brussels, where he afterwards usually resided. It was here that he became acquainted with Voltaire, who admired his poetry, and made him a present of all his works. He came over, in 1721, to England, where he printed a collec-

tion of his works, in 2 vols. 12mo., London. This edition, published in 1723, brought him tiearly 10,000 crowns, which he placed in the hands of the Ostend company, where he soon lost the whole of it. He now found an asylum in the establishment of the duke of Aremberg, whose table was open to him at all times, and who, being obliged, in 1733, to go to the army in Germany, settled on him a pension of 1500 livres. But, having been imprudent enough to publish in a journal that the duke d'Aremberg was the author of those verses for which he himself had been banished France, he was dismissed from his table, and his pride would not allow him to accept the pension after this rupture. The count de Luc and M. de Senozan, receiver-general of the church revenue, now invited him to come privately to Paris, in the hopes of procuring a diminution of the period of his banishment, but all th,eir attempts proved abortive; and after having staid three months at Paris, hereturned to Brussels in February, 1740, where he died 1741. M. Seguy, in concert with the prince of la Tour Tassis, published a very beautiful

edition of his works, in 3 vols. 4to., agreeable to the poet's last corrections. There is a larger collection in five volumes, which did both injury and honor to his memory, as he in it speaks both in favor of and against the very same persons.

ROUSSEAU (Jean Jacques), a celebrated French writer, born at Geneva in 1712. His father was a watchmaker. His education was but scanty, but he made up for this by self-application. His friends put him apprentice to an engraver, from whom he says he learnt to be idle, and even to steal ; at length he eloped from him. Bornex, bishop of Anneci, from whom he solicited an asylum, committed the care of his education to madamede Warrens, a lady who had in 1725 left part of her wealth, and the Protestant religion, to throw herself into the church. By her assistance he went to Turin with letters of recommendation, and was admitted into a seminary there, having been first made a proselyte to the Roman Catho-tholic religion by his benefactress. He was soon disgusted with his new life, which he quitted almost pennyless, and was obliged to engage himself as a footman to a lady of quality. She dying in three months, her nephew pro-

cured him another place out of livery. He next commenced teaching music at Chamberi, where he remained till 1741, when he went to Paris, where he was long in very destitute circumstances. Meanwhile he began to emerge fiom obscuiity, and the place of deputy under M. Dupin, farmer general, a man of parts, afforded him temporary relief, and enabled him to be of some benefit to Mad. de Warrens. The year 1750 was the commencement of his literary career. The academy of Dijon had proposed the question : ' Whether the revival of the arts and sciences has contributed to the refinement of manners ?' He supported the negative side of the question, and the academy crowned his work. From that period he increased in celebrity. His next work was A Discourse on the Causes of Inequality among Mankind, and on the Origin of Social Compacts, a work written with a view to prove that mankind are equal ; that they were born to live apart from each other ; and that they have perverted the order of nature in forming societies. He bestows the highest praise on the state of nature, and depreciates the idea of every social

compact. By presenting this performance to the magistrates, he was received again into his native country, and reinstated in all the privileges and rights of a citizen, after having abjured the Catholic religion. He soon however returnevl, and lived for some time in Paris, and afterwards retired into the country. His Letter to M. de Alembert on the design of erecting a theatre ;it Geneva, in 1757, first drew down upon him the envy of Voltaire, and was the cause of those indignities with which that author never ceased to load him. In 1752 he gave to the theatre a pastoral, The Village Conjuror, of which he composed both the poetry and music. His Dictionary of Music affords several excellent articles ; some of them, however, are very inaccurate. Rousseau, soon after his Village Conjuror, published A Letter on, or rather against, French Music, in consequence of which he was insulted, menaced, and lampooned. Harmonic fanaticism went even to hang him up in effigy. He next published the New Heloisa, an epistolary romance, in six parts, 1761, 12mo. His Emilius afterwards obtained him more fame than the New Heloisa.

This moral romance, which was published in

1762,, in 4 vols. 12mo., treats chiefly of educa-

tion. See EDUCATION. He dwelt from 1754 in

a small house in the country near Montmorenci ;

a retreat which he owed to the generosity cf a

farmer general. The French parliament con-

demned his Emilius in 1762, and entered a

criminal prosecution against the author, which

forced him to make a precipitate retreat ; and he

found an asylum in Neufchatel. His first care

was to defend his Emilius against the archbishop

of Paris, by whom it had been anathematised

The Letters of La Montaigne appeared soon

after ; but this work, far less eloquent, and full of envious discussions on the magistrates and

clergy of Geneva, irritated the Protestant minis-

ters without effecting a reconciliation with the

Romish clergy. The protection of the king of

Prussia, to whom Nrufrhatel belonged, was not

sufficient to rescue him from that obloquy which

the minister of Montiers Travers, the village to

which he had retired, had excited against him.

On the night between the 6th and 7th of Sep-

tember, 1765, some fanatics attacked his house, and, fearing new insults, he in vain sought an asylum in Bern. As this canton was connected with Geneva they did not allow him to remain in the city. Obliged to set out on a journey, in a very inclement season, he reached Strasburg in a destitute situation. He waited there till the weather was milder, when he went to Paris, where Mr. Hume then was, who proposed taking him with him to England. After some stay in Paris, in the disguise of an Armenian, Rousseau set out for London in 17fi6. Hume, much affected with his situation and his misfortunes, procured for him a very agreeable settlement. He did not however make such an impression on the minds of the English as he had done on the French. The periodical prints were filled with satires against him ; and they published a forged letter from the king of Prussia, ridiculing the principles and conduct of this new Diogenes. Rousseau from this time treated Hume as an enemy, who he said had brought him to England with no other view than to expose him to public ridicule; and he therefore returned to France.

On the 1st of July, 1770, Rousseau appeared for the first time at the Regency coffee-house, dressed in ordinary clothing, having for some time previous to this worn ,an Armenian habit. His friends procured for him liberty of staying, on condition that he should neither write on religion or politics. He died of an apoplexy at Ermenon-ville, belonging to the marquis de Girardin, about ten leagues from Paris, July 2d, 1778, aged sixty-six. This nobleman has erected to his memory a very plain monument, in a grove of poplars, which constitutes part of his beautiful gardens. On his tomb is inscribed in French — ' Here reposes the man of Nature and of Truth.' Rousseau, during his stay near Lyons, married madame le Vasseur, his governess, a woman who, without beauty or talents, had gained over him a great ascendancy. There are several small pieces written by him, to be found in a collection of his works published in 25 vols. 8vo. and 12mo, to which there is appehded a very insignificant supplement in 6 vols. The most important parts in this collection are selected from his Thoughts ; in which the confi-

dent sophist and the impious author disappear, and nothing is offered to the reader but the eloquent writer and the contemplative moralist. There were found in his portfolio after his death, Confessions, in twelve books, which were afterwards published. His other works are, 1. The Reveries of a Solitary Wanderer, being a journal of the latter part of his life. 2. Considerations upon the Government of Poland. 3. The Adventures of Lord Edward, a novel, being a kind of supplement to the Nouvelle Heloise. 4. Various Memoirs and Fugitive Pieces, with a great number of letters. 5. Emilia and Sophia. 6. 'Hie Levite of Ephraim, a poem. 7. Letters to Sara. 8. An Opera and a Comedy. 9. Translations of the first book of Tacitus's History of the Episode of Olinda and Sophronia, taken from lasso, &c. &c.

ROW

ROUT, n. s. & v. a. Goth, and Swed. rote Belg. rot. A clamorous multitude ; a rabble ; a tumultuous crowd ; confusion : to put to confusion ; to assemble in tumultuous crowds. The next way to end the wars with him, and to

rout him quite, should be, to keep him from invading of those countries adjoining. Spenser.

A rout of people there assembled were,

Of every sort and nation under sky. Id.

If that rebellion

Came like itself in base and abject routs,

Led on by bloody youth, goaded with rage,

And countenanced by boys and beggary,

You, reverend father, then had not been there.

Shakspeare.

Farmers were to forfeit their holds in case of un-

lawful retainer, or partaking in routs and unlawful

assemblies. Bacon.

The meaner sort routed together, and suddenly as-

sailing the earl, in his house, slew him.

Id. Henry VII.

Thy army,

As if they could not stand when nhou wer't down,

Dispersed in rout, betook them all to fly. Daniel.

Fancy, wild dame, with much lascivious pride,

By twin chameleons drawn, does gaily ride,

Her coach there follows, and throngs round about.

Of shapes and airy forms an endless rout. Cowley.

That party of the king's horse that charged the

Scots, so totally routed and defeated their whole

army that they fled. Clarendon.

Nor do I name of men the common rout,

That wandering loose about,

Grow up and perish, as the summer fly. Milton.

Their mightiest quelled, the battle swerved,

With many an inrode gored ; deformed rout

Entered and foul disorder. Id. Paradise Lost.

The mad ungovernable roitf,

Full of confusion, and the fumes of wine,

Loved such variety and antick tricks. Roscommon,

Harley spies

The doctor fastened by the eyes

At Charing-cross among the rout,

Where painted monsters are hung out. Su-ift.

ROUTE, ra. s. Fr. route. Road ; way.

Wide through the furzy field their route they take, Their bleeding bosoms force the thorny brake. Gu\t.

ROW, n. s. Sax. na; Goth, and Swed. ra;

Teut. reih. A rank or file; a number of tilings

ranged in a line.

Lips never part but that they show

Of precious pearl the double row. Sidney

After them all dancing on a row,

The comely virgins came with garlands dight,

As fresh as flowres. Spenser.

A new born wood of various lines there grows,

And all the flourishing letters stand in rows.

Cowley.

Where any row

Of fruit trees, overwoody reached too far

Their pampered boughs, and needed hands to check

Fruitless embraces. Milton' t Paradise Lost.

Where the bright seraphim in burning row,

Their loud uplifted angel trumpets blow. Milton.

The victor honoured with a nobler vest,

Where gold and purple strive in equal row.*

Dry den.

Why round our coaches crowd the white-gloved

beaux,

Why bows the side box from its inmost rows ?

Pope.

Row, ?;. n. &, v. a.) Sax. nopari ; Goth, nm.

ROW'ER, n. s. $ To impel a vessel m ROW 63

ROW

water by oars ; to drive by oars ; a rower is one who manages oars.

He saw them toiling in rowing • for the wind was

contrary. Murk vi. 48.

Some of these troughs or canoes were so great

that above twenty men have been found rowing in

one. Abbot.

The swan rows her state with oary feet. Milton.

The bold Britons then securely row'd ;

Charles and his virtue was their sacred load.

Waller.

The watermen turned their barge, and rowed

softly, that they might take the cool of the evening.

Dryden.

Four gallies first, which equal rowers bear,

Advancing in the watery lists appear. Id.

The bishop of Salisbury ran down with the stream

thirty miles in an hour, by the help of but one rower.

Addison.

ROWE (Nicholas), an eminent English poet,

the son of John Rowe, esq., serjeant at law,

was born at Little Barford, Bedfordshire, in

1673. He acquired a knowledge of the classic

authors under Dr. Busby in Westminster school ;

but poetry was his early and darling study.

His father, who designed him for his own pro-

fession, entered him a student in the Middle

Ten: pie. He made considerable advances in the

law ; but the love of the belles lettres and poe-

try stopped him in his career. His first tragedy,

The Ambitious Stepmother, meeting %vith universal applause, he laid aside all thoughts of the law. He afterwards composed several tragedies; but he valued himself most upon his Tamerlane. The others are the Fair Penitent, Ulysses, The Royal Convert, Jane Shore, and Lady Jane Gray. He also wrote a poem called The Biter, and several poems upon different subjects, which have been published under the title of Miscellaneous Works, in one volume, as his dramatic works have been in two. ‘ Rowe is chiefly to be considered,’ says Dr. Johnson, ‘ in the light of a tragic writer and a translator. In his attempt at comedy, he failed so ignominiously, that his Biter is not inserted in his works ; and his occasional poems are rarely worthy of either praise or censure. In the construction of his dramas there is not much art. He is not a nice observer of the unities; nor does he much affect the auditor, except in Jane Shore, who is always seen and heard with pity. Whence then has Rowe his reputation ? From the reasonableness and propriety of some of his scenes, from the elegance of his diction, and the suavity of his

verse. He seldom moves either pity or terror,

but he often elevates the sentiment ; he seldom

pierces the breast, but he always delights the ear, and often improves the understanding.' Being a

great admirer of Shakspeare, he gave the public

an edition of his plays. But the most consider-

able of Mr. Rowe's performances was a transla-

tion of Lucan's Pharsalia, which he just lived to

finish, but it did not appear in print till 1728,

ten years after his death. The duke of Queens-

berry, when secretary, made him under-secretarv.

After the duke's death all avenues were stoˆpsd

to his farther preferment ; and during the rest of

queen Anne's reign he passed his time in study.

On the accession of George I. he was made poet

laureat, and one of the land-surveyors of the

customs in the port of London. The prince of

Wales conferred on him the clerkship of his

council ; and the lord chancellor Parker made

him his secretary for the presentations. He did

not enjoy these promotions long ; for he died

December 6, 1718, aged forty-five. He was

twice married, and had a son by his first wife,

and a daughter by his second. He was interred

in Westminster Abbey, in the Poet's Corner,

opposite to Chaucer.

ROWE (Elizabeth), an English lady, eminent for her writings, born at Ilchester, in Somersetshire, in 1674. She had a taste for both painting and poetry, and was very fond of music. In 1696 a collection of her poems was published. Her paraphrase on the thirty-eighth chapter of Job was written at the request of bishop Ken. She married, in 1710, Mr. Thomas Rowe, the translator of Plutarch's Lives ; but intense study soon threw him into a consumption, which put a period to his life in May, 1715, when he was but just twenty-eight. Mrs. Rowe wrote an elegy on his death ; and continued to the last moments of her life to express the highest veneration and affection for his memory. Soon after his decease, she retired to Frome, in Somersetshire. In this recess she composed the most celebrated of her works, Friendship in Death, and Letters Moral and Entertaining. In 1736 she published The History of Joseph; a poem written in her younger years. She died of an apoplexy, February 20, 1736-7. In her cabinet were found letters to several of her friends, which she had

ordered to be delivered after her decease. The

Rev. Dr. Isaac Watts, agreeably to her request,

revised and published, in 1737, her Devout Ex-

ercises of the Heart in Meditation and Soliloquy,

Praise and Prayer; and, in 1739, her Miscella-

neous Works, in prose and verse, were published

in 2 vols. 8vo., with an account of her life and

writings prefixed.

ROW'EL, n. s. & v. a. Fr. rouelle. The

points of a spur turning on an axis : to pierce

the skin and keep the wound open.

A rider like myself, who ne'er wore rowel

Nor iron on his heel. Shahtpeare. Cymbeline.

A mullet is the rowel of a spur, and hath never but five points ; a star hath six. Peacham.

He spurred his fiery steed

With gory rowels to provoke his speed. Dryden.

Rowel the horse in the chest. Mortimer.

ROW'EN, n. s. Teut. rauke, grass. After

grass.

Then spare it for rowen, till Michel be past,

To lengthen thy dairie no better thou hast. Tusser.

Rowen is a field kept up till after Michaelmas, that the corn left on the ground may sprout into green.

Notes on Tusser.

Turn your cows, that give milk, into your rmcent, till snow comes. Mortimer's Husbandry.

ROWLEY (William), a dramatic writer who lived in the reign of Charles I. and was educated at the university of Cambridge. Wood styles him ' the ornament, for wit and ingenuity, of Pembroke Hall, in Cambridge.' He was a great benefactor to the English stage, having left us five plays of his own composing, and one in which Shakspeare afforded him some assistance.

ROYSNIXG (John), an ingenious English mathematician, born in 1699. lie was fellow of Magdalen College, Cambridge, and afterwards rector of Anderby, in Lincolnshire. In 1738 he printed, at Cambridge, A Compendious System of Natural Philosophy, in 2 vols. 8vo. ; reprinted in 1745. He wrote also two pieces in the Philosophical Transactions, viz. 1. A Description of a Barometer, wherein the Scale of Variation may be increased at pleasure ; vol. xxxviii. p. 39.

And, 2. Directions for making a Machine for finding the Roots of Equations universally, with the manner of using it ; vol. Ix. p. 240. He died in London, November 1771.

ROXANA, a Persian princess, daughter of Darius, who, being taken prisoner by Alexander the Great, captivated her conqueror, who married her. After his death she behaved with great cruelty, for which she was put to death by Cassander. SeeMACEDox.

ROXBURGH, an ancient city of Roxburghshire, once famed for opulence and magnificence, of which very few relics now remain. It stood on a rising ground, opposite Kelso, at the west end of a fertile plain, peninsulated by the Tweed and the Tiviot, near a magnificent Cistertian monastery founded by David I. It was totally destroyed by king James II. and never afterwards rebuilt ; and, as its site is now converted into arable fields, the plough has nearly obliterated all traces of its existence. At the point of the peninsula stood the castle, memorable in the Scottish history, as an object of frequent mortal contention between the Scots and English ; and

before which king James II. was killed By the bursting of a cannon. This castle is now entirely in ruins.

ROXBURGH, or ROXBURGHSHIRE, a county of Scotland, so named from the above ancient city, called also Teviotdale, from the Teviot which runs through it: extending about thirty miles from east to west, and fifteen in breadth from the English border to the Blue Cairn in Lauderdale Moor; but of an irregular figure. It is bounded on the north by Lauderdale and Berwickshire; on the east and south-east by Northumberland and Cumberland ; on the south and south-west by Annandale ; and on the west by Dumfries and Selkirk shires. It is divided into three districts, called Teviotdale, Liddesdale, and Eskdale, from their chief rivers, the Teviot, Liddal, and Esk. On the north and west the county is mountainous, and chiefly appropriated to pasture; but on the south and east considerably level and fertile. The whole abounds with the most romantic scenery, exhibiting the rough appearance of hills, mosses, rocks, and mountains, interspersed with delightful fertile valleys,

through which run numerous rivers and rivulets. The chief mountains are the Cheviot and Cockraw Hills, which are situated in what was called the Debateable Lands : from the property of them being often the subject of debate between the two kingdoms, but finally adjudged to Scotland at the Union. This county contains one royal borough, viz. Jedburgh ; and several considerable towns, as Kelso, Hawick, Melrose, and Castletown. Before the union of the crowns, while predatory wars xere frequent between the two kingdoms, 10,000 horsemen, well armed and accoutred, could have been raised in twenty four hours- Even after that period, and before the union of the kingdoms, the profits of a very lucrative contraband trade enriched the people and kept up the population. The recent improvements, however, in cultivation, manufactures, improvements in the breed of sheep and wool, and other arts of peace, are now making up for these deficiencies, and increasing the population and prosperity of the borders of both kingdoms, without danger of interruption and depredations from predatory inroads on either

side. This county sends one member- to the imperial parliament. There are many ancient forts and castles ; and the ancient Roman road, called the Rugged Causeway, can be traced from Hounam to the Tweed.

ROXBURY, a township of the United States, in Norfolk county, Massachusetts, two miles S. S.W. of Boston. It contains many handsome houses and country seats. The soil is in a high state of cultivation, and the inhabitants supply Boston with great quantities of vegetables and fniit. Population 3669.

ROY'AL, adj. ~\ Fr. row/; Ital. and
ROY'ALIST, n. s. /Span, real, reale, of Lat.
ROY'ALIZE, v. a. \regalis. Kingly; belonging
ROY'ALLY, adv. I to or becoming a king
ROY'ALTY, n. s. J regal ; all the derivatives corresponding.

What news from Venice
How doth that royal merchant, good Anthonio?
ShaJupeare.

Ere you were queen, ay, or your husband king,
To royalise his blood, I spilt mine own. Id.

It shall be my care,

To have you royally appointed. Id.

Draw, you rascal ; you come with letters against

the king, and take vanity the puppet's part against the royalty of her father. Id. King Lear.

Royalty by birth was the sweetest way of majesty :

a king and a father compounded into one, being of a temper like unto God, justice and mercy. Holyday.

Wherefore do I assume

These royaltiei, and not refuse to reign ? Milton.

The royal stock of David. Id.

Where Candish fought the royalists prevailed,

Neither his courage nor his judgment failed.

Waller.

His body shall be royally interred,

And the last funeral pomp adorn his hearse.

Dry den.

If they had held their royalties by this title, either there must have been but one sovereign, or else every father of a family had as good a claim to royalty as these. Locke.

The old church of England royalists, another name

for a man who prefers his conscience before his in-

terests, are the most meritorious subjects in the world, as having passed all those terrible tests which domi-

neering malice could put them to, and carried their

credit and their conscience clear. South.

1 will, alas ! be wretched to the great,

And sigh in rnyultu, and grieve in state. Prior.

Thrice happy they, who thus in woods and groves

From courts retired, possess their peaceful loves :

Of royal maids how wretched is the fate ! Granville.

ROYAL SOCIETY. See SOCIETY.

ROYENA, in botany, African bladdernut ; a

genus of the digynia order, and detandria class

of plants; natural order eighteenth, bicornes:

CAL. urceolated ; COR. monopetalous, with the

limb revoluted : CAPS, unilocular and quadri-

valved. Species seven, all Cape herbs.

ROY'NISH, adj. Fr. rogneux, mangy, paltry.

Paltry ; sorry ; mean ; rude.

The roynish clown, at whom so oft

Your grace was wont to laugh, is also missing.

Shakspeare.

ROYSE (George), D. D., an English divine,

born at Martock, in Somersetshire, about 1655 ;

and educated at St. Edmund Hall, Oxford. He

became chaplain to king William III., and at-

tended him to Ireland in 1690. He was made

dean of Bristol, and died in 1708.

ROYSTON, a market town in Hertfordshire. The name of the town is derived from a cross ' erected in the commencement of the twelfth century by a lady lloise, and hence called Roise's Cross. A monastery was afterwards built near it, and largely endowed. Houses gradually arose round the monastery, and the name was changed to Royse's Town, or Royston. The town is now noted chiefly for its corn trade. The church is an ancient edifice, consisting of a nave, chancel, and aisles. The market is on Wednesday, and it has five annual fairs. Thirty-seven miles north of London.

ROY'TELET, n. s. fr.roytelet. A little petty king-

Causing the American roytelets to turn all homagers to that king and the crown of England. Heylin.

ROZEE (Madame), an extraordinary paintress, born at Leyden in 16,32. She neither used oil nor water colors, but wrought on the rough side of the pannel, with a preparation of silk floss, disposed in different boxes, according to the different degrees of bright and dark tints, out of

which she applied the colors requisite, and blended, softened, and united the tints with surprising beauty. In this singular manner she executed portraits, landscapes, and historical subjects. She died in 1682, aged fifty.

RUATAN, an island of the bay of Honduras, thirty miles long, and nine wide; fortified by rocks and shoals, which defend the fort, and also by the narrowness of the port, into which only one vessel can enter at a time. Yet it is capable of containing 500 vessels in perfect safety.

From the sea this island appears singularly beautiful. It is entirely covered with the cocoa-nut and other trees ; and the soil is fertile. It abounds with deer, wild hogs, Indian rabbits, and birds of many species : parrots are innumerable. The Spaniards have a kind of military station or look-out post here. The small adjoining islands of Helene, Moratte, and Borburette, are separated from this by a narrow channel, and seem like detached parts of it. In the south are some ports, and besides these, some little channels fit for small vessels. In the west part of the island are meadows, in which mules are bred.

RUB, v. a., v. n. &t,n.s.ˆ Welsh, rhubco ;

RUB'BER, n. s. > Teut. reiber ; Swed.

RUB'STONE. j rubba. To scour or

smooth by friction ; pass one body over another ;

to wipe ; cleanse ; polish ; ' to rub up' is to

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excite or to polish ; ' rub down,' curry a horse ; as a verb neuter, to rub is to fret; make a

friction ; pass or force a way through difficulty : a rub, the act of rubbing; collision; hence

difficulty ; hindrance : rubber, the instrument

or agent in rubbing ; a game ; a courtesy : rub-

stone, a whetstone.

A cradle for barhe, with rub-stone and sand.

Tusser.

He, who before he was espied, was afraid, after

being perceived, was ashamed, now being hardly

rubbed upon, left both fear and shame, and was

moved to anger. Sidney.

Look, how she rubi her hands,

— It is an accustomed action with her, to seem thus washing her hands. Shakspeare. Macbeth.

We'll play at bowls,

— 'Twill make me think the world is full of rubs,

And that my foitune runs against the bias.

Shakspeare.

To sleep ! perchance to dream ; ay, there's the rub. Id.

Upon this rub, the English ambassadors thought

fit to demur, and sent to receive directions.

Hay ward.

No hunters, that the tops of mountains scale,

And rub through woods with toile seek them all.

Chapman.

He expounds the giddy wonder

Of my weary steps, and under

Spreads a path clear as the day,

Where no churlish rub says nay. Crashaw.

The government at that time was by kings, before

whom the people in the most formal expressions of

duty and reverence used to rub their noses, 6r stroke their foreheads. Heylin.

Their straw-built citadel now rubbed with balm.

Milton.

When his fellow beasts are weary grown,

He'll play the groom, give oats, and rub 'em down.

Dry den.

He that once sins, like him that slides on ice,

Goes swiftly down the slippery ways of vice ;

Though conscience checks him, yet, those rubs gone

o'er,

He slides on smoothly, and looks back no more. Id.

Servants blow the fire with puffing cheeks, and lay The rubbers, and the bathing sheets display. Id.

'Tis as much as one can do to rub through the

world, though perpetually a doing. L'Estrange.

The ass was to stand by, to see two boobies try

their title to him by a rubber of cuffs. Id.

The bare rubbing of two bodies violently produces

heat, and often fire. Locke.

If their minds are well principled with inward

civility, a great part of the roughness, which sticks to the outside for want of better teaching, time and observation will rub of; but if ill, all the rules in the world will not polish them. Id.

The rough'or coarse file, if large, is called a rubber, and takes off the unevenness which the hammer

made in the forging. Moion.

The whole business of our redemption is to rub

over the defaced copy of the creation, to reprint God's image upon the soul. South.

You will find me not to have rubbed up the me-

mory of what some heretofore in the city did. Id.

In narrow clefts, in the monument that stands over

him, catholics rub their beads, and smell his bones, which they say have in them a natural perfume,

though very like apopleclick balsam ; and what would make one suspect that they rub the marble with it, it is obseived that the scent is stronger in the morning than at night. Addism on 7fn/i/.

• *F*

RUB

RUB

A forcible object will rub out the freshest colours at a stroke, and paint others. Collier of the Aspect.

If butchers had but the manners to go to sharps,

gentlemen would be contented with a rubber at cuffs.

Id. on Duelling.

Two bones, rubbed hard against one another, pro-

duce a fetid smell. Arbuthnot on Aliments.

An hereditary right is to be preferred before elec-

tion ; because the jgovernment is so disposed that it almost executes itself; and, upon the death of a

prince, the administration goes on without any rub

or interruption. Swift.

Rub the dirty tables with the napkins, for it will save your wearing out the common rubbers. Id.

RUBBER, INDIA. See CAOUTCHOUC.

RUB'BAGE, TI. s.) From rub ; meaning,

RUB'BISH. } at first, dust made by

rubbing. Rubbage is not now used. Ruins

of a building ; fragments of matter used in

building.

What trash is Rome !

What rubbish, and what offal ! when it serves

For the base matter to illuminate

So vile a thing as Caesar. Shakspeare.

Such conceits seem too fine among this rubbage.

Wotton .

A fabric, though high and beautiful, if founded

on rubbish, is easily made the triumph of the winds.

Glanmlle's Scepsis.

The Almighty cast a pitying eye,

He saw the town's one half in rubbish lie. Dryden.

When the foundation of a state is once loosened,

the least commotion lays the whole in rubbish.

L' Estrange.

Knowledge lying under abundance of rubbish, his

scope has been to remove this rubbish, and to dress up crabbed matters as agreeably as they can. Daven.

That noble art of political lying ought not to lie any longer in rubbish and confusion.

Arbuthnot's History of John Bull.

The enemy hath avoided a battle, and taken a surer way to consume us, by letting our courage evaporate against stones and rubbish. Swift.

RUBBLE-STONE, n.s. From rub.

Rubble-stones owe their name to their being rubbed

and worn by the water, at the latter end of the de-

luge, departing in hurry and with great precipitation.

Woodward.

RUBENS (Sir Peter Paul), the most eminent

of the Flemish painters, was born in 1577, at

Cologne. His father, who was a counsellor in

the senate at Antwerp, had been compelled by the civil wars to seek refuge in Cologne, and, during his residence there, Rubens was born. He soon discovered a strong inclination for designing, and his mother, perceiving her son's bias, permitted him to attend the instructions of Tobias Verhaecht, a painter of architecture and landscape. He next became the pupil of Adam Van Ort, but his surly temper quickly disgusted Rubens, whose natural disposition was amiable. He then became the disciple of Octavio Van Vien, or Otho Venius, a painter of singular merit, and who was not only skilled in the princi-

•ples of his art but also distinguished for critical learning. Rubens now gave up his whole mind to painting, and soon equalled his master. To arrive at that perfection which he already beheld in idea, he travelled through Italy, visiting the most valuable collections of paintings and an tique statues witli which that country abounds. Having finished some fine paintings for the archduke Albert's palace, he was recommended by him to the duke of Mantua, by whom he was received with the most flattering marks of distinction, and where he studied the works of

Julio Romano. He next visited Rome, where he examined the productions of Raphael, and the pointings of Titian and Paul Veronese called him to Venice. He continued in Italy seven years. At length hearing that his mother was ill he hastened to Antwerp, but she died before his arrival. He married soon after, but, his wife dying in four years, he retired from Antwerp, and endeavoured to sooth his melancholy by a journey into Holland. His fame now spread over Europe. He was invited by Mary of Medicis queen of Henry IV. of France to Paris, where he painted the galleries in the palace of Luxemburg. These form a series of paintings which delineate the history of that princess ; and afford a decisive proof of his superiority in such compositions. At Paris he became acquainted with the duke of Buckingham, who employed him to explain to Isabella, the wife of Albert the archduke, the cause of the misunderstanding between the courts of England and Spain. In this employment Rubens acquitted himself so well, that Isabella appointed him envoy to the king of Spain, to propose terms of peace. Philip con-

ferred on him the honor of knighthood, and made him secretary to his privy council. Rubens returned to Brussels, and thence passed over into England in 1630 with a commission from the Catholic king to negociate a peace. He was successful, and a treaty was concluded, and Charles I. treated him with every mark of respect. Having engaged him to paint some of the apartments of Whitehall, he not only gave him a handsome sum of money, but, as an acknowledgment of his merit, created him a knight ; and the duke of Buckingham purchased of him a collection of pictures, statues, medals, and antiques, to the value of £10,000. He returned to Spain, where he was highly honored and rewarded for his services. He was made a gentleman of the king's bed-chamber, and secretary to the council of state in the Netherlands. Rubens, however, did not lay aside his profession. He returned to Antwerp, where he married a second wife called Helena Forment, a celebrated beauty. He died on the 30th of May 1640, aged sixty-three, leaving a large fortune to his children. The figure of Rubens was noble, his manners engaging, and

his conversation lively. He spoke several lan-
guages perfectly, and was an excellent statesman.
His house at Antwerp contained one spacious
apartment, in imitation of the rotunda at Rome,
adorned with a choice collection of pictures
which he had purchased in Italy; part of which
he sold to the duke of Buckingham. His inven-
tion was so fertile that, when he painted the same
subject several times, he always supplied some-
thing new. The attitudes of his figures are natu-
ral and varied, the carriage of the head is pecu-
liarly graceful, and his expression noble and
animated. He carried the art of coloring to its
highest pitch. The great excellence of Rubens
appears in his grander historical compositions ;
he touched them in such a manner as to give
them a lasting force, beauty, and harmony. Yet,

with all his merits, Rubens is accused of want of
correctness in designing. Though he had spent
seven years in Italy in studying those antiques
by which other celebrated artists had modelled

their taste; though he had examined them with such minute attention as not only to perceive their beauties, but to be qualified to describe them in a Dissertation which he wrote on that subject ; yet he seems never to have divested himself of that heavy style of painting, which, being peculiar to his native country, he had insensibly acquired. The astonishing rapidity, too, with which he painted, made him fall into inaccuracies, from which those works that he finished with care arc entirely exempted. Among his finished pieces is the Crucifixion, lately to be seen at Antwerp ; but of all his works the paintings in the palace of Luxemburg best display his genius and his style. Algarotti says, that he was more moderate in his movements than Tintoretto, and more soft in his chiaroscuro than Caravaggio ; but not so rich in his compositions, nor so light in his touches as Paul Veronese ; in his carnations less true than Titian, and less delicate than Vandyck. Yet he gave his colors the utmost transparency and harmony, notwithstanding their extraordinary deepness ; and he had a strength and grandeur of style en-

tirely his own.

RUBIA, in botany, madder, a genus of the

monogynia order, and tetrandria class of plants ;

natural order forty-seventh, stellatae : COR. is

monopetalous and campanulated ; and there are

two monospermous berries. There are seven

species, of which the most remarkable is the

R. tinctorum, or dyer's madder, so much used

by the dyers and calico-printers. This has a

perennial root and annual stalk ; the root is

composed of many long, thick, succulent fibres,

almost as large as a man's little finger ; these are joined at the top in a head like asparagus, and

run very deep into the ground. From the upper

part or head of the root come out many side

roots, which extend just under the surface of the

ground to a great distance, whereby it propagates

very fast ; for these send up a great number of

shoots, which if carefully taken off in the spring, soon after they are above ground, become so

many plants. These roots are of a reddish color,

somewhat transparent ; and have a yellowish pith

in the middle, which is tough and of a bitter

taste. From this root arise many large four cor-

nered jointed stalks, which in good land will

grow five or six feet long, and, if supported,

sometimes seven or eight ; they are armed with

short herbaceous prickles ; and at each joint are

placed five or six spear-shaped leaves ; their up-

per surfaces are smooth ; but their mid rib on

the under side is armed with rough herbaceous

spines, and the leaves sit close to the branches in whorls. From the joints of the stalk come out

the branches, which sustain the flowers : they

are placed by pairs opposite ; each pair crossing

the other ; these have a few small leaves towards

the bottom, which are by threes, and upwards

by pairs opposite : the branches are terminated

by loose branching spikes of yellow flowers,

which are cut into four parts resembling stars.

These appear in June, and are sometimes suc-

ceeded by seeds which seldom ripen in Eng-

land for any useful purpose connected with

dyeing or manufactures. Madder root is used

in medicine. It is an ingredient in the

icteric decoction of the Edinburgh pharma-

copeia. Madder colors the bones of animals

wiio have it mixed with their food : all the bones, particularly the more solid ones, are changed

both externally aud internally, to a deep red ; but neither the fleshy nor cartilaginous parts suffer-

ed any alterations : some of these bones mace-

rated in water for many weeks together, and

afterwards steeped and boiled in spirit of wine,

lost none of their color, nor communicated any

tinge to the liquors.

RUBICON, a river of Italy, anciently form-

ing the boundary between Italy and Gaul. Cre-

sar, by passing this river with his legions, and

thus quitting the province assigned him, was

deemed to have made war on the republic.

RUBIF1C, adj. -\ Lat. ruber and facto.

RU'BIFORM, adj. (Making red : having a red

RU'BIFY, v. a. ˆappearance : to make red :

RUBIF'IOUS, adi. J red.

While the several species of rays, as the rubific,

are by refraction separated one from another, they

retain those motions proper to each. Grew.

Of those rays, which pass close by the snow, the

rubiform 'will be the least refracted ; and so come to the eye in the directest lines. Newton's Opticks.

RU'BRIC, n. s. & adj. Fr. rubrique ; Lat.

rubrica. Directions printed in books of law

and prayer-books ; so termed, because originally

distinguished by being in red ink : red.

No date prefixed,

Directs me in the starry rubricks set. Milton.

They had their particular prayers according to the

several days and months ; and their tables or rvbrickt , to instruct them. Stillingfleet.

The rubrick and the rules relating to the liturgy

are established by royal authority, as well as the

liturgy itself. Nelson.

The light and rays which appear red, or rather

make objects appear so, I call rvirick or red making.

Newton.

What though my name stood rubrick on the walls.

Pope.

RUBUS, the bramble, a genus of the poly-

gamia order and icosandria class of plants ;

natural order thirty-fifth, senticosae : CAL. quin-

quefid, petals five ; the berry consisting of mono-

spermous acini or pulpy grains. The principal

species is the common raspberry, which, with its

varieties, demands culture in every garden for

the fruit; particularly the common red kind,

white, and twice bearing raspberry ; all of which

are great bearers : but, for the general planta-

tions, the common red and the white kind are

chiefly preferred ; planting also a share of the

twice bearing sort, both as a curiosity and for

the sake of its autumnal crops of fruit, which in favorable seasons ripen in tolerable perfection ; observing to allow all the sorts some open exposure in the kitchen garden, though they will prosper in almost any situation. The other species are considered as^lants of variety, for hardy plantations in the shrubbery. Some of them are also very ornamental flowering plants ; particularly the Virginian flowering raspberry, and the double blossomed bramble, which have great

merit as furniture for ornamental compartments; and the white berried bramble, which is a great curiosity. All the other species and varieties serve to diversify large collections.

RU'BY, n. s. Fr. rubis ; Span, rubi, from Lat. ruber. A precious stone of a red color.

Up, up fair bride and call
Thy stars from out their several boxes, take
Thy rubies, pearls, and diamonds forth, and make
Thyself a constellation of them all. Donne.

You can behold such sights,
And keep the natural ruby of your cheeks,

When mine is blanched with fear. Shalupebre.

Wounds, like dumb mouths, do ope their ruby

lips. Id.

Melpomene would be represented like a manly

lady, upon her head a dressing of pearl, diamonds,

and rubies. Peacham.

Thrice upon thy finger's tip,

Thrice upon thy rubied lip. Milton.

Desire of wine

Thou could'st repress, nor did the dancing ruby

Sparkling, out-poured, the flavour, or the smell,

Or taste, that cheers the hearts of Gods and men,

Allure thee from the cool crystalline stream. Id.

Crowns were on thy royal scutcheons placed,

With saphires, diamonds, and with rubies graced.

Drfjden .

HeVsaid to have a rich face and rubies about his

nose. Captain Jones.

RUBY, a precious stone, ranked by Jameson

under the head of the spinell, of the color of a

bright corn poppy flower. The balass, or pale

red inclining to violet; a species of sapphire.

There are rubies of different shades of color, but

that the most sought after should be scarlet, or

fire color ; it should be soft and velvety in ap-

pearance, and throw forth a glow lively and ar-

dent. When these qualities are eminently dis-

played, no stone is comparable thereto, and its

value surpasses even that of the diamond. The

spinell rubies are about half the value of dia-

monds of the same weight ; the balass is valued

at 30s. per carat ; a perfect ruby, if it weigh

more than three carats and a half, is of greater

value than a diamond of the same weight. It is

most frequently found very small ; its common

size being that of a large pin-head ; and is then very cheap ; but it is also found of four, six, or ten carats; and sometimes, though but very

rarely, up to twenty, thirty, or forty. It is never found of an angular or crystalliform shape, but

always of a pebble-like figure, often roundish,

sometimes oblong, and much larger at one end

than the other, and resembling a pear, usually

more or less flattened on one side. It is com-

monly so naturally bright and pure on the sur-

face as to need no polishing ; it is worn in rings, and in the crowns of princes, in its native state.

It is fusible with borax in a strong and long-

continued heat, running into a transparent glass

of a pale green color : the same effect is pro-

duced by microcosmic salt; but with potassa

the glass is opaque and differently colored. In the course of experiments made on precious stones, by order of the grand duke of Tuscany, rubies, in the heat which dissipated diamonds, were softened, and lost some of their color, but preserved their form and weight. By addition of a third lens, a further degree of fusion was

given to rubies. Even then rubies could not be made to unite with glass. By having been exposed to this heat, the surface of the rubies which had suffered fusion lost much of their original hardness, and were nearly as soft as crystal. But their internal parts, which had not been fused, retained their hardness. Rubies become electric by being rubbed. They are met with in the mountains of Pegu in the East Indies ; and at Ava, Calicut, and Brasil. They are found in the sands of rivers, in an argillaceous earth of a hard texture and greenish color ; sometimes they adhere to red rocks. The spinell rubies are met with in Hungary, Silesia, Bohemia, and Brasil. The balass comes principally from Brasil, though some are also brought from the East Indies. The largest ruby known was brought

from China to prince Gargarin, governor of Siberia. It came afterwards into the hands of prince Mentchikof, and is at present one of the ornaments of the imperial crown of Russia. According to Pliny, the ancients found considerable difficulty in engraving on this stone : many modern artists have essayed upon it, and among them one of the most successful is a German named Haefler.

RUD, v. a. Sax. ruiˆu, redness. To make red. Obsolete.

Her cheeks, like apples, which the sun had rudded. Spenser.

RUDBECK (Olaus), a learned Swedish physician, of an ancient and noble family, born in 1630. He became professor of medicine at Upsal, where he acquired great applause by his extensive knowledge; and died in 1702. His principal works are, 1. Exercitatio Anatomica, exhibens ductus novos hepaticos Aquosos, et vasa glandularum serosa, in 4to. He there claims the discovery of the lymphatic vessels. 2. Athlantica, sive Manheim, vera Japheti posterorum sedes ac patria, 3 vols. folio ; in which he en-

deavours to prove that Sweden was the country whence all the ancient Pagan divinities and our first parents were derived ; and that the Germans, English, French, Danes, Greeks, and Romans, with all other nations, originally came from thence.

RUDBECKIA, in botany, dwarf sunflower, a genus of the polygamia frustranea order, and syngenesia class of plants ; natural order forty-ninth, composita ; receptacle paleaceous and conical ; pappus consisting of a quadridentate margin : CAL. a double series of scaly leaves. Species nine, natives of America.

RUD'DER, n. s. Sax. rioSep; Belg. roeder. The instrument of steering a vessel ; any thing that guides or governs.

They loosed the rudder bands, and hoisted up the main-sail, and made towards shore. Acts xxvii. 40.

My heart was to thy rudder tied by the string,
And thou shouldst towe me after. Sliakspeare.

Those that attribute unto the faculty any first or sole power have therein no other understanding, than such a one hath, who, looking into the stern of a ship, and finding it guided by the helm and rudder, doth ascribe some absolute virtue to the piece of wood, without all consideration of the hand that

guides it. Raleigh's Hiitory «J' the l'»rtd.

For rhyme the rudder is of verses. Hitdibras.

Thou held'st the rudder with a steady hand,

Till safely on the shore the bark did land. Dryden.

The RUDDER, in navigation, is a piece of

timber turning on hinges in the stern of the ship, and which, opposing sometimes one side in the

water and sometimes another, turns or directs

the vessel this way or that. See SHIP BUILDING,

and NAVIGATION.

RUDDIMAN (Thomas), M. A., the gramma-

rian of Scotland, was born in 1674, at Raggel,

in Banff. His father, James Ruddiman, was a

farmer, and strongly attached to the house of

Stuart. His son was instructed in the principles

of Latin grammar at the parish school of Boyn-

die. At the age of sixteen he became anxious to

pursue his studies at the university ; but his

father, thinking him too young, opposed his in-

clination. Hearing of the competition trial an-

nually held at King's College, Aberdeen, for a

certain number of bursaries, Ruddiman, without

the knowledge of his father, set out for that city, where he presented himself as a candidate, and,

though he had neither clothes to give him a de-

cent appearance, nor friends to recommend him,

he gained the first prize. After attending the

university four years he obtained the degree of

M. A. He soon after engaged as a private tutor ;

and within a year accepted the office of school-

master of Laurencekirk. When Ruddiman had

spent three years and a half in this employment,

Dr. Pitcairne invited him to Edinburgh, and

promised him his patronage. When Ruddiman

arrived in Edinburgh, the advocates' library,

which had been founded eighteen years before

by Sir George Mackenzie, attracted his attention ;

and he was soon after appointed assistant keeper,

under Mr. Spottiswoode the librarian. His

salary for executing this laborious office was £8

6s. \d. ; and he received a present of £o Scots,

£4 3s. 4d. sterling, as a mark of respect from

the faculty ! When Ruddiman's merit became

better known his assistance was anxiously soli-

cited by those engaged in literary publications.

Freebairne, a respectable bookseller of that

period, prevailed upon him to correct and pre-

pare for the press Sir Robert Sibbald's Introductio ad historiam rerum a Romanis gestarurn in ea Borealis Britanniae parte quae ultra murum Picticuin est. He received for his labor £3 sterling. At the request of Mr. Spottiswoode, librarian, for £5 sterling, he contributed his aid to the publication of Sir Robert Spottiswoode's Practiques of the Laws of Scotland. In 1707 h,e commenced auctioneer, an employment not very suitable to the dignified character of a man of letters ; and published an edition of Voluseni de Animi Tranquillitate Dialogus, to which he prefixed the life of Volusenus. In 1709 he published Johnstoni Cantici Solomonis Paraphrasis Poetica, and Johnstoni Cantica with notes, which he dedicated in Latin verse to Dr. Pitcairne.

The philological talents of Ruddiman were next directed to a more important object. Freebairne proposed to publish a new edition of the Scottish translation of Virgil's #lneid by Gawin Douglas, bishop of Dunkeld. Ruddiman corrected the work and wrote the glossary. Ruddiman was now invited by the magistrates of Dundee to be rector of the grammar school of that town ; but

the faculty of advocates, anxious to retain him, augmented his salary to £30 6s. Qd. sterling, and he declined the offer. In 1711 he assisted bishop Sage in publishing Drummond of Hawthornden's Works. In 1713 Dr. Pitcairne died, and Ruddiman conducted the sale of his library, which was disposed of to Peter the Great. In 1714 he published the Rudiments of the Latin Tongue, which soon superseded all other books on the subject, and is still taught in all the grammar-schools in Scotland. It has also been translated into other languages. He was next called upon to publish the works of Buchanan. The value of these he enhanced much by his elaborate preface, his Tabula Regum Scotiae Chronologica, and Propriorum Nominum Interpretatio. Ruddiman also added a learned dissertation, entitled De Metris Buchanauaeis Libellus, and subjoined annotations, critical and political, on the History of Scotland. He had now been so long accustomed to superintend the press that he was led to erect a printing-office himself. In 1715 he commenced printer, in partnership with his brother Walter, who had been brought up to the

business. Some years after he was appointed printer to the university, with James Davidson, bookseller. In 1725 the first part of his Grammaticae Latinae Institutiones was published. The second part appeared in 1731. Ruddiman nex engaged in the management of a newspaper, the Caledonian Mercury. Mr. Ruddiman, after the death of Mr. Spottiswoode, librarian, remained for some time in his former station ; but was at length appointed keeper of the library, though without any increase of salary. In 1 739 he published Selectus Diplomatum et Numismatum Scotiae Thesaurus. This work was projected and begun by Anderson (hence called Anderson's Diplomata), but was finished by Ruddiman.

As Ruddiman had imbibed from his father his political prejudices in favor of the house of Stuart, he was not an unconcerned spectator of the civil commotions in 1745. He did not, however, take any active part in the Rebellion. He retired to the country ; and was engaged in writing Critical Observations on Burman's Commentaries on Lucan's Pharsalia. During the last seventeen years of his life Ruddiman was almost

incessantly engaged in controversy. He died in

Edinburgh on the 12th January, 1757, in his

eighty-third year. He was three times married,

but left behind him only one daughter, Alison,

who was married, in 1747, to James Stewart, esq.

RUD'DLE, n.s. Isl. rudul. Red earth.

Ruddle owes its color to an admixture of iron ;

and, as that is in greater or less proportion, it is of a greater or less specific gravity, consistence, or hard-

ness. Woodward.

RUD'DOCK, n. s. Lat. rubecula. A kind

of bird. The red-breast.

Of singing birds, they have linnets and ruddocks.

Carew.

RUDDY, adj. Sax. nu'&u. Approaching to

redness ; pale red.

The ruddiness upon her lip is wet ;

You'll mar it, if you kiss it. ShaJuveare.

We may see the old man in a morning,

Lusty as health, come ruddy to the field,

And there pursue the chase, as if he meant

To o'ertake time, and bring back youth again.

Otway.

New leaves on every bough were seen ;

Some ruddy coloured, some of lighter green.

Dryden.

A ciown of ruddy gold enclosed her brow,

Plain without pomp. Id.

Ceres, in her prime,

Seems fertile, and with ruddiest freight bedeckt.

Philip.*

If the flesh lose its ruddiness, and look pale and withered, you may suspect it corrupting.

II iMm'l Surgery.

If physic, or issues, will keep the complexion from inclining to coarse, or ruddy, she thinks them well employed. Law.

*R,\JDE,adj. * Sax. jieT>e ; Fr. rude;*

RCUF/LY, adv. [- Ital. rudu; Lat. rudis. Un-

HUDE'NESS, n. s. j taught ; barbarous ; rough ;

harsh : the adverb and noun substantive corre-

sponding.

Though I be rude in speech, yet not in knowledge.

2 CormUutau.

I would know what ancient ground of authority he

hath for such a senseless fable ; and if he have any of the rutle Irish books. S/w;iser.

With his truncheon he so rudely stroke

Cynocles twice, that twice him forced his foot re-

voke. Id.

Let be thy bitter scorn,

And leave the rudeness of that antique age

To them that lived therein in state forlorn. Id.

Ruffian let go that rude uncivil touch ;

Thou friend of an ill-fashion. Shaltspeare.

I that am not shaped for sportive tricks,

I that am rudely stampt, and want love's majesty

To strut before a wanton ambling nymph. Id.

This rudeness is a sauce to his good wit,

Which gives men stomach to digest his words

With better appetite. Id. Julius C&sar.

Vane's bold answers, termed rude and ruffian-

like, furthered his condemnation. Hay ward.

*What he did amiss was rather through nulem:^*

and want of judgment, than any malicious meaning.

Id.

In their so rude abode,

Not the poore swineherd would forget the gods.

*Chapman**

He was yet but rude in the profession of arms,

though greedy of honour. Wet ton's Buckingham.

Nor is there any nation in the world, now ac-

counted civil, but, within the memory of books, were utterly rude and barbarous. Wilkint.

Clouds pushed with wings rude in their shock.

Milton.

Such tools as art yet rude hath formed. Id.

Spring does to flowery meadows bring,

What the rude winter from them tore. \‘aller.

You can with single look inflame

The coldest breast, the rudest tame. Id.

The water appears white near the shore, and a

ship ; because the rude agitation breaks it into foam.

Bnyle.

It was the custom to worship rude and unpolished

stones. Stillingjleet.

To his country farm the fool confined ;

llude work well suited with a rustic mind. Dryden.

My muse, though rudely, has resigned’

Some faint resemblance of his godlike mind. Id.

The public will in triumphs rudely share,

And kings the rtidenes.1 ot their joy must b«ar. Id.

It has been so usual to wiite preface j, that a man is thought rude to his reader who does not give him some account beforehand.

RUD

You can hardly be too sparing of water to your

housed plants ; the not observing of this destroys

more plants than all the rudenesses of the season.

Evelyn’s Kalendar.

The rudeness, tyranny, the oppression and ingra-

titude of the late favorites towards their mistress,

were no longer to be born. Swift.

The rudeness, ill- nature, or perverse behaviour of

any of his flock, used at first to betray him into im-

patience ; but it now raises no other passion in him than a desire of being upon his knees in prayer to God for them. Law.

To win no praise when well-wrought plans pre-

vail,

But to be rudely censured when they fail ;

To doubt the love his favorites may pretend,

And in reality to find no friend. Cowper.

RUDES'BY, n. s. From rude. An uncivil

turbulent fellow. A low and deservedly obso-

lete word.

I must be forced

To give my hand, opposed against my heait,

Unto a mad-brain rudesby, full of spleen.

Shakspeare.

Out of my sight, rudesby, be gone. Id.

RU'DIMENT, n. s. } Fr. rudiment; Lat.

RUDIMEN'TAL, adj. $ rudimentum. The first

principles ; first elements of a science ; beginning

of any thing : the adjective corresponding.

Such as were trained up in the rudiments, and were so made fit to be by baptism received into the church, the fathers usually term hearers. Hooker.

To learn the order of my fingering,

I must begin with rudiments of art. Shukspeare.

Moss is but the rudiment of a plant, and the mould of earth or bark. Bacon's Natural Histinry.

He was nurtured where he was born in his first

rudiments, till the years of ten, and then taught the principles of musick. Wotton's Life of Villiers.

Thou soon shall quit

Those rudiments, and see before thine eyes

The monarchies of the' earth, their pomp, and state, Sufficient introduction to inform

Thee, of thyself so apt, in regal arts. Milton .

The rudiments of nature are very unlike the grosser appearances'. Glanvitle's Scepsis.

So looks our monarch on this early fight,

The' essay and rudiments of great success,

Which all-maturing time must bring to light.

Dryden.

Could it be believed that a child should be forced to learn the rudiments of a language which he is

never to use, and neglect the writing a good hand, and casting accounts? Locke.

The sappy boughs

*Attire themselves with blossoms, sweet rudiment**

Of future harvest. Philips.

Shall that man pretend to religious attainments

who is defective and short in moral'! which are but the rudiments, the beginnings, and first draught of

religion ; as religion is the perfection, refinement, and sublimation of

morality. South.

(ioil beholds the first imperfect rudiments of virtue in the soul, and keeps a watchful eye over it, till it has received every grace it is capable of.

Addison't Sfjectator.

Your first nnHiiiental essays in spectatorship were

made in my shop, where you often practised for hours Spectatot .

O come not ye near innocence and truth,

Ye worms that eat into the bud of youth !

InlVriintis ;is impure, your Ijlijjlitiii'^ power

in i'^ riol-m- nil llio pi |1 i

RUE

Such as the halteres, or rudiments of wings, of

some two-winged insects. Darwin.

RUE, v. a. ~\ Sax.neopj-ian. To grieve

RUE'FUL, adj. f for; regret; lament: the

RUE'FTJLLY, adv. £ derivatives all correspond-

RuE'FULNESS,n.s. 3 ing.

Thou temptest me in vain ;

To tempt the thing which daily yet I rue,

And the old cause of my continued pain,

With like attempts to like end to renew. Spenser.

You'll rue the time

That clogs me with this answer. Shakspeare.

When we have our armour buckled on,

The venomed vengeance ride upon our swords,

Spur them to rueful work, rein them from ruth. Id

Oh ! treacherous was that breast to whom you

Didst trust our counsels, and we both may rue

Having his falsehood found too late, 'twas he

That made me cast you guilty, and you me. Donne.

Thy will

Chose freely what it now so justly rues. Milton.

Cocytus, named of lamentation loud,

Heard on the rueful stream. Id. Paradise Lost.

Why should an ape run away from a snail, and

very ruefully and frightfully look back, as being afraid 1 More.

He sighed, and cast a rueful eye ,

Our pity kindles, and our passions die. Dryden.

I gaed a waefu' gate yestreen,

A gate, I fear, I'll dearly rue;

I gat my death frae twa sweet een,

Twa lovely een o' bonnie blue. Bums.

RUE, n. s. Fr. rue ; Lat. ruta. A herb, for-

merly called herb of grace, because holy water

was sprinkled with it.

What savor is better,

For places infected, than wormwood and rue 1

Tusser.

Here did she drop a tear ; here, in this place,

I'll set a bank of rue, sour herb of grace ;

Rue, even for Ruth, here shortly shall be seen,

In the remembrance of a weeping queen.

Shakspeare. Richard' II.

The weasel, to encounter the serpent, arms herself

with eating of rue. More.

RUE, in botany. See RUTA.

RUE, DOG'S. See SCROPHULARTA.

RUE (Charles de la), a French orator and

poet, born in Paris in 1643. He was educated

at the college of the Jesuits, where he became a

professor of humanity and rhetoric. In 1667

he composed a Latin poem on the conquests of

Louis XIV., which was so much esteemed by

Corneille that he translated it into French, pre-

sented it to the king, and passed such high

encomiums on the superior merit of the original

that the author was received into the favor of

that monarch. De la Rue became one of the

most eminent preachers of his age. He died in

Paris on the 27th of May, 1725, aged eighty-

two. He published Panegyrics, Funeral Ora-

tions, and Sermons. His best sermon is entitled

Des Calamities Publiques, and his most admired

funeral oration was composed on the prince of Luxemburg. There are also tragedies of his writing, both in Latin and French, which were approved by Corneille. He was one of those learned men who published editions of the classics for the use of the Dauphin. Virgil, which fell to his share, was published with notes, and a life of the poet, in 1675, 4to.

RUELLE', n. s. Fr. ruelle. A circle; an assembly at a private house. Not used.

The poet, who flourished in the scene, is condemned in the ruelle. Dryden's Preface to JEneis.

RUELLIA, in botany, a genus of the angiospermia order, and didynamia class of plants ; natural order fortieth, personatae : CAL. quinquepartite : COR. sub-campanulated ; the stamina approaching together in pairs : CAPS, springing asunder by means of its elastic segments. Species forty-six ; shrubs of Asia, Africa, and America.

RUFF, n. s. 1 Both from rough.

RUF'FLE, r.«.,t-.n.&n. s. $ A puckered linen ornament for the neck or wrists: to wrinkle;

disorder ; roughen ; discompose ; to grow rough

or turbulent : disturbance : ruff is also a river

fish.

We'll revel it

With ruffs, and cuffs, and fardingals. Shakspeare.

Naughty lady,

These hairs, which thou dost ravish from my chin,

Will quicken and accuse thee : I'm your host ;

With robbers' hands, my hospitable favours

You should not ruffle thus. Id.

Were I Brutus,

And Brutus Antony, there were an Antony

Would ruffle up your spirits, and put a tongue

In every wound of Caesar, that should move

The stones of Rome to rise and mutiny. Id.

The night comes on, and the high winds

Do sorely ruffle ; for many miles about

There's scarce a bush. Id.

A valiant son-in-law thou shalt enjoy ;

One fit to bandy with thy lawless sons,

To ruffle in the commonwealth of Rome. Id.

They would ruffle with jurors, and inforce them to

find as they would direct. Bacon's Henry VII.

Like an uproar in the town,

Before them every thing went down,

Some tore a ruff, and some a gown. Dray ton.

Sooner may a gulling weather spy,

By drawing forth heaven's scheme, tell certainly,

What fashioned hats, or ruffs, or suits next year,

Our giddy-headed antick youth will wear. Donne.

Within a thicket I reposed, when round

I ruffled up fallen leaves in heap, and found,

Let fall from heaven, a sleep interminate.

Chapman.

The knight found out

The' advantage of the ground, where best

He might the ruffled foe infest. Hudibrat.

We are transported by passions, and our minds

ruffled by the disorders of the body ; nor yet can we telt how ˆhe soul should be affected by such kind of agitations. CUtnville.

A ruff or pope is much like the pearch for shape, and taken to be better ; but will not grow bigger than a gudgeon : he is an excellent fish, and of a pleasant taste. Walton.

In changeable taffeties, differing colours emerge

and vanish upon the ruffling of the same piece of silk.

Boyle.

As she first began to rise,

She smoothed the ruffled seas, and cleared the skies.

Dry den.

The rising winds a ruffling gate afford. Id.

The fiery courser, when he hears from far

The sprightly trumpets and the shouts of war,

On his right shoulder his thick mane reef ned,

Ruffles at speed, and dances in the wind. Id.

How many prince? that, in the ruff of all their

RUF

glory, have been taken down from the head of a con-

quering army to the wheel of the victor's chariot !

L'Ettrange.

The ladies freed the neck from those yokes, those

linen rufft, in which the simplicity of their grand-

mothers had enclosed it. Addison's Guardian.

A small skirt of fine ruffed, linen, running along

the upper part of tht stays before, is called the

modesty -piece. Addison.

The tucker is a slip of fine linen, run in a small ruffle round the uppermost verge of the women's stays.

Id.

I reared this flower.

Soft on the paper ruff its leaves I spread. Pope.

Bear me. some god ! oh quickly bear me hence

To wholesome solitude, the nurse of sense :

Where contemplation prunes her ruffled wings,

And the free soul looks down to pity kings. Id.

Conceive the mind's perception of some object, and

the consequent ruffle or commotion of the blood. Watts.

RUFFHEAD (Dr. Owen), was the son of a baker in Piccadilly, who educated him for the law. He entered in the Middle Temple ; and, while be was waiting for opportunities to distinguish himself in his profession, he wrote a variety of pamphlets on temporary politics ; and was afterwards distinguished by his accurate edition of The Statutes at Large, in 4to. He now obtained good business, though more as a chamber counsellor in framing bills for parliament than as a pleader ; but his close application to study, with the variety of works he engaged in as an author, impaired his constitution. He died in 1769, aged forty-six. Some time before his death bishop Warburton engaged him to write his long promised Life of Alexander Pope ; which, however, when executed, was very far from giving general satisfaction.

RUFFIAN, n. s. & v. n. Teut. ruffian; Ital. ruffiuno; Fr. ruffien, a bawd. Perhaps, says Dr. Johnson, it may be best derived from the old Teutonic word which we now write

rough. A brutal, boisterous fellow; a cut-

throat; a robber: to play the ruffian.

Have you a ruffian that will swear ? drink ? dance ?

Revel the night ? rob 1 murder ? Shakspeare.

A fuller blast ne'er shook our battlements ;

If it hath ruffianed so upon the sea,

\hat ribs of oak when mountains melt on them.

Can hold the mortise ? Id. Othello.

Sir Ralph Vane's bold answers, termed rude and

r«/frjrt-like, falling into ears apt to take offence, furthered his condemnation. Hmyward.

The boasted ancestors of these great men.

Whose virtues you admire, were all such ruffiant ;

This dread of nations, this almighty Rome,

That comprehends in her wide empire's bounds

All under heaven, was founded on a rape.

Additon't Cato.

Experienced age

May timely intercept the ruffian lage ;

•Jonvene the tribes. Pope'$ Odyuey-

RUFINUS, a celebrated Italian, born about

the middle of the fourth century at Concordia.

He applied himself to the belles lettres, and

studied eloquence at Aquileia. He then devoted

himself to theology. St. Jerome happening to

pass through Aquileia, Rufinus formed aa intimate friendship with him ; but was soon deprived of his company, as he continued his travels through France and Germany, and then

set out for the east. Rufinus resolved to follow him ; embarked for Egypt ; and, having visited the hermits in the deserts, repaired to Alexandria to hear the renowned Didymus. The Arians, who ruled in the reiun of Valens, persecuted Rufinus : threw him into a dungeon, loaded him with chains, and, finally, banished him to the deserts of Palestine. From this exile he was relieved by St. Melania, who employed her wealth in ransoming those confessors who had been imprisoned or banished. He went next to Jerusalem ; and having built a monastery on Mount Olivet he there assembled a great number of hermits. He converted many to the Christian faith, and persuaded above 400 hermits who had joined in the schism of Antioch to return to the Catholic church. Rufinus, having published a translation of the principles of Origen, was summoned to appear before pope

Anastasius, at Rome. But he sent an apology for not appearing, with a vindication of his work, in which he attempted to prove that certain errors, of which Origen had been accused, were consistent with the opinions of the orthodox. St. Jerome attacked Rufinus's translation. Rufinus composed an elegant reply, in which he said that, being only the translator of Origen, he was not bound to sanction his errors. In 407 he returned to Rome ; but in 408, that city being threatened by Alaric, he retired to Sicily, where he died in 410. His works are, 1. A Translation of Josephus. 2. A Translation of several works of Origen. 3. A Latin Version of Ten Discourses of Gregory Nazianzen, and Eight of Basil. 4. A Translation of the Ecclesiastical History of Eusebius, which engaged him nearly ten years. He made many additions to the work, and continued the history from the twen-

tieth year of Constantine to the death of Theo-

dosius the Great. 5. A Vindication of Origen.

6. Two Apologies, addressed to St. Jerome.

7. Commentaries on the prophets Hosea, Joel,

arfd Amos. 8. Lives of the Hermits. 9. An

Explanation of the Creed.

RUFUS, the surname of William II. king of

England. See ENGLAND.

RUG, n. s. Swed. rugget, rough. A rough,

nappy, woollen cloth : a rough dog.

Mongrels, spaniels, curs,

Shoughes, water nigs, and demy wolves are cleped

All by the name of dogs. Shakspeare. Macbeth.

January must be expressed with a horrid and fear-

ful aspect, clad in Irish rug or coarse freeze.

Peacham on Drawing.

The vungus resembleth a goat, but greater and

more profitable ; of the fleece whereof they make rug, covenngs, and stuffs. Heylin.*

A rug was o'er his shoulders thrown ;

A rug ; for nightgown he had none. Su-ift.

RUGBY, a market town and parish of War-

wickshire, eighty-five miles from London, is

pleasantly situated near the Avon. Rugby is

chiefly remarkable for its celebrated grammar-school, founded in 1567. The church is a commodious structure, and there are places of worship for dissenters. Market on Saturday ; there are also some annual fairs.

RUG EN, an island of the Baltic, separated from Pomerania by the strait of Gellen. Its shape is so very irregular that no determinate

length or breadth would give any idea of its size, but it is calculated to contain 142,000 acres. It consists of the island Proper and three peninsulas, Jasmund on the north-east, Wittow on the north, and Monguth on the south-east. These different parts have several elevations, called mountains by the natives. The peninsula of Jasmund is terminated by a promontory of chalky cliffs, resembling the ruins of an immense building, interspersed with trees, and from which a torrent tumbles with impetuosity into the sea, above which the highest part of the promontory is 430 feet. The peninsula of Wittow fcalso

terminates in a similar but less elevated pro-

montory, named Arcona. Chalk predominates

in these two peninsulas ; the general soil of the

other parts is sand and clay mixed with shells;

blocks of granite are also met with, and the

north coast, in particular, is covered with pyrites, fragments of coral and jasper, and porphyry.

It also affords china earth and clays for pottery.

The island is well watered by lakes and rivu-

lets, and produces all kinds of grain and vege-

tables in the greatest abundance. It has good

horses and excellent horned cattle, but the sheep

are inferior. The wild animals are deer, hares,

and foxes. The Rugeners breed great quantities

of geese, which they smoke for exportation. In

the middle of the peninsula of Jasmund, 400

feet above the sea, is a large lake, near which

are several ancient mounds and ramparts of

earth, supposed by the natives to be the burying

places of the Huns, a number of earthen vases

being found in the mounds. These mounds, of

which there are others in various parts of the

island, are called Hunengraebre, which properly

signifies giant's grave : they are usually between

forty and sixty feet long. Rudely cut large

square stones are also met with in several parts of the island, which are supposed to have served as altars. The Rugeners are extremely industrious, the produce of the soil, their cattle, geese, and the herring fishery, supplying them with objects of foreign commerce, and which they export from some roads (the island having no port), and particularly from the village of Schaprode on the west. The annual export of corn from the island is 1600 lasts. The island has two towns and several villages. Bergen, the chief place, is near the north-east part of the island of Rugen Proper, and situated on an eminence that commands a view of the greater part of the island. It has from 1500 to 1600 inhabitants. Saagard, the second town, is on the interior of the peninsula of Jasmund, has 800 inhabitants, and near it is a mineral spring, resorted to both by the natives and strangers. The population of the island is 25,000.

Rugen belonged to Denmark from the twelfth to the fourteenth century, when it passed by convention to the dukes of Pomerania, whose house becoming extinct, Sweden got possession of its territories by the peace of Westphalia, in

1648, when Rugen was etected into a principality, to which was attached the office of grand huntsman of the empire. The language of the inhabitants is German, with a partial mixture of Swedish and Danish, and the manners and usages are the same as 'those of the north of Germany. The peasants, however, were not emancipated from a state of vassalage till 1806. This island was acquired by Prussia, with the rest of Pomerania, in 1814. The neighbouring parts of the continent being a monotonous level, the island of Rugen is visited for its picturesque beauties by many Germans, one of whom has elegantly celebrated the promontory of Arcona, the rocks of Jasmund, and its sacred woods and tumuli. The coasts are celebrated in the annals of shipwreck, scarcely a year passing without several vessels being stranded on the shores of the peninsulas and on Hidensee. Several ancient regulations are still in force respecting shipwrecks. When a vessel makes the signal of distress, the inhabitants of the coast are bound to hasten to her assistance, and first to endeavour to save the crew. The persons

who arrive first are entitled to a preference for

salvage, but none is to enfbrce his services if the crew is alone able to save the cargo. The small

islands dependent on Rugen are numerous ; the

principal is Hidensee on the west, whose inha-

bitants have little external communications ;

they speak a rude dialect of the high German,

mixed with many Danish, Swedish, and obso-

lete Teutonic words. Their occupations are

rearing a few cattle, whose dung is their princi-

pal fuel, the island having no wood ; fishing for

their subsistence, and collecting the amber which

is occasionally driven on the shores. Unmantz

island, also on the west, is next in consideration ; and all the others, amounting to upwards of a

dozen, are insignificant.

RUG'GED, adj. Swed. rugget. Rough; full

of unevenness or asperity.

His hair is sticking ;

His well-proportioned beard made rough and rugged

Like to the summer's corn by tempest lodged.

Shahspeare.

Now bind my brows with iron, and approach

The rugged'st hour that time and spite dare bring.

To frown upon the enraged Northumberland. Id.

Hardness and ruggedness is unpleasant to the touch.

Baciin.

Through forests wild,

To chase the lion, boar, or rugged bear. Fairfax.

Nature, like a weak and weary traveller,

Tired with a tedious and rugged way. Denham.

Fierce Talgol, gathering might,

With nigged truncheon charged the knight.

Hudibras.

Syrups immediately abate and demulce the hoarse-

ness and violence of a cough, by mollifying the

ruggedness of the intern tunick of the gullet.

Harvey.

A monosyllable line turns verse to prose, and

even that prose is rugged and unhaimonious.

Dry den.

This softness of the foot, which yields and fits

itself to the ruggedness and unevenness of the roads, does render it less capable of being worn. Ray.

The greatest favours to such an one neither soften

nor win upon him ; neither melt nor endear him, but leave him as hard, rugged, and unconcerned as ever.

South.

Since the earth revolves not upon a material and

rugged, but a geometrical plane, their proportions

may be varied in innumerable degrees. Benttey.

RUGENDAS (George Philip), a celebrated

painter, born at Augsburg, in 1666. He excelled

RUI

in painting sieges, battles, &c., though he painted

with the left hand. He died 1742.

RUGGLES (George), M. A., a dramatic

writer, who flourished in the reign of king

James I. He wrote a humorous Latin play,

entitled Ignoramus, which was acted before the

king on the 8th of March, 1615, at the university

of Cambridge.

RUG'IN, n. s. From RUG. A nappy cloth.

The lips grew so painful that she could not endure the wiping the ichor from it with a soft ruˆin with her own hand. Wiseman's Surgery.

RU'GINE, n.s. Fr. ruginc. A chirurgeon's

rasp.

If new flesh should not generate, bore little ori-

fices into the bone, or rasp it with the rugine.

Sharp.

RUGOSE', adj. Lat. rugosus. Full of

wrinkles.

It is a relaxation of the sphincter to such a de-

gree that the internal rugose coat of the intestine

turneth out, and beareth down. Wiseman's Surgery.

*RU'IN, n. *., v. a., & v.n.^1 Fr. mine; Lat.*

RTJ'INATE, v. a. j ruina. The fall

RUINA'TION, n. s. I or destruction of

RU'INER, \ edifices ; the re-

RU'INOUS, adj. I mains of such edi-

Ru'fNOUSLY, adv\ j fices ; destruction ;

mischief: to ruin and ruinate (the latter disused)

both mean to subvert ; destroy : ruin, verb neuter,

to fall into destruction : the other derivatives

correspond in sense.

Though he his house of polished marble build,

Yet shall it ruin like the moth's frail cell,

Or sheds of reeds, which summer's heat repel.

Sandys.

So shall the great revenger ruinate

Him and his issue by a dreadful fate. Id.

He parted frowning from me, as if ruin

Leant from his eyes. Shatepeare. Henry VIII.

Roman coins were overcovered in the ground, in

the sudden ruination of towns by the Saxons.

Camden's llemains.

The errors of young men are the ruin of business.

Bacon.

The Romans came to pull down kingdoms ; Philip

and Nabis were already ruinated, and now was his

turn to be assailed. Id.

It is less dangerous, when divers parts of a tower are decayed, and the foundation firm, than when the foundation is ruinous. Huyward.

What offence of such impietie

Hath Priam or his sonnes done thee? that with so

high a hate

Thou shouldst thus ceaselessly desire to raze and

ruinate

So well a builded town as Troy ? Chapman.

This Ulysses, old Laertes' sonne,

That dwells in Ithaca ; and name hath wonne

Of citie ruiner. Id.

If real uneasinesses may be admitted to be as de-

terring as imaginary ones, his own decree will retort the most ruinously on himself. Decay of Piety.

Havock, and soil, and min are my gain. Milton.

Hell heard the unsufFerablc noise ; hell saw

Heaven ruining from heaven, and would have fled

Affrighted, but strict fate had fixed too deep

Her dark foundations, and too fast had bound. Id.

The birds,

After a night of storm so ruinous,

Cleared up their choicest notes in bush and spray,

To gratulate the sweet return of morn. Id.

Loud rung the ruin, and, with boistrous fear,

Strait revelled in the queen's amazed ear.

Beaumont.

Those whom God to ruin has designed,

He fits their fate, and first destroys their mind.

Dry den.

A nation loving gold must rule this place,

Our temples ruin, and our rites deface. Id.

If we are idle, and disturb the industrious in their business, we shall ruin the faster. Locke,

The Veian and the Gabian towers shall fall,

And one promiscuous ruin cover all ;

Nor, after length of years, a stone betray

The^jHace where once the very ruins lay. Additon.

She would ruin me in silks, were not the quantity

that goes to a large pincushion sufficient to make her a gown and petticoat. Id.

Judah shall fall oppressed by grief and shame,

And men shall from her ruins know her fame.

Prior.

Those successes are more glorious which bring be-

nefit to the world, than such ruinous ones as are

dyed in human blood. Granville'i Preface.

A confident dependence ill grounded creates such

a negligence as will certainly ruin us in the end.

Wake.

Such a fool was never found,

Who pulled a palace to the ground,

Only to have the ruins made

Materials for a house decayed. Swift.

A stop might be put to that ruinous practice of

gaming. Id.

RUINART (Thierry, or Theodoric), a learned

French divine, born at Rheims in 1657. He

became a Benedictine monk in 1674. Mabillon

chose him for his assistant in his literary labors.

In 1689 he published ActaPrimorum Martyrum

Sincera, &c., 4to. He also published several

other learned works. When Mabillon died, in

1707, he was appointed to continue his work;

but died in travelling to Champagne, in quest of

new memoirs, in 1709.

RUIZIA, in botany, a genus of the polyandria

order, and monadelphia class of plants ; natural

order thirty-seventh, columniferae : CAL. double;

external triphyllous ; internal parted into five :

COR. consisting of five petals, inclining to the

right hand side, and adhering to the stamina,

which are from thirty to forty. It has ten styli, and as many capsulffi. These are compressed and membranous. In each capsule are two seeds. There are four species, viz. —

1. R. cordata. 2. R. laciniata. 3. R. lobata; and 4. R. palmata; all of which are natives of Asia, and the Cape of Good Hope.

RULE, n. s., v. a., &) Sax. nejjole ; Teut.

RU'LER, n. s. [v. n.] and Belg. regel; Ital. regola; Span, regla ; Lat. regula. Government; sway; empire ; any thing by which other things are regulated ; canon; precept; and, in an obsolete sense, regularity : as a verb active, to control ; govern ; manage ; or settle : as a verb neuter to have power or command, taking over before the object : a ruler is one who possesses superior power or command : any instrument of rule or guidance.

A wise servant shall have rule over a son that causeth shame. Proverbs xvii. 2.

Judah yet ruleth with God, and is faithful with the saints. llosea xi. 12.

He sought to take unto him the ruling of the affairs. 1 Mac.

Soon rulers grow proud, and in their pride foolish.

Sidney.

I am ashamed, that women

Should seek for rule, supremacy, or sway,

When they are bound to serve, love, and obey.

Shukxpeare.

Some say he's mad ; others,%that lesser hate him,

Do call it valiant fury ; but, for certain,

He cannot buckle his distempered cause

Within the belt of rule. Id.

It is a purposed thing

To curb the will of the nobility ;

Suffer't, and live with such as cannot rule,

Nor ever will be ruled. Id. Coriolanvs.

God, by his eternal providence, has ordained

kings ; and the law of nature, leaders and rulers

over others. Raleigh.

Adam's sin did not deprive him of his rule, but

left the creatures to a reluctation. Bacon.

How easily have these rulers discouraged a faint-

hearted people Bp. Hall's Contemplations.*

If your influence be quite dammed up

With black usurping mists, some gentle taper,

Though a rush candle from the wicker hole

Of some clay habitation, visit us

With thy long levelled rule of streaming light.

Milton.

Thrice happy men ! whom God hath thus ad-

vanced !

Created in his image, there to dwell,

And worship him ; and in reward to rule

Over his works. Milton's Paradise Lost.

He laid this rule before him, which proved of

great use ; never to trouble himself with the fore-

sight of future events. Fell.

We profess to have embraced a religion which

contains the most exact rules for the government of our lives. Tillotson.

Know'st with an equal hand to hold the scale ;

See'st where the reasons pinch, and where they fail, •Vnd where exceptions o'er the general rule prevail.

Dryden.

Rome ! 'tis thine alone with awful sway,

1 o rule mankind, and make the world obey,

Disposing peace and war thy own majestic way.

Id.

There being no law of nature, nor positive law of

God. that determines which is the positive heir, the right of succession, and consequently of bearing rule, could not have been determined. Locke.

We subdue and rule over all other creatures ; and

use for our own behoof those qualities wherein they excel. Bay.

They know how to draw a straight line between

two points by the side of a ruler. Moxon.

A judicious artist will use his eye, but he will

trust only to his rule. South's Sermon.*

This makes them apprehensive of every tendency

to endanger that form of rule established by the law of their country. Addison.

The pompous mansion was designed

To please the mighty rulers of mankind ;

Inferior temples use on either hand. Id.

Had he done it with the pope's license, his adver-

saries must have been silent ; for that's a ruled case with the schoolmen. Atterbury.

Seven years the traitor rich Mycena; swayed ;

And his stern rule the groaning land obeyed. Pope.

Instruct me whence this uproar ;

And wherefore Vanoe, the sworn friend to Rome,

Should spurn against our rule and stir

The tributary provinces to war? A. Philips Briton.

A rule that relates even to the smallest oart of our life is of great benefit to as, merely as it is a rule.

law.

It was not easy to determine by what rule of dis-

tinction the words of this dictionary were to be

chosen. Johnson. Plan of Dictionary.

B. I grant that men continuing what they are,

Fierce, avaricious, proud, there must be war ;

And never meant the rule should be applied

To him that fights with justice on his side. Coieper.

RULE, in a monastic sense, a system of laws

or regulations, whereby religious houses are go

verned, and which the religious make a vow at

their entrance to observe. Such are the rules of

the Augustins, Benedictins, Carthusians, Fran-

ciscans, &c.

RULES OF COURT, in law, are certain orders

made from time to time in the courts of law,

which attorneys are bound to observe, in order

to avoid confusion ; and both the plaintiff and

defendant are at their peril also bound to pay

obedience to rules made in court relating to the

cause depending between them. It is to be ob-

served that no court will make a rule for any

thing that may be done in the ordinary course ;

and that if a rule be made, grounded upon an

affidavit, the other side may move the court against it, in order to vacate the same, and thereupon

shall bring into court a copy of the affidavit and rule. On the breach and contempt of a rule of

court an attachment lies ; but it is not granted

for disobedience to a rule, when the party has not been personally served ; nor for disobeying a

rule made by a judge in his chamber, which is

not of force to ground a motion upon, unless the

same be entered.

RUM, n.s. From the liquor; often vulgarly

called kill-devil. A country parson. A cant

word, worthy the dean of St. Patrick's.

I'm grown a mere mopus ; no company comes,

But a rabble of tenants and rusty dull nans. Swift.

RUM, a species of vinous spirit, distilled

from sugar-canes. Rum, according to Dr. Shaw,

differs from simple sugar spirit, in that it con-

tains more of the natural flavor or essential oil

of the sugar-cane ; a great deal of raw juice and parts of the cane itself being fermented in the

liquor or solution of which the rum is prepared.

The unctuous or oily flavor of rum is often sup-

posed to proceed from the large quantity of fat

used in boiling the sugar; which fat, indeed, if

coarse, will usually give a stinking flavor to the

spirit in our distillations of the sugar liquor or

wash, from our refining sugar-houses ; but this

is nothing of kin to the flavor of the rum, which is really the effect of the natural flavor of the

cane. The method of making rum is this : — When

a sufficient stock of the materials is gathered to-

gether, they add water to them, and ferment

them in the common method, though the fer-

mentation is always carried on very slowly at

first ; because, at the beginning of the season for making rum in the islands, they want yeast or

some other ferment to make it work ; but by de-

grees, after this, they procure a sufficient quan-

tity of the ferment, which rises up as a head to

the liquor in the operation ; and thus they are

able afterwards to ferment and make their rum

with a great deal of expedition, and in large

quantities. When the wash is fully fermented,

or to a due degree of acidity, the distillation is carried on in the common way, and the spirit is

made up proof : though sometimes it is raised

10 a much greater strength, nearly approaching

to that of alcohol or spirit of wine ; and it is

then called double distilled rum. It might be

easy to rectify the spirit, and bring it to much

greater purity than we usually find it to be of;

for it brings over in the distillation a very large quantity of the oil ; and this

often so disagree-

able that the rum must be suffered to lie by a

long time to mellow before it can be used ;

whereas, if well rectified, it would grow mellow

much sooner, and would have a much less potent

flavor. The best state to keep rum in, both for

exportation and other uses, is that of alcohol or

rectified spirit. In this form it might be trans-

ported in one-half the bulk it usually is, and

might be let down to the common proof strength

with water when necessary : for the common use,

of- making punch, it would likewise serve much

better in the state of alcohol ; as the taste would be cleaner, and the strength might always be

regulated to a much greater exactness than in

the ordinary way. The only use to which it

•would not so well serve, in this state, would be

the common practice of adulteration among our

distillers ; for, when they want to mix a large

portion of cheaper spirit with the rum, their

business is to have it of the proof strength, and

as full of the flavoring oil as they can, that may drown the flavor of the spirits they mix with it,

and extend its own. If the business of rectify-

ing rum were more nicely managed, it seems a

very practicable scheme to throw out so much

of the oil as to have it in the fine light state of a clear spirit, but lightly impregnated with it :

in this case it would very nearly resemble arrack,

as is proved by the mixing a very small quan-

tity of it with a tasteless spirit, in which case

the whole bears a very near resemblance to ar-

rack in flavor. Rum is usually very much adul-

terated in Britain : some are so barefaced 'as to

do it with malt spirit ; but, when it is done with molasses spirit, the tastes of both are so nearly

allied that it is not easily discovered. The best

method of judging of it is by setting fire to a

little of it ; and, when it has burnt away all the inflammable part, examining the phlegm both by

the taste and smell.

RUM, an island of Scotland, one of the He-

brides, seven miles west of Eigg, and included

in the county of Argyll. It is about eight miles

long, and nearly as broad, containing a surface

of above 22,000 square acres of hilly, rocky,

and mountainous ground, chiefly fitted for pas-

ture. Great numbers of small Shetland sheep

are fed upon it, whose wool is remarkably fine.

This island formerly abounded with wood and

deer; but, the woods being destroyed, the deer

have disappeared. The only harbour is Loch

Serefort, which is spacious, and has good anchor-

age, from five to seven fathoms water.

RUM KEY, one of the Bahamas, situated

about eight or nine leagues east from the north

end of Long Island, and ten north from Great

Harbour. It is under cultivation at present,

and the acres of patented estates granted by the

crown for this purpose, previously to May 1803,

amounted to 11,738.

II use RIVER, a river of North America, having

RUM

its source in Le Mille Lac, thirty-five miles

south of Lower Red Cedar Lake, and falling

into .the Mississippi. It is about fifty yards

wide at its mouth, and the small Indian canoes

ascend quite to the lake.

RUM'BLE, v. n. Teut. rummelen ; Belg.

rommelen. To make a hoarse low noise.

. At the rushing of his chariots, and at the rumbling of his wheels, the fathers shall not look, back to their children for feebleness.

Jeremiah xlvii. 3.

The trembling streams, which wont in channels

clear

To rumble gently down with murmur soft,

And were by them right tuneful taught to bear

A base's part amongst their consorts oft,

Now forced to overflow with brackish tears,

With, troublous noise did dull their dainty ears.

Spemer.

Rumble thy belly fujl ; spit fire, spout rain ;

Nor rain wind thunder are my daughters ;

I tax not you, you elements, with unkindness.

Shahtpeare

Our courtier thinks that he's preferred whom every

man envies ;

When love so rumbles in his pate, no sleep comes in his eyes. Suckling.

Apollo starts, and all Parnassus shakes

At the rude rumbling Baralipton makes.

Rvscommon.

The fire she fanned, with greater fury burned

Rumbling within. Dryden.

On a sudden there was heard a most dreadful

rumbling noise within the entrails of the machine,

after which the mountain burst. Add'ucn.

Seve.ral monarchs have acquainted me, how often

they have been shook from their respective thrones by the rumbling of a wheel-barrow. Spectatur.

RUMELIA, or ROMELIA, a province of Eu-

ropean Turkey, containing all the north parts of

Greece and the capital of the Ottoman empire, Constantinople. It is one of the best peopled parts of Turkey : but so deficient are the Turks in statistical information, even in immediate reference to their own country, that the distribution of the inhabitants over its widely extended surface, and the comparative population of the different provinces, cannot be stated with precision. See TURKEY, for the best accounts we are able to obtain.

RUMEX, dock, in botany, a genus of the trigynia order, and hexandria class of plants ; natural order twelfth, holoraceffi : CAL. triphyllous; there are three connivent petals, and one quetrous seed. There are thirty-seven species, of which the most remarkable are these :

1. R. acutus, or sharp pointed dock (the oxylapathum of the shops). The roots of this are slender, and »run straight down, sending out a. few small fibres ; the stalks rise about two feet high, garnished at bottom with leaves four inches long, and one 'and a half broad in the middle. They are rounded at their base, where they are slightly indented, but end in acute points. From the joints of the stalks cpme out alternately long •

foot-stalks, which sustain the spikes of flowers,

which grow in small whorls round the stalks, at

about an inch distant.

2. R. alpinus, monk's rhubarb, grows natu-

rally on the Alps, but has long been cultivated

in the gardens of this country. It has large

roots, which spread and multiply by their offsets : they are shorter and thicker than the patientia,

are of a very dark brown on the outside, and

yellow within. The leaves are of the round

heart-shape, standing upon long foot-stalks. The

stalks rise from two to three feet high; they are

thick, and, have a few small roundish leaves on

the lower part, but the upper part is closely gar-

nished with spikes of white flowers standing

erect close to the stalks. These appear in the

end of May, and are succeeded by large trian-

gular seeds, which ripen in August.

3. R. aquaticus, the water-dock, grows natu-

rally in ponds, ditches, and standing waters, in

many parts of Britain. It is supposed to be

the herba Britannica of the ancients. It has

large roots, which strike deep into the loose mud,

sending out leaves about two feet long. The

stalks rise five or six feet high, when the plants grow in water, but in dryland seldom more than

three ; these are garnished wkh narrow leaves

among the spikes of flowers to the top. The

flowers stand upon slender foot-stalks, which are

reflexed ; they are of an herbaceous color, ap-

pear in June, and the seeds ripen in autumn.

4. R. patientia, patience rhubarb, was for-

merly much more cultivated in the British gar-

dens than at present. The root is large, and

divides into many thick fibres; their outer coyer

is brown, but yellow within, with some reddish

veins ; the leaves are broad, long, and acute-

pointed ; their foot-stalks are of a reddish color ; the stalks rise six or seven feet high, and divide towards the top into several erect branches, gar-

nished with a few narrow leaves, terminating

with loose spikes of large staminous flowers.

These appear in June, and are succeeded by

pretty large three-cornered seeds, whose cover-

ings are entire, which ripen in autumn. These

plants are but seldom cultivated ; and so easily

multiply by their numerous seeds that they soon

become troublesome weeds where they once get

an entrance.

RUMFORD. See ROMFORD.

RUMFORD, COUNT, so called from the title conferred on him by the elector of Bavaria, was born in Woburn, New England, in 1752. His name was Benjamin Thompson. He acquired, when young, a knowledge of natural philosophy, by the aid of the professor of that science in the college of Cambridge. He then employed himself as a teacher, till he was raised to independence by an advantageous marriage, when he became a major in the militia of his native province ; and when the war took place between Great Britain and her colonies, his local knowledge enabled him to render services of importance to the English commanders. He went to England, and, as the reward of his services, obtained a situation in the foreign office, under lord. George Germaine. Towards the close of the war, he was sent to New York, where he raised a regiment of dragoons, "of which he was appointed colonel, and thus became entitled to half-pay. Returning to England in 1784, he received the honor of knighthood, and was for some time one of the under secretaries of state.

Soon after, he went to the continent, and, through the recommendation of the prince of Deux-Ponts (afterwards king of Bavaria), entered into the service of the reigning elector-palatine and duke of Bavaria, when he effected many important and useful reforms in both the civil and military departments of the state. Among these was a scheme for the suppression of mendicity, which he carried into execution at Munich and other parts of the Bavarian territories, providing labor for able-bodied paupers, and exciting a spirit of industry among the lower orders of the people in general. As the re\vard of his success in this and other undertakings, he received from the sovereign of Bavaria various orders of knighthood, was made a lieutenant-general, and created count Rumford. He left Bavaria in 1799, and returned to England, where he employed himself in making experiments on the nature and application of heat, and on other subjects of economical and philosophical research. He likewise suggested the plan, and assisted in the foundation, of the royal institution, which led to other establishments of a

similar description. In 1802, he removed to Paris, where he took up his residence ; and, his wife being dead, he married the widow of the celebrated Lavoisier; but the union proved unfortunate, and a separation ere long took place. Count Kumford then retired to a country house at Auteuil, about four miles from Fans, and there devoted his time to the embellishment of his domain, and to the cultivation of chemistry and experimental philosophy. Though he disliked both the character and politics of the French, he preferred the climate of their country to every other ; and he therefore procured permission from the king of Bavaria to continue in France, and retain the pension of 1200 pounds a year, granted him by that prince. He died in August, 1814, leaving by his first wife a daughter, who resided at Boston, in the United States. Count Rumford was by no means a man of learning, his literary acquirements being confined to the English, French and German languages ; but he was familiar with the discoveries and improvements of modern science, and the industry and perseverance with which he pur-

sued his inquiries enabled him to make considerable additions to our knowledge of chemistry and practical philosophy. Besides a great number of papers in various scientific journals, he published four volumes of Essays, experimental, political, economical, and philosophical.

RU'MINANT, adj: } French iruminer;

RU'MINATE, v. n, & v. a. > Lat. rumino. Hav-

*RUMINA'TION, n. *.) ing the power of chewing the cud : to chew the cud : hence to muse; reflect: as a verb active, to chew over again ; muse on : the noun substantive corresponding.*

The condemned English
Sit patiently, and inly ruminate
The morning's danger. Shalupeart.

Mad with desire she ruminates her sin,
And wishes all her wishes o'er again ;
Now she despairs, and now resolves to try,
Would not, and would again, she knows not why.
Dry den.

Ruminant creatures have a power of directing this perisialtick motion upwards and downwards.
Ray.

RUMINANT, in natural history, is applied to an animal which chews over again what it has eaten before. Peyer, in a Treatise De Ruminantibus et Ruminatione, shows that there are some animals \vhich really ruminate, as oxen, sheep, deer, goats, camels, hares, and squirrels ; and that there are others which only appear to do so, as moles, crickets, beetles, crabs, mullets, &c. The latter class, he observes, have their stomachs composed of muscular fibres, by which the food is ground up and down as in those which really ruminate. Mr. Ray observes that ruminants are all four-footed, hairy, and viviparous ; some with hollow and perpetual horns, others with deciduous ones.

RUM'MAGE, v. a. Fr. remuage ; Germ. ranmen, to empty, — Skinner. To search ; plunder ; evacuate.

I have often rummaged for old books in Little-Britain and Duck-lane. Swift.

RUM'MER, n. s. Sax. riumoji; Dan. and

Belg. roemer. A large glass ; a drinking cup.

RUMNEY. See ROMNEY.

*RU'MOR, n. *. &,t;. a. > Fr. rumeur ; Lat.*

RU'MORER. $ rumor. Flying or

popular report ; fame : to report or bruit abroad : the noun substantive corresponding.

'Twas rumoured,

My father 'scaped from out the citadel. Dryden.

RUMP, n. g. Belg. romp ; Teut. rumpff.

The end of the back bone ; used of beasts, and

contemptuously of human bemgs.

He charged him first to bind,

Crowdero's hands on rump behind. Hudibras.

RUMPHIA, in botany, a genus of the mono-

gynia order, and triandria class of plants : CAL.

trifid ; the petals three ; the fruit a trilocular

plum. Soecies one only, a tree of the East

Indies.

RUM'PLE, v. a. & n. s. Sax. ppym|>elle ;

Belg. rompelen ; Teut. rumpsel. To crush or

contract into wrinkles : the wrinkle or fold

made.

RUMSEY. See ROMSEY.

*RUN, v. n., v. a. & n. *.^\ Sax. ninnan ; Goth.*

*RUN'AGATE, n. *. (and Swed. rinna ;*

RUJN'AWAY, 4 Teut. and Belg. ren-

. RUN'NER. J nen. To move swiftly,

or at a quick pace ; pass on the surface of

the ground; have course; rush; emit; flow;

stream; be liquid, fluid, or fusible; melt;

vanish : hence to pass in thought or word ; be

mentioned cursorily ; be known popularly ; go

on ; proceed ; tend ; go on violently or irregu-

larly ; taking after, away, away with, on, over,

and out before the object : as a verb active, to

drive ; force ; stab ; pierce ; trace ; melt ; pro-

secute ; venture ; venture against law ; taking

down before the object. This verb, as Johnson

says, may be observed always to retain much of

its primitive idea, and to imply progression, and,

for the most part, progressive violence ; a run is

a course of motion ; the act of running : flow ; cadence; general reception ; modish clamor : 'at

the long run,' in fine, in the result : a runagate and runaway alike signify a fugitive ; a rebel ;

apostate ; one who flies from danger : runner, a

racer or messenger; a shooting sprig; the mov-

ing stone of a mill.

Laban raw out unto the man unto the well.

Genesis xxiv. 29.

Joseph is a fruitful bough, whose branches run

over the wall. Id. xlix. 22.

The Lord sent thunder, and the fire rare along upon the ground. Exodus ix. 25.

Whether his flesh run with his issue, or be stop-

ped, it is his uncleanness. Leviticus xiii. 3.

God bringeth the prisoners out of captivity; hut

letteth the runagates continue in scarceness.

Psalm Ixviii. 6.

Their feet rim to evil, and make haste to shed

blood. Proverbs.

Running under the island Clauda, we had much

work to come by the boat. Acts xxvii. 16.

They run the ship aground. Id. xxvii. 41.

Many have run out of their wits for women.

1 Esdras iv.

The wretch" compell'd, a runagate became,

And learned what ill a miser state doth breed.

Sidney.

If, through our too much security, the same should

run on, soon might we feel our estate brought to

those lamentable terms, whereof this hard and heavy

sentence was by one of the ancients uttered.

'Hooker.

This proud Turk offered scornfully to pass liy

without vailing, which the Venetian captains not

enduring, set upon him with such fury that the

Turks were enforced to run both their gallies on

shore. hnolles't Hitter y.

Neither was, he ignorant what report run of liim-

self, and how he had lost the hearts of his subjects.

h iwtle.*

My conscience will serve me to run from this Je»v, my master. Shakspeare. Ulerchunt of Venice.

My statues,

Like a fountain, with a hundred spouts,

Did run pure blood. Id. Julius Caesar.

A hound runs counter, and yet draws dry food well.

Shakspeare.

If you suspend your indignation against my

brother, till you can derive from him better testi-

mony of his intent, you should run a certain course.

Id. Kuiy Lear.

If thou rememberest not the slightest folly

That ever love did make thee run into,

Thou hast not loved. Id. As You Like It.

Fore-spent with toil, as runners with a race,

I lay me down a little while to breathe. Shahtpeare From growing riches with good cheer,

To running out by starving here. Id.

Poor Romeo is already dead, run through the ear

with a love song. Id. Itomeo and Juliet.

Thou runaway, thou coward, art thou fled ?

Speak in some bush ; where dost thou hide thy head 1

Shakipeare.

As Cain, after he had slain Abel, had no certain

abiding ; so the Jews, after they had crucified the Son of God, became runagates. RiMyk.

The difference between the valour of the Irish

rebels and the Spaniards was, that the one nm innni before they were charged, and the other straight

after. Eacim.

In some houses wainscots will sweat, so that they

will almost run with water. Id.

The owner hath incurred the forfeiture of eight

years' profits of his lands, before he cometh to tlie knowledge of the process that runneth against him.

1

A man's nature runs either to herbs or weeds ;

therefore let him seasonably water the one, and.

destroy the other. '<'•

Hunning on with vain prolixity. Drinjton.

RUN

The priest and people run about,

And at the ports all thronging out,

As if their safety were to quit

Their mother. Ben Jonson.

He hath run out himself, and led forth

His desperate party with him ; blown together

Aids of all kinds. Id. Catiline.

Discourses ran thus among the clearest observers :

it was said that the prince, without any imaginable stain of his religion, had, by the sight of foreign courts, much corroborated his judgment.

Wotton's Buckingham.

Thirst of fame makes them seek to climb to heaven ; it makes them not fear to run down headlong to hell.

Bp. Hall.

The rest dispersed run, some disguised,

To unknown coasts : some to the shores to fly.

Daniel.

Insectile animals, for want of blood, run all out

into legs. Hammond.

The king's ordinary style runneth, our sovereign

lord the king. Saunderson.

We have many evils to prevent, and much danger

to run through. Taylor.

The zeal of love runs out into suckers, like a fruit-

ful tree. Id. Rule of Holy Living.

Take here her reliques and her gods, to run

With them thy fate, with them new walls expect.

Denham.

He would himself be in the Highlands to receive

them, and run his fortune with them. Clarendon.

Rivers run potable gold. Milton.

Day yet wants much of his race to run. Id.

Hath publick faith, like a young heir,

For this taken up all sorts of ware,

And run into every tradesman's book,

Till both turned bankrupts ? Hudibras.

They, when they're out of hopes of flying,

Will run away from death by dying. Id.

Customs run only upon our goods imported or ex-

ported, and that but once for all ; whereas interest runs as well upon our ships as goods, and must be yearly paid. Child.

Hath falsehood proved at the long run more for

the advancement of his estate than truth 1 Tillotson.

The greatest vessel, when full, if you pour in

still, it must run out some way, and the more it

runs out at one side, the less it runs out at the other.

Temple.

Since death's near, and runs with so much force,

We must meet first, and intercept his course.

Dry den.

He ran up the ridges of the rocks amain. Id.

Her form glides through me, and my heart gives

way;

This iron heart, which no impression took

From wars, melts down, and runs, if she but look.

Id.

Could you hear the annals of our fate ;

Through such a train of woes if I should run,

The day would sooner than the tale be done Id.

His grisly beard his pensive bosom sought,

And all on Lausus ran his restless thought. Id.

The estate run out, and mortgages are made,*

Their fortune rui-ned, and their fame betrayed. Id.

The common cry

Then ran you down for your rank loyalty. Id.

Here those that in the rapid course delight,

The rival runners without order stand. Id.

They ran down a stag, and the ass divided the prey very honestly. L'Estrange.

Wickedness may prosper for a while, but, at the

long run, he that sets all knaves at work, will pay them. Id.

The ass sets up a hideous bray, and fetches a rttn at them open mouth. Id.

If there remains an eternity to us, after the short revolution of time we so swiftly run over here, 'tis clear that all the happiness that can be imagined,

in this fleeting state, is not valuable in respect of the future. Locke.

That punishment follows not in this life the breach of this rule, and consequently has not the force of a law, in countries where the generally

allowed prac-

tice runs counter to it, is evident. Id.

Thoughts will not be directed what objects to pur-

sue, but run away with a man in pursuit of those

ideas they have in view. Id.

Though putting the mind unprepared upon an un-

usual stress may discourage it, yet this must not run it, by an overgreat shyness of difficulties, into a lazy sauntering about ordinary things. Id.

I shall run the danger of being suspected to have

forgot what I am about. Id.

A talkative person runs himself upon great incon-

veniences, by blabbing out his own or others' secrets.

Bay.

If the richness of the ground cause turnips to run to leaves, treading down the leaves will help their rooting. Mortimer.

In every root there will be one runner, which hath little buds on it, which may be cut into. Id.

The mill goes much heavier, by the stone they call the runner being so large. Id.

Your iron must not burn in the fire ; that is, run or melt ; for then it will be brittle. Moxon.

Study your race, or the soil of your family will

dwindle into cits, or run into wits. Tatler.

The world had not stood so long, but we can still run it up to artless ages when mortals lived by plain nature. Burnet.

It is no such hard matter to convince or r?.m down a drunkard, and to answer any pretences he can allege for his sin. South.

See daisies open, rivers run. Parnel.

Some papers are written with regularity ; others

run out into the wildness of essays. Spectator.

Hipparchus, going to marry, consulted Philander

upon the occasion ; Philander represented his mis-

tress in such strong colours, that the next morning

he received a challenge, and before twelve he was run through the body. Id.

The dire example ran through all the field,

Till heaps of brothers were by brothers killed.

Addison.

As wax dissolves, as ice begins to run,

And trickle into drops before the sun,

So melts the youth. Id. Ovid.

As fast as our time rum, we should be very glad

in most parts of our lives that it ran much faster.

Addison.

Virgil, in his first Georgick, has run into a set of precepts foreign to his subject. Id.

This church is very rich in relicks, which run up

as high as Daniel and Abraham. Id.

If we run over the other nations of Europe, we

shall only pass through so many different scenes of poverty. Id.

Some English speakers run their hands into their

pockets, others look with great^attention on a piece of blank paper. Id.

It is impossible for detached papers to have a ge-

neral run of long continuance, if not diversified with humour. Id.

The time of instance shall not commence or run

till after contestation of suit. Ayliffe's Parergon.

I would gladly understand .the formation of a soul, and run it up to its punctum saliens. Collier.

This run in the head, of a late writer of natural RUN 80

history, who is not wont to have the most .ucky hits in the conduct of his thoughts. Woodward.

I have known several instances, where the lungs

run through with a sword have been consolidated and healed. Blackmore.

It is a confederating with him, to whom the sacri-

fice is offered ; for upon that the apostle's argument -uns. Atterburii.

O that I could now prevail with any one to count

up what he hath got by his most beloved sins, what a dreadful danger he runs. Colamy.

On all occasions, she run out extravagantly in

praise of Hocus. Arbuthnot.

The whole runs on short, like articles |in an ac-

count, whereas, if the subject were fully explained,

each of them might take up half a page.

Id. on Coins.

Searching the ulcer with my probe, the sinus run

np above the orifice. Wiseman > Surgery.

Our king returned,

The muse ran mad to see her exil'd lord ;

On the cracked stage the bedlam heroes roared.

Granville.

Raw and injudicious writers propose one thing for

their subject, and run off to another. Felton.

The purest gold must be run and washed. Id.

What is raised in the day, settles in the night, and "ts cold runs the thin juices into thick sizy substances.

Cheyne.

She saw with joy the line immortal run,

Each sire imprest, and glaring in his son. Pope.

Magnanimity may run up to profusion or extrava-

gance. Id.

Run in trust, and pay for it out of your wages.

Swift.

A horse-boy, being lighter than you, may be

trusted to run races with less damage to the horses.

Id.

When we desire any thing, our minds run wholly

on the good circumstances of it ; when 'tis obtained, our minds run wholly on the bad ones. Id.

To Tonson or Lintot his lodgings are better

known than to the runners of the post-office.

Id. to Pope.

Heavy impositions lessen the import, and are a

strong temptation of running goods. Swift.

You cannot but have observed what a violent run

there is among too many weak people against uni-

versity education. Id.

He shows his judgment, in not letting his fancy

run out into long descriptions. Broome on Odystey.

He no where uses any softness, or any run of verses to please the ear. Id.

In the middle of a rainbow the colors are suffi-

ciently distinguished ; but near the borders they run into one another, so that you hardly know how to

limit the colors. Watts.

Religion is run down by the licence of these times.

Berkeley.

He will no more complain of the frowns of the

world, or a small cure, or the want of a patron, than he will complain of the want of a laced coat, or a running-horse. Law.

Though Ramus run in with the first reformers of

learning in his opposition to Aristotle ; yet he has given us a plausible system. Baker.

RON, an extensive salt morass of Hindostan,

which bounds the western frontier of Gujerat,

and communicates with the gulf of Cutch, seve-

ral hundred miles in length. It is supposed to

have been formerly covered by the sea, but af-

fords excellent pasture, and some fine horses. It

belongs to several petty chiefs.

RU.N

RUND'LET, n. s. Perhaps runlet or round-

let. A small barrel.

Set a rundlft of verjuice over against the sun in

summer, to see whether it will sweeten. Bacon

The angels did not fly, but mounted the ladder by

degrees ; we are to consider the several steps and rundles we are to ascend by. Duppa.

The third mechanical faculty, styled, axis in peri-

trochio, consists of an axis or cylinder, having a run-

die about it, wherein are fastened divers spokes, by which the whole may be turned round.

Wilkins't Mathematical Afagick.

RUNGS, in a ship, the same with the ground

timbers ; being the timbers which constitute her

floor ; and are bolted to the keel, whose ends are rung-heads.

RUNGPOOR, or Takhut Koondy, is an

extensive district of Bengal, situated about

26° N. lat., bounded on the north by the

Bootan mountains, and on the east by the

Brahmapootra. It produces rice, sugar, silk,

indigo, hemp, and tobacco. The glandular

swellings of the throat are very prevalent here.

Besides the Brahmapootra, it is watered by the

Teestah and Durlah. Its chief towns are Rung-

pore, Guzgotta, and Mungulhaut. This district

was taken possession of, and colonised by the

Mahometans in the thirteenth century, and was

always governed by a foujedar or military collector. Between 1730aud 1740 it was ruled by Sayed Ahmed, nephew of Aly Verdy Khan, who is accused of having been very oppressive, and compelling the rajahs of Dinagepore and Couch Behar to pay him tribute. It is now governed by a civil establishment of judge, collector, &c., and is subservient to the court of circuit and appeal of Dacca. Couch Behar is included in this collectorship.

RUNGPORE, the capital of the above district, is situated on the eastern bank of the Goggot, is a very regular built town, and carries on a considerable trade with Bootan, Assam, and Calcutta. The judge and collector reside at Nuwalgunge, about a mile from the town. Long. 89° 5′ E., lat. 25° 47′ N.

RUKGPORE, an extensive fortress of Gergong, the ancient capital of Assam. It is situated on an island, and can only be approached by a bridge, which was built some centuries ago.

RUN'NEL, n. s. From run. A rivulet ; a small brook.

With murmur loud, down from the mountain's

side,

A little runnel tumbled neere the place. Fairfax.

RUNNER, in the sea language, a rope belong-

ing to the garnet and the two bolt tackles. It

is reeved in a single block joined to the end of a pendant : it has at one end a hook to hit'h into

any thing ; and at the other a double block, into which is reeved the fall of the tackle, or the gar—

net, by which means it purchases more than the

tackle would without it.

RUN'NET, n. s. Sax. jenunnen, coagulated.

A liquor made by steeping the stomach of a calf

in hot water, and used to coagulate milk tor

curds and cheese. It is also written llENM.r,

which see.

The milk of the fig hath the quality of a runner to gather cheese. Baan': Natural History.

HUP

It coagulates the blood, as ruitnet turns milk.

. Tlie milk in the stomach of calves, coagulated by the runnet, is rendered fluid by the gall in the duo-

denum. Arbtithnot.

RUNNET, or RENNET. See RENNET.

RUNNINGTON (Charles), serjeant-at-law,

Itorn in Hertfordshire in 1751. He was in 1768

placed with a special pleader, who employed

him in a digest of the law of England. He was

called to the bar in 1778, and in 1787 to the degree of Serjeant In 1815 he was appointed commis-

sioner for the relief of insolvent debtors, which

office he resigned in 1819, and died at Brighton,

January 18, 1821. Mr. Runnington published

Hale's History of the Common Law, 2 vols. ;

Gilbert's Law of Ejectments, 8vo. ; Ruffhead's

Statutes at Large, 4 vols. 4to.; History of the

Legal Remedy by Ejectment, and the Resulting

Action or Mesne Process, 8vo.

*RUNMON,n. *. Fr. rognant, scrubbing. A*

paltry wretch.

You witch ! you polecat ! you nmnion '.

Shukspeare.

RUNNYMEAD,a celebrated mead, near Eg-

ham, in Surrey, where king John was compelled

to sign Magna Charta, the great charter of Eng-

lish liberty, and the Charta de Foresta. See

ENGLAND.

RUNT, n. s. Runte, in the Teutonic dia-

lects, signifies a bull or cow, and is used in con-

tempt by us for small cattle ; as the Welsh term

kefyl, a horse, is used for a worthless horse.

Johnson. — Goth, rian, rant, Thomson. Any

small animal ; below the natural growth of the kind.

Reforming Tweed

Hath sent us runts even of her churches breed.

Cleaveland.

Of tame pigeons, are croppers, carriers, and runts.

Walton.

This overgrown runt has struck off his heels, lowered his foretop, and contracted his figure.

Adduon.

RUPEE, a silver coin current in the East Indies, worth about 2s. fid. See COINS.

RUPERT, prince palatine of the Rhine, and grandson of king James I. of England, was born in 1619. In 1642 he came over into England, and offered his services to king Charles I., his uncle, who gave him a command in his army. At Edgehill he charged with incredible bravery, and made a great slaughter of the parliamentarians. In 1643 he seized the town of Cirencester ; obliged the governor of Litchfield to surrender; and, having joined his brother prince Maurice, reduced Bristol in three days, and passed to the relief of Newark. In 1644 he

marched to relieve York, where he gave the par-

liamentarians battle, and entirely defeated their

right wing; but Cromwell charged the marquis

of Newcastle with such an irresistible force that

the royalists were at length entirely defeated.

After this the prince retired to Bristol, which

surrendered to Fairfax after a gallant resistance.

The king was so enraged at the loss of this city, so contrary to his expectation, that he recalled

all prince Rupert's commissions, and sent him u

pass to go out of the kingdom. In 1648 he

went to France, was highly complimented by

that court, and kindly received by king Charles

II., who was there at the time. Afterward he

was constituted admiral of the king's navy : in-

fested the Dutch ships, many of which he took;

and, having engaged with De Ruyter, obliged

him to fly. He died in 1682, and was interred

in king Henry VII.'s chapel, Westminster, witli

great magnificence. He seldom engaged but he

gained the advantage, which he generally lost by

pursuing it too far. He was better qualified to

storm a citadel, or even to mount a breach, than

patiently to sustain a siege. He took the hint of his discovery of mezzotinto, it is said, from a soldier scraping his rusty fusil. The first mezzotinto print ever published was the work of his hands, and may be seen in the first edition of Evelyn's Sculptra. The secret is said to have been soon after discovered by Sherwin, an engraver, who made use of a loaded file for laying the ground. The prince, upon seeing one of his prints, suspected that his servant had lent him his tool, which was a channeled roller ; but, upon receiving full satisfaction to the contrary, he made him a present of it. The roller was afterwards laid aside ; and an instrument with a crenelled edge, shaped like a shoemaker's cutting knife, was used instead of it. He also invented a metal called by his name, of which guns were cast.

RUPERT'S DROPS, a sort of glass drops with long and slender tails, which burst to pieces on the breaking off those tails in any part ; invented by prince Rupert. Their explosion is attended in the dark with a flash of light ; and, by being boiled in oil, the drops are deprived of their explosive quality.

RUPPIN, NEW, a town of Brandenburg,

Prussia, in the government of Potsdam, on a

lake of the same name. It is regularly built, the

streets intersecting each other at right angles, and has a high church, high school, council-house,

barracks, hospital, a workhouse, and a very large

building for exercising the troops. It contains

4600 inhabitants, besides a garrison. The prin-

cipal employments, are weaving woollen, tan-

ning, and making gloves. Old Ruppin is a

small town a little farther to the north, with

1000 inhabitants. Thirty-five miles N. N. W. of

Berlin.

RUP'TION, 7i. s. } Latruptus.

RUP'TURE, n. s., v. a., 8c v. n. j Breach; so-

lution of continuity : the act of breaking; hernia : to break ; suffer disruption.

The egg,

Bursting with kindly rupture, forth disclosed

Their callow young. Hilton.

A lute string will bear a hundred weight without

rupture, but at the same time cannot exert its elasti-

city. Arbuthnot.

'I he plenitude of vessels or plethora causes an

extravasation of blood by ruption or apertion.

Wiseman.

The rupture of the groin or scrotum is the most

common species of hernia. Sharp's Surgery.

The vessels of the brain and membranes, if rup-

tured, absorb the extravasated blood. Sharp.

When the parties, that divide the commonwealth,

come to & rupture, it seems every man's duty to chuse a side. Swift.

G

RURAL ARCHITECTURE.

RU RAL, adj. Yr. rural; Lat. rwra, ruralis.

Country ; existing in the country, not in cities ;

suiting or resembling the country.

Lady, reserved to do pastor company honour,

Joining your sweet voice to the rural uiusick of desert.

Sidney.

Here is a rural fellow,

That will not be denied your highness' presence;

He brings you figs. Shaktpeare. Cymbetine.

We turn

To where the silver Thames first rural grows.

Thomson.

The summit gained behold the proud alcove

That crowns it ! yet not all its pride secures

The grand retreat from injuries impressed

By rural carvers, who with knives deface

The pannels, leaving an obscure rude name,

In characters uncouth, and spelled amiss. Cowper,

RURAL ARCHITECTURE. The application of

such architectural science as was then in prac-

tice, to the accommodation of the agriculturist,

must have taken place at a very early period of

human history. We have already (see the ar-

ticle AGRICULTURE) endeavoured to trace the his-

tory of agricultural improvements generally —

our business in this and the succeeding article

is strictly practical ; and will relate to the most expedient methods which have been suggested

•n modern times for farm buildings, and the ge-

neral economy of a farm.

On the first of these subjects the reader may

further consult the article FARM, where the laying

out of farm lands, and the construction of the

principal farm erections, are dwelt upon. In the

present article, the smallest farm-house and

farm-cottages will engage our attention ; farm-

stables, buildings for the accommodation of

stock, poultry-houses, barns, straw-houses, cart-

sheds, &c.

1. Of the smaller farm-house and farm-cot-

tages.— The smallest farm-house will be that in

•which the farmer keeps no servant, and culti-

vates a few acres. Such a house should consist

of an entry or porch at the end, and ranging by

the side of a dairy and pantry ; a kitchen of

good size, say twelve to fifteen feet square ; a

parlour of equal size ; a light closet off the parlour and at the opposite end of the house to the

dairy ; tool-house adjoining it ; staircase and

cellar under; poultry-house, and three bed-rooms

up stairs. The ground plan of such a house is

given in Plate RURAL ARCHITECTURE, fig. 1.

A farm-house forming a medium between this

and that of what may be called a professional

farmer is given in figs. 2 and 3. Here the

farmer is supposed to keep a servant, who is

domesticated with him, and the poultry and

tool-house are in the yard. It contains an en-

trance and stair (a) ; kitchen, closet, and oven

(6) ; back kitchen (c) ; dairy (rf) ; parlour (r) ; bedroom (/); with three bedrooms and a garret

up stairs, and a cellar under.

In larger farm-houses the servants' rooms

have been recommended to be quite distinct

from the house. Where farms are large, and

consequently a great number of servants wanted,

particularly where they are unmarried, suitable

and convenient rooms for sleeping in, and,

where they find their own provisions, for pre-

paring and dressing them in, are not merely

requisite, but of considerable advantage to t! > e

farmer, as well as the men, as they save mucK

time, which would otherwise be lost, in going

to their meals ; besides keeping them together

in a sober, steady state, ready for their different employments. In this way, too, the servants

are a great deal more comfortable, and live far

more cheaply than when they go to the public-

houses to eat their meals, as is much the case in the southern parts of the kingdom. But incon-

veniences of this kind are probably the best

guarded against by having such servants, when

it can be done, in the houses of the farmers, in

which cases the eating-rooms for them should

be so placed as that a facility may be given ot

overlooking them. But the rooms for lodging

in should, at the same time, be quite detached

and distinct, such persons being frequently care-

less and negligent of their candles and fires, be-

sides being irregular in other parts of their con-

duct. In whatever situations such rooms may be erected, the ground-floors should be formed of stone, brick, or some other incombustible material, while the upper ones are laid with plaster, as in some of the' midland districts.

Mr. J. Wood, of Bath, has suggested cottages of four classes, for laborers, having from one to four rooms each. . See his Series of Plans for Cottages. They chould be constructed, he says, on the following principles :

' The cottage should be dry and healthy ; this is effected by keeping the floor sixteen or eighteen inches above the natural ground ; by building it clear of banks, on an open spot of ground, that has a declivity or fail from the building ; by having the rooms not less than eight feet high — a height that will keep them airy and healthy ; and by avoiding having chambers in the roof.

• *They should be warm, cheerful, and comfortable. In order to attain these points, the walls should be of a sufficient thickness (if of stone, not less than sixteen inches ; if of brick, at least a brick and a half) to keep out the col J*

of the winter, or the excessive heat of the sum-

mer. The entrance should be screened, that

the room, on opening the door, may not be ex-

posed to the open air; the rooms should receive

their light from the east or the south, or from any point betwixt the east and the south ; for, if they receive their light from the north, they will be

cold and cheerless; if from the west, they will

be so heated by the summer's afternoon sun, as

to become comfortless to the poor laborer, after

a hard day's w ork ; whereas, on the contrary

receiving the light from the east or the south,

they will be always warm and cheerful. So like

the feelings of men in a higher sphere are those

of the poor cottager, that if his habitation be

warm, cheerful, and comfortable, he will return

to it with gladness, and abide m it with pleasure

' They should be rendered convenient, by

having a porch or shed to screen the entrance,

and to hold the laborer's tools ; by having a shed to serve as a pantry, and store-place for fuel;

by having a privy for cleanliness and decency's

sake ; by a proper disposition of the windows,

doors, and chimneys ; by having the stairs,

where there is an upper floor, not less than three I-U' UA L AKCM LIT ECTU WE,

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RURAL ARCHITECTURE.

feet wide, the rise or height not more than eight

.tiches, and the tread or breadth not less than

nine inches ; and, lastly, by proportioning the

size of the cottage to the family that is to inhabit it; there should be one lodging-room for the

parents, another for the female, and a third for

the male children ; it is melancholy, he says, to

see a man and his wife, and sometimes half a

dozen children, crowded together in the same

room ; nay, often in the same bed ; the horror

is still heightened, and the inconveniency in-

creased, at the time the woman is in child-bed,

•or in case of illness, or of death ; indeed, whilst the children are young, under nine years of age,

there is not that offence to decency, if they sleep in the same room with their parents, or if the

boys and girls sleep together, but after that age

they should be kept apart.

‘ Cottages should not be more than twelve

feet wide in the clear, that being the greatest

width that it would be prudent to venture the

rafters of the roof, with the collar-pieces only, without danger of spreading the walls ; and, by using collar-pieces, there can be fifteen inches in height of the roof thrown into the upper chambers, which will render dormer-windows useless.

Cottages should be always built in pairs, either at a little distance from one another, or close adjoining, so as to appear one building, that the inhabitants may be of assistance to each other, in case of sickness or any other accident.

‘ For economy, cottages should be built strong, and with the best of materials, and these materials well put together ; the mortar must be well tempered and mixed, and lime not spared : hollow walls bring on decay, and harbour vermin ; and bad sappy timber soon reduces the cottage to a ruinous state. Although cottages need not be fine, yet they should be regular ; regularity will render them ornaments to the country, instead of their being, as at present, disagreeable objects.

‘ A piece of ground should be allotted to every cottage, proportionable to its size ; the cottage

should be built in the vicinity of a spring of

water — a circumstance to be attended to ; and,

if there be no spring, let there be a well.'

' Humanity,' Beatson well observes, 'shudders

at the idea of an industrious laborer, with a wife, and perhaps five or six children, being obliged

to live, or rather exist, in a wretched, damp,

gloomy room, of ten or twelve feet square, and

that room without a floor ; but common decency

must revolt at considering that over this wretched

apartment there is only one chamber, to hold

all the miserable beds of this miserable family.

And yet instances of this kind, to our shame be

it spoken, occur in every country village. How

can we expect our laborers or their families to

be healthy, or that their daughters, from whom

%ve are to take our future female domestics,

should be cleanly, modest, or even decent, in

such wretched habitations ?'

The last writer describes an economical stair-

case for cottages, in which every step is divided

into two parts, half of it being just double the

height of the other half. In ascending his stair

tht left foot is set on the left step, and the right foot on the right, alternately to the top of the

stair. It is clear, therefore, that as the steps for the right and for the left foot are in the same

line, and although neither foot rises each time

higher than seven inches and a half above the

other, yet every time that one foot is moved, it

rises fifteen inches higher than it was before. In

a stair of this kind, if each tread or breadth for the foot be nine inches, and each rise of the one foot above the other seven inches and a half, as-

each foot rises the height of two steps, or fifteen inches, every time it is moved, it is plain that

six steps of this kind will rise as high as twelve in the common way, and will require only one

half the size of a hatch or opening in the floor

above, that would be required for those twelve

steps as usually constructed. This will be of

advantage, where much is required to be made

of little room, and will of course give more

space to the chambers above.

In addition to our better farm-houses, given

under the article FARM, we may here subjoin the

elegant design of a very commodious and ample

farmery given in the General Report of the

Agricultural State of Scotland : — The dwelling-

house contains two parlours, fig. 4 (a, 6); kitchen ©; dairy (d); pantry (c); dining parlour (/);

bed-rooms (g, A); cellars (i). The farmery con-

sists of cart-sheds and granary over (a); riding

horse stable (6) ; common stable (c) ; stalled cat-

tle (d) ; places for tools and other articles of the cattle attendant (e) ; entrance from the spacious

root or turnip shed (/); straw (g); threshing-

machine and water-wheel (A); granaries and

straw-lofts over (g, /, ni) ; tools and sundries (i) ; smith's shop (f), and carpenter (&).

2. Of farm stables. — Stables of all kinds should

be situated on dry hard ground ; and, if possible, on an ascent, for the sake of drainage : the win-

dows or some openings should be made to the

north or east, that the north winds may be let in in the summer to cool them, and the rising sun

all the year round. Close window-shutters are

always a valuable addition.

Farm stables should of course be contiguous

to those other offices with which they are natu-

rally connected. Beatson objects to the mode of

making the racks and mangers of a farm stable

run quite' across the upper end of the stall. Ser-

vants, he observes, in order to save trouble, are

very apt to stuff the racks full of hay, however

large they may be, from which many bad conse-

quences arise, and much hay is lost or destroyed

by being pulled down and mixed with the litter.

Besides, various bad effects result from the prac-

tice of suffering horses to be continually stuffing themselves with hay, as is well known to those who are accustomed to the proper management of such animals ; as under their directions they are never permitted to have much hay in their racks at a time. Another disadvantage also attends this mode of fitting up stalls, especially for farm-houses, as it ought to be the object to preserve, every thing ; the hay-seeds are totally lost. And, by the practice of placing the racks with so much inclination outwards, the seeds are also very apt to fall into the horse's ears and eyes, which often cause disagreeable effects. For these reasons it is said that racks should

have a perpendicular direction, not having a space of more than fourteen or sixteen inches from the wall ; the bottom being sparred, in order to let the seeds fall down through below, whence they may be removed by a sort of sliding shutter. These advantages may also be neatly and conveniently obtained by leaving niches in

the walls for the racks, on which plan the spars

will be equal with the insides of the walls.

Where the niches and racks are made in the

middle of the stalls, two feet, or two feet and a half wide, will in most cases be sufficient ; they

should, however, be carried down low enough

to admit of a small box or drawer being placed

under them, for the reception of the hay-seeds.

Racks of this sort may likewise be placed in the

corners of the stalls, and be made in such a way

as that one niche may serve two stalls. And

they may be placed in the angles of the stalls

without having any niche, and may be made of

a semicircular form. But, in whatever way they

are formed, there should constantly be a division

betwixt them, which is probably best made of

deal. Where the racks are put in the corners of

the stalls, it may perhaps be more advantageous

to have them straight than circular ; but, in which-

ever way they are formed, the farmer should

always have a hatch fixed for each stall, as by

that means a great deal of time may be saved in

feeding his horses. If the above methods be

adopted, it must be unnecessary to make a

manger of the same width with the stall ; as a

box or drawer, sixteen or eighteen inches long, and twelve or fourteen inches wide, will answer every intention perfectly well. But it should be so contrived that it may be readily taken out and cleaned whenever it is fouled, or becomes furred with dirt. With the fixed mangers this can never be done.

There is another method of making stalls, which, as being cheaper and more economical, deserves to be regarded by the farmer : on this plan the stable has neither racks nor mangers; the head of the stall is boarded about three feet from the ground, having a space of about two feet from the wall, in which the hay is to be deposited, the horse pulling his hay from below, instead of drawing it from above ; which is not only more natural, but prevents the waste of hay, much of which drops down and is lost when the horse eats from a rack. But even in this construction it will be necessary to have the bottom sparred within eight or ten inches of the ground, and a box, hopper, or hay-manger and drawer, so contrived as to receive the seeds of the hay : where there are double stalls, the boxes may be divided in the middle. Single stalls, where they

can be conveniently made, should however al-

ways he preferred, as being much more safe and

convenient in different points of view, both for

the horses and persons employed about them.

The paving of stables is a matter of great im-

portance, though it ha? been hitherto but little

attended to : and whether the stall should have

a slight declivity, or be perfectly level, has not

rerliaps yet been so fully considered as it ought,

t would appear to be more natural and easy for

these animals to stand and rest themselves on a

level surface, than on one that is sloping, as it is evident that the tendons or sinews of the pastern

joints must be kept more upon the stretch in the

latter than in the former case. The main diffi-

culty in regard to a level stall has been the con-

veying away of the moisture; but this may be

effected by paving the stall perfectly level, and

leaving a small drain in the middle, extending

within two or three feet of the upper end ; but

which should not be more than seven or eight

inches wide at top, forming an angle at the bot-

tom. The depth at the end nearest the head of

the stall need not be more thaji three or four

inches, having as much slope as can be con-

veniently given it backwards, in order that it

may carry the moisture off quickly to the main

drain, into which all the stall-drains should have

a fall, and the moisture be discharged. And the

small stall-drains must also be covered with a

piece of good strong oak-plank, in which a great

number of holes are bored, and which must be

so fastened as to admit of its being readily raised up and let down; as by this means the drains

may be washed, and kept clean and sweet, as

often as they are found to be furred up and ob-

structed. Besides these, main drains must be

made at the end of the stalls, or in some other

convenient situation, for carrying off the moisture

into the general receptacle. Where they are

*placed at the bottoms of the stalls, th*ey should*

not be closer to the stalls than two feet, in order that the stale of mares may get readily into them, which would not be the case if they were nearer,

unless the pavement behind the stalls was made

to decline a little towards them. These main

drains need not be more than seven or eight

inches wide at the top ; but they should be

covered with plank, in which holes are perfo-

rated for conveying away the moisture and wet-

ness. But, with the view of saving the expense

of making main drains within the stable, a shallow open drain may be made in the common way, with which the stall drains may communicate by means of very small grates at the ends. And it should be observed that the pavements or floors of the stalls should have a very slight declination from their sides towards the drains, to prevent moisture standing on them ; an inch, or an inch and a half in the whole, will however be quite sufficient for these purposes.

In regard to the sizes of stalls, it may be noticed that they differ much according to circumstances ; but four feet and a half in width are the least they should ever be made, and five feet are much better. The divisions between them should be high, so that strange horses may not see each other. But where stallions are kept, or young horses required to be left loose in a stall, they should be so enclosed as to be incapable of doing mischief. And, for these purposes,

one or more stalls may be sparred to the top,

or doors provided, which may be hung to the

back posts of the stable. Where this last method

is followed, the stalls serve extremely well for

keeping different mares and their foals separate

from others, as well as many other useful pur-

poses in the business of horse-management with

the farmer.

The writer of the East Ix>thian Agricultural

Survey has remarked that sometimes stalls are

made double ; and, as farm-horses generally work

in pairs, each pair that work together have one

of these double stalls ; for horses are social ani-

mals, and it is said they feed better, and are more cheerful, when they live in society. But even in

this case it is proper they should be fastened to

the opposite sides of the stall, and that each

horse should have his own rack and his own

manger ; for, although they may seem to have a

very great attachment to each other, yet, if the

dividing of their food is left to themselves, it is more than probable they will quarrel about it,

and that the strongest horse will have the best

share. But such farm-stables as contain only one

row of stalls, with one horse in each stall, are,

on the whole, the most useful and convenient ;

and if the stalls are sufficiently large, and the

divisions between them raised sufficiently high,

not wilh spars, as often is the case, but with

boards closely joined, each horse will be allowed

to eat his proportion of corn and hay equally,

and allowed to take the necessary rest, without

danger of being disturbed by a troublesome

neighbour. The stable ought to be well paved,

and of a sufficient breadth to leave a space of at least six or seven feet behind each horse, for a

safe passage to the servants in hanging the harness upon the wall, &c. The pavement should de-

cline very gradually from the horse's head back-

wards, towards the channel at his heels, which

should also decline, in the same gradual manner,

towards one end of the stable, where the urine

may be received into a reservoir. Proper open-

ings should also be left in the walls, for the pur-

pose of ventilation ; these should be fitted with

sliding or flap-boards, opened in the morning,

when the horses go out to work, and shut in the

evening : in this way the stables will be properly ventilated ; and every risk of cold, from having

these openings uncovered during the night, be

avoided.

In some cases the racks are fixed about four-

teen inches from the walls, with but very little,

if any, slant ; having their bottom parts laid with small spars, or thin narrow pieces of wood, in an

open manner, so that the hay seeds can fall down

through between them, and be received in a

drawer or box, made for the purpose below,

where they are capable of being drawn or taken

out at pleasure. A small box, or trough, is

placed in some convenient part, answering the

purpose of a manger, and which is sometimes

made as a drawer, to put in and draw out as

there may be occasion. The divisions of the

stalls sometimes rise pretty high at the head

parts in the ordinary way ; and, at other times,

in a curving manner at the upper ends, from the

tail-posts to nearly the ceilings of the stables ;

and flap-doors, the height of the lower parts of

the divisions, are sometimes fastened with hinges

to posts, or the walls behind the horses. In

other instances, the racks are placed in half-cir-

cular niches or recesses in the walls of the

stables, opposite the divisions of the stalls ; each niche being made to serve

two stalls, by having a division in the middle betwixt them ; and the racks themselves are sometimes made in half-circular forms. The same kind of half-circular racks are occasionally also put in the angles or corners of the stalls, without any niches; there being divisions between them, so as that they may serve two stalls : but the racks, in these cases, have not always the half-circular form, but are made and fixed up in a straight manner. In all these cases, small drawers or boxes serve as mangers, for the horses to eat their provender out of, as may be necessary.

There is sometimes a hopper sort of contrivance in stables, where neither racks nor mangers are employed, which is broad at the top, and has about fourteen inches width in the bottom part ; being sparred, in order that the seeds may drop through into a drawer made for the purpose below. In each corner there is a small box for corn, which serves as a manger ; the hopper part being divided in the middle, so as to serve two stalls as hay-mangers. This is a neat and convenient mode in some cases, though rather

expensive in making and putting up. There are still other contrivances in fitting up racks and stalls for preventing the unnecessary waste of labor and food, as well as to guard against the inconvenience of hay seeds falling into the eyes and ears of horses, which have been suggested by experienced farmers in other countries. In one set of contrivances, in this intention, the racks are placed in an upright manner, and the perpendiculars of them are made to fall on the inner edges of the troughs below, which have shelving leaves. In these cases, when the animals pull out the hay from the racks, the waste parts fall on the leaves, and thus slide down into the troughs, where they are secured from bdng spoiled by the breath of the horses ; while the distance between the bottoms of the racks and the troughs is quite sufficient for the admission of the heads of the horses, so as that they may get at the hay which is dropped. The racks, in these cases, are two feet four inches in depth, and two feet at top from the edge parts of them ; being planed within, in order that the hay may fall to the bottoms of the racks gradually, in proportion as it diminishes in quantity, and the

animals he saved the trouble of a long reach,

which they are often obliged to make in the

stables which are fitted up in the old usual man-

ner. The animals are fed and supplied with

the fodder from the entry, which is six feet in

width ; the hay being dropped through a trap-

door from the store-room above the stable. This

plan is the suggestion of Mr. West, an intelli-

gent North American farmer. Another plan of

this kind has been proposed by Mr. Cooper of

the United States, in which the racks of the stalls of the stables have a somewhat different construc-

tion and position, being formed with what are

called flats, or thin strips or pieces of wood. In these the advantages are supposed to be very

great, as the upright flats prevent the horses from wasting the hay, as well as from blowing upon

it ; and, besides, the animals are prevented from

looking round, a habit to which horses are much

accustomed when any person enters the stable ;

neither can they thrust their heads over the

troughs, as the flats compel them to feed directly

over them, without turning to either side. This

mode of fitting up the stalls of stables may be

found of much utility, in different situations and

circumstances, in the management of both sad-

dle, farm, and team-horses. At Holkham Mr

Coke has his mangers themselves, it is said by the writer of the corrected agricultural account of that district, plated with sheet-iron ; and the front edges, which are rollers, covered with tin-plates. The bottoms of the stall divisions are made of slate. It has also been found that for stables, as well as all other offices, those locks which have copper wards are the best, as -being much more durable than any other kinds.

Stable lofts for saddle as well as for farm, team, and carriage-horses, are also fitted up with different sorts of machinery and contrivances for preparing and reducing the different articles of food, which such horses arc to have, into the most proper, and economical forms. These are, for the most part, straw or chaff-cutters, bean, barley, or malt-crackers, and oat-crushing and bruising machines. Such contrivances are often of very great utility and convenience, when properly managed, and put up in such stable buildings, or the rooms connected with them ; and

particularly where other more valuable uses are to be made of straw, pea and bean-haum, and other similar materials, than that of merely littering animals. They are likewise useful in saving much labor, by their being always ready and at hand.

A lofty stable is recommended by White (Treatise on Veter. Med. p. 1), fifteen or twenty but never less than twelve feet high, with an opening in the ceiling for ventilation. The floor he prefers is brick or limestone, inclining not more from the manger to the gutter than an inch in a yard. Some litter, he says, should always be allowed for a horse to stale upon, which should be swept away as often as is necessary. This, with a pail or two of water, thrown upon the floor, and swept off while the horse is at exercise, will keep the stable perfectly clean, and free from offensive smells. The depth of a stable should never be less than twenty feet, nor the height less than twelve. The width of a stall should not be less than six feet clear. But, when there is sufficient room, it is a much better plan to allow each horse a space of ten or twelve feet, where he may be loose and exercise himself a little. This will be an effec-

tual means of avoiding swollen heels, and a

great relief to horses that are worked hard.

With respect to the rack and manger, White

prefers the former on the ground rising three

feet high, eighteen inches deep from front to

back, and four feet long. The manger, eighteen

inches deep, eighteen inches from front to back,

and five feet in length. The rack he prefers

being closed in front. ‘ Farm stables in Scot-

land,’ says the editor of The Farmer’s Maga-

zine, ‘ are constructed in such a manner that all

the horses stand in a line, with their heads to-

wards the same side wall, instead of standing in

two lines, fronting opposite walls, as formerly.

Those lately erected are at least sixteen feet wide within walls, and sometimes eighteen, and the

width of each stall upon the length of the stable

is commonly five feet. To save a little room,

>;t:ills of nine feet are sometimes made to hold

two horses, and, in that case, the manner and the

wjrlth of the stall are divided into equal purls

l

stall from another. By this contrivance, each

horse indeed eats his food by himself; but the

expense of single stalls is more than compen-

sated by the greater ease, security, and comfort of the horses.

It may be of importance to observe here that stables should be better lighted than is commonly the case, as the blindness which is so frequently met with among horses has really been attributed, and not without probability, to an excess of the stimulus of light on their coming out of dark or dusky stables. Another practical hint.

Farm-stables are mostly, during -the summer months, much exposed to the open air, the doors, wickets, or windows of them being very seldom shut, except at night, and then but rarely; the consequence is, that flies, which are attracted by the horse-dung and other similar matters, have very free access; but as it may commonly be observed that in such exposed stables, too, the spider is very prevalent, as is seen by the number of cobwebs, it may, of course, be unwise. and improper to disturb or destroy them, and the insect should probably be cherished in such stables, as it may save the horse from the irritation of a variety of troublesome enemies and

disturbers. It has been observed by Mr. Van-
couver, that, except in Ireland, where the metho‘1
of treating farm-horses is extremely bad irul.ed,
those in the county of Devon have perhaps as
hard measure dealt out to them as is any \licn-
to be met with in the United Kingdom. 1 roi:i
the injudicious manner in which they receive i!,,-
corn, that is occasionally given them, it is sup-
posed, in some measure, a questionable poii’t,
whether it affords them a benefit, or, by diu :t
ing their appetites from the hay, pea-hauni, or
other sorts of straw, absolutely produces an in-
jury and disadvantage, in consequence oi
avidity with which they swallow the corn in an
unmasticated or unchewed state. In order to
rectify and remedy such improper mode-
management in the stable, and other treatment i
farm and heavy team-horses, a better and more
*desirable example, .it is thought, can no *
be found than that which may be drawn from
the management of farm and waggon-horses in
Pennsylvania and Maryland. These horses, it
is said, perform journeys of 200 and 300 mile-;
over the stupendous mountains of that country,

with prodigious loads of wheat and flour from

the interior, and wet and dry goods from the

sea-ports to the different points of embarkation,

at 1 ort Pitt, Red-stone, Charlestown, Wheeling,

and other places on the Ohio River. Notwith-

standing which, these waggon-horses, through

the whole extent of that country, are, it is as-

serted, seldom seen in a less high condition than

the brewers' and other large cart-horses in the

metropolis of this country. The manner in

which these American horses are sustained and

supported, so as to perform these labors, is, it is said, generally by feeding them, in the stables

and on the roads, with hay and straw chopped

in short pieces about half an inch in length, \ ith which is mixed about half a peck of rye, oat, and Indian corn-meal, to about two and a half or

three pecks of hay c!i< >|>ped in the same manner.

Imu-trough, sufficiently large for four or

five horses to eat out of at the same time, is at-

tached to each waggon, it is said, while on the

road. The chaff is put into this trough, and,

after being well mixed with the given quantity

of meal, is moistened, and again well stirred

together, until every shred or part of the hay or

chopped straw is found to be covered, or, as it

were, frosted over by the meal. The avidity

with which the horses eat their meat, or proven-

der, when thus prepared, may, it is supposed,

be readily conceived. Their feed or meal being

finished, they either pursue their journey or lie

down to rest : but in either case, it is observed, not without being well dressed, and perfectly

freed and cleansed from the muddy and other

effects of their last labor. It is the pride and

pleasure, it is said, of the carters, as well as of the waggon masters in that country, to see their

horses in a condition above rather than under

the labor which they have to perform; and in

100 miles travelling, from Baltimore to Philadel-

phia, it is confidently asserted that as many

prime waggon-horses, and in as high condition,

may be seen, as is the case in any direction for

the same distance from the chief city of this

country.

What are called korse-hanimeh, or sheds, with

distinct yards, have been used as stables with great success in Berwickshire. Each shed holds two

horses, with a nitch for harness ; to each there is an open straw yard, of small size, with a water

trough, and a gate large enough to admit a cart

to take out the dung. Mr. Herriot, of Lady-

kirk, has long used these buildings, and has lost

no horse by death for a number of years. His

horses lie in these open hammels in winter ; and

it is remarked that in frosty weather, when snow

is falling, and lying on the ground, the animals

do not go under cover, but prefer to lie out, with their backs and sides covered with snow. It is

known that, if a horse is kept out in winter, he

will have no grease, nor swelled legs, and perhaps

few other diseases. Every farmer who keeps a

large stock of horses, occasionally loses one by

inflammation, brought on by coughs and colds ;

but the horses of the farmer alluded to become

aged, and he has not had occasion to purchase a

young horse for several years.' — (Husb. of Scot.

i. 26.)

3. Of buildings for live stock. — The cattle-

shed is used both for lodging milch cows, and

feeding cattle for the butcher. The principal

requisites are, that they can be readily and well

aired, and that they are so constructed as to save labor in feeding and cleaning the cattle. There

are three ways in which cattle are placed in

them ; first, in a row towards one of the walls ; secondly, in two rows, either fronting each other,

with a passage between, or with the heads to

each wall ; or thirdly, across the building in suc-

cessive rows. It is common to have an opening

in the walls, through which turnips are supplied ;

but the plan most approved, and now becoming

general, is to fix the stakes to which the cattle

are tied about two and a half or three feet from

the wall, which allows the cattle-man, without

going among them, to fill the troughs successively

from his wheelbarrow or basket. It is also an

improvement to keep the cattle separate, by par-

titions at least between every two. The width

of such stalls should not be less than seven feet

and a half.

Cattle hammels have also been adopted in

Berwickshire. Two cattle are here usually kept

together, and go loose, in which way they are

thought by some to thrive better than when tied

to a stake, and, at the same time, feed more at

their ease than when a number are kept together.

All that is necessary is, to run partition walls

across the sheds and yards of the farmers ; or, if these are allotted to rearing stock, one side of

the square, separated by a cart-way from the straw-yards, may be appropriated to the hammels. In the usual management of a row of hammels, in Berwickshire, there is one hammel at one end used as a temporary repository for roots and straw for the cattle ; then each hammel consists of the open yard, and the covered part ; the entrance door, of which there is only one to each hammel, is in the wall of the yard, and on each side of it are two troughs for food, and a crib for hay, straw, cut clover, or other herbage in summer.

Calf-pens, or stages, are common additions to cow-houses. The floor should be made of laths or spars about two inches broad, laid at the distance of an inch from each other, upon joists, so as to make it about ten or twelve inches from the ground : and the place below should be often cleaned. This is the principal suggestion we have to offer : but a slight partition of about three feet high between the calves, and a rack for the hay, are also improvements.

The calf-pens of Gloucestershire, as described by Marshal, are of admirable construction. A

pen which holds seven, or occasionally eight

calves, is of the following description : — The

house or roomstead, in which it is placed, mea-

sures twelve feet by eight : four feet of its width are occupied by the stage, and one foot by a

trough placed on its front ; leaving three feet as

a gangway, into the middle of which the door

opens. The floor of the stage is formed of laths,

about two inches square, lying lengthways of the

stage, and one inch asunder. The front fence is

of staves, an inch and a half diameter, nine

inches from middle to middle, and three feet

high : entered at the bottom into the front bearer

of the floor (from which cross-joists pass into

the back wall), and steadied at the top by a rail ; which, as well as the bottom piece, is entered at

each end into the end wall. The holes in the upper rail are wide enough to permit the staves to be

lifted up and taken out, to give admission to the

calves ; one of which is fastened to every second

stave, by means of two rings of iron joined by

a swivel ; one ring playing upon the stave, the

other receiving a broad leathern collar, buckled

round the neck of the calf. The trough is for

barley-meal, chalk, &c., and to rest the pails on.

Two calves drink out of one pail, putting their

heads through between the staves. The heigh.:

of the floor of the stage from the floor of the

room is about one foot. It is thought to be

wrong to hang it higher, lest, by the wind draw-

ing under it, the calves should be too cold in

severe weather : this, however, might be easily

prevented by litter, or long strawy dung thrust

beneath it. It is observable that- these stages

are fit only for calves which are fed with the pail, not for calves which suck the cow.

Hog-styes are generally constructed with

shed-roofs, about six or seven feet wide, with

height in proportion. They should be at no

great distance from the house ; while the less

they arc connected with the other buildings of the

farm the better. Swine, it seems, though gene-

rally considered as filthy animals, delight in a

clean and comfortable place to lie down in, and

cleanliness has a better effect upon no animal,

with respect to their thriving, lu order to keep

them dry, a sufficient slope must be given, not

only to the inside places but to the outside

areas; these should be a little elevated, having

steps up from them of at least five or six inches. Hog-styes should likewise have divisions, to keep the different sorts of swine separate; nor should many ever be allowed to be together. According to Marshal, every pig should have a rubbing-post. ‘ Having occasion,’ says he, ‘to shift two hogs out of a sty without one, into another with a post, accidentally put up to support the roof, he had a full opportunity of observing its use. The animals, when they went in, were dirty, with broken ragged coats, and with dull heavy countenances. In a few days they cleared away their coats, cleaned their skins, and became sleeky haired.’ They enjoyed their post like a placeman. It was discernible in their looks, in their liveliness, and apparent contentment. It is not probable that any animal should thrive while afflicted with pain or uneasiness. Graziers suffer single trees to grow, or put up dead posts in the ground, for their cattle to rub themselves against ; yet it is probable that a rubbing-post has never been placed intentionally in a sty ; though, perhaps, for a two-fold reason, rubbing is most requisite to swine. ‘ In farm-yards,’ says Mr. Loudon, ‘ the pig-

geries and poultry-houses generally occupy the south side of the area, in low buildings, which may be overlooked from the farmer's dwelling-house. They should open behind into the straw-yards or dungheap, to allow the hogs and fowls to pick up the corn left on the straw, or what turnips, clover, or other matters are refused by the cattle. They should have openings outwards, that the pigs may be let out to range round the farmery at convenient times ; and that the poultry may have ingress and egress from that side as well as the other.'

Beatson (Com. to the Board of Ag. vol. i.), is of opinion that poultry ought always to be confined, but not in a close, dark, diminutive hovel, as is often the case ; they should have a spacious airy place, properly constructed for them. Some people are of opinion that each sort should be kept by itself. This, however, is not, he thinks, necessary ; for all sorts may be kept promiscuously together, provided they have a place sufficiently large to accommodate them, and proper divisions and nests for each kind to retire to separately, which they will naturally do. Wakefield of Liverpool keeps a large stock of

turkeys, geese, hens, and ducks, all in the same

place : and, although young turkeys are in gene-

.-al considered so difficult to bring up, he rears

great numbers in this manner every season. For

this purpose he has about three-quarters, or nearly

a whole acre, enclosed with a fence only six or

seven feet high, formed of slabs set on end, or

any thinnings of fir or other trees split and put

close together. They are fastened by a rail near

the top and another near the bottom, and are

pointed sharp, which he supposes prevents the

poultry flying over, for they never attempt it,

although so low. Within this fence are places

done up slightly (but well secured from wet) for

each sort of poultry-; also a pond or stream of

water running through it. These poultry are fed

almost entirely with potatoes boiled in steam,

and thrive astonishingly well. The quantity of

dung that is made in this poultry place is also

an object worth attention : and, when it is cleaned out, a thin paring of the surface is at the same

time taken off, which makes a valuable compost,

for the purpose of manure. But, for keeping

poultry upon a small scale, it is only necessary

to have a small shed or slight building, formed

in some warm sheltered sunny situation : if near

“the kitchen or other place where a constant fire

is kept so much the better, with proper divisions,

boxes, baskets, or other contrivances for the

different sorts of birds, and for their laying and

incubation.

1 The poultry-house should,’ says Young, ‘ con-

tain an apartment for the general stock to roost

in, another for setting, a third for fattening, and a fourth for food. If the scale is large, there

should be a fifth for plucking and keeping fea-

thers. If a woman is kept purposely to attend

them, she should have her cottage contiguous,

that the smoke of her chimney may play into

the roosting and setting rooms : poultry never

thriving so well as in warmth and smoke ; an

observation as old as Columella, and strongly

confirmed by the quantity bred in the smoky

cabins of Ireland. For setting both turkeys and

hens, nests should be made in lockers, that have

lids with hinges, to confine them, if necessary,

or two or three will, he says, in sitting, crowd

into the same nest. All must have access to a

gravelled yard, and to grass for range, and the

building should be near the farm-yard, and have

clear water near. Great attention should be paid to cleanliness and whitewashing, not for appearance, but to destroy vermin.' Loudon recommends for the interior a sloping stage of spars for the poultry to sit on ; ' beneath this stage may be two ranges of boxes for nests ; the roof should have a ceiling to keep the whole warm in winter, and the door should be nearly as high as the ceiling for ventilation, and should have a small opening with a shutter at bottom, which, where there is no danger from dogs or foxes, may be left open at all times to admit of the poultry going in and out. The spars on which the clawed birds are to roost should not be round and smooth, but roundish and roughish, like the branch of a tree. The floor must be dry, and kept clean for the web-footed kinds.'

4. Of the barn. — Barns should, if possible, be placed on a declivity ; and, according to the recommendation of the Annals of Agriculture, vol. xvi., should be underpinned with brick or stone ; the roof covered with reed or straw ; and 'U1. lil I'AC.KW).

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those of adjoining stables (if any), with slate.

At each end of the barn, and over the back door,

small doors, four feet square, should be fixed at

the height of twelve feet from the ground ; the

two former for putting corn in at the ends, and

the latter for filling the middle of the barn after the bays are full. All the bays should have a

floor of clay or marie, and the threshing-floor be

made with hard bricks, which will be sufficient

for all sorts of grain except wheat and rye ; and

for threshing them it will be good economy to

have planks of oak or red deal well fitted toge-

ther and numbered, to be laid down occasionally

and confined by a frame. A barn built on such

a plan would hold a great deal of corn and be

filled most conveniently ; and, if the stacks were

built at each end, they might be taken in without

any carting. If more buildings are requisite,

two may be added on the back side like the sta-

bles in front ; otherwise if doors are made under

the eaves on the back side, as directed at the

ends, and stacks be placed opposite to them just

far enough to avoid the eaves dropping, by plac-

ing a waggon between them and the barn by way

of a stage, these stacks may be taken in without

carting ; which method spares a great waste of

corn and much trouble. The spars of the roofs

of the stables rest upon the upper cills of the

sides of the barn, and the outside wall of the

stables is eight feet high ; the barn supplying the highest side and one end of each stable, and the

stables in return are buttresses to the barn. An

elevated barn floor is both more durable, and

less subject to vermin ; the grain is kept more

dry and sweet than on a ground floor, and cannot

slip through it without discovery. When built

in this way, barns should have a southern aspect,

the arches of the cattle-stalls facing that way.

Mr. Marshal, in the Rural Economy of York-

shire, speaks highly of the advantages of barns

formed in this manner.

In respect to the size of barns, the same writer

observes, that in Gloucestershire fifty-two by

twenty feet in the clear, and from sixteen to

twenty feet in height to the plate, is considered

a good barn ; these dimensions admitting of four

bays of ten feet each, with a floor in the middle.

The advantage of having buildings of this sort

conveniently situated is extremely great, both in

regard to the feeding of cattle, sheep, and hogs, and likewise in the economy of labor and fodder. The invention of threshing machines has of late varied the construction of barns, as where they are made use of they should be contrived chiefly with a view to the working of them : the machines being built in the centre, with the grain stacks adjoining them, in such a manner as that they may be supplied without the assistance of carts or horses. The barns in these cases need not be so large, but they should have granaries provided in them, which may probably be most conveniently placed over the floors. In most old barns, threshing machines may be erected without much inconvenience ; and notwithstanding the superiority of stacking grain in the open air has been fully shown, and of course the necessity of large barns in a great measure done away, many agricultors are still attached to the method of housing corn in the straw.

The hay-barn is generally constructed of timber, and open on the south or east, or even on all sides. In Middlesex there are many hay-barns capable of holding from thirty to fifty, and

some even 1 00, loads of hay. They are found

to be extremely useful and convenient during a

catching and unsettled hay-harvest.

In plate II. RURAL ARCHITECTURE, are, fig.

1 . The ground plan and elevation of a common

double barn : a wall is often run across the middle of these buildings ; they are chiefly serviceable

for the storage of grain in the straw, and are of all sizes. Fig. 2 is the ground plan and eleva-

tion of an open improved barn, the threshing

floor of which is towards one end ; and on each

side of it below are divisions for different pur-

poses : the corn being kept above in the straw.

This is an economical and airy building. Figs. 3

and 4 are a front and end elevation of a barn

adapted for a two-horse threshing-machine. This

barn is fifty-five feet in length within the walls, -and seventeen in width. The walls are ten feet

high, which idmits of a granary or room thirty

feet long above the machine, shown by the dotted

line in the elevation. The floor is not continued

the whole length, in order that there may be

more room left in the other end for unthreshed

grain, which is introduced at the end. The ma-

chine within the barn is only ten feet by seven,

including the distance from the wall. The horse

beam is twenty-four feet in length, and gives motion by a laying shaft through the wall, to the machine within. There is no shed or cover over the horse-path. The expense of a machine on this plan will be from thirty to forty pounds.

In barns with threshing machines, the granary is almost always formed immediately above the floor on which the machine works ; which admits raising the corn to it directly from the ground-floor, either by the threshing-mill iiself, or a common windlass. When it is to be taken out, and carried to market, it may be lowered down upon carts with the utmost facility. See our article GRANARY.

5. Off the straw-house, cart-sheds, root-house, 4-c. — The straw-house, when distinct from the barn, should be placed at the end of the cattle-sheds, opposite to the root-house, and have a cart entrance, and an inner door communicating with the feeder's walk. Straw, however, is often stacked, in preference to placing it in a straw-house, especially where farming is on any considerable scale.

Cart-sheds or lodges, for the protection of

carts or waggons, should be near the farm-yard.

Carts, &c., under proper shelter when out of

use, will last much longer than if left exposed

in the yard to the weather; for, as they are thus sometimes wet, and sometimes dry, they soon

rot. The dust and nastiness should also be con-

stantly washed off before they are laid up in

these places.

The root house is intended for depositing or

stowing away potatoes, turnips, cabbages, and

other roots or tops for the winter feed of cattle.

It should join the cattle-sheds, and communicate

with them by an inner door that opens into the

feeder's walk, and the entrance door ought to

admit a loaded cart. These houses seem very

necessary wherever there is a number of cows

or other cattle supported on roots or cabbages,

as without them it would not only be inconve-

nient, but in many cases in severe weather im-

possible to provide for them the daily supply.

Cabbages should not, however, be kept long in-

doors, as they are very liable to the putrid fer-

mentation. The master should be careful that

the yard-man constantly keeps such places per-

fectly clean and sweet, in order that the roots may contract no bad smell, as cattle are in many cases extremely nice in this respect.

The appendages to farm buildings are the dung-yards, pits, and reservoirs, the rick-yard, straw-yard, poultry-yard, drying-yard, garden, orchard, and cottage-yards. These vary so much, according to situation and other circumstances, that a description of them seems needless in this place.

Corn-stands have been of late considered requisite fixtures of a stack-yard ; their basements are of timber, masonry, or iron, on which the stack is built, and their object is to keep the lower part dry, and exclude vermin. A usual mode of constructing them is to place a stout frame of timber on uprigh . stones, two feet high, and having projecting caps of flat stones. They are also constructed wholly of stone, of circular or polygonal walls. In both modes, pieces of timber are placed as a frame in the middle to support the grain upon, and generally a cone of spars in the centre, to form a funnel. Cast iron stands (plate II. fig. 5) for stacks, on pillars

about three feet high, and weighing half a hun-

dred weight each, have been introduced with

success in some parts of the country. They are

made both with and without hollow cones or

triangles. A stack requires seven pillars, besides

the framing, which may either be made of poles

or young trees. In the wet climate of Clack-

mannanshire wheat has been stacked in five

days, beans in eight, and barley and oats in ten

days and sometimes earlier. No vermin can

find their way into these stacks to consume the

grain, and the straw is better preserved. The

cone or triangle keeps up a circulation of air,

and prevents heating, or other damage. (Gen.

Rep. of Scotland, Vol. IV., Appendix p. 379).

Hay-stands have been constructed in a similar

RURAL ECONOMY

RCRAI ECONOMY. Under this general head

we have determined to include those practical

parts of the science of agriculture which could not conveniently be embraced in the general article

of that name. See AGRICULTURE.

In that article we have taken a general view

of soils, and of the ordinary principles of amelio-

rating them by manuring, ploughing, rotation of

crops, &c. In the present paper we propose to

treat, 1. Of the arable system. 2. Of grazing.

3. Of the modern convertible system. 4. Of

the cultivation of plants that are articles of com-

merce. 5. Of the management of live stock.

6. Of implements of husbandry. The dairy, and

its general economy, have engaged our attention

under the article DAIRY.

PART I.

OF THE ARABLE SYSTEM.

In laying out a farm on the arable system, it has been recommended that attention be paid to that

course of crops, which the quality of the soil may point out ; and that, upon all farms not below a

medium size, there should be twice the numberof

enclosures that there are divisions or breaks in

the course. Thus, if a six years' rotation be

thought most profitable, there should be twelve

enclosures, two of which are always under the

same crop. One advantage in tin's arrange-

ment is, that it tends greatly to equalize labor,

and, with a little attention, may contribute much

to equalise the produce. On large farms, where

all the land under turnips and clover, for instance, is near the extremity of the grounds, or at a con-

siderable distance from the buildings, supposed

to be set down near the centre, it is clear that

the labor of supplying the house and straw-yard

stock with these crops, as well as the carriage of the manure to the field, is much greater than if

the fields were so arranged as that the half of

each of these crops had been near the offices.

But, by means of two fields for each crop in the

rotation, it is quite easy to connect together one

field near the houses with another at a distance ; thus having a supply at hand for the home stock,

while the distant crops may be consumed on the

ground. The same equalisation of labor should

be observed in the cultivation of the corn fields,

and in harvesting the crops. By this kind of

arrangement a field of inferior soil may be so

connected with one that is naturally rich, that

the former may be gradually brought up in pro-

duce towards the level of the latter, without any

injury. For instance, a field under turnips may

be so fertile that it would be destructive to the

succeeding corn crop to consume the whole or

the greater part on the ground ; while another

may be naturally so poor, or so deficient in te-

nacity, as to make it inexpedient to spare any

part for consumption elsewhere. By connecting

these two under the same crop, — by carrying from the one what turnips are wanted for the feeding-houses and straw-yards, and eating the whole crop of the other on the ground with sheep, the ensuing crop of corn will not be so luxuriant on the former as to be unproductive, while the latter will seldom fail to yield abundantly.

1. In preparing land for crop ping, the first thing that occurs is to consider the obstructions to regular ploughing. The most formidable of these are stones lying above or below the surface. Stones above the surface may be avoided by the ploughman, though not without loss of ground ; but stones below the surface are commonly not discovered till the plough is shattered to pieces, and perhaps a day's work lost. The clearing land of stones is therefore necessary to prevent mischief. And. to encourage the operation, it is

attended with much actual profit. In the first place, the stones are often useful for fences : when large they must be blown, and are commonly proper for building. And, as the blowing with gunpowder does not exceed a halfpenny for

each inch that is bored, these stones come generally cheaper than to dig as many out of the quarry. 2dly, As the soil round a large stone is commonly the best in the field, it is purchased at a low rate by taking out the stone ; for not only is the ground lost that is occupied by a large stone, but also a considerable space round it, to which the plough has not access without danger. A third advantage is that the plowing can be carried on with much expedition, when there is no apprehension of stones : in stony land, the plough must proceed so slow, as not to perform half of its work.

But to clear land of stones is an undertaking too expensive for a tenant who has not a long lease. As it is, however, so important both to him and to his landlord, it appears reasonable that the expense should be divided, where the lease does not exceed nineteen or twenty years. It falls naturally upon the landlord to be at the expense of raising the stones, and upon the tenant to carry them off the field.

Another obstruction is wet ground. Water may improve gravelly or sandy soils ; but it

sours a clay soil, or renders it unfit for vegetation, and converts low ground into a morass. A great deal has been written upon different methods of draining land. See DRAINING. One way of draining without expense, when land is to be enclosed with hedge and ditch, is to direct the ditches so as to carry off the water. But this method is not always practicable. If the run of water be considerable, it will destroy the ditches, and lay open the fences, especially where the soil is loose or sandy. If ditches will not answer, hollow drains are sometimes made, and sometimes open drains, made so deep as to command the water. The former is filled up with loose stones, with brush-wood, or with any other porous matter that permits the water to pass. The latter is left open. To make the former effectual, the ground must have such a slope as to give the water a brisk course. To attempt to execute them in a level ground is an error ; the passages are soon stopped up with sand and sediment, and the work is rendered useless. This inconvenience takes not place in open drains ; but they are subject to other inconveniences.

They are always filling up, and make a yearly

reparation necessary; and they obstruct both

ploughing and pasturing.

The following open drain is one of the best.

It is made with the plough, cleaving the space

intended for the drain over and over, till the fur-

row be made of a sufficient depth for carrying

off the water. The slope on either side may, by

repeated ploughings, be made so gentle as to

give no obstruction either to the plough or to the harrow. There is no occasion for a spade, unless

to smooth the sides, and to remove accidental

obstructions in the bottom. This drain is exe-

cuted at much less expense than either of the

former ; and it is perpetual, as it can never be

obstructed. In level ground indeed grass may

grow at the bottom, but to clear off tho grass

once in four or five years will restore it to its original perfection. A hollow drain may be

proper between the spring-head and the main

drain, where the distance is not great ; but in

every other case the drain recommended is the best.

N\ here a level field is infested with water from

higher ground, the water ought to be intercepted

by a ditch carried along the foot of the high

ground, and terminating in some capital drain.

The only way to clear a field of water that is hol-

low in the middle is to carry it off by some

drain still lower.

A clay soil of any thickness is often pestered

with rain, which settles on the surface. The

only remedy is high narrow ridges, well rounded.

And, to clear the furrows, the furrow of the foot-

ridge ought to be considerably lower, to carry

off the water cleverly. It cannot be made too

low, as nothing hurts clay soil more than the

stagnation of water on it. Some gravelly soils

have a clay bottom ; which is a substantial be-

nefit to a field when in grass, as it remains

moister. But, when in tillage, ridges are ne-

cessary to prevent rain from settling at the bot-

tom ; and this is the only case where a gravelly

soil ought to be ridged. Clay soils that have

little or no level have sometimes a gravelly bot-

tom. For discharging the water, the best method

is, at the end of every ridge to pierce down to the gravel, which will absorb the water. But if the

furrow of the foot-ridge be low enough to receive

all the water it will be more expeditious to make

a few holes in that furrow. In some cases, a

field may be drained, by filling up the hollows

with earth from higher ground. But, as this me-

thod is expensive, it will only be taken where

no other method answers. Where a field hap-

pens to be partly wet, partly dry, there ought to

be a separation by a middle ridge, if it can be

done conveniently ; and the dry part may be

ploughed while the other is drying.

Some of the low parts of Scotland are of a

brick clay soil, extremely wet in winter. This

in a good measure may be prevented by proper

enclosing, as there is scarcely a field but can be drained into lower ground. But as this would

lessen the quantity of rain in a dry climate, such as is all the east side of Britain, it may admit ot some doubt whether the remedy would not be as

bad as the disease.

To improve a moor, let it be opened in winter

when it is wet ; and when the plough cannot be

employed at any other work. In spring, after

frost is over, a slight harrowing will fill up the seams with mould, to keep out the air, and rot

the sod. In that state let it lie the following

summer and winter, which will rot the sod more

than if laid open to the air by ploughing. Next

April, let it be cross-ploughed, breaked, and

harrowed, till it be sufficiently pulverised. Let

the manure laid upon it, whether lime or dunu,

be intimately mixed with the soil by repeated

harrowirgs. This will make a fine bed for tur-

nip seed if sown broad-cast. But, if drills be

intended, the method must be followed that is

directed afterward in treating of the culture of

turnip. A successful turnip-crop, fed on the

ground by sheep, is a fine preparation for laying

down a field with grass seeds. It is an improve-

ment upon this method, to take two or three

successive crops of turnip, which will require no

dung for the second and following crops. This

will thicken the soil, and enrich it greatly.

The best way of improving swampy ground,

after draining, is paring and burning. But

where the ground is dry, and the soil so thin as

that the surface cannot be pared, the way of

bringing it into tilth from the state of nature is to plough it with a feathered sock, laying the

grassy surface under. After the new suiface is

mellowed with frost, fill up all the seams by har-

rowing cross the field, which by excluding the air

will effectually rot the sod. In this state let it lie summer and winter. In the beginning of

May after, a cross-ploughing will reduce all to small square pieces, which must be pulverised with the brake, and made ready for a May or June crop. If these square pieces be allowed to lie long in the sap without breaking, they will become tough and not be easily reduced.

On the subject of paring and burning, Mr. Loudon says, ‘ The season for this operation is April, May, and June : the particular period must, however, always depend much on the state of the weather and the nature of the crop. When the east winds prevail, in February and March, this sort of business may sometimes be carried on. But for accomplishing the work with the greatest despatch, and also with the least trouble and expense, a dry season is obviously the best. The prudent cultivator should not embark in the undertaking unless there be a reasonable probability of his accomplishing it while the weather keeps dry and favorable. The latter end of May or the beginning of June, when the hurry of the spring-seed time is over, in the more northern districts, when a number of hands can be most easily procured may, upon the whole, be considered as the best and most convenient season ; as at this

period the green vegetable products are in their most succulent state, and of course may probably afford more saline matter ; but in the more southern counties either a much earlier season must be taken, or the interval between the hay season and the harvest time must be fixed upon, the latter of which is, on the principle just stated, evidently the best, where the extent of ground to be burnt is not too large. In other seasons it would frequently be impossible to procure a sufficient number of hands for performing the business. In bringing waste lands into cultivation, where an extensive tract of ground is to undergo this process, the autumn may, in many cases, afford a convenient opportunity for the operation. A good deal depends on the crops that are to be sown after paring and burning. When rape or turnips are to be cultivated, the end of May, or the beginning of June, will be the most proper time: but, if barley or oats are to be sown, the paring and burning must be completed as early in spring as the nature of the season will admit ; and, when lands are pared and burned as a preparation for a crop of wheat, July, or even the beginning of August, may, in

favorable seasons, answer ; but U is better to

have the ground ready sooner if possible. In

respect to the depth to which lands of different

qualities maybe pared with the most advantage,

it is obvious that, as it can hardly be prope.- to pare light, thin-stapled soils, to the same depths

as those of the more deep and heavy kinds, it

should, in some degree, be regulated by their

particular nature, and their differences in re-

spect to heaviness. Boys, who is in the habit

of breaking up thin chalky soils, and sucli

as have been in tillage, in this way, observes

that in Kent, where the method of paring most

in use is with down-shares or breast ploughs,

they take off turfs as thick as the nature of the soil will admit, from half an inch to two inches ; the thicker the better, provided there be a suffi-

cient portion of vegetable matter contained

within them to make them burn well. The most

usual depths of paring are from about one to

three inches.

‘ In regard to burning, when the season is not

very wet, the turfs will commonly be sufficiently

dried in about a fortnight or three weeks, even

without being turned ; but in rainy weather they

require a longer time, and must be turned more;

than once to prevent their striking out roots and

shoots, which might hinder them from burning.

As soon as the turfs have fully undergone tho

process of burning, and are reduced to the state

of ashes and a powdery earthy matter, the whole

should, as soon as possible, be spread out over

the land in as regular and equal a manner as

the nature of the work will admit of ; for, without great attention in this respect, great inequality

in the crops may take place ; besides the soil

will be made lighter in some places than in

others, which may be disadvantageous in the

same way. The spreading, where it ran by any

means be accomplished, should always be per-

formed before any rain falls ; as, where this point is not attended to, a great loss may be sustained

by the saline matters being carried down in a

state of solution, and their beneficial effects in a great measure lost before the crops are in a con-

dition to receive them. In order to secure tho

full influence of the ashes, the land is frequently slightly ploughed over immediately after the

ashes are spread out And it is stated by Do-

naldson that those who are more than ordinarily

attentive in this respect only rib or slob furrow

the field, so that the ashes after burning may be

covered up with the greater expedition and de-

spatch. By this mode they cannot probably,

however, be so equally mixed with the soil as by

that of ploughing the whole field with a very

slight furrow, so as just to cover them. The ex-

pense of the operation of paring and burning

will vary according to the nature and situation

of the land, the method in which it is performed,

and the customs of the district in regard to the

price of labor. On the thin sort of chalky soils

it is stated by Boys that the expense for paring

at a moderate thickness, where the land is not

very flinty, is about equal to four or five plough-

ings.'

We add this writer's remarks on the operation

of drying and burning clay for manure, as it is in several respects similar to that of paring and

burning. ' The practice of burning clay,' ho

observes, ' has at various times been pursued with

energy and success, and at other times has fallen

into neglect. The oldest book in which it is

mentioned is probably The Country Gentleman's

Companion, by Stephen Switzer, gardener, Lon-

don, 1732. In that work it is stated that the

earl of Halifax was the inventor of this useful improvement; and that it was much practised in Sussex. There are engravings of two kilns for burning clay, one adopted in England, and the other in Scotland ; where it is said to have been ascertained that lands, reduced by tillage to poverty, would produce an excellent crop of turnips if the ground were ploughed two or three times, and clay ashes spread over it. In the same work there are several letters, written in the years 1730 and 1731, stating that the plan of burning clay had answered in several parts of England ; and accounts were received from Scotland that, upon experiment, it had answered better than either lime or dung, but was found too expensive. The practice is described at length in Ellis's Practical Farmer, or Hertfordshire Husbandman, 1732. In 1786 James Arbuthuot, of Peterhead, tried several successful experiments with burning clay, and various others have since been made in different parts of the empire. In 1814 the practice was revived and written on by Craig, of Callay, near Dumfries, and soon after by general Beatson, near

Tunbridge ; by Curwen, Burrows, and several correspondents of agricultural journals. In Ireland, it would appear, the practice prevails in several places, and Craig says he adopted it from seeing its effects there. The result of the whole is, that the benefits of this mode of manuring have been greatly exaggerated ; though they certainly appear to be considerable on clayey soils. Aiton (Farmer's Magazine, vol. xxii. p. 423) compares this rage for burning clay, which existed in 1815, to the fiorin mania of a few years prior date. In 1822 he found few of the advocates for these improvements disposed to say much on the subject, and saw very few clay kilns smoking. ' To give my ultimatum upon this subject,' he says, ' I regret that the discoverers of fiorin grass, and of the effects of burnt clay, have so far overrated their value. Both are useful and proper to be attended to ; — the grass to be raised on patches of marshy ground, and used as green food to cattle in winter; and the burnt earth as a corrector of the mechanical arrangement of a stubborn clay soil ; and I have no doubt but if they had been only recommended for those valuable purposes they would have been

brought into more general use than they yet are

or will be, till the prejudice against them, arising from the disappointment of expectations raised

high by too flattering descriptions, are removed.'

He thus describes the action of burnt clay : —

• *It must be obvious to every person that has*

paid attention to the subject, that when clay, or

other earth, is burnt into ashes like brick-dust,

it will not (unless acids be applied to it) return again to its former state of clay, but will remain in the granulated state of ashes or friable mould,

to which it was reduced by the operation of

burning. An admixture of this kind, with a

strong adhesive clay, must evidently operate as

a powerful manure bf changing the mechanical

arrangement of the latter and rendering it more

friable; giving greater facility to the protection

of redundant moisture, and to the spreading ot

the roots of vegetables in quest of food. The

application of as much water, sand, or any simi-

lar substance, would have exactly the same effect

in opening, and keeping open, the pores of an

adhesive clay soil, and converting it into the

quality loam. Besides this, which would be a

permanent improvement upon the staple or tex-

ture of every clay soil, burnt clay or torrefied

earth may sometimes acquire, in this operation, a small quantity of soot or carbonic matter, that may, in favorable circumstances, operate for one season as a manure, or as a stimulus to a small extent to the growth of vegetables. This at least may be the case if the clay or earth burnt shall abound with vegetable matter, and if the burning is conducted in such a smothered way as to prevent the smoke or vegetable matter from escaping. But as it is the subsoil that is recommended, and seems to be generally used for burning, it is impossible any considerable quantity of vegetable matter fcan be found in it. The calcareous matter in the soil, it is said, will be calcined and formed into lime by the operation of burning. But I am disposed to consider this argument as far more plausible than solid. Calcareous matter is no doubt found, on chemical analysis, to a certain extent in some soils ; perhaps some perceptible portion of it may be found in every soil. But it is seldom or never found in any soil to such an extent as to Be of much use as a manure to other land. Even when the soil is impregnated with a large portion of calcareous matter, if it is not in the form of limestone, but minutely mixed with

it, the burning cannot

either increase or much alter the lime. If it is

in the form of stones, however small, or in what

is called limestone gravel, there is little chance

of its being calcined in the operation of burning

the clay ; it would go through that ordeal unal-

tered. Any change, therefore, that can be

made upon the small portion of calcareous

matter in the soil, by burning in the manner di-

rected, can scarcely have any perceptible effect

when that matter is applied as manure to other

soils. And though it is possible that some qua-

lities in particular soils, unfavorable to vegeta-

tion, may be corrected by burning, and that in

some other instances the fire may render the clay

more nutritive to plants (though I have not been

able to trace this, or even to conjecture how it

can happen), yet I am much disposed to believe

that its effect as a mechanical mixture in opening

the pores of the soil is the chief improvement

that can be derived from the application of burnt

clay as a manure. If it has any other effect it

must be from the soot or carbonic matter collected

during the operation of burning; or perhaps it

may acquire by the torrefaction somewhat of a

stimulating quality, that may for a short time

promote the growth of particular plants. But

these qualities can only be to a small extent,

and continue to act for a very limited period.' —

Far. Mag. xxii. 422.

According to a writer in the Farmer's Journal

the action of burnt clay is at least three-fold,

and may be manifold. It opens the texture of

stubborn clays, gives a drain to the water, spira-

cles to the air, and affords to the roots facility of penetrating. Clay ashes burned from turves,

containing an admixture of vegetable matter,

consist, in some small proportion, of vegetable

alkali, or potassa, a salt which is known to be a good manure. It also, in most cases, happens,

that a stiff cold clay is impregnated with pyrites, a compound of sulphuric acid and iron. Al-

though the chemical attraction between these two

bodies is so strong that it is one of the most dif-

ficult operations in the arts totally to free iron

from sulphur, yet a very moderate heat sublimes

a large portion of the sulphur. The iron is then left at liberty to re-absorb a portion- of the redun-

dant sulphuric acid, which too generally is found

in these soils, and thereby sweetens the land ;

and it is probable that the bright red, or crimson calx of iron, which gives coloring to the ashes

when over burnt, is beneficial to vegetation in

the present case, inasmuch as it is, of itself, one of the happiest aids to fertility, as is exemplified in the red marl strata, and red sand strata throughout the kingdom. The evolution and re-

combination of different gases, no doubt, mate-

rially affect the question ; but it is reserved for accurate chemical observers lo give us an account

of the processes which take place in this respect.

C'urwen notices that clay ashes do no benefit as

a top dressing on grass, which is in part to be

explained by reason that the ashes, when spread

on the surface of the grass, cannot exert the me-

chanical action on the soil in the ways enume-

rated. Neither can the calx of iron come so im-

mediately in contact with the particles of the soil, for the producing of any chemical effect, as it

would do if the ashes were ploughed in. In

short, like many other manures which are laid on

the surface, unless it contains something soluble

which may be washed into the ground by rains,

it does very little good ; and the feeble propor-

tion of vegetable alkali is probably the only so-

luble matter the ashes contain. However san-

guine may be the admirers of burnt clay, all

experience confirms that the most beneficial clay-

ashes are those which are burnt from the greatest

proportion of rich old turf, ancient banks, roots

of bushes, and other vegetable matters; and I

conceive the value of mere powdered pottery

(for such it is) may easily be overrated. — Far.

Journ. 1819.

The common method of burning clay is thus

described by Mr. Loudon. An oblong enclosure,

of the dimensions of a small house (say fifteen

feet by ten), is made of green turf sods, raised

to the height of three and a half or four feet. In the inside of this enclosure, air-pipes are drawn

diagonally, which communicate with holes left

at each corner of the exteriot wall. These pipes

are formed of sods put on edge, and the space

between these so wide only as another sod can

< ;i-ily cover. In each of the four spaces left be-

tween the air-pipes and the outer wall, a fire is

kindled with wood and dry turf, and then the

whole of the inside of the enclosure or kiln filled \vith dry turf, which is very soon on fire ; and

on the top of that, when well kindled, is thrown

the clay, in small quantities at a time, and re-

peated as often as necessary, which must be re-

gulated by the intensity of the burning. The

air-pipes are of use only at first, because, if the fire burns with tolerable keenness, the sods form-

in? the pipes will soon be reduced to ashes. The

pipe on the weather side of the kiln only is left open, the mouths of the other three being stopped

up, and not opened, except the wind should veer

about. As the inside of the enclosure, or kiln,

begins to be filled up with clay, the outer wall

must be raised in height, always taking care to

have it at least fifteen inches higher than the top of the clay, for the purpose of keeping the wind

from acting on the fire. When the fire burns

through the outer wall, which it often does, and

particularly when the top is overloaded with

clay, the breach must be stopped up immedi-

ately, which can only be effectually done by

building another sod wall from the foundation,

opposite to it, and the sods that formed that part of the first wall are soon reduced to ashes. The wall can be raised as high as may be convenient

to throw on the clay, and the kiln may be in-

creased to any size, by forming a new wall when

the previous one is burnt through. The princi-

pal art consists in having the outer wall made

quite close and impervious to the external air,

and taking care to have the top always lightlv,

but completely covered with clay ; because, 'if

the external air should come in contact with the

fire, either on the top of the kiln, or by means of its bursting through the sides, the fire will be

very soon extinguished. In short, the kiln re-

quires to be attended to nearly as closely as char-

coal pits. Clay is much easier burnt than either

moss or loam ; — it does not undergo any altera-

tion in its shape, and on that account 'allows the

fire and smoke to get up easily between the

lumps ; whereas moss and loam, by crumbling

down, are very apt to smother the fire, unless care-

fully attended to. No rule can be laid down for

regulating the sine of the lumps of clay thrown

on the kiln, as that must depend on the state of

the fire ; but I have found every lump completely

burnt on opening the kiln ; and some of them

were thrown on larger than my head. Clay, no

doubt, burns more readily if it be dug up and

dried for a day or two before it be thrown on

the kiln ; but this operation is not necessary, as it will burn though thrown on quite wet. After

a kiln is fairly set a going, no coal or wood, or any sort of combustible is necessary, the wet

clay burning of itself, and it can only be extin-

gnished by intention, or the carelessness of the

operator, — the vicissitudes of the weather having

hardly any effect on the fire, if properly attended to. It may, perhaps, be necessary to menti it

that, when the kiln is burning with great keen-

ness, a stranger to the operation may be apt to

think that the fire is extinguished. If, therefore, any person, either through impatience, or too

great curiosity, should insist on looking into the

interior of the kiln, he will certainly retard, and may possibly extinguish the fire ; for, as before

mentioned, the chief art consists in keeping out

the external air from the fire. Where there is

abundance of clay, and no great quantity of

green turf, it would perhaps be best to burn the

clay in draw-kilns the same as lime.

Colonel Dickson, at Ilexham, and other gentle-

men of Northumberland, instead of building a

kiln use gratings or arches of cast iron, to form

a vault or funnel for the fuel, and over this fun-

••nel the clay is built. The grated arches are

made about two feet and a half long, two feet

diameter, and about fourteen inches high. One

grating is to be filled with brushwood, stubble, or any other cheap fuel, and

the clay, as it is dug, built upon it to a convenient height, leaving small vacancies, or boring holes, to allow the heat to penetrate to the middle and outer parts of the clay. When a sufficient quantity is built upon the first grating, another is added at either or both ends, filled with similar fuel, and the clay built upon them as before. This process is continued until ten, twelve, or a greater number of the gratings have been used, when one end is built up or covered with clay, and at the other, under the last grating, a fire is made of coals or faggot wood. The end at which the fire is made should face the wind if possible, and if the process has been properly conducted the clay will be effectually burnt. By commencing with a centre grating, in the form of a cross, the workman may build from four ends in the place of two ; this contrivance will afford a facility in the work, and have a draft of wind at two entrances. The advantage of this mode of burning clay is the saving of cartage, as the clay may be always burned where it is dug.

Mr. Curwen has practised burning clay and

surface soil by lime without fuel (Farm. Mag. vol.

xvi. p. 1 1, 1 2), in the following manner : — Mounds of seven yards in length, threT and a half in

breadth, are kindled with seventy-two Winches-

ter bushels of lime. First, a layer of dry sods

or parings, on which a quantity of lime is spread, mixing sods with it ; then a covering of eight

inches of sods, on which the other half of the

lime is spread, and covereU a foot thick : the

height of the mound being about a yard. In

twenty-four hours it will take fire. The lime

should be immediately from the kiln. It is

better to suffer it to ignite itself, than to effect it by operation of water. When the fire is fairly

kindled, fresh sods must be applied. Mr. Cur-

wen recommends obtaining a sufficient body of

ashes before any clay was put on the mounds.

The fire naturally rises to the top. It takes less time, and does more work to draw down the

ashes from the top, and not to suffer it to rise

above six feet. The former practice of burning

in kilns was more expensive; did much less

work ; and, in many instances, calcined the

ashes, and rendered them of no value.

2. Of ridges. — The first thing is to consider

what grounds ought to be formed into ridges, and

what ought to be tilled with a flat surface. Dry soils, which suffer by want of moisture, ought to be tilled flat, to retain moisture. The method for such tilling is to go round from the circumference to the centre, or from the centre to the circumference. This method is advantageous in point of expedition, as the whole is finished without once turning the plough. At the same time, every inch of the soil is moved, instead of leaving either the crown or the furrow unmoved, as is commonly done in tilling ridges. Clay soil, which suffers by water standing on it, ought to be laid as dry as possible by proper ridges. A loamy soil is the medium between these two. It ought to be tilled flat in a dry country, especially if it incline to the soil first mentioned. In a moist country, it ought to be formed into ridges, high or low according to the degree of moisture and tendency to clay.

In grounds that require ridging, an error prevails, that ridges cannot be raised too high. But high ridges labor under several disadvantages. The soil is heaped upon the crown, leaving the furrows bare ; the crown is too dry, and the furrows too wet; the crop, which is always best on

the crown, is more readily shaken with the wind, than where the whole crop is of an equal height; the half of the ridge is always covered from the sun, a disadvantage which is far from being slight in a cold climate. High ridges labor under another disadvantage; in ground that has no more level than barely sufficient to carry off water, they sink the furrows below the level of the ground ; and consequently retain water at the end of every ridge. The furrows ought never to be sunk below the level of the ground. Water will more effectually be carried otf by lessening the ridges both in height and breadth ; a narrow ridge the crown of which is but eighteen inches higher than the furrow, has a greater slope than a very broad ridge where the difference is three or four feet.

In forming ridges, where the ground hangs considerably, they may be too steep as well as too horizontal ; and, if to the ridges be given all the steepness of a field, a heavy shower may do irreparable mischief. To prevent this the ridge ought to be so directed cross the field as to have a gentle slope, for carrying off water slowly, and no more. In that respect, a hanging field has*

greatly the advantage of one that is nearly hori-

zontal ; because, in the latter, there is no oppor-

tunity of a choice in forming the ridges. A hill

is of all ground the best adapted for directing the ridges properly. If the soil be gravelly, it may

be ploughed round and round, beginning at the

bottom and ascending gradually to the top in a

spiral line. This method of ploughing a hill,

requires no more force than ploughing on a level;

and removes the great inconvenience of a gravelly

hill, that rains go off too quickly ; for the rain is retained in every furrow. If the soil be such as

to require ridges, they may be directed to any

slope that is proper.

To form a field into ridges, that has not been

formerly cultivated, the rules mentioned are

easily put in execution. After seeing the ad-

vantage of forming a field into ridges, people

were naturally led into an error, that the higher

the better. But the practice of making their

ridges crooked certainly did not originate from

design, but from the laziness of the driver suffer-

ing the cattle to turn, instead of making them

finish the ridge without turning. There is more

than one disadvantage in this slovenly practice.

First, the water is kept in by the curve at the end of every ridge, and sours the ground. Secondly, as a plough has the least friction possible in a straight line, the friction must be increased in a curve, the back part of the mouldboard pressing hard on the one hand, and the

coulter pressing hard on the other. Thirdly, the plough moving in a straight line has the greatest command in laying the earth over. But, where the straight line of the plough is applied to the curvature of a ridge to heighten it by gathering, the earth moved by the plough is continually falling back, in spite of the most skilful ploughman.

The inconveniences of ridges high and crooked are so many that one would be tempted to apply a remedy at any risk. Ancl yet, if the soil be clay, it would not be advisable for a tenant to apply the remedy upon a lease shorter than too nineteen years. In a dry gravelly soil, the work is not difficult or hazardous. When the ridges are cleaved two or three years successively in the course of cropping, the operation ought to be concluded in one summer. The earth, by reite-

rated ploughings, should be accumulated upon the furrows, so as to raise them higher than the crowns ; they cannot be raised too high, for the accumulated earth will subside by its own weight. Cross ploughing, once or twice, will reduce the ground to a flat surface, and give opportunity to form ridges at will. The same method brings down ridges in clay soil ; only let the work be carried on with expedition ; because a hearty shower, before the new ridges are formed, would soak the ground in water, and make the farmer suspend the work for the remainder of that year at least. In a strong clay, the ridges should not be altered, unless it can be done to perfection in one season. On this subject Dr. Anderson has said, ' The difficulty of performing this operation properly with the common implements of husbandry, and the obvious benefit that accrues to the fanner from having his fields level, has produced many new inventions of ploughs, harrows, drags, &c., calculated for speedily reducing the fields to that state ; none of which have as yet been found fully to answer the purpose for which they were intended, as they all indiscriminately carry the earth that was on the high places into

those that were lower; which, although it may,

in some cases, render the surface of the ground

tolerably smooth and level, is usually attended

with inconveniences far greater, for a considera-

ble length of time, than that which it was intend-

ed to remove. For experience sufficiently shows

that even the best vegetable mould, if buried for

any length of time so far beneath the surface as

to be deprived of the benign influences of the at-

mosphere, becomes an inert lifeless mass, little

fitted for nourishing vegetables ; and constitutes

a soil very improper for the purposes of the far-

mer. It therefore behoves him to preserve, on

every part of his fields, an equal covering of that vegetable mould that has long been uppermost,

and rendered fertile by the meliorating influence

of the atmosphere. But if he suddenly levels

his high ridges, by any of these mechanical con-

trivances, he buries all the good mould that was

on the top of the ridges in the old furrows, by

which he greatly impoverishes one part of his

field, while he too much enriches another, and

he has the mortification frequently to see the one

half of his crop rotted by an over-luxuriance,

while other parts of it are weak and sickly, or

one part ripe and ready for reaping, while tin-

other is not propprly filled.

‘ On these accounts, if the farmer has not a

long lease, it will be in general much his inte-

rest to leave the ridges as he found them, rather

than to attempt to aker their direction ; and, if

he attends with due caution to moderate the

height of these ridges, he may reap very good

crops. But, where a man is secure of possessing

his ground for any length of time, the advan-

tages that he will reap from having level and

well laid out fields are so considerable as to be

worth purchasing, if it should even be at a

considerable expense. But the loss that is sus-

tained at the beginning by this mechanical mode

of levelling ridges, if they are of considerable

height, is so very great, that it is doubtful if any future advantages can fully compensate it. I

would therefore advise that all this levelling

apparatus should be laid aside, and the follow-

ing more efficacious practice be substituted in

its stead : a practice that I have long followed

with success, and can safely recommend as the

very best that has yet come to my knowledge.

‘ If the ridges have been raised to a very great

height, as a preparation for the ensuing opera-

tions, they may be first cloven, or scalded out,

as it is called, that is, ploughed so as to lay the earth on each ridge from the middle towards

the furrows ; but, if they are only of a moderate degree of height, this operation may be omitted.

ˆ hen you mean to proceed to level the ground,

let a number of men be collected, with spades,

more or fewer as the nature of the ground requires, and then set a plough to draw a furrow directly

across the ridges of the whole field intended to

be levelled. Divide this line into as many parts

as you have laborers, allotting to each one ridge

or two, more or less, according to their number,

height, and other circumstances. Let each of

the laborers, as soon as the plough has passed

that part assigned him, begin to dig in the bot-

tom of the furrow that the plough has just made,

about the middle of the side of the old ridge,

keeping his face towards the old furrow, work-

ing backwards till he comes to the height of the

ridge, and then turn towards the other furrow,

and repeat the same on the other side of the

ridge, always throwing the earth that he digs up

into the deep old furrow between the ridges

that is directly before him ; taking care not to

dig deep where he first begins, but to go deeper and deeper as he advances to the height of the ridge, so as to leave the bottom of the trench he thus makes across the ridge entirely level, or as nearly so as possible. And when he has finished that part of the furrow allotted to him that the plough has made in going, let him then finish in the same manner his own portion of the furrow that the plough makes in returning. In this manner each man performs his own task through the whole field, gradually raising the old furrows as the old heights are depressed. And if an attentive overseer is at hand, to see that the whole is equally well done, and that each furrow is raised to a greater height than the middle of the old ridges, so as to allow for the subsiding of that loose earth, the operation will be entirely finished at once, and nevar again need to be repeated.

‘ In performing this operation, it will alvvayt be proper to make the ridges formed for tht

purpose of levelling, which go across the old

ridges, as broad as possible ; because the deep

trench that is thus made in each of the furrows

is an impediment in the future operations, as

well as the height that is accumulated in the

middle of each of these ridges ; so that the

fewer there are of these the better. The farmer,

therefore, will do well to advert to this, and

begin by forming a ridge by always turning the

plough to the right hand, till it becomes of such

breadth as makes it very inconvenient to turn

longer in that manner ; and then, at the distance

of twice the breadth of this new-formed ridge

from the middle of it, mark off a furrow for the

middle of another ridge, turning round it to the

right hand, till it becomes of the same breadth,

and then, turning to the left hand, plough out

the interval that was left between the two new-

formed ridges. By this mode of ploughing,

each ridge may be made of forty, or fifty, or sixty yards in breadth, without any great inconve-

nience; for, although some time will be lost in

turning at the ends of these broad ridges, yet, as this operation is only to be once performed in

this manner, the advantage that is reaped by having few open furrows is more than sufficient to coun

terbalance it. To moderate the height that would

be formed in the middle of each of these grea4

ridges, it will be proper to mark out the ridges,

and draw the furrow that is to be the middle

of each some days before you collect your la-

borers to level the field, that you may, without

any hurry or loss of labor, clear out a good

trench through the middle of each of the old

ridges ; as the plough at this time, going and

returning nearly in the same track, prevents the

laborers from working properly without this

precaution. If these rules are attended to, your

field will be at once reduced to a proper level,

and the rich earth that formed the surface of the

old ridge be still kept upon the surface of your

neld ; so that the only loss that the possessor of such ground can sustain by this operation is

merely the expense of performing it.'

Dr. Anderson afterwards makes a calculation

of the different expenses of levelling by the

plough and by the spade, in which he finds the latter by far the cheapest method. It should be a rule, according to him, to direct the ridges north and south if the ground will permit. In this direction, the east and west sides of the ridges, dividing the sun equally between them, will ripen at the same time. It is a great advantage to form ridges so narrow and so low as to admit the crowns and furrows to be changed alternately every crop. The soil nearest the surface is the best ; and, by such ploughing, it is always kept near the surface, and never buried. In high ridges the soil is accumulated at the crown, and the furrows left bare. Such alteration of crown and furrow is easy, where the ridges are only seven or eight feet broad. This mode of ploughing answers perfectly well in sandy and gravelly soils, and even in loam ; but it is not safe in clay soil. In that soil the ridges ought to be twelve feet wide, and twenty inches high ; to be preserved always in the same form by casting, that is, by ploughing two ridges together, beginning at the furrow that separates

them, and plougning round and round till iki

two ridges be finished. By this method, the se-

parating furrow is raised a little higher than the

furrows that bound the two ridges. But at the

next ploughing that inequality is corrected, by be-

ginning at the bounding furrows, and going round

and round till the plough ing of the two ridges be completed at the separating furrow.

For cleaning the ground of weeds, a cleaning

harrow is often used. It is drawn by a single

horse, directed by reins, which the man at the

opposite corner puts over his head, to have botli

hands free. In this corner is fixed a rope, with

which the man from time to time raises the har-

row from the ground, to let the weeds drop. For

the sake of expedition, the weeds ought to be

dropped in a straight line cross the field, whether the harrow be full or not; and seldom is a field

so dirty but that the harrow may go thirty yards

before the teeth are filled. The weeds will be

thus laid in parallel rows, like those of hay raked together for drying. A harrow may be drawn

swiftly along the rows, to shake out all the dust; and then the weeds may be carried clean off the

field in carts. But, instead of burning them,

they may be converted into useful manure, by

laying them in a heap, with a mixture of hot dung to begin fermentation. At first view, this way of cleaning land will appear operose ; but neither the labor nor expense is imrroderate At any rate, these ought not to be grudged ; for, if a field be once thoroughly cleaned, the seasons must be very cross, or the farmer very indolent, to make it necessary to renew the operation in less than twenty years. In the worst seasons a few years' pasture is always under command ; which effectually destroys triennial plants, such as thistles and couch-grass.

3. We may here offer a few remarks of a practical kind on soils : — i. Clay is in general the stiffest of all soils, and contains an unctuous quality. See CLAY. But, under the term clays, earths of different sorts and colors are included. One kind is so obstinate that scarcely any thing will subdue it ; another is so hungry and poor that it absorbs whatever is applied, and turns it into its own quality. Some clays are fatter than others, and the fattest are the best ; some are more soft and slippery. But all of them retain water poured on their surfaces, where it stagnates,

and chills the plants, without sinking into the

soil. The closeness of clay prevents the roots

and fibres of plants from spreading in search of

nourishment. The blue, the red, and the white

clay, if strong, are unfavorable to vegetation.

The stony and looser sort are less so ; but none

of them are worth any thing till their texture is

so loosened by a mixture of other substances, and

opened, as to admit the influence of the sun, the

air, and frost. Among the manures recommended

for clay, sand is of all others to be preferred :

and sea-sand the best of all, as it most effectually breaks the cohesion. It is preferred, because it

is not formed wholly of small stones ; but con-

tains a great deal of calcareous matter, such as,

shells grated and broken to pieces by the tide ;

and al so salts. The smaller the sand is the

more easily it penetrates the clay ; but it abidps less time in it than the larger The next best

sand is that washed down by rains on gravelly

soils. Those which are dry and light are the

worst. Small gritty gravel has also been recom-

mended by the best writers on agriculture, for these soils ; and in many instances they have answered the purpose. Shells, marie, ashes, and all animal and vegetable substances, are very good manures for clay ; but they have .een found most beneficial when sand is mixed with th ••m. Lime has been often used, but eminent agri-culturists have found no advantage from it singly, when applied to clays. The crops most suitable for such lands are, wheat, beans, cab-bages, and rye-grass. Clover seldom succeeds, nor indeed any plants whose roots require depth, and a wide spread in the earth.

ii. Chalk. — Chalky soils are generally dry and warm, and, if there be a tolerable depth of mould, fruitful ; producing great crops of barley, rye, peas, vetches, clover, trefoil, burnet, and particularly sainfoin. The latter plant flourishes in a chalky soil better than any other. . But, if the surface of mould be very thin, this soil re-quires good manuring with clay, marl, loam, or dung. As these lands are dry, they may be sown earL'er than others. When barley is three inches high, throw in 10 Ibs. of clover, 15 Ibs. of trefoil, and roll it well. The next summer mow the

crop for hay; feed off the aftermath with sheep;

and in winter give it a top-dressing of dung.

This will produce a crop the second spring,

which should be cut for hay. As soon as this

crop is carried off plough up the land, and in

the beginning of September sow three bushels of

rye per acre, either to feed off with sheep in the spring or to stand for harvest. If you feed it off, sow winter vetches in August or September,

and make them into hay the following summer.

Then get the land into as fine tilth as possible,

*and sow it with sainfoin, which, wi*H a little ma-*

nure once in two or three years, wi remain and

produce good crops for twenty yea : s together.

lii. Light poor land seldom produces good

crops of any thing, till well manured. After it

is well ploughed, sow three bushels of buck

wheat per acre, in April or May, When in

bloom, let the cattle in a few days eat off the best, and tread the other down ; this done, plough in

what remains immediately. This will soon fer-

ment and rot ; then lay it fine, and sow three

bushels of rye per acre. If this can be got off

early enough, sow turnips , if not, winter vetches

to cut for hay. Then get it in good tilth and

sow turnip-rooted cabbages, in rows three feet

apart. This plant seldom fails, if it has sufficient room, and the intervals are well horse-hoed ; and

it is the best spring feed for sheep when turnips

are over. The horse-hoeing will clean and pre-

pare the land for sainfoin, for the sowing of

which April is the best season. The usual way

is to sow it broad-cast, four bushels to an acre ; but experienced husbandmen prefer sowing it in

drills two feet asunder ; for then it may be horse-

hoed, and half the seed will be sufficient. The

hone-hoeing will also earth up the plants, and

render them more luxuriant and lasting. If you

sow it broad-cast, give it a top-dressing m De-

. v» r or January of rotten dung or as!.

IT of both mixed up in comport. From

various trials, it is found that taking only one

crop in a year, and feeding the after-growth, is

better than to mow it twice. Cut it as soon as it is in full bloom, if the weather will permit The

hay will be the sweeter, and the strength of the

plants less impaired, than if it stands till the seed is formed.

iv. Light rich land, being the most easy to»

cultivate to advantage, and capable of bearing

most kinds of grain, pulse, and herbage, little

need be said upon it. Such lands are the best

adapted to the drill husbandry, especially where

machines are used, which require shallow furrows to be made for the seed. This, if no, prone to couch-grass, is the best of all soiis for lucerne ; which, if sown in two feet drills, and kept clean, will yield an astonishing quantity of the most excellent herbage. But lucerne will never be cultivated to advantage where couch-grass and weeds abound ; nor in the broad-cast method, even where they do not ; because horse-hoeing is essential to the vigorous growth of this plant.*

v. Coarse rough land. — Plough deep in autumn ; when it has lain two weeks, cross plougn it, and let it lie rough through the winter. In March give it another good ploughing ; drag, rake, and harrow it well to get out the rubbish, and sow four bushels of black oats per acre if the soil be wet, and white oats if dry. When about four inches high, roll them well after a shower ; this will break the clods ; and the fine mould, falling among the roots of the plants, will promote their growth greatly. Some sow clover and rye grass among the oats, but this is bad husbandry. If designed for clover, sow it singly,

and let a coat of dung be laid on it in December. The snow and rain will then dilute its salts and oil, and carry them down among the roots of the plants. This is better than mixing the crops on such land ; for the oats will exhaust the soil so much that the clover will be impoverished. The following summer you will have a good crop of clover, which cut once, and feed the aftergrowth. In the winter plough it in, and let it lie till February ; then plough and harrow it »ell ; and in March, if the soil be moist, plant beans in drills of three feet, to admit the horse-hoe freely. When you horse-hoe them a second time, sow a row of turnips in each interval, and they will succeed well. But, if the land be strong enough for sowing wheat as soon as the beans are off, the turnips may be omitted.

4. Of ploughing. — No operation of agriculture is of more importance than ploughing : and, as the Essex Report on Agriculture here observes, ‘ there is scarcely a circumstance in agriculture more surprising, after so general attention has been paid to it, than the extreme uncertainty in which the true structure of the

plough yet remains. That variations for different soils and circumstances must and ought to occur is admitted ; but one plough for one specific object might have been produced, its superiority to others ascertained^ and the principles in its construction, on which such merit depended, fully developed, and laid down in accurate drawings ; yet this has not been done : the only approximation to it is, it is contended,

in a paper by the late Mr. Arbuthnot, which the writer published nearly forty years ago in his ' Eastern Tour.' Farming mechanics, it is supposed, look to the Board of Agriculture for supplying this great deficiency, which can be supplied only by a series of experiments, demanding a considerable expense, and more attention.' But more of the construction of particular ploughs hereafter. We only need add here that •wheels added to ploughs have, in the estimation of many good farmers, been only an apology for want of skill in the ploughman. Yet they often afford much assistance, by enabling him to exe-

cute the work with greater regularity in the depth, and more evenness in the surface. From the nature of the machinery with which they are loaded, however, they are evidently more expensive in their construction, more liable to be put out of order, ;>nd from the friction that is thus produced require more strength in the teams that are employed in drawing them. Besides, they have the disadvantage of being more apt to be put out of order in their course, by the occurrence of stones, clods, and other surface inequalities, than those of the common kind. A further inconvenience attending these ploughs is noticed by lord Somerville in the Communications to the Board of Agriculture, which is, that with wheel-ploughs workmen are apt to set the points of their shares too low, so as by their inclined direction to occasion a heavy pressure on the wheel, which must proceed horizontally. He conceives the effect of this struggle to be an increased weight of draught infinitely beyond what could be imagined, on which account he thinks that the wheel is to be considered as of no consequence in setting a plough for work ; but that

passing lightly over the surface it will be of material use in breaking old lays, or lands where flints, rocks, or the roots of trees are present, and in correcting the depression of the share from any sudden obstruction, as also in bringing it quickly into work again, when thrown out towards the surface. It is however believed on the whole, by the writer of the Middlesex Report, that in comparing two extensive districts, one of which is managed with wheel-ploughs, and the other with those of the swing kind, taking ever description of ploughmen that are met with in them, the wheel-ploughs will be found to have the advantage in point of neatness of work. See PLATES OF 1'ioucns.

But the great weight of the carriage parts for the wheels, and the time and trouble which they require in adjusting and fixing them, are great objections to the use of this sort of plough in most cases, and particularly for the general purposes of husbandry. Therefore, in the forming of all sorts of ploughs, the less they are encumbered with machinery of the wheel or other kinds, the more useful they will probably be

found.

Holding the plough in a proper position, and properly directing the horses or cattle which draw it, are only to be acquired by experience : it scarcely need be added, that the art of drawing a straight furrow with a plough in which the horses are yoked in pairs, consists in keeping each of the horses a small distance apart, so as to see forward between them ; and next to fix the eye on some object or objects over the land, and keep tltese objects and the coulter or muzzle of the plough in one line. By far the best practical directions for ploughing, as Mr. Loudon thinks, are thus given in the Supplement to the Encyclopaedia Britannica, by Mr. C leghorn.

‘ Three different points require particular attention in ploughing : 1 . The breadth of the slice to be cut; 2. its depth; and 3. the degree in which it is to be turned over ; — which last circumstance depends both upon the construction of the plough, particularly the mould-board, and the care of the ploughman.

‘ The breadth and depth of the furrow-slice

are regulated by judiciously placing the draught

on the nozzle or bridle of the plough ; setting it so as to go more or less deep, and to take more

or less land or breadth of slice, according as

may be desired. In general, the plough is so

regulated that, if left to itself, and merely kept

from falling over, it would cut a little broader

and a little deeper than is required. The coul-

ter is also placed with some inclination towards

the left or land side, and the point of the sock

or share has a slight tendency downwards. The

degree to which the furrow-slice turns over is

in a great measure determined by the pro-

portion between its breadth and depth, whic:i

for general purposes is usually as three is to

two; or, when the furrow is nine inches broad,

it ought to be six inches in depth. When the

slice is cut in this proportion, it will be nearly half turned over, or recline at an angle of forty

or forty-five degrees ; and a field so ploughed

will have its ridges longitudinally ribbed int .

angular drills or ridgelets. But if the slice is

much broader, in proportion to its depth, it

will be almost completely overturned, or left

nearly flat with its original surface downwards ;

and each successive slice will be somewhat over-

lapped by that which was turned over before it.

And, finally, when the depth materially exceeds

the width, each furrow slice will fall over on its side, leaving all the original surface bare, and

only laid somewhat obliquely to the horizon.

‘ Ploughing with the breadth and depth nearly

in the proportion of three to two is best adapted

for laying up stubble land after harvest, when

it is to remain during winter exposed to the mel-

lowing influence of frost, preparatory to fallow

or turnips. The shallow furrow of considerable

width, as five inches in depth by eight or nine

wide, is understood to answer best for breaking

up old leys ; because it covers up thp grass turf, and does not bury the manured soil. Ploughing

with the depth of the furrow considerably ex-

ceeding the width is a most unprofitable and

uselessly slow operation, which ought seldom or

never to be adopted. The most generally useful

breadth of a furrow-slice is from eight to ten

inches, and the depth, which ought to be seldom

less than four inches, cannot often exceed six or

eight inches, except in soils uncommonly thick

and fertile. When it is necessary to go deeper,

as for carrots and some other deep-rooted plants a trench ploughing may be given by means of a second plough following in the same furrow

Shallow ploughing ought always to be adopted after turnips are eaten on the ground, that the manure may not be buried too deep ; and also in covering lime, — especially" if the ground has been pulverised by fallowing, because it naturally tends to sink in the soil. In ploughing down farm-yard dung, it is commonly necessary to go rather deep, that no part of the manure may be left exposed to the atmosphere. In the first ploughing, for fallows or green crops, it is advisable to work as deep as possible, and no great danger is to be apprehended, though a small portion of the subsoil be at that time brought to the surface. The furrow-slices are generally distributed into beds varying in breadth according to circumstances ; these are called ridges or lands, and are divided from one another by gutters or open furrows. These last

serve as guides to the hand and eye of the sower

to the reapers, and also for the application of

manures in a regular manner. In soils of a

strong or retentive nature, or which have wet

close subsoils, these furrows serve likewise as

drains for carrying off the surface water, and

being cleared out, after the land is sown and

harrowed, have the name of water furrows.

‘ Ridges are not only different in breadth, but

are raised more or less in the middle, on different soils. On clayey retentive soils, the great point

to be attended to is the discharge of superflu-

ous water. But narrow ridges or stitches, of

from three to five feet, are not approved of

in some of the best cultivated counties. In

these a breadth of fifteen or eighteen feet, the

land raised by two gatherings of the plough, is

most commonly adopted for such soils ; such

ridges being thought more convenient for ma-

nuring, sowing, harrowing, and reaping than

narrower ones ; and the water is drained off quite

as effectually. Ridges on dry porous turnip soils

may be formed much broader ; and, were it not

for their use in directing the laborers, may be,

and sometimes are, dispensed with altogether.

They are often thirty, or thirty-six feet broad,

which in Scotland are called band-win ridges,

because reaped by a band of shearers, commonly

six, served by one binder. If it be wished to

obliterate the intermediate furrows, this may be

done by casting up a narrow ridglet or single

bout-drill between the broad ridges, which is

afterwards levelled by the harrows.

The mode of forming ridges straight and of

uniform breadth is as follows : — Let us suppose

a field perfectly level that is intended to be laid off into ridges of any determinate breadth. The

best ploughman belonging to the farm conducts

the operation, with the aid of three or more

poles shod with iron, in the following manner : —

The first thing is to mark off the head ridges, on which the horses turn in ploughing, which

should in general be of an equal breadth from

the bounding lines of the field, if these lines

are not very crooked or irregular. The next

operation, assuming one straight side of the

field, or a line that has l>een made straight, as

the proper direction of the ridges, is to measure

off from it w ith one of the poles (all of them of a certain length, or expressing specific measures),

l.aif the intende I breadth of tlie ridge, if it is to be gathered, or one breadth

and a half if to be

ploughed flat ; and there the ploughman sets up

a pole as a direction for the plough to enter.

On a line with this, and at some distance, he

plants a second pole, and then in the same man-

ner a third, fourth, &c., as the irregularity cf

the surface may render necessary, though three

must always be employed, the last of them at

the end of the intended ridge, and the whole in

one straight line. lie then enters the plough at

the first pole, keeping the line of poles exactly

between his horses, and ploughs down all the

poles successively ; halting his horses at each,

and replacing it at so many feet distant as the

ridges are to be broad ; so that, when he reaches

the end of the ridge, all his poles are aˆain set up in a new line parallel to the first. He re-

turns, however, along his former track, correct-

ing any deviations, and throwing a shallow fur-

row on the side opposite to his former one.

These furrows, when reversed, form the crown

of the ridge, and direct the ploughmen who are

to follow. ‘ The same operations are carried on

until the whole field is marked out. This is

called feiring in Scotland, and striking the fur-

rows in England. It is surprising with what accuracy these lines are drawn by skilful ploughmen. Another method has been adopted for the same purpose, which promises to be useful with less experienced workmen. A stout lath or pole, exactly equal in length to the breadth of the intended ridge, is fixed to the plough at right angles to the line of the draught, one end of which is placed across the handles exactly opposite the coulter, while the other end projects towards the left hand of the ploughman, and is preserved in its place by a rope passing from it to the collar of the near-side horse. At the outer end of the lath a coulter or harrow tine is fixed perpendicularly, which makes a trace or mark on the ground, as the plough moves onwards, exactly parallel to the line of draught. By this device, when the plough is feiring the crown of uuridge, the market traces the line on which the next ridge is to be feired. — General Report Scotland, vol. i. p. 354.

The direction and length of ridges are points which must evidently be regulated by the nature of the surface, and the size of the field. Short angular ridges, called butts, which are often necessary in a field with irregular boundaries, are

always attended with a considerable loss of time, and ought to be avoided as much as possible.

In ploughing steep land it is thought advisable to give the ridges an inclination towards the right hand at the top, by which, in going up the acclivity, the furrow falls more readily from the plongh, and with less fatigue to the ho

Another advantage of forming ridges in a slanting direction, on such lands, is that the soil is not so apt to be washed down from the higher ground, as if the ridges were laid at right angles.

Wherever circumstances will permit, the best direction, however, is due north and south, by which the grain on both sides of the rid^e enjoys nearly equal advantages from the influence of the sun.

' Land thus formed into ridges,' says Mr. Loudon, is afterwards cultivated without it, «rk-

ing out the ridges anew, until the inter-furrows liave been obliterated by a fallow or fallow crop.

This is done by one or other of the following modes of ploughing. 1 . If the soil be dry, and

the land has been ploughed flat, the ridges are split out in such a way that the space which the crown of the old ridge occupied is now allotted to the open furrow between the new ones. This is technically called crown and furrow ploughing. 2. When the soil is naturally rather wet, or, if the ridges have been raised a little by former ploughings, the form of the old ridges, and the situation of the inter-furrows, are preserved by what is called casting, that is, the furrows of each ridce are all laid in one direction, while those of the next adjoining ridges are turned the contrary way ; two ridges being always ploughed together. 3. It is commonly necessary to raise the ridges, on soils very tenacious of moisture, by what is called gathering, which is done by the plough going round the ridge, beginning at the crown, and raising all the furrow slices inwards. 4. This last operation, when it is wished to give the land a level surface, as in fallowing, is reversed by turning all the furrow-slices outwards ; beginning at the inter-furrows, and leaving an open furrow on the crown of each ridge. In order to bring the land

into as level a state as possible, the same mode of ploughing, or cleaning, as it is called, may be repeated as often as necessary. With respect to ploughing relatively to time, in the strongest lands, a pair of good horses ought to plough three-quarters of an acre in nine hours ; but upon the same land, after the first ploughing, on friable soils, one acre or an acre and a quarter is a common day's work. Throughout the year, an acre a day may be considered as a full average on soils of a medium consistency. The whole series of furrows on an English statute acre, supposing each to be nine inches broad, would extend to 19,360 yards; and adding twelve yards to every 220, for the ground travelled over in turning, the whole work of one acre may be estimated as extending to 20,41 6 yards, or eleven miles and nearly five furlongs.

' In ploughing relatively to season, it is well known that clayey or tenacious soils should never be ploughed when wet ; and that it is almost equally improper to allow them to become too dry, especially if a crop is to be sown without a second ploughing. The state in which such lands should be ploughed is that which is

commonly indicated by the phrase, ‘ between the wet and the dry,’ — while the ground is slightly moist, mellow, and the least cohesive. The season best for ploughing the first time, for fallow or green crops, is immediately after harvest, or after wheat sowing is finished ; and, when this land has been gone over, the old tough swards, if there be any, are next turned up. The reasons for ploughing so early are sufficiently obvious ; as the frosts of winter render the soil more friable for the spring operations, and assist in destroying the weed roots. In some places, however, the first ploughing for fallow is still delayed till after the spring seed-time.’

The cultivator, grubber, scuffler, scarifier, &c., are used to lessen the number of ploughings in fallows or light free soils. Their operation differs from that of the plough in not reversing the surface, and therefore they can never, as some suppose, become a substitute for that implement. Still the grubber is recommended by good judges as a valuable implement. Lester of Northampton, who is said first to have invented an implement of this kind, declares himself confident that one man, a boy, and six horses,

will move as much land in a day, and as effectually, as six ploughs : meaning land in a fallow state that has been previously ploughed. And this may allow us to introduce the important question

5. Of Fallowing. — ‘ The vague ancient opinion of the use of nitre, and of nitrous salts in vegetation,’ says Sir Humphrey Davy, ‘ seems to have been one of the principal speculative reasons for the defence of summer fallows. Nitrous salts are produced during the exposure of soils containing vegetable and animal remains, and in greatest abundance in Lot weather; but it is probably by the combination of the azote from these remains with oxygen in the atmosphere that the acid is formed ; and at the expense of an element which otherwise would have formed ammonia; the compounds of which are much more efficacious than the nitrons compounds in assisting vegetation. Mr. Loudon observes ‘ that this reason is, however, more speculative than experimental, and seems influenced by the opinion adopted by the author, that fallows are of little use in husbandry. . One

obvious advantage of aeration in summer, or a summer fallow,' he says, ' is, that the soil may thus be heated by the sun to a degr.ee which it never could be, if partially covered with the foliage of even the widest drilled crops. For this purpose, if the soil is laid up in large lumps, it is evident it will receive more heat by exposing a greater surface to the atmosphere, and it will retain this heat longer than can he expected, from the circumstance of the lumps reflecting back the rays of heat radiated l>y each other.' A clayey soil in this way (Farmer's Magazine, 1815) may be heated to 120°, which may in some degree alter its absorbent powers as to water, and contribute materially to the destruction of vegetable fibre, insects, and their eggs. By the aeration of lands, in winter, mi-nute mechanical division is obtained by the freezing of the water in the <(soil ; for, as water in the solid state occupies more space than when fluid, the particles of earthy matters and of decomposing stones are thus rent asunder, and crumble down in a fine mould. Rough stony soils will thus receive an accession to their finer soil every winter. ' Agricultural experience,' adds our author,

*’ has fully proved that fallows are the only means by which stiff clays- in moist climates can be effectually cleared of weeds. Supposing therefore that no other advantage whatever was obtained, that no nutritive matter was imbibed from the atmosphere, and the soil was neither chemically nor mechanically benefited by aeration, this benefit alone, the effectual eradication of weeds, is sufficient to justify the use of fallows on such soils Many of the objections to fal-

lows have arisen in consequence of the parties not previously agreeing as to what a summer fallow is. In England generally, or at least formerly, a fallow was a portion of land left a year without culture or cropping : unless being once or twice ploughed can be denominated the former, and an abundant growth of coarse grasses and weeds can constitute the latter. The jacheres of the French are the same thing. In Scotland and the best cultivated districts a summer fallow is a portion of land which is begun to be cultivated after the crop is removed in autumn, and is frequently, as need requires,

ploughed, harrowed, and otherwise comminuted,

and freed from stones, weeds, inequalities, &c.,

till the autumnal seed-time of the following

year : it is thus for twelve months in a state of constant tillage and movement. The result is

that the land is thoroughly freed from roots of

weeds ; from many seeds of weeds, which are

thus made to germinate and are then destroyed ;

and from many eggs of insects which are thus

hatched, but, being without plants to nourish

them in their larva state, speedily die. The

land is also thoroughly pulverised, and the top,

bottom, and middle, mixed together ; stones are

picked out ; inequalities unfavorable to surface

drainage removed or lessened, and various other

useful objects attained. Such a fallow can no

more be compared with what usually passes

under that name than the plough of Virgil with

that of Small.'

East Lothian stands, we believe, at the head

of the Scottish counties for excellent farming :

and here fallowing, introduced at the beginning

of the last century, seems to be practised in its

greatest perfection. The sixth earl of Hadding-

ton, we are told, was the first proprietor, and

John Walker, of Beanston, near Dunbar, the first fanner upon this principle. lie took the hint from some English travellers, while they spent a night at his house, and with whom he had conversation upon the subject, so much to his satisfaction that he made an experiment upon six acres the following summer, which he carried through in spite of the animadversions of his neighbours, who were divided in their opinions as to the sanity of his mind, or the stability of his circumstances. The result of the experiment gave them a better opinion of both, and the return was so abundant as to induce him to extend his next year's fallow break to twenty acres ; soon after which the practice began to spread', and, so early as the year 1724, fallowing upon all the deep strong soils was common throughout the county, and has continued to be so ever since. The practice of the county is thus described in the General Report of Scotland, vol. i. p. 419,

' Invariably, after harvest, the land intended for being summer fallowed in the ensuing year gets an end-long ploughing, which ought to be

as deep as the soil will admit, even though a little of the till or subsoil is brought up. This both tends to deepen the cultivated or manured soil, as the fresh accession of hitherto uncultivated earth becomes afterwards incorporated with the former manured soil, and greatly facilitates the separation of the roots of weeds during the ensuing fallow process, by detaching them completely from any connexion with the fast subsoil. This autumnal ploughing, usually called the winter furrow, promotes the rotting of stubble and weeds; and, if not accomplished towards the end of harvest, must be given in the winter months, or as early in the spring as possible. In giving this first ploughing, the old ridges should be gathered up, if practicable, as in that state they are kept dry during the winter months ; but it is not uncommon to split them out or divide them, especially if the land had been previously highly gathered, so that each original ridge of land is divided into two half ridges. Sometimes, when the land is easily laid dry, the furrows of the old ridges are made the crowns of the new ones, or the land is ploughed

in the way technically called crown-and-fur. In other instances two ridges are ploughed together, by what is called casting, which has been already described. After the field is ploughed, all the inter-furrows, and those of the headlands, are carefully opened up by the plough, and are afterwards gone over effectually by a laborer with a spade, to remove all obstructions, and to open up the water furrows into the fence ditches, wherever that seems necessary, that all moisture may have a ready exit. In every place where water is expected to lodge, such as ditches or hollow places in the field, cross or oblique furrows are drawn by the plough, and their intersections carefully opened into each other by the spade. Wherever it appears necessary, cross cuts are also made through the head ridges into the ditches with a spade, and every possible attention is exerted, that no water may stagnate in any part of the field.

‘ As soon as the spring seed-time is over the fallow land is again ploughed end-long. If formerly split, it is now ridged up ; if formerly laid up in gathered ridges, it is split or cloven

down. It is then cross-ploughed ; and, after

lying till sufficiently dry to admit the harrows,

it is harrowed and rolled repeatedly, and every

particle of the vivacious roots of weeds brought

up to view, carefully gathered by hand into

heaps, and either burnt on the field or carted off to the compost midden. The fallow is then

ridged up, which places it in a safe condition in

the event of bad weather, and exposes a new

*surface to the harrows and roller; after whi< *h*

the weeds are again gathered by hand, but a pre-

vious harrowing is necessary. It is afterwards

ploughed, harrowed, rolled, and gathered as

often as may be necessary to reduce it into fine

tilth, and completely to eradicate all root weeds.

Between these successive operations, repeated

crops of seedling weeds are brought into vege-

tation and destroyed. The larvae likewise of

various insects, together with an infinite variety

of the seeds of weeds, are exposed to be de-

voured by birds, which are then the farmer's best

friends, though often proscribed as his bitterest

enemies. Some writers on husbandry have con-

demned the use of the harrow and roller in the

fallow process, alleging that frequent ploughing

is all that is necessary to destroy root-weeds, i>y the bating or drying of the c.lods in the sun and wind l'iit experience has ascertained that fir-

qucnlly turning over the ground, though abso-

lutely necessary while the fallow process is going

on, can never eradicate couch-grass or other

root-weeds. In all clay soils, the ground turns

up in lumps or clods, which the severest drought

will not penetrate so sufficiently as to kill the

included roots. When the land Is again plough-

ed, these lumps are simply turned over and no

more, and the action of the plough serves in no

degree to reduce them, or at least very imper-

ceptibly. It may be added that these lumps

likewise enclose innumerable seeds of weeds,

which cannot vegetate unless brought under the

influence of the sun and air near the surface.

The diligent use, therefore, of the harrow and

roller, followed by careful hand-picking, is indis-

pensably necessary to the perfection of the fallow

process.'

' When employed to reduce a strong obdurate

soil, not more than two of the common sort of

harrows should be yoked together, because they

are apt to ride and tumble upon each other, and thus impede the work. It may also be remarked that on rough soils harrows ought to be driven as fast as the horses can walk ; because their effect is in direct proportion to the degree of velocity with which they are driven : and the harrow-man's attention should be constantly directed to prevent these implements from riding upon each other, and to keep them clear of every impediment, from stones, lumps of earth, clods, and grass roots. In ordinary cases, and in every case where harrowing is meant for covering the seed, and the common implement in use, three harrows are the best yoke, because they fill up the ground more effectually than when a smaller number is employed ; some of the improved forms, calculated to cover the breadth of two or more of the old harrows by one frame, are only fit for flat ridges ; or for working dry lands in which ridging is not requisite.

6. Of the usual crops. — The preceding part of this treatise is all preparatory to the capital object of a farm, that of raising plants for the nourishment of man and other animals. These (see AGRICULTURE, par. 84) are of two kinds ;

culmiferous and leguminous ; differing widely from each other. Wheat, rye, barley, oats, rye-grass, are of the first kind ; of the other kind are peas, beans, clover, cabbage, and many others. The propagation of plants is naturally divided into three subdivisions : — 1st. Plants cultivated for fruit; 2d. Plants cultivated for roots ; 3d. Plants cultivated for leaves.

SECT. I. — PLANTS CULTIVATED FOR FRUIT.

1. WHEAT takes the lead among plants cultivated for fruit. A sandy soil is thought too loose ; the only chance for a crop is after red clover, say some writers, the roots of which bind the soil. Rye is a crop much fitter for sandy soil than wheat; and like wheat is generally sown after a summer-fallow. Sow wheat as soon as the ground is ready. When sown too early, however, it is too forward in spring, and apt to be hurt by frost; when sown a month too late, it has not time to root before frost comes on, and frost spews it out of the ground. The greater part of the wheat crop throughout Britain is probably sown upon fallowed land. ‘ When it succeeds turnips consumed on the ground, or clover cut for hay or soiling, it is commonly

sown after one ploughing ; but upon heavier soils, or after grass of two or more years, the land is ploughed twice or three times.'

Setting of wheat, or dibbling, is a method which is reckoned one of the greatest improvements in husbandry that was made during the last century. It seems to have been first suggested by planting grains in a garden from curiosity, by persons who had no opportunity of extending it to a lucrative purpose. Nor was it attempted on a larger scale, till a farmer near Norwich began it upon less than an acre of land. For two or three years only a few followed his example ; and these were generally the butt of their neighbours. They had, however, considerably better corn and larger crops, which, together with the saving of seed, engaged more to follow them. Experiment established the practice, and was the means of introducing it generally among the intelligent farmers of a very large district.

The lands on which this method was found particularly prosperous were either after a clover stubble, or on which ti efoil and grass-seed were sown the preceding year. These grounds, after

the usual manuring, were once turned over by the plough in an extended flag or turf, at ten inches wide ; along which a man, called a dibbler, with two setting-irons somewhat bigger than ram-rods, but considerably bigger at the lower end, and pointed at the extremity, walked backwards along the turf and made the holes about four inches asunder every way, and one deep. Into these holes the droppers (women, boys and girls) dropped two grains, which is quite sufficient. After this a gate, bushed with thorns, was drawn by one horse over the land, and closed the holes. By this mode, three pecks of grain are sufficient for an acre; and, being immediately buried, it is equally removed from vermin or the power of frost. The regularity of its rising gives the best opportunity of keeping it clear from weeds, by weeding or hand-hoeing. Sir Thomas Beevor of Hethel-Hall, in Norfolk, soon found the produce to be two bushels per acre more than from the wheat which is sown ; and, having much less small corn intermixed with it, the sample was better, and always fetched a higher price. This method, too, saves to the

farmer and to the public many pecks of seed-

wheat.

In light lands a very dry time prevents

dibbling, as the holes made with the instruments

will be filled up again with the mould as fast as the instrument is withdrawn. So, again, in a

very wet season, on strong and stiff clays, the

seeds in the holes cannot be properly covered by

the bushes drawn over them. But these extremes

of dry and wet do not often happen, nor do they

affect lands of a moderately consistent texture,

or both light and heavy soils at the same time,

so that the general practice is in fact never great-

ly impeded by them.

In the Philosophical Transactions for 1768

we meet with an extraordinary experiment for

propagating wheat, of which the following is an

abstract:— On the 2d of June, 1766, Mr. C.

Miller (son of the celebrated gardener of this

name) sowed some grains of the common red

wheat ; and on the 8th of August, a single plant

was taken up and separated into eighteen parts,

and each part planted separately. These plants

having pushed out several side-shoots, about the middle of September, some of them were taken up and divided, and the rest between that time and the middle of October. This second division produced sixty-seven plants. These plants remained through the winter, and another division of them, made between the middle of March and the 12th of April, produced 500 plants. They were then divided no further, but permitted to remain. The plants were in general stronger than any of the wheat in the fields. Some of them produced upwards of 100 ears from a single root. Many of the ears measured seven inches in length, and contained between sixty and seventy grains. The whole number of ears which, by the process abovementioned, were produced from one grain of wheat, was 21,109, which yielded three pecks and three quarters of clear corn, the weight of which was forty-seven pounds seven ounces ; and, from a calculation made by counting the number of grains in an ounce, the whole number of grains was about 576,840. There was only one general division of the plants made in the spring. Had a second been

made, Mr. Miller thinks, the number of plants would have amounted to 2000. The ground was a light blackish soil, upon a gravelly bottom ; and consequently a bad soil for wheat. One half of the ground was well dunged, the other half had no manure. There was, however, no difference discoverable in the vigor or growth of the plants. It is evident that the expense and labor of setting in the above manner by the hand, will render it impracticable upon a large scale.

A correspondent of the Bath Society, therefore (Robert Bogle, esq.), to extend the practice, proposed the use of the harrow and roller until some better implements be invented. This method occurred to him from attending to the practice usual with farmers, of harrowing their fields after the grain is sprung up. Upon investigating the principles upon which these practices are founded, they said, ‘ that after very heavy rains, and then excessive dry weather, the surface • f their lands was apt to be caked, the tender fibres of the young roots were thereby prevented from pushing, and of course the vegetation was greatly obstructed ; in such instances they found

very great benefit from harrowing and rolling.'

This reasoning he owns to be well founded, but

contends that the benefit arising from harrowing

and rolling is not derived from pulverising en-

tirely, but from subdividing and enabling the

plants to tiller, as it is termed. ' The harrow,' he observes, ' certainly breaks the incrustation, and

the roller crumbles the clods ; but the harrow

removes many of the plants from their original

stations ; and, if the corn has begun to tiller at the time it is used, the roots will be in many instances subdivided, and then the application of my

system of divisibility comes into play. The

roller then serves to plant the roots which liavc

been torn up the harrow.' On this the society

observe, that the teeth of a harrow are too l-ir^c to divide roots so small and tenacious as those

of grain ; and, whenever such roots stand in the

line any tooth makes, they will, if small, be only turned on one side by the earth yielding to their

lateral pressure, or, if large, the whole root will be drawn out of the ground. The principal

uses, therefore, derived from harrowing and

rolling these crops are, opening the soil

between the plants, earthing them up, break-

ing the clods, and closing the earth about their

roots. ' I have conversed,' says Mr. Bogle,

' much with many practical farmers, who all

admit that my plan has the appearance not only of being practical, but advantageous. I have also seen in the ninth number of Mr. Young's Annals of Agriculture the account of an experiment which strongly corroborates my theory. It was made by the Rev. Mr. Pike of Edmonton. From this, and other experiments which have been made under my own eye, I foresee clearly that the system is practicable, and will certainly be productive of great benefit, should it become general. Besides the saving of nine-tenths of seed in the land sown broad-cast, other very important advantages will attend the setting out of wheat from a seed-bed, such as an early crop ; the certainty of good crops ; rendering a summer fallow unnecessary; saving dung; and having your wheat perfectly free from weeds without either hand or horse-hoeing : 500 plants in April produced almost a bushel of grain. My gardener says, he can set 1000 plants in a day, which is confirmed by the opinion of two other gardeners.'

Excellent wheat according to Brown (Tracts on Rural Affairs) may be grown on light soils, with the exception of soft sands. Such soils,

however, are not constitutionally disposed to the growth of that grain ; nor will they, under any management, bear such a frequent repetition of it as those already mentioned. Summer fallow on them may safely be dispensed with ; because a crop of turnips, which admits every branch of the cleaning process to be more perfectly executed than even a naked or bare fallow does, may be profitably substituted. Wheat here comes in with propriety after turnips, though, in general cases, it must be sown in the spring months, unless the turnips are stored ; in which case it may be sown in November ; or it may be sown after clover, for the fourth crop after the rotation ; or in the sixth year, as a way-going crop, after drilled peas and beans, if the rotation is extended to that length. But, take it any way, it is scarcely possible to raise wheat so extensively upon light soils, even where they are of the richest quality, as is practicable upon clays; nor will a crop of equal bulk upon the one return so much produce in grain as may be got from the other. To enlarge upon this point would only serve to prove what few husbandmen will dispute, though, it may be added, that,

on thin sands, wheat ought not to be ventured,

unless they are either completely clayed or

marled, as it is only with the help of these aux-

iliaries that such a soil can gam stamina ca-

pable of producing wheat with any degree of

succi —.

‘ On soils really calculated for wheat, though

in different degrees, summer fallow is the first

and leading step to gain a good crop or crops of

that grain. The first furrow should be given

before winter, or as early as other operations

upon the farm will admit; and every attention

should be used to go as deep as possible ; for it rarely happens that any of the succeeding fur-

rows exceed the first one in that respect. The

number of after-ploughings must be regulated

by the condition of the ground and the state of

the weather; but, in general, it may be ob-

served that ploughing in length and across, al-

ternately, is the way by which the ground will

be most completely cut, and the intention of

fallowing accomplished. It has been argued

that harrowing clay soils, when summer fallowed,

is prejudicial to the wheat crop ; but, without

discussing this point (such a discussion being

unnecessary), it may merely be stated that in a

dry season it is almost impracticable to reduce

real clays, or to work them too small ; and that

oven in a wet one, supposing they are made

surface-smooth, they will, when ploughed up

attain, consolidate into clods or big lumps after

forty -eight hours' drought, and become nearly as

obdurate as ever. It is only on thin soils, which have a mixture of peat earth, and are incumbent

on a bottom impervious to wafer, that damage

is at any time sustained by over harrowing.

Such are generally of a weak texture, and may

be broken down with facility by the roller and

harrow. If caught by much rain, before the

pores are in some measure closed, the moisture

is greedily absorbed ; and, being prevented from

going downwards by the hardness of the sub-

soil, the whole surface becomes a kind of mor-

tar or paste, unless previously well ridged up;

which, to a certain extent, prevents the conse-

quences from being dangerous. These evils,

ho%vever, must be submitted to by the posses-

sors of such soils, if they want to have them

sufficiently fallowed and prepared in a proper manner; for, without reducing them, couch-grass, and especially moss, with which they are commonly stored, cannot be eradicated. If they are reduced in the early part'of the season, the danger is small ; but to break them down in the latter part ought always to be avoided, unless called for by imperious necessity. When wheat is sown after beans it rarely happens, in this northern climate, that more than one ploughing can be successfully bestowed. Before this is given it is advantageous to cross-harrow the land, which levels the drills, and permits the ploughing process to be executed with precision. Almost in every case the ridges should be gathered up, so that the furrows may be well cleared out, and the plants preserved from injury during the inclement winter season. Clover land should be neatly ploughed, and well laid over, so that the roots of the grasses may be buried and destroyed ; for it frequently happens that crops of wheat, after clover and rye-grass, . are greatly injured by inattention to the ploughing process. In short, sowing wheat after clover

may be considered as the most hazardous way in

which that grain can be cultivated.'

The manures best calculated for wheat, are now

generally allowed to be animal matters and lime.

It is certain according to Sir H. Davy, Chaptal,

&c., that wheat will not thrive on any soil that does not contain lime. Professor Thaer says it ab-

sorbs more nourishment from the soil than any

of the' corn tribe; and he calculates (hypothe-

tically, as he allows) that for every 100 parts of nutriment in a soil sown with this grain, forty

will be carried off by the crop. (Principes

Raisonnees, torn. iv. art. Froment). At the

same time too much manure on land in good

tilth is very apt to cause the crop to lodge;

and hence some people think it improper to

dung rich clays or loams when fallowed, and

choose rather to reserve that restorative till the

succeeding season, when they are prepared for a

crop of drilled beans. Delaying the manuring

process for a year is attended with many advan-

tages ; because good land, fully wrought, con-

tains such a principle of action within itself, as

often causes the first wheat crop to be lodged

before it is filled ; under which circumstance,

the produce is diminished both in quantity and quality. This delay in manuring is, however, attended with disadvantages; because, when dung is kept back till the end of autumn or beginning of winter, to be laid on the stubbles, the weather is often so wet that it cannot be carted on without subjecting the land to injury from poaching, whilst the labor in laying it on fs also increased. On thin clays, or even upon soils of the other description not in high condition, there can be no doubt but that the end of summer, and upon summer fallow, is the most proper time for manuring them, though it will be found that an improvident expenditure of dung, on such occasions, ought always to be steadily avoided. Where manure is abundant, wheat alternating with a green crop, or indeed any corn crop and a green crop may be grown alternately for any length of time. (Farm. Mag. vol. xxiii. p. 298).

Wheat is sown as far north as Petersburgh and in Sweden, and will endure a great deal of cold during winter, if sown in a dry or well drained soil. Moderately moist weather before the flowering season, and after the grain is set or formed, is favorable; but

continued heavy rains

after the flowering season produces the smut.

The dry frosty winds of February and March,

and even April in some districts, are more inju-

rious to the wheats of Britain than any other

weather. Hoar frosts, when the plant is in the

ear, produce blights ; and mildews often result

from or follow sultry winds and fogs. Cold, in

the blossoming and ripening season in July,

even unaccompanied by wind or rain, produces

an inferior grain, greatly deficient in gluten ; and heat the contrary. The most valuable wheat of

Europe, according to Sir H. Davy, is that of

Sicily ; which he found to contain much more

gluten than any other.

The season of sowing wheat on clays, accord-

ing to the able writer in the Ency. Brit. Supple-

ment, is generally the latter end of autumn ; but

on early turnip soils it is sown after clover or

turnips, at almost every period from tne begin-

ning of September till the middle of March ,

but the far greater part is sown in September and

October. For summer wheat, in the southeni

districts, May is sufficiently early, but in the north the last fortnight of April is thought a more eligible seed-time. In the cultivation of spring-sown winter wheat, it is of importance to use the produce of spring-sown grain as seed, as the crop of such grain ripens about a fortnight earlier than when the produce of the same wheat winter-sown is employed as spring seed. According to Brown, this process is indispensably necessary on every soil ; otherwise smut, to a greater or less extent, will, in nine cases out of ten, assuredly follow. Though almost all practical farmers are agreed as to the necessity of pickling, yet they are not so unanimous as to the modus operand! of the process, and the article which is best calculated to answer the intended purpose. Stale urine may be considered as a safe and sure pickle ; and, where it can be obtained in a sufficient quantity, is commonly resorted to. The mode of using it does not, however, seem to be agreed upon; one party contends that the grain ought to be steeped in the urine, another considers it as sufficient to sprinkle the urine upon it. Some, again, are advocates for a pickle made of salt and water,

suttciently strong to buoy up an egg, in which the grain is to be thoroughly steeped. But whatever difference of opinion there may be as to the kind of pickle that ought to be used, and the mode of using it, all admit the utility of mixing the wetted seed with hot lime, fresh slaked ; and this, in one point of view, is absolutely necessary, so that the seed may be equally distributed. It may be remarked that experience justifies the utility of all these modes, provided they are attentively carried into execution. There is some danger from the first ; for, if the seed steeped in urine is not immediately sown, it will infallibly lose its vegetative power. The second, viz. sprinkling the urine on the seed, seems to be the safest, if performed by an attentive hand; whilst the last may do equally well, if such a quantity of salt be incorporated with the water as to render it of sufficient strength. It may also be remarked that this last mode is oftener accompanied with smut, owing no doubt to a deficiency of strength in the pickle ; whereas a single head with smut is rarely discovered when urine has been used. A mode of preparing wheat for sowing, recently adopted in the

south of Scotland, is thus described : — ‘ Take four vessels, two of them smaller than the other two, the former with wire bottoms, and of a size to contain about a bushel of wheat, the latter large enough to hold the smaller within them. Fill one of the large tubs with water, and, putting the-wheat in the small one, immerse it in the water and stir and skim off the grains that float above, and renew the water as often as is necessary, till it comes off almost quite clean. Then raise the small vessel in which the wheat is contained, and repeat the process with it in the other large tub, which is to be filled with stale urine ; and in the mean time wash more wheat in the water tub. When abundance of water is at hand, this operation is by no means tedious; and the wheat is much more effectually cleansed from all impurities, and freed more completely from weak and unhealthy grains and seeds of weeds, than can be done by t’ne winnowing machine. \ hen thoroughly washed and skimmed, let it drain a little; then empty it on a clear floor or in the cart that is to take it to the field, and sift quick-lime upon it, turning it over and mixing it with a shovel, till it be sufficiently dry for sowing.’ (Supplement, Ency. Brit. art. Agriculture).

The modes of sowing wheat are either broad-

cast, drilling, ribbing, or dibbling. The first

mode is the most general, and the seed is for the most part covered by harrowing; but no more

harrowing, Brown observes, should be given to

fields that have been fallowed, than what is ne-

cessary to cover the seed, and level the surface.

Ground which is to lie in a broken down state

through the winter suffers severely when an ex-

cessive harrowing is given. It is a general prac-

tice in most of the southern counties, and even

on opposite soils, when wheat is sown broad-

cast, to plough it in with a shallow furrow.

This i done erven after beans and on clover leys.*

Drilling is also practised, and is becoming

more general on lands infested with annual

weeds. A machine which sows at three different

intervals, according to the judgment of the far-

mer, of twelve, ten and a half, or nine inches,

is much approved of in the northern districts.

It deposits six, seven, or eight rows at once, ac-

cording as it is adjusted to one or other of these intervals, and the work is done with ease and

accuracy when the ridges are previously laid out

of such a breadth, twelve and a half feet, as to

be sown by one bout : the machine going along one side of such a ridge, and returning on the other, and its direction being guided by one of its wheels, which thus always runs in the open furrow between the ridges. If the ten and a half inch interval be adopted, and it is the most common one in that country, the machine sows seven rows at once, or fourteen rows on a ridge of twelve feet and a half. But the space between the rows varies in some parts still more than this machine admits of; it ought not, however, to be so narrow as to prevent hand hoeing, even after the crop has made considerable progress in growth ; and it cannot advantageously be so wide as to admit the use of any effective horse-hoe.

Ribbing is a mode of sowing in some places, by which a drill machine is dispensed with. The seed is scattered with the hand in the usual broad-cast manner, but, as it necessarily falls for the most part in the furrows between the ribs, the crop rises in straight parallel rows, as if it had been sown by a drill machine : after sowing the ribs are levelled by harrowing across. This plan has nearly all the advantages of drilling in

so far as regards exposure to the rays of the sun, and the circulation of air among the plants ; but, as some plants must always rise between the rows, it is not quite so proper when horse-hoeing is required.

Of dibbling Mr. Loudon says, notwithstanding the advantages of saving seed, as well as some others which are generally reckoned undeniable, it is asserted by some very judicious farmers that dibbling of wheat on the whole is not really a profitable practice. It is parti-

cularly said to be productive of weeds unless dibbled very thick : which indeed may probably be the case, as the weeds are thus allowed a greater space to vegetate in. Marshal is of opinion that the dibbling of wheat appears to be peculiarly adapted to deep rich soils, on which three or four pecks dibbled early may spread sufficiently for a full crop ; whereas light, weak, shallow soils, which have lain two or three years, and have become grassy, require an additional quantity of seed, and consequently an addition of labor, otherwise the plants are not able to reach each other, and the grasses of course find

their way up between them, by which means the crop is injured and the soil rendered foul. If a single grain of good size and sound could be dropt in each hole, and no more, there might be an advantage in dibbling where it could be accomplished at a moderate rate ; but where two or three grains are put in each hole, and often six or eight, the source of profit is diminished or destroyed by twofold means ; first, by using too much seed ; and, secondly, because three or four grains springing out of one hole will not make such a strong plant or stool as one sound grain. The only way in which we can conceive dibbling likely to answer is by the use of a machine such as that invented by I'lunkett, but which never came into use. To attempt dibbling either wheat or beans by hand, on a large scale, we consider as quite unsuitable for the present improved state of agriculture.'

When wheat is sown broad-cast, the subsequent culture is confined to harrowing, rolling, and hand-hoeing : and, as grass seeds are frequently sown in spring on winter-sown wheat, the harrows and roller are employed to loosen

the soil, and cover the seeds, operations to a certain extent found beneficial to the wheat crop itself, and sometimes performed when grass seeds are not to be sown. One or two courses of harrowing penetrate the crust which is formed on tenacious soils, and operate like hand-hoeing in raising a fresh mould to the stems of the young plants. Rolling in spring ought never to be omitted on dry porous soils.

When drilling, ribbing, or dibbling has been adopted, the intervals are hoed or stirred either by hand hoes, common or pronged, by horse hoes, or drill harrows. In general the drill used at sowing will be the best to use for hoeing or stirring. Or, if a single drill should have been used, the expanding horse hoe, or Blakie's invented horse-hoe, may be successfully adopted. The operation of hoeing or stirring should generally be performed in March. Weeding the rows should not be delayed later than the end of May. Where wheats rise uneven, or too thin in some places and too thick in others, the practice of transplanting has been practised in Essex and Norfolk, at the end of March. Blanks are

sometimes filled up by sowing summer wheat, dibbling beans, &c., but these are obviously bad modes ; a better is either to stir the soil well, and encourage the tillering of the plants, or to stir the soil and then transplant.

Substances both solid and fluid have been made use of for top dressing wheat where the land or growth is poor; the first consist chiefly of birds' dung brought into a powdery state, bone-dust, soot, peat-ashes, and saline matters ; the latter are principally the drainings of dung-hills, &c. The former should be thinly and evenly sown over the crop, as early in the spring as horses can be admitted on the land ; and a roller may then be passed over the crop. Where the latter substances are made use of, care should always be taken that the plants be not injured by having too large a quantity applied. The season for performing this business is the beginning of February. When wheat appears too forward, it }s sometimes eat down in April, with sheep or even with horses, but this requires great judgment.

The best farmers agree that wheat ought to be

cut before it become dead ripe. In ascertaining the proper state, Brown observes, it is necessary to discriminate betwixt the ripeness of the straw, and the ripeness of the grain ; for in some seasons the straw dries upwards; under which circumstance, a field to the eye may appear to be completely fit for the sickle, when in reality the grain is imperfectly consolidated ; and perhaps not much removed from a milky state. Though it is obvious that, under such circumstances, no further benefit can be conveyed from the root, and that nourishment is withheld the moment that the roots die; yet it does not follow that grain so circumstanced should be immediately cut; because, after that operation is performed, it is in a great measure necessarily deprived of every benefit from the sun and air, both of which have greater influence in bringing it to maturity, so long as it remains on foot, than when cut down, whether laid on the ground, or bound up in sheaves. The state of the weather at the time also deserves notice ; for, in moist or even variable weather, every kind ot grain, when cut prematurely, is more exposed to

damage than when completely ripened. All these things will be studied by the skilful husbandman, who will also take into consideration the dangers which may follow, were he to permit his wheat crop to remain uncut till completely ripened. The danger from wind will not be lost sight of, especially if the season of the equinox approaches ; even the quantity dropped in the field, and in the stack-yard, when wheat is over ripe, is an object of consideration. The mode of reaping is almost universally by the sickle. In a few days of good weather the crop is ready for the barn or stack-yard, where it is built either in oblong or circular stacks, sometimes on frames supported with pillars to prevent the access of vermin, and to secure the bottom from dampness ; as soon afterwards as possible the stacks should be neatly thatched. When the harvest weather is so wet as to render it difficult to prevent the stacks from heating, it has been the practice to make funnels through them, a large central one, and small lateral ones to communicate. Corn keeps better in a well-built stack than in any barn.

Wheat is now the cleanest threshed grain ;

because the length of the straw allows it to be properly beaten out before it passes the machine, which sometimes is not the case with short oats and barley. If horses are used as the impelling

power, thin feeding is necessary, otherwise the animals may be injured ; but where 'vind or water is employed, the business of threshing is executed speedily, completely, and economically.— Brown. In performing the operation one man feeds the grain in the straw into the machine, and is assisted by two half-grown lads, or young women, one of whom pitches or carries the sheaves from the boy close to the threshing stage, while the other opens the bands of every sheaf, and lays the sheaves successively on a small table close by the feeder, who spreads them evenly on the feeding stage, that they m iy 1 e drawn in successively by the fluted rollers, to undergo the operation of threshing. In the opposite end of the barn or straw-house, into which the rakes or shakers deliver the clean threshed straw, one man forks up the straw from

the floor to the straw- mow, and two lads or young women build it, and tread it down. In a threshing machine, worked by water or wind, this is the whole expense of hand-labor in the threshing part of the operation, and, as a powerful machine can easily thresh from 200 to 300 bushels of grain in a working day of nine hours, the expense is exceedingly small indeed. Assuming 250 bushels as an average of the work of these people for one day, and their wages to be nine shillings, the expense does not amount to one halfpenny for each bushel of grain. Even reducing the quantity of grain threshed to 150 bushels, the easy work of a good machine of inferior size and power, the expense does not exceed three farthings the bushel. But the whole of this must not be charged against the threshing only, the grain being half dressed at the same time, by passing through one winnowing-machine, which is always attached to a complete threshing-mill ; and where a second can be conveniently connected with it, as is commonly the case if the mill be of considerable power, the corn comes down nearly ready for market. So

that the threshing, dressing, and building of the

straw, with the use of a powerful water-mill,

will scarcely cost more than dressing alone when

the flail is employed ; after every reasonable

allowance for the interest of money, and the tear

and wear of the machine. When grain is threshed

with a machine worked by horses, the expens >

s considerably enhanced. One capable of

effecting the larger quantity of work, already

calculated on, will require eight good horses,

and a man to drive them, who may perhaps re-

quire the aid of a boy. The value of the work

of eight horses for a day cannot be less than forty shillings, and the wages of the driver may be

called two shillings and sixpence. Hence the

total expense of threshing 250 bushels will

amount to £2 2x. 6d. : or about two-pence per

bushel, when the wages of the attendants are

added ; still leaving a considerable difference in

favor of threshing by the machine, in preference

to the flail. Were it even ascertained that the

expense of threshing by horses and by the flail is nearly the same, horse-mills are to be recom-

mended on other accounts ; such as better thresh-

ing, expedition, little risk of pilfering, &c.

Professor Thaer says, that in general wheat

gives double the weight of straw than it does of

grain ; OR elevated ground something less ; and

on low grounds something more. An acrp,

therefore, which produces four quarters of wheat,

weighing sixty-one pounds per bushel, ought to

produce about 177J cwt. of straw; two load, or

twenty-two hundred weight and a half, however,

is only reckoned a tolerable crop in this country.

The yield of grain in some seasons has been

under twenty ; while in others it is upwards of

thirty bushels the acre, the soil and culture being in every respect the same. The average produce

of Britain has been estimated at" three, three and

a half, and four quarters ; and one of the largest crops ever heard of at ten quarters, and the

least at one quarter and a half. The proportion

which the corn bears to the straw, in Middlesex,

is eleven bushels and a half to a load of thirty-

six truss of thirty-six pounds each, or eleven

hundred weight and a half.

2. RYE is a bread corn of Germany and

Russia. In Britain it is now very little grown : being no longer a bread corn, and therefore of

less value to the farmer than barley, oats, or

pease. The varieties are not above two, winter

and spring rye ; but there is so little difference between them that spring rye sown along with winter rye can hardly be disting heel from it.

Rye, as we have said, will grow in dry sandy soils ; on the whole it may be considered as preferring sands to clays. The preparation of the soil should be similar to that for wheat. According to professor Thaer, rye abstracts thirty parts in 100 of the nutriment contained on the soil in which it is grown. The after culture, harvesting, and threshing, are also the same as on wheat.

3. OATS. — As winter ploughing enters into the culture of oats, we must remind the reader of the effect of frost upon tilled land. Providence has neglected no region intended for th • habitation of men. If in warm climates the soil be meliorated by the sun, it is no less meliorated by frost in cold clima es. Frost acts upon water, by expanding it into a larger space ; but has no effect upon dry earth, or sand. Upon wet earth, however, it acts most vigorously ; and expands the moisture; which, requiring more space, puts every particle of earth out of its place, and separates them from each other. In that

view, frost may be considered as a plough supe-

rior to any that can be made by the hand of

man : its action reaches the minutest particles ;

*and, by dividing and separating them, it render**

the soil loose and friable. This operation is

most remarkable in tilled land, which gives free

access to frost.

The common method is to sow oats on new-

ploughed land in March, as soon as the ground is

tolerably dry. If it continues wet all March, it

is too late to venture them after. It is much

better to summer-fallow, and to sow wheat in

the autumn. But the preferable method, espe-

cially in clay soil, is to turn over the field after harvest, and to lay it open to the influences of

frost and air, which lessen the tenacity of clay,

and reduce it to a free mould. The surface

soil by this means is finely mellowed for recep-

tion of the seed ; and it would be a pity to bury it by a second ploughing before sowing. In

general, the bulk of clay-soils are rich; and

skilful ploughing, without dung, will probably give

a better crop than unskilful ploughing with dung.

We must add a word respecting clays which

are artificial, whether left by the sea, or swept

drown from higher grounds by rain. The method

commonly used of dressing, which has been

called carse-clay for oats, is, not to stir it till the ground be dry in spring, which seldom hap-

pens before the 1st of March, and the seed is

sown as soon after as the ground is sufficiently

dry for its reception. Frost has a stronger effect

on such clays than on natural clay. And, if the

field be laid open before winter, it is rendered

so loose by frost as to be soon drenched in water.

The particles at the same time are so small as

that the first drought in spring makes the surface

cake or crust. The difficulty of reducing this

crust into mould for covering the oat-seed, has

led farmers to delay ploughing till March. But

we are taught by experience that this soil,ploughed

before winter, is sooner dry than when the plough-

ing is delayed till spring ; and, as early sowing

is a great advantage, the objection of the super-

ficial crusting is easily removed by the first har-

row above described, which will produce abun-

dance of mould for covering the seed. The

ploughing before winter not only procures early

sowing, but has another advantage; the surface

soil that had been mellowed during winter by the sun, frost, and wind, is kept above.

The dressing a loamy soil for oats differs little from dressing a clay soil, except that, being less hurt by rain, it requires not high ridges, and therefore ought to be ploughed crown and furrow alternately. Where there are both clay and loam in a farm, it is obvious from what is said above, that the ploughing of the clay after harvest ought first to be despatched. If both cannot be overtaken that season, the loam may be delayed till the, spring with less hurt. — Next of a gravelly soil ; which is the reverse of clay, as it never suffers but from want of moisture. Such a soil ought to have no ridges ; but be ploughed circularly from the centre to the circumference, or from the circumference to the centre. It ought to be tilled after harvest: and the first dry weather in spring ought to be laid hold of to sow, harrow, and roll ; which will preserve it in sap.

The culture of oats is simple. That grain is probably a native of Britain : it grows on the worst soil with very little preparation. Before turnips were introduced, it was always the first crop upon land broken up from the state of na-

ture. Upon such land, it may be a good me-

thod to build upon the crown of every ridge,

in the form of a wall, all the surface earth, one sod above another, as in a fold for sheep. After

standing in this form all summer and winter, let

the walls be thrown down, and the ground pre-

pared for oats. This will secure one or two

good crops ; after which the land may be dunged

for a crop of barley and grass seeds. This

method may answer in a farm where manure is

scarce.

In England oats are generally cut down with

the scythe, and carried loose to the barn or stack ; but in the northern districts, and where threshing

machines are used, they are tied into sheaves if

mown, but, for the most par:, reaped with the

sickle, in order in both cases to facilitate the

process of threshing. They are ready for the

scythe or sickle when the grain becomes hard,

and the straw yellowish. Like wheat they should

generally be cut before they are dead ripe, to

prevent the shedding of the grain, and to in-

crease the value of the straw as fodder. They

rarely get much damage when under the har-

vest process, except from high winds, or from

shedding, when opened out after being thoroughly

wetted. The early varieties are much more

liable to these losses than the late ones ; because the grain parts more easily from the straw, an

evil to which the best of grain is at all times

subject. Early oats, however, may be cut a little

quick, which, to a certain extent, lessens the

danger to which they are exposed from high

winds ; and, if the sheaves be made small, the

danger from shedding after rains is considerably

lessened, because they are thus sooner ready for

the stack. Under every management, however,

a greater quantity of early oats will be lost

during the harvest process than of the late ones,

because the latter adhere firmly to the straw, and

consequently do not drop so easily as the former.

— Brown.

In Sweden, in most seasons, the oat crop is

dried on frames or poles, and in Russia, not only

oats, but barley and rye are kiln-dried in the

straw. The produce of oats is generally consi-

dered greater and of better quality in the

northern than in the southern counties ; and the

reasons are obviously that, in the former, more

attention is paid to their culture, and the climate is more favorable for the maturation of the grain

Ten quarters an acre is reckoned a good crop in

the north, but the produce is often twelve and thirteen quarters, and the straw from two to three and a half loach per acre. In meal the produce is eight Ibs. for fourteen Ibs. of corn. Sir II. Davy found 100 parts of oats afforded fifty-nine parts of starch, six of gluten, and two of saccharine.

4. BARLEY is a culmiferous plant that requires a mellow soil. In England it ranks next in value as a crop to wheat. Extraordinary care is requisite where it is to be sown in clay. The land ought to be stirred immediately after the crop is removed, which lays it open to be mellowed with the frost and air. In that view the sort of ploughing has been introduced termed ribbing, by which the greatest quantity of surface possible is exposed to the air. The obvious objection to this method is, that half of the ridge is left unmoved : and, to obviate it, the following method is offered, which moves the whole soil, and at the same time exposes the same quantity of surface to the frost and air. As soon as the former crop is off the field, let the ridges be gathered with as deep a furrow as the soil will admit, beginning at the crown and end-

ing at the furrows. This ploughing loosens the

whole soil, giving free access to the air and frost.

Soon after, begin a second ploughing : let the

field be divided by parallel lines cross the ridges, with intervals of thirty feet or so. Plough once

round an interval, beginning at the edges and

turning the earth toward the middle of the in-

terval ; which covers a foot or so of the ground

formerly ploughed. Within that foot plough

another round similar to the former ; and after

that other rounds, till the whole interval be fi-

nished, ending at the middle. Instead of be-

ginning at the edges, and ploughing toward the

middle, begin at the middle and plough toward

the edges. Plough the other intervals in the

same manner. As the furrows of the ridges will

thus be pretty much filled up, let them be cleared and water-furrowed without delay. By this

method, the field will be left ridged up for win-

ter. In this form the field is kept perfectly dry;

for, beside the capital furrows that separate the

ridges, every ridge has a number of cross fur-

rows that carry the rain instantly to the capital

furrows. In hanging grounds retentive of mois-

ture, the parallel lines ought not to be perpendi-

cular to the furrows of the ridges, but to be

directed a little downward, to carry rain water

the more hastily to these furrows. If the ground

be clean, it may lie in that state winter and

spring, till the time of seed-furrowing. If weeds

rise, they must be destroyed by ploughing, or

braking, or both; for there cannot be worse

husbandry than to put seed into dirty ground.

This method resembles common ribbing in

appearance, but is very different in reality. As

the common ribbing is not preceded by a gather-

ing furrow, the half of the field is left unfilled, compact as when the former crop was removed,

impervious in a great measure to air or frost.

The common ribbing at the same time lodges

the rain-water on every ridge, preventing it from

descending to the furrows, which is hurtful in

all soils, and destructive in a clay soil. The

stitching here described, or ribbing, prevents

these noxious effects. By the two ploughings

the whole soil is opened, admitting freely air

and frost; and the multitude of furrows lays the

surface perfectly dry. When it is proper to

sow the seed, all is laid flat with the brake, and the seed-furrow which succeeds is so shallow as

to bury little or none of the surface earth :

whereas the stirring for barley, being done with

the deepest furrow, buries all the surface-soil

that was mellowed by the frost and air. This

method is also less expensive ; for after common

ribbing, which keeps in the rain water, the

ground is commonly so soured as to make the

stirring a laborious work.

Barley is less valuable when it does not ripen

equally. That which comes up speedily in a

dusky soil, gains a great advantage over seed-

weeds. Therefore, first take out about one-third

of the contents of the sacks of seed barley, to

-allow for the swelling of the grain. Lay the

sacks with the grain to steep in clean water; let

it -lie covered with it for at least twenty-four

hours. When the ground is dry, and no likeli-

hood of rain for ten days, it is better to lie thirty-

six hours. Sow the grain wet from steeping,

without any powdered quicklime, which would

suck up part of its useful moisture. The seed

will scatter well, but the sower must put in one-

quarter, or one-third more seed in bulk than

usual of dry grain, as the grain is swelled in

that proportion : harrow it in as quickly as pos-

sible after it is sown : and give it the benefit of a fresh furrow. It will rise in a fortnight at farthest.

The following experiment by a correspondent

of the Bath Society is considered as inter-

esting : — The last spring, 1783, being remark-

ably dry, I soaked my seed barley in the black

water taken from a reservoir which constantly re-

ceives the draining of my dung heap and

stables. As the light corn floated on the top, I

skimmed it off, and let the rest stand twenty-

four hours. On taking it from the water, J

mixed the seed gram with a sufficient quantity of

sifted wood ashes, to make it spread regularly,

and sowed three fields with it. I began sowing

the 16th and finished the 23rd of April. The

produce was sixty bushels per acre, of good clean

barley, without any small or green corn, or

weeds at harvest. No person in this county had

better grain, I sowed also several other fields with the same seed dry, and without any preparation ;

but the crop, like those of my neighbours, was

very poor ; not more than twenty bushels per

acre, and much mixed with green corn and weeds.

I also sowed some of the seed dry one ridge in each of my former fields, but the produce was very poor in comparison of the other parts of the field.

Where the land is in good order, and free of weeds, April is the month for sowing barley. Every day is proper. The dressing loamy soil and light soil for barley, is the same with that described ; only that to plough dry is not so essential as in dressing clay soil. Loam or sand may be stirred a little moist : better, however, delay a week or two, than to stir a loam when moist. Clay must never be ploughed moist, even though the season should escape altogether. But this will seldom be necessary; for not in one year of twenty will it happen, but that clay is dry enough for ploughing some time in May. Frost may correct clay ploughed wet after harvest ; but, ploughed wet in the spring, it unites into a hard mass, not to be dissolved but by very hard labor.

On the cultivation of this grain we have the following observations by a Norfolk farmer: 'The best soil is that which is dry and healthy, rathei light than stiff, but yet of sufficient strength to retain moisture. On this kind of land the grain is always the best bodied and colored, and has the

thinnest rind. These qualities recommend it most

to the maltster. If the land is poor, it should be dry and warm ; and when so it will often bear

better grain than richer land in a cold and wet

situation. In the choice of seed, the best is of a pale lively color and brightish cast, without any

deep redness or black tinge at the tail. If the rind he a little shrivelled, it is the better; for that slight shriveling proves it to have a thin skin, and to have sweated in the mow. The necessity of a

change of seed by not sowing two years together

what grew on the same soil, is not in any part of husbandry more evident than in the culture of

this grain, which, if not frequently changed, will

grow coarser every year. Liming has been found

prejudicial. Sprinkling a little soot with the

water in which it is steeped has been of great

service, as it secures the seed from insects. In a very dry seed time, barley that has been wetted

for malting, and begins to sprout, will come up

sooner, and produce a good crop. On lands

Ill

tolerably manured,' adds this writer, ' I sowed

clover with my barley, which I reaped at har-

vest ; and fed the clover all the following winter, and from spring to July, when I fallowed it till

the following spring, and then sowed it with bar-

ley and clover as before. Repeating this method

every year, I had very large crops ; but would not recommend this practice on poor light land. We sow on our lightest lands in April, on our moist lands in May ; finding that those lands \hich are the most subject to weeds produce the best crops when sown late. The common method is to sow the barley seed broad-cast at two sowings, the first harrowed in once, the second twice; the usual allowance from three to four bushels per acre. But if farmers could be prevailed on to alter this practice, they would soon find their account in it. Were only half the quantity sown equally, the produce would be greater, and the corn less liable to lodge ; for, when corn stands very close, the stalks are drawn up weak, and on that account are less capable of resisting the force of winds, or supporting themselves in heavy rains. From our great success in setting and drilling wheat, some of our farmers tried these metnods with barley; but did not find it answer their expectations, except on very rich land. 1 have myself had eighty stalks on one root of bailey, which all produced good and long ears, and the grain was

better than any other ; but the method is too ex-

pensive for general practice. In poor land, sow

thin, or your crop will be worth little. Farmers

who do not reason on the matter will be of a dif-

ferent opinion ; but the fact is indisputable.'

When the barley is sowed, and harrowed in, he

advises that the land be rolled after the first

shower of rain to break the clods. This will

close the earth about the roots, which will be a

great advantage to it in dry weather. When

the barley has been up three or four weeks, roll

it again with a heavy roller, which will prevent

the sun and air from penetrating the ground to

the injury of the roots. This rolling, before it

branches out, will also cause it to tiller into a

greater number of stalks ; so that if the plants

be thin, the ground will be thereby filled, and

the stalks strengthened. If the blade grows too

rank, as it sometimes will in a warm wet spring,

mowing is a much better method than feeding

it down with sheep ; because the scythe takes

off only the rank tops, but the sheep, being

fond of the sweet end of the stalk next the root, will often bite so close as to injure its future

growth.

The preparation of the soil for barley is often by a turnip fallow ; sometimes it is taken after pease and beans, but rarely by good farmers, either after wheat or oats. When sown after turnips, it is taken with one furrow, which is given -as fast as the turnips are consumed, the ground thus receiving much benefit from spring frosts. But often two or more furrows are necessary for the fields last consumed ; because, when a spring drought sets in, the surface, from being poached by the removal or consumption of the crop, gets so hardened as to render a greater quantity of ploughing, harrowing, and rolling necessary, than would otherwise be called for. When sown after beans and pease, one winter and one spring ploughing are usually bestowed ; but, when after wheat or oats, three ploughings are necessary, so that the ground may be put in proper condition. These operations are very ticklish in a wet and backward season, and rarely in that case is the grower paid for the expense of his labor. Where land is in such a situation as to require three ploughings before it can be seeded with barley, it is better to summer fallow it at once, than to run the risks which

seldom fail to accompany a quantity of spring

labor. If the weather be dry, moisture is lost

during the different processes, and an imperfect

germination necessarily follows : if it be wet, the

benefit of ploughing is lost, and all the evils of a wet seed-time are sustained by the future crop.

Browne. — After turnips, eaten on the ground by

sheep, the land, being consolidated by their

treading, sometimes receives two ploughings ;

but, if only one, it should be well harrowed and

rolled ; and it is often finished by harrowing

after the roller, especially if grass-seeds be sown, which are covered by this last harrowing. Bar-‘

ley is sometimes sown on the first ploughing,

and covered by a second shallow ploughing. As

it is found of great importance, with a view to

speedy and equal vegetation, that the ground

should be fresh and moist, barley is generally

sown upon what is termed hot-fur, that is, as

soon as possible after it is turned up by the

plough. Manure can seldom be applied with ”’

advantage. The climate most favorable to ,1-f

barley is a warm and dry one. There are in-

stances of a crop being sown and ripened with-

out having enjoyed a single shower of rain : but

gentle showers from the time it is sown till it

begins to shoot into the ear are favorable ; while

heavy rains at any period, and especially imme-

diately after sowing, are highly injurious.

No grain requires such careful harvesting. It

should be cut at a time when the grain is soft,

and the straw retains a great proportion of its

natural juices. It is generally cut down in

England with the cradle scythe, and either tied

up or carted home loose after lying in the swarth

some days to dry. It is not apt to shed ; but in wet weather it will be apt to spout or grow

musty ; and therefore every fair day after rain it

should be shook up and turned ; but be careful

never to house it till thoroughly dry, lest it mow-

burn, which will make it malt worse than if it

had spired in the field. Lisle says, that poor

thin barley should be cut a little sooner than if

the same plants were strong and vigorous ; as

the straw, when the plants are full ripe, in such

cases will not stand against the scythe. In this

situation, barley in particular should lie in swarth till it is thoroughly dry. Some of his barley,

which lay out in swarth five or six days in very

fine weather, though both blighted and edge-

grown, grew plump, and acquired very nearly as good a color as the best. He reckons short scythes the l>est for mowing lodged or crumpled com, because they miss the fewest plants ; and observes that a bow upon the scythe, which carries away the swarth before it, is preferable to a cradle, the fingers of which would be pulled to pieces by the entangled corn, in drawing back the scythe. In Scotland and Ireland it is generally reaped with the sickle. Make au

opening in tne stack from top to bottom, by placing a large bundle of straw in the centre of the stack, when it commences, and in proportion as it rises, the straw is drawn upwards, leaving a hollow behind; which, if one or two openings are left in the side of the stack near the bottom, insures a complete circulation of air. Threshing machines for barley are furnished with what is called a hummeling machine, and, where this is wanting, it is customary to put the grain, accompanied with a portion of threshed straw, a second time through the machine. Where barley has been mown, the whole of the straw requires to

be twice threshed, independently of the necessity of getting rid of the ears. The produce of barley, taking the average of England and the south of Scotland, Donaldson considers, might be rated at thirty-two bushels ; but when Wales and the north of Scotland are included, where, owing to the imperfect modes of culture still practised, the crops are very indifferent, the general average will not probably exceed twenty-eight bushels the acre. Middleton states it as varying in England from fifteen to seventy-five bushels per acre. The average produce of the county of Middlesex is about four quarters of com and two loads of straw per acre.

5. BUCK WHEAT delights in a mellow sandy soil ; but succeeds well in any dry loose healthy land, and moderately so in a free loamy stone 1 brash. A stiff clay is its aversion, and it is entirely labor lost to sow it in wet poachy ground. The proper season for sowing is from the last week of May or the beginning of June. It has been sown, however, so early as the beginning of April, and so late as the 22nd of July, by way of experiment ; but the latter was rather too great an extreme, and the former was in danger

from frost. In an experiment, upon a small

piece of ground, the grain of two different crops

was brought to maturity in summer 1787. After

spring feedings, a crop of turnip-rooted cabbage,

or vetches, there will be sufficient time to sow the land with buck-wheat. In hot dry summers, a

crop of vetches might even be mown for hay

early enough to introduce a crop of this grain

after it. It will grow on the poorest soil, and

produce a crop in the course of three or four

months. It was cultivated so early as Gerard's

time, 1597, to be ploughed in as manure; but at

present, from its inferior value as a grain, and

its yielding very little haulm for fodder or ma-

nure, it is seldom grown but by gentlemen in

plantations, to encourage game. Arthur Young

recommends farmers in general to try this crop.

It has numerous excellencies, he says, perhaps as

many to good farmers as any other grain or

pulse in use. It is of an enriching nature,

having the quality of preparing for wheat, or

any other crop. One bushel sows an acre of land

well, which is but a fourth of the expense of

seed-barley. It should not be sown till the end

of May. This is important; for it gives time in

the spring to kill all the seed-weeds in the

ground, and brings no disagreeable necessity

from bad weather in March or April, to sow

barley, &c., so late as to hazard the crop. It is as valuable as barley, and is the best of all crops for sowing grass seeds with, giving them the

same shelter as barley or oats without robbing.

Buck-wheat is mown and harvested in the

mariner of barley. After it is mown, it must lie several days, till the stalks be withered, before it be housed. It is in no danger of the seeds fall-

ing, nor does it suffer much by wet. From its

great succulency it is liable to heat, on which

account it is better to put it in small stacks of five or six loads each, than in either a large one or a barn. The produce may be stated upon the ave-

rage at between three and four quarters per

acre; it would be considerably more did all the

grains ripen together, but that never appears to

be the case. Its use in this country is almosc

entirely for feeding poultry, pigeons, and swine.

It may also be given to horses, which are said to thrive well on it ; but the author of the New

Farmer's Calendar, says, he thinks he has seen

it produce a stupefying effect. We should

add that it has been used in the distillery in

England, and is a good deal used in that way,

and as horse corn on the continent. Young says,

a bushel goes farther than two bushels of oats,

and, mixed with at least four times as much bran,

will be full feed for any horse a week. Four

bushels of the meal, put up at four hundred weight will fatten a hog of sixteen or twenty stone in

three weeks, giving him afterwards three bushels

of Indian corn or hog-pease, broken in a mill,

with plenty of water. Eight bushels of buck-

wheat meat will go as far as twelve bushels of

barley meal. The meal is made into thin cakes

called crumpits in Italy, and even in some parts

of England ; and it is supposed to be nutritious,

and not apt to turn acid upon the stomach.

6. BEANS. — The most proper soil for beans is

a deep and moist clay. There has been intro-

duced into Scotland a method of sowing beans

with a drill-plough, and horse-hoeing the inter-

vals ; which, beside affording a good crop, is a

dressing to the ground. In the common way,

as this grain is early sown, the ground intended

for it should be ploughed before winter, to give

access to the" frost and air — beneficial in all soils, and necessary in a clay soil. Take the first op-

portunity after January, when the ground is dry,

to loosen the soil with the harrow, till a mould

be brought upon it. Then sow the seed and

cover it equally. Beans ought to be laid deep in the ground, not less than six inches. In clay soil, the common harrows are altogether insufficient. The soil which has rested long after ploughing is rendered compact and solid; the common harrows skim the surface : the seed is not covered ; and the first hearty shower of rain lays it above ground. If the ground ploughed before winter happen, by a superfluity of moisture, to cake, the first harrow going along the ridges, and crossing them, will loosen the surface, and give access to the air for drying. As soon as the ground is dry, sow without delay.

If rain happen in the interim, wait till a dry day or two come. Carse clay, ploughed before winter, seldom fails to cake. Upon that account, a second ploughing is necessary before sowing ; which ought to be performed with an ebb furrow, to keep the frost n.ould as near the surface as possible. To cover the seed with ine plough is expressed by the phrase to sow under

furrow. The clods raised in this ploughing are a sort of shelter to the young plants in the

chilly spring months. The above method will answer for loam. As for a sandy or gravelly soil, it is altogether improper for beans.

Though we cannot approve the horse-hoeing of beans, with the intervals that are commonly allotted for turnip, yet we would strongly recommend the drilling them at the distance of ten or twelve inches, and keeping the intervals clean of weeds. This may begone by hand-hoeing, at the same time laying fresh soil to the roots of the plants. But as this is expensive, and hands are not always to be got, a narrow plough, drawn by a single horse, might be used, with a mould-board on each side to scatter the earth upon the roots of the plants. This is a cheap and expeditious method ; it keeps the ground clean, and nourishes the plants with fresh soil. As beans delight in a moist soil, and have no end of growing in a moist season, they cover the ground totally when sown broad-cast, keep in the dew, and exclude the sun and air: the plants grow to a great height, but carry little seed, and that little not well ripened. Hence the advantage of drilling ; which gives free access to the sun and air, dries the ground, and affords plenty of ripe

seed.

Brown, a very superior bean grower, gives the

following directions : — The furrow ought to be

given early in winter, and as deep as possible,

that the earth may be sufficiently loosened, and

room afforded for the roots of the plant to search for the requisite nourishment. The first furrow

is usually given across the field, which is the best method when only one spring furrow is intended ;

but, as it is now ascertained that two spring

furrows are highly advantageous, perhaps the

one in winter ought to be given in length, which

lays the ground in a better situation for resisting the rains, and renders it sooner dry in spring,

than can be the case when ploughed across. On

the supposition that three furrows are to be

given, one in winter, and two in spring, the fol-

lowing is the most eligible preparation. The

land being ploughed in length, as early in winter

as is practicable, and the cross gutter and headland furrows sufficiently digged out, take the second

furrow across the first as soon as the ground is

dry enough in spring to undergo the operation ;

water-furrow it immediately, and dig again the

cross gutter and headland furrows, otherwise the

benefit of the second furrow may be lost. This

being done, leave the field for some days, till it is sufficiently dry, when a cast of the harrow be-

comes necessary, so that the surface may be

levelled. Then enter with the ploughs, and

form the drills. Manure is frequently applied,

especially if the bean crop succeed wheat. — Trea-

tise on Rural Affairs. According to Brown, the

best way is to apply the dung on the stubble be-

fore the winter furrow is given, which greatly

facilitates the after process. Used in this way, a

fore stock must be in hand ; but, where the far-

mer is not so well provided, spring dunging be-

comes necessary, though evidently of less advan-

tage. At that season it may either be put into

the drills before the seed is sown, or spread upon the surface and ploughed down, according to the

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nature of the drilling process which is meant to

be adopted. Land dunged to beans, if duly

hoed, is always in high order for carrying a crop

of wheat in succession. Perhaps better wheat,

both in respect of quantity and quality, may be

cultivated in this way, than in any other mode of

sowing.

In one mode of drilling beans, the lands or

ridges are divided by the plough into ridgelets,

or one bout stitches, at intervals of about twenty-

seven inches. If dung is to be applied, the

seed ought to be first deposited, as it is found

inconvenient to run the drill machine after-

wards. The dung may then be drawn out from

the carts in small heaps, one row of heaps serv-

ing for three or five ridgelets ; and it is evenly

spread, and equally divided among them, in a

way that will be more minutely described when

treating of the culture of turnips. The ridgelets

are next split out or reversed, either by means ofc the common plough, or one with two mould-

boards, which covers both the seed and the ma-

nure in the most perfect manner. When beans

are sown by the other method, in the bottom of

a common furrow, the dung must be previously

spread over the surface of the winter or spring

ploughing. Three ploughs then start in succes-

sion, one immediately behind another, and a

drill harrow either follows the third plough or is

attached to it, by which the beans are sown in

every third furrow, or at from twenty-four to

twenty-seven inches asunder, according to the

breadth of the furrow-slice. Another approved

way, when dung is applied at seed time, is to spread the dung and to plough it down with a strong furrow ; after this shallow furrows are drawn, into which the seed is deposited by the drill-machine. Whichever of these modes of sowing is followed, the whole field must be carefully laid dry by means of channels formed by the plough, and when necessary by the shovel; for neither then nor at any former period should water be allowed to stagnate on the land. The dibbling of beans is considered by Arthur Young as an excellent plan.

7. PEASE are of two kinds, the white and the gray : the cultivation of the latter only belongs to this place. There are two principal species of the gray kind, distinguished by their time of ripening. One ripens soon, and for that reason is termed hot seed ; the other, which is slower in ripening, is termed cold seed.

Pease, a leguminous crop, is proper to intervene between two culmiferous crops; less for the profit of a pease crop, than for meliorating the ground. Pease, however, in a dry season, will produce six or seven bolls each acre ; but in an ordinary season they seldom reach above two

or two and a half. Hence, in a moist climate,

which all the west of Britain is, red clover seems a more beneficial crop than pease ; as it makes

as good winter food as pease, and can be cut

green thrice during summer.

A field intended for cold seed ought to be

ploughed in October or November ; and in Fe-

bruary, as soon as the ground is dry, the seed

ought to be sown on the winter furrow. A field

intended for hot seed ought to be ploughed in

March or April, immediately before sowing. But,

I

;f infested with weeds, it ought to be also ploughed in October and Novemoer.

Pease laid a foot be.ow the surface will vege-

tate ; but the most approved depth is six inches

in light soil, and four inches in clay soil ; for

which reason they ought to be sown under

furrow when the ploughing is delayed till spring.

Of all grains, beans excepted, they are the least

in danger of being buried. Pease differ from

beans in loving a dry soil and a dry season.

Horse-hoeing has little effect when the plants are

new sprung; and, when they are advanced, their

length prevents it. Fast growing at the same

time is the cause of their carrying so little seed : the seed is buried among the leaves ; and the sun

cannot penetrate to make it grow and ripen. The

only practicable remedy to obtain grain is thin

sowing ; but thick sowing produces more straw,

and mellows the ground more. Half a boll for

an English acre may be reckoned thin sowing;

three firlots, thick sowing.

Notwithstanding what is said above, Mr.

Hunter of Berwickshire, some years ago, be-

gan to sow all his pease in drills ; and never

failed to have great crops of pease, as well as of straw. He sowed double rows at a foot inter-

val, and two feet and a half between the dou-

ble rows, which admit horse-hoeing. By that

method he had also good crops of beans on light

land.

Pease and beans mixed are often sown together,

in order to catch different seasons. In a moist

•eason, the beans make a good crop ; in a dry

The growth of plants is commonly checked

by drought in the month of July, but promoted

by rain in August. In July grass is parched ;

in August it recovers verdure. Where pease are so far advanced in the dry season that the seeds begin to form, their growth is indeed checked, but the seed continues to fill. If only in the blossom at that season, their growth is checked a little ; but they become vigorous again in August, and continue growing without filling till stopped by frost. Hence it is that cold seed, which is early sown, has the best chance to produce corn ; hot seed, which is late sown, has the best chance to produce straw.

The following method is practised in Norfolk, for sowing pease upon a dry light soil, immediately opened from pasture. The ground is pared with a plough extremely thin, and every sod is laid exactly on its back. In every sod a double row of holes is made. A pea dropt in every hole lodges in the flayed ground immediately below the sod, thrusts its roots horizontally, and has sufficient moisture. The most common mode of sowing pease is broad-cast ; but the advantages of the row culture in the case of a crop early committed to the soil must be obvious. The best farmers, therefore, sow pease in drills either after the plough, the seed being deposited

commonly in every second or third furrow, or if

the land is in a pulverised state by drawing drills with a machine or by ribbing. In Norfolk and

Suffolk pease are generally dibbled on the back

of the furrow, sometimes one and sometimes two

rows on each ; but dibbling in no manner ap-

pears to us so well suited for a farmer's purpose

as the drill. In Kent, where immense quantities

of pease are grown both for gathering green and

for selling ripe to the seedsmen, they are gener-

ally sown in rows from eighteen inches to three

feet asunder, according to the kind, and well

cultivated between.

The after culture is that of hoeing, either by

hand or horse. Where the former method pre-

vails, it is the general custom to have recourse

to two hoeings ; the first when the plants are

about two or three inches in height, and again

just before the period in which they come into

blossom. In this way the vigorous vegetation of

the young crop is secured, and a fresh supply o

nourishment afforded for the setting of the pods

and the filling of the pease. At the last of these operations the rows should be laid down, and

the earth well placed up to them, the weeds

being previously extirpated by hand labor. It

has been stated \hat in some parts of Kent,

where this sort of crop is much grown, it is the

practice, when the distance of the rows is suf-

ficiently great, to prevent the vegetation of

weeds, and forward the growth of pea crops, by

occasionally horse-hoeing, and the use of the

brake-harrow, the mould being laid up to the

roots of the plants at the last operation by fixing a piece of wood to the harrow. This should,

however, only be laid up on one side, the pease

being placed up to that which is most exposed

to the sun. When pea crops become ripe they

wither and turn brown in the haulm or straw,

and the pods open. In this state they should

be cut as soon as possible, in order that there

may be the least loss sustained by their shedding.

In early crops the haulm is hooked up into

loose open heaps, which, as soon as they are

perfectly dry, are removed from the ground and

put into stacks for the purpose of being converted

to the food of animals, on which they are said

to thrive nearly as well as on hay. When in-

tended for horses, the best method would seem

to be that of having them cut into chaff and

mixed with their other food.

Young says that forward white pease will be

fit to cut early in July ; if the crop is very great they must be hooked; but if small, or only

middling, mowing will be sufficient. The stalks

and leaves of pease being very succulent, they

should be taken good care of in wet weather:

the tufts, called wads or heaps, should be turned,

or they will receive damage. White pease should

always be perfectly dry before they are housed,

or they will sell but indifferently, as the bright-

ness and plumpness of the grain are considered

at market more than with hog-pease. The straw

also, if well harvested, is very good fodder for

all sorts of cattle and for sheep ; but if it re-

ceives much wet, or if the heaps are not turn n I, it can be used only to litter the farmyard with.

It is the practice in some districts to remove the haulm as soon as it has been cut up by hooks

constructed with sharp edges for the purpose, to

every fifth ridge, or even into an adjoining grass

field, in order that it may be the better cured

for use as cattle food, and at the same time allow of the land being immediately prepared for the

succeeding crop. When wet weather happens, whilst the pease lie in wads, it occasions a considerable loss, many of them being shed in the field, and of those that remain a great part will be so considerably injured as to render the sample of little value. This inability in pease to resist a wet harvest, together with the great uncertainty throughout their growth, and the frequent inadequate return in proportion to the length of haulm, has discouraged many farmers from sowing so large a portion of this pulse as of other grain ; though on light lands, which are in tolerable heart, the profit, in a good year, is far from inconsiderable. The threshing of 'pease requires little labor. Where the haulm is wished to be preserved entire it is best done by hand ; as the threshing machine is apt to reduce it to chaff. But where the fodder of pease is to be given immediately to horses on the spot, the breaking it is no disadvantage. The produce in ripened seeds is supposed by some to be from three and a half to four quarters the acre; others, as Donaldson, imagine the average of any two crops together not more than about twelve bushels ; and that on

the whole, if the value of the produce be merely attended to, it may be considered as a less profitable crop than most others. But, as a means of ameliorating and improving the soil at the same time, it is esteemed of great value. As to the produce in green pease, in the husk, the average of the early crops in Middlesex is supposed to be from about twenty-five to thirty sacks the acre, which, selling at from 8s. to 18s. the sack, afford about £18 the acre. The author of the Synopsis of Husbandry, however, states the produce about Dartford, at about forty sacks the acre, though, he says, fifty have sometimes been gathered from that space of land. The produce of pease in straw is very uncertain. In flour it is as three to two of the bulk in grain, and husked and split for soups as four to two. 1000 parts of pea flour afforded Sir H. Davy 574 parts of nutritive or soluble matter, viz. 501 of mucilage or vegetable animal matter, twenty-two of sugar, thirty-five of gluten, and sixteen of insoluble extract.

SECT. II. — OF PLANTS CULTIVATED FOR ROOTS.

Turnips delight in a gravelly soil, and can be raised to great perfection, and without the least hazard of miscarrying. At the same time there

is no soil but will bear turnips, when well pre-

pared. No agriculturist ever deserved better of

a country than he who first cultivated turnips in

the field. No plant is better fitted for the climate of Britain, no plant prospers better in the coldest part of it, and no plant contributes more to fer-

tility. In a word, there has not for two centu-

ries been introduced a more valuable improve-

ment.

Of all roots, turnips require the finest mould ;

and, to that end, of all harrows frost is the best.

To give access to frost, the land ought to be pre-

pared by ribbing after harvest, as above directed

in preparing land for barley. If the field be

not subject to annuals, it may lie in that state

till the end of May ; otherwise the weeds must

be destroyed by a breaking about the middle o(

April, and again in May, if weeds arise. The

first week of June plough the field with a shal-

low furrow. Lime it if requisite, and harrow

the lime into the soil. Draw single furrows,

with intervals of three feet, and lay dung in the

furrows. Cover the dung sufficiently, by going

round it with the plough, and forming the three

feet spaces into ridges. The dung comes thus to

lie below the crown of every ridge.

The season of sowing must be regulated by the time intended for feeding. When intended for feeding in November, December, January, and February, the seed ought to be sown from the 1st to the 20th of June. Where the feeding is intended to be carried on to March, April, and May, the seed must not be sown till the end of July. Turnips sown earlier than above directed flower that very summer, and run fast to seed ; which renders them unfit for food. If sown much .later, there is no food but from the leaves. Though by a drill plough the seed may be sown of any thickness, the safest way is to sow thick. Thin sowing is liable to many accidents, which are far from being counterbalanced by the expense that is saved in thinning. Thick sowing can bear the ravages of the black fly, and leave a sufficient crop behind. It is a protection against drought, gives the plants a rapid progress, and establishes them in the ground before it is necessary to thin them.

The sowing turnips broad-cast is universal in England, and common, though a barbarous

practice, in Scotland. The eminent advantages

of turnips is, that, besides a profitable crop, they make a most complete fallow ; and the latter

cannot be obtained but by horse-hoeing. Upon

that account, the sowing turnips in rows at three

feet distance is recommended. Wider rows an-

swer no profitable end ; straiter rows afford not

room for a horse to walk in. When the turnips

are about four inches high, annual weeds will

appear. Go round every interval with the

slightest furrow possible, two inches from each

row, moving the earth from the rows towards the

middle of the interval. A thin plate of iron

must be fixed on the left side of the plough, to

prevent the earth from falling back and burying

the turnips. Let women weed the rows with

their fingers ; which is better and cheaper than

with the hand hoe, which is also apt to disturb

the roots of the turnips that are to stand, and to leave them open to drought by removing the

earth from them. The standing turnips are to be

twelve inches from each other : a greater distance

makes them swell too much ; less affords them

not sufficient room. A woman soon comes to

be expert in weeding. The following hint may

be necessary to a learner. To secure the turnip

that is to stand, let her cover it with the left

hand, and with the right pull up the turnip on

both sides. After thus freeing the standing tur-

nip, she may safely use both hands. Let the

field remain in this state till the appearance of

new annuals make a second ploughing neces-

sary ; which must be in the same furrow with

the former, but deeper. As in this ploughing

the iron plate is removed, part of the loose earth I 2

lid

will fall back on the roots of the plants : the

rest will fill the middle of the interval, and bury every weed. When weeds begin again to ap-

pear, then is the time for a third ploughing in

an opposite direction, which lays'the earth to the

roots of the plants. This ploughing may be

about the middle of August; after which weeds

rise very faintly. If they do rise, another

ploughing will clear the ground of them. Weeds

that at this time rise in the row, may be cleared with a hand-hoe, which can do little mischief

among plants twelve inches from each other.

But it may be done cheaper with the hand. And

after the leaves of turnips in a row meet together, the hand is the only instrument that can be ap-

plied for weeding.

In swampy ground, the surface of which is

best reduced by paring and burning, the seed

may be sown in rows with intervals of a foot.

To save time, a drill plough may be used that

sows three or four rows at once. Hand-hoeing

is proper for such ground ; because the soil

under the burnt stratum is commonly full of

roots, which digest and rot better under ground

than when brought to the surface by the plough.

While these are digesting, the ashes will se-

cure a good crop. • In cultivating turnips,

care should be taken to procure good, bright,

nimble, and well dried seed, and of the best

kinds. The Norfolk farmers generally raise the

oval white, the large green topped, and the red

or purple topped kinds, which from long expe-

rience they have found most profitable. The

roots of the green topped will grow to a large

size, and continue good much longer than others.

The red or purple topped will also grow large,

and continue good till February ; but the roots

become hard and stringy sooner than the former.

The green topped, growing more above ground, is in more danger of injury from severe frosts than the red or purple, which are more than half covered by the soil ; but it is the softest and sweetest, when grown large, of any kind. They are brought to table a foot in diameter, as good as garden turnips.

Turnips delight in a light soil, of sand and loam mixed. When the soil is rich and heavy, although the crop may be as weighty, they will !>e rank, and run to flower earlier in spring. Turnip seed will not do well without frequent changing. The Norfolk seed is sent to most parts of the kingdom, and even to Ireland, but after two years it degenerates ; so that those who wish to have turnips in perfection should procure it fresh every year from Norwich, to prevent being imposed upon by seed of that name inferior in quality.

When the plants have got five leaves, they should be hoed, and set out at least six inches apart. A month afterward, or earlier if it be a wet season, a second hoeing should take place, and the plants be left at least fourteen inches

from each other, especially if intended for feed-

ing cattle ; for, where the plants are left thicker, they will be proportionably smaller, unless the

land is very rich indeed. Some of the best Nor-

folk farmers sow turnips in drills three feet

asunder, and at a second hoeing leave them a

foot apart. By these means the trouble and ex-

pense of hoeing is much lessened, and the crop

of equal weight as when sown in the common

method. The intervals may easily be cleared of

weeds by the horse-hoe. Great quantities of

turnips are raised in Norfolk every year for feed-

ing black cattle, which turn to great advantage.

An acre of land contains 4840 square yards, or

43,560 square feet. If then every square foot

contains one turnip, and they weigh only two

pounds each, here will be a mass of excellent

food of forty-six tons per acre, worth from four

to five guineas and sometimes more.

Extraordinary crops of barley frequently suc-

ceed turnips, especially when fed off the land

In feeding them off, the cattle should not be

suffered to run over too much of the ground

at once ; for in that case they will tread down

and spoil twice as many as they eat. In Nor-

folk they are confined by hurdles to as much as is sufficient for them for one day. By this mode the crop is eaten clean, the soil is equally trodden, which if light is of much service, and equally manured by the cattle. A notion prevails, in many places, that mutton rattened with turnips is thereby rendered rank and ill tasted ; but this is a vulgar error. The best mutton in Norfolk is all fed with turnips. Rank pastures, and marshy lands produce rank mutton. If the land be wet and spongy, the best method is to draw and carry off your turnips to some dry pasture; for the treading of the cattle will not only injure the crop, but render the land so stiff that you must be at an additional expense in ploughing. To preserve turnips for late spring seed, the best method, and which has been tried with success by some of the best English farmers, is to stalk them up in dry straw ; a load of which is sufficient to preserve forty tons of turnips. The method is easy, and is as follows : — After drawing your turnips in February, cut off the tops and tap roots (which may be given to sheep), and let them lie a few days in the field. Then, on a layer of straw next the ground, place

a layer of turnips two feet thick; then another layer of straw, and so on alternately, till you have brought the heap to a point. Care must be taken to turn up the edges of the layers of straw, to prevent the turnips from rolling out ; cover the top well with long straw, and it will serve as a thatch for the whole. In this method, as the straw imbibes the moisture exhaled from the roots, all vegetation will be prevented, and the turnips will be nearly as good in May as when first drawn from the field. If straw be scarce, old haulm or stubble will answer the same purpose. But, to save this trouble and expense, farmers in all counties would find it their interest to adopt the method used by the Norfolk farmers, which is, to continue sowing turnips to the end of August ; by which means their late crops remain good in the field till the end of April, and often till the middle of May. The advantages of having turnips good till the spring seed is ready, are so obvious and great, that many of the most intelligent farmers are now come into it, and find their account in so doing.

2. POTATOES. — The choice of soil is not of creater importance for any other plant than for

potatoes. This plant in clay soil, or in rank

black loam lying low without ventilation, never

makes palatable food. In a gravelly or sandy

soil, exposed to the sun and free air, it thrives to perfection, and has a good relish. But a rank

black loam, though improper to raise potatoes

for the table, produces them in great plenty ;

and the product is a palatable food for horned

cattle, hogs, and poultry. The spade is a proper

instrument for raising a small quantity, or for

preparing corners or other places inaccessible to

the plough ; but, for raising potatoes in quantities, the plough is the only instrument.

As two great advantages of a drilled crop are,

to destroy weeds, and to have a fallow at the

same time with the crop, no judicious farmer

will think of raising potatoes in any other way.

In September or October, as soon as that year's

crop is removed, let the field have a rousing fur-

row, a cross brakeing next, and then be cleared

of weeds by the cleaning harrow. Form it into

three feet ridges, in that state to lie till April, which is the proper time for planting potatoes.

Cross brake it, to raise the furrows a little. Then lay well digested horse

dung along the furrows,

upon which lay the roots eight inches distant.

Cover up these with the plough, going once

round every row. This makes a warm bed for

the potatoes; hot dung below and a loose cover-

ing above, that admits every ray of the sun. As

soon as the plants appear above ground, go

round every row a second time with the plough,

which will lay upon the plants an additional

incli or two of mould, and at the same time bury

all the annuals ; and this will complete the

ploughing of the ridges. When the potatoes are

six inches high, the plough, with the deepest

furrow, must go twice along the middle of each

interval in opposite directions, laying earth first

to one row, and next to the other. And to per-

form this work, a plough with a double mould

ooard will be more expeditious; but, astheearth

cannot be laid close to the roots by the plough,

the spade must succeed, with which four inches

of the plants must be covered, leaving little more

but all the tops above ground ; and this operation will bury all the weeds that have sprung since the former ploughing. What weeds arise after, must

be pulled up by the hand. A hoe is never to be

used here.

In the Bath Society Papers, we have the following practical observations on the culture and use of potatoes, given as the result of various experiments made for five years successively.

When the potatoe crop has been the only object in view, the following method is the most eligible : — The land being well pulverised by two or three good harrowings and ploughings, is then manured with fifteen or twenty cart loads of dung per acre, before it receives its last earth. Then it is thrown on to what the Suffolk fanners call the trench balk, wm'ch is narrow and deep ridge work, about fifteen incites from the centre of one ridge to the centre of the other. Women and children drop the sets in the bottom of every furrow fifteen inches apart ; men follow and cover them with large hoes, a foot in width, pulling the mould down so as to bury the sets five inches deep ; they must receive two or three hand lioeings, and be kept free from weeds; always observing to draw the earth as much as possible to the stems of the young plants. The first or second week in April is the most advantageous time for planting.

In the end of September or beginning of October, when the haulm becomes withered, they should be ploughed up with a strong doubk breasted plough. The workman must be cautioned to set his plough very deep, that he may strike below all the potatoes, to avoid damaging the crop. The women who pick them up, if not carefully attended to, will leave many in the ground, which will prove detrimental to any succeeding crop. To avoid which, let the land be harrowed, and turn in the swine to glean the few that may be left. By this method, the sets will be fifteen square inches from each other ; it will take eighteen bushels to plant an acre ; and the produce, if on a good mixed loamy soil, will amount to 300 bushels. If the potatoes are planted as a preparation for wheat, it is preferable to have the rows two feet two inches from each other, hand-hoeing only the space from plant to plant in each row ; then turning a small furrow from the inside of each row by a common light plough, and afterwards with a double breasted plough with one horse, split the ridge formed by the first ploughing thoroughly to clean the intervals. This work should not be done

too deep the first time, to avoid burying the ten-

der plants ; but the last earth should be plough-

ed as deep as possible ; and the closer the mould

is thrown to the stems of the plants the better.

Thus fifteen bushels will plant an acre, and the

produce will be about 300 bushels ; and the

land, by the summer ploughings, will be pre-

pared to receive seed wheat immediately, and .il-

most ensure a plentiful crop. The potatoe sets

should be cut a week before planting, with one

or two eyes to each, and the pieces not very

small ; two bushels of fresh slaked lime should

be sown over the surface of the land as soon as

planted, which will effectually prevent the attacks

of the grub.

A premium having been offered by the abot t

Society for the cultivation of potatoes by far-

mers, &c., whose rent does not exceed £40 per

annum, the following methods were communi-

cated, by which those who have only a small

spot of ground may obtain a plentiful crop.

The earth should be dug twelve inches deep,

if the soil, will allow of it: after this, a hole should be opened about six inches deep, horse

dung, or long litter should be put therein aboul

three inches thick ; this hole should not be more

than twelve inches in diameter; upon this dung,

or litter, a potatoe should be planted whole,

upon which a little more dung should be shook,

and then earth put thereon. In like manner the

whole plot of ground must be planted, taking

care that each potatoe be at least sixteen inches

apart ; and, when the young shoots make their

appearance, they should have fresh mould drawn

round them with a hoe ; and if the tender shoots

are covered, it will prevent the frost from injur-

ing them; they should again be earthed when

the shoots make a sec OK d appearance, but not be covered, as the seasci will then be less severe.

A plentiful supply r mould should be given

them, and the parson who performs this business

.should never tread upon the plant, or the hillock

that is raised round it; as,. the lighter the earth is, the more room the potatoe will have to ex-

pand. From a single root thus planted, very

nearly forty pounds of large potatoes were ob-

tained, and from almost every other root upon the

same plot, from fifteen to twenty pounds ; and,

unless the soil be stony or gravelly, ten pound, or half a peck of potatoes may almost always be obtained from each root, by pursuing the above method. But cuttings or small sets will not do for this purpose.

The second method will suit those who have not time to dig their ground. Where weeds much abound, and have not been cleared in the winter, a trench may be opened in a straight line the whole length of the ground, and about six inches deep ; in this trench the potatoes should bo planted about ten inches apart ; cuttings or small potatoes will do for this method. When they are laid in the trench, the weeds that are on the surface may be pared off on each side about ten inches from it, and be turned upon the plants; another trench should then be dug, and the mould that comes out of it turned on the weeds. Each trench should be regularly dug, that all the potatoes may be ten or twelve inches from each other. This method will raise more potatoes than can be produced by digging the ground twice, and dibbling in the plants; as the weeds lighten the soil, and give the roots room

to expand. They should be twice hoed, and earthed up in rows. If cut potatoes are to be planted, every cutting should have two eyes, for, though fewer sets will be obtained, there will be a greater certainty of a crop, as one eye often fails. Where a crop of potatoes fails in part, amends may still be made by laying a little dung upon the knots of the straw or haulm of those potatoes that do appear, and covering them with mould ; each knot or joint thus ordered, will, if the weather prove wet afterwards, produce more potatoes than the original roots. From the smallest potatoes planted whole, from four to six pound at a root were obtained, and some of the single potatoes weighed nearly two pound.

These were dug in, in trenches where the ground was covered with weeds, and the soil was a stiff" loamy clay.

A good crop may be obtained by laying potatoes upon turf at about twelve or fourteen inches apart, and upon l>eds of about six feet wide ; on each side of which a trench should be opened about three feet wide, and the turf that comes thence should be laid with the grassy side downwards upon the potatoes ; a spot of mould should

next be taken from the trenches, and be spread over the turf; and in like manner the whole plot of ground that is to be planted must be treated. When the young bhoots appear, another spot of mould from the trenches should he strewed over the beds, to rover the shoots ; this will prevent the frost from injuring them, encourage them to expand, and totally destroy the young weeds. When the potatoes are taken up in the autumn, turn the earth again into the trenches, so as to make the surface level.

For field planting, a good method is to dung the land, which should be once ploughed previous thereto ; and, when ploughed a second time, the potatoe plants should be dropped before the plough in every third furrow, about eight or ten inches apart. Plants that are cut s\it!i two eyes are best for this purpose. The reason for planting them at so great a distance as every third furrow, is, that when the shoots appear, a horse hoe may go upon the two vacant furrows to keep them clean ; and, after they are thus hoed, they should be moulded up in ridges ; and, if this crop be taken up about October or

November, the land will be in excellent condi-

tion to receive a crop of wheat. Lands that are

full of twitch or couch grass, may be made clean

by this method, as the horse-hoeing is as good as

a summer fallow; and if, when the potatoes are

taken up, women and children were to pick out

such filth, no traces of it would remain ; and by burning it a quantity of manure would be pro-

cured. After ploughing, none should ever dib-

ble in potatoes, for treading the ground, .

Vacant places in hedge rows might be grubb-

ed and planted with potatoes, and a good crop

might be expected, as the leaves of trees, thorns,

&c., are a good manure, and will surprisingly

encourage their growth, and gratify the wishes of

the planter; who, by cultivating such places, will

then make the most of his ground, and it will be

in fine order to receive a crop of corn the follow-

ing year.

The best method of taking up potatoes is to

plough once round every row at the distance of

four inches, removing the earth from the plants,

and gathering up with the hand all the potatoes

that appear. This distance is proper to prevent

cutting the roots. When the ground is thus

cleared by the plough, raise the potatoes with a

fork having three broad toes. The potatoes

must then be gathered with the hand.

It is of importance to have potatoes all the

year round. For a long time they were in Scot-

land confined to the kitchen garden ; and, after

they were planted in the field, it was not supposed at first that they could be used after December.

Of late they have been kept good till April.

But it is easy to preserve them till the next crop: when taken out of the ground, lay in a corner

of a barn a quantity that may serve till the

spring covered with dry straw pressed down :

hury the remainder in a hole dug in dry ground,

mixed with the husks of dried oats, sand, or the

dry leaves of trees, over which build a stack ot

hay or corn. When the pit is opened for taking

out the potatoes, the eyes of what have tendency

to push must be cut out; and this cargo will

serve till the end of June. To be certain of

making the old crop meet the new, the setting of

a small quantity may be delayed till June, to be

taken up at the ordinary time before frost. This

cargo, having not arrived to full growth, will not

be so ready to push as what are set in April. If the old crop be exhausted before the new crop is

ready, the interval may be supplied by the po-

tatoes of the new crop that lie next the surface,

to be picked up » -ith the hand ; which, far from

hurting the crop, will rather improve it.

Kinlinrf found inealy'potatoes to contain twen-

ty-four per cent, of thf 'ir \< iˆht of nt.tritive mat-

ter, and rye seventy parts. Consequently sixty-

four and a half measures of potatoes afford the

same nourishment as twenty-four measures -of rye.

1000 parts of potatoe yielded to Sir H. Davy

from 200 to 360 parts of nutritive matter, of

which from 155 to 200 were mucilage or starch,

fifteen to twenty sugar, and thirty to forty gluten.

Now, supposing an acre of potatoes to weigh

nine tons, and one of wheat one ton, which is

about the usual proportion, then as 1000 parts

of wheat afford 950 nutritive parts, and 1000 of

potatoe say 230, the quantity of nutritive matter

afforded by an acre of wheat and potatoes will

be nearly as nine to four ; so that an acre of po-

tatoes will supply more than double the quantity

of human food afforded by an acre of wheat.

The potatoe is perhaps the only root grown in Britain which may be eaten every day in the year without satiating the palate, and the same thing can only be said of the West Indian yam, and bread fruit. They are, therefore, the only substitute that can be used for bread with any degree of success, and indeed they often enter largely into the composition of the best loaf bread without at all injuring either its nutritive qualities or flavor. In the answer by Dr. Tissot to M. Linquet, the former objects to the constant use of potatoes as food, not because they are pernicious to the body, but because they hurt the faculties of the mind. He owns that those who eat maize, potatoes, or even millet may grow tall and acquire a large size ; but doubts if any such ever produced a literary work of merit.' Potatoe meal may be preserved for years closely packed in barrels, or unground in the form of slices ; these slices having been previously cooked or dried by steam, as originally suggested by Forsyth of Edinburgh. Some German philosophers have also proposed to freeze the potatoe, by which the feculous matter is separated from the starch, and the latter, being then dried and

compressed, may be preserved for any length of time, or exported with ease to any distance. (Annalen des Ackerbaues, vol. iii. s. 389).

Potatoes as food for live stock are often joined with hay, straw, chaff, and other similar matters, and have been found useful in many cases, especially in the later winter months, for horses, cows, &c. With these substances, as well as in combination with other materials, as bean or barley-meal and pollard, they are also used in the fattening of neat cattle, sheep, and hogs.

Potatoes are much more nutritive when boiled ; they were formerly cooked in this way, but are now very generally steamed, especially in the north. The practice has been carried to the greatest extent by Curwen in feeding horses. He gives to each horse, daily, one and a half stone of potatoes mixed with a tenth of cut straw : 120 stones of potatoes require two and a quarter bushels of coals to steam them. An acre of potatoes, he considers, goes as far in this way as four of hay. VonTbaer found them, when given to live-stock, produce more manure than any other food : 100 Ibs. of potatoes producing sixty-six pounds of manure of the very best descrip-

tion. The baking of potatoes in an oven has also been tried with success (Comm. Board of Agriculture, vol. iv.) ; but the process seems too expensive. They are also given raw to stock of every description, to horses and hogs washed, but not washed to cows or oxen. Washing was formerly a disagreeable and tedious business, but is now rendered an easy matter, whether on a large or small scale, by the use of the washing machine.

3. CARROTS and PARSNIPS. — Of all roots a carrot requires the deepest soil. It ought at least to be a foot deep, all equally good from top to bottom. If such a soil be not in the farm, it may be made artificially by trench ploughing, which brings to the surface what never had any communication with the sun or air. When this new soil is sufficiently improved by a crop or two with dung, it is fit for bearing carrots. Beware of dunging the year when the carrots are sown ; for with fresh dung they seldom escape rotten scabs. The only soils proper for carrrots are loam and sand. The ground must be prepared by the deepest furrow that can be taken, the sooner after harvest the better ; immediately upon the back of which, a ribbing ought to succeed, as directed for barley. At the end of March, or begin-

ning of April, which is the time of sowing the

seed, the ground must be smoothed with a brake

Sow the seed in drills, with intervals of a foot

for hand-hoeing, where the crop is an acre or

two : but if the quantity of ground be greater, the intervals ought to be three feet for horse-hoeing.

In flat ground without ridges, it is proper to make parallel furrows jvith the plough, ten feet asun-

der to carry off redundant moisture. The for-

mer will often find carrots a very advantageous

crop ; instances are given of their excellence as

food for horses, cattle, and hogs.

The culture of PARSNIPS is much the same

with that of carrots.

SECT. III. — PLANTS CULTIVATED FOR LEAVES,

OR FOR LEAVES AND ROOTS.

The plants proper for the field of these kinds

are 'cabbage red and white, colewort plain and

curled, turnip-rooted cabbage, and the root of

scarcity.

1. CABBAGE is an interesting article in hus-

bandry. It is easily raised, is subject to few dis-

eases, resists frost more than turnips, is palatable

to cattle, and sooner fills them than turnips, car-

rots, or potatoes. The season for setting cabbage

depends on the use it is intended for. If intend-

ed for feeding in November, December, and

January, plants procured from seed sown the

end of July the preceding year must be set in

March or April. If intended for feeding in

March, April, and May, the plants must be set

the first week of the preceding July, from seed

sown in the end of February or beginning of

March the same year. The late setting of the

plants retards their growth ; by which means they

have a vigorous growth the following spring,

And this crop makes an important link in th«

chain that connects winter and summer green

food. Where cabbage for spring food is neglected,

a few acres of rye sown at Michaelmas will sup-

ply the want. After the rye is consumed there is

time sufficient to prepare the ground for turnips.

Where cabbage plants are to be set in March,

the field must be made up after harvest in ridges

three feet wide. In that form let it lie all winter to be mellowed with air and frost. In March

take the first opportunity, between wet and dry,

to lay dung in the furrows. Cover the dune;

with a plough, which will convert the furrow into a crown, and the crown into a furrow. Set the plants upon the dung, three feet from each other. Plant them so as to make a straight line cross the ridges, and along the furrows, to which a gardener's line stretched perpendicularly cross the furrows will be requisite. This will set each plant at the distance precisely of three feet from the plants that surround it. The purpose of this is to give opportunity for ploughing, not only along the ridges, but across them. This mode saves hand-hoeing, is a more complete dressing to the soil, and lays earth neatly round every plant. If the soil be deep and composed of pood earth, a trench ploughing after the preceding crop will be proper ; in which case the time for dividing the field into three feet ridges ought immediately to precede the dunging for the plants. If weeds rise so close to the plants as not to be reached by the plough, destroy them with a hand-hoe. Unless the soil be much infested with annual weeds, twice ploughing after the plants are set will be a sufficient dressing. The first removes the earth from the plants ; the

next, at the distance of a month or so, lays it back.

Where the plants are to be set in July, the field must be ribbed as directed for barley. It ought to have a slight ploughing in June before the planting, to loosen the soil, but not so as to bury the surface earth ; after which the three feet ridges must be formed, and the other particulars carried on as directed above with respect to plants set in March.

2. As to the turnip-rooted cabbages, in the Bath Society Papers we have the following account of Sir Thomas Beevor's method of cultivating them, which he found to be cheaper and better than any other : — ' In the first or second week in June I sow the same quantity of seed, hoe the plants at the same size, leave them at the same distance from each other, and treat them in all respects like the common turnip. In this method I have always obtained a plentiful crop of them ; to ascertain the value of which I need only inform you that, oti the 23d of April last, having then two acres left of my crop, sound, and in good perfection, I divided them by fold hurdles into three parts of nearly equal dimensions. Into

the first part I put twenty-four small bullocks of

about thirty stone weight each (fourteen pounds

to the stone), and thirty middle-sized fat wed-

ders, which, at the end of the first week, after

they had eaten down the greater part of the

leaves, and some part of the roots, I shified into the second division, and then put seventy lean

sheen into what was left of the first ; these fed

off the remainder of the turnips left by the fat

stock ; and so they were shifted through the three divisions, the lean stock following the fat as they wanted food, until the whole was consumed.

The twenty-four bullocks and the thirty fat wed-

Mers continued in the turnips until the 2 1st of

M.iy. and the seventy lean sheep until the 29th,

ifhich is one day ovei four weeks; so that the

*two acres kept me twenty-four small bullock**

and 110 sheep four weeks, not reckoning the

overplus day of keeping the lean sheep ; the

value, at the rate of keeping at that season, can-

not be estimated in any common year at less than

4rf. a week for each sheep, and Is. 6d. per week

for each bullock, which would amount together

to the sum of £14 10s. Qd. for the two acres.

‘ You will observe that, in the valuation o.

the crop above mentioned, I have claimed no

allowance for the great benefit the farmer receives

by being enabled to suffer his grass to get into a forward growth, nor for the superior quality of

these turnips in fattening his stock ; both which

circumstances must stamp a new and a great

additional value upon them. But, as their con-

tinuance on the land may seem to be injurious

to the succeeding crop, to supply that loss I have always sown buck-wheat on the first earth upon

the land from which the turnips were thus fed

off; allowing one bushel of seed per acre, for

whjch I commonly receive from five to six quar-

ters per acre in return. Thus you see that, in

providing a most incomparable vegetable food

for cattle, in that season of the year in which the farmer is generally most distressed, and his cattls

almost starved, a considerable profit may like-

wise be obtained, much beyond what is usually

derived from his former practice, by the great

produce and price of a crop raised at so easy

an expense as that of the buck-wheat, which

with us sells commonly at the same price as

barley, oftentimes more, but very rarely for less.

The land on which I have usually sown turnip-

rooted cabbages is a dry mixed soil, worth 15s.

per acre.'

To the preceding account the Society have subjoined the following note : — ‘ Whether we regard the importance of the subject, or the clear and practical information which the foregoing letter conveys, it may be considered as truly interesting as any we have ever been favored with : and therefore it is recommended in the strongest manner to farmers in general, that they adopt a mode of practice so decisively ascertained to be in a high degree judicious and profitable.’

To raise the turnip-rooted cabbage for transplanting, the best method yet discovered i to breast-plough and burn as much old pasture as may be judged necessary for the seed-bed: two perches well stocked with plants will be sufficient to plant an acre. The land should be cluij as shallow as possible, turning the ashes in ; ami the seed should be sown the beginning of April.*

The land to be cultivated and dunged as the common turnip. About midsummer will be a proper lime for planting, which is best done as follows : — The land to be thrown into one-bout ridges, upon the tops of which the plants are to be set, about eighteen inches from each other. As soon as the weeds rise give a hand-hoeing,

afterwards run the ploughs in the intervals, and

fetch a furrow from each ridge, which, after lymˆ

two or three weeks, is a,fain thrown back to the

ridges ; if the weeds rise again give them ano-

ther hand-hoeing. If the young plants in the

seed-bed be attacked by the fly, sow wood-ashes

over them when the dew is

vent their ravages

3. The mangel wurtzel, or ROOT OF SCARCITY,

beta cicla (see BETA), delights in a rich loamy

land well dunged. It is directed to be sown in

rows, or broad-cast, and as soon as the plants

are of the size of a goose-quill, to be transplanted in rows of eighteen inches distance, and eighteen

inches apart, one plant from the other : care

must be taken in the sowing to sow very thin,

and to cover the seed, which lies in the ground

about a month, an inch only. In transplanting

the root is not to be shortened, but the leaves

cut at the top ; the plant is then to be planted

with a setting stick, so that the upper part of the root shall appear about half an inch out of the

ground ; this last precaution is necessary to be at-

tended to. These plants will strike root in twenty-four hours, and a man will plant with ease 1800 or 2000 a day. In the seed-bed the plants, like all others, must be kept clear of weeds : when planted out, after once hoeing, they will suffocate «very kind of weed near them.

The best time to sow the seed is from the beginning of March to the middle of April : but some continue sowing every month until the beginning of July, to have a succession of plants. Both leaves and roots have been extolled as excellent both for man and beast. This plant is said not to be liable, like the turnip, to be destroyed by insects ; for no insect touches it, nor is it affected by excessive drought, or the •changes of seasons. Horned cattle, horses, pigs, and poultry, are exceedingly fond of it when cut small. The leaves may be gathered every twelve or fifteen days ; they are from thirty to forty inches long, by twenty-two to twenty-five inches broad. This plant is excellent for milch cows, when given to them in proper proportions, as it adds much to the quality as well as quantity of their milk ; but care must be taken to propor-tion the leaves with other green food, otherwise

it would abate the milk, and fatten them too

much, they being of so exceedingly fattening a

quality.

4. OFTARES. — The common tare is d istinguished

into the winter and spring tare, probably the

same original plant ; but a material difference

has been superinduced by cultivation. (Annals of

Agriculture, vol. ii). The winter tare escapes in-

jury from frosts, which destroy the spring variety : the difference in the seeds is, however, so incon-

siderable, as to be scarcely distinguished ; but

‘ the winter-tare vegetates with a seed leaf of a

fresh green color, whereas the spring tare comes

up with a grassy spear of a brown dusky hue.’ —

Dickson’s Practical Agriculture.

The winter variety is sown in September and

October, and the first sowing in spring ought to

be early. If they are to be cut green for soiling throughout the summer and autumn, which is

the most advantageous method of consuming

them, successive sowings should follow till the

end of May. The quantity of seed to an acre

is from two bushels and a half to three bushels

and a half, according to the time of sowing, and

as they are to be consumed green or left to stand for a crop.

Tares are in some places eaten on the ground,

particularly by sheep : and, as the winter sown

variety comes early, the value of this food is then very considerable. The waste, however, in this

way, even though the sheep be confined in hur-

dles, is great : and still greater when consumed

by horses or cattle. But if the plants be cut

green, and given to stock either on the field or in the fold-yards, there is perhaps no green crop

of greater value.

A little rye sown with winter tares, and a few

oats with the spring sort, serve to support their

weak stems, and add to the bulk of the crop.

There is little difference in the culture of tares

and peas ; they are often sown broad-cast, but

sometimes in rows, with intervals to admit of

hand-hoeing. The land ought to be rolled as a

preparation ; and they should always be cut with

the scythe, rather than a sickle. When thus cut

with the scythe, even an early spring sown crop

sometimes yields a weighty after crop. In those

districts where winter sown tares are found to

succeed, the ground may be cleared in time for

being sown with turnips, or dressed like a fallow

for wheat.

5. OF RAPE-SEED. — Rape is cultivated to a

large extent in Great Britain, not only for the

sake of the oil, but also for feeding sheep. The late Mr. Culley of Northumberland gives the following

account of its culture, founded on his own prac-

tice : —

‘ Rape may be sown from the 24th of May to

the 8th of June : but comes to the greatest

growth if sown in May. If sown earlier it is

apt to run to seed. From two to three pounds

of seed is required per acre, sown by a common

turnip-seed drill. But, as rape-seed is so much

larger than turnip-seed, the drill should be wider. When hoed the rape should be set out

at the same distance as turnip plants. The drills

should be from twenty-six to twenty-eight or

thirty inches, according to the quantity of dung

given. As many ploughings, harrowings, and

rollings, &c., should be given, as may be neces-

sary to make that kind of poor soil as fine as

possible, and cleared of twitch, &c. : the pro-

duce will be from twenty-five to even fifty tons

per acre, or upwards. But it is not so much the value of the green crop (though the better the

green crop, the better will the wheat be) as the

great certainty of a valuable crop of wheat, that

merits attention. The sheep are put on from the

beginning to the middle of August ; they must

have the rape consumed by the middle, or at

latest by the end of September, so that the wheat

may be got sown, on such poor damp soils, be-

fore the autumnal rains take place. The number

of sheep must depend on the goodness or bad-

ness of the crop. But as many sheep must be

employed as vo eat the rape by the middle of

September, or end of that month at the latest,

for the reasons formerly given. The Burwell

red wheat (so called from a village in Cambridge-

shire) is always preferred Poor clays will not

allow deep ploughing, consequently that opera-

tion must be governed by the depth of the soil.

The land must be made as clean as any naked

fallow. There is scarcely an instance known of

a crop of wheat sown after rape, and eat off

with sheep, being mildewed, and the grain is generally well perfected. Mr. Culley has known a crop of wheat after rape, upon a poor moorisn

thin clay soil,worth much more than the fee-simple of the land that produced it. He has frequently known land, both after rape and after naked fallow, in the same field ; and invariably the rape-wheat was better in every respect than that after naked fallow.' — Husbandry of Scotland, vol. ii. appendix, p. 45.

OF THE CULTURE OF GRASSES.

The end of August or the beginning of September is the best season for sowing grass-seeds, as there is time for the roots of the young plants to fix themselves before the sharp frosts set in.

Moist weather is best for sowing ; the earth being then warm, the seeds vegetate immediately ; but if this season proves unfavorable, they will do very well in the middle of March.

Never sow on foul land ; plough it well, and clear it from the roots of couch-grass, rest-harrow, fern, broom, and all other noxious weeds. If these are suffered to remain they will soon

destroy the young grass. Rake these up in

heaps, burn them on the land, and spread the

ashes as a manure. Repeat the ploughings and

harrowings in dry weather. If the soil be clayey

and wet make some drains to carry off the water.

Before sowing lay the land as level as possible.

If the grass seeds 'are clean, three bushels will

be sufficient per acre. When sown, harrow it in

gently, and roll it in with a wooden roller. When

it comes up, fill up all the bare spots with fresh seed, which, if rolled to fix it, will soon come

up and overtake the rest. In Norfolk they sow

clover with their grasses, particularly with rye-

grass ; but this should not be done except when

the land is designed for grass only three 'or four years, because neither of these kinds will last

long in the lands. Where you intend it for a

continuance it is better to mix only small white

Dutch clover, or marl grass with other grass seed,

and not above eight pounds to an acre. These

are abiding plants, spread close on the surface,

and make the sweetest feeding for cattle. In

spring root up thistles, hemlock, or any large

weeds that appear. The doing this while the

ground is soft enough to permit drawing by the

roots, and before they seed, will save a vast deal of trouble afterwards.

A common method of laying down fields to

grass is extremely injudicious. Some sow barley

with the grasses, which, they suppose to be use-

ful in shading them, without considering how

much the corn draws away the nourishment.

Others take their seeds from a foul hay-rick ; by

which means, besides filling the land with rubbish

and weeds, what they intend for dry soils may

have come from moist, where it grew naturally,

and vice versa. The consequence is that the

ground, instead of being covered with a good

thick sward, is filled with plants unnatural to it.

The kinds of grass most eligible for pasture lands

are, the annual meadow, creeping, and fine bent,

the fox-tail, and crested dog's tail, the poas, the fescues, the vernal, oat-grass, and the rye-grass.

We do not, however, approve of sowing all these

kinds together; for besides their ripening at dif-

ferent times, by which we can never cut them all

in perfection and full vigor, no cattle are fond of all alike. Horses will scarcely eat hay which oxen

and cows will thrive upon ; sheep are particu

larly fond of some kinds, and refuse others. The

darnel-grass, if not cut before several of the other kinds are ripe, becomes so hard and wiry in the

stalks, that few cattle eat it. Such as wish for a particular account of the above-mentioned

grasses, will be amply gratified in consulting Mr.

Stillingfleet on this subject, who has treated it

with great judgment and accuracy. The sub-

stance of his observations is given in our article

GRASS.

The grasses commonly sown for pasture, for

hay, or to be cut green for cattle, are red clover, white clover, yellow clover, rye-jjrass, narrow-

leaved plantain called ribwort, saintfoin and lu-

cerne. Red clover is of all the most proper to be

cut green for summer food. It is a biennial plant

when suffered to perfect its seed ; but, when cut

green, it will last three years, and in a dry soil longer. At the same time the safest course is to

let it stand but a single year ; if the second year's crop happen to be scanty, it proves, like a bad

crop of pease, a great encourager of weeds by

the shelter it affords them. Here, as in all other crops, the goodness of seed "is of importance.

Choose plump seed of a purple color, because it

takes on that color when ripe. It is red when

hurt in the drying, and of a faint color when un-

ripe.

Red clover is luxuriant upon a rich soil, whe-

ther clay, loam, or gravel : it will grow even

upon a moor, when properly cultivated. A wet soil is its only bane. To have red clover in perfection, weeds must be extirpated, and stones taken off. The mould ought to be made as fine as a harrowing can make it ; and the surface smoothed with a light roller. This gives an opportunity for distributing the seed evenly ; which must be covered by a small harrow with teeth not larger than that of a garden rake. In harrowing, the man should walk behind with a rope in his hand fixed to the back part of the harrow, ready to disentangle it from stones, clods, turnip or cabbage roots, which would trail the seed, and displace it.

No precise depth is necessary for the seed of red clover. It will grow vigorously from two inches deep, and it will grow when barely covered. Half an inch may be reckoned the most advantageous position in a clay soil, a whole inch in what is light or loose. It is a vulgar error that small seed ought to be sparingly covered. Misled by it, farmers cover their clover seed with a bushy branch of thorn, which not only covers it unequally, but leaves

part on the surface to wither in the air. The

proper season for sowing red clover is from the

middle of April to the middle of May. It will

spring from the first of March to the end of Au-

gust; but such liberty ought not to be taken.

There cannot be a greater blunder in husbandry

than to be sparing of seed. Some writers talk

of sowing an acre with four pounds. That

quantity of seed, say they, will fill an acre with plants as thick as they ought to stand. This rule

may be admitted as to grain, but will notanswer

witli respect to grass. Grass seed cannot be

sown too thick : the plants shelter one another ;

they retain all the dew ; and they must push for-

ward, having no room laterally. Observe the

place where a sack of pease, or of other grain,

has been set down for sowing : the seed dropped

there accidentally grows more quickly than in

the rest of the field sown thin out of hand. A

young plant of clover, or of sainfoin, according

to Tull, may be raised to a great size where it

has room ; but the field will not produce

half the quantity. When red clover is sown for

cutting green, there ought not to be less than twenty-four pounds to an acre. A field of clover is seldom too thick ; the smaller the stem, the more acceptable it is to cattle. It is often too thin ; and when so the stem tends to wood.

Red clover is commonly sown with grain ; and the most proper grain is flax. The soil must be highly cultivated for flax as well as for red clover. The proper season for sowing is the same for both ; the leaves of flax, being very small, admit of free circulation of air; and flax being an early crop is removed so early as to give the clover time for growing. In a rich soil it has grown so fast as to afford a good cutting that very year. Next to flax, barley is the best companion to clover. The soil must be loose and free for barley ; as well as for clover : the season for sowing is the same ; and the clover is well established in the ground before it is overtopped by the barley. At the same time, barley com-monly is sooner cut than either oats or wheat.

When clover is sown in spring upon wheat, the soil, which has lain five or six months without being stirred, is an improper bed for it ; and the wheat, being in the vigor of growth, overtops it

from the beginning. It cannot be sown along with oats, because of the hazard of frost ; and when sown as usual among the oats three inches high, it is overtopped, and never enjoys free air till the oats be cut. Where oats are sown upon the winter furrow, the soil is rendered as hard as when under wheat. Red clover is sometimes sown by itself without other grain : but this method, besides losing a crop, is not salutary; berause clover in its infant state requires shelter. As to the quantity of grain proper to be sown with clover, in a rich soil well pulverised, a peck of barley on an English acre is all that ought to be ventured ; but there is not so much soil in Scotland so rich. Two Linlithgow firlots make the proper quantity for an acre that produces six bolls of barley; half a firlot for what produces nine bolls. To some, so small a quantity may appear ridiculous. But a rich soil in good order, will, from a single seed of barley, produce twenty or thirty vigorous stems. The culture of white clover, yellow clover, ribwort, and rye-grass, is the same in general with that of red clover. Yellow clover, ribwort,

and rye-grass, are all early plants, blooming in

the end of April or beginning of May. The two

latter are evergreens, and therefore excellent for

winter pasture. Rye-grass is less hurt by frost

than any of the clovers, and will thrive in a moister soil : nor is it much affected by drought. In a

rich soil it grows four feet high. These grasses

are generally sown with red clover for producing

a plentiful crop. The proportion of seed is ar-

bitrary ; and there is little danger of too much.

When rye-grass is sown for procuring seed, five

firlots wheat measure may be sown on an acre ; and.

for procuring seed of rib-wort, forty pounds may

be sown. The roots of rye-grass spread hori-

zontally : they bind the soil by their number ;

and, though small, are yet so vigorous as to thm e in hard soil. Red clover has a large tap-roo

which cannot penetrate any soil but what is open

and free ; and the largeness of the root makes

the soil still more open and free. Rye-grass,

once a great favorite, appears to be discarded in

most parts of Britain. The common practice

has been to sow it with red clover, and to cut

them promiscuously in the beginning of June for

green food, and a little later for hay. This in-

deed is the proper season for cutting red clover,

because it then begins to flower; but, as the seed of the rye-grass is then approaching to maturity,

its growth is stopped for that year, as much as of oats or barley cut after the seed is ripe. Oats or barley cut green before the seed forms, will afford two other cuttings ; which is the case of rye-

grass, of yellow clover, and of ribwort. By such

management, all the profit will be drawn that

these plants can afford.

When red clover is intended for seed, the

ground ought to be cleared of weeds, as the seed

cannot otherwise be preserved pure : what seeds

escape the plough ought to be taken out by the

hand. In England, when a crop of seed is in-

tended, the clover is always first cut for hay.

This practice will not answer in Scotland, as the

seed would often be too late for ripening. It

would do better to eat the clover by sheep till

the middle of May, which would allow the seed

to ripen. The seed is ripe when, upon rubbing

it between the hands, it parts readily from the

husk. Then apply the scythe, spread the crop

thin, and turn it carefully. When perfectly dry,

take the first hot day for threshing it on boards

covered with a coarse sheet. Another way, less

subject to risk, is to stack the dry hay, and to

thresh it in the end of April. After the first threshing, expose the husks to the sun ; and thresh them till no seed remain. Nothing is more efficacious than a hot day to make the husk part with its seed ; in which view it may be exposed to the sun by parcels, in an hour or two before the flail is applied.

White clover, intended for seed, is managed in the same manner. No plant ought to be mixed with rye-grass that is intended for seed. In Scotland much rye-grass seed is hurt by transgressing that rule. The seed is ripe when it parts easily with the husk. The yellowness 01 the stem is another indication of its ripeness ; in which particular it resembles oats, barley, and other culmiferous plants. The best manner to manage a crop of rye-grass, for seed, is to bind it loosely in small sheaves, widening them at the bottom to. make them stand erect; as is done with oats in moist weather. In that state they may stand till sufficiently dry for threshing. They thus dry more quickly, and are less hurt by rain, than by close binding and putting the sheaves in shocks like corn. The worst way of all is to spread the rye-grass on the moist ground ; for it makes the

seed malten. The sheaves, when sufficiently dry,

are carried in close carts to where they are to be threshed on a l>oard, a> mentioned above for

clover. Put the straw in a rick when 100 stone

or so are threshed. Carry the threshing board

to the place where another rick is intended;

and so on till the whole seed is threshed, and the straw ricked. There is necessity for close carts

to save the seed which is apt to drop out in a

hot day ; and a hot day ought always to be

chosen for threshing. Carry the seed in sacks to

the granary or barn, to be separated from the

husks by a fanner. Spread the seed thin upon a

timber floor, and turn it once or twice a-day till perfectly dry. If suffered to take a heat, it is

useless for seed.

The writers on agriculture reckon sainfoin

preferable to clover in many respects . they say

that it produces a larger crop ; that it does not

hurt cattle when eaten green ; that it makes bet-

ter hay ; that it continues four times longer in the ground ; and that it will grow on land that will

bear no other crop. Sainfoin has a very long

tap-root, which is able to pierce very hard earth.

The roots grow very large ; and the larger they are, they penetrate to the greater depth ; and hence this grass, when it thrives well, receives a great part of its nourishment from below the staple of the soil : of course, a deep dry soil is best for sainfoin. When plants draw their nourishment from that part of the soil that is near the surface, it is not of much consequence whether their number be great or small. But the case is very different when the plants receive their food, not only near, but also deep below the surface. Besides, plants that shoot their roots deep are often supplied with moisture, when those near the surface are parched with drought.

To render the plants of sainfoin vigorous, they must be sown thin. The best method of doing this is by a drill ; because, when sown in this manner, not only the weeds, but also the supernumerary plants, can easily be removed. It is several years before sainfoin comes to its full strength ; and the number of plants sufficient to stock a field, while in this imperfect state, will make but a poor crop for the first year or two. It is therefore necessary that it be sown in such a manner as to make it easyito take up plants in

such numbers, and in such order, as always to leave in the field the proper number in their proper places. This can only be done with propriety by sowing the plants in rows by a drill. Supposing a field to be drilled in rows at ten inches distance, the partitions may be hand-hoed, and the rows dressed in such a manner as to leave a proper number of plants. In this situation the field may remain two years ; then one-fourth of the rows may be taken out in pairs, in such a manner as to make the beds of fifty inches, with six rows in each, and intervals of thirty inches, which may be ploughed. Next year another fourth of the rows may be taken out in the same manner, so as to leave double rows, with partitions of ten inches, and intervals of thirty ; all of which may be hoed at once or alternately, as may be most convenient.

The great quantity of this grass which the writers on this subject assure us may be raised upon an acre, and the excellency and great value of the hay made of it, should induce farmers to make a complete trial of it. The plants taken up from a field of sainfoin may be set in another fi=>U ; and if the transplanting of the grass suc-

ceeds as well as the transplanting of lucerne has

done with Mr. Lunin de Chateauvieux, the trou-

ble and expense will be sufficiently recompensed

by the largeness of the crops. In transplanting,

it IF necessary to cut off great part of the long tap-ioot : this will prevent it from striking very

deep into the soil, and make it push out laige

roots in a sloping direction from the cut end of

the tap-root. Sainfoin managed in this manner

will thrive even on shallow land that has a wet

bottom, provided it be not overstocked with

plants. Whoever inclines to try the culture of

this grass in Scotland, should take great pains in

preparing the land, and making it as free from

weeds as possible. In England, as the roots

strike deep in that chalky soil, this plant is not liable to be so much injured by drought as other

grasses are, whose fibres lie horizontally, and lie

near the surface. The quantity of hay produced

is greater and better in quality than any other.

But there is one advantage attending this grass,

which renders it superior to any other ; viz. that

it affords excellent feeding for milch cows. The

prodigious increase of milk which it makes is

astonishing, being nearly double that produced

by any other green food. The milk is also bet-

ter, and yields more cream than any other ; and the butter procured from it is much better colored

and flavored.

The following remarks by an English farmer

are made from much experience and observation.

Sainfoin is much cultivated in those parts where

the soil is of a chalky kind. It will always suc-

ceed well where the roots run deep ; the worst

soil of all for it is where there is a bed of cold wet clay, which the tender fibres cannot pene-

trate. It will make a greater increase of pro-

duce, by at least thirty times, than common grass

or turf on poor land. Where it meets with chalk

or stone, it will extend its roots through the

cracks and chinks to a very great depth, in search of nourishment. The dryness is of more conse-

quence than the richness of land for sainfoin ; al-

though land that is both dry and rich will always

produce the largest crops. It is very commonly

sown broad-cast ; but it answers best in drills,

especially if the land be made fine by repeated

ploughing, rolling, and harrowing. Much de-

pends on the depth which this seed is sown. If

it be buried more than an inch deep, it will sel-

dom grow ; and, if left uncovered, it will push

out its roots above ground, and these will be

killed by the air. March and the beginning of

April are the best seasons for sowing it, as the

severity of winter and the drought of summer

are equally unfavorable to the young plants. A

bushel of seed sown broad-cast, or half that quan-

tity in drills, if good, is sufficient for an acre.

The drill should be thirty inches apart, to

admit of horse-hoeing between them. Much

depends on the goodness of the seed, which may

however, be best judged of by the following

marks : —

The husk being of a bright color, the kernel

plump, of a gray or bluish color without, and,

if cut across, greenish and fresh withinside; if it be thin and furrowed, and of a yellowish cast, it

will seldom grow. When the plants stand sin-

gle, and have room to spread, they produce the

greatest quantity of herbage, and the seed ripens

oest. But farmers in general plant them so close

that they choke and impoverish each other, and

often die in a few years. Single plants run deepest and draw most nourishment; they are also

easiest kept free from weeds. A single plant

will often produce half a pound of hay, when

dry. On rich land this plant will yield two

good crops in a year, with a moderate share of

culture. A good crop must not be expected the

first year ; but, if the plants stand not too thick, they will increase in size the second year prodi-

giously. No cattle should be turned on the

field the first winter after the corn is off with

which it was sown, as their feet would injure the

young plants. Sheep should not come on the

following summer, because they would bite off

the crown of the plants, and prevent their shoot-

ing again. A small quantity of soapers' ashes as

a top-dressing will be of great service, if laid on the first winter.

If the sainfoin be cut just before it comes into

bloom, it is admirable food for horned cattle ;

and, if cut thus early, it will yield a second crop the same season. But, if it proves a wet season,

it is better to let it stand till its bloom be per-

fected ; for great care must be taken, in making

it into hay, that the flowers do not drop off, as cows are very fond of them ; and it requires

more time than other hay in drying. Sainfoin

is so excellent a fodder for horses, that they re-

quire no oats while they eat it, although they

be worked hard all the time. Sheep will also be

fattened with it faster than with any other food.

If the whole season for cutting proves very rainy,

it is better to let the crop stand for seed, as that will amply repay the loss of the hay ; because it

will not only fetch a good price, but a peck of

it will go as far as a peck and a half of oats for horses. The best time of cutting the seeded

sainfoin is when the greatest part of this seed is well filled, the first blowing ripe, and the last

blowing beginning to open. For want of this

care some people have lost most of their seed by

letting it stand too ripe. Seeded sainfoin should

always be cut in a morning or evening, when

the dews render the stalks tender. If cut when

the sun shines hot, much of the seed will fall out and be lost.

An acre of very ordinary land, when improved

by this grass, will maintain four cows very well

from the 1st of April to the end of November ;

and afford, besides, a sufficient store of hay to

make the greater part of their food the four

months following. If the soil be tolerably good,

a field of sainfoin will last from fifteen to twenty years in prime ; but, at the end of seven or eight years, it will be necessary to lay on a moderate

coat of well rotted dung ; or, if the soil be very ligkt and sandy, of marie. The future crops,

and the duration of the plants in health and vigor, will thus be greatly

increased and prolonged.

Hence it will appear that, for poor land, there is nothing equal to this grass in point of advantage

to tne farmer. Clover will last only two years

:n perfection ; and often, if the soil be cold and moist, nearly half the plants 'will rot, and bald

patcnes be found in every part of the field the

secono. year. Besides, from our frequent rains

during September, many crops left for feeding

are lost. But from the quantity and excellent

quality of sainfoin, and its ripening earlier, and

continuing in vigor so much longer, much risk and

expense is avoided, and a large annual profit

accrues to the farmer.

The writers on agriculture, ancient as well as

modern, bestow the highest encomiums upon lu-

cerne as affording excellent hay, and producing

very large crops. Lucerne remains at least ten or

twelve years in the ground, and produces about

eight tons of hay upon the Scots acre. There is

but little of it cultivated in Scotland. However,

it has been tried in several parts of that country •

and it is found that, when the seed is good, it

comes up very well, and stands the winter frost.

But the chief thing whicn prevents this grass

from being more used in Scotland is the difficulty of keeping the soil open and free from weeds lu a few years the surface becomes so hard, and the turf so strong, that it destroys the lucerne before the plants have arrived at their greatest perfection ; so that lucerne can scarcely be cultivated with success there, unless some method be fallen upon of destroying the natural grass, and preventing the surface from becoming hard and impenetrable. This cannot be done effectually by any other means than horse-hoeing. This method was first proposed by Tull, and afterwards practised successfully by M. de Chateauvieux. That gentleman tried the sowing of lucerne both in rows upon the beds where it was intended to stand, and likewise the sowing it in a nursery, and afterwards transplanting it into the beds prepared for it. He prefers transplanting ; because part of the tap-root is thus cut off, and the plant shoots out a number of lateral branches from the cut part of the root, which makes it spread its roots nearer the surface, and consequently renders it more easily cultivated ; besides, this circumstance adapts it to a shallow soil, ia which, if left in its natural state, it would not

grow. This transplanting is attended with many advantages. The land may be prepared in summer for receiving the plants from the nursery in autumn ; by which means the field must be ia a much better situation than if the seed had been sown upon it in the spring. By transplanting, the rows can be made more regular, and the intended distances more exactly observed ; and consequently the hoeing can be performed more perfectly, and with less expense. M. Chateauvieux likewise tried the lucerne in single beds three feet wide, with single rows ; in beds three feet nine inches wide, with double rows ; and in beds four feet three inches wide, with triple rows. The plants in the single rows were six inches asunder, and those in the double and triple rows were about eight or nine inches. In a course of three years he found that a single row produced more than a triple row of the same length. The plants of lucerne, when cultivated by transplantation, should be at least six inches asunder, to allow them room for extending their crowns.

He further observes that the beds or ridges ought to be raised in the middle ; that a small

trench, two or three inches deep, should be drawn in the middle ; and that the plants ought to be set in this trench, covered with earth up to the

neck. He says that if the lucerne be sown in spring, and in a warm soil, it will be ready for transplanting in September ; that, if the weather be too hot and dry, the transplanting should be delayed till October ; and tbat, if the weather be unfavorable during both these months, this opera-

tion must be delayed till spring. He further directs that the plants should be carefully taken out of the nursery, so as not to damage the roots ; that the roots be left only about six or seven inches long; that the green crops be cut off within about two

inches of the crown ; that they be put into \vater as soon as taken up, and remain till they are

planted ; and that they should be planted with a planting-stick, in the same manner as cabbages.

He does not give particular directions as to the times of horse-hoeing ; but only says, in general, that the intervals should be stirred once in the month during the whole time that the lucerne is in a growing state. He likewise observes that great care ought to be taken not to suffer any weeds to grow among the plants, at least for the first two or three years ; and, for this purpose,

that the rows, as well as the edges of the inter-

vals where the plough cannot go, should be

weeded by the hand.

Burnet is peculiarly adapted to poor land, it

proves an excellent winter pasture when hardly

any thing else vegetates. It makes good butter;

it never swells cattle ; it is fine pasture for sheep ; and will flourish well on poor, light, sandy, or

stony soils, or even on dry chalk hills. The cul-

tivation of it is neither hazardous nor expensive.

If the land is prepared as is generally done for

turnips, there is no danger of its failing. After

the first year, it will be attended with very little expense, as the flat circular spread of its leaves

will keep down, or prevent the growth of weeds.

On the failure of turnips, either from the fly or

black worm, some of our farmers have sown the

land with burnet, and in March following had

a fine pasture for their sheep and lambs. It will

perfect its seed twice in a summer ; and this seed is said to be as good as oats for horses ; but it is too valuable to be applied to that use. It is some-

times sown late in the spring, with oats and bar-

ley, and succeeds very well ; but it is best to

sow it singly in the beginning of July, when

there is a prospect of rain, on a small piece of

land, and in October following transplant it in

rows two feet apart, and about a foot distant in

rows. This is a proper distance, and gives op-

portunity for hoeing the intervals in the succeed-

ing spring and summer. After it is eaten down

by cattle, it should be harrowed clean. Some

horses will not eat it freely at first, but in two or three days they are generally very fond of it. It

affords rich pleasant milk, and in great plenty.

The severest frost never injures it, and the oft-

ener it is fed upon, the thicker are its leaves,

which spring constantly from its root.

PART II.

OF THE GRAZING SYSTEM.

Grazing, in a large sense, will comprehend the

entire management of grass lands. These are ob-

viously divided into meadows, or such perennial

grass lands as are usually kept for a hay crop,

and permanent pastures. The importance of

some system for their proper management being

adopted will appear from the consideration that

by far the greater part of the land of Great

Britain is included in one or other of these

descriptions. See MEADOW.

Of the culture of meadows. — The most luxuriant

and valuable meadows are found in the bottom of

valleys, and connected with one or more rivers of the neighbourhood : often indeed the entire growing soil has been washed down from adjoining highlands. This, of all other land, observe the Agricultural Reports of Staffordshire, is ‘ the most productive of grass and hay, yielding sustenance for cattle through the summer and the winter, and producing an everlasting source of manure for the improvement of the adjoining lands. In all cases of extensive enclosures, the improvement of the vale land, or that formed by nature for meadow and pasture, should be first attended to. In this view, the low lands in all situations come under the head of natural meadows. But river or low meadows, from their long retention of moisture, and the great depth of vegetable matter which they contain, are certainly liable to throw up coarse herbage ; in many cases therefore more careful drainage, as well as other management, is necessary to bring them into proper condition for the growth of good herbage than is requisite in the hay grounds in more elevated places. The most proper season for surface-draining grass lands is autumn, when they are comparatively firm and dry ; in the early

spring months such lands are too full of mois-

ture. The grips, or small open drains, should

be cut obliquely in the most suitable directions

for conveying off the superficial stagnant water.

‘ It is a practice, in some cases, to suffer the sods or grippings that are taken out of the trenches

to remain on their sides ; but it is much better, and a less slovenly mode, to have them con-

veyed from the land and laid up in heaps, in

order to their being acted upon by the winter

frosts and other causes, so as to be brought into

a state proper for being formed into composts

with well rotted farm-yard dung. Much of this

sort of draining may be performed at a small

expense, and the beneficial effects be very con-

siderable, especially where the lands are very

much loaded with moisture, in the quantity of

produce.’ Besides, such meadow lands ‘ de-

mand much more attention in their management

in other respects, as those of their being fed by

cattle, and the performing of the different opera-

tions that are proper for rendering them produc-

tive of good herbage. In these cases stock

should be turned upon the lands, and manure-

be applied \vith much care, and only when the

land is in such a state of dryness as not to be in-

jured by the poaching or breaking of the sward.

The higher sorts of grass lands, in most instances, admit of considerably more latitude in perform-

ing these different operations, as they are capable

of admitting the stock, as well as the dung-cart,

more early in the spring months, and of suffering

them to remain or be applied at later periods in

the autumn without inconvenience. The advan-

tage of this attention is rendered sufficiently

plain by the effects which the contrary practice

produces in such meadow and other hay lands

as are in a state of commonage, where the stock

is admitted at all seasons, and under all circum-

stances.'

' In apiece of clayey meadow land/ mentioned

in the Agricultural Report of Middlesex, ' which

was exposed to the treading of cattle during the

wet season of winter, with a view of fully ascer-

taining the effects of the practice of suffering

cattle to remain too long upon grass hay lands,

it was found that after three years, notwithstand-

ing every possible care and attention in rolling,

manuring, and sowing grass seeds, was employed,

it was not restored to its former state of sward.'

And it is said that, on the deep tough yellow

clayey grass lands in this district, ' it is well

known that wherever a bullock makes a hole

with his foot, it holds water, and totally destroys every vestige of herbage ; which is not quite re-

placed till several years after the hole is grown

up.' Bog-meadows are drained and managed in

a similar manner with other low meadows.

The upland meadows of Middlesex yield also

some fine hay crops ; being so well situated for

receiving the manure of the metropolis. Here

moss, mole-hills, and ant-hills, are the great ene-

mies of the farmer : and the destruction of the

latter is often a process of no small difficulty.

It is said that where grass lands are sufficiently

rolled with a heavy roller, once or oftener every

year, no ant-hills will ever be formed greater

than the roller can compress, and consequently

no injury will be sustained. In this, as in most

other cases of disease, observes Mr. Loudon,

proper regimen is the best cure. ' In domestic

economy, various directions are given for destroy-

ing bugs, lice, and other vermin ; but who ever

had any to destroy, who attended properly to cleanliness ?'

With regard to the application of manure, we are told in the Middlesex Report, that almost all the grass lands in the county are preserved for hay, that the manure is invariably laid on in October, while the land is sufficiently dry to bear the driving of loaded carts without injury, and when the heat of the day is so moderated as not to exhale the volatile parts of the dung. Other agriculturists prefer applying it immediately after hay-time, or from about the middle of July to the end of August, said to be the 'good old time' (Cormnun. to Board of Agriculture, vol. iv. p. 138); others again from the beginning of February to the beginning of April (Dickson's Practical Agriculture, vol. ii. p. 915). ' The dairy farmers in North Wiltshire,' observes Mr. Davies, and in particular the graziers, are much more attentive to the quality than the quantity of their hay. They make a point of haining up their meadows as early as possible in autumn, and of course are able to mow early in the summer. It is not uncommon to see grass

mown, not only before it is in blossom, but even

before it is all in ear ; and to this it is owing that it is more common to fat cattle with hay alone,

in North Wilts, than perhaps in any country in

the kingdom. And by this the dairy-men are

able to keep up the milk of those cows that calve early, and from which calves are fatted, which

otherwise shrink before the springing of the

grass and never recover. And the advantage

they get by early after-grass, and by the duration

of that after-grass to a late period in autumn,

fully compensates for the loss of quantity in their hay crop.'

Dr. Anderson says it is in general understood

that, if hay can be made so as to retain some

tinge of its green color, it is better than if it were bleached white or rotted ; but precautions are

seldom thought necessary to be adopted for

guarding against the effects of scorching sun-

shine, which, by too quickly exhaling its natural

juices, renders it sticky, brittle, and unpalatable

to a certain degree ; and, what is of still more

importance, the effects of rain, or even dew if

abundant, if they are suffered to fall upon the

grass after it is cut, and before it be made into hay, are seldom adverted to ; so that if dry

weather comes soon to exhale that wet, while the

grass lies spread out upon the ground, the

farmer feels little anxiety about the consequences ;

though it is a certain fact that no hay which has been in the least wetted during the process of

hay-making can ever be made to have that sweet

palatable taste it would have had without it.

Nor has our author ever seen that beasts, when

allowed to choose between hay so made and

that which has been guarded from moisture,

ever hesitated to make choice of the last, or

committed a mistake, even where he himself

could not distinguish a perceptible difference.

But to obtain hay in all cases of the very best

quality the circumstances will admit of, the fol-

lowing process, he says, may be safely conjoined

with the practice of cutting and feeding beasts

with grass in the house as above recommended.

Where the produce of grass land is to be cut, as

above described, and used green, it will be pro-

per in general to reserve a part of it for hay.

In this case the cutting for grass and for hay

should be carried on together, but with the fol-

lowing variations, depending on the uses it is to

be applied to. That part of the grass which is

intended to be used green, as it will suffer no

damage by being cut when wet, must continue

to be cut regularly each day as it is wanted,

without regard to the weather; whereas that

part of it which is intended for hay ought on no

account to be cut while wet ; and, therefore, that

part of the operation must be discontinued, un-

less when the weather is dry and fine ; nor should

it ever be cut either in the morning or the even-

ing, while dew is upon it. And as the hay, in

the mode proposed, ought to be made day by

day, for a continuance, as the grass comes for-

ward for the scythe, while the weather is in a

proper state for it, and not all at one time, as in the usual mode of hay-making, the cutting both

grass and hay from the same field may be very

economically combined together. For this pur-

pose the grass which is cut in the morninsr,

while the dew may perhaps be upon it, and in

the afternoon, ought to be appropriated to the

beasts gieen ; and that part of the grass only

which is cut from nine till two o'clock, while the weather is dry and fine, should be made into

hay. If the mower begins to cut down for hay

about nine o'clock in the morning, and goes on

in that operation till one or two in the afternoon ; and, if the persons who are to put up the hay

begin that operation about one, the grass will

thus be allowed to lie between three and four

hours in the swathe, exposed to the sun, which

will exhale some part of its moisture, and deaden

- *enough for the purposes required, though it*

Mill retains the whole of its nutritious juices

\vithout abatement. After being allowed to lie

thus long it should be raked clean up, and car-

ried off the field in the same cart that is em-

ployed for taking in the grass, and immediately

put into the stack, so as that the whole grass

that was cut that day shall be put up hjefore

evening; and thus regularly each good day

throughout the season. But as grass, while in

this green and succulent state, would not keep

if put up by itself, care must betaken to provide

some dry forage to mix with it. For this purpose

nothing can be so proper as good dry hay ; but,

for want of that, at the beginning, good straw

may be very safely employed. Our author once

saved a great quantity of clover hay, being a late third cutting, when the season was too far ad-

vanced to admit of its being made in the usual

way, by putting it up when new cut, thus inter-

mixed with a large proportion of good straw. It kept perfectly well; and, when cut down and given to the beasts, was relished by them better than any other hay he had, and was equally valuable for every purpose.

Every part of the management in Middlesex, with regard to hay, has been acknowledged by able judges to be very superior. When the grass here is nearly fit for mowing, the farmer generally lets it out to be mown by the acre ; calculating that a healthy man will mow from one and a-half to two acres a day, beginning very early in the morning. He provides five hay-makers to each mower, and they are expected to bring a fork and rake of their own. The course of operations that now takes place is thus described in the Middlesex Report : —

First day. — All the grass mown before nine o'clock in the morning is tedded, in which great care is taken thoroughly to loosen every lump, and to strew it evenly over all the ground. By this regular method of tedding grass for hay, the hay will be of a more valuable quality, heat more equally in the stack, consequently not so

liable to damage or fire ; will be of greater quan-

tity when cut into trusses, and will sell at a bet-

ter price ; for, when the grass is suffered to lie a day or two before it is tedded out of the swathe, the upper surface is dried by the sun and winds,

and the interior part is not dried, but withered,

so that the herbs lose much, both as to quality

and quantity, which are very material circum-

stances. Soon after the tedding is finished, the

hay is turned with the same degree of care and

attention: and if, frorr. the number of 'hands,

they are able to turn the whole again, they do so, or at least as much of it as they can, till twelve or one o'clock, at which time they dine. The

first thing to be done after dinner is to rake it into what are called single wind-rows; and the

last operation of this day is to put it into grass-

cocks.

Second day. — The business of this day com-

mences with tedding all the grass that wa> mown

the first day after nine o'clock, and all thai was mown this day before nine o'clock. Next, the

grass-cocks are to be well shaken out into stad-

dles (or separate plats) of five or six yards dia-

meter. If the crop should be so thin and light

as to leave the spaces between these staddles

rather large, such spaces must be immediately

raked clean, and the rakings mixed with the

other hay, in order to its all drying of a uniform color. The next business is to turn the staddles,

and after that to turn the grass that was tedded

in the first part of the morning, once or twice,

in the manner described for the fiist day. This

should all be done before twelve or one o'clock,

so that the whole may lie to dry while the work-

people are at dinner. After dinner the first

thing to be done is to rake the staddles into

double wind-rows ; next, to rake the grass into

single wind-rows ; then the double wind-rows

are put into bastard-cocks ; and, lastly, the

wind-rows are put into grass-cocks. This com-

pletes the work of the second day.

Third day. — The grass mown and not spread

on the second day, and also that mown in the

early part of this day, is first to be tedded in the morning, and then the grass-cocks are to be

spread into staddles as before, and the bastard-

cocks into staddles of less extent. These lesser

staddles, though last spread, are first turned,

then those which were in grass-cocks; and next

the grass is turned once or twice before twelve

or one o'clock, when the people go to dinner as

usual. If the weather has proved sunny and

fine, the hay which was last night in bastard-

cocks will this afternoon be in a proper state to

be carried ; but if the weather should, on the

contrary, have been cool and cloudy, no part of

it probably will be fit to carry. In that case the first thing set about after dinner is to rake that which was in grass-cocks last night into double

wind-rows ; then the grass which was this morn-

ing spread from the swathes into single wind-

rows. After this the hay which was last night

in bastard-cocks is made up into full-sized

cocks, and care taken to rake the hay up clean,

and also to put the rakings upon the top of each

cock. Next, the double wind-rows are put into-

bastard-cocks, and the single wind-rows into

grass-cocks, as on the preceding days.

Fourth day. — On this day the great cocks just

mentioned are usually carried before dinner.

The other operations of the day are such, and in

the same order, as before described, and are con-

tinued daily until the hay harvest is completed.

Of the culture of pastures. — Dr. Anderson,

in the third volume of his Essays on Agricul-

ture, has some practical remarks on pastures,

which we think worth perpetuating in our work :

— ‘ It is stated,’ he says, ‘ in the Agricultural

Survey of Gloucestershire, that one acre of rye-grass, which had been saved from Michaelmas to May, kept nine ewes and lambs one month. \e may, therefore, he adds, conclude that the produce of the same field, from May till Michaelmas, would have been double to that it yielded during the winter half year; consequently it could have sustained eighteen ewes and lambs one month. At this rate the acre of ground, ta, ng the whole year round, would have afior eil food Tor twenty-seven ewes and lambs for one month. These were large

sheep, weighing abovit twenty-five pounds per quarter on the average. In the Survey of Wiltshire, it is said that 500 such ewes and lambs are sufficient to dung an acre each day when folded upon it ; at that rate, says the Dr., twenty-seven of them should dung an acre in a little less than nineteen days ; consequently, in thirty days, somewhat better than half an acre more. He is, however, inclined to think this would be but a very moderate dunging ; but should dou-

ble the quantity of dung, or more, be required

for certain purposes on particular occasions, it

will not, he says, affect the conclusions deduci-

ble from these facts in kind, only in degree.

Hence, in his opinion, it follows, that if none of this dung were suffered to go to waste, an acre

of good land laid down to grass, in high order,

should afford as much dung as would be sufficient

to dress each year an acre and a half of other

.and.

In the Agricultural account of Suffolk, it is

stated that the rich marsh lands there keep at the rate of six sheep for seven summer months, and

four for the five winter months per acre ; that is, a little more than five sheep on an average per

acre throughout the year. These are very large

sheep, of which 800 would be equal to the 500

ewes and lambs above mentioned, and conse-

quently would be sufficient to dung an acre in

one day. But five times 365 makes 1825, the

number of sheep kept for one day. At this rate

one acre of these rich grass lands would afford

as much dung in the course of one year, as

should be sufficient to dung somewhat more than

two acres and a quarter each year, if husbanded

with due economy and attention.

But, as the sheep in neither of these cases are

folded, the dung is suffered to drop in a scattered manner over the pastures, throughout the whole

year. In this manner the influence of the dung must either be nothing, or it must produce certain ef-

fects upon the grass. It is well known that when

sheep are folded upon grass ground, so as to de-

posit their dung upon it in considerable quanti-

ties all about one time, as in folding, the effect is, that a flush of grass is quickly produced over its whole surface, which is much more luxuriant and

abundant than it would have been, had it not re-

ceivedthis dressing. But it is well known, that the animals, whose dung has occasioned that flush of

grass, nauseate it ; nor can they be brought to

taste it, unless they be compelled through hunger;

although animals of another kind are seen to eat

that kind of grass, not only without reluctance, but even with avidity. He thinks the extra flush of grass raised on the two acres and a half, that might be thus manured by the sheep fed on one acre,

would be sufficient, on a moderate computation,

to keep at the rate of two sheep per acre. By

consequence, the extra grass produced by the

dung of the sheep kept on one acre of this rich

grassland, would be sufficient to keep four sheep

and a half. But, to keep within bounds, say three

sheep only could be kept by the grass produced

from the dung of the sheep fed on one acre. If

the dung be supposed to have the same effect in

producing extra grass, when dropped from the

animals as they pasture on the field, as it has when laid upon ground closely by means of folding,

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it must follow, from these premises, that as much

grass will grow from the dung upon each acre as

would feed three sheep. But, as the sheep

will not eat this kind of grass without constraint, the ground must either be so hard stocked as to

compel them, through hunger, to eat that nau-

seous food, or that portion of the grass produced

by the dung will be suffered to run to waste ; so that, in either case, a considerable loss must be

sustained by the owner. After some farther re-

marks our author adds, ‘ If these observations

be well founded, what an amazing waste is sus-

tained through the nation, by the loss of the

dung thus uselessly scattered on the surface of

pasture fields ! ‘

The remedy which first presents itself in this

case, he contends, is that of folding; and that,

if properly managed, there are perhaps few cases

in which it might not be put in practice, not only without detriment to the stock, but even to their

advantage. All animals, but especially those

that ruminate, choosing to feed and rest by turns.

Ruminating animals require much time for rest ;

and, the more quiet they are allowed to be dur-

ing that period, the better they will thrive. If*

these then are withdrawn from their pastures

after they have properly filled their bellies, and

when they become necessarily disposed to rumi-

nate, they can sustain no damage by being put

into a place where they can have no access to

food. And if they be only as long detained there

as till they have rechewed the food they have

swallowed, and begin to feel an inclination to

eat more, they will be benefited by this confine-

ment, rather than otherwise. And they will thus

all feed and rest at the same time.

Penning, however, under injudicious manage-

ment, may tend to retard the feeding of the ani-

mals subjected to it. If the creatures be driven

to a great distance from their pastures to the pen, it must subject them to a hurtful degree of fatigue ; and this will be increased if they are made to pass through lanes, where they may be crowded by

passengers, mired in dirt, or drenched in wet ;

or if they are neglected too long in the pen ; or put up at improper times, &c. Therefore, to

derive the full benefit from folding,where the pas-

tures are of a great extent, there ought to be two or more folds placed close

by the pasture, at con-

venient distances ; so that the flocks, being gently conducted from one to the other, feeding all the way, might find themselves, when full, just at the place for rest. There they should be suffered to remain just so long as is found to be necessary to complete their ruminating process, and to prepare them for feeding afresh ; they should then be suffered to rise and stretch themselves, when they naturally void their dung and urine on the spot. Thus will the dung be preserved, and the pastures be kept clean"and sweet. They ought then to be led gently to the fresh pasture which they had not lately breathed upon, or trampled with their feet, and which of course will be to them sweet and inviting ; they should thus be slowly conducted to their next resting place, feeding all the way ; and so on till they go over the whole in a regular succession. If diseases be produced by suffering the animals to eat their food when covered with hoar frost, or dew, or mildew, or

at certain times of the clay or night, when snails and other creatures are abroad, which they may

swallow with their food, in all these cases, when

observed, the evil may, by an attentive economist,

6e avoided by a judicious use of the fold. He

may also withdraw the sheep from the pastures

when they become restless and refuse to feed.

]n short, a judicious economist, by having folds

properly situated, respecting the circumstances

of shelter, coolness, water, and other conveni-

encies, may avail himself of these for greatly

promoting the health and enjoyment of the ani-

mals, and thus accelerating their feeding ; so

that, independent of the benefits he shall derive

from their dung, he will in other respects reap

considerable emolument.

Dr. Anderson observes that some persons

contend that the pastures ought to be stocked very

lightly ; alleging that although much of the pro-

duce is thus allowed to run to seed,which the beasts will not eat, and which of course is trod under

foot, and rotted by rain, and thus wasted ; yet

experience, they say, proves that a greater profit

will be thus derived from it, upon the whole, on

account of the superior thriving of the animals,

than by any other practice. Others insist that

li^htstocking of grass land is a practice highly to be condemned ; as it tends not only gradually to

diminish its produce, but also to encourage the

growth of coarse and unprofitable grasses, which

deteriorate the pastures ; and that hard stocking

*of grass lands, especially those of a rich quality, * an indispensible requisite of good manage-*

ment. These two opinions, so diametrically op-

posite, and which are equally maintained by

sensible men, he thinks, clearly prove the embar-

rassment to which they are subjected, in conse-

quence of their not having adverted to the cir-

cumstances stated above, and many other parti-

culars, as affecting the economical consumption

of the produce of lands in grass. A third party,

he adds, who approach perhaps nearer to the

txuth than either, advise that a mixed stock should be always kept upon the same field ; and that,

were the consumption of the foul grass produced

by the dung of the animals the only article to be adverted to, it might doubtless be so managed as

to correct this evil. But there are so many cir-

cumstances to be adverted to, that it is not easy

by these means to get them all remedied. In

every field a variety of plants spontaneously

spring up, some of which are disrelished by one

class of animals, while they are eaten by others ;

and some of which, though eaten readily by some

animals at one particular period of their growth,

are rejected by them entirely at another. Thus it

becomes necessary, not only to have a vast

variety of animals in the same pasture, but also a very particular attention is required to augment

or diminish the proportion of some of these

classes of animals, at particular seasons of the

year; otherwise some part of the produce will

M allowed to run to waste, unless it be hard

stocked to such a degree as to retard their thriv-

ing. But, if a great variety of animals be allowed

to go at large in the same pasture, they are never suffered to feed with that tranquillity which is

necessary to ensure thriving in the highest degree.

One class of these wishes to feed, or to play,

while the others would incline to rest. They thus

mutually disturb and tease each other ; and this

inconvenience is greatly augmented if penning

of any sort be attempted. From these considera-

tions the practice of intermixing various kinds of

stock very much together is productive of evils in

many cases greater than those which result from

the waste of food they were intended to prevent.

And though, by hard stocking, the grass will be

kept shorter, and more palatable in general to the

animals who eat it, than if it were allowed to run to a great length, yet as animals which are to be fatted must not only have sweet food, but an

abundant bite at all times, to bring them forward

in a kindly manner, it seems to be nearly impos-

sible to obtain at the same time both these advan-

tages in the practice of pasturage.

Might not these evils, says our author, be

greatly diminished, if not entirely remedied, in

many cases, by having the produce cut by the

scythe, and given to the animals fresh in the

house ; rather than to suffer them to go at large and eat the produce on the field, even under any

system of management whatever ? Many argu-

ments, he thinks, tend to show that this practice

is, in general, highly economical and advantage-

ous. 1. If the consumption of plants be the

object principally attended to, it is pl

benefits will be great ; for experience has clearly

proved that there are many plants which are

greedily consumed by beasts, if cut and given to

them in the house, which never would be touched

by them when growing in the field. Of this na-

ture is the dock, cow-parsley, thistles, nettle-;, and many other plants. Upon what principle it should happen that these plants should be so readily eaten when thus given, while they are totally rejected when in the field, he cannot say ; but that they are thus eaten, without reluctance, even when the animal is not hurtfully hungry, is evident from this circumstance, that tin? beasts often fall greedily to these at the moment they are brought in from the field, even before they have had time to become hungry after they had come in. Fewer plants would be rejected or suffered logo to waste on this plan. 2dly. .Many of even the best kinds of grasses, which when young form the most palatable food for the crea?-tures, if once suffered to get into ear ; are disrelished so much as never to be tasted by them unless to prevent starvation ; and. as, in most pasture fields, many of these grasses get into ear from various causes, all the produce of these plants is inevitably lost to the farmer. But if cut down by the scythe, in proper time, not one of these is ever suffered to get into that nauseating state ; and consequently no waste is sustained.

3dly. But when animals are suffered to go upon the field, many of the plants are trodden under foot by the beasts, and bruised or buried in part of the earth ; in which state they are greatly dis-relished by them, and are suffered to run to waste ; which never would take place were the practice of cutting adopted generally. Lastly. Those few plants which are totally disielished by one class of animals, will not, from this circum-stance, become less acceptable to others, but much the reverse. Food that an animal has breathed upon, for any considerable time, be-

comes unpleasant to other animals of the same class; but not so to those of another species ; it seems indeed thus to acquire for them a higher relish. Even greater defilement by one animal seems to render food more acceptable to others ; for straw, that in its clean state has been rejected by cattle, if employed as litter for horses, ac-quires a relish for cattle that they search for with avidity. Hence the sweeping of the stalls from one animal furnishes a dainty repast for those of another kind ; which can easily be shifted from one to the other, if the plants are consumed

in the house, but which must have been lost in

the field.

If, adds this author, the health and the comfort

of the animal be chiefly adverted to, the balance

«vill be clearly in favor of the cutting system, when compared with that of pasturing. When animals

are exposed to the sun, in the open air, they are not only greatly incommoded on many occasions

by the heat, but also are annoyed by swarms of

flies,gnats, and hornets, particularly by the gad-fly, which drives them into a state of fury, and must

retard their thriving. At other times they are

hurt by chilling blasts, or drenched by cheerless

rain, which renders their situation very unpleas-

ing, and greatly retards their feeding. Under

proper management, in a well constructed stall, all

these evils would be removed, and they would

be kept perpetually in a proper state of coolness,

tranquillity, and ease, so as to make the same

quantity of food go farther than it otherwise could have done in nourishing them. They would also

be prevented from licking up snails, worms, and

other noxious creatures, among their food, which

they are by pasturing apt to do, when they feed

at those times of the day or night when those

creatures crawl abroad. This would be entirely

avoided by cutting the grass at those times of the day when none of these are to be found. Thus lingering diseases might often be avoided, which always retard the thriving, and often prove the destruction of the animal. And by giving an opportunity of administering dry and nourishing food along with the soft and succulent, and by varying the tastes, so as to provoke an appetite, not only the health, but the thriving of the creatures, would be greatly augmented beyond what they could have been in any other way.

But, if manure is to be chiefly attended to, there can be no comparison between the two modes of consumption. This is so greatly in favor of stall-feeding, that it would be idle to spend time in proofs of a proposition that may be considered as self-evident and certain. And lastly, if the quantity of herbage produced from the same field be adverted to, it will be found to be equally in favor of the cutting system. All animals delight more to feed on the young fresh shoots of grass, than those that are older. Hence those patches in a pasture field that happen to have been eaten once bare, in the beginning of the season, are kept very short ever afterwards

throughout the whole of that season, by the crea-

tures delighting to feed upon them in preference

to the parts of the field that have got up to a

greater head ; so that these last are suffered to

remain in a great measure untouched throughout

the season. It is not, brwcver, in general

known, tha! grass, even the leafy parts of it,

when it has attained a certain length, becomes

stationary ; and, though it will retain its verdure for some months in that state, makes no sort of

progress whatever ; whereas, if it had been

cropped down frequently, it would have con-

tinued in a constant state of progress, advancing

with a rapidity in a ereat measure proportioned

to the frequency of its being cropped. For ex-

perimental proofs of this fact, see our author's

Essay on Agriculture and Rural Affairs, Vol. II.

Disquis V.

' I have often,' says he, ' seen lawns around

gentlemen's houses that have been under a course

of continued shaving from time immemorial, that

discovered no symptoms of exhaustion, nor any

sensible diminution of luxuriance or verdure,

though no manures of any sort had ever been

laid upon them. This fact struck him as im-

portant; and he applied for information respect-

ing this particular, to a gardener who had the

charge of very extensive lawns of this sort, be-

longing to a gentleman of large property. He

assured him that, for upwards of thirty years

that he had had the care of the lawns, some

parts of them which had been laid down long

before he knew them, and were' originally, as he

supposed, of a rich quality, had never received

during all that time the smallest quantity of ma-

nure of any sort ; and that the lawn continued

to be equally close in the pile, equally verdant

at all seasons in the year, and required to be as often cut as ever ; and that, in short, he had no reason to apprehend that the quantity of its pro-

*duce had diminished in the smallest degree.**

This seems to our author a strong presumptive

proof that grass land, when once of a rich qua-

lity, may be continued for an indefinite tength

of time under the scythe, without being at all

deteriorated, even when it gets no return of dung.

And as the Doctor has shown that rich grass

land, under pasturage, produces as much dung

as ought to manure each year more than double

its own extent of surface ; it follows that, if the same quantity of grass land will only furnish as

many beasts in the house, as if it were pastured

upon (and it will do much more), there can be

annually obtained from each acre of land kept

under the scythe as much dung as might manure

two acres more, which might be abstracted from

that grass land without deteriorating it. Of

course, if the land be such as that it can admit of being made richer, a dressing of that dung,

now and then returned upon itself, would give

it the richness wanted, without any extraneous

aid. In this point of view, then, it seems to be impossible to deny that rich land, if kept under

the scythe, can never become poorer, if none of

the dung made by the beasts fed upon it be ab-

stracted from it ; but that, on the contrary, it can thus be made to afford a large annual supply of

dung for the purpose of enriching poorer land,

while it still continues to be fertile itself in the same degree. He also remarks, there seems to

be no doubt but that the quality of the grass

must continue to improve while under the scythe,

much more than while under pasturage. Every

person, says he, who has bestowed the smallest

attention to objects of this sort, must have re

marked that the worst kiml of grasses grow most freely upon those parts of rich grass lands that are the most open and spongy in their texture ; and that they are in general much sweetened in the pile where they chance to be much trod upon. Hence the finest grasses on such fields always abound most upon paths which are moderately trod upon ; white clover, and the sweetest grasses, being seen there in abundance, while they are less frequent in the spongy parts of the field. But frequent rolling tends to produce this effect more universally and equally than any kind of treading by beasts.

In confirmation of this, the observations of Mr. Davies, in his Account of the Agriculture of Wiltshire, may be quoted. He says that ‘ the sweetness of the feed depends much more on its being kept close, and eaten as fast as it shoots, than on any peculiar good quality of the grass itself; for there are many downs that, when close fed, appear to be a very sweet pasture, but which, if suffered to run a year or two without a full stock on thorn, will become so coarse that

sheep will almost as soon starve as eat the grass : and even in those parts of the downs, where the

finer and sweeter grasses abound, the soil is fre-

quently so loose and porous, that nothing but

constant treading will prevent them from dying

out, or being choked by the larger and coarser

grasses.' It is farther remarked, by Mr. Davies,

that in consequence of too light stocking, heath,

in some cases, comes in the place of the better

grasses. But, says Dr. Anderson, it is very evi-

dent that all the purposes of hard stocking, that

is, keeping the grass short, and in a continual

slate of vegetation, and consequently sweet, and

preventing the coarser grasses from running up

to stalk and overpowering the others, together

with the consolidating of the ground by treading,

would be obtained with much greater certainty

by the practice of mowing ; while the animals

that consumed the produce could in no case be

subjected to a stint of food, which they neces-

sarily must sometimes be, where reliance is had

upon hard stocking for preventing this evil.

Our able essayist observes that the terms

sweetness of pasture, and sweet kinds of grass,

frequently occur in agricultural writings ; yet it

is doubtful, if ever they have been properly de-

fined. He therefore here attempts to supply this

defect. Those pastures which animals choose

to feed upon in preference to others, and which in general are eaten down close to the ground, are

said to be sweet pastures, he observes, in con-

tradistinction to those where the grass, being

disrelished, is suffered to grow to a greater

length, and often to wither in part, without being

touched ; which are called coarse, or, if tending

to dampness, sour pasture. Without entering

into a disquisition concerning the circumstances

that tend to produce this sweetness, which are

various, he considers that, from whatever cause

it originates, it is a universal rule, that in every case the younger the grass is, the sweeter and

more palatable it will be to beasts of every sort ; and that the same weight of food will go much

farther in nourishing or fattening an animal, if it 1 <• very pleasing to the palate of the animal to ulnch it is given, than if it had been less tooth-

some. For, as a certain quantity of food is re-

quired for the mere sustenance of every animal,

if that quantity be daily administered to it, and

no more, the creature will barely subsist, but

will never return any profit to the farmer. But,

if the beast shall get a greater quantity of food

than this portion which is barely necessary for subsistence, that surplus food then goes to augment the size, and to fatten the animal, and of course yields a profit to the farmer in proportion to its quantity.

As to weeding, the dock-weeder will be" found a useful implement for taking out that mischievous perennial by the roots ; nettles and other weeds may be cut with spades, or mown over ; while some of the rushes and fern are best killed by hoisting the stem. Mosses greatly molest old pastures ; and rich composts, harrowing, and drainage, are often necessary to be applied. The Code of Agriculture says that, ' to keep grass in good condition, a dressing of from thirty to forty cubic yards or cart-loads of compost is required every four years. The application of unmixed putrescent manure will thus' be rendered unnecessary, which ought at least to be avoided, in meadows appropriated for the feeding of dairy cows, from its affecting the quality of the milk.' p. 476.

An eminent agriculturist observes that there seems to be a season, some time during the year,

when grass lands, particularly old turf, should be

eaten very close, not merely for the sake of pre-

venting waste, but also for the purpose of keep-

ing down the coarser kinds of plants, and giving

to the pastures as equal and fine a sward as pos-

sible. The most proper period must partly de-

pend upon the convenience of the grazier ; but it

can hardly be either immediately before the

drought of summer or the frost of winter. Some

time in autumn, when the ardent heat of the

season is over, and when there is still time for a new growth before winter, may be most suitable

for the land itself, and generally also for the

grazier, his fat stock being then mostly disposed

of, or carried to the after grass of mown grounds.

The sweeping of pastures with the scythe may

be employed as a substitute for this close feeding ; the waste and labor of which, however, though

they be but trifling, it does not seem necessary

to incur on rich grazing lands, under correct

management. Under the system of fogging pas-

ture lands, fields in pasture are shut up early in

May, and continued in that state till November

or December, when the farmer's stock is turned

in, and continue to pasture till the May succeed-

ing. Such management, however, can only be advisable on a soil of the driest nature. The chief improvements of which mountainous pastures are susceptible, according to Mr. Loudon, are those of draining and sheltering by plantations. ‘ Some parts might probably be enclosed by strips of plantation between stone walls, or by stone walls alone ; but, as the stock on mountain pastures are generally under the care of a herdsman, the advantages of change of pasture, and alternate eating down and saving or sparing the grass, by keeping out the cattle, are obtainable without the use of fields.’ But, in the words of an able contemporary, ‘ except in regard to those

necessary operations that have been already . noticed — such as the extirpation of weeds and noxious shrubs, clearing away ant and mole-hills, &c., there are few points respecting the management of this kind of land on which some difference of opinion does not prevail. The time of stocking — the number of the animals, and whether all should be of one or of different species — the extent of the enclosures — and the propriety of eating the herbage close, or leaving it always in

a rather abundant state — are all of them ques-

tions which it is scarcely possible to decide in a

satisfactory manner by the application of general

rules.' Mr. Marshal states that, in all cases where fatting cattle or dairy cows make a part of the

stock, and where situation, soil, and water will

permit, every suit of grazing grounds ought to

consist of three compartments. One for head

stock (as cows or fatting cattle) ; one for followers (as rearing and other lean stock) ; and the third

to be shut up to freshen, for the leading stock. —Marshal's Yorkshire, vol. ii. p. 158.

PART III.

OF THE CONVERTIBLE OR ALTERNATE

SYSTEM.

The Board of Agriculture, under the direction

of government, was long engaged in an enquiry

- *into the best means of converting portions of*

grass lands into tillage, without exhausting the

soil, and of returning the same to grass, after a

certain period, in an improved state, or at least

without injury : and, while the author of the sup-

plemental article on Agriculture in the Encyclo-

paedia Britannica thinks the industry of the

Board was ill-directed, much information was

certainly collected by this means. Sir John Sin-

clair is confident that a ‘ much larger proportion of the United Kingdom than is at present so cultivated, might be subject to the alternate system of husbandry, or transferred from grass to tillage, and then restored to grass. Much of the middling sorts of grass lands, from 200 to 400 feet above the level of the sea, is of this description ; and all well-informed husbandmen, and friends to the general prosperity of the country, regret that such lands are left in a state of unproductive pasturage, and excluded from tillage.

There are lands, however, respecting which it seems the general testimony was, that they ought never to be thus broken up ; as strong clays, unfit for barley or turnips ; soft clayey loams, with a clayey or marly sub-soil ; and the deeper valley or river meadows, most of which improve annually while kept under good grazing management. The grass lands of Lincolnshire are instanced as the richest altogether in the kingdom. They let from £l 15s. to £3 per acre, and the value of the produce is from £3 to £lO,per acre, arising from the beef, mutton, and wool, obtained, subject to little variation from the nature of the seasons. The stock maintained per acre on the

best grazing lands surpasses what could be fed

by any arable produce ; it being not uncommon

to feed at the rate of from six to seven sheep in summer, and two sheep in winter. The sheep,

when put on the grass, may weigh from 18 Ibs.

to 20 Ibs. per quarter, and the increase of weight would be at the rate of 4 Ibs. per quarter, or 16

Ibs. per sheep. But suppose in all only 100 Ibs.

at 8d. per pound, that would amount to £3 17s.

lOd. The wool would be worth about two

guineas more, besides the value of the winter

keep ; and the total may be stated at about £7

per acre, got at little expense. Such lands can-

not be better employed. From other causes,

very light land, where sheep are both bred and

fed, must, in part at least, be left as permanent

pasture : and those of the county of Norfolk are

here adduced in proof. Great injury has been

sustained, we are told, by breaking up permanent

pastures on such soils, more especially when

subject to rectorial tithes : lands of an inferior

soil, which kept two sheep on an acre, paying

only vicarial tithes, and rented at 10s. per acre,

since they have been broken up cannot pay, even

without rent, both the tithe of corn and the ex-

pense of cultivation. In general it may be al-

lowed that a farm lets best with a fair proportion

of grass land upon it, which admits of a mixed

management.

Under the following particulars are given, in

the Code of Agriculture, the result of the infor-

mation communicated to the Board : i. e. whe-

ther any previous steps are necessary before

lands in grass are broken up ; the proper mode

of effecting that object ; the course of crops ;

the manure necessary : the system of manage-

ment during the rotation ; the mode of laying

down the land again to grass ; that of sowing the grass-seeds ; and the subsequent management.

1 . If the land be wet, it is said to be advisable to drain it completely, previous to its being

broken up ; as it is not improbable that its being kept in pasture was partly on that account.

Land that long has been in pasture does not re-

quire dung during the first course of crops that

is taken after being broken up ; but the applica-

tion of calcareous manure is always, in suck

cases, expedient. Sometimes lime is spread on

the ground before it is ploughed ; at other times

when it is either under summer fallow, or a

drilled crop of turnips. Marl and chalk also

have been used for the same purpose with great advantage. The land thence derives additional strength and vigor; the succeeding crops are much improved ; the soil is commonly so softened in its texture that it may be ploughed with half the strength that would otherwise be necessary ; and, whenever it is restored to grass, the herbage is abundant.

2. Wherever the soil is not too shallow, or friable, or when the turf cannot soon be rotted, if land is to be broken up from old pasture, paring and burning is the proper system. In this way good tilth is speedily procured ; the damage that might otherwise be sustained by the grub, the wire-worm, and other insects, is avoided, while the soil receives a stimulus which ensures an abundant crop. Where paring and burning, from any circumstance, cannot take place, the land may be trenched or double-ploughed. This is effected by means of two ploughs following each other, the first plough taking off a thin surface of about three inches, and the second going deeper in the same place, covering the surface-sod with fine mould ; both

furrows not exceeding the thickness of the vegetable mould or other good soil. If the land is ploughed with one furrow, the operation ought to be performed before winter, that it may receive the benefit of the succeeding frosts, by which the success of the future operations will not only be promoted, but most of the insects lodged in the soil will be destroyed. When one furrow alone is taken, the best size is four inches and a half deep by eight or nine broad. The strain on horses in ploughing ley land is mostly from the depth.

3. The rotation of crops to be adopted, when grass lands are broken up, must partly depend upon the soil, and partly on the manner in which it is prepared for cultivation. As a general principle, however, it may be laid down, that unless by the course of cropping to be pursued the bad grasses and other plants indigenous in the soil are extirpated, they will, when the land is again laid down to grass, increase and prevail with more rapidity and effect than seeds chosen by the farmer; and the consequence must be, a heavy disappointment to the future

crops of grass, perhaps solely, or at least principally, attributable to a previous defective management. It is necessary, therefore, to enter into details upon this subject. The process of conversion in clayey soils should be commenced with paring and burning, especially where the grub is suspected. The following course may then be adopted: — 1. Rape fed with sheep; 2. Beans; 3. Wheat; 4. Beans; 5. W:heat ; 6. Fallow ; 7. Wheat, sown with grass-seeds. This may seem severe cropping, but is justified by experience when old grass clay land is broken up. If the land has not been pared and burnt, the first crop ought to be either oats or dibbled beans. To do justice to the plan of restoring the land to grass, there ought to be, in all cases, according to the soil, either a naked or turnip fallow, before the sowing of grass-seeds be attempted. But on mellow loamy clay land, consisting of fine old grass pasture, where it is thought necessary or advisable to break up such land, it should be done in detached pieces, so as to suit the convenience of the occupier, and the following course should be adopted: — !. Autumnal ploughing for oats in spring; 2. Fallow

for rape, to be eaten with sheep; 3. Beans; 4. Wheat, sown with clover; 5. Clover; 6. Clover; 7 Wheat; 8. Rape, to be partially eaten, and jioed in spring, and to stand for seed ; and, 9. Wheat with grass-seeds. This is a very profitable rotation, and applicable to the best grazing land in Lincolnshire. As to chalk : Paring and burning is considered in this case to be indispensable as a preparation for turnips, which ought, where manure can be got, to be raised iwo years in succession ; then barley, clover, wheat; and, after one or two additional crops of 'urnips, the land may be laid down with sainfoin to great advantage. Peat : On this soil

;>armg and burning are essentially necessary. Under a judicious system, the greatest and quickest profit is thus secured to the farmer, •Mih advantage to the public, and without in-iury to the landlord. Draining also must not be neglected. The crops to be grown on j«eat soils are, 1. Rape or potatoes; 2. Oats; 3. Tur nips; 4. Oats or wheat; and, 5, Clover, or grass-seeds. A liberal application of lime, where it ‘ can be obtained, is of the greatest service in en-abling such soils to bring corn to its full perfec-tion. In the fens of Thorney, the following course was recommended : — 1. Paring and burn-ing for rape ; 2. Oats; and, 3. Wheat with grass-seeds ; if the land was safe from water, the Lam-mas sort, if not spring wheat. This short cours^, it is contended, preserves the land in heart ; and it afterwards produces abundant crops of grass. But long courses, in such a soil, run the lands to weeds and straw, without quality in the grain. Loam : The courses of crops applicable to this soil are too numerous to be here inserted. If the sward be friable, the following rotation may .be adopted: — 1. Oats; 2. Turnips; 3. Wheat or

barley ; 4. Beans ; 5. Wheat ; 6. Fallow or tur-

nips; 7. Wheat or barley, and grass-seeds. If

the sward be very tough and coarse, instead of

taking oats, it may be pared and burnt for tur-

nips. Sand : On rich and deep sandy soils,

the most valuable crop that can be raised is car-

rots. For inferior sands, turnips, to be eaten on

the ground, then to be laid clown with barley and

grass seeds.

4. According to the improved system of lav-

ing down lands to grass, they ought to be pre-

viously made as clean and fertile as possible.

With that view, all the green crops raised oui;ht

to be consumed upon the ground ; fallow or

fallow crops ought not to be neglected ; an-

whole straw of the corn crops should be con-

verted into manure, and applied to the soil that

produced it. Above all, the mixing of calcareous

matter with the soil, either previous to, or during the course of cropping, is essential ; and nothing

generally improves meadows or pastures more

than lime or marl.

5. It is disputed whether grass-seeds should

be sown with or without corn. In favor of the

first practice, that of uniting the two cro:

is maintained that, where equal pains are taken,

the future crop of grass will succeed equally

well as if they had been sown separately, while the same tilth answers for both. On the other hand

it is observed, that as the land must, in that

case, be put into the best possible order, there

is a risk that the corn crop will grow so luxu-

riantly, as to overpower the grass-seeds, and, at

any rate, will exclude them from the benefit of

the air and the dews. If the season also In

a corn-crop is apt to lodge, and the grass will, in a great measure, be destroyed. On soils mode-

rately fertile, the grasses have a better chance of

succeeding ; but then, it is said, that the land is so much exhausted by producing the corn- crops,

that it seldom proves good grass land afterwards.

In answer to these objections, it has been 01

that where, from the richness of the soil, the

any risk of sowing a full crop of corn, less seed d, even as low as one-third of the usual

quantity ; and that a moderate crop of grain

nurses the young plants of grass, and protects

them from the rays of a hot sun, without pro

ducing any material injury. Where the two

crops are united, barley is the preferable graic.,

except on peat. Barley has a tendency to !•-

the texture of the ground in which it grows, which is favorable to the vegetation of grass-seeds. In the choice of barley, that sort should be preferred which runs least to straw, and which is the soonest ripe. On peat, a crop of oats is to be preferred. The manner of sowing the grass-seeds requires to be particularly attended to. Machines have been invented for that purpose, which answer well, but they are unfortunately too expensive for the generality of fanners. It is said to be a bad system to mix seeds of different plants before sowing them, in order to have the fewer casts. It is better to sow each sort separately, for the expence of going several times over the ground is nothing, compared to the benefit of having each sort equally distributed. The seeds of grasses, being so light, ought never to be sown in a windy day, except by machinery, an equal delivery being a point of great consequence. Wet weather ought likewise to be avoided, as the least degree of poaching is injurious. Grass -seeds ought to be well

harrowed, according to the nature of the soil.

6. When the corn is carried off, the young crop of grass should be but little fed during autumn, and that only in dry weather ; but heavily rolled in the following spring, in order to press the soil home to the roots. It is then to be treated as permanent pasture. By attention to these particulars, the far greater proportion of the meadows and pastures in the kingdom, of an inferior, or even medium quality, may be broken up, not only with safety, but, as we are told, with great profit.

PART IV.

OF THE CULTIVATION OF PLANTS THAT ARE ARTICLES OF COMMERCE.

These in general are such as cannot be used for food ; and are principally flax, hemp, rape, hops, and timber of various kinds.

Ofjiax and hemp. — Flax is cultivated not only with a view to the common purposes of making linen, but for the sake of its seed also ; and thus forms a most extensive article of commerce, all the oil used by painters, at least for common purposes, being extracted from this seed. See FLAX, FLAX-DRESSING, and LINVM. The cake

which remains after ihe extraction of the oil is in some places used as a manure, and in others sold for fattening of cattle. In the vale of Gloucester, Mr. Marshal informs us that it is, next to hay, a main article of stall fatting ; though the price is often great. Hence some individuals have been induced to try the effect of lintseed itself boiled to a jelly, and mixed with flour, bran, or chaff, with good success ; "and even the oil itself has been tried for the same purpose in Herefordshire. Though this plant is in universal culture over the whole kingdom, yet it appears, by the vast quantity imported, that by far too little ground is employed in that way; as Mr. Marshal takes notice of its culture only in Yorkshire, and here, he tells us, its cultivation is confined to a few districts. The kind cultivated is that called ' blea-line,' or the blue or lead colored flax, and this requires a rich dry soil for its cultivation.

A deep, fat, sandy loam is perhaps the only soil on which it can be cultivated with advantage. If sown upon old corn land, it ought to be well cleaned from weeds, and rendered perfectly friable by a summer fallow. Manure is

seldom or ever set on for a line crop ; and the soil process consists generally of a single ploughing. The seed time is May, but much depends on the state of the soil at the time of sowing. ‘ It should neither be wet nor dry ; and the surface ought to be made as fine as that of a garden-bed. Not a clod of the size of an egg should remain unbroken.’ Two bushels of seed are usually sown upon an acre; the surface, after being harrowed, is sometimes raked with garden or hay-rakes ; and the operation would be still more complete if the clods and other obstructions, which cannot be easily removed, were drawn into the interfurrows. A light hand-roller used between the final raking and harrowing would much assist this operation. The chief requisite during the time of vegetation is weeding, which ought to be performed with the utmost care ; and for this reason it is particularly requisite that the ground should be previously cleansed as well as possible, otherwise the expense of weeding becomes too great to be borne, or the crop must be considerably injured. It is an irreparable injury, if, through a dry season, the plants come up in two crops ; or if by accident or misma-

nagement they be too thin. The goodness of the crop depends on its running up with a single stalk without branches ; for wherever it ramifies there the length of the line terminates ; and this ramification is the consequence of its having too much room at the root, or getting above the plants which surround it. The branches are never of any use, being unavoidably worked off in dressing ; and the stem itself, unless it bear a due proportion to the length of the crop, is likewise worked off among the refuse. The ramification of the flax will readily be occasioned by clods on the ground when sown. A second crop is very seldom attended with any profit ; for, being overgrown with ihe spreading plants of the first crop, it remains weak and short, and at pulling time is left to rot upon the land.

Flax is injured not only by drought, but by frost, and is sometimes attacked, even when got five or six inches high, by a small white slug, which strips off the leaves to the top, and the stalks bending with their weight are thus sometimes drawn into the ground. Hence, if the crop does not promise fair at-weeding time, our

author advises not to bestow further labor and expense upon it. A crop of turnips or rape will generally pay much better than such a crop of flax. The time of flax harvest in Yorkshire is generally in the latter end of July, or beginning of August. On the whole, our author remarks, that ‘ the goodness of the crop depends in some measure upon its length; and this upon its evenness and closeness upon the ground. Three feet high is a good length, and the thickness of a crow’s quill a good thickness. A fine stalk affords more fine and fewer shivers than a thick one. A tall thick set crop is therefore desirable. But, unless the land be good, a thick crop cannot attain u sufficient length of stem. Hence the

folly of sowing flax on land which is unfit for it. Nevertheless, with a suitable soil, a sufficiency of seed evenly distributed, and a favorable season, flax may turn out a very profitable crop. The flax crop, however, has its disadvantages ; it interferes with harvest, and is generally believed to be a great exhauster of the soil, espe-

cially when its seed is suffered to ripen. Its cultivation ought therefore to be confined to rich grass-land districts, where harvest is a secondary object, and where its exhaustion may :-e rather favorable than hurtful to succeeding arible crops, by checking the too great rankness of rich fresh broken ground.

In vol. ii. of Bath Papers, a Dorsetshire gentleman, who writes on the culture of hemp and flax, gives an account somewhat different from that of Mr. Marshal. Instead of exhausting crops, he maintains that they are both ameliorating crops if cut without seeding; and, as the best crops of both are raised from foreign, seed, he is of opinion that there is little occasion for raising it in this country. A crop of hemp, he insists, prepares the land for flax, and is therefore clear gain to the farmer. ‘ That these plants impoverish the soil,’ he repeats, ‘ is a mere vulgar notion, devoid of all truth. The best historical relations, and the verbal accounts of honest ingenious planters, concar in declaring it to be a vain prejudice, unsupported by any authority; and that these crops really meliorate and improve the soil.’ He is likewise of opinion that the

growth of hemp and flax is not necessarily con-

fined to rich soils, but that they may be culti-

vated with profit also upon poor sandy ground,

if a little expense be laid out in manuring it.

; Spalding Moor in Lincolnshire is a barren

sand ; and yet with proper care and culture it

produces the best hemp in England, and in large

quantities. In the Isle of Axholme, in the same

county, equal, quantities are produced ; for the

culture and management of it is the principal

employ of the inhabitants; and, according to

Leland, it was so in the reign of Henry VIII.

In Marshland the soil is a clay or strong warp,

thrown up by the river Ouze, and of such a qua-

lity that it cracks with the heat of the sun, till a hand may be put into chinks ; yet, if it be once covered with the hemp or flax before the heats

come on, the ground will not crack that summer.

When the land is sandy, they first sow it with

barley, and the following spring they manure the

stubble with horse or cow dung, and plough it

under. Then they sow their hemp or flax, and

harrow it in with a liˆht harrow, having short

teeth. A good crop destroys all the weeds, and

makes it a fine fallow for flax in the spring. As soon as the flax is pulled, they prepare the

ground for wheat. Lime, marl, and the mud of ponds, is an excellent compost for hemp lands.' Our author takes notice of the vast quantity of flax and hemp, not less than 11,000 tons, imported formerly into Britain ; and complains ilia it is not all raised in the island. He observes that the greater part of those marshy Jands lying to the west of Mendip hills are very {u-oper for the cultivation of hemp and flax ; wad if laid out in this manner could not fail of inR out. highly advantageous both to the landholders and the public at large. ' The vast quantities of hemp and flax,' says he, 'which have been raised on lands of the same kind in Lincolnshire marshes, and the fens of the Isle of Ely and Huntingdonshire, are a full proof of the truth of my assertion. Many hundreds of acres in the above mentioned places, which for pasturage or grazing were not worth more than 20s. or 25s. per acre, hare been readily let at from £-2 to £4.*

Choice of the soil, and preparing the ground.

— A skilful flax-raiser always prefers in Scotland, we are told, a free open deep loam, and all grounds that produced the preceding year a good crop of

turnips, cabbages, potatoes, barley, or broad

clover, or have been formerly laid down rich,

and kept for some years in pasture. A clay soil,

the second or third crop after being limed, will

answer well for tfax ; provided, if the ground be

still stiff, that it be brought to a proper mould,-

by tilling after harvest to expose it to winter

frosts. All new grounds produce a strong crop

of flax, and pretty free of weeds. When many

mole-hills appear upon new ground, ii ;u>\v,.rs

the better for flax after one tilling. The seed

ought never to be sown on grounds that are either

too wet or dry, but on such as retain a natural

moisture ; and such grounds as are inclined to

weeds ought to be avoided, unless prepared by

a careful summer fallow. If the linseed be

sown early, and the flax not allowed to stand for

seed, a crop of turnip may be got after the flax

that very year ; the second year a crop of rye or barley may be taken; and the third year grass

seeds are sometimes sown along with the lint-

seed. This is the method mostly practised in

and about the counties of Lincoln and Somer-

set, where great quantities of flax and hemp are

every year raised, and where these crops have

long been capital articles. There old ploughed

grounds are never sown with linseed, unless the

soil be very rich an'd clean. A certain worm,

called in Scotland the coup worm, abounds in

new ploughed grounds, which greatly hurts every

crop but flax. In small enclosures, surrounded

with trees or high hedges, the flax, for want of

free air, is subject to fall before it is ripe, and the droppings of rain and dew from the trees

prevent the flax within the reach of the trees

from growing to any perfection. Of preceding

crops, potatoes and hemp are the best prepara-

tion for flax. In the fens of Lincoln, upon pro-

per ground of old tillage they sow hemp, dung-

ing well the first year; the second year hemp

without dung; the third year flax without dung;

and that same year a crop of turnip eat on the

ground by sheep ; the fourth year hemp with a

large coat of dung; and so on successively. If

the ground be free and open, it should be but

once ploughed, and that as shallow as possible,

not deeper than two inches and a half. It

should be laid flat, reduced to a fine garden

mould by good harrowing, and all stones and

sods should be carried off. Except a little pi-

geon's dung for cold or sour ground, no other

dung should be used preparatory for flax ; be-

cause it produces too many weeds, and throws

up the flax thin and poor upon the stalk. Ite-

l< >ir sowing, the bulky clod.s should be broken,

or carried ofl' the ground ; and stones, quicken-

ings, and every other thing that may hinder the

growth of the flax, should be carefully taken

away.

Choice of seed. — The brighter in color, and

heavier the seed is, so much the better; that

which, when bruised, appears of a light or yel-

lowish green, and fresh in the heart, oily, and not dry, and smells and tastes sweet, and not fusty,

may be depended upon. Dutch seed of the

preceding year's growth for the most part an-

swers best ; but it seldom succeeds if kept ano-

ther year. It ripens sooner than any other fo-

reign seed. Philadelphia seed produces fine

lint and few bolls, because sown thick, and an-

swers best in wet cold soils. Riga seed pro-

duces coarser lint, and the greatest quantity of

seed. Scotch seed, when well winned and kept

and changed from one kind of soil to another,

sometimes answers pretty well ; but should be

sown thick, as many of its grains are bad, and

fail. It springs well, and its flax is sooner ripe than any other ; but its produce afterwards is

generally inferior to that from foreign seed. A

kind has been lately imported, called Memel

seed ; which looks well, is short and plump, but

seldom grows above eight inches, and on that ac-

count ought not to be sown.

Method of sowing. — The quantity of lintseed

sown should be proportioned to the condition

of the soil ; for if the ground be in good heart, and the seed sown thick, the crop will be in

danger of falling before it is ready for pulling.

In Scotland, from eleven to twelve pecks, Lin-

lithgow measure, of Dutch or Riga seed, is ge-

nerally thought sufficient for one acre ; and about

ten pecks of Philadelphia seed, which, being the

smallest grained, goes farthest. Riga lintseed,

and the next year's produce of it, is preferred in Lincolnshire. The time for sowing lintseed is

from the middle of March to the end of April,

as the ground and season answer ; but the earlier

the seed is sown, the less the crop interferes with the corn-harvest. Late sown lintseed may grow

long, but the flax upon the stalk will be thin and poor. After sowing, the ground ought to be harrowed till the seed is well covered, and then (supposing the soil, as before mentioned, to be free, and reduced to a fine mould) it ought to be rolled. ˆYhen a farmer sows a large quantity of lintseed, he may find it proper to sow a part earlier and part later, that in the future operations of weeding, pulling, watering, and grassing, the work may be the easier and more conveniently gone about. It ought always to be sown on a dry bed.

Weeding. — Flax ought to be weeded when the crop is about four inches long. If longer deferred, the weeders will so much break and bend the stalks that they will never perhaps recover their straightness again ; and, when the flax grows crooked, it is more liable to be hurt in the rippling and swingling. Quicken-grass should not be taken up ; for, being strongly rooted, the pulling of it always loosens a deal of the lint. If there is an appearance of a settled drought, it is better to defer the weeding, than by that operation to expose the tender roots of the flax to the drought. So soon as the weeds

are got out, they ought to be carried off the field, instead of being laid in the furrow, where they

often take root again, and at any rate obstruct

the growth of the flax in the furrows.

For the cultivation, natural history, dressing,

importation, uses, &c., of hemp, see CANKABIS

and HEMP.

We may subjoin in this place a few practical

remarks on rape or cole seed. This, as well as

lintseed, is cultivated for the purpose of making

oil, and will grow almost any where. Mr. Ha-

zard says that in the north of England the

farmers pare and burn their pasture lands, and

then sow them with rape after one ploughing;

the crop commonly standing for seed. Poor

clay, or stone brash land, will often produce

from twelve to sixteen or eighteen bushels per

acre, and almost any fresh or virgin earth will

yield one plentiful crop ; so that many in the

northern counties have been raised, by culti-

vating this seed, from poverty to affluence. The

seed is ripe in July, or the beginning of August;

and the threshing of it out is conducted with the

greatest mirth and jollity. The rape, being fully

ripe, is first cut with sickles, and then lafd thin upon the ground to dry ;

and, when in proper

condition for threshing, the neighbours are in-

vited, who readily contribute their assistance.

The threshing is performed on a large cloth in

the middle of the field, and the seed put into

sacks and carried home. It does not admit of

being carried from the field in the pod, to be

threshed at home, and therefore the operation is

always performed in the field ; and, by the num-

ber of assistants procured on this occasion, a

field of twenty acres is frequently threshed out

in one day. The straw is burnt for the sake of

its alkali, the ashes being said to equal the best kind of those imported from abroad. The pro-

per time for sowing rape is June ; and the land

should, previously to the sowing, be twice well

ploughed. About two pounds of seed are suffi-

cient for an acre; and, according to our author,

it should be cast upon the ground with only the

thumb and two fore-fingers ; for, if it be cast witn all the fingers, it will come up in patches. If

the plants come up too thick, a pair of light har-

rows should be drawn along the field length-ways

and cross-ways, by which means the plants will

be equally thinned ; and, when the plants which

the harrows have pulled up are withered, the ground should be rolled. A few days after, the plants may be set out with a hoe, allowing sixteen or eighteen inches distance betwixt every two plants.

Mr. Hazard strongly recommends the transplanting of rape, having experienced the good effects of it himself. A rood of ground, sown in June, will produce as many plants as are sufficient for ten acres ; which may be planted out upon ground that has previously borne a crop of wheat, provided the wheat be harvested by the middle of August. One ploughing will be sufficient for these plants ; the best of which should be selected from the seed-plot, and planted in rows two feet asunder, and sixteen inches apart in the rows. As rape is an excellent food for sheep, they may be allowed to feed upon it in the spring ; or the leaves might be gathered, and

given to oxen or young cattle : fresh leaves would sprout again from the same stalks, which in like manner might be fed off by ewes and lambs in time enough to plough the land for a crop of

barley and oats. Planting rape in the begin-

ning of July, however, would be most advanta-

geous for the crop itself, as the leaves might then be fed off in the autumn, and new ones would

appear in the spring. Our author discommends

the practice of sowing rape with turnips, as the

crops injure one another. ‘ Those who look for

an immediate profit,’ says he, ‘ will undoubt-

edly cultivate rape for seed ; but perhaps it may

answer better in the end to feed it with sheep :

the fat ones might cull it over first, and after-

wards the lean or store-sheep might follow them,

and be folded thereon : if this is done in autumn

season, the land will be in good heart to carry a crop of wheat ; or, where the rape is fed off in

the spring, a crop of barley might follow. In

either case, rape is profitable to the cultivator ;

and when it is planted, and well earthed round

the stems, it will endure the severest winter ; but the same cannot be advanced in favor of that

which is sown broad cast.’ In the Agricultural

Survey of Kent it is remarked, that this seed

is much cultivated on the poor lands of the

eastern part of that county, under the same man-

agement as turnips. Sometimes, although rarely,

it is sown for seed ; but most, commonly fed off

with lean flocks of sheep. Cattle and sheep, when poor, are however very subject to be destroyed by eating greedily of this plant.

Of coriander, canary, and some other seeds.—Coriander is used in large quantities by distillers, druggists, and confectioners, and might be a considerable object to such farmers as live in the neighbourhood of great towns ; but the price is very variable. In the fourth volume of Bath Papers, Mr. Hartley gives an account of an experiment made on this seed, which proved very successful. Ten perches of good sandy loam were sown with coriander in March. 3 Ibs. of seed were sufficient for this spot ; and the whole expense amounted only to 5s. Wd. The produce was 87 Ibs. of seed, which, valued at 3d., yielded a profit of 15. lid. or £15 18i. 4rf. per acre. He afterwards made several other experiments on a larger scale ; but none of the crops turned out so well, though all of them afforded a good profit.*

Canary seed has been cultivated in large quantities in the Isle of Thanet, where it is said they have had frequently twenty bushels to an acre.

Mr. Hartley sowed half an acre of ground, the

soil a mixture of loam and clay, but had only

eight bushels and a half, or seventeen bushels

per acre. With this produce, however, he had a

profit of £4 2. 3d. per acre.*

In Kent, where this seed is much cultivated,

Mr. Boys says, there are three kinds of tilths for it, viz. summer fallow, bean stubble, and clover

lay ; the last he considers the best. If the land is not very rich, a coat of rotten dung is fre-

quently spread for it. Whether manured or not,

the tillage necessary is to plough the land the

first opportunity that offers after wheat-sowing is

done ; and, as soon as the land is tolerably dry

in the spring, furrows are made about eleven or

twelve inches apart, and the seed is sown broad-

cast, about four or five gallons per acre, and

well harrowed in. When the blade appears, and

the rows are distinct, the intervals are imme-

diately hoed with a Dutch hoe, and afterwards,

in May or June, the hoeing is repeated with a

common hoe : carefully cutting up every weed,

and thinning the plants in the furrows, if they

are too thick. It is cut in the harvest, which is always later than any corn crop, with a hook,

called a twibil and a hink ; by which it is laid

in lumps, or wads, of about half a sheaf of

each. The seed clings remarkably to the husk ; and, to detach it, the crop must be left a long time on the ground to receive moisture sufficient to destroy the texture of the envelopment, otherwise it would be hardly possible to thresh out the seed. The wads are turned from time to time, to have the full benefit of the rains and sun.

Radish seed. — For this crop the land should be clean, full of manure, and ploughed a good depth in the early part of the winter. In Kent they cultivate the early short top, the salmon, and the turnip rooted. The seed is sown on furrows, about ten inches apart : in a dry time in the month of March, about two or three gallons per acre. As soon as the plants appear, every other row is cut up with a horse-hoe, leaving the rows twenty inches apart. When the plants get two or three rough leaves, they are hoed out in rows, and are then kept clean by repeated horse and hand-hoeing when necessary, leaving the plants at about eighteen inches distance. The crop is seldom fit to reap till October, and sometimes is out in the fields till Christmas, without receiving injury from wet

weather : it being necessary that it should have much rain to rot the pods, that it may thresh well. The produce is from eight to twenty-four bushels per acre.

Spinach seed. — Two sorts of this seed are cultivated, the prickly and the round : both are sown in furrows, about twelve or fourteen inches apart ; the prickly, six gallons per acre, and the round four. 1'arly in March, when the plants have leaves about an inch or two in length, they are hoed out to the distance of four or five inches. When the crop is in full bloom, the greater part of the male plants are drawn out by hand, and given profitably to young pigs ; by which operation the female plants have more room to grow, and perfect their seed. The crop, when ripe, is pulled up, and threshed in the field on a cloth, or carried to the barn for that pur-

pose.

Of wood. — The use of woad in dyeing is well known (see ISATIS and WOAD), and the consumption is so great that the raising of the plant might undoubtedly be an object to a husbandman, provided he could get it properly manufactured for the dyers, and could overcome

their prejudices. The growing of this plant was

long in a manner monopolised in particular

places, particularly at Keynsham near Bristol.

Mr. Bartley informs us that, in a conversation

he had with these growers, the latter asserted

that the growth of woad was 'peculiar to their

soil. This is a blackish heavy mould, with a

considerable proportion of clay; but works

freely ; that of Brislington, where Mr. Bartley

resided, was a hazel, sandy loam : nevertheless,

having sowed half an acre of this soil with

woad seed, it throve so well that he never saw

a better crop at Keynsham. Woad grows to the

greatest advantage on a light black rich soil,

which has a southern situation. Land intended

for it should be dunged a year before it is sown

with this plant, and made first to bear a crop of wheat, &c. This being taken off, three deep

stirrings should be given with the plough, the

first in November, and the other two in spring.

It is often sown so early as in the beginning of

April ; but, when it is too cold at that period,

the sowing must be deferred till May. Jn this

climate, however, it is often not sown until some time later.

In some parts of Kent this plant is much cultivated. It is frequently sown on poor, stiff, and oome chalky lands, in the proportion of ten or twelve Ibs. of seed to the acre, and among beans before the last hoeing in the beginning of July.

It requires no culture while growing, unless the land be full of weeds ; in which case the weeds must be drawn out by the hand, or cut up with a narrow hoe. When the plants have produced their bloom up to the top of the stem, they are pulled up, then tied by a single stalk in small handfuls, and set up in a conical form to ripen.

When thoroughly dry, the seed is shaken out on a cloth or into a tub, the plants being then bound with rope-yarn into bundles, each weighing 30 Ibs. : sixty of these bundles make a load of woad, the price of which is generally from £4 to £10.

The Keynsham growers are said to cultivate and prepare it in the best manner.

Of madder. — This is a plant also used by the dyers. See DYEING and RUDIA. It was formerly much cultivated in the eastern part of Kent : ‘ I am firmly persuaded,’ says Mr. Boys.

‘ that good crops of excellent madder may be

raised in Kent, on soils properly adapted for the

purpose ; and that it would be a profitable arti-

cle of culture, if it were never under £3 per cwt., nor would the buyers be injured by a restriction

to this price ; but then the legislature must inter-

fere to prevent the importation of the root from

Holland, where it can be cultivated cheaper.

Perhaps, (said he before the peace,) if that coun-

try should continue unfriendly to us, it might be

good policy to encourage the growth of madder at

home. I have many years been in the habit of

cultivating it ; but, from the low price at market, have been obliged to abandon it. There have

been several modes of planting practised ; but

that which appears the best is to plant it in sin-

gle rows, about two feet apart. The land should

be perfectly clean from weeds, and have been

well manured the preceding year, so that the

dung may be well incorporated with the soil ;

which should be a fine deep, rich, sandy loam,

without any redundancy of moisture. To pre-

pare the land for planting, it should be ploughed

Hi the autumn, to have the benefit of the winter’s frost, and harrowed in dry weather in the spring,

and then kept clean by horse-hoeing, until the

nlanfs are ready for drawing, which is usually by

tiic end of May, or beginning of June: the

proper time is known by the plants having got

to the height of ten or twelve inches from the

ground, and having produced roots branching

out from the bottom of the suckers which will

be perceived by drawing up a few of them.

When the suckers are in this state, all hands

necessary for this work are to be provided, that

the operation may proceed with every possible

despatch. One acre requires about 20,000

plants. The plants should have about one-third

of their tops cut off, and then their roots should be dipt in earth, or fine mould and water beaten

together to the consistence of batter; which

prevents the necessity of watering them. It re-

quires one woman to dip the plants, two to carry

and strew them in handfuls along the furrow,

and about seven to follow the plough. The land

should be ploughed with a strong turnwrest

plough with six horses, twelve or fourteen inches

deep : women attend to lay the plants about

eight or nine inches apart in every other furrow,

leaning off from the plough: by which, every

time the plough returns, the row of plants laid

in by women who follow the plough is covered with the earth of the furrow. The crop must be kept perfectly clean by the hoe and hand weeding during the summer months, and earthed up with the plough each autumn until the third after planting, when the roots are dug up by trenching the land two feet deep ; two children attending each digger, in order to pick out the roots.

The most proper time to take up the roots is when they are about the size of a swan's quill ; they then yield most dye, and are of course most proper for use; but the time when they arrive at this proper state depends not only on the nature of the soil in which they have been planted, but also on the good husbandry that has been bestowed on the land.

For HOPS, see that article.

In Vol. II. of his Annals, Mr. Young informs us, that ' one profit of hop land is that of breaking it up. Mr. Potter grubbed up one garden, which failing, he ploughed and sowed barley, the crop great ; then mazagan beans, two acres of which produced sixteen quarters and five

bushels. He then sowed it with wheat, which produced thirteen quarters and four bushels and a half; but since that time the crops have not been greater than common. The same gentleman has had ten quarters of oats after wheat.' In the ninth volume there is an account of an experiment by Mr. Le Bland of Sittingbourne in Ke'H, of grubbing up twelve acres of hop ground. Part of the hops were grubbed up and mazagan beans sown in their stead ; but the seed being bad, and the summer dry, the crop turned out very indifferent. Next year the remainder of the hops were grubbed up, and the whole twelve acres sown with wheat; but still the crops turned out very bad, owing to the wet summer of that year. It was next planted with potatoes, which turned out well ; and ever since that tune the crops have been good. This gentleman informs us that the person who had the hop ground above mentioned did not lose less by it than .t'1500.

The culture of hups s e n> to be confined in a

great measure to the southern counties of England ; for Mr. Marshal mentions it as a matter of surprise that in Norfolk he saw a ‘ tolerably large hop garden.’ The proprietor informed him that three or four years before there had been ten acres of hops in the parish (Blowfield), where he resided ; which was more than could be collected in all the rest of the county ; but at that time there were not above five ; and the culture was daily declining ; as the crops, owing to the low price of the commodity, did not defray the expense. It is clear enough that hops are the most uncertain and precarious crop on which the husbandman can bestow his labor. Mr. Young is of opinion that some improvement in the culture is necessary ; but he does not mention any, excepting that of planting them in espaliers, a method long since recommended both by Mr. Rogers and Mr. Potter. The former took the hint from observing that a plant which had been blown down, and afterwards shot out horizontally, always produced a greater quantity than those wKich grew upright. He also remarks that hops which are late picked carry

more next year than such as are picked early ; for which reason he recommends the late picking. The only reason for picking early is that the hops appear much more beautiful than the others.

Of the cultivation of apples and pears. — In Herefordshire and Gloucestershire the cultivation of fruit, for the purpose of making a liquor from the juice, forms a principal part of their husbandry. In Devonshire also considerable quantities of this kind of liquor are made, though much less than in these two counties. For the cultivation, curing, and management of fruit trees in general, see HORTICULTURE.

The fruits cultivated in Herefordshire and Gloucestershire are the apple, pear, and cherry. From the two first are made the liquors named cyder and perry. See CYDER and PERRY. Mr. Marshal remarks that nature has furnished only one species of pears and apples, viz. the common crab of the woods and hedges, and the wild pear, which is also pretty common. The varieties of these fruits are entirely artificial, being produced not from seed, but by a certain mode

of culture ; whence it is the business of those who wish to improve fruit to catch at superior accidental varieties ; and, having raised them by cultivation to the highest perfection of which they are capable, to keep them in that state by artificial propagation. Mr. Marshal, however, observes that it is impossible to make varieties of fruit altogether permanent, though their duration depends much upon management. ‘ A time arrives, says he, ‘ when they can no longer be propagated with success. All the old fruits which raised the fame of the liquors of this country are now lost, or so far on the decline as to be deemed irrecoverable. The redstreak is given up; the celebrated stir-apple is going off; and the squash-pear, which has probably furnished this country with more champaign than was ever imported into it, can no longer be got to flourish ; the stocks canker, and are unproductive. In Yorkshire similar circumstances have tukrn place; several old fn ‘:•; which were productive within my own recollection are lostj the stocks cankered, and the trees would no longer come to bear.’ Our author controverts the common notion among orchard men that the

decline of the old fruits is owing to a want of fresh grafts from abroad, particularly from Normandy, whence it is supposed that apples were originally imported into this country. Mr. Marshal, however, thinks that these original kinds have been long since lost, and that the numerous varieties of which we are now possessed were raised from seed in this country. At Ledbury he was shown a Normandy apple-tree, which, with many others of the same kind, had been imported immediately from France. He found it, however, to be no other than the bitter-sweet, which he had seen growing as a neglected wilding in an English hedge.

The process of raising new varieties of apples, Mr. Marshal says, is simple and easy. ' Select among the native species individuals of the highest flavor ; sow the seeds in a highly enriched seed-bed. When new varieties, or the improvement of old ones, are the objects, it may be eligible to use a frame or stove ; but, where the preservation of the ordinary varieties only is wanted, an ordinary loamy soil will be sufficient. At any rate, it ought to be perfectly clean at least from root weeds, and should be double dug from

a foot to eighteen inches deep. The surface being levelled, and raked fine, the seeds ought to be scattered on about an inch asunder, and covered about half an inch deep with some of the finest mould previously raked off the bed for that purpose. During summer the young plants should be kept perfectly free from weeds, and may be taken up for transplantation the ensuing winter ; or, if not very thick in the seed bed, they may remain in it till the second winter. The nursery ground ought also to be enriched, and double dug to the depth of fourteen inches at least; though eighteen or twenty are preferable. The seedling plants ought to be sorted agreeably to the strength of their roots, that they may rise evenly together, the top or downward roots should be taken off, and the longer side rootlets shortened. The young trees should then be planted in rows three feet asunder, and from fifteen to eighteen inches distant in the rows ; taking care not to cramp the roots but to lead them evenly and horizontally among the mould. If they be intended merely for stocks to be grafted, they may remain in this

situation until they are large enough to be planted out ; though, in strict management, they ought

to be re-transplanted two years before their be-

ing transferred into the orchard, ‘ in fresh but

unmanured double-dug ground, a quincunx four

feet apart everyway.’ In this second transplan-

tation, as well as in the first, the branches of the root ought not to be left too long, but to be

shortened in such a manner as to induce them

to form a globular root, sufficiently small to be

removed with the plant ; yet sufficiently large to

. give it firmness and vigor in the plantation.

Having thus proceeded with the seed bed, our

author adds the following directions : — ‘ Select

from among the seedlings the plants \IIOM;

wood and leaves wear the most apple-like ap-

pearance. Transplant these into a rich deep

soil in a genial situation, letting them remain in

this nursery until they begin to bear. With the

seeds of the fairest, richest, and best flavored fruit, repeat this process ; and at the same time, or in

due season, engraft the wood which produced

this fruit on that of the richest, sweetest, best

flavored apple ; repeating this operation, and

transferring the subject under improvement from one tree and sort to another, as richness, flavor, or firmness may require; continuing this double mode of improvement until the desired fruit be obtained. There has, no doubt, been a period when the improvement of the apple and pear was attended to in this country ; and, should not the same spirit of improvement revive, it is probable that the country will, in a course of years, be left destitute of valuable kinds of these two species of fruit ; which, though they may in some degree be deemed objects of luxury, long custom seems to have ranked among the necessaries of life.' ,

In the Bath Papers, Vol. IV., JVIr. Grimwood supposes the degeneracy of apples to be rather imaginary than real. He says that the evil complained of ' is not a real decline in the quality of the fruit, but in the tree ; owing either to want of health, the season, soil, mode of planting, or the stock they are grafted on being too often raised from the seed of apples in the same place or county. I have not a doubt in my own mind, but that the trees which are grafted on the stocks raised from the apple-pips are

more tender than those grafted on the real crab-stock ; and the seasons in this country have, for many years past, been unfavorable for fruits, which add much to the supposed degeneracy of the apple. It is my opinion that, if planters of orchards would procure the trees grafted on real crab-stocks from a distant country, they would find their account in so doing much overbalance the extra expence of charge and carriage.' In the same volume, Mr. Edmund Gillingwater assigns as a reason for the degeneracy of apples the mixture of various farina, from the orchards being too near each other. In consequence of this notion, he also thinks that the oldest and best kinds of apple-trees are not lost, but only corrupted from being planted too near bad neighbours : ' Remove them,' says he, ' to a situation where they are not exposed to this inconvenience, and they will immediately recover their former excellency,'

With regard to the method of cultivating fruit-trees, it is only necessary to add that, while they remain in the nursery, the intervals betwixt them may be occupied by such kitchen-stuff as will not crowd or overshadow the plants ; keeping the

rows in the mean time perfectly free from weeds.

In pruning them, the leader should be particu-

larly attended to. If it shoot double, the weaker

of the contending branches should be taken off";

but if the leader be lost, and not easily recover-

able, the plant should be cut down to within a

hand's breadth of the soil, and a fresh stem

trained. The undermost boughs should be taken

off by degrees, going over the plants every win-

ter ; but taking care to preserve heads of suffi-

cient magnitude not to draw the stems up too

tall, which would make them feeble in the lower

part. The stems in Herefordshire are trained to

six feet high ; but our author prefers seven, or

even half a rood in height. A tall stemmed tree

is much less injurious to what grows below it

than a low headed one, which is itself in danger

of being hurt, at the same time that it hurts the crop under it. The thickness of the stem ought

to be in proportion to its height ; for which rea

son a tall stock ought to remain longer in the

nursery than a low one. The usual size at which

they are planted out in Herefordshire is from four

to six inches girt at three feet high ; which size, with proper management, they will reach in

seven or eight years. The price of these stocks in Herefordshire is eighteen pence each.

In Herefordshire it is common to have the ground of the orchards in tillage, and in Glouces-tershire in grass ; which Mr. Marshal supposes to be owing to the difference betwixt the soil of the two counties; that of Herefordshire bein< (generally arable, and Gloucester grass land.

Trees, however, are very destructive not only to a crop of corn, but to clover and turnips ; though tillage is favorable to fruit trees in general, espe-cially when young. In grass grounds their pro-gress is comparatively slow, for want of the earth being stirred about them, and by being injured by the cattle, especially when low-headed and drooping. After they begin to bear, cattle ought by all means to be kept away from them, as they not only destroy all the fruit within their reach, but the fruit itself is dangerous to the cattle, being apt to stick in their throats and choak them. These inconveniences may be avoided by eating the fruit grounds bare before the gathering season, and keeping the boughs out of the way of the cattle ; but Marshal is of opi-nion that it is wrong to plant orchards in grass

land. ‘ Let them,’ says he, ‘ lay their old

orchards to grass ;• and, if they plant, break up

their young orchards to arable. This will be

changing the course of husbandry, and be at

once beneficial to the land and to the trees.’ Our author complains very much of the indolent and

careless method in which the Herefordshire and

Gloucestershire farmers manage their orchards.

Blight is a term, as applied to fruit trees,

which Mr. Marshal thinks is not understood,

Two bearing years, he remarks, seldom come to-

gether ; and he is of opinion that it is the mere exhausting of the trees by the quantity of fruit

which they have carried one year that prevents

them from bearing any the next. The only thing

therefore that can be done in this case is to keep the trees in as healthy and vigorous a state as

possible. Insects destroy not only the blossoms

and leaves, but some of them also the fruit,

especially pears. Mr. Marshal advises to set a

price upon the female wasps in the spring ; by

which these mischievous insects would perhaps

be exterminated, or at least greatly lessened.

An excess of fruit stints the growth of young

trees, and renders all in general barren for two

or three years ; while in many cases the branches

are broken off by the weight of the fruit ; and in one case Mr. Marshal mentions that an entire

tree had sunk under its burden. To prevent as much as possible the bad effects of an excess of fruit, Mr. Marshal recommends to graft in the boughs, and when fully grown to thin the bearing branches ; thus endeavouring, like the gardener, to grow fruit every year.

Though it is impossible to prevent the effects of old age, yet, by proper management, the natural life of fruit-trees may be considerably protracted. The most eligible method is to graft stocks of the native crab in the boughs. The decline of the tree is preceded by a gradual decline of fruitfulness, which long takes place before the tree manifests any sign of decay. During this decline of fruitfulness there is a certain period when the produce of a tree will no longer pay for the ground it occupies, and beyond this period it ought by no means to be allowed to stand. In the Vale of Gloucester, however, our author saw an instance of some healthy bearing apple trees, which then had the second tops to

the same stems. The former tops, having been

worn out, were cut off, and the stumps saw-

grafted. Our author observes that the pear-tree

is much longer lived than the apple, and ought

never to be planted in the same ground. He

concludes with the following general observation :

- *Thus, considering fruit-trees as a crop in hus-*

bandry, the general management appears to be

this ; plant upon a recently broken up worn out

sward. Keep the soil under a state of arable

management, until the trees be well grown ; then

lay i down to grass, and let it remain in sward*

until the trees be removed, and their roots be

decayed ; when it will again require a course of

arable management.'

Of chei-ries andflberts. — In Kent they prefer

for this fruit a situation where there is a deep

surface of loam upon the rock. But by some it

is said that there is not any necessity for a great depth of soil. In respect to distance apart,

cherry-trees require to be planted according to

their sorts ; a heart requiring double the distance of a duke or mortllo. But, when planted by

themselves, they are generally placed from twenty

to thirty feet distant, and are put somewhat

deeper in the earth than apples ; but in other respects the management is the same.

Cherry wine. — A cooling and pleasant drink is made from the juice of cherries when properly fermented. For making this liquor the cherries should hang upon the trees till they are thoroughly ripe, in order that their juices may be better perfected and enriched by the sun ; and they should be gathered in dry weather. The juice is then pressed out, and a quantity of sugar proportioned to the intended strength of the wine is to be added, and the whole regularly fermented. When the wine is become fine it must be bottled for use.

Filberts are much cultivated in some parts of Kent. The soil best adapted for them is the stone shattery sandy loam of a quality somewhat inferior ; as it is a disadvantage for the trees to grow with great luxuriance, they bearing most nuts when bat moderately strong. If they are planted among hops, without apples or cherries, •hey are put about twelve feet apart ; when the hops are dug up, the filberd plantation is kept clean by repeated dig^ug and hoeing ; and great skill is necessary in pruning to make them

bear well. It is indeed entirely owing to skill

and management in this operation that the trees

are rendered productive upon even a favorite

soil. These trees are generally trained in the

shape ot a punch bowl, and never suffered to

grow above five or six feet high, with short stems, like a gooseberry bush, and exceedingly thin of

wood. If suffered to stand till ripe this fruit will keep good for several years in a dry room or

closet ; but when gathered they should be laid

thin on the floor of a room where the sun can

get in to dry them properly.

Of raising trees for timber and other purposes.

— The importance and value of these is so well

known that it is almost superfluous to say any

thing on that subject : notwithstanding this ac-

knowledged value, however, the growth of timber

is so slow, and the returns for planting so distant, that it is generally supposed for a Ions time to

be a positive loss or at least to be attended witli no profit. This matter, however, when properly

“onsidered, will appear in another light. There

are four distinct species of woodlands, viz. woods,

timber groves, coppices, and woody waste.*

The woods are a collection of timber trees and

underwood ; and the coppices are collections of

underwood alone. All these turn out to advan-

tage sooner or later, according to the quick or

slow growth of the trees, and the situation of the place with respect to certain local advantages.

Thus in some places underwood is of great con-

sequence, for rails, hoops, stakes, fuel, &c. ; and

by reason of its growth it may be accounted the

most profitable of all plantations. An osier-bed

will yield a return of profit the second or third

year, and a coppice in fifteen or twenty years ;

while a plantation of oaks will not arrive at per-

fection in less than a century. This last period

is so long that it may be supposed likely to deter people from making such plantations of this kind,

as few are willing to take any trouble for what

they are never to see in perfection. It must be

remembered, however, that, though the trees

themselves do not come to perfection in a shorter

time, the value of the ground will always increase

in proportion to their age. Mr. Pavier, in the

Bath Papers, vol. iv., compute.; the value of

fifty acres of oak timber in 100 years to be

£12,100, which is nearly fifty shillings annually

per acre; and, as this is continually accumulating

without any of that expense or risk to which

annual crops are subject, planting of timber may be accounted one of the most profitable articles in husbandry. Evelyn calculates the profit of 1000 acres of oak land in 150 years, at no less than £670,000. But it would be improper to occupy with timber of such slow growth the grounds which, either in grass or corn, can repay the trouble of cultivation with a good annual crop. In the Bath papers, vol. iv., Mr. Wagstaffc recommends planting as an auxiliary to cultivation. He brings an. instance cf the success of Sir William Jerringham, who made trial of the most unpromising ground perhaps that any successful planter has hitherto attempted. His

method was to plant beech trees at proper distances among Scotch firs, upon otherwise barren heaths. ‘ These trees,’ says Mr. Wagstaffe, ‘ in a soil perhaps without clay or loam, with the heathy sod trenched into its broken strata of sand or gravel, under the protection of the firs, have laid hold, though slowly, of the soil ; and, accelerated by the superior growth of the firs,

have proportionally risen, until they wanted an enlargement of space for growth when the firs were cut down.' He adds that, when the firs are felled, their roots decay in the ground ; and hus furnish by that decay a new support to the soil on which the beeches grow ; whereby the latter receive an additional vigor, as well as an enlargement of space and freer air; the firs themselves, though cut down before they arrived at their full growth, being also applicable to many valuable purposes.

In the Annals of Agriculture, vol. vi., we find the culture of trees recommended by Mr. Harries; and he informs us that the larch is the quickest grower and the most valuable of all the resinous timber trees ; but, unless there be pretty good room allowed for the branches to stretch out on the lower part of the trunk, it will not arrive at any consi'derable size ; and this observation, he says, holds good of all pyramidal trees. Scotch firs may be planted between them, and pulled out after they begin to obstruct the growth of the larch. Some of these larches he had seen planted about thirty years before,

which, at five feet distance from the ground,

measured from four feet to five feet six inches in circumference. The most barren grounds, he

says, would answer for these trees, but better

soil is required for the oaks. In this paper he

takes notice of the leaves of one of his planta-

tions of oaks having been almost entirely de-

stroyed by insects ; in consequence of which

they did not increase in bulk as usual ; but

another, which had nearly escaped these ravages,

increased at an average one inch in circumfer-

ence. ‘ A tree four feet round,’ says he, ‘ that

has timber twenty feet in length, gains by this

growth a solid foot of timber annually, worth

one shilling at least, and pays five per cent, for standing. It increases more as the tree gets

from five to six feet round. I have in my groves

3000 oaks that pay me one shilling each per

annum, or £150 a year. My poplars have

gained in circumference nearly two inches, and

a Worcester and witch elm as much. I have

lately been informed that the smooth cut of a

holly tree, that measures twenty inches and up-

wards round, is worth to the cabinet makers

2s. 6d. per foot.’

The following table shows the increase of trees in twenty-one years from their first planting. It was taken from the marquis of Lansdowne's plantation, begun in 1765, and the calculation made on the 15th of July 1768. It is about six acres in extent, the soil partly a swampy meadow upon a gravelly bottom. The measures were taken at five feet above the ground ; the small firs having been occasionally drawn for posts and rails, as well as rafters for cottages; and, when peeled of the bark, will stand well for seven years.

	Height r.i Feet.	Circumference in Feet.	Inch.
Lombardy poplar	60 to 80	4	8
Arbeal	50 to 70	4	6

Plane

50 to 60

3

6

Acacia

50 to 60

2

4

Elm .

40 to 60

3

6

Chestnut .

30 to 50

2

9

Weymouth pines

30 to 50

2

5

Cluster ditto

30 to 50

2

5

Scotch fir .

30 to 50

2

10

Spruce ditto

30 to 50

2

2

Larch

50 to 60

3

10

From this table it appears that planting of

timber trees, where the return can be waited

for during the space of twenty years, will un-

doubtedly repay the original profits of planting,

as well as the interest of the money laid out;

which is the better worth the attention of a pro-

prietor of land, that the ground on which they

grow may be supposed good for very little else.

From a comparative table of the growth of oak,

ash, and elm timber, given in the Annals of

Agriculture, vol. ii., it appears that the oak is by much the slowest grower of the three.

With respect to the growth of underwood,

which in some cases is very valuable, it is to be Remarked that, to have an annual fall of it, the

whole quantity of ground, whatever its extent

may be, ought to be divided into annual sowings.

The exact number of sowings must be regulated

by the uses to which it is intended to be put.

Thus, if, as in Surrey, stakes, edders, and hoops

are saleable, there ought to be eight or ten

annual sowings; or if, as in Kent, hop poles are

demanded, fourteen or fifteen will be required ;

and if, as in Yorkshire, rails be wanted, or, as

in Gloucestershire, cordwood be most marketa-

ble, eighteen or t%venty sowings will be necessary

to produce a succession of annual falls. Thus

the business, by being divided, will be rendered

less burdensome; a certain proportion being

every year to be done, a regular set of hands

will, in proper season, be employed ; and, by

beginning upon a small scale, the errors of the

first year will be corrected in the practice of the second, and those of the second in that of the

third. The produce of the intervals will fall

into regular course; and, when the whole is

completed, the falls will follow each other in

regular succession. The greatest objection to

this method of sowing woodlands is the extra-

ordinary trouble in fencing; but this objection

does not hold if the sowings lie at a distance

from one another; on the contrary, if they lie

together, or in plots, the entire plot may be

enclosed at once ; and, if it contain a number of sowings, some subdivisions will be necessary,

and the annual sowing of these subdivisions

may be fenced off with hurdles, or some other

temporary contrivance ; but, if the adjoining

land be kept under the plough, little temporary

fencing will be necessary. But, in raising a

woodland from seeds, it is not only necessary tc

defend the young plants against cattle and sheep

but against hares and rabbits ; so that a close

fence of some kind is absolutely necessary.

With regard to the preparation of the ground

for raising timber, if the soil be of a stiff clayey nature, it should receive a whole year's fallow ;

if light, a crop of turnips may be taken ; but at all events it must be made perfectly clean before

the tree seeds be sown, particularly from peren-

nial root weeds ; as, after the seeds are sown,

the opportunity of performing this necessary

business is in a great measure lost. If the situa-

tion be moist, the soil should be gathered into

wide lands, sufficiently round to let the water

run off 'from the surface, but not high. The

time of sowing is either October or March ; and

the method as follows : — 'The land being in fine

order, and the season favorable, the whole should

be sown with corn or pulse adapted to the season

of sowing; if in autumn, wheat or rye may be

the crop ; but if in spring, beans or oats.

Whichever of these species be adopted, the

quantity of seed ought to be less than usual, to

give a free admission of air, and prevent the

crop from lodging. The 'sowing of the grain

being completed, that of the tree seeds must be

immediately set about. These are to be put

in drills across the land ; acorns and nuts should be dibbled in, but keys and berries scattered in

trenches or drills drawn with the corner of a

hoe, as gardeners sow their pease. The distance

mioht'be a quarter of a statute rod, or four feet

and one inch and a half. A land chain should

be used in setting out the drills, as not being

liable to be lengthened or shortened by the

weather. It is readily divided into roods ; and

the quarters may be easily marked.'

The species of underwood to be sown must be determined by the consumption of it in the neighbourhood. Thus, if stakes, hoops, &c., be in request, the oak, hazel, and ash, are esteemed as underwood. Where charcoal is wanted for iron forges, beech is tbe prevailing underwood. The oak, box, birch, &c., are all in request in different countries, and the choice must be determined by the prevailing demand.

As the keys of the ash sometimes lie two or even three years in the ground, it will be proper to have the places where they are sown distinguished by some particular marks, to prevent them from being disturbed by the plough after harvest ; as a few beans may be scattered along with them, if the crop be oats ; or oats if the crop be beans.

The crop should be reaped, not mown, at harvest time, and be carried off as fast as possible.

Between harvest and winter a pair of furrows should be laid back to back in the middle of each interval, for meliorating the next year's crop, and laying the seedling plants dry; while the stubble of thp unploughed ground on each

side of the drills will keep them warm during

*the winter. The next year's cro*p may be pota-*

toes, cabbages, turnips; or, if the first was

corn, this may be beans ; if the first was beans, this may be wheat drilled. In the spring of the

' third year the drills which rose the first year

must be looked over, and the vacancies filled up

iiom those parts which are thickest; but the

drills of the ash should be let alone till the

fourth year. The whole should afterwards be

looked over from time to time ; and this, with

cultivating the intervals, and keeping the drills

free from weeds, will be all that is necessary

until the tops of the plants begin to appear.

The crops may be continued for several years ;

and, if they only pay for the expenses, they will

still be of considerable advantage, by keeping

the ground stirred, and preserving the plants

from hares and rabbits. Even after the crops

are discontinued, the ground ought still to be

stirred, alternately throwing the mould to the

roots of the plants, and gathering it into a ridge in the middle of the interval. The best method

of doing this is to split the ground at the ap-

proach of winter, to throw it up to the trees on

both sides; this will preserve the roots from

frost ; gather it again in the spring, which will

check the weeds, and give a fresh supply of air;

split again at midsummer, to preserve the plants

from drought; gather, if necessary, in autumn,

and split as before at the approach of winter.

The spring and midsummer ploughings should

be continued as long as a plough can pass be-

tween the plants.

Whenever the oaks intended for timber are in

danger of being drawn up too slender for their

height, it will be necessary to cut off all the

rest at the height of about a hand-breadth above

the ground ; and those designed to stand must

now be planted at about two rods distant from

each other, and as nearly a quincunx as possible.

The second cutting must be determined by the

demand for the underwood ; with this proviso,

that the timber stands be not too mucji crowded

by it ; for, rather than this should be the case, the coppice should be cut, though the wood may not

have reached its proper profitable state. What

is here said of the method of rearing oak trees

in woods is in a great measure applicable to

that of raising other trees in timber groves. The

species most usually raised in these are the ash, elm, beech, larch, spruce fir, Weymouth pine, poplar, willow, alder, chestnut, walnut, and cherry. The three last are used as substitutes for the oak and beech, and these two for the mahogany.

PART V.

OF THE MANAGEMENT OF LIVE STOCK.

As great part of the stock of a husbandman must always consist of cattle, and one of his principal expenses is in the maintenance of them, this part of his business is certainly to be looked upon as important. The cattle belonging to a farm may be divided into two classes, viz. such as are intended for work, and such as are designed for sale. The former are now principally horses. In the second volume of Bath Papers, we have an account of a comparative experiment of the utility of horses and oxen in husbandry, by Mr. Kedington of Bury, in which the preference is decisively given to oxen. He says that when he began the experiment, in 1779, he was almost certain that there was not an ox worked in the whole country : finding, however, the expense of horses very great, he purchased a

single pair of oxen, but found much difficulty in breaking them, as the workmen were so much

prejudiced against them, that they would not take the proper pains. At last he met with a laborer who undertook the task ; and the oxen ‘ soon became as tractable and as handy, both at ploughing and carting, as any horses.’ On this he determined to part with all his cart horses; and when he wrote his letter (1781) he had not a single horse, nor more than six oxen; which inconsiderable number performed, with ease, all the work of his farm (consisting of upwards of luO acres of arable land and sixty of pasture uiid wood), besides the statute duty on the high-ways, timber and corn, carting, harrowing, rolling, and every part of rural business. They are constantly shod ; their harness is the same as that of horses (excepting the necessary alterations for difference of size and shape); they are driven with bridles and bits in their mouths, answering to the same words of the ploughman and carter as horses will do. A*

single man holds the plough, and drives a pair

of oxen with reins: and our author informs us

that they will plough an acre of ground in less

than eight hours, or even in seven. The inter-

vals of a small plantation, in which the trees

are set in rows ten feet asunder, are ploughed

by a single ox with a light plough, and he is

driven by the man who holds it. The oxen go

in a cart either single, or one, -two, or three,

according to the load. Four oxen will draw

eighty bushels of barley or oats in a waggon

with ease ; and, if good of their kind, will travel as fast as horses with the same load. One ox

will draw forty bushels in a light cart, which our author thinks is the best carriage of any. On

the whole, he prefers oxen to horses for the fol-

lowing reasons: — 1. They are kept at much less

expense, never eating meal or torn of any kind.

In winter they are fed with straw, turnips, car-

rots, or cabbages : or, instead of the three last,

they have each a peck of bran per day while

kept constantly at work. In spring they eat

hay ; and, if working harder than usual in seed-

time, they have also bran. When the vetches

are fit for mowing, they get them only in the

stable. After the day's work in summer they

have a small bundle of hay, and stand in the

stable till they cool ; after which they are turned into the pasture. Our author is of opinion that

an ox may be maintained in condition for the

same constant work as a horse for at least £4

less annually. 2. After a horse is seven years

old, his value declines every year ; and when

lame, blind, or very old, he is scarcely worth

any thing : but an ox in any of these situations

may be fatted, and sold for even more than the

first purchase ; and will always be fat sooner

after work than before. 3. Oxen are less liable

to diseases than horses. 4. Horses are often

liable to be spoiled by servants riding them

without their master's knowledge, which is not

the case with oxen. 5. A general use of oxen

would make beef plentiful, and consequently all

other meat ; which would be a national benefit.

Mr. Marshal, in his Rural Economy of the

Midland Counties, also shows the advantage of

employing oxen in preference to horses, from the

mere article of expense, which, according to his

calculation, is enormous on ».he part rf the horses.

VOL. XIX.

He begins with estimating the number of square

miles in England ; and this he supposes to be

30,000 of cultivated ground. Supposing the

work of husbandry to be done by horses only,

and each square mile to Employ twenty horses,

which is about three to 100 acres, the whole

number used throughout Britain would be

600,000 ; from which deducting one-sixth, for the

number of oxen now employed, the number will

be 500,000. Admitting that each horse works

ten years, the number of farm-horses which die

annually are 50,000 ; each of which requires full

four years keep before he is fit for work. .Horses indeed are broken in at three, some at two years

old, but they are, or ought to be, indulged in

keep and work till they are six ; so that the cost of rearing and keeping may be laid at full four

ordinary years. For all this consumption of

vegetable produce he returns the community not

a single article of food, clothing, or commerce ;

even his skin,' for economical purposes, being

barely worth the taking off. By working horses

in husbandry, therefore, ' the community is losing

annually the amount of 200,000 years keep of a

growing horse ; which, at the low estimate of £5

a-year, amounts to a million annually. On the contrary, supposing the business of husbandry to be done solely by cattle, and admitting that oxen may be fatted with the same expenditure of vegetable produce as that which old horses require to fit them for full work, and that instead of 50,000 horses dying, 50,000 oxen, of only fifty-two stone each, are annually slaughtered ; it is evident that a quantity of beef nearly equal to what the city of London consumes would be annually brought into the market ; or 100,000 additional inhabitants might be supplied with one pound of animal food a-day each, without consuming one additional blade of grass.' 'Oxen,' adds Mr. Marshal, ' appear to be perfectly handy, and work, either at plough or cart, in a manner which shows that although horses may be in some cases convenient, and in most cases pleasurable to the driver, they are by no means necessary to husbandry. A convenience used in this country is a moveable harness-house, with a sledge bottom, which is drawn from place to place as occasion may require. Thus no labor is lost either by the oxen or their drivers. In

Yorkshire oxen are still used, though in fewer

numbers than formerly. The Yorkshire plough

was formerly of such an unwieldy construction

that four or six oxen, in yokes, led by two

horses, were absolutely requisite to draw it ; but

the improvements in the construction of the

plough have of late been so great that two bones

are now sufficient for the purpose ; so that, as

Yorkshire has always been famous for its breed

of horses, we are not to wonder at the present

disuse of oxen.' For these and other reasons,

the employment of oxen at all is to Mr. Marshal a convincing argument of their utility as beasts of

draught. The timber carriers still continue to us«

them, even though their employment be solely

upon the road. They find them not only able to

stand working every day, but to bear long hours

better than horses going in the same pasture. An

ox in a good pasture soon fills his belly, and lies down to rest; but a horse can scarcely satisfy

his hunger in a short summer's night. Oxen are

also much superior at a difficult pull to horses.

Horses of draught cost, at four years old, from £•20 to £30 ; they will, with extravagant keep, extraordinary care and attendance, and much good luck, continue to labor eight or ten years, and may then generally be sold for 5s. a-head. if we had no other species of animals adapted to the purposes of draught in the island, cart-horses would be very valuable. But it is evident that, were only a small share of the attention paid to the breeding of draught oxen which is now bestowed on the breeding of cart-horses, animals equally powerful, more active, less costly, equally adapted to the purposes of husbandry if harnessed with equal judgment, less expensive in keep and attendance, much more durable, and infinitely more valuable after 'they have finished their labors, might be produced. A steer, like a colt, ought to be familiarised to harness at two or three years old, but should never be subjected to hard labor until he be five years old ; from which age, until he be fifteeu or twenty, he may be considered as in his prime as a beast of draught. 'An ox,' says Mr. Marshal, 'which I worked several years in Surrey, might, at seventeen or eighteen years of age, have challenged, for

strength, agility, and sagacity, the best bred cart-

horse in the kingdom.'

Of horses, and the methods of breeding, rearing,

and feeding them. — The midland counties of

England have for some time been celebrated on

account of their breed of the black cart-horse ;

though Mr. Marshal is of opinion that this kind

are unprofitable as beasts of draught in husban-

dry. The present improvement in the breed took

its rise from six Zealand mares sent over by the

late lord Chesterfield during his embassy at the

Hague. These mares being lodged at his lord-

ship's seal at Bretby in Derbyshire, the breed of

horses thus became improved in that county, and

for some time it took the lead for the species of these animals. As the improved breed passed

into Leicestershire, however, through some un-

known circumstances, it became still more im-

proved ; and Leicester has for some time taken

the lead. It is now found, however, that the

very large horses formerly bred in this district

are much less useful than such as are of a smaller size. Mr. Marshal describes in lofty terms one

of these large horses, a stallion belonging to Mr.

Bakewell, which, he says, was the handsomest

horse he ever saw. ‘ He was,’ says he, ‘ the fancied war-horse of the German painters ; who, in the luxuriance of imagination, never perhaps excelled the natural grandeur of this horse. A man of moderate size seemed to shrink behind his fore end, which rose so perfectly upright, that his ears stood (as Mr. Bakewell says every

horse's ears ought to stand) perpendicularly

over his fore feet. It may be said, with little

latitude, that in grandeur and symmetry of form,

viewed as a picturable object, he exceeded as far

the horse which this superior breeder had the

honor of showing to his majesty, and which was

afterwards shown publicly at London, as that

horse does the meanest of the breed.' A more useful horse, l>m! aUo by Mr. Bakewell, however, is

described as having ' a thick carra-e, his back

short and straight, and his legs short and clean : as strong as an ox, yet active as a poney ; equally suitable for a cart or a lighter carnage.'

The stallions in this country are bred either by

farmers or by persons whose business it is to

breed them, and who therefore have the name of

breeders. See EQUUS and HORSE. These last

either cover with them, or let them out to others

for the season, or sell them. The prices given

for them are from fifty to 200 guineas by pur-

chase; from forty to eighty or 100 by the season ; or from half a guinea to two guineas by the mare.

Mr. Marshal owns that this breed of horses are a

profitable species of live stock, and, as far as

there is a market for six-years-old-horses of this

breed, it is profitable to agriculture. ' But,' says he, ' viewing agriculture in general, not one oc-

cupier in ten can partake of the profit ; and, being kept in agriculture after they have reached that

profitable age, they become indisputably one of

its heaviest burdens. Even the brood mare,

after they have passed that age, may, unless they

be of a very superior quality, be deemed un-

profitable to the farmer.'

.Mr. Marshal complains that the ancient breed

of Norfolk horses is almost entirely worn out.

They were small, brown muzzled, and light boned,

but they could endure very heavy work, with little

food : two of them were quite equal to the plough in the soil of that county, which is not deep. The present breed is produced by a cross with a large

one of Lincolnshire and Leicestershire already

mentioned. He approves of the Suffolk breed,

which, he says, are a ' half-horse, half-hog race

of animals, but better adapted to the Norfolk

husbandry than the Leicestershire breed ;' their

principal fault, in his opinion, is a flatness of the rib. In the Vale of Gloucester most farmers

rear their own plough horses. They are of a very

useful kind, the color mostly black, inclinable to

tan color, short and thick in the barrel, and low

on their legs. The price of a six-year-old horse

*from £2*5 to £35. Some cart horses are bred in*

Cotswold hills ; the mares are worked till the

time of foaling, but not while they suckle ; and

the foals are weaned early, while there is plenty

of grain upon the ground. Yorkshire, which has

been long celebrated for its breed of horses, still stands foremost in that respect among the Kni;-

lish counties. It is chiefly remarkable for the

breed of saddle horses, which cannot be reared in

Norfolk, though many attempts have been made

for that purpose. Yorkshire stallions are often

sent into Norfolk; but, though the foals may I .,

handsome when young, they lose their beautv

when old. In Yorkshire, on the other hand,

though the foal be everso unpromising, it acquire-;

beauty, strength, and activity as it grows up.

Mr. Marshal supposes that from 5000 to 10,OOO

horses are annually bred up between the eastern

Morelands and the Humber. In the breeding of

horses he complains greatly of the negligence of

the Yorkshire people, the mares beini: almost

totally neglected ; though in the brute creation

almost every tiling depends upon the female.

With regard to the general maintenance of In

our author recommends the Norfolk manage-

ment of horses as the cheapest method of feeding

them practised an> where. In winter, when little

work is to be done, their only rack-meat is barley-straw ; a reserve of clover-hay being usually made against the hurry of seed-time. A bushel of corn in the most busy season is computed to be an ample allowance for each horse, and in more leisure times a much less quantity suffices. Oats and sometimes barley, when the latter is cheap and unsaleable, are given ; but in this case the barley is generally malted, i. e. steeped and afterwards spread abroad for a few days, until it begin to vegetate, when it is given to the horses, and is supposed to be less heating than in its natural state. Chaff is universally mixed with hoise corn; the great quantities of corn grown in this country afford in general a sufficiency of natural chaff; the chaff, or rather the awns of barley, which in some places are thrown as useless to the dunghill, are here in good esteem as provender. This method of keeping horses, which Mr. Marshal approves of in the Norfolk farmers, is practised, and probably has been so from time immemorial, in many places of the north of Scotland ; and is found abundantly suf-

ficient to enable them to go through the labor required. In summer they are in Norfolk kept out all night, generally in clover leys ; and in summer their keep is generally clover only, a few tares excepted.

In the Annals of Agriculture, vol. iv., Mr. Young gives an account of the expenses of keeping horses ; which, notwithstanding the vast numbers kept in the island, seem still to be very indeterminate, as the informations he received varied no less than on his own farm of the expense of horses kept from £8 to £25 a year. From accounts kept for no other purpose than that of agriculture he stated the average of the whole at £ll 12$. 3d. On the discordant accounts he received, Mr. Young observes that many of the extra expenses depend on the extravagance of the servants ; while some of the apparent savings depend either on their carelessness, or stealing provender from their beasts privately. He concludes, however, that ‘ the more exactly the expense of horses is examined into, the more advantageous will the use of oxen be found.’ Every day’s experience convinces me

more and more of this. If horses kept for use alone, and not for show, have proved thus expensive to me, what must be the expense to those farmers who make their fat sleek teams an object of vanity ? It is easier conceived than calculated.'

Notwithstanding all these strong arguments, urged by Mr. Young, Mr. Henry Harper, an eminent Lancashire farmer, in a comparative view of the expense of the purchase and keep of three horses and three oxen for one year, makes a balance of £44 Os. 6d. in favor of horses. But in the calculation he states 49s. per week, or £127 8s. a year, for gain by his horse team.

The Suffolk punch is a very useful animal for labor, according to Culley. ' Their color is mostly yellowish or sorrel, with a white ratch or blaze on their faces; the head large, ears wide, muzzle coarse, fore-end low, back long but very straight, sides flat, shoulders too far forward, hind quarters middling but rather high about the laps, lei;s round and short in the pasterns, deep-bellied and full in the flank. Here, perhaps, lies much of the merit of these horses ; for we

know, from observation and experience, that all deep-bellied horses carry their food long, and consequently are enabled to stand longer and harder days' works. However, certain it is that these horses do perform surprising days' works. It is well known that the Suffolk and Norfolk farmers plough more land in a day than any other people in the island ; and these are the kind of horses every where used in those districts.' — Culley on Live Stock, p. 27.

Another horse in high repute for labor with the farmers in Scotland, and the north of England, is the Clydesdale: it is probably equal, says Mr. Cleghorn, to any other breed in Britain

Of the breeding and rearing of cattle. — These are reared for two different purposes, viz. for work, and for slaughter. For the former purpose Mr Marshal remarks that it is necessary to procure a breed without horns. This he thinks would be no disadvantage, as horn, though formerly an article of some request, is now of very little value. The horns are useless to cattle in their domestic state, though nature has bestowed them upon them as weapons of defence in their

wild state ; and our author is of opinion that it

would be quite practicable to produce a hornless

breed of black cattle as well as of sheep, which

last has been done by attention and persever-

ance; and there are now many hornless breeds

of sheep in Britain. Nay, he insists that there

are already three or four breeds of hornless cattle in the island ; and that there are many kinds of

which numbers of individuals are hornless, and

from these, by proper care and attention a breed

might be formed. The first. step is to select fe-

males ; and, having observed their imperfections,

to endeavour to correct them by a well chosen

male.

The other properties of a perfect breed of

black cattle for the purposes of the dairy as well as others, according to Mr. Marshal, are as fol-

lows : — 1. The head small and clean, to lessen

the quantity of offal. 2. The neck thin and

clean, to lighten the fore end as well as to lessen the collar and make it sit close and easy to the

animal in work. 3. The carcase large, the chest

deep, and the bosom broad, with the ribs stand-

ing out full from the spine ; to give strength of

frame and constitution, and to admit of the in-

testines being lodged within the ribs. 4. The

shoulders should be light of bone, and rounded

off at the lower point, that the collar may be

easy, but broad to give strength ; and well co-

vered with flesh for the greater ease of draught,

as well as to furnish a desired point in fatting

cattle. 5. The back ought to be wide and level

throughout ; the quarters long ; the thighs thin,

and standing narrow at the round bone ; the ud-

der large when full, but thin and loose when

empty, to hold the greater quantity of milk; with

large dug veins to fill it, and long elastic teats for drawing it off with greater ease. 6. The legs,

below the knee and hock, straight, and of a

middle length ; their bones, in general, light and

clean from fleshiness, but with the joints and

sinews of a moderate size, for the purposes of

strength and activity. 7. The flesh ought to be

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mellow in the state of fleshiness, ami firm in the state of fatness. 8. The hide mellow and of a

middle thickness.

As the milk of cows is an article of great im-

portance, it is an object to the husbandman, if

possible, to prevent the waste of that useful fluid which in the common way of rearing calves is

unavoidable. A method of bringing up these

young animals at less expense is proposed by the

duke of Northumberland. His plan is to make

skimmed milk answer the purpose of that which

is newly drawn from the teat ; and which, he

supposes, might answer the purpose at one-third

of the expense of new milk. The articles to be

added to the skimmed milk are treacle and the

common linseed oil cake, ground very fine, and

almost to an impalpable powder : the quantities

of each being so small that to make thirty-two

gallons would cost only sixpence, besides the

skimmed milk. It mixes very readily, and al-

most intimately, with the milk, making it more

rich and mucilaginous, without giving it any

disagreeable taste. The recipe for making it is

as follows : — Take one gallon of skimmed milk,

and to about a pint of it add half an ounce of

treacle, stirring it until it is well mixed; then

take one ounce of linseed oil cake finely pulver-

ised, and with the hand let it fall gradually in

very small quantities into the milk, stirring it in the mean time with a spoon or ladle until it be

;horoughly incorporated; then let the mixture be put into the other part of the milk, and the whole be made nearly as warm as new milk when it is first taken from the cow, and in that state it is fit for use. The quantity of the oil-cake powder may be increased as occasion requires, and as the calf becomes inured to its flavor.

On this subject Mr. Young remarks that, in rearing calves, there are two objects of great importance. 1. To bring them up without any milk at all ; and, 2. To make skimmed milk answer the purpose of such as is newly milked or sucked from the cow. In consequence of premiums offered by the London Society, many attempts have been made to accomplish these desirable purposes ; and Mr. Budel, of Wanborough in Surrey, was rewarded for an account of his method. This was to give the calves a gruel made of ground barley and oats. But Mr. Young, who tried this method with two calves, assures us that both of them died. When in Ireland he had an opportunity of purchasing calves at three days old from Is. 8d. to 3s. each ; by which he was led to repeat the experiment

many times over. This he did in different ways, having collected various recipes. In consequence of these he tried hay tea, bean meal mixed with wheat flow, barley and oats ground nearly but not exactly in Mr. Budel's method ; but the principal one was flax seed boiled into a jelly, and mixed with warm water : this being recommended more than all the rest. The result of all these trials was that, out of thirty calves, only three or four were reared ; these few were brought up with barley and oatmeal, and a very small quantity of flax seed jelly : one only excepted, which at the desire of his coachman was brought up on a mixture of two-thirds of skimmed milk and one-third of water, with a smalt addition of flax seed jelly well dissolved. The second object, namely, that of improving skimmed milk, accord-ing to the plan of the duke of Northumberland, seems to be the more practicable of the two. Mr. Young informs- us that it has answered well with him for two seasons ; and two farmers to whom he communicated it gave likewise a favorable report.

In vol. iii. of the same work we are informed

that the Cornwall farmers use the following me-

thod in rearing their calves: — 'They are taken

from the cow from the fourth to the sixth da\ ;

after which they have raw milk from six to u-n

or fourteen days. After this they feed them

with scalded skimmed milk and gruel made of

shelled oats, from three quarts to four being given in the morning, and the same in the evening.

The common family broth is thought to be better

than the gruel. The proportion of gruel or

broth is about one-third of the milk given

themr A little fine hay is set before them, which

they soon begin to eat.'

In vol. v. of Bath Papers, we have an account

by Mr. Crook of a remarkably successful expe-

riment in rearing calves without milk at all.

This gentleman, in 1787, weaned seventeen

calves; in 1788, twenty-three; and in 1789

fifteen. In 1787 he bought three sacks of lin-

seed, value £2 5s. which lasted the whole three

years. One quart of it was put to six quarts of

water ; which, by boiling ten minutes, was rt-

duced to a jelly ; the calves were fed with this

mixed with a small quantity of tea made by

steeping the best hay in boiling water. By the

use of this food three times a day, he says that

his calves throve better than those of his neigh-

bours which were reared with milk. — These un-

natural kinds of food, however, are In many

cases apt to produce a looseness, which in the eml proves fatal to the calves. In Cornwall fhey re-

medy this sometimes by giving acorns as an

astringent ; sometimes by a cordial of which

opium is the basis. In Norfolk the calves are

reared with milk and turnips ; sometimes with

oats and bran mixed among the latter. Winter

calves are allowed more milk than summer ones;

but they are universally allowed new milk, or

even to suck.

According to Parkinson there seem to be two

distinct kinds of Welsh cattle. 'The large sort

are of a brown color, with some white on the rump and shoulders,denoting a cross from the long horns,

though in shape not the least resembling them.

They are long in the legs, stand high according

to their weight, are thin in the thigh, and rather narrow in the chine ; their horns are white and

turned upwards; they are light in flesh, and,

next to the Devons, well formed for the yoke;

have very good hoofs, and walk light and nimble.

The other sort is much more valuable; color

black, with very little white ; of a good useful

form, short in the leg, with round deep bodies ;

the hide is rather riiin, with short hair ; they have a likely look and a good eye ; and the bones,

though not very small, are neither large nor

clumsy ; and the cows are considered good

milkers.' (Parkinson on Live Stock, vol. i. p

135).

Aldrrney cattle are much prized in England

for the sake of their milk, which is rich, and not always small in quantity. The race is consider-

ed by competent judges as too delicate and ten-

der to be propagated to any extent in Britain.

Their color is mostly yellow, light red, or dark

dun, with white or mottled faces; they have

short horns, are small in size, and often ill shap-

ed ; yet are they fine in bone ; and their beef,

though high colored, is welf flavored. Mr.

Culley says he has seen some very useful

cattle bred from a cross between an Alderney

cow and a short horned bull. See Bos.

' Whatever be the breed,' says Mr. Culley, ' I

presume that, to arrive at excellence, there is

one form or shape essential to all, which form I

shall attempt to give in the following description

of a bull.

‘ The head of the bull should be rather long,

and muzzle fine; his eyes lively and prominent;

his ears long and thin ; his horns white ; his

neck rising with a gentle curve from the shoulders, and small and fine where it joins the head ; his

shoulders moderately broad at the top, joining

full to his chine and chest backwards, and to the

neck-vane forwards ; his bosom open ; breast

broad, and projecting well before his legs ; his

arms or fore thighs muscular, and tapering to

his knee ; his legs straight, clean, and very fine boned ; his chine and chest so full as to leave

no hollow behind the shoulders ; the plates

strong to keep his belly from sinking below the

level of his breast; his back or loin broad,

straight, and flat ; his ribs rising above one another, in such a manner that the last rib shall be rather the highest, leaving only a small space to the

hips or hooks, the whole forming a round or bar-

rel-like carcase ; his hips should be wide placed,

round or globular, and a little higher than the

back ; the quarters (from the hip to the rump)

long, and, instead of being square, as recom-

mended by some, they should taper gradually

from the hips backward, and the turls or pott-

bones not in the least protuberant ; rumps close

to the tail ; the tail broad, well haired, and

set on so high as to be in the same horizontal

line with his back.' (Culley on Live Stock,

38.)

Oftkfep. — According to Culley there are four-

teen different breeds of sheep in Great Britain,

a"l of them readily distinguishable by their horns,

or by being hornless, by the color of their faces

and legs, and by the length and quality of their

wool. Parkinson (on Live Stock, vol. i. p. 249)

enumerates no fewer than thirty-seven breeds.

' Perhaps,' says the article Agriculture, Supple-

ment to Encyclopaedia Britannica, ' the most eli-

gible mode of classification would be, to consi-

der separately those races which are best adapt-

ed to enclosed arable land ; those which occupy

green hills, downs, and other tracts of moderate

elevation ; and, finally, such as inhabit the higher hills, and mountains. On the first description of

land every sort of practicable improvement may

be effected, though there the carcase has hitherto

been the chief object ; on the second, the carcase

is smaller but the wool generally finer, — and it

is probably with such sheep that the greatest

improvements ought to be attempted on the

fleece ; and, on the last division, the breeds are necessarily small and hardy, and, in regard to

form and general properties, still almost in a

state of nature. The improvement of sheep

must mainly depend on the circumstances of

every district, in regard to the food and shelter

it affords them ; and it is only where these in-

dispensable requisites are abundantly provided

by nature, or by human industry, that the most

skilful management can be successful.

Culley gives, as in the case of cattle, his iJeaof the best general form of the male : — ‘ His head,’

he says, of the ram, ‘ should be fine and small,

his nostrils wide and expanded, his eyes pro-

minent, and rather bold or daring, ears thin, his

collar full from his breast and shoulders, but ta-

pering gradually all the way to where the neck

and head join, which should be very fine and

graceful, being perfectly free from any coarse

leather hanging down ; the shoulders broad and

full, which must at the same time join so easy to the collar forward, and chine backward, as to

leave not the least hollow in either place ; the

mutton upon his arm, or fore-thigh, must come

quite to the knee ; his legs upright, with a clean fine bone, being equally clear from superfluous

skin and coarse hairy wool from the knee and

hough downwards ; the breast broad and well

forward, which will keep his fore-legs at a pro-

per wideness ; his girth or chest full and deep,

and, instead of a hollow behind the shoulders,

that part by some called the fore-flank should be

quite full; the back and loins broad, flat, and

straight, from which the ribs must rise with a

fine circular arch ; his belly straight, the quarters long and full, with the mutton quite down to the

hough, which should neither stand in nor out;

his twist deep, wide, and full, which, with the

broad breast, will keep his four legs open and

upright; the whole body covered with a thin

pelt, and that with fine, bright, soft wool. The

nearer any breed of sheep comes up to the above

description, the nearer they approach towards

excellence of form.'

This kind of stock is highly advantageous to

the farmer in various points of view : as supply-

ing food and clothing, and as a means of im-

proving the farm. See Ovis, SHEEP, and WOOL.

The sheep of different counties excel in these

different properties, and in some parts they have been much improved by crossing the breeds.

Kent, in his Survey of Norfolk, observes, that there ought always to be some affinity or similitude between the animals which are crossed. It is, says he, a manifest incongruity to match a Norfolk and a Leicester sheep ; or a Norfolk and a South Down ; or any long-woolled sheep with a short -woolled ; but a Leicestershire sheep may be matched, with some degree of propriety witli a Cottswold ; and a South Down sheep with a Berkshire or a Herefordshire Ryland.

In the Survey of Staffordshire Mr. Pitt says, the Wiltshires crossed by a heavy ram have produced sheep, at little more than two years old, of forty pounds per quarter, and which have been sold to the butcher at £3 10s. each. The Dorsetshire breed, which are well made and compact, have often answered well, and are, in the opinion of some experienced farmers, equal

to any other breed. The fact is, that any breed of sheep, if sound and healthy, may be enlarged

and improved by good keeping, and by crossing with rams selected with attention.

The best sheep for fine wool are said to be those bred in Herefordshire and Worcestershire ; but they are small and black faced, and consequently bear but a small quantity. Warwick, Leicester, Buckingham, and Northamptonshire, breed a large-boned sheep, of the best shape, and deepest wool. The marshes of Lincolnshire also breed a very large kind of sheep, but their wool is not good. The northern counties in general breed sheep with long, but hairy wool ; and Wales breeds a small hardy kind of sheep, which has the best tasted flesh, but the worst wool of all. The farmer, according to some writers, should always buy his sheep from a worse land than his own, and they should be big-boned, and have long greasy wool curling close and well. These sheep always breed the finest wool, and are also the most approved of by the butcher.

E'itt, in his Survey of Staffordshire, tells us, in that populous manufacturing county the considerable demand for lamb, as well as mutton, induced a great proportion of farmers to keep none

other than an annual stock of sheep, consisting of ewes bought in at Michaelmas from Cannock Heath, Sutton Coldfield, the common of Shropshire, and sometimes even from Gloucestershire, Wiltshire, and Dorsetshire. These ewes being immediately put to a ram, the lambs in spring are suckled till they are fit for the butcher ; they are then sold, and the ewes kept in good pasture, fatted and sold after them, and the whole stock generally cleared off within the year: the lambs and wool generally pay the original purchase of the ewe, and sometimes more ; and the price of the fat ewe remains for keeping and profit. He observes that the rams of Mr. Fowler, a celebrated breeder of this kind of stock, are stout, broad-backed, wide on the rump, and well made, with fine wool to the very breech ; the largest of them would, he believes, fatten to more than thirty pounds the quarter ; and the smallest would be considerably above twenty pounds. Great attention has been paid for several years past to improving this breed both in wool and carcasses. But Mr. Fowler himself thinks the breed is now pushed rather too far in bulk and weight, for the pasturage of the common, or even of the neigh-

bourhood, unless they are driven into better

land for fatting. But he is clearly of opinion

that pushing or increasing the size or bulk of

sheep by improving their pasturage, or removing

i Item to a better pasture, does not at all tend to injure the staple, or degenerate the fineness of

clothing wool, provided due attention be paid to

selecting the tinest-woolled rams. The Leices-

tershire breeds, he says, are of two kinds, the

old and the new. The old Leicesters are large,

thick, heavy sheep, with long combing wool ; the.

new Leicester breed is a refinement upon the

old, by crossing with a finer-boned and a finer-

woolled ram. These are now established in

various parts of Staffordshire, and increasing in

oilier places. The old Leicester breeds are cross-

ing with the new, which bids fair to produce a

very good breed ; there being many instances

in which the old breed were become too coarse,

and the new too fine. The stock of Mr. Dyott,

of Freeford near Litchfield, a gentleman who has

attended much to this subject, is closely bred

from the new Leicester breed, by rams for many

years procured from the best breeds. His farm-

ing is to the extent of 800 acres or more; and

the main object sheep. His stock of breeding ewes is 2(30, and he never sells a lamb, which upon the avenxyje rearing is about 300. lie informed our author that his annual sales from sheep and wool amounted upon an average to £650, that his sheer hogs or yearling wethers generally go to the butcher at two guineas each ; and the culls of this age make 35s. each ; and by keeping to February he has sometimes sold them at 50s. each, under two years old. He has several times killed sheep kept to a greater age, that have weighed forty pounds per quarter. Mr. Pitt says that there are some other flocks, such as those of lord Bagot's tenants, and particularly some lately belonging to Mr. Harvev, his lordship's steward, that deserve attention. This breed is gaining ground fast, and is supposed by many to be the best pasture sheep-flock in the kingdom. The superiority consists in this, that the pastures may be stocked much harder with these than any other stock of equal weight : as they are always fat, even when suckling lambs. The ewes, full grown, will weigh from twenty to twenty-five pounds per quarter ;*

wethers at two years old about the same ; but when kept another year they rise to thirty pounds per quarter. The fleeces weigh from seven to ten pounds. These sheep he describes to be fine and light in the bone ; thick and plump in the carcase ; broad across the loin, with the back bone not rising into a ridge, but sinking in a nick, and a double chine of mutton rising on either side ; fine and clean in the neck and shoulder ; not too short in the leg ; and of a sufficient bulk in the carcase to rise to the weight above-mentioned.

In Norfolk, those who keep ewe flocks, Mr. Kent observes, find them answer extremely well ; for, besides the fleece and manure, the average price of the lambs is 12s. Those who buy the wether lambs with a view of bringing them up for fatting stock, after keeping them eighteen or nineteen months, generally sell them at an average of 30s., which is a very handsome profit.

Mr. Boys informs us that the management of sheep in the different parts of Kent is as follows : — In the eastern part the flock farmers buy in lambs at Romney fair the 20th August, at from 12s. to 14s. each ; and when they have kept them

two yeacs they either sell them lean to the fatting grazier, or fatten them themselves on turnips and

pea or bean straw. Oats, and cullings of garden

beans, are sometimes given to finish them in tho

spring. When these two yearling sheep are sold

in autumn to the graziers, the price is from 2 l.v.

to 28s. each ; and when made fat they product-

from 34s. to 42s. according to their size and fat-

ness. Hut these prices have lately considerabl)

advanced. The few sheep bred in the marshes

are of the same sort, except some small parcels

of Dorsetshire and South Down cwos. But al>

most the whole of the sheep kept on the upland

farms of East Kent are the true Romney marsh

bi oed ; whose carcases and bones being large,

and wool long and heavy, they require rich land

and good keep to make them fat. Mr. Boys

keeps no other than South Down sheep, and has

every reason to be satisfied with them : his flock is about 1000, 400 of which are breeding ewes.

In the isle of Sheppey the sheep are of the

Romney marsh sort, true Rents. The soil being

much inferior to Romney marsh, the sheep are

somewhat smaller ; and, from the same cause, their wool is lighter and finer. The wethers are fattened at three years old, then weighing from twenty to twenty-four pounds per quarter. The sheep mostly kept in the district of West Kent are the South Down sort, bought in wether lambs at the autumnal fairs on the Downs, October 2nd. The usual practice with the lambs in the Romney marshes is that of sending them, about the beginning of September, to be kept by the neighbouring upland -or hill farmers during the winter. They go in separate lots, being received at certain appointed places by the farmers, and driven to the houses or taken to the farms by their servants. They are then commonly put upon the stubbles or grattons, as they are called ; but in some cases they have also pastures to run upon, though too little attention is, in general, paid to the changing of them ; by which they suffer much, and are ofbn greatly injured, especially such as are weakly and delicate. It is found that there is a prodigious benefit in keeping the lambs in winter, in such situations, in having the grounds dry and warm,

instead of being of a cold, wet, clayey nature.

Lambs should by no means be stocked along with the ewes, as the old sheep will constantly take the feed, and stench the land, by which the lambs may be greatly hurt. They should always be stocked separately, and the pastures be frequently changed, circumstances which are little regarded here. Some think that lambs do not thrive well on being put to grass, after having been fed on luxuriant food, such as turnips, old tares, rye-grass, &c. The price of the keeping of lambs in these cases is very different ; some paying only 3s. 6d. the lamb, while others pay 5s. ; and where no neat stock are kept they charge as high as from 6s. to 6s. 6d. the head, for the space of about six months. This is but a late advance; however it makes the price of keep a serious object. The loss of lambs in this system of winter management is occasionally considerable, but depends much on the nature of the season, as to mildness or severity, amounting in some cases to four or more in TOO.

The tegs, or one-year old lambs, in this system are brought from the uplands, where they have been wintered too often in a low state of condition, for the supply of the marsh graziers,

which enables them to keep more ewes and fat-

tening sheep on the marsh lands. This is done

about the beginning of April, when the upland

farmers are indulged with a feast or treat at the

expense of the graziers, as a recompense for their

care and attention to the lambs, in which libe-

rality has a great effect. As the flocks reach the

marsh, they are put into the poorest pastures, at

'he rate ot five to the acre, their old sheep being just sold to make room for them. Tlu.se are

commonly the best conditioned tegs, in which

there may sometimes be loss from the sudden

transition from poor to too good keep, though

they are not, in general, so subject to some sorts of disease as the old ones, on such changes being

made in their food. The marsh sheep-graziers

have lately been much in the practice of prevail-

ing on the farmers to keep such flocks a fort-

night, or even douhle that time, on turnips,

which has the advantage of enabling them to

double the stock on the same pastures during

the summer; while, on the other hand, it is evi-

dent that, when they are so hard stocked early in

the spring, they can neither have so luxuriant a

growth nor be so full of grass. The pastures

are likewise eased gradually, as the fat ewes or wethers are taken off, and their places supplied by the wether-tegs, while the ewe-tegs are suffered to remain on their original pastures until they are selected, or set for going to the rams. The wether tegs in the autumn are removed to the fatting, and the ewe-tegs to the breeding grounds, among the two and three yearling ewes. The wethers remain till July or August following, when, as they become fat, they are drawn out and sold to the butchers at the marsh markets, or sent to Smithfield. The two-yearling wethers, when fat, at this season weigh from twenty to twenty-eight pounds per quarter ; and some of the largest and best fed a few pounds more. The old ewes, there called barrens, are put to fattening as soon as their milk is dried after the third lamb, which is at the age of four years, on some of the best lands ; where they are placed, from two to three per acre, for the winter. These, in favorable winters, are sometimes made fat, and sold in the spring. The practice of fattening sheep on turnips, assisted by oil cake, corn, hay, saintfoin, &c., is greatly in use among the upland farmers of this county ; not so much for the

profit by feeding with those articles, as for the

great improvement of the soil where the turnips

are fed off. The manure from sheep fed on oil

cake and turnips is reckoned very enriching to

the land. A great number of fold flocks of lean

sheep are kept by the farmers in the east part of the county, of from eight to twenty score. These

are each attended by a shepherd, who removes

the fold every morning to fresh ground, at six

o'clock in summer, and at break of day in win-

ter : the flock is then driven away to the most

inferior keep at the first part of the morning, and is returned into the fold for two or three hours

in the middle of the day, while the shepherd

goes to dinner ; in the afternoon it is gradually

led to the best keep in the farm, that the sheep

may return full fed to the fold in the evening.

Great caution is necessary in feeding sheep on

clover in summer, and on turnips in the first part of winter.

Mr. Robertson has insetted the following ac-

count of feeding ewes with early lambs in his

Survey of Mid Lothian, as stated by an accurate

observer. The number in all was sixty ; fed off

in four weeks the expense was £12. Thus each

lamb cost 4s. The expense of twenty fed five

weeks was £5 12s. 6d., or 5s. 7%d. each lamb : —

‘ Feeding on grass takes six weeks to feed off.

*The average rent of good grass may be £2 pe**

acre, which will feed off four ewes with lambs.

He considers six weeks from the middle of April,

the usual time of laying on, to be full one-half

of the value of the grass for that season ; hence the lambs cost 5s. each in that time. In turnip

feeding sheep, by flaking them on the field,

twenty sheep eat an acre in fourteen weeks. If

they be led off to a grass field, ten score will

tathe or dung an acre in seven days, worth £2

lOs. As to feeding in the house, he finds the

dung worth the trouble of carting, and the value

of the straw it takes for litter, lie finds also the lambs fed on grains not only sooner ready, but

more white and firm in the flesh ; the ewes are

also in better condition. He likewise found that,

at times, to mix a little salt among the grains

was of great service ; but it was necessary to

avoid, above all things, giving them grains when

sour, or old kept; and of importance also to feed

them regularly, and to give them fresh clean

litter every day.' A sheep will consume about twenty pounds of turnips in twenty-four hours, if it he allowed as many as it can eat, which should always be allowed to fat sheep ; but, as sheep vary in size, so they will consume more or less food.

The Teeswater breed of sheep is said to be the largest in Great Britain ; is at present the most prevalent in the fine fertile lands on the banks of the Tees in Yorkshire ; and supposed to be from the same stock as those of the Lincolns. It is a breed only calculated for warm rich pastures, where they are kept in small lots enclosed, and well supported with food in severe winters. The produce in mutton is large, but, from their requiring so much longer time and richer keep, and being admitted in so much smaller proportions on the acre, they are not, upon the whole, so profitable, perliaps, as the smaller more quick-feeding breeds. In the ewes there is, however, according to Culley, a property which is of much consequence, which is, that in general they are very prolific, bringing two and frequently three lambs, and in some cases a greater number each. Hegiresthe following description of the breed : —

The legs are longer, finer boned, and support a thicker and more firm and heavy carcase than the Lincolnshires ; the sheep are much wider on the backs and sides, and a fatter and finer-grained mutton. The weight per quarter in two-years old wethers is from twenty-five pounds to thirty-five pounds, and in particular instances to fifty-five pounds or more. The wool is shorter and less heayy than in that breed.

In the Corrected Report of the West Riding, of Yorkshire, Mr. Parkinson supposes that a useful kind is capable of being bred by crossing the ewes of this sort with Dishley rams. ‘ It is added that by the use of these, and those of the Northumberland kind, the quality of the wool and the mutton has not only been greatly improved, but the quantity of bone and offal much lessened ; and, at the same time, the fattening property considerably increased : they becoming fatter ai two years old than the others are at three. The wethers of this improved sort generally sell, unshorn, at two years old, from 45. to 55s. a piece, and weigh from twenty-four to thirty pounds the quarter.*

The Lincolnshire breed is characterised by their

having no horns ; white faces; lonsr, thin, weak carcases ; thick, rough, white ;egs ; bones large; pelts thick; slow feeding; mutton coarse grained ; the weight per quarter in ewes from fourteen pounds to twenty pounds; in three-year old wethers from twenty pounds to thirty pounds ; the wool from ten to eighteen inches in length. And it is chiefly prevalent in the district which gives the name, and other rich grazing ones. The writer of the work on Live Stock supposes that this breed is now so generally improved by new Leicester tups, that they are probably, in a ˆreat measure, free from those defects of the old breed of which Mr. Culley, with much reason, complained, namely, slow feeding, from a looseness of form, and too much bone, and coarse-grained flesh. It must not, however, be denied, that a good old Lincoln has ever been, and the name, at least, still continues a great favorite at Smithfield. The new or improved Lincolns have finer bone, with broader loins and trussed carcases, and are among the best, if not actually the best, long-woolled stock we have. The New Leicester, or Dishley, is an improved breed of sheep, readily distinguished from the

other long-woolled sons, according to Culley, by

having fine lively eyes; clean heads, without

horns; straight, broad, flat backs; round or

barrel-shaped bodies ; fine small bones ; thin

pelU; and a disposition to make fat at an early

age ; to which maybe added a superiority in the

fineness of the grain and the flavor of ihe mutton to that of other sheep of the large long-woolled

kinds. The weight per quarter in ewes three or

four years old from eighteen pounds to twenty-

six pounds ; in two-year old wethers, from

twenty pounds to thirty pounds; the length of

wool from six to fourteen inches. The author of

the Treatise on Live Stock characterises them as

having a fulness of form and substantial width

of carcase, with a peculiar plainness and meek-

ness of countenance ; the head long, tiiin, and

leaning backward ; the nose projecting forward :

the ears somewhat lone, and standing backward,

great fulness of the fore-quarters ; legs of mode-

rate length, and ihe finest bone; tail small;

fleece well covering the body, of the shortest and

finest of the combing wools, the length of staple

six or seven inches. The fore-flank, a term of

the old school, current in the time of Lisle, or

that flap of skin and fat appended to the ribs,

and the inferior part of the shoulder, is remark-

ably capacious in this breed. New Leicester

mutton, it is believed, is the most finely grained

of all the large lonsj-woolled species, but of a

flavor bordering on the insipid. And it is added,

that it is reported, and with the strongest pro-

bability, from the appearance of the stock, the

fineness of the wool, and the grain of the mutton, that a Ryeland cross was a prime instrument in

the Dishley improvement of sheep. Probably

the root or foundation was Lincoln. In the

ordinary and gradual course of improvement

or alteration of form, it must have taken, it is

thought, a long time and vast pains, to mould the

animals into that artificial and peculiar shape

which distinguishes this remarkable variety.

The author of the Treatise on Cattle sa> s, the

pure Dishley sheep are by no means the most

prolific, nor the best nurses ; and adds that, the

heads of the improvers having had time to cool,

it is no longer boasted that new Leicester sheep

are able to subsist, and even thrive, on the

shortest commons. In fine, it is contended, the merits of tliis stock as an improving cross (their grand point of utility), being so undeniably great, their disadvantages have been overlooked : and, lurther, that though the Dishley cross has made its way into every part of this island, to the land's End, to the bottoms of the Welsh mountains, and of the Scottish Highlands, to Ireland, and even to Russia, its general success has been attended with various particular instances of failure, a remarkable oneof which is given by lordSomerville, in his Facts, in respect to the Bampton or Western long-woolled sheep. The cross is sometimes very injudiciously used with short or carding wool stock, excepting where the intention is only forward lamb. On stock naturally good and improveable this peculiar effect of the new Leicester cross has resulted : the improved have considerably surpassed, in the most valuable properties, their improvers. Of this many examples may be seen, it is supposed, in the improved Lincoln, Northumberland, and Midland county sheep. It has been stated by lord Somerville that all the breeds of sheep in this kingdom may

be arranged into two classes ; those which shear

die short or clothing, and those which shear the

long or combing wool. And that the quality of

the flesh in each class follows the character of the wool, the short-woolled sheep being close in the

grain as to flesh, consequently heavy in the scale, and high flavored as to the taste ; the polled

Iniio-woolled sheep more open and loose in the

grain, and larger in size. We have as above de-

scribed the three chief long-woolled varieties,

and must refer to our article SHEEP for further

observations on this valuable animal and its

habits.

Of the rearing and fattening of hogs. — The

practice of keeping these animals is so general,

especially in England, that one should think the

profit attending it would be absolutely indis-

putable ; and this the more especially when it is

considered how little nicety they have in their

choice of food. From such experiments, how-

ever, as have been made, the matter appears to

be very doubtful. In the Annals of Agriculture,

vol. i., we have an experiment by Mr. Mure, of

feeding hogs with the cluster potatoe and carrots ; by which it appeared that the profit on large

hogs was much greater than on small ones ; the

latter eating almost as much as the former, with-

out yielding a proportionable increase of flesh.

The gain was counted by weighing the large and

small ones alive; and it was found that from

November 10th to January 5th they had gained

in the following proportion: twenty large hogs

£l 3s. 6d. ; twenty small 7s. Qd. ; two stag

hogs, £l 17s. 8rf. On being finished with pease,

however, it appeared that there was not any real

profit at last ; for the accounts stood ultimately

at par ; the expense being £95, and the product

being exactly the same.

In some experiments by Mr. Young, related

in the same volume, he succeeded still worse, not

being able to clear his expenses. His first expe-

riment was attended with a loss of a guinea

per hog; the second with the loss of 11s. 3d. ;

the third of 3s. In the'se three the hogs were

fed with pease ; given whole in the two first, but ground into meal in the last. The fourth experi-

ment, in which the hog was fed with Jerusalem

artichokes, was attended with no loss ; but ano-

ther, in which pease were again tried, was at-

tended with a loss of 4s. Barley was tried,

ground along with pease and beans ; this was

attended with a profit of 17s. 4|d. In another

experiment in which the hogs were fed with

pease and barley ground, the beans being omitted

as useless, there was a profit of 12s. 3d. upon an expense of £20 15s. 9d. In this experiment the

pease and barley meal were mixed into a liquid

like cream, and allowed to remain in that state

for three weeks, till it became sour. This was

attended in two other instances with profit, and

in a third with loss : however, Mr. Young is or

opinion that the practice will still be found ad-

vantageous, on account of the quantity of dung

raised, and that the farmer can thus use his pease and barley at home, without carrying them to

market.

Mr. Marshal remarks that, in the midland

district, oats are preferred to barley as a food

both for young pigs and breeding swine. It is

also supposed that young pigs require warm

meat to make them grow quickly. Barley meal

and potatoes are used in fattening them. In

this district it is common to keep two or three

*pigs in the sty along with the*old hogs to be*

fatted.

In Staffordshire, Mr. Pitt says, the breed of

hogs most esteemed is not the large slouched-

eared breed, but a cross between them and a

smaller dwarf breed. They should be fine in the

bone, thick and plump in the carcase, with a fine

thin hide, and of a moderate size; large enough

to fat, at from one to two years old, to the

weight of from 300 Ibs. to 400 Ibs. each. These,

if well bred, will keep themselves in good plight

with little feeding, and will soon grow fat with a plentiful allowance of proper food. Hogˆ of

the large breed have been fatted there, to from

600 Ibs. to 800 Ibs. each, exclusive of the en-

trails; but, requiring much time and food, have

pretty generally given way to a smaller-sized,

finer-boned, thick, plump, animal. Hogs are

generally fatted there by farmers with the refuse

of the dairy, boiled potatoes, and barley meal,

and pease either whole or ground : by millers

with the husk or bran of wheat ground down,

but not wholly divested of its flour ; also with

other sorts of grain and pulse ground down ; by

butchers with the refuse or offal of slaughtered

animals. The best way of managing the pota-

toes is to boil them in their own steam, and put

them afterwards into a large oven when the bread

is drawn, to evaporate the watery parts : they will then go nearly as far as chestnuts or acorns in feeding.

In Lancashire Mr. Holt observes, that Mr. Eccleston has a breed between the wild boar and the Chinese, which have very light and small bellies. Upon the same food, he thinks, they will yield onefourth more flesh than either the large

Irish or Shropshire breeds. Their size is but small, weighing only from ten to fifteen score, generally about twelve score.

In Kent a great number of pigs are reared and fed on the corn stubbles for the butchers, which are killed in autumn for roasting, at the age of three or four months, then weighing three or four score pounds each. Some are also fattened and killed at from six to twelve months old, and sold.

In the west part of this district, a few farmers hare the lamer kind, or Berkshire breed ; but in general they are mixtures of many different sorts. Little attention, says Mr. Boys, is paid to this animal, though the breed might doubtless be very

much improved with proper care. Many hogs, says he, are likewise kept in the woods of the Weald of Kent in the autumn, on acorns, and fattened on corn in the winter.

Pigs, Mr. Holt says, should, during their growth, be regularly turned out to graze. This, besides the advantageof grass, which is nutritious, by the fresh air and exercise causes a disposition to take their rest; and sleep after a meal contributes to their cleanliness, and renders their flesh of superior flavor. Mr. Young has inserted a number of experiments on feeding hogs in the Transactions of the London Society of Arts ; and, on the whole, prefers pollard and skimmed milk, as the best feeding; and, next to these, boiled carrots and potatoes.

Of rabbits. — In particular situations these animals may be kept to advantage, as they multiply exceedingly, and require no trouble in bringing up. A considerable number of them are kept in Norfolk, where many parts, consisting of barren hills or heaths, are proper for their reception. They delight in the sides of sandy hills, which are generally unproductive when

tilled ; but level ground is improper for them.

Mr. Marshal is of opinion that there are few

sandy or other loose soiled hills which would not

pay better in rabbit warrens than any thing else.

‘ The hide of a bullock,’ says he, ‘ is not worth more than one-twentieth of 1iis carcase ; the skin

of a sheep may, in full wool, be worth from a

sixth to a tenth part of his carcase ; but the fur of a rabbit is worth twice the whole value of the carcase ; therefore, supposing a rabbit to consume

a quantity of food in proportion to its carcase, it is, on this principle, a species of stock nearly

three times as valuable as either cattle or sheep.’

Rabbit warrens ought to be enclosed with a stone

or sod wall ; and, at their first stocking, it will be necessary to form burrows to them until they have

time to make them for themselves. Boring the

ground horizontally with a large auger is perhaps

the best method that can be practised. Eagles,

kites, and other birds of prey, as well as cats,

weasels, and polecats, are great enemies of rab-

bits. The Norfolk warreners catch the birds by

traps placed on the tops of stumps of trees or

artificial hillocks of a conical form, on which they naturally alight. Traps also seem to be the only

method of getting rid of the other enemies,

though thus the rabbits themselves are in danger

of being caught.

Rabbits are subject to two diseases: — 1. The rot, occasioned by too much green food, or giving it to them fresh gathered, with dew or rain upon it. The cure is the sweetest hay that can be got. 2. A kind of madness, which is known by their tumbling about, with their heels upwards. The cause is full feeding ; the cure, keeping them low, and giving them tare thistle. One buck rabbit will serve nine does.

Of poultry. — Under this head are comprehended a variety of birds, which are objects of attention to the farmer. 1. fowls. — The farm yard cannot be said to be complete until well stocked with fowls ; the advantage of which is most considerable in situations where the farmer is best supplied with grain, and has the best means of preserving the birds. In choosing this kind of stock, prefer the best breeders and the best layers ; the oldest being the best sitters, and the youngest the best layers ; but no sort will be good for either, if they are kept too fat. The best age to set a hen for chickens is two years old, and the best month is February ; though any month between that and Michaelmas is good. Hens sit twenty-one days, during which they should constantly have meat and drink near them,

that they may not straggle from their eggs, and chill them. If fowls are fed with buck or French wheat, or with hemp seed, they will lay more eggs than ordinary ; and buck-wheat, either whole or ground, made into paste, will fatten fowls very speedily ; but the common food used is barley-meal, with milk or water; but wheat flour moistened is the best. A good hen should be working, vigilant, and laborious, both for herself and her chickens, and the larger the better. The elder hens are rather to be chosen for hatching than the younger, because they are more constant, and will sit out their time ; but, if chosen for laying, take the youngest. Those eggs that are laid when the hens are a year and a half or two years old are the best ; at that time give the hens plenty of victuals, and sometimes oats, with fenugreek to heat them, if you would have large eggs.

In setting hens, take care that the eggs be new, which may be known by their being heavy, full, and clear. While sitting, a hen should never be disturbed from her nest, lest she forsake it. A hen-house should be large and spacious, with a pretty high roof and strong walls, to keep out

thieves and vermin ; there should likewise be

windows on the east side, for the benefit of the

rising sun ; and round about the inside of the

walls, upon the ground, should be made large

pens, three feet high, for geese, ducks, and large

fowls to sit in ; and near the covering of the

house long perches, reaching from one side to the

other, should be fixed, on which cocks, hens, ca-

pons, and turkeys, may sit. At another side of

the house, at the darkest part of the ground pens, fix hampers full of straw, for nests, for the hens to lay their eggs ; but, when they sit to hatch

chickens, they should be on the ground '. there

should likewise be stakes stuck in the walls, that

the poultry may climb to their perches with ease ;

and the floor should not be paved, but made of

earth smooth and easy. The smaller fowls should

also have a hole at one end of the house to go in and out when they please, else they will seek out

roosts in other places. It would likewise be

of "great advantage to have the hen-noun-, si-

tuated near some kitchen, brew-house, bake-

house, or kiln, where it may have the heat of the

fire, and be perfumed with smoke, which is very

grateful to pullets.

To fatten chickens, put them into coops, and

feed them "with barley-meal ; put a small quan-

tity of brick dust into their water, which will

give them an appetite and fatten them very soon ;

for all fowls and birds have two stomachs, the one is their crop, that softens their food, and the other the gizzard, that macerates their food ; in the last we always find small stones and sharp sand,

which help to do that office.

2. The duck, a native of Great Britain, is

found on the edges of all quiet waters through-

out Europe. In breeding, one drake is generally

put to five ducks ; the duck will cover from

eleven to fifteen eggs, and her term of incuba-

tion is thirty days. They begin to lay in Fe-

bruary, are very prolific, and are apt, like the

turkey, to lay abroad, and conceal their eggs, by

covering them with leaves or straw. The duck

generally lays by night, or early in the morning;

white and light-colored ducks produce similar

eggs, and the brown and dark-colored ducks

those of a greenish blue color, and of the largest size. In setting ducks, it is considered safest to

put light-colored eggs under light ducks, and the

contrary; as there are instances of the duck

turning out with her bill those eggs which were

not of her natural color. During incubation, the duck requires a secret and safe place, rather than any attendance, and, will, at nature's call, cover her eggs, and seek her food, and the refreshment of the waters. On hatching, there is not often a necessity for taking away any of the brood, barring accidents; and having hatched, let the duck retain her young upon the nest her own time. On her moving with their brood, prepare a coop upon the short grass, if the weather be fine, or under a shelter, if otherwise: a wide and flat dish of water, often to be renewed, standing at hand ; barley, or any meal, the first food. In rainy weather, particularly, it is useful to clip the tails of the ducklings, and the surrounding down beneath, since they are else apt to draggle and weaken themselves. The duck should be cooped at a distance from any other. The period of her confinement to the coop depends on the weather and the strength of the ducklings. A fortnight seems the longest time necessary ; and they may be sometimes permitted to enjoy the pond at the end of a week, but not for too great a length at once, least of all in cold wet weather, which will affect, and cause them to scour and appear rough and

draggled. In such case they must be kept within a while, and have an allowance of bean or pea-meal mixed with their ordinary food. The meal of buck-wheat and the former is then proper. The straw beneath the duck should be often renewed, that the brood may have a dry and comfortable bed ; and the mother herself be well fed with solid corn, without an ample allowance of which ducks are not to be reared or kept in perfection, although they gather so much abroad. Duck eggs are often hatched by hens. The fattening of ducks at any age is very easy ; whether it be the duckling or the grown 4uck, the method is the same. They are to be put in a quiet dark place, and kept in a pen, where they are to have plenty of corn and water; any, kind of corn will do ; and with this single direction they will fatten extremely well in fifteen or twenty days.

3. Geese are advantageous both for food, feathers, and grease. They will live upon commons, or any sort of pasture, and need little care and attendance ; only they should have plenty of water. The largest geese are reckoned the best ;

but there is a sort of Spanish geese that are muˆ

better layers and breeders than the English, es-

pecially if their eggs be hatched under an Eng-

lish goose. Geese in general lay in spring, the

earlier the better, because of their price and of

their having a second brood. They commonly

lay twelve or sixteen eggs each. One may know

•when they will lay by their carrying straw in

their mouths, and when they will sit by their

continuing on their nest after they have laid. A

goose sits thirty days, but if the weather be fair and warm she will hatch three or four days

sooner. After the goslings are hatched, some

keep them in the house ten or twelve days, and

feed them with curds, barley meal, bran, Sec.

After they have got some strength, let them out

three or four hours a-day, and take them in again, till they are big enough to defend themselves.

For fattening green geese, they should be shut

up when they are about a month old, and they

will be fat in about a month longer. The fatting

of older geese is commonly done when they are

about six months old, in or after harvest, when

they have been in the stubble fields, from which

food some kill them ; but those who wish to have

them very fat shut them up two or three weeks,

and feed them with oats, split beans, barley meal,

or ground malt mixed with milk. Geese will

likewise fatten well with carrots cut small.

4. Turkeys prosper very well in open coun-

tries, where there is not much shelter to harbour

vermin to destroy them, as they are naturally in-

clined to ramble. The hens are so negligent of

their young, that, while they have one to follow

them, they never look after the rest; and there-

fore care must be taken while they are young to

watch them, and to keep them warm, as they

cannot bear the cold. When kept with corn,

they are very great feeders ; but, if left to their liberty when grown up, they will get their own

living, without trouble or expense, by feeding on

herbs, seeds, &c. Turkeys, being very apt to

straggle, will often lay their eggs in secret places ; therefore they must be watched, and made to lay

at home. They begin to lay in March, and sit

in April ; eleven or thirteen eggs are the most

they sit on. They hatch in twenty-five or thirty

days. The young ones may be fed either with

curds, or green fresh cheese. Their drink may

be new milk, or milk and water. Some give

them oatmeal and milk boiled thick together,

into which they put wormwood chopped small,

and sometimes eggs boiled hard, and cut in

pieces. They must be fed often ; and, when they

have got some strength, feed them abroad in a

close walled place where they cannot stray ; the

must not be let out till the dew is off the gras«, as it is very prejudicial to them. In the faUiiiw

of turkeys, sodden barley is very excellent, or

sodden oats for the first fortnight.

5. Pigeons. — These, Mr. Pitt observes, can

hardly, in general, be considered as an article of

profit to the occupier of a farm, though there are instances in Staffordshire, where something hand-

some is actually made of them by tenants; yet

these instances are rare, and too seldom occur to

be reckoned upon in a general account. But

few farm-houses are indeed furnished with the

necessary accommodations for them ; and the

increase of them beyond a certain degree must

be injurious to the cultivation of grain ; within

due bounds they do little harm ; but, increased

beyond it, they prove pernicious vermin, both

to the new sown crops and the early part of harvest. They are particularly voracious on early pease. Mr. Kent says that pigeons are much fewer in Norfolk than formerly, as many of the pigeon-houses have been dropt, on account of the injury which they did to thatched buildings.

Of bees. — Under the article APIS, we have given so full an account of the management of these useful and industrious insects, that we need add nothing here on the subject of bee husbandry.

SKETCH OF HOLKHAM FARMING.

In concluding this practical article we trust our readers will be gratified with an abstract of Dr. Rigby's able account of ' Holkham' farming: we give it not only with a view to doing justice to the efforts of the distinguished proprietor of that estate in improving and extending the scientific pursuit of agriculture, but also as containing many valuable passing hints on several of the topics of this paper. Dr. Rigby tells us that his paper was originally read at the Norwich Philosophical Society in December 1816 : and written from notes taken at Holkham, not intended for

publication.

‘ My observations,’ says our author, ‘ will be principally directed to the extraordinary improvement Mr. Coke has effected in the value of his extensive estate, by a system of agriculture almost peculiar to himself; by an encouraging liberality to his tenants, in a system of leasing his farms, equally peculiar to himself; and by his judicious and extensive system of planting, which, I believe, already exceeds any thing of the kind in the county, and is still progressively increasing. I had the advantage of riding with Mr. Coke several hours, two successive mornings, over the Holkhara farm in his own occupation, ;md over another at Warham, occupied by an intelligent tenant ; and, as he allowed me to he full of questions, and seemed to have a rea’dy pleasure in answering them, I had ample means of gratification and information.

‘ My first impression was that of surprise and admiration at the exuberance of the crops, at the seeming richness of the soil, and at its unexampled freedom from weeds. The first crops which attracted our notice were some extensive ones, both of wheat and barley. I had never before

•jeen such. Mr. Coke estimated the wheat from

ten to twelve coombs per acre, and said nearly

twenty coombs per acre of barley had urowti

upon it, which is at least double the average

crop in the county of Norfolk, and nearly treble

that of many counties in the kingdom ; and yet

so sterile was this part of the estate considered,, when he came into possession of it, that a large

tract of it had been let, tithe free, on a long lease, at 3s. per acre ; and Mr. Coke offered another

lease, of twenty-one years, at 5s. per acre, but

the tenant had not courage to take it, and Mr

Coke procured him a farm under another land-

lord. At that time wheat was not cultivated in

this district : in the whole tract, between Holk-

ham and Lynn, not an ear was to be seen, nor

was it believed that one would grow. The system

of farming was wretched, and the produce of the

soil of little value. What a change has been ef-

fected by capital, skill, and industry! Notwith-

standing the rain of that summer had been, on

other farms, bo productive of weeds, and had

rendered crops, in general, more than usually

foul, I cannot help repeating that there was

scarcely a weed to be seen here. In several

places the harvest had commenced, and the ground, which was exposed on cutting the wheat, was as clean as a barn floor. The day being fine, it was pleasing to see the reapers at work — they were divided into parties, who seemed to have certain quantities allotted to them to cut; among the rest I observed, with some interest, a man, and two girls about twelve or fourteen years of age, who had also a certain share ; he proved to be a widower, and these were his children.

‘ On the second morning Mr. Coke accompanied me to an extensive farm of his at Warham,. a neighbouring parish, in the occupation of Mr. Blomfield, cultivated on the Holkham system, and exhibiting the same weedless surface, and the same rich produce, as Mr. Coke’s. On one piece of seventy acres, very near the sea, I think the wheat exceeded Mr. Coke’s in luxuriance and quantity.

‘ Mr. Blomfield has the merit of having made a discovery, and adopted a practice, which must be of singular benefit. to Norfolk. This county is deficient in old pasture, and the attempt to lay down land, as it is called, for a permanence, so

as to procure this kind of valuable pasture, has

hitherto been attended with great expense, and

has not always been successful. lie effects it l>y

what he has, rather ludicrously, called inoculating

the land, and literally in one summer it produces

a rich, and, strange as it may sound, an old pas-

ture. Without describing the process in detail,

it will give a sufficient idea of it to say tlia-t the immediate operation on the land consists in

placing pieces lof grass, turf, or flag, of about

three inches and a half square, at certain dis-

tances, leaving an interval uncovered equal to

that which is covered byy the pieces of flag : tlicse are well rammed down, and, in doing this, Air.

Blomfield jocularly said it was inoculating the

land, which gave it its name : this process takes

place in a winter month, and in the spring some

grass seeds are sown on the uncovered spots ;

but, before the end of the summer, the pieces of

il.iv. extend themselves, and, uniting, the whole

not only appears to be, but really is, the same as old pasture. I saw thirty acres near Mr. Blom-

lirld's house, a most 'ordinary soil, light and

gravelly, and not worth 5s. an acre, under this

process, become an excdluit pasture, worth at

least £l 10s. an acre. Mr. Coke was preparing a large piece, within view of the house at llolk-ham, to he thus improved. 1 asked Mr. Blom-field how the thought occurred to him; he said, from observing pieces of flag laid on the hedge-row banks, and beaten firmly on with a spade when these banks are dressed, and which, he added, soon extended themselves and covered the 1 anks, if free from weeds, with a similar flag.' Mr. Coke's system of husbandry is the drill si/stem, which he adopted at a very early period, and his extraordinary success in it is owing to the progressive improvement he has effected in •the process, so as effectually to answer the pur-.pose of loosening the soil, at different seasons, and of completely extirpating weeds. The ad-vantage of deep and repeated ploughings and harrowings, to clean, loosen, and pulverise the soil, preparatory to its receiving the different seeds, every one knows, and, to a certain degree, this is practised on every farm ; but the impor-tance of stirring the soil, destroying weeds, and earthing up the young plants in the summer

months, was not ascertained until effected in the drill system, by horse-hoeing, &c.; and Mr. Coke's great improvement in it, derived from his long experience, consists in his having gradually drilled at wider distances. When the drilling of wheat was first practised, the lines were four and six inches distant. Mr. Coke now drills it at nine inches distance, which admits ample room for horse-hoeing, in the spring and early summer months, obviously much more effectual in loosening the soil, destroying weeds, and moulding up the plants, than hand-hoeing, particularly as usually practised by women and girls ; who, in most instances, by a partial stirring of the earth, and an incomplete destruction of weeds, promote the more vigorous growth of those which remain. But he does not think it advisable to earth up white-straw crops, and therefore, in horse-hoeing wheat, he does not recommend moulding up the plants. The true estimate of every process in agriculture must indeed be obtained from experience ; but the drawing earth round the stems would seem to promote their tillering, or the produc-

tion of new stems by suckers or pullulations ;

and this was one of the great advantages which

Tull, who has unquestionably the merit of having

been the first to suggest the drill system, ex-

pected from horse-hoeing wheat. And it is wor-

thy of remark to what an extent the stems may

lie multiplied under favorable circumstances, an

indispensable one being the supplying the lower

part of the plant with fresh earth to work in.

The most perfect way in which this can be ef-

fected is, obviously, by transplanting. Dr. Dar-

win, in his Phytologia, gives a drawing of a

plant of wheat taken from a corn field in the

spring, which then consisted of two stems ; it

was replanted in his garden, and purposely

buried so deep as to cover the two or three first joints of both the stems beneath the soil. On

taking up the plant, on the 24th of September, it

had assumed the form delineated, and consisted

of six stems, p. 278. Another way of effecting a

multiplication of the stems is by drawing fresh

earth round the lower part of the plant, without

removing it, and whic^i, though inferior in degree,

is evidently similar in principle, to transplant-

ing it ; for, in both cases, Dr. Darwin explains

the process to be effected by accumulating earth

above the first few joints of the stems, whence

new buds spring, generated and nourished by

the caudex of the leaf, which surrounds the joint,

as the original stem vvas generated and nourished

from the grain itself, and which, like the seed,

withers away, when sufficient roots have been

formed for the future support of the plant. Sir

Humphry Davy also entertains a similar opinion

on this subject, and considers the tillering of

corn, or the multiplication of stems, as favored

by the drill husbandry; for, he says, loose earth

is thrown, by hoeing, round the stalks. — Ele-

n.ents of Agricultural Chemistry, p. 204.

In drilling turnips, Mr. Coke has gradually

extended his lines on ridges, in what is called the Northumberland method, from twelve to fifteen,

to eighteen, and even to twenty-seven inches.

These wide drills allow the horse-hoe of the

largest dimensions, and of various forms, adapted

to the different purposes of turning up the soil

and earthing up the plants, to pass most readily.

1816 was the first year in which the turnips

were drilled so widely, and Mr. Coke expected

that the twenty-seven inch drilled Swedish tur-

nips would exceed in weight those of eighteen inches, by ten ions an acre. Dr. Itigby saw a large piece of these, about sixty acres, in which half were at eighteen inches distance, and half at twenty-seven inches ; the latter were evidently the largest, in the most vigorous growth, and certainly promised to meet Mr. Coke's expectations. Drilled turnips, however, obviously require cross-hoeing, which must necessarily be done by hand ; but as this is merely to destroy the supernumerary plants, it is easily effected by women and young persons. The Swedish turnips form his principal and most valuable crop, and are sown upon the best soils, from the middle of May to the middle of June ; but Mr. Coke cultivates on his lightest soils the common and the Scotch yellow turnip, both which are sown from the middle of June to the middle of July.

In 1814 Mr. Blaikie published some observations on preserving Swedish turnips, by placing them, as he terms it, and this has been successfully adopted at Holkham. They are taken up about the middle of November, or as soon as they have attained their full growth ; the tails or bulb roots only are cut off, and they are placed

in an orchard, or on old turf land, close to, and touching each other, with the tops uppermost,

and only one turnip deep. An acre of good

turnips from the field will occupy much less

space when placed than could be imagined. In

very severe weather a slight covering of litter is

thrown over them. In this way they will keep

very well, and be sound and firm in June. Those

taken up in the spring, when the bulb or fibrous

roots begin to shoot, and which, if suffered to

remain on the ground, would greatly deteriorate

the soil, may be placed in the same way ; and at this time, if under the shade of trees the better.

The carrying off the Swedish turnips, and,

placing them elsewhere for consumption, is,

however, principally recommpuded on strong

soils and retentive sub-soils, where they cannot

be eaten on the ground without injury- But upon

light soils, and open sub-soils, the turnips should

be placed where they grow, and put into beds

of a proper width for a common hurdle to cover

them ; a furrow of earth should be ploughed

against the outside rows to protect them from

the severity of the weather, and from the depre-

dations of game. The expense of placing a me-

dium crop of Swedish turnips, with tops and tails

on, is about four shillings and sixpence per acre,

and five shillings per acre, when the tails are cut from the bulbs. When turnips are eaten where

they are placed, the ground is hurdled oft" and

folded in the usual way ; they are chopped in

pieces, and thrown about for full-mouthed sheep ;

but when given to young and old sheep they are

cut into slices by a machine, and given to the

sheep in troughs, which are frequently shifted.

The refuse is thrown about, and the bottoms of

the beds, where the turnips were placed, are

shovelled and spread about ; particular attention

being paid to shifting the folds, so that the land is regularly manured. It is not generally known

that the texture of the larger Swedish turnips is

firmer, and the specific gravity, consequently,

greater than in the smaller ones, the reverse be-

ing the case in the common turnip. The rind,

the least nutritive part, is also, in the same pro-

portion, thinner ; but, were it equally thick,

there would still be proportionately less of it, the surface of a large sphere bearing, obviously, a

less proportion to the interior contents than the

surface of a smaller sphere. These may appear trifling circumstances, but they not only show the intrinsic superiority of the Swedish turnip, but the manifest advantage of endeavouring, by a superior cultivation, to grow large ones, thereby improving their quality as well as increasing their weight per acre ; and this, it is evident, can in no way be so- completely effected as by the improved drill system, and which was never so convincingly apparent as in the most magnificent crops of the year 1817, both at Holkham and on lord Albemarle's farm, at Quiddenham, in this county.

Mr. Coke is liberal in manuring for turnips : he allows not less than fourteen loads of manure per acre, the common quantity not often exceeding ten loads : he is enabled to dp this by manuring his wheat with oil cake, which he drills in with the seed, one ton being sufficient for six acres ; or he puts it in between the rows by the drill in the following spring, and this not only saves time, labor of horses, &c., as well as manure, but certainly answers well, as his wheat crops sufficiently prove. Mr. Coke mixes the farm-yard dung in compost heaps, by which

means he not only increases the quantity, but he seems to improve the quality of the manure, so much so that he now grows better crops of turnips upon the Northumberland ridge method, uith compost manure, and without oil cake, than he has formerly done, when his turnips were sown upon the flat, either drilled or broad cast, with all his farm-yard dung in the common method, and a large proportion of oil-cake added to it; and he has the advantage of reserving the oil cake for the wheat crop, to which he consi- a more adapted tl:;in to tisuiips. The turnip crop, though so highly important, has hitherto however, even under the best management, been considered as avery uncertain one, depend in gal— most wholly on seasons. In a rainy season it has been unusually good ; but in dry seasons there is frequently a general failure ; and, independent of the plant suffering from a deficiency of moisture, in its very early state, it is liable, in all seasons, and peculiarly in dry ones, to become a prey to the ravages of the fly, which not unfrequently sweeps off whole and repeatedly sown crops. Some ingenious mechanical contrivances have been applied to remedy this latter

evil, and a curious trap, invented by Mr. Paul

of Starston, a most intelligent and active farmer,

has been successfully used in saving many crops ;

but its application is necessarily attended with

trouble ; and it is, at least, an additional source of occupation at a time when all hands are

more than ordinarily employed in making hay,

&c., and it has never, therefore, been generally

made use of. Mr. Coke, however, no longer con-

siders the turnip crop as an uncertain one ; under

his improved system of cultivation, it appears

to be alike secure both from the seasons and the

depredations of this insect.

By depositing a much larger quantity of seed than is usually sown, Mr. Coke produces a greatly increased number of plants, which, as the time of the insect feeding upon them is limited, obviously increases the chance of a greater number of them being ultimately left untouched ; and this chance is much increased by shortening the period of the existence of the leaf on which these little animals feed, whicli is effected by accelerating the growth of the plants, by the stimulus of manure placed immediately under them, and also by the judicious method of depositing the seed immediately after the earth has been well stirred by the plough, by which in all seasons some moisture is evolved, and some chemical changes effected, which much favor the first process of vegetation. The leaf on which the insects feed is the first or cotyledon leaf, which is known to live only until the second or rough leaf is formed. The cotyledon leaf appears to be an expansion or evolution of the seed itself, and being probably nourished by the saccharine matter, which, from analogy, we may suppose is elaborated during its process of

germination, it acquires a degree of sweetness

which attracts the fly. This communication be-

tween the seed and cotyledon leaf continues,

however, only until the roots are thrown out

whose office it is to supply nutriment, derived

immediately from the soil, to the plant in its more advanced state, and simultaneously with their

formation below the surface are the second or

rough leaves formed above ground ; and, as soon

as this curious economy between the roots and

these leaves is established, the seed, no longer

necessary as a source of nourishment, wastes

away, the cotyledon leaves die and fall off, and,

the rough leaves not being sweet, the fly is no

longer attracted, disappears also, and the crop is

secure.

This excellent method of cultivating the tur-

nip will, probably, be understood by the follow-

ing brief detail of the process of sowing it. it

is effected by forming trenches and raising riil'jes on a clean tilth, by a trench or double-breasted

plough and a pair of horses, one of which always

goes in the last trench, and this sets out the width and preserves the straight line with tolerable ac-

curacy. A cart and two or three horses pass

down the trenches, which are thus opened, drop-

ping heaps of compost manure, which are spread

by two men with forks, and the manure falls

pretty equally in the rows ; another plough, like the former, passes through the middle of the first form-

ed ridge, divides it equally, covers the manure, and forms another ridge immediately over it ; a boy

with a mule, or little horse, drawing a very light roller, follows this second operation, and flattens

the top of the ridges ; another boy, with a like

horse, follows the roller with a drill, and deposits the seed on the middle of the ridges, and a light chain attached at each end to the back of the

drill and whicfi at first sight appeared as if ac-

cidentally fallen from it, throws the earth into

the drilled lines and covers the seed, and thus

the work goes on, the laborers and ihe relative

progress of the work being so proportioned, that

none are idle, none stand in each other's way ;

the manure is not left to dry in the sun, but the operation is completed as it proceeds, and about

three acres in a day, with fourteen cart loads

of manure on each, as before observed, may

be accomplished with one complete set.

In drilling wheat, Mr. Coke allows much

more than the usual quantity of seed ; ten pecks

an acre are the utmost which most farmers drill

or dibble, and even six pecks have sometimes been thought sufficient ; but he allows four bushels an acre in October, and even five bushels in November. In deposit-ng so large a quantity, of seed, and burying it so much deeper than when sown broadcast, it certainly does not seem so requisite to earth up the plants, as probably there will ever be a sufficient number of stems derived, in the first instance, from the seeds themselves ; but then a question arises, and which may merit consideration, whether there would not, eventually, be an equal number to produce ears, were a less quantity of seed sown, and the plants afterwards judiciously moulded >ip. It would seem, indeed, to come to the same thing, and if so in the latter case there would be a manifest, and on a large scale a very great saving of seed. It cannot be expected that nature should conform her processes to calculations on paper ; but if the production of buds and stems from the joints of wheat plants, when duly surrounded with earth, depends upon an established and unvarying law of nature, it must be the same thing whether twelve stems are pro-

duced directly, from six grains of wheat, or six

stems are produced from three grains, and six

more are subsequently produced by surrounding

the lower joints with earth. A few experiments,

conducted as they usually are at Holkham, would

decide the question.

Mr. Coke is an advocate for early sowing ;

and, as the drill puts in the seed quickly, and, as before observed, no time is lost in carting on

manure ; he has seldom much to sow in Novem-

ber. He says he has always the best crops when

the wheat is very thick in the rows ; and he

never thinks it thick enough if he can easily pass his finger through the stems, near the ground.

He cuts his wheat very early, even when the

ear and stem are greenish, and the grain not

hard. He says the wheat, thus early reaped, is

always his best sample, and he gets 2s. a quarter

for it more than for wheat cut in a more mature

state. He, perhaps, loses something in the mea-

sure, the skin being thinner, and the grain, pro-

bably, not quite so bulky ; but, if this be true,

it is fully compensated by his suffering no loss

by shedding on the ground, which, when the eai

is ripe and the weather windy, is often not in-

considerable. He is equally early in cutting

oats and peas : when Dr. Rigby observed to

him that, in both these, the seeds were not all

ripe; his answer was that he should lose more

by the falling of the ripe seeds at the botˆpms,

than he should gain by waiting until the rest were ripe ; and that the straw in this state, retaining

some immature seeds, was of more value to his

stock in the yards, than if cut later.

To prove the utility of reaping wheat early,

Mr. Coke had hung up, in his own room, a few

handfuls of wheat which was greenish and im-

mature ; in a few days they had ripened in the

capsule. ‘ Mr. George Hibbert, of Clapham, a

gentleman well skilled and much experienced in

the cultivation of plants, was with us,’ says our

author, ‘ and he has since, in a letter, observed

to me that this is a common natural process,

more especially when the capsules are of a suc-

culent nature, and which all gardeners very well

know ; and he mentioned a remarkable instance

which occurred to him respecting a plant whose

seed had no considerable envelopement. James

Niven was employed by him to collect the seeds

of plants in Southern Africa : he sent a speci-

men of a beautiful erica, lamenting, in his letter, that he had never been able to find one of that species advanced into fruit ; but out of that very specimen, which he seems to have gathered in the full vigor of flowering, Mr. Hibbert actually obtained ripe seeds, and produced plants here by sowing them. When Niven returned, he showed him the specimen, and he said a very considerable progress towards fructification must have been made during the transit from the Cape of Good Hope, hither, by the rising of the sap within the specimen.'

Mr. Coke's course of husbandry, that is, the succession of his crops, varies but little from that which is general throughout the county of Norfolk. It is called the four or five course ; — first year, turnips — second, barley, laid down with clover or other grass seeds — third, grass to cut or feed — fourth, wheat. He has, within a few years, found it profitable to lay down a certain quantity of land with cock's-foot grass, dactylis glomerata, and this lies two years, making the course on this land five years.

This grass does not stand for hay, but is ex-

cellent sheep feed ; when fed close, it tillers very much ; or spreads and branches on the «ground

with multiplied stems, and, in the season most

favorable to vegetation, it will grow more than

an inch in a few days. Sheep are very fond of

it, and Mr. Coke says he can pasture more upon

it than on any other layer of artificial grass. The 160

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seeds of thu grass, which is indigenous, are ga-

thered in the woods and lanes by women and

children, who cut the tops off with scissars,

about six inches long, an inch and a half below

the lower spur; they are paid 3

it, measured as hay ; one bushel of seed is ob-

tained from seven bushels of it in the state it is thus gathered.

Though not cultivated as other artificial grasses,

in the regular course of 'husbandry, saintfoin has

been found, at Holkham, a valuable source of

hay, and of autumnal pasturage. It was first

cultivated in this district, in the year 1774, upon the Brent Hill Farm, by Mr. Beck, the then

occupier. Mr. Beck's example was followed by

.Mr. Coke, and he has cultivated saintfoin, in

Holkham park, about forty years. It seems

mosi adapted to thin soils, incumbent on chalk.

The seed is generally sown, in the pod, at the rate of five bushels per acre, with the barley, after a turnip crop ; nine pounds of trefoil per acre are sown at the same time. The saintfoin being in pod, attention is required to bury the seed properly. The trefoil produces a crop to mow in the following year, and dies away in the succeeding years. The saint foin is not in full perfection until the third and fourth years. It continues good until the ninth year, after which it becomes weaker, and is ploughed up for the land to go through a regular course of husbandry. The saintfoin is seldom manured or top-dressed : it produces a ton and a half of hay per acre, annually, while in perfection. It is never spring-fed, but is depastured by all sorts of cattle, to consume the after-math in autumn. Mr. Coke is ever ready to try the cultivation of any new article. The introduction of the Swedish turnip into general cultivation is much owing to him. I was pleased, says Dr. R., to see a crop of mangel wurzel in a good state : and he told me he had procured some Heligoland beans, a new and promising article, which is said to yield sixty bushels or fifteen coombs

per acre, and he proposed dibbling them on the transplanted land ; but I saw no cabbages, no succory, no burnet, no parsnips. In Mr. Blaikie's pamphlet, on the Conversion of Arable Land into Pasture, he gives the result of two trials of dibbling the Heligoland beans on this land ; the one was upon land which had undergone a complete summer fallow, previous to its being transplanted ; and the other was land from which Swedish turnips were taken up in November, but they seem not to have answered in either case ; the failure is, however, attributed to the beans having been put into the ground too late. In another instance, Poland oats were sown, and produced twelve coombs per acre.

Mr. Coke's flocks are highly estimated, and he is distinguished for his skill and attention in this branch of rural economy. His sheep are all Soulhdowns, but he told me he had not the merit of selecting them himself. Some years ago he was visited by some gentlemen from the South of England, who found much fault with the Norfolks, which then composed his flocks, and told him that the sheep in their county, the Sussex Southdowns, were much more profitable

and better adapted to his pastures : — he bought

500 on their recommendation, and, finding they

fully answered his purpose, he got rid of his

Norfolks, and has had none since but the

Southdowns. Mr. Coke was much gratified on

finding that Mr. Cline confirmed this preference

in his paper on the forms and constitutions of

animals, in which he considers the characteristic

mark of health and vigor, in an animal, to be the expanded chest, the thorax which has ample

room for the free play of the heart and lungs.

In the Norfolk sheep the sternum terminates

almost in a line or edge, the ribs contracting

too much as they approach it ; while the chest

of the Southdowns is more rounded and wider,

terminating with a less angle at the sternum.

He remarked, on showing Dr. Rigby his admi-

rable dairy of North Devon cows, the same cha-

racteristic superiority of form over the Norfolk

cows. He particularly pointed out the flat line

the ribs take in spreading from the spine, in the

upper part of the chest.

When Mr. Coke came to his estate at Holk-

ham, the rent was £2200, — this was forty-one

years ago. The produce of his woods and plan-

tations amounts now to a larger sum ; for he has

had the spirit and judgment to plant 1500 acres ;

the greater part of which have become magnifi-

cent woods, which have not only by their pic-

turesque beauty, unspeakably improved the

landscape; by their protection in checking the

cold rude winds, so prevalent on this coast, ma-

terially softened the temperature ; and, by the

annual fall of their leaves, even contributed

something to the fertilisation of the soil ; but, at this time, the annual fall of timber, poles, and

underwood, from them, averages about £2700.

The timber and poles are applicable to most

building purposes; some of them are used in

the buildings, which he is constantly carrying on

upon an extensive scale; his houses, cottages,

*barns, stables, and other farming buildings bein^*

all in a superior style of architecture ; and the

remainder is sold in the neighbourhood.

' I saw,' says Dr. R., ' a handsome house,

built in the summer of 1815, and now occupied

by his head gardener: the doors, window;;,

floors, stairs, as well as the roofs, joists, spars, &c., were all of Scotch larch, and spruce fir, of

Holkham growth ; and his timber yard, from

the same source, displayed no mean quantity of rough timber, balks, planks, &c. In the plantations, several of which I rode through, the oaks and Spanish chestnuts have already attained a considerable size, and are' in a state of vigorous growth ; some of'the oaks, particularly those near the house, being the largest I ever saw, of the same age ; these in time will, obviously, become the most valuable timber on the estate ; in time they may even supply our future wooden walls, and, under a change of form, navigate the very sea which washes the shores on which they are now growing.'

Firs, of the different species, the Scotch larch, spruce, and silver, have attained a sufficient growth to be applied to the above-mentioned useful purposes ; and, like the oaks, for many years to come, will have an increasing value. There are also other trees, which, though of a subordinate character, Mr. C«>kr turns to ;t gO" '1

account ; the Salix coerulea, or the French willow, at six years' growth, can be advantageously

riven into laths, which are very tough, and answer the purpose quite as well as those made of foreign deal : the populus monilifera, the Canada poplar, also grows very luxuriantly. The wild cherry is also cultivated extensively, and its timber is valuable for all building purposes, when of forty of fifty years' growth. Another poplar, the black Italian, said to be the most profitable for planting of all poplars, is judiciously planted as a skreen, round some barns and farming buildings.

Mr. Coke's system of letting his estates is not less excellent than his farming system : a long lease and a moderate rent cannot fail to be highly advantageous both to landlord and tenant ; to the occupier it affords every encouragement to invest capital, and every motive for the skilful cultivation of his farm; and to the landlord eventual permanent profit in the improved value of his estate. The following have been the important results : — Mr. Coke's tenants are enriched, and his property has increased in value to an almost incredible degree. He gives twenty-one years' leases, and he has already seen the termination of such leases on most of his

farms, and, though he continues the same encouraging system of long lease and moderate rent, his present relatively moderate rents, relatively as to the improved state of his farms, have admitted the total increase of his Norfolk rents to amount to the enormous sum of £20,000; an increase in the value of landed property, a creation of wealth, probably, unexampled, except in the vicinity of large towns, or in populous manufacturing districts. On the renewal of many of his leases, he has given the tenants the bonus of a capital house : these afford not only every possible accommodation to his tenants' families, but are striking ornaments to the country. Irrigation is one of the superior improvements in agriculture, which Mr. Coke has advocated and adopted; but this can, obviously, be only effected in peculiar situations, and can only be undertaken by persons of considerable capital. The situation of Holkham does not admit of irrigating to any extent ; but even here Mr. Coke exhibits a water meadow, where it could be little expected ; it is near the house at Longlands, his principal farm, and rather on high ground ; the source is a large pond, originally formed for

the common purposes of a farm- yard. There may be a spring which feeds it in some degree, but its principal supply is from the heavens. When the pond is full, the water is well-directed to an adjoining meadow, whose level is a little below it. To a certain degree it has its use, but the supply of water is inadequate to an extensive and long continued irrigation.

' The best specimen of complete irrigation, on \any of his estates, is at Lexham,' says Dr. Iligby, 'which I have seen, when visiting his respectable tenant there, Mr. Beck. A small stream, tolerably well supplied, runs through a little valley of ordinary meadow land ; a large reservoir of several acres has been formed by an embankment, and raised so much above the contiguous grounds as to admit of many streams, in

different directions, being conveyed over an extensive surface of land, to which they impart a wonderfully fertilising principle, and by anticipating the common period of the growth of grass in the spring, and by continuing it luxuriantly during the whole seasons of vegetating

temperature, the supply of grass is much more early, and infinitely more abundant, than could be obtained on the land of such a farm under common circumstances. The grass which first shows itself in the spring, in the watered meadows, is the festuca fluitans, the long and broadish leaves of which are known to float on the surface of water, in ditches, &c. The cattle are very fond of this grass, and, on being first turned into these meadows, run with eagerness to get it. These water meadows were well designed and executed under the direction of Mr. Smith, the engineer, but at a very considerable expense. Mr. Coke, who has given a long lease of the farm to Mr. Beck, is said to have been at half of the expense; and, in addition to it, he has built him an excellent house, on a rising ground, and at a proper distance from the water, which is here as much a feature of decoration and beauty as in any gentleman's ground ; and the whole would form a picturesque scene, were more trees growing on the opposite side of the water.'

Dr. Rigby afterwards visited Holkham at the sheep-shearing. At this time, he says ' consider-

ing the extreme dryness of the season, the crops, particularly the wheat, were excellent. The Devon cattle were not only beautiful, but, by the state of their flesh, they betrayed no marks of the prevailing drought, it being a peculiar excellence of this stock that they will keep themselves in good condition in moderate' pastures. The flocks of Southdown sheep appear to be every year improving, showing the judicious and unceasing attention paid to them. About three o'clock the company returned to the hall, and not fewer than 300 persons sat down to dinner in the statue gallery, Mr. Coke presiding at one table and the earl of Albemarle at the other. After giving ' a fine fleece and a fat carcase,' Mr. Coke proposed the health of ' lord Erskine, who sat near him. He should not, however, he said, give him as a lawyer, but as a farmer. The circumstance of his lordship having, of late years, turned his attention to agriculture, and having been, several times during the morning engaged in conversation with him on the subject of Merinos, whose cause he seems disposed to advocate, he was induced to anticipate some ob-

servations from his lordship on that subject, and, in a vein of humor, alluded to the rudiments of his lordship's agricultural studies, and the progress he had made. I am led to hope, said Mr. Coke, that we shall hear something instructive, especially on the subject of Merinos, which, you know, has many times been discussed in this room with great good-humor. It will give me pleasure, and I am persuaded it will give you all pleasure, to hear his lordship inform you of his great success. 1 am fond of instruction, have met it many times where I did not expect it, and look for it now very anxiously. — I know his lordship's abilities ; but I fear the subject is M

a difficult one, as 1 have never yet known a good carcase supported under 10 or 12 Ibs. of such close and fine wool ; and I have long been convinced that good carcases and fine fleeces together, early maturity and a quick return, which we have in the Southdowns, will always beat the Merinos. — Their backs are as narrow as rabbits, and their faults appear to be incorrigible. Perhaps every one here may not think so, and I

know there is a considerable party of public-

spirited gentlemen who still persist in the Me-

rino cause. I am persuaded they do it from the

best motives : I heartily wish them success, but

I do not envy them ; I do not envy my honor-

able friend here, and hope he has reaped a plen-

tiful and encouraging profit. For my part, I

am governed by experience, and I always make

haste to discard error when I find it out. I

must beg, however, to relate an anecdote, which

will show you what immense progress his lord-

ship must have made in these studies, since the

first time I had the honor of his company here,

to venture upon such a subject. He was riding

with me in a barouche by a field of wheat, some

years ago, at a time when he certainly was not

prepared to enlighten us on the difficulties of the point in question, and he suddenly clapped his

hands together, and exclaimed, ‘ What a beau-

tiful piece of lavender !’ — but since that time,

gentlemen, his lordship is, I know very well,

considerably improved, and may be thoroughly

prepared to defend the cause upon which I have

so long been in an error, if it be one.

His lordship, in reply, commented, in a strain

of pleasantry, on Mr. Coke's observations relative to his studies in agriculture. He had studied it under an able master, and, if he had made no considerable progress, it must be owing to his own want of capacity. He, however, assured the company that he did know wheat from lavender ; but he certainly had made the exclamation alluded to ; and was it to he wondered at ? He had seen wheat many times before ; but, never having seen any so admirably cultivated, was a sufficient reason for his not knowing the plant again. — He had seen such facts and examples at Holktiam, that he had been struck with the conviction that agriculture must be an important branch of knowledge : important not only to the good of mankind, but to mental improvement ; to the understanding of a man, and to the science of a philosopher. He had indeed, his lordship observed, commenced his study of agriculture late in life, when, perhaps, the vigor of his attention was spent in other pursuits, more important to him at the time, but never more pleasing. It is this day, said his lordship, forty years since I was called to the bar ; — I have

studied Coke at Westminster, and I now study

Coke at Holkham. But the difference between

these studies is very great ; they differ as the

laws of man differ from the laws of nature ; as a complex and opposing system of facts and pre-

cedents,— where no two cases can be perfectly

parallel, where human interests and passions are

perpetually excited, where human evidence is

often incomplete, often doubtful, — differs from

that order and regularity, where the finger

of nature points to certain conclusions; where

the fruits of our skill and labor rise to gire tes-

timony ; and where the very earth is eloquent,

and speaks nothing but the truth. If, continued

Ins lordship, we only consider the subject of

manure, we shall perceive one of the most strik-

ing bounties and benefits of the divine ordkiation.

and of that wisdom with which we are blessed,

in a thousand ways, without our knowing it :

this very substance, the refuse of every thing,

had it been useless, must have accumulated in

heaps, intolerably noisome, and perpetually pes-

tilential ; but, by the blessing of providence, it is every man's interest to remove these otherwise

increasing mountains of filth, and by decompo-

sition, in various ways, concealed in a great measure from us, it gives increase to our fields, and adds to the means of industry and the reward of the husbandman. In allusion to what he was expected to deliver in the Merino cause, his lordship very pleasantly waived the subject, by saying that it was a subject'on which he was yet considerably deficient in knowledge and experience, and he must take a few more lessons before he could venture to sum up the evidence before such a jury.

In proposing the health of lord Lynedock, Mr. Coke took occasion to advert to the Scotch husbandry. He alluded to a report which had prevailed, which had perhaps been industriously circulated, and eagerly listened to, as all calumnies were, by many persons. It had been said that he had found fault with the agriculture of Scotland. Found fault ! said Mr. Coke, to be sure I did, and I praised it likewise. But the first only is remembered by those who would malign my observations. If there be a fault, it ought to be noticed, or how should we improve? The truth is, the agriculture of Scotland deserves very

great praise, and especially their turnip husban-

dry, which equals any thing I ever saw. If I

had wavered before in opinion, I should have

been at once convinced of the decided superiority

of the ridge system, by what I saw in Scotland ;

and I now think it my duty to declare my con-

viction that the ridge system of cultivating this

crop is not only the best for producing the

largest crops, but it will obtain, what can never

be insured by the other, a certain crop. By

what we witness this year, notwithstanding the

drought, the crops in this neighbourhood, by the

ridge system, are both forward and promising ;

and, as this is the foundation of the success of the whole course, it must be the most important

point in our favor. Mr. Coke then congratulated

the neighbourhood around him, for having very

generally adopted this system, for which they

were much indebted to Mr. Blaikie. The fault

he had found in Scotland, Mr. Coke observed,

was that the land, with the crop after turnips,

was not so clean as it might be, and he was induced to observe it, in order to draw the attention of

the Scotch farmers to the probable defect there

might be in cleaning the fallows; buthewilling-

ly allowed that they had a very troublesome weed in the north, which seemed to be peculiar to Scotland ; and, as the root was a small bulb, it was difficult to be destroyed. It increased so much in the land before the field came to wheat, that the crop, if lodged, would be presently tied

down by the stems of this weed growing through it, and it could not rise4o ripen the grain, lie said he had visited lord Lynedock's farm, and he was beyond measure gratified at his reception. The noble lord had carried inoculation into Scotland ; he thanked him for it, and it proved that this meeting did good.

In the course of this meeting, Mr. Coke stated that it had existed forty-two years. Upon no former occasion had it been so numerously attended : a proof that the motives for its establishment had met with the approbation of his neighbours, and that the result had been favorable to the country. He trusted that it would still increase in numbers every year, and that he should lie honored with the company of all who desired

to see agriculture cultivated on the liberal princi-

ple of a community of interest between landlord

and tenant. When he began this institution, the

land of llolkham was so poor and unproductive

that much of it was not worth 5s per acre. — He

began with a trial of the Leicester breed of sheep ; but, by the advice of Mr. Ellman of Sussex, he

was induced to adopt the Southdown breed, and

to that admirable stock he much attributed the

progress which Norfolkhad made in cultivation.

The extension of farms, where flocks were to be

employed, was unavoidable. Such farms must

be large : but if capital and skill were applied to them, and the flocks were made the means of in-

creasing the corn produce, so far from its being

injurious, as a question of political economy, ex-

perience had proved it to be highly advantageous,

since he could state, from actual enumeration,

that three times the number of inhabitants were

maintained on the same space of ground as be-

fore ; the population of Holkham had increased

from 200 to 600, within a few years back, since

cultivation, by the union of capital and skill, had advanced. In all his parish there was scarcely a

single individual, of any age, that did not find

full employment, and they even wanted hands. —

He had been applied to, some time ago, by the

principal inhabitants of the three parishes of

llolkham, Warham, and Wighton, to- say that

their poor-house was no longer wanted ; that, in

fact, it was a burden'to keep it up; their poor

were so much diminished, they had no use for it.

And when he told them to consider well what

they were about, and to look forward to times

when the poor might increase upon them, they

replied, they were convinced that, by the spirit

of independence which their comfort inspired,

and the certainty of labor, they had no dread of a reverse, for the whole district was industrious and

moral. — The workhouse was therefore pulled

down, and the aged and infirm were a small bur-

den on the three parishes. The introduction of

the drill husbandry, which he could now, from the

most ample experience, recommend, had justified

all the hopes he had entertained of it. It was the most profitable course a farmer could pursue,

and, with the turnip crops, completed the Nor-

folk system of husbandry. He paid merited

compliments to Mr. Blakie, his steward, for su-

perior talents, indefatigable attention, and inte-

grity in the conduct of his affairs, as well as for the many plain, practicable, and ingenious com-

munications he had given to the public ; and he spoke, with warm eulogy, of the ardent manner in which his efforts had been seconded, not only by his own tenants, but by many of the noblemen and gentlemen, as well as yeomen, his friends and neighbours.

PART V.

OF IMPLEMENTS OF HUSBANDRY.

Upon this topic we can of course accomplish nothing more than a selection of the most approved modern instruments of agriculture. Many of the machines and implements involved meet our separate attention in their alphabetical places : others, as the peck, the mattock, the spade, fork, &c., seem too minute, and of too universal application, to be inserted in a work of this description. We begin therefore with the most important, perhaps, of agricultural implements.

1. Of ploughs. — In our plate AGRICULTURE (Plate I.) are figures of ploughs, whose names are given. The first, the Roman plough, has good authority for its iron part or share, such as it is ; but we are doubtful as to the wheels and handle.

The Roman plough was according to Cato of two kinds, one for heavy and one for light soils.

There is a plough still in use in Spain, which is supposed to come the nearest to the Roman im

plement generally used. It is our fig. 2,,plate I.

RURAL ECONOMY.

Virgil describes a plough with a mould-boara

used for covering seed and ridging: to supply

its place a sort of diverging stick was used, it

seems, in the form described : this stick appears to have been inserted in the share head, or held ob-

liquely and sloping towards the side to which

the earth was to be turned. The Romans did

not plough their fields in beds, by circumvolving

furrows ; but the cattle returned to the same fur-

row. Virgil also mentions wheel ploughs, which

Lasteyrie thinks were invented in or not long

before the time of Pliny, who attributes the in-

vention to the inhabitants of Cisalpine Gaul.

Lasteyrie gives figures of three wheel ploughs

from a Sicilian model, and from Caylus's Col-

lection of Antiquities.

Cato says, of ploughing, What is the best cul-

ture of land ? Good ploughing. What tha

second best? Ploughing in the common way.

What the third ? Laying on manure. The Ro-

man season for ploughing was any time when

land was not wet : in the performance, the fur-

row is directed to be kept equal in breadth

throughout, one furrow equal to another; and

straight furrows. The usual depth is not men-

tioned, but it was considerable, as Cato says corn-

land should be of good quality for two feet in

depth. No scamni or balks (hard unmoved

soil) were to be left, and, to ascertain that this was properly attended to, the farmer is directed,

when inspecting the work done, to push a pole

into the ploughed land in a variety of places.

The plough was generally drawn by one pair of

oxen, guided by the ploughman without the aid

of a driver. In breaking up stiff land he was

expected to plough half an acre ; and in free

lands an acre ; and light lands one acre and a

hull1 each day. Land was ploughed in square

plots of 120 feet to the side, two of which made

a jugerum or acre. We may here add, though a

little out of place among mere implements, in

most cases a crop and a year's fallow succeeded

each other ; though, when manure could be got,

two crops or more were taken in succession ;

and on certain rich soils, which Pliny describes as favorable for barley, a crop was taken every year. In fallowing, the lands were first ploughed after the crop was removed, generally in August ; they were again cross-ploughed in spring, and at least a third time before sowing, whether spring corn or winter corn was the crop. There was, however, no limit to the number of ploughings and sarclings, and when occasion required manual operations ; the object being, as Thecphrastus observes, ‘ to let the earth feel the cold of winter, and the sun of summer, to invert the soil, and render it free, light, and clear of weeds, so that it can most easily afford nourishment.’ (Theo. de Caus. Plant, lib. iii. c. 25). Manuring was held in such high esteem by the Romans, that immortality was given to Stercutius for the invention.

To return to our modern ploughs. In the ‘ Itural Economy of Yorkshire,’ after the similarity of the principles that are requisite in the constriction of the ship and the plough is noticed, and the difficulty of fixing and reducing them to a regular theory as nearly the same, it is observed that the art of construction in either

case is principally attained by practice. In this district, says the writer, the ploughs of different makers pass through the soil with various degrees of facility and execution; nevertheless, though he has paid some attention to the different makes, he finds himself entirely incapable of laying down such particular rules of construction as would do his country any service, or his work any credit. Even the general principles of construction he must mention with diffidence.

The principal difficulty in the construction of a plough is that of adapting it to all soils, in all seasons, and to all depths. If the soil break up in whole furrows, every inch of depth requires in strictness a separate plough, or a separate regulation. Here rests the main objection to the winding mould-board, which admits no regulation in respect of depth. If the semi-arch, or nollow of the hind part of the mould-board, be raised sufficiently high to turn a thick furrow completely, it is of no use in turning a thin one. On the contrary, if it be brought down sufficiently low to turn a shallow furrow properly, it is impossible to turn a deep one with it in a workman-like manner. There

is not room for

it within the hollow, or semi-archway of the mould-board. The inevitable effect of this is, either the furrow is forced away wholly by the upper edge of the mould-board, and set on edge ; or the mould-board rides upon the furrow, raising the heel of the plough from the ground, the bad effects of which need not be explained. An upright stern, with a moveable heel-plate to turn the furrow at any given depth, is, in this point of view, much preferable to a hollow mould-board ; and, if its use in raising a crest of mould, for the purpose of covering the seed, be added, its preference is still more conspicuous. But some of these inconveniences have been obviated by the invention of moveable mould-plates, as will be seen afterwards. Yet, in the construction of all sorts of ploughs, there are, notwithstanding, a few points or circumstances that ought to be particularly and in all cases attended to ; such as the following : that part which perforates the soil, and breaks it up, and which is usually termed the throat or breast, should have that sort of clean, tapering, sharp-

ened form, that is introduced with the greatest readiness, and which affords the smallest resistance in its passage through the ground. According to some, this part should be long and narrow, making an acute angle with the beam, as the length of the breast is supposed to have a tendency to preserve the flag from being broken, on account of the surface for its support being longer ; which is a circumstance of consequence in the ploughing of old lays for wheat, pease, and other similar crops ; as, by such means, the growth of weeds through the broken ground is prevented. And the resistance of the earth against the breast is likewisevlessened, in proportion to the acute angularity of that part against the beam of the plough. The mould-board should also have that sort of curved, twisted, or hollowed-out form, which is best calculated to lessen resistance, and at the same time give the furrow-slice the proper turn. And the beam and muzzle of these implements should likewise have such a construction as that the team or moving power may be attached in the best and most suitable line of draught, as this is a cir-

cumstance of great importance, when several

animals are made use of together, that the

draught of the whole may coincide in the most

perfect manner, and with the utmost exactness.

Likewise, in the construction of every sort of

plough, much regard should be paid to the

weight, so that they may have sufficient strength

for the purpose, without being unnecessarily

heavy. Much may be done in this intention, by

lessening the quantity of wood in those parts

where there it no particular stress, while it is

retained so as to have full power in the others.

This has been much less attended to in the

making of ploughs than its importance would

seem to demand.

It is noticed, in the Agricultural Survey of the

County of Essex, that the throat at the fore end

or neb of the plate or breast in the Norfolk, and most other ploughs, with the exception of the

Rotherham, rises from the upper surface of the

share too perpendicularly, and too much at right

angles to the line of friction, or pressure of the earth the plate has constantly to act against :

working thus abruptly in the ground, the slice

or furrow is violently torn, or burst from off the ground hand, broken and imperfectly turned

over, instead of being gradually cut, raised whole, and whelmed over; as will always be the case, when the plough enters the ground obliquely, and at a proper angle ; and that the plate or mould-board is properly turned for raising up, and turning the slice completely over. It is a clear position, proved by experiment, that a semi-ellipsis is the true form of throat which is necessary in ploughs, which is the part

or space from the share point to the junction or approach of the breast to the beam : and that there is found a remarkable variation in the form of the breasts, or mould-boards of the ploughs throughout the northern parts of the same district, and which is chiefly in the degree of concavity or convexity. Some wheel-wrights and farmers prefer a form rather concave, a flatness in the fore part, which joins the share, and which gradually fills up as the sweep recedes ; others like it neither concave nor convex ; and there are many ploughs in which the convexity is extremely great. The great length of the breast, in some ploughs, is a circumstance which gives

steadiness to the implements ; but, at the same time, it is probably the means of increasing the draught to the horses in a great degree. The shortness of the breast, if the curve or sweep be in perfection, or wears equally every where, may lessen friction, and certainly does, if the earth be loose ; but it probably may not have the same effect in the first earth, upon a stiff layer. It is, however, a pretty general opinion, that it lessens it in all cases. A great variety of breasts, of different forms and constructions, are represented in the plates upon ploughs, in the Agricultural Survey already referred to, which are well worth consulting by the enquirer.

The old Norfolk plough of our plate I. AGRICULTURE is held in much esteem in that, as well as some other light districts, as performing the work in an easy and expeditious manner. The carriage and wheels in all ploughs of this nature, however, form objections to them, and render them clumsy implements. The wheels added to them in our figure are an improvement.

The head and beam are short ; the carriage part and wheels stand very high, of course the fore end of the beam is much elevated, by which

advantage is gained in driving the horses, as it is usually drawn by two horses yoked abreast, the

ploughman directing them by reins.

Of the swing sort, the Rotherham plough

is perhaps the most popular. See AGRICUL-

TURE, plate I., figure 3. It is a light useful

plough for all the less heavy sorts of soil, and

has certainly much superiority where one plough

is only required, and where the advantageous and

economical method of performing the work with

one man and two horses without a driver is used.

It is in much estimation in all the West Riding

of Yorkshire, and is said in the Agricultural Sur-

vey of the Riding district to have been invented

by Mr. Joseph Foljambe, of Eastwood, about

seventy years ago. In that district its usual di-

mensions are

From the end of stilt on landside to the point of the Feet. Inches share 7 4

From the end of beam where inserted into it to ditto, of ditto 3 0

Length of beam .....' 6 0

Width of the head in the widest upper part ... 1 4

Ditto of ditto at lowest part 0 9

Ditto of share behind the wing 0 3J

Length of surface on which the plough touches the ground 2 lOjj

Height from ground to top of beam where coulter goes through 1 8

Width between stilts at the end 2 6

Height of ditto from the ground 1 11

Weight of wood and iron work, about If cw

whole length

bottom

face.

And it has also a copse rack, or hock with

teeth, to admit of more land being given to the

plough, or the contrary, which is particularly

useful in many cases.

It is noticed that with a few trifling altera-

tions it is made use of over the whole district,

and from that being often called the Dutch

plough, it is supposed to have been originally

brought from Holland by the inventor.

In Mr. Bailey's improved Rotherham plough

the mould-board, which is of cast-iron, is

so formed that the sod to be raised presses

equally against it, in every part, from the sock

point to Ihe place where it leaves it; and it

varies from other mould-boards, in not beginning

to take its rise from the bottom of the heel, but at least twelve inches farther forward towards the

sock, and in being cut away at the bottom op-

posite the heel, about three inches high, from the sole, by which the turning of the sod or furrow-slice is said to be much facilitated. Thus improved, these ploughs have been found to answer perfectly in different trials, and have been allowed by those who have seen them at work to go with more ease to the teams than most others. It has been supposed that the beam, from its crooked form, which is obvious in some of its improvements, by being fixed so low down in the part next to the handles, makes the plough require less force, and to go in a more sliding manner. And that from the fore end of the beam being so much higher than the hinder part, the holder of the plough has more power, as the draught does not oppose so much resistance to him ; for, if the beam were fixed to the handles much higher, as is usually the case in other ploughs, this plough would be constantly rippling on the point, and in that way increase the weight of draught. And where it meets with any resistance, such as a stone, it is liable to rise up, while in this form it proceeds in a sliding manner, which affords a steadier motion, and renders it more easily held. Besides,

it is much stronger ; particularly in the part where the left handle and the beam are joined, under-

neath the mortise where the tenon of the beam ;

by which the bearing of the ploughman on the

handles does not in the least affect that part,

which in other ploughs is the weakest. In this

improvement of the Rotherham plough the

mould-board is so constructed at the breast as to

have a slight degree of convexity, instead of

being concave, as is often the case, by which the

furrow-slice is supposed to be prevented from

slipping down ; and by the keeping the lower

part from the ground, when it comes to the turn

of the breast, it falls off; consequently, as the

furrow-slice is rested on or by the side of the

breast, when the plough has advanced twelve

inches the work is finished. By this improve-

ment it is supposed that the plough will turn a

furrow of any extent, from four to eighteen

inches, where requisite, and the same in depth ;

as the plough that will produce a wide furrow

and turn it well is capable of ploughing deep :

the convexity of the breast also causes it to clean itself better, which is a

*desirable property, as it is thereby rendered less heavy, and less resistance afforded by one portion of earth being prevented from rubbing upon another, and at the same *ime the work performed in a more perfect man- ner. The coulter has likewise a position so as to cut in a slanting manner, which causes any resistance to rise up more expeditiously, and the land to be opened with more facility than where it has a more perpendicular direction. Where this improved plough is employed with more than two horses abreast, the additional ones must be put before the pair, as it has not land enough to follow single horses. Wheels have been added to these ploughs for particular purposes ; and with either one or two fixed near the points of the beams, without any carriage parts, they have been found to pass through the soil in a very light, easy, and steady manner, and where there are two to require no holder in many cases, except in setting in turning out of the work at the ends of the ridges. The Northumberland or Cumberland plough is only an improved plough of this kind. Smalfs chain plough is esteemed one of the best of the swing kind, and seems capable of very extensive application. It has its name from*

that of the inventor, who constructed it about

forty years ago. It is neatly formed, and very

light in its appearance, but at the same time,

from the addition of the chain, possessing great

strength. It is, therefore, capable of being em-

ployed in strong rough sorts of soil, where other

sorts of ploughs are liable to be destroyed, as

when the share, or even the coulter, in this im-

plement, meets with any sudden impediment or

obstructing cause, the stress is immediately

thrown upon the chain instead of the beam. The

is formed with a fin or feather, by which

the firm earth in the bottom of the furrow is cut and moved more readily, and in a more com-

plete manner than could be done by the sock in

the common plough. In this plough the mould-

hoard is mostly made of cast-iron, ha

gentle curve, by which the furrow-slice is thrown

off with the least possible resistance. It is sup-

I by Mr. Donaldson to be on the whole one

of the best constructed swing-ploughs for all

sorts of souls. It is capable of ploughing, with

one man and two horses yoked abreast without

any driver, more than an acre a day with the

greatest ease. A plough of this sort is shown at fig. 1., plate II., RURAL

Lord Somerville's single plough is also a plough of this sort, in which the throat is sharpened, and the mould board rendered moveable in the mat-ner of his double furrow plough, shown iu-fiˆ. 5 of plate AGRICULTURE. It is capable of being made use of with advantage in breaking up deep stifi' soils, as from the moveable nature of the extreme part of the mould-board the furrow-slice can be laid more or less flat.

Ducket's skim-coulter, or trenching plough, is an implement of this sort, capable of being em-ployed with great advantage where the surface is coarse or grassy. The principle upon which this plough operates is that of trenching ground in the practice of gardening, or depositing the surface spit of earth in the bottom of the pre-ceding furrow, and placing the second, or that taken from below, upon it. Where the soils are sufficiently deep it is capable of performing its work to a considerable extent. It has been ob-served by lord Somerville, in a little tract on ploughs and oxen, that the skim requires a per-pendicular direction, and that the coulter-hole should be removed farther from the throat and

share, as in the common position it would choak

when in work.

The use of the paring plough, the fourth figure

of the plate AGRICULTUUL, will be shown in that

part of this article which treats of ‘ preparing ‘

land on the arable system,

Plate I. RURAL ECONOMY, fig. 3, shows a

plough to be made entirely of iron, to which a

new kind of share is attached, the invention of M r.

*Finlayson. This share, a, instead of having it**

cutting edge curved, or forming an obtuse angle

with the land side, is made straight, and extend-

ing nearly the whole length of the mould-board,

at an acute angle with the land side. At the

back part of the share a triangular piece, or

wing, 6, is to be introduced occasional y bv

screwing its pin into a hole in the share, for the purpose of enabling it to turn and accommodate

itself to the way of the plough. The intended

purpose of this wing is to cut the clods of the

earth, and break them in a perpendicular direc-

tion. In order to prevent the plough from choking

at the coulter, the beam is made to curve upwards

as seen at r, the coulter being introduced at the

under side, and made fast by wedges. Another

contrivance to effect the same object is shown at

1, and consists in opening the beam by

lateral curves, c, c, the coulter being attached by screw bolts, and rounded off at top. By these

means, should any stubble or other vegetable

matters accumulate in front, they would be

enabled to rise over the top of the coulter without choking or obstructing the progress of the plough.

For the purpose of r> in at which

the share shall cut the ground, the shackle by

which the plough is drawn is to be shifted higher

or lower, at the muzzle or nose of the '.

This i> done by means of a MTI-W, ,/, in

which passes through the bolt of the shackle, and,

1-y bfiiv,' timu'd, moves the shackle higher or

low or, and t!:« : the share to be drawn

through the ground at a less or greater d"pth

bem 'face, as rircumstance> nny re-

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quite. The mode of adjusting the lateral draugnt

of the plough so as to give the share more or less land, and also to enable it to be drawn by a single or double team of horses, is by the addition of a bary, fig. 5, to the end of which one of the draw-

ing shackles is to be attached. The plough,

shown at fig. 5, is constructed in every respect

upon the ordinary principles of what is called a

Scotch plough, the side bar only excepted, which

by sliding horizontally, in a lateral direction upon a plate g, may be set at any angle to the beam,

ard, being there fixed by a bolt, will cause the

plough to follow a certain course to which the

draught by the adjustment of the bar will incline it.

The skeleton plough, fig. 6, designed for wet

land, is constructed of bars set in the usual form of the mould-board, and landside ; these bars

may be either square or round, and set by screws

or bolts, cradled together so as to produce the

general figure of those surfaces. The object of

this construction is that the earth shall not adhere to the surfaces, but pass through between the

bars, and by that means allow the plough to

clear itself as it proceeds.

Fig. 7 represents the improved harrow; it is

formed of bars, which support a peculiar sort of

t;ues (shown detached at fig. 8, and another form

at fig. 9). The intention in forming these tines

with rounded heads is that the stubble, roots,

and other vegetable matters, may be enabled to

rise over the top of the tines, and clear them.

In order to regulate the depth at which the tines

of this harrow shall penetrate the ground, the

carriage of the fore-wheel is connected to a lever

bar, a, by the raising and lowering of which the

nose of the harrow is depressed or elevated to

any required distance from the ground, and con-

sequently the depth to which the tines are in-

tended to penetrate will by these means be de-

termined. The lever that regulates the fore-wheel

is held at the hinder part of the harrow by a

spring-guide, b, consisting of two rods placed

close together with swells or bands, forming

open spaces at several parts for the lever to rest in. When the tines are intended to penetrate

the ground to the greatest depth, the handle of

the lever must be raised to the top of the guide; but, when the tines are to be drawn out of the

ground, the handle must be pressed upon so as

to cause the lever to fall to the bottom of the

guide, the elastic lateral pressure of the guide

holding the lever in any intermediate position to

which it may have been shifted for adjustment.

As it is frequently necessary to lift the tines of the harrow out of the ground instantly, without

stopping the horses, as in turning at the head-

lands, that may be done by merely pressing upon

the handle of the lever. The hinder wheels of

the harrow are also to be raised or lowered to

correspond with the fore-wheel, and this is done

by means of screws, c, c, which pass through the

end bearings of the frame into the axle of the

wheels. The last improvement proposed is a

horse-hoe, or drill-harrow, with peculiarly formed

tines attached to the frame-work, as seen in fig.

10. One of these tines has been shown at fig. 9,

and before alluded to, as designed to permit the

.stubble to rise over its top, and thereby to relieve the hoe or harrow fro:n choking. At the sides of

this hoe scufflers are introduced, their extremi.

ties being formed like shares for the purpose of

cutting away obstructions.

The inventor has, we understand, received

testimonials from a number of highly respectable

agriculturists, expressing their unqualified ap-

probation of the efficacy with which these ploughs

performed when employed upon rough and un-

broken ground, for which they are particularly

designed : and the manner in which they throw off the stubble, permitting those obstructions to escape without clogging the progress, is obviously calculated to diminish the labor of draught, as well as perform clean work.

2. Other harrows are exhibited, AGRICULTURE, plate II., as the first, or tusset harrow, and second, or fallow, with their teeth separately underneath. Then follow the double seed and chain and screw harrows. By mistake the plate containing the common and iron seed harrows has been numbered plate II. of AGRICULTURE, as well as that containing the ploughs ; but the figures with these inscriptions speak sufficiently for themselves. The field roller of this plate is a very useful instrument : its weight being of course adapted to the land.

Harrows have not undergone much improvement in their construction ; the principal point in which they have been rendered more beneficially applicable and convenient for use, appears to be in the form of the frames ; the method of attaching the draught; the position and manner of fixing in the tines or teeth ; and the directions of the bulls or solid parts.

It has been justly hinted by a late writer that

there is no one harrow, whatever the nature of its construction may be, that can be applicable to every description of soil, or which can operate with equal effect and advantage on such lands as are rough and smooth, loose and solid, &c. It is necessary that they should constantly be fitted to the particular nature of the soil, and the peculiar uses to -which it is devoted.

In the lighter sorts of ground, it is obvious that smaller and lighter sorts of harrows, with shorter teeth, may more fully answer the purpose than in such as are strong, heavy, and tenacious, or which have been lately broken up from the state of old sward, and that of common moor heath, and other sorts of waste, where they should have much greater weight and length of tines. It is frequently the practice, where the soil is rough and stubborn, as in some instances of fallowing stiff clayey lands, to unite two common harrows together, in order more completely to reduce and break down the lumpiness of such grounds. And in the view of effecting these purposes, especially where the soil is stiff, adhesive, and much matted with weeds, it has been found advantageous not to have the harrows too

thickly set with tines, by which they are liable to become choked up, and prevented from working in a proper manner.

The hitching or riding of harrows upon each other it has been attempted to remove, by having them constructed with running bulls, which are said to answer the purpose. It has also been suggested that inconveniences of this nature may be obviated by the mere fastening of the different

harrows together by means of hooks and eyes, or what in some places are called coupling-irons ; as in this way the different harrows are only suffered to rise and fall at the same time.

3. Lester's cultivator of our (second) plate II. AGRICULTURE, is a fine implement amongst the variety that have been suggested as pulverisers of the soil. The scuffler is of similar character and use. But the grubber, RURAL ECONOMY, plate II. fig. 2, is thought an improvement on both. — All the coulters but two are fixed iu the bars ; these two are placed in the side beams of the outer fume, and may be said to go more or less deep by pins and wedges. Land on which po-

tatoes or turnips have grown, or that has been ploughed in autumn or winter may be so stirred by this instrument that a crop may be sown in spring without further use of the plough. Beans and pease have been thus sown in spring, says Mr. Cleghorn, on the winter furrow, after being stirred by the grubber : and barley also, after turnip, without any ploughing. In working fallow it is used with good effect.

4. The heavy roller of our (second) plate II. AGRICULTURE has been improved upon, in a compound or spiked roller, and in the roller and water-box, plate III. RURAL ECONOMY, fig. 1, of which latter a representation is given. The spiked roller is employed in working fallows, or preparing stiff bean land for wheat. In stiff clay-ground, when ploughed dry, or which has been much trod upon, the furrow-slice will rise in large lumps, or clods, which the harrow cannot break. In this state of the ground, the rollers commonly used have little effect. Indeed, the seed is often buried in the ground, observes Mr. Loudon, by the clods being pressed down upon it by the weight of the roller. ‘ To remedy this, the spike-roller has been employed, and

found very useful ; but a roller can be made, which, perhaps, may answer the purpose better than the spike one. This roller is formed from a piece of hard wood, of a cylindrical form, on which are placed several rows of sharp-pointed darts, made either of forged iron, or cast metal. These darts, by striking the hard clods in a sloping direction, cut or split them into small pieces; and, by this means, they must be more easily pulverised by the harrow.'

5. The best, and, as Mr. Loudon says, ' the essential drill machines, are French's for turnips, Cooke's for corn, and the drill attached to a plough for beans.'

Mr. French was an agricultural mechanic of Northumberland, who first suggested the great improvement of concave rollers in the drill machine. Since it has been usual to sow pulverised manure with turnip seed, two hoppers (A) (A) have been added to his invention. See plate III. fig. 2.

Cooke's improve 1 drill and horse-hoe is shown in fig. 3, plate III. It can be used as cultivator, hoe, rake, &c. It is in general use in

Norfolk, Suffolk, and various other parts of

England. Its advantages are said to be, 1.

That the wheels are so large that the ma-

chine c;iii travel on any road without trouble or

*'i.ui.rrof I'l-iakinjr ; ;iU:> tV.m tlx, farm to the X<\, .M'nnut taking :» [i*C8l. •:. In ihe*

coulter-beam, with all the coulters, moving with

*great ease, on the principle of the pentagraph. *o*

the right or left, so as to counteract the irregula-

rity of the horse's draught, by which means the

drills may be made straight: and, where lands or

ridges are made four and a half or nine and a half feet wide, the horse may always go in the furrow,

without setting a foot on the land, either in drilling or horse-hoeing. 3. In the seed supplying itself

regularly, without any attention, from the upper

to the lower boxes, as it is distributed. 4. In

lifting the pin -on the coulter-beam to a hook 011

the axis of the wheels ; by which means the

coulters are kept out of the ground at the end of the land, without the least labor or fatigue to the person who attends the machine. 5. In going

up or down steep hills, in the seed-box being

elevated or depressed accordingly, so as to ren-

der the distribution of the seed regular ; and the

seed being covered by a lid, and thus screened

from wind or rain. The bean drill attached to a

plough is shown fig. 4. — It can be fixed in the

handles of any common plough.

The interval between the rows of drilled tur-

nips, potatoes, and beans and peas, admit the

employment of a horse-hoe, or hoeing-plough.

Of this kind of machine there are many varieties.

A very good one is described in the Northum-

berland Report (p. 43). The body is of a trian-

gular form, and contains three coulters and three

hoes, or six hoes, according to the state of the soil.

A hoe of the same kind is sometimes attached to a small roller, and employed between rows of

wheat and barley, from nine to twelve inches

distant ; it is also used in place of a cultivator, in preparing bean stubbles for wheat in autumn,

and for barley in spring. For THRESHING and

WINNOWING MACHINES, see those articles

ADDENDA.

We hoped (see our article AOUCDLTDBB)

to advert at this period of the publication of

our work to a more satisfactory adjustment of

the corn question by the government.

At present (1829) we have only seen another

temporary and tampering expedient resorted to

in the shape of a new corn bill which we be-

lieve satisfies no party. We consider this, there-

fore, still an adjourned question ; and shall only

add some miscellaneous observations on its im-

portance. We are indebted to a pamphlet pub-

lished at the period of the passing of the corn

bill of 1815 for the following observations: —

1. On the variations in seasons, and their

on agricultural productions. — Although the price

at which productions will sell is in some in. a

sure regulated by the proportion betwixt demand

and supply, yet it is by no means in the ratio of the excesses to the demand in times of super-

abundance, or in the ratio of deficiency to demand

in times of scarcity. Thus, if the demand be as-

ten, and the supply as eleven, the price will be

depressed more than ten per cent. If, on the;

other hand, the demand be as ten, and the sim-

ply as nine, the price will be raised more than

ten per cent. If the demand continue the same,

and (lie supply be as twelve, the price to wliic-h the | roduclinii will be reduced will !•< I'ar tnur9

than ten per cent, lower than it would have been

with a supply at eleven.

It will not be necessary to carry this illustration farther, though it will be obvious that, in the case of excess of supply beyond demand, the depreciation will be much greater in a commodity that is quickly perishable, than in one that will retain its properties for a long period. Even in articles that lose none of their virtues by being preserved, but from their bulk require considerable space, the depreciation will be greater than in those which are more easily removed or stored at less expense. Thus potatoes have felt a much greater depreciation than wheat from their perishable nature ; and, from being bulky, when raised at a distance from a large town or a populous district, they have not borne even the expense of conveyance to the consumers. The prices of commodities are also influenced in some measure, and occasionally in a considerable degree, by the prevalence of public opinion, as to the proportion between demand and supply ; and, in articles of the first necessity, to a greater extent than in those of inferior consideration. This influence, however, is of a transient kind ; and the opinion on which it is grounded is generally corrected before any

very injurious effect is produced.

From the great variety in soil and climate within this island, the produce of our harvests generally does not vary so much as a slight observer would suppose. The wet seasons, which are injurious to our cold and heavy soils, are beneficial to those of the opposite description; and a summer of great drought, which parches the lighter soils, and lessens their productions, increases those of the heavier soils. There will, however, be variations in productiveness, but usually not to a great extent. Perhaps on a large average of years, not including one or two of very uncommon character, it will be found that, taking the standard as twenty, in the best years their production may have reached twenty-three, and the worst, not fallen short of seventeen ; and that most of our harvests have been at some period between seventeen and twenty-three. If the views we have taken be tolerably correct, we may presume that for the past twenty years, if our production has been as twenty, our consumption may be estimated as twenty-one ; and this estimate will be confirmed

by the excess of our importation beyond our exportation of corn for that period, as shown by the public documents.

Previously to the year 1811 there had been for several years a gradual increase in the prices of corn, such as must have happened if, as in every other country, the population had a little preceded in its march the production of food. This increase had given a stimulus to agriculture ; the capital which had acci«nulated in that branch of industry had been invested in making further improvements ; some extraneous capital also was attracted into the same channel, and in consequence a greater portion of labor was exerdsed in cultivation than it had before received. The harvest of 1811 was miserably deficient; and, before one half of it was threshed, the deficiency became obvious ; prices rose with rapidity, and to a height scarcely ever known before. The advance in price came too late to produce much influence on the ensuing harvest. Some spring wheat indeed was sown ; but its effect in aiding national subsistence was trifling, as the same land would probably have produced more

food, if, as usual, barley, and not spring wheat, had succeeded to turnips.

The deficiency of the harvest of 1811 was not made up by that of 1812, which probably readied the average of our usual production, or one-twentieth less than our consumption. The same price thus continued, and, appearing to be almost permanently fixed at a rate that would pay the most expensive cultivation, it gave a stimulus to still greater agricultural exertions ; no cost w;is spared in the purchase of manures ; every portion of land capable of bearing corn was appropriated to that purpose ; the usual and regular courses of cropping were generally deviated from ; and a breadth of land sown, far exceeding what had ever before been done. Potatoes, which had borne a higher relative price than corn, were cultivated also to an extent before unknown.

The year 1313 proved highly propitious; all the different species of corn were favored by the seasons, whose variations seemed exactly executed as if to promote abundant vegetation ; the weather whilst harvesting this crop was unusually favorable ; and this bountiful supply, housed

under such happy circumstances, proved as good in quality, as it was excessive in quantity. But the impression of its abundance upon the public exceeded the reality.

It is extremely difficult to estimate the quantum of excess in this year of singular character. As fai as pretty extensive enquiry, and not inattentive observation, may enable us, we may attempt the calculation without the fear of erring very materially. Most of the farmers on poor lands, whose usual growth of wheat had been twenty bushels to the acre, in that year allow that their growth amounted to from twenty-four to twenty-five bushels; those on better lands usually producing twenty-four to twenty-six, produced from thirty to thirty-two bushels, and on the very best wheat lands some have stated their excess above the usual production to amount to eight bushels. Allowing difficulty of accuracy, and requesting that indulgence which the nature of the case requires, it will not be deemed presumptuous to estimate this great production at twenty-six, taking, as before, the average production as > twenty, and the consump-

tion as twenty-one : this will account, if tolerably accurate, for an enormous depreciation in price.

The happy events which led to the peace fol-

lowed each other in quick succession. Soon

after our harvest was securely housed, the foreign

ports were opened as well as our own, and a

large importation of foreign corn was made.

The words peace and plenty have been so com-

monly joined together that the public expected

some union by which one must necessarily pro-

duce the other ; as if a magical operation was to

be performed by the cessation of war, by which

either the earth was to become more fertile, or

thf physical necessity for food become lessened.

‘ Partly from the clamors of the populace, partly

from the state of the foreign exchanges, and,

perhaps, partly because the measure originated

with their political opponents, the alterations in

the corn laws, which it was afterwards found

necessary to make, were protracted by ministers

till the greatest mischief was effected ; and then, when too late to be of any service, they were

enacted amidst as much popular confusion as

could have happened had it been done at the

proper period.

Notwithstanding the surplus quantity of corn

produced by the harvest of 1813, the markets

would not liave^been so ruinously depressed if

the law had protected the grower early against

the foreign competitors. A sufficient number

would have retained their stock, or at least a

part of it, till a more distant period ; but, seeing no check on the foreign corn, and dreading a

larger quantity than even could be imported,

each rushed to the market, the produce rapidly

fell, till at last it seemed permanently settled at a price from thirty to fifty per cent, below its ac-

tual cost. Those farmers who were obliged to

sell, and who are the far greater proportion of

the body, when they wanted money to pay their

rent, taxes, and laborers, were under the neces-

sity of selling a double quantity, to realise the

usual sum ; and thus a glut was produced,

which has been attended with the most serious

consequences. The harvest of 1814 was by no

means abundant in quantity, and the quality of

the wheat was so bad in general, and yielded so

little flour, that it may be fairly estimated below the average rate of our production. The surplus

of the preceding great harvest, and the quantity imported, which was increased by the expectation that the corn bill would raise the price, were sufficient for the consumption of the year, but left a very small stock on hand to meet the future wants of the country. The harvest which followed, in 1815, was a month earlier than our harvests usually are ; and from the surplus of the great harvest, from the imported quantity, and" from the harvest of 1814, instead of twelve, not more than eleven months' provision had been consumed, when the next harvest commenced. The very low price at which wheat was sold, now increased the consumption very considerably ; and the inferior qualities of it, whkh would produce but little at the market, were used for fattening cattle, and for other purposes to which wheat was never applied before. Thus a degree of profusion in the use of it has rendered the surplus quantity of little avail towards supplying any future scarcity that may occur.

The harvest of 1815, which has been before stated to have taken place a month earlier than usual, found us with a small quantity of foreign

wheat of an indifferent quality in the granaries at the sea ports, and but a small stock in the hands of the grower, probably not more than sufficient

for our consumption to the usual period at which

our corn is harvested. The productiveness of the

harvest of 1815 most certainly was below the

average of our consumption, at least if the whole

rnay l>e judged of from the southern parts of the

island ; but still the markets became lower, not

*from abundance, but from the impoverished^*

condition of the cultivators. At an unusually

early period a great quantity of new corn was

produced in the markets ; the pressing demands

for money could only be met by sacrificing at

less than half the cost the greater part of the

year's production and even that became insuffi-

cient to satisfy only the most pressing wants;

the inferior wheats could not be sold at any rate ; the prices were so low that only wheat of the

best quality would suit the palates even of the

poor ; and accordingly at this early period there is felt a scarcity of the finest kinds of wheat. The

same profusion of the inferior descriptions has

continued ; and the probability is that, before

the harvest arrives, a sensible deficiency will be

discovered. Thus from the alarm produced by

an expectation of enormous importation of fo-

reign corn, added to a surplus at home, our own

prices have been reduced so low as to bring

ruin on many cultivator's, and a loss of capital to all, which, whatever may be the future demand,

must prevent them from bestowing on the land

that labor which can alone enable it to produce

nearly sufficient for our subsistence.

If the corn-bill (of 1815) passed in the last ses-

sion of parliament, had been enacted when it was

first proposed, it is probable that the price would have been kept at nearly its cost, notwithstanding

the surplus quantity. The general profusion in

the use of corn would not have taken place ;

some of the surplus would have been stored to

meet future periods of scarcity ; and the land

whose culture is now slighted, and neglected,

would have been kept up to that full power

of production, which is now from the loss of ca-

pital gradually diminishing.

2. On the present and future effects of the de-

pression of agriculture. — It is not unusual to hear

those who have paid but slight attention to the

nature of agriculture express their surprise that

a year or two of actual loss, should be produc-

tive of so much distress as jis complained of at

present; especially when following years in which the cultivators have gained large profits. They ask, cannot those who during several years have gained on the amount of their capital a larger share of profit than other members of the community endure the discontinuance of that profit, or even some loss, without suffering more than has been inflicted on their neighbours ? It may not be amiss in the first place to remark that, in those years in which the produce of the land has borne the highest prices, they

have seldom been very much raised till a large part of the growth of the more numerous portion, the poorer farmers, had passed from their hands into those of the corn merchant, the factor, or the meal-man ; and, therefore, those who most needed have been the least benefited by such high prices. The fact is that the smaller class of farmers are under the necessity of selling their produce early ; long before the deficiency is apparent; and therefore never can have the full benefit which "the richer part of the profession, the smaller number, may sometimes gain. Very high prices of produce, such as were obtained three or four years ago, have been occasioned by crops deficient either in quantity or quality ; and then such advanced prices amounted to but little more on the whole growth

of the year, than a good crop would have produced at lower prices.

Whatever gains have been made in prosperous years by the great mass of cultivators, however much they may have increased their substance

during those years, it has not usually been diverted into other channels than that in which it has been acquired. It has generally been expended either in improving the soil already under cultivation, or in preparing land, before in a neglected state, to bear the most valuable crops. Thus this increase of property, added to what they had before invested in agriculture, has only increased their loss. It is almost needless to state that all land recently brought into cultivation, instead of repaying any part of the capital expended upon it, or even any interest, has not paid the annual expenses of seed, labor, and taxes ; and the loss has been equal to the capital expended, and the annual rent. It will thus appear that a series of years of moderate prosperity and accumulation, if that accumulation has been re-invested in the soil, is not a compensation equivalent to the disastrous events which the two last years have produced ; in which probably the whole rental of the corn land in this kingdom has been paid (as far as rents have been paid), not out of the profits, but out of the capital of the cultivators.

The first of the evils, a long train of which must follow, has fallen on the laboring poor, whose wages, indeed, have not been lessened to the full extent of the reduced prices of the produce of the land, and who, could they obtain employment, would have no great reason to complain ; but their sufferings arise from the scarcity of labor. The farmer has no means, and no inducement to employ laborers, the cost of whose labor is greater than he can hope to be paid for ; and should corn now become higher in price, the greater part of his growth being sold, he would still be unable to pay those whom, excited by hopes of further improvement, he might wish to employ.

At no period in the memory of man has there been so great a portion of industrious agricultural laborers absolutely destitute as at the present moment. They cannot procure employment, and parochial relief is doled out with a scanty hand, by those who want even the pittance that is bestowed to pay the few workmen they are obliged to employ. This evil is not likely to be lessened, but, on the contrary, must increase as the capital of the farmers ap-

proaches nearer to annihilation. To them it will be of no consequence that labor is cheap, and corn scarce. The capital, \liich by setting in motion the labor would increase the quantity of corn grown, is departed, and a long period must elapse before it can be again collected. The mechanics and tradesmen, whose principal dependence was on the agriculturists, and who form a very large proportion of the kingdom, are in a situation not much better than the laboring poor. Their best customers can scarcely employ them; and for the little trade they have, instead of being paid with punctuality as heretofore, they are glad to receive a very small proportion, and defer the remainder to a future period. This evil extends to all the other classes not immediately dependent on the agriculturists ; and it would be difficult to point out a single branch of industry that is not suffering under the influence of the general depression.

The higher classes of the community, the landed proprietors, whose wealth and rank are as beneficial to the poor as to themselves, must suffer in their revenues and their comforts, as well as in their feelings. They have been warranted in living very (nearly up to their annual incomes : and,

in general, cannot be capable of very great re-

trenchments, without denying themselves many

luxuries, and even comforts, in the furnishing of

which numerous members of the community

have found the means of subsistence. It is no-

torious that rents cannot be paid, except in a

few partial instances ; that, as the capital of the tenants is d minished, their means of paying

must become lessened ; and, for many extensive

portions of land, no tenants will be found who

have the means of cultivating them. Thus that

important class, the pillars and the ornaments of

our country, are already in some degree, and

must more extensively hereafter become sharers

in the general calamity.

This slight sketch of the evils which have

already resulted from the depression of agricul-

ture, and whose extent must be yet increasing, is

by no means overcharged. The subject is too

painful, or it might be much enlarged. Alarm-

ing, however, as this representation is, it is by no means equal to those which the future presents.

The distress of the agriculturists has been stated

to have already diminished the labor applied to

the land. The withdrawing of the labor will di-

minish the produce ; and if the opinions before stated, of the proportion between our supply of food and our consumption, be nearly correct, a very small diminution in our produce, which is already begun, and will surely continue, must reduce the community to a state approaching to famine.

It may appear ridiculous, to those who suppose we are overloaded with food, to talk of approaching famine : they may think that, having already too much corn, we shall never again feel a deficiency of that necessary article : but let it be considered that, during twenty years, we have regularly, with one exception, felt a deficiency ; that in the whole of that period, if not rapidly, our agriculture was regularly increasing, whereas now it is at least as rapidly on the decline ; that many producing farms are now absolutely and totally without cultivation ; that the number of such farms is daily increasing ; that the land which has hitherto enjoyed its full portion of labor is deprived of the greater part ; and that the population has increased, and will continue to do so till it is checked by a scarcity of food.

If these facts are correct, and it is scarcely pos-

sible that they should be controverted, the time cannot be very distant when our cultivation will be so much diminished, that after a harvest but a little below the ordinary rate of productiveness, our deficiency in corn must be too great for any surplus in foreign countries to supply our wants, however high the price we may offer for it.

If it be true that at the commencement of the last harvest there was not a surplus of wheat sufficient to supply us for more than a month ; that the produce of the last year was below the average of twelve months' consumption; that, unless the next harvest happens as early as the last, thirteen months' consumption will be requisite ; that from the distress of the farmers the markets early became overloaded, and were depressed to a price that created profusion in the use of wheat ; that the cultivation of potatoes, that useful substitute for wheat, has, from the losses sustained, nearly ceased, except in the vicinity of large towns or populous districts ; and

if we consider that the price of wheat is in most parts of Europe so high as to indicate a scarcity

rather than a surplus, we may conclude that a

considerable degree of want will prevail before any

new wheat is produced. If such scarcity should

happen, and a probability appear of such a

price being maintained as will repay the expense

of cultivation, those who have not quite ex-

hausted their powers may continue the growth

of corn to a moderate extent ; but, should it

happen that the present depression continues,

the prospect will be gloomy indeed ; the great

number of cultivators who will have been driven

from the occupation, the increased quantity of

land without culture, and the slovenly manner in

which what is cultivated will be managed, must

produce scarcity, famine, and depopulation.

These observations may be thought a little an-

tiquated, but we conceive most of the reasoning

applicable to the present state of agricultural

affairs : and cannot better conclude than by the

following brief statement of the drawbacks and

improvements in agriculture, suggested by another

able writer, Mr. Cleghora, in the article we have

already been much indebted to, Agriculture,

Supplement to the Encyclopaedia Britannica. ‘ To the class of drawbacks upon agriculture,’ says this writer, ‘ and impediments to its improvement, belong tithes, — poor-rates, — payments in the shape of fines, and services exacted by the lords of manors — entails — tenancy at will, or on very short leases — unfair restrictions on the tenant as to the disposal of his lease, and as to the management of the lands during its currency —the game laws — and the complicated regulations under which commons and common fields are cultivated, and the great expense required to place them in a state of severally. It appears that nearly three-fourths of the land of England and Wales are exposed to claims which wrest from the husbandman one-tenth of the gross produce of his labor and capital, and this whether the remainder of the produce be or be not sufficient for his remuneration. Though no rent were paid for poor soils, this burden alone would effectually prohibit their correct cultivation ; and, even in the case of rich soils, tithes diminish the rent so considerably, as to make it the interest of landholders, in many parts of England, to restrain their tenants from converting grass lands into tillage; that is, from placing them under the most productive management for the community, both in regard to the supply of food and of em-

ployment.

- *To the enlightened enquirer it "must appear*

abundantly clear that all plans for the extension

and improvement of British agriculture must

prove ineffectual, so long as these capital obsta-

cles are left untouched ; and that their removal

is all that need be done, and all that ought to be done by a wise government, for securing an abun-

dant supply of the first necessaries of life. Let

all land be held and occupied in severally — let it be exempted from all indefinite exact ons, parti-

cularly such as diminish, or altogether absorb

the just returns of capital and industry — let the

connexion between the land proprietor and the

farmer be every where formed upon equitable

principles to the exclusion of all remnants of feu-

dal ideas, all notions of favor and dependence,

and all obligalions lhat do not appear within the

four corners of the lease itself, or i« not im-

posed by the general principles of law — let the

rights of a tenant be so far enlarged as lhat he

may be enabled at pleasure to withdraw his

capital by a transference of his lease, and to re-

gulate the succession to it after his death — then

there can be little doubt thai a large pan of the disposable capital of the nalion, now embark C' I

in much less profitable pursuits, would, of its own accord, turn lowards the improvement of our lands ; and thus furnish employment and subsistence for our population, secure from the caprice of fashion, and the rivalship and jealousy of other countries.'

RUSCUS, knee-holm, knee-holly, or butcher's broom, a genus of the syngenesia, and dicecia class of plants ; natural order eleventh, sarmentaceae : MALE CAL. hexaphyllous : COB. none, nectarium central, ovate, and perforated al ihe top : FEMALE CAL. COR. and nectarium are the same as in the male ; there is one style, with a trilocular two seeded berry. The most remarkable species is the

K. aculeatus, or common butcher's broom, common in ihe woods in many parts of England. It has roots composed of many thick fibres which twine about each other ; from which arise several stiff green stalks about three feet high, sending out from their sides sc' oral ihort branches, garnished with stiff, oval, heart-rhaped leaves, placed alternately on every pa it of the stalk, ending with sharp prickly points.

The flowers are produced in the middle, on the upper side of the leave? ; they are small, and cut into six parts,; of a purple color, sitting close to the midrib. They appear in June ; and the female flowers are succeeded by berries as large as cherries, of a sweetish taste, which ripen in winter; when ihey are of a beautiful red color. As this plant grows wild in m<»t parts of England, it is rarely admitted into gardens ; but, if some, of ihe rools are plaiiuˆl under tall trees in large plantations, they will spread into large clumps ; and, as ihey retain their leaves in winter, at that season they will have a good effect. The seeds of this plant generally lie a year in the ground before they vegetate; and Ihe plants so raised are long before

they arrive at a size big enough to make any figure, and therefore it is much better to transplant the roots. The root is accounted aperient, and in this intention is sometimes made an ingredient in apozejns and diet drinks, for opening

slight obstructions of the viscera and promoting

the fluid secretions. This plant is used by the

butchers for besoms to sweep their blocks.

K.USE, TI. s. Fr. ruse. Cunning; artifice;

little stratagem ; trick. A French word, says

Johnson, neither elegant nor necessary.

1 might here add much concerning the wiles and

ruses, which these timid creatures use to save them-

selves. Ray.

RUSH, n. s. } Sax. nipc; Teut. rusch ;

RUSH-CANDLE, >Goth. raus. A plant: the

RUSHY, adj. 3 compound and adjective

follow the noun-substantive in sense.

He taught me how to know a man in love ; in

which cage of rushes I am sure you are not prisoner.

Stiakspeare.

.Man but a rush against Othello's breast,

And he retires. Id. Othello.

He it moon or sun or what you please ;

And if jou please to call it a rush-candle,

Henceforth it shall be so for me. Shakspetire.

If your influence be quite dammed up

With black usurping mists, some gentle taper,

Though a rush-caudle from the wicker hole

Of some clay habitation, visit-us. Milton.

Your farm requites your pains ;

Though rushes overspread the neighbouring plains.

Dryden.

Not a rush matter, whether apes go on four legs or two. L' Estrange.

In rushy grounds, springs are found at the first

snit. Mortimer.

John Bull's friendship is not worth a rush.

Arbuthnot.

What knight like him could toss the rushy lance ?

Ticket.

The timid hare to some lone seat

Retired ; the rushy fen or rugged furze. Thomson.

A rush hath a flower composed of many leaves,

which are placed orbicularly, and expand in form of a rose : they are planted with great care on the

hanks of the sea in Holland, in order to prevent the water from washing away the earth ; for the roots of these rushes fasten themselves very deep in the

ground, and mat themselves near the surface, so as to hold the earth closely together. Miller.

RUSH, v. n. Sen. s. Sax. pneopan. To move

with violence ; go on with tumultuous rapidity ;

violent course or motion.

Their dam upstart out of her den afraide,

And rushed forth, hurling her hideous taile.

Spenser. Faerie Queene.

Gorgias removed out of the camp by night, to the

end he might rush upon the camp of the Jews.

1 Mac. iv. 2.

A gentleman of his train spurred up his horse,

and with a violent rush severed him from the duke.

Wotton.

Him while fresh and fragrant time

Cherisht in his golden prime,

The rush of death's unruly wave

Swept him off into the grave. Crashaw.

Annies ruth to battle in his clouds. Milton.

Desperate should he rush, and lose his life,

With odds oppressed. Drydens JEneis.

They will always strive to be good Christians, but

never think it to be a part of religion to rush into the office of princes or ministers. Sprat.

You say, the sea

Does with its waves fall backward to the west,

And, thence repelled, advances to the east ;

While this revolting motion does indure,

The deep must reel, and rush from shoar to shoar,

Blackmure.

With a rushing sound the assembly bend

Diverse their steps. Pope's Odyssey.

RUSH, in botany. See JUNCUS.

RUSH, SWEET. See Acouus.

RUSHWORTH (John), was born in Northumberland about 1607. After attending the university of Oxford, he removed to Lincoln's Inn ; and attended the meetings of parliament, where he wrote down the speeches of the king and members. During eleven years, from 1630 to 1640, when no parliament was held, he was an attentive observer of the great transactions of state in the star-chamber, the court of honor, and exchequer chamber. He also visited the camp at Berwick, was present at the battle of Newborn, at the treaty of Rippon, and at the great council of York. In 1640 he was appointed assistant to Henry Elsynge, clerk to the house of commons; and the commons trusted him to convey their overtures to the king, while he was at York. When the parliament created Fairfax their general, Rushworth was appointed his secretary ; and, when Fairfax resigned his commission, Rushworth returned to Lincoln's Inn, and was soon after chosen one of the committee to consider the propriety and means of new-model-

ling the common law. He was elected a repre-

sentative for Berwick-upon-Tweed to the parlia-

'ment which Richard Cromwell assembled in

1658, and was reelected to that which restored

Charles II. to tfye crown. After the restoration

he delivered to the king several books of the

privy council, which he had preserved during-

the commotions. Sir Orlando Bridgeman keeper

of the great seal chose him his secretary in 1677, which office he held as long as Sir Orlando kept

the seals. In 1678 he was a third time chosen

member for Berwick, and a fourth time in the

parliament in 1679. He was imprisoned in the

King's Bench for the last six years of his life.

He died 12th of May, 1690. His Historical

Collection of Private Passages in State, weighty

Matters in Law, and Remarkable Proceedings

in Parliament, was published in folio. The

first part appeared in 1659 ; the second in 1680 ; the third in 1692; the fourth and last was pub-

lished in 1701 ; and altogether made 7 vols.

These underwent a second edition in 1721 ; and

the trial of the earl of Strafford was added,

which made the eighth. This work has of course

been much applauded by those who condemn

the conduct of Charles L, and accused of parti-

ality by their opponents.

RUSK, n. s. Arm. ruzg. Hard bread for

stores.

The lady sent me divers presents of fruits, sugar,

and rusk. Raleigh.

RUSMA, in natural history, is the modern

name of the eastern nations for the substance

called by the ancient Greeks sory, and used as a

depilatory. The Turks in particular call this sub-

stance rusma. It is not, as some have imagined,

a mineral substance found ready for use, in the

bowels of the earth ; but requires a preparation

and alloy. Bellon, who first described at Cuta,

in Galatia, ‘ the source of a mineral which they

call rusma,’ adds that this mineral alone cannot

be used ‘ till it has been beaten into a very fine powder, putting half as much quicklime as

rusma, which is then diluted in a vessel with

water.’ Thus the rusma of Bellon is not of it-

self a depilatory ; but it contains some caustic

matter, which being mixed with lime gives it that

property. This presumption is confirmed by

Velmont de Bomare, who, having received from Constantinople some small pieces of mineral rusma, perceived that, on throwing it upon hot coals, there immediately exhaled from it a vapor, which gives reason for suspecting that it is a ‘ colchitis’ mineralised by sulphur and arsenic. This mixture is the true rusraa of the Turks, and the nouret of the Arabs. Boyle tells us- he made a fine powder of equal parts of rusma and quicklime, and, letting them soak a little time in water, they became a soft paste, which he spread on the part he would free from hair ; and, after letting this paste lie on about three minutes, he wiped it off with a wet cloth, and found the hair taken away by the roots without any inconvenience.

RUSSEL (Alexander), M. D., was born and educated at Edinburgh. He became physician to the English Factory at Aleppo. In 1775 he published a History of Aleppo, whicli was much esteemed, and has since been reprinted, and translated into different languages. He returned to England in 1759, and became physician to St. Thomas’s hospital. He died in 1770.

RCSSEL (Lord William), an illustrious British patriot, the third son of William, first duke of Bedford, was born in 1641. In 1667 he married Rachael, second daughter of Thomas Wriothesly, earl of Southampton, and widow of lord Vaughan, a lady of distinguished talents and piety. Having obtained a seat in the house of commons, he took part with the whigs, and opposed the succession of James duke of York, with great zeal. He afterwards entered into various schemes for excluding that prince, for which he was indicted and tried at the Old Bailey, by a venal court, and a packed jury who found him guilty ; and he was beheaded at Lincoln's Inn "Fields, July 31st, 1683. In 1689 the house of lords passed an act, reversing his attainder. His lady survived him several years, and a volume of her correspondence with some of the most eminent personages of that age has been published. See GREAT BRITAIN.

RL'SSELIA, in botany, a genus of the digynia order, and pentandria class of plants : CAL. five-leaved : rop.. two-lipped ; petals five above: CAPS. one celled and many seeded. Species one only,

a climber of Havannah.

RUSSELL (Thomas Macnamara,) esq., admi-

ral of the white, was descended, on both sides,

from most respectable families. His father (an

Englishman) went over to Ireland, where he

married a lady of that country, and settled. .Mr.

11 was born, we believe, about the year

1743, and his Christian name .Macnamara was

derived from his paternal crrandmother. At the

early age of five years, he had the misfortune of

losing his father : and, through either the fraud

or mismanagement of his guardians, all the for-

tune which had been left him was dissipated by

the time that he reached fourteen. Our officer

entered the service at an early period ; and, after serving fourteen years as midshipman, was pro-

moted to the rank of lieutenant. During the

war with the colonies he served on board the

Albany, Diligent, and Raleigh, principally on

the coast of America, and distinguished himself

on several occasions. The pilot having once

run the Albany upon a rock, at some distance

from the land, to the westward of the bay of

Fundy. lieutenant Russell requested and ob-

tained from his commander the Albany's boats,

armed with volunteers, to cruize for vessels to lighten and get her off; or, should that be impracticable, to save her stores, and to cover their own retreat to Halifax. In the course of seven or eight hours he returned, with no fewer than four fine sloops and schooners, some laden and some in ballast, which he had cut out from under a very heavy fire from the shore.

From the Albany Mr. Russell was removed to the command of the Diligent brig, of eisrht three-pounders. In this ship, whilst cruising off the Chesapeak, he engaged and took the Lady Washington, letter of marque, of sixteen six-pounders, richly laden, from France. Mr. Uussell now became first lieutenant of the Raleigh, commanded by captain (afterwards admiral) Gambier. In this ship he was engaged in repelling the French attempt upon Jersey (under the command of captain Ford and Sir James Wallace) in 1779.

After this service lord Shuldham, then port admiral at Plymouth, honored lieutenant Russell with the command of Drake's Island, with 200 or 300 seamen and marines. His lordship flatter-

ingly termed this the Post of Honor; it being, as he observed, the advanced post of Great Britain, whilst the combined fleets kept the channel. Lieutenant Russell next served in the Raleigh, at the siege of Charlestown ; on the reduction of which (May the llth, 1780) vice-admiral Arbuthnot, the naval commander-in-chief, promoted him to the rank of master and commander in the Beaumont sloop.

From the Beaumont sloop, captain Russell was made post in the Bedford, of seventy-four guns, then bearing the broad pendant of commodore Affleck. He soon after removed into the Hussar, of twenty guns; in which ship he cruised successfully against the enemy, by taking and destroying a large frigate near Boston, laden with masts and naval stores, for the French fleet ; a large brig privateer, of eighteen guns ; a letter of marque, of nearly the same force ; and several smaller prizes, beside the Sybille frigate, the capture of which demands more particular notice.— The Hussar had only twenty guns, and 1 16 men, thirteen of whom were on the sick li>t ; but La Sybille had thirty-eight guns, and 350 men ; circumstances which rendered the odds far

greater in favor of the Frenchman.

Captain Russell's official letter says, ' On my

approach, she displayed an English ensign re-

i in her main shrouds, and English colors

over French at the ensign-staff. Having like-

RUSSELL.

wise discovered that she was under very good

jury-masts, had some shot-holes in her quarter,

and not supposing that French tactics contained

a ruse de guerre of so black a tint, I took her to he what her colors intimated — a distressed prize

to some of his majesty's ships ; every hostile

idea vanished ; my mind was employed in de-

vising means to succor and protect her ; I de-

clined the privilege of my supposed rank, and

stood under his lee to hail. At that moment, by

a pre-concerted and rapid movement, he put up

his helm, aimed at laying me athwart hawse,

carrying away my bowsprit, raking, and then

boarding me. I felt the error of my credulity;

ordered our helm hard-a-weather, shivered, and

shortened the after-sails: The Hussar obeyed it

• — saved me from the murdering reflection of a

surprise — baffled in part the enemies' attention,

and received only a half-raking fire ; which,

however, tore me to pieces forward, and killed

two of my men. By this time both ships were

by the lee forward, and almost aboard each other.

I called aloud, to stand by to board him. It

had the desired effect; he put up his helm —

wore off — the Hussar closed with him — and a

fair engagement commenced before the wind.

After about two hours' chase, the Hussar got up

abreast of the enemy, gave him one broadside,

which he returned with two guns, and struck his

colors; the Centurion, then about long random

shot astern, and the Terrier sloop about four or

five miles to leeward, under a pressure of sail.

The French officers, when prisoners, confessed

that it was their intention to put the crew of the Hussar to the sword for daring to chase them in

so contemptible a ship.'

From the circumstance of peace taking place

just at that period, the above letter was never

published. Perhaps, also, from motives of con-

ciliation on the part of Great Britain, it was

thought politic not to give it to the world, as it certainly bore extremely hard upon the French

commander. But, as it was intended that this

letter should appear at the court of France

against count Krergarou, it became necessary to have it legally authenticated, which was accordingly done.

When the captain of la Sybille delivered his sword to captain Russell on the Hussar's quarter-deck, he commenced a speech, with much pomposity of style and manner, saying, ' Accept, Sir, of a sword, which was never before surrendered. Conceive my feeling, on being reduced to it by a ship of less than half my force but such a ship ! such a constant and continued tremendous fire '. ' — Captain Russell answered, ' Sir, 1 must humbly beg leave to decline any compliments to this ship, her omcers, or company, as I cannot return them. She is indeed no more than a British ship of her class should be. She had not fair play : but Almighty God has saved her from a most foul snare of a most perfidious enemy.' ' I receive your sword with me most inexpressible contempt ; and, sir, you will please to observe, that lest it should ever defile the hand of any honest French or English officer, I here, in the most formal and public manner, break it.' At this moment a strong box, containing about £500, was brought onboard the

Hussar, and another filled with plate, &c. The French officers in a body declared that the money was their private property, and that the plate belonged to their captain. ‘ Gentlemen,’ said captain Russell, ‘ it shall continue yours ; whatever your captain may think, British officers do not fight for money.’ Attempts were made to bribe captain Russell to release the count ; the English commander, of course, revolted at the offer, and severely reproved the bearer.

On his return to England, captain Russell, for his various services, was offered the honor of knighthood; an honor which he modestly declined, as not possessing a sufficient fortune.

Some of his friends thought that this refusal might disoblige lord Keppel ; but that it did not was evident from his lordship’s continued friendship towards him whilst he lived.

During the peace, in the course of the year 1791, captain Russell was appointed to command the Uiana, on the Jamaica station ; where, for his conduct during the apprehension of a- rising among the negrops, he was twice honored with the public thanks of the inhabitants. It was during this time that he was sent by admiral

Affleck, to convoy a cargo of provisions, as an act of charity, f;om the government and principal inhabitants of Jamaica, to the white people of St. Domingo, who were then severely suffering from the depredations of the people of color. He was received with joy and gratitude ; and was invited to a public dinner given by the colonial assembly at Aux Cayes. At this repast our officer represented to the assembly that there was a lieutenant Perkins, of the British navy, cruelly confined in a dungeon at Jeremie, on the other side of the island, under the pretext of having supplied.the blacks with arms ; but, in fact, through malice for his activity against the trade of that part of St. Domingo in the American war. Captain Russell stated that, before he had ventured to plead his cause, he had satisfied himself of his absolute innocence; that he had undergone nothing like a legal process, a thing impossible from the suspension of their ordinary courts of justice, owing to the divided and distracted state of the colony ; and yet, horrible to relate, he lay under sentence of death ! ‘ Grant me,’ said captain Russell, ‘ his life ! Do not suffer these people to be guilty of the murder of an innocent man, by which they would drag

British vengeance upon the whole island.' So forcible was this appeal that the assembly, in the most hearty and unequivocal manner, promised that an order should be instantly transmitted for him to be delivered up. On the following day, however, on captain Russell sending an officer to receive the order for lieutenant Perkins's liberation, he returned with a refusal from the assembly ; for, ' as it was a promise made after dinner, they did not think it binding.'

Almost at the moment of the officer's return, the Ferret sloop, captain Nowell (afterwards admiral Nowell), hove in sight. She had been at Jeremie, with despatches containing the requests of lord Effingham and admiral Affleck, that lieutenant Perkins might be delivered up, which the council of commons there absolutely refused. No sooner was captain Russell apprised of this state of the

business, than he declared that he would sacrifice as many Frenchmen as there were hairs on Perkins's head, if they murdered him. His determination was soon known amongst the Diana's

crew ; the anchor was up, sail crowded, and the wind favoring them in an uncommon manner, the frigate and sloop quickly appeared offJeremie. Both of the vessels hove to close to the harbor, and prepared for battle ; every soul on board of them panting for vengeance, should Perkins be murdered. Captain Nowell, on landing, was surrounded by a mob of at least 300 villains, armed with sabres; and, together with lieutenant Godby, who accompanied him, had occasion to keep his hand on his sword during the whole of the conference which took place. The president read the letter, and said, ‘ Sir, suppose I do not ? ‘ ‘In that case,’ replied the British officer, ‘you draw down a destruction which you are little aware of. I know captain Russell ; beware, if you value your town, and the lives of thousands ; he has given me sixty minutes to decide ; you see, sir, that thirty of them are elapsed.’ The mob now grew outrageous. ‘ You shall have him,’ exclaimed one of them, ‘ but it shall be in quarters ! ‘ Captain Nowell instantly drew his sword, and; looking at the president, said, ‘ Sir, order that fellow out of my sight, or he dies ! ‘ The president did so ;

and, after a few more threats from captain

Nowell, that he would return without him, poor

Perkins was led from the brig of war lying off the town in which he had been kept a close prisoner,

into the Ferret's boat.

Having remained the usual time on the Ja-

maica station, the Diana returned to England,

and was paid off; after which captain Russell

was appointed to command the St. Albans of

sixty-four guns, and brought home four or five

East Indiamen from St. Helena. On the llth

of January, 1796, he was appointed to the Ven-

geance, of seventy-four guns ; in which he served

in the West Indies, under rear-admiral Harvey,

at the captures of St. Lucia and Trinadad, and at

the subsequent unsuccessful siege of Porto Rico ;

and on this station captain Russell had the satis-

faction of making, the second time in his life, an

ample fortune ; but, by an unlimited confidence

in the integrity of others, his golden treasures

soon vanished.

In the spring of 1799 he returned to England,

and joined the Channel fleet, then under the

orders of earl St. Vincent. Having remained for

some time in that service, the Vengeance, being

much out of repair, was paid off; and, on the

23d of April, 1800, captain Russellwas appointed

to the Princess Royal, a second rate, in which

ship he remained until advanced to the rank of

rear admiral of the white, Jan. 1st., 1801 ; and on the 23d of April, 1804, rear-admiral of the red.

Soon after the commencement of the late war,

v.e tincl our officer serving under lord Keith.

About the year 1807 he was appointed to 'he

chief command of the North Sea fleet ; but, from

the rigid caution which the Dutch squadrons ob-

served, no opportunity occurred for him to dis-

play the determined spirit which he was well

known to possess. His promotion to the

rank of vice-admiral took place Nov. 9th, 1805;

and on the 12th of August, 1812, he became a

full admiral. Mrs. Russell, to whom he was

united about the year 1793, died March 9th,

1818, leaving an only child, a daughter, married

in 1817 to George Edward Patey, esq., lieut.

R.N.

Admiral Russell's blockade of the Texel, dur-

ing the period of the threatened invasion of our

shores, has been considered admirable, and was

planned and executed by himself. His system

of anchoring during the strongest gales, with sometimes three cables on end, was rewarded by the most complete success. During the neap tides, the line-of-battle ships for the most part rendezvoused at North Yarmouth, by which a saving to his country in wear and tear, and probable loss of ships, was effected to an immense amount. Indeed, while this blockade of the Texel was the most efficient ever known, and was conducted with all the rigidness of a si;‘e of bitter warfare, it was marked by instances refined humanity which procured the respect and esteem of the Dutch admiral Kictchurt, his officers, and men.

RUSSET, adj. & n. s. Fr. rousset ; Lat. russus. Reddishly brown : such is the color of apples called russetings, and of coarse country dresses.

The morn, in ruttet mantle clad,
Walks o’er the dew of yon high eastern hill.
Shakfpeare.

Taffata phrases, silken terms precise,
Figures pedantical : these summer flies
Have blown me full of maggot ostentation :

Henceforth my wooing mind shall be exprest

In russet yeas, and honest kersey noes. Id.

Our summer such a russet livery wears,

As in a garment often dyed appears. Dryden.

The Dorick dialect has a sweetness in its clownish-

ness, like a fair shepherdess in her country russet.

Id.

This white spot was immediately encompassed

with a dark gray or russet, and that dark gray with the colors of the first iris. Newton'i Opticks.

The rtuset pearmain is a very pleasant fruit, con-

tinuing long on the tree, and in the conservatory par-

takes both of the russeting and pearmain in colour

and taste ; the one side being generally russet, and the other streaked like a [-earraain. Mortimer.

_: –

ml if?*

RUSSIA.

RUSSIA (from Sclav. Rossi or Russi, a small

Sclavonic tribe) comprehends a portion of

Europe and Asia, exceeding in extent any em-

pire that was ever before included under one

form of government. It borders on the Baltic,

the Euxine, and the Caspian, and is washed

both by the Arctic and Great Pacific Oceans.

. Stretching from the eastern confines of Asia to the mountains of Olonetz, and from the mouths of the Don, the Volga, and the Kuban, to the Frozen Sea, Russia comprises, independently of islands and promontories, 165° of longitude and 32° of latitude; being 9684 miles in length and 2400 in breadth. It contains a surface of about 4,000,000 square miles, and a population of more than 42,000,000 inhabitants, or about ten persons to each square mile. The population of European Russia, exclusively of the kingdom of Poland, does not much exceed 40,000,000. The chief augmentations by which the empire has been enlarged (for since its provinces were united under one government they have never been contracted) are the following, as stated in the Russian Court Calendar for 1817 : —

The conquest of Siberia took place in 1573. Yermark, the hetman of the Don Cossacks, rebelled against the authority of Russia, and was obliged to flee before the forces of the czar. In this extremity he ascended the Ural mountains, and discovered the vast plains of Siberia. Ani-

mated by the idea of founding a new empire, in these unknown regions, he pushed on from conquest to conquest, till he had subdued all the savage tribes from the Ob and the Ural to the Altaian mountains. But, being unable to preserve the conquests which his valor had achieved, he laid the fruit of his victories at the feet of the czar, who not only forgave his rebellion, but rewarded his talents, his courage, and his enterprise. ‘ Thus an empire more extensive than Mexico or Peru was added to the Russian territory, by a man inferior to the conquerors of tne New World, only because his exploits have not been recorded.’ Little Russia was added to the i former possessions in 1644; and Livonia, Esthonia, Ingria, Carelia, Viborg, and several islands in the gulf of Finland, were ceded to Sweden, at the peace concluded between the two powers in 1721. White Russia was annexed in 1772; and the Crimea, the island of Taman, and a great part of the Kuban, comprising a vast territory, with about 1,500,000 inhabitants, were wrested from the Porte, by the treaty which the menacing attitude of Catharine II., and her celebrated minister Potemkin, induced that power to sign

in 1784. The dukedoms of Lithuania and Courland augmented the accumulating mass in 1793; and the partition of Poland, about two years afterwards, added nearly 3440 square leagues, nnd about 2,000,000 inhabitants. Georgia was annexed in 1801 ; and Baily stock in 1807. The war between Russia and Sweden, in 1809, proved disastrous to the latter, and Russia acquired Finland by the peace that was concluded in September of that year.

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By a treaty of peace in August 1811 between Russia and Turkey the former obtained the province of Bessarabia, and the eastern part of Moldavia ; for by that treaty the Pruth, from its en – trance into Moldavia, to its junction with the Danube, and tin's last river to the Black Sea, were fixed as the boundaries between the two empires. The grand duchy of Warsaw was also annexed to Russia in 1815, but now constitutes a great part of the present kingdom of Poland.

This empire has undergone much variation in its political divisions. In 1796 Catherine II.

divided the whole into fifty governments ; a division annulled by Paul in 1800, another, comprising forty-one governments, being substituted in its stead. When the late emperor ascended the throne, he re-established most of the governments which his father had abolished; and a Ukase for that purpose was published in September 1801, by which the forty-one existing governments were increased by five others that had previously been established, and four more were added, which made the number fifty. The acquisition of Finland has been made since that period. The following are its present chief divisions : —

GOVERNMENTS ON THE NOUTII.

Governments.	*Capitals.*
Finland	*Abo*
Wyburg	*Wyburg*
Olonetz	*Olonetz*
Archangel	*Archangel*
Esthonia	*Revel*
St. Petersburgh . . .	*St. Petersburgh.*
Novogorod	*Novogorod-Veliki*
Vologda	*Vologda*

Livonia Riga

Pskove ˆ . . . . Pskove

Twer Twer

Jarosla Jarosla

Kostroma Kostroma.

GOVERNMENTS IN THE CENTRE.

Smolensko .... Smolensko

Moscow Moscow

Volodimir Volodimir

Nizney Novogorod . . Nizney Novogorod

Kaluga Kaluga

Tula Tula

Riazan Riazan

Tambof Tambof

Orel Orel

Kursk Kursk

Woronetz Woronetz

Tschenigo Tschenigo

Ukraine Karkof.

GOVERNMENTS ON THE SOUTH.

Kiev Kiev

Catharinoslaf .... Catharinoslaf

Cossacks Tscherkaskoy

Taurina Caffa

Caucasus (pan in Asia).

178 It U S S 1 A.

GOVERNMENTS ON THE EAST.

Governments. Capitals.

Perm (part in Asia) . Perm

Vyatka Vyatka

Orenburg (part in Asia) Orenburg

Kazan Kazan

Simbirsk Simbirsk

Penza Penza

Saratof Saratof.

GOVERNMENTS ON THE WEST.

Witepsk Witepsk

Moghilef Moghilef

Courland Mittau

Wilna . . .. Wilna

Grodno Grodno

Minsk Minsk

Volhynia Lucko

Podolia Kaminieck

Cherson Cherson.

I. EUROPEAN RUSSIA. — European Russia oc-

cupies the north-east portion of Europe ; being

bounded on the north by the Frozen Ocean ; on

the east by Asia ; on the west by Sweden, the gulf of Bothnia, the Baltic, Prussia, Poland, and Austria ; and on the south by Turkey and the Black Sea. It extends from about 44° to 72°ofNlat.; and from 22° to 60° of E. long, from Greemvich. Its length in a right line on the western frontier is about 1940 miles; but from south-west to north-east it is nearly 2180 miles. Its greatest breadth is about 51° of lat., where it is nearly 1520 miles. Its superficial extent has been estimated at about 1,000,000 square miles.

The two distinguishing features of this part of Russia are vast plains, denominated steppes, and majestic rivers. Some of the former consist of an extremely fertile soil ; others are saline wastes ; while a middle kind produces a scanty supply of vegetation, and are occupied, in summer, by tribes that roam in quest of pasturage.

The most noted of these steppes are, 1 . The desert of Petshora, situated between the Dwina and Petshora, and extending from 63° of lat. to the shores of the White Sea. This plain is interspersed with forests and small lakes, and is almost destitute of inhabitants, except in the

vicinity of Archangel and Mezen. 2. The steppe of the Dnieper, including the Crimean desert, and comprised between the Dnieper, the Don, and the sea of Azof. It consists chiefly of dry sand diversified with salt lakes. The appearance indicates its having once been a submarine bed, the waters of which, by bursting the Thracian Bosphorus, may have flowed into the Mediterranean. 3. The steppe of the Don and the Volga, which occupies a considerable part of the space between these rivers. The great and generally rich plain bounded by the Volga and the Ural is about 2° further north than the latter, and stretches towards the Caspian.

( )ther parts of the Russian territory, though generally flat, present more variety. The surface, generally speaking, is composed of two inclined planes ; one sloping towards the south and south-east, and the other descending towards the opposite points. These declivities meet on the east side of the empire, about 60° of lat. and thence follow a winding line towards the south-west, till their union reaches 50°, and quits Russia in the vicinity of Sraolensko. From

this waving ridge, the waters flow on the one side to the Euxine and Caspian ; and, on the other, into the White Sea and the Baltic.

The mountains of Olonetz originate in the northern extremity of Lapland, and stretch through about 15° towards the south. The northern parts are constantly covered with snow ; the more southern regions with forests, and contain various metals, particularly iron. The mountains of Valday, which are crossed by the road from St. Petersburg to Moscow, have been supposed, by some travellers, to be merely a continuation of the former chain. They are chiefly composed of clay and sand, with occasional blocks of granite, forests, and fertile valleys. This elevated region gives rise to the Volga, the Duna, the Dnieper, and the Ocka.

A ridge of hills likewise extends through Moldavia and Bessarabia, along the southern coast of Taurida, and connects the Carpathian with the Caucasian chain. ‘ They form the southern extremity of the peninsula, and consist of calcareous matter, supported, as it were, by pillars of marble, trap, clay, common lime-stone, and

schistus, in parallel and almost vertical veins, alternating with each other. This singular ridge has the appearance of an amphitheatre along the Euxine. The vales produce the laurel, the olive, the fig, the lotus, and the pomegranate ; the cliffs are adorned with the red bark and perpetual foliage of the strawberry-tree ; while the sheep and goats, clinging to the declivities, combine with the simple manners of the Tartars to form an enchanting picture.' The Uralian mountains, which separate Europe from Asia, for more than 1200 miles, have already been mentioned in our article EUROPE. This range declines abruptly on the western side. The highest part is in the province of Orenburg, and the most elevated near the western verge of the range. These, however, do not exceed 4500 feet in height

The principal rivers descending towards the south are the Volga, the Don, and the Dnieper. Those that run in an opposite direction, the Petshora, the Dwina, the Neva, and the Duna, with their tributaries.

The level nature of the soil, and the number

of large rivers, are extremely favorable to internal navigation of all kinds. Peter the Great completed the navigation from the Caspian to the Baltic, by opening the canal of Vishnei Voloshok, between the river Twerza, that falls into the Volga, and the Shlina, which terminates in the gulf of Finland. Various other plans of internal navigation have at different times been wholly or partially executed ; and the repose of peace, aided by the information which the Russians have derived from their visits to the more improved nations of Europe, will doubtless be employed in promoting the national resources of these vast dominions. Among these improvements, the construction of canals is finding a place, though they are rendered less necessary in Russia than in most other countries, by the

continued intensity of the frost, which makes the conveyance of heavy articles on sledges a matter of ease constantly to be depended on. No sooner has the frobt set in than sledge-ways, covered with these vehicles, are opened from the gulf of

Archangel to the mouth of the Don, and from the banks of the Irtish to those of the Neva.

Some of the Russian lakes are the largest bodies of fresh water in Europe : as those of Ladoga, Peypus, Onega, and ILmen. Russia also contains several others.

Russia is generally connected with the idea of cold ; but this applies only to the northern districts ; those of the opposite extreme participate in the temperature, and yield all the products of southern Europe. With respect to climate, European Russia may be divided into three distinct regions ; the cold otie from 60° northward ; the temperate between 50° and 60° ; and the warm from 50° to the southern extremity. In the first of these the severity of winter is sreat, and confines the labors of agriculture to a very limited period. Little vegetation appears before June ; but then the accumulated heat of almost continual day renders its progress vigorous and rapid. The extremes of heat and cold at St. Petersburg!! during ten years were as follow : —

GREATEST HEAT.

GREATEST COLD.

I

Year.

Day.

Degree of Fahrenheit.

Day.

Degree of Fahrenheit.

1782

12th July

85°

16th February

29° below 0.

1783

17th June

88

9th January

•23 ditto

1784

29th July

92

30th January

8 ditto

1785

23d July

86

3d March

22 ditto

1786

27th June

87

2d January

24 ditto

1787

13th June

92

9th February

14 ditto

1788

18th July

95

*{ 20th January *

\ 23d December $

15 ditto

1789

19th July

90

12th January

20 ditto

1790

31st July

78

3d and 10th February

8 ditto

1791

15th June

86

7th and 22d December

10 ditto

The climate here is as changeable as in our own country. Fahrenheit's thermometer has been known at St. Petersburgh to be at 3° one day, and nearly 37° the next; making a difference of about 34° in a few hours. Storms of thunder and lightning seldom take place in Russia; but the aurora borealis is very frequent, and the atmosphere is often seen to discharge electric fluid. Near Moscow the rivers are generally frozen as early as the beginning of November ; and the ice seldom breaks up till the middle of Marcn. The buds of the birch expand in May, and its leaves fall in September. In the southern parts of this middle region, particularly in the government of Tula, Orel, Kursh, and Kiev, the climate resembles that of parts of France. It produces

apples, pears, plums, melons, and arbutuses. But here, as well as in the former region, the year embraces only two seasons. Snow clogs the path of retreating summer, and a vivid sun at once dissolves the winter's frost. In the southern regions the luxuriance of warm latitudes greets the travellers' eye, and wine and silk, with abundance of choice fruits, are found. Spring begins with March, and continues to the end of May. Nature is then arrayed in her rnost brilliant colors, and every aspect under which she is viewed is refreshing and beautiful. In June, the influence of the sun becomes powerful, the plains lose their verdure, the springs are dried up, and the rivers cease to flow. Fahrenheit's thermometer, in the shade, often exceeds 100°. September is sometimes far advanced before the fiery glare of summer abates. In this season ruin and dew seldom fall ; but in the peninsular province of Tauiida the heat, during the middle of the day, is tempered by refreshing breezes from the sea, succeeded in the evening by others from the land. Here the climate is salubrious ; though in some other districts of the south the

swamps and saline steppes are unhealthy. As autumn advances the nights become cold, and this season is the most sickly in the year. In winter the tops of the mountains are covered with snow.

The varieties of the soil we have already glanced at. Barren deserts occur even in the southern regions, and wide-spread plains, impregnated with salt. The governments of Volodimir and Riazan are esteemed the most productive. There the soil consists of a rich vegetable mould, and yields all kinds of grain and esculent vegetables. On some of the steppes the grass grows to the height of a man. The Russian forests are perhaps unequalled in the old world, and consist of oak, pines, cedars, firs, linden, and birch. The shores of the Volga, the Ocka, and the Don, are adorned with vast woods of oak, whence it is conveyed to the ports of the Baltic and the Euxine. The Valchonskoi forest, through which the road lies from Viesma to Moscow, extends on all sides to a great distance. The governments of Olonetz, Archangel, Perm, and other northern regions, are likewise

covered with forests of unknown extent. Even the road from Petersburg to Moscow runs chiefly through a succession of woods. The fir, the pine, and the black pine, are the prevailing trees in the northern parts. On the Ural mountains the cedar grows in abundance, and is often cut down by the inhabitants for its cones, which yield excellent oil. The larch flourishes in the

north, and is employed in ship-building, and for its turpentine and charcoal. In addition the beech, the elm, the maple, and the poplar, grow in the southern regions. The birch is used in various ways. Its bark is employed in tanning ; its leaves afford a yellow dye, its sap a liquor called birch wine, and its wood not only supplies fuel, but is converted into domestic vessels. The linden is likewise equally valuable. Its outer bark is manufactured into carriages, baskets, trunks, and covering for cottages; and the inner rind into mats. The rind of its shoots is platted into shoes for the boors. Its blossom

supplies food for bees, and its wood is made into boats.

The Russian agriculture is generally in a very rude state. In the north both the soil and climate are unfavorable to its progress, and a few patches of feeble rye are almost the sole evidences of civilisation; and the thinly scattered inhabitants chiefly derive their subsistence from the fishery and chase. In Finland also the inhabitants grow little grain. See FINLAND.

The productions of this extensive empire, it has been long said, are as various as the soil and climate. Here the gifts of Providence are scattered with a profusion which, while it corresponds with the prodigality of the inhabitants, forms a singular contrast with their indolence, poverty, and unskilfulness in the arts of wealth and comfort. The Russians at once suffer from want, and allow abundance to corrupt ; and though they might supply the world they depend on others. The following facts have been recently stated : — ‘ The harrow consists of short wooden pegs, driven into thin laths, woven together with willows. The use of the roller is hardly known. A crooked stick frequently

serves as a flail. To drain moist lands or swamps is not at all the practice, though they are so numerous and prejudicial to man and beast, and might be converted into the finest corn fields. The steppe lands are employed a short time without manure and then forsaken. When a boor has fixed on a piece of forest land for the purpose of making it arable, together with the bushes and young wood, he cut down and consigns to the flames, trees which have stood for . two centuries, and are fit to be the 'mast of some great admiral.' If he cannot fell such large trees, stripping them of their bark, he leaves them to wither, and kindles the brush-wood under them. In burning the dry weeds and grass for the purpose of manure the forests are sometimes set on fire, and consumed for miles. The boor has no conception of artificial manure, marl, chalk, or pond-mud. The land is seldom clean harrowed.' Oats, rye, wheat, and barley, are sown in most parts ; and raised in considerable quantities. Rice is grown in some of the southern districts ; but hemp and flax are the principal objects of culture. In some of*

the Uralian mountains they grow wild. Hops and tobacco are cultivated in the southern provinces. Beyond 60° of latitude the vegetables resemble those of the northern parts of Norway and Sweden. Between 50° and 60° they differ little from those of Great Britain and Ireland. Almost all sorts of culinary vegetables are cultivated. This region is also plentifully stocked with fruit trees and shrubs ; and vast orchards of apple, pear, plum, and cherry trees appear. Cherries are produced in such abundance that' both wine and vinegar are made of them. Nuts and walnuts are likewise plentiful. Various berries are annually gathered in vast quantities, and eaten either raw or preserved. They include gooseberries, currants, strawberries, cranberries, &c. &c.

Maize, rice, and cotton, are among the common products of the south. The fruits comprise chestnuts, almonds, pomegranates, olives, figs, peaches, apricots and mulberries, with grapes and other delicate fruits of southern climates. The vine is cultivated by the Cossacks of the Don, but in an imperfect manner. The water-

melon often weighs 30 lbs., and is of an excellent flavor.

Cattle abound in all parts of Russia, and form a principal source of wealth. The breed is often large, and as well as that of the sheep has been much improved; but they are frequently left to seek their own food in the fields and forests. Buffaloes are numerous in the south. The long-tailed sheep, kept by the Cossacks of the Don, and other tribes in the south, yield wool of an excellent quality. The large sheep which range over the steppes of Taurida are covered with coarse wool mixed with hair; but the skins of their lambs furnish a fine colored and valuable fur in great request. The silky-fleeced Tauridan is also a valuable but small breed. Sheep indeed are so numerous in the southern provinces that a common Tartar often possesses a flock of 1000, and a rich one of 50,000. There are also great numbers of swine in Russia.

Notwithstanding the diversity of climate and treatment, the native Russian horses have a considerable resemblance to each other. All are of

a compact form, with ram-like heads, and long and meagre necks, but they are hardy and active. In the governments of Moscow, Tambof, Kazan, and some others, the native breed has been improved by the introduction of foreign horses The Tartar horses are of known excellence. Those of the Cossacks are small but indefatigable. The Russian cavalry is chiefly composed of Lithuanian horses. The Russian nobility pay great attention to the breed of this animal. The ass is little used ; but, as well as the camel and dromedary, it is sometimes employed in the southern provinces for domestic purposes. The rein-deer is the principal domestic animal in the north. Goats are common in all the districts ; and are kept both for their milk and hair. The peculiar species bred in Taurida sheds its fleece every spring; it is obtained by combing the animal at that season. In both silkiness and elasticity it exceeds the finest wool.

Among the wild animals are the bear, the wolf, the lynx, the fox, the deer, the elk, the antelope, and many other smaller species. Those which are most valued for their furs are inhabitants of Siberia ; but hares and rabbits are com-

mon to all parts. The wild boar is found on the steppes of the Volga, and the borders of the Uralian forests ; and is often huuted by the Cossacks. So much does this animal fatten on the roots and salt plants of the steppes, that he

often weighs more than six hundred weight. The flesh is esteemed a delicacy, und the animal is rarely killed without danger. The antelope ranges in large herds in the south.

Russia possesses nearly all the species of birds which are to be found in Europe. The number of wild fowl that flock to the desolate steppes, marshes, and forests, is almost incredible. Some idea, however, may be formed of their number by their value when caught; a bustard, weighing 20 Ibs., is frequently sold for thirty or forty copecs, which is only equal to a few pence. Other game are equally plentiful.

The sturgeon is caught in the Volga, and some of the other rivers, in the highest perfection. The sterlet -is also an excellent fish, common in the lakes and rivers; and a rich salmon is pecu-

liar to the Kama, a stream that falls into the

Volga. It is from three to four feet in length.

To the general diffusion of the common species

of European fish through the rivers of Russia,

the eel forms an exception, none being found

either in the Volga or in the rivers to the east of it. It is also remarkable that the herring and

seal are here found in some of the lakes and

even the rivers.

.VIATIC RUSSIA. — Asiatic Russia extends

from about 37° of E. long., to the eastern

extremity of Asia, (more than 5000 English

miles), and from the Frozen Ocean to the great

range of mountains which separates it from the

central plateau. Its breadth exceeds 1500 miles ;

but it is much narrower towards the east. The

whole surface is computed at 3,000,000 of square

miles,, with about one individual to each. The

population is composed of a variety of primi-

tive tribes, intermixed with a few Russian set-

tlers, and a small accession in the east, which

from its difference in manners, customs, and ap-

pearance, is supposed to be of American descent.

The ancient Greeks and Romans extended their

Scythian Ocean over the wide regions of Sibe-

ria; but Ptolemy, who was better informed, placed an unknown land in that direction : and Marco Polo, with other travellers of the middle ages, obtained some vague ideas of a country in this part of Asia, rich in furs. In the middle of the thirteenth century the Monguls had established a government on the Irtish, in the western part of Siberia, but Russia was then too frequently exposed to the ravages of its eastern neighbours to carry either its arms or its investigations into those regions. Even when her internal divisions had enabled her, in some measure, to consolidate her empire, its southern and eastern frontiers were exposed to hostile attacks, and the northern provinces of Archangel afforded the means of first becoming acquainted with the countries bordering on that quarter. The Samoiedes of the Oby and the adjacent districts visited Russia to barter their furs with the natives. This excited their curiosity, and enterprises were undertaken to the countries whence the furs were brought.

Yermack, one of the principal chiefs of the Cossacks, with about 6000 followers, first entered Siberia in quest of new regions, and vanquished

Kutchum, the khan of Siber, took his capital, .ind suddenly found himself at the head of an almost unlimited empire. Apprehensive, however, that continual efforts would be made to wrest the newly-acquired sceptre from his hands, he endeavoured to secure it by laying it at the feet of the czar. This was an offer too congenial with the Russian disposition to be refused ; and, though the conquest was transient, it not only disclosed those eastern countries, but animated the hope of permanent success. The Russians soon after penetrated to the Yenisei, or Jenisei, and, having conquered the Tonguses, enjoined them to prosecute their discoveries to the east. These people fulfilled their commission, and soon penetrated to the Pisida, which is supposed to have been the Angara, on the opposite side of which they found a people, whom they described as ' of good understanding, well set, with small eyes, flat faced, brown color, and inclining to tawney.' But they could not understand their language. The Russians now soon arrived at the Lena, descending its stream to the Frozen Ocean ; in 1639 one of their adventurers

reached the eastern shore Thus, in half a century, a few wandering Cossacks and Tungusian hunters, added an extent of country to the Russian empire that stretched one-third round the globe. After this they founded the towns of Irkutsk and Nertschinsk, and established a line of posts along the Amur. The map of the Caspian, constructed by Peter the Great, was an important accession to the progressive geography of that district, and was the first document which represented that sea as stretching from north to south, instead of from east to west, as had been previously supposed.*

The mountainous region, at the south-west extremity of Asiatic Russia, has always been inha bited by rude tribes, under independent chiefs, secure in their own fastnesses. Here they have imbibed, and constantly cherished, the spirit of the feudal ages ; and, though Russia has made great advances in the work of subjugation, she is yet unable to exact more than a precarious submission, and can only levy her imposts by force of arms, and a chain of military posts.

Asiatic Russia consists of two distinct parts,

Siberia and Caucasus. The first is divided into the two great governments of Tobolsk on the west and Irkutsk on the east. The latter government includes the peninsula of Kamschatka. Besides these two governments, the province of Astracan, with parts of Caucasus, Perm, and Orenburg, are Asiatic. We therefore adopt the following general division : —

Capitals.

(Tobolsk . . Tobolsk

t Irkutsk . . Irkutsk

Astracan . . Astracan

Part of Perm

Part of Orenburg

'Part of Caucasus Georgiewsk

Cossacks of the

Governments.

SIBERIA

Black Sea

Circassia .

! Georgia .

' Lesghistan

Dashes tan

Schirwan .

Mingrelia .

Ekaterinodar

Tiflis

Derber.d

Baku

Xalikara

t 'atalis.

Abassia, bordering on the north-eastern shores of the Black Sea, is under the protection of the Turks ; and Circassia, with some divisions of the other provinces, nearly independent. Georgia, however, was incorporated with Russia in 1800. The extent and population of those various governments are uncertain.

The ice-bound shores of the Arctic Ocean stretch along the north ; while the fury of the eastern wave, and the action of subterranean tire, seem to have rent the oriental regions into vast promontories and islands. An immense range of mountains sweeps along its southern confines, mingling with the Caspian and Caucasan chain. The Uralian mountains, which

constitute the western boundary, we have already noticed.

In Asiatic Russia the general surface, like that of the European portion of this empire, is chiefly composed of steppes; sometimes arid or saline deserts, at others principally occupied by marshes, or covered with almost interminable forests; while some consist of a fertile soil, and produce a luxuriant vegetation. Asiatic Russia, however, is not destitute, on its confines, of mountain ranges." The great ridge which stretches nearly from the eastern shores of the Caspian to the promontory of Tschutskoi is known by various names. The Altaian mountains form a barrier between this empire and independent Tartary. South of the lake of Baikal the mountains of that name, supposed to be the highest points of the chain, rear their summits to more than 10,000 feet above the sea. In most parts of the chain, however, they are lower. After bending to the north, they are known as the Daouria, which are succeeded by those of the Yablonnoi and Stannovoi, which give place to the vague denomination of the mountains of Okotsk. The com-

ponent parts of this range are various. In some, ˆreat masses of granite indicate a primitive formation, while in others, limestone, marble, petrified shells, and valuable ores abound. This range gives rise to many of the largest rivers of Northern Asia; but little is known beyond its outlines and general direction. Several lower ridges diverge from it, and diversify the neighbouring districts.

Through Ramtschatka also a mountainous range stretches, the highest summits of which are covered with perpetual snow, and many of them constantly shaken by volcanic fury. One of these is situated near Nijni Kamtschalka, and may be seen at the distance of more than 100 miles. Scarcely two years elapse without eruptions, when the whole country is covered with ashes for thirty miles round. Another active volcano rises near the southern extremity of Kamschatka.

The Oby, the Yenisei, and the Lena, are the largest streams, and divide all the broad part of Siberia into three great basins. A few smaller streams also enter the Arctic Ocean from

*the narrower districts on the east. The first ,of these vast basins embraces all the space between the I'ralian mountains and 00° of long., l>ein- about :,0° from ea-t in \,>i, ;md 20° from north to south. Many writers place the * <>f the Oby in the lak' of Alum. or Altyn, 52° of lat, ; but, as the Shabetian is the only confluent river of that lake, it may, with propriety, be considered as the parent stream, which extends several degrees to the south, and nearly to 95° of long. After crossing the Altaian chain it flows in a serpentine direction towards the north-west, till it meets the Irtish, which issues from the said mountain range, and rivals it in magnitude. — Subsequently to its junction, it winds to the north, and forms that vast estuary called the Sea of Oby. Having collected the waters of such a wide space it becomes a large river long before it reaches the sea, and is in some places several miles in width. Its whole length is about 2180 miles, the greater part of which is navigable. — The Irtish flows nearly in the same direction as the Oby, but a few degrees more to the west. Several important streams likewise fall into*

the Caspian and Black Seas. The Ural rises

from the south-western part of the Uralian chain,

and, after flowing towards the west, turns to the

south, and enters the Caspian. In the upper

part of its course, its banks are steep and rocky, but it afterwards flows through a vast saline

steppe : its fisheries are an inexhaustible source

of wealth to the Cossacks. The Volga also falls

into the same sea, which is likewise joined by

the Terek and the Kuma on the west, while the

Kuban or ancient Hypanis flows in the opposite

direction, and enters the Euxine near the Isle of

Taman.

Siberia contains few lakes ; but the vast Bai-

kal has often been delineated as an inland sea.

Another large lake is met with about 52° of lat.

and east of the Irtish. Its length is 170 miles,

*and its shape very irregular. An island divide**

it into two parts, called the lakes of Tchany and

Soumi. Several other lakes are situated bet\, t u

this and the Uralian mountains. That of Altyn

has been mentioned in the description of the

Oby. It is on the north side of the Altaian

chain, and is nearly forty miles long and twenty

broad. The largest lake in the north of Siberia

is the Fiazinskoi, in 68° of lat., and a few degrees east of the Yenisei. Some small saline lakes are found on the steppes north of tin ‘ pian, and are considered as indications of that sea having extended much farther north than at present.

With respect to the climate, Asiatic Russia i< colder than the European part, under the same latitudes., Beyond 60° the winter lasts nine or ten months, and the earth is frozen to a depth ; but the almost perpetual day imparts considerable heat to the summer. In the vao marshes traversed by the lower part of the Oby the’ whole accumulated heat of this period, however, does not thaw the ground ‘more than two feet; and Gmeliu states, that, at .lakoutsk, in 62°, the ground in the middle of summer wa> found to be frozen at the depth of three or four feet. The use of wells is therefore entireU vented.

In the southern parts the cold is often extreme. 1’allas witnessed the freezing of mercury in 58° i>t’ lat. ; and even on the southern borders in 50° the cold is severe. North of the lake of Baikal,

the .••uniii! ;l!y MI slum and uncertain

that agriculture is almost impracticable. In the most genial parts, where it is attempted, if the crop does not ripen before the end of August, it is usually buried in snow, before the husbandman can reap the reward of his labor. Captain Cook found snow six feet deep on the eastern coast in May, which was not dissolved till June. There the thermometer stood at 32° during the whole of the former month, and even in the middle of the latter it did not rise higher than 58°. In August it reached 65°, and the lowest point to which it sunk was 40°. In October the ground was again covered with snow. W inter then begins his sway, and, though in the latitude of England and some of the finest provinces of France, the mercury commonly stands below 20°. With the name of Kamtschatka is connected the idea of one of the most desolate and inhospitable regions on the globe. Its geographical situation, however, renders its climate and productions much superior to those of Siberia.

Baron Steinheil, who lived several years in this distant land, and drew up a plan for the improvement of the country, asserts, ‘ From a loug course of observations made during my residence in Kamtschatka, I am convinced that both the climate and soil are such as that agriculture might be carried on with the most complete success.’ But see our article KAMTSCHATKA.

The forests of Siberia contribute to render the air in many places damp and unwholesome, particularly in the western regions. The eastern districts are colder, but more salubrious. In most parts the winds are violent, and tremendous hurricanes often bury both man and beast beneath the sand and snow. Near the Caspian the inhabitants enjoy a warm and protracted summer, though the winter is cold. In the province of Astracan, the heat is sufficient to mature the grape, and much excellent wine is made. Mulberry-trees flourish also, and silk is produced in considerable quantities. In the mountainous region of Caucasus, the climate exhibits every variety. On the southern side heat prevails in the valleys, and cold on the mountains ; the following extract

from Mr. Glen's Journal gives a good idea of the climate of the northern side. 'The temperature of the atmosphere is in general,' he says, ' much more equable than at Astracan ; the thermometer does not rise so high in summer, neither does it sink so low in winter ; and, what may appear strange, the temperature is still more equable in the valleys of the snow mountains. Last winter (1818-19), when the thermometer fell to 17° in the colony, the rivulets among vhe mountains were not frozen, and the valleys were green all the winter through. The summer heats, too, are less oppressive. In short, from all accounts, the climate in these valleys does not materially differ from that of the valleys among the hills of our native country (Scotland). The most striking characteristic of a Karass winter, as it set in about the beginning of December, 1819, was a strong rind (rime), that lodged on the branches of trees, in the form of minute icicles, in such quantities as to weigh them to the ground, or break them. Its appearance is picturesque and romantic in a high degree ; but its effect particularly in the orchards, destructive. Nor are large trees proof against its overwhelming

power. I have seen the massy branches of some of them break down with a crash, in a dead calm, merely by the weight of the rind. When it is strong, the whole country is overhung, sometimes for many successive days, by a thick fog.'

The oak and the hazel, which bear the rigors of a German winter, will not flourish under the same parallels in Siberia. They indeed stretch along the northern base of the Altaian chain, but farther north they become stunted. The common heath that covers many of the lower districts of Lapland is not to be found in these wastes. It must not, however, be inferred that these plains are merely tracts of snow ; on the contrary, almost interminable forests of birch, elder, lime, maple, poplar, and aspen, interspersed with millions of pines, cover many parts. The Siberian plum, the crab, the mountain ash, the willow, and other trees, are found ; and the short summer exhibits a brilliant display of flowers. The lily of the valley, and several bulbous-rooted plants, are concealed beneath the snow for the greater part of the year.

Though agriculture is but little practised in

Siberia, the crops are occasionally good ; nearly two-thirds of the country, however, yield no grain. Hemp and flax are cultivated in some parts, and the potatoe has likewise been introduced. The cattle, in a few of the richest steppes, are of a tolerable size, and the Mongol horses are beautiful ; some of them resembling the tiger, and the leopard, in the variety of their colors. In all the northern and eastern regions, except Kamtschatka, and a few other parts, where dogs are employed in drawing sledges, the rein-deer is, however, the most valuable possession of the natives. The utility of this singular animal is greatly enhanced by its capability of enduring the most extreme cold, and subsisting on a species of moss. A Samoiede often possesses 150 or 200 ; and the wealthy Koriaks and Tchouktchis several thousands each. The Siberian dog resembles the wolf, and in many parts supplies the place of the rein-deer, in drawing the sledge. The wild animals are numerous.

The mineral productions of Russia are chiefly obtained in the Asiatic regions.

The primitive mountains supply granite and porphyry in great abundance. Alabaster is also

found in extraordinary quantities and of every color. Yellow, gray, and cloudy marble abounds in many places, and white is found in the Uralian quarries, little inferior to the finest Parian. A great variety of cems have also been discovered in the mountainous part of the empire. Various parts of Russia yield gold, silver, copper, iron, and lead. The chief gold-mines are on the Asiatic side of the Uralian mountains, and were first opened in 1754. These annually supply about 6430 tons of ore, which yield about 1901bs. of refined metal. But the produce has now oeen increased, as is stated, to nearly 28011-s. of gold. The mines which were pre viously opened, in the mountains of Olonetz, have either been abandoned or are now little productive.

Twines of silver are worked in several places,

but chiefly in Asia ; and the whole produce is stated at 46,800lbs. of the refined metal. Lead mines have been worked in Russia for more than a century, and still yield a considerable

quantity of metal. The number of workmen employed in all these mines is estimated at 70,000; and the value of the produce exceeds double the expenses of working them. Copper is obtained jn the mountains of Olonetz, in the Uralian chain, and in Asia. The quantity of copper now annually obtained has lately been stated at 67,000 quintals, each equal to about 108lbs. avoirdupois, which is consequently equal to 3230 tons ; and its value exceeds £250,000. Most of the mountains, and many of the plains, of Russia atford iron-ore, and great quantities are annually procured, in the manufacturing of which about 100 forges and 800 hammers are constantly employed. The value of the iron is more than double that of the copper. The whole produce of all the gold and silver mines belongs to the crown, with a sixth of the copper and one-eighth of the iron.

Coal has been found in various parts of Russia, and attempts are making, under the immediate sanction of the emperor, for discovering it in others.

Salt abounds, and is found in the pure and

solid rock, at the bottom of the lakes, in the

liquid spring, and incrusting the plains. Rock

salt is obtained in the government of Orenburg,

and in the steppe of the Volga ; the salt lakes

of Saratof, Taurida, and other places, yield large

quantities, as well as the impregnated springs of

Perm and Novogorod. Glauber's salts, and seve-

ral of the other saline species, are likewise found.

Thermal springs are found in various places, and

of different temperatures, from merely warm to

1 90° of Fahrenheit's thermometer. The most cele-

brated vitriolic waters are at Sarepta, near the

banks of the Volga, in the government of Sara-

tof, and are much frequented. The water is

clear and saline, its taste not unpleasant, and its temperature generally about 10° of Fahrenheit

above the common water in its vicinity. These

waters are beneficial in various complaints, such

as inflammation:), cramps, and inveterate colds.

They are supposed to contain about l-200th part

of earthly and mineral ingredients. The spring

is very copious. The principal places in Euro-

pean Russia where naphtha is found are in the

district of Perekop, in the government of Tauri-

da, and in the Island of Taman ; but it is still

more abundant in the Asiatic part of the empire. Incrusting springs are numerous, and the mountains contain stalactic caverns, with springs that mcrust substances with a coating of iron ore. The chief towns of the provinces will be found in their places in our alphabet, and ST. PETERSBURG and Moscow have received our particular atteniion, see these articles. Kiev, the original «:radle of the monarchy, was settled by a colony of Sarmates before the Christian era. Its appearance from the Moscow road is thus described by Mr. James : — ‘ Arrived at the top of a declivity,” says our traveller, ‘a new scene presented itself. The cupolas, that before were but as spots in the vjpw, faced us with a blaze of gold, and

- *tixniyiriii JMV colors which dazzled the eye.*

The country below showed an unvaried plain of immeasurable extent, covered with a thick forest, through the middle of which the Dnieper, now dwindled to a streamlet, was seen winding its silvery path into the horizon. It was a land seeming untouched by man, and afforded a prospect as wild in appearance as any that the most uncivilised tracts of America could furnish.’

Kiev is celebrated for its ancient catacombs,

which render it the resort of numerous pilgrims,

many of whom undertake a journey of 1500

versts on foot.

Tcherchaskoy, the capital of the Don Cossacks,

is situated on the river Don, about 100 miles

before it is lost in the sea of Azof. It is thus described by Dr. Clarke : — ‘ The appearance of

Tcherchaskoy, as the traveller approaches it upon

the river, affords a most novel spectacle. Al-

though not so grand as Venice, it somewhat re-

sembles that city. The entrance is by broad

canals intersecting it in all parts. On each side

wooden houses, built on piles, appear to float on

the water ; to these the inhabitants pass in boats, or on narrow bridges, only two planks wide,

with posts and rails, forming a causeway to every

quarter of the place. As we sailed into the

town, we beheld the younger part of the inhabit-

ants upon the house-tops, sitting upon the ridges

of the sloping roofs, while their dogs were actu-

ally running about and barking in that extraor-

dinary situation. During our approach, children

leaped from the windows and doors like so

many frogs, into the water, and in an instant

were seen swimming about our boat. Every

thing seemed to announce an amphibious race :

not a square inch of dry land was to be seen ; in the midst of a very populous metropolis, at least

one half of its citizens were in the water, and the other in the air.' The population is estimated

at 15,000 individuals. Nicholaef is the chief

town in the southern part of the empire.

The principal town in the eastern part of Si-

beria is Irkutsk, on the right bank of the river

Angara, at a short distance from the sea of Ii;u-

kal. The streets are in general broad and i

lar, but not paved. Most of the private dwellings

are of wood ; the government buildings and

churches of stone This is now considered as

the capital of the whole of Siberia. The mode

of living is quite oriental ; and the wives

and daughters of the principal citizens are sel-

dom seen except on public occasions. Nearly

in the same latitude, on the Chinese borders,

and about ten or twelve degrees further cust,

stands Nertschink, in the midst of a mining dis-

trict. The caravans engaged in the Chi;ia trade

formerly passed through Nertschink, but I

they have followed a different route it has de-

clined. Kiakhta, in the government of Irkutsk,

and on the border of China, has lately risen to*

eminence, as the centre of the trade between the

two empires.

The privilege of engaging in arts and in

tiircs in Russia was, till lately, reserved tor lh<; nobility and the first and second class of artizans.

Hut the emperor Alexander, by an imperial

I'kase, dated December 1818, removed this ob-

stacle to improvement. Among the articles

most extensively made are linen, leather, isin-

glass, and kaviar, of which large quantities are

exported. The two latter are prosecuted with

great success on the banks of the Volga, and

other great rivers in the south. Silk, cotton,

woollen-cloth, sail-cloth, hats, lace, glass, por-

celain, oil, soap, candles, cordage, and paper,

are likewise manufactures found in various parts

of the empire. Those of pitch, tar, pot-ash,

alum, saltpetre, and gunpowder, with iron, brass,

and copper works, are numerous : nor is any one

more extensive or more productive to the revenue

than that of spirituous liquors. Cannon, and

all other implements of war, are made in great numbers ; and several steam engines have been purchased in England, for the improvement of the different national establishments. Breweries and sugar-refineries have likewise been introduced.

Thejisheriet of the Volga, the Ural, and other rivers, form an important part of the Russian industry. Those of the last named river belong rntirely to the Cossacks, to whom it has proved an inexhaustible source of wealth. The manner in which they are conducted is thus described in the European commerce of Rordansz : — 'The river Ural flows into the Caspian ; when winter approaches, the fish seek refuge in the river from the storms which at that season Tint the Caspian. They ascend the river in such immense numbers that it is hardly possible to form an idea of it, and stop at different places where they find sufficient water and food. The Cossacs carefully observe, beforehand, all the places where such a mass is collected, and wait there patiently till the river is frozen over. On the 1st of January the fishery begins upon the whole river, from the capital town Uralski, down into the Caspian

Sea. Above and below the several banks of fish,

the hetman first causes the river to be blockaded

by means of laige double nets extended across

its whole breadth, which is effected by cutting

in the ice a ditch, if it maybe so called, two feet broad. As soon as it is certain that the fish can-

not escape, the governor of Orenburg and the

hetman of the Cossacks repair to a certain place

on the bank of the river, and on both sides of

it above 30,000 Cossacks are ready, each in his

own sledge, drawn by a strong and swift-footed

horse, and armed with a harpoon and an axe.

By the order of the governor, a cannon is fired

as a signal for beginning ; hereupon the Cossacks

all rush upon the river, and drive full speed to

the fish-bank, enclosed with nets, which is usually

some versts distant. Those who arrive first are

praised not only for the swiftness of their horses, but for their courage, for this racing is attended

with no little danger ; because, if any one should be so unskilful, or so unlucky, as to overturn his sledge, all those that follow would infallibly

drive over him. As soon as the Cossacks reach

the place where there is such a bank of fish,

they immediately cut a hole in the ice with their

axe, and thrust in their harpoon, and the quan-

tity of fish is so great that they never fail to

strike one at every time. The terrible noise

caused by the driving of 30,000 sledges over the

frozen river naturally terrifies the fish, which

try all to escnpe at once, but are hindered by the The greatest difficulty for the fishermen

is to draw out the fish, and they are often obliged to call their comrades to assist ; for they some-

times spear fish weighing 150lbs. to 200 Ibs. ;

but in such cases they must divide the fish with

him who assists them. This fishery continues

the whole winter, during which the Cossacks

dwell in tents on both sides of the river. They

proceed successively from one bank of fish to

another, down to the mouth of the river. Dur-

ing this time, the river affords a very peculiar

spectacle ; both its surface and its two banks are

covered with a countless multitude of men, who

are in constant motion. Traders come from the

remotest parts of the empire to buy the fish im-

mediately from the Cossacks, with a great train

of sledges, all loaded with salt; they constantly

attend the fishery in its progress down the river

to the sea. Every evening the Cossacks sell to

them what they have caught during the day, and

receive payment on the spot. The merchants

send the fish (which are frozen quite hard) to Moscow, Casan, &c., and also an incredible quantity of the salted row of sturgeon, known under the name of kaviar. It is astonishing what a great number of different kinds of fish are found in the Ural, and they all attain an extraordinary size, particularly the sturgeon, salmon, and pike. The very best of these fish cost, on the banks of the Ural, not more than a halfpenny, or three farthings a pound. The day when the fishery begins, the governor has the fish, which the Cossacks send as a present to the emperor, chosen from among the whole number, and sends them without delay to St. Petersburgh, where they arrive quite frozen. The quantity is fixed, and it is said to be very considerable. In summer the Cossacks also carry on the fishery; but it is far less productive, and, as the fish will not keep in this season, the Cossacks salt them immediately, and send them to the neighbouring towns for sale.' The whale and seal fishery is chiefly prosecuted in the Arctic Ocean.

Among the exports of Russian commerce, are iron, copper, hemp, flax, linen, sail-cloth, cordage, grain, tobacco, linseed, saltpetre, and oil ;

with timber, planks, masts, pitch, tar, resin,

pot-ash, wax, tallow, hides, candles, isinglass,

kaviar, and horse-hair. Leather is the most im-

portant manufacture exported, and the greatest

endeavours are used to keep the method by which

it is prepared a secret. For these articles the

Russians receive in return silks, woollen, and

cotton cloth, hardware, looking-glasses, stock-

ings, watches, wines, brandy, and fruits from

southern Europe, with colonial produce, paper,

books, engravings, &c., from England, and other

states. It is estimated that one-half of the trade

of Russia is carried on within the confines of the capital. The trade of Russia with Persia is by

means of the Caspian, and the caravans that

travel to Orenburg, a few degrees north of that

sea. The chief articles are woollens, furs, iron,

steel, copper, lead, and other native productions.

Russia receives in return silk, cotton, drugs,

tapestry, gold, pearls, and diamonds. Thetrade

of China is carried on from the frontier of Sibe-

ri;i, and consists in the exchange of furs, iron,

copper, and other minerals, for Chinese silks,

tea, musk, tigor skins, and a few: other articles.

The annual amount of this commerce is between 3,000,000 and 4,000,000 of rubles. With Turkey, the Russians exchange kaviar, soap, leather, iron, and other produce, for olive oil, wines, rice, and fruits. Of the whole foreign European trade of Russia more than half is with Great Britain, the different articles of which have been specified above.

We may now exhibit the comparatively modern rise and progress of the maritime greatness of Russia. At the close of the seventeenth century, when Peter the Great ascended the throne, Russia was still in a state of barbarism, in comparison with the other nations of Europe. This prince possessed from nature a great activity of disposition, an impatient ardor, and a perseverance which obstacles only served to stimulate. With such a character it was natural that Peter should form the project of improving his subjects, and of making Russia act a part amongst the nations of Europe; but to this effect it was necessary to have suitable communications with the ocean, and the procuring them was the first

object of the enterprises of the czar. He first turned his views towards the White Sea, and in person visited Archangel ; but observing that its distance, and the severity of its climate, opposed insurmountable obstacles to any considerable extension of industry and commerce, his next object was the Black Sea, situated under a more favorable climate, but of which the coasts were possessed, and the navigation watched with jealousy by the Turks. A war breaking out between the two nations, Peter attacked Azoph, but failed in the attempt, for want of vessels to block it by water. A fleet being, however, quickly created, the following year put him in possession of this fortress and its territory, but which the defeat of Pruth again obliged him to relinquish.

Peter now seriously occupied himself in the creation of a navy ; and, in order to give full effect to his designs, he visited, as we have seen in his life, England, Germany, and Holland, in order to acquire a knowledge of the art of constructing vessels, and of the details of a marine. During his travels the activity and opulence of Riga, Konigsberg, and other ports of the Baltic,

did not fail to strike him, and to give him a just idea of the importance of maritime commerce.

Not far from the frontiers of his dominions he

met Augustus, who, on being raised to the throne

of Poland, had promised his subjects to recon-

quer the Polish provinces, reduced under the

dominion of Sweden ; but, being too weak to

execute this promise alone, he proposed a coalition

to the czar. A perspective conformable to the

views of Peter now presented itself; and on his

return to his dominions he armed, and the coasts

of the Baltic became the theatre of his efforts.

While Charles XII. was overrunning Poland and

Saxony, Peter seized on Ingria, and founded

Peters!. ur_r.

In spite of the superiority of situation, and the

encouragement given to foreigners to visit his

infant capital, a great part of the productions of

Russia were still sent to Archangel, until, prohibi-

tions and punishments being added to premiums

nd privilege-: Petersburg at last triumphed.

The first foreign vessel that entered the Neva was

a large Dutch ship, richly laden ; and her arrival caused such satisfaction to the czar that he

granted this vessel an exemption from all duties

while she should continue to trade to Petersburg : and by frequent repairs she was kept in existence for more than half a century. So early as 1718 100 ships of the same nation loaded at Petersburg ; and, other nations following the example of the Dutch, it was soon known that a vast field was opened in the north for the exercise of talents and industry, and strangers of all nations flocked to Russia to improve or seek their fortunes. The merchants of Germany, England, France Holland, Denmark, and Sweden, established themselves in the cities for the purposes of commerce, while the English and Dutch also supplied ship-builders and officers, both of land and sea, who improved the organisation of the armies and fleets.

The plans of Peter were not lost sight of by his successors ; Catharine II., in particular, by her victories and her negociations, as well as by the encouragement of foreigners and the protection of commerce, accelerated the progress of industry and civilisation amongst her subjects. Although a part of the commercial productions of the Russian dominions are still exported from

Archangel, and another part from the ports of the Black Sea, since its navigation has been opened , the principal commerce of Russia is by the Baltic. From its ports on this sea are exported corn, hemp, flax and flax-seed, fir timber (masts, deals, rafters), pitch, tar, and potash, iron and copper of Siberia, hides and tallow, honey and wax, rhubarb, tobacco in leaf, fish oil, isinglass, kaviar, and furs of Siberia, viz. castors, sables, foxes of various colors, wolves, squirrels, bears, rats, and white hares. In 1793 Russia exported by sea, for 400,000 rubles of these furs ; sea-birds' feathers, horse-hair, hogs' bristles, and neats' tongues. The chief manufactured objects are saltpetre, cordage, and sail-cloth ; coarse linens, mats, and soap. The principal imports are English manufactures, viz. fine woollens, glass, and earthenware, stationary, all kinds of cottons, mathematical instruments, cutlery, and hardware, tin and lead. The other imports are colonial produce, particularly coffee, pf which Petersburg imports nearly 1,500,000 Ibs. ; sugar, of which it receives nearly 5,000,000 Ibs. ; tea and spices, wines, liqueurs, fruits, and oil of the south ; fine linens of Holland and Silesia ; silks of France, watches, toys, &c., of ditto, besides

various utensils of iron and copper.

*In the middle of the eighteenth century the exports of Russia from the Baltic did not exceed 12,000,000 or 13,000,000 of rubles, and the imports about 8,000,000 or 10,000,000. At the close of the same century the exports exceeded 45,000,000, and the imports were above 32,000,000. The general statement of the Russian maritime commerce (independently of the Caspian and Siberian Seas *) was as follows :—*

- *The amount of the commerce of the Caspian Sea, in late years, has been about 100,000 rubles of exports, and 800,000 of imports.*

RUSSIA.

187

Exports.

Imports.

1802, From the Baltic

1804,

1805,

llubles.

47,000,000

45,OCO,000

52,000,000

Rubles.

33,000,000

27,000,000

29,000,000

1802, From Archangel

1804,

1805,

5,000,000

2,200,000

3,750,000

550,000

390,000

390,000

1 802,From the Black Sea

1804,

1805,

3,000,000

5,000,000

7,400,000

2,055,000

4,200,000

5,356,000

Catharine II., by duties and prohibitions, en-

deavoured to diminish the mass of imports ; and,

by late regulations, certain objects are allowed to be imported by foreigners only into the ports of Petersburg, Riga, Revel, and Liebau. But, though the manufactures of Russia have advanced beyond the state of infancy they were in half a century past, they are still very insufficient to afford all the objects that increasing civilisation renders necessaries to the higher classes, such as fine manufactures for clothing, wines, ornamental furniture, &c.

Russia presents a singular phenomenon among the maritime powers, that of possessing an imposing military marine with a very insignificant commercial one. The total number of her merchant vessels that navigate the Baltic and the ocean did not very lately exceed fifty ; 100 lesser vessels serve to carry on the coasting trade of the Baltic, and about 100 craft, of twenty to thirty tons, are employed in loading and discharging the vessels at Cronstadt that cannot enter the Neva. Not one of the Russian ports, except Petersburgh, has any establishments for building or repairing ships. Even the few ships that sail under the Russian flag from Riga and Revel belong to the merchants of Hamburg and

Lubeck,who, in order to profit by the drawback of three-eighths of the duties on imports, have purchased the freedom of these cities.

Russia has two trading companies, one for carrying on the herring-fishery in the \Vhite Sea, and the North-west American Company. A company has also been founded at Petersburg for saving the cargoes of vessels wrecked in the gulf of Finland ; and the fourth part of the property saved is adjudged to the company as salvage. Several ukases also prescribe to the inhabitants of the coasts the measures to be taken to assist the crews and save the cargoes of the stranded vessels.

Under the immediate successors of Peter the dreat the Russian navy was neglected, and had little more than a nominal existence. When Catharine II. mounted the throne, this ambitious ind enlightened princess auain invited English uul other foreign ship -builders and officers to Petersburg ; and among the English was Sir Charles Knowles, a captain in the British navy, who united the professional knowledge of the complete practical seaman to an intimate ac-

quaintance with the theory of naval construction. lor his direction the Russian marine was soon put on a respectable footing, and many of the abuses in its civil administration corrected. Towards the end of Catharine's reign the marine again declined, but revived under Paul, who built many ships, and introduced several improvements into the administration. The Russian dominions afford every article necessary to the construction and equipment of a navy. At Cronstadt and Petersburg the ships are built of the oak of Kasan ; the Ukraine and government of Moscow supply hemp ; masts are procured from the vast pine forests of Novogorod, and from the Polish provinces; pitch and tar from Wyborg ; iron and copper from Siberia. In spite of all these advantages the marine is far from having attained a height proportionate to the land forces of the empire. The want of ports on the ocean, and of colonies and fisheries abroad, as well as the state of vassalage of the peasantry, which binds them to the soil, are the chief causes that keep down the military marine, as well as the commercial, by preventing the

formation of seamen. The government has, however, latterly done something towards forming national seamen, by obliging all Russian ships to have two-thirds of their crews natives; and binding the captains, under a penalty of 240 rubles, to bring back to port every Russian seaman he carries from it. There is, however, no restriction with respect to the countries of the captains and officers of merchant vessels ; and the greater number of those in the Russian foreign traders are foreigners. It has also been latterly the custom to send young men, at the expense of the crown, into the English service to learn the profession, and they have been admitted into the British navy as volunteers.

In 1803 a school of naval architecture w;is founded at Petersburg, the expenses of which are paid by government, and amount to upwards of 200,000 rubles a year. There is also a similar institution at Nicolaef in the Black Sea. The palace of Oranienbaum has been appropriated for a naval academy, in which 600 cadets are educated at the expense of the crown. They are admitted at the age of five years, and remain till seven-

teen : during the last three years they make an annual cruise in the Baltic, as far as Revel. There are also navigation schools at Riga, Archangel, and Irkutsk in Siberia, and a school for Baltic pilotage at Cronstadt.

The government of Russia is a despotic monarchy ; the sovereign uniting in himself the legislative, executive, and judicial authorities. Any subject, from the highest to the lowest, may be banished, and his property confiscated, at the pleasure of the czar. The succession appears to be hereditary ; but one prince has often been deposed and another raised to the throne without exciting any commotion. The emperor is generally assisted, however, by a number of ministers and counsellors of his own appointing.

The grand chancellor is the first officer of state ; and under him are ministers for foreign affairs, finances, war, marine, interior, religious worship, public instruction, and police. The different councils in which the ministers preside are styled imperial colleges : the members, with a number of other statesmen appointed by the

emperor, amounting altogether to thirty-five, compose the supreme council, which is invested with a superintending and controlling power over all the public affairs. The senate is another public body, established by the late emperor in 1801, and of which his imperial majesty is the president. This body has the revision of both civil and criminal affairs. It receives reports from all the inferior departments, decides in every difficult case that arises in the tribunals; and from its decrees there lies no appeal except to the emperor. AH questions are determined in this body by a majority of votes, amounting to two-thirds of the whole: in the other departments unanimity is necessary. The senate is the organ of the decrees or ukases of the emperor. The cabinet is a distinct council from any of the above, and has generally consisted of ten members, including the high steward of the household. This council manages his majesty's private affairs, examines petitions, despatches, and accounts, and watches over the produce of the revenue. It also assists the emperor in deliberating on the appeals received from the senate.

The civil law in Russia is a collection of rules derived from most of the other states of Europe, and methodised under the direction of Catharine II. She divided the empire into provinces, and adopted a variety of regulations for the better administration of justice. Courts are now established in each of the provinces, and judges appointed by the crown. But an impartial administration of justice cannot be introduced between the nobles who are tyrants, and the peasants, slaves. The criminal law admits of capital punishment for high treason only ; and the humanity of the emperor Alexander induced him to abolish torture. Felons receive the knout, are branded on the cheek and forehead, and sentenced to hard labor. Many of them are sent to the mines of Siberia, where numbers perish from the effects of the knout, the fatigue of travelling nearly 5000 miles in fetters, and the unhealthy state of the mines.

The nominal force of the army is 600,000 ; but in time of peace one-fifth or one-sixth of this number is non-effective, and at least an equal number are required for garrison duty. At the beginning of 1812 the utmost exertions of the

emperor could not bring into the field more than 200,000 men. The navy we have already noticed.

According to the most authentic accounts the revenue of Russia is nearly £25,000,000 sterling, arising chiefly from a poll tax, first imposed by Peter the Great ; a tax on the capital of merchants residing within the imperial dominions; duties on the exports and imports, and upon law proceedings; together with the produce of the royal domains and monopolies. There are likewise stamp duties, and various other imposts.

The established religion is the Greek church, ati'l has been fully described in our article GREEK CHURCH. There are about 2,000,000 of separatists, with a great number of Mahometans and Pagans, as well as Protestants and Roman Cntliolics, to all of whom complete toleration is allowed. The mo<:l singular of the sects is the Duhoborsti, who, after many persecutions, have been allowed to settle undisturbed in Taurida. They have neither priests, church, nor picture ; and reject both baptism and the Lord's supper. They are sober, industrious, and gentle, and dis-*

tinguished by mutual affection, hospitality, and benevolence. They take great care to bring up their children in the principles and precepts of religion. Their worship is confined neither to place nor time, and consists of singing, praying, and reading the scriptures. They have all things in common, and their only punishment for those who have transgressed the rules of the society is banishment from the community.

Education was much neglected in Russia till a late period ; for though various schools, academies, and colleges were instituted, their benefits were confined to certain classes, and their influence was little felt on the general condition of society. A great number of schools have been established, in the different provinces, for the education of the peasants. The academies and universities have been improved or remodelled, and more amply endowed with funds, for the liberal support of the professors, and the better accommodation of the students, the number of whom has been greatly increased. The Russian language is a dialect of the Sclavonian, harsh and difficult of utterance, but it is said to possess great copiousness. The alphabet comprises

thirty-six letters, formed of the Greek characters, with others apparently of native origin. The language, however, is far from being in a precise form.

*Dr. Clarke says, * in whatever country we seek original genius we must go to Russia for a talent of imitation. It is the scheme of Russian intellect ; the principle of all their operations. They have nothing of their own ; but it is not their fault if they have not every thing that others invent. Their surprising cowers of imitation exceed all that has hitherto been known. The meanest Russian slave has been found adequate to the accomplishment of the most intricate and most delicate works of mechanism, to copy, with his single hand, what has demanded the joint labors of the best workmen in France or England.' Mr. James (in reference to this subject)— ' Newly extricated from barbarism, the infant mind is seized with the desire of pursuing whatever strikes the fancy, or serves to interest; or amuse, while the labors of more rigid science and learning are entirely thrown aside. We find at Petersburgh few men of abstruse acquirements, yet musicians, poets, and painters in*

abundance ; and the nation has arrived in these

arts, it must be confessed, at a highly reputable

pitch of perfection. The works of art, though

not fraught with the spirit of originality of the

southern professors, yet display in almost every

branch the most correct and refined taste ; and

even the natives shine, while the prejudices of

their countrymen have denied them a fair share

of patronage. The academy of arts is fostered

by the superintendence cf the crown ; and, from

the revenues allotted to it, it is well furnished with models from the antique, as well as other matters

suited to its institution. The labors of the stu-

dents exhibit some of the highest specimens of

imitative excellence ; their designs in architec-

ture are of great merit, and their pictures pos-

sess a free style of execution, combined with

chasteness and harmony of color, seldom equalled

in any school.' Their music is framed in the

Italian state. Many of the national airs are ex-

tremely simple and regular. The cultivation of

science has been encouraged by the establishment

of various institutions for that purpose ; and seve-

ral volumes of the memoirs of the Academy of Sciences, founded at St. Petersburgh in 1725, have been distinguished by the excellence of their papers in the abstruse parts of mixed mathematics. The chief Russian universities are those of St. Petersburgh, Kiev, and Abo, with the colleges founded by Peter the Great at Moscow.

More than eighty distinct nations are said to be included within the limits of this empire, and thus exhibit man in every state of his physical and moral condition, from the being who lives on the produce of the chase, clothed in the skins of his prey, and sheltered in the recess of a rock, or the wandering Nomade, who pitches his tent to-day, removes it to-morrow, and is entirely dependent upon the produce of his flock, through the humble peasant, the industrious husbandman, the jngenious mechanic, the wealthy merchant, the owners of almost unknown estates, and the proprietors of men, to the autocrat of all the Russias. The Sclavonians constitute the great body of the population of European Russia : this part of the empire embraces, beside Fins and Laplanders on the north-west, the Samoides on the north-east ; the Cossacks on the*

south, and the Tartars of Taurida on the south-east. The Sclavonic Russians are middle-sized, robust, and vigorous, differing little in complexion from the inhabitants of Great Britain. Those towards the north are a more diminutive race. Their characteristic physiognomy, according to Mr. Tooke, is a small mouth and eyes, thin lips, and white teeth, the nose usually small and turned upwards, the forehead low, the beard thick and bushy, and the hair varying from dark brown to red. The general expression of the countenance is that of gravity rather than sprightliness, but indicating much good-nature. Accustomed to implicit obedience from the nature of the government, and trained to the endurance of hardships and privation from their manner of life, they seem neither to fear danger, nor shrink from fatigue, are subject to few diseases, and frequently attain old age. With the same general features the women have a delicate skin and a fine complexion, which they often destroy by a free use of paint. ' On looking at their faces you easily discern the Tartar and Kalmuc ingrattation upon the old Moscovite stock. The vi-

sage is short, the bones of the cheek high, the

forehead projecting:, and the eyes small. Their

stature is commonly of the middle size; and,

from their habits of life, both men and women

are inclined to be very corpulent. When a tinge of the Georgian Poles and Circassians mingles with

the Russian blood, the result is the most exqui-

site beauty.'

The whole people of Russia may be said to

consist only of two distinct orders, the nobles

and the peasants. The interval between these

has been denominated a tiers etat ; but, a? far as relates to all the practical purposes of life, it is filled up by foreigners, who once enjoyed all lie

lucrative branches of commerce, in which only a

few of the natives as yet participate. 'The

privileges of a nobleman consist in being ex-

empted from military conscription, and from

corporal punishment ; in having the right to es-

tablish manufactories, to possess land and slaves,

to impose taxes, and to inflict chastisement upon

them, &c. The charges on this class are to fur-

nish recruits to the crown, .and to pay a certain

fee on the alienation cf their property. Besides

those who enjoy the above-mentioned rights by

inheritance, these advantages are attached to cer-

tain stations in the civil and military lines ; as-

sessors in the chancery, for instance, and all offi-

cers of the army or navy, are called nobles, though the possession of slaves is limited to persons above the rank of major. The imperial companies of

trade at Petersburg also participate in certain of

these immunities, and are allowed to use carriages

with one pair of horses. But even the nobility

can neither marry, nor choose a profession,

without the emperor's consent. Their estates are

valued by the number of peasants they support.

Several of the nobility possess more than 100,000

peasants ; the property belonging to the family

of Scheremeter consists of 125,000 slaves. Both

in their privileges, and in their manner of life,

these nobles seem to be exact copies of the great

feudal barons of the middle ages. Many of them,

in the country, have households consisting of

500 or 600 peasants, who perform all the various

duties of butchers, bakers, tailors, shoemakers,

footmen, valets, surgeons, musicians, and come-

dians ; for which they are selected without dis-

crimination. Their destinations are determined

upon, and they are then qualified for them by

the cudgel.' — James's Travels.

Dr. Clarke exhibits a lively picture of the ef-

fect of the extremes of poverty and riches in this

empire.

‘ To this poverty, and to these riches, are

equally joined,’ he says, ‘ the most abject mean-

ness, and the most despicable profligacy. In

sensuality they are without limits of law, con-

science, or honor; in their amusements always

children ; in their resentment women. The tHys

of infants, the baubles of French fops, constitute

the highest objects of their wishes. Novelty de-

lights the human race ; but no part of it seeks for novelty so eagerly as the Russian nobles. Novelty

in their debaucheries ; novelty in gluttony ; novelty in cruelty ; novelty in whatever they pursue. This

is not the case with the lower class, who preserve their habits unaltered from one generation to

another. But there are characteristics in which

the Russian prince and peasant are the same.

They are all equally barbarous. Visit a Russian,

of whatever rank, at his country seat, and you

will find him lounging about, uncombed, un-

washed, unshaven, half-naked, eating raw tur-

nips, and drinking quass. The raw turnip is

handed about in slices, in the’first houses, upon

a silver salver, with brandy, as a whet before

dinner. The real Russian rises at an early hour,

and breakfasts on a dram with black bread.

His dinner, at noon, consists of the coarsest and

most greasy viands, the scorbutic effects of which

are counteracted by salted cucumbers, sour cab-

bage, the juice of his vaccinium, and his nectar

quass. Sleep, which renders him unmindful of

his abject servitude and barbarous life, he par-

ticularly indulges ; sleeping always after eating,

and going early to bed. The principal articles

of diet are the same every where, grease and

brandy.'

A uniform costume is seen in all parts of Rus-

sia, only differing in quality as it is worn in the country or the capital. In the one it is a sheep-

skin tunic, fastened round the waist with a gir-

dle ; in the other of cloth, plaited behind like a petticoat. The hair is cut in one shape, and the

lower part of the face is always hid by a beard.

The females retain much of Asiatic finery and

gaudy robes. They wear a saraphan, or vest

without sleeves, fitting close about the neck,

down to the hips, and reaching to the feet. A

row of close-set buttons usually adorns the front,

and it is girt round the waist with a sash, to which the keys in common use are suspended. In some parts the females wear their hair bound up with a riband, or band, which crosses the forehead, and which is often decorated with pearls and beads of various colors : in others they wear caps made in the form of an upright crescent. – In the vicinity of Moscow, and in some of the adjacent parts of the country, the cap has a front resembling that worn by the English jockey, studded with pearls or beads. The houses of the peasants are all of rough logs of. wood, and in villages these are uniformly placed with their ends to the street. The walls have their interstices stopped with moss. The whole family sleep in the same room, reclining on mats, straw, or sheep-skins, and in the clothes they wear during the day. The favorite place at night is on the edge of the stove, which is raised above the floor with a few bricks.

A peculiar custom of Russia is the frequent use of the warm bath, with which the meanest hamlets are provided. The heat they sustain on these occasions would be almost insupportable to other people. It is usually from 100° to 130°

of Fahrenheit's thermometer; and the vapor is renewed every five minutes, by water thrown on hot stones. Such is the effect of habit on the constitution of the Russians that they frequently sally forth from these steam caldrons, and plunge immediately into cold water, or roll in the snow ; and male and female, old and young, not only of the same family, but even of the same village, all assemble in the bath together.

We must conclude this part of our paper with a sketch of the mode of travelling peculiar to Russia : we mean the extensive and skilful use of sledges. Sometimes a body, like that of a coach, is placed on a sledge, which unites the advantage of repose with the convenience of rapid motion. In this manner eighty or 100 miles a day are performed. And hence the Russian prefers the winter for his long journeys. In summer travelling is far more tedious and fatiguing by the badness of the roads, which are often composed of rough logs of wood, laid transversely on beams. Of his passage over one of the large rivers, Mr. James says, ' Nothing could be more strikingly wild than our passage

over the Ypoote. A raft of trees loosely pinned together was provided ; a rope, made from the bark of trees, served for its draught ; on either bank of the river rose a vast forest, not thick and luxurious, but bared in many a line by the pro- gress of age an(| decay ; amidst its shades were seen the white shirts and black fur caps of the Tartars, as they scampered along in the wanton- ness of sport, with their horses at full speed; their taravan, just arrived, was ranged on the river side, and the oxen were seen, every now and then, as the raft put off, plunging into the stream, and swimming lo the opposite shore.'

SOUTHERN RUSSIA is largely inhabited by the Cossacks, who present the singular anomaly of a free people in the midst of abject slavery. As free as a Cossack is a common proverb in Russia. They have been acknowledged as a distinct race for more than nine centuries ; and, according to their different emitrrations and settlements, are at present distinguished by the names of Malo- Russian Cossacks, Don Cossacks, Cossacks of the Black Sea, of the Volga, of Grebenskoy, of Orenburg, of the Ural Alps, and of Siberia. The subsequent remarks, chiefly confined to those

within the European part of the empire, are principally derived from Dr. Clarke's Travels. The ramifications of the Cossack republic, for such it is, extend into various parts of a vast despotic government, which considers it a matter of policy to guarantee their privileges, do the Cossacks afford a greater contrast with the Russians in their political existence than in their personal appearance and individual character. These people are thus contrasted by the intelligent author above referred to, ana who had excellent opportunities of witnessing the t\< > nations. In reference to the Cossacks of the Don and the Black Sea, he says, 'The Rti- regards both with aversion, and affects to consider them beneath his notice, and unworthy of his society, for no other assignable reason than ignorance or envy. The Cossack is rich, the 1 sian poor. The Cossack is high-minded, the Russian abject. The Cossack is for the most part clean in his person, honorable, valiant, often well informed, and possesses, with his loftiness of soul, a very noble stature; the Russian is generally filthy, unprincipled, dastardly, always

ignorant, and rarely distinguished by any eleva-

tion of mind or body.' Many of those vast

steppes in the vicinity of the Don, which appear

as blanks in our best maps, are said to be filled with Cossack abodes. Stanitzas, or settlements,

are formed along all the rivers by which they

are intersected ; and the late bishop Ileber

states that the procurator (who is a person ap-

pointed by the Russian government to superin-

tend the execution of the laws) affirmed to him

that the whole number of Cossacks liable to he

called upon for active service amounted to

200,000 men. The entire male population is rec-

koned at 500,000. 'There is something ex-

tremely martial, and even intimidating, in the first

appearance of a Cossack. Mis dignified and

majestic look ; his elevated brows and dark

mustachoes ; his tall helmet of black wool, ter-

minated by a crimson sash, with its plume, and

white cockade ; his upright posture ; the ease

and elegance of his gait; give him an air of

great importance. We found them in consi-

derable numbers at Kasankaia, lounging before

their houses, and conversing in such large parties that it seemed as if we were entering their capital. Their dresses were much richer than any we had seen in Russia, although all were uniform. Each person's habit consisted of a blue jacket, edged with gold, and lined with silk, fastened by hooks across the chest. Beneath the jacket appeared a silk waistcoat, the lower part of which was concealed by the sash. Large and long trowsers, either of the same material as the jacket, or of white dimity, kept remarkably clean, were fastened high above the waist, and covered the boots. The sabre is not worn, except on horseback, on a journey, or in war. In its place is substituted a switch, or a cane, with an ivory head : this every Cossack bears in his hand, as an appendage to his dress; being at all times prepared to mount his horse at a moment's notice. Their cap or helmet is the most beautiful part of the costume, because it is becoming to every set of features. It adds considerably to their height, and gives, with the addition of whiskers, a military air to the most insignificant figure. They wear their hair short round the head, but not thin upon the crown. It is gene-

rally dark, thick, and quite straight. The cap

is covered by a very soft and shining black wool.

Some of them have civil and military distinc-

tions of ha'bit, wearing, in time of peace, instead

of the jacket, a large frock without buttons. The sash is sometimes yellow, green, or red, though

generally black, and they wear large military

gloves. There is no nation in the world more

neat with regard to dress ; and, whether young

or old, it seems to become them all. A quiet

life seems altogether unsuited to their disposi-

tion. They loiter about, having no employment

to interest them ; and, passionately fond of war,

seem distressed by the indolence of peace. The

territory of the Cossacks, which is almost en-

tirely pasture land, is divided into stanitzas, or

cantons; for many stanitzas now contain more

than a single village. To each of these a certain portion of land and fishery is allotted by govern-

ment, and an allowance of corn from Voronetz,

and northwards according to the returned num-~

ber of Cossacks. They are free from all taxes ;

even from those of salt and distilleries. The

distribution of the land to individuals in each sta-

nitza is settled by the inhabitants and their Ata-

man. This Ataman was chosen by the people, and was both civil and military commander of the place ; but he is now appointed by the crown, and greatly diminished in power ; formerly the Ataman himself marched at the head of his stanitza : now he merely sends the required contingent, which is put under officers named by the crown. The allotment of land and fishery which each Cossack possesses may be let out by him to farm, and often is so. The Cossack, in consequence of his allowance, may be called upon to serve for any term not exceeding three years, in any part of the world, mounted, armed, and clothed, at his own expense, and making good any deficiencies that may occur. Food, hay, and camp equipage, are furnished by government. Those who have served three years are not liable, at least not usually called upon, to serve abroad, except on particular emergencies. They serve, however, in the cordon along the Caucasus, and in the duties of the post and police. After twenty years they become free from all service, except the home duties of police, and assisting in the passage of corn barks over

the shallows of the Don. After twenty-five

years' service they are free entirely.'

The Cossacks and other inhabitants of Tcher-

chaskoy export fish, iron, kaviar, and a little

wine : their merchants going to war, like the

rest of their countrymen, and the greater num-

ber of their superior officers being merchants.

In the capital they live a pleasant and agreeable

life, and have often public amusements, as balls

and parties of pleasure.

The Cossacks are said to be favorably con-

trasted with the other inhabitants of Russia as to

cleanliness both in their persons and houses.

The dress of the females differs from all the other costumes of Russia ; and its magnificence is dis-

played in the ornaments of the cap. The hair of

the married women is tucked under the cap,

which is adorned with flowers, or covered with

pearls and gold. The dress of the young \vomen

is elegant ; a silk tunic with trowsers fastened

with a girdle of solid silver, yellow boots, and

an Indian handkerchief round the head. ' The

common dress of men in Tcherchaskoy is a blue

jacket, with a waistcoat and trowsers of white

dimity ; the latter so white and spotless that

they seem always new. We never saw a Cossack in a dirty suit of clothes. Their hands, moreover, are always clean, their hair free from vermin, their teeth white, and their skin has a healthy and cleanly appearance. Polished in their manners, instructed in their minds, hospitable, generous, disinterested, humane, and tender to the poor, good husbands, good fathers, good wives, good mothers, virtuous daughters, valiant and dutiful sons ; such are the natives of Tcherchaskoy. In conversation the Cossack is a gentleman ; for he is well informed, free from prejudice, open, sincere, and honorable.'

The following account of the religious ceremonies of this people is from Dr. Clarke : —

' The morning after our arrival (at Axay) the general, who was commander-in-chief over all the district, including the town of Tcherchaskoy, the metropolis, came to Axay. The day was celebrated as a festival, in honor of the recovery of one of the emperor's children from the small pox inoculation. He sent us an invitation to dinner ; and in the forenoon we accompanied him, with all the staff officers, to a public cere mony in the church. On entering this building

we were much surprised at its internal magnificence. The screen of the altar was painted of a green color, and adorned with gold : before it was suspended a very large chandelier, filled with tapers of green wax. The screen, like the rest of the church, was covered with pictures : some of these were tolerably well executed, and all of them curious from their singularity and the extraordinary figures they served to represent Here were no seats as in other Russian churches The general placed himself against a wall on the

right hand facing the sacristy, standing on a step covered with a carpet, and raised about four inches from the level of the floor. We were directed to place ourselves by his right hand. The other Cossacks, whether in military uniform or national domestic habit, stood promiscuously in the body of the church. The priest, in very rich robes, with his back towards the people, was elevated upon a kind of throne, placed beneath the chandelier, and raised three steps from the platform, facing the great doors of the sa-

cristy : these were shut. Over them was a picture of the Virgin ; and before it, suspended by a string, were two wooden angels, joine'd b^ck to back, like the figures of Janus, with candles in their hands. Whenever the doors of the sacristy were thrown open, the wooden angels were lowered before the centre of the entrance : here they whirled round and round in a most ludicrous manner. As the ceremony began, the priest, standing upon the throne, loosened a girdle bound across his breast and shoulders, whereon was an embroidered representation of the cross. This he held between his forefinger and thumb, repeating the service aloud, and touching his forehead with it, while the people sang responses, and were busied in crossing themselves. The vocal part of the ceremony was very solemn. The clear shrill notes of children placed among the choristers, rising to the dome of the church, and seeming to die away in the air, had a most pleasing effect. It is the same in all the Russian churches, and I know not any tlung with which it can more justly be compared than the sounds produced by an /Eolian harp.

The words they use are Russian, and every where the same, ‘ Lord have mercy upon us !’ We did not find them altered even among the Cossacks ; it was still ‘ Ghospodi pomilui !’ but thrilled

‘ In notes with many a winding bout
Of linked sweetness long drawn out.’

‘At last there was an interval of silence, after Jus, other voices, uttering solemn airs, were heard within the sacristy. The doors were then thrown open, and a priest, having upon his head a silver chalice, containing the sacred bread, covered with a white napkin, made his appearance. He was preceded by others, who advanced \vith censers, dispersing incense over the doors of the sacristy, the pictures, the priest, the general, the officers, and the people. After some ceremonies, the bread was distributed among the congregation ; then, those who came out of the sacristy having retired, its doors were again closed, and prayers were read for all the royal family ; their names being enumerated in a tone of voice and manner exactly like that of a corporal or serjeant at a roll-call. Passages were

also read from the Psalms; but the method of reading in all the Russian churches is beyond description. The young priests who officiate pride themselves upon mouthing it over with all possible expedition, so as to be unintelligible, eren to Russians ; striving to give to the whole lesson the appearance of a single word of numberless syllables. Some notion may be formed of their delivery, by (.earing the criers in our courts of justice administer the oath to a jury.

HISTORY. — Russia was anciently inhabited by various nations ; such as Huns, Scythians, Sarmatians, Cimbri, &c., of whom an account is given under the various detached articles. The origin of the Russians themselves, though not prior to the ninth century, is covered with almost impenetrable obscurity ; partly owing to the ignorance and barbarity of the people, and partly to the policy which long prevailed among them of discouraging all accounts of their origin, and enquiries into their ancient state and situation; of which we have a remarkable instance in the modern suppression of a work by professor Muller, entitled Ue Originibus Gentis et Nominis

Russorum. According to several authors of credit, the Russians derived their origin from the Slavi or Slavonians, corruptly called the Sclavonians, who settled first along the banks of the Volga, and afterwards near the Danube, in Bulgaria and Hungary ; but, being driven thence by the Romans (whom the Russians call Wolochers, or Wolotaners), they first removed to the banks of the Borysthenes or Dnieper, then overran Poland, and built the city of Kiow. Afterwards they extended their colonies farther north, to the rivers which run into the Ilmen Lake, and laid the foundation of the city of Novogorod. The towns of Smolensk and Tsernikow appear also to have been built by them. The most ancient inhabitants, not only of Russia, but of all Siberia to the borders of China, are called Tshudi : for professor Muller, who, on enquiring in those parts by whom the ancient buildings and sepulchral monuments he saw there were erected, was every where answered that they were the works of a people of this name. In the ninth century the Scandinavians, that is, the Danes, Norwegians, and Swedes, emigrated

from the north, and, crossing the Baltic, went to seek habitations in Russia. They first subdued the Courlanders, Livonians, and Esthonians ; and, extending their conquests still farther, exacted tribute from the Novogorodians, settled kings over them, and traded as far as Kiow, and even to Greece. These new invaders were called Waregers, which, according to Muller, signifies seafaring people; or, if derived from the old northern word war, it signifies warlike men. To these Waregers the name of Russes, or Russians, is thought by the most eminent authors to owe its origin ; but the etymology of the word itself is uncertain. In these dark ages Russia was divided among a great number of pctty princes, who made war upon each other with great ferocity and cruelty, so that the whole country was reduced to the utmost misery ; when Gostomisel, a chief of the Novogorodians, pitying the unhappy fate of his countrymen, and seeing no other method of remedying their calamities, advised them to offer the government of their country to the Waregers. The proposal was readily accepted, and three princes of great

abilities and valor were sent to govern them ;

namely, Ruric, Sincus, and Truwor, said to have

been brothers. The first took up his residence

at Ladoga, in the principality of Great Novo-

. (.rod ; tin: srrond at Bielo Osero, or the Wliit< >

I ake ; and the third kept his court at Isborsk,

K/JW/tr

RUSSIA.

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or, according to others, at a small town then

called Twertzog, in the principality of Pleskow.

The three brothers reigned amicably, and made

considerable additions to their dominions ; all of

which at length devolved on Ruric by the death

of Sincus and Truwor.

RUSSIA, UNDER THE RACE OF RURIC. RuHC

became zealous for the strict administration of

justice, and issued a command to all the boyars

who possessed territories under him to exercise

it in an exact and uniform manner. To this

end it was necessary there should be general

laws: and this leads us to conclude that letters

were, not entirely unknown in his dominions.

The Russian empire continued to flourish till

the end of the reign of Wolodomir, who as-

cended the throne in 976. Having settled the

affairs of his empire, he demanded in marriage

the princess Anne, sister to the Greek emperor

Basilius Porphyrogenitus. His suit was granted,

on condition that he should embrace Chris-

tianity. With this the Russian monarch com-

plied ; and that vast empire was thenceforward

considered as belonging to the patriarchate of

Constantinople. Wolodomir received

of Basilius on the day on which he was baptised ; and, according to the Russian annals, 20,000 of

his subjects were- baptised on the same day.

Michael Syra, or Cyrus, a Greek, sent by Pho-

tius the patriarch of Constantinople, was ac-

cepted as metropolitan of the whole country.

At the same time Wolodomir put away all his

former wives and concubines, of whom he had

upwards of 800, and by whom he had twelve

sons, who were baptised on the same day with

himself. The idols of paganism were now thrown

down, churches and monasteries were erected,

towns built, and the arts began to flourish. The

Sclavonian letters were now first introduced into

Russia; and Wolodomir sent missionaries to

convert the Bulgarians ; but only three or four of their princes came to him and were baptised. These events happened in the year 987. Wolodomir called the arts from Greece, cultivated them in the peaceable periods of his reign, and rewarded their professors with generosity, that he might dispel the clouds of ignorance which enveloped his country, call forth the genius of his countrymen, and render them happy. He also founded public schools, and enacted a law concerning the method of instructing youth, and directing the conduct of the masters appointed to instruct them. He died in 1008, and, contrary to all rules of sound policy, divided his empire among his twelve sons.

Wolodomir was no sooner dead than his sons commenced a civil war. Suantepolk, one of the brothers, having destroyed and seized upon the dominions of two others, was himself driven out by Jarislaus, and obliged to fly to Boleslaus king of Poland. This brought on a dreadful war betwixt the Poles and Russians, in which the former were victorious, and the latter lost a great part of their dominions, as related under

POLAND. Jarislaus, finding himself unable to oppose the king of Poland, now turned his arms against the rest of his brothers, all of whom he dispossessed of their dominions, and seized them for himself. He next attacked the Cos-

sacks, over whom he gained several advantages : after which he ventured once more to try his fortune with Boleslaus : but in this second expedition he was attended with worse success than before, being now reduced to the condition of a vassal and tributary to the victorious monarch. However, in the reign of Mieczislaus 11. the successor of Boleslaus, the Russians again shook off the yoke, and a lasting peace was confirmed by the marriage of Mieczislaus with the sister of Wolodomir. Jarislaus now continued to enjoy the empire quietly ; and devoted a great part of his time, we are told, to study. He invited men of letters to his court, and caused many Greek books to be translated into the Russian language. In 1019 he gave the people of Novogorod several laws, under the title of Gramota Soudebnaia, to be observed in the

courts of justice. These are the first laws that are known to have been reduced to writing in Russia ; and what renders them remarkable is the conformity they have to those of the other northern nations. He founded a public school at Novogorod, where he maintained and educated 300 children at his own expense. His court was the most brilliant of the north, and furnished an asylum to unfortunate princes. He died in 1052.

Jarislaus fell into the same error which his father had committed, by dividing his dominions among his five sons. This produced a repetition of the bloody scenes which had been acted by the sons of Wolodomir ; the Poles took advantage of the distracted state of affairs to make continual inroads and invasions ; and the empire continued in the most deplorable situation till 1237, when it was totally subdued by the Tartars. Innumerable multitudes of these barbarians headed by their khan Batto, after ravaging great part of Poland and Silesia, broke suddenly into Russia, where they committed the greatest cruelties. Most of the Russian princes,

among whom was the great duke George Sevoloditz, were made prisoners, and racked to death ; and, in short, none found mercy but such as acknowledged themselves the subjects of the Tartars. The imperious conqueror imposed upon the Russians every thing that is most mortifying in slavery ; insisting that they should have no other princes than such as he approved of; that they should pay him yearly a tribute, to be brought by the sovereigns themselves on foot, who were to present it numbly to the Tartarian ambassador on horseback. They were also to prostrate themselves before the haughty Tartar ; to offer him milk to drink, and, if any drops of it fell down, to lick them up : a singular mark of servility, which continued nearly 260 years.

George Sevoloditzwas succeeded by his brother Michael Sevoloditz Zernigouski ; who opposed the Tartars, but was defeated by them, and lost his life. He left three sons, Theodore, Alexander, and Andrew, whose wars with each other ended in the death of them all. Alexander, a son of Alexander, was then placed on the throne

by the Tartars ; and his son Daniel removed his court from Wolodimir to Moscow, where he first assumed the title of great duke of Wolo-

imir and Moscow. Daniel left two sens, Gregory and John ; the former of whom, named Kalita, from a purse he used always to carry about him filled with money for the poor, ascended the throne ; but he was soon assassinated by another prince named Demetrius, who \vus himself put to death for it by the Tartars ; and John, likewise surnamed Kalita, was then made czar. This John left three sons, John, Simon, and Andrew ; and the eldest of these, commonly called Ivan Ivanovitz in the barbarous language of Russia, i. e. John, the son of John, was made czar, with the approbation of the Tartars, on whom he was dependent. During these several reigns, which occupied upwards of 100 years, the miseries of a foreign yoke were aggravated by all the calamities of intestine discord and war ; whilst the knights of Livonia, or brothers of the short sword, as they are sometimes called,

s kind of military order of religious, on one side, and the Poles on the other, attacked Russia, and took several of its towns, and some considerable countries. The Tartars and Russians, whose interests were in this the same, often united to oppose their common enemies, but were generally worsted. The Livonians took Pleskow ; and the Poles made themselves masters of Black Russia, the Ukraine, Podolia, and t lie city of Kiow. Casimir the Great, one of their kings, carried his conquests still farther. He claimed a part of Russia, in right of his relation to Boleslaus duke of Halitz, who died without issue, and took the duchies of Perzemyslia, Halitz, and Luckow, and the districts of Sanock, Lubackzow, and Trebowla; all which countries he made a province of Poland. See POLAND.

The newly conquered Russians were ill disposed to brook the government of the Poles, whose laws and customs were more contrary to their own than those of the Tartars had been. They joined the latter to rid themselves of the yoke, and assembled an army numerous .enough

to overwhelm all Poland, but destitute of valor and discipline. Casimir, undaunted by this deluge of barbarians, presented himself at the head of a few troops on the borders of the Vistula, and obliged his enemies to retire. Demetrius, the son of John, who commanded in Moscow, made frequent efforts to rid himself of the galling yoke. He defeated in several battles Ms.,, may, khan of the Tartars ; and, when conqueror, refused to pay them any tribute, and assumed the title of great duke of Muscovy. But the oppressors of the north returned in greater numbers than before ; and Demetrius, at length overpowered, after a struggle of three years, perished with his whole army, which amounted to 240,000 men. His son, Basilius, revenged his father's death. He attacked his enemies, drove them out of his dominions, and conquered Bulgaria. He made an alliance with the Poles, whom he could not subdue ; and even ceded to them a part of his country, on condition that they shouiu help him to defend the rest against any :iew irxarsions of the Tartars. But this treaty was a weak barrier against ambition. The

Russians found new enemies in their allies, and the Tartars soon returned. Basilius had a son named Basilius, to whom the crown ought (o have descended. But the father, suspecting his legitimacy, left it to his own brother Gregory, a man of a severe and tyrannical disposition, and therefore hated by the people, who asserted the son's right, and proclaimed him their sovereign. The Tartars took cognizance of the dispute, and

determined it in favor of Basilius ; upon which Gregory had recourse to arms, drove his nephew from Moscow to the principality of Uglitz, and usurped his throne. Upon the death of Gregory, Basilius returned to Moscow ; but Andrew and Demetrius, sons of the late usurper, laid siege to that city, and obliged him to retire to the monastery of Troitz, where they took him prisoner, with his wife and son, and put out hi«= eyes : hence the appellation of jemnoi, the blind. The subjects of this unfortunate prince, incensed at the cruel treatment he had received, forced the perpetrators of it to fly to Novogorod, and reinstated their lawful sovereign at Moscow, where he died. In the midst of this general confusion, John I., the son of Basilius, by his invincible spirit and refined policy, became both the conqueror and deliverer of his country, and laid the first foundation of its future grandeur.

Observing with indignation the narrow limits of his power at his accession to the throne, after the death of his father, he began immediately to revolve within himself the means of enlarging his

dominions. Marriage seemed to him one of the best expedients he could begin with; and accordingly he demanded and obtained Maria, sister of Michael duke of Twer, whom he soon after deposed, under pretence of revenging the injuries done to his father, and added this duchy to his own territories of Moscow. Maria, by whom he had a son named John, who died before him, did not live long ; and upon her death he married Sophia, daughter of Thomas Palicologus, who had been driven from Constantinople, and forced to take shelter at Rome, where the pope portioned this princess, in hopes of procuring thereby great advantage to the Romish religion ; but his expectations were frustrated, Sophia being obliged to conform to the Greek church after her arrival in Russia. John doubtless hoped by this marriage to establish a claim to the empire of the east, to which her father was the next heir : and the Russians certainly owed to this alliance their deliverance from the Tartar yoke. Shocked at the servile homage exacted by those proud victors, her husband going to meet their ambassadors at some distance from the city, and standing to hear what they had to

say, whilst they were at dinner, Sophia told him

that she was surprised to find that she had mar-

ried a servant to the Tartar. Nettled at this re-

proach, John feigned himself ill when the next

deputation from the Tartars arrived, and under

that pretence avoided a repetition of the stipulated humiliating ceremonial. Another circumstance

equally displeasing to this princess was that the

Tartars had, by agreement, within the walls of

the palace at Moscow, houses, in which their

ministers resided ; to show their power, and at

the same time watch the actions of the great

duke. To get rid of these, a formal embassy

was sent to the Tartarian khan, to tell him, that

Sophia having been fave^d with a vision from

above, ordering her to build a temple in the

place where those houses stood, her mind could

not be at ease till she had fulfilled the divine

command ; and therefore his leave was desired

to pull them down, and give his people others.

The khan consented : the houses within the

kremlin were demolished ; and, no new ones

being built, the Tartar residents were obliged to

leave Moscow, their prince being prevented

from revenging this breach of promise, by a war he was engaged in with the Poles. John taking advantage of this circumstance, and having considerably increased his forces, disclaimed all subjection to the Tartars, attacked their dominions, and made himself master of Casan, where he was solemnly crowned with the diadem of that kingdom, which is still used for the coronation of the Russian sovereigns. The province of Perraia, with great part of Lapland and Asiatic Bulgaria, soon submitted to him ; and Great Novogorod was reduced by his generals after a seven years' siege, and yielded him 300 cart loads of gold and silver, and other valuable effects. Alexander Witold, waiwode of Lithuania, was in possession of this rich place, from which lie had exacted for some years an annual tribute of 100,000 rubles, a prodigious sum for those days in that country. When it was taken by John Basiltowitz, he, to secure his conquest, put it under the protection of the Poles, voluntarily rendered himself their tributary for it, and accepted a governor from the hand of their king Casimir III., a weak prince, from whom he had

nothing to fear. The Novogorodians continued to enjoy all their privileges till about two years after ; when John, ambitious of reigning without control, entered their city with a numerous retinue, under pretence of keeping to the Greek faith, he being accused of an intention to embrace the Romish religion ; and, with the assistance of the archbishop Theophilus, stripped them of all their remaining riches. He then deposed the treacherous prelate, and established over Novogorod new magistrates, creatures of his own ; thus destroying at once a noble city, which, had its liberties been protected, and its trade encouraged, might have proved to him an inexhaustible fund of wealth. All the north beheld with terror and astonishment the rapid increase of the victor's power : foreign nations courted his alliance ; and the petty princes of Russia submitted to him without resistance. The Poles, however, complained loudly of this breach of faith in regard to Novogorod, and threatened revenge ; upon which John, elated with his successes, with the riches he had amassed, and the weak condition of most of his neighbours, sent a

body of troops into Lithuania, and soon became master of several of its towns. Casimir applied for assistance to Matthias king of Hungary ; but was answered that his own soldiers were quite undisciplined ; that his auxiliaries had lately mutinied for want of pay ; and that it was impossible for him to raise a new army out of the neighbouring countries. The Polish monarch in this distress was obliged to purchase of John a cessation of arms for two years, during which the Muscovite made new accessions to his dominions- The dukes of Servia, whose territories were about 500 miles in extent, had long thought themselves ill used by the Lithuanians on account of their religion, which was that of the Greek church ; and wanted to withdraw from this subjection to Poland, and put themselves under the protection of Russia. An accident afforded them the wished for pretence. Their envoys, arriving at Wilna, desired admittance to the king's presence; which being refused one of them endeavoured to force his way in ; but the porter shut the door rudely against him, and in so doing broke one of his fingers. The porter was immediately put to

death ; but the Servians, not satisfied, returned home in great fury, and prevailed upon their countrymen to submit to the Muscovites. Casimir made several attempts to recal them, but to no purpose. Matthias king of Hungary dying about this time, two of his sons, Uladislaus, then king of Bohemia, and John Albert, contended for his vacant crown. Casimir wished to give it to the latter, whom he assisted to the utmost of his power ; and, though he was in great want of men and money, he purchased a renewal of the truce with the Russians, and thereby gave John time to establish himself in his new acquisitions. Casimir died in 1492, and was succeeded on the throne of Poland by his son John Albert, who, totally disregarding the Russians, involved himself unnecessarily in a war with the brave Stephen duke of Moldavia; and, though he had at the same time both the Tartars and Turks against him, his propensity to pleasure rendered him so indolent that he not only did not attempt to molest John in any of his possessions, but concluded a peace with him on terms very advantageous to the latter ; and even entered into a

treaty, by which he stipulated not to assist the Lithuanians, though they had chosen his brother Alexander for their duke, in case the Russians should attack them. Alexander, to parry the inconveniences of this agreement, and to guard against the designs of his enemies, demanded in marriage John's daughter, Helena, by his second wife Sophia, and obtained her. The Lithuanians then expected tranquillity; but the ambitious czar, (for John had assumed that title since his conquest of Casan,) soon found a pretence to break with his new allies, by alleging that Polish Russia, as far as the river Berezina, had belonged to his ancestors, and therefore was his by right, and that Alexander had engaged to build a Greek church at Wilna for his Russian consort, which instead of doing, he had endeavoured to force the Polish Russians to become Roman Catholics. In consequence of this plea, he sent into the territories of his son-in-law, by different ways, three armies, which reduced several places, destroyed the country about Smolensko, and defeated the Lithuanian field marshal Ostrosky near the river Wredrasch, where he fell unawares into an am-*

bush of the Russians. Alexander raised a new army of Silesians, Bohemians, and Moravians; but they came too late, the Russians having retired with their plunder. Elated by their success they invaded Livonia in 1502, with 130,000 men ; but Walter Von Plettenberg, grand-master of the knights of the cross, with only 12, 000 men, O 2

gave them a total overthrow; killing 10,000 of them with little loss on his own side. John dispirited by this defeat, and being engaged in a •war with the Tartars, the Poles, and the city of Pleskow, immediately despatched an embassy to Plettenberg, and concluded a truce with him for fifty years. At the same time he begged of that general to send to Moscow, that he might see him, one of the iron dragoons, as he called them, who had performed wonders in the late engagement. Von Plettenberg readily complied ; and the czar rewarded the cuirassier's accomplishments with considerable honors and presents. Alexander had been elected king of Poland upon the death of his brother John

Albert, in 1501, but the Poles refused to crown his consort Helena, because she adhered to the Greek religion. Provoked at this affront, and probably still more stimulated by ambition, John resolved again to try his fortune with them : and accordingly ordered his son Demetrius to march against Smolensko, and reduce that city. The young prince did what he could, but the vigorous resistance of the besieged, and the arrival of the king of Poland with a numerous army, obliged the Russians to raise the siege and return home ; and the czar was glad to make a fresh truce with the Poles for six years, upon the easy terms of only returning the prisoners he had taken. Neither the czar nor Demetrius long survived this event; for Sophia, who had gained an absolute ascendant over her husband, and wanted to give the sovereignty to her children, persuaded him to set aside and imprison his grandson Demetrius, the only child of the late John, whom he had by his first wife Maria, and declare her eldest son Gabriel his successor. The czar blindly followed the iniquitous advice ; but shortly after, finding his end approach, he sent for young

Demetrius, expressed great remorse for his barbarity, and on his death-bed declared him his lawful successor. He died in November 1505, after a reign of fifty-five years ; leaving behind him an immense territory, chiefly of his own acquiring.

The czar was no sooner dead than his son Gabriel, at the instigation of his mother Sophia, put an end to the life of the young Demetrius, by confining him in prison, where he perished with hunger and cold ; after which Gabriel was crowned by the name of Basilius, and took the title of czar. On his accession he expected that the Poles would be in confusion about the election of a new sovereign ; but, being disappointed by their unanimous election of Sigismund I. (see POLAND), he sent an army into Lithuania, and laid siege to Smolensko. It made a brave resistance, till news arrived that the crown troops of Poland were coming to their assistance, with 80,000 Crim Tartars ; on which the Russians retreated with precipitation, but were quickly followed by the Poles, who reduced the czar to submit to their own terms. Basilius remained

quiet for some time ; after which he, with a numerous army, encamped near Pleskow, where the Poles, presuming on the late treaty, received him as a friend. But the Muscovite priests, of the Greek church, preaching up that it would be advantageous to have a sovereign of their own IPligion, brought them to such a height of enthusiasm that they murdered their magistrates, and opened their gates to the czar, who made them all slaves, banished them to different parts, and filled the city with Muscovites, to secure his conquest. Soon after he took Smolensko ; and the Swedes, alarmed at his rapid progress, desired a prolongation of the truce for sixty years longer. The duchy of Lithuania was the great object of Basilius; to accomplish which he ordered John Czeladin, a man enterprising even to rashness, to march thither with 80,000 men. The army of the Poles did not exceed 35,000 men, but was commanded by a most experienced general. The two armies met on the opposite banks of the Dneiper, near Orsova, and the Poles passed that river in sight of their enemies. The Lithuanians began the aUack, but were repulsed

by the Russians, who, imprudently following them, became at once exposed to the full fire of the enemy's artillery. The Polish cavalry then rushed in among them and made dreadful havoc. Those who endeavoured to fly were drowned in the Dneiper ; and the rest, including Czeiadin himself, were made slaves. Basilius was at Smolensko, when he received the news of this dreadful defeat ; on which he immediately fled to Moscow where his danger increased daily. The Crim Tartars ravaged his dominions, and the emperor Maximilian, with whom he had been in alliance, deserted him ; his troops were defeated in Livonia, where he was obliged to submit to a peace on dishonorable terms. In the mean time, the king of Poland stirred up the Tartars to invade Russia, while the Russian monarch endeavoured to excite them to an invasion of Poland . These barbarians, equally treacherous to both parties, first invaded and ravaged Podolia in Poland ; and then invaded Russia, defeated the armies of the czar in 1521, and quickly made themselves masters of Moscow. An army which had been sent to oppose their progress was de-

feated near the Occa; and the czar's brother

Andrew, who commanded it, was the first who

fled. Basilius with great difficulty made his

way to Novogorod ; but so terrified that he hid

himself by the way under a haycock, to avoid a

party of the enemy. The Tartars, however, soon

obliged him to sign a writing, by which he

acknowledged himself their vassal, and promised

to pay them a tribute of so much a head for every one of his subjects. Besides this, Machmet

Gerei, the commander of the Tartars, caused hi

own statue to be set up at Moscow, as a mark of

his sovereignty ; compelled Basilius to return to

his capital, to bring thither in person the first

payment of this tribute, and, as a token of his

submission, to prostrate himself before his statue.

Machmet Gerei then left Moscow, and returned

home with an immense booty, and upwards of

80,000 prisoners, who were made slaves, ;m-l

sold like cattle to the Turks. In his way back

he attempted to take the city of Rezan; but was

repulsed with considerable loss by John Kowen,

who commanded in that place for the Russians.

Here the Tartar general narrowly escaped with

his life, his coat being shot through with a mus-

kel hall; and the Mu-roviies pulled down his p, and broke it t-> pieces as soon as the con-

querors had left them. Basilius died in 1533, and was succeeded by his son John Basiliowitz II., an infant of five years of age.

During the minority of John II. his two uncles Andrew and George endeavoured to deprive him of the crown; but their attempts were defeated by the activity of his guardians. The Poles also commenced hostilities, but made little progress. John, as soon as he entered his nineteenth year, showed a desire to rescue his subjects out of that desperate state of ignorance and barbarism in which they had been hitherto immersed. He sent a splendid embassy to the emperor Charles V., who was then at Augsburg, to desire the renewal of a treaty of friendship which had been concluded with his father Maximilian, and offering to enter into a league with him against the Turks, as enemies to the Christian religion ; for his farther information in which, particularly in regard to the doctrine and ceremonies of the

Latin church, he requested that his ambassador

might be allowed to send from Germany to Rus-

sia proper priests to instruct him and his sub-

ects. With these he likewise desired to have

some wise and experienced statesmen, able to

civilize the wild people under his government;

and also, the better to help to polish them, he

requested that he would send mechanics and

artists of every kind ; in return for all which he offered to furnish two tons of gold yearly, for

twenty years together, to be employed in the

war against the Turks. The emperor readily

agreed, and the Russian ambassador accordingly

engaged upwards of 300 German artists, to re-

pair to Lubec, and proceed thence to Livonia.

But the Lubeckers, who were very powerful at

that time, and aimed at nothing less than the en-

grossing of the whole commerce of the north,

stopped them, and represented strongly to the

emperor, in the name of all the merchants in Li-

vonia, the dangerous consequence of thus afford-

ing instructions to the Russians, who would soon

avail themselves of it to ruin their trade, and

distress the subjects of his imperial majesty.

The workmen and others intended for Russia

were easily prevailed upon to return home; and the czar's ambassador was arrested upon his arrival at Lubec, and imprisoned there at the suit of the Livonians : however he escaped soon after ; and the czar, though provoked at the Lubeckers, was obliged to suspend his resentment. His first enterprise was against the Tartars at Casan, who had hitherto been such formidable enemies. In this he was attended with success : the whole territory was conquered in seven years; but the capital, Casan, being well fortified and bravely defended, made such resistance as quite disheartened the besiegers. John, hearing of this, hastened to them with considerable reinforcement, and exhorted them to push the siege with redoubled vigor. But the greater part, deaf to his remonstrances, proceeded to mutiny, and fell upon their comrades who were for continuing the war. John, alarmed at this, rushed in among the combatants, and with difficulty 'parted them ; but neither menaces nor entreaties, nor even a promise of the whole plunder of the city if they took it, could prevail on them to continue the war. Their rage at last prompted

them to threaten the life of their sovereign, who was obliged to make the best of his way to Moscow ; and the mutineers instantly returned thither. John, though justly incensed at this insolence, took a method of punishing it which does honor to his humanity. Having selected a guard of 2000 of his best troops, he ordered a great feast, to which he invited his principal nobles and officers, to each of whom, according to the Russian custom, he gave very rich garments. The chief of the seditious were clothed in black velvet ; and after the dinner was over he made a speech to the whole company, setting forth the behaviour of his troops before Casan, their contempt of his commands, and their conspiracy against his life : to which he added that he was doubly sorry to find the instigators of such wickedness among those who were styled, and who ought to be, his faithful counsellors ; and that those who knew themselves to be guilty of such atrocious wickedness could not do better than voluntarily to submit themselves to his mercy. Upon this most of them immediately threw themselves at his feet, and implored his pardon. Some of the most criminal were exe-

cuted, but the rest were only imprisoned. Immediately after this John marched with a fresh army to reinvest Casan, before the Tartars had time to recover themselves. The besieged still made an obstinate defence, and the Russians again began to be dispirited; upon which the czar ordered his pioneers to undermine the walls of the citadel, a practice then unknown to the Tartars. This work being completed, he directed his priests to read a solemn mass to the whole army, at the head of which he afterwards spent some time in prayer, and then ordered fire to be set to the powder, which acted so effectually that great part of the foundation was immediately blown up, and the Muscovites, rushing into the city, slaughtered all before them ; while the astonished Tartars, crowding out at the opposite gate, crossed the Casanka, and fled into the forests. Among the prisoners taken on this occasion were Simeon king of Casan, with his queen ; both of whom were sent to Moscow, where they were treated with the utmost civility and respect. Encouraged by this success ˆJohn invaded the country of Astracan, the capital of

*which he soon reduced ; after which he prepared to revenge himself on the Livonians for their behaviour in stopping the German artists. John Basiliowitz I. had concluded a truce with this people for*fifty years ; which now being expired, lodocus, archbishop of Dorpt and canon of Munster, sensible of the danger to which he was exposed by the vicinity of the Russians, requested the czar to give him a prolongation of the truce. John offered him the alternative of a truce for five yˆars, upon payment of one-fifth of a ducat for eˆich person in Dorpt ; or for twenty years, on condition that he and the Livonians should rebuild all the Russian churches which had been demolished in their territories, and allow his subjects the free exercise of their religion. lodocus evaded an answer, but at last levied a considerable sum, and fled with it to .Munster, where he resigned his prebend and married. His successor, named Herman and*

the deputies from Livonia, accepted of conditions, and swore to observe them ; with this ad-

ditional clause, that the priests of the Romish communion should be exempted from paying tribute. But, while the Livonians swore to these terms, they were at that very time in treaty with Gustavus Vasa, king of Sweden, to join them in attacking Russia. Gustavus complied with their desires; upon which John invaded Finland. Gustavus advanced against him with a powerful army ; but, as neither the Poles nor Livonians gave him any assistance, he was obliged to conclude a treaty with the czar, and soon after to evacuate the country. Finland was then governed by William of Furstenberg, grand master of the Livonian knights and the archbishop of Riga; between whom a quarrel happened about this time, which facilitated John's designs. The archbishop, after attempting to set himself above the grand master even in civil affairs, and to persecute those who adhered to the conefesion of Augsburg, chose for his coadjutor in the archbishopric of Riga Christopher duke of Mecklenburg. From the abilities and haughty temper of this lord the Livonian knights had reason to fear the worst ; and the step was, besides, unprecedented, and contrary to the established

laws. These discontents were heightened by letters intercepted from the archbishop to his brother Albert, duke of Prussia, inviting this last to suppress the order of Livonian knights, and to secularise their possessions ; so that an open war broke out among the contending parties, and the archbishop was seized and made prisoner. He was, however, soon released, through the mediation of the emperor of Germany and other potentates, backed by the powerful preparations of the Prussians to avenge his cause ; but in the mean time, the strength of their country being totally exhausted, the Livonians were obliged, instead of preparing for war, to sue to the czar for peace. John replied that he did not believe their intentions to be sincere while they kept 6000 Germans in pay ; and, therefore, if they meant to treat of peace, they must begin with dismissing these troops. The Livonians did as they were ordered ; and in 1558 an army of 100,000 Russians entered the district of Dorpt, and laid every thing waste with the most shocking cruelty. After this they entered the territories of Riga, where they behaved with

equal inhumanity; and, having at last satiated themselves with blood and treasure, they retired with an immense booty and a great number of prisoners. The Livonians, now convinced of their own folly in provoking the rage of the Russians, sent' ambassadors to sue for peace. These offered the czar a present of 30,000 ducats, and prevailed upon him to grant their nation a truce for four months, during which they returned home to get the money. But in this interval the Livonian governor of the city of Nerva fired some cannon against Ivanogorod or Russian Nerva, on the opposite side of the river, and killed several of the czar's subjects who were quite unarmed. The Russians, out of regard to the truce, did not attempt to make reprisals, but immediately acquainted John with it ; which so incensed the czar that, when the Livonian amidors arrived, he told them he looked upon their nation to be a set of perjured wretches, who had renounced all honesty ; that they might go back with their money and proposals, and let their countrymen know that his vengeance would soon overtake them. The ambassadors were scarcely arrived in Livonia when an army of

300,000 Russians entered the district of Nerva, under Peter Sisegaledrii, who had been a famous pirate in the Euxine Sea. He took Nerva in nine days, and soon made himself master of Dorpt, where he found immense treasures. Several other garrisons, terrified by the approach of such numbers, quitted their posts; so that the Russians became masters of a ˆreat part of Livonia almost without opposition. At last Gothard Kettler, grand master of the knights of Livonia, entreated Christian III. king of Denmark, to take Ri?a, Revel, and the countries of Garnland, Wirrland, and Esthonia, under his protection ; but, from his advanced age, he declined the offer, though he assisted them with money and powder, of which they stood greatly in need. Having then applied to the emperor of Germany and the court of Sweden, Kettler put himself under the protection of the Poles, who had hitherto been such formidable enemies to the Russians. In the mean time the latter pursued their conquests ; took the city of Marienburg, laid waste the district of Riga, destroyed Garnland, and penetrated to the very gates of Revel. Felin, though pro-

vided with the best artillery in the whole country, became theirs by the treachery of its garrison ; and William of Furstenberg, the old grand master, was taken, and ended his days in a prison at Moscow. The distracted situation of the Livonian affairs now reduced the bishop of Oesal to sell his bishopric to Ferdinand king of Denmark, who exchanged it with his brother Masrnus for a part of Holstein. The districts of Revel and Esthonia put themselves under the protection of Sweden ; and tire grand master, finding himself deserted by all, suppressed the order of which he was the chief, and accepted of the duchy of Courland, which he held as a tief of the crown of Poland. The czar saw with pleasure the division of Livonia between the Swedes and Poles, which, he rightly judged, would produce quarrels between the two nations, and thus give him the fairer opportunity of seizing the whole. In 1564 the Swedes offered him their assistance against the Poles ; but he, judging himself strong enough without them, attacked the Poles with his own forces, but was twice defeated, which checked his farther operations in Livonia. In 1569 he entered into a treaty of

commerce with England, captain Richard Chancellor having recently discovered a passage to Archangel in Russia, through the White Sea, by which that empire could be supplied with foreign goods, without the assistance of Poland or Livonia. To the discoverers of this new passage John granted many exclusive privileges ; and after the death of queen Mary I. renewed the alliance wit!) queen Elizabeth, which has been continued without interruption evtr since. In the mean time, however, a prodigious army of Turks and Tartars entered Muscovy, with a design tosubduc the whole country ; but Xerebrinov, the czar's general, havinjj attacked them in a defile, put them to flight with great shuchter. They then

retired towards the mouth of the Volga ; but, being closely pursued by the Russians and Tartars, they were again defeated, and forced to fly towards Azof on the Black Sea, which they found ruined by the blowing up of a powder magazine. The Russians then attacked their ships there, took some, and gunk the rest ; by which means almost

the whole army perished either with hunger or sword. From this time the empire of Russia became so formidable that none of the neighbouring nations could expect to make a conquest of it. The Poles and Swedes indeed continued to be very formidable ; and, by the instigation of the former, the Grim Tartars, in 1571, again invaded the country with an army of 70,000 men. The Russians, who might have prevented their passing the Volga, retired before them till they came within eighteen miles of Moscow, where they were totally defeated. The czar no sooner heard this news than he retired with his most valuable effects to a well fortified cloister ; upon which the Tartars entered the city, plundered it, and set fire to several churches. A violent storm of wind soon spread the flames all over the city, which was totally burnt in six hours, though its circumference was upwards of forty miles. The fire likewise communicated itself to a powder magazine at some distance from the city ; by which accident upwards of fifty roods of the city wall, with all the buildings upon it, were destroyed ; and, according to the best historians, upwards of 120,000 citizens were burnt or

buried in the ruins, besides women, children, and foreigners. The castle, however, which was strongly fortified, could not be taken ; and the Tartars hearing that a formidable army was coming against them under John Magnus, duke of Holstein, whom John had made king of Livonia, thought proper to retire. The war, nevertheless, continued with the Poles and Swedes ; and the czar, being defeated by the latter after some trifling success, was reduced to the necessity of suing for peace. But, the negociations being somehow or other broken off, the war was renewed with vigor. The Livonians, Poles, and Swedes, having united against the Russians, gained great advantages over them ; and in 1579 Stephen Battori, then king of Poland, levied an army to invade Russia, and regain all that Poland had formerly claimed, which indeed was little less than the whole empire. As the Poles understood the art of war much better than the Russians, John found his undisciplined multitudes unable to cope with the regular forces of his enemies ; and their conquests were so rapid that he was soon obliged to sue for peace,

*which, however, was not granted : and the number of enemies which now attacked Russia might probably have conquered it entirely, had not the allies grown jealous of each other. The consequence was that, in 1582, a peace was concluded with the Poles, in which the Swedes were not comprehended. However the Swedes, finding themselves unable to effect any thing of moment after the desertion of their allies, concluded a truce ; after which the czar, having been worsted in an engagement with the Tartars, died *n 1548. This great prince was succeeded by his son Theodore; a man of such weak understanding that he was totally unfit for government. Under him, therefore, the Russian affairs fell into confusion; and Boris Gndenov, a nobleman whose sister Theodore had married, assumed all the authority. At last he resolved to usurp the throne. For this purpose he caused the czar's brother Demetrius, who was only nine years of age, to be assassinated, and afterwards caused the czar also to be murdered. In 1597 the czar himself was taken ill and died, being poisoned by Gudenov ; of which indeed the czarina was*

so well convinced that she would never after-

wards speak to her brother. With Theodore

ended the line of Ruric, who had governed the

empire of Russia for above 700 years.

II. RUSSIA, TILL THE ELECTION OF THEODORE

III OF THE HOUSE OF ROMANO V. — Boris, who in

reality was possessed of all the power, and would

indeed have suffered nobody else to reign, art-

fully pretended to be unwilling to accept the

crown, till compelled to it by the intreaties of the people ; and even then he put the acceptance of it on the issue of an expedition which he was about

to undertake against the Tartars. The truth of

the matter, however, was, that no Tartar army

was in the field, nor had Boris any intention of

invading that country ; but by this pretence he

assembled an army of 500,000 men, which he

thought the most effectual method of securing

himself in his new dignity. Boris, in 1600, con-

cluded a peace with the Poles, but resolved to

continue the war against the Swedes ; however,

being disappointed in some of his attempts

against that nation, he entered into an alliance

with the Swedish monarch, and even proposed a

match between the king's brother and his

daughter. But, while these things were in agita-

tion, the city of Moscow was desolated by one

of the most dreadful famines recorded in history.

Thousands of people lay in the streets and high-

ways, with their mouths full of hay, straw, or

even the most filthy things, which they had been

attempting to eat. In many houses the fattest

person was killed, in order to serve for food to the rest. Parents were said to have eaten their chil-

dren, and children their parents, or to have sold

them to buy bread. One author, Petrius, says

that he himself saw a woman bite several pieces

out of a child's arm as she was carrying it along : and Margaret relates tha £ four women, having

ordered a peasant to come to one of their houses,

under pretence of paying him for some wood,

killed and ate both him and his horse. This

dreadful calamity lasted three years, notwith-

standing all the means which Boris could use to

alleviate it ; and in this time upwards of 500,000

people perished in the city. In 1604 a young man

appeared, who pretended to be Demetrius, whom

Boris had caused to be murdered. Being sup-

ported by the Poles, he proved very troublesome

to Boris all his lifetime; and after his death de-

prived his son Theodore II., the new czar, of the

empire ; after which he ascended the throne himself, and married a Polish princess. However he held the empire but a short time, being killed in an insurrection of his subjects ; and the unhappy czarina was sent prisoner to Jaroslaw. After the death of Demetrius, Zuski, who had conspired against him, was chosen czar ; but rebellions

continually taking place, and the empire being perpetually harassed by the Poles and Swedes, in 1610 Zuski was deposed, and Uladislaus son of Sigismund king of Poland was elected. However, the Poles representing to Sigismund that it would be more glorious for him to be the conqueror of Russia than only the father of its sovereign, he carried on the war with such fury that the Russians in despair fell upon the Poles, who resided in great numbers at Moscow. The Poles being well armed, and mostly soldiers, had greatly the advantage; however, they were on the point of being oppressed by numbers, when they fell upon the most cruel method of insuring their success that could be devised. This was by setting fire to the city in several places ; and, while the distressed Russians ran to save their families, the Poles fell

upon them sword in hand. In this confusion up-

wards of 100,000 people perished ; but the event

was that the Poles were finally driven out, and

lost all footing in Russia. The expulsion of the

Poles was succeeded by the election of Theodore

Romanov, a young nobleman of seventeen years

of age, whose posterity still continue to enjoy the sovereignty. He died in 1646, and was succeeded

by his son Alexis.

III. RUSSIA UNDER THE HOUSE OF ROMANOV.

—The reign of Alexis was almost one continued

scene of tumult and confusion, the empire being

harassed on all sides by external enemies, and

perpetually disturbed by internal commotions.

The sources of these commotions arose from the

multiplicity and inconsistency of the laws, and the

jarring claims of the border nobles. An eman-

noy ukase, or personal order of the sovereign,

signed with his own hand, is to this day the law

of Russia. These edicts are as various as the

opinions, prejudices, passions, or whims of men ;

and in the days of Alexis they produced endless

contentions. To remedy this evil, he made a se-

lection from all the edicts of his predecessors, of

such as had been familiarly current for 100

years ; presuming that those either were founded in natural justice, or during so long a currency had formed the minds of the people to consider them as just. This digest, which he declared to be the common law of Russia, and which is prefaced by a sori of institute, is the standard law book at this day, known by the title of the Ulogenie or Selectior. ; and all edicts prior to it were declared to be obsolete. He soon made his Novellie, however, more bulky than the Ulogenie ; and the additions by his successors are beyond enumeration. This was undoubtedly a great and useful work ; but Alexis performed another still greater. Though there are many courts of judicature, in this widely extended empire, the emperor has always been lord paramount, and could take a cause from any court immediately before himself. But as several of the old nobles had the remains of principalities in their families, and held their own courts, the sovereign or his ministers, at a distance up the country, frequently found it difficult to bring a culprit out of one of these hereditary feudal jurisdictions, and try him by the laws of the empire. This was a very disagreeable limitation of

imperial power ; and the more so, that some

families claimed even a right to repledge. A

lucky opportunity offered of settling this dispute;

and Alexis embraced it with great ability. Some

families on the old frontiers were taxed with their defence, for which they were obliged to keep

regiments on foot; and, as they were but scantily

indemnified by the state, it sometimes required

the exertion of authority to make them keep up

their levies. When the frontiers, by the conquest

of Casan, were far extended, those gentlemen

found the regiments no longer burdensome, be-

cause, by the help of false musters, the former

scanty allowance much more than reimbursed

them for the expense of the establishment. The

consequence was that disputes arose among them

about the right of guarding certain districts, and

law-suits were necessary to settle their respective

claims. These were tedious and intricate. One

claimant showed the order of the court, issued a

century or two back to his ancestor, for the

marching of his men, as a proof that the right was then in his family. His opponent proved that his

ancestors had been the real lords of the marches ;

but that, on account of their negligence, the court had issued an emannoy ukase to the other, only at

that particular period. The emperor ordered all

the family archives to be brought to Moscow, and

all documents on both sides to be collected. A

time was set for the examination ; a fine wooden

court-house was built ; every paper was lodged

under a good guard ; the day was appointed

when the court should he opened and the claims

heard ; but that morning the house, with all its

contents, was in two hours consumed by fire.

The emperor then said, ‘ Gentlemen, hence-

forward your ranks, your privileges, and your

courts, are the nation’s, and the nation will guard itself. Your archives are unfortunately lost, but

those of the nation remain. I am the keeper, and

it is my duty to administer justice for all and to all. Your ranks are not private, but national,

attached to the services you are actually perform-

ing. Henceforward colonel Buturlin (a private

gentleman) ranks before captain Viazemsky (an

old prince).’ This constitution, which established

the different ranks of Russia, as they remain to

this day, is by Voltaire ascribed to Peter ; but it was the work of Alexis, who, when the situation

of himself and his country is considered, must be

allowed to have been a great and a good man.

He died in 1676.

Alexis was succeeded by his son Theodore

IV., who after an excellent reign, during the

whole of which he exerted himself to the utmost

for the good of his subjects, died in 1682, having appointed his brother Peter I., commonly called

the Great, his successor. See PETEII I. Theo-

dore had another brother named John ; but, as

he was subject to the falling sickness, the czar

had preferred Peter, though very young, to the

succtssion. But through the intrigues of the

princess Sophia, sister to Theodore, a strong

ptity was formed in favor of John; and soon

after both John and Peter were proclaimed sove-

reigns of Russia under the administration or

Sophia, who was declared regent. But the

princess regent conspired against Peter, and,

being discovered, was confined for life in aeon-

vent. From this time also John continued to be

only a nominal sovereign till hi- dca'lt, which*

happened in 1696, Peter continuing to engross

all the power. To this emperor Russia has long

ascribed the whole of her present greatness. The

private character of Peter, however, seems to

have been very indifferent. Though he had been married in his eighteenth year to a young and beautiful princess, he was not restrained by the vows of wedlock; and was besides so much addicted to the pleasures of the table, the prevailing vice of his country, that nobody could have imagined him capable of effecting the reformation which he accomplished. In spite of all disadvantages, however, he applied himself to «.he military art and to civil government. He had also a very singular dread of water, which, had it not been conquered, would have rendered him for ever incapable of accomplishing what he afterwards did. Whfn he was about five years of age, his mother went with him in a coach in the spring season ; and passing over a dam where there was a considerable water-fall, whilst he lay asleep in her lap, he was so suddenly awaked and frightened by the rushing of the water, that it brought a fever upon him ; and after his recovery he retained such a dread of that element that he could not bear to see any standing water, much less to hear a running stream. This aversion, however, he conquered by jumping into

water ; and afterwards became fond of that element. Being ashamed of the ignorance in which he had been brought up, he learned almost of himself, and without a master, enough of tlie High and Low Dutch languages to speak and write intelligibly in both. He looked upon the Germans and Dutch as the most civilised nations ; because the former had already erected some of those arts and manufactures in Moscow which he was desirous of spreading throughout his empire, and the latter excelled in navigation. During the administration of the princess Sophia, he had formed a design of establishing a maritime power in Russia; which he accomplished by the means recorded in our memoir of him. Ravine reformed his army, and introduced new discipline, he led his troops against the Turks ; from whom, in 1696, he took the fortress of Azof; and had the satisfaction to see his fleet defeat that of the enemy. On his return to Moscow were struck the first medals which had ever appeared in Russia. The legend was, ‘ PETER I'HE FIRST, the august emperor of Russia.' On the reverse was AZOF, with these words ‘ Victori-

ous byfre and water.' Notwithstanding this suc-

cess, however, Peter was much chagrined at

having his ships all built by foreigners ; having

besides as great an inclination to have a harbour

on the Baltic as on the Euxine. These consi-

derations determined him to send some of the

young nobility of his empire into foreign countries, where they might improve. In 1697 he sent

sixty young Russians into Italy, most of them

to Venice, and the rest to Leghorn, to learn the

method of constructing their galleys. Forty

more were sent to Holland, to be instructed in

building and working large ships; others to Ger-

many, to serve in the land forces, and to learn

military discipline. At last he resolved to travel

through different countries in person, that he

might have the opportunity of profiting by hi?

own observation and experience. Of this jour-

ney we have given a short account in our me-

moir of him; and shall only add that, in execut-

ing his great design, he lived and worked like a

common carpenter. He labored hard at the

forges, rope-yards, and mills for sawing timber,

manufacturing of paper, wire-drawing, &c. In

acquiring the art of a carpenter he began with

purchasing a boat, to which he made a mast himself, and by degrees executed every part of the construction of a ship. Peter went also from Sweden to Amsterdam, to attend the lectures of the celebrated Ruysch on anatomy. He likewise attended the lectures of burgo-master Witsen on natural philosophy. From this place he went to Utrecht, to visit king William III. of England ; and on his return sent to Archangel a sixty gun ship, in the building of which he had assisted with his own hands. In 1698 he went to England, where he employed himself as he had done in Holland, and perfected himself in the art of ship-building; and, having engaged a great number of artificers, returned with them to Holland : whence he set out for Vienna, where he visited the emperor ; and was on the point of setting out for Venice, to finish his improvements, when he was informed of a rebellion having broken out in his dominions. This was occasioned by the superstition and obstinacy of the Russians, who, having an almost invincible attachment to their old ignorance and barbarism, had resolved to dethrone the czar on account of his

innovations. But Peter, arriving unexpectedly at Moscow, quickly put an end to their machinations, and took a most severe revenge on those who had been guilty. Having then made great reformations in every part of the empire, in 1700 he entered into a league with the kings of Denmark and Poland against Charles XII. of Sweden. The particulars of this famous war are related under SWEDEN. Here we shall only observe that, from the conclusion of this war, Sweden ceased not only to be a formidable enemy to Russia, but even lost its political consequence in a great measure altogether. Peter applied himself to the cultivation of commerce, arts, and sciences, with equal assiduity as to war; and he made such acquisition of dominion, even in Europe itself, that he may be said, at the time of his death, to have been the most powerful prince of his age. He was unfortunate in the Czarovitz his eldest son, whom he contrived to get rid of by the forms of justice, and then ordered his wife Catharine to be crowned with the same magnificent ceremonies as if she had been a Greek empress, and to be recognised as his successor ; which she accordingly was, and

mounted the Russian throne upon the decease of her husband.

Catharine I. succeeded her husband in 1725, and carried into execution many of the great designs which he had left unfinished. See CATHARINE. She died after a short but glorious reign, in 1727, and was succeeded by Peter II. a minor, son to the Czarovitz Alexis. Many domestic revolutions happened in Russia during the short reign of this prince ; but none was more remarkable than the disgrace and exile of prince Menzikoff, the favorite general in the two late

New Code of Laws, &c., and is a very respectable work, which does honor to the empress, by whom it was undoubtedly composed, if she had seriously intended to put it in execution. But the most consequential of the deputies were privately instructed to be very cautious, and informed that carriages and guards were ready for Siberia. There was a grand procession at their presentation. Each had the honor of kissing her majesty's hand and receiving a gold medal.

They met in form to recognise one another, then parted, and have never met since. The New Code melted away without notice; and the princess Dashkoff was handsomely given to understand that her counsels were no longer necessary, and that she could not do better than take the amusement of the tour of Europe. She was liberally supplied, visited London, Edinburgh, and most other capitals in Europe ; accompanied by one of the young princes, said to have been Paul, afterwards emperor; and was treated with great kindness, but kept amused with something very different from legislation. Jn the mean time, many patriotic things were really done. Taxes were frequently remitted where they were burdensome. Every person was declared free who had served government without pay for two years. No man was allowed to send boors from his cultivated estates to his mines in Siberia, nor to any distant estates, but for the purposes of agriculture. Many colonies of German peasants were in various places settled on the crown-lands, to teach the natives the management of the dairy : a branch of rural

*economy of*which the Russians were till that period so completely ignorant that there is not in their language an appropriated word for butter, or cheese, or even for cream. The Russians hoped to be likewise instructed in agriculture ; but the colonists were poor and ignorant ; and this part of the project came to nothing, like the great national schools. Other improvements, however, took place in favor of commerce ; for all barriers were removed, and goods suffered to pass through the empire duty-free. The empress with great liberality encouraged the introduction of arts and manufactures. An academy was instituted of sculpture, painting, architecture, &c., a magnificent and elegant building was erected for it, and many ele"ves supported in it at the expense of the crown. Several very promising youths have been educated in that academy ; but as the Russians are childishly fond of finery, and cannot be persuaded that any thing fine was ever done by their own countrymen, the students are all, on leaving the academy, suffered to starve. The empress, who had a very just taste in architecture, designed several buildings equally useful and*

ornamental to her capital (see NEVA and PETERSBURG): and, while she thus diligently cultivated the arts of peace, she did not neglect those of war. She put her fleets on the most respectable footing, and procured a number of British officers to instruct her seamen in the science of naval tactics. By land, her successes against the Turks, the Swedes, and the Poles (see POLAND, SWEDEN, and TURKEY), compel us to believe that her troops were better disciplined, and her generals more skilful, than any whom the greatest of her predecessors could bring into the field; and the empire of Russia, though the people are but just emerging from a state of barbarism, is at this day one of the most powerful in Europe. But the glory of Catharine's reign is stained by injustice and cruelty. More horrible massacres than those of Ismail and Prague, by her general Suwarrow, were not committed by the most savage troops in the most barbarous ages. Of her character, both public and private, we have given a general sketch under the article CATHARINE II. About fifteen different princes and courtiers successively gratified her desires. Among these were Alexis and Gregory

Orloffs, brothers ; prince Potemkin ; prince Lauskoi ; the two Zubows, brothers ; Vassiltchikoff, a lieutenant of the guards; count Panin; and several others. The first of her lovers was Stanislaus Augustus, count Poniatowski, with whom she had formed a connexion even in her husband's life time ; and whom she afterwards rewarded with the kingdom of Poland, for it was by her influence, and the presence of her troops, that the election was over-awed in his favor, on the 7th of September 1764 ; though she afterwards deprived him of his crown and dominions, when she found him no longer pliable, but willing to give the Poles a free constitutution. While she was thus disposing of foreign kingdoms, she was under continual dread of beinsf thrown, by some sudden plot or revolution, from the throne she had usurped. To prevent this, she hesitated at no new crimes. She procured the private assassination of prince John, whom her husband Peter HI. had generously liberated from prison. She also, by the most treacherous means, wherein prince Alexis Orloff was her villanous agent, shut up the princess Tarrakanoff, a daughter of

the empress Elizabeth, by Alexis Razumoffsky (who had been privately married to her), in a fortress, where she was never more heard of. Such were the means she used to get rid of all who had any claim to the throne. Yet, with all her crimes and vices, it must be allowed that she did more to civilize her barbarous subjects than even Peter the Great. In Petersburg alone she founded thirty-one seminaries, where-in 6800 children of both sexes were educated at the annual expense of 754,335 rubles. She superintended the education of her own grand-children, and even wrote books for their instruc-tion ; while jealousy led her to keep their father, her own son Paul, at a distance from court and from all opportunity of improvement. But her greatest effort for the improvement of science was in 1767, when she employed the celebrated Drs. Pallas, Gmelin, Euler, and several other men very eminent in the republic of letters, to travel through her vast dominions, to determine the geography of her extensive territories, the position of the chief towns, their temperature, soil, and productions ; and the manners of the inhabitants, &c. This survey of her empire must

immortalise her name in science, when her

crimes are forgotten. In the coalition against the

French republic Catharine promised much, hut

did nothing, except granting refuge to French

*emigrants, and sending a squadron of crazy ship**

to co-operate with the British navy, which were

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obliged to be repaired at the expense of the

British government. This extraordinary woman

was meditating a new war with the Turks, when

she was suddenly seized on the morning of No-

vember 9th, 1796, with a fit of apoplexy, which

put an end to her life at 10 o'clock in the evening of the 10th, in the sixty-eighth year of her age.

And she certainly died with the character of one

of the greatest sovereigns that ever swayed the

sceptre in Russia.

Catharine II. was succeeded in the empire of

all the Russias by her son Paul, whose reign

was short, and his end, like that of his father,

unfortunate. Paul, though his education, from

his mother's jealousy, had been very much neg-

lected, seemed not to want spirit for great exer-

tions. He took an active and zealous part with

the combined powers in the operations against

the French republicans ; and, by the exertions of his troops under Suwarrow, the French power in Italy was for some time totally overthrown. They also made some exertions in Holland to assist the British troops, but with less success. But all Suwarrow 's exertions were unrewarded by Paul ; who, adopting a new system of politics, and showing an evident inclination to favor the French republicans, disgraced instead of recompensing the old general. But, while Paul was meditating farther exertions in favor of his new allies, the French republicans, he was murdered on the 23d March, 1801. The particulars of this transaction have been so variously related that we forbear to state any of them. The causes of the murder have been also so variously assigned that we shall likewise leave the investigation of them to future historians. But it is per-

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haps an instructive exhibition of the nature o\ all arbitrary governments that, where the lives ol the subjects are all at the mercy of the sovereign, the life of the sovereign should be at all times at the mercy of assassins. Of the character of Paul we shall only say that he appears to have

been a well meaning man, but too fond of that arbitrary power to which he thought himself entitled by his birth, and of consequence rash and precipitate in his measures. See PAUL.

Paul was succeeded by his eldest son, Alexander ; who, whether he was previously acquainted with the plot or not, appears to have made little enquiry after his father's murderers. For some time after his accession to the throne he appears to have profited considerably by his grandmother's instructions, and those of the preceptors she placed over him. lie encouraaed learning, the sciences, commerce, and manufactures, for the benefit of his subjects and empire. After several energetic but unsuccessful struggles against France, he became the humble friend of Buonaparte. See his life in detail in our article ALEXANDER OF RUSSIA. At the death of Alexander, through the intrigues of the empress mother, Constantine the elder brother was set aside, or compelled to abdicate the throne in favor of the reigning emperor Nicholas : he has already distinguished himself by a successful war against Turkey, in which he at last compelled the Porte to sue for peace upon humiliating conditions. In

1831 he engaged in a struggle with the Poles, in which he lost many thousand men, besides his general field-marshal Count Diebitsch Sabalkan-ski, but succeeded in crushing their liberties and reducing Poland to the form of a province.

RUST, n. s ,v.n., & v. a,) Sax. riuj-t; Dan.

RUSTY, adj. J rust ; Sard. rost.

Is the oxide of a metal, and is composed of oxygen combined with a metal : to gather rust or make rusty ; the adjective correspond-ing.

H,er fallow leas,

The darnel, hemlock, and rank fumitory

Doth root upon, while that the culler rusts,

That should deracinate such savagery. Shakspeare.

Keep up your bright swords, for the dew will rust them. Id. Othello.

Hector, in his dull and long continued truce,

Is rutty grown. Id. Troilus and Cressida.

Let her see thy sacred truths cleared from all rust and dross of human mixtures. King Charles.

Rust eaten pikes and swords in time to come,

When crooked ploughs dig up earth's fertile womb,

The husbandman shall oft discover. May's Virgil.

Gold is the best metal ; and, for purity, not sub-

ject to rust as all others : and yet the best gojd has some dross. Bp. Hall.

After a long calm of peace, he was left engaged

in a war with a rusty sword and empty purse.

Hovel.

But Pallas came in shape of rusf,

And 'twixt the spring and hammer thrust

Her Gorgon shield, which made the cock

Stand stiff, as 'twere transformed to stock.

Hudibras.

By dint of sword his crown he shall increase,

And scour his armour from the rust of peace.

J)ryden .

Must I rust in Egypt never more

Appear in arms, and be the chief of Greece ? Id.

Part scour the rusty shields with seam, and part

New grind the blunted axe. Id. j£neis.

My scymitar got some rust by the sea water.

Gulliver.

RUST is the oxide of any metal, procured by

corroding and dissolving its superficial parts by

some menstruum. Water is the great agent in

producing rust ; and hence oils and other fatty

bodies secure metals from rust,; water being no

menstruum for oil, and therefore not able to

make its way through it. All metals except gold are liable to rust ; and even this also if exposed to the fumes of sea-salt. Iron, for instance, when exposed to the air, soon becomes tarnished, and gradually changed into a brownish-red or yellow powder, well known by the name of rust. This change is occasioned by the gradual combination of the iron with the oxygen of the atmosphere, and is therefore an oxide of iron. The cutlers in Sheffield, when they have given knife or razor blades the requisite degree of polish, rub them with powdered quicklime, in order to prevent them from tarnishing ; and we have been informed that articles made of polished steel are dipped in lime-water by the manufacturer, before they are sent into the retail market. Another method is that of varnishing over the metal with a composition of two parts oil varnish, mixed with one part rectified

sjiiiits of turpentine. This varnish must be lightly and evenly applied with a sponge; after

uhich the article is to be left to dry in some

situation not exposed to dust. Articles thus

varnished retain their metallic lustre, and do not

contract any spots of rust. This varnish may

be employed with particular advantage to pre-

serve philosophical instruments from any change,

in experiments where, by being placed in con-

tact with water, they are liable to lose that

polish and precision of form, which consti-

tute part of their value. Plumbago, or black

lead, also protects iron from rust for a time, and is on that account used on the fronts of grates,

&c.

RUSTIC, adj. & n. s. ~) Lat. rusticus.

RUST'JCAL, | Rural ; country ;

RUST'ICALLY, I rude ; untaught ;

RUST'ICALNESS, [plain: a rustic is a

RUST'ICATE, v. n. & v. a. \ clown, a country-

RCSTIC'ITY. J man : the adverb

and noun-substantive corresponding : to rusticate

is to reside in or banish into the country.

By Lelius willing missing was the odds of the Ibe-

rian side, and continued so in the next by the ex-

cellent running of a knight, though fostered by the

muses, as many times the very rustick people left

both their delights and profits to hearken to his songs.

Sidney.

There presented himself a tall, clownish, young

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My brother Jaques he keeps at school,

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For my part he keeps me rustically at home.

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Addison.

As nothing is so rude and insolent as a wealthy

rustick, all this his kindness is overlooked, and his person most unworthily railed at. South.

This so general expense of their time would cur-

tail the ordinary means of knowledge, as 'twould

shorten the opportunities of vice ; and so accord-

ingly an universal rustirity presently took place, and stopped not till it had over-run the whole stock of mankind. Woodward's Natural History.

With unguent smooth the polished marble shone,

Where ancient Neleus sat, a rustick throne. Pope.

My lady Scudamore, from having rusticated in your

company too long, pretends to open her eyes for the sake of seeing the sun, and to sleep because it is night. Id.

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He is coming ; I hear the straw rustle.

Shakspeare.

This life

Is nobler than attending for a check ;

Richer than doing nothing for a bauble ;

Prouder than rustling in unpaid-for silk. Id.

Thick swarmed, both on the ground, and in the

air

Brushed with the hiss of rustling wings. Hilton.

As when we see the winged winds engage,

Rustling from every quarter of the sky,

North, East, and West, in airy swiftness vy.

Granville.

All begin the attack ;

Fans clap, silks rustle, and tough whalebones crack.

Pope.

Not less their number than the milk-white swans

That o'er the winding of Cyaster's springs,

Stretch their long necks, and clap their ri.itling wings. Id.

RUSTSCHUK, or RUSCEK," a large town 01

European Turkey, in Bulgaria, situated at the

influx of the Cara Lorn into the Danube, which

is here nearly two miles wide. It has a strong

'castle and several mosques and public baths ; is

the see of a Greek archbishop, and contains con-

siderable manufactures of silk, cotton, linen,

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tercourse by the Danube between the Euxine

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in 1810, and the following year a Turkish army

was totally defeated near this by the Russians,

with the loss of all its artillery and baggage.

About five miles from Rustschuk are to be seen

the ruins of the old town of Tschernow or Cser-

navoda. Population 24,000. Forty miles east

of Nicopoli, and fifty-five west of Semendria.

RUT, n. s. Fr. rut. Copulation of deer :

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sooner. Bacon.

From hills raine waters headlong fall,

That always eat huge ruts, which, met in one bed

fill a vail

With such a confluence of streames, that on the

mountaine grounds

Farre off, in frighted shepherds eares the bustling

noise rebounds. Chapman.

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RUTA, in botany, rue ; a genus of the mono-

gynia order, and decandria class of plants ; na-

tural order twenty-sixth, multisiliquae : CAL.

quinquepartite ; petals concave; receptacle

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species, of which the most remarkable are

these : —

1. R. baga, or Swedish turnip. See RURAL

ECONOMY. Besides being later in shooting than

the common turnip, this plant loses not its nutri-

tive qualities after beinsj shot, but retains all its juices and solidity. This root has been supposed

a mere variety of the yellow turnip, but it is

found to differ very materially. The stem has

something of the appearance of the rape, or cab-

bage kind ; and that part of the root which is above the surface of the ground is covered by a thick,

green skin, which in some is smooth, but in

others quite rough, and the internal fleshy part

is of a dense firm consistence, having a yellowish

tinge, nearly similar to that of the horn carrot.

The great inducements for the farmer to enter

freely into the culture of this root are, according to Mr. Young, 1. If he has the right sort of seed, the root yellow in flesh, and rough in coat, it

lasts through all frosts, and may be depended on

for sheep quite through the month of April,

though drawn two months before, and spread

on a grass field. 2. It is an excellent and nou-

rishing food for sheep, and also for any sort of

cattle. 3. It is equal to potatoes in keeping

stock swine : a point of very great consequence.

4. It is, next to carrots, the very best food that can be given to horses. 5. It is sown at a season which leaves ample time, in case of a failure, to

put in common turnips, or cabbages. Another

extraordinary quality of the ruta baga is that it

seems impossible to make it rot : though bit, or

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in spring puts out a new stem. Both roots and

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2. R. hortensis, or common broad-leaved gar-

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use. It rises with a shrubby stalk to the height

of five or six feet, sending out branches on every side, garnished with

leaves, whose small lobes are wedge-shaped, of a gray color, and have a strong odor. The flowers are produced at the end of the branches in bunches almost in the form of umbels : they are composed of four yellow concave petals, which are cut on their edges, and eight yellow stamina which are longer than the petals, terminated by roundish summits. The germen becomes a roundish capsule, with four lobes, full of holes containing rough black seeds. Rue has a strong unpleasant smell, and a bitterish penetrating taste : the leaves, when full of vigor, are extremely acrid, insomuch as to inflame and blister the skin, if much handled. With regard to their medicinal virtues, they are powerfully stimulating, attenuating, and detergent. Boerhaave entertained a very high opinion of the virtues of this plant, particularly of the essential oil, and the distilled water cohobated or redistilled several times from fresh parcels of the herb

RUTCHESTER, an ancient town of Northumberland, noith-west of Chollerton, called Vindobala by the Romans. The wall of Severus

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RUTH, n. s. ~\ From rue. Mercy ;

RUTH'FUL, adj. (.pity; tenderness : thede-

RUTH'FULLY, adv. i rivatives all correspond-

RUTH'LESS, adj. J ing. Out of use.

His archers circle me ; my reins they wound,

And ruthless shed my gall upon the ground.

Sandys.

The Britons, by Maximilian laid way

With wretched miseries and woful ruth,

Were to those Pagans made an open prey. Spenser.

Help me, ye baneful birds, whose shrieking sound

Is sign of dreary death, my deadly cries

Most ruthfully to tune. Id. Pastoral.*

The flower of horse and foot, lost by the valour of the enemy, ruthfully perished. Knolles.

What is Edward but a ruthless sea ?

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Oileades of that rich bowl, and left his lips, nose, eyes

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O wretch of guests, said he, thy tale hath stirred My mind to much ruth. Chapman.

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RUTH, a canonical book of the Old Testa-

ment, being a kind of appendix to the book of

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RUTHERFORD (John), M. D., one of the

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of Edinburgh, was born in 1695, and received

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v.mits of turpentine. This varnish must be

lightly and evenly applied with a sponge; after

\vhich the article is to be left to dry in some

situation not exposed to dust. Articles thus

varnished retain their metallic lustre, and do not

contract any spots of rust. This varnish may

be employed with particular advantage to pre-

serve philosophical instruments from any change,

in experiments where, by being placed iu con-

tact with water, they are liable to lose that

polish and precision of form, which consti-

tute part of their value. Plumbago, or black

lead, also protects iron from rust for a time, and is on that account used on the fronts of grates,

&c.

RUSTIC, adj. &c n. s. ~) Lat. rusticus.

RUST'ICAL, j Rural; country;

RVST'ICALLY, I rude ; untaught ;

RUST'ICALNESS, j plain: a rustic is a

RUST'ICATE, v. n. & v. a. \ clown, a country-

RUSTIC'ITY. J man : the adverb

and noun-substantive corresponding : to rusticate

is to reside in or banish into the country.

By Lelius willing missing was the odds of the Ibe-

rian side, and continued so in the next by the ex-

cellent running of a knight, though fostered by the

muses, as many times the very rustick people left

both their delights and profits to hearken to his songs.

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school of Selkirk. After his father's death he

went to Edinburgh, where he studied at the Uni-

versity. He next engaged himself as an appren-

tice to a surgeon in Edinburgh, with whom he

continued till 1716, when he went to London, and attended the lectures on anatomy by Dr. Douglas, on surgery by Andre, and on materia medica by Strother. In 1717 he returned to Edinburgh, and afterwards he went to Leyden, then the most famous medical school in Europe. In 1719 he went to France, and was, in July, admitted to the degree of M. I), at the University of Rheims. He spent the winter in Paris, for the sake of Winslow's demonstrations m anatomy; and in 1720 returned to Britain. In 1721 he settled as a physician in Edinburgh ; and soon afterwards joined with Drs. Sinclair, Plummer, and Innes, in purchasing a laboratory, for the preparation of compound medicines. They also gave lectures on chemistry to a numerous audience ; and soon after on other branches of medicine. In 1725 they were appointed conjunct professors in the University, and each for some time read lectures in every department of medical science, except anatomy, and carried forward their classes in rotation. In 1748 Dr. Rutherford introduced a great improvement in medical education. Sensible that abstract lec-

tures on the symptoms and the mode of treating various diseases, of which the students know little but the names, could scarcely be of any benefit, he had for some time encouraged his pupils to bring patients to him on Saturday, when he enquired into the nature of their diseases, and prescribed for them in the presence of the class. This gave rise to the course of clinical lectures ; the utility of which was so obvious that it was enacted, by a decree of the senate of the University, that no man should be admitted to an examination for his degree who had not attended those lectures ; to which an excellent hospital, then newly erected, gave the professors every opportunity of doing ample justice. He resigned his professorship in 1765, after having taught medicine in its different departments for upwards of forty years. He died in Edinburgh in 1779.

RUTHERFORD (Thomas), D. D., was born in 1712; became fellow of St. John's College, Cambridge, regius professor of divinity in that university, rector of Shenneld, and archdeacon of Essex. He married Charlotte Elizabeth Abdy,

daughter of Sir William Abdy, Bart. He published, 1. An Essay on the Nature and Obligations of Virtue; 8vo. 1744. 2. A System of Natural Philosophy ; Cambridge, 1748 ; 2 vols. 8vo. 3. A Letter to Dr. Middleton, in defence of Bishop Sherlock; 8vo. 1750. 4. A Discourse on Miracles; 8vo. 1751. 5. Institutes of Natural Law; 2 rols. 8vo. 6, 7. Two Letters to Dr. Kennicott; 1761 and 1762. 8. A Vindication of Subscriptions to an Established Confession of Faith, &c.; Cambridge, 1767. 9, 10. Two other Tracts on the same subject ; 1 766 and 1 767 : besides several Sermons, and Charges to the Clergy. He died October 5th, 1771, aged rifty-nine.

RUTHERGLEN, or RIGLEN, an ancient royal borough of Scotland, in Lanarkshire. Maitland says it was founded by Ruther, the seventh king of Scots, from whom it derived its name. From several original charters, still preserved, it is certain that it was erected into a royal borough by king David I. about 1126. The territory under the jurisdiction of the borough was extensive, and the inhabitants enjoyed

many distinguished privileges, which were however gradually wrested from them in favor of Glasgow, which in later times rose into consequence by trade and manufactures. It is now much reduced, consisting of but one street and a few lanes. About 150 yards to the south of the main street is a kind of lane, named Dins Dvkes, where queen Mary was for a short time stopt in her flight, after the battle of Langsid, by some insolent rustics. Adjoining to a lane called the Back Row stood the castle of Rutherglen, originally built about the time of the foundation of the town. This ancient fortress underwent several sieges during the wars in the days of kins; Robert Bruce, and it remained a place of strength until the battle of Langside; soon after which it was destroyed by the regent, to revenge himself on the Hamilton family, in whose custody it then was. No relic of it now exists. Rutherjlen joins with Kilmarnock, Port-Glasgow, Renfrew, and Dumbarton, in electing a member to parliament. Rutherglen is two miles south-east of Glasgow, and nine west of Hamilton.*

RUTHYN, a borough of North Wales, in Den-

bighshire, with a good market on Monday, with an ancient castle restored and occupied by the WTests. The church, a handsome building, was made collegiate in 1310, at which time there was here a monastery of White Friars. The town was formerly surrounded by walls, but it is now little more than a broad ill-built street, leading to the market-house, in which stands the town-hall. It has a free school, hospital, and county court-house ; fifteen miles south-west from Holv-well, and 210 miles north-west of London

RUTILIUS RUFUS (Publius), a Roman con-sul, in the age of Sylla, celebrated for his writ-ings. Sylla having banished him, he retired to Smyrna, and refused, when solicited by his friends, to be restored by arms. He was the first who taught the Roman soldiers to fabricate their own weapons ; and, during his exile, wrote a History of Rome, in Greek ; an account of his own life in Latin ; and many other works, which are lost. Ovid, Fast., Seneca, Cic. &c.

RUTLAND, county of, or RUTLANDSHIRE, is the smallest county of England. The Saxon name of this county was Roteland, but its ety-

mology is otherwise unknown. Some have de-

rived it from Roet, or Rud, which signifies red,

because in many parts of the county the land is

of a red color. But others object that this cannot be the reason, and allege that there is only one

part of the county, which is about Glaiston, that

has a ruddy soil ; besides, most of the English

counties have soils of the same color ; and there-

fore these would have it to be derived from the

word Rotundalandia, from its circular figure ;

but its form was not round when this name, of

which Rutland is supposed to be a contraction,

was given it; and, besides, it is not probable

that the Saxons would give a Latin name to an

*English county. The Coritani inhabited tin**

district in the time of the Romans ; but under

the Saxons it was part of the kingdom of Mer-

cia. This county is bounded by Leicestershire on

the N. N.W., west and south-west ; and by Lin-

colnshire on the east and north-east. It is only

forty-eight miles in circumference. It is divided

inio five hundreds, and contains 91,002 acres

;uid twenty-nine perches.

The climate of this county is generally esteemed very good and healthy ; and it is thought that the winds blow as many days in the year from one point as another, the west e-cepted. The mean quantity of rain which has been observed, according to a journal kept by Samuel Barker, esq., and cited in Mr. Parkin-son's Survey, in eight years, was 24-61. The soil of this county is, generally speaking, fertile, but varying very much in different parts ; the «;ust and south-east parts, through which the great North road runs, being in general of a shallow staple, upon limestone rock, with a mix-ture of cold woodland clay soil. The other parts of the county are composed of a strong loamy red land, intermixed with keal (iron-stone is found amongst it). This soil is esteemed most congenial for convertible tillage crops ; the understratum of the whole county, at different depths, is generally a very strong blue clay. The circumstance of this county varying so much in its soils, at such small distances, causes each sort to be much more valuable than it would be were it of one kind through the whole of a lordship; there being a proportion of each

soil on the different farms, so as to have convertible high lands for tillage, and low lands for grass, having the advantage of being proper for breeding and store stock ; thus producing every thing useful within themselves, the tillage land growing turnips for the store and fattening sheep ; barley, clover, wheat, and grass-seeds plentifully. The face of the county is, generally speaking, very beautiful, especially where it is well timbered, being much diversified by small and gently rising hills running east and west, with valleys of about half a mile in width intervening; so that in travelling through the county there are fresh views at the distance of every three or four miles, causing its appearance to be very lively. The produce of this county has already been partially alluded to : its barley is of a very superior quality, so that the inhabitants call it corn, giving other grain its name, such as wheat, oats, &c. At Ketton there is a kind of stone very proper and famous for building. There is also in many parts stone for lime, consisting of a soft and hard species. Various opinions are entertained of the lime

made from these two sorts ; but in general that from the hard stone is preferred. This county is, upon the whole, well watered. The rivers Eye and Welland are its south-west and south-east boundaries ; but its two principal rivers are the Guash and the Chater : there are also many rivulets and numberless springs. The Welland divides this county from Northamptonshire ; the Guash, or, as it is commonly called, the Wash, rises near Oakham, in a district surrounded with hills, and running eastward divides the county nearly into two equal parts, and running into

Lincolnshire fulls into the Welland to the east of Stamford. This river supplies many towns with excellent water, and affords plenty of fish ; and most of the other towns and villages at a distance from this river have rivulets and brooks that pass by them. — There is a navigable canal in this county, made by act of parliament passed in 1793, for extending the Melton Mowbray canal to Oakham, the centre of the county, which has proved of great benefit to it. It i» said, however, to be frequently defective in the

summer season from the very scanty supply of water. Rutlandshire sends only two members to parliament, both for the county.

The smallness of this county will account for the few eminent men it has produced. We know not whether we may apply the term eminent to Jeffery Hudson, the dwarf; but certainly he thought himself of some consequence when he fought a duel with a brother of lord Croft's. He was born at Oakham, the county town, in the year 1619, and when seven years of age was not above fifteen inches high, though his parents, who had several other children of the usual size, were tall and lusty. At that age the duke of Buckingham took him into his family ; and, to divert the court, who, on a progress through this county, were entertained at the duke's seat at Burleigh-on-the-llill, he was served up at table in a cold pie. Between the seventh and the thirteenth year of his age he did not advance many inches in stature : but it is remarkable that even after thirty he shot up to the height of three feet nine inches, which he never exceeded. He was given to Henrietta Maria, consort to king Charles I., probably at the time of his being served up in

the pie; and that princess, who kept him as her dwarf, is said frequently to have employed him in messages abroad. In the civil wars between king Charles the First and the Parliament, Hudson was raised to the rank of captain of horse in the king's service, and afterwards accompanied the queen, his mistress, to France ; whence he was banished for killing his antagonist, as above mentioned. They fought on horseback. After his banishment, he was taken at sea by an Algerine corsair, and was many years a slave in Barbary ; but being redeemed he' came to England, and in 1678 was committed prisoner to the Gate House, Westminster, on suspicion of being concerned in what was called Oates's plot. After lying there a considerable time he was discharged, and died in 1682, aged sixty-three years. In Newgate Street, London, there is a small stone sculpture of one William Evans, a gigantic porter to Charles 1 . ; and another of his diminutive frllow-servant. Pennant has given us a sketch of this sculpture on the same plate with the Boar in East Cheap, but has omitted to insert the

date, 1669. The same author observes that it

was probably by his own consent that the dwarf

was put into the pocket of the giant, and drawn

out by him at a masque at court to amaze and

divert the spectators ; for it is certain he had too much spirit to suffer such an insult from even

Goliath, as was evident from his courage in 1644,

when he killed Mr. Croft, who had presumed to

ridicule the irritable hero. These figures are in

very excellent preservation, having been recently

painted, with red surtouts, by the owner or oc-

cupier of the house (No. 80), Mr. George Payne,

hatter, hosier, and glover. Mr. Pennant, and

others after him, have placed this sculpture over

the entrance to Bagnio Court. — This county has

given the title of earl ever since the reign of 1681.

sciences at Paris in 1727 elected him a member.

He was also F. R. S. of London.

RUYSDAAL, or RUYSDALL (Jacob), an

eminent Dutch landscape painter, born at

Haerlem, in 1636. He painted sea pieces with

inimitable truth and transparency. He died in

RUYTER (Michael Adrian), a distinguished

Dutch naval officer born at Flushing, in Zealand,

in 1607. He entered on a seafaring life when

Richard II. The first earl of Rutland was Ed-

ward, the eldest son of Edward Langley, the

fifth son of Edward III. : but the first earl of

the present family of Manners was created earl of he was only eleven years old, was first a cabin Rutland by Henry VIII. In the reign of queen boy, and advanced successively to the rank of Anne, John Manners, then earl of Rutland, re- mate, master, and captain. He made eight ceived from that princess the title of marquis of voyages to the West Indies, and ten to Brasil.

Granby and duke of Rutland, which his succes- He was then promoted to the rank of rear ad-

sors still enjoy. miral, and sent to assist the Portuguese against ‘ There is no manufacture carried on in this the Spaniards. His gallantry was still more county of any account. Want of water and scarcity conspicuous before Sallee in Barbary. With one of fuel are the only reasons, and not any want of single vessel he sailed through the roads of that inclination, spirit, or property, in the inhabitants place in defiance of five Algerine corsairs. In of the county.’ Parkinson.

1653 a squadron of seventy vessels was sent

RUTTUNPORE, a town and district of Hin- against the English under admiral Van Tromp.

dostan, in the province of Gundwaneh. It is Ruyter, who accompanied the admiral in this governed by a rajah, who is tributary to the expedition, seconded him with great skill and Mahrattas. The town consists of about 1000 bravery in the three battles which the English so houses, but it was formerly a place of much gloriously won. He was afterwards stationed in greater consequence. There are other places of the Mediterranean, where he took several Turkish this name in Hindostan. vessels. In 1659 he received a commission to RUTUBA, in ancient geography, two rivers join the king of Denmark in his war with the of Italy : one in Liguria, rising in

the Appenine Swedes ; and the king of Denmark ennobled mountains, and running into the Mediterranean: him and gave him a pension. In 1661 he run another in Latium, falling into the Tiber.

ashore a vessel belonging to Tunis, released

RUTULI, an ancient people of Latium, over forty Christian slaves, made a treaty with the whom Turnus reigned, when ./Eneas arrived in Tunisians, and reduced the Algerine corsairs to Italy. Their capital was Ardea.

submission. His country raised him to the rank

RUTUP./E, RUTUPIUM, or RUTUPENSIS POB- of vice-admiral and commander in chief. He TUS, in ancient British geography, a sea-port obtained a signal victory over the combined fleets town of Cantium, on the south coast of Britain, of France and Spain in 1672, about the time of abounding in oysters. Some suppose it to be the conquest of Holland. Ruyter, having thus Dover; others Richborough, or Sandwich.

made himself master of the sea, conducted a

RUYSCH (Frederick), the celebrated Dutch neat of Indiamen safely into the Texel ; thus anatomist, was born at the Hague in 1638. defending and enriching his country, while it After making great progress at home, he repaired was the prey of hostile invaders. In 1673 he to Leyden, and there prosecuted the study of had three engagements with the fleets of France anatomy and botany. He studied next at Fra- and England, in which his bravery was more neker, where he became M. D. He then returned

to the Hague; and, marrying in 1661, devoted

his whole time to his profession. In 1665 he

published a treatise, entitled Dilucidatio valvu-

distinguished than ever. But in an engagement

with the French fleet, off the coast of Sicily, he lost the day, and received a mortal wound, of

which he died in a few days. His corpse was

larum de Vasis Lymphaticis et Lacteis ; which carried to Amsterdam, and a magnificent monu-

raised his reputation so high that he was chosen ment was there erected by the command of the professor of anatomy at Amsterdam. After this states-

general.

he was perpetually engaged in dissecting the RYDAL WATER, a lake of Westmoreland, a various parts of the human body. Ilis anatomi- little west of Ambleside ; about one mile long, cal collection was very valuable. He had a It has many small islands ; and communicates series of foetuses of all sizes, from the length of by a narrow channel with Grassmere Water on the little finger to that of a new born infant.

Peter the Great of Russia, in his tour through

Holland in 1698, visited Ruysch, passed whole

days with him, and, when he returned to Hol-

land in 1717, purchased his cabinet of curiosities

for 30,000 florins, and sent it to Petersburg.

In 1685 he was made professor of medicine.

Ruysch retained his vigor of mind and body

till 1731, when he died on the 22d of February.

His anatomical works are printed in 4 vols. 4to.

The style of his writings is simple and concise,

the west, and by the Rothway with Windermere

Lake on the south. Rydal Mall stands on an

eminence near the lake.

RYDROOG, a town and district of Hindos-

tan, in the province of Bijanagur, now included

in the British collectorship of Bellary. It was

taken possession of in the end of the sixteenth

century, by the delawai, or minister of the rajah

of Bijanagur, after the defeat of that prince

by the Mahometans. In 1766 it was subdued

by Hyder Aly ; and at the peace of 1 792 ceded

but sometimes inaccurate. The academy of to the Nizam; but in the year 1800 it RYM

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RZE

made over to the British. The town stands in

long. 77° 22′ E., and lat. 14° 19′.

RYE, n. s. Sax. riyje ; Swed. ryg, rug ;

Belg. rogge, i. e. rough. A coarse kind of bread

corn.

Between the acres of the rye,

These pretty country folks would lye. S/iakspeare Some sow rye grass with the corn at Michaelmas

Mortimer.

Rye is more acrid, laxative, and less nourishing

than wheat. Arbuthnot on Aliments.

RYE, in botany. See SECALE.

RYE, a town of Sussex, with markets on Wed-

nesday and Saturday. It is one of the cinque-

ports ; is a handsome well built place, governed

by a mayor and jurats, and sends one member

to parliament. It has a church built with stone,

and a town hall ; and the streets are paved with

stone. It has two gates, and is a place of great

naval trade. Thence large quantities of corn

are exported, and many of the inhabitants are fishermen. It is thirty-four miles south-east by south of Tunbridge, and sixty-four on the same point from London. The mouth of the harbour is choked up with sand, though of late it has been considerably improved, by cutting a new channel to the sea, and erecting a dam across the old one, under the direction of Dr. Pape, vicar of Pen. The corporation is held by prescription, and consists of a mayor, jurats, and freemen ; and, ever since the reign of king Edward III., this place has sent two members to parliament, who are elected by the mayor and freemen. A store-house, called the Friary, was formerly a church belonging to the Augustins.

RYEGATE, a borough and market town of Surry, seated in the valley of Holmsdale. It sends one member to the imperial parliament. It had a castle, the ruins of which are still to be seen; particularly a long vault, with a large room at one end, where the barons held their private meetings in the reign of king John, before they took up arms against him. It is sixteen miles east of Guildford, and twenty-one south-west of London. Market on Tuesday.

RYEGRASS. See HORDEUM.

RYEPOOR, a large town of Hindostan, province of Gundwaneh, district of Choteesgur. It was formerly reckoned the second in the Nagpore dominions, and is situated on the road from Cuttack to Nagpore, in long. 82° 26′ E.. lat. 21° 17′ N.

RYER (Peter Du), a French dramatic writer, oprn in Paris in 1605. He was secretary to the king, and afterwards became secretary to the duke of Vendome. He wrote for the booksellers, and his works procured him a place in the French Academy in 1646. He was afterwards made historiographer of France. He wrote nineteen dramatic pieces, and thirteen translations. He died in 1658.

RYMER (Thomas), esq., the author of the Pffidera, was born in the north of England, and educted at the grammar school of Northallerton. He was admitted a scholar at Cambridge, then became a member of Gray's Inn, and at length was appointed historiographer to king William. He wrote A View of the Tragedies of the Last Age, and afterwards published a tragedy named

Edgar. His Fccdera, a collection of all the public transactions, treaties, &c., of the kings of England with foreign princes, is esteemed one of our most authentic and valuable records, and is often referred to by the best English historians. It was published in London about 1700, in 17 vols. folio. Three were added by Sanderson after Rymer's death. The whole were reprinted at the Hague in 10 vols. in 1739. They were abridged by Rapin in French, and inserted in Le Clerc's Bibliotheque. Rymer died in 1713. Some specimens of his poetry are preserved in Nichols's Select Collections.

RYMER, THOMAS THE. See RHYMER.

RYNABAD, a town of Bengal, in the district of Jessore, stands on the south bank of the Boirub, and is one of the most frequented channels for boats coming down the country in the hot season, through the woods or sunderbunds. Long. 89° 44′ E., lat. 22° 42′ N.

RYNCHOPS, in ornithology, a genus belonging to the order of anseres. The bill is straight; and the superior mandible much shorter than the inferior, which is truncated at the point. The

species are two, viz.

1. R. fulva, and 2. R. nigra, both natives of America.

RYSCHIA, in botany, a genus of the monogynia order, and penta»idria class of plants: TIL. pentaphyllous : COR. pentapetalous ; the apices turned back, about three times the length of the calyx ; the filaments are five, awl-shaped, and shorter than the petals : CAPS, quadrilocular, and contains many seeds. Of this there are two species, viz.

1. R. clausifolia ; and 2. R.souroubea.

RYVES (Sir Thomas), an English lawyer, born about 1590, and educated at Winchester school, and the university of Oxford. He became a celebrated civilian in Doctors' Commons, and the court of Admiralty. On the accession of Charles I. he was made king's advocate, and knighted. He wrote, 1. The Vicar's Plea; 2. Historia Navalis Antiqua; 3. Historia Navalis Media. He died in 1651.

RZESZOW, one of the circles of Austrian Poland, lying along the southern frontier of the new kingdom of Poland, and containing a tract

of 1675 square miles. It is watered by the San and the Wisloka, and has about 225,000 inhabitants. It is in general level and fertile, but is covered on the north side by almost impene trable forests. The capital of the same name is a small town on the Wisloka, seventy miles west of Lemberg, and eighty east of Cracow. It is one of the best built towns of the Austrian part of Poland, and has a brisk traffic in corn and poultry. Inhabitants 4600.

P2

SAA

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SAB

As a letter, S is the eighteenth in our alphabet, -and the fourteenth consonant. The sound is formed by driving the breath through a narrow passage between the palate and the tongue, elevated near it, together with a motion of the lower jaw and teeth towards the upper, the lips being a little way open ; with such a configuration of every part of the mouth and larynx as renders the voice somewhat hissing.

S has in English the same sound as in other

languages, and unhappily prevails in so many of

our words that it produces in the ear of a

foreigner a continued sibilation. In the begin-

ning of words it has invariably its natural and

genuine sound : in the middle it is sometimes

uttered with a stronger appulse of the tongue to

the palate, like z, as rose, rosy, osier, resident, business. In the end of monosyllables it is

sometimes 5, as in this ; and sometimes z, as in

as, has; no noun singular should end with s

single : therefore in words, written with diph-

thongs, and naturally long, an e is nevertheless

added at the end, as goose, house ; and, where

the syllable is short, the s is doubled, and was

once sse, as ass, anciently asse; wilderness,

anciently wildernesse; distress, anciently dis-

tresse. In some words it is silent, as isle,

island, viscount, &c. Of all other letters, the s

is nearest akin to the r ; whence it was frequently changed, on account of its disagreeable sound,

into r. See R. Add to this, that the Latin

nouns now terminating in or, as arbor, labor, Sec., all anciently ended in s, as arbos, labos, &c.

As an abbreviation, S stands for societas or

socius; as, R.S.S. for Regie societatis socius ; or

F. R.S. Frater rigia societatis, i. e. fellow of the royal society. As a numeral,

S was anciently

us»r1 for seven.*

SAAD EDDIN MOHAMMED BEN HASSAN,

known also by the appellation of Khodja Effendi,

the most celebrated of the Turkish historians.

He became preceptor to sultan Amurath III. ; and

was subsequently appointed mufti, which office

he held till his death, about A. D. 1600. He

was the author of The Crown of Histories, con-

taining an account of all the Turkish emperors

to his own times, translated into Italian by Vin-

cent Brattuti, and into Latin by Kollar. A. L.

Schloezer, in his Critico- Historical Amusements,

Gottingen, 1797, 8vo., has given full details of

this Chronicle, which has been continued from

1510, where the author concluded it, to 1751, by

five other historiographers appointed by the

lultans.

SAADE, a town of Arabia, the capital of the

mountainous district of Yemen, called also the Sa-

han. It is the residence of a chief,who assumes the title of Imam ; but who finds it difficult to main-

tain his ground. His revenue arises chiefly from a

custom-house here established, at which duties

are paid by goods passing into the interior. In

the neighbourhood is a fortified height. 368 miles N.N. E. of Mocha.

SAAN LOUIS, a town of the Prussian pro-\ince of the Lower Rhine, fortified by Vauban,

S.

under Louis XIV., but ceded to Prussia by a treaty of Paris in 1815. During the revolution, this place was called Sarre Libre. It is eleven miles north-west of Saarbruck, and thirty-four east of Thionville, contains 4 100 inhabitants, and has manufactures of iron and leather.

SAATZ, a circle of Bohemia, contiguous to the Saxon frontier, and to the circles of Leut-meritz, Rakonitz, and Elnbogen. Its area is about 820 square miles, is level towards the south, and contains some of the best corn land in Bohemia, but the north is traversed by the Erzgebirge mountains, in which there are mines of iron, alum, and tin. The woods are here also extensive. Other products of this circle are flax, hops, turf, and coal. There are some cotton manufactures. Population 114,000.

SAATZ, in Bohemian Zatets, a town of Bohe-mia, on the Egra, the chief place of the preced-

ing circle. Population 3800. Eighty-nine miles

west by north of Prague, aud twenty-eight east

of Carlsbad.

SAAVEDRA. See CERVANTES.

SABA, a Dutch island of the West Indies, is

a great but fruitful rock, four leagues in circuit, without any road for ships, and with but one

landing place, at a creek on the south side. One

delightful valley produces necessaries for the few

inhabitants, and materials for several manufac-

tures ; but, being destitute of a port, its com-

merce is inconsiderable. There is abundance of

fish, particularly bonitos, caught on the coasts.

Rocks appear for some distance on the coast,

and vessels of course cannot come in, unless they*

be very small.

SAB^EANS, or SABJEI. See SABIANS.

SAB'AOTH, n.s. Heb. K3JT. Signifying an

army.

Holy Lord God of sabaoth ; that is, Lord of hosts.

Common I'rayer.

SABA/I A, in Greek antiquity, were noctur-

nal mysteries in honor of Jupiter Sabazius. All

the initiated had a golden serpent put in at their breasts, and taken out at the lower part of their

garments, in memory of Jupiter's ravishing Proserpine in the form of a serpent. There were also other feasts and sacrifices distinguished by this appellation, in honor of Mithras, the deity of the Persians.

SABBATARIANS, a sect of Christians, chiefly Baptists, whot observe the Jewish or seventh-day Sabbath, from a persuasion that, being one of the ten commandments, which they contend are all in their nature moral, it was not abrogated by the New Testament. They say that Saturday must at least be deemed of equal validity for public worship with any day never particularly set apart by Jesus Christ and his Apostles. In our own country this sect is by no means numerous. They have but two congregations in London, if these are not united. In America, however, there are many Christians of this persuasion, particularly in Rhode Island, and New Jersey.

SABBATH.

SAB'BATH, n. s. > Heb. H3P, signifying

SABBAT'ICAL, adj.] rest; Fr. s'ibbat; Lat. sab-

batum. The day appointed by God for public

worship among Jews and Christians : the adjec-

tive correspond) ag.

I purpose,

And by our holy sabbath have I sworn,

To have the due and forfeit of my bond.

Shakspeare

The usurer is the greatest sabbathbreaker, because

his plough goes every Sunday. Bacon'i Essays.

The Sabbathless pursuit of wealth is the present

disease of Great Britain. Bacon.

Never any sabbath of release

Could free his travels and afflictions deep.

Daniel's Civil War.

Glad we returned up to the coasts of light,

Ere sabbath ev'ning. Milton.

Nor can his blessed soul look down from heaven,

Or break the eternal sabbath of his rest,

To see her miseries on earth. Dryden.

The appointment and observance of the sabbatical

year, and, after the seventh sabbatical year, a year of jubilee, is a circumstance of great moment.

Forbes.

Peaceful sleep out the sabbath of the tomb,

And wake to raptures in a life to come. Pope.

SABBATH, Heb. H31P, i. e. rest. The seventh day was so denominated, because in it God had rested from his works of creation. From that time the seventh day was set apart for religious services; and, by a particular injunction, was afterwards observed by the Hebrews as a holy day. They were commanded to set it apart for sacred purposes in honor of the creation being completed in six days, God resting on the seventh.

The importance of the institution may be gathered from the different laws respecting it. When the ten commandments were published from Mount Sinai, the law of the Sabbath held a place in what is commonly called the first tulile, and by subsequent statutes the violation of it was punished with death. Six days were allowed for the service of man; but the seventh God reserved to himself, and appointed it to be observed as a stated time for holy offices, and the duties of piety and devotion. On this day the ministers of the temple entered upon their week ; and those who had attended on the temple service the preceding week went out at the

same time. New loaves of show-bread were

placed upon the golden table, and the old ones

taken away. Two lambs for a burnt-offering,

with a certain proportion of fine flour mingled

with oil, and wine for a libation, were offered.

The Sabbath too was celebrated from evening to

evening. It began at six in the evening on

Friday, and ended at the same time the next

day. Concerning the time at which the Sab-

bath day was first instituted, different opinions

have been held, some have maintained that the

sanctincaion of the seventh day, mentioned in

Gen ii., is only there spoken of Jio 7rpo\«i//tv, or by anticipation ; and is to be understood of the

Sabbath afterwards enjoined the children of

Israel. But it cannot be supposed that the in-

spired penman would have mentioned the sanc-

tification of the seventh day amongst the pri-

meval transactions, if such sanctitication had

not taken place until 2500 years afterwards.

From the accounts we have of the religious

service practised in the patriarchal age, it ap-

pears that, immediately after the fall, when Adam

was restored to favor through a mediator, a stated

form of public worship was instituted, which

man was required to observe, in testimony, not only of his dependence on the Creator, but also of his faith and hope in the promise made to our first parents, and seen afar off. It is no objection to the early institution of the Sabbath that it is not mentioned in the history of the patriarchal age. When Moses wrote the book of Genesis it was unnecessary to relate minutely transactions and institutions already well known by tradition; accordingly we see that his narrative is every where very concise, and calculated only to preserve the memory of the most important facts. The sabbath is first taken notice of as a well known solemnity ; and the incidental manner in which it is mentioned is a convincing proof that the Israelites were no strangers to the institution ; for, had it been a new one, it must have been enjoined in a positive and particular manner, and the nature of it must have been laid open and explained, otherwise the term would have conveyed no meaning.

The division of time into weeks, or periods of seven days, which obtained so early and almost universally, is a strong indication that one

day in seven was always distinguished in a particular manner. God commanded Noah, seven days before he entered the ark, to introduce into it all sorts of living creatures. When the waters of the flood began to abate, Noah sent forth a dove, which, finding no rest for the sole of her foot, returned to him. After seven days he sent forth the dove a second time ; again she returned to the ark, &c. This septenary division of time has been, from the earliest ages, uniformly observed over all the eastern world. The Assyrians, Egyptians, Arabians, and Persians, made use of a week, consisting of seven days. Many vain attempts have been made to account for this uniformity ; but a practice so general and prevalent could never have taken place had not the septenary distribution of time been instituted from the beginning, and handed down by tradition. From the same source also must the ancient heathens have derived their notions of the sacredness of the seventh day. That they had such notions of it is evident from several passages of the Greek poets, quoted by Aristobulus, a learned Jew, by Clement of Alexandria, and

Eusebius.

wpov

The seventh, the sacred day.

Ilcsiod.

upov t)fiap.

Homer.

Afterwards came the seventh, the sacred day.

That they likewise held the number seven in high estimation has been also shown. The Pythagoreans call it the venerable number, aiˆaautt a£ioc, worthy of veneration, and held it to be perfect and most proper to religion. These facts can be accounted for only by admitting the primeval institution of the Sabbath, as related by Moses in the book of Genesis. That institution was absolutely necessary to preserve amori;:: men a sense of religion ; and it was renewed to.

the Jews at the giving of the law, and its observance enforced by the severest penalties. It was accordingly observed by them with more or less strictness in every period of their common-

wealth and kingdom ; and there is no one of the

institutions of their divine lawgiver which, in

their present state of dispersion, they more

highly honor. In the time of the Maccabees

they carried their respect for the Sabbath so very

high that they would not on that day defend

themselves from the attacks of their enemies.

But afterwards they did not scruple to stand

upon their necessary defence, although they

vrould do nothing to prevent the enemy from

carrying On their operations. When our Saviour

was on earth, it was no sin to loose a beast from the stall, and lead him to water ; and, if he had chanced to fall into a ditch, they pulled him out: but now it is absolutely unlawful to give a crea-

ture in that situation any other assistance than

that of food. Their various ceremonies are so

trifling, superstitious, and ridiculous, that we

think it would be disgracing a work of science

to take up room with them. Vide Buxtorfs

Judaica Synagoga ; and Allen's Modern Judaism.

As the seventh day was observed by the

Jewish church, in memory of the rest of God

after the works of creation, so the first day of

the week has always been observed by the Chris-

tian church, in memory of the resurrection" of

Jesus Christ, by which he completed the work of man's redemption on earth, and rescued him from the dominion of him who has the power of death. This day was denominated by the primitive Christians the Lord's Day, or Sunday, but it was never styled the Sabbath ; a name solely appropriated to Saturday, or the seventh day, both by sacred and ecclesiastical writers. Of the change from the seventh to the first day of the week, or even of the institution of the Lord's Day festival, there is no account in the New Testament. However, it may be fairly inferred from it that the first day of the week was, in the apostolic age, a stated time for public worship.

On this day the apostles were assembled, when the Holy Ghost came down so visibly upon them to qualify them for the conversion of the world. On this day we find St. Paul preaching at Troas, when the disciples came to break bread : and the directions which the same apostle gives to the Corinthians, concerning their contributions for the relief of their suffering brethren, plainly allude to their religious assemblies on the first day of the week. From the consentient evidence and uniform practice of the primitive church,

and also from the attestation of Pliny, we find that the first day of the week was observed in the earliest ages as a holy day or festival, in honor of the resurrection of Christ. In the early ages this day was occupied in a constant atlendance on all the offices of divine worship. On it they held their religious assemblies, in which the writings of the apostles and prophets were read to the people, and the doctrines of Christianity pressed upon them by the exhortations of the clergy. Solemn prayers and praises were offered up to God, and hymns sung in honor of Christ ; the Lord's supper was celebrated ; and collections were made for the maintenance of the clergy and the relief of the poor On this day they abstained, as much as they could, from bodily labor. They looked upon it as a day of joy and gladness ; and therefore all fasting on it was prohibited, even during Lent, their gieat annual fast. — Such was the zeal of those times that nothing, no, not the severest persecutions, hindered them from celebrating holy offices on this day ; and, when they could not meet in the day time, they assembled in the

morning before it was light. When the empire

became Christian, Constantine and his successors

made laws for the more solemn observation of

the Lord's day. They prohibited all prosecu-

tions and pleadings, and other juridical matters,

to be transacted on it, and also all unnecessary

labor.

SABBATH BREAKING, or profanation of the

Lord's day, is punished by the municipal laws

of England. The keeping one day in seven holy.

as a time of relaxation and refreshment, as well

as for public worship, is of great service to a state, considered merely as a civil institution. The

laws of king Athelstan forbad all merchandising

on the Lord's day, under very severe penalties.

And by the statute 27 Henry VI., c. 5, no fair

or market shall be held on the principal festivals, Good Friday, or any Sunday (except the four

Sundays in harvest), on pain of forfeiting the

goods exposed to sale. And by the statute 1

Car. I., c. 1 , no persons shall assemble, out of

their own parishes, for any sport whatsoever,

upon this day ; nor, in their parishes, shall use

any bull or bear beating, interludes, plays, or

other unlawful exercises or pastimes, on pain

that every offender shall pay 3s. 4d. to the poor.

By statute 29 Car. II., c. 7, no person is allowed to work on the Lord's day, or use any boat or

barge, or expose any goods to sale, except meat

in public houses, milk at certain hours, and

works of necessity or charity, on forfeiture of 5s.

SABBATH DAY'S JOURNEY, a measure, amonvr

the ancient Jews, of 729 English paces and three

feet; or 200O cubits; or 3648 feet.

SABBATICAL YEAR, or the year of jubilee, among

the ancient Jews, was every seventh year ; in

which it was unlawful to till the ground, and all

slaves were set at liberty, except those who pre-

ferred continuing in service to freedom. There

was also a grand sabbatical year held by the Jews

with uncommon splendor every forty-ninth year :

though some commentators assert it was held tin-

fiftieth year. See JUBILEE.

SABEANS, in ancient history, a tribe of

Arabs, descended from Sheba, the son of Cush,

or from Sheba, the son of Raaroah, and grandson

of Cush. . They inhabited the country culled

Saba or Sheba ; they carried off Job's cattle, and

were afterwards conquered by Cyrus.

SABEANS, in ecclesiastical history, a sect of

Christian heretics, who held mixed doctrines dc»
rived from Christianity, Judaism, Mahometanism,
and Paganism. They adopted baptism after
the example, and in commemoration of, John
the Baptist; but did not administer it in the
name of the Trinity. They have four sacraments ;
baptism, the eucharist, orders, and marriage.
Both ministers and laity are allowed two wives,
-till retain some knowledge of the gospel;

but their superstitious ceremonies and frequent
washings are supposed to be of Jewish origin,
and derived from the Hemerobaptists, who had
a -;hief of the name of John.
SABELLI, an ancient people of Italy, de-
scended from the Sabines, or, as others say, of
the Samnites. They inhabited that part of Italy
which lay between the Sabines and the Marsi.
SABELLIANS, in ecclesiastical history, a
sect of the third century, who embraced the
opinions of Sabellius. They maintained that the
Word and the Holy Spirit are only virtues, ema-

nations, or functions of the Deity ; and held that he who is in heaven is the Father and Creator of all things, that he, through the virgin, became a child ; and that, having accomplished the mystery of our salvation, he diffused himself on the apostles in tongues of fire, and was then denominated the Holy Ghost. This they explained by resembling God to the sun, the illuminative virtue or quality of which was the Word, and its warming virtue the Holy Spirit. The Word, they taught, was darted like a divine ray, to accomplish the work of redemption ; and that, being re-ascended to heaven, the influences of the Father were communicated after a like manner to the apostles. They were anathematised in a council held at Constantinople, A. D. 381.

SABELLICUS (Mark Anthony Coccins), a learned Italian, born at a small town upon the Teveron, in the fifteenth century. He became professor of belles lettres at Vicenza, and died in the seventieth year of his age.

SABELLIUS, an ancient philosopher of Egypt, the founder of the sect of the Sabellians, was a native of Libya. He first broached his doctrines

in the third century, about the year 255, in Ptolemais. He taught, according to Epiphanius, that the same person is Father, Son, and Holy Ghost ; so that there are only three denominations in one hypostasis or subsistence ; or) as in man, body, soul, and spirit. This author says that the Sabellians agreed with the Noetians, except in one thing, viz. that they said the Father did not suffer. Theodoret's account of Sabellius is, that he taught the Father, and the Son, and the Holy Spirit, to be one hypostasis or subsistence, and one person with three names ; that he speaks of the same sometimes as Father, sometimes as Son, and sometimes as Holy Ghost.

SABIA, a country of Eastern Africa, to the south of Sofala, traversed by a river of the same name, which falls into the Indian Ocean. Slaves, ivory, and gold dust, may be procured here.

SABIANS, or SAB^ANS, an ancient sect of idolaters, who worshipped the sun. Some critics derive the name from the Hebrew Tsaba, a host or army, because they worshipped the host of heaven, the Tsaba hememim, against which

idolatry Moses cautions the Israelites. The

word is sometimes also written Sabaites, Za-

beeans, Zabians, Zabaites, Tsabaeans, Tsabians,

and Tsabaists. Mahomet, in the Koran, and

the Arabian authors since him, make frequent

'mention of them. Beidavius, in his comment

on the Koran, represents them as a kind of mean

between the Christians ana the Magusians, who

«re trie followers of the Magi among the Persians : he adds, that they pretend to be of the religion

of Noah. Some charge them with worshipping

the stars; and others the angels or demons.

Maimonides attributes both to them.

Sale, in his preliminary discourse to the Koran,

has given the following brief account of the

tenets and worship of this sect : — They believe

in the existence of one God, though they also

pay an adoration to the stars, or the angels and

intelligences which they suppose reside in them,

and govern the world under the supreme Deity.

They endeavour to perfect themselves in the

four intellectual virtues, and believe the souls of

wicked men will be punished for 9000 ages, but

will afterwards be received to mercy. They are

obliged to pray three times a day, before sun-

rise, before noon, and before sun-set; and in

praying they turn their faces, as some say, to the north ; according to others to the south, to Mec-

ca, or to the star to which they pay their devo-

tion. They have three fasts in the year; the

first lasts thirty days, the second nine days, and

the last seven. They offer many sacrifices, of

which they eat no part, but wholly burn them.

They abstain from beans, garlic, and some other

pulse and vegetables.

SABINA (Julia), a Roman lady, who married

the emperor Adrian, by advice of Plotina, Tra-

jan's widow. She is celebrated for her .virtues,

but was ill used by her husband, though she as-

sisted in raising him to the empire. Some say

he even poisoned her. She had been thirty-eight

years married to him when she died A. D. 138.

SA'BINE, n. s. Fr. sabine; Lat. sabina. A

plant.

' Sabine or savin will make fine hedges, and may be brought into any form by clipping much beyond

trees. Mortimer.

SABINE, or SAVIN. See JUNIPERUS.

SABINES, or SABINI, an ancient nation of

Italy, reckoned among the Aborigines. Some,

however, say they were originally a colony of Spartans, who settled in that part of Italy. Their territories were situated in the neighbourhood of Rome between the Nar and the Anio, and bounded on the north by the Appennines and Umbria; east by the dominions of the JEqui ; south by Latium; and west by Etruria. Their chief cities were Cures, Fidenae, Crustumerium, Collatia, Corniculum, Nomentum, and Reate. The greatest part of the neighbouring nations were descended from them ; particularly the Sabelli, the Samnites, the Umbrians, yEqui, Brutii, Marsi, &c. Under their king Titus Tatius they made war with the Romans under Romulus, on account of the rape of their virgins ; but, after several battles, the war was put an end to by the women on whose account it was commenced, who by this time were attached to their Roman husbands ; a peace was concluded, the nations united, and Romulus and Tatius reigned jointly for six years over both nations, till Tatius was killed. See ROME. After this they occasionally revolted, but were finally subdued and incorporated as Roman citizens about A. U.C. 373.

SABINUS, a native of Sparta, the founder of the Sabine nation, to whom he gave name. He was deified after his death.

SABINUS (Flavius), a brother of the emperor Vespasian, famed for his fidelity to Vitellius. He commanded the Roman armies thirty-five years, and governed Home twelve years ; but was killed irt an insurrection of the people.*

SABINUS (Julius), a Roman commander, who proclaimed himself emperor, in opposition to Vespasian, but, being defeated soon after, hid himself for nine years in a cave, attended by his wife and two faithful domestics ; but being discovered he was dragged before Vespasian, and by his order put to death, though his wife endeavoured to excite Vespasian's compassion, by sliDwing him the twins she had borne in the cave.

SABINUS (Francis Floridus), a learned writer, who flourished soon after the restoration of letters in Europe. His chief works are, In Calumniatores IMauti et aliorum linguae Latinae scrip-

sorum apologia, Basil, 1540; and Lectionum Successivarum libri tres. Franc. 1602, 8vo. He died in 1547.

SABINUS (George), a celebrated Latin poet, born in the electorate of Brandenburg in 1508. His poem, Res gestae Caesarum Germanorum, spread his reputation all over Germany, and procured him the patronage of several princes ; he was made professor of the belles lettres at Frankfort on the Oder, rector of the academy of Konigsburg, and counsellor to the elector of Brandenburg. He married two wives, the first was the eldest daughter of the famous reformer Melancthon. He died in 1560. His poems have been often printed.

SABIONCELLO, or SABIONEIRA, a peninsula of Austrian Dalmatia, having the islands of Cufzolo and Meleda on the south, and on the north the island of Lesina, from which it is separated by a part of the gulf of Venice called the Canal of Sabioncello, or the Stagno. Forty-five miles north-west of Ragusa.

SABIONETTA, a town of Mantuan, now Austrian Italy, with a castle. It was for a time

the capital of a principality of the same name,

given in 1806, by an imperial decree of Buona-

parte, to his sister Paulina, and her husband, the

prince Borghese, duke of Guastalla. Nineteen

miles S. S. W. of Mantua. Inhabitants 6000.

SA'BLE, n. a. & adj. Fr. sable; Swed. subel ;

Lat. zibella. Fur ; black.

By this the drooping daylight 'gan to fade,

And yield bis room to sad succeeding night,

Who with her sable mantle 'gan to shade

Che face of earth, and ways of living wight.

Faerie Queene.

Furiously running in upon him with timultuous

speech, he violently rauglit from his head his rich cap of tables. Knolles.

Sable is worn of great personages, and brought out

of Russia, being the fur of a little beast of .that name, esteemed for the perfectness of the colour of the hairs, which are very black. Hence sable, in

heraldry, signifies the black colour in gentlemen's

arms. Peacham on Blazoning.

With him inthroned

Sat jafek-vested night, eldest of things,

The consort of his reign. Mdtont Paradise Lott.

They soon begin that tragick play,

Ami with their smoky cannons banish day :

Muht, horrour, slaughter, with confusion meet,

And in their sable arms embrace the flee. Wallrr.*

Adoring first the genius of the place,

And night, and all the stars that gild her sable tli rone. Dryiien.

The peacock's plumes thy tackle must not fail,

Nor the dear purchase of the sable's tail. Gay.

SABLE, in heraldry, signifies black; and, in

engraving, is expressed by horizontal and perpen-

dicular lines crossing <:ach other. Alexander

Nisbet says that ' the duke of Anjou, king of

Sicily, after the loss of that kingdom, appeared

at a tournament in Germany all in black, with

his shield of that tincture, seme de larmes, i. e.

sprinkled with drops of water to represent tears,

indicating by that both his grief and loss.

SABLE, in zoology. See MUSTELA. The

chase of these animals, in the more barbarous

times of the Russian empire, was the employ, or

rather task of the unhappy exiles in Siberia.

As that country is now become more populous,

the sables have in a great measure quitted it, and retired north and east to live in desert forests

and mountains ; they live near the banks of

rivers, or in the little islands in them ; on this account they have by some been supposed to be

the 2a/3fptov of Aristotle (Hist. An. lib. viii. -c.

5), which he classes with the animals conversant among waters. The hunters of sables formed themselves into troops, from five to forty each ; the last subdivided into lesser parties, and each chooses a leader, but one directs the whole ; a small covered boat is provided for each party, loaded with provisions, a dog and net for every two men, and a vessel to bake their bread in ; each party has also an interpreter for the country they penetrate into. Every party then sets out according to the course their chief points out ; they go against the stream of the rivers, drawing their boats up, till they arrive in the hunting country ; there they stop, build huts, and wait till the waters are frozen, and the season com-mences. They then penetrate into the woods ; mark the trees as they advance, that they may know their way back; and in their hunting quarters form huts of trees, and bank up the snow round them ; near these they lay their traps; then advance farther, and lay more traps, still building new huts in every quarter, and re-turn successively to every old one to visit the traps and take out the game to skin it, which the chief of the party alone must do; during this

time they are supplied with provisions by persons who are employed to bring it on sledges, from the places on the road, where they are obliged to form magazines The traps are a sort of pit-fall, with a loose board placed over it, baited with fish or flesh ; when sables grow scarce the hunters trace them in the new-fallen snow to their holes ; place their nets at the entrance ; and sometimes wait two or three days for the coming out of the animal. The season of chase being over, the hunters re-assemble, make a report to their leader of the number of sables each has taken ; share the booty ; then continue at the head-quarters till the rivers are clear of ice ; and afterwards return home.

SABLES, D'OLUNE DES, a port in the west of France, in La Vendee. It is well built, and has a harbour capable of admitting vessds < >f r<«ii -u'crable siv.e. Tho chief traffic is in ba)

salt, corn, and cattle. It has an extensive fishery of pilchards. Inhabitants 5200. Forty-five miles south of Nantes.

SABLIERE (Anthony), de Rambouille de la, a

French poet, who died in Paris in 1680. His Madrigals, which are much celebrated, were published after his death by his son.

SABOLCS, a palatinate of the east of Hungary, bounded on the west and north by the river Theyss. It has a superficial extent of 2120 square miles, consisting entirely of level ground ; in part covered with sand, and another part with small lakes, of so little depth as to dry up in «ummer, when soda is founa in the bottom. The Theyss often overflows its banks, and causes jreat ravages ; yet this district produces large quantities of corn, tobacco, and fruit. The chief town is Nagy Kallo, and the inhabitants of the palatinate, amounting to 135,000, are Calvinists.

SABON, an island of a triangular form, at the south entrance of the straits of Malacca. It is about twenty-four miles in circumference, and separated from the island of Sumatra by a navigable channel, called the Straits of Sabon. Long. 103° 21′ E., lat. 0° 42′ N.

SA'BRE, n. s. Fr. sabre. I suppose of Turkish original, says Johnson : and we have Span, table ; Arab. self. A cymetar ; a short

sword with a convex edge; a falchion.

To me the cries of fighting fields are charms ;

Keen be my sulre, and of proof my arms ;

1 ask no other blessing of my stars,

A'o prize but fame, no mistress but the wars.

Dry den.

Seamed o'er with wounds, which his own sabre gave,

In the vile habit of a village slave,

The foe deceived. Pitpe's Odyssey.

SABRE, a kitid of sword with a very broad and heavy blade, thick at the back, and a little falcated or crooked towards the point : it is generally worn by the heavy cavalry. The grenadiers, belonging to the whole of the French infantry, are likewise armed with sabres. The blade is not so long as that of a small sword, but it is nearly twice as broad . French hussars wear the curved ones somewhat longer than those of the grenadiers.

SABRE-TASCHE, from the Ger. tasche, pocket. An appointment or part of accoutrement which has been adopted for the use and convenience of dragoon officers. It consists of a pocket

which is suspended from the sword-belt on the left side, by three slings to correspond with the belt. It is usually of an oblong shape scolloped at the bottom with a device in the centre, and a broad lace round the edge. The color of it always corresponds with that of the uniform.

SACˆE, an ancient people of Scythia, who inhabited the country east of Bactriana and Sogdiana, north of Mount Imaus. Thpy lived in tents and built no towns. Ptol. vi. 13, Herod, iii. c. 93.

SACJEA, a feast which the ancient Babylonians and other orientals held annually in honor of the deity Anaitas. The Sacsea were in the east what the Saturnalia were at Rome, viz. a feast for the slaves. One of the ceremonies was to choose a prisoner condemned to death, and allow him all the pleasures and gratifications he could wish before he was carried to execution.

SACCANIA, one of the four provinces into which the Peloponnesus or Morea was divided by the Turks. It is bounded by the piovince of Zakounia (the ancient Laconia) by the isthmus of Corinth, and the gulfs of Lepanto, Egina,

and Napoli, and comprehends the ancient territories of Corinth, Sicyon, and Argos, forming the north-east part of the Morea. See GREECE.

SAC'CHARINE, adj. Lat. saccharum. Having the taste, or any other of the chief qualities of sugar.

Manna is an essential saccharine salt, sweating from the leaves of most plants.

Arbuthnot on Aliments.

SACCHAROMETER, the name of an instrument for ascertaining the value of worts, and the strength of different kinds of malt liquors. It is merely an hydrometer contrived to ascertain the specific gravity of worts, or rather to compare the weight of worts with that of equal quantities of the liquor employed in the brewery. The principle is as follows : — The menstruum or water employed by the brewer becomes heavier or more dense by the addition of such parts of the materials as have been dissolved or extracted by, and thence incorporated with it : the operation of boiling, and its subsequent cooling, still adds to the density of it by evaporation : so that, when it is submitted to the action of fermentation, it is more dense than at any other period.

In passing through this operation a remarkable alteration takes place. The fluid no sooner begins to ferment than its density begins to diminish ; and, as the fermentation is more or less perfect, the fermentable matter becomes more or less attenuated; and, in lieu of every particle thus attenuated, a spirituous particle, of less density than water, is produced ; so that when the liquor is again in a state of quietude, it is so much specifically lighter than it was before, as the act of fermentation has been capable of attenuating the component parts of its acquired density.

SACCHARUM, the sugar cane, in botany, a genus of the digynia order and triandria class of plants ; natural order fourth, gramina : CA L. none but a long down : COR. bivalved. Species eleven ; the chief is, S. officinarum, called by former botanists arundo saccharifera. It is a native of Africa, the East Indies, and of Brazil ; whence it was introduced into our West India islands soon after they were settled. For the process of making sugar, see SUGAR.

SACCHI (Andrew), a celebrated painter, born at Rome in 1594. He was the disciple of

Francis Albano, whom he afterwards surpassed in taste and correctness. He distinguished him self by his paintings in fresco, and arrived at a high degree of perfection. The works of Sacchi are finished with uncommon care and skill. He died in r668.

SACCHOLACTIC ACID. See MUCJC ACID.

SACERDOTAL, adj. Lat. sacerdotalis.

Priestly; belonging to the priesthood.

They have several offices and prayers, especially for the dead, in which functions they use sacerdvtm garments. StilUnpfeet.

He fell violently upon me, without respect to my tticfdotal orders. Drtiden'i SpanUi Fryar.

If ample powers, granted by the rulers of this world, add dignity to the persons intrusted with these powers, behold the importance and extent of the sacerdotal commission. Atterbury.

SACHEVERELL (Dr. Henry), a clergyman of the Tory faction in the reign of queen Anne ; who distinguished himself by his sermons and writings against the dissenters. He owed his

consequence, however, to being indiscreetly prosecuted by the house of lords for his assize sermon at Derby, and his sermon on the 5th of November, at St. Paul's, in 1709; in which he asserted the doctrine of non-resistance to government in its utmost extent ; and reflected severely on the act of toleration. The high and low church parties were then very violent, and Sacheverell's trial inflamed the high church party to dangerous riots and excesses ; he was, however, suspended for three years, and his sermons burned by the common hangman. The Tories being in administration when his suspension expired, he was freed with every mark of honor and public rejoicing ; was ordered to preach before the commons on the 29th of May, had the thanks of the house for his discourse, and obtained the valuable rectory of St. Andrew's Holborn.

SACHTLEVEN (Cornelius and Herman), two celebrated Dutch painters. Herman was the most eminent. He was born at Rotterdam, in 1609, and was the disciple of Van Goyen. His pictures are rare and valuable. He died in

1685.

SACK, n. t. Sav.a-l Sax. j-aec ; Heb. par ;

SACK-CLOTH, n. s. S Or. (TGUCKOC ; Lat. saccus.

It is observable of this word, says Dr. Johnson,

that it is found in all languages, and it is therefore conceived to be antediluvian. A bag; a pouch;

commonly a large bag ; to put in bags ; hence to

plunder ; pillage : and, as a noun substantive, the storm of a town : sack-cloth explains itself.

Thus with tack-cloth I invest my woe,

And dust upon my clouded forehead throw.

Sandys.

Edward Bruce spoiled all the old English pale in-

habitants, and sacked and raised all cities and corpo-

rate towns. Spenser.

Vastius caused the authors of that mutiny to be

thrust into sacks, and in the sight of the fleet cast into the sea. K nolle.*

Our tacks shall be a mean to sack the city :

And we be lords and rulers over Roan.

Shakspeare. Henry VI.

I'll make thee stoop and bend thy knee,

Or sack this country with a mutiny. Id.

What armies conquered, perished with thy sword ?

What cities sacked ? Fairfax.

Who sees these dismal heaps, but would demand

What barbarous invader tacked the land ? Denham.

If Saturn's son bestows

Thy sack of Troy, which he by promise owes,

Then shall the conquering Greeks thy loss restore.

Dry den.

Now the great work is done, the corn is ground,

The grist is sacked, and every tack well bound.

Relterton.

The pope himself was ever after unfortunate,

Rome being twice taken and sacked in his reign.

St-uth.

The great magazine for all kinds of treasure is the bed of the Tiber : when the Romans lay under the

apprehensions of seeing their city sacked by a bar-

barous enemy, they would take care to bestow such

of their riches this way as could best bear the water.

Addison.

Being clad in sackcloth, he was to lie on the ground, and constantly day and night implore God's mercy

for the sin he had committed. Ayliffe's Parergon.

Wood goes about with suckfuU of dross, odiously

misrepresenting his prince's countenance. Suiift.

Coarse stuff made of goats hair, of a dark colour, worn by soldiers and mariners ; and used as a habit among the Hebrews in times of mourning. Called

sackcloth, either because saris were made of this sort of stuff, or because haircloths were straight and close like a sack. Calmet.

SACK. Fr. sec. Of uncertain etymology

A kind of sweet wine, now brought chiefly from the Canaries. The sack of Shakspeare is believed to be what is now called sherry.

Pleash you drink a cup of sack. Shaktptare.

The butler hath great advantage to allure the maids with a glass of sack. Swift.

Snuff the candles at supper on the table, because the burning snuff may fall into a dish of soup or sackpossel. Id.

SACK was a wine used by our ancestors, which some have taken to be Rhenish, and some Canary wine. Venner, in his Via Recta ad Vitam Longam, printed in 1628, says ‘ that sack, taken by itself, is very hot and very penetrative; being taken with sugar, the heat is both somewhat allayed, and the penetrative quality thereof also retarded.’ He adds that Rhenish, &c., decline after a year, but sack and the other stronger wines are best when they are two or three years old. It appears probable that sack was not a sweet wine, from its being taken with sugar, and that it did not receive its name from having a saccharine flavor, but from its being originally stored in sacks or borachios. It does not ap-

pear to have been a French wine, but a strong

wine, the production of a hot climate. Perhaps

it was what is called dry mountain, or some •

Spanish wine of that kind. This is the more

probable, as Howell, in his French and English

Dictionary, 1650, translates sack by vin d Es-

pagne, vin sec.

SACK'BUT, n. s. FT.sambuque; Span, taea-

buche ; Lat. tumbuca. A kind of pipe.

The trumpets, sackbuts, psalteries, and fife,

Make the sun dance. Shakspeare. Coriolanus.

The SACKBUT is a musical instrument of the

wind kind, being a sort of trumpet, though

different from the common trumpet both in form

and size ; it is fit to play a bass, and is contrived to be drawn out or shortened, according to the

tone required, whether grave or acute. The

Italians call it trombone.

SACKVILLE (Thomas), lord Buckhurst, and

earl of Dorset, a statesman and poet, was born

in 1536. He was sent to Hurt Hall in Oxford,

in the end of the reign of Edward VI., whence

he removed to Cambridge, where he took the

degree of M. A., and thence to the Inner Tem-

ple, where he studied the law, and was called to the bar. He commenced poet whilst at the universities, and his juvenile productions were much admired. About the fourth year of queen

Mary, he was a member of the house of commons. In 1 557 he wrote a poem entitled The Induction, or the Mirror of Magistrates. In 1551 his tragedy of Gorboduc was acted before queen Elizabeth by the gentlemen of the Inner Temple. In the first parliament of Elizabeth's reign Mr. Sackville was member for Sussex, and for Bucks in the second. In the mean time he made the tour of France and Italy, and in 1566 was imprisoned at Rome, when his father died ; by which he became possessed of a very considerable fortune. Having obtained his liberty, be returned to England ; and being knighted was created lord Buckhurst. In 1570 he was sent ambassador to France. In 1586 he was one of the commissioners appointed to try the unfortunate Mary queen of Scots ; and was

employed to report the confirmation of her sentence, and to see it executed. In 1587 he went ambassador to the states general, in consequence of their complaint against the earl of Leicester ; who, disliking his impartiality, prevailed on the queen to recal him, and he was confined to his house. In this confinement he continued ten months, when, Leicester dying, he \v;is restored to favor, and in 1580 was installed knight of the garter ; but the greatest proof of tho queen's partiality for him appeared in 1591, when she caused him to be elected chancellor of the university of Oxford, in opposition to her favorite Essex. In 1 598, on the treasurer Burleigh's death, lord Buckhurst succeeded him, and became in effect prime minister; and when, in 1601, the earls of Essex and Southampton were brought to trial, he sat as lord high steward. On the accession of James I. he had the office of lord high treasurer confirmed to him for life, and was created earl of Dorset. He continued in high favor with the king till his death, which happened suddenly on the 19th of April, 1608, in the council chamber at Whitehall. He was

interred in Westminster Abbey.

SACKVILLE (Charles), earl of Dorset, a celebrated wit and poet, was born in 1637. He was one of the libertines of king Charles II.'s court, and indulged in inexcusable excesses. He openly discountenanced the violent measures of James II., and engaged early for the prince of Orange, by whom he was made lord chamberlain of the household, and a member of the privy council. He died in 1Y06, and left several poetical pieces, which were published among the works of the minor poets in 1749.

SAC'RAMENT, n.s. ^ Fr. sacrament ; Lat-

SAC'RAMENTAL, adj. > sacramentum. An

SAC'RAMENTALLY, adv. j oath; any ceremony producing an obligation; an outward and visible sign of an inward and spiritual grace : the adjective and adverb corresponding.

As often as we mention a sacrament, it is improperly understood ; for in the writings of the ancient fathers all articles which are peculiar to Christian faith, all duties of religion containing that which sense or natural reason cannot discern, are most commonly named sacraments. Hooker.

To make complete the outward substance of a sa-

crament, there is required an outward form, which

form' sacramental efements receive from sacramental

words. Id.

Ten thousand French have ta'en the sacratnent

To drive their dangerous artillery

Upon no Christian soul but English Talbot.

fihakspeare. Henry VL,

As we have ta'en the sacrament,

We will unite the white rose with the red.

Id. Richard 111.

My body is sacrcmentally contained in this sacra-

ment of bread. Hall.

The law of circumcision was meant by God sacra-

mentally to impress the duty of strict purity.

Hammond.

The words of St. Paul are plain ; and, whatever

interpretation can be put upon them, it can only vary the way of the sacramental efficacy, but it cannot

evacuate the blessing. Taylor.

Before the famous battle of Cressy, he spent the

greatest part of the night in prayer , and in the morn-

ing received the sacrament, with his son, and the chief of his officers. Addinm.

SACRAMENT is derived from the Latin sacra-

mentum, which signifies an oath, particularly the

oath taken by soldiers to be true to their country and general. The words of it, according to

Polybius were, obtemperaturus sum et faclur . ,

quicquid mandabitur ab imperatoribus juxta

vires. The word was adopted by the "writers of

the Latin church, and employed, perhaps with

no great propriety, to denote those ordinances

of religion by which Christians came under an

obligation, equally sacred with that of an oath,

to observe their part of the covenant of grace,

and in which they have the assurance of Chri ,t

that he will fulfil his part of it. Of sacramen s in this sense of the word, Protestant churches

admit of but two; and it is not easy to conceive

how a greater number can be made out from

Scripture, if the definition of a sacrament be

just which is given by the church of England.

By that church the meaning of the word is

declared to be ' an outward and visible sign 6 '

an inward and spiritual grace given unto us,

ordained by Christ himself as a means whereby

we receive the same, and a pledge to assure us

thereof; According to this definition, baptism

and the Lord's supper are certainly sacraments ;

for each answers the definition in the fullest

sense of the words. See BAPTISM and SUPPER OF THE LORD. The Romanists, however, add to this number confirmation, penance, extreme unction, ordination, and marriage, holding in all seven sacraments ; but two of those rites, not being peculiar to the Christian church, cannot be Christian sacraments, in contradistinction to the sacraments or obligations into which men of all religions enter. Marriage was instituted from the creation (see MARRIAGE) ; and penance or repentance has a place in all religions which teach that God is merciful and men fallible. The external severities imposed upon penitents by the church of Rome (see PENANCE) may indeed be in some respects peculiar to the discipline of that church", though the penances of the Hindoos are certainly as rigid ; but none of these severities were ordained by Christ, as the pledge of an inward and spiritual grace ; nor do they bring men under obligations analogous to the meaning of the word sacramentum. Confirmation has a better title to the appellation than any of the other five ; though it certainly was

not considered as such by the earliest writers of the Christian church, nor does it appear to have been ordained by Christ himself. See CONFIRMATION. Ordination is by many churches considered as a very important rite ; but as it is not administered to all men, nor has any particular form appropriated to it in the New Testament, it cannot be considered as a Christian sacrament conferring grace necessary to salvation. Extreme unction is a rite which took its rise from the miraculous powers of the primitive church, vainly claimed by the succeeding clergy. These considerations seem to have some weight with the Homish clergy themselves ; for they call the eucharist, by way of eminence, the holy sacrament. Numerous as the sacraments of the Romish church are, a sect of Christians sprung up in England, early in the eighteenth century, who increased their number. The founder was a Dr. Deacon of Manchester, where the remains of it subsisted very lately. According to these men, every rite in the book called the apostolical constitutions was certainly in use among the

apostles themselves. Still, however, they make a distinction between the greater and the less sacraments. The greater sacraments are baptism and the Lord's supper. The less are no fewer than ten ; viz. : — five belonging to baptism, exorcism, anointing with oil, the white garment, a taste of milk and honey, and anointing with chrism or ointment. The other five are, the sign of the cross, imposition of hands, unction of the sick, holy orders, and matrimony. Of the nature of these less sacraments we need give no account. The sect which taught them, if not extinguished, is in its last wane. It has produced, however, one or two learned men ; and its founder's Full, True, and Comprehensive View of Christianity, in two catechisms, is a work 'which the Christian antiquary will read with pleasure for information, and the philosopher for the materials which it contains for meditation on the workings of the human mind. It was published in 8vo. in 1748.

SACRAMENT, CONGREGATION OF THE HOLY, a religious establishment formed in France, whose founder was Antherius, bishop of Bethlehem,

and which, in 1644, received an order from Urban VIII. to have always a number of eccleˆ siastics ready to exercise their ministry among pagan nations, wherever the pope or congregation de propaganda should appoint.

SACRAMENT (St.), or Colonia, a city and colony which was held by the Portuguese, opposite the city of Buenos Ayres, on the shore of the La l'L,a. It has a tolerable port, receiving some shelter from the island of St. Gabriel ; yet it is otherwise open and exposed. It was founded by the Portuguese, in the year 1679, under Don M intiel de Lobo, and has occasioned many struggles between Spain and Portugal. The fortress of St. Gabriel, which protects the harbour, is reckoned a strong one. Thirty-three miles north-east from Buenos Ayres.

SACRAMENTARY, an ancient Romish church-book, which contains all the prayers and ceremonies practised at the celebration of the sacraments. It was written by pope Gelasius, and afterwards revised, corrected, and abridged, by St. Gregory.

SACRARIUM, in archaiology, a sort of

family chapel in the houses of the Romans. It differed from the lararium, inasmuch as that was dedicated to all the household deities without exception, while the sacrarium was devoted to some particular divinity. Cicero, in his oration for Milo, speaks of the sacrarium de bona dea. The name was also given to that particular portion of the ancient temples wherein the sacred things were deposited.

SA'CRED, adj. f Fr. sacre ; Lat. tacer.

SA'CREDLY, adv. > Immediately relating to

SA'CREDNESS, n. s. J God ; devoted to religious uses ; holy ; mysterious : the derivatives corresponding.

Those who came to celebrate the sabbath, made a conscience of helping themselves for the honour of that most sacred day. Mace.

The honour's sacred, which he talks on now,
Supposing that I lackt it.

Shahspeare. Antony and Cleopatra

Poet and saint, to thee alone were given,
The two most sacred names of earth and heaven;

Cowley

Wolves shall succeed for teachers, grievous wolves,

Who all the sacred mysteries of Heaven

To their own vile advantages shall turn. Milltm.

Smit with the love of sacred song. Id.

O'er its eastern gate was raised above

A temple sacred to the queen of love. Dryden.

Secrets of marriage still are sacred held ;

Their sweet and bitter by the wise concealed. Id.

This insinuates the sacredness of power, let the ad-

ministration of it be what it will. L'Ettrange.

When God had manifested himself in the flesh,

how sacredly did he preserve this privilege ! South.

In the sanctuary the cloud, and the oracular an-

swers, were prerogatives peculiar to the lacredtiess of the place. Id.

Before me lay the sacred text,

The help, the guide, the balm of souls perplexed.

Arbuthnot.

SACRIF'ICABLE, adj. } Fr. sacri-

SAC'RIFICATOR, n. s. I far ; Lat. sa-

SAC'RIFICE, v. a., v. n. & n. s. > a ifico. To SAC'RIFICER, i offer to hea-

SAC'RIFICED, adj. J ven ; to immo-

late as an atonement or propitiation : with to ;

to offer a propitiatory victim : the act of offer-

ing, or thing offered : sacrificator is a redundant

synonyme of sacrificer : the other derivatives are

sufficiently plain.

Let us go to sacrifice to the Lord. Exod. iii. 18.

He that sacrificeth of things wrongfully gotten, his offering is ridiculous. Ecclus. xxxiv. 18.

A la rims' limbs are lopt,

And intrails feed the sacrificing fire.

Shakspeare. Titus Andronicuf.

This blood, like sacrificing Abel's, cries

To me for justice. Id. Richard II.

Upon such sacrifiet

The gods themselves throw incense.

Id, King Lear,

Let us be sacrificer, but not butchers. .S/ akspeare.*

R ain sacrificial whisperings in his ear ;

Make sacred even his stirrup. Id. Timon.

'Tis a sad contemplation that we should sacrifice

the peace of the church to a little vain curiosity.

Decay of Piety.

.Men from the herd or flock

Of facrijicing bullock, lamb, or kid. Millon.

SACRIFICE.

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Some mischief is befallen

To that meek man who well had sacrificed. Id.

God will ordain religious rites

Of sacrifice. Jd.

Although Jephtha's vow run generally for the

words, whatsoever shall come forth ; yet might it be restrained in the sense to whatsoever was sacrijicable, and justly subject to lawful immolation, and so would not have sacrificed either horse or dog.

Brotmt'l Vulgar Errotirt.

Not only the subject of tuo-ifae is questionable,

but also the tacnjicator, which the picture makes to be Jephtha. Browne.

Tertullian's observation upon these tacrijiciat rites

is pertinent to this rule.

Taylor's Worthy Communicant.

When some brawny sacrificer knocks,

Before an altar led, an offered ox. Dnjden.

The breach of this rule, To do as one would be

done to, would be contrary to that interest men sa-

crifice to when they break it. Lncke.

A priest pours wine between the horns of a bull : the priest is veiled after the manner of the old Roman sncrijicers. Addison.

I saw among the ruins an old heathen altar, with

this particularly in it, that it is hollowed like a dish at one end ; but it was not this end on which the sacrifice was laid. Id.

Syphax loves you, and would sacrifice

His life, nay more, his honour to your service. Id.

Condemned to sacrifice his childish years

To babbling ignorance, and to empty fears. Prior.

A great genius sometimes sacrifices sound to sense.

Broome.

A SACRIFICE is an offering made to God on an

altar, as an acknowledgment of his power and a

payment of homage. Sacrifices (though the term

is sometimes used to comprehend all the offer-

ings made to God, or in any way devoted to his

service and honor) differ from mere oblations iu

this, that in a sacrifice there is a real destruction or change of the thing offered ; whereas an ob-

lation is only a simple offering or gift, without

any such change at all : thus all sorts of tithes

and first-fruits, and whatever of men's worldly

substance is consecrated to God for the support

of his worship and the miantenance of his mi-

nisters, are offerings or oblations ; and these, un-

der the Jewish law, were either of living crea-

tures or other things : but sacrifices, in the more peculiar sense of the term, were either wholly or

in part consumed by fire. Concerrling the ori-

gin of sacrifices very various opinions have been

held. By many the Phoenicians are supposed to

have been the authors of them ; though Porphyry

attributes their invention to the Egyptians.

By modern deists, sacrifices are said to have

had their origin in superstition. It is therefore weak (say they) to derive this practice from any par-

ticular people ; since the same mode of reasoning would lead various nations, without any intercourse with each other, to entertain the same opinions respecting the nature of their gods, and the proper means of appeasing their anger. Men of gross conceptions imagine their deities to be like themselves, covetous and cruel. They are accustomed to appease an injured neighbour by a composition in money ; and they endeavour to compound in the same manner with their gods, by rich offerings to their temples and to their priests. The most valuable property of a simple people is their cattle. These offered in sacrifice are supposed to be fed upon by the divinity, and are actually fed upon by his priests. If a crime is committed which requires the punishment ot death, it is accounted perfectly fair to appease the deity by offering one life for another ; be cause, by savages, punishment is considered as a debt for which a man may compound, and which one man may pay for another. Hence, they allege, arose the notions of imputed guilt and vicarious atonement. — Had sacrifices never prevailed in the world but among such gross idol-

aters as worshipped departed heroes, who were

supposed to retain in their state of deification all the passions and appetites of their mortal state,

this account of the origin of that mode of wor-

ship would have been perfectly satisfactory. But

we know from the most incontrovertible author-

ity, that sacrifices were in use among people who

worshipped the true God, and who must have

had very correct notions of his attributes. Now

we think it impossible that such notions could

have led any man to fancy that the taking away

of the life of a harmless animal, or the burning

of a cake or other fruits of the earth in the fire, would be acceptable to a Being self-existent,

omnipotent, and omniscient, who can neither be

injured by the crimes of his creatures, nor receive any accession of happiness.

Some persons who admit the authenticity of

the Jewish and Christian sacrifices, and firmly

rely on the atonement made by Christ, are yet

unwilling to allow that sacrifices were originally

instituted by God. Of this opinion were St.

Chrysostom, Spencer, Grotius, and Warburton,

as were likewise the Jewish Rabbies, Maimo-

nides, R. I-evi, and Ben Gerson. The greater

part of these writers maintain that sacrifices

were at first a human institution, and that God, to prevent their being offered to idols, introduced them into his service, though he did not approve of them as good in themselves, or as proper rites of worship. Warburton's theory of sacrifice is more plausible. According to this ingenious prelate, sacrifices had their origin in the sentiments of the human heart, and in the ancient mode of conversing by action in aid of words. Gratitude to God for benefits received is natural to the mind of man, as well as his bounden duty. ' Expiatory sacrifices,' he says, ' were in their own nature intelligible. Here some chosen animal, precious to the repenting criminal, who deprecates the Deity who is to be appeased, was offered up and slain at the altar, an action which in all languages speaks to this purpose : — I confess my transgressions at thy footstool, O my God ! and with the deepest contrition implore thy pardon. And 1 own that I myself deserve the death which I now inflict on this animal." See Divine Legation, B. ix. c. 2. This system of sacrifice, which the bishop think so well supported by the most early movements*

of simple nature, we admit to be ingenious, but by no means satisfactory. The two chief observances in the Jewish ritual were the sabbath and sacrifices. Though the distinction of weeks was well known over all the eastern world, the Hebrews, during their residence in Egypt, were probably very negligent in their observance of

the sabbath. To enforce a religious observance of that sacred day it became necessary to inform them of the time and occasion of its first institution, that they might keep it holy in memory of the creation ; but, in a country like Egypt, the people were in danger of holding sacrifices in too high rather than too low veneration, so that there was not the same necessity for mentioning explicitly the early institution of them. It was sufficient that they knew the divine institution of their own sacrifices, and the purposes for which they were offered. ‘ Faith,’ says the apostle Paul, is the substance of things hoped for, the evidence of things not seen,’ and comes not by reasoning, but by hearing. What things then were they of which Abel, the first sacnficer, had heard, for

which he hoped, and in the faith of which he offered sacrifice ? Undoubtedly it was a restoration to that immortality which was forfeited by the transgression of his parents. Of such redemption an obscure intimation had been given to Adam, in the promise that the seed of the woman should bruise the head of the serpent ; and it was doubtless to impress upon his mind in more striking colors the manner in which this was to be done that bloody sacrifices were first instituted. As long as such rites were thus understood they constituted a perfectly rational worship, as they showed the people that the wages of sin is death ; but when men sunk into idolatry, and lost all hopes of a resurrection from the dead, the slaughtering of animals to appease their deities was a practice grossly superstitious- It rested in itself, without pointing to any farther end, and the grovelling worshippers believed that by their sacrifices they purchased the favor of their deities. When once this notion was entertained, human sacrifices were .soon introduced. By the Jewish law these abominable offerings were strictly forbidden, and the whole ritual of sacrifice restored to its original purity.

All Christian churches have, till very lately, agreed in believing that the Jewish sacrifices served, among other uses, for types of the death of Christ and the Christian worship. Many are of opinion that they were likewise federal rites, as they certainly were considered by the ancient Romans. (Liv. 21,45). Of the various kinds of Jewish sacrifices, and the subordinate ends for which they were offered, a full account is given in the books of Moses. When an Israelite offered a loaf or a cake, the priest broke it into two parts ; and, setting aside that half which he reserved for himself, broke the other into crumbs, poured oil, wine, incense, and salt upon it, and spread the whole upon the fire of the altar. If these offerings were' accompanied with the sacrifice of an animal, they were thrown upon the victim to be consumed along with it. If the offerings were of the ears of new corn, they were parched at the fire, rubbed in the hand, and then offered to the priest in a vessel, over which he poured oil, incense, wine, and salt, and then burnt it upon the altar, having first taken as much of it as of right belonged to himself. The

principal sacrifices among the Hebrews consist-

ed of bullocks, sheep, and goats : but doves and

turtles were accepted from those who were not

able to bring the other; these animals were to

be perfect, and without blemish. The rites of

sacrificing were various, and are very minutely

described in the books of Moses.

The manner of sacrificing among the Greeks

and Romans was as follows : — In the choice ot

the victim, they took care that it was without

blemish or imperfection ; its tail was not to be

too small at the end ; the tongue not black, nor

the ears cleft ; and the bull must never have been yoked. The victim being pitched upon, they

gilt his forehead and horns, especially if a bull,

heifer, or cow. The head they also adorned witli

a garland of flowers, a woollen infula or holy

fillet, whence hung two rows of chaplets with

twisted ribands; and over the middle of the

body a kind of stole, hung down on each side ;

the lesser victims were only adorned with gar-

lands and bundles of flowers, together with

white tufts or wreaths. The victims, thus pre-

pared, were brought before the altar : the lesser

being driven to the place, and the larger led by

a halter; when, if they made any struggle, or

refused to go, the resistance was taken for an ill omen, and the sacrifice often delayed. The vic-

tim, thus brought, was carefully examined, to see

that there was no defect in it; then the priest,

clad in his sacerdotal habit, and accompanied

with the sacrincers and other attendants, and

being washed and purified according to the ce-

remonies prescribed, turned to the right hand,

and went round the altar, sprinkling it and those

who were present with meal and holy water.

Then the crier proclaimed with a loud voice,

Who is here? To which the people replied,

Many and good. The priest then having ex-

horted the people to join with him, by saying

Let us pray, confessed his own unworthiness,

acknowledging that he had been guilty of divers

sins ; for which he entreated pardon of the gods,

hoping that they would grant his requests, accept

the oblations offered, and send them all health

and happiness; and to this general form added

petitions for such particular favors as were then

desired. The priest then took a cup of wine;

and, having tasted it, caused his assistants to do

the like ; and then poured forth the remainder

between the horns of the victim. Then the

priest or the crier, or sometimes the most honor-

able person in the company, killed the beast, by

knocking it down or cutting its throat. If the

sacrifice was in honor of the celes

throat was turned up towards heaven, but if

they sacrificed to the heroes or infernal gods, the victim was killed with its throat towards the

ground. If by accident the beast escaped the

stroke, leaped up after it, or expired with pain

and difficulty, it was thought to be unacceptable

to the gods. The beast being killed, the priest

inspected its entrails, and made predictions from

them. They then poured wine and frankincense

into the fire, to increase the flame, and then laid the sacrifice on the altar; which in the primitive

times was burnt whole to the gods, and thence

called a holocaust ; but in after-times only

part of the victim was consumed in the fire, and

the remainder reserved for the sacrincers ; the

thighs, and sometimes the entrails, being burnt

to their honor, the company feasted upon the

rest. During the sacrifice, the priest, and the per-

son who gave the sacrifice, jointly prayed, laying

their hand noon the altar. Sometimes they

played upon musical instruments in the time of the sacrifice, and on some occasions they danced round the altar, singing sacred hymns in honor of the gods.

Concerning the origin of human sacrifices various opinions have been formed. When men had indulged the fancy of bribing their gods by sacrifice, it was natural for them to think of enhancing the value of the atonement by the cost and rarity of the offering, and thus at last they offered that which they conceived to be the most precious of all, a human sacrifice. 'It was customary,' says Sanchoniathon, '-in ancient times, in great and public calamities before things became incurable, for princes and magistrates to offer up in sacrifice to the avenging demons the dearest of their offspring.' Sanchoniathon wrote of Phoenicia ; but the practice prevailed in every nation of which we have received any ancient account. The people of Dumah, in particular, sacrificed every year a child, and buried it underneath an altar; for

they did not admit of images. The Persians buried people alive. Hamestris, the wife of Xerxes, entombed twelve persons alive under ground. It would be endless to enumerate every city and province where these dire practices obtained. The Cyprians, the Rhodians, the Phoceans, the lonians, those of Chios, Lesbos, Tenedos, all offered human sacrifices. The natives of the Tauric Chersonesus offered up to Diana every stranger whom chance threw upon their coast. Hence arose that just expostulation of Euripides in his Iphigenia, upon the inconsistency of the proceeding. Iphigenia wonders, as the goddess delighted in the blood of men, that every villain and murderer should be priviledged to escape, nay, driven from the threshold of the temple; whereas, if an honest and virtuous man chanced to stray thither, he was only seized upon, and put to death. The Pelasgi, in a time of scarcity, vowed the tenth of all that should be born to them for a sacrifice, to procure plenty. Aristomenes the Messenian slew 300 noble Lacedemonians, among whom was Theopompus the king of Sparta, at the altar of Jupi-

ter at Ithome. The Lacedemonians did not fail to make ample returns, and offered the like number of victims to Mars. Their barbarous festival of the Diamastigosis is well known. See DIAMASTIGOSIS. Phylarchus, as quoted by Porphyry, says that of old every Grecian state made it a rule, before they marched against an enemy, to solicit a blessing on their undertakings by human victims. The Romans were accustomed to the like sacrifices. They both devoted themselves to the infernal gods, and constrained others to submit to the same horrid doom. Hence we read in Livy that, in the consulate of JEmilius Paulus and Terentius Varro, two Gauls, a man and a woman, and two Greeks were buried alive at Rome in the ox-market. He says it was a sacrifice not originally of Roman institution ; yet was often practised there by public authority. Plutarch mentions a similar instance a few years before, in the consulship of Flaminius and Furius. Caius Marius offered up his own daughter as a victim to the Dii Averrunci, to procure success in a battle against the Cimbri ; as we are informed by Dorotheus, quoted by Clemens

and by Plutarch, who says that her name wa>
Calpurnia. Cicero, mentioning this custom as
common in Gaul, adds that it prevailed among
the people even at the time he was writing ; and
Pliny says that it had then, and not very long,
been discouraged. For there was a law enacted
when Lentulus and Crassus were consuls, so
late as A. U. C. 657, that there should be no
more human sacrifices. They were, however,
again offered, though they became not so ge-
neral. For Augustus Caesar, when Perusia sur-
rendered during the second triumvirate, offered
up, upon the Ides of March, 300 persons, of the
equestrian and senatorial order, to the manes
of his uncle Julius Caesar. Even in Rome this
custom was revived : and Porphyry assures us
that in his time a man was every year sacrificed
at the shrine of Jupiter Latialis. Heliogabalus
offered similar victims to the Syrian deity which
he introduced among the Romans. The same is
said of Aurelian. The Gauls and Germans were
so devoted to this shocking custom that no bu-
siness of any moment was transacted among
them without the blood of men. They were of-

fered up to Husus, Taranis, Thautates, 8cc. These deities are mentioned by Lucan. The altars of these gods were generally situated in the depth of woods, that the gloom might add to the horror of the operation. The persons devoted were led thither by the Druids, who presided at the solemnity, and performed the cruel office. Tacitus mentions the cruelty of the Hermunduri, in a war with the Catti, wherein they had greatly the advantage ; at the close of which they made one general sacrifice of all their prisoners. The remains of the legions under Varrus suffered the same fate. There were many places destined for this purpose all over Gaul and Germany ; but especially the woods of Arduenna(now Ardennes), and the great Hercynian forest ; a wild that extended above thirty days' journey in length. The places set apart for this solemnity were held in the utmost reverence. Lucan mentions a grove of this sort near Marsilia, which even the Roman soldiers were afraid to violate, though commanded by Caesar. Claudian compliments Stilicho that, among other advantages accruing to the Roman armies through his conduct, they

could now venture into the awful forest o, Ilercynia, and follow the chace in those so much dreaded woods. These practices prevailed among all the nations of the north. The Massagetae, the Scythians, the Getes, th« Sarmatians, all the various nations upon the Baltic, particularly the Suevi and Scandinavians, held it as a fixed principle that their security could not be obtained but at the expense of the lives of others. Their chief gods were Thor and Woden, whom they thought they could never sufficiently glut with blood. They had many celebrated places of worship ; especially in the island of Rugen, near the mouth ot the Oder ; and in Zealand, and among the Semnones and Naharvalli. But the most frequented was at Upsal ; where there was every year a grand solemnity, which continued for nine days, during which they sacrificed animals of all sorts; but the most acceptable and numerous victims

were men. Of these none were esteemed so auspicious a sacrifice as the prince of the coun-

try. Whea the lot fell for the king to die, it was received with universal joy ; as it once happened

in the time of a famine, when they cast lots, and it fell to king Domalder to be the people's vic-

tim ; and he was accordingly put to death. They

did not spare their' own children. Harold the

son of Gunild slew two of his sons to obtain,

says Verstegan, ' such a tempest at sea, as

should break and disperse the shipping of Harold

king of Denmark.' Another king slew nine

sons to prolong his own life. Adam Bremensis,

speaking of the awful grove at Upsal where

these horrid rites were celebrated, says that

there was not a single tree but was reverenced,

as if gifted with some portion of divinity ; be-

cause they were stained with gore and foul with

human putrefaction. The same is observed by

Scheiffer in his account of this place. The

manner in which the victims were slaughtered

was diverse in different places. Some of the

Gaulish nations chined them with the stroke of

an axe. The Celtae placed the man who was to

be offered for a sacrifice upon a block or an

altar, with his breast upwards, and with a sword

struck forcibly across the sternum ; then tumb-

ling him to the ground, from his agonies and convulsions, as well as from the effusion of blood, they formed a judgment of future events. The Cimbri ripped open the bowels ; and from them they pretended to divine. In Norway they beat men's brains out with an ox-yoke. In Iceland they dashed them against an altar of stone. In many places they transfixed them with arrows. After they were dead, they suspended them upon the trees, and left them to putrefy. At one time seventy carcases of this sort were found in a wood of the Scevi. Dithmar of Mersburg speaks of a place called Ledur in Zealand, where there were every year ninety-nine persons sacrificed to the god Swantowite. During these bloody festivals a general joy prevailed, and banquets were most royally served. They fed, caroused, and gave a loose to indulgence, which at other times was not permitted. Their servants were numerous^ who attended during the term of their feasting, and partook of the banquet. But, at the close of all, they were smothered in the same pool, or otherwise made away with. On which Tacitus remarks how great an awe this circumstance must necessarily

infuse into those who were not admitted to these mysteries. They imagined that there was something mysterious in the number nine : for which reason these feasts were in some places celebrated every ninth year, in others every ninth month; and continued for nine days. When all was ended, they washed the image of the deity in a pool ; and then dismissed the assembly. These accounts are handed down from a variety of authors in different ages; many of whom were natives of the countries which they describe, and to which they seem strongly attached. The like custom prevailed to an excessive degree at Mexico (see MEXICO), and even under'the mild government of the Peruvians ; and in most parts of America. But, among the nations of Canaan, the victims were peculiarly chosen. Their own cliildreT;, and whatever was nearest and dearest to them, were deemed the most worthy offering to their gods. The Carthaginians, who were a colony from Tyre, carried with them the religion of their country, and instituted the same worship in the parts were they settled. It consisted in the adoration of several deities, but

particularly of Kronus, to whom they offered human sacrifices, and especially children. If the parents were not at hand to make an immediate offer, the magistrates did not fail to make choice of those who were most fair and promising. Upon a check being received in Sicily, Hamilcar laid hold of a boy, and offered him on the spot to Kronus ; and at the same time drowned a number of priests to appease the deity of the sea. The Carthaginians, upon a great defeat of their army by Agathocles, imputed their miscarriages to the anger of this god, and seized at once 300 children of the nobility, and offered them for a sacrifice; 300 more yielded themselves voluntarily, and were put to death with the others. The Egyptians chose the most handsome persons to be sacrificed. The Albanians pitched upon the best man of the community, and made him pay for the wickedness of the rest. If a person had an only child, it was the more liable to be sacrificed, as being esteemed more acceptable to the deity, and more efficacious to the general good. Those who were sacrificed to Kronus were thrown into the arms of

a molten idol, which stood in the midst of a large fire, and was red hot. The arms of it were stretched out, with the hands turned upwards, as it were to receive them ; yet sloping downwards, so that they dropt thence into a glowing furnace below. To other gods they were otherwise slaughtered, often by the very hands of their parents. They embraced their children with great fondness, and encouraged them in the gentlest terms, that they might not be appalled at the sight of the hellish process ; begging of them to submit with cheerfulness to this fearful operation. If there was any appearance of a tear rising, or a cry unawares escaping, the mother smothered it with her kisses, that there might not be any show of backwardness or constraint, but the whole be a free-will offering. These cruel endearments over, they stabbed them to the heart, or otherwise opened the sluices of life ; and with the blood warm, as it ran, besmeared the altar and the grim visage of the idol. These were the customs which the Israelites learned of the people of Canaan, and for which they are upbraided by the Psalmist

(cvi. 34 — 39). These cruel rites, practised in so many nations, made Plutarch doubt, ‘ Whether it would not have been better for the Galatae, or for the Scythians to have had no tradition or conception of any superior beings, than to have formed to themselves notions of gods who delighted in the blood of men ; of gods who esteemed human victims the most acceptable and perfect sacrifice. Would it not, says he, have been more eligible for the Carthaginians to have had the atheist Critias, or Diagoras their lawgiver, at the commencement of their polity, and to have been taught that there was neither god nor demon, than to have sacrificed in the man-

ner they were wont to the god whom they adored ? ‘ The mother, he adds, who sacrificed her child stood by, without any seeming sense of what she was losing, and without uttering a groan. If a sigh did escape she lost all the honor which she proposed to herself in the offering, and the child was notwithstanding slain.

All the time of this ceremony, while the children were murdering, there was a noise of clarions and tabors sounding before the idol, that the cries and shrieks of the victims might not be heard.' ' Tell me now,' adds Plutarch, ' if the monsters of old, the Typhons, and the giants, were to expel the gods, and to rule the world in their stead ; could they require a service more horrid than these infernal rites and sacrifices ?'

SAC'RILEGE, n. s. ^ Fr. sacrilege ; Lat.

SACRILE'GIOUS, adj. > sacrilcgium. The

SACRILEGIOUSLY, adv.) crime of appropriating what is devoted to religion, or of violating or profaning things sacred : the adjective and adverb corresponding.

By what eclipse shall that sun be defaced,
What mine hath erst thrown down so fair a tower,
What sacrilege hath such a saint disgraced ?

Sidney.

Then 'gan a cursed hand the quiet womb
Of his great grandmother with steel to wound,
And the hid treasures in her sacred tomb
With sacrilege to dig. Faerie Queene.

To sacrilegiotts perjury should I be betrayed, I

should account it greater misery. King Charles.

When these evils befel him, his conscience tells

him it was for sacrilegiously pillaging and invading God's house. South.

We need not go so many ages back to see the ven-

geance of God upon some families, raised upon the

ruins of churches, and enriched with the spoils of sa-

crilege. Id.

Blasphemy is a male iiction, and a sacrilegious de-

traction from the Godhead. Aylijfe's Parergon.

Still green with bays each ancient altar stands,

Above the reach of sacrilegious hands. Pope.

SA'CRING, part.ˆ A participle of the

SA'CRIST, ˆ French sacrer. The verb

SAC'RISTAN, i is not used in English.

*SAC'RISTY. * Consecrating ; a sacrist*

or sacristan (Fr. sacristairi) is one who has the

care of consecrated things : sacristy the place

where they are kept.

I'll startle you,

Worse than the sacring bell.

Shakspeare. Henry VIII.

The sacring of the kings of France is the sign of their sovereign priesthood as well as kingdom, and

in the right thereof they are capable of holding all vacant benefices.

Temple.

Bold Amycus from the robbed vestry brings

A sconce that hung on high,

With tapers filled to light the sacristy. Dryden.

A third apartment should be a kind of sacristy

for altars, idols, and sacrificing instruments.

Addison.

A sacrist or treasurer are not dignitaries in the

church of common right, but only by custom.

Ayliffe's Parergon.

SACROBOSCO (Joannes de), or John Hali-

fax, a celebrated mathematician of the thir-

teenth century, said by English biographers to

have been born at Halifax in Yorkshire, but both

Scots and Irish writers claim him as their coun-

tryman. After receiving his education at Ox-v

ford, he entered into orders, and went to Paris,

where he died in 1256- He wrote, 1. De

Sphaera Mundi ; 2. De Anni Rations; 3. De

Algorismo.

SACRUM, or Os basilare, the sacred bone,

so called from its being offered in sacrifice by

the ancients, or perhaps from its supporting the

organs of generation, which they considered as sacred. In young subjects it is composed of five or six pieces, united by cartilage ; but in more advanced age it becomes one bone, in which, however, the marks of the former separation may still be easily distinguished. Its shape has been sometimes compared to an irregular triangle ; and sometimes, and perhaps more properly, to a pyramid, flattened before and behind, with its basis placed towards the lumbar vertebrae, and its point terminating in the coccyx. See ANATOMY.

SAD, adj. -\ Of this word, so frequent in
SAD'DEN, v. a. (the language, the etymology is
SAD'LY, adv. {not known, says Johnson.
*SAD'NESS, n. s. * Goth, sat, grief. — Thomson.*
Sorrowful ; full of grief : hence heavy ; gloomy ; bad ; cohesive : to sadden is to make sad : and the adverb and noun substantive correspond.

Be not as the hypocrites of a sad countenance. Matthew.

Do you think I shall not love a sad Pamela s° well as a joyful ? Sidney.

\ith that his hand, more sad than lump of lead,

Uplifting high, he weened with Morddure,

His own good sword, Morddure to cleave his head.

Faerie Queene.

My father has gone wild into his grave ;

For in his tomb lie my affections ;

And with his spirits sadly I survive,

To mock the expectations of the world.

Shakspeare. Henry IV.

It ministreth unto men, and other creatures, all

celestial influences ; it dissipateth those sad thoughts and sorrows which the darkness both begetteth and

maintaineth. Raleigh.

If it were an embassy of weight, choice was made

of some sad person of known judgment and expe-

rience, and not of a young man, not weighed in state matters. Bacon.

A sad wise valour is the brave complexion

That leads the van, and swallows up the cities :

The giggler is a milk-maid, whom inflection,

Or a fired beacon, frighteth from his ditties.

Herbert

The soul receives intelligence

By her near genius of the body's end,

And so imparts a sadness to the sense.

Daniel's Civil War.

A passionate regret at sin, a grief and sadness of its memory, enter into

God's roll of mourners.

Decay of Piety.

And let us not be wanting to ourselves,

Lest so severe and obstinate a sadness

Tempt a new vengeance. Denham's Sophy.

Thoughts in my unquiet breast are risen,

Tending to some relief of our extremes,

Or end, tho' sharp and sad, yet tolerable. Milton.

Up into heaven, from Paradise in haste

Th' angelic guards ascended, mute and sad. Id.

Dim sadness did not spare

Celestial visages. Id.

Crystal, in its reduction into powder, hath a vale

and shadow of blue ; and in its coarse pieces is of a sadder hue than the powder of Venice glass.

Browne's Vulgar Errourt.

I met him accidentally in London in tad coloured

c.oathes, far from being costly.

Walton' Life of Bishop Sanderson.*

Scarce any tinging ingredient is of so general use

as woad, or glastum; for though of itself it dye but a blue, yet it is used to

prepare cloth for a green, and many of the tadder colours, when the dyers

make them last without fading. Boyle.

He sadly suffers in their grief,

Out- weeps an hermit, and out -prays a saint.

Drifden.

If the subject be mournful, let every thing in it

have a stroke of sadness. Id.

Woad or wade is used by the dyers to lay the

foundations of all sad colours.

Mortimer's Husbandry.

Marl is binding, and saddening of land is the great prejudice it doth to clay lands. Id.

We may" at present easily see, and one day sadly

feel. South.

These qualifications make him a sad husband.

Adtiiton.

Her gloomy presence saddens all the scene,

Shades every flower, and darkens every green ;

Deepens the murmurs of the falling floods,

And breathes a browner horror on the woods. Pope.

See in her cell sad Eloisa spread,

Propped on some tomb, a neighbour of the dead.

Id.

*SAD'DLE, n. *.'& v. a. *\ Sax. j-£rt>l ; Goth.*

SAD'DLE-BACKED, adj. f seda ; Dan. and

SAD'DLE-H AKER, n. s. iBelg. sadel; Wei.

SAD'DLER.) sadell. The seat

which is put upon a horse : to cover with a sad-

dle ; to burden : saddle-backed is denned in the

extract : saddle-maker and saddler, a manufac-

turer of saddles.

I will saddle me an ass, that I may ride thereon.

2 Sum.

His horse hipped, with an old moth-eaten saddle,

and the stirrups of no kindred

Shakipeare. Taming of the Shrew.

Sixpence that I had

To pay the toddler for my mistress' crupper,

The toddler had it. Id. Comedy of Errours.

The law made for apparel, and riding in saddles,

after the English fashion, is penal only to English-

men. Davies.

Rebels, by yielding, do like him, or worse,

Who saddled his own back to shame his horse.

Cleat-eland.

The utmost exactness in these belongs to farriers,

saddlers, and smiths. Digby.

One hung a pole-ax at his saddle bow,

And one a heavy mace. Dryden't Knight' Tale.*

Resolved for sea, the slaves thy baggage pack,

Each saddled with his burden on his back ;

Nothing retards thy voyage. Dryden.

Horses, taddlt-bached, have their backs low, and a

raised head and neck. Farrier' Dictionary.*

No man, sure, e'er left his house,

And toddled Ball, with thoughts so wild,

To brine a midwife to his spouse,

Before he knew she was with child. Prior.

The smith and the toddler's journeyman ought to

partake of your master's generosity.

Swift's Direction to the Groom.*

SADDLE, in archaiology. In the earlier ages

the Romans used neither saddle nor stirrups,

and hence the Roman cavalry were subject to

sundry maladies in the hips and legs from the

want of some support for their feet. Hippo-

crates observes that the Scythians, who were

much on horseback, were incommoded by de-

fluxions in the legs from the same cause. In

less remote times, the Romans placed upon their

horses a square pannel, or species of covering

which enabled them to sit less hardly. This

they termed ephippium.

The saddles now chiefly in use are : — The running saddle, which is a small one with round skirts. The Burford saddle, which has the seat and the skirts both plain. The pad saddle, of which there are two sorts, some made with burs before the seat, and others with bolsters under the thighs. The French pad saddle, of which the burs come wholly round the seat. The portmanteau saddle, that has a cantle behind the seat, to keep the portmanteau from the back of the rider. A war saddle, whicli has a cantle and a bolster behind and before ; also a fair bolster. The pack saddle, a saddle upon which loads may be carried

The several parts of a saddle are too well known to require any minute description in this place.

SADDUCEES, a sect among the ancient Jews respecting whose origin there are various opinions. Epiphanius and others contend that they took their rise from Dositheus, a sectary of Samaria, and their name from the Hebrew word p”l¥, just, from the great justice and equity which they showed in their actions. In the Jewish Talmud we are told that the Sadducees derived

their name from Sadoc, or Zadoc, and that the

sect arose about 260 years before Christ, in the

time of Antigonus of Socho, president of the

Sanhedrim at Jerusalem, and teacher of the law.

He had often in his lectures taught his scholars

that they ought not to serve God as slaves do

their masters, from the hope of a reward, but

merely out of filial love for his own sake ; from which Sadoc and Baithas inferred that there

were no rewards after this life. They therefore

separated from their master, and taught that there

was no resurrection nor future state. This new

doctrine quickly spread, and gave rise to the

sect of Sadducees, which in many respects re-

sembled the Epicureans. Dr. Prideaux thinks

that the Sadducees were at first no more than

what the Karaites are now ; that is, they would

not receive the traditions of the elders, but stuck to the written word only ; and, the Pharisees

being great promoters of those traditions, these

two sects became opponents. Afterwards the

Sadducees imbibed other doctrines, they denied

the resurrection of the dead, and the existence

of angels, and of the spirits or souls of men de-

parted. (Matt. xxii. 23, Acts xxiii. 8). They

held that there is no spiritual being but God only ; that as to man, this world is his all. They did not deny but that we had reasonable souls ; but they maintained that these were mortal ; and that what is said of the existence ot angels, and of a future resurrection, is nothing but illusion. It is also said that they rejected the prophecies. The Sadducees observed the law themselves, and caused it to be observed by others with the utmost rigor. They admitted of

cone of the traditions, explications, or modifications of the Pharisees ; they kept only to the text of the law ; and maintained that only what •was written was to be observed. The Sadducees are accused of rejecting all the books of Scripture except those of Moses. But Scaliger vindicates them from this reproach, and observes that they did not appear in Israel till after the canon was completed ; and that, if they had been to choose out of the canonical Scriptures, the Pentateuch was less favorable to them than any

other book, since it often mentions angels. Besides, the Sadducees were present in the temple, where the books of the prophets were daily read, and were in the chief employments of the nation ; many of them were even priests. Menasseh Ben Israel says, expressly, that they did not reject the prophets, but that they explained them in a sense very different from that of the other Jews. Josephus assures us that they denied destiny or fate ; alleging that these were only sounds void of sense, and that all the good or evil that happens to us is in consequence of the good or evil side we have taken, by the free choice of our will. They said, also, that God was far removed from doing or knowing evil, and that man was the absolute master of his own actions. Yet it is certain they were not only tolerated among the Jews, but were admitted to the high priesthood itself. John Hyrcanus, high priest, separated from the Pharisees, and went over to this sect ; and gave strict command to the Jews, on pain of death, to receive the maxims of this sect. Aristobulus and Alexander Jannsus, sons of Hyrcanus, favored the

Sadducees; and Maimonides assures us that under Alexander Jannaeus they possessed all the offices of the Sanhedrim, and that there only remained of the party of the Pharisees Simon the son of Secra. Caiaphas, who condemned Jesus Christ, was a Sadducee, as well as Ananus the younger, who put to death St. James. The modern Jews hold as heretics that small number of Sadducees that are among them. The sect of the Sadducees was much reduced by the destruction of Jerusalem, and by the dispersion of the Jews ; but it revived afterwards. At the beginning of the third century it was so formidable in Egypt that Ammonius wrote against the.m, or rather against the Jews, who tolerated the Sadducees, though they denied the fundamental points of their religion. The emperor Justinian mentions the Sadducees in one of his acts, banishes them out of his dominions, and condemns them to the severest punishment, as people that maintained atheistical and impious tenets. Annus, or Ananus, a disciple of Juda, son of Nachman, a famous rabbi of the eighth century, declared himself in favor of the Sadducees, and

strenuously defended them ; as did also, in the

twelfth century, Alpharag, a Spanish rabbi.

This doctor wrote against the Pharisees, and

maintained that the purity of Judaism was only

to be found among the Sadducees; that the tra-

ditions avowed by the Pharisees were useless ;

and that the ceremonies, which they had mul-

tiplied without end, were an insupportable yoke.

SADLER (Anthony), D. D., an eminent

English divine; born at Chilton, in Wiltshire,

in 1610. He took his degree in 1665, and was

appointed one of the king's chaplains by Charles

II. He died in 1680.

SADLER (William Windham), an ingenious

aeronaut, who fell a victim to the practice of his profession. On the 30th of September, 1824,

he ascended from the neighbourhood of Black-

burn in Lancashire ; and in the descent, the car

being driven against a chimney, Mr. Sadler was

thrown out, at the height of about forty yards

from the ground, when his skull was fractured,

and he was otherwise so injured as to occasion

his death, in the twenty-eighth year of his age.

lie had made thirty aerial voyages, in one of which he attempted to cross the Irish channel, but, from

the obstruction of various currents, failed. He possessed considerable talents as a chemist and engineer, in which capacities he was employed by the first gas company established at Liverpool, where he had also fitted up warm, medicated, and vapor baths.

SADOLET (James), a learned cardinal, born at Modena in 1477. Leo X. made him his secretary. Sadolet was soon after made bishop of Carpentras, near Avignon. He was made a cardinal in 1536, by Paul III., and employed in several negociations and embassies. He died in 1547, not without the suspicion of poison, for corresponding too familiarly with the Protestants, and for testifying too much regard for some of their doctors. His works, which are in Latin, were collected in 1607 at Mentz, in 1 vol. 8vo. All his contemporaries spoke of him in the highest terms.

SADYATTES, the son of Gyges, king of Lydia, father of Alyattes II., and grandfather of the famous Croesus. He succeeded Ardysus II. about A. A. C. 631 ; carried on a war against the Milesians for six years, and died in 619, in his thirteenth year.

SAFE, adj. & n. s. ~} Fr. sanf; Lat.

SAFE'-CONDUCT, n. s. \ $alvus. Secure ;

SAFE'GUARD, n. s. & v. n. ! free from danger

SAFE'LY, adv. \ or hurt ; harm-

SAFE'NESS, n. s. \ less : a safe place

SAFE'TY. J for depositing

food ; a safe-conduct is, a pass or warrant to

pass ; a convoy : safeguard, protection ; defence ; pass : and, as a verb neuter, to protect : safely

and safeness follow the senses of safe, adjective : safety is, security ; freedom or preservation from

hurt; custody.

To write the same things to you, to me is not

grievous, but to you safe. Phil. iii. 1 .

We serve the living God as near as our wits can

reach to the knowledge thereof, even according to his own will ; and do therefore trust that his mercy

shall be our safeguard. Hooker.

Our separated fortune

Shall keep us both the safer ; where we are.

There's daggers in men's smiles.

Shakpeare. Macbeth.

But Banquo's lafel

— Ay, my good lord. Safe in a ditch he bides,

With twenty trenched gashes on his head ;

The least a death to nature. Id.

If you do fight in safeguard of your wives,

Your wives shall welcome home the conquerors.

Shaksveart.

God safely quit her of her burden, and with gentle Q2

travail, to the gladding of your highness with an

heir. ld-

To that dauntless temper of his mind,

He hath a wisdom that doth guide his valour

To act in safety. Id.

Imprison him ;

Deliver him to safety, and return. Id. King John.

Cssar, where dangers threatened on the one side,

and the opinion that there should be in him little safe-

guard for his friends on the other, chose rather to venture upon extremities, than to be thought a weak prot sctor. Raleigh.

A trumpet was sent to sir William Waller, to de-

sire a safe-conduct for a gentleman. Clarendon.

A trumpet was sent to the earl of Essex for a safe-

guard or pass to two lords, to deliver a message from the king to the two houses. Id.

Ascend ; I follow thee, safe guide, the path

Thou leadest me. Milton.

But Trivia kept in secret shades alone,

Her care, Hippolytus, to fate unknown ;

And called him Virbius in the Egerian grove,

Where then he lived obscure, but tafe from Jove.

Dry den.

Put your head into the mouth of a wolf, and, when you've brought it out safe and sound, talk of a re-

ward. L'Eitrange.

Who is there that hath the leisure and means to

collect all the proofs, concerning most of the opinions he has, so as safely to conclude that he hath a clear and full view 1 Locke.

If a man should forbear his food or his business,

till he had certainty of the tafenets of what he was going about, he must starve and die disputing. Sauih.

If her acts have been directed well,

While with her friendly clay she deigned to dwell,

Shall she with safety reach her pristine seat,

Find her rest endless, and her bliss complete "!

Prior.

Great numbers, descended from them, have, by

the blessing of God upon their industry, raised them-

selves so high in the world as to become, in times of difficulty, a protection and a safeguard to that altar, at which their ancestors ministered. Atterbury.

Thy sword, the tafeguard of thy brother's throne,

Is now become the bulwark of thy own. Granville.

Beyond the beating surge his course he bore,

With longing eyes observing to survey

Some smooth ascent, or safe sequestered bay. Pope.

SAFE-CONDUCT is a security given by a prince under the great seal, to a stranger, for his safe coming into and passing out of the realm.

There are letters of safe- conduct which must be enrolled in chancery ; and the persons to whom they may be granted must have them ready to show.

SAFETY LAMP. For a description of this humane and useful invention see LAMP and COAL. One inconvenience attached to this lamp was, that the perfect safety which attended its use often induced the men at work in the mines to go into more deteriorated atmospheres than they otherwise would, which sometimes occasioned the lights to be extinguished. To obviate this inconvenience, Sir Humphrey Davy has contrived to suspend a coil of platinum wire over the flame 01 each lamp, the effect of which is, that the moment the light is extinguished by the superabundance of carbureted hydrogen gas in the atmosphere, the coil of platinum wire becomes of an intense red heat ; and

this affords light enough to enable the men to find the road through the different passages to the entrance of die mine. This alone would have been an important improvement — but this is not all ; for no sooner is the lamp brought into a part of the mine in which the atmosphere contains less than one-fourth of carbureted hydrogen gas, than the heated platinum wire of itself re-lights the lamp, and the men are enabled to return to their work without further interruption and in perfect safety.

Mr. Murray's new safety lamp, preresented in the annexed diagram, consists of two concentric cylinders of thick glass, the space between being filled with water through a pipe at top, and represented in the figure, having an air-escape aperture on the opposite side. 'Over the flame of the wick,' says Mr. M., ' is a bell or funnel, with a double recurved pipe issuing from its summit, and passing below the lamp, terminating imme-

diately under a single central aper-

ture. Here the products of com-

bustion are discharged (the excess

is of course disengaged by the usual

aperture at the top of the cylin-

der), and mingled with the explo-

sive atmosphere rising from below,

and passing to the rlame of the

lamp. This is again mixed more

intimately at its immediate ingress, where it

passes through the apertures represented on each

side of the lamp. The rest may be inferred

from a simple inspection of the figure, in which

two of the ribs that fence in the outer cylinder

(a guard from external injury) are supposed to

be removed, in order to show the internal ar-

rangement to better advantage.

‘ By a circular band of lead affixed to its

base, the instrument will always fall vertically ;

and, should it accidentally fall on its side, it

will immediately recover its upright position.

The water will not spill in any condition of the

instrument, for the resistance of the atmosphere

will prevent this. It is shown lower in the

cylinders than it ought to be, in order to be

clearly represented. The water will preserve

the inner cylinder of an equable temperature.

Hedged in by water, external injury may only

affect the outer wall ; but, granting that the in-

strument is crushed to atoms in an explosive

atmosphere, the worst that can happen is the

extinction of the flame within by a flood of

water.'

' I see,' continues the inventor, no necessity

for shielding the inner cylinder by metallic bars,

because explosion cannot take place within.

The lamp is a self regulator; for, as the quantity of azote, &c., will be in the ratio of the quantity of the disarmed explosive mixture, and conse-

quent elongation of the spire of flame, so soon

as it amounts to a maximum, extinction takes

place, and the comparative color of the flame,

with the varied phenomena of the exotic lambent

flame, will afford an elegant measure of that

explosive force which has been disarmed before

its transmission from the portal below.

' This lamp has been submitted to the ordeal

of explosive atmospheres, with the most com- being drawn much closer together, and deeper, plete success. No explosion whatever occurs if the soil will allow, than is done for any kind within the cylinder. When the explosive atmo- of corn ; and accordingly the charge is greater, sphere, mixed with the product of combustion, About five weeks after, during any time in May, passes towards the lamp, the color of its flame they lay between twenty and thirty loads of dung is changed, and it shoots up into the bell or upon each acre ; and, having spread it with great funnel (which carries off these chemical products care, they plough it in as before. The shortest of flame, in order that they may be mixed with rotten dung is the best ; and the farmers spare the explosive atmosphere, before it passes into no pains to make it good, being sure of a pro-

the cylinder) ; and, as the explosive mixture in- portionable return. About midsummer they creases, a lambent attenuated flame plays silently plough a third time, and between every sixteen round that of the lamp, which finally disappears; feet and a half they leave a broad furrow, which and, when it has reached its maximum, it is serves both as a boundary to the several parcels, tranquilly extinguished.

SAFFI, or AZAFFI, a sea-port of Morocco, the

capital of the province of Abda. It is supposed

to be a town originally built by the Carthaginians, and is situated between two hills. Here is a

very fine road, affording anchorage in every sea-

son, except in winter, when the winds blow

from the south and south-west. The French had

and for throwing the weeds into at the proper

season. The time of planting is commonly in

July. The only instrument used at this time

is a small narrow spade, commonly called a spit

shovel.

One man with his shovel raises about three or

four inches of earth, and throws it before him

about six or more inches. Two persons, gene-

several factories there, where they took in great rally women, followwith roots, which they place quantities of wool, wax, gum, and leather ; but in the farthest edge of the trench made by the the emperor, having founded jMogodor, gave it digger, at about three inches from each other, the monopoly of the trade with Europe. The As soon as the digger has gone once the breadth country round consists of a dry and barren sand, of the ridge, he begins again at the other side ; and the Moors are very rude and fanatical here, and, digging as before, covers the roots last set, The population is stated by Jackson at 12,000

Long. 9° 5′ W., lat. 32° 20′ N.

which makes room for another row of roots at

the same distance from the first. The only dex-

SAF'FRON, n. s. Fr. safran ; from Arab, terity necessary in digging is to leave some part saphar ;t Span, azafran. A plant.

Are these your customers 1

Did this companion, with the saffron face,

Revel and feast it at my house to-day,

Whilst upon me the guilty doors were shut?

Shakspeare.

Soon as the white and red mixt finger'd dame

Had gilt the mountains with her saffron flame,

1 sent my men to Circe's house.

Chapman's Odyssey.

Grind your bole and chalk, and five or six chives

of saffron. Peacham.

Now when the rosy morn began to rise,

And waved her saffron streamer through the skies.

Dry den.

An herb they call safflow, or bastard saffron, dyers use for scarlet. Mortimer's Husbandry.

SAFFRON, in botany. See CROCUS. Saffron

is principally cultivated in Cambridgeshire, and

of the first stratum of earth untouched to lie

under the roots; and, in setting, to place the

roots directly upon their bottom. The quantity

of roots planted on an acre is generally about

sixteen quarters, or 128 bushels. From the time

of planting till September, or sometimes later,

there is no more labor required ; but at that time they begin to vegetate, and are ready to show

themselves above ground, which may be known

by digging up a few of the roots. The ground

is then to be pared with a sharp hoe, and the

weeds raked into the furrows, otherwise they

would hinder the growth of the saffron. In some

time after the flowers appear. They are gathered

before they are full blown, as well as after ; and the proper time for it is early in the morning.

The owners of the saffron fields get together a

sufficient number of hands, who pull off the

near Saffron Walden in Essex ; but the quantity whole flowers, and throw them by handfuls into of land under this crop has been gradually les- a basket, and so continue till about 11 o'clock, sening for the last century, and especially within Having then carried home the flowers, they im-

the last fifty years, so that its culture is now al- mediately fall to picking out the stigmata or most entirely confined to a few parishes round chives, and together with them a pretty large proportion of the stylus itself; the rest of the

flower they throw away. Next morning they

return to the field, without regarding whether

the weather be wet or dry ; and so on daily, till the whole crop js gathered. — The next labor is

to dry the chives on the kiln. The kiln is built

upon a thick plank, that it may be moved from

place to place. It is supported by four short

Saffron Walden. This is owing partly to the

material being less in use than formerly, and

partly to the large importations from the east,

often, as professor Martyn observes, adulterated

with bastard saffron (carthamus tinctorius) and

marygolds.

Saffron is generally planted upon fallow

ground, and they prefer that which has borne

barley the year before. The saffron ground is legs ; the outside consists of eight pieces of wood seldom above three acres ; and, in choosing, the of three inches thick, in form of a quadrangular principal thing is, that it be well exposed, the frame, about twelve inches square at the bottom soil not poor, nor a very stiff clay, but a tempe- on the inside, and twenty-two on the upper part ; rate dry mould, such as commonly lies upon which last is likewise the perpendicular height chalk and is of a hazel color. The ground being of it. On the foreside is left a hole of aoout chosen, about Lady-day or the beginning of eight inches square, and four inches above tiif April it must be carefully ploughed, the furrows piank, through which the fire is put in ; over att SAP

the rest laths are laid pretty thick, close to one another, and nailed to the frame. They are then

plastered over on both sides, as are also the

planks at bottom, very thick, to serve for a

hearth. Over the mouth is laid a hair-cloth,

fixed to the edges of the kiln, and likewise two

rollers or moveable pieces of wood, which are

turned by wedges or screws, to stretch the cloth.

Instead of the hair-cloth, some people use a net-

work of iron wire, by which the saffron is sooner

dried, and with less fuel; but the difficulty of

preserving it from burning makes the hair-cloth

preferred by the best judges. The kiln is placed

in a light part of the house ; and they begin

with putting five or six sheets of white paper on

the hair-cloth, and upon these they lay out the

wet saffron two or three inches thick. It is then

covered with some other sheets of paper, and over

these is laid a coarse blanket five or six times

doubled, or, instead of this, a canvas pillow filled with straw ; and, after the fire has been lighted for some time, the whole is covered with a board

having a considerable weight upon it. At first

they apply a pretty strong heat ; and at this time a great deal of care is necessary to prevent burn-

ing. When it has been thus dried about an hour

they turn the cakes of, saffron upside down,

putting on the coverings and weight as before.

If no accident happens during these first two

hours the danger is over ; and nothing more is

requisite but to keep up a very gentle fire for

twenty-four hours, turning the cake every half

hour. That fuel is best which yields least smoke;

for which reason charcoal is preferred. The

quantity of saffron produced at a crop is uncer-

tain. Sometimes five or six pounds of wet chives

are got from one rood, sometimes not above one

or two, and sometimes not so much as is suffi-

cient to defray the expense of gathering and

drying. But it is always observed that about

five pounds of wet saffron go to make one pound

of dry for the first three weeks of the crop, and six pounds during the last week. When the

heads are planted very thick two pounds of dry

saffron may at a medium be allowed to an acre for the first crop, and twenty-four pounds fbr the two

remaining ones, the third being considerably

larger than the second. To obtain the second

and third crops the hoeing, gathering, picking,

&c., must be repeated ; and about midsummer,

after the third crop is gathered, the roots must

all be taken up and transplanted. For taking up the roots sometimes the plough is used, and sometimes a forked hoe ; and then the ground is harrowed once or twice over. During all the time of ploughing, harrowing, &c-, fifteen or more people will find work enough to follow and gather the heads as they are turned up. The roots are next to be carried to the house in sacks, where they are cleaned thoroughly from earth, decayed old pieces, involucra, or excrescences, after which they become fit to be planted in new ground, or they may be kept for some time without danger of spoiling. At a medium, twenty-four quarters of clean roots, fit to be planted, may be had from each acre.

In purchasing saffron that kind ought to be cho-en which has the broadest blades ; this being the mark by which English saffron is distinguished from the foreign. It ought to be of an orange or fiery red color, and to yieid a dark yellow tincture. It should be chosen fresh, not above a year old, in close cakes, neither dry nor yet very moist, tough and firm in tearing, of the same color within as without, and of a strong,

acrid, diffusive smell.

SAFFRON, the KOOKOG of the Greeks, crocus of the Latins, and zadaran, or zahafaran of the Arabians, was held in much estimation by the Hebrews, who called it carcom, and was greatly celebrated in ancient times both by physicians and poets. In medicine it was considered to be very powerful, but it is not now much used. Saffron imparts the whole of its virtues and color to rectified spirit, proof spirit, wine, vinegar, and water. A tincture drawn with vinegar loses greatly its color in keeping ; the watery and vinous tinctures are apt to grow sour, and then lose their color also ; that made in pure spirit keeps in perfection for many years.

SAFFRON, BASTARD. See CARTHAMUS.

SAFFBON, MEADOW. See COLCHICUM.

SAFFRON WALDEN, a market-town and parish of Essex, twelve miles north from Bishop's Stortford, and forty-two north-east from London. The church is a fine old Gothic building, and there are Presbyterian, Baptist, and Quakers' meeting-houses, with several well-endowed almshouses, and a free-school. A considerable trade

is carried on in malting, and in the manufacture

of bolting-cloths, checks, fustians, &c. The town

is irregularly built and not paved. It was in-

corporated by Edward VI., and is governed by

a mayor and aldermen. The keep of its ancient

castle is still to be seen, and on the green behind it is a singular work, called the Maze, consisting

of a number of concentric circles, with four out-

works issuing from the four sides, all cut in the

chalk, and supposed by Dr. Stukely to have

been a British place of exercise for the soldiery.

Audley-End, the seat of lord Braybrook, stands

on the site of a priory of Benedictines, and was

once a royal palace of great magnificence and

extent, but part of it has been pulled down.

Market on Saturday.

SAG, v. n. Goth, and Swed. siga. To hang

heavy.

The mind I say by, and the heart I bear,

Shall never sag with doubt, nor shake with fear.

Stiaksptare.

SAGA'CIOUS, adj. ~\ Lat. sagax. Quick

SAGA'CIOUSLY, adv. f of scent or thought,

SAGA'CIOUSNESS, n. s. f with of: the adverb

SAGAC'ITY. J and noun substantives

corresponding.

So scented the grim feature, and up turned

His nostrils wide into the murky air ;

Sagacious ojf his quarry from so far. Milton.

\ith might and main they chased the murd'rous

fox,

Nor wanted horns t' inspire sagacunu hounds.

Dry den.

Only sagacious heads light on these observations,

and reduce them into general propositions. Locke.

Sagacity finds out the intermediate ideas, to dis-

cover what connection there is in each link of the

chain, whereby the extremes are held together. Id.

It requires too great a sagacity for vulgar minds to draw the line nicely between virtue and vice. South.

SAG

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SAG

SAGAN, in Scripture history, the suffragan or

deputy of the Jewish high-priest. According to

some writers, he was only to officiate for him

when he was rendered incapable of attending

the service through sickness or legal uncleanness

on the day of expiation ; or, according to

others, he was to assist the high-priest in the care of the affairs of the

temple and the service of

the priests.

SAGAPENUM, in pharmacy, &c., a gum-

resin brought to us in two forms ; the finer and

purer is in loose granules or single drops; the

coarser kind is in masses composed of these

drops of various sizes cemented together. In

either case it is of a firm and compact substance, considerably heavy, and of a reddish color on the

outside, brownish within, and spotted in many

places with small yellowish or whitish specks.

Its smell is strong and disagreeable ; its taste

acrid and unpleasant. It is imported from Per-

sia and the East Indies. The plant which pro-

duces it is supposed to be of the ferula kind,

from the seeds and fragments of the stalks some-

times met with in the body of it. Its dose is

from ten grains to two scruples ; but it is now

seldom given alone. It is an ingredient in the

theriaca, mithridate, and many other composi-

tions of the shops.

SAGARA, the ancient Helicon of Greece,

stands a few miles to the north of the gulf of

Corinth. It is of considerable height, and its

scenery is picturesque. Here may still be traced

the fountains of Aganippe and Hippocrene, the

stream of Permessus, and the village of Ascra,

the birth-place of Hesiod, now also called, after

the mountain, Sagara. From its top may be seen

a great part of Greece.

SAGE, adj. & n. s. \ Fr. sage ; Ital . saggio; SAGE'LY, adv. £ Lat. sagax. Wise ; grave ;

SAGE'LINESS, n. s. r prudent : a man of gra-

vity or wisdom : the adverb and noun substan-

tive corresponding.

Though you profess

Yourselves such sage ; yet know I no less,*

Nor am to you inferior. Sandys.

Tired limbs to rest,

0 matron sage, quoth she, I hither came.

Faerie Queene.

Vane, young in years, but in sage councils old,

Than whom a better senator ne'er held

The helm of Rome. Milton.

At his birth a star proclaimed him come,

And guides the eastern sages, who enquire

His place, to offer incense, myrrh, and gold. Id.

Can you expect that she should be so sage

To rule her blood, and you not rule your rage ?

Waller.

Groves, where immortal tages taught,

Where heav'nly visions Plato fired. Pope.

1 grant it dangerous, and approve your fear,

That fire is catching if you draw too near ;

But sage observers oft mistake the flame,

And give true piety that odious name. Cowper.

SAGE, n. s. Fr. sauge ; Lat. salvia. A plant

of which the school of Salernum thought so

highly that they left this verse : —

Cur moriatur homo cui salvia crescit in horto 1

Johnson.

By the color, figure, taste, and smell , we have

as clear ideas of sage and hemlock, as we have of a circle Locke.

Marbled with tage the hard'ning cheese she pressed,

Gay.

SAGE, in botany. See SALVIA.

SAGE TREE. See PHILOMIS.

SAGE (Alan Rene Le), a celebrated French

writer, born at Ruys, in Brittany, in 1667. He

was a complete master of the French and Spa-

nish languages, and wrote several admired

novels in imitation of the Spanish authors. These

were, The Bachelor of Salamanca, 2 vols. 12mo. ;

•New adventures of Don Quixote, 2 vols. 12mo. ;

The Devil« on Two Sticks, 2 vols. 12mo. ; and Gil Bias, 4 vols. 12mo. He produced also some comedies, and died in 1747, near Paris.

SAGHALIEN, called also Oku Jessp, the Upper Jesso, and by the natives Tchoka, a large island at the eastern extremity of Asia, immediately to the north of the island of Jesso. It is about 450 miles in length from north to south, and from forty to 130 in breadth from east to west, separated from the continent by a narrow channel, called the channel of Tartary. It has become a subject of controversy among navigators whether this channel extends along the whole western coast, thus forming Saghalien into an island, or whether there be an isthmus connecting it with Tartary, rendering it a peninsula. D'Anville, in his maps, describes it sometimes one way and sometimes the other ; and though Peyrouse entered ihe channel, he was obliged, by adverse winds, to quit it before examining its whole extent. On enquiring of the people of Saghalien itself, he was assured that it was an island, separated from the continent only by a narrow strait. The people of Tartary, on the other hand, asserted that Saghalien was

connected with the continent by an isthmus of sand. Peyrouse, on the whole, was led to conclude that there was a strait, but so obstructed by sand and sea-weed as to be scarcely passable. Some geographers are of opinion that all the circumstances may be best accounted for, by supposing a very narrow and winding strait separating the two coasts. This is the delineation followed in the Chinese and Japanese maps. Saghalien, late Jesso, appears to be very mountainous towards the centre, and on the eastern coast. To the south of 51° the country becomes more level, and exhibits only sand-hills. Here th^e soil exhibits a vigorous vegetation, and is covered with forests of pine, oak, willow, and birch. The surrounding sea and the rivers produce an extraordinary quantity of fish. Roses, angelica, and other flowers, flourish on the hills. The eastern coast, along which the Russian navigator Krusenstern sailed, appeared to be nearly destitute of inhabitants. Peyrouse gives a very favorable account of those with whom he had intercourse. They sail in boats of willow bark, similar to those made on the neighbouring island

of Jesso. The north-east coast, opposite to the

mouth of the Saghalien, is occupied by a colony

of Mantchou Tartars. The Japanese had formed

a colony in the bay of Aniwa, at the southern

extremity of the island ; but it has been destroyed by the Russians.

SAGINA, in botany, pearl-wort, a genus of the

tetragynia order, and tetrandria class of plants; na-

tural ordor twenty-second, caryophylleae : CAL. te-

traphyllous ; petals four : CAPS, unilocular, quad-

rivalved, and polyspermous. Species five, four

common in our own country.

SAGITTA, in astronomy, the arrow or dart, a

constellation of the northern hemisphere, near the

eagle. See ASTRONOMY.

SAGITTAL, adj. & n. s. J Lat. sagitta, an

*SAG'ITTARY, n. *. t arrow. Belonging*

to an arrow : in anatomy, a suture so called from its resemblance to an arrow: sagittary is the

fabled CENTAUR, which see.

His wound was between the tagittal and coronal

sutures to the bone. Wiseman's Surgery.

The dreadful sagittary

Appals our numbers.

Shakrpeare. Troilus and Cressida.

SAGITTARIA, arrow head, a genus of the polyandria order, and monoecia class of plants ; natural order fifth, tripetaloideae : MALE CAL. triphyllous : COR. tripetalous ; the filaments generally about fourteen : FEMALE CAL. triphyllous : COR. tripetalous ; pistils many : SEEDS many and naked. Species five, of which the most remarkable is the

S. sagittifolia, growing naturally in many parts of England. The root is composed of many strong fibres, which strike into the mud ; the foot-stalks of the leaves are in length proportionable to the depth of the water in which they grow; sometimes almost a yard long; they are thick and fungous ; the leaves, which float upon the water, are shaped like the point of an arrow, the two ears at their base spreading wide asunder. The flowers are produced upon long stalks which rise above the leaves, standing in whorls round them at the joints. They consist of three broad white petals, with a cluster of stamina in the middle, which have purple summits. There is

always a bulb at the lower part of the root,

growing in the sol id earth beneath the mud. This

bulb constitutes a considerable part of the food

of the Chinese ; and upon that account they

cultivate it. Horses, goats, and swine, eat it ;

cows are not fond of it.

SAGITTARIUS, the archer, in astronomy, the

ninth sign in the zodiac, marked thus $. The

stars in this constellation are in the Britannic

Catalogue fifty-two, in Tycho Brahe's sixteen,

and in Ptolemy's thirty-two.

SAGO is a simple brought from the East Indies,

of considerable use as a restorative diet. It is

produced from a species of palm tree, growing

in the East Indies. The progress of its vegeta-

tion in the early stages is very slow. At first it is a mere shrub, thick set with thorns ; but, as

soon as its stem is once formed, it rises in a short time to thirty feet, is about six feet in circum-

ference, and imperceptibly loses its thorns. Its

ligneous bark is about an inch in thickness, and

covers a multitude of long fibres ; which, being

interwoven one with another, envelope a mass

of a gummy kind of meal. As soon as this tree

is ripe, a whitish dust, which transpires through

the pores of the leaves, and adheres to their extremities, proclaims its maturity. The Malays then cut it down near the root, divide it into several sections, and then scoop out the mass of mealy substance, which is enveloped by, and adto the fibres; they dilute it in water, and then pass it through a straining bag of fine cloth, to separate it from the fibres. When thrs paste has lost part of its moisture, by evaporation, the Malays throw it into earthen vessels, of different shapes, where they allow it to dry and harden. This paste is wholesome nourishing food ; the Indians eat it diluted with water, and sometimes baked or boiled. A jelly is sometimes made of it, which is white and of a delicious flavor. An inferior kind of sago is made in the West Indies from the pith of the areca.

SAGOR, an island of Bengal, from time immemorial a celebrated place of Hindoo pilgrimage. It is situated at the junction of the Bhagurutty River, the most sacred branch of the Ganges, with the ocean. Till recently many persons annually devoted themselves, and sacrificed their children at this place, to the sharks

and alligators. The island is not inhabited, but the Brahmins repair at the appointed season to the temple, followed by the pilgrims. A society in Calcutta has lately taken a lease of this island from the East India Company, and engaged to clear and bring it into a state of cultivation. Its south point is is in long. 88° 20′ E., lat. 21° 34′ N.

SAGREDO (John), a noble Venetian, of an ancient family, who flourished in the seventeenth century. He became procurator of St. Mark, and was elected doge of Venice in 1675 ; but resigned because his election was not approved by the people. He was sent ambassador to several European courts. In 1677 he published a History of the Ottoman Empire ; which is esteemed a very faithful compilation.

SAGUENAY, a river of Canada, tributary to the St. Lawrence, into which it flows, on the west bank, at the town and harbour of Tadousac. It draws its source from Lake St. John, receiving many large rivers that flow from the north and north-west, from an immense distance in the interipr.

SAGUM, in Roman antiquity, a military

habit, open from top to bottom, and usually fastened on the right shoulder with a buckle or clasp. It was not different in shape from the chlamysof the Greeks and the paludamentumof the generals. The only difference between them was, that the paludamentum was made of a richer stuff, was generally of a purple color, and rather longer and fuller than the sagum. Some authors have defined the sagum as a military tunic, but several passages of Tacitus and Pliny show that it was without sleeves, and was more ample than the tunic. The emperor Caracalla had invented, or imitated from the Gauls, a particular kind of sagum, to which the emperor's name was assigned ; and so fond is he represented to have been of this garment that he preferred it to any other, distributed a large number among the people and soldiers, and even required that all who approached his presence should wear this vestment.

The precise form of the Caracalla is not now to be ascertained. It has been described as a garment made of several pieces diversely embroidered, and descending to the heels, except-

ing in the instance of the soldiers who wore it shorter.

SAGUNTUM, or SAGUNTUS, an ancient town of Spain, now called Morvedro, where there are still the ruins of a Roman amphitheatre. Saguntum is celebrated in history as having been the cause of the second Punic war, and for its attachment to the Romans. Hannibal took it after a siege of about eight months ; and the inhabitants, not to fall into the enemy's hands, set fire to their'houses, and all their effects, and perished in the flames. The conqueror afterwards rebuilt it, and, as some suppose, called it Spartagene.

SAHARA, a name sometimes given to the great African desert, or the immense tract of territory in Northern and Central Africa, interposed between the states of Barbary and Soudan. In its greatest length it stretches nearly across the whole of Africa, from the Atlantic to the Nile, forming a space of 45° of long., or about

3000 miles. Its breadth from Barbary to Soudan

may be estimated at 15°, or 1000 miles. It

forms thus by much the most extensive desert to

be found in any part of the world, and has al-

ready been treated of under the article AFRICA.

The only impulse by which man has been led to

traverse these dreary wilds is lhat of commerce;

and the chief means for this have been afforded

by that most useful animal the camel. The

'ordinary trade is carried on by merchants, inured

from their infancy to that train of hardship and

difficulty which attends these journeys, and who,

for the sake of mutual aid, proceed in caravans

or large bodies, sometimes amounting to the

number of 2000. Their food consists of the

milk of the camel, with barley-meal or Indian

corn, a few dates, or dried flesh and coffee.

Water is conveyed in goat-skins covered with tar.

At each of the oases, or spots affording water,

which occur at distant intervals along the waste,

they stop for a few days to take in a supply.

The greatest evil which they have to fear is when, in consequence of a peculiarly dry season, one

of these happens to fail of water. A caravan

from Morocco, consisting of 2000 men, with

1800 camels, entirely perished in this way in 1798. The caravans take their departure from every part of Northern Africa ; but the three grand points of rendezvous are Cairo, Mourzouk, and the south frontier of Morocco. Cairo sends three great caravans into the interior ; one to Sennaar, partly along the Nile, but chiefly across the deserts on either side ; another proceeds to Darfur, through an extensive desert, by the Great Oasis, Sheb, and Selyme. It sends one also to Mourzouk, which communicates with those despatched thence in the countries on the Niger. Mourzouk sends two great caravans, one to Bornou, and one to Cassina, and holds intercourse with Tombuctoo on a smaller scale.

The sea coast of the Sahara is for the most part rocky and destitute of harbours. Hence a considerable number of European vessels suffer shipwreck, and are cast ashore here ; when the crews are generally stripped of every thing, and reduced to a state of cruel bondage. Their only hope of relief is from being carried over the desert to be sold in Morocco, whence European merchants frequently send them home. r

SAID orSAiiiD, a name applied to Upper

Egypt, comprehending the valley of the Nile,

from the vicinity of Cairo to the frontier of

Nubia. It consists throughout of a plain only a

few miles broad, enclosed between the chains of

mountains which extend parallel with the Nile,

and is exceedingly fertile, particularly in grain,

and in antiquities.

SAIDA, the port of Damascus, the ancient

SIDON, see that article.

SAIL, n. s., v.n.&v.a. ˆ Sax. peˆl; Belg.

SAII/ER, or ˆseyhel, se.yl ; Swed.

SAIL'OR, n. s. j segel. The canvas

sheet which catches the wind and carries on a

vessel ; a ship or vessel ; wings ; any number of

ships : to sail is, to move by means of sails ; put out to sea ; pass by sailing : a sailer, a seaman.

Fearing lest they should fall into the quicksands,

they strake sail, and so were driven. Acts xxvii. 17.

When sailing was now dangerous, Paul admo-

nished them. Acts.

He cutting way

With his broad sails about him soared round ;

At last, low stooping with u-nwieldy sway,

Snatched up both horse and man. Faerie Queent.

He came too late ; the ship was under tail.

Shakspeare.

So by a roaring tempest on the flood,

A whole armado of collected sail

Is scattered. «..

Speak again, bright angel ! for thou art

As glorious to this sight, being o'er my head,

As is a winged messenger from heaven,

When he bestrides the lazy-pacing clouds,

And sails upon the bosom of the air. Id.

It is written of Edgar, that he increased the fleet he found to two thousand six hundred sail.

Raleigh's Essays.

They had many times men of other countries that

were no sailors. Bacon.

A feigned tear destroys us, against whom

Tydides nor Achilles could prevail,

Nor ten years' conflict, nor a thousand tail.

Denham.

The galley borne from view by rising gales,

She followed with her sight and flying sails.

Dryden.

Battered by his lee they lay ;

The passing winds through their torn canvass play,

And flagging sails on heartless sailors fall. II.

I shall not mention any thing of the sailing wag-

gons. Mortimer.

View Alcinous' groves, from whence

Sailing the spaces of the boundless deep,

To Ariconium precious fruits a/rived. Philip.*

A sail arrived

From Pompey's son, who through the realms of

Spain

Calls out for vengeance on his father's death.

Addison't Cato.

He had promised to his army, who were discou-

raged at the sight of Seleucus's fleet, consisting of an hundred fail, that at the end of the summer they should see a fleet of his of five hundred sail.

Arbuthnot on Coins.

Young Pompey built a |fleet of large ships, and

nad goodsailon, commanded by experienced captains.

Arbuthnot.

Sublime she sails

Th' aerial space, and mounts the winged gales.

Pope.

Full in the openings of the spacious main

It rides, and, lo ! descends the sailer train.

Id. Odyttey,

SAI

A SAIL, in navigation, is an assemblage of several breadths of canvas sewed together by the lists, and edged round with cord, fastened to the yards of a ship, to make it drive before the wind. See SHIPPING. The edges of the cloths, or pieces, of which a sail is composed, are generally sewed together with a double seam ; and the whole is skirted round at the edges with a cord, called the bolt-rope. Although the form of sails is extremely different, they are all nevertheless triangular or quadrilateral figures. The former of these are sometimes spread by a yard, as lateen-sails; and otherwise by a stay, as stay-sails; or by a mast, as shoulder-of-mutton sails; in all which cases the foremost leech or edge is attached to the said yard, mast, or stay, throughout its whole length. The latter, or those which are four-sided, are either extended by yards, as the principal sails of a ship ; or by yards and booms, as the studding-sails, drivers, and ring-sails ; or by gaffs and booms, as the main-sails of sloops and brigantines. The principal sails are the courses, or lower sails, the top-sails, which

are next in order above the courses, and the top-gallant sails, which are above the top-sails. Every yard in a ship has its proper sail, except the cross-jack, which takes its name from the yard ; and those which are not bent to the yard are the flying jib, fore, foretop, main, maintop, maintop-gallant, mizen, mizen top-mast, stay-sails, main and maintop studding sails. In this important art our law interferes minutely, eu-joining by various acts of parliament that every vessel first setting out to sea from Great Britain or British America shall be furnished with one full and complete set of sails of the manufacture of Great Britain, under a penalty of fifty pounds. These acts prescribe the manner in which sail-cloth shall be manufactured as to breadth and width. See SHIP-BUILDING.

To make sail is to spread an additional quan-tity of sail, so as to increase the ship's velocity.

To set sail is to unfurl and expand the sails upon their respective yards and stays, in order to begin the action of sailing. To shorten sail, is to re-duce or take in part of the sails, with an inten-tion to diminish the ship's velocity. To strike sail is to lower it suddenly. This is particularly used in saluting or doing homage to a superior

force, or to one whom the law of nations ac-

knowledges as superior in certain regions. Thus

foreign vessels strike to a British man of war in

the British seas.

SAILING, the movement by which a vessel is

wafted through the water, by the action of the

wind upon her sails. When a ship changes her

state of rest into that of motion, as in advancing out of a harbour, or from her station at anchor,

she acquires her motion very gradually, as a body

which arrives not at a certain velocity till after a frequent repetition of the action of its weight.

The first impression of the wind greatly affects

the velocity, which being but small at first, the

resistance of the water which depends on it will

be very feeble ; but, as the ship increases her

motion, the force of the wind on the sails will

be diminished ; whereas, on the contrary, the

resistance of the water on the bow will accumu-

iutc in proportion to the velocity with which the

vessel advances. Thus the repetition of the de-

grees of force, which the action of the sails adds

to the motion of the ship, is perpetually in-

creasing ; whilst, on the contrary, the new degrees

added to the effort of resistance on the bow are

always augmenting. The velocity is then accelerated in proportion as the quantity added is greater than that which is subtracted ; but when the two powers become equal ; when the impression of the wind on the sails has lost so much of its force, as only to act in proportion to the opposite impulse of resistance on the bow, the ship will then acquire no additional velocity, but continue to sail with a constant uniform motion. The great weight of the ship may indeed prevent her from acquiring her greatest velocity ; but, when she has attained it, she will advance by her own intrinsic motion, without gaining any new degree of velocity, or lessening what she has acquired. See TACTICS, NAVAL and MILITARY, and NAVIGATION.

SAIMA, a large lake, or succession of lakes, in European Russia, in the government of Finland, to the north of Wilmanstrand . It is of very irregular form, said to be 250 miles in length, and of very various breadths. It contains a great number of islands, consisting chiefly of granite, and in general uninhabited. The lake of Lapwesi is a part of that of Saima.

SAINT, n. s. & v. a. \ Fr. saint ; Lat. sanc-

SAINT'ED, adj. I tus. A person emi-

SAINT'LIKE, > nent for piety ; to place

SAINT'LY, adv. i among saints ; canonize:

SAINT'SHIP, n. s. J sainted is holy; pious;

sacred: saintlike and saintly correspond, as also

the noun substantive following.

To thee be worship and thy mints for aye.

Shakrpeare

She will not stay the siege of loving terms,

Nor ope her lap to saint-seducing gold. Id.

I hold you as a thing enskied and tainted,

By your renouncement an immortal spirit,

And to be talked with in sincerity

As with a saint. Id.

The king, in whose time it passed, whom catholicks

count a saintlike and immaculate prince, was taken

away in the flower of his age. Bacon.

He that thinks las saintthip entitles him to cen-

sures is to be looked on not only as a rebel, but an usurper. Decay of Piety.

The crown virtue gives,

After this mortal change, to her true servants,

Amongst the enthroned gods on tainted hills.

Miltt'H.

I mention still

Him whom thy wrongs, with saintly patience borne,

Made famous in a land and times obscure. Id.

If still thou dost retain

The same ill habits, the same follies too,

Glossed over only with a saintlike show,

Still thou art bound to vice. Dryden's Peniiis.

This savours something ranker than the tenets of

the fifth monarch, and of sovereignty founded upon

taintship. South.

Are not the principles of those wretches still

owned, and their persons sainted, by a race of men of the same stamp 1 Id.

Miracles are required of all who aspire to this dig-

nity, because they say an hypocrite may imitate a

saint in all other particulars. Addium on Italy.

SAI

235

SAI

Over against the church stands a large hospital,

erected by a shoemaker, who has been beatified,

though never sainted. Addison.

By thy example, kings are taught to sway,

Heroes to fight, and saints may learn to pray.

Granville.

So unaffected, so composed a mind ;

So firm, yet soft, so strong, yet so refined,

Heaven, as its purest gold, by tortures tried ;

The saint sustained it, but the woman died. Pope.

Thy place is here ; sad sister ; come away :

Once, like thyself, I trembled, wept, and prayed,

Love's victim then, though now a sainted maid. Id.

The devil was piqued such saintship to behold,

And longed to tempt him. Id.

SAINTS (sancti), in the Romish church, holy

persons deceased, and, since their decease, ca-

nonised by the pope, after several informations

and ceremonies. One of the points wherein the

Roman Catholics and Protestants differ, is, that

the former address, invoke, and supplicate saints,

&c., to intercede for them ; whereas the latter

hold it sufficient to propose their good examples

for our imitation. It would seem that in the first ages every bishop in his own diocese was wont

to declare what persons were to be honored as

saints by his people. Hence St. Cyprian, about

the middle of the third century, B. 5. ep. 6, re-

quires that he be informed of those who should

die in prison for the faith, that so he might make mention of them in the holy sacrifice with the

martyrs, and might honor them afterwards on the anniversary day of their happy death. It was tlius that St. Laurence, St. Ambrose, St. Augustine, St. Basil, and many others appear to have been canonised by custom and universal persuasion. In those ages none were reckoned saints but the apostles, the martyrs, and very eminent confessors, whose sanctity was notorious every where. Afterwards canonisations were performed in provincial synods under the direction of the metropolitan. It was thus that St. Isidore of Seville was canonised in the seventh century, by the eighth council of Toledo, fourteen years after his death. This method of canonisation continued occasionally down to the twelfth century. The last instance of a saint canonised in that way is that of St. Walter, abbot of Pontoise, who was declared a saint by the archbishop of Rouen in 1 153. In the twelfth century, to prevent mistakes in so delicate a matter, pope Alexander III. judged it proper to reserve this declaration to the holy see of Rome exclusively ; and decreed that no one should for the future be honored by the church as a saint, without the express approbation of the pope.

Since that time the canonisation of saints has been carried on in the form of a process ; and there is at Rome a congregation of cardinals, called the congreuation of holy rites, who are assisted by several divines under the name of consuitors, who examine such matters, and prepare them for the decision of his holiness. When, therefore, any potentate, province, city, or religious body think fit, they apply to the pope for the canonisation of any person. The first juridical step in this business must be taken by the bishop in whose diocese the person for whom the application is made had lived and died, who by 'iis own authority calls witnesses to attest the holiness, the virtues, and miracles of the person in question. This is succeeded by a tedious process of enquiry into the character of the deceased. Commissioners summon witnesses, take depositions, and collect letters arid other writings of the venerable man, and get all the intelligence they can concerning him, and the opinion generally entertained of him. Their report is considered by the congregation, and every part of it discussed by the consultors, when the con-

gregation determines whether or not they can permit the process to go on. If it be allowed to proceed, a cardinal, who is called ponent, undertakes to be the principal agent in that affair. There is also a distinguished ecclesiastic called the promoter of the holy faith, who is sworn to make all reasonable objections to the proofs adduced in favor of the canonisation. If the decision be favorable, then the proofs ot miracles are permitted to be brought forward ; when two miracles must be verified to the satisfaction of the congregation, both as to the reality of the facts, and as to their having been above the power of nature. If the decision on this point is likewise favorable, then the whole is laid before the pope and what divines he chooses.

When the pope is resolved to give his approbation, he issues a bull, first of beatification, by which the person is declared blessed, and afterwards another of sanctification, by which the name of saint is given him. These bulls are published in St. Peter's church with great solemnity. After his canonisation, his name is inserted in the Martyrology, or catalogue of saints, of which a portion is read every day in the

choir at the divine office. His name may be mentioned in the public church service, and his intercession with God besought. His relics may be enshrined, &c. Canonisation is necessarily very expensive, because so many persons must be employed about it ; so many journeys must be made ; so many writings for and against it must be drawn out. The expense altogether amounts to about 25,000 Roman crowns, or £6000 sterling. But it is generally contrived to canonise two or three at a time, by which means the particular expense of each is very much lessened, the solemnity being common. Several authors have written on canonisation, particularly Prosper Lambertini, afterwards pope under the name of Benedict XIV. who had held the office of promoter of the faith for many years. He published on it a large work in several volumes, folio, of which there is an abridgment in French.

ST. JOHN (Henry), lord Viscount Bolingbroke, an eminent statesman and philosopher, descended from an ancient and noble family, born about the year 1672. He had a liberal education;

and when he left the university, contrary to the inclinations of his family, he cultivated Tory connexions ; and gained such influence in the house of commons that in 1704 he was appointed secretary of war and of the marines. He was closely united in all political measures with Mr. Harley : when, therefore, that gentleman was removed from the seals in 1707, Mr. St. John resigned; and in 1710, when Mr. Harley was made chancellcr of the exchequer, he was made

secretary of state. In 1712 he was created oaron St. John of Lediard-Tregoze in Wiltshire, and Viscount Bolingbroke. But, not receiving when he wished the ribbon of the order of the garter, he renounced the friendship of Harley, then earl of Oxford, and joined with the Whigs. Nevertheless, on the accession of George I., the seals were taken from him ; and, hearing that he was to be impeached for his conduct in regard to the treaty of Utrecht, he withdrew to France. Here he accepted an invitation to enter

into the pretender's service, and accepted the seals as secretary; but the year 1715 was scarcely expired, when, though he was attainted of high treason at home, the seals and papers of his office were taken from him ; the Pretender and his party accusing him of neglect, incapacity, and treachery. While in France he wrote his celebrated Reflections Upon Exile ; and in 1716 drew up a vindication of his conduct, in the form of A Letter to Sir William Wyndham. His first lady being dead, he married a niece of Madame de Maintenon, and widow of the marquis de Vilette, with whom he had a very large fortune. In 1723 the king being prevailed on to grant him a free pardon, he returned to England ; but was by no means satisfied to remaiu a mere titular lord, excluded from the house of peers. This confirmed his enmity to Sir Robert Waipole, to whom he attributed his not receiving the full extent of the king's clemency : hence he distinguished himself by a multitude of political writings, till 1735, when he returned to France. In this retreat he began his course of Letters on the Study and Use of History, for the use of

lord Cornbury, to whom they are addressed. Upon the death of his rather he settled at Battersea, the ancient seat of his family, where he passed the remainder of his life. He died in 1751, and left his MSS. to Mr. Mallet, who published them with his former printed works, in 5 vol? ., 4to ; they are also printed in 8vo.

ST. JUST (Anthony), a political demagogue of the French Revolution, associated in the crimes and punishment of Robespierre. He was born in 1760 and educated for the law. At the com mencement of the revolution he was chosen a d«puty to the convention from the department of the Aisne, and voted for the death of Louis XVI. : assisted materially in the destruction of the Girondists, and was subsequently sent, as a commissioner of the national convention, to the army in Alsace, when, in conjunction with Lebas, he carried to a great extent the system of terror both among the troops and people. St. Just, on his return to Paris, towards the close of 1793, obtained great influence ; and Robespierre was principally guided by his violent counsels. After assisting in the overthrow of Danton and his

friends, he became justly involved in the ruin of Robespierre, who rejected his advice in the last struggle. He was guillotined July 28, 1794.

He was the author of Organ t, a poem in twenty cantos, 1789, 2 vols. 8vo. ; Mes Passe-temps, ou le Nouvel Organt de 1792, another licentious poem ; and Fragments sur les Institutions Re-puhlicaines, a posthumous work, 1800, 12mo. ; besides reports to the National Convention, from the Committees of General Surety and of Public Safety. This wretch has beer sometimes con-founded with Louis Leon St. just, who called himself the marquis de Fontvielle, -and was the author of a work, enli'led Esprit de la Revolu-tion, et de la Constitution de France.

SAINTE MARTHE (Scevola), was born at Loudun in 1536. He early acquired the Latin, Greek, and Hebrew languages, and became cele-brated as a lawyer, orator, poet, and historian. He was much employed under Henry III. and IV. In 1579 he was governor and treasurer of Pole-tiers. In 1593 and 1594 he was intendant of finances in the army, and reduced Poictiers under Henry IV. He published 1. La Louange de la

Ville de Poictiers; 1573: 2. Opera Poetica; Lat. et Gall.; 1575 : 3. Gallorum doctrina illustrium Elogia; 1598: and Paedotrophia, seu de Puerorum Educatione; dedicated to Henry III.; 1584. This last work went through ten editions during his life, and has been often reprinted. He died in 1623; leaving several sons.

SAINTE MARTHE (Abel), eldest son of Scevola, was born at Loudun in 1570; and cultivated like him Latin and French poetry. His poems were printed with his father's in 1632, 4to. Louis XIII. gave him a pension ; made him a counsellor of state; and, in 1627, made him his librarian. He published Opuscula Yaria, at Poictiers, in 8vo., 1645. He died in 1652.

SAINTES, a considerable and ancient town in the south-east of France, in the department of the Lower Charente, near the river of that name. It was, in the time of the Romans, one of the chief cities of Aquitaine, and subsequently the capital of the province of Saintonge. Its aspect from a distance is fine, but its streets are narrow and winding, and its houses ill built ; it contains a cathedral founded by Charlemagne, a Roman amphitheatre, an aqueduct, and a triumphal arch

of white marble on the bridge across the Cha-

rente. Inhabitants 10,300. Forty-two miles

south-east of Rochelle.

SAKE, n. s. Sax. rac; Goth, sac; Belg.

saecke. Account; cause; end; purpose.

Would I were young for your sake, mistress Anne.

Shakspeare.

Thou neither do'st persuade me to seek wealth

For empire's sake, nor empire to affect

For glory's sake. Milton i Paradise Lost.

The profane person serves the devil for nought, and sins only for sin's sake. Tillotton.

Wyndham like a tyrant throws the dart,

And takes a cruel pleasure in the smart ;

Proud of the ravage that her beauties make,

Delights in wounds, and kills for killing sake.

Granville.

SA'KER, n. s. Saker originally signified a

hawk : then a small piece of artillery.

According to observations made with one of her

rrajesty's sakers, and a very accurate pendulum chro-

nometer, a bullet, at its first discharge, flies five hundred and ten yards in five half seconds, which is a mile in a little above seventeen half seconds.

Derham's Physico-Tlteology.

The cannon, blunderbuss, andsafcer,

He was the inventor of and maker. Hudwras.

SA'KERET, n. t. From saker. The male of

a saker-hawk. This kind of hawk is esteemed

next after the falcon, and gyr-falcon. Bailey.

SAL 23

SAL, n. s. Lat. sal. Salt. A word often

used in pharmacy.

Acids will help its passing off ; as tal prunel.

Floyer.

Sal gem rt so called from its breaking frequently

into gemlike squares. It differs not in property

from the common salt of the salt springs or that of the sea, when all are equally pure.

Woodward's Met. Foss.

SAL ALEMBROTH, a compound of muriate of

mercury and ammonia.

SAL AMMONIAC, muriate of ammonia. See

AMMONIA, AMMONIAC SAL, and MUBIATIC

ACID. This salt, according to Mongou, is met

with in the form of an efflorescence on ihe sur-

face of the earth, or adhering in powder to rocks.

Sometimes, as in Persia and the country of th'e

Kalmucks, it is found as hard as stone. It is

met with of different colors, as gray, black, green, and red, in the neighbourhood of volcanoes, in

the caverns or grottos of Puzzuoli, and in the mineral lakes of Tuscany, as well as in some mountains of Tartary and Thibet. At Solfaterra, near Naples, it is found in the crevices, of a yellowish color, like common sal ammoniac that has been often sublimed.

SAL PRCNELLJE, nitrate of potass cast into round balls or flat cakes after being fused.

SALACIA, in- botany, a genus of the trigynia order, and gynandria class of plants : CAL. quinquefid : COR. quinquepetalous; antherne on the lop of the germ. Species two, natives of China.

SALA'CIOUS, adj. (Fr. solace ; Lat. salax.

SALA'CITY, n. s. \ Lustful: lecherous; lust.

Immoderate salacity and excess of venery is supposed to shorten the lives of cocks.

Browne' Vulgar Errours.*

One more »aJacfoi/s, rich, and old,
Out-bids, and buys her. Dryden't Juvenal.

A corrosive acrimony in the seminal lympha produces salacity. Flayer on the Humours.

Animals. spleened, grow extremely salacioui.

Arbnthnot.

SALAD, n. s. Fr. sulade. Food of raw

herbs. It has been generally pronounced sallet.

I climbed into this garden to pick a salad, which

is not amiss to cool a man's stomach.

Shakspeare. Henry VI.

My sallet days,

\Yhcn I was green in judgment, cold in blood.

Shakspeare.

You have, to rectify your palate,

An olive, capers, some better salad,

Ushering the mutton. Ben Jonson.

I tried upon sallet oil. Boyle.

Some coarse cold salad is before thee set ;

Fall on. Dryden's Persiut.

Sow some early toileting. Mortimer'i Husbandry.

Leaves eaten raw are termed talad ; if boiled they become potherbs ; and some of those plants which

are potherbs in one familv are salad in another.

Watts.

SALADILLO, a river of Buenos Ayres, which

rises in vast plains in the interior, and, running

to the south-east, falls into the sea near the

mouth of the La Plata, on the southern side.

SALADIN, a sultan of Egypt, equally re-

ifowned as a warrior and legislator. He sup-

ported himself by his valor against the united efforts of the chief Christian potentates of Europe, SAL who carried on the most unjust wars against him, under the false appellation of Holy Wars. See CRUSADE.

SALADO, an abundant river of South America, in the province of Tucun.an, which has its rise from many streams flowing down the western declivity of the Andes, in lat. 24° S. It derives its name from the salt with which its waters are impregnated.

SALAMANCA, a province of Spain, forming the south part of the kingdom of Leon, and bordering on Portugal ; between 5° and 7° of W . long., and 40° and 41° 38′ of N. lat. It has a superficial extent of 1500 square miles, consisting partly of a dead flat, destitute of trees, and deficient in water ; partly, particularly in the south, of lofty mountains, where are found the Sierras of Francia, Bejar, Gredos, Gata, and Puerto del Pico. It is watered by the Douro, the Aguedar, the Yeltes, the Tormes, and the Alagon, and contains the small lake of Gredos. The climate is in general dry and" hot ; but the

mountains are rich in minerals, and the more favorable exposures produce vines, and other fruits of a warm climate. The wool of this province is good ; the best pastures being allotted to the Merino breed of sheep. Inhabitants 200,000. The contraband trade with Portugal is very considerable.

SALAMANCA, an ancient city of Spain, is situated on the ascent of three hills, having the river Tormes at their base. The environs are pleasant, and, along with the numerous spires of the city, are happily contrasted with the surrounding monotonous country. The town has a wall, thirteen gates, several squares and fountains, and a number of massy buildings ; but the streets are all on uneven ground, and often in want of water. The houses are uniform, and of a good height, with balconies in front ; and one of the sides of the great square is occupied by the town-house. Other public buildings are the cathedral, university, churches, and convents. The cathedral is a majestic Gothic edifice, entered by a fine gate, and admired in the interior for the boldness of the arches, and the finished

character of the sculpture. The bishop's see is of very remote date.

The university was founded in 1239, and had long a considerable reputation. The buildings are still extensive, consisting of twenty-five colleges, and the number of professional chairs fully sixty; while the students do not at present exceed 300 or 400.

Here are various vestiges of antiquity, in particular a Roman road leading to Merida, and a Roman bridge over the Tormes, of twenty-seven arches, and about 500 feet in length. The banks of the river, and the country to the west of Salamanca, were the scene of an engagement between the British under lord Wellington, and the French under Marmont, in July 1812. Salamanca is 153 miles W.N.W. of Madrid.

SALAMANCA, a small town of Mexico, in the intendancy of Guanaxuato, situated in a rising plain, at the height of 7075 feet above the level of the sea. It is about seventy miles N.N.W. of Valladolid, and 150 north-west of Mexico.

Also, formerly, a city of South America, in the

kingdom of New Granada, and province of Santa Martha, of which little remains bnt a small village.

SAL'AMANDER, n. s. ˆ Fr. salumandre ; SALAMAN'DRINE, adj. i Lzt. sahmundra. An animal supposed to live in the fire, and imagined to be very poisonous : salamandrine, capable of bearing fire unhurt.

The salamander liveth in the fire, and hath force also to extinguish it. Bacon's Xatural History.

There may be such candles as are made of salamander's wool, being a kind of mineral, which whiteneth in the burning, and consumeth not. Bacon.

According to this hypothesis, the whole lunar world is a torrid zone, and may be supposed uninhabitable, except they are salamanders which dwell theiein. Glanville's Scepsis.

Whereas it is commonly said that a salamander extinguisheth fire, we have found by experience that on hot coals it dieth immediately. Bratcne's Vulgar Errcnrt.

Laying it into a pan of burning coals, we ob-

served a certain lalamandrine quality, that made it

capable of living in the midst of fire, without being consumed or singed. Spectator.

The artist was so encompassed with fire and smoke

that one would have thought nothing but a salaman-

der could have been safe in such a situation.

Addisont Guardian,

Of English talc, the coarser sort is called plaister or parget ; the finer, spaad, earth flax, or salamander's hair. Woodward.

SALAMANDER. See LACERTA.

SALAMIS, an island of the archipelago, in

the Sinus Saronicus, on the south coast of- At-

tica, opposite to Eleusis ; celebrated for a battle

between the Greek and Persian fleets. In the

council of war held before this battle, among the

Persians, queen Artemisia was the only person

who opposed their design of engaging. She was

queen of Halicarnassus, and followed Xerxes in

this war with five ships, the best equipped of

any in the fleet, except those of the Sidonians.

She represented in the council of war the dan-

gerous consequences of engaging a people far

more expert in maritime affairs than the Per-

sians; alleging that the loss of a battle at sea

would be attended with the ruin of their army ; whereas, by lengthening out the war, and advancing into the heart of Greece, they would create jealousies and divisions among their enemies, who would separate to defend each his own country ; and that the king might thus make himself master of Greece. This prudent advice was not followed, but an engagement was resolved upon. Xerxes, to encourage his men, caused a throne to be erected on the top of an eminence, whence he might safely behold whatever happened ; having several scribes about him, to write down the names of such as should signalise themselves. The approach of the Persian fleet, with the news that a strong detachment from the army was marching against Cleombrotus, who defended the isthmus, struck such terror into the Peloponnesians that they could tiot lie prevailed upon to stay any longer at Salam is, but insisted on returning to their own country. Themistocles, hearing of this, privately •lesnatched a trusty friend to the Persian commai.ders, informing them of the intended flight, and exhorting them to send part of their fket

round the island, to prevent their escape. The same messenger assured Xerxes that Themistocles designed to join the Persians, as soon as the battle began, with all the Athenian ships. The king, giving credit to this, immediately caused a strong squadron to sail round the island in the night to cut off the enemy's retreat. Early next morning, as the Peloponnesians were preparing to set sail, they found themselves encompassed on all sides by the Persian fleet, and were against their inclination compelled to remain in the straits of Salamis and expose themselves to the same dangers with their allies. As to the number of the Persian ships the poet I – chylus speaks of it in his tragedy of Perszs as a matter he was well assured of:

A thousand ships (for well I know the number

The Persian flag obeyed), two hundred more

And seven, o'erspread the seas.

The Athenians had only 180 galleys, each carried eighteen men that fought upon deck, four of whom were archers and the rest heavy armed. Themistocles avoided the engagement till a certain wind, which rose regularly every day at the same time, began to blow. As soon as this wind

blew he gave the signal for battle. The Per-

sians advanced with great resolutions, but the

wind blowing directly in their faces, and the

largeness and number of their ships embarrassing

them in a place so narrow, they were thrown

into disorder; which the Greeks observing, broke

into the Persian fleet ; some of whom fled to-

wards Phalarus, where their army lay encamped ;

others saving themselves in the harbours of the

neighbouring islands. Queen Artemisia distin-

guished herself, her ships being the last that fled : which Xerxes observing, cried out that the men

behaved like women, and the women with the

courage and intrepidity of men. The Athenians

offered a reward of 10,000 drachmas to any one

that should take her alive, but she got clear of the ships and arrived safe on the coast of Asia. In

this engagement the Grecians lost forty ships ;

and the Persians 200, besides many more that

were captured. Pausanias says that on one side of

this island stood in his time a temple of Diana,

and on the other a trophy for a victory obtained

by Themistocles, together with the temple of

Cenchreus, or Cychreus, the site of which is now

thought to be occupied by the church of St.

Nicholas.

SALAMIS, the capital of the above island. This city was demolished by the Athenians, because in the war with Cassander it surrendered to the Macedonians. In the second century, when it was visited by Pausanias, some ruins of the Agora or market-place remained, with a temple and image of Ajax ; and not far from the port was shown a stone, on which they related Telamon sat to view the Salaminian ships on their departure to join the Grecian fleet at Aulis. The walls may still be traced, and were about four miles in circumference. The level space within them is now covered with green corn. The port is choked with mud, and was partly dry. Among the scattered marbles are some with inscriptions. On one, near the port, the name

of Solon 'occurs. This renowned lawgiver was a native of Salamis, and a statue of him was erected in the market-place, with one hand covered by his vest, the modest attitude in which

he was accustomed to address the • people of Athens. The island of Salamis is now inhabited by a few Albanians, who till the ground.

SALAMIS, SALAMINA, or SALAMJNIA, an ancient town of Cyprus on the south-east coast. It was built by Teucer, and so named by him from the island from which he had been banished, about A. A. C. 1270. His descendants continued masters of it for above 800 years. It was destroyed by an earthquake, but rebuilt in the fourth century, and called Constantia. It is now called Salina.

SALAMIS, in the mythology, a daughter of the river god Asopus, by the nymph Methone. Neptune became enamoured of her, and carried her to the island afterwards named from her, where she bore him a son, named Cenchreus.

SALAPIA, or SALAPIJE, in ancient geography, a town of Italy, in Apulia ; to which Hannibal retired after the battle of Cannae. It was afterwards taken from him by Marcellus.

SAL'ARY, n. s. Fr. salaire ; Lat. solarium. Stated hire ; annual or periodical payment of money.

This is hire and salary, not revenge. Shukspeare.

Several persons, out of a salary of five hundred

pounds, have always lived at the rate of two thou-

sand. Swift.

SALASSI, an ancient people of Gallia Cisal-

pina, who were often at war with the Romans.

In A. U. C. 610 they cut off an army of 10,000

Romans under Appius Claudius ; but were soon

after defeated, and at last totally subdued, and

sold as slaves by Augustus. Their country was

settled by a Roman colony, and called Pretoria

Augusta.

SALE, n. s. ~\ Goth, sala ; Belg. saal.

SALE'ABLE, adj. I The act or power of selling ;

SALE'ABLY, adv. Vvent; market; public rnar-

SALES'MAN, n. s. i ket ; auction ; price : used

SALE'WORK. } by Spenser for a sale bas-

ket : the derivatives correspond : sale-work is,

work merely for sale ; careless work.

Nothing doth more enrich any country than many

towns ; for the countrymen will be more industrious in tillage, and rearing of all husbandry commodities, knowing that they shall have ready tale for them at Jiose towns. Spenser.

To make baskets of bulrushes was my wont ;

Who to entrap the fish in winding sale

“Was better? Id.

The other is not a thing for sale, and only the gift of the gods. Shakipeare. Cvmbeline.

I see no more in you than in the ordinary

Of Nature’s tale-work. Id. As You Like It.

I can impute this general enlargement of saleable

things to no cause sooner than the Cornishman’s

want of vent and money. Carew.

Others more moderate seeming, but their aim

Private reward ; for which both God and state

They’d set to sale. Milton’s Agvniste.*

Those that won the plate, and those thus sold,

ought to be marked so as they may never return to the race or to the sale. Temple.

This vent is made quicker or slower as greater or

less quantities of any saleable commodity are removed out of the course of trade. Locke.

The more money a man spends, the more must he

*endeavour to increase his stock ; which at last set**

the liberty of a commonwealth to sale. Additm.

Poets make characters, as salesmen cloaths ;

We take no measure of your fops and beaus. Swift.

SALE is the exchange of a commodity for

money; barter, or permutation, is the exchange

of one commodity for another. When the bar-

gain is concluded, an obligation is contracted by

the buyer to pay the value, and by the seller to deliver the commodity at the time and place agreed on, or immediately, if no time be specified. In this, as well as other mercantile contracts, the safety of commerce requires the utmost good faith and veracity. Therefore, although, by the laws of England, a sale above the value of £10 be not binding, unless earnest be paid, or the bargain be confirmed by writing, a merchant would lose all credit who refused to perform his agreement, although these legal requisites were omitted. When a specific thing is sold, the property, even before delivery, is in some respect vested in the buyer ; and, if the thing perishes, the buyer must bear the loss. For example, if a horse dies before delivery, he must pay the value ; but, if the bargain only determines the quantity and quality of the goods, without specifying the identical articles, and the seller's warehouse with all his goods be burned, he is entitled to no payment. He must also bear the loss if the thing perish through his fault. If a person purchase goods at a shop without agreeing for the price, he is liable for the ordinary market-price at the time of purchase.

If the buyer prove insolvent before delivery, the seller is not bound to deliver the goods without payment or security. If the importation, or use of the commodities sold, be prohibited by law, or if the buyer knows that they were smuggled, no action lies for delivery. The property of goods is generally presumed, in favor of commerce, to belong to the possessor, and cannot be challenged in the hands of an onerous purchaser. But to this there are some exceptions. By the Scotch law stolen goods may in all cases be reclaimed by the proprietor, and also by the English law, unless they were bought bona fide in open market ; that is, in the accustomed public places, on stated days in the country, or in a shop in London ; and horses may be reclaimed, unless the sale be regularly entered by the bookkeeper of the market. In all cases, if the goods be evicted by the lawful proprietor, the seller is liable to the purchaser for the value. Actions for payment of shop-accounts, as well as other debts not constituted by writing, are limited in England to six years. The testimony of one witness is admitted ; and the seller's books, although the person that kept them be dead, are

good evidence for one year. In Scotland merchants' books may be proved within three years of the date of the last article, by one witness, and the creditor's books, and oath in supplement. After three years they can only be proved by the oath or writ of the debtor. A merchant's books are in all cases good evidence against him.

SALE (George), a learned English author, one of the writers in the Universal History, all the oriental part of which he compiled. He was

also engaged in other important literary labors ; but his chief work is The Koran of Mahomet, which he translated into English from the original Arabic, and enriched with explanatory notes from the most approved commentators ; and to which he prefixed a Preliminary Discourse; London, 4to. 1733. Mr. Sale died in 1736.

SALEM, a post town of Rockingham county, New Hampshire, thirty-five miles north of Boston, and thirty-five south-west of Portsmouth.

Here is a woollen manufactory.

SALEM, a sea-port town of the United States, capital of Essex county, Massachusetts, four miles and a half north-west of Marblehead, fourteen N. N. E. of Boston, twenty-four south of Newburyport. It is chiefly built on a tongue of land formed by two inlets from the sea, called North and South rivers ; over the former of which is a bridge, upwards of 1500 feet long, connecting Salem with Beverly, and the latter forms the harbour. The harbour has good anchorage, but the water is so shallow that vessels drawing more than twelve or fourteen feet must unload, in part, at a distance from the wharfs. The situation of Salem is low, but pleasant ; it is well built; and with regard to population, wealth, and commerce, is the second town in New England. It contains a court-house, jail, alms-house, market-house, three banks, four insurance-offices, a custom-house, a grammar school, an orphan asylum, a bank for savings, a museum, an athenaeum containing upwards of 5000 volumes well selected, and eleven houses of public worship, six for Congregationalists,

two for Baptists, one for Episcopalians, one for Friends, and one for Universalists. It has numerous public and private schools, which are well supported. None of the public buildings are splendid : but the court-house, the market-house, the alms-house, the custom-house, and the grammar school-house, all of brick, and the jail of stone, are spacious, handsome, and commodious. The churches are large, neat, and convenient. Three of them are furnished with organs, and six with steeples or cupolas. The private houses have generally the appearance of neatness, convenience, and comfort ; and many of them indicate taste and opulence. The town was formerly built almost entirely of wood, but a large proportion of the houses erected within the last twenty years are of brick.

The appearance of Salem is very irregular, the streets having been laid out with little regard to symmetry or beauty. In the northern part of the town there is a common, containing about ten acres, surrounded by a handsome public walk, which is planted with rows of trees. On a peninsula below the town there are two forts, Fort Pickering and Fort Lee, and on Baker's

Island there is a light house.

S;ilem is, next to Plymouth, the oldest town

in the state, and was settled in 1626. The inha-

t;mts are chiefly employed in trade and naviga-

tion. The shipping belonging to this port in

1816 amounted to 34,454 tons. The East India

trade has, for several years, been carried on here

with great spirit and advantage, and it is to this branch of commerce that the town is indebted

for a great part of its wealth. The number of

vessels employed at present in this trade amounts

to fifty-three, carrying 14,272 tons. There are

now living about 1<50 persons, who, as masters

or supercargoes of vessels, have sailed from this

town round the Cape of Good Hope, or Cape

Horn. A society composed of such persons,

styled the East India Marine Society, was incor-

porated in 1801 ; the object of which is to afford

relief to indigent members or their families, to

promote the knowledge of navigation and trade

to the East Indies, and to increase the museum.

The museum belongs to this society, and is a

very extensive and interesting cabinet of curi-

osities collected from all parts of the world, and

is visited free of expense.

SALEM, NEW, a post town of Franklin county, Massachusetts ; eighteen miles E. S. E. of Greenfield, eighty west of Boston, west 452. Population 2167. Here is a respectable academy.

SALEM, a post town of Washington county, New York, eighteen miles south-east of Sandy Hill. Population 2833. The courts for the county are held alternately here and at Sandy Hill. Here is a handsome town, on an extensive plain, containing a court house, a jail, an academy, and two churches. Two weekly newspapers are published.

SALENGORE, a Malay principality, extending a considerable space along the western coast of the Malay peninsula. It is governed by a Mahometan prince, who bears the title of rajah. The rajah monopolises the greater part of the trade, and is thus induced to afford protection to vessels coming up the river of Salengore. There are several other rivers traversing the territory, and falling into the straits of Malacca ; particularly one called Burnam, from which a great number of long rattans are brought. The commodities fitted for exportation here are tin,

rattans, gold dust, elephants' teeth, dragon's blood, camphire, with some pepper, and other spices. These are given in exchange for opium, piece goods, gunpowder, cutlery, steel, copper, iron, and some woollens. The Chinese and the Birgis of Celebes carry on a good deal of trade at this port. Long. 101° 18′ E. ; lat. 3° 20′ N.

SALEP, in the materia medica, the dried root of a species of orchis. See ORCHIS. Several methods of preparing salep have been practised. Geoffrey has given a very judicious process for this purpose in the Histoire de L'academie Royale des Sciences, 1740 ; and Retmus in the Swedish Transactions, 1764, has improved Geoffrey's me-thod. Mr. Moult of Rochdale also found a method of curing the orchis root; by which salep is prepared, at least equal, if not superior, to any brought from the Levant. The new root is to be washed in water ; and the fine brown skin which covers it is to be separated by a small brush, or by dipping the root in hot water, an3 rubbing it with a coarse linen cloth. When a sufficient number of roots have been thus cleaned, they are spread on a tin plate, and placed n an oven heated to the usual degree, where they are

to remain six or ten minutes, in .hich time they will have lost their milky whiteness, and acquired a transparency like horn, without any diminution of bulk. They are then to be re-

moved to dry and harden in the air, which will require several days to effect ; or, by using a very pentle heat, they may be finished in a few hours.

Salep, thus prepared, may be afforded in places where labor bears a high value, at about 8d. or lOd. per pound. And it might be sold still cheaper, if the orchis were to be cured, without separating from it the brown skin which covers it ; a troublesome part of the process, and which does not contribute to render the root either more palatable or salutary. The foreign salep is sold at 5x. or 6s. per pound. As a wholesome nourishment, says Dr. Percival in his Essays, Medical and Experimental, rice is much inferior to salep. Salep has the singular property of concealing the taste of salt water; a circumstance of the highest importance at sea, when there is a scarcity of fresh water. The restorative, mucilaginous, and demulcent qualities of the orchis root, render it

of considerable use in various diseases. In the sea-scurvy it lessens the acrimony of the fluids, and at the same time is easily assimilated into a mild and nutritious chyle. The ancient chemists entertained a very high opinion of the orchis root, as appears from the secreta secretorum of Raymond Lully, 1565.

SALERNO, a city of Italy, in the kingdom of Naples, the capital of the province of Principato Citra, and having a population of 10,000. Though delightfully situated, the town itself is not agreeable : the streets are paved with lava, narrow and irregular, and have a gloomy appearance, from the height of the houses. Salerno is an ancient city, and has in front of the cathedral twenty-eight ancient granite columns. The harbour is good. Twenty-eight miles E. S. E. of Naples.

SALES (St. Francis de), a Romish saint, born at Sales castle in 1567. In 1602 he was made bishop of Geneva, in which station his conduct was pious and exemplary ; he founded a society of religious, called the Order of the Visitation ; which was sanctioned by Paul V. in 1618. He

died in 1622, and was canonized by Alexander VI. He wrote, 1. An Introduction to a Devout Life ; 2. A Treatise on the Love of God ; and Letters.

SALET, in war, aˆ light covering or armour for the head, anciently worn by the light horse, only different from the casque in that it had no crest, and was little more than a bare cap.

SALIANT, in fortification, denotes projecting. There are two kinds of angles, the one saliant, which have their point outwards ; the other re-entering, which have their points inwards.

SALIC, or SALIQUF., law (lex salica), an ancient and fundamental law of the kingdom of France, usually supposed to have been made by Pharamond, or by Clovis ; in virtue whereof males only are to inherit. Some, as Postellus, suppose it to have been called Salic, q. d. Gallic, because peculiar to the Gauls. For Montauus insists, it was because Pharamond was at first called Salicus. Others believe it to have been so named, because used only in the Salic lands. These were nqble fiefs which their first kings used to bestow on the sallians, that is, the great lord of their salle or court, without any other te-

nure than military service ; and, for this reason,

such fiefs were not to descend to women, as being by nature unfit for such a tenure. Shakspeure represents it as derived from the name of the river Sala, in Germany, and says —

‘ That the land of Salique lies in Germany,
Between the floods of Sala and of Elbe,
Where Charles the Great, having subdued it.e Saxons,
There left behind and settled certain French
U’ho, holding in disdain the German women
For some dishonest manners of their life,
Established there this law. Henri/ V., act 1.

Montesquieu derives the origin of this word from theSalians, a tribe of Franks who settled in Gaul in the reign of Julian, who is said to have given them lands on condition of their personal service in war. Before the election of the Merovingian kings, this powerful tribe of the Franks appointed four venerable chieftains to compose their laws; and their labors were examined and approved in three successive assemblies of the people. After the baptism of Clovis,

he reformed several articles incompatible with Christianity. The Salic law was again amended by his sons ; and, under the reign Dagobert, the code was revised and promulgated 100 years after the establishment of the French monarchy.

If it be asked, how it came to pass that the Salic laws gained general authority in the country of the Franks, and the Roman law gradually declined ; while in the jurisdiction of the Visigoths the Roman law spread itself, and obtained at last a general sway ? Montesquieu replies that the Roman law was disused among the Franks, on account of the great advantages accruing from being a Frank to a person living under the Salic law. The clergy alone retained the old law, because a change could be of no advantage to them. The Roman law inflicted no hardships upon them, as it was the work of Christian emperors. ‘ This law,’ says Millot, ‘ fixed the punishment of crimes and various points of police. There is no ground for believing, that it expressly settled the right of succession to the crown. It only says that, with relation to the salic land, women have no share of heritage, without restricting it to the royal family ; for all those were called salic

lands which were held by

right of conquest; and it is easy to conceive,

that a nation of soldiers, whose general \va?

their king, would not submit to be governed by

a woman. A long custom, supported by the

principles of the nation, became in time the es-

tablished law of the kingdom.'

SALICORNIA, jointed glass-wort, or salt-

wort, a genus of the monogynia order, and

monandria class of plants : natural order twelfth,

holoracere : CAL. ventricose, or a little swelling

out and entire : there are no petals, and but one SEED. There are nine species, of which the most

remarkable are —

1. S. fruticosa, with obtuse points, grows

plentifully in the salt-marshes which are over-

flowed by the tides in many parts of England. It

is an annual plant, with thick, succulent, jointed

stalks, which trail upon the ground. The flowers

are produced at the ends of the joints toward

the extremity of the branches, which are small,

and scarcely discernible by the naked eye.

2. S. perennis, with a shrubby branching stalk, grows naturally in Sheppey Island. This has a shrubby branching stalk about six inches long; the points of the articulations are acute ; the stalks branch from the bottom, and form a kind of pyramid. They are perennial, and produce their flowers in the same manner as the former. The inhabitants near the sea coasts, where these plants grow, cut them up towards the latter end of summer, when they are fully grown ; and, after having dried them in the sun, they burn them for their ashes, which are used in making of glass and soap. These herbs are by the country people called kelp, and promiscuously gathered for use. Barilla is likewise made from them. They are also used for dyeing leather red, instead of the shenan.

SA'LIENT, adj. Latin, saliens. Leaping ; bounding ; moving by leaps.

The legs of both sides moving together as frogs, and salient animals, is properly called leaping. Browne'i Vulgar Errourt.

A talient point, so first is called the heart,

By turns dilated, and by turns comprest,

Expels and entertains the purple guest; Blackmore.

W ho best can send on high

The talient spout, far streaming to the sky. • Pope.

SALII, in Roman antiquity, priests of Mars,

of whom Numa instituted twelve, who wore

painted particolored garments, and high bonnets ;

with a steel cuirass on the breast. They were

called salii, from saltare to dance; because, after

assisting at sacrifices, they went dancing about

the streets, with bucklers in their left hand, and

a rod in their right, striking with their rods on

one another's bucklers, and singing hymns in

honor of the gods. Their feasts were uncom-

monly sumptuous, whence dapes saliares is pro-

verbially applied to repasts splendid and costly.

Their chief, called praesul and magister saliorum,

was one of their members, and led the band,

the rest imitating all his steps and motions. The

whole company was called collegium saliorum.

Sext. Pompeius makes mention of salian maids,

virgines saliares, hired for the purpose, and

joined with the salii, wearing a kind of military

garb, called paludamentum, with high round

bonnets like the salii, and like them performing

sacrifice with the pontifices.

SALIMBENI (V7enura), an eminent historical

painter, born at Sienna, in Tuscany, in 1557.

There was a fine picture by him of the descent

of the Spirit on the apostles at Pentecost, in the possession of the earl of Pembroke. He died in

1613.

SA'LINE, adj. .) Lat. salinus. Consisting

SALI'NOUS, adj. \ of, or forming, salt.

We do not easily ascribe their induration to cold ; but rather unto talinoia spirits and concretive juices.

Browne.

*This *aline sap of the vessels, by being refused re-*

ception of the parts, declares itself in a more hostile manner, by drying the radical moisture.

Harvey on Consumptions.

If a very small quantity of any salt or vitriol be dissolved in a great quantity of water, the particles of the salt or vitriol will not sink to the bottom, though they be heavier in specie th.iu the water ; but will evenly diffuse themselves into all the water, so as to it as mline at the top as at the bottom.

As the substance of coagulation is not merely sa-

line, nothing dissolves them but what penetrates and

relaxes at the same time. Arbuthnot on Aliments.

SALISBURY, the capital or county town of

Wiltshire, is situated in a vale, at the confluence of the Wiley and Nadder, with the Aron. It

owed its origin to the cathedral, which was begun in 1220, by bishop Poor, and finished in 1256, when the see was held by William of York. This building is in the early pointed style of architecture, and may be justly regarded as one of the most elegant and regular ecclesiastical structures in the kingdom. It is in the form of a double cross, and consists of a nave and choir, with two side aisles, and two transepts, each with its aisle. Connected with it is a handsome quadrangular cloister, and an octagon chapter-house. The spire, which is evidently a later erection, and was probably begun at tho latter end of Edward II., or the beginning of Edward III.'s reign, rises on four pillars, at the intersection of the nave and principal transept, to the stupendous height of 400 feet. Although it declines above two feet from the perpendicular, it has yet withstood the storms and tempests of ages, and the effects of time and accident; and seems likely to remain for centuries a monument of singular architectural boldness, skill, and perseverance. The chapter-house is also a beautiful specimen of architecture, the groined

roof of fifty feet in diameter beiug poised on a single slender pillar in the centre.

The cathedral establishment consists of a dean, forty-one prebendaries, six of whom are residentiary, and called canons, a sub-dean, sub-chanter, four vicars choral, seven lay-vicars, one of whom is organist, and eight choristers. The chapter is composed of the dean and residentiary canons ; and the close in which the cathedral is situated is environed with a wall, and forms a distinct jurisdiction, under the dean, in virtue of letters patent granted by Edward III. The bishop, who is a member of the cathedral establishment, as prebendary of Pottern, has under him the archdeacons of Sarum, Wilts, and Berks, for the superintendance of his diocese. In the close is a college, for the maintenance of a certain number of clergymen's widovvs, built and endowed by bishop Seth Ward.

The city, which is erected on ground originally belonging to the see, acknowledges the bishop as lord of the manor. It is incorporate, and governed by a mayor, high steward, recorder, twelve justices, fourteen aldermen, and thirty common-

council men. The justices are chosen from the aldermen, and the aldermen from those who have borne the office of mayor.

It contains the three parish churches of St. Thomas, St. Edmund, and St. Martin ; and in eludes the suburbs of Fisherton and Eastllarn-ham.

An attempt was made; under bishop Ward, in the reign of Charles II., to render the Avon navigable to Christchurch ; and, about thirty years ago, a canal was begun to form a water communication with the port of Southampton! : but both these projects proved abortive. With respect to land communications, the city was essentially benefited by the turning of the threat

western road through if, which was effected soon after the commencement of the cathedral. To this advantage, and to its central situation in regard to the great towns, in the west and south of England, Salisbury owes much of its present

importance ; for its manufactures of cloth, flannel, and lace, are now in a manner extinct, and its cutlery much reduced, in consequence of the competition of Birmingham, Sheffield, &c. Besides the parish churches, the principal buildings are the council-house, erected at the expense of the late earl of Radnor ; the general infirmary, supported by voluntary contribution ; and the county prison. These two last are situated in Fisherton. There are many alms-houses and charitable establishments, the chief of which is the hospital of St. Nicholas, founded, or at least endowed, by bishop Bingham. Salisbury is twenty-one miles north-east from Southampton, eighty-two W. S.W. from London, ninety-one E. N. E. from Exeter, and thirty-seven south-west from Bath. Lat. 51° 3′ N., long. 1° 42′ E. It sends two representatives to parliament, the right of election being rested in the corporation. Old Sarum, the parent of the present city, which is sometimes called New Sarum, is situated about a mile and a half to the north. It consists of a circular rampart and ditch, formed by scacping down a hill, and a mound in the centre,

which was probably crowned by the keep Or citadel. It was originally a fortress of the Britons ; was afterwards occupied by the Romans, of whose military ways, four diverged from this spot ; next by the Saxons ; and finally rendered by the Norman sovereigns a post of considerable importance. Of its buildings nothing remains but a few trifling fragments, though it long enjoyed the privilege of sending two members to parliament, •who were chosen by the occupiers of certain lands in the vicinity. It was disfranchised in 1832.

SALISBURY, a post town of Hillsborough county, New Hampshire, on the west side of the Merrimack; fourteen miles N. N. W. of Concord, thirty-eight south-east of Dartmouth College, fifty-nine W. N. W. of Portsmouth. The fourth New Hampshire turnpike passes through this town, and upon this road, in the south part of the town, there is a pleasant village, containing a Congregational "meeting house, and an academy ; and about two miles above, on the turnpike, there is a Baptist meeting-house. On the Merrimack near the mouth of the Winnipiseogee, there is another flourishing village. Salisbury is a very good agricultural town. — Also a

post town of Essex county, Massachusetts, on

the north bank of the Merrimack ; four miles

north-west of Newburyport, thirty-six N. N. E.

of Boston. It contains two parishes, and has a

pleasant and considerable village, on the north

bank of the Merrimack, below the junction of

the Powow River. Considerable business is done

at this village at ship building, and here is some trade in the fisheries. — Also a post town of Litch-

field county, Connecticut, in the north-west cor-

ner of the state ; twenty-four miles north-west of

Litchfield. It is a considerable town, and the

neighbourhood contains large quantities of iron

ore.

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SALI'VA, n. s.~\ Lat. saliva. Every thing

SAI/IVAL, adj. (that is spit up ; more strictly

SAL'IVOUS, t that juice which is separated

SALIVATE, v. a. J by the glands called salival :

relating to the saliva : to salivate is to cleanse

or purge by means of the salival glands.

The woodpecker, and other birds that prey upon

flies, which they catch with their tongue, in the room of the said glands have a couple of bags filled with a viscous humour, which, by small canals, like the sa-

lival, being brought into their mouths, they dip their tongues herein, and so

with the help of this natural bird-lime attack the prey. Grew.

Holding of ill tasted things in the mouth will

make a small salivation. Id. Cosmologia.

The necessity of spittle to dissolve the aliment ap-

pears from the contrivance of nature in making the

salivary ducts of animals which ruminate, extremely

open : such animals as swallow their aliment without chewing, want salivary glands. Arbuthnot.

Not "meeting with disturbance from the saliva, I

the sooner extirpated them. Wiseman't Surgery.

She was prepossessed with the scandal of salivating, and went out of town. Id.

There happeneth an elongation of the uvula, through

the abundance of salivout humour flowing upon it.

Wiseman.

SALIVA is that fluid by which the mouth and

tongue are continually moistened in their natural

state ; and which is supplied by glands which

form it, called salivary glands. This humor is

thin and pellucid, incapable of being concreted

by the fire, almost without taste and smell. Sa-

liva, beside water, which constitutes at least

four-fifths of its bulk, contains the following

ingredients:—!. Mucilage. 2. Albumen. 3.

Muriate of soda. 4. Phosphate of soda. 5.

Phosphate of lime. 6. Phosphate of ammonia.

Like all the other animal fluids, it is however

liable to many changes from disease, &c.

Brugnatelli found the saliva of a patient laboring

under an obstinate venereal disease impregnated

with oxalic acid. The concretions which some-

times form in the salivary ducts, &c., and the

tartar or bony crust which so often attaches itself to the teeth, are composed of phosphate of lime.

It has a great affinity for oxygen, absorbs it rea-

dily from the air, and gives it out again to other bodies. Hence the reason why gold or silver,

triturated with saliva in a mortar, is oxidated, as Du Tennetar has observed. Hence also the rea-

son that saliva is a useful application to sores of the skin. Dogs and other animals have con-

stantly recourse to this remedy, and with much

advantage.

SALIVATION, in medicine, is effected chiefly

by mercury. The use of salivation is in diseases

belonging to the glands and membrana adiposa,

and principally in the cure of the venereal dis-

ease ; though it is sometimes also used in epi-

demic and cutaneous diseases, &cc.

SALIX, the willow, in botany, a genus of the

diandria order, and dicecia class of plants : na-

tural order fiftieth, amentaceae: amentum of the male scaly : COR. none, but a nectariferous glandule at the base of the flower : female amentum scaly : COR. none ; style bifid : CAPS, unilocular and bivalved : SEEDS pappous. The willow has been frequently the theme of poetical description,

tooth in ancient and modern times. There are seventy species ; of which the most remarkable are,

‘ i. S. alba, white or silver-leaved willow, growing to a great height and considerable bulk, having smooth pale green shoots ; long, spear-shaped, acuminated, sawed, silvery-white leaves, downy on both sides, with glands below the serratures. This is the common white willow, which grows abundantly about towns and villages, and by the sides of rivers and brooks, &c.

2. S. Babylonica, Babylonian pendulous salix, commonly called weeping willow, grows to a largish size, having numerous long, slender, pendulous branches, hanging down loosely all round, and long, narrow, spear-shaped, serrated, smooth

leaves. This curious willow is a native of the east, and is retained in our hardy plantations for ornament, and exhibits a most agreeable variety ; particularly when disposed singly by the verge of any piece of water, or in spacious openings of grass ground.

3. S. caprea, the common sallow tree, grows to but a moderate height, having smooth, dark-green, brittle branches ; oval, waved, rough leaves, indented at top, and woolly underneath. It grows abundantly in this country, but more frequently in dry than moist situations ; it is of a brittle nature, and therefore unfit for the bas-ket-makers; but will serve for poles, stakes, and to lop for fire-wood ; and its timber is good for many purposes.

4. S. fissa, basket osier. Leaves alternate, pedicelled, minutely toothed. A shrub four or five feet high, with erect) flexible, and very tough branches, of a yellowish ash color, sometimes purplish. A native of various parts of Europe, on the sandy banks of rivers, and in England cultivated in fens as preferable to all other wil-lows or osiers for basket-work.

5. S. fragilis, fragile or crack willow, rises to a middling stature, with brownish, very br.ttle

branches; long, oval, lanceolate, smooth leaves, of a shining green on both sides, having dentated glandular foot-stalks. This kind in particular being exceedingly fragile, so that it easily cracks and breaks, is unfit for culture in osier-grounds.

6. S. pentandria, broad-leaved, sweet-scented willow, grows to some considerable stature, having brownish-green branches ; oblong, broad, scattered, smooth, sweet-scented leaves, shining-above ; and pentandrous flowers.

7. S. purpurea, purple or red willow, grows to a large height, having long, reddish, very pliable shoots, and long, spear-shaped, serrated, smooth leaves, the lower one being opposite.

8. S. viminalis, or osier willow, grows but to a moderate height, having slender rod-like branches ; very long, pliant, greenish shoots : and very long, narrow, spear-shaped, acute, almost entire leaves, hoary, and silky underneath.

9. S. vitellina, yellow or golden willow, grows but to a moderate height ; having yellow, very pliant shoots; oval, acute, serrated, very smooth leaves, with the serratures cartilaginous, and with

callous punctures on the foot-stalks. All the species are of the tree kind, very hardy, remark-abK i-, and several of them attaining • consul*. ruble stature when permitted to run up to standards. They are generally the most abundant and of most prosperous growth in watery situations : they however will grow freely almost anywhere, in any common soil and expo-sure : but grow considerably faster and stronger in low moist land, particularly in marshy situa-tions, by the verge of rivers, brooks, and other waters ; which places, often lying waste, may be employed to good advantage in plantations of willows for different purposes.*

SALLEE, a large walled sea-port on the coast of Morocco, situated in the province of Benihassen, at the mouth of a river of the same name. It was formerly the great hold of Moor-ish piracy, and immense depredations were com-mitted from it upon European commerce.

SALLENGUE (Albert Henry de), F. R. S., an ingenious writer, born at the Hague in 1694. His father was receiver general of Walloon Flanders, and of an ancient family, lie sent

young Albert to Leyden, who, having finished his studies, commenced advocate in Holland. After the peace of Utrecht, in 1713, he travelled into France. In 1716 he was made counsellor to the princess of Nassau; in 1717 commissary of finances to the States. In 1719 he visited England, and was elected F. R. S. He wrote commentaries on Ovid's epistles and other classics ; and was writing a History of the United Provinces, when he was cut-off by the small pox in 1723.

SALLO (Denis de), a French writer, born in Paris in 1626. He studied the law, and was admitted a counsellor in the parliament of Paris in 1652. It was in 1664 he laid the plan of the Journal des Scavans; and the year following began to publish it, under the name of Sieur de Heronville, which was that of his valet de Chambre. But he criticised so severely, and authors retorted so powerfully, that M.de Sallo, after he had published his third Journal, gave up the undertaking, delivering it over to the abbe Gallois ; who, without presuming to criticise, contented himself merely with giving the

titles of new books, and making extracts. .M.

de Sallo died in 1669.

SAL'LOW, n. s. Lat. salts. A tree of the

genus of willow.

Sallows and reeds on banks of rivers born,

Remain to cut to stay thy vines. Drytltn.

SAL'LOW, adj. > Belg. salow ; Teut.

SAL'LOWKESS, n. s. S salo, black. Sickly ; yel-

low : the noun substantive corresponding.

\Yhat a deal of brine

Hath washt thy sallow cheeks for Rosaline

The see .e of beauty and delight is changed :

No roses bloom upon my fading cheefc,

Nor laughing graces wanton in my eyes ;

But haggard Grief, lean-looking sallow Care,

And pining Discontent, a rueful train,

Dwell on my brow, all hideous and forlorn. Rowe.

A fish diet would give such a nallou-iuns to the ce-

lebrated beauties of this island, as \voulJ scarce

make them distinguishable from those of Trance.

Adii a. n.

SALLUSTIUS (Caius Crispus), a celebrated

Roman historian, born at Amitornum, in Iialy,

A. U. C. 669. His Roman History, in MX

books, from the death of Syila to the conspiracy of Catiline, the great work from which he chiefly derived his glory among the ancients, is unfortunately lost, excepting a few fragments ; but ‘ the two detatched pieces of his history which happily remain entire are sufficient to justify the great encomiums he has received as a writer. No man has inveighed more sharply against the vices of his age than this historian ; yet no man had less pretensions to virtue. His youth was spent in a most lewd and profligate manner, and his patrimony rapidly squandered. Marcus Varro, a writer of undoubted credit, relates, in a fragment preserved by Aulus Gellius, that Sallustius was actually caught in bed with Fausta the daughter of Sylla, by Milo her husband ; who scourged him very severely, and did not suffer him to depart till he had redeemed his liberty with a considerable sum. ‘ In A. U. C. 694 he was made questor, and in 702 tribune of the people; in neither of which places did he acquit himself with honor. By his questor-

ship he obtained an admission into the senate ; but was expelled by the censors in 704 on account of his debauched way of life. In 705 Caesar restored him to the dignity of a senator, and made him questor a second time. In the administration of this office he behaved very scandalously. In 707, when the African war was at an end, he was made praetor for his services to Caesar, and sent to Numidia. Here he outrageously plundered the province ; and returned with such immense riches to Rome, that he purchased a magnificent building upon mount Quirinal, with those gardens which still retain the name of Sallustian gardens, besides his country house at Tivoli. Eusebius tells us that he married Terentia, the divorced wife of Cicero ; and that he died at the age of fifty, A. U. C. 710, four years before the battle of Actium. Besides his histories of the Catilinarian and Jugurthine wars, we have some orations, printed with his fragments.

SAL'LY, n. s. & v. a.) Fr. salfie. Erup-

SAL'LYPORT. $ tion ; issue from a place besieged ; quick egress ; escape : to make

sucli egress : a sally-port is a gate at which sal-

lies are made.

Now mote I weet,

Sir Guyon, why with so fierce sallience

And fell intent, yp did at erst me meet.

Faerie Queene.

The Turks, sallying forth, received thereby great

hurt. Knolles.

The episodical part, made up of the extravagant

sallies of the prince of Wales and Fal staffs humour, is of his own invention. Shakspeare. Illustrated.

At his return all was clear, and this excursion was esteemed but a sally of youth. Wotton.

The deputy sat down before the town for the space

of three winter months ; during which time sullies

were made by the Spaniards, but they were beaten

in with loss. Bacon.

My slippery soul had quit the fort,

But that she stopped the sallyport. Cleaveland.

Love to our' citadel resorts

Through those deceitful sallyports ;

Our sentinels betray our forts. Denham,

Tis but a sully of youth. Id. &>/%.

These passages were intended for sullies of wit ;

but u hence comes all thiˆ rage of nil ! St'dimgfleet.

The noise of some tumultuous fight ;

They break th» truce aud sally out by night.

Drijdeti.

Every one shall know a country better that makes

often sallies into it, and traverses it up and down, than he that, like a mill-horse, goes still round in the same track. Locke.

We have written some things which we may wish

never to have thought on : some sallies of levity

ought to be imputed to youth. SwiJ't.

SALLY-PORTS, in fortification, or posterns as

they are sometimes called, are those under-

ground passages which lead from the inner

works to the outward ones ; such as from the

higher flank to the lower, or to the tenailles, or the communication from the middle of the cur-

tain to the ravelin. When they are made for

men to go through only, they are made with

steps at the entrance and going out. They are

about six feet wide, and eight feet and a half

high. There is also a gutter or shore made

under the sally ports, which are in the middle of

the curtains, for the water which runs down the

streets to pass into the ditch ; but this can only be done when they are wet ditches. When

sally-ports serve to carry guns through for the

out works, instead of making them with steps,

they must have a gradual slope, and be eight feet wide. See FORTIFICATION.

SALMANASAR, or SALMAXESER, the son of Tiglath-pileser, king of Assyria, succeeded his father, about A. M. 3276. He took Samaria, put an end to the kingdom of Israel, and carried the Israelites into captivity, A. M. 3283. He was afterwards defeated by the Tyrians ; and died about A. A. C. 714. He was succeeded by his son Sennacherib.

SALMASIUS (Claudius), a French writer of great abilities and immense erudition, descended from an ancient and noble family, and born at or near Semur in 1596. His mother, who was a Protestant, educated him in her own religious opinions, and he at length converted his father, lie settled at Leyden ; and in 1659 paid a visit to Christina, queen of Sweden, who showed him extraordinary marks of regard. Upon the death of king Charles I. he was prevailed on by the royal family, then in exile, to write a defence of that king, which was answered by the celebrated Milton in 1651, in a work entitled Defensio pro Populi Anglicano contra Claudii Salmasii Defensionem Regiam. This book was

read over all Europe ; and conveyed such a

proof of the writer's abilities that he was re-

spected even by those who hated his political

principles. Salmasius died in 1653. His

works are numerous, and of various kinds ; but

the greatest monuments of his learning are his

Notae in Historise Augustae Scriptores,. and his

Exercitationes Plinianse in Solinum.

SALMASIUS (Claudius), son of the preceding,

published the answer to Milton, which his father

had begun, but did not live to finish; and dedi

cated it to king Charles II. in 1660.

SALMO, the salmon, in ichthyology, a genus

of the order of abdominales. The head is

smooth, and furnished with teeth and a tongue ;

the rays of the gills are from four to ten ; the back-fin is fat behind, and the ventral fins havo

many rays. There are many species, of which

the most remarkable are the following : —

1. S. albus, the white, migrates out of the

sea into the river Esk in Cumberland, from

July to September. When dressed the flesh of

these fish is red and most delicious eating.

They have, on their first appearance from the

salt water, the lernaea salmonea, or salmon louse,

adhering to them. They never exceed a foot in

length. The upper jaw is a little longer than the lower ; in the first are two rows of teeth, in the last one ; on the tongue are six teeth. The

back is straight, the whole body of an elegant

form, the lateral line is straight ; color, between

that and the top of the back, dusky and silvery

intermixed ; beneath the line white ; first dorsal

fin spotted with black; tail black, and much

forked.

2. S. alpinus, the red charr, is an inhabitant

of the lakes of the north, and of those of the

mountainous parts of Europe. It chooses clear

and pure waters, and is very rarely known to

wander into running streams. It is found in

vast abundance in the cold lakes on the summits

of the Lapland mountains, and is almost the

only fish that is met with in any plenty in those regions. The larvae of a species of gnat afford

food to the fish, who in their turn are a support to the migratory Laplanders, in their summer

voyages to the distant lalces. There are but few

lakes in our island that produce this fish ; and

even those not in any abundance. It is found

in Ullswater and Windermere in Westmoreland ;

in Llyn Quellyn, near the foot of Snowdon ;

and, before the discovery of the copper mines,

in those of Llynberris ; but the mineral streams

have entirely destroyed the fish in the last lakes.

In Scotland it is found in Loch Inch and other

neighbouring lakes, and is said to go into the

Spey to spawn. They are supposed to be in the

highest perfection about May, and continue so

all the summer ; yet are rarely caught after

April. When they are spawning in the river

they will take a bait, but at no other time ; being commonly taken, as well as the other species, in

what they call breast-nets, which are in length

about twenty-four fathoms, and about five where

broadest. They are taken in greatest plenty

from the end of September to the end of Novem-

ber. This species is much esteemed for the

table, and is very delicate when potted.

3. S. eperlanus, the smelt, inhabits the seas of

the northern parts of Europe, and is found as

far south as the Seine. They are also taken in

i lie Straits of Magellan, and of a most surprising size, some measuring twenty inches in length

and eight in circumference. They inhabit the

seas that wash these islands the whole year,

except when they ascend the rivers. In certain

rivers they appear a long time before they spawn,

I "'ing taken in great abundance in November,

December, and January, in the Thames and

Dee, but in others not till February ; and in

March and April they spawn ; after which they

all return to the salt water, and are not seen in the rivers till the next season. They never come

into tin: Mersey .is lonur as there is any snow

water in the river. These fish vary greatly in

size; but the largest we ever heard of was thir-

teen inches long, and weighed half a pound.

They have a very particular scent, whence is

derived one of their English names, smelt, i. e.

smell it. That of sparling, which is used in

Wales and the north of England, is taken from

the French sperlan. The fishing for smelts in

the Thames is prohibited under heavy penalties,

and the exertions of the magistrates hare nearly

put an end to it. The fish can hardly be pur-

chased in London at any price however extra-

vagant. It is a fish of a very beautiful form and

color ; the head is transparent, and the skin in

general so thin that with a good microscope the

blood may be observed to circulate. The irides

are silvery; the pupil of a full black ; the under jaw is the longest ; in the front of the upper

jaw are four large teeth ; those in the sides of

both are small ; in the roof of the mouth are two rows of teeth ; on the tongue two others of large teeth. The scales are small, and readily drop

off; the tail consists of nineteen rays, and is

forked. The color of the back is whitish, with a

cast of green, beneath which it is varied with

blue, and then succeeds a beautiful gloss of a

silvery hue.

4. S. fario, the trout: the colors of which

vary greatly in different waters, and in different

seasons. Trouts differ also in size. The stomachs

of the common trouts are uncommonly thick

and muscular. They feed on the shell-fish of

lakes and rivers, as well as on small fish. They

likewise take into their stomachs gravel or small

stones, to assist in comminuting the testaceous

parts of their food. The trouts of certain lakes

in Ireland, such as those of the province of

Gal way and some others, are remarkable for the

great thickness of their stomachs, which, from

some slight resemblance to the organs of diges-

tion in birds, have been called gizzards; the Irish

name the species that has them gillaroo trouts.

These stomachs are sometimes served up to table alone, under the appellation of gillaroo. Trouts are most voracious fish, and afford excellent diversion to the angler. Trouts shift their quarters to spawn; and like salmon make up towards the heads of rivers to deposit their roes. The under jaw of the trout is subject, at certain times, to the same curvature as that of the salmon. Trouts are caught in very great plenty at all seasons of the year ; one weighing a pound and a half is a usual size, though some are caught of four pound weight. Five or six ounces is ;i common weight ; the largest are commonly the best for the table, when a deep salmon color. In winter great quantities are potted along with the charre, and sent to London, &c. Geld fish (those without spawn) are the firmest and best.

5. S. lavaretus, the gwiniad, is an inhabitant of several of the lakes of the Alpine parts of Europe. It is found in those of Switzerland, Savoy, and Italy ; of Norway, Sweden, Lapland, and Scotland ; in those of Ireland and of Cumberland ; and in Wales, in that of Llyntegicl, near Bala, in Merionethshire. It is the same with the ferra of the lake of Geneva; the Schelly

of Hulsewater; the pollen of Loch Neah ; and the vangis and juvengis of Loch Mbaon. It is said to have been first introduced into Scotland by queen Mary ; and as in her time the Scottish

court was much Frenchified, the name was perhaps derived from the French vendois, a dace; to which a slight observer might be tempted to compare it by the whiteness of its scales. The British name gwiniad or whiting was bestowed upon it for the same reason. It is a gregarious fish, and approaches the shores in vast shoals in spring and in summer ; which proves in many places a relief to the poor of inland countries, as the annual return of the herring is to those who inhabit the coasts. Between 7000 and 8000 have been taken at one draught. The whiting is a fish of an insipid taste, and must be eaten soon, for it will not keep long ; those that choose to preserve them do it with salt. They die very soon after they are taken. Their spawning season in Llyntegid is in December. The largest whiting we ever heard of weighed between three and four pounds ; the head is small, smooth,

and of a dusky hue ; the eyes very large ; the

pupil of a deep blue; the nose blunt at the end;

the jaws of equal length; the mouth small and

toothless ; the branchiostegous rays nine ; the

covers of the gills silvery, powdered with black.

The back is a little arched, and slightly cari-

nated ; the color, a£ far as the lateral line, is glossed with deep blue and purple ; but towards

the lines assumes a silvery cast, tinged with

gold ; beneath which those colors entirely pre-

vail. The tail is very much forked ; the scales

are large, and adhere close to the body.

6. S. salar, the common salmon, is a northern

fish, being unknown in the Mediterranean Sea

and other warm climates ; it is found in France

in some of the rivers that fall into the ocean, and north as far as Greenland ; they are also very

common in the northern parts of North America.

They are in several countries a considerable

article of commerce; they are stationary fisheries

in Iceland, Norway, and the Baltic ; and in

Great Britain, on the Tweed, at Berwick, and in

various rivers of Scotland. See our article

FISHERIES. In Cumberland they go up the

river Derwent in September, through the lake of

Bassenthwaite, up the river which runs through

Keswick into the Vale of St. John, where they

deposit their spawn in the small streams and

feeders of the lake. The young salmon are called

salmon smelts, and go down to the sea with the

first floods in May. The salmon was known to

the Romans, but not to the Greeks. Pliny speaks

of it as a fish found in the rivers of Aquitaine : Ausonius enumerates it among those of the Mo-

selle. The salmon is a fish that lives both in the salt and fresh waters ; quitting the sea at certain seasons for the sake of depositing its spawn, in

security, in the gravelly beds of rivers remote

from their mouths. There is scarcely any diffi-

culties but what they will overcome to arrive at

places fit for their purpose; they will ascend

rivers hundreds of miles, force themselves against

the most rapid streams, and spring with amazing

agility over cataracts of several feet in height.

Salmon are frequently taken in the Rhine as high

up as Basil ; they gain the sources of the Lap-

land rivers in spite of their torrent like currents, and surpass the perpendicular falls of Leixslip,

Kennerth, and Pont Aberglastyn. The salmon

is so generally known that a very brief descrip-

tion will serve. It has been known to weigh

seventy-four pounds. The color of the back and

sides is gray, sometimes spotted with black,

sometimes plain ; the covers of the gilta are sub-

ject to the same variety ; the belly silvery : the

nose sharp-pointed; the end of the under j;nv

in the males often turns up in the form of a

hook ; sometimes this curvature is very consider-

able ; it is said that they lose this hook when

they return to the sea. The teeth are lodged in

the jaws and on the tongue, and are slender but

very sharp; the tail is a little forked. When the

fish enter the Friths, or mouths of the rivers, at the commencement of their upward migration, and

are thus in good condition, they are termed, in

the language of fishermen, clean fish. At this

period they are infested with the salmon louse,

caligus productus of naturalists, and which

chiefly adhere to the more insensible parts. But

when arrived at the place of spawning, the fish

is lean, as the whole fat of the body has passed

into the melt and the roe. In this state, in

which they are termed red fish, they are worth-

less as an article of food. After the fish have

spawned they are termed kelts or foul fish, and

are equally despised with the red fish. The gills

are now more or less covered with the entomoda

salmonea. The motion of the fish upwards from the sea to the river and place of spawning is influenced by several causes. When there is abundance of fresh water in the Friths the fish seem to proceed regularly and rapidly up the middle of the stream, enter the rivers, and hasten on to their destination. In returning to the sen, after spawning, the fish seem to keep the middle of the stream in the river, and the deepest and saltest water in the Friths. Salmon enter the river at all seasons of the year, but they approach in greatest numbers during the summer months.

Fish taken in May, June, and July, are much fatter than fish in the same condition as to spawning, taken in February, March", or April. They fall off in fatness very rapidly from August to January, when they are leanest. The principal spawning season is in November, December, and January. See FISHERIES. Salmon fisheries, Marshal observes, are ' copious and constant sources of human food ; they rank next to agriculture. They have indeed one advantage over every other internal produce : their increase does not lessen other articles of human sustenance. The salmon does not prey on the produce of the

soil, nor does it owe its size and nutritive quali-

ties to the destruction of its compatriot tribes. It leaves its native river at an early state of growth ;.

and, going even naturalists know not where, re-

turns of ample size, and rich in human nourish-

ment ; exposing itself in the narrowest streams,

as if nature intended it as a special boon to man.

In every stage of savageness and civilisation the

salmon must have been considered as a valuable

benefaction to this country.' From the extremity

of the Highlands, and from the Orkney and

Shetland Islands, these fish are sent up to the

London market in ice ; and when the season is

at its height, and the catch more than can be

taken off hand fresh, they are then salted, pickled, or dried, for winter consumption at home, and

for thp foreign markets. Perhaps the fishery of

the Tweed is the first in point of quantity caught, which is sometimes quite astonishing, several

hundreds being taken at a single draught of the

net. Formerly it was all pickled and killed,

after being boiled, and sent to London under the

name of Newcastle salmon ; but the present mode

has so raised the value of the fish as nearly to have banished this article of food from the inhabitants in the environs of the fishery, except as an expensive luxury. Within memory, salted salmon formed a material article of economy in all the farm houses of the vale of Tweed, insomuch that indoor servants often bargained that they should not be obliged to take more than • two weekly meals of salmon. It could then be bought at 2s. the stone, of nineteen pounds weight; it is now never below 12s., often 36s., and sometimes two guineas.

7. S. thymallus, the umber, or grayling, haunts clear and rapid streams, and particularly those that flow through mountainous countries.

It is found in the rivers of Derbyshire ; in some of those of the north ; in the Tame near Ludiow ; in the Lug, and other streams near Leominster.

It is also very common in Lapland ; the inhabitants make use of the entrails of this fish instead of rennet, to make the cheese which they get from the milk of the rein deer. It is a voracious fish, rises freely to the fly, and will very eagerly take a bait. It is a very swift swimmer, and disappears like the transient passage of a shadow, whence it derived the name of umbra.

8. S. trutta, the sea trout, migrates like the salmon up several of our rivers, spawns, and re-

turns to the sea. The shape is more thick than the common trout; the irides silver ; the head thick,

smooth, and dusky, with a gloss of blue and

green ; the back of the same color, which grows

fainter towards the side line. The back is plain, but the sides, as far as the lateral line, are marked with large distinct irregular-shaped spots of

black ; the lateral line straight ; the sides beneath the line and the belly are white. Tail broad,

and even at the end. The flesh when boiled is

of a pale red, but well flavored.

SALM'ON, n. s. Lat. salmo ; Fr. saumon. A

well-known fish.

They poke them with an instrument somewhat

like the salmon spear. Carew's Survey of Cornwall.

They take salmon and trouts by groping and tick-

ling them under the bellies in the pools, where they hover, and so throw them on land. Carew.

Of fishes, you find in arms the whale, dolphin,

salmon, and trout. Peacluim.

The satmmi is accounted the king of fresh water

fish, and is bred in nvers relating to the sea, yet so far from it as admits no tincture of brackishness.

Sir Francis Karon observes the age of a salmon ex-

ceed not ten years. After he is got into the sea he becomes from a samlet, not so big as a gudgeon, to be a talmun in as short a time as a gosling becomes a goose. Walton's Angler.*

There is in many rivers that relate to the sea »i/-

mott trouts as much different from others, in shape and spots, as sheep

differ in their shape and bigness.

Id.

SALMON, in ichthyology. See SALMO, No. 6.

SALMON FISHERY, &c. See FISHERY.

SALMON (Nathaniel), a celebrated English divine, physician, and antiquarian, was the son of the Rev. Thomas Salmon, M. A., rector of Mepsall. He was admitted of Benet College, Cambridge, June llth, 1690, and took the degree of LL. D. in 1695. He then entered into orders, and became curate of Westmill, in Hertfordshire ; but, although he had taken the oaths to king William III., he refused to do so to queen Anne ; and, being therefore turned out of his cure, he studied physic, and practised at St. Ives and Bishop's Stortford. He was married, and left three daughters. He published, 1. A Survey of the Roman Antiquities in the Midland counties of England; in 8vo., 1726. 2. A Survey of the Roman Stations in Britain, according to the Roman Itinerary; 8vo., 1728. 3. The History of Hertfordshire, &c., fol., 1728. 4. The Lives of the English Bishops from the Restoration to the Revolution; 1733. 5. The Antiqui-

ties of Surrey, &c., 8vo., 1736. 6. The History and Antiquities of Essex, folio. This work was left unfinished at his death, in 1738.

SALMON (Thomas), an eminent English historian and geographer, younger brother to the Dr. He wrote many useful works, particularly, 1. A Geographical Grammar ; 8vo., which went through numberless editions. 2. A History of England. 3 An examination of Bishop Burnet's History of his own times. He died in April 1743.

SALMONE, a town of Peloponnesus, in EHs, with a fountain, forty stadia from Olympia; thence called Salmonis.

SALMONEUS, in fabulous history, a king of Elis, the son of ˆEolus and Enarete, and brother of Sisyphus. He married Alcidice by whom he had Tyro. Ambitious to be reckoned a god, he imitated thunder and lightning by artificial fireworks. Jupiter therefore struck him with a real thunderbolt, and placed him in hell near his brother Sisyphus.

SALON, a town in the south-east of France, in Provence, department of the mouths of the

Rhone. It is situated on a height, on the canal of Capronne, and its trade consists in the produce of the neighbouring country, viz. corn, cattle, wool, olives and silk. Inhabitants 6300. Eiglv-teen miles W.N.W. of Aix, and nineteen east of Aries.

SALONA, a town of Austrian Dalmatia, on a bay of the Adriatic, once a town of importance, having been taken and destroyed in the reign of Augustus, but rebuilt by Tiberius, who sent thither a Roman colony, and made it the capital of Illyricum. This rank it long held ; but seems to have declined after the reign of Dioclesian. Two miles north-east of Spalatro.

SALONA, a considerable town of Livadia, near a bay called the gulf of Salona, which is an inlet from the gulf of Corinth. Salona is situated in a fertile and highly cultivated plain, at the foot of mount Parnassus, and is supposed to occupy the site of the ancient Amphissu. The modern town has no fortifications. Its population is estimated at 8000, and its trade is considerable. Salona is the see of a bishop, subject to the arch-bishop of Athens. Forty-eight miles north-east of Lepanto.

SALONICA anciently called Thessalonica,

Hallia, and Therma, a large and handsome city

of Macedon, standing at the northern extremity

of a great bay, and on the acclivity of a steep

hill, which rises from the bay at its north-east

extremity. The circumference of the walls is

about five miles, and the fortress has seven

towers. The domes and minarets of mosques

are seen rising from among the other buildings,

environed by cypresses, and giving a general air

of splendor to the place. In ancient times this was a comparatively small place, and is indebted for

its increase to the advantage of its position.

With the country to the north, one of the most

fertile districts in Macedon, it communicates by

land, or by the river Vardari, the ancient Axius.

The articles collected in Salonica, viz. cotton,

tobacco, corn, and wool, are exported to different

parts of Europe. The Turks never carried on

much business here; it is in the hands of Greeks,

Jews, and Frank or French, Italian, English, or

Dutch merchants, all of whom have consuls here.

The population is computed at 70,000.

Salonica has few antiquities, except the propy'laea of the ancient Hippodrome, the alto relievos on which are represented in a series of beautiful and accurate engravings, in Stuart's Antiquities of Athens. 272 miles west of Constantinople, and 252 E. S. E. of Ragusa. Long. 22° 56′ E., lat. 40° 38′ 7″ N.

SALONIKA, the wife of the emperor Gallienus, eminent for her public and private virtues. She patronised the arts and sciences, and to her Rome was greatly indebted for a short period of prosperity. But her virtues could not preserve her from the murderers of her husband, v?ho assassinated both, A. D. 268.

SALSETTE, an island on the western coast of Hindostan, and province of Aurungabad, formerly separated from Bombay by a strait 200 yards wide, across which, in the year 1805, a causeway was carried. This island is eighteen miles long, by fourteen broad, and is well adapted for sugar, cotton, hemp, indigo, &c. ; but it has hitherto been kept in a state of nature, for the purpose of supplying Bombay with wood,

charcoal, and sea salt. Salsette is remarkably

rich in antiquities, and the remains of reservoirs,

with flights of stone steps round them, the ruins

of temples, &c. The most remarkable object,

however, is the caverns at Kennere, which con-

tain two colossal statues of Boodh. One of

these was converted by the Portuguese into a

church. In 1773, during a rupture with the

Mahrattas, it was occupied by the British troops,

and has ever since remained in their possession.

Janna is the chief town.

SAL'SIFY, n. s. A plant.

Salsify, or the common sort of goatsbeard, is of a very long oval figure, as if it were cods all over streaked, and engraven in the spaces between the

streaks, which are sharp-pointed towards the end.

Mortimer's Husbandry.

*SALSOACID, n. *. Lat. 'salsus and acidus.*

Having a taste compounded of saltness and sour-

ness.

The distinction of salts, whereby they are discri-

minated into acid, volatile, or ialsugiueut, if I may so call the fugitive salts of animal substances, and fixed or alcalizale, may appear in much use in na-

tural philosophy. Boyle.

The takoacids help its passing off; as sal nrunel.

Floyer.

SALSOLA, glass-wort ; a genus of the digynia order, and pentandria class of plants, natural order twelfth, holoraceae : CAL. pentaphyllous : CAPS, monospermous, with a screwed seed. The species are these : —

1 . S. kali, growing naturally in the salt marshes in divers parts of England. It is an annual plant, which rises above five or six inches hieh, sending out many side branches, which spread on every side, garnished with short awl-shaped leaves, which are fleshy, and terminate in acute spines. The flowers are produced from the side of the branches, to whicn they sit close, and are encompassed by short prickly leaves ; they are small, and of an herbaceous color. The seeds are wrapped up in the empalement of the flower, and ripen in autumn; soon after which the plant decays.

2. S. rosacea, growing naturally in Tartary, is an annual plant, whose stalks are herbaceous, and seldom rise more than five or six inches high. The leaves are awl-shaped, ending in acute points ; the empalements of the flowers spread open; the flowers are small, and of a rose color,

but soon fade ; the seeds are like those of the other kinds.

3. S. soda rises with herbaceous stalks, nearly three feet high, spreading wide. The leaves on the principal stalk, and those on the lower part of the branches, are long, slender, and have no spines'; those on the upper part of the stalk and branches are slender, short, and crooked. At the base of the leaves are produced the flowers, which are small and hardly perceptible; the empalement of the flower afterwards encompasses the capsule, which contains one cochleated seed. All the sorts of glass-wort are sometimes promiscuously used for making kali, but this species is esteemed best. The manner of making it is as follows : — Having dug a trench near the sea, they place laths across it, on which they lay the herbs in heaps ; and, having made a fire below, the liquor which runs out of the herbs drops to the bottom, which at length thickening, becomes kali, which is partly of a black, and partly of an ash color, very sharp and corrosive, and of a saltish taste. This, when thoroughly hardened, becomes like a stone ; and in that state is transported to different countries for the making of

glass.

4. S. tragus grows naturally on the sandy shores of the south of France, Spain, and Italy. This is also an annual plant, which sends out many diffused stalks, garnished with linear leaves an inch long, ending with sharp spines. The flowers come out from the side of the stalks in the same manner as those of the former ; their empalements are blunt, and not so closely en-compassed with leaves as those of the other.

5. S. vermiculata grows naturally in Spain. This has shrubby perennial stalks, which rise three or four feet high, sending out many side branches, garnished with fleshy, oval, acute pointed leaves, coming out in clusters from the side of the branches, they are hoary, and have stiff' prickli-.s. The flowers are produced from between t!uj leaves to\;ira the end of the 250

branches ; they are so small as scarcely to be discerned unless they are closely viewed. The seeds are like those of the other kinds.

SALT, n. s., adj., & v. a.-x Saxon pea^c>

SALT-CAT, n. s. I Goth., Swed., and

SALT-CELLAR, lT)zn.salt; Fr.se/;

SALTEB, TLat. sal. A well

SALTERN, 1 known combina-

SALTPETRE. J tion of an acid

with an alkali, earth, or metallic oxide : impreg-

nated with, or abounding in salt. See CHEMIS-

TRY, and below. Taste ; smack ; relish ; wit : to

season with salt : a salt-cat is a name for a

lump of salt, see below : salt-cellar, the vessel

that usually holds the salt : saltern, a salt-pan or work : saltish, saltly, and saltness, correspond :

saltpetre (Lat. sal petr

He shall inhabit the parched places in the wil-

derness in a salt land, ana not inhabited.

Jer. xvii. 6.

Moab and Ammon shall be as the breeding of

nettles, salt-pits, and a perpetual desolation.

Zech. ii. 9.

Is not discourse,' manhood, learning, gentleness,

virtue, and liberality, the spice and salt that seasons a man ? Shakspeare.

Though we are justices and doctors, and church-

men, Mr. Page, we have some salt of our youth in

us ; we are the sons of women.

Id. Merry Wives of Windsor.

We were better parch in Africk sun,

Than in the pride and toll scorn of his eyes.

Shakspeare.

Thou old and true Menenius,

Thy tears are softer than a younger man's,

And venomous to thine eyes. Id. Coriolanus.

Be a whore still :

Make use of thy salt hours, season the slaves

For tubs and baths ; bring down the rose-cheeked

youth

To the tub-fast and the diet. Id. Timon.

This new-married man, approaching here,

VVhose salt imagination yet hath wronged

Your well-defended honour, you must pardon.

Shakspeare.

After these local names, the most have been de-

rived from occupations ; as smith, taller, armourer.

Camdent Remains.

Some think their wits have been asleep, except

they dart out somewhat that is piquant and to the

quick ; men ought to find the difference between salt-

ness and bitterness. Bacon.

Cicero prettily calls them salinas salt-pans, that

you may extract salt out of, and sprinkle where you please. Id.

It hath been observed by the ancients, that salt

water will dissolve salt put into it in less time than fresh water. Id.

Nitre, or saltpetre, having a crude and windy

spirit, by the heat of the fire suddenly dilateth. Id.

If the offering was of flesh, it was salted thrice.

Browne.

Since salts differ much, some being 'nit, some vo-

latile, some acid, and some urinous, the two qualities wherein they agree are, that it is easily dissoluble in water, and affects the palate with a sapour good or «v"-. Boyle.

Nitre or taltpetrt, in heaps of earth, has been ex-

tracted, if they be exposed to the air, so as to be kept from rain. Locke.

Soils of a saltish nature improve sandy ground.

Mortime.*

In Cheshire they improve their lands by letting

out the water of the salt springs on them, always

after rain. Id.

Many give a lump of salt, which they usually

call a salt-cat, made at the saltern, which makes

the pigeons much affect the place. Id. Husbandry.

A leap into salt waters very often gives a new mo-

tion to the spirits, and a new turn to the blood.

Addison.

A particle of salt may be compared to a chaos,

being dense, hard, dry, earthy in the centre, and

rare, soft, and moist in the circumference.

teuton's Optichs.

The stratum lay at about twenty-five fathoms, by

the duke of Somerset's salt-pant near \Vhitehaven.

Woodward on Fossils,

Salts are bodies friable and brittle, in some degree pellucid, sharp or pungent to the taste, and dissolu-

ble in water ; but, after that is evaporated, incorpo-

rating, crystallising, and forming themselves into

angular figures. Woodward.

When any salt is spilt on the table-cloth, shake it out into the saltcellar.

Swift's Directions to the Butler.

SALT is distinguished by some into three

kinds : native or rock salt ; common, or sea

salt, or white salt ; and bay salt.

SALT, BAY. Under the title of bay salt are

ranked all kinds of common salt extracted from

the water wherein it is dissolved, by means of

the sun's heat, and the operation of the air ;

whether the water from which it is extracted be

sea water, or natural brine drawn from wells and

springs, or salt water stagnating in ponds and

lakes. It does not appear that there is any other

thing requisite in the formation of bay salt, than

to evaporate the sea water with an exceeding

gentle heat ; and it is even very probable that

our common sea salt by a second solution and crystallisation might attain the requisite degree of purity.

SALT, COMMON, or sea salt, or white salt, the name of that salt extracted from the waters of the ocean, which is used in great quantities for preserving provisions, &c. It is composed of muriatic acid, saturated with soda ; and hence, in the new chemical nomenclature, it is called muriate of soda. See CHEMISTRY, Index. It is commonly found in salt water and salt springs, in the proportion of thirty-six per cent. It is found also in coals and in beds of gypsum. Of this most useful commodity there are ample stores on land as well as in the ocean. There are few countries which do not afford vast quan-

tities of rock or fossil salt. Mines of it have long be«n discovered and wrought in England, Spain, Italy, Germany, Hungary, Poland, and other countries of Europe. In several parts of the world there are huge mountains which wholly consist of fossil salt. Of this kind are two mountains in Russia, near Astracan ; several in the kingdoms of Tunis and Algiers, in Africa ; and several also in Asia ; and the whole island

of Ormus in the Persian gulf almost entirely

consists of fossil salt. The new world is like-

wise stored with treasures of this useful mineral,

as well as with all other kinds of subterranean

productions. The sea affords such vast plenty

of common salt, that all mankind might thence

be supplied with quantities sufficient for their

occasions. There are also innumerable ‘ springs,

ponds, lakes, and rivers, impregnated with

common salt, from which the inhabitants of

many countries are plentifully supplied there-

with. In some countries which are remote from

the sea, and have little commerce, and which are

not blessed with mines of salt or salt waters, the necessities of the inhabitants have forced them

to invent a method of extracting their common

salt from the ashes of vegetables. And the in-

genious Dr. Fothergill extracted plenty of it from

the ashes of fern. See Medical Essays, vol. v.

article 13. Mr. Boyle discovered common salt

in human blood and urine. ‘ I have observed

it,’ says Mr. Brownrigg, ‘ not only in human

urine, but also in that of dogs, horses, and black cattle. It may easily be

discovered in these,

and many other liquids impregnated with it, by certain very regular and beautiful starry figures which appear in their surfaces after congelation. These figures I first observed in the great frost in 1739. The dung of such animals as feed upon grass or grain doth also contain plenty of common salt.' Naturalists, observing the great variety of forms under which this salt appears, have thought fit to rank the several kinds of it under certain general classes ; distinguishing it, more usually, into rock, or fossil salt, sea salt, nnd brine or fountain salt. To which classes others might be added, of those muriatic salts •vhich are found in animal and vegetable substances. These several kinds of common salt often differ from each other in their outward form and appearance, or in such accidental properties as they derive from the heterogeneous substances with which they are mixed. But, when perfectly pure, they have all the same qualities ; so that chemists, by the exactest enquiries, have not been able to discover any essential difference between them. Immense

masses of it are found in different countries, which require only to be dug out and reduced to powder. In this state it is called rock salt. The water of the ocean also contains a great proportion of this salt, to which indeed it owes its taste, and the power it possesses of resisting freezing till cooled down to zero. When this water is evaporated sufficiently, the salt precipitates in crystals. It is by this process that it is obtained in this country. But the salt of commerce is not sufficiently pure for the purposes of chemistry, as it contains usually muriate of lime, &c. ; but it may be obtained pure by the following process : — Dissolve it in four times its weight of pure water, and filter the solution. Drop into it a solution of carbonate of soda, as long as any precipitate continues to fall. Separate the precipitate by filtration, and evaporate slowly till the salt crystallises. Muriate of soda usually crystallises in cubes, which, according to Hauy, are the primitive form of its crystals and its integrant particles. It is the most common and most useful seasoner of food ; it preserves meat from putrefaction, and butter from rancidity ; it serves for an enamel to the surfaces of coarse

stone ware ; it is an ingredient in many processes of dyeing; metallurgists use it in many of their essays. Its utility in chemistry is equally extensive. From it muriatic and oxy-muriatic acids are obtained ; and from it also of late great quantities of soda have been extracted, and introduced with advantage as a substitute for the soda formerly obtained from the combustion of vegetables. The acid is easily extracted from this salt by means of sulphuric acid ; but to obtain the alkali at a cheap rate is not so easy. The methods which have hitherto succeeded may be reduced to two: — 1. Muriate of soda may be decomposed by some substance which has a » stronger affinity for muriatic acid than soda has. The soda by this process is set at liberty, and may be obtained by evaporation and crystallisation. There are three substances capable of setting the base of common salt at liberty, and of furnishing soda, either pure or in the state of carbonate. These are litharge, lime, and iron.

When about four parts of litharge and one of common salt, properly pounded and mixed, are macerated in a little water for several hours and stirred repeatedly, the muriatic acid gradually

combines with the oxide of lead, and forms a muriate, while the soda is left in solution, and may be obtained separately by filtration and evaporation. The decomposition goes on still more rapidly, if the mixture be heated during the process. That the alkali may be extracted from common salt by lime is a fact, for which we are indebted to Scheele. Cahausen indeed had hinted at it in 1717, but his treatise had been forgotten. Scheele ascertained that a mixture of lime and common salt, formed into a paste, and placed in a moist cellar, was covered with an efflorescence of soda in fifteen days. Berthollet has rendered it probable that the soda which is found abundantly in the west of Egypt is formed naturally by a similar process, lo Scheele likewise we owe the discovery that common salt may be decomposed by iron. lie observed that a wooden vessel, placed in a cellar, and containing brine, had its iron hoops covered with an efflorescence of soda. This induced him to dip a plate of iron into a solution of common salt, and to suspend it in a cellar. After an interval of fourteen days, he found his

iron incrusted with soda. The same decomposition takes place also if zinc or copper be substituted for iron. 2. The second method of extracting soda from common salt is less direct. It consists in displacing the muriatic by some other acid, which may be afterwards easily decomposed or displaced ; thus the soda is left behind at last, in a state of purity. The acids which have been made use of are the sulphuric and acetous ; the boracic, phosphoric, and arsenic acids might indeed be employed, as they decompose common salt in a high temperature. The products in that case would be borat, or the phosphate or arseniate of the same base, according to the acid. These salts might be afterwards decomposed by lime, and the soda obtained separate. But these acids are a great deal too high priced to admit of their employment. Sulphuric acid may be either employed in a separate state, or in combination with bases, when the salts which it then forms can be procured at a sufficiently cheap rate. Alum, sulphate ot lime, and sulphate of iron, have been respectively employed with advantage to decompose

c«mmon salt, and obtain sulphate of soda.

Alum was first employed for that purpose by Constantini, a physician of Melle near Osnaburgh, about 1650. The process does not succeed but at a low temperature. Sulphate of lime decomposes common salt when formed with it into balls, and exposed to a strong heat. Much discussion has taken place among the German chemists about the possibility of decomposing common salt by sulphate of iron. That sulphate of soda may be obtained by exposing a mixture of these two salts to a strong heat was first announced by Vander Ballen. This was contradicted by Hahneman, but confirmed by the experiments of Tuhten, Lieblein, and VViegleb. It succeeded completely with the French commissioners, De Lievre, Pelletier, Darcet, and Girond, who were appointed, in 1794, to examine the different processes for obtaining soda from common salt. They ascertained also that pyrites or sulphureted oxide of iron may be employed for the same purpose.

After obtaining the sulphate of soda it is necessary to expel the acid, to obtain the soda separately. This is done by calcining the salt mixed with a certain proportion of charcoal or pit-coal. By this process it is converted into sulphuret of soda, and the sulphur may be abstracted by the intervention of iron or chalk. When the sulphuret of soda is nearly in fusion, small bits of iron (the parings of tin-plate answer best) are thrown in gradually in sufficient quantity to decompose the sulphate. The fire is raised till the mixture melts. The iron, having a stronger affinity for the sulphur, combines with it, and leaves the soda, which may be separated by solution in water, filtration, and evaporation.

SALT, COMMON, METHOD OF PREPARING.

Without entering into any particular detail of the processes used for the preparation of bay salt, in different parts of the world, we shall only give a brief account of the best methods of preparing common salt. At some convenient place near the sea-shore is erected the saltern. This is a long low buildinsi, consisting of two parts ; one of which is called the fore-house, and the other the pan-house or boiling-hou'se. The fore -house serves to receive the fuel, and cover the work-

men ; and in the boiling-house are placed the

furnace and pan, in which the salt is made.

Sometimes they have two pans, one at each end

of the saltern ; and the part appropriated for the fuel and workmen is in the middle. The fur-

nace opens into the fore-house by two mouths,

beneath eacli of which is a mouth to the ash-pits.

To the mouths of the furnace doors are fitted ;

and over them a wall is carried up to the roof,

which divides the fore-house from the boiling-

house, and prevents the dust of the coal and the

ashes, and smoke of the furnace from falling into

the salt pan. The fore-house communicates

with the boiling-house by a door placed in the

wall which divides them. The body of the fur-

nace consists of two chambers, divided from

<-;ich other by a brick partition called the mid-

feather ; which from a broad base terminates in

a narrow edge nigh the top of the furnace, and,

by means of short pillars of cast iron erected

upon it, supports the bottom of the salt pun : it also (ills up a considerable part of the furnace,

which otherwise would be too large, and would

consume more coals than by the help of this

contrivance are required. To each chamber of

the furnace is fitted a grate, through which the

ashes fall into the ash-pits. The grates are made

of long bars of iron, supported underneath by

strong cross bars of the same metal. They are

not continued to the farthest part of the furnace,

it being unnecessary to throw in the fuel so far ; for the flame is driven from the fire on the grate to the farthest part of the furnace, and thence

passes, together with the smoke, through two

flues into the chimney ; and thus the bottom of

the salt pan is every where equally heated. The

salt pans are made of an oblong form, flat at the bottom, with the sides erected at right angles ;

the length of some of these pans is fifteen feet,

the breadth twelve feet, and the depth sixteen

inches ; but at different works they are of dif-

ferent dimensions. They are commonly made of

plates of iron, joined together with nails, and

the joints are filled with a strong cement. Within

the pan five or six strong beams of iron are fixed to its opposite sides at equal distances, parallel

to each other and to the bottom of the pan, from

which they are distant about eight inches. From

these beams hang down strong iron hooks, which

are linked to othei hooks or clasps of iron firmly nailed to the bottom of the pan; and thus the

bottom of the pan is supported, and prevented

from bending down or changing its figure. The plates most commonly used are of malleable iron, about four feet and a half long, a foot broad, and the third of an inch in thickness. The Scots prefer smaller plates, fourteen or fifteen inches square. Several make the sides of the pan, where they are not exposed to the fire, of lead ; those parts, when made of iron, being found to consume fast in rust from the steam of the pan. Some have used plates of cast iron, five or six feet square, and an inch in thickness; but they are very subject to break when unequally heated, and shaken (as they frequently are) by the violent boiling of the liquor. The cement most commonly used to fill the joints is plaster made of lime. The pan thus formed is placed over the furnace, being supported at the four courners by brick work, but along the mid die, and at the sides and ends, by round pillars of cast iron, called taplins, which are placed at three feet distance from each other, being about eight inches high, and at the top, where smallest, four inches in diameter. By means of these pillars the heat of the fire penetrates equally to all parts of the bottom of the pan, its four cor-

ners only excepted. Care is also taken to pre-
vent the smoke of the furnace from passing into
the boiling-house, by bricks and strong cement,
which are closely applied to every side of the
salt pan. In some places, as at Blyth in Nor-
thumberland, besides the common salt-pans here
described, they have a preparing pan placed be-
tween two salt-pans, in the middle part of the
building, which in other works is the fore-house.
The sea-water, being received into this preparing
pan, is there heated and in part evaporated by
the flame and heat conveyed under it through
flues from the two furnaces of the salt-pans;
and the hot water, as occasion re-quires, is con-

vcyed through troughs from the preparing pan
into the salt-pans. Various other contrivances
have been invented to lessen the expense of fuel,
and several patents have been obtained for that
purpose ; but the salt-boilers have found their
old methods the most convenient. Between the
sides of the pan and walls of the boiling-house
there runs a walk five or six feet b'oad, where
the workmen stand when they draw the salt, or

have any other business in the boiling-house.

The same walk is continued at the end of the pan, next to the chimney ; but the pan is placed close to the wall at the end adjoining to the fore-house.

The roof of the boiling-house is covered with

boards fastened on with nails of wood, iron nails

quickly mouldering into rust. In the roof are

several openings to convey off the watery vapors ;

and on each side of it a window or two, which

the workmen open when they look into the pan

whilst it is boiling. Not far distant from the

saltern on the sea-shore, between full sea and

low-water marks, they also make a little pond in

the rocks, or with stones on the sand, which they

call their sump. From this pond they lay a pipe, through which, when the tide is in, the sea-

water runs into a well adjoining to the saltern ;

and from this well they pump it into the troughs,

by which it is conveyed into their ship or cis-

tern, where it is stored up until they have occa-

sion to use it. The cistern is built close to the saltern, and may be placed most conveniently

between the two boiling-houses, on the back side

of the fore-house ; it is made either of wood or

brick and clay : it sometimes wants a cover, but

ought to be covered with a shed, that the salt-

water contained therein may not be weakened by

rains, nor mixed with soot and other impurities.

It should be placed so high that the water may

conveniently run out of it through a trough into

the salt pans. Besides the buildings already men-

tioned, several others are required ; as store-

houses for the salt cisterns for the bittern, an office for his majesty's salt-officers, and a dwelling-

house for the salt-boilers. All things being thus prepared, and the sea-water having stood in the

cistern till the mud and sand are settled to the

bottom, it is drawn off into the salt-pan. And at

the four corners of the salt-pan, where the flame

does not touch its bottom, are placed four small

iead pans, called scratch-pans, which, for a salt-

pan of the size above-mentioned, are usually

about a foot and a half long, a foot broad, and

three inches deep ; and have a bow or circular

handle of iron, by which they may be drawn out

with a hook when the liquor in the pan is boiling.

The salt-pan being filled with sea-water, a strong

fire of pit-coal is lighted in the furnace ; and then, for a pan which contains about 400 gallons, the

salt-boiler takes the whites of three eggs, and in-

corporates them well with two or three gallons of

sea-water, which he pours into the salt- pan while

the water contained therein is only lukewarm ;

and immediately stirs it about with a rake, that

the whites of the eggs may every where be equally

mixed with the salt water. Instead of whites of

ews, at many salterns, as at most of these near

Newcastle, they use blood from the butchers,

either of sheep or black cattle, to clarify the sea-

water ; and at many others they do not give

themselves the trouble of clarifying it. As the

water grows hot, the whites of eggs separate from

it a black frothy scum, which arises to the surface of the water, and covers it all over. As soon as the pan begins to boil this scum is all risen, and it is then time to skim it off. The most conve-

nient instruments for this purpose are skimmers

of thin ash boards, six or eight inches broad, and so long that they may reach above half way over

the salt-pan. These skimmers have handles fitted

to them ; and the salt-boiler and his assistant,

each holding one of them on the opposite sides

of the pan, apply them so to each other that they overlap in the middle, and, beginning at one end

of the pan, carry them gently forward together,

along the surface of the boiling liquor to the other end ; and thus, without breaking the scum, col-

lect it all to one end of the pan, from whence

they easily take it out. After the water is skimmed, it appears perfectly clear and transparent ; and

they continue boiling it briskly, till so much of

the fresh or aqueous part is evaporated that what

remains in the pan is a strong brine almost fully

saturated with salt, so that small saline crystals

begin to form on its surface ; which operation, in

a pan filled fifteen inches deep with water, is

usually performed in five hours. The pan is then filled up a second time with clear sea-water drawn

from the cistern ; and, about the time when it is

half filled, the scratch-pans are taken out, and,

being emptied of the scratch found in them, are

again placed in the corners of the salt-pan. The

scratch taken out of these pans is a fine white

calcareous earth found in the form of powder,

which separates from the sea-water during its

coction, before the salt begins to form in grains.

This subtile powder is violently agitated by the

boiling liquor, until it is driven to the corners of the pan, where, the motion of the liquor being

more gentle, it subsides into the scratch-pans

placed there to receive it, and in them it remains undisturbed ; and thus the greatest part of it is

separated from the brine. After the pan has

again been filled up with sea- water, three whites

of eggs are mixed with the liquor, by which it is clarified a second time, in the manner above de-

scribed ; and it is afterwards boiled down to a

strong brine as at first; which second boiling

may take up about four hours. The pan is then

filled up a third time with clear sea-water; and

after that a fourth time ; the liquor being each

time clarified and boiled down to a strong brine,

as before related ; and the scrach-pans being1

taken out and emptied every time that the pan is

filled up. Then, at the fourth boiling, as soon

as the crystals begin to form on the surface of the brine, they slacken the fire, and only suffer the

brine to simmer, or boil very gently. In this

heat they constantly endeavour to keep it all the

time that the salt corns or granulates, which may

be nine or ten hours. The salt is said to granu-

late, when its minute crystals cohere together into

little masses or grains, which sink down in the

brine and lie at the bottom of the salt-pan. When

most of the liquor is evaporated, and the salt

thus lies in the pan almost dry on its surface, it is then time to draw it out. This part of the pro-

cess is performed by raking the salt to one side

of the pan into a long hea •, wher it drains a 2.34

SALT.

while from the brine, and is then emptied out into barrows or other proper vessels, and carried into

the store-house, and delivered into the custody

of his majesty's officers. And in this manner the whole process is performed in twenty-four hours, the salt being usually drawn every morning. In the store-house the salt is put hot into drabs, which are partitions like stalls for horses, lined on three sides and at the bottom with boards, and having a sliding board on the foreside to put in or draw out as occasion requires. The bottoms are made shelving, being highest at the back side, and gradually inclining forwards ; by which means the saline liquor, which remains mixed with the salt, easily drains from it ; and the salt in three or four days becomes sufficiently dry, and is then taken out of the drabs and laid up in large heaps, where it is ready for sale. The saline liquor which drains from the salt is not a pure brine of common salt, but has a sharp and bitter taste, and is therefore called bittern; this liquor at some works they sitve for particular uses, at others throw away. A considerable quantity of this bittern is left at the bottom of the pan after the process is finished ; which, as it contains much salt, they suffer to remain in the pan, when it is filled up with sea-water. But at each process this liquor becomes more sharp and bitter, and also increases in quantity ; so that, after the third or

fourth process is finished, they are obliged to

take it out of the pan, otherwise it mixes in such quantities with the salt as to give it a bitter

taste, and disposes it to grow soft and run in

the open air, and renders it unfit for domestic

uses. After each process there also adheres to

the bottom and sides of the pan a white stony crust, of the same calcareous substance with that be-

fore collected from the boiling liquor. This the

operators call stone- scratch, distinguishing the

other found in the lead pans by the name of

powder-scratch. Once in eight or ten days they

saparate the stone-scratch from their pans with

iron picks, and in several places find it a quarter of an inch in thickness. If this stony crust is

suffered to adhere to the pan much longer, it

grows so thick that the pan is burnt by the fire, and quickly wears away.

SALT, NATIVE, or ROCK SALT, or fossil salt, is

common salt dug out of the earth. This kind of

salt is in several countries found so pure that it serves for most domestic uses, without any pre-

vious preparation (triture excepted); for, of all

natural salts, rock-salt is the most abundantly

furnished by nature in various parts of the world,

being found in large masses, occupying great

tracts of land. It is generally formed in strata

under the surface of the earth, as in Hungary,

Muscovy, Siberia, Poland, Calabria, Egypt,

Ethiopia, and the East Indies. ‘ In England,’

says Magellan, « the salt mines at Northwich are

in a high ground, and contain it in layers or

strata of various colors, of which the yellow and

brown are the most plentiful, as I have observed

on the spot, which I visited in June 1782, in

company with my worthy and learned friend Mr.

Volta, professor of natural philosophy in the

university of Pavia, and well known by his ?reat

abilities and many discoveries in that branch of

knowledge. The mine into which we descended

was excavated in the form of a vast dome or vault under ground, supported by various columns of

the salt, that were purposely left to support the

incumbent weight. And, the workmen having

lighted a number of candles all round its circum-

ference, it furnished us with the most agreeable

and surprising sight, whilst we wera descending

in the large tub which serves to bring up the

lumps that are broken from the mine, &c. See

the description of the famous salt mines of

Wieliczka in Poland, by Mr. Bernard, in the

Journal de Physique, vol. xvi., for 1780, p. 459’,

in which the miraculous tales concerning these subterraneous habitations, villages, and towns, are reduced to their proper magnitude and estimate.' But the English fossil salt is unfit for the uses of the kitchen, until by solution and coction it is freed from several impurities, and reduced into white salt. The British white salt is not so proper as several kinds of bay salt for curing fish and such flesh meats as are intended for sea provisions, or for exportation into hot countries. So that for these purposes we are obliged, either wholly or in part, to use bay salt, which we purchase in France, Spain, and other foreign countries.

It is remarked by the writer of the account of the Agriculture of Cheshire, that, from some experiments made on different specimens of the rock-salt of that county, it would appear that the transparent kind of it is an almost pure muriate of soda, which contains no admixture of either earth or earthy salts ; and that the color of the less transparent and brown specimens is derived from the earth that enters, in greater or less proportions, into their compositions. That on 480 grains of transparent rock-salt being dissolved

in four ounces of distilled water, there was, first, no precipitate let fall, on the addition of car-

bonate of potash. Secondly, no alteration was

produced by this solution on blue vegetable

juices. Thirdly, on the addition of a few drops

of tincture of galls, a slight purple tinge was

given to the solution ; and after standing some

hours, there was a brown sediment at the bottom

of the vessel. Fourthly, on the addition of mu-

riate of barytes, there was no precipitate thrown

down. From the first of these trials, it is sup-

posed that rock-salt has no muriate of lime, or

muriate of magnesia, combined with it ; from

the second, that it has no uncombined acid or

alkali ; from the third, that it contains some por-

tion of iron ; and from the fourth, or last, that

there is no sulphate of lime contained in it.

And that, on examining different specimens of the

less transparent, and the brown rock-salt, with

the same re-agents as in the above trials, it was

found that these consisted of muriate of soua,

or sea-salt, in combination with a certain pro-

portion of earth, varying in quantity from one

to thirty per cent. ; also, that the earth was

wholly the argillaceous or common clay ; but

that some of the specimens contained a few

grains of sulphate of lime, in 480 of those of

the rock-salt.

The beds of this salt are now well known to

*be the principal cause of the salt-brine spring**

in this county ; and, in connexion wur. some

other circumstances, to have a great share in

causing the vast differences in their strength, in

di-U'erent places.

Although rock-salt is found in various parts of

the above district, there are no pits of it wrought at present, except in the vicinity of Northwich.

Part of the inferior rock-salt which is procured

there, is, it is said, used at some of the refineries in that neighbourhood; and a further quantity

sent down the river Weaver, for the supply of

the refineries at Frodsham, in the same county,

and those on the banks of the Mersey, in Lan-

cashire. The purer rock-salt, or that which is

called in general Prussian rock, is carried by the

same conveyance to the port of Liverpool ;

whence, according to the above writer, it is ex-

ported chiefly to Ireland, and the ports of the

Baltic. The annual quantity sent down the first of the above rivers is found, on the average of ten years, to be 51,109 tons. But in this, it is observed, is included what is used at the Frodsham and Lancashire refineries, which may probably be about one-third of the whole. And it is added that it appears, from the report of the committee of the house of commons, appointed to inquire into the laws respecting the salt duties, printed in June, 1801, that,

in 1798) (-20,162) f

1799 Were exported? 33,913 £'

1800) (.34,9393

Of this quantity,

in 1798 . . . 16,095)

1799 . . . 22,374 Mons

1800 . . . 19,663)

•were sent to different ports in Ireland ; the remainder was principally exported to Denmark, Russia, Sweden, Prussia, and Germany. A small quantity went to Guernsey, Jersey, and the \ est Indies.

In regard to the original formation of the beds or strata of rock-salt, in this and other countries, different theories, opinions, and conjectures,

have been formed and proposed ; but it is one of those geological questions which are extremely embarrassing in their nature, and very difficult in their solution. Mr. Holland has, however, in the above work, ingeniously stated several suppositions on the subject, and the objections to which they are exposed. It is remarked that, wherever rock-salt is met with, sulphate of lime seems to lie very generally discovered in mixture with the earthy strata above it. And the writer of the Memoir sur le Sel Marin,in the eleventh volume of the Annals of Chemistry, it is added, informs us, that this is the case in Poland, Transylvania, and Hungary ; also, that there is commonly a layer of gypsum betwixt the strata of stone and the bed of salt. This gypseous layer is of different colors and is found crystallised, striated, and mixed with marine "shells. The gypsum above the beds of rock-salt in Cheshire is, in like manner, found crystallised and striated, but no marine exuviae, or organic remains, it is observed, are ever met with in any of the strata.

Nor does gypsum accompany it. as is usual in

other places, as near Cordova, .in Spain, where

rock-salt forms a mountain 500 feet in height,

and three miles in circumference, as noticed l.y

Kirwan and Townshend. Jars, the author of the

Voyages Metallurgiques, who, it is asserted, has

given the most particular account we have of the

upper stratum of rock-salt about Northwich, re-

marks, that ‘ it appears to have been deposited

by layers or beds of several colors ; ‘ and that

‘ these layers of salt are in such a position as to lead us to believe that the deposition of it was

made in waves, similar to those which are formed

on the sea-coast .‘This, Mr. Holland says, coincides with an opinion suggested by Mr. Stanley, a friend

of his, in regard to the probable origin of the beds of rock-salt now in existence in this district ; who states that rock-salt is there found in several

strata, one above the other, with intermediate beds

of indurated clay, in the valleys of the Weaver,

and those of the other rivers and brooks empty-

ing themselves into it ; but that it has never been found so near the surface, as to be above the level of the sea, or beneath any solid rock. If beds of rock-salt are to be considered as so many depo-

sits of salt from sea-water, we must suppose the

sea at some former period to have occupied the

valleys in this country; and that, from time to

time the communications were interrupted be-

tween these valleys (tthen deeper than they are

now) and the sea. Earthquakes, or accumula-

tions of sand in the estuaries of the Mersey and

the Dee, might, it is contended, have caused the

interruptions. Whenever the sea-water in the

valleys became separated from the sea, the salt

contained in it would subside by the natural

process of evaporation. This, it is supposed,

would the more easily have taken place, if, by any subterraneous fermentation, the ground below

the water should have been heated. To account

for a greater accumulation of salt than the sea-

water filling ail the lowest parts of the district

would contain, we must suppose, it is said, that

the obstruction interposed between the valleys

and the sea had been repeatedly broken down

and renewed again. Tides, unusually high,

might occasionally overcome the resistance of

the accumulated sand ; and, if the intervals be-

tween the inundations were only of short dura-

tion, a subsidence of salt might take place equal

to the formation of the thickest stratum of the

rock-salt now existing. Long intervals be-

tween the inundations would admit of an ac-

cumulaton of clay, and other earthy particles,

over the salt thus deposited ; and in this manner

would be formed a new basis for another stratum

of rock-salt to repose upon. Thus, it is thought,

the regular and astonishing existence of salt

strata may be accounted for, without necessarily

supposing them coeval with the original forma-

tion of the earth ; but, to confirm the theory, it is suggested that much observation and close en-

quiry into the natural history of the county

would be required.

Mr. Holland, however, suggests that there are

many objections to the theory which supposes the

beds of rock- salt in this district to have been formed by deposition from the waters of the sea; some

of which he states rather for the sake of promot-

ing discussion and enquiry, than of affording any

very decided opinion on a matter of so much

doubt, uncertainty, and obscurity. Though on

making a perpendicular section of the upper bed

*of rock-salt, nn im*rular stratification, such as*

noticed by J;irs, may, lie says, by frequent accu-

rate examination, be. observed, the general ap-

pearance of the sides of the openings, whence

‘.he rock-salt is taken, is that of a confused and irregular red mass ; in which some portions of

salt have a greater, others a less, proportionate

admixture of earth ; while here and there they

may be seen perfectly pure and transparent. He,

therefore, asks, is it likely that this irregularity and confusion would have existed, had the beds

of rock-salt in this district been formed by the

evaporation of sea-water inundating the land at

certain intervals of time, as the above theory

supposes ? On the contrary, says he, would it

not be natural to expect from reasonings a priori,

that the salt, thus deposited from sea-water,

would be disposed in layers perfectly regular,

and differing from one another merely in thick-

ness, or a few other circumstances of inferior

moment? Another fact xvhich, it is supposed,

invalidates, in some measure, the notion that the

rock-salt has been deposited from the waters of

the sea, is the great disproportion of quantity

shown by analysis to exist between the earthy

salts contained in the brine of this district, and

those held in solution by sea-water ; the ratio

here being as one to ten, or the proportion which

the earthy salts bear to the pure muriate of soda in sea-water is ten times greater than that which prevails in the Cheshire brine. The ascertaining of this fact proves, it is supposed, that the rock-salt (from the solution of which the brine is formed) is combined with a much smaller proportion of earthy salts than exists in sea-water ; a circumstance difficult to be accounted for, on the supposition that the beds of this substance were formed by the evaporation of the sea-water, occupying the valleys and lowest parts of the land. It must be noticed, however, as worthy of attention, that the earthy salts intermixed with the rock-salt in the above district are the same which are held in solution by sea-water, being principally muriated magnesia and sulphate of lime. There is, however, a still stronger proof, it is supposed, against the notion that the beds of rock-salt in this county are depositions from the sea-water, in the circumstance that no marine exuviae have ever been discovered in the strata. This, it is imagined, .would almost indubitably have been the case, had the land been covered with sea-water during a period of sufficient length for the deposition of beds of salt of such

prodigious thickness ; and the fact, that no such

exuviae do actually exist, is supposed in itself

sufficient to induce a suspicion that the theory

in question cannot be well founded. Other ob-

jections too i is observed, offer themselves to*

its validity; such as the enormous depth of sea-

water necessary to the production of a body of

rock-salt forty yards in thickness ; the difficulty, if not impossibility, on such principles, of ac-

counting forthe formation of the singular insulated

mountain of rock-salt at Cordova in Spain; with

others of a more trivial nature, which will readily present themselves in this enquiry. It is, how-

ever, at the same time candidly acknowledged,

that there are many facts and circumstances of

actual observation, that confer a strong degree of

plausibility on the opinion, which it has been here contended against. The certainty that the surface

of the county was at some former period mi ch

lower than it is at present, and the diminution

of the thickness of the strata of rock-salt in pro-

portion as they recede from the sea, are circum-

stances which undoubtedly range themselves on

this side of the question : and, upon the whole,

it is thought, that it may be doubted whether the

theory, which regards the beds of rock-salt as

deposits from sea-water, does not accord more exactly with existing appearances than any other which has been adduced on the subject. According to the satement of. Mr. Holland, in his Agricultural Survey, the first bed and pit of rock-salt was found and wrought in Marbury, at a small distance from the town of Northwich, at the depth of about thirty yards from the surface, in the year 1670, when searching for coal. The bed was thirty yards in thickness, and rested upon a stratum or layer of hard clay. In consequence of this discovery, other similar attempts were made ; and, on sinking shafts or pits any where in the vicinity of it within the space of half a mile, it was found to exist at about the same depth from the surface of the earth, when not prevented from being dug down to by brine-springs or those of common water. This continued the only place in which it was found until the year 1779, when this sort of rock was again met with in searching for brine in the neighbourhood of Lawton, at the depth of about forty-two yards, but only of the thickness of about four feet ; there being beneath it a bed of indurated

clay ten yards in thickness, which, being penetrated through, a second stratum of rock-salt was discovered, twelve feet in thickness ; and, on continuing the sinking of the pit, another layer of indurated clay, fifteen yards in thickness, passed through ; below which appeared a third stratum of rock-salt, which was unk into not less than twenty-four yards ; the lowest fourteen yards, being the purest, or the least mixed with other substances, were the only parts that were wrought.

Until this period, in the neighbourhood of Northwich, no attempts had, however, been made to sink pits in order to find a lower stratum of rock-salt; as the one which had been first met with was so thick, and furnished such an abundant supply for every demand, there could be no other inducement to this than the expectation of meeting with a stratum, at a greater depth, which might contain a less admixture of earthy matters. It would seem, too, that the fear of meeting with springs below, which might impede the working out of the materials from the pits, and even render this

wholly impracticable, prevented the proprietors

of them from sinking deeper. As, however, no

inconvenience or interruption of this nature had

occurred, on sinking through different alternate

strata of rock-salt and clay at Lawton ; and it

had been found that there was a wer stratum

of rock-salt there, which was more pure than

those nearer the surface, the owners of one of

the works or pits in this vicinity were induced,

a little time after the trials at Lawton, as in 1781, to sink deeper than had yet been done, and to

pass through the bed or body of indurated clay

lying underneath the rock-salt, which had been

so long known and wrought. This indurated

clayey material was found to be from ten to

eleven yards in thickness ; and immediately be-

neath it a second stratum of rock-salt was met

with, the upper part of which differed little in

purity from that of the higher stratum or layer

of rock ; but, on penetrating into it to the extent of from twenty to twenty-five yards, it was there

- *found to be much more pure and free from*

earthy admixture. But it continued to have this

increased degree of purity for four or five yards only; while, for fourteen yards still lower, to which depth the pit or shaft was sunk, the proportion of earthy matter was again as large as in the upper part of the stratum. It was therefore, on this account, thought useless to sink the pit to any greater depth. Many other proprietors of pits, shafts, or mines, in the same neighbourhood, it is stated, followed the example which had been thus set them ; and penetrated through the bed of indurated clay lying beneath the upper stratum of rock-salt. A second stratum of rock-salt was constantly met with below this ; and, on passing down into it, the same order of disposition as to purity was observed, as in the pit or mine in which it had been first noticed and examined ; and the same has been found to prevail in all the pits, shafts, works, and mines, which have since been sunk in the same vicinity. It is further noticed that there is great uniformity in the strata which are passed through in sinking pits for rock-salt or brine ; and that they very generally consist of clay and sulphate of lime mixed in various proportions; that of the latter

somewhat increasing as the pit, shaft, or work,

approaches the rock or brine. The workmen

distinguish the clay by the appellation of metal,

giving it the name of red, brown, or blue metal,

according to its color; and the sulphate of lime

by that of plaster.

The strata formed by these are, in general,

close and compact ; allowing very little fresh

water to pass through them. In some places,

however, they are broken and porous : and they

admit so much fresh water into the pit or work,

that, whenever they have been met with, it has

been usual to discontinue any attempts to pass

through them in sinking the pits. In these places

the workmen call the metal saggy. It was

thought not only impracticable to overcome a

water, which vulgar prejudice had magnified into

a great stream running under ground ; but it was

believed, even if the sinking could be continued

below this, that the water could not be kept out

of the pit, shaft, or work, and that it would either weaken the brine so as to destroy its value, or

would find its way into the cavity of any rock,

pit, or mine, which might be found below it.

Later experience, it is said, has proved that these ideas were not altogether

well founded. A

few years ago an attempt was made in VVitton

to pass through this porous stratum, in order to

get to the brine. It was met with about twenty-

eight yards from the surface ; the thickness of it

was about thirteen feet ; and the quantity of

water, which was forced through it into the pit

or shaft, was 360 gallons a minute. By means of

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a steam-engine, the sinkers were enabled to pass

through this water ; to fix a gauge or curb a few yards below it, in a stratum of indurated clay ;

and thence to bring up a wooden frame, sup-

porting a wall of puddled earth twelve inches

thick, by which the access of the fresh water into the pit or shaft was in a great degree prevented,

and an opportunity given to pass down to the

brine below. A shaft was afterwards sunk

through this porous stratum, for the purpose of

obtaining rock-salt ; which object was, after a

short time, defeated, by the influx of brine into

the shaft at the surface of the upper stratum of

rock-salt ; an accident originating in a cause

completely distinct from the fresh water in the

porous stratum or bed. An exact section of the

different strata sunk through in reaching the second bed of rock-salt in the pit at Witton, near Northwich, is given by Mr. Holland in the above report ; and all the strata in the neighbourhood of the last town are supposed to have nearly a similar disposition. The inclination of them in the pit or shaft at the above place was from north-west to south-east ; and the dip about one yard in nine. The stratum through which the fresh water flowed is shown, and the level it found, it is said, was' sixteen yards from the surface, which, it is remarked, nearly corresponds with that of the brook below. The line of separation, between the lowest stratum of earth and the first of rock-salt, is very exactly defined ; they are perfectly distinct, and do not at all run into each other. It is farther noticed that, in carrying a horizontal tunnel for 100 yards along the upper stratum of rock-salt, this was found to be irregular and unequal on its surface ; the irregularities in a great measure corresponding with those on the surface of the ground above.

Considerable salt-works are carried on in Scotland, and in the northern counties of this country on the sea-coast, by the evaporation of sea-water.

At Lymington, in Hampshire, the sea-water is

evaporated to one-sixth of the whole by the ac-

tion of the sun and air.

A Mr. Lowndes some time since published a

method of greatly improving the English brine-

salt, so as to make it at least equal to the French bay-salt. His method is : let a brine-pan, con-

taining about 800 gallons of liquor, be filled with

brine to within an inch of the top ; then make

and light the fire, and, when the brine is just

luke-warm, put in either an ounce of blood from

the butcher's, or the whites of two eggs. Let

the pan boil with all possible violence, and as

the scum rises take it off. When the fresh or

watery part is pretty well decreased, throw into

the pan the third part of a pint of new ale, or the same quantity of the grounds of any malt liquor.

When the brine begins to grain, add to it the

quantity of a small nut of fresh butter, and, when the liquor has stood half an hour longer, draw

out the salt. By this time the fire will be greatly abated, and so will the heat of the liquor; let no more fuel be thrown on the fire, but let the brine gently cool, till a person can just bear to put his hand into it ; keep it in that degree of heat as

nearly as possible, and wnen it has worked for

some time, and is beginning to grain, throw in

the quantity of a small nutmeg of fresh butter,

and about two minutes aAer that scatter through-

out the pan, as equally as may be, an ounce and

three quarters of common alum, pulverised very

tine ; then instantly, with the common iron

scrape-pan, stir the brine very briskly in every

part of the pan for about a minute ; then let the pan settle, and constantly feed the fire, so that

the brine may never be quite scalding hot, yet

always a great deal more than luke-warm ; let

the pan stand working thus for about three days

and nights, and then draw it, or take out the

salt. The brine remaining will, by this time, be

so cold that it will not work at all, therefore

fresh coals must be thrown upon the fire, and

the brine must boil for about half an hour, but

not near so violently as before the first drawing ; then, with the usual instrument, take out such

salt as is beginning to fall, and put it apart ;

then let the pan settle and cool. \Vhen the brine

becomes no hotter than one can just put one's

hand into it, proceed as before, and let the

quantity of alum not exceed an ounce and a

quarter, and about eight-and-forty hours after

draw the pan, and take out all the salt.

Lowndes's Brine Salt improved.

Mr. Lowndes afterwards directs cinders to be

chiefly used in preparing the fires, the better to

preserve an equal heat, and by that means also

he proposes saving a considerable expense, as-

serting that at present cinders are so little valued in Cheshire as to be thrown out into the high-

ways. Mr. Lowndes adds that, in a pan of the

size before-mentioned, there may be prepared,

at each process, 1600lbs. weight of salt from

the best brine in Cheshire, and 1066 Ibs. from

the ordinary brine of that county. This, as the

process continues five days, is a little more than

five bushels and a half of salt a day from the

best brine, and a little more than four bushels a

day from the ordinary kind.

The commerce of salt has formerly brought

an immense profit to France, or rather to the

royal treasury than to the makers and sellers,

on account of the heavy duty. The English and

Dutch, and (when they are at war with France)

the Swedes and Danes, have taken off most of

the salt of the Comic" Nantois ; paying for it, com-

muoibus annis, from twenty to thirty-five livres

the load. That of Guerande has been preferred,

by the English and Irish, to all the rest, as the best. Yet that of Borneuf, though browner and

heavier, is most used in France, as also through-

out the Baltic ; particularly in Poland, where,

besides the ordinary uses, it serves in tilling the ground ; being found to warm it, and prevent

little vermin from gnawing the grain. The Eng-

lish and Dutch have often striven hard, in times

of war, to do without the French salt; and to

that end have endeavoured to take salt from the

Spaniards and Portuguese ; but there is a dis-

agreeable sharpness and serosity natural to this

salt, which renders it very unfit for the salting of flesh, fish, &c. To remove this they boil it with

sea-water, and a little French salt, which they

procure by means of neutral nations, which not

only softens it, but increases its quantity by one-

third. Hut it should seem their refinine; does

no» succeed to their wish, by the eagerness with

which they return to the salt of Bretagne, &c

The duties on salt in this country are now wholly insignificant.

SALT, in chemistry. This term has been

usually employed to denote a compound, in

definite proportions, of any acid, with an alkali,

earth, or metallic oxide. When the proportions of the constituents are so adjusted that the resulting substance does not affect the color of infusion of litmus, or red cabbage, it is then called a neutral salt. When the predominance of acid is evinced by the reddening of these infusions the salt is said to be acidulous, and the prefix super, or bi, is used to indicate this excess of acid. If, on the contrary, the acid appears to be less than is necessary for neutralising the alkalinity of the base, the salt is then said to be with excess of base, and the prefix sub is attached to its name. See CHEMISTRY, and the various acids and metals in the alphabetical arrangement.

SALT, ARSENICAL, NEUTRAL OF MACQUER. Superarseniate of potash.

SALT, BITTER, CATHARTIC. Sulphate of magnesia.

SALT, COMMON. Muriate of soda.

SALT, DIGESTIVE, OF SYLVIUS. Acetate of potash.

SALT, DIURETIC. Acetate of potash.

SALT, EPSOM. Sulphate of magnesia.

SALT, FEBRIFUGE, OF SYLVIUS. Muriate of potash.

SALT, FUSIBLE. Phosphate of ammonia.

SALT, FUSIBLE, OF URINE. Triple phosphate of soda and ammonia.

SALT, GLAUBER'S. Sulphate of soda.

SALT, MARINE. Muriate of soda.

SALT, MARINE, ARGILLACEOUS. Muriate of alumina.

SALT, MICROCOSMIC. Triple phosphate of soda and ammonia.

SALT, NITROUS, AMMONIACAL. Nitrate of ammonia.

SALT OF AMBER. Succinic acid.

SALT OF BENZOIN. Benzoic acid.

SALT OF CANAL. Sulphate of magnesia.

SALT OF COLCOTHAR. Sulphate of iron.

SALT OF EGKA. Sulphate of magnesia.

SALT OF LEMONS, ESSENTIAL. Superoxalate of potash.

SALT OF SATURN. Acetate of lead.

SALT OF SEDLITZ. Sulphate of magnesia.

SALT OF SEIGNETTE. Triple tartrate of potash and soda.

SALT OF SODA. Subcarbonate of soda.

SALT OF SORREL. Superoxalate of potash.

SALT OF TARTAR. Subcarbonate of potash.

SALT OF VITRIOL. Purified sulphate of zinc.

SALT, PERLATE. Phosphate of soda.

• SALT, POLYCHREST, OF GLASER. Sulphate of potash.

SALT, SEDATIVE. Boracic acid.

SALT, SPIRIT OF. Muriatic acid was formerly called by this name, which it still retains in commerce.

SALT, SULPHUREOUS, OF STAHL. Sulphate of potash.

SALT, WONDERFUL PERLATE. Phosphate of soda.

SALT MINES. The salt mines of Vielicza, near Cracow. Poland, are very extraordinary

caverns. Wraxall describes them thus, in his Memoirs of the Courts of Berlin, Dresden, Warsaw, Vienna : — ‘ After being let down,’ says he,

• by a rope to the depth of 230 feet, our conductors led us through galleries which, for loftiness and breadth, seemed rather to resemble the

avenues to some subterranean palace than passages cut in a mine. They were perfectly dry in every part, and terminated in two chapels, composed entirely of salt, hewn out of the solid mass. The images which adorn the altars, as well as the pillars and ornaments, were all of the same transparent materials ; the points and spars of which, reflecting the rays of light from the lamps which the guides held in their hands, produced an effect eoˆially novel and beautiful. Descending lower into the earih, by means of ladders, I found myself in an immense hall or cavern of salt, many hundred feet in height, length, and dimensions, the floor and sides of which were cut with exact regularity ; 1000 persons might dine in it without inconvenience, and the eye in vain attempted to trace or define its limits. Nothing could be more sublime than this vast subterranean apartment, illuminated by flambeaux, which faintly discover its prodigious magnitude, and leave the imagination at liberty to enlarge it indefinitely. After remaining about two hours and a half under ground, I was drawn up again in three minutes with the greatest facility.'

SALTA, or SAN MIGUEL DE SALTA, a city and district of Tucuman, South America, was founded in 1682, under the name of San Clemente de la Nueva Sevilla, but was afterwards changed to its present site in the beautiful valley of Lerma. Its environs are very fertile, abounding in wheat, rye, and vines, with pastures for the cattle exported from this place to Peru ; and its commerce consists in corn, meal, wine, cattle, salt meat, fat, hides, and other commodities, which are sent to all parts of Peru. It is computed that the number of mules fattened in the valley of Lerma amount, during the months of February and March, when the annual lair is held, to 60,000 ; and, besides these, there are generally 4000 horses and cows. The natives are subject to a species of leprosy, and nearly all the women, after they have attained the age of twenty, have the goitrous swelling in the throat, which disfigures them very much. It is fifty miles south of Jujui ; and the river which washes the town turns east, and enters the Vermeijo.

SALTASH, a post and market town of Cornwall, seated on the side of a sleep hill, on the banks of the Tamar; it has three streets, which,

from the declivity, are washed clean by every shower of rain that falls. It possesses many privileges, and has jurisdiction on the Tamar, to the mouth of the port, claiming anchorage dues of all vessels that enter the harbour ; and their coroner sits upon all bodies found drowned in the river. Saltash sent two members to parliament ever since the reign of Edward VI., who were elected by the mayor, recorder, &c., but was disfranchised in 1832. It has a. market on Saturday, and sufficient depth of water in its harbour for larˆe vessels. It lies six miles north-west of Plymouth, and 220 W. S. W. of London.

SALTATION, r,. s. Lat. saltatio. The act of dancing ; jumping : beat ; palpitation.

The locusts being ordained for saltation, their hinder legs do far exceed the others.

BKNBW'J Vultjar Errours.

If the great artery be hurt, you will discover it by its saltation and florid colour.

Wiseman's Surgery.

SALTCOATS, a sea-port town of Ayrshire, five miles north-west of Irvine. It has an excel-

lent harbour, capable of admitting vessels of 220 tons. In 1700 it became the property of Sir Robert Cunningham, who began to work the valuable strata of coals in the neighbourhood, and built a harbour at Saltcoats to export them. He also erected several large pans for the manufacture of salt ; which proved so successful that there is now made above 3000 bolls annually. Ship-building was also commenced and carried on with success. Notwithstanding the population and prosperity of this town it has neither magistrates, nor police, nor even a weekly market, but only one annual fair. A bailiff levies the dues of anchorage, and executes such regulations as are necessary for loading the vessels, sailing, &c., and the masters or owners of these vessels enter into a written obligation to observe these regulations. Saltcoats lies ten miles north-west of Ayr, and twenty-two south-west of Glasgow.

SALTEU (John), an English officer, born in 1709, who by his merit rose from the ranks to be a major-general, and lieutenant-colenol, of the first regiment of foot. The duke of Cumberland,

then in the guards, first noticed him, made him serjeant in his own company, and some time after gave him a commission, and patronised him publicly in presence of all the other officers. He died in 1787, aged seventy-eight.

SALTER (Samuel), D.D., a learned English divine, born at Norwich, and educated at the Charter House. He was admitted of Benet College; Cambridge, in 1730, where he obtained the degree of B.A. and a fellowship. He became soon after preceptor to the sons of Sir Philip Yorke, chief justice of the king's bench, who also made him his chaplain, a prebendary of Gloucester, and rector of Burton Goggles, in 1 740, where he married Miss Seeker, a relation of the bishop of Oxford. In 1750 he was made minister of Great Yarmouth ; in 1751 archbishop Herring created him D.D.; in 1756 the lord chancellor made him rector of St. Bartholomew ; and, in 1761, master of the Charter House. He published Pindaric Odes, in Greek, on the nuptials of the Princes of Wales and Orange ; Latin Verses on the Death of Queen Caroline ; and Sermons, Tracts, &c. He died May 2, 1 778.

SALTFLEET, a sea-port town of Lincoln-

shire, with a market on Saturday ; seven miles

south of the mouth of the Humber, thirty-three

north-east of Lincoln, and 158 north of London.

SALTIER, n. s. FT. saultiere. A term of

heraldry,

A saltier is in the form of a St. Andrew's cross, and by some is taken to be an engine to take wild beasts ; in French it is called un sautoir : it is an honourable bearing. Peacham.

SALTIER. See HERALDRY. This, says G

Leigh, in his Accidence of Arms, was anciently

made of tin; height of a man, and driven full of

pins, the use of which was to scale walls, &c.

Upton derives this word from saltus, i. e. a forest.

The French call this ordinary sautoir, from sauter,

to leap ; perhaps because it may have been used

by soldiers to leap over walls of towns, which in

former times were low; but some think it is

borne in imitation of St. Andrew's cross.

SALTINBANCO, n. s. Lat. saltare. in banco,

to climb as a mountebank mounts a bank or

bench. A quack or mountebank.

Siiltinbuncoet, quacksalvers, and charlatans, deceive

them : were /Esop alive, the Piazza and Pont-neuf

could not speak their fallacies.

Browne's Vulgar Errtmrs.

He played the sallinbanco's part,

Transformed to a Frenchman by my art. Hudibras.

SALTPETRE. See GUNPOWDER and CHE-

MISTRY.

SALV'ABLE, adj. ~\ Lat. salvo. Possible

SALVABIL'ITY, n. s.f to be saved; the noun

SAL'VAGE, > substantive correspond-

SALVA'TION, \ing: salvage is a legal

SAL'VATORY.) claim for assisting a

wrecked vessel: salvation, preservation from

eternal death : the act of saving.

As life and death, mercy and wrath, are matters

of understanding or knowledge, all men's tahwtion,

and all men's endless perdition, are things so oppo-

site, that whosoever doth affirm the one must neces-

sarily deny the other. Hooker.

Why do we Christians so fiercely argue against the

salwibility of each other, xs if it were our wish that all should be damned, but those of our particular

sect ? Decay of Piety .

Our wild fancies about God's decrees have in

event reprobated more than those decrees, and have

bid fair to the damning of many whom those left

tollable. Id.

Him the most High,

Wrapped in a balmy cloud with winged steeds,

Did, as them saw'st, receive ; to walk with Ood

High in talvation, and the climes of bliss,

Exempt from death. Milton't Paradise Lost.

I consider the admirable powers of sensation,

phantasy, and memory, in what talvatoriet or reposi-

tories the species of things past are conserved.

Hole's Origin of Mankind.

SALVADOR (Si), the city of San Salvador,

the chief place of the province, and the second

of Brasil, is built on a rocky eminence 600 feet

nigh, on the east shore of All Saints' bay,, a

league within Cape Salvador, the east point of

the entrance. The streets, though wide, are so

steep as generally to preclude the use of car-

riages. The number of private houses is about

2000, mostly of stone, and massively built. The

religious buildings are of course numerous and

rich, particularly the cathedral, dedicated to San

Salvador. The population has been estimated at 30,000 whites, and 70,000 Indians and negroes. The natural strength of the position is aided by strong fortifications, and the garrison usually consists of 5000 regular troops, besides a large white and black militia. Many ships of war and merchant vessels are built here. The buildings are chiefly of the seventeenth century, ill constructed, and, from the slightness of the materials, rapidly decaying, which diminishes the effect of many of them once sumptuous. The town is divided into high and low, the latter consisting of streets filled with store houses on the shores of the bay, for the convenience of loading and unloading.

SALVADOR (St.), the name given by the Portuguese missionaries to the capital of the kingdom of Congo, in Western Africa. We have no ac— count of it, except theirs, which is somewhat antiquated. They describe it as built at the top of a rocky and steep hill, in a plain about ten miles in circumference. The king's palace consists of a vast enclosure, about a league in circuit. The Portuguese had a quarter assigned to

them, they tell us, which they built partly of stone and enclosed. They had erected a church, and invested one of their number with the title of bishop. The late British expedition, though they found no Portuguese on any part of the Zaire, were yet informed that a few still remained in this capital.

SALVADOR (St.), a district of Guatimala, in South America, which produces in great abundance sugar-cane and indigo.

SALVADOR (St.), the capital of the above province, situated on the banks of a river, at the distance of twelve miles from the Pacific. It has a little trade, and is the residence of a governor. Population about 5000 Indians, whites, and castes. 140 miles E. S. E. of Guatimala.

SALVADOR (St.), one of the Bahama Islands, discovered by Columbus in 1492. It is also known by the name of Cat Island, and, except at the south extremity, is very narrow. The population in 1797 amounted, including whites, to 657, and in 1803, the era of patented estates granted by the crown for cultivation, to 28,903.

SALVADORA, in botany, a genus of the mo-

nogynia order, and tetrandria class of plants : CAL. quadrifid : COR. none : KERRY monospermous ; species one only, a Persian shrub ; the seed covered with an antlus or loose coat.

SAL'VAGE, adj. Fr. saulvage ; Ital. sdvaggio, from Lat. silva. Wild ; rude ; cruel. Now spoken and written SAVAGE, which see

May the Essexian plains
Prove as a desert, and none there make stay
But tabage beasts, or men as wild as they. Waller.

A savage race inured to blood. Dryden.

SALVAGE MONEY, a reward allowed by the civil and statute law for the saving of ships or goods from the danger of the sea, pirates or enemies— Where any ship is in danger of being stranded or driven on shore, justices of peace are to command the constables to assemble as many persons as are necessary to preserve it ; and, on its being preserved by their means, the persons assisting therein shall, in thirty days after, be paid a reasonable reward for their salvage ; otherwise the ship or goods shall remain in the custody of the officers of the customs, as a security for the same. And in case the said

officer of the customs, and the owners, &c., of

the ship shall be unable to agree concerning the

sum to be paid as salvage, they shall have powet

to nominate three neighbouring justices, who

shall adjust the quantum of the gratuity to be

paid to the several persons acting in the salvage

of the ship or goods ; and such adjustment

shall be binding on all parties, and shall be re-

coverable in an action at law to be brought by

the respective persons to whom the same shall

be allotted by the justices. And, in case no per-

son shall appear to make his claim to all or any

of the goods saved, then the chief officer of the

customs of the nearest port shall apply to three

of the nearest justices, who shall put him or some responsible person in possession of such goods,

such justices taking an account thereof in writ-

ing, to be signed by such officers of the customs ; and if the goods shall not be legally claimed

within twelve months, by the right owners, they

shall be publicly sold, or, if perishable, forth-

with sold, and the produce of the sale, after all

charges deducted, with a fair account of the

whole, shall be transmitted to the exchequer,

there to remain for the benefit of the owner,

when appearing ; who, upon affidavit, or other

proof of his right, to the satisfaction of one of

the bjtrons of the coif, shall, upon his order, re-

ceive the same out of the exchequer.

SALVAGES, a group of uninhabited islands,

or rather rocks, off the coast of Africa, immedi-

ately north of the Canaries.

SALU'BRIOUS, adj. \ Latin salubris.

SALU'BRITY, n. s. $ Wholesome ; health-

ful ; promoting health ; wholesomeness.

The warm limbeck draws

Salubrioui waters from the nocent brood. Philipi.

SALVE, n. s. & v. a. \ Originally and pro"

SA'LVER, £ perly sulf, which hav"

SAL'VO.) ing salves in the

plural, the singular in time was borrowed from it.

Sax. rea'F > Lat salviis, salvo. A glutinous

matter applied to wounds and hurts ; a plaster ;

help; remedy: to cure by medicaments; help

by a salvo ; salute (obsolete) : a salver is a dish to save what is left : salvo, an exception, reser-

vation, or excuse.

Some seek to salve their blotted name

With others blot, ‘till all do taste of shame. Sidney.

Our mother tongue, which truly of itself is both

full enough for prose, and stately enough for verse, hath long time been counted most bare and barren of both ; which default, when as some endeavoured to

salve and cure, they patched up the holes with rags from other languages. Spenser.

That stranger knight in presence came,

And goodly salved them ; who mought again

Him answered as courtesy became. Faerie Queene.

Many skilful leeches him abide,

To salve his hurts. Id.

Ignorant I am not how this is salved : they do it but after the truth is made manifest. Hooker.

Let us hence, my sovereign to provide

A talre for any sore that may betide.

Shakspeare. Henry VI.

My more particular,

And that which most with you should salve my

?oing.

Is Fulvia’s death. Id. Antony and Cleopatra.

The schoolmen were like the astronomers, who, to

talre phenomena, framed to their concek eccentricks

and epicycles ; so they, to stilve the practice of the church, had devised a great number of strange posi-

tions. Bacon.

Sleep is pain's easiest salve, and doth fulfil

All offices of death except to kill. Donne.

*I hey admit many *«/>v>s, cautions, and reservations, so as (hey cross not the chief design. King Charlis.*

Go study salve and treacle : ply

Your tenant's leg, or his sore eye. Cleaveland.

*If they shall excommunicate me, hath the doc**

trine of meekness any salve for me then ?

*Hammond**

The royal sword thus drawn has cured a wouud,

For which no other salve could have been found.

Waller.

Though most were sorely wounded, none were

slain ;

The surgeons soon despoiled them of their arms,

And some with salves they cure. Dryden.

It will be hard if he cannot bring himself off at last with some salvo or distinction, and be his own con-

fessor. L'Estrange.

He has printed them in such a portable volume

that many of them may be ranged together on a

single plate; and is of opinion that a salver of

spectators would be as acceptable an entertain-

ment for the ladies, as a saiver of sweetmeats.

Additon.

If others of a more serious turn join with us deli-

berately in their religious professions of loyalty,

with any private salvoes or evasions, they would do well to consider those maxims in which all casuists are agreed. Id.

There must be another state to make up the ine-

qualities of this, and salve all irregular appearances.

Atterbury.

Between each act the trembling salver ring,

From soup to sweet wine. Pope.

Tills conduct might give Horace the hint to say,

that, when Homer was at a loss to bring any difficult matter to an issue, he laid his hero asleep, and this sak-ed all difficulty. Broome.

SALVE REGINA, among the Romanists, the

name of a Latin prayer, addressed to the Virgin.

It was composed by Peter, bishop of Compos-

tella. The custom of singing it at the close of

the office was begun by order of St. Dominic,

in the congregation of Dominicans at Bologna,

about 1237. Gregory IX. first appointed it to

be general. St. Bernard added the conclusion,

O dulcis ! O pia, &c.

SALVI (John), an eminent Italian historical

painter, born near Urbino in 1504. He excelled

chiefly in copying the works of the great masters,

which he did with surprising accuracy. He died

in 1590.

SALVIA, sage, a genus of the monogynia order, and digynia class of plants ; natural order forty-second, verticillatse : COR. unequal ; filaments placed crosswise on a pedicle. The most remarkable species are these : —

1. S. auriculata, common sage ot virtue, is well known in the gardens and markets. The leaves are narrower than those of the common sort ; they are hoary, and some of them are indented on their edges towards the base, which indentures have the appearance of ears. The spikes of flowers are longer than those of either the second or fourth species, and the whorls are t:enerally naked, having no leaves between them. The flowers are smaller, and of a deeper blue than those of common red sage.

2. S. officinalis, the common large sage, which is cultivated in gardens, of which there are the following varieties : — 1. The common green sage. 2. The wormwood sage. 3. The green sage with a variegated leaf. 4. The red sage. 5. The red-sage \nh a variegated leaf. These are accidental

variations, and therefore are not enumerated as species. The common sage grows naturally in the southern parts of Europe, but it is here cultivated in gardens for use ; that variety with red or blackish leaves is the most common in the British gardens ; and the wormwood sage is in greater plenty here than the common green-leaved sage, which is not common in gardens.

3. S. pomifera, with spear-shaped oval entire leaves, grows naturally in Crete. It has a shpubby stalk, which rises four or five feet high, dividing into several branches. The flowers grow in spikes at the end of the branches ; they are of a pale blue color, and have obtuse empalements. The branches have often punctures made in them by insects, at which places grow large protuberances as big as apples, in the same manner as the galls upon an oak, and the rough balls on the briar.

4. S. tomentosa, generally called balsamic sage by the gardener. The stalks do not grow so upright as those of the common sage ; they are very hairy, and divide into several branches,

garnished with broad heart-shaped woolly leaves

standing upon long foot-stalks ; they are sawed

on their edges, and their upper surfaces are

rough ; the leaves which are upon the flower-

stalks are oblong and oval, standing upon shorter

foot-stalks, and are very slightly dentated on their edges ; they grow in whorled spikes toward the

top of the branches ; the whorls are pretty far

distant, but few flowers in each ; they are of a

pale blue, about the size of those of the common

sort. This sage is preferred to all the others for making sage tea. All the sorts of sage may be

propagated by seeds, if they can be procured ;

but as some of them do not perfect their seeds

in this country, and most of the sorts, especially

the common kinds for use, are easily propagated

by slips, it is not worth while to raise them from seeds.

SALVIANS, or SALVIANUS, an ancient father

of the Christian church, who flourished about

A. D. 440, and was well skilled in the sciences.

Some say he was a Gaul ; others a German. He

resided long at Triers, and was called the Jere-

miah of the fifth century. He acquired such

reputation for his piety and learning that he was

named the master of the bishops. He wrote A

Treatise on Providence ; another on the Avarice of the Clergy ; and nine epistles, of which Baluze has given an excellent edition ; that of Conrad Rittershusius, in 2 vols. 8vo., is also esteemed.

SALVIATI (Francis), an eminent painter, born in Florence, 1510. His manner of designing approached very near that of Raphael ; and he worked in distemper, fresco, and oil. His naked figures are peculiarly graceful, as well as those in drapery. He died in 1563.

SALVIATI (Joseph), an eminent painter and mathematician, born in Venice in 1535. His original name was Porta. He was often employed in conjunction with Paul Veronese and Tintoret. His skill was equally great in designing and coloring ; and he wrote several useful Treatises on .Mathematics. He died in 1585. Both these painters took the name of Salviati from a cardi- Cfll, who patronised them greatly.

SAl.VINI (Antonio Marie), a learned Italian, who became professor of Greek at Florence. He translated Homer's Iliad and Odyssey ; with the poems of Hesiod, Theocritus, Anacreon, and many of the minor Greek poets, into Italian

verse. He was a member of the academy de la Crusca, and assisted in the compilation of their Dictionary, in 6 vols. He died in Florence in 1729.

SALUS, in the Roman mythology, the goddess of health, and the daughter of JEsculapius, called Hygiaea by the Greeks. We find her name on many medals of the Roman emperors, with different inscriptions ; as, SALUS PUBLICA, SALUS REIPUBLlCjE, SALUS AUGUSTI, &C.

SALUSTE (William de), Du Bartas, a French poet, who lived ia the sixteenth century. He was employed by Henry IV. of France in England, Denmark, and Scotland ; and commanded a troop of horse in Gascony, under marechal de Martignan. He was a Calvinist, and died in 1590, aged forty-six. He wrote a great number of poems ; the most famous are, 1 . The Week, or the Creation of the World, in seven books. 2. The Poem of Judith : and, 3. The Battle of Ivry, gained by Henry IV. in 1590. He wrote in a bombastic style.

SALUTARY, o$) Fr. salutaire; Lat.

SAL'UTARINESS, n. s. $ salutaris. Wholesome;

healthful ; safe ; contributing to health or safety : the noun substantive corresponding.

The gardens, yards, and avenues are dry and clean ; and so more salutary as more elegant. Ray.

It was want of faith in our Saviour's countrymen,

which hindered him from shedding among them the

salutary emanations of his divine virtue ; and he did not many mighty works there, because of their un-

belief. Bentley.

SALUTATION, n. s. ˆ Fr. salutation •

SALUTE', v. a. & n. s. £ Lat. salutatio. The SALU'TER. j act or style of salu-

ting ; greeting : to greet ; kiss : a kiss : one who salutes.

The early village cock

Hath twice done salutation to the morn.

*Shakfpeare**

One hour hence

Shall salute your grace of York as mother. Id.

Would I had no being,

If this salute iny blood a jot : it faints me,

To think what follows. Id. Henry VIII.

In all publick meetings, or private addresses, use

those forms of salutation, reverence, and decency,

used amongst the most sober persons.

Taylor's Rule of Holy Living.

On her the angel haii

Bestowed, the holy salutation used

To blest Mary. Milton.

O, what avails me now that honour high

To have conceived of God, or that salute,

Hail highly favoured, among women blest! Id.

The custom of praying for those that sneeze is

more ancient than these opinions hereof ; so that

not any one disease has been the occasion of this

salute and deprecation. linnune.

There cold salutes, but here a lover's kiss.

lioscommon.

Court and state he wisely shuns ;

Nor bribed to servile lalvtatiem runs. Dryden.

Continual salutes and addresses entertaining hwr

all the way, kept him from saving so great a lile, bu SAL

with one glance of his eye upon the paper, till he came to the fatal place where he was stabbed.

South.

I shall not trouble my reader with the first salutes of our three friends. Addifon.

SALUTATION, VARIOUS MODES OF. Modes of

salutation have, in different countries, very dif-

ferent characters, and it is not uninteresting to

examine .their shades. Many display a refine-

ment of delicacy ; others are remarkable for their

simplicity, or sensibility. The islanders, near

the Philippines, take the hand or foot of him

they salute, and with it they gently rub their

face. The Laplanders apply their nose strongly

against that of the persons they salute. Dampier

says that, at New Guinea, they are satisfied in

placing on their heads the leaves of trees, which

have ever passed for symbols of friendship and

peace. Other salutations are very incommodious;

it requires great practice to enable a man to be

polite in an island in the Straits of the Sound.

Boatman tells us, 'They raised his left foot, which they passed gently over the right leg, and thence

over his face.' The inhabitants of the Philip-

pines bend their body very low, in placing their

hands on their cheeks, and raising at the same

time one foot in the air, with their knee bent.

An Ethiopian takes the robe of another, and ties

it about his own waist, so that he leaves his

friend half naked. Sometimes men place them-

selves naked before the person whom they salute,

to show their humility, and that they are un-

worthy of a covering in his presence. This was

practised befoie Sir Joseph Banks, when he re-

ceived the visit of two Otaheitan ladies. Some-

times they only undress partially. The Japanese

only take off a slipper ; the people of Arracan

their sandals in the street, and their stockings in the house. The grandees ,of Spain claim the

right of appearing covered before the king to

show that they are not so much subjected to him

as the rest of the nation. When two negro mo-

narehs visit they embrace in snapping three times

the middle finger. When the inhabitants of Car-

mena, says Athenaeus, would show a peculiar

mark cf esteem, they opened a vein, and pre-

sented "or the beverage of their friend, the blood

as it issued. The Franks tore hair from their

head, and presented it to the person whom they

saluted The slave cut his hair, and offered it

to his naster. The Chinese are singularly par

ticular in their personal civilities ; they even

calculate the number of their reverences. The

men trove their hands in an affectionate manner,

while iliey are joined together on their breast,

and bow their head a little. If two persons

meet ai'.er a long separation, they both fall on

their knees and bend their faces to the earth, and this they repeat two or

three times. If a Chi-

nese is a:ked how he finds himself in health ? he

answers, Very well : thanks to your abundant

felicity. If they would tell a man that he looks

well, thej say, Prosperity is painted on your

face ; or, Your air announces your happiness.

All these ind many other answers are prescribed

by the Chiiese academy of compliments. There

arc determned the number of bows, the expres-

sions to beemployed, the genuflections, and the

inclinations to 'be made to 'the right or left hand, the salutations of the master before the chair

where the stranger is to be seated ; for he salutes it most profoundly, and wipes the dust away

with the skirts of his robe. The lower class of

people are equally nice in these punctilios ; and

ambassadors pass forty days in practising them

before they can appear at court. The marks of

honor are frequently arbitrary ; to be seated,

with us, is a mark of repose and familiarity; to

stand up, that of respect. There are countries,

however, in which princes will only be addressed

by persons who are seated, and it is considered

as a favor to be permitted to stand in their pre-

sence. This custom prevails in despotic coun-

tries : a despot cannot suffer without disgust the

elevated figure of his subjects ; he is pleased to-

bend their bodies with their genius : his presence

must lay those who behold him prostrate on the

earth : he desires no eagerness, no attention ; he

would only inspire terror.

SALUTE, in military matters, a discharge of

artillery or small arms, or both, in honor of some person of extraordinary quality. The colors

likewise salute royal persons, and generals com-

manding in chief; which is done by lowering

the point to the ground. In the field, when a

regiment is to be reviewed by the king or his

general, the drums beat a march as he passes

along the line, and the officers salute one after

another, bowing their half-pikes or swords to the

ground ; then recover and take off their hats.

The ensigns salute all together by lowering their

colors. In the navy this ceremony is variously

performed, according to the circumstances, rank,

or situation of the parties. It consists in firing a certain number of cannon, or volleys of small

arms; in striking the colors or topsails; or in

one or more general shouts of the whole ship's

crew, mounted on mr«>ts or rigging for that pur-

pose. The principal regulations with regard to salutes in the royal navy are as follows : — When a flag-officer salutes the admiral and commander in chief of the fleet he is to give him fifteen guns ; but when captains salute him they are to give him seventeen guns. The admiral and commander-in-chief of the fleet is to return two guns less to flag-officers, and four less to captains. Flag-officers saluting their superior or senior officer are to give him thirteen guns. Flag-officers are to return an equal number of guns to flag-officers bearing their flags on the same mast, and two guns less to the rest, as also to the captains. When a captain salutes an admiral of the white or blue he is to give him fifteen guns ; but to vice or rear-admirals thirteen guns. When a flag-officer is saluted by two or more of his majesty's ships he is not to return the salute till all have finished, and then to do it with such a reasonable number of guns as he shall judge proper. In case of the meeting of two squadrons, the two chiefs only are to exchange salutes. And, if single ships meet a squadron consisting of more than one flag, the principal flag only is to be saluted. No salutes shall be repeated by the

same ships unless there has been a separation of

six months at least. None of his majesty's ships

of war, commanded only by captains, shall give

or receive salutes from one another, in whatsoever

part of the world they meet. A flag-officer com-

niandmg ID chief shall be saluted, upon his first

Hoisting his flag, by all the ships present, with

such a number of guns as is allowed by the first, third, or fifth articles. When any of his ma-

jesty's ships meet with any ship or ships belong-

ing to any foreign prince or state, within his

majesty's seas (which extend to Cape Fir.isterre),

it is expected that the said foreign ships do

strike their topsail, and take in their flag, in ac-

knowledgment of his majesty's sovereignty in

those seas : and if any shall refuse, or offer to resist, it is enjoined to all flag-officers and com-

manders to use their utmost endeavours to com-

pel them thereto, and not suffer any dishonor to

be done to his majesty. And if any of his ma-

jesty's subjects shall so much forget their duty

as to omit striking their topsail in passing by his majesty's ships, the name of the ship and master,

and whence and whither bound, together with

affidavits of the fact, are to be sent up to the

see-etary of the admiralty, in order to their being proceeded against in the admiralty court. And

it is to be observed that, in his majesty's seas, his majesty's ships are in nowise to strike to any ;

and that in other parts no ship of his majesty is to strike her flag or topsail to any foreigner, un-

less such foreign ship shall have first struck, or

at the same time struck, her flag or topsail to his majesty's ship. The flag-officers and commanders

of his majesty's ships are to be careful to main-

tain his majesty's honor upon all occasions,

giving protection to his subjects, and endeavour-

ing, what in them lies, to secure and encourage

them in their lawful commerce ; and they are

not to injure, in any manner, the subjects of his

majesty's friends and allies. If a foreign admiral

meets with any of his majesty's ships, and salutes

them, he shall receive gun for gun. If he a

be a vice-admiral, the admiral shall answer with

two guns less ; if a rear-admiral, the admiral

and vice-admiral shall return two less. But if

the ship be commanded by a captain only, the

flag-officer shall give two guns less, and captains

an equal number. When any of his majesty's

ships come to an anchor in any foreign port or

road, within cannon-shot of its forts, the captain

may salute the place with such a number of guns

as has been customary, upon good assurance

of having the like number returned, but not

otherwise. But if the ship bear a flag, the flag-

officer shall first carefully inform himself how

ft us of the like rank, belonging to other crowned heads, have given or returned salutes, and to in-

sist upon the same terms of respect. It is

allowed to the commanders of his majesty's ships

in foreign parts to salute the persons of any ad-

mirals, commanders-in-chief, or captains of ships

of war of foreign nations, and foreign noblemen,

or strangers of rank, coming on board to visit

the ship ; and the number of guns is left to the commander, as shall be suitable to the occasion

and quality of the person visiting ; but he is

nevertheless to remain accountable for any ex-

cesses in the abuse of this liberty. If the ship

visited be in company with other ships of war,

the captain is not to make use of the civilities

allowed in the preceding articles but with leave

iind consent of the commander-in-chief or the

vcinor captain. Merchant ships, whether foreign-

ers or belonging to his majesty's subjects,

the admiral of the fleet, shall be answered by six guns less ; when they salute any other flag-ships,

they shall be answered by four guns less ; and,

if they salute men of war commanded by cap

tains, they shall be answered by two guns less.

If several merchant ships salute in company, no

return is to be made till all have finished, and

then by such a number of guns as shall be

thought proper ; but, though the merchant-ships

should answer, there shall be no second return.

None of his majesty's ships of war shall salute

any of his majesty's forts or castles in Great Bri-

tain or Ireland on any pretence whatsoever.

SALUZZO, a district of Piedmont, forming

part of the continental states of the king of Sar-

dinia, and bounded by the county of Nice, the

valley of Lucerne, and the frontier of France,

extending along the province of Dauphiny. It

has a superficial extent of 750 square miles,

mountainous and rugged ; but, from warmth ol

climate, its soil is in many parts fertile, produc-

ing corn, hemp, fruit, wine, and silk. It is

commonly called the marquisate of Saluzzo. Po-

pulation 126,000.

SALUZZO, a town of the Sardinian states, in the north-west of Italy, the capital of the above district, situated at the foot of the Alps, not far from the source of the Po. Including its suburbs, it has above 10,000 inhabitants. It is to» lerably well built, and contains a cathedral and several churches worth notice. The silk manufactures are extensive. It is the see of a bishop, and stands on an eminence. Twenty-eight miles south of Turin.

SALZBURG, a province and city in the west of Austria, lying between Styria, Tyrol, and Bavaria. Its area, since the cession of Berchtolsgaden to Bavaria, is about 2800 square miles, and its population 142,000. It consists partly of a great valley, with the Salza flowing along the middle, and partly of a track of mountains and defiles. The ground is highest in tlie south, where it forms part of the None Alps. The climate of this mountainous region is much more severe than might be expected in 46° 55′ and 47° 58′ N. lai. Even in the neighbourhood of Salzburg, the hills, which are here much inferior to those of the south, are covered with snov before

October. In the south the winter lasts, with lit-

tle intermission, from the beginning of Novem-

ber to April, and showers and frosts folow till

about the end of June. The Sirocco, 10 well

known in the Mediterranean, then passes along

these valleys from Italy, and, though much cooled

in this mountain track, has not eTen herf lost its power, though it seldom lasts above a diy.

SAMANAP, a large town on the s«uth-east

coast of the island of Madura. It is sitiated on

a fine bay, which, though rather shalbw, will

admit of large brigs or prows, lying cbse up to

the town. This place carries on an extensive

commerce ; and the country abounds in rice,

and teak timber. Here the Dutch used to build

their largest ships for the country trade.

SAMANEANS, an ancient philoscphical sect

of India, mentioned by Greek writes, who de-

voted themselves entirely to the study of divine

nis lorn, and gave up all private property, coin-

milting the care of their families to the State.

Their Society was supported at the public ex-

pense. They were a kind of magi, and have been confounded by some with the Brahmins. They proceeded from Ariana, a province of Persia, and the neighbouring countries, spread themselves in India, and taught new doctrines. The Brahmins, before their arrival, were in the highest period of their glory, were the only oracles of India, and their principal residence was on the banks of the Ganges, and in the adjacent mountains ; while the Samaneans were settled towards the Indus. Others say that the Brahmins acquired all their knowledge from the Samaneans. The most celebrated and ancient of the Samanean doctors was Boutta, or Buddah, who was born A. A.C. 683. His scholars paid him divine honors ; and his doctrine, which consisted chiefly in the transmigration of souls, and in the reverence of cows, was adopted not only in India, but also in Japan, China, Siam, and Tartary. It was propagated, according to M. de Saint Croix, in Thibet, in the eighth century, and succeeded there the ancient religion of Zamolxis. The Samaneans, or Buddists, were entirely destroyed in India by the jealous rage of the

Brahmins, whose absurd practices and fables they affected to treat with contempt; but several of their books afe still preserved and respected on the coasts of Malabar. Several of the Brahmin orders have also adopted their manner of living, and openly profess the greatest part of their doctrines.

SAMAR, one of the Philippines, situated south-east from the large island of Luzon, from which it is separated by a strait about five leagues in breadth. In length it may be estimated at 140 miles, by sixty the average breadth.

In this island the soil is extremely fertile, easily cultivated, and rewards the industry of the laborer with at least forty-fold.

SAMARA, in botany, a genus of the monogynia order, and tetrandria class of plants : CAL. quadripartite : COR. tetrapetalous : stamina immersed in the base of the petal : stigma funnel-shaped. Species four, natives of the East and West Indies, and of the Cape.

SAMARCAND, a great city of Asia, the former capital of Independent Tartary, and, under Timur, of an empire which extended over a great part of this continent. Clavijo, a Spanish am-

bassador, who visited it about A. D. 1400, estimated the population of the city and suburbs at 150,000. A considerable number, for want of habitations, were obliged to make their habitations in the surrounding rocks. The country, for two leagues round, was entirely covered with large villages, gardens, and country houses, the residence of Tartar chiefs ; so that to a stranger approaching, a vast forest seemed to enclose it. Its inland commerce was most extensive. The pomp of Timur's court, and of his numerous palaces, is said to have surpassed description. Our information with regard to the modern state pf this once celebrated capital, is very imperfect.

SAMARIA, in ancient geography, one of the three larger districts on this side of the Jordan, situated in the middle between Galilee on the north, and Judea on the south, beginning at the village Ginsea, in the Campus Magnus, and ending at the toparchy called Acrobatena. (Josephus). Its soil differed in nothing from that of Judea ; both equally hilly and champaign, both equally fertile in corn and fruit (id.) : called the kingdom of Samaria in Ephraim (Bible) ; comprising

the ten tribes, and consequently all the country

to the north of Judea, and east and west of Jor-

dan. Both the kingdom and city are now called

Naplous.

SAMARIA, the capital city of the kingdom of

Samaria, or of the ten tribes. It was built by

Omri king of Israel, who began to reign A. M.

3079, and died in 3086. 1 Rings xvi. 24. He

bought the hill Samaria of Shemer for two ta-

lents of silver, or for the sum of £684 : 7 : 6. It took the name of Samaria from Shemer the owner

of the hill ; though some think there were al-

ready some beginnings of a city, because, before

the reign of Omri, there is mention made of Sa-

maria (I Kings xiii. 32) in A. M. 3030. But

others take this for a prolepsis, or an anticipation, in the discourse of the man of God, who speaks

of Samaria under the reign of Jeroboam. How-

ever this be, it is certain that Samaria was no

considerable place, and did not become the

capital of the kingdom of Israel till after the

reign of Omri. Before him, the kings of Israel

dwelt at Shechem, or at Tirzah. Samaria was

situated upon an agreeable and fruitful hill, and in an advantageous situation, and was twelve miles

from Dothairn, twelve from Merom, and four

from Atharoth. Josephus says it was a day's

journey from Jerusalem. Besides, though it was

built upon an eminence, yet it must have had

water in abundance ; since we find medals

struck in this city, wherein is represented the

goddess Astarte treading a river under foot.

And Josephus says that, when it was taken by

John Hyrcanus, he caused the brook to flow

over its ruins, to obliterate all marks of it. The kings of Samaria omitted nothing to make the

city the strongest, the finest, and the richest, that was possible. Ahab built there a palace of

ivory (1 Kings xxii. 39), that is there were many

ornaments of ivory in it. Amos describes Sa-

maria under Jeroboam II., as a city sunk into

all excesses of luxury and effeminacy. (Amos

iii. 15, and iv. 1, 2). Benhadad king of Syria

built public places or streets in Samaria (1 Kings

xx. 34), probably for traffic, where his people

dwelt to promote trade. His son Ben-hadad

besieged it under Ahab (1 Kings xx. 1, 2, 3, &c.) A. M. 3203. In 3204 Ben-hadad brought au

army into the field, but it was again cut in

pieces. Some years after this Ben-hadad came

a third time, lay down before Samaria, and re-

duced it to such necessities by famine that a

mother was there forced to eat her own child ;

but the city was relieved by a sensible exertion

of the protection of God. Lastly, it was besieg-

ed by Shalmaneser king of Assyria, in the ninth

year of Hoshea king of Israel (2 Kings xvii. 6, 7, &c.), and fourth of Hezekiah king of Judah. It

was taken three years after, in A. M. 3283. The

prophet Hosea speaks of the cruelties exercised

by Shalmaneser against the besieged (Hosea x.

4 — 8) ; and Micah says that this city was re-

duced to a heap of stones. (M.ic. i. 6). The

Cuthites, who were sent by Esarhaddon to in-

habit the country of Samaria, did not think it

worth their while to repair the ruins of this city, they dwelt at Shechem, which they made their

capital. They were still upon this footing when

Alexander the Great came into Phoenicia and

Judea. However the Cuthites had rebuilt some

of the houses of Samaria, from the time of the

return from the captivity, since Ezra then speaks

of the inhabitants of Samaria (Ezra iv. 17; Nehem.

iv. 2) ; and the Samaritans, jealous of the favors that Alexander the Great had conferred on the Jews,

revolted from him while he was in Egypt, and

burnt Andromachus alive, whom Alexander had left governor of Syria. Alexander marched against them, took Samaria, and put in Macedonians to inhabit it ; giving the country around it to the Jews ; and, to encourage them to cultivate it, lie granted them an exemption from tribute. The kings of Egypt and Syria, who succeeded Alexander, deprived them of the property of this country. But Alexander Balas king of Syria restored to Jonathan Maccabaeus the cities of Lydda, Ephrem, and Ramatha, which he cut off from the country of Samaria. (1 Mac. x. 30, 38, and xi. 28, 34). Lastly, the Jews re-entered into the full possession of this whole country under John Ilyrcanus, the Asmonacan, who took Samaria, and ruined it as above-mentioned. It continued in this condition to A. M. 3937, when Aulus Gabinius was the proconsul of Syria, and gave it the name of Gabiniana. But it was still inconsiderable, till Herod the Great restored it to its ancient lustre, and named it Sebaste, the Greek for Augusta, in honor of Augustus, who had given him the property of it. The sacred authors of the New Testament mention but little of Samaria ; and when they do, it is rather of the country about it than of

the city. (See Luke xvii. 11 ; John iv. 4, 5). It was there our Lord had the conversation with a Samaritan woman of Sychar. After the death of St. Stephen (Acts viii. 1, 2, 3), when the disciples were dispersed through Judea and Samaria, St. Philip the deacon withdrew into the city of Samaria, where he made several converts. When the apostles heard that this city had received the word of God, they sent Peter and John thither, to communicate the Holy Ghost to such as had been baptised. There they found Simon Magus. See SIMON. Samaria is never called Sebaste in the New Testament, though strangers hardly knew it but by this name. St. Jerome says that it was thought Obadiah was buried at Samaria. They also showed there the tombs of Elisha and of St. John the baptist. There are found many ancient medals that were struck at Sebaste and Samaria ; and some bishops of this city have subscribed to the ancient councils.

SAMARITANS, the people of the city and province of Samaria. In this sense, it should seem that we might give the name of Samaritans

to the Israelites of the ten tribes, who lived in the city and territory of Samaria. However, the sacred authors give the name of Samaritans only to those strangers whom the kings of Assyria sent from beyond the Kuphrates to inhabit the kingdom of Samaria, when they carried captive the Israelites that were there before. Thus we may fix the epoch of the Samaritans at the taking of Samaria by Salmaneser, in A.M. 3283. This prince carried away the Israelites, and assigned them dwellings beyond the Euphrates, and in Assyria (2 Kings xvii. 24). He sent other inhabitants in their stead, of whom the most considerable were the Cuthites, a people descended from Cush, and who are probably of the number of those whom the ancients knew by the name of Scythians. See CUTH. His successor Esarhaddon, being informed that the people which had been sent to Samaria were infested by lions (3 Rings xvii. 25), imputed it to their ignorance of the manner of worshipping the god of the country ; and sent a priest of the god of Israel that he might teach them the religion of the Hebrews. But they blended this religion with that which they professed before; so they

continued to worship their idols, in conjunction with the God of Israel, not perceiving how incompatible these two religions were. It is not known how long they continued in this state ; but, at the return from the captivity of Babylon, they had entirely quitted the worship of their idols; and, when they asked permission of the Israelites that they might labor with them at the rebuilding the temple of Jerusalem, they affirmed, that from the time that Esarhaddon had brought them into this country they had always worshipped the Lord. (Ezra iv. 1, 2, 3). And indeed, after the return from the captivity, the scripture nowhere reproaches them with idolatrous worship, though it does not dissemble either their jealousy against the Jews, or the ill offices they had done them at the court of Persia, by their slanders and calJmnies, or the stratagems they contrived to hinder the repairing of the walls of Jerusalem. (Nehem. ii. 10, 19; iv. 2, &c. ; vi. 1, 2, &c.). It does not appear that there was any temple in Samaria, in common to all those people who came thither from beyond the Euphrates, before the coming of Alexander the Great into Judea. Till then every one was

left to his own discretion, and worshipped the Lord where he thought fit. But they soon comprehended, from the books of Moses which they had in their hands, and from the example of the Jews, that God was to be worshipped in that place only which he had chosen. As they could not go to the temple of Jerusalem, which the Jews would not permit, they resolved to build a temple of their own upon Mount Gerizim, near Shechern, their capital. Therefore Sanballat, the governor of the Samaritans, applied to Alexander, as Josephus says, but more probably to Darius Nothus, king of Persia, as Dr. Prideaux supposes (see SANBALLAT) ; and told him he had a son-in-law, called Manasses, son to Jaddus the high priest of the Jews, who had retired to Samaria with a great number of other persons of his own nation : that he desired to build a temple in this province, where he might exercise the high-priesthood ; that this undertaking would be to the advantage of the king's affairs, because, in building a temple in the province of Samaria, the nation of the Jews would be divided, who were a turbulent and seditious people, and by such a division would be made weaker, and less in acon-

dilion to undertake new enterprises. The king

readily consented to whatSanballat desired, and the Samaritans presently began their building of the temple of Gerizim, which from that time they have always frequented, and still frequent as the place where the Lord intended to receive the adoration of his people. It is of this mountain, and of this temple, that the Samaritan woman of Sychar spoke lo our Saviour. (John iv. 20). See GERIZIM. Josephus adds that the Samaritans did not long continue subject to Alexander ; they revolted the very next year, and he drove them out of Samaria, put Macedonians in their room, and gave the province of Samaria to the Jews. This preference that Alexander gave to the Jews contributed not a little to increase that hatred that had already obtained between these two people. When an Israelite had deserved punishment, for the violation of some important point < >f the law, he took refuge in Samaria. When the Jews were in a prosperous condition, and affairs were favorable to them, the Samaritans

called themselves Hebrews, and pretended to be of the race of Abraham. But, when the Jews fell under persecution, the Samaritans disowned them, and acknowledged themselves to be Phoenicians originally. This was their practice in the time of Antiochus Epiphanes. The Samaritans, having received the Pentateuch from the priest that was sent by Esarhaddon, have preserved it to this day, in the same language and character it was then, that is, in the old Hebrew or Phoenician character which we now call the Samaritan, to distinguish it from the modern Hebrew character, at present used in the books of the Jews. These last, after their captivity, changed their old characters, and took up those of the Chaldee, which they had been used to at Babylon, and which they continue to use. It is wrong, says F. Calmet, to give this the name of the Hebrew character, for that can be said properly only of the Samaritan text. The critics have taken notice of some variations between the Pentateuch of the Jews and that of the Samaritans ; but these chiefly regard the word Gerizim, which the Samaritans purposely introduced to

favor their pretensions, that mount Gerizim was the place in which the Lord was to be adored. The religion of this people was at first the Pagan. Every one worshipped the deity they had been used to (2 Kings xvii. 29. — 31). The Babylonians worshipped Succoth-benoth ; the Cuthites, Nergal; the Hamathites, Ashima: the Avites, Nibhaz and Tartak ; the Sepharvites, Adrammelech and Anammelech. Afterwards, the Samaritans added that of the Lord, the God of Israel (ibid. 32, 33). But they gave a proof of their little regard to the worship of the true God, when, under Antidchus Epiphanes, they consecrated their temple at Gerizim to Jupiter Argivus. In the time of Alexander the Great, they celebrated the sabbatical year, and consequently the year of jubilee also. Under the kings of Syria they followed the epoch of the Creeks, or that of the Seleucidae. After Herod 'iad re-established Sa.naria, and given it the name of Sebaste, the inhabitants, in their medals, and all public acts, took the date of this new esiab- • -•ihment. But the old inhabitants of Samaria, c>i whom the greater part were Pagans or Jews,

were no rule to the other Samaritans, who pro-

bably reckoned their years by the reigns of the

emperors they were subject to, till they fell under the Mahometans, under whom they live at this

day ; and they reckon their year by the Hegira,

or according to the era of the Ishmaelites. Such

as desire to be further acquainted with the his-

tory of the ancient Samaritans, we refer to the

works of Josephus. As to their religion, it is

said that they receive only the Pentateuch, and

reject all the other books of scripture, chiefly the prophets, who have expressly declared thecominc;

of the Messiah. They have also been accused

of believing God to be corporeal, of denying the

Holy Ghost, and the resurrection of the dead.

Jesus Christ says (John iv. 22) they worship they

know not what. The Samaritan woman is a suf-

ficient testimony that the Samaritans expected a

Messiah, who they hoped would clear up all their

doubts (John iv. 25). Several of the inhabitants of Shechem believed at the preaching of Jesus Christ, and several of Samaria believed at that of St. Philip. The modern Samaritans are not numerous. Joseph Scaliger, being curious to know their usages, wrote to the Samaritans of Egypt, and to the high-priest of the sect who resided at Neapolis in Syria. They returned two answers to Scaliger, dated in the year of the Hegira 998. These were preserved in the French king's library, and were translated into Latin by Morin, and printed in England in the collection of that father's letters, in 1682, under the title of Antiquitates EcclesiseOrientalis. By these it appears that they believe in God, in Moses, the holy law, the mountain of Gerizim, the house of God, the day of vengeance and of peace; that they value themselves upon observing the law of Moses in many points more rigidly than the Jews themselves. They keep the sabbath with the utmost strictness, without stirring from the place they are in, but only to the synagogue. They go not out of the city, and abstain from their wives on that day. They

never delay circumcision beyond the eighth day. They still sacrifice in the temple on mount Gerizim, and give to the priest what is enjoined by the law. They do not marry their nieces as the Jews do, nor do they allow a plurality of wives. Their hatred for the Jews is testified by Josephus, as well as in the New Testament. (See John iv. 9). The Jewish historian says that one passover night, when they opened the gates of the temple, some Samaritans had scattered the bones of dead men there, to insult the Jews, and to interrupt their devotions. And the Samaritan woman of Sychar was surprised that Jesus talked with her, and asked drink of her, being a Samaritan. When our Saviour sent his apostles to preach in Judea, he forbad them to enter into the Samaritan cities (Matt. x. 5); because he looked upon them as schismatics. One day, when he sent his disciples to provide him a lodging in one of the cities of the Samaritans, they would not entertain him, because they perceived he was going to Jerusalem (Luke ix. 52, 53). And, when the Jews were provoked at the reproaches of Jesus Christ, they told him he

was a Samaritan (John viii. 48). Josephus re-

lates t: ; t some Samaritans having killed several

Jews, as they were going to the feast at Jerusa-

lem, this occasioned a kind of war between them.

The Samaritans continued their fealty to the

Romans, when the Jews revolted ; yet they did

not escape from being involved in some of the

calamities of their neighbours. There were, in

very modern times, Samaritans at Shechem,

otherwise called Naplouse. They had priests of

the family of Aaron, as they stated : a high-

priest, who resided at Shechem, or at Gerizim,

vho offered sacrifices there, and who declared

the feast of the passover, and all the other feasts, to all the Samaritans. Some of them are said

still to be found at Gaza, some at Damascus,

and some at Grand Cairo.

SAMBALLAS, a name given to a cluster of

islands near the coast of America, in the Spanish

Main, of which three groupes are called Cave-

sas, Mulatas, and Sagua. These islands are

scattered at very unequal distances, some only

one, some two, some three, and some four miles Irom the shore and from one another, extending a very considerable distance along the northern shore of the isthmus of Darien.

SAMBUCUS (John), a learned physician, bon: at Teraau, in Hungary, in 1531. After studying in several universities, his abilities recommended him to the emperors, Maximilian II. and Rodolph II., who successively appointed him counsellor and historiographer. He wrote the Lives of the Roman Emperors, and other works. He died at Vienna, in 1584.

SAMBUCUS, in botany, elder, a genus of the trigynia order, and pentandria class of plants ; natural order forty-third, dumosae : CAL. quinquepartite : COR. quinquefid ; berry trispermous. The most remarkable species are these :

1. S. Canadensis, the Canada shrubby elder, rises with a shrubby stem, branching eight or ten feet high, having reddish shoots, somewhat bipinnated leaves, often ternate below ; the other composed of five, seven, or nine oval lobes ; and towards the ends of the branches cymose quinquepartite umbels of flowers, succeeded by

blackish-red berries.

2. S. nigra, the common black elder tree, rises with a tree stem, branching numerously into a large spreading head, twenty or thirty feet high ; pinnated leaves, of two or three pairs of oval lobes and one odd one ; and large five-parted umbels of white flowers towards the end of the branches, succeeded by bunches of black and other different colored berries, in the rarieties ; which are, common black-berried elder-tree, white-berried elder, green-berried elder, laciniated, or parsley-leaved elder, having the folioles much laciniated, so as to resemble parsley-leaves, gold-striped leaved elder, silver-striped elder, and silver-dusted elder.

5. S. racemosa, racemose, red-berried elder, rises with a tree-like stem, branching ten or twelve feet high, having reddish-brown branches and buds ; pinnated leaves of six or seven oval fleeply-sawed lobes, and compound, oval, racemous clusters of whitish-green flower, succeeded by oval clusters of red berries. It is lommon to the mountainous parts of the south of Europe, and is retained in our gardens as a

flowering shrub, naving a peculiar singularity in its oval-clustered flowers and berries. AH tlie sorts of elder are of the deciduous kind, very hardy, and grow freely any where ; are generally free shooters, but particularly the common elder and its varieties, which make remarkably strong-jointed shoots, of several feet in length, in one season ; and they flower mostly in summer, except the racemose elder, which generally begins flowering in April ; and the branches being large, spreading, and very abundant, are exceedingly conspicuous ; but they emit a most disagreeable odor. The flowers are succeeded, in the most of the sorts, by large bunches of ripe berries in autumn, which, though very unpalatable to eat, are in high estimation for making that well known cordial called elder wine, particularly the common black-berried elder. The merit of the elder in gardening may be both for use and ornament, especially in large grounds.

SAME, adj. \ Sax. j-am ; Goth, and Teut.

SAMENESS, n.s. \ same. Identical ; not different ; not another; being of the like sort or degree: the noun substantive corresponding.

Miso, as spitefully as her rotten voice could utter it, set forth the tame sins of Amphialus. kidney.

Difference of persuasion in matters of religion

may easily fall out, where there is the sameness of duty, allegiance, and subjection. King C/mr/c.*

Do but think how well the same he spends,

Who spends his blood his country to relieve.

Daniel.

The tenor of man's woe

Holds on the same. Stilton.

Th' etlierial vigour is in all the tame,

And ev'ry soul is filled with equal flame. Dryden.

The merchant does not keep money by him ; but,

if you consider what money must be lodged in the

banker's hands, the case will be much the same.

Locke.

If itself had been coloured, it would have trans-

mitted all visible objects tinctured with the same

colour , as we see whatever is beheld through a

coloured glass appears of the same colour with the

glass. Hay on the Creation.

The tame plant produceth as great a variety of

juices as there is in the same animal. Arbuthin>t.

If all courts have a sameness in them, 'things may

be as they were in my time, when all employments

went to parliamentmen's friends. Swift.

SAM I EL, the Arabian name of a hot wind peculiar to the desert of Arabia. It blows over the desert in July and August from the north-west quarter. Some years it does not blow at all, and in others it appears six, eight, or ten times, but seldom continues more than a few minutes at a time. It often passes with the apparent quickness of lightning. The Arabs and Persians have warning of its approach by a thick haze arising out of the horizon: when they instantly throw themselves with their faces to the ground, and continue in that position till the wind has passed, which happens almost instantaneously ; but if they are not brisk enough to take this precaution, and they get the full force of the wind, it generally produces death. The Arabs say that this wind always leaves behind it a very strong sulphureous smell, and that the air at these times is quite clear, except about the horizon in the north-west, which gives wartiing of its approach. See ARABIA

SAM

SAM'LET, n. s. Fr. salmonet, or salmonlet.

A little salmon.

A salmon, after he is got into the sea, becomes

from a samlet, not so big as a gudgeon, to be a sal-

mon, in as short a time as gosling becomes a goose.

Walton's Angler.

SAMNITES, an ancient nation of Italy, who

inhabited the country situated between Picenum,

Campania, Apulia, and Latium. They distin-

guished themselves by their implacable enmity

against the Romans, in the early ages of that

republic ; but were at last totally subdued, and,

according to some, extirpated, about A. A. C.

272, after a war of seventy-one years. See

ROME.

SAMOGITIA, or SZAMAIT, a tract of Russian

Lithuania, forming the north-west part of that

great province, and bearing the title of county.

It lies to the south of Courland, and to the north of Prussia Proper, having part of its western

boundary along the Baltic, but without any har-

bour of consequence.

SAMOLUS, in botany, round-leaved water

pimpernel, a genus of the monogynia order, and

pentandria class of plants ; natural order twenty-

first, precise : COR. salver-shaped ; stamina sur-

rounded by small scales at its throat: CAPS.

unilocular inferior. Species four, one of which,

S. valerandi, is common to the marshes of our

country.

SAMON, an island in the eastern seas, lying

off Timor to the north-west. It is woody, hilly

land, but not mountainous, and towards the

south end low. A woody island, called Tios in

the charts, lies off the south-west point, which is the only thing like danger on the west side ; but

the tides run strong here, and make formidable

riplings.

SAMOS, in ancient geography, an island of

Asia, in the ./Egean Sea, near the promontory

Mycale, opposite to Ephesus ; in compass eighty-

seven miles according to Pliny, or 100 according

to Isidorus ; famous for a temple of Juno, with

a noted asylum, whence their coin exhibited a

peacock. It was the country of Pythagoras, who,

to avoid the oppression of its tyrants, retired to

Italy. Samos was first governed by kings, after-

wards became a democracy, and at last an oli-

garchy. It was most flourishing under Polv crates.

The Samians assisted the Greeks against Xerxes.

They were conquered by Pericles A. A.C. 441 : afterwards by Eumenes king of Pergamus ; but restored to liberty by Augustus. Samos was reduced to a Roman province under Vespasian.

SAMOS, an island of the Grecian archipelag >, separated only by a narrow strait from the o >-posite continent of Asia Minor. See GREECE.

SAMOTHRACE, or SAMOTHRACIA, in ancient geography, an island in the TEgean Sea, opposite the mouth of the Hebrus, thirty-two miles from the coast of Thrace. It was also called Dardania, Electria, Leucania, Leucosia, Melitis, and Samos ; and hence Samothrace, or Thracian Samos, to distinguish it from Samos in Asia Minor. Pliny makes it thirty-eight miles in circumference, but modern travellers say it is only twenty. Before the age of the Argonauts it was deluged to the top of the highest mountains by a sudden inundation of the Euxine. It was anciently governed by kings, but, like most other states in Greece, became afterwards democratic. The people enjoyed all their rights and priyilege under the Romans till the reign of Vespasian. By him it was reduced, with the other islands in*

the ,/Egean Sea, to the form of a Roman province. It is now under the Turks, and by them named Samandrachi.

SAMOYEDES, a savage race who traverse the immense and frozen deserts extending along the northern coast of Asia. They do not recognise themselves by this name, which has been given to them by the Russians, but call them selves Khasova. They extend, on the European side, as far as the river Mesen, which falls into the White Sea ; while they inhabit the shores of Asia, eastward to the Olenek, and almost to the Lena : thus filling up the space between 40″ and 120° of E. long., a line of upwards of 2000 miles. The whole of this vast extent is not supposed to contain a population of more than 20,000. They are divided into three great tribes: the Vanoites, who inhabit the banks of the Petchora and the Obi, in the vicinity of Obdorsk ; -the Tysia-Igoley, who are found on the Mesen, and in the interior of the government of Archangel ; and the Khirutches, who fill the remoter and interior parts of Siberia. The rude traditions concerning their origin seem to sup-

port the conjecture that they were driven hither,

by war and oppressson, from happier climates.

Like other tribes of these ungenial climates,

theysare a small and stunted race, commonly be-

tween four and five feet high. They have a flat,

round, broad face, large thick lips, a wide and

open nose, little beard, and black and rough hair

in small quantity, carefully arranged. The dress

of the men differs little from that of the Ostialcs; but they are reckoned more savage, and are very

superstitious.

SAMP, a dish said to have been invented by

the savages of North America, who have no corn

mills. It is Indian corn deprived of its external

coat by soaking it ten or twelve hours in a lixi-

vium of water and wood-ashes. This coat or

husk, being separated from the kernel, rises to

the surface of the water, while the grain, which

is specifically heavier than water, remains at the

bottom of the vessel ; which grain, thus deprived

of its hard coat of armour, is boiled, or rather

simmered, for two days, in a kettle of water near

the fire. When sufficiently cooked, the kernels

swell to a great size and burst open ; and this

food, which is uncommonly sweet and nourish-

ine, may be used in a variety of ways ; but the

best way is to mix it with milk, and with

soups and broths, as a substitute for bread. It

is even better than bread for these purposes;

for, besides being quite as palatable as the very

best bread, it is less liable than bread to grow

very soft when mixed with these liquids.

SAM'PHIRE, n. s. Fr. sain Pierre ; Lat.*

crithmum. A plant preserved in pickle.

Half way down

Hangs one that gathers samphire : dreadful trade !

Met h inks he seems no bigger than his head.

Shakajieare

This plant grows in great plenty upon the rocks

near the sea-shore, where it is washed by the salt SAM

water. Il is greatly esteemed for pickling, and is from the form of the arches of the gates, nnd sometimes used in medicine. Miller.

SAMIMUHF.. See CIUTHMTM.

SAMT1.K, n. s. \ Corrupted from example

SAM'PI.ER. < and exemplar. A speci-

men ; part of the whole shown, that judgment

may be made of the whole : a pattern of work.

O love, why dos't thou in thy beautiful sampler

set such a Work for my desire to set out, which is impossible ? Sidney.

Fair Philomela, she but lost her tongue,

And in a tedious sampler sewed her mind.

Sliakspture.

We created with our needles both one flower,

Both on one sampler, sitting on one cushion ;

Both warbling of one song, both in one key.

As if our hands, our sides, voices, and minds

Had been incorp'rate. fd.

He entreated them to tarry but two days, and he

himself would bring them a sample of the ore.

Raleigh.

Coarse complexions,

And cheeks of sorry grain, will serve to ply

The sampler, and to tease the housewife's wool.

Milton.

I have not engaged myself to any : I am not

loaded with a full cargo : 'tis sufficient if I bring a sample of some goods in this voyage. Dryden.

Determinations of justice were very summary and

decisive, and generally put an end to the vexations of a law-suit by the ruin both of plaintiff and de-

fendant : travellers have recorded some samplet of

this kind. Addison.

From most bodies

Some little bits ask leave to flow ;

And, as through these canals they roll,

Bring up a sample of the whole. Prior.

I design this but for a sample of what I hope more fully to discuss. Woodward.

I saw her sober over a sampler, or gay over a

jointed baby. Pope.

SAMSON, the son of Manoah, of the tribe of

Dan, and a judge of Israel. The extraordinary

circumstances of his birth, life, miraculous

strength, marriage, repeated defeats of the Phi-

some ancient pieces of sculpture, intermixed with

the other stones, appears to have been built by

the Turks : but the town can boast of five mosques, with minarets, and a large khan for the use of

merchants. The ships belonging to the port

are navigated by the Greeks ; adjoining villages

are inhabited chiefly by Christians. Inhabitants

2000.

SAMUEL, an eminent inspired prophet, his-

torian, and judge of Israel, and the last judge of

that commonwealth. lie was the son of Klkanah,

a Levite of the family of Kohath, by his beloved

wife Hannah. The extraordinary circumstances

preceding his birth ; his early dedication to God

by his mother, with her beautiful hymn on that occasion; the revelations communicated to him by the Almighty ; his reformation of the people, and their consequent victory over the Philistines ; the conduct of his sons, which excited the people to desire a change of government ; his description of the character of a king ; his anointing of Saul their first monarch ; his appeal to the people respecting his own just government ; his repeated reproofs of king Saul for his improper conduct ; his just punishment of the murderous monarch of the Amalekites ; his anointing of David ; and his death, — are recorded 1 Sam. i. — xxv. He is reckoned the author of the books of Judges and Ruth.

SAMUEL, THE BOOKS OF, two canonical books of the Old Testament. The books of Samuel and the books of Kings are a continued history of the reigns of the kings of Israel and Judah ; for which reason the books of Samuel are likewise styled the first and second book of Kinys. Since the first twenty-four chapters contain all that relates to the history of Samuel, and the latter part of the first book and all the second

include the relation of events that happened aft«'r

the death of that prophet, it has been supposed

that Samuel was author of the first twenty-four

chapters, and that the prophets Gad and Nathan

listines, captivity, and death, are recorded in finished the work. The hrst book of Samuel Judges xiii. — xvi. He judged Israel twenty

years. Chronologists place his death in A. M.

S887, or A. A. C. 1117: Milton wrote a beauti-

ful poem on his history, entitled Samson Agonis-

tes.

SAMSON'S POST, a sort of pillar erected in a

ship's hold, between the lower deck and the

kelson, under the edge of a hatchway, and fur-

nished with several notches that serve as steps to

mount gr descend, as occasion requires. This

post, being firmly driven into its place, not only

serves to support the beam and fortify the vessel

comprehends the transactions under the govern-

ment of Eli and Samuel, and under Saul the first

king ; and also the acts of David while lie lived

under Saul. The second book is wholly spent

in relating the transactions of David's reign.

SAMYDA, in botany, a genus of the mono-

gynia order, and decandria class of plants : CAL.

quinquepartite and colored : COR. none : CAPS.

the inside resembles a berry, is trivalved and

unilocular: the SEEDS nestling. Species ten,

natives of the East and West Indies.

SANADON (Noel Stephen), a Jesuit, born at

in that place, but also to prevent the cargo or Roueu in 1676, and a distinguished professor materials contained in the hold from shifting to of humanity at Caen. He there became ac-

the opposite side by the rolling of the ship in a quainted with Huet bishop of Avranches, after-

turbulent or heavy sea. wards his intimate friend. Sanadon next taught SAMSOON, a city of Asia Minor, on the rhetoric at the university of Paris, and was en-

Black Sea, and on the site of the ancient Amisus, trusted with the education of the prince of Conti which, after Sinope, was the most opulent city in after the death of Du Morceau. In 1728 he was Pontus. It is situated near the west end of a made librarian to Louis XIV., an office which bay, about four miles in length, and surrounded he retained t6 his death. He died on the 21st by olive trees. The houses, which are made of September 1733, in the fifty-eighth year of his wood, plastered with mud, and white-washed, age. His works are, 1. Latin Poems, in 12mo., produce a good effect. The modern town is 1715, and by Barbou, in 8vo., 1754. These small, surrounded by a decayed wall, which, consist of Odes, Elegies, Epigrams, &c. '2. A SANCHONIATHO.

Translation of Horace, with Remarks, in 2 vols.

4to., Paris, 1727; best edition Amsterdam, 1735,

in 8 vols. 12mo,; with the notes of M. Dacier.

Sanadon translated with elegance and taste ; but

his version is rather ~a paraphrase than a faithful

translation. 3. A collection of Discourses ; and

4. Prieres et Instructions Chretiennes.

SAN'ATIVE, adj. > Lat. sano. Powerful

SANA'TION, M.S. > to cure ; healing: the act of curing.

The vapour of coltsfoot hath a sanative virtue towards the lungs. Bacon 't Natural History.

Consider well the member, and, if you have no probable hope of sanatian, cut it off quickly. Wiseman 's Surgery.

SANBALLAT, the governor of the Samaritans, a great enemy to the Jews. He was a native of Horon, or Horonaim, a city beyond Jordan, in the country of the Moabites. He lived in the time ofv Nehemiah, who was his great opponent, and from whose book we learn his history. There is one circumstance related of him by Josephus which has occasioned some dispute among the learned. According to that author, when Alexander the Great came into Phoenicia, and sat down before the city of Tyre, Sanballat quitted the interests of Darius king of Persia, and went at the head of 8000 men to offer his services to Alexander. This prince readily entertained him, and, at his request, gave him leave to erect a temple upon

mount Gerizim, where he constituted his son-in-jaw Manasseh the high-priest. But this is a flagrant anachronism ; for 120 years before this, that is, in A. M. 3550, Sanballat was governor of Samaria ; wherefore the learned Dr. Prideaux (in his Connexion of the Histories of the Old and New Testament) supposes two Sanballats, and endeavours to show it to be a mistake of Josephus, in making Sauballat to flourish in the time of Darius Codomannus, and to build his temple upon mount Gerizim by license from Alexander the Great ; whereas this was performed by leave from Darius Nothus, in the fifteenth year of his reign.

SANCHES (Anthony Nunes Ribeiro), M. D., a learned physician, born at Penna-Macor in Portugal, in 1699. His father, an opulent merchant, gave him a liberal education, intending him for the law, and, on finding him prefer physic, withdrew his protection ; on which his maternal uncle, Dr. Nunes Ribeiro, a physician at Lisbon, furnished him with the means of prosecuting his studies, at Coimbra and Salamanca ; where he took his degree in 1724. In 1725 he

was appointed physician to the town of Bene-

vente. About 1727 he came over to London,

•where he spent two years ; after which he studied

at Leyden under Boerhaave; who, in 1731, re-

commended him to the empress Anne of Russia.

On his arrival at Petersburg Dr. Bidloo, then

first physician to the empress, gave him an ap-

pointment in the hospital at Moscow, where he

continued till 1734, when he was appointed phy-

sician to the army, and was present at the siege

of Asoph. In 1740 he was appointed one of the

physicians to the empress, who had labored

eight years under a disease which he asserted to

be a stone in the kidney. His opinion was con-

firmed at her death, six months after, upon open-

ing her. The regency that succeeded appointed

him first physician ; but the revolution of 1742,

which placed Elizabeth on the throne, deprived

him of all his employments. Hardly a day

passed that he did not hear of some of his friends being executed ; and it was with difficulty that

he obtained leave to retire from Russia. In

1747 he went to Paris, where he continued till

October 14th, 1783, when he died. His printed

works, on the Origin of the Venereal Disease,

and other subjects, are well known to the faculty. He was a member of the Royal Medical Society at Paris, and of the Royal Academy of Lisbon, to the establishment of which he had contributed.

SANCHEZ (Francis), in Latin Sanctius, was of Las Brocas in Spain. He wrote, 1. An excellent treatise entitled Minerva, or De Causis Linguae Latinae, which was published at Amsterdam in 1714, in 8vo. The authors of the Port-royal Methode de la Langue Latine have been much indebted to this work. 2. The Art of Speaking, and the Method of Translating Authors. 3. Several other learned pieces on grammar. He died in 1600, in his seventy-seventli year.

SANCHEZ (Francis), a Portuguese physician, who settled at Toulouse, and, though a Christian, was born of Jewish parents. He is said to have been a man of genius and a philosopher. His works have been collected under the title of Opera Medica. His juncti sunt tractatus quidam philosophici non insubtiles. They were printed at Toulouse in 1636; where Sanchez died in 1632.

SANCHONIATHO, or SANCHONIATHON, a Phoenician philosopher and historian, who is said to have flourished before the Trojan war, about the time of Semiramis. Of this most ancient writer the only remains extant are fragments of cosmogony, and of the history of the gods and first mortals, preserved by Eusebius and Theodoret ; both of whom speak of Sanchoniatho as an accurate and faithful historian ; and the former adds that his work, which was translated by Philo Byblius from the Phenician into the Greek language, contains many things relating to the history of the Jews which deserve great credit, both because they agree with the Jewish writers, and because the author received these particulars from the annals of Hierombalus, a priest of the god Jao. Several modern writers, however, of great learning, have called in question the very existence of Sanchoniatho, and have 'contended that the fragments which Eusebius adopted as genuine, u-pon the authority of Porphyry, were forged by that author, or the pretended translator Philo, from enmity to the Christians, that the Pagans might have something to show of equal

antiquity with the books of Moses. These op-

posite opinions have produced a controversy

that has filled volumes. We can, however, only

refer such of our readers as are desirous of fuller information to the works of Bochart, Scaliger,

Vossius, Cumberland, Dodwell, Stillingfleet,

Mosheim, Cudworth. and Warburton. The con-

troversy respects two questions, 1. Was there in

reality such a writer ? 2. Was .he of the very re-

mote antiquity which his translator claims for

him ?

That there was really such a writer, and that

the fragments preserved by Eusebius are indeed

parts of his history, interpolated perhaps by the

translator, we are fully persuaded. Eusebius,

who admitted them into his work as authentic,

was one of the most learned men of his age. He

had better means than any modern writer can

have of satisfying himself with respect to the au-

thenticity of a very extraordinary work, which

had then but lately been translated into the

Greek language, and made generally known ;

and there is nothing in the work itself, or at least in those parts of it which

he has preserved,

that could induce a wise and good man to ob-

trude it upon the public as genuine, had he him-

self suspected it to be spurious. Too many of

the Christian fathers were indeed very credulous,

and ready to admit the authenticity of writings

without duly weighing the merits of their claim ;

but then such writings were always believed to

be favorable to the Christian cause, and inimical

to Paganism. That no man of common sense

could suppose the cosmogony of Sanchoniatho

favorable to the cause of revealed religion, a fur-

ther proof cannot be required than the following-

extract : — ‘ He affirms that the principles of the universe were a dark and windy air, or a wind

made of dark air, and a turbulent evening chaos;

and that these things were boundless, or for a

long time had no bound or figure. But when

this wind fell in love with its own principles,

and a mixture was made, that mixture was called

desire, or Cupid (iroQoc). This mixture com-

pleted was the beginning of the ((ertertwc) making

of all things. But that wind did not know its

own production; and of this, with that wind,

was begotten mot, which some call mud, others

the putrefaction of a watery mixture. And of this came all the seed of this building, and the generation of the universe. But there were certain animals which had no sense, out of which were begotten intelligent animals, and were called Zophesemin, that is, the spies or overseers of heaven ; and were formed alike in the shape of an egg. Thus shone out mot, the sun and the moon, the less and the greater stars. And the air shining thoroughly with light, by its fiery influence on the sea and earth, winds were begotten, and clouds and great defluxions of the heavenly waters. And all these things first were parted, and were separated from their proper place by

all met again in the air, and dashed against one another, and were so broken to pieces ; whence thunders and lightnings were made ; and at the stroke of these thunders the fore-mentioned intelligent animals were awakened, and frighted with the sound ; and male and female stirred in the earth and in the sea.' This is their generation of animals. After these things Sanchoniatho

goes on saying : 'These things are written in the Cosmogony of Taautes, and in his memoirs ;

and out of the conjectures, and surer natural signs which his mind saw, and found out, and wherewith he hath enlightened us.' Afterwards declaring the names of the winds north and south, and the rest, he makes this epilogue: ' But these first men Consecrated the plants shooting out of the earth, and judged them gods, and worshipped them ; upon whom they themselves lived, and all their posterity and all before them ; to these they made their meat and drink offerings.' Then he concludes, ' These were the devices of worship agreeing with the weakness and want of boldness in their minds/ Let u» suppose Eusebius to have been as weak and credulous as the darkest monk in the darkest age of Europe, a supposition which no man will make who knows any thing of his writings, what could he see in this senseless jargon which even a dreaming monk would think of employing in support of Christianity ? Eusebius justly styles it direct atheism, but could he imagine that an ancient system of atheism would contribute so much to make the Pagans of his age admit as divine revelations the books of the Old and New Testa-

ments, that he should be induced to adopt, without examination, an impudent forgery not 200 years old as genuine remains of the most remote antiquity ? If this Phenician cosmogony be a fabrication of Porphyry, or of the pretended translator, it must surely have been fabricated for some purpose ; but it is impossible to conceive what purpose either of these writers could have intended to serve by forging a system so extravagantly absurd. Porphyry, though an enemy to the Christians, was not an atheistj and would never have thought of making an atheist of him whom he meant to obtrude upon the world as the rival of Moses. His own principles were those of the Alexandrian Platonists ; and, had he been the forger of the works which bear the name of Sanchoniatho, instead of the incomprehensible jargon about dark wind, evening chaos, mot, the overseers of heaven in the shape of an egg, and animation proceeding from the sound of thunder, we should doubtless have been amused with refined speculations concerning the operations of the Demiurgus and other persons in the Platonic Triad. See PLATONISM, and PORPHYRY. F.Simon

of the oratory imagines (Bib. Crit. vol. i. p. 140) that the purpose for which the history of Sancho-

niatho was forged was to support paganism, by

taking from it its mythology and allegories,

which were perpetually objected to it by the

Christian writers ; but this learned man totally

mistakes the matter. The primitive Christians

were too much attached to allegories themselves

to rest their objections to Paganism on such u

foundation ; what they objected to that system

was the immoral stories told of the gods. To

this the Pagan priests and philosophers replied,

that these stories were only mythologic allego-

ries, which veiled all the great truths of theology, ethics, and physics. The Christians said this

could not be ; Cor that the stories of the gods

had a substantial foundation in fact, the.-:" pods

being only dead men deified, who in life had

like passions and infirmities with other mortals.

This then was the objection which the forper of

the works of Sanchoniatho had to remove, if he

really forged them in support of Paganism ; but,

instead of doing so, he gives the genealogy and

history of all the greater gods, and shows that

they were men deified afterdeath for the exploits,

some of them grossly immoral, which they had

performed in this world. We have elsewhere

given his account of the deification of Chrysor,

and Ouranos, and Ge, and IJ ypsistos, and Muth ;

but our readers may wish to accompany him

•.hrough the history of Ouranos and Chronus, two

of his greatest gods ; whence it will appear how

little his writings are calculated to support the

tottering cause of Paganism against the objec-

tions urged to it by the Christian apologists.

‘ Ouranos,’ says he, ‘ taking the kingdom of his

father, married Ge his sister, and by her had

four sons ; Ilus, who is called Chronus ; Betylus ; Dagon who is Siton, or the god of corn ; and

Atlas. But by other wives Ouranos had much

issue, wherefore Ge, being grieved at it and jea-

lous, reproached Ouranos, so that they parted

from each other. But Ouranos, though he parted

from her, yet by force invading her, and lying

with her when he listed, went away again ; and he also attempted to kill the children he had by her.

Ge also often defended or avenged herself,

gathering auxiliary powers unto her. But when

Chronus came to man's age, using Hermes Tris-
megistus as his counsellor and assistant (for he
was his secretary), he opposed his father Oura-
nos, avenging his mother. But Chronus had
children, Persephone and Athena; the former
died a virgin, but by the council of the latter
Athena, and of Hermes, Chronus made of iron a
scimitar and a spear. Then Hermes, speaking
to the assistants of Chronus with enchanting words
wrought in them a keen desire to fight against
Ouranos in the behalf of Ge ; and thus Chronus
warring against Ouranos, drove him out of his
kingdom, and succeeded in the imperial power.
In the fight was taken a well-beloved concubine
of Ouranos big with child. Chronus gave her in
marriage to Dagon, and she brought forth at his
house what she had in her womb by Ouranos,
and called him Demaroon. After these things
Chronus builds a wall round about his house, and
founds Byblus the first city in Phenicia. After-
wards Chronus, suspecting his own brother Atlas,
with the advice of Hermes, throwing him into a
deep hole of the earth, there buried him, and
having a son called Sadid, he despatched him

with his own sword, having a suspicion of him, and deprived his own son of life with his own hand. He also cut off the head of his own daughter, so that all the gods were amazed at the mind of Chronus. But, in process of time, Ouranos being in banishment, sends his daughter Astarte, with two other sisters Rhea and Dione, to cut off Chronus by deceit, whom Chronus taking, made wives of these sisters. Ouranos, understanding this, sent Eimarmene and Hore, Fate and Beauty, with other auxiliaries, to war against him ; but Chronus, having gained the affections of these also, kept them with himself. Ouranos devised Bsetulia, contriving stones that moved as having life. But Chronus begat on Astarte seven daughters, called Titanides or Artemides ; and he begat on Rhea seven sons, the youngest of whom, as soon as he was born, was consecrated a god. Also by Dione he had daughters, and by Astarte two sons, Pothos and Eros, i. e. Cupid and Love. But Dagon, after he had found out bread, corn, and the plough, was called Zeus Aratrius. To Sedyc, or the just, one of the Titanides bare Asclepius. Chronus had also in

Peraa three sons : 1. Chronus, his father's name-

sake. 2. Zeus Belus. 3. Apollo/ T«s it Con-

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ceivable that a writer so acute as Porphyry, or

indeed that any man of common sense, would

forge a book filled with such stories as these, to remove the Christian's objections to the immoral

characters of the Pagan divinities? The suppo-

sition is impossible. Nor is Sanchoniatho here

writing allegorically, and by his tales of Oura-

nos, and Ge, and Chronus, only personifying the

heaven, the earth, and time. On the contrary,

he assures us that Ouranos, or Epigeus, or Au»-

tochthon, was the son of one Eliaun or Hypsis-

tos, who dwelt about Byblus, and that from him

the element which is over us was called heaven,

on account of its excellent beauty, as the earth

was named Ge after his sister and wife. And

his translator is very angry with the Neoteric

Greeks, as he calls them, because that, ' by a

great deal of force and straining, they labored to

turn all the stories of the gods into allegories

and physical discourses.' This proves that the

author of this book did not mean to veil the great truths of religion under the cloak of mythologic

allegories ; and therefore, if it was forged by Porphyry in support of Paganism, the forger so far mistook the state of the question between him and his adversaries, that he contrived a book, which, if admitted to be ancient, totally overthrew his own cause. The next enquiry with respect to Sanchoniatho is his antiquity. Did he really live and write at so early a period as Porphyry and Philo pretend ? We think he did not; and what confirms our opinion is that mark of national vanity and partiality in making the sacred mysteries of his own country original, and conveyed from Phoanicia into Egypt. This, however, furnishes an additional proof that Porphyry was not the forger of the work ; for he well knew that the mysteries had their origin in Egypt (see MYSTERIES), and would not have fallen into such a blunder. He is guilty, indeed, of a very great anachronism, when he makes Sanchoniatho contemporary with Semiramis, and yet pretends that what he writes of the Jews is compiled from the records of Hierombalus the priest of the god Jao; for Bochart has made it appear highly probable that Hierombalus or Jerom-baal is the Jerub-baal or Gideon of Scripture. Between

the reign of Semiramis and the Trojan war a period elapsed of nearly 800 years, whereas Gideon flourished not above seventy years before the destruction of Troy. But, supposing Sanchoniatho to have really consulted the records of Gideon, it by no means follows that he flourished at the same period with that judge of Israel.

His atheistic cosmogony he does not indeed pretend to have got from the priest of Jao, but from records deposited in his own town of Berytus by Thoth, a Phoenician philosopher, who was afterwards king of Egypt. Stillingfleet indeed thinks it most probable that Sanchoniatho became acquainted with the most remarkable passages of the life of Jerub-baal from annals written by a Phoenician pen. He observes that, immediately after the death of Gideon, the Israelites, with their usual proneness to idolatry, worshipped Baal-berith, or the idol of Berytus, the town in which Sanchoniatho lived ; and from this circumstance he concludes that there must have been such an intercourse between the Hebrews

and Borytians, that in process of lime the latter people might assume to themselves the Jeruhhaal of the former, and hand down his actions to posterity as those of a priest instead of a great commander. All this may b< true ; but, if so, it amounts to a demonstration, that the antiquity of Sancboniatho is not so bigh by many ages as that which is claimed for him by Philo and Porphyry, though he may still be more ancient, as we think Vossiushas proved him to be, than any other profane historian whose writings have come down to us, either entire or in fragments. (De Hist. Grsec. lib. i. c. 1). But, granting the authencity of Sanchoniatho's history, what, it may be asked, is the value of his fragments, that we should take the trouble to asceriain whether they be genuine remains of high antiquity, or the forgeries of a modem impostor ? We answer, with the illustrious Stillingrleet, that though those fragments contain such absurdities as it would be a disgrace to reason to suppose credible; though the whole cosmogony is the grossest sink of atheism ; and though many persons make a figure in the history, whose very existence may

be doubted ; yet we, who have in our hands the light of divine revelation, may in this dungeon discover many excellent relics of. ancient tradition, which throw no feeble light upon many passages of Holy Scripture, as they give us the origin and progress of that idolatry which was so long the opprobrium of human nature. They furnish too a complete confutation of the extravagant chronology of the Chaldeans and Egyptians, and show, if they be genuine, that the world is indeed not older than it is said to be by Moses. We would therefore recommend to our readers an attentive perusal of Cumberland's Sanction iatho.

BANCROFT (William), archbishop of Canterbury, was born at Fresingfield, in Suffolk, in 1616; and admitted into Emanuel College, Cambridge, in 1633. In 1642 he was elected a fellow ; and, for refusing to take the covenant, was ejected. In 1660 he was chosen one of the university preachers ; in 1663 was nominated dean of York ; and in 1664 dean of St. Paul's. In this station he began to repair the cathedral, till the fire of London in 1666 employed his thoughts on the more noble undertaking of re-

building it, toward which he gave £1400. He also rebuilt the deanery, and improved the revenue of it. In 1668 he was admitted archdeacon of Canterbury on the king's presentation. In 1677, being prolocutor of the convocation, he was promoted to be archbishop of Canterbury. In 1678 he was committed to the Tower with six other bishops, for presenting a petition to king James against reading the declaration of indulgence. Upon the king withdrawing himself, he concurred with the lords in a declaration to the prince of Orange for a free parliament, and due Indulgence to the protestant dissenters. But, when that prince and his consort were declared king and queen, his grace, refusing to take the oaths, was suspended and deprived. He lived itely till his death in 1693. Hi U-arnin-, integrity, and piety, made him an exalted ornntiient of the church. He puMMu-d n \olume :.i lv!mo., entitled M a from*

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Machiavel, Borgia, and other authors; Familiar Letters to Mr. North, an 8vo. pamphlet, and three of his sermons were printed together after

his death.

M TIFY, r.fl.

S \NCTIFICA'TIOX, n. s.

SANC'TIFIER,

SAXCTIMO'XIOTS, adj.

SAXC'TIMOXV, n.s.

SAXC'TITUUE,

IITY,

SAXC'TUARIZE, v. a.

•. UARY, n. s.

Fr. sanctifier; Lat.

sanctifico. To make

holy ; free from sin,

or moral taint ; make

;a means of holint-ss ;

I secure from pollution

or violation : sanctin-

cation and sanctirier

J correspond with the

verb : sanctimonious is having the appearance of

sanctity or sanctitude, which are synonymous,

and signify holiness; goodness; godliness: to

sanctuarize is to shelter under sacred privi!

(obsolete) : a sanctuary is a holy place ; the

most sacred part of a temple or place of worship ; place of protection ; asylum ; shelter.

For if the blood of bulls, sprinkling the unclean.

sanctijieth to the purifying of the flesh, how much more shall the blood of Christ! Heb. \. 13.

The grace of his ianctijication and life, which

first received in him, might pass from him to ln>

whole race, as malediction came from Adam unto all

mankind. -.cr.

The gospel, by not making many things unclean.

as the law did, hath sanctified those things generally to all, which partirularly each man to himself must tunctifu by a reveiend and holy use. Id.

Her pretence is a pilgrimage, which holy under-

taking, with most austere sanctimony, she accom-

plished. Sliakfjtearf.

At his touch,

Such sanctity hath heaven given his hand,

They presently amend.

No place indeed should murder tanctuarise.

Come, my boy, we will to tanctuarti.

Oft have I heard of sanctuary men ;

But sanctuary children ne'er 'till now.

There was great reason why all discreet princes

should beware of yielding hasty belief to the robes of lanctinwnti. Raleigh.

He fled to Beverly, where he and divers of his

company registered themselves sanctuary men.

Bacon's llenrn VII .

Those judgments God hath been pleased to send

upon me, are so much the more welcome, as a means which his mercy hath sanctified so to me as to make me repent of that unjust act. King Charles.

In their looks divine

The image of their glorious maker shone,

Truth, wisdom, sanctitude, serene and pure.

Mi/ton.

God attributes to place

No tanctity, if none be thither brought

By men who there frequent. /./.

About him all the sanctities of heav'n

Stood thick as stars, and from his sight received

Beatitude past utt'rance. Id.

They often plac'd

Within his sanctuary itself their shrines. Id.

The bishop kneels before the cross, and devoutly

adores and kisses it : after this follows a long prayer for the sanciijiratisn of that new sign of the cross.

StWngfteet.

The holy man, amazed at what he saw,

Made haste to sanctify the bliss by law. DnjJm The admirable works of painting were made fuel

for the fire ; but some reliques of it took sanctuary under ground, and escaped the common destiny.

LI. Dnfrtsnoy.

Id.

Id

Id.

Id.

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A tanctimonious pretence, under a pomp of form,

without the grace of an inward integrity, will not

serve the turn. L'Estrange.

What are the bulls to the frogs, or the lakes to the meadows ? — Very much, says the frog ; for he that's worsted will be sure to take sanctuary in the fens.

Id.

Those external things are neither parts of our de-

votion, or by any strength in themselves direct

causes of it ; but the grace of God is pleased to move us by ways suitable to our nature, and to

ftmctify these sensible helps to higher purposes.

South.

What actions can express the entire purity of

thought, which refines and sanctifies a virtuous man ?

Addison.

Tt was an observation of the ancient Romans,

that their empire had not more increased by the

strength of their arms than the sanctity of their man-

ners. Id.

Let it not be. imagined that they contribute no-

thing to the happiness of the country who only serve God in the duties of a holy life, who attend his

stimtutirij, and daily address his goodness.

Roger's Sermons.

To be the sunctijier of a people, and to be their God, is all one. Derham's Physico-Tlieology.

Truth guards the poet, sanctifies the line. Pope.

SANCTION, n. s. Fr. sanction : Lat. sanctio.

The confirmation which gives to any thing its

obligatory power; ratification.

I have killed a slave,

And of his blood caused to be mixed with wine .

Fill every man his bowl. There cannot be

A fitter drink to make this sanction in. Ben Jonson.

Against the public sanctions of the peace,

With fates averse, the rout in arms resort,

To force their monarch. Dryden's JEneis.

There needs no positive law or sanction of God

to stamp an obliquity upon such a disobedience.

South.

This word is often made the sanction of an oath : it is reckoned a great commendation to be a man of honour. Swift.

The satisfactions of the Christian life, in its pre-

sent practice and future hopes, are not the mere raptures of enthusiasm, as the strictest professors of reason have added the sanction of their testimony. Watts.

Wanting tanction and authority, it is only yet a private work. Baker on Learning.

SANCTORIUS, or SANTORIUS, an ingenious and learned physician, was a professor in the university of Padua in the beginning of the seventeenth century. He contrived a kind of weighing chair, by means of which, after estimating the aliments received, and the sensible discharges, he was enabled to determine with great exactness the quantity of insensible perspiration, &c. On these experiments he erected a curious system, which he published under the tkle of De Medicina Statica, of which we have an English translation by Dr. Quincy. Sanctorius published several other treatises, which showed great abilities and learning.

SANCTUARY, amons the Jews, also called sanctum sanctorum, or holy of holies, was the holiest and most retired part of the temple of Jerusalem, in which the ark of the covenant was

preserved, and into which none but the high

priest was allowed to enter, and that only once

a-year, to intercede for the people. Some dis-

tinguish the sanctuary from the sanctum sancto-

rum, and maintain that the whole temple was

called the sanctuary. To try and examine any

thing by the weight of the sanctuary, is to exa-

mine it by a just and equal scale ; because, among the Jews, it was the custom of the priests to'keep stone weights, to serve as standards for regulat

ing all weights by, though these were not at aM

different from the royal or profane weights.

SANCTUARY, in the Romish church, is also

used for that part of the church in which the

altar is placed, encompassed with a rail or ba-

lustrade.

SANCTUS, SANCUS, or SANGUS, a deity of the

Sabines, introduced among the gods of ancient

Rome, by the name pf deus fidius. He was the

father of Sabinus, the first king of the Sabines.

SAND, n. s. 1 Sax. pand; and all the

SAKD'BLIND, adj. northern languages. Par-

SAND'ED, [tides of loam, stone, or

SAND'ISH, (gravelly earth ; in fact,

SAND'STONE, n. s. \ sundered stone : hence

SAND'Y, adj. J barren country covered

with sand : sandblind, having a disease in which

sand, or small matters, appears to fly before the

sight : sanded is, covered with sand ; barren ;

marked with small spots : sandish, loose ; hav-

ing the nature of sand : sandstone, stone that

easily crumbles to sand : sandy, abounding with,

or like, sand ; loose.

Most of his army being slain, he, with a few of

his friends, sought to save themselves by flight over the desert sands. Knolles.

Here i' the' sands

Thee I'll rake up, the most unsanctified. Sliakspeare.

My true begotten father, being more than sand-

blind, high gravelblind, knows me not.

Id. Merchant of Venice.

My hounds are bred out of the Spartan kind,

So flewed, so sanded, and their heads are hung

With ears that sweep away the morning dew.

Shakspeare.

Safer shall he be on the sandy plains,

Than where castles mounted stand. Id.

Sand hath always its root in clay, and there be no veins of tund of any great depth within the earth.

Bacon,

Favour, so bottomed upon the sandy foundation of

personal respects only, cannot be long lived.

Bacon to Villiert.

Her sons spread

Beneath Gibraltar to the Libyan sands. Milton.

Engaged with money bags, as bold

As men with sand bags did of old. Hndibras.

A region so desert, dry, and sandy, that travellers are fain to carry waters on their camels.

Browne's Vulgar Errours.

SAND, CHARLES Louis, student of theology,

who murdered Kotzebue, was born 5th of Octo-

ber, 1795, at Wansiedel, in the Fitchetelgeberge,

where his father held a judicial office. In 1812

he was sent to the gymnasium of Ratislion; in

1814 he entered the university of Tubingen;

and in 1815 joined the Bavarian army, as a

volunteer, against the French. After the peace,

lie pursued his studies at Erlangen, when, in

1817, his most attached friend was drowned in

his presence, without his being able »o render

him any assistance. In the autumn of 1817,

he went to the university of Jena, and became

a member of the Burchenshaft. His soul now

necame animated with that enthusiastic devotion to wliat he considered the amelioration of his country, that was then predominant amongst the youth of Germany. Amongst the writers of that period who ridiculed the ardour of these youthful patriots, Kotzebue was the most prominent. Kotzebue also was discovered to be acting at the instigation of the Russian government. Sand, therefore, viewed Kotzebue as the enemy of his country, and considered that his duty could only be conscientiously discharged by the removal of so powerful an enemy to her liberties. On the afternoon of the 9th of March, 1819, he went to Kotzebue's residence at Menheim, delivered him a letter, and whilst he was reading, stabbed him with a dagger. He passed down stairs, handed a paper to the servant, inscribed, "Death-blow to AugustusVon Kotzebue," and hasting into the street, knelt down, and exclaimed, " Long live my German father-land." He next attempted to destioy himself, but was arrested, tried, and executed on the 20th of May, 1820. Kotzebue died soon after the mur-

derous attack.

SAND, in natural history, a genus of fossils,

the characters of which are, that they are found

in minute concretions ; forming together a kind

of powder, the genuine particles of which are

all of a tendency to one determinate shape, and

appear regular though more or less complete

concretions; not to be dissolved or disunited by

water, or formed into a coherent mass by means

of it, but retaining their figure in it ; transparent, verifiable by extreme heat, and not dissoluble in,

nor effervescing with acids. Sands are subject

to be variously blended, both with homogene and

heterogene substances, &c., and hence, as well

as from their various colors, are subdivided into,

1. White sands, whether pure or mixed with

other arenaceous or heterogeneous particles; of

all which there are several species, differing no

less in the fineness of their particles than in the different degrees of color, from a bright and

shining white, to a brownish, yellowish, green-

ish, &c., white. 2. The red and reddish sands,

both pure and impure. 3. The yellow sands,

whether pure or mixed, are also very numerous.

4. The brown sands distinguished in the same

manner. 5. The black sands whereof there are

only two species, viz. a fine shining grayish-black

sand, and another of a fine shining reddish-black

color. 6. The green kind of which there is only

one known species, viz. a coarse variegated

dusky green sand, common in Virginia. Sand

is of great use in the glass manufacture ; a white kind of sand being employed for making of the

white glass, and a coarse greenish looking sand

for the green glass. In agriculture it seems to

be the office of sand to make unctuous earths

fertile, and fit to support vegetables, &c. A

vegetable planted only in sand, or in a fat glebe, or in earth, receives little growth or increase ;

but a mixture of both renders the mass fertile.

Common sand is therefore a very good addition,

by way of manure, to all sorts of clay lands : it warms them, and makes them more open and

loose.

By the sand from the son-shore many valuable

pieces of land have been entirely lost; of wluVli “»’

give the following instances from Mr. Pennant : ‘ I have more than once,’ says he, ‘ on the east coasts of Scotland, observed the calamitous state of several

extensive tracts, formerly in a most flourishing

condition, at present covered with sands, unstable

as those of the deserts of Arabia. The parish of

Fyvie, in the county of Aberdeen, is now reduced

to two farms. Not a vestige is to be seen of any buildings, unless a fragment of the church. The

estate of Coubin, near Forres, is another melan-

choly instance. This tract was once worth £300

a-year, at this time overwhelmed with sand.

This distress was brought on about 100 years

ago, and was occasioned by the cutting down,

some trees, and pulling up the bent-star which

grew on the sand hills ; which at last gave rise

to the act of 15 Geo. II. c. 33, to prohibit the lestruction of this useful plant. The Dutch

perhaps owe the existence of part at least of

their country to the sowing of it on the mobile

solum, their sand banks. Mr. Stillingrleet re-

commended the sowing of this plant on the

sandy wilds of Norfolk, that its matted roots

might prevent the deluges of sand which that

country experiences. It has been already re-

marked that, wheresoever this plant grows, the

salutary effects are soon observed to follow. A

single plant will fix the sand, and gather it into a hillock ; these hillocks, by the increase of vege-

tation, are formed into larger, till by degrees a

barrier is often made against the encroachments

of the sea; and might as often prove preven-

tative of the calamity in question. The plant grows in most places near the sea, and is known to the Highlanders by the name of murah ; to the English by that of bent-star, matgrass, or marram. Linnaeus calls it arundo arenaria. The Dutch call it helm. This plant has stiff and sharp-pointed leaves, growing like a rush, a foot and a half long : the roots both creep and penetrate deeply into their sandy beds : the stalk bears an ear five or six inches long, not unlike rye ; the seeds are small, brown, and roundish. By good fortune, as old Gerard observes, no cattle will eat or touch this vegetable, allotted for other purposes, subservient to the use of mankind.'

SAND Box TREE. See HURA.

SANDA, or SANDAY, one of the Orkneys, twelve miles long, and from one to three broad. Its form is irregular, it is separated from Stronsay on the south by a channel three miles broad ; from Eda, or Eday, on the west by a channel of one mile and a half broad ; and from north Ronoldshay on the north by a channel of from one to two leagues and a half. The surface is flat, particularly on the east coast, which renders it

subject to inundations during the spring tides,

accompanied with an east wind. The soil is

mixed with sand, but produces good crops, when

well manured with sea-ware ; which abounds

on the coast, and is made into kelp in greater

quantity than in any other island in Orkney.

SAN'DAL, n. $. Fr. tandtile ; I .at. xamlalium.

A loose shoe.

Thus sung the uncouth swain to the oaks and rills.

While still the morn went out with mndtils grey.

A/I./OU

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From his robe

Flows light ineffable : his harp, his quiver,

A nd Lycian bow are gold : with golden tandals

Mis feet are shod. Prior.

The sandals of celestial mold,

Fledged with ambrosial plumes, and rich with gold,

Surround her feet. Pope's Odyssey.

The SANDAL, in antiquity, was a rich kind of

slipper worn on the feet by the Greeks and Ro-

mans, made of gold, silk, or other precious stuff;

consisting of a sole, with a hollow at one ex-

treme to embrace the ancle, but leaving the upper part of the foot bare. It was fastened on with leather strings, which crossed several times round the lower part of the leg. Besides these sandals, the ancients used also other coverings for the feet, which, like those of our own day, left no part bare. Those, indeed, often ascended as hieh as the ancle, and even the calf of the leg.

The proper term given by the Romans to this latter article of dress was calceus. These were, however, generally regarded as troublesome and uneasy. The wearers took care to provide them of leather extremely supple, which was termed aluta, derivative of alumen, alum, that substance being employed to produce the requisite softness. The Roman matrons, when assembled on occasions of solemnity, wore the alutse of white leather : the courtezans, on the other hand, preferred the sandal, of elegant shape and handsomely embroidered, this not hiding at all the shape of a pretty foot. For this reason, Ovid, in his Art of Love, counsels these amiable fair to conceal their feet, if ill formed, in an aluta of dazzling white.

SANDAL is also used for a shoe or slipper worn by the pope and other Romish prelates

when they officiate. It is also the name of a sort of slipper worn by several congregations of reformed monks. This last consists of no more than a mere leathern sole, fastened with latches or buckles, all the rest of the foot being left bare. The capuchins wear sandals ; the recollets, clov«> ; the former are of leather, and the latter of wood.

SANDARACII GUM is a dry and hard resin, usually met with in loose granules, of the size of a pea or a horse-bean, of a pale whitish yellow color, transparent, and of a resirrous smell, brittle, very inflammable, of an acrid and aromatic taste, and diffusing a very pleasant smell when burning. Sandarach is esteemed good in diar 'lisas and in haemorrhagies. The varnish-makers make a kind of varnish of it, by dissolving it in oil of turpentine or linseed, or in spirit of wine. That gum sandarach is only produced from a species of juniper was long a very common opinion ; but it appears to be a mistake. The juniperus communis, from which many have derived this gum, does no! grow in Africa; and sandarach seems to belong exclu-

sively to that part of the world. The gum sandarach of our shops is brought from the southern provinces of Morocco. The tree which produces it is a Thuia, found also by M. Vahl in Tunis. It was made known several years ago by Dr. Shaw, who named it Cypressus fructu quadnvalvi, Equiseti instar articulatis : but neither of these learned men was acquainted with the economical use of this tree; probably because, being not common in the northern part uf Barbary, the inhabitants find little advantage in collecting the resin which exudes from it. M. Schousboe, who saw the species of thuia in question, says that it does not rise to more than twenty or thirty feet at most, and that the diameter of its trunk does not exceed ten or twelve inches. It distinguishes itself on the first view, from the two other species of the same genus cultivated in gardens, by having a very distinct trunk, and the figure of a real tree ; whereas in the latter the branches rise from the root, which gives them the appearance rather of bushes. Its branches are also more articulated and brittle. Its flowers, which are not very apparent, show themselves in April ; and the fruits, which are

of a spherical form, ripen in September. When a branch of this tree is held to the light, it appears to be interspersed with a number of transparent vesicles which contain the resin. When these vesicles burst, in the summer months, a resinous juice exudes from the trunk and branches, as is the case in other coniferous trees. This resin is the sandarach, which is collected by the inhabitants of the country, and carried to the ports, from which it is transported to Europe. It is employed in making some kinds of sealing wax, and in different sorts of varnish.

SAN DEC, one of the eighteen circles or districts of Austrian Galicia. It lies in the south-west of the province, on the borders of Hungary, and is watered by the Donajetz and the Poprad, the latter being the only river common to Galicia and Hungary. It is of irregular form, and contains 1400 square miles, with 195,000 inhabitants.

SANDEMAN (Robert), was born at Perth in 1723, and educated at the university of St. Andrew's. Becoming a member of the society of Independents, he in 1757 published a work entitled, Letters on Theron and Aspasio, 2 vols.

8vo., in which he attacked the Rev. James Hervey, author of Theron and Aspasio, in the most severe terms, and analysed all the most popular doctrines advanced ;n that work, with the most satirical criticism. Mr. Sandeman in 1766 went over to America, where a meeting was erected for him ; but preaching the doctrine of ‘ submission to the powers that be,’ this did not suit the spirit of resistance to British taxation which was then becoming daily more popular in the American colonies. He died in New England in 1772.

SANDEMANIANS, a sect of Independents, so named from the preceding writer. In Scotland they are called Glassites, from their founder Mr. John Glas, who was a minister rf the established church in that kingdom ; but, being charged with a design of subverting the national covenant, and sapping the foundation of all national establishments by the kirk judicatory, “as expelled by the synod from the church of Scotland. His sentiments are fully eˆplained in a tract published at that lime, enti ‘< d The Te-timony of the King of Martyrs, and preserved in

the first volume of his works. In consequence

of Mr. Glas's deposition, in 1728, his adherents

formed themselves into churches, conformable

in their institution and discipline to what they

apprehended to be the plan of the first churches

recorded in the New Testament. And the pecu-

liar doctrine maintained by them may be learned

from the works of Mr. John Glas, and from

Mr. Robert Sandeman's Letters to Mr. Hervey,

in which he endeavours to show that his notion

of faith is contradictory to the Scripture account

of it, and could only serve to lead men, pro-

fessedly holding the doctrines commonly called

(. 'ah inistic, to establish their own righteousness upon their frames, inward feelings, and various

acts of faith. In these letters Mr. Sandeman

attempts to prove that faith is neither more nor

less than a simple assent to the divine testimony

concerning Jesus Christ recorded in the New

Testament; and he maintains that the word

faith, or belief, is constantly used by the apos-

tles to signify what is denoted by it in common

discourse, viz. a persuasion of the truth of any proposition ; and that there is no difference between believing any common testimony and believing the apostolic testimony, except that which results from the nature of the testimony itself. This led the way to a controversy among those who were called Calvinists, concerning the nature of justifying faith ; and those who adopted Mr. Sandeman's notion of it, and who received the denomination of Sandemanians, formed themselves into church order, in strict fellowship with the Independent churches in Scotland, but holding no kind of communion with other churches. The chief points in which this sect differs from other Christians are their weekly administration of the Lord's Supper : their love-feasts, of which every member is not only allowed but required to partake, and which consist of their dining together at each other's houses, in the interval between the morning and afternoon service; their kiss of charity used on this occasion at the admission of a new member and at other times, when they deem it to be necessary or proper; their weekly collection before

the Lord s Supper, for the support of the poor, and defraying other expenses; mutual exhortation ; abstinence from blood and things strangled ; washing each other's feet, the precept concerning which, as well as other precepts, they understand literally ; community of goods, so far as that every one is to consider all that he has in his possession and power as liable to the calls of the poor and the church ; and the unlawfulness of laying up treasures on earth, by setting them apart for any distant, future, and uncertain use. They allow of 'public and private diversions, so far as they are not connected with circumstances really sinful ; but, apprehending a lot to be sacred, disapprove of playing at cards, dice, &c. They maintain a plurality of elders, pastors, or bishops, in each church ; and the necessity of the presence of two elders in every act of discipline, and at the administration of the I.onl's Supper. In the choice of these elders second marriages disqualify for the office ; and they are ordained by prayer and fasting, imposition of hands, and giving the right hand of fellowship. In their discipline they are stru t and severe ; and think thenpelves oblis

separate from the communion and wor-hip < >t

al! such religious societies as appr-.u to iiiem

not to profess the simple truth for their only

ground of hope, and who do not walk in obedi-

ence to it.

SAN'DERLING, n. s. Of uncertain origin

A bird.

\Ve reckon coots, sanderlings, pewets, and mews.

(\irfw.

SAN'DERS, n. s. Lat. tantalum. A kind of

Indian wood.

Aromatize it with sanders. Wueman's Surgery.

SAN DEIIS, or SA L x DEUS, in botany. See PTK-

nocAiiprs, and SANTALLM.

SANDERS (Robert), a Scottish author, born

near Breadalbane, in 1727. He went to London,

and compiled, partly from his own survey and

partly from books, a work entitled The Complete.

English Traveller, in folio. He next compiled

The Newgate Calendar. He afterwards became

amanuensis to lord Lyttleton ; and Dr. Johnson

mentions that he was in his lordship's employ-

ment when he wrote his History of Henry 11.

But of all his writings, that which made most

noise was his Gaffer Graybeard, an illilˆr-d

work, in 4 vols. 12mo., in which the most emi-

nent dissenting ministers of the age were treat 'I*

with very little ceremony. He died in 1783.

SANDERSON (Robert), F. R. S., a learnt ci

and laborious antiquary, who was usher of the

court of chancery, and clerk of the chapel of the

rolls. He assisted Mr. Ryder in publishing In-

valuable work entitled Foedera; and continued it

after his 'death; beginning with the sixteenth vo-

lume, the title of which says, Ex schedis Thonise

Rymer, potissimum edidit Robertus Sanderson,

1715; and ending with the twentieth, August

21st, 1735. He died December 25th, 1741.

SAND'EVER, n. s. Fr. suindcver. Defined

below.

That which our Enghsn classmen call «/»<..'

and the French, of whom probably the name \;is

borrowed, suinderer, is that recrement that is made

when the materials of glass, namely, sand, and a tixt lixiviate alkali, having been first baked together, and kept long in fusion, the mixture casts up the super-

fluous salt, which the workmen afterwards take off

with ladles, and lay by as little worth. lini/le.

SANDING ISLES, Pulo Sanding, or San-

diang, two small islands off the south-west coast of Sumatra, near the south-eastern extremity of the Nassau or Poggy Isles, in which turnup they are sometimes included. They are inhabited, and only remarkable for the production of the long nutmeg, which grows wild ; and some good timber, particularly of the kind known by the name of marbaw. An officer and a few men were landed here in 1769, with a view to the establishment of a settlement, but the scheme was subsequently abandoned.

SANDIVER, a whitish salt, continually cast up from the metal, as it is called, whereof ulass is made; and, swimming on its surface. i< skimmed off. Sandiver is also plentifully thrown out in the eruptions of volcanoes ; some is of a line white, and others tinned bluish or yelloss ish.

SANDIL'S (Christopher), a celebrated Socinian writer, born at Kouiuˆlierj, in Prussia, in I li>l. lie wrote Nucleiˆ UJMon:i> Kcclesiasticae, and various other works in fas or of his opinions, and dn d it Amstridum, in 16HU.

SANDWICH ISLANDS.

SANDOM1R, a palatinate or province of the

ce\v kingdom of Poland. It is bounded on one part by the Vistula, on another by the Pilica ; the rest of the boundary is formed by the palatinate of Cracow. Its area is about 4700 square miles, with 448,000 inhabitants. It abounds in wood, and has several sandy tracks and marshes, but in general is of great fertility, and wants only a skilful and efficient cultivation to render it flourishing. This palatinate has a greater variety of minerals than is common in Poland. Sandomir was also the name of a palatinate in the old kingdom of Poland. It was of considerable extent, but in 1772 the part to the right of the Vistula was ceded to Austria.

SANDOMIR, a town in the south of Poland, on the Vistula, opposite to the influx of the San, and the chief place of the foregoing palatinate. In a remote age this was the residence of the court. At present it is a poor place, and the houses built of wood.

SANDORICUM, in botany, a genus of the monogynia order, and decandria class of plants ; natural order twenty-third, trihillatae : CAL. quinquedentate ; petals five, and linear shaped ; nectarium having ten dentoe, on which the antherse

grow ; the fruit is a drupa, and five in number, each of which has one seed. There is only one species, viz.

S. Indicum, a native^ of Africa and the East Indies.

SANDRAT (Joachim), a celebrated German painter and author, born at Frankfort, in 1606. He was early sent to a grammar school, but, showing an inclination for engraving, he was allowed to follow his own wishes. He went on foot to Prague, and placed himself with Giles Sadler, a celebrated engraver, who advised him to study painting. He accordingly went to Utrecht, and studied under Gerard Huntorst, who took him to England, where he staid till 1627. He then went to Venice, where he copied the paintings of Titian and Paul Veronese ; and thence went to Rome, where he became eminent, lie then went to Naples, and thence to Sicily and Malta, and through Lombardy to Frank-fort, where he married. The manor of Stokau having fallen to him, he repaired it at a great expense, but had hardly got it finished, when it was burnt by the French. Upon their retreat,

he rebuilt it in a better style than ever ; but, on the rumor of a second invasion, sold it, and

settled in Augsburg; which, on his wife's death,

he left, and went to Nuremburg, where he set

up an academy of painting. Here he also pub-

lished several volumes on subjects relating to his

profession; the most esteemed of which is, The

Lives of the Painters, with their Effigies ; being

an abridgment of the biographical works of

\ asari, Ridolfi, and Van Mander. He painted

till he was seventy years of age, and died in

1683, aged seventy-seven.

SANDROCOTTUS, an Indian of mean birth,

contemporary with Alexander the Great, who,

from the prodigy of a lion once licking the sweat

from his brow as he was sleeping, prognosticated

future greatness to himself. For impertinence

to Alexander, he had been ordered out of his

presence, but, on the death of that conqueror,

he actually made himself master of a part of the

country in the hands of Seleucus.

SANDSTOM, in mineralogy. See MINERA-

LOGY.

SANDWICH, a borough, cinque port, and

market-town in Eastry hundred, Kent, sixty-

eight miles east by south of London. It contains three parish churches, and was, previous to the blocking up of its harbour by the sand, a place of considerable importance. It was walled and surrounded by a ditch, and was considered in ancient times a place of great strength. The town is irregularly built, standing on the bank of the river Stowe ; the streets are narrow and incommo-

dious ; the principal manufactures are those of ropemaking and shipbuilding. The exports of Sandwich are grain, flour, seeds, hops, wool, malt, and feather. The town is governed by a mayor, recorder, twelve jurats, and twenty-four common councilmen, and, being the principal cinque-port, the mayor carries a black knotted staff, whilst the other cinque-ports are only allowed white ones. The members belonging to Sandwich are Fordwich, Deal, Ramsgate, Reculver, Sarre, Stoner, and Walmer. It sends two members to parliament, who are returned by the corporation and freemen, and it also gives the title of earl to the family of Montagu. There is an hospital for six poor men and as many women, and another for twelve men, dedicated to St. Thomas ; also two good charity-schools. In the town-hall is the council chamber and court-hall, in which half-yearly sessions are held. Market on Saturday.

SANDWICH, an island of the Eastern seas, opposite New Ireland. It is rather low, and covered with trees. Long, of the most westerly point, 50° 54′ 15′ E., lat. 2° 59‘26’S.

SANDWICH ISLANDS, an interesting group of islands, consisting of eleven islands, discovered by captain James Cook in the beginning of the year 1778, lying between the parallels of 18° 54′ and 22° 15′ N., and extending in longitude from the meridian of 154° 54′ to 160° 24′ W. They are called by the natives Qwhyee (Hawaii), Mowee (Maui), Ranai (Lanai), Morotinnee (Molokina), Kahowrowee (Kahauraui), Morotoi (Molokai), Woahoo (Oahu), Atooi (Kauai), Oneehou (Niihau), Oreehoua (Lihaua orLiihaua), Tahoora (Kahura).

Hawaii, the easternmost, and by far the largest of these islands, is of a triangular shape, and nearly equilateral. 'The angular points make the north-east and southern extremities. Its greatest length, which lies in a direction nearly north and south, is eighty-four miles and a half; its breadth seventy-two miles ; and it is about 293 miles in circumference. Of the six large dis-tricts into which this island is divided, Ehidu is the most healthful and fertile. The chiefs at Oahu generally speak of its exuberance and beauty with the liveliest expressions of recol-

lected pleasure, since Hawaii is the birth-place and cradle of sovereignty. A great part of the coast presents only a few trees growing out of the mouldering remains of volcanic eruptions, and shapeless slags of lava ; but. after ascending a few hundred feet, the traveller finds himseH shrouded in a cloud, and amid the soft verduie

of a moii luxuriant vegetation. The blackcattle, which were introduced by the circumnavigator, have multiplied exceedingly ; and there is reason to believe, from the accounts given by the natives who have penetrated into the central parts of ihe country, that its recesses contain a store of vegetables to reward the pains, and inform the understanding, of the laborious and enlightened bota-iist. Mauna Roa, or the great mountain, is estimated to be nearly 16,000 feet high ; a volcanic mountain, once the source of superstitious fears and the engine of priestly bondage, as it js now the wonder of all who visit Hawaii, and the w ished-for bower of their toil and travail. Maui lies at the distance of twenty-four miles

N.N.E. from Hawaii, and is 140 geographical miles in cirumference. A low isthmus divides it into two circular peninsulas, of which that to the east is called Oamadua, and is double the size of the eastern peninsula called \Vailukee. Its mountains are so high that, by an optical illusion, their summits appear like hills resting upon the clouds. Lihaua, the residence of the princess Nahienaena, and of her missionary tutors, presents a very beautiful landscape when viewed from the sea, but disappoints the spectator as he approaches the landing place, for want of a green carpet to conceal the disagreeableness of a dirty red soil. Captain King remarks that ‘ this pleasant scene was shortly changed on advancing a few miles to the westward. The Sice of the country became totally different, the shores and sides of the hills had no indications of being inhabited, and were almost destitute of vegetable productions.’ ‘ There appeared to be a rude mass of naked, barren rocks, broken into deep gulleys, that extended from the mountains to the sea-side.’ — Vancouver.

Lanai is about nine miles distant from Maui,

and lies to the south-west of the passage between these islands. The country, to the south, is high and craggy, but the other parts of the islands present a better prospect.

Oahu lies to the north-west of Molokai, at the distance of about seven leagues, and is computed to be about forty miles long, and somewhat less than eight in width. The highest mountain is conjectured to be about 4000 feet in height, and was first ascended by the writer of this paper in company with several natives and two of the mission family. The nati'tes mocked their dread of a monstrous mou or lizard, which superstitious awe had created and endowed with supernatural attributes, by charging themselves with the load of warlike weapons ; and after mou's ascent invoked his fancied godship in tones of defiance. The deep recesses of the mountains are rich in the varied produce of stately trees and other vegetable curiosities. A wide extended plain, called the wilderness of Weuroa, runs obliquely across the island, and is at least 300 feet above the level of the sea. Its fertility might, by industrious means, be turned to a good account.

Between Kahauraui and Maui lies the small un-

inhabited island of Molokina.

Molokai is only seven miles and a half from

Maui, to the north-west; very barren, and nearly

without wood.

Kauai lies to the north-west of Ohau, and is

distant from it about eighty-one miles. The face

of the country to the north-east and north-west

is broken and rugged, but to the south it is more even ; the hills rise in a gentle slope from the

sea side, and at some distance back are covered

with wood.

Niihau lies fifteen miles to the westward of

Tauai. The eastern coast is high, and rises

abruptly from the sea ; but the rest of the island consists of low ground, excepting a cliff on the

south-east point. This island produces the best

kind of yams that are to be obtained among the

islands, and the dracaena terminalis, or tea-root

(kii), which yields, by boiling, ˆ luscious juice

resembling molasses.

Liihaua, separated from Niihau by a channe.

about a mile in breadth, is of very small extent,

and entirely composed of one barren rock, to all

appearance destitute of soil, and presenting no

indication of ever having been by choice the

residence of human creatures.

Kahura is a low sandy island, and visited only

for the purpose of catching turtle and sea-fowls.

The island of Hawaii was on the 25th of

February, 1794, ceded to Great Britain by

Tamaahamaah, or, according to the present or-

thography, Kamehameha, the king of Hawaii,

who by right of conquest became afterwards su-

preme governor of all the islands, and hence it is

evident that all the Sandwich Islands are, both

by discovery and cession, the property of Great

Britain. This is now the more to be insisted

upon, because the American government, pre-

suming that the islands were autocratical, em-

powered captain Jones ofc the Peacock to ne-

gociate a treaty of neutrality with the natives, in which it was, among other things, stipulated that,

in the case of a war between Great Britain and

America, any ship should be indemnified by

taking shelter in any of the ports of the Hawaiian Islands. This treaty was in a very clandestine

manner brought about through the ministry of

some of the American missionaries, who in this

instance seem to have forgotten the nature of

their high calling, and humbled themselves to become the instruments of a secular, and not very honest, policy. A desire to blot out the remembrance of the generosity of Great Britain, by razing the memorials of her good deeds done to the islanders, gave occasion, as the writer has reason to believe, to the following otherwise unaccountable transaction, of which he was an eyewitness:— Returning one evening from the c >n-sul's house to his rooms at Whitehall, the former residence of the late prime minister Karaimoku (shortly after the orders of the late king and queen of these islands had arrived), he was surprised to see all the principal chiefs of the neighbouring islands assembled round the door of the sepulchre which had been reared for the reception of the coffins ; and yet more astonished on entering to behold one of the coffins just about to be lowered down into a grave prepared for that purpose. His presence was immediately announced by murmurs of the foreigner (tahaure), and they listened with submission to his admonition, that charged them with an unaccountable piece of ungrateful conduct in removing these great pledges of king George's love, which, in the sen-

timents of these islanders, are always accounted sacred. After some consultation the queen, calling me aside, requested that I would go and ask the concurrence of Karaimoku, the dying minister, who, in the laconic style of authority, said, ‘ It is enough.’ The design was immediately dropped, and the dead suffered tosleop in peace. The face of things since the time of Cook has been completely changed, the clou.c of vermil-tinctured feathers once worn by the chieftains has been exchanged for a guise of European fashion, and the plumy sceptre, or kahele, which was wont to preqede persons of distinction, is now displaced by some foreign badge of rank and office. Instead of the thrilling sound pro-duced by the combination of various rhythmical instruments, played in measured cadence to the movements of a dance which was led in honor of some tutelary divinity, you hear the curious recitative of numerous scholars chanting their lessons, as they are taught to combine the flowing sounds of their native language into words and

sentences. Nor has the outward garb alone un-

dergone a great change since that period, if we

may judge of the present generation by com-

paring them with a few old men who are the

survivors of the last ; for there has been a great falling oft in mental activity and manly fortitude.

An observer discovers a certain nobility of dis-

position indicated by the carriage of the elder

race, and a certain frankness of humor, of which

he cannot discern the slightest symptons in their

drowsy-headed offspring who crowd the courts

and dwellings of the chiefs. In the room of en-

gaging in those sports and gymnic exercises

which were once the favorite amusements of his

forefathers, a native, when he has finished the

task which necessity imposes on him, betakes

himself to his mat, and solaces his cares by re-

citing a psalm or portion of sacred scripture,

which the industrious missionary has clothed in

the mother dialect of his willing convert.

An islander looks forward to the time of a

special assembly and examination of the schools

as to a day of general festivity, while all his

thoughts are taken up in providing the best ap-

parel for the occasion, and in repeating his les-

sons that he may merit the public applause of the chiefs and missionaries. The extraordinary fondness which these people exhibit for reading seems to be a phenomenon in the human mind ; since, from the scantiness of translated matter, the same lesson is necessarily repeated many thousand times during the days of preparation preceding these general meetings : and the intellectual gratifications required must therefore, on every view of the subject, be but ‘ a vanishing quantity.’ The allotted hours of labor, the proportional mean between the longest and shortest spaces of daylight, are not thought sufficient for the praxis of their palapala or reading, but in these seasons they borrow freely of the night, so that, when fever and pain have kept the writer waking, he has often heard, during the silent watches of midnight, the disjointed sounds of murmuring voices. This may however be explained by having recourse to the superior principle, that occupation is as necessary to the health of the mind, as the stimulus of the non-naturals is to that of the body, and hence we see one reason why a preference is given to an exercise that demands so few of our physical ener-

gies.

The government is at present monarchical,

and was at a late period administered by Kaha-

manu, the favorite queen dowager of Tamelvameha,

at whose nod all the chiefs and subordinate go-

vernors tremble. 'All the land is said to be

held in fee by the king or queen regent, who

can take away or bestow it at their pleasure

The aristocratic part of the community let their

lands by a kind of feodal tenure, which obliges

the tenant to render allegiance to his landlord,

and, in time of battle, to repair to his standard ; who, besides receiving the customary rentage of

half the produce, seldom scruples to take the

fattest of his swine, and the choicest part of his crop. To remove this great discouragement to

industry, some laws to secure the enjoyment of

property are highly necessary. To aggravate

their miseries, a law was passed some years ago

obliging every man to dispose of this abundance

to foreign ships, &c., by bringing it to the pub-

lic market, where, besides paying the clerk, he

was compelled to surrender half the price to the

king ; but this severe imposition was at the re-

commendation of the English consul taken off;

and, by the abolition of interdictions and various species of tyranny, they begin to realize some of the advantages of freedom. We have often admired the silence and promptitude with which the orders of the queen were executed ; the minister who has any particular part of her property in charge, or whose business it is to fill any office of government, -seldom requires more than the silent expression of the countenance to interpret the will of his mistress.

They all acknowledge the supremacy of the English government, and are impatiently waiting for its interposition and advice in framing a few laws or maxims for adjusting their disordered state of affairs. Though there are differences of opinion as to what rules they ought to be governed by, and some complaints of the great austerity of the missionary discipline, yet there is not the slightest symptom of disturbance. The common people have sold and forgotten the use of their native arms ; and the ambition of ruling over others is displaced by the desire of appearing more learned, more religious, and better habited, than their fellow creatures.

In order to train and bring xinder subjection

the humors of the younger people, an absolute authority over them seems necessary. For where diet, lodging, and climate tend to foster the concupiscible part of our nature, and the restraints of legal enactments, custom and example are scarcely felt ; the cordial draught, mingled by Circe for the unwary, becomes far more tasteful, and its draught attended with less remorse than in societies where legislation and the judgment of civil courts provide pains and penalties for transgressors. If we regard individual depravity, the Sandwich islander wrll appear to advantage over many civilised nations ; but, to institute a just comparison, we must consider him in a state of society wherein he will come very short of an equality with most, there being

little of what Tully calls communitas, in which condition each individual member contributes his quota of benefits, that he may be a joint partaker in the common stock of happiness.

The counterpart of the sirens, failed in ancient story, who have been deemed by some to exist

only in the imagination of poets, may be found

at Oahu, who win not by a voice tuned to en-

chant by melodious warbling, but by the far

more powerful spell of female suasion, that —

O'KOI ˆOoyyuiv dtouati

£«OT;V(J»V TV fovri rvvt), fat v//~ta TtKvi

(fucaJSt voffrijaavrt Traptorarat, ovS't jawvrat.

He who was so void of understand ing as to listen to the pleasing sorcery of their enticements never

after felt any longings after the blandishments of

home, nor the fond caresses of his wife and

children. And it is no uncommon thing to wit-

ness a youth of respectable parentage and hope-

ful parts, allured, on his first visit to Oahu, into the vortex of sensual delights, and, after reeling

a few jears in dizzy dissip.it ion, snatched away

by a fit of apoplexy, unless he be removed from

inevitable ruin by some forceful interposition.

One would not be inclined to predict that a gen-

tleman, who had been fostered in the bosom of

society, could prefer a life at Oahu, where there

are none of those things which we significantly

call comforts, to his maternal hearth, where they

come unbought and unasked for. But we have

seen instances in which all the advantages and

all the charities of life were exchanged for a pleasing companion and the delicious liberty of Honolulu. We have adverted to this effect upon the minds of foreigners by way of extenuating, if it can be admitted as an extenuation, the licentious habits of a great proportion of the natives, and to give the reader some perception of the baits which pleasure holds out in a place wherein a stranger, at the first glance, would not expect to find such a profusion of her dainties. Few encomiums can be justly bestowed upon the moral rectitude and integrity of their minds, but in spite of degeneracy there have been many, and still are a few remaining, who in this respect might be patterns for people of a better education. The frequent examples of falsehood and covenant-breaking arise not altogether from a malignity of nature, but in some measure from the want of a customary or intuitive discrimination of right and wrong, and of consequence the selfish passions, receiving little or no check from enlightened reason, are allowed to gain the ascendant ; and hence, unless profit be in the prospective, a benefit seldom finds a counterpart in the mutual good offices of friendly intercourse.

To make a native a present in order to entice him to engage in any work of utility would be the most effectual way to baffle the hopes of performance ; and we have been taught by experience the necessity of deliberating when about to recompense a servant for his services, whether we could dispense with his attendance for several days ; for no sooner was he in possession of the reward than he presently disappeared to enjoy it. There is radically in their disposition a certain waywardness and inclination to play the truant, the growth of a long-enjoyed freedom from established rules of action, which, order to render them .capable . of discharging those duties which devolve upon us from the relations of civil and social life, must be cured; and this cannot be done by any foreigner, whether priest or layman, \vithout the coercive authority of some superior chief exerting itself in pursuing the runnaways to their hiding places, and bringing them back to their fancied hard bondage. All the experiments we have seen tried or heard related frustrated the exertions of their foster parents, except on one who was a girl, confided

to the care of a respectable missionary by a chief woman of Hawaii, who, as often as the maiden

eloped from confinement despatched her people

in all directions to find out the place of her con-

cealment. The damsel did not, as might have

been expected, retain any resentment, but re-

quited their pains by waiting on her sick master

and mistress unaided, with the most diligent and

loving attention. In the summer of 1827, when

we visited the family, the little maid was still

living with them, and appeared an emblem of

good nature and assiduity. \e notice this fact,

because, while it illustrates their native disposi-

tion, it encourages the philanthropist to hope

that if the same discipline, grievous indeed for

a time to the child, could be made use of, many

who, without education would be given up to

lasciviousness, might by timely interposition

be retrieved and made to fulfil with applause

those duties which heaven has ordained for our

general benefit.

There is one tiling, independent of a genial

climate, which tends to encourage the promiscu-

ous intercourse of the sexes, namely, on particu-

lar occasions the herding together of many hun-

dreds of both sexes within the confines of one apartment or dwelling-house, who, during the time of repose, when they are extended or rather strewed upon the matting, adjust themselves so as mutually to serve as pillows for each other, and by their numerous intersections form such a species of network as a traveller is seldom indulged with a sight of. Besides there is a certain roving propensity among the better sort, especially derived from an old custom of sojourning but a short season in any province or island and this practice was, anterior to the port town of Honolulu becoming the emporium of the whole group of islands, so prevalent, that these successive pilgrimages answered the purpose of a sort of memorial notation for measuring the time elapsed since the happening of any important event. But since it is not practicable to come at all the foreign commodities in so expeditious a manner as at Honolulu, the chiefs who reside there content themselves by indulging this hereditarypropensity to peregrinations on a smaller scale, and with removing to houses newly erected by themselves or their friends and equals, and

hence the privileges of the host or hostess being

in no respect different from those of the gu

a stranger, on his first visit, finds it difficult to distinguish the occasional inmates from the ori-

ginal proprietor of the tenement. We have been

told that Tamahnmeha, who subjugated all the

inlands to the yoke of Hawaii, being aware of this disposition of his subjects, when he had built ;•

house, levied the toll of a crown upon every

chief and commoner who came to visit him in his

new residence ; but such is the excess of this pe-

culiar species of curiosity and fondness for no-

velty, that I never heard but that this exaction

was cheerfully paid, though money was not at

that time very plentiful among them. In their

intellectual character they sometimes evince a

degree of shrewdness for which an observer, from

a contemplation of some parts of their mental

exertion, would not antecedently be inclined to

give them credit ; to mention an instance or two

which fell under my own notice : — While a nu-

merous circle of natives, whom, at the writer's

departure, he for the first time admitted into his

room, were offering various articles of native art

for sale to one of his brother officers, he remarked to him that a fisherman was exhorting one with

whom he was in treaty not to lower his demands ;

but the former, guessing the nature of our com-

munication, very gravely told the writer that as

his conversation was addressed to another he had

no business to apply or hear any part of it. A

person who was steward of all the sandal-wood

exported from Oahu was accused of embez-

zling his master's property ; the chief, after re-

flecting a few minutes, said, in reply, ' I know

that this man robs me, but he will not allow

another to do so ; now I know, if I trust you, that you will not only rob me yourself, but suffer

others to do it.' Nothing can be more complete

than the dominion which the Christians have ob-

tained over their minds, nor any thing surpass

the eagerness which they evince to be better ac-

quainted with the statutes and ordinances of

Holy Writ.

The American missionaries, who have been

chiefly instrumental in changing the features of

these islands, are, in the relative sense of lan-

guage, men of unblemished moral character,

notwithstanding the strange load of calumnies and obloquy which has been cast upon them 'by their adversaries ; for none of the many grievous charges which they had brought against the missionaries could be made good when they were convened in a public manner for the specific purpose of finding them guilty ; and so little foundation had their railings in trath and verity that they speedily dropped the cause, and were fain to change sides with the defendants. The capital offence which the missionaries have given to the residents and visitors is by instigating the chiefs to prevent the intercourse of the unmarried women with foreign suitors, by prohibiting their going on board the vessels. The moral character of the missionary is not to be impeached because an enlightened judgment does not always lead him to frame the best schemes and adopt the most eligible methods for gaining his purpose. Men of no great learning, and less acquaintance with secular matters, often endeavour to make the general rule efficient without taking into the account those corrections which the various modifications to which it is subjected when put in practice might seem to

require. The logic of the missionary teaches him to argue thus : — ‘ Hath not the Scripture Slid it, and shall men presume to add to or take from that book ?’ No : but a divine command-ment sometimes resolves itself into cue o a more general influence ; as, for example, that of •keeping the sabbath holy does into that precept to show mercy and kindness to all God’s crea-tures. To cut off occasion for cavilling we will divest their reports of that machinery which has dignified the progressive issue of the labors, and briefly sum up the effect of their exertions, which we think every wise man will allow to be highly beneficial. They have taught the idolaters, as far as the instruments of communication assist them, the unity of the God-head, and the infinite perfection of the divine attributes, the scope and design of revelation, and the obliga-tion of moral virtues. They have fixed the varying sounds of language in a permanent orthography, and have instructed the majority of the natives in the nature and use of these symbols, so that they can read what is written and communicate with their friends by means oi

letters ; and, lastly, they have prevented an un-

speakable deal of hard usage by reviving the

primeval law which ordained that man was not

only the head, but the protector of his helpmate.

There is one phenomenon, though familiar to

all, which a traveller in ascending the moun-

tains, if he possesses any relish for the sublime

and beautiful, cannot fail to admire ; this is the

appearance of rainbows in arcs of various

curvatures, hung as it were in the ample void

of the deep valleys below him : sometimes a

thread or two only of the complex twine of

ligh{ curving to the sun's altitude, are spread on

the bosom of a hill ; at others the purpled scarf

of iris, like an oblique zone, partly encircles one of the lesser mountains, and thence it conies to

pass that this strange imagery, added to other

entertainments of nature, beguile the mind from

regarding the concernments of the body, which

is toiling through black mud and drenching

rains to climb the headlong ascent of some

lofty eminence. In the year 1827, August 18thy

when crossing the wilderness of Wairoa, we

witnessed a rainbow which seemed best fitted to

make the way-faring man turn aside and wonder

at the bright enchantment; the primary bow appeared like a solid arch, with its two ends resting on the plain a few paces from us, and was strengthened by three supernumerary red arches of unusual splendor ; the secondary bow was not complete, but had one supernumerary arch. This glorious apparition appeared to a lively imagination calculated to afford a glimpse at a similitude of those transcendant spectacles described by St. John and the prophet Ezekiel. The frequent showers which fall in the higher parts of this island are to be ascribed to the trade wind, which brings along with it a mass of vapors. These being impelled by the current of air are, in order to surmount the obstruction of the interposing ridges, obliged to ascend into a region of less relative heat and density, where the atmosphere, being unable to hold the vapory particles any longer in solution, sheds them upon the brows of the highest mountains.

Die.l. — The vegetable called poe may be justly said to be the staff of life, and to an-iver the purpose of bread among us. This is made by first roasting and then macerating

the roots of the taro till they can be reduced by kneading and the gradual admixture of water to

a pulpy solution, winch, after it has remained in

calabashes a few hours to acquire of fermenta-

tion a slight degree of acidity either with or

without a little animal food, forms the »tay of a

Sandwich islander's diet. The nauseous custom

of eating dogs is very much tempered in the

imagination by observing in what manner the

animal is nurtured, that it never goes abroad

without being carried, and that it eats of the

same morsel and drinks out of the same cup as

its mistress. The flesh is thus rendered more

wholesome and palatable than that of the swine,

whose feeding is not half so delicate. Modern

cookery has not devised a method more simple

or more effectual for dressing meat, without

hardening the muscular fibre or dissipating the

savory juices, than the custom used from time

immemorial of wrapping up the flesh in the suc-

culent leaves of the taro, and submitting it to the action of heated stones in an oven hollowed out

of the ground. This viand, when served up with

the vegetable sauces, is called luau.

We may specify the following as the principal productions of these islands: — 1. Oliia, metrosideros, a species in which this country is comparatively rich, are distinguished by some adjunctive epithet importing their respective uses or properties. 2. Ohia-ai, or edible ohia, which, instead of the capsules borne by the rest of the genus, yields a pear-shaped fruit of a very mild and juicy nature. This is a tree of peculiar beauty and stateliness, and the large dark green leaves are strikingly set off by the bunches of red flowers which are followed by clusters of fruit -garnishing the lower part of the branches in rosy prufusion. 3. Pilo, a species of capparis, bearing a large white flower singly from the bosoms of alternate, smooth, elliptical leaves, and an oblong yellow berry. 4. Limii, a general name for the submarine productions of that part of cryptogamous botany called algae, but particularly of the various species of fucus which are made into saline pickles, and are very much relished by them ; a peculiar sort called kala is the most esteemed. Every species has its appropriate name. 5. Kukut, aleurites tn-

bloba, or candle-nut tree. The hoary foliage of

this tree diversifies the hills with the appearance

of white patches. The nuts, when divested of

their integuments, were formerly set in order

upon a sharp stick, and burnt in the room of

candles. They also yield by expression an oil

that has the practical uses of linseed oil. 6. Ko, corelia sebestena, a large shady tree which grows

by the sea side. This genus is chiefly charac-

terised by having a divided style, which, with its

globular stigmata, resembles the figure of that

kind of ancient scourge called scorpions. 7. Ko,

saccharum, the sugar-cane, which grows wild on

the banks of rivulets, has, by cultivation, been

modified into at least twenty varieties, dis-

tinguished from one another by the color of the

stem, sheath, and midrib of the leaf, and ahe

variations of its surface. Were industry as

kind to this people as nature is in the production of this plant, the making of sugar might be

made a manufacture of great importance to them.

8. Ka, a species of cyperus, the root of which

affords a gluey substance, used in glazing and

scenting their native cloth. The odor is of such

a narcotic nature that, if a piece of cloth treated in this way be allowed to remain in a close room, it is apt to affect the person who inhabits it

with an intolerable sickness, which continues

till the offensive material is removed. 9. Hapu,

cibotiumchamoisai, the ark-formed, distinguished

from the Dicksonia by the determinate figure and

cartilaginous nature of its capsules, which are a

stem of that genus seated upon the margin of the

frond. From a stock of about a foot high usually

issue several doubly winged fronds; this is

crowned with convolute bundles of brownish

silk, which was formerly made into pillows and

cushions. The hapu is sometimes roasted and

eaten ; but, from the admixture of woody matter,

is not very nutritious, nor very easy of digestion.

10. le, climbing pandanus, the leaves at the top

*of the branch expand and form a cup-like re-**

ceptacle for the fruit, which, by the absorption

of oxygen, change to an acetous pulp. This, as

well as the ripening berries, with which branched

spikes are closely studded, is greedily devoured

by the little birds. The stem is about an inch in diameter, sending forth many radicles, which

attach themselves to, and imbibe, the juices of

the larger trees, particularly the mimosa, hetero-

phylla, or hoa. The tree, being robbed of its

nutriment, after a few years begins to show

signs of decay, becomes stag-headed, and ulti-

mately dies. 1 1 . Thoa, mimosa heterophylla, re-

markable for the transformation of its leaves.

This alienation is accounted for by supposing

that the plastic substance provided by nature for

the leaf is appropriated by the leaf-stalk ; for, in the younger trees, it may be traced from an in-

cipient winged expansion, till it ends in a single

uniform leaf, at which time, the power of further

vegetation being exhausted, the numerous leaflets,

following an inverse ratio in number and size ;

disappear. The wood of this tree is very useful

in the construction of canoes. 12. Thi, the

oxalis and marsilea quadrifoliata, which latter

genus is characterised by having a receptacle

rising from the root, and forming a box, which

contains many rows of capsules, separated by the

doublings of a subtile membrane. The roots of

this water plant, by their mode of propagation,

weave a kind of net-work, which we have seen

the chief women convert into a scarf, and wear

about their necks and shoulders. 13. Orana, a

shrub belonging to the family of the urtica;, be-

longing to the genus morens, furnishes, from the

woody fibres of the bark, a fine material for the

making of cordage. 14. Ahuhu, tephosia pirca-

toria, the bark used for poisoning fish. 15.

Vthi, a species of grasshopper roasted and eaten.

16. Iriiahi, somtolum or sanders wood, an im-

portant article of commerce with China, but, like

other sources of national wealth which are not

the gradual result of honest industry, has, by

inducing an over-confident hope in the ade-

quacy of their means, brought upon the unwary

people a huge mass of debts, of which, unless they continue to pursue the plan proposed by his Bri-

tannic majesty's consul, in erection of a poll tol!

they will not speedily disencumber themselves.

Pastimes. — It has been already hinted that

scarcely any remnant of their elder games and

exercises are now left to give the traveller some

notion of past times, and hence, if a rare accident does not favor him, he must learn their nature

from the relations of the old people. Pohinehine

is a game of chance, wherein several folded

pieces of native cloth are severally placed before

each player ; a man then dexterously passes his

hand under every one of them, containing a stone,

which is hidden beneath a different parcel each time, while each competitor in his turn strikes with a wand, at a venture, any one of them. After ten rounds, the game is decided in favor of him who has struck the lucky parcel of cloth the greatest number of times. Wawaiule is a species of dichotomous, or club-mess, lycopodium. Akakamoa, the denomination of a game formerly played by two chiefs, with the dichotomies of the branches mutually hooked within each other ; the gamester whose fork, in pulling them asunder, first broke, lost his wager. Mokomoko, or boxing-matches, consecrated to the memory of Olono, a certain deity who was believed to have vouchsafed his presence under the form of captain Cook. The people of two neighbouring districts used to assemble on their borders when these games were about to be celebrated. A ring being formed, an athlete would, like Dares TEneid, v. 376, bare his broad shoulders, and, with uplifted arms alternately, provoke the yielding air a few moments, and then retire ; one from the opposite side would follow his example; and this exhibition, by turns of the candidates

for renown, continued till the eyes of some well-matched pair had singled out each other. A fall, or turning the back upon the antagonist, decided the" combat.

Language. — One general language is extended over all die islands, which are comprehended under the name of Polynesia, subject to a peculiar dialectical rariation in each particular group, with occasional mixture of words which, from their anomalous form, seem to have been borrowed from different sources. In the first primer that was printed by the missionaries their dialect is made to embrace seventeen elementary sounds ; but, since the natives confound in their articulation the elements D T K, R L, B P, with each other, it appeared expedient to a council of missionaries, in order to prevent an embarrassing variation in the orthography of the natives, to retrench the superfluous letters, and reduce the number of simple sounds to twelve. But since the U, like W, sometimes assumes the power of a consonant, there seems to be no reason why it ought to be retained.

The orthography is precisely the same as that

adopted from the Sanscrit by professor Lee in the compilation of the New Zealand grammar. The dialects of Hawaii and New Zealand differ chiefly in the presence of nasal sounds in the latter. A short acquaintance with their analogies shows how near such words as New Zealand, Tangata, and Tanata, as the word Kanaka is often heard. The vocal organs of a Sandwich islander, without Jong training, find it impossible to articulate the ˆarsh combinations of consonantal sounds of •>ur language ; but his ear can nicety discrimi-nate the appropriate sound of each vowel and diphthong. They never amalgamate two conso-nants, a mute and a liquid, as we do in the syl-lable bri in Britain, but usually insert a sheva, or short vowel sound, to soften the utterance, and pronounce that word as if it were written Perikane. The affinity of the Polynesian lan-guage with the Malayan has been pointed out by Mr. Marshman in his grammar of that tongue, and its etymological relationship to the Hebrew did not escape the notice of the propagators of the gospel ; and, during the author's stay at Oahu, he observed several instances in words and phrase-ology. To give our readers some notion of the

softness and flowing sweetness of this dialect, we will select a distich from a hymn composed by the missionaries, in which the Indians call upon their hearts to rejoice that the love of God has visited them. It is read nearly as if it were Italian: —

Ua iki mai nei ke kanawai mau

Ke hauoli nei ko kakou naau.

SANDWICH LAND, a name given by Cook to the southerly land which he discovered in the South Atlantic Ocean, otherwise called Southern Thule.

SANDY DESERT, a name given byway of eminence to an extensive tract of Hindostan, in the province of Gujerat, where the army of the celebrated Mahmoud of Ghizne was nearly lost.

After the taking of the temple of Diu, in the year 1025, one of the priests offered himself as a guide to the sultan ; and, having purposely led them into the heart of this desert, boasted of his success, on which he was instantly put to death.

SANDY HOOK, an island of the United States on the coast of New Jersey, in the township of Middleton, seven miles south of Long Island, and twenty-five south of New York. It was formerly a peninsula. Sandy Hook, or Point, forms

a capacious harbour, where is a light-house on the north point of the Hook, in long. 72° 2′ \ ., lat. 40° 26′ N.

SANDY LAKE, a lake of North America, near the source of the Mississippi, twenty-five miles in circumference. Of the numerous rivers running into it, one is entitled to particular attention, viz. the Savannah, which, by a portage of three miles and three quarters, communicates with the river St. Louis, which flows into the Lake Superior, at the Ford de Lac, and is the channel by which the North-west company bring all their goods for the trade of the Upper Mississippi. The rigor of the climate is extreme here. Lat. 46° 9′ 20′ N.

SANDY LAKE RIVER, a large but short river of the United States, which falls into the Mississippi. It connects the lake of the same name with the Mississippi, by a strait only six miles in length.

SANDY RIVER, BIG, a river of the United States, which rises in the Laurel mountains, Hs sources interlocking with those of the Cumberland, Clinch, Kenhaway, Kentucky, and Licking. It forms part of the boundary between Vir-

ginia and Kentucky, running N.N.W. into the Ohio, forty miles above the Scioto. It has a course of about 130 miles, and at its mouth is 200 yards wide.

SANDY RIVF.R, LITTLE, a river of the United States, in Kentucky, running into the Ohio, twt-nty miles below Bisj Sandy.

SANDY'S (Edwin), 1). D., and archbishop of York, an eminent English prelate, and zealous reformer, born at liawkshead, in Lancashire, in 1519. He was educated at St. John's College, Cambridge, where he graduated. About 1547 he was chosen master of Catherine Hall, and, in 1553, vice-chancellor of the university. Having early embraced the Protestant religion, he, on the death of king Edward VI., zealously espoused the cause of lady Jane Gray ; preached a sermon in favor of her title, and even printed it. Two days after, being ordered to proclaim queen Mary, he refused, and was thereupon deprived of all his preferments, and sent prisoner to the

Tower, where he lay above seven months, and was then removed to the Marshalsea. He was afterwards liberated ; but bishop Gardiner, hearing he was an incorrigible heretic, made strict search after him. The doctor escaped, however, in May 1554, to Antwerp, and thence went to Augsburg, and Strasburg, where he remained for some time. In 1558 he went to Zurich, and lodged five weeks with Peter Martyr, with whom he maintained an intimate correspondence ever after. On queen Mary's death he returned to England, January I Oth, 1558-9. In March he was appointed, by queen Elizabeth, one of the nine Protestant divines to dispute with nine Roman Catholics before the parliament. He was also appointed one of the commissioners for preparing the Liturgy. He was then made bishop of Worcester, and, being well skilled in the dead languages, he was, in 1565, one of the bishops appointed to make a new translation of the Bible; and he accordingly translated the books of Kings and Chronicles. In 1570 he was appointed bishop of London, and in 1571 assistant to the archbishop of Can-

terbury, in the commission against papists and puritans. In 1576 he was promoted to be archbishop of York. In his zeal against the papists he was very severe. He died July 10th, 1588, aged sixty-nine. He was twice married. By his second wife Cecilia, daughter of Sir Thomas Wilford, of Hartridge, in Kent, he had seven sons and two daughters.

SANDYS (George), was born in 1577. He travelled over several parts of Europe and the east ; and published an account of his journey in folio, in 1635. He made an elegant translation of Ovid's Metamorphoses ; and composed some poetical pieces of his own, that were greatly admired. He also paraphrased the Psalms; and left behind him a Translation, with Notes, of a Sacred Drama written by Grotius, entitled Christus Patiens ; on which, with Adamus Exul, and Masenius, was founded Lauder's impudent charge of plagiarism against Milton. See LAUDER. He became one of the privy chamber to Charles I., and died in 1643.

SANGALLAN, or CAPE GALLAN, the Cangallan of British seamen, is situated on the coast

of Peru, N.N.W. of the island of Lobos, and three miles north-west < if Curette island- On -its south side is a good harbour, frequented by the coasting ships from Panama ami Lima.

SANGAY, a volcanic mountain of South America, in the province of Quixos and Macas Quito. It rises to the height of 16,122 feet, and its north side is constantly covered with snow. From its summit, flames, smoke, and calcined matter, are seen continually to burst 'forth, accompanied with explosions, which are heard at Quito, 135 miles distant. The country adjacent is rendered totally barren by its incessant action.

SANGARIS, or SANGARIUS, in ancient geography and mythology, a river of Phrygia rising in Mount Dindymus, and falling into the Euxine. The god of this river was fabled to have been the father of Hecuba, queen of Troy ; and she became pregnant of Altes, by gathering boughs of an almond tree on its banks.

SANGIAC, in the Turkish polity, the governor of a province. Hence also the province so governed : it was particularly used in Egypt, which was divided into twenty-four sangiacs.

SAN GUI, an oblong island in the eastern seas, between thirty-six and forty miles in length, and between ten and fifteen miles in breadth. It extends in a direction N.N.W., and is broadest towards the north ; towards the south it has several good bays, and is said to be surrounded by forty-six smaller islands of various dimensions. The coast has better harboilrs, and is less dangerous from hidden rocks and shoals, than most of the eastern islands. The island is well wooded and inhabited, and affords refreshments of all kinds. Spices are also procured, \iili which a trade is carried on to Magindanao. The principal town and bay are about the middle of the west coast, and called Taroona, in lat. 3° 28′ N., long. 125° 44′ E.

SANGUIF'EROUS, adj.

SANGUIFICA'TION, «. s.

Fr. sangiiin ;

Lat. sanguifer,

sanguis. Con-

veying blood :

'Sanguification is

the product! n of

blood : sanguifier,

a producer of

blood : to san-

SAN'GUIFIER,

SAN'GUIFY, v.a.

SAN'GUINARY, adj.

SAN'GUINE, adj.

SAN'GUINENESS,'«..*

SANGUIN'ITY,

SANGUIN'EOUS, adj.

guify, to produce blood : sanguinary, bloody ;

cruel ; murderous (always used in a bad sense) :

sanguine, as a noun substantive, means blood

color : as an adjective, red ; having the color of

blood ; cheerful ; ardent ; abounding with blood :

sanguineness and sanguinily, heat; ardor; con-

fidence : sanguineous, constituting blood, 01

abounding in blood.

A griesiy wound,

From which forth gushed a stream of gore, blood

thick,

That all her goodly garments stained around,

And in deep sanguine dyed the grassy ground.

Faerie Queeite.

This fellow

Upbraided me about the rose I wear ;

Saying, the sanguine colour of the leaves

Did represent my master's blushing cheeks.

SJiaktpfaart.

Rage, or phrensy, it may be, in some perhaps na

tural courage, or f«?yi/!»fnr.

suffl-r as to do. That mind is truly great, and only that which stands above the power of all extiinsi

SAN

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SAN

violence; which keeps itself a distinct principality, independent upon the outward man.

Decay of Piety.

The scene is now more sangniiuirv, and fuller of

ictors : never was such a confused mysterious civil war as this. Howel.

A stream of nec'trous humour issuing flowed

Sanguine. Milton.

At the same time I think, I command : in inferior faculties, I walk, see, hear, digest, sanguify, and car-

nify, by the power of an individual soul. Hale.

The choleric fell short of the longevity of the san-

guine. Browne.

This animal of Plato containeth not only sangui-

neous and reparable particles, but is made up of

veins, necves, and arteries. Id. •

Dire Tisiphone there keeps the ward,

Girt in their sanguine gown. Dryden.

Though these faults differ in their complexions as

sanguine from melancholy, yet they are frequently

united. Government of the Tongue.

Bitters, like choler, are the best sanguifiers, and

also the best febrifuges. Flouer on the Humours.

Since the lungs are the chief instrument of smigui-

fication, the animal that has that organ faulty can never have the vital juices, derived from the blood, in a good state. Arbuthnot.

A plethoric constitution, in which true blood

abounds, is called sanguineous. Id.

The fifth conjugation of the nerves is branched to

the muscles of the face, particularly the cheeks,

whose sanguiferous vessels it twists about.

Derham 's Phytico- Tlieology..

A set of sanguine tempers ridicule, in the number

of fopperies, all such apprehensions. Swift.

I very much distrust your sanguinity. Id.

Passion transforms us into a kind of savages, and

makes us brutal and sanguinary. Broome.

SANGUINARIA, in botany, blood-wort, a

genus of the monogynia order, and polyandria

class of plants ; natural order twenty-seventh,

rhceadeae ; COR. octopetalous : CAL. diphyllous;

the siliqua ovate and unilocular. There is only

one species, viz.

S. (‘anadensis, a native of the northern parts

of America, where it grows plentifully in the

woods ; and in spring, before the leaves of the

trees come out, the surface of the ground is in

many places covered with the flowers which

have some resemblance to our wood anemone ;

but they have short naked pedicles, each sup-

porting one flower at top. Some of these flowers

will have ten or twelve petals, so that they ap-

pear to have a double range of leaves, which has

occasioned their being termed double flowers ;

but this is only accidental, the same roots in dif

ferent years producing different flowers. The

plant will lu-ar the open air in this country, but should be placed in a loose soil and sheltered

situation, not too much exposed to the sun. It

is propagated by the roots ; which may. be taken

up and parted, in September, every other year.

The Indians paint themselves yellow with the

juice of these plants.

SANGriSOKBA, in botany, greater wild

biimet, a genus of the monogynia order, and te-

Iniiidria class of plants; natural order fifty-fourth, miscellaneae : CAL. diphyllous ; germen situated

betwixt the calyx and corolla. The most remarkable species is —

S. ofh'cinalis, with oval spikes. This grows naturally in moist meadows in many parts of Britain. The stalks rise from two to three feet high, branching towards the top ; and are terminated by thick oval spikes of flowers of a grayish brown color, which are divided into four segments almost to the bottom. These are succeeded by four oblong cornered seeds. The leaves of this sort are composed of five or six pairs of lobes placed along a midrib, terminated by an odd one. These are heart-shaped, deeply dentated on their edges, and a little downy on their under sides. The cultivation of this plant has been greatly recommended as food to cattle.

SANIlEDRIM,orSANHEDRrN,Heb.pnnjD, was the name whereby the Jews called the great council of the nation, assembled in an apartment of the temple of Jerusalem, to determine the most important affairs both of their church and state. .This council consisted of seventy senators. The room they met in was a rotunda, half

of which was built without the temple, and half within; that is, one semicircle was within the compass of the temple, the other semicircle was without, for the senators to sit in, it being unlawful for any one to sit down in the temple. The nasi, or prince of the sanhedrim, sat upon a throne at the end of the hall, having his deputy at his right hand and his sub-deputy on his left. The other senators were ranged in order on each s-ide. The rabbins assert that the sanhedrim has always subsisted in their nation from the time of Moses down to the destruction of the temple by the Romans. See Grotius's Commentaries, and his book De jure Belli et Pacis, lib. i. c. 3, art. 20, and Selden de Synedriis veterum Hebraeorum; also Calmet's Dissertation on the Polity of the ancient Hebrews, before his Comment upon the Book of Numbers. As to the qualifications of the judges, their birth was to be untainted. They were often taken from the race of the priests or Levites, or out of the number of the inferior judges, or from the lesser sanhedrim, which consisted only of twenty-three judges. They were to be skilful in the law, tra-

ditional and written. Eunuchs were excluded

from the sanhedrim, usurers, decrepit persons,

players at games of chance, such as had any bo-

dily deformities, those that had brought up

pigeons to decoy others to their pigeon-houses,

and those that made a gain of their fruits in the sabbatical year. Some also exclude the high-

priest and the king, because of their power ; but

others insist that the kings always presided in

the sanhedrim, while there were any kings in

Israel. Lastly, the members of the sanhedrim

were to be of a mature age, a handsome person,

and of considerable fortune. Such at least are

the requisites mentioned by the rabbins. The

authority of the great sanhedrim was, according

to these authors, very extensive. This council

decided such causes as were brought before it

by appeal from the inferior courts. The king,

the high-priest, the prophets, were under its ju-

risdiction. If the king offended against the law,

if he kept too many horses, if he hoarded up too

much gold and silver, the sanhedrim, according

to these rabbins, had him stripped and whipped

in their presence. But whipping among the

Hebrews was not ignominious ; and the king

is said to have borne this correction by way

of penance, and himself made choice of the person that was to exercise this discipline. The general affairs of the nation were also brought before the sanhedrim. The right of judging in capital cases belonged to this court, and this sentence could not be pronounced in any other place but in the hall called Laschat haggazith, or the hall paved with stones, supposed by some to be the A»0o mentioned in John xix. 13. Hence the Jews were forced to quit this hall when the power of life and death was taken out of their hands, forty years before the destruction1 of their temple, arid three years before the death of Jesus Christ In the time of Moses this council, say the rabbies, was held at the door of the tabernacle of the testimony. As soon as the people were in possession of the land of promise, the s uihedrim followed the tabernacle. It was kept successively at Gilgal and Shiloh, at Kirjath-

jearim, at Nob, at Gibeon in the house of Obed-

edom; and, lastly, it was settled at Jerusalem

till the Babylonish captivity. During the cap-

tivity it was kept up at Babylon. After the return

from Babylon it continued at Jerusalem to the

time of the Sicarii or Assassins. Then, finding

that these profligate wretches whose number in-

creased every day sometimes escaped punish-

ment by the favor of the president or judges, it

was removed to Hanoth, which were certain

abodes, situated, as the rabbies tell us, upon the

mountain of the temple. Thence they came

down into the city of Jerusalem, withdrawing

themselves by degrees from the temple. After-

wards they removed to Jamnia, thence to Jeri-

cho, to Uzza, to Sepharvaim, to Bethsanim, to

Sephoris, last of all to Tiberias, where they con-

tinued to the time of their utter extinction.

This is the account which the Jews give us of

the sanhedrim. But the learned do not agree

with them in all this. F. Petau fixes the date of tht> first sanhedrim, when Gabinius was governor

of Judea, who, according to Josephus, erected

tribunals in the five principal cities of Judea;

Jerusalem, Gadara, Aniathus, Jericho, and Se-

phora or Sephoris, in Galilee. Grotius places the origin of the sanhedrim under Moses, as the rabbies do ; but he makes it terminate at the beginning of Herod's reign. Basnage places it under Judas Maccabaeus, or his brother Jonathan. We see, indeed, under Jonathan Maccabaus, that the senate with the high-priest sent an embassy to the Romans. The rabbies say that Alexander Jannaeus, king of the Jews, ot the race of the Asmonoeans, appeared before the sanhedrim, and claimed a right of sitting there, whether the senators would or not. Josephus informs us that, when Herod was but yet governor of Galilee, he was summoned before the senate, where he appeared. It must be therefore acknowledged that the sanhedrim was in being before the reign of Herod. It was in being afterwards, as we find from the gospel and from the Acts. Jesus Christ, in St. Matthew (v. 22), distinguishes two tribunals. ' Whosoever is angry with his brother without a cause shall be in danger of the judgment.' This, they say, N the tribunal of the twenty-three judges. ' And whosoever shall say to his brother, Raca shall

be in danger of the council ;' that is, of the great sanhedrim, which had the right of life and death,

at least generally, and before this right was taken away by the Romans. See Mark xiii. 9, xiv. 55,

xv. 1 ; Luke xxii. 52. 66 ; John xi. 47; Acts iv.

15, v. 21, where mention is made of the syne-

drion or sanhedrim. The origin of the sanhe-

drim is involved in uncertainty ; for the council

of the seventy elders established by Moses was

not what the Hebrews understand by sanhedrim.

Besides we cannot perceive that this establish-

ment subsisted either under Joshua, the judges,

or the kings. We find nothing of it after the

captivity, till the time of Jonathan Maccaba>'is.

The tribunals erected by Gabinius were very

different from the sanhedrim, which was the su-

preme court of judicature, and fixed at Jeru-

salem ; whereas Gabinius established" five at five

different cities. Lastly, this senate was in being

in the time of Jesus Christ ; but it had no

longer then the power of life and death. John

xviii. 31.

SANICULE, SANICCLA, or self-heal, in

botany, a genus of the digynia order, and petan-

dria class of plants ; natural order forty-fifth,

umbellatae. The umbels are close together,

almost in a round head ; the fruit is scabrous ;

the flowers of the disk abortive. There are three

species, viz.

1. S. Canadensis, sanicle of Canada.

2. S. Europaea, European self-heal ; and, 3.

S. Maralandica, the sanicle of Maryland ; all of

which are found in many parts both of Scotland

and England. These plants were long celebrated

for healing virtues, but are now disregarded.

SA'NIES, n. s. Lat. sanies. Thin matter ;

serous excretion.

It began with a round crack in the skin, without

other matter than a little unites. U'ite'nun.

Observing the ulcer sanwus, I proposed digestim.

as the only way to remove the pain. Id.

But bolder grown, at length inherent found

A pointed thorn and drew it from the wound.

The cure was wrought ; he wiped the saniou blood.*

And firm and free from pain the lion stood. (Vir/vr.

SANIES, in surgery, is a serous putrid matter,

issuing from wounds. It differs from pus, which

is thicker and whiter.

SANITY, n. 5. Lat. sanitos. Soundness of

mind.

How pregnant, sometimes, his replies are !

A happiness that madness often hits on,

Which unity and reason could not be

So prosperously delivered of. Shaktptare. Hamlet.

SANNAZARIUS (James), a celebrated Latin

and Italian poet, born at Naples in 1458. He

ingratiated himself into the favor of king Fre-

derick; and, when that prince was dethroned,

attended him into France, where he staid with

him till his death, which happened in 1504.

Sannazarius then returned into Italy, where he

applied himself to polite literature, and parti-

cularly to Latin and Italian poetry. His gay

and facetious humor made him sought for by all

companies ; but he was so afflicted on hearing

that Philibert, prince of Orange, general of the

emperor's army, had demolished his country

house, that it threw him into an .ilness, of which he died in 1530. He wrote a great .umber or

Italian and Latin poems : among those in Latin

liis Dt Partu Yirginis and Eclogues are chiefly

esteemed ; and the most celebrated of his Italian

pieces is his Arcadia.

SAN-PIETRO, or SAMPIERO, called also Bas-

tilica, from Hastia, in Corsica, his birth-place,

SANSANDING, a large town of Central

Africa, in the state of Bambarra. It is situated on the Niger, and has a considerable trade, parti-

cularly in salt. The market-place is an extensive

square, constantly crowded, where the different

articles are exposed on stalls, roofed with mats.

•was a celebrated general in the French service, The currency is in cowries, 3000 of which go to under Francis I., Henry II., and Charles IX.

He bore arms at an early age against the Ge-

noese, and by his valor and military skill soon

a monkalli of gold, valued at 12s. 6d. sterling.

Twenty-five miles north-east of Sego.

SANS-CULOTTES, Fr. from sans, without,

became formidable to them. He married Vanini and culottes, breeches ; a term of contempt, used Ornano, a rich and beautiful heiress, only daugh-

ter of the viceroy of Corsica. Still inveterate

against the Genoese, he went into France with

Ins wife and family, where he served the court

successfully during the civil wars. He then set

out for Constantinople to solicit the grand sig-

nior to send a fleet against the Genoese. Mean

time the Genoese sent their agents to his wife,

ihen at Marseilles, soliciting her to return to her native country, promising the restoration of her

by the proud noblesse of France under the ancient

despotism, towards those of the inferior ranks.

This rankled in the minds of the people, when

they got the power into their hands, and the

plebeians, in the pride of their power, at last en-

nobled this term of reproach, and some of their

bravest generals in their despatches announcing

their victories, gloried in having been born sans-

culottes. The term and its fate merit preser-

vation in a work of science, as a caveat against

fortune, and even giving hopes of a pardon to the pride of the higher ranks and the folly of the her husband. The credulous Vanini was per- lower.

suaded. She set out with her furniture, jewels, SANSON (Nicholas), a celebrated French gec-

and family, for Genoa. A friend of San-Pietro's grapher, born at Abbeville, in Picardy, December armed a ship, pursued her, brought her back to 12th, 1600. Having finished his studies, he en-

France, and delivered her to the parliament of tered into business as a merchant, but, meeting Aix. San-Pietro, returning from Constantino- with considerable losses, he gave up merchan-

ple, was enraged. He then went to Aix, and dise, and applied himself to geography; his demanded his wife, and afterwards murdered her. father having studied that science, and published He immediately after set out for Paris, appeared

before Charles IX., confessed his crime, pleaded

his former services, and demanded a pardon.

several maps. In 1619 he completed a map of

ancient Gaul, which was very favorably received,

and encouraged him to further exertions. After

The whole court was shocked, but the pardon this he published about 300 large maps of dif-

was granted in 1567. He was soon after, how-

ever, assassinated by the brothers of his wife.

SANQUEL, one of the largest rivers of South

America, in Patagonia. It has its rise in the

snowy mountains of the Cordillera, on the east

side, and derives its name from a thorny, thick,

ferent countries, ancient and modern ; and caused

100 tables to be engraved, exhibiting the divi-

sions of modern Europe. He also published

several tracts to illustrate his maps ; as, 1 . Re-

marks upon the Ancient Gauls ; 2. A Treatise

on the Four Parts of the World ; 3. Two Tables

and rough reed, called sanquel, with which the of the Cities and Places in the Maps of the country between this river and the first Desa- Rhine and Italy ; 4. A Description of the Roman guero abounds. It makes its first appearance at Empire, of France, Spain, Italy, Germany, and a place called Diamante, whence the Spaniards the British Isles; together with the ancient Iti-

sometimes call it the Rio del Diamante. It has neraries. He also wrote: 5. The Antiquity of a course of 300 miles, and enters the Rio Negro Abbeville, which involved him in a controversy by a wide mouth. with F. L'Abbe, the Jesuit, and others ; 6. Sa-

SANQUHAR, a royal borough, seated on the cred Geography ; and, 7. A Geographical Index Nith, on the borders of Ayrshire ; nearly equi- of the Holy Land. Cardinal Richelieu and distant from the Solway Frith and the Atlantic, Mazarine pgtrorJsed him greatly ; and the latter It has one

principal street, about a quarter of a appointed him royal geographer. He died in mile long, and has long been famed for its wool- Paris, while preparing an Atlas of all his maps, len manufactures. Sanquhar was erected into a

burgh of barony in 1484; but had previously

in 1667; leaving two sons.

SANSONATE, a district and own of Gua-

been a burgh from time immemorial, as that timala, to the southward of Suchitepec. The charter relates. King James VI. made it a royal town is a sea-port, and is situated 120 miles borough in 1596. It is governed by a provost, south-east of the city of Mexico, with about three bailiffs, dean of gujld, treasurer, and eleven 2000 inhabitants. The population of the dis-

counsellors. It joins with the boroughs of trict is about 40,000, consisting almost entirely Dumfries, Annan, Kirkcudbright, and Loch- of Indians, mulattoes, and negroes, and its ca-

maben, in electing a representative in the impe- pital is La Trinidad or Sansonate, situated on rial parliament. It lies twenty-seven miles the river Sansonale, at its mouth.

N. N. W. of Dumfries, thirty-two north of Kirk-

cudbright, and thirty-three from Ayr.

SANS, prep. Fr. sans. Without. Out of use.

Last scene of all,

That ends this strange eventful history,

Is second childishness and mere oblivion,

Sans teeth, tans eyes, sans taste, sans every thing.

Shakspear.*

Voi XIX.

SANSOVINO (James), an eminent sculptor

and architect, born in Florence in 1479. The

mint, and the library of St. Mark, at Venice, were magnificent specimens of his skill. He was so highly esteemed at Venice, that, when a general tax was laid on the inhabitants, he and Titian alone were exempted. He died in that city, in 1570, at the age of ninety-one-

SANTA BARBARA, a sea-port and settlement of New California, visited by Vancouver in 1793, who gave the name of Point Felipe to the west point of its harbour- The interior a few miles only from the sea coast is composed of rugged barren mountains, which rise in five di<- tinCt ridges a great distance inland, and to the east. Vancouver says that the sheep and poultry at this settlement exceed, both in size and delicacy of flavor, those of any of the other settlements which he visited. Santa Barbara was founded in 1786, and lately contained 1100 inhabitants. It is garrisoned by about sixty soldiers, out of which it affords guards also to the mis-

sion of the same name. Long. 240° 43′ E., lat. 34° 24′ N.

SANTA CRUZ, the capital of the island of Teneriffe, and residence of the governor of the Canaries, is also the centre of the trade of these islands. Here reside all the consuls and commissaries of foreign powers, and this port may be considered as a great caravansary on the road between America and the Indies. It is situated in a plain, surrounded by barren mountains, and its only natural advantage is a road, which affords safe anchorage in deep water, where ten or twelve ships of war may lie. A mole stretches out into the sea, which is rounded at the extreraity, to afford a landing place, and is ascended by a stair at the top of which is placed the custom-house, which it -is thus impossible to avoid. The streets are tolerably broad, and generally well built. The houses have all a wide court in the interior. Travellers remark the vast number of ecclesiastics seen on the streets, and of the importunity of beggars. The population is about 8400.

SANTA CRUZ DE LA SIERRA, a town and province of Buenos Ayres^ founded in 1558, and

afterwards removed 1 50 miles more to the south, to the place where it now stands, in lat. 14° 20′ S., at the foot of a chain of mountains, which bounds the country of the Chiquitos Indians to the north, and thence runs in a north-east direc tion to Lake Xarayes. It was at first called San Lorenzo, and stands on the Puapay.

SANTALUM, in botany, a genus of the monogynia order, and octandria class of plants : CAL. superior : COR. monopetalous ; the stamina placed in the tube ; the stigma is simple ; the fruit a berry. It grows to the size of a walnut-tree. Its leaves are entire, oval, and placed opposite to each other. Its flower is of one single piece, charged with eight stamina, and supported upon the pistil, which becomes an insipid berry, resembling in form that of the laurel. Its wood is white in the circumference, and yellow in the centre when the tree is old. This difference of color constitutes two kinds of sanders, both employed for the same purposes, and having equally a bitter taste, and an aromatic smell. With the powder of this wood a paste is prepared with which the Chinese, Indians, Persians, Arabians,

and Turks, anoint their bodies. It is likewise

burnt in their houses, and yields a fragrant and

wholesome smell.

1. S. album, white sanders, is brought from

the East Indies in billets, about the thickness of

a man's leer, of a pale whitish color. It is that part of the yellow sanders wood which lies next

the bark. Great part of it, as met with in the

shops, has no smell or taste, nor any sensible

quality that can recommend it to the notice of

the physician.

2. S. flavum, yellow sanders, is the interior

part of the wood of the same tree which furnishes

the white, is of a pale yellowish color, of a plea-

sant smell, and a bitterish aromatic taste, accom-

panied with an agreeable kind of pungency. Dis-

tilled with water it yields a fragrant essential

oil, which thickens in the cold into the consis-

tence of a ba,lsam. Digested in pure spirit it

imparts a rich yellow tincture; which, being com-

mitted to distillation, the spirit arises without

bringing" over any thing considerable of the fla-

vor of the sanders. Hoffman looks upon this

extract as a medicine of similar virtues to am-

bergris ; and recommends it as an excellent

restorative in great debilities.

3. S. rubrum, red sanders, though in less estimation, and less generally used, is sent by preference into Europe. This is the produce of a different tree, which is common on the coast of Coromandel. Some travellers confound it with the wood of Caliatour, which is used in dyeing. See PTEROCARPIS.

SANTANDER, or St. Andero, a province of Spain, called also, and more correctly, Las Montanas de Santander and de Burgos, or simply Las Montanas, stretching along the southern shore of the Bay of Biscay, between Asturias, Old Castile, and Biscay Proper. It consists of steep mountains and valley, and the produce varies greatly, according to the elevation. The valleys produce maize; and the pasturage, whether on the plains or on the slope of the hills, is in general good. It contains mines of the finest iron ; and there are foundries of artillery and steel at La C'avada and Lierganes. The coast has the excellent harbours of St. Vincent de la Barquera, Santillana, Castro de Urdiales, Santander, Laredo, and, above all, Santona. Ships of war are built at Guarnizo. This province*

formed part of the ancient Cantabria.

SANTANDER, the capital of the foregoing pro-

vince, is situated on the declivity of a hill, in a circular peninsula, to the east of Santillana. Its

port is of easy access for merchant vessels of all sizes ; frigates of forty guns must wait the flow

of the tide before they can pass the bar. The

harbour is protected by two forts or castles, and

the entry of vessels into the inner basin facilitated by a fine pier. Santander was long one of the

ports called habilitados, or authorised to carry

on a free trade with Spanish America. It also

exports considerable quantities of wool. Popu-

lation 10,000. Since 1754 it has been the see of

a bishop. Fifty miles north-west of Bilboa, and

seventy-nine north of Burgos.

SANTEE, a river of South Carolina, United

States, formed by the union of the Congaree and

Wateree. It runs into the sea by two mouths,

twenty miles below Georgetown. This river

affords a navigation at some seasons nearly 300

miles, and is connected with Cooper Kiver by a

canal. The main branch in North Carolina is

called Catawba.

SANTEUIL, or SANTFA'I. (John Baptist), de,

SAN

was born in Paris in 1630. Having finished his studies in Louis XIV. '3 college he applied himself entirely to poetry, and celebrated in his verses the praises of several great men. He was caressed by all the learned men of his time ; and Louis XIV. gave him a pension. He attended trie duke of Bourbon to Dijon, when that prince went thither to hold the states of Burgundy: and died there in 1697, as he was preparing to return to Paris. Besides his Latin hymns, he wrote a great number of Latin poems.

SANTIPORE, a town and celebrated factory of the East India Company in Bengal, district of Kishenagur. The factory. chiefly purchases muslins, saunahs, sugar, and rum. It is esteemed one of the healthiest places in Bengal. Longr. 28° 34′ £., lat. 23° 13′ N. There is another place of the same name in Allahabad.

SANTOLINA, lavender cotton, in botany, a genus of the polygamia rcqualis order, and syngenesia class of plants ; natural order forty-ninth, compositac. The receptacle is paleaceous ; there

is no pappus: c A L. imbricated and hemispherical.

The most remarkable species are these : —

1. S. chamaecyparisus, the common lavender-

cotton, has been long known in the English gar-

dens; it was formerly called abrotanum faennna,

or female southernwood, and by corruption hro-

tany ; it grows naturally in Spain, Italy, and the

warm parts of Europe. It has a ligneous stalk,

dividing into many branches, garnished with

slender, hoary, indented, leaves, that have a rank

strong odor when handled. The branches are

terminated by a single flower, composed of

many hermaphrodite florets, which are sistular,

cut into five parts at the top, of a sulphur-yellow and included in one common scaly empalement,

having no borders or rays. These are succeeded

by small, oblong, striated seeds, which are sepa-

rated by scaly chaff, and ripen in the empale-

ment ; the plants thrive in a dry soil and a shel-

tered situation.

2. S. chamaemelifolia, with obtuse woolly

leaves, has shrubby stalks, which rise three feet

high, garnished with broader leaves than any of

the other, whose indentures are looser, but double ; they are hoary, and when bruised have

an odor like chamomile. The leaves are placed pretty far asunder, and the stalks are garnished with them to the top. The stalks are divided likewise at the top into two or three foot-stalks, each sustaining one pretty large sulphur-colored flower.

3. S. decumbens, with linear leaves, is of a lower stature than either of the former, seldom rising more than fifteen or sixteen inches high. The branches spread horizontally near the ground, and are garnished with shorter leaves than either of the former, which are hoary and finely indented ; the stalks are terminated by single flowers, of a bright yellow color, which are larger than those of the first sort.

4. S. rosmarinifolia, with linear entire leaves, and shrubby stalks, which rise about three feet high, sending out long slender branches, garnished with single linear leaves of a pale-green color. The stalks are terminated by large, single, globular flowers, of a pale sulphur-color.

5. S vil!oL-a, with woolly leaves, has a shrubby stalk, which branches out like the first, but the plants seldom grow so tall. The branches are garnished very closely below with leaves ; the flowers are of a deep sulphur-color. It grows

naturally in Spain.

6. S. virens, with very long linear leaves, rises higher than any other of this genus. The branches are more diffused ; they are slender, smooth, and garnished with very narrow long leaves, which are of a deep green color; the stalks are slender, naked towards the top, and terminated by single flowers of a gold color. All these plants may be cultivated so as to become ornaments to a garden, particularly in small bosquets of ever-green shrubs, where, if they are artfully intermixed with other plants of the same growth, and placed in the front line, they will make an agreeable variety ; especially if care be taken to trim them twice in a summer, to keep them witliin bounds, otherwise their branches are apt to straggle, and in wet weather to be borne down and displaced, which renders them unsightly ; but, when they are kept in order, their hoary and different colored leaves will have a fine effect in such plantations. They may be propagated by planting slips or cuttings during the spring, in a border of light fresh earth, but must be watered and shaded in hot dry weather,

until they have taken root ; after which they will require no farther care but to keep them clean from weeds till autumn, when they should be transplanted where they are designed to remain ; but, if the ground is not ready by that time to receive them, let them remain in the border until spring ; for if they are transplanted late in autumn, they are liable to be destroyed by cold in winter.

SANTORINI, SANTORIN, ST. ERINI, or ST. IRENE, the ancient Thera and Calista, an island in the Grecian archipelago, between Nanphio, Nio, and Candia. Its length and greatest breadth

are about eight miles. It has the form of a crescent, and between its two points are the small islands of Therasia and Aspronisi, within which again are three others. All seem of volcanic origin, and have risen at different periods from the sea : Santorini being almost entirely covered with pumice-stone, ashes, and other volcanic substances It is, however, well cultivated, and produces barley, cotton, vines, almonds, figs, and various fruits. Population 10,000. Long. 25° 36′ E , lat. 36° 28′ N.

SANTOS, a well-built town and port of St. Pauls, Brazil, is the storehouse of the province, and the resort of many vessels trading to the Rio de la Plata. The rice and bananas of the district, which are grown in great quantities, are considered the best in Brasil. It also exports sugar, coffee, rum, rice, mandioca, indigo, &c. As Santos is the embarking place of St. Paul's, its intercourse with that town is very considerable. In the course of a day several hundred mules arrive, loaded with the produce of the country, and return with salt, iron, copper, earthenwares, and European manufactures. It

has convenient water carriage, its river being

navigable about twenty miles up to Cuberton,

where an officer with a guard of soldiers is sta-

tioned to receive the duties, for the repair of the U 2

•ree. All these plants are propagated by seeds;

they must be put into small pots, and plunged

into a hot-bed of tanner's bark. In five or six

weeks the plants will appear, when the glasses

of the hot-bed should be raised every day in

warm weather, to admit fresh air to the plants. In three or four weeks after the plants appear they

will be fit to transplant, when they must be

shaken out of the pots, and carefully parted, so

as not to injure their roots, and each planted

into a separate small pot, and plunged into the

hot-bed again, observing to shade them from the

sun until they have taken new root ; after which

time they must have free air admitted to them

every day when the weather is warm, and will

require to be frequently watered.

SAPLING, n. s. From sap. A young tree ;

a young plant.

Look, how I am bewitched ; behold mine arm

Is, like a blasted sapling, withered up. Shaktpeare.

Nurse the saplings tall, and curl the grove

With ringlets quaint. Milton.

A sapling pine he wrenched from out the ground,

The readiest weapon that his fury found. Dryden.

Slouch turned his head, saw his wife's vigorous

hand

Wielding her oaken sapling of command. A'i/i<;.

What planter will attempt to yoke

A sapling with a falling oak ? Surift.

SAPONA'CEOUS, adj. \ Lat. sapo, soap.

SAP'ONAUY. J Soapy; resembling

soap; having the qualities of soap.

By digesting a solution of salt of tartar with oil of almonds, I could reduce them to a soft saponary substance. Boyle.

Any mixture of an oily substance with salt, may

he called a soap : bodies of this nature are called su-

ponaceaus. Arbuthnot.

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of the digynia order, and decandna class of

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S. officinalis, which is a British plant, has a creeping root, so that in a short time it would fill a large space of ground. The stalks are about two feet high, and of a purplish color. The foot-stalks of the flowers arise from the wings of the leaves opposite ; they sustain four, five, or more purple flowers each ; which have generally two small leaves placed under them. The stalk is also terminated by a loose bunch of flowers growing in form of an umbel ; they have each a large swelling cylindrical empalement, and five broad obtuse petals, which spread open, of a purple color. These are succeeded by oval t upsiiles, with one cell filled with small seeds. The decoction is used to cleanse and scour woollen cloths; the poor people of some countries use it instead of soap for washing ; from which use it had its name.

SAPOR, n. s. Lat. sapor. Taste; power of affecting or stimulating the palate.

is some sapor in all aliments, as being to be distinguished and judged by the gust, whu h runnot b< admitted in air. Hiwnf.

‘1 lie sliape of those liltlc paiti< IT «hich distinguish the various sapors, odours, and colours of bodies. Watt.*

SAPOR I., king of Persia, succeeded his father A rtaxerxes about A. D. 438. He enlarged his dominions by taking Mesopotamia, Syria, and Cilicia ; but proved a most haughty and cruel tyrant, particularly to the Roman emperor Valerian, whom he took prisoner, and after every possible insult put him to a cruel death. After this he was very unsuccessful ; was repeatedly defeated by Odenatus, prince of Palmyra ; and at last assassinated by his own subjects, A. D. 273. He was succeeded by his son Hormisdas.

SAPOR II., king of Persia, grandson of Sapor I., succeeded his father Hormisdas, A. D. 310. He was a very active and warlike monarch, and proved very troublesome to the Romans. His victories alarmed the emperor Julian so much that he marched against him in person ; but in a rencounter with the troops of this prince received his mortal wound. Jovian made peace with Sapor ; but the latter afterwards renewed hostilities, invaded Armenia, and defeated the emperor Valens. Sapor died A. D. 380, after a long

and prosperous reign of seventy years.

SAPPERS are soldiers belonging to the

royal artillery, whose business it is to work at

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dactyl; and the two lust trochees. The Adonian

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a spondee. Each stanza consisted of three lines

Sapphic and one Adonian, thus :

Aure”-

Diri-

Sordi-

arn quis

git, tu

bus tec-

quls nicili- | ocrl- | tateru

tus caret | obso- I leti

ti, caret | invi- | dend'A

Sobrius aula.

SAPPIHRA, the wife of a rich merchant m Gueldres, equally distinguished for her beauty and her misfortunes. Rhinsauld, a German officer, and governor of the town of Gueldres, fell in love with her; and, not being able to seduce her either by promises or presents, lie imprisoned her husband, pretending that he kept up a traitorous correspondence with the enemies of the state. Sapphira yielded to the passion of the governor to relieve her husband from chains: but private orders had already been given to put liiui to death. His unhappy widow, overwhelmed with grief, complained to Charles duke of Bur-•_'iindy. He ordered Rhinsauld to marry her, and to make over to her all his possessions. As soon as the deed was signed, ami the marriage over, Charles commanded him to be put to death. Thus the children of a wife whom he had seduced, and of a husband whom he had

murdered, became lawful heirs to all his \";ihli.

SAP

295

SAR

SAPPHIRE, n. s. Lat. sapphirus. A pre-

cious stone of a blue color.

In enrolled tuffs, flowers, purfled, blue and white, Like saphire, pearl, in rich embroidery.

Shakspeare.

She was too saphirine and clear for thee ;

Clay, flint, and jet now thy fit dwellings be.

Donne.

A few grains of shell silver, with a convenient

proportion of powdered crystal glass, having been

kept three hours in fusion, I found the coliquated

mass, upon breaking the crucible, of a lovely saphi-

rine blue. Boyle.

Saphire is of a bright blue color. Woodward.

He tinctures rubies with their rosy hue,

And on the saphire spreads a heavenly blue.

Blackmore.

That the saphire should grow foul, and lose its

beauty, when worn by one that is lecherous, and

many other fabulous stories of gems, are great argu-

ments that their virtue is equivalent to their value.

Derham.

SAPPHIRE, a genus of precious stones, of a blue color, and the hardest of all except the ruby and diamond. They are found in the same countries with these jewels, also in Bohemia, Alsace, Siberia, and Auvergne. M. Rome de 1'Isle mentions one found at Auvergne, which appeared quite green or blue according to the position in which it was viewed. They are seldom found of a deep blue color throughout, or free from parallel veins. The late unfortunate Louis XVI. had one with a stripe of fine yellow topaz in the middle. Some are found half green and half red, and are foliated like the ruby. The finest sapphires come from the East Indies. In Scotland they have been found of a hardness and lustre equal to the oriental, both light and deep colored. When powdered, they are fusible with borax, magnesia, or microcosmic salt, into a transparent glass. Jameson considers it as a species of rhomboidal corundum. It is the telesie of Haiiy, and the perfect corundum of Bournon. The following is Jameson's description of it abridged by Dr. Ure : — Colors blue and red ; it occurs also gray, white, green, and yel-

low. It occurs in blunt-edged pieces, in roundish pebbles, and crystallised. The primitive figure is a slightly acute rhomboid, or double three-sided pyramid, in which the alternate angles are 86° 4′ and 93° 56′. The following are the usual forms : — a very acute, equiangular, six-sided pyramid ; the same truncated on the summit ; a perfect six-sided prism ; an acute, double, six-sided pyramid : the same acuminated, or truncated in various ways. Splendent, inclined to adamantine. Cleavage parallel with the terminal planes of the prism. Fracture conchoidal. From transparent to translucent. Refracts double. Brittle. Specific gravity 4 to 4-2. Its constituents are,

Klaproth.

Blue.

Alumina, 98-5

Lime, 6-5

Oxide of iron, 1

Loss

100-0

Chenevix.

Red.

90-0

7-0

1-2

1-8

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Infusible before the blowpipe. It becomes electrical by rubbing, and retains its electricity for several hours ; but does not become electrical by heating. It occurs in alluvial soil, in the vicinity of rocks belonging to the secondary or floetz-trap formation, and imbedded in gneiss. It is found at Podsedlitz and Treblitz in Bohemia, and Hohenstein in Saxony; Expailly in France ; and particularly beautiful in the Cape-Ian mountains, twelve days' journey from Sirian, a city of Pegu. Next to diamond, it is the most valuable of the gems. The white and pale blue varieties, by exposure to heat, become snow-white, and when cut exhibit so high a degree of lustre that they are used in place of diamonds. The blue stone to which the ancients applied the name of sapphire was different from ours ; it was spotted with golden spangles ; it was, indeed, the same as the lapis lazuli.

SAPPHO, a celebrated poetess of antiquity,

who has been often styled the Tenth Muse, born

at Mitylene, in the isle of Lesbos, about A.A.C.

610. She was contemporary with Stesichorus

and Alcaeus. The last was her countryman, and

some think her suitor. A verse of this poet, in

which he intimates to her his passion, is preserved in Aristotle, Rhet. lib. i. cap. 9, together with

the damsel's answer. Of the numerous poems

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fragments which the ancient scholiasts have cited ;

a hymn to Venus, preserved by Dionysius of

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with Phaon, and did all she could to win him,

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tue of porphyry to her. Vossius says that none of the Greek poets excelled Sappho for sweetness of verse ; and that she made Archilochus the model of her style, but softened the harshness of his expression. Rapin observes that Longinus had great reason to extol the admirable genius of this woman ; for what remain of her works are delicate, harmonious, and impassioned to the last degree.

SAR'ABAND, n. s. Fr. sarabande ; Span. $arabunde. A Spanish dance.

The several modifications of this tune-playing quality in a fiddle, to play preludes, sarabands, jigs, and gavots, are as much real qualities in the instrument as the thought is in the mind of the composer.

A rbtttthnot and Pope.

A SARABAND is a musical composition, in the triple time, the motions of which are slow and serious. See Music. Saraband is also a dance to the same measure, which usually terminates when the hand that beats fhe time falls ; and is otherwise much the same as the minuet. The saraband is said to be originally derived from the Saracens, and is usually danced to the sound of the guitar or castauettes.

Tee. All these plants are propagated by seeds;

they must be put into small pots, and plunged

into a hot-bed of tanner's bark. In five or six

weeks the plants will appear, when the glasses

of the hot-bed should be raised every day in

warm weather, to admit fresh air to the plants. In three or four weeks after the plants appear they

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time they must have free air admitted to them

every day when the weather is warm, and will

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SAPLING, n. s. From sap. A young tree;

a young plant.

Look how I am bewitched ; behold mine arm

Is, like a blasted sapling, withered up. Shaktpeare.

Nurse the saplings tall, and curl the grove

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A sapling pine he wrenched from out the ground,

The readiest weapon that his fury found. Dryden.

Slouch turned his head, saw his wife's vigorous

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What planter will attempt to yoke

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Aure-

am quis

quis mfrll-

ocrl-

Diri-

git, tu

tus caret

obso-

Soidi-

bus tec-

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invi-

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SARACENS, a name given to the former inhabitants of Arabia; so called from the word sara, which signifies a desert, as the greatest part of Arabia is ; and, this being the country of Mahomet, his disciples were called Saracens.

Under the article ARABIA, and still more fully under MAHOMET, we have given an account of the rise, progress, and establishment of the Mahometan system of imposture and superstition ; previous to which event the name of Saracens was hardly known in Europe. Of his flight from Mecca" to Medina, A. D. 622, and consequent orijin of the Mahometan era of the Hegira, we have also given a particular account, with his various and rapid successes, for ten years after the commencement of that era. By the year 631, the ninth of the Hegira, the principal men among the Arabs, and the whole of the Koreish, his most inveterate opponents, had submitted, and by the year 632 the whole peninsula of Arabia was reduced under his sub-

jection and superstition. But in that year, the tenth of the Hegka, while fresh embassies of submission were daily arriving, this famous impostor died in Medina, in the chamber of his best beloved wife, in consequence of a poisoned dish presented to him three years before, by Zainoh, the daughter of Hareth, an Arabian chief, of which he had eaten but a small quantity. The death of Mahomet threw all Mecca into consternation. The veneration of the people was so great that they could hardly believe his death possible. Abu Beer, however, at last convinced them that, though God was immortal, his prophet was mortal.

Warm disputes followed between the Mohajerin and the Ansars ; about the election of a caliph, as his successor. Ali, the son-in-law of Mahomet, who had married the prophet's daughter, Fatinia, certainly had the best title; but Abu Beer was preferred by the influence of Omar, and chosen by both parties. Ali, after some remonstrances, submitted : but his superior right is defended even to the present period, by a numerous party of Mahometans, hence called

Shites, or Sectaries. Upon Abu Beer's accession many of the Arabs refused to pay the tribute imposed on them by Mahomet ; whereupon Abu Beer sent Khaled, with an army of 4500 men, who totally defeated them, brought off much plunder, and made many of them slaves. He also killed Moseilama, and defeated Toleiah, two pretended prophets, who attempted to imitate Mahomet in his posture. He next sent his son Osama into Syria, where he plundered the country and did much damage to the Greeks. He soon after sent Khaled to invade Irak, which he accomplished, and put an end to tne kingdom of Hira, collecting 70,000 pieces of money, and subjecting the people to tribute. He next prepared to invade Syria, and, having collected a great army, gave Yezid Ebn Abu Sosian the rornmnnd <.f it, with the following among oilier 'Treat, your men with lenity : if you be victorious, kill neither old people, \voir.snr nor children : cut down no palm trees, nor burn any fields of corn : spare all fruit trees, and slay no cattle but such as you use : put none of the religious persons to the sword : offer no violence to the places they serve God in.' The Greek

emperor was much alarmed, and sent a party of Greeks to reconnoitre the enemy, who falling in with a party of Arabs, a battle ensued, in which the Greeks lost 1200 men, while the Saracens lost only 120. Many skirmishes followed, and much rich spoil was taken by the Saracens, and sent to the caliph. Another party of Greeks, however, were more successful against Abu Obeidah, whom they totally defeated, and who was therefore displaced by Abu Beer. Khaled was sent to reduce Bostra, a rich city of Syria, which he accomplished chiefly by treachery. Being joined by Obeidan's troops, he laid siege to Damascus with 45,000 men. The Greek emperor sent an army of 100,000 men, under general Werdan, to relieve it ; but they were attacked by Derar Ehn Al Wazar, at the head ef a numerous body of Saracens ; and, though the Greeks were at first so successful as even to take Derar himself prisoner (who had plunged into the heart of the Christian army, killed the standard-bearer, and seized the standard, which was a cross richly adorned with precious stones), yet the Saracens completely defeated them, Khaled himself turn-

ing the fortune of the day, by arriving with a fresh body of foot and 1000 horse. Werdan, however, having still an army of 70,000 men, made a fresh attempt to relieve Damascus ; bu: being again completely defeated, with the loss of 50,000 men, Damascus was soon after taken, A. D. 634 ; and that very day Abu Beer died of a consumption, aged sixty-three.

Abu Beer was succeeded by Omar I., who was saluted with the title of emperor of the believers, and replaced Abu Obeidah in the command, being displeased with Khaled for his cruelties ; whereas Obeidah was mild and merciful to the Christians. Khaled, however, bore his disgrace with magnanimity, and swore he would obey the new caliph. Obeidah, however, some time afterwards voluntarily yielded the command to Khaled, as being possessed of more military skill. Under these commanders, the Saracens soon after reduced the fortresses of Kinnisrin, Baalbec, Adestan, Shaizar, and Hems : upon which the Greek emperor Heraclius sent against them an army of 240,000 men, under Manuel ; but this numerous body was utterly

defeated by Khaled, near a village called Yermouk; where, according to the Arabian historians, the Christians lost 150,000 men killed, and 40,000 prisoners, while the Arabs lost only 4030 men; but this seems incredible. The defeat of Yermouk was followed by the loss of Jerusalem, and all Palestine. Omar, hearing of the success of his troops, immediately set out to visit Jerusalem, in a kind of pilgrimage, being dressed in a coarse habit made of camels' liair, daily, and performing numberless su-

perstitious ceremonies by the way, as well as some signal acts of justice and mercy, and giving some striking instances of humility, by causing all his followers to eat with him without distinction. Upon his arrival he preached a sermon to his people ; after which he signed the articles of capitulation, confirmed the inhabitants of Jerusalem in all their rights and privileges, and visited the temple of the resurrection, and other antiquities of that city, accompanied by Sophronius the patriarch, who with difficulty could prevail on

him to change his dirty garments for others more becoming his dignity. After dividing the government of Syria between Abu Obeidah and Yezid Ebn Abu Sosian, ordering Amru Ebn Al As to invade Egypt, and leaving proper orders otherwise, he returned to Medina. Yezid then attacked Caesarea, but found it stronger than he expected. Obeidah advanced to Aleppo, where Youkinna and John, two brothers, governed under Heraclius. Youkinna resolved to oppose the Saracens, and accordingly set out at the head of 12,000 troops ; and, meeting with a party of Arabs, defeated them ; but, in the mean time, the people of Aleppo, afraid of the consequences, if their city should be taken by storm, submitted to Abu Obeidah. On this Youkinna posted home to Aleppo in a rage, ordered them to annul their treaty, and, finding them not ready to comply, killed 300 of them, among whom was his own brother John. He vr? soon after attacked by the Saracens, and defeated with the loss of 3000 men ; after which he was besieged by them in the citadel, from which he made repeated sallies, and killed great numbers of the Saracens. Abu

Obeidah, after continuing the siege four months onger, at last wrote Omar that the citadel was impregnable, and proposed raising it. But Omar sent him a fresh reinforcement, with seventy camels, and orders to continue it. Among these new troops was an Arab of a gigantic size, named Dames ; who, by his size and his ingenuity, in raising seven men perpendicularly upon his own and each other's shoulders, overtopt the walls in the night, got quietly in, killed the sentinels and the guards; and admitting Khaled, with a fresh party of Saracens, soon got complete possession of the citadel. Youkinna and some of the principal officers turned Mahometans. After this Youkinna proposed to Obeidah to betray into his hand Azar, an important fort, where his own cousin Theodorus was commandant, by going to him at the head of 100 Arabs dressed as Greeks. But, this piece of treachery was detected, Theodorus having heard of the plan ; and Youkinna and his pseudo-Greeks were made prisoners. But the fort being reduced, Youkinna recovered his liberty ; but was soon after taken prisoner a second time, and carried before

Heraclius at Antioch. Here again he dissembled, and pretended that he was still a Christian, and had only professed Mahometanism to serve the emperor the more effectually ; upon which Heraclius appointed him governor of Antioch, which the traitor soon after delivered up to the Saracens. Heraclius, disconsolate by these successive losses, was put by the king of Ghassan upon the ungenerous plan of attempting to get rid of Omar by assassination. The king accordingly employed Wathek Ebn Mosafer, a resolute young Arab of his own tribe, on this dangerous enterprise. Wathek got a fair opportunity, by finding Omar sleeping under a tree, but was deterred by a lion, who came and licked the caiiph's feet till he awoke : on which Wathek, considering this as miraculous, confessed his intention, turned Mahometan, and was pardoned. Obeidah then despatched a body of 1300 troops, under Meisarah Ebn Mesroux, to the mountainous parts of Syria. The Greeks surrounded them, and would have cut them all off, had not Khaled appeared at the head of 3000 Arabs. On this the Greeks fled, leaving their tents and

rich effects to the Arabs. But Abdallah Ebn Hodasa, one of Omar's chief favorites, was taken prisoner, and sent to Constantinople. Omar wrote to Heraclius, requesting his release, which Heraclius generously granted, and sent along with him many valuable presents, particularly a jewel of immense value, which Omar sold, and put the price in the public treasury, though requested to keep it for his own use. About this time a negotiation for peace took place ; but, Omar insisting upon an annual tribute, it failed. Mean time many skirmishes took place, and many heroic acts of prowess were performed by individuals on both sides. But the chief success was on the side of the Saracens. Khaled took Manbii, Beraa, Balis, Raaban, Douluc, Korus (the ancient Cyrus), and several other fortified towns. Prince Constantine, the son of Heraclius, finding his troops diminishing-daily, took the advantage of a tempestuous night to escape to Catsarea; which was soon after invested by Amru. Mean time Youkinna, by his old system of treachery, took Tripoli, and seized fifty ships, which had just arrived from Crete

and Cyprus with a supply of arms and pro-

visions, not knowing that the Saracens were pos-

sessed of it. With these he set out for Tyre,

where he deceived the people, pretending to

come as a friend, and opened the gates to Yezid.

Constantine, hearing at Caesarea of these losses,

set sail with his family and all his wealth, leaving the citizens to make their best terms with Amru.

The surrender of Caesarea was followed by that

of all the other cities and forts in Syria, from the Mediterranean to the Euphrates, in the eigh-

teenth year of the Hegira, or A. D. 640, six years after the expedition commenced. To the mise-

ries of war were added those of violent storms

of hail, an epidemical distemper, and at last a

pestilence, all within the course of this year,

which the Arabs style the year of destruction.

By this last plague, the Saracens lost 25,000

men ; among whom were Abu Obeidah, Yezid,

Abu Sosian, Serjabil, and other eminent charac-

ters. Amru after this set out for Egypt, and on

b»is way took Tarma, a town on the isthmus of

Suez. He next attacked Mesr, the ancient Mem-

phis, which, after a siege of seven months, was

betrayed to him by Al Mokawkas, the governor.

He then proceeded to Alexandria, which, after

defeating the imperial army, he invested. During the siege Amru himself was taken prisoner, 'but protected from detection by one of his own slaves giving him a box on the ear, while he was answering some questions proposed by tht govcr-

nor, who generously dismissed him without ransom. Amru nevertheless reduced Alexandria soon after, which was followed by the loss of the whole kingdom of Egypt ; while his general Okba Ebn Nafe made himself master of all the country of Africa, between Barka and Zoweilah, including also what now forms the piratical kingdom of Tripoli. Soon after this a great famine raged in Arabia, particularly at Medina, where Omar then resided. Omar therefore wrote to Amru to send him a supply of corn, which he accordingly sent on a train of loaded camels, the first of which entered Medina when the last left Alexandria. But, this method proving tedious and expensive, Omar ordered Amru to clear the Araris T raj anus, now named Khalis, which runs through Cairo, of the sand which

choked it. This Amru did, and thus rendered the communication from Egypt to Arabia easy. The Saracens, thus successful in the west, were no less so in the east. The capture of Irak, and destruction of Hira, brought on a war with the Persians. See PERSIA. On the departure of Khaled, the command of the troops was left with Abu Obeid Ebn Masud, Mothanna Ebn Haretha, Amru Ebn Hasen, and Salit Ebn Kis. Abu Obeid, having passed a river, was killed, and his troops in great danger ; Mothanna retreated, repassed the river without loss, and fortified his camp till he received supplies; his troops in the mean time ravaging Irak on the side next the Euphrates. A body of 12,000 Persian horse was sent against these invaders, under Mahran. The Persians had the advantage at first, and the Arabs retired, but were soon brought back by Mothanna : the battle lasted from noon till sunset ; at last Mothanna engaging Mahran in single combat laid him dead at his feet ; on which the Persians fled. After this a powerful army was sent under the Persian general Rustam ; but he was also killed, and his troops dispersed. Abu

Musa, another Saracen general, defeated a formidable body under Al Harzaman, a noble Persian, at Athwaz. But of all Omar's generals, Saad Ebn Abu Wakkas was the most successful. With 12,000 troops he advanced to Kadesia, a city bordering on the deserts of Irak ; where, having defeated an army of 120,000 Persians, he look the rich city of Al Madayen, with Yetdegerd's treasure ; which was so rich that Saad took out of it 3000,000,000 of dinars, or £2025,000,000 sterling ; besides the royal plate, the crown and royal garments, another treasure of 10,000,000 of crowns, and a piece of silk tapestry sixty cubits square, so richly adorned with gold, silver, and jewels, that Omar having cut it in pieces, and distributed it among the Saracens, a small part of it, which fell to Ali's share, sold for 20,000 crowns. In the twenty-first year of the Hegira the Saracens, still unsatisfied with conquest, invaded Mesopotamia, under Aiyad Ebn Ganem, where the city of Edessa submitted at the first summons. He next marched to C'onstantina, the ancient Nicephorum, which he took by storm, as well as Dara, where he massacred the people; which so terrified the rest of the

fortified towns that they all submitted. Mo-

;:heirah KbnSaabah, another of Omar's generals,

took Shiz, a town famed for the birth of Zerdusht, the Persian philosopher, and overran the pro-

vince of Adtrbeitzan. He also reduced Arme-

nia, and penetrated into Cappadocia. Saad the

?ame year took Athwas, the capital of Khusistan,

or Chusistan, the ancient Susiana, and reduced

the whole province ; while Al Nooraan conquered

the greatest part of Chorasan. But, while Omar's

troops were thus overrunning the finest countries

in the world, a period was put to his rife and con-

quests by a Persian, named Abu Lulua, who

stabbed him thrice in the belly, while performing

his devotions at Medina, because Omar had re-

fused to remit a tribute payable for the exercise

of his religion. The Arabs rushed upon the

assassin, but before they could get him over-

powered he murdered seven of them. Omar

languished three days, and died in the twelfth

year of his reign.

After the murder of Omar, Othman Ebn Assan

was chosen caliph; and AH was still kept out of

his right, though he had not only a better title,

but was in fact the most virtuous and best cha-

racter, and the bravest warrior of that period. Othman was inaugurated in the twenty-fourth year of the Hegira, or A. D. 645. He began his reign by sending Al Mogheirah to complete the conquest of Amadan ; which he soon accomplished, and also reduced Bira, a strong fort of Mesopotamia. Another army, under Abdallah Ebn Amur, was sent into Persia to reduce the rest of Yezdegerd's dominions; which was done so completely that Yezdegerd was obliged to fly to Segestan, and leave Persia altogether. See PERSIA. In the twenty-seventh year of the Hegira Moawiyah reduced the islands of Cyprus and Aradus ; and took Ancyra and Rhodes, where he broke in pieces the famous colossus, and sold the metal of it to a Jew of Edessa. Another of Othman's commanders entered Isauria, where he committed dreadful depredations, plundering the towns and villages, murdering many of the inhabitants, and carrying off 5000 prisoners. In the thirty-first year of the Hegira Hebib, entering that part of Armenia which was still unconquered, defeated a body of the imperial troops, pursuing them to Mount Caucasus,

and laying waste the country ; and Abul Abar, the admiral of the Saracens, defeated the emperor Constans by sea, on the coast of Lycia. This battle was so bloody that the sea was dyed with blood. But, while Othman's arms were thus successful abroad, a dangerous conspiracy was forming against him at home. The accusations against him were trifling and superstitious. To mention but one — 'he had presumed to sit on the top of Mahomet's pulpit, whereas Abu Beer had only sat on the highest step, while Omar was content with the lowest.' Otnman. however, to all these formidable accusations pleaded guilty, and promised amendment ; but this only increased the insolence of the rebels. By the influence of AH, however, tranquillity was apparently restored. Hut it was soon interrupted by Ayesha, one of Mahomet's widows, who, by a scheme of villany worthy of the widow of the grand impostor, accomplished the destruction of the caliph. Wishing to raise her favorite Telha to the caliphate, she prevailed on Merwan, the caliph's secretary, to write to the prefect of Egypt,

enjoining him to put to death Mahomet Ebn Abu Beer, with whom the letter was sent, and who was to have been his successor. This letter Merwan took care should be discovered, and Mahomet, taking it for genuine, published the caliph's cruelty all over these countries. He then marched with a body of rebels to Medina, and besieged the caliph in his palace ; and, notwithstanding Othman's protestations of innocence, nothing but his death could satisfy the rebels. Othman applied to AH for assistance, who sent his two sons Hassan and Hosein, who defended the palace with great courage, till, water failing, they were obliged to abandon it ; upon which the rebels entered and murdered the caliph, in the eighty-second year of his age, and twelfth of his reign. His body remained three days unburied, when it was thrown into a hole without any solemnity.

Mahomet's omission of naming a successor to the caliphate is totally unaccountable ; and, as we have seen, threw the dignity out of his family during three successive reigns. His son-in-law Ali repeatedly claimed the succession, and

doubtless had the best right, yet always peaceably submitted to the election of other persons. The Arabs, by their giving the preference to others, seem to have been influenced by no motive whatever but this republican idea, that it should not be established as a principle that the apostleship or caliphate should be reckoned an hereditary dignity. On the death of Othman, however, Ali's amiable qualities triumphed over all opposition, and he was unanimously elected. Besides his other popular qualities, he was a man of such unparalleled courage and strength, that he never declined a combat to which he was challenged, nor ever failed to come off victor; whence he was styled by the Arabs The lion of God. Great as Ali's merits were, however, he was not without his enemies. Among these Mahomet's widow, Ayesha, was the most conspicuous. At the time of Ali's inauguration she was at Mecca, where she possessed a considerable share of power. She very early began to plot against him, and Ali raised up against himself another very powerful enemy, by imprudently dismissing Moawiyah from his government of

Syria, who, whatever malversations he was guilty of, should not have been displaced till Ali's government was more firmly established. The consequence was that Moawiyah was immediately proclaimed caliph by his troops, and thus the Saracens were divided into two factions ; the one under Moawiyuh and Ayesha, adhering to the house of Ommiya, to which Othman and Moawiyah belonged, the other to Ali. The former were called Motazalitus, or Separatists; the latter Sephalites. Ali, finding a strong party forming against him, applied to the Koreish, to raise an army against Ayesha, who had begun hostilities and taken the city of Basra. Ziyad Ebn Ilantelah, the Ansars, and a great number of people joined Ali. At Arrabah he was joined by many other parties ; from Medina he yot a large supply of horses, and from Cufa 8000 men. He then advanced to Basra, attacked and defeated the troops of Ayesha, and took the prophet's widow prisoner, though her troops were so zealous in her defence, that seventy men had their hands cut off successively, who held her camel by the bridle. Ali, however, treated her very kindly, and at first set her at liberty, but afterwards con-

fined her to her house at Medina, to prevent her from interfering farther instate affairs. After this victory AH had no more enemies to contend with in Arabia, Egypt, Irak, Persia, or Chorason. But a strong party of rebels still remained in Syria headed by Moawiyah, who was soon joined by Amru Ebn Al Ats. Ali, after in vain attempting to bring the rebels to an accommodation, entered Syria with 70,000 men, while that of Moawiyah amounted to 80,000. By reinforcements the former was increased to 90,000, and the latter to 120,000. The armies came within sight of each other in the end of the thirty-sixth year of the Hegira. The first month of the thirty-seventh was spent in fruitless negociations ; after which they fought in different parties, without hazarding a general engagement. These battles lasted about 110 days, during which Moawiyah lost 45,000 men and Ali 25,000. Among these was Ali's general of horse, Ammar Ebn Yazar, who was above ninety years old, and had been much esteemed by Mahomet, and was one of his companions. The loss of him so enraged Ali, that he challenged Moawiyah to fight him in sin-

gle combat. This, however, the coward refused, though Amru urged him to accept. The battle was then renewed with great fury ; Moawiyah's troops were pushed to their camp, which would certainly have been taken, had not Amru retrieved Moawiyah's affairs, when just on the brink of destruction, by a stratagem. He ordered some of his men to fix copies of the Koran to the points of their lances, and carry them to the front of the battle, crying out, 'This is the book that ought to decide all differences ; this is the book of God, that prohibits the effusion of rnussulmans blood.'

Ali's troops on this threw down their arms, and thus was decisive victory wrested from him when almost gained. The two parties then agreed to choose each his arbitrator. Moawiyah chose Amru, but Ali was again shuffled out of his right, the troops of Irak naming for him Abu Musa, a man who had already betrayed him. The consequence was that Ali was deposed; to which sentence he submitted, but without laying down his arms. After this AH retired to Cufa, where 12,000 of his troops, called Kharejites, pretending to be offended with the step he had taken, revolted. They insisted that he ought not to keep the peace with Moawiyah, but pursue

him without mercy. But Ali replied that, as he had given his word, he must keep it. They then chose Abdallah Ebn Waheb their general, who appointed for their rendezvous Naharwan, a town between Waset and Bagdad, four miles east of the Tigris, where they collected an army of 25,000 men. Ali at last marched against them, but previously proclaimed quarter and pardon to all who should return to his standard. This measure soon reduced Abdallah 's troops to 4000 men, with whom he rushed upon Ali's forces, who cut them all to pieces except nine. Had AH marched immediately against Moawiyah, he had probably reduced him entirely; but he seems to have considered the agreement as binding,

and therefore acted only on the defensive. At last the Kharejites, wishing to ged rid of Moawiyah, Amru, and Ali, sent assassins to murder all the three. Moawiyah was wounded, but recovered ; Amru's secretary was killed by mistake; but Ali was wounded with a poisoned sword, which proved mortal. The assassin was

taken, and would have been pardoned had Ali recovered ; but he ordered him to be put to death if he died, ‘ that he might accuse him before God.’ Even in this, however, Ali showed his clemency, by ordering him to be killed at one blow, without torture. Thus fell Ali, the most virtuous of all the caliphs, after he had reigned nearly five years, and lived sixty-three.

Hassan the son of Ali, who inherited all his father’s virtues except his courage, was declared caliph immediately upon Ali’s death. Moawiyah soon showed his hostile intentions, and Hassan’s friends pressed him to declare war immediately ; but, though they prevailed with him to take the field, his disposition was too mild and peaceable : and he himself, sensible of his incapacity to dispute the empire with Moawiyah, in spite of the remonstrances of his friends, resigned it to that villain ; who some years after caused him to be poisoned by his own wife.

Moawiyah, now sole master of the empire, resolved to reduce the Kharejites, who were still rebellious. In this service he offered Hassan the command of the arfny, but that prince declined it. He then sent the Syrian troops against

them, but they were defeated. At last the Cufans were employed, who quickly put an end to the rebellion. In the forty-eighth year of the Hegira the caliph sent his son Yezid, with a powerful army, to besiege Constantinople. In this expedition he was accompanied by three or four of those associates of Mahomet whom he had dignified with the title of his companions, who, notwithstanding their great age, were prompted by zeal to undergo incredible fatigues. But, in spite of the zeal of these veterans, the expedition proved unsuccessful ; and in it one of them, viz. Abu Ayub, who had been with Mahomet at the battles of Bedr and Ohod, lost his life. His tomb is still held in the highest veneration by all Mussulmans. In the fifty-fourth year of the Hegira the Saracens made an irruption into Bukharia, and defeated the Turkish army, killing great numbers of them. About this time a treaty was concluded between the emperor Constantine IV. and the Saracens, whereby the latter were allowed to keep the territories they had seized, but bound to pay 3000 Ibs. of gold annually, fifty slaves, and fifty good

horses. This treaty was to last thirty years. In the fifty-fifth year of the Hegira, Moawiyah conferred the government of Chorasan upon Saad, Othman's grandson, who soon after passed the Jihun, or Amu (the ancient Oxus), and advanced with a body of troops to Samarcand, which instantly surrendered to him ; soon after which, lie defeated an army of Usbeck Tartars, and marcned directly to Tarmud, which also surrendered. The fifty-seventh year of the hegira was remarkable for nothing but vast swarms of locusts which did incredible damage in Syria and Mesopotamia. In the fifty-eighth Ayeslia, Mahomet's widow died, and in the sixtieth Moawiyah himself, after having reigned from Hassan's resignation, nineteen years five months and five days. He was interred at Damascus.

On Moawiyah's death his son Yezid was immediately proclaimed, April 7th, 680. He wrote to Al Walid, the governor of Medina, to seize Hosein, the remaining son of Ali, and Abdallah Ebn Zobeir, if they refused to acknowledge his right ; but they escaped to Mecca ; on which Jediz displaced Al Walid, and appointed Amru

Ebn Saad governor in his stead. Amru immediately sent against Abdallah his own brother Amer, who mortally hated him ; but Abdallah engaged and took him prisoner, which raised his fame at Medina. Mean time Hosein, as the only heir of Ali, became very popular at Mecca, Medina, Irak, and Cufa ; and the Cufans even raised an army of 18,000 men in his favor ; and promised to raise 120,000 more ; but all Hosein's hopes were soon frustrated, and himself killed in an engagement with Obeidallah. Yezid did himself honor by treating Hosein's family with kindness. In the sixty-first year of the Hegira Yezid appointed Salem Ebn Ziyad governor of Chorasan, who soon after made an irruption into the Turkish territories. He sent a body of troops to Khowarazm, the capital of the Tartars, from which he extorted 50,000,000 of money : whence advancing to Samarcand, he compelled the people of that city also to pay him an immense sum. Meantime Abdallah Ebn Zobeir, being, by the death of Hosein, at the head of the house of Hashem, began to aspire to the caliphate, and was proclaimed caliph at Medina, on the arrival

of Hosein's family. He then expatiated on Hosein's tragical death, and accused the Cufans of being the most perfidious villains on earth. This pleased the citizens of Mecca and Medina, who flocked to him in crowds, so that he soon had a great crmy. Yezid, hearing of all this, swore he would have him in chains, and sent a silver collar for him to Merwan, governor of Medina. At last the people of Medina renounced their allegiance to Yezid, and formally deposed him in a whimsical but expressive manner, throwing aside their turbans, shoes, &c., and saying, ' I lay aside Yezid as I do this turban, or shoe,' &c. They then banished Yezid's governor, and all his friends, who, to the number of 1000, took refuge in the house of Merwan Ebn Al llaken, where, being besieged by Abdallah's party, they sent to Yezid for assistance, who detached a body of troops under Moslem Ebn Okba to Medina for that purpose. The people of Medina, on this, allowed Yezid's friends to withdraw ; but Moslem advanced at the head of 5000 foot and 12,000 horse, and summoned the town to surrender ; which being refused, the garrison made

a vigorous defence, but, the principal officers being killed, the city was taken by storm ; all the men who had borne arms were massacred, the women

ravished, and the city pillaged. Ali alone, the

son of Hosein, was treated with respect. By this

severity Moslem incurred the anathema pro-

nounced by Mahomet against those who should

pillage Medina. After this Moslem proceeded

to Mecca, where Abdallah had retired ; but he

died by the road, and the command dcvchd

upon Hosein Ebn Thamir, who advanced to

Mecca and besieged it forty days, battering it

with such fury that he beat down its famous

temple ; and it must soon have shared the fate

of Medina had not the news of Yezid's death

stopped further operations. Yezid died in his

thirty-ninth year, the sixty-second of the Hegira,

or A. D. 684, having reigned only three years and

eight months.

'Yezid was succeeded by his son Moawiyah

II., who was proclaimed caliph at Damascus on

his father's death; but, being of a weak consti-

tution, he resigned the crown in six weeks, and

died soon after. Great commotions followed. Obeidallah was become so unpopular by his cruelties, particularly by the death of Hosein, that he was obliged to fly into Syria ; on which his house was plundered by the mob. In this confusion Abdallah might have easily secured the caliphate, had he not, with equal imprudence and cruelty, ordered the house of Ommiyah to be exterminated. This ruined his affairs ; for they being obliged to fly for safety, Merwan was proclaimed caliph at Damascus, and thus the Saracen empire was once more rent into two factions. A battle soon ensued between Dahak Ebn Kais, who favored Abdallah, and the troops of Merwan, in which Dahak was defeated and killed, and thus Merwan became master of Syria. Soon after he advanced with a body of troops to Egypt, but sent before him Amru Ebn Said with a detachment, who defeated Abdalrahman, Abdallah's lieutenant, in several brisk actions, till he at last surrendered the whole country to Merwan, for a sum of money, and retired to Hedsjaz. The Syrian troops immediately took possession of the country ; and Merwan, having appointed

his son Abdalazziz over Egypt, returned to Damascus. He then sent Amru Abn Said against Musab, Abdallah's brother, whom he totally defeated. In the sixty-fifth year of the Hegira the Cufans, pretending remorse for their treachery to Hosein, raised an insurrection against both caliphs, and assembled 16,000 men under Soliman to avenge the death of Hosein. Al Mockhtar, who had served under Abdallah, offered to serve instead of Soliman, who he said was incapable of executing the enterprise. This being refused, he drew off 2000 from Soliman, while other 10,000 left him. So enthusiastic, however, was Soliman in the affair, that he set forward to Syria with the remaining 4000, who were all cut to pieces by Obeidallah, who was at the head of 20,000. Soon after this died the caliph Merwan, after a short reign of eleven months, being poisoned by Seinab, Moawiyah's widow, whom he had married.

Merwan was succeeded by his son Abdalmalec, who released Al Mokhtar, who had been imprisoned by the governor of Cufa. Al Mokhtar soon after hearing that Abdallah had imprisoned

the whole descendants of the celebrated caliph Ali, and was going to put them to death, sent a body of 750 horse to Mecca under Abu Abdalla for their relief, which they accomplished, and took Abdallah himself prisoner, two days before they were all to have been murdered. After this they settled on a mountain near Mecca with a body of 4000 men. Al Mokhtar next attacked and killed Obeidallah ; but was soon after defeated and slain by Musab, and all his men to the number of 7000, though they surrendered at discretion, were also slain for their former outrages. Next year, the sixty-eighth of the Hegira, the Azarakites made an irruption into Irak, penetrating to Cufa and Al Madayen, and committing the most horrid cruelties, murdering all they met with, and sparing neither age nor sex. The governor of Mesopotamia carried on a war with them for eight months. Musab sent against them Omar Ebn Abdallah, who gave them a great overthrow, slaughtered great numbers of them, and pursued the rest as far as Ispahan and Kerman. Returning a second time Omar totally defeated and dispersed them. In the sixty-ninth

year of the Hegira Abdalmalec marched against Musab. In his absence he left Amru Ebn Said governor of the city, who immediately seized it for himself; on which Abdalmalec returned. After some skirmishes between the caliph's troops and those of Amru, a treaty was agreed upon ; which Abdalmalec broke immediately after by murdering Amru with his own hand. Upon this Yahyah, Amru's brother, at the head of 1000 slaves, attacked the palace and killed the guards, but were quelled afterwards, partly by money. In the seventieth year of the Hegira the Greeks made an "irruption into Syria; and the caliph was obliged to pay a tribute of 1000 dinars per day, and sent annually 365 slaves and 365 horses to Constantinople. The revenues of Cyprus, Armenia, and Heria, were agreed to be divided. Abdalmalec next marched against Musab, whom he defeated and killed through the treachery of his troops. The caliph went to Cufa, where all ranks submitted and swore to him. He then ordered money to be distributed among the people, and gave a splendid entertainment to all his new subjects, from which even the meanest

were not excluded. During this entertainment Musab's head was presented to the caliph ; on which one of the company said, ' I saw Hosein's head in this same castle presented to Obeidallah ; Obeidallah's to Al Mokhtar; Al Mokhtar's to Musab ; and now at last Musab's to yourself.' The caliph was so struck with this remark, that, to divert the ill omen, he ordered the castle to be instantly demolished. Abdallah Ebn Zobier, hearing of the defeat and death of -his brother, put Mecca in a proper state of defence. Abdalmalec, on his return from Damascus, appointed his brother Basbar governor of Cafu, and Khaled Ebn Abdallah governor of Basra ; who imprudently displaced Al Mohalleb, one of the greatest generals of the age, from the command of the army, and put in his place Abdalaziz, a man much inferior. The barbarous Azarakites no sooner heard of this than they attacked Abdalaziz, entirely defeated, and took his wife prisoner. A dispute arising among them about the price of the lady, one of them, to end it, cut off her head. On this disaster Khaled was ordered to replace Al Mohalleb, which he no sooner did than they in conjunction attacked the

Azarakites, forced their camp, and completely defeated them. In the seventy-second year of the Hegira Abdalmalec prepared to invade Hedsjaz, and appointed Al Hejaj, one of his bravest ge-

nerals, commander. After several skirmishes, wherein Abdallah's troops had the worst, most of Abdallah's friends, two of his sons, and 10,000 inhabitants of Mecca, deserted him. In this extreirity he consulted with his mother, whether he should submit to the caliph or not ; but she, being a high-spirited woman, the daughter of Abu Beer, the second caliph, advised him against it; whereupon, in a fit of despair, he plunged into the midst of his enemies without his usual coat of mail, and, after slaughtering great numbers of them, was killed. Al Hejaj cut off his head and fixed his body to a cross ; which had a strong odor of musk for several days after, his mother having given him a draught in which a pound of musk was infused, to inspire him with courage. By the reduction of Mecca Abdalmalec was now sole master of the empire, but he

suffered a great loss the next year, having an army of 100,000 men cut off by the Khazarians in Armenia. The governor, however, marched against them soon after at the head of 40,000 chosen troops, penetrated into the heart of Armenia, defeated a large body of them, and drove them into their temples, to which he set fire. One of his generals also defeated 80,000 Khazarians at the Caspian gates, killed a great number of them, and compelled the rest to turn Ma-, hometans. Al Hejaj, for his services, was made governor of Medina, and then of Irak, Chorasan, and Sejestan, in all which places he behaved with the greatest cruelty, and yet he was continued in these governments till he died. In the seventy-sixth year of th« Hegira Saleh Ebn Marj, and Shebib Ebri Seid, a Kharejite, rebelled against the caliph. Saleh was proclaimed emperor of the faithful at Daras in Mesopotamia. At first they were successful, and defeated even Al Hejaj himself; but at last were defeated and killed, and their troops slaughtered and dispersed. In the seventy-sixth year of the Hegira Abdalmalec erected the first mint in Arabia, and

struck gold and silver coins. Before this period their dinars or gold coins had Greek inscriptions, and their dirhems or silver coins Persian. The caliph now struck dirhems with the Arabic words, Alia Samad, i. e. God is eternal, upon them; which offended some superstitious Mussulmans, who thought the name of God would thus be profaned by the touch of the unclean. In the seventy-seventh year of the Hegira, the Saracens made an incursion into the imperial territories, when Lazica and Bernucium were betrayed to them. In the seventy-eighth they over-ran Africa Proper, and demolished the city of Carthage. They were driven out by John the Patrician, but, returning with a superior force, they made John fly to Constantinople. In the year seventy-nine Abdalrahman rebelled in Persia ; and drove the khan or emperor of the Turks, Tartars, and Moguls, out of that country ; but in eighty, Heraclius, the Greek general, penetrated into Syria, as far as Samosata, killed 200,000 Saracens, and ravaged the country dreadfully.

At last, after about eighty battles, or as some say 100, Abdalrnhman was defeated and killed by

Al Hejaj. In the eighty-third year of the Hegira

the Armenian nobolity revolting, drove the Arabs

out of that province ; but Mahomet, a general

of the caliph's, entering it witli a powerful army, got the authors of the revolt into his hands, and

caused them to be burnt alive. The Saracens

then invaded Cilicia, under one Azar, but were,

to the number of 10,000 the one year, and 12,000

the next, cut in pieces by Heraclius, and the

rest forced to fly. In the year eighty-six Abdal-

malec died, after a reign of twenty-one years.

Abdalmalec was succeeded by his son Al

Walid, who greatly extended the Saracen empire.

In the first year of his reign one of his generals passed the Jihun, and defeated a numerous army

of Turks and Tartars. He then over-ran and re-

duced Sogdiana, Bagrass, Shash, Targana, and

the whole immense tract called Mawaralnahar,

or Great Bukharia. He also conquered the

khan of Khowarazm, and forced him to pay an

annual tribute of 2,000,000 of dinars. Another

of his generals, called Mahomet, made an irrup-

tion into India, and conquered a great part of

that country. He also subdued the kingdom of

Al Sind, between Persia and India ; when

Derar the king of it was defeated and killed,

and had his head cut off by Mahomet. In the ninetieth year of the Hegira the Saracens made an irruption intc- Cappadocia, defeated the imperial army, and took the city of Tyana. In the two following years they repeated their incursions under Othman, took several cities, and carried off numbers of slaves. In the year ninety-three, or A. D. 712, Tarek Ebu Zarka, made a descent on Spain, defeated Roderick, the last king of the Goths, reduced Toledo, and over ran a great part of the kingdom. Being joined by Musa, commander of the African Moslems, they took most of the forts and subdued the whole country. In these expeditions they acquired immense spoils, particularly a very rich table, called Solomon's table, of gold, silver, and pearls, and standing on 365 feet. In ninety-four Tarick landed a body of 12,000 men at Gibraltar, with which he plundered Hispania Bsetica, and great part of Lusitania. Roderick's troops being new raised were unable to resist these hardy invaders. Another Saracen general entered Pisidia, ravaged the country, and took Antioch. In the year ninety-five Hejaj died, after a cruel government of twenty years; during which period he killed

120,000 men, and suffered 50,000 men and 30,000 women to perish in prisons. This ysr.r also the Saracens completely defeated Roderick king of the Goths, who was killed in the battle; and Tarif amassed immense riches. In the east these plunderers were equally successful. Moslema ravaged the whole province of Galatia, carrying off rich spoils, and many prisoners. But, wMle Al Walid was preparing to invade Constantinople, he died in the sixty-ninth year of the Hegira.

The caliph Al Walid was succeeded by his brother Soliman. This year the Saracen conquests on the east side were increased by the reduction of Tabrestan and Jurgon or Georgia. In Spain also the city of Toledo, which had revolted, was reduced, and Caesar-Augusta, now Saragossa, as well as several others. The next year Moslema set out for Constantinople, which he besieged without success till the ninety-ninth year of the Hegira; when he was obliged to re-

turn, after having lost before it 120,000 men.

The soldiers were reduced to the greatest extremities of hunger, oeing forced to live upon hides, he roots and bark of trees, the most noisome animals, and even the dead bodies of their companions. This year also (the ninety-ninth) the caliph Soliman died. According to some, he was poisoned by Yezid his brother, governor of Persia, who was displeased- with his having appointed his cousin-german Omar Ebn Abdalaziz as his successor, to the exclusion of himself. According to others, he died of an indigestion ; which is not to be wondered at, if, as those authors say, he used to devour lOOlbs. of meat every day, and dine very heartily after eating three lambs roasted for breakfast. In the latter part of his reign, the Moors were by no means successful in Spain ; the kingdom of Navarre being founded at this time by Pelagius, or Pelayo, whom the Arabs were never able to reduce. The new caliph Omar Ebn Abdalaziz was by no means of a martial character ; but is said to have been very pious, and possessed of very amiable qualities. He suppressed the usual malediction, which was solemnly pronounced by

the caliphs of the house of Ommiyah against the house of AH; and always showed great kindness to the latter. He was poisoned by Yezid, after a short reign of two years and five months. Concerning Yezid II., the successor of Omar, we find very little worth mentioning. He did not long enjoy the dignity he had so iniquitously purchased, dying after a reign of about four years. He died of grief for a favorite concubine named Hababah, who was accidently choked by a large grape which stuck in her throat. Yezid was succeeded by his brother Hesham, who ascended the throne in the 105th year of the Hegira. In the second and third years of his reign several incursions were made into the imperial territories, but generally without success. In the 109th year Moslema drove the Turks out of Armenia and Adirbeitzan, and again confined them within the Caspian gates. The next year he obliged them to take an oath that they would keep their own country ; but this they soon violated, and were again driven back by Moslema. About this time also the Arabs, having passed the Pyrenees, invaded France to the number of

400,000, including women and slaves, under the command of one Abdalrahman. Having advanced to Aries, upon the Rhone, they defeated a large body of French that opposed them : and, having also defeated count Eudo, they pursued him through several provinces, wasted the country with fire and sword, and took the city of Tours, most of which they reduced to ashes. Here, however, a stop was put to to their devastations by Charles Martel ; who, coming up with them near Tours, engaged them for seven days together, and at last gave them a total overthrow. He took a».l their baggage and riches ; and Abdalrahman, with the shattered remains of his army, reached the frontiers of Spain with difficulty. The following year also the Arabs were overthrown at Illiberis, scarcely any of them escaping. To make amends for this bad fortune, however, the caliph's arms were successful against the Turks, who had again invaded some of the eastern provinces. In the 125lh year of the Hegira died the caliph Hesham, after a reign of nineteen years seven months and eleven days. He was succeeded by Al Walid II., who is re-

presented as a man of a most dissolute life and was assassinated the following year on account of his professing Zendicism, a species of infidelity nearly resembling Sadducoeism.

Al Walid II. was succeeded by Yezid III., the son of Al Walid I., who died of the plague after a reign of six months ; and was succeeded by Ibrahim Ebn Al Walirl, an imprudent and stupid prince. He was deposed in the 127th year of the Hegira by Merwan Ebn Mahomet, the governor of Mesopotamia ; who gave out, as an excuse for his revolt, that he intended to revenge the murder of the caliph Al Walid II.

He was no sooner seated on the throne, than the people of Hems rebelled against him. Against them the caliph marched with a powerful army, and summoned them to surrender. They assured him that they would admit him into their city ; and, accordingly, one of the gates bein^ opened, Merwan entered with about 300 of his troops. The men that entered with him were immediately put to the sword ; and the culipli himself escaped with great difficulty. However, he afterwards defeated them in a pitched battle,

put a great number of them to the sword, dismantled the city, and crucified 600 of the principal authors of the revolt. The inhabitants of Damascus soon followed the example of those of Hems, and deposed the caliph's governor; but Merwan marched to Damascus with great celerity, entered the city by force, and punished the authors of the revolt. Peace, however, was no Sooner established at Damascus, than Soliman Ebn Hesham set up for himself at Basra, where he was proclaimed caliph by the inhabitants. Here he assembled an army of 10,000 men, with whom he marched to Kinnissin, where he was joined by vast numbers of Syrians. Merwan, receiving advice of Soliman's rapid progress, marched against him with all the forces he could assemble, and entirely defeated him. In this battle Soliman lost 30,000 men, so that he was obliged to fly to Hems, where 900 men took an oath to stand by him to the last. Having ventured, however, to attack the caliph's forces a second time, he was defeated, and again forced to fly to Hems. But, being closely pursued by Merwan, he constituted his brother Said governor

of the city, leaving with him the shattered remains of his troops, and himself fled to Tadmor. Soon after his departure Merwan appeared before the town, which he besieged for seven months; during which time he battered it incessantly with eighty catapults. The citizens, being reduced to the last extremity, surrendered, and delivered Said into the caliph's hands. In consideration of this submission, Merwan pardoned the rebels, and took them all under his protection. About the same time, another pretender to the caliphate appeared at Cufa; but Merwan took his measures so well that he extinguished this rebellion before it could come to any height. Notwithstanding the success, however, that had hitherto attended Merwan, a strong party was formed against him in Khorasan by the house of

Al Abbas. The first of that house that made any considerable figure was named Mahomet, who Nourished in the reian of Omar Ebn Abdalaziz. He was appointed chief of the house of Al Abbas, about the 100th year of the Hegira ; and is

said to have prophesied, that after his death, one of his sons named Ibrahim should preside over them till he was killed, and that his other son Abdallah, surnamed Abul Abbas Al Saffah, should be caliph, and exterminate the house of Ommiyah. Upon this Al Saffah was introduced as the future sovereign, and those present kissed his hands and feet. After the decease of Mahomet, his son Ibrahim nominated as his representative in Khorasan one Abu Moslem, a youth of nineteen years of age ; who beginning to raise forces in that province, Merwan despatched against him a body of horse under Nasr Ebn Sayer ; but that general was entirely defeated by Abu Moslem, and the greatest part of his men killed. The next year (the 128th of the Hegira) Merwan made vast preparations to oppose Abu Moslem, who after the late victory began to grow formidable. Merwan gained two victories over some of Ibrahim's generals ; but, the year following, Abu Moslem brought such a formidable army into the field that the caliph's troops could not make head against them; his officers in Khorasan therefore were obliged either to take

an oath of allegiance to Ibrahim, or to quit the

province within a limited time. In the 1 30th year

of the Hegira the caliph's general Nasr, having

drawn together another army, was again defeated

by Kahtabah, another of Ibrahim's generals, and

forced to fly to Raya, a town of Dylam, or of

Khorasan. The next year Ibrahim, having fool-

ishly taken it into his head to go on a pilgrimage to Mecca, attended by a numerous retinue splen-

didly accoutred, was seized and put to death by

Merwan : and the year following Abul Abbas

was proclaimed caliph at Cufa. As soon as the

ceremony was ended, he sent his uncle Abdallah

with a powerful army to attack Merwan's forces

that were encamped near Tubar, at a small dis-

tance from Mosul, where that caliph was then

waiting for an account of the success of his troops under Yezid governor of Irak against Khataba,

one of Al Saffah 's generals. Khataba, receiving

advice of Yczid's approach, immediately advanc-

ed against him, and entirely defeated him ; but

in crossing the Euphrates, the waters of which

were greatly swelled, he was carried away by

the current and drowned. The pursuit, how-

ever, was continued by his son Hamid, who dis-

persed the fugitives in such a manner that they could never afterwards be rallied. At the news of this disaster, Merwan was at first greatly dispirited ; but, soon recovering himself, he advanced to meet Abdallah. In the beginning of the battle, the caliph happened to dismount ; and his troop perceiving their sovereign's horse without his rider, concluded that he was killed, and therefore immediately fled ; nor was it in the power of the caliph himself to rally them again, so that he was forced to fly to Damascus; but the inhabitants of that city, seeing his condition desperate, shut their gates against him. Upon this he fled to Egypt, where he maintained himself for some time; but was at last attacked and killed by Saleh, Abdallah 's brother, in a town ofThebais called Busir Kurides. The citizens of Damascus, though they had shamefully deserted Merwan, refused to open their gates to the victors ; upon which Saleh entered the city by force, and gave it up to be plundered for three days by his soldiers.

By the total defeat and death of Merwan, Al Saffah remained sole master of the Saracen throne ; but no very remarkable events happened

during his reign ; only he massacred great numbers of the partisans of the house of Ommiyah ; and Constantine Copronymus, taking advantage of the intestine divisions among the Saracens, ravaged Syria. The caliph died of the small pox in the 136th year of the Hegira, in the thirty-third year of his age ; and was succeeded by his brother Al Mansur. In the beginning of Al Mausur's reign hostilities continued against the house of Ommiyah, who still made resistance, but were always defeated. Abdallah, however, the caliph's uncle, caused himself to be proclaimed caliph at Damascus ; and having assembled a powerful army in Arabia, Syria, and Mesopotamia, advanced with great expedition to the banks of the Masius near Nisibis, where he encamped. Al Mansur, being informed of this rebellion, despatched Abu Moslem against Abdallah. This general, having harassed him for five months together, at last brought him to a general action ; and, having entirely defeated him, forced him to fly to Basra. Notwithstanding all his services, however, Abu Moslem was soon after ungratefully and barbarously mur-

dered by Al Mansur, on some ridiculous pre-

tences of being deficient in respect towards him.

After the death of Abu Moslem, one Sinan, a

Magian, or adorer of fire, having made himself

master of that general's treasures, revolted against

the caliph ; but he was soon defeated by Jamhur

Ebn Morad, who had been sent against him with

a powerful army. In this expedition Jamhur

having acquired immense riches, the covetous

disposition of the caliph prompted him to send

a person express to the army to seize upon all

the wealth. This so provoked Jamhur that he

immediately turned his arms against his master;

but was soon defeated, and entirely reduced.

The following year (the 139th of the Hegira) one

Abdalrahman, of the house of Ommiyah, after

the entire ruin of that family in Asia, arrived in Spain, where he was acknowledged caliph ; nor

did he or his descendants ever afterwards own

subjection to the Arabian caliphs. The 140th

year of the Hegira is remarkable for an attempt

to assassinate the caliph. This attempt was made

by the Rawandians ; an impious sect, who held

the doctrine of metempsychosis or transmigra-

tion. They first offered Al Mansur divine

honors, by going in procession round his palace, as the Moslems were wont to do round the Caab ; but the caliph, highly incensed at ciiis impiety, ordered 100 of the principal of them to be imprisoned. These, however, were soon released by their companions ; who then went in a body to the palace with an intention to murder their sovereign ; but he being a person of uncommon bravery, though he was surprised with very few attendants, mounted a mule, and ad-

Tanced towards the mutineers witli an intention to sell his life as dearly as possible. In the mean time, Maan Ebn Zaidat, one of the chiefs of the Ommiyan faction, who had concealed himself to avoid the caliph's resentment, sallied out of his retreat, and, putting himself at the head of Al Mansur's attendants, charged the rebels with such fury that he entirely defeated them. This generosity of Maan was so remarkable that it afterwards passed into a proverb. On tliis occasion 6000 of the Rawandians were killed on the spot, and the caliph delivered from instant death ; he was, however, so much disgusted with

the Arabs, on account of this attempt, that he resolved to remove the capital of his empire out of their peninsula ; and accordingly founded a new city on the banks of the Tigris, named Bagdad. The foundations of it were laid in the 158th year of the Hegira, and finished four years after. On the removal of the seat of government to Bagdad, the peninsula of the Arabs seems all at once to have lost its consequence, and in a short time the inhabitants seem even to have detached themselves from the jurisdiction of the caliphs; for in the 156th year of the Hegira, while Al Mansur was yet living, they made irruptions into Syria and Mesopotamia, as if they had designed to conquer these countries over again for themselves ; and though the Arabs, properly so called, continued nominally subject to the caliphs of Bagdad till the abolition of the caliphate by Hulaku the Tartar, yet they did not become subject to him when he became master of that city. From the building of the city of Bagdad to the death of Al Mansur nothing very remarkable happened, excepting some irruptions made into the territories of the Greeks, and by the Arabs into some of the caliph's other territories. In the

157th year of the Hegira, also, a grievous famine was felt in Mesopotamia, which was quickly after followed by a plague that destroyed great numbers. This year likewise, the Christians, who had been all along very severely dealt with by Al Mansur, were treated with the utmost rigor by Musa Ebn Mosaab the caliph's governor ; every one who was unable to pay the enormous tribute exacted of them being thrown into prison. In the 158th year of the Hegira, the caliph set out from Bagdad to perform the pilgrimage to Mecca ; but, being taken ill on the road, he expired at Bir Maimun, whence his body was carried to Mecca ; where, after 100 graves had been dug, that his sepulchre might be concealed, he was interred, having lived, according to sone, sixty-three, according to others, sixty-eight years, and reigned twenty-two. He was extremely covetous, and left in his treasury 600,000,000 dirhems, and 24,000,000 dinars. He is reported to have paid his cook by assigning him the heads and legs of the animals dressed in his kitchen, and to have obliged him to procure at his own expense all the fuel and vessels

he had occasion for. When Al Mansur expired at Bir Maimun, he had only his domestics and Rabi his freed man with him. The latter, for some time, kept h'is death concealed, and pretended to have a conference with him ; in which, as he gave out, the caliph commanded him to exact an oath of allegiance to Al Mohdi his son, as his

immediate successor, and to Isa Ebn Musa his cousin german, as the next apparent heir to the crown. He then despatched a courier to Bagdad with the news of Al Mansur's death : upon which Al Mohni was unanimously proclaimed caliph. Isa Ebn Musa, however, no sooner heard this news than he began to entertain thoughts of setting up for himself at Cufa, where he then resided ; and, to facilitate the execution of his scheme, fortified himself in that city. But Al Mohdi, being apprized of his defection, sent a detachment of 1000 horse to bring him to Bagdad ; which being done, Al Mohni not only prevailed upon him to own his allegiance to him, but also to give up his right to the succession for 10,000 according to some, or according to others for 10,000,000 dinars. From

the accession of Al Mohdi to the 164th year of the Hegira, the most remarkable event was the rebellion of Al Mokanna. This impious impostor, whose true name was Hakem Ebn Hesham, came originally from Khorasan, and had been an under secretary to Abu Moslem governor of that province. He afterwards turned soldier, and passed from the province of Khorasan into that of Mawaralnahr, where he pave himself out for a prophet. The name of Al Mokanna, as also that of Al Borkai, that is, the veiled, he took from his custom of covering his fuce with a veil or girdle mask, to conceal his deformity; he having lost an eye in the wars, and being otherwise of a despicable appearance. In some places he made many proselytes, deluding the people with a number of juggling tricks which they swallowed as miracles, and particularly by causing the appearance of a moon to rise out of a well for many nights together; whence he was also called in the Persian tongue Sazendeb mak, or the moon-maker. This wretch, not content with being reckoned a prophet, arrogated to himself divine honors; pretending that

the Deity resided in his person. At last this impostor raised an open rebellion against the caliph, and made himself master of several fortified places in Khorasan, so that Al Mohdi was obliged to send one of his generals with an army against him. Upon the approach of the caliph's troops, Al Mokanna retired into one of his strong fortresses, which he had well provided for a siege; and sent his emissaries abroad to persuade the people that he raised the dead to life, and foretold future events. But being closely besieged by the caliph's forces, and seeing no possibility of escaping, he gave poison in wine to his whole family, and burnt theii bodies, with all their furniture, provisions, and cattle; and, lastly, he threw himself into the flames, or, as others say, into a tub of aquafortis, or some other preparation, which consumed every part of him except the hair. When the besiegers therefore entered the place, they found no living creature in it, except one of Al Mokanna's concubines, who, suspecting his design, had hid herself, and now discovered the whole. This terrible contrivance, however, produced the desired effect. He had promised his followers

that his soul should transmigrate into the form of an old mnn riding on a grayish coloied beast, and that afitr so manv ypars he would return and

give them the earth for their possession ; which ridiculous expectation kept the sect in being for several years. All this time war had been carried on with the Greeks, but without any re-remakable success on either side. In the 164th year of the Hegira, however, Al Mohdi ordered his son Harun Alraschid to penetrate into the Greek territories with an army of 95,000 men. Harun, then, having entered the dominions of the empress Irene, defeated one of her com-manders that advanced against him ; after which he laid waste several of the imperial provinces with fire and sword, and even threatened Con-stantinople itself. By this the empress was so terrified that she purchased a peace with the ca-liph by paying him an annual tribute of 70,000 pieces of gold ; which delivered her from the de-predations of these barbarians. After the signing

of the treaty, Harun returned home laden with spoils and glory. In the 169th year of the Hegira, Al Mohdi was poisoned, though undesignedly, by one of his concubines, named Hasanah. She had designed to destroy one of her rivals whom she imagined to have too great an ascendant over the caliph, by giving her a poisoned pear. This the latter, not suspecting any thing, gave to the caliph ; who had no sooner eaten it than he felt himself in an exquisite torture, and soon after expired.

On the death of Al Mohdi, he was succeeded by his eldest son Al Hadi ; who having formed a design to deprive his younger brother Harun Alraschid of his right of succession,-and even to assassinate him, was poisoned by his vizier in the 170th year of the Hegira; and on his death the celebrated caliph Haruu Alraschid ascended the throne. This was the best and wisest prince that ever sat on the throne of Bagdad. He was also extremely fortunate in all his undertakings, though he did not much extend his dominions by conquest. In his time the Saracen empire may be said to have been in its most flourishing state,

though, by the independency of the Saracens in Spain, who had formerly set up a caliph of the house of Ommiyahjhis territories were not quite so extensive as those of some of his predecessors. See BAGDAD. The first instance of Harun's good fortune, and which was taken for a presage of a prosperous and happy reign, was his finding a valuable ring which he had thrown into the Tigris to avoid being deprived of it by his brother Al Hadi. He was able to give the divers no other direction than by throwing a stone from the bridge of Bagdad, about the same place of the river in which he hatl thrown the ring ; notwithstanding which they found it without any great difficulty. In the 1 86th year of the Hegira, or A. D. 802, the caliph divided the government of his extensive dominions among his three sons : to Al Amin the eldest he assigned Syria, Irak, the three Arabias, Mesopotamia, Assyria, Media, Palestine, Egypt, and all that part of Africa extending from the confines of Egypt and Ethiopia to the straits of Gibraltar, with the dignity of caliph; to Al Mamun, the second, he assigned Persia, Kerman, the Indies,

Khorasan, Tabrestan, Cablestan and Zablestan, with the vast province of Mawaralnahr ; and to his third son, Al Kasem, he gave Armenia, Natolia, Jorjan, Georgia, Circassia, and all the Sa» racen territories bordering upon the Euxine Sea. Al Amin was to ascend the throne immediately after his father's decase; after him Al Mamun-, and then Al Kasem, whom he had surnamed Al Mutaman. The most considerable exploits performed by this caliph were against the Greeks, who by their perfidy provoked him to make war upon them, and whom he always overcame. In the 187th year of the Hegira the caliph received a letter from the Greek emperor Nicepliorus, soon after he had been advanced to the imperial dignity, commanding him to return all the money he had extorted from the empress Irene, though that had been secured to him by the last treaty concluded with that princess, or expect soon to see an imperial army in the heart of his territories. This insolent letter so exasperated Harun that he immediately assembled his forces, and advanced to Heraclea, laying the country through which he passed waste with fire and sword. For

some time also he kept that city straitly besieged ; which so terrified the Greek emperor that he

submitted to pay an annual tribute. Upon this

Harun granted him a peace, which he broke

soon after ; but Harun compelled him to renew

it, and then returned with his army. In the

188th year of the Hegira war was renewed with

the Greeks ; and Nicephorus with a great army

attacked the caliph's forces with the utmost fury.

He was, however, defeated with the loss of

40,000 men, and received three wounds in the

action ; after which the Saracens committed terri-

ble ravages in his territories, and returned home

laden with spoils. The next year Harun invaded

Phrygia, defeated an imperial army sent to op-

pose him, and ravaged the country. In the 190th

year of the Hegira, November (27th, 805, the

caliph marched into the imperial territories with

an army of 135,000 men, besides a great num-

ber of volunteers. He first took the city of

Heraclea, whence he carried 16,000 prisoners ;

after which he took several other places, and

made a descent on Cyprus, which he plundered

in a terrible manner. This so intimidated 'Ni-

cephorus that he immediately sent the tribute

due to Harun, the withholding of which had been the cause of the war, and concluded a peace upon the caliph's own terms ; one of which was that the city of Heraclea should never be rebuilt. This perhaps Harun would not so readily have granted, had not one Rafe Ebn Al Leith revolted against him at Samarcand, and assembled a considerable force. In the 191st year of the Hegira, the caliph removed the governor of Khorasan from his employment, because he had not attended to the motions of the rebel Rafe. As this governor had also tyrannised over his subjeets in the most cruel manner, his successor sent him in chains to the caliph : yet the rebels made this year a great progress in the conquest of Khorasan. Next year the caliph marched in person against the rebels, who were daily becoming more formidable. The general rendezvous of his troops was in the plains of Rakka, whence he advanced with them to Bagdad. Having the re supplied the troops with every thing necessary, he continued his march to the frontiers of Jorjan, where he was seized with an illness which grew

more violent after he had entered that province. Finding himself, therefore, unable to pursue iiis journey, he resigned the command of the army to his son Al Mamun, retiring himself to Tus in Khorasan. We are told by Khondemir that, before the caliph departed from Rakka, he had a dream wherein he saw a hand over his head full of red earth, and at the same time heard a person pronouncing these words, ‘ see the earth where Harun is to be buried.’ Upon this he asked where he was to be buried ; and was instantly answered, ‘ at Tus.’ This dream greatly discomposing him, he communicated it to his chief physician, who endeavoured to divert him, and advised him to pursue some amusement, to draw his attention another way. The caliph accordingly prepared a magnificent regale for his courtiers, which lasted several days. After this he put himself at the head of his forces, and advanced to the confines of Jordan. As his disorder increased, he retired to Tus, where he sent for his physician, and said to him, ‘Gabriel, do you remember my dream at Rakka ? We are now arrived at Tus, the place of my interment. Send

one of my eunuchs to fetch me a handful of the

earth of this city.' Upon this, Masrur, a favorite

eunuch, was despatched to bring a little earth.

He soon brought a handful of red earth,

which he presented to the caliph with his arm

half bare. At the sight of this, Harun cried

out, ' in truth this is the earth, and this is the very arm, that I saw in my dream.' His spirits im-

mediately failing, and his malady being greatly

increased by the perturbation of mind ensuing

upon this sight, he d ied three days after, and was buried in Tus. Bashir Ebn Al Leith, the arch-

rebel's brother, was brought in chains to the

caliph, when at the point of death. At the sight

of him Harun declared that if he could speak

only two words he would say kill him ; and

immediately ordered him to be cut in pieces in

his presence. This being done, the caliph soon

after expired, in the year of the Hegira 193,

having reigned twenty-three years. The distem-

per that put an end to his days is said to have

oeen the bloody flux.

Upon the arrival of a courier from Tus, with

the news of Al Raschid's death, his son Al Amin

was immediately proclaimed caliph; and was no

sooner seated on the throne than he formed a

design of excluding his brother Al Mamun from

the succession. Accordingly he deprived him

of the furniture of the imperial palace at Kho-

rasan ; and in open violation of his father's will, who had bestowed on Al Mamun the perpetual

government of Khorasan, and of all the troops

in that province, he ordered these forces to march

directly to Bagdad. Upon the arrival of this

order, Al Mamun expostulated with the general

Al Fadl Ebn Rabi, who commanded his troops,

and endeavoured to prevent his marching to

Bagdad ; but without effect, for he punctually

obeyed the orders sent by the caliph. Al Ma-

mun, however, took care not to be wanting in

fidelity to his brother. He obliged the people

of Khorasan to take an oath of fidelity to Al

Amin, and reduced some who had actually excited

a considerable body of the people to revolt, while

the general Al Fadl having ingratiated himself

with the caliph by his ready compliance with his

orders, was chosen prime vizier, and governed with

an absolute sway : Al Amin abandoning himself

entirely to drunkenness. Al Fadl was a very able

minister ; though, fearing Al Mamun's resent-

ment if ever he should ascend the throne, he gave Al Amin such advice as proved in the end the ruin of them both. He told him that his brother had gained the affection of the people of Khorasan by the good order and police he had established among them; that his unwearied application to the administration of justice had so attracted their esteem that the whole province was entirely at his devotion; that his own conduct was by no means relished by his subjects, whose minds were almost totally alienated from him ; and therefore that he had but one part to act, which was to deprive Al Mamun of the right of succession that had been given him by his father, and transfer it to his own son Musa, thou«h then but an infant. Agreeably to this pernicious advice, the caliph sent for his brother Al Kaseni from Mesopotamia, and recalled Al Mamun from Khorasan, pretending he had occasion for him as an assistant in his councils. By this treatment Al Mamun was so much provoked that he resolved to come to an open rupture with his brother, in order if possible to frustrate his wicked designs. Instead, therefore, of going to Bagdad as he had been commanded, he cut

off all communication betsveen his own province

and that capital ; saying that, as his father Harun had assigned him the lieutenancy of Khorasan,

he was responsible for all the disorders that

might happen there during his absence. He also

coined money, and would not suffer Al Amin's

name to be impressed upon any of the dirhems

or dinars struck in that province. Not content

with this, he prevailed upon Rafe Ebn Al Leith,

who had been for some time in rebellion, to join

him with a body of troops ; whose example was

soon after followed hy Harthema Ebn Aafan ;

which put him in possession of all the vast terri-

tory of Khorasan. Here he governed with an

absolute sway, officiated in the mosque as Imam,

and constantly harangued the people. In the

195th year of the Hegira, October 4th, 817, the

caliph Al Amin, finding that his brother set him

at defiance, declared war against him, and sent

his general AH Ebn Isa with an army of 60,000

men to invade Khorasan. Al Mamun, being in-

formed that Ali was advancing against him with

such a powerful army, put on foot all the troops

he could raise, and gave the command to Thaher

Ebn Hosein, one of the greatest generals of his

age. Thaher, being a man of undaunted reso-
lution, chose only 4000 men, whom he led
against Al Amin's army. Ali, seeing so small a
number of troops advancing against him, was
transported with joy, and promised himself an
easy victory. Despising his enemies, therefore,
lie behaved in a secure and careless manner ;
the consequence of which was that his army
was entirely defeated, and himself killed, his
head being afterwards sent as a present to Al
Mamun, who amply rewarded Thaher and Har-
thema for their services. After this victory, Al
Mamun assumed the title of caliph, and made all
necessary preparations for carrying the war into

the very heart of his brother's dominions. For
this purpose he divided his forces into two bo-
dies, and commanded them to march into Irak
by different routes. One of them obeyed the
orders of Thaher, and the other of Harthema.
The first directed his march to Ahwas, and the
other towards Holwan, both of them proposing

*to meet in the neigbourhood of Bagdad, and after their junction to besiege that city. In the 196th year of the Hegira, Thaher Ebn liosein made a most rapid progres with the troo*ps under his command. Having advanced towards Ahwas, he there defeated a body of the caliph's forces ,• and, though the victory was by no means decisive, it so intimidated the commander of Ahwas, that he surrendered that fortress to him. This opened a way to Wafer on the Tigris, and facilitated the conquest of that place. After this he marched with his army to Al Madayen, the inhabitants of which immediately opened their gates to him. The rapidity of these conquests, and the infamous conduct of Al Amin, excited the people of Egypt, Syria, Hejaz, and Yemen, unanimously to declare for Al Mamun ; who was accordingly proclaimed caliph in all these provinces. The next year Al Mamun's forces, under Thaher and Harthema, laid siege to Bagdad. As the caliph was shut up in that place, and it had a numerous garrison, the besieged made a vigorous defence, and destroyed a great number of their enemies. The besiegers, however, incessantly played upon the town with their*

catapults and other engines, though they were in their turn not a little annoyed by the garrison with the same sort of military machines. The latter likewise made continual sallies, and fought like men in despair, though they were always beaten back into the town with considerable loss. In short, the siege continued during the whole of this year, in which the greatest part of the eastern city, called the Camp of Al Mohdi, was demolished or reduced to ashes. The citizens, as well as the garrison, were reduced to the last extremity by the length and violence of the siege. In the beginning of the 198th year of the Hegira, Al Amin, finding himself deserted by his troops, as well as by the principal men of Bagdad, who had kept a private correspondence with Thaher, was obliged to retire to the old town on the west bank of the Tigris. He did not, however, take this step, before the inhabitants of the new town had formally deposed him, and proclaimed his brother Al Mamun caliph. Thaher, receiving advice of this, caused the old town to be invested, planted his engines against it, and at last starved it to a surrender. Al Amin, being thus reduced to the necessity of putting himself

into the hands of one of the generals, chose to

implore the protection of Harthema, whom he

judged to be of a more humane disposition than

Thaher. Having obtained this, he embarked in

a small vessel in order to arrive at that part of the camp where Harthema was posted; but

Thaher being informed of his design, which, if

put in execution, he thought would eclipse the

glory he had acquired, laid an ambush for him,

which he had not the good fortune to escape.

Upon his arrival in the neighbourhood of Har-

thema's tent, Thaher's soldiers rushed upon him,

drowned all his attendants, and put Al Amin him-

self in prison. Here he was soon after massacred

by Thaher's servants, who carried his head in

triumph to their master, by whose order it was

afterwards exposed to view in the streets of

Bagdad. Thaher afterwards sent it to Al Mamun

in khorasan, together with the ring or seal of the caliphate, the sceptre, and the imperial robe. At the sight of these Al Mamun fell down on his

knees, and returned thanks to God for his suc-

cess ; making the courier who brought them a

present of a million of dirhems, in value about

£100,000 sterling. The same day that Al Amin

was assassinated, his brother Al Mamun was

proclaimed caliph at Bagdad. He had not been lonsr seated on the throne, when he was alarmed by rebellions breaking out in different parts of the empire. The>e, however, were at last happily extinguished ; after which Thaher Ebn Hosein had the government of Khorasan conferred upon him and his descendants with almost absolute and unlimited power. This happened in the 205th year of the Hegira, from which time we may date the dismemberment of that province from the empire of the caliphs. During the reign of this caliph nothing remarkable happened ; only the African Saracens invaded the island of Sicily, where they made themselves masters of several places. He died of a surfeit, in the 218th year of the Hegira, having reigned twenty, and lived forty-eight or forty-nine years.

On the death of Al Mamun his brother Al Motasem, by some of the oriental historians suruamed Billah, was saluted caliph. He succeeded by virtue of Al Mamun s express nomination of him, to the exclusion of his own son Al Abbas, and his other brother Al Casern, who had been appointed by Harun Al Raschid. In the beginning of his reign he was obliged to employ

the whole forces of his empire against one Babec, who had been for a considerable time in rebellion in Persia and Persian Irak. This Babec first appeared in the year of the Hegira 201, when he began to take upon him the title of a prophet. What his particular doctrine was is now unknown ; but his religion is said to have differed from all others then known in Asia. He gained a gieat number of proselytes in Aderbijanand the Persian Irak, where he soon grew powerful enough to wage war with the caliph Al Mamun, whose troops he often beat, so that he was now become extremely formidable. The general sent by Al Motasem to reduce him was Heider Ebn Kans, surnamed Afshan, a Turk by nation, who had been brought a slave to the caliph's court, and, having been employed in disciplining the Turkish militia there, had acquired the reputation of a great captain. By him Babec was defeated with prodigious slaughter, no fewer than 60,000 men being killed in the first engagement. The next year, being the 220th of the Hegira, he received a still greater overthrow, losing 100,000 men, killed and taken prisoners. By this defeat he was obliged to retire into the Gordyaan mountains ;

where he fortified himself in such a manner that Afshin found it impossible to reduce him till the year of the Hegira 222. This commander, having reduced with invincible patience all Babec's castles, one after another, the impostor

was obliged to shut himself up in a strong fortress called Cashabad, which was now his last resource. Here he defended himself with great bravery for several months; but at last, finding he should be obliged to surrender, he made his escape into a neighbouring wood, whence he soon after came to Afshin upon that general promising him pardon. But Afshin no sooner had him in his power than he first caused his hands and feet, and afterwards his head, to be cut off. Babec had supported himself against the power of the caliphs for upwards of twenty years, during which time he had cruelly massacred 250,000 people ; it being his custom to spare neither man, woman, nor child, of the Mahometans or their allies. Amongst the prisoners taken at Cashabad there was one Nud, who had been one

of Babec's executioners, and who owned that,

by his orders, he had destroyed 20,000 Saracens

with his own hands ; to which he added that

vast numbers had also been executed by his com-

panions. In the 223d year of the Hegira the

Greek emperor Theophilus invaded the caliph's

territories, where he behaved with the greatest

cruelty, and by destroying Sozopetra, the place

of Al Motasem's nativity, notwithstanding his

earnest entreaties to the contrary, occasioned the

terrible destruction of AMORIUM, mentioned

under that article. The rest of this caliph's reign is remarkable for nothing but

Afshin, who was accused of holding correspond-

ence with the caliph's enemies. After his death

a great number of idols were found in his house,

which were immediately burned, as also several

books said to contain impious and detestable

opinions. In the 227th year of the Hegira died

the caliph Al Motasem, in the forty-eighth or

forty-ninth year of his age. He had reigned

eight years eight months and eight days, was

born in the eighth month of the year, fought eight battles, had 8000 slaves, and had 8,000,000

dinars and 80,000 dirhems in his treasury at his

death ; whence the oriental historians gave him the name Al Mothamen, or the Octonary. He is said to have been so robust that he once carried a burden of 1000 Ibs. weight several paces. As the people of Bagdad disturbed him with frequent revolts and commotions, he took the resolution to abandon that city, and build another for his own residence. The new city he built was first called Samaria, and afterwards Sarra Manray, and stood in the Arabian Irak. He was attached to the opinion of the Moatazalites, who maintain the creation of the Koran ; and both he and his predecessor cruelly persecuted those who believed it to be eternal.

A! Motazem was succeeded by Al Wathek Ballah, who the following year, being the 228th of the Ilegira, invaded and conquered Sicily. Nothing remarkable happened during the rest of his reign ; he died in the 232d year of the Hegira, and was succeeded by his brother Al Motawakkel. The new caliph began his reign with an act of the greatest cruelty. The late caliph's vizier, having treated Al Motawakkel ill in liis brother's lifetime, and opposed his election to

the caliphate, was on that account now sent to prison. Here the caliph ordered him to be kept awake for several days and nights together : after this, being suffered to fall asleep, he slept u whole day and night ; and after he awoke was thrown into an iron furnace lined with spikes or nails heated red hot, where he was miserably burnt to death. During this reign nothing remarkable happened, except wars with the Greeks, which were carried on with various success. In the year 867, too, being the 245th of the Hegira, violent earthquakes happened in many provinces of the Saracen dominions; and the springs 'at Mecca failed to such a degree that the celebrated well Zemzem was almost dried up, and the water sold for 100 dirhems a bottle. In the 247th year of the Hegira the caliph was assassinated at the instance of his son Al Montaser; who succeeded him, and died in six months after. He was succeeded by Al Mostain, who, in the year of the Hegira 252 was forced to abdicate the throne by his brother Al Motazz, who afterwards caused him to be privately murdered. He did not long enjoy the dignity of which he

had so iniquitously possessed himself; being deposed by the Turkish militia (who now began to set up and depose caliphs as they pleased) in the 255th year of the Hegira. After his deposition he was sent under an escort from Sarra Manray to Bagdad, where he died of thirst or hunger, after a reign of four years and about seven months. The fate of this caliph (however merited) was peculiarly hard : the Turkish troops had mutinied for their pay; and Al Motazz, not hafirig money to satisfy their demands, applied to his mother, named kabiha, for 50,000 dinars. This she refused, telling him that she had no money at all, although it afterwards appeared that she was possessed of immense treasures. After his deposition, however, she was obliged to discover them, and even deposit them in the hands of the new caliph Al Mokhtadi. They consisted of 1,000,000 dinars, a bushel of emeralds, and another of pearls, and three pounds and three quarters of rubies of the color of fire.

Al Mokhtadi, the new caliph, was the son of one of Al Wathek's concubines, named Korb, or Kark, said by some to have been a Christian.

The beginning of his reign is remarkable for the irruption of the Zenjians, a people of Nubia, Ethiopia, and the country of Caffres, into Arabia, where they penetrated into the neighbourhood of Basra and Cufa. The chief of this gang of robbers, who, according to some of the Arab historians, differed but little from wild beasts, was Ali Ebn Mohammed Ebn Abdalrahman, who falsely gave himself out to be of the family of Ali Ebn Abu Taleb. This made such an impression upon the Shites in those parts that they flocked to him in great numbers ; which enabled him to seize upon the cities of Basra and Ramla, and even to pass the Tigris at the head of a formidable army. He then took the title ot prince of the Zenjians in order to ingratiate himself with those barbarians, of whom his army was principally composed. In the 256th year of the Hegira Al Mokhtada was barbarously murdered by the Turks, who had raised him t'> the throne ; and was succeeded by Al Motamed the son of Al Motawakkel. This year the prince of the Zenjians, Ali, or Al Habib, made incursions to the very gates of Bagdad, doing prodi-

gious mischief wherever he passed. The caliph therefore sent against him one Jolan with a considerable army ; he was overthrown, however, with very great slaughter by the Zenjian, who made himself master of twenty-four of the caliph's largest ships in the bay of Basra, put a vast number of the inhabitants of Obolla to the sword, seized upon the town, set fire to it, and soon reduced it to ashes, the houses mostly consisting of the wood of a certain plane-tree called by the Arabians s:ij. Thence he marched to Abadan, which likewise surrendered to him. Here he found an immense treasure, which enabled him to possess himself of the whole district of Ahwaz. In short, his forces being now increased to 80,000 strong, most of the adjacent territories, and even the caliph's court itself, were struck with horror. In the 257th year of the llegira Al Habib continued victorious, defeated several armies sent against him by the caliph, reduced the city of Basra, and put 20,000 of the inhabitants to the sword. The following year the caliph, supported by his brother Al Mowaffek, had formed a design of circumscribing the power

of the Turkish soldiery, who had for some time given law to the caliphs themselves. But this year the Zenjians made so rapid a progress in Persia, Arabia, and Irak, that he was obliged to suspend the execution of his design, and even to employ the Turkish troops to assist his brother Al Mowaffek in opposing these robbers. The first of the caliph's generals, who encountered Al Habib this year, was defeated in several en-\xagements, and had his army at last entirely destroyed. After this Al Mowaffek and another general named Mosleh advanced against him. In the first engagement, Mosleh being killed by an arrow, the caliph's troops retired ; but Al Mowaffek put them afterwards in such a posture of defence that the enemy durst not renew the attack. Several other sharp encounters happened this year, in which neither party gained great advantage; but at last, some contagious distempers breaking out in Al Mowaffek's army, he was obliged to conclude a truce, and retire to Waset to refresh his troops. In the 259th year of the Hegira, commencing November 7th, 881, the war between the caliph and Al Habib still

continued. Al Mowaffek, upon his arrival at Bagdad, sent Mahommed, surnamed Al Mowalled, with a powerful army to act against the Zenjians: but he could not hinder them from ravaging the province of Ahwaz, cutting off about 50,000 of the caliph's subjects, and dismantling the city of Ahwaz ; and, notwithstanding the utmost efforts of all the caliph's generals, no considerable advantages could be gained either this or the following year. In the 261st year of the Hegira, beginning October 16th, 883, Mohammed Ebn Wasel, who had killed the caliph's governor of Pars, and afterwards made himself master of that province, had several engagements with Al Habib. The caliph, having been apprised of the state of affairs on that side, annexed the government of l-'ar>, Ahwaz, and Basra to the prefecture he had given to Musa Ebn Boga, whom he looked upon as one of the best generals he had. Musa, soon after his nomination to that post, sent Abdalrahman Ebn Mosleh as his

deputy to Ahwaz, giving him as a colleague and assistant one Tisam, a Turk. Mohammed Ebn Wasel, however, refusing to obey the orders of

Abdalrahman and Tisam, a fierce conflict ensued, in which the latter were defeated, and Adbalrahman taken prisoner. After this victory Mahommed advanced against Musa Ebn Boga himself; but that general, finding he could not take possession of his new government without a vast effusion of blood, recalled the deputies from their provinces, and made the best of his way to Serra Manray. After this Yakub Ebn Al Leit, having taken Khorasan from the descendants ofThaher, attacked and defeated Mohammed Ebn Wasel, seizing on his palace, where he found a sum of money amounting to 40,000,000 dirhems. The next year Yakub being grown formidable by the acquisition of Ahwaz and a considerable portion of Ears, or at least the Persian Irak, declared war against the caliph. Against him Al Motamed despatched Al Mowaffek ; who, having defeated him with prodigious slaughter, plundered his camp, and pursued him into Khorasan; where, meeting with no opposition, he entered Nisabur, and released Mahomet the Thaherian, whom Yakub had detained in prison three years. As for Yakub himself, he made his escape with

great difficulty ; though he and his family continued several years in possession of many of the conquests he had made. This war with Yakub proved a seasonable diversion in favor of Al Habib, who this year defeated all the forces sent against him, and ravaged the district of Waset.

In the 263d of the Hegira, beginning September 24th, 885, the caliph's forces, under the command of Ahmed Ebn Lebuna, gained two considerable advantages over Al Habib; but, being at last drawn into an ambuscade, they were almost totally destroyed, their general himself making his escape with the utmost difficulty ; nor were the caliph's forces able, during the course of the next year, to make the least impression upon these rebels. In the 265th year of the Hegira, beginning September 3d, 887, Ahmed Ebn Tolon rebelled against the caliph, and set up for himself in Egypt. Having assembled a considerable force, he marched to Antioch,and besieged Sima the governor of Aleppo, and all the' provinces known among the Arabs by the name of Al Awasem in that city. As the besieged found that he was resolved to carry the place by assault, they thought fit, after a short defence, to submit, and

to put Sima into his hands. Ahmed no sooner had that officer in his power than he caused him to be beheaded ; after which he advanced to Aleppo, the gates of which were immediately opened unto him. Soon after he reduced Damascus, Hems, Hamath, Kinnisrin, and Al Rakka, situated upon the eastern bank of the Euphrates. This rebellion so exasperated Al Motamed that he caused Ahmed to be publicly cursed iu all the mosques belonging to Bagdad and Irak ; and Ahmed on his part ordered the same malediction to be thundered out aeainst the caliph in all the mosques within his jurisdiction. This year also a detachment of Al Habib's troops penetrated into Irak, and made themselves rs of four of the caliph's ships laden with corn ; they then advanced !o Al Nomanic, laid

the greatest part of it in ashes, and carried off with them several of the inhabitants prisoners. After this they possessed themselves of Jarjaraya, where they found many more prisoners, and destroyed all the adjacent territory with fire and

sword. This year there were four independent powers in the Saracen dominions, besides the house of Ommiyah in Spain : viz. the African Saracens, or Aglabites, who had for a long time acted independently ; Ahmed in Syria and Egypt ; Al Leit in Khorasan ; and Al Habib in Arabia and Irak. In the 266th year of the Hetrira, beginning August 23d, 888, Al Habib reduced Ramhormoz, burnt the stately mosque there to the ground, put a vast number of the inhabitants to the sword, and carried away great numbers, as well as a vast quantity of spoil. This was his last successful campaign ; for the year following Al Mowaffek. attended by his son Abul Abbas, having attacked him with a body of 10,000 horse and a few infantry, notwithstanding the vast disparity of numbers (Al Habib's army amounting 'to 100,000 men), defeated him in several battles, recovered most of the towns he had taken, together with an immense quantity of spoil, and released 5000 women who had been thrown into prison by these barbarians. After these victories Al Mowaffek took post before the city of Al Mabiya, built by Al Habib, and the

palace of his residence ; burnt all the ships in the harbour ; thoroughly pillaged the town ; and then entirely dismantled it. After the reduction of this place, in which he found immense treasures, Al Mowaffek pursued the flying Zenjians, put several of their chiefs to the sword, and advanced to Al Mokhtara, a city built by Al Habib. As the place was strongly fortified, and Al Habib was posted in its neighbourhood with an army, according to Abn Jaafer Al Tabari, of 300,000 men, Al Mowaffek' perceived that the reduction of it would be a matter of some difficulty. He therefore built a fortress opposite to it, where he erected a mosque, and coined money. The new city, from its founder, was called by the Arabs Al Mowaffekkia, and soon rendered considerable by the settlement of several wealthy merchants there. The city of Al Mokhtara, beinˆ reduced to great straits, was at last taken by storm, and given up to be plundered by the caliph's troops; after which Al Mowaffek defeated the numerous forces of Al Habib in such a manner that they could no more be rallied during that campaign. In the year 268 of the Hegira Al Mowaffek penetrated aˆaiu into Al Mabiya,

and demolished the fortifications which had been raised since its former reduction, though the rebels disputed every inch of ground. Next year he aˆain attacked Al Habib with great bravery ; and would have entirely defeated him, had he not been wounded in the breast with an arrow, which obliged him to retreat. However, as soon as he was cured of his wound, Al Mow-affek advanced a third time to Al Mabiya, made himself master of that metropolis, threw down the walls that had been raised, put many of the inhabitants to the sword, and carried a vast number of them into captivity. The year 270 of the Hegira, commencing July llth, 892, proved fatal to the rebel Al Habib. Al Mowaffek made himself a fourth time master of Al Ma-biya, burnt Al Habib's palace, seized upon his family, and sent them to Sarra Manray. As for the usurper himself he escaped ; but being closely pursued by Al Mowaffek into the province of Ahwaz, where the shattered remains of his forces were entirely defeated, he at last fell into the hands of the victor, who ordered his head to be cut off, and carried through a great part of that region which he had so long disturbed. By

this complete victory Al Mowaffek obtained the

title of Al Nasir Lidmalbah, that is, the protector of Mahometanism. This year also died Ahmed

Ebn Tolun, who had seized upon Egypt and Sy-

ria, and was succeeded by his son Khamarawi-

yah. The next year a bloody engagement hap-

pened between the caliph's forces commanded by

Al Mowaffek's son and those of Khamarawiyah,

who had made an irruption into the caliph's ter-

ritories. The battle was fought between Al

Ramla and Damascus. In the beginning Kha-

marawiyah found himself so hard pressed that

his men were obliged to give way ; upon which,

taking for granted that all was lost, he fled with great precipitation, even to the borders of Egypt ;

but in the mean time his troops, being ignorant

of the flight of their general, returned to the

charge and gained a complete victory. After this

Khamarawiyah, by his just and mild administra-

tion, so gained the affections of his subjects that

the caliph found it impossible to gain the least

advantage over him. In the year of the Hegira

276 he overthrew one of the caliph's generals,

named Abul Saj, at Al Bathnia, near the city of

Damascus; after which he advanced to Al

Rakka on the Euphrates, and made himself master of that place. Having annexed several large provinces to his former dominions, and left some of his friends in whom he could confide to govern them, he then returned into Egypt, the principal part of his empire, which now extended from the Euphrates to the borders of Nubia and Ethiopia. The following year, the 278th of the Hegira, was remarkable for the death of Al Mowaffek. He died of the elephantiasis or leprosy ; and, while in his last illness, said that, of 100,000 men whom he commanded, there was not one so miserable as himself. This year was also remarkable for the first disturbances raised in the Saracen empire by the Karmatians. The origin of this sect is uncertain ; but the most common opinion is that a poor fellow, by some called Karmata, came from Khuzestan to the villages near Cufa, and there pretended great sanctity, and that God had enjoined him to pray fifty times a day, inviting people to the obedience of a certain imam of the family of Mahomet ; and this way of life he continued till he had made a very great party, out of whom he chose twelve as his apostles to govern the rest, and to propagate his doctrines.

He also assumed the title of prince, and obliged every one of his earlier followers to pay him a dinar a year. But Al Haidam, the governor of that province, finding that men neglected their work, to say those fifty prayers a day, seized the fellow, and, havins: put him in prison, swore that he should die. This being overheard by a girl, belonging to the governor, she, out of compas-

sion, took the key of the dungeon at night from tinder her master's head, released Karmata, and restored the key to its place. The next morning the governor found his prisoner gone ; and the accident, being publicly known, raised great ad-miration : Karmata's adherents giving out that God had taken him into heaven. After this he appeared in another province, and declared to a great number of people that it was not in the power of any person to do him hurt ; notwith-standing which, his courage failing him, he re-tired into Syria, and was never heard of more. After his disappearance the sect continued and increased : his disciples pretending that their master had manifested himself to be a true prophet, and had left them a new law, wherein

he had changed the ceremonies and form of prayer used by the Mahometans, &o. From this year (278) these sectaries gave almost continual disturbance to the caliphs and their subjects, committing great disorders in Chaldea, Arabia, and Mesopotamia, and at length established a considerable principality. In the 279th year of the Hegira died the caliph Al Motamed ; and was succeeded by Al Motaded, son to Al Mowaffek.

In the first year of his reign, Al Motaded demanded in marriage the daughter of Khamarawiyah, sultan, or caliph, in Egypt ; which was agreed to, and their nuptials were solemnised with great pomp in the 282d year of the Hegira. He carried on a war with the Karmatians ; but very unsuccessfully, his forces being defeated with great slaughter, and his general Al Abbas taken prisoner. This caliph also granted to Harun, son to Khamarawiyah, the perpetual prefecture of Awasam and Kinnisrin, which he annexed to that of Egypt and Syria, upon condition that he paid him an annual tribute of 45,000 dinars. He died in the year of the Hegira 289, and was succeeded by his son Al Moctasi, who proved a war-

like and successful prince. He gained several advantages over the Karmatians, but was not able to reduce them. The Turks, however, having invaded the province of Mawaralnahar, were defeated with great slaughter ; after which Al Moctasi carried on a successful war against the Greeks, from whom he took Seleucia. After this he invaded Syria and Egypt, which provinces he recovered from the house of Ahmed Ebn Tolun. The reduction of Egypt happened in the 292d year of the Hegira, after which the war was renewed with success against the Greeks and Karmatians. The caliph died in the 295th year of the Hegira, after a reign of about six years and a half. He was the last of the caliphs who made any figure by their warlike exploits. His successors Al Moktader, Al Kaher, and Al Radi, were so distressed by the Karmatians and numberless usurpers who were every day starting up, that by the 325th year of the Hegira they had nothing left but the city of Bagdad. In the 324th year of the Hegira, commencing November 30th, 946, the caliph Al Radi, finding himself distressed on all sides by usurpers, and having a

vizier of no capacity, instituted a new office su-

perior to that of vizier, which he entitled emir al omra, or commandant of commandants. This

great officer was trusted with the management 01

military affairs, and had the entire management ot

the finances, in a much more absolute and unli-

mited manner than any of the caliph's viziers ever

had. Nay, he officiated for the caliph in the great mosque at Bagdad, and had his name mentioned

in the public prayers throughout the kingdom.

In short, the caliph was so much under the

power of this officer, that he could not apply a

single dinar to his own use without the leave of

the emir al omri. In the year 325 the Saracen

empire, once so great and powerful, was shared

among the following usurpers : — 1 . The cities of

Waset, Basra, and Cufa, with the rest of the

Arabian Irak, were considered as the property

of the emir al omra, though they had been in the

beginning of the year seized upon by a rebel

called Al Barilli, who could not be driven out ot

them. 2. The country of Fars, Farsistan, or

Persia, properly so called, was possessed by

Amado'ddawia Ali Ebn Bulya, who resided in the

city of Shiraz. 3. Part of the tract denominated

Al Jebal, together with Persian Irak, which is the mountainous part of Persia, and the country of the ancient Parthians, obeyed Rucno'ddawla, the brother of Amao' ddawla, who resided at Ispahan. The other part of that country was possessed by Washmakin the Deylamite. 4. Diyar Rabia, Diyar Beer, Diyar Modar, and the city of Al Mawsel, or Mosul, acknowledged for their sovereign a race of princes called Hamdanites. 5. Egypt and Syria no longer obeyed the caliphs, but Mahomet Ebn Taj ,who had formerly been appointed governor of these provinces. 6, 7. Africa and Spain had long been independent. 8, 9. Sicily and Crete were governed by princes of their own. 10, 11. The provinces of Khorasan and Mawaralnahar were under the dominion of Ai Nasr Ebn Ahmed, of the dynasty of the Samarians. 12 — 14. The provinces of Tabrestan, Jorjan or Georgiana, and Mazanderan, had kings of the first dynasty of the Deylamites. 15. The province of Kerman was occupied by Abu Ali Mahomet Ebn Eylia Al Sammani, whc had made himself master of it a short time before. 16. Lastly, the provinces of Yamana and Bah-

rein, including the district of Hajr, were in the possession of Abu Thaer the Karmatian. Farther particulars respecting the history of the Saracens will be found under the articles already referred to, and particularly under SPAIN, where they were more generally styled Moors than either Saracens, Arabs, Moslems, or Mussulmans.

SARAGOSSA, or ZARAGOSA, a city in the north of Spain, on the south bank of the Ebro, Jhe capital of Arragon, and the see of an archbishop. It is surrounded by an earthen wall, :md tins twelve gates: the town being built on i!ie site of the ancient Salpuba, which wa-t «-n-i.irˆ«-\ .cud thence c?.lleˆ Casi Augusta, corrupted subsequently into Saraˆossa. The canal of Arragon approaches it both cast and west. It is a large place, built throughout of brick, but the houses are seldom above three stories in height ; and the streets generally narrow and crooked. Hut there is one long and street called the (.'07.0, and two

ofcr the Ebro, one of wood, said to be the finest of the kind in Europe.

Saragossa has a Gothic cathedral, sixteen other churches, and nearly forty convents. The church of our ‘ Lady of the Pillar’ is remarkable for its supposed miraculous image ; and that of St. Engracia for various relics.

This city is the residence of the intendant, captain-general, and high court of justice of Aridgon ; and of a small garrison. It has a university founded in 1478, and an academy of fine arts. Here are also two public libraries.

The climate is temperate, and of far less intense heat than the south of Spain.

This city is chiefly celebrated for its dreadful sieges in 1808 and 1809. The French attempted to take it by assault in 1 808, but were repulsed with loss. Returning with augmented numbers, they invested nearly half the town, in defence of which the citizens were indefatigable, the batteries being served by both sexes. However, on the 4th of August, the French beat down the wall on the right bank of the Guerva, and enabled their troops to force their way into the Cozo. Being thus in possession of nearly half the town, the contest seemed only to have begun : for the inhabitants defended house

after house, and made a number of nocturnal attacks on the part occupied by the French : eventually the latter, making no progress, on the 14th of August retired. The siege of the following year was no less obstinate. Having received great reinforcements, and entirely defeated various Spanish armies, the French marched in November (1808) once more upon this point. Their plan was now to destroy the city partly by bombs, or by mining, and their first attack (December 20th) gave them possession of some important posts. The bombardment commenced on the 10th of January, which, violent as it was, caused less injury than a fever now raging in the garrison : and Saragossa was crowded with soldiers. It continued, however, to make a brave resistance, and it was not till after a bombardment of six weeks, and a very unequal contest in mining, that Palafox, its noble commander, surrendered. 175 miles K. N. E. of Madrid. Population 50,000. Dr. Southey's eloquent narrative of the siege of 1808, in his History of the Peninsular War, is amongst the most successful productions of his ever-able pen. We are quite sure our readers

will only wish that, instead of the following abstract, we could have given the entire chapter he has devoted to this memorable conflict : —

‘ A regular siege was to be expected ; how were the citizens to sustain it with their brick walls, without heavy artillery, and without troops who could sally to interrupt the besiegers in their works ? In spite of all these discouraging circumstances, confiding in God and their own courage, they determined to defend the streets to the last extremity. Palafox, immediately after the repulse of the enemy, set out to muster reinforcements, to provide such resources for the Mege as he could, and to place the rest of Arrairon in a state of defence, if the capital should fall. The besiegers army was soon reinforced*

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battalions of Portuguese, who, according to the devilish system of Buonaparte’s tyranny, had been forced out of their country, to be pushed on in the foremost ranks, wherever the first fire of a battery was to be received, a line of bayonets clogged, or a ditch filled, with bodies. They occupied the best positions in the surrounding

plain, and, on the 27th, attacked the city and the Torrero ; but they were repulsed with the loss of 800 men. six pieces of artillery, and five carts of ammunition. By this time they had in-vested nearly half the town. The next morning they renewed the attack at both places ; from the city they were again repulsed, losing almost all the cavalry who were engaged. But the Tor-rero was lost through the alleged misconduct of an artillery officer, vrho was charged with having made his men abandon the batteries at the most critical moment. For this he was condemned to run the gauntlet six times, the soldiers beating him with their ramrods, arid after this cruelty he was shot.

‘ The French having now received a train of mortarsy howitzers, and twelve-pounders, which were of sufficient calibre against mud walls, kept up a constant fire, and showered down shells and grenades from the Torrero. About 1200 were thrown into the town, and there was not one building that was bomb-proof within the walls. After a time the inhabitants placed beams of timber together endways against the houses, in a sloping direction, behind which those who

were near when a shell fell might shelter them-
selves. The enemy continued also to invest the
city more closely, while the Arragonese made
every effort to strengthen their means of defence.
They tore down the awnings from their windows,
and" formed them into sacks which they filled
with sand, and piled up before the gates, in the
form of a battery, digging round it a deep
trench. They broke holes for musketry in the
walls and intermediate buildings, and stationed
cannon where the position was favorable for it.
The houses in the environs were destroyed.
' Gardens and olive grounds,' says an eye-wit-
ness, 'that in better times had been the recreation
and support of their owners, were cheerfully
rooted up by the proprietors themselves, where-
ver they impeded the defence of the city, or
covered the approach of the enemy.' ˆ omen
of all ranks assisted; they formed themselves
into companies, some to relieve the wounded,
some to carry water, wine, and provisions, to
those who defended the gates. The countess
Burita instituted a corps for this service; she
was young, delicate, and beautiful. In the

midst of the most tremendous fire of shot and shells, she was seen coolly attending to those occupations which were now become her duty; nor throughout the whole of a two months' siege did the imminent danger, to which she incessantly exposed herself, produce the slightest apparent effect upon her, or in the slightest degree bend her from her heroic purpose. Some of the monks bore arms ; others exercised their spiritual offices to the dying ; others, with the nuns, were busied in making cartridges whr;h the children distributed.

' Among 60,000 persons there \ill always

be found some wicked enough for any employment, and the art of corrupting has constituted great part of the French system of war. During the night of the 28th the powder magazine, in the area where the bull fights were performed, which was in the very heart of the city, was blown up, by which fourteen houses were destroyed, and about 200 persons killed. This was the signal for the enemy to appear before

three gates which had been sold to them. And, while the inhabitants were digging out their fellow citizens from the ruins, a fire was opened upon them with mortars, howitzers, and cannons, which had now been received for battering the town. Their attack seemed chiefly to be directed against the gate called Portillo, and a large square building near it, without the walls, and surrounded by a deep ditch ; though called a castle, it served only for a prison. The sandbag battery before this gate was frequently destroyed, and as often reconstructed under the fire of the enemy. The carnage here throughout the day was dreadful.

‘ Augustina Zaragoza, a handsome woman of the lower class, about twenty-two years of age, arrived at this battery with refreshments, at the time when not a man who defended it was left alive, so tremendous was the fire which the French kept up against it. For a moment the citizens hesitated to re-man the guns. Augustina sprung forward over the dead and dying, snatched a match from the hand of a dead artilleryman, and fired off a six-and-twenty pounder; then,

jumping upon the gun, made a solemn vow never to quit it alive during the siege. Such a sight could not but animate with fresh courage all who.beheld it. The Saragossans rushed into the battery, and renewed their fire with greater vigor than ever, and the French were repulsed here and at all other points with great slaughter.

‘ Lefebvre probably was so indignant at meeting with any opposition from a people whom he despised, and a place which, according to the rules and pedantry of war, was not tenable, that he lost his temper, and thought to subdue them the shortest way, by mere violence and superior force. Having found his mistake, he proceeded to invest the city still more closely. In the beginning of the siege, the besieged received some scanty succors ; yet, however scanty, they were of importance. 400 soldiers from the regiment of Estremadura, small parties from other corps, and a few artillerymen got in ; 200 of the militia of Logrono were added to these artillerymen, and soon learnt their new service, being in the presence of an enemy whom they had such righteous reason to abhor. Two four-and-twenty pounders and a few shells, which were much

wanted, were procured from Lerida. The enemy, mean time, were amply supplied with stores from the magazine in the citadel of Pamplona, which they had so perfidiously seized on their first entrance, as allies, into Spain. Hitherto the, had remained on the right bank of the Ebro. On the llth of July they forced the passage of the ford, and posted troops enough on the opposite side to protect their workmen while foiming a floating bridge. In spite of all the efforts of the Arragonese, this bridge was completed on the 14th ; n way was thus made for their cavalry, to their superiority in which the French were mostly indebted for all their victories in Spain. This gave them the command of the surrounding country ; they destroyed the mills, levied contributions on the villages, and cut off every communication by which the besieged had hitherto received supplies. These new difficulties called out new resources in this admirable people and their general, — a man worthy of commanding such a people in such times. Corn-mills, worked by horses, were erected in various parts of the city ; the monks were employed in manufacturing gunpowder, materials for which were obtained

by immediately collecting all the sulphur in the

place, by washing the soil of the streets to extract its nitre, and making charcoal from the stalks of

hemp, which in that part of Spain grows to a

magnitude that would elsewhere be thought very

unusual.

‘ By the end of July the city was completely

invested, the supply of food was scanty, and the

inhabitants had no reason to expect succor.

Their exertions had now been unremitted for

forty-six days, and nothing but the sense of duty

could have supported their bodily strength and

their spirit under such trials. They were in

hourly expectation of another general attack, or

another bombardment. They had not a single

place of security for the sick and the children,

and the number of wounded was daily in-

creased by repeated skirmishes, in which they

engaged for the purpose of opening a communi-

cation with the country. At this juncture they

made one desperate effort to recover theTorrero.

It was in vain ; and convinced by repeated losses, and especially by this last repulse, that it was

hopeless to make any effectual sally, they re-

solved to abide the issue of the contest within the walls, and conquer or perish there.

‘ On the night of the 2d of August, and on the following day, the French bombarded the city from their batteries opposite the gate of the Carmen. A foundling hospital, which was now filled with the sick and wounded, took fire, and was rapidly consumed. During this scene of horror the most intrepid exertions were made to rescue these helpless sufferers from the flames. No person thought of his own property or individual concerns — every one hastened thither. The women were eminently conspicuous in their exertions, regardless of the shot and shells which fell about them, andbruving the flames of the building. It has often been remarked that the wickedness of women exceeds that of ˆthe other sex ; forthe same reason, when circumstances, forcing them out of the sphere of their ordinary nature, compel them to exercise manly virtues, they display them in the highest degree, and, when they are once awaked to a sense of patriotism, they carry the principle to its most heroic pitch. The loss of women and boys during this siege was very great, fully pioportionate to that of men ; they were always the most forward, and

the difficulty was to teach them a prudent and

proper sense of their danger. On the following

day the French completed their batteries upon

the right bank of the (iuerva, \ithin pistol-shot

of the gate of St. Kngracia, so called from a

splendid church and conrent of Jeronimites,

situated on one side of it.

‘ On the 4th of August the French opened

batteries within pistol-shot of this church and

convent. The mud walls were levelled at the

first discharge ; and the besiegers, rushing through the opening, took the batteries before the adja-

cent gates in reverse. Here general Mori, who

had distinguished himself on many former occa-

sions, was made prisoner. The street of St.

Engracia, which they had thus entered, leads

into the Cozo, and the corner buildings where it

is thus terminated were on the one hand the

convent of St. Francisco, and on the other the

general hospital. Both were stormed and set on

fire ; the sick and the wounded threw themselves

from the windows to escape the flames, and the

horror of the scene was aggravated by the maniacs,

whose voices, raving or singing in paroxysms of

wilder madness, or crying in vain to be set free,

were heard amid the confusion of dreadful sounds.

Many fell victims to the fire, and some to the in-

discriminating fury of the assailants. Those who

escaped were conducted as prisoners to the Tor-

rero; but, when their condition had been dis-

covered, they were sent back on the morrow

to take their chance in the siege. After a severe

contest, and dreadful carnage, the French forced

their way into the Cozo in the very centre of the city ; and, before the day closed, were in posses-

sion of one half of Saragossa. Lefebvre now

believed that he had effected his purpose, and

required Palafox to surrender in a note contain-

ing only these words: — ‘ Head-quarters. St.

Engracia. Capitulation !’ The heroic Spaniard

immediately returned this reply : — ‘ Head-quar-

ters, Saragossa. War at the knife’s point !’

‘The contest which was now carried on is

unexampled in history. One side of the Cozo,

a street about as wide as Pall Mall, was possessed by the French ; and, in the centre of it, their

general, Verdier, gave his orders from the Fran-

ciscan convent. The opposite side was main-

tained by the Arragonese, who threw up batteries

at the openings of the cross streets, within a few paces of those which the French erected against

them. The intervening space was presently

heaped with dead, either slain upon the spot or

thrown out from the windows. Next day the

ammunition of the citizens began to fail ; the

French were expected every moment to renew

their efforts for completing the conquest, 'and

even this circumstance occasioned no dismay,

nor did any one think of capitulation. One cry

was heard from the people, wherever Palafox

rode among them, that, if powder failed, they

were ready to attack the enemy with their

knives — formidable weapons in the hands of

desperate men. Just before the day closed Don

Francisco Palafox, the general's brother, entered

the city with a convoy of arms and ammunition,

and a reinforcement of 3000 men, composed of

Spanish guards, Swiss, and volunteers of Arra-

gon : a succor as little expected by the Saragos-

sans as it had been provided against by the

enemy

‘ The war was now continued from street to

street, from house to house, and from room to

room ; pride and indignation having wrought

up the French to a pitcli of obstinate fury littlo inferior to the devoted courage of the patriots.

Durinsr the whole siege no man distinguished

himself more remarkably than the curate of one

of the parishes, within the walls, by name P.

Santiago Sass. He was always to be seen in the

streets, sometimes fighting with the most deter-

mined bravery against the enemies, not of his

country alone, but of freedom, and of all virtu-

ous principles, wherever they were to be found;

at other times administering the sacrament to

the dying, and confirming, with the authority of

faith, that hope which gives to death, under such

circumstances, the joy, the exultation, the tri-

umph, and the spirit of martyrdom. Palafox

reposed the utmost confidence in this brave

priest, and selected him whenever any thing pe-

culiarly difficult or hazardous was to be done.

At the head of forty chosen men, he succeeded

in introducing a supply of powder into the

town, so essentially necessary for its defence.

‘ This most obstinate and murderous contest

was continued for eleven successive days and

nights, more indeed by night than by day ; for

it was almost certain death to appear by day-

light within reach of those houses which were

occupied by the other party. But, under cover

of the darkness, the combatants frequently dashed

across the street to attack each other’s batteries ; and the battles which began there were often

carried on into the houses beyond, where they

fought from room to room and floor to floor.

The hostile batteries were so near each other that

a Spaniard in one place made way under cover

of the dead bodies, which completely filled

the space between them, and fastened a rope to

one of the French cannons ; in the struggle

which ensued, the rope broke, and the Saragos-

sans lost their prize at the very moment when

they thought themselves sure of it.

‘ A new horror was added to the dreadful cir-

cumstances of war in this ever memorable siege.

In general engagements the dead are left upon

the field of battle, and the survivors remove to

clear ground and an untainted atmosphere; but

here — in Spain, and in the month of August,

there where the dead lay the struggle was still carried on, and pestilence was dreaded from the enormous accumulation of putrefying bodies. Nothing in the whole course of the siege so much embarrassed Palafox as this evil. The only remedy was to tie ropes to the French prisoners, and push them forward amid the dead and dying, to remove the bodies, and bring them away for interment. Even for this necessary office there was no truce, and it would have been certain death to the Arragonese who should have attempted to perform it ; but the prisoners were in general secured by the pity of their own soldiers, and in this manner the evil was in some degree diminished.

‘ A council of war was held by the Spaniards on the 8th, not for the purpose which is toousual in swch councils, but that their heroic resolution might be communicated with authority to the people. It was that, in those quarters of the city where the Arragonese still maintained their ground, they should continue to defend themselves with the same firmness : should the enemy

at last prevail, they were then to retire over the Ebro into the suburbs, break down the bridge,

and defend the suburbs till they perished.

When this resolution was made public, it was

received with the loudest acclamations. But in

every conflict the citizens now gained ground

upon the soldiers, winning it inch by inch, till

the space occupied by the enemy, which on the

day of their entrance was nearly half the city,

was gradually reduced to about an eighth part.

Meantime, intelligence of the events in other

parts of Spain was received by the French — all

tending to dishearten them ; the surrender of

Dupont, the failure of Moncey before Valencia,

and the news that the junta of that province had

despatched 6000 men to join the levies in Arra-

gon, which were destined to relieve Saragossa.

During the night of the 13th their tire was

particularly fierce and destructive : after their

batteries had ceased, flames burst out in many

parts of the buildings which they had won ; their

last act was to blow up the church of St. En-

gracia; the powder was placed in the subterra-

nean church — and this remarkable place — this

monument of fraud and of credulity — the splen-

did theatre wherein so many feelings of deep

devotion had been excited — which so many thou-

sands had visited in faith, and from which un-

questionably many had departed with their ima-

ginations elevated, their principles ennobled,

and their hearts strengthened, was laid in ruins.

In the morning the French columns, to the great

surprise of the Spaniards, were seen at a distance, retreating over the plain, on the road to Pam-

plona.

‘ The history of a battle, however skilfully

narrated, is necessarily uninteresting to all ex-

cept military men ; but, in the detail of a siege,

**.vhen time has destroyed those considerations*

which prejudice or pervert our natural sense of

right and wrong, every reader sympathises with

the besieged, and nothing, even in fictitious nar-

ratives, excites so deep and animating an interest.

There is not, either in the annals of ancient or

of modern times, a single event recorded more

worthy to be held in admiration, now and for

evermore, than the siege of Saragossa. Will it

be said that this devoted people obtained for

themselves, by all this heroism and all these

sacrifices, nothing more than a short respite

from their fate? Woe be to the slavish heart

that conceives the thought, and shame to the

base tongue that gives it utterance ! They pur-

chased for themselves an everlasting remem-

brance upon earth — a place in the memory and

love of all good men in all ages that are yet to come. They performed their duty ; they re-

deemed their souls from the yoke ; they left an

example to their country never to b« forgotten,

never to be out of mind, and sure to contribute

to and hasten its deliverance.' — Souther's Works,

3 vols. 4to., pp. 405—421, Vol. I.

SARAH [Heb. nitfr, i. e. lady], and SARAI

[Hfli. i. e. my mistress], names of the patriarch

Abraham's wife. She is supposed to be the same

with Iscah, the daughter of Haran, Abraham's

younger brother by a different mother, and con-

sequently the sister of Lot. Her beauty and

consequent danger in the courts of Egypt and

SAR

Gerar ; her entertainment of the angels ; her

barrenness till her ninetieth year, with her mi-

raculous conception and the birth of Isaac in

her ninety-first ; her turning oflf Hagar, with ner

death and burial in her 128th year, are recorded

in Genesis xii. xviii. xx. xxi. xxiii.

SARASIN (John Francis), a French author, born at Hermauville, near Caen, in Normandy, about 1604. He studied at Caen, and afterwards went to Paris ; where he became eminent for his wit and humor. He afterwards travelled through Germany, and, upon his return, became secretary to the prince of Conti, whom he prevailed upon to marry the niece of cardinal Mazarine, in reward for which he is said to have received a large sum. But the prince, afterwards hearing of his venality, dismissed him, which is said to have brought on his death. He published, 1. Discours de la Tragedie : 2. L'Histoire du Siege de Dunkerque : and, 3. La Pompe funebre de Voiture : inserted in the Miscellanea of Menage ; to whose care he left all his MSS., from which Menage published a 4to. vol. at Paris, in 1656, and other 2 vols. in 1675; consisting of various essays in prose and poetry, which are esteemed. He died in 1654.

SARATOGA, a county and town of New York. The county has a population of 33,000, chief town Ballston. The town is twelve miles

north-east of that place, and gives name to several mineral springs. The most noted, those of Saratoga

and Ballston, are the most celebrated mineral

waters in the United States. They are strongly

impregnated with carbonic acid, and contain

also carbonate of soda, muriate of soda, super-

carbonated lime, and a carbonate of iron. They

are much frequented, during the warm months,

by gay and fashionable people, as well as by in-

valids. The principal springs in Saratoga are

Congress Spring, and Rock Spring, which are

situated in the west part of the town, seven miles N. N. E. of Ballston, twelve west of the Hudson,

thirty-two north of Albany. Here is a large,

handsome, and flourishing village, with a post

office, a Presbyterian church, and boarding-

houses which afford excellent accommodations

for visitors. Saratoga is memorable as the place

where general Burgoyne surrendered the Britisli

army to general Gates, October 17th, 1777.

SARATOV, an important province of Russia,

situated on the Wolga, partly in Europe, and

partly in Asia ; having on the one side the

country of the Don Cossacks, and on the other

that of Astracan. Containing an area of 91,000

square miles, its population is so thin as not to exceed 1,000,000; and a great part of the tract to the east of the Wolga is so-impregnated with salt as to be in many parts unfit for the growth of vegetables. Of the salt lakes in this quarter, the most productive is that of Jelton. The country to the west of the Wolga is fitted partly for tillage, and partly for pasturage. The great danger to vegetation here is from locusts, swarms of which often appear in summer. Attempts were made in the last century, by the Russian government, to improve particular spots by German settlers; and these colonists form the chief merchants and manufacturers of th« country ; but their success has been very limited.

SAR

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SAR

SARATOV, a neat town of European Russia, tne capital of the above government, stands on the Wolga, surrounded by a wall and ditch ; the houses are mostly of wood. It has an active trade between Moscow and Astracan, and a fine command of water carriage : the articles of

traffic not derived from these cities are fish, ca-

viar, and salt. Inhabitants 5000. 374 miles

north by west of Astracan, and 465 south-east of

Moscow.

SAR'CASM, n. s.ˆ Fr. sarcasme ; Lat. sar-

SARCAS'TIC, adj. tcasmus. A keen reproach ;

SARCAS'TICAL, £a taunt; a gibe : the ad-

SARCAS'TICALLY. Jjective and adverb corre-

sponding.

He asked a lady playing with a lap-dog, whether

the women of that country used to have any children or no"! thereby sarcastically reproaching them for

misplacing that affection upon brutes which could

only become a mother to her child. South.

What a fierce and sarcastick reprehension would

this have drawn from the friendship of the world, and yet what a gentle cme did it receive from Christ !

Id.

Sarcasms of wit are transmitted in story.

Government of the Tongue.

Rejoice, O young man, says Solomon, in a se-

vere sarcasm, in the days of thy youth, and walk

in the ways of thy heart ; but know that for these things God will bring thee into judgment.

Rogers's Sermons.

Epithets may be found in great plenty at Billings-

gate ; sarcasm and irony learned upon the water ; and the epiphonema or exclamation frequently from the

bear-garden, and as frequently from the ‘ hear him,’

of the house of commons. Pope.

When an angry master says to his servant, It is

bravely done, it is one way of giving a severe re-

proach ; for the words are spoken by way of sarcasm, or irony. Watts.

SARCE’NET, n. s. Derived by Skinner

from Lat. sericum saracenicum. Fine thin woven

silk.

Why art thou thdn exasperate, thou idle imma-

terial skein of sley’d silk, thou green sarcenet flap for a sore eye, thou tassel of a prodigal’s purse 1

Shakspeare. Troilus and Cressida.

If they be covered, though but with linen or

mcenet, it intercepts the effluvium. Browne.

These are they that cannot bear the heat

Of figured silks, and under sarcenets sweat.

Dry den.

She darts from sarcenet ambush wily leers,

Twitches thy sleeve, or with familiar airs

Her fan will pat thy cheek ; these snares disdain.

Gay.

SARCOCELE. See SURGERY.

SARCOCOLLA, a concrete juice brought

from Persia and Arabia, in small whitish yellow

grains, with a few of a reddish, and sometimes

of a deep red color mixed with them; the whitest

tears are preferred as being the freshest ; its taste is bitter, accompanied with a dull kind of sweet-

ness. This drug dissolves in watery liquors,

and is used in medicine.

SARCOPHAGUS [Gr. ffapro^ayoc, from

., to eat], in architecture,

the name of a stone found, accord ing to Pliny, in the Troad, and of which tombs were constructed

on account of its caustic qualities. It is said to have perfectly consumed the flesh of human bo-

dies buried in it in the space of forty days.

This property, for which it was greatly cele-

brated, is mentioned by all the ancient natu-

ralists. There was another very singular quality

also attached to it, but whether to all, or only

to some peculiar pieces of it, is not known ;

that is, its turning into stone any thing that

was put into vessels made of it. This is re-

corded only by Mutianus and Theophrastus,

except that Pliny had copied it from these au-

thors, and some of the later writers from him.

The custom of burying the dead is proba-

bly more ancient than that of burning their

bodies. Mythology attributes the latter mode to Hercules, while it assigns the earliest usage of the former method to the primitive Greeks and Romans. In the Greek colonies of Italy they buried, as we do, the entire body ; and, even when the custom of burning the body became general among the Romans, several families retained that of interment. But the term sarcophagus is by no means limited to a particular kind of stone. Indeed, its more generally accepted meaning is a sort of coffin, made, among the ancients, either of stone, of marble, or porphyry. The Greeks also sometimes employed hard wood, which was calculated to resist humidity, such principally as oak, cedar, or cypress. Occasionally also they used terra cotta, and even metal. The form of these sarcophagi was ordinarily a parallelopipedon — namely, a long square, such as our coffin. Sometimes the angles were rounded, thus assuming an elliptical shape. The lid of the sarcophagus varies both in shape and ornament. Sometimes it bears the statue of the person inhumed therein, often lying down in the posture used by the ancients as they took their

meals. The capacity or size of the sarcophagi

was also of course very various.

The sarcophagus in which the body of Alex-

ander the Great was supposed to be entombed

is one entire block of Egyptian marble, and is

now in the British Mtiseum, a prize for which

we are principally indebted to the active and

classical spirit of Dr. E. D. Clarke, of Cam-

bridge. Some doubts, however, are entertained

by the learned as tcr this being the real tomb of Alexander.

SARCOPHAGY, n. s. Gr.

0ayu>, to eat. The practice of eating flesh.

There was no sarcophagy before the flood ; and,

without the eating of flesh, our fathers preserved

themselves unto longer lives than their posterity.

Browne's Vulgar Errours.

SARCOT'ICK, n. s. Fr. sarcotigue, from

Gr. (rap£. Medicines which fill up ulcers with

new flesh.

The humour was moderately repressed, and

breathed forth ; after which the ulcer incarned with common sarcoticki, and the ulcerations about it were cured by ointment of tutty. Wiseman.

SARDANAPALUS, the last king of Assyria,

whose character is one of the most infamous in

history. He clothed himself as a woman, and

spun amidst companies of his concubines. He painted his face, and buried himself in the most unbounded sensuality. Having grown odious to his subjects, a rebellion was formed against him by Arbaces the Mede, and Belesis the Babylonian. They were attended, however, with very

bad success at first, being defeated with great slaughter in three pitched battles. With great difficulty Belesis prevailed upon his men to keep the field only five days longer ; when they were joined by the Bactrians, who had come to the assistance of Sardauapalus, but had been prevailed upon to renounce their allegiance to him. With this reinforcement they twice defeated the troops of Sardanapalus, who shut himself up in Nineveh, the capital of his empire. He was here closely besieged, while the conspirators received large accessions of strength from the revolt of the different provinces ; but Sardanapalus confided in the prediction that ‘ Nineveh could never be taken, unless the river became her enemy.’ The city being well supplied with

provisions, the confederate forces remained two whole years before it without producing any impression, till at length the Tigris, having been swollen by unusual quantities of rain, overflowed twenty stadia (two miles and a half) of the wall, and thus made a practicable breach. Sardanapalus now, dreading to fall into the hands of an enraged enemy, retired into his palace, in a court of which he caused a vast pile of wood to be raised ; and heaping upon it all his gold and silver, and royal apparel, and at the same time enclosing his eunuchs and concubines in an apartment within the pile, he set fire to it, and thus destroyed himself. Athenaeus represents the treasures thus destroyed as worth a thousand myriads of talents of gold, and ten times as many talents of silver, i. e. about £1400,000,000 sterling.

SARDANAPALUS, another monarch of Assyria, mentioned by Clectarchus, who died of old age. Sir Isaac Newton supposes him to be the same with Esarhaddon.

SAR'DEL, n. s.

SAR'DINE STONE,

SAR'DIUS.

I A sort of precious stone :

> sardonyx ; found in Sar-

i dinia.

Thou shall set in it four rows of stones ; the first row shall be a sardius. Exod. xxviii. 7.

He that sat was to look upon, like a jasper and a sardine stone. Rev. iv. 3.

SARDINIA, an insular and continental king-

dom of Southern Europe. The continental part

occupies the north-west portion of Italy, and is

bounded by Switzerland on the north, the duchies

of Milan and Parma on the east, the Mediter-

ranean on the south, and France on the west.

It stretches about 200 miles from north to south,

and 1 30 from east to west. With the island, it

comprises a surface of 27,400 English square

miles, and a population of 3,994,000.

All the continental dominions of the king of

Sardinia had, without ceremony, been seized by

the French, and were united to their empire, till

the congress of Vienna, which restored it to the

condition of 1792, adding the states of Genoa,

and making other slight changes on the frontiers

of Switzerland and France. It contains at present

the following countries : —

Countries.

Square miles.

Population.

Chief Towns.

Inhabitants.

Piedmont, with the county of Nice .

7900

900

1,750,000

186,000

Turin

Casale

85,000

15,000

Part of the duchy of Milan . . .

Territory of the late Republic of Genoa

Savoy (not properly included in Italy)

Island of Sardinia, with the adjacent Isles

3300

2300

3800

9200

556,000

532,000

450,000

520,000

Alessandria

Genoa

Chamberri

Cagliari

35,000

80,000

12,000

30,000

Piedmont thus appears one of the best peopled districts in Europe, while the mountainous duchy of Savoy is the most thinly peopled of the continental states. Intersected from north to south by the Maritime Alps, Continental Sardinia can scarcely be excelled in sublime mountain scenery. The ridge that, sweeping round the gulf of Genoa, joins the Appennines, gives a fine character to the southern regions, while all the centre and eastern districts form part of the grand basin of the Po, the greatest river of this kingdom. The summit of Mont Blanc, rising 15,660 feet above the level of the sea, with Mont Cenis, Mont Viso, and several other lofty peaks, serrate the western

chain ; and the noble St. Bernard, Mont Rosa,

and others of the great Alps, rise majestically

on its northern frontier. The Tanaro, the Siara,

and other rivers, fall into the Po, from the south and south-east; while the Doira, Baltea, the

Sesia, and the Tesino, enter it from the north.

The last separates the Austrian from the Sar-

dinian dominions. Most of the lakes in northern

Italy are situated between the eastern confines of

Sardinia and the top of the Adriatic. Lago

Maggiore forms a part of the north-west boun-

dary, while that of Geneva stretches along the

borders of Switzerland.

The soil in the lower parts of these territories

is a rich sandy loam, intermixed with gravel ;

but the more elevated parts are chiefly composed

of rock. The climate is hot in the valleys ; on

the hills mild ; and on the mountains severe :

but in most places, except the marshy plains, it

is salubrious. The annual temperature of Genoa,

in the immediate vicinity of the sea and 'the

mountains, is about 61° of Fahrenheit's ther-

mometer. In the lower parts all kinds of Euro-

pean grain, with Indian corn, rice, and hemp,

are produced. Oranges, lemons, olives, vines,

mulberries, figs, and other fruits, are of the finest flavor ; and rich pastures feed, in several places, large herds of cattle. Irrigation is practised to a great extent. Silk is a valuable product, and of good quality here. The Alps of Piedmont contain gold, silver, and copper ; the last, in the duchy of Aosta, is often mixed with antimony, zinc, and arsenic. A vein of cobalt has been discovered not long since, a little east of Mont Blanc, and plumbago near Binay. Green porphyry is found on Mont Viso, and various inferior precious stones in other places. Valuable marbles are also found in many parts: and some of the mineral waters are in good re pute ; particularly the baths of Binay.

SARDINIA.

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SARDINIA, THE ISLAND or, is fifty-five leagues long, north and south, and twenty-five broad, having upwards of 200 leagues of coast. On the north it is mountainous, but has extensive plains, marshes, and lakes, towards the south. It has productive iron and lead mines, some poor silver ones, copper, pyrites,

precious stones, porphyry, marbles, alabaster, and some thermal springs. The two principal rivers are the Oristano and Fumendosa. The former, also called the Tirsi, empties itself into the gulf of Oristano on the west coast, and the latter on the south-east coast. There is said to be an inland navigable communication between Cagliari and Oristano, principally by the river Mariel, which empties itself into the gulf of Cagliari. The soil in the valleys is fertile, producing wheat and barley, and all the fruit trees of Europe, besides oranges, lemons, jujubes, grapes, palms, caroubs, lentisk (cistus ladanum), tobacco, &c. The horse is here met with in a wild state : it is small, well made, and very active. The asses are strong ; the mules few ; the hogs excellent, being fed on chestnuts. The wild quadrupeds are small deer, abundance of wild hogs : the muffoli, or wild sheep, inhabits the most solitary parts of the mountains. The island of Assinara has numbers of land turtle, and sea turtle are taken on the coasts as well as tunny fish, but both anchovies and sardines are scarce. The small bustard and wild-ducks abound. The climate is in general healthy, ex-

cept in the vicinity of the morasses, which cause putrid fevers. The population is about 50,000, and the revenues do not exceed £80,000. Surrounded by people highly civilised, the Sardes are still in a state of surprising barbarity. In the country the men are clothed in goat-skins, one before and another behind, without breeches, shoes, or stockings, and a woollen or skin cap on the head. The women have no other habiliment than a long woollen gown and a woollen cap. The peasants always go armed to defend themselves from one another; for they are all robbers and assassins, so that travelling in the interior is extremely unsafe without an escort ; and it is even dangerous for ships to send their people on shore for water unless they are well armed. In short, the Sardes are the Malays of the Mediterranean. They are, however, strongly attached to their king and country. The barbarism of the peasantry is strongly contrasted by the pomp and outward show of the citizens of the capital, all of whom, mechanics not excepted, strut about with bag-wig, sword, and chapeau bras ; and even in this costume it is

common to be solicited for charity.

The coasts are indented by numerous gulfs and lined with islets and rocks. The principal headlands are, cape Comino, the east point and north limit of the gulf of Orosei. Cape Carbonera, the south-east point and east limit of the gulf of Cagliau : off it is the rocky island Cortellazzo (Ficaria), the west point of which is foul, but there is a good road on its north-west : on it is a castle, and north-east of it are two small islands, with a watch-tower on each ; the outermost is named Serpentaria. Cape Pola, the west point of the gulf of Cagliari, is a low rocky point with a watch-tower, and off it two rocky islets. Cape Tavolaro, or Teulado, is the south-west point of the island, and east point of the gulf of Palma. Cape de Napoli, or la Fresca, the south point of the gulf of Oristano, on the middle of the west coast. Cape della Cacia (Nympheus) on the north-west. Cape Falcon (Gorditatum) is the north-west point of the island.

The chief gulfs are Terra-Nova on the north-east, the north point of which is cape Figueri ; Porto Cavallo within the islands Tavolaro, and

others. The gulf of Orosei, between cape Co-

mino and Monte Santo ; the bay of Oliastro,

south of cape Monte Santo, and of which cape

Bellevue is the south point. The gulf of Cag-

liari on the south-east, at the head of which is

Cagliari (Calaris), the capital of the island, con-

taining 25,000 inhabitants. Its port is formed

by two moles, and receives vessels of twelve

feet. The gulf of Rosso has cape Tavolaro for

its west point : near its head is the isle Ilossa, tolerably large, flat, and very rocky, within

which is good anchorage before a river. The

gulf of Palma, at the south-west extremity of the

island, is formed by the main land on the east,

and by the island Antiocha, also called St. Jago

and Palma de Sal (Plumbaria), on the west,

which is three leagues long and one broad. In

the entrance of the gulf are two great rocks,

named the Bull and Cow. A league north-west

of Antiocha, and three leagues from the main,

is the island San Pietro (Accepitrum), rocky,

barren, and surrounded by islets, with fort St.

Carlos on its east side. The gulf of Oristano

on the middle of the west coast. Porto Conta

on the north-west is a good harbour whose en-

trance is protected by two towers ; that on the right on an elevation seventy feet high, and so perpendicular that the ascent is by a rope ladder. There is good anchorage throughout the port, except near the town, where are some rocks level with the sea. At the head of the port is a spring of brackish water. The north coast of the island curves greatly inward, forming a large gulf between the island Asinara on the north-west and Cape Scardo, the north point of Sardinia. The island Asinara (Herculis) is separated from cape Falcon by a channel with but two fathoms, and in it is the little island Piana. Asinara is very irregular, but three leagues in its greatest length. On its east side is Porto Trabuco, well sheltered, and with good anchorage in six and eight fathoms. Sassari, the second town of the island, is on the river Fiuminargia, four leagues from the sea, Its port, named Torres, is at the mouth of the river, secured by two moles. Off the north-east end of Sardinia are the isles Madelaine (Hermaea), between which and the main is an excellent road for the largest ships. On the largest island is a village and several forts, and here

beef, wine, and vegetables may be procured for

a fleet, and water from a considerable river on

the main.

Sardinia, as well as Corsica, passed under the

dominion of successive masters, until it came

in the seventh century under that of the Sara-

cens, who were driven from it by the Pisaus an.l

Genoese, and the Genoese were dispossessed of

it by the king of Arragon in 1330. It remained

with Spain until 1708, when it was taken by the

English for the emperor of Germany, who in

1720 ceded it with the title of kingdom to the

house of Savoy.

'The inhabitants of Sardinia,' says Mr. Salt,

- *(I speak of the common people,) arc yet scarcely above the negative point of civilisation; perhaps*

it would be more correct to say that they ap-

pear to have sunk a certain way back into bar-

barism. They wear, indeed, linen shirts, fas-

tened at the collar by a pair of silver buttons,

like hawks' bills ; but their upper dress of shaggy goat skins is in the pure savage style. A few

have gone one step nearer to perfectibility, and actually do wear tanned leather coats, made somewhat in the fashion of the armor worn in Europe in the fifteenth century. With such durable habiliments, it is easy to conceive that they do not require much assistance from the manufactures of foreign countries.'

SARDIS, or SAUDES, now called SARDO or SART, an ancient towa of Asia, in Natolia, about forty miles east of Smyrna. It was much celebrated in early antiquity, was enriched by the fertility of the soil, and had been the capital of the Lydian kings. It was seated on the side of mount Tmclus ; and the citadel, placed on a lofty hill, was remarkable for its great strength. It was the seat of king Croesus, and was in his time taken by Cyrus ; after which the Persian satrap f>r commandant resided at Sardis, as the emperor did at Susa. The city was also taken, burnt, and evacuated by the Milesians in the time of Darius, and the city and fortress surrendered on the approach of Alexander after the battle of the Granicus. Under the Romans, Sardis was a very considerable place till the time of Tiberius Caesar, jvhen it suffered prodigiously by an earthquake.

The munificence of the emperor, however, was

nobly exerted to repair the damages. Julian attempted to restore the heathen worship in the place. He erected temporary altars where none had been left, and repaired the temples where any vestiges remained. In the year 400 it was plundered by the Goths, and it suffered considerably in the subsequent troubles of Asia. On the incursions of the Tartars, in 1304, the Turks were permitted to occupy a portion of the citadel, separated by a strong wall with a gate, and were afterwards murdered in their sleep. The site of this once noble city is now green and flowery, the whole being reduced to a poor village. There are, however, some curious remains of antiquity about it, and some ruins which display its ancient grandeur.

The SARDIUS, SAIIDEI., or SARDINE STONE, was a precious stone of a blood red color. The best came from Babylon.

SAR'DONYX, n. s. A precious stone. See below.

The onyx is an accidental variety of the agate kind; 'tis of a dark horny colour, in which is a plate of bluish white, and sometimes of red : when

oa one or both sides tlie white there happens to lie also a plate of a reddish colour, the jewellers call the stone a tardontir. Wwdward.

'ihr SARDONYX is a precions stone consisting of a mixture of white and red cornelian, sometimes in strata, but at other times blended together. It is found 1. Striped with white and red strata, which may be cut in cameo as well as the onyx. 2. White with red dendritica! figures, greatly resembling the mocha stone ; but with this difference, that the figures in the sardonyx are of a red color, in the other black. The sardonyx was highly esteemed among the ancients ; the Romans used it in rings and other articles of jewellery. According to Pliny, the rings of knights and senators we're frequently adorned with the sardonyx. Martial uses the expression sardonychata manus to indicate a hand embellished with rings of sardonyx.

SARI, a commercial town of Mazanderan, Persia, on the coast of the Caspian. It is an ancient city, alluded to by the poet Ferdusi; and, when visited by Hanvvay, contained four or five temples, built of the most solid materials, with rotundas, thirty feet in diameter, and nearly 120 feet high. Sari is well fortified,

having a good wall and deep ditch, and a palace the residence of one of the Persian princes. It is crowded with inhabitants, we are told, and a society of Armenians is established in its vicinity. It has a brisk trade with Astracan and the interior. Long. 52° 58′ E.,' lat. 35° 35′ N.

SARISBURIENSIS (Joannes), or John of Sarisbury, an English writer, born at Rochester about 1110, and who went to France in 1126. He was sent by Henry II. to pope Eugenius, and was much patronised by him and his successor, and by Thomas a Becket, the chancellor, whom he accompanied in his travels to France. When Becket was murdered, Sarishury was severely wounded in the arm, defending him. He afterwards went to Fiance, where he was made bishop of Chartres in 1179. He died about 1181. He wrote, 1. Policraticon, sive de Nugis Curialium, et Yestigiis Philosophorum ; 2. Letters ; 3. The Life of Thomas a Becket; and, 4. A Treatise upon Logic and Philosophy.

SARK, n. s. Sax. pcynk. A shark or shirk; in Scotland, a shirt.

Flaunting beaux ganˆ with their breast open, and

their sarks over their waistcoats. Arbuthnot.

SARK, in geography, a British island in the

English Channel, near the coast of France ;

about six miles east of Guernsey, on which it is

dependent, and west of Jersey. The climate is

healthy, and the land, though sandy, sufficiently

fertile to produce provisions for its inhabitants.

It is about two miles square, and contains about

450 inhabitants. The island is surrounded with

steep rocks, and the air is in general serene, free from fogs and damps, and remarkably healthy.

SAR LAT, a town, the capital of an arron-

dissement in the department of the Dordogne,

in the south-west of France, situated on the

Sarlat. It has nothing interesting except a few

Roman remains, the houses being ill built, and

the streets narrow. Before the revolution it was

the seat of a bishop. Population 0000. Thirty

miles south-east of Perigueux, and ninety-eight

east by north of Bordeaux.

SARMATlA,in ancient geography, an exten-

sive country at the north of Europe and Asia, lying partly in the former and partly in the latter; comprehending all Poland, Russia, and great part of Tartary. Littleton. It was divided into European and Asiatic.

ASIATIC SARMATIA was bounded by Hyrcania, the Tanais, and the Euxine Sea. It contained Great Tartary, Circassia, and the neighbouring country.

EUROPEAN SARMATIA was bounded by the ocean on the north, Tanais on the east, the Jazygae on the south, and the Vistula on the west. It contained the modern countries of Russia, Poland, Lithuania, and Little Tartary. Lempriere.

SARMATIANS, Sarmatii, the ancient inhabitants of Sarmatia. They were a savage uncivilised nation, often confounded with the Scythians, naturally warlike, and they painted their bodies to appear more terrible in battle. They were infamous for their lewdness, and in the time of the emperors they became very powerful, and disturbed the empire by their frequent incursions ; till at last, increased by the savage

hordes of Scythia, they successfully invaded, and finally ruined the empire in the third and fourth centuries. They generally lived on the mountains, without houses, residing in their chariots, whence they were called Hamaxobii. They lived upon plunder, and fed upon milk mixed with the blood of horses.

SARMATIAN SEA, or SARMATICUM MARE, a name given to the Euxine Sea, because on the coast of Sarmatia. Ovid.

SARNO, an inland town of Naples, in the Principato Citra, near the base of Mount Vesuvius, remarkable for the superior quality of the silk raised in its environs. It has an old castle belonging to the Barberini family, who are dukes of Sarno. It is the see of a bishop. Inhabitants 1 2,000. Twenty miles east of Naples, and twelve north by west of Salerno.

SARONICUS SINUS, the Saronic Bay, in ancient geography, a bay of the ˆEgean Sea, on the south of Attica, and north of Peloponnesus : so named from Saron king of Tro?zene, who was drowned in it, swimming after a stag. The entry to it was between the promontories of Sunium

and Scylla.

SAROS, or SCHAROS, a county of Hungary, separated from Austrian Galicia by the Carpathians. Its area is about 1400 square miles, containing several lofty mountains, the chief of which are called Simonka and Oblik. The mineral springs are numerous ; but there are few mines, except of salt : there is also a mine of opals at Czervenitz. The cold is rather intense, on account of the vicinity of the mountains ; but corn succeeds, and vines in particular spots. Population 142,000. The chief town is Eperies.

SAROS-PATAK, a well built town of the northeast of Hungary, on the Bodros. It has a Catholic, Calvinist, and Greek church. Here is also a Calvinist college, on a large scale. Inhabitants 8000. Fourteen miles north by east of Tokay, and 125 E. N. E of Pest.

SAROTHRA, in botany, bastard gentian, a genus of the trigynia ord> , and pentandria class of plants ; natural order twentieth, rotacese ;

COR. pentapetalous : CAPS, unilocular, and colored.

SARPEDON, in fabulous history, the son of Jupiter by Europa, and younger brother of Minos, with whom he stood competitor for the kingdom of Crete. Failing in that attempt, he went to Caria, and built Miletus.

SARPEDON, another son of Jupiter by Laodamia, daughter of Bellerophon, flourished about a century later than the brother of Minos. He went to the Trojan war to assist king Priam against the Greeks, where he was attended by his faithful friend Glaucus. He made a great slaughter of the Greeks; but was at last killed by Patroclus.

SARRACENA, or SARRACONIA, in botany, side-saddle flower, a genus of the monogynia order, and polyandria class of plants ; natural order fifty-fourth, miscellanea : COR. pentapetalous: CAL. double, triphyllous below, pentaphyllous above : CAPS, quinquelocular ; the style has a stigma of the form of a shield. Species four, all natives of America.

*SARRASIN, or SARRAZIN, in fortification, a kind of portcullis, otherwise called a herse, which is hung with ropes over the gate of a town o**

fortress, to be let fall in case of a surprise.

SARSAPARILLA, in botany. See SMILAX.

SART, an insignificant village of Asia Minor, distinguished by containing on its site the ruins of Sardis. These are confusedly scattered over a large verdant plain, and consist largely of bricks, so strongly cemented as to make it scarcely possible to detach them. They seem to have no tendency to crumble to pieces by mere time.

SARTHE, or SARTE, a department of the north-west of France, comprising the greater part of the former province of Maine, and bounded by the departments of the Orne, the Loir and Cher, and the Mayenne. It is nearly of a circular form, and has a superficial and level extent of 2430 square miles, except in the north-west part, where there are small hills. Lime and sand predominate in the soil, which yields luxuriant fields of corn. The principal rivers are the Sarthe, the Loir, the Huine. The climate is mild, and the air healthy. The productions, beside corn, are flax, hemp, vines, and fruits. Here are also some iron mines and marble quarries. Grazing is followed to a considerable

extent : the principal manufactures are of hard-

ware, leather, paper, and woollens. The de-

partment is in the diocese of Le Mans, and juris-

diction of the cour royale of Angers, and is

divided into four arrondissements, LP Mans

(the capital), La Fleche, Mamers, and St. Calais.

Population 410,000.

SARTORIUS (from sartor, a tailor; because

tailors cross their legs with it), a flat slender

muscle which is the longest of the human body,

and from an inch and a half to two inches in

breadth, situated immediately under the integu-

ments, and extending obliquely from the upper

and anterior part of the thigh, to the upper an-

terior part of the tibia ; being enclosed by a thin membranous sheath, which is derived from the

adjacent fascia lata. It serves to bend the leg

obliquely inwards, or to roll the thigh outwards,

and at the same time to cross one leg over ano-

ther. See ANATOMY.

SARUM, OLD, formerly a borough of Wilt-

shire, about one mile north of New Sarura or

Salisbury. It has the ruins of a fort which be-

longed to the ancient Britons ; and is said also

to have been a Roman station. In the north-

SASHES, in military dress, are worn by the

officers of most nations, either round their waist

or over their shoulders. Those for the British

army are made of crimson silk.

SASNEE, a town and fortress of Hindostaa,

province of Agra, once the residence of a

zemindar, who, having proved refractor)', was

west angle stood the palace of the bishop, whose expelled by the British after a desperate resist-

see was removed hither from Wilton and Sher-

born ; but, the bishop quarreling with king Ste-

phen, he seized the castle and put a garrison into

it, which was the principal cause of its destruc-

tion, as the see was soon after removed hence

to Salisbury in 1219. Here synods and par-

ance in 1803. Long. 78° 4′ E., lat. 27° 45′ N.

SASSAFRAS, in botany. See LAURI-S.

SASSARI, a considerable town and province

of the island of Sardinia, standing in a luxur>-

ant neighbourhood, and abounding with some

rivers. It is the seat of the courts of justice, as liaments have formerly been held, and hither well as of a university, and several lesser semi-

were the states of the kingdom summoned to naries. It is likewise the see of an archbishop, swear fidelity to William the Conqueror. Here and contains an unusual number of churches, also was a pakce of the British and Saxon The harbour, called Porto Torre, is situated on kings, and of the Roman emperors ; which was the gulf of this name, about ten miles from the deserted in the reign of Henry III., for want of town, and communicates with it by means of a water, so that one farm-house is all that is left of river. Sixty-four miles north of Oristano.

this ancient city ; it was called the Borough of SATALIA, ANTALIA, or ADALIA, a city of Old Sarum, and sent two members to pasliament, Caramania, on the site of the ancient Olbia, and who were chosen by the proprietors of certain beautifully situated round a small harbour : on adjacent lands. It was disfranchised in 1832. «he level summit of the hill the city is enclosed SARUN, an extensive district of Hindostan, by a ditch, a double wall, and a series of square in" the province of Bahar, on the north-east side towers, about fifty yards asunder. Between two of the Ganges ; one of the most prosperous for of the towers appear the remains of a splendid its size in the British territories. The Ganges, gateway, exhibiting fourteen columns, the upper Gunduck, and several other streams, render it parts of which are of the Corinthian order, rich in pasture, and it produces excellent cattle The inside walls and towers appear to have been and horses. A great quantity of the saltpetre well built. The port is enclosed by two stone exported from Calcutta is manufactured here; piers, which once had towers on the extremities; the inhabitants are about one-fourth Mahomet-

ans. The chief town is Chuprach.

SARZEDAS, an inland town of the north of

Portugal, supposed to be the Oppidum Sarsi-

dense of the Romans ; eight miles west of Cas-

tel Branoo, and 117 E. N. E. of Lisbon. It

contains 3000 inhabitants, and various antiqui-

but they are now in a ruinous state. The gar-

dens round the town are beautiful. Population

8000.

SATARAH, a celebrated town and fortress of

Bejapoor, Hindostan, occupying the point of a

rock at the west of a range of hills, and having

only a very narrow passage up to it, admitting but ties. ˆParticles of gold are found in the Lica at a single person. After it had capitulated to the British, in February 1818, the officers declared

that 200 men might defend it against any force.

Taken originally from the king of Bejapoor, by

a little distance.

SASCACHAWAN, or SASKATCHIWINE, a

considerable river of North America, rising in the

Rocky Mountains. Its two principal branches are the Mahratta chief Sevajee, in 1673, this fortress the north and south, which, pursuing very wind- was captured by Aurungzebe in 1690, but was ing courses to the east, for about 440 miles, in a retaken soon after the death of that monarch in direct line, join about sixty miles east of Hud- 1707, and is now the capital of a Mahratta state.

son's House, and then run north-east through

Pine Island Lake, and Cedar Lake, into Lake

Winnipic, in lat. 51° 45′ north. As for as Cedar

Lake, the navigation is interrupted by falls and

rapids ; but above this lake it may be considered

navigable for canoes to its sources. On the

It owes its celebrity principally to its having

been for a long period the residence or state

prison of the Maha rajah. Here he was confined

about the middle of the last century by the

peishwa, who usurped the government, still in-

serting the name of the rajah in all public re-

banks are five principal factories of the North- cords and forms. It stands in long. 74° 3′ ¥.., west company.

SASH, n. s. Fr. chassis. Of this word, says

Johnson, the etymologists give no account: I

lat. 17° 30′ N., a short distance north of the

Kistnah.

*SATCHEL, n. *. Teut.feckel ; I.at. .«»•(•«//«.*

suppose it comes from scache, of scayoir, to A little bag : commonly a bag used by school-

know, a sash worn being a mark of distinction :

and a sash window being made particularly for

the sake of seeing and being seen. A belt worn

by way of distinction ; a silken band worn by

officers in the army. A window so formed as to

be let up and down by pulleys.

She ventures now to lift the sash ;

The window is her proper sphere. Swift.

She broke a pane in the iaih window that looked

into the yard. Id.

boys to carry books.

The whining schoolboy with his satchel,

And shining morning face, creeping like snail

Unwillingly to school. Shakspeare. At You Like It.

Schoolboys lag with satchels in their hands.

Swift.

SATE, v. a. “) Both verbs, from

*SA’TIATE, v. a. & n. *. J Latin satio, signify SATI’ETY, n. s. 3 to feed abundantly ;*

fill ; satisfy : and the first is commonly confined SAT

to the idea of filling to repletion, ov over fulness, or beyond natural desire : satiety is fulness be-

yond desire or pleasure ; hence wcarisouieness

of abundance.

He leaves a shallow plash to plunge him in the

deep,

And with satiety seeks to quench his thirst.

Shakspeare.

Those smells are the most grateful where the de-

gree of heat is small, or the strength of the smell allayed ; for these rather woo the sense than satiate it.

Bacon.

Nothing more jealous than a favourite, especially

towards the waining time and suspect of satiety.

Wotton.

I may yet survive the malice of my enemies, al-

though they should be satiated with my blood.

King diaries.

In all pleasures there is satiety ; and after they be used, their verdure departeth. Hakewill.

Sated at length, ere long I might perceive

Strange alteration in me. Milton’s Paradise Lost.

They satiate and soon fill,

Though pleasant ; but thy words, with grace divine

Imhued, bring to their sweetness no tatietij. Milt< >n.

Whatever novelty presents, children are presently

eager to have a taste, and are as soon satiated with it.

Locke.

How will their bodies stript

Enrich the victors, while the vultures sau

Their maws with full repast. Pkilip$.

The loosened winds

Hurled high above the clouds ; till all their force Consumed, her ravenous jaws, the earth satiate closed.

Id.

He may be satiated, but not satisfied. Norris.

No action, the usefulness of which has made it

the matter of duty, but a man may bear the con-

tinual pursuit of, without loathing or satiety. South.

Thy useless strength, mistaken king, employ,

Sated with rage, and ignorant of joy. Prior.

Why does not salt of tartar draw more water out

of the air than in a certain proportion to its quan-

*tity, but for want of an attractive force after it is *a-*

tiated with water ? Newton .

Our generals retired to their estates,

In life's cool evening, satiate of applause,

Nor think of bleeding even in Brunswick's cause.

Pope.

The joy unequalled, if its end it gain,

Without satiety, though e'er so blest,

And but more. relished as the more distressed. Id.

SATELLITE, n. s. \ Fr. satellite; Lat.

SAT'ELLOUS, adj. S satelles. Pope has in

the plural continued the Latin form, and as-

signed it four syllables. I think, says Johnson,

improperly. A small planet revolving round a

larger : consisting of satellites.

Four moons move about Jupiter, and five about

Saturn, called their satellite. Locke.*

The smallest planets are situated nearest the sun

and each other ; whereas Jupiter and Saturn that

are vastly greater, and have many satellites about

them, are wisely removed to the extreme regions of

the system. Bentley.

Ask of yon argent fields above,

Why Jove's satellites are less than Jove "? Pope.

SATELLITES, in astronomy. See ASTRONOMY.

SATGONG, an ancient royal port of Bengal,

known to the Romans by the title of Ganges

Keggia, and formerly the residence of the kings

of that country. The district belonging to it contained 700 souare miles. It is mentioned in

De Barro's Portuguese History, supposed to have been written about the year 1530, as being as great and noble as Chatigong, but less frequented, because its port is not so convenient for the entry and departure of shipping. It is first spoken of by the Mabometan historians in 1592, when it was plundered by the Afghauns. The Dummooda is supposed formerly to have fallen into the Bhagurutty above Satgong. The town stands two or three miles from the river side, and four from Hoogly. Long. 88° 30′ E., lat. 22° 57′ N.

SATHMAH, a county of Hungary, "adjacent to Transylvania, on both sides of the river Szamos. Its territorial extent is 2250 square miles. Many tracts are sandy, others strewed with soda, or covered with marshes ; the marsh of Etsed is twenty-eight miles in length ; yet this country produces on the whole a considerable quantity of wheat, maize, and wine. Particular districts contain mines of salt and metals.

The chief town is Nagy-Caroly. Population 187,000.

SATHMAR, or SATHMAR NEMETHI, a town 01 Hungary, in the palatinate of the same name, situated on the Szamos, 255 miles south of Presburg. It consists of two parts, Sathmar and Nemethi, standing on the two sides of the river, and previous to 1715 forming two distinct towns. The inhabitants carry on an active trade, and produce a large quantity of wine. In the neighbourhood are salt-mines. Sathmar is a bishop's see, erected in 1806, and has a Catholic seminary, one Greek and two Calvinist churches.

SATIMANGALUM, a town and strong fortress of the province of Coimbetoor, South of India. The fort was built in the seventeenth century, by Trimula Naick, governor on the part of the rajah of Madura. It was taken about fifty years afterwards by the rajah of Mysore, and by the British in the year 1792. It contains a temple, dedicated to Vishnu, and is inhabited by weavers of coarse cotton cloth. A severe battle was fought in the vicinity of this place between the British and the troops of Tippo. Long. 77°

20′ E., lat. 10° 28′ N.

SATIN, n. s. Fr. satin ; Ital. setan; Belg.

sattin. A soft close, shining silk.

SATIN, in the arts, has become of late an arti-

cle of considerable use for hats. See SILK MA-

NUFACTURE.

SATIRE, n. s. -\ Fr. satire ; Lal.satira,

SATIR'IC, adj. I anciently satura. A

SATIR'ICAL, f poem in which wicked-

SATIR'ICALLY, adv. £ ness or folly is censured.

SATIRIST, n. K. V Proper satire, says John-

SAT'IRIZE, v. a. j son, is distinguished by

the generality of the reflection from a lampoon

which is aimed against a particular person : the

adjective and adverb strictly agree with the noun

substantive : a satirist is a writer or utterer of

satires : to satirize, to censure as in a satire.

SATIRE ; in the widest sense of the word,

pungent ridicule or cutting censure of faults,

vices and weaknesses ; hence the phrase, " a

satirical person." In a narrower sense, in

which it is more commonly used, it is a poem,

of which ridicule and censure are the object

and chief characteristic. This species of poetry

nad its origin with the Romans : the name is derived from satur (by no means from satyr), and refers, originally, to the mixture of subjects treated, and of metres used, in the earlier productions of this kind. Satire is one of the latest branches of poety cultivated, because it presupposes not merely much natural wit, but also acute observation, and much variety of life and manners to call this wit into exercise. In fact it is only in an advanced state of society, where folly and vice force themselves on the public eye, that a taste can exist for this species of production. As the object of satire is always castigation, it is distinguished from mere wit, which may occupy itself simply with the ludicrousness of particular relations. The form of satire is very varied. It may be in the shape of epistles, tales, dialogues, dramas, (as with Aristophanes), songs, epics, fables, &c. The most common form of satire, however, is that of a didactic composition. The ancients wrote their

satires in iambic and dactylic Terse. The moderns generally use the iambus, sometimes the Alexandrine, (q. v.), sometimes the iambic verse of five feet, the latter sometimes with, sometimes without, rhyme. The proper didactic satire originated, as we have said, with the Romans ; and its inventor was Lucilius : Horace, Juvenal, and Persius developed it. Vulpius, Casaubon, and Kunig have written on the Roman satire Of the modern satirists, we may mention, among the Italians, Ariosto, Alamanni, Salvator Ros:i, Meuzini, Dotti, Gasparo Gozzi, Alfieri, &c. ; among the Spaniards, Cervantes, Quevedo, and Saavedra; among the French, Regnier, Boileau, and Voltaire, &c. ; among the Germans, Seb. Brand, Ulr. Hutten, Fischart, Haller, Rabener, Lichtenberg, Falk, Wieland, &c. ; among the English, Donne, Rochester, Dryden, Butler, Pope, Swift, Young, Churchill, Johnson, Peter Pindar (Wolcot), Gifford, Mathias ; among the Poles, Krasiczky. The Greeks had not the proper satire. The poem of Archilocus, and that of Simonides, were more properly lampoons ; and the silli had probably a didactic form, but

were of the nature of parody. Entirely diffe-

rent from the satire was the drama satyricon of

the Greeks, invented by Pratinas — a mixture of

tragic, at least heroic action with comic. These

dramas served as interludes and after-pieces, and

had a low comic character. We possess only

one— the Cyclops of Euripides. — See Eichstadt,

De Dramate Gracorum comico-satyrico, fyc.,

and Herrmann and Pinzger on the same sub-

ject.

SAT'ISFY, v. a. kv.n. "I Fr. satufaire ;

SATISFACTION, n. t. I Lat. satisfacio.To

SATISFAC'TI VE, adj. [content ; please to

SATISFAC'TORY, [^contentment ; re-

SATJSFAC'TORII.Y, adv. jcorapense; con-

SATISFAC'TORINESS, n s. J vince ; appease;

free from doubt or perplexity ; make payment ;

give content : the noun substantive corresponds :

satisfactive and satisfactory mean giving content

or gratification ; atoning : the adverb and noun

substantive following correspond.

Who halh caused it to rain oa the earth to satisfy the desolate and waste ground, and to cause the bud of the tender tree to spring forth ? Job.

A most wise and su'Scient means of redemption

and salvation, by the satisfactory and meritorious

death and obedience of the incarnate son of God,

Jesus Christ. Sanderson.

They strain their memory to answer him satisfac-

torily unto all his demands. D'gby.

Die he, or justice must ; unless for him

Some other able, and as willing, pay

The rigid satisfaction, death for death. Milton.

Will he draw out,

Fo/ anger's sake, finite to infinite

In punished man, to satisfy his rigour,

Satisfied never 1 That were to extend

His sentence beyond dust and Nature's law. Id.

By a final and satisfactive discernment of faith, we lay the last effects upon the first cause of all things.

liroiene.

Bellonius hath been more satisfactorily experimen-

tal, not only affirming that chameleons feed on flies, but upon exenteration he found these animals in their bellies. Id.

The incompleatness of the seraphick lover's hap-

piness in his fruitions proceeds not from their want of satitf actor iness, but his want of an entire posses-

sion of them. hi't/le.

Of ev'ry nation each illustrious name,

Such toys as these have cheated into fame ;

Exchanging solid quiet lo obtain

The windy satisfaction of the brain.

Dry den's Juvenal.

Of many things useful and curious you may satisfy

yourselves in Leonardo de Vinci. Dryden.

Tis a wretched mtisfactia a revengeful man takes,*

even in losing his life, provided his enemy go for company. L'Estrange.

The mind, having a power to suspend the execu-

tion and satisfaction of any of its desires, as at liberty to consider the objects of them. Locke.

An intelligent American would scarce take it for a

satisfactory account, if, desiring to learn our architec-

ture, he should be told that a pillar was a thing sup-

ported by a basis. Id.

This I would willingly be satisfied in, whether the soul, when it thinks thus, separate from the body,

acts less rationally than when conjointly with it 1

Id.

Run over the circle of earthly pleasures, and, bad

not God secured a man a solid pleasure from his own actions, he would be forced to complain that pleasure was not satisfaction. South.

I'm satisfied. My boy has done his duty.

Addison.

The standing evidences of the truth of the Gospel

are in themselves most firm, solid, and satisfying.

Atterbury.

SATURATE, v. a.) Lat. satura. Fully to

SAT'URABLE, adj.] impregnate : impregna-

ble with any thing till it will receive no more.

Be the figures of the salts never so various, yet, if the atoms of water were fluid, they would always so conform to those figures as to fill up all vacuities ; and consequently the water would be to. tumble with the same quantity of any salt, which it is not.

Crew's Cosmo! . Sacra.

Rain-water is plentifully saturated with terres-

trial matter, and more or less stored with it.

Woodward.

His body has been fully saturated with the fluid of light, to be able lo last so many years without any sensible diminution, though there are constant ema-

nations thereof. Cheyne.

Still night succeeds

A softened shade, and saturated earth

Awaits the morning beam. Thomswi.

SAT 3:

SATURATION, in chemistry, is the impreg-

nating an acid with an alkali, or vice versa, till

cither will receive no more, and the mixture will

then become neutral. Some substances unite in

all proportions. Such, for example, are acids in

general, with water, and many of the metals with

each other. But there are likewise many sub-

stances which cannot be dissolved in a fluid, at

a settled temperature, in any quantity beyond a

certain proportion. Thus water will dissolve

only about one-third of its weight of common salt, and if more be added it will remain solid. A fluid, which holds in solution as much of any substance as it can dissolve, is said to be saturated with it. But saturation with one substance does not deprive the fluid of its power of acting on and dissolving some other bodies, and in many cases it increases this power. For example, water saturated with salt will dissolve sugar.

SATURDAY, n. s. Sax. r or petermj-baej, according to Yerstegan, from j-aeteri a Saxon idol ; more probably from Saturn, dies Saturni. The last day of the week.

This matter I handled fully in last Saturday'! Spectator. Addison,

SATURDAY, the seventh day of the week, is so called from the idol Sealer, worshipped on this day by the ancient Saxons, and thought to be the Saturn of the Latins.

SATUREIA, savory, in botany, a genus of the gymnospermia order, and didynamia class of plants ; natural order forty-second, verticillatae : segments of the corolla nearly equal ; the stamina standing asunder.

1. S. hortensis, or summer savory, is an annual plant, which grows naturally in the south of France and Italy, but is cultivated in this country both for the kitchen and medicinal use. Summer savory is a very warm pungent aromatic ; and affords in distillation with water a subtle essential oil, of a penetrating smell, and very hot acrid taste. It yields little of its virtues by infusion to aqueous liquors ; rectified spirit extracts the whole of its taste and smell, and elevates nothing in distillation.

2. S. montana, or winter savory, is a perennial plant growing naturally in the south of France and Italy, but is cultivated in gardens both for culinary and medicinal purposes. Both kinds are propagated by seeds. Those of the first kind should be sown in the beginning of April upon a bed of light earth, either where they are to remain, or for transplanting. If the plants are to stand unremoved, they should be sown thinly; but if they are to be transplanted, they may be sown closer. The second species may be sowii upon a poor dry soil, where the plants will endure the severest winters, though they are often killed by the frost when planted in good ground.

SATURN, n. s. > Fr. saturne ; Lat. satur-

SAT'URNINE, adj.ynus. A planet long thought

SATUR'XIAN. j the remotest of the solar

system : supposed by astrologers to impress dul-

ness, or severity of temper : hence the adjective,

which signifies gloomy; grave; severe: and

hence the opposing adjective saturnian, which

signifies golden ; happy ; like the fabled days of

the reign of Saturn.

I may cast my readers under two divisions, the

>5 SAT

mercurial, and saturnine : the first are the gay part, the others are of a more sober and solemn turn.

Addison.

The smallest planets are placed nearest the sun

and each other ; whereas Jupiter and Satuni, that

are vastly greater, are wisely removed to the extreme regions. Bentley.

Th' Augustus, born to bring Saturnian times.

Pope.

From the far hounds

Of utmost Saturn, wheeling wide his round.

Thornton.

SATURN, in astronomy, one of the planets of

our solar system. See ASTRONOMY, Indexˆ

SATURN, in chemistry, an appellation anciently

given to lead.

SATURN, in heraldry, denotes the black color in blazoning the arms of sovereign princes.

SATURN, in the ancient mythology, one of the principal of the Pagan deities, was the son of Ccelus and Terra, and the father of Jupiter, Neptune, and Pluto. He deposed and mutilated his father, and obliged his brother Titan to resign his crown to him, on condition of his bringing up none of his male issue, that the succession might at length devolve on him. For this purpose he devoured all the sons he had by his wife Kheaor Cybele : but, bringing forth at one time Jupiter and Juno, she presented the latter to her husband, and sent the boy to be nursed on Mount Ida ; when Saturn, being informed of her having a son, demanded the child ; but in his stead his wife gave him a stone swaddled up like an infant, which he instantly swallowed. Titan, finding that Saturn had violated the contract he had made with him, put himself at the head of his children, and made war on his brother; and, having made him and Cybele prisoners, confined them in Tartarus ; but Jupiter raised an army in Crete, went to his father's assistance, defeated Titan, and

restored Saturn to the throne. Some time after, Saturn being told that Jupiter intended to dethrone him, endeavoured to prevent it ; but the latter, being informed of his intention, deposed his father, and threw him into Tartarus. But Saturn, escaping thence, fled into Italy, where he was kindly received by Janus, king of the country, who associated him in the government : whence Italy obtained the name of Saturnia Tellus ; as also that of Latium, from lateo, ‘ to lie hid.’ There Saturn, by the wisdom and mildness of his government, is said to have produced the golden age. Saturn is represented as an old man with four wings, armed with a scythe. Sometimes he is delineated under the figure of a serpent with its tail in its mouth : this is emblematic of the seasons, which roll perpetually in the same circle. Sometimes, also, Saturn is painted with a sand-glass in his hand. The Greeks say that the story of his mutilating his father and destroying his children is an allegory, which signifies, that Time devours the past and present, and will also devour the future. Tatius, king of the Sabines, first built a temple to Saturn on the Capitoline hill : a second was afterwards

added by Tullus Hostilius, and a third by the first consuls. On his statues were generally hung fetters, in commemoration of the chains he had worn when imprisoned by Jupiter. Fron. vhis circumstance, all slaves that obtained

tiu'ir liberty generally dedicated their fetters to him.

SATt'HNALIA, in Roman antiquity, a festival observed about the middle of December, in honor of the god Saturn, whom Lucian introduces giving an account of the ceremonies observed on this occasion, thus: — ' During my whole reign, which lasts but for one week, no public business is done : there is nothing but drinking, singing, playing, creating imaginary kings, placing servants with their masters at table, &c. There shall be no disputes, reproaches, &c., but the rich and poor, masters and slaves, shall be equal,' &c. On this festival the Romans sacrificed bare-headed, contrary to their custom at other sacrifices. During its continuance no business or profession was allowed to be carried on except cookery ; all distinctions of

rank ceased ; and slaves could say what they pleased to their masters with impunity.

SATURNIA, a name of Juno as the daughter of Saturn.

SATURNINUS (P. Sempronius), a Roman general under Valerian, who was proclaimed emperor by the troops against his inclination. He was afterwards murdered by them, for attempting to restore the ancient discipline, in his forty-third year, A. D. 262. See ROME.

SATURNINUS (Sextus Julius, or Junius), another Roman general, a native of Gaul, who was compelled by the soldiers to assume the title of emperor. See ROME. He was ip favor with Aurelian.

SATYAVRATA, or MENU, in Indian mythology, is believed by the Hindoos to have reigned over the whole world in the earliest age of their chronology, and to have resided in the country of Dravira on the coast of the eastern Indian peninsula. His patronymic name was Vaivaswata, or child of the sun. In the Bhagavat we are informed that the Lord of the universe, intending to preserve him from the sea of destruction

caused by the depravity of the age, thus told him

how hg was to act : — ‘ In seven days from the

present time, O thoa tamer of enemies, the three

worlds will be plunged in an ocean of death ;

but, in the midst of the destroying waves, a large vessel, sent by me for thy use, shall stand before thee. Then shalt thou take all medicinal herbs,

all the rariety of seeds ; and, accompanied by

seven saints, encircled by pairs of all brute ani-

mals, thou shalt enter the spacious ark and con-

tinue in it, secure from the flood, on one immense

ocean without light, except the radiance of thy

holy companions. When the ship shall be agi-

tated by an impetuous wind, thou shalt fasten it

with a large sea serpent on my horn ; for I will be near thee : drawing the vessel, with thee and

thy attendants, I will remain on the ocean, O

chief of men, until a night of Brahma shall be

completely ended. Thou shalt then know my

true greatness, rightly named the supreme God-

head ; by my favor all thy questions shall be

answered, and thy mind abundantly instructed.’

TbH story is evidently that of Noah disguised by

A-iatic fiction and allegory.

> \ I’ VI!, M.S. i Lat. SH tints. A sylvan SATYRI’ASIS. J god ; supposed among the

ancient, to \< > < rude :HK! lev'

low.

Satyrs, us Pliny (.usuries, were found in time past in the eastern mountains of India. Peacham.

If the chyle \>e very plentiful, it breeds a taty-

riasis, or an abundance of seminal lympha.

Flayer on the Humours.

The heathen lawgivers of ancient days,

IS'ames almost worthy of a Christian's praise,

Would drive them forth from the resort of men,

And shut up every satyr in his den. Cou-per.

SATYRS, in ancient mythology, a species of

demi-gods who dwelt in the woods. They are

represented as monsters, half men and half goats;

having horns on their heads, a hairy body, with

the feet and tail of a goat. They are generally

in the train that follows Bacchus. As the poets

supposed that they were remarkable for piercing

eyes and keen raillery, they have placed them in

the same pictures with the Graces, Muses, and

even with Venus herself. It seems probable that

some large species of monkey or baboon seen in

the woods gave the first occasion to feign these

demi-gods. Pliny evidently points out some

sort of ape under the name of Satyr. He says

satyrs are found in some mountains of India;

they are nimble, running .sometimes upon all four, sometimes erect like men, and they are so swift that it is difficult to overtake them except they are old or sick. To this we may add, that shepherds covered with goatskins, and still more often priests of Bacchus, counterfeited satyrs, to seduce the innocent shepherdesses ; and thus we have the true explication of the fable. Hence the opinion spread that the woods were full of these mischievous divinities.' The shepherdesses trembled for their honor, and the shepherds for their flocks ; for which reason they sought to appease them by sacrifices, and by the offerings of the firstling of their flocks.

SATYRIASIS. See MEDICINE.

SATYR1UM, in botany, a genus of the diandria order, and gynandria class of plants ; natural order forty-second, verticillata; : nectarium scrotiform, or inflated double behind the flower. Species twenty-one, natives of warm climates.

SAVAGE, adj., n. s. & v. a.-\ Fr.

SAV'AGELY, cm.

SAV'AGENE>S, n. $.

SAV'AGEUY.

taught : a man untaught or uncivilised : to make

barbarous (a barbarism of Thomson's) : the ad-

verb corresponding ; and the noun substantives

see below.

Chain me to some sleepy mountain's top,

Where roaring bears and savage lions roam.

Shakspcure.

Your castle is surprised, your wife and babes

Savagely slaughtered. Id. Macbeth.

A savagennx in unreclaimed blood

Of general assault. Id. Il-jmlel.

'I his is the bloodiest shame,

The wildest tavag'ry, the vilest stroke,

That ever wall-eyed wiath, or staring rage,

Presented to the tears of soft remorse. Shahtpeare.

Thus people lived altogether a tawge life, 'till

Saturn, arriving on those coasts, devised laws to

govern them by. Raleigh.

Long after these times were they but savages. Id.

The seditious lived by rapine and ruin of all the country, omitting nothing of that which tanaget, unruly behaviour, clu

commit. Hni/tr

.•\ r. siiitvuˆf .

f Ital. selnipiiio.

f Wild; unculti

J vated ; un-

I see the savagest of all creatures, lions, tigers, bears, by an instinct from God, come to seek the ark (as we see swine foreseeing a storm run home crying for shelter), men I see not ; reason once debauched is worse than brutishness. Bp. Hall.

The savage clamour drowned,

Both harp and voice. Milton.

Cornels, and savage berries of the wood,

And roots and herbs, have been my meagre food.

Dryden.

A herd of wild beasts on the mountains, or a

savage drove of men in caves, might be so disor-

dered ; but never a peculiar people.

Sprat's Sermons.

To deprive us of metals is to make us mere savages ; to change our corn for the old Arcadian diet, our

houses and cities for dens and caves, and our cloath-

ing for skins of beasts : 'tis to bereave us of all arts and sciences, nay, of revealed religion. Benttey.

Tyrants no more their savage nature kept,

And foes to virtue wondered how they wept. Pope.

The Cyclops were a people of Sicily, remarkable

for savageness and cruelty. Broome.

Friends, relations, love himself,

Savaged by woe, forget the tender tie. Thornton.

SAVAGE (Richard), the poet, was the son of Anne countess of Macclesfield by the earl of Rivers, according to her own confession ; and was born in 1698. This confession of adultery was made to procure a separation from her husband, the earl of Macclesfield : yet, having obtained this end, no sooner was her spurious offspring brought into the world, than she resolved to disown him ; and, as long as he lived, treated him with the most unnatural cruelty. She endeavoured to send him secretly to the plantations; but, this plan being frustrated, she placed him apprentice with a shoemaker. In this situation, however, he did not long continue ; for his nurse dying he discovered his real mother, and therefore applied to her, and tried every art to attract her regard. But in vain did he solicit this unnatural parent ; she avoided him with the utmost precaution, and took measures to prevent his ever entering her house. Mean time, having a strong taste for poetry, he wrote two plays, Woman's a Riddle and Love in a Veil : by the second of which he acquired the acquaintance of Sir Richard Steele and Mr. Wilks, by whom he •was pitied, caressed, and relieved. But the

kindness of his friends not affording him a constant supply, he wrote the tragedy of Sir Thomas Overbury, which brought him in £200. He soon after published a volume of Miscellanies, to which he wrote a preface, in which he gives an account of his mother's cruelty. The profits of his tragedy and his Miscellanies somewhat raised him both in circumstances and credit; so that the world began to behold him with a more favorable eye, when both his fame and life were endangered by a most unhappy event. A drunken frolic in which he one night engaged ended in a fray, and, swords having been drawn on both sides, Savage unfortunately killed a man, for which he was condemned to be hanged. But the countess of Hertford at length laid his whole case before queen Caroline, and Savage obtained a pardon. Savage now lost that affection for his mother which the whole series of her cruelty had not before been able wholly to repress; and considering her as an implacable enemy, whom nothing but his blood could satisfy, threatened to harass her with lampoons, and to publish a copious narrative of her

conduct, unless she consented to allow him a

pension. This expedient proved successful ;

and lord Tyrconnel, upon his promise of laying

aside his design of exposing his mother's cruelty,

took him into his family, treated him as an equal, and engaged to allow him a pension of £200 a-

year. This was the happy period of Savage's

life. He was courted by all who wished to be

thought men of genius and taste. At this time

he published the Temple of Health and Mirth, on

the recovery of lady Tyrconnel from a long illness; and the Wanderer, a moral poem, which he de-

dicated to lord Tyrconnel, in strains of the highest panegyric: but these praises he soon was in-

clined to retract, being discarded by the man on

whom they were bestowed. Of this quarrel lord

Tyrconnel and Mr. Savage gave very different

accounts. But our author's conduct was ever

such as made all his friends, sooner or later,

grow weary of him, and even forced most of

them to become his enemies. Being thus once

more turned adrift upon the world, Savage,

whose passions were very strong and whose

gratitude was very small, exposed the faults

of lord Tyrconnel. He also took revenge upon

his mother, by publishing The Bastard. Some

time after this, Savage formed the resolution

of applying to the queen ; who having once

given him life, he hoped she might extend her

goodness to him, by enabling him to support it.

— With this view, he published a poem on hu

birth-day, which he entitled The Volunteer Lau

real ; for which she was pleased to send him £50

with an intimation that he might annually ex-

pect the same bounty. But this annual allow-

ance was nothing to a man of his strange and

singular extravagance. His usual custom was,

*as soon as he had received his pension, *n dis-*

appear with it, and secrete himself from his

most intimate friends, till every shilling of it was spent; which done he again appeared, pennyless

as before ; but he would never inform any per-

son where he had been, nor in what manner his

money had been dissipated. — From the reports,

however, of some who penetrated his haunts,

he expended botli his time and his cash in the

most sordid and despicable sensuality ; particu-

larly in eating and drinking, in which he would

indulge in the most unsocial manner, sitting

whole days and nights by himself, in obscure

houses of entertainment, over his bottle and

trencher, immersed in filth and sloth, with scarcely decent apparel ; generally wrapped up in a

horseman's great coat. His wit and talents,

however, still raised him new friends as fast as

his misbehaviour lost him his old ones. Yet such

was his conduct, that occasional relief only fur-

nished the means of occasional excess ; and he

defeated all the attempts made by his friends to

fix him in a decent way. Yet, amidst all his

penury and wretchedness, this man had so much

pride, and so high an opinion of his own merit,

that he was always ready to repress, with scorn

and contempt, the least appearance of any slight

towards himself, in the behaviourof his acquaint-

ance ; among whom he looked upon none as his

superior. He would be treated as an equal,

even by persons of the highest rank. He once

refused to wait upon a gentleman who was de-

sirous of relieving him when in the lowest dis-

tress, only because the message signified the gen-

tleman's desire to see him at nine in the morning.

.His life was rendered still more unhappy by the

death of the queen, in 1738, when his pension

was discontinued. His distress now became so notorious that a scheme was at length concerted for procuring him a permanent relief. It was proposed that he should retire into Wales, with an allowance of £50 a year, on which he was to live privately, in a cheap place, for ever quitting his town haunts, and resigning all farther preten-

sions to fame. This offer he seemed gladly to accept. In 1739 he set out for Swansey, in the Bristol stage-coach, and was furnished with fif-teen guineas to bear the expense of his journey. But, on the fourteenth day after his departure, his friends and benefactors, the principal of whom was Mr. Pope, who expected to hear of his arrival in Wales, were surprised with a letter from Savage, informing them that he was yet upon the road, and could not proceed for want of money. There was no other remedy than a remittance ; which was sent him, and by the help of which he was enabled to reach Bristol, whence he was to proceed to Swansey by water. At Bristol, however, he found an embargo laid upon the shipping ; so that he could not imme-diately obtain a passage. Here, therefore, being obliged to stay for some time, he so ingratiated

himself with the principal inhabitants, that he was often invited to their houses, distinguished at their public entertainments, and treated with a regard that highly gratified his vanity. At length, with great reluctance, he proceeded to Swansey ; where he lived about a year, very much dissatisfied with the diminution of his salary ; for he had, in his letters, treated his contributors so insolently that most of them withdrew their subscriptions. Here he finished a tragedy, and resolved to return with it to London ; which was strenuously opposed by his constant friend Mr. Pope ; who proposed that Savage should put this play into the hands of Mr. Thomson and Mr. Mallet, that they might fit it for the stage, that his friends should receive the profits it might bring in, and tha* the author should receive the produce by way of annuity. This kind and prudent scheme was rejected by Savage with contempt. — He declared he would not submit his works to any one's correction : ;ind that he would no longer be kept in leading-strings. Accordingly he soon returned to Bristol, in his way to London ; but at Bristol, meeting*

with a repetition of the same kind treatment he had before found there, he was tempted to make a second stay in that opulent city for some time. Here he was again not only caressed and treated, but the sum of £30 was raised for him, with which it had been happy if he had immediately departed for London. But he never considered that a frequent repetition of such kindness was not to be expected. In short, he remained here till his company was no longer welcome. Necessity came upon him before he ˆ•:is aware ; his money v-w spent, his clothes vcrc worn nut, his appparanri- was shabby ; lie now began to find every man from home at whose house he called; and he found it difficult to obtain a dinner. Thus reduced, it would have been prudent in him to have withdrawn from the place; but the mistress of a coffee house, to whom he owed about £8, arrested him for the debt. He remained for some time at a great expense, in the house of the sheriff's officer, in hope of procuring bail ; which expense he was enabled to defray by a present from Mr. Nash at Bath. No bail, however, was to be found; so that poor Savage was at last lodged

in Newgate, a prison in Bristol. But it was the fortune of this extraordinary mortal always to find more friends than lie deserved. The keeper of the prison took compassion on him, and greatly softened the rigors of his confinement by every kind of indulgence. While he remained here his ingratitude again broke out, in a bitter satire on the city of Bristol; to which he certainly owed great obligations, notwithstanding his arrest. This satire is entitled London and Bristol delineated; and in it he abused the inhabitants of the latter, with such a spirit of resentment, that the reader would imagine he had never received any other than the worst of treatment in that city. In about six months after his arrest he was seized with a disorder, which at first was not suspected to be dangerous ; but, growing daily more languid and dejected, at last a fever seized him ; and he died on the 1st of August 1743, in the forty-sixth year of his age. The works of this original writer, after having long lain dispersed in magazines and fugitive publications, were collected and published in an elegant edition, in 2 vols. 8vo. ; to which are prefixed, the admirable Memoirs of Savage, by Dr.

Samuel Johnson.

SAVAGE ISLAND, an island in the south Pacific Ocean, about thirty-three miles in circumference, discovered by captain Cook, in the year 1774. The name was given on account of the rude behaviour of the inhabitants. Captain Cook says the island is of a round -form, and good height ; and has deep waters close to its shores. All the sea coast, and as far inland as he could see, was covered with trees, shrubs, &c., among which were some cocoa-nut trees. The inhabitants seemed to be stout and well made. They fish with lights by night, called tomais, made from the bark of the cocoa-nut tree. They form a decoy for fish. The island is .in long. 169° 37′ W., and lat. 19° 1′ S.

SAVAGISM, a word of modern adoption, designed to express that ignorant and barbarous state of mankind, which most ancient philosophers, and some modern authors of eminence, suppose to have been the original state of all mankind. A numerous sect of ancient philosophers maintained that man literally sprung at first from the earth ; that he was without ideas and

without speech ; and that many ages elapsed be-

fore the race acquired the use of language, or at-

tained to greater knowledge than the beasts.

O^er sects again, with the vulgar, and almost

alrthe poets, maintained that the h'rst mortals

were wiser and happier, and moie powerful,

than any of their offspring ; that mankind, in-

MI,U! of being originally garages, and rising to

the state of civilisation by their own gradual and

progressive exertions, were created in a high de-

gree of perfection ; that, however, they degene-

rated from that state, and that all nature degene-

rated with them. Hence the various ages of the

world have almost every where been compared

to gold, silver, brass, and iron, the golden having always been supposed to be the first age. See

AGE.

Since the revival of letters in Europe, and es-

pecially during the last century, the same ques-

tion has been agitated both in France and the

England. Such of the ancients as held that man

was originally a savage were countenanced by

the atheistic cosmogony of the Phoenicians, and

by the early history of their own nations ; the moderns build their system upon what they suppose to be the constitution of the human mind, and upon the late improvements in arts and sciences. As the question must finally be decided by historical evidence, before we make our appeal to facts, we may remark, upon the supposition that all mankind were originally savages, destitute of the use of speech, and, in the strictest sense of the words, mutum et turpe pecus, the great difficulty is to conceive how they could emerge from that state, and become at last enlightened and civilised : but the modern advocates for the universality of the savage state remove this difficulty by a number of instincts or internal senses, with which they suppose the human mind endowed, and by which the savage is, without reflection, not only enabled to distinguish between right and wrong, and prompted to do every thing necessary to the preservation of his existence and the continuance of the species, but also led to the discovery of what will contribute, in the first instance, to the ease and accommodations of life. These instincts, they think, brought

mankind together when the reasoning faculty, which had hitherto been dormant, being now roused by the collisions of society, made its observations upon the consequences of their different actions, taught them to avoid such as experience showed to be pernicious, and to improve upon those which they found beneficial ; and thus was the progress of civilisation begun. But this theory seems opposed by unanswerable objections.

In the preliminary discourse to Sketches of tfye History of Man, lord Kames would infer, from some facts which he states, that many pairs of the human race were at first created, of very different forms and natures, but all depending entirely on their own natural talents. But to this statement he rightly observes that the Mosaic account of the creation opposes objections. ‘ Whence then,’ says his lordship, ‘ the degeneracy of all men into the savage state ? To account for that dismal catastrophe, mankind must have suffered some dreadful convulsion.’ Now this is taking for granted the very thing to be proved. We deny that at any period since the

creation, all men were sunk into the state of

savages ; and, that they were, no proof has yet

•oeen brought, nor do we know of any that can

be brought, unless our fashionable philosophers

Choose to prop their theories by the buttress of

Sanchoniatho 9 Phoenician cosmogony. His

lordship, however, says, or rather supposes, that

the confusion at Babel, &c., was this dreadful

convulsion : For, says he, by confounding the

language of men, and scattering them abroad

upon the face of all the earth, they were rendered savages. Here again we have a positive asser-

tion without the least shadow of proof; for it

does not at all appear that the confusion of lan-

guages, and the scattering abroad of the people,

was a circumstance such as could induce uni-

versal savagism. There is no reason to think

that all the men then alive were engaged in

building the tower of Babel ; nor does it appear

from the Hebrew original that the language of

those who were engaged in it was so much

changed as the reader is apt to infer from our

English version. That the builders were scat-

tered is indeed certain ; and if any of them were

driven, in very small tribes, to a great distance

from their brethren, they would in process of time

inevitably become savages. But it is evident, from

the Scripture account of the peopling of the

earth, that the descendants of Shem and Japheth

were not scattered over the face of all the earth, and that therefore they could not be rendered

savage by the catastrophe at Babel. In the

chapter which relates that wonderful event the

generations of Shem are given in orders down to

Abraham ; but there is no indication that they

had suffered with the builders of the tower, or

that any of them had degenerated into the state

of savages. On the contrary, they appear to have

possessed a considerable degree of knowledge ;

and if any credit be due to the tradition which

represents the father of Abraham as a statuary

and himself as skilled in the science of astro-

nomy, they must have been far advanced in the

arts of refinement. Even such of the posterity

of Ham as either emigrated or were driven frorr.

the plain of Shinar in large bodies, so far from

sinking into savagism, retained all the acquire-

ments of their antediluvian ancestors, and be-

came afterwards the instructors of the Greeks and

Romans. This is evident from the history of

the Egyptians and other eastern nations, who in the days of Abraham were powerful and highly civilised. And that for many ages they did not degenerate into barbarism is apparent from its having been thought to exalt the character of Moses, that he was learned in all the wisdom of the Egyptians, and from the wisdom of Solomon having been said to excel all the wisdom of the east country and of Egypt. Thus decided are the Scriptures of the Old Testament against the universal prevalence of savagism in that period of the world ; nor are the most authentic Pagan writers of antiquity of a different opinion. Mochus the Phoenician (Strabo, lib. 17), Democritus, and Epicurus, appear to be the first champions of the savage state, and they are followed by a mumerous body of poets and rhapsodists, among the Greeks and Romans, who were unquestionably devoted to fable and fiction. The account which they have given of the origin of man, the reader will find in other parts of this work. But we hardly think that he will employ it in support of the fashionable doctrine of original savagism. Against the wild reveries of this school might be quoted all the leaders of the other sects,

Greeks and barbarians ; the philosophers of both academies, the sages of the Italian and Alexandrian schools ; the magi of Persia ; the brahmins of India, and the druids of Gaul, &c. The testimonies of the early historians among all the ancient nations, indeed, who are avowedly fabulists, is very little to be depended on, and has been called in question by the most judicious writers of Pagan antiquity. (See Plutarch Vita Thes. sub. init. ; Thucyd. 1. i. cap. 1 ; Strabo, 1. xi. p. 507 ; Livy Pref. ; and Varro ap. August. de Civ. Dei.) The more populous and extensive kingdoms and societies were civilised at a period prior to the records of profane history ; the presumption, therefore, without taking revelation into the account, certainly is, that they were civilised from the beginning. This is rendered further probable from other circumstances. To account for their system, the advocates of savagism are obliged to hare recourse to numerous suppositions. They imagine that since the creation dreadful convulsions have happened, which

have spread ruin and devastation over the earth, which have destroyed learning and the arts, and brought on savagism by one sudden blow. But this is reasoning at random, and without a vestige of probability ; for the only convulsion that can be mentioned is that of Babel, which we have already shown to be inadequate.

It may be farther argued, that it does not appear that any people that were once civilised, and in process of time had degenerated into the savage or barbarous state, have ever recovered their pristine condition with foreign aid. Whence we conclude that man, once a savage, would never have raised himself from that hopeless state. This appeaVs evident from the history of the world ; for that it requires strong incitements to keep man in a high state of knowledge and civilisation is evident from what we know of the numerous nations which were famed in antiquity, but which are now degenerated in an astonishing degree. That man cannot, or, which is the same thing, has not risen from barbarism to civilisation and science by his own efforts and natural talents, appears further from the following facts : — The rudiments of all the learning, religion, laws, arts, and sciences, and other

improvements that have

enlightened Europe, a great part of Asia, and the

northern coast of Affica, were so many rays di-

verging from two points, on the banks of the

Euphrates and the Nile. In proportion as na-

tions receded from these two sources of huma-

nity and civilisation, in the same proportion

were they more and more immersed in ignorance

and barbarism. The Greeks had made no pro-

gress towards civilisation, when the Titans first,

and afterwards colonies from Egypt and Phe-

nicia, taught them the very elements of science

and urbanity. The aborigines of Italy wdre in

ihe same state prior to the arrival of the Pe-

lasgi, and the colonies from Arcadia and other

parts of Greece. Spain was indebted for the

fir^t seeds of improvement to the commercial

spirit of the Phoenicians. The Gauls, the

Britons, and the Germans, derived from the Ro-

mans all that in the early periods of their history they knew of science, or the arts of civil life, and so on of other nations in antiquity. The same

appears to be the case in modern times. The

countries which have been discovered by the

restless and inquisitive spirit of Europeans have

been generally found in the lowest stage of sava-

gism : from which, if they have emerged at all, it has been exactly in proportion to their connexion with the inhabitants of Europe. Even Western Europe itself, when sunk in ignorance, during the reign of monkery, did not recover by the efforts of its own inhabitants. Had not the Greeks, who in the fifteenth century took refuge in Italy from the cruelty of the Turks, brought with them their ancient books, and taught the Italians to read them, we, who are disputing about the origin of the savage state, and the innate powers of the human mind, had at this day been gross and ignorant savages ourselves, incapable of reasoning with accuracy upon any subject. That we have now advanced far before our masters is readily admitted; for the human mind, when put on the right track, and spurred on by emulation and other incitements, is capable of making great improvements ; but between improving science, and emerging from savagism, every one perceives there is an immense difference. Lork Kames observes that the people who inhabit a grateful soil, where the necessaries of life are easily procured, are the first who in-

vent useful and ingenious arts, and the first who figure in the exercises of the mind. But the Egyptians and Chaldeans, who are thought to support this remark, appear from what we have seen to have derived their knowledge from their antediluvian progenitors, and not from any advantages of situation or strength of genius. Besides, the inhabitants of a great part of Africa, of North and South America, and of many of the islands lately discovered, live in regions equally fertile, and equally productive of the necessaries of life, with the regions of Chaldea and Egypt ; yet these people have been savages from time immemorial, and continue still in the same state. The Athenians, on the other hand, inhabited the most barren and ungrateful region of Greece, while their acquirements in the arts and sciences have rarely been excelled. The Norwegian colony which settled in Iceland about the beginning of the eighth century inhabited a most bleak and barren soil, and yet the fine arts were eagerly cultivated in that dreary region, when the rest of Europe was sunk in ignorance and barbarism. Again, there are many parts of Africa, and of North and South America, where

the soil is neither so luxuriant as to beget indo-

lence, nor so barren and ungrateful as to depress

the spirits by labor and poverty ; where, notwith-

standing, the inhabitants still continue in an un-

cultured state. From all which, and from

numerous other instances which our limits per-

mit us not to bring forward, we infer that some

external influence is necessary to impel savages

towards civilisation; and that in the history of

the world, or the nature of the thing, we find no instance of any people emerging from barbarism

by the progressive efforts of their own genius.

On the contrary, as we find in societies highly

cultivated and luxurious a strong tendency to

degenerate, so in savages we not only find no

inaik of tendency to improvement, but rather a

rooted aversion to it. Among them, indeed, the

social appetite never reaches beyond their own

horde. It is, therefore, too weak and too con-

lined to dispose them to unite in large commu-

nities; and of course, had all mankind been

once in the savage state, they never could have

arrived at any considerable degree of civilisation. Instead of trusting to any such natural progress as is contended for, the providence of Heaven, in pity to the human race, appears, at different times, and in different countries, to have raised up some persons endowed with superior talents, who, having themselves acquired some knowledge in nations already civilised by useful inventions, legislation, religious institutions, and moral arrangements, sowed the first seeds of civilisation among the hordes of wandering disunited barbarians. Thus we find the Chinese look up to their Fohee, the Indians to the Brahma, the Persians to Zoroaster, the Chaldeans to Cannes, the Egyptians to Thoth, the Phoenicians to Melicerta, the Scandinavians to Odin, the Italians to Janus, Saturn, and Picus, and the Peruvians to Manco. In later times, and almost within our own view, we find the barbarous nations of Russia reduced to the same order and civilisation by the genius and exertions of Peter the Great. The endeavours of succeeding monarchs have powerfully contributed to the improvement of this mighty empire. In many parts of it, how-

ever, we still find the inhabitants in a state very little superior to savagism ; and, through the most of it, the lower, and perhaps the middling orders, appear to retain an almost invincible aversion to further improvements. A fact which, when added to numerous others of a similar nature which occur in the history of the world, seems to prove indisputably that there is no such natural propensity to improvement in the human mind as we are taught by some authors to believe. The origin of savagism, if we allow mankind to have been at first civilised, is easily accounted for by natural means : the origin of civilisation, if at any period the whole race were savages, cannot, we think, be accounted for otherwise than by a miracle, or a series of miracles. To many persons in the present day the doctrines we have now attempted to establish will appear very humiliating : it is a popular kind of philosophy to attribute to the human mind very pre-eminent powers; which so flatter our pride as in a great measure to pervert our reason, and blind our judgment. The history of the world, and of the dispensations of God to man, are certainly at variance with this doctrine respecting the origin of civilisation : for, if the human mind be possessed of that

innate vigor which that

doctrine attributes to it, it will be extremely

difficult to account for .those numerous facts

which seem with irresistible evidence to proclaim

the contrary ; for that unceasing care with which

the deity appears to have watched over us ; and

for those various and important revelations He has

vouchsafed to us. Let us rejoice and be thank-

ful that we are men and Christians ; but let not

a vain philosophy tempt us to imagine that we

are angels or gods.

SAVAN'-XA, w. s. Span, submi'ia. An open

meadow ; pasture ground.

He that rides posl through a country may tell how, in general, the parts lie ; here a morass, and there a river ; woodland in one part, and samnnut in another.

Locke.

Plains immens1.

And vast savannas, where the wandering eye,

Unfixed, is in a verdant ocean lost. Thomson.

SAVANNAH, a city and port of entry of the

United States, in Chatham county, Georgia, on

the south-west bank of the Savannah, seventeen

miles from its mouth. It is situated on a sandy

plain, about forty feet above low tide, and con-

tains a court-house, jail, alms-house, hospital, theatre, public library, academy, exchange, three banks, including a branch of the United States bank, and seven houses of public worship, one for Presbyterians, one for Episcopalians, one for Lutherans, one for Methodists, one for Baptists, one for Roman Catholics, and a Jewish synagogue.

The academy is built of brick and stone, 180 feet by sixty, of three stories. The exchange is a brick edifice of five stories. The new Presbyterian church is a very spacious and elegant edifice of stone. The city, a few years since, was almost wholly built of wood, with very few elegant houses ; but a large proportion of the houses recently erected are handsomely built of brick.

Savannah has heretofore been accounted very unhealthy during the summer and autumn, but the salubrity of the place is now much improved, by appropriating to a dry culture those lands in its immediate vicinity which were formerly appropriated to rice.

The city is regularly laid out, and contains ten public squares, each consisting of two acres, with a pump in the centre. The squares and

public walks are planted with china trees, which contribute much to the ornament, comfort, and salubrity of the place. Savannah is the great emporium of the state, and is a place of much trade. In six months, ending the 31st of March 1818, there were exported from it 61,797 bales of cotton, 13,680 tierces of rice, and 1500 hogs-heads of tobacco. The shipping owned here, in 1816, amounted to 12,766 tons. Vessels drawing fourteen feet of water come up to the wharfs ; larger vessels take in their cargoes at Five Fathom Hole, three miles below the town. On the east side of the city is Fort Wayne ; at Five Fathom Hole is Fort Jackson ; and on Tybee Island, near the mouth of the river, there is a light-house. 118 miles south-west of Charlestown, and 123 south-east of Augusta.

SAVANNAH, a river of the United States, which is formed by the union of the Tugeloo and Keowee. It separates South Carolina from Georgia, and runs south-east into the Atlantic. It is navigable for large vessels to the town of Savannah, seventeen miles, and for boats of 100 feet keel to Augusta, which, by the course of the river, is 340 miles above Savannah. Just above Augusta

there are falls ; beyond these the river is navigable for boats to the junction of the Tugeloo and Keowee.

SAVARY (James), an eminent French writer on trade, was born at Done, in Anjou, in 1622. He continued in trade until 1658, and was afterwards admitted of the council for the reforma-

tkm of commerce ; and the orders which passed in 1670 were drawn up by his instructions and advice. He wrote Le Parfait Negociant, 4to. ; and Avis et Conseils sur les plus Importantes Matieres du Commerce, 4to. He died in 1690; and out of seventeen children, whom he had by one wife, left eleven.

SAVARY (James and Philemon Lewis), two of the sons of the preceding, labored jointly on a Dictionnaire Universelle du Commerce, 2 vols. folio. This work was begun by James, who was inspector general of the manufactures at the cus tom-house, Paris ; who called in the assistance of his brother Philemon-Lewis, a canon of the

royal church of St. Maur, and at his death left him to finish it. This work appeared in 1723, and Philemon afterwards added a third supplemental volume to the former.

SAVARY, an eminent French traveller and writer, born at Vitry, in Britanny, about 1748. He studied with applause at Rennes, and, in 1776, travelled into Egypt, where he remained about three years. During this period he was engaged in the study of the Arabian languages, in searching out ancient monuments, and in examining the national manners. He next visited the islands in the Archipelago, where he spent eighteen months. On his return to France, in 1780, he published, 1. A Translation of the Koran with a short Life of Mahomet, 2 vols. 8vo. ; 2. The Morality of the Koran, or a collection of the most excellent maxims in the Koran ; a work extracted from his translation, which is esteemed both elegant and faithful; 3. Letters on Egypt, in 3 vols. 8vo., in 1785. In these the author makes his observations with accuracy, and renders interesting every thing he relates ; but he is censured for painting modern Egypt and its in-

habitants in too high colors. These letters, how-

ever, were rapidly sold ; and, encouraged by this

flattering reception, he prepared his Letters upon

Greece. But about this time he contracted a

malady from too intense application. His diges-

tion became languid ; sleep forsook him ; a dry

and troublesome cough came on ; his face ap-

peared bloated, and his legs inflamed. In this

situation he returned to Paris, in the beginning

of 1788, to attend to the publication of his new

work. He had then all the symptoms of a dan-

gerous dropsy. His strength was exhausted, and

he died on the 4th of February 1788.

SAUCE, n. t. & v. a.) Fr. souse, saulse ;

SADCE'PAN. } Ital. salsa ; Lat. salt us.

Something eaten with food to improve it or give

a relish : to treat with sauce; hence to intermix : a sauce-pan is properly a pan for cooking sauce.

The bitter sauce of the sport was that we had our honours for ever lost, partly by our own faults, but principally by his faulty using of our faults.

Sidney.

Then fell she to tauce her desires with threatenings.

Id.

All the delights of love, wherein wanton youth

walloweth, be but folly mixed with bitterness, and

sorrow untced with repentance. Spenter.

Epicurean cooks

Sharpen with cloyless tauce his appetite.

Slicksjvare.

ttuch was the sauce of Moab's noble feast,

Till night far spent invites 'hem to their rest.

Cow ley.

He thst spends his time in sports is like him

\vhosemeatisnothingbut sauces; they are health-

less, chargeable, and useless. Taylor.

Your master will not allow you a silver saucepan.

Swift.

High sauces and rich spices are fetched from the

Indies. Baker.

SAUCER, n. s. Fr. sauciere, or from sauce. A

small pan or platter in which sauce is set on the table

Infuse a pugil of new violets seven times, and it

shall make the vinegar so fresh of the flower, as, if brought in a saucer, you shall smell it before it come at you. Bacon.

Some have mistaken blocks and posts

For spectres, apparitions, ghosts,

With saucer eyes and horns. Hudibras.

The SAUCISSE, or SAUCISSON, in mining, is

a long pipe, sometimes made of leather, of about

an inch and a half diameter, filled with powder,

going from the chamber of the mine to the en-

trance of the gallery. It is generally placed in a

wooden pipe called an auget, to prevent its

growing damp. It serves to give fire to mines,

bomb-chests, &c.

SAU'CY, adj. -\ Fr. solace; Lat. so/or.

SAUCE'BOX, n. s. fPert; petulant; rude;

SAU'CILY, adv. £ impertinent : the adverb

*SAU'CINESS, n. s. * and noun-substantive cor-*

responding : saucebox is an impertinent busy

fellow.

With how sweet saws she blamed their sauciness,

To feel the panting heart, which through her side

Did beat their hands. Sidney.

You are more taucy with lords than the heraldry

of your birth and virtue gives you commission.

Sliakspeare.

And if thou hast the mettle of a king,

Being wronged as we are by this peevish town,

Turn thou the mouth of thy artillery,

As we will our's against these MHCI/ walls. Id.

Though this knave came somewhat saucily into the

world before he was sent for, yet was his mother fair.

Id.

By his authority he remains here, which he thinks is a patent for his sauciness. Id.

A freed servant, who had much power with Claudius, very saucily had almost all the words ; and, amongst other things, he asked in scorn one of the ‘ exammates, who was likewise a freed servant of Scribonianus, I pray, sir, if Scribonianus had been emperor, what would you have done 1 He answered, I would have stood behind his chair, and held my peace. Bacon.

It is saucinets in a creature, in this case, to reply. HnimhaU.

I lose my patience, when with saucy pride
By untuned ears I hear his numbers tried. Rnscommon.

Power’s first pedigree from force derives,
And calls to mind the old prerogatives
Of free-born man ; and with a saucy eye
Searches the heart and soul of majesty. Denham.

You saucinett, mind your pruning knife, or I may use it for you. Dryden’s Don Sebastian.

Imputing it to the natural aauciness of a pedant, they made him eat his words. L’ Estrange.

Homer, to express a man both timorous and saucy,

makes use of a kind of point, namely, that he had the eyes of a dog, but the heart of a deer.

Addiion's Spectator.

The foolish old poet says that the souls of some

women are made of sea water : this has encouraged

my sanccboi to be witty upon me. /rf.

SAV

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SAV

A trumpet behaved himself very saucily. Addison.

This might make all other servants challenge the

same liberty, and grow pert upon their masters ; and, when this sauciness became universal, what less mis-

chief could be expected than an old Scythian re-

bellion 1 Collier on Pride.

*SAVE, v. «., v. n., & adv.**

SA'VER, n. s.

SA'VING, adj., adv., & n. s.

SA'VINGLY, adv.

SA'VIOUR, n. s.

French sauver ;

Lat. salvo. To

. make or keep

safe ; reserve ;

spare; salve;

embrace opportunely ; preserve from eternal

death ; to be chief: a saver or saviour is one

who preserves ; rescues ; keeps ; the Redeemer

of mankind : saving, frugal ; parsimonious ; and

as an adverb with exception in favor of : as a

noun-substantive an escape of expense ; excep-

tion : savingly agrees with saving as an adjective.

He shall not feel quietness, he shall not lave of

that which he desired. Job xx. 20.

One shall cry unto him, yet cannot he answer, nor

*save him out of his troubles. f*a. xlvi. 7.*

We are not of them who draw back unto perdition ; but of them that believe to the saving of the soul.

Heb. x. 39.

They were manifoldly acknowledged the savers ot

that country. Sidney.

But being all defeated, save a few, ‘

Rather than fly, or be captived herself she slew.

Spenser.

All this world’s glory seemeth vain.

And all their shows but shadows, saving me. Id.

Whatsoever we read in Scripture concerning the

endless love and saving mercy which God showeth

towards his church, the only proper subject thereof

is this church. Hooker.

There are some that will be saved, and some that

will be damned. Shakspeare.

All the conspirators, save only he,

Did that they did in envy of great Cssar. Id.

Brass ordnance saveth in the quantity of the mate-

r al, and in the charge of mounting and carriage.

Bacon.

He never put down a near servant, save only

Stanley, the lord chamberlain. Id. Henry VII.

It is a great saving in all such lights, if they can be made as fair and light as others, and yet last longer. Bacon.

By nature far from profusion, and yet a greater

sparer than a saver ; for though he had such means to accumulate, yet his garrisons and his feastings

soaked his exchequer. Wotton.

His merits save them. Milton.

How build, unbuild, contrive

To save appearances : how gird the sphere

With centrick and eccentrick. Id.

How have I then with whom to hold converse,

Save with the creatures which I made? //.

So judged he man, both judge and Saviour sent. Id.

We may be confident whatever God does is in-

tended for our good, and whatever we interpret other-

wise we can get nothing by repining, nor save any

thing by resisting. Temple.

The circling streams, once thought but pools of

blood,

From dark oblivion Harvey's name shall save.

Dryden.

Will you not speak to save a lady's blush 1 Id.

Laws of arms permit each injured man

To make himself a saver where he can. Id,

Contend not with those that are too strong for us, but still with a saving to honesty ; for integrity must be supported against all violence. V [-'strange.

Saving the reverence due to so great a man, 1

doubt not but they did all creep out of their holes.

Ray on the Creation.

Silvio, finding his application unsuccessful, was

resolved to make a saving bargain ; and, since he

could not get the widow's estate, to recover what he had laid out of his own. Addison.

By reducing interest to four per cent, there was a considerable saving to the nation. Id.

However consonant to reason his precepts ap-

peared, nothing could have tempted men to acknow-

ledge him as their God and Saviour, but their being firmly persuaded of the miracles he wrought. Id.

He who feareth God, and worketh righteousness,

and perseveres in the faith and duties of our religion, shall certainly be saved. Rogers.

She loved money ; for she was saving, and applied

her fortune to pay John's clamorous debts.

Arbuthnot's History of John Bull.

They meanly pilfer, as they bravely fought,

Now save a nation, and now nave a groat. Pope.

The same persons, who were chief confidents to

Cromwell, foreseeing a restoration, seized the castles, in Ireland, just saving the tide, and putting in a stock of merit sufficient. Swift.

Who dares affirm this is no pious age,

When charity begins to tread the stage 1

When actors, who at best are hardly savers,

Will give a night of benefit to weavers? Id.

Be saving of your candle. – Id.

Will no superior genius snatch the quill,

And save me on the brink from writing ill 1 Young.

SAVE, a large river of Austrian Illyria, rising

about six miles to the south of Villach, and flow-

ing through a part of Styria and Croatia. After

leaving the latter, it separates Sclavonia from

Turkey, till it joins the Danube, between Semlin

and Belgrade. Its course is at first winding ; and

it frequently overflows its banks. It is, however,

of great importance to the trade of all the coun-

tries through which it passes, and is the medium

by which the corn and tobacco of the Bannat

and neighbouring provinces are interchanged.

SAVENDROOG, a celebrated but unhealthy fortress of the Mysore, Hindostan. It is situated on the summit of an immense rock, half a mile in perpendicular height, and surrounded by a thick wood. It was considered by the natives impregnable ; but was taken by storm, without the loss of a man, by the British, in 1791. It was used by Hyder Aly and Tippoo Sultan as a state prison. Long. 77° 29′ E., lat. 12° 56′ N.

SA VERNE, a well built town in Alsace, department of the Lower Rhine. It is situated on the Sarre, and has a castle, formerly the residence of the bishops of Strasburg. Saverne has a great trade in woollens, leather, hardware, pottery, and tobacco, almost all manufactured in the town ; and the surrounding country is productive in wine. The town contains a college, an hospital, and 6000 inhabitants. Twenty-two miles W.N.W. of Strasburgh.

SAVILE (Sir George), afterwards marquis of Halifax, was born about 1630; and, some time after his return from his travels, was created ? peer, in consideration of his own and his father‘5 merits. He was a strenuous opposer of the bill of exclusion ; but proposed such limitations of

the duke of York's authority as should disable him from doing any harm either in church or state, as the taking out of his hands all power in SAV

ecclesiastical matters, the disposal of the public money, and the power of making peace and war; and lodging these in the two houses of parliament. After that bill was rejected in the house of lords, he pressed them, though without success, to proceed to the limitation of the duke's power ; and began by moving that, during the king's life, he might be obliged to live 500 miles out of England. In August 1682 he was created a marquis, and soon after made lord privy-seal. Upon king James's accession he was made president of the council ; but, on his refusal to consent to the repeal of the test, he was dismissed from all public employments. In that assembly of the lords which met after king James's withdrawing himself the first time from Whitehall, he was chosen president ; and upon the king's return from Feversham he was sent, with the earl of Shrewsbury and lord Delamere, from the prince of Orange, to order his majesty to quit

the palace at Whitehall. In the convention-parliament he was chosen speaker of the house of lords, and strenuously supported the motion for the vacancy of the throne, and the conjunctive sovereignty of the prince and princess ; upon whose accession he was again made privy -seal. Yet, in 1689, he quitted the court, and became a zealous opposer of the measures of government till his death, in April 1695. He wrote, The Anatomy of an Equivalent ; a Letter to a Dissenter; a Rough Draught of a new Model at Sea ; and Maxims of State ; all in one volume 8vo. He also published the character of king Charles II., 8vo. ; the Character of Bishop Burnet, and Historical Observations upon the Reigns of Edward I., II., III., and Richard II., with Remarks upon their faithful Counsellors and false Favorites.

SAVILE, or SAVILLE (Sir Henry), was born at Bradley, near Halifax, in Yorkshire, in 1549. He was entered of Merlon College, Oxford in 1561, where he took the degrees in arts, and was chosen fellow. When he proceeded M. A., in 1570, he read for that degree on the Almagest of

Ptolemy. In 1578 he travelled into France and other countries ; and at his return was made tutor in the Greek to queen Elizabeth, who had a great esteem for him. In 158.5 he was made warden of Merton College, which he governed thirty-six years with great honor, and fmproved it by all the means in his power. In 1596 he was chosen provost of Eton College. In 1619 he founded in the university of Oxford two professorships in geometry and in astronomy ; which he endowed with a salary of £160 a-year besides a legacy of £600 to purchase more lands for the same use. He also furnished a library with mathematical books, near the mathematical school, for the use of his professors ; and gave £100 to the mathematical chest of his own appointing : adding afterwards a legacy of £40 a-year to the same chest, to the university, and to his professors jointly. He likewise gave £120 towards the new building of the schools, besides several rare MSS. and printed books to the Bodleian library ; and a quantity of Greek types to the printing-press at Oxford. After a life spent in the encouragement of science and literature in general, he died at Eton College the 19th of

February, 1622, in the seventy-third year of his age, and was buried in the chapel. The highest encomiums are bestowed on him by all the learned of his time : by Casaubon, Alercerus, Meibomius, Joseph Scaliger, and bishop Montague ; who in his Diatribae upon Selden's History of Tythes, styles him, 'that magazine of learning, whose memory shall be honorable amongst not only the learned, but the righteous' forever.' His publications are, 1. Four Books of the Histories of Cornelius Tacitus, and the Life of Agricola; with Notes upon them, in folio, dedicated to queen Elizabeth in 1581. 2. A View of certain Military Matters, orCommmentaries concerning Roman Warfare, 1598. 3. Rerum Anglicarum Scriptores Post Bedam, &c. 1596. 4. The Works of St. Chrysostom, in Greek, in 8 vols. folio, 1613. Several editions of this work were afterwards published in Paris. 5. In 1618 he published a Latin Work, written by Thomas Bradwardin, archbishop of Canterbury, against Pelagius, entitled De Causa Dei contra Pelagium, et de Virtute Causarum ; to which he prefixed the life of Bradwardin. 6.

'In 1621 he published a collection of his own Mathematical Lectures on Euclid's Elements, in 4to. — 7. Oratio Coram Elizabetha Regina, Oxoniae Habita, anno 1592. Oxford 1658, 4to. 8. He translated into Latin King James's Apology for the Oath of Allegiance. He also left several MSS. behind him, written by order of king James ; all which are in the Bodleian library. Four of his letters to Camden are published by Smith, among Camden's Letters, 1691, 4to.

SAVIN, in botany. See JUNIPERUS.

SAVIOUR, ORDER OF ST., a religious order of the Romish church, founded by St. Bridget, about the year 1445, and so called from its being pretended that our Saviour himself declared its constitution and rules to the foundress. It is principally founded for religious women, who pay a particular honor to the holy virgin ; but there are some monks of the order, to administer the sacrament and spiritual assistance to the

SAUL, Heb. blKBT, i.e. asked, the son of Kish, a rich man of Gibeah, of the tribe of Benjamin, the first king of Israel. Saul's fruitless journey seeking his father's asses ; his meet-

ing with the prophet Samuel ; the interesting particulars foretold to him, with his anointing as king, about A. A. C. 1095, or A. M. 2909 ; his prophesying with the young prophets ; his appointment by the lot ; his modesty in hiding himself; his first victory over the Amorites; his rash sacrifice in the absence of Samuel; his equally rash curse ; his victories over the Philistines and Amalekites ; his sparing of king Agag, with the judgment pronounced against him for it ; his jealousy and persecution of David ; his barbarous massacre of the priests and people of Nob; his repeated confessions of his injustice to David ; his consultation of the witch of En-dor ; with his defeat and suicide, are recorded in 1 Sam. ix — xxxi. He reigned forty years, and died A. M. 2949

SAUMUR, a central town of France, in Anjou, situated on the southern bank of the Loire, over which it has two bridges, the one

from the northern bank to an island in the mid-

dle, and the other from the island to the southern bank. The former was much injured in the revolutionary war; but the latter, consisting of twelve elliptical arches, each of sixty feet span, is still one of the finest structures of the kind in France. The principal street, built on a line with this bridge, contains the theatre, and various other elegant buildings. The castle, situated on an eminence which commands the town, is a very ancient building, and is used as a depot for military stores. The cavalry barracks are spacious and handsome, and the town contains several squares and Roman and Celtic antiquities. Its chief attraction, however, is the beauty of the surrounding scenery. Saumur was formerly fortified, and has long been noted for Protestantism. In the time of Henry IV. the governor of this part of France, Duplessis Mornay, founded here a Protestant academy, much resorted to during the seventeenth century. It has manufactures of linen, woollens, leather, and some trade in wine and brandy. Saumur was the birthplace of madame Dacier. The road to Tours is along the banks of the Loire, on the great mound called the Leve. Twenty-seven miles south-east

of Angers, and thirty-eight W. S. W. of Tours.

SAUNDERS, in botany and dyeing. See

PTEROCARPUS SANTALUM.

SAUNDERSON (Dr. Robert), an eminent

preacher, born at Rotherham in Yorkshire, in

1587. He attended the grammar-school at Ro-

therham, where he made such rapid proficiency

that at thirteen he was sent to Lincoln College,

Oxford. In 1608 he was appointed logic reader.

He took orders in 1611, and was promoted suc-

cessively to several benefices. Archbishop Laud

recommended him to king Charles I. as a pro-

found casuist, who appointed him one of his

chaplains in 1631. The king regularly attended

his sermons, and said that 'he carried his ears to hear others, but his conscience to hear Saunder-

son.' In 1642 Charles created him regius pro-

fessor of divinity at Oxford and canon of Christ

Church; but in 1648 he was ejected by the

visitors from the parliament. When the parlia-

ment proposed the abolition of the episcopal

form of church-government, Charles desired him

to take the subject under his consideration. He

accordingly wrote a treatise entitled Episcopacy

as Established by law in England not Prejudicial

to Regal Power. At the request of the celebrated Boyle, who sent him a present of £50, Saunderson published his book De Conscientia. On the restoration of Charles II. he recovered his professor^hip and canonry, and soon after was made bishop of Lincoln. During the two years and a half in which he possessed this new office, he spent a considerable sum in augmenting poor vicarages, in repairing the palace at Bugden, &c. He died January 29th, 1663, in his seventy-sixth year. 1. In 1615 he published Logicae Artis Compendium, which was the system of lectures he had read in the University. 2. Sermons, amounting to thirty-six, printed in 1681, folio, with the author's life by Walton. 3. Nine Cases of Conscience Resolved ; 1678, 8vo. 4. De Juramenti Obligatione. This book was translated into English by Charles I. while a prisoner in the Isle of Wight, and printed in London in 1665, 8vo. 5. De Obligatione Conscientiae. 6. Censure of Mr. Antony Ascham, and of his book of the Confusions and Revolutions of Government. 7. Pax Ecclesiee, concerning Predestination, or the Five Points. 8.

Two Discourses in Defence of Archbishop Usher's Writings.

SACNDERSON (Dr. Nicolas), born at Thurlstone in Yorkshire in 1682, lost his sight by the small-pox before he was a year old. But never, theless he was initiated into the Greek and Roman authors at a free school at Penniston After spending some years studying the languages, his father, who was in the excise, began to teach him arithmetic. He soon surpassed his father ; and made long and difficult calculations without any sensible marks to assist his memory. At eighteen he was taught the principles of Algebra and geometry by Richard West, esq., of Undoorbank, who, though a gentleman of fortune, yet, being strongly attached to mathematical learning, undertook his education. Saunderson was also assisted in his mathematical studies by Dr. Nettleton. These two gentlemen read books to him and explained them. Some of his friends, who had remarked his perspicuous manner of communicating his ideas, proposed that he should attend the university of Cambridge as a teacher of mathematics. This proposal was immediately

put in execution ; and he was conducted to Cambridge, in his twenty-fifth year, by Mr. Joshua Dunn, a fellow-commoner of Christ's College. The subject of his lectures was the Principia Mathematica, the Optics, and Arithmetica Universalis of Sir Isaac Newton, and he was attended by a very numerous audience. When Whiston was removed from his professorship, Saunderson was universally allowed to be the man best qualified for the succession. The heads of the university applied to their chancellor, the duke of Somerset, who procured the royal mandate to confer upon him the degree of A. M. He was then elected Lucasian professor of mathematics in November 1711. He now devoted his whole time to his lectures. When George II., in 1728, visited the university of Cambridge, he expressed a desire to see professor Saunderson. He waited upon his majesty in the senate house, and was there, by the king's command, created LL.D. He was admitted F.R.S. in 1736. He was naturally of a vigorous constitution ; but his sedentary life at length rendered him scorbutic. He died on the 19th of April, 1739, aged

fifty-seven. He wrote a system of algebra, which was published in 2 vols. 4to. at London, after his death in 1740, at the expense of the University. Dr. Saunderson invented for his own use a Palpable Arithmetic ; that is, a method of performing operations in arithmetic solely by the sense of touch. In the cabinet of medals, at Cambridge, he could single out the Roman medals with the utmost correctness ; he could Iso perceive the slightest variation in the atmosphere. When he walked, he knew when he passed by a tree, a wall, or a house. He made these distinctions from the different way his face was affected by the motion of the air. In his youth he had been a performer on the flute ; and

made such proficiency, that, if he had cultivated his talents in this way, he would probably have been as eminent in music as he was in mathematics. He recognised not only his friends, but even those with whom he was slightly acquainted, by the tone of their voice.

SAUNTER, v. n. Fr. alter a la salute terre.

from idle people who roved about the country,

and asked charity under pretence of going to the

holy land ; or sans terre, having no settled home. To wander about idly ; loiter ; longer.

Tell me, why tauniering thus from place to place

I meet thee, Naevolus. with clouded face ? Dryden.

The cormorant is still iauj\tering by the sea-side,

to see if he can find any of his brass cast up.

L'Ettrange.

Though putting the mind upon an unusual stress

that may discourage, ought to be avoided ; yet this must not run it into a lazy sauntering about ordinary things. Lock.*

So the young squire, when first he comes

From country school to Will's or Tom's,

Without one notion of his own,

He MMntert wildly up and down. Prior.

Here tauntering apprentices O'IT Otway weep. Gay.

The brainless stripling

Spells uncouth Latin, and pretends to Greek ;

A taitnteriny tribe ! such born to wide estates,

With yea and no in senates hold debates. Tkkel.

Led by my hand, he taitntered Europe round,

And gathered every vice in every ground. Dunciad.

SAVONA, at one time a place of great trade

in the north-west of Italy, was, in 1648, half destroyed by an explosion of 1000 barrels of gunpowder, which had been deposited in the citadel. Since then it has suffered both from pestilence and war. The principal articles of trade are silk, wool, and fruit ; and heavy iron ware, such as ships' anchors. Savona was the birth-place of popes Sixtus IV. and Julius II. Columbus was for some time a resident here. In 1745 sixteen French and Spanish vessels, laden with military stores, and lying in the harbour, were sunk by the bombs of a British squadron. In 1746 the king of Sardinia took the town; and in 181U and 1811 pope Pius VII. resided here some time during his dispute with Buonaparte. Inhabitants 10,000. Twenty miles W.S.W. of Genoa, and sixty north-east of Nice.

SAVONAROLA (Jerome), a celebrated Italian monk, born at Ferrara in 1452, and descended from a noble family. At the age of twenty-two he assumed the habit of a Dominican friar, without the knowledge of his parents, and distinguished himself in that order by his piety and ability as a preacher at Florence. He placed

himself at the head of the faction which opposed the family of the Medici. He explained the Apocalypse, and pointed out a prophesy which foretold the destruction of his opponents. He predicted a renovation of the church, and declaimed with much severity against the clergy and the court of Rome. Alexander VI. excommunicated him, and prohibited him from preaching. He derided the anathemas of the pope ; yet he forbore preaching for some time, and then resumed his employment with more applause than ever. The pope and the Medici family then thought of attacking him with his own weapons. Savonarola having posted up a thesis as a subject of disputation, a Franciscan, by their instigation, offered to prove it heretical. The Franciscan was seconded by his brother friars, and Savonarola by his brethren. To convince their antagonists of the superior sanctity of Savonarola, one of the Dominicans offered to walk through a fire : and, to prove his w ickedness, a Franciscan agreed to the same experiment. The multitude, eager to witness so extraordinary a spectacle, urged both parties to come to a deci-

sion; and the magistrates were constrained to give their consent. Accordingly, Saturday the 7th of April, 1498, was fixed for the trial. On that day the champions appeared ; but when they saw one another in cold blood, and beheld the wood in flames, they were anxious to escape the imminent danger into which they had rashly thrown themselves. The Dominican pretended he could not enter the flames without the host in his hand. This the magistrates refused to allow; and the Dominican's fortitude was not put to the test. The Franciscans incited the multitude against their opponents, who accordingly assaulted their monastery, broke open the gates, and entered by force. Upon this, the magistrates brought Savonarola to trial as an impostor. He was put to the torture, and examined ; and in the answers which he gave fully evinced that he was a fanatic. He boasted of having frequent conversations with God ; and his brother friars were credulous enough to believe him. John Francis Picus, earl of Mirandula, who wrote his life, assures us that the devils which infested the convent of the Dominicans trembled at the sight of fiiar Jerome. At length

pope Alexander VI. sent the chief of the Dominicans, with bishop Romolino, to degrade him from holy orders, and to deliver him up to the secular judges with his two fanatical associates. They were condemned to be hanged and burned on the 23d of May, 1498. Savonarola submitted to the execution of the sentence with ereat firmness and devotion, and without uttering a word respecting his innocence or his guilt. He was forty-six years of age. Immediately after his death, his Confession was published in his name. It contained many extravagancies, but nothing to deserve so horrid a punishment. His adherents did not fail to attribute to him the power of working miracles ; and so strong a veneration had they for their chief that they preserved with pious care any parts of his body which they could snatch from the flames. The earl of Mirandula, the author of his life, has described him as an eminent saint. He gravely informs us that his heart was found in a river; and that he had a piece of it in his possession, which had been very useful in curing diseases, and ejecting demons. Savonarola has also been defended by

F. Quetif, Bzovius, Baron, and other religious

Dominicans. He wrote a prodigious number

of books. He has left, 1. Sermons in Italian:

2. A treatise entitled Triumphus (Jrucis ; 3.

Eruditorum Confessorum ; and several others.

His works have been published at Leyden in b

vols. 12mo.

SA'VOR, n.s., v.n. & v. a.-\ Fr. sai-fur.

ˆA'VORII.Y, adv. f Ascent ; odor;

SA'VOR ix ESS, «• s. £ taste: to have

SA'VORY, tidj.) a particular

taste; betoken: to like; relish; the adverb,

noun-substantive, and adjective corresponding.

Savoury meat, such as my father loveth. Genesis.

Thou savourest not the things that be of God.

Matthew.

What tavour is better, if physick be true,

For places infected, than wormwood and rue ?

Tusser.

This ripping of ancestors is very pleasing, and sa-

roureth of good conceit and some reading.

Spenser on Ireland.

Wisdom and goodness to the vile seem vile ;

Filths savour but themselves. Sliakspeare.

The duke's answers to his appeachments are very

diligently and civilly couched ; and, though his heart was big, yet they all savour of an humble spirit.

Wotton.

Benzo calls its smell a tartareous and hellish sa-

vour. Abbot.

If 'twere a secret that concerned my life,

This boldness might become thee ;

But such unnecessary rudeness savours

Of some design. Denham's Sophy.

That savours only of rancour and pride. Milton.

The pleasant savoury smell

So quickened appetite, that I

Could not but taste ! Milton's Paradise Lost.

That Jews stink naturally, that is, that there is

in their race an evil savour, is a received opinion we know not how to admit. Browne's Vulgar Errours.

This mufti is some English renegado, he talks so

favourilu of toaping. Drydf.ns Don Sebastian.

The collation he fell to very s

A director influence from the sun gives fruit a

better savour and a greater worth. Smith.

I have rejected every thing that savours of party.

Addisim.

Truffles, which have an excellent oil, and a volatile salt of a grateful savour, are heating.

Arbuthnot on Diet.

SAVOY, a duchy of the north-west part of the continental states of Sardinia, extending from lat. 45° 8′ to 46° 28′ N. It is bounded on the vest by France, on the east by Piedmont. Its form is oblong, its length from north to south being ninety-four miles, its general breadth between sixty and seventy. Its superficial extent is about 3800 square miles ; its population about 450,000.

The scenery of Savoy, less remarkable for beauty than for grandeur, produces in the mind of the spectator feelings of awe, and even terror. From the bleak tops of the mountains the view is infinitely diversified: the bottom of the valley is strewed with cottapes, fields, and vineyards ; verdant pastures extend along the base, and through a considerable part of the ascent : here succeed forests, often of great length ; while the summit is crowned with snow and ice. Savoy is

the region of Mount Blanc, Mount St. Bernard,

Mount Cenis, Mount Iseran, Mount Valaison,

and Mount Toumet, all connected, forming the

stupendous barrier between Savoy and Piedmont.

The roads are often impassable for carriages,

and burdens are generally carried on the backs

of horses or mules. Wheat, barley, oats, rye,

and hemp, are produced in the valleys : and the

pasturage enables the agriculturists to send num-

bers of fine cattle into Piedmont and the Mila-

nese. The exports are chiefly raw produce, such

as cheese, butter, hemp, tanned skins, and wool.

The transit trade between France and Italy is

earned on chiefly by the new road across Mount

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Cenis : the manufactures are confined to a few

coarse linens, tanning, hardware, pottery, and a

little paper.

The Savoyards have a brown complexion, from

their frequent exposure to the air, and live chiefly in the country ; for except Chambery, their ca-

pital, there is no town of 5000 inhabitants. From

the simplicity of their manners, and their fru-

gality and sobiiety, they have, by some writers,

been compared to the Germans, as described by

Tacitus. An uninstructed, they are at the same time an uncorrupted people. The language in common use is a mixture of French and Italian. The Savoyards quit their native mountains, in the same way as the Welsh or the Scottish Highlanders, and are remarked for pursuing a variety of petty callings. ' The Savoyards,' says Mr. Galette, a late observer, ' are good-natured, gentle, plain in their manners, simple in their affection, faithful, and honest. Improvidence is a striking feature in their national character, and is as strong in the nobleman as the peasant. They are always in debt ; and I really shoulnot think it possible to name three persons among a hundred, taken at random, whose property would; be free from incumbrance. They are unthinkingly liberal and generous ; yet they cannot bring themselves to pay what they owe ! If you happen to have a claim for £5 on a Savoyard, he will, very probably, spend £100 in giving you and your whole family a hearty hospitable reception, for months, but the poor £5 will not be forthcoming after all. The laws, with respect to debtors, are the worst in Europe ; they are

framed in such a manner as effectually to prevent strangers from lending pecuniary assistance to the natives, even on the best landed security.' On the whole, this country is very far behind the rest of Europe, and seems to belong to another century, or to another quarter of the globe. Savoy (derived from the Latin Sabaudia) was the country of a well known tribe of Celtic origin, the Allobroges, who were subjugated in the reign of Augustus. Their country formed a part of the great province of Gallia Narbonensis, and remained in possession of the Romans during several centuries ; a length of possession which accounts for the numerous remains of Roman antiquities found in different parts. After various changes, it was erected, in the beginning of the eleventh century, into a county. In the fifteenth century it became a dukedom, and had a large accession of power in the acquisition of Piedmont. The ducal family, as we have seen in the article SARDINIA, acquired the royal title in 1719, and with it nearly its present dominions.

SAVOY, in botany. See BRASSICA.

SAURIN (James), a celebrated preacher, born at Nismes in 1677, and the son of a Protestant lawyer of eminence. He applied to his studies with great success ; but at length he relinquished them for the profession of arms. In 1694 he made a campaign as a cadet in lord Galloway's company, and soon afterwards obtained a pair of colors in the regiment of colonel Renault, which served in Piedmont. But, the duke of Savoy having made peace with France, he returned to Geneva, and resumed the study of philosophy

and theology, under Turretin and other professors. In 1700 he visited Holland, then came to England, where he remained for several years, and married. In 1705 he returned to the Hague, where he fixed his residence, and preached with the most unbounded applause. His sermons, especially those published during his life, are distinguished for justness of thought, and an elegant unaffected style. Saurin died on the 30th

of December, 1730, aged fifty-three. He wrote 1. Sermons, in 12 vols. 8vo. and 12mo. 2. Discourses Historical, Critical, and Moral, on the most memorable Events of the Old and New Testament. This is his greatest and most valuable work. It was printed first in 2 vols. folio. Beausobre and Roques undertook a continuation of it, and increased it to 4 vols. 3. The State of Christianity in France, 1725, 8vo. 4. An Abridgment of Christian Theology and Morality, in the form of a Catechism, 1722, 8vo. He afterwards published an abridgment of this work. 5. His Dissertation on the Expediency of sometimes disguising the Truth raised a multitude of enemies against him. In this discourse his plan was to state the arguments of those who affirm that, in certain cases, it is lawful to disguise truth, and the answers of those who maintained the contrary. He does not determine the question, but seems, however, to incline to the first opinion. He was immediately attacked by several adversaries, and a long controversy ensued ; but his doctrines and opinions were at length publicly approved of by the synods of Campen and of the Hague.

SAURIN (Joseph), a geometrician of the Academy of Sciences at Paris, born at Courtouson, in the principality of Orange, in 1659. His father, who was a minister at Grenoble, was his first preceptor. He made rapid progress in his studies, and was admitted minister of Eure, in Dauphiny, when very young ; but, having made use of some violent expressions in one of his sermons, he was obliged to quit France in 1683. He retired to Geneva, and thence to Berne, where he obtained a considerable living; but soon after repaired to Holland. He returned afterwards to France, and surrendered himself lo Bossuet bishop of Meaux, who obliged him to make a recantation of his errors. He was favorably received by Louis XIV., obtained a pension from him, and was treated by the Academy of Sciences with the most flattering respect. At that time (1717) geometry formed his principal occupation. He adorned the Journal des Seavans with many excellent treatises ; and he added to the Memoirs of the Academy many interesting papers. These are the only works which he has left. He died in Paris December 29th, 1737,

in his seventy-eighth year, of a fever.

SAUROMATˆE. See S ARM AT.*

SAURURUS, in botany, lizard's tail, a genus of the tetragynia order and heptandria class of plants ; natural order second, piperitae : CAL. a catkin, with uniflorous scales: COR. none; germina four and four monospermous berries.

SAUSSURE (Horace Benedict), de, was born in Geneva in 1740. His earliest passion was botany : his father was a scientific agriculturalist ; and a variegated soil, abundant in plants of different kinds, invites the inhabitant of the banks of the Leman to cultivate that agreeable science. This taste produced an intimacy between De Saussure and the great Haller. De Saussure was induced also to study the vegetable kingdom, by his connexion with Ch. Bonnet, who had married his aunt, and who soon set a just value on the rising talents of his nephew. Bonnet was then employed on the leaves of plants. De Saussure studied these organs of vegetables also, and he published the result of his researches, under the title of Observations on the Bark of Leaves. This small work, which appeared soon after 1760, contains new observations on the

epidermis of leaves, and in particular on the miliary glands by which they are covered. About that period, the place of professor of philosophy falling vacant, it was conferred upon De Saussure, who was then only twenty-one years of age. At that time the two professors of philosophy at Geneva taught physics and logic alternately. De Saussure discharged this double task with equal success. For physics, however, he had the greatest taste, and they conducted him to the study of chemistry and mineralogy. He then began his travels through the mountains ; not now to examine their vegetable productions, but to study their geological character. During the first fifteen or twenty years of his professorship he employed himself by turns in discharging the duties of his office, and in traversing the different Alpine ranges near Geneva. He even extended his excursions on one side as far as the banks of the Rhine, and on the other to Piedmont. At the same time he undertook a journey to Auvergne, to examine there the extinguished volcanoes, and another to Paris, England, and Holland. After that he visited Italy and Sicily. In 1779 he published the first volume of his

Travels through the Alps; which contains a minute description of the environs of Geneva, and an excursion as far as Chamouni, a village at the bottom of Mont Blanc. Amidst his numerous excursions through the Alps, and at the time of the political troubles of Geneva in 1782, he made his experiments on hygrornetry, which he published in 1783, under the title of Essays on Hygrornetry. In 1786 De Saussure resigned the professor's chair, which he had filled for about twenty-five years, to his pupil and fellow-laborer Pictet. The second volume of his Travels was published in 1786. It contains a description of the Alps around Mont Blanc, and also some interesting experiments on electricity, and a description of his electrometer. Some years after the publication of the second volume of his Travels, he was admitted as a foreign associate of the Academy of Sciences of Paris. De Saussure was the founder of the Genevese Society of Arts, over which he presided till thelast moment of his life ; and one of his fondest wishes was the preservation of this useful establishment.

By his fatiguing labors in the council of Five Hundred, of which he was a member, and after-

wards in the National assembly, his health, how

ever began to be deranged, and in 1794 he was

almost deprived of the use of his limbs by a stroke of the palsy. But his mind still preserved its

activity; and after that accident he revised the

two last volumes of his Travels, which appeared

in-1796. They contain an account of his excur-

sions to the mountains of Piedmont and Switzer-

land, and in particular of his journey to the sum-

mit of Mont Blanc. It was also during his illness

that he directed the experiments made on the

height of the bed of the Arve, and that he pub-

lished Observations on the Fusibility of Stones

by the Blow-pipe, which were inserted in the

Journal de Physique. Having gone for the sake

of his health to the baths of Plombiers, he still ob-

served the mountains at a distance, and caused

to be brought to him specimens of the strata

which he perceived in the steepest rocks. He had

announced that he would conclude his travels

with some ideas on the primitive state of the

earth ; but the more he acquired new facts, and

the more he meditated on the subject, the more uncertain did his opinions become in regard to those grand revolutions which preceded the present epoch. Though the state of his health began gradually to become worse, the French government appointed him professor of philosophy at the Special School of Paris; but his

strength was exhausted. On the 22d of March, 1799, he terminated his brilliant career at the age of fifty-nine. Saussure was not only the author of many Essays, and Papers, relating to natural history, but displayed his ingenuity by the construction of a thermometer for measuring the temperature of water at various depths, of a hygrometer, to determine the quantity of aqueous vapor in the air, of a eudiometer to ascertain the purity of the atmosphere, of an electrometer, mi anemometer, and other philosophical instruments. He had a most extensive correspondence \ ith men of science.

SAVU, an island in the eastern seas, described by Cook as twenty miles in length ; in the middle are hills of a considerable height. It is represented both by captain Cook and by M. Labillarde as presenting an enchanting prospect from the sea. ‘ The principal trees of this island,’ says our great navigator, ‘ are the fan-paim, the cocoa-nut, tamarind, limes, oranges, and mangoes ; and other vegetable productions are maize, Guinea-corn, rice, millet, calevances, and water-melons. We saw also one sugar-cane, and a

few kinds of European garden stuff, particularly celery, marjoram, fennel, and garlic. For the supply of luxury, it has betel, areca, tobacco, cotton, indigo, and a small quantity of cinnamon, which seems to be planted here only for curiosity. There are, however, several kinds of fruit besides those which have been already mentioned. The tame animals are buffaloes, sheep, goats, hogs, fowls, pigeons, horses, asses, dogs, and cats ; and of all these there is great plenty. The sheep are of the kind which in England are called Bengal sheep, and differ from ours in many particulars. The fowls are chiefly of the game breed, and large, but the eggs are remarkably small. Of the fish which the sea produces here we know but little : turtles are sometimes found upon the coast, and are by these people, as well as all others, considered as a dainty. The people are rather under than above the middling size ; the women especially are remarkably short, and squat built ; their complexion is a dark brown, and their hair universally black and lank. The men are in general well made, vigorous, and active, and have a greater variety in the make and disposition of their features than usual; the

countenances of the women are, on the contrary, all alike. The men fasten their hair up to the top of their heads with a comb ; the women tie it behind in a club, which is very far from becoming. Both sexes eradicate the hair from under the arm, and the men do the same with their beards, for which purpose the better sort always carry a pair of silver pincers, hanging by a string round their necks ; some, however, suffer a very little hair to remain upon their upper lips ; but this is always kept short. The dress of both sexes consists of cotton cloth, which being dyed blue in the yarn, and not uniformly of the same shade, is in clouds or waves of that color, and even in our eye had not an inelegant appearance. This cloth they manufacture themselves; and two pieces, each about two yards long and a yard and a half wide, make a dress. Almost all the men had their names traced upon their arms in indelible characters of a black color ; and the women had a square ornament of flourished lines impressed in the same manner, just under the bend of the elbow. The houses of Savu are all built upon the same plan, and differ only in size, being large in proportion to the rank and riches of the

proprietor. Some are 400 feet

long, and some are not more than twenty ; they are all raised upon posts or piles about four feet high.

When the natives of this island were first

formed into a civil society is not certainly known, but at present it is divided into five principali-

ties or nigrees : Laai, Seba, Regecua, Timo, and

Massara, each of which is governed by its re-

spective rajah or king. The religion of these

people, according to Mr. Lange's information, is

an absurd kind of Paganism, every mau choos-

ing his own god, and determining for himself

how he should be worshipped, so that there are

almost as many gods and modes of worship as

there are people. In their morals, however, they

are said to be irreproachable.' Long. 122° 30′

E., lat. 10° 35′ S.

SAUVAGES (Francis Boissier), de, an emi-

nent French physician, born in 1706. His abili-

ties procured him the professorships of medicine

and botany in the university of Montpellier. His

works are very numerous. The principal are,

1. Theoria Febris, 1738, 12mo. : 2. Nosologi.i

Methodica; 5 vols. 8vo. 1763: 3. Physiologiae

Mechanics Elementa; 1755, 12mo.

SAUVAGESIA, in botany, a genus of the

monogynia order, and pentandria class of plants :

COR. pentapetalous and fringed : CAL. pentaphyl-

lous ; the nectarium the same, having its leaves

placed alternately with the petals : CAPS, unilo-

cular. Species one ; a West Indian plant.

SAW, n. s. Sax. raja; Belg. saeghe ; Goth.

saga. A saying ; maxim ; proverb.

Good king, that must approve the common saw :

Thou out of Heaven's benediction comest

To the warm sun ! Shafcspeare. King Lear.

His weapons, holy saws of sacret writ Shaktpeare.

Strict age and sour severity,

With their grave saws in slumber lie. Milton.

SAW, n. f. & v. a. -\ Sax. rz%z, or pje, of

SAW'DUST, n. s. J Goth.sega,to cut; Fr. scie.

SAW'PIT, \A dentated instrument

SAW WREST, i which cuts by attrition:

SAWYER. J to use such an instru-

ment : saw-dust is the dust it makes : saw-pit,

a pit for the sawing of timber : saw wrest an in

strument used in sharpening saws : sawyer, a

man whose trade is to saw timber.

They were stoned, they were tawn asunder.

Hebrew.*

A carpenter after he hath sawn down a tree, and

wrought it handsomely, sets it in a wall.

Wild. xiii. 11.

Let them from forth a sawpit rush at once

With some diffused frong. Shakspeare.

The roach is a leather mouthed fish, and has »aw-

like teeth in his throat. Walton' Angler.*

It is an incalescency, from a swift motion, such as that of running, threshing, or tawing.

Kay on the Creation.

Then saws were toothed, and sounding axes made.

Dryden.

Rotten sawdust, mixed with earth, enriches it very

much. Mortimer's Husbandry.

They colour it by laying it in a tawpit that hath oak tawduit therein. Id.

With the saw-wrest they set the teeth of the saw ; that is, they put one of the notches of the wrest be-

tween the first two teeth on the blade of the saw, and then turn the handle horizontally a little about upon the notch towards the end of the saw ; and that at once turns the first tooth somewhat towards you,

and the second tooth from you.

Moxon's Mechanical Exercise.

The pit-saw is used by joiners, when what they

have to do may be as soon done at home as send it to the sawyers. Id.

If I cut my finger, I shall as certainly feel pain as if my soul was co-extended with the limb, and

had a piece of it saum through. Collier.

If the membrane be fouled by the taivilust of the

bone, wipe it off with a sponge. Wiicman.

If they cannot cut,

His taws are toothless, and his hatchets lead. Pope.

SAWING. This is practically regarded ns a

distinct business from the trades, in which the

saw is not only a'very useful, but necesary im-

plement, snch as those of the carpenter, cabinet-

maker, cooper, &c. The saw is an instrument

which serves to cut into pieces several solid

matters; as wood, stone, ivory, &c. The best

saws are of tempered steel, ground bright and

smooth ; those of iron are only hammer-har-

dened; hence the first, besides their being stiffer,

are likewise found smoother. They are known

1o be well hammered by the stiff bending of the

blade ; and to be well and evenly ground by their

bending equally in a bow. The edge in which

are the teeth is always thicker than the back, be-

cause the back is to follow the edge. The teeth

are cut and sharpened with a triangular file, the

blade of the saw being first fixed in a whetting-

bloclt. After they have been filed, the teeth are

set, that is, turned out of the right line, that they may make the kerf or fissure the wider, that the

back may follow the better. The teeth are al-

ways set ranker for coarse cheap stuff than for

hard and fine, because the ranker the teeth are

set the more stuff is lost in the kerf. The saws

by which marble and other stones are cut have

no teeth : these are generally very large, and are stretched out and held even by a frame. The

lapidaries, too, have their saw, as well as the

workmen in mosaic; but of all mechanics none

have so many saws as the joiners ; the chief are, 1. The pit-saw, which is a large two-handed

saw, used to saw timber in pits ; this is chiefly

used by the sawyers. 2. The whip-saw, which

is also two-handed, used in sawing such large

pieces of stuff as the hand-saw will not easily

reach. 3. The hand-saw, which is made for a

single man's use, of which there are various

kinds ; as the bow, or frame saw, which is fur-

nished with cheeks : by the twisted cords which

pass from the upper parts of these cheeks, and

the tongue in the middle of them, the upper

ends are drawn closer together, and the lower

set further apart. 4. The tennon saw, which,

being very thin, has a back to keep it from bend-

ing. 5. The compas^ saw, which is very small,

and its teeth usually not set; its use is to cut a round, or any other compass kerf : hence the

edge is made broad, and the back thin, that it

may have a compass to turn in.

The surgeons use a saw to cut off bones : this

should be very small and light, in order to be

managed with the greater ease and freedom, the

blade exceedingly fine, and the teeth exquisitely

sharpened, to make its way more gently, and yet

with great expedition.

Saws are now generally used by butchers in se-

parating the bones of the meat : the divisions by

the saw are neater than those by the chopper, and

there is a certain saving, as the chopper splinters bones, the parts of which cannot be included in

the weight.

The pit-saw is that which is chiefly used in

the employment properly denominated sawing.

The teeth are set rank for coarse work, so as to

make a fissure of about a quarter of an inch.

To perform the work, the timber is laid on a

frame over an oblong pit, called the saw-pit; and it is cut by means of a long saw fastened in a frame, which is worked up and down by two men, the one standing on the wood to be cut, and the other in the pit. As they proceed in their work they drive wedges, at proper distances from the saw, to keep the fissure open, which enables the saw to move with freedom. This, though a profitable, is a very laborious employment, and hence have been introduced saw-mills, which, in different countries, are worked by different means, as by men, by horses, by water, by wind, or by steam.

A saw-mill, worked by men, consists of several parallel saws, which are made to rise and fall perpendicularly by means of mechanical motion. In this case a very few hands are necessary to carry on the operation, to push forward the pieces of timber, which are either laid on rollers, or suspended by ropes, in proportion as the sawing advances. We shall, however, give a more detailed account of the saw-mills as used in various parts of the world. The history of the invention of sawing is curious, and may be inserted.

In early periods of society the trunks of trees were split with wedges, into as many, and a? thin pieces as possible ; and if it was necessary

to have them still thinner they were hewn, by some sharp instrument, on both sides, to die proper size. This simple but wasteful manner of making boards has been still continued in some places, to the present time. Peter the Great, of Russia, endeavoured to put a stop to it, by forbidding hewn deals to be transported on the river Neva. The wood-splitters perform their work more expeditiously than sawyers, and split timber is much stronger than that which has been sawn ; for the fissure follows the grain of the wood, and leaves it whole ; whereas the saw, which proceeds in the line chalked out for it, divides the fibres, and by these means lessens its cohesion and strength. Split timber, indeed, turns out often crooked and warped ; but, in many purposes to which it is applied, this is by no means prejudicial ; and the fault may sometimes be amended. As the fibres, however, re-

tain their natural strength and direction, thin boards particularly can be bent much better. This is a great advantage in making pipe-staves, and in forming various implements of the like kind.

Our common saw, which needs only to be guided by the hand of the workman, however simple it may be, was not known to the inhabitants of America when they were subdued by the Europeans. The inventor of this instrument has, by the Greeks, been inserted in their mythology, with a place among those whom they have honored as the greatest benefactors of the earliest ages. By some he is called Talus, and by others Perdix. Pliny ascribes the invention to Daedalus, but Hardouin, in the passage where he does SK>, reads Talus rather than Daedalus. Diodorus Nculus, Apollodorus, and others, name the inventor Talus. He was the son of Daedalus's sister; and was, by his mother, placed under the tuition of her brother, to be instructed in his art. Having, it is said, once found the jaw-bone of a snake, he employed it to cut through a small piece of wood ; and, by these means, was induced to form a like instrument of iron, that

is, a saw. This invention, which greatly facili-

tates labor, excited the envy of his master, and

instigated him to put Talus to death privatdy.

\V e are told that, being asked, when he was

burying the body, what he was depositing in the

earth, he replied, ‘ A serpent.’ This suspicious

answer discovered the murder ; and thus, adds

the historian, a snake was the cause of the inven-

tion, of the murder, and of its being found out.

The saws of the Grecian carpenters had the

same form, and were made in the like ingenious

manner as ours are at present. This is fully

shown by a painting still preserved among the

antiquities of Herculaneum. Two genii are re-

presented at the end of a bench, which consists of a long table that rests upon two four-footed stools.

The piece of wood which is to be sawn through

is secured by cramps. The saw with which the

genii are at work has a perfect resemblance to

our frame saw. It consists of a square frame,

having in the middle a blade, the teeth of which

stand perpendicularly to the plane of the frame.

The piece of wood which is to be sawn extends

beyond the end of the bench, and one of the

workmen appears standing, and the other sitting

on the ground. The arms, in which the blade is fastened, have the same form as that given to them at present. In the bench are seen holes, in which the cramps that hold the timber are struck, and the ends of them reach below the boards that form the top of it.

The most beneficial and ingenious improvement of this instrument was, without doubt, the invention of saw-mills ; which are now generally driven either by steam, by water, or by the wind. Mills of the first kind were erected so early as the fourth century, in Germany, on the small river Roeur or Raer, for though Ausonius speaks of water-mills for cutting stone, and not timber, it cannot be doubted that these were invented later than mills for cutting out deals, or that both kinds were erected at the same time. Pliny conjectures that the mill for cutting stone was invented in Caria ; at least he knew no building incrusted with marble of greater antiquity than the palace of king Mausolus, at Halicarnassus. This edifice is celebrated by Vitruvius for the beauty of its marble ; and Pliny gives an account of the kinds of sand used for cutting it ; for it is the sand, he says, and not the saw, which pro-

duces that effect. The latter presses down the former, and rubs it against the marble ; and the coarser the sand is, the longer will be the time required to polish the marble which has been cut by it. Notwithstanding these facts there is no account in any of the Greek or Roman writers of a mill for sawing wood ; and, as the writers of modern times speak of saw-mills as new and un-common, it would seem that the oldest construc-tion of them has been lost, or that some important improvement has made them appear entirely new. Becher says that saw-mills were invented in the seventeenth century. In this he erred ; for when settlers were conveyed to the island of Ma-deira, which was discovered in 1420, saw-mills were erected also, for the purpose of sawing into planks the various species of excellent timber with which the island abounded, and which were afterwards transported to Portugal. About the year 1427 the city of Breslau had a saw-mill, which produced a yearly rent of three marks ; and in 1490 the magistrates of Erfurt purchased a forest, in which they caused a saw-mill to be erected, and they rented another mill in the neigh-bourhood besides. Norway, which is covered

with forests, had the first saw-mill about the year 1530. This mode of manufacturing timber was

called the new art ; and, because the exportation

of deals was by these means increased, that cir- ‘

cumstance gave occasion to the deal-tithe, intro

duced by Christian III. in the year 1545. Soon

after the celebrated Henry Canzau caused the

first mill of this kind to be built in Holstein. In 1552 there was a saw-mill at Joachimsthal, which

as we are told, belonged to Jacob Geusen, ma-

thematician. In the year 1555 the bishop of

Ely, ambassador from Mary queen of England

to the court of Rome, having seen a saw-mill in

the neighbourhood of Lyons, the writer of his

travels thought it worthy of a particular descrip-

tion. In the sixteenth century, however, there

were mills with different saw-blades, by which a

plank could be cut into several deals at the same

time. The first saw-mill \>as erected in Holland.

at Saardam, in the year 1596; and the invention

of it is ascribed to Cornelius Cornelissen. Per-

haps he was the 6rst person who built a saw-

mill at that place, which is a village of great

trade, and has still a great many saw-mills, though the number of them is becoming daily less ; for within the last thirty years 100 have been given up. The first mill of this kind in Sweden was erected in the year 1653. At pre- - ent that kingdom possesses the largest perhaps ever constructed in Europe, where a water-wheel, twelve feet broad, drives at the same time seven- ty-two saws.

In England saw-mills had at first the same lute that printing had in Turkey, the ribbon- loom in the dominions of the church, and the crane in Strasburg. When attempts were made to introduce them they were violently opposed, because it was apprehended that the sawyers would be deprived by them of their means of getting a subsistence. For this reason it was found necessary to abandon a saw-mill erected by a Dutchman near London, in 1663 ; and in the year 1700, when one Houghton laid before the nation the advantages of such a mill, he ex- pressed his apprehension that it might excite the rage of the populace. What he dreaded was actually the case in 1767 or 1768, when an opu-

lent timber-merchant, by the desire and- approba-

tion of the Society of Arts, caused a saw-mill,

driven by wind, to be erected at Lamehouse, under

the direction of James Mansfield, who had

learned, in Holland and Norway, the art of con-

structing and managing machines of that kind.

A mob assembled and pulled the mill to pieces ;

but the damage was made good by the nation,

;iud some of the rioters were punished. A new

mill was afterwards erected, which was suffered

to work without any molestation, and which gave

occasion to the erection of others. It appears,

however, that this was not the only mill of the

kind then in Britain ; for one driven also by wind had been built at Leith, in Scotland, some years

before.

Saw-mills, as they are now constructed, are of

two kinds, acccording as the saws employed af-

fect their operation by a circular or by a recipro-

cating motion. Circular saw-mills are the most

simple in their construction. At a manufactory

for hollow masts, on the Surrey side of Westmin-

ster bridge, are several of them. In one of the

simplest, a wheel is turned by a horse, which

gives motion to a pinion on a horizontal shaft ; a spur-wheel is fixed on the

shaft, and turns a pi- ‘

in on on another horizontal shaft, ou which a

wheel is fixed in the room above the machine,

and the bearings for the gudgeons of the shaft

are supported on the joists of the floor : by

means of an endless strap passing round this

wheel, and round a pulley on the spindle of the

Circular saw, a rapid motion is given to the saw : it is fixed on a spindle by a shoulder, against

which it is held by another moveable shoulder

pressed tight by its nut, on the end of the spin-

dles which is tapped into a screw to receive it.

The saw has a circular hole through the middle

fitting tight upon the spindle, so as to cause them to turn together. The ends of the spindle are

pointed, and that point nearest the saw works in

a hole made in the end of a screw, screwed in a

bench of stout planks, and well braced together;

the other turns in a similar screw passed through

a cross beam mortised between two vertical

beams extending from the floor to the ceiling :

one of the beams can be raised or lowered in its

mortises by wedges put both above and below its

tenons. In order to adjust the plane of the saw to the plane of the bench, there is a long parallel ruler, which can be set at any distance from the

saw, and fixed by means of screws going through

circular grooves cut through the bench. In using

the machine, the ruler is to be set the proper

distance from the saw of the piece of wood to be

cut, and as thp saw turns round, a workman

slides the end of a piece of wood to it, keeping, its edge against the guide or ruler, that it may

cut straight. We have witnessed the operation,

which is as neat as it is expeditious and ingeni-

ous. When the saw requires sharpening, one of

the screws at the end of its spindle must he turn-

ed back : the spindle and saw can be then re-

moved, and may be fixed in a common vice to

whet it, in the same manner as a common saw ;

the outsides of the teeth are not filed to leave a surface perpendicular to the plane of the saw, but

inclined to it, and in the same direction that

each tooth so filed is bent in the setting; by this means, the saw, when cutting, first takes away

the wood at the two sides of the kerf, leaving a

ridge in the middle of it, the use of which is to keep the saw steady in a right line, that it may

not have a tendency to get out of the straight

line in any place where the wood is harder at

one side than on the other. The most important

machinery of this kind that we have seen is, un-

questionably, at Portsmouth, for the manufac-

turing of ships' blocks.

The great cross-cutting mw may be thus des-

scribed. — The tree subjected to the action of this

machine is placed on a long frame or bench

raised a little from the floor, and at the end of it is erected a frame, composed of vertical posts

and cross timber, in the manner of a small and

low door-way; through this frame the end ot

the tree is drawn by the capstan above-mentioned

its end projecting as much from the surface of

the frame as is intended to be cut off; and it i<

fastened in the frame from rolling sideways, by n.

lever, which can be readily made to press upon

it and hold it down. The saw itself is a straight blade, fixed into a wooden handle or pole at

each end, to lengthen it ; one of these handles u

connected by a joint to the upper end of a lever, bent like an L, and having its centre beneath the

floor : the horizontal arm of the lever is connect-

ed by a spear-rod, with a crank on the end of a

spindle near the ceiling of the room, the motion

of which is regulated by a fly-wheel. By this

means the saw has a.reciprocating motion from

right to left, nearly in a horizontal position, and exactly across the log it is to cut oft, imitating in its motion the carpenter's hand-saw, consider

ing his arm as the arm of the bent or L lever

The teeth of the saw are of course on the lower

side of the blade, and are sloped so as to cut iit drawing towards the lever. It rises and falls

freely upon its joint at the end of the lever, and can be lifted up hy the handle, at tin-

end of the blade, to take it off its work, which it follows up by its own weight. The machine

being at rest is prepared for work, by fixing the

log in the frame as before mentioned, so that the

surface of the frame intersects the log at the

place where it is intended to be cross-cut. The

saw, which was before lifted up by its handle,

to be clear above the log, is now suffered to rest upon it, in the place where the cut is to be

made ; and, to guide it at first setting in, the

back of the saw is received in a saw kerf, made

in the end of a piece of board, which is attached to the frame over the saw, but slides up and

down in a groove to reach the saw at any height,

according to the thickness of the log lying be-

neath it. Being thus prepared, the machine is

put in action by a rope or strap which turns the

fly-wheel and its crank. This, giving a vibration

to the bent or L lever, causes the saw to recipro-

cate horizontally across the tree, until it cuts it

through : it follows up its cut by its own weight alone, but the attendant can at any time lift up the saw from its work, though its motion continues, by means of a rope which suspends the handle of the saw, when required. As the saw gets into the tree it quits the guide above-mentioned, which becomes the less necessary as the saw goes deeper ; a saw having no tendency to alter its first course, when cutting across the grain of the wood. We admire the simplicity of this machine, which nevertheless executes its work with much accuracy and expedition. It might be very usefully employed in many situations where great manual labor is spent in cross-cutting large logs of timber.

The cross-cutting circular saw. — This machine is for similar purposes, and stands close by the former. It is a circular saw, whose spindle is so mounted as to move in any direction parallel to itself; the saw all the while continuing in the same plane, and revolving rapidly upon its axis, cuts the wood it is presented to, and as it admits of being applied at first on one side, and then on another side of the tree, a saw of moderate dimensions will be sufficient to divide larger trees than could otherwise be done by it.

The great reciprocating saw for cutting up trees

lengthwise. — In this machine the saw works ver-

tically : it has an horizontal carriage, on which

the timber is fastened ; this passes through a

vertical frame with grooves, in which another

frame slides up and down in the manner of a

window-sash, and has the saw stretched in it.

The saw-frame is moved up and down by means

of a crank on an axis beneath the floor, which

is turned by means of an endless rope. At

every time the saw rises and falls, it turns a rat-

chet-wheel round, by means of a click, a few

teeth; and this has on its axis a pinion, working

a rack attached to the carriage of the tree, which by this means is advanced : at every stroke, the

saw makes a proper quantity for another cut.

The saw-frame is adapted to hold several saws

parallel to each other, for sawing a tree into se-

veral boards at once, when required.

Saw-mills, for cutting blocks of stone, are

moved horizontally. When a completely cylin-

drical pillar is to be cut out of one block of

stone, ;he first thing will be to ascertain in the block the position of the axis of the cylinder :

then lay the block so that such axis shall be

parallel to the horizon, and let a cylindrical

hole of from one to two inches diameter be

bored entirely through it. Let an iron bar,

whose diameter is rather less than that of this

tube, be put through it, having just room to slide freely to and fro as occasion may require. Each

end of this bar should terminate in a screw, on

which a nut and frame may be fastened. The

nut-frame should carry three flat pieces of wood

or iron, each having a slit running along its mid-

dle nearly from one end to the other, and a

screw and handle must be adapted to each slit;

by these means the frame-work at each end of

the bar may readily be so adjusted as to form

equal isosceles or equilateral triangles; the iron

bar will connect two corresponding angles of

these triangles, the saw to be used two other

corresponding angles, and another bar of iron,

or of wood, the two remaining angles, to give

sufficient strength to the whole frame. This con-

struction, it is obvious, will enable the workmen

to place the saw at any proposed distance from

the hole drilled through the middle of the block ; and then, by giving-the alternating motion to the

saw-frame, the cylinder may at length be cut

from the block, as required. This method was first pointed out in the collection of machines approved by the Paris academy. If it were proposed to saw a conic frustum from such a block, then let two frames of wood or iron be fixed to those parallel ends of the block which are intended to coincide with the bases of the frustum, circular grooves being previously cut in these frames to correspond with the circumferences of the two ends of the proposed frustum ; the saw being worked in these grooves will manifestly cut the conic surface from the block. This is the contrivance of Sir George Wright.

The best method of drilling the hole through the middle of the proposed cylinder seems to be this: — On a carriage, running upon four low wheels, let two vertical pieces (each having a hole just large enough to admit the borer to play freely) be fixed two or three feet asunder, and so contrived that the pieces and holes to receive the borer may, by screws, &c., be raised or lowered at pleasure, while the borer is prevented from sliding to and fro by shoulders upon its bar, which are larger than the holes in the vertical pieces, and which, as the borer revolves,

press against those pieces. Let a part of the

boring-bar between the two vertical pieces be

square, and a grooved wheel with a square hole

of a suitable size be placed upon this part of the bar ; then the rotatory motion may be given to

the bar by an endless band, which shall pass over

this grooved wheel and a wheel of a much larger

diameter in the same plane, the latter wheel

being turned by a winch handle in the usual way.

As the boring proceeds, the carriage with the

borer may be brought nearer the block, by levers

and weights, in the same manner as in pipe-

making.

SAXE (Maurice, count), was born in 1696.

He was the natural son of Frederick Augustus II.,

elector of Saxony, and king of Poland, and of

the countess of Konigsmarc, a Swedish lady,

celebrated for her wit and beauty. He was edu-

cated witli Frederick Augustus, the electoral

prince, afterwcii'iis King of Poland. He served

his first campaign in the army commanded by

prince Eugene and the duke of Marlborough,

when only twelve years old. He signalised him-

self at the sieges of Tournay and Mons, and particularly at the battle of Malplaquet. During the campaign of 1710 prince Eugene and the duke of Marlborough paid many public encomiums to his merit. Next year the young count accompanied the king of Poland to the sie-je of Stralsund, the strongest place in Pomerania, and displayed the greatest intrepidity. He swam across the river in sight of the enemy, with a pistol in his hand. His valor shone no less conspicuously on the bloody day of Gaedelbusck, w'here he commanded a regiment of cavalry. He had a horse killed under him, after he had three times rallied his regiment, and led them on to the charge. Soon after that campaign, his mother prevailed on him to marry the countess of Lubin, a lady both rich and beautiful. This union lasted but a short time. In 1721 the count procured a dissolution of the marriage ; a step of which he afterwards repented. In 1717 ' he went to Hungary, where the emperor had an army of 15,000 men under prince Eugene. Young count Saxe was present at the siege of Belgrade, and at a battle which the prince gained

over the Turks. On his return to Poland, in 1718, he was made a knight of the golden eagle. The wars in Europe being concluded by the treaties of Utrecht and Possarowitz, count Saxe went to France. He spent his time during the peace, in studying mathematics, fortification, and mechanics. At sixteen he invented a new exercise, which was taught in Saxony with the greatest success. Having obtained a regiment in France, in 1722, he formed it according to his new plan. In 1726 the states of Courland chose him for their sovereign. But both Poland and Russia rose in arms to oppose him. The czarina wished to bestow the duchy on prince Menzikoff'. MenzikofT sent 800 Russians to the new chosen duke in his palace. Count Saxe, who had only sixty men, defended himself with astonishing intrepidity. The siege was raised, and the Russians obliged to retreat. Soon after he retired to Usmaiz, and prepared to defend his people against the two hostile nations. Here he remained with only 300 men, till the Russian general approached at the head of 4000 to force his retreat. That general invited the count to a conference, during which he intended to surprise

him, and take him prisoner. The count, in-

formed of the plot, avoided the conference.

About this time he wrote to France for men and

money. Madame le Couvreur, a famous ac-

tress, pawned her jewels and plate, and sent him

40,000 livres. The count, unable to defend

himself against Russia and Poland, was obliged

in 1729 to leave his new dominions and retire

into France. Count Saxe, thus stript of his

territories, devoted himself to the study of ma-

thematics. He composed also, in thirteen nights,

and during the intervals of an ague, his Reve-

ries, which he corrected afterwards. The death

t'f the king of Poland his father, in 1733, kindled a r ew war in Europe. His brother, the elector

of Saxony, offered him the command of al.

his > forces, but he preferred the French service,

and repaired to the duke of Berwick, who was

encamped on the Rhine. The count, at the head

of a regiment of grenadiers, forced the enemy's

lines, and by his bravery decided the victory.

He behaved at the siege of Philipsburg with

no less intrepidity. For these services he was, in

1734, rewarded with the rank of lieutenant-

general. Peace was concluded in 1736 ; but the

death of the emperor Charles VI. kindled a new

war. Prague was besieged by the count in 174 i

near the e«d of November, and taken by assault.

The conquest of Egra followed a few days after :

and Charles VII. wrote a congratulatory letter

to Saxe with IMS own hand, in 1744 he \vas

made marshal of France, and commanded a part

of the French army in Flanders. During that

campaign he displayed the greatest military

conduct. Though the enemy was superior in

number, he watched their motions so skilfully

that they could do nothing. In January 1745

an alliance was concluded at Warsovia, betwcei.

the queen of Hungary, the king of England,

and the states of Holland. He went soon after,

though exceedingly ill, to take the command of

the French army in the Low Countries. \Vher

the battle of Fontenoy was fought, M. Saxe was

at the point of death, yet he caused himself to be put into a litter, and carried round all the posts.

During the action he mounted on horseback

though very weak. The victory of Fontenoy,

owing entirely to his vigilance and capacity, was

followed by the reduction of Tournay, Bruges,

Ghent, Oudenarde, Ostend, Ath, and Brussels :

this last city was taken on the 28th of February 1746 ; and very soon after the king sent to the marshal a letter of naturalisation in the most flattering terms. The succeeding campaigns gained him additional honors. After the victory of Raucoux, which he gained on the lltli of October 1746, the king of France made him a present of six pieces of cannon. He was, on the 12tli of January 1747, created marshal of all the French armies, and, in 1748, commander-general of all those parts of the Netherlands which he had conquered. Holland now began to tremble for her safety. Maestricht and Bergen op Zoom had already fallen, and nothing but misfortunes seemed to attend the further prosecution of the war. The states general therefore offered terms of peace, which were accepted, and a treaty concluded on the 18th of October 1748. M. Saxe retired to Chambord, a country seat which the king of France had given him. Sometime after he went to Berlin, and, on his return to France, he spent his time among men of learning, artists, and philosophers. He died of a fever, on the 30lh of November 1750, aged fifty-four. His life had

been, he said, an excellent dream. He was remarkably careful of the lives of his men. One day a general officer was pointing out to him a post which would have been of great use. It will only cost you, says he, a dozen grenadiers. That would do very well, replied the marshal, were it only a dozen lieutenant-generals. He had been educated and died in the Lutheran religion. His heart wa< put into a silver giitbox,

SAXONS.

34:

and Louis XV. was at the charge of his funeral. His corpse was interred with great splendor in the Lutheran church of St. Thomas, at Strasburg, on the 8th of February, 1751. The best edition of his Reveries was printed at Paris 1757, in 2 vols. 4to. It was compared with the originaf MS. in the king's library. It is accompanied with many designs exactly engraved, and a Life of the Author. M. d'Espagnac published the count's life, in 2 vols. 12mo.

SAXIFRAGA, saxifrage, in botany, a genus of the digynia order and decandria class of plants; natural order thirteenth, succulentas :

'•• \ L. cjuinquepartite : COR. pentapetalous : CAPS.

birostrated, umlocular, andpolyspermous. There

are thirty-eight species; of which the most re-

markable are these : —

1. S. granulata, or white saxifrage, which

ˆrows naturally in the meadows in many parts of

England. The roots of this plant are like grains of corn, of a reddish color without ; from which

arise kidney-shaped hairy leaves, standing upon

pretty long foot-stalks. The stalks are thick, a

foot high, hairy, and furrowed ; these branch out

from the bottom, and have a few small leaves

like those below, which sit close to the stalk :

the flowers terminate the stalk, growing in small

clusters ; they have five white petals, enclosing

ten stamina and the two styles. There is a va-

riety of this with double flowers, which is very

ornamental.

2. S. oppositifolia grows naturally on the

Alps, Pyrenees, and Helvetian mountains: it is

also found pretty plentifully growing upon Ingle-

borough Hill in Yorkshire, Snowdon in Wales,

and some other places. It is a perennial plant, with stalks trailing upon the ground, and are sel-

dom more than two inches long, garnished with

small oval leaves standing opposite, which lie

over one another like the scales of a fish : they are of a brown-green color, and have a resem-

blance of heath. The flowers are produced at

the end of the branches, of a deep blue ; and tnus make a pretty appearance during their continu-

ance, which is great part of March and the be-

ginning of April.

3. S. punctata, London pride, grows naturally

on the Alps, and also in great plenty on a moun-

tain of Ireland called Mangerton in the county

of Kerry. The roots of this are perennial ; the

leaves are oblong, oval, and placed circularly at

bottom. They have broad, flat, furrowed foot-

stalks, and are deeply crenated at their edges,

which are white. The stalk rises a foot high, is of a purple color, stiff, slender, and hairy. It sends out from the side on the upper part several

.short foot-stalks, which are terminated by white

flowers spotted with red.

4. S. pyramidata, mountain heath, with a py-

ramidal stalk, grows naturally on the mountains

of Italy. The leaves are tongue-shaped, gathered

into heads, rounded at their points, and have car-

tilaginous and sawed borders. The stalk rises

two feet and a half high, branching out near the

ground, forming a natural pyramid to the top.

The flowers have five white wedge-shaped

petals, and ten stamina, placed circularly the

length of the tube, terminated by roundish

purple summit?. When these plants are strong,

they produce very large pyramids of flowers,

which make a fine appearance. All these spe-

cies are easily propagated by offsets, or by part-

ing their roots.

SAXTFRAGE, n. s.) Fr. saxifrage ; Lat.

SAXIFRA'GOUS, adj. } saxum and /range. A

plant : dissolvent of the stone. See below.

Saxifrage, quasi saxum frangere, to break the

stone, is applicable to any thing having this property ; but it is a term most commonly given to a plant,

from an opinion of its medicinal virtues to this effect.

Quincy.

Because goat's blood was found an excellent me-

dicine for the stone, it might be conceived to be able to break a diamond ; and so it came to be ordered that the goats should be fed on saxifragout herbs,

and such as are conceived of power to break the

stone. Browne's Vulgar Errours.

SAXO GRAMMATICUS, descended from an il-

lustrious Danish family, was born about the

middle of the twelfth century. Stephen, in his

edition of Saxo Grammaticus, printed at Soroe,

asserts that he must have been alive in 1156, but cannot ascertain the exact place and time of his birth. On account of his learning, Saxo was distinguished by the name of Grammaticus. He was provost of the cathedral church of Roskild, and warmly patronised by the learned and warlike Absolon, the celebrated archbishop of Lunden, at whose instigation he wrote the History of Denmark. His epitaph, a dry panegyric in bad Latin verses, gives no account of the era of his death, which happened, according to Stephens, in 1204. His history, consisting of sixteen books, begins from the earliest accounts o the Danish annals, and concludes with the yeat 1 186. The first part, which relates to the origin of the Danes, and their ancient kings, is full of fables; but the last eight books, and particularly those which regard the events of his own times deserve the utmost credit. He wrote in Latin : the style, if we consider the barbarous age in which he flourished, is, in general, elegant. Mallet, in his Histoire de Dannemarc, vol. i. p 182, says that Sperling, a writer of great erudition, has proved, in contradiction to the asser-

tions of Stephens and others, that Saxo Grammaticus was secretary to Absolon ; and that the Saxo, provost of Roskild, was another person, and lived earlier.

SAXONS, the natives of Saxony, ancient and modern. The ancient Saxons were a brave but fierce people. The Britons, or inhabitants of South Britain, being deserted by the Romans, about the middle of the fifth century, and threatened with utter extirpation by the Scots and Picts, invited the Saxons over from Germany to assist and defend them ; in consequence of which a numerous body of them came over under Hengist and Horsa, A. D. 449 or 450 ; and, repeated emigrations of fresh adventurers successively arriving afterwards, they soon conquered and divided all South Britain, since called England, into seven kingdoms, commonly denominated the Saxon heptarchy. 'See ENGLAND. With regard to the history of the Saxons, previous to the fourth century, we have very few particulars. ' The Saxons,' says Mr. Whitaker, ' have been derived by our historians from very

different parts of the globe ; India, the north of Asia, and the forests of Germany. And their appellation has been equally referred to very different causes ; the name of their Indian progenitor, the plundering disposition of their Asiatic fathers, and the short hooked weapons of their warriors.' But the real origin of the Saxons, and the genuine derivation of their name, seem clearly to be these: — In the earlier period of the Gallic history, the Celtae of Gaul crossed the Rhine in considerable numbers, and planted various colonies in the regions beyond it. Thus the Volcae Tectosages settled on one side of the Hercynian forest and about the banks of the Neckar ; the Helvetii upon another, and about the Rhine and Maine ; the Boii beyond both ; and the Senones in the heart of Germany. Thus also we see the Treviri, the Nervii, the Suevi, and the Marcomanni, the Quadi, the Venedi, and others in that country ; all plainly betrayed to be Gallic nations by the Gallic appellations which they bear, and all together possessing the greatest part of it. And, even as late as the conclusion of the first century, we find one nation on the eastern

side of this great continent actually speaking the language of Gaul, and another upon the northern using a dialect nearly related to the British.

But as all the various tribes of the Germans are considered by Strabo to be ytvr\aioi ToXarat, or genuine Gauls in their origin ; so those particu-% larly, who lived immediately beyond the Rhine, and are asserted by Tacitus to be indubitably native Germans, are expressly denominated ToXa-TCU, or Gauls, by Diodorus, and as expressly de-clared by Dio to have been distinguished by the equivalent appellation of Celts from the earliest period. And the broad line of nations, which extended along the ocean, and reached to the borders of Scythia, was all known to the learned in the days of Diodorus by the same significant appellation of TaXarot, or Gauls. Of these, the most noted were the Si-Cambri and Cimbri; the former being seated near the channel of the Rhine, and the latter inhabiting the peninsula of Jutland. The denominations of both declare their original, and show them to have been derived from the common stock of the Celtae, and to be of the same Celtic kindred with the Cimbri of our

*own Somersetshire, and theCymbri or Cambrians of our own Wales. The Cimbri are accordingly denominated Celtae by Strabo and Appian : and they are equally asserted to be Gauls by Diodorus; to be the descendants of that nation which sacked the cily of Rome, plundered the temple of Delphi, and subdued a great part of Europe and some of Asia. Immediately to the south of these were the Saxons, extending from'the isthmus of the Chersonesus to the current of the Elbe ; and they were equally Celtic in their origin as their neighbours. They were denominated Ambrones, as well as Saxons ; and, as such, are included by Tacitus under the general appellation of Cimbri, and comprehended by Plutarch under the equal one of Celto-Scythae. The name of Ambrones appears particularly to have been Gallic ; being common to the Saxons beyond the Elbe, and the Ligurians in Cisalpine Gaul ; as both found, to .their surprise, on the irruption of the former into Italy with the Cimbri. And, what is equally su rprising, and has been equally unnoticed by the critics, the Welsh distinguish England by the name of Loegr or Liguria, even to the presen**

moment. In that irruption, these Saxons, Ambrones, or Ligurians, composed a body of more than 30,000 men, and were principally concerned in cutting to pieces the large armies of Manlius and Caepio. Nor is the appellation of Saxons less Celtic than the other. It was originally the same with the Belgic Suessones of Gaul ; the capital of that tribe being now entitled Soissons by the French, and the name of the Saxons pronounced Saisen by the Welsh, Sason by the Scots, and Saisenach or Saxsenath by the Irish. And the Suessones or Saxones of Gaul derived their own appellation from the position of their metropolis on a river, the stream at Soissons being now denominated the Aisne, and formerly the Axon; Uess-on, or Axon, importing only waters, or a river, and S-uess-on or S-ax-on the waters of the river. The Suessones, therefore, are actually denominated the Uessones by Ptolemy ; and the Saxones are actually entitled the Axones by Lucan. These, with their brethren and allies thv Cimbri, having been more formidable enemies to the Romans by land than the Samnites, Carthaginians, Spaniards, Gauls, or Parthians, in the

second century applied themselves to navigation, and became nearly as terrible by sea. They soon made themselves known to the inhabitants of the British isles by their piracies in the northern channels, and were denominated by them Loch-lyn or Lochlynach; lucd-lyn signifying the people of the wave, and the D being quiescent in the pronunciation. They took possession of the Orkney Islands, which were then merely large shoals of land, uncovered with woods, and over-grown with rushes ; and they landed in the north of Ireland, and ravaged the country. Before the middle of the third century they made a second descent upon the latter, disembarked a considerable body of men, and designed the absolute subjection of the island. Before the conclusion of it, they carried their naval opera-tions to the south, infested the British Channel with their little vessels, and made frequent de-scents upon the coasts. And in the fourth and fifth centuries, acting in conjunction with the Picts of Caledonia and the Scots of Ireland, they ravaged all the east and south-east shores of Bri-tain, began the formal conquest of the country,

and finally settled their tictorious soldiery in Lancashire.

The division of Germany into circles took place towards the close of the fifteenth century, when the large tract of country known vaguely by the name of Saxony, was formed into three circles, Westphalia, Upper Saxony, and Lower Saxony. Upper might with more propriety have been styled Eastern Saxony, being bounded by Poland, Silesia, and Lusatia on the east, and by Bohemia and Franconia on the south. Its extent was about 43,000 square miles ; its population about 4,000,000. It comprised the electorates of Saxony and Brandenburg, the duchy of Pomerania, and a number of small principalities. The name of Upper is to be understood as implying a surface of such comparative elevation as to cause several rivers (the Elbe, Spree, and

o'heis) to flow to the westward towards Lower Saxony. That country, which might have been termed Western Saxony, had Westphalia and the Rhine to the west, and Sleswick with the Baltic

to the north. Its area contained 26,000 square

miles, and comprised the electorate of Hanover,

the duchies of Mecklenburs, Brunswick, and

llolstein, the free towns of Hamburgh, Bremen,

Lubeck, with a number of small states. In 1806

the distinction of circles was finally abolished,

and the names of Upper and Lower Saxony are

now of use only in history.

SAXONY, a modern kingdom of Europe, is

situated towards the north-east of Germany, and

bounded on the south by Bohemia, and on the

north by the Prussian states. Previous to 1814

it contained 2,000,000 of inhabitants (exclusive

of the part of Poland subject to this crown) ; but it was reduced by the congress of Vienna. At

present its divisions, extent and population, are,

Square

miles.

Population.

Circle of Meissen

Leipsic

Erzgebirge

Vogtland

Part of Merseburg

Upper Lusatia

1600

1460

2175

700

73

1180

300,000

207,000

460,000

90,000

10,000

170,000

Total

7188

1,237,000

1 lie length of Saxony is 140 miles, its greatest breadth about seventy-five.

No part of Europe in the same latitude enjoys a milder climate. Towards the north-east of the frontier line, and in a quarter where the lofty langeof the Erzgebirge is succeeded by a lower, called the Wohlische Kamm, the Elbe issues from Bohemia. The other considerable rivers are the two Elsters, the two Muldas, and the

Queiss, all rising in the south of Saxony, and flowing northward, but not navigable here. The Elbe, on the other hand, is navigable, and, by its course through the centre of the country, affords a noble conveyance for merchandise. The mountainous districts in the south contain extensive forests, which are kept up with care as the supply of fuel for the mines. Coal and turf are used for domestic fuel. In the southern and mountainous parts the valleys only are well cultivated ; but in the level districts, particularly the circles of Meissen and Leipsic, the products are wheat, barley, oats, and other grain, tobacco and bops. Vines are found in a few situations. The number of sheep is large, and great care has been bestowed on the Merino rams, first imported about the year 1768; the Saxon wool, indeed, has been rendered, by good management, the best in Germany. Hogs are also numerous. Few countries equal Saxony in mineral riches. The rocks of the Erzgebirge furnished Werner with the facts on which he founded a system of geology. The basis of the Erzgebirge is granite, covered by gneiss, mica, and clay slate in succession. Between these are strata, containing

metallic ores. The rocks, called in this country weiss-stein (white-rock), contain a variety of heterogeneous substances, such as feldtspar, mica, garnet, and cyanite. Basalt is found in various parts, towering above the others in lofty polygonal columns. The topaz occurs frequently, and there are found also chrysolites, amethysts, chalcedonies, cornelians, agates, jasper, garnets, and tourmalins ; serpentine, asbest, amianthus, barytes, and fluates of lime. The porcelain clay in the neighbourhood of Meissen is well known ; here are also fullers'-earth, terra-sigillata, and other argillaceous minerals. There are also a few silver mines. The lofty primitive mountains abound in iron ; the secondary in copper and lead. Next to these are arsenic, cobalt, antimony, manganese, zinc, sulphur, alum, vitriol, and borax.

The manufactures and trade are of great extent, and are somewhat similar to those of England. The weaving of linen is an employment of old date, and is carried on in almost every village of the kingdom, but more particularly in Upper Lusatia, at Zittau, Bautzen, and Herrnhut.

Woollens are likewise manufactured extensively, and cotton spinning and weaving on a good scale. The machinery used in Saxony, though inferior to the English, has of late years been much improved; labor also is cheap. There are silk manufactures on a small scale at Leipsie and other towns. Tanneries are more general, and paper manufactories are not inconsiderable. Every town of consequence has its breweries and distilleries. The manufactures connected with the mines are of course of considerable extent. At Dresden there are foundries of cannon and balls. Cobalt is made into smalts and blue dye in several towns in the mining district ; other places are noted for the manufacture of verdigris and green dye.

The exports from Saxony consist in wool and minerals ; linen, yarn, woollens, and lace. The imports are silk, flax, cotton, coffee, sugar, wine, and in certain seasons corn. The most trading place is Leipsic, which is remarkable both for its half-yearly fairs, and for being the centre of the book trade.

Saxony reckons among its inhabitants a great majority of Lutherans, but the reigning family

have been Catholics since 1697. The institutions for education in this country are numerous and well conducted, it being a common remark that in no country, except Scotland and the Pays de Vaud, are the lower classes so generally taught to read and write. In no country of equal extent is the number of printing and book establishments so great. Halle now belongs to Prussia, but Leipsic remains to Saxony, and maintains its reputation. The German character predominates among this people, as is evinced, among other things, by the minuteness with which they too often treat an insignificant subject ; also in the more creditable points of the general modesty of their females.

The revenue of Saxony, after defraying all local expenses, probably exceeds £1,000,000 sterling, and Saxony has long been burdened with a national debt. The army, which in this country was never large in proportion to its po-

pulation, is on a peace establishment of 12,000 men, the best disciplined part of whom are

cavalry and artillery.

After being, during many centuries, an electorate, Saxony was formed in 1 806 into a kingdom, in consequence of the occupancy of Prussia by Buonaparte. This change of title was not accompanied by an extension of prerogative, the sovereign continuing to share the legislative functions with the states. The states are divided into two houses, viz. the prelates and nobles in one, and in the other the country gentry and deputies of the towns. The higher offices of administration are entrusted to a cabinet council, a board of finance, a military board, a high court of appeal for judicial questions, and an upper consistory for ecclesiastical. Each circle has a court of justice, and offices for the transaction of provincial business. The peasantry are here in the enjoyment of complete personal freedom.

The king, as a member of the Germanic confederation, has the fourth rank in the smaller, and four votes in the larger assembly. J

Saxony remained neutral in the war of 1740 between Prussia and Austria. In that of 1756 she was tempted to take part by Austria ; but, in-

stead of an accession of territory, she saw her dominions ravaged and many of her subjects ruined. The peace of 1763 left her country loaded with an enormous debt. In the war of 1 793 the contingent furnished by Saxony against France was not large, and no decided part was taken in the war, until 1806, when the elector sent all his troops to the support of the king of Prussia. The overthrow of that power enabled Buonaparte to attach the Saxons to his cause. The title of elector was changed to that of king. Prussian Poland was added to the Saxon dominions, and in 1809 was nearly doubled by cessions from Austria. But these acquisitions led to disastrous results. The Russians re-occupied Poland in the beginning of 1813, and, joined by the Prussians, made Saxony the scene of the great struggle against Buonaparte. Many of the people, however, flattered themselves that their attachment to the cause of Germany, evinced by the defection of their troops from the French army on the 18th October, would secure the integrity of the territory. The interval between the battle of Leipsic and the decision of the congress

of Vienna (nearly eighteen mouths) was balanced between hope and fear, and cruel was the disappointment of the Saxons, on finding that the northern and eastern part, containing no less than 850,000 inhabitants, was to be transferred to Prussia. The king protested against this dismemberment; but, dreading bloodshed, he thought proper to acquiesce.

SAXONY, a province of the Prussian states, situated to the west of Brandenburgh, and north of the kingdom of Saxony. It comprises almost the whole of the cessions made by the latter power at the congress of Vienna, the principalities to the north of the duchy of Anhalt, and to the west of the rivers Elbe and Havel ; so that the whole now forms an area of 9830 square miles, with more than 1,000,000 of inhabitants. It is divided into the governments of Magdeburg, Merseburg, and Erfurt, and form a distinct military division; the chief town is Madgeburg.*

This province is in general level, the only hills being part of the Hartz, in the south-west corner, and a detached part of the Thuringiaa

forest. The rest is varied only by insignificant

elevations. The soil, however, varies, being in

some places dry and sandy, and in others a

heavy loam. No part of the Prussian states

possesses a more fertile land and good husban-

dry. There are some large forests, but in the

far greater part wood is scarce. The objects of

cultivation are corn, hemp, flax, and chicory for

making coffee. Pit coal and metals are found in

the mountains of the Hartz; porcelainx clay in

the level ground in the south ; but the product

hitherto most profitable is salt obtained from

brine springs by evaporation. The richest of

these springs is in the government of Merseburg,

where it is often difficult to find pure water for drinking. The inhabitants are almost all Protes-

tants, except in the little district called the

Eichsfeld. Having enjoyed the benefits of an

enlightened government, both under Prussia ana

Saxony, they are in general active and industr

ous. The commerce is insignificant.

SAY, v. a., v. n. & n. s.) Sax. j-ecjan ; Belg.

*SAY'ING, n. *. $ seggan; Teut. sagen.*

To speak ; utter in words ; allege ; repeat : to

pronounce ; utter ; relate : as a noun-substantive,

a speech, and (abridged from ASSAY) a sample ;

trial : saying is an expression ; a word ; a proverb.

And hise britheren seiden to him, passe fro hennis, and go into Judee, that also thi disciplis seen thi werkis that thou doist. WiclifJon. 7.

Speak unto Solomon ; for he will not say thee nay.

1 Kings.

He said moreover, I have somewhat to say unto

thee ; and she said, Say on. Id.

Say nothing to any man, but go thy way. Mark.

Moses fled at this saying, and was a stranger in

Midian. Acts.

Then shall be said or sung as follows.

i Common Prayer.

So good a say invites the eye,

A little downward to espy

The lively clusters of her breast. Sidney.

Say it out, Diggon, whatever it hight. Spenter

With flying speed, and seeming great pretence,

Came messenger with letters which his message said.

Faerie Queene.

Some obscure precedence, that hath tofore been

«ain. Shaktpeare.

Since thy outside looks so fair and warlike,

And that thy tongue some say of breeding breathes,

By rule of knighthood I disdain. Id.

I thank thee, Brutus,

That thou hast proved Lucilius s saying true. Id.

The council-table and star-chamber hold, as Thu-

cydides said of the Athenians, for honourable that

which pleased, and for just that which profited.

“larendon.

Many are the taking of the wise,*

Extolling patience as the truest fortitude. Milton.

Say first what cause

Moved our grand parents to fall off ! Id.

King John succeeded his said brother in the king-

dom of England and duchy of Normandy. Hale.

This gentleman having brought that earth to th«

publick ‘(ay masters, and upon their being unable to SAY

bring it to fusion, or make it fly away, he had pro-

cured a little of it, and with a peculiar flux separated a third part of pure gold. Boyle.

Others try to divert the troubles of other men by

pretty and plausible sayings, such as this, that if evils are long, they are but light. Tiliotson.

After all can be said against a thing, this will still be true, that many things possibly are which we

know not of.

The lion here has taken his right measures, that

is to say, he has made a true judgment. L’Estrange.

We poetick folk, who must restrain

Our measured sayings in an equal chain,

Have troubles utterly unknown to those,

Who let their fancy loose in rambling prose. Prior.

The sacred function can never be hurt by their

tayings, if not first reproached by our doings.

Atterbury.

And who more blest, who chained his country ; say, :JT he whose virtue sighed to lose a day 7 Pope.

He no sooner said out his say., but up rises a cun-

ning snap. Jd.

Say, Stella, feel you no content,

Reflecting on a life well spent 1 Swift.

Of some propositions it may be difficult to tay

whether they affirm or deny ; as when we say, Plato was no fool. Watts.

SAY (Samuel), an English dissenting minis-

ter, was born in 1675. After acting as chap-

**ain and preacher in Andover and Yarmouth, he*

was settled at Lowestofft for eighteen years.

He next became colleague to the Rev. Samuel

Baxter, at Ipswich, for nine years, and at last,

in T734, succeeded the celebrated Dr. Edmund

Calamy at Westminster ; where he died April

12th, 1743, aged sixty-eight. A volume of his

poems was published in 4to., 1743, with two

essays in prose, On the Harmony, Variety, and

Power of Numbers ; which have been much admired. These were published for the benefit of his daughter. He wrote several other tracts.

SAY, in commerce, a kind of serge much used abroad for linings, and by the religious for shirts ; with us it is used for aprons by several sorts of artificers, being usually dyed green.

SAYANSKIE, a chain of mountains in Siberia, forming a prolongation of the Altai, and a line of separation between Siberia and Chinese Tartary. They extend between the Upper Yenisei and the lake Baikal, and consist chiefly of naked rocks of a red granite. They are divided into two ranges, one of which, bordering on the Yenisei, derives its name from that river, the other from the city of Krasnoiarsk.

SAYPAN, one of the Ladrone Islands, about twenty miles in circumference. According to some it does not afford the same refreshments to ships that touch there as Tinian, though Anson, by whom it was visited, says that it presents an aspect not in any respect less agreeable. Voyagers in general agree in giving Tinian the preference to Saypan, both in regard to extent and beauty. Long. 145° 55′ E., lat. 15° 13′ N.

SBIRRI, from Ital. sbirri, an archer, a name

given to a class of armed police in Italy, re-

sembling the French gens'd'armes in every thing

but their usefulness. They patrole with a large

cocked hat, armed with a fusil, pistols, and in-

variably with a poniard. They are under the

immediate command, and subject to the orders

of, the different intendants or governors of pro-

vinces, and, in small towns, under those of the

SCA

magistrates. The sbirri are employed like our

Bow Street officers, in taking up thieves ana

assassins, whom they are authorised to lodge in

the different prisons, and at whose execution

they must personally attend. These men are, in

general, despised, and not much feared by the

people ; they are often accused of being in com-

munication with the leaders of the various gangs

of robbers and assassins that infest Italy, parti-

cularly the Appennine mountains-.

SCAB, n. s. ~\ Sax. pcaeb ; Ital. scabbia ; SCABB'ED, adj. f Lat. scabies. An incrustation

SCABB'Y, i formed over a sore ; a dis-

SCA BIOUS. J ease of animals : the adjec-

tives all follow the sense of the noun-substantive.

Her writhled skin, as rough as mapple rind,

So scabby was, that it would have loathed all woman-

kind. Faerie Qiieene.

What's the matter you dissentious rogues,

That rubbing the poor itch of your opinion,

Make yourselves scabs 1 Shakspeare. Coriolanus.

I would thou did'st itch from head to foot, and I had the scratching of thee, I would make thee the

loathsomest scab in Greece. Shakspeare.

The briar fruit make those that eat them scabbed.

Bacon.

That free from gouts thou may'st preserve thy care, And clear from scabs produced by freezing air.

Dryden.

To you such scabb'd harsh fruit is given, as raw

Young soldiers at their exercising gnaw. Id.

A scabby tetter on their pelts will stick.

When the raw rain has pierced them to the quick.

Id.

One of the usurers, a head man of the city, took

it in dudgeon to be ranked, cheek by joul, with a scab of a currier. L'Estrange.

In the spring scabious eruptions upon the skin

were epidemical, from the acidity of the blood.

Arbuthnot on Air.

This vap'ring scab must needs devise

To ape the thunder of the skies. Swift.

If the grazier should bring me one wether fat and

well fleeced, and expect the same price for a whole hundred, without giving me security to restore ray

money for those that were lean, shorn, or scabby, I would be none of his customer. Id.

SCAB'BARD, n. s. Germ, schap — Junius »

Goth, skalpen. The sheath of a sword.

Enter fortune's gate,

Nor in thy scabbard sheath that famous blade,

'Till settled be thy kingdom and estate. Fairfax.

What eyes ! how keen their glances ! you do well

to keep 'em veiled ; they are too sharp to be trusted out o' th' scabbard. Dryden's Spanish Fryar.

SCA-BIOSA, scabious, in botany, a genus of

the monogynia order and tetrandria class of

plants, natural order forty-eighth, aggregate ,

Common CAL. polyphyllous ; proper, double

superior; the receptacle paleaceous or naked.

The most remarkable species are, —

1. S. arvensis, the meadow scabious, which

grows naturally in many places of Britain. It

has a strong, thick, fibrous root, sending out

many branching stalks, which rise to the height

of three feet. The lower leaves are sometimes

almost entire, and at others they are cut into

many segments almost to the midrib. The

flowers are produced upon naked foot-stalks at the end of the branches ; they are of a purple color, and have a faint odor.

2. S succisa, or devil's bit, grows naturally in

woods and moist places. This has a short tap-root, the end of which appears as if it was bitten or cut off, whence the plant has its name. The leaves are open and spear-shaped, and smooth ; the stalks are single, about two feet high, garnished with two leaves at each joint ; they generally send out two short foot-stalks from their upper joint, standing opposite, which are terminated by purple flowers. Both these have been recommended as aperient, sbdonfic, and expectorant ; but the present practice has no dependence on them.

SCA'BROUS, adj. Fr. scabreus; Lat. sca-tter. Rough ; rugged ; poir ed on the surface ; harsh.

Lucretius is scabrous and rougo in these ; he seeks them, as some do Chaucensms, which were better expunged. Ben Jonson.

Urine, black and bloody, is'occasioned by sorae-

jhing sharp or scabrous wounding the small blood-

vessels ; if the stone is smooth and well bedded, this may not happen. Arbuthnot.

SCABWORT. See SCABIOSA.

SC .UVULA, in botany, a genus of the mono

gynia order and pentandria class of plants : COR.

monopetalous ; the tube slit longitudinally ; the

Iwrder quinquefid and lateral. The fruit is a

plum inferior and monospermous ; the nucleus

bilocular. Species three, natives of India.

SCAF'FULD, n. s. } French eschafaut;

SCAF'FOLDAGE, >of Lat. scabellwn. A

SCAF'FOLDING. j temporary stage or gal-

lery : particularly the stage erected for the exe-

cution of malefactors : the other two substantives

are synonymous.

Fortune, smiling at her fortune therein, that a

scaffold of execution should grow a scaffold of coro-

nation. Sydney.

Pardon

The flat unraised spirit, that hath dared

On this unworthy scaffold to bring forth

So great an object. Shahspeare. Henry V.

A strutting player doth think it rich

To hear the wooden dialogue and sound,

Twixt his stretch 'd footing and the tcaffoldage.

Shahspeare.

These outward beauties are but the props and

scaffolds

On which we built our love, which, now made

perfect,

Stands without these supports. Denham's Sophy.

The throng

On banks and scaffolds under sky might stand.

Milton.

Send forth your lab'ring thought ;

Let it return with empty notions fraught,

Of airy columns every moment broke,

Of circling whirlpools, and of spheres of smoke :

Yet this solution but once more affords

New change of terms and scaffolding of words.

Prior.

What are riches, empire, power,

But steps by which we climD to rise, and reach

Our wish ? and, that obtained, down with the scaf-

folding

Of sceptres and of thrones. ' Congreve.

Sickness, contributing no less than old age to the

shaking down this scaffolding of the body, may dis-

cover the inward structure. Popt.

Sylla added three hundred commons to the senate ;

then abolished the office of tribune, as being only a icaff'i>ld to tyranny, whereof he had no further use.

Swift.

SCAGLIULA, in architecture, a kind of Ita-

lian composition in imitation of marble, variously

colored according to the species the artist in-

tends to represent. It is laid on brick in the

manner of stucco, and worked off with iron

tools, or formed by moulds into friezes, architec-

tural borders, &c. This manufacture was intro-

duced into this country by Mr. Coade, and is

now carried on with great success.

SCALA (Bartolomeo), an eminent Italian

writer, who flourished when literature was reviv-

ing in Europe. He was born about 1424, and

was the only son of a miller ; but, going early to Florence, Cosmo de Medicis gave him education.

He studied the law ; became LL.D., and fre-

quented the bar. Un Cosmo's death, in 1464,

Peter de Medicis employed him in the service

of the republic, in the most important negocia-

tions. In 1471 he was made a citizen of Flo-

rence; in 1472 he was ennobled and made chancellor. In 1484 he was sent on an embassy to pope Innocent VIII., whom he pleased so well that the pope made him a Roman knight and senator. He published some of his orations, among which were the following: — 1. Pro Imperaioriis militaribus signis dandis Constantio Sfortiae imperatori; 1481; 2. Apologia contra vituperatores Florentiae; 1496, folio; 3. De Historia Florentina ; Libri iv. 4. Vita di Vitaliani Borromeo ; Rome, 1677, 4to. He died in Florence in 1497.

SCALA NOVA, the old Neapolis, a well built sea-port town of Asia Minor, three leagues from the site> of the ancient Ephesus. The fortifications are about three-quarters of a mile in circumference. To the north is a suburb, in which alone the Christians are permitted to' dwell. The population is reckoned by Tournefort, at 1000 Turkish families, 600 Greek, ten Jew, and sixty Armenian. The town carries on a considerable trade in grain, coffee, and cloth, from Egypt, Smyrna, and Salonica. The neighbourhood yields a considerable quantity of wine.

Forty miles south of Smyrna.

SCALADE', n. $. > Fr. scalade ; Span, sca-

SCALA'DO. J lada, from Latin scala, a

ladder. A storm given to a place by raising

ladders against the walls.

What can be more strange than that we should

within two months have won one town of importance

by tcalado, battered and assaulted another, and over-

thrown great forces in the field ? Bar on .

Thou raiscdst thy voice to record the stratagems,

the arduous exploits, and the nocturnal scalade of

needy heroes, the terror of your peaceful citizens.

Arbuthnot's History of John Bull.

SCA LA no, or SCALADE, in the art of war, is

an assault made on the wall or rampart of a

city, or other fortified place, by means of lad-

ders, without carrying on works in form, to

secure the men.

SCA'LARY, adj. From Lat. scala. Pro-

ceeding by steps like those of a ladder.

He made at nearer distances certain elevated

places and scahtry ascents, that they might better

ascend or mount their horses. Browne

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SCALD, v. a., n. s., & adj. } Span, csculder ; SCALD'IIEAD, n. s. >Ital. scaldare ; of

SCALL. y Lat. culidus. To

burn with hot liquor : scurf on the head : paltry ; sorry : scurvy : scaldhead, a leprous disease of

the head : scall is leprosy ; morbid baldness.

It is a dry scall, a leprosy upon the head.

Lev. xiii. 30.

Upon thy bald hede maist thou have the scall.

Chaucer.

Her head altogether bald,

Was overgrown with scurff and filthy scald.

Spenser.

O majesty !

When thou dost pinch, thy bearer, thou dost sit

Like a rich armour worn in heat of day

That scalds with safety. Shakspeare. Henry IV.

Saucy lictors

Will catch at us like strumpets, and scald rhymers

Ballad us out o'tune. Shakspeare.

Here the blue flames of scalding brimstone fall,

Involving swiftly in one ruin all. Cowley.

That I grieve, 'tis true ;

But 'tis a grief of fury, not despair !

And, if a manly drop or two fall down,

It scalds along my cheeks, like the green wood,

That, sputt'ring in the flame, works outward into tears. Dryden's CLeomenes.

It depends not on his will to persuade himself,

that what actually scalds him, feels cold. Locke.

In Oxfordshire the sour land they fallow when

the sun is pretty high, which they call a scalding fallow. Mortimer.

Warm cataplasms discuss ; but scalding hot may

confirm the tumour : heat, in general, doth not

resolve and attenuate the juices of a human body ; for too great heat will produce concretions.

Arbulhnot on Aliments.

The serum is corrupted by the infection of the

touch of a salt humour, to which the scab, pox, and scaldhead are referable. Flayer.

The best thing we can do with Wood is to scald

him ;

For which operation there's nothing more proper

Than the liquor he deals in, his own melted copper.

Swift.

SCALD CREAM, sometimes also called clouted

cream, a method of preparing cream for butter.

Mr. Feltham gives the following account of it : —

The purpose of making scald cream is for but-

ter superior to any which can be procured from the usual raw cream, being preferable for flavor and keeping. As leaden cisterns would not answer for scalding cream, the dairies mostly adopt brass pans, which hold from three to five gallons of the milk ; and that which is put into those pans one morning stands till the next, when, without disturbing it, it is set over (on a trivet) a steady brisk wood fire, devoid of smoke, where it is to remain from seven 10 fifteen minutes, according to the size of the pan, or the quantity in it : the precise time for removing it from the fire must be particularly attended to, which is, when the surface begins to wrinkle or to gather in a little, showing signs of boiling ; it is then instantly to be taken off, and placed in the dairy until the next morning, when the fine cream is thrown up, and may be taken for the table, or for butter, into which it is now soon converted by stirring it with the hand. Some know when to remove it from the fire by sounding the pan with the finger, it being then less sonorous ; but this is only acquired by experience. Dr. Hales observes that this method

of preparing milk will take off the taste it

sometimes acquires from the cows' feeding on

turnips, cabbages, &c.

SCALDS, in the history of literature, a name

given by the ancient inhabitants of the northern

countries to their poets ; in whose writings their

history is recorded. See BARDS.

SCALE, n. s. &u. «. Sax. r-cale ; Belg. schael ;

Island, skal ; Goth. skal. A balance ; the dish

of a balance : hence the sign Libra : to measure ; compare.

If thou tak'st more

Or less than a just pound, if the scale turn

But in the estimation of a hair,

Thou diest. Shakspeare. Merchant of Venice.

Here's an equivocator, that could swear, in both

the scales, against either scale. Sha/tspeare.

You have found,

Scaling his present bearing with his past,

That he's your fixed enemy. Id. Coriolaniu.

The world's scales are even ; when the main

In one place gets, another quits again. Cleveland.

Juno pours out the urn, and Vulcan claims

The scales, as the just product of his flames.

Creech.

Long time in even scale

The battle hung. Milton's Paradise Lost.

The scales are turned, her kindness weighs no

more

Now than my vows. Waller.

In full assemblies let the crowd prevail ;

I weigh no merit by the common scale,

The conscience is the test. Dryden.

If we consider the dignity of an intelligent being, and put that in the scales against brute inanimate mat-

ter, we may affirm, without overvaluing human nature, that the soul of one virtuous and religious man is of greater worth and excellency than the sun and his

planets. Bentley's Sermons.

Collect at evening what the day brought forth,

Compress the sum into its solid worth,

And, if it weigh the importance of a fly,

The scales are false, or algebra a lie. Cowper.

SCALE, n.s., v.a. & v. n.") Fr. escaille ; Lat.

SCALED, adj. > squama. The la-

SCALY. j mina of a fish's

coat ; any thing exfoliated or disquamated : to

strip of scales ; to pare off a surface : the adjec-

tives signify squamous ; having scales : to peel

off in thin particles.

Raphael was sent to scale away the whiteness of

Tobit'seyes. Tab. iii. 17.

Half my Egypt was submerged, and made

A cistern for scaled snakes.

Shakspeare. Antony and Cleopatra.

Those that cast their shell are the lobster and

crab : the old skins are found, but the old shells never ; so as it is like they scale off, and crumble away by degrees. Bacon.

He puts him on a coat of mail,

Which was made of a fish's scale. Drayton.

Take jet and the scales of iron, and with a wet fea-

ther, when the smith hath taken an heat, take up the scales that fly from the iron, and those scales von should grind upon your painter's stone. Peacham.

The river horse and scaly crocodile. Milton.

Standing aloof, with lead they bruise the scales,

And tear the flesh of the incensed whales. Waller.

His awful summons they so soon obey ;

So hear the scaly herd when Proteus blows,

And so to pasture follow through the sea. Dryhn.

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I/ all the mountains were tcaled, and the earth

tv.ade even, the waters would not overflow its smooth surface. Burnet.

A scaly fish with a forked tail. Woodward.

When a scale of bone is taken out of a wound,

burning retards the separation. Sharp's Surgery.

SCALE, n.s. 8c v. a. Lat. scala. A ladder;

means of ascent ; the act' of storming by lad-

ders ; regular gradation ; series of musical or

other degrees, or notes ; any thing marked at

equal distances : to climb by ladders ; to mount.

Often have I scaled the craggy oak,

All to dislodge the raven of her nest :

How have I wearied, with many a stroke,

The stately walnut-tree, the while the rest

Under the tree fell all for nuts at strife ! Spenser.

They assailed the breach, and others with their

scaling ladders scaled the walls.

Knollet's History nf the Turks.

They take the flower o' the Nile

By certain scale i' the pyramid : they know

By the height, the lowness, or the mean, if dearth Or foizon follow.

Shakspeare. Antony and Cleopatra.

' Love refines

The thought, and heart enlarges ; hath his seat

In reason, and is judicious ; is the scale

By which to heavenly love thou mayest ascend.

Milton.

Others to a city strong

Lay siege, encamped ; by battery, scalt, and mine

Assaulting. Id. Paradise Lost.

The map of London was set out in the year 1658,

oy Mr. Newcourt, drawn by a icale of yards.

Graunt.

Heaven with these engines had been scaled,

When mountains heaped on mountains failed.

Walter.

The bent of his thoughts and reasonings run up

and down this scale, that no people can be happy but under good governments. Temple.

When the bold Typhaeus scaled the sky,

And forced great Jove from his own heaven to fly,

The lesser gods all suffered. Dryden.

The scale of the creatures is a matter of high specu-

lation. Grew.

On the bendings of these mountains the mark of

several ancient scales of stairs may be seen, by which they used to ascend them. Addison on Italy.

We believe an invisible world, and a scale of

spiritual beings, all nobler than ourselves.

Bentley's Sermons,

All the integral parts of nature have a beautiful

analogy to one author, and to their mighty, original, whose images are more or less expressive, according

to their several gradations in the smle of beings.

Chetfne's Philosophical Principles.

Far as creation's ample range extends,

The scale of sensual mental powers ascends. Pope.

SCALE, a mathematical instrument consisting

of several lines drawn on wood, brass, silver,

&c., and variously divided according to the pur-

poses it is intended to serve ; whence it acquires

various denominations, as the plain scale, dia-

gonal scale, plotting scale, &c.

SCALE, in architecture and geography, a line

divided into equal parts, placed at the bottom of

a map or draught, to serve as a common measure

to all the parts of the building, or all the dis-

tances and places of the map.

SCALE, in music, sometimes denominated a

gamut, a diagram, a series, an order, a diapason.

It consists of the regular gradations of sound,

by which a composer or performer whether m

rising or descending may pass from any given

tune to another. These gradations are seven.

When this order is repeated, the first note of the second is consentaneous with the lowest note of

the first ;. the second of the former with the se-

cond of the latter ; and so through the whole

octave. The second order, therefore, is justly

esteemed only a repetition of the first. For this reason the scale among the moderns is sometimes limited to an octave ; at other times extended to the compass of any particular voice or instrument. It likewise frequently includes all the practical gradations of musical sound, or the whole number of octaves employed in composition or execution, arranged in their natural order. See Music.

SCALIGER (Julius Caesar), a learned critic, born at the castle of Ripa, in the Veronese, in 1484; and said by himself to have been descended from the ancient princes of Verona. He learned the Latin tongue in his own country ; and in his twelfth year was presented to the emperor Maximilian, who made him one of his pages. He served that emperor seventeen years, and gave signal proofs of his valor and conduct in several expeditions. He was present at the battle of Ravenna in April 1512, in which he lost his father Benedict Scaliger, and his brother Titus ; on which his mother died with grief : when, being reduced to necessitous circumstances, he entered into the order of the Franciscans, and

applied himself to study at Bologna ; but soon after took arms again, and served in Piedmont. At which time a physician persuaded him to study physic, which he did at his leisure hours, and also learned Greek ; and at last the gout d— termined him, at forty years of age, to abandon a military life. He soon after settled at Agen, where he was naturalised in 1528, married, and applied himself seriously to his studies. !!•• learned first the French tongue ; and then made himself master of the Gascon, Italian, Spanish, German, Hungarian, and Sclavonian. Mean- while he supported his family by the practice of physic. He did not publish any of his works till he was forty-seven years of age; when he .soon gained a name in the republic of letters. He had a graceful person, and a strong memory. He died of a retention of urine in 1558. He wrote in Latin, 1. A Treatise on the Art of Poe- try. 2. Exercitations against Cardan : which works are much esteemed. 3. Commentaries on Aristotle's History of Animals, and on Theo- phrastus on Plants. 4. Some Treatises on Physic. 5. Letters, Orations, Poems, and other works in

Latin.

SCALIGER (Joseph Justus), one of the most learned critics and writers of his time; the son of the above, was born at Agen, in France, in 1540. He studied in the college of Bourdeaux, after which his father employed him in tran-scribing his poems ; by which he obtained such a taste for poetry that before he was seventeen years old he wrote a tragedy upon the subject of Oedipus. He went to Paris in 1559, with a design to apply himself to the Greek language For this purpose he for two months attended the lectures of Turnebus ; and afterwards shut him-

self up, and by constant application for two years gained a perfect knowledge of that lan-guage ; after which he applied to the Hebrew, which he learned by himself with great facility. He made no less progress in the sciences ; and his writings procured him the reput\tion of one of the greatest men of the age. He embraced the reformed religion at twenty-two years of age.

In 1563 he attached himself to Lewis Casteignier de la Roch Pazay, whom he attended in several journeys ; and in 1593 was offered the place of honorary professor of the university of Leyden, which he accepted. He died of a dropsy in that city in 1609. He was a man of great temperance ; and was never married. He published many works, the principal of which are, 1. Notes on Seneca's Tragedies, on Varro, Ausonius, Pompeius Festus, &c. 2. Latin Poems. 3. A Treatise de Emendatione Temporum. ' 4. Eusebius's Chronicle with Notes. . 5. Canones Isagogici; and many other works. The collections entitled Scaligeriana were collected from his conversations by one of his friends ; and, being ranged into alphabetical order, were published by Isaac Vossius.

SCAL'LOP, n. s. Fr. escalop. A fish with a hollow pectinated shell.

So the emperour Caligula,
That triumphed o'er the British sea,
Engaged his legions in fierce bustles
With periwincles, prawns, and muscles,
And led his troops with furious gallops,

To charge whole regiments of scallops. Hudibras.

The sand is in Scilly glistering, which may be occasioned from freestone mingled with white scallop shells. Mortimer.

SCALLOP, in ichthyology. See PECTEN. In the Highlands of Scotland, the great scallop shell is made use of for the skimming of milk. In old times it had a more honorable place ; being admitted into the halls of heroes, and was the cup of their festivity when the tribe assembled in the hall of thei- chieftain.

SCALMARTIN ROCKS, rocks of Ireland, on the coast of Down county, Ulster, in the harbour of Donaghadee. Though they are so smooth that vessels seldom suffer on them, yet in high tides and storms they are dangerous.

SCALP, n. s. & v. a. Belg. schelpe, a shell ; Ital. scalpo. The skull or cranium ; to take off the scalp.

High brandishing his bright dew-burning blade,
Upon his crested scalp so sore did smite,
That to the scull a yawning wound it made.
Faerie Queene.

White beards have armed their thin and hairless

Against thy majesty. Shakspeare. Richard II.

The hairy scalps

Are whirled aloof, while numerous trunks bestrow

The ensanguined field. Phillips.

If the fracture be not complicated with a wound

of the sca/f), or the wound is too small to admit of the operation, the fracture must be laid bare by

taking away a large piece of the scalp.

Sharp's Surgery.

We seldom inquire for a fracture of the skull by

tcalping, but that the scalp itself is contused.

Sharp.

SCALPA, one of the Western Islands of

Scotland, lying in the sound between the Isle of

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Sky and Pomona, about five miles long and from

two to three broad. It is barren and rocky, in

the highest part of it, is a rock of petrified

moss, in which are a variety of shells ; and great quantities of shells are found several feet under

ground. It lies one mile east of Sky.

SCALPA FLOW, a large expanse of water among

the Orkney Islands, resembling a small sea, about

fifty miles in circumference; surrounded by

twelve islands, through which are several out-

lets to the Pentland Frith, Atlantic and German Oceans. During war it is a great thoroughfare for vessels coming north ; and abounds with safe harbours and road-steads for vessels of the largest size. The chief entrance from the west is through Hoy-mouth, and from the east through Holme Sound. The tide at its entrance into Scalpa Flow is remarkably rapid, but soon subsides.

A SCALPEL is a kind of knife used in anatomical dissections and operations in surgery.

SCALPING, in military history, a barbarous custom practised by the American Indians, of taking off the tops of the scalps of their enemies' skulls with their hair on. They preserve them as trophies of their victories, and are rewarded by their chiefs according to the number of scalps they bring in.

SCAMANDER, or SCAMANDROS, a celebrated river of Troas, rising at the east end of Mount Ida, and running into the sea below SigaeurrK Homer says it was called Xanthus by the gods. The goddesses Juno, Minerva, and Venus, are fabled to have bathed in it, previous to their ap-

pearing before Paris, in the contest for the golden apple. The Simois runs into it. It was a custom among the Phrygian brides to bathe themselves before marriage in this river. But this superstitious ceremony was abrogated, in consequence of Cimon an Athenian's having assumed the disguise of a river god, and deflowering Calirrhoe, a noble virgin, at that time betrothed.

' The origin of this river,' says Dr. Clarke, ' is not like the source of ordinary streams, obscure and uncertain ; of doubtful locality and indeterminate character ; ascertained with difficulty, among various petty subdivisions in swampy places, or amidst insignificant rivulets, falling from different parts of the same mountain, and equally tributary ; it bursts at once from the dark womb of its parent, in all the greatness of the divine origin assigned to it by Homer. Our ascert, as we drew near to the source of the river, became steep and stony. Lofty summits towered above us, in the greatest style of Alpine grandeur ; the torrent, in its rugged bed below, all the while foaming upon our left. Presently we entered one of the sublimest natural amphitheatres the eye ever beheld ; and here the guides desired us

to alight. The noise of waters silenced every other sound. Huge craggy rocks rose perpendicularly to an immense height; whose sides and fissures to the very clouds, concealing their tops, were covered with pines, growing in every possible direction, among a variety of evergreen shrubs, wild sage, hanging ivy, moss, and creeping herbage. Enormous plane-trees waved their vast branches above the torrent. As we approached its deep gulf, we beheld several cas-

cades all of foam, pouring impetuously from chasms in the naked face of a perpendicular rock. It is said the same magnificent cataract continues during all seasons of the year, wholly unaffected by the casualties of rain or melting snow.'

SCAMANDER, in fabulous history, the son of Corybas and Demodice, who brought a colony from Crete into Phrygia, and settled at the foot of Mount Ida, where he established the festivals of Cybele. Being afterwards drowned in the Xanthus, the river was named after him. He was

succeeded by his son Teucer: Diod. 4.

SCAM'BLE, v. n. Ital. scambilarc, from Lat.

scambus. To be turbulent or rapacious ; to

scramble.

Have fresh chaff in the bin,

And somewhat to scamble for hog and for hen.

Tnsser.

Scambling, out facing, fashion-mongering boys

That lie, and cog, and flout, deprave and slander.

Shakspeare.

He was no sooner entered into the town but a

scumbling soldier clapt hold of his bridle, which he thought was in a begging or a drunken fashion.

Wotton.

Some scambling shifts may be made without them.

More.

My wood was cut in patches, and other parts of it scambled, and cut before it was at its growth.

Mortimer.

SCAMMO'NIATE, adj. From scammony.

Made with scammony, a resinous juice.

It may be excited by a local scammnniate, or other acrimonious medicines. Wiseman's Surgery.

SCAMMONY,a resinous gum, brought into this

country from Aleppo, in light spongy masses,

easily friable, of a shining ash- color verging to

black ; when powdered of a light gray or whitish

color : an inferior sort is brought from Smyrna,

in more compact ponderous pieces, of a darker

color, and full of sand and other impurities.

This juice is chiefly of the resinous kind ; proof spirit totally dissolves it, the impurities only

being left. It has a faint unpleasant smell, and

a bitterish, somewhat acrimonious taste. Scam-

mony is an efficacious and strong purgative.

Some have condemned it as unsafe, and laid

sundry ill qualities to its charge; the principal

of which is, that its operation is uncertain, a full dose proving sometimes ineffectual, whilst at

others a much smaller one occasions dangerous

hypercatharses. This difference is owing to the

different circumstances of the patient, and not

to any ill quality or irregularity of operation of

the medicine : where the intestines are lined

with an excessiye load of mucus, the scammony

passes without exerting itself upon them ; where

the natural mucus is deficient, a small dose of

this or any other resinous cathartic irritates and

inflames. Many have endeavoured tn abate the

force of this drug, and correct its imaginary vi-

ruknce, by exposing: it to the fume of sulphur,

dissolving it in acid juices, &c. ; but this can only destroy a part of the medicine, without altering the rest. Scammony in substance, judiciously managed, needs no corrector: if triturated with sugar or almonds, it bfchmes snffi-Iv ife and mild. It m,

solved by figuration in a .ti<.n: cleioftion pt

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liquorice, and then poured off from the fa?ces ; the college of Wirtemberg assures us that by this treatment it becomes mildly purgative, without any inconveniences ; and that it also proves inoffensive to the palate. The common dose is from three to ten grains. According to the analysis of Vogel, Scammony consists of

Aleppo.

Smyrna.

Resin

60

29

Oum

3

8

Extractive ....

2

5

Vegetable debris and ˆ

earth . . . . J

35

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100

SCAMOZZI (Vincent), a celebrated Italian

architect and writer, born at Vicenza in l.‘i.vj.

He travelled through most parts of Europe, ami

was much employed in the chief cities of Italy.

He wrote a celebrated work, entitled Idea del’hi

Architecture Universale, 2 vols. folio, Venice,

1615. He died at Venice in 1616, aged sixty-

four.

SCAM’PER, v.n. Goth. sJcampa; Ital.so/;«-

pare. To fly with speed or trepidation.

A fox seized upon the fawn, and fairly scampered

away with him. L’Estrange.

Be quick, nay, very quick, or he’ll approach,

And, as you’re scampering, stop you in your coach.

King.

You will suddenly take a resolution, in your cabi-

net of Highlanders, to scamper off with your new

crown. Addison .

Close behind his heel

Now creeps he slow ; and now, with many a frisk

Wide-scampering, snatches up the drifted snow

With ivory teeth, or ploughs it with his snout ;

Then shakes his powdered coat, and barks for joy.

Camper.

SCAN, v. a. Fr. scandre ; Lat. scando. To

examine a verse by counting the feet : examine

nicely or formally.

So he goes to heaven,

And so am I revenged : that would be scanned.

Shaktpeare. Hamlet.

The rest the great architect

Did wisely to conceal ; and not divulge

His secrets to be scanned by them, who ought

Rather admire. Milton $ Paradise Lost

They scan their verses upon their fingers. Walsh.

Sir Roger exposing his palm, they crumbled it

into all shapes, and diligently scanned every wrinkle that could be made in it. Addinm.

Every man has guilt, which he desires should not

DC rigorously scanned ; and therefore, by the rule of charity and justice, ought not to do that which he should not suffer. Government of the Tongue.

One moment and one thought migtit let him tcan

Tin' varions turns of life, and fickle state of man.

Prior.

The actions of men in high stations are all con-

spicuous, and liable to be scanned and sifted.

Atterltury.

At the final reckoning, when all men's actions

shall l>e scanned and judged, the great King shall

pass liis sentence, according to th« good men have

done, or neglected to do (alumy.

SCA

SCAN'DAL, M. s. & v. a. -v Fr. scandale ; Lat.

SCAN'DALIZE, v. a. I scandalwn ; Greek

SCAN'DALOUS, adj. > OKavSaXoV. Op-

SCAN'DALOUSLY, adv. i probrium ; offence

SCAN'DALOUSNESS, n.s. J given by the faults

of others ; aspersion ; calumny : to charge falsely ; reproach : this is also sometimes the sense of scan-

dalize; at others it means to offend by some sup-

posed crime : the adjective, adverb, and noun-

substantive follow the senses of scandal.

I demand who they are whom we scandalize by

using harmless things ! Among ourselves that agree

in this use, no man will say that one of us is offen-

sive and scandalous unto another. Hooker.

Nothing scandalous or offensive unto any, especi-

ally unto the church of God : all things in order, and with seemliness. M.

If black scandal, or foul-faced reproach,

Attend the sequel of your imposition,

Your mere enforcement shall acquittance me

From all the impure blots and stains thereof.

Shakspeare. Richard III.

I do fawn on men, and hug them hard,

And after tcandal them. Id. Julius Ceetar.

Something savouring

Of tyranny, which will ignoble make you,

Yea, scandalous to the world. Id. Winter' Tale.*

Thou do'st appear to scandalize

The publick right and common cause of kings.

Daniel.

It had the excuse of some bashfulness, and care

not to scandalise others. Hammond on Fundamentals.

Whoever considers the injustice of some ministers,

in those intervals of parliament, will not be scanda-

lized at the warmth and vivacity of those meetings.

Clarendon.

His lustful orgies he enlarged

Even to the hill of scandal, by the grove

Of Moloch homicide. Milton's Paradise Lost.

My known virtue is from scandal free,

And leaves no shadow for your calumny. Dryden.

Many were scandalized at the personal slander

and reflection flung out by scandalizing libellers.

Addison.

In the case of scandal, we are to reflect how man ought to judge. Rogers'; Sermons.

You know the scandalous meanness of that pro-

ceeding, which was used. Pope.

Shun their fault, who, scandalously nice,

Will needs mistake an author into vice. Id.

His discourse at table was scandalously unbecoming

the dignity of his station ; noise, brutality, and ob-

sceneness. Sicift.

SC AND ALUM MAGNATUM, in law, is a de-

famatory speech or writing, to the injury of a

person of rank ; for which a writ, that bears this name, is granted for the recovery of damages.

SCANDERBEG, the surname of George Cas-

triot, king of Albania, a province of Turkey in

Europe. He was delivered up wilh his three elder

brothers as hostages, by their father, to Amurath

TI., sultan of the Turks, who poisoned his brothers, but spared him on account of his youth, being

likewise pleased with his juvenile wit and hand-

some person. In a short time he became one of

the most renowned generals of the age ; and, revolting from Amurath, he joined Hunniades, a most formidable enemy of the Turks. He defeated the sultan's army, took Amu rath 's secretary prisoner, obliged him to sign and seal an order to the governor of Croia, the capital of Albania, to deliver up the citadel and city to the SCA bearer of that order, in the name of the sultan. Witli this forced order he repaired to Croiu ; and recovered the throne of his ancestors, and maintained the independency of his country against the numerous armies of Amurath and his successor Mohammed II., who was obliged to make peace with him in 1461. He then went to the assistance of Ferdinand of Arragon, at the request of pope Pius II., and by his assistance Ferdinand gained a complete victory over his enemy the count of Anjou. Scanderbeg died in 1467.

SCANDINAVIA, a general name for the countries of Norway, Sweden, and Denmark The inhabitants of these countries, in former times, were excessively addicted to war. From their earliest years they applied themselves to

the military art, and accustomed themselves to cold, fatigue, and hunger. Even the very sports of youth and childhood were dangerous. They consisted in taking frightful leaps, climbing up the steepest rocks, righting naked with offensive weapons, wrestling with the utmost fury ; so that it was usual to see them terrible in the combat at the age of fifteen. At this early age the young men became their own masters ; when they received a sword, a buckler, and a lance. This ceremony was performed at some public meeting. One of the principal men of the assembly named the youth in public ; after which he was obliged to provide for his own subsistence, and was either now to live by hunting, or by joining in some incursion against the enemy. Great care was taken to prevent the young men from too early connexions with the female sex ; and indeed they could have no hope to gain the affection of the fair, but in proportion to the courage and address they had shown in their military exercises. Accordingly, in an ancient song, we find Bartholin, king of Norway, extrenre'y surprised that his mistress should prove unkind, as he could perform eight different exercises. The

children were generally born in camps; and, being inured from their infancy to behoid nothing but arms, effusion of blood, and slaughter, they imbibed the cruel disposition of their fathers; and, when they broke forth upon other nations, behaved rather like furies than human creatures. The laws of this people, in some measure, resembled those of the ancient Lacedemonians. They knew no virtue but bravery, and no vice but cowardice. The greatest penalties were inflicted on such as fled from battle. The laws of the ancient Danes declared such persons infamous, and excluded them from society. Amontr the Germans, cowards were sometimes suffocated in mud ; after which they were covered over with hurdles, to show, says Tacitus, that though the punishment of crimes should be public, there are certain degrees of cowardice and infamy which ought to be buried in oblivion. Frotho king oi Denmark enacted, by law, that whoever solicited an eminent post, ought upon all occasions to attack one enemy, to face two, to retire only one step back from three, and never to make an actual retreat till assaulted by four. The rules

of justice were adapted and warped to these prejudices. War was looked upon as a real act of justice, and force was thought to be an i&con-

testable title over the weak, and a visible mark that God had intended them to be subject to the strong. Lastly, their religion, by annexing eternal happiness to the military virtues, gave the utmost possible degree of vigor to that propensity which these people had for war, and to their contempt of death, of which many instances are recorded. Harold, surnamed Blaatand, or Bluetooth, a king of Denmark, who lived in the beginning of the ninth century, had founded on the coasts of Pomerania a city named Julin or Jomsburg. In this colony it was forbidden to mention the word fear, eren in the most imminent dangers. No citizen of Jomsburg was to yield to any number of enemies, however great. The sight of inevitable death was not to be an excuse for showing the smallest apprehension.

Neither was this intrepidity peculiar to the inhabitants of Jomsburg ; it was the general character of all the Scandinavians. To die with his arms in his baud was the ardent wish of every free man ; and the high idea which they had of this kind of death led them to dread such as proceeded from old age and disease. The warriors who found themselves lingering in disease, often availed themselves of their few remaining moments to shake off life, by a way that they supposed to be more glorious. Some of them would be carried into a field of battle that they might die in the engagement ; others slew themselves. Many procured this melancholy service to be performed by their friends, who considered it as a most sacred duty.

SCANDIX, shepherd's needle, or Venus comb, in botany, a genus of the digynia order, and pentandria class of plants; natural order forty -fifth, umbellate : COR. radiating ; the fruit subulated ; the petals emarginated ; the florets of the disc frequently male. The most remarkable species is the

S. odorata, with angular furrowed seeds. It

is a native of Germany, and has a very thick

perennial root, composed of many fibres of a

sweet aromatic taste, like aniseed, from which

come forth many large leaves that branch out

somewhat like those of fern, whence it is named

sweet fern. The stalks grow four or five feet

high, are fistulous and hairy; the flowers are

disposed in an umbel at the top of the stalk, are of a white color, and have a sweet aromatic

scent. This species is easily propagated by

seeds, which, if permitted to scatter, will supply

an abundance of young plants, that may be put

into any part of the garden, and require no care.

SCANIA, or SCHONEN, a province of South

Gothland, Sweden, bounded on the south by the

Baltic, and on the west by the Sound. The

latter separates it from Denmark. Its) -ngth

from north to south is above sixty-five mi. »s, its breadth from east to west above fifty. It com-

prises the most pleasant, as well as most fertile,

country in Sweden ; and consists of gentle emi-

nences, which, in the interior, are covered with

wood, and of fertile plains and valleys, producing

abundance of corn and pasturage. Cattle and

horses are considerably larger here than in the

northern provinces of Sweden. The principal mineral products are alum, sulphur, coal, chalk, and lead. The inhabitants also export oak timber, hemp, and cordage, as well as horses, sheep, • and cattle. The fisheries are productive. Scania was in remote ages independent; it was afterwards in the possession of Denmark, but was ceded to Sweden, along with the adjoining provinces of Blekingen and Halland, at the peace of lloschild, in 1658. The Danes attempted to re-conquer it after the adventures of Charles XII. ; but an army of 50,000 peasants baffled their attempts. It is now divided into the provinces or hens of Christianstadt and Malmohus. Population 260,000.

SCANNING, in poetry, the measuring of verse by feet, in order to see whether or not the quantities be duly observed. Thus an hexameter verse is scanned by resolving it into six feet ; a pentameter, by resolving it into five feet, &c.

SCANT, v.a.,adj., 8c adv.^\ Sax. jerceanan«

SCAN'TV, adj. to break ; Goth.

SCAN'TILY, adv. \dumt. To limit;

SCAN'TINESS, n. s. 1 straiten : the ad-

SCANT'LET, ' jective signifies

SCANT'LING, scarce ; limited :

SCANT'LY, adv. hence not liberal ;

SCANT'NESS, n. s. J wary: as an ad-

verb (obsolete), scarcely ; hardly : scanty is nar-

row ; confined ; small : hence poor ; not copious

or full ; sparing: the adverb and noun-substan-

tive corresponding : scantlet and scantling sig-

nify a small piece or pattern ; a small or given

quantity : scantly is synonymous with scant,

adverb, and scantness with scan i ness.

You think

I will youi serious and great business scant,

For she is with me. Shakspeare. Othello.

From this time,

Be somewhat tcanter of your maiden presence.

Shtikipeare.

He spoke

Scantily of me, when perforce he could not

But pay me terms of honour. Id.

The success,

Although particular, shall give a scantling

Of good or bad unto the general. Id.

The people, beside their travail, charge, and long

attendance, received of the bankers scant twenty

shillings for thirty. Camden's Remains.

England, in the opinion of the popes, was pre-

ferred, because it contained in the ecclesiastical divi-

sion two large provinces, which had their several

legati nati ; whereas France had tcantly one. Id.

They need rather to be scanted in their nourish-

ments than replenished to have them sweet.

Bacon's Natural History.

White is a penurious colour, and where moistuie

*is «cant .- so blue violets, and other flowers, if the**

be starved, turn pale and white. .Bacon.

He was a man fierce, and of no evil disposition,

saving that he thought scantiness of estate too great an evil. Ilayward.

A single violet transplant :

The strength, the colour, and the size,

All which before was poor and scant,

Redoubles still and multiplies. Donne.

A wild pamphlet, beside other malignities, would

tcant allow him to be a gentleman. Wotlvn.

We want read in any writer, that there have been

seen any people upon the south coast.

Abbot's Description of the World.

Reduce desires to narrow scantlings and small

pioportions. Taylor's Rule of Holy Living.

To find out that,

In such a tcant allowance of star-light,

Would over task the best land-pilot's art. Milton.

While the world was but thin, the ages of man-

kind were longer ; and, as the world grew fuller, so their lives were successively reduced to a shorter

scantlet, till they came to that time of life which they now have. Hale.

Looking on things through the wrong end of the

perspective, which scants their dimensions, we neglect and contemn them. Glanville't Scepsis.

Did we but compare the miserable scantnest of our

capacities with the vast profundity of things, truth and modesty would teach us wary language. Id.

I am scanted in the pleasure of dwelling on your

actions. Dryden.

Virgil has sometimes two of them in a line ; but

the scantineis of our heroic verse is not capable of receiving more than one. Id.

A scemtliny of wit lay gasping for life, and groan-

ing beneath a heap of rubbish. Id.

My eager love, I'll give myself the lye ;

The very hope is a full happiness.

Yet scant ly measures what 1 shall possess-. Id.

Tis hard to find out a woman that's of a just

. What can 'scape the eye

Of God all-seeing'? Mtitor.

Thou lurk'st

In valley or green meadow, to way-lay

Some beauty rare, Calisto, Clymene ;

Too long thou laid'st thy scapes on names adored. Id.

Could they not fall unpity'd on the plain,

But slain revive, and, taken, scape again? Dryden.

SCAPE-GOAT, in Jewish antiquity, the goat

which was set at liberty on the day of solemn

expiation. For the ceremonies on this occasion,

see Levit. xvi. 5, 6, fcc. Some say that a piece

of scarlet cloth, in form of a tongue, was tied on the forehead of the scape-goat. — Hoff. Lex. Univ.

in voc. Lingua. Many have been the disputes

among the interpreters concerning the meaning

of the word scape-goat ; or rather of Azazel, for

which scape-goat is put in our version of the

Bible. Spencer believes Azaz.el to be a proper

name, viz. that of the evil spirit, to which he

conceives the goat to have been devoted. He

observes that the ancient Jews used to substi-

tute the name Samael for Azazel ; and many of

them have ventured to affirm that at the feast of

icantKng for her age, hnmour, and fortune, to make ‘ »”’ v,- T -A. «

a wife ff L’Estrange. expiation they were obliged to otler a gift to Sa-

in this narrow scantling of capacity, we enjoy but mael to obtain his favor. Thus arso the goat, one pleasure at once. Locke.

As long as one can increase the number, he will

think the idea he hath a little too scanty for positive infinity. Id.

Their language being scanty and accommodated

only to the few necessaries of a needy simple life, had no words in it to stand for a thousand. Id.

Alexander was much troubled at the scanti«e« of

nature itself, that there were no more worlds for him to disturb. South.

There remained few marks of the old tradition, so

they had narrow and scanty conceptions of Provi-

dence. Woodward.

O’er yonder hill does scan the dawn appear.*

Gay.

Now scantier limits the proud arch confine,

And scarce are seen the prostrate Nile and Rhine :

A small Euphrates through the piece is rolled

And little eagles wave their wings in gold. Pope.

They with such scanty wages pay

The bondage and the slavery of years. Swift.

In illustrating a point of difficulty, be not too scanty of words, but rather become copious in your

language. Watts.

A. Patriots, alas ! the few that can be found,

Where most they flourish upon English ground,

The country's need have scantily supplied,

And the last left the scene when Chatham died.

Cowper.

SCAPE, v. a., v. n., & n. s. Contracted from

escape. To miss ; avoid ; shun ; not to incur ;

to fly ; get away : an escape.

What, have I scaped love-letters in the holyday

time of my beauty, and am I now a subject for them 1

Shaktpeare.

I spoke of most disastrous chances,

Of hair-breadth scapes in the imminent deadly breach. Id.

No natural exhalation in the sky,

No scape of nature, no distempered day,

But they will pluck away its natural cause,

And call them meteors, prodigies, and signs. Id.

Having purposed falsehood, you

Can have no way but falsehood to be true !

Vain lunatick, against these «•«;« I could*

Dispute, and conquer, if I would. Donne.

sent into the wilderness to Azazel, was under-

stood to be a gift or oblation. Some Christians

have been of the same opinion. But Spencer

thinks that the genuine reasons of the ceremony

were, 1. That the goat, loaded with the sins of the people, and sent to Azazel, might be a symbolical representation of the miserable condition of sinners. 2. God sent the goat thus loaded to the evil daemons, to show that they were impure thereby to deter the people from any conversation or familiarity with them. 3. That the goat sent to Azazel, sufficiently expiating all evils, the Israelites might the more willingly abstain from the expiatory sacrifices of the Gentiles. Le Clerc is of opinion that Azazel was the name of a place, either a mountain or a cliff, at which the goat waited, and thence, as the rabbins say, was cast down and slain. But the most common opinion is, that Azazel is a name given to the goat itself, on account of its being let go, as being derived from TJ? gnez or az, goat, and *?lb azel, he hath gone away. Thus it was understood by our translators, who render it scapegoat ; the Septuagint likewise render it aTroiroft-*

SCAPEMENT, in clock and watch work, a general term for the method, whatever it may be, of communicating the impulse of the wheels to the pendulum or balance. The ordinary scape-

ments consist of the swing-wheel and pallets

only ; but modern improvements have added

other levers or detents, chiefly for the purposes of diminishing friction, or for detaching the pendu –

lum from the pressure of the wheels during part

of the time of its vibration. See WATCHES.

SCAPULA, n. s. Lat. scapula. The shoulder

blade.

The heat went off from the parts, and spread

up higher to the breast and scapula. Wiseman.

The humours dispersed through the branches of

the axillary artery to the scaputary branches.

Id. of Ulcers.

The viscera were counterpoised with the weight of

the tcapular part. Derham .

, in anatomy. See ANATOMY.

(John), the reputed author of a

Greek lexicon, noted only for a gross act of

literary fraud. Being employed by Henry Ste-

phens as a corrector to his press, while he was

publishing his Thesaurus Linguae Graecae, Scapula

extracted those words and explications which he

reckoned most useful, comprised them in one volume, and published them as an original work, with his own name. The compilation and printing of the Thesaurus had cost Stephens immense labor and expense ; but it was so much admired by those learned men to whom he had shown it, and seemed to be of such essential importance to the acquisition of the Greek language, that he reasonably hoped his labor would be rewarded by success, and the money he had expended would be repaid by a rapid and extensive sale. Hut, before his work came abroad, Scapula's abridgment appeared ; which, from its size and price, was quickly purchased, while the Thesaurus itself lay neglected in the author's hands. The consequence was, a bankruptcy on the part of Stephens, while he who had occasioned it was enjoying the fruits of his treachery. Scapula's Lexicon was first printed in 1570, in 4to. It was afterwards enlarged and published in folio, and has gone through several editions. Its success is, however, not owing to its superior merit, but to its price and commodious size. Stephens charges the author with omitting many important

articles. He accuses him of misunderstanding and perverting his meaning ; and of tracing out absurd and trifling etymologies, which he himself had been careful to avoid. Doctor Busby would never permit his scholars at Westminster School to make use of Scapula's lexicon.

SCAPULAR, in anatomy, the name of two pairs of arteries, and as many veins.

SCAPULAR, or SCAPULARY, a part of the habit of several religious orders in the church of Rome, worn over the gown as a badge of peculiar veneration for the Blessed Virgin. It consists of two narrow slips or breadths of cloth covering the back and the breast, and hanging down to the feet. The devotees of the scapulary celebrate their festival on the 10th of July.

SCAR, n. s. 8c v. a. Fr. escarre ; Gr. ((rgapa. A mark made by a hurt ; a cicatrix : to mark in this way.

Yet I'll not shed her blood,
Nor tear that whiter skin of tier's than snow,
And smooth as monumental alabaster. Shabtpeare.

Scratch thee but with a pin, and there remains
Some tear of it. Id. As You Like It.

The soft delicious air,

To heal the scars of these corrosive fires,

Shall breathe her bairn. Milton.

It may be struck out of the omnisciency of God,

and leave no tear nor blemish behind. More.

This earth had the beauty of youth and blooming

nature, and not a wrinkle, scar, or fractuie on all its body. But-net.

In a hemorrhage from the lungs, stypticks are of-

ten insignificant ; and if they could operate upon the affected part, so far as to make a scar, when that fell off, the disease would return. Arbuthnot on Diet.

*The boughs < *ave way. and did not tear*

My limbs ; ana I found strength to bear

Mv wounds, already scarr'd with cold—

My bonds forbade to loose my hold. Byron.

SCAR'AB, n. s. l"r. scarabee ; Lat. scarabgus.

A beetle; an insect with sheathed wings.

A small scarab is bred in the very tips of elm-

leaves : these leaves may be observed to be dry and dead, as also turgid, in which lieth a dirty, whitish, rough maggot, from which proceeds a beetle.

Derham's Physico- Theoli-gy.

SCARAB./EUS, the beetle, in zoology, a genus

of insects of the coleoptera order. The antenna?

are of a clavated figure, and fissile longitudi-

nally : the legs are frequently dentated. See

ENTOMOLOGY. The wing-cases prevent the va-

rious injuries their real wings might sustain by rubbing or crushing against the sides of their abode. These, though they do not assist flight, yet keep the internal wings clean and even, and produce a loud buzzing noise when the animal rises in the air. The scarabseus sacer is very often found on Egyptian monuments. It is represented on the Isiac table; and is frequent among hieroglyphics : it passed as the symbol of immortality, and as the emblem of the sun. Another species was consecrated to Isis, and indicated the moon ; its two horns resembling the crescent of that planet. According to Caylus, the Egyptians were in the constant habit of giving the shape of the scarabaeus to their amulets or rings.

1. S. capricornus, the small gilded Capricorn, is of a true gold color, but in some lights has a cast of green and purple. It is often found among reeds by the banks of rivers (Lister). A variety of this species^ but which Lister makes a distinct species, called the yellow Capricorn, hus a large black spot on each of the cases of the wings. It is found among the dry hay in April.

2. S. carnifex, which the Americans call the tumble-dung, is all over of a dusky black, and,

though not much larger than the common black beetle, is the strongest of the beetle kind. Their excellent smell directs them in flights to excrements, which they form into round balls or pellets, in the middle of which they lay an egg. These pellets, in September, they convey three feet deep in the earth, where they lie till the approach of spring, when the eggs are hatched and burst their nests, and the insects find their w;i\ out of the earth. They assist each other with indefatigable industry in rolling these globular pellets to the place where they are to be buried. This they perform willi the tail foremost by shoving along the ball with their hind feet. They are always accompanied by other beetles of a larger size, and of a more elegant structure and color. The breast of this is covered with a shield of a crimson color, and shining like metal ; the head is of the like color, mixed with green ; and on the crown of the head stands a shining bl;ick horn, bending backwards. Hence these are called the kings of the beetles, though they par take of the same dirty drudgery with the rest.

3. S. cerambyx, the musk beetle, is one of the most beautiful of Jhe English beetles. The male

is much smaller than the female, and is of a

mixed color of purple and gold ; the female i:-

more of a green color; the horns of the mal»-

also consist of longer joints ; and in both

the horns hang over the back, ai>H .-“•« ‘r-nffei SCA

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SCA

lltan the whole body. They are found among

old willows, and often in the very wood. They

are most numerous in July. They make a

mournful sound when taken. See ENTOMOLOGY.

4. S. Hercules, the elephant beetle, is the

largest of this kind hitherto known ; and is

found in South America, particularly in Guinea

and Surinam, as well as about the river Oro-

nooko.

SCAR’AMOUCH, n. s. Fr. escaramouche,

A buffoon in motley dress.

It makes the solemnities of justice pageantry, and

the bench reverend puppets, or scaramouches in

scarlet. Collier.

SCARBOROUGH, a town of Yorkshire, in

the North Riding, seated on a steep rock, almost

inaccessible except towards the west. On the

top of this rock is a large green plain, with two wells of fresh water springing out of the rock.

The town is well built ; the principal streets are spacious and well paved, and the houses in general have a handsome appearance. A fine range of buildings on the cliff, commands a charming view. There is a commodious quay, and one of the finest harbours in the kingdom ; to which belong many ships employed in the coal trade, from Newcastle to London. The harbour is protected by vast piers, extending a considerable way into the sea. A barrack has been erected here, with a strong battery of eighteen-pounders to protect the shipping. Scarborough has an excellent hospital for the widows of poor seamen, maintained by a rate on vessels, and a small deduction from seamen's wages ; also an asylum for aged and infirm persons; an amicable society for clothing and educating about seventy boys and girls ; a Lancasterian school, and numerous other benevolent institutions. It is a town corporate, governed by two bailiffs, a recorder, two coroners, four chamberlains, and thirty-six common councilmen, and has sent two members to parliament since the reign of Ed-

ward I. who are elected by the corporation. It has been principally frequented on account of its mineral waters, called the Scarborough Spa. The spring was under the cliff, part of which fell down in 1 737, and the water was lost ; but, in clearing away the ruins to rebuild the wharf, it was recovered. These waters are chalybeate and purging. When they are poured out of one glass into another, they throw up a number of air bubbles ; and if they are shaken for some time in a phial close stopped, and the phial be suddenly opened before the commotion ceases, they emit an elastic vapor, with an audible noise, which shows that they abound in carbonic acid gas. At the fountain they have a brisk, pungent, chalybeate taste ; but they lose their chalybeate virtues by exposure and by keeping. A person resides at the spa during the season, and receives a subscription from each person, one-eighth of which goes to the water servers, &c., and the rest to the corporation. Assemblies and balls are held at Scarborough as at Tunbridge. See MINERAL WATERS.

SCARCE, adj. & adv.-\ Ital. scarso ; of Lat.

SCARCE' LY, adv. f careo. Scanty ; not

SCARCE'NESS. n. s. I plentiful; rare : scan-

SCAR'CITY. 'tily; hardly; with

difficulty : this is also the sense of scarcely :

scarceness and scarcity mean want, scantiness,

smallness of quantity ; rareness.

A thing which we so little hoped to see, that even they which beheld it Jone scarcely believed their own senses. Hooker.

They that find fault with our store, should be least willing to reprove our scarcity of thanksgivings. Id.

When we our betters see bearing our woes,

We scarcely think our miseries our foes. Shakspeare

Scarcity aud want shall shun you ;

Ceres' blessing so is on you. Id.

You neither have enemies, nor can scarce have

any. Dryden.

He scarcely knew him, striving to disown

His blotted form, and blushing to be known. Id.

Raphael writes thus concerning his Galatea : —

To paint a fair one, 'tis necessary for me to see many fair ones ; but, because there is so great a scarcity of lovely women, I am constrained to make use of one

certain idea, which I have formed in my fancy.

Id. Dufresnoy.

A Swede will no more sell you his hemp for less

silver, because you tell him silver is scarcer now in England, and therefore risen one-fifth in value, than a tradesman of London will sell his commodity

cheaper to the Isle of Man, because money is tcarce there. Locke.

Corn does not rise or fall by the differences of

more or less plenty of money, but by the plenty and scarcity that God sends. Id.

Age, which unavoidably is but one remove from

death, and consequently should have nothing about

it but what looks like a decent preparation for it, scarce ever appears, of late days, but in the high mode, the flaunting garb, and utmost gaudery of

youth. South.

The scarcest of all is aPescennius Niger on a me-

dallion well preserved. Addison.

In this grave age, when comedies are few,

We crave your patronage for one that's new,

And let the scarceness recommend the fare. Id.

They drink very few liquors that have not lain in

fresco, insomuch that a scarcity of snow would raise a mutiny at Naples. Id.

Since the value of an advantage is enhanced by

its scarceness, it is hard not to give a man leave to love that most which is most serviceable.

Collie)- on Pride.

SCARE, v. a. ~\ Italian, scorare — Skinner ;*

SCARE'CROW, > Goth, skoar, fright — Thom-

SCARE'FIRE. j son. To frighten; terrify;

to strike with sudden fear : the compounds cor-

responding.

Thereat the scarecrow waxed wond'rous proud,

Through fortune of his first adventure fair,

And with big thundering voice reviled him loud.

Spenser.

They have scared away two of my best sheep,

which, I fear, the wolf will sooner find than the

master. Shakspeare.

We must not make a scarecrmo of the law,

Setting it up to fear the birds of prey,

And let it keep one shape, 'till custom make it

Their pearch, and not their terrour. Id.

Many of those great guns, wanting powder and

shot, stood but as cyphers and sra recruit's. Raleigh.

Scarecrows are set up to keep birds from corn and

fruit ; and some report that the head of a wolf, whole, dried, and hanged up in a dove-house, will scare

away vermin. Bacon.

The wing of the Irish was so grievously either

galled or icared therewith, that, being strangers.

SCA

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SCA

and in a manner neutrals, they had neither good

heart to go forward, nor good liking to stand still, nor good assurance to tun away. Haytoard.

The drum and trumpet, by their several sounds,

serve for many kind of advertisements ; and bells

serve to proclaim a $carefire, and in some places wa-

ter-breaches. Holder.

A scarecrow set to frighten fools away. Dryden.

Let wanton wives by death be scar'd :

But, to my comfort, I'm prepar'd. Prior.

One great reason why men's good purposes so of-

ten fail, is, that when they are devout, or scared, they then in the general resolve to live religiously.

Calamy's Sermons.

SCARF, n. s. & v. a.) Fr. escharfe. Any

SCARF'SKIN. \ thing that hangs loose

upon the shoulders or dress : the epidermis.

The matrons flung their gloves,

Ladies and maids their scarfs and handkerchiefs,

Upon him as he passed. Shakspeare. Coriolanus.

Will you wear the garland about your neck, or

under your arm like a lieutenant's scarf?

Shakspeare.

My sea-gown icarf about me in the dark

Groped I to find them out. Id. Hamlet.

How like a younker, or a prodigal

The icarfed bark puts from her native bay,

I lugg'd and embraced by the strumpet wind ! Id.

Come, feeling night,

Scarf up the tender eye of pitiful day. Id.

Iris there, with humid bow,

Waters the' odorous banks, that blow

Flowers of more mingled hew

Than her purfled scarf can shew. Milton.

Titian, in his triumph of Bacchus, having placed

Ariadne on one of the borders of the picture, gave her a scarf of a vermilion colour upon a blue dra-

pery. Dryden.

The ready nymphs receive the crying child ;

They swathed him with their scarfs. Id.

My learned correspondent writes a word in defence

of large scarves. Spectator.

The scarfskin, being uppermost, is composed of

several lays of small scales, which lie thicker ac-

cording as it is thicker in one part of the body than another : between these the excretory ducts of the

miliary glands of the true skin open. Cheyne.

*Put on your hood and *carf, and take your plea-*

sure. Swift.

SCARFING, a term in carpentry, by which

is meant the joining of two beams of wood toge-

ther to increase the length. See CARPENTRY.

SCARFSKIN. See ANATOMY.

SCAR'IFY, v. a. } Fr. scarcer; Latin

SCARIFICA'TION, n. s- Sscari/rro. To let blood

SCAR'IFIER. J by incisions of the

skin : the act of doing so : the agent or instru-

ment.

Hippocrates tells you, that, in applying of cups,

the scarification ought to be made with crooked in-

struments. Arbuthnut.

Washing the salts out of the eschar, and scari-

fying it, I dressed it. Wiseman's Surgery.

You quarter foul language upon me, without

knowing whether 1 deserve to be cupped and wvm-

jted at this rate. Spectator.

SCAR'LET, n.s. St. adj. Fr. escarlate ; Ital.

tcarlato. A color compounded of red and yel-

low ; cloth dyed with a scarlet color ; of this

color.

If we live thus tamely,

To be thus jaded by a piece of tcarlet,

Farewel nobility. Shakspeare. Henry VIII.

I conjure thee,

By hei high forehead, and her scarlet lip.

Shalupeare.

The Chinese, who are of an ill complexion, being

olivaster, paint their cheeks scarlet. Bacon.

As a bull

Amid' the circus roars ; provoked from far

By sight of scarlet and a sanguine war. Dryden.

The scarlet honour of your peaceful gown. Id.

Would it not be insufferable for a learned profes-

sor, and that which his scarlet would blush at, to have his authority of forty years standing in an in-

stant overturned ? Locke.

SCARLET (see DYEING), in painting in water

colors, minium mixed with a little vermilion

produces a good scarlet; but if a flower in a

print is to be painted a scarlet color, the lights as well as the shades should be covered with

minium, and the shaded parts finished with car-

mine, which will produce an admirable scarlet.

SCARLET is a beautiful bright red color given

to cloth, either by a preparation of kermes, or

more completely by the American cochineal.

Professor Beckmann, in the second volume of his

History of Inventions, has drawn the following

conclusions: — 1. That scarlet, or the kermes

dye, was known in the east in the earliest ages,

before Moses, and was a discovery of the Phoe-

nicians in Palestine. 2. Tola was the ancient

Phoenician name used by the Hebrews, and even

by the Syrians ; for it is employed by the Syrian translator, Isaiah, chap. i. ver. 18. Among the

Jews, after their captivity, the Aramaaan word

zehorti was more common. 3. The Arabs re-

ceived the name kermes, with the dye, from Ar-

menia and Persia, where it was indigenous, and

had been long known ; and that name banished

the old name in the east, as the name scarlet has in the west. About 1643 a Fleming named Kepler

established the first dye-house for scarlet in Eng-

land, at the village of Bow, near London ; and

on that account the color was called, at first, by the English, the Bow dye. In 1667 another

Fleming, named Brewer, invited to England by

king Charles II. with the promise of a large sa-

lary, brought this art to great perfection. There

are three kinds of scarlet : one, called Venetian

scarlet, dyed with hermes ; another, dyed with

cochineal ; and the third with gum lac. The first

of these is chiefly used for tapestry, and is re-

markably permanent.

SCARLET FEVER. See MEDICINE.

SCAR'MAGE, or J For skirmish. Spen-

SCAR'MOGE, n. s. j ser.

Such cruel game my scarnages disarms ;

Another war, and other weapons, I

Do love, when Love does give his sweet alarms.

Spenser.

SCARPANTO, or Koje, the ancient Carpa-

thos, an island in the Mediterranean, between

Candia and Rhodes. It is for the most part

rocky and mountainous, but contains several

good harbours, iron mines, and quarries of marble.

Long. 26° 50 E., lat. 35° 44′ N.*

SCARRON (Paul), a famous French burlesque

writer, was the son of a counsellor in parliament,

and was born in Paris about the end of 1610, or

beginning of 1611. His father marrying a se-

cond wife, he was compelled to assume the

ecclesiastical habit. At the age of twenty-four

he visited Italy, and after his return to Paris

continued a life of reckless dissipation. But in

1638 while attending the carnival at Mens, of

which place he was a canon, having dressed

himself as a savage, his singular appearance ex

cited the curiosity of the children of the town.

They followed him in multitudes, and he was

obliged to take shelter in a marsh, and this wet

and cold situa ion produced a numbness which

totally deprived him of the use of his limbs,

which he never again recovered. He took up

his residence in Paris, and the loss of his health was followed by the loss of his fortune, in a law-

suit with his step-mother; and mademoiselle de

Hautefort, compassionating his misfortunes, pro-

cured for him an audience of the queen. The

poet requested to have the title of valetudinarian

to her majesty. The queen smiled, and Scarron

considered the smile as the commission to his

new office. Cardinal Mazarine gave him a pen-

sion of 500 crowns ; but that minister having

received disdainfully the dedication of his Ty-

phon, the poet immediately wrote a Mazarinade,

and the pension was withdrawn. He then at-

tached himself to the prince of Conde, and cele-

brated his victories. He at length formed the

extraordinary resolution of marrying, and was

accordingly, in 1651, married to madame d'Au-

bigne (afterwards the celebrated madame de

Maintenon), then only sixteen years of age. ' At

that time,' says Voltaire, ' it was considered as a great acquisition for her to gain for a husband a

man who was disfigured by nature, and very little

enriched by fortune.' She restrained by her modesty his indecent buffooneries, and the literary men who had formerly resorted to his house again frequented it. But he lived with so little economy that his income was soon reduced to a small annuity, and what he styled his marquisate of Quinet, i. e. the profits of his publications, which were printed by one Quinet. Though Scarron wrote comedies, he had not patience to study the rules of dramatic poetry. It was the fashion of the times to pillage the Spanish writers. Scarron was acquainted with that language, and he found it easier to use materials already prepared, than to invent new subjects. The great success of his Jodelet Maitre was a great allurement to him. The comedians who acted it requested more of his productions. They were written with little toil, and procured him large sums. Christina, queen of Sweden, when she visited Paris, was anxious to see Scarron. ' I permit you,' said she to Scarron, ' to fall in love with me. The queen of France has made you her valetudinarian, and I create you my Roland ' Scarron did not long enjoy that title ; as he died on the 14th of October, 1660, aged . fifty-one. His

works have been collected and published by

Bruzen de la Martiniere, in 10 vols. 12mo., 1737.

These are, 1. The ./Eneid travestied, in eight

books. 2. Typhou, or the Gigantomachia. 3.

Many comedies; as Jodelet, or the Master

Valet; Jodelet cuffed ; Don Japhet d'Armenie ;

The Scholar of Salamanca. He also wrote other

til SCA

pieces in verse. 4. His Comic Romance, in

prose, merits attention. It is written with much

humor and purity of style. 5. Spanish Novels

translated into French. 6. A volume of Letters.

7. Poems ; consisting of Songs, Epistles, Stanzas,

Odes, and Epigrams. Scarron can raise a laugh

on the most serious subjects ; but his sallies are

rather those of a buffoon than the effusions of in-

genuity and taste. He is continually falling

into the mean and the obscene.

SCATH, v. a. & n. s. > Sax. j-ceafcan, j-ca-

SCATH'FUL, adj. $

mage ; destroy : the damage or waste done : the

adjective corresponding. Both the verb and

noun are now obsolete.

The ear that budded fair is burnt and blasted,

And all my hoped gain is turned to scath. Spenser.

He bore a spiteful mind against king Edward, doing

him all the scath that he could, and annoying his

territories. Id.

They placed them in Rhodes, where daily doing

great scath to the Turk, the great warrior Soliman, with a mighty army, so overlaid them, that he won

the island from them. Knottes.

A bawbling vessel was he captain of,

For shallow draught, and bulk unprizable,

\ith which such scatliful grapple did he make,

That very envy, and the tongue of loss,

Cried fame and honour on him. Shakspeare.

Still preserved from danger, harm, and scath,

By many a sea and many an unknown shore.

Fairfax.

As when Heaven's fire

Hath scathed the forest oaks, or mountain pines,

With singed top their stately growth, though bare

Stands on the blasted heath. Milton's Paradite Lost.

SCATTER, v. a. } Sax. rcaterian; Belg.

SCAT'TERINGLY, adv. l-schatteren. To throw

SCAT'TERLING, n. s. j loosely about ; sprin-

kle ; squander : the adverb corresponding : scat-

terling is a vagabond ; one that has no home or

settled habitation. An elegant word, says John-

son, but disused.

Samuel came not to Gilgal, and the people were

Mattered from Saul. 1 Sam. xiii. 8.

A king that sitteth in the throne of judgment,

scaltereth away all evil with his eyes. Prov. xx. 8.

Such losels and scatterlings cannot easily, by any

ordinary officer, be gotten, when challenged for any such fact. Spenser.

Sound diffuseth itself in rounds ; but if that which would scatter in open air be made to go into a canal, it gives greater force to the sound. Bacon.

The Spaniards have here and there scatteringly,

upon the sea-coasts, set up some towns. Abbot.

Adam by this from the cold sudden damp

Recovering, and his scattered spirits returned.

Milton.

Those drops of prettiness, scattering i/ sprinkled

amongst the creatures, were designed to defecate and exalt our conceptions, not to inveigle or detain our passions. Boyle.

Why should my muse enlarge on Libyan swains,

Their scattered cottages and ample plains 1 Dryden.

Teach the glad hours to scatter, as they fly,

Soft, quiet, gentle love, and endless joy. Prior.

Corruption, still

Voracious, swallowed what the liberal hand

Of beauty scattered o'er the savage year. Thomson.

The sun

Shakes from his noon-day throne the scattering clouds. M

SCE

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SCAVENGER, n. s. From Sax. rcapan, to

shave, perhaps to sweep. Once a petty magis-

trate, whose province was to keep the streets

clean : now the laborer employed in removing

filth.

Since it is made a labour of the mind, as to inform men's judgments, and move their affections, to re-

solve difficult places of Scripture, to decide and clear off controversies, I cannot see how to be a butcher, scavenger, or any other such trade does at all qualify men for this work. Smith.

Fasting 's Nature's scavenger. Baynard.

Dick the tcavenger, with equal grace,

Flirts from his cart the mud in Walpole's face.

Swift.

SCAURUS (M. ˆEmilius), a Roman consul,

who distinguished himself by his eloquence at

the bar, as well as by his victories in Spain as a general. He was sent against Jugurtha, but was

suspected of having been bribed by that monarch.

He, however, conquered the Ligurians, and,

during his censorship, built the Milvian bridge

at Rome, and paved the ./Emilian road. He

wrote several books, particularly his own life, but none of them are extant.

SCAURUS (M. JEmilius), son of the preceding, is famous for having a erected a large and grand theatre at Rome, while he was acdile. It was so capacious that it would contain 30,000 spectators ; it was supported by 360 columns of marble, and adorned with 3000 brazen statues.

SCEL'ERAT, n.s. Lat. sceleratus. A villain ; a wicked wretch. A word introduced unnecessarily from the French by a Scottish author.

SceUratt can by no arts stifle the cries of a wounded conscience. Cheyne.

SCELERATUS, in Roman antiquity, the name given a street in Rome, formerly called Cypriiis, from the horrible wickedness of Tullia, the wife of Tarquin II., who ordered her charioteer to drive her chariot over the body of her wounded father. See ROME. Also the name of a plain at Rome, near the Colline gate, so named from the Vestal Minucia being buried alive in it for adultery.

SCENE', n. «. J Fr. scene ; Lat. scxna ; Gr.

SCF.X'ERY. J oKnvrj. The stage ; a theatre

of dramatic poetry: hence the. general ap-

pearance of any action ; a display ; a series ;

part of a play : the words are nearly synony-

mous.

The king is set from London, and the icene

Is now transported to Southampton. ShaJispeart.

The alteration of scenes feeds and relieves the eye, before it be full of the same object. Bacon.

Cedar and pine, and fir and branching palm,

A sylvan scene ; and as the ranks ascend

Shade above shade, a woody theatre

Of stateliest view. Milton.

To make a more perfect model of a picture, is, in the language of poets, to draw up the scenary of a play. Dryden.

A mute tcene of sorrow, mixt with fear :

Still on the table lay the unfinished cheer. Id.

If his characters were good,

The scenes entire, and freed from noise and blood,

The action great, yet circumscribed by time,

The words not forced, but sliding into rhinie,

He thought, in hitting these his business done. Id.

He must gain a relish of the works of nature, and SCE

be conversant in the various sceiutry of a country

life. Additon.

Eternity ! thou pleasing, dreadful thought !

Through what variety of untried beings,

Through what new scenes and changes must we pass !

Id.

Say, shepherd say, are these reflections true ?

Or was it but the woman's fear that drew

This cruel scene, unjust to love and you ? Prior.

Our author would excuse these useful scenes

Begotten at his entrance. Grtmville.

The progress of the sound, and the scenary of the

bordering regions, are imitated from JEn. vii. on the sounding the horn of Alecto. Pope.

To complete

The tcene of desolation, stretched around

The grim guards stand. Thomson.

Tis well, if looked for at so late a day,

In the last scene of such a senseless play,

True wisdom will attend his feeble call,

And grace his action ere the curtain fall. Cotcper.

SCENE, in its primary sense, denoted a place

where dramatic pieces and other public shows

were exhibited. The original scene for acting

of plays was as simple as the representations

themselves ; it consisted only of a plain plot of

ground proper for the occasion, which was in

some degree shaded by the neighbouring trees,

whose branches were made to meet together, and

their vacancies supplied with boards, sticks, and

the like ; and, to complete the shelter, these were sometimes covered with skins, and sometimes

with only the branches of other trees, newly cut

down and full of leaves. Afterwards more

artificial scenes, or scenical representations, were

introduced, and paintings used instead of the

objects themselves. Scenes were then of three

sorts; tragic, comic, and satiric. The tragic

scene represented stately magnificent edifices,

with decorations of pillars, statues, and other

things suitable to the palaces of kings. The

comic exhibited private houses with balconies

and windows, in imitation of common buildings ;

and the satiric was the representation of groves,

mountains, dens, and other rural appearances ;

and these decorations either turned on pivots, or

slid along grooves.

SCENE is also a part or division of a dramatic

poem. Thus plays are divided into acts, and

acts are subdivided into scenes. Whenever,

therefore, a new actor appears, or an old one

disappears, the ‘action is changed into other

hands; and therefore a new scene then com-

mences.

SCEN'ICK, adj. Fr. scenique, from scene.

Dramatic; theatrical.

With ictnich virtue charm the rising age. Anon.

SCENOGRAPH'ICAL, adj.) Gr.

SCENOGRAPH'ICALLY, adv. $ and

Drawn in perspective.

If the workman be skilled in perspective, more

than one face may be represented in our diagram

scenographically. Mortimer.

*SCENT, n. *. & v.a. Fr. sentir, to smell ; Ital.*

sentire. The power of smelling ; the smell ; the

object of smell ; chase by the smell : to smell ;

to perfume.

Belman cried upon it at the meerest loss,

And twice to-day picked out the dullest scent.

Shaktpeart.

SCEPTICS,

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The plague, they report, hath a scent of the smell of a mellow apple. Bacon.

Good scents do purify the brain,

Awake the fancy, and the wits refine. Davit.

Exulting, 'till he finds their nobler sense

Their disproportioned speed does recompense ;

Then curses his conspiring feet, whose scent

Betrays that safety which their swiftness lent.

Deiiham.

Partake

The season, prime for sweetest scents and airs.

Milton.

So scented the grim feature, and upturned

His nostrils wide into the murky air,

Sagacious of his quarry from so far. Id.

He gained the observations of innumerable ages,

and travelled upon the same scent into -(Ethiopia.

Temple.

I?alm, from a silver box, distilled around,

Shall all bedew the roots, and scent the sacred ground. Dryden.

Actaeon spies

His opening hounds, and now he hears their cries ; A generous pack, 01 to maintain the chase,

Or snuff the vapour from the scented grass.

Addiiim.

Cheerful health,

His duteous handmaid, through the air improved,

With lavish hand diffuses scents ambrosial. Prior.

A hunted hare treads back her mazes, crosses and

confounds her former track, and uses all possible

methods to divert the scent. Watts.

The crystal waters round us fa'

The merry birds are lovers a',

The scented breezes round us blaw,

A' wandering w' me Davie. Burns.

SCEPTICS, an ancient sect of philosophers,

founded by Pyrrho, who, according to Laertius,

had various other denominations. From their

master they were called Tyrrhenians ; from the

distinguishing tenets or characteristic of their

philosophy they derived the name of Apo-

retici, from aTroptiv, to doubt; from their

hesitation they were called ephetici, from

nrfxiiv, to stay or keep back ; and lastly, they

were called zetetici, or seekers, from their never

getting beyond the search of truth. That the sceptical philosophy is absurd can admit of no dispute in the present age; and that many of the followers of Pyrrho carried it to the most ridiculous height is no less true. But we cannot believe that he himself was so extravagantly sceptical as has sometimes been asserted, when we reflect on the particula-s of his life, which are still preserved, and the respectful manner in \hich we find him mentioned by his contemporaries, and writers of the first name who flourished soon after him. The truth, as far as at this distance of time it can be discovered, seems to be, that he learned from Democritus to deny the real existence of all qualities in bodies, except those which are essential to primary atoms, and that he referred every thing else to the perceptions of the mind produced by external objects ; in other words, to appearance and opinion. All knowledge of course appeared to him to depend on the fallacious report of the senses, and consequently to be uncertain ; and in this notion he •u'ns confirmed by the general spirit of the Eleatic school in which he was educated. He was fur-

ronfirmed in his scepticism by the subtilties

“i thfl Dinlectic schools, m which te had l-nu instructed by the son of Stilpo; choosing to overturn the cavils of sophistry by recurring to the doctrine of universal uncertainty, and thus breaking the knot which he could not unloose ; for, being naturally and habitually inclined to consider immoveable tranquillity as the great end of all philosophy, he was easily led to despise the dissensions of the dogmatists, and to infer, from their endless disputes the uncertainty of the questions on which they debated ; contro versy, as it has often happened to others, becoming also with respect to him the parent of scepticism. Pyrrho’s doctrines, however new and extraordinary, were not totally disregarded. lie was attended by several scholars, and succeeded by several followers, who preserved the memory of his tenets. The most eminent of his followers was Timon, in whom the public succession of professors in the Pyrrhonic school terminated. In the time of Cicero it was almost extinct, having suffered much from the jealousy of the dogmatists, and from a natural aversion in the human mind to acknowledge total ignorance, or

to be left in absolute darkness. The disciples of Timon, however, still continued to profess scepticism, and their notions were embraced privately at least by many others. The school itself was afterwards revived by Ptolemaeus, a Cyrenian, and was continued by /Enesidemus, a contemporary of Cicero, who wrote a treatise on the principles of the Pyrrhonic philosophy, the heads of which are preserved by Photius. A system of philosophy thus founded on doubt, and clouded with uncertainty, could neither teach tenets of any importance, nor prescribe a certain rule of conduct ; and accordingly we find that the followers of scepticism were guided entirely by chance. As they could form no certain judgment respecting good and evil, they accidentally learned the folly of eagerly pursuing any apparent good, or of avoiding any apparent evil ; and their minds of course settled into a state of undisturbed tranquillity, the grand postulatum of their system. In the schools of the sceptics we find ten distinct topics of argument urged in support of the doctrine of uncertainty; with this precaution, however, that nothing could be positively asserted, either concerning their number or their

force. These arguments chiefly respect objects of sense ; they place all knowledge in appearance ; and, as the same things appear very different to different people, it is impossible to say which appearance most truly expresses their real nature. They likewise say that our judgment is liable to uncertainty from the circumstance or frequent or rare occurrence, and that mankind are continually led into different conceptions concerning the same thing by custom, law, fabulous tales, and established opinions. On all these accounts they think every human judgment is liable to uncertainty ; and concerning any thing they can only assert that it seems to be, not that it is what it seems. This doubtful reasoning, if reasoning it may be called, the sceptics extended to all the sciences in which they discovered nothing true, or which could be absolutely asserted. In all nature, in physics, morals, and theology, they found contradictory opinions ;IIK! in< n-hensihle

phenomena. In physics the appearances they thought might be deceitful ; and, respecting the nature of God and the duties of morality, men were, in their opinion, equally ignorant and uncertain. But scepticism has not been confined to the ancients and to the followers of Pyrrho. Numerous sceptics have arisen in modern times, varying in their principles, manners, and character, as chance,'prejudice, vanity ,weakness, or indolence prompted them. The great object, however, which they seem to have had in view was to overturn, or at least to weaken, the evidence of analogy, experience, and testimony; some of them have even attempted to show that the axioms of geometry are uncertain, and its demonstrations inconclusive. Most of our readers must be well acquainted with the essays of Hume, and with the able confutations of them by doctors Reid, Campbell, Gregory, and Beattie, who have likewise exposed the weakness of the sceptical reasonings of Des Cartes, Malbranche, and other philosophers of great fame in the same school.

SCEP'TRE, n. s. I Fr. sceptre ; Lat. scep-

SCEP'TERED, adj. $ trum. The ensign of

royalty borne in the hand : the adjective corres-

ponding.

Nor shall proud Lancaster usurp ray right,

Nor hold the sceptre in his childish fist.

Shakspeare.

How, best of kings, do'st thou a sceptre bear !

How, best of poets, do'st thou laurel wear !

But two things rare the fates had in their store,

And gave thee both, to shew they could no more.

Ben Jensen.

The court of Rome has, in other instances, so

well attested its good menagery, that it is not credi-

ble crowns and sceptres are conferred gratis.

Decay of Piety.

T sing the man who Judah's sceptre bore

In that right hand which held the crook before.

Cowley.

The parliament presented those acts which were

prepared by them to the royal sceptre, in which were some laws restraining the extravagant power of the

nobility. Clarendon.

The sceptered heralds call

To council, in the city-gates.

Milton's Paradise Lost.

A shilling dipt in the bath may go for gold among the ignorant, but the

sceptres on the guinea show

the difference. Dryden.

To Britain's queen the sceptered suppliant bends,

To her his crowns and infant race commends.

Ticket.

The Lily's height bespoke command,

A fair imperial flower ;

She seemed designed for Flora's hand,

The tceptre of her power. Cowper.

Became religion, and the heart ran o'er

With silent worship of the great of old ! —

The dead but sceptered sovereigns, who still rule

Our spirits from their urns. Byron.

The SCEPTKE is a kind of royal staff, or ba-

toon, born on solemn occasions by kings, as a

badge of their command and authority. Nicod

derives the word from the Greek

he says originally signified 'a javelin,' which

the ancient kings usually bore as a badge of their authority. But aKnirrpov does not properly sig-

nify a javelin, but a staff to rest upon, from

' I lean upon.' Accordingly, in the sim-

plicity of the earlier ages of the world, the scep-

tres of kings were no other than long walking

staves: and Ovid, in speaking of Jupiter, des-

cribes him as resting on his sceptre (Met. i. v. 178). The sceptre is an ensign of royalty of greater antiquity than the crown. The Greek tragic and other poets put sceptres in the hands of the most ancient kings they ever introduce. Justin observes that the sceptre, in its original, was an hasta, or spear. He adds, that, in the most remote antiquity, men adorned the hasta; or sceptres as immortal gods ; and that it was > upon this account, that, even in his time, they still furnished the gods with sceptres. — Neptune's sceptre is his trident. In process of time, the king's sceptre became covered with ornaments in copper, ivory, gold, or silver, and also with symbolical figures. The sceptre borne by the Roman emperors, as on their medals, 8cc., is surmounted, when these princes are in the consular habit, with a globe topped by an eagle. Phocas is imagined to have been the first who added a cross to his sceptre ; and his successors even substituted the former emblem for the latter, bearing ornamented crosses alone. Richard Cceur de Lion held in his right hand a golden sceptre surmounted by a cross, and, in his left,

a golden baton, topped by the figure of a dove. Tarquin the Elder was the first who assumed the sceptre among the Romans. Le Gendre tells us, that, in the first race of the French kings, the sceptre was a golden rod, almost always of the same height with the king who bore it, and crooked at one end like a crozier. Frequently instead of a sceptre, kings are seen on medals with a palm in their hand.

SCHAAF (Charles), a learned German, born at Nuys, in the electorate of Cologn, in 16lf>. His father was major in the army of the landgrave of Hesse-Cassel. He studied divinity at Duisbourg; and, having acquired the oriental languages, became professor in that university in 1677. In 1679 he was invited to Leyden in the same capacity, where he settled and died in 1729, of an apoplexy. He published several works on oriental learning ; of which the principal is his Grammatica Chaldaiaca et Syriaca.

SCH./EFFERA, in botany, a genus of the tetrandria order, and dicecia class of plants : CAT . quadripetalous : COR. quadripetalous, quinquepetalous, and often wanting ; the fruit is a bilocu-

lar berry with one seed. Of this there are two species :

1 . S. completa, and S. latiflora, both natives of Jamaica; and growing in the lowlands near the sea.

SCH7ESBURG, a district of Transylvania, belonging to the Saxons, lying along the great Kockel. It contains 210 square miles, with about 20,000 inhabitants. Though hilly, it has no high mountains, and is divided into the Upper and Lower Circles, both of which have good pasturage and vines.

SCHJESBURG, or SEGESVAR, a town of Transylvania, situated near the Great Kockel. It is divided into the Upper and Lower Town. The former stands on a hill, nearly 250 feet in height, and is fortified ; the latter is built on the plain, and open. The inhabitants are chiefly Lutherans,

and have here four churches, with a gymnasium. The principal employments are the weaving of linen, and spinning cotton. The environs produce vines and other fruit. The present town was begun in 1178; but several ruins, and a

number of medals found, show that it was occupied by the Romans. Forty-seven miles E. S. E. of Clausenburg, and 120 north-east of Temesvar. Inhabitants 6000.

SCHAFFBAUSEN, a fine town in the north of Switzerland, situated near the frontiers of Suabia, on the Rhine. Its buildings are the large parish church of St. John, an academy with seven professors, besides other teachers, the town library, town-hall, and market house. The transit trade of this place has long been considerable, owing chiefly to its situation about a league above the celebrated cataract of the Rhine, which necessitates all the goods brought down the river to be landed here. The manufactures are of silk, cotton, and leather, and are considerable, and the wine raised in the neighbourhood forms also an article of export. A wooden bridge of ingenious construction, is here thrown across the Rhine, and forms the only channel of communication between this town and the rest of Switzerland. It is 360 feet in length, and consists of two very wide arches. It was first erected in 1758, after the repeated

destruction by inundations of the preceding stone bridge ; and though burnt by the French troops, in their retreat in 1799, has been rebuilt. Twenty-five miles west of Constance, and fifty east by north of Bale.

SCHAFFHAUSEN, a canton in the north of Switzerland, with an extent of 170 square miles, a number of small hills, but no mountains, except one called the Randen. The climate is temperate, the soil various, and the products wheat, barley, oats, vines and other fruits. The towns and manufactures are inconsiderable. The inhabitants are, with few exceptions, Calvinists. Population 32,000.

SCHALCKEN (Godfrey), an eminent Dutch painter, born at Dort in 1643. He was a disciple of Gerard Douw, whose style he adopted. He resided some time in London, and painted the portrait of king William III. by candle light, the king holding the candle. He was equally eminent in history. He died in 1706.

SCHATEN (Nicolas), a learned Jesuit, who flourished in the seventeenth century. He wrote several works, but that for which he is most ce-

lebrated is his History of Lower Germany. It is esteemed very correct, and abounds with interesting researches. He died about 1697.

SCHATZK, a town in the interior of European Russia, in the government of Tambov, on Schata. It has a considerable traffic in hemp, hardware, and silk. Ninety-six miles north of Tambov, and 2 16 south-east of Moscow. Inhabitants 5700. Long. 41° 56′ E., lat. 54° 26′ N.

SCH AU EN BURG, a district of Hesse, in the north-west of Germany, situated at a distance from the rest of the elector's territories, and consisting of the south and east parts of the principality of Schauenburg-Lippe. Its area is about 210 square miles. It is in general level and fertile. In its government it is independent of the other states of the electorate. Population 24,000.

SCHAUENBURG, Of ScHAUMBURG-LlPPF., a principality of the German empire, in Westphalia, worth about £22,000 annually, bounded by Hanover, Prussian Westphalia, and the province of Schauenburg belonging to Hesse-Cassel. Its extent is above 210 square miles. Popula-

tion 24,000. The soil is fertile, both for tillage

and pasturage. The chief manufactures are

thread and linen.

SCHED'ULE, n. s. Fr. schedule ; Lat. sche-

dula. A small scroll ; a list or inventory.

The first published schedules being brought to a

grave knight, he read over an unsavory seatence or

two, and delivered back the libel. Houker.

I will give out ichedutes of my beauty ; it shall be inventoried, and every particle and utensil labelled to my will. Shahspeare.

All ill, which all

Prophets or poets spake, and all which all

Be annexed in schedule unto this by me,

Fall on that man ! Donne.

A SCHEDULE is a scroll of paper or parchment

annexed to a will, lease, or other deed ; contain-

ing an inventory of goods, or some other matter

omitted in the body of the deed. The word is a

diminution of the Latin scheda, or Greek (rˆiSy,

a leaf or piece of paper.

SCHEELE (Charles William), an eminent

Swedish chemist, born in 1742, at Stralsund.

When very young he received the usual educa-

tion at a private school ; and at a very early age showed a strong desire to follow the profession

of an apothecary. With Mr. Bauch, an apothe-

cary at Gottenburg, he passed an apprentice-

ship of six years, and laid the first foundation of his knowledge. Among the various books which

he read, on chemical subjects, Runckel's Labor-

atory was his favorite. He repeated many of the

experiments in that work privately in the night,

when the rest of the family were asleep. A friend

of Scheele's had also excited his attention to ex-

periments in chemistry by advising him to rea

Neuman's Chemistry. After his departure from

Gottenburgh in 1765 he obtained a place witli

Kalstrom, an apothecary at Malmo. In 1767 he

went to Stockholm, and in 1773 to Upsal, where

he had free access to the University Laboratory

Here also he commenced the friendship which

subsisted between him and Bergman. During

his residence at this place, Prince Henry of

Prussia, accompanied by the duke of Sunder-

land, visited Upsal, and went to see the Acade-

mical Laboratory, and Scheele was appointed by

the university to exhibit some chemical experi-

ments to them ; and he showed some of the most

curious processes in chemistry. In 1777 Schee'e

was appointed by the Medical College to be

apothecary at Roping, where he showed his abilities. When he was at Stockholm he discovered the fluoric acid ; and whilst at Upsal, he made many experiments to prove its properties. At the same place he began his series of experiments on manganese. At Koping he finished his Dissertation on Air and Fire ; a work which the celebrated Bergman most warmly recommended in the friendly preface which he wrote for it. The theory which Scheele endeavours to

prove in this treatise is, that fire consists of pure air and phlogiston. The author's merit in this work was sufficient to obtain the approbation of the public ; as the ingenuity displayed in handling so delicate a subject, and the many new and valuable observations dispersed through the treatise, justly entitled the author to that fame which his book procured him. The English translation is enriched with the notes of Richard Kirwan. Scheele now diligently emplpyed himself in contributing to the Transactions of the Academy at Stockholm. He first pointed out a new way to pre-

pare the salt of benzoin. In the same year he discovered that arsenic, prepared in a particular manner, partakes of all the properties of an acid, and has its peculiar affinities to other substances. In a Dissertation on Flint, Clay, and Alum, he clearly overturned Beaume's opinion of the identity of the siliceous and argillaceous earths. He published also an Analysis of the Human Calculus. He published an excellent dissertation on the different sorts of oether. His investigation of the coloring matter in Prussian blue, the means he employed to separate it, and his discovery that alkali, sal ammoniac, and charcoal, mixed together, will produce it, are strong marks of his penetration and genius. The valuable discoveries of this great philosopher, many of which are to be found in the Transactions of the Royal Society at Stockholm, are too numerous for us to attempt to give a list of them. Most of his essays have been published in French by madame Picardet, and M. Morveau of Dijon. Dr. Beddoes also made a very valuable English translation of the greater part of Seheele's dissertations, to which he has added some useful and ingenious notes. His last dissertation was his very valuable observations on the acid of the gall-nut. See GALLIC

ACID. The character of Scheele, as a chemist, is too generally established to need any eulogium. He mixed but little with society ; as, when his profession permitted him, he was employed in his experimental enquiries. His chemical apparatus was neither neat nor convenient ; his laboratory was small and confined ; nor was he particular in regard to the vessels which he employed in his experiments, so that it is surprising how such discoveries, and such elegant experiments, could have been made under such disadvantages. He understood none of the modern languages except the German and Swedish ; so that he was compelled to wait till discoveries were conveyed to him through the slow channel of translation. An offer was made to him of an annuity of £300 if he would settle in this country; but death put an end to this project. He died in May 1786.

SCHEFFER (John), a learned German, born at Strasburg in 1621 . He became eminent as a critic on Greek and Latin authors. Being obliged to leave his native country on account of the wars in 1648 he retired to Sweden, where queen Christina was patronising all men of letters. He

was soon after professor of eloquence and politics at Upsal ; honorary professor royal of the law of nature and nations ; and assessor of the royal college of antiquities ; and at last librarian of the university of Upsal. He published several learned works ; particularly De Militia Navali Veterum. He died in 1679.

SCHEGKIUS (James), a learned German physician and professor, of the seventeenth century, born at Schorndorf, in the duchy of Wirtemberg. He was first appointed professor of philosophy in Tubingen ; and afterwards professor of medicine for thirteen years. He wrote several works on philosophy, medicine, and theology ; of which the most celebrated is his work De Animae Principatu ; an cordi, an cerebrae, tribuendus.

SCHEINER (Christopher), a German mathematician, astronomer, and Jesuit, eminent as the first who discovered spots on the sun, was born at Schwaben in the territory of Middleheim in 1575. He first discovered these dark places on the sun's disk in 1611, and made observations on these phenomena at Rome, until at length, reducing them to order, he published them in

one volume folio in 1630. He wrote also other tracts, relating to mathematics and philosophy, and died in 1690.

SCHELDT, or SCHELDE, a large river of the Netherlands, which, rises in the French department of the Aisne, and flows in a northerly direction by Cambray, Boucham, and Denain, to Valenciennes, where it becomes navigable. From Valenciennes it diverges to Conde and Tournay, inclining to the north-east, after which it flows nearly north, passes Oudenarde, and reaches Ghent, where it is joined by the Lys. From Ghent it winds to Antwerp ; and, being now swelled into a wide river, becomes divided into the two branches of East and West Scheldt, both of which discharge themselves into the German Ocean. It is of a slow current, hence well called by Goldsmith ‘ the lazy Scheldt,’ and of a small body of fresh water, but in the lower part of its course, of great importance to navigation. The. Dutch, to increase the commerce of Amsterdan . kept it long blocked by two forts. It has been free only since 1795. The number of merchair vessels that entered it in 1815 was 1000, oe which 500 where British. The whole length of

its course is about 200 miles.

SCHELESTADT, or SCHLETTSTADT, a town

in the east of France, department of the Lower

Rhine, on a canal that communicates with the

Ille. It is covered on one side by marshes, and

on the other it is strongly fortified. It has some manufactures of tobacco, caps, stockings, salt-

petre, potash, soap, and earthenware. The art of

glazing earthenware is said to have been invented

here. It was confirmed to France at the peace

of Westphalia in 1648. Population 7500.

Twenty-five miles south-west of Strasburg.

SCHELLINKS (William), an eminent Dutch

painter, born at Amsterdam in 1631. He painted

history and landscapes, but chiefly excelled in

sea pieces. His chief work is a picture of

Charles II. embarking for England, at the Resto-

ration ; in which the figures are well grouped.

*He died in 1678. *

SCHELLINKS (Daniel), a younger brother of

William, was born at Amsterdam in 1633. He

was also reputed a good landscape painter. He

died in 1701.

SCHEME, n. s. ˆ Gr. ffxtipa. A plan ; com-

SCIIF/MER, >bination of various things

SCHE'MATISM. j into one view or design; a

SCH

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SCH

system ; a combination of the aspects of the

heavenly bodies.

It is a scheme and face of heaven,

As th' aspects are disposed this even. Hudibras.

It hath embroiled astrology in the erection of

wliemes, and the judgment of death and diseases.

Browne.

Were our senses made much quicker, the appear-

ance and outward scheme of things would have quite

another face to us, and be inconsistent with our

well-being. Locke.

He forms the well concerted scheme of mischief ;

Tis fix'd, 'tis done, and both are doomed to death.

Rowe.

The haughty monarch was laying schemes for sup-

pressing the ancient liberties, and removing the an-

cient boundaries of kingdoms. Atterbury.

The stoical scheme of supplying our wants by lop-

ping off our desires, is like cutting off our feet when we want shoes. Swift.

Every particle of matter, whatever form or schema-

tism it puts on, must in all conditions be equally ex-

tended, and therefore take up the same room.

Creech.

Hope calculates its schemes for a long and durable

life ; presses forward to imaginary points of bliss, and grasps at impossibilities ; and consequently very often ensnares men into beggary, ruin, and disho-

nour. Addison.

SCHEMNITZ, or SELMECZ-BANJA, a well-

built and large mining town of Hungary, stands in

the midst of the most picturesque scenery, a few

miles from the Raab, and contains a number of

good houses and tolerably wide streets. It con-

tains, including the suburb of Bela-Banja, about

23,000 inhabitants, of whom 12,000 are employed

about the mines of Schemnitz, the most extensive

in Hungary. The extent of ground containing

the ores is calculated at five or six miles square, and includes the town, which is undermined.

The works are now at a great depth, the old

tunnel for drawing off the water being nearly

11 00 feet below the surface, and the new still

lower. Schemnitz is a favorable situation for a

mining school, and there has been here one of

celebrity since the middle of the eighteenth cen-

tury. A fund for experiments is allowed by

government. Forty-six miles north of Gran,

and eighty-three east north of Presburg.

SCHE'SIS, n. s. Gr. eˆmc. Habitude;

state of any thing with respect to other things.

Tf that mind which has existing in itself from all eternity all the simple essences of things, and conse-

quently all their possible scheies or habitudes, should ever change, there would arise a new tchesis in the mind, which is contrary to the supposition. Norris.

SCHEUCHZERIA, in botany, lesser flower-

ing rush, a genus of the trigynia order, and hex-

andria class of plants ; natural order fifth, tripe-

taloideae : CAL. sexpartite : COR. none ; styles

none: CAPS, three inflated and monospermous.

Species one only, a native of Europe.

SCHIAVONA (Andrew), a celebrated painter,

born at Sebenico, in Dalmatia, in 1522. His

parents were so poor that they could not pro-

cure him a master ; but, being merely employed

as a servant about a painter's shop, he rose by

the force of his own genius to a high degree of

fame. He showed great taste in his drapery and

the attitudes of his figures. He died at Venice

in 1582.

SCHICKARD (William), professor of He-

brew in the university of Tubingen, was born

in 1592. He wrote various learned works : as. 1. A Hebrew Grammar entitled Horologium Schickardi ; 2. De Jure Regio Judaeorum, Leipsic, 1 674, 4to. ; 3. Series Regum Persia, Tubing. 1621, 4to. He died of the plague in 1635, aged forty-three.

SCHIDONE (Bartholomew), an eminent history and portrait painter, born at Modena in 1560. He studied in the school of the Caracci, but adopted the style of Corregio. His genius was great, but he lost its advantages by gaming. He died in 1616.

SCHIECH. See SHEIK.

SCHIEDAM, a considerable town of the Netherlands, in South Holland, situated on the river Schie, a short way from its influx into the Maese. It is noted for its very numerous distilleries of gin (Hollands), of which there are no less than 200 in the town. This article forms its chief export; but the inhabitants take part also in the herring fishery. Population 9000. Schiedam has a small harbour, and is four miles west of Rotterdam, and six south by east of Delft.

SCHILLER (Frederick), was born November 10th, 1759, at Marbach in Wirtemberg, where his father was a lieutenant in the service of the duke. While a boy Schiller was distinguished by uncommon ardor of imagination; and he was sent to the military school at Stuttgard called Charles's Academy. Schiller was originally destined for the profession of surgery, and prosecuted that study with great zeal, especially anatomy and physiology, which opened an extensive field to his highly inquisitive mind. His first publication was his Robbers, which was ordered to be suppressed, principally on account of the following passage: — 'This ruby I drew from the finger of a ninister whom I threw down at the feet of his sovereign in the chase. By adulation he had raised himself from the lowest rank to be the favorite of the prince; the fall of his neighbour was the means of his greatness, and the tears of orphans assisted in his elevation. This diamond I took from another of the crew, who sold honors and offices to the highest bidder, and pushed from his door the dejected patriot.' It will be recollected that Schiller lived in the same country where Schubart languished for

eight years of horror in the fortress of Hohenasperg. Schiller, therefore, did not think it advisable to await the decision of his own fate, especially as he had inserted an obnoxious poem on tyranny in Schubart's chronicle. He fled to Manheim. Here he at first had recourse to his surgical attainments for a subsistence. He was appointed surgeon to a regiment, till his friends opened for him a career more adapted to his talents, and procured him the post of dramatist to the theatre of Manheim. The fruits of this appointment are, The Conspiracy of Fiesko, and Intrigue and Love. The Rhenish Thalia likewise deserves to be mentioned. Schiller however was not quite contented with his situation ; and, without other fortune, the fortune of his genius inspired him with confidence in himself, and his fame t,rave him reason to hope that he should

everywhere meet with friends. He left Manheim for Mentz, where he had the good fortune to become acquainted with the duke of Weimar, to

whom he read the first act of his Don Carlos. Soon after this interview he visited Saxony, where Dresden captivated him by its treasures of art, its rich library, and the men of genius whom he found there. His Don Carlos, which he continued during his residency at Dresden, was soon interrupted. He began to read every thing that related to Philip; the library of Dresden afforded him abundant materials ; and he became imperceptibly so deeply interested that he neglected poetry for a time, aud attended solely to history, to which we are indebted for his Revolt of the Netherlands from the Spanish Government. At Leipsic, or rather at Gohlis, a charming village near that city, where he passed a summer with M. Goschin, he continued and completed his Don Carlos. From Leipsic Schiller removed to Weimar, where Wei land, whom he for a Jime assisted in the publication of the German Mercury, received him with cordiality. Some years afterwards Schiller was appointed professor of history at Jena, and taught that science with almost unexampled applause. That he might be able to study and to

labour with less interruption, he reversed the order of nature. However singular it may appear, it is not the less true, that at the evening he might be found at his breakfast, and at midnight deeply engaged in business. The stamp of midnight is in fact strikingly impressed on many of his compositions. At length, however, Goethe invited him back to Weimar, where he composed his Maid of Orleans, of the first representation of which at Leipsic the following account is given by an eye-witness and a friend of Schiller: 'I repaired,' says he, ' from Lauchstadt to Leipsic, and should not have repented the journey, had I only witnessed the respect paid to Schiller, in a manner perhaps unparalleled in the annals of the German stage. Notwithstanding the heat, the house was crowded almost to suffocation. No sooner had the curtain dropped at the conclusion of the first act, than a thousand voices exclaimed, as with one mouth, ' Long live Frederick Schiller !' and the sound of drums and of trumpets joined in this expression of universal applause. The modest author returned thanks from his box with a bow, but all the spectators had not been able to obtain a sight of

the object of their admiration. You may there-

fore conceive how, when the play was over, all

thronged out of the house to see him. The ex-

tensive space from the theatre to the Ranstadt

gate was crowded with people. He came out,

and in a moment a passage was cleared. ‘ Hats

off !’ exclaimed a voice ; the requisition was uni-

versally complied with ; and thus the poet pro-

ceeded through multitudes of admiring specta-

tors, who all stood uncovered, while parents in

the back ground raised their children in their

arms, and cried, That is Schiller.’ This distin-

guished writer died in 1805.

SCHILLING (Diebold), a native cf Soleure,

in Switzerland, the gretfier of a tribunal in Berne, in the fifteenth century. He wrote in the Ger-

man language, A History of the War between

the Swiss and Charles le Temeraire, Duke of

Burgundy ; which was published at Berne in

1743, in folio. The author was present in almost

all the battles he describes.

SCHINUS, in botany, Indian mastic, a genus

of the decandria order, and dioecia class of plants ; natural order forty-third, dumosae : MALE CAL.

quinquefid ; the petals five : FEMALE, flower the

same as in the male ; the berry tricoccous.

Species two, natives of Peru and Brasil.

SCHISM, n.s. •} Fr. schisnte ; Gr.

SCHISMAT'ICAL, adj. ioxiapa. A separa-

SCHISMAT'ICALLY, adv. I tion or division in

SCUIS'MATIC, n. s. J the church : the de-

rivatives corresponding.

No known heretick nor tchismatick should be suf-

fered to go into those countries. Bacon.

Set bounds to our passions by reason, to our er-

rours by truth, and to our schisms by charity.

King Char Us.

By these tumults all factions, seditions, and schis-

matical proposals against government, ecclesiastical

and civil, must be backed. Id.

Thus you behold the schistnatick's bravadoes :

Wild squeaks in squibs, and Calamy in grenado's.

Kutlo:

Oppose schisms by unity, hypocrisy by sober piety,

and debauchery by temperance. Sprat".

Here bare anathemas fall but like so many bruta

fulmina upon the obstinate and schismatical, who are like to think themselves shrewdly hurt by being cut off from that body which they chuse not to be of, and so being punished into a quiet enjoyment of

their beloved separation. South.

When a schism is once spread, there grows at length a dispute which are the schismaticks : in the sense of the law the tchism lies on that side which opposes itself to the religion of the state. itoj/t.

The schismaticks united in a solemn league and

covenant to alter the whole system of spiritual go-

vernment. Id.

SCHISM is chiefly used of separations happen-

ing from diversity of opinions among people pre-

viously of the same religion and faith. Among

ecclesiastical authors, the great schism of the west is that which happened in the times of Clement

VII. and Urban VI., which divided the church

for forty or fifty years, and was at length ended

by the election of Martin V., at the council of

Constance. The Romanists number thirty-four

schisms in their church. They bestow the name

English schism on the reformation of religion

in this kingdom. Some of the church of Eng-

land apply the term schism to the separation

of the nonconformists, viz. the presbyterians, in-

dependents, and anabaptists, for further reform-

ation.

SCHLICHTINGIUS (Jonas, De Bukowic),

a Unitarian author, born in Poland in 1596 ;

where he preached till he was expelled by the

diet of Warsaw, in 1647. He then retired to

Muscovy, and settled at Zullichaw ; where he died in 1661. His works were printed at Amsterdam in 1766.

SCHMIDT (Erasmus), a learned German, born at Delitzch in Misnia, in 1560. He became professor of Greek and mathematics at Wirtemberg, where he taught these sciences with great reputation for many years, and died in 1637 He published an edition of Pindar, with a Latin

version and a commentary in 4to. 1616; also editions with learned notes of Lycophron, Dionysius, Perienetes, and Hesiod ; which last was published at Geneva in 1693.

SCHNEEBERG, a town of Saxony, fifty-three miles W. S. W. of Dresden, and seven W. N. W. of Schwarzenberg. It contains 4400 inhabitants ; has several public schools, and some manufactures, of which that of smalts is the largest in Saxony : others are connected with the neighbouring mines. The quantity of gold extracted from these is said to have been formerly

considerable. At present the chief products of the mines are silver, cobalt, bismuth, iron, some tin and lead.

SCIIOEFFER (Peter), a German painter, who flourished in the middle of the fifteenth century, and was one of the latest improvers of the art, by the discovery of the matrix in type-founding.

SCIIOENOBATES,(from the Greek, OC, a rope, and /Satvw, I walk), a name which the Greeks gave to their rope-dancers : by the Romans called funambuli. The schcenobates were slaves whose masters profited by entertaining the people with their feats of activity. Mercurial is de arte gymnastica, lib. iii. gives us five figures of schcenobates engraven after ancient stones.

SCHOENUS, in botany, bastard Cyprus, marsh, or round rush, a genus of the monogynia order, and triandria class of plants ; natural order third, calamariae. The glumes are paleaceous, univalved, and thickset : COR. none ; and only one roundish seed between the glumes. Species forty, natives chiefly of the Cape.

SCHOEPFLIN (John Daniel), a learned Ger-

man, born at Sulzburg, in the Brisgaw, in 1694, He became professor of history in the Lutheran university of Strasburg. He was offered the same professorship at Francfort on the Oder, at Upsal in Sweden, at the famed university of Leyden, and was invited to Petersburg, by the czarina to be historiographer imperial, but he preferred Strasburg. In 1725 he pronounced a congratulatory oration in the name of the university before king Stanislaus, on the marriage of his daughter with the king of France ; which was printed with some other tracts. He died at Stra>burg in 1771.

SCHOL'AR, ».«.

SCHOL'ARSHIP,

SCHOLAS'TIC, adj.

SCHOLAS'TICALLY,

SCHOOL, n. s. &w. a.

SCHOOL'BOY,

ScHOOL'DAy,

SCHOOL'FELLOW,

SCHOOL'HOUSE,

SCHOOL'MAX,

SCHOOL'MASTER,

SCHOOL'MISTRF.SS

Fr. ecolier; lat.scho-

laris, scholar. A dis-

ciple; one who learns

of a master: hence both

j a man of real literary

! attainments or excel-

ciliousness: the compounds do not appear to

need explanation.

Una her besought to be so good

As in her virtuous rules to school her knight.

Faerie Queent.

Fair Una 'gan Fidelia fair request,

To have her knight unto her schoolhouse placed.

Spenter.

Many times that which deserveth approbation

would hardly find favour, if they which propose it

were not to profess themselves icholars, and followers of the ancients. Hooker.

The favour of proposing there, in convenient sort,

whatsoever ye can object, which thing I have known

them to grant, of tcholattick courtesy unto strangers, never hath nor ever will be denied you. Id.

Adrian VI. was some time schoolmaster to Charles

V. Knolles.

He's gentle, never schooled, and yet learned.

Sliukspeare.

You shall go with me ;

I have some private schooling for you both. Id.

Schoolboys' tears take up

The glasses of my sight. Id.

Is all forgot?

All schooldays friendship, childhood, innocence 1 IV.

My cousin William is become a good scholar: he

is at Oxford still, is he not? Id.

1, thy schoolmaster, have made thee more profit

Than other princes can, that have more time

For vainer hours, and tutors not so careful. Id.

The king, though no good tchoolman, converted

one of them by dispute. Bacon.

If a man's wit be not apt to distinguish or find

differences, let him study the schoolmen. Id.

To spend too much time in studies, is sloth ; to

make judgment wholly by their rules, is the humour

of a scholar : they perfect nature, and are perfected by experience. Id.

Sir Francis Bacon was wont to say, that those

who left useful studies for useless scholastick specu-

lations, were like the Olympick gamesters, who ab-

stained from necessary labours, that they might be

fit for such as were not so. Id.

The ancient sophists and rhetoricians lived till

they were an hundred years old ; and so likewise

did many of the grammarians and schoolmasters, as

Orbilius. Id.

No crazed brain could ever yet propound,

Touching the soul, so vain and fond a thought ;

But some among these masters have been found,

Which in their schools the self-same thing had taught.

Dames.

He grins, smacks, shrugs, and such an itch en-

dures,

As 'prentices or schoolboys, which do know

Of some gay sport abroad, yet dare not go. Donne.

To schoolmen I bequeath my doubtfulness,

My sickness to physicians. Id.

Scholastic education, like a trade, does so fix

f lence, and a pedant, a man in a particular way, that he is not fit to judge
" mere man of books : of any thing that lies out of that way.

Burners TVieon/.

The first principles of Christian religion should

not be farced with school points and private tenets.

Sounder-son.

My end being private, I have not expressed my

conceptions in the language of the schools. Digbii.

I would render this intelligible to every rationa,

man, however little versed in scholastic learning.

Id. on Bodies.

Let no man be less confident in his faith, con-

cerning the great blessings God designs in these di-

vine mysteries, by reason of any difference in the

2 B

scholarship follows

only what may be called

the good sense : scho-

J lastic and scholasti-

cally, all the senses of scholar : a school is a

house or establishment devoted to instruction

and discipline; a state or mode of instruction;

hence a particular system, and hence the theolo-

gical system of those ages immediately following

the Fathers : to school is, to instruct, train, lec-

ture ; treat with disdainful superiority or super-

VOT. \|.

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SCH

seveiaJ tchools of Christians, concerning the conse-

quent blessings thereof. Taylor.

This same scholar's fate res angusta domi, hinders

the promoting of learaing. H'ilkint.

This place should be school and university, not

needing a remove to any other house of scholarship.

Mitt on.

Both sides charge the other with idolatry, and

that is a matter of conscience, and not a tcholastick nicety. Stillingjieet.

Their age the same, their inclinations too.

And bred together in one school they grew. Dryden.

School your child,

And ask why God's anointed he reviled. Id.

Thy flattering method on the youth pursue ;

Joined with his schoolfellows by two and two :

Persuade them first to lead an empty wheel,

In length of time produce the laboring yoke. Id.

Such precepts 1 have selected from the most con-

siderable which we have from nature, that exact

schoolmistress. Id.

A man may find an infinite number of propositions

in books of metaphysicks, school divinity, and natural philosophy, and know as little of God, spirits, or

bodies, as he did befpre. Locke.

The emulation of ichoolftlloirt often puts life and

industry into young lads. Id.

To watch occasions to correct others in their dis-

course, and not slip any opportunity of shewing

their talents, scholars are most blamed for. Id.

A father may see his children taught, though he

himself does not turn schoolmaster. South' Sermons.*

No moralists or casuists, that treat tcholastically

of justice hut treat of gratitude, under that general head as a part of it. South.

The tchotars of the Stagyrite,

Who for the old opinion fight,

Would make their modern friends confess

The difference but from more to less. Prior.

My fchwlmistress, like a vixen Turk,

Maintains a lazy husband by our work. Gay.

If this be schooling, it is well for the considerer : 111 engage that no adversary of his shall in this

sense ever school him. Atterbury.

*Unlearned, he knew no schoolman '*subtle art ;*

No language, bat the language of the heart. Pope.

It pitied my very heart to think that a man of my master's understanding, and great tcholarship, who

had a book of his own in print, should talk so out-

rageously. Id.

Once he had heard a schoolboy tell,

How Semele of mortal race

By thunder died. Swift.

Writers on that subject have turned it into a com-

position of hard words, trifles, and subtilties, for the mere use of the schools, and that only to amuse men with empty sounds.]'atts.

Men of nice palates could not relish Aristotle, as

he was drest up by the schoolmen. Baker.

Warped by the world in Disappointment's tdiool,

In words too wise, in conduct there a fool :

Too firm to yield, and far too proud to stoop,

Doomed by his very virtues for a dupe,

He cursed those virtues as the cause of ill,

And not the traitors who betrayed him still. Byron.

A SCHOLIAST, or commentator, is a gram-

marian who writes scholia, or notes, &c., upon

ancient authors who have written in the learned

languages.

SCHOUON, n. t.~\ Lat. scholium. A note;

SCH o LI CM, fan explanatory observa-

SCHO'LIAST,| ition: Hooker only uses

STHO'LY. J scholy in this sense :

scholiast is a writer of such notes.

Hereunto have I added a certain gloss or scfioliwn, for the exposition of old words, and harder phrases, which manner of glossing and commenting will seem

strange in our language. Spenser.

That tcholy had need of a very favourable reader,

and a tractable, that should think it plain construc-

tion, when to be commanded to the word, and

grounded upon the word, are made all one. Hooker.

The title of this satyr, in some ancient manu-

scripts, was the reproach of idleness ; though in

others of the scholiasts, 'tis inscribed against the luxury of the rich. Drijdeit.

What Gellius or Stobaeus cooked before,

Or chewed by blind old scholiast o'er and o'er.*

Poie.

Some cast all their metaphysical and moral learn-

ing into the method of mathematicians, and briug

every thing relating to these abstracted or practical sciences under theorems, problems, postulates, «-/j< >-

liumi, and corollaries. Wmttt,

SCHOMBERG (Frederick Armand duke of)

a distinguished officer, the son of count Schom-

berg, by an English lady, daughter of lord Dud-

ley, was born in 1608. He entered into the

military life under Frederick Henry prince of

Orange, and served under his son William II.

of Orange. He then repaired to the court of

France, where his reputation was so well esta-

blished that he obtained the government of

Gravelines, Furnes, and the adjacent countries.

The French court soon after sent Schomberg to

assist the Portuguese against the Spaniards,

which he effectually did. The court of Spain was compelled to solicit peace in 1668, and to acknowledge the right of the house of Braganza to the throne of Portugal. For his services he was created count Mentola in Portugal ; and a pension of £5000 was bestowed upon him, with the reversion to his heirs. In 1673 he came over to England to command the army ; but, the English being then disgusted with the French nation, Schomberg: was suspected; and therefore returned to France, which he soon left, and went to the Netherlands. In June 1676 he compelled the prince of Orange to raise the siege of Maastricht ; and was raised to the rank of mareschal of France. Upon the revocation of the edict of Nantes, when the persecution commenced against the Protestants, Schomberg, who was of that persuasion, requested leave to retire into his own country. This was refused ; but he was permitted to take refuge in Portugal, where he had reason to expect he would be kindly received on account of past services. But the bigotry of the Portuguese, though it did not prevent them from accepting

assistance from a heretic when their kingdom was threatened with subversion, would not permit them to give him shelter when he came for protection. The inquisition interfered, and obliged the king to send him away. He then went to Holland, and the elector of Brandenburg made him governor of Ducal Prussia, and commander in chief of his forces. When the prince of Orange sailed to England, to take possession of its crown, Schomberg obtained permission from the elector to accompany him. In April 1689 he was made K. G., and naturalised by act of parliament ; and in May following was created a baron, earl, marquis, and duke of England, by the title of baron Teys, earl of Brent-t'ord, marquis of Harwich, and duke of Schomnerg. The house of commons voted to him £i 00,000, as a reward for his services. Of this he only received a small part ; but after his death a pension of £5000 a year was bestowed upon his son. In August 1689 he was sent to Ireland to reduce that kingdom. When he arrived he fbi;nd himself at the head of an army consisting only of 12,000 foot and 2000 horse, while king James commanded an army three times as nu-

merous. Schomberg thought it dangerous to engage with so superior a force, and, being disappointed in his promised supplies from P'ngland, remained on the defensive. He posted himself at Dundalk, about five or six miles from James, who was encamped at Ardee. For six weeks he remained in this position, without attempting to give battle, while, from the wetness of the season, he lost nearly the half of his army. Schomberg was much blamed for not coming to action; but had he risked an engagement, and been defeated, Ireland would have been lost. At the famous battle of the Boyne, which decided the fate of James, Schomberg passed the river at the head of his cavalry, defeated eight squadrons, and broke the Irish infantry. When the French Protestants lost their commander, Schomberg went to rally and lead them on to charge. While thus engaged, a party of king James's guards passed Schomberg in attempting to rejoin their own army. They attacked him with great fury, and gave him two wounds in the head. The wounds were not dangerous, but the French Protestants, thinking their general was killed, fired

upon the guards, and shot him dead. He was buried in St. Patrick's cathedral.

SCHONBURG, a county of Saxony, which belonged to Bohemia till the treaty of Teschen, in 1779, when it was ceded to Saxony. It adjoins the circles of Leipsic and the Erzgebirge, has an extent of about 340 square miles, and a population of 61,000.

A SCHOOL is a public place, wherein the languages, the arts, or sciences are taught. See EDUCATION. The Latin schola, according to Du Cartge, signifies discipline and correction ; he adds that it was anciently used, in general, for all places where several persons met together, to study, converse, or do any other matter. Accordingly, there were scholae palatinae, being the several posts wherein the emperor's guards were placed ; schola scutariorum, schola gentilium, &c. At length the term passed also to civil magistrates ; and, accordingly, in the code we meet with schola chartulariorum, schola agentium, &c. ; and even to ecclesiastics, as schola cantorum, schola sacerdotum, &c.

SCHOONER, in naval ajjjairs, a small vessel

with two masts, whose main-sail and fore-sail are suspended from gaffs, reaching from the mast towards the stern, and stretched out below by booms, whose foremost ends are hooked to an iron, which clasps the mast so as to turn therein as upon an axis, when the after-ends are swung from one side of the vessel to the other.

SCHOREL (John), a Flemish painter, who •was also a musician and 1'nguist, born in 1495, at Schore in Holland. He studied under Al-

y —

•1 SCH

bert Durer ; and travelled into Germany, where a friar prevailed on him to accompany him to Jerusalem, where he painted several relics of antiquity. On his return he visited Venice and Rome, where pope Adrian VI. appointed him superintendent of the buildings at Belvidere. On Adrian's death he returned to the Netherlands, and refused an offer from Francis I. of France, to settle in Paris. He died in 1562.

SCHORNDORF,a neat town of Wirtemberg, on the Rems, seventeen miles east of Stutgard. The chief manufacture is coarse woollens. The

environs have always been noted for their wine. Inhabitants 3500.

SCHOTIA, in botany, a genus of the monogynia order, and decandria class of plants ; natural order thirty-third, lomentaceae : CAL. semiquinquefid : COR. with five petals, which are equal ; the tube is turbinated, carneous, and persistent. The legumen pedicellated, and contains two seeds ; there is only one species, viz. S. speciosa, the African lignum vitse.

SCHOTTUS (Andrew), a learned Jesuit, born at Antwerp, in 1552. He studied at Louvain, and afterwards went to Paris ; whence lie travelled into Spain, and became professor of Greek at Toledo. He published several tracts, and died at Antwerp in 1629.

SCHOTTUS (Gaspar), professor of mathematics, at Wirtemberg, who first published an account of Guericke's discovery of the Air-pump, in 1657, in a work entitled Mechanica Hydraulico-Pneumatica. In 1664 he published a more full account of it, in his Technica Curiosa, a curious collection of all the wonderful experiments, &c., then known in Europe.

SCHOUTEN'S ISLAND, an island on the east coast of Van Diemen's Land, consisting almost entirely of lofty black mountains, separated by deep reaches.

SCHOUWEN, an island of the province ol Zealand, at the mouth of the Scheldt. Its extent, fifteen miles in length and five in breadth, was formerly greater, a part of it having been overflowed by the sea. In 1809 it was occupied by the British forces. The chief town is Zierikzee.

SCHREVELIUS (Cornelius), a laborious Dutch critic and writer, born at Haerlem, in 1615; who has given the public some editions of the ancient authors more elegant than correct : his Greek Lexicon is esteemed the best of all his works. He died in 1667.

SCHROETER (John Samuel), an eminent musician born in Saxony. He came to London in 1774, with his father, who was also a musician, but of no great eminence. But young Schroeter improved himself under the famous Emanuel Bach ; and some time after composed a set of Lessons for the Piano-forte, which Na-

pier published, and paid him liberally for the

copyright. This raised his fame, and procured

him several scholars. After the publication of

his first set of Concertos, he obtained the lead in all musical entertainments. About this time he

married a young lady, who was his pupil, through

whom he became entitled to a large fortune; but

her friends threatening him with the terrors of

the court of chancery, he gave up his claim, for

an annuity of £500, with this condition, thut he

should perform no more in public. But the

prince of Wales not long after appointed him

one of his band of music with a liberal salary.

His last Set of Sonatas, with an elegant accom-

paniment for the violin and violincello, were

composed at the desire of the prince, to whom it

was dedicated. He died in 1785.

SCHULTENS (Albert), professor of Hebrew

and of the eastern languages at Leyden, was

born at Groningen, where he studied till 1706,

and continued his studies at Leyden and Utrecht.

He at length applied himself to the study of Arabic ; in which he made great progress. A short time after he became minister of Wassenar, and two years after professor of the eastern tongues at Franeker. At length he was invited to Leyden, where he taught Hebrew and the eastern languages with great reputation till his death, in 1750. Hig principal works are, 1. A Commentary on Job, 2 vols. 4to. 2. A Commentary on the Proverbs. 3. Vetus et regia via Hebraizandi. 4. Animadversiones Philologies et Critics ad varia loca Veteris Testamenti. 5. A Treatise on Hebrew roots. 6. An excellent Hebrew grammar, &c. Schultens discovered in his works sound criticism and much learning. He maintained, in opposition to Gousset and Driessen, that to have a perfect knowledge of Hebrew it is necessary to join with it, not only the Chaldee and Syriac, but more particularly the Arabic.

SCHUMEG, orSoMOGYi-VARMEGYE, a palatinate of Hungary, between the Balaton lake and the Drave. Its area is 2430 square miles ; generally level, and in many places marshy, and unhealthy. The inhabitants are of very various /•aces, and there are many Jews. The county

takes its name from the old castle of Somogy or Schumeg, but the chief town is Kaposvar. Population 170,000.

SCHUMLA, SCHUMNA, or CIUMLA, a large and very strong town in the north-east of European Turkey, on the road from Constantinople to Wallachia. It is situated in the province of Silistria, about fifty miles south of the Danube, which is here in the lower part of its course. It is supposed to occupy the site of the ancient Marcianopolis. In general not well built, it still contains many handsome mosques and baths. Its castle is one of the chief Turkish posts (indeed the principal one) between Adrianople and the Russian frontier. The importance of this place altogether has never been more decidedly evinced than in the recent struggle for the possession of it, between Russia and Turkey. The population, as in other Turkish towns, is unascertained by any ancient register, but is said to amount to 30,000. Its trade consists chiefly in the wine of the country, the manufacture of hardware, and in consequence of German cloth being cheap here in the manufacture of cloth for the Turkish metropolis. From the marshy nature of the neigh-

bouring country, strangers, it is said, cannot remain here even a few days without being seized with intermittent fever. The great natural features of this part of Turkey are the Danube and the long mountain range of Balkan, the ancient 1 hi imis. They extend from west to east, in a direction nearly parallel, at a distance of about 100 miles ; and Schumla stands halfway between them. On the east, at the distance of seventy miles, is the Euxine ; on the west the interior of Bulgaria.

SCHUYLKILL, a rirer of Pennsylvania, United States, which rises in Luzerne county, north-west of the Kittatinny mountains, through which it passes, runs south-east into the Delaware, six miles below Philadelphia. It is 140 miles long, and navigable for boats for ninety. The Tulpehocken, a navigable stream, flows into the Schuylkill one mile and a half above Reading. There are falls on the river five miles above Philadelphia, and Swedes falls a little below Norristown. A canal, connecting the Swatara with the Tulpehocken will unite the waters of the Schuylkill with those of the Susquehannah.

SCHWALBEA, in botany, a genus of the an-

giospermia order, and didynamia class of plants : CAL. quadrifid, with a superior lobe ; the lowermost longest, and emarginated. Species one only, a North American plant, with a fine dark red flower.

SCHWARTS, or SCHWARTZ (Cornelius), an eminent history painter, born at Ingolstadt in 1550, who was distinguished by the appellation of the German Raphael. He learned the first principles of the art in his own country, but finished his studies at Venice; when he not only made the works of Titian his models, but received some personal instructions from that illustrious master. His performances were soon in high esteem, and he was invited by the elector of Bavaria to his court, and appointed his principal painter. He died in 1594 ; and his most capital works, as well in fresco as in oil, are in the palace at Munich, and in the churches and convents.

SCHWARTZ (Bartholemew or Bertholet), a native of Friburg in Germany, who flourished in the thirteenth and fourteenth centuries, and is remarkable for being the discoverer of gunpow-

der, in 1320.

SCHWARTZ (Christian Frederick), a missionary to the East Indies, born at Somienburg, in the Newmarck, October 26th, 1726, went to Halle in 1746, and entered at the University, by the advice of the ex-missionary Schulze. When he had continued his oriental studies for a-year and a half, he was persuaded to go out to the East and proceeded to England with two other gentlemen destined for the same service : in July 1750 they arrived at Tranquebar. Mr. Schwartz, in 1767, was taken into the service of the English Society for the promotion of Christian knowledge, when he removed to Trichinopoly ; and there and at Tanjore passed the remainder of his life. At both places he also received from the govern- ment of Madras £l 00 a-year, as garrison preacher, which sum he is said to have expended in building a church at Trichinopoly, &c. He was held in high esteem by the Hindoos ; and the rajah of Tanjore made him tutor to his son. He died February 13th, 1796, at Tanjore, and his body was interred in his own church.

.SCIIWARTZENBERG, a small principality of Franconia, in the dominions of Bavaria. Its

nrea is somewhat less than 100 square miles

The prevailing religion is Lutheran. The prince?

•>f this house ave flesv-ended Horn one of the oldest families in Franconia, and owe their revenue and

political power less to this principality than to

their extensive domains in Bohemia and other

parts of Germany. The total population on their

estates, or in towns in which they hold property,

is computed at 130,000. The head of the house

was made a prince of the empire in 1670, but

mediatised in 1806.

SCHWARTZBURG, a district in the interior

of Germany, divided into two counties. One of

them adjoining Saxe-Gotha, the other, farther to

the south, is near the Russian province of Erfurt.

The area of the whole is 1166 square miles; very

hilly, but interspersed with fertile valleys, ex-

tending along the banks of the rivers. The forests

are extensive, and contain mines of iron, alum,

and cobalt ; also quarries of marble, freestone,

and slate. The manufactures are insignificant.

The princes of Schwartzburg are of great anti-

quity, and divided into the two branches of

Sondershausen and Rudolstadt, residing respec-

tively at the towns of these names. Both are

members of the Germanic body, under the con-

stitution of 1815 ; and the territories of both are nearly equal in population and income (that is

each numbers about 50,000 subjects). Each

county has its cabinet, its treasury, and its dis-

tinct courts of justice.

SCHWEIDNITZ, a principality of the Prus-

sian province or government of Reichenbach,

bounded on the south by Bohemia, and includ-

ing a territorial extent of not quite 1000 square

miles, partly hilly, and partly level : it produces

corn in large quantities ; and the flocks of sheep and manufacturing villages are numerous. In-

habitants 180,000.

SCHWEITZ,or SCHWYTZ, a canton of Swit-

zerland, lying contiguous to the lakes of Zug

and Lucerne. Its extent is about 466 square

miles, surrounded by Alpine mountains, between

which are a few valleys. The chief mountains

are Rigi in the south-west corner, above 6000

feet in height ; Pragel in the south-east, above

5,500 ; and Mytten, situated between the two,

of 6300 feet. The soil and climate of course are fitter for pasturage than for tillage. Manufactures are almost unknown. Inhabitants about 30,000. Here, in the beginning of the fourteenth century, the standard of the Swiss liberty was first erected, and this petty canton had the honor of giving a name to the confederation, and the inhabitants made a spirited but unavailing resistance to the French in 1798, and suffered severely in 1799, when Switzerland became the theatre of war.

SCHWENKFELDIA, in botany, a genus of the monogynia order, and' pentandria class of plants: CAL. quinquefid : ron. funnel-shaped: stigma parted into five : the berry quinquelocular, with a number of seeds. Of this there are three species, viz. S. aspera, and S. cinerea,both uatives of Guiana. S. hirta is a native of Jamaica. The leaves of all of them are remarkably rough, and stick to the fingers or clothes.

SCHWENKIA.in botany, a genus of the monogynia order, and diandria class of plants : COR. almost equal, plaited at the throat, and glandulous ; there are three barren stamina : CAPS, bi-

locular and pojygperruous. Species one only, a Guiana plant.

SCHWERIN, the capital of the duchy of Mecklenburg-Scbwerin, is situated on the west side of the lake of this name, and surrounded with a rampart. It is divided into the Old Town, the New Town, the Moor, and the suburbs. The grand ducal palace is situated on an island in the lake : it is fortified, and communicates with the town by a draw-bridge ; its ornaments are the picture gallery and park. Of Schwerin, the chief buildings and institutions are the high church, formerly a cathedral, two other Lutheran churches, a Catholic church, poor house, orphan house, infirmary, and synagogue. The manufactures are trifling: but brewing and distilling are carried on to some extent. In 1759 this town was taken by the Prussians, after a bombardment, and laid under a heavy contribution ; and occupied in 1806 by the French. Population 8500. Sixty miles east of Hamburgh, and seventeen south of Wismer.

SCIACCA, or XACCA, a large sea-port on the south-west of Sicily, in the Val di Mazzara,

called anciently Thermae Selinuntise, from the warm baths on the east side of the town. It is situated at the foot of St. Calagere, and has a good appearance from a distance. It is still surrounded by a wall, and contains 12,000 inhabitants.

SCI7ENA, in ichthyology, a genus belonging to the order of thoracici. The membrane of the gills has six rays ; the opercula and whole head are scaly. There are five species, the following is the most worthy of notice :

S. umbra, sea-crow, or umbre, of a black color, in shape resembling a perch : ventral and anal fins black, as if dyed with ink ; back variegated with undulatinsr lines, of dark brown and blue; snout sharp ; mouth capacious. This fish is caught in the Mediterranean, and sold undt r the name of umbrino in the markets of Rome.

SCIATHER'ICAL, adj. I Fr. sciaterigue ;

SCIATHER'IC. i Greek jpticoc.

Belonging to a sun-dial.

There were also, from great antiquity, tciatheretical or sun-dials, by the shadow of a stile or gnomon denoting the hours ; an invention ascribed unto Anaximenes by Pliny. Browne.

SCIATICA, n.s.) Fr. sciatique; Lat. is

SCIAT'IC, ychiadica vassio. The hip

SCIAT'ICAL, adj. J gout.

Thou cold sciatica,

Cripple our senators, that their limbs may halt

As lamely as their manners. Shakspeare. Timon.

The Scythians, using continual riding, were gene-

rally molested with the »ciatica or hip-gout.

Browne' » Vulgar Errovrt.

In obstinate sciatical pains, blistering and cau-

teries have been found effectual. Arbuthnot.

Racked with iciatich, martyred with the stone,

Will any mortal let himself alone 1 Pope.

SCI'ENCE,n.s, -\ Fr. science; Latin

SCIEN'TTAL, adj. txcientin. Knowledge;

SCIENTIFIC, £ that part of ourknow-

SCIENTIF'ICALLY, adv. / ledge which is built

on principles in particular. See below : scien-

tial means productive of science : scientific

pertaining to, or indicating or producing demon-

strative knowledge : the adverb corresponding.

No science doth make known the 6rst principles

whereon it buildeth ; but they are always taken as

plain and manifest in themselves, or as proved and

granted already, some former knowledge having made

them evident. Hooker.

I present you with a man

Cunning in music and the mathematicks,

To instruct her fully in those sciences. Shakspeare.

If we conceive God's sight or tcience, before the

creation, to be extended to all and every part of the world, seeing every thing as it is, his prescience or foresight of any action of mine, or rather his science or sight, from all eternity, lays no necessity on any thing to come to pass, more than my seeing the sun move hath to do in the moving of it. Hammond.

No where are there more quick, inventive, and

penetrating capacities, fraught with all kind of scien-

tijical knowledge. Hoteel.

From the tree her step she turned ;

But first to reverence done, as to the power

That dwelt within ; whose presence had infused

Into the plant tciential sap, derived

From nectar, drink of gods. Milton's Paradise Loit.

The indisputable mathematicks, the only tcience

Heaven hath yet vouchsafed humanity, have but few

votaries among the slaves of the Stagirite.

Glancille's Scepsis.

Natural philosophy proceeding from settled prin-

ciples, therein is expected a satisfaction from scienti-

Jical progressions, and such as beget a sure or rational relief. Browne' Vulgar Errours.*

Science perfects genius, and moderates that fury

of the fancy which cannot contain itself within the bounds of reason. Dryden.

The systems of natural philosophy that have ob-

tained are to be read more to know the hypotheses,

thaa with hopes to gain there a comprehensive, sci-

tntijical and satisfactory knowledge of the works of nature. Locke.

Sometimes it rests upon testimony, because it is

easier to believe than to be scientifically instructed.

Id.

No man, who first traffics into a foreign country

has any scientifick evidence that there is such a coun-

try, but by report, which can produce no more than

a moral certainty ; that is, a very high probability, and such as there can be no reason to except against.

South.

Good sense, which only is the gift of Heav'n,

And, though no science, fairly worth the sev'n. Pope.

So you arrive at truth, though not at science.

Berkley.

SCIENCE, in philosophy, denotes any doctrines

deduced from self evident principles. Sciences,

according to Locke, may be properly divided as

follows : — 1. The knowledge of things, their

constitutions, properties, and operations ; this, in

a little more enlarged sense of the word, may be

called fvaiKr), or natural philosophy ; the end of

which is speculative truth. See PHILOSOPHY

and PHYSICS.— 2. The skill of rightly applying

these powers, irpaKTuci]. The most considerable

under this head is ethics, which is the seeking out those rules and measures of human actions that

lead to happiness, and the means to practise them

(see MORAL PHILOSOPHY) ; and the next is me-

chanics, or the application of the powers of na-

tural agents to the uses of life. See Mi i HANK s.

3. The doctrine of signs, anjitiowriKi) ; the most

usual of which being words, it is aptly enough

termed logic. See Locic. This, says Mr.

Locke, seems to be the most general, as well as

natural, division of the objects of our iinderˆ.uul-

ing ; for a man can employ his thoughts about

nothing but either the contemplation of things

themselves for the discovery of truth ; or about

the things in his own power, which are his ac-

tions, for the attainment of his own ends : or the signs the mind makes use of both in the one and

the other, and the right ordering of them for its

clearer information. All which three, viz. things

as they are in themselves knowable, actions as

they depend on us in order to happiness, and the

right use of sisns in order to knowledge, being

toto caelo different, they seem to be the three great provinces of the intellectual world, wholly sepa-

rate and distinct one from another.

SCILLA, the squill, in botany, a genus of the

monogynia order and hexandria class of plants,

natural order tenth, coronariae: COR. hexapetalous

and deciduous; the filaments filiform. The most

remarkable species is the

S. maritima, or sea onion, whose roots are used

in medicine. Of this there are two sorts, one

with a red and the other with a white root ;

which are supposed to be accidental varieties, but

the white are generally preferred for medicinal

use. The roots are large, somewhat oval-shaped,

composed of many coats lying over each other

like onions ; and at the bottom come out several

fibres. From the middle of the root arise several

shining leaves, which continue green all the

winter, and decay in the spring. Then the flower

stalk comes out, which rises two feet high, and is naked half way, terminating in a pyramidal

thyrse of flowers, which are white, composed of six petals, which spread open like the points of a star. This grows naturally on the sea shores, and in the ditches, where the sak water flows with the tide. Sometimes the roots which are bought for use put forth their stems and produce flowers, as they lie in the druggists' shops. This root is very nauseous to the taste, intensely bitter, and so acrimonious, that it ulcerates the skin if much handled. Taken internally, it powerfully stimulates the solids, and promotes urine, sweat, and expectoration. If the dose is considerable,it proves emetic and purgative. It yields the whole of its virtues to aqueous aud vinous menstrua, and likewise to vegetable acids.

SCILLY ISLES, a cluster of small islands and rocks situated in the Atlantic Ocean, nearly ten leagues west of the Land's End. These islands were first called Cassiterides, or the Tin Isles, from their being rich in that metal. Strabo says these islands were ten in number, lying close together, of which only one was uninhabited ; the people led an erratic life, lived upon the produce of their cattle, wore an under gar-

ment which reached down to their ankles, and

over that another, both of a black color, girt

round a little below the breast with a girdle, and walked with staves in their hands. The riches of

these islands were tin and lead, which, with the

skins of their cattle, they exchanged with the

Phoenicians for earthenware, salt, and utensils

made of brass. Other ancient writers style

these islands Hesperides, from their western situ-

a'ion, and Oestrymnides, asserting that the land

was extremely fertile, as well as full of mines;

and that the people, though very brave, wero ad –

«li- t. '1 to commerce, and boldlv passed tlu

in their leather coats. The Romans were ex-

ceedingly desirous to obtain a share in this com-

merce, which the Phoenicians as carefully la-

bored to prevent, by concealing their navigation

to these islands. At length, however, the Ro-

mans prevailed ; and Publius Crassus, coming

thither, was so well pleased with the industry

and manners of the people, that he taught them

various improvements, as well in working their

mines, which till that time were but shallow, as

in carrying their merchandise to different markets. We find them called in the itinerary of Antoninus, Sigdelcs ; bySulpitius, Siller.ae; and by Solinus they are termed Silures. All we know of them after this period is. that their tin trade continued, and that sometimes state prisoners were exiled hither as well as to other islands. When the legions v.ere withdrawn, and Britain with its dependencies left in the power of the natives, these islands shared the same lot with the rest. As to the appellation which from this period prevailed, the ordinary way of writing it is Sully ; in records we find it spelt Silly, Siiley, or Scilley ; but we are told the old British appellation was Sulleh, or Sylleh, which signifies rocks consecrated to the sun. Nothing is recorded of them from the fifth to the tenth century. It is, however, supposed, that within this space they were almost destroyed by an earthquake, attended with a sinking of the earth, by which most of their lowlands, and of course the greatest part of their improvements were covered by the sea, and those rich mines of tin which had rendered them so famous swallowed up in the deep. They have a tradition in Cornwall, that a very extensive tract

of country called the Lioness, in the old Cornish Lethousow, supposed to lie between that country and Scilly, was thus lost ; and many concurrent circumstances render this probable. In reference to these islands, the case is still stronger ; for at low ebbs their stone enclosures are still visible from almost all the isles. The fertility of the islands is mentioned in all the ancient accounts. There is mention made of a breed, of wild swine, and the inhabitants had great plenty of fowl and fish. But, notwithstanding the fertility of the country, it was but thinly peopled, because they were liable to be often spoiled by French or Spanish pirates. In time of war, the importance of these islands is conspicuous. In 1651 Sir John Grenville took shelter in them with the remains of the Cornish cavaliers. The depredations committed by his frigates soon made it evident that Scilly was the key of the English commerce ; and the clamors of the merchants thereupon rose so high that the parliament was forced to send a fleet of fifty sail, with a great body of land forces on board, under Sir George Ayscue and admiral Blake, who, with great difficulty, and considerable loss, made

themselves masters of Trescaw and Brehar; where they erected those lines and fortifications near the remains of the old fortress called Oliver's Castle. But at length they granted Sir John Grenville a most honorable capitulation, as the surest means to recover places of such consequence. On the 22nd of October, 1707, several ships were wrecked on these rocks. It was thick

when the British fleet under Sir Cloudesley Shovel, returning from an unsuccessful expedition against Toulon, mistaking these rocks tor land, struck upon them. The Association, in which Sir Cloudesley was, with his lady's two sons, several other persons of distinction, and 800 brave men, struck first, and went immediately to the bottom : the Eagle, under captain Hancock, soon shared the same fate : the Romney and the 1'ircbrand were also lost, but the two captains and twenty-five meu were saved. The rest of the fleet escaped, having notice of the fate of these ships. There are five of these islands now inhabited. The largest of these is St. Mary's, which is two miles and a half in length, about one mile and a half in breadth, and between nine and ten miles

in compass. On the west side there projects an isthmus. Beyond this there is a peninsula, which is very high ; and upon which stands Star Castle, built in 1593, with some outworks and batteries. On these there are upwards of sixty pieces of cannon mounted ; and for the defence of which there is a garrison. Under the castle barracks and lines stands Hugh Town, built so low as to be subject to inundations. A mile within land stands Church Town, which, besides the church consists of a few houses only, with a court house. About two furlongs east of this lies the Old Town, where there are more houses, and some of them very convenient dwellings. Treslaw lies two miles directly north of St. Mary's. It was formerly styled St. Nicholas's Island ; and was at least as large as St. Mary's, though at present about half the size. The remains of the abbey are yet visible. There are about ten stone houses, with a church, which compose the Dolphin Town ; an old castle built in the reign of Henry VIII., called Oliver's Castle ; and a block-house raised out of the ruins of that castle. This island is noted for producing plenty of the finest samphire, and the only tin

works that are now visible are found in it.

A mile to the east of Trescaw, and about two miles from the most northern part of St. Mary's' lies the isle of St. Martin's, not much inferior in size to that of Trescaw. St. Martin's produces corn, affords the best pasture in these islands and feeds a great number of sheep. St. Agnes, which is also called the Light-house Island, lies nearly three miles south-west of St. Mary's : and is, though small, well cultivated, fruitful in corn and grass. — The only inconvenience is the want of good water; the great advantage consists in having several good coves or small ports, where boats may lie in safety. The light-house is the principal ornament and great support of the island, which stands on the most elevated ground, built with stone from the foundation to the lantern, which is fifty-one feet high. Brehar, or, as pronounced, Bryer Island, lies north-west of St. Mary's, and west of Trescaw, to which, when the sea is very low, they sometimes pass over on the sand. It is very mountainous, abounds with sea and land fowls, excellent samphire, and a great variety of medical herbs. The air of these

islands is equally mild and pure ; their winters are seldom subject to frost or snow. When the former happens it lasts not long; and the latter never lies upon the ground. The heat of their

summers is much abated by sea-breezes. They are indeed frequently incommoded by sea fogs, but these are not unwholesome. The soil is very good, and produces grain of all sorts (except wheat, of which they had anciently plenty) in large quantities. They still raise a little wheat, but the bread made of it is unpalatable. They eat, for this reason, chiefly what is made of barley. Potatoes prosper, and roots of all kinds, pulse, and sallads, grow well ; dwarf fruit-trees, gooseberries, currants, raspberries, &c., under proper shelter, thrive exceedingly ; but they have no trees. They have wild fowls of all sorts, from the swan to the snipe; and a particular kind called the hedge chicken, which is not inferior to the ortolan : also tame fowls, puffins, and rabbits, in great numbers. Their black cattle are small, but well tasted, though they feed upon sea-weed.

Their horses are small, but strong and lively. They have also large flocks of fine sheep, whose fleeces are good, and their flesh excellent. St. Mary's harbour is very safe and capacious, having that island on the south ; the eastern islands, with that of St. Martin, on the east ; Trescaw, Brehar, and Samson, to the north ; St. Agnes, and several small islands, to the west. Ships ride here in three to five 'athoms water, with good anchorage. Into this harbour there are four inlets, viz. Broad Sound, Smith's Sound, St. Mary's Sound, and Crow Sound ; so that hardly any wind can blow with which a ship of 150 tons cannot safely sail through one or other of them, Crow Sound only excepted, where they cannot pass at low water, but at high tide there is from ˆixteen to twenty-four feet in this passage. There are also two other harbours, viz. New Grynsey, which lies between Brehar and Trescaw, where ships of 300 tons may ride securely; and Old Grynsey, between Trescaw, St. Helen's, and Theon, for smaller ships. The former is guarded by the batteries at Oliver's Castle ; the latter by the blockhouse on the east

*side of Trescaw, called Dover. In this harbour, and in all the little coves of the several isles, prodigious quantities of mackerel may be caught in their season ; also soal, turbot, and plaice ; and ling, which, from its being a thicker fish, mellower, and better fed, is very justly preferred to *ny caught nearer our own coasts. Salmon, cod, and pollock, are in great plenty, and pilchards in vast abundance. The alga marina, fucus or sea weed, serves to feed both their small and great cattle, manures their lands, is burned into kelp, is sometimes preserved, sometimes pickled, and is in many other respects very beneficial to the inhabitants. The civil government is administered by the court of twelve ; in which the commander in chief, the proprietors' agent, and the chaplain, have their seats in virtue of their offices : the other nine are chosen by the people. These decide or compromise all differences ; and punish small offences by fines, whippings, &c. ; except for the soldiers, there is no prison in the islands. But, in case of capital offences, the criminals may be transported to the county of Cornwall, and there brought to justice. The great importance of these islands arises from their*

advantageous situation, as looking equally into St. George's Channel, which divides Great Britain from Ireland, and the English Channel, which separates Britain from France. For this reason, most ships bound from the southward strive to make the Scilly Islands, to steer their course with greater certainty. It is very convenient also for vessels to take shelter amongst them ; which prevents their being driven to Milford Haven, or some port in Ireland, if the wind is strong at east ; or, if it blows hard at north-west, from being forced back into some of the Cornish harbours, or even on the French coasts.

SCIMITAR, n. s. See CIMETER. A short sword with B convex edge.

I'll heat his blood with Greekish wine to-night,
Which with my scimitar I'll cool to-morrow.
Shakspeare.

SCINTILLATION, n. s. Lat. scintillatio.

The act of sparkling ; sparks emitted.

He saith the planets' scintillation is not seen, because of their propinquity. Glanville's Scepiis.

These scintillations are not the accension of the air upon the collision of two hard bodies, but rather the inflammable effluences discharged from the

bodies

collided. Browne,

With airy lens the scattered rays assault ;

And bend the twilight round the dusky vault ;

Ride, with broad eye and scintillating hair,

The rapid fire-ball through the midnight air.

Darwin.

SCIO, the ancient Chios, an island of the Grecian Archipelago, thirty miles in length, from ten to eighteen in breadth, and ninety in circumference, composed of high mountains, which are rendered, by the industry of the inhabitants, very productive. The plain, extending for some leagues round the town, is celebrated for its extraordinary beauty and fertility. Here also are some quarries of a reddish freestone. The air is good, though, from its great communication with other places, it is much exposed to the plague. Corn raised is not sufficient for the consumption, and herbage is so scarce that they give their cotton shrubs to the cattle after the cotton is gathered, and preserve the dried leaves of the vines for them in winter. This want renders all animal food dear, except goat's flesh.

See GREECE.

Scio, the capital of the above island, situated

in a shallow bay on its eastern coast. Here is a

good road for the largest shipping, and a mole,

which forms a tolerable harbour. The castle is

a large Venetian fort, which has been used as a

place of confinement for state prisoners. To the

east of the present city is the Palaio Castro, or

old town. The population is stated at 35,000.

Long. 25° 54′ E., lat. 38° 23′ N.

SCI'OLIST, n. s. Lat. sciolus. One who

knows many things superficially.

I could wish these sciolout zelotists had more judg-

ment joined with their zeal. Howel.

Twas this vain idolizing of authors which gave

birth to that silly vanity of impertinent citations ; these ridiculous fooleries signify nothing to the more generous discerners, but the pedantry of the affected sciolists. Glanville'i Sstptii

These passages were enough to humble the pre-

sumption of our modern sciolists, if their pride were not as great as their ignorance. Temple.

SCIOM'ACHY, n. s. Fr. schiamac hie ; Gr.

OKia and pax]- Battle with a shadow. It*

should be written sciamachy.

To avoid this sciomachy, or imaginary combat of

words, let me know, Sir, what you mean by the name of tyrant? Coicley.

SCI'ON, n. s. Fr. scion. A small twig taken

from one tree to be engrafted into another.

Sweet maid, we marry

A gentle scion to the wildest stock ;

And make conceive a bark of baser kind

11 y bud of nobler race. Shakspeare. Winter' Tale.*

.March, is drawn, in his left hand blossoms, and

soiois upon his arm. Peacham.

The scions are best of an old tree .

Mortimer t Husbandry.

SCIOPPIUS (Caspar), a learned German

writer of the seventeenth century, born at Neu-

mark, in the Upper Palatinate, in 1576. He

studied at the university, and, at the age of six-

teen, became an author. He abjured the system

of the Protestants, and became a Roman Catho-

lic about 1559. He possessed all those qualities

which fitted him for making a distinguished

figure in the literary world ; imagination, me-

mory, profound learning, and invincible impu-

dence. But he neither showed respect to his

superiors, nor decency to his equals. Joseph Scaliger, above all others, was the object of his satire. That learned man, having drawn up the history of his own family, and deduced its genealogy from princes, was severely attacked and ridiculed by Scioppius. Scaliger in his turn wrote a book entitled The Life and Parentage of Caspar Scioppius. This inflamed Scioppius still more : he collected all the calumnies thrown out against Scaliger, and formed them into a huge volume. He treated with great contempt James I., king of England, in his Ecclesiasticus, &c , and in his Collyrium Regium Britannia Regi, graviter ex oculis laboranti munere missum. He had also the audacity to abuse Henry IV. of France in a most scurrilous manner, on which account his book was burned at Paris. Provoked by his insolence to their sovereign, the servants of the English ambassador assaulted him at Madrid, and chastised him severely. For his furious assaults upon the most eminent men he was called the Cerberus of literature. He died on the 19th November, 1649, aged seventy-four, at Padua, the only retreat which remained

to him. 400 books are ascribed to him, which discover great genius and learning. The chief of these are, 1. Verisimilium Libri IV. 1596, in 8vo. 2. Commentarius de Arte Critica, 1661, in 8vo. 3. De sua ad Catholicos Migratione, 1660, in 8vo. 4. Notationes Criticae in Phaedrurn, in Priapeia, Patavii, 1664, in 8vo. 5. Suspectarum Lectionum Libra V. 16G4, in 8vo. 6. Classicum belli sacn, 1619, in 4to. 7. Collyliura regium, 1611, in 8vo. 8. Grammatica Philosophica, 1644, in 8vo. 9. Relatio ad Reges et Principes de Stratagematibus Societatis Jesu, 1641, in 12mo. This last was published under the name of Alphonso de Vargas.

SCIOTO, a river of the United States, which rises in Ohio, near the sources of the Sandusky. Its course is east by south ; and it passes by Columbus, Cocleville, and Chillicothe, and runs into the Ohio, at Portsmouth, inˆlat. 38° 34′ N., 352 miles below Pittsburg. It is navigable for large keel boats to Columbus, and for canoes almost to its head. There is a convenient portage between it and the Sundusky of four miles.

SCIPIO, the cognomen of a celebrated family

in ancient Rome, who were a branch of the Cornelian family, and by their bravery and other virtues rose to the highest honors in the republic. This surname was derived from scipio, a staff", because one of their ancestors had led his father when blind, and been to him as a walking staff.

SCIPIO (Cnseus Cornelius), Asina, was consul A. U. C. 492, and 498. During his first consulship he was defeated in a naval battle, and lost seventeen ships; but in 493 he took Aleria, in Corsica, and defeated the Carthaginians under Hauno, in Sardinia, took 200 of their ships, and the city of Panormum in Sicily.

SCIPIO (Cnseus), and SCIPIO (Publius), sons of Asina. In the beginning of the second Punic war Publius was sent with an army into Spain to oppose Hannibal ; but, hearing that Hannibal had gone to Italy, he endeavoured by quick marches to stop him. Hannibal, however, defeated him near the Ticinus, where he would have lost his life had not his son (afterwards the famed Africanus) bravely defended him. He again went into Spain, where he gained several memorable victories over the Carthaginians and inhabitants. His brother Cnseus shared the command

with him, but, though at first successful, their confidence proved their ruin. The/ divided their army, and soon after Publius was furiously assailed by the Carthaginians under Mago and the two Asdrubals. Publius was killed, and his army cut to pieces. The victors immediately fell upon Cnaeus, from whom 30,000 Celtiberians had just revolted. He retired to a hill and defended himself bravely, but was overpowered by numbers.

SCIPIO (Publius Cornelius), surnamed Africanus, was the son of Publius. He first distinguished himself at the battle of Ticinus, as above mentioned ; and, after the fatal battle of Cannae, when some Romans proposed to abandon Italy to the victors, he made his countrymen swear eternal fidelity to Rome, and enact that the first who should repeat such a proposal should be put to death. So early as in his twenty-first year he was made sedile. On the slaughter of the Roman armies under his father and uncle, Scipio was sent to avenge their deaths ; and within four years he expelled the Carthaginians from Spain, and reduced it to a Roman province. After these signal victories he was called home to defend

Rome against Hannibal, but gave it as his opinion that Hannibal could only be conquered in Africa. On this he was elected consul and sent to Africa, where his conquests were as rapid as in Spain ; the Carthaginians under Asdrubal were totally routed ; and Hannibal called .home from the gates of Rome. These two great generals met soon after, but could come to no terms of agreement. The battle of Zama was therefore fought, where Scipio was so successful that 20,000 Carthaginians were killed, and as many made prisoners ; while the Romans lost only 2000. Peace was demanded, and granted, but

upon the most humiliating terms. On his return to Rome Scipio was honored with a triumph, and with the agnomen of Africanus. In the conquest of Spain a princess of uncommon beauty was taken prisoner. Scipio, hearing that she had been betrothed to a young Spanish prince, not only restored her inviolate to her parents and lover, but sent rich presents along with her. By

his generous conduct he made not only that prince, but Masinissa, Syphax, and others, the friends of Rome. He married Emilia, daughter of the celebrated Paulus .Emilius, who fell at the battle of Cannae; and died at his country seat at Ldternum, about A. A. C. 181, aged only fifty-one. His widow raised a mausoleum to his memory, and placed upon it his statue with that of Ennius. The Romans venerated, when dead, the virtues of the man they were unjustly jealous of when living.

SCIPIO (Lucius Cornelius), surnamed Asiaticus, was the brother of the preceding, and accompanied him in his expeditions into Spain and Africa. He was rewarded with the consulship for his services, A. U. C. 562 : and was sent against Antiochus, king of Syria; whom, with the assistance and advice of his brother Africanus, he completely defeated in a battle at Magnesia, near Sardis, wherein Antiochus lost 50,000 infantry and 4000 cavalry, and soon after submitted. On his return to Rome, Scipio was decreed a triumph and the surname of Asiaticus. But, notwithstanding his victories and disinterest-

ed conduct, Cato the censor accused him of having received money from Antiochus, which he had not accounted for. This produced an enquiry, and a prejudiced judge decided against Scipio and his two lieutenants. But, upon con fiscating his property, the whole effects of Scipio did not amount to near the sum he was charged with. His friends and tenants, in this distress, made him liberal offers, which he generously declined. He was soon sent to settle the disputes between Eumenes and Seleucus, which he accomplished; and, on his return, the Romans, ashamed of their former injustice, rewarded his merits with such uncommon liberality, that Asiaticus was enabled to celebrate games in honor of his victory for ten successive days. He died about A. A. C. 170.*

SCIPIO (Publius Cornelius), jEmilianus, the son of Paulus yEmilius, the conqueror of Perseus, was adopted by his cousin Publius Cornelius Scipio, the son of Scipio Africanus and .Emilia. He first appeared in the Roman army under his father ; and distinguished himself as a legionary tribune in Spain, where he killed a Spanish giant,

and obtained a mural crown at the siege of In-

tercatia. Soon after he was made icdile, and

elected consul, though under the usual age qua-

lifying for these high offices. He was then sen

to Africa to finish the third Punic war, which he

carried on and completed, till he had accom-

plished the inhuman decree of Cato and the

senate, by the total destruction of that city

republic, and people, A. A. C. 147. .'Emilianus

is said, in the midst of his victory, to have wept over the miseries of this unfortunate people; it

had been better had he saved them. Another

commission, equally horrible and bloody, the

same Scipio was, a few years after this, employ-

ed by the senate to execute upon the brave but

unfortunate inhabitants of Numantia in Spain ;

and which he executed with equal success and

equal horrors, A. A. C. 133. For these conquests

j-Emilianus was honored with two triumphs, and

the double titles of Africanus junior, and Nu-

mantinus. Yet his popularity was short. He

incurred the displeasure of the people by vindi-

cating the murder of his cousin and brother-in-

law, their favorite, Tiberius Gracchus. He was

afterwards accused by his enemies of aspiring to

the dictatorship. Not long after he was found strangled in his bed ; which was said to have been done by the triumviri, PapiriusCarbo, Caius Gracchus, and Fulvius Flaccus, on account of his opposition to the Sempronian Law ; and bis wife Sempronia was accused of having admitted the assassins into his bed chamber. This murder was committed A. A. C. 128.

SCIPIO (C. Cornelius, Nasica), was the son of Cnaeus Scipio. He was at first refused the consulship, though supported by the interest of Africanus, but afterwards obtained it ; when he was sent against the Boii, whom he conquered, and was decreed a triumph. He was also successful in an expedition into Spain. It is recorded to his honor, that when the image of the goddess Cybele was brought from Phrygia, the senate decreed, that one of their body, who was most eminent for purity of morals, should be delegated to meet the goddess at Ostia, and Nasica was appointed, as best suiting that character. Nasica also distinguished himself as an orator, and the friend of persecuted virtue, by his zeal in confuting the invidious calumnies invented against his relations Africanus and Asiaticus.

SC1RPUS, in botany, rush grass, a genus of the monogynia order, and triandria class of plants, natural order third, calamariae : glumes paleaceous, and imbricated all round : COR. none, and only one beardless seed. Species sixty-seven, nine of which are common in the bogs and marshes of our own country.

*SCI'RRUS," n. s. Fr. scirrhe. This should be written skirrhus, says Johnson, not merely because it comes from mcippo'c, but because c in English has before e and i the sound of *. See SKEPTICK. An indurated gland.*

Any of these three may degenerate into a scirrhus, and that scirrhtu into a cancer. Witeman.

How they are to be treated when they are strum-ous, tcirrhous, or cancerous, you may see. Id.

The difficulty of breathing, occasioned by tchirrho-ritiet of the glands, is not to be cured.

Arbuthnt > t on Ditt.

SCIRRHUS, in surgery and medicine, is a hard tumor of any part of the body, void of pain, and exceedingly apt to degenerate into cancers. See SURGERY.

SCIS'SOR, n. s., or'j This word is varions-

SCIS'SORS, I ly written, as it is sup-

SCIS'SIBLE, adj. I posed to be derived by

SCIS'SILE, [different writers; of

SCIS'SION, n. s. I which some write c«-

SCIS'SVRE. J sors, from c

cido ; others scissors, from scindo , and some

cisars, cizars, or scissars, from Fr. ciseatu ; Thomson says Fr. ciseuux, from Lat. scindo. A

small pair of shears : scissible and scissile mean

capable of being cut by any instrument of this

kind : scission, the act of cutting : scissure, the cut made.

His beard they have singed off with brands of

fire;

And ever, as it blazed, they threw on him

Great pails of puddled mire to quench the hair :

My master preaches patience to him, and the while

His man with scissors nicks him for a fool.

Shakspeare.

The differences of impressible and not impressible,

scissible and not scistible, and many other passions of matter, are plebeian notions. Bacon.

The breach seems like the zcissures and ruptures of an earthquake, and threatens to swallow all that at-

tempt to close it, and reserves its cure only for

omnipotence. Decay of Piety.

Wanting the scissars, with these hands I'll tear,

If that obstruct my flight, this load of hair. Prior.

\ hen the lawyers and tradesmen brought extra-

vagant bills, Sir Roger wore a pair of scissars in his pocket, with which he would snip a quarter of a yard off nicely. Arbnthnot.

Animal fat is a sort of amphibious substance, scis-

lihle like a solid, and resolvable by heat. Id.

IVerves may be wounded by scission or puncture :

the former way they are usually cut through, and

wholly cease from action, H'iseman't Surgery.

SCIURUS, in botany, a genus of the mono-

gynia order, and diandria class of plants : CAL.

quinquedentate : coil, bilabiated : the filaments

are barren : CAPS, five, and joined together :

bivalved, unilocular, with one seed. Of this

there is only one species, viz.

S. aromatica, a native of Guiana.

SCIURUS, in zoologj, the squirrel, a genus of

quadrupeds belonging to the order of glires. It

has two fore-teeth in each jaw, the superior ones

shaped like wedges, and the inferior ones sharp

pointed. Some species of this genus are pro-

vided with hairy membranes extended from the

fore to the hind legs, by which they are enabled

to bear themselves in the air, when leaping from

one tree to another ; from this circumstance the

genus is very properly broken, into two subdivi-

sions, distinguished by the want or possession of

this membrane. The former are called sciuri

scandentes, or climbing squirrels; the latter

petauri, or flying squirrels. Mr. Kerr enumerates

thirty-one species, and twelve varieties of the

former ; and eight species with two varieties of

the latter. The following are the chief: —

1. S. Abyssinicus, th« Abyssinian squirrel, is

of a rusty black color on the back; the fore feet and belly gray ; the tail one foot and a half long.

It inhabits Abyssinia. It is thrice the size of the common species ; the nose and soles of the feet

are flesh-colored. One was purchased by The-

venot in Arabia from an Abyssinian. It was

good-natured and sportive ; eat of every thing but

flesh, and cracked the hardest almonds.

2. S. EPstuans, the Brasilian squirrel, is of a

dusky color, tinged with yellowish on the upper

part of the body ; the inside of the legs and belly yellow, with a white stripe along the

middle of the belly ; the tail is round and an-

nulated with black and yellow. They inhabit

Brasil and Guiana. The ears are plain and

roundish, the fur soft, the head and body eight

inches, the tail ten.

3. S. albipes, the white-legged squirrel, has

ears slightly tufted with black hair ; the head,

upper parts of the body, sides, and toes, reddish

brown ; the under parts and legs white, as well

as the face, nose, under side of the neck, inside

of the ears, breast, belly, fore legs, and inside of the hind thighs; the tail is long and covered with dusky hair, much shorter than in the common

species. They inhabit Ceylon.

4. S. anomalus, the Georgian squirrel, is of a

yellow color, mixed with dusky on the upper

parts and tail ; the under parts a dull tawny ;

the ears plain and rounded, flame yellow, whitish

within ; the circumference of the mouth is white ;

the tip of the nose black ; the cheeks tawny ; the whiskers and region of the eyes dusky. This

species is larger than the common squirrel ; they

inhabit Georgia in Asia.

5. S. bicolar, the Javan squirrel, has the upper

parts of the body black, the under tawny ; the

thumbs are provided with large round flat nails ;

the ears are plain, hairy, and sharp pointed.

The head and body are about a foot long ; the

tail is a foot, tipt with black ; the under parts

are light brown ; the hind feet black ; the claws

on the fore feet sharp, except the nail on the

fifth toe ; the thumbs are very short. They in-

habit Java.

6. S. Capensis, the Cape squirrel, is of a pale

ferruginous color on the upper parts of the body,

mixed with black ; with a white line from the

shoulder, along each side ; the tail is black in

the middle, and hoary at the sides ; the ears are

scarcely apparent, whence M. Pennant calls it

the earless dormouse. This species never climbs ‘

trees, but burrows in the ground, forming a warm

nest, with a round hole; in which it lodges,

closing up the orifice. It feeds on bulbous roots, especially potatoes ; it is very tame, and

never offers to bite; walks on its hind feet; often lies flat on its belly, and flirts up its tail. The head is flat, with a blunt nose, full black eyes,

divided upper lip, and long whiskers; the belly

and feet a dirty white ; there is a white line

above each eye ; the toes are long and distinct,

with a large knob on each foot for a thumb ; the claws are long ; the hind legs black and naked

behind. It is the size of the common squirrel,

but much broader and flatter. They are found

near Mount Sneeberg, 800 miles north of the

Cape of Good Hope.

7. S. cinereus, the gray squirrel, with plain ears ; hair of a dull gray color, mixed with black, and often tinged with dirty yellow ; belly and inside of the legs white; tail long, bushy, gray, and striped with black; size of a half grown rabbit. It inhabits the woods of northern Asia, North America, Peru, and Chili ; is very numerous in North America, and does incredible damage to the plantations of maize, running up the stalks and eating the young ears ; they are proscribed by the provinces, and a reward of threepence per head given for every one that is killed. They make their nests in hollow trees, with moss, straw, wool, &c., feed on maize in the season, and on pine-cones, acorns, and mast of all kinds; form holes undeiground, and there deposit a large stock of winter piovision ; descend from the trees, and visit their magazines

when in want of meat ; are particularly busy at the approach of bad weather ; during the cold season keep in their nest for several days together ; seldom leap from tree to tree, only run up

and down the bodies ; their hordes are often de-

stroyed by swine ; and, when their magazines are

covered with deep snow, the squirrels often

perish for want of food ; they are not easily shot, nimbly changing their place when they see the

gun levelled ; have the actions of the common

squirrel ; are easily tamed ; and their flesh is

esteemed very delicate. Their furs, which are

imported under the name of petit-gris, are valu-

able, and used as linings to cloaks.

8. S. erythraeus, the ruddy squirrel, is of a

yellow color, mixed with dusky, on the upper

parts ; the under parts blood-red mixed with

tawny ; the tail the same, with a longitudinal

blackish stripe; the ears slightly tufted. It is

larger than the common squirrel; the fore paws

have a large protuberance instead of a thumb.

They inhabit India.

9. S. flavus, the fair squirrel, with the body

and tail of a flaxen color ; of a very small size, with plain round ears and rounded tail. Inhabits

the woods near Amadabad, the capital of Guze-

rat, in great abundance, leaping from tree to tree.

Linn6 says it is an inhabitant of Carthagena in

South America.

10. S. Hudsonius, the Labradore squirrel, is of

a ferruginous color along the back, the sides

paler, and the belly ash color mottled with

black ; the tail is like the back, but barred and

tipped with black; the ears are plain. It is

smaller than the common squirrel, and apt to

vary in color to a gray. They inhabit the pine

forests of Labradore, and round Hudson's Bay.

11. S. Indicus, the Bombay squirrel, is of a

dull purple color on the head, back, sides, and

upper parts of the legs and thighs ; the belly

and lower parts yellow ; the tail tipt with orange ; the ears tufted. The head and body

are sixteen inches long; the tail seventeen.

They inhabit India, near Bombay.

12. S. Madagascarensis, the Madagascar

squirrel, in the slowness of its pace and general

manners resembles the sloth ; but in the form of

its tail, the number and form of its toes, five on each foot, and the number and arrangement of

its teeth, it is more nearly allied to the squirrel.

It lives in holes under ground ; is slothful, timid, and sleeps much; it feeds chiefly on worms,

picked from the hollows of trees by its toes.

The middle toe on the fore feet is very long and

naked; the thumb on the hind feet has a flat

rounded nail. The ears are large, flattened,

black, and covered thickly with rough hair ; the

face has two bunches of hair above the eyes, on

the nose and cheeks, and under the chin ; the

fur is of two sorts, an under downy fleece-like

wool, of a pale tawny, with longer straight black

hairs intermixed, the face and throat are of a pale whitish tawny color ; the tail is flattened, about

eighteen inches long, covered with thick set white

hair from the base to the middle, and the rest

black ; the toes on the fore paws are long ; four of the claws on the hind feet are hooked and

sharp-pointed. They inhabit the east side of

Madagascar.

13. S. maximus, the Malabar squirrel, is of a

red brown color on the upper parts ; the under

parts and tail black ; the ears lightly tufted, it is about the size of a large cat ; has small erect ears, long hair, strong black claws ; and a small

protuberance instead of a thumb on the fore

paws, with a flat nail. Thev inhabit the Malabar coast, and province of Mane in India ; feed

chiefly on the milk of the cocoa nut, and have a

loud sonorous voice.

14. S. niger, the black squirrel, with plain

ears ; sometimes wholly black, but often marked

with white on the nose, the neck, or end of the

tail ; the tail shorter than that of the cinereus, the body equal. They inhabit the north of Asia, North America, and Mexico; breed and associate in separate troops ; are equally numerous with the cinereus, commit as great ravages among the maize, make their nests in the same manner, and form magazines for winter food. The finest are taken near the lake Baikal, which are the best in all Siberia ; these continue black the whole year, the others grow rusty in summer.

15. S. palmarum, the palm squirrel, is of a mixed black and red color, with three longitudinal yellow stripes on the back and sides; the tail is encircled with coarse dirty yellow hair, and is barred with black. — Shreber. This species inhabit the hot regions of Asia and Africa ; live much on cocoa nuts, and are fond of the sury, or palm wine, whence the Dutch call them suricatsjie, or little cats of the sury. They are only three inches long ; the tail is as long, and is carried erect, the ears are short, broad, and fringed with hair -At the edges ; an obscure pale yellow stripe runs along the back, and othei two on each side. The hair on the head, back, and

sides, is a mixed black and red ; on the thighs

and legs redder; on the belly pale yellow.

16. S. petaurus australis, the southern flying

squirrel, is the largest and most elegant of all the flying squirrels ; its most remarkable characteris-

tic is the rounded thumbs or great toes of the

hind feet, which are furnished with a flattened

nail, while all the other toes, five to each foot, have sharp hooked claws ; the two toes next this

are united by the skin, but have separate claws;

the color is a fine sable, or deep gray-brown, on

the upper parts, darkest on the middle of the

back, and the under parts are nearly white ; the

edges of the membrane are somewhat scalloped,

and of a lighter color ; the fur is exquisitely soft and beautiful ; the tail is long and bushy, thickly clothed with very soft loose hair, longest towards

the outer end ; the ears are longish, and there is a black streak over each eye. They inhabit New

South Wales.

17. S. petaurus petaurista, the Indian flying

squirrel, or flying cat, has a tail longer than the body, flattened, and very full of long hair. This species is eighteen inches long from nose to

rump ; the head is rounded ; the whiskers and

claws are black ; the female has six teats on tho

breast and belly ; the eyes have long narrow pv

*pils like those of a cat. They inhabit the island**

of the Indian Ocean. There are two varieties.

18. S. petaurus sagitta, the arrow or Java fly-

ing squirrel, with a small round head, cloven

upper lip ; small blunt ears, two small warts at

the utmost corner of each eye, with hairs grow-

ing out of them : neck short : four toes on the

fore feet, and, instead of a thumb, a slender bone two inches and a half long, lodged under the

lateral membrane, serving to stretch it out :

thence to the hind legs extends the membrane,

which is broad, and a continuation of the skin

of the sides and belly : there are five toes on the hind feet ; and on all the toes sharp compressed

bent claws : the tail is covered with long hairs

disposed horizontally ; color of the head, body,

and tail, a bright bay, in some parts inclining to orange : breast and belly of a yellowish-white :

length, from nose to tail, eighteen inches ; tail

fifteen. They inhabit Java, and others of the

Indian islands : leap from tree to tree as if they flew, and will catch hold of the boughs with their tails. Niewhoff, p. 354, describes this under the

name of the flying cat, and says the back is black.

19. S. petaurus volans, the European flying

squirrel, has round naked ears, full black eyes,

and a lateral membrane from the fore to the hind

legs : tail with long hairs disposed horizontally,

longest in the middle ; its color above, a brownish ash, beneath, white tinged with yellow. They

are much less than the common squirrel : inhabit

Finland, Lapland, Poland, Russia, and North

America; live in hollow trees; sleep in the day;

during the night are very lively ; are gregarious,

numbers being found in one tree; leap from

bough to bough, sometimes at the distance of

ten yards. This action has improperly been

called flying, but the animal cannot go in any

other direction than forward ; and even then

cannot keep an even line, but sinks considerably

before it can reach the place it aims at : sensible of this, the squirrel mounts the higher in propor-

tion to the distance it wishes to reach : when it

would leap, it stretches out the fore-legs, and,

extending the membranes, becomes specifically

lighter than it would otherwise be, and thus is

enabled to spring farther than other squirrels

that have not this apparatus. When numbeis

leap at a time, they seem like leaves blown off

by the wind. Their food is the same as the other squirrels. They are easily tamed ; and bring

three or four young at a time.

20. S. petaurus volucella, the American flying

squirrel, is of a brownish color on the upper

parts ; the belly white, tinged with yellow; the

tail is flattened, broadest at the middle, and ends in a point. This species is easily tamed ; it is about five inches long from nose to rump, with

a round tail of four inches ; the head is thickish ; the eyes are black, large, and prominent; the

ears roundish, transparent, almost naked, of a

brownish ash color; the whiskers black, and

longer than the head ; the neck is short. The

fur is very fine and soft, of an ash color, with

white tips on the upper parts ; on the lower,

white and ash all around. The membrane ex-

tends from the ears to the fore and hind legs,

adhering as far as to the toes ; it includes a pecu-

liar bone which is attached to the wrist, and

helps to stretch it out in flying ; on the hind legs it extends to the ancles. By this membrane the

animal supports itself in the air, as if flying, for a considerable way ; and it swims nearly in the

same manner. This species inhabit the tempe-

rate and warm parts of North America, living in

societies in the woods, and feeding on fruits and.

seeds, which they procure in the evening, as they

sleep much during the day.

21. S.striatus, the ground-squirrel, with plain

ears ; ridge of the back marked with a black

streak; each side with a pale yellow stripe,

bounded above and below with a line of black :

head, body, and tail, of a reddish brown ; the

tail the darkest ; breast and belly white ; nose

and feet pale red ; eyes full. They inhabit the

north of Asia, but are found most numerous in

the forests of North America. They never run

up trees except they are pursued, and find no

other means of escaping ; they burrow and form

their habitations under ground, with two en-

trances, that they may get access to the one in

case the other is stopped up. Their retreats are

formed with great skill, in form of a long gallery, with branches on each side, each of which ter-

minates in an enlarged chamber, as a magazine

to store their winter provisions in ; in one they

lodge the acorns, in another the maize, in a third the hickory nuts, and in the last their favorite

food the chinquapin chestnut. They very seldom

stir out during winter, as long as their provisions last ; but, if these fail, they will dig into cellars where apples are kept, or barns where maize is

stored, and do a great deal of mischief; but at

that time the cat destroys great numbers, and is

as great an enemy to them as to mice. During

the maize harvest they are very busy in biting

off the ears, and filling their mouths so full with the corn that their cheeks

are quite distended.

They give great preference to certain food ; for if, after filling their mouths with rye, they happen

to meet with wheat, they fling away the first,

that they may indulge in the last. They are very

wild, bite severely, and are scarcely ever tamed ;

the skins are of little use, but are sometimes

brought over to line cloaks.

22. S. vulgaris, the common squirrel, has ears

terminated with long tufts of hair ; large, lively,

black eyes ; head, body, legs, and tail, of a bright reddish brown ; breast and belly white ; hair on

each side the tail lies flat. In Sweden and Lap-

land it changes, in winter, into gray. In Russia

it is sometimes found black. In many parts of

England there is a beautiful variety, with milk-

white tails. This species inhabit Europe and

North America, the northern and the temperate

parts of Asia : and a variety is even found as far south as the isle of Ceylon. It is a lively, active animal ; lives always in woods : in the spring,

the female is seen pursued from tree to tree by

the males, feigning an escape from their em-

braces ; makes its nest of moss and dried leaves

between the fork of two branches ; brings from

three to seven young at a time ; has two holes to its nest; stops up that on the side the wind blows, which was remarked by Pliny ; lays in a hoard

of winter provision, such as nuts, acorns, &c. ;

in summer, feeds on buds and young shoots ; is

particularly fond of those of fir, and the young

cones ; sits up to eat, and uses its fore-feet as

hands ; covers itself with its tail ; leaps to a sur-

prising distance; when disposed to cross a river,

a piece of wood often serves as its boat, its tail SCL

forming the sail. Boys frequently nurse this

beautiful and active animal under cats. 'There

are three creatures, the squirrel, the field-mouse,

and the bird called the nuthatch, which live

much on hazel nuts ; and yet they open them

eac h in a different way. The first, after rasping off the small end, splits the shell in two with his long fore feet, as a man does with his knife ; the second nibbles a hole with his teeth, as regular

as if drilled with a wimble, and yet so small that one would wonder how the kernel can be ex-

tracted through it : while the last pecks an ir-

regular ragged hole with its bill ; but as this artist has no paws to hold the nut firm while he pierces it, like an adroit workman he fixes it, as it were in a vice, in some cleft of a tree, or in some crevice, when, standing over it, he perforates the stubborn

shell.'— White's Selborne. They are preyed on

by martins and other animals of the mustela and

viverra tribes : also by serpents and birds of prey.

Mr. Kerr describes six varieties.

23. S. vulpinus, the vulpine or fox squirrel,

of the planter, is of a large size, and ruddy

color, mixed with black and dirty white, and has

plain ears. It inhabits Virginia, and is the size

of a small rabbit. The fur is coarse ; the throat

and insides of the thighs and legs are black ; the tail is shorter than that of the common squirrel ;

and of a dull yellow color, mixed with black

and reddish at the tip, as are also the ears.

SCLAVI, or SLAV i, the ancient inhabitants of

Sclavonia or Slavonia. This name originally

signified illustrious.

SCLAVONIA, a province in the south of the

Austrian empire, which, in official documents,

bears the title of the kingdom of Sclavonia. It

is long and narrow, the Drave and Danube run-

ning along its northern frontiers, and separating

it from Hungary ; while the Save, also a great

river, extends along its southern confines, divid-

ing it from Turkey. Its area is about 6600 square

miles ; population about 530,000. It lies be-

tween 45° and 46° of N. lat.; and, being a

frontier province, its inhabitants are exempt from

taxes, but subject (see the article HUNGARY) to

military duty. The mountainous tracks are barren in dry years, and in the low "grounds there are many districts too marshy for cultivation ; but the greatest part of the country produces wheat, barley, maize, flax, hemp, and madder. The fruits are chestnuts, plums, and vines ; also figs, almonds, and other products of a warm climate. The forests contain the finest oak. Domestic animals are reared with little care, and vast numbers of hogs are found in the woods. Of wild animals, the bear, the wolf, the fox, the polecat, and the vulture are common. Equal mischief is experienced from insects, which multiply surprisingly in the heats of summer, and it sometimes happens that a continuance of southerly winds brings a swarm of locusts from Turkey. The mineral treasures of Sclavonia have not been explored. The only minerals known to exist in large quantities are salt, limestone, sulphur and coal. The manufactures are insignificant.

Sclavonia formed part of the ancient Illyria, and derives its present name from a tribe of Sclavi or Slavi, wlm settled here in the sixth

century. Then the Venetians, having acquired possession of Dalmatia, extended their conquests hither. It remained alternately subject to them and to the Hungarians, until overrun by the Turks, in whose possession it continued about 170 years.

SCLERANTHUS, in botany, German knot-grass, or Knawel, a genus of the digynia order, and dodecandria class of plants ; natural order twenty-second, caryophylleifi : CAL. monophyl-lous: COR. none: there are two SEEDS contained in the calyx ; species three, natives of this country.

SCLERIA, in botany, a genus of the tetran-dria order, and monoecia class of plants ; natural order fourth, gramina : CAL. a gluma, with from two to six valves; the flowers are numerous; the SEEDS a sort of nut, small, oblong, and shin-ing. There are six species, all natives of the West Indies.

SCLEROTIC, adj. Fr. sclerotique ; Gr.

coats of the eye.

The ligaments observed in the inside of the scle rotick tunicles of the eye, seive instead of a muscle, by their contraction, to*

alter the figure of the eve.

Ray on the Creation.

SCOFF, v. n. & n. s. i Belgic schoppen ;

SCOFF'ING, n. s. >Goth.s£uip. To treat

SCOFF'IXGLY, adv. J with insolent ridicule,

or contumelious language, with at : the noun-

substantive and adjective corresponding.

With scarf's and scorns, and contumelious taunts,

In open market-place produced they me.

Shakspeare. Henry VI.

Sell when you can ; you are not for all markets : Cry the man mercy, love him, take his offer ;

Foul is the most foul, being found to be a scoffer.

Shakspeare.

Of two noblemen of the west of England, the

one was given to scoff, but kept ever royal cheer in his house ; the other would ask of those that had

been at his table, Tell truly, was there never a flout or dry blow given ? Bacon .

There is no greater argument of a light and incon-

siderate person, than prophanely to tcoff at religion.

Tillotson.

Our answer, therefore, to their reasons is No ; to their scoffs, nothing. Holder.

Consider what the apostle tells these tcoffers they

were ignorant of ; not that there was a deluge, but he tells them that they were ignorant that the heavens and the earth of old were so and so

constituted.

Burnet't Theo,y of the Earth.

How could men surrender up their reason to flat-

tery, more abusive and reproachful than the rudest

Ktiffls, and the sharpest invectives? South.

Such is love.

And such the laws of this fantastic empire,

The wanton boy delights to bend the mighty,

And ico/sat the vain wisdom of the wise. Rou-e.

Divers have hoarded themselves among these pro-

fane icofen, not that they are convinced by their rea-

sons, but terrified by their contumelies.

Government of the Tongue.

Aristotle applied this hemistick scojfingly to the sy-

cophants at Athens. Broome.

Some little souls, that have got a smattering of as-

tronomy or chemistry for want of a due acquaint-

ance with other sciences, make a scoff" at them all, in comparison of the'.r favourite science Watt.*

SCOLOPAX.

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SCOLD, v. n. & H.S. Saxon rcyh>; Belgic

scholden. To quarrel clamorously and rudely ;

rate with the tongue; a scold is a skilful, or

properly a practised person in the use of that

weapon.

Pardon me, 'tis the time that ever

I'm forced to scold. Shakspeare. Coriolamu.

They attacked me, some with piteous moans,

others grinning, and only shewing their teeth, others ranting, and others scolding and reviling.

Stillingfle".t.

Sun-burnt matrons mending- old nets ;

Now singing shrill, and scolding oft between ;

Scolds answer foul-mouthed scolds. Su-ift.

For gods, we are by Homer told,

Can in celestial language scold. Id.

A shrew in domestick life is now become a tcold in politicks. Addison's Freeholder.

SCOLOPAX, in ornithology, a genus of birds

belonging to the order of grallae. The back is

cylindrical, obtuse, and longer than the head ;

the nostrils are linear : the face is covered ; and the feet have four toes. There are numerous

species, of which the following are a selection :

1. S. aegocephala, the godwit, weighs twelve

ounces and a half, the length is sixteen inches ;

the breadth twenty-seven ; the bill is four inches

long, turns up a little, black at the end, the rest a pale purple ; from the bill to the eye is a broad white stroke ; the feathers of the head, neck, and back, are of a light reddish brown, marked in

the middle with a dusky spot; the belly and

vent feathers white, the tail regularly barred with

black and white. The six first quill-feathers are black ; their interior edges of a reddish brown ;

the legs in some are dusky, in others of a grayish blue, which perhaps may be owing to different

edges ; the exterior toe is connected as far as the first joint of the middle toe with a strong ser-

rated membrane. The male is distinguished

from the female by some black lines on the

breast and throat. These birds are taken in the

fens, in the same season and in the same manner

with the ruffs and reeves (see TKINGA); and

when fattened are esteemed a great delicacy, and

sell for 2s. 6rf. or 5s. a piece. A stale of the same species is placed in the net. They appear

in small flocks on our coast in September, and

continue with us the whole winter ; they walk on

the open sands like the curlew, and feed on insects.

2. S. arquata, the curlew, frequents our sea-

coasts and marshes in winter, in large flocks,

walking 'on the open sands ; feeding on shells,

frogs, crabs, and other marine insects. In sum-

mer they retire to the mountainous and unfre-

quented parts of the country, where they pair

and breed. Their eggs are of a pale olive color, marked with irregular but distinct spots of pale

brown. Their flesh is very rank and fishy ; they differ much in weight and

size ; some weighing

thirty-seven ounces, others not twenty-two : the

length of the largest to the tip of the tail, twenty-

rive inches ; the breadth three feet five inches ;

the bill is seven inches long : the head, neck,

and coverts of the wings, are of a pale brown ;

the middle of each feather black ; the breast and

belly white, marked with narrow oblong black

lines : the back is white, spotted with a few black strokes : the quill feathers are black, but the

inner webs spotted with white ; the tail is white,

tinged with red, and beautifully bam fl v. i'l.

black ; the legs are long, strong, and of a bluish gray color : the bottoms of the toes flat and

broad, to enable it to walk on the soft mud in

search of food.

3. S. calidris, the red-shank, is found on most

of our shores ; in the winter time it conceals it-

self in the gutters, and is generally found single,

or at most in pairs. It breeds in the fens and maishes, and flies round its nest when disturbed,

making a noise like a lapwing. It lays four

eggs, whitish tinged with olive, marked with ir-

regular spots of black chiefly on the thicker end.

It weighs five ounces and a half: the length is

twelve inches, the breadth twenty-one ; the bill

nearly two inches long, red at the base, black towards the point. The head, hind part of the neck, and scapulars, are of a dusky ash-color, obscurely spotted with black ; the back is white, sprinkled with black spots; the tail elegantly barred with black and white ; the cheeks, under side of the neck, and upper part of the breast are white, streaked downward with dusky lines ; the belly white ; the exterior webs of the quill-feathers are dusky ; the legs long, and of a fine bright orange color ; the utmost toe connected to the middle toe by a small membrane ; the inmost by another still smaller.

4. S. gallinago, the common snipe, the length to the end of the tail is nearly twelve inches ; the breadth about fourteen ; the bill is three inches long, of a dusky color, flat at the end, and often rough like shagreen above and below. The head is divided lengthways with two black lines, and three red, one of the last passing over the middle of the head, and one above each eye : between the bill and the eyes is a dusky line ; the chin is white ; the neck is varied with brown and red. The scapulars are beautifully striped lengthways with black and yellow ; the quill-

feathers are dusky ; but the edge of the first is

white, as are the tips of the secondary feathers :

the quill-feathers next the back are barred with

black and ˆale red ; the breast and belly are

white ; the coverts of the tail are long, and al-

most cover it ; they are of a reddish-brown co-

lor. The tail consists of'fourteen feathers, black

on their lower part, then crossed with a broad

bar of deep orange, another narrow one of black ;

and the ends white or pale orange. The legs

pale green ; the toes divided to their origin. In the winter time snipes are very frequent in all

marshy and wet grounds, where they lie con-

cealed in the rushes, &c. In summer they dis-

perse to different parts, and are found in the

midst of the highest mountains as well as of the

low moors ; their nest is made of dried grass ;

they lay four eggs of a dirty olive color, marked

with dusky spots. When they are disturbed

much, particularly in the breeding season, they

soar to a vast height, making a singular bleating

noise ; and, when they descend, dart down with

vast rapidity : it is also amusing to observe the

cock, while his mate sits on her eggs, poise him-

self on her wings, making sometimes a whistling

and sometimes a drumming noise. Their food

is the same with that of the woodcock ; their

flight very irregular and swift, and attended with

a shrill scream. These birds are found in every

quarter of the glol>e, and in very various cli-

mates.

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5. S. glottis, the greenshank, is in length to the end of the tail fourteen inches ; to that of the toes twenty ; its breath twenty-fire. The bill is two inches and a half long ; the upper mandible

black, straight, and very slender ; the lower re-

flects a little upwards ; the head and upper part

of the neck are ash-colored, marked with small

dusky lines pointing down ; over each passes a

white line ; the coverts, the scapulars, and upper

part of the back, are of a brownish ash-color ;

the quill-feathers dusky, but the inner webs

speckled with white ; the breast, belly, thighs,

and lower part of the back, are white; the tail

is white, marked with undulated dusky bars :

the inner coverts of the wings finely crossed with

• double and treble rows of a dusky color. It is

a bird of an elegant shape, and small weight in

proportion to its dimensions, weighing only six ounces. The legs are very long and slendw, and bare two inches above the knees. The exterior toe is united to the middle toe, as far as the second joint, by a strong membrane which borders their sides to the very end. — These birds appear on the English coast and wet grounds in the winter time in but small numbers.

6. S. rusticola, the woodcock, during summer inhabits the Alps of Norway, Sweden, Polish Prussia, and the northern parts of Europe : they all retire from those countries the beginning of winter, as soon as the frosts commence ; which force them into milder climates, where the ground is open, and adapted to their manner of feeding. They live on worms and insects, which they search for with their long bills in soft grounds and moist woods. — Woodcocks generally arrive here in flocks, taking advantage of the night or a mist : they soon separate ; but, before they return to their native haunts, pair. They feed and fly by night ; beginning their flight in the evening, and return the same way to their day retreat. They leave England in the end

of February or beginning of March; though they sometimes continue longer. These birds appear in Scotland first on the eastern coasts, and make their progress from east to west. Our species of woodcock is unknown in North America : but a kind is found that has the general appearance of it ; but is scarcely half the •size, and wants the bars on the breast and belly. The length nearly fourteen inches ; and the breadth twenty-six ; the bill is three inches long, dusky towards the end, reddish at the base ; tongue slender, long, sharp, and hard at the point ; the eyes large, and placed near the top of the head, that they may not be injured when the birds thrusts its bill into the ground ; from the bill to the eyes is a black line; the forehead is a reddish ash-color ; the crown of the head, the hind part of the neck, the back, the covert of the wings, and the scapulars, are prettily barred with a ferruginous red, black, and gray ; but on the head the black predominates : the quill feathers are dusky, indented with red itnjks. The chin is of a pale yellow ; the whole under side of the body is of a dirty white, marked with numerous transverse lines of a dusky color. The tail consists of twelve fea-

thers, dusky or 'ilack on the one web, and marked with red on the other ; the tips above am ash-colored, below white. The legs and toes am livid; the latter divided almost to their very origin, having only a very small web between the middle and interior toes ; as those of the two species of snipes found in England.

SCOLOPENDRA, in zoology, a genus of insects belonging to the order of aptera. The feet are very numerous, being as many on each side as there are joints in the body ; the antennae are setaceous : there are two jointed pappi, and the body is depressed. — These insects are very formidable and noxious in the warm countries, where they grow to the length of a quarter of a yard or more, though in this climate they seldom grow above an inch long. The scolopendra is also called the centipes from its number of feet. In the East Indies it grows to six inches in length, and as thick as a man's finger : it consists of many joints ; and from each joint proceeds a leg on each side : they are covered with hair, and seem to have no eyes ; but there are two feelers on the head, with which they find

out the way they are to pass : the head is very round, with two small sharp teeth, with which they inflict wounds that are very painful and dangerous. Some of the species live in holes in the earth ; others under stones, and among rotten wood ; so that the removing of these is exceedingly dangerous in the countries where the scolopendrae breed. The scolopendra forficata is the largest in this country, of a dun color, smooth, and composed of nine scaly segments, without reckoning the head. The feet are fifteen in number on each side, and the last longer than the rest, and turned backwards, form a kind of forky tail. The antennae are twice the length of the head, and consist of forty-two short segments. The insect's progressive motion is very quick, and sometimes serpentine. It is found under stones on the ground, under flower-pots and garden boxes.

SCOLYMUS, in botany, golden thistle; a genus of the polygamia aequalis order, and syngenesia class of plants ; natural order forty-ninth, compositae : receptacle paleaceous : CAL. imbricated and prickly, without any pappus. Species

three, natives of Barbary and the United States

of Europe. ˆ

SCOMBER, the mackerel, in ichthyology, a

genus belonging to the order of thoracici. The

head is smooth and compressed, and there are

seven rays in the gill membrane. There are

twenty-two species ; the most remarkable are the

following : —

1. S. communis, the common mackerel, a

summer fish of passage that visits our shores in

vast shoals. It is less useful than other species

of gregarious fish, being very tender, and unfit

for carriage ; but it may be preserved by pickling and salting. See FISHERY. It was greatly es-

teemed by the Romans, because it furnished the

garum, a sort of pickle that gave a high relish to their sauces ; and was also used medicinally.

This fish is easily taken by a bait ; but the best time is during a fresh gale of wind, which is

thence called a mackerel gale. In the spring

the eyes of mackerel are almost covered with a

white film ; during which period they are half

blind. This film grows in winter, and is cast

the beginning of summer. It is not often that a

mackerel exceeds two pounds in weight, yet

there have been instances of some that weighed

upwards of five. The nose is taper and sharp pointed ; the eyes large ; the jaws of an equal length ; the teeth small, but numerous. The form of this fish is very elegant. The body is a little compressed on the sides : towards the tail it grows very slender, and a little angular. It is a most beautiful fish when alive ; nothing can equal the brilliancy of its color, which death impairs, but does not wholly obliterate.

2. S. thunnus, the tunny. These fish are caught in nets, and amazing quantities are taken ; for they come in vast shoals, keeping along the shores. They frequent our coasts, but not in shoals, like the tunnies of the Mediterranean. They are not uncommon in the lochs on the west coast of Scotland ; where they come in pursuit of herrings ; and often during night strike into the nets, and do considerable damage. When the fishermen draw them up in the morning, the tunny rises at the same time towards the surface, ready to catch the fish that drop out. On perceiving it, a strong hook, baited with a herring and fastened to a rope, is instantly flung out, which the tunny seldom fails to take. As soon as hooked it loses all spirit ; and after a

very little resistance submits to its fate. It is

dratted to the shore and cut up, either to be

sold fresh to people who carry it to the country

markets, or preserved salted in large casks. The

pieces, when fresh, look exactly like raw beef;

but when boiled turn pale, and have something

of the flavor of salmon. One mentioned by Mr.

Pennant weighed 460lbs. The fish was seven

feet ten inches long : the greatest circumference

five feet seven ; the least near the tail one foot six. The body was round and thick, and grew

suddenly very slender towards the tail, and near

that part was angular. The irides were of a

plain green; the teeth very minute. The tail

was in form of a crescent; and two feet seven

inches between tip and tip. The skin on the

back was smooth, very thick, and black. On

the belly the scales were visible. The color of

the sides and belly was silvery, tinged with caeru-

lean and pale purple : near the tail marbled with

gray. On the coast of Scotland they are called

mackrelsture ; mackrel, from being of that genus ;

and sture, from the Danish stor, great.

SCOMM, n. s. From Lat. scomma. A buf-

foon. A word well out of use.

The scomms, or buffoons of quality are wolvish in

conversation. L'Estrange.

SCONCE, n.s. Teut. schantz; Goth: skyu,

to cover. A fort; bulwark; wall protection; a

•candlestick for a wall.

Such fellows are perfect in the great commanders'

names, and they will learn you by rote where ser-

vices were done ; at such and such a sconce, at such a breach. Shakspeare. Henry V.

\Vhy does he suffer this rude knave now to knock

him about the sconce with a dirty shovel, and will not tell him of this action of battery 1 Id. Hamlet.

Golden tcwices hang upon the walls,

To light the costly suppers and the balls.

Drwlen's Luc.

Triumphant Umbriel, on a sconce's height.

Clapped his glad wings, and sat to view the fight.

Pope.

Put candles into sconces.

Swift's Directions to the Butler.

SCONE, or SCOON, an ancient town of Scot-

land, in Perthshire, remarkable for being the

place where the kings were anciently crowned.

Here was once an abbey of great antiquity, which was burnt by the reformers at Dundee. Kenneth II. upon his conquest of the Picts in the ninth century, having made Scone his principal residence, delivered his laws, called the Macalpine laws, from a tumulus named the Mote Hill of Scone. The old palace was begun by the earl of Gowrie ; but was completed by Sir David Murray of Gospatric, the favorite of king James VI., to \vhom that monarch had granted it ; and the new possessor, in gratitude to his benefactor, put up the king's arms in several parts of the house. It is built around two courts. The dining room is large and handsome ; and has an ancient and magnificent chimney piece, and the king's arms, with this motto : —

Nobis hsec invicta miserunt centum sex proavi.

Beneath are the Murray arms. In a small bedchamber is a medly scripture piece in needlework, with a border of animals, pretty well done, the work of queen Mary during her confinement in LochLeven Castle. The gallery is about 155 feet long, the top arched, divided into compartments filled with paintings in water colors. Till

the destruction of the abbey, the kings of Scot-

land were crowned here, sitting in the famous

marble chair which Edward I. transported to

Westminster Abbey, to the great mortification of

the Scots, who looked upon it as a kind of palla-

dium. Charles II., before the battle of Wor-

cester, was crowned in the chapel. The old

pretender resided for some time at Scone in 1715;

and his son paid it a visit in 1745. Such was the palace of Scone, till about the year 1803, that

part of it was taken down and rebuilt in a more

modern style by the earl of Mansfield. The

modern house, including a very small portion of

the ancient palace, forms one of the most magni-

ficent houses in Scotland. The church erected

in 1784 was taken down, and anew one built in

1804 upon the same plan, decorated with an an-

cient family seat of the Stormont family, the

ancestors of the earl of Mansfield, of very curious workmanship. Scone consists of two streets,

one of them very wide, and lies forty-one miles

north of Edinburgh, and two from Perth.

SCOOP, n. s. & v. a. Fr. escape ; Swedish

scop ; Belg. schoepe. A kind of large ladle ; a

vessel with a long handle used to throw out

liquor; a surgical instrument: to use a scoop;

to make hollow or like a scoop.

As by the brook he stood,

He scooped the water from the crystal flood.

Id.

They turn upside down, hops on malt-kilns, when

almost dry, with a scoop. Mortimer' t Husbandry.

It much conduces how to scare

The little race of birds, that hop

From spray to spray, scooping the costliest fruit,

Insatiate, undisturbed. Philipt.

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A spectator would think this circular mound had

been actually scooped out of that hollow space.

Spectator.

Her fore-feet are broad, that Sue may scuot> away

much earth at a time. Addisou.

*Those carbuncles the Indians will sct>.y, so as *o*

hold above a pint Arhutknot on Ccins.

Endeavour with thy scoop, or fingers, to force the

stone outwards. Sharp's Surgery.

The genius of ths place

Or helps the ambitious hill the heaven to scale,

Or scoops in circling the theatre's vale. Pope.

Melted Alpine snows

The mountain cisterns fill, those ample stores

Of water tcooped among the hollow rocks.

Thornton.

SCOPARIA, in botany, a genus of the mono-

gynia order, and tetrandria class of plants, na-

tural order fortieth, personatne : CAL. quadripar-

tite : COR. the same, and rotaceous : CAPS, uni-

locular, bivalved, and polyspermous.

SCOPAS, a celebrated Grecian architect and

sculptor, a native of Ephesus, according to Lem-

priere. He flourished about A. A. C. 430. He

built the famous Maasoleum for Q. Artemisia,

which was esteemed one of the seven wonders of

the world. See ARTEMISIA. But his chief work

was a statue of Venus, which he carried to

Rome, where it was esteemed superior even to

that of Praxiteles.

SCOPE, n. s. Lat. scopus. Aim ; intention ;

drift: room; space; liberty.

The scope of all their pleading against man's au-

thority is to overthrow such laws and constitutions

in the church, as depending thereupon, if they should therefore be taken away, would leave neither face

nor memory of church to continue long in the world.

Hooker.

Now was time

To aim their counsels to ths fairest scope.

Hubbard's Tale.

Your scope is as mine own,

So to enforce or qualify the laws,

As to your soul seems good.

Shakspeare. Measure for Measure.

His coming hither hath no further scope

Than for his lineal royalties, and to beg

Infranchisement immediate on his kneee.

Id. Richard II.

Ah, cut ray lace asunder,

That my pent heart may have some scope to beat,

Or else I swoon with this dread killing news.

Sltaktpeare.

Sith 'twas my fault to give the people scope,

Twould be my tyranny to strike and gall them

For what I bid them do. Id.

As surfeit is the father of much fast,

So every scope, by the immoderate use,

Turns to restraint. Id.

We should impute the war to the scape at which

it airaeth. Raleigh.

The scopes of land granted to the first adventurers were too large, and the liberties and royalties were too great for subjects. Davies on Ireland.

He, in what he counsels, and in what excels,

Mistrustful, grounds his courage on despair

A nd utter dissolution, as the scope

Of all his aim. Milton's Paradise Lost.

An heroick poet is not tied to a bare representa-

tion of what is true, but that he might let himself loose to visionary objects, which may give him a

freer scope for imagination. Dryden.

Had t'ae whole s:upe of the author been answer-

able to his title, he would have only undertaken

to prove what every man is convinced of; but the

drift of the pamphlet is to stir up our compassion towards the rebels. Addison.

These theorems being admitted into opticks, there

would be scope enough of handling that science vo-

luminously, after a new manner ; not only by teach-

ing those things which tend to the perfection of vi-

sion, but also by determining mathematically all

kinds of phenomena of colours which could be" pro-

duced by refraction. Newton's Optu-ki.

SCOPOL1A, in botany, a genus of the oc-

tandria order, and gynandria class of plants ;

natural order eleventh, sannentacese : TAL. di-

phyllous : COR. quadrifid : the antherae coalesce

in two columns, one placed above the other. Ot'

this there is only one species, viz. S. composita.

SCORBUTICAL, adj. } Fr. scarbutiyue ;

SCORBTJ'TIC, £ Lat. scorbutuf. Dis-

SCOUBU'TICALLY, adv. j eased with scurvy :

the adverb corresponding.

Violent purging hurts scorbutic constitutions ;

lenitive substances relieve. Arbutluwt.

A person about forty, of a full and xcorbutical

body, having broke her skin, endeavoured the curing

of it ; but, observing the ulcer sanious, I proposed digestion. II i.

A woman of forty, Korbutictillti and hydropically

affected, having a sordid ulcer, put herself into my hand. Id.

SCORCE, n. s. Used by Spenser for dis-

course, or power of reason : in imitation perhaps

of the Italians.

Lively vigour rested in his mind,

And recompensed him with a better scarce ;

Weak body well is changed for mind's redoubled

force. Faerie Qurene.

SCORCH, v. a. & v. n. Saxon j-concne'o ;

Belg. schrocken, burnt. To burn superficially :

be dried up or thus burnt.

Power was given to scorch men with fire.

Revelations xvi. 8.

Fire scorcheth in frosty weather.

Bacon's Natural History.

The same that left thee by the cooling stream,

Safe from sun's heat, but scorched with beauty's beam.

Fairfax.

The swarthy Africans complain

To sec the chariot of the sun

So nigh their scorching country run. Roscommon.

You look with such contempt en pain,

That languishing you conquer more ;

So lightnings which in storms appear

Scorch more than when the skies are clear. Waller.

I rave,

And, like a giddy bird in dead of night,

Fly round the fire that scorches me to death.

Dryden.

The love was made in Autumn, and the hunting

followed properly when the heats of that scorching

country were declining. Id.

Scatter a little mungy straw or fern amongst your

seedlings, to prevent the roots from scorching, and to receive the moisture that falls.

Mortimer's Husbandry.

The same beams that shine, scorch too. South.

He, from whom the nations should receive
Justice and freedom, lives himself a slave ;
Tortured by cruel change of wild desires,
Lashed by mad rage, and scorched bv brutal fires.

Prior.

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SCORDISCJE, or SCORDISCI, an ancient people of Pannonia and Thrace, infamous for their barbarity during the reiens of the Roman emperors. They not only sacrificed their prisoners to their gods, but drank their blood. — Liv. Flor. Strabo.

SCORDTUM, or water germander, in botany, is a species of teucriura.

SCORE, n. s. & v. a. Tsl. skora ; Goth, skor, a mark or notch. A notch, or long incision ; a line drawn; account kept; reason; sake: to murk or set down in account.

Hast thou appointed where the sun should rise,

And with her purple light adorn the skies 1

Scored out the bounded sun's obliquer ways,

That he on all might spread his equal rays ?

Our forefathers had no other books but the score

and the tally : thou hast caused printing to be used.

Shakspeare. Henry VI.

He's worth no more :

They say he parted well, and paid his score.

Id. Macbeth.

That thou dost love her, strikes some scores away

From the great compt.

Id. All's Well That Ends Well.

He had been prentice to a brewer,

But left the trade ; as many more

Have lately done on the same score. Htuifbras.

Universal deluges have swepfall away except two

or three persons who begun the world again upon a

new score. Tillotton.

Your follies and debauches change

With such a whirl, the poets of your age

Are tired, and cannot score 'em on the stage ;

Unless each vice in short-hand they indite,

Kven as notcht prentices whole sermons write.

Dryd-'ii .

You act your kindness on Cydaria's score. Id.

A lion that had got a politick fit of sickness, wrote the fox word how glad he should be of his

company, upon the score of ancient friendship.

L'Ettrange.

Does not the air feed the flame? And does not

the flame warm and enlighten the air 1 Does not the earth quit scores with all the elements, in the fruits that issue from it? South.

If your terms are moderate, we'll never break off

upon that tcore. Collier on Pride.

Kings in Greece were disposed by their people

upon the score of their arbitrary proceedings.

Stcift.

Madam, I know when

Instead of five you scored me ten. Id.

SCORE, n. s. Sax. j-con. Twenty ; because

twenty, being a round number, was distinguished

on tallies by a long score.

How many score of miles may we well ride

*'Twixt hour and hour ? Shat*peare. Cymbeline.*

The fewer still you name, you wound the more ;

Bond is hut one, but Harpax is a score. Pope.

For some scores of lines there is a perfect absence of that spiiit of poesy. Watts.

O bid him never tie them mair

Wi' wicked strings o' hemp or hair !

But ca' them out to park or hill,

An' let them wander at their will ;

So may his flock increase, an' grow

To scores o' lambs, an' packs o' woo' ! Burns.

SCO'RIA, n. s. Lat. scoria. Dross ; recre-

ment.

By the fire they emit many drossy and scorious

parts. Browne.

The scoria, or vitrified part, whu-h most metals,

when heated or melted, do continually protrude to

the surface, and which, by covering the metals in

form of a thin glassy skin, causes these colours, is much denser tfian water. Newton's Opticks.

SCORIA, among metallurgists, is the dross of

metals in fusion ; or the glass often produced

by melting; metals and ores: when cold it is

brittle, and not dissoluble in water.

SCORIFICATION, the art of reducing a

body either entirely, or in part, into scoriae. It

is used by metallurgists, in order that any metal,

imprisoned in a solid body, may, on account of

its weight, descend and separate itself from it,

and finally, if that be required by itself either

wholly or in part, converted into scoriae. It is

often proper to make this scorification in a vessel that may absorb the scoriae, and retain only the

metallic part of the mass. See CUPEL and

ASSAYING.

SCORN, v. a., v. n., &-\ French escorne.r ;

SCORN'ER, n.s. [n.s. 9 Span, escannir ; Ital.

SCORN'H:L, adj. fscornare. To des-

SCORN'FULLY, adv. J pise ; slight ; revile ;

to scoff; disdain; neglect : the noun substantive,

adjective, and adverb, corresponding.

My friends tcorn me ; but mine eye poureth out

tears unto God. Jt>b xvi. 20.

Our soul is filled with the scorning of those that are at ease, and with the contempt of the proud.

Pstilm cxxiii. 4.

Surely he scorneth the scorner, but he giveth grace unto the lowly. Proverbs.

He that sitteth in the heavens shall laugh them to scorn ; the Lord shall have them in derision.

Psalms. Common Prayer.

If he do fully prove himself the honest shepherd

Menalcas his brother and heir, I know no reason

why you should think scorn of him. Sidney.

They are very active ; vigilant in their enterprises, present in perils, and great (corners of death.

Spenser on Ireland.

He said mine eyes were black, and my hair black ; And, now I am remembered, scorned at me.

Shakfpeare.

We were better parch in Afric's sun

Than in the pride and salt scorn of his eyes. Id.

He used us scornfully; he should have showed us

His marks of merit, wounds received for's country.

Id.

Diogenes was asked in scorn, What was the

matter that philosophers haunted rich men, and not

rich men philosophers 1 He answered, because the one knew what they wanted, the others did not. Bacon.

I've seen the morning's lovely ray

Hover o'er the new-born day

With rosy wings so richly bright,

As if he scorned to think of night. Crashaio.

This my long sufferance, and my day of grace,

They who neglect and scorn shall never taste ;

But hard be hardened, blind be blinded, more.

Milton.

Is it not a most horrid ingratitude thus to make a scorn of him that made us ? Tillntson.

Every sullen frown and bitter scorn

But fanned the fuel that loo fast did burn.

Dry den.

The enamoured deity

The scornful damsels shuns. Id.

The tcorner should consider, upon the sight of a

cripple, that it was only the distinguishing mercy of heaven that kept him from being one too.

L'Ettrange.

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SCORPIO.

For Xumidia's grown a sc.n-n amoriij the nations,

A breach of publick vows. Additon's Cato.

They, in the tcomer's or the judge's seat,

Dare to condemn the virtue which they hate. Prior.

With him I o'er the hills had run,

Scornful of winter's frost and summer's sun. Id.

The sacred rights of the Christian church are

scornfully trampled on in print, under an hypocritical pretence of maintaining them. Atterbury's Hermans.

Fame, that delights around the world to stray,

Scorns not to take our Argos in the way. Pope.

SCORP/ENA, in ichthyology, a genus of fishes, of the order thoracici The head is large and sharp ; the eyes are near each other ; there are teeth in the jaws, palate, and fauces ; and there are seven rays in the membrane of the gill. The species are three ; viz.

1. S. horrida, 2. S. porcus, and 3. S. scrofa. The largest of these is the S. scrofa, of which the following are the distinguishing characters : — Lower lip having two cirri ; head large ; eyes enormous, pupil black, iris yellow or reddish, with four brown rays, above which are three cirri ; mouth large ; cheeks and lower jaw cirrous ; jaws equal ; the tongue and palate armed with sharp, recurved teeth ; aperture of the gills large, the cover with two large and many smaller spines ; back brown ; fins bluish, the rays varied, yellow, and brown, and mostly forked. This fish inhabits the Atlantic, Mediterranean, and Northern Seas ; it grows from three to four yards long, and is a most voracious fish, preying not only on other fishes, but also on sea-birds ; body whitish-tawny, spotted with brown, and covered with large scales ; the flesh is eaten in

Italy. This fish is called by the people of Cornwall father-lasher.

SCORPˆNA is also the name of another fish caught in many parts of the Mediterranean. It seldom grows to more than a pound weight. Its body is long, but not flatted, and is moderately thick. Its head is extremely large, and is armed with prickles, and it grows gradually less from thence to the tail. The prickles about the head are accounted venomous, and the fishermen usually cut them off as soon as the fish is caught. Its tail is rounded at the end. The belly and belly-tins are reddish.

SCORPIO, in entomology, a genus of insects belonging to the order of aptera. It has eight feet, besides two frontal claws ; the eyes are eight in number, three on each side of the thorax, and two on the back. It has two claw-shaped palpi, a long jointed tail, with a pointed weapon at the extremity ; it has likewise two combs situated between the breast and abdomen. See ENTOMOLOGY. There are several species, all natives of warm climates. Of all the classes of noxious insects, the scorpion is the most terrible, whose size among the insects is enormous, and

its sting often fatal. In several parts of the

continent of Europe it is but too well known,

though it seldow grows above four inches long ;

but in the warm tropical climates it is seen a

foot in length, and in every respect as large as a lobster, which it somewhat resembles in shape.

The scorpion's head seems, as it were, jointed to

tlie breast, in the middle of which are seen two

eyes: and a little more forward two eyes more,

placed in the fore part of the bead ; these eyes

are so small that they are scarcely perceivable :

and it is probable the animal has but little oc-

casion for seeing. The mouth is furnished with

two jaws ; the undermost is divided into two,

and the parts notched into each other, with which

it breaks its food, and thrusts it into its mouth; these the scorpion can at pleasure pull back into

its mouth, so that no part of them can be seen.

On each side of the head are two arms, each

composed of four joints; the last of which is

large, -,vith strong muscles, and formed in the

manner of a lobster's claw. Below the breast

are eight legs, each divided into six joints ; the two hindmost of which are each provided with

two crooked claws, and here and there covered

with hair. The belly is divided into seven little rings ; from the lowest of

which is continued a

tail composed of six joints, which are bristly,

and formed like little globes, the last being armed with a crooked sting. This is that fatal instru-

ment which renders this insect so formidable ; it

is long, pointed, hard, and hollow ; it is pierced

near the base by two small holes, through which,

when the animal stings, it ejects a drop of poi-

son, which is white and caustic. The reservoir

in which this poison is formpcl and kept is a

small bladder near the tail. If this bladder be

greatly pressed the venoi.. will be seen issuing

out through the two holes above mentioned ; so

that it appears, that when the animal stings, the

bladder is pressed, and the venom issues through

the two apertures into the wound. Galen ob-

serves that a person who had not witnessed the

fact would not suppose that so small an injury

as the sting of a scorpion, or the bite of a poi-‘

sonous spider, could produce the violent effects

which they do in the whole body. He says

the aculeus or sting of a scorpion ends in the

minutest point ; and has no perforation through

which any poison can pass into the wound.

Yet, he says, we must suppose the venom to

be some spiritual substance or moisture, in

which a great power is concentrated in a small

compass. ‘ Before I had an opportunity,’ says

Dr. Moseley, ‘of examining this subject, my

respect for the opinion of Galen made me doubt

the accuracy of Leuwenhoek, Redi, Mead, and

others, who assert that there is an aperture near

the cuspis of a scorpion’s sting ; and that through this aperture a liquid poison is injected when a

wound is inflicted. Repeated experiments, with

the best glasses, have never enabled me to dis-

cover any foramen or opening whatever.’ There

are few animals more formidable, or more truly

mischievous, than the scorpion. As it takes re-

fuge in a small place, and is generally found

sheltering in houses, it must frequently stin>,’

those among whom it resides. In some of the

towns of Italy, and in France, in the ci-devant

province of Languedoc, it is a terrible enemy ;

but its malignity in Europe is trifling, when

compared to what the natives of Africa and th-

east are known to experience. In Batavia,

where they grow twelve inches long, there is no

removing any piece of furniture without the

utmost danger of being stung by them. Bostnan

assures us that along the Gold Coast they are

often found larger than a lobster ; and thjit thuit SCORPIO.

sting is inevitably fatal. In Europe, however,

they are by no means so large, so venomous, or

so numerous. The general size of this animal

does not exceed two or three inches. Mauper-

tuis, who made several experiments on the scor-

pion of Languedoc, found it by no means so

invariably dangerous as had till then been repre-

sented. He provoked one of them to sting a

dog in three places of the belly, where the ani-

mal was without hair. In about an hour after

the poor animal appeared greatly swollen, and

became very sick ; he then cast up whatever he

had in his bowels, and for about three hours con-

tinued vomiting a whitish liquid. The belly

was always greatly swollen when the animal be-

gan to vomit ; but this operation always seemed

to abate the swelling, which alternately swelled,

and was thus emptied for three hours successively.

The poor animal after this fell into convulsions,

bit the ground, dragged himself along upon his

fore feet, and at last died, five hours after being bitten. He was not partially swollen round the

place which was bitten, as is usual after the sting of a wasp or a bee ; but his whole body was inflated, and there only appeared a red spot on the places where he had been stung. Some days after, however, the same experiment was tried upon another dog, and even with more aggravated cruelty, yet the dog seemed in no way affected by the wounds ; but, howling a little when he received them, continued alert and well after them ; and soon after was set at liberty without showing the smallest symptoms of pain.*

So far was this poor creature from being terrified •at the experiment, that he left his own master's house to come to that of the philosopher, where he had received more plentiful entertainment.

The same experiment was tried by fresh scorpions upon seven other dogs, and upon three hens ; but no deadly symptom ensued. Hence it appears, that many cirsumstances, which are utterly unknown, must contribute to give efficacy to the scorpion's venom. In the trials made by Maupertuis he employed scorpions of both sexes, newly caught and seemingly vigorous and active.

These experiments may serve to show that many of the boasted antidotes which are given for the

cure of the scorpion's sting, owe their success

rather to accident than their own efficacy. They

only happened to cure when their sting was no

way dangerous ; but in cases of actual malignity

they might probably be utterly unserviceable.

The scorpion of the tropical climates, being much

larger than the former, is probably much more

venomous. Helbigius, however, who resided

for many years in the east, assures us that he

was often stung by the scorpion, and never re-

ceived any material injury from the wound ; a

painful tumor generally ensued, but he always

cured it by rubbing the part with a piece of iron or stone, as he had seen the Indians practise be-

fore him, until the flesh became insensible.

Seba, Moore, and Bosman, however, give a very

different account of the scorpion's malignity ;

and assert that, unless speedily relieved, the

wound becomes fatal. No animal in the creation

seems endued with such an irascible nature;

they have often been seen, when taken and put

inio a place of security, to exert all their rage

against the sides of the glass vessel that contained them. They will attempt to sting a stick when

put near them, and attack a mouse or a frog,

while those animals are far from offering any in-

jury. Maupertuis put three scorpions and a

mouse into the same vessel together, and they

soon stung the little animal in different places.

The mouse, thus assaulted, stood for some time

upon the defensive, and at last killed them all,

one after another. He tried this experiment, in

order to see whether the mouse, after it had

killed, would eat the scorpions ; but the little

quadruped seemed satisfied with the victory, and

even survived the severity of the wounds it had

received. Wolkemar tried the courage of the

scorpion against the tarantula, and enclosed

several of both kinds in glass vessels for that

purpose. The spider at first used all its efforts

to entangle the scorpion in its web, which it im-

mediately began spinning ; but the scorpion

rescued itself from the danger, by stinging its

adversary to death ; it soon after cut off, with its claws, all the legs of the spider, and then sucked all the internal parts at its leisure. The fierce

spirit of this animal is equally dangerous to its

own species, for scorpions are the cruellest ene-

mies to each other. Maupertuis put about 100

of them together in the same glass ; and they

scarcely came into contact before they began to

exert all their rage in mutual destruction ; there was nothing to be seen but one universal carnage, without any distinction of age or sex ; so that in a few days there remained only fourteen, which had killed and devoured all the rest.

He next enclosed a female scorpion, big with young, in a glass vessel, and she was seen to devour them as fast as they were excluded ; there was but one only of the number that escaped the general destruction, by taking refuge on the back of its parent ; and this soon after revenged the cause of its brethren, by killing the old one in its turn. Such is the terrible and unrelenting nature of this insect. It is even asserted that, when driven to an extremity, the scorpion will destroy itself. The following experiment was ineffectually tried by Maupertuis : — ‘ But,’ says Mr. Goldsmith, ‘ I am so well assured of it by many eye-witnesses, who have seen it both in Italy and America, that I have no doubt remaining of its veracity. A scorpion newly caught is placed in the midst of a circle of burning charcoal, and thus an egress prevented on every side ; the scorpion, as I am assured, runs for about a

minute round the circle, in hopes of escaping; but, finding that impossible, it stings itself on th«

back of the head, and in this manner the un-

daunted suicide instantly expires/ This, how-

ever, wants further confirmation. The male and

female of this insect are very easily distinguish-

able ; the male being smaller and less hairy. The

female brings forth her young alive, and perfect

in their kind. Redi, having bought a quantity

of scorpions, selected their females, which by

their size and roughness, were easily distinguish-

able from the rest, and putting them in separate

glass vessels, he kept them for some days without

food. In about five days one of them brought

forth about thirty-eight young ones, well shaped,

and of a milk white color, which changed every

day more and more into a dark rusty hue. Ano-

ther female, in a different vessel, brought forth

twenty-seven of the same color, and the day

following the young ones seemed all fixed to the

back and belly of the female. For near a fort-

night all these continued alive and well, but

afterwards some of them died daily, until, in about a month, they all died except two. Were it worth the trouble, these animals might be kept living as long as curiosity should think proper. Their chief food is worms and insects ; and upon a proper supply of these their lives might be lengthened to their natural extent. How long that may be we are not told ; but if we may argue from analogy, it cannot be less than seven or eight years ; and perhaps, in the larger kind double that duration. As they have somewhat the form of the lobster, so they resemble that animal in casting their shell, or more properly their skin; since it is softer by far than the covering of the lobster, and set with hairs, which grow from it in great abundance, particularly at the joinings. The young lie in the womb of the parent, each covered up in its own membrane, to the number of forty or fifty, and united to each other by an oblong thread, so as to exhibit altogether the form of a chaplet. It seems probable that captivity produces that unnatural disposition in the scorpion which induces it to destroy its young ; since, at liberty, it is found to protect them with unceasing assiduity.

SCORPIO, the scorpion, in astronomy, the eighth sign of the zodiac, denoted by the character m. See ASTRONOMY.

SCOR'PION, n. s. French scorpion ; Latin scorpio. A reptile resembling a small lobster, with a very venomous sting.

I\Iy father hath chastised you with whips, but I will chastise you with scorpions. 1 Kings xii. 11.

Well, forewarning winds
Did seem to say, seek not a scorpion's nest.
Shakspeare. Henry VI.

Full of icorpimu is my mind, dear wife. Id. Macbeth.

The squeezing crab and stinging scorpion shine.
Dryden.

SCORPION. See SCORPIO.

SCORPION GRASS is a species of scorpiurus.

SCORPIURUS, the caterpillar, in botany, a genus of the decandria order, and diadelphia class of plants, natural order thirty-second, papilionaceae ; legume contracted by incisions on the inside betwixt every two seeds revoluted round. There are four species, the most remarkable of which is —

S. vermiculata, a native of Italy and Spain.

It is an annual plant, with trailing herbaceous

stalks, which at each joint have a spatular-shaped

leaf with a long foot-stalk. From the wings of

the leaves come out the foot-stalks of the flowers, which sustain at the top one yellow butterfly

flower, succeeded by a thick twisted pod, hav-

ing the size and appearance of a larger cater-

pillar, from whence it had this title. This has

long been preserved in the gardens of this coun-

try, more on account of its odd shape than for

any great beauty. It is propagated by sowing

the seeds on a bed of light earth ; and, when the plants come up, they must be kept free from

weeds and thinned, so that there nrny be a foot

distance between thorn.

SCORZA (Senibald), an eminent Italian pain-

ter and engraver, born at Vollagio, in 1590. He

engraved after the designs of the celebrated Albert

Durer, with great accuracy. As a painter he

excelled in representing animals and flowers.

He died in 1631, aged forty-one.

SCORZONERA, viper-grass, in botany, a

genus of the polygamia ajqualis order, and syn-

genesia class of plants : natural order forty-

ninth, composite ; receptacle naked ; pappus

like a plum : CAL. imbricated, with scales membranaceous on their margins. The most remarkable species is the —

S. Hispanica, the Spanish, or common viper-grass. It is cultivated in the gardens of this country, both for culinary and medicinal purposes. The root is carrot-shaped, about the thickness of a finger, covered with a dark brown skin, is white within, and has a milky juice. The stalk rises three feet high, is smooth, branching at the top, and garnished with a few narrow leaves, whose base half embraces the stalk. The flowers are of a bright yellow color, and terminate the stalks in scaly empalements composed of many narrow tongued-shaped hermaphrodite florets, lying over each other like the scales of fish, and are of a bright yellow color. After these are decayed, the germen, which sits in the common empalements, turns to oblong cornered seeds, having a roundish ball of feathered down at the top. This plant is propagated by seeds ; and must be carefully thinned and kept free from weeds, otherwise the plants will be weak. The roots of the scorzonera were for-

merly much celebrated for their alexipharmic , virtues, and for throwing out the small-pox ; but have now almost entirely lost their character; however, as they abound with an acrid juice, they may sometimes be of use for strengthening the viscera, and promoting the fluid secretions.

SCOT (Michael), of Balwirie, a learned Scottish author of the thirteenth century. He made the tour of France and Germany ; and was received with distinction at the court of the emperor Frederic II. He was skilled in languages ; and translated into Latin, from the Arabic, the history of animals, by the celebrated physician Avicenna. He published the whole of the works of Aristotle with notes. He wrote a work on The Secrets of Nature ; also a tract On the Nature of the Sun and Moon. He there speaks of the grand operation of the alchymists, and is exceedingly solicitous about the projected powder, or the philosopher's stone. He likewise published Mensa Philosophica, a treatise on astrology and chiromancy. He was much admired in his day, and was even suspected of

magic; and had Roger Bacon and Cornelius

Agrippa for his panegyrists.

SCOT (Reginald), a writer in the sixteenth

century. He studied at Hart Hall, in tlio Irii-

versity of Oxford ; after which he retired to

Smeethe, where he lived a studious life, and died

in 1599. He published The perfect Platform of

a Hop-gurden, and The Discovery of Witch-

craft; in which he showed that the relations

concerning magicians and witches are chimerical.

This work was not only censured by kiirˆ.hmirs

I. in his Dsrmonologv, but by several eminent

divines; and all the copies of it that could be

found were burnt.

SCOT, n. s. Fr. scot. Shot; payment;

scot and lot, parish payments.

‘Twos time to counterfeit, or that hot termagant

Scot had paid me scot and lot too.

Sluikspeare. Henry IV.

The chief point that has puzzled the freeholders,

as well as those that pay scut and lot, for about these six months, is, Whether they would rather be go-

verned by a prince that is obliged by law to be

good, or by one who, if he pleases, may plunder or imprison! Addison.

Protogenes, historians note,

Lived there a burgess, scot and lot. Prior.

SCOT AND LOT is a customary contribution

laid upon all subjects according to their abilities.

Whoever were assessed in any sum, though not

in equal proportions, were said to pay scot and

lot.

SCOTAL, or SCOTALE, is where an officer of

a forest keeps an ale-house within the forest, by

color of his office, making people come to his

house, and there spend their money for fear of

his displeasure. We find it mentioned in the

charter of the forest, cap. 8. ‘ Nullus forresta-

rius facial Scotallas, vel garbas colligat, vel ali-

quam collectam faciat,’ &c. The word is com-

pounded of scot and ale, and by transposition

of the words is otherwise called aleshot.

SCOTCH, v. a. Qu. Lat. quota). To cut

with shallow incision.

He was too hard for him ; directly before Corioli, he scoicht and notcht him like a carbonado.

Shahspeare. Coriolanvs.

We’ll heat ‘em into Bench holes ; I have yet

room for six scotches more.

Id. Antony and Cleopatra.

Give him four scotches with a knife, and then put into his belly, and these scotches, sweet herbs.

Walton's Angler.

Children being indifferent to any thing they can do, dancing and scotch hoppers would be the same thing to them. Locke.

SCOT I (Latin), the Scots, the ancient inhabitants of Scotland, mentioned as distinct from the Picts, so early as by Claudian de Hon. 3. Cons. v.

SCOTIA, NOVA, or NEW SCOTLAND, a name that has been given to those British settlements in North America, situated between 43° and 46° lat. N. and between 60° and 67° long. W., bounded by the St. Laurence on the north, by the gulf of St. Laurence and the Atlantic Ocean on the east, by the same ocean on the south., and by Canada and New England on the west. In 1784 this province was divided into two governments.

See our article NORTH AMERICA, chap. III. The trade between Great Britain and these provinces consists in the export of linen, woollens, and

fishing gear chiefly, for £30,000 a- year, and the

import of lumber and fish for £40,000.

The Isle of Sable, twenty-five leagues distant

from Cape Canso, the north-east point of Nova

Scotia, is composed entirely of sand-hills, in the

shape of sugar-loaves, 140 feet high, and white

as milk with white transparent stones : it is of a semicircular shape, being ten leagues in circxiit,

hut very narrow. On the north, or concave

side, is a shallow lake, five leagues in circum-

ivKT.ce, ii'id comnr'iiio :'irv.; with the sea. It

has no port, but has some ponds of fresh water,

and produces juniper, blue-berry bushes, grass,

and vetches. Many vessels have been wrecked

on this island, and the people have perished of

hunger. In order to render it less dangerous,

the government of Halifax, in 1809, sent a party

of people to settle on it, in order to show fires during bad nights, and to afford assistance to

those who may be shipwrecked on it.

The peninsula of Nova Scotia was first settled

by the French in 1604, who gave it the name of

Acadia. Their original establishment was at

Port Francois, on the west coast, and the first

colonists occupied themselves solely in trading

with the Indians for furs, or procuring them by the chase themselves. The vicinity of the British colonies of New England, however, produced here, as well as at Canada, a destructive concurrence in the Indian trade ; and on the part of the Acadians, similar attempts to irritate the Indians against the English, while the latter retorted on the French settlements, whenever the disputes between the two nations in Europe permitted them to commence open hostilities. After being taken by the English, and restored several times, Acadia was finally ceded to Great Britain by the peace of Utrecht. Very few English, however, settled on it, and, with the exception of change of name to Nova Scotia, no alteration was made in the government ; the French colonists being maintained in possession of their laws and religion, and were besides permitted to remain neuter in any wars between France and England. In 1746 the French attempting to regain possession of the province, and the colonists breaking their neutrality, the British government determined to colonise it efficiently, and at the peace of Aix-la-Chapelle (1748) the

disbanded officers and soldiers were encouraged to emigrate thither by grants of land according to their respective ranks. These encouragements induced 3750 persons to embark for the colony in 1749, who founded the city of Halifax. The French colonists, fearing a persecution from the new government and colonists, on account of their religion, and being also encouraged by the Canadian government, generally retired from Nova Scotia to that province, while the English, equally anxious to get rid of them, removed the remainder to the other English colonies. In 1769 the population of the colony had increased to 26,000 persons, by emigrations from England and Germany ; and in the same year its exports amounted to £30,000. The American war still farther increased the population, by the emigration of loyalists from the insurgent colonies, and gave an extraordinary impulse to its commerce and cultivation, by the demands of the British fleets and armies.

SCOTISTS, a sect of school divines and philosophers, thus called from their founder J. Duns Scotus, a cordelier, who maintained the immacu-

late conception of the Virgin, orthatshewasborn without original sin, in opposition toThomasAquinus and the Thomists. TheScotistsandThomists disagreed about the nature of the divine co-operation with the human will, the measure of divine grace that is necessary to salvation, and other abstruse and minute question?, which it is needless to enumerate.

SCOTLAND, an ancient, and long an independent kingdom of Great Britain, is situated, exclusive of its islands, between 54° 37′ and 58° 42′ N. lat., and between 1° 47′ and 6° 7′ W. long, from London. It contains thirty-three counties, and is bounded south by the Solway frith, and the rivers Esk, Lark, Liddel, and Tweed ; on the east and north by the Northern Ocean ; and on the west by the waters of the Atlantic. Its greatest length due north and south is 275 miles, and its greatest breadth 147 miles ; but its breadth is extremely various, and in one place does not exeeed thirty-six miles. The superficial area of the mainland is said to

amount to 25,520 square miles, 494 square miles of fresh water lakes, and 5000 square miles of salt-water lochs, or lakes. The islands, comprising the Hebrides on the west, and the Orkneys and Zetland isles towards the north, comprehend an area of 4224 square miles.

I. HISTORY OF SCOTLAND UNTIL THE WITH-DRAWMENT OF THE ROMANS.' — It is difficult tO give any satisfactory account of the origin of the appellation of Scots, from which the country has derived its name. The conjectures of the most eminent antiquaries serve rather to perplex than to clear up the difficulty. All that we know with certainty concerning this appellation is, that it was at first a term of reproach, framed by enemies, rather than assumed by the nation.

The Highlanders, the descendants of the ancient Scots, are absolutely strangers to the name, and have been always so. All those who speak the Gaelic language call themselves Albanich or Gael, and their country Alba or Gaeldochd ; whence Caledonia, the most ancient name of the country. The Picts, who possessed originally the northern and eastern, and in a later period also the more southern, division of North Bri-

tain, were at first more powerful than the Cale-

donians of the west. It is therefore probable

that the Picts were ready to traduce and ridicule

their weaker neighbours of Argyle. These two

nations spoke the same language, the Gaelic.

In that language Scot, or Scode, signifies a corner or small division of a country. Accordingly,

a corner of North Britain is the very name which

Giraldus Cambrensis gives the little kingdom of

Argyle, which the six sons of Muredus king of

Ulster were said, according to his information, to

have erected in Scotland. Scot in Gaelic is

much the same with little or contemptible in

English. Others observe, that in the same lan-

guage the word Scuit signifies a wanderer, and

suppose that this may have been the origin of

the narr.e of Scot ; a conjecture which they

think is countenanced by a passage in Amianus

.Marcellinus (1. xxvii.), who characterises the

men by the epithet of per diversa vagantes, i. e.

roaming. On the whole it appears, that for

some one of the reasons couched under the above

disparaging epithets, their sneering neighbours,

the Picts or the Britons, may have given the

appellation of Scots to the ancestors of the Scot-

tish nation. At what time the inhabitants of the west of Scotland became distinguished by this name is uncertain. Porphyrius the philosopher is the first who mentions them, about A. D. 267; and towards the middle of the fourth century we find them mentioned with other British nations, by Ammianus Marcellinus, in the passage above referred to. The territory of the ancient Scots, before the annexation of Pictavia, comprehended all that side of Caledonia, which lies on the north and western ocean, from the frith of Clyde to the Orkneys. Towards the east their dominions were divided from the Pictish territories by the high mountains which run from Dumbarton to the frith of Tain. In process of time, the Scots, under the reign of Kenneth, the son of Alpin, became so powerful as to subdue their neighbours the Picts, and gave their own denomination to all Caledonia, Pictavia, and Valentia ; all which are now comprehended under the general name of Scotland.

The origin of the Scots has been warmly disputed by many antiquaries of note ; particularly by Macpherson and Whitaker. The first con-

tends that they are of Caledonian, the latter that they are of Irish extraction. The Scots seem to have been originally descended from Britons of the. south, or from Caledonians, who, being pressed forward by new colonies from Gaul, till they came to the western shore of Britain, passed over into Ireland, probably about 100 years before the Christian era. About A. D. 320 they returned atjain into Britain ; or at least a larue colony of them, under the conduct of Fergus, and settled on the western coasts of Caledonia, from whence they had formerly migrated. As early as the year 340, we find them associated with the Picts in their expeditions to the Roman province ; and, for ninety or 100 years after, their ravages are frequently mentioned by the Roman and British writers. The historians of Scotland, like those of all other nations, assume too great an antiquity for their countrymen. By them the reign of Fergus, the first Scottish monarch, is placed in A. A. C. 330. He was the son of Farquhard, an Irish prince ; and was called into Scotland by the Caledonians, to assist them against the southern Britons, with whom they were then at war. Having landed on one of the Ebudae or

western isles, he had a conference with the Caledonians, whose language and manners he found to be the same with those of his countrymen. Having then landed in Scotland, and taken the field at the head of his new allies, he engaged the Britons under their king Coilus. Victory declared in favor of the Scots ; Coilus was defeated and killed : and from him the province of Kyle first received its name. After this Fergus was declared king of the Scots, with the solemnity of an oath. But having been recalled to Ireland, to quiet some commotions there, he was drowned by a sudden tempest on his return, at a place in Ireland called from him Carrick-Fergus, i. e. Fergus's Rock, in the year 305 B. C.

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SCOTLAND.

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Fergus I. was succeeded by his brother Feritharis, to the prejudice of his two sons, Ferlegus and Mainus. This was in conformity with a law, by which it was ordained that, whilst the children of their kings were infants, one of their

relations, who was reckoned the most fit for the government, should be raised to the throne, but that after his death the sovereignty should return to the sons of the former king. But Ferlegus, impatient for the crown, demanded it from his uncle. The dispute being referred to an assembly of the states, Feritharis was confirmed on the throne, and Ferlegus would have been condemned for sedition had not his uncle interposed. However, he was imprisoned ; but, having made his escape, he fled first to the Picts and then to the Britons, to excite them against Feritharis.

With both he failed in accomplishing his purpose ; but, his uncle being afterwards stabbed in his bed, the suspicion fell upon Ferlegus, who was thereupon set aside from the succession, and died in obscurity, the throne being conferred upon his brother Mainus. Mainus succeeded his uncle A. A. C. 291, and is celebrated for a peaceable and just reign of twenty-nine years ; and a treaty with Crinus king of the Picts. He died in 262, and was succeeded by his son Dornadil, who was a great hunter, and" instituted the laws of hunting in this country. He died in 233 B. C., and was succeeded by his brother

Nothat ; who in the twentieth year of his reign,

B.C. 213, was killed in a battle with Reuther

his nephew ; upon which the latter was immedi-

ately invested with the sovereignty. A bloody

war ensued with the Picts, in which both parties

were reduced to the last extremities, and glad to

conclude a peace, which continued many years.

Reuther died in 187 B. C., the 26th of his reign, and was succeeded by his brother Reutha ; who

is said to have encouraged trade and manufac-

tures, and to have received an embassy of learned

men from Ptolemy king of Egypt. He died

171 B.C., and left the throne to his son Thereus,

who, proving a tyrant, was banished, and died

at York in 161. His brother Josina succeeded,

and cultivated the arts of peace ; studying me-

dicine and botany, Sec. He reigned twenty-four

years,'and died 137 B.C., when his son Finnan

succeeded. He is celebrated as a wise monarch,

and in his reign we find the first beginnings of

the Scottish parliament; as he enacted that kings

should do nothing without the consent of their

grand council.

Finnan died in his thirtieth year, 107 B. C.,

and was succeeded by his son Durstus, who,

proving a cruel tyrant, was killed in battle by his nobles, in the ninth year of his reign. He was succeeded by his brother Even I., who was a wise monarch ; and successfully assisted the Picts against the Britons. Even died in his nineteenth year B. C. 79, when the crown was usurped by his bastard son Gillus, who murdered the two sons of Durstus, but was killed in battle two years after. In 77 B.C. Even II., the nephew of Finnan, succeeded Gillus, and built the towns of Innerlochy and Inverness. He overcame Belus king of the Orkneys, who had invaded Scotland, and was succeeded by his son Eder, in 30 B. C., in whose time Julius Caˆar invaded the southern parts of this island. Eder is said to have assisted the Britons against the common enemy. lie was succeeded, after a reign of forty-eight years, by his son Even III., in the year 12 B.C., who is represented as a monster of cruelty apd lust. Nor was he less remarkable for his rapaciousness, which at last occasioned a rebellion : he was dethroned, im- . prisoned, and put to death in his seventh year, 4 B. C. Even was succeeded by Metellanus,

nephew of Ederus, a wise and good king, who reigned prosperously thirty-nine years in peace, and was succeeded by his sister's son, the famous Caractacus, A. D. 35, who is celebrated by Boece, Fordun, Monipenny, Buchanan, and all our other ancient historians, as one of the greatest of the Scottish monarchs. See CARAC-TACUS. The Scottish historians insist that his fame for wisdom, courage, and riches (accumu-lated during the peaceable reign of his uncle), being very great, he was invited by the Britons to assist them in expelling the Romans, and that upon his arrival at York, to which the Britons had retired after a defeat, he was elected general of the combined troops of the Britons, Scots, and Picts; who, though equally brave and numerous, amounting to 60,000 men, were de-feated by the Romans in three different battles ; in the last of whifh, Caractacus's queen, daugh-ter, and brother, were taken prisoners by Vespa-sian ; and soon after he himself was betrayed to the Romans by his step-mother Cai tismandua, and carried prisoner to Rome. Being afterwards restored, with his relations, they add that Caracta-

cus reigned in peace till A. D. 55, when he died. Caractacus was succeeded by his brother Corbred I. who punished the treachery of Cartismandua by burying her alive. Corbred's sister, the famous Woada, or Voadicea, being married to the king of the Britons, and shamefully used by the Romans, being herself whipped, and her daughters violated, Corbred raised an army of Scots and Picts, expelled the Romans out of the north of England, and took Berwick. About this time the Scots were joined by a numerous tribe of the Murrays from Moravia, under their general Roderic, who assisted them in their wars, receiving the county of Murray in reward of their bravery. After this Woada raised an army of 5000 females, it is said, to revenge the cause of her sex, who, joining the combined forces, defeated the Romans, and killed 7000 of them. But Suetonius coming soon after, with a fresh body of 10,000 troops, the combined army was defeated, and Woada killed herself. Corhred returned to Scotland, where he died in peace in the eighteenth year of his reign, A. 1). 72 ; and was succeeded by Dardanus, nephew of Metel-

lanus ; who, proving a cruel tyrant, was beheaded by his nobles A. D. 76. He was succeeded by Corbred II., sirnamed Galdus, and called by the Roman historians Galgacus, in whose reign the invasion by Agricola happened. Agricola having completed the conquest of the southern parts, and in a great measure civilised the inhabitants, formed a like plan with regard to Scotland. At this time the Caledonians were rendered more formidable than ever they had been;

by the accession of great numbers from the south ; for, though the Romans had civilised the greatest part, many of those savage warriors, disdaining the pleasures of a peaceable life, retired to the northward, where the martial disposition of the Scots better suited their inclination. The utmost efforts of valor, however, were not proof against the discipline of the Roman troops and the experience of their commander. In the third year Agricola had penetrated as far as the river Tay; but the particulars of his progress are not recorded. In the fourth he built a line

of forts between the friths of Forth and Clyde, to exclude the Caledonians from the south parts of the island ; and the year after he subdued those parts which lay to the south and west of his forts, viz. the counties of Galloway, Cantyre, and Argyle, which were then inhabited by a people called Cangi, who, as Tacitus expressly informs us, had never before been known to the Romans. Agricola still pursued the same prudent measures by which he had already secured the possession of such a large tract of country, advancing slowly, and building forts as he advanced, to keep the people in obedience. The Scots, though commanded by their king, who is said to have been well acquainted with the manner of fighting and discipline of the Romans, were yet obliged to retreat ; but at last, finding that the enemy made such progress as endangered the subjugation of the whole country, he resolved to cut off their communication with the southern parts,"and likewise to prevent all possibility of a retreat by sea. Agricola then divided his troops into three bodies, having a communication with each other.

Upon this, Galgacus resolved to attack the weak-
i -t of the three, which consisted only of the
ninth legion, and lay at that time at a place
called Lochore, about two miles from Loch-
Leven in Fife. The attack was made in the
night : and, as the Romans were both unpre-
pared and inferior in number, the Scots pene-
trated into the heart of their camp, .and were
making a great slaughter, when Agricola de-
tached some light armed troops to their assist-
ance ; by whom the Caledonians in their turn
were routed, and forced to fly to the marshes
and inaccessible places, where the enemy could
not follow them. This engagement has been
magnified by the Roman historians into a vic-
tory, though it can scarcely be admitted from the
testimonies of other historians. The Romans,
however, certainly advanced very considerably,
and the Scots as constantly retreated, till they
came to the foot of the Grampian mountains,
where the Caledonians resolvea to make their
last stand. In the eighth year of the war, Agri-
cola advanced to the foot of the mountains,
where he found the enemy ready to receive him.

Tacitus has recorded a speech of Galgacus, which some think he fabricated for him, in which he sets forth the aspiring disposition of the Romans, and encourages his countrymen to defend themselves vigorously, as knowing that every thing valuable was at stake. A desperate engagement ensued. In the beginning the Britons had the advantage by the dexterous management of their bucklers; but Agricola having ordered three Tungrian and two fiatavian cohorts, armed with short swords, and embossed bucklers terminating in a point, to attack the Scots, who were armed with long swords, the latter soon found these weapons useless in a close encounter ; and as their bucklers only covered a small part of their bodies, they were easily cut in pieces by their adversaries. The most forward of their cavalry and charioteers fell back upon their infantry, and disordered the centre ; but, the Britons endeavouring to out-flank their enemies, the Roman general opposed them with his horse ; and the Caledonians were at last routed with great slaughter, and forced to fly into the woods, whither the Romans pursued

with so little caution that numbers of tliem

were cut off. Agricola, however, having ordered

his troops to proceed more regularly, prevented

“the Scots from attacking and cutting off his men

in separate parties, as they had expected ; so

that this victory proved the greatest stroke to the Caledonians that they had hitherto received.

This battle is supposed by some to have been

fought in Strathern, half a mile south from the

kirk of Comrie ; but others imagine the place

to have been near Fortingal Camp, a place

somewhat farther on the other side of the Tay

Great as this victory was it seems not to have

been productive of any solid or lasting advant-

age to the Romans; as Agricola, instead of

putting an end to the war by the immediate con-

quest of all Caledonia, retreated into the coun-

try of the Foresti, commonly supposed t

Forfarshire, though others imagine it to have

been the county of Fife. Here he receive-!

hostages from part of the Caledonians; and

ordered part of his fleet to sail round Britain,

that they might discover whether it was an

island or a continent. The Romans no sooner

had left that part of the country than the Cale-

donians demolished all the forts they had raised : and, Agricola being soon after recalled by I)o-mitian, the further progress of the Roman arms was stopped, Galgacus proving superior to any of the successors of that general. Galgacus or Corbredus reigned peaceably after this, till A. D. 110, when he died, in the thirty-fifth year of his reign. From the time of Agricola to that of Adrian, we know little of the affairs of Scotland, except-ing that Lugtacus succeeded his father in 110, and proving a cruel tyrant was killed by his no-bles, A. D. 113. He was succeeded by his cousin Mogbllus, in whose reiˆn Adrian came into Britain. During this internal the Scots must have entirely driven the Romans out of their country, 'and reconquered all that tract which lay between Agricola's chain of forts and Carlisle on the west, and Newcastle of Tinmouth Bar on the east, which Adrian, on visiting Bri-tain, fixed as the north boundary of the Roman dominions. Here he built a wall between the mouth of the Tine and the Solway Frith, to shut out the barbarians ; which did not answer the purpose, as it was only built of turf, and guard-

ed by no more than 18,000 men. See ADRIAN'S WALL. On the departure of Adrian, he left Julius Severus as his lieutenant ; but he carrifl his arms to the north of Adrian'? wall: and this

long interval of peace gave so much security to Mogallus that he degenerated into a tyrant, and was. murdered by his nobles. The only instance of his tyranny which is recorded, however, is a law by which it was enacted that the estates of such as were condemned should be forfeited to his exchequer, without any part thereof being allotted to their wives and children ; an act which subsists almost in its full force to this day in Great Britain and the best regulated European governments. Mogallus was succeeded by his son Conarus, A. D. 149, who, following his father's bad example, was deposed and died in jail, A. D. 163. His cousin Ethod, or Ethodius I., succeeded him, who proved a good monarch, and was successful in several battles against the Romans, under Victorinus, Trebellus, and Pertinax ; yet was treacherously murdered by a harper, in his thirty-third year, A. D. 195. The

harper was tortured to death. Satrael, Ethod's brother, succeeded him, but becoming tyrannical he was killed by a courtier, in his fourth year, A. D. 199; and was succeeded by his brother Donald I. In the reign of Antoninus Pius the proprietor Lollius Urbius drove the Scots far to the northward, and repaired the chain of forts built by Agricola, which lay between the Carron on the Frith of Forth and Dunglass on the Clyde. These were joined together by turf walls, and ormed a much better defence than the wall of Adrian. However, after Antoninus's death, Cornmodus having recalled Calpurnius-Agricola, an ;i')lu commander, who kept the Scots in awe, a more dangerous war broke out than had ever been experienced by the Romans in that quarter. The Scots, having passed the wall, put all the Romans they could meet with to the sword : but they were soon repulsed by Ulpius Marcellus, a general of consummate abilities, whom Commodus sent into the islands. In a short time the tyrant also recalled this able commander. After his departure, the Roman discipline in Britain suffered a total relaxation ; the

soldiery grew mutinous, and great disorders ensued : but these were all happily removed by the arrival of Clodius Albinus, a person of great skill and experience in military affairs. His presence for some time restrained the Scots within proper bounds : but, a civil war breaking out between him and Severus, Albinus crossed over to the continent with the greatest part of the Roman forces in Britain; and, meeting his antagonist at Lyons, a dreadful battle ensued, in which Albinus was defeated, and his army cut in pieces. See ROME. The absence of the Roman forces gave encouragement to the Scots to renew their depredations, which they did with such success that this emperor became apprehensive of losing the whole island ; on which he determined to go in person and quell these troublesome enemies. The army he now collected was far more numerous than any the Romans had ever sent into Britain ; and, being commanded by such an able general as Severus, the Scots must have been very hard pressed. The particulars of this important expedition are very imperfectly related ; however, we are assured

that Severus lost a vast number of men, it is said not less than 50,000, in his march through Scot-

land. Yet he penetrated to the most northern

extremity of the island, and obliged the enemy

to yield up their arms. On his return, he built

a much stronger fortification to secure the fron-

tiers against the enemy than had ever been done

before, and which, in some places, coincided

with Adrian's wall, but extended farther at each

end. But, in the mean time, the Scots provoked

by the brutality of the emperor's son Caracalla,

whom he had left regent in his absence, again

took arms : on which Severus himself took the

field, with a design to extirpate the whole nation ; for he gave orders to his soldiers ' not to spare even the child in the mother's belly.' But his

death, which happened soon after, put a stop to

the execution of his revenge ; and his son Cara-

calla ratified the peace with the Scots. During

all these important transactions Scotland was

governed by Donald I., who was the first Chris-

tian king of this country. He also first coined gold and silver, and died in his 18th year, A. D. 216.

Donald was succeeded by Ethodius II., the

son of Ethodius I., who, acting tyrannically, was

killed by his guards, A. D. 231. His son Athi-

rco succeeded, and, pursuing similar measures,

was deserted by his nobles, and killed himself in his twelfth year, A. D. 242. His successor Nathalocus, behaving also tyrannically, was killed by his nobles in his eleventh year, A. D. 253. He was succeeded by Findocus, the son of Athirco, who proved a good monarch, but was killed at a hunting, by the instigation of his brother Carausius, in his eleventh year, A. D. 264.

His other brother Donald II. succeeded, but reigned only one year, being killed in battle by Donald III., lord of the Isles, who usurped the throne, and reigned twelve years, but was killed by Crathilinthus, the son of Findocus, A. D. 277, who proved a good monarch. Mean time his uncle Carausius had acquired great fame by his repeated victories over the Romans, and was elected king of the Britons. See CARAUSIUS and ENGLAND. Crathilinthus died in his twenty-fourth year, A. D. 301, and was succeeded by his cousin Fincormachus, a brave and pious prince, who assisted Octavius, king of the Britons, in a successful battle against the Romans, wherein 16,000 Romans were slain, and 15,000 Britons ; for which service Westmoreland and Cumberland were ceded to Scotland. He died

in his forty-seventh year, A. D. 348, and was succeeded by Romachus nephew of Crathilinthus, who, for his cruelty, was beheaded by the nobles, A. D. 351. Angusian, another nephew, succeeded, and proved a good prince, but was killed in battle, A. D. 354 ; and succeeded by Fincormachus, a third nephew of Crathilinthus, who reigned well and conquered the Picts, but was treacherously murdered, A. D. 357, by two Picts, who were tortured to death. He was succeeded by his son, Eugene I., under whom the Roman and Pictish forces were united against the Scots. The Picts were commanded by their king, named Hungus, and the Romans by Maximus, who murdered Valentinian III., and afterwards assumed the empire. The allies defeated Eugene in the county of Galloway ; but, Maxinus being obliged to return southward on account of an insurrection, the Picts were in their

turn defeated by the Scots. Next year, however, Maxima marched against the Scots; who, being now reduced to extremity, brought into the field*

not only all the men capable of bearing arms, but the women also. In this engagement the Picts would have been utterly defeated, had they not been supported by the Romans ; but Eugene being killed, with the greatest part of his nobility, the Scots were defeated ; and so well did the conquerors improve their victory, that their antagonists were at last totally driven out of the country. Some of them took refuge in the .Ebudae Islands, and some in Scandinavia, but most of them fled to Ireland, whence they made frequent descents upon Scotland.

The Picts were at first highly pleased with the victory they had gained over their antagonists ; but being commanded to adopt the laws of the Romans, and to choose no king who was not sent them from Rome, they began to repent of their having contributed to the expulsion of the Scots ; and in the year 404, when Aistulphus king of the Goths sent over a body of exiled Scots to Britain, under Fergus, the son of Erthus, and grandson of Ethodius, brother of Eugene I., the Picts immediately joined .them against the common enemy. The consequence

was, that the Britons were pushed to the last extremity ; and the Romans being obliged, by the inundation of northern barbarians who poured in upon them, to recal their forces from Britain, the inhabitants were reduced to a most miserable situation. In the time of Fergus II. they were obliged to give up all the country which lies north of Adrian's wall. Fergus II. is celebrated as not only a brave but a pious prince : but, though often successful against the Romans, he was at last killed in battle by them, in his sixteenth year, A. D. 420. His son Eugene II. succeeded him, and imitated his virtues. He obtained several victories over the Romans and their British allies. In his reign Graham, the founder of the family of that name, who was of the blood royal, and whose daughter was married to Fergus II., performed many brave exploits, and destroyed part of Antoninus's Wall, thence called Graham's Dike. In the seventh year of Eugene the Romans were expelled out of Scotland, after a bloody battle ; and soon after left the island. Eugene died in his thirty-first year, A. D. 451, and was succeeded by Dongard his

brother. It was in Eugene's reign that the Britons were reduced so low, that they were obliged to write that remarkable letter to Rome entitled ' the groans of the Britons.' This, however, not being attended with success, the Britons were obliged to call in the Saxons to their assistance. By these new allies the Scots were defeated in a great battle, and their king Dongard drowned in the Humber, A. D. 457, which put a stop for some time to these incursions. Hitherto we have seen the Scots very formidable enemies to the southern Britons. But, when the Saxons became the enemies of the Britons, the Scots joined in a strict alliance with the latter; neither does it appear that this league was ever dissolved, though the united efforts of the Scots and Brilons were not sufficient to preserve the independency of the latter.

II. HISTORY OF SCOTLAND TO THE REIGN ur KENNETH II.— A series of inonarchs followed, of whom little is recorded. Dongard was succeeded by his brother Constantine I., who, hecoming tyrannical, was killed by one of his nobles, whose daughter he had ravished : A. D 479, in his twenty-second year. Congal I. the son of Dongard succeeded him, who conquered

the Britons in a bloody battle, wherein 20,000

Britons, with Guythel prince of Wales, were

slain. He had afterwards some other battles with the Britons and Saxons, wherein little was

gained by either party. He died in his twenty-

second year, A. D. 501, and was succeeded by

his brother Conranus, who also carried on a war

against the Saxons, and, along with the Picts,

assisted first king Ambrosius, and afterwards the

celebrated king Arthur against them with con-

siderable success. This excellent monarch,

however, after all his victories, was murdered by

traitors in his own chamber, A. D. 335, in his

thirty-fourth year. Conranus was succeeded by

Eugene III., whose reign was uncommonly

peaceable. He died in his twenty-third year,

A. D. 558, and was succeeded by his brother

Congal II., who was a pious prince, and uied in

his eleventh year, A. D. 569. His brother Kin-

natel succeeded, and reigned well the short

time he lived, which was only one year. He

was succeeded by Aidanus, the son of Conramis,

who joined the Britons against the Saxons.

He died iu the thirty-fifth year of his age, A. D. 605; an;l was succeeded by Kenneth I.,

the son of Congal II., who only reigned one year, and was succeeded by Eugene IV., the son of Aidanus, in 606. He reigned in peace, instituted good laws, and died in his fifteenth year, A. D. 621. He was succeeded by his son Ferquhard I., who, being a vicious tyrant, \ as deposed by his nobles, and put in prison, where he killed himself, in his eleventh year, A. D. 632. His son Donald IV. succeeded him, and proved a pious and peaceable monarch, but was unfortunately drowned in Loch Ta, while fishing, in his fourteenth year, A. D. 646. He was succeeded by his brother Ferquhard II., who was infamous for his avarice ; and died in his eighteenth year, A. D. 664, by the bite of a wolf. Malduinus, the son of Donald IV'., succeeded, and was esteemed a pious and just sovereign ; but his queen, becoming jealous of him, strangled him in bed, in the twentieth year of his reign, A. D. 684 ; for which she and her accomplices in the murder were burnt. Eugene V., Malduin's brother, succeeded him, and proved a valiant monarch. He obtained a great victory over F.dfred, king of Northumberland, who was killed

with 10,000 Saxons, and their ally Bredius king of the Picts fled. Eugene died in his fourth year, A. D. 688. Eugene VI., the son of Ferquhard II., succeeded him, and maintained the character of a religious and peaceable monarch. He only reigned nine years, dying in 697. Amberkeleth, the son of Aidan, succeeded, but was killed in battle by an arrow, in his second year. He was succeeded by his brother Eugene VII., who made peace with Garnard, king of the Picts, who married his daughter Spontana ; but she was murdered the year following, in bed, by

two assassins, who had intended to kill her husband. Eugene endowed several churches, and died in his sixteenth year, A. I). 715. Murdach, the son of Amberkeleth, succeeded, and cultivated peace so successfully that he got all differences settled during his reign, among the Britons, Scots, Picts, and Saxons. He also built Whithorn. The venerable Bede flourished in his time. See BEDA. Murdach died in his sixteenth year, and was succeeded by Etsinus, or

Ethwin, the son of Eugene VII. A. D. 730, who had a peaceable and prosperous reign of thirty-one years. Eugene VIII., the son of Murdach, succeeded him, A. D. 76t, and began his reign with an act of justice, by executing Donald lord of the Isles, and the earl of Galloway, for their crimes ; but soon after degenerated so greatly himself, that his nobles conspired against and killed him, in the third year of his reign. Fergus III., the son of Etsinus, succeeded Eugene in 764, and married Ethiolia, daughter of the king of the Picts ; but, in the third year of his reign, neglecting her for other women, she murdered him ; and his servants being taken up on suspicion, she came into the court, confessed the murder, and stabbed herself. Fergus III. was succeeded by Solvathius, the son of Eugene VIII. in 767 ; who married a daughter of the king of the Britons, and preserved his kingdom in peace and prosperity for twenty years, when he died of the gout, lie was succeeded by the celebrated Achaius, the son of Etliwin, in 787; who, after quelling some insurrections in Scotland and Ireland, entered into a treaty of perpetual amity with Charles the Great, king of

France, and emperor of Germany, which treaty continued to be observed inviolably between the two nations, till the accession of James VI. to the throne of England. Achaius strengthened this alliance still farther, by marrying a daughter of Charlemagne, and by sending his brother William, with several noblemen, and 4000 troops, to assist Charles in his various wars, wherein they acquired great honor, upon which our ancient historians expatiate very largely; and inform us that, along with these troops, Achaius sent two learned clerks, John and Clement, who gave the Parisians their first taste for learning, and laid the foundation of the University (f Pans ; and they add that John was afterwards sent to Pavia, to establish learning in Italy.

After this Achaius reigned in peace, and died of age, in the thirty-second year of his reign ; leaving one son, named Alpinus, by his second queen Fergusia, sister of Ilungus, king of the Picts ; which connexion afterwards proved the foundation of the Scottish king's claim upon the Pictish crown. Meantime Congal II., nephew of Achaius, succeeded him, according to the

Scottish rule, A. D. 819. He died in the fifth year of his short but peaceful reign ; and was succeeded by Dongal, the son of Solvathius, in 824. Meantime a horrible scene of murder and incest was acted in the royal family of the Picts. Dorstologus, their king, was murdered by his brother Eganus, who married his brother's widow Brensia, who soon after murdered him in his bed to avenge the death of her first husband. The murder of these two princes gave rise to the next remarkable event in the history of Scotland, viz. the war with the Picts. The occasion of the quarrel was, that Dongal king of Scotland claimed, in the name of prince Alpinus, by a former embassy, a right to the Pictish throne; which, however, was rejected by the Picts : upon which both parties had recourse to arms ; but, when every thing was ready for the campaign, Dongal was drowned in crossing the river Spey, in the seventh year of his reign, A. D. 731. At this time the dominions of the Scots comprehended the western islands, together with the counties of Argyle, Knapdale, Kyle, Kintyre, Lochaber, and a part of Breadalbane ; while the

Picts possessed all the rest of Scotland, and part of Northumberland ; so that the Picts seem to have been by much the most powerful people of the two. However the Scots appear to have been superior in military skill; for Alpin, the successor of Dongal, having engaged the Pictish army near Forfar, after an obstinate engagement defeated them, and killed their king, though not without the loss of a great number of his own men. The Picts chose Brudus, the son of their forme king, to succeed him ; but soon after deposed and put him to death on account of his stupidity and indolence. His brother Kenneth shared the same fate on account of his cowardice; till at last another Brudus, a brave and spirited prince, ascended the throne. Having raised a powerful army, he began with offering terms of peace to the Scots ; which, however, Alpin rejected, and insisted upon a total surrender of his crown. Brudus on this endeavoured to procure the assistance of Edwin king of Northumberland. Edwin accepted the money ; but, pretending to be engaged in other wars, he refused the assistance which he had promised. Brudus, not dis-*

mayed by this disappointment, marched resolutely against his enemies ; and the two armies came to an engagement near Dundee. The superior skill of the Scots in military affairs was about to have decided the victory in their favor, when Brudus used the following stratagem to preserve his army from destruction : — He caused all his attendants, and even the women who attended his army, to assemble and show themselves at a distance, as a powerful reinforcement coming to the Picts. This struck the Scots with such a panic that all the efforts of Alpin could not recover them ; and they were accordingly defeated with great slaughter. Alpin himself was taken prisoner, and soon after beheaded by order of the conqueror. This execution happened at a place now called Pit-alpy, but in former times' Bas- Alpin, which in the Gaelic language signifies the death of Alpin ; or, as Monipenny has it, Pas-Alpin, i.e. the head of Alpin. His head was afterwards stuck upon a pole, and exposed on a wall.

Alpin was succeeded by his son Kenneth II., A. D. 834, who, being a brave and enterprising

prince, resolved to take a most severe revenge for his father's death. The Scots, however, were so dispirited by their late defeat that they were exceedingly averse to any renewal of the war ; while, on the other hand, the Picts were so much elated, that they made a law, by which

it became death for any man to propose peace with the Scots, whom they resolved to exterminate ; and some of the nobility were expelled the council on account of their opposition to this law. The consequence was that civil dissensions took place among them, and a bloody battle was fought between the opposite parties before the Scots had thought of making any farther resistance. By these distractions Brudus, •who had in vain endeavoured to appease them, was so much affected that he died of grief, and was succeeded by his brother Drusken. The new prince also failed in his endeavours to accommodate the civil differences ; so that the Scots, by gaining so much respite, at last began to recover their courage; and some of them,

having ventured into the Pictish territories, car-

ried off Alpin's bead from Abernethy, the capital

of their dominions. In the mean time Kenneth

gained over the nobility to his side by the fol-

lowing stratagem ; which, however ridiculous,

is not incredible, if we consider the superstition

of that age. Having invited them to an enter-

tainment, the king introduced into the hall where

they slept a person clothed in a robe made of the skins of fishes, which made such a lumirAns ap-

pearance in the dark that he was mistaken for an

angel or some supernatural messenger. To add

to their terror he denounced, through a speaking-

trumpet, the most terrible judgments if war was

not immediately declared against the Picts, the

murderers of the late king. In consequence of

this celestial admonition war was immediately

renewed with great vigor. The Picts were not

deficient in their preparations, and had now pro-

cured some assistance from England. The first

battle was fought near Stirling ; where the Picts,

being deserted by their English auxiliaries, were

utterly defeated. Drusken escaped by the swift-

ness of his horse, and a few days after made ap-

plication to Kenneth for a cessation of hostilities ; but, as the Scottish

monarch demanded a sur-
render of all the Pictish dominions, the treaty
was instantly broken off. Kenneth pursued his
good fortune, and conquered the counties of
-Mi-arns, Angus, and Fife; but, as he marched
against Stirling, he received intelligence that
these counties had again revolted, and cut off all
the garrisons which he had left, and that Drusken
was at the head of a considerable army in these
parts. On this Kenneth hastened to oppose him,
and a negociation again took place. The result
was still unfavorable. Kenneth insisted on an
absolute surrender of the counties of Fife,
M earns, and Angus ; which being refused, both
parties prepared for a decisive battle. The en-
gagement was very bloody and desperate, the
Picts fighting like men in despair. Drusken re-
newed the battle seven times, but at last was en-
tirely defeated and killed, and the counties in
dispute became the immediate property of the
conqueror. Kenneth did not fail to improve
his victory by reducing the rest of the Pictish
territories ; which he is said to have done with
the greatest cruelty, and even to have totally ex-

terminated the inhabitants. The capital, called Camelon (supposed to have been Abernethy), held out four months ; but was at last taken by surprise, and every living creature destroyed. This was followed by the reduction of the Maiden Castle, now that of Edinburgh ; which was abandoned by the garrison, who fled to Northumberland. After the reduction of these imposiant places the rest of the country made no great resistance, and Kenneth became mister i>: whole kingdom of Scotland in the p. i sent titent of the word.

III. HISTORY OF SCOTLAND FROM THE COXQUEST OF THE PlCTS UNTIL THE DEATH OF ALEXANDER III. — Besides this war with the Picts, Kenneth is said to have been successful against the Saxons, though of these wars we have very little account. Having reigned ten years in peace after his subjugation of the Picis, and composed a code of laws for the good of his people, Kenneth died of a fistula, at Fort Teviot, near Duplin, in Perthshire, A. D. 854. Before his time the seat of the Scottish government had been in Argyleshire ; but he removed it to Scone,

by transferring thither the famous black stone, supposed to be the palladium of Scotland, and which was afterwards carried off by Edward I. of England, and lodged in Westminster Abbey. Kenneth II., surnamed the Great by some historians, was succeeded by his brother Donald V., who is represented as a man of the worst character ; so that the remaining Picts, who had fled out of Scotland were encouraged to apply to the Saxons for assistance, promising to make Scotland tributary to the Saxon power after it should be conquered. This proposal was accepted, and the confederates invaded Scotland with a powerful army, and took the town of Berwick ; however, they were soon after defeated by Donald, who took also their ships and provisions. This capture proved their ruin ; for, some of the ships being loaded with wine, the Scots indulged themselves so much with that liquor that they became incapable of defending themselves ; the consequence of this was th.it the confederates, rallying their troops, attacked them in that state of intoxication. The Scots were defeated with excessive slaughter ; 20,000

of them lay dead on the spot, the king and his principal nobility were taken prisoners, and all the country from the Tweed to the Forth became the property of the conquerors. Still, however, the conquerors were unable to pursue their victory farther, and a peace was concluded, on condition that the Saxons should be masters of all the conquered country. Thus the Forth and Clyde became the southern boundaries of the Scottish dominions. It was agreed that the Forth should from that time forward be called the Scots Sea ; and it was made capital for any Scotchman to set his foot on English ground. They were to erect no forts near the English confines, to pay an annual tribute of £1000, and to give up sixty of the sons of their chief nobility as hostages. A mint \vas erected by the Saxon prince named Osbreth, at Stirling; and a cross raised on the bridge of that place, with the following inscription, implying that this place was the boundary between Scotland and England : —

Anglos a Scotis separat crux ista reraotis :
Anna hie slant Bruti slant Scoti sub hac cruce tuti.

After the conclusion of this treaty, so humiliating

to the Scots, the Picts, finding that their interest had been entirely neglected, fled to Norway,

while those who remained in England were mas-

sacred. Donald shared the common fate of un-

fortunate princes, being dethroned and shut up

in prison, where he killed himself, in 858. But

the character of Donald, and the whole account

of these transactions, rests on the credit of a

single author, namely Boece; for other writers

represent Donald as a hero, and successful in

his wars; but the obscurity in which the whole

of this period of Scottish history is involved

renders it impossible to determine these matters.

Donald V. was succeeded by his nephew Con-

stantine II., the son of Kenneth II., in whose

reign Scotland was first invaded by the Danes,

who proved such formidable enemies to the Eng-

lish. This invasion was occasioned by some exiled

Picts who fled to Denmark, where they prevailed

upon the king of that country to send his two

brothers, Hunger and Hubba, to recover the

Pictish dominions from Constantine. These

princes landed on the coast of Fife, where they

committed the most horrid barbarities, not sparing even the ecclesiastics who had taken refuge in the island of May at the mouth of the Forth. Constantine defeated one of the Danish armies commanded by Hubba, near the water of Leven ; but was himself defeated and taken prisoner by Hungar, who caused him to be beheaded at a place since called theJDevil's Cave, in 874. This unfortunate action cost the Scots 10,000 men; but the Danes seem not to have purchased their victory very easily, as they were obliged immediately afterwards to abandon their conquests, and retire to their own country. Howtver the Danish monuments that are still to be seen in Fife leave no room to doubt that many bloody scenes had been acted here between the Scots and Danes besides that above mentioned. Constantine II. was succeeded by his brother 1-tl), or his son, as Monipenny styles him, surnumed the Swift-footed, from his agility. Being devoted to luxury, his nobles took him and put him in prison, where he died the third day after of melancholy, in the second year of his reign, A. D. 876. He was succeeded by Gregory the

son of Dongal, contemporary with Alfred of England, and both princes deservedly acquired the surname of Great. The Danes at their departure had left the Picts in possession of Fife. Against them Gregory immediately marched, and quickly drove them into the north of England, where their confederates were already masters of Northumberland and York. In their way thither they threw a garrison into the town of Berwick; but this was presently reduced by Gregory, who put to the sword all the Danes, but spared the lives of the Picts. From Berwick Gregory pursued the Danes into Northumberland, where he defeated them, and passed the winter in Berwick. He then marched against the Cumbrians, who, being mostly Picts, were in alliance with the Danes. Them he easily overcame, and obliged to yield up all the lands they had formerly possessed belonging to the Scots, at the same time that he agreed to protect them from the Danes. In a short time, however, Constantine the king of the Cumbrians violated the convention he had made, and invaded Annandale ; but was defeated and killed by Gregory

near Lochmaben. After this victory Gregory reduced the counties of Cumberland and Westmoreland, which, it is said, were ceded to him by Alfred the Great; and indeed the situation of Alfred's affairs at this time renders such a cession probable. Gregory next engaged in a war with the Irish, to support Donach, an Irish prince, against two rebellious noblemen. The Irish were the first aggressors, and invaded Galloway ; but, being repulsed with great loss, Gregory went ovei to Ireland in person, where the two chieftains, who had been enemies to each other before, HOW joined their forces to oppose the common enemy. The first engagement proved fatal to one of their chiefs named Brian, who was killed with a great number of his followers. After this victory Gregory reduced Dundalk and Drogheda. On his way to Dublin he was opposed by a chieftain named Corneil, who shared the fate of his confederate, being also killed, and his army entirely defeated. Gregory then became guardian to the young prince whom he came to assist, appointed a regency, and obliged them to swear that they would never

admit into the country either a Dane or an Eng-

lishman without his consent. Having then placed

garrisons in the strongest fortresses, he returned

to Scotland, where he built the city of Aberdeen ; and died in 894, at his castle of Dundore in the

Garioch, in the eighteenth year of his reign.

Gregory was succeeded by Donald VI. the

son of Constantine II., who imitated the virtues

of his predecessor. The Scottish historians

unanimously agree that Northumberland was at

that time in the hands of their countrymen ;

while the English as unanimously affirm that it

was subject to the Danes, who paid homage to

Alfred. Be this as it will, however, Donald

continued to live on good terms with the English

monarch, and sent him a body of forces, who

proved of considerable advantage to him in his

wars with the Danes. The clans of the Murrays

and Rosses having invaded each other, and com-

menced a bloody civil war, Donald came upon

them with a great army, and punished the ring-

leaders in 903. He died at Forres in 905. He

was succeeded by Constantine III., the son of

Eth, who married a daughter of the prince of

Wales ; he also entered into an alliance with the

Danes against the English. The reason of this confederacy was that the English monarch, Edward the Elder, finding the Scots in possession of the northern counties of England, made such extravagant demands upon Constantine as obliged him to ally with the Danes to preserve his dominions in security. However, the league subsisted only for two years, after which the Danes found it more for their advantage to resume their ancient friendship with the English. Constantine afterwards appointed the presumptive heir to the Scottish crown, Malcolm, or according to some Eugene, the son of the late king Donald VI., prince of the southern counties, on condition of his defending them against the attacks of the English. The young prince had soon an opportunity of exerting his valor : but, not behaving with the requisite caution, he

.was defeated with the loss of almost all his army, he himself being carried wounded out of the field; and, in consequence of this disaster, Constantine was obliged to do homage to Edward for the possessions he had to the south of the

Scottish boundary. In the beginning of the reign of Athelstan, the son of Edward the Elder, the northern Danes were encouraged by some conspiracies formed against that monarch to throw off the yoke ; and their success was such that Athelstan entered into a treaty with Sithrac the Danish chief, and gave him his daughter in marriage. Sithrac, however, did not long survive iis nuptials ; and his son Guthred, endeavouring to throw off the English yoke, was defeated, and obliged to fly into Scotland. This brought on a series of hostilities between the Scots and English, which in 938 issued in a general engagement. At this time the Scots, Irish, Cumbrians, and Danes, were confederated against the English. The Scots were commanded by their king Constantine, the Irish by Anlaf, the brother of Guthred the Danish prince, the Cumbrians by their own sovereign, and the Danes by Froda. The generals of Athelstan were Edmund his brother, and Turketii his favorite. The English attacked the entrenchments ot' the confederates, where the chief resistance they met with was from the Scots. Constantine was in the utmost

danger of being killed or taken prisoner, but was rescued by the bravery of his soldiers ; however, after a most obstinate engagement, the confederates were defeated with such slaughter that the slain are said to have been innumerable. The consequence was, that the Scots were deprived of all their possessions south of the Forth; and Constantine, quite dispirited by his misfortune, resigned the crown to Malcolm, and retired to the monastery of the Culdees at St. Andrews, where he became a canon, and died five years after, in 943. The distresses which the English sustained in their subsequent wars with the Danes gave the Scots an opportunity of retrieving their affairs; and in 944 Malcolm I., the successor of Constantine, was invested with the sovereignty of Northumberland, on condition of his holding it as a fief of the crown of England, and assisting in defence of the northern border.

Soon after the conclusion of this treaty, Malcolm going to the county of Moray, to settle some disturbances, was treacherously murdered in the ninth year of his reign. The murderers were all apprehended, tortured, and put to death. Malcolm was succeeded by his son Indulfus, A. D.

952. In this reign the Danes became extremely formidable by their invasions, which they now renewed with greater fury than ever, being exasperated by the friendship subsisting between the Scots and English monarchs. Ilaquin, king of Norway, also attempted an invasion, but was defeated by Indulfus. The first descent of the Danes was upon East Lothian, where they were soon expelled, but crossed over to Fife. Here they were again defeated, and driven out ; and so well had Indulfus guarded the coasts that they could tiot find an opportunity of landing ; till, having seemed to steer towards their own country, the Scots were thrown off their guard, and the Danes on a sudden made good their landing at Cullen, in Banffshire. Here Indulfus soon came up with them, attacked their camp, and drove them towards their ships ; but was killed in an ambuscade, into which he fell during his pursuit, in the ninth year of his reign. He was succeeded by Duffus the son of Malcolm 1. A. D. 961, to whom historians gave an excellent character; but, after a reign of five years, he was murdered in 966. He was succeeded by Culen

the son of Indulfus, who had been nominated prince of Cumberland, in his father's lifetime, as heir-apparent to the throne. He is represented as a very degenerate prince ; and is said to have given himself up to sensuality in a manner almost incredible, being guilty of incontinence not only with women of all ranks, but even with his own sisters and daughters. The people in the mean time were fleeced to support the extravagance and luxury of their prince. In consequence of this, an assembly of the states was convened at Scone for the resettling of the government ; but on his way thither Culen was assassinated in the fourth year of his reign, near the village of Mothven, by Rohard, or llodard, thane of Fife, whose daughter he had debauched. The provocations which Culen had given to his nobility seem to have rendered them totally untractable and licentious ; which gave an occasion to a remarkable revolution in the reign of Kenneth III., who succeeded Culen, A. D. 970. This prince, being a man of great resolution, began with relieving the common people from the oppressions of the nobility, which were now intolerable ; and this plan he pursued with so

much success that, having nothing to fear from the great barons, he ordered them to appear before him at Lanerk ; but the greatest part, conscious of their demerits, did not attend. The king so well dissembled his displeasure that those who came were quite charmed with his affability, and the noble entertainment he gave them ; in consequence of which, when an assembly was called next year, the guilty were encouraged to appear as well as the innocent. No sooner had this assembly met, however, than the place of meeting was beset with armed men. The king then informed them that none had any thing to apprehend, excepting such as had been notorious offenders ; and these he ordered to be immediately taken into custody, telling them that their submitting to public justice must be the price of their liberty. They were obliged to accept the king's offer, and the criminals were punished according to their deserts. About this time Edgar, king of England, finding himself hard pressed by the Danes, found means to unite the king of Scotland and the prince of Cumberland along with himself in a treaty against

the Danes ; which gave occasion to a report that Kenneth had become tributary to the king of England. This, however, is utterly denied by all the Scottish historians; who affirm that Kenneth cultivated a good correspondence with Edgar, both because he expected assistance in defending his coasts, and because he intended entirely to alter the mode of succession to the throne. About this time the Danes made a dreadful invasion. Their original intention seems to have been to land on some part of the

English coasts ; but, finding them probably too well guarded, they landed at Montrose in Scotland, committing every where the most dreadful ravages. Kenneth at that time was at Stirling, and quite unprepared ; however, having collected a handful of troops, he cut off many of the enemy as they were straggling up and down, but could not prevent them from besieging Perth. Nevertheless, as the king's army constantly increased, he re-solved to give the enemy battle. The scene of this action was at Lu nearly, near

Perth. The king is said to have offered ten

pounds in silver, or the value of it in land, for the head of every Dane which should be brought

him ; and an immunity from all taxes to the sol-

diers who served in his army, provided they

should be victorious ; but, notwithstanding the

utmost efforts of the Scots, their enemies fought

so desperately that Kenneth's army fled, and

must have been totally defeated, had not the

fugitives been stopped by a yeoman, named

Thomas, and his two sons, who were coming up

to the battle. Buchanan and Boece inform us,

that, these countrymen were ploughing in a field

hard by the scene of action, and, perceiving that

their countrymen fled, they loosed their oxen,

and made use of the yokes as weapons, with

which they first obliged their countrymen to

stand, and then fell upon their enemies. The

fight was now renewed with such fury on the

part of the Scots, that the Danes were utterly

defeated; and, after the battle, the king rewarded

Thomas with the barony of Errol, in the Carse of

Cowrie, ennobled his family, and gave them an

armorial bearing of a bloody yoke in a field, al-

luding to the rustic weapons with which they

had achieved this glorious exploit; and gave him also the surname of Hay, because, when weary with the fatigue of his exertions, he had said Oh Hay ! After this Kenneth stained all his glory by poisoning prince Malcolm, lord of Cumberland, &c., the heir apparent of the crown : and, to secure the succession more effectually in his own family, prevailed on the states to make the succession hereditary, without regard to infancy or age. After this, either the king's conscience persuaded him, or the superstition of the times invented the story, that he heard a voice from heaven, threatening him and his son with vengeance for the murder of the prince. In either case the threatening was fulfilled. In 994 Kenneth was murdered by a lady named Fenella, whose son he had caused to be put to death. The murder was perpetrated in Fenella's castle, at Fettercairn, in the Mearns, where she had persuaded the king to pay her a visit, by an automaton image of the king ia brass, which held out a golden apple in its hand ; which Fenella desired the king to take, but he had no sooner dftie so, than the internal springs moved a cross-bow held by the image, and shot

the king through the body. His attendants waited long near the place; but. being at length tired out, they broke open the doors, and found their king murdered; upon whicVi they laid the castle in ashes ; but Fenella had escaped by a posteirv

The throne was then seized by a usurper named Coustantine IV. the son of Culen, who,

being killed in battle at Cramond, after a remit of a year and a half, was succeeded by Crim, the son of king Duffus ; and he again was defeated and killed by Malcolm the son of Kenneth, the lawful heir of the Scottish throne, A. D. 10U4. After this victory, however, Malcolm did noi immediately assume the sovereignty; but asked the crown from the nobles, although, by the law passed in the reign of Kenneth, the succession to the throne of Scotland was now hereditary. This they immediately granted, and Malcolm was crowned king, A. D. 1004. He joined himself in alliance with the king of England ; and proved so successful against the Danes in England, that Sweno their king resolved to di-

rect his whole force against him by an invasion of Scotland. His first attempt, however, proved very unsuccessful ; all his soldiers being cut in pieces, except some few who escaped to their ships, while the loss of the Scots amounted to only thirty men. But in the mean time, Duncan priace of Cumberland, having neglected to pay his homage to the king of England, the latter invaded that country in conjunction with the Danes Malcolm took the field against them, and defeated both ; but while he was thus employed in the south, a new army of Danes landed in the north at the mouth of the Spey. Malcolm advanced against them with an army much inferior in number; and his men, neglecting every thing but the blind impulses of fury, were almost all cut to pieces : Malcolm himself being desperately wounded. By this victory the Danes were so much elated that they sent for their wives and children, intending to settle in this country. The castle of Nairn, then thought almost impregnable fell into their hands ; and the towns of Elgin anc. Forres were abandoned both by their garrisons and inhabitants. The Scots were every-where

treated as a conquered people, and employed in the most servile offices by the haughty conquerors ; who, to render the castle of Nairn, as they thought, absolutely impregnable, cut through the small isthmus which joined it to the land. All this time, however, Malcolm was raising forces in the southern counties ; and, having at last got an army together, he came up with the Danes at Murtloch, near Balveney, which appears at this day to have been a strong Danish fortification. Here he attacked the enemy ; but, having the misfortune to lose three of his general olh'cers, he was again obliged to retreat. However, the Danish general happening to be killed in the pursuit, the Scots were encouraged to renew the fight with such vigor that they obtained at last a complete victory; but suffered so much that they were unable to derive from it all the advantages which might otherwise have accrued. On the news of this ill success, Sweno ordered two fleets, one from England and another from Norway, to make a descent upon Scotland, under Camus, one of his most renowned generals. The Danes attempted to land at the mouth of the Forth ; but, finding every

place there well fortified, they were obliged to move farther northward, and effected their purpose at Redhead in Angus-shire. The castle of Brechin was first besieged ; but, meeting with a stout resistance there, they laid the town and

church in ashes. Thence they advanced to the village of Panbride, and encamped at a place called Karbuddo. Malcolm in the mean time was at hand with his army, and encamped at a place called Barr, in the neighbourhood of which both parties prepared to decide the fate of Scotland ; for, as Moray and the northern provinces were already in the possession of the Danes, it was evident that a victory at this time must put them in possession of the whole. The engagement was desperate, and so bloody that the rivulet which proceeds from Loch Tay is said to have had its waters dyed with the blood of the slain ; but at last the Danes gave way and fled. There was at that time in the army of Malcolm, a young prince of the name of Keith, who com-

manded a colony of the Catti, a German tribe, who settled in the north of Scotland, and gave name to Caithness. He pursued Camus; and, having overtaken him, engaged and killed him ; but another Scottish officer coming up, disputed with Keith the glory of the action. While the dispute lasted Malcolm came up ; who suffered them to decide it by single combat. In this second combat Keith proved also victorious, and killed his antagonist. The dying person confessed the justice of Keith's claim ; and Malcolm dipping his finger in his blood marked the shield of Keith with three strokes, pronouncing the words Veritas vincit, Truth overcomes, which has ever since been the armorial bearing and motto of the family of Keith. The shattered remains of the Danish forces reached their ships; but being driven back by contrary winds, and provisions becoming scarce, they put ashore 500 men on the coast of Buchan, to procure them some food : but, their communication with the ships being soon cut off, they fortified themselves as well as they could, and made a desperate resistance; but at last were all put to the sword.

The place where this massacre happened is still called Crudane ; being probably an abbreviation of Cruor Danorum, i. e. the blood of the Danes, a name imposed on it by the ecclesiastics of those days. Svveno, not yet discouraged, sent his son Canute, afterwards king of England, and one of the greatest warriors of that age (see CANUTE), into Scotland, with an army more powerful than any that had yet appeared. Canute landed in Buchan ; and, as the Scots were much weakened by such a long continued war, Malcolm thought proper to act on the defensive. But the Scots, who now thought themselves invincible, demanded to be led on to a general engagement. Malcolm complied with their desire, and a battle ensued ; in which, though neither party had much reason to boast of victory, the Danes were so much reduced that they willingly concluded a peace on the following terms, viz.— That the Danes should immediately depart Scotland; that as long as Malcolm and Sweno lived neither of them should wage war with the other, or help each other's enemies ; and that the field in which the battle was fought should be set apart and consecrated for the burial of the dead. These stipula-

tions were punctually fulfilled by Malcolm, who

built in the neighbourhood a chapel dedicated to

Olaus, the tutelar saint of these northern nations.

After all these glorious exploits, and bfC-oming

the second legislator in the Scottish nation, Mal-

colm is said to have stained the latter part of his reign with avarice and oppression ; in con-

sequence of which he was murdered at the age

of eighty, after he had reigned above thirty

years. This assassination was perpetrated %vhen

he was on his way to Glammis. His own do-

mestics are said to have been privy to the mur-

der, and to have fled along with the conspirators ;

but, in passing the lake of Forfar on the ice, it gave way with them, and they were all drowned,

their bodies being discovered some days after.

This account is confirmed by the sculptures

upon some stones erected near the spot ; one of

them which is still called Malcolm's gravestone,

and all of them exhibit some rude representa-

tions of the murder and the fate of the assassins.

Malcolm II. was succeeded in 1034 by his

grandson Duncan I., but he is said to have had

another grandson, by a daughter named Dowoda,

viz. the famous Macbeth ; though some are of

opinion that Macbeth was not the grandson of Malcolm, but of Fenella who murdered Kenneth III. The first years of Duncan's reign passed in tranquility, but domestic broils soon took place on the following occasion. Banquo, thane of Lochaber, and ancestor to the royal family of Stuart, acled then in the capacity of steward to Duncan, by collecting his rents ; but, being very rigid in the execution of his office, he was way-laid, robbed, and almost murdered. Or' this outrage Banquo complained, as soon as he recovered of his wounds and could appear at court. The robbers were summoned to surrender themselves to justice; but, instead of obeying, thev killed the messenger. Macbeth represented this in such strong terms that he was sent witli an army to reduce the insurgents, who had already destroyed many of the king's friends. This commission he performed with such success that the rebel chief put an end to his own life ; after which Macbeth sent his head to the king, and then proceeded with the utmost severity against the insurgents, who were composed of Irishmen, Islanders, and Highlanders. This insurrection was scarcely quelled, when the Danes landed

again in Fife ; and Duncan put himself at the head of an army, having the thanes Macbeth and Banquo serving under him. The Danes were commanded by Sweno king of Norway, and eldest son of Canute. He proceeded with all the barbarity customary with his nation, putting to death men, women, and children, who fell in his way. A battle was fought between the two nations near Culross, in which the Scots were defeated ; but the Danes purchased their victory so dearly that they could not improve it ; and Duncan retreated to Perth, while Macbeth was sent to raise more forces. In the mean time Sweno laid siege to Perth, whfch was defended by Duncan and Banquo. The Danes were so much distressed for want of provisions, that they at last consented to treat of a peace, provided the pressing necessities of the army were relieved. The Scottish historians inform us that this treaty was set on foot to amuse Svveno, and gain time for the stratagem which Duncan was preparing. This was no other than a barbarous contrivance of infusing intoxicating herbs into

t!:e liquors that were sent along with the other provisions to the Danish camp. These sopo-rifics had their intended effect ; and, while the Danes were under their influence, Macbeth and Banquo broke into their camp, where they put all to the sword, and it was with difficulty that some of Sweno's attendants carried him on board the only ship of all the fleet that returned to Norway. It was not long, however, before a fresh body of Danes landed at Kiughorn, in Fifeshire; but they were entirely defeated by Macbeth and Banquo. Such of the Danes as escaped fled to their ships ; but before they de-parted they obtained leave to bury their dead in Inchcolm, a small island lying in the Forth, where one of their monuments is still to be seen. Thus ended the formidable invasions of the Danes; after which Duncan applied himself to the administration of justice, and the reforma-tion of the manners of his subjects. Macbeth, however, who had obtained great reputation by his success against the Danes, began to form am-bitious designs, and to aspire to the crown itself.

The fables relating to his usurpation are so well known, from the tragedy composed by Shakspeare which bears the name of Macbeth, that we need not take notice of them ; but only mention the fact, that Duncan, not knowing he had so dangerous an enemy near his person, was murdered at Inverness, in the sixth year of his reign, by Macbeth, who succeeded him in the throne, A. D. 1040. During the greatest part of the reign of the usurper, Malcolm, the true heir to the crown of Scotland, kept close in his principality of Cumberland, without any thoughts of ascending his father's throne. Macbeth for some time governed with moderation, and enacted some excellent laws, but at last became a tyrant. Becoming jealous of Banquo, the most powerful subject in his dominions, he invited him to an entertainment, and caused him to be treacherously murdered. His son Fleance was destined to the same fate, but escaped to Wales. After him Macduff, the thane of Fife, was the most powerful person in Scotland ; for which reason, Macbeth determined to destroy him. But Macduff, understanding this, fled to

France; and Macbeth cruelly put to death his

wife and infant children, and sequestrated his es-

tate. Macduff vowed revenge, and encouraged

Malcolm to attempt to dethrone the tyrant.

Macbeth opposed them with his whole force ;

but, being defeated in a pitched battle, he took

refuge in the most inaccessible places of the

Highlands, where he defended himself for two

years; but in the mean time Malcolm was ac-

knowledged king of Scotland, and crowned at

Scone, A. D. 1055. The war between Macbeth

and the new king continued for two years after

the coronation of the latter ; but at last he was killed in a sally by Macduff. However, the

public tranquillity did not end with his life. His

followers elected one of his kinsmen named

Lullach, surnamed the Idiot, to succeed him :

but he, unable to withstand Malcolm, \ithdrew

to the north, where, being pursued, he was killed at Essey, in Strathbogie, after a rei

Malcolm being now established on the throne,

A. D. 1057, began with rewarding Macduff tor

his great services ; and conferred upon his

family four extraordinary privileges: — 1. That

they should place the king in his chair of state

at the coronation. 2. That they should !< >ad the van of all the royal armies. 3. That they should have a regality within themselves : and, 4. That if any of Macduff's family should happen to kill a nobleman unpremeditatedly, he should pay twenty-four marks of silver, and if a plebeian, twelve. The king's next care was to reinstate in their father's possessions all the children who had been disinherited by the late tyrant; which he did in a convention of his nobles held at Forfar. In the time of William the Conqueror, Malcolm was engaged in a dangerous war with England, the occasion of which was as follows : On the death of Edward the Confessor, Harold II. seized the throne of England, to the prejudice of Edgar Atheling the true heir to the crown. However, he created him earl of Oxford, and treated him with great respect; but, on the defeat and death of Harold, William discovered some jealousy of Edgar. Soon after, William having occasion to pay a visit to his dominions in Normandy, he appointed Edgar to attend him, along with some other noblemen whom he suspected to be in his interest; but, on

his return to England, he found the people in a state of such disaffection to his government, that he proceeded with great severity, and great numbers of his subjects were obliged to take refuge in Cumberland and the southern parts of Malcolm's dominions. Edgar had two sisters, Margaret and Christina : these, with his two chief friends, Gospatric and Marteswin, soon made him sensible how precarious his life was under such a jealous tyrant, and persuaded him to make preparations for flying into Hungary or some foreign country. Edgar accordingly set sail with his mother Agatha, his two sisters, and a great train of Anglo-Saxon noblemen ; but by stress of weather was forced into the Frith of Forth, where the illustrious exiles landed at the place since called the Queen's Ferry. Malcolm no sooner heard of their landing than he paid them a visit in person ; and at this visit became enamoured of the princess Margaret. In consequence of this the chief of Edgar's party repaired to the court of Scotland. William soon made a formal demand of Edgar; and, on Malcolm's refusal, declared war against him. William

was the most formidable enemy the Scots had ever encountered, as having not only the whole force of England, but of Normandy at his command. However, as he had tyrannised most unmercifully over his English subjects, they were much more inclined to assist his enemies than himself; and he even found himself obliged to give up the county of Northumberland to Gospatric, who had followed Edgar, up6n condition of his making war on the Scots. This nobleman accordingly invaded Cumberland ; in return for which Malcolm ravaged Northumberland in a dreadful manner, carrying off an immense booty, and inviting the Irish and Danes to join him : for even at this time the Danes kept up their claims upon the crown of England. The Irish were also interested in advancing the cause of Harold's three sons, who had put themselves

under iheir protection ; besides their view to obtain plunder. However, as all these views tended to the destruction of William's power, a union

was formed against him ; but, when they came to stipulations, the parties disagreed. The three sons of Harold, with a body of Irish, made a descent upon Somersetshire, and defeated a body of English ; but the Irish having obtained an opportunity of acquiring some booty immediately retired with it. The Danes landed at the mouth of the Humber from forty small ships, where they were joined by Edgar and his party ; and had the allies been unanimous, it is probable that William's government would have been overthrown. By this time the latter had taken from Gospatric the earldom of Northumberland, and given it to Robert Cummin one of his Norman barons ; but the Northumbrians having joined Gospatric, and received the Danes as their countrymen, murdered Cummin and all his followers at Durham. After this they laid siege to the forts built by William in Yorkshire : but, not being able to reduce them, the English, Scots, and Danes, united their forces, and took the city of York, and put the garrison of 3000 Normans to the sword ; this success was followed by many incursions and ravages,

in which the Danes and Northumbrians ac-

quired great booty. It soon appeared, how-

ever, that these allies had the interest of Edgar

no more at heart than the Irish : and that all the dependence of this forlorn prince was upon Mal-

colm and the few Englishmen who had followed

his fortune : for the booty was no sooner obtained

than the Danes retired to their ships, and the

Northumbrians to their habitations. In the mean

time William, having raised a considerable army,

advanced northwards. He first took a severe

revenge upon the Northumbrians ; then reduced

the city of York, and put to death a great number of the inhabitants ; when, perceiving that dan-

ger was still threatened by the Danes, he bribed

them with a sum of money to depart to their own

country. Malcolm was now left alone to en-

counter this formidable adversary ; and, finding

himself unable to oppose so great a force, with-

drew to his own dominions, where he remained

for some time upon the defensive. His second

invasion took place in 1071, while William was

employed in quelling an insurrection in Wales.

He is said at this time to have behaved with the

greatest cruelty. Bursting into England by Cum-

berland he ravaged Teesdale ; and at a place called Hundreds-keld massacred several English noblemen, with all their followers. Thence he marched to Cleveland, in the north riding of Yorkshire ; which he also ravaged with the utmost cruelty, sending back the booty with part of the army to Scotland : after which he pillaged the bishopric of Durham, where he is said not to have spared the most sacred edifices. Meanwhile Gospatric, to whom William had again ceded Northumberland, attempted to make a diversion in his favor by invading Cumberland ; but, being defeated by Malcolm, he was obliged to shut himself up in Bamborough castle ; while the latter returned in triumph to Scotland, where he married the princess Margaret, who proved a most excellent queen. In 1072 William, having greatly augmented his army, in liis turn invaded Scotland. The particulars of the war are unknown; but it ended to the disadvantage of the Scots, as Malcolm agreed to pay him homage. The English historians contend that the homage was for the whole of his dominions ; but the Scots with more show of reason affirm that it

was only for those he possessed south of the Tweed. On the conclusion of the peace a cross was erected at Stanmore in Richmondshire, witli the arms of both kings, to serve as a boundary between the possessions of William and the feudal dominions of Malcolm. Part of this monument, called Re-cross, or rather Roy-cross, or the cross of the kings, was entire in the days of Camden. This peace produced the greatest alteration in the manners of the Scots. What chiefly contributed to this was the excellent disposition of queen Margaret, who was, for that age, a pattern of piety and politeness : and next to this was the number of foreigners who had settled in Scotland ; among whom were some Frenchmen. Malcolm himself, also, was far from being averse to a reformation, and even set the example. During her husband's absence in England queen Margaret had chosen for her confessor one Turgot, whom she also made her assistant in her intended reformation. She began with new-modelling her own court; into which she introduced the offices, furniture, and manner of living, common in the more polite nations of Europe; dismissing from her service

all who were noted for immorality and impiety. Turgot she charged, on pain of her displeasure, to give his real sentiments on the state of the kingdom, and was ir.tbrmed by him that faction reigned among the nobles, rapine among the commons, and licentiousness among all ranks. Above all, he complained that the kingdom was destitute of a learned clergy. This the queen represented to her husband, and prevailed upon him to set about the work of reformation ; in which, however, he met with considerable opposition. The Scots, accustomed to oppress their inferiors, thought all restrictions of their power were as many steps towards their slavery. The introduction of foreign offices and titles confirmed them in this opinion ; and such a dangerous insurrection happened in Moray and some of the northern counties, that Malcolm was obliged to march against the rebels. He found them indeed very formidable ; but they were so much intimidated by his resolution, that they intreated the clergy who were among them to intercede with the king. Malcolm received their submission, but refused to grant an unconditional pardon,

lie gave all the common people indeed leave to

return to their habitations, but obliged the higher

ranks to surrender themselves to his pleasure.

Many of the most guilty were put to daath, or

had their estates confiscated. This severity

checked the rebellious spirit of the Scots ; upon

which Malcolm returned to his plans. Still,

however, he found himself opposed even in those

abuses which were most obvious and glaring,

and durst not entirely abolish many odious cus-

toms. In those days the Scots were without the

practice of saying grace after meals, till it was

introduced by Margaret, who gave a glass of

wine to those who remained at the roya! liible

and heard tlie thanksgiving; which gave rise to

the term of the gi \ce-drink. Besides this, the

terms of the duration of Lent and Easter were

fixed ; the king and queen bestowed large alms

on the poor, and the latter washed the feet of six or their number ; many churches, monasteries,

&c., were erected, and the clerical revenues aug-

mented. In 1077 Malcolm again invaded Eng-

land ; but with what success is not well known,

in 1088, after the death of the conqueror, he ;iL.nin espoused the cause of Edgar Etheling. At the time of Edgar's arrival Malcolm was at the head of a brave and well disciplined army, with which he penetrated a great way into the country of the enemy ; and, it is said, returned home with an immense booty. William resolved to revenge the injury, and prepared great armaments both by sea and land for the invasion of Scotland. His success, however, was not answerable to his preparations. His fleet was dashed to pieces by storms, and almost all on board perished. Malcolm had also laid waste the country through which his antagonist was to pass, in such an effectual manner that William lost a great part of his troops by fatigue and famine ; and, when he arrived in Scotland, found himself in a situation very little able to resist Malcolm, who was advancing with a powerful army. In this distress Rufus had recourse to Robert de Mowbray earl of Northumberland, who dissuaded him from venturing a battle, but advised him by all means to open a negociation through the English noblemen who resided with

Malcolm. Edgar undertook the negociation, on condition of his being restored to his estates in England. Malcolm had never yet recognised the right of W'illiam Rufus to the throne of England, and therefore refused to treat with him as a sovereign prince ; but offered to enter into a negociation with his brother Robert, surnamed Curt-hose, from the shortness of his legs. The two princes accordingly met ; and Malcolm, having shown Robert the disposition of his army, offered to cut off his brother William, and to pay to him the homage he had been accustomed to pay to the Conqueror for his English dominions. But Robert generously answered that he had resigned to William his right of primogeniture in England ; and that he had even become one of William's subjects by accepting of an English estate. An interview with William then followed ; in which it was agreed that the king of England should restore to Malcolm all his southern possessions, for which he should pay the same homage he had been accustomed to do to the Conqueror, that he should restore to Malcolm twelve disputed manors, and give him like-

wise twelve merks of gold yearly, besides restoring to Edgar all his English estates. This treaty was concluded in Lothian, according to the English historians ; but at Leeds in Yorkshire, according to the Scots. However William considered the terms as so very dishonorable that he resolved not to fulfil them. Soon after his departure Edgar and Robert began to press him to fulfil his engagements ; but, receiving only evasive answers, they passed over into Normandy. After their departure William applied himself to the fortification of his northern boundaries, especially Carlisle, which had been destroyed by the Danes 200 years before As this place lay within the feudal dominions of Malcolm, he complained of William's proceedings as a breach of the late treaty ; and soon after repaired to the English court at Gloucester that he might have a personal interview with the king, and obtain redress. On his arrival William refused him admittance to his presence without paying him homage. Malcolm offered this in the same manner as had been done by his predecessors, that is, on the confines of the two kingdoms ; but, this being rejected by William, Malcolm returned to

Scotland in a rage, and again prepared for war.

The first of Malcolm's military operations now

proved fatal to him; but the circumstances of

his death are variously related. According to

the Scottish historians, having laid siege to Aln-

wick, he reduced the place to such straits that a

knight came out of the castle, having the keys on

the point of a spear, and, pretending that he de-

signed to lay them at Malcolm's feet, ran him

through the eye with the spear as soon as he came within reach. Prince Edward, the king's eldest

son, was mortally wounded in attempting to re-

venge his father's death. The English historians,

on the other hand, contend that the Scots were

surprised in their camp, their army entirely de-

feated, and their king killed. On this occasion

the Scottish historians also inform us that the

family of Piercy received its name; the knight

who killed the Scottish king having been sur-

named Pierce-eye, from the manner in which he

gave that monarch the fatal stroke. Queen Mar-

garet, who was at that time lying ill in the castle of Edinburgh, died four days after her husband.

On the death of Malcolm Canmore, which

happened in the year 1093, the throne was

usurped by his brother, Donald Bane, or Donald VII., who, notwithstanding the great virtues and glorious achievements of the late king, had been at the head of a strong party during the whole of his reign. The usurper, giving way to the barbarous prejudices of himself and his countrymen, expelled out of the kingdom all the foreigners whom Malcolm had introduced. Edgar himself had long resided at the English court, where he was in high reputation ; and, by his interest there, found means to rescue his nephew young Edgar, the king of Scotland's eldest son, out of the hands of the usurper Donald Bane. The favor he showed to him, however, produced an accusation against himself, as if he designed to adopt young Edgar as his son, and set him up as a pretender to the English throne. This accusation was preferred by an Englishman whose name was Orgar ; but, as no legal proofs could be obtained, the custom of the times rendered a single combat between the parties unavoidable. Orgar was one of the strongest and most active men in the kingdom ; but the age and infirmities of Edgar allowed him to be defended by ano-

ther. For a long time none could be found who would enter the lists with this champion ; but at last one Godwin of Winchester, whose family had been nnder obligations to Edgar or his ancestors, offered to defend his cause. Orgar was overcome and killed ; and, when dyjng, confess

ed the falsehood oJ' nis accusation. The conqueror obtained all the lands of his adversary, and William lived ever afterwards on terms of the strictest friendship with Edgar. This combat, trifling as it may seem to us, produced very considerable effects. The party of Edgar and his brothers (who had likewise taken refuge at the English court) revived in Scotland to such a degree that Donald was obliged to call in the Danes and Norwegians to his assistance. In order to engage them more effectually, the usurper yielded up to them the Orkney and Shetland islands ; but, when hio iww allies came to his assistance, they behaved in such a manner as to become more intolerable to the Scots than ever the English had been. This discontent was

greatly increased when it was found that William designed to place on the throne of Scotland a natural son of the late Malcolm, named Duncan, who had served with reputation in the English armies. Donald attempted to maintain himself on the throne by the assistance of his Norwegian allies ; but, being abandoned by the Scots, he was obliged to fly to the isles, to raise more forces : in the meantime Duncan II. was crowned at Scone with the usual solemnity. The Scots were now greatly distressed by two usurpers who contended for the kingdom. One of them however was soon despatched. Malpedir, thane of Mearns, surprised Duncan in the castle of Monteith, and killed him ; after which he replaced Donald VII. on the throne. But the affection of the Scots was by this time entirely alienated from Donald, and a manifest intention of calling in young Edgar prevailed. To prevent this, Donald offered the young prince all that part of Scotland which lay south of the Forth ; but the terms were rejected, and the messengers who brought them were put to death as traitors. The king of England also, dreading the neighbour-

hood of the Norwegians, interposed in young Edgar's favor, and gave Atheling the command of an army to restore him. Donald prepared to oppose his enemies with all the forces he could raise ; but, deserted by the Scots, he was obliged to flee; and his enemies pursued him so closely that he was soon taken. Being brought before Edgar, he ordered his eyes to be put out, and condemned him to perpetual banishment, in which he died some time after. The credulous historians of this period tell us that this revolution was owing to St. Cuthbert, who appeared to Edgar, informing him that he should prove victorious, if he received his banner from the hands of the canons ; which he accordingly did. During his reign a strict friendship subsisted between the courts of England and Scotland ; owing to the marriage of Henry I. of England with the princess Matilda, sister to Edgar. This has given occasion to the English historians to assert, that Edgar held the kingdom rf Scotland as a feudatory of Henry. A seal has been forged of Edeˆar sitting on horseback, with a sword in his right hand, and a shield on his left arm, with a

border of France : this last circumstance is a sufficient proof of the forgery. After a reign of nine years, Edgar died at Dundee, in 1107 ; and was succeeded by his brother Alexander I. surnamed the Fierce, from the impetuosity of his temper. On his accession to the throne, however, the Scots were so ignorant of his true character, on account of his appearance of piety and devotion, that the northern parts of the kingdom were soon filled with bloodshed, by the wars of the chieftains. Alexander immediately raised an army, and, marching into Moray and Ross-shire, attacked the insurgents separately ; and, having subdued them all, put great numbers of them to death. He then set himself to reduce the exorbitant power of the nobles. A remarkable instance of this appeared on his return from this expedition. In passing through the Mearns, he met with a widow who complained that her husband and son had been put to death by the young earl their superior. Alexander immediately alighted from his horse, aud swore that he would not remount him till lie had enquired into the justice of the complaint; and, finding

it to be true, the offender was hanged on the spot. These vigorous proceedings prevented all attempts at rebellion ; but produced many conspiracies among the profligate part of his subjects. The most remarkable of these took place while the king was engaged in building the castle of Bal-Edgar, so called in memory of his brother, who had laid the foundation. It was situated in the Carse of Cowrie, which formerly belonged to Donald Bane, but came to the crown, either by donation or forfeiture. The conspirators bribed one of the king's chamberlains to introduce them at night into tl>e royal bedchamber; but Alexander, alarmed at the noise, drew his sword and killed six of them : after which, by the help of a knight named Alexander Carron, he escaped the danger, by fleeing into Fife. The conspirators chiefly resided in the Mearns, to which Alexander once more repaired, at the head of an army ; but the rebels retreated northwards, and crossed the Spey. The kinj pursued them across that river, defeated them, and brought to justice all that fell into his hands. In this battle Carron distinguished himself so eminently that he obtained the name of Skrim-

geour or Scrimzeour, i. e. skirmisher or fighter.

The next remarkable transaction of Alexander's reign was his journey into England, where he visited Henry I., whom he found engaged in a war with the Welsh. Henry had planted a colony of Flemings on the borders of the principality, to keep that turbulent people in awe, as well as to introduce into his kingdom the manufactures for which the Flemings were famous. The Welsh, jealous of this colony, invaded England ; where they defeated the earl of Chester and Gilbert Strongbow, the two most powerful of the English subjects. Alexander, in virtue of the fealty which he had sworn for the English possessions, readily agreed to lead an army into Wales. There he defeated one of the chieftains, and reduced him to great straits ; but could not prevent him from escaping to Griffith, prince of North Wales, with whom he was closely allied. Henry also marched against the enemy, but with much worse success in the field than Alexander; for he lost two-thirds of his army, with almost his whole bagu;n>'e, by fatigue, famine, and the attacks of the Welsh. This loss, however, he made up i; some measure by his policy; for having

raised a jealousy between the two Welsh chiefs, he induced them to conclude a peace, but not without restoring all his lands to the one, and paying a considerable sum of money to the other. Alexander married Sibylla, daughter of William duke of Normandy ; but died without issue in 1124, after a reign of seventeen years, and was buried at Dunfermline.

Alexander, dying a bachelor, was succeeded by his youngest brother David ; who interfered in the affairs of England, and took part with the empress Maud in the civil war she carried on with Stephen. In 1136 David met his antagonist at Durham ; but, as neither party cared to venture an engagement, a negociation took place, and a treaty was concluded. This, however, was not long observed ; for, in 1137, David again invaded England, defeated Stephen at Roxburgh, and forced him to retreat precipitately, after losing one-half of his army. Next year he renewed his invasion ; and, though he himself was a man of great mildness and humanity, he suffer-

ed his troops to commit such outrages as firmly united the English in opposition to him. His grand nephew William cut in pieces the vanguard of the English army at Clithero; after which he ravaged the country with such cruelty that the inhabitants became exasperated beyond measure against him. New associations were entered into against the Scots ; and the English army, receiving great reinforcements from the southward, advanced to Northallerton, where the famous standard was produced. The body of this standard was a kind of box which moved upon wheels, from which arose the mast of a ship surmounted by a silver cross, and round it were hung the banners of St. Peter, St. John de Beverly, and St. Wilfred. Standards of this kind were common at that time on the continent ; and so great confidence had the English in this standard that they now thought themselves invincible. They had, however, a much more solid ground of confidence, as being much better armed than their antagonists. The armies met at a place called Culton Moor. The first line of the Scots army was composed of the inhabitants

of Galloway, Carrie, Kyle, Cunningham, and Renfrew. These, by some historians, are called Picts, and are said to have had a prince of their own, who was a feudatory to David. The second line consisted of Lothian men, by which we are to understand the king's subjects in England as well as the south of Scotland, together with the English and Normans of Maud's party. The third line was formed of the clans under their different chieftains, but who were subject to no regular command, and were always impatient to return to their own country when they had acquired any booty. The English soldiers, having ranged themselves round their standard, dismounted from their horses, to avoid the long Jances which the first line of the Scottish army carried. Their front line was intermixed with archers ; and a body of cavalry, ready for pursuit, hovered at some distance. The Picts, besides their lances, made use of targets ; but, when the English closed with them, they were soon disordered and driven back upon the centre, where David commanded in person. His son made a gallant resistance, but was at last forced to yield : the last line seems never to have been en-

gaged. David, seeing the victory decided against him, ordered some of his men to save themselves by throwing away their badges, which it seems Maud's party had worn, and mingling with the English; after which he himself, with his shattered forces, retreated towards Carlisle. The English historians say that in this battle the Scots were totally defeated, with the loss of 10,000 men ; but this seems not to be the case, as the English did not pursue, and the Scots were in a condition for carrying on the war next year. However, there were now no great exploits performed on either side ; and a peace was concluded, by which Henry, prince of Scotland, was put in possession of Huntingdon and Northumberland, and took an oath of fealty to Stephen. David built no fewer than fifteen abbeys : viz. at Holyrood-house, Kelso, Jedburgh, Melrose, Newbottel, Cambuskenneth, Dundrennan, Holm-Cultrane, Kinloss, Dunfermline, Holme in Cumberland, Carlisle, North Berwick, and two at Newcastle ; and founded four bishoprics. His son prince Henry died before him, leaving three sons and three daughters. David,

called also, from his piety, St. David, continued faithful to his niece the empress as long he lived; and died at Carlisle in 1153, after a glorious reign of above twenty-nine years.

David was succeeded by his grandson Malcolm IV., surnamed the Maiden, on account of his continence. He suppressed several rebellions, banished many of the turbulent Murrays, built the abbeys of St. Andrew's and Cupar in Angus, and died at Jedburgh, in the twelfth year of his reign, A. D. 1165. He was succeeded by his brother William I., surnamed the Lion, who immediately entered into a war with Henry II. of England, on account of the earldom of Northumberland, which had been given up by Malcolm; but Henry, finding his affairs in a very embarrassed situation, consented to yield up this county on William's paying him homage, rather than continue the miseries of war. In 1172 he attempted to avail himself of tne unnatural war which Henry's sons carried on against their father, and invaded England. He divided his army into three columns ; the first of which laid siege to Carlisle ; the second he himself led into Northumberland ; and the king's brother, David,

advanced with the third into Leicestershire. William reduced the castles of Burgh, Appleby, Warkworth, and Garby, and then joined that division of his army which was besieging Carlisle. The place was already reduced to such straits that the governor had agreed to surrender it by a certain day, provided it was not relieved before that time; on which the king, leaving some troops to continue the siege, invested a castle with some of the forces he had under his command, at the same time sending a strong reinforcement to his brother David ; by which means he himself was left with a very small army, when he received intelligence that a strong body of English under Robert de Stuterville and his son were advancing to surprise him. William, sensible of his inability to resist them, retired to Alnwick, to which he instantly laid siege; but

acted in such a careless manner that his enemies, having dressed a party of their soldiers in Scottish habits, took him prisoner, and carried him, with his feet tied under the belly of a horse, to Richmond Castle. He was then carried in

chains before Henry to Northampton, and or-

dered to be transported to the castle of Falaise in Normandy, where he was shut up with other

state prisoners. Soon after this an accommoda-

tion took place between Henry and his sons, and

the prisoners on both sides were set at liberty,

William only excepted, who bore his confinement

with great impatience. Of this Henry took the

advantage, to make him pay homage for the

whole kingdom of Scotland, and acknowledge

that he held it only as a feu of the crown of Eng-

land ; and, as a security, he was obliged to de-

liver into the hands of Henry all the principal

forts in Scotland : viz. the castles of Roxburgh,

Berwick, Jedburgh, Edinburgh and Stirling;

William at the same time agreeing to pay the

English garrisons which were put into these

castles. David, the king's brother, and twenty

barons, who were present at the signing of this

shameful convention, were put into the hands of

Henry as hostages for William's good faith ; after

which the king was set at liberty, and returned to Scotland. The affairs of Scotland were now in

the greatest confusion. The people of Galloway,

at the head of whom were two princes, called

Othred and Gilbert, had taken the opportunity of asserting their independency on the crown of Scotland ; and, having expelled all the Scottish officers out of the country, they demolished the forts which William had erected, and put to death all the foreigners. But, a quarrel ensuing between them, Othred was murdered by Gilbert, who applied to Henry for protection. Henry, to give all possible sanction to the convention betwixt him and William, summoned him to meet him and his son at York. William obeyed the summons, and along with him appeared all the great nobility and landholders; who confirmed the convention of Falaise, swore fealty to Henry, and put themselves and their country under his protection. In the mean time Gilbert, who was at the head of the rebels in Galloway, had offered to put himself and bis people under the protection of Heury, and to pay to him '2000 merks of silver yearly, with 500 cows and as many hogs ; but Henry, that he might oblige his new feudatory William, refused to have any concern with Gilbert. On this William ordered his general Gilchrist to march against him ; which he

did with such success that Gilbert was entirely defeated, and Galloway again reduced under the dominion of Scotland. Very soon after this victory Gilchrist fell under the king's displeasure on the following occasion : He had married Matilda, sister to William ; and, on suspicion or proof of her incontinence, put her to death at a village called Maynes, near Dundee. The king, being highly displeased at such a gross affront to himself, summoned Gilchrist to take his trial for the murder; hut, as the general did not choose to make his appearance, his estates were confiscated, his castles demolished, and himself banished. He took refuge in England ; but as it had been agreed in the convention between William and Henry that the one should not harbour the traitorous subjects of the other, Gilchrist was forced to return to Scotland with his two sons. There they were exposed to all the miseries of indigence, and in perpetual fear of being discovered, so that they were obliged to skulk from place to place. William, on his return from an expedition against a usurper whom he had defeated, observed three strangers, who, though disguised like rustics, appeared to be above the vulgar rank.

William was confirmed in this apprehension by seeing them strike out of the high road, and endeavour to avoid notice. He ordered them to be seized and brought before him. The oldest, who was Gilchrist himself, fell upon his knees before him, and gave such a detail of his misfortunes, as drew tears from the eyes of all present ; and the king restored him to his former honors and estates. From the family of this Gilchrist that of the Ogilvies is descended. The Scots continued in subjection to the English until the accession of Richard I. This monarch, being a man of romantic valor, zealously undertook an expedition into the Holy Laud against the Turks. That he might secure the quiet of his dominions in his absence, he determined to make the king of Scotland his friend ; and, for this purpose, bethought nothing could be more acceptable than releasing him and his subjects from that subjection which even the English themselves considered as unjust. However, he determined not to lose this opportunity of supplying himself with a sum of money, which was absolutely necessary in such an expensive and dangerous undertaking. He therefore made William pay him 10,000 merks for this

release ; after which he entered into a convention, which is still extant, acknowledging that ‘ all

the conventions and acts of submission from

William to the crown of England had been ex-

torted from him by unprecedented writings and

duresse.’ This transaction happened in 1189.

The generosity of Richard met with a grateful

return from William; for when Richard was

imprisoned by the emperor of Germany in his

return from the Holy Land, the king of Scotland

sent an army to assist his regency against his re-

bellious brother John, who had wickedly usurped

the throne of England. For this Richard owned

bis obligation in the highest degree; and the two

monarcbs continued in friendship as long as

Richard lived. Some differences happened with

king John about the possession of” Northumber-

land and other northern counties; but these were

all finally adjusted, to the mutual satisfaction of

both parties ; and William continued a faithful

ally of the English monarch till his death, which

happened in 1214, after a reign of forty-nine

years.

William was succeeded by his son Alexander

II., a youth of sixteen. He revived his claim to

Northumberland and the other northern counties of England ; but John, supposing that he had now thoroughly subdued the English, not only refused to consider the demands of Alexander, but made preparations for invading Scotland. John had given all the country between Scotland and the river Tees to Hugh de Baliol and another nobleman, upon condition of their defending it against the Scots. Alexander f»'ll upon Nor-

thumberland, which he easily reduced, while John invaded Scotland. Alexander retired to Melrose to defend his own country ; upon which John burnt the towns of Wark, Alnwick, and Morpeth, and took the strong castles of Roxburgh and Berwick. He next plundered the abbey of Coldingham, reduced Dunbar and Haddington, ravaging the country as he passed along. His next operation was directed against Edinburgh ; but, being opposed by Alexander at the head of an army, he precipitately marched back. Alexander pursued, and John, to cover his retreat, burnt the towns of Berwick and Coldingham.

In this retreat John set his men an example of barbarity, by setting fire every morning to the house in which he had lodged the preceding night. In short, such desolation did he spread all around him, that Alexander found it impossible to continue his pursuit; for which reason lie marched west%vard, and invaded England by the way of Carlisle. This town he took and fortified ; after which he marched south as far as Richmond, receiving homage from all the great oarons as he went along. At Richmond he was again stopped by John's ravages, and obliged to return through Westmoreland to his own dominions. When the English barons found it necessary to put themselves under the protection of Louis, son to the king of France, that prince, among other acts of sovereignty, summoned Alexander to do him homage ; but the latter, being then engaged in the siege of Carlisle, which had fallen into the hands of king John, could not attend. In a short time Alexander found himself obliged to abandon this enterprise; after which he laid siege to Barnard castle; but, being baffled here also, marched southwards through

the whole kingdom of England, and met Louis at London or Dover, where the prince confirmed to him the rights to Northumberland, Cumberland, and Westmoreland. He continued a faithful ally to Louis and the barons in their wars with John; and in 1216 brought a fresh army to their assistance, when their affairs were almost desperate. This once more turned the scale against John ; but, he soon after dying, the English easily became reconciled to the government of Henry III., and the party of Louis dwindled every day, till at last he was obliged to drop all thoughts of being king of England. As long as Louis continued in England, Alexander proved faithful to his interest ; but in 1217 he was on such good terms with Henry as to demand his eldest sister, the princess Jane or Joan, for a wife. His request was granted, and in 1221 he espoused the princess, while his eldest sister Margery was married to Hubert de Burgh, justiciary of England, and his second sister to Gilbert earl marshal, the two greatest subjects in England. As long as the queen of Scotland lived, a perfect harmony subsisted between the Scots and English ; but in 1239 queen Joan died*

without children, and Alexander soon after married Mary, the daughter of Egelrand de Courcy, a young and beautiful French lady, by whom he had a son named Alexander, in 1241. From this time a coolness took place between the two courts, and many differences arose ; but no hostilities were commenced on either side during the life of Alexander, who died in 1249, in the thirty-fifth year of his reign.

Immediately after the death of his father, Alexander III. took possession of the throne. He is the first of the Scottish kings of whose coronation we have any particular account. The ceremony was performed by the bishop of St. Andrew's, who girded the king with a military belt, probably as an emblem of his temporal jurisdiction. He then explained in Latin, and afterwards in Gaelic, the laws and oaths relating to the kingdom ; and the monarch received them all with great appearance of joy, as he also did the benediction and ceremony of coronation. After the ceremony was performed, a Highlander repeated on his knees before the ' throne, in Gaelic, the genealogy of Alexander and his an-

cestors, up to Fergus I., or perhaps Gathelus.

In 1250 the king, though only ten years of age,

was married to the daughter of Henry, who now

thought it a proper opportunity to cause him to

do homage for the whole kingdom of Scotland.

But Alexander, notwithstanding his youth, re-

plied with great sense and modesty that his

business in England was matrimony ; that he had

come thither under Henry's protection and invi-

tation ; and that he was no way prepared to

answer such a difficult question. Henry seems

to have been encouraged to make this attempt by

the distracted state of the Scottish affairs at that time ; for, during the minority of the king, the

nobility threw every thing into confusion by their

dissensions. The Cummins were now become

exceedingly powerful; and Alexander II. is

blamed by Buchanan for allowing them to obtain

such an exorbitant degree of power, by which

they were enabled almost to .shake the founda-

tions of government. Though the king had r –

fused to do the homage required of him, they

imagined that Henry's influence was now too

great ; and, fearing bad consequences to them-

selves, they withdrew from York, leaving Henry

in full possession of his son-in-law's person

Henry, however, to show that he deserved all the

confidence which could be reposed in him, pub-

licly declared, that he dropped all claim of su-

periority with regard to the crown of Scotland,

and that he would ever afterwards act as the

father and guardian of his son-in-law ; confirm-

ing his assurances by a charter. Yet, when

Alexander returned to Scotland, he found they

had made a strong party against his English

connexions. They now exclaimed that Scot-

land was no better than a province of England ;

and, having gained almost all the nobility over to

this opinion, they kept the king and queen an

state prisoners in the castle of Edinburgh. Henry

got intelligence of these proceedings; and his

queen privately sent a physician whom she could

trust, to enquire into her daughter's situation.

Having got admittance into the young queen's

presence, she gave him a most lamentable account

of her situation. She said that the place of their confinement was very unwholesome, in conse-

quence of which their health was in imminent

danger; and that they had no concern in the

affairs of government. Historians inform us

that the Cummins usurped the whole power of the state. Henry did not well know how to act.

If he proceeded at once to v'olent measures, he was afraid of the lives of his daughter and son-in-law; and, on the other hand, by a more cautious conduct, he left them exposed to the wicked attempts of those who kept them in thraldom, some of whom, he knew, had designs on the crown. By advice of the Scottisli royalists, among whom were the earls of Dunbar, Fife, Stratherne, Carrick, and Robert Bruce, Henry assembled his military tenants at York, whence he himself advanced to Newcastle, where he published a manifesto, disclaiming all designs against the peace or independency of Scotland ; declaring that the forces which had been collected at York were designed to maintain both; and that all he meant was to hare an interview with the king and queen upon the borders. From Newcastle he proceeded to Wark, where he privately despatched the earl of Gloucester, with his favorite John Mansel, and a train of trusty

followers, lo gain admission into the castle of Edinburgh, which was then held by John Baliol and Robert Ross, noblemen of great influence both in England and Scotland. The earl and Mansel gained admittance into the castle, in disguise, on pretence of their being tenants to Baliol and Ross ; and their followers obtained access on the same account, without suspicion, till they were sufficiently numerous to have mastered the garrison, had they met with resistance. The queen immediately informed them of the thraldom and tyranny in which she had been kept ; and among other things declared that she was still a virgin, as her jailors obliged her to sleep separate from her husband. The English, being masters of the castle, ordered a bed to be prepared that very night for the king and queen ; and Henry, hearing of the success of his party, sent a safe conduct for the royal pair to meet him at Alnwick. Robert Ross was summoned by Henry to answer for his conduct ; but, throwing himself at the king's feet, he was punished only by the sequestration of his estate, as was John Baliol, by a heavy fine, which the king of England reserved

entirely to his own use. Alexander and his queen were attended to Alnwick by the heads of their party ; aud when they arrived it was agreed that Henry should act as his son-in-law's guardian ; in consequence of which several regulations were made to suppress the exorbitant power of the Cummins. That ambitious family, how-ever, were all this time privately strengthen-ing their party in Scotland, though they out-wardly appeared satisfied with the arrangements made. This rendered Alsxander secure ; so that, being off his guard, he was surprised when asleep in the castle of Kinross, by the earl of Menteith, who carried him to Stirling. The Cummins were joined in this treason by Sir Hugh Abernethy, Sir David Lochore, and Sir Hugh Barclay ; and, in the mean time, the whole nation was thrown into the utmost confusion. The great seal was forcibly taken from Robert Stuterville, substitute to the chancellor the bishop of Dunkeld ; the estates of the royalists were plundered ; and even the churches were not spared. The king at last was delivered by the death of the earl of Monteith, who is said to have been poisoned by his wife to gratify her passion for a young English gentle-

man named John Russel. The earl died at a juncture very critical for Scotland, and his death disconcerted all the schemes of his party, which never aftervards could make head against the royalists. Alexander, being thus restored to the exercise of regal authority, acted with great wi«-dom and moderation. He pardoned the Cum-mins and their adherents, upon their submitting to his authority ; after which he applied him-self to the regulation of his other affairs ; but a storm was now ready to break upon him from another quarter. The usurper Donald Bane, brother to Malcolm Canmore, had engaged to de-liver up the isles of Orkney and Shetland to the king of Norway, for assisting him in making good his pretensions to the crown of Scotland. Haquin, the king of Norway, at this time alleged that these engagements extended to the deliver-ing up the islands of Bute, Arran, and others in the Frith of Clyde, as belonging to the Western isles ; and, as Alexander would not comply with these demands, Haquin appeared with a fleet of 160 sail, having on board 20,000 troops, who landed and took the castle of Ayr. Alexander immediately despatched ambassadors to treat

with Haquin ; but the latter, flushed with success, would hearken to no terms. He made himself master of the isles of Bute and Arran ; after which he passed over to Cunningham. Alexander divided his army into three bodies : The first was commanded by Alexander, high steward of Scotland (the great grandfather of Robert II.), and consisted of the Argyle, Athol, Lenox, and Galloway men. The second was composed of the inhabitants of Lothian, Fife, Merse, Berwick, and Sterling, under Patrick earl of Dunbar. The king himself led the centre, which consisted of the inhabitants of Perthshire, Angus, Mearns, and the northern counties. Haquin, who was an excellent commander, disposed his men in order of battle, and the engagement began at a place called Largs. Both parties fought with great resolution ; but at last the Norwegians were defeated with dreadful slaughter, no fewer than 16,000 of them being killed on the spot. The remainder escaped to their ships; which were so completely wrecked, the day after, that Haquin could scarcely find a vessel to carry him with a few friends to Orkney, where he

soon after died of grief. In consequence of this victory, Owen king of the Isle of Man submitted to Alexander ; and his example was fol-

lowed by several other princes of the Norwegians. Haquin's son, Magnus, a wise and learned prince, soon after arrived in Scotland with fresh reinforcements, and proposed a treaty ; but Alexander, instead of listening to an accommodation, sent the earls of Buchan and Murray, with Alan the chamberlain, and a considerable body of men to the Western Islands, where they put to the sword some of the inhabitants, and hanged their chiefs for having encouraged the Norwegian invasion. In the mean time Magnus returned to Norway : where a treaty was at last concluded between him and Alexander. By this Magnus renounced all right to the contested islands ; Alexander at the same time consenting to pay him 1000 merks of silver in the space of two years, and 100 yearly ever after, as an ac-

knowledgment for these islands. To cement the friendship more firmly, a marriage was concluded between Margaret the daughter of Alexander, and Eric the son and heir of Magnus, who was also a child ; and, some years after, when the parties

were of proper age, the marriage was consummated. From tliis time to the accession of Edward I. of England, we find nothing remarkable in the history of Scotland. That prince, however, proved a more cruel enemy to this country than it had ever experienced. Alexander was present at the coronation of Edward, who was then newly arrived from the Holy Land, where he had been on a crusade. Soon after this Alexander paid him homage for his English estates; particularly for the lands and lordship of Penrith and others, which Henry had given him along with his daughter. He proved an excellent ally to Edward in his wars against the French ; and the latter passed the charter by which he acknowledged that the services of the king of Scotland in those wars were not in consequence of his holding lands in England, but as an ally to his crown. Even at this time, however, Edward had formed a design on the liberties of Scotland ; for, in the charter just mentioned, he inserted a salvo, acknowledging the superiority by which he reserved his right to the homage of the king of Scotland, when it

should be claimed by him or his heirs. The bishop of Norwich suggested this salvo : and this was the reason why Alexander would not perform the homage in person, but left it to be performed by Robert Bruce earl of Carrick ; Alexander standing by, and expressly declaring that it was only paid for the lands he held in England. No acts of hostility, however, took place during the life of Alexander, who was killed on the 19th of March, 1285, in the forty-fifth year of his age, by his horse rushing down the black rock near Kinghorn as he was hunting.

IV. HISTORY OF SCOTLAND TO THE DEATH OF JAMES V. — Both before and after the death of Alexander, the great subjects of Scotland seemed to have been sensible of Edward's ambitious designs. On the marriage of Margaret with Eric prince of Norway, the states of Scotland passed an act obliging themselves to receive her and her heirs as queen and sovereigns of Scotland. Edward at that time was in no condition to oppose this measure, in which the Scots were unanimous; and therefore contented himself with forming factions among the leading men of

the country. Under pretence of resuming the cross, he renewed his intrigues at the court of Rome, and demanded leave from the pope to collect the tenths in Scotland ; but his holiness replied that he could make no such grant without the consent of the government of Scotland. On the death of Margaret, queen of Norway, her daughter, in consequence of the act above-mentioned, was recognised by the states as queen of Scotland. As she was then but two years old, they came to the resolution of excluding from all share in the government, not only Edward I. but their queen's father ; and they accordingly established a regency from among their own number, consisting of the six following noblemen ; viz. Robert Wishart bishop of Glasgow, Sir James Cummin of Badenoch, senior, James lord high steward of Scotland, who were to have the superintendancy of all that part of Scotland which lies south of the Forth ; William Fraser bishop of St. Andrew's, Duncan M'DufF earl of Fife, and Alexander Cummin earl of Buchan, who were to hare the direction of all affairs north of that river. With these arrange-

ments Eric was exceedingly displeased, as considering himself as the only rightful guardian of his own child. He therefore cultivated a good correspondence with Edward, from whom he had received considerable pecuniary favors ; and, perceiving that the states of Scotland were unanimous in excluding all foreigners from the management of their concerns, he fell in with the views of the king of England, and named commissioners to treat with those of Edward upon the Scottish affairs. These negotiations terminated in a treaty of marriage between the queen of Scotland and Edward prince of Wales, young as they both were. This alarmed the states of Scotland, who resolved not to suffer their queen to be disposed of without their consent. It was therefore agreed by the commissioners on both sides, to acquaint them with the result of their conference, and to demand that a deputation should be sent up for settling the regency of Scotland, or, in other words, for putting the sovereign power into the hands of the two kings. As the two parties, however, were within the prohibited degrees of consanguinity, being first

cousins, a dispensation was applied for to pope Boniface, who granted it on the condition that the peers of Scotland consented to the match. Though the Scottish nobility were very much against this match, they could not refuse their consent to it when proposed by the father and grand-uncle of their young queen. They therefore appointed the bishops of St. Andrew's and Glasgow, with Robert Bruce lord of Annandale, and John Cummin, to attend as their deputies, but with a salvo to all the liberties and honors of the realm of Scotland ; to which Edward agreed.

These deputies met at Salisbury with those of England and Norway ; and it was at last agreed, 1. That the young queen should be sent from Norway (free of all marriage engagements) into England or Scotland. 2. That if the queen came to England she should be at liberty to repair to Scotland as soon as the distractions of that kingdom should he settled : that she should, on her arrival in her own dominions, be free of all matrimonial contracts ; but that the Scots should engage not to dispose of her in marriage without her father's or Edward's consent. 3. The Scottish deputies promised to give such security

as the Norwegian commissioners should require, that the tranquillity of the nation should be settled before her arrival. 4. That the commissioners of Scotland and Norway, joined with commissioners from England, should remove such regents and officers of state in Scotland as should be suspected of disaffection, and place others in their stead. If the Scott.sh and Norwegian commissioners should disagree on that or any other head relating to the government of Scotland, the decision was to be left to the arbitration of Enarlish commissioners. The party of Edward was

now so strong in Scotland that no opposition was made to the late agreement, in a parliament held at Brechin to deliberate upon the settlement of the kingdom. It is uncertain whether he communicated in form to the Scottish parliament the pope's dispensation for the marriage ; but they highly approved of it upon certain conditions to which Edward was previously to agree ; but the latter, without waiting to perform any condition, immediately sent for the young

queen from Norway. This exceedingly displeased Eric, who was not inclined to put his daughter into the hands of a prince whose sincerity he suspected, and therefore shifted off the departure of the princess till he should hear farther from Scotland. Edward, alarmed at this, had again recourse to negociation ; and ten articles were at last drawn up, in which the Scots took all imaginable precautions for the safety and independency of their country. These articles were ratified by Edward on the 28th of August, 1289; yet, even after the affair of the marriage was fully settled, he lost no time in procuring as strong a party as he could. At the head of these were the bishop of St. Andrew's and John Baliol. That prelate, while he was in England, was highly caressed by Edward, from whom he had great expectations of preferment ; and Baliol, having great estates in England, considered the latter as his sovereign. The bishop, on his return to Scotland, acted as a spy for Edward, and carried on with him a secret correspondence, informing him of all public transactions. It appears from this correspondence that the Scots were far from being unanimous as to the

marriage. Bruce earl of Annandale suspected that the young queen was dead ; and, soon after Michaelmas 1290, assembled a body of forces, and was joined by the earl of Mar and Athol. Intelligence of these commotions was carried to Edward by Baliol ; and the bishop of St. Andrew's advised Edward, in case the report of the queen's deatli should prove true, to march a body of troops towards Scotland, to secure such a successor as he thought proper. Edward, in the mean time, consented to allow ambassadors to be sent from Scotland to bring over the young queen ; previous to which he appointed the bishop of Durham to be lieutenant in Scotland for the queen and her future husband ; and all the officers there, both civil and military, obliged themselves to surrender their employments and fortresses to the king and queen (that is, to Edward) immediately on their arrival in Scotland. But, while the most magnificent preparations were making for the reception of the young queen, certain intelligence of her death was received.

The Scots were thrown into the utmost consternation by the news of their queen's death ; while

Edward was as well prepared as if he had known what was to happen. The state of Scotland at this time indeed was to the last degree deplorable. The act of succession established by the late king had no farther operation, being determined by the death of the queen ; and, since the crown was rendered hereditary, there was no precedent by which it could be settled. The Scots, in general, however, turned their eyes upon the posterity of David earl of Huntingdon, brother to the two kings, Malcolm IV. and William I., both of whom died without lawful issue. The earl had three daughters ; Margaret, the eldest, was married to Alan lord of Galloway ; the only issue of which marriage was Dervegi), wife to John Baliol, who had a son John, a competitor for the crown. The second daughter, Isabella, was married to Robert Bruce; and their son Robert was a candidate likewise. The third daughter, Ada, had been married to Henry Hastings, an English nobleman. John Hastings, the son of this marriage, was a third competitor ; but, as his claim was confessedly the worst of the three, he only put in for a third of the kingdom, on the principle that his mother

was joint-heir with her two sisters. Several other claimants now started up. Florence earl of Holland pretended to the crown, in right of his great-grandmother Ada, the eldest lawful sister of king William ; as did Robert de Pynkeny, in the right also of his great-grandmother Marjory, second sister of king William. Six other claimants appeared, very absurdly founding upon their descent from bastards of king William and Alexander II. and III. John Cummin lord of Badenoch derived his claim from a more remote source, viz. Donald Bane, who usurped the crown about 200 years before this time ; but he was willing to resign in favor of John Baliol. The latter indeed had surely the best right ; and, had the succession been regulated as it now is in all hereditary kingdoms, he would undoubtedly have carried it. Bruce and Hastings, however, pleaded that they were preferable, not only to John Baliol the grandchild of Margaret, but also to Dervegil her daughter and his mother, for the following reason : Dervegil and they were equally related to their grandfather earl David : she was indeed the daughter of his eldest

daughter ; but she was a woman, they were men ; and the male in the same degree ought to succeed to sovereignties, in their own nature impartible, preferably to the female. Notwithstanding this number of candidates, however, it was soon perceived that the claims of all of them might be cut off, excepting two, viz. Baliol and Bruce, of whom the former had the preference with respect to hereditary right, and the latter as to popularity. Baliol had strongly attached himself to Edward's party ; which, being by far the most powerful in Scotland, gave him a decided superiority over Bruce. The event was that Edward, by his own party most probably, was appointed to decide between the two competitors. It soon appeared, however, that Edward had no mind to adjudge the crown to any person but himself; for, in an assembly held at Norham on the 10th of May 1291, Brabanzon the chief justice of England informed the members : ' That his master was come thither in consideration of the state of the realm of Scotland, which was then without a king, to meet them, as direct sovereign of that kingdom, to do justice to the

claimants of his crown, and to establish a solid

tranquillity among his people ; that it was not

his intention to retard justice, nor to usurp the

riqht of any body, or to infringe the liberties of the kingdom of Scotland, but to render to every

one his due. And, to the end this might be done

with the more ease, he required the assent of

the states ex abundante, and that they should

own him as direct sovereign of the kingdom ;

offering, upon that condition, to make use of

their counsels to do what justice demanded.'

The deputies were astonished at this declaration,

and replied that they were by no means pre-

pared to decide on Edward's claim of superi-

ority ; but that Edward ought previously to

judge the cause between the two competitors,

and require homage from him whom lie should

choose to be king. Edward gave them till next

day to consider of his demand. Accordingly,

on that day, the assembly was held in Norham

church, where the deputies from Scotland in-

sisted upon giving no answer to Edward's de-

mands, which could be decided only by the

whole community ; representing that numbers of the noblemen and prelates were absent, and that they must have time to know their sense of the affair. On this Edward gave them three weeks ; which interval he employed in multiplying claimants to the crown, and in flattering each with hopes, if he would acknowledge his superiority. But when the assembly met, according to appointment, on the 2d of June, they found the place of meeting surrounded by a numerous army of English. Edward had employed the bishop of Durham to draw up the historical evidence of his right to the crown of Scotland ; which has since been published. In this paper mention is made of the fealty and homage performed by the kings of Scotland to the Anglo-Saxon kings of England ; but no evidence is brought of any such homage being performed. As to the homage performed by the kings of Scotland, from the time of William the Conqueror to that of the dispute between Bruce and Baliol, the Scots never denied it ; but they contended with justice that it was performed for the lands held of the crown of England ; and that it was as far

from any relation to a fealty performed for the crown of Scotland, as the homage paid by the English monarchs to the crown of France was from all relations to the crown of England. With regard to the homage paid by William to Henry II., it was not denied that he performed it for the whole kingdom of Scotland : but they pleaded that it was void, because it was extorted when William was a prisoner; and they produced Richard I.'s charters, which pronounced it compulsive and iniquitous. But Edward was by no means disposed to examine into the merits of these arguments. Instead of this, he closeted the several pretenders to the crown ; and, having found them all ready to comply with his measures, he drew up the following charter of recognition to be signed by them all : ' To all who shall hear this present letter : We Florence earl of Holland, Robert de Bruce lord of Annandale, John Baliol lord of Galloway, John Hastings lord of Abergavenny, John Cummin lord of Badenoch, Patrick de Dunbar earl of March, John Vesci for his father Nicholas Soulis, and William de Ross, greeting in the Lord :

Whereas we intend to pursue our right to the kingdom of Scotland; and to declare, challenge, and aver the same before him that has most power, jurisdiction, and reason to try it ; and the noble prince Edward, by the grace of God king of England, &c., having informed us, by good and sufficient reasons, that to him belongs the sovereign seigniory of the same : We therefore promise that we will hold firm and stable his act; and that he shall enjoy the realm to whom it shall be adjudged before him. In witness whereof, we have set our seals to this writing, made and granted at Norham, the Tuesday after the Ascension, in the year of Grace 1291.'

Edward then declared, by the mouth of his chancellor, that although, in the dispute which was arisen between the several claimants, touching the succession to the kingdom of Scotland, he acted in quality of sovereign, in order to render justice to whomsoever it was due ; yet he did not thereby mean to exclude himself from that hereditary right which in his own person he might have to that crown, and which right he intended to assert and improve when he should

think fit: and the king himself repeated this protestation with his own mouth in French. The candidates were then severally called upon by the English chancellor to know whether they were willing to acknowledge Edward's claim of superiority over the crown of Scotland, and to submit to his award in disposing of the same ; which being answered in the affirmative, they were then admitted to prove their rights. But this was mere matter of form ; for all the force of England was then assembled on the borders to support the claims of Edward, and nothing now remained but to furnish him with a suffi cient pretence for making use of it. Observing that the Scots were not so unanimous as they ought to be in recognising his superiority, and that the submission, which the candidates had signed, was not sufficient to carry it into execution, Edward demanded that all the forts in Scotland should be put into his possession, that he might resign them to the successful candidate. Though nothing could be more shameful than a tame compliance with this last demand of Edward, the regency of Scotland

without hesitation yielded to it also. Gilbert de Umfraville alone, who had the command of the castles of Dundee and Forfar, refused to deliver them up, until he should be indemnified by the states, and by Edward himself, from all penalties of treason which he might be in danger of incurring. But, though Edward had thus got into his hands the whole power of the nation, he did not think proper to determine every thing by his own authority. Instead of this, he appointed commissioners, and promised to grant letters patent declaring that sentence should be passed in Scotland. It had been all along foreseen that the great dispute would be between Bruce and Baliol ; and, though the plea of Cummin was judged frivolous, yet he was a man of too much influence to be neglected, and he agreed tacitly to resign it in favor of Baliol. Edward accordingly made him the compliment of joining him with Baliol in nominating forty commissioners. Bruce was to name forty more ; and the names of the eighty were to be given in to Edward in three days ; after which the king was to add to them twenty-four of his own

choosing. The place and time of meeting were left in their own option. They unanimously pitched upon Berwick for the place of meeting ; but, as they could not agree about the time, Edward appointed the 2d of August following. Soon after this the regents resigned their commissions to Edward ; but he returned them, with powers to act in his name ; and nominated the bishop of Caithness to be chancellor of Scotland ; joining in the commission with him Walter de Hemondesham an Englishman, and one of his own secretaries. Still, however, he met with great difficulties. Many of his own nobles, particularly the earl of Gloucester, were by no means fond of increasing the power of the English monarch by the acquisition of Scotland ; and therefore threw such obstacles in his way that he was again obliged to have recourse to negociation and intrigue, and at last to delay the meeting until the 2d of June in 1292 ; but during this interval, that he might the better reconcile tlie Scots to the loss of their liberty, he proposed a union of the two kingdoms ; and for this he issued a writ

by virtue of his superiority. The commissioners having met on the 2d of June, 1292, ambassadors from Norway presented themselves in the assembly, demanding that their master should be admitted into the number of their claimants, as father and next heir to the late queen. This demand too was admitted by Edward, after the ambassadors had acknowledged his superiority over Scotland ; after which he proposed that the claims of Bruce and Baliol should be previously examined, but without prejudice to those of the other competitors. This being agreed to, he ordered the commissioners to examine by what laws they ought to proceed. The discussion of this question was attended with such difficulty, and the opinions on it were so various, that Edward once more adjourned the assembly to the 12th of October following; when the commissioners urged that Edward ought to give justice conformable to the usage of the two kingdoms ; but that, if no certain laws or precedents could be found, he might, by the advice of his great men, enact a new law. The succession to the kingdom, they said, might be awarded in the

same manner as to other estates and great baro-

nies. Upon this, Edward ordered Bruce and

Baliol to be called before him, and both of them

urged their respective pleas, and answers, to the

following purpose: Bruce pleaded, 1. That

Alexander II., despairing of heirs of his own

body, had declared that he held him to be the

true heir, and offered to prove by the testimony

of persons still alive that he declared this with

the advice and in the presence of the good men

of his kingdom. Alexander III. also had de-

clared to those with whom he was intimate, that,

failing issue of his own body, Bruce was his right heir. The people of Scotland had also taken an

oath for maintaining the succession of the nearest

in blood to Alexander III., who ought of ritrht

to inherit, railing Margaret the maiden of Nor-

way and her issue. — Baliol answered that nothing

could be concluded from the acknowledgment

of Alexander II.; for that he left heirs of his

body ; but made no answer to what was said of

the sentiments of Alexander III., and of the oath

made by the Scottish nation to maintain th« suc-

cession. 2. Bruce pleaded that the right o»

reigning ought to be decided according to the

natural law, by which kings reign ; and not according to any law or usage in force between subject and subject : that, by the law of nature, the nearest collateral in blood has a right to the crown ; but that the constitutions which prevail among vassals bind not the lord, much less the sovereign : that although in private inheritances, which are divisible, the eldest female heir has a certain prerogative, it is not so in a kingdom that is indivisible; there the nearest heir of blood is preferable whenever the succession opens. —To this Baliol replied that the claimants were in the court of their lord paramount ; and that he onght to give judgment in this case, as in the case of any other tenements, depending on his crown, that is, by the common law and usage of his kingdom, and no other. That, by the laws and usages of England, the eldest female heir is preferred in the succession to all inheritances, indivisible as well as divisible. 3. It was unjed by Bruce that the manner of succession to the kingdom of Scotland in former times made for his claim ; for that the brother, as being nearest in degree, was wont to be preferred to the son of the deceased king. Thus, when Kenneth Macalpin died, his brother Donald was preferred to his son Constantine, aud this was con-

firmed by several other authentic instances in the history of Scotland. — Baliol answered that, if the brother was preferred to the son of the king, the example proved against Bruce ; for that the son, not the brother, was the nearest in degree. He admitted that after the death of Malcolm III. his brother usurped the throne : but he contended that the son of Malcolm complained to his liege lord the king of England, who dispossessed the usurper, and placed the son of Malcolm on the throne ; that after the death of that son the brother of Malcolm III. again usurped the throne; but the king of England again dispossessed him, and raised Edgar, the second son of Malcolm, to the sovereignty. 4. Bruce pleaded the example of other countries, particularly Spain and Savoy, where the son of the second daughter excluded the grandson of the eldest daughter. — Baliol answered that examples from foreign countries were of no importance ; for that according to the laws of England and Scotland, where kings reign by succession in the direct line, and earls and barons succeed in like manner, the issue of the younger

sister, although nearer in degree, excludes not the issue of the eldest sister, although more remote ; but the succession continues in the direct line. 5. Bruce pleaded that a female ought not to reign, as being incapable of governing : that at the death of Alexander III. the mother of Baliol was alive; and, as she could not reign, the kingdom devolved upon him, as being the nearest male heir of the blood royal. But to this Baliol replied that Bruce's argument was inconsistent with his claim : for that, if a female ought not to reign, Isabella the mother of Bruce ought not, nor must Bruce himself claim through her Besides Bruce himself had sworn fealty to a female, the maiden of Norway. The arguments being thus stated on both sides, E«lwanl demanded an answer from the council a-; to the

merits of the competitors. He also put the following question to them : by the laws and usages of both kingdoms, does the issue of the eldest sister, though more remote in one degree, exclude the issue of the second sister, though nearer in one degree? or ought the nearer in

one degree, issuing from the second sister, to exclude the more remote in one degree issuing from the eldest sister ? To this it was answered unanimously, that by the laws and usages of both kingdoms, in every heritable succession, the more remote in one degree, lineally descended from the eldest sister, was preferable to the nearer in degree issuing from the second sister. In consequence of this Bruce was excluded from the succession; upon which he entered a claim for one-third of the kingdom : but being baffled in this also, the kingdom of Scotland being determined an indivisible fee, Edward ordered John Baliol to have seisin of Scotland ; with this caveat, however, ‘ That this judgment should not impair his claim to the property of Scotland.’

After so many disgraceful and humiliating concessions on the part of the Scots, John Baliol was crowned king at Scone, on the 30th of November, 1292 ; and finished the ceremony by doing homage to the king of England. All his submissions, however, could not satisfy Edward, as long as the least shadow of inde-

pendence remained to Scotland. A citizen of Berwick appealed from a sentence of the Scottish judges appointed by Edward, in order to carry his cause into England. But this was opposed by Baliol, who pleaded a promise made by the English monarch, that he should ‘ observe the laws and usages of Scotland, and not withdraw any causes from Scotland into his English courts.’ Edward replied, that it belonged to him to hear the complaints made against his own ministers ; and concluded with asserting his right, not only to try Scottish causes in England, but to summon the king of Scotland, if necessary, to appear before him in person. Baliol had not spirit to resist ; and therefore signed a most disgraceful instrument, by which he declared that all the obligations which Edward had come under were already fulfilled, and therefore that he discharged them all. Edward now thought proper to give Baliol some marks of his favor, the most remarkable of which was the sovereignty of the Isle of Man ; ” but it soon appeared that he intended to exercise his own rights in the most provoking manner. Malcolm

earl of Fife had two sons, Colban his heir, and another who is constantly mentioned in history by the family name of Macduff. — It is said that Malcolm put Macduff in possession of the lands of Reres and Crey. Malcolm died in 1266; Colban his son in 1270; Duncan the son of Colban in 1288. To this last earl, his son Duncan, an infant, succeeded. During the nonage of this Duncan, grand-nephew of Macduff, William, bishop of St. Andrew's, guardian of the earldom, dispossessed Macduff. He complained to Edward ; who, having ordered his cause to be tried, restored him again to possession. Matters were in this state when Baliol held his first parliament at Scone, on the 10th of February, 1292, when Macduff was cited to answer for having taken possession of the land of Reres and Crey. As his defences did not satisfy the court, he was condemned to imprisonment ; but an action was reserved to him against Duncan, when he should come of age, and against his heirs. In all his defence, it is surprising that Macduff should have omitted his strongest argument, viz. that the regents, by Edward's authority, had put him

in possession, and that Baliol had ratified all things under Edward's authority. However, as soon as he was set at liberty, he petitioned Baliol for a rehearing ; but, this being refused, he appealed to Edward, who ordered Baliol to appear before him in person on the 25th of March, 1293 : and, as Baliol did not obey this order, he summoned him again to appear on the 14th of October. In the mean time the English parliament drew up certain standing orders in cases of appeal from the king of Scots. One of these regulations provided, ' that no excuse of absence should ever be received either from the appellant, or the king of Scotland respondent ; but that the parties might have counsel if they demanded it.' Though Baliol had not the courage to withstand the second summons of Edward, he behaved with considerable resolution at the trial. The cause of Macduff being come on, Edward asked Baliol what he had to offer in his own defence; to which he replied, < I am king of Scotland. To the complaint of Macduff, or to ought else respecting my kingdom, I dare not make answer without advice of my people.' — • Edward affected surprise at this refusal, after the

submissions which Baliol had already made him; but the latter steadily replied, ‘ In matters respecting my kingdom, I neither dare nor can answer in this place, without the advice of my people.’ Edward then desired him to ask a farther adjournment, that he might advise with the nation. But Baliol, perceiving that his doing so would imply an acquiescence in Edward’s right of requiring his personal attendance on the English courts, made answer, ‘That he would neither ask a longer day, nor consent to an adjournment.’— It was then resolved by the parliament of England that the king of Scotland had offered no defence ; that he had made evasive and disrespectful answers ; and that he was guilty of manifest contempt of the court. To make recompense to Macduff for his imprisonment, he was ordered damages from the king of Scots, and it was also determined that Edward should enquire, according to the usages of the country, whether Macduff recovered the tenements in question by the judgment of the king’s court, and whether he was dispossessed by the king of Scots. The three principal castles of

Scotland, with the towns wherein they were

situated, and the royal jurisdiction thereof, were

further ordered to be taken into the custody of

the king, and there remain until the king of Scots should make satisfaction for his contempt and

disobedience. Before this judgment was pub-

licly intimated, Baliol is said to have addressed

Edward in the following words : — ‘ My lord, I

am your liege-man for the kingdom of Scotland ;

that whereof you have lately treated respects my

people no less than myself : I therefore pray you

to delay it until I have consulted my people,

lest I be surprised through want of advice :

they who are now with me neither will nor dare

advise me in absence of the rest of my kingdom.

After I have advised with them, I will in your

first parliament after Easter report the result, and do to you what I ought.’ In consequence of

this address, Edward, with consent of Macduff,

stopped all proceedings till the day after the

feast of Trinity, 1294. But before this term

Edward was compelled to suspend all his pro-

ceedings by a war which broke out with France.

In a parliament held this year by Edward the king of Scotland appeared, and consented to yield up the whole revenues of his English estates for three years to assist Edward against his enemy. He was also requested and ordered by Edward to extend an embargo laid upon the English vessels all over Scotland ; this embargo to endure until the king of England's further pleasure should be known. He also requested him to send some troops for an expedition into Gascony, and required the presence and aid of several of the Scottish barons. The Scots, however, eluded these demands of Edward, by pretending that they could not bring any considerable force into the field : and, unable to bear his tyranny any longer, negociated an alliance with Philip of France. Having assembled a parliament at Scone, they prevailed upon Baliol to dismiss all the Englishmen whom he maintained. They then appointed a committee of twelve, four bishops, four -earls, and four barons, by whose advice every thing was to be regulated ; and, if we may credit the English historians, watched the conduct of Baliol himself, and detained him in a kind of honorable captivity. However,

they could not prevent him from delivering up the castles of Berwick, Roxburgh, and Jedburgh, to the bishop of Carlisle; in whose custody they were to remain during the war between England and France. Notwithstanding this, Baliol concluded the alliance with Philip ; by which it was stipulated that the latter should give in marriage the eldest daughter of the count of Anjou to Baliol's son ; it was also provided that Baliol should not marry again without the consent of Philip. The king of Scotland engaged to assist Philip in his wars at his own expense, and with his whole power, especially if Edward invaded France; and Philip on his part engaged to assist Scotland, in case of an English invasion. Elated with the hopes of assistance from France, the Scots now invaded Cumberland with a large army, and laid siege to Carlisle. The men abandoned the place ; but the women mounted the walls, and drove the assailants from the attack. Another incursion into Northumberland proved almost as disgraceful. Their whole exploits consisted in burning a nunnery at Lamely, and a monastery at Corebridge,

though dedicated to their patron St. Andrew ; but, having attempted to storm the castle of Harbottle, they were repulsed with loss. In the mean time Edward with an army equal in number to that of the Scots, but much superior on account of its discipline, invaded the east coast of Scotland. Berwick had either not been delivered according to pro: ise, or had been resumed by the Scots, and was now defended by a numerous garrison. Edward assaulted it by sea and land. The ships which began the attack were all either burnt or disabled ; but Edward, having led on his army in person, took the place by storm, and cruelly butchered the inhabitants, to the number of 8000, without distinction of sex or age. In this town there was a building called the Red-hall, which certain Flemings possessed by the tenure of defending it at all times against the king of England. Thirty of these maintained their ground for a whole day against the English army ; but at night, the building being set on fire, all of them perished in the flames. The same day the castle capitulated ; the garrison, consisting of 2000 men, marched*

out with all the honors of war, after having sworn never to bear arms against England. In the mean time, Baliol, by the advice of his parliament, solemnly and openly renounced his allegiance to Edward, sending the following declara tion : — 'To the magnificent prince, Edward, by the grace of God king of England, John, by the same grace, king of Scotland. Whereas you, and others of your kingdom, you not l>un.r ignorant, or having cause of ignorance, by yoinr violent power, have notoriously and frequently done grievous and intolerable injuries, contempts, grievances, and strange damages against us, the liberties of our kingdom, and against God and justice ; citing us, at your pleasure, upon every slight suggestion, out of our kingdom : unduly vexing us ; seizing our castles, lands, and possessions, in your kingdom ; unjustly, and for no fault of ours, taking the goods of our subjects, as well by sea as land, and currying them into your kingdom ; killing our merchants, and others of our kingdom ; carrying our subjects and iirjprisoning them : for the reformation of which things, we sent our messengers to

you, which remain not only unredressed, but there is every day an addition of worse things to them ; for now you are come with a great army upon the borders, for the disinheriting us and the inhabitants of our kingdom ; and, proceeding, have inhumanly committed slaughter, burnings, and violent invasions, as well by sea as land : we not being able to sustain the said injuries, grievances, and damages any longer, nor to remain in your fealty or homage, extorted by your violent oppression, we restore them to you, for ourself and all the inhabitants of our kingdom, as well for the lands we hold of you in your kingdom as for your pretended government over us.' Edward was presented with this renunciation by the hands of the intrepid Henry, abbot of Aberbrothwick ; and, as it was favorable to his political views, he received it rather with contempt than anger. ' The foolish traitor,' said he to the abbot, 'since he will not come to us, we will go to him.' The abbot had been persuaded by his enemies, of whom he had many in Scotland, to present this letter, in hopes that Edward would have put him to death ; but

he had address enough to escape safe out of his hands, without receiving any other answer. Though this scheme of renunciation had been concerted some time before, declaration was not sent to Edward till after the taking of Berwick.

SCOTLAND.

41:

The fete of Scotland, however, after it, was soon decided. The earl of March had taken part with Edward, but the countess betrayed his castle of Dunbar into the hands of the Scots. Edward sent a chosen body of troops to recover the place. The whole force of Scotland opposed them on the heights above Dunbar; but leaving their advantageous post, and pouring down on their enemies in confusion, they were dispersed and defeated. The castle of Dunbar surrendered at discretion ; that of Roxburgh followed the same example ; the castle of Edinburgh surrendered after a short siege; and Stirling was abandoned. The Scots, in the mean time, were guilty of the greatest extravagancies. During a short interval between the loss of Berwick and (he defeat at Dunbar, an order was made for ex-

pelling all the English ecclesiastics who held I eneSces in England ; all the partizans of England, and all neutrals, were declared traitors, and ilicir estates confiscated. But the great successes of Edward soon put an end to these impotent acts of fury. Baliol was obliged to iir.plore the mercy of the conqueror. Divested of his royal ornaments, and bearing a white rod in his hand, he performed a most humiliating penance ; confessing that by evil and false counsel, and through his own simplicity, he had grievously offended his liege lord. He recapitulated his various transgressions, in concluding an alliance with France, while at enmity with England ; in contracting his son with the niece of the French king ; in renouncing his fealty ; in attacking the English territories, and in resisting Edward. He acknowledged the justice of the English invasion and conquest ; and therefore he, of his own free consent, resigned Scotland, its people, and their homage to his liege lord Edward, 2nd of July 1296.

Edward pursued his conquests, the barons every where crowding in to swear fealty to

him, and renounce their allegiance with France. His journey ended at Elgin, whence he returned southward ; and, as an evidence of his having made an absolute conquest of Scotland, he carried off from Scone the wooden chair in which the kings were wont to be crowned. Some of the charters belonging to the abbey were carried off, and the seals torn from others. On the 28th of August, 1296, Edward held a parliament at Berwick, where he received the fealty of the clergy and laity of Scotland. Among those who professed their allegiance at this parliament was Robert Bruce the younger, earl of Carrick. After this Edward took the most effectual methods of securing his new conquest. He ordered the estates of the clergy to be restored ; and, having received the fealty of the widows of many of the Scottish barons, he put them in possession of their jointure lands, and even made a decent provision for the wives of many of his prisoners. Yet, though in every thing he behaved with great moderation towards the Scots, he committed the government of certain districts, and of the chief castles in the south of Scotland, to his English subjects, of whose

fidelity and vigilance he thought himself assured.

To conciliate the affections of the clergy, he

granted to the Scottish bishops for ever the pri-

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vilege of bequeathing their effects by will, in the same manner as that privilege was enjoyed by

the archbishops and bishops of England. In

honor of the ‘ glorious Confessor St Cuthbert,’

he gave to the monks of Durham an annual pen-

sion of £40, payable out of the revenues of Scot-

land. At last, having settled every thing, as he

thought, in tranquillity, he departed for Eng-

land with all the exultation of a conqueror. The

tranquillity established by Edward, however,

was of short duration. The government of

Scotland at that time required many qualities

which his vicegerents possessed not. Warrene,

earl of Surrey, who had been appointed governor,

took up his abode in England, on pretence of

recovering his health. Cressingham, the treasurer,

was avoluptuous, proud, and selfish ecclesiastic ;

while Ormesby, the justiciary, was hated for his

severity. Under these officers the administration

of Edward became more and more feeble ; bands

of robbers infested the highways, and the Eng-

lish government was universally despised. At this critical moment arose Sir William Wallace, the hero of the Scottish poets, by whom, indeed, his real exploits are so much obscured that it i; difficult to give an authentic relation of them. He was the younger son of Wallace of Ellerslit, in the neighbourhood of Paisley. Having been outlawed for some offence (supposed to have been the killing of an Englishman), he 'associated with a few companions of fortunes equally desperate. Wallace himself was endowed %\ ith great strength and courage, and an active and ambitious spirit ; by his affability, eloquence, and wisdom, he maintained an authority over the rude and undisciplined multitudes who flocked to his standard. In May 1297 he began to infest the English quarters ; and, being successful in his predatory incursions, his party became more numerous, and he was joined by Sir William Douglas. With their united forces these two allies attempted to surprise Ormesby the justiciary, while he held his court at Scone; but he saved himself by a precipitate flight. After this the Scots roved over the whole country,

assaulted castles and massacred the English. Their party was joined by many persons of rank ; among whom were Robert Wishart bishop of Glasgow, the Steward of Scotland, and his brother Alexander de Lindesay, Sir Richard Lund in, and Sir Andrew Moray of Bothwell. Young Bruce would have been a vast accession to the party ; for he possessed all Carrick and Annandale, so that his territories reached from the frith of Clyde to Sol way ; but the wardens of the western marches of England suspected his fidelity, and summoned him to Carlisle. He obeyed, and made oath on the consecrated host, and on the sword of Becket, to be faithful and vigilant in the cause of Edward ; to prove his sincerity he invaded the estate of Sir William Douglas, and carried off his wife and children. However, he instantly repented of what he had done : ‘ I trust,’ said he, ‘ that the pope will absolve me from an extorted oath ;’ on which he abandoned Edward, and joined the Scottish army. All this time Edward was in France, not in the least suspecting an insurrection among people whom he imagined he had thoroughly

subdued. As soon as he received the intelligence he ordered the earl of Surrey to suppress the rebels; but he, declining the command on account of his health, resigned it to his nephew, lord Henry Percy. A great army, some say no fewer than 40,000 men, was now assembled, with which Percy marched against the Scots. He found them encamped at Irvine, with a lake in their front, and their flanks secured by entrenchments, so that they could not be attacked without the utmost danger. The Scots, however, ruined every thing by their dissensions. Wallace was envied on account of his many accomplishments, and his companions began to suggest that an opposition to the English could only be productive of farther national destruction. Sir Richard Lundin, an officer of great rank, openly formed a hostile party, and went over to Edward with all his followers. He attempted to justify his treachery, by saying, ‘ I will remain no longer of a party that is at variance with itself.’

Other leaders entered into a negociation with the English. Bruce, the steward, and his brother Alexander de Lindesay, and Sir William Douglas, acknowledged their offences, and made submissions to Edward. This scandalous treaty seems to have been negociated by the bishop of Glasgow, and their recantation is recorded in the following words : — ‘ Be it known to all men : whereas we, with the commons of our country, did rise in arms against our lord Edward, and against his peace, in his territories of Scotland and Galloway, did burn, slay, and commit divers robberies ; we, therefore, in our own name, and in the name of all our adherents, agree to make every reparation and atonement that shall be required by our sovereign lord ; reserving always what is contained in a writing which we have procured from Sir Henry Percy and Sir Robert Clifford, commanders of the English forces ; at Irvine, 9th of July, 1297.’ To this instrument was subjoined ‘ Escrite a Sire Willaume ;’ the meaning of which Lord Hailes supposes to be, that the barons had notified to Sir William Wallace their having made terms of accommodation for themselves and their party. Edward ac-

cepted the submission of the Scottish barons who had been in arms, and granted liberty to those whom he had jnade prisoners in the course of the former year, on condition that they should serve him in his wars against France. The inconstancy of Bruce, however, was so great that acknowledgments of submission or oaths of fealty were not thought sufficiently binding on him ; for which reason the bishop of Glasgow, the steward, and Alexander de Lindesay, became sureties for his loyalty and good behaviour, until he should deliver his daughter Marjory as an hostage. Wallace alone refused to be concerned in these shameful submissions ; and, with a few resolute followers, resolved to submit to every calamity rather than give up the liberty of his country. The barons had undertaken to procure his submission as well as their own ; but, finding that to be impossible, the bishop of Glasgow and Sir William Douglass voluntarily surrendered themselves prisoners to the English. Edward, however, ascribed this surrender, not to any honorable motive but to treachery. He asserted that Wishart repaired to the castle of Roxburgh under pretence of yielding himself up, but with

the concealed purpose of forming a conspiracy to betray that castle to the Scots ; and, in proof of this, appealed to intercepted letters. On the other hand, Wallace, ascribing the bishop's conduct to traitorous pusillanimity, plundered his house, and carried off his family captives. Immediately after the defection of the barons at Irvine, Wallace, with his band of determined followers, attacked the rear of the English army, and plundered their baggage; but was obliged to retire, with the loss of 1000 men. He then found himself deserted by almost all the men of eminence and property. His army, however, increased considerably by the accession of numbers of inferior rank, and he again began to act on the offensive. While he employed himself in besieging the castle of Dundee, he was informed that the English army approached Stirling. Wallace, having charged the citizens of Dundee, under the pain of death, to continue the blockade of the castle, hastened with all his troops to guard the important passage of the Forth ; and encamped behind a rising ground in the neighbourhood of the abbey of Cambuskenneth. Brian Fitz Allan had been appointed

governor of Scotland by Edward ; but Warrene,

who waited the arrival of his successor, remained

with the army. Imagining that W'allace might

be induced by fair means to lay down his arms,

he despatched two friars to the Scottish camp,

with terms of capitulation, ' Return,' said Wal-

lace, ' and tell your masters, that we came not

here to treat, but to assert our right, and to set Scotland free. Let them advance, they will find

us prepared.' The English, provoked at this

answer, demanded impatiently to be led on to

battle. Sir Richard Lundin remonstrated against

the absurdity of making a numerous army pass

by a long narrow bridge in presence of the

enemy. He told them that the Scots would

attack them before they could form on the plain

to the north of the bridge, and thus certainly de-

feat them ; at the same time he offered to show

them a ford, which, having crossed with 500 horse

and a chosen detachment of infantry, he pro-

posed to come round upon the rear of the enemy,

and by this diversion facilitate the operations of

the main body. But, this proposal being rejected,

the English army began to pass over; which was

no sooner perceived by Wallace, than he rushed

down upon them, and broke them in a moment. Cressingham the treasurer was killed, and many thousands were slain on the field, or drowned in their flight. The loss of the Scots would have been inconsiderable, had it not been for that of Sir Andrew Moray, the intimate friend and companion of Wallace, who was mortally wounded in the engagement. The Scots are said to have treated the dead body of Cressingham with the utmost indignity.

The victory at Stirling was followed by the surrender of Dundee castle and other praces ot strength in Scotland ; and at the same time the Scots took possession of Berwick, which the English had evacuated. But as a famine now t»ok place in Scotland by the bad seasons and miseries of war, Wallace marched with his \hole

army into England, that he might in some measure relieve the necessities of his countrymen by plundering the enemy. This expedition lasted three weeks, during which time the whole country from Cockermouth and Carlisle to the

Elates of Newcastle was laid waste, with all the fury of revenge and rapacity ; though Wallace endeavoured, as far as possible, to repress the licentiousness of his soldiers. In 1298 Wallace assumed the title of ' Governor of Scotland,' in name of king John, and by consent of the Scottish nation; but in what manner this office was obtained is now in a great measure unknown. In a parliament which he convoked at Perth he was confirmed in his authority; and under this title he conferred the constabulary of Dundee on Alexander Scrirageour and his heirs, on account of his faithful aid in bearing the royal standard of Scotland. This grant is said to have been made with the consent and- approbation of the Scottish nobility, 29th March 1298.

From this period, however, we may date the very great jealousy which took place between Wallace and the nobles of his party. His elevation wounded their pride ; his great services reproached their inactivity in the public cause; and thus the counsels of Scotland were perplexed with distrust and envy, when almost its very existence depended on unanimity. In June 1298 Edward, who had all this time been in

Flanders, returned to England, and summoned the Scottish barons, under pain of rebellion, to attend him in parliament ; and, on their disobeying his summons, he advanced with his army towards Scotland. His main force, commanded by himself, assembled, at Berwick ; but a body of troops, under the earl of Pembroke, having landed in the north of Fife, were defeated with great loss by Wallace, on the 12th of June. The same month Edward invaded Scotland by the way of the eastern borders. No place resisted him except the castle of Dirleton. After a resolute defence, it surrendered to Anthony Beck, bishop of Durham. Meanwhile the Scots were assembling all their strength in the interior part of the country. Few barons of eminence repaired to the national standard. They whose names are recorded, were John Comyn of Badenoch, the younger; Sir John Stewart of Bonkill, brother to The Steward ; Sir John Graham of Abercorn ; and Macduff, the grand uncle of the young earl of Fife. Robert Bruce again acceded to the Scottish party ; and with his followers guarded the important castle of Ayr, which kept the communication open with Galloway, Argyleshire,

and the isles. The aim of Edward was to pene-

trate into the west, and there to terminate the

war. He appointed a fleet, with provisions, to

proceed to the frith of Clyde, and await his ar-

rival in those parts. This precaution was abso-

lutely necessary for the subsistence of his numer-

ous army in a country impoverished and waste.

Waiting for accounts of the arrival of his fleet,

he established his head quarters at Temple-liston,

between Edinburgh and Linlithgow. In the

mean time a dangerous insurrection arose in his

camp. He had bestowed a donative of wine

among his soldiers ; they became intoxicated ; a

national quarrel ensued. In this tumult the

Welsh slew eighteen English tcclesiastics. The

English hoi-semen rode in among the Welsh,

and revenged this outrage with great slaughter :

and the Welsh, in disgust, separated themselves

from the army. It was reported to Edward that

they had mutinied, and gone over to the Scots :

‘ I care not,’ said Edward, dissembling the danger, ‘ let my enemies go and join my ene-

mies ; I trust that in one day I shall chastise

them all.’ Edward was now placed in most

critical circumstances. As the fleet with pro-

visions had been detained by contrary winds, he could not venture to advance, neither could he .subsist any longer in his present quarters. To retreat would have sullied the glory of his arms, and exposed him to the obloquy and murmurs of a discontented people. Yet he submitted to this hard necessity : and commanded his army to return to the eastern borders. At this moment intelligence arrived that the Scots were advanced to Falkirk. Edward instantly marched against them. His army lay that night in the fields. While Edward slept on the ground, his war-horse struck him and broke two of his ribs. The alarm arose that the king was wounded. They who knew not the cause, repeated the cry, ‘ The king is wounded ; there is treason in the camp ; the enemy is upon us.’ Edward mounted on horseback, and by his presence dispelled the panic. With a fortitude of spirit superior to pain, he led on his troops : and at break of day the Scottish army was descried, forming on a stony field, at the side of a small eminence, in the neighbourhood of Falkirk. Wallace ranged his infantry in four bodies. The archers, commanded by Sir John Stewart, were placed in the

intervals. The horse, amounting to no more than 1000, were at some distance in the rear. On the front of the Scots lay a morass. Having drawn up his troops in this order, Wallace pleasantly said, ‘ Now I have brought you to the ring, dance according to your skill.’ Edward placed his chief confidence in the numerous and formidable body of horsemen whom he had selected for the Scottish expedition. These he ranged in three lines. The first was led by Bigot, earl marshal, and the earls of Hereford and Lincoln ; the second by the bishop of Durham, having under him Sir Ralph Basset of Drayton; the third, intended for a reserve, was led by the king himself. His infantry probably were drawn up behind, to support the cavalry, and to annoy the Scots with their arrows. Bigot, at the head of the first line, rushed on to the charge. He was checked by the morass, which in his impetuosity he had overlooked. This obliged him to incline to the solid ground on his left, towards the right flank of the Scottish army. The bishop of Durham, who led the second line, inclined to the right, turned the morass, and advanced towards ihe left flank of the Scottish array. He proposed to halt till the

reserve should advance.

‘ To mass, Bishop,’ cried Basset, and instantly charged. The shock of the English cavalry on each side was violent, and gallantly withstood by the Scottish infantry ; but the Scottish cavalry, dismayed at the number and force of the English men at arms, immediately quitted the field. Stewart, while giving orders to his archers, was

thrown from his horse and slain. His archers crowded round his body and perished with him. Often did the English strive to force the Scottish circle. ‘ They could not penetrate into that wood of spears,’ as one of their historians speaks. By repeated charges, the outermost ranks were brought to the ground. The English infantry incessantly galled the Scots with showers of stones and arrows. Macduff and Sir John Graham fell. At length the Scots were broken by the numbers and weight of the English cavalry, and the rout became universal. The number of the Scots slain in this battle must hare been

very great. As is commonly the case, it is exaggerated by the historians of the victors, and reduced too low by those of the vanquished. On the side of the English the loss was inconsiderable. The only persons of note who fell were Brian le Jay, master of the English Templars, and the prior of Torphichen in Scotland, a knight of another order of religious soldiery. The Scots in their retreat burnt the town and castle of Stirling. Edward repaired the castle, and made it a place of arms. He then marched to the west. At his approach, Bruce burnt the castle of Ayr, and retired. Edward would have pursued him into Carrick ; but the want of provisions stopped his further progress. He turned into Annandale, took Bruce's castle of Lochmaben, and then departed out of Scotland by the western borders. Here may be remarked the fatal precipitancy of the Scots. If they had studied to protract the campaign, instead of hazarding a general action at Falkirk, they would have foiled the whole power of Edward, and reduced him to the necessity of an inglorious retreat. In 1299 Edward released John Baliol, the unfortunate king of

Scotland, whom he had kept close prisoner ever since 1296. Before this time Baliol had used the most disgraceful methods to recover his liberty. He had solemnly declared that ‘ he would never have any intercourse with the Scots ; that he had found them a false and treacherous people ; and that he had reason to suspect them of an intention to poison him.’ However, notwithstanding all his protestations, Edward still detained him in captivity ; but at last released him at the mediation of the pope, though after a singular form. He ordered the governor of Dover to convey him to the French coast, and there to deliver him to the papal nuncio, ‘ with full power to the pope to dispose of Baliol and his English estate.’ In consequence of which he was conveyed to Witsand, delivered to the nuncio in presence of a notary and witnesses, and a receipt taken for his person. Notwithstanding this abject state, however, the Scots continued to own him for their king, and to assert their national independency : and, though the misfortune at Falkirk had deprived them of a very considerable extent of territory, they were still in possession of the whole country beyond the Forth, as well

as the county of Galloway.

By general consent William Lamberton, arch-

bishop of St. Andrew's, Robert Bruce earl of

Carrick, and John Cummin the younger, were

chosen guardians of Scotland in the name of

Baliol. Wallace at this time was reduced to the

condition of a private man ; nor had he any longer the command of the Scots armies, nor any share

in their councils. The new guardians undertook

to reduce the castle of Stirling, and Edward pre-

pared to defend it. The Scots posted themselves

at the Torwood, and chose their ground so ju-

diciously that Edward could scarcely have raised

the siege without dislodging them; which, find-

ing it impossible for him to do, he returned home

in disgust. Next year he invaded Scotland on

the west side, wasted Annandale, and reduced

Galloway; but the Scots, being taught by ex- '

perience to avoid a general action, chose their

posts with such skill that Edward could not

penetrate farther ; and the same year a truce was

concluded with the Scots, to continue till Whit-

sunday 1301. This year a new competitor ap-

peared for the crown of Scotland. Boniface

VIII., in a bull directed to Edward, averred

that Scotland belonged anciently, and did still belong, to the holy see ; and supported his extravagant claim by some strange authorities, such as, that Scotland had been miraculously converted by the relics of St. Andrew ; after which he proceeded to show the futility of Edward's pretensions, and that Scotland never had any feudal dependence on England. He required Edward to set at liberty all the Scottish ecclesiastics, particularly Wishart bishop of Glasgow, and to remove his officers from the patrimony of the church : ' But,' added he, ' should you have any pretensions to the whole, or any part of Scotland, send your proctors to me within six months ; I will hear and determine according to justice; I take the cause under my own peculiar cognizance.' This interposition of the pope hafF probably been procured by Scottish emissaries at the court of Rome; but, however ridiculous his pretensions might be, they afforded matter of very serious consideration to Edward. After spending a whole winter in deliberations, Edward and his parliament made separate answers to the pope- The answer of the parliament

stated that ‘ All England knew that, ever since the first establishment of this kingdom, its kings had been liege-lords of Scotland. At no time had the kingdom of Scotland belonged to the church. In temporals the kings of England are not amenable to the see of Rome. We have with one voice resolved that, as to temporals, the king of England is independent of Rome ; that he shall not suffer his independency to be questioned ; and therefore that he shall not send commissioners to Rome.

Such is, and such, we trust in God, ever will be, our opinion. We do not, we cannot, permit our king to follow measures subversive of that government which we have sworn to maintain, and which we will maintain.’ The king entered into a more full refutation of the pope’s arguments ; and having, as he thought, answered them sufficiently, marched again into Scotland ; but, by the mediation of France, another truce was concluded, to last till St. Andrew’s day 1302. After the expiration of the truce, Edward sent an ami) into Scotland, under John de Seagrave. Tins general divided his troops into three bod.es; but, keeping them so far distant that they could not support each other, they were all engaged

and defeated in one day by the Scots, near Roslin. This, however, was the last successful ex-

ploit of the Scots at this period. The pope deserted them, and the king of France concluded a peace with England, in which all mention of the Scots was industriously avoided ; so that t!iey were left alone to bear the whole weight of Edward's resentment, who now invaded their country in person with a mighty army. He met with no resistance in his progress, except from the castle of Brechin, which was commanded by Thomas Maul, a brave and experienced officer. He held out for tsventy days against the whole power of the English army ; but at last, being mortally wounded, the place capitulated. Thence Edward proceeded northward, according to some historians, as far as Caithness. He then returned towards the south, and wintered in Dunfermline. Here was an abbey of the Benedictines, a building so spacious that, according to an English historian, three sovereign princes, with all their retinue, might have been lodged within its pre-

cincts, and the Scottish nobles often held their assemblies here. The English soldiers utterly demolished this magnificent fabric. The only fortress that remained in the possession of the Scots was the castle of Stirling, where Sir William Oliphant commanded. To protect this single place of refuge, Comyn assembled all his forces. He posted his army on the south bank of the river, in the neighbourhood of Stirling, there to make the last stand for the national liberty. The Scots fondly imagined that Edward would attempt to force the passage, as the impetuous Cressingham had attempted in circumstances not dissimilar. But the prudence of Edward frustrated their expectations. Having discovered a ford at some distance, he crossed the river at the head of- his whole cavalry. The Scots gave way, and dispersed themselves. All resources but their own coura«e had long failed them ; that iast resource failed them now, and they hastened to conciliate the favor of the conqueror. Previous to this Bruce had surrendered himself to John de St. John, the English warden. Comyn and his followers now submitted to Edward.

*They stipulated for their lives, liberties, and estates ; reserving alwnys to Edward the power of inflicting pecuniary mulcts on them as he should see fit. From the general conditions of this stipulation, the following persons were excepted : VVishart, bishop of Glasgow, the Steward, Sir John Soulis, David de Graham, Alexander de Lindesay, Simon Fra*er, Thomas Bois, and Wallace. With respect to them, it was provided that the bishop of Glasgow, the Steward, and Soulis, should remain in exile for two years, and should not pass to the north of Trent; thatGraham and Lindesay should be banished from Scotland for six months ; that Fraser and Bois should be banished for three years from all the dominions of Edward, and should not be permitted, during that space, to repair to the terri*ories of France. ‘ As for \Villiam Wallace, it is agreed, that he shall render himself up at the wiii and mercy of our sovereign lord the king, if it shall seem good to him.’ These were all the conditions that the Scottish nation stipulated for the man who had vanquished the English at Stirling, who had expelled them from Scotland,*

and who had once set his coun'rv free ! But Wallace scorned submission. He lived a free-man ; a freeman he was resolved to die. Fraser, who had too oft complied with the times, now caught the same heroic sentiments. But their endeavours to rouse their countrymen were vain. The season of resistance was past. Wall ice perceived that there remained no more hope ; and sought out a place of concealment, where eluding the vengeance of Edward, he might silently lament o't his fallen country. Edward now assembled at St. Andrew's what is called a parliament, where Wallace, Fraser, and the gar-rison of Stirling, were summoned to appear; and sentence of outlawry was pronounced against them. Edward then prepared to besiege the castle of Stirling; and, foreseeing that the reduc-tion of this place would be attended with diffi-culty, stripped the abbey of St. Andrew's of the lead which covered it, in order to employ the metal in bullets for his battering machines. Oli-phant was solemnly summoned to surrender, but in vain. Edward drew out all his artillery, and battered the walls with stones of 200 Ibs.

weight. The besieged, however, defended them-

selves with obstinacy, and killed a great number

of the English ; but at last they were obliged to

surrender; and Edward, lookins upon the con-

quest of Scotland as now complete, set out for

York, and thence to Lincoln.

Edward, though he had thus met with all the

success he could desire in his expeditions against

the Scots, could not but perceive that his domi-

nion over them must be very precarious, as long

as he held them in subjection as a conquered

people. He resolved therefore once more to re-

new his attempts for an union of the two king-

doms. He began with taking into favor the

bishop of Glasgow, Robert Bruce, and John

Mowbray, who, next to Bruce and the Cummings,

were the most powerful of the greatest of the

Scottish nobility. To them he recommended

the settling the affairs of their country, but in

such a manner as to leave it in his power to effect the proposed union with England. This scheme,

however, was by no means agreeable to Bruce,

who had now no other competitor for the crown

but Cumming, who was in a great measure inca-

pable of opposing his designs ; neither indeed

could it ever be made agreeable to the bulk of the nation ; and therefore came to nothing at last. Scotland, however, was subdued. Its inhabitants had renounced every idea of asserting their liberty, and only strove to make their court to the conqueror. Wallace alone still remained an exception. Edward, who had received into favor those who had proved traitors over and over again, showed a mean revenge against the only man who discovered a steady and honorable spirit, and whose friendship seemed worth the courting. Ralph de Haliburton, a prisoner, offered his assistance for discovering Wallace ; and for this purpose was granted a temporary liberty; but what he did in this very dishonorable employment is unknown. Certain it is that Wallace was discovered and betrayed into the hands of the English by Sir John Menteith

This celebrated and heroic patriot was arraigned at Westminster a< a traitor to Edward, and as having burnt villages, stornu d castles, and

slaughtered many subjects of England. Wa'.-

lace denied his ever having been a traitor, and indeed with truth ; for he had always been the avowed enemy of Edward, and had not at any time owned allegiance to him. But whatever his defence might have been it was of no avail with a judge who had resolved on his destruction. Wallace was condemned to die a traitor's death, and the sentence was executed with the utmost rigor ! In his last moments he asserted that independency which a degenerate nation had renounced. His head was placed on a pinnacle at London, and his mangled limbs were distributed over the kingdom.

After the death of Wallace, Edward thought of nothing but settling the affairs of Scotland as a conquered country ; however, he took care to preserve the ancient forms so far as was consistent with the dependent state of the nation. It has been said, indeed, that Edward abrogated all the Scottish laws and customs, and endeavoured to substitute the English in their stead ; but this is denied by others. Lord Hales gives at length the record with respect to these laws, for which we refer the inquisitive reader to his work. An indemnity was now granted to the Scots upon

certain conditions. Various fines were imposed from one to five years rent of the estates of the delinquents. The person taxed was to pay half his income annually ; and thus Umfraville, taxed in five years rent, was allowed ten years to discharge the fine. There was an express reservation to Edward of all the royal demesnes which Baliol might hare alienated. There was also an exception for those who were already in custody, and those who had not yet submitted. Thus, after a long and obstinate contest, was Scotland wholly reduced under the dominion of Edward. Within four months, however, that system was overthrown, which the incessant labor of fifteen years had established by craft, dissimulation, and violence, with a waste of treasure, and the effusion of much blood. The causes of this event are related as follows : — Dervegil of Galloway had a son, John Baliol, and a daughter named Marjory. John Comyn was the son of Marjory, and, setting Baliol aside, was heir to the pretensions of Dervegil. He had for many years maintained the contest against Edward ; but at last laid down his arms, and swore fealty to the conqueror ; and, as Baliol had repeatedly

renounced all pretensions to the crown of Scotland, Comyn might now be considered as the rightful heir. His riTal in power and pretensions was Bruce, earl of Carrick. This young nobleman's grandfather, the competitor, had patiently acquiesced in the award of Edward. His father, yielding to the tunes, had served under the English banners. But young Bruce had more ambition, and a more restless spirit. In his earlier years he acted upon no regular plan. By turns the partisan of Edward, and the ricegerent of Baliol, he seems to have forgotten or stifled his pretensions to the crown. But his character developed itself by degrees, and in maturer age 1 ecame firm and consistent. According to the traditionary report, Bruce made the following 1 roposal to Comyn : — ' Support my title to the crown, and I will give you my estate ; or give me yo»r estate, a- d 1 will support your's.' The conditions were properly drawn out and signed by both parties ; bxit Comyn, either through fear or treachery, revealed the whole to Edward. On this the king showed Bruce the letters of his accuser, and questioned him closely ; but the latter

found means to pacify him by mild and judicious

answers. Notwithstanding this, however, Ed-

ward still suspected him, though he dissembled

his sentiments, until he should get the brothers

of Bruce into his power. The king, having drank

freely one evening, informed some of his lords that he had resolved to put Bruce to death next day.

The earl of Gloucester, hearing this resolution,

sent a messenger to Bruce with twelve pence

and a pair of spurs, as if he had meant to restore what he had borrowed. Bruce understood the

meaning of his message, and prepared for

flight. The ground was covered with snow,

which would have discovered his flight ; but

he ordered, it is said, his farrier to invert the

shoes of his horses, and immediately set out for

Scotland, in company with his secretary and

groom. In his way he observed a foot passen-

ger whose behaviour seemed to be suspicious,

and whom he soon discovered to be the bearer

of letters from Comyn to the English monarch,

urging the death or immediate imprisonment of

Bruce. The latter, filled with resentment, imme-

diately beheaded the messenger, and set forward

to Lochmaben, where he arrived -he seventh

after his departure from London. Soon after this he repaired to Dumfries, where Comyn happened at that time to reside. Bruce requested an interview with him in the convent of the Minorites, where he reproached him with his treachery. Comyn gave him the lie, and Bruce instantly stabbed him ; after which he hastened out of the convent and called ‘ to horse.’ His attendants, Lindesay and Sirkpatrick, perceiving him pale, and in extreme agitation, enquired how it \;is with him ? ‘ 111,’ replied Bruce, ‘ 1 doubt 1 have slain Comyn.’ ‘ You doubt,’ cried Kirkpatrick ; on saying which, he rushed into the place where Comyn lay, and instantly despatched him. Sir Robert Comyn, a relation, attempted to deft ml his kinsman, and shared his fate. Bruce had now gone so far that it was in vain to think of retracting ; and therefore set himself in opposition to Edward in good earnest. The justiciaries were then holding their court at Dumfries ; who, hearing what had happened, imagined their own lives to be in danger, and barricaded the doors. Bruce ordered the house to be set on fire : upon which they surrendered ; and Bruce granted them leave to depart out of Scotland without

molestation. The above account of this catastrophe, taken from the Scottish historians, seems probable ; but those of the English writers differ in many particulars. Lord Hales supposes both to be wrong, and that the true circumstances of the quarrel are unknown. The death of Comyn affected the Scots variously, according to their different views and interests. The relations of the deceased viewed it as a cruel assassination, and joined with Edward in schemes of revenue. Some, who wished well to the peace of thwir country, thought it was better to submit quietly to the English, than to attempt a revolution, which could not be effected without much danger and bloodshed ; but, on the other hand, the

friends of Bruce now saw the necessity they were under of proceeding to the coronation of the new king without loss of time. The ceremony was therefore performed at Scone on the 25th of March, 130G, in presence of two earls, the bishops of Andrew's and Glasgow, the abbot of Scone, John de Athol, and John de Meuteith.

It had been customary, since the days of Mac-

beth, for one of the family of Fife to put the

crown on the king's head ; and Bruce found the

prepossession of the Scots in favor of this cir-

cumstance so strong that he was obliged to seek

fur an expedient to satisfy them. Macduff, the

tMil of Fife, was at that time in England, where

he had married a near relation of Edward. His

sister was wife to the earl of Buchan, one of the heads of the family of Comyn, and consequently

the determined enemy of Robert. But, by an

uncommon effort of female patriotism, she post-

poned all private quarrels to the good of her

country, and, in her husband's absence, repaired,

with all his warlike accoutrements, to Bruce, to

whom she delivered them up, and placed the

crown upon his head. This crown is said to

have been made by Conyers, an Englishman, who

narrowly escaped being punished for it by Ed-

ward.

The king of England received intelligence of

these proceedings with astonishment; and with-

out delay sent a body of troops under Aymer

de Valence, earl of Pembroke, to suppress the

alleged rebellion. Bruce omitted nothing for

his defence. He had always been considered by his countrymen as an accomplished young nobleman, firmly attached to Edward's person and government ; and confided in as such by those independent patriots who joined Wallace. But their utmost confidence was now gained by his rendering himself so obnoxious to Edward that no possibility of a reconciliation was left ; and he soon saw himself at the head of an army. ˆ ith these Bruce formed a camp at Methven, near Perth, the head-quarters of the enemy ; but knowing the disadvantage under which he labored from the inexperience of his men, he resolved to act upon the defensive. The English general sent Bruce a challenge to fight him, which was accepted ; but the day before the battle was to have been fought by agreement, the Scots were attacked by surprise, and totally defeated. Bruce behaved with the greatest valor, and had three horses killed under him. Being known by the slaughter which he made, John Mowbray, a man of great courage and resolution, rushed upon him, and catching hold of his horse's bridle, cried out, ' I have hold of the new made king !'

but he was delivered by Christopher Seaton. After the battle many prisoners were hanged and quartered. This disaster almost gave the finishing stroke to the affairs of Bruce. He now found himself deserted by a great part of his followers. The English had taken prisoners great numbers of women whose husbands followed him ; and all those were now ordered, on pain of death, to return to their husbands. Thus was Bruce burdened with a number of useless adherents, and found it hard to subsist. The consequence \as that most of his men departed with their fam!L«, so that in a few days his force was reduced to 500. With these he retreated to Aberdeen, where he was met by his brother Sir Neil, his wife, and a number of other ladies, the latter of whom he persuaded to retire to his castle of Kildrummey, under the protection of Sir Neil Bruce and the earl of Athol. In the mean time the desertion among Bruce's troops continued, so that now he had with him not more than 200 men ; and, as winter was coming on, he resolved to go into Argyleshire, where Sir Neil Campbell's estate lay. In his way thither

he encountered incredible difficulties ; and, some of his followers being cut off at a place called Dairy, the rest were so disheartened that they all forsook him, excepting Sir Gilbert Hay, Sir James Douglas, and a few domestics. Bruce, however, kept up the spirits of his little party by recounting to them the adventures of princes and patriots in circumstances similar to his owa. Having crossed Lochlomond in a small crazy boat, he was discovered by his trusty friend the earl of Lenox, who had been proscribed in England, and now lived in a kind of exile on his own estate. The meeting between these friends was very affecting, and drew tears from the eyes of all present. Lenox, who had heard nothing of Bruce's misfortunes, furnished him and his half-famished attendants with plenty of provisions ; but being soon made sensible that it was impossible for them to live in a place where they were well known, and surrounded by enemies, Bruce resolved to seek out some more safe habitation. For this purpose Sir Neil Campbell had already provided shipping ; but our adventurers had scarcely set sail, when they were pur-

sued by a large squadron of the enemy's rleet. The bark which carried the earl of Lenox escaped with the utmost difficulty to Cantire, where Bruce was already landed; and, at their meeting, both agreed they would never afterwards be separated. In the mean time Edward, having compromised some differences with his English subjects, resumed his old project of entirely subduing Scotland ; and his intention appears to have been to divide the lands of such as he suspected of disaffection among his English followers. He ordered a proclamation to be issued, that all who had any title to the honor of knighthood, either by heritage or estate, should repair to Westminster to receive all military ornaments, their horses excepted, from his royal wardrobe. As the prince of Wales came under this denomination, he was the first who underwent the ceremony ; which gave him a right to confer the like honor on the sons of above 300 of the chief nobility and gentry of England. The prince then repaired, at the head of this gallant train, to Edward ; who received them, surrounded by his nobility, in the most

solemn manner. The king then made a speech

on the treachery of the Scots, whose entire de-

struction he vowed. He declared his resolution

of once more heading his army in person ; and

desired, in case of his death, that his body might be carried to Scotland, and not buried till signal

vengeance was taken on the perfidious nation.

Having then ordered all present to join him

within fifteen days, with their attendants and

military equipages, he prepared for his journey

northward. He entered the country soon after

Bruce's defeat at Methven The army was di-

vided into two bodies ; one commanded by the

king, the other by the prince of Wales, and,

under him, by the earls of Lancaster and Here-

ford, with orders to proceed northwards, and

penetrate into the countries where the interest

of Bruce was strongest. As he passed along,

Edward caused all that fell into his hands, whom

he suspected of favoring Bruce's party, to be

immediately executed. The bishop of Glasgow

was the only exception to this barbarity : he was

taken, but had his life spared on account of his

function. In the mean time, as the prince of Wales continued his march, Bruce's queen began to be alarmed for her safety. She was advised to take sanctuary at the shrine of St. Duthac in Rossshire ; but there she was made prisoner by William earl of Ross, who was of the English party. By Edward's order she was sent to London ; her daughter, who was taken at the same time, being shut up in a religious house. The directions for the entertainment of the queen are still preserved. She was to be conveyed to the manor of Brustewick ; to have a waiting-woman and a maid-servant, advanced in life, sedate, and of good conversation: a butler, two men servants, and a foot-boy for her chamber, ' sober, not riotous,' to make her bed ; three greyhounds when she inclines to hunt; venison, fish, and the fairest house in the manor. In 1308 she was removed to another prison ; in 1312 she was removed to Windsor Castle, 20s. per week being allowed for her maintenance. In 1314 she was committed to Rochester Castle, and was not set at liberty till the close of that year. The only fortress which Bruce possessed in Scotland was the castle of Kildrummy ; and it was soon

besieged by the earls of Lancaster and Hereford. (>ne Osburn treacherously burnt the magazine ; by which means the garrison, destitute of provisions, was obliged to surrender at discretion. The common soldiers were hanged ; Sir Neil Bruce and the earl of Athol were sent prisoners to Edward, who caused them to be hanged on a gallows fifty feet high, and then beheaded and burnt. The countess of Buchan, who had crowned king Robert, was taken prisoner ; as was lady Mary Bruce, the king's sister. Some historians say that Edward ordered these two ladies to be shut up in wooden cages, one to be hung over the walls of the castle of Roxburgh, and the other over those of Berwick, as public spectacles : but lord Hales tells us that the countess of Buchan was put into close confinement in the castle of Berwick. About this time, also, many others of Bruce's party were put to death ; among whom were Thomas and Alexander Bruce, two of the king's brothers, and John Wallace, brother to the celebrated Sir ˆN illiam. Bruce himself, in the mean time, was in such a despicable situation that it was thought

he never more could give disturbance ; it was even reported that he was dead. All his misfortunes, however, could not intimidate him, or prevent his meditating a most severe revenge upon the destroyers of his family. He first removed to the castle of Dumbarton, where he was hospitably received and entertained by Angus lord of Kintyre : but, suspecting that he was not safe there, he sailed in three days to Rachrin, a small island on the Insh coast, where he secured himself effectually from the pursuit of his enemies. It was during his stay in this island that the report of his death was generally propagated.

Notwithstanding this, his party increased considerably ; even when he landed on this island, he was attended by 300 men. However, after having lived secluded for some time, being apprehensive that the report of his death might be generally credited among his friends, it was resolved to attempt the surprise of a fort held by the English under Sir John Hastings, on the isle of Arran. This was performed with success by his two friends Douglas and Sir Robert Boydy who put the greatest part of the garrison to the sword. The king, hearing of their success,.

passed over into Arran ; but, not knowing where his people resided, is said to have found them out by blowing a horn. He then sent a trusty servant, one Cuthbert, into his own county of Carrick ; with orders, in case he found it well affected to his cause, to light a Are on a certain point near his castle of Tunberry, whence it could be discerned in Arran. Bruce and his party perceived the signal, as they thought, and immediately put to sea. Their voyage took up but little time ; and, as Bruce had now 400 men along with him, he resolved immediately to act on the offensive. His first exploit was to sur-prise his own castle of Tunberry, which had been given, along with Bruce's estate, to lord Henry Percy. Him he drove out, along with the English garrison ; but, in the mean time, he met with his servant Cuthbert, who gave him disagreeable intelligence. This man had met with very little encouragement in Scotland ; in consequence of which he had not lighted the fire agreed upon as a signal of his success, that which Bruce had observed having been kindled by accident. He also told him that the English were in full possession of the country. Soon

after this the king was joined by a lady of fortune, who brought along with her forty warriors. By her he was first particularly informed of the miserable fete of his family and relations ; which, instead of disheartening, animated him the more with a desire of revenge. However, he did not immediately attempt any thing, but allowed Douglas to make an effort for the recovery of his estate of Douglasdale. In this expedition Douglas was joined by one Thomas Dickson, a man of considerable fortune, and who gave him intelligence concerning the state of the country. By his advice he kept himself private till Palm Sunday, when he and his followers with covered armor repaired to St. Bride's church, where the English were attending divine service. The latter were surprised, but made a brave defence; until being overpowered by numbers they were obliged to yield. Douglas, without farther resistance, took possession of his own castle, which he found well furnished with arms, provisions, and money. He destroyed all that he could not carry with him, and also the castle itself, where he knew that he must have been besieged had he kept it. While Bruce and his friends were

thus signalising themselves, and struggling with

the English under so many disadvantages, they met with many difficult adventures related by the Scottish historians ; but, as it is now impossible to distinguish the true from the false, we shall pass over the greater part in silence, confining ourselves only to those facts which are important and well authenticated. In 1307 the earl of Pembroke advanced into the west of Scotland to encounter Bruce. The latter did not decline the combat; and Pembroke was defeated. Three days after this, Bruce defeated with great slaughter another English general named Ralph de Monthermer, and obliged him to fly to the castle of Ayr. The king laid siege to the castle for some time, but retired at the approach of succors from England. This year the English performed nothing, except burning the monastery at Paisley. Edward, however, resolved still to execute his utmost vengeance on the Scots, though he had long been retarded by a dangerous indisposition. He was now so

weak, however, that he could advance no far-

ther than six miles in four days ; after which he

expired in sight of Scotland, which he had so

often devoted to destruction. With his dying

breath he gave orders that his body should ac-

company his army into Scotland, and remain

unburied until the country was totally subdued ;

but his son caused it to be deposited in West-

minster Abbey.

The death of such an inveterate enemy to the

Scottish name could not fail of raising the spirits of Bruce and his party ; and the inactive and

timid behaviour of his successor Edward II.

contributed not a little to give them fresh cou-

rage. After having granted the guardianship of

Scotland to his favorite Piers de Gaveston, earl

of Pembroke, whom his father had lately banish-

ed, he advanced to Cumnock, on the frontiers of

Ayrshire, and then retreated into England ; con-

ferring the office of guardian of Scotland upon

John de Bretagne, earl of Richmond, a fortnight

after he had bestowed it upon Gaveston. He

was no sooner gone than Bruce invaded Gallo-

way. The inhabitants refusing to follow his

standard, he laid waste the country ; but was

defeated and obliged to retire northwards by the guardian. In the north he overran the country without opposition ; and soon began to move southwards again to repair his late disaster. He was encountered by Comyn, earl of Buchan, with an undisciplined body of English, whom he entirely defeated and dispersed. But about this time he was seized with a grievous distemper, which weakened him so much that no hopes were left of his recovery. In this enfeebled situation he was attacked by the earl of Buchan and John Mowbray, an English commander, who had assembled a body of troops. The armies met at Inverary in Aberdeenshire. Bruce was too weak to support himself, and therefore was held upon horseback by two attendants ; but he had the pleasure of seeing his enemies totally defeated, and pursued with great slaughter for many miles : it is reported that the agitation of his spirits on that day proved the means of curing him of his disease. This battle was fought on the 22nd of May, 1308. The king of Scotland now lock revenge of his enemies, after the manner of that barbarous age, by wast-

ing the county of Buchan with fire and sword ; and his success had so raised his character that many of the Scots who had hitherto adhered to the English cause now came over to him. Edward, the king's brother, invaded Galloway, and defeated the inhabitants of that country. John de St. John, an English commander, with 1500 horsemen, attempted to surprise him ; but Edward, having received timely information of his designs, ordered the infantry to entrench themselves strongly, while he himself, with fifty horsemen well armed, under cover of a >ick mist, attacked his enemies and put them to flight. After this he reduced all the fortresses in the country, and totally expelled the English. About this time also, Douglas, when roving about the mountainous parts of Tweedale, surprised and made prisoners Thomas Randolph the king's nephew, and Alexander Stewart of Bonkil, who had hitherto continued inimical to the interests of Robert. Randolph was conducted to the king, but talked to him in a haughty strain; upon which his uncle put him into close confinement. The next exploit of Robert was

against the lord of Lorn, a division of Argyle-shire. It was this nobleman who had reduced the king to such straits after his defeat at Methven ; and he now resolved to take ample revenge. Having entered the country, the king arrived at a narrow pass, where the troops of Lorn lay in ambush. This pass had a high mountain on the one side, and a precipice washed by the sea on the other; but Robert having ordered Douglas to make a circuit and gain the summit of the mountain with part of the army, he entered himself with the rest. He was immediately attacked ; but Douglas with his men rushed down the hill, and decided the victory in favor of the king; who soon after took the castle of Dunstaffnage, the chief residence of this nobleman. While Robert and his associates were thus exciting the admiration of their countrymen by their exploits, the English were so unsettled and fluctuating in their counsels that their party knew not how to act. Edward still imagined that there was a possibility of reconciling the Scots to his government ; and for this purpose he employed William de Lam-

by rton, bishop of St. Andrew's, who, after having been taken prisoner, and carried from one place of confinement to another, had at last made such submissions as procured first his liberty and then the confidence of Edward. This ecclesiastic, having taken a most solemn oath of fidelity to the English monarch, now resolved to ingratiate himself, by publishing against Robert and his adherents a sentence of excommunication, which had been resolved on long before. This, however, produced no effect ; and the event was that in 1309, through the mediation of the king of France, Edward consented to a truce with the Scots. This pacific disposition, however, lasted not long. The truce was scarcely concluded when Edward charged the Scots with violating it, and summoned the barons to meet him in arms at Newcastle; yet, probably being doubtful of the event of the war, lie empowered Robert de Umfraville. and three

others, to conclude a new truce ; declaring, however, that he did this at the request of Philip king of France, as his dearest father and friend,

but who was in no sort to be considered as the ally of Scotland. The new negociations were soon interrupted. They were again renewed ; and, in the beginning of 1310, the truce was concluded, but entirely disregarded by the Scots. The progress of Bruce now became alarming. The town of Perth, a place at that time of great importance, was threatened ; and, to relieve it, Edward ordered a fleet to sail up the river Tay; he also commanded the earl of Ulster to assem« ble a body of troops at Dublin, and thence to invade Scotland ; his own barons were ordered to meet him in arms at Berwick. About the end of September he entered Scotland ; passed from Roxburgh through the forest of Selkirk to Biggar ; thence he penetrated into Renfrew ; and, turning back by the way of Linlithgow, he retreated to Berwick, where he continued inactive eight months. During this invasion, Robert had carefully avoided a battle with the English, well knowing that an invasion undertaken in autumn would ruin the heavy armed cavalry, on which the English placed their chief dependence. His cause was also favored by a scarcity which

prevailed at this time in Scotland ; for, as maga-

zines and «ther resources of modern war were

then unknown, the English army were greatly

retarded in their operations, and found it impos-

sible to subsist in the country. The spirit of

enterprise had now communicated itself to all

ranks of people in Scotland. In 1311 the castle

of Linlithgow was surprised by a poor peasant,

named William Binnock. The English garrison

were secure, and kept but a slight guard ; of

which Binnock being informed, concealed eight

resolute men in a load of hay, which he had

been employed to drive into the castle. With

these, as soon as the gate was opened, he fell

upon the feeble guard, and became master of the

place ; which was dismantled by Robert, as well

as all the other castles taken in the course of the war. Edward now resolved to invade Scotland

again ; and for this purpose ordered his army to

assemble at Roxburgh. But Robert, not con-

tented with acting on the defensive, resolved

in his turn to invade England. He accordingly

entered that country, and cruelly ravaged the

bishopric of Durham. He returned loaded with

spoil, and laid siege to Perth. .' fter remaining

six weeks before that place, he raised the siege, but returned in a few days, and, having provided scaling ladders, approached the works with a chosen body of infantry. In a dark night he made the attack ; and, having waded through the ditch, though the water stood to his throat, he was the second man who reached the top of the walls. The (own was then soon taken ; after which it was plundered and burnt, and the fortifications levelled with the ground, on the 8th of January, 1312.

Edward was now become weary of the war, and renewed his negociations for a truce ; but they still came to nothing. Robert again invaded England ; burnt great part of the city of Durham ; and" even threatened to besiege Ber- VM< l w-Kˆro tt-« v;~~ ˆf ˆngland had for the time fixed his residence. He next reduced the castles of Butel, Dumfries, and Dalswinton, with many other fortresses. The castle of Roxburgh, a place of the utmost importance, then fell into his hands. The walls were scaled while the garrison was revelling on the eve of Lent. They retreated into the inner tower ; but their gover-

nor a Frenchman, having received a mortal wound, capitulated. Randolph, the king's nephew, was now received into favor, and began to distinguish himself in the cause of his country. He blockaded the castle of Edinburgh so closely that all communication with the neighbouring country was cut oft'. The place was commanded by one Leland, a knight of Gascony ; but the garrison, suspecting his fidelity, imprisoned him in a dungeon, and chose another commander in his stead. One William Frank presented himself to Randolph, and informed him how the walls might be scaled. This man in his youth had resided in the castle; and, having an intrigue with a woman in the neighbourhood, had been accustomed to descend the wall during the night, by means of a ladder of ropes ; whence, by a steep and difficult path, he arrived at the foot of the rock. Randolph himself, with thirty men, undertook therefore to scale the castle walls at midnight. Frank was their guide, who still retained a perfect memory of the path, and who first ascended the wall. But, before the whole party could reach the summit,

an alarm was given, the garrison ran to arms,

and a desperate combat ensued. The English

fought valiantly till their commander was killed ;

after which they threw down their arms. Leland,

the former governor, was released from his con-

finement, and entered into the Scottish service.

In 1313 king Robert found the number of Ins

friends still increasing. He was now joined I y

the earl of Athol, who had lately obtained a trn'itt of lands from Edward. This year, through the

mediation of France, the conferences for a truce

were renewed. These, however, did not retard

the military operations of the Scots. Cumberland

was invaded and laid waste ; the miserable inhabit-

ants besought Edward's protection ; who com-

mended their fidelity, and desired them to defend

themselves. In the mean time Robert, leaving

Cumberland, passed over into the Isle of Man,

which he totally reduced. Edward found great

difficulties in raising the supplies neceˆnry for

carrying on the war; but at last overcame all these, and by the beginning of 1314 was prepared to

invade Scotland with a large army. In March he

ordered his ships to be assembled for the invasion; invited to his assistance Eth O'Connor, chief of

the Irish of Connaught, and twenty-six other

Irish chiefs; summoned them and his subjects in Ireland to attend his standard, and gave the command of these auxiliaries to the earl of II-ster. His barons were summoned to meet him at Berwick on the 12th of June, and 22,000 foot soldiers, from the different counties of England and Wales, were required by proclamation to assemble at Wark. In the mean time the suc-cesses of the Scots continued. Edward Bruce had reduced the castles of Rutherglen and Dun-dee, and laid siege to the castle of Stirling. The governor agreed to surrender, if he was not re-

lieved before the 24th of June, 1314 : and to this Edward agreed, without consulting his bro-ther. The king was highly displeased with this /ash treaty, which interrupted his own operations, allowed the English time to assemble their ut-most force, and at last obliged him either to raise the siege, or to put all on the event of a single battle. However, he resolved to abide by the agreement, and to meet the English by the ap-pointed day. Having ordered a general rendez-vous of his forces between Falkirk and Stirling, he found their number to amount to somewhat

more that 30,000, besides upwards of 15,000 of an undisciplined rabble that followed the camp. He determined to wait the English in afield which had the burn or brook of Bannock on the right and Stirling on the left. His chief dread was the strength and number of the English cavalry, and these he took every method to oppose. The banks of the Bannock were steep in many places, and the ground between it and Stirling was partly covered with wood. The king commanded many pits, of about a foot in breadth and two or three feet deep, to be dug in all places where cavalry could have access. From the description given of them, by the historians of those times, there seem to have been many rows of them, with narrow intervals. They were carefully co-vered with brushwood and sod, so that they would easily be overlooked by a rash and impe-tuous»enemy. He also made use of caltrops, to annoy the horses. On the 23d of June the Scots received intelligence of the approach of Edward, and prepared to decide the fate of their country. The front of their army extended fiom the Ban-nockburn nearly to St. Ninians, almost upon the line of the present turnpike road from Stirling

to Kilsyth ; and the stone in which the king is said to have fixed his standard is still to be seen. Robert commanded all his soldiers to fight on foot. He gave the command of the centre to Douglas and Walter, the grand steward of Scotland ; his brother Edward had the command of the right wing, and Randolph of the left ; the king himself taking charge of the reserve, which consisted of the men of Argyle, Carrick, and the islanders. In a valley to the rear, west of a rising ground, now called Gilles' Hill, he placed the baggage, and all the useless attendants of his army. Randolph was commanded to be vigilant in preventing the English from throwing succors into the castle of Stirling ; but 800 horsemen, commanded by Sir Robert Clifford, made a circuit by the low grounds to the east, and soon approached the castle. The king, perceiving their motions, chid Randolph for his inadvertency, on which the latter hasted to encounter that body. As he advanced, the English wheeled to attack him. Randolph drew up his men in a circular form, presenting their spears on every side. At the first onset Sir William Daynecourt, an English commander of distinguished valor, was

killed ; but Randolph, who had only a small

party with him, was surrounded on all sides.

Douglas perceived his danger, and requested

the king to let him go to his assistance ; Robert at first refused, but afterwards consented with re-

luctance. Douglas set out without delay ; but

as he approached he saw the English falling into

disorder ; upon which he called on his men to

stop, and not diminish the glory of Randolph

and his men byshning their victory. Robert

was in front of the line when the English ap-

peared. He was meanly dressed, with a crown

above his helmet, and a battle-axe in his hand.

Henry de Bohun, an English knight, armed cap-

a-pee, rode forward to encounter him. Robert

struck his antagonist so violently with his bat-

tle-axe that he cleft him down to the chi ;

after which the English vanguard retreated in

confusion. The Scottish generals blamed their

king for his rashness in thus encountering Bohun,

and he himself, conscious of the justice of their

charge, only replied, ‘ I have broken my good

battle-axe.’ On Monday, the 24th of June, the

whole English army moved on to the attack.

The van, consisting of archers and lancemen,

was commanded by Gilbert de Clare, earl of Gloucester, nephew to the English king, and Humphry de Bohun, constable of "England ; but the ground was so narrow that the rest of the army had not sufficient room to expand itself; so that it appeared to the Scots as consisting of one great compact body. The main body was brought up by Edward in person, attended by Aymer de Valence earl of Pembroke, and Sir Giles d'Argentine, two experienced commanders. Maurice, abbot of Inchaffray, placing himself on an eminence, celebrated mass in the sight of the Scottish army. He then passed along the front, barefooted, with a crucifix in his hands, and in few words exhorted the Scots to fight for their rights and liberty. The Scots fell down on their knees, which being perceived by Edward, he cried out, ' They yield ! See, they implore mercy.' ' They do,' answered Umfraville, one of his commanders, ' they do implore mercy but not from us. On that field they will be victorious or die.' As both parties were violently exasperated against each other, the engagement began with great fury. The king of Scotland, perceiving that his troops were grievously annoyed by the

English archers, ordered Sir Robert Keith the marischal, with a few armed horsemen, to make a circuit, and attack the archers in flank. This was instantly accomplished ; and, as the weapons of the archers were useless in a close encounter, they could make very little resistance, at the same time that their flight spread disorder through the whole army. Robert now advanced with the reserve ; the whole English army was in the utmost confusion ; for the defeat of the archers had decided the victory in favor of the Scots. The young and gallant earl of Gloucester attempted to rally the fugitives, but was thrown from his horse and cut in pieces, which increased the general confusion. At this critical moment, the numerous attendants on the Scottish camp, promoted by curiosity, or the desire of plunder issued from their retirement. The English mistook them for a body of fresh troops coming to the assistance of their enemies, and fled with precipitation on all sides. Many sought refuge among the rocks in the neighbourhood of Stirling castle, and many were drowned in the rivers. Pembroke and Sir Giles d'Argen-

tine had never quitted Edward during the action ; but now, seeing the battle irretrievably

lost, Pembroke constrained the king to quit the field. D'Argentine refused to fly. He was a man of great valor, and had a high reputation in Scotland. He is said to have thrice encountered two Saracen warriors at once in Palestine, and to have killed both his adversaries each time. His valor now availed him but little ; for, rushing into the midst of the Scottish army, he was instantly cut in pieces. Douglas, with sixty horsemen, pursued Edward close. At the Torwood he met Sir Lawrence Abernethy, who was hastening to the English rendezvous with twenty horsemen. The latter soon abandoned the cause of the vanquished, aud joined Douglas in the pursuit of Edward, who fled to Linlithgow. He had scarcely arrived there, when he was alarmed by the approach of the Scots, and again obliged to fly. Douglas and Aberne thy followed him with such assiduity, that (as lord Hales says) ne vel mingendi locus concede-*

retur ; but, notwithstanding their utmost efforts, Edward got safe to Dunbar, where he was received by the earl of March, who protected him till he could be conveyed by sea to England, where he met with a more horrible death than if he had been killed in battle. Such was the decisive victory of Bannockburn, the greatest defeat the English ever sustained from the Scots. On the side of the latter no persons of note were slain, except Sir William Vipont and Sir Walter Ross, the favorite of Edward Bruce ; and so grievously was Edward afflicted by the death of this man, that he exclaimed, ‘ O that this day’s work were undone, so Ross had not died ! ‘ On the English side were slain twenty-seven barons and bannerets, and twenty-two taken prisoners ; of knights there were killed forty-three, and sixty taken prisoners ; of esquires there fell 700 ; but the number of the common men who were killed or taken was never known with any certainty. See BANNOCK-BURN. The Welsh who had served in the English army were scattered over the country, and cruelly butchered by the Scottish peasants ; the .English, who had taken refuge

among the locks in the neighbourhood of Stir-

ling, surrendered at discretion ; the castle was

surrendered, and the privy-seal of England fell

into the hands of the king of Scots. The spoils

of the English camp were immense, and, along

with the ransom of the many noble prisoners who

fell into their hands, greatly enriched the con-

querors. Robert showed much generosity in his

treatment of the prisoners. He set at liberty Ralph de Monthermer and Sir Marmaduke Twerge,

two officers of high rank, without ransom ; and

by humane and generous offices alleviated the

misfortunes of the rest. The dead bodies of the

earl of Gloucester and lord Clifford were sent to

England, that they might be interred by their

friends. There was one Bastan, a Carmelite

friar and poet, whom Edward is said to have

brought with him in his train, to be spectator of

his achievements, and to record his triumphs.

It Man was made prisoner, and obliged to cele-

brate the victory of Robert over the English.

This he did in wretched Latin rhymes, which,

however, procured his liberty. After the battle

of Bannockburn, the earl of Hereford retreated

to the castle u(Bothwell, where he was besieged

by Edward Bruce, and soon obliged to surrender. He was exchanged for the wife, sister, ami daughter of the king, the young earl of Mar, and the bishop of Glasgow.

The terror of the English after the defeat at Bannockburn is almost incredible. Walsingham asserts that many of them revolted to the Scots, and assisted them in plundering their own country. ‘ The English,’ says he, ‘ were so bereaved of their wonted intrepidity, that 100 of that nation would have fled from two or three Scotchmen.’ Edward Bruce and Douglas entered England on the east side, ravaged Northumberland, and laid the bishopric of Durham under contribution. Thence they proceeded to Richmond, laid Appleby and some other towns in ashes, and returned home laden with plunder. Edward summoned a parliament at York, to concert means for the public security ; and appointed the earl of Pembroke to be guardian of the country between the Trent and the Tweed. Robert, however, sent ambassadors to treat of peace; but the Scots were too much elated with their good fortune to make concessions, and the Eng-

lish were not yet sufficiently humbled to yield to all their demands. The ravages of war were renewed, and the Scots continued their incursions into England, and levied contributions in different places. In 1315 the English affairs seemed to revive. The Scots indeed plundered Durham and Hartlepool ; but they were repulsed from Carlisle, and failed in an attempt on Berwick. The Irish of Ulster, oppressed by the English government, implored the assistance of Robert, and offered to acknowledge his brother Edward as their sovereign ; who accordingly landed at Carrickfergus on the 25th of May, 1315, with 6000 men. This was an enterprise evidently beyond the power of Scotland to accomplish. However, there were motives which induced Robert to consent. The offer of a crown inflamed the ambition of Edward Bruce, whose impetuous valor made no account of difficulties, however great. It might have been deemed ungenerous, and perhaps impolitic, to have rejected the proposals of the Irish for the advancement of his brother, to whom the king owed more than he could repay. Besides, the invasion of

Ireland seemed a proper expedient for dividing the English forces. But the issue proved unfortunate. The king himself had gone over into Ireland, to assist his brother in attempting the subjection of that country ; and during his absence the English had made several attempts to disturb the tranquillity of Scotland. The earl of Arundel invaded the forest of Jedburgh with a numerous army ; but, being drawn into an ambuscade by Douglas, he was defeated with great loss. Edmund de Caillaud, a knight of Gascony and governor of Berwick, invaded and wasted Teviotdale ; but, while he was returning home, loaded with spoil, he was attacked, defeated, and killed by Douglas. Soon after this intelligence was conveyed to Douglas that one Robert Neville had boasted that he would encounter him whenever he saw his banner displayed. Douglas soon gave him an opportunity. He advanced towards Berwick, displayed his banner and burnt some villages. Neville, provoked a

these ravages, took the field, encountered Dou-

glas, was defeated and killed. By sea the English invaded Scotland, and anchored ott'lnverkeithing in tlie frith of Forth, where they soon after landed ; 500 men, under the earl and sheriff of Fife, attempted to oppose their landing, but were intimidated by the number of their enemies. William Sinclair, bishop of Dunkeld, happened to meet the fugitives ; and having, by his reproaches, obliged them to rally, he led them on uˆain to the charge, and drove the English to their ships with considerable loss. For this exploit Robert conferred the title of the king's bishop on Sinclair ; and he was long venerated !•>• his countrymen on this account. In 1317, after king Robert had returned from his Irish expedition, a bull was issued by pope John XXII. commanding a two years' truce between England and Scotland, under pain of excommunication. Two cardinals were sent into Britain to make known his commands ; and they were empowered to inflict the highest spiritual censures on Robert Bruce, or whomsoever else they thought proper. About the beginning of September 1317 two messengers were sent to Robert by the cardinals. The king gave them a

gracious reception ; and, after consulting with his barons, answered that he very much desired a perpetual peace, by the mediation of the cardinals, or any means. He allowed the open letters from the pope, which recommended peace, to be read in his presence, and listened to them with due respect; but he would not receive the sealed letters addressed to Robert Bruce, governor of Scotland, alleging that there might be many of his barons whose names were Robert Bruce, and that these barons might have some share in the government. Unless, therefore, the letters were addressed to him as king of Scotland, he could not receive them without advice of his parliament, which he promised immediately to assemble on the occasion. The messengers attempted to apologise for the omission of the title of king. ' The holy church was not wont,' they said, 'during the dependence of a controversy, to write or say any thing which might be interpreted as prejudicial to the claims of either of the contending parties.' ' Since then,' answered the king, ' my spiritual father and my holy mother would not prejudice the cause of my adversary, by bestowing on me the appellation of king

during the dependence of the controversy, they ought not to have prejudiced my cause by withdrawing that appellation from me. I am in possession of the kingdom of Scotland ; all my people call me king; and foreign princes address me under that title ; but it seems that my parents are partial to their English son. Had you presumed to present letters with such an address to any other sovereign prince, you might perhaps have been answered in a harsher style ; but 1 reverence you as the messengers of the holy see."

The messengers, quite abashed with this reply, requested that he would consent to a temporary cessation of hostilities; but to this he declared that he never would consent, while the English daily invaded and plundered his people. His counsellors told the messengers that the disrespectful omission was owing to the intrigues of the English at the court of Rome, and hinted that they had received this intelligence from Avignon. When the messengers had informed the cardinals of these proceedings, the latter determined to proclaim the papal truce in Scotland ; in which hazardous office they employed Adam Newton, guardian of the monastery of Minorities

at Berwick, who was charged with letters to the clergy of Scotland, particularly to the bishop of St. Andrew's. The monk found the king encamped with his army in a wood near Old Cambus, making preparations for assaulting Berwick. Personal access was denied to the king ; but the monk proclaimed the truce by the authority of the pope. The king sent him for answer that he would listen to no bulls till he was treated as king of Scotland, and had made himself master of Berwick. The monk, terrified at this answer, requested either a safe conduct to Berwick, or permission to pass into Scotland, and deliver his letters to the Scottish clergy. Both were refused ; and he was commanded to leave the country instantly. He set out for Berwick, but in his way thither was attacked by robbers, 01 some who pretended to be so. By them he was stripped and robbed of all his parchments, together with his letters and instructions; the robbers also tore the pope's bull. In 1318 king Robert proceeded in his enterprize against Berwick. A citizen of Berwick, named Spalding, having been ill used by the governor, resolved to revenge himself; and therefore wrote a letter to a Scottish lord,

whose relation he had married, offering on a certain night to betray the town. The nobleman communicated this important intelligence to the king, who commanded him to repair to a certain place with a body of troops ; to which place he also gave separate orders to Douglas and Randolph to repair at the same hour, each with a body of troops under his command. The forces, thus cautiously assembled, marched to Berwick, and, assisted by Spalding, scaled the walls, making themselves masters of the place in a few hours. The garrison of the cattle, perceiving that the number of Scots was but small, made a desperate sally with the men who had fled into the castle from the town ; but, liter an obstinate conflict, they were defeated and driven back, chiefly by the extraordinary valor of a young knight, named Sir William Keith, of Galston, on the 28th March 1318. King Robert no sooner heard of the success of his forces against the town than he hastened to lay siege to the castle of Berwick, which was soon obliged to .apitulate; after which the Scots entered Northumberland, and took the castles of Wark, Ilarbottle, and Mitford.

In May 1318 they again invaded England, and penetrated into Yorkshire, burning, in their progress, the towns of Northallerton, Borough-bridge, Scarborough, and Skipton in Craven, and forcing the inhabitants of Rippon to redeem themselves by paying 1000 merks ; after which they returned to Scotland with much booty ; and, as an English historian expresses it, 'driving their prisoners before them like flocks of sheep.' This year the interposition of the pope was again obtained against Robert ; and the two cardinals-residing in England were commanded to excom-

municate Robert Bruce and his adherents, on account of his treatment of the messengers of the holy see, and his assault of Berwick, after a truce had been proclaimed by the papal authority. This sentence was accordingly put in execution: and, on messengers being sent from Scotlarid to Rome, to procure a reversal of the sentence, Edward despatched the bishop of Hereford, and Hugh d'Espencer the elder, to inform his holiness of certain intercepted letters which had been

written from Avignon to Scotland ; upon which the pope ordered all the Scots residing at Avignon, and all of that place who had corresponded with Scotland, to be taken into custody. The most remarkable transaction of this year, however, was the defeat and death of Edward Bruce in Ireland. His body was quartered, and distributed for a public spectacle over that country : his head was presented to Edward by John lord Birmingham, the commander of the English army. In the mean time Edward, who had summoned a parliament to meet at Lincoln, was obliged to prorogue it on account of the Scottish invasion, and to assemble an army at York for the defence of England. At Michaelmas it was determined, in a parliament held at London, that every city and town in England should furnish a certain proportion of men completely armed. Thus a considerable body of troops was raised ; but, when they assembled at York, their party animosities and mutual distrust rose to such a height that a considerable number of them were sent back to their habitations. In 1319 Edward, having- succeeded so well with the

court of Rome, made similar attempts with other powers, to the prejudice of the Scottish nation. Accordingly he requested the earl of Flanders to prohibit the Scots from entering his country ; but to this request he received for reply, that ' Flanders was the common country of all men ; I cannot prohibit any merchants from trafficking thither,' said the earl, ' for such prohibition would prove the ruin of my people.' Edward, on this, once more determined to have recourse to war; and with this view commanded his army to assemble at Newcastle-upon-Tyne, on the 24th of July 1319 ; but first requested the prayers of the clergy for success, and demanded from them a sum of money by way of loan. Every thing being now in readiness, the English army approached Berwick, then under the care of Walter, grand steward of Scotland. This nobleman had long apprehended an attack from the English, and bad taken his means of defence accordingly. The English however, confiding in their numbers, made a general assault ; but were repulsed on the 7th September, after an obstinate contest. Their next attempt was on the side towards the river. At that time the walls of Berwick were of

inconsiderable height ; and it was proposed to bring a vessel close to them, whence the troops might enter by a drawbridge. But the Scots annoyed the assailants so much that they could not bring this vessel within the proper distance; and at the ebb of the tide it grounded, and was burnt. The English had then recourse to a new-invented engine which they called a sow. In many particulars it resembled the testudo arietaria of the ancients. It was a large fabric of timber well-roofed, having stages within it, and in height surpassing the wall of the town. It was moved upon wheels, and served for the double purpose of conducting the miners to the foot of the wall, and armed men to the storm. But this machine was counteracted by one constructed by John Crab, a Flemish engineer. This was a kind of moveable crane, by which great stones might be raised, and then let fall upon the enemy. The English made a general assault on the quarter towards the sea, as well as on the land side ; so that the garrison, exhausted by continual fatigue, could scarcely maintain their posts. The great engine moved on to the walls : at length a huge stone struck it with such force that the beams

gave way, and, the Scots pouring down combus-

tibles upon it, it was burnt. The English, how-

ever, still continued the attack. The steward,

with a reserve of 100 men, went from post to

post, relieving those who were wounded or unfit

for combat. One soldier of the reserve only re-

mained with him when an alarm was given that

the English had burnt a barrier at the port called St. Mary's, possessed themselves of the draw-

bridge, and fired the gate. The steward hastened

thither, called down the guard from the rampart,

ordered the gate to be set open, and rushed out

upon the enemy. A desperate combat ensued,

and continued till the close of the day, when the

English commanders withdrew their troops.

Notwithstanding this brave defence, it was evi-

dent that the town could not hold out long ; and

Robert could not, with any probability of suc-

cess, attack the fortified camp of the English.

He therefore determined to make a powerful di-

version in England. By order of the king 15,000

men entered England by the western marches,

and laid waste Yorkshire. The archbishop of

York hastily collected a numerous body of com-

mons and ecclesiastics, with whom he encoun-

tered the Scots at Mitton, near Borough-Bridge, in the North Riding of Yorkshire : but the English were instantly routed, and 3000 left dead on the field : a great part of those who fled perished in the river Swale. In this action 300 ecclesiastics are said to have lost their lives.

The news of this successful inroad alarmed the besiegers of Berwick. The barons whose estates lay to the southward remote from the Scottish depredations were eager for continuing the siege. But they were opposed by those of the north ; who were no less eager to abandon the enterprise, and return to the defence of their own country. With them the earl of Lancaster concurred in opinion ; who, understanding that his favorite manor of Pontefract was exposed to the ravages of the Scots, departed with all his adherents. Edward, upon this, drew off the remainder of his army, and attempted to intercept Randolph and Doughs ; but they eluded him, and returned in safety to Scotland. The failure of this last attempt induced Kdward seriously to think of peace ; and accordingly a truce was concluded on the 21st of December

1319; which interval of tranquillity the Scots made use of to address a manifesto to the pope. This was drawn up in a spirited manner, and made a very considerable impression in the

councils of the pontiff. The pope, seeing that Robert would not be terrified into submission, ordered Edward to make peace with him in the l>est manner he could. A negociation was accordingly set on foot, which soon terminated ineffectually ; the truce was not renewed, and in 1322 a mutual invasion took place. The Scots penetrated into Lancashire by the western marches ; and, after plundering the country, returned home with an immense booty; while Edward made great preparations for an expedition into Scotland, which took place in August. In this, however, he was unsuccessful. Robert had caused all the cattle to be driven off, and all the effects of value to be removed ; fixing his camp at Culross, on the north side of the Frith of Forth. His orders for removing the cattle were so punctually obeyed that the only prey which fell into the hands of the English was a

single lame bull. Edward, however, penetrated nearly as far as Edinburgh ; but, his provisions being consumed, many of his soldiers perished for want, and he was obliged at last to retire. On their return, his soldiers burnt the abbeys of llolyrood, Melrose, Dryburgh, &c., and killed many of the monks ; but, when they returned to England, and again enjoyed a plentiful living, they indulged in such excesses as were productive of a great mortality. One English historian says, almost one-half of the great army which Edward had brought from England with him were destroyed either by hunger or gluttony. As soon as the English retired, they were pursued by the Scots, who laid siege to the castle of Norhain. Edward lay at the abbey of Biland in Yorkshire, with a body of troops advantageously posted near. The Scots attempted to surprise the king, and it was with the utmost difficulty that he escaped to York, leaving to the enemy all his baggage and treasure. The English camp was supposed to be accessible only by a narrow pass, but Douglas undertook to force it, and Randolph presented himself as a volunteer in this dangerous service, under his friend

Douglas. The Highlanders and men of the Isles climbed the precipice on which the English camp stood, and the enemy were driven out with great loss. The Scots pursued them to the gates of York, wasted the country without control, and returned home unmolested. Edward, disheartened by repeated losses, agreed to a cessation of arms, from the 30th of March 1 323, until the 12th of June 1336. It was stipulated that, during its continuance, no new fortresses should be erected in Cumberland, north of the Tyne, or in the counties of Berwick, Roxburgh, or Dumfries ; and by a singular article it was provided that, ' Bruce and the people of Scotland might procure absolution from the pope ; but, in case there was no peace concluded before the expiration of the truce, that the sentence of excommunication should revive.' The treaty was ratified by Robert, as king of Scotland, 7th of June 1323. Robert's next care was to reconcile himself to the church, and to obtain from the pope the title of king, which had been so long denied him; this at last, with difficulty, was obtained. A son was born this year to the king

f Scotland ut Dunfermline, and named Daud.

But scarcely had this future hero come into the world, when a rival began to appear. John Baliol had lorn; been dead ; but left a son named Edward, heir to his pretensions. The young prince had resided on his paternal estate in Normandy, neglected and forgotten; but in 1324 was called to the court of England, for the purpose of setting him up as a rival to young David Bruce. The negociations for peace, however, still went on ; but the commissioners made little progress, by reason of the demands for feudal sovereignty still made by the English. The reconciliation with the church was also broken off, by the Scots keeping possession of Berwick. Tnis had been taken during the papal truce; and Robert chose still to lie under the sentence of excommunication rather than to part with such an important fortress.

In the beginning of 1327 Edward II. was deposed and barbarously murdered. He was succeeded by his son Edward III., then in his fifteenth year, who renewed the negociations for peace, and ratified the truce which his father had

made ; but hearing that the Scots had resolved to invade England, if a peace was not immediately concluded, he summoned his barons to meet him in arms at Newcastle, and fortified York. We are not informed why the Scots at this time disregarded the truce ; however, on the 15th of June 1327, Douglas and Randolph invaded England by the western marches, with an army of 20,000 horsemen. Against them Edward led an army, consisting at the lowest calculation of 30,000 men, who assembled at Durham on the 1 3th of July. The Scots proceeded with the utmost cruelty, burning and destroying every thing as they went along ; and on the 18th of the same month the English discovered them by the smoke and flames which marked their progress. They marched forward in order of battle towards the quarter where the smoke was perceived ; but, meeting with no enemy for two days, they concluded that the Scots had retired. Disencumbering themselves then of their heavy baggage, they resolved by a forced march to reach the river Tyne, and, by posting themselves on the north bank, to intercept the enemy

on his return. On the 20th of July the cavalry,

having left the infantry behind, crossed the river

at Halydon : but, before the rest of the army

could come up, the river was so swelled by sud-

den rains that it could no longer be forded ;

thus the English troops remained divided for

several days, without any accommodation for

quarters, and in the greatest want of provisions

and forage. The soldiers now began to murmur ;

and it was resolved again to proceed south-

wards. The king proclaimed a reward of lands,

to the value of £100 yearly for life, to the person who should first discover the enemy 'on dry

ground, where they might be attacked;' and

many knights and esquires swam across the river

on this strange errand. The army continued its

march for three days without any news of the

Scots ; but on the fourth accounts of them were

brought by Thomas Rokesby, esq., who reported

that, ' the Scots had made him prisoner ; but

that their leaders understanding his business had

set him at liberty; saying, that they had remain-

ed for eight days on the same ground, as ignorant

of the motions of the English as ttie English

were of theirs, and that they were desirous and

ready to combat.' With this man for their guide,

the English- soon came in view of the Scots.

They were advantageously posted on a rising

ground, having the river Were in front, and their

flanks secured by rocks and precipices. The

English dismounted and advanced, hoping to

allure the Scots from their strong post ; but in

vain. Edward then sent a herald to Randolph

and Douglas, with a message in the style of chi-

valry : ' Either,' says he, ' suffer me to pass the river, and leave me room for ranging my forces ;

or do you pass the river, and I will leave you

room to range yours ; and thus shall we fight on

equal terms.' To this the Scottish commanders

answered, 'We will do neither. On our road

hither we have burnt and spoiled the country ;

and here we are fixed while to us it seems good,

if the king of England is offended, let him come

over and chastise us.' The armies continued in

sight of each other for two days ; after which

the English, understanding that their enemies

were distressed for provisions, resolved to main-

tain a close blockade, and to reduce them by fa-

mine. Next day, however, they were surprised to find that the Scots had secretly decamped, and taken post two miles up the river in ground still stronger, and of more difficult access. The English encamped opposite to them near Stanhope park. At midnight Douglas undertook a most desperate enterprise. With 200 horsemen he approached the English camp, and entered it under the guise of a chief commander calling the rounds. Having thus eluded the sentinels, he passed on to the royal quarters, overthrew every thing that opposed him, and furiously assaulted the king's tent. The domestics of Edward desperately defended their master ; and his chaplain with many others of his household were slain. However, the king himself escaped ; and Douglas, disappointed of his prey, rushed through the enemy, and effected a retreat with inconsiderable loss. The following day the English learned from a prisoner that orders had been issued in the Scottish camp for all men to hold themselves in readiness that evening to follow the banner of Douglas; on which, apprehending an attack in the night, they prepared for

battle, lighting great fires, and keeping a strict watch ; but in the morning they were informed by two trumpeters, whom they had taken prisoners, that the Scots had decamped before midnight, and were returning to their own country. This report they could scarcely credit, and the army remained for some hours in order of battle : but at length some scouts, having crossed the river, returned with certain intelligence that the Scottish camp was deserted : which, when Edward was assured of, he burst into tears ; for the enterprise, which thus terminated in disappointment and dishonor, had cost an immense sum. His foreign auxiliaries in particular consisted of heavy-armed cavalry ; and they were now so much worn out that they could scarcely move : the few living horses were become unserviceable, in a campaign of three weeks ; so that they were obliged to procure horses to convey them to the south of England. Edward, having rested at Durham for some days, inarched to fork, where he disbanded his army. Barbour, a Scottish historian, relates that there was a morass in the rear of the Scottish camp, which he calls

the two mile morass ; that the Scots made a way over it with brushwood, removing it as they went along, that the English might not pursue them by the same way. The English narratives are filled with descriptions of the strange appearance of the deserted camp of the Scots. Their pursuers found, we are told, a number 01 skins stretched between stakes, which served for kettles to boil their meat ; and for bread each soldier carried along with him a bag of oatmeal, of which he made cakes, toasting them upon thin iron plates, which appear to have been part of their armour. On the return of Douglas and Randolph, the king led his army against the eastern borders, and besieged the castle of Norham. However, in 1328, Edward, wearied out with continued losses and disappointments, consented to a perpetual peace between the two kingdoms on the condition — 1. That the stone on which the kings of Scotland were wont to sit at the time of their coronation, should be restored to the Scots. 2. The king of England engaged to employ his good offices at the papal court for obtaining a revocation of all spiritual processes depending before the holy see against the king of

Scots, or against his kingdom. 3. For these causes, and to make reparation for the ravages committed in England by the Scots, the king of Scots was to pay 30,000 merks to the king of England. 4. Restitution was to be made of the possessions belonging to ecclesiastics in either kingdom, whereof the war might have deprived them. 5. But there was not to be any restitution made of inheritances which had fallen into the hands of the king of England or of the king of Scots, by reason of the war between the two nations, or through the forfeiture of former possessors. 6. Joanna, sister of the king of England, was to be given in marriage to David, the son and heir to the king of Scots ; the king of Scots providing the princess in a jointure of £'2000 yearly, secured on lands and rents. 7. If either of the parties failed, in performing these conditions, he was to pay £2000 of silver to the papal treasury. This peace, ratified at Northampton, is styled ignominious by the English historians, and the marriage of the Scottish prince to the king of England's sister, that base marriage ; because thus all pretensions

to sovereignty over Scotland were given up. The marriage of the infant prince was celebrated on the 12th of July 1328. On the 7th of June, 1329, died Robert Bruce, unquestionably the greatest of the Scottish monarchs. His death seems to have been occasioned by the excessive fatigues of military service ; and his disease, called by historians of those times a leprosy, was probably an inveterate scurvy, occasioned by his mode of living. He died at the age of fifty-five. He was married to Isabella, daughter of Donald the tenth earl of Mar ; by whom he had a daughter named Marjory, married to Walter, the grand steward of Scotland ; whose husband died in 1326. The second wife of Robert was Elizu-

beth, the daughter of Aymer de Burgh, earl of Ulster. By her he had a son, David II.; a daughter named Margaret, married to William earl of Sutherland ; another, named "Matilda, married to Thomas Isaac, esq. ; and Elizabeth, married to Sir Walter Oliphant of Gask. Pie had also a natural son named Robert. That

king Robert I. was a man of unquestionable virtue and humanity, as well as unequalled in the knowledge of the military art, is evident from many particulars already related. The only questionable part of his character is his severe punishment of a conspiracy formed against him in 1320; a relation of which, to avoid interrupting our detail of more important matters, we deferred till now. — The chief of the conspirators were William de Soulis, whose ancestor had been a candidate for the crown ; the countess of Sirathern, and some other persons of rank. The countess discovered the plot ; after which Soulis confessed the whole, and was punished with perpetual imprisonment ; as well as the countess, notwithstanding her having made the discovery, (‘ilbert de Malyerb and John de Logie, both knights, and Richard Brown, esq., were put to death as traitors : but the person most lamented v.-as Sir David de Brechin, for his bravery styled the flower of chivalry. He was nephew to the king, and had served with great reputation against the Saracens. To him the conspirators, after having exacted an oath of secrecy, revealed

their designs. He condemned their undertaking, and refused to share in it ; but did not discover it, on account of the oath he had taken. Yet for this concealment he was tried as a traitor, condemned and executed, without regard to his personal merit or his relation to the king. The conspirators were tried before the parliament at Scone in 1 320 ; and this session, in which so much blood was shed, was long remembered under the name of the black parliament.

After the death of Robert I. the administration was assumed by Randolph, in consequence of an act passed in 1318, by which he was appointed regent in case of the king's death. In his new character he behaved himself in a most exemplary manner : and by impartially discharging the duties of his station, and rigidly administering justice, he secured jnost perfectly the public tranquillity. The severe exercise of justice was now rendered not only necessary but indispensable. During a long course of war, the people had been accustomed to plunder and bloodshed ; and, having now no English enemies to employ them, they robbed and murdered

one another. Randolph repressed these crimes by making the counties liable for the robberies committed within their bounds. He gave orders for severely punishing all vagabonds, and obliged them to work for their livelihood ; making proclamation that no man should be admitted into any town or borough, who could not earn his bread by his labor. These regulations were attended with the most salutary effects. A fellow who had secreted his own plough irons, pretending that they were stolen, being detected by the sheriff's officers, was instantly hanged. A certain man, having killed a priest, went to Rome, and obtained absolution from the pope ;

after which he boldly returned to Scotland. Randolph ordered him to be tried, and, on his conviction, to be executed : ' because,' said he, ' although the pope may grant absolution from the spiritual consequence of sin, he cannot screen offenders from civil punishment.' King Robert, just before his death, had desired that his heart might be deposited in our Saviour's sepulchre at Jerusalem ; and on this errand the great comman-

der, Douglas, was employed, who set sail in June, 1330, with a numerous and splendid retinue. He anchored off Sluys in Flanders, the great emporium of the Netherlands, where he expected to find companions in his pilgrimage ; but, learning that Alphonso XI. the young king of Leon and Castile, was engaged in a war with Osmyn the Moor, he could not resist the temptation of fighting against the enemies of Christianity. He met with an honorable reception at the court of Spain, and readily obtained leave to enter into what was thought the common cause of Christianity. The Moors were defeated ; but Douglas, giving way to his impetuous valor, pursued the enemy too eagerly, and, throwing among them the casket which contained the heart of his sovereign, cried out, ' Now pass thou onward as thou wast wont; Douglas will follow thee or die.' The fugitives rallied and surrounded Douglas ; who, with a few of his followers, was killed in attempting to rescue Sir Walter St. Clair of Roslin. His body was brought back to Scotland, and interred in the church of Douglas. His countrymen styled him the good

Sir James Douglas. He was one of the greatest commanders of the age; and is said to have been engaged in seventy battles, fifty-seven of which he gained, and was defeated in thirteen. In November 1331 Edward Baliol began to renew his pretensions to the crown of Scotland, about the time that David II. and his consort Johanna were crowned at Scone. This year differences began also to arise with England. It had been provided, by an article of the treaty of Northampton, that ' Thomas lord Wake of Ledel, Henry de Beaumont, called earl of Buchan, and Henry de Percy, should be restored to their estates, of which the king of Scots, by reason of the war between the two nations, had taken possession.' This article had been executed with respect to Percy, but not to the other two ; and, though Edward had repeatedly complained of this neglect, he obtained no satisfaction. Lord Hales has some judicious remarks on this omission, which he ascribes to the political foresight of Randolph. The disinherited barons now resolved to invade Scotland, though their force consisted of only 3000 infantry, and 400 men at arms. Edward would not permit them to enter Scot-

land by the usual way, as he himself did not yet choose openly to take part in their quarrel. They were therefore obliged to take shipping, and landed at a place called Ravenspur, or Ravensburgh, at the mouth of the Humber, long ago overwhelmed by the sea. Randolph, having intelligence of the English preparations, had marched an army to the frontiers of East Lothian ; but, being afterwards informed of the naval armament, he marched northwards; but died at Musselburgh, on the 20th of July 1332.

Donald, earl of Marr, a man whose only merit consisted in his being relate J to the royal family, was chosen to succeed him in the regency. Edward, in the mean time, fell upon a most curious expedient to show the justice of his cause. In March 1332 he had published a prohibition for any person to infringe the treaty of Northampton : yet the disinherited lords had been suffered to embark, expressly for the purpose of invading Scotland, after this prohibition was published. After they were gone, Henry de Percy was em-

powered to punish those who should presume to array themselves in contempt of his prohibition ; and because he understood that the Scots were arming, in order to repel those invaders who:r. Edward had indirectly sent against them, he empowered Henry de Percy to arm against them. On the 31st of July Edward Baliol and his associates landed in the neighbourhood of Kinghorn, on the Forth ; routed the earl of Fife, who opposed them; and marched next day to Dunfermline. Having then ordered his fleet to wait for him at the mouth of the Tay, he proceeded northwards, and encamped on the Miller's acre at Forteviot, with the river Earn in front. Here his situation was extremely dangerous, and his destruction seemed inevitable. The earl of Marr was encamped with a numerous army on the opposite bank of the river Earn, near Duplin ; and another, nearly as numerous, had advanced from the south, through the Lothians and Stirlingshire, and fixed its quarters at Auchterarder, eight miles west of Forteviot. Historians differ as to the number of the two armies. Fordun says that the regent had with him 30,000 men, and the earl of March as many ; and that Baliol

had between 500 and 600 men at arms, that is, horsemen completely armed. Hemingford reckons each of the Scottish armies at 40,000, and Baliol's at 500 armed men. Knyghton says that Baliol, when he landed in Fife, had 300 armed men, and 3000 more of different sorts ; but that he had in all only 2500 men in his camp at Earn. In this desperate situation the English general formed a design of attacking the Scots in their camp. They were directed to a ford by Andrew Murray of Tullibardine. The Scots kept no watch, but abandoned themselves to intemperance and riotous mirth ; while their enemies, led by Alexander Mowbray, crossed the

river at midnight. Ascending a rising ground,

they came unperceived on the right flank of the

Scottish army, and made a dreadful slaughter.

At the first attack, young Randolph hasted with

300 men at arms to oppose the enemy ; and

being seconded by Murdoch earl of Monteith,

Alexander Fraser, and Robert Bruce, natural son

to the late king, he gave a check to the English, and maintained the combat on equal terms. But

now the regent himself, "along with the whole

multitude, rushed forward to battle without the

least order; so that, "while the hindmost pressed

on, the foremost were thrown down and trodden

upon. The slaughter lasted many hours, and the

remains of this vast army were utterly dispersed.

Many men of eminence were killed ; among

whom were Donald earl of Marr, author of the

whole catastrophe; Thomas earl of Moray, Mur-

doch earl of Monteith K< >1,. rt carl of Carrick,

Alexander Fraser, and Robert Bruce. The

slaughter of the infantry and of the men at arms

was very great ; and the most probable accounts

make it 2000 men at arms, and upwards of

13,000 common soldiers. The loss of the I'.n/

lish was inconsiderable. The day after this victory, Baliol took possession of Perth ; and, apprehending an attack from the earl of March, caused the ditch to be cleared, and the town to be fortified with palisadoes. The first information which the earl received of this dreadful defeat was from a soldier, who fled mortally wounded, and had time only to show his wounds, and expire. The earl, on his arrival at the field of battle, found a dreadful confirmation of the soldier's intelligence ; but, instead of taking any E roper measures, he and his men hurried on eadlong to Perth, actuated only by a blind impulse to revenge. At first they designed to assault the place ; next they determined to reduce it by famine. This, however, could not be done unless the Scots had been masters at sea. One John Crab, a Flemish engineer (who had distinguished himself by destroying the famous engine called the sow at the siege of Berwick), had continued for many years to annoy the English on the eastern coasts. After the blockade of Perth was formed, he came with ten vessels to the month of the Tay, where the English fleet was. and took

the ship belonging to Henry de Beaumont ; but soon after all his ten vessels were burnt by the English in a general engagement. After this the blockade of Perth was raised, the earl of March disbanded his army, and Edward Baliol was crowned king of Scotland at Scone, on the 24th of September 1332.

The new monarch was no sooner put in possession of the kingdom than he left Perth in the hands of the earl of Fife, while he himself repaired to the southern parts of the kingdom. But the party of king David was far from being extinguished. Baliol was scarcely gone, when Perth was surprised, and its fortifications razed, by James Fraser, Simon Fraser, and Robert Keith. The earl of Fife was made prisoner, with his family and vassals. Andrew Murray of Tullibardine, who had directed the English to a ford on the Earn, was put to death as a traitor.

Such of the Scots as still adhered to the interest of their infant prince chose Sir Andrew Murray of Bothwell regent. He was a brave and active man, but had not as yet sufficient force to attempt any thing considerable. In the mean time. li.i-liol behaved in a most scandalous manner. At

Roxburgh, he made a solemn surrender of the liberties of Scotland; acknowledged Edward for his liege lord ; and became bound to put him in possession of the town, castle, and territory of Berwick, and of other lands on the marches, extending in all to the yearly value of £2000, 'on account,' as the instrument bears, S great honor and emoluments which we have procured through the sufferance of our lord tho king, and by the powerful and acceptable aid which we have received fiom his good subjects. He also proffered to marry the princess Johanna, whom he considered as only betrothed to David Bruce, and to add £500 to her jointure; an this under the penalty of £10,000 to be appro-*

priated as a portion to the lady, or otherwise disposed of for her behoof. He farther engaged to provide for the maintenance of David Bruce as the king of England should advise ; and, lastly, he became bound to serve Edward in all his wars, excepting in England, Wales, and Ireland, for the space of a year together, with 200 men at

arms. Afterwards, Edward having engaged to maintain him on the throne of Scotland, Baliol bound himself to serve him in all his wars whatever. Though the greatest part of the nation submitted to this shameful treaty, it roused the indignation of those who wished well to their country. John, the second son of Randolph, now earl of Moray by the death of his brother ; Archibald, the youngest brother of the renowned Douglas ; together with Simon Fraser, assembled a body of horsemen at Moffat in Annandale ; and, suddenly traversing the country, assaulted Baliol unexpectedly at Annan. His brother Henry made a gallant resistance for some time; but was at last overpowered with numbers, and killed, with several other persons of distinction. Baliol himself escaped almost naked, with scarcely a single attendant, and fled to England. After his departure, the Scots began to make depredations on the English frontiers. Edward issued a proclamation, in which he solemnly averred that the Scots, by their hostile depredations, had violated the peace of Northampton. Baliol, in the meantime, being joined by some

English barons, returned to Scotland ; took and burnt a castle where Robert de Colville commanded ; and, establishing his quarters in the neighbourhood of Roxburgh, began to make preparations for besieging Berwick. Just after his arrival, Archibald Douglas, with 3000 men, invaded England by the western marches, plundered the country, and carried off much booty ; in revenge for which, Sir Anthony de Lucy made an inroad into Scotland, defeated and took prisoner Sir William Douglas, celebrated in history by the appellation of the knight of Liddesdale, whom Edward caused to be put in irons. About the same time, Sir Andrew Murray the regent attacked Baliol, with a view to discomfit him before the reinforcements which he expected out of England could arrive. A sharp conflict ensued at Roxburgh, in which the regent, attempting to rescue a soldier, was taken prisoner ; and thus Scotland was at once deprived of its two ablest commanders. Archibald Douglas was now declared regent ; and Edward prepared to invade Scotland. He ordered possession to betaken of the Isle of Man in his own name ; and soon after made it over to Sir William Montague, who had

some claim of inheritance in it. The chief design of Edward, however, was to obtain possession of Berwick, which had been ceded to him by Baliol. This appeared to the Scots a place of no less importance than it did to Edward ; and therefore they took all the precautions in their power to prevent the loss of it. The earl of March was appointed to command the castle, and Sir William Keith the town. The Scots made an obstinate defence. At length the regent, with a numerous army, appeared in the neighbourhood. He endeavoured to convey succors into the town, or to provoke the enemies to quit the advantage of the ground, and engage in battle. But all his efforts were in vain ; the English obstructed every passage, and stood on the defensive. The regent then entered Northumberland, wasted the country, and even assaulted Bamborough castle, where Philippa the young queen of England resided. He fondly imagined that Edward III. would have abandoned the siege of Berwick, as his father did, in similar circumstances. Edward nevertheless persevered in his enterprise. During a general assault, the

town was set on fire, and great part of it consumed. The inhabitants having experienced the evils of a siege, and dread ing the worse evils of a storm, implored the earl of March and Sir William Keith to seek terms of capitulation. A truce was obtained ; and it was agreed that the town and castle should be delivered up on terms fair and honorable, unless succors arrived before the hour of vespers on the 19th of July. By the treaty, Sir William Keith was allowed an interview with the regent. He found him with his army in Northumberland ; urged the necessity of his return ; and showed him that Berwick, if not instantly relieved, was lost for ever. Persuaded by his importunities, the regent resolved to combat the English, and either to save Berwick or lose the kingdom. On the afternoon of the 19th of July the regent prepared for battle. He divided his army into four bodies. The first was led by John earl of Moray, the son of Randolph ; but, as he was young and inexperienced in war, James and Simon Fraser, soldiers of approved reputation, were joined with him in the command. The second body was led by the steward of Scotland, a youth of sixteen, under

the inspection of his uncle Sir James Stewart of Rosyth. The third body was led by the regent himself, having with him the earl of Carrick and other barons of eminence. The fourth body, or reserve, appears to have been led by Hugh earl of Ross. The numbers of the Scottish army on that day are variously reported by historians. The continuator of Hemingford says, that, besides earls and other lords or other great barons, there were fifty-five knights, 1100 men at arms, and 13,500 of the commons lightly armed, amounting in all to 14,655. With him Knyghton concurs, when his narrative is cleared from the errors of transcribers. The English were advantageously]K>sted on a rising ground at Halydon, with a marshy hollow in their front. Baliol had the command of one of the wings. It had been provided by the treaty of capitulation ‘ That Berwick should be considered as relieved, in case 200 men at arms forced their passage into the town.’ This the Scottish men at arms attempted ; but Edward, aware of their purpose, opposed them in person, and repulsed them with great slaughter. The Scottish army

rushed on to a general attack ; but they had to descend into the marshy hollow before mounting the eminences of Halydon. After having struggled with the difficulties of the ground, and after having been incessantly galled by the English archers, they reached the enemy. Although fatigued and disordered, they fought as it became men who had conquered under Robert Bruce. The English, with equal valor, had great advan-

tages of situation, and were better disciplined. The earl of Ross led the reserve to attack in flank that wiiiic where Baliol commanded ; but he was repulsed and slain. There fell with him Kenneth earl of Sutherland, and Murdoch earl of Monteith. In the other parts of the field the events were equally disastrous. The regent received a mortal wound, and the Scots every where gave way. In the field, and during a pursuit for many miles, the number of slain and prisoners was so great, that few of the Scottish army escaped. Besides the earls of Ross, Sutherland, and Monteith, there were among the

slain Malcolm earl of Lenox, an aged baron, who had been one of the foremost to repair to the standard of Robert Bruce, and whose exertions were for his country ; Alexander Bruce earl of Carrick, who atoned for the short defection from the family of his benefactor ; John Campbell earl of Atnole, nephew of the late king ; James Fraser, and Simon Fraser ; John Graham, Alexander Lindesay, Alan Stewart, and many other persons of eminent rank. The Steward had two uncles, John and James. John was killed, and James mortally wounded and made prisoner. Two other Stewarts fought at this battle ; viz. Alan of Dreghorn, paternal ancestor of king Charles I. and James of Rosyth, maternal ancestor of Oliver Cromwell. The regent, mortally wounded, and abandoned on the field of battle, only lived to see his army routed and himself a prisoner. This victory was obtained with very inconsiderable loss. The English historians say, that on their side there were killed one knight, one esquire, and twelve foot soldiers. Nor will this appear altogether incredible, as the English ranks remained unbroken, and their archers, at a secure distance, incessantly annoyed the Scottish in-

fantry. According to capitulation, the town and castle of Berwick surrendered. The English king took twelve hostages for the fidelity of the citizens. Thus was the whole of Scotland reduced under the subjection of Baliol, excepting a few fortresses; so that it became necessary to provide for the safety of the young king and queen. Accordingly, they were conveyed to France, where they were honorably entertained. Meanwhile, Baliol employed himself in making new concessions to his liege lord Edward ; and in 1 334 the work of submission was completed by a solemn instrument drawn up by Baliol, in which he surrendered great part of the Scottish dominions, to be for ever annexed to the crown of England. In this instrument Baliol said, that ‘ he had formerly become bound to make a grant to Edward of lands on the marches, to the amount of £2000 lands ; that the Scottish parliament had ratified his obligation ; and that he had accordingly surrendered Berwick and its territory ; and now, for completely discharging his obligation, he made an absolute surrender to the English crown of the forests of Jedburgh, Selkirk,

and Etterick; of the counties of Roxburgh, Peebles, and Dumfries ; together with the county of Edinburgh, and the constabularies of Linlithgow and Haddington.' This extraordinary surrender was made with so much precipitation, that Baliol forgot to except his own private estate out of it. This, however, was restored to him by Edward. At the same time, Baliol did homage, and swore fealty, ' for the whole kingdom of Scotland arid the isles adjacent.'

A quarrel now arose among the disinherited lords, to whom this revolution had been owinii. which produced the worst consequences to the interest of Baliol. The brother of Alexander Mowbray died, leaving only daughters. Mowbray having claimed a preference to his nieces, Baliol put him in possession of the inheritance : when Henry Beaumont earl of Buchan, and David Strathbogie or Hastings, earl of Athol, espoused the cause of the ladies ; but, perceiving that their solicitations were not heard, they left the court in disgust, and retired to their castles August 1334. Baliol soon perceived his error in offending these two powerful lords ; and, to

regain their favor, dismissed Mowbray, and

conferred on Da?id Strathbogie the whole es-

tates of the young Steward of Scotland. Thus

he alienated the affections of Mowbray, and

added to the influence of the earl of Athol, who

was by far too powerful before. About this

time Sir Andrew Murray of Bothwell, having

regained his freedom, began to assemble tlie

friends of liberty, and was immediately joined

by Mowbray. In a moment every thing; was in

confusion. Geoffery Mowbray, governor of

Roxburgh, revolted; Henry Beaumont was be-

sieged in his castle of Dundarc by Murray and

Mowbray, and forced to surrender, but was al-

lowed to depart into England. Richard Talhot,

endeavouring to pass into England with a body

of troops, was defeated and taken prisoner by

Sir William Keith of Galston. The Steward of

Scotland, who had lain concealed in the Isle of

Bute since the battle of Halydon, passed over to

the castle of Dunbarton, which was still remaining:, to king David. With the assistance of Doupii

Campbell, of Lochow, he made himself master

of the castle of Dunoon in Cowal. His tenants

of the isle of Bute attacked and stew Alan Lile

the governor, and presented his head to their master. John the son of Gilbert, governor of the castle of Bute, was made prisoner in the action. He ordered the garrison to surrender, and attached himself to the Scottish interest. Encouraged by these successes, the Steward entered his ancient inheritance of Renfrew, and compelled the inhabitants to acknowledge the sovereignty of David. Godfrey Ross, the governor of Ayrshire, submitted to the Steward. The earl of Moray returned from France, whither he had fled after the battle of Halydon, and was acknowledged regent along with the Steward. The earl, having raised a body of troops, marched against the earl of Athol, compelled him to retire into Lochaber, and at last to surrender; after which he embraced the party of the conquerors. Baliol was now obliged to retire again into England, to solicit assistance from Edward ; and this was readily granted. Edward himself took the field at a very unfavorable season for militnry enterprises. His army was divided into two parts. With the one he wasted Lothian, while Baliol did the like in Annandale with the

other ; and, in the mean time, Patrick earl of March renounced his allegiance to England ; sensible that, though the kings of England main-

tained him in an independency dangerous to Scotland, they wou d never permit him to become formidable in a country which they themselves possessed. The year 1335 is remarkable for the siege of Lochlevon castle by the English, tinder John de Strivelin. This fort was built on a small island, very difficult of access. The English commander erected a fort in the cemetery of Kinross ; and at the lower end of the lake, whence runs the river Leven, he raised a strong and lofty bulwark, by which he hoped to lay the island under water, and oblige the garrison to surrender. But four Scottish soldiers, having approached the bulwark undiscovered, pierced it so dexterously that the waters, rushing out with a prodigious force, overflowed part of the English camp ; and the garrison, sallying out during the confusion, stormed and plundered the fort at Kinross. At this time, the English

commander, with many of his soldiers, happened to be absent at Dunfermline, celebrating the festival of St. Margaret. On his return, he swore that he would never desist till he had taken the place, and put the garrison to the sword ; however, his utmost efforts were at last baffled, and he was obliged, notwithstanding his oath, to desist. In the mean time, the regents assembled a parliament at Dairsy, near Cupar in Fife; but no plan of defence could be determined upon, from the animosities and factions among the barons. Through the mediation of the French, terms of peace were proposed ; but, being rejected by the English, Edward again invaded Scotland, cruelly ravaging the country with one army, while Baliol and the earl of Warren did the same with another. Soon after this invasion, count Guy of Namur landed at Berwick with a considerable number of men at arms in the service of the English. He advanced to the neighbourhood of Edinburgh ; but was defeated and taken prisoner by the earls of March and Moray, and Sir Alexander Ramsay. In this engagement one Richard Shaw, a Scottish esquire,

was singled out by a combatant in the army of count Guy, and both pierced each other with their spears ; the stranger, being stripped, was discovered to be a woman. The earl of Moray treated Guy with the greatest respect, not only allowing him and the remainder of his troops to depart from Scotland without molestation, but even attending him to the borders, accompanied by William Douglas and his brother James. On his return, William de Pressen, warden of the castle and forest of Jedburgh, attacked and defeated his party ; James Douglas was killed, the earl himself taken prisoner, and carried into England. Thus was the Scottish nation once more reduced to the brink of ruin. Alexander and Geoffery Mowbray, and some others, pretending powers from ' the earl of Athol, and Robert the Steward of Scotland,' concluded a treaty with Edward at Perth ; the substance of which was, that all the Scots should receive pardon, and have their fees, lands, and offices restored, excepting those who by common assent in parliament should be excluded. The liberties of the church, and the ancient laws and

usages of Scotland, were to remain in full force. Al! offices were to be fi!l<:d with Scotsmen, excepting that the king should appoint whom he pleaded within his regalities.

Ine earl of Athol now began to persecute with the utmost fury those who wished well to the freedom of Scotland. With 3000 men he besieged the castle of Kildrummy, which had hitherto been the great refuge of king David's party. Sir Andrew Murray of Bothwell resolved to attempt the rescue of his wife and family, who were shut up in it. With 1100 men he surprised Athol in the forest of Kilblain. The earl's men, seized with a panic, fled ; on which their commander, refusing to accept of quarter, was killed. Sir Andrew Murray then assembled a parliament at Dunfermline, where he was immediately appointed regent. In 1336 the king of England, perceiving that the Scots were taken under the patronage of France, resolved to invade their country, and crush them at once before they could have assistance from their allies. In this expedition he penetrated as far as Inverness ; but the Scots, under Sir An-

drew Murray, avoided a general action; so that Edward could effect nothing of consequence. The inhabitants of Aberdeen attacked one Thomas Rosheme, who landed at Dunottar. They were defeated ; but Rosheme fell in the action. Edward chastised the vanquished severely, and burned the town. He then began to repair the castles whose fortifications had been demolished by king Robert. He put in a state of defence the castles of Dunottar, Kinclevin, Lawrieston, Stirling, Bothwell, Edinburgh, and Roxburgh ; greatly augmented the fortifications of Perth, and left a considerable body of troops in the place. The Scots reduced these castles as soon as Edward was departed; and in 1337, under Sir Andrew Murray, invaded Cumberland. No great exploits, however, were now performed on either side. Edward, making preparations for invading France, had little leisure to attend to the affairs of Scotland ; and the Scots, divided among themselves, and destitute of those leaders under whom they had acquired so much glory, could not now annoy their enemies. The most remarkable transaction was the siege of the

castle of Dunbar, belonging to the earl of March. The English commander was the earl of Salisbury. The earl of March was absent ; but his wife, the daughter of Randolph, commonly called Black Agnes, undertook to defend it in her husband's absence. The English again employed their huge machine called a sow, mentioned in our account of the siege of Berwick : it met with the same fate as formerly ; a huge stone, let fall upon it from the top of the walls, crushed it to pieces. The English, baffled in every attack, turned the siege into a blockade ; bjut, Sir Alexander Ramsay having entered it with forty resolute men, the garrison made a sally, and cut in pieces the advanced guard of the enemy. The English, disheartened by so many misfortunes, abandoned the enterprise. In 1338 Sir Andrew Murray the regent died, and was succeeded in his office by Robert the Steward of Scotland. In 1339 he reduced the town of Perth and the castle of Stirling ; and gained over to the Scottish interest William Bullock, governor of the castle of Coupar : after which.

having expelled the enemy from every post north of the Forth, he employed himself in settling the affairs of the nation. In 1341 the castle of Edinburgh was surprised by Sir William Bullock. According to his appointment, one Walter Currie of Dundee privately received into his ship the knight of Liddesdale, with William Fraser, Joachim of Kinbuch, and 200 resolute men. Currie cast anchor in Leith road, pretending to be an English shipmaster, who had a cargo of wine and provisions, with which he proposed to furnish the commander of the castle. His barrels and hampers were brought to the castle-gate, and suddenly thrown down in such a manner as to obstruct the shutting of it. Currie and his men then slew the sentinels ; and the knight of Liddesdale, with a party wiio lurked in the neighbourhood, rushed in, overpowered the garrison, and made themselves masters of the place. On the 4th of March, this year, the king and queen arrived from France, and landed at Bervie in Kincardineshire. In 1342 Sir Alexander Ramsay took the strong fortress of Roxburgh ; for which important service the king

bestowed on him the charge of sheriff of Teviot-dale, then held by William Douglas of Liddes-dale. The king's liberality proved fatal to Ram-say, for from that time Douglas became his im-placable enemy ; and having, after a pretended reconciliation, unexpectedly surprised him with three of his friends, he put these instantly to death, carrying off Ramsay himself to his castle of the Hermitage, where he caused him to be starved in a most barbarous manner. The un-happy man was confined in a room, over which was a heap of wheat; a few grains of which were let fall every day though a hole, not as many as would support life, but as would pro-tract it for a time, and make him longer sensible of the agonies of hunger ; in this miserable situation he survived seventeen days. About the same time, Sir William Bullock was put to death by Douglas in a similar manner ; nor was king David in a capacity to punish such atrocious cruelties. In the mean time David, having raised a powerful army, prepared to take a severe revenge of the English, from whom he had suffered so much. Edward was then in

France, but commanded Baliol to raise all the militia beyond the Trent : which order, however, produced but little effect ; so much was the mean-spirited prince despised by the English. David invaded and ravaged Northumberland; but was obliged to raise the siege of Newcastle, which was commanded by Sir John Nevil, an excellent officer. Exasperated at this repulse, David entered the bishopric of Durham, which he ravaged in the most cruel manner. However, on the approach of Edward with a powerful army, the Scots retired ; and a two years truce was agreed upon. This pacification was but short-lived. In 1345 the Scots again prepared to invade England, while Edward took all necessary measures for opposing them ; but they ravaged Westmoreland, and burnt several towns. The year ended with a new truce, and hostilities wtre not renewed till 1346, when David entered Kiiuland with an army of 50,000 men His first '•\ploit was the taking of the fortress of Liddel, awl massacring all who:n he found in it. The commander, Sir Walter Selby, capitulated .vith a Scottish knight for his life ; but, the bargain

being disapproved of by David, he barbarously ordered two of Selby's sons to be strangled in his presence, and then the father's head to be cut off. Thence the Scots marched to Lancroft, which they plundered ; then, passing into Northumberland, they pillaged the priory of Ilexham, but spared the town, to serve as a magazine. Three other towns, Corbridge, Durham, and Darlington, were spared for the same reason. In his march to Durham, he would have made the county a desert, had not some of the monks paid him a contribution of £1000 to spare their estastes : however, according to Knyghton, every Englishman who fell into David's hands was put to death, unless he could redeem his life by paying threepence. To put a stop to the cruelties of this invader, the queen of England, in her husband's absence, assembled a powerful army, which was divided into four bodies ; the first commanded by lord Henry Percy ; the second by the archbishop of York ; the third by the bishop of Lincoln, the lord Mowbray, and Sir Thomas Rokeby ; and the fourth and principal division by Edward Baliol. The king of Scot-

land headed a chosen battalion, of the flower of his nobility, and the French auxiliaries. The high steward of Scotland headed the second line ; and the third was commanded by the earls of Moray and Douglas. While the English were approaching, lord Douglas and Sir David Graham skirmished with them, but were defeated with the loss of 500 men. The general engagement began between the archers on each side, but, the English being superior in the use of the bow, the steward of Scotland advanced to the relief of his countrymen. The English archers, unable to bear his attack, fell back upon lord Henry Percy's division, which was thus put in confusion, and would have been totally defeated, had not Baliol advanced to their relief with a body of 4000 horse. The steward was then obliged to retire; by which means the flank of that division commanded by David, and which was then engaged with another line of the English, was left exposed to an attack. Baliol perceived the advantage ; and, without pursuing the steward, attacked the king's division, which was immediately cut in pieces. David was left with

about eighty noblemen and gentlemen, but still

maintained the fight with obstinacy ; nor would

he yield, even when wounded in the head \ iih

an arrow, expecting to be delivered by the

steward, and that line of his army which was

still entire under the lords Moray and Douglas.

At last, finding himself totally overpowered, he

attempted to retreat, but was overtaken by a

party under one John Copeland. This captain,

endeavouring to seize the king, had two of his

teeth struck out by a blow of his gauntlet ; but

at last the king was obliged to give up his sword, and surrender himself. After he was taken,

Baliol attacked and totally routed that division

of the Scottish army which had hitherto re-

mained entire under the lords Moray and

Douglas. In this battle the Scots lost a great

number of their nobility, and 15,000 soldiers.

Many persons of distinction were also taken

along with the king ; ami had it not been th.it

the escape of the Scots was favoured by the

avarice of the English soldiers, who neglected

the pursuit to plunder, scarcely a single Scots-

111. in would have returned.

David was carried to the castle of Bambo-
rough, where he was kept with so much privacy
that for some time it was not known where he
was, or that he had been taken prisoner. As soon
as the truth was known, the queen of England
demanded the royal prisoner from Copeland;
but the latter positively refused to part with him
even to the queen, unless she could produce an
order to that purpose under Edward s hand and
seal. This resolute behaviour was resented by
the queen, and a complaint made to the king ;
in consequence of which Copeland was sum-
moned to appear before Edward, when he re-
signed David to the custody of lord Nevil. The
English monarch, then in France, approved of
all that he had done, rewarded him with £500
u-yeur, and sent him back to England honored
with knighthood. David was then escorted by
Copeland, attended by 20,000 men, from the
castle of Ogle in Northumberland, till lord
Nevil, by indenture, delivered him to Sir Tho-
mas llokeby sheriff of Yorkshire. In the
same pompous manner he was conducted all the

way to London, which he entered on a black courser. lie was received in the capital with the greatest solemnity by the lord mayor and aldermen, the city companies under arms lining all the streets through which he passed, and the houses being loaded with spectators who expressed a generous concern for his captivity. Being arrived at the tower, he was delivered, by indenture likewise, to the custody of the constable, lord John Darcy, on the 2d of January, 1347. Baliol, now encouraged by the misfortune of his rival, made an effort once more to establish himself on the throne of Scotland; and, before the end of the year, reduced the castles of Hermitage and Roxburgh, the forest of Etteric, the Merse, with the counties of Annandale, Teviotdale, and Tweeddale. The Scots continued faithful to their king, notwithstanding his misfortune, and chose the steward for the guardian of the kingdom. He behaved with a prudence equal to the high station he filled ; but the progress of Baliol was so rapid that it is scarcely probable he could have maintained his ground, had not Edward again consented to a truce; which, however, seems to have been ill observed

on the part of the Scots. In fact, though both the Scottish and English historians are silent as

to particulars, we find that, about the end of

1348, all Scotland was recovered out of the

hands of the English, excepting Berwick, Rox-

burgh, Hermitage, and Lanark, which was part

of Baliol's hereditary estate, and defended by

him with an army. The Scottish historians in-

form us that the English, in revenge for the da-

mages done to their country by the breach of the

peace, proclaimed a tournament and other mi-

litary exercises at Berwick, to which they invited

the Scots; but, in their way thither, the latter fell into an ambuscade and were all cut in pieces.

The years 1349 and 1350 were remarkable only

for a dreadful plague which invaded Scotland,

after ha -ing ravaged the continent of Europe.

According to Fordun, one-third of the people of

Scotland perished at this time. The patients'

flesh swelled exceedingly, and they died in two

days' illness ; but the mortality chiefly affected

the middling and lower ranks. The same dread-

ful calamity continued throughout the years

1351 and 1352; occasioning a cessation of arms

not only in Scotland, but throughout all Europe.

All this time king David remained a prisoner in England; for, though several treaties had been proposed, they had come to nothing, as Edward insisted upon being indemnified for the ravages the Scots had committed in his territories. At last it was proposed that the king of Scotland should be set at liberty, on paying 90,000 merks for his ransom, by equal proportions, within nine years ; with other conditions seemingly not unreasonable, but which we need not specify, as the whole were rejected by the Scottish nobility , and, in 1355, war was recommenced with England, at the instigation of France, who sent 40,000 crowns to Scotland to defray the expenses. With this sum the guardian, having raised an army, once more took the field ; but not before the English had destroyed the Lothians and Douglasdale. A battle was fought on Nisbet Moor ; in which the English, being drawn into an ambuscade, were totally defeated. The next attempt of the Scots was against Berwick, which they designed to surprise by an escalade. They met, however, with such a vigorous resistance, that many persons of distinction were

killed. However, the attack proved successful ; but the acquisition was of no importance as the castle held out. Edward, in the mean time, hearing of the loss of the town, hurried back from France to London. Here he staid but three days, and marched northward to raise the siege. He reached Durham on the 23rd of December, 1355, where he appointed all his military tenants to meet him on the 1st of January, 1356. On the 14th he arrived before Berwick, which was instantly retaken ; but the Scots were allowed to return home. Baliol now perceiving that Edward meant not to establish him on the throne of Scotland, but to retain in his own possession as many places of that country as he could, came to the resolution of giving up quietly to the king of England all his claims to Scotland. This indeed was only a form, as he was not then possessed of any part of it. However, the ceremony was performed at Roxburgh ; and Baliol presented his crown and some earth and stones by way of investiture. Baliol, in return, was to have a revenue of £2000 a-year ; and, as Edward was at the head of an excellent

army, he had little doubt of forcing the Scots to submit. The affairs of Scotland were now in a very critical situation, and it was necessary to gain time. Edward was therefore amused with a negociation ; and to this he the more willingly listened, as he was waiting for his fleet, from which he had great expectations. A little time, however, discoTered the deceit. The Scots plainly told Edward that they would die rather than submit to his demands ; and he, in return, threatened a dreadful revenge. His fleet in the mean time arrived in the Frith of Forth ; the mariners destroyed and pillaged all that was

within their reach, without sparing even the sacred edifices, carrying off the statues of the blessed virgin, loading the monks with chains, and committing every kind of sacrilege. Edward had by this time marched as far as Haddington, but was obliged to receive provisions all the way from his fleet ; for the Scots had desolated the country. During his march his army was harassed, and his foragers cut off, so

that he was reduced to extreme distress ; and at

last, his fleet being totally destroyed by a storm, he was obliged to return to England. In the

mean time the prince of Wales, who had been

left by his father to carry on the war in France, defeated and took prisoner John king of France

at the battle of Poictiers. In this battle were

3000 Scots, who had gone over as auxiliaries to

the French monarch, and who suffered ex-

tremely. However the success of Edward, in-

stead of rendering him haughty, seemed to have

a contrary effect ; and, by the mediation of pope

Innocent V., a truce for two years was concluded

with France, in which the Scots were compre-

hended. During this interval the ransom of the

king of Scots was settled at 100,000 merks, to

be paid in ten years ; for which twenty hostages

were to be given. In consequence of this

treaty, David obtained his liberty in 1358, and

Edward laid aside all hopes of ever subduing

Scotland. As for Baliol, he was now sunk in

oblivion ; and it is not known what became of

him, or when he died. David, though restored

to liberty, found himself greatly embarassed with

the payment of such a large sum for his ransom ;

the kingdom of Scotland being then in a most miserable and exhausted condition. After sending his queen, and going into England himself, he could obtain no greater favor than a respite of a few months for the payment of the second moiety ; so that he was at last constrained to ask assistance from France. This could scarcely be expected in the distressed situation of that kingdom ; however, it was at last agreed that 60,000 merks should be paid to Scotland, in case the Scots would consent to renew the war the following year. Neither party, however, kept their word ; and David, being still greatly distressed about the remainder of his ransom, at last entered into a very extraordinary negociation with Edward, by which he consented that the king of England should be his successor to the throne of Scotland. But this negociation was defeated through the invincible hatred which the Scots bore to an English governor. David then, being entirely unable to discharge the remainder of his ransom, was obliged to enter into a new treaty; by which the kingdom of Scotland became indebted to Edward in the sum of £100,000 sterling, to be paid by equal proportions within

twenty-five years, during which there should be a truce within the two nations. From this time we meet with little more of any moment in the reign of David. After the death of his queen Johanna, the sister of Edward, he married a Scottish woman of mean birth, named Margaret Ix>gie ; but by neither of his wives had he any children. Queen Margaret he divorced on what pretence is not known; but she left the king-dom, and complained personally to the pope, who treated her as David's lawful wife, and en joined him to receive her as such under the most severe penalties ; but Margaret never returned to Scotland, and, on the 22d of February, 1371, David himself died, leaving the kingdom to his nephew Robert Stewart, the first of that family who sat on the throne of Scotland.

On the accession of Robert II. an assembly of the states was held, in which it was resolved that he should be crowned at Scone; and, to pre-vent all future disputes concerning the succes-sion, a particular act was framed, by which the kingdom was secured to Rodert and his heirs. Being thus established on the throne, he endea-

voured to renew the war with the English, to recover from them the town of Berwick, and some other places on the borders. In this, however, he failed ; and, as £56,000 of David's ransom still remained unpaid, Robert bound himself to discharge it at the rate of 4000 marks every midsummer. He then proposed an alliance with France; but, the terms demanded by that kingdom being that Scotland should be obliged to make war with England whenever France should require it, Robert would not consent to such a condition. A new treaty, therefore, was entered into, by which it was provided that neither Scotland nor France should be obliged to make war with England ; and, by another clause, that the dispensation or authority even of the pope himself should never free the kings or kingdoms of I" ranee and Scotland from the obligations they lay under to assist one another as often as required, in opposition to the kingdom of England. In case of a competition for the crown of Scotland, the king of France and his heirs were to take care that no English influence was used; but shou

with all his power defend and assist the kirr established by the Scotch laws. Lastly, it was agreed that no Frenchman should ever serve for wages or otherwise against Scotland, nor any Scotsman against France. This last article occasioned a recal of all the Scots from the English armies, which Edward looked upon to be a prelude to invasion. He accordingly issued writs for assembling all the militia in the north of England. At this time an invincible hatred subsisted between the neighbouring people of both nations, which extended not only through the lower ranks, but the higher classes also. The inhabitants of the borders, indeed, paid very little regard to the orders of their respective sovereigns ; so that hostilities .were committed by them daily upon each other, even when then peace between the nations. They had established with one another certain conventions, which have been since collected, by the name of Border laws : the families of Douglas and Percy, and their adherents in particular, whose estates lay contiguous to one another, were at perpetual variance. It had been common for the borderers*

of both kingdoms, during a truce, to frequent

each other's fairs : and a servant of the carl of

March had been killed in a fray about this

time at Roxburgh, which was still in tne hands

of the English. Justice for this murder was de-

manded from lord Percy, but he slighted tlv

complaint. On this the earl of March, with .\<

rother the earl of Moray, assembling their fol-

lowers, entered the next fair that was held in

Roxburgh, plundered and burnt the town, and

killed all the En-jlish who fell into their hands.

The English borderers were ordered to lay waste

the lands of the earl of March ; but in their way thither destroyed the castle of Sir John Gordon,

a man of great property in the south of Scotland.

Sir John in his turn invaded England, whence

he drove oft" a large booty in cattle, and a num-

ber of prisoners. In his retreat he was attacked

by a body of fresh troops under Sir John Lish-

burn, at a place called Caram. An obstinate

encounter followed. The Scots were five times,

repulsed ; but at last they renewed the charge

with such fury that they made Lishburn, his

brother, and several other persons of distinction, prisoners, with all their surviving soldiers. On this lord Percy with 7000 men encamped at Dunse, in the south of Scotland, but was obliged to retire. In the mean time Musgrave, the governor of Berwick, who had been ordered to join Percy with a detachment from the garrison, was on his march intercepted, defeated, and taken prisoner by Sir John Gordon ; after which the border war became general. The issue of these disturbances is but little known ; however, in 1 377, we find them raging with more violence than ever. The fair of Roxburgh was once more the scene of action, and the town was again burnt down by the Scots. Lord Percy, who was now earl of Northumberland, resolved to take signal vengeance. He ravaged the Scottish borders, particularly the earl of March's estate, for three days, at the head of 10,000 men. Some time after this the Scottish insurgents became powerful enough to surprise Berwick ; which, however, was quickly retaken by the English, who soon after invaded Scotland. In this expedition, however, they succeeded so ill that Percy

desisted from his expedition. The Scots then began hostilities by sea, under one Mercer, an experienced sailor ; but he was taken prisoner by the English with all his fleet. In 1379 England was afflicted with a dreadful plague, of which the Scots took advantage to invade the country, killing and plundering the defenceless inhabitants without mercy. This predatory war continued, generally to the disadvantage of the English, till the beginning of November 1380, when a truce was concluded for a year. This truce, like the others, was but indifferently observed ; so that, in 1383, new negociations were set on foot ; but, in 1 3R4, the war was renewed with greater fury than ever. In spring the earls of March and Douglas took the castle of Lochmaben, and intercepted a rich convoy which the English were sending to Roxburgh ; burnt to the ground the castle of Wark, and committed such devastations in the north of England that several gentlemen offered to resign their estates to Richard II. because they were not able to de-i'end them against the Scots. The duke of Lanraster entered Scotland at the head of an army ;

but the inhabitants had removed every thing valuable, so that he marched on to Edinburgh without accomplishing any thing of consequence. On his return he was harassed by flying parties of Scots, who destroyed a considerable :i of his men. This year, also, . the French sent a body of auxiliaries into Scotland. The earls of Northumberland and Nottingham entered Scotland with an army of 10,000 horse and 6000 archers ; but retired, after having committed devastations in the southern counties. The Scots revenged themselves by laying waste all the northern part of England to the gates of Newcastle. Berwick was taken by the Scots, and soon after surrendered for 2000 merks. A truce was then, as usual, concluded ; but in the mean time king Robert was meditating a severe blow against the English. The duke of Burgundy, having come to the possession of the estate of his father-in-law the earl of Flanders, claimed the sovereignty of the town of Ghent ; but the people refused to submit to him, and in this refusal were protected by king Richard II. of England. On this the duke of Burgundy proposed to the French court to invade England in concert with

the Scots. A fleet was accordingly fitted out at Sluys ; on board of which John de Vienne, the French admiral, embarked, carrying along with him £50.000 in gold, which the duke of Burgundy advanced to be distributed in Scotland, where the admiral arrived safe with 2000 auxiliaries, of whom 500 were men at arms. 400 suits of complete armour were brought along with them. to be distributed among the bravest of the Scots, who were for a short time elated with the great attention which had been paid them by the French king ; but in the mean time, the Flemings having revolted, the French abandoned the Scots to sustain the whole weight of the English resentment, that they themselves might employ their arms in Flanders. King Richard took tlie field with a more numerous army than had ever been mustered in England before. Hostilities were begun by the Scots, who, according to custom, invaded the northern parts of England, and carried off a considerable booty; however, in their retreat, they were in danger of being cut off by the duke of Lancaster, who had been sent with an army to intercept them. The English

army proceeded northwards, but could not accomplish any thing, the country being desolated, till they came to Edinburgh, which they laid in ashes. Being, however, incessantly harassed by parties of the enemy, they were obliged to retreat. In 1378, after a short truce, the war was renewed with fresh fury. Northumberland and Westmoreland were ravaged by the earls of Fife and Douglas, and lord Nithisdale defeated a body of 3000 English ; after which he formed a plan of invading Ireland, the inhabitants of which had of late been very active against the Scots. In 1388 Douglas obtained permission to raise a body of forces for his invasion ; and, having landed in safety, defeated the Irish, plundered the town of Carliogford, and loaded fifteen ships with the booty. Thence the Scots sailed to the Isle of Man, which, in like manner, was plundered and laid waste; after which they returned with their booty to Lock Rian in Scotland. Encouraged by their success Robert determined to proceed on a more enlarged plan. Having assembled a parliament at Aberdeen, a double invasion of England was resolved upon. Two armies were

raised consisting cf 25,000 men each, the one

under the earls of Monteith and Fife, Douglas,

lord of Galloway, and Alexander Lindesay ; the

other under the earls of Douglas, March, Craw-

ford, Moray, the lord high constable of Scotland,

and other persons of rank. The former entered

Cumberland, and the latter Northumberland,

ooth which countries they laid waste, and both

armies were to meet within ten miles of New-

castle. The English were thrown into the greatest

consternation. Newcastle was defended by the

earl of Northumberland, whose age and infirmi-

ties rendered him incapable of taking the field ;

but his place was abundantly supplied by his

two sons Henry and Ralph, the former of whom

is known in English history by the name of

Hotspur. The town was garrisoned by the flower

of the English nobility and gentry, as well as the inhabitants of the adjacent counties, who had

fled thither for refuge. Douglas selected 2000

foot and 400 horsemen out of the two armies,

and encamped on the north side of the town,

with a view of storming it next day. In the

meantime he was challenged by Hotspur to fight him hand to hand, with sharp ground spears, in sight of both armies. Douglas accepted the challenge, and Percy was unhorsed the first encounter, and obliged to take refuge within the portcullis of the town ; whence Douglas brought off his antagonist's lance, with a pennon affixed to it, and swore in his hearing that he would carry it into Scotland. Next day Douglas attempted to storm the town ; but, being repulsed in the attack, he decamped in the night. Percy, breathing furious revenge, pursued and overtook the Scots at Otterburn. His arrival was quite unexpected, so that the principal commanders of the Scottish army were sitting down to supper unarmed. The soldiers, however, were instantly prepared for battle; but, in the hurry necessarily attending a surprise of this kind, Douglas forgot to put on his cuirass. Both leaders encouraged their men by the most animating speeches; and both parties waited for the rise of the moon, which happened that night to be unusually bright. The battle being joined on the moon's first appearance, the Scots beean to

?ive ground, but, being rallied by Douglas, who fought with a battle-axe, the English, though greatly superior in numbers, were totally routed ; 1200 were killed on the spot, and 100 persons of distinction, among whom were the two Percies, were made prisoners by Keith, marischal of Scotland. On the side of the Scots the greatest loss was that of the brave earl Douglas, who was killed in consequence of going to battle without his armour. This single combat between Douglas and Percy, and the subsequent battle, gave rise to the celebrated ballad of Chevy Chace. See OTTERBURN. In the mean time the bishop of Durham marched towards Newcastle with an army of 10,000 men ; but was informed by the runaways of Percy's defeat, on the 21st of July 1388. In a council of war it was resolved to pursue the Scots, whom they hoped easily to vanquish, as being wearied with the battle of the preceding day, and laden with plunder. The earl of Moray, who commanded in chief, having called a consultation of his officers, resolved to venture a battle. The prisoners were almost as numerous as the whole Scottish army ; however

the generals required no more of them than their

words of honor that they should continue inac-

tive during the battle, and remain priscners still.

This condition being complied with, the Scots

drew out their army for battle. Their rear was

secured 'by marshes, and their flanks by large

trees which they had felled. In short their ap-

pearance was so formidable that the English,

dreading to encounter a resolute enemy so strongly

secured, retired to Newcastle, leaving the Scots

at liberty to continue their march to their own

country. Robert being now oppressed with age,

so that he could no longer end'iie the fatigues of government, the administration of affairs devolved

upon his second son the earl of Fife ; for his

eldest son was by nature indolent, and besides

lame by an unlucky blow he had received from

a horse. Early in the spring of 1389 he invaded

England with success; but the same year a truce

was concluded, to last from the 19th of June

1389 to the 16th of August 1392 ; in \vhich the

allies of both crowns were included. This truce

was violently opposed by the nobility, who sus-

pected their king of being too much under French

influence. Upon this the court of France sent

over ambassadors to persuade the nobilitv to comply ; informing them that, in case of a refusal, they could expect no assistance either of men or money from the continent. With difficulty they prevailed, and peace between England and Scotland was once more restored. Scarcely, however, was this truce finished, when the peace of the nation was most scandalously violated by Robert's third son, Alexander, earl of Buchan. This prince, having a quarrel with the bishop of Murray, burnt down the fine cathedral of l-'luin, which has been called by historians the ornament of the north of Scotland. The king for this crime caused his son to be imprisoned; and a civil war would have been the consequence had it not been for the veneration which the Scots retained for their old king. However they did not long enjoy their beloved monarch; for he died on the 19th of April 1390, in the seventy-fifth year of his age, and the nineteenth of his reign.

On the death of Robert II. the crown devolved upon his eldest son John ; but the name being thought unpropitious, from the unfortunate reigns of the three Johns of Scotland, England, and

France, he changed it for that of Robert, though he was still called by the commonalty Robert John Fernzier. He had been married to Annabella, the daughter of Sir John Drummond, ancestor to the noble family of Perth ; and \;is crowned along with his consort at Scone, on the 13th of August, 1390. He confirmed the truce with England, and renewed the league with France ; but the beginning of his reign was disturbed by the wars of the petty chieftains with each other. Duncan Stewart, son to Alexander, earl of Buchan, who had died in prison, assembling his followers under pretence of reve- his father's death, laid waste the county of Angus. Walter Ogilvy, the sheriff of Angus, attempting to repel the invaders, was killed, with his brother and sixty of their followers. The king then gave a commission to the earl of Crawford to suppress them, which he soon did, and most

of them were either killed or executed. The followers of the earl of Buchan were composed of the wildest Highlanders, distinguished by the title

of Catterenes, which answers to that of banditti or robbers. They seem to have lived, like the Arabs, entirely by plunder; and they or their ancestors had emigrated from the Western Isles and from Ireland. The lands they inhabited were never cultivated till the middle of the seventeenth century. The earl of Crawford's success against the followers of Buchan encouraged Robert to intrust him with a commission for subduing other insurgents. The most remarkable of these were the Clan Chattan and Clan Kay. As both these tribes were numerous and brave, Crawford was afraid that they might unite against him as a common enemy. He proposed, therefore, that the two rival clans should each choose thirty men, to determine their differences by the sword without any other weapon. The king and his nobility were to be spectators of the combat ; the conquered clan were to be pardoned for all their former offences, and the conquerors honored with the royal favor. This proposal was readily accepted, and the North Inch of Perth was to be the scene of action. But, upon mustering the combatants, it was found that one of the clan

Chattan had absented himself. It was proposed to balance this difference by withdrawing one of the combatants from the clan Kay ; but not one of them could be prevailed on to resign his place. At last one Henry Wynd, a saddler, though no way connected with either party, offered to supply the place of him that was absent, on condition of his receiving a French crown of gold (about 7s. 6d. of our money) ; which was immediately paid him. The combat then began with incredible fury ; but at last, through the superior valor and skill of Henry Wynd, victory declared in favor of the clan Chattan. Only ten of the conquerors besides Wynd were left alive, and all of them desperately wounded. Of the clan Kay only one remained ; and he having received no hurt escaped by swimming across the Tay.

W'hile these internal broils were going on, the truce which had lately been concluded with England was so ill observed that it became necessary to enter into fresh negociations. These had little effect. The borderers on both sides had been so accustomed to ravage and plunder that they could not live in quiet. Robert also was thought to be too much attached to the king of England.

He had introduced the new title of duke, which he bestowed first on the prince royal ; but, making an offer of that honor to one of the heads of the Douglas family, it was rejected with disdain. That powerful family had never lost sight of an ancient claim they had upon the castle of Roxburgh, which was still in the possession of the Knglish; and this year the son of the earl of Douglas, Sir William Stewart, and others, broke down the bridge of Roxburgh, plundered the town, and destroyed the forage and corn there and in the adjacent country. The English applied for satisfaction ; but obtained none, as the confusion which involved the kingdom by the deposition and murder of Richard II., and the accession of Henry IV., prevented them from having recourse to arms, the only argument to which the Scottish patriots in those days would listen. No sooner was the catastrophe or' Richard known in Scotland than the Scots resolved to avail themselves of it ; and invading the north parts of England, demolished the castle of Wark, and laid the neighbouring country under contribution. The situation of Henry's affairs did not admit of his resenting this insult. He contented himself with nominating his brother, the

earl of Westmoreland, to treat with the Scots

about a truce of peace ; or, if that could not be obtained, to make a mutual agreement that the

towns of Dumfries in Scotland, and Penrith in

England, should be free from hostilities during

the war. To this proposal the Scots paid no

regard; and being now encouraged by the court

of France, who resented the deposition of

Richard, they renewed their ravages in England.

In t400 Henry called a parliament to consult on

the best means of repelling the Scottish invasions;

and in this he was greatly assisted by the divi-

sions of the Scots among themselves. Prince

David, duke of Rothesay, the heir-apparent of

the crown, was now grown up to man's estate, and

it was thought proper to provide a suitable con-

sort for him. The king scandalously offered him

to the lady whose father could give him the

highest price. The earl of March was the highest

bidder ; and advanced a considerable sum in

ready money, on condition that his daughtei

should become the royal bride. This sordid mate!

was opposed by Douglas, who proposed his owi.

daughter, the lady Margery. So degenerated was

the court of Scotland, at this time, that neither the king nor the duke of

Rothesay opposed this pro

posal of a new match, because it was to be pur

chased with a fresh sum ; and they even re-

fused to indemnify the earl of March for the.

money he had already advanced. As the duke

of Albany sided with Douglas, a council of the

nobility was privately assembled, which annulled

the contract of the lady Elizabeth Dunbar, the

earl of March's daughter, in favor of the lady

Margery, daughter to the earl of Douglas ; but

without taking any measures for repaying the

money to the earl of March. The continuator of

Fordun informs us that the earl of Douglas paid

a larger sum for his daughter's fortune than that

which had been advanced by the earl of March,

and that the earl of Douglas's daughter was mar-

ried to the duke of Rothesay : that, before the

marriage was celebrated, March demanded that

the money he had advanced should be reim-

bursed ; but, receiving an unsatisfactory answer,

he declared that, as the king had not fulfilled his bargain, he would bring unexpected calamities

upon the country. Accordingly he fled into Eng-

land, leaving his castle of Dunbar to the custody

of his nephew Robert Maitland, who soon after

put it into the hands of the earl of Douglas, called in history Archibald the Grim, from the sternness

of his visage. As soon as Robert heard of the

revolt of the earl of March, he sent ambassadors

demanding back his subject ; but the request was

disregarded. On the other hand, the earl of

March demanded repossession of the castle of

Dunbar, pleading that he had committed no act

of treason, but had come to England under a safe

conduct from king Henry, on purpose to nego-

ciate his private affairs, but this request was dis-

regarded ; upon which he sent for all his family

and followers to England, where they joined him

in great numbers. This produced a war between

the two kingdoms. The earl of March, with

Henry Percy, surnamed Hotspur, invaded Scot-

land, penetrating as far as Haddington, and

carrying off great numbers of the inhabitants into

captivity. Thence they went to Peebles, and

then to Linton, ravaging the country all the way

as they passed along. They next besieged the

castle of Hales, and took several of the neigh-

bouring forts ; but Archibald the Grim, or his

son, having raised an army against them, they were struck with terror, and fled to Berwick, to the gates of which they were pursued by the Scots. At this time the Scottish admiral, Sir Robert Logan, was at sea with a squadron ; but miscarried iu an attempt he made upon some English ships of war that protected their fleet when fishing upon the coast of Scotland. After this the English plundered the Orkney Islands ; which, though belonging to the crown of Norway, were at that time governed, or rather farmed, by Sinclair the Scottish earl of Orkney and Caithness. All this time the earl of March continued under the protection of the king of England. He had received repeated invitations to return to his allegiance : but, all of them being rejected, he was proclaimed a traitor ; and the Scottish governor made a formal demand of him from king Henry. With this the latter not only refused to comply, but renewed his league with the lord of the isles. On the 25th of July, 1400, the earl of March renounced his homage, fealty, and service, to the king of Scotland, and transferred them to Henry by a formal indenture. For this he was rewarded with a pension of 500

merks sterling, and the manor of Clipestone in Sherwood forest. Henry now began to revive the claim of homage from the kings of Scotland, and even to meditate the conquest of the king-dom. He had indeed many reasons to hope for success ; from the weakness of the Scottish govern-ment, the divided state of the royal family, and the dissensions among the chief nobility. Before he set out on his journey he received a letter from the duke of Rothesay, full of reproaches on ac-count of the presumptuous letters which Henry had addressed to Robert and his nobility. The letter was addressed by the duke, ‘ To his ad-versary of England,’ as the Scots had not yet recognised the title of Henry IV. to the crown of England. Towards the end of it the duke de-sired Henry, to avoid the effusion of Christian blood, to fight him in person with two, three, or 100 noblemen on a side. But this challenge produced no other answer from Henry than that ‘ he was surprised that the duke of Rothesay should consider noble blood as not being Chris-tian, since he desired the effusion of the one, and not of the other.’ Henry arrived at heith on the very day on which he had appointed the

Scottish nobility to meet him and pay their

homage, and conclude a peace between the two

/ crowns. He flattered the English with a promise

of raising the power and glory of their country

to a higher pitch than it had ever reached. Under

this pretext he seized upon the sum of £350,000

in ready money, beside; as much in plate and

jewels, which had been left by Richard II. in

the royal treasury. He raised also vast contribu-

tions on the clergy and nobility, and likewise on

the principal towns and cities. At last, finding

that neither his vast preparations, nor the interest of the earl of March, had brought any of the

Scots to his standard, he formed the siege of

Edinburgh castle, which was defended by the duke

of Rothesay. The duke of Albany, brother to

king Robert, was then in the field with an army,

and sent a letter to king Henry, promising that,

if he would remain where he was for six days,

he would give him battle, and force him to raiMj

the siege, or lose his life. When this was written the duke was at Calder-muir; and Henry was so

much pleased with the letter that he presented

the herald who delivered it with his upper gar-

ment, and a chain of gold ; promising, on his

royal word, that he would remain where he was until the day appointed. On this occasion, however, the duke forfeited his honor (if indeed the villain had any to forfeit) ; for he suffered six days to elapse without making any attempt on the English aimy. Henry in the mean time, pushed on the siege of Edinburgh castle; but met with a most vigorous resistance from the duke of Rothesay. At the same time he \va< informed that the Welsh were on the point of rebellion under their famous chieftain Owen Glendower. He knew also that many of the English were highly dissatisfied with his title to the crown ; and that he owed his peaceable possession of it to the moderation of the earl of March, who was the real heir to the unfortunate Richard, but a nobleman of no ambition. Tor these reasons he raised the siege of Edinburgh castle, and returned to England. He then agreed to a truce for six weeks, but which was alierterwards prolonged for a year, by commissioners of the two crowns, who met at Kelso. In 1401 Scotland suffered a great loss by the death of Trail, archbishop of St. Andrew's, a most exem-

plary patriot, and a person of great influence. Archibald Douglas the Grim had died some time before, and his loss also was now severely felt; for the king himself, naturally feeble, and quite disabled by his age and infirmities, lived sequestered from the world This year also queen Annaoella died, so that none remained who might be able to heal those divisions which prevailed among the royal family. Robert duke of Albany, a man of great ambition, was an enemy to the duke of Rothesay, the heir-apparent ; and endeavoured to impress his father with a bad opinion of him. This prince, however, appears to have been chargeable with no misdemeanor of consequence. One Ramorgny, a man of the vilest principles, but an attendant on the duke of Rothesay, had won his confidence ; and, perceiving how much he resented the conduct of his uncle the duke of Albany, had the villany to suggest to the prince the despatching him by assassination. This infamous proposal the prince rejected with such horror and displeasure, that the villain, being afraid he would disclose it to the duke of Albany, informed the latter, undci

the seal of the most inviolable secrecy, that the prince intended to murder him ; upon which the

ciate, resolved upon the prince's death. By practising upon the dealing king, Lindsay and Uamorgny obtained a writ directed to the duke ot Albany, empowering him to arrest his son, and to keep him under restraint. The same traitors had previously possessed the prince with an apprehension that his life was in danger, and had persuaded him to seize the castle of St. Andrew's. He was riding thither with a small attendance, when he was arrested between the towns of Nidi and Stratirum (according to the continuator of Fordun), and hurried to the very castle of which he was preparing to take possession. The duke of Albany, and the earl of Douglas, who was likewise the prince's enemy, were then at Culross, waiting the event ; of which they were no sooner informed, than they ordered a strong body of ruffians to carry the royal captive from the castle; which they did, after clothing him in a russet cloak, and com-

mitting him to the custody of two execrable wretches, John Selkirk and John Wright, who were ordered by the duke of Albany to starve him to death. According to Buchanan his fate was for some time prolonged by the compassion of one of his keeper's daughters, who thrust him oatcakes through the chinks of his prison walls, and a woman who, being a wet nurse, found means to convey part of her milk to him through a small tube. Both these charitable females were detected, and put to death. The prince himself died on Easter-eve, his hunger, it is said, having impelled him to devour part of his own flesh. In the mean time Robert, being yet ignorant of the shocking murder, had consented to renew hostilities with England. On the expiration of the truce, Henry sent a commission to the carls of Northumberland and Westmoreland, to offer the Scots any terms they could reasonably desire; but every offer of this kind was rejected. The earl of March had received another pension from Henry, on condition of his keeping on foot a certain number of light troops to act against the Scots ; and so effectually did these now annoy their enemies that the earl of Douglas was

obliged to take the field. By dividing his men

into small parties, he repressed the depredations

of the invaders; and Thomas Haliburton, the

commander of one of the Scottish parties,

made incursions into England as far as Bambo-

roush, whence he returned with a considerable

booty. This encouraged another chieftain, Pa-

trick Hepburn, to make a similar attempt ; but,

being elated with success, he remained too long

:n the enemy's country ; so that the earl of March sent a detachment to intercept him. This pro-

duced a desperate encounter, in which Hepburn

was killed ; the flower of the youth of Lothian,

who had attended him, were cut off, and scarcely

a single Scotchman remained unwounded. On

the news of this disaster, the earl of Douglas ap-

plied for assistance to the duke of Albany. He

v. as immediately furnished with a considerable

m my, consisting of 10,000, or 13,000 ; but, ac-

re rding to the English historians, of 20,000 men.

IWrdoch, the sen of the duke, attended the earl

t'n this expedition, as did also the earlb of Moray, AnjitiS, (;ikney, and manyithers of the chief

nobility, with eighty knights. The Scots on tin

occasion conducted themselves with the same

imprudence they had done before. Having penetrated too far into the country, they were intercepted by the English on their return, and obliged to engage at a place called Homeldon, under great disadvantages. The consequence was that they were utterly defeated, and almost the whole army either killed or taken. Henry Hotspui, to whom this victory was chiefly owing, resolving to pursue the advantage he had gained, entered the southern parts of the kingdom, and laid siege to a castle called Cocklawys, on the borders of Teviotdale. The castle was for some time bravely defended ; but at last the governor entered into a treaty, by which it was agreed to deliver up the castle, if it was not relieved by the king or governor in six weeks; during which time no additional fortifications were to be made. But, while the English were retiring, one of Percy's soldiers pretended that the Scots had broke the capitulation by introducing a mattock into the place. The governor, hearing of this charge, offered to fight any Englishman who should engage to make it good. A champion was accordingly singled out, but was defeated

by the Scotchman ; and the English army retired according to agreement. The matter then being debated in the Scottish council, it was resolved to send relief to the castle. Accordingly the duke of Albany, with a powerful army, set out for the place ; but, before he came there, certain news were received of the defeat and death of Hotspur, at Shrewsbury. In 1404 king Henry, anxious for a peace with Scotland, renewed negotiations for that purpose. These, however, not being attended with success, hostilities were continued, but without any remarkable transaction. In the mean time king Robert was informed of the miserable fate of his eldest son the duke of Rothesay ; but was unable to resent it by executing justice on the monster Albany. After giving himself up to grief, therefore, for some time, he resolved to provide for the safety of his second son James, by sending him into France ; and the young prince took shipping with all imaginable secrecy at the Bass, under the care of the earl of Orkney. On his voyage he was taken by an English privateer off Flamborough Head, and brought before Henry. The English monarch having examined the attendants

of the prince, they told him they were carrying the prince to France for his education. ‘ 1 understand the French tongue,’ replied Henry, ‘ and your countrymen ought to have been kiwi enough to have trusted me with their prince’s education.’ He then committed the prince and his attendants close prisoners to the tower of London. The news of this disaster arrived at the castle of Rothesay in the Isle of Bute (the place of Robert’s residence) while the kin? \%as at supper ; and the news threw him into such an agony of grief that he died in three days, the 29th of March 1405, after having reigned about fifteen years.

By the death of Robert, and the captivity of the prince, all the power devolved upon the duke of Albany, who was appointed regent by a convention of the states assembled at Scone.

SCOTLAND.

The allegiance of the people, however, to their captive prince could not be shaken ; so that the egent was oU’iged to raise an army for the pur pose of rescuing him. Henry summoned all his military tenants, and made great preparations ;

but, having agreed to treat of a final peace with Ireland and the lord of the Isles, the regent laid hold of this as a pretence for entering into a new negociation with the English monarch ; and a truce was concluded for a year. In consequence of this, Rothesay, king at arms, was appointed commissary general for the king and kingdom of Scotland ; and in that quality repaired to the court of England. When prince James was taken, there had been a truce, however ill observed, subsisting between the two nations. Rothesay produced the record of this truce, which provided that the Scots should have a free navigation ; and, in consequence of this, he demanded justice of the captain and crew of the privateer who had taken the prince. Henry ordered the matter to be enquired into; but the English brought their complaints as well as the Scots ; and the claims of both were so intricate that the examination fell to the ground, but at the same time the truce was prolonged. In the end of 1409, or the beginning of 1410, the war was renewed with England, and Henry prepared to strike the fatal blow which he had long meditated against Scotland. He had entered into a league with the lord of the Isles, where a consi-

derable revolution then happened. Walter Les-

ley had succeeded to the estate and honors of the

earl of Ross, in the right of his wife, who was the heir. By that marriage, he had a son named

Alexander, who succeeded him ; and a daughter

Margaret, who was married to the lord of the

Isles. This Alexander had married one of the

regent's daughters ; and, dying young, he left

behind him an only daughter, Euphan, who was

deformed, and became a nun at North Berwick.

Her grandfather, the regent, procured from her

a resignation of the earldom of Ross, to which

she was undoubted heir, in favor of John earl of

Buchan, but in prejudice of Donald lord of the

Isles, who was the son of Margaret, sister to the

earl Alexander, and consequently the nearest heir

to the estate after the nun. Donald applied for

redress; but, his suit being rejected, he, with his brother John, fled into England, where he was

graciously, received by king Henry. According

to the instructions given him by the English mo-

narch, Donald returned to his own dominions in

the Isles, where he raised an army, and, passing

over into Ross-shire, violently seized on the es-

tate in dispute. He was soon at the head of

10,000 Highlanders, with whom he marched into the province of Moray, and thence to Strathbogie and Garioch, which he laid under contribution. Advancing towards Aberdeen, with a view to pay his troops with the plunder of that city, which was then a place of considerable trade, he was met by the earl of Marr, whom the regent had employed to command against him, at a village called Harlaw, near Aberdeen. A fierce engagement ensued, in which great numbers were killed on both sides, and the victory remained uncertain ; but Donald finding himself in the midst of an enemy's country, where he could raise no recruits, began to retreat next day ; and, the shattered state of the royal arm;' preventing him from being pursued, he escaped to his own dominions ; where in a short time he submitted, and swore allegiance to the crown of Scotland. In the mean time Henry continued the war, and refused to renew the truce, though frequently so licited. He had now, however, sustained a ereai loss by the defection of the earl of March, who had gone over to the Scots. This nobleman, on his return to Scotland, had been fully reconciled to the Douglas family, and now strove to distin-

guish himself in the cause of his country ; a circumstance which, together with the countenance shown the Scots by the court of France, and ;i bull published by the pope in their favor, contributed to reduce Henry to reason : we hear of no more hostilities between the two nations till after the death of the English monarch, which happened in 1413.

In 1415, the truce being expired, the Scots made great preparations for besieging Berwick ; but nothing was done during the campaign, but the burning of Penrith by the Scots, and Dumfries by the English. Next year a truce was agreed uponr and a treaty entered into for the ransom of king James; which was so far advanced that the English king agreed to his visiting Scotland, provided he engaged to forfeit £100,000 sterling in case of his failure to return by a certain day. For reasons now unknown, this treaty was broken off, and vast preparations were made for a new invasion of Scotland ; which, however, was executed with so little success, that it became known among the common people of Scotland by the name of the fule

raid. In 1420 died Robert duke of Albany, regent of Scotland, at the age of eighty ; and such was the veneration which the Scots had for his memory, notwithstanding his villany, that his post of regent was conferred upon his eldest son Murdoch. The war with England was now discontinued ; but in France Henry V. met with the greatest opposition £rora the Scots auxiliaries, insomuch that he proclaimed all the Scots in the service of the Dauphin rebels against their lawful sovereign. Soon after this the town and castle of Melun being obliged to capitulate, one of the articles was, that all the English and Scots in the place should be resigned to the absolute disposal of the king of England ; when he caused twenty Scottish soldiers who were found in the place to be hanged. In 1421 Henry returned to England, and with him James the Scottish king. On his arrival there, he was informed that the Scots, under the earl of Douglas, had made an irruption into England, where they had burnt Newark, but had been forced to return to their own country by a pestilence, though a new invasion was daily expected. Instead of

resenting this insult, Henry invited the earl of Douglas to a conference at York ; in which the latter agreed to serve him during life, by sea and land, against all living, except his own liege lord the king of Scotland, with 200 foot and as many horse ; the king of England, in the mean time, allowing an annual revenue of £200 for paying his expenses. A new negociation was also now set on foot for the ransom of kin? James ; but

he did not obtain his liberty till 1424. Henry V. was then do;id ; find, none of his generals being able to supply his place, the English power in France began to decline. They then became sensible how necessary it was to be at peace with Scotland. James was therefore highly caressed, and at his own liberty within certain bounds. The English even consulted him about the manner of conducting the treaty for his ransom ; and one Dougal Urummond, a priest, was sent with a safe conduct for the bishop of Glasgow, chancellor of Scotland, Dunbar earl of March, John Montgomery of Androssan., Sir Patrick Dunbar of Bele, Sir Robert Lauder of Edrington, &c., to have an interview at Pomfret, with their

master the captive king, and there to treat of their common interests. Most of these noblemen and gentlemen had before been nominated to treat with the English about their king's return ; and Dougal Drummond seems to have been a domestic favorite with James. Hitherto the Scottish king had been allowed an annual revenue of £700; but, while he was making ready for his journey, his equipage and attendants were increased to those befitting a sovereign ; and he received a present from the English treasury of £lOO. That he might appear in a way suitable to his dignity, at every stage were provided relays of horses, fish, flesh, and fowl, with cooks and other servants for furnishing the most sumptuous entertainments. In this meeting at Pomfret, James acted as a kind of a mediator between England and his own subjects, to whom he fully laid himself open ; but, in the mean time, the English regency issued a commission for settling the terms upon which he was to be restored, if he arid his commissioners should lay a proper foundation for such a treaty. The instructions the commissioners received

were dated at Westminster, July 6th, 1423; but we need not quote them, as nothing definitive was concluded at this time, but that another meeting should be held at York. This accordingly took place, and the chief articles proposed were agreed to. The English commissioners were, Thomas bishop of Durham, chancellor of England, Philip bishop of Winchester, Henry Percy earl of Northumberland, and Mr. John Wodeham. On the 10th of September they came to the following agreement with the Scottish commissioners: — 1. That the king of Scotland and his heirs, as an equivalent for his entertainment in England, should pay to the king of England and his heirs, at London, in the church of St. Paul, by equal proportions, the sum of £40,000 sterling. 2. That the first payment of 10,000 merks, should be made six months after the king of Scotland's entering his own kingdom ; that the like sum should be paid next year, and so on for six years, when the whole would be cleared; unless, after payment of 40,000 merks, the last payment of 10,000 should be remitted. 3. That the king of Scotland, be-

fore entering his own kingdom, should give sufficient hostages for his performance. 4. That the king of Scotland should be at Branspath, or Durham, by the 1st of March, where he should be attended by the nobles of his blood, and other subjects, to fix the number and quality of the hostages. 5. That, to cement and perpetuate the amity of the two kingdoms, the governors of Scotland should send ambassadors to London, with power to conclude a contract of marriage between the king of Scotland and some lady of the first quality in England. (James, it is probable, had already fixed his choice upon the lady Joan, daughter to the earl of Somerset, who was son to John of Gaunt duke of Lancaster, by his second marriage ; but he paid his people the compliment, not only of consulting their opinion, but of concluding the match.) The commissioners, after their agreement at York, proceeded towards London, and Thomas Somerville of Carnwath, with Walter Ogilvy, were added to their number. Being arrived at that capital, they ratified the former articles, and undertook for their king, that he should deliver his hostages to the king of England's officers, in the city of

Durham, before the last day of March ; that he should also deliver to the said officers four obligatory letters, for the whole sum of £40,000 from the four burghs of Edinburgh, Perth, Dundee, and Aberdeen ; that he should give his obligatory letter to the same purpose, before removing from Durham, and should renew the same four days after his arrival in his own kingdom ; that the hostages might be changed from time to time for others of the same fortune and quality, and that, if any of them should die in England, others should be sent thither in their room. The marriage of James with the lady Joan Beaufort was celebrated in the beginning of February, 1424. The young king of England presented him with a suit of cloth of gold for the ceremony ; and the next day he received a legal discharge of £10,000 to be deducted from the £40,000 at which his ransom was fixed. The ceremony being performed, the king and queen set out for Durham, where the hostages were waiting ; and arrived at his own dominions, along with the earl of Northumberland and the chief of the northern nobility, who attended him

with great pomp. On the 20th of April, the same year, he was crowned at Scone. During the dependence of the treaty for James's release, the Scots had emigrated to France in such numbers that no fewer than 15,000 of them appeared in arms under the duke of Touraine.

On his return, James found himself in a disagreeable situation. The great maxim of the duke of Albany, when regent, had been to maintain himself in power by exempting the lower class of people from taxes. This plan had been continued by his son Murdoch ; but, as the latter was destitute of his father's abilities, the people abused their happiness, and Scotland became such a scene of rapine that no commoner could say he had a property of his own. The Stewart family, on their accession, were possessed of a very considerable patrimonial estate, independent of the standing revenues of the crown, which consisted chiefly of customs, wards, and reliefs. The revenues of the paternal estate belonging to James, had they been regularly transmitted to him, would have more than maintained him in a splendor equal to his dignity, while he

was in England ; nor would he in that case have had any occasion for an allowance from

the kino; of England. But, as the duke of Albany never intended that his nephew should return, he parcelled out among his favorites the estate of the family in such a manner that James found all his patrimonial revenues gone, and many of them in the hands of his best friends. This circumstance, of itself sufficiently disagreeable, was attended with two others, which tended to make it more so. The one was that the hostages which had been left for the king's ransom in England, being all of them persons of the first rank, were attended by their wives, families, children, and equipages, which rivalled those of the same rank in England, and drew much ready money out of the nation. The other circumstance was, the expense of the Scottish army in France ; where Charles, who had never been in a condition to support it, was now reduced to the utmost necessity; while the revenues of James himself were both scanty and

precarious. To remedy these inconveniences, therefore, the king obtained from his parliament an act, obliging the sheriffs of the respective counties to enquire what lands and estates had belonged to his ancestors David II., Robert II., and Robert III.; and he formed a resolution of resuming these lands wherever they could be discovered. At this time many of the most illustrious personages in the kingdom were arrested, and the duke of Albany, his two sons, and the earl of Lennox the duke's father-in-law, were put to death. James proceeded with great spirit to reform the abuses which had pervaded every department of the state, and warmly protected and encouraged learning and learned men. He himself wrote some poetry; and in music was so excellent a composer, that he has been with good reason regarded as the father of Scottish music. He introduced organs into his chapels, and a much better style of architecture into all the public buildings. He was also a warm patron of the useful arts: in short, be did more towards the civilisation of his people than had been done by any of his predecessors. In

the mean time the truce continued with England. James, however, seemed not to have any inclination to enter into a perpetual alliance with that kingdom. Ou the contrary, in 1428, he entered into a treaty with France ; by which it was agreed that a marriage should be concluded between the dauphin of France, afterwards Louis XL, and the young princess of Scotland ; and so great was the necessity of Charles VII. for troops at that time, that he demanded only 6000 forces as a portion for the princess. The rest of the reign of James was spent in reforming' abuses, curbing the authority of the great barons, and recovering the royal estates. In this, however, he used so much severity that lie was at last murdered in 1437. The perpetrators of this regicide were the earl of Athol ; Robert Graham who was connected with the earl, and discontented on account of his losing the estate of Strathern; and Robert, grandchild and heir to Athol, and one of the king's domestics. The king had dismissed his army, without even reserving to himself a body guard, and was at supper in the Dominican convent of the Black

friars near Perth : Graham had for some time been at the head of a band of outltws, and brought a party of them to Perth in the dead of the night, posting them near the convent. Walter Stratton, one of the king's cupbearers, on bringing some wine to the king while at supper, perceived armed men in the passage, and gave the alarm, when he was immediately killed. Catharine Douglas, one of the queen's maids of honor, ran to bolt the outer door; but the bar was taken off by Robert Stuart; and, the lady thrusting her arm into the staple, it was instantly broken. Patrick Dunbar, brother to the earl of March, was killed in attempting to defend, his sovereign, and the queen received two wounds in attempting to interpose herself betwixt her husband and the assassins. James defended himself as long as he could ; but was overpowered at last after receiving twenty-eight wounds.

The crown now devolved upon his son James II., at that time only seven years of age. A. parliament was immediately called by the queen-mother, at which the most cruel punishments were decreed to the murderers of the late king.

The crime, no doubt, deserved an exemplary

punishment ; but the barbarities inflicted on

some of those wretches are shocking to relate.

Within less than six weeks after the death of the

kin:, all of them were brought to Edinburgh,*

arraigned, condemned, and executed ; the c-ari

of Athol and Robert Graham undergoing the

most cruel torments, such as pinching with hot

irons, dislocation of the joints, Sec. The earl of

Athol had, besides, a crown of red hot iron put

on his head, and was afterwards cut up alive,

his heart taken out, and thrown into a fire.

/Eneas Sylvius, the pope's nuncio, who beheld

them, said on this occasion that he was at a UK;

to determine whether the crime committed by

the regicides or the punishment inflicted upon

them was the greatest. As the late king had

prescribed no form of a regency, in case of hi<

death, the settlement of the government bo.

a matter of great difficulty. Archibald eail of

Douglas, who had been created duke of Tou-

raine in France, was by far the greatest subject

in the realm ; but as he had not been a favorite, and the people were now disgusted with regen-

cies, he was not formally appointed to the

administration, though he in fact enjoyed the supreme power as long as he lived ; which, however, was but a short time. He died the same year (1438); and Sir Alexander Livingstone of Callendar was appointed to succeed him as governor of the kingdom, that is, to have the executive power, while William Crichton, as chancellor, had the direction of the civil courts. Tins was a most unfortunate partition of power for the public. The governor and chancellor quarrelled ; the latter took possession of the king's person and the castle of Edinburgh, to neither of which he had any right ; while the former had on his side the queen mother, a woman of intrigue and spirit. Her son was shut up in the castle of Edinburgh ; and in a short lime there was no appearance either of law or government. The governor's edicts were counteracted by those of the chancellor in the king's name, and those who obeyed the chancellor were punished by the

governor ; while the young earl of Douglas, with his numerous followers and dependents, was a

declared enemy of both parties. The queen-mother demanded access to her son, which Crichton could not deny her; and she was accordingly admitted, with a small train, into the castle. She played her part so well, and dissembled with so much art, that the chancellor, imagining that she had become a convert to his cause, treated her with unbounded confidence. Pretending that she had vowed a pilgrimage to the white church at Buchan, she recommended the care of her son's person, till her return, to the chancellor, in the most affectionate terms ; but, in the mean time, she secretly sent him to Leith, packed up in a clothes chest; and both she and James were received at Stirling by the governor before the escape was known. As every thing had been managed in concert with Livingstone, he called together his friends, and laying before them the tyrannical behaviour of the chancellor, it was resolved to besiege him in the castle of Edinburgh, the queen promising to open her own granaries for the use of the army. In the mean time, the chancellor anticipating the storm, and applying to the earl of Douglas, that haughty

nobleman answered him that he was preparing to exterminate both parties. The siege of Edinburgh castle being formed, the chancellor demanded a parley, and to have a personal interview with the governor ; which the latter, who knew the sentiments of Douglas, readily agreed to. Common danger united them, and the chancellor resigning to the other the custody of the castle and the king's person, with the highest professions of duty and loyalty, the two competitors swore an inviolable friendship. Next day the king cemented their union, by confirming both in their respective charges. The lawless example of the earl of Douglas encouraged the other great landholders to gratify their private animosities, sometimes at the expense of their honor, as well as their humanity : and a family difference having occurred between Sir Allan Stuart of Darnley, and Thomas Boyd of Kilmarnock ; it was settled that both parties should come to a peaceable agreement at Polmaisthorn, between Linlithgow and Falkirk, where Stuart was treacherously murdered by his enemy. His death was revenged by his brother, Sir Alexander

Stuart of Beilmouth, who challenged Boyd to a pitched battle, the principals being each attended by a small army. The conflict was fierce and bloody, eacli party retiring in its turn, and charging with fresh fury ; but at last victory declared for Stuart, the bravest of Boyd's attendants being cut off in the field. About this time the islanders, under two of their chieftains, Lauchlan Maclean and Murdoch Gibson, notorious freebooters, invaded Scotland, and ravaged the province of Lenox. They were opposed by John Colcuhoun of Luss, whom they slew, some say treacherously, and others in an engagement at Lochlomond, near Inchmartin. After this the robbers became more outrageous than ever : all the laboring hands in the kingdom being engaged in domestic broils, and a dreadful famine ensued, attended, as usual, by a pestilence. James IT. was now about ten years of age ; and the

wisest part of the kingdom, agreed that the public distresses were owing to a total disrespect of the royal authority. The young earl of Douglas never had fewer than 1000, and sometimes 2000

horse in his train, lie pretended to be indepen-

dent of the king and the law; that he had a

right of judicature upon his own large estates;

and that he was entitled to the exercise of royal

power. He gave protection to thieves and mur-

derers, affecting to brave the king, made knights,

and, according to some writers, endowed certain

noblemen, of his own dependents, with a power

of sitting in parliament. The queen-mother was

not wholly guiltless of those abuses. She had

fallen in love with, and married Sir James Stuart,

commonly called the Black Knight of Lorn,

brother to the lord of that title, and a descendant of the house of Darnley. Affection for her

husband caused her to renew her political in-

trigues ; her interest inclined towards the party

of the Douglasses. The governor sought to

strengthen his authority by restoring the exercise

of the civil power. The conduct of lord Cal-

lendar was not so defensible, either as to pru-

dence or policy. When the queen expressed her

desire that her husband might be admitted to

some part of the administration, the governor

threw both him and his brother lord Lorn into

prison, on a charge of disloyal practices. The

queen, being offended at this, was herself confined to a mean apartment in the castle of Stirling ; and a convention of the states was called to judge in what manner she was to be proceeded against. The case was difficult ; nor is it probable that the governor would have carried matters to such extremity, had he not had strong evidences of her illegal behaviour. She was obliged to dissemble her resentment, by professing before the states that she had always been entirely innocent of her husband's practices. Upon making this purgation (as Lindsay calls it) she was released, with her husband and his brother, being bailed by the chancellor and the lord Gordon, who became sureties for their good behaviour in the penalty of 4000 merks. The govenior was afterwards accused of many arbitrary and partial acts : but if we consider his situation, and the violence of the parties, it was almost impossible, consistently with his own safety, to have exerted the virtues either of patriotism or moderation. The chancellor was piqued at the small regard which the governor pajd to his person and dignity, and secretly

connected himself with the queen-mother. The king and his mother continued at Stirling ; where the governor, on pretence of consulting the public safety, and that of the king's person, maintained a strong, guard. The queen-mother represented this to her son as a restraint upon his liberty; and, obtaining his consent to put himself into the chancellor's hands, the latter, a man of activity and courage, crossing the Forth in the dark with a strong body of horse, surrounded the king as he was hunting : and, when some of the guards offered to dispute the possession of his person, Sir William Livingston, the governor's eldest son, restrained them, and suffered the king to depart. This happened when the governor was absent from Stirling ; and the clian-

cellor entered Edinburgh at the head of 4000 horse, where the king and he were joyfully received. The governor showed no emotion at what had happened ; on the contrary, he invited the chancellor to an interview, to settle all differ-

ences. Lord Douglas, however, continued to brave

both parties. He demanded by his ambassadors,

Malcolm Fleming of Cumbernauld, and Allan

Lawder, the investiture of the sovereignty of Tou-

raine from Charles VII. of France ; which, being

readily granted, served to increase his insolence.

The first-fruits of the accommodation between

the two great officers of state was the holding of a parliament at Edinburgh, for redressing the

public disorders; and encouragement was given

to all persons who had been injured by Douglas

to make their complaints. The numbers which

on that occasion resorted to Edinburgh were in-

credible ; parents, children, and women, de-

manding vengeance for the murder of their rela-

tions, or the plunder of their estates; till, by the multiplicity of their complaints, they became

without remedy, none being found bold enough

to encounter the earl, or to endeavour to bring

him to a fair trial. The parties, therefore, were

dismissed without relief, and it was resolved to

proceed with that haughty noble in a different

manner. Letters were written to him by the

governor aud chancellor in the name of the

states, requesting him to appear with his friends

in parliament, and to take that lead in public affairs to which they were entitled by their high rank and possessions: and the manner in which these letters were penned operated effectually on his vanity, and made the earl consider them as proceeding from the inability of the government to continue the administration of affairs without him. Without suspecting that any man in Scotland would be so bold as to attack him, he wrote to the chancellor and governor that he intended to set out for Edinburgh: when the chancellor, on pretence of doing him honor, met him on his journey ; and, inviting him to the castle of Crichton, entertained him there for some days. The chancellor had not only removed the earl's suspicion, but had made him a kind of convert to patriotism, by painting to him the miseries of his country, and the glory that must redound to him and his friends in removing them. He therefore attended the chancellor to Edinburgh ; and, being admitted into the castle, dined at table with the king. Towards th'e end of the entertainment, a bull's head, the certain prelude of immediate death, was served up. The

earl and his brother started to their feet, and endeavoured to escape ; but the armed men, rushing in, overpowered them, and, tying their hands and those of Sir Malcolm Fleming with cords, they were carried to the hill and beheaded. The young king endeavoured, with tears, to procure their pardon ; for which he was severely checked by his unrelenting chancellor.

In 1443 the king, being arrived at the age of fourteen, declared himself out of the years of minority, and took upon himself the administration of affairs. He appears to have been a prince of great spirit and resolution ; and he had occasion for it. Having appointed one Robert .Sempil of Fulwood governor of the castle of Dumbarton, he was killed by one Galbreath (a noted partizan of the earl of Douglas), who seized upon the government of the castle. The young earl of Douglas, rinding himself not supported by the chief branches of his family, began to think his safest course would be to return to his duty. He accordingly repaired to the king at Stirling; and, throwing himself at his feet, implored his pardon. The king, finding

that he insisted on no terms but that of pardon, and that he had unconditionally put himself into his power, not only granted his request, but made him the partner of his councils. James had always disliked the murder of the earl of Douglas and his brother ; and the chancellor, perceiving the ascendancy which this earl was daily gaining at court, thought it high time to provide for his own safety. He therefore resigned the great seal, and retired to the castle of Edinburgh, the custody of which he pretended had been granted to him by the late King during his life, or till the present king should arrive at the age of twenty-one. Lord Callendar, who knew himself equally obnoxious as Crichton, and that he could not maintain his footing by himself, resigned likewise all his posts, but kept possession of the castle of Stirling. As both this and that of Edinburgh were royal forts, the two lords were summoned to surrender them ; but, instead of complying, they justified their conduct by the great power of their enemies, who had been so lately at the head of robbers and outlaws ; but promised to surrender themselves to the king as soon as he was of lawful age.

This answer being deemed contumacious, the chancellor and the late governor, with his two sons Sir Alexander and Sir James Livingston, were proclaimed traitors in a parliament summoned to meet at Stirling. In another parliament held at Perth the same year, an act was passed that all the lands and goods which had belonged to the late king should be possessed by the present to the time of his lawful age. This act was levelled against the late governor and chancellor, who were accused of having alienated to their own uses, or to those of their friends, a great part of the royal effects and jewels ; and, their estates being confiscated, the execution of the sentence was committed to John Forrester of Corstorphin, and other adherents of the earl of Douglas. The sentence threw the whole nation into a flame. The castle of Crichton was besieged; and, being surrendered upon the display of the royal banner, it was levelled with the ground. It soon appeared that the governor and chancellor, the latter especially, had many friends ; and in particular Kennedy bishop of St. Andrew's, nephew to James

I., who sided with them from the drea»' and ha-

tred they bore to Douglas. Crichton thus soon

found himself at the head of a body of men ;

and, while Forrester was carrying fire and sword

into his estates and those of the late governor,

his own lands and those of the Douglasses were

overrun. Corstorphin, Abercorn, Blackness,

and other places were plundered ; and Crichton

carried off from them more booty than he and

his adherents had lost. Douglas was so much

exasperated by the great losses he had sustained,

that he engaged his friends, the earl of Crawford

and Alexander Ogilvy of Innerquharity, to lay

waste the lands of the bishop of St. Andrew's,

whom he considered as the chief support of the

two ministers. This prelate was not more con-

siderable by his high birth than he was vene-

rable for his virtue ; and had, from a principle

of conscience, opposed the earl of Douglas and

his party. Being conscious he had done nothing

that was illegal, he first admonished the earl of

Crawford and his coadjutor to desist from de-

stroying his lands ; but, finding his admonitions ineffectual, he laid the earl under excommunication. That nobleman was almost as formidable in the northern, as Douglas had been in the southern parts of Scotland. The Benedictine monks of Aberbrothick had chosen Alexander Lindsay, his eldest son, to be judge of their temporalities, until Lindsay proved so chargeable, by the number of his attendants and his high manner of living, to the monks, that their chapter removed him from his post, and substituted in his place Alexander Ogilvy of Innerquharity, guardian to JoWn Ogilvy of Airley, who had an hereditary claim upon the bailiwic. This, notwithstanding their former intimacy, created an irreconcileable difference between the two families. Each competitor strengthened himself by calling in the assistance of his friends ; and the lord Gordon taking part with the Ogilvies, to whom he was paying a visit, both parties immediately mustered in the neighbourhood of Aberbrothick. The earl of Crawford, who was at Dundee, immediately posted to Aberbrothick, and, placing himself between the two armies, demanded an interview with Ogilvy ; but,

before his request could be granted, he was killed by a common soldier. His death exasperated his friends ; and a bloody conflict ensued, which ended to the advantage of the Lindsays, that is, the earl of Crawford's party. On that of the Ogilvies were killed Sir John Oliphant of Aberdalgy, John Forbes of Pitsligo, Alexander Barclay of Gartley, Robert Maxwel of Teling, Duncan Campbell of Campbellfether, William Gordon of Burrowfield, and others. With these gentlemen, about 500 of their followers are said to have fallen. Innerquharity was taken prisoner, and carried to the earl of Crawford's house at Finhaven, where he died of his wounds ; but lord Gordon escaped by the swiftness of his horse. This battle seems to have kindled the flames of civil discord all over the kingdom. No regard was paid to the magistracy, nor to any but the clergy. The most numerous, fiercest, and best allied family wreaked its vengeance on its foes, either by force 01 treachery ; and the enmity that actuated the parties stifled every sentiment of honor and humanity. The Lindsays, secretly abetted by the earl of Douglas,

curried fire and sword through the estates of their enemies ; and all the north of Scotland presented scenes of murder and devastation. In the west, Robert Boyd of Duchal, governor of Dumbarton, treacherously surprised Sir James Stuart of Achmynto, and treated his wife with such inhumanity that she expired in three days in Dumbarton castle. The castle of Dunbar was taken by Patrick Hepburn of Hales. Alexander Dunbar dispossessed the latter of his castle of Hales; but it was retaken by the partisans of the earl of Douglas, whose tenants in Annandale behaved with peculiar fierceness and cruelty. At lust the gentlemen of the country, unconnected with these robbers and murderers, shut themselves up in their several houses ; each of which in those days was a petty fortress, victualled, and provided in the best manner they could. This seems to have been the h'rst nWsure that composed the public commotions. The earl of Douglas was sensible that the clergy and the disinterested part of the kingdom considered him as the source of the calamities which the nation suffered ; and that James him-

self would soon be of the same opinion. He therefore sought to avail himself of the juncture, by forming secret but strong connexions with the earls of Crawford, Ross, and other great noblemen, who wanted to see their feudal power restored. The queen dowager and her husband, during this public confusion, had retired to the castle of Dunbar, while it was in Hepburn's possession, where she died soon after. She left by her second husband three sons ; John, who in 1455 was made earl of Athole ; James, who in 1469, was created earl of Buchan; and Andrew who became bishop of Murray. As the earl of Douglas was an enemy to the queen-dowager's husband, the latter retired to England, where he obtained a pass to go abroad ; but, being taken at sea by Flemish pirates, died in confinement. The great point between the king and Sir William Crichton, whether the latter should give up the castle to his majesty, remained still undecided ; and by the advice of the earl of Douglas, who had been created lord-lieutenant of the kingdom, it had now suffered a nine months' siege. Crichton and his follow-

ers were offered a full indemnity for past of-

fences, and restoration to the king's favor : when

he accepted of the conditions, but refused to act

in any public capacity till they were confirmed

by a parliament. This was soon held at Perth,

and he was restored to his estate and honors.

By this reconciliation between Douglas and

Crichton, the former was left at full liberty to

prosecute his revenge against lord Callendar,

the late governor, and this he did with rigor.

The governor himself, Sir James Dundass of

Dundass, and Sir Robert Bruce of Clackman-

nan, were forced to save their lives by the loss

of their estates ; but they were sent prisoners to

the castle of Dumbarton. Alexander, the go-

vernor's eldest son, and two other gentlemen of

his name and family, were condemned to los.~

their heads. Lindsay gives an extract of the

speech which Alexander Livingston, one of the

most accomplished gentlemen of his time, made

upon the scaffold, in which he complained with

great bitterness of the cruel treatment his father,

himself, and friends had undergone; and that he

suffered by a packed jury of his enemies.

The king being about eighteen years of age, it was now thought proper that a suitable consort should be provided for him ; and, after various consultations, Mary, the daughter of Arnold duke of Gueldres, was chosen, at the recommendation of Charles VII. of France. This produced

an immediate rupture with England. The earls of Salisbury and Northumberland entered Scotland at the head of two armies. The former burnt the town of Dumfries, as the latter did that of Dunbar; while Sir John Douglas of Balveuy made reprisals by plundering the county of Cumberland, and burning Alnwick. Upon the return of the English to their own country, additional levies were made, and a fresh invasion of Scotland was resolved upon under the earl of Northumberland, who had a lieutenant, whom the Scots, from the bushiness and color of his beard, called Magnus with the red mane. He was an excellent officer, having been trained in the French wars ; and is said to

have demanded no other recompense for his services, from the English court, than that he should enjoy all he could conquer in Scotland. The Scots, in the mean time, had raised an army commanded by George Douglas earl of Ormond, and under him by Wallace of Craigie, with the lords Maxwell and Johnston. The English, having passed Solway Frith, ravaged all that part of the country which belonged to the Scots; but, hearing that the earl of Ormond was approaching, called in their parties, and fixed their camp on the banks of the Sark. Their advanced guard was commanded by Magnus ; their centre by the earl of Northumberland ; and theii iear, which was composed of Welsh, by Sir John Pennington, an officer of courage and experience. The right wing of the Scots was commanded by \Vallace, the centre by the earl of Ormond, and their left wing by the lords I\iaxwell and Johnston. Before the battle, the earl of Ormond endeavoured to inspire his men with high resentment against the English, who, he said, had treacherously broken the truce. The signal being given, the Scots under Wallace rushed for-

ward upon their enemies ; but, as usual, were received by so terrible a discharge from the English archers that their impetuosity must have been stopped, had not their brave leader put them in mind that their forefathers had always been defeated in distant fights by the English, and that they ought to trust only to their swords and spears. They obeyed, and broke in upon the English, commanded by Magnus, with such fury as soon fixed the fortune of the day on the side of the Scots. The slaughter (for both parties fought with the utmost animosity) fell chiefly upon the division commanded by Magnus, who was killed, together with the whole of his body guard of picked soldiers. Sir John Pennington's division, with that under the earl of Northumberland, was likewise routed ; and the whole English army, struck by the loss of their champion, fled towards the Solway ; where, the river being swelled by the tide, numbers of them were drowned. The loss of the English in slain amounted to at least 3000 men. Among the prisoners were Sir John Pennington, Sir Ilobert Harrington, and the earl of Northumberland's

eldest son, the lord Percy, who lost his own

liberty in forwarding his father's escape. Of

the Scots about 600 were killed ; but none of

note excepting the brave Wallace, who died

three months after of his wounds. The booty

on this occasion is said to have been greater

than any that had fallen to the Scots since t'i j buttle of Bannockburn. The rest of the hi>tory

of this reign is almost entirely a relation of the cabals and conspiracies of the nobles and other

chiefs. The earl of Douglas had entered into a

confederacy with the earls of Crawford, Morav,

and Ross, and appeared on all occasions with

such a train of followers as bade defiance to the

royal power. This insolence was detested by tin-

wiser part of the nation; and Maclellan, who

was nephew to Sir Patrick Gray, captain of tic-

king's guard, refused to give any attendance

upon the earl. This inoffensive behaviour was

by the latter considered as a kind of treason,

and seizing upon Maclellan 's house and person,

he sent him prisoner to the castle of Dougla—.

As Maclellan was a gentleman of great worth

and reputation, his uncle Sir Patrick applied to

James in his favor; who wrote and signed a,

letter for his release : and, upon Gray's delivering this letter to Douglas at his castle, the latter

seemed to receive it with the highest respect,

and to treat Gray with hospitality ; but in the

mean time he gave private orders that Maclel-

lan's head should be struck off, and his body

exposed upon the green before the castle. After

dinner the earl told Gray that he was ready to

obey the king's commands; and, conducting him

to the green, showed him the lifeless trunk.

Upon this Gray mounted his horse, and, trusting

to his swiftness for safety, was pursued by the

earl's attendants to the gates of Edinburgh. The

conspiracy against James's government was now

no longer a secret. The lords Balveny and Ha-

milton, with such a number of other barons and

gentlemen, had acceded to it, that it was thought

to be more powerful than all the force the

king could bring into the field. Even Crichton

advised James to dissemble. The confederates,

entered into a solemn bond and oath never to

desert one another : all who did not enter into

this association were treated as enemies to the

public ; their lands were destroyed, their effects

plundered, and they themselves imprisoned or

murdered. Drummond says that Douglas was now able to bring 40,000 men into the field ; and that his intention was to have usurped the crown. When James invited him to a conference in the castle of Stirling, he offered to comply, provided he had a safe conduct ; which was expedited in the form and manner required. The earl began his inarch with his usual great retinue, and arrived at Stirling on Shrove Tuesday, lie was received by the king as if he had been the best of his friends, and admitted to sup with his majesty, while his attendants were dispersed in the town. The entertainment being over, the king told the earl, ‘ That, as he was now of age, he was resolved to be the father of all his people, and to take the government into his own hands ; that he, therefore, had no reason to be under any apprehensions from his old enemies Callendar and Crichton ; that there was no occasion to form any confederacies, as the law was ready to protect him ; and that he was welcome to the principal direction of affairs under the crown, and to the first place in the royal confidence ; nay, that all former offences done

by himself and his friends should be pardoned.'

This speech was the very reverse of what the carl of Douglas expected. It rendered him, indeed, the first subject of the kingdom ; but still he was controlable by the civil law. In short, upon the king's peremptorily putting the question to him, he not only refused to dissolve the confederacy, but upbraided the king for his government. This produced a passionate re-joinder ton the part of James; but the earl represented that he was under a safe conduct, and that the nature of the confederacy was such that it could not be broken but by the common consent of all concerned. The king insisted upon his setting the example; and, the earl continuing more and more obstinate, James stabbed him \vith his dagger, and armed men, rushing into the room, finished the slaughter. After the death of the earl of Douglas the confederacy came to nothing. The insurgents excused themselves as being too weak for such an enterprise ; and were contented with trailing the safe conduct at a

horse's tail, and proclaiming by trumpets and

horns the king a perjured traitor. They pro-

ceeded no farther, and each departed to his own

habitation, after agreeing to assemble with fresh

forces about the beginning of April. James lost

no time in improving this shoit respite ; and

found the nation in general much better disposed

in his favor than he had reason to expect. The

intolerable oppressions of the great barons made

his subjects esteem the civil far preferable to the feudal subjection, and even the Douglasses were

divided among themselves; for the earl of An-

gus and Sir John Douglas of Dalkeith were

among the most forward of the royalists. James

at the same time wrote letters to the earl of

Huntly, to all the noblemen who were not par-

iius in the confederacy, and to the ecclesiastics,

ii.'fore the effect of those letters could be known, insurgents had returned to Stirling (where

••s still kept himself upon the defensive);

ited their insolence, and the opprobrious

ueiit of his safe conduct; and at last plun-

dered the town, and laid it in ashes. Being

iil unable to take the castle, partly through

their own divisions, and partly through the di-

versity of their operations, they left Stirling, and destroyed the estate of Sir John Douglas of Dalkeith, whom they considered as a double traitor. They then besieged his castle; but it \v;is so bravely defended by Parick Cockburn, a gentleman of the family of Langton, that they raised the siege. All this time the unhappy countrjf was suffering the most cruel devastations ; for matters were now come to such extremity that it was necessary for every man to be a royalist or a rebel. The king was obliged to keep on the defensive ; and, though he had ventured to leave the castle of Stirling, he was in no condition to face the rebels. They were in possession of all the strong passes by which his friends were to march to his assistance ; and he even consulted with his attendants on the means of escaping to France, where he was sure of an hospitable reception. He was diverted from that resolution by bishop Kennedy and the earl of Angus, who was himself a Douglas, and prevailed upon to wait for the event of the earl of '.I'intly's attempts. This nublouian, who was descended from the Seatons, but by marriage inherited the great estates of the Gordons in the

north, had raised an army for James, to whose family he and his ancestors, by the Gordons as well as the Seatons, had been always devoted. James was not mistaken in the high opinion he had of Huntly ; and in the mean time he issued circular letters to the chief ecclesiastics and bodies politic of his kingdom, setting forth the necessity he was under to proceed as he had done, and his readiness to protect all his loyal subjects against the power of the Douglasses and their rebellious adherents. Before those letters could have any effect, the rebels had plundered the defenceless houses and estates of all who were not in their confederacy. The indignation which the public had conceived against the king, for the violation of his safe conduct, began now to subside; and the behaviour of his enemies seemed to justify what had happened. The forces he had assembled being unable, as yet, to act offensively, he resolved to wait for the earl of Huntly, who by this time was at the head of a considerable army, and had begun his march southwards. He had been joined by the Forbeses, Ogilvies, Leslies, Grants, Irvings, and other relations and dependents of his family ; but, having

advanced as far as Brechin, he was opposed by

the earl of Crauford, the chief ally of the earl of Douglas, who commanded the people of Angus,

and all the adherents of the rebels in the neigh-

bouring counties, headed by foreign officers. The

two armies joining battle, on the 18th of May,

victory was for some time in suspense ; till one

Coloss of Bonnymoon, or Balnamuin, on whom

Crauford had great dependence, but whom he

had imprudently disobliged, came over to the

royalists with the division he commanded, which

was the best armed part of Crauford's army.

His defection gave the fortune of the day to the

earl of Huntly, as it left the centre flank of Crau-

ford's army entirely exposed. He himself lost

one of his brothers; and fled with another, Sir

John Lindesay, to his house at Finhaven, where

he declared, ' That he would be content tore-

main seven years in hell, to have in so timely a

season done the king his master that service the

earl of Huntly had performed, and carry that

applause and thanks he was to receive from him.'

No author informs us of the loss of men on either side, though all agree that it was very consider-

able upon the whole. The earl of Huntly lost

two brothers, William and Henry ; and to in-
demnify him for his services, and for the presents
he had made to his followers, the king gave him
the lands of Badenoch and Lochaber. The battle
of Brechin was not immediately decisive in
favor of the king, but proved so in its conse-
quences. The earl of Moray, a Douglas like-
wise, took advantage of Huntly's absence to
harass and ravage the estates of all the royalists
in the north ; but Huntly, returning from Bre-
chin with his victorious army, drove the enemy
into his own county of Moray, and afterwards
expelled him even thence. James was now
encouraged, by the advice of his kinsman bishop
Kennedy, to proceed against the rebels in a
leu.il manner, by holding a parliament at Edin-
burgh, to which the confederated lords were

summoned ; and, upon their non-appearance,
declared traitors. This proceeding seemed to
make the. rebellion rage more fiercely ; and at
last the confederates disowned their allegiance to
James. The earls of Douglas, Crauford, Or-

mond, Moray, the lord Balveny, Sir James Hamilton, and others, signed public manifestoes, which were pasted on the doors of the principal churches, importing ‘ that they were resolved never to obey any command or charge, nor answer any citation for the time coming ; because the king, so far from being a just master, was a bloodsucker, a murderer, a transgressor of hospitality, and a surpriser of the innocent.’ These atrocious proceedings did no service, however, to their cause. The earl of Huntly continued victorious in the north, where he and his followers, in revenge for the earl of Moray’s having burnt his castle of Huntly, ravaged all Moray’s estate north of the Spey. When he came to Forres, he burnt one side of the town because it belonged to the earl, and spared the other, the property of his own friends. James thought himself, from the behaviour of Douglas and his adherents, now warranted to come to extremities ; and, marching into Annandale, he carried tire and sword through all the estates of the Douglasses. The earl of Crauford destroyed the lands of the people of Angus, and of all

others who had abandoned him at the battle of Brechin. James, returning from Annandale to Edinburgh, marched northwards to Angus, to reduce the earl of Crauford, who had hitherto deferred throwing himself at the king's feet, only in hopes that better terms might be obtained from James for himself and his party. Perceiving that the earl of Douglas's obstinacy had put an end to all hopes of a treaty, he resolved to make a merit of breaking the confederacy, by being the first to submit. James, having arrived in Angus, was continuing his march through the country, when the earl and some of his chief followers fell on their knees before him on the road, bare-headed and bare-footed ; the earl acknowledging his crimes, and imploring forgiveness. James was then attended by his chief counsellors, particularly bishop Kennedy. He asked their advice; which proving merciful, James promised to the earl and his followers restitution of all their estates and honors. The earl, in gratitude, before the king left Angus, joined him with a troop of his friends and followers ; and, attending him to the north, was

extremely active in suppressing all the remains of the rebellion there. The submission of the earl of Crauford was followed by that of the earl of Douglas ; but he soon resumed his rebellious practices, and in 1454 raised an army to fight against the king. The king erected his standard at St. Andrew's, marched thence to Falkland, and ordered all the forces of Fife, Angus, Strathern, &c., to rendezvous at Stirling; which they did to the number of 30,000. Douglas assembled his forces, which amounted to 40,000, some say 60,000 men, on the south bank of the Carron, between Stirling and Abercorn. Bishop Kennedy had advised the king to divide his enemies by offering them pardon separately ; and thus in a few days the earl was deserted by all his numerous army, excepting about 100 of his nearest friends and domestics, with whom he retired towards England. However, in his journey southward, he raised a considerable body of forces, consisting of his own tenants, of outlaws, robbers, and borderers, with whom he renewed his depredations on the loyal subjects of the king. He was opposed by the

earl of Angus, who continued firm in the royal cause. An engagement ensued at Ancrum muir; where Douglas was entirely defeated, and he himself with great difficulty escaped to an adjacent wood. His estates were afterwards forfeited to the king. The rest of the reign of James II. was spent in internal regulations for the good of his people. He was killed in 1460 at the siege of Roxburgh castle, by the bursting of a cannon. This siege he had undertaken in favor of the queen of England, wife of Henry VI., who, after losing several battles, and being reduced to distress, was obliged to apply to him for relief. The nobility who were present concealed his death for fear of discouraging the soldiers ; and in a few hours after the queen appeared in the camp, and presented her young son James III. as their king.

James III. was not quite seven years of age at his accession to the crown. The administration devolved on his mother, who pushed the siege of Roxburgh castle with so much vigor that the garrison capitulated in a few days ; after which the army ravaged the country, and dismantled

the castle of VVark. In 1466 negociations were begun for a marriage between the young king and Margaret princess of Denmark ; and in 1468 the following conditions were stipulated; — 1. That the annual rent hitherto paid for the northern isles of Orkney and Shetland should be for ever remitted and extinguished. 2. That king Christian I. should give 60,000 florins of gold for his daughter's portion, whereof 10,000 should be paid before her departure from Denmark ; and that the islands of Orkney should be made over to the crown of Scotland by way of pledge for the remainder; with this proviso that they should return to that of Norway after complete payment. 3. That king James should, in case of his dying before the said Margaret, leave her in possession of the palace of Linlithgow, and castle of Down, in Monteith, with all their appurtenances, and the third part of the ordinary revenues of the crown, to be enjoyed by her during life. 4. But, if she chose to return to Denmark, that in lieu of the said liferent, palace, and castle, she should accept of 120,000 florins of the Rhine; from which sum the 50,000 due for the remainder of her portion

being deduced and allowed, the islands of Orkney should be reannexed to the crown of Norway. When these articles were agreed upon, Christian found himself unable to fulfil his part of them. Being then engaged in an unsuccessful war with Sweden, he could not advance the 10,000 florins which he had promised to pay down as part of his daughter's fortune. He was therefore obliged to apply to the plenipotentiaries to accept of 2000, and to take a farther mortgage of the isles of Shetland for the other 8000. The Scottish plenipotentiaries, of

whom Boyd, earl of Arran, was one, gratified him in this request; and this concession is thought to have proved fatal to the earl. Certain it is that his father was beheaded for treasonable practices alleged to have been committed long before, and for which he produced a parliamentary indemnity to no purpose ; the earl himself was divorced from his wife, the king's sister, and obliged to live in perpetual exile, while the countess was married to another. In

1476 those misfortunes began to come on James which afterwards terminated in his ruin. He had made his brother, the duke of Albany, governor of Berwick ; and had entrusted him with very extensive powers upon the borders, where a violent propensity for the feudal law still continued. The Humes and the Ilepburns, then the most powerful subjects in those parts, could not brook the duke of Albany's greatness, especially after he had forced them, by virtue of a late act, to part with some of the estates which had been granted them in this and the preceding reign. The pretended science of judicial astrology, by which James was incredibly infatuated, was the most effectual engine that could work their purposes. One Andrew, an infamous impostor in that art, had been brought over from Flanders by James ; and he and Schevez, then archbishop of St. Andrew's, concurred in persuading James that the Scottish lion was to be devoured by his own whelps ; a prediction that, to a prince of James's turn, seemed of certain accomplishment. The condition to which James reduced himself by his belief in astrology was

truly deplorable. The princes upon the conti-

nent were smitten with the same infatuation;

and the wretches who besieged his person had

no safety but by continuing the delusion in his

mind. According to Lindesay, Cochran, who

had some knowledge of architecture, and had

been introduced to James as a master mason,

privately procured an old woman, who pre-

tended to be a witch, and who heightened his

terrors by declaring that his brothers intended to

murder him. James believed her; and the un-

guarded manner in which the earl of Mar treated

his weakness, exasperated him so much, that the

earl was arrested, and committed to the castle of

Craig-miller; whence he was brought to the

Canongate, a suburb of Edinburgh, where he suf-

fered death. The duke of Albany w as at the castle of Dunbar when his brother the earl of Mar's tra-

gedy was acted ; and James could not be easy

without having him likewise in his power. In

hopes of surprising him he marched to Dunbar;

but the duke, being apprised of his coming, fled

to Berwick, and ordered his castle of Dunbar to

be surrendered to the lord Evendale, though not

before the garrison had provided themselves with

boats and small vessels, in which they escaped to England. He ventured to come to Edinburgh ; where James was so well served with spies that he was seized, and committed close prisoner to the castle, with orders that he should speak with none but in the presence of his keeper. The duke had probably suspected and provided against this disagreeable event ; for we are told that he had agents, who every day repaired to the castle, as if they had come from court, and reported the state of matters between him and the king, while his keepers were present, in so favorable a light that they made no doubt of his soon regaining his liberty, and being readmitted to his brother's favor. The seeming negociation at last went on so prosperously, that the duke gave his keepers a kind of a farewell entertainment, previous to his obtaining a formal deliverance ; and they drank so immoderately that, being intoxicated, they gave him an opportunity of escaping over the castle wall, by converting the sheets of his bed into a rope. Whoever knows the situation of that fortress will be amazed at the boldness of this attempt; we are

told that the duke's valet, the only domestic he was allowed to have, making the experiment before his master, broke his neck; upon which the duke, lengthening the rope, slid down unhurt, and went on board a ship which his friends had provided, and escaped to France. In 1482 the king began to feel the bad consequences of taking into his favor men of worthless characters. His great favorite at this time was Cochran, whom he had raised from a low station to the dignity of earl of Mar. All historians agree that this man made a most infamous use of his power. He obtained at last a liberty of coinage, which he abused so much as to endanger an insurrection ; for he issued a base coin called black money by the common people, which they refused to take in payments. His skill in architecture had first introduced him to James ; but he maintained his power by other arts ; for, knowing that the king's predominant passion was the lovejof money, he procured it by the meanest and most oppressive methods. James haa other favorites still less worthy of the royal countenance ; Hommil, a taylor ; Leonard, a blacksmith; Torfifan, a dancing-master; and some

others. The favor shown to these men gave so

much offence to the nobility that, after some

deliberation, they resolved to remove the king,

with some of his least exceptionable domestics

(but without offering any violence to his person),

to the castle of Edinburgh ; and to hang all his

worthless favorites over Lauder bridge, the com-

mon place of execution. Their deliberation was

not kept so secret as not to come to the ears of his favorites, who, suspecting the worst, wakened

James before day-break, and informed him of

the meeting. He ordered Cochran to repair to

it, and to bring him an account of the proceed-

ings. According to Lindesay, who seems to

have had very minute information as to this event,

Cochran . rudely knocked at the door of the

church, just after the assembly had finished their

consultation ; and, upon Sir Robert Douglas of

Lochleven informing them that the earl of Mar

demanded admittance, the earl of Angus or-

dered the door to be thrown open ; and, rushing

upon Cochran, 'pulled a massy gold chain

from his neck, saying, that a rope would be-

come him better; while Sir Robert Douglas

stripped him of a costly hunting horn he wore

by his side, telling him he had been too long the hunter of mischief. Cochran, astonished, asked them whether they were in jest or earnest, but they soon convinced him they were in earnest, by pinioning down his arms with a halter. The

earl of Angus, with some of the chief lords, attended by a detachment of troops, then repaired to the king's tent, where they seized his other favorites, Thomas Preston, Sir William Rogers, James Hommil, William Torfifan, and Leonard, and upbraided him in rude terms with his misconduct in government, and even in private life, fames only interceded for the safety of a young gentleman, Ramsay of Balmain. Cochran, with his other favorites, were hanged over Lauder bridge as proposed, and he himself was conducted, under easy restraint, to the castle of Edinburgh. Though confined, he here behaved with great spirit ; and refused to pardon those who had confined him, or had any hand in the execution at Lauder. At last, however, he was relieved by the duke of Albany, at the quail's desire, lie accomplished his del'vtrance, as

some say, by surprising the castle of Edinburgh ; others say the gates were opened, upon a formal requisition made by two heralds ; the king then repaired to the abbey of llolyrond-house with his brother, who acted now as his first minister. All the lords who were near the capital came to pay him their compliments ; but James was so much exasperated at what had happened that he committed sixteen of them prisoners to the castle. After his release James granted a patent to the citizens of Edinburgh, and enlarged their privileges.

I n 1487 he finished the secret negotiations in which !»e had engaged with Henry VII. king of England. The principal articles agreed upon be-iu'Uveen the two monarchs were, That kinj> James's eldest son should marry Catherine, the third Daughter of Edward IV., and sister to the jirincess Elizabeth, then queen of England ; and that James, who was now a widower, should marry queen Elizabeth. A third marriage was also to be concluded between the duke of Rothesay ami another daughter of Edward IV. To complete these treaties, and end all controversies concerning the town of Berwick, which the king of Scotland much desired to possess, a congress

was to be held tlie ensuing year. In the mean

lime a most powerful confederacy was formed

against the king ; the origin of which was his

passion for architecture. Being pleased with

the situation of Stirling castle, he resolved to

give it all the embellishments which art could be-

stow ; and about this time made it the chief place of his residence. He raised within it a hall,

ivhich at that time was deemed a noble structure ; and a college, which he called the chapel royal,

endowed with an archdeacon who was a bishop,

u subdean, treasurer, chanter, &c., and a double

set of the other officers usually belonging to such i ii>titutions. The expenses necessary for main-

taining these establishments were considerable,

and the king had resolved to assign the revenues

of the rich priory of Coldingham for that pur-

pose. This priory had been generally held by

the Hume family, who, through length of time,

considered it as their property ; they therefore

strongly opposed the king's intention. The dis-

pute seems to have lasted some years; for the

former parliament passed a vote annexing the

priory to the king's chapel royal ; and the par-

liament of this year had passed a statute strictly

prohibiting all persons, .spiritual and temporal,

to attempt any thing directly or indirectly, contrary or prejudicial to the said union and annexation. The Humes resented their being stripped of so gainful a revenue, the loss of which affected most of the gentlemen of that name ; and they united themselves with the Hepburns, another powerful clan in that neighbourhood, in an association, by which both families engaged to stand by each other, and not to suffer any prior to be received for Coldingham, if he was not of one of their surnames. The lords Gray and Drummond soon joined the association; as did many other noblemen and gentlemen, who had their own causes of discontent. Their agents gave ont, that the king was grasping at arbitrary power ; that he had acquired his popularity by deep hypocrisy ; and that he was resolved to be signally revenged upon all who had any hand in the execution at Lauder. The earl of Angus, who was the soul of the confederacy, advised the conspirators to apply to old earl of Douglas to head them ; but that nobleman was now dead to all ambition, and, instead of encouraging the conspirators, pathetically exhorted them to break off all their rebellious connexions, and return to

their duty. Finding he could not prevail with them, he wrote to all the numerous friends and descendants of his family, and particularly to Douglas of Cavers, sheriff of Teviotdale, dissuading them from entering into the conspiracy, some of his letters to this effect are still extant. This great man survived the application but a; short time ; for he died without issue at Lindores, on the 15th of April, 1488; and in him ended the first branch of that noble house. He was remarkable for being the most learned of all the Scotch nobility of his time, and for the comeliness of his person. James appears to have been no stranger to the proceedings of the conspirators ; but, though he dreaded them, he depended upon the protection of the law, as they did upon his pusillanimity. His degeneracy in this respect is remarkable. Descended from a race of heroes, he was the first of his family who had been branded with cowardice. But his conduct at this time fully justifies the charge. Instead of vigorously supporting the execution of the laws in his own person, he shut himself up in his castle of Stirling, and raised a body guard ; the command of which he gave to Bothwel, master of his house-

hold, lie likewise issued a proclamation, forbidding any person in arms to approach the court; and Bothwel had a warrant to see the same put into execution. Though the king's proceedings in all this were perfectly agreeable to law, yet they were given out by his enemies as so many indications of his averson to the nobility, and served only to induce them to parade the country in more numerous bodies. The connexions entered into by James with Henry alarmed the conspirators, however, and made them resolved to strike the great blow, before he could avail himself of an alliance that seemed to place him above all opposition. The acquisition of Berwick to the crown of Scotland, which was looked upon to be as good as concluded ; the marriage of the duke of Rothesay with the '•itcr of the dowager and sister to the consort

queen of England ; and, above all, the strict harmony which reigned between -James and the states of his kingdom, rendered them in a manner desperate. Besides the earl of Angus, the

earls of Argyle and Lennox favored the conspirators ; yet their success may be said to have been entirely owing to his English connexions; which they made use of to affirm that Scotland was soon to become a province of England, and that James intended to govern his subjects by an English force. These allegations inclined many, even of the moderate party, to their cause ; and they soon took the field, and appointed their rendezvous ; until all the south of Scotland was in arms. James continued to rely upon the authority of his parliament ; and summoned, in the terms of law, the insurgents to answer at the proper tribunals for their breaches of the peace. The conspirators, far from paying any regard to his citations, tore them in pieces, buffeted and otherwise maltreated the messengers, and set the laws at open defiance. Even north of the Forth, the heads of the houses of Gray and Drummond spread the spirit of disaffection through the populous counties of Fife and Angus ; but the counties north of the Grampians continued firm in their duty. The duke of Rothesay was then A promising youth about fifteen years of age ;

and the subjecting the kingdom of Scotland to

that of England being the chief, if not the only

. .uise urged by the rebels for their appearing in arms, they naturally cast their eyes upon that

prince, as his appearance at their head would

irive strength and vigor to their cause ; and in

this they were not deceived. James, in the

mean time, finding that the inhabitants of the

southern provinces were either engaged in the

rebellion, or at best observed a cold neutrality,

embarked on board of a vessel which was then

lying in the frith of Forth, and passed to the

north of that river, not finding it safe to go by land to Stirling. Arriving at the castle, he gave

orders that the duke of Rothesay should be put

under the care of Schaw, of Sauche, whom he

had made its governor, charging him not to suf-

fi>r that prince on any account to depart from the fort. The rebels, giving out that James had fled

to Flanders, plundered his equipage and baggage

before they passed the Forth ; and thus supplied

themselves with a large sum of money, which

proved of the utmost consequence to their affairs.

They then surprised the castle of Dunbar, and

plundered the houses of every man to the south

of the Forth whom they suspected of being a

royalist. James was all this time making a pro-

gress, and holding courts of justice in the north,

where the great families were entirely devoted to

his service, particularly the earls of Huntley,

Kirol, and Marshal. But every day brought

him fresh alarms from the south. The conspira-

tors, notwithstanding the promising appearance

of their affairs, found, that in a short time their cause must languish, and their numbers dwindle,

unless they wrre furnished with fresh pretexts,

and headed by a person of the greatest authority.

^ hile they were deliberating who that person

should be, the earl of Angus boldly proposed

the duke of Rothesay; and an immediate appli-

i .itioi; \va< made to Schaw, the young prince's

governor, who secretly favored their cause, and

was prevailed upon by a considerable sum of

money to put the prince into their hands, and

declare for the rebels. James, having ordered all

the forces of the north to assemble, hurried to

Perth, where he appointed the rendezvous of his

army, which amounted to 30,000 men. Among

the other noblemen who attended him was the fa-

mous lord David Lindsay of the Byres (an officer

of great courage and experience, having long

served in foreign countries), who headed 3000

foot and 1000 horse, mostly raised in Fifeshire.

Upon his approaching the king's person, he pre-

sented him with a horse of remarkable spirit and

beauty, and informed his majesty that he might

trust his life to his agility and sure-footedness.

The lord Ruthven, who was sheriff of Strathern,

and ancestor to the unfortunate earls of Gowry,

joined James at the head of 3000 well armed

men. The whole army being assembled, James

proceeded to Stirling ; but was astonished, when

he was not only denied entrance into the castle,

but saw the guns pointed against his person,

and understood, for the first time, that his son

was at the head of the rebels. Schaw pretended

that the duke of Rothesay had been carried oft'

against his will ; but the king's answer was,

' Traitor, thou hast deceived me ; and if 1 live I shall be revenged on thee, and thou shall be re-

warded as thou hast deserved.' James lay that

night in the town of Stirling, where he was joined by all his army ; and, understanding the rebels

were advancing, he formed his line of battle.

The earl of Athol, his uncle, who was trusted by

both parties, proposed an accommodation ;

which was effected, according to Abercromby

and other historians ; but the terms are not re-

corded. The earl of Athol surrendered himself as a

hostage into the hands of the rebels. James was

sensible of 'the advantage which public clamor

gave to his enemies ; and he applied to the kings of France and England, and the pope, for their in-

terposition. His holiness named' Adrian de Cas-

tello for his nuncio on this occasion, and.the two

kings threatened to rarse troops for the service of James. But he, by a strange fatality, left the strong castle of Edinburgh, where he might have been in

safety till his friends reassembled ; and, crossing

the Forth, made another attempt to lie admitted

into the castle of Stirling. Again he was disap-

pointed, and informed that the rebels were at

Torwood in the neighbourhood, and ready to give

him battle. He was at this time in possession

of the castle of Blackness ; his admiral, VVood,

commanded the Forth ; and his loyal subjects in

the north were upon their march to join him.

Hawthornden says that, while he remained at

Blackness, he was attended by the earls of Mont-

rose, Glencairn, and lords Maxwell and Ruth-

ven. To give his northern friends time to join him, he proposed a negociation ; but that was soon at end, upon the rebels peremptorily requiring him to resign his crown to his son, that is, to themselves. The latter had been inured to war, and consisted chiefly of borderers, well armed and disciplined ; in which they had the advantage of the king's Lowland subjects, who were unaccustomed to arms. The forces of James were at Falkirk; but they soon passed the Car-

ron, encamped above the bridge near Torwood, and made such dispositions as rendered a battle unavoidable. He was encamped at a small brook named Sauchie-burn, near the same spot of ground where the great Bruco had defeated the English under Edward II. The earl of Monteith, the lords Erskine, Graham, Ruthven, and Maxwell, commanded the first line of the king's army. The second was commanded by the earl of Glencairn, who was at the head of the Westland and Highland men. The earl of Crawford, with the lord Boyd and Lindsay of

Byres, headed the rear, wherein the kind's main

strength consisted, and where he himself ap-

peared in person, completely armed, and mounted

upon the horse which had been presented to him

by Lindsay. The first line of the royalists

obliged that of the rebels to give way ~, but, the latter being supported by the Annandale men

and borderers, the first and second line of the

king's army were beat back. The little courage

James possessed had forsaken him on the first

onset ; and he put spurs to his horse, intending

to gain the banks of the Forth, and to go on

board one of Wood's ships. In passing through

the village of Bannockburn, however, a woman

who was filling her pitcher at a brook, frightened

at the sight of a man in armor galloping full

speed, left it behind her ; and, the horse taking

(right, the king was thrown to the ground, and

carried, bruised and maimed, by a miller into his

hovel. He immediately called for a priest to

make his confession ; and, the rustics demanding

*his name and rank, * I was,' said he, ' your king this morning.' The woman, running to the door,*

called in a priest to confess the king : being in-

troduced into the hovel, he saw the king covered

\ith a coarse cloth; and, kneeling by him, he asked James whether he thought he could recover if medically attended ? James answering in the affirmative, the villain pulled out a dagger, and .slabbed him to the heart. Such is the dark account given of this prince's unhappy end. The name of the person who murdered him is said to have been Andrew Borthwick, a priest, one of the pope's knights. Some pretend that the lord Gray, and others that Robert Stirling of Keir, was the regicide ; and even Buchanan is uncertain as to the name of the person who gave him the fatal blow.

It is probable that the royalists lost the battle through the cowardice of James. Even after his flight his troops fought bravely; but they were discouraged on receiving certain accounts of his death. The prince, young as he was, had an idea of the unnatural part he was acting, and before the battle had given a strict charge for the safety of his father's person. Upon hearing that he had retifed from the field, he sent orders that none should pursue him ; but they were ineffectual, the rebels being sensible that they could have no safety but in the king's death. When that

was certified, hostilities seemed to cease ; nor were the loyalists pursued. The number of slam

must have been considerable, as the earl of Glen-

cairn, the lords Sempil, Erskine, and Ruthven,

and other gentlemen of great eminence, are

mentioned. As to the duke of Rothesay, who

was now king, he appeared inconsolable when

he heard of his father's death ; but the rebels

endeavoured to efface his grief, by the profusion,

of honors they paid him as king. Seeing his

remorse and anguish, in reflecting on the un-

natural part he had acted, they became apprehen-

sive indeed for their own safety. The catastrophe

of James HI., however, was not yet become

public ; and it was thought that he had gone

aboard some of the ships belonging to Sir

Andrew Wood. Willing to indulge the hope as

long as possible, the prince desired an interview

with the admiral ; but the latter refused to come

on shore, unless he had hostages for his safety.

These being delivered, Sir Andrew waited upon

the young king at Leith. He had by messages

assured him that he knew nothing of his father ;

and had even offered to allow his ships to be

searched : yet such was the anxiety of the new

king that tie could not be satisfied till he had examined him in person. Young James had been long a stranger to his father. When Wood, therefore, entered the room, he asked him, ‘ Are you my father?’ ‘I am not,’ replied Wood, bursting into tears, ‘but I was your father’s true servant, and while I live I shall be the determined enemy of his murderers.’ This did not satisfy the lords, who demanded whether he knew where the king was. The admiral replied in the negative; and upon their questioning him concerning his manoeuvres on the day of battle, when his boats were seen plying backwards and forwards, he told them that he and his brother had determined to assist the king in person ; but all they could do was to save some of the royalists. ‘ I would to God,’ says he, ‘ my king was there safely ; for I would defend and keep him skaithless from all the traitors who have cruelly murdered him ; and I think yet to see the day that shall behold them hanged and drawn for their demerits.’ This spirited declaration, and the freedom with which it was delivered, struck the guilty part of the council with

dismay ; but the fear of sacrificing the hostages procured Wood his freedom, and he was suffered to depart. When he came on board his fleet, he found his brother preparing to hang the two > lords who had been left as hostages ; and this would certainly have been their fate, had the admiral been longer detained.

The council now removed to Edinburgh, where James IV. was crowned on the 24th of June 1487. In October this year the nobility, and others interested, converted themselves into a parliament, and passed an act by which they were indemnified for their rebellion against their late sovereign ; after which the act was exemplified under the great seal of Scotland, that it might be produced in their justification, if called for by any foreign prince. They next proceeded to the arduous task of vindicating their rebellion in the eyes of the public; and so far did they gain upon the new king by flattery, that he consented to summon the lords who had taken part with his father, before the parliament, to answer for their conduct. In consequence of this, no fewer than twenty-eight lords were cited to ap-

pear at Edinburgh in the space of forty days. The first upon the list was lord David Lindsay of the Byres, who was called upon to answer for

the cruel coming against the king at Bannockburn with his father, giving him council to have devoured the king's grace here present ; and to that effect giving him a sword and a good horse to fortify him against his son.' Lord Lindsay was remarkable for the bluntness of his conversation and the freedom of his sentiments : being irritated _by this charge, he delivered himself in such a manner, concerning the treason of the rebellious lords, as abashed the boldest of them ; and, as they were unable to answer him, all they could do was to press him to throw himself upon the king's clemency ; which he refused to do. His brother, Patrick Lindsay, undertook to be his advocate, and apologised upon his knees for the roughness of his behaviour; upon which Lindsay was released, on entering into recognizance to appear again at an appointed day : however, he was afterwards sent prisoner by the

king's order, for a twelve-month, to the castle of Rothesay. The regicides now endeavoured to gain the public favor by affecting a strict administration of justice. The king was advised to make a progress through the kingdom, attended by his council and judges ; while, in the mean time, certain noblemen and gentlemen were appointed to suppress all kinds of disorders in their own lands and those adjoining, till the king came to the age of twenty-one. The memory of the late king was branded in the most opprobious manner. All justices, sheriffs, and stewards, who were possessed of heritable offices, but who had taken up arms for him, were either deprived of them for three years, or rendered incapable of possessing them for ever. All the young nobility, who had been disinherited by their fathers for taking arms against the late kinsr, were, by act of parliament, restored to their successions. At last, to give a kind of proof to the world that they intended only to resettle the state of the nation, without prejudice to the lower ranks of subjects, who did no more than follow the examples of their superiors, it was enacted,

‘ That all goods and effects taken from the burgesses, merchants, and those who had only personal estates, or, as they are called unlanded men, since the battle of Stirling, were not only to be restored, but the owners were to be indemnified for their losses ; and their persons, if in custody, to be set at liberty. Churchmen, who were taken in arms, were to be delivered over to their ordinaries, to be dealt with by them according to the law.’ The castle of Dunbar was ordered to be demolished ; and some statutes were enacted in favor of commerce, and for the exclusion of foreigners. These last acts were passed with a view to recompense the boroughs, who had been very active in their opposition to the late king. Howevei the lords, before they dissolved their parliament, thought it necessary to give some public testimony of their disapproving the late connexion with England. It was therefore enacted, ‘ That as the king was now of age to marry a noble princess, born and descended of a noble and worshipful house, an honorable embassy should be sent to the realms of France, Britanny, Spain, and other places, to

conclude the matter.' This embassy was to be

splendid : and to consist of a bishop, an earl, or lord of parliament, a secretary, clergyman, and

knight. They were to be attended by fifty horse-

men ; and £5000 was allowed them for expenses :

they were empowered to renew the ancient

league between France and Scotland ; and, in

the mean time, a herald, or, as he was called, a

trusty squire, was sent abroad to visit the several courts, to find out a proper match for the king.

One considerable obstacle, however, lay in the

way of this embassy. The pope had laid under

an interdict all those who had appeared in arms

against James III. ; and the party who now

governed Scotland were looked upon by all the

powers of Europe as rebels. The embassy was

therefore suspended for a considerable time, and

it was not till 1491 that the pope could be pre-

vailed upon to take off the interdict. In the

mean time the many good qualities which dis-

covered themselves in the young king began to

conciliate the affections of his people. Being

considered, however, as little better than a pri-

soner in the hands of his father's murderers,

several of the nobility made use of that as a pre-

text for taking arms. The most forward of these was the earl of Lennox, who with 2000 men attempted to surprise the town of Stirling ; but, being betrayed by one of his own men, he was defeated, and the castle of Dumbarton, of which he was the keeper, taken by the opposite party. In the north, the earls of Huntley and Marshal, with the lord Forbes, complained that they had been deceived, and declared their resolution to revenge the late king's death. Forbes, having procured the bloody shirt of the murdered prince, displayed it on the point ot a lance, as a banner under which all loyal subjects should enlist themselves. However, after the defeat of Lennox, the northern chieftains found themselves incapable of marching southward. The cause of the murdered king was next undertaken by Henry VII. of England, who made an offer to Sir Andrew Wood of five ships to revenge it. The admiral accepted the proposal ; but the English behaving as pirates, and plundering indiscriminately all who came in their way, he thought proper to separate himself from them. Upon this James was advised to

send for the admiral, offer him a pardon, and a commission to act against the English freebooters. Wood accepted of the king's offer; and, being well provided with ammunition and artillery, he, with two ships only, attacked the five English vessels, all of which he took, and brought their crews prisoners to Leith. This conduct of Wood was highly resented by the king of England. The Scottish admiral's ships had been fitted out for commerce as well as war, and Henry commanded his best sea-officer, Sir Stephen Bull, to intercept him on his return from a commercial voyage to Flanders. Wood had no more than two ships with him : the English admiral had three ; and those much larger, and carrying a greater weight of metal. The English took their station at the island of May, in the mouth of the Frith of Forth, and, having come unawares upon the enemy, fired two guns as a signal for their surrender. The Scottish commander encouraged his men as well as he could ; and, finding them determined to stand by him,

began the engagement in sight of numberless spectators on both sides of the Frith. The fight continued all that day and was renewed with redoubled fury in the morning ; but, in the mean time, the ebb-tide and a south wind had carried both squadrons to the mouth of the Tay. Here the English fought under great disadvantages, by reason of the sand-banks ; and, before they could get clear of them, all the three were obliged to submit to the Scots, who earned them to Dundee. Wood treated his prisoners with humanity ; and, having afterwards presented them to king James, the latter dismissed them not only without ransom, but with presents, and a letter to king Henry. To this the English monarch returned a polite answer ; a truce was concluded, and all differences were accommodated. James all this time had continued to display such moderation in his government, and appeared to have the advantage of his subjects so much at heart, that they became gradually well affected to his government, and in 1490 all parties were fully reconciled ; the next year the happiness of his kingdom was completed by the pope taking

off his interdict, and giving the king absolution for his father's death. Tranquillity being thus restored, the negociations concerning the king's marriage began to take place, but met with several interruptions. In 1493 Henry VII. proposed a match between James and his cousin, the princess Catharine ; but this was treated with contempt. Henry made in 1495 another offer of alliance with James; proposing a marriage betwixt him and his eldest daughter Margaret. This proposal was accepted : but, at the time in which he was negociating the marriage, he not only protected Perkin Warbeck, the avowed pretender to the crown of Henry, but invaded England on his account. This conduct was highly resented by the English parliament ; but Henry himself forgave even this insult, and the marriage negociations were resumed. The bride was not more than ten years and six months old ; and, being only the fourth degree of blood from James, it was necessary to procure a dispensation from the pope. This being obtained, a treaty of perpetual peace was concluded between the two nations, on the 1st of July,

1503, being the first that had taken place for 170 years, or since the peace of Northampton, between Robert I. and Edward III. One of the great ends that Henry had in view in promoting ihis marriage was to detach James from the French interest; no sooner, therefore, was the treaty signed, than he wrote to his son-in-law to this purpose ; who, however, politely declined to I reak with his ancient ally. On the 16th of June, the royal bride set out from Richmond in company with her father, who convoyed her as far as Collyweston, the residence of his mother, the countess of 'Richmond. After passing some days there the king resigned his daughter to the catc of the earls of Surrey and Northumberland. On the borders of Scotland a number of her retinue were permitted to take leave ; but those who remained still made a royal appearance. At L'linberton church they were met by James, attended by a numerous train of his nobility and officers of state; and at Kdinburgh the nuptials were celebrated with the greatest splendor. On this occasion the Scots vied, we are told, with the most extravagant of their guests in luxury

and display. After the celebration of the nuptials James appears to have enjoyed a tranquillity almost unknown to any of his predecessors ; and began to make a considerable figure among the European potentates. But the magnificence of his court and embassies, his liberality to strangers and to learned men, his costly edifices, and, above all, the large sums he laid out in ship-building, brought him into some difficulties ; and he so far attended to the advice and example of his father-in-law that he supplied his necessities by reviving dormant penal laws, particularly with regard to wardships and old titles of estates. Though he did this without assembling his parlament, yet he found agents who justified his proceedings, in the manner of the English ministers of the day, Empsom and Dudley. At last, however, touched with the sufferings of his subjects, he ordered all prosecutions to be stopped. He even went farther : and, sensible of the detestation into which his father-in-law's avarice had brought himself and his administration, he ordered the ministers who had advised him to-these shameful courses to be imprisoned ; and

several of them died in confinement. About this time James applied himself with incredible assiduity to naval affairs ; one ship which he built, the St. Michael, is supposed to have been, the largest then in the world. She was 240 feet long, thirty-six wide within the sides, and ten feet thick. She carried 300 small artillery, twelve cannons, and 1000 men. The expense was £30,000. He worked with his own hands in building it, and Scotland at this time produced excellent seamen. The first essay of his arms by sea was in favor of his kinsman Joint of Denmark. This prince was brother to Margaret queen of Scotland ; and ha;l partly been called to the throne of Sweden, and partly possessed it by force. He was opposed by the administrator Sture, whom he pardoned after he was crowned. Sture, however, renewing his rebellion, and the Norwegians revolting, John was forced to return to Denmark; but left his queen in possession of the castle of Stockholm, which she bravely defended. This heroic princess became a great favorite with James; and several letters that passed between them are extant. The

king of Denmark, next to the French monarch, was the favorite ally of James. It appears, from the histories of the north, that both James and his father had given assistance to him in reducing the Norwegians ; and he resolved to become a party in the war against the Swedes, if they continued in their revolt. Previous to this he sent an ambassador to offer his mediation between John and his subjects. The mediation was accepted and the negociations opened at Calmar. The deputies of Sweden not attending, John prevailed with those of Denmark and Norway to pronounce sentence of forfeiture against Sture and all his adherents. In the mean time the siege of the castle of Stockholm \vas pressed so warmly that the garrison was diminished to a handful, destitute of all kind of provisions; so that the brave queen \a- Ibm d to capilulale ou

condition that she should be suffered to depart for Denmark ; a stipulation perfidiously violated by Sture, she being confined in a monastery. On this occasion James resolved to employ his

maritime power. He wrote a letter, conceived in the strongest terms, to the archbishop of Upsal, the primate of Sweden, exhorting him to employ all his authority in favor of the king; and another to the Lubeckers, threaten ins to declare war against them, as well as the Swedes, if they continued to assist the rebels. According to Hollingshed, James, in consequence of king John's application, gave the command of an army of 10,000 men to the earl of Arran, who replaced John upon his throne. It is certain that, had it not been for James, John must hare sunk under his enemies. Sture, hearing that a considerable armament was fitting out in Scotland, agreed to release the queen, and to conduct her to the frontiers of Denmark ; where he died. By this time James's armament, which was commanded by the earl of Arran, had set sail ; but, perceiving that all matters were adjusted between John and the Swedes, the ships returned sooner than James expected, ' which,' says he, in a letter he wrote afterwards to the queen, ' they durst not have done, had they not brought me an account that her Danish majesty

was in perfect safety.' The severity of John having occasioned a fresh revolt James again sent a squadron to his assistance, which appeared before Stockholm, and obliged the Lubeckers to conclude a new treaty. James, having thus discharged his engagements with his uncle, turned his attention towards the Flemings and Hollanders, who had insulted his flag, on account of the assistance he had afforded the duke of Gueldres. He gave the command of a squadron to Barton ; who put to sea and treated all the Dutch and Flemish traders who fell into his hands as pirates, sending their heads in hogsheads to James. Soon after Barton returned to Scotland, and brought with him a number of rich prizes. James was then so much respected upon the continent that no resentment was shown either by the court of Spain, whose subjects those Netherlanders were, or any other power in Europe, for this vigorous proceeding. The peace with England continued all the reign of Henry VII. ; nor did our Henry VIII., though he had not the same reason as his father to conciliate the Scots, for some time show any dispo-

sition to break with them. A breach, however, did soon take place. About thirty years before John Barton, a relation of the above commander, was taken in a trading vessel by two Portuguese captains; and Barton, with several Scotchmen, were killed in defending their property. The action was esteemed cowardly as well as piratical, because it was done under the protection of a large Portuguese squadron. The ship and the remaining part of the crew, with the cargo, were carried to Portugal, whence no redress could be obtained ; and James III. granted letters of marque to John and Robert Bartons, heirs to the Barton who had been murdered. Upon the accession of James IV. the letters of marque were recalled, and a friendly correspondence was entered into between James and the king of Portugal. No redress, however, was to be had from the latter ; and Robert Barton being made a prisoner, and his ship a prize, was detained in Zealand, till James procured his deliverance by applying in his favor to the emperor Maximilian. Sir Andrew Barton took part in the quarrel ; and, having ob-

tained a like letter of marque, he made dreadful depredations on the Portuguese trade. According to English authors, he also plundered many English ships, on pretence of their carrying Portuguese property, and made the navigation of the narrow seas dangerous to Englishmen. The court of London received daily complaints of his depredations ; but, Henry being averse to quarrel with James, these complaints were heard with coldness. The earl of Surrey had then two sons ; and he declared to Henry's face that, while he had an estate that could furnish out a ship, or a son who was capable of commanding one, the narrow seas should not be thus infested. Henry could not discourage his generous offers ; and letters of marque were accordingly granted to the two young noblemen, Sir Thomas and Sir Edward Howard. The prizes that Barton had taken had rendered his ships immensely rich, consequently they were heavy laden, and unfit for fighting ; while the ships of the Howards were clean, and of a superior force. After encountering a great deal of foul weather, Sir Thomas Howard came up with the Lyon, com-

manded by Sir Andrew Barton ; and Sir Edward fell in with the Unicorn, Barton's other ship. The event was such a< might be expected from the inequality of the match. Barton was killed, while he was animating, with his whistle, his men to hold out to the last ; and both the Scottish ships, being taken, were carried in triumph to London. James could never forgive the loss of this brave officer. He sent to demand satisfaction; but was answered that Barton and his crew were lawless pirates, and that what had been done against them ought never to be resented amongst sovereign princes. James asserted that Barton was no pirate, because he bore his commission ; and that he ought to have been convicted of piratical acts before he was treated as guilty. Henry intimated to James that he was willing to accommodate the affair by way of negociation ; but James rejected the proposal with disdain. Various negociations took place concerning this and other affairs till 1513; when James, fully resolved upon a war with England, thought it highly necessary that it should have the sanction of his parliament,

which he accordingly assembled. The young nobility were not only inspired with the sentiments of James, but had been won over by the French ; and the majority of them, as well as of the clergy, were ripe for a war with England. The older statesmen, on the other hand, who saw the flourishing state of Scotland, arising from a long peace, dreaded the ruinous consequences of a war. The queen naturally headed this party ; and she was joined by the earl of Angus and the sober part of the nobility. But their arguments made no impression on James, who had received a present from Louis XI. of four ships laden with wine and flour, and two

ships of war completely equipped. He promised to the French queen, upon his honor, that he would take the field against the English; and she had sent him a fresh letter, gently reproaching him for want of gallantry. In short, the reasonings of the wisest and best part of the nobility were over-ruled, and an expedition against England was resolved on. The earl of Hume,

who was chamberlain of Scotland, was, at this juncture, at the head of 7000 or 8000 men, with whom he committed great devastation on the English borders. Henry's queen, Catharine of Spain, whom he had left regent of his dominions, issued a commission of array, directed to Sir Thomas Lovel, K. G., for assembling the militia of the counties of Nottingham, Derby, Warwick, Leicester, Stafford, Rutland, Northampton, and Lincoln. The management of this war, however, was chiefly committed to the earl of Surrey, who assembled the militia of Chester, Lancaster, Northumberland, Westmoreland, Cumberland, and the bishopric of Durham. Hume had by this time laid great part of Northumberland waste; and his men were returning home laden with booty. The earl of Surrey, resolving to intercept them, ordered Sir William Bulmer to form an ambush with 1000 archers, at a place called Broomhouse. Bulmer executed his orders with great success. The archers assaulted the Scots all at once, and made such good use of their arrows that their main body was put to flight, 500 killed, and 400 taken, with lord Hume's stan-

dard ; the greatest part of the plunder being re-

covered at the same time. The Scots styled this

expedition the 111 raid. James was more exaspe-

rated than ever by this defeat, and continued his

preparations for inyading England with addi-

tional vigor. His queen did all that became a

prudent wife to divert him from his purpose.

She endeavoured to work upon his superstition,

by recounting to him her ominous dreams. James

treating these as mere fictions of the brain, she

had receurse to other arts. While he was waiting

at Linlithgow for the arrival of his army from

the north and the Highlands, he assisted one

afternoon at the vespers in the church of St.

Michael. Being placed in one of the canons'

seats, a venerable man entered, dressed in a long

garment of an azure color, and girded round

with a towel or roll of linen, his forehead bald,

and his yellow locks hanging down his shoulders ;

in short, he was dressed and formed like St.

Andrew, the apostle of Scotland. The church

being crowded, this personage made his way to

the king's seat ; and, leaning over it, said, ' Sire, I am sent hither to intreat you for this time to

delay your expedition, and to proceed no farther

in your intended journey ; for, if you do, you

shall not prosper in your enterprise. I am

further charged to warn you, if you be so refractory a< to go forward, not to use the acquaintance,

company, or counsel of women, as ye tender your

honor, life, and estate.' After delivering these

words he retired through the crowd, and was

seen no more, though diligent enquiry was

made after him. That this scene was enacted,

seems to be past dispute; for Sir David Lindsay,

who was then a young man, and present in the

church, reported it both to Buchanan and Lind-

say the historians. It is the opinion of historians

that the whole was a contrivance of the queen,

to wnose other afflictions the stings of jealousy

were now added. In one of the Scottish inroads

into England, one Heron, the proprietor of the

castle of Ford, had been taken piisoner and sent

to Scotland ; where he was detained on a charge

of murder, of which he seems to have been inno-

cent. The English historians mention this as

having passed after James entered England ;

but, from the latter part of the supposed phan-

tom's speech, it is probable that it happened be-

fore ; and that Heron's wife and beautiful daugh-

ter had been for some time soliciting James for his deliverance. Be that as it may, James was smitten with the charms of the daughter; and her mother, who was a most artful woman, knew how to avail herself of the conquest. Pretending that she had interest enough to procure the release of lord Johnston and Alexander Home, who were prisoners in England, she was permitted by James to keep a constant correspondence with the earl of Surrey, to whom she is said to have betrayed all James's secrets and measures.

The rendezvous of James's army was at the Barrow-muir, to which James repaired ; and, having given orders for the march of his artillery, he lodged at the abbey of Holyrood House. While he was there, another attempt was made to divert him from his purpose of invading England : but James, deaf to all solicitations, mustered his army ; and on the 22d August passed the Tweed, encamping that night near the banks of the Twissel. On his arrival at Twisselhaugh, on the 14th, he called an assembly of his lords, and declared that the heirs

of all such as should die in the armyf or be killed by the enemy during his stay in England, should have their wards, relief, and marriages, of the king ; who, upon that account, dispensed with their age. This was the crisis of that prince's fate. Abandoned to his passion for his English mistress, she prevailed with him, at her mother's instigation, to trifle away his time for some days ; during which interval the junction of the English army was formed. The earl of Surrey, the English general, was then at Pomfret ; but ordered the landholders of the neighbouring counties to certify to him in writing what number of men each could furnish, charging them to be ready at an hour's warning ; and laid his plan so as not to bring his army into the field till James had advanced so far into England as to render it difficult for him to retire without a battle. This precaution assisted the lady Ford in persuading James that there was no danger in the delay. In the mean time the earl of Surrey ordered the governors of Berwick and Norham, the two strongest places on the frontiers of England, to prepare for a vigorous resistance ; and directed them to certify how

long they could hold out ; in hopes that, if they

made a resolute defence, James would march

on, and leave them in his rear. The governor

of Norham's answer was, that his castle was so

well provided as to leave him no doubt, in case

of a siege, to be able to defend it till king Henry should return from abroad and relieve it in per

son. James, liowever, besieged it on the 25th

of August, and battered it so furiously that lie

took it by capitulation on the sixth day. James

then proceeded to the castle of Etal, belonging

to the family of Manners, which he took and

demolished likewise, as he also did \Vark, and

arrived before the castle of Ford. The Scottish

army is generally allowed to have consisted of at

least 50,000 men when it passed the Tweed. At

this time it was encamped on the heights of

Cheviot, in the heart of a country naturally bar-

ren, and now desolate through the precautions

taken by the English general. Being obliged to

extend their quarters, for the benefit of subsistence, the mercenary part of them had acquired a con-

siderable plunder, with which, as usual, they re-

tired to their own country, as many more d d for want of subsistence. The earl of Surrey knew their situation, and ordered the rendezvous of his army, first at Newcastle, and then near Norham, having certain intelligence of the vast desertions daily happening in the Scottish army. The wetness of the season rendered his march, especially that of the artillery, extremely difficult; but, being joined by several persons of distinction, he arrived on the 3d of September at Alnwick, where he was reinforced by 5000 hardy veteran troops, sent from the English army on the continent ; so that his army now consisted of 26,000 men, all completely provided for the field. James having, in the manifesto which he dispersed on his entering England, given the death of Barton as one of the causes of his invasion, the lord-admiral had prevailed with Henry to send him upon this service ; and he informed James by a letter that he intended to justify the death of that pirate in the front of the English army. By this time the army of James was, by desertion and other causes, reduced to less than half its numbers; but the chief misfortune attending it was his own con-

duct. His indolence, inactivity, and scandalous amours, at such a season, had disgusted several of his greatest and best fripnds ; some of whom suspected a correspondence between the English lady and the earl of Surrey. James was deaf to all their remonstrances ; until the earl of Angus declared that he was resolved to return home, as he foresaw the ruin of the army was inevitable. He accordingly withdrew to Scotland, but left behind him his two sons. Lord Hume and the earl of Huntley were likewise discontented. The former had brought his men into the field ; but, according to some historians, with a design rather to betray than to serve James ; but Huntley, though he disliked his conduct, remained firmly attached to his person. The defection or backwardness of those great men seemed to make no impression upon James. He had chosen a strong camp in the neighbourhood of Ford, on the side of a mountain called Flodden Hill ; and separated from the English army by the river Till. This advantageous situation put the earl of Surry under great difficulties ; for it rendered the Scottish army inaccessible, as it was fortified by artillery, and was well supplied with provi-

sions. The earl drew up a manifesto, with which he charged Rouge Croix herald, who was attended by a trumpet. It contained some proposals for an exchange of prisoners, which seem.s to have been calculated to give the lady Ford the more credit with James ; but concluded with reproaches for his perfidious invasion of England, and a defiance to a general battle. The herald was farther charged with a verbal commission to James, that the earl of Surry had issued orders that no quarter should be given to any of the Scottish army but the king. A council of war was called on this occasion ; in which the earl of Huntly and others made strong remonstrances against a general engagement. Ti ey showed how fatal it must be to Scotland, should it prove unsuccessful; and that the wisest course James could follow was to return home, where, if he was pursued by the enemy, he could fight to great advantage. Huntly, however, added that he was equally ready to share in his majesty's danger as his glory. Other noblemen, and the French ambassador, represented a retreat as disgraceful to the nobility of Scotland and the arms

of James, and used many romantic arguments, which but loo well suited with the king's disposition. According to Drummond, the council were of opinion that the king should immediately besiege Berwick; but the majority were of opinion that it was beneath the dignity of James to fight the earl of Surry at that nobleman's requisition. Patrick lord Lindsay of Byres, who was president of the council, expressed himself so strongly on that head, that James, in a passion, is said by the historian Lindsay to have sworn that if he lived to return to Scotland he would hang that nobleman at his own gate. He ordered Rouge Croix to be called in ; and, after treating him \iti trr i> politeness, sent a message to the earl or Surr by one of his own heralds (Islay), importing that he would give the English battle on the Friday following; and that had he received such a message from the earl even in his own castle of Edinburgh, he would have left that, and all other business, to have fought him. With this message, a manifesto, in vindication of James's conduct, was sent by the same herald. The earl of

Surry, who was then so infirm that he was carried about in a sedan or chariot, had foreseen that James would return an answer by one of his own heralds; but, unwilling that he should obtain any knowledge of the situation of the English camp, he ordered proper persons to receive ‘ m at two miles’ distance, where soon after he attended in person. Islay executed his commission, and the English general dismissed him, after bestowing great compliments upon the honor and courage of James. The earl then ordered his army to inarch in the line of batt’e towards Wollerhaugh. There he was joined by Rouge Croix, who gave him an account of the strong situation of the Scottish camp ; but the advanced posts of the English army were then within three miles of the enemy, and the earl of Surry foi nd his difficulties daily increasing. The roads were broken up, the swelling of the rivers cut him off from the necessary communications for supplying his army, and nothing but a battle could save him either from being disbanded or destroyed. James seems to have so far regarded the advice of his wisest counsellois,

as not to abandon his strong situation. They endeavoured to persuade him that it was sufficient for his honor, if he did not decline the battle on the day appointed ; and that his engagement did not bind him to fight upon disadvantageous ground. The Scots, at the same time, knew of their enemy's distresses ; and warmly represented to their king that he wanted nothing but patience to be victorious. The earl of Surry, however, again sent Rouge Croix to inform James that he was ready to give him battle, and James was nettled at this tacit imputation upon his courage. It is certain that he neglected the necessary precautions for guarding the passages of the Till, which the English crossed, partly at a place where it was fordable, and partly at a bridge. While the English were passing the bridge, Borthwick, master of the Scottish artillery, fell upon his knees, and begged permission from James to point his cannon against them ; but James answered in a passion that it must be at the peril of his (Borthwick's)

head, and that he was resolved to see all his enemies that day on the plain before him in a body. The earl of Surry, after passing the Till, took possession of Braxton, which lay to the right of the Scottish camp ; and by that manoeuvre cut off the communication of his enemies with the Tweed, and commanded the river below Eton castle. The Scottish generals saw themselves now in danger of being reduced to the same straits in which their enemies had been involved two days before. James had intelligence that this was far from being the intention of the English general ; and imagining that the latter's intention was to take possession of a strong camp upon a hill between him and the Tweed, which would give the English a farther command of the country, he resolved to be before-hand with the earl, and gave orders for making large fires of green wood, that the smoke might cover his march along the height, to take advantage of that eminence. But, while this stratagem concealed his march, the movements of the enemy were also concealed from him : for, when he came to the brow of the height, he

found them drawn up in order of battle on the

plain, so close to where he was that his artillery must overshoot them. A battle was now not

only unavoidable, but the only means of saving

the Scottish army. James's person was so dear

to his troops that many of them dressed them-

selves as nearly as they could in the same coats

of armour and with the same distinctions that

James wore that day. His generals had earnestly

desired him to retire to a place of safety, where

he would be secure in all events ; but he obsti-

nately refused to follow their advice ; and on the

9th of September, 1513, early in the morning,

dispositions were ordered for the line of battle.

The command of the van was allotted to the earl

of liuntly ; the earls of Lennox and Argyle

commanded the Highlanders under James : and

the earls of Crawford and Montrose led the

body of reserve. The earl of Surry gave the

command of his van to his son, the lord admiral ;

his right wing was commanded by his other son,

Sir Edward Howard ; and his left by Sir Mar-

tnaduke Constable. The rear was commanded

by the earl himself, lord Dacres, and Sir Edward

Stanley. Under those leaders served the flower

of all the nobility and gentry then in England. Lord Hume served under the earls of Crawford and Montrose, and Hepburn earl of Bothwell was in the rear. The first movement of the English army was made by the lord admiral, who suddenly wheeled to the right, and seized a pass at Milford, where he planted his artillery so as to command the most sloping part of the ascent where the Scots were drawn up ; and it put them into such disorder that the earl of Huntly found it necessary to attack the lord admiral : he drove him from his post; and the consequence must have been fatal to the English, had not his precipitate retreat been covered by some squadrons of horse under the lord Dacres, which gave the admiral an opportunity of rallying. The earl of Surry now advanced to the front, so that the English army formed one continued line, which galled the Scots with perpetual discharges of their artillery and bows. The Highlanders, as usual, impatient to come to a close fight, rushed down the declivity with their broad swords, without order or discipline, and before the rest of the army, particularly the division

under lord Hume, advanced to support them. Their impetuosity, however, made a considerable impression upon the main battle; and, the king bringing up the earl of Both well's reserve, the conflict became general. By this time the lord admiral, having again formed his men, came to the assistance of his father, and charged the division under the earls of Crawford and Montrose, who were marching to support the Highlanders, among whom the king and his attendants were fighting on foot : while Stanley, making a circuit round the hill, attacked the Highlanders in the rear. Crawford and Montrose, not being seconded by the Humes, were routed ; and thus all that part of the Scottish army which was engaged under the king was completely surrounded, by the division of the English under Surry, Stanley, and the admiral. In this situation James acted with a coolness not common to his temper. He drew up his men in a circular form, and their valor more than once opened the ranks of the English, or obliged them to stand aloof, and again have recourse to their bows and artillery. The chief of the Scottish nobility made fresh

attempts to prevail with James to make his escape while it was practicable ; but he obstinately continued the fight. He saw the earls of Montrose, Crawford, Argyle, and Lennox, fall by his side, with the bravest of his men ; and, darkness now coming on, he himself was killed by an unknown hand; while the English, ignorant of the victory they had gained, had actually retreated from the field of battle, with a dr-Lu of renewing it next morning. This disaster \;is evidently owing to the romantic disposition of the king, and to the want of discipline among his soldiers ; though some writers have ascribed it to the treachery of lord Hume. Many of James's domestics knew and mourned over his body ; and it appeared that he had received t\vo mortal wounds, one through the trunk with an arrow, and the other on the head with a ball. 11 is coat of armour was presented to queen Ci-

therine, who informed her husband, then in France, of the victory over the Scots. The loss on both sides, in this engagement, is far from

being ascertained ; though Polydore Virgil, who Jived at the time, mentions the loss of the English at 5000, and that of the Scots at 10,000. After the death of James IV. the administration devolved on the queen dowager; but she being pregnant, and unable to bear the weight of government, accepted of Beaton archbishop of Glasgow and chancellor of Scotland, with the earls of Huntly, Angus, and Arran, to assist her in the public affairs. Soon after her husband's death she had written an affecting letter to her brother the king of England, setting forth the deplorable state of the kingdom, with her own condition, and imploring his friendship and protection for herself and her child. The letter seems never to have been communicated by Henry to his council ; but he answered it, and informed his sister that if the Scots would have peace they should have peace, and war if they chose it. ' He added,' says Drummond, ' that her husband had fallen by his own indiscreet rashness, and foolish kindness to France; that he regretted his death as his ally, and should be willing to prohibit all hostility against Scotland

during the minority of her son.' For a remedy of present evils, one year and a day's truce was agreed to. But, though Henry might grant this truce to his sister's intreaty, it certainly did not become a national measure; for it appears by a letter dated two years after, from the Scottish council to the king of France, published by Rymer, that the Scots never had desired a truce. So far from that, the French influence, joined to a desire of rerenge, remained so strong in the kingdom that, after the meeting of the parliament, some members proposed a renewal of the war. The motion was indeed over-ruled, but they could not be brought to make any advances towards Henry for a peace ; and every day was now big with public calamity. The archbishopric of St. Andrew's being vacant, three competitors appeared : viz. 1. Gawin Douglas, abbot of Aberbrothick; 2. John Hepburn, prior of St. Andrew's, a bold, avaricious, restless, but shrewd and sensible priest ; and, 3. Forman, bishop of Moray in Scotland, and archbishop of Bourges in France, who had in his interest not only the duke of Albany (son to the traitor duke) first prince of the blood, but also the court of Rome;

and, having received the pope's bull and nomination to the dignity, he was considered as the legal archbishop. This preference discouraged Douglas from pursuing his pretensions ; but Hepburn being supported by the clan of his own name, and by the Humes, made so formidable a head against his rivals that none could be found daring enough to publish the papal bull. The earl of Hume, however, put himself at the head of his followers, and, notwithstanding all the opposition given by the Hepburns, proclaimed the bull at the cross of Edinburgh; an undertaking which proved that the earl of Hume had more power than the queen ; but Hepburn's resolution, and the greatness of his friends, obliged Forman to agree to a compromise. Hepburn was advanced to the see of Moray, without

accounting for the revenues of the archbishopric which he had received during its vacancy ; and he gave Forman a present of 3000 crowns, to b'> divided among his friends and followers.

In April 1514 the posthumous son, of whom the queen had been delivered in Stirling castle,

was by the bishop of Caithness baptized Alex-
ander. On the 6th of August she was married
to the earl of Angus ; than which nothing could
be more impolitic. She had neither consulted
,her brother nor the States of Scotland in the
match ; and by this marriage she in fact resigned
all claim to the regency. But the Douglasses
affirmed that the states might lawfully reinstate
her in it ; and that the peace of the kingdom
required it. The earl of Hume put himself at
the head of the opposition to this proposal. He
dreaded that the farther aggrandisement of An-
gus must weaken his interest on the borders :
and he was joined by a number of the young
nobility, who, though otherwise divided, united
against Angus. In short, the general opinion
was, that the Douglasses were already too great ;
and that, should the queen be reinstated in the
regency, they must be absolute. It was added
by the earl of Hume, that, now the queen had
.nade a voluntary abdication of it by her mar
riage, it ought not to be renewed. At last the
duke of Albany was chosen regent. He was
possessed of all the qualities requisite; nor did

he disappoint the expectations of the public.

On his arrival at Glasgow, he took upon him the

titles of earl of March, Marr, Garioch, lord of

Annandale, and of the Isle of Man, regent and

protector of the kingdom of Scotland. At Edinburgh he was received in form by the three

estates, and the queen met him at some distance

from the town. The parliament then resumed

“ts session, and the three estates took an oath of obedience, till the king, then an infant of four

years old, should arrive at maturity. The first

thing at which the regent aimed was the conci-

liating the differences amongst the variors con-

tending families in the kingdom ; at the same

time that he suppressed various daring robbers,

one of whom is said to have had no fewer then

800 attendants in his career. He took into favor Hepburn the prior of St. Andrew’s, whom he

consulted for information concerning the state of

Scotland, and who acquainted him with all the

feuds and animosities which raged among the

great families. He represented the civil power

as too weak to curb these potent chieftains : and

gave it as his opinion that the regent’s adminis-

tration ought to be supported by foreign arm?,

meaning those of France. Hepburn also gained

an ascendancy over the regent, by money laid out among his domestics, by a fawning and plausible address, and well-directed flatteries ; and took care to employ this ascendancy to destroy those who were obnoxious to himself. The earl of Hume thus became obnoxious to the regent, through the insinuations of Hepburn ; and soon perceived that neither he nor his friends were welcome guests at court. Alarmed for his safety, he resolved to form a party with the queen-mother and her new husband against the regent : a scheme in which both readily concurred. In the mean time the regent was making a progress

through Scotland, and bloodj feuds were raging among the nobles : but, before any remedy could be applied to these disorders, he was informed of the schemes of the queen-mother and her party ; and that she had resolved to fly into England with her infants. On this he returned to Edinburgh ; set out at midnight, and surprised the castle of Stirling, where he found the queen-

mother and her children. The regent, after this

bold step, took care to show that the care of the royal infants was his chief study. As he himself

uas nearly allied to the crown, to remove all

suspicions, he committed the care of the king

and his brother to three noblemen of the most

unexceptionable character, of whom one was the

earl of Lennox. They were appointed to attend

the princes by turns ; to whom also a guard of

French and Scots was assigned ; and the queen-

mother was left at liberty to reside where she

pleased. On this the earl of Hume retired to

his own estate ; whence he was soon after drawn,

and obliged to fly into England, by the earls of

Arran and Lennox. The queen-mother retired

to a monastery at Coldstream ; and messengers

were despatched to the court of England to

know how Henry would have his sister disposed

of. He ordered the lord Dacres, his warden of

the march.es, to attend her to Harbottle castle

Northumberland ; where she was delivered of

her daughter the lady Mary Douglas, mother of

Henry lord Darnley, father of James VI. The

regent sent ambassadors to Henry, to vindicate

his own conduct. He likewise invited the queen

to return to Scotland ; where she should at all times be admitted to see her children. This offer, however, she declined ; and set out for London, where she was affectionately received by her brother. But in the mean time many disorders were committed throughout the king-dom by her party ; though, by the interposition of archbishop Forman, they were terminated without bloodshed ; and the earl of Angus and others returned to their duty. Lord Hume how-ever refused to surrender, or to accept of the regent's terms ; and was of consequence declared a traitor, and his estate confiscated. All this time he had been infesting the borders at the head of a lawless banditti ; and now he began to commit such devastations that the regent marched against him at the head of 1000 troops. Hume, being obliged to lay down his arms, was sent prisoner to Edinburgh castle ; where the regent very unaccountably committed him to the charge of his brother-in-law the earl of Ar-ran. Hume easily gained over this near relation to his party ; and both of them in October 1515 escaped to the borders, where they soon renewed

hostilities. Both the earls were now proclaimed traitors, but Hume was allowed fifteen days to surrender himself. This short interval the regent employed in quashing the rebellion, for which purpose the parliament had allowed him 15,000 men. He besieged the castle of Hamilton, the earl of Arran's chief seat, which was in no condition of defence : but he was prevailed upon by Arran's mother, daughter to James II., and his own aunt, to forbear further hostilities, and to pardon her son. Arran accordingly submitted ; but the public tranquillity was not restored. An association at the head of which was the earl of Moray, the king's natural brother, had been formed against the earl of Iluntly. That nobleman was too well attended to fear any danger by day ; but his enemies introduced some armed troops in the night into Edinburgh. On this a fierce skirmish ensued, in which some were killed on both sides ; but farther bloodshed was prevented by the regent, who confined all the lords in prison till he had brought about a general reconciliation. One Hay, who had been very active in stirring up the quarrels, was banished

to France; and only the earl of Hume now continued in arms. In 1516 died Alexander duke of Rothesay ; an event which brought the regent one degree nearer the crown. Negociations were then entered into about prolonging the truce with England ; but, Henry insisting upon a removal of the regent from his place, they were dropped. Finding, however, that he could neither prevail on the parliament as a body to dismiss the regent, nor form any party of any consequence against him, he at last consented to a prolongation of the truce for a year. In 1517, the affairs of the regent requiring his presence in France, he resolved before his departure to remove the earl of Hume, who alone continued to disturb the public tranquillity. Under pretence of settling some differences which still remained with England, he called a convention of the nobility , and sent special letters to the earl of Hume and his brother to attend, on account of their great knowledge in English affairs. Both of them obeyed the summons, and were seized and executed as soon as they arrived at Edinburgh. By this severity the regent lost the affections of the people to such a degree that

he could scarcely get their places supplied.

That of lord-warden of the marches he at last

gave to his French favorite Sir Anthony D'Arcy ;

and that of lord chamberlain to lord Fleming.

Soon after this the regent levied an army, on

pretence of repressing some disturbances on the

borders. These being speedily quelled, he seized

on his return upon the earl of Lennox, and

forced him to deliver up his castle of Dumbar-

ton ; not choosing to leave it, during his absence, in the custody of a nobleman of suspected fide-

lity ; and, from similar motives, he afterwards

took him along with him to the continent. He

then procured himself to be nominated ambas-

sador to France, in which character he left the

kingdom, having committed the government to

the archbishops of St. Andrew's and Glasgow,

the earls of Arran, Angus, Huntly, and Argyle,

with the warden D'Arcy, on whom was his chief

dependence. On the departure of the regent,

the queen-mother left the English court ; and

arrived with a noble retinue at Berwick, to visit

her son. Here she was received by her hus-

band ; for whom she had contracted an invin-

cible aversion, on account of Tiis infidelities to

her bed. However she suppressed her resent-

ment, and accompanied him to Edinburgh.

Here she demanded access to her son ; but was

refused by D'Arcy. Lord Erskine, however,

who was one of those to whom the care of the

young king was committed, conveyed him to the

castle of Craigmillar (where D'Arcy had no ju-

risdiction), on pretence that the plague was in

Edinburgh; and there the queen was admitted;

but this gave such offence to D'Arcy that lord

Erskine was obliged to carry back the king to

the castle of Edinburgh, where all further access

was denied to his mother. In short, the beha-

viour of this favorite was on all occasions so

haughty and violent that he rendered himself

universally odious; and was at last murdered

with all his attendants in his way to Dunse,

where he proposed to hold a court of justice.

His death was very little regretted ; yet his mur-

derers were prosecuted with the utmost severity,

and several persons of distinction declared rebels

on that account. Meanwhile, the regent was

treated with high marks of distinction in France. The king showed him the greatest respect, promised to assist in establishing his authority in Scotland, and confirmed the ancient league between the two kingdoms. Soon after the earl of Lennox arrived from France, with assurances of assistance from the king, who was highly pleased at the zeal of the governors in punishing D'Arcy's murderers ; and 500 soldiers arrived with him, to reinforce the garrisons, especially that of Dunbar. All this time the queen-mothei continued at Edinburgh, employing herself in attempts to procure a divorce from her husband, under pretence of his having been previously contracted to another. The affairs of the kingdom again began to fall into confusion, and many murders and commotions happened continually. The earl of Arran had the chief direction in the state; but Angus had still great interest, and took every opportunity to oppose him. This produced an encounter at Edinburgh; in which victory declared for Angus, and seventy-two of the routed party were killed, on the 30th ot April, 1519. On the 19th of November, 1521,

the regent returned from France. He found the kingdom in great disorder. The earl ot Angus domineered in the field, but his antagonists outvoted his party in parliament. The queen-mother, who had fixed her affections on a third husband, hated all parties almost equally; but joined the regent, in hopes of his depriving the other two of power. This happened accordingly, and she was with the regent when he made a kind of triumphal entry into Edinburgh, attended by many persons of the first rank. The earl of Angus was now summoned to appear as a criminal ; but his wife interceded for him, because he gave her no opposition in the process of divorce. In the mean time Henry VIII., perceiving that the Scots were entirely devoted to the French interest, sent a letter full of accusations against the regent, and threats against the nation, if they did not renounce that alliance. No regard being paid to these requisitions, lord Dacres was ordered to proclaim upon the borders, that the Scots must stand to their peril, if they did not fall in with his measures by the 1st of

March, 1522. This producing no effect, Henry seized the effects of all the Scots residing in England, and banished them his dominions, after marking them, according to bishop Lesley, with a cross. A war was the consequence; and, on the 30th April, the earl of Shrewsbury, Henry's steward of the household, and K. G., was appointed commander-in-chief against the Scots ; and lord Dacres made an inroad as far as Kelso, plundering and burning wherever he came. The regent ordered his army to rendez-vous at Iloslin ; but the Scots, remembering the disaster at Flodden, showed an extreme aversion to the war, and told the regent that, though they would defend themselves if they were attacked, they would not engage in a French quarrel. The regent remonstrated, but without effect; and, as the malecontents continued obstinate, he was in danger of being left by himself, when the queen mother interposed, and prevailed upon lord Da-cres to agree to a conference, the event of which was a renewal of the negociations for peace. The regent, perceiving that he had lost his former popu-larity, determined to revenge himself ; and told

those whom he could trust, that he was about to return to France, whence he should bring such a force by sea and land as should render it unnecessary for him to ask leave of the Scots any more to invade England. Accordingly he embarked for France on the 25th of October, publicly giving out that he should return the ensuing August. On the regent's arrival in that country, he made a demand of 10,000 foot and 5000 horse for carrying on the war against England ; but the situation of Francis I. did not then allow him to spare so many, though he was daily sending over ships with men, ammunition, and money, for the French garrisons in Scotland. At last it was publicly known in England that the regent was about to return with a strong fleet, and 4000 of the best troops of France ; upon which Henry determined, if possible, to intercept him. Sir William Fits-Williams, with thirty-six large ships, was ordered to block up the French squadron in the harbour of Finhead. Sir Anthonv Poyntz cruised with another in the Western seas, as Sir Christopher Dow and Sir Henry Shireburn did in the northern with a third squadron. The duke of Albany, being unable to cope with Fitz-Williams, was obliged to set out from another

port with twelve ships, having some troops on board. They fell in with Fitz-Williams's squadron ; two of their ships were sunk, and the rest driven back to Dieppe. Fitz-Williams then made a descent at Treport, where he burnt eighteen French ships, and returned to his station off Finhead. As soon, therefore, as Fitz-Williams appeared, the duke disembarked his soldiers, as if he had intended to delay his expedition for that year ; but a storm soon arising, which obliged the English fleet to return to the Downs, the regent reimbarked his men, and, sailing by the western coasts, arrived safe in Scotland. All this time the earl of Surry had been carrying on the most cruel and destructive war in that country ; insomuch that, according to cardinal Wolsey, ' there was left neither house, fortress, village, tree, cattle, corn, nor other succour for man,' in Tweedale and March. The regent's return did not immediately put a stop to these devastations ; for the intestine divisions in Scotland prevented him from taking the field ; his party was weakened by his long absence, and the queen mother had been very active in

strengthening the English interest. A parlia-

ment was called in 1523, where it was debated, whether peace or war with England should take place ; and the latter was determined on. Henry was at this time so well disposed to culti-vate a friendship with Scotland that he offered to James his eldest sister Mary in marriage ; but the Scots, animated by the appearance of their French auxiliaries, and corrupted by their gold, rejected all terms, and resolved upon war. How-ever, when the army was assembled, and had advanced to the borders, the regent found the same difficulty he had formerly experienced ; for they flatly refused to enter England. With great difficulty he prevailed upon part of them to pass the Tweed ; but, not meeting with success, he was obliged to return to Scotland, which at this time was divided into four factions. One of these was headed by the regent, another by the queen, a third by the earl of Arran, and a fourth by Angus, who had lived as an exile under Henry's protection. At last the duke of Albany, finding all parties united against

him, resigned his office of regent ; and on the 14th of March in that year went on board one of his own ships for France, whence he never returned to Scotland. He did not make a formal abdication of his government; indeed he requested the nobility, whom he convened for that purpose, to enter into no alliance with England during his absence, which he said would continue no longer than the 1st of September following ; to make no alteration in the government ; and to keep the king at Stirling. The nobility, impatient for the absence of the regent, readily promised whatever he required but without any intention of performing it ; nor, indeed, was it in their power ; for it had been previously determined that James himself should now take the administration into his own hands. According to Buchanan, the regent had no sooner returned to France than Scotland relapsed into all the miseries of anarchy. The queen dowager had the management of public affairs, but her power was limited. The earl of Arran, apprehending danger from the English, entered into the views of the French party. The queen -mo

ther's dislike to her husband prevented a union

ˆmong those who were in the English interest ;

and Wolsey restored the earl of Angus to all his

importance in Scotland. The queen, therefore,

had no other way left to keep herself in power

but to bring her son into action. On the 29th

of July, therefore, James V. removed from Stir-

ling toHolyrood House, where he took upon him-

self the exercise of government, convoking the

nobility, and obliging them to swear allegiance

a second time. The truce with England was

now prolonged, and the queen's party carried

all before them. On the very day in which the

last truce was signed with England, the earl of

Angus entered Scotland. He had been invited

from his exile in France into England where he

was caressed by Henry, who disregarded all his

sister's intreaties to send him back to France,

and now resolved to support him in Scotland.

Yet, though his declared intention in sending the

farl to Scotland, was, that the latter might ba-

lance the French party there, the king enjoined

him to sue for a reconciliation with his wife, and to co-operate with the earl of Arran, who now

acted as prime minister. On his return, how-

ever, he found himself excluded from all share in the government, but soon found means to form a strong party in opposition to Arran. In the mean time ambassadors were sent to the court of England, to treat of a perpetual peace. At the same time a match was proposed between the young king of Scotland and Henry's daughter. This had originally been a scheme of Henry himself. The ambassadors arrived in London on the 19th December, and found Henry very much disposed both to the peace and to the match. Commissioners were appointed to treat of both ; but they were instructed to demand, by way of preliminary, that the Scots should renounce their league with France, and that James should be sent for education to England. The Scottish commissioners declared that they had no instructions on these points ; but the earl of Cassils offered to return to Scotland, and bring a definitive answer from 'the three states ; in the mean time the truce was prolonged to the 15th ot May, 1525. On his arrival at Edinburgh he found the earl of Angus the leading man in parliament; by whose influence it was determined

that the Scots should renounce their league with France, and substitute in place of it a similar league with England ; and that the king should be brought up at the English court, till he wn of an age proper for marriage ; but at the same time they required of Henry to break off all engagements with Charles V., who was the bitter enemy of Francis, and at that time detained him prisoner. To this Henry returned a cold answer, being then engaged in treaties with the emperor, among which one was concerning the marriage of the princess Mary. However, before Cassils returned, a truce of two years and a half was concluded. But now the queen mother, though she had always been a warm advocate for an alliance between the two nations, yet disliked the means of bringing it about. She saw her husband's party increasing every day in power ; so that she had no other resource than keeping possession of the king's person, whom she removed to the castle of Edinburgh. Being under the necessity of convening a parliament, it was resolved to hold it within the castle ; which, being an unconstitutional measure, the earl of Arran and*

his party complained. They be^an with remon-

strances, but, finding them ineffectual, they

formed a blockade of the castle with 2000 men,

and cut off all communication with the town by

means of trenches. As no provisions could thus be

got into the castle, the queen ordered some of the cannon to be turned against the town, to force

the citizens to put an end to the blockade. Se-

veral shots were fired ; but. when all things ap-

peared ready for a civil war, matters were com-

promised. It was agreed that the king should

remove out to the palace of Holyrood House •

whence he should repair with all possible mag-

nificence to his parliament, in the house where it

was commonly held ; and there a finishing hand

was to be put to all differences. This agreement

was signed on the 25th of February, 1526. The

parliament accordingly met, and the king's mar-

riage with the princess of England was confirmed ;

but no mention was made of his being sent for

his education into that country ; on the contrary,

he was committed to the care of eight lords of

parliament. These were to have the custody of

the king's person, every one his month succes-

sively, and the whole to stand for the govern-

ment of the state ; yet with this limitation, ' that the king, by their counsel, should not ordain or

determine any thing in great affairs to which the

queen, as princess and dowager, did not give her

consent.' This partition of power, by giving the

queen a negative in all public matters, soon

threw every thing into confusion; The earl of

Angus, by leading the king into various scenes

of dissipation, gained such an ascendancy over

him that he became totally guided by him ;

while the queen mother, finding that she could

not have access to her son without her husband,

whom she hated, retired with her domestics to

Stirling. Thus the young monarch was left un-

der the sole tuition of the earl of Angus, who

made a very bad use of his power, engrossing

all the places of honor and profit. The arch-

bishop of St. Andrew's, having now joined the

queen's party, advised her to make a formal de-

mand upon her husband, that the order of go-

vernment which had been settled last parliament

should take place, and that under a penalty he

should set the king at liberty. To this the earl

answered that ‘ having been sohighly favored by his good uncle the king of England, and that James himself being under great obligations to him, neither the queen nor the other lords need be in any pain about him, as he chose to spend his time with the earl of Angus rather than with any lord in the kingdom.’ James, however, perceived that he was in fact no better than the earl’s prisoner, and resolved to recover his liberty. The earls of Argyle and Arran had retired from court, and were living on their own estates; but the earl of Lennox dissembled his sentiments so well, that he was neither suspected by the earl of Angus nor any of the Douglas family. The king, being gained upon by his insinuating behaviour, opened his mind to him, and requested his assistance against his keepers. At the same time he sent letters to his mother and her party, by some domestics, whom Lennox had pointed out, intreating them to remove him from the earl, adding that if this could not be done by any other means they should use force. On receiving Uiis letter the queen and her party assembled .heir forces at Stirling, and began their march for Edinburgh. Angus, on the oilier hand, pre-

pared to give them a warm reception, but to carry along with him the king. This resolution being made known to the queen-mother, she. was so much concerned for the safety of her son that the whole army was disbanded ; and thus the authority of the earl of Angus seemed to be more established than ever. Nothing, indeed, •was now wanting to render him despotic but the possession of the great seal, which the archbishop of St. Andrew's had carried to Dunfermline. As no deed of any consequence could be executed without this, he prevailed upon the king to demand it by special message ; in consequence of which the archbishop was obliged to give it up. About this time the divorce between the queen-mother and the earl took place ; which increased the dislike of James, while the imprudence of Angus gave every day fresh disgust. As Angus knew that he had no firm support but in the attachment of his followers, he suffered them to rob and plunder the estates of his opponents without mercy. These, again, did not fail to make reprisals ; so that, towards the end of 1526, there was scarcely an appearance of civil government in Scotland. Thus the court became al-

most totally deserted ; every nobleman being obliged to go home to defend his own estate. Even Angus himself shared in the common calamity, and hence was frequently obliged to leave the king to the custody of Lennox. To this nobleman the king now made the most grievous complaints, and charged him to contrive some plan for his escape. Lennox accordingly recommended to him the baron of Buccleugh, who was very powerful in the southern parts, and a violent enemy to Angus and the whole family of Douglas. To him he gave orders to foment the disorders in the southern parts to such a degree as to require the king's personal presence to compose them. Buccleugh was then to attack the party, and take the king by force from the Douglasses. This scheme was put in execution, but Buccleugh was defeated, and the attempt proved abortive. After this the earl of Angus behaved towards Lennox with such indifference that Lennox openly declared against him, and advised the king to form a friendship with the archbishop of St. Andrews. This was accordingly done ; but the interest of the archbishop

and Lennox was overbalanced by that of Arran and the Hamilton family, whom the earl of Angus now drew over to his party. However, the earl of Lennox, having received powers from the king, suddenly retired from court, and published a manifesto, inviting all loyal subjects to assist him in delivering the king from confinement. In consequence of this he was soon joined by a numerous army, with whom he advanced towards Edinburgh. Angus assembled his adherents ; and sent orders to the inhabitants of Edinburgh to take the field with the king at their head. The citizens immediately put themselves under arms ; but, James pretending to be indisposed, Sir George Douglas, brother to the earl of Angus, said, ‘ Sir, rather than our enemies should take you from us, we will lay hold of your person ; and, should you be torn in piece? in th« struggJe, we will carry off part of your body. Upon this speech, which James never forgot, he mounted his horse, and set forward to Linlithgow at a slow pace ; insomuch that Sir George Douglas, afraid of not coming in time to succor his brother, made use of many insinuations to

push James on to the field of battle. Three ex-

presses arrived from the earl of Angus ; the first

informing his brother that he was about to en-

gage with a superior army ; the second that

Angus was engaged with a division of Lennox's

army, commanded by the earl of Glencairn ; and

that Lennox himself was engaged with the Ha-

miltons. The third informed him that Lennox,

if not defeated, was on the point of being so.

Upon receiving this last news James hastened to

the field of battle, that he might save Lennox,

and put an end to the bloodshed ; but he came

too late ; for the royal party was already defeated with great slaughter ; and Lennox himself, after

being wounded and taken prisoner, was mur-

dered by Sir James Hamilton. On the night of

the battle the king was removed to Linlithgow ;

and, though he was under the greatest grief for

the fate of Lennox, the behaviuur of the Doug-

glasses struck him with such terror that he dis-

sembled his sentiments. The earl of Angus led

his victorious troops into Fife, in hopes of sur-

prising the queen and the archbishop of St. An-

drews. The queen, on the news of his approach, fled, with her new husband Henry Stuart, brother to lord Evandale, to Edinburgh, and both were admitted into the castle. The archbishop fled to the mountains, where he was obliged to keep cattle as a shepherd. Angus, after having plundered the castle of St. Andrew's and the abbey of Dunfermline, returned in triumph in Edinburgh, where he prepared to besiege the castle ; but the queen, hearing that her sen was among the number of the besiegers, ordered the gates of the castle to be thrown open, and surrendered herself and her husband prisoners to James, who was advised to confine them to the castle. After these successes, the earl of Angus established a court of justice, in which he prosecuted those who had opposed him, among whom was the earl of Cassils. He was offered by Sir James Hamilton, natural son to the earl of Arran, the same who had murdered Lennox, an indemnity, if he would own himself a vassal of that house ; but this condition was rejected. Being called to his trial, and accused of having taken arms against the king, a gentleman of his name and

family, who was his advocate, denied the charge, and offered to produce a letter under James's own hand desiring him to assist in delivering him from his gaolers. This striking evidence confounded the prosecutor so much that the earl was acquitted ; but, on his return home, he was way-laid and murdered by one Hugh Campbell, at the instigation of Sir James Hamilton. During these transactions in the south, many of the Highland clans were perpetrating the most horrid scenes of rapine and murder. The state of the borders was little better than that of the Highlands ; but it engaged the attention of Angus more, as he had great interest in these parts. Marching, therefore, against the banditti which infested these parts, he soon reduced them to reason. His power seemed now to be firmly established, insomuch that the archbishop of St. Andrews began to treat with Sir George Douglas, to whom he offered lucrative leases and other emoluments, if he would intercede with Angus in his favor. This was readily agreed to; and the archbishop was allowed to return in safety to his palace about the same time that Angus returned

from his expedition against the borderers. Nothing was then to be seen at court but festivities of every kind, in which the queen-mother, who \as now liberated, took part; and she was afterwards suffered to depart to the castle of Stirling, which Angus had neglected to secure. In the mean time the archbishop invited the Douglasses to spend some days with him at his castle; which they accordingly did, and carried the king with them. Here James dissembled so well that Angus thought there could be no danger in leaving him in the hands of his friends, till he should return to Lothian to settle some public and private affairs. He left the king in the custody of his uncle Archibald, his brother Sir George, and one James Douglas of Parkhead, captain of the guards, who watched the king on pretence of doing him honor. The earl was no sooner gone than the archbishop sent an invitation to Sir George Douglas, desiring him to come to St. Andrews, and there put the last hand to the leases. This was so plausible that he immediately set out for St. Andrews ; while his uncle the treasurer went to Dundee, where

he had an amour. James, thinking this the best

opportunity for an escape, resolved to attempt it,

and, by a private message, apprised his mother of

his design. It was then the season for hunting,

which James often followed in the park of Falk-

land ; and, calling for his forester, he told him

that, as the weather was fine, he intended to kill a stag next morning, ordering him at the same time

to summon all the gentlemen in the neigbour-

hood to attend him with their best dogs. He then

called for his chief domestics, and commanded

them to get his supper early, because he intended

to be in the field by day-break ; and talked with the captain of his guard of nothing but the ex-

cellent sport he expected. Meantime he had

engaged two young men, the one a page of his

own, the other, John Hart, a helper in his

stables, to attend him in his flight, and to provide him with the dress of a groom for a disguise. Hav-

ing taken leave of his attendants, charging them

to be ready early in the morning, and, being left

alone, he stole softly out of his bed-chamber, went to the stable, dressed himself in his disguise; and he and his companions, mounting the three best

horses, galloped to Stirling castle ; into which he

was admitted soon after day-break. He com-

manded all the gates to be secured; and, the

queen having previously prepared every thing for a vigorous defence, orders were given that none should be admitted into the castle without the king's permission. About an hour after the king escaped from Falkland, Sir George Douglas returned ; and, being assured that the king was asleep, went to bed. But James had been seen and known in his flight ; for, in the morning, the bailiff of Abernethy informed Sir George that the king had passed Stirling bridge. An express was despatched, informing Angus of all that had happened. The earl quickly repaired to Falkland, where he and his friends resolved to go to Stirling, and demand access to the king. James by this time had issued letters to the earls of Huntly, Argyle, Athol, Glencairn, Monteith, Ilothes, and Eglinton ; lords Graham, Livingston, Lindsay, Sinclair, Kuthven, Drumraond, Evandale, Maxwell, and Semple. Before all of them could arrive at Stirling, the earl of Angus and his friends were upon their journey to the same place ; but were stopped by a herald, commanding them not to approach within six miles of the king's residence. On this the earl

deliberated with his party how to proceed. Some

were for marching, and taking the castle by sur-

prise ; but that was found to be impracticable.

The eatl and his brother therefore resolved to

make a show of submission to ˆie king's order ;

and they accordingly went to Linlithgow. By

this time all the nobility already mentioned, and

many others, had assembled at Stirling; and

James, calling them to council, inveighed against

the tyranny of the Douglasses with acrimony,

and in conclusion, said, ' Therefore I desire, my

lords, that I may be satisfied of the said earl, his kin, and friends. For I vow that Scotland shall

not hold us both, while I be revenged on him

and his.' The result was that proclamation

should be made, renewing the order for the

Douglasses not to approach the court, and di-

vesting the earl of Angus and his brother of all

their public employments. Such was the mode-

ration of the assembly that by their advice

James ordered the earl to retire to the north of

the Spey till his pleasure should be known ; but

his brother was commanded to surrender himself

a prisoner in the castle of Edinburgh, to take his trial in a very full parliament, to be held in that city next September. The earl and his brother considered all this as a prelude to their destruction ; and resolved to surprise the city of Edinburgh, and hold it against the king and parliament, before the latter could assemble. The royal party acted with great spirit. The management of the king's escape, his reception into Stirling, the fortifying that castle, and the ready obedience of his great nobility, some of whom attended him with their followers before they received any summonses, are proofs of wise and spirited deliberations. It was to be expected that the Douglasses, who remained assembled in a numerous body, would make the attempt they made ; but the royalists despatched lord Maxwell and the baron of Lochinvar with troops to take possession of the city, till James could arrive with 2000 forces to their relief. Maxwell and Lochinvar made such despatch that they were in possession of the city when the Douglasses appeared before it, and repulsed them ; while a terrible storm had scattered the troops under James, before he could come to their assistance,

so effectually, that, being left almost without attendants, he might have been taken by the smallest party of the enemy. Upon the retreat of the Douglasses from Edinburgh, the parliament met ; and the earl of Angus, his brother, Sir George Douglas, his uncle Archibald Douglas, and Alexander Drummond of Carnock, with some of their chief dependents, were indicted and forfeited in absence (none of them appearing), for ‘ assembling of the king’s lieges, with intention to have assailed his person ; detaining of the king against his will and pleasure, and contrary to the articles agreed upon, for two years and more ; all which time the king was in fear and danger of his life.’ One Banantyne had the courage to plead their cause against these heinous charges ; but so exasperated were both the king and parliament against them that the former swore he never would forgive them, and the latter that they never would intercede fer them. Nor was it deemed sufficient simply to declare their resolution ; but the solemnity of oaths was added, to discourage the king of England from continuing the applications he was

daily making for the partlon of Angus; and, to extinguish all hopes of that kind, James created his mother's third husband lord Methven, and gave him the direction of his artillery. The disgrace and forfeiture of the Douglasses having created many vacancies in the state, Gavin Dunbar, archbishop of Glasgow, and tutor to the king, was nominated lord chancellor, and Robert Carncross, a person, says Buchanan, more eminent for wealth than virtue, was made treasurer ; but he was soon after displaced for favoring the Douglasses, and Robert Barton appointed to succeed him. The Douglasses still kept their arms ; and, being joined by many outlaws and robbers in the south, they ravaged all the lands of their enemies, carrying their devastations to the very gates of Edinburgh. A commission of lieutenancy was then given to the earl of Argyle and lord Hume, who did great service in protecting the country from the outlaws. Several villages, however, near Edinburgh, were burnt ; and all the provisions the Douglasses could find were carried off to their castle of Tamtalian, which served as their head quarters. The castle

of D unbar remained still in the hands of the duke of Albany's garrison, who recognised n – master but him. The place was well stored with artillery of all kinds; and, lying in the neighbourhood of Tamtalian, it was easy to transport them to the siege ; but James thought he had no right to make use of them without the consent of one Maurice, governor of the castle. Having summoned, by proclamation, the inhabitants of Fife, Angus, Strathern, Stirlingshire, Lothian, Merse, and Teviotdale, to appear at Edinburgh on the 10th of December, with forty days victuals, to assist in the siege, he sent three noblemen to borrow artillery from Maurice, and to remain as pledges for the safe redelivery of the same ; and they were accordingly sent him.

This delicacy is the more remarkable as the duke of Albany had given orders that every thing in his castle should be at the king's service. However unanimous the parliament might appear against the Douglasses, yet James was but ill seconded in this attempt. The enemies of the Douglasses had impolitically rendered it treasonable for any person to shelter or protect the earl of Angus, his kinsmen, or followers. This pro-

ceeding, in a country where the Douglasses had so many connexions, carried with it an appearance of cruelty and a thirst of revenge, especially as James had chosen such a season for carrying on the siege. In short, after battering the place for some days, and losing one Falconer, his chief engineer, the king abandoned his enterprise. Before this time, a negociation was going forward between James and the king of England; which proves that the former was now rendered placable towards the Douglasses, and was the reason why the siege was suspended. The truce between Scotland and England was now near expiring ; and Henry, under that pretence, gave a commission to the prior of Durham, Thomas Magnus, Sir Anthony Ughtred, captain of the town and castle of Berwick, William Frankelyn, chancellor of Durham, and Sir Thomas Tempest. England was then the principal ally of Francis against the emperor ; and this gave a handle for Francis to interpose so far in favor of 472

the Douglasses, that he brought James to consent to a preliminary negociation for their ob-

taining a secure retreat in England.

James being now delivered from all dread of the Douglasses, and under no control from any party, showed excellent dispositions for government. Finding that the borderers were renewing their depredations, he resolved to strike at the root of an evil which had so long disgraced his ancestors, by giving no quarter to the chiefs of these robbers, whose residence was in Liddesdale. This was the more necessary, as their daring attempts had exasperated the English so much, that they had actually burnt a town in Teviotdale ; and had killed one Robert Kerr, a man of some consequence. Two of the chiefs of the Scottish borderers were Cockburn of Kenderlaw, and Adam Scot, commonly called the king of the thieves. Both of them were barons; and had been so inured to the practice that they thought there was no crime in robbing ; they therefore appeared publicly in Edinburgh ; where James ordered them to be apprehended, tried, and hanged. He next proceeded with great firmness against many noblemen and gentlemen, who were suspected of being disaffected

to the late peace. All of them had behaved with great loyalty, and some of them had done him the most important services. Of this number were the earl of Hume, lord Maxwell, with the barons of Buccleugh, Farniherst, Polwart, Johnston, and Mark Kerr; yet so zealous was James for the impartial administration of justice that he ordered them all, with many other chiefs of the borderers, to be sent to prison ; where they lay till they entered into recognizances, and found bail for their good behaviour. Of all the party of the Douglasses, none of any note, excepting Alexander Drummond of Carnock, was suffered to return home, at the earnest request of the ambassadors and the treasurer Barton. This lenity was of very little consequence ; for James having appointed the earl of Murray to be sole warden of the Scottish marches, with power to treat with the earl of Northumberland, their conferences had broken off on account of fresh violences. He now resolved to attempt in person what his predecessors and he had so often failed in by their deputies. As he was known to be fond of hunting, he summoned his nobility

to attend him with their horses and dogs ; which they did in such numbers, that his hunting retinue consisted of above 8000 persons, two-thirds of whom were well armed. This preparation gave no suspicion to the borderers, as hunting matches in those days commonly consisted of some thousands ; and James, having set out upon his diversion, is said to have killed 540 deer. Among the other gentlemen who had been summoned to attend him was John Armstrong of Gilnockhall. He was the head of a numerous clan, who lived with great splendor upon the contributions under which they laid the English borderers. He was himself always attended by twenty-six gentlemen on horseback, well mounted and armed, as his body guards. Having received the king's invitation, he was fond of displaying his magnificence to his sovereign ; and, •Hiring himself and his guard more pompously than usual, they presented themselves before James, from whom they expected some particular mark of distinction for their services against the English, and for the protection they had always given to their countrymen the Scots. On

their first appearance James, not knowing who he was, returned Armstrong's salute, imagining him to be some nobleman, ; but, upon hearing his name, lie ordered him and his followers to be immediately apprehended, and hanged upon the spot. Armstrong begged hard for his life ; and offered to serve the king in the field with forty horsemen, besides making him- large presents of jewels and money, with many other tempting of- fers; but the king was inexorable. These and some similar executions restored peace to the borders.

Hitherto we have considered only the civil transactions of Scotland ; but religion will now claim a considerable share of our attention. The opinions of Luther had been propagated in Bri- tain soon 4fter his preaching in 1517. They had for some years gained ground, and, when the contentions began between James and his no- bility, were become formidable to the establish- ed religion. James, having escaped from the hands of his nobles by means of the archbishop of St. Andrew's, was naturally favorable to the clergy, and, as they opposed the reformation, became a zealous persecutor. On the other hand the nobility, having opposed the kins and clergy

in civil affairs, did so likewise in religion. The clergy finding themselves unequal in argument, had recourse to more violent methods. Rigorous inquisitions were made after heretics, and fires were every where prepared for them. 'The first person,' says Dr. Stuart, ' who was called upon to suffer for the reformed religion was Patrick Hamilton, abbot of Feme. At an early period of life he had been appointed to this abbacy ; and, having imbibed a favorable idea of the doctrines of Luther, he had travelled into Germany, where, becoming acquainted with the most eminent reformers, he was fully confirmed in their opinions. Upon his return to Scotland he exposed the corruptions of the church, and insisted on the advantages of the tenets which he had embraced. A conduct so bold, and the avidity with which his discourses were received by the people, gave an alarm to the clergy. Under the pretence of a religious and friendly conference he was seduced to St. Andrew's by Alexander Campbell, a Dominican friar, wh-i was instructed to remonstrate with him on the subject of the reformation. The conversation

they held only served to establish the abbot more

firmly in his sentiments, and to inflame his zeal to propagate them. The archbishops of St. An-

drews and Glasgow, and other dignitaries of the

church, constituting a court, called him to appear

before them. The abbot neither lost his cour.ut ,

nor renounced his opinions. lie was convicted

accordingly of heretical pravity, delivered over

to the secular arm, and executed in 1527. His

tenets are thus enumerated in the sentence : —

4 Man hath no free will. Man is in sin so long

as he liveth. Children, incontinent after their

baptism, are sinners. All Christians, that be

worlhie to be called Christians, do know that

they are in grace. No man is justified by woi k>, S C O T L A N D.

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but by faith only- Good works make not a good

man, but a good man doth make goo-‘ works;

and faith, hope, and charity, are so knit, that he that hath the one hath the rest ; ana he that

wanteth the one of them wanteth the rest.’

(Keith’s Hist. p. 3). This reformer had not at-

tained the twenty-fourth year of his age. His

youth, his virtue, his magnanimity, and his suf-

ferings, all operated in his favor with the people.

To Alexander Campbell, who insulted him at the stake, he objected his treachery, and cited him to answer for his behaviour before the judgment seat of Christ. And this persecutor, a few days after, being seized with a frenzy, and dying in that condition, it was believed and affirmed with confidence that Mr. Hamilton was an innocent man and a martyr. A deed so affecting, from its novelty and circumstances, excited throughout the kingdom a universal indignation and curiosity. Particular enquiries were made into the tenets of Hamilton. Converts to the new opinions multiplied in every quarter, and a partiality to them began to prevail even among, the Romish clergy. Alexander Seton, the king's confessor, inveighed against the errors and abuses of Popery ; neglected in his discourses all mention of purgatory, and pilgrimages, and saints ; and recommended the doctrines of the reformed. What he taught was impugned ; and, his boldness rising with contradiction, he defended warmly his opinions, and even affirmed that in Scotland there were no true and faithful bishops. A sarcasm so just, and so daring, provoked the

whole body of the prelacy. They studied to compass his destruction ; and, as Mr. Seton had exhorted the king to a greater purity of life, they iioped to conduct him to the stake ; but he fled into England. In 1533 Henry Forest, a Benedictine friar, who adopted the reformed doctrines, was not so fortunate. After having been imprisoned for some time in the tower of St. Andrews, he was brought to trial, condemned, and burnt. He had said that Mr. Hamilton was a pious man and a martyr ; and that the tenets for which he suffered might be vindicated. This guilt was aggravated by the discovery that friar Forest was in possession of a New Testament in the English language. A cruelty so repugnant to the feelings of mankind, while it pleased the pride of the ecclesiastics, was destroying their importance, and exciting a general disposition in the people to adopt the principles and sentiments of the reformed. In 1534 archbishop James Beaton of St. Andrews, though remarkable for prudence and moderation, was overawed by his nephew and coadjutor David Beaton and by the clergy. By commission, granted by him, persecutions were carried on with violence.

Many were driven into banishment, and many were forced to acknowledge what they did not believe. The more strenuous and resolute were delivered over to punishment. Among these were two private gentlemen, Norman Gourlay and David Stratton. They were tried at Holyrood House before the bishop of Ross ; and, refusing to recant, were condemned. King James, who was present, appeared exceedingly solicitous that they should recant their opinions ; and Stratton, upon being adjudged to the fire, having begqed for mercv, was about to receive it, when the priests proudly pronounced that the grace o. the sovereign could not be extended to a criminal whom their law had doomed to suffer. A few years after, the bishops having assembled at Edinburgh, two Dominican friars, Killor and Beverage, with Sir Duncan Sympson a priest, Robert Forrester a gentleman of Stirling, and Thomas Forest vicar of Dolour in Perthshire, were condemned to be burnt together. At Glasgow a similar scene was acted in 1539 ; Hieronymus Russel, a gray friar, and a young gentleman named Kennedy, were accused of heresy

before the bishop. Russel, when brought to the stake, displaying a deliberate demeanor, reasoned gravely with his accusers, and was only answered with reproaches. Mr. Kennedy, who was not yet eighteen years of age, seemed disposed to disavow his opinions, and to sink under the weight of cruel affliction ; but, the exhortation and example of Russel awakening his courage, his mind assumed a firmness and constancy, his countenance became cheerful, and he exclaimed with a joyful voice, ‘ Now I defy thee, death ; I praise my God, I am ready.’ James Beaton, archbishop of St. Andrews, having died about this time, the ambition of David Beaton, his coadjutor, was gratified in the fullest manner. He had before been created a cardinal, and was now advanced to the primacy of Scotland. No Scottish ecclesiastic had been ever invested with greater authority ; and the reformers had every thing to fear from so formidable an enemy. The natural violence of his temper had swelled into an overbearing insolence. His youth had been passed in scenes of policy and intrigue, which gave him address and knowledge of men.*

He was dark and designing. No principles of justice were any bar to his schemes ; nor did his heart open to any impressions of pity. His ruling passion was an inordinate love of power; and, his consequence depending upon the church of Rome, he maintained its superstitions with the warmest zeal. He seemed to take a delight in perfidiousness and dissimulation ; had certainly no religion ; and indulged in the most open profligacy of manners. In connexion with these defects he possessed a persevering obstinacy in pursuing his measures, and practised all the arts necessary to advance them. He was scarcely invested in the primacy when he exhibited his taste for magnificence, and his aversion to the reformed. He proceeded to St. Andrews with an uncommon pomp and parade. The earls of Iluntly, Arran, Marischal, and Montrose, with the lords Fleming, Lindsay, Erskine, and Seton, honored him with their attendance; and there appeared in his train Gavin archbishop of Glasgow and lord high chancellor, four bishops, six abbots, many private gentlemen, and a vast multitude of the inferior clergy. In the cathedral, from a throne erected by his command, he ha-

rangued on the state of religion and the church to this company and a crowd of other auditors. He lamented the increase of heretics; insisted upon their audacity: and urged the necessity of actine against them with rigor. He told this assembly that he had cited Sir John Borlhwick to appeal before it for maintaining tenets of faith hostile

to the church, and for dispersing Heretical books, and he desired their assistance in bringing him to justice. Thirteen articles of accusation were accordingly read against him ; but he neither appeared personally nor by any agent or deputy. He was however found guilty; and the cardinal, with a solemnity calculated to strike with awe and terror, pronounced sentence against him. His goods and estate were confiscated ; and a painted representation of him was burnt publicly. It was declared that every office of humanity, comfort, and solacement extended to him should be considered as criminal, and be punished with confiscations and forfeitures. Sir John Borth-wick, having been apprised of his danger, fled

into England, where he was kindly received by Henry VIII., who employed him in negociations with the Protestant princes of Germany. Cardinal Beaton perceived with concern that this act of severity did not terrify the people. New defections from the church were announced. Andrew Cunningham, son to the master of Glencairn, James Hamilton brother to Patrick Hamilton the martyr, and the celebrated George Buchanan the historian, were imprisoned upon suspicion of heresy ; and, if they had not escaped, must have died at the stake. In this declining condition of popery the cardinal held many mournful consultations with the bishops. All their wisdom was employed to devise methods to support their power. The project of an inquisitorial court was conceived. To erect this tribunal they allured James V. with the hopes of the confiscation and spoils which might enrich him, from the persecution and punishment of the reformed. He yielded to their solicitations, and gave them the sanction of his authority. A formal commission was granted, constituting a court of enquiry after heretics, and nominating for its president Sir James Hamilton of Fennard, natural

brother to the earl of Arran. The officious zeal

of this man, his ambition, and thirst of blood,

were acceptable in a high degree to the clergy ;

and to this bad eminence their recommendation

had promoted him. Upon the slightest suspicion

he was allowed to call any person before him, to

scrutinise into his creed, and to absolve or to

condemn him. A tribunal so dreadful could not

have found a director more suited to it. He was

in haste to fill the prisons with culprits, and was marking down the names of all those to whom

heresy was imputed by popular report. But,

while he was brooding over mischief, and multi-

plying in fancy the triumphs of his wickedness,

an unexpected turn of affairs presented him in

the light of a criminal, and brought him to the

scaffold. The brother of Mr. Hamilton the mar-

tyr, to avoid persecution, had been obliged to

go into banishment ; but, by the intercession of

his friends, he was permitted to return for a

short time to his own country, that he might

regulate the affairs of his family. He was con-

nected with Sir James Hamilton, and, trusting

to the ties of blood, ventured to prolong his stay beyond the period allotted to him. Sir James,

willing to give a signal example of severity, and

thus to ingratiate himself with the priesthood,

resolved to make his own relation the first victim

of his power. Mr. Hamilton, however, being

acquainted with the most private machinations

of this inquisitor, despatched his son to the

king, who was about to pass the Forth in a

barge, and entreated him to provide for his safety

as Sir James Hamilton had conspired with thf

house of Douglas to assassinate him. James V.

being at variance with the house of Douglas

was disposed to believe every thing flagitious of

Sir James Hamilton. He ordered the young

gentleman to go with expedition to Edinburgh,

and to open the matter to the privy -council ; and he furnished him with the ring which he sent to them

upon these important occasions, which required

their address and activity. Sir James Hamilton

was apprehended and imprisoned. An accusa-

tion of having devised the king's death was pre-

ferred against him. His defence appeared un-

satisfactory. A jury of men of rank and

character pronounced him guilty ; and, being

condemned to suffer the death of a traitor, he lost his head, and the quarters of his body were ex-

posed on the gates of the city of Edinburgh. The clergy, who could not prevent his trial and execution, regretted his death, but did not appoint a successor to him in their court of inquisition.'— Dr. Gilbert Stuart's History of the Reformation.

In other respects, however, James showed great concern for the welfare of his people. Being dissatisfied with the ordinary administration of justice, he had recourse to the parliament of Paris for a model of the like institution in Scotland. Great objections lay to ambulatory courts of justice. The authority of the heritable jurisdiction was almost exclusive of all law ; for, though the king might preside in them, yet he seldom did ; and appeals to the council were disagreeable and expensive. The institution of the lords of articles threw too much weight into their scale, as no business could be transacted in parliament but what they prepared ; and it was in the power of the king to direct them as he pleased. The true source of the public grievances in matters of property lay in the disregard shown to the excellent acts which had passed during the reigns of James I., II., and III., and which

bad not been supported in the late reigns. The evil had gathered strength during the minority of James V. ; and he resolved to establish a standing jury for all matters of law and equity, with a president, who was to be the mouth of the assembly. On the 13th of May, this year, as we find by a curious MS. in the British museum, the lords of the articles laid before the parliament the proposition for instituting the court of session in the following words : — ' Item, anent the second artikel concerning the order of justice ; because our sovereign lord is maist desirous to have an permanent order of justice for the universal of all his lieges ; and therefore tendis to institute an college of cunning and wise men for doing and administration of justice in all ciril actions ; and therefore thinke to be chosen certain persons maist convenient and qualified yair (there), to the number of fifteen persons, half spiritual, half temporal, with an president.' In 1553 hostilities were recommenced with England ; but, after some slight incursions on both sides, a truce again took place. The

chief transactions of these years, however, were the negociations for the king's marriage. Indeed there is scarcely any monarch mentioned in history who seems to have had a greater variety of choice, or who was more difficult to he pleased. The situation of affairs on the continent of Europe had rendered Scotland a kingdom of great consequence, as holding the balance of power between France and England, and the emperor of Germany ; and each of the rival powers endeavoured to gain the favor of James by giving him a wife. In 1534 king Francis offered him hrs daughter; and the match was strongly recommended by the duke of Albany, who was still living in France. The same year the imperial ambassador arrived in Scotland, and presented, in the name of his master, the order of the golden fleece to James, who had already been invested with that of St. Michael by Francis. At the same time he offered him his choice of three princesses ; Mary of Austria, the emperor's sister, and widow of Lewis king of Hungary ; Mary of Portugal, the daughter of his sister Eleanora of Austria ; or Mary of England, the daughter of Catharine and Henry. Another condition, however, was

annexed to this proposal ; viz. that, to suppress the heresies of the time, a council should be held for obviating the calamities which threatened the Christian religion. These proposals would have met with a more ready acceptance from James, had not his clergy at this time been disgusted with Charles for allowing too great a latitude to the Protestants of Germany. James, in his answer, returned the emperor his polite acknowledgments for the splendid alliances he had offered him : touched on the proposal of the council as being a measure rather to be wished for than hoped, because it ought to be free and holy, and upon the model of the first councils; and observed that, if such a council could be obtained, he would send ecclesiastics to it ; but, if not, every prince ought to reform the errors of the clergy within his own dominions. He bewailed the obstinate conduct of his uncle in his divorce and marriage ; and offered his best offices for effecting a reconciliation between him and the emperor, wishing that all the princes of Christendom would unite their arms against their common enemy the Turks. He hinted, very justly, that his imperial majesty

had offered more than he could perform, because his cousin, Mary of England, was not at his disposal. That it would be impolitic to give a preference to any of the three princesses, all of them being so illustrious and deserving ; but, to show how much he valued an alliance with his imperial majesty, he would become a suppliant to that prince for his niece, daughter to Christian king of Denmark, to become his bride. The ambassador's answer to this unexpected request was that she was already betrothed to the count palatine. But, whether the emperor had any right to offer the English princess or not, it is agreed by most historians that he was offered either Mary or Elizabeth by their father Henry himself. To Mary of Bourbon, the daughter of the duke of Vendosme, he is said to have been contracted ; but for some reason or other all these matches were broken off; and the king at last went to France, where he married Magdalen the eldest daughter of Francis. The nuptials were celebrated at Paris in 1537, with great magnificence ; arnd among other things served up by way of dessert at the marriage feast, were a number of covered cups filled, it is said, with pieces of gold and gold dust, the product of Scotland, which

James distributed among the guests. This gold was found in the mines of Crawford Moor, then worked by the Germans. In the beginning of May the royal pair embarked for Leith, under convoy of four large ships of war, and landed on the 28th of the same month. The joy of the Scots was universal, but it was of short continuance ; for the young queen died of a ferer on the 22d of July the same year. King James did not long remain a widower ; for the same year he sent Beaton, abbot of Arbroath, to treat of his second marriage with a French lady, Mary of Guise, duchess-dowager of Longueville. In this he was rivalled by his uncle Henry VIII., but not before James had been contracted to her. Henry, however, not only insisted upon having this lady for his wife, but threw out some menaces against Francis, because he would not comply with his request. In January, 1538, she was married to James, and escorted to Scotland by the admiral of France with a considerable squadron, both James and Francis being suspicious that Henry would make some attempt to intercept the royal bride. But nothing of this kind happened : and she landed safely at Fife

Ness ; whence she was conducted to the king at St. Andrew's. But, while James was thus completing his domestic arrangements, he was in other matters showing himself a bloody tyrant. Some differences subsisted between the families of Gordon and Forbes in the north. The heir of the house last mentioned had been educated in a loose dissipated manner, and kept company with a worthless fellow named Strahan. Having refused this favorite something he had asked, the latter attached himself to Gordon earl of Huntly, who, it is said, assisted him in forging a charge of treason against Forbes. He was accused of intending to restore the Douglasses to their forfeited estates and honors ; which improbable story being supported by some venal evidence, the unhappy young man was condemned and executed as a traitor. The king could not but see the injustice of this execution ; and, to make some amends for it, banished Strahan the kingdom. Another execution, which happened a few days after, was even more inhuman. The earl of Angus, finding that he could not regain the favor of the king, had recourse to a method usual in those days for attracting his notice, viz. the com-

mitting of depredations on the borders. This crime was sufficient with James to occasion the death of his innocent sister, the dowager lady of Glammis. She had been courted by one Lyon, whom she had rejected in favor of a gentleman of the name of Campbell. Lyon, exasperated at his repulse, found means of admittance to James, whom he filled with the greatest terrors on account of the practices of the family of Angus ; and at last charged the lady, her husband, and an old priest, with a design of poisoning the king. The parties were all remarkable for the

quiet and innocent lives they led ; and this circumstance was by their diabolical accuser turned to their prejudice, by representing it as the effect of cunning. However, the evidence against the lady appeared so absurd and contradictory that some of the judges were for dropping the prosecution, and others for recommending her case to the king ; but the majority prevailed to have it determined by a jury, who brought her in guilty ; and she was condemned to be burnt alive ou the Castle-hill of Edinburgh. The defence she made

would have done honor to the ablest orator, and undeniably proved her innocence, but, though it was reported to James, it was so far from mitigating her sentence that it was aggravated by her husband being obliged to behold her execution. The unhappy man endeavoured to make his way over the castle wall of Edinburgh ; but, the rope proving too short, he was dashed in pieces : and lord Glammis her son, though but a child, was imprisoned during the remainder of this reign. The old priest, though put to the torture, confessed nothing, and was freed. Lyon, like Strahan, was banished the kingdom. Whether these and other cruelties had affected the king's conscience, or whether his brain had been touched by the distractions of the different parties is unknown; but it is certain that, in 1540, he began to live retired: his palace appeared like the cloistered retreat of monks ; his sleep was haunted by' the most frightful dreams, which he construed into apparitions ; and the body of Sir James Hamilton seemed continually present to his eyes. Perhaps the loss of his two sons, who died on the same day that Sir James was

executed, might have contributed to bring this man more remarkably to his remembrance. No doubt it added to the gloom of his mind ; and he now saw his court abandoned by almost all h»s nobility. At last James was in some degree roused from his inaction, by the preparations made against him lf/y his uncle Henry Vlli. of England. Some differences had already taken place ; to accommodate which Henry had desired a conference with James at York. But this the latter, by the advice of his parliament, had declined. The consequence was a rupture between the two courts, and the English had taken twenty of the Scots' trading vessels. Henry threatened to revive the antiquated claim of the English superiority over Scotland, and had given orders for a formidable invasion of the Scottish borders. He complained that James had usurped the title of Defender of the Faith, to which he had added the word Christian, implying that Henry was an infidel : but the kings of Scotland had, some time before, been complimented by the papal see with that title. James, on the other hand, threw his eyes towards Ireland, the north

part of which was actually peopled with inhabi-

tants, who owned no sovereign but the king of

Scotland, and who offered to serve James against

the English : some of their chiefs having re-

paired to Scotland, and done homage to James,

llenryhad about this time declared himself king

• if Ireland, of which he was before only styled the lord ; and James roundly asserted that he had a

(•referable claim to at least one-half of that island, u hich had been peopled by the subjects of Scot-

land. Though the Scottish historians of this reign

take very little notice of this incident, James ap-

pears to have been very tenacious of his title;

and a vast intercourse was certainly carried on

between the subjects of Scotland and the northern

Irish, who unanimously acknowledged James for

their natural sovereign. Indeed, this was the only

ground of quarrel that the king, with the least

shadow of justice, could allege against Henry.

His parliament being met, many public-spirited

acts were passed ; and, before the assembly was

dissolved, the members renewed the acts against

leasing making; by which is meant the misrepre-

senting of the king to his nobles, or the nobles to their king: and James, to dismiss them in good

humor, passed an act of free grace for all crimes

committed in his minority; the earl of Angus, and Sir George and Sir Archibald Douglas being excepted. Henry, after cutting off the head of his wife Catharine Howard, married and divorced the princess Anne of Cleves, and found himself either deserted or distrusted by all the princes on the continent, Protestant as well as Roman catho-

lic. James and his clergy jelled greatly on this public odium incurred by Henry ; but the em-peror, having again quarrelled with Francis, left Henry, whose dominions they had threatened jointly to invade, at liberty to continue his pre-parations against the Scots. He first ordered his fleet, then the most formidable of any in the world, to make fresh descents upon Scotland. At the same time he appointed a very considera-ble army to rendezvous upon the borders, under Sir Robert Bowes, the earl of Angus, and his brothers Sir George and Sir Archibald Douglas. James was every day expecting supplies of money, arms, and other necessaries from Francis ; but, these not arriving, he reassembled his par-liament on the 14th of March, who gratified him in all his demands. Many excellent regulations were made for the internal government, peace,

and security of the kingdom, and against the exportation of money instead of merchandise. Acts were passed for fortifying and embellishing the town of Edinburgh, and for better supplying Scotland with wine. The royal revenue was increased by many additional estates ; and the last hand was put to one of the best plans for a national militia that perhaps ever appeared. As yet, excepting in the disappointment which Henry met wiih from his nephew in not meeting him at York, he had no grounds for commencing hostilities. But the queen-mother was now dead ; and consequently the connexion between James and Henry was weakened. Whatever her private character might have been, she was a happy instrument of preventing bloodshed between the two kingdoms. She was buried with royal honors at Perth. James, to all appearance, was at this time in a most desirable situation. His domain, by forfeitures and otherwise, farexceeded that of any of his predecessors. He could command the purses of his clergy; had large sums of ready money in his exchequer; his forts were well stored and fortified ; and he was now daily receiving remittances of money, arms, and ammu-

nition from France. All this show of happiness was only in appearance; for the affections of his nobility, and the wiser part of his subjects, were

now alienated from him more than ever, by his excessive bigotry and superstition. He had nominated the earl of Huntly to the command of his army on the borders, consisting of 10,000 men ; and his lieutenant-general was Sir Walter Lindsay of Torphichen, who had seen a great deal of foreign service, and was esteemed an excellent officer. Huntly acquitted himself admirably in his commission ; and was so well served by his spies as to have certain intelligence that the English intended to surprise and burn Jedburgh and Kelso. The English army under Sir Robert Bowes and the Douglasses, with other northern Englishmen, continued still upon the borders ; and one of the resolutions the Scottish nobility and gentry had come to was, not to attack them on their own ground, nor to act offensively, unless their enemies invaded Scotland. Huntly being informed that the English

had advanced on the 24th of August to a place called Haldanrig, and that they had destroyed great part of the Scottish arid debateable lands, resolved to engage them : and the English were astonished when at day break they saw the Scots drawn up in order of battle. Neither party could now retreat without fighting; and Torphichen, who led the van, consisting of 2000 of the best troops of Scotland, charged the English so furiously that Huntly gained a complete and an easy victory. Above 200 of the English were killed, and 600 taken prisoners ; among whom were their general Sir Robert Bowes, Sir William Mowbray, and about sixty of the most distinguished northern barons ; the earl of Angus escaping by the swiftness of his horse. The loss of the Scots was inconsiderable. Meanwhile the duke of Norfolk, having raised a great army, had orders to march northwards, and to disperse a manifesto, complaining of James for having disappointed him of his interview at York, and reviving the ridiculous claim of superiority over the kingdom of Scotland. It was plain, from the words of this manifesto, that

Henry was still placable towards James ; and that he would easily have dropped that claim, if his nephew would have made any advances towards a reconciliation. The condition of James was now deplorable. The few faithful counsellors he had about him, such as Kirkaldy of Grange, then lord treasurer, plainly intimated that he could have no dependence on his nobles, as he was devoted to the clergy ; and James sometimes, in a fit of distraction, would draw his dagger upon the cardinal and other ecclesiastics, when they came to him with fresh propositions of murder and proscriptions, and drive them out of his presence. But he had no constancy of mind ; and he certainly put into his pocket a bloody scroll that had been brought him by his priests, beginning with the earl of Arran, the first subject of the kingdom. In one of his cooler moments he appointed lord Erskine, and some others of his nobility, to make a fresh attempt to gain time; and Henry even condescended to order the duke of Norfolk (who was then advanced as far as York), the lord privy seal, ths bishop of Durham, and others, to treat

with him. The conferences were short and unsuccessful. The duke bitterly complained that the Scots sought only to amuse him till the season for action was over. In short, he considered both them and Learmonth, who was ordered to attend him, as so many spies, and treated them accordingly. It was the 21st of October before he entered the east borders of Scotland. According to the Scottish historians, his army consisted of 40,000 men ; but the English have fixed it at 20,000. James affected to complain of this invasion as unprovoked ; but he lost no time in preparing to repel the danger. The situation of his nobility, who were pressed by a foreign invasion on the one hand and domestic tyrants on the other, induced them to hold frequent consultations; the king, who was encamped with his army at Falla Moor, hearing of this, removed hastily to Edinburgh; from which he sent orders for his army to advance, and give battle to the duke of Norfolk. The answer of the nobility was, that they were determined not to attack the duke upon English ground; but that, if he invaded Scotland, they knew their duty. The earl of

Huntly, who commanded the van of the Scottish army, consisting of 10,000 men, was of the same opinion ; but no sooner did Norfolk pass the Tweed than he harassed the English army, cut off their foraging parties, and distressed them in such a manner that the duke agreed once more to a conference for peace ; which was managed on the part of the Scots by the bishop of Orkney and Sir James Learmonth ; but nothing was concluded. The English general, rinding it now impossible to prosecute his invasion, repassed the Tweed ; and was harassed in his march by the earl of Huntly, who desisted from the pursuit when his enemies gained English ground. James, whose army at this time amounted to above 30,000 men, continued still at Edinburgh, from which he sent frequent messages to order his nobility and generals to follow the duke of Norfolk into England ; but these were disregarded. James was flattered that now he had it in his power to be revenged for all the indignities that had been offered by England to Scotland. In this he was encouraged by the French ambassador, and the high opinion he had of his own trcops. About the beginning of No-

vember he came to a resolution of reassembling his army, which was disbanded upon the duke of Norfolk's retreat. This project appeared so feasible and so promising that several of the nobility fell in with it, particularly lord Maxwell, the earls of Arran, Cassils, and Glencairn.with lords Fleming, Somerville, and Erskine : others represented, but in vain, that the arms of Scotland had already gained sufficient honor, by obliging the powerful army of the English, with their most experienced general at their head, to make a shameful retreat before a handful ; that the force of Scotland was inferior to that of England ; and that an honorable peace was still practicable.

It was said, in reply to these considerations, that the state of the quarrel was now greatly altered ; that Henry had in his manifesto declared his intention to enslave their country ; that he treated the nobility as his vassals; that the duke of Norfolk had been guilty of burning the dwellings of the defenceless inhabitants, by hying above twenty villages and towns in ashes ; and that no

Scotchman, who was not corrupted by Henry's gold, would oppose the king's will. The last,

perhaps, was the chief argument that prevailed

on lord Maxwell, a nobleman of great honor and

courage, to agree to carry the war into England

by Solway, provided he was at the head of 10,000

men. It was at last agreed that the earl of Arran and the cardinal should openly raise men, as if

they intended to enter the east marches, where

they were to make only a feint, while lord Max-

well was to make the real attempt upon the west.

Private letters were every where circulated to raise the men who were to serve under the lord Max-

well ; among whom were the earJs of Cassils and

Glencairn, the lords Fleming, Somerville, Erskine,

and many other persons of great consideration.

James, who was never suspected of want of cou-

rage, probably would have put himself at the head

of this expedition, had he not been dissuaded

from it by his priests and minions, who reminded

him of the consultations at Falla Moor, and the

other treasonable practices of the nobility. They

added that, most of them being corrupted by the

English gold, he could not be too much on his

guard. He was at last persuaded to repair to the

castle of Lochmaben near Carlaverock, and there

to wait the issue of the inroad. It was probably

at this place that James was prevailed on to come to the fatal resolution of appointing one Oliver Sinclair, a son of the house of Roslin, and a favorite minion at court, to command the army in chief; and his commission was made out accordingly. On the 23d of November the Scots began their march at midnight; and, having passed the Esk, all the adjacent villages were seen in flames by the break of day. Sir Thomas Wharton, the English warden of those marches, Dacres and Mulgrave, hastily raised about 500 men, and drew them up upon an advantageous ground ; when Sinclair, ordering the royal banner to be displayed, and being mounted on the shoulders of two tall men, produced and read his commission. It is impossible to conceive the consternation into which the Scots were thrown upon this occasion ; their leaders setting the example, the whole army declared that they would rather surrender themselves prisoners to the English than submit to be commanded by such a general. In an instant all order in the Scottish army was broken down ; horse and foot, soldiers and noblemen and peasants, were intermingled. The English general

perceived this confusion : 100 of his light-horse

advanced ; they met with no resistance : the

nobles were the first who surrendered themselves

prisoners ; and, the rest of the English advancing, they obtained a bloodless victory ; for even the

women and the boys made prisoners of Scotch

soldiers, and none were killed. Lord Herbert

relates the circumstances of this shameful affair,

and agrees with the Scottish authorities on the

whole ; but mentions that only 800 common

soldiers were made prisoners. The chief pri-

soners were the earls of Cassils and Glencairn,

the lords Maxwell, Fleming, Somerville, Oli-

phant, and Gray, and above 200 gentlemen.

James was then at Carlaverock, about twelve

miles distant from the place of action, depressed

in his spirits, and anxious about the event of the expedition, still called the Raid of Solway Moss.

When the news came, and that the earl of Arran

and the cardinal were returned to Edinburgh,

he was seized with an additional dejection of

mind, which brought him to his grave. In such

a situation every cruel action of his life wound-

ed his conscience ; and he at last sunk into a

sullen melancholy, which admitted of no conso-

lation. From Carlarerock he removed to Falk-

land ; and sometimes expressed himself as if he

thought the whole body of his nobility were in a

conspiracy against him. The presence of the

few attendants who were admitted into his cham-

ber, and who were the wicked instruments of his

misconduct, seemed to aggravate his sufferings,

and he either could not or would not take any

sustenance. His death being now inevitable,

Beaton approached his bed side with a paper, to

which he is said to have directed the king's hand, pretending that it was his last will. On the 18th

of December, while James was in this deplorable

state, a messenger came from Linlithgow, with an

account that the queen was brought to bed of a

daughter ; and the last words he was distinctly

heard to say were, ' It will end as it began : the crown came by a woman, and it will go with

one ; many miseries approach this poor king-

dom : Henry will either master it by arms, or

win it by marriage.' He then turned his face to

the wall, and in broken ejaculations pronounced

the word Solway Moss, and some faint expres-

sions alluding to the disgrace which the Scots

had just suffered there. In this state he lan-

guished for some days ; and died on the 1 3th.

V. HISTORY OF SCOTLAND UNTIL THE UNION OF THE SCOTTISH AND ENGLISH CROWNS. — James V. was succeeded by his infant daughter Mary. He had taken no steps for the security of his kingdom, so that ambitious men had now another opportunity of throwing the public affairs iivto confusion. The situation of Scotland indeed at this time was very critical. Many of the nobility were prisoners in England, and those who remained at home were factious and turbulent. The nation was dispirited. Commotions were daily excited on account of religion, and Henry VIII. had formed a design of adding Scotland to his other dominions. By a testamentary deed which cardinal Beaton had forged in the name of his sovereign, he was appointed tutor to the queen and governor of the realm, and three of the principal nobility were named to act as his counsellors in the administration The nobility and the people, however, calling in question the authenticity of this deed, which he could not establish, the cardinal was degraded ; and the states ad'vanced to the regency James Hamilton,*

earl of Arran, whom they judged to be entitled to this distinction, as the second person in the kingdom, and the nearest heir, after Mary, to the crown. 'The disgrace of cardinal Beaton,' Dr. Stuart observes, ' might have proved the destruction of his party, if the earl of Arran had been endowed with vigor of mind and ability. But he was too indolent to gain partizans, and too irresolute to fix them. Slight difficulties filled him with embarrassment, and gieat ones overpowered him. His enemies, applying themselves to the timidity of his disposition, betrayed him into weaknesses; and the esteem which his

gentleness had procured him in private life was lost in the contempt attending his public conduct, which was feeble, fluctuating, and inconsistent. The attachment which he professed for the reformed religion drew to him the love of the people ; his high birth, and the mildness of his virtues, conciliated their respect ; and, from his name being at the head of the roll of heretics which the clergy had presented to the late king,

a sentiment of tenderness was mingled with his popularity. His conduct corresponded, at first, with the impressions entertained in his favor. Thomas Guillarae and John Rough, two celebrated preachers, were invited to live in his house ; and he permitted them to declaim openly against the errors of the church of Rome. They attacked and exposed the supremacy of the pope, the worship of images, and the invocation of saints. Cardinal Beaton and the prelates were exceedingly provoked, and indefatigably active to defend the established doctrines. This public sanction afforded to the reformation was of little consequence, however, when compared with a measure which was soon after adopted by Robeit lord Maxwell. He proposed that the liberty of reading the scriptures in the vulgar tongue should be permitted to the people ; and that, for the future, no heretical guilt should be inferred against any person for having them in his possession or for making use of them. The regent and the three estates acknowledged the propriety of this proposal. Gavin Dunbar archbishop of Glasgow, and chancellor of Scotland,

protested, indeed, for himselfand for the church, that no act on this subject should pass and be effectual, till a provincial council of all the clergy of the kingdom should consider and determine, whether there was a necessity that the people should consult and study the scriptures in the vulgar tongue ; but, his protestation being disregarded, the bill of the lord Maxwell was carried into a law, and the regent made it generally known by a proclamation. From this period copies of the bible were imported in great numbers from England ; and, men allured by an appeal so flattering to their reason, were proud to recover from the supine ignorance in which they had been kept by an artful priesthood. To read became a common accomplishment ; and books were multiplied in every quarter, which disclosed the pride, the tyranny, and the absurdities of the Romish church and superstitions.' The death of James V. proved very favorable to the ambitious designs of Henry. He now proposed a union of the two kingdoms by the marriage of his son Edward VI. with Mary the young queen of Scotland. To promote this, he

released the noblemen who had been taken prisoners at Solway, after having engaged them on oath, not only to concur in promoting the alliance, but to endeavour to procure him the charge and custody of the young queen, with the government of her kingdom, and the possession of her castles. The earl of Angus, and his brother, who had been fifteen years in exile, accompanied them to Scotland, and brought letters from Henry recommending them to the restitution of their honors and estates. The regent was inclined to favor the demands of persons of such eminent station ; but, though the states were inclined to the marriage, they refused to permit the removal of the queen into England, and treated with contempt the idea of giving the government of Scotland and the care of the castles to the king of England. Sir Ralph Sadler, the English ambassador, exerted all his endeavours to induce the regent to comply with the requisitions of his master; but all his intrigues were unsuccessful ; and Henry at last authorised the commissioners to consent to treaties of amity and marriage, on the most favorable terms that

could be procured. In consequence of these powers, it was agreed that a firm peace and alliance should take place between the two nations and that they should mutually defend and pro tect one another in case of an invasion. The queen was to remain within her own dominions till she was ten years of age ; and Henry was not to claim any share in the government. Six nobles, or their apparent heirs, were to be surrendered to him in security for the conveyance of the young queen into England, and for her marriage with prince Edward, as soon as she was ten years of age. It was also stipulated that, though the queen should have issue by Edward, Scotland should retain not only its name, but its laws and liberties. These conditions, however advantageous to Scotland, yet did not give entire satisfaction. Beaton, who had been imprisoned on suspicion of treasonable schemes, and was now released from his confinement by the influence of the queen-dowager, took all opportunities of exclaiming against the alliance, as tending to destroy the independency of the kingdom. He pointed out to the churchmen the dangers which

arose from the prevalence of heresy, and urged them to unanimity and zeal. Awakening all their fears and selfishness, they granted him a large sum of money, with which he might gain partizans ; the friars were instructed to preach against the treaties with England ; and fanatical men were instructed to display their rage in offering indignities to Sir Ralph Sadler. Cardinal Beaton was not the only antagonist the regent had to deal with. The earls of Argyle, Huntly, Bothwel, and Murray, concurred in the opposition ; and having collected some troops, and possessed themselves of the queen's person, they assumed all the authority of the government. They were joined by Matthew earl of Lennox, who was made to hope that he might espouse the queen-dowager and obtain the regency. He was also inclined to oppose the earl of Arran, from an ancient quarrel between their families, and from a claim he had to supersede him, both in the enjoyment of his personal estates and in the succession to the crown. The regent, alarmed at such a powerful combination, inclined to attend to some advances made him by the queen-

dowager and cardinal. To refuse to confirm the treaties, after he had brought them to a conclusion, was, however, a step so repugnant to,probity, that he could not be prevailed upon to adopt it. He therefore, in a solemn manner, ratified them in the abbey-church of Holyrood House, and commanded the p;reat seal of Scotland to be appended to them. The same day he went to St. Andrews and issued a mandate to the cardi-

nal, requiring him to return to his allegiance. To this the prelate refused to pay any attention, or to move from his castle ; upon which the regent denounced him a rebel, and threatened to compel him to submission by military force. But, in a few daysafter, the pusillanimous regent, meeting with Beaton, forsook the interest of Henry VIII. and embraced that of the queen-dowaeer and of France. Being in haste also to reconcile himself to the church of Rome, he renounced publicly, at Stirling, the opinions of the reformed, and received absolution from the hands of the cardinal. By this mean-spirited

conduct the regent exposed himself to universal contempt, while cardinal Beaton usurped the whole authority. The earl of Lennox, finding that he had no hopes of success in his suit to the queen-dowager, engaged in negociations with Henry, to place himself at the hoad of the Scottish lords who were in the English interest, and to assert the cause of the reformation.

The consequence of all this was a rupture with England. Henry not only delayed to ratify the treaties on his part, but ordered all the Scottish ships in the harbour of England to be taken and confiscated. This violent proceeding inrlamed the national disgusts against the English alliance ; and the party of the cardinal and / queen-dowager thus obtained an increase of popularity. Henry himself, however, was so much accustomed to acts of outrage and violence, that he seemed to think the step he had taken a matter of no moment ; and therefore demanded that the hostages, in tprms of the treaty of marriage, should still be delivered up to him. But the cardinal and regent informed his ambassador, Sir Ralph Sadler, that from their own authority

Ihey could not command any of the nobles to be committed to him as hostages ; and that the offensive strain of behaviour assumed by the English monarch might have altered the senti- ments of the Scottish parliament with regard to a measure of such importance. After much altercation the conferences were broken off: and, as the lords who were released from captivity had promised to return prisoners to England, it now remained with them to fulfil their promise. None of them, however, had the courage to do so, excepting the earl of Cassils; and Henry, being struck with his punctilious sense of honor, dismissed him loaded with presents. Cardinal Beaton, being thus in possession of power, took measures to secure it. The coronation of the queen was celebrated at Stirling; a council was chosen to direct and assist the regent in the greater affairs of state, at the head of which was the queen-dowager: John Hamilton, abbot of Paisley, who had acquired an ascendancy over the regent, was promoted to the privy seal, and made treasurer of the kingdom ; and cardinal Beaton, upon the request of the regent and the three estates, accepted the office of lord high chan-

cellor. After the flatteries and the hopes with which the earl of Lennox had been amused, the cardinal had reason to dread the utmost warmth of his resentment. He had therefore written to Francis I. giving a detail of the critical situation of affairs in Scotland, and entreating him to re-cal to France the earl of Lennox, who was now interested to oppose the influence and operations of the queen-dowager. But the indignation with which the treachery of the cardinal had in-flamed the earl of Lennox precipitated him into immediate action, and defeated the intention of this artifice. In the "hostile situation of his mind towards Scotland, an opportunity of commencing hostilities had presented itself. Five ships had arrived in the Clyde from France, loaded with warlike stores, and having on board the patriarch of Venice, Peter Conta-reni, legate from Paul III., with La Brosse, and James Mesnaige, ambassadors from France ; and 30,000 crowns, which were to be employed in strenghthening the French faction, and to be dis-tributed by the queen-dowager and the cardinal. Prevailing with the commanders of these vessels, who conceived him to be the fast friend of their

monarch, he secured this money for his own use, and deposited the military stores in his castle of Dumbarton, under the care of George Stirling, the deputy governor, who at this time was entirely in his interests. By the successful application of this wealth the earl of Lennox called forth the full exertions of his party in levying a formidable army, witli which he threatened the destruction of the regent and the cardinal, offering them battle in the fields between Leith and Edinburgh. The regent, not being in a condition to accept the challenge of his rival, had recourse to negociation. Cardinal Beaton and the earl of Huntly proposed terms of amity, and exerted themselves with so much address that the earl of Lennox, losing the opportunity of chastising his enemies, consented to an accommodation, and indulged anew the hope of obtaining the queen-dowager in marriage. His army was dismissed, and he threw himself at the feet of his mistress, by whom he was, in appearance, favorably received; but many of his friends were seduced from him under different pretences; and at last, apprehending his total ruin from some secret enterprise, he fled to Glasgow, and fortified himself

in that city. The regent collecting an army

marched against him ; and having defeated his

friend the earl of Glencairn, in a bloody encounter, was able to reduce the place of strength in

which he confided. In this ebb of his fortune, the earl of Lennox had no hope but from England.

The revolution produced in the political state of

Scotland by the arts of cardinal Beaton, while it

defeated the intrigues of Henry VIII., pointed

all its strength against the progress of the refor-

mation. After abandoning his old friends, the

regent, in connexion with the cardinal, was am-

bitious to undo all the services he had rendcn d

to them. The three estates annulled the treaties

of amity and marriage, and empowered commis-

sioners to conclude an alliance with France.

The regent discharged the two preachers Guil-

lame and Rough, v%hom he had invited to im-

pugn the doctrines of the church ; and he drove

back into England many pious persons, whose

zeal had brought them to Scotland, to explain

and advance the new opinions. He caressed

with particular respect the legate whom the pope

had sent to discourage the marriage of the young

queen with the prince of Wales, and to promise

his assistance against the enterprises of Henry VIII. He procured an act of parliament to be

passed for the persecution of heretics; and, upon the foundation of this authority, the most rigorous proceedings were concerted against the reformed ; when the arms of England, rousing the apprehensions of the nation, gave the fullest employment to the regent and his counsellors. In the rage and anguish of disappointed ambition, the earl of Lennox made an offer to assist the views of the king of England; who, treating him as an ally, engaged, in the event of success, to give him in marriage his niece lady Margaret Douglas, and to invest him. in the regency of Scotland. To establish the reformation in Scotland, to acquire the superiority over it to Henry VIII., and to effectuate the marriage of the prince of Wales with the queen of Scots, were the great objects of their confederacy. Henry, though engaged in a war with France, which required all his military force, could not resist the opportunity to execute his vengeance against Scotland. Edward

Seymour earl of Hartford was appointed to command 10,000 men, who were embarked at Tinmouth, about a fleet of 200 ships, under the direction of Sir John Dudley, lord Lisle. This army landed without opposition near Leith, and the earl of Hertford made it known to Sir Adam Otterburn, the provost of Edinburgh, that his commission empowered him to lay the country waste and desolate, unless the regent should deliver up the young queen to the king of England. It was answered that every extremity of distress would be endured, before the Scottish nation would submit to so ignominious a demand : 600 horse from Berwick, under lord Evers, now joined the earl of Hertford. Leith and Edinburgh, after a feeble resistance, yielded to the English commander, who abandoned them to pillage, and then set fire to them. A cruel devastation ensued in the surrounding villages and country, and an immense booty was conveyed on board the English fleet. But, while extreme terror was every where excited, the earl of Hertford reembarked a part of his troops, and ordered the remainder to march with expedition

to the frontiers of England. The regent, assisted by cardinal Beaton and the earls of Huntly, Ar_ryle, Bothwel, and Murray, was active, in the mean time, to collect an army, and to provide for the security of the kingdom. He felt, therefore, the greatest surprise on being relieved so unexpectedly from the most imminent danger; and an expedition conducted with so little discernment did not advance the measures of Henry VIII. To accomplish the marriage of the young queen with the prince of Wales, to possess himself of her person, or to achieve a conquest over Scotland, were all circumstances apparently within the reach of the English commander ; and yet, in the moment of victory, he neglected to prosecute his advantages, and having inflamed the animosities of the Scottish nation, by a display of the passions and cruelty of his master, left them to recover from their disaster, and to improve their resources. The earl of Lennox, taking the opportunity of the English fleet, went to consult with Henry VIII. upon the desperate state of his affairs. He re-

newed his engagements with this monarch ; and received in marriage the lady Margaret Douglas,

with possessions in England. Soon after he arrived in the Frith of Clyde, with eighteen ships and 600 soldiers, that he might secure the castle of Dumbarton, and employ himself in plundering and devastation. But George Stirling, to whom the castle was intrusted, refused to surrender it; and even obliged him to re-embark his troops. After engaging in a few petty incursions and skirmishes, he returned to England. In 1544 Henry consented to a truce ; and Scotland, says Dr. Stuart, after having suffered the miseries of war, was subjected to the horrors of persecution. The regent had procured an act of parliament for the persecution of the reformed ; and the cardinal, to draw to himself an additional splendor and power, had obtained from the pope the dignity of legate a latere. A visitation of his own diocese appeared to him tin most proper method of commencing the proposed extirpation of heresy ; and he carried with him in his train the regent, and many per-

sons of distinction, to assist in his judicatories, and to share in his disgrace. In the town or' Perth many persons were accused and condemned. The most trifling offences were regarded as atrocious crimes, and made the subjects of prosecution and punishment. Robert Lamb was hanged for affirming that the invocation of saints had no merit to save. Willia u Anderson, James Reynold, and James Finlayson, for having abused an image of St. Francis, Inputting horns upon his head. James Hunter, having kept them company, was found to be equally guilty, and hanged likewise. Helen Stirke, having refused, when in labor, to invoke the assistance of the Virgin, was drowned. Many of the burgesses of Perth, being suspected of heresy, were sent into banishment ; and the lord Ruthven, the provost, was upon the same account dismissed from his office. The cardinal was equally strenuous in persecuting heresy elsewhere. But the clamor attending the executions of men of inferior station was now lost in the fame of the martyrdom of Mr. Wishart ; a person who, while he was respectable by his birth, was highly eminent

from the opinion entertained of his capacity and endowments. The historians of the protestant persuasion have spoken of this reformer in terms of the highest admiration. They extol his learning as extensive, insist on the extreme candor of his disposition, and ascribe to him the utmost purity of morals. They even imputed to him the spirit of prophecy. It may be sufficient to affirm that George Wishart was the most eminent preacher who had hitherto appeared in Scotland. His mind was cultivated by reflection and study, and he was amply possessed of those abilities and qualifications which excite the passions of the people. His ministry had been attended with the most flattering success ; and his courage to encounter danger grew with his reputation. The day before he was apprehended, he said to John Knox, ‘ I am weary of the world, since I perceive that men are weary of God.’ He had already reconciled himself to that terrMe death which awaited him. He was found in the house of Cockburn of Ormiston, in East Lothian ; who, refusing to deliver him to the sen-ants of the regent, the earl of

Bothwel, the sheriff of the county, required that lie should be entrusted to his care, and promised liiat no injury should be done to him. But the authority of the regent and his counsellors obliged the earl to surrender his charge. He was conveyed to the cardinal's castle at St. Andrews, and his trial \v;is hurried on. The cardinal and the clergy, proceeding in it without the concurrence of the secular power, adjudged him to be burnt alive*. In the circumstances of his execution there appears a deliberate and most barbarous cruelty. NVhen led out to the stake, he was met by priests, who, mocking his condition, called upon him to pray to the virgin, that she might intercede with her Son for mercy to him. ' Forbear to tempt me, my brethren,' was his mild reply. A black coat of linen was put upon him by one executioner, and bags of powder were fastened to his body by another. Some pieces of ordnance were pointed to the place of execution. He spoke to the spectators, intreating them to remember that he was to die for the true gospel of

Christ. Fire was communicated to the faggots. From a balcony in a tower of his castle, which was hung with tapestry, the cardinal and the prelates, reclining upon rich cushions, beheld the inhuman scene. This insolent triumph, more than all his afflictions, affected the magnanimity of the sufferer. He exclaimed that the enemy, who so proudly solaced himself, would perish in a few days, and be exposed ignominiously in the place which he now occupied. Cardinal Beaton took a pleasure in receiving the congratulations of the clergy upon a deed which it was thought would fill the enemies of the church with terror. But the indignation of the people was more excited than their fears. All ranks of men were disgusted with an exercise of power which despised every boundary of moderation and justice. The prediction of Mr. Wishart, suggested by the general odium which attended the cardinal, was considered by the disciples of this martyr as the effusion of a prophet ; and perhaps gave occasion to the assassination that followed. Their complaints were attended to by Norman Lesley, the eldest son of the earl of Rothes, whom the

cardinal had treated with indignity, though he had profited by his services. He consented to be their leader. The cardinal was in his castle of St. Andrews, which he was fortifying after the strongest fashion of that age. The conspirators, at different times, early in the morning entered into it. The gates were secured ; and appointing a guard, that no intimation of their proceedings might go to the cardinal, they dismissed from the castle all his workmen separately, to the number of 100, and all his domestics, who amounted to no fewer than fifty persons. The eldest son of the earl of Arran, whom he kept as a hostage for his father's behaviour, was alone detained by them. The prelate, alarmed with their noise, looked from his window, and was informed that his castle was taken by Norman Lesley. It was in vain that he endeavoured to secure the door of his chamber by bolts and chests. The conspirators brought fire, and were ready to apply it, when, admitting them, he implored their mercy. Two of them struck him nastily with their swords. But James Melvil, rebuking their passion, told them that this work

and judgment of God, though secret, ought to be done with gravity. He reminded the cardinal, in general terms, of the enormity of his sins, and reproached him in a more particular manner with the death of Mr. Wishart. He swore that no hopes of his riches, no dread of his power, and no hatred to his person, were any motives which actuated him ; but that he was moved to accomplish his destruction by the obstinacy and zeal manifested by him against Christ Jesus and his holy gospel. Wailing for no answer, he. thrust the cardinal three times through the body with his dagger, on the 29th of May, 1546. The rumor that the castle was taken giving an alarm to the inhabitants of St. Andrew's, they came in crowds lo gratify their curiosity, and to offer their assistance, according to the sentiments they entertained. The adherents and dependents of the cardinal were clamorous to see him ; and the conspirators, carrying his dead body to the very window from which he had beheld the sufferings of Mr. Wishart, exposed it to their view.

The truce, in the mean time, which had been

concluded with England was frequently interrupted ; but no memorable battles were fought. Mutual depredations kept alive the hostile spirit of the two kingdoms ; and while the regent was making military preparations, which gave the promise of important events, a treaty of peace was finished between England and France, in which Francis I. took care to comprehend the Scottish nation. In this treaty it was stipulated by Henry that he was not to wage war against Scotland, unless he should be provoked by new and just causes of hostility. But the murderers of cardinal Beaton, apprehensive of their safety, had despatched messengers into England with applications to Henry for assistance ; and, being joined by more than 120 of their friends, they took the resolution of keeping the castle, and of defending themselves. Henry, notwithstanding his treaty with France, resolved to embrace this opportunity of augmenting the disturbances of Scotland. He hastened to collect troops ; and the regent and his counsellors pressed France for supplies in men and money, and military stores and artillery. The high

places which the cardinal occupied were filled up immediately upon his death. John Hamilton, abbot of Paisley, was elected archbishop of St. Andrews, and George earl of Huntly was promoted to be chancellor. By these officers the regent was urged to proceed with vigor against the conspirators ; and it was a matter of the greatest anxiety to him lo recover his eldest son, whom they detained in custody. The clergy had, in the most solemn manner, pronounced them to be accursed ; and agreed to furnish, for four months, a monthly subsidy of £3000 to defray ihe expense of reducing them to obedience.

The queen dowager and the French faction were eager at the same time, to concur in avenging the assassination of a man to whose counsels and services they were so greatly indebted. And, that no dangerous use might be made of the eldest son of the earl of Arran, who, after his father, was the heir of the monarchy, an act of parliament was passed, excluding him from his birthright while he remained in the possession of the

enemies of his country, and substituting his brothers in his place, according to their seniority. The dark politics of Henry suggested the necessity of this expedient; and in its meaning aud tendency there may be remarked the spirit and greatness of a free people. A powerful army laid siege to the castle of St. Andrews, and continued their operations during four months ; but no success attended the assailants. The fortifications were strong ; and a communication with the besieged was open by sea to the king of England, who supplied them with arms and provisions. . The garrison received his pay, and the principal conspirators had pensions from him. In return for his generosity, they were engaged to promote the marriage of his son with the young queen ; to advance the reformation ; and to keep in custody the eldest son of the regent. Negotiation succeeded to hostility ; and as the regent expected assistance from France, and the conspirators had the prospect of support from an English army, both parties were disposed to gain time. A treaty was entered into, in which the regent engaged to procure from Rome an abso-

lution to the conspirators, and to obtain to them from the three estates an exemption from prosecutions of every kind. Upon the part of the besieged, it was stipulated, that, when these conditions were fulfilled, the castle should be surrendered, and the regent's son be delivered up to him. In the mean time Henry VIII. died ; and in a few weeks after Francis I. also paid his debt to nature. But the former, before his death, had recommended the prosecution of the Scottish war; and Henry II., the successor of Francis, was eager to show his attention to the ancient ally of his nation. When the absolution arrived from Rome, the conspirators refused to consider it as valid ; and an expression used by the pope, implying an absurdity, furnished an apology foi their conduct. They knew that the counsellors of Edward VI. were making vigorous preparations to invade Scotland ; they were confident of their present ability to defend themselves; and the advocates for the reformation encouraged them. The latter indeed, in the mean time, adopted but too many of the intolerant maxims of the Roman Catholics, and many of them congratulated the conspirators upon what they called*

their godly deed and enterprise. Rough, who had formerly been chaplain to the regent, entered the castle and joined them. At this time also John Knox began to distinguish himself in an eminent manner, both by his success in argument, and the unbounded freedom of his discourse; while the Roman clergy, every where defeated and ashamed, implored the assistance of the regent and his council, who assured them tnat the laws against heretics should be put in execution.' — Stuart's History. In the mean time the castle of St. Andrews, being invested by a fleet of sixteen sail under admiral Strozzi from France, was obliged to capitulate. Honorable terms were granted to the conspirators ; but, after being conveyed to France, they were cruelly used, from the hatred entertained by the Catholics against" the Protestants. Many were confined in prisons ; and others, among whom, says Dr. Stuart, was John Knox, were sent to the galleys. The castle itself was razed to the ground. The same year, 1547, Scotland was invaded by an English army under the duke of Somerset, who had been chosen protector of England during

the minority of Edward VI. The design of this invasion was to oblige the Scots to comply with the scheme of Henry VIII., and conclude a marriage between Edward and the young queen of Scotland. The English army consisted of 1 3,000 men ; besides which the protector had a fleet of sixty sail, one-half of which were ships of war, and the others were vessels laden with provisions and military stores. On the other hand, the regent opposed him with an army of 40,000. Before the commencement of hostilities, however, the duke of Somerset addressed a letter to the government, in which he pressed the marriage with such powerful arguments, and so clearly showed the benefits which would result from it to both nations, that the regent and his party, who were averse to peace, thought proper to suppress it, and to circulate a report that the English had come to force away the queen, and to reduce the kingdom to a state of dependence. All hopes of an accommodation being thus removed, the English army advanced to give battle to the Scots. They found the latter posted in the most advantageous situation, around the villages of Musselburgh, Inveresk, and Monkton ; so that he could

not force them to an action, at the same time that he found himself in danger of having his communication with his ships cut off, which would have totally deprived his army of the means of subsistence. In this dangerous situation he had again recourse to negociation, and offered terms still more favorable than before. He now declared himself ready to retire into England, and to make ample compensation for the injuries committed by his army, if the Scottish government would promise that the queen should not be contracted to a foreign prince, but should be kept at home till she was of age to choose a husband for herself, with the consent of the nobility. These concessions increased the confidence of the regent so much, that, without taking advantage of the strength of his situation, he resolved to come to a general engagement. The protector moved towards Pinkey, a gentleman's seat, east of Musselburgh ; and the regent, conceiving that he meant to take refuge in his fleet, changed the strong ground in which he was encamped. He commanded his army to pass the Esk, and to approach the Eng-

lish forces, which were posted on the middle of Faside Hill. The earl of Angus led on the van ; the main body marched under the regent ; and the earl of Huntly commanded in the rear. It was the regent's intention to seize the top of the hill. The lord Gray, to defeat this purpose, charged the earl of Angus, at the head of the English cavalry. They were received upon the points of the Scottish spears, which were longer than the lances of the English horsemen, and put to flight. Tha earl of Warwick, more successful with his command of infantry, advanced to the attack. The ordnance from the fleet assisted his operations; and a brisk fire from the English artillery, which was planted on a rising ground, served still more to iniimifhte

the Scottish soldiery. The remaining troops under the protector were moving slowly and in the best order, to take a share in the engagement. The earl of Angus was not well supported by the regent and the earl of Huntly. A panic spread through the Scottish army. It fled in

different ways, presenting a scene of the greatest havoc and confusion. Few perished in the fight ; but the chase continuing in one direction to Edinburgh, and in another to Dalkeith, with the utmost fury, a prodigious slaughter was made. The loss of the English did not amount to 500 men; but 10,000 soldiers perished on the side of the Scots. A multitude of prisoners were taken ; and among these the earl of Huntly, the lord high chancellor.

Amidst the consternation of this decisive victory, the duke of Somerset had a full opportunity of effectuating the marriage and union projected by Henry VIII., and on the subject of which such fond anxiety was entertained by the English nation. But, the cabals of his enemies threatening his destruction at home, he yielded to the necessities of his ambition, and marched back into England. He took precautions, however, to secure an entry into Scotland, both by sea and land. A garrison of 200 men was placed in the isle of St. Kolumba in the Forth, and two ships of war were left as a guard to it. A garrison was also stationed in the castle of Broughty,

)n the mouth of the Tay. When he passed through the Merse and Teviotdale, the leading men of these counties repaired to him ; and, taking an oath of allegiance to king Edward, surrendered their places of strength. Some of these he demolished, and to others he added new fortifications. Hume castle was garrisoned with 200 men, and entrusted to Sir Edward Dudley ; and he posted 300 soldiers, with 200 pioneers, in the castle of Roxburgh, under Sir Ralph Bulmer. The only resource of the regent now was the hope of assistance from France. The young queen was lodged in the castle of Dumbarton, under the care of the lords Erskine and Livingstone ; and ambassadors were sent to Henry II. of France, acquainting him with the disaster at Pinkey, and imploring his assistance. The regent had asked permission from the protector to treat of peace, and the earl of Warwick was appointed to wait for them at Berwick ; but none were ever sent on the part of Scotland. Hostilities were soon recommenced by the English. Lord Gray led an army into Scotland, fortified the town of Haddington, took the castles

of Yester and Dalkeith, laid waste the Merse and the counties of East and Mid-Lothian. On the other hand, in June, 1548, M. De Desse, a French officer of great reputation, landed at Leith with 6000 soldiers, and a formidable train of artillery. In the mean time the regent was in disgrace on account of the disaster at Pinkey ; and the queen-dowager, to supersede his authority, improved this circumstance to her own advantage. As her power and interest could best be supported by France, she resolved to enter into the strictest alliance with that kingdom. It had been proposed that the dauphin of France should marry the queen of Scotland ; and this proposal now met with many partisans, the hostilities of the English having lost a great number of friends to the cause of that country. 1 1 was resolved to send the queen immediately to France, which would remove the cause of the present contentions, and her subsequent marriage with the dauphin would in the fullest manner confirm the friendship betwixt the two nations. The French government also entered deeply into the scheme : and, to promote it, made presents

of great value to many of the Scottish nobility. The regent himself was gained over by a pension of 12,000 livres, and the title of duke of Chatel-herault. M. de Yilleg-agnoni, who commanded four galleys in the harbour of Leith, making a feint as if he intended to proceed instantly to France, tacked about to the north, and, sailing round the isles, received the queen at Dumbar-ton ; whence he conveyed her to France, and delivered her to her uncles, the princes of Lor-raine, in July, 1548. The siege of Haddington had been undertaken as soon as the French auxiliaries arrived, and was now conducted with vigor. To reinforce the garrison 1500 horse advanced from Berwick; but, an ambuscade being laid for them, they were almost totally destroyed. Another body of English troops, however, which amounted only to 300 persons, was more successful. Eluding the vigilance of the Scots and the French, they entered Had-dington. and supplied the besieged with ammu-nition and provisions. Lord Seymour, high admiral of England, made a descent upon Fife with 1 200 men and some pieces of artillery ;

but was driven back to his ships with great slaughter by James Stuart, natural brother to the young queen, who opposed him at the head of the county militia. A second descent was made by him at Montrose ; but, being equally unsuccessful there, he left Scotland without performing any important achievement. Having collected an army of 17,000 men, and adding to it 3000 German Protestants, the protector put it under the direction of the earl of Shrewsbury. Upon the approach of the English, Desse, though he had been reinforced with 1 5,000 Scots, thought it more prudent to retreat than to hazard a decisive battle. He raided the siege of Haddington, and marched to Edinburgh. The earl of Shrewsbury did not follow him to force an engagement : jealousies had arisen between the Scots and the French. The insolence and vanity of the latter, encouraged by their superior skill in military arts, had offended the quick and impatient spirit of the former. The fretfulness of the Scots was augmented by the calamities inseparable from war; and, after the conveyance of the young queen to France, the peculiar advantage con-

ferred upon that kingdom by this transaction was fully understood, and appeared highly disgraceful and impolitic. In this state of their humor Desse found not at Edinburgh the reception he expected. The quartering of his soldiers produced disputes, which ended in an insurrection of the inhabitants. The French fired among the citizens. Several persons of distinction fell, and among these were the provost of Edinburgh and his son. The national discontents and inquietudes were driven, by this event, to the most dangerous extremity ; and

Desse, who was a man of ability, thought of giving employment to his troops, and of flattering the people by the splendor of some martial exploit. The earl of Shrewsbury, after supplying Haddington with troops, provisions, and military stores, retired with his army into England. Its garrison was in the enjoyment of security, and unsuspicious of danger. Marching in the night, Desse reached this important post; and, destroying a fort of observation, prepared to

storm the main gates of the city, when the garrison took the alarm. A French deserter pointing a double cannon to the thickest ranks of the assailants, the shot was incredibly destructive, and threw them into confusion. In the height of their consternation, a vigorous sally was made by the besieged. Desse renewed the assault in the morning, and was again discomfited. He now turned his arms against Broughty castle; and, though unable to reduce it, yet recovered the neighbouring town of Dundee, which had fallen into the possession of the enemy. Hume castle was retaken by stratagem. Desse entered Jedburgh, and put its garrison to the sword; ravaged the English borders in different incursions, and obtained several petty victories. Leith, which from a small village had grown into a town, was fortified by him ; and the island of Inchkeith, nearly opposite to the harbour, being occupied by English troops, he made them prisoners, after a brisk encounter. His activity and valor could not, however, compose the discontents of the Scots ; and, the queen dowager having written to Henry II. to recall him, he was succeeded

in his command by M. de Thermes, who was accompanied into Scotland by Monluc bishop of Valence, a person highly esteemed for his address and ability. This ecclesiastic was designed to supply the loss of cardinal Beaton, and to discharge the office of lord high chancellor of Scotland. But the jealousies of the nation increasing, and the queen-dowager herself suspecting his ambition and turbulence, he soon returned home. De Thermes brought with him from France a reinforcement of 1000 foot, 2000 horse, and 100 men at arms. He erected a fort at Aberlady, to distress the garrison of Haddington, and to intercept its supplies. At Coldingham he destroyed a troop of Spaniards in the English pay. Fast castle was regained by surprise. Distractions in the English court did not permit the protector to act vigorously in the war. The earl of Warwick was diverted from marching an army into Scotland. An infectious distemper had broke out in the garrison at Haddington ; and it could not hold out for any time against the Scots. The earl of Rutland, therefore, with a body of troops, entered the town ; and, after setting fire to it, conducted the garrison and artillery to Berwick.

The regent was soli-

citous to recover the other places still in the

power of the English. De Thermes laid siege

to Broughty castle, and took it. He then be-

sieged Lauder ; and the garrison was about to

surrender at discretion, when the news arrived

that a peace was concluded between France,

England, and Scotland. By this treaty Henry II.

obtained the restitution of Boulogne and its de-

pendencies, which had been taken from him by

the king of England, and far which he paid

400,000 crowns. No opposition was to be given

to the marriage of the queen of Scotland with

the dauphin : the fortresses of Lauder and

Douglas were to be restored to the Scots, and

the English were to destroy the castles of Rox-

burgh and Eymouth. After the ratifications of

the articles, the queen-dowager embarked with

Leon Stozzi for France, attended by many of the

nobility. Having arrived there, she communi-

cated to the king her design of assuming the

government of Scotland, and he promised to

assist her. But the jealousy which prevailed

between the Scots and French rendered the ac-

complishment of this design very difficult. To remove the regent by an act of power might endanger the scheme altogether; but it might be Kssible to persuade him to resign his office, ir this purpose intrigues were immediately commenced ; indeed the regent himself contributed to promote their schemes by his violent persecution of the reformed. The peace was hardly proclaimed, when he provoked the public resentment by an action of sanguinary insolence. Adam Wallace, a man of simple manners, but of gfeat zeal for the reformation, was accused of heresy, and brought to trial in the church of the Black Friars at Edinburgh. In the presence of the regent, the earl of Angus, Huntly, Glencairn, and other persons of distinction and rank, he was charged with preaching without any authority of law, with baptizing one of his own children, and with denying the doctrine of purgatory ; and it was strenuously objected to him that he accounted prayers to the saints and the dead to be a useless superstition ; that he had pronounced the mass to bean idolatrous service; and that he had affirmed that the bread and wine

in the sacrament of the altar, after the words of the consecration, do not change their nature, but continue to be bread and wine. These offences were esteemed too terrible to admit of any pardon.— The earl of Glencairn alone protested against his punishment. The pious sufferer bore with resignation the contumelious insults of the clergy ; and by his courage and patience at the stake recommended the opinions he had embraced. Other acts of atrocity and violence stained the administration of the regent. In his own palace, William Crichton, a man of family and reputation, was assassinated by lord Semple. No attempt was made to punish the murderer. His daughter was the concubine of the archbishop of St. Andrews, and her tears and entreaties were more powerful than justice. John Melvil, a person respectable by his birth and his fortune, had written to an English gentleman, recommending to his care a friend who was then a captive in England. This letter contained no improper information in matters of state ; and no suspicion of any crime against Melvil could be inferred from it. Yet the regent brought him

to trial upon a charge of high treason ; and, for an act of humanity and friendship, he was con-

demned to lose his head. The estate of Melvil,

forfeited to his family, was given to David, the

youngest son of the regent.

Amidst the amusements of the French court,

the queen-dowager was not inattentive to the

scheme of ambition which she had projected.

The earls of Huntly and Sutherland, Marischal

and Cassils, with lord Maxwell, and other per-

sons of eminence who had accompanied her to

France, were gained over to her interests. Ro-

bert Carnegie of Kinnaird, David Panter, bi-

shop of Ross, and Gavin Hamilton, commendator

of Kilwinning, being also at this time in that

kingdom, and having the greatest weight with the

regent, were treated with a most punctilious re-

spect. Henry declared to them his earnest wish

that the queen-dowager might attain the govern-

ment of Scotland. In case the regent should

consent to this measure, he expressed a firm in-

tention that no detriment should happen to his

consequence and affairs; and he desired them

to inform him that he had already confirmed his title of duke of Chatelherault, had advanced his son to be captain of the Scots gendarmes in France, and was ready to tender other marks of favor to his family. With this message, Mr. Carnegie was sent to Scotland ; and a few days after he was followed by the bishop of Ross. The bishop, being a man of eloquence and authority, obtained a promise from the regent to resign; and for this service he received, as a recompense, an abbey in Poitou. The queen-dowager, full of hopes, now prepared to return to Scotland, and in her way thither made use of a safe-conduct obtained from Edward VI. by the king of France. The English monarch, however, had not yet forgot the beautiful queen of Scotland ; and did not fail to urge his superiority of claim to her over the dauphin. The queen-dowager did not seriously enter upon the business: only in general terms complained of the hostilities committed by the English ; and two days after this conversation she proceeded towards Scotland, where she was conducted by the earl of Both well, lord Hume, and some other noblemen, to Edinburgh, amidst the acclamations of

the people. She had not long been returned to the capital, when the bad conduct of the regent afforded her an opportunity of exerting her influence. The regent, having proposed a judicial circuit through the kingdom, under pretence of repressing crimes and disorders, molested the people by plunder and rapine. Great fines were levied for offences pretended as well as real ; and the protestants in particular were the objects of his severity. In his progress he was accompanied by the queen dowager ; and, as she affected to behave in a manner directly opposite, the most disagreeable comparisons were made between her and the regent. The bishop of Ross did not fail to put him in mind of his promise, but he wished still to continue in power. His resolution, however, failed him, on the intimation of a parliamentary enquiry into his administration. An agreement with the queen dowager then took place ; and it was stipulated that he should succeed to the throne upon the death of the queen without issue ; that nis son should enjoy the command of the gendarmes ; that no enquiry should be made into the expen-

diture of the royal treasures ; that no scrutiny into his government should take place; and that he should enjoy in the most ample manner his duchy and his pension. These articles were ratified at an assembly of parliament, and the queen-dowager was formally invested with the regency.

Mary of Lorraine, the new regent, though she had with great difficulty attained the summit of her wishes, seemed to be much less conversant in the arts of government than in those of intrigue. She was scarcely settled in her new office when she rendered herself unpopular by her too great attachment to France, and by her persecution of the Protestants. She was entirely guided by the counsels of her brothers, the duke of Guise and the cardinal of Lorrain ; and paid a devoted attention to those of M. d'Oysel the French ambassador. Several high offices were filled with Frenchmen, which excited the highest resentment of the Scottish nobility; and the commonalty were instantly prejudiced against her by the partiality she showed to the Papists. At first, however, she enacted many salutary laws ;

and, while she made a progress herself through the southern provinces of the kingdom to hold justiciary courts, she endeavoured to introduce order and law into the western counties and isles : first by the earl of Huntly, and afterwards by the earls of Arcyle and Athol, to whom she granted commissions for this purpose. In another improvement, which the queen-regent attempted by the advice of her French council, she found herself opposed by her own people. It was proposed that the possessions of every proprietor of land in the kingdom should be valued and entered into registers ; and that a proportional payment should be made by each. The application of this fund was to maintain a regular and standing body of soldiers. This guard or army, it was urged, being at all times in readiness to march against an enemy, would protect effectually the frontiers; and there would no longer be any necessity for the nobles to be continually in motion on every rumor of hostility or incursion from English invaders. No art, however, or argument could recommend these measures. A perpetual tax and a standing army were conceived to be the genuine charac-

teristics of despotism. All ranks of men considered themselves insulted and abused ; and 300 tenants of the crown assembling at Edinburgh, and giving way to their indignation, sent their remonstrances to the queen-regent in such strong and impressive language as induced her to abandon the scheme. Yet still the attempt which she had made left an impression in the minds of the people. They suspected her to be a secret enemy to their government and liberties ; and they were convinced that Henry II. was engaging her in artifices that he might reduce Scotland to be a province of France. While an alarm about their civil rights was spreading among the people, the Protestants were rising daily in their spirit and in their hopes. John Knox, whose courage had been confirmed by misfortunes, and whose talents had improved by exercise, w?s at this time making a progress through Scotland. The characteristic peculiarities of Popery were the favorite topics of his declamation and censure. He treated the mass, in particular, with the most sovereign contempt, representing it as a remnant of idolatry. Many

of the nobility and gentry afforded him counte-

nance and protection. They invited him to

preach at their houses, and partook with him in

the ordinances of religion after the reformed

method. Religious societies and assemblies

were held publicly in defiance of the Papists;

and celebrated preachers were courted with assi-

duity to officiate in particular districts and towns. The clergy cited him to appear before

them at Edinburgh, in the church of the Black-

friars. On the appointed day he presented him-

self, with a numerous attendance of gentlemen,

who were determined to exert themselves in his

behalf. The priesthood did not choose to pro-

ceed in his prosecution ; and Knox, encouraged

by this symptom of their tear, took the resolu-

tion to explain and inculcate his doctrines re-

peatedly and openly in the capital. In 1556 the

earl of Glencairn took the earl Marischal to hear

the exhortations of this celebrated preacher ; and

they were so much affected with his reasonings

and rhetoric that they requested him to address

the queen-regent upon the subject of the refor-

mation of religion. In compliance with this re-

quest, he wrote a letter in terms more forcible

than pleasing, and the earl of Glencairn delivered

it with his own hand, in the expectation that some advantage might be obtained for the reformed.

But the queen-regent was no less offended with

the freedom of the nobleman than of the preacher ;

and, after perusing the paper, she gave it to

James Beaton, archbishop of Glasgow, with an ex-

pression of disdain : ‘ Here, my lord, is a pas-

quil.’ Amidst these occupations Knox received

an invitation to take the charge of the English

congregation at Geneva ; which he accepted. The

clergy called upon him, in his absence, to appear

before them, condemned him to death as a

heretic, and ordered him to be burned in effigy.

This injurious treatment did not in the least ob-

struct the progress of the reformation. Deser-

tions were made from popery in every town and

village ; and even many members of the church,

both secular and regular, were forward to em-

brace the new principles, and to atone for their

past mistakes by the bitterest railleries against

the corruptions and folly of the Romish faitn.

The priests were treated in all places with ridi-

cule and contempt. The images, crucifixes, and relics, which served to rouse the decaying fervors of superstition, were stolen from the churches, and trampled under foot. The bishops implored the assistance of the queen regent. Citations were given to the preachers to appear in their defence. They obeyed ; but with such a formidable retinue that it was with difficulty she was permitted to apologise for her conduct. James Chalmers of Gaitgirth, pressing forward from the crowd, addressed himself to her : ' We vow to God that the devices of the prelates shall not be carried into execution. We are oppressed to maintain them in their idleness. They seek to undo and murder our preachers and us ; and we are determined to submit no longer to this wickedness.' The multitude, applauding this speech, put their hands to their daggers. A trusty messenger was despatched to Geneva, inviting John Knox to return to his own country; but, upon further consideration, by opposite despatches, Knox was requested to delay his journey for some time. To this zealous reformer their unsteadiness was a matter of serious afflic-

tion; and, in the answer, he rebuked them with

severity, but entreated them not to faint under

their purposes, from apprehensions of danger.

To particular persons he wrote other addresses :

and to all of them the greatest attention was paid, In 1557 a formal bond of agreement, which ob-

tained the appellation of the first covenant, was

entered into, and all the more eminent persons

who favored the reformation were invited to

subscribe it. The earls of Argyle, Glencairn,

and Morton, with the lord Lorn, and John Ers-

kine of Dun, led the way by subscribing it.

AH the subscribers to this deed, renouncing the

superstitions and idolatry of the Church of Rome,

promised to apply continually their whole power

and wealth, and even to give up their lives, to

forward and establish the word of God. They

distinguished the reformed by calling them the

Congregation of Christ ; and, by the opprobrious

title of the Congregation of Satan, they peculiar-

ised the favorers of Popery. After the leaders

of the reformation had subscribed the first cove-

nant they addressed letters to Knox, urging in

the strongest terms his return to Scotland ; and,

that their hopes of his assistance might not be

disappointed, they sent another address to Calvin, the celebrated reformer, begging him lo join his commands to their entreaties. The archbishop of St. Andrews, who perceived the rising storm, was in a difficult situation. A powerful combination threatened ruin to the church ; and he had separated himself from the politics of the queen-regent. The zeal of the Roman Catholics pointed out strong measures to him; and his dispositions were pacific. The clergy were offended with his remissness. The reformers detested his loose principles, fand were shocked with the depravity of his life. He tried the force of address and did not succeed. He then resolved to be severe, and was still more unsuccessful. The earl of Argyle was the most powerful of the reformers. To allure him from his party the archbishop of St. Andrews employed Sir David Hamilton. But the kindness he affected, and the advices he bestowed, were no compliment to this nobleman ; and his threats were despised. The reformers, instead of losing their courage, felt a sentiment of exultation and triumph; and the earl of Argyle dying about

this time he not only maintained the new doc-
trines in his last moments, but entreated his son
to promote the public preaching of the gospel,
and the utter ruin of superstition and idolatry.
At length the archbishop and the prelates resolved
on a furious persecution of the reformed. Walter
Mill, a priest, having been long under the sus-
picion of heresy, was carried to St. Andrews,
committed to prison, and accused before the
archbishop and his suffragans. He was in an
extreme old age ; and had struggled all his life
with poverty. He sunk not, however, under the
hardness of his fate. To the articles of his accu-
sation he replied with signal recollection and
fortitude. The firmness of his mind, in the ema-
ciated state of his body, excited admiration ; and
the insults of his enemies, and their contempt

served to discover his superiority over them.
When the clergy declared him a here'.ic no tem-
poral judge could be found to condemn him to
the fire. He was respited to another day ; and
such great sympathy prevailed for his misfor-

tunes that it was necessary to allure one of the archbishop's domestics to supply the place of the civil power, and to pronounce the sentence of condemnation. When brought to the stake lie praised God that he had been called to seal the truth with his life; and he conjured the people, as they would escape eternal death, not to be overcome by the errors and the artifices of monks and priests, abbots and bishops. The barbarity of this execution affected the reformers with inexpressible horror. Subscriptions for mutual defence were taken. The leaders of the reformation, dispersing their emissaries to every quarter, encouraged the vehemence of the multitude. The covenant to establish a new form of religion extended far and wide. When the leaders of the reformation were apprised of the ardent zeal of the people, and considered the great number of subscriptions which had been collected in the different counties of the kingdom, they assembled to deliberate concerning the steps to be pursued. It was resolved that a public supplication of the whole body of the Protestants should be presented to the queen-regent ; which,

after complaining of the injuries they had suf-

fered, should require her to bestow upon them

her support and assistance, and urge her to pro-

ceed in the work of a reformation. To explain

their full meaning, a schedule, containing parti-

cular demands, was to be presented to her scru-

tiny. To Sir James Sandilands of Calder they

committed the important charge of their mani-

festo and articles of reformation. His character

was in the highest estimation ; his services to his country were numerous ; his integrity and honor

were superior to all suspicion ; and his age and

experience gave him authority and reverence.

The petition of the Protestants was expressed in

strong but respectful terms. They told the

queen regent that, ‘ though they had been pro-

voked by great injuries, they had yet, during a

long period, abstained from assembling them-

selves, and from making known to her their com-

plaints. Banishment, confiscation of goods, and

dwrth in its most cruel shape, were evils with

which the reformed had been afflicted ; and they

were still exposed to these dreadful calamities.

Compelled by their sufferings they presumed to

ask a remedy against the tyranny of the prelates

and the estate ecclesiastical. They had usurped

an unlimited dominion over the minds of men.

Whatever they commanded, though without any

sanction from the word of God, must be obeyed.

Whatever they prohibited, though from their

own authority only, it was necessary to avoid.

All arguments and remonstrances were equally

fruitless and vain. The fire, the faggot, and the

sword, were the weapons with which the church

enforced and vindicated her mandates. By these,

• •f late years, many of their brethren had fallen ; and, upon this account, they were troubled and

wounded in their consciences. For, conceiving

ii!i:mse!ves to be a part of that power which God

had established in this kingdom, it was their

duty to have defended them, or to have concur-

red with them in an open avowal of their com-

mon religion. They now take the opportunity

to make this avowal. They break a silence

which may be misinterpreted into a justification

of the cruelties of their enemies ; and, disdaining all farther dissimulation in matters which con-

cern the glory of God, their present happiness,

and their future salvation, they demand that the

original purity of the Christian religion shall be

restored, and that the government shall be so improved as to afford to them a security in their persons, their opinions, and their property.'

With this petition of the Protestants Sir James Sandilands presented their schedule of demands, or the preliminary articles of the reformation. They were in the spirit of their supplication, and of the following tenor: — 'I. It shall be lawful to the reformed to peruse the Scriptures in the vulgar tongue ; and to employ also their native language in prayer publicly and in private. II. It shall be permitted to any person qualified by knowledge to interpret and explain the difficult passages in the Scriptures. III. The election of ministers shall take place according to the rules of the primitive church ; and those who elect shall enquire diligently into the lives and doctrines of the persons whom they admit to the clerical office. IV. The holy sacrament of baptism shall be celebrated in the vulgar tongue, that its institution and nature may be the more generally understood. V. The holy sacrament of the Lord's Supper shall likewise be administered in the vulgar tongue ; and in this commu-

nion, as well as in the ceremonial of baptism, a becoming respect shall be paid to the plain institution of Christ Jesus. VI. The wicked and licentious lives of the bishops and estate ecclesiastical shall be reformed ; and, if they discharge not the duties of true and faithful pastors, they shall be compelled to desist from iheir ministry and functions.'

The queen-regent now found it necessary to flatter the Protestants. She assured them by Sir James Sandilands, their orator or commissioner, that every thing they could legally desire should be granted to them ; and that, in the mean tune, they might, without molestation, employ the vulgar tongue in their prayers and religious exercises. But, upon the pretence that no encouragement might be given to tumults and riot, she requested that they would hold no public assemblies in Edinburgh or Leith. The Congregation, for this name was now assumed by the Protestants, were transported with these proofs of her regard ; and, while they sought to advance still higher in her esteem by the inoffensive quietness of their carriage, they were encouraged in the

*undertaking they had begun. Nor to the clergy, who at this time were holding a provincial council at Edinburgh, did the Congregation scruple to communicate the articles of the intended reformation. The latter received their demands v*ith a storm of rage, which died away, however, in innocent debility. 1'pon recovering from their passions, they offered to submit the controversy between them and the reformed to a public disputation. The Congregation did not refuse this mode of trial : and desired, as their*

o'lly conditions, that the Scriptures might be considered as the standards of orthodoxy and :mtb, and that those of their brethren who were in exile and under persecution might be permitted to assist them. These reasonable requests were not, however, complied with ; and the church would allow no rule of right but the canon law and its own councils. Terms of reconciliation were then offered on the part of the estate ecclesiastical. It held out to the Protestants the liberty of praying and administering

the sacraments in the vulgar tongue, if they would nay reverence to the mass, acknowledge purgatory, invoke the saints, and admit of petitions for the dead. To conditions so ineffectual and absurd the Congregation did not deign to return any answer. The meeting of the parliament approached. The parties in contention were agitated with anxieties, apprehensions, and hopes. An expectation of firm and open assistance from the queen-regent gave courage to the reformed; and, from the parliamentary influence of their friends in the greater and the lesser baronage, they expected the most important services. They drew up with eagerness the articles which they wished to be passed into a law ; and, as the spirit and sense of their transactions are to be gathered in the completes! manner from the papers which were framed by themselves, it is proper to attend to them. Their petitions were few and explicit. I. They could not, in consequence of principles which they had embraced from a conviction of their truth, participate in the Romish religion. It was therefore their desire that all the acts of parliament giving authority to the church to proceed against them as heretics should be abro-

gated ; or at least that their power should be suspended till the disputes which had arisen were determined and brought to a conclusion. II. They did not mean that all men should be at liberty to profess what religion they pleased, without the control of authority. They consented that all transgressors in matters of faith should be carried before the temporal judge. But it was their wish that the clergy should have only the power to accuse ; and they thought it conformable to justice that a copy of the criminal charge should be lodged with the party upon trial, and that a competent time should be allowed him to defend himself. III. They insisted that every defence consistent with law should be permitted to the party accused; and that objections to witnesses, founded in truth and reason, should operate to his favor. IV. They desired that the party accused should have permission to interpret and explain his own opinions ; and that his declaration should carry a greater evidence than the deposition of any witness ; as no person ought to be punished for religion, who is not obstinate in a wicked or damnable tenet. V. In fine they urged that no

Protestant should be condemned for heresy, without being convicted by the word of God, of the want of that faith which is necessary to salvation. The congregation presented these articles to the queen-regent, expecting that she would not only propose them to the three estates assembled in parliament, but employ all her influence to recommend them. But, finding themselves disappointed, they began to suspect her sincerity ; and they were sensible that their petitions, though they should be carried in parliament, could not pass into a law without her consent. They therefore abstained from presenting them : but, as their complaints and desires were fully known in parliament, they ordered a solemn declaration to be read there in their behalf, and demanded that it should be inserted in the public records. In this declaration, after expressing their regret for having been disappointed in their scheme of reformation, they protested that no blame should be imputed to them for continuing in their religion, which they believed to be founded in the word of God ; that no danger of life, and no political pains, should

be incurred by them, for disregarding statutes which support idolatry, and for violating rites which are of human invention ; and that, if insurrections and tumults should disturb the realm, from the diversity of religious opinions, and if abuses should be corrected by violence, all the guilt, disorder, and inconvenience thence arising, instead of being applied to them, sho d be ascribed solely to those who had refused a timely redress of wrongs, and who had despised petitions presented with the humility of faithful subjects, and for the purposes of establishing the commandments of God, and a most just and salutary reformation. The three estates received this protest with attention and respect ; but the intention of inserting it in the national records was abandoned by the congregation upon a formal promise from the queen-regent that all the matters in controversy should speedily be brought by her to a fortunate issue. While the protestants were thus making the most vigorous exertions in behalf of their spiritual liberties, the queen-regent, to establish herself the more effectually, used every effort to promote the

marriage of her daughter with the dauphin of France. In 1557 commissioners were appointed to negociate this marriage ; but, while these negociations were going on, the court of France acted in the most perfidious manner. At the age of fifteen, after solemnly ratifying the independency of Scotland, and the succession of the crown in the house of Hamilton, queen Mary was influenced by the king and her uncles, the princes of Lorrain, to sign privately three extraordinary deeds or instruments. By the first she conveyed the kingdom of Scotland to the king of France and his heirs, in the default of children of her own body. By the second she assigned him, if he should die without children, the possession of Scotland, till he should receive a million of pieces of gold, or be amply recompensed for the sums expended by him in the education of the queen of Scotland in France. By the third she confirmed both these grants in an express declaration that they contained the pure and genuine sentiments of her mind ; and that any papers which might be obtained, either before or after her marriage, by means of the

Scottish parliament, should be invalid, and of no force nor efficacy. On the 24th of April the nuptials were celebrated with uncommon pomp ; and the dauphin Francis was allowed to assume the title of king of Scotland.

The French court demanded for the dauphin the crown and other ensigns of royalty belonging to Scotland ; but the commissioners had no power to comply with the request. It was then desired that, when they returned home, they should use all their influence to procure the crown matrimonial of Scotland for the dauphin. This also was refused ; the court of France was disgusted; and four of the commissioners died, it was supposed of poison, given them by the princes of Lorrain. This subject, however, was pressed, on the return of the surviving commissioners, by the king of France himself, the queen of Scotland, and the queen-regent. The Protestants also joined their interest, hoping thereby to gain over the queen and queen-regent to their party; so that an act of parliament was at length

passed, by which the crown matrimonial was given to the dauphin during the time of his marriage with queen Mary; but without any prejudice to the liberties of the kingdom, to the heirs of her body, or to the order of succession. With so many restraints it is difficult to see the advantages which could accrue from this gift so earnestly sought after ; and it is very probable that the usurpations of France in consequence of it would have been productive of many disturbances ; but these were prevented by the death of Francis II., in December 1560. But before this event took place, Scotland was, by the intrigues of France, involved in confusion on another account. After the death of Mary I. queen of England, and daughter to Henry VrIII., the princes of Guise insisted on the claim of Mary queen of Scots to the crown of England, in preference to that of Elizabeth, whom they looked upon as illegitimate. This claim was supported by the king of France, who prevailed with the queen of Scots herself to assume the title of queen of England, and to stamp money under that character. The arms of England were quartered*

with those of France and Scotland ; and employed as ornaments for the plate and furniture of Mary and the dauphin. Thus was laid the foundation of an irreconcileable quarrel between Elizabeth and Mary ; and to this we may ascribe the inveteracy with which the former persecuted the unhappy queen of Scotland every time she had it in her power. But, while they imprudently excited a quarrel with England, they yet more imprudently quarrelled also with the majority of the people of Scotland. As Elizabeth professed the Protestant religion, it was easily foreseen that the congregation, or body of the reformed in Scotland, would never consent to act against her in favor of a popish power; and, as they could not be gained, it was resolved to destroy them at once by putting to death all their leaders. The queen regent gave intimation of her design to re-establish popjry by proclaiming a solemn observance of Easter, receiving the sacrament according to the Romish communion herself, and commanding all her household to receive it in the same manner. She next expressed herself in a contemptuous manner against the re-

formed, affirmed that they had insulted the royal dignity, and declared her intention of restoring it to its ancient lustre. The preachers of the congregation were next cited to appear at Stirling to answer the charges which might be brought against them. Alexander earl of Glencaira, and Sir Hugh Campbell of Louden, were deputed to admonish her not to persecute the preachers unless they had been obnoxious, by circulating erroneous doctrines, or disturbing the peace of government. The queen-regent, in a passion, told them that the preachers should be all banished Scotland though their doctrines were as sound as those of St. Paul. The deputies urged her former kind behaviour and promises; but the queen-regent answered that ‘ the promises of princes ought not to be exacted with rigor, and that they were binding only when subservient to their conveniency and pleasure.’ To this they replied that in such a case they could not look upon her as their sovereign, and must renounce their allegiance as subjects. Soon after this transaction the queen-regent received the news that the reformation was established in Perth.

Lord Ruthven, the provost of the city, was summoned to answer for this innovation ; but his reply was that he had no dominion over the minds and consciences of men. The provost of Dundee, being ordered to apprehend an eminent preacher, named Paul Methven, sent him intelligence of the order that he might provide for his safety. The proclamation for observing Easter was every where despised and neglected, and people exclaimed against the mass as an idol New citations, in the mean time, had been given to the preachers to appear at Stirling. They obeyed the summons ; but attended by such multitudes that the queen-regent, dreading their power, though they were without arms, intreated Mr. Erskine of Dun, whom they had sent before as a deputy, to stop their march ; assuring him that all proceedings against the preachers should be stopped. In consequence of this the multitude dismissed ; yet, when the day came on which the preachers should have appeared, the queen-regent, with unparalleled folly as well as treachery, caused them to be declared traitors, and proclaimed it criminal to afford them any subsistence. Mr. Erskine, exasperated by this

shameful conduct, hastened to the congregation, apologised for his conduct, and urged them to proceed to the last extremities. At this critical period also John Knox, returning from Geneva, joined the Congregation at Perth, and pointed all the thunder of his eloquence against idolatry. A priest, in contempt of this reformer's rhetoric, prepared immediately after his sermon to say mass; and, opening a case which stood upon the altar, displayed the images of the saints. The great provocations which the Protestants had received, joined to the impious passions of the multitude thus excited, were now productive of the greatest disorders. Images were destroyed, monasteries pulled down, and their wealth either seized by the mob or given to the poor. The celebrated monasteries of the Gray and Black Friars, with that of the Carthusians, were attacked and demolished. The example of Perth was followed by Cupar in Fife ; and, similar insurrections being apprehended in other places, the queen-regent determined to punish the inhabitants of Perth in the most exemplary manner. But the gentlemen of Fife, Angus, and Mearns

assembling their friends and dependents, formed a camp near Perth. The earl of Glencairn, with admirable celerity, advanced from Ayrshire with 2500 men. The queen-dowager also collected an army, but, being opposed by such a formidable power by the Protestants, she thought proper to conclude an agreement. The Protestants, however, dreaded her insincerity ; and therefore entered into a second covenant to stand by and defend one another. Their fears were not vain. The queen-regent violated the treaty almost as soon as made, and began to treat the Protestants with severity. The earl of Argyle, and the prior of St. Andrew's, who about this time began to take the title of lord James Stuart, now openly headed the Protestant party, and prepared to collect their whole strength. The queen-regent opposed them with what forces she had, and which indeed chiefly consisted of her French auxiliaries ; but, being again afraid of coming to an engagement, she consented to a truce until commissioners should be sent to treat with the lords of an effectual peace. No commissioners,

however, were sent oa her part ; and the nobles, provoked by such complicated and unceasing treachery, resolved to push matters to the utmost extremity. The first exploit of the reformed was the taking of the town of Perth, where the queen-regent had placed a French garrison. The multitude, elated with this achievement, destroyed the palace and abbey of Scone, in spite of all the endeavours of their leaders, and even of Knox himself to save them. The queen-regent, apprehensive that the congregation would commit farther ravages to the southward, resolved to throw a garrison into Stirling; but the earl of Argyle and lord James Stuart anticipated her design, and arrived there the very day after the demolition of the abbey and palace of Scone. The people, incapable of restraint, and provoked beyond measure by the perfidious behaviour of the Catholic parly, demolished all the monasteries in the neighbourhood, together with the fine abbey of Cambuskenneth, situated on the bank of the Forth. From Stirling they went to Linlithgow, where they committed their usual ravages upon every thing that they reckoned relics of idolatry; after which they advanced to

Edinburgh : the queen-regent, alarmed at their approach, fled to Dunbar; and the Protestants took up their residence in Edinburgh.

The congregation, having thus got possession of the capital, assumed to themselves the ruling power of the kingdom, appointing preachers in all the churches, and seized the mint, with all the instruments of coinage. The queen-regent, unable to dispute the matter in the field, published a manifesto, in which she set forth their seditious behaviour, commanding them to leave Edinburgh within six hours, and enjoining her subjects to avoid their society under the pain of treason. The congregation having already lost somewhat of their popularity, by their violent proceedings, were now incapable of coping with government. As they had not established themselves in any regular body, or provided a fund for their support, they felt their strength decay, and multitudes of them returned to their habitations. Those who remained found themselves obliged to vindicate their conduct; and, in an address to the regent, to disclaim all treasonable intentions. Negociations again took place,

which ended abortively, and the queen-regent, who had taker, this opportunity of collecting her forces, marched against the congregation on the 23d of July, 1559. At length the Protestants, finding themselves incapable of making head against their enemies, entered into a negociation, by which all differences were for the present accommodated. The terms of this treaty were, that the town of Edinburgh should be open to the queen-dowage"r and her attendants ; that the palace of Holyrood House and the mint should be del'ivered up to her ; that the Protestants should be subject to the laws, and abstain from molesting the Roman Catholics in the exercise of their religion. On the queen's part, it was agreed, that the Protestants should have the free exercise of taeir religion, and that no foreign troops should entei the city of Edinburgh. Notwithstanding this treaty, the reformed had no confidence in the queen's sincerity. Having heard of the death of Henry IT. of France, and the accession of Francis II. and Mary to that kingdom, they seem to have dreaded more danger than ever. They now entered into a third covenant;

in which they engaged to refuse attendance to the queen-dowager, in case of any message or letter ; and that, immediately on the receipt of any notice from her to any of their number, it should be communicated without reserve, and be made a common subject of scrutiny and deliberation. It was not long before they had occasion for all their constancy and strength. The queen-regent repented of the favorable terms she had granted the reformed; and, being denied the favor which she requested of saying mass in the High church of Edinburgh, she ordered them to be every where disturbed in the exercise of their religion. In this imprudent measure, the quevn-regent was confirmed by letters which now came from Francis and Mary, promising a powerful army to support her. The envoy who brought these despatches also carried letters to lord James Stuart, now the principal leader of the Protestants, and natural brother to the queen. These letters were filled with reproaches and menaces, mixed with entreaties; and along with them the envoy delivered a verbal message, that the king fas master was resolved rather to ex-

pend all the treasures of France than not to be reve-ged on the rebellious nobles who had disturbed the peace of Scotland. Lord James Stu:-i was not tooe frightened by these menaces, lie returned a cool and deliberate answer, apologising for the Protestants, and vindicating them from the charge of rebellion ; but at the same time intimating his full resolution of continuing to head the reformed, as he had already done. The letters of Francis and Mary were soon followed by 1000 French soldiers, with money and military stores ; and the commander was immediately despatched again to France, to solicit the assistance of as many more soldiers, with four ships of war, and 100 men at arms. But, before he could set out, La Bosse, another French commander, arrived with 2000 infantry; and, that the congregation might be defeated not only

by arms but in disputation, the same ship brought three doctors of the Sorbonne, to show the pernicious tendency of the new doctrines. Thus matters were pushed beyond all hopes of recon-

ciliation. The nation was universally alarmed on account of the introduction of French troops, to which they saw no end: the queen-regent attempted to quiet the minds of the public by a proclamation ; but their fears increased the more. The congregation assembled at Stirling, where they were joined by the earl of Arran, and soon after by his father the duke of Chatelherault. They now deliberated on the measures to be followed with the queen-regent; and the result of their consultations was, that an expostulatory letter should be addressed to her. This was accordingly done; but, as the queen behaved with her usual duplicity, the nobles called the people to arms: mutual manifestoes were published ; and both parties prepared to decide the contest by the sword. The congregation having seized Broughty castle, marched thence to Edinburgh. The queen-regent retired to Leith, which she had fortified and filled with French troops. Thither the nobles sent their last message to her, charging her with a design to overthrow the liberties of the kingdom. They requested her to command her Frenchmen and mercenaries to

depart from Leith, and to make that place open and patent, not only to the inhabitants who had been dispossessed of their houses, but to all the inhabitants of Scotland. They declared that her denial of this request should be considered by them as a proof of her intention to reduce the kingdom to slavery ; in which case they were determined to employ their utmost power to preserve its independency. Two days after this message the queen-regent sent to them the lord Lyon, whom she enjoined to tell them that she considered their demand not only as presumptuous, but as an encroachment on the royal authority; that it was an indignity to her to be dictated to by subjects ; that Frenchmen were not to be treated as foreigners, being entitled to the same privileges with Scotchmen ; and that she would neither disband her troops, nor command the town of Leith to be made open and patent. The lord Lyon then, in the name of the queen-regent, commanded the lords of the congregation to depart from Edinburgh and disperse themselves under the pain of high treason. The Protestants irritated by this answer, after some

deliberation, degraded the queen-regent ; and to this purpose the nobility, barons, and burgesses, all agreed in subscribing an edict, which was sent to the principal cities in Scotland and published in them.

The next step taken by the 'congregation was to summon Leith to surrender; but, meeting with defiance instead of submission, it was resolved to take the town by scalade. For this service ladders were framed in the church of St. Giles ; a business which, interrupting the preachers in the exercise of pubjic worship, made them prognosticate misfortune and miscarriage to the congregation. In the displeasure of the preachers the common people found a source of complaint ; and the emissaries of the queen-dowager acting with indefatigable industry to divide her adversaries, and spread chagrin and dissatisfaction among them, discontent, animosity, and terror,, prevailed to a great degree. The duke of Clutelherault discouraged many by his example. Defection from the Protestants added strength to the queen-dowager. The most secret deliberations of the confederated lords were revealed to her.

The soldiery were clamorous for pay ; and it was very difficult to procure money to satisfy their claims. Attempts to soothe and appease them, discovering their consequence, engendered mutinies. They put to death a domestic of the earl of Argyle, who endeavoured to compose them to order; they insulted several persons of rank who discovered a solicitude to pacify them ; and they even ventured to declare that, for a proper reward, they were ready to suppress the reformation, and to re-establish the mass. It was absolutely necessary to give satisfaction to the Protestant soldiers. The lords and gentlemen of the congregation collected a considerable sum among them ; but it was not equal to the exigency. The avarice of many withheld what they could afford, and the poverty of others did not permit them to indulge their generosity. It was resolved that each nobleman should surrender his silver plate to be struck into money. By the address, however, of the queen-dowager, the officers of the mint were bribed to conceal, or to convey to a distance, the stamps and instruments of coinage. A gloomy despair gave dis-

quiet to the congregation, and. threatened their ruin. Queen Elizabeth, with whose ministers the confederated lords maintained a correspondence at this time, had frequently promised them her assistance ; but they could not now wait the event of a deputation to the court of England. In an extremity so pressing they therefore applied for a sum of money to Sir Ralph Sadler and Sir James Croft, the governors of Berwick; and Cockburn of Ormiston, who was entrusted with this commission, obtained from them an aid of 4000 crowns. Traitors, however, in the councils of the congregation, having informed the queen-dowager of his errand and expedition, the earl of Bothwel, by her order, intercepted him upon his return, discomfited his retinue, and made a prize of the English subsidy. To rouse the spirit of the party, an attack was projected upon Leith, and some pieces of artillery were planted against it ; but, before any charge could be made, the French soldiers sallied out to give battle to the troops of the congregation, possessed themselves of their cannon, and drove them back to Edinburgh. A report that

the victors had entered the city with the fugitives filled it with disorder and dismay. The earl of

Argyle and his Highlanders hastened to recover

the honor of the day, and harassed the French in

their retreat. This petty conflict, while it elated

the queen-dowager, served to augment the

despondence of the Protestants. Vain of their

prowess, the French made a new sally from

Leith, to intercept a supply of provisions and

stores for the congregation. The earl of Arran

and lord James Stuart attacked them, and obliged

them to retire ; but, pursuing them with too

much heat, a fresh body of French troops made

its appearance. It was prudent to retreat, but

difficult. An obstinate resistance was made.

It was the object of the French to cut oft' the

soldiery of the congregation from Edinburgh,

and by these means to divide the strength of that

station. The earl of Arran and lord James Stuart

had occasion for all their address and courage.

Though they were able, however, to effect their

escape, their loss was considerable, and the victory was manifestly on'the side of their adversaries.

About this time William Maitland of Lethington, secretary to the queen-dowager, withdrew secretly from Leith, and joined himself to the confederated nobles. He had been disgusted with the jealousies of the French counsellors, and was exposed to danger from having embraced the doctrines of the reformed. His reception was cordial, and corresponded to the opinion entertained of his wisdom and experience. He was skilled in business, adorned with literature, and accustomed to reflection ; but it was not knbwn that he wanted integrity. The accession of this statesman to their party could not console the lords of the congregation for the unpromising aspect of their affairs. Those who affected prudence retired privately from a cause which they accounted desperate, and the timorous fled with precipitation. The distrust of the brethren was infectious; and excited the ridicule and scorn of the partisans of the queen-dowager. In this distress the associated nobles resolved to abandon the capital. A little after midnight they retired from Edinburgh ; and so great was the panic that they marched to Stirling without any stop.

John Knox, who had accompanied the congregation to Stirling, anxious to restore their unanimity and courage, addressed them from the pulpit. He represented their misfortunes as the consequences of their sins ; and, entreating them to remember the goodness of their cause, assured them in the end of joy, honor, and victory. His popular eloquence, corresponding to all their warmest wishes, diffused satisfaction and cheerfulness. They passed from despair to hope. A council was held, in which the confederated nobles determined to solicit, by a formal embassy, the aid of queen Elizabeth. Maitland of Letliington and Robert Melvil were chosen to negociate this important transaction ; and they received the fullest instructions concerning the state and difficulties of the congregation, the tyrannical designs of the queen-dowager, and the danger which threatened England from the union of Scotland with France. The queen of England determined to assist the reformers; whose leaders now dispersed themselves, and went to different parts of the kingdom to exert their activity for the common cause. The queen-dow'ager, ima-

gining that the lords were fled, conceived great hopes of being able to crush the reformed at once. Her sanguine hopes, however, were soon checked on hearing that queen Elizabeth was resolved to assist them. She now determined to crush her enemies before they could receive any assistance from England. Her French troops took the road to Stirling, and wasted in their march all the grounds which belonged to the favorites of the reformation. After renewing their depredations at Stirling they passed the bridge; and, proceeding along the side of the river, exercised their cruelties in a district which had distinguished itself by an ardent zeal against popery. , While the terror of their arms was thus diffusing itself, they resolved to seize the town and castle of St. Andrews, which they considered as an important military station, and as a convenient place of reception for the auxiliaries they expected from France. But lord James Stuart employed himself to interrupt their progress and retard their attempts ; and, to keep the force of the Congregation entire, he hazarded no action of importance. A small advantage was obtained by the French at Petticur ; and they took King-

horn. Lord James Stuart, with 500 horse and 100 foot, entered Dysart. With this inconsiderable strength he proposed to act against an army of 4000 men. His admirable skill in military affairs and his heroic courage were eminently displayed.

During twenty days he prevented the inarch of the French to St. Andrews, intercepting their provisions, harassing them with skirmishes, and intimidating them by the address and boldness of his stratagems. M. d'Oysel, enragad and ashamed to be disconcerted by a body of men so disproportioned to his army, exerted himself with vigor. Lord James Stuart was obliged to retire. Dysart and Wemys were given to the French troops to be pillaged ; and, when d'Oysel was in full march to St. Andrews, he discovered a powerful fleet bearing up the Frith. It was concluded that the supplies expected from France were arrived. Guns were fired by his soldiers, and their joy was indulged in all its extravagance. But this fleet having taken the vessels which contained their provisions, and the ordnance with which they intended to improve the fortifications of the castle at St. Andrews, a period was put to their rejoicings. Certain news was

brought that the fleet they observed was the navy of England, which had come to support the congregation. A consternation, heightened by the giddiness of their preceding transports, invaded them. M. d'Oysel perceived now the value and merit of the service which had been performed by lord James Stuart ; and, thinking no more of St. Andrews and conquest, fled to Stirling, in his way to Leith, from which he dreaded to be intercepted : — he reached that important station after a march of three days. A formal treaty was now concluded between the lords of the Congregation and queen Elizabeth.

In the mean time the queen dowager was disappointed in her expectations from France. The violent administration of the house of Guise had involved that nation in troubles and distresses. Its credit was greatly sunk, and its treasury wns near exhausted. Persecutions, and the spirit of reaction, produced commotions and conspiracies ; and, amidst domestic and dangerous intrigues and struggles, Scotland failed to engage that particular distinction which had been promised to its affairs. It was not, however, ne-

glected altogether. The count de Martigues had arrived at Leith with 1000 foot and a few horse. The marquis D'Elbeuf had embarked for it wiih another body of soldiers; but, after losing several ships in a furious tempest, was obliged to return to the haven from which he had sailed. In this sad reverse of fortune many forsook the queen-

dowager. It was now understood that the Eng-•ish army was upon its march to Scotland. The Scottish lords who had preserved a neutrality, meditated a union with the Protestants. The earl of Huntly gave a solemn assurance that he would join them. Proclamations were issued throughout the kingdom, calling upon the subjects of Scotland to assemble in arms at Linlithgow, to re-establish their ancient freedom, and to assist in the utter expulsion of the French soldiery. The English fleet, meanwhile, under Winter the vice-admiral, had taken and destroyed several ships, had landed some troops upon Inchkeith, and discomfited a body of French mercenaries. Upon these acts of hostility, the princes

of Lorrain despatched the chevalier de Seure to queen Elizabeth, to make representations against this breach of the peace, and to urge the recall of her ships. This ambassador affected likewise to negociate concerning the evacuation of Scotland by the French troops, and to propose methods by which the king of France might quarter the arms of England without prejudice to queen Elizabeth. But to prevent the execution of vigorous resolutions against the queen-dowager, and to gain time, were the only objects he had in view. With similar intentions Mouluc, bishop of Valence, a man of greater address and ability, and equally devoted to the house of Guise, was also sent at this time to the court of England. Queen Elizabeth, however, and her ministers, were too wise to be amused by artifice and dexterity. Lord Grey entered Scotland with an army of 1200 horse and 6000 foot ; and lord Scroop, Sir James Croft, Sir Henry Percy, and Sir Francis Lake commmanded under him. By an inhuman policy, the queen-dowager had already wasted all the country around the capital. But the desolation she had made, while it was ruinous to the Scottish peasants, affected not

the army of England. The leaders of the congregation had provided against this difficulty. The duke of Chatelherault, the earls of Argyle, Glencairn, and Monteith, the lord James Stuart, and the lords Ruthven, Boyd, and Ochiltree, with a numerous and formidable force, joined the English commander at Preston. Struck with the sad condition of her affairs, despairing of a timely and proper succor from France, and reminded by sickness of her mortality, the queen-dowager retired from Leith to the castle of Edinburgh, and put herself under the protection of lord Erskine. At the period when she was appointed to the regency lord Erskine had received from the three estates the charge of this important fortress, with the injunction to hold it till he should know their farther orders ; and, giving way to the solicitations of neither faction, he had kept it with fidelity. By admitting the queen-dowager, he yielded to sentiments of honor and humanity, and yet did not depart from his duty. A few only of her domestics accompanied her, with the archbishop of St. Andrews, the bishop of Dunkeld, and the earl Marischal,

The confederated nobles now assembled at Dalkeith to hold a council ; and, conforming to those maxims of prudence and equity which, upon the eve of hostilities, had been formerly exercised by them, they invited the queen-dowager to an amicable conclusion of the present troubles. In a letter which they wrote to her they called to her remembrance the frequent manifestoes and messages in which they had pressed her to dismiss the French soldiery, who had so long oppressed the lower ranks of the people, and who threatened to reduce the kingdom itself to servitude. The aversion, however, with which she had constantly received their suit and prayers was so great that they had given way to a strong necessity, and had intreated the assistance of the queen of England to expel these strangers by force of arms. But, though they had obtained the powerful protection of this princess, they were yet animated with a becoming respect for the mother of their sovereign ; and, abhorring to stain the ground with Christian blood, were disposed once more to solicit the dismission of these mercenaries, with their

officers and captains: and, that no just objection might remain against the grant of this their last request, they assured her that a safe passage by land, to the ports of England, should be allowed to the French ; or that, if they judged it more agreeable, the navy of queen Elizabeth should transport them to their own country. If these proposals should be rejected, they appealed and protested to God and to mankind, that no motive of malice, or hatred, or wickedness of any kind, had induced them to employ the fatal expedient of arms ; but that they had been compelled to this distressful remedy, for the preservation of their commonwealth, religion, persons, estates, and posterity. They begged her to waigh the equity of their petitions, to consider the inconveniences of war, and to think on the rest and quiet which were necessary to relieve the afflictions of her daughter's kingdom ; and they besought her to embalm her own memory, by an immortal deed of wisdom, humanity, and justice. To give authority and weight to the letter of the associated lords, lord Grey directed Sir George Howard and Sir James Croft to wait

upon the queen-dowager, and to stipulate the peaceable departure of the English troops, upon the condition that the French mercenaries were immediately dismissed from her service, and prohibited from residing in Scotland. Returning no direct answer to the applications made to her, she desired time to deliberate upon the resolution which it became her to adopt. This equivocal behaviour corresponded with the spirit of intrigue which had uniformly distinguished the queen-dowager ; and it is probable that her engagements with France did not permit her to be explicit. The combined armies marched towards Leith. A body of the French, posted upon a rising ground, called Hawk Hill, disputed their progress. During five hours the conflict was maintained with obstinate valor. At length the Scottish horsemen charged the French with a fury which they were unable to resist. They fled to Leith with precipitation ; and might have been cut off from it altogether, if the English cavalry had exerted themselves : 300 French soldiers perished in this action, and a few only on the side of the congregation. Leith

was invested. The pavilions and tents of the English and Scottish nobility were planted at llestalrig, arid around it. Trenches were cast ; and, the ordnance from the town annoying the combined armies, a mount was raised, upon which eight cannons were erected. A continued fire from these, against St. Anthony's tower in South Leith, being kept up and managed with skill, the walls of this fabric were shaken, and the French found it necessary to dismount their artillery. Negligent from security, and apprehensive of no attack, the English and Scottish officers occupied themselves in amusements, and permitted a relaxation of military discipline. The French, informed of this levity, made a sally from Leith. While some of the captains were diverting themselves at Edinburgh, and the soldiery were engaged at dice and cards, they entered the trenches unobserved, and, pushing their advantage, put 600 men to the sword. After this slaughter, the Protestants were more attentive to their affairs. Mounts were built at proper

distances, which, being fortified with ordnance, served as places of retreat and defence in the event of sudden incursions ; and thus they continued the blockade in a more effectual manner. The army under the marquis D'Elbeuf, promised so often to the queen-regent, was in vain expected by her; but she received, at this time, supplies in money and military stores ; and Monluc, bishop of Valence, though defeated in dexterity by Elizabeth and her ministers, had arrived in Scotland to try anew the arts of negotiation. Conferences were held by him with the queen-dowager, with the English commanders, and with the confederated nobles ; but no agreement could be concluded. His credentials neither extended to the demolition of Leith, nor to the recall of the French mercenaries : and, though he obtained powers from his court to consent to the former of these measures, they were yet burdened with conditions which were disgraceful to the congregation ; who, in the present prosperous state of their fortunes, were not disposed to give up any of the objects for which they had struggled so long, and to the attainment of

which they now looked forward with a settled hope. Though the orations of Monluc could not overpower the stubborn sense of the congregation, yet as he affected to give them admonitions and warnings, and even ventured to insult them with menaces, they appear to have conceived a high indignation against him. Under this impulse, and that, in so advanced a stage of their affairs, they might exhibit the determined firmness of their resolutions, and bind to them by an indissoluble tie the earl of Huntly and the other persons who had joined them in consequence of the English alliance, they entered into a new league and covenant, more solemn, expressive, and resolute, than any which they had yet subscribed. The nobles, barons, and inferior persons, v'io were parties to this bond, bound themselves in the presence of Almighty God, as a society, and as individuals, to advance and set forward the reformation of religion, and to procure, by every possible means, the true preaching; of the Gospel, with the proper administration of the sacraments and other ordinances. Deeply affected, at the same time, with the misconduct

of the French statesmen, who had been promoted to high offices ; with the oppressions of the French mercenaries, whom the queen-dowager kept up and maintained under the color of authority ; with the tyranny of their captains; and with the manifest danger of conquest to which the country was exposed, by different fortifications upon the sea-coast, and by other dangerous innovations ; they promised and engaged, generally and individually, to join with the English army, and to concur in an honest, plain, and unreserved resolution to expel all foreigners from the realm, as oppressors of public liberty ; that, by recovering the ancient rights, privileges, and freedom of their nation, they might live for the future under the due obedience of their king and queen, be ruled by the laws and customs of the country, and by officers and statesmen born and educated among them. It was likewise contracted and agreed by the subscribers to this bond and covenant that no private intelligence by writing or message, or communication of any kind, should be kept up with their adversaries. When the strong and fervid sentiments of this new associa-

tion were communicated to the queen-dowager, she resigned herself to sorrow. Her mind, inclined to despondence by the increase of her malady, felt the more intensely the cruel distractions into which the kingdom had been driven by the ambition of France, her own dealing affection for the princes of Lorrain, and the vain prognostications of flatterers. In the agony of passion she is said to have invoked the curse of God to alight upon all those who had counselled her to persecute the preachers, and to refuse the petitions of the most honorable portion of her subjects. In the mean time the siege of Leith was prosecuted. But, the strength of the garrison amounting to more than 4000 soldiers, the operations of the besiegers were languid. An accidental fire in the town, which destroyed many houses and a great part of the public granary, afforded them an opportunity of plying their artillery with some advantage; and a few days after they made n general assault. But the scaling-ladders which were applied to the walls being too short, and Sir James Croft, who had been gained to the queen-dowager, having acted a treacherous part,

the attempt failed of success, and 1000 men were destroyed. The combined armies, however, did not lose their hopes. The English and Scots animated the constancy of one another ; and in the ratification of the treaty of Berwick, which was now made, a new source of cordiality opened itself. Letters also had come from the duke of Norfolk, promising a powerful reinforcement, giving the expectation of his taking upon him the command of the troops in person, and ordering his pavilion to be erected in the camp. Leith began to feel the misery of famine, and the French to give themselves to despair. The besiegers abounded in resources ; and the arrival of 2000 men, the expected reinforcement from England, gave them the most decisive superiority over their adversaries. Frequent sallies were made by the garrison, and they were always unsuccessful. Discouraged by defeats, depressed with the want of provisions, and languishing

under the negligence of France, they were ready to submit to the mercy of the congregation.

Amidst these distresses the queeri-dowasrfr, wasted with a lingering distemper and with grief, expired in the castle of Edinburgh. A few days before her death she invited to her the duke of Chatelherault, lord James Stuart, and the earls of Argyle, Glencairn,and Marischal, to bid them a last adieu. She expressed to them her sorrow for the troubles of Scotland, and made it her earnest suit that they would consult their constitutional liberties, by dismissing the French and English from their country ; and that they would preserve a dutiful obedience to the queen their sovereign. She professed an unlimited forgiveness of all the injuries which had been done to her ; and she entreated their pardon for the offences committed against them. In token of her kindness and charity she then embraced them by turns, while the tears started to her eyes. After this interview, the short remaining portion of her life was dedicated to religion ; and she flattered the congregation by calling John Willocks, one of the most popular of their preachers, to assist and comfort her by his exhortations. He made long discourses to her about the abominations of the mass ; but she appears

to have died in the communion of the Roman church ; and her body, being transported to France, was deposited in the monastery of St. Peter, at Rheims, in Champagne, where her sister Renee was abbess.

The death of the queen-dowager, at a period so critical, broke altogether the spirit of the French troops. They were blocked up so completely that it was almost impossible for any supplies to reach them either by sea or land ; and France had delayed so long to fulfil its magnificent promises that it was no longer in a capacity to take any steps towards their accomplishment. Its internal distress and disquiets were multiplying. The nobility, impoverished by wars, were courting the rewards of service, and struggling in hostility : the clergy were avaricious, ignorant, and vindictive. The populace, knowing no trade but arms, offered their swords to the insurgents. Francis II. the husband of Mary, was without dignity or understanding. Catherine de Medicis his mother was full of artifice and falsehood : insurrections were dreaded in every province. The house of Guise was encompassed

with difficulties and trembling with apprehensions, so that they could not think of persisting in their views of distant conquests. It was chiefly in the exemption from foreign wars that they could hope to support their own greatness, and apply a remedy to the domestic disturbances of France. It appeared to Francis and Mary that they could not treat in a direct method with the congregation, whom they affected to consider as rebellious subjects, without derogating from their dignity ; in neprociating for a peace, therefore, they addressed themselves to queen Elizabeth. They granted a commission to John Monluc, bishop of Valence, Nicholas Relieve bishop of Amiens, James de la Brpsse, Henry Clentin lord of Oysel, and Charles de la Rochefaucault lord of Randan ; authorising them to enter into agreements with the queen of England. The English commissioners were Sir William Cecil principal secretary of state, Nicholas Wotton dean of Canterbury and York, Sir Ralph Sadler, Sir Henry Percy, and Sir Peter Crew ; and the powers of treaty were to be exercised by them all in conjunction, or by four, three, or two of

them. The plenipotentiaries of France, though empowered only to treat with England, were yet, by a separate commission, entrusted also to assure the congregation that, notwithstanding the heinous guilt incurred by them, Francis and Mary were inclined to receive them into favor upon their repentance and return to obedience; and to abstain for ever from all enquiry into their conduct. They had full authority, at the same time, by this new deed, to hear, in conjunction with the commissioners of Elizabeuh, their complaints, and to grant, with their consent, the relief which appeared most proper and salutary. The nobility and people of Scotland, choosing for their representatives lord James Stuart, lord Ruthven, and Maitland of Lethington, expressed their willingness to concur in reasonable measures for the re-establishment of the public union and tranquillity, while, by a formal petition, they enumerated their grievances, claimed a redress of them, and asked a uniform protection to their constitution and laws. To this petition the intercession of queen Elizabeth effected the friendly atteution of Francis and Mary ; and upon the

*foundation thus concerted Monluc and Randan, Cecil and Wotton, the acting plenipotentiaries of England and France, drew up and authenticated the celebrated Deed of Relief and Concession, which does so much honor to l*ne spirit, perseverance, and magnanimity of the Scottish nation. By this agreement Francis and Mary consented that no French soldiers or foreign troops should ever be introduced into Scotland without the council and the advice of the three estates. They concurred in the opinion that the French mercenaries should be sent back into France, and that the fortifications of Leith should be demolished; they agreed that commissioners should be appointed to visit Dunbar, and to point out the works there which ought to be destroyed : and they bound themselves to build no new fortress or place of strength within the kingdom, and to repair no old one without parliamentary authority. They consented to extinguish all debts which had been contracted for the maintenance of the French and Scottish soldiery ; appointed the estates of the realm to hold a parliament for the discussion of affairs of state;*

and obliged themselves to consider the acts of this assembly as valid and effectual. They confirmed the ancient law of the country, which prohibited the princes of Scotland from making peace or war without the advice of the three estates. It was agreed by them that the three estates, in concurrence with the queen, should elect a council for the administration of affairs during her majesty's absence. They became bound to employ the natives of Scotland in the management of justice both civil and criminal, in the offices of chancellor, keeperof the seals, treasurer, comptroller, and in other similar stations; and to abstain from the promotion of all foreigners to places of trust and honor, and from investing

any clergyman in the charge of affairs of the revenue. They further determined to publish an act of oblivion, and to bury for ever the memory of all the late transactions. They concluded that a general peace and reconciliation should take place among all parties. And they referred the reparation which might be proper to compensate the injuries that had been sustained by

bishops and ecclesiastics to the judgment of the three estates. Upon the subject of reformation, the plenipotentiaries of England and France did not choose to deliberate and deride, although articles with regard to it had been presented to them by the nobles and people. They referred this delicate topic to the ensuing meeting of the parliament ; and the leaders of the congregation engaged that deputies from the three estates should repair to the king and queen, to know their intention concerning matters of such high importance. After having granted these concessions to the nobility and people of Scotland upon the part of their respective courts, Monluc and Randan, Cecil and Wotton, concluded another deed of treaty and agreement. By this it was determined that the English and French troops should depart out of Scotland ; that all warlike preparations should cease ; that the fort of Eymouth should be razed, in terms of the treaty of Cambray ; that Francis and Mary should abstain from bearing the title and arms of England or Ireland'; that it should be considered whether a further compensation should be made to Eliza-

*beth for the injuries committed against her; and that the king and queen of Scots should be fully and sincerely reconciled to the nobility and the people of their kingdom. The interests of England and France were the particular objects of this agreement. But, though the concessions to the Protestants were not inserted in it at full length, an express reference was made to them; and they received a confirmation in terms which could not be misunderstood. This deed recorded the clemency of Francis and Mary to their subjects of Scotland, the extreme willingness of the nobility and people to return to their duty and allegiance, the representation they had offered of their grievance and the request of queen Elizabeth that redress should be afforded to them ; and it appealed to the consequent concessions which had been stipulated to their advantage. By these important negociations the Protestants, while they humbled France, flattered queen Elizabeth ; and, while they acquired a power to act ii the establishment of the reformation, restored its civil constitution to Scotland. The exclusion v»f foreigners from offices of state, the limitation *f the Scottish princes with regard to peace and*

war, the advancement of the three estates to their ancient consequence, and the act of oblivion of all offences, were acquisitions most extensively great and useful; and, while they gave the fullest security to tlie reformed, gratified their most sanguine expectations.

The peace, so fortunately concluded, was immediately proclaimed. The French mercenaries embarked for their own country, and the English fcrmy took the road to Berwick. Amidst events so joyful, the preachers exhorted the confederated nobles to command the solemnity of a thanks-

giving. It was ordered accordingly ; and, after its celebration, the commissioners of the boroughs, with several of the nobility, and the tenants in capite, were appointed to choose ministers to preach the gospel in the principal towns throughout the kingdom. John Knox was called to discharge the pastoral functions at Edinburgh, Christopher Goodman at St. Andrews, Adarn Heriot at Aberdeen, John Row at Perth, Paul Methvcn at Jedburgh, William Christison at Dundee, David Ferguson at Dunfermline, and

David Lindsay at Leith. That the business of the church might be managed with propriety, superintendants were elected to preside over the ecclesiastical affairs of provinces and distrirts. John Spottiswood was named the superintendant for Lothian, Willocks for Glasgow, John Winram for Fife, John Erskine of Dun for Angus and Mearns, and John Carsewell for Argyle and the Isles. This gave a beginning to the reformed church of Scotland. Amidst the triumph and exultation of the Protestants, the meeting of the parliament approached. All persons who had a title from law, or from ancient custom, to attend the great council of the nation, were called to assemble there : while there was a full convention of the greater barons and the prelates, the inferior tenants in capite, or the lesser barons, upon an occasion so great, instead of appearing by representation, came in crowds to give personally their assistance and votes; and all the commissioners for the boroughs, without exception, presented themselves. It was objected to this parliament, when it was assembled, that it could not be valid, since Francis and Mary were not present, and had not empowered any person

to represent them. But, by the terms of the hue concessions to the nobility and the people, they had in effect dispensed with this formality ; and the objection, after having been agitated witli heat for some days, was rejected. The lords of the articles were then chosen ; and, as ihe Protestant party were superior to the popish faction, they were careful in electing the members of this committee to favor all those who were disposed to forward the reformation. The first object which the lords of the articles held out to the parliament was the supplication of the nobility, gentry, and all the other persons who professed the new doctrines. It required that the Romish church should be condemned and abolished. It reprobated transubstantiation, (he merit of works, papistical indulgences, purgatory, pilgrimages, and prayers to departed saints ; considering them as pestilent errors, and as fatal to salvation. It demanded that all those who should teach and maintain them should be exposed to correction and punishment. Also that a remedy should be applied against the profanation of the holy sacraments by the Roman Catholics ; that the ancient discipline of the church should be restored ; that

the supremacy and authority of the pope should be abolished ; and that the patrimony of the church should be employed in supporting the reformed ministry, in the provision of schools, and in the maintenance of the poor. This supplication of the Protestants was received in parliament with marks of the greatest respect. The popish doctrines it censured, and the strong

language it employed, excited no dispute. The nobility, however, and the lay members, did not think it expedient that the patrimony of the church, in all its extent, should be allotted to the reformed ministry, and the support of schools and the poor. Avoiding therefore any explicit scrutiny into this point, the parliament gave it in charge to the ministers and the leading men of the reformation, to draw up under distinct heads, the substance and sense of those doctrines which ought to be established over the kingdom. Within four days this important business was accomplished. The writing or instrument to which the reformed committed their opinions was termed

4 The Confession of Faith, professed and believed by the Protestants within the realm of Scotland.' (See Knox's Collection of Confessions of Faith, vol. II., and Slat. Book Parl., 1567). It was read first to the lords of the articles. It was then read to the parliament ; and the prelates of the Romish church were commanded, in the name of God, to make publicly their objections to the doctrines it proposed. They preserved a profound silence. A new diet was appointed for concluding the transaction. The articles of the Confession were again read over, and the votes of the parliament were called. Of the temporal nobility, three only refused to bestow upon it t:;eir authority. The earl of Athol, and the lords Somerville and Bothwel, protested that ' they would believe as their fathers had done before them.' The bishops and the estate ecclesiastical, from a consciousness of the weakness of popery, seemed to have lost all power of speech. No dissent, no vote, was given by them. ' It is long,' said the earl Marisckal, ' since I entertained a jealousy of the Romish faith, and an affection to the reformed doctrines. But this day has af-

forded me the completest conviction of the false-

hood of the one, and the truth of the other. The

bishops, who do not conceive themselves to be

deficient in learning, and whose zeal for the main-

tenance of the hierarchy cannot be doubted, have

abandoned their religion, and their interest in it, as objects which admit of no defence or justification.'

All the other constituent members of this great

council were zealous for the establishment of the

reformation, and affirmed the propriety of its doc-

trines. Thus the high court of parliament, with

great deliberation and solemnity, examined, voted,

and ratified the confession of the reformed faith.

A few days after the establishment of the Con-

fession of Faith, the parliament passed an act

against the mass and the exercise of the Romish

worship. It ordained that all persons saying or

hearing mass should, for the first offence, be ex-

posed to the confiscation of their estates, and to

a corporal chastisement, at the discretion of the

magistrates ; that for the second offence they

should be banished out of the kingdom ; and,

for the third, they should incur and suffer the

pains of death. This fierceness, it must be ac-

knowledged, did not suit the generosity of vic-

tory ; and, while an excuse is sought for it in the perfidiousness of the Romish priesthood, it es-

capes not the observation of the most superficial

historians that these sererities were exactly those

of which the Protestants had complained so

loudly, and with so much justice. By another

ordination the parliament, after having declared

that the pope had inflicted a deep wound upon

the sovereignty and government of Scotland, by

his frequent interferences and claims of power,

decreed that, for the future, his jurisdiction and

authority should be dead and extinct ; and that

all persons maintaining the smallest connexion

with him, or with his sect, should be liable to

the loss of honor and offices, proscription, and

banishment. These memorable and decisive

statutes produced the overthrow of the Romish

religion. To obtain to these proceedings the

approbation of Francis and Mary was an object

of the greatest anxiety, and of infinite moment to

the three estates. Sir James Sandilands, lord St.

John, was therefore appointed to go to France,

and to express to the king and queen the affection and allegiance of their subjects, to explain what

had been done in consequence of the late conces-

sions and treaty, and to solicit their royal ratification of the transactions of the parliament. The spirited behaviour of the congregation had, however, exceeded all the expectations of the princes of Lorraine ; and the business of the embassy, and the ambassador himself, though a man of character and probity, were treated not only with ridicule, but with insult. He returned accordingly without any answer to his commission. Instead of submitting the heads of a reformation to Francis and Mary, by a petition, the parliament had voted them into laws ; and from this informality the validity of its proceedings has been suspected : but it is observable that the Protestants had not concealed their views with regard to religion and the abolition of Popery ; that in the grant of redress and concession, and in the deed of treaty, no prohibition was made to bar the establishment of the reformation ; that a general authority was given to the parliament to decide in affairs of state ; and that Francis and Mary were solemnly bound to authenticate its transactions. Though a formality was wanting, the spirit of the treaties was yet respected and maintained. The nation, of consequence, im-

puted the conduct of Francis and Mary to po-

litical reasons suggested by the princes of Lor-

raine, and to the artifices of the Popish clergy ;

and as Elizabeth did not refuse, upon her part,

the ratification of the agreements, but solicited

and pressed the French court to adopt the same

measure, a strength and force were thence com-

municated to this conclusion. When the three

estates despatched Sir James Sandilands to

France, they instructed the earls of Morton and

Glencairn, with Maitland of Lethington, to re-

pair to the court of England. By these ambas-

sadors they presented to Eli?abeth their respect-

ful thanks for her late most important services;

and, while they solicited the continuance of her

favor and protection, entreated that, for the estab-

lishment of a perpetual peace and amity, she

would be pleased to take in marriage the earl of

Arran, the next heir after his father to the Scottish monarchy. The queen made new and fervent

protestations of her regard, and promised her

warmot aid when it should be necessary, in

their just defence, upon any future occasion.

She spoke in obliging terms of the earl of Ar-

ran ; but, as she found in herself no present dis-

position to marriage, she desired that lie might consult his happiness in another alliance. She expressed a favorable opinion of the Scottish nobility ; and, as a demonstration of her esteem, she begged them to consider the unanimity of their order as a necessary guard against the ambition and the artifices of the enemies of their nation. The success of the congregation, though great and illustrious, was not yet completely decisive. The refusal of Francis and Mary to ratify their proceedings was a source of inquietude. The Popish party, though humbled, was not annihilated : under the royal protection it might soon be formidable. Political considerations might arise, not only to cool the amity of England, but even to provoke its resentment ; and France, though it could now transport no army against Scotland, might soon be able to adopt that expedient. Severe calamities were still therefore to be dreaded. In the narrowness of their own resources they could find no permanent security against the rage of domestic faction,

and the strenuous exertions of an extensive king-dom. While the anguish of melancholy appre-hensions repressed the triumph of the congrega-tion, the event which could operate most to their interests was announced to them. This event •was the death of Francis II., without issue. The tie which knit Scotland to France was thus broken. A new scene of politics arose. Cathe-rine de Medicis, the queen-mother, ruled Charles IX., and was the personal enemy of the queen of Scots. The power and the credit which Mary had lent to her uncles, and the frequent and humiliating disappointments which the queen-mother had suffered from her influence over Francis, were now repaid with a studied neglect. In the full perfection of her charms, with two crowns on her head, and looking towards a third, she felt herself to be without grandeur and with-out consequence. Leaving a court where she had experienced all the enjoyments of which humanity is susceptible, she retired to Rheims to indulge her sorrow.

In the humiliation of their queen, and in the change produced in the councils of France, the

Protestants of Scotland found every possible encouragement to proceed with vigor in the full establishment of the reformed doctrines. After the dissolving of the parliament they turned their attention to the plan of policy which might suit best the religion for which they had contended. The three estates, amidst their other transactions, had granted a commission to Messrs. John Winram, John Spottiswood, John Willocks, John Douglas, John Row, and John Knox, to frame and model a scheme of ecclesiastical government. They were not long in composing the First Book of Discipline ; in which they explained the uniformity and metlwx5 which ought to be preserved concerning doctrine, the administration of the sacraments, the election and provision of ministers, and the policy of the church. A convention of the estates gave its sanction to the Presbyterian scheme ; but, while the Book of Discipline sketched out a policy admired for its simplicity, yet it required that the patrimony and the rich possessions of the ancient church should be allotted to the new establishment. The reformers, however, so successful in the

doctrines and the policy they had proposed, were here very unfortunate. This convention of the estates did not pay a more respectful regard to this proposal than the celebrated parliament had done, which demolished the mass and the jurisdiction of the see of Rome. It was not till after long and painful struggles that the new establishment was able to procure to itself a becoming, or even necessary provision and support. The Romish clergy were strenuous to continue in their possessions, and to profit by them ; and the nobles and the laity, having seized upon great part of the property of the church, were no less anxious to retain their acquisitions. The aversion entertained from bestowing riches upon the Presbyterian establishment, encouraged the ardor which prevailed for advancing all the other views and interests of the reformed. This end was also promoted by the insidious policy of Catherine de Medicis. She was willing to increase all the difficulties in the situation of the queen of Scots and her subjects. Upon this account she had engaged Charles IX. to despatch M. Noailles to the Scottish parliament, to urge it in strong terms to renew the ancient league between the two kingdoms, to dissolve the alliance with England,

and to re-establish over Scotland the popish

doctrines and the popish clergy. A new meet-

ing of the estates was assembled, which treated

these strange requisitions with the indignation

they merited. M. Noailles was instructed to

inform his sovereign that France having acted

with cruelty and perfidiousness towards the

Scots, by attacking their independency and

liberties under the pretence of amity and mar-

riage, did not deserve to know them any longer

as an ally ; that principles of justice, a love of probity, and a high sense of gratitude, did not

permit the Scottish parliament to break the con-

federacy with England, which had generously

protected their country against the tyrannical

views of the French court, and the treacherous

machinations of the house of Guise ; and that

they were never to acknowledge the popish

clergy to be a distinct order of men, or the legal possessors of the patrimony of the church;

since, having abolished the power of the pope,

and renounced his doctrines, they could bestow

no favor or countenance upon his vassals and

servant" To this council of the estates a new

supplication was presented by the Protestants.

They departed from the high claim which they had made for the riches and patrimony of the popish church; and it was only requested by them that a reasonable or decent provision should be allotted to the true preachers of the gospel. This application, however, was treated with neglect; but, amidst the anxiety manifested by the nobles and the tenants of the crown to hold the Presbyterian clergy in subjection and in poverty, they discovered the warmest zeal for the extension and continuance of the reformed opinions. For, in this supplication of the Protestants, an ardent desire being urged that all the monuments of idolatry which remained should be utterly destroyed, the fullest and most unbounded approbation was given to it. An act accordingly was passed which com-

mancled that every abbey-church, every cloister, and every memorial whatsoever of popery, should be finally overthrown and demolished ; and the care of this popular employment was committed

to those persons who were most remarkable for their keenness and ardor in the work of the reformation. Its execution in the western counties was given in charge to the earls of Arran, Argyle, and Glencairn; lord James Stuart attended to it in the more northern districts ; and, in the inland divisions of the country, it was intrusted to the barons in whom the congregation had the greatest confidence. A dreadful devastation ensued. The populace, armed with authority, spread their ravages over the kingdom. The churches and religious houses were every where defaced or pulled to the ground ; and their furniture, utensils, and decorations, became the property of the invaders. The libraries of the ecclesiastics, and the registers of their transactions and of civil affairs, were gathered into heaps and burnt. Religious antipathy, the sanction of law, the exhortation of the clergy, the hope of spoil, and the ardor to put the last hand to the reformation, concurred to drive the rage of the people to its wildest fury. The death of Francis II. having left his queen Mary ii a very disagreeable situation in France, she

now began to think of returning to her own country. To this she was solicited both by the Protestants and Papists ; the former that they might gain her over to their party ; and the latter, hoping that, as Mary was of their own persuasion, popery might be re-established in Scotland. For this deputation the Protestants chose lord James Stuart, and the Papists John Lesly, official and vicar-general of the diocese of Aberdeen. The latter got the start of the Protestant ambassador, and thus had the opportunity of first delivering his message. He advised her strongly to beware of lord James Stuart, whom he represented as a man of unbounded ambition, who had espoused the Protestant cause for no •other reason than that he might advance himself to the highest employments in the state; nay, that he had already fixed his mind on the crown. For these reasons he advised that lord James should be confined in France till the government of Scotland could be completely established; but if the queen was averse to this measure, he compelled her to land in some of the northern districts of Scotland, where her friends were

most numerous ; in which case an army of 20,000 men would accompany her to Edinburgh, to restore the Popish religion, and to overawe her enemies. The next day lord James Stuart waited upon her, and gave an advice very different from that of Lesly. The surest method of preventing insurrections, he said, was the establishment of the Protestant religion ; that a standing army and foreign troops would certainly lose the affections of her subjects ; for which reason he advised her to visit Scotland without {niards and without soldiers, and he became Solemnly bound to secure their obedience to her. To this advice Mary, though she distrusted its author, listened with attention ; and lord James took care to improve the favorable opportunity; by which IIILMIIS In- obtained a promise of the earldom of Marre. Before Mary set out from France she received an embassy from queen Elizabeth, pressing her to ratify the treaty of Edinburgh, in which she had taken care to get a clause inserted that Francis and Mary should for ever abstain from assuming the title and arms of England and Ireland. But this was declined

by the queen of Scotland, who, in her conference with the English ambassadors, gave proof of her political abilities. Her refusal greatly augmented the jealousies which already prevailed between her and Elizabeth, insomuch that the latter refused her a safe passage through her dominions. This was considered by Mary as a high indignity ; she returned a very spirited answer, informing her rival that she could return to her dominions without any assistance from her, or indeed whether she would or not. In August 1561 Mary set sail from Calais for Scotland. She left France with much regret ; and at night ordered her couch to be brought upon deck, desiring the pilot to awaken her in the morning if the coast of France should be in view. The night proved calm, so that the queen had an opportunity once more of indulging herself with a sight of that beloved country ; a favorable wind now sprung up, and, a thick fog coming on, she escaped a squadron of men of war which Elizabeth had sent out to intercept her : on the 20th of August she landed safely at Leith. Though the Scots received their queen with the

greatest demonstrations of joy, it was not long before an irreconcileable quarrel arose. The Protestant religion was now established all over the kingdom ; and its possessors had so far deviated from their own principles, or what ought to have been their principles, that they would grant no toleration to the opposite party, nor even to the sovereign herself. Inconsequence of this, when the queen attempted to celebrate mass in her own chapel of Holyrood House, a violent mob assembled, and it was with the utmost difficulty that lord James Stuart and other persons of distinction could appease the tumult. Mary attempted to allay these ferments by a proclamation, in which she promised to take the advice of the states in re'igious matters ; and, in the mean time, declared it to be death for any person to attempt an innovation or alteration of the religion now established in Scotland. Against this proclamation the earl of Arran protested, and told the herald that the queen's proclamation should not protect her attendants and servants if they presumed to commit idolatry and to say mass. John Knox declared from the

pulpit that one mass was more terrible to him than if 10,000 armed enemies had landed in any part of the kingdom to re-establish popery. The preachers every where declaimed against idolatry and the mass; keeping up, by their mistaken zeal, a spirit of discontent and sedition throughout the whole kingdom. Knox was called before the queen to answer for the freedom of his speeches ; but his unbounded boldness gave Mary much disquiet. The freedoms, however, which were taken with the queen, could not induce her to depart from the plan of government which she had laid down. To the Protestants she resolved to pay the greatest attention; from

among them she chose her privy council, and heaped favors upon lord James Stuart, who, for his activity in promoting the reformation, was the most popular man in the kingdom ; while, to her courtiers of the Roman Catholic persuasion, she behaved with a distant formality. In the mean time the difference between the two rival queens became every day greater. The queen

of Scotland pressed Elizabeth to declare her the nearest heir to the crown of England, and Elizabeth pressed Mary to confirm the treaty of Edinburgh. With this the latter could not comply, as it would in fact have been renouncing for ever the title to that crown for which she was so earnestly contending. Endless negociations were the consequence, and the hatred of Elizabeth to Mary continually increased. This year the queen of Scotland amused herself by making a circuit through part of her dominions. From Edinburgh she proceeded to Stirling ; thence to Perth, Dundee, and St. Andrews. Though received every where with the greatest acclamations and marks of affection, she could not but remark the rooted aversion which had universally taken place against popery ; and, upon her return to Edinburgh, her attention was called to an exertion of this zeal, which may be considered as highly characteristic of the times. The magistrates of this city, after their election, enacted rules, according to custom, for the government of their borough. By one of these acts, which they published by proclamation, they commanded all monks, friars, and priests, toge-

ther with all adulterers and fornicators, to depart from the town and its limits within twenty-four hours, under the pains of correction and punishment. Mary, interpreting this exertion of power to be a usurpation of the royal authority and a violation of order, displaced the magistrates, commanded the citizens to elect others in their room, and granted by proclamation a plenary indulgence to all her subjects not convicted of any crime, to repair to, and remain in, her capital at their pleasure. Besides these disturbances on account of religion, the kingdom was now in confusion on another account. The long continuance of civil wars had left a proneness to tumults and insurrections every where ; and thefts, rapine, and licentiousness of every kind, threatened to subvert the foundations of civil society. Mary made considerable preparations for the suppression of these disorders, and appointed lord James Stuart her chief justiciary and lieutenant. He was to hold criminal courts at Jedburgh, and at Dumfries. To assist his operations against the banditti, who were armed, and often associated into bodies, a military force

was necessary ; but, as there were then neither standing army nor regular troops in the kingdom, the county of Edinburgh and ten others were commanded to have their strength in readiness to assist him. The feudal tenants, and the allodial or free proprietors of these districts, in complete armor, and with provisions for twenty days, were appointed to be subservient to the purposes of his commission, and to obey his orders in establishing the public tranquillity. In this expedition he was attended with his usual success. He destroyed many of the strong holds of the banditti, hanged twenty of the most notorious offenders, and ordered fifty more to be carried to Edinburgh, to suffer the penalties of the law for their rebellious behaviour. He entered into terms with lord Grey and Sir John Foster, the wardens of the English borders, for the mutual benefit of the two nations; and he commanded the chiefs of the disorderly clans to submit to the queen. In the mean time the queen was in a very disagreeable situation, being suspected and disturbed by both parties. From the concessions she had made to the Protestants,

the Papists supposed that she had a design of renouncing their religion altogether ; while, on the other hand, the Protestants could scarcely allow themselves to believe that they owed any allegiance to an idolater. Disquiets of another kind also now took place. The duke of Chatelherault, having left the Catholics to join the opposite party, was neglected by his sovereign. Being afraid of danger he fortified the castle of Dumbarton, which he resolved to defend ; and, in case of necessity, to put himself under the protection of the queen of England. The earl of Arran was a man of weak abilities, but of boundless ambition. The queen's beauty had made an impression on his heart, and his ambition made him fancy himself the fittest person in the kingdom for her husband. But his fanaticism, and the violence with which he had opposed the mass, disgusted her. He bore her dislike with an uneasiness that preyed upon his intellects and disordered them. The earl of Bothwel was distinguished chiefly by his prodigalities and the licentiousness of his manners. The earl of Marischal had every thing that was

honorable in his intentions, but was over wary. The earl of Morton possessed penetration and ability, but was attached to no party from any principles of rectitude ; his own interests were the motives which governed him. The earl of Huntly, the lord chancellor, was unquiet, variable, and vindictive. The earls of Glencairn and Monteith were exceedingly zealous for the new opinions ; and this, as well as their poverty, recommended them to queen Elizabeth. Among courtiers of this description it was difficult for Mary to make a selection of ministers in whom to confide. The popularity of lord James Stuart, and of Maitland of Lethington, had early pointed them out to this distinction ; and hitherto they had acted to her satisfaction. They were each of eminent capacity ; but the former was suspected of aiming at the sovereignty ; the latter was prone to duplicity ; and both were more connected with Elizabeth than became them as the ministers and subjects of another sovereign. Beside the policy of employing and trusting statesmen who were Protestants, and the precaution of maintaining a firm peace with

England, Mary had it also at heart to enrich the crown with the revenues of the ancient church A convention of estates was assembled to deliberate upon this measure. The bishops were alarmed with their perilous situation. They were told that the charge of the queen's household required an augmentation; and that, as the rents of the church had flowed chiefly from the crown, it was expedient that a proportion of

them should now be resumed to uphold its splendor. After long consultations, the prelates and estate ecclesiastical, considering that they existed merely by the favor of the queen, consented to resign to her the third part of their benefices ; with the reservation that they should be secured during their lives against all farther payments, and relieved from the burden of the maintenance of the reformed clergy. With this offer the queen and the convention of estates were satisfied. Rentals, accordingly, of all their benefices throughout the kingdom, were ordered to be produced by the ancient ecclesiastics ; the

reformed ministers, superintendants, elders, and deacons, were enjoined to make out registers of the grants necessary to support their establishment ; and a power of judging in these matters was committed to the queen and the privy council. While the prelates and estate ecclesiastical submitted to this offer from the necessity of their affairs, it was by no means acceptable to the reformed clergy, who at this time were holding an assembly. It was their wish to effect the entire destruction of the ancient establishment, to succeed to a large proportion of their emoluments, and to be altogether independent of the crown. But the nobles and gentlemen who had promoted the reformation thought very differently. To give too much of the wealth of the church to the reformed clergy was to invest them with a dangerous power. To give too great a proportion of it to the crown was a step still more dangerous. At the same it was equitable that the ancient clergy should be maintained during their lives ; and it consisted with the private interests of the noblemen and gentlemen who had figured during the reformation, not to

give consent to any scheme that would deprive them of the spoils of which they had already possessed themselves out of the ruins of the church. Thus public as well as private considerations contributed to separate and divide the lay protestants and the preachers. The general assembly, therefore, was not successful in the views which had called them together, and which they submitted to the convention of the estates. Doubts were entertained whether the church had any title to assemble itself. The petition for the complete abolition of idolatry, or for the utter prohibition of the mass, was rejected. The request that Mary would give authority to the book of discipline was not only refused, but even treated with ridicule. The only point pressed by the church, which attracted any notice, was its requisition of a provision or a maintenance; but the measure invented for this end was in opposition to all its warmest desires.

This measure, however, so unpromising to the preachers in expectation, was found to be still more unsatisfactory upon trial. The wealth of

the Romish church had been immense, but great invasions had been made upon it. The fears of the ecclesiastics, upon the overthrow of popery, induced them to engage in fraudulent transactions with their relations ; in consequence of which many possessions were conveyed from the church into private hands. Long leases of church-lands, or in perpetuity, were granted to stra; Sales also of ecclesias'icnl property, to a great extent, had been made by the incumbents ; and a validity was supposed to be given to these transactions by conrirmatkms from the pope. Even the crown had contributed to make improper dispositions of the ecclesiastical land revenues. Laymen had been presented to bishoprics and church-livings, with the power of disposing of the territory in connexion with them, in this diffusion of the property of the church much extensive domain came to be invested in the 'nobles and the gentry. From these causes, the grant of the third of their benefices, made by the ancient ecclesiastics to the queen, with the burden of maintaining the reformed clergy, \vas not nearly so considerable as might have been expected. But, the direction of the scheme being

lodged in the queen and the privy-council, the advantage to the crown was still greater than that bestowed upon the preachers. Yet the carry iii' the project into execution was not without its inconveniences. There were still many opportunities for artifice and corruption. The ecclesiastics often produced false rentals of their benefices ; and the collectors for the crown were not always faithful to their trust. The complete produce of the thirds did not amount to a great sum ; and it was to operate to the expense's of the queen, as well as to the support of the preachers. A scanty proportion went to the latter; and yet the persons chosen to fix their particular stipends were the fast friends of the reformation ; for this business was committed to the earls of Argyle and Morton, lord James Stuart, and Maitland of Lethington, with James Mackgill the clerk register, and Sir John Ballenden the justice-clerk : 100 Scottish merks were deemed sufficient for a common minister. To clergymen of greater interest, or who exercised their functions in more extensive parishes, 300 merks were allotted; and, excepting to superin-

tendants, this sum was seldom exceeded. To the earl of Argyle, lord James Stuart, and lord Erskine, who had large ecclesiastical revenues, their thirds were usually remitted by the queen ; and, upon the establishment of this fund or revenue, she also granted many pensions to persons about her court and of her household. The complaints of the preachers were made with little decency. To a mean spirit of flattery to the reigning power they imputed the defection of their friends ; and against the queen they were animated with the bitterest animosity. The poverty in which they were suffered to remain inflamed all their passions, and inveterate habits of insult fortified them into a contempt of authority. To the queen, whose temper was warm, the rudeness of the preachers was an endless inquietude, which, while it fostered her religious prejudices, had the good effect to confirm her constancy to her friends. Lord James Stuart, who was entitled to her respect and esteem from his abilities, and his proximity to her in blood, had merited rewards and honors by his public services and the vigor of his counsels. After his

successful discharge of her commission, as chief justiciary and lord lieutenant, she could not think of allowing him to descend from these offices without bestowing upon him a solid and

permanent mark of her favor. She advanced liim into the rank of her nobility, by conferring upon him the earldom of Mar ; and contributed to augment his consequence by facilitating his marriage with Agnes the daughter of the earl of Marischal; and the ceremonial of this alliance was celebrated with a magnificence and ostentation so extravagant in that age as to excite the fears of the preachers lest some avenging judgment should afflict the land. They exclaimed with virulence against his riotous feasting and banquets ; and especially against his masquerades. In fact the abilities of the earl of Mar, the ascendancy he maintained in the councils of his sovereign, and the distinctions which he had acquired, exposed him to envy. The most formidable and desperate of his enemies was the earl of Huntly. In their rivalship for power, many causes of disgust had arisen. The one

was at the head of the Protestants, the other of the papists. Upon the death of Francis II., llnntly and the popish faction had sent a deputation to Mary, inviting her to return to Scotland, and offering to support her with an army of 20,000 men. His oner was treated with civility, but rejected. The invitation of the Protestants, presented by the earl of Mar, was more acceptable to her. Huntly had advised her to detain his rival in confinement in France till the Roman Catholic religion should be re-established in Scotland. This advice she not only disregarded, but treated his enemy with particular civilities. Upon her arrival in Scotland, Huntly renewed his advances, offering to her to set up the mass in all the northern counties. He even conversed upon this subject with her uncles and her French courtiers. Still no attention was paid to him. He came to her palace, and was received only witn respect. He was lord high chancellor without influence, and a privy counsellor without trust. The earl of Mar had her confidence, and was drawing to him the authority of government. These were cruel mortifications to a man

of high rank, inordinate ambition, immense wealth, and who commanded numerous and warlike retainers. But he was yet to feel a stroke still more severely excruciating, and far more destructive of his consequence. The opulent estate of Mar, which Mary had erected into an earldom, and conferred upon his rival, had been lodged in his family for some time. He considered it as his property, and that it was never to be torn from his house. This blow at once insulted most sensibly his pride, and cut 'most fatally the sinews of his greatness. After employing against the earl of Mar those arts of detraction and calumny which are so common in courts, he drew up a formal memorial, in which he accused him of aiming at the sovereignty of Scotland. This paper he presented to the queen ; but, the arguments with which he supported his charge being weak, she was the more confirmed in her attachment to her minister. Huntly then addressing himself to the earl of Bothwel, a man disposed to desperate enterprises, engaged him to attempt to involve the earl of Mar and the house of Hamilton in open and violent contention.

Bothwel represented to Mar the enmity which had long subsisted between him and the house of Hamilton. It was an obstacle to his greatness ; and while its destruction might raise him to the highest pinnacle of power, it would be most acceptable to the queen. He concluded with making an unlimited offer of his services in the execution of this flagitious enterprise. The earl of Mar, however, abhorring the baseness of the project, rejected his advances. Bothwel, thus disappointed, next practised with the house of Hamilton to assassinate the earl, whom they considered as their greatest enemy. The business, he said, might be performed with ease. The queen was accustomed to hunt in the park of Falkland ; and there Mar, slenderly attended, might be put to death ; the person of the queen might be seized ; and, by detaining her in custody, a sanction might be given to their crime. The integrity of the earl of Arran, revolting against this conspiracy, defeated its purposes. Dreading the perpetration of so cruel an action, and yet sensible of the resolute determination of his friends, he wrote privately to the earl in-

forming him of his danger. But the answer of Mar to this letter, thanking him for his intelligence, being intercepted by the conspirators, Arran was confined by them under a guard in Kinneil House. He escaped, however, and discovered the plot to the queen. But, as he could produce no witnesses or written vouchers, he offered to prove his information, by engaging Bothwel in single combat. And though, in his examinations before the privy council, his love to the queen, his attachment to the earl of Mar, the atrocity of the scheme he revealed, and, above all his concern for his father, the duke of Chatelherault, threw him into a perturbation of mind which expressed itself violently in his speech, his countenance, and his actions ; yet his declarations were so consistent and firm, that it was thought advisable to take the command of the castle of Dumbarton from the duke of Chatelherault, to confine the other conspirators to different prisons, and to await the farther discoveries which might be made by accident and time. The earl of Huntly, inflamed by these disappointments, invented other devices. He

excited a tumult while the queen and the earl of Mar were at St. Andrews with only a few attendants ; imagining that the latter would sally forth to quell the insurgents, and that a convenient opportunity would thus be afforded foi putting him to the sword without detection. The caution of Mar, however, defeating the purpose, he ordered some of his retainers to attack him in the evening when he should leave the queen ; but, these assassins being surprised in their station, Huntly affected to excuse their being in arms in a suspicious place and at a late hour by frivolous apologies. About this period two letters were received by Mary from the pope and the cardinal of Lorrain, in consequence of the intrigues of the earl of Huntly and the Roman Catholic faction. They pressed her to consider that, while this nobleman was the most powerful of her subjects, he was the most zealous in the interests of the church of Rome. They intreated her to marry Sir John Gordon his second son ; promised her money and military supplies, if she would set herself to restore the

ancient religion of her country ; and recom-
mended it to her to destroy the more zealous
Protestants about her court, of whom a roll was
transmitted to her, which included the name of
her minister the earl of Mar. These letters could
not have reached her at a juncture more unfa-
vorable for their success. Mar, to whom she
communicated them, was encouraged to proceed
with the greatest vigor in undermining the de-
signs of his enemies. New incidents exasperated
the animosities of his enemies. Sir JohnGordon and
lord Ogilvie, having a private dispute, happened
to meet each other in the High Street of Edin-
burgh. They immediately drew swords ; and,
lord Ogilvie receiving a very dangerous wound,
Sir John Gordon was committed to prison by
the magistrates. The queen, at this time in
Stirling, was informed by them of the riot; and,
while they expressed a fear lest the friends of
the prisoner should rise up in arms to give
him his liberty, they mentioned a suspicion
which prevailed that the partisans of lord Ogil-
vie were to assemble themselves to vindicate his
quarrel. The queen, after commending their di-

ligence, desired them to watch over their pri-

soner ; wished that the law should take its course ; and advised them to rely upon the earl of Mar

for their protection. Sir John Gordon, however,

escaped from his confinement; and, flying into

Aberdeenshire, filled his retainers with his com-

plaints, and added to the disquiets of his father

the earl of Huntly. The queen, upon return-

ing lo Edinburgh, held a consultation with her

privy council ; and soon after set out upon a

progress to the northern parts of her kingdom.

At Aberdeen she was met by lady Huntly, a wo-

man of deep dissimulation and of refined address,

who endeavoured to conciliate her affections, was

prodigal of flattery, expressed her zeal for the

popish religion, and hinted the great power of

her husband. She then interceded with the queen

for forgiveness to her son. But Mary having

told her that this favor could not possibly be

granted till her son should return to prison, and

submit to the justice of his country, lady Huntly

engaged that he should do so, and only intreated

that, instead of Edinburgh, he should be con-

fined in the castle of Stirling. This request was

complied with ; and in the prosecution of the bu-

siness, a court of justiciary being called, Sir John Gordon made his appearance, and acknowledged

himself to be the queen's prisoner. Lord Glam-

miswas appointed to conduct him to the castle of

Stirling.. But, upon the road to this fortress, he

deceived his guards, hastened back, and gathering

1000 horsemen among his retainers, entrusted

his security to the sword. In the mean time

the queen continued her progress. The earl of

Huntly joined himself to her tram. His anxiety

to be allowed to attend her to his house of Strath-

bogy was uncommon. The intelligence arrived

of the escape and rebellion of Sir John Gordon.

The behaviour of the father and the .<>n awakened*

in her the most alarming suspicions. Assembling

her privy council, she, with their advice, com-

manded her heralds to chair, r Sir John Gordon

and his adherents to return to their allegiance

and to surrender up to her their houses of strength and castles, under the pains of lii-ˆh treason und

forfeiture. Disdaining now to go to the house of

the earl of Huntly, where that nobleman had made

preparations to hold her in captivity, she ad-

vanced to Inverness by a different rout. In the

castle of Inverness she proposed to take up her

residence ; but Alexander Gordon, the deputy

governor, a dependent of the family of Huntly,

refused to admit her. Her attendants were few

in numbei, the town was without walls, and the

inhabitants were suspected. In this extremity,

some ships in the river were kept in readiness as

a last refuge ; and she issued a proclamation

commanding all her loyal subjects in those parts

to repair to her for her protection. The Erasers and Monros came in crowds to assist her. The Clan

Chattan, though called to arms by the earl of

Iluntly, forsook his standard for that of their so-

vereign, when they discovered that his intentions

were hostile to her. She employed them in lay-

ing siege to the castle, which surrendered upon

the first assault. The lives of the soldiers were

spared, but the deputy governor was executed,

and the queen returned to Aberdeen. To punish

the earl of Iluntly for the troubles he had raised, a measure infinitely humiliating was executed.

The earl of Mar resigned the rich estate of that

name to lord Erskine, who claimed it as his

right ; and received in recompense, after its

erection into an earldom, the territory of Murray,

which made an extensive portion of the posses-

sions of the earl of Huntly. Lady Huntly hastened to Aberdeen to offer the most humble submissions on the part of her husband, to avert the downfal of his greatness. But all access to the queen was refused ; and the earl of Huntly w;is summoned to appear in person before the privy council, to answer for his conduct, and to make a full resignation of all his fortresses. He did not present himself, and was declared to be in open rebellion. A new proclamation was issued by the queen to collect sufficient numbers to subdue the insurgents. The command of her troops was given to the earl of Murray, who put them instantly into motion. Huntly advancing towards Aberdeen to give them battle, was informed of their approach. He halted at Corrichie, hoping for a decisive victory. The army of the queen was the most numerous ; but

there were several companies in it, in whom little confidence could be placed. These the earl • of Murray posted in the front of the battle, to begin the attack. They recoiled upon him, as he expected ; but a resolute band, holding out their spears, obliged them to face the foe. Their flight made Huntly think the day was his own.' He therefore ordered his soldiers to rush upon the enemy sword in hand. But, when they came to the place where the earl of Murray had stationed himself, his firm battalion put a stop to their progress. In a panic they took to flight. The earl of Huntly was killed in the pursuit. Hi-; .sons, Sir John Gordon and Adam Gordon, wore made prisoners, with the principal gentlemen who had assisted him. Mary, upon receiving the tidings of this success, discovered neither joy nor sorrow. But the earl of Murray and liis party were not yet satisfied. Sir John Gor don was brought to trial, confessed his guilt, and was condemned to suffer as a traitor. Adam,

upon account of his tender age, was pardoned ;

and tines were levied from the other captives,

according to their wealth. The lord Gordon,

after the battle, fled to his father-in-law, the duke of Chatelherault, but was delivered up by that

nobleman. He was convicted of treason, and

condemned ; but the queen was satisfied with

confining him in prison. The body of the earl

of Iluntly was carried to Edinburgh, and Kept

unburied, till a charge of high treason was

brought against him before the three estates. A dis-

play was made of his crimes, and parliament pro-

nounced his guilt. His estates were forfeited ; his

dignity, name, and memory, were pronounced ex-

tinct ; his ensigns armorial were torn from the book tifarms ; and his posterity were rendered unable to enjoy any offices, honor, or rank, within the realm.

While these scenes were transacting, Mary,

who was solicitous to establish a secure amity

between the two kingdoms, opened a negociation

to procure an interview with Elizabeth. Secre-

tary Maitland, whom she employed, met with a

most gracious reception at the court of London.

The city of York was appointed as the place

where the two queens should express their mu-

tual love and affection, and bind themselves to

each other in an indissoluble union ; the day of

their meeting was fixed ; the fashion and articles of their interview were adjusted ; and a safe conduct into England was granted to the queen of Scots by Elizabeth. But in this advanced state of the treaty it was unexpectedly interrupted. The disturbances in Trance, the persecution of the Protestants there, and the dangers which threatened the reformed countries, required Elizabeth to be upon her guard against the machinations of the adversaries of her religion. Upon these pretences she declined for a season the projected interview ; sending to Mary, with this apology, Sir Henry Sidney, a minister of ability, whom she instructed to dive into the secret views of the Scottish queen. This was a severe disappointment to Mary; but Elizabeth acted in this negociation without sincerity. It was not her interest to admit into her kingdom a queen who had pretensions to her crown, who might raise the expectations of her Roman Catholic sub ects, and advance herself in their esteem; and who far surpassed her in beauty and the bewitching allurements of conversation and behaviour. Amidst affairs of great moment, a mat-

ter of smaller consequence, but interesting in its circumstances, deserves to be recordetl. Chatelard, a gentleman of family in Dauphiny, and a relation of the chevalier de Bayard, had been introduced to queen Mary by lord Damville, the heir of the house of Montmorency. Polished manners, vivacity, attention to please, the talent of making verses, and an agreeable figure, were his recommendatirns. He became necessary in all parties of pleasure at the palace. His assiduities attracted the notice of the queen, and, at times, •ˆhe did him the honor to dance with him. But icr politeness and condescension insinuated into him other sentiments than gratitude. He felt the power of her charms. In an unhappy moment he entered her apartment, and concealed himself under her bed. \Vhile the queen was undressing uer maids discovered him and gave her the alarm. Chatelard was dismissed with disgrace, but soon after pardoned. The frenzy, however, of his love compelling him to repeat his crime, it was no longer proper to show him any compassion. The delicate situation of Mary, the noise of these adventures, and the rude suspicions of her subjects, required that he should be tried and

*punished. He was accordingly condemned to lose his head; and the sentence was executed. The disagreeable circumstances in which Mary found herself involved by her quarrel with Elizabeth, the excessive bigotry and overbearing spirit of her Protestant subjects, together with the adventure of Chatelard, and the calumnies propagated in consequence of it, determined her to think of a second marriage. Her beauty and expectations of the crown of England, with what she already possessed, brought her many suitors She was addressed by the king of Sweden, the king of Navarre, the prince of Conde, the duke of Ferrara, prince Charles of Spain, the archduke Charles of Austria, and the duke of Anjou. Her own inclination was to give the preference, among these illustrious lovers, to the prince of Spain ; but her determination was to render her decision as agreeable as possible to queen Elizabeth, the English nation, and the Protestants in both kingdoms. Her succession to the crown cf England was the object nearest her heart; and Elizabeth, who wished to prevent her from marrying altogether, contrived to impress upon he**

mind an opinion that any foreign alliance would greatly obstruct that much desired event. She therefore pitched upon two of her own subjects, whom she successfully recommended as fit matches for the queen of Scots; and she promised that, upon her acceptance of either of them, her right of inheritance should be enquired into and declared. Lord Robert Dudley, afterwards earl of Leicester, was the first person proposed ; but, except a manly fare and fine figure, he had not one quality that could recommend him to the Scottish princess. Mary received this suitor with composure, but was more induced to treat him with scorn than love. The English queen then recommended to Mary another suitor, lord Darnley, of the house of Stuart, whose birth was almost equal to her own, and whom the Scottish princess was induced to accept as a husband by motives which we have elsewhere detailed. See MAUY. Elizabeth, however, was not more sincere in this proposal than in the former; for, after permitting Darnley, and his father, the earl of Lennox, to visit Scotland, to divert the attention of the queen from the

continent, she threw every possible obstacle in the way of the marriage. When Mary was so entangled that she could not draw back. Elizabeth intimated her disapprobation of that marriage, which she herself had originally planned and forwarded ; and her whole council declared against it. John Knox, in the mean time, forgetting not only the meek and peaceable behaviour of a Christian, but the allegiance of a subject, interfered with the marriage of his soverei?n. Yet the principle upon which he acted now forms an essential part of the British constitution, which opressly prohibits the king 01 any of the royal family from marrying a Roman Ca-

tholic. As Darnley was a Papist he was of consequence execrated by the whole body of Protestants, laity as well as clergy ; while, on the other hand, he was supported by the earls of Athol and Caithness, the lords Ruthven and Hume, and the whole Popish faction. It was exceedingly unfortunate for the queen, that neither lord Darnley himself, nor his father, the

earl of Lennox, had any talents for business ; and, as they naturally had the direction of the queen's affairs, it is no wonder that they were very ill managed. But a source of opposition, more violerit than any imperfections of their own, arose to them in the attachment which they discovered to a person upon whom the queen had of late bestowed repeated favors. David Rizzio, from a mean origin, raised himself to distinguished notice in Mary's court. He was born at Turin, where his father earned a subsistence as a musician. Varieties of situation and adventure, poverty and misfortunes, had taught him experience. In the train of the count de Morette, the ambassador from the duke of Savoy, he had arrived in Scotland. The queen, desirous to complete her band of music, admitted him into her service. In this humble station he had the dexterity to attract her attention ; and her French secretary falling into disgrace, from negligence and incapacity, he was promoted to his office. A necessary and frequent admission to her company afforded him now the fullest opportunity to recommend himself to her ; and, while she ap-

proved his manners, she was sensible of his fidelity and his talents. His mind, however, was not sufficiently vigorous to bear prosperity. Ambition grew upon him with preferment. He interfered in affairs of moment, intruded himself into the conventions of the nobles at the palace, and was a candidate for greatness. The queen consulted with him upon the most important business, and entrusted him with real power. His suppleness and servility, in his former condition, were exchanged for insolence, ostentation, and pride. He exceeded the most potent barons in the stateliness of his demeanor, the sumptuousness of his apparel, and the splendor of his retinue. The nobles, while they despised his low birth, ard detested him as a foreigner, were mortified with his grandeur, and insulted by his arrogance. Their anger and abhorrence were driven into fury ; and, while this undeserving minion, to uphold his power, courted Darnley, and with officious assiduities advanced his suit with the queen, he hastened not only his own luin, but laid the foundation of public calamity. To the earl of Murray the exaltation of Rizzio,

so offensive in general to the nation, was peculiarly humiliating. His interference for the earl of Leicester, the partiality he entertained for Elizabeth, his connexions with secretary Cecil, and the favor he had shown to Knox, had all contributed to create in Mary a suspicion of his integrity. The practices of Darnley and Rizzio were thence the more effectual ; and the fullest weight of their influence was employed to undermine his power. Mary, aware of their critical situation, was solicitous to add to her strength. Bothwel, who had been imprisoned for conspiring against the life of the earl of Murray, and who had escaped from confinement, "was recalled from France ; the earl of Sutherland, an exile in Flanders, was invited home to receive his pardon ; and George Gordon, the son of the earl of Huntly, was admitted to favor, and was soon reinstated in the wealth and honors of his family. As soon as Bothwel arrived, the earl of Murray insisted that he should be brought to trial for having plotted against his life. This was agreed to ; and on the day of trial Murray made his appearance with 800 of his adherents. Bothwel

did not choose to contend with such a formidable enemy ; he therefore fled to France, and left a protestation that fear of violence was the cause of his flight. The queen commanded the judge not to pronounce sentence. Murray complained of her partiality, and engaged still deeper in cabals with queen Elizabeth. Darnley, in the mean time, pressed his suit with eagerness.

The queen endeavoured to cause Murray to subscribe a paper expressing his consent to her marriage ; but to no purpose. However, many of the nobility did subscribe this paper; and she ventured to summon a convention of the estates at Stirling, to whom she opened the business of the marriage ; and who approved of her choice, provided the Protestant religion should continue to be the establishment. In the mean time ambassadors arrived from England, with a message importing Elizabeth's entire disapprobation of the queen's marriage with lord Darnley. But to these ambassadors Mary only replied that matters were gone too far to be recalled ; and that Elizabeth had no cause of displeasure, since, by her advice, she had fixed her affections not

upon a foreigner, but upon an Englishman ; and since the man she favored could boast of having in his veins the royal blood of both kingdoms. She then created lord Darnley a lord and a knight. He was made a baron and a banneret, and styled lord Armanagh. He was belted earl of Ross. He then promoted fourteen gentlemen to the honor of knighthood, and did homage to the queen, without any reservation of duty to the crown of England, where his family had long resided. But his advancement to the dukedom of Albany was delayed ; and this was so much resented by him that he threatened to stab lord Ruthven when he told him of it. In the mean time the meeting of parliament, which was to determine the marriage, was approaching. The earl of Murray, encouraged by the apparent firmness of Elizabeth, and alarmed with the approbation bestowed by the convention on the queen's choice, began to meditate a decisive blow. To inspirit the resentments of his friends, and to justify the violence of his projects, he hinted apprehensions of being assassinated by lord Darnley, and he avoided to go to Perth, where he affirmed

that the plot against him was to be carried into

execution. He courted the enemies of Darnley,

and he united to him in a confederacy the duke

of Chatelherault, and the earls of Argyle, Ruthven,

and Glencairn. It was not the sole object of their association to oppose the marriage. They medi-

tated the death of the earl of Lennox and lord

1)arnley ; and, while the queen was upon the road to Callander to visit lord Livington, they pro-

posed to intercept her and to hold her in cap-

tivify. In this event, Murny was to advance

liimself into ihe government of the kingdom,

under the character of its regent. But, Mary

having heard of their conspiracy, the earl of

Athol and lord Ruthven raised suddenly 300

men to protect her in her journey. Defeated in

this scheme, the earl of Murray and his asso-

ciates did not relinquish their cabals ; and the

iiation was filled with alarms and suspicions.

Amidst other arts employed by the malcontents,

they insisted upon the danger which threatened

the Protestant religion from the advancement of

lord Darnley, and from the rupture that must en-

sue with England. Letters were dispersed among the Protestants, reminding them of what God had wrought for them in the abolition of idolatry, and admonishing them to oppose the restoration of the mass. A supplication was presented to the queen, complaining of idolaters, and insisting upon their punishment. It was received with unusual respect ; and Mary instructed the popish ecclesiastics to abstain from giving offence of any kind to the Protestants. A priest, however, having celebrated mass, was taken by them, and exposed to the insults of the populace at the market place of Edinburgh, in the garments of his profession, and with the chalice in his hand; and, the queen having given a check to this tumultuous proceeding, the Protestants were confirmed in their belief that she meant to overthrow their religion. The most learned and able of the clergy held frequent consultations together ; and the general assembly was called to deliberate upon the affairs of the church. The commissioners, whom they sent to ihe queen, were ordered to demand a parliamentary ratification of their desires. They

insisted that the mass, with every remain of popery, should be suppressed throughout the kingdom ; that, in this reformation, the queen's person and household should be included; that all papists and idolaters should be punished upon conviction according to the laws ; that all persons should resort to the churches upon Sunday, 10 join in public worship ; that an independent provision should be assigned for the support of the clergy, and their successors; that all vacant benefices should be conferred upon persons qualified for the ministry ; that no bishopric, abbey, priory, deanery, or other living, having many churches, should be bestowed upon a single person ; but that each church should be provided with a minister; that the glebes and manses should be allotted for the ministers, and for the reparation of churches; that all lands, which of old had been devoted to hospitality, should again be made subservient to it ; that the lands and rents which formerly belonged to the monks, with the annuities, &c., should be employed in the maintenance of the poor and the upholding of schools; that all horrible crimes should be

punished ; that judges should be appointed in

every district; and that, for the ease of the labor-

ing husbandmen, some order should be devised

concerning a reasonable payment of the tithes.

To these requisitions the queen made an answer

full of moderation and humanity. She was ready

to agree with the tnree estates in establishing the reformed religion over the subjects of Scotland ;

and she was steadily resolved not to throw into

hazard the life, the peace, or the fortune, of any person whatsoever upon account of his opinions.

As to herselfand her household, she was persuaded

that her people would not urge her to adopt

tenets in contradiction to her own conscience,

and thereby involve her in remorse. She had

been nourished and brought up in the Romish

faith ; she conceived it to be founded on the word of God ; and she was desirous to continue in it.

But, setting aside her belief and religious duty,

she ventured to assure them that she was con-

vinced, from political reasons, that it was her

interest to maintain herself firm in the Roman

Catholic persuasion. By departing from it she

would forfeit the amity of the king of France,

and that of other princes who were now strongly

attached to her; and their disaffection could not

be repaired or compensated by any new alliance.

To her subjects she left the fullest liberty of

conscience ; and they could not surely refuse to

their sovereign the same right and indulgence.

With regard to the patronage of benefices, it was

a prerogative and property which itwould ill be-

come her to violate. Her necessities, and the

charge of her royal dignity, required her to return in her hands the patrimony of the crown. Afu-r

the purposes, however, of her station, and t! > o

exigences of government, were satisfied, she could

not object to a special assignment of revenue for

the maintenance of the ministry ; and, on the

subject of the other articles which had been sub-

mitted to her, she was willing to be directed by

the three estates of the kingdom, and to concur

in the resolutions which should appear to them

the most reasonable and expedient. The clergy,

in a new assembly, expressed high displeasure

at this answer to their address. They told the

queen that the doctrines of the reformation,

which she refused to adopt, were the religion

which had been revealed by Jesus Christ, and

taught by the apostles. They required of her,

therefore, to embrace the means of attaining the

truth which were offered to her in the preaching of the word, or by the appointment of public disputations between them and their adversaries. The errors of the mass were placed before her in all their deformity. The sayer of it, the action itself, and the opinions expressed in it, were all pronounced to be equally abominable. To hear the mass, or to gaze upon it, was to commit the complicated crimes of sacrilege, blasphemy, and idolatry. Her delicacy in not renouncing her opinions from the apprehension of offending the king of France and her other allies they ridiculed. They told her that the true religion of Christ was the only means by which any confederacy could endure ; and that it would bring to her the friendship of the King of kings. As to patronages being a portion of her patrimony, they intended not to defraud her of her rights ; but it was their judgment that the superintendants ought to make a trial of the qualifications of candidates for the ministry ; and, if no trials or examinations of ministers took place, the church would be filled with misrule and ignorance. And as to her opinion, that a suitable assignment should be made for them, they begged her to condescend to adopt a proper scheme for this end, .mJ

to carry it into execution ; and that, taking into a due consideration the other articles of their demands, she would study to comply with them, and to do justice to the religious establishment of her people. From the fears of the people about their religion, disturbances and insurrections were unavoidable; and, before Mary had given her answer to the petitions of the clergy, the Protestants, in a formidable number had marched to St. Leonard's Craig; and, dividing themselves into companies, had chosen captains to command them. But, the leaders of this tumult being apprehended, it subsided by degrees ; and the queen, upon the intercession of the magistrates of Edinburgh, gave them a free pardon. To quiet the apprehensions which had gone abroad of her inclination to overturn the reformed doctrines, she repeatedly issued proclamations, assuring her subjects that it was her fixed determination not to disturb any person upon account of his religion or conscience ; and that she would never attempt any innovation that might endanger the public tranquillity. While Mary was thus

conducting her affairs with prudence, the earl of Murray and his confederates continued their intrigues. They perceived that their only hope of success depended upon Elizabeth; and, as Randolph had promised them her protection and assistance, they addressed a letter to her, explaining their views and situation. The pretences of hostility to their sovereign, upon which they affected to insist, were her settled design to overturn the Protestant religion, and her rooted desire to break all amity with England. But with her support and aid they did not doubt of being able to advance effectually the advantage of the two kingdoms. They applied not, however, for any supply of troops. Au aid from her treasury was now only necessary ; and they engaged to bestow her bounty in the manner most agreeable to her inclinations and her interests. The pleasure with which Elizabeth received their application was equal to the aversion she had conceived against the queen of Scots. She not only granted the relief they requested, but assured them by Randolph of her esteem and favor while they should continue to uphold the reformed

religion and the connexion of the two nations.

Flattered by her assurances, they were strenuous

to gain partizans, and to disunite the friends of

their sovereign ; and, while they were secretly

preparing for rebellion, they disseminated among

the people the tenets that a Papist could not

legally be their king ; that the queen was not at liberty of herself to make the choice of a hus-

band ; and that, in a matter so weighty, she

Mght to be entirely directed by the determina-

jon of the three estates in parliament. Eliza-

**eth, carrying her dissimulation to the most*

criminal extremity, commanded Randolph to ask

an audience of Mary ; and to counsel her to har-

bour no suspicions of the earl of Murray and

his friends ; to open her eyes to their sincerity

and honor ; and to call to mind that, as their

ienrices had hitherto preserved her kingdom in

repose, her jealousies of them might kindle it

into combustion, make the blood of her nobles to

flow, and cast into hazard her person and her

frown. Full of astonishment at a message so

rude, the queen of Scots desired him to inform

his mistress that she required not her instruc-

tions to distinguish between patriotism and

treachery ; that she was fully sensible when her will was resisted or obeyed ; and that she possessed a power which was more than sufficient to repress and to punish the crimes of her subjects. The English resident went now to the earl of Lennox and the lord Darnley, and charged them to return to England. The former expressed an apprehension of the severity of his queen, and sought an assurance of her favor before he could venture to visit her dominions. The latter, exerting greater fortitude, told him that he acknowledged no duty or obedience but to the queen of Scots. The resident, treating this answer as disrespectful to Elizabeth, turned his back upon lord Darnley, and retired without bidding him adieu. This behaviour of Elizabeth, so tierce and so perfidious, was well calculated to confirm all the intentions of Mary. But, while the queen of Scots was eager to accomplish her marriage, she was not inattentive to the rising troubles of her country. The parliament which she had appointed could not now be held : it was therefore prorogued to a more distant day ; and the violence of the times did not then permit it

to assemble. By letters she invited to her, with all their retainers, the most powerful and the most eminent of her subjects. Bothwel was recalled anew from France ; and by general proclamations she summoned to her standard the united force of her kingdom. The castle of Edinburgh was likewise provided amply with stores and ammunition. The alacrity with which her subjects flocked to her from every quarter assured her of her power and popularity ; while it struck Murray and his adherents with the danger to which they were exposed. On the 29th of July, 1565, the ceremony of marriage between the queen and lord Darnley was performed. The latter had been previously created duke of Albany. The day before the marriage a proclamation was published, commanding him to be styled king of the realm, and that all letters after their marriage should be directed in the names of her husband and herself. The day after a new proclamation was issued confirming this act; he was pronounced king by the sound of trumpets, and associated with the queen in her government : a measure which seems to have

been the effect of the extreme attachment the queen had for her husband, which did not permit her to see that it was an infringement of the constitution.

The earl of Murray remonstrated that a king was imposed upon the nation without the consent of the three estates, and called upon the nation to arm against the beginnings of tyranny. The malcontents were quickly in arras; but their success did not answer their expectations. The majority of the nation were satisfied with the good intentions of their sovereign, and she herself took the earliest opportunity of crushing the rebellion in its infancy. The earl of Murray was declared a traitor ; and similar steps were taken with other chiefs of the rebels. She then took the field against them at the head of a considerablo army ; and, having driven them from

place to place, obliged them at last to take refuge in England. Queen Elizabeth received them with that duplicity for which her conduct was so remarkable. Though she herself had countenanced, and even excited them to revolt, she re-

fused to give an audience to their deputies. Nay, she even caused them to emit a public declaration, that neither she, nor any person in her name, had ever excited them to their rebellious practices. Yet, while the public behaviour of Elizabeth was so acrimonious, she afforded them a secure retreat in her kingdom, treated the earl of Murray in private with respect and kindness, and commanded the earl of Bedford to supply him with money. Mary, however, resolved to proceed against the rebels with an exemplary rigor. The submissions of the duke of Chatelherault alone, who had been less criminal than the rest, were attended to. But even the favor which he obtained was precarious and uncertain ; for he was commanded to use the pretence of sickness, and to pass for some time into foreign countries. A parliament was called ; and a summons of treason being executed against the earls of Argyle, Glencairn, and llothes, with others of the principal rebels, they were commanded to appear before the three estates; in default of which their lives and estates were declared to be forfeited. In the mean time Throgmorton the

English ambassador solicited the pardon of the rebels; which Mary was at first inclined to grant. However, by the persuasion of the court of France, she was not only induced to proceed against them with rigor, but acceded to the treaty of Bayonne, by which the destruction of the Protestants was determined. This measure filled the whole court with terror and dismay. The rebels were acquainted with the danger of their situation ; and, being now driven desperate, they were ready to engage in the most atrocious designs. Unhappily, the situation of affairs in Scotland rendered the accomplishment of their purposes but too easy. Violent disgusts had taken place between the queen and her husband. Her fondness had been excessive ; but she soon perceived that the qualities of his mind were not proportioned to his personal accomplishments. He was proud, disdainful, suspicious, wilful, giddy and obstinate, insolent and mean. The queen iu consequence began to show an indifference towards him ; which he took care to augment, by showing the like indifference towards her, and engaging in low intrigues and

amours, indulging himself in dissipation and riot, &c. However, the desire of dominion was his ruling passion ; and the queer, finding his total incapacity for exercising his power to any good purpose, had excluded him from it altogether. He was therefore a proper object for the machinations of the rebels, and readily entered into an agreement with them to depose the queen; vainly thinking that he should thus seture the crown to himself. However as the parJiament was soon to assemble, in which the rebels lad every reason to believe that they would be tondemned for high treason, it was necessary lhat the kingdom should be thrown into disorder before that time came, otherwise their fate was inevitable. Practising on the imbecility of Darnley, they persuaded him that a criminal correspondence subsisted between the queen and David Rizzio. Of all the slanders circulated against queen Mary, this appears the most ridiculous and incredible ; Rizzio was both old and of very unattractive appearance. But the king was resolved upon his destruction ; and the conspirators hoped thereby not only to get an in-

demnity, but to effect a total revolution at court, and the entire humiliation of Bothwel, Huntly, and Athol, who were the associates of llizzio. However, to save themselves, they engaged the king to subscribe abend, affirming that the project of assassinating Rizzio was altogether of his own devising ; acknowledging that he had solicited them to take a part in it, from the apprehensions that resistance might be made to him ; and agreeing, upon the word and honor of a prince, to protect and secure them against every hazard and injury to which they might be exposed from the achievement of his enterprise. Having procured this security, and having allured the earl of Lennox the king's father to approve of their measures, they adjusted the method of the projected murder, and despatched a messenger to the English frontier, advertising the earl of Murray and the rebels of their intention, and inviting them to return tothecourt. Upon the 9th of March, about seven o'clock P. M. armed men, to the number of 500, surrounded the palace of Holyrood. The earl of Morton and lord Lindsay entered the court of the palace, with*

160 persons. The queen was in her chamber at supper, with her natural sister the countess of Argyle, her natural brother Robert commendator of Holyrood House, Bejon of Creich master of the household, Arthur Erskine, and David Rizzio. The king, entering the apartment, seated himself by her side. He was followed by lord Ruthven, who being wasted with sickness, and cased in armour, exhibited an appearance that was hideous and terrible. Four ruffians attended him. In a hollow voice he commanded Rizzio to leave a place which did not become him. The queen, in astonishment, asked the king the meaning of this mysterious enterprise. He affected ignorance. She ordered Ruthveii from her presence under pain of treason ; declaring that, if Rizzio had committed any crime, she would produce him before the parliament, and punish him according to the laws. Ruthven, drawing his dagger, advanced towards Rizzio. The queen rose to make an exertion of her authority. The unfortunate stranger laid hold of her garments, crying out for justice and mercy. Other conspirators, rushing into the chamber,

overturned the table, and increased the dismay and confusion. Loaded pistols were presented to (he bosom of the queen. The king held her in his arms. George Douglas, snatching the dagger of his sovereign, plunged it into the body of Rizzio. The wounded and screaming victim was dragged into the antichamber ; and so eager were the assassins to complete their work that he was mangled with fifty-six wounds. While the queen was pressing the king to gratify her enquiries into the meaning of a deed so execra-ble, Ruthven returned into their presence. She gave a full vent to indignafion and reproach.

Ruthven, with an intolerable coldness and deli-Iteration, informed her that Rizzio had been put to death by the counsel of her husband, whom he had dishonored ; and that by the persuasion of this minion she had refused the crown matrimo-nial to the king, had engaged to re-establish the ancient religion, had resolved to punish the earl of Murray and his friends, and had entrusted her confidence to Bothwel and Huntly, who

were traitors. The king, taking the part of Ruthven, remonstrated against her proceedings, and complained that from the time of her familiarity with Rizzio she had neither regarded, entertained, nor trusted him. His suspicions and ingratitude shocked and tortured her. His connexion with the conspirators gave her an ominous anxiety. Apprehensions of outrages still more atrocious invaded her. In these agitated moments site did not lose herself in the helplessness of sorrow. The loftiness of her spirit communicated relief to her ; and, wiping away her tears, she exclaimed, that it was not now a season for lamentation, but for revenge.

The earls of Huntly, Bothwel, and Athol, lords Fleming and Livingston, and Sir James Balfour, who were at this time in the palace, found all resistance to be vain. Some of them, eluding the vigilance of Morton, made their escape ; and others were allowed to retire. The provost and magistrates of Edinburgh, hearing of the tumult, ordered the alarm bell to be rung. The citizens ran in crowds to enquire into the welfare of their sovereign; but she was not permitted to address them. The conspirators told

her that, if she presumed to make any harangue,

they would ‘ cut her in pieces, and cast her over the walls.’ The king called to the people that

she was well, and commanded them to disperse.

The queen was shut up in her chamber, uncer-

tain of her fate, and without the consolation or at-

tendance of her women. In the morning a pro-

clamation was issued by the kin?, without the

knowledge of his queen, prohibiting the meeting

of the parliament, and ordering the members to

retire from the city. The rebellions lords now

returned from England, and arrived at Edinburgh

within twenty-four hours after the assassination

of Rizzio. The queen, knowing of how much

consequence it was for her to gain the earl of

Murray, invited him to wait upon her. Not-

withstanding die extreme provocation which she

had met with, Mary so far commanded her pas-

sions that she gave him a favorable reception.

After informing him of the rudeness and severity

of the treatment she had met with, the queen ob-

served, that, if he had remained in friendship

with her at home, he would have protected her

against such excesses of hardship and insult.

Murray, with an hypocritical compassion, shed

tears ; while the queen seemed to entertain no

doubt of his sincerity, but gave him room to

hope for a full pardon of all his offences, fn

the mean time, however, the conspirators were

consulting, whether they should hold the queen in

perpetual captivity, or put her to death ; or whe-

ther they should content themselves with com-

mitting her to close custody in Stirling castle, till they should obtain a parliamentary sanction to

their proceedings, establish the Protestant reli-

gion by the total overthrow of the mass, and

invest the king with the crown matrimonial ami

the government of the kingdom. Mary now

began to perceive the full extent of her wretched-

ness ; and therefore, as her last resource, ap-

plied to the king, whom she treated with all

the blandishments of her sex. The king, wh'»,

with all his faults, had a natural facility of tem-

per, was easily gained over. The conspirators

were alarmed at his coldness, and endeavoured

to fill his mind with fears concerning the dupli-

city of his wife ; but, finding they could not gain their point, they at last began to treat of'an ac-

commodation. The king brought them a mes-

sage, importing that Mary was disposed to bury

in ob'ivion all memory of their transgressions ;

and he offered to conduct them into her presence.

The earls of Murray and Morton, with the lord

Ruthven, attending him into her presence, and,

falling on their knees before the queen, made their apologies and submissions. She commanded

them to rise ; and having desired them to recol-

lect her abhorrence of cruelty and rapaciousness,

she assured them, with a gracious air, that instead of designing to forfeit their lives, and possess

herself of their estates, she was inclined to re-

ceive them into favor, and to give a full pardon,

not only to the nobles who had come from I;.n_-

land, but to those who had assassinated David

Rizzio. They were accordingly ordered to pre-

pare the bonds for their security and forgive:

which the queen promised to take the earliest

opportunity of subscribing; but in the mean

time the king observed that the conspirators

ought to remove the guards which they hari

placed around the queen, that all suspicion ot

restraint might be taken away. This measure

could not with any propriety be opposed, and

the gvards were therefore dismissed ; upon which

the queen, that very night, left her palace at

midnight, and took the road to Dunbar, accoin panied by the king and a few attendants. The news of the queen's escape threw the conspirators into the utmost consternation ; as she immediately issued proclamations foi her subjects to attend her in arms, and was powerfully supported. They sent therefore lord Semple, requesting, with the utmost humility, her subscription to their deeds of pardon and security ; but to this message she returned an unfavorable answer, and advanced towards Edinburgh with ai army of 8000 men. The conspirators now fled with the utmost precipitation. Even John Knox retired to Kyle till the storm should blow over. On the queen's arrival at Edinburgh, a privy council was instantly called, in which the conspirators were charged to appear as guilty of murder and treason ; their places of strength were ordered to be given up to the officers of the crown ; and their estates and possessions were made liable to confiscation and forfeiture. But, while the queen was thus eager to punish the conspirators, she was sensible that so many of the nobility, by uniting in a common cause,

might raise a powerful party in opposition to her; for which reason she endeavoured to detach the earl of Murray from the rest, by making him of- f i-s of pardon. Sir James Melvil accordingly I ledged himself to produce his pardon and that

•of his adherents, if he would separate from Mor- ton and the conspirators. He accordingly be- came cold and distant to them, and exclaimed against the murder as a most execrable action; but, notwithstanding his affected anger, when the conspirators fled to England, he furnished them with letters of recommendation to the earl of Bedford. After the flight of the conspirators, the king thought it necessary for him to deny his hav- ing any share in the action. He therefore em- braced an opportunity of declaring to the privy council his total ignorance of the conspiracy against Rizzio ; and not satisfied with this, by public proclamations at the market-place of his capital, and over the whole kingdom, protested to the people at large that he had never bestow- ed upon it, in any degree, the sanction of his

command, consent, assistance, or approbation.

In the mean time the queen granted a full and

ample pardon to the earls of Murray, Argyle,

Glencairn, and Rothes, and their adherents ; but

towards the conspirators she remained inexora-

ble. This lenity, to Murray especially, proved

a source of the greatest inquietude to the queen ; for this nobleman, blind to every motive of ac-

tion distinct from his own ambition, began to

contrive new plots, which, though disappointed

for a time, soon operated to the destruction of

the queen, and almost to the ruin of the nation.

In 1566 the queen was delivered of a prince, who

received the name of James. This happy event,

however, did not extinguish the quarrel betwixt her

and the king. His desire to intrude himself into her authority, and to fix a stain upon her honor, his

share in the murder of Rizzio, and his extreme

meanness in publicly denying it afterwards,

could not fail to impress her with the strongest

sentiments of detestation and contempt. Un-

able, however, totally to divest herself of regard

for him, her behaviour, though cold and distant,

was yet decent and respectful. Castelnau, am-

bassador extraordinary from France, endeavour-

ed to bring about a reconciliation ; nor were his endeavours altogether ineffectual. The king and queen spent two nights together; and proceeded, in company to Meggatland in Tweedale, to enjoy the diversion of the chase, attended by the earls of Huntly, Bothwel, Murray, and other nobles. Thence they passed to Edinburgh, and then took the road to Stirling. Had the king been endowed with any prudence, he would have made the best use of this opportunity to have regained the affections of his queen ; but, instead of this, finding that he was not immediately entrusted with power, his peevishness suggested to him a design of going abroad. To M. du Croc, the French resident, who had attended Mary at Stirling, he ventured to communicate his chimerical project. This statesman represented to him its wildness and inefficacy; and could hardly believe that he was serious. His father and all the courtiers endeavoured to dissuade him from it. They admonished him to remember that his flight would expose him to every kind of ridicule and disgrace. They pointed out •the happiness of his fortune, and counselled him

not to part lightly with its flattering advantages. The queen herself, taking his hand into her's, and pressing it with affection, besought him to say by what act or deed she had unfortunately induced him to conceive so fatal a purpose? Her memory did not reproach her with any crime or indiscretion, which affected his honor or her integrity ; yet, if she had undesignedly incurred his displeasure, she was disposed to atone for it : and she begged him to speak freely. M. du Croc then asked him to reveal his inquietudes. But all this attention was ineffectual. Obstinately froward, lie refused to confess that he intended any voyage, and made no mention of any reasons of discontent. He acknowledged with readiness that he could not accuse the queen of any offence. In perturbation, he prepared to retire ; and, turning to her, said, ' Adieu, madam ! you shall not see me for a long time.'

He then bowed to the French envoy and to the lords of the privy council, and hastened back to Stirling, leaving the queen and her council in astonishment. They resolved to watch his motions, and could not conjecture what step he would take. Mary despatched a courier to ad-

vertise the king of France and the queen-mother of his conduct. But it was not possible that a prince so meanly endowed with ability could make any impression upon her allies. He was universally odious ; and at this time the queen was in the highest estimation with the great body of her subjects. After passing some days at Stirling, he addressed a letter to the queen, in which, after hinting at his design of going abroad, he insinuated his reasons of complaint. 'He was not entrusted by her with authority, and she was no longer studious to advance him to honor. He was without attendants ; and the nobility had deserted him.' Her answer was sensible and temperate. She called to his remembrance ' the distinctions she had conferred upon him, the uses to which he had put the credit and reputation accruing from them, and the heinous offences he had encouraged in her subjects. Though the plotters against Rizzio had represented him as the leader of their enterprize, she had behaved as if she believed not his participation in the guilt of that project. As to the defects of his retinue, she had uniformly offered him the attendance of her own servants.

As to the nobility they were the supports of the throne, and independent of it. Their countenance was not to be commanded, but won. He had discovered too much stateliness to them ; and they were the proper judges of their own deportment. If he wished for consequence, it was his duty to pay them attention ; and, whenever he should conciliate their regard, she would be happy to give him all the importance that belonged to him.' In the mean time the earls of Murray and Bothwel were industriously striving to widen the breach between the king and queen, and at the same time to foment the division between the king and his nobles. The earl of Morton excited disturbances on the borders; and, as no settled peace had taken place there since Mary's marriage, there was the greatest reason to believe that he would succeed in his attempts. Proclamations were therefore issued by the queen to call her subjects to arms : and she proceeded to Jedburgh to hold justice-courts. In the course of tin's journey she was

taken dangerously ill : ;is soon as she was able to travel she visited Kelso,

Werk Castle, Hume,

Lang ton, and VVedderburn. The licentious bor-

derers, on the first news of her recovery, laid

down their arms. Being desirous to take a view

of Berwick, the queen advanced to it with an

attendance of 1000 horse. Sir John Forster,

the deputy warden of the English marches, came

forth with a numerous retinue, and conducted

her to the most proper station for surveying it,

and paid her all the honors in his power, by a

salute of the artillery, and other demonstrations of joy. Continuing her journey, she passed to Ey-

inouth, Dunbar, and Tamtallan ; proceeding

thence to Craigmillar Castle, where she proposed

to remain till the time of the baptism of the

princp, which was to be celebrated at Stirling.

During her severe sickness her husband had kept

himself at a distance ; but, when she was so far

recovered as to be out of danger, he made his

appearance ; and, being received with some cold-

ness, he retired suddenly to Stirling. This cruel

neglect was a most sensible mortification to her.

She was seized with a settled melancholy ; and in

her anguish often wished for death to put a pe-

riod to her existence. Her nobles, who were ca-

balling against her, remarked her condition, and took advantage of it. Bothwel, who had already recommended himself by his services, redoubled his efforts to heighten the favor which these services had induced her to conceive for him. At this time he sought to gain the affection of the queen, with a view to marry her himself, providing a divorce from her husband could be obtained, •which was now become the subject of consultation by Murray and his associates. After much deliberation the queen herself was acquainted with this project ; and it was told her that, provided she would pardon the earl of Morton and his associates, the means should be found of effectuating the divorce. This was urged as a nvitter of state by the earls of Murray, Lethingto», Argyle, and Huntly ; and the queen was invited to consider it as an affair which might be managed without any interference on her part. The queen replied that she would listen to them, upon condition that the divorce could be obtained according to the laws, and that it should not be any way prejudicial to her son ; but, if they meant to operate their purpose by a disregard to

these points, they must not think any more of it; for, rather than consent to their views, she would endure all the torments, and abide by all the perils, to which her situation exposed her. Lethington, upon this, in the name of the rest, engaged to deliver her from her husband, without prejudice to her son : words which could not be understood otherwise than as pointing at murder. Lord Murray, added he, who is here present, scrupulous as he is, will connive, and behold our proceedings without opening his lips. The queen is said immediately to have made answer, ' I desire that you will do nothing from which any stain may be fixed upon my honor or conscience ; and I therefore require the matter to rest as it is, till God of his goodness send relief. What you think to be of service to me may turn out to my displeasure and harm.' It appears that from this moment a plot was formed by Murray, Bothwel, and Lethington against the life of Darnley, and by some of them probably against the queen herself; and that Morton, who with the other conspirators against Rizzio had received a pardon, was closely associated with them in their nefarious

designs. That profligate peer was, in his way to Scotland, met at Whittingham by Bothwel and the secretary. They proposed to him the murder of the king, and required his assistance, alleging that the queen herself consented to the deed : to which Morton by his osvn account replied that he was disposed to concur, provided he were sure of acting under any authority from her; but Bothwel and Lethington, having returned to Edinburgh on purpose to obtain such an authority, sent him back a message, that the queen would not permit any conversation upon that matter. In the mean time preparations were made for the baptism of the young prince ; to assist at which the queen left Craigmillar, and went to Stirling. The ceremony was performed on the 17th of December, 1566. He was called Charles-James-James-Charles, and proclaimed by the heralds prince and steward of Scotland, duke of Rothesay, earl of Carrick, lord of the isles, and baron of Renfrew. Amidst the scenes of joy displayed on this occasion the king showed greater folly than ever. Though he had often kept at a greater distance before, he took up his residence at Stirling, as if he had meant to offend the queen, and to expose

their quarrels: chiefly confining himself to his chamber. His strange behaviour, however, did not give the public any favorable idea of him ; and, as the earl of Murray and his faction took care to augment the general odium, no court was paid to him by foreign ambassadors. His situation, therefore, was exceedingly uncomfortable; but, though he must have been conscious of its imprudence, he did noi alter his conduct. In a sullen humor he left Stirling, and proceeded to Glasgow. Here he fell sick, with such symptoms as seemed to indicate poison. He was tormented with violent pains, and his body was covered with pustules of a bluish color ; so that his death was daily expected. Mary did not repay his coldness to her by negligence. She set out immediately for Glasgow, and waited on him with all the assiduity of an affectionate wife until he recovered; after which she returned with him to Edinburgh; and, as the low situation of the palace of Holyrood House was thought to render it unhealthy, the king was lodged in a house which had been appointed for the superior of the church called St. Mary's in the

Fields. This house stood upon a high ground, at the back of that ground where the royal infirmary now stands, and in a salubrious air ; and here she staid with him some days. Here the conspirators thought proper to finish their plot in the most execrable manner. On the 10th of February, 1567, about two o'clock in the morning, the house where the king resided was blown up by gunpowder. The explosion, alarming the inhabitants, excited a general curiosity, and brought multitudes to the place whence it proceeded. The kin? was found dead and naked in an adjoining field, with a servant who used to sleep in the same apartment with him. On neither was there any mark of fire or olber external injury. Till the

late improvements of the city, when all incumbrances were cleared away, the gate in the old wall, at the back of the king's house, by which the conspirators entered and returned from their bloody business, was distinctly visible, though long ago built up.

The queen was in the palace of Holyrood House, taking the diversion of a masked ball, which was given to honor the marriage of a

favorite domestic, when the news of the king's death was brought to her. She showed the utmost grief, and appeared exasperated to the last degree against the perpetrators of a deed at once so shocking and barbarous. The most express and positive orders were given to enquire after the perpetrators by every possible method. A proclamation was issued by the privy council, assuring the people that the queen and nobility would leave nothing undone to discover the murderers of the king. It offered £2000, and an annuity for life, to any person who should give information of the devisers, counsellors, and perpetrators of the murder ; and, besides this reward, the promise of a full pardon, to the conspirator who should make a free confession of his own guilt, and that of the confederates. On the fourth day after this proclamation was published a placard was affixed to the gate of the city prison, affirming that the earl of Bothwel, James Balfour, David Chalmers, and black John Spence, were the murderers. No name, however, was subscribed to this intelligence, nor was any demand made for the proffered reward ; so that it

was difficult to know whether this advertisement had been dictated by a spirit of calumny or the love of justice. In the mean time the earl of Murray conducted himself with his usual circumspection and artifice. Upon a pretence that his wife was dangerously sick at his castle in Fife, he, the day before the murder, obtained the queen's permission to pay a visit to her. Thus he proposed to prevent all suspicion whatever of his guilt. He was so full, however, of the intended project that, while he was proceeding on his journey, he observed to the person who accompanied him, ' This night, before morning, the lord Darnley shall lose his life.' When the blow was struck, he returned to Edinburgh to carry on his practices. Among foreign nations the domestic disputes of the queen and her husband being fully known, it was with the greater ease that reports could be propagated to her disadvantage. To France letters were despatched, expressing in fervent terms her participation in the murder. In England the ministers and courtiers of Elizabeth could not flatter that princess more agreeably, than by industriously detracting from the

honor and the virtue of the Scottish queen. Within her own dominions a similar spirit of outrage exerted itself, and not without success. Her reconciliation with her husband was interpreted to be dissimulation and treachery. The Protestant clergy, who were her most determined enemies, possessed a leading direction among the populace ; and they were the friends and the parlizans of the earl of Murray. Open declamations from the pulpit were at the same time made against Bothwel; and papers were dispersed making the queen a party with him in the mur-

der. Every art was employed to provoke the frenzy of the people. Voices, interrupting the silence of the night, proclaimed the^ infamy of Bothwel ; and portraits of the regicides were circulated over the kingdom. The queen's determination, however, to scrutinize into the matter was unabated ; and to the earl of Lennox, the king's father, she paid an attention which he could only have expected from her upon an emergency of this kind. Having pressed her by letter to the most diligent enquiry after the regicides,

she returned an answer so completely to his

wishes that he was fully convinced of the sincerity and rigor with which she intended to proceed

against them ; and he urged her to assemble the

three estates, that their advice might direct the

order and manner of their trial. She wrote to

him that an assembly of the estates was already

proclaimed ; that it was her earnest and deter-*

mined will and purpose that no step should be

neglected that could conduce to the execution of

justice : and that, although she had thought it

expedient to call a meeting of the parliament at

this juncture, it was not her meaning that the pro-

ceedings against the regicides should be delayed

till it was actually assembled : adding that if he would condescend to mention the names which,

in his opinion, were most suspicious, she would

instantly command that those steps should be

taken which the laws directed and authorised. He

in return named the earl of Bothwel, James Bal-

four, David Chalmers, black John Spence, Franjfp

Sebastian, John de Bourdeaux, and Joseph, trre

brother of David Rizzio; and assured her majesty

that his suspicions of these persons were weighty

and strong. In reply to his information, Alary

gave him her solemn promise that the persons he had pointed out should undergo their trial in conformity to the laws, and that they should be punished according to the measure of their guilt : and she invited him to leave immediately his retirement, and to meet her at her court, that he might witness the proceedings against them, and the zeal with which she was animated to perform the part that became her. While the queen carried on this correspondence with the earl of Lennox she resided partly at the palace of lord Seton, a few miles from her capital, and partly at Holyrood House. By the time that she sent her invitation to him she was residing in her capital. She delayed not to confer with her counsellors, and to lay before them the letters of the earl of Lennox. Bothwel was earnest in his protestations of his innocence; and he even expressed his wish for a trial, that he might establish his integrity. No facts pointed to his guilt; there had appeared no accuser but the earl of Lennox ; and no witnesses had been found who could establish his criminality. Her privy council seemed to be firmly persuaded tliat he was suffering under the malice of defamation. Murray, Morton, and

Lethington, whatever might be their private machinations, were publicly his most strenuous defenders; and they explained the behaviour of the earl of Lennox to be the effect of jealousy against a nobleman who had outrun him so far in the career of ambition. But though all the arts of Murray and Bothwel, Morton and Lethington, were exerted to mislead the queen, they

were not able to withhold her from adopting the strain of conduct which was the most proper and honorable to her. It was her own ardent desire that the regicides should be punished ; she had given her solemn promise to the earl of Lennox that the persons whom he suspected should be prosecuted ; and amidst all the appearances in favor of Bothwel, and all his influence, it is a striking proof of her honor, vigor, and ability, that she could accomplish this measure. An order, accordingly, of the privy council was made, which directed that the earl of Bothwel, and all the persoss named by Lennox, should be

brought to trial for the murder of the king, and that the laws of the land should be carried into full execution. The 12th of April was appointed for the trial. A general invitation was given to all persons whomsoever to prefer their accusations.

The earl of Lennox was formally cited to do himself justice, by appearing in the high court of justiciary, and by coming forward to make known the guilt of the culprits. In the mean time it was thought proper to repress that spirit of outrage that had manifested itself against the queen. No discoveries, however, were made, except against James Murray, brother to Sir William Murray of Tullibardin, who at different times had published placards injurious to her. He was charged to appear before the privy council ; but, refusing to obey its citation, it was made a capital offence for any commander of a vessel to convey him out of the kingdom ; and the resolution was taken to punish him with an exemplary severity. Effecting, however, his escape, he avoided the punishment due to his repeated and detestable acts of calumny and treason. The day for the trial of Bothwel approached. The conspirators, notwithstanding

their power, were not without apprehensions.

Their preparations, however, for their safety had

been anxious ; anjfk among other practices, they

threw the earl of "Lennox into a panic. They

were favored by his consciousness of his unpo-

pularity, and his want of strength, by his timidity

and spirit of jealousy : by the time he had reached Stirling, in his way to Edinburgh, his fears pre-

dominated. He was uo longer in haste to proceed

against the regicides. He addressed a letter to

the queen, in which he said he had fallen into

such sickness that he could not travel ; and he

affirmed that he had not time to prepare for the

trial and to assemble his friends. An application

for the delay of a trial so important, upon the

night immediately preceding the day stated for

it, for reasons of no force, could not with pro-

priety be attended to. The privy council refused

the earl's demand. The court of justiciary

was assembled. The earl of Argyle acted as

lord high justiciar ; and was aided by four

assessors, Robert Pitcairn, commendator of

Dumfermline, and lord Lindsay ; with Mr.

James Macgill and Mr. Henry Balnaves, two

lords of the session. The indictment was read,

and the earls of Bot'iwel and Lennox were called upon ; the one as the defender, the other as the accuser. Bothwel, who had come to the court with an attendance of his vassals, and a band of mercenary soldiers, presented himself; but I^-n-nox appeared only by his servant Robert L'un-nyngham ; who after apologising for the earl's absence, from the shortness of time and the ab-sence of his friends, desired that a new duy should be appointed for the trial ; and protested that, if the jury should now enter upon the busi-ness, they would incur the guilt of a wilful error, and their verdict be of no force. This remon-strance and protestation appeared not to the court of sufficient importance to interrupt the trial. They paid a greater respect to the letters of the earl of Lennox to the queen insisting upon an immediate prosecution, and to the order of the privy council consequent upon them. The jury, who consisted of men of rank, after considering and reasoning upon the indictment for a consi-derable time, were unanimous in acquitting Bothwel of all share and knowledge of the king's murder. The machinations, however, of Morton were so apparent that the earl of Caithness, the

chancellor of the assize, made a declaration, in their name and his own, that no wilful error ought to be imputed to them for their verdict, no proof, vouchers, or evidence, to support or confirm the criminal charge, having been submitted to them. At the same time he offered a protestation, for himself, that there was a mistake in the indictment, the 9th day of February, instead of the 10th, being expressed in it as the date of the murder. It is not to be doubted but that this flaw in the indictment was a matter of design, and with a view to the advantage of Bothwel, if the earl of Lennox had made his appearance against him. And it has been remarked, as very suspicious, that soldiers in arms should have accompanied him to the court of justice ; that, during the trial, the earl of Morton stood by his side, to countenance and assist him ; and that the four assessors to the chief justiciar were warm and strenuous friends of Murray's.

Immediately after his trial, Bothwel set up in a conspicuous place a writing, subscribed by him, challenging to single combat any person of equal rank with himself who should dare to af-

firm that he was guilty of the king's murder. To

this challenge an answer was published, in which

the defiance was accepted upon the condition

that security should be given for a fair and equal conflict : but, no name being subscribed to this

paper, no step was taken for the duel. Two

days after the parliament met : and there the

party of Bothwel appeared equally formidable.

The verdict in his favor was allowed to be true

and just. He was continued in his high offices;

and obtained a parliamentary ratification of the

place of keeper of Duubar castle, with the estates

in connexion with it ; and other favors were

conferred upon Murray, with the rest of the no-

bles suspected as accomplices in the murder. A

very short time after the acquitment of Bothwel

he began to give a greater loose to his ambition,

and conceived hopes of gaining the queen in

marriage. It has been already remarked that he

had insidiously endeavoured to gain her affection

during the lifetime of her husband ; but the recent death of the king in such a shocking manner,

and the strong suspicions still resting upon him,

notwithstanding his acquittal, prevented him from

making his addresses openly to her. He therefore

endeavoured to gain the nobility over to his side ; which having done, by means of great promises,

he invited them to an entertainment, where they

agreed to ratify a deed pointing him out to the

queen as a person worthy of her hand, and ex-

pressing their resolute determination to support

him in his pretensions. This extraordinary bond

was accordingly executed ; and Murray's name

was the first in the list of subscribers, to decoy others to sign after him ; but, that lie might ap-

pear innocent of what he knew was to follow,

he had, before any use was made of the bond,

asked and obtained the queen's permission to go

to France. In his way thither he visited the

court of Elizabeth, where lie did not fail to con-

firm all the reports which had arisen to the dis-

advantage of Mary ; and he now circulated the

intelligence that she was soon to be married to

Bothwel. Her partizans in England were exceed-

ingly alarmed ; and even Elizabeth herself wrote

to her, and cautioned her not to afford such a

mischievous handle to the malice of her enemies.

Mary, upon the dissolution of the parliament,

had gone to Stirling to visit the young prince. Bothwel, armed with the bond of the nobles, assembled 1000 horse, under the pretence of protecting the borders, of which he was the warden ; and, meeting her upon her return to her capital, dismissed her attendants, and carried her to his castle of Dunbar. The arts which he there used to effect the accomplishment of his wishes are mentioned under the article MARY. But having been married only six months before to lady Jane Gordon, sister to the earl of Huntly, it was necessary to procure a divorce before he could marry the queen. This was easily obtained. The parties were cousins within the prohibited degrees, and had not obtained a dispensation from Rome. The marriage therefore, in the opinion of the queen and her Roman Catholic subjects, was illicit. The husband had also been unfaithful ; so that two actions of divorce were instituted. The lady commenced a suit against him in the court of commissaries, charging him as guilty of adultery with one of her maids. The earl brought a suit against his wife before the archbishop of St Andrews, upon the plea of

consanguinity. By both courts their marriage was decided to be void ; and thus two sentences of divorce were pronounced.

Bothwel now conducted the queen from Dunbar to her capital. But, instead of attending her to her palace at Holyrood House, his jealousy and apprehensions induced him to lodge her in the castle of Edinburgh, where he could hold her in security against any attempt of his enemies. To give satisfaction, however, to her people, and to convince them that she was no longer a prisoner, a public declaration upon her part appeared to be a measure of epexdiency. she presented herself, therefore, in the court of session ; the lords chancellor and president, the judges, and other persons of distinction, being present. After observing that some stop had been put to the administration of justice upon account of her being detained at Dunbar against her will by the lord Bothwel, she declared that, though she had been highly offended with the outrage offered her, she was yet inclined to forget it. His courteousness, the sense she entertained of his past services to the state, and the hope with which

she was impressed of his zeal and activity for the future, compelled her to give him and his accom-

plices in her imprisonment a full pardon. She

also desired them to take notice that she was

now at her liberty ; and that she proposed, in

consideration of his merits, to take an early op-

portunity of promoting him to new honors. At

length the order was given for the proclamation

of the banns of marriage between them, and Mr.

John Craig, one of the ministers of Edinburgh,

was desired to perform this business. But, though

the order was subscribed by thequeen, he refused

his compliance without the authority of ihe

church. The church, after long reasonings,

granted him permission to discharge this duty.

But his scruples were not yet removed. He

protested that, in obeying their desife, he should

be allowed to speak his own sentiments concern-

ing the marriage, and that his publishing the

banns should infer no obligation in him to offi-

ciate in the solemnity. In his congregation,

accordingly, before a crowded audience, and in

the presence of several noblemen and privy coun-

sellors, he declared that the marriage of the queen

and the earl of Bothwel was unlawful, and that

he was prepared to give his reasons for this opinion to the parties themselves. He added that, if leave to do this was denied him, he would either abstain altogether from proclaiming the banns, or take the liberty, after proclaiming them, to inform his people of the causes of his disapprobation of the marriage. He was carried before the lords of the privy council; and the earl of Bothwel called upon him to explain his behaviour. He answered that the church had prohibited the marriage of persons separated for adultery ; and that the divorce between him and his wife must have been owing to collusion; since the sentence had been given with precipitation, and since his new contract was so sudden ; and he objected to him the abduction and ravishment of the queen, and the suspicion of his guilt in the king's murder. This bold language drew no reply from Bothwel that was satisfactory to Mr. Craig, or that could intimidate him. He proclaimed in his church the banns of the marriage ; but he told the congregation that he discharged the suggestions of his conscience in pronouncing it to be a detestable and

scandalous engagement. He expressed the sor-

row he felt for the conduct of the nobility who

seemed to approve it from their flattery or silence ; and, addressing himself to the faithful, he be-

sought them to pray to the Almighty that he

would turn a resolution intended against law,

reason, and religion, into a comfort and benefit

to the church and the kingdom. These freedoms

were too great to pass unnoticed. Mr. Craig

was ordered anew to attend the privy council ;

and he was reprimanded with severity for ex-

ceeding the bounds of his commission. He had

the courage to defend himself. His commission,

he said, was founded in the word of God, posi-

tive law, and natural reason ; and upon these

topics he was about to prove that the marriage

must be universally foul and odious, when the

earl of Bothwel commanded him to be silent.

The privy council, struck with the vigor of the

man, and apprehensive of the public discontents,

did not dare to inflict any punishment upon him ;

and this victory over Bothwel, while it heightened

all the suspicions against him, served to encourage the enemies of the queen, and to undermine the respect of her subjects. Mary, before she gave her hand to Bothwel, created him duke of Orkney. The ceremony was performed in a private manner, after the rules of the popish church ; but, to gratify the people, it was likewise solemnised publicly according to the Protestant rites by Adam Bothwel bishop of Oskney, who IKK! renounced the episcopal order for the Presbyterian. It was celebrated with little pomp. Many of the nobles had retired to their seats in the country ; and those who attended were thoughtful and Sad. Du Croc, the French ambassador, sensible that the match would be displeasing to his court, refused to give his countenance to the solemnity. There were no acclamations of the people. Mary herself was not unconscious of the imprudence of the measure, and looked back with surprise and sorrow to the train of circumstances which had conducted her to this fatal event. Forsaken by her nobles, and imprisoned at Dunbar, she was in so perilous a situation that no remedy could save her honor

hut death. Her marriage was the immediate and necessary consequence of that situation. Melvil vindicates her on this principle, and even lord Ilailes apologises for her by observing that 'after Mary had remained a fortnight under the power of a daring profligate adventurer, few foreign princes would have solicited her hand.' But, after making every allowance for her situation and circumstances, it was a most imprudent step, and the most unjustifiable action of her whole life. It was indeed the point for which her enemies had labored with a wicked and relentless policy.

Mary was unfortunate in her second marriage, but much more so in her third. Bothwel had neither talents for business nor affection for his wife. Ambitious to the last degree, he sought only to establish himself in power, while his fears and jealousies made him take the most improper means. The marriage had already thrown the nation into a ferment; and the least improper exercise of power, or indeed an appearance of it, would be sufficient to ruin them both for ever. Perhaps the only thing which at this

juncture could have pacified the people, would have been the total abolition of popery, which they had often required. But this was not thought of. Instead of taking any step to please the people, Bothwel endeavoured to force the earl of Mar to deliver up the young prince to his custody. This was sufficient to make the flame, which had hitherto been smothered, break out with all its violence. It was universally believed that Bothwel, who had murdered the fattier, designed to kill the son also, and the queen was thought to participate in all his crimes. The earl of Murray now took advantage of the queen's unfortunate situation to aggrandise himself. After having visited the KIILTlish court, he proceeded to France, where he assiduou.tly disseminated all the reports against the queen which were injurious to her reputation ; and where, without being exposed to suspicion, he was able to maintain a close correspondence with his friends Morton and Lethington, and to inspirit their machinations. His associates, true to ins ambition and their own, had promoted all the schemes of Bothwel upon

the queen with a power and influence which had insured their success. In confederacy with the earl of Murray himself, they had conspired with him to murder the king. Assisted with the weight of the earl of Murray they had managed his trial, and operated the verdict which acquitted him. By the same arts, and with the same views, they had joined with him to procure the bond of the nobles, recommending him to the queen as a husband, asserting his integrity and innocence, recounting his noble qualities, and expressing an unalterable resolution to support the marriage against every opposer and adversary, and recording a wish that a defection of its objects should be branded with everlasting ignominy. When the end, however, was accomplished for which they had been so zealous, and when the marriage of the queen was actually celebrated, they were in haste to entitle themselves to the ignominy which they had imprecated. The murder of the king, the guilt of Bothwel, his acquittal, his divorce, and his marriage, became the topics of their complaints and declamation. Upon the foundation of this hated mar-

riage, they ventured to infer the privity of the queen to all his iniquity and transactions ; and this step seemed doubtless, to the mass of her own subjects, and to more distant observers, a strong confirmation of all the former suspicions which had been circulated with so much artifice. Their imputations and devices excited against her, both at home and abroad, the most indignant and humiliating odium; and, amidst the ruins of her fame, they thought to bury for ever her tranquillity and peace. But, while this cabal were prosecuting their private ends, several noblemen, not less remarkable for their virtue than their rank, were eager to vindicate the national integrity and honor. The earl of Athol, upon the king's murder, had retired from the court, and was waiting for a proper season to take revenge upon the regicides. The earl of Mar, uneasy under the charge of the young prince, was solicitous to make himself strong, thai he might guard him from injury. Motives so patriotic and honorable drew applause and partizans. An association was insensibly formed to punish the murderers of the king, and to protect

the person of the prince. Morton and Lething-

ton encouraged and promoted this combination. A

convention was appointed at Stirling, for consult-

ing upon the measures expedient to be pursued.

They agreed to take an early opportunity to ap-

pear in the field ; and, when they separated, it

was to collect their retainers, , and to inspirit their passions. Of this confederacy, the leading men

were the earls of Argyle, Athol, Morion, Mar,

and Glencairn; the lords Hume, Semple, and

Lindsay; the barons Kirkaldy of (irange, Mur-

*ray of Tullibardin, and Maitland of I*thington.*

The earl of Bothwel was sensible that if he was

to sit upon the throne he must wade to it through SCOTLAND.

blood. By his advice, two proclamations were

issued in the name of the queen, under the pre-

tence of suppressing insurrections and depreda-

tions upon the borders. By the former she

called together in arms, upon an early day, the

earls, barons, and freeholders of the districts of

Forfar and Perth, Strathern, and Monteith,

Clackmannan, Kinross, and Fife. By the latter

she charged the greater and lesser baronage,

with all the inferior proprietors of the shires of

Linlithgow, Edinburgh, Haddington, and Ber-

wick, to prepare immediately for war, and to

keep themselves in readiness to march upon her

order. These military preparations added to the

public discontents. The rumors against the

•queen were violent and loud. It was said that

she meant to overturn the constitution and the

laws ; that she had been careless of the health of her son, and was altogether indifferent about his

preservation; that she had separated herself from

the councils and assistance of her nobles ; and

that she wished to make her will the only rule of her government. Agitated with the hazardous

state of her affairs she published a new procla-

mation, in which she employed herself to refute

these accusations; and in which she took the op-

portunity to express, in a very forcible manner,

not only her attachment to her people and the

laws, but the fond affection that she bore to the

prince, whom she considered as the chief joy of

her life, and without whom all her days would

be comfortless. The declarations of the queen

were disregarded. The nobles abounding in

vassals, and having the hearts of the people,

were soon in a situation to take the field. They

were advancing to the capital. The royal army was not yet assembled ; and the queen and Bothwel suspected that the castle of Edinburgh would shut its gates upon them. The fidelity of Sir James Balfour, the deputy governor, had been staggered by the practices of the earl of Mar and Sir James Melvill. Mary left her palace of Holyrood House, and was conducted to Borthwick Castle. The associated lords, informed of her flight, took the road to this fortress, with 2000 horse. Lord Hume, by a rapid march, presented himself before it with the division under his command ; but, being unable to guard all its avenues, the queen and Bothwel effected their escape to Dunbar, where the strength, of the fortifications gave them a full security against a surprise. Upon this second disappointment, the nobles resolved to enter Edinburgh, and to augment their strength by new partizans. The earl of Huntly and lord Boyd were here on the side of the queen, with the archbishop of St. Andrews, the bishop of Ross, and the abbot of Kilwinning. They endeavoured to animate the inhabitants to defend their town and the cause of their sovereign. But the tide of popularity

was favorable to the confederate lords. The magistrates ordered the gates of the city to be shut; but no farther resistance was intended. The lords, forcing St. Mary's port, found an easy admittance, and took possession of the capital. The earl of Huntly and the queen's friends fled to the castle to Sir James Balfour, who had been the confident of Bothwel, and who agreed to protect them, although he was now concluding a treaty with the insurgents. The associated lords now formed themselves into a council, and circulated a proclamation. By this paper they declared that the queen, being detained in captivity, was neither able to govern her realm, nor to command a proper trial to be taken of the king's murder. In an emergency so pressing they had not despaired of their country, but were determined to deliver the queen from bondage, to protect the person of the prince, to revenge the murder of the king, and to vindicate the nation from the infamy it had hitherto suffered through the impunity of the regicides. They therefore commanded all the subjects of Scotland whatsoever, and the

buigesses and inhabitants of Edinburgh in particular, to take a part with them, and to join in the advancement of purposes so beneficial and salutary. Next day they issued another proclamation in terms still stronger. They expressed their persuasion of Bothwel's guilt in the rape and seduction of the queen, and in the king's murder, to accomplish his marriage ; and of his design to murder the young prince, and that he was collecting troops with this view. Addressing themselves, therefore, to all the subjects of the realm, whether they resided in counties or in boroughs, they invited them to come forward to their standard ; and threatened all who should disobey them that they should be treated as enemies and traitors. Bothwel in the mean time was not inactive; the proclamations of the queen had brought many to her assistance ; 4000 combatants ranged themselves on her side, and Bothwel was impatient to put his fortunes to the issue of a battle. He left the strong castle of Dunbar, where the nobles were not prepared to assail him, and where he might have remained in safety till they dispersed themselves; for

their proclamations were not so successful as they had expected ; their provisions and stores were scanty ; and the zeal of the people, unsupported by prosperity, would soon have abated. Imprudent precipitation served, them in a most effectual manner. When the queen had reached Gladsmuir, she ordered a manifesto to be read to her army, and to be circulated among her subjects. By this paper she replied to the proclamations of the confederated nobles, and charged them with treachery and rebellion. She treated their reasons of hostility as mere pretence. As to the king's murder, she protested that she herself was fully determined to revenge it, if she could be so fortunate as to discover its perpetrators. With regard to the bondage from which they were so desirous to relieve her, she observed that it was a falsehood so notorious that the simplest of her subjects could confute it ; for her marriage had been celebrated in a public manner, and the nobles could hardly have forgotten that they had subscribed a bond recommending Bothwel to be her husband. With regard to the industrious defamations of this nobleman, it was urged that he had discovered

the utmost solicitude to establish his innocence. He had invited a scrutiny into his guilt ; the justice of his country had absolved him ; the three estates assembled in parliament were satisfied with the proceedings of his judges and jury;

and he had offered to maintain his quarrel against any person whatsoever who was equal to him in rank, and of an honest reputation. The nobles, she said, to give a fair appearance to their treason, pretended that Bothwel had schemed the destruction of the prince, and that they were in arms to protect him. The prince, however, was actually in their own custody ; the use they made of him was that of a screen to their perfidiousness ; and the real purposes with which they were animated were the overthrow of her greatness, the ruin of her posterity, and the usurpation of the royal authority. She therefore entreated the aid of her faithful subjects ; and, as the prize of their valorous services she held out to them the estates and possessions of the rebels.

The associated nobles, pleased at the approach of the queen, put themselves in motion. In Edinburgh they had gathered an addition to their force ; and the Scottish officer who commanded the companies which the king of Denmark was permitted to enlist in Scotland had been gained to assist them. He had just completed his levies, and he turned them against the queen. The nobles, after advancing to Musselburgh, refreshed their troops. Intelligence was brought that the queen was upon her march. The two armies were nearly equal in numbers ; but the preference, in point of valor and discipline, belonged decisively to the soldiers of the nobles. The queen posted herself on the top of Carberrry hill. The lords, taking a circuit, seemed to be retreating to Dalkeith, but, wheeling about, they approached to give her battle. They were ranged in two divisions. The one was commanded by the earl of Morton and the lord Hume ; the other was directed by the earls of Athol, Mar, and Glencairn, with the lords Lindsay, Ruthven, Semple, and Sanquhar. Bothwel was the leader of the royal forces; and

there served under him the lords Seton, Yester, and Borthwick. It was not without apprehensions that Mary surveyed the formidable appearanoe of her enemies. Du Croc, the French ambassador, hastened to interpose his good offices, and to attempt an accommodation. He assured the nobles of the peaceful inclination of the queen ; and that the generosity of her nature disposed her not only to forgive their present insurrections, but to forget all their former transgressions. The earl of Morton informed him that they had not armed themselves against the queen, but against the murderer of the late king ; and that if she would surrender him up to them, or command him to leave her, they would return to their duty. This language confounded Du Croc. He conceived that all negociation was fruitless, and withdrew. Mary was full of perturbation and distress. It was with infinite regret that she considered the consequences of her situation at Dunbar. Nor had his behaviour since her marriage contributed to allay her inquietudes. The violence of his passions, his suspicions, and his guilt, had induced him to

surround her with his creatures, and to treat her with insult and indignity. She had been almost constantly in tears. His demeanor, which \;ts generally rude and indecent, was often so savage and brutal that she sometimes was tempted to commit suicide. Upon his account she was now encompassed with dangers. Her crown was in hazard. Under unhappy agitations, she rode through the ranks of her army, and found her soldiers dispirited. Whatever respect they might entertain for her, they had none for her husband. His own dependents only were willing to fight for him. He endeavoured to awaken the royal army to valor, by throwing down the gauntlet of defiance against any of his adversaries who should dare to encounter him. His challenge was instantly accepted by Kirkaldy of Grange, and by Murray of Tullibardin. He objected that they were not peers. The lord Lindsey discovered the greatest impatience to engage him, and his offer was admitted ; but the queen prohibited the combat. All the pride and hopes of Bothwel sunk within him. His soldiers, in small parties, were secretly

abandoning their standards. It was equally perilous to the queen to fight or to fly. The most prudent expedient for her was to capitulate. She desired to confer with Kirkaldy of Grange, who remonstrated to her against the guilt and wickedness of Bothwel, and counselled her to abandon him. She expressed her willingness to dismiss him upon the condition that the lords would acknowledge their allegiance and continue in it. Kiskaldy passed it to the nobles, and received their authority to assure her that they would honor, serve, and obey her as their princess and sovereign. He communicated this intelligence to her. She advised Bothwel to provide for his safety by flight; and Kirkaldy admonished him not to neglect this opportunity of effecting his escape. Overwhelmed with shame, disappointment, terror, remorse, and despair, this miserable victim of ambition and guilt turned his eyes to her for the last time. To Kirkaldy of Grange the queen stretched out her hand ; he kissed it ; and, taking hold of the bridle of her horse, conducted her towards the nobles. They were approaching her with becoming reverence, when she addressed herself

to them thus : — ‘ I am come, my lords, to express my respect, and to conclude our agreement ; I am ready to be instructed by the wisdom of your councils ; arid I am confident that you will treat me as your sovereign.’ The earl of Morton, in the name of the confederacy, addressed her in these words : — ‘ Madam, you are among us in your proper place ; and we will pay to you as much honor, service, and obedience, as ever in any former period was offered by the nobility to the princes your predecessors.’

This gleam of sunshine was soon overcast. She remained not many hours in the camp, till the common soldiers, instigated by her enemies, presumed to insult her with the most unseemly reproaches. They exclaimed indignantly against her as the murderer of her husband, and reviled her as a lewd adulteress, and in language the most coarse and opprobrious. The nobility forgot their promises, and seemed to have neither honor nor humanity. She had changed one miserable scene for a distress that was deeper and more hopeless. They surrounded her with guards, and conducted her to her capital. She

was carried along its streets, and shown to her people in captivity and sadness. She cried out to them to commiserate and protect her. They withheld their pity, and afforded her no protection. Even new insults were offered to her. The lowest of the populace, whom the declamations of the clergy had driven into rage and madness, vied with the soldiery in the licentious outrage of invective and execration. She besought Maitland to solicit the lords to repress the insupportable atrocity of her treatment. She conjured him to let them know that she would submit herself implicitly to the determination of the parliament. Her intreaties and her sufferings made no impression upon the nobles. They continued the savage cruelty of their demeanor. She implored, as the last request she would prefer to them, that they would lead her to her palace. This consolation, too, was refused to her. They wished to accustom her subjects to behold her in disgrace, and to teach them to triumph over her misfortunes. In the most mortifying

and afflicting hour she had ever experienced, oppressed with fatigue, and disfigured with dust and sorrow, they shut her up in the house of the lord provost : leaving her to revolve in her anxious and agitated mind the indignities she had already endured, and to suffer in anticipation the calamities they might yet inflict upon her. The malice of Morton and his adherents was still far from being gratified. In the morning, when the queen looked from the window of the apartment to which she had been confined, she perceived a white banner displayed in such a manner as to fix her attention. There was delineated upon it the body of the late king stretched at the foot of a tree, and the prince upon his knees before it, with a label from his mouth, containing this prayer, ' Judge and revenge my cause, O Lord !' This abominable banner revived all the bitterness of her afflictions. The curiosity of the people drew them to a scene so new and so affecting. She exclaimed against the treachery of her nobles ; and she begged the spectators to relieve her from their tyranny. The eventful story of the

preceding day had thrown her capital into a ferment. The citizens of a better condition crowded to behold the degraded majesty of their sovereign. Her state of humiliation, so opposite to the grandeur from which she had fallen, moved them with compassion and sympathy. They heard her tale, and were filled with indignation. Her lamentations, her disorder, her beauty, all stimulated their ardor for her deliverance. It was announced to the nobles that the tide of popular favor had turned towards the queen. They hastened to appear before her, and to assure her, with smiles and courtesy, that they were immediately to conduct her to her palace, and to reinstate her in her royalty. Imposing upon her credulous nature, and that beautiful humanity which characterised her even in the most melancholy situations of her life, they prevailed with her to inform the people that she was pacified, and that she wished them to disperse themselves. They separated in obedience to her desire. The nobles now conveyed her to Holyroocl House.. But nothing could be farther from their intentions than her re-

establishment in li-berty and grandeur. They held a council, in which they deliberated concerning the manner in which they ought to dispose of her. It was resolved that she should be confined during her life in the fortress of Lochleven ; and they subscribed an order for her commitment. A resolution so sudden, so perfidious, and so tyrannical, filled Mary with the utmost astonishment, and drew from her the most bitter complaints and exclamations. Kirkaldy of Grange, perceiving with surprise the lengths to which the nobles had proceeded, felt his honor alarmed for the part he had acted at their desire. He expostulated with them upon their breach of trust, and censured the extreme rigor of the queen's treatment. They counselled him to rely upon the integrity of their motives ; spoke of her passion for Bothwel as most vehement, and insisted on the danger of intrusting her with power. He was not convinced by their speeches ; and earnestly recommended lenient and moderate measures. They assured him that when it appeared that she detested Bothwel, and had utterly abandoned his interests, they would think of kindness and moderation. But this, they

urged, could hardly be expected ; for they had recently intercepted a letter from her to this nobleman, in which she expressed, in the strongest terms, the warmth of her love, and her fixed purpose never to forsake him. This letter is such a palpable forgery that Mr. Hume himself gives it up.

Kirkaldy was desired to peruse this letter; and he pressed them no longer with his remonstrances. The queen sent a message to this generous soldier, complaining of the cruelty of her nobles, and reminding him that they had violated their engagements. He instantly addressed an answer to it, recounting the reproaches he had made to them ; stating his advice, describing the surprise with which he had read her intercepted letter ; and conjuring her to renounce and forget a most wicked and flagitious man, and, by this victory over herself, to gain the love and respect of her subjects. The forgery of a letter from her to Bothwel completed the amazement of the queen. So unprincipled a contempt of every thing that is most sacred, so barbarous a perseverance in perfidiousness and injustice, extinguished every sentiment of hope in her bo-

som. She conceived that she was doomed to inevitable destruction, and sunk under a pang of unutterable anguish. The lords Ruthven and Lindsay arrived, in this paroxysm of her distress, to inform her that they were commanded to put in execution the order fo her commitment. They charged her women to take from her all her ornaments and her royal attire. A mean dress was put upon her ; and in this disguise they conveyed her with precipitation to the prison appointed for her. The lords Seton, Yester, and Borthwick, endeavoured to rescue her, but failed in the attempt. She was delivered over to NYilliam Douglas the governor of the castle of Lochleven, who had married the mother of the earl of Murray, and was himself nearly related to the earl of Morton. See MARY. Upon the same day on which the nobles subscribed*

the order for the imprisonment of the queen, they entered into a bond of confederacy, by which they bound themselves into a body for the strenuous prosecution of their quarrel. They

engaged to punish the murderers of the king, to examine into the queen's rape, to dissolve her marriage, to preserve her from the bondage of Bothwel, to protect the person of the prince, and restore justice to the realm. An oath confirmed their reliance upon one another ; and, in advancing their measures, they engaged to expose and employ their lives, kindred, and fortunes. But, notwithstanding all the pretended patriotism of the rebels, nothing was further from their intentions than to prosecute Bothwel and restore the queen to her dignity. They had already treated her in the vilest manner, and allowed Bothwel to escape, when they might easily have apprehended and brought him to trial. To exalt themselves was their only aim. Eleven days after the capitulation at Carberry Hill, they held a convention, in which they very properly assumed the name of lords of the secret council, and called a proclamation for apprehending Bothwel as the murderer of the Jtjng; offering a reward of 1000 crowns to any person who should bring him to Edinburgh. A search had been made for the murderers of the

king that very night in which the queen was confined in Lochleven castle. One Sebastian a Frenchman, and captain Blackader, were then apprehended ; and soon after James Edmondstone, John Blackader, and Mynart Eraser, were taken up and imprisoned. The people expected full and satisfactory proofs of the guilt of Bothwel, but were disappointed. The affirmation of the nobles that they were possessed of evidence which could condemn him, appeared to be no better than a pretence. Sebastian escaped ; the other persons were put to the torture, and sustained it without making any confession that the nobles could publish. They were condemned, however, and executed, as being concerned in the murder. In their dying moments they protested their innocence. A sanguine hope was entertained that captain Blackader would reveal the whole secret at the place of execution, and a vast multitude of spectators were present. No information, howe'ver, could be derived from what he said with regard to the regicides; but, while he solemnly protested that his life was unjustly taken away, he averred it

as his belief that the ˆarls of Murray and Morton were the contrivers of the king's murder. The lords of the secret council now proceeded to the greatest enormities. They robbed the palace of Holyrood House of its furniture and decorations ; converted the queen's plate into coin ; and possessed themselves of her jewels, which were of great value ; and, while the faction committed these acts of robbery, the earl of Glencairn with solemn hypocrisy demolished the altar in the queen's chapel, and defaced and destroyed all its pictures and ornaments. These excessive outrages, however, lost them the favor of the people, and an, association was formed in favor of the queen. The court of France, as -non a; tin; IK-WS of Mary's imprisonment arrived, ii. -patched M. de Villeroy to condole with her upon her misfortunes : but the lords of tfie secret council would not admit him to see ner. The earl of Murray was at this time in France ; and to the promises of this treacherous wretch the king trusted, imagining him to be a steady friend to the unfortunate queen. Elizabeth also pretended friendship, and threatened the asso-

ciated lords ; but, as they knew her insincerity, they paid no regard to her threats, and even refused to admit her ambassador to Mary's presence. From all these appearances of friendship, Mary derived no real assistance. On the 24th of July, 1567, lord Lindsay, whose imperious behaviour, says Dr. Stuart, approached to infamy, was ordered by the lords to wait upon the queen at Lochleven. He carried with him three deeds or instruments, and was ordered to compel her to subscribe them. By the first she was to resign her crown to her infant son ; by the second she appointed the earl of Murray regent of Scotland; and, by the third, she constituted a council to direct the prince till this nobleman should arrive in Scotland, or in the event of his death or refusal of the office. On the part of the queen all resistance was vain. Sir Robert Melvil assured her that what she did by compulsion, and in a prison, could not bind her; as did also Throgmorton, the English ambassador, in a letter which Sir Robert Melvil brought in the scabbard of his sword. Mary, therefore, forlorn and helpless, could not resist the barbarous rudeness with which Lindsay pressed the subscription of

the papers, though she would not read them.

Five days after, the lords of the secret council

met at Stirling, for the coronation of the young

prince. A protestation was made, in the name

of the duke of Chatelherault, that this solemnity

should neither prejudge his rights of succession,

nor those of the other princes of the blood. The

young prince being presented to them, the lords

Lindsay andRuthven appeared, and in the name

of the queen renounced in his favor her right and

title to the crown, gave up the papers they had

forced her to subscribe, and surrendered the

sword, sceptre, and royal crown. After the

papers were read, the earls of Morton, Athol,

Glencairn, Mar, and Monteith, with the master

of Graham, the lord Hume, and Bothwel, bishop

of Orkney, received the queen's resignation in

favor of her son in the name of the three estates.

After this formality, the earl of Morton, bending

his body, and laying his hand upon the Scrip-

tures, took the coronation oath for the prince,

engaging that he should rule according to the

laws, and root out all heretics and enemies to the word of God. Adam Bothwel then anointed

the prince king of Scotland, delivered to him

the sword, and sceptre, and put the crown upon his head. In the procession to the castle from the church, where the inauguration was performed, and where John Knox preached the inauguration sermon, the earl of Athol carried the crown, Morton the sceptre, Glencairn the sword, and the earl of Mar carried the prince in his arms. The solemnities received no countenance from Elizabeth ; and Throgmorton, by her express command, was not present at them.

Soon after this ceremony the earl of Murray returned from France; and his presence gave

such strength to his faction that very little opposition could be given by the partisans of Mary, who were desponding for want of a leader. A .ittle time after his arrival, this monstrous hypocrite and traitor waited upon his distressed and insulted sovereign at Lochleven. His design was to get her to desire him to accept of the regency, which he otherwise pretended to decline. The queen, unsuspicious of the deepness of his arts, conscious of the gratitude he owed

to her, and trusting to his natural affection, and their tie of a common father, received him with a tender welcome. She was in haste to pour forth her soul to him ; and with tears and lamentations related her condition and her sufferings. I le heard her with attention ; and turned occasionally his discourse to the topics which might lead her to open to him her mind without disguise, in those situations in which he was most anxious to observe it; but her distress awakened not his tenderness. He seemed to be in suspense; and from the guardedness of his conversation she could gather neither hope nor fear. She begged him to be free with her, as he was her only friend. He yielded to her entreaties as if with pain and reluctance ; and, taking a comprehensive survey of her conduct, described it witli all the severity that could affect her most. He could discover no apology for her misgovernment and disorders ; and, with a mortifying plainness, he pressed upon her conscience and her honor. At times she wept bitterly. Some errors she confessed ; and against calumnies she warmly vindicated herself. But all she could

urge in her behalf made no impression upon him ; and he spoke to her of the mercy of God as her chief refuge. She was torn with apprehensions, and nearly distracted with despair. He dropped some words of consolation ; and, after expressing an attachment to her interests, gave her his promise to employ all his consequence to secure her life. As to her liberty, he told her that to achieve it was beyond all his efforts ; and that it was not good for her to desire it. Starting from her seat, she took him in her arms, and, kissing him as her deliverer from the scaffold, solicited his immediate acceptance of the regency. He declared that he had many reasons to refuse the regency. She conjured him not to abandon her in the extremity of her wretchedness. There was no other method, she said, by which she herself could be saved, her son protected, and her realm rightly governed. He gave way to her anxiety and solicitations. She besought him to make the most unbounded use of her name and authority, desired him to keep for her the jewels that yet remained with her, and recommended it to him to get an early possession of all the forts of her kingdom. He

now took his leave of her, and, embracing anew this pious traitor, she sent her blessing with him to the prince her son. In the mean time the wi etched earl of Bothwcl was struggling with the greatest difficulties. Sir William Murray and Kirkaldy of Grange had put to sea in search of him. He had been obliged to exercise piracy for subsistence to himself and his followers. His pursuers came upon him unexpectedly at the Orkney Islands, and took three of his ships, but he himself escaped. Soon after, having seized a Turkish trader on the coast of Norway, two ships of war belonging to the king of Denmark gave chase to him as a pirate. An engagement ensued, in which Bothwel was taken. His officers and mariners were hanged in Denmark, but Bcthwel himself, being known by some Scottish merchants, had his life spared. He was thrown, however, into a dungeon, where he remained ten years ; and at last died melancholy and distracted. The regent sent commissioners to the king of Denmark to demand him as a prisoner ; but that prince, considering Murray as a traitor and usurper, totally disregarded his request. The

dreadful fate of Bothwel did not make any alteration in the situation of the queen. Her enemies, bent on calumniating her, produced letters, which they said were written and sent by her to that licentious nobleman during the life of the king. These letters are now universally admitted to have been forged by the rebels themselves, who practised likewise upon some servants of Bothwel to accuse the queen of the murder of her husband. The letters for some time gained credit; but the confessions of the servants were all in her favor. When on the scaffold, they addressed themselves to the people ; and, after having solemnly declared the innocence of the queen, they protested before God and his angels that the earl of Bothwel had informed them that the earls of Murray and Morion were the contrivers of the king's murder. It was impossible that such transactions as these could advance the popularity of the regent. His unbounded ambition and cruelty to his sovereign began at last to open the eyes of the nation ; and a party was forming itself in favor of the queen. She herself had been often meditating her escape ; and she

at last effected it by means of a young gentle-
man, George Douglas, brother to her keeper,
who had fallen in love with her. On the second
day of May 1568, about 7 P. M. when the
keeper was at supper with his family, George
Douglas, possessing himself of the keys of the
castle, hastened to her apartment, and conducted
her out of prison. Having locked the gates of
the castle, they immediately entered a boat
which waited for them ; and, being rowed across
the lake, lord Seton received the queen with a
chosen band of horsemen in complete armour.
That night he conveyed her to his house of Nid-
drie in West Lothian ; where having rested a
few hours, she set out for Hamilton.

The escape of the queen threw her enemies
into the greatest consternation. Many forsook
the regent openly, and still more made their
submissions privately, or concealed themselves.
He did not, however, despond ; but resolved to
defend himself by force of arms. The queen
soon found herself at the head of 6000 men, and
the regent opposed her with 4000. Mary, how-
ever, did not think it proper to risk a battle ;

but in this prudent resolution she was over-ruled by the impetuosity of her troops. A battle was fought on the 13th of May 1568, at Langside, near Glasgow ; in which Mary's army was defeated, and her last hopes blasted. The unfortunate queen fled towards Kirkcudbright, where she deliberated on the plan she should afterwards

follow. The "result of her deliberations was to take the worst step possible. Notwithstanding all the pprfidy which she had found in Elizabeth, Mary could not think that she would now refuse to afford her a refuge in her dominions ; and therefore determined to retire into England. To this she had been solicited by Elizabeth herself during her confinement in Lochleven castle ; and she now resolved, in opposition to the advice of her most faithful counsellors, to make the fatal experiment. In obedience to her order, the lord Henries addressed a letter to Mr. Lauder, the deputy-commander at Carlisle ; and, after detailing her defeat at Langside, desired to know if she might trust herself upon English ground. This officer wrote instantly an answer, that, lord

Scroop the warden of the frontier being absent, he could not give a formal assurance in a matter which concerned the state of a queen ; but that he weuld send by post to his court to know the pleasure of his sovereign ; and that, if in the mean time any necessity should force Mary to Carlisle, he would receive her with joy, and protect her against her enemies. Mary, however, before the messenger returned, had embarked in a fishing boat with sixteen attendants. In a few hours she landed at Workington in Cumberland, and thence proceeded to Cockermouth, where she continued till Mr. Lauder, having assembled the gentlemen of the country, conducted her with the greatest respect to the castle of Carlisle. To Elizabeth she announced her arrival in a despatch, which described her late misfortunes in general and pathetic terms, and in which she expressed an earnest solicitude to pay her a visit at her court, and the deep sense she entertained of her friendship and generosity. The queen of England, by obliging and polite letters, condoled with her upon her situation, and gave her assurances of all the favor and protection that

were due to the justice of her cause. But, as they were not accompanied with an invitation to London, Mary took the alarm. She thought it expedient to instruct lord Fleming to repair to France; and she entrusted lord Herries with a most pressing remonstrance to Elizabeth. Her anxiety for an interview to vindicate her conduct, her ability to do so in the most satisfactory manner, and her power to explain the ingratitude, the crimes, and the perfidy of her enemies, were urged to this princess. A delay in the state of her affairs was represented as nearly equivalent to absolute destruction. An immediate proof was therefore requested from Elizabeth of the sincerity of her professions. If she was unwilling to admit into her presence a queen, a relation, and a (friend, she was reminded, that, as Mary's entrance into her dominions had been voluntary, her departure ought to be equally free and unrestrained. She valued the protection of the queen of England above that of every other potentate upon earth ; but, if it could not be granted, she would solicit the amity, and implore the aid of powers who would commi-

serate her afflictions, and be forward to relieve them. Mary likewise gave thanks to Elizabeth for the courtesy with which she had hitherto been treated in the castle of Carlisle. She also begged of her to avert the cruelty of the regent from her adherents, and to engage him not to waste her kingdom with hostility and ravages ; and she paid her compliments in an affectionate letter to secretary Cecil, and asked his kind offices in extricating her from her difficulties. But the queen of England was not to be moved by remonstrances The offer of Mary to plead her cause before her, and to satisfy all her scruples, was rejected. Her disasters were rather a matter of exultation than of pity. The deliberations of the English queen, and those of her statesman, were not directed by maxims of equity, compassion, or generosity. They considered the flight of Mary into England as an incident that was fortunate for them; and they were solicitous to adopt those measures which would enable them to draw from it the greatest advantage. They considered all the possible consequences of liberating her, of restoring her to her throne, and

of allowing her to remain at liberty in England ; and how they might affect Scotland, England, Ireland, and the cause of the Reformation ; and upon the whole concluded that it was by far the wisest expedient to keep the queen of Scots in confinement, to invent methods to augment her distress, to give countenance to the regent, and to hold her kingdom in dependence and subjection. In consequence of this cruel and unjust resolution Mary was acquainted that she could not be admitted into Elizabeth's presence till she had cleared herself of the crimes imputed to her ; she was warned not to think of introducing French troops into Scotland ; and it was hinted that for the more security she ought to be removed farther from the frontier. This message showed Mary the imprudence of her conduct in trusting herself to Elizabeth; but the error could not now be remedied. She was watched to prevent her escape, and all her remonstrances were vain. The earl of Murray had offered to accuse her ; and it was at last concluded that Elizabeth could not, consistently with her own honor and the tranquillity of her

government, suffer the queen of Scots to come

into her presence, to depart out of England, or

to be restored to her dignity, till her cause should be tried and decided. An order was given to

remove her from Carlisle castle to a place of

strength at a greater distance from the borders,

to confine her more closely, and to guard against

all possibility of an escape.

In consequence of these extraordinary transac-

tions a trial took place, perhaps the most re-

markable for its injustice of any recorded in

history. Mary, confined and apprehensive, sub-

mitted to be tried. The regent, who was to be

the accuser, was summoned into England, and

commissioners were appointed on both sides.

On the 4th of October the commissioners met at

York ; and, four days after, the deputies of the

queen of Scots were called to make known their

complaints. They related the most material cir-

cumstances of the crnel usage she had received.

Their accusations were an alarming introduction

to the business in which the 'regent had em-

barked; and, notwithstanding the encouragement

shown to him by Elizabeth, he was assaulted by

apprehensions. The artifices of Maitland addel

to his alarms. Instead of proceeding instaniij to

defend himself, or to accuse the queen, lie sought permission to relate his doubts and scruples to the English commissioners. In his own name, and with the concurrence of his associates, he demanded to know whether they had sufficient authority from Elizabeth to pronounce, in the case of the murder, Guilty or Not guilty, according to the evidence that should be laid before them ; whether they would actually exercise this power ; whether, in the event of her criminality, their sovereign should be delivered to him and his friends, or detained in England in such a way as that no danger should ensue from her activity; and whether, upon her conviction, the queen of England would allow his proceedings, and those of his party, to be proper, maintain the government of the young king, and support him in the regency, in the terms of the act of parliament which had confirmed him in that office. To these requisitions it was answered, upon the part of the English deputies, that their

commission was so ample that they could enter into and proceed with the controversy ; and that the sovereign would not restore the queen of Scots to her crown, if satisfactory proofs of her crime should be produced ; but that they knew not in what manner she would finally conduct herself as to her person and punishment. With regard to the sovereignty of the prince, and the regency of the earl of Murray, these might be canvassed in a future period. These replies did not please the regent and his associates; and they requested the English commissioners to transmit their doubts and scruples to be examined and answered by Elizabeth. But, while the regent discovered in this manner his apprehensions, he yet affirmed that he was able to answer the charges imputed to him and his faction ; and, this being in a great measure a distinct matter from the controversy of the murder, he was desired to proceed in it. He pretended that Bothwel, who had the chief concern in the murder of lord Darnley, possessed such credit with the queen, that, within three months after that horrible event, he seized her person and led her

captive to Dunbar, obtained a divorce from his wife, and married her : that the nobility, being moved with his crimes, did confederate to punish him, to relieve her from the tyranny of a man who had ravished her, and who could not be her husband, and to preserve the life of the prince: that, having taken arms for these purposes, the earl marched against them ; but that, proposing to decide the quarrel by single combat, his challenge was accepted : that he declined, notwithstanding, to enter the lists, and fled : that the queen, preferring his impunity to her own honor, favored his escape by going over to the nobility : that they conducted her to Edinburgh, where they informed her of the motives of their proceedings, requested her to take the proper steps against him and the other regicides, and entreated her to dissolve her marriage, to take care of her sou, and to consult the tranquillity of her realm : that this treatment being offensive to her she menaced them with vengeance, and offered to surrender her crown, if they would permit her to possess the murderer of her husband ; that her inflexible mind, and the necessities of the state, compelled them to keep her at a distance

from him, and out of the way of a communication with his adherents: that during her confinement, finding herself appointed with the troubles of royalty, and unfit for them from vexation of spirit and the weakness of her body and intellect, she freely, and of her own will, resigned her crown to her son, and constituted the earl of Murray to the regency ; that the king accordingly had been crowned, and Murray admitted to the regency ; that, the sanction of the three estates assembled in parliament having confirmed these appointments, a universal obedience of the people had ensued, and a steady administration of justice had taken place : that certain persons, however, envious of the public order and peace, had brought her out of prison, and had engaged to subvert the government ; that they had been disappointed in their wicked attempts ; and that it was most just and equitable that the king arid the regent should be supported in power, in opposition to a rebellious and turbulent faction. This apology, so imperfect, so impudent, and so irreconcileable with facts, received a complete confutation from the deputies of the queen of

Scots. To take arms against her because Both-

wel had her favor was, they said, a lame justifi-

cation of the earl of Murray and his friends;

since it had never been properly manifested to

her that he was the murderer of her husband.

He had indeed been suspected of this crime ; but

had been tried by his peers, and acquitted. His

acquittal had been ratified in parliament, and

had obtained the express approbation of the

party who were now so loud in accusing him,

and who had conspired against her authority.

These rebels had even urged her to accomplish

her marriage with him, had recommended him as

the fittest person to govern the realm, and had

subscribed a bond asserting his innocence, and

binding themselves to challenge and punish all

his adversaries and opponents. They had never,

either before or after the marriage, advertised the

queen of his guilt, till, having experience of their strength, they secretly took arms, and invested

her in Borthwick castle. The first mark of their

displeasure was the display of warlike banners.

She made her escape to Dunbar ; and they, re-

turning to Edinburgh, levied troops, issued pro-

clamations, took the field against her, under the

pretence of delivering her from his tyranny, and

got possession of her person. She was willing

to prevent the effusion of blood, and was very

far from preferring his impunity to her honor.

Kirkaldy of Grange, in obedience to instructions

from them, desired her to cause him to retire, and invited her to pass to them under the promise of

being served and obeyed as their sovereign. She

consented, and Kirkaldy advised Bothwel to de-

part, and assured him that no man would pursue

him. It was by their own contrivance that he

fled; and it was in their power to have taken

him ; but they showed not the smallest desire to

make him their prisoner. He remained, too, for

some time in the kingdom, and was unmolested

by them ; and it was not till he was upon the

seas that they affected to go in search of him,

When she surrendered herself, in the sight of their army, the earl of Morton ratified the stipulations

of Kirkaldy, made obeisance to her in their

names, and promised her all the service and

honor which had ever been paid to any of her

predecessors. They were not faithful, however,

to their engagements. They carried her to Edinburgh, but did not lodge her in her palace. She was committed to the house of a burgess, and treated with the vilest indignities. She indeed broke out into menaces, and threatened them; nor was this a matter either of blame or of wonder. But it was utterly false that she ever made any offer to give away her crown, if she might possess Bothwel. In the midst of her sufferings she had even required them, by secretary Maitland, to specify their complaints, and besought them to allow her to appear in parliament, and to join and assist in seeking a remedy to them from the wisdom of the three estates. This overture, however, so salutary and submissive, they absolutely rejected. They were animated by purposes of ambition, and had not in view a relief from grievances. They forced her from her capital in the night, and imprisoned her in Lochleven ; and there they affirm that, being exhausted with the toils of government and the languors of sickness, she, without constraint or solicitation, resigned her crown to her son, and appointed the earl of Murray to be regent during

his minority. But the truth could neither be concealed, nor overturned, nor palliated. She was in the vigor of youth, unassailed by maladies, and without any infirmity that could induce her to surrender the government of her kingdom. The earl of Athol and the barons of Tullibardin and Lethington, principal men of their council, sent Sir Robert Melvil to her with a ring and presents, with a recommendation to subscribe whatever papers should be laid before her, as the only means to save her life, and with an assurance that what she did under captivity could not operate any injury to her. Melvil, too, communicated to her an intimation in writing from Sir Nicholas Throgmorton, which gave her the same advice and die same assurance. To Sir Nicholas Throgmorton she sent an answer, informing him that she would follow his counsel ; and enjoining him to declare to his mistress her hapless state, and that her resignation of her crown was constrained. Nor did this ambassador neglect her commission ; and it was a popular persuasion that Elizabeth would have marched an army to her relief, if she had not been intimi-

dated by the threat of the rebels that the blood of the queen of Scots would be the wages of her soldiers. It was also not to be contradicted that, when lord Lindsay presented to his sovereign the instruments of resignation, he menaced her with a closer prison and a speedy death, if she should refuse to subscribe them. It was under an extreme terror, and with many tears, that she put her name to them. She did not consider them as her deeds ; did not read them ; and protested that, when she was at liberty, she would disavow subscriptions which had been extorted from her. Even Douglas, the keeper of Lochleven, could not endure to be a witness of the violence employed against her. He departed out of her presence that he might not see her surrendrr her rights against her will ; and he sought and obtained from her a certificate thut he was not accessory to this compulsion and outrage. Nor did it consist with the slightest probability that she would, of her own will and accord, execute a resignation of her royal estate, and retain no provision for her future maintenance. Yet, by these extraordinary deeds, the

condition to which she was reduced was most miserable and wretched ; for no portion whatever of her revenue was reserved to her, and no security of any kind was granted either for her liberty or her life.

As to the coronation of the prince, it could have no validity, as being founded in a pretended and forced resignation. It was also defective in its form ; for there were in Scotland more than 100 earls, bishops, and lords; and of these there did not assist in it more than four earls, six lords, one bishop, and two or three abbots. Protestations, too, were openly made, that nothing transacted at that period should be prejudicial to the queen, her estate, and the Mood-royal of Scotland. As to the ratification of the investiture of the young prince, and the regency of the earl of Murray by the estates, this was done in an illegal parliament. The principal nobility, too, objected in this parliament to this ratification. Protestations were made before the lords of the articles, as well as before the three estates, to interrupt and defeat transactions which were in a wild hostility to the constitution and the laws. Neither was it true that the government of the

king and the regent was universally obeyed, and administered with equity and approbation ; for a great division of the nobility never acknowledged any authority but that of the queen, and never held any courts but in her name ; and it was notorious that the administration of the usurpers had been marked and distinguished by enormous cruelties and oppressions. Many honorable families and loyal subjects had been persecuted to ruin, and plundered of their wealth, to gratify the retainers and soldiers who upheld this insolent domination ; and murder and bloodshed, theft and rapine, were prevalent to a degree unheard of for many ages. Upon all these accounts it was inferred that Elizabeth ought to support the queen of Scots, to restore her to her crown, and to overthrow the power of a most unnatural and rebellious faction. To these facts the regent did not pretend to make any objection; and, though required by the English commissioners to produce sounder and better reasons for his treatment of the queen, he did not advance any thing in his own behalf. He even allowed the charges of treason and usurpation to be pressed

against him, without presuming to answer. This surprising behaviour, which might readily have been construed into .an acknowledgment of his guilt, proceeded from some conferences which he had with the duke of Norfolk. This noble-man was a zealous partizan for the succession of Mary to the English crown. He was of opi-nion that his mistress, while she wished to gra-tify her animosity and jealousies against the queen of Scots, was secretly resolved, by fixing a stain upon her, to exckide her from t!ie suc-cession, and to involve her son in her (li»_rr .10.- He wa> isiger to defeat a purpose which he con

ceived to be not only unjust in itself, but highly detrimental to his country ; and he observed with pleasure that Maitland of Lethington was favor-able to Mary. To this statesman he expressed his surprise that the regent could think of an attempt so blameable as that of criminating his sovereign. If Mary had really given offence, by mistakes, it yet was not the business of a good subject industriously to hold her out to scorn. Anxious and repeated conferences were held by

them ; and at length it was formally agreed that the regent should not accuse the queen of Scots ; and that the duke in return should protect him in the favor of Elizabeth, and secure him in the possession of his regency. But, while the regent engaged himself in this intrigue with the duke of Norfolk, he was still desirous of gratifying the resentments of Elizabeth, and of advancing his own interests by undermining secretly the reputation of his sovereign. He instructed Maitland, George Buchanan, James Macgill, and John Wood, to go to the duke of Norfolk, the earl of Sussex, and Sir Ralph Sadler, and to communicate to them, as private persons, and not in their character of commissioners, the letters to Bothvvel, and the other proofs upon which he affirmed the guilt of the queen of Scots. He desired that they would examine these papers, give their opinion of them to Elizabeth, and inform him whether she judged them sufficient evidences of Mary's concern in the murder of her husband. If this should be her opinion, he testified his own readiness, and that of his associates, to swear that the papers were genuine,

and of the hand-writing of the queen. By this operation, he was solicitous to establish his vouchers as incontestable, and as testimonies of record.

The commissioners examined his papers, and heard the comments of Buchanan and his other assistants; but they do not seem to have bestowed credit upon them. They described them, however, to Elizabeth; pointed out the places of them which were strongest against Mary ; and allowed that their force and meaning were very great if genuineness could be demonstrated. But of their genuineness they acknowledged that they had no other evidence than stout assertions, and the offer of oaths. The earl of .Sussex, in a private despatch to secretary Cecil, does more than insinuate, that he thought Mary would be able to prove the letters palpable forgeries ; and, with respect to the murder of the king, he declares in plain terms, that, from all he could learn, Murray and his faction would, upon a judicial trial, be found by ' proofs hardly to be denied,' more criminal in that charge than the queen. Elizabeth and

her ministers, upon the receipt of such de-
spatches, did not think it expedient to empower
them to adopt a method of proof so palpably
suspicious, and in which she could not openly
toncur, without grossly violating even the ap-
pearance of probity. The regent had before at-
tempted to engage her in a direct assurance of
fie validity of his papers, when he submitted
copies of them to her inspection by his secretary,
Mr. Wood. His attempt at this juncture was
-similar. Nor were these the only transactions
which took place during the continuance of the
commissioners at York. The inventive genius
of Lethington had suggested to him a project,
which he communicated in confidence to the
bishop of Ross. It received the warm approba-
tion of this ecclesiastic ; and they determined to
put it to a trial. While they attended the duke
of Norfolk to the diversion of hawking, the}
suggested to him a marriage with the queen of
Scots. Her beauty, her accomplishments, and
her kingdom, were high allurements, and as he
was the greatest subject of England, perhaps of
Europe, he seemed not to be unworthy of them

The proposal was very flattering to the admiration he entertained of Mary, to his ambition, and to his patriotism. The more he thought of it, he was the more convinced of its propriety. His access to be informed of the practices of the regent destroyed in him the operations of those slanders by which her enemies were so active to traduce her. In this state of his mind, the lady Scroop, his sister, who resided at Bolton Castle with Mary, completely confirmed his resolution. For from her he learned the orderly carnage and the amiable dispositions of the queen of Scots. He was now impatient to make her the offer of his hand. Elizabeth in the mean time was thrown into confusion by the refusal of the regent to accuse the queen of Scots. To give a positive answer to his doubts and scruples was not consistent with her honor ; and yet, without this condescension, she was assured that the Scottish deputies would not exhibit their charge of crimination. Having deceived Mary, therefore, with fair promises, she was active in gaining the regent over to her views , which having done, he consented at last to prefer his accusa-

tion against Mary before the commisioners, who now met at Westminster by her command. The charge was expressed in general and presumptive terms. It affirmed that as James, earl of Bothwel, was the chief executor of the murder of king Henry, so the queen was his persuader and counsel in the device ; that she was a maintainer and fortifier of this unnatural deed, by stopping the inquisition into it and its punishment, and by taking in marriage the principal regicide; that they had begun to exercise a cruel tyranny in the commonwealth, and had formed a resolution of destroying the innocent prince, and of transferring the crown from the true line of its kings to a bloody murderer, and a godless tyrant ; and that the estates of the realm, finding her unworthy to reign, had ordered her to resign the crown ; her son to be crowned, and the earl of Murray to be established in the regency. Before this accusation was preferred the earl of Lennox presented himself before the English commissioners ; made a lamentable declaration of his griefs, and produced to them the letters which had passed between him and Mary concerning the murder, with a writing which con-

tained a direct affirmation of her guilt. The deputies of Mary were astonished at this accusation, being a violent infringement of a protestation which they had formerly given in, and which had been accepted, namely, that the crown, estate, person, and honor of the queen of Scots, should be guarded against every assault

and injury ; yet in all these particulars she was now injured. It was understood that no judicial proceedings should take place against her; yet she was actually arraigned as a criminal, and her deputies were called upon to defend her. They denied, however, the validity of the charge ; and, while they fully explained the motives which actuated the earl of Murray and his faction in their proceedings, they imputed to persons among themselves the guilt of the king's murder. They affirmed that the queen's adversaries were the accomplices of Bothwel ; that they had subscribed a bond conspiring the death of the king ; and that their guilt had been attested, in the sight of 10,000 spectators, by

those of their confederates who had already been executed. They exclaimed against the enormous ingratitude, and the unparalleled audacity of men, who could forget so completely all the obligations which they owed to their sovereign ; and who, not satisfied with usurping her power, could even charge her with a murder which they themselves had committed. They represented the strong necessity which had arisen for the fullest vindication of their mistress ; and they said, that in so weighty an extremity they could not suppose that she would be restrained from appearing in her own defence. They had her instructions, if her honor was touched, to make this requisition ; and, till it was granted, they insisted that all proceedings in the conference should be at an end. A refusal of this liberty, in the situation to which she was driven, would be an infallible proof that no justice was intended to her. It was their wish to deal with sincerity ; and they were persuaded that, without a proper freedom of defence, their queen would full a victim to partiality and injustice. They therefore earnestly pressed the English commis-

sioners that she might be permitted to present herself before Elizabeth, the nobles of England, and the ambassadors of foreign nations, to manifest to the world the injuries she had suffered, and her innocence. After having made these spirited representations to the English commissioners, the deputies of Mary desired to have access to the queen of England. They were admitted accordingly to an audience ; and, in a formal address, they detailed what had happened, insisted that the liberty of personal defence should be allowed to their mistress, and demanded that the earl of Murray and his associates should be taken into custody, till they should answer to such charges as should be preferred against them. She desired to have some time to turn her thoughts to matters of such high importance ; and told them that they might soon expect to hear from her. The bishop of Ross, and the otherMeputies of Mary, in the mean time, struck with the perfidious management of the conference, convinced of the jealousies and passions of Elizabeth, sensible that her power over her commissioners was unlimited, and anxious for the deliverance of their mistress, made an overture

for an accommodation to the earl of Leicester

and Sir William Cecil. They proposed that the

original meaning of the conference should still

be adhered to, notwithstanding the accusation

presented by the earl of Murray ; and that Eli-

zabeth, disregarding it as an effort of faction,

should proceed to a good agreement between

Mary and her subjects. For this scheme, they

had no authority from their mistress, but they

were moved to it by their anxiety for peace and

the re establishment of the affairs of the Scottish nation. They were introduced at Hampton

court to Elizabeth ; who listened to their motion

and was averse from it. They then repeated

the desires of the petition they had presented to

her ; but she did not think it right that the

queen of Scots should yet have the liberty to

defend herself in person. She confessed, in-

deed, that it was reasonable that Mary should be

heard in her own cause ; but she affirmed that

she was at a loss at what time she should appear, at what place, and to whom she should address

herself. While she expressed, however, the hope

that Mary might obtain the permission so re-

peatedly and so earnestly requested, she said

that the earl of Murray should first be heard in support of his charge, and that she should attend to the proofs which he said he was ready to produce. After this business should be transacted, she told the deputies of Mary that she would again confer with them. It was to no purpose that they objected to a procedure so strange. An accusation, said they, is given ; the person accused is anxious to defend herself; this privilege is denied to her ; and yet a demand is to be made for the vouchers of her guilt. What was this but an open violation of justice ? They would not, therefore, consent to a measure which was so alarming to the interests of their queen ; and, if it was adopted, a protest against its validity would be lodged with her commissioners.

The English commissioners resumed the conference, and were about to demand from the earl of Murray the proofs with which he could support his accusation. The bishop of Ross and his associates, being admitted to them, expressed themselves in conformity to the conversation they had with Elizabeth. They declared that it was unnatural and preposterous in their sove-

reign to think of receiving proofs of the guilt of the queen of Scots, before she was heard in her own defence ; and they protested that, in the event of this proceeding, the negociation should be dissolved, and Elizabeth be disarmed of all power to do any prejudice to her honor, person, crown, and estate. The commissioners of the English queen were affected with this protestation, and felt more for the honor of their mistress than for their own. They refused to receive it, because there were engrossed in it the words of the refusal which Elizabeth had given to the petition for Mary. They did not choose to authenticate the terms of this refusal by their subscriptions ; and were solicitous to suppress so palpable a memorial of her iniquity. They alleged that the language of her refusal had not been taken down with accuracy ; and they pressed Mary's deputies to present a simpler form of protestation. The bishop of Ross and his colleagues yielded not, however, immediately to their insidious importunity ; but, repeating anew their protestations as they had at first planned it, included the express words of Eliza-

beth ; and, when compelled by the power of the

commissioners to expunge the language of the English queen, they still insisted upon their protestation. An interruption was thus given to the validity of any future proceedings which might affect the reputation of the queen of Scots. The earls of Murray and Morton, with their friends, were very much disappointed. For they had solaced themselves with the hope of a triumph before there was a victory ; and thought of obtaining a decree from Elizabeth, which, while it should pronounce the queen of Scots to be an adulteress and a murderer, would exalt them into the station and character of virtuous men and honorable subjects. Though the conference ought naturally to have terminated upon this protestation of the deputies of Mary against the injustice of Elizabeth, yet it did not satisfy the latter princess that the accusation only had been delivered to her commissioners ; she was seriously disposed to operate a judicial production of its vouchers. The charge would thus have

a more regular aspect, and be a sounder foundation upon which to build not only the infamy of the Scottish queen, but her own justification for the part she had acted. Her commissioners accordingly, after the bishop of Ross and his colleagues had retired, disregarding their protestation, called upon the earl of Murray and his associates to make their appearance. The pretence, however, employed for drawing from him liis papers, was sufficiently artful, and bears the marks of that systematic duplicity which so shamefully characterises all the transactions of Elizabeth at this period. Sir Nicholas Bacon, the lord keeper, addressed himself to the earl of Murray. He said that, in the opinion of the queen of England, it was a matter surprising and strange that he should accuse his sovereign of a crime most horrible, odious to God and man, against law and nature ; and which, if proved to be true, would render her infamous in all the kingdoms of the world. But though he had so •widely forgot his duty, yet had not Elizabeth renounced her love of a good sister, a good neighbour, and a good friend ; and it was her will that he and his company should produce the papers

by which they imagined they were able to main-

tain their accusation. The earl of Murray, in his

turn, was not wanting in dissimulation. He ex-

pressed himself to be very sorry for the high dis-

pleasure he had given to Elizabeth by his charge

against Mary, and for the obstinacy of the Scot-

tish queen and her deputies, which made it

necessary for him to vindicate himself by disco-

vering her dishonor. Under the load of this

double and affected sorrow, he made an actual

and formal exhibition of the vouchers by which

he pretended to fix and establish her criminality.

A particular notice of these extraordinary

vouchers the reader will find in our life of MARY, and in the works there referred to. To enume-

rate all the shifts to which Elizabeth and the ad-

versaries of Mary were put, to make the strange

evidence that was produced wear some degree of

plausibility, would far exceed our bounds. It is

sufficient to say that, after having wearied

themselves with prevarication and falsehood ;

after havingr pressed Mary to abdicate her crown,

a requisition with which she never would com-

ply ; and after having finally refused to hear her

in her own defence ; Elizabeth, on the 10th Ja-

nuary, 1569, gave leave to the earl of Murray

and his accomplices to depart her dominions

telling them that, since they came into England,

nothing had been objected to them which could

hurt their honor as men, or affect their allegiance as subjects. At the same time she told them

that they had produced no information or evi-

dence, by which she was entitled to con-

ceive any bad opinion of the queen of Scots.

It was therefore her pleasure to allow the af-

fairs of Scotland to continue precisely in the

same condition in which they were at the be-

ginning of the conference. Three days after

this they formally took their leave of the queen

of England. The deputies of Mary remonstrated,

protested, and argued to no purpose ; the Eng-

lish privy council, with the most provoking in-

difference, told them that ‘ the earl of Murray

had promised to their sovereign, for himself and

his company, to return to England at any time

she should call upon him. But, in the mean

time, the queen of Scots could not, for many

strong reasons, be suffered to take her departure

out of England. As to her deputies, they

would move’ Elizabeth to allow them to return to

Scotland ; and they believed that she would not

detain them.'

Mary was exceedingly disappointed and cha-

grined by this singular issue of her cause. Her

friends during this period had increased, and

the cruel and injurious treatment she had met

with was so flagrant that the earl of Murray and

his faction were apprehensive of a sudden reverse

of fortune. The earls of Argyle andHuntly pro-

tested against the injustice of their proceedings, at the same time that they openly accused the

earl of Murray and Maitland of Lethington as

the associates of Bothwel in the murder of the

king. This charge, according to the custom of

the times, they offered to prove by the law of

arms; and they protested that, if their adversa-

ries should delay to answer the challenge, they

should be held as confessing themselves guilty of

the murder. Elizabeth, however, foreseeing

something of this kind, had dismissed Murray

and his adherents with precipitation, so that there

could now be no formal production of it before

the English commissioners. However, it was

known and published in the court of Elizabeth.

Murray made an evasive reply, and Lethington

made none at all. This, however, afforded no relief to the unhappy queen of Scotland. Her inveterate and treacherous enemy held her fast, and endeavoured, by every method in her power, to render her life miserable. Mary, on the other hand, never lost either her spirit or dignity. She attempted to rouse in the minds of her nobles that passion for liberty which had once so much distinguished the Scottish nation, but which now seemed to be exchanged for a servile subjection to the queen of England. But, some despatches which pressed these topics being intercepted, Mary was removed from Bolton to Tutbury castle, where she was entrusted to the earl of Shrewsbury, and committed to closer confinement than she had yet experienced ; while Elizabeth dispersed manifestoes all ovei the

northern counties, of Kngland, complaining of reports injurious to her honor, and disclaiming all hostile intentions towards the liberties of Scotland. In the mean time Murray returned to Scotland, where he took every method to es-

tablish himself in his ill-acquired power. M;uy had commanded the duke of Chatelherault to return to Scotland, to raise forces for her behoof; but this nobleman had been long detained in England by the artifices of Elizabeth, so that Murray had arrived there before him. The duke, however, began to raise forces, and might have proved a troublesome antagonist, had not Murray deceived him by a pretended negociation, and got him into his power ; immediately after which he imprisoned him, and forced most of the other lords who were on that side to submit. When the news of this important event reached the queen of Scots, she instructed the bishop of Ross to repair to Elizabeth, and to make remonstrances in their behalf. By the agency of this ecclesiastic, whom she had constituted her ambassador, she meant to conduct her transactions with the queen of England ; and, from the conclusion of the conferences, she had been meditating a proper plan upon which to accomplish her liberty and restoration. The bishop of Ross, after complaining loudly of the rigorous proceedings of the regent, and intimating the general belief which prevailed that he was supported by

the English court, pressed the propriety of a final settlement of the affairs of his mistress. With this view, he was admitted by Elizabeth and her privy counsellors to frequent conferences ; and they even desired him to present to them in writing the articles which he was commanded to propose as the foundation of a treaty. He failed not to comply with this injunction ; and it was the import of his schedule of agreement that Mary should engage never to molest Elizabeth, and the lawful heirs of her body, respecting the succession to the crown of England and Ireland, if she could obtain sufficient security, that upon their demise her rights would be respected ; that a new treaty of alliance and friendship should be concluded between the two queens, by the advice of the estates of both kingdoms ; that this league should be ratified by their oaths and seals, and confirmed by parliamentary acts ; and, if any farther assurance should be deemed necessary on the part of Mary, that she would procure the kings of France and Spain to be the guaran-

tees of lier punctuality and concord ; that in com-

pliance with the pleasure of Elizabeth, she would

extend her clemency to all her subjects who had

offended her, under the provision that they would

submit to her sovereignty, deliver up the prince her son, restore her castles, give back her jewels, and surrender to her friends and servants the estates

and possessions of which they had been deprived ;

that the murder of the king should be punished

against all the actors in it without delay, and ac-

cording to the laws ; that, to prevent Bothwel from returning to Scotland, and to please those who

imagined that it was in his power to excite ferments and trouble, she would be bound to institute a

process of divorce against him ; and that, these

articles being adjusted, the queen of England

should allow her to proceed to Scotland, under a

safe and honorable convoy, to be re-established

by the three estates in her realm and srovernment,

and to be gratified with the dissolution of all

the acts and statutes which had been passed to

her prejudice. These heads of alliance were

receired with a respect and cordiality which

were not usually paid to the transactions of

Mary in the court of Klizabeth ; and the bishop of Ross was elated with expectation. Their justice,

however, was not the sole, or even the chief,

cause of this attention and complaisance. A combination of the English nobles had taken place against Cecil, whose power and credit were objects of indignation and jealousy ; and the duke of Norfolk had been active and successful in promoting the scheme of his marriage with the queen of Scots.

Taking advantage of the condition of parties, he had practised with the principal nobility to encourage his pretensions to Mary ; and he secretly communicated to them the promises of support he had received from the earl of Murray. By the advice and influence of Sir Nicholas Throgmorton, he engaged in his behalf the earl of Leicester, and this nobleman imparted the matter to the earls of Pembroke and Arundel. The duke himself was able to conciliate the favor of the earls of Derby, Bedford, Shrewsbury, Southampton, Northarr pton, Northumberland, Westmoreland, and Sussex. In the mean time he was eagerly pressing Mary herself with his suit and importunities ; and they had mutually exchanged the tokens of a constant and sincere love. It was in this forward state of the match

that the bishop of Ross drew up his schedule of

articles for the accommodation of the riv.il

queens. At the desire of Elizabeth, her privy

council conferred with the bishop upon these

articles at different times ; and they expressed

themselves to be highly pleased with their general

import and meaning. Little doubt was enter-

tained of their success ; and the earl of Leicester, to complete the business, and to serve the duke

of Norfolk, undertook to give them a more spe-

cial force, and to improve them by the introduc-

tion of a stipulation about the marriage of the

queen of Scots. According to his scheme of

agreement, it was required of Mary that she

should be a party to no attempt against the rights and titles of the queen of England or her heirs ; that she should consent to a perpetual league,

offensive and defensive, between the two king-

doms; that she should finally establish the Pro-

testant religion in Scotland ; that she should ad-

mit to her favor those of her subjects who had

appeared against her ; that if she had made any

assignment of her kingdom to the duke of An-

jou, in the expectation of a marriage to be

contracted between them, it should be dissolved ;

and that instead of looking to a foreign prince

whose alliance would be dangerous not only to

the religion but to the liberty of the two realms, she would agree to marry the duke of Norfolk,

the first peer of Eng.and. These arficles being

communicated to the bishop of Ross, he was de-

sired to transmit them to Mary; but, as they

touched upon some points concerning which he

had no instructions, he declined this office, and

recommended to employ a special messenger

rf their own in a commission of such high im-

portance. They accordingly appointed Mr.

I 'mulish to go with them to the queen of Scots,

and, in a formal despatch, they extolled the

merits of the duke of Norfolk ; assured her of

the general favor and support of the English no-

bility, if she should approve of his love ; and in-

timated their belief that Elizabeth would not be

averse from a marriage which gave the certain

promise of tranquillity and happiness to the two

kingdoms. This despatch was in the hand-

writing of Leicester ; and it was subscribed by

this nobleman, and the earls of Arundel and

Pembroke, and lord Lumley. Mary, in the so-

litude of her prison, received this application with pleasure. By the lord Boyd she returned a very favorable answer to it ; but took the liberty to admonish them of the necessity of their securing the good-will of Elizabeth, lest her dislike of the treaty of the marriage should excite new disasters, and involve the duke of Norfolk in danger. This advice, the suggestion of her delicacy and prudence, did not draw sufficiently their attention. The duke of Norfolk was now impatient to conclude this great transaction in which he had engaged himself; and admitted into his counsels many nobles whom he had hitherto neglected to court, and many gentlemen who were considerable from their distinction and fortunes. The countenance and consent of the kings of France and Spain were thought necessary to the measures in agitation, and were solicited and obtained. In the universality of the applause with which they were honored, it was supposed that Elizabeth would be allured into a cordial acknowledgment of their propriety, or be compelled to afford them a reluctant approbation ; and so

ardent a belief prevailed of their fortunate termination that the marriage-contract was actually entrusted to the keeping of M. Fenelon, the French ambassador. The activity of the duke of Norfolk with the English nobles did not so much engross his attention as to make him forget the regent. He kept up with him a close correspondence in consequence of the concert into which they had entered, and received the most ample assurances of his fidelity and service. The most sanguine and seducing hopes elated him. The regent, while he stipulated for terms of favor and security to himself and his faction, appeared to be full of the marriage, as a measure from which the greatest advantages would arise to the two kingdoms, to the two queens, and to the true religion. The match, in the meanwhile, was anxiously concealed from I^lizabeth ; but she was zealously pressed to conclude an accommodation with Mary, on the foundation of the schedule of agreement presented by the bishop of Ross. After having had many conferences with her privy-council, she seemed inclined to treat definitively for the restoration of the queen

of Scots, and actually agreed to open the transaction to the regent. Lord Boyd was sent into Scotland upon this business ; and, while he carried her letters, he was intrusted.with despatches from Mary, the duke of Norfolk, and Sir Nicholas Throgmorton. As the regent was returning from his northern expedition, he was saluted at

Elgin by lord Boyd, who immediately laid before him the despatches and instructions with which he had been charged. The queen of England, in her letters, made three propositions in behalf of Mary, and intimated a desire that one of them should be accepted. The queen of Scots, she said, might be restored fully and absolutely to her royal estate ; she might be associated in the government with her son, have the title of queen, and, till the prince should attain the age of seventeen years, the administration might continue in the regent ; or she might be permitted to return to Scotland in a private station, and have an honorable appointment to maintain her in a safe and happy obscurity. The despatches from Mary to the regent de-

sired that judges might immediately be allowed to enquire into the legality of her marriage with Bothwel ; and that, if it was found to have been concluded in opposition to the laws, it should be declared void, and that the liberty be granted to her of entering anew into a matrimonial engagement. The duke of Norfolk expressed to the regent the gratitude he felt for his friendship; promised him the command of the fullest exertions of his consequence and power ; entreated him to proceed expeditiously in promoting the business of the marriage, and referred him to the instructions of lord Boyd for a satisfactory answer to any doubts which might give him disgust or uneasiness. By the letters of Throgmorton, the regent was advertised that the marriage of the queen of Scots with the duke of Norfolk was a certain and decided point; and he was counselled to concur heartily and expeditiously in this transaction, that his consent might not seem to have been extorted. Maitland of Lethington was recommended to him by this statesman as the person whom he should choose to represent him in the English court, as he could

negociate best the terms and mode of his security and that of his party. The zeal of Throgmorton induced him also upon this occasion to address to Maitland a despatch, in which he was importunate to hasten his expedition to England, in the character to which he recommended him. He complimented him as the fittest person to open the match to the English queen, on the part of the regent and the Scottish nobility ; and he represented the success of the scheme to be infallible, as Elizabeth would never be so unwise as to put her own safety, the peace of her kingdom, and the preservation of her people, in competition with the partial devices that might proceed from the vanity and th« passions of any person whatsoever. He enumerated the names of the English nobility who had confederated to promote the marriage. He enlarged upon it as an expedient full of wisdom, and as advantageous in the highest degree to religion and the state. He pointed out the lasting and inseparable connexion of England and Scotland, as its happy and undoubted consequence. For, if James VI. should die, the sceptres of the

two kingdoms should devolve to an English prince ; and, if he should attain to manhood, he might marry the daughter of the duke of Norfolk, and unite in his person the two crowns. These weighty despatches employed fully lh0

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thoughts of the regent. The calls of justice and humanity were loud in the behalf of Mary; his engagements to Norfolk were precise and definitive ; and the commission of Elizabeth afforded him the command of the most important services. But, on the other hand, the restoration of Mary and her marriage would put an end for ever to his greatness ; and, amidst all the stipulations which could be made for his protection, the enormity of his guilt was still haunting him with suspicions and terror. His ambition and his selfish sensibilities were an overmatch for his virtue. He practised with his partisans to throw obstacles in the way of the treaty and the marriage ; and, on the pretence of deliberating concerning the restoration of Mary, and on her

divorce from Bothwel, a convention of the estates was summoned by him to assemble at 1'erth. To this assembly the letters of Elizabeth were recited ; and her propositions were considered in their order. The full restoration of Mary to her dignity was accounted injurious to the authority of the king, and her association with her son in the government was judged improper and dangerous ; but it was thought that her deliverance from prison, and her reduction to a private station, were reasonable expedients. No definitive decree, however, was pronounced. The letters of Mary were then communicated to tin's council, and gave rise to vehement debates. She had written and subscribed them in her character of queen of Scotland. This carriage was termed insolent and imperious by the friends of the regent. They also held it unsafe to examine her requests till they should be communicated to Elizabeth. The favorers of Mary engaged that, while the commissaries were proceeding in the business of the divorce, new despatches in the proper method should be applied for and procured. They were heard with evident symptoms

of displeasure ; on which they exclaimed ‘ that it was wonderful to them that those very persons who lately had been so violent for the separation of the queen and Bothwel, should now be so averse from it.’ The partizans of the regent replied ‘ that, if the queen was so eagerly solicitous to procure the divorce, she might apply to the king of Denmark to execute Bothwel, as the murderer of her husband ; and that then she might marry the person who was most agreeable 10 her.’ The passions of the two factions were inflamed to a most indecent extremity, and the convention broke up with strong marks of hostility. Notwithstanding the caution with which Mary and Norfolk carried on their intrigues, intimations of them had come to Elizabeth. Norfolk himself, by the advice of the earl of Pembroke, had ventured to disclose his secret to Sir William Cecil, who affected to be friendly to him. The regent, in answer to her letters, transmitted to her the proceedings of the convention at Perth. The application of Mary for a divorce i key to the ambitious hopes of the duke of Norfolk. He commanded Sir William Cecil to

apply himself to discover the conspiracy. This statesman betrayed the confidence with which he h;d been entrusted; and Elizabeth, while the duke was attending her at Farnham, discovering mixfire of pleasantry and passion, admonished him to be careful on what pillow he reposed his head. The earl of Leicester, alarmed by his fears, revealed to her atTitchfield the whole proceedings of the duke of Norfolk and his friends. Her fury was ungovernable ; and, at different times, she loaded Norfolk with the severest reproaches and contumely for presuming to think of a marriage with the queen of Scots without her concurrence. Insulted with her discourse and her looks, abandoned by Leicester, and avoided by other nobles in whom he had confided, his courage forsook him. He left the court at Southampton without taking leave, and went to London to the earl of Pembroke. New intimations of her displeasure were announced to him, and he retired to his seat at Kinninghall in Norfolk. His friends pressed him to take the field, and to commit his safety to the sword ; but, having no inclination to involve his country in the miseries of war, he

rejected their advice ; and, addressing an apo-

logy to Elizabeth, protested that he never meant

to depart from the fidelity which he owed to her ; and that it was his fixed resolution to have ap-

plied for her consent to his marriage with the

queen of Scots. In return she ordered him to

repair to her court at Windsor ; and, as he ap-

peared to be irresolute, a messenger was de-

spatched to take him into custody. He was first

confined to the house of Paul Wentworth, at

Burnham, in the neighbourhood of Windsor,

and then committed to the Tower. The earls of

Pembroke and Arundel, lord Lumley, Sir Nicho-

las Throgmorton, and the bishop of Ross, were

also apprehended and confined.

Elizabeth, amidst the ferment of her inquie-

tudes, gratified her revenge by insulting tin-

queen of Scots. The earl of Huntingdon, who

affected to have pretensions to the crown of

Scotland preferable to those of the Scottish prin-

cess, was joined with the earl of Shrewsbury in

the office of guarding her. His instructions were

rigorous and he was disposed to exceed them.

The earl of Shrewsbury considered it as an in-

dignity to have an associate who was a declared

enemy to his charge, who had an interest in her death, and who was remarkable for a natural ferocity of disposition. Mary exclaimed against the indelicacy and rudeness of Elizabeth, and protested that all her intentions were commendable and innocent. Huntingdon took a delight in her sufferings. He ransacked her coffers with a view of making discoveries ; but her prudence had induced her to destroy all the evidences of her transactions with the duke of Norfolk ; and the officious assiduity of this jailor %v;is only rewarded with two cyphers which he could not comprehend. The domestics whom she favored were suspected and dismissed. Her train of attendants was diminished. An unrelenting watch was kept upon her. No couriers were allowed to carry her despatches. No messengers were admitted to her presence; and all the letters from her friends were ordered to be intercepted, and conveyed to the queen of England. The proceedings of the convention at Perth were afflicting to Elizabeth, to Mary, and to the duke of Norfolk. In the former they created suspicions of the regent ; and they were a certain

annunciation to the latter that he was resolved

to support himself in the government of Scotland. Uncertain rumors had reached Elizabeth of the interviews he had held with Norfolk in the business of the marriage. Mr. Wood, who brought from the regent his answer to her letter, was treated with disrespect. Secretary Cecil sent instructions to lord Hudson, the governor of Berwick, to watch his operations. Elizabeth, by a special envoy, required from him an explanation of his ambiguous carriage. The regent apologised to her for his connexions with the duke of Norfolk, by laying open the design of that nobleman to cut him off, in his way to Scotland, by a full communication of whatever had passed between them in relation to Mary, and by offers of an unlimited submission and obedience. While the duke of Norfolk was carrying on his intrigues with Mary, the scheme of an insurrection for her deliverance was advancing under the direction of the earls of Northumberland and Westmoreland. Motives of religion

were the chief foundation of this conspiracy;

and the more zealous catholics over England

were concerned in it. Mary, however, by the

advice of the duke of Norfolk, who was afraid of

her matching with a foreign prince, did not enter

into it with cordiality. It advanced notwith-

standing ; and the agents of the pope were lavish

of exhortations and donatives. The duke of

Alva, by the order of his master the king of

Spain, encouraged the conspirators with the offer

of 20,000 men from the Netherlands ; and, under

the pretence of adjusting commercial disputes,

lie sent to England Chiapini Yitelli, marquis of

Celona, an officer of ability, that he might be at hand, and prepare to take the command of them

The report of an insurrection was universal. Eli-

zabeth kept an army of 15,000 men near her

person. The queen of Scots was removed to

Coventry, a place of strength; and, if a superior

and commanding force should appear before it,

her ferocious keeper had orders to assassinate

her. Repeated commands were sent to the earls

of Northumberland and Westmoreland to repair

to court. But the imprisonment of the duke of

Norfolk and his friends had struck a panic into

them. They conceived that their conspiracy was discovered ; and, putting themselves at the head of their followers, they issued their manifesto. The restoration of popery, the establishment of the titles of Mary to the English crown, and the reformation of abuses in the commonwealth, were the avowed objects of their enterprise. But they had embarked in a business for which they were altogether unequal. Their efforts were feeble and desultory. The duke of Alva forgot his promises. Wherever the peace was disturbed by insurgents, there were troops to oppose them. The vigilance of Elizabeth disconcerted with ease the operations of men whom no resources or popularity could have conducted to greatness, and who could neither conquer nor die. The earl of V.'estmoreland, after concealing himself for some time in Scotland, effected ap escape into Flanders, where he passed a miserable and useless existence ; and the earl of Northumberland, being taken by the regent, was imprisoned in the castle of Lochleven. As the fury of Elizabeth abated, her resentment to the duke of Norfolk lost its power:

and she failed not to distinguish between the intrigues of an honorable ambition, and the practices of an obstinate superstition. It was the result of the examination of this nobleman, and of the confessions of the other prisoners, that Lethington had schemed the business of the marriage, and that the earl of Murray had encouraged it ; that her consent was understood to be necessary to its completion ; and that Mary herself had warmly recommended the expedient of consulting her pleasure. Upon receiving proper admonitions, the earls of Pembroke, Arundel, the lord Lumley, Sir Nicholas Throgmorton, and the bishop of Ross, were released from confinement; and, after a more tedious imprisonment, the duke of Norfolk himself was admitted to his liberty. This favor, however, was not extended to him till he had not only submissively acknowledged his presumption in the business of his marriage ; but had fully revealed whatever had passed between Mary and him, and solemnly engaged himself never more to think of this alliance, and never more to take any concern whatsoever in her affairs. The

regent, in the meanwhile, was very anxious to recover the good opinion of Elizabeth. Her treatment of Mr. Wood, and her discovery of his practices, had excited his apprehensions. He therefore assembled at Stirling a convention of the estates ; and, taking her letters a second time into consideration, returned her an answer to them by Robert Pitcairn abbot of Dunfermline, in a style suited to her temper and jealousies, and from which she could infer that no favor would be shown to the queen of Scots. But this base condescension not being sufficient, in his opinion, to draw completely to him the cordiality of the queen of England, he was preparing to gratify her with another sacrifice. The partiality of Maitland to Mary, and his intrigues with Norfolk and the English malcontents, had rendered him uncommonly obnoxious to Elizabeth. The late commotions had been chiefly ascribed to his arts. Under the pretence of employing his service in despatches to England, the regent invited him to Stirling. He was then with the earl of Athol at Perth; and, suspecting some device, he obeyed the summons with re-

luctance. When he took his place in the privy council, captain Crawford, the minion of the earl of Lennox, who had distinguished himself in the trial of Mary, accused him, in direct terms, of being a party in the murder of the late king. The regent affected astonishment, but permitted him to be taken into custody. He was soon after sent to Edinburgh under a guard, and admonished to prepare for his trial. Upon similar charges the lord Seton and Sir James Balfour were seized upon and imprisoned. Kirkaldy of Grange, the governor of the castle of Edinburgh, who was warmly attached to Maitland, after having remonstrated in vain with the regent on his conduct, employed address and stratagem in the service of his friend. Under the cover of niijht, he went with a guard of soldiers to the lodging where Maitland was confined ; and, showing a forged warrant for taking his person into keeping, got possession of him.- Kirkaldy

had now in his castle the duke of Chatelherault,

the lord Herries, and Maitland. The regent sent for him to a conference; but he refused to obey his message. He put himself and his fortress under the direction of his prisoners. The regent, condescending to pay him a visit, was more lavish than usual of his promises and kindness. His arts, however, only excited the disdain of this generous soldier. As the regent could not lead out Maitland to the block, he instituted a process of treason against him, to forfeit his estates. Kirkaldy, by a trumpeter, desired him to commence similar actions against the earl of Morton and Mr. Archibald Douglas, as it was notorious that they were parties to the king's murder. This messenger was likewise charged with delivering a challenge from him to Mr. ArrJjiuald Douglas, and another from the lord Herries to the earl of Morton. This disappointment, and these indignities, made a deep impression upon the regent ; and, in a thoughtful dissatisfied humor, about this time, he made a short progress towards the English border, courting popularity, and deserving it, by an attention to order and justice. Elizabeth, flattered by his

submissive advances, and pleased with his ambition, was now disposed to gratify his fullest wishes ; and she perceived that, by delivering to him the queen of Scots, she would effectually relieve herself of a prisoner whose vigor and intrigues were a constant interruption to her repose. A treaty for this purpose was entered into and concluded. The regent was to march an army to the English frontiers, and to receive from her his sovereign into her own dominions, the victim of his power, and the sport of his passions. No hostages and no security were stipulated for her entertainment and good usage. His authority over her was to be unlimited. Upon his part he was to deliver to Elizabeth the young prince, to put her in possession of the principal forts of Scotland, and to assist her with troops in the event of a war with France. This treaty, so fatal to Mary, and so ruinous to the independence of Scotland, escaped not the vigilance of the bishop of Ross. He complained of it in the strongest terms to Elizabeth ; and declared it to be equivalent to a sentence of death against his mistress. The ambassadors of France and Spain were also strenuous in their remon-

strances to her upon this subject. All resistance, •however, was unavailing ; and the execution of the treaty seemed inevitable. Yet how vain are the loftiest schemes of human pride ! The career of the regent was hastening to its termination ; and the hand of an assassin put a period to his dream of royalty. Scotland did not lose its liberties ; but Mary continued to be unfortunate. James Hamilton of Bothwelhaugh, who had been taken a prisoner at the battle of Langside, obtained his liberty and life; but his estates were forfeited. His wife, the heiress of Wood-houslie, retired upon this emergency to her pa-ternal inheritance, in the hope that it might •ft ape the rapacity of the regent. He had, how-ever, given it away to one of his favorites, Sir James IJallenden ; and the instruments of his power having the inhumanity to strip her of her garments, and to turn her naked out of her house, in a cold and dark night, she became dbtrac-te.l before the morning. Hamilton vowed revenge ; and the regent made a mockery of his threats. This contempt inspirited his passions ; and tht humiliation of the house of Hamilton, to whicb

he was nearly allied, fostered his discontents until the madness of party reconciled his mind to assassination. After watching for some time a proper opportunity to commit his horrible purpose, he found it at Linlithgow. The regent was to pass through this town in his way from Stirling to Edinburgh. Intimations reached him that Hamilton was now to perpetrate his design; but he unaccountably neglected them. The assassin, in a house that belonged to the archbishop of St. Andrews, waited deliberately his approach ; and, firing his musket from a window, shot him through the body. The wound was not judged to be mortal; but the regent, finding its pain increase, prepared for death; and in a few hours expired. A fleet horse of the abbot of Arbroath's carried the assassin to the palace of Hamilton ; and thence he soon after effected his escape into France.

The death of Murray made no favorable alteration in the affairs of Mary. Confusion and disorder prevailed throughout the kingdom; and, though the friends of the queen were promised assistance from France, nothing effectual was

done. At last the regency was conferred upon

the earl of Lennox ; an enemy to his queen, and

who treated her friends with the utmost rigor.

At the same time Elizabeth continued to amuse

with negociations her unhappy rival. She granted

liberty to the bishop of Ross to repair to the queen of Scots, who had been removed to Chatsworth,

and to confer with her on the inteuded accord

and treaty. Mary, conforming to the advances

of Elizabeth, authorised lord Livingston to pass

to her dominions, and to desire her friends to

appoint a deputation of their number to give

their assistance in establishing the tranquillity of

their country : and, after meeting with some in-

terruptions upon the English borders from the

earl of Sussex, this nobleman executed success-

fully his commission. The queen's lords gave

power to ten nobles to act in a body, or by two

of their number, in the intended negociation :

and a safe conduct from Elizabeth allowed them

to enter the English realm, and to remain in it six months. While lord Livingston was consulting

the interests of Mary with her friends in Scotland, the bishop of Ross was making earnest suit with

Elizabeth to proceed in the projected negociation.

His solicitations were not ineffectual ; and Sir Wil-

liam Cecil and Sir Walter Mildmay were ordered to wait upon the queen of Scots at Chatsworth. The heads of accommodation which they proposed were explicit and particular ; and the rigor they discovered towards the Scottish princess seemed to vouch their sincerity. They proposed that a perfect amity should take place between the two queens; that all the treaties formerly concluded by the two nations should receive an ample confirmation ; that the queen of Scots should ratify the treaty of Edinburgh, and forbear from advancing any title or claim to the crown of England during the life of Elizabeth, or to the prej idice of the heirs of her body ,

that, in case of foreign invasions, the two realms should mutually assist each other ; that all foreign soldiers should be ordered to depart out of Scotland ; that, in the future, strangers of the profession of arms should be prohibited from repairing to it, and from taking up their residence in any of its castles or houses of strength; that Mary should hold no correspondence, diredlly or indirectly, with any subject of England, without fhe permission of the English queen ; that the

earl of Northumberland, and the English rebels

in Scotland, should be delivered up to Elizabeth;

that redress should be given to the subjects of

England for the spoils committed upon them by

the Scottish borderers ; that the murderers of

lord Darnley and the earl of Murray should be

punished ; that, before the queen of Scots should

be set at liberty, the young prince her son should be brought into England, and that he should con-

tinue in the keeping of Elizabeth till the death

of his mother, or till her resignation to him of

her crown on attaining his majority ; that the queen of Scots should not enter into a negociation for

her marriage without the knowledge of the queen

of England, nor conclude it without her appro-

bation, or that of the greatest part of the Scottish nobility; that none of the subjects of Scotland

should be suffered to go to Ireland without the

safe conduct of Elizabeth ; and that Mary should

deliver to her all the testimonies and writings

which had been sent from France, renouncing

the pretended marriage between her and the

duke of Anjou. Besides these articles, it was

proposed by another treaty to adjust the differ-

ences of the queen of Scots and her subjects;

and Sir William Cecil and Sir Walter Mildmay

embraced the opportunity of conferring with her upon this business, under the pretence of facilitating its management in the future stages of its progress. During their stay at Cbatsworth, these statesmen were completely satisfied with the behaviour of the queen of Scots. The candor, sincerity, and moderation, which she displayed, were full assurances to them, that, upon her part, there was no occasion to apprehend any improper policy or art ; and the calamities of her condition were a still securer pledge of her compliance. Elizabeth, upon hearing their report, affected to be highly pleased with her sister, and sent a message to the earl of Lennox, instructing him in the conditions which had been submitted to Mary, and desiring him to dispatch commissioners into England to deliberate in the treaty, and to consult his interest and that of his faction. Nor did Mary neglect to transmit to her friends in Scotland the proposed terms of agreement ; and the bishop of Ross, who had assisted her in the conferences with Sir William Cecil and Sir Walter Mildmay, conveyed intimations of them to the pope, the king of France, and the duke of Alva ; besought their

advice, and informed these princes that, unless an effectual relief could be expected from their favor, the necessities of her condition would compel her to subscribe to the hard and humiliating dictates of the queen of England.

'But, while Mary and her friends were in-•'nlgingthe hope of a termination to her troubles, Elizabeth was secretly giving comfort to her adversaries, and encouraging them to throw obstacles in the way of the treaty. Sir William Cecil wrote to the regent, expressing his disapprobation of the negociations at Chatsworth ; desiring- him not to be apprehensive of the boastings of the adherents of the queen of Scots; and advising him to make choice of commissioners, in the name of the king, in whose constancy and fortitude he could rely. The earl of Sussex also sent him despatches, in which he admonished him to turn- his anxious attention to the approaching negociation, and to insist on secure stipulations for the preservation of the prince, for his own safety, and for a general indemnity to the nobles and their adherents, whose party he had espoused. In every event he re-

presented it as proper for him to pay the greatest respect to Elizabeth ; and, if no treaty should be concluded, he advised him to be prepared for reducing the friends of Mary to obedience, and for defending himself against invasions from abroad. By these artifices, the regent and his faction intimated to Elizabeth their dissatisfaction with the terms of agreement proposed to Mary; and Pitcairn abbot of Uunfermline, \l;o had been appointed secretary of state in the room of Maitland of Lethington, was sent to her upon this business. He exclaimed against the treaty as wild and impolitic ; and contended that no stipulations could bind Mary, whose religion taught her to keep no faith with heretics ; that her claims to the English crown, and her resentment against the queen of England, as well as her own subjects, would, immediately upon her restoration, involve the two kingdoms in blood ; and that no peace could be enjoyed, but by detaining her in close captivity. Elizabeth did not discourage these iniquitous sentiments; and Pitcairn was assured by her that from her natural love to the king, and her regard to the nobles, she would provide for their

security, and maintain their quarrel and their consequence. Mary had been carried to Sheffield, and was recovering from a fever. To this place the bishop of Galloway and lord Livingston, who had been selected by her friends to be her acting deputies in England, repaired to impart to her the state of affairs in Scotland, and to receive her commands. After repeated conferences on the approaching treaty, she gave them her commission and instructions, and, joining them to the bishop of Ross, sent them to Elizabeth. They claimed an audience of this princess, and were admitted to it at Hampton-court. Having presented their credentials, they informed her that they were ready to conclude a treaty of concord and agreement, upon principles the most extensive and liberal ; and, representing to her the impoverished and tumultuous state of their country, they begged her to proceed in the business with expedition. The orders, they said, which they had received, and their own inclinations, disposed them to follow her advice and counsel in all points which were honorable and consistent with reason ; and, as her protection

was the only refuge of the adversaries of their . queen, it was completely in her power to put a period to all disturbances, and to accomplish an accord, which would not only confer upon hei

the highest reputation, but be of the most signal utility to the t%vo kingdoms. Elizabeth declared that it would please her highly to advance in the negociation ; and that it was a pain to her that the regent, by his delay in sending commissioners, should discover any aversion from it. This answer was deemed very favorable by the bishop of Ross and his associates ; and they obtained her authority to send a messenger to the regent to hasten his operations. In the mean time Mary received despatches from the pope, the king of France, and the duke of Alva; and they concurred in recommending it to her to accept of the articles of accommodation offered by Elizabeth. The Turk was giving employment to the pope and the king of Spain : Charles IX., already enfeebled by the obstinate valor of the Hugunots, was busy in deceiving them with ap-

pearances of peace, and in plotting their massacre ; and the duke of Alva felt himself insecure in his government of the Netherlands. But, while they strongly advised Mary to conclude an agreement with the queen of England, they were yet lavish to her of their expressions of a constant amity ; and, if the treaty should miscarry, they promised to make the most strenuous exertions in her behalf, and to assist her adherents with money, ammunition, and troops. The earl of Morton, the abbot of Dumfermline. and Mr. James Macgill, had been appointed by the regent and his faction to be their commissioners in the name of the king ; and at length their arrival was announced to Elizabeth. They justified to her the deposition of the queen of Scots, and thus interrupted the progress of ihe treaty. In an elaborate memorial they affected to consider Mary as unworthy to reign, and asserted the constitutional power of the people to throw her down from royalty. They endeavoured to entrench themselves within the authority of laws, civil, canon, and municipal. But though the general position, that the people

have a title to resist the domination of the sovereign is clear and undubitable, yet their application of it to the queen of Scots was wildly precarious and improper. To speak of her tyranny, and her violation of the rights of her people, was even a wanton mockery of truth and justice; for, instead of having assumed an illegal exorbitancy of power, she had suffered in her own person and rights, and had been treated by her subjects with the most cruel and tyrannical insolence. Elizabeth, who was afraid to enter anew into the conduct of Mary, who was fully sensible of the insolence of her adversaries, and who did not approve of any maxims that pressed against the majesty of princes, received their memorial with surprise and indignation. She perceived not, she told them, any reason that could vindicate the severity which had been shown to the queen of Scots by her enemies ; and advised them to consider that in the present negociation it was their proper business to consult the security of the king and of their faction. Upon the part of Elizabeth, the commissioners were the lord keeper Bacon, the earls of Sussex

mid Leicester, lord Clinton, lord chamberlain, Sir William Cecil (now lord Burleigh), Sir Francis Knollys, Sir James Croft, Sir Walter Mildmay, and Sir Thomas Smith. The deputies of Mary were invited to meet with the English commissioners in the house of the lord keeper ; and, after he had stated the general purposes of the treaty, he intimated to them that there were two points which required a particular discussion. A proper security, he said, ought to be given by the queen of Scots for her due performance of the stipulations of the agreement with Elizabeth ; and it was expedient to concert the mode of the pardon and indemnity which she was to extend to the subjects of Scotland who had offended her. As an assurance of the accommodation with his mistress, he demanded that the duke of Chatelherault, the earls of Huntly and Argyle, the lords Hume and Herries, with another person of high rank, should be surrendered to her, and remain in England for three years ; that the castles of Dumbarton an d Hume should be in her possession during the same period ; and, as to the delivery of the

prince into her custody, he observed that it would be required from the regent, the queen of Scots not having the power of its performance. The deputies of Mary, surprised with his language, intreated the English delegates to reflect that their queen, if deprived of the most faithful of her nobles, and of her strongest forts, could have little desire to return to her own kingdom ; for she would thus be unable to protect herself against the turbulence of her subjects, and be a sovereign without friends and without strength. They were inclined, they said, to act upon their commission and powers to the utmost extent to gratify Elizabeth ; and they would agree that two earls and two barons should be surrendered for two years, as hostages of the fidelity of their sovereign, under the restriction that they might be exchanged every six months for persons of an equal condition. As to the giving up of any forts or castles, they would not agree to it, because, among the other inconveniences of this measure, similar claims would be competent to the king of France, by the spirit of the treaty of Edinburgh, which stipulated that no French or English troops should be admitted into Scot-

land. The lord keeper Bacon told them that

the whole kingdom of Scotland was an in-

adequate pledge, and that, if his advice would

be followed, the queen of Scots should not ob-

tain her liberty upon any kind of security which

could be granted by the Scottish nation. In all

public treaties, said the delegates of Mary, no

further assurances can be required from a sove-

reign than what consists with his safety ; and, when exactions are pressed from a contracting party in

a league which are ruinous and impossible, a foun-

dation is sought to break off the negociation. The

English commissioners now, interfering in a body,

declared upon their honor that it was the mean-

ing of Elizabeth to agree to the restoration of the queen of Scots to her crown and realm, upon re-

ceiving sufficient assurances for the articles of the accommodation ; that the security offered for her

acceptance should be submitted to her delibera-

tion ; and that they would immediately proceed

to confer with the deputies for the king of Scots.

The English commissioners were not unac-

quainted with the sentiments of the earl of Mor-

ton and his colleagues ; and it was from this

quarter that they expected a resolute and definitive interruption to the treaty. Nor did these delegates disappoint their expectations. After affecting to take a comprehensive view of the articles under debate, they declared that their commission gave them authority to treat about the amity of the two kingdoms, and the maintenance of the true religion ; but that it conferred upon them no power to receive their queen into Scotland, or to surrender to Elizabeth the person of their king. They therefore begged not to be urged to accede to a league which, in some future period, might expose them to a charge of high treason. This singular declaration was considered to be solid and weighty by the English commissioners ; and, in a new conference, it was communicated by them to the deputies of Mary. The bishop of Ross and his associates were disgusted with this formal impertinence. They did not hesitate to pronounce it to be an unworthy and most frivolous subterfuge. The authors, they said, of the deposition of their sovereign did not need any authority but their own to set her at liberty ; the prince

was not yet five years of age, and could give them no instructions : and the regent was wholly dependent upon the will and pleasure of the queen of England. It was replied by the English delegates that the commission of king James to his deputies, having been perused by Elizabeth, was accounted by her to be insufficient ; and that it was her opinion that the earl of Morton should return to Scotland to hold a parliament for obtaining new powers. The bishop of Ross exclaimed that the queen of Scots had been amused with deceitful promises, that the prudence of Elizabeth had been corrupted by partial counsels, and that the pretences for interrupting the negociation were affected and unreal. The instructions, he said, from his sovereign to her commissioners were to negociate and conclude, and not to trifle ; and they would not consent to protract, by artificial delays, a treaty which the queen of England, if her intentions were sincere, could immediately terminate upon reasonable and honorable terms. His speech and his demeanor he acknowledged to be free and open ; and he besought them to excuse him,

since, having been made an instrument to abuse his mistress with false hopes, he could not but resent the indignity, and express what he knew and what he felt. The English deputies, addressing him and his colleagues, observed that as the friends of Mary, and those of the kins her son, could not come to an agreement, and as their queen was refused the assurance she expected, they held their commission to be at an end, and were no longer at liberty to negociate. The insincerity of Elizabeth, and the failure of the league or agreement, filled Mary with resentment and complaints. Her animosities and those of Elizabeth were increased. She was in haste to communicate to her allies the unworthy treatment she had received; and she sent her commands to her adherents in Scotland to rise up in •arms, to repose no trust in truces which were prejudicial and treacherous, and to employ all their resources and strength in the humiliation of the regent and his faction. Elizabeth, who by this time apprehended no danger from Charles IX., or the duke of Alva, resolved to give a strong and effectual support to the kind's

friends, and to disunite by stratagem, and op-
press by power, the partisans of the Scottish
princess. The zeal of the bishop of Ross having
raised her an>\er, she commanded him to dep-.irt
from London ; and Mary, in contempt of her
mandate, ordered him to remain there under the
privilege of her ambassador. The high and un-
broken spirit of the. Scottish queen, in the midst
of her misfortunes, never once awakened the
generous admiration of Elizabeth. \Vhile it
uniformly inflamed her rage, it seems also to
have excited her terror. \Vith a pusillanimous
meanness, she sent a despatch to the earl of
Shrewsbury, instructing him to keep his charge
in the closest confinement, and to be incessantly
on his guard to prevent her escape. He obeyed,
and regretted her severity. The expense, re-
tinue, and domestics of the queen of Scots, were
diminished and reduced, and every probable
means by which she might endeavour to obtain
her liberty were removed from her. The rigors,
however, that invaded her person could not reach
her mind ; and she pitied the tyrant that could
add distress to oppression, and deny her even

the comforts of a prison. All this time Scot-

land was involved in the miseries of civil war.

The friends of Mary were every where punished

with fines and forfeitures. Private families took

the opportunity of the public confusion to re-

venge their quarrels against each other. Indi-

viduals of every denomination ranged themselves

on the side either of the regent or of the queen, and took a share in the hostilities of their coun-

try. Acts of outrage and violence were com-

mitted in every quarter, while, amidst the general

confusion, religion was made the pretence by

both parties. Meantime, though many encoun-

ters took place between the two factions, yet

neither party seems to have been conducted by

leaders of any ability or skill in military affairs.

This year, in one of these skirmishes, the regent

himself was taken prisoner by a party of the

queen's faction, and put to death. But this

event made little change in the affairs of the

nation.

The earl of Mar, another of the queen's ene-

mies, was chosen to the regency ; but, though

he propoSed to act against her party with riˆor,

he was baffled before Edinburgh castle, which

was still held by her friends ; and some bloody skirmishes were fought in the north, where victory declared in favor of the queen. These advantages, however, were more than compensated to the other party by the following event. NVhile the negociations with Elizabeth for Mary's restoration were depending, the scfoerw: of a conspiracy for her deliverance was communicated to her by Robert Ridolphi, a Florentine, who lived in London many years as a merchant, and who was secretly an agent for the court of Rome. But to his letters, while the fate of the treaty was uncertain, she returned no reply. Its miscarriage, through the duplicity of Elizabeth, recalled them forcibly to her attention, and stimulated her to seek the accomplishment of her

liberty by measures bolder and more arduous lliuu any which had been hitherto employed by her. She drew up in cipher an ample description of his communications and of her situation, and despatched it to the bishop of Ross, together with letters for the duke of Norfolk. Her instructions to this ecclesiastic were to

convey these papers and letters expeditiously to Norfolk, and to concert an interview between that nobleman and Ridolphi. The confidential servants by whom the duke acted with the bishop of Ross were Bannister and Barker ; and, •wing received from them the paper, they were deciphered by Hickford, his secretary. Having considered them maturely, he delivered them to Hickford, with orders to commit them to the flames. But his orders were disobeyed ; and Hickford deposited them, with other papers of consequence, under the mats of the duke's bedcliamber. The contents of these communications awakening the hope and ambition of Norfolk, he was impatient to see Kidolphi ; and the bishop of Ross soon brought them together. Ridolphi, whose ability was inspirited by motives of religion and interest, exerted all his address to engage the duke to put himself at the iiead of a rebellion against his sovereign. He represented to him that there could not be a season more proper than the present for achieving the overthrow of Elizabeth. Many persons who had enjoyed authority and credit under her

predecessor were much disgusted; the Roman Catholics were numerous and incensed; the younger sons of the gentry were languishing in inaction ; and there were multitudes disposed to insurrection from the love of change, and the ardor of enterprise. He insinuated that his rank, popularity, and fortune, enabled him to take the command of such persons with advantage ; and painted out the glory he might purchase by the humiliation of his enemies, and by his marriage with the queen of Scots. To give strength to these considerations he produced a long list of noblemen and gentlemen, whom he affirmed to be ready to hazard their lives for a revolution, if the duke would enter into it with cordiality, lie also mentioned the aid with which he might flatter himself from abroad. The pope he assured him had already provided 100,000 crowns for the enterprise; and, if popery should be adtanced in England, he would cheerfully defray Jhe whole charges of the war. The king of Spam would supply 4000 horse and 6000 foot, which might be landed at Harwich ; and Charles IX. was devotedly attached to the queen of Scots. In fine, he urged that, while he might

depend on the assistance and arms of the great-
est princes of Christendom, he would entitle
himself to the admiration of all of them by his
magnanimous efforts and generous gallantry in
the cause of a queen so beautiful and so unfor-
tunate. The duke, allured by appearances so
plausible, forgot the submissive obligation in
which he had bound himself to Elizabeth never
more to interfere in the affairs of the Scottish
princess. Ridolphi, in this forward state of the
business, advised him to write to the pope, the
king of Spain, and the duke of Alva, expressive
of his concurrence in the design, and inspiriting
their activity and resolutions. He even produceˆ
letters framed for tin's purpose ; and, while l.e
entreated the duke to subscribe them, he ofle.-eo
to carry them himself to Flanders, Rome, and
Spain. The duke, who was ambitious and timid,
disposed to treason, and unfit for it, refused to
subscribe the letters ; but he allowed the bishop
of Ross and Barker his servant to go to the
Spanish ambassador to express his approbation
of the measures of Ridolphi, to acknowledge
that the letters were according to his mind, and

to empower this statesman to certify their authenticity to his court. Ridolphi, full of hopes, set out to execute his commission. He passed first to the duke of Alva. to whom lw communicated the transactions in which he had been engaged, and with whom he held many conferences. There was at this time at Brussels Charles Bailly, a servant of queen Mary's ; and Ridol phi, after disclosing to him his proceedings with Alva, entrusted him with letters to her, to the duke of Norfolk, the Spanish ambassador, and the bishop of Ross. \ hen this messenger reached Calais, a letter was delivered to him from the bishop of Ross, desiring him to leave his despatches with the governor of that place. But he neglected this notice ; and, being searched at Dover, his letters, books, and clothes were seized, and he himself was sent to London, and imprisoned in the Marshalsea. The bishop of Ross, full of apprehensions, applied to lord Cobham, the warden of the cinque- ports, who was friendly to the duke of Norfolk; and, obtaining by his means the packet of despatches from Kidolphi, substituted another in its place, which

contained letters of no danger or usefulness. He also sent intelligence of this manoeuvre to Bailly, and admonished him to preserve a profound silence. This simple and unpractised agent had, however, excited suspicions by the symptoms of terror he had exhibited upon being taken, and by exclaiming that the despatches he brought would involve his own destruction and that of others. At his first examination he confessed nothing ; but being sent to the tower, and put upon the rack, he revealed his conversations with Ridolphi, and declared that the despatches which he had brought had been delivered to the bishop of Ross. An order granted for taking the bishop into custody. I laving been aware, however, of his perilous situation, his house was searched in vain for treasonable papers ; and he thought to screen himself from answering any interrogatories under the sanctity of his character as the ambassador of an independent princess. An unexpected incident excited in the meanwhile new suspicions. Mary being desirous of transmitting 2000 crowns to > lord Henries, to advance her interests in Scot-

land, the duke of Norfolk undertook to convey it to him with safety. He entrusted it to the charge of his confidents Hickford and Barker, who putting it into a bag with despatches from their master to lord 1 lorries, ordered a servant called Brown to carry it to Bannister ; who, bemg at this time on the border, could forward it to Scotland. Brown, suspicious or corrupted, instead of proceeding on his errand, carried tlu: bag and its contents to lord Burleigh. The

privy council, deeming it treason to send money out of the realm for the use of the friends of Mary, whom they affected to consider as enemies, ordered Hickford and Barker to be apprehended. The rack extorted from them whatsoever they knew to the prejudice of their master. Hickford gave intelligence of the fatal communications from Mary ; which he had villanously preserved in opposition to the orders given to him. AH the proceedings between the queen of Scots, the duke of Norfolk, the bishop of Ross, and Ridol-phi, were brought to light. A guard was placed

upon the house of the duke to prevent his escape.

Sir Ralph Saddler, Sir Thomas Smith, Sir Henry

Nevil, and Dr. Wilson, were commissioned to

examine him ; and, in the belief that the papers

and letters so often alluded to had been destroyed, he denied that he had any concern in the affairs

of the queen of Scots, or any knowledge of them.

He was committed to the tower a close prisoner.

Bannister by this time was taken ; and he con-

firmed the relations of Hickford and Barkei. In

the course of their discoveries, the earls of Arun-

del and Southampton, lord Cobham, Mr. Thomas

l.'obham, his brother, Sir Thomas Stanley, Sir

Henry Percy, and other gentlemen who were

friendly to the queen of Scots and the duke of

Norfolk, were apprehended and ordered to be

lodged in different prisons; and the rack, and

the expectation of a pardon, drew from them the

fullest confessions. The duke was unable to de-

fend himself. The concurring testimonies of his

friends and servants, with the papers, which he

fondly imagined had been burnt, were communi-

cated to him. lie was overwhelmed with amaze-

ment, and exclaimed that he had been betrayed.

He made ample acknowledgments of his guilt,

and had no hope but in the mercy of his sovereign. By the confession of the duke himself, and from all the enquiries which had been made by the ministers of Elizabeth, it appeared obvious that the bishop of Ross had been the principal contriver of the conspiracy. Ridolphi had acted under his direction, and he had inspirited the duke of Norfolk. He had even advised that nobleman to put himself at the head of a select band to seize the person of Elizabeth. In his examinations the bishop was treated with great rigor and insult. But he made an able defence, and peremptorily refused to make any answer to interrogatories. The counsellors of Elizabeth were disturbed with his obstinacy ; and, having told him that the rack would soon render him more pliant, he was ordered into close keeping in a dark apartment of the tower. In a few days four privy counsellors, the lord admiral, lord Burleigh, Sir Francis Knollys, and Sir Thomas Smith, went to the tower, and caused him to be brought to them to the lieutenant's lodsrin?. After having assured him that he was charged by all the prisoners as the principal

contriver of the conspiracy, they insisted that he should explain fully the part he had acted. The confessions of the duke of Norfolk and his servants, of the lord Lumley, Sir Thomas Stanley, and other gentlemen, with the despatches of the queen of Scots, were set before him. They now protested upon their honor that, if he would wake a fret; and open declaration of his proceedings, it should neither be employed against him self, nor any other person : but that, if he should continue resolute in refusing to give this satisfaction to their queen, she would absolutely consider him as a private person, and order him to be tried and executed as a traitor. In this extremity he accepted the conditions, and disclosed minutely all the transactions of the principal parties in the conspiracy. But, while he described the offences of his mistress, the duke of Norfolk, and himself, he made many apologies for their conduct. It was natural, he said, for the queen of Scots to exert her most strenuous endeavours to recover her freedom and crown ; and the methods she adopted to obtain her purposes ought to be considered in connexion with the arts of Elizabeth, who pertinaciously denied

her access to her presence, who kept her a close prisoner, in contempt of all the principles of humanity and justice, and who afforded an open and powerful assistance to her enemies. The duke of Norfolk he was earnest to excuse, on the foundation of the advances which had been made in his marriage with the queen of Scots. Their plighted love, and their engagements, did not allow him to forsake her. As for himself, he was her ambassador and her servant ; arid, being highly indebted to her generosity and kindness, he could not abandon her in captivity and distress, without incurring the guilt of the most sinful treachery and ingratitude. The daring proposal he had made to seize the person of Elizabeth was the point, he observed, which seemed to press upon him the most severely : and he entreated them to believe that he had moved it only with the view of trying the courage of the duke of Norfolk. The privy counsellors of Elizabeth were now in possession of all the evidence they could expect. Norfolk was admonished to prepare for his trial ; and bishop Lesley perceived that, though he might escape with his life, he

would never more be permitted to reside in England as an ambassador or friend of the queen of Scots. The defeat of the duke of Norfolk's conspiracy was a blow to Mary which she could never recover. Her most faithful friends were languishing in prisons upon her account ; she had no longer the counsels of the bishop of Ross ; and the Spanish ambassador, who had entered into her concerns with an unscrupulous cordiality, had been ordered to withdraw from England. The trial and condemnation of Norfolk soon followed, and plunged her into the most calamitous distress.

The massacre of the Protestants at Paris in 1572 proved also extremely detrimental to queen Mary. It was interpreted to be a consequence of the confederacy which had been formed at Bayonne for the extermination of the reformed. The Protestants were every where transported with rage against the papists. Elizabeth prepared herself against an attack from the Roman Catholic powers ; and was haunted with the notion that they meant to invade her kingdom, and to give it to the queen of Scots. Her am-

bassador at Paris, Sir Francis Walsingham, augmented her apprehensions and terror. He compared her weakness with the strength of her enemies, and assured her that, if they should

possess themselves of Scotland, she would soon cease to be a queen. He represented Mary as the great cause of the perils that threatened her personal safety and the tranquillity of her kingdom ; and, as violent diseases required violent remedies, he scrupled not to counsel her to unite Scotland to her dominions, and to put to death a rival whose life was inconsistent with her security. The more bigoted protestants of Scotland differed not widely in their sentiments from Sir Francis ; while the more moderate were still more attached to their religion than to Mary ; and, amidst the indignation and horror into which the subjects of Scotland were thrown by the sanguinary outrages of Charles IX. and Catharine de Medicis, they surveyed the sufferings of their sovereign with a diminished sympathy. This year the regent, finding himself beset

with difficulties which he could not overcome, and the affairs of the nation involved into confusion from which he could not extricate them, died of melancholy, and was succeeded by the earl of Morton. During the regency of the earl of Mar, a remarkable innovation took place in the church, which deserves to be particularly explained, being no less than the introduction of Episcopacy instead of the Presbyterian form of worship.

*"While the earl of Lennox was regent, the archbishop of St. Andrew's was put to death, because he was strongly suspected to have had some concern in the death of the earl of Murray ; after which the earl of Morton procured a grant of the temporalities of that see. Out of these he allotted a stipend to Mr. John Douglas, a Protestant clergyman, who took upon him the title of archbishop. This excited censure and murmurs. In the language of the times, it was pronounced to be * profanation of the kirk, and a high contempt of God ; it underwent the scrutiny of the ministry in complaints to the regent ; and a commission of privy-counsellors and clergymen*

was appointed, in the name of the king, to enquire into it, and to reform and improve the policy of the church. This commission, upon the part of the privy council, consisted of the earl of Morton, the lord lluthven, Robert abbot of Dunfermline, Mr. James Macgill, Sir John Ballenden, and Colin Campbell of Glenorchie ; and, upon the part of the church, were Messrs. John Erskine of Dun, John VVinram, Hay, Lindsay, Pont, and John Craig. The consultations and debates were long ; but the influence of the earl of Morton directed their determinations. It was resolved that, till the majority of the king, or till the wisdom of the three estates should be consulted, the titles of archbishop and bishop should continue as in the times which preceded the reformation; that a chapter of learned ministers should be annexed to every metropolitan or cathedral seat ; that the sees, as they became vacant, should be given to those of the Protestant ministry who were most eminent for their qualifications ; that the archbishops and bishops should exercise no higher jurisdiction than was permitted to superintendants ; and that

they should be subject to the control of the gene-

ral assemblies of the church ; that all abbots,

priors, and other infenui prelates presented to

benefices, should be examined by the bishop

the diocese ; and that their fitness to represent

the church in parliament should be enquired

into; that the king and the regent should recom-

mend qualified persons to vacant bishoprics ;

that the elections of them should be made by the

chapters of the respective cathedrals ; that all

benefices with cure under prelacies should be

disposed to officiatine ministers; and that the

bisliops and superintendants, upon the 'ordina-

tion of ministers, should exact an oath from them

to recognise the authority of the king, and to pay canonical obedience to their ordinary in ail

things that were lawful. By these artful regula-

tions the earl of Morton did not mean solely to

consult his own rapacity or that of the nobles.

The exaltation of the Protestant church to be one

of the three estates was a consequence of them :

and, the clergy being the strenuous enemies of

Mary, he might by their means secure a decided

influence in parliament. The earl of Mar, as

regent, giving his sanction to the proceedings of

the commission, they were carried into practice. The delusive expectation of wealth, which this revival of episcopacy held out to the ministry, was flattering to them; and they bore with tolerable patience this severe blow that wa> struck against the religious policy of Geneva. Mr. John Douglas was elected, notwithstanding the opposition made by John Knox and other ecclesiastics, who stood up for the rules established at the reformation. He was inaugurate- 1 by the bishop of Caithness, Mr. John Spotswood, and Mr. David Lindsay, who, violating the book of discipline, communicated to him his admission by the imposition of hands. This was a singular triumph of episcopacy ; yet Douglas was in a very advanced age; and his mental qualifications which had never been eminent, were in a state of decay. A general assembly, held at St. Andrews, considering the new regulations, appointed commissioners to go to John Knox, who was indisposed, and to consult with him whether they were agreeable to the word of God . But from the arts of the nobles, or from the sickness of Knox, this conference was not carried

into execution. In a general assembly, however, which met at Perth, the new polity was reported and examined. The titles of archbishop, dean, arch-dean, chancellor, and chapter, were excepted against as popish distinctions. A wish was expressed that they might be exchanged for titles less profane and superstitious ; and a unanimous protestation was made that the new polity was merely a temporary expedient, and should only continue till a more perfect order should be obtained from the king, the regent, and the nobility. This tolerating resolution left the new polity in its full force ; and a foundation was now established for the laity to partake in the profits of bishoprics. The simoniacal paction of Morton and Douglas was not long singular. Mr. James Boyd was appointed to the archbishopric of Glasgow, James Paton to the bishopric of Dunkeld, and Mr. Andrew Graham to the see of Dumblain; these compromising ecclesiastics, upon being allowed competencies to themselves, gratified their noble friends with a proportion of their revenues. The people, however, approved not

thi?, simoniacal spirit of traffic ; and the bishops of the new polity were treated openly with re-

proach or ridicule. The year 1572 is remarkable

for the death of John Knox, whose mistaken zeal

had contributed to bring upon the queen many

of those misfortunes with which she was now

oppressed.

Neither by his death, however, nor by the

change of the regency, could she now be

relieved. The earl of Morton was so much de-

voted to Elizabeth that he received particular

instructions from her how to guide the young

king. His elevation, indeed, gave the finishing

stroke to the queen's affairs. He employed

himself with success in dividing her party

among themselves, and induced the duke ot

Chatelherault and the earl of Huntly to forsake

her. As for Elizabeth, she was bent on putting

.Mary to death ; but, as no crime could be alleged au linst her in England, she thought it proper

that she should be carried back to suffer death

in her own dominions. This proposal, however,

\MH rejected ; and the friends who remained true

t'> Mary once more began to indulge themselves

in hopes of succors from France. New misfortunes, however, awaited them. The castle of Edinburgh, which had hitherto been held for the queen by Kirkaldy of Grange, was obliged to .surrender to an English army commanded by Sir William Drury. Kirkaldy was solemnly aˆured by the English commander of his life and liberty ; but Elizabeth violated this 'capitulation, and commanded him to be delivered up to the regent ; 100 of his relations offered to become vassals to Morton, and to pay him 3000 merks yearly, if he would spare his life ; but in vain : Kirkaldy and his brother Sir James were hanged at Edinburgh. Maitland of Lethington, who was taken at the same time, was poisoned in the prison-house of Leith. The jealousy of Klizabeth did not diminish with the decline of Mary's cause. She now treated her with more rigor than ever, and patronised Morton in all the enormities which he committed against her friends. Lesly, bishop of Ross, had been long imprisoned in England, on account of his concern in the duke of Norfolk's conspiracy. Morton earnestly solicited the queen to deliver him

up, and would undoubtedly have put him to death ; but, as he had acted in the character of ambassador from Mary, he was suffered to depart for France. When he arrived there he endeavoured in vain to stir up the emperor, the pope, and the duke of Alva, to exert themselves in behalf of the queen of Scotland ; and in 1574 the misfortunes of his royal mistress were farther aggravated by the death of Charles IX. of France, and her uncle the cardinal of Lorrain. The regent, in the mean time, ruled with the most despotic sway. He twice coined base money in the name of his sovereign ; and, after [Hitting it into circulation the second time, he issued orders for its passing only for its intrinsic value. The duke of Chatelherault happening to die this year, the regent took every method of ruining all those of his name and family. He committed to prison all the Hamiltons, and every person of distinction who had fought for the queen at the battle of Langside, and compelled them to buy their liberty at an exorbitant price. He instigated Douglas of Lochleven to assassinate lord Arbroath, and it was with difficulty that the latter escaped the ambush laid for him.

Reid, bishop of Orkney, having left his estate to charitable uses, the regent prohibited the execution of the will, and took upon himself the administration. To be rich was a sufficient crime to excite his vengeance. He entered the warehouses of merchants, and confiscated their property ; and, if he wanted a pretence to justify his conduct, the judges and lawyers were ready at his call.

In this disastrous period the clergy augmented the general confusion. Andrew Melvil had lately returned from Geneva ; and, the discipline of its assembly being considered by him as the most perfect model of ecclesiastical polity, he was much offended with the introduction of episcopacy into Scotland. His learning was considerable, and his skill in languages profound. lie was fond of disputation, violent, and pertinacious. The Scottish clergy were in a humor to attend to him ; and his merit was sufficient to excite their admiration. Instigated by him, John Drury, one of the ministers of Edinburgh, called in question, in a general assembly, the lawfulness of the bishops, and the authority of chapters in electing them. Melvil, after com-

mending his zeal and his motion, declaimed concerning the flourishing state of the establishment of Geneva ; and, having recited the opinions of Calvin and Beza upon ecclesiastical government, maintained that there should be no office-bearers in the church whose titles were not in the book of God. He affirmed that the term bishop was no where to be found in it in the sense in which it was commonly understood, as Christ allowed not any superiority among ministers. He contended that Christ was the only lord of his church, and that the ministers of the word were all equal in degree and power. He urged that the bishops, beside being unlawful, had grown unseemly with corruptions ; and that, if they were not removed out of the church, it would fall into decay, and endanger the interests of religion. His sentiments were received with flattering approbation; and, though the archbishop of Glasgow, with th6 bishops of Dunkeld, Gal'oway, Brechin, Dumblain, and the Isles, were present in this assembly, they ventured not to defend their vocation. It was resolved that the name of bishop conferred no

distinction or rank, and that the office was not more honorable than that of the other ministers. The episcopal estate in the meanwhile was watched with anxious observation ; a.nd faults of every kind, which were found in individuals, were charged upon the whole order. In a new assembly this subject was again canvassed. It was moved, whether bishops, as constituted in Scotland, had any authority for their functions from the Scriptures? After long debates, it was thought prudent to avoid an explicit determination of this important question. But a confirmation was bestowed upon the resolution of the former assembly ; and it was established as a rule, that every bishop should make choice of a particular church within his diocese, and should

actually discharge the duties of a minister. The regent, disturbed with these proceedings of the brethren, was disposed to amuse and to deceive them. He sent a messenger to advise them not to disfigure the established forms ; adding that, if their aversion from episcopacy was insur-

mountable, it would become them to think of

some other mode of ecclesiastical government.

The assembly, taking the advantage of this

mes-age, intimated to him that they would frame

a lasting platform of polity, and submit it to the privy-council. They appointed accordingly a

committee of the brethren for this purpose ; and

in a short time Messrs. Dacid Lindsay, James

J.;iuson, and Robert Font, were deputed to wait

upon the regent with a new scheme of ecclesias-

tical government. The regent, taking from them

their schedule, replied that he would appoint

certain persons of the privy council to confer

with them. A conference was even begun upon

the subject, but, from his arts or the public trou-

bles, no advances were made in it. This year

the earl of Bothwel died in Denmark; and in his

last moments is said to have confessed that he

was sjuilty of the king's murder, revealed the

names of the persons who were his accomplices,

and, with the most solemn protestations, declared

the honor and innocence of the queen. His

confession was transmitted to Elizabeth by the

king of Denmark.

The regent still continued his enormities, till,

having rendered himself obnoxious to the best part of the nobility, he was, in 1577, compelled to resign his office into the hands of James VI. ; but, as the king was then only twelve years of age, a general council of twelve peers was appointed to assist him in the administration. Next year, however, the earl of Morton having gained the favor of the young king, procured the dissolution of this council ; and thus, being left the sole adviser of the king, he hoped to be raised to his former greatness. This could not be done, however, without keeping the king in a kind of captivity, so that nobody could have access to him but himself. The king, sensible f his situation, sent a despatch to the earls of Argyle and Athol, intreatingthem to relieve him. An army for this purpose was soon raised, and Morton's partisans were in danger of being defeated, had not the opposite party dreaded the vengeance of Elizabeth, who was resolved to support the earl of Morton. In consequence of this a negociation was entered into, by which it was agreed that the earl of Argyle with some others should be admitted into the king's council; and that four noblemen should be chosen by

each parly to consider of some proper method of preserving tranquillity in the nation. This pacification did not greatly diminish the power of Morton. lie soon got rid of one of his principal antagonists, the earl of Athol, by poisoning him at an entertainment; after which he again gave a loose rein to his resentments against the house of Hamilton, whom he persecuted in the most cruel manner. By these means he drew upon himself a general hatred; and he was supplanted in the king's favor by the lord d'Aubigney, who came from France in 1579, and was created carl of Ix»nnox. In 1580 Morton was suspected of an intention to deliver up the king to Elizabeth, and a guard was appointed to prevent any attempts of this kind. The queen ot England endeavoured to support her zealous partisan, but without effect. He was tried, condemned, and executed, for being concerned in the murder of Darnley. At the place of execution it is said that he confessed his guilt. It is certain that he acknowledged himself privy to the plot formed against the life of the kins: ; and when one of the clergymen attending him before his execution observed that by his own confes-

sion he merited death in foreknowing and con-

cealing the murder, he replied, ‘ Ay but, Sir,

had 1 been as innocent as St. Stephen, or as

guilty as Judas, I must have come to the scaffold.

Pray, what ought I to have done in this matter ‘!

You knew not the king’s weakness. If I had

informed him of the plot against his life, he

would have revealed it even to his enemies and

those concerned in the design ; and I should, it

may be, have lost my own life, for endearoaring

to preserve his.’

The elevation of king James, and the total

overthrow of Morton, produced no beneficial

consequences to the unfortunate Mary. In 1581

she addressed a letter to Castelnau, the French

ambassador, in which she complained that her

body was so weak, and her limbs so feeble, that

she was unable to walk. Castelnau therefore in-

treated Elizabeth to mitigate the rigors of her

confinement ; which being refused, the latter had

thoughts of resigning her claims to the crowns

both of England and Scotland into the hands

of her son, and even of advising him to use

every effort in his power to establish his claim to the English crown as preferable to that of Eliza-

beth. But, being apprehensive of danaer from this violent method, she again contented herself with sending to the court of England ineffectual memorials and remonstrances. Elizabeth, instead of taking compassion on her situation, assiduously encouraged every kind of disorder in the kingdom, on purpose to have the queen more and more in her power. Thus, the Scottish malcontents finding themselves always supported, a conspiracy was at last entered into, the design of which was to hold James in captivity, and to overthrow the authority of Arran and Lennov, who were now the principal persons in the kingdom. The chief actors in this were the earls of Cowrie, Mar, and Glencairn, the lords Lindsay and Boyd, with the masters of Glammis and Oliphant. Through the youth and imbecility of the king, they easily accomplished their purpose ~T and, having got him in their power, they promised him his liberty provided he would command Lennox to depart the kingdom. This was accordingly done ; but the king found himself as much a prisoner as before. The more effectually to detain him in their custody, the rebels con-

strained him to issue a proclamation, wherein he

declared himself to be at perfect liberty. Lennox

was preparing to advance to the king's relief

with a considerable body offerees, when he was

disconcerted by the king's peremptory command

to leave Scotland ; upon which he retired to

Dumbarton, to wait for a more favorable oppor-

tunity. The »:arl of Arran, being more forward.

was committed to close custody for some time,

but afterwards confined only in his house of

Kinneil. The rebels took upon them the title of

lords for the reformation of the state. The clergy, who had all this time been exceedingly averse to

-episcopacy, now gave open countenance to the

lords of the reformation. On the 13th of Oc-

tober, 1582, they made a solemn act by which

the raid of Kuthven, as the capture of the king

was called, was deemed a service most acceptable

to all who feared God, respected the true religion, and were anxious for the preservation of the king

and state ; and every minister was commanded to

declaim from his pulpit upon the expediency of

this measure, and to exhort the people to concur

with the lords in prosecuting the full deliverance of the church, and the perfect reformation of the commonwealth. Not satisfied with this, the conspirators got their proceedings approved by the states of Scotland, as a good, a thankful, and a necessary service to the king. At the same time it was enacted that no suit civil or criminal of any kind should ever be instituted against the persons concerned in it. Soon after this Lennox took his leave of Scotland, and sailed to France, where he died. The unfortunate Mary was driven to despair when she heard that her son was taken prisoner by rebels who had been instigated by Elizabeth. In this distress she addressed a most spirited letter to Elizabeth, in which she at once asserted her own innocence, and set forth the conduct of Elizabeth herself in such language as must have put the most impudent of her adversaries to the blush. Elizabeth had recourse to her usual arts of treacherous negociation. New terms were proposed to Mary, who would gladly have submitted almost to any thing to procure her freedom. It was proposed, as had often been done before, to associate the queen of Scots with her son in the government; but as this was

to be referred to the king, who was in the hands of Elizabeth's friends, and to the parliament, who were under the power of the same faction, it is easy to see that no such association ever could take place, or indeed was ever intended. After the death of Lennox, the conspirators apprehended no further danger, little supposing that a prince so young and unexperienced could deliver himself from captivity. This, however, in 1583, he effected in the following manner. A convention of the estates had been summoned to meet at St. Andrews ; James, whom the earl of Arran, notwithstanding his confinement at Kinneil, had found means to instruct, pretended a desire of visiting his grand uncle the earl of March, who resided at St. Andrews, and was for that purpose permitted to repair thither a few days before the convention. The better to deceive the earls of Cowrie, Angus, and Mar, who attended him, he took up his lodgings in an old inn, which was quite open and defenceless. But, having expressed a desire to see the castle of St. Andrews, he was admitted into it ; and colonel Stuart, who commanded the castle, after ad-

mitting a few of his retinue, ordered the gates to be shut. The earls of Argyle, Marischal, Montrose, and llothes, who were in concert with the kin fwoids. The opposite faction, being unprepared tor hostilities, were filled with consternation. Of all the conspirators, the earl of Gowrie alone wa> admitted into the king's presence, by the favor of colonel Stuart, and received his pardon. The earls of March, Argyle, Gowrie, Marischal, and Rothes, were appointed to be a council for assisting the king in the management of his affairs ; and soon after this James set out for Edinburgh. The king no sooner found himself at liberty, than, by the advice of his privy council, he issued a proclamation of mercy to the conspirators ; but they, flattering themselves with the hopes of support from Elizabeth, obstinately refused to accept of his pardon. Iri consequence of this they were denounced rebels. Elizabeth gave them all the encouragement she could, and the clergy uttered the most seditious discourses against the king and government; but, while they railed against popery, they themselves maintained openly the distinguishing tenet of popery,

namely, that the clerical was entirely independent of the civil power. At last the rebels broke forth into open hostilities ; but, by the vigilance of Arran, the earl of Gowrie, who had again begun his treasonable practices, was committed to custody Awhile the rest, unable to oppose the king, who appeared against them with a formidable army, were obliged to fly into England, where Elizabeth with her usual treachery protected them. The earl of Gowrie suffered as a traitor ; but the severity exercised against him did not intimidate the clergy. The clergy still continued their rebellious practices, until, the king being informed that they were engaged in a correspondence with some of the fugitive lords, citations were given to their leaders to appear before the privy-council. Not daring to appear they fled to England ; and on the 20th of May, 1584, the king summoned a convention of the estates, on purpose to humble the pride of the church, tn this assembly the raid of lluthven was declared to be rebellion, according to a declaration which had formerly been made by the king. And, as it had grown into a custom with the promoters of sedition to

decline the judgment of the king and the council, when called before them to answer for rebellious or contumelious speeches, uttered from the pulpit or in public places, an ordination was made, asserting that they had complete powers to judge concerning persons of every degree and function, and declaring that every act of opposition to their jurisdiction should be accounted treason, it was enacted that the authority of the parliament was full and supreme; and that every attempt to diminish, alter, or infringe its power, dignity, and jurisdiction, should be held and punished as treason. All jurisdictions and judgments, all assemblies and conventions, not approved of by the king and the three estates, were prohibited. It was ordained that the king might appoint commissioners to examine into the delinquencies of clergymen, and, if convicted, to deprive them of their benefices. It was commanded that clergymen should not for the future be admitted to the dignity of lords of session, or to the administration of any judicature civil or criminal. An ordination was made which subjected to capital punishment all persons who

should utter false and slanderous speeches in sermons, declamations, or familiar discourse, to the reproach and contempt of the king, his parents, and progenitors. It was further ordered that a guard, consisting of forty gentlemen, with a yearly allowance to each of £200, should continually attend upon the king. This parliament, which was full of zeal for the crown, did not overlook Buchanan's History of Scotland, which had excited a very general attention. It commanded that all persons who were possessed of copies of his history, and of his Treatise on the Scottish government, should surrender them within forty days, under the penalty of £200, that they might be puiged of the offensive and extraordinary matters they contained. This stroke of tyranny was furious and ineffectual ; foreign nations, as well as his own countrymen, were filled with the highest admiration of Buchanan. His writings were multiplied in every quarter ; and the severity exercised against them only served the more to excite curiosity, and to diffuse his reputation.

While the parliamentary acts, which struck

against the importance of the church, were in agitation, the ministers deputed David Lindsay to solicit, the king that no statutes should pass which affected the ecclesiastical establishment, without the consultation of the general assembly. But the earl of Arran, having intelligence of this commission, defeated it, by committing Lindsay to prison as a spy for the discontented nobles. Upon the publication, however, of these acts by the heralds, Robert Pont minister of St. Cuthberts, and one of the senators of the court of session, with Walter Balcanqual, protested formally in the name of the church, that it dissented from them, and that they were consequently invalid ; after which they fled, and were proclaimed traitors. By letters and pamphlets, artfully spread among the people, their passions were roused against the king and his council. AH the clergy were commanded to subscribe a declaration, of the supremacy of the king over the church, and their submission to the authority of the bishops. On this, the national ferments increased in violence. Many ministers, refusing to subscribe, were deprived of their livings. It

was urged that to make the king supreme over the church was no better than to set up a new pope, and to commit treason against Jesus Christ ; that to overthrow assemblies and presbyteries, and to give dominion to bishops, was not only to overset the established polity of the church, but to destroy region itself; for the bishops were the slaves of the court, schismatical in their opinions, and depraved in their lives. It was ur^ed that the ministers alone were entrusted wrth ecclesiastical functions, and with the sword of the word; and that it was most wicked to imagine that Jesus Christ had ever committed the keys of the kingdom of heaven to civil magistrates. While the clergy were thus im potently venting their wrath, Elizabeth alarmed beyond measure at this sudden revolution, and terrified l.y a confession extorted by the rack from one 1'rancis Throgmorton, concerning a combination of the Catholic princes to invade England, began to treat Mary in a more severe manner than usual; and having gained over the earl ot Arran, the only man of activity in Scotland, she resolved on further extremities. The Roman

Catholics, at home and abroad, were inflamed against her with a boundless and inplacable rage : there prevailed many rumors of plots and conspiracies against her kingdom and life. Books were published which detailed her cruelties and injustice to Mary in the most indignant language of reproach, and which recommended her assassination as a most meritorious act : the earl of Arran had explained to her the practices of the queen of Scots with her son, and had discovered the intrigues of the Catholic princes to gain him to their views. While her fears were thus excited, circumstances happened which confirmetl them, and provoked her to give full scope to her malignity. Crichton, a Scottish Jesuit, passing into his own country, was taken by Netherland pirates ; and some papers which he had torn in pieces and thrown into the sea, being recovered, were transmitted to England. Sir William Wade put them together, and they demonstrated that the invasion of England was concerted by the pope, the king of Spain, and the duke of Guise. About this time, too, a letter was intercepted from Mary to Sir Francis Englefield. She

complained in it that she could have no reliance upon the integrity of Elizabeth, and that she expected no happy issue to any treaty which might be opened for her restoration and liberty. She urged the advancement of the great plot ; she intimated that the prince her son was favorable to the design, and disposed to be directed by her advice ; she entreated that every delicacy with regard to her own state and condition should be laid aside without scruple ; and she assured him that she would most willingly suffer perils and dangers, and even death itself, to give relief to the oppressed children of the church. These discoveries, so exasperating to Elizabeth, were followed. by a deep and general consternation. The terror of an invasion spread with rapidity over England ; and the Protestants, while they trembled for the life of their champion, were still more alarmed with the dangers which threatened their religion. In this state of perplexity and distraction, the counsellors of Elizabeth, who had been her instruments in persecuting the queen of Scots, and of her severities to the Roman Catholics, were sensible that her

*greatness and safety were connected with their own ; and they concurred in indulging her fears, jealousies, and resentments. It was resolved that Mary should perish. An association was formed, to which persons of every condition and degree were invited, for the preservation of the life of Elizabeth, which it was affirmed was in danger, from a conspiracy to advance some pretended title to the crown ; and its members vowed, by the majesty of God, to employ their whole po*er, bodies, lives, and goods, in her service ; to withstand all persons, of what-soever nation or rank, who should attempt in anj form to invade and injure her safety or her life, and to prosecute to destruction any pretended successor, by whom, or for whom, the assassination of Elizabeth should be attempted or committed. The earl of Leicester was the patron of SCOTLAND.*

**his association ; and the whole influence of Elizabeth and her ministers was exerted to multiply the subscriptions. A combination so resolute and so fierce, which pointed to the death of Mary, which threatened her titles to the crown*

of England, and which might defeat the succes-

sion of her son, could not fail to excite in her

bosom the bitterest anxiety and perturbation.

Weary of her sad and long captivity, broken

down with calamities, dreading afflictions still

more cruel, and willing to take away from Eli-

zabeth every possible pretence of severity, she

now framed a scheme of accommodation, to

which no decent or reasonable objection could

be made. By Naw, her secretary, she presented

it to Elizabeth and her pri\y-council. She pro-

tested in it that, if her liberty should be granted to her, she would enter into the closest amity

with Elizabeth, and pay an observance to her

above every other prince of Christendom ; that

she would forget all the injuries with which she

had been loaded, acknowledge Elizabeth to be

the rightful queen of England, abstain from any

claim to her crown during her life, renounce the

title and arms of England, which she had usurp-

ed by the command of her husband the king of

France, and reprobate the bull from Rome which

had deposed the English queen. She likewise

protested that she would enter into the associa-

tion which had been formed for the security of

Elizabeth ; and that she would conclude a defensive league with her, provided that it should not be prejudicial to the ancient alliance between Scotland and France ; and that nothing should be done during the life of the English queen, or after her death, which should invalidate her titles 10 the crown of England, or those of her son. As a confirmation of these articles, she would consent to stay in England for some time as an hostage; and, if she was permitted to retire from England, she would surrender proper and acceptable persons as sureties. She also engaged that she would make no alterations in Scotland ; nnd that, upon the repeal of what had been enacted there to her disgrace, she would bury in oblivion all the injuries she had received from her subjects ; that she would recommend to the king her son those counsellors who were most attached to England, and that she would employ herself to reconcile him to the fugitive nobles : that she would Jake no steps about his marriage without acquainting the queen of England ; and that, to give the greater firmness to the proposed accommodation, he should be call-

ed as a party to it : in fine, that she would pro-

cure the king of France and the princes of Lor-

raine to be guarari tees for the performance of her

engagements. Elizabeth, with great hypocrisy,

professed the greatest satisfaction and joy at

these overtures. She made no advances, how-

ever, to conclude an accommodation with Mary;

and her ministers and courtiers exclaimed against

lenient and pacific measures. It was insisted

that the liberty of the Scottish queen would be

the death of Elizabeth : that her association with

her son would be the ruin both of England and

Scotland ; and that her elevation to power would

extend the empire of popery, and give a deadly

blow to the doctrines of the reformation. In the mean time an act of attainder had passed against

the fugitives nobles, and their estates and honors

were forfeited to the king; who, not satisfied

with this, sent Patrick master of Gray to de-

mand a surrender of their persons from the queen

of England. As this ambassador had resided

some time in France, and been intimate with the

duke of Guise, he was recommended to Mary :

*but being a man of no principle he was easi*y*

corrupted by Elizabeth ; and, while he pretended

friendship to the unfortunate queen, discovered

all that he knew of the intentions of her and Ix r son. The most scandalous falsehoods wi-r—

forged against Mary ; and, the less she was abl ;

to execute, the more she was said to design.

That she had an amour with her keeper the earl

of Shrewsbury, as was now reported, was possi-

ble, but of this there was no proof. This, how-

ever, could be no treason against Elizabeth : yet,

on account of this, Mary was committed to the

charge of Sir Amias Paulet and Sir DrueDrurv,

zealous puritans, who would treat her with that

strict severity which might drive her to despair

and induce her to commit some rash action. —

The earl of Leicester, said to be Elizabeth's pa-

ramour, even ventured to send assassins, on pur-

pose, by the murder of Mary, at once to deliver

his mistress from her fears. But the new keepers

of the castle, though religious bigots, were men

of strict probity, and rejected with scorn such an

infamous proposal.

In 1585 Mary began to feel all the rigors of a

severe imprisonment. She had been removed

from Sheffield to the castle of Tutbury ; and un-

der her new keepers she experienced a treatment

which was in the highest degree unjust, disre-

spectful, and acrimonious. Two apartments or

chambers only were allotted to her, and they

were small and inconvenient, meanly furnished,

and so full of apertures and chinks that they

could not protect her against the inclemencies of

the weather. The liberty of going abroad for

exercise was denied to her. She was assailed by

rheumatisms and other maladies ; and her phy-

sician would not undertake to effect a cure un-

less she should be removed to a more commodi-

ous dwelling. Applications for this purpose

were often made, but uniformly rejected. Here,

however, her own afflictions did not extinguish

in her mind her sensibility for the misfortunes of

others; and she often indulged herself in the

satisfaction of employing a servant to go through

the village in search of objects of distress. But

her inhuman keepers, envying her this pleasure,

commanded her to abstain from it. Imputing

their rigor to a suspicious fidelity, she desired that her servant might, on these occasions, be accom-

panied by one of the soldiers of their guard, or

by the constable of the village. But they would

not alter their prohibition. To insult her the

more, the castle of Tutbury was converted into a common jail : and a young man, whose crime was the profession of the Romish religion, was committed to a chamber which was opposite to her window, that he might be persecuted in her sight. He was dragged every morning to join in the Protestant worship ; and, after enduring several weeks this extraordinary violence to his conscience, was strangled, it is said, without any

form of law. Mary remonstrated to Elizabeth against indignities so shocking and so horrible ; but in vain. In the midst of her misfortunes, however, she had still solaced herself with hope, from the exertions of her son. He had hitherto behaved with a becoming cordiality ; and, in the negociation which she had opened with him for her association in the government, he had been studious to please her. He had informed her that he found the greatest comfort in her maternal tenderness, and that he would accomplish her commands with humility and expedition ; that he would not fail to ratify her union and

association with him in the government ; that it would be his most earnest endeavour to reconcile their common subjects to that measure ; and that she might expect from him, during his life, every satisfaction and duty which a good mother could promise to herself from an affectionate and obedient son. But these fair blossoms of kindness were all blasted by the arts of Elizabeth. The master of Gray had now obtained an ascendant over James. He delayed to ratify her association in the government; and he even appeared unwilling to press Elizabeth for her liberty. The master of Gray had convinced him that, if any favor was shown to Mary by the queen of Eng-

«and, it would terminate in his humiliation. He assured him that, if his mother were again to mount the Scottish throne, her zeal for Popery would induce her to seek a husband in the house of Austria ; that she would dissolve his association with her in the government, on the pretence of his attachment to the reformed doctrines ; and that he would not only lose the glory of his present power, but endanger his succession. Mary expostulated with him by letter upon the timidity

of his behaviour ; and he returned her an answer full of disrespect. Her amazement, indignation, and grief, were infinite. She wrote to Castelnau the French ambassador to inform him of her inquie-tudes and anguish. ‘ My son,’ said she, ‘ is un-grateful ; and I desire that the king your master shall consider him no longer as a sovereign.’ Elizabeth, having thus sown dissension between the queen of Scots and her son, made the best use she could of her quarrel. The pope, the duke of Guise, and the king of Spain, had con-cluded an alliance, called the holy league, for the extirpation of the Protestant religion all over Europe. Elizabeth was thrown into the greatest consternation by this; and the idea of a counter association among the Protestant princes of Europe immediately suggested itself. Sir Edward Wottou was deputed to Scotland ; and so com-pletely gained upon the imbecility of James that he concluded a firm alliance with Elizabeth,with-out making any stipulation in favor of his mother. Nay, so far was he the dupe of this ambassador and his mistress, that he was persuaded to take into his favor Archibald Douglas, one of the murderers of lord Darnley; and even appointed

this assassin to be his ambassador to England. Mary, thus abandoned by all the world, in the hands of her most inveterate and cruel enemy, fell a victim to her resentment and treachery, in 1587. A plot of assassination had been formed in the spring of 1586 against the English queen , partly to rescue the Scottish princess, but chiefly to serve the interests of the Roman Catholic religion. This conspiracy, which originated with Roman Catholic priests, was soon imparted to Babington, a person of great fortune, of many accomplishments, and who had formerly shown himself a zealous friend of queen Mary. That she had corresponded with Babington there is no doubt ; but it was some years previous to the formation of this plot. A long silence had taken place between them ; and Morgan, one of the English fugitives in France, and a warm friend of Mary's, in May 1586, wrote a letter to her, repeatedly, and in the most pressing manner, recommending a revival of that correspondence. In consequence of which, in her answer to Morgan, dated the 27th day of July, she informed him that she had made all apologies in her

power to Babington, for not having written to him for so long a time ; that he had generously offered himself and all his fortune in her cause ; and that, agreeably to Morgan's advice, she would do her best to retain him in her interests ; but she throws out no hint of her knowledge of the intended assassination. On the very same day she wrote likewise to Paget, another of her most confidential friends ; but not a word in it with respect to Babington's scheme of cutting off the English queen. To Morgan and to Paget she certainly would have communicated her mind, and would hare consulted them about the plot, had she been accessory to»it. Indeed it seems to have been part of the policy of Mary's friends to keep her a stranger to all clandestine and hazardous undertakings in her favor. Morgan, in a letter of the 4th of July, expressly recommended to have no intelligence at all with Ballard, who was one of the original contrivers of the plot, and communicated it to Babington. The queen, in consequence, shut the door against all correspondence with that person. The conspiracy, which goes under the name of Babington, was detected in June : the names, proceedings,

and residences of those engaged in it were then known ; the life of Elizabeth was in imminent hazard : yet the conspirators were not apprehended ; they were permitted to enjoy complete liberty ; treated as if there had not been the least suspicion against them ; and in this quiet state were they suffered to continue till August, for a period of nearly two months. The queen of Scots continued still detached from Babington and his associates. Their destruction was a small matter compared with tier's. Elizabeth's ministers knew how much they had rendered themselves justly obnoxious to the Scottish princess : should she come to mount the throne of England their downfall was inevitable ; from which consideration they were even more zealous than their mistress to accomplish her ruin. Of these, Sir Francis \Valsingham secretary of state appears to have taken upon himself the chief management in concerting a plan of operations against the queen of Scots. His spies having early obtained the confidence of the inferior conspirators, he learned that a packet from France was intended to be conveyed by them to queen Mary, and by the hands of one Gilbert Gifford a priest,

whom he had secretly gained over from their

association, he wrote a letter to Sir Amias Paulet, SCOTLAND.

who had now the custody of Mary, requesting;

that one of his domestics might be permitted to

take a bribe for conveying that packet to his cap-

tive. This was on purpose to communicate to

her a letter, forged in the name of Babington, in

which that conspirator was made to impart to

the Scottish queen his scheme of assassination,

and to claim rewards to the perpetrators of the

deed. Paulet, however, to his honor, refused to

act a part in this plan of villany ; upon which

Gifford corrupted a brewer in the neighbour-

hood, who put his letters to Mary in a hole in

the castle-wall. By the same conveyance it was

i bought that Mary would answer the letters ; but

*.*he never saw them, and of course no return was*

made. It was then contrived that answers, in

the name of the queen of Scots to Gifford,

should he forged and found in the hole of the

wall. Walsingham, to whom these letters were

carried, deciphered them by the help of one

Thomas Philips, and, after exact copies were

taken, they were all artfully sealed and sent off to the persons to whom they were directed. The

answers which Babington made to the queen's supposed letters were carried directly to Walsingham.

A foundation for criminating Mary being thus laid, the conspirators suffered the death of traitors. The unhappy princess, eagerly watched by Paulet, and unacquainted with the late occurrences, received a visit from Sir Thomas Gorges. This envoy, as instructed by Elizabeth, surprised her when she had mounted her horse to take the pleasure of the chase. His salutation was abrupt and unceremonious; and after informing her of the discovery and circumstances of the conspiracy of Babington, ne rudely charged her with a concern in it. Her astonishment was great, and she desired to return to her chamber : but this favor was refused ; and after being carried from one house to another, in an anxious and perplexing uncertainty, she was committed to Fotheringay castle in Northamptonshire. Naw and Curl, her two secretaries, the former a Frenchman the latter a Scotsman, were taken into custody. Paulet, breaking open the doors of her private closet, possessed himself of hei

money, which amounted to only 7000 crowns. Her cabinets were sealed up; and, being sent to London, were examined in the presence of Elizabeth. They contained many despatches from persons beyond the sea, copies of letters which had been dictated by her, and about sixty tables of ciphers and characters. There were also discovered in them many despatches from English noblemen, which were full of admiration and respect. These Elizabeth concealed. Naw and Curl declared that the copies of her letters were in their hand-writing. They had been dictated by her in the French language to Naw, translated into English by Curl, and then put into cipher. They contained not any matters with which which she could be criminated. It was upon the foundation of the letters which Gifford had communicated to Walsingham that her guilt was to be inferred ; and with copies of these, and with an attested account of the conspiracy of Babington and his associates. Sir Edward Wotton was now dispatched to France

to accuse her to Henry III., and to explain to him the dangers to which Elizabeth was exposed

from the machinations of the English exiles. The privy counsellors of Elizabeth deliberated upon the most proper method of proceeding against Mary. To some it appeared that as she was only accessory to the plot, and not the designer of it, the most eligible severity to be exercised against her was a closer and more rigorous confinement. By others, who were haunted by the terrors of Popery, it was urged that she ought to be put instantly to death by the formalities of the law. The earl of Leicester recommended it as most prudent to despatch her secretly by poison. But this counsel was rejected as mean and disgraceful. The lawyers were of opinion that she might be tried upon the statute of Edward III. respecting high treason. Elizabeth, however, and her ministers had provided a more plausible foundation for her trial. This was a parliamentary statute approving the act of association, which had been passed while Mary was in England. The next point of debate was the designation under which it was most adviseable to arraign her : and it was resolved to designate iier, Mary, daughter and heir of James V., king of Scotland, commonly called queen of Scots,

and dowager of France. Elizabeth next ap-

pointed above forty peers, and five judges, with

authority to enquire into the matters compassed

and imagined against her by the Scottish prin-

cess, and to pass sentence according to the spirit

and tenor of the act. Of these commissioners a

great majority proceeded to the castle of Fotlie-

nngay ; and, the day after their arrival, they de-

puted to Mary, Sir Walter Mildmay, Sir Amias

Paulet, and Edward Barker a public notary, to de-

liver to her a letter from Elizabeth. In this letter the English queen gratified her unhappy passions,

and after reproaching Mary with her crimes, in-

formed her that her commissioners were ap-

pointed to take cognizance of them. The Scot-

tish princess, though astonished with the project

of being brought to a public trial, was able to

preserve her dignity, and addressed them with

a composed manner and air. ‘ It is a matter,’

said she, ‘ altogether uncommon and strange

that Elizabeth should command me to submit to

a trial, as if I were her subject. I am an inde-

pendent sovereign, and will not tarnish by any

means my high birth, “the princes my predeces-

sors, and my son. Misfortunes and misery have

not yet so involved me in dejection as that I am to faint and sink under this new calamity and insult. I desire that you will remember what I formerly protested to Bromley, who is now lord chancellor, and to the lord La War. To speak to me of commissioners is a vain mockery of my rank. Kings alone can be my peers. The laws of England are unknown to me ; and I have no counsellors to whose wisdom I can apply for instruction. My papers and commentaries have been taken from me ; and no person can have the perilous courage to appear as my advocate. I have indeed recommended myself and my condition to foreign princes ; but I am clear of the guilt of having conspired the destruction of Elizabeth, or having incited any person what-soever to destroy her. It is only by my own

words and writings that an imputation of this kind can be supported; and I am conscious, beyond the possibility of a doubt, that these evidences cannot be employed against me.' The

day after she had in this manner refused to allow the jurisdiction of the commissioners, Paulet and Barker returned to her, and informed her that they had put her speech into writing, and desired to know if she would abide by it. She heard it read distinctly, acknowledged it to be rightly taken, and avowed her readiness to persist in the sentiments she had delivered. But she added there was a circumstance to which she had omitted to speak. 'Your queen,r said she ' affects in her letter to observe that I am subject to the laws of England, because I have lived under their protection. This sentiment and mode of thinking are very surprising to me. I came into England to crave her assistance and aid ; and, ever since, I have been confined to a prison. The miseries of captivity cannot be called a protection, and the treatment I have suffered is a violation of all law.'

This afflicted but undaunted princess, after having thus disputed the competency and repelled the pretexts of the commissioners, was induced at last, by arguments under the insidious mask of candor and friendship, to depart

from the proper and dignified ground which she had taken, and consent to that mode of trial which had been proposed. It was represented to her, by Hatton the vice-chamberlain, that by rejecting a trial she injured her own reputation and interests, and deprived herself of the only opportunity of setting her innocence in a clear light to the present and to future times. Imposed upon by this artifice, she consented to make her appearance before the judges ; at the same time, however, she still protested against the jurisdiction of the court, and the validity of their proceedings. After various formalities, the lord chancellor opened the case ; and was followed by serjeant Gawdry, who proceeded to explain the statute, and to demonstrate that she had offended against it. He then entered into a detail of Babington's conspiracy ; and concluded by affirming ' that Mary knew it, had approved it, had promised her assistance, and had pointed out the means to effect it.' Proofs of this charge were exhibited against her, and displayed with great art. The letters were read which Sir Francis Walsingham or his emissaries had forged.

Her secretaries had afforded all the necessary intelligence about the conspiracy, upon which to frame a correspondence between Mary and Babington, and upon which despatches might be fabricated in her name to her foreign friends ; and the ciphers were furnished by them. But, beside these pretended letters, another species of evidence was held out against her. Babington, proud of the despatch sent to him in her name by Walsingham ana Gifford, returned an answer to it; and a reply from her by the same agency was transmitted to him. Deluded, and in toils, he communicated these marks of her attention to Savage and Ballard, the most confidential of his associates. His confession and theirs became thus of importance. Nor were her letters and the confessions of these conspirators deemed sufficient vouchers of her guilt. Her secretaries, therefore, were engaged to subscribe a declaration that the despatches in her name were written by them at her command, and according to her instructions. These branches of evidence, put together with skill, and heightened with all the imposing colors of eloquence, were pressed upon

Mary. Though she had been long accustomed to the perfidious inhumanity of her enemies, her amazement was infinite. She lost not, however, her courage ; and her defence was alike expressive of her penetration and magnanimity : ‘ the accusation preferred to my prejudice is a most detestable calumny. I wa not engaged with Babington in his conspiracy ; and I am altogether innocent of having plotted the death of Elizabeth. The copies of Babington’s letters which have been produced may indeed be taken from originals which are genuine ; but it is impossible to prove that I ever received them. Nor did he receive from me the despatches addressed to him in my name. His confession, and those of his associates, which have been urged to establish the authority of my letters to him, are imperfect and vain. If these conspirators could have testified any circumstances to my hurt, they would not so soon have been deprived of their lives. Tortures, or the fear of the rack, extorted improper confessions from them ; and then they were executed. Their mouths were open to utter false criminations ; and immediately were shut*

for ever, that the truth might be buried in their graves. It was no difficult matter to obtain ciphers which I had employed ; and my adversaries are known to be superior to scruples. I am informed that Sir Francis Walsingham has been earnest to recommend himself to his sovereign by practices both against my life and that of my son ; and the fabrication of papers, by which to effectuate my ruin, is a business not unworthy of his ambition. Evidence, the most clear and incontestable, is necessary to overthrow my integrity; but proofs, the most feeble and suspicious, are held out against me. Let one letter be exhibited, written in my hand, or that bears my superscription, and 1 will instantly acknowledge that the charge against me is sufficiently supported. The declaration of my secretaries is the effect of rewards or of terror. They are strangers ; and to overcome their virtue was an easy achievement to a queen whose power is absolute, whose riches are immense, and whose ministers are profound and daring in intrigues and treachery. I have often had occasion to suspect the integrity of Naw ; and Curl, whose capacity is more limited, was always most obsequious to

him. They may have written many letters in
my name without my knowledge or participa-
tion : may have put many things into despatches
which are prejudicial to Elizabeth; and may even
have subscribed their declaration to my preju-
dice, under the prepossession that the guilt which
would utterly overwhelm them might be pardoned
in me. I have never dictated any letter to them
which can be made to correspond with their tes-
timony. And what, fet me ask, would become
of the grandeur, the virtue, and the safety of
princes, if they depended upon the writings and
declarations of secretaries ? Nor let it be forgotten
that, by acting in hostility to the duty and alle-
giance which .they solemnly swore to observe to
me, they have utterly incapacitated themselves
from obtaining any credit. The violation of their
oath of fidelity is an open perjury ; and of such
men the protestations are nothing. But, if they
are yet in life, let them be brought before me.
It argues not the fairness of the proceedings
against me that this formality is neglected. I
am also without the assistance of an advocate ;

and, that I might be defenceless and weak in the greatest degree, I have been robbed of my papers and commentaries. As to the copies or the despatches which are said to have been written by my direction to Mendoza, the lord Paget, Charles Paget, the archbishop of Glasgow, and Sir Francis Inglefield, they are most unprofitable forgeries. For they tend only to show that I was employed in encouraging my friends to invade England. Now, if I should allow that these despatches were genuine, it could not be inferred from them that I had conspired the death of Elizabeth. I will even confess that I have yielded to the strong impulses of nature ; and that, like a human creature, encompassed with dangers and insulted with wrongs, I have exerted myself to recover my greatness and my liberty. The efforts I have made can excite no blushes in me ; for the voice of mankind must applaud them. Religion even cannot look to them with reproach. I have sought by every art of concession and friendship to engage my sister to put a period to my sufferings. Invited by her smiles, I ventured into her kingdom, in the pride and gaiety

-f my youth ; and, under her anger and the iiiiseries of captivity, I have grown into age. V)uring a calamitous confinement of twenty years, my youth, my health, my happiness, are for ever gone. To her tenderness and generosity I have been indebted as little as to her justice ; and, oppressed and agonizing with unmerited afflictions and hardships, I scrupled not to beseech the princes my allies to employ their armies to relieve me. Nor will I deny that I have endeavoured to promote the advantage and interest of the persecuted Catholics of England. My intreaties in their behalf have even been offered with earnestness to queen Elizabeth herself. But the attainment of my kingdom, the recovery of my liberty, and the advancement of that religion which I love, could not induce me to stain myself with the crimes that are objected to me. I would disdain to purchase a crown by the assassination of the meanest of the human race. To accuse me of scheming the death of the queen my sister is to brand me with the infamy which 1 abhor. It is my nature to employ the devotions of Esther, and not the sword of Judith. Elizabeth

herself will attest that I have often admonished

her not to draw upon her head the resentment

of my friends by the enormity of her cruelties

to me. My innocence cannot sincerely be doubt-

ed ; and it is known to the Almighty God that

I could not possibly think to forego his mercy,

and to ruin my soul, to compass a transgression

so horrible as that of her murder. My crimes are,

my birth, the injuries 1 have been compelled to

endure, and my religion. I am proud of the first ;

1 can forgive the second ; and the third is to me a source of such comfort and hope that for its glory I will be contented that my blood shall flow upon

the scaffold.' To the defence of Mary no answer

was made beside stout and unsupported affirm-

ations of the truth of the evidence produced to

her prejudice. In the course of the trial, how-

ever, lord Burleigh, who was willing to discom-

pose her, charged her with a fixed resolution of

conveying her claims and titles to England to

the king of Spain. She acknowledged that the

Spaniard professed to have pretensions to the

kingdom of England, and that a book in justi-

fication of them had been communicated to her.

But she declared that she had incurred the dis-

pleasure of many by disapproving of this book ;

and that no conveyance of her titles had ever

been executed. The trial continued during the

space of two days ; but the commissioners avoided

to deliver their opinions. Lord Burleigh, in

whose management Elizabeth chiefly confided,

and whom the Scottish queen discomposed in

no common degree by her ability and vigor, being

eager to conclude the business, asked if she had

any thing to add to what she had urged in her

defence. She informed him that she would be

infinitely pleased if it should be permitted to her to be heard in her justification before a full

meeting of the parliament, or before the queen

and her privy-council. This intimation was un-

expected ; but the request was rejected. The

court, in consequence of previous instructions

from Elizabeth, adjourned to a farther day, and

appointed that the place of its convention should

be the stai-chamber at Westminster. It accord-

ingly assembled there; and Naw and Curl, who

had not been produced at Fotheringay castle,

were now called before the commissioners. They

swore that the declaration they had subscribed

was in every respect just and faithful. Nothing

farther remained but to pronounce sentence

against Mary. The commissioners unanimously

concurred in delivering it as their verdict, or

judgment, that she ‘ was a party to the conspiracy of Babington ; and that she had compassed and

imagined matters within the realm of England*

tending to the hurt, death, and destruction of the

royal person of Elizabeth, in opposition to the

statute framed for her protection.’ Upon the

same day in which this extraordinary sentence

was given the commissioners and the judges of

England issued a declaration, which imported

that it was not to derogate in any degree from the titles and honor of the king of Scots. The sen-

tence against Mary was very soon afterwards

ratified by the English parliament.

King James was struck with horror at hearing

of the proposed execution of his mother; but

that spiritless prince could show his resentment

no farther than by unavailing embassies and re-

monstrances. France interposed in the same

ineffectual manner ; and on the 6th December,

1586, Elizabeth caused the sentence of the com-

missioners against her to be proclaimed. After

this she was made acquainted with h’er fate, and

received the news with the greatest composure,

and even apparent satisfaction. Her keepers

now refused to treat her with any reverence or

respect. They entered her apartment with their

heads covered, and made no obeisance to her.

They took down her canopy of state, and de-

prived her of ali the badges of royalty. By these

insulting mortifications they meant to inform her

that she had sunk from the dignity of a princess

to the abject state of a criminal. She smiled,

and said, ‘ In despite of your sovereign and her

subservient judges, I will live and die a queen.

My royal character is indelible ; and I will sur-

render it with my spirit to the Almighty God,

from whom I received it, and to whom my honor

and my innocence are fully known.’ In this

melancholy situation Mary addressed a magna-

nimous letter to Elizabeth, in which, without

making the least solicitation for her life, she only requested that her body might be carried to

France ; that she might be publicly executed ;

that her servants might be permitted to depart

out of England unmolested, and enjoy the lega-

cies which she bequeathed them. But to this

letter no answer was given. In the mean time

James, who had neither address nor courage to

attempt any thing in behalf of his mother, an-

nounced her situation to his bigoted subjects,

and ordered prayers to be said for her in all the churches. The form of the petition he prescribed

was framed with delicacy and caution, that the

clergy might have no objection to it. He en-

joined them to pray ‘ that it might please God

to enlighten Mary with the light of his truth, and to protect her from the danger which was hanging

over her.’ His own chaplains, and Mr. David

Lindsay minister of Leilh, observed his com-

mand. But all the other bigoted clergy refused

to prefer any petitions to the Almighty for a

papist. James, shocked with their spirit of into-

lerance and sedition, appointed a new day for

prayers to be said for Mary, and issued a stricter injunction to the clergy ; and, that he might be

free himself from any insult, he ordered the arch-

bishop of St. Andrews to preach before him.

The ecclesiastics persuaded John Cowper, a pro-

bationer, to occupy the pulpit designed for the

archbishop. When the king entered the church

he testified his surprise, but told Cowper that if he would obey his injunction, he might proceed to officiate. Cowper replied ‘ that he would do as the Spirit of God should direct him.’ The king commanded him to retire, and the captain of his guard advanced to compel him to obedience. The enraged probationer exclaimed that this violence ‘ would witness against the king in the great day of the Lord ;’ and denounced a curse against the spectators for not exerting themselves in his defence. The archbishop, now ascending the pulpit, performed with propriety the function to which he had been called, and recommended moderation and charity to the audience. In the afternoon Cowper was cited before the privy-council ; and was accompanied there by Mr. Walter Balcanqual and Mr. William Watson, two ministers remarkable for their zeal. As a punishment for his audacious petulance he was committed, to the castle of Blackness ; and his attendants, having distinguished themselves by an impudent vindication of him, were prohibited from preaching during the pleasure of the king. Elizabeth, in the mean while, felt the torment of

miserable passions. At times she courted the

sadness of solitude, and refused to be consoled

or to speak. In other seasons her sighs wr r»

frequent, and she broke out into loud and wild

exclamations expressive of the state of her mind.

Her subjects waited the determination of her

will in distracting agitation. Her cruel ministers,

who knew that it is the nature of fear to exclude pity, were industrious in inventing terrifying in-

telligence, and in circulating it through the king-

dom ; such as that the Spanish fleet had arrived

at Milford Haven ; that a formidable army of

Scottish combatants was advancing to the capital :

that the duke of Guise had disembarked many

troops of veteran soldiers in Sussex ; that Mary

had escaped out of prison, and was collecting the

English Catholics ; that the northern counties

had thrown aside their allegiance ; and that there

was a new plot to kill Elizabeth, and to reduce

London to ashes. An actual conspiracy was even

maliciously charged upon L'Aubespine the French

resident ; and he was forced to withdraw from

England in disgrace. From the terrors which

the ministers of Elizabeth were so studious to

excite, they invariably inferred that the tranquil-

lity of the kingdom could alone be re-established by the speedy execution of the Scottish queen. While the nation was thus artfully prepared for the destruction of Mary, Elizabeth ordered secretary Davidson to bring to her the warrant for her death. Having perused it, she observed that it was expressed in proper terms, and annexed her subscription. Though she earnestly desired the death of Mary, she was yet terrified to encounter its infamy. She was solicitous to accomplish this base transaction by some method which would conceal her consent to it. After int mating to Davidson an anxious wish that its blame should be removed from her, she counselled him to join with Walsingham in addressing a letter to Sir Amias Paulet and Sir Drue Drury, recommending it to them to manifest their love to her by shedding privately the blood of her adversary. The unlawfulness of this deed affected Davidson, and he objected to it. She repeated absolutely her injunctions, and he departed to deliver them. A letter under his name and that of Walsingham was despatched to Mary's keepers, communicating to them her purpose. Corrupted by her pas-

sions, and lost to the sensibilities of virtue, Eli-

zabeth had now reached the last extremity of this

wickedness. Though a sovereign princess, and

entrusted with the cares of a great nation, she

blushed not to charge her ministers to enjoin a

murder — a murder connected with every circum-

stance that could make it most frightful and

horrid. The victim for whose blood she thirsted

was a woman, a queen, a relation, splendid with

beauty, eminent in ability, magnanimous under

misfortunes, and who had fled to her for refuge

from her enemies. A wild Arab would have

spared his enemy on this principle alone. Sir

Amias Paulet and Sir Drue Drury, though the

slaves of religious prejudices, felt an elevation of mind which reflected the greatest disgrace upon

the sovereign. They considered themselves

as grossly insulted by the proposal ; and they

assured Walsingham that the queen might com-

mand their lives and their property, but that they

would never consent to part with their honor,

and to stain themselves and their posterity with

the guilt of an assassination. When Davidson

carried their despatch to her slie broke out into

anger. Their scrupulous delicacy, she said, was

an infringement of their oath of association ; and

they were nice, precise, and perjured traitors.

She then recommended one \V ingfield to strike

the blow. The astonished secretary exclaimed

with warmth against a mode of proceeding so

unwarrantable. He protested that, if she should

take upon herself the blame of this deed, it would pollute her with the blackest dishonor ; and

that, if she should disavow it, she would over-

throw for ever the reputation, the estates, and

the children of the persons who should assist in

it. She heard him with pain, and withdrew

from him with precipitation. The warrant, after

having been communicated to Walsingham, was

carried to the chancellor, who put the great seal

to it. This formality was hardly concluded when

a message from Elizabeth prohibited Davidson

from waiting upon the chancellor till he should

receive farther instructions. Within an hour

after he received a second message to the same

purpose. He hastened to court, and Elizabeth

asked eagerly if he had seen the chancellor. He

answered in the affirmative ; and she exclaimed

with bitterness against his haste. He said that he had acted exactly as she had directed him. She continued to express warmly her displeasure ; but gave no command to stop the operation of the warrant. In a state of uneasiness and apprehension he communicated her behaviour to the chancellor and the privy-council. These courtiers, however, who were well acquainted with the arts of their mistress, and who knew how to flatter her, paid no attention to him. They perceived, or were secretly informed, that she desired to have a pretence upon which to complain of the secretary, and to deny that he had obeyed her instructions. They observed to him that, by subscribing the warrant, she had performed what the law required of her; and that it was not proper to delay the execution any longer. While they were anxious to please Elizabeth, they were conscious of their own cruelty to Mary, and did not imagine that they could be in security while she lived. They despatched the warrant to the earls of Shrewsbury and Kent, with instructions to them to fulfil it. When the two earls and their retinue reached Fotheringay castle they found Mary sick, and reposing upon

her bed. They insisted, notwithstanding, on being introduced to her. Being informed by her servants that the message they brought was important and pressing, she prepared to receive them. They were conducted into her presence by Sir Amias Faulet and Sir Drue Drury ; and with little formality they told her that Elizabeth had consented to her death, and that she was to suffer the next morning at eight o'clock. Then Beale, one of the clerks of the privy-council, who accompanied them, read over the warrant, which she heard with pious composure and unshaken fortitude. They then affected to justify their mistress by entering into details concerning the conspiracy of Babington. She put her hand upon the Scriptures, which lay upon a table near her, and swore in the most solemn manner that she never devised, consented to, or pursued the death of Elizabeth in any shape whatsoever. The earl of Kent, unwisely zealous for the Protestant religion, excepted against her oath, as being made upon a popish Bible. She replied to him mildly,

' It is for this very reason, my lord, to be relied upon with the greater security ; for I esteem the popish version of the Scriptures to be the most

authentic.' Indulging his puritanical fervor he declaimed against popery, counselled her to renounce its errors, and recommended to her attention Dr. Fletcher dean of Peterborough. She heard the dean with some impatience. Rising into passion he exclaimed, that ' her ˆife would be the death of their religion, and that her death would be its life.' After informing him that she was unalterably fixed in her religious sentiments, she desired that her confessor might have the liberty to repair to her ; when the two earls observed that their consciences did not allow them to grant this request. She made enquiries concerning her secretaries Naw and Curl ; and asked whether it had ever been heard of, in the wickedest times of the most unprincipled nation, that the servants of a sovereign princess had been suborned for the purpose of destroying her ? They looked to one another and were silent. Bourgoin her physician, who with her other domestics was present at this interview, seeing the earls ready to depart, besought them with an emphatic earnestness to reflect upon the short and inadequate portion of time that they had allotted to his mis

tress to prepare herself for death. He insisted that a respect for her high rank, and the multiplicity and importance of her concerns, required at least a period of some days. They pretended not to understand the propriety of his petition, and refused it. Upon the departure of the two earls, her domestics gave a full vent to their afflictions ; and while she experienced a melancholy pleasure in their tears, lamentations, and kindness, she endeavoured to console them. Their grief, she said, was altogether unavailing, and could neither better her condition nor their own. Her cause had every thing about it that was most honorable ; and the miseries from which she was to be relieved were the most hopeless and the most afflicting. Instead of dejection and sadness, she therefore enjoined them to he contented and happy. That she might have the more leisure to settle her affairs, she supped early, and, according to her usual custom, ate little. While at table, she remarked to Bourgoin, her physician, that the force of truth was insurmountable ; for that the earl of Kent, notwithstanding the pretence of. her having con-

spired against Elizabeth, had plainly informed her that her death would be the security of their religion. When supper was over, she ordered all her servants to appear before her, and treated them with the kindness which we have mentioned in her life. See MARY. She then entered her bed-chamber with her women ; and employed herself in religious duties. At her accustomed time she went to sleep; and, after enjoying some hours of sound rest, awoke; then gave herself to further pious meditation, and partook of a consecrated host, which a melancholy presentiment of her cnlamities haa induced her

to obtain from pope Pius V. At the break of day she arrayed herself in rich, but becoming apparel ; and, calling together her servants, she ordered her will to be read, and apologised for the smallness of their legacies from her inability to be more generous. Following the arrangement she had previously made, she then dealt out to them her goods, ward-robe, and jewels. To Bourgoin her physician she committed the

care of her will, with a charge that he would deliver it to her principal executor, the duke of Guise. She also entrusted him with tokens of her affection for the king of France, the queen-mother, and her relations of the house of Lorrain. Bidding now an adieu to all worldly concerns, she retired to her oratory, where she was seen sometimes kneeling at the altar, and sometimes standing motionless with her hands joined, and her eyes directed to heaven. While she was thus engaged, Thomas Andrews, the high sheriff, announced to her that the hour for execution was arrived. She came forth dressed m a gown of black silk; her petticoat was bordered with crimson velvet; a veil of lawn bowed out with wire, and edged with bone lace, was fastened to her caul, and hung down to the ground ; an Agnus Dei was suspended from her neck by a pomander chain ; her beads were fixed to her girdle ; and she bore in her hand a crucifix of ivory. Amidst the screams and lamentations of her women she descended the stairs ; and in the porch she was received by the earls of Kent and Shrewsbury with their attendants. Here, too,

she met Sir Andrew Melvil the master of her

household, whom her keepers had long debarred

from her presence. Throwing himself at her feet,

and weeping aloud, he deplored his sad destiny,

and the sorrowful tidings he was to carry into

Scotland. After she had spoken to Melvil, she

besought the two earls that her servants might be

treated with civility, that they might enjoy the

presents she had bestowed upon them, and that

they might receive a safe conduct to depart out

of the dominions of Elizabeth. These slight fa-

vors were readily granted. She then begged

that they might be permitted to attend her to

the scaffold, that they might be witnesses of her

behaviour at ner death. To this request the earl of Kent discovered a strong reluctance. He said

that they would behave with an intemperate

passion ; and that they would practise super-

stitious formalities, and dip their handkerchiefs

in her blood. She replied that she was sure

that none of their actions would be blameable ;

and that it was but deceut that some of her

women should be about her. The earl still hesi-

tating, she was affected with the insolent and

stupid indignity of -his malice, and exclaimed,

‘ I am cousin to your mistress, and descended from Henry VII. I am a dowager of France, and the anointed queen of Scotland.’ The earl of Shrewsbury interposing, it was agreed that she should select two of her women who might assist her in her last moments, and a few of her men-si rv;m!s, \vho might behold her demeanour, and report it. She entered the hall where she was to suffer, and advanced with an air of grace and majesty to the scaffold, which was built at rs farthest extremity. The sj-»ectators wc-ro numerous. Her magnanimous carriage, her beauty, which was still striking, and her matchless misfortunes, affected them. They gave way to contending emotions of awe, admiration, and pity. She ascended the scaffold with a firm step and a serene aspect, and turned her eye to the block, the axe, and the executioners. The spectators were dissolved in tears. A chair was placed for her, in which she seated herself. Silence was commanded ; and Beale read aloud the warrant for her death. She heard it attentively, yet with a manner from which it might be gathered that ner thoughts were employed upon a subject

more important. Dr. Fletcher, taking his station opposite to her without the rails of the scaffold, counselled her to repent of her crimes; and, while he inveighed against her attachment to popery, he threatened her with everlasting fire if she should delay to renounce its errors. His behaviour was highly indecent and coarse. Twice she interrupted him with great gentleness. But he pertinaciously continued his exhortations. Raising her voice she commanded him with a resolute tone to with-hold his indignities and menaces, and not to trouble her any more about her faith. I was born, said she, in the Roman Catholic religion ; I have experienced its comforts during my life, in the trying seasons of sickness, calamity, and sorrow ; and I am resolved to die in it. The two earls, ashamed of his savage obstinacy, admonished him to desist, and to content himself with praying for her conversion. He entered upon a long prayer; while Mary falling upon her knees, and disregarding him, employed herself in devotion. Her women now assisted her to disrobe; and, the executioners offering their aid, she repressed their for-

wardness, observing that she was not accus-

tomed to be. attended by such servants, nor to be

undressed before so large an assembly. Her

upper garments being laid aside, she drew upon

her arms a pair of silk gloves. Her women and

men servants burst out into loud lamentations.

She put her finger to her mouth to admonish

them to be silent, and then bad them a final adieu with a smile that seemed to console, but that

plunged them into deeper woe She kneeled

resolutely before the block, and said, ‘ In thee,

0 Lord ! do I trust ; let me never be con-

founded.’ She covered her eyes with a linen

handkerchief in which the eucharist had been

enclosed ; and stretching forth her body with

great tranquillity, and fitting her neck for the

fatal stroke, called out, ‘ Into thy hands, O God !

1 commit my spirit.’ The executioner, from un-

skilfulness, or from inquietude, struck three

blows before he separated her head from her

body. He held it up mangled with wounds,

and streaming with blood ; and her hair, being

discomposed, was discovered to be already

gray. The dean of Peterborough alone cried

out, So let the enemies of Elizabeth perish.

The earl of Kent alone, in a low voice, answered, Amen. All the other spectators were melted into the tenderest sympathy and sorrow. Her women hastened to protect her dead body from the curiosity of the spectators ; and solaced themselves with the thoughts of mourning over it undisturbed when they should retire, and of

laying it out on its funeral garb. But the two earls prohibited them from discharging these melancholy yet pleasing offices to their departed mistress, and drove them from the hall. Bourgoin her physician applied to them that he might be permitted to take out her heart for the purpose of preserving it, and of carrying it with him to France. But they refused his entreaty with auger. The executioners carried her remains into an adjoining apartment ; and, tearing a cloth from an old billiard table, thus covered that form, once so beautiful. The block, the cushion, the scaffold, and the garments, which were stained with her blood, were consumed with fire. Her body, after being embalmed and

committed to a leaden coffin, was buried with

royal splendor and pomp in the cathedral of

Peterborough. See M A RY. Elizabeth, who had

treated her like a criminal while she lived, seemed disposed to acknowledge her for a queen when

she was dead.

On the death of his mother the full govern-

ment of the kingdom devolved on James her son:

and Elizabeth, justly apprehensive of his resent-

ment for her treatment of his mother, wrote him

a letter, in which she disclaimed all knowledge

of the fact. James had received intelligence of

the murder before the arrival of this letter, sent

by one Gary. The messenger was stopped at

Berwick by an order from the king, telling him

that, if Mary had been executed, he should pro-

ceed at his peril. James shut himself up in

Dalkeith Castle, to indulge himself in grief;

but the natural levity and imbecility of his mind

prevented him from acting in any degree as be-

came him. Instead of resolutely adhering to his

first determination of not allowing Gary to set foot in Scotland, he in a few days gave his consent

that he should be admitted to an audience of

certain members of his privy council, who took a

journey to the borders on purpose to wait upon him. In this conference, Gary demanded that the league of amity between the two kingdoms should be inviolably observed. He said that his mistress was grieved at the death of Mary, which had happened without her consent; and, in Elizabeth's name, offered any satisfaction that James could demand. The Scottish commissioners treated Gary's speech and proposal with becoming disdain. They observed that they amounted to no more than to know whether James was disposed to sell his mother's blood ; adding that the Scottish nobility and people were determined to revenge it, and to interest in their quarrel the other princes of Europe. Upon this Gary delivered to them the letter from Elizabeth, together with a declaration of his own concerning the murder of the queen. This reception of her ambassador threw Elizabeth into the utmost consternation. She was apprehensive that James would join his force to that of Spain, and entirely overwhelm her ; and, had the resentment or the spirit of the king been equal to that of the nation, it is probable that the haughty English princess would have been made severely to

repent her perfidy and cruelty. It does not, however, appear that James had any serious intention of calling Elizabeth to an account for the murder of his mother; for which, perhaps, his natural imbecility may be urged as an excuie, though it is more probable that his own necessity for money had swallowed up every other consideration. By the league formerly concluded with England it had been agreed that Elizabeth should pay an annual pension to the king of Scotland. James had neither economy to make his own revenue answer his purposes, nor address to get it increased. He was therefore always in want ; and, as Elizabeth had plenty to spare, her friendship became a valuable acquisition. To this consideration, joined to his view of ascending the English throne, must be ascribed the little resentment shown by him to the atrocious conduct of Elizabeth, who continued to exert her usual arts of dissimulation and treachery. She prosecuted and fined secretary Davidson and lord Burleijjli for the active part they had taken in Mary's death : their punishment was indeed much less than they deserved, but they certainly did not merit such treatment at her hands. Walsingham, though

equally guilty, escaped by pretending indisposition, or perhaps because the queen had still occasion for his services. By her command he drew up a long letter addressed to lord Thirlston, king James's prime minister; in which he showed the necessity of putting Mary to death, and the folly of attempting to revenge it. He boasted of the superior force of England to that of Scotland ; showed James that he would for ever ruin his pretensions to the English crown, by involving the two nations in a war ; that he ought not to trust to foreign alliances; that the Roman Catholic party were so divided among themselves that he could receive no assistance from them, even supposing him so ill advised as to change his own religion for that of popery, and they would not trust his sincerity. Lastly, he attempted to show that James had already discharged all the duty towards his mother and his own reputation that could be expected from an affectionate son and a wise king; that his interceding for her, with a concern so becoming nature, had endeared him to the kingdom of England ; but that it would be madness to push his resentment farther. This letter had all the effect that could be desired.

James gave an audience to the English ambassa-

dor; and being assured that his blood was not

tainted by the execution of his mother for treason

against Elizabeth, but that he was still capable of succeeding to the crown of England, he consent-

ed to make up matters, and to address the mur-

derer of his mother by the title of loving and af-

fectionate sister.

The reign of James, till his accession to the

crown of England by Elizabeth's death in 1603,

affords little matter of moment. His scandalous

concessions to Elizabeth, and his constant appli-

cations to her for money, filled up the measure of

royal meanness. Ever since the expulsion of

Mary, the country had in fact been reduced to

the condition of an English province. The

sovereign had been tried by the queen of Eng-

land and executed for treason ; a crime, in th«

very nature of the thing, impossible, unless Scot-

land had been in subjection to England; and, to

complete all, the contemptible successor of Mary

thought himself well off that he was not a traitor too to his sovereign the queen of England.

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During the reign of Jan is Uie religious disturb-

ances which began at the Reformation, and that

violent struggle of the clergy for power, which

never ceased till the Revolution in 1688, went on

with great violence. Continual clamors were

raised against popery, at the same time that the

very fundamental principles of popery were held,

nay, urged in the most insolent manner, as the

effects of immediate inspiration. These were the

total independence of the clergy on every earthly

power, at the same time that all earthly powers

were to be subject to them. Their fantast.c de-

crees were supposed to be binding m heaven ; and

they took care that they should be binding on

earth ; for whoever had offended so far as to fall under a sentence of excommunication was de-

clared an outlaw. This circumstance must have

contributed to disturb the public tranquillity in a

great degree. But, besides this, the weakness of

James's government was such that, under the

name of peace, the whole kingdom was involved

in the miseries of civil war; the feudal animosi-

ties revived, and slaughter and murder prevailed

all over the country. James, fitted only for pedantry, disputed, argued, modelled, and remodelled the constitution to no purpose. The clergy continued their insolence, and the laity their violences upon one another ; at the same time that the king, by his unhappy credulity in the operation of demons and witches, declared a most inhuman and bloody war against poor old women, many of whom were burnt for the imaginary crime of conversing with the devil. In autumn 1600 happened a remarkable conspiracy against the liberty, if not the life of the king. The attainder and execution of the earl of Gowrie for the part he acted in the raid of Ruthven, and for subsequent practices of treason, have been already mentioned. His son, however, had been restored to his paternal dignity and estates, and had in consequence professed gratitude and attachment to the king. But the Presbyterian clergy continued to express their approbation of the raid of Ruthven, and to declare on every occasion that in their opinion the earl had suffered by an unjust sentence. One of the most eminent and popular of that order of men was preceptor to the younger Gowrie and his brothers, who, from their frequent

conversations with him, must have been deeply

impressed with the belief that their father was

murdered. The passion of revenge took possession

of their breasts ; and having invited the king from Falkland to the earl of Cowrie's house at Perth,

under the pretence of showing him a secret trea-

sure of foreign gold, which he might lawfully ap-

propriate to his own use, an attempt was made

to keep him close prisoner, with threats of putting him to instant death, if he should make any at-

tempt to regain his liberty. The reality of this

conspiracy has been questioned by many writers,

because they could not assign a rational motive

for Cowrie's engaging in so hazardous an enter-

prise ; and some have even insinuated that the

conspiracy was entered into by the king against

Gowrie, to get possession of his lar^e estates It

Has been shown, however, by Arnot, in his Cri-

minal Trials, that the conspiracy was the earl's,

who seems to have intended that the king should

he cut off l>y the hund of an assassin ; nnd the

same writer has made it appear probable that hf

entertained hopes, in the then distracted state of

the nation not ill founded, of being able to mount the throne of his murdered sovereign. Mr.

Cant, however, gives a very different opinion on

this event. The late learned and judicious lord llailes, and the celebrated Dr. William Robertson, also totally discredit the story. From this danger, whether real or fictitious, James was rescued by his attendants the duke of Lennox, the earl of Mar, Sir Thomas Erskine, afterwards earl of Kellie, and Sir John Ramsay who was ennobled; and Gowrie and his brother, falling in the struggle, were attainted by an act of parliament, their arms cancelled, and their whole estates forfeited and annexed to the crown. The most memorable transaction of James's reign, and that most to his honor, is the effort he made for civilising the western islands. For this purpose iie instituted a company of gentlemen adventurers, to whom he gave large privileges : the method he proposed was to transport numbers of the islanders to the low countries of Scotland, and to give their islands, which were very improveable, in fee to such of his lowland subjects as should choose to reside in the islands. The experiment was to be made upon the Lewes, a long range of the Ebudae ; wherice the adventurers expelled Murdoch Macleod, the tyrant of the inhabitants.

Macleod, however, kept the sea; and, intercepting a ship which carried one of the chief adventurers, he sent him prisoner to Orkney, after putting the crew to the sword. Macleod was soon after betrayed by his own brother, and hanged at St. Andrews. The history of this new undertaking is rather dark ; and the settlers themselves seem to have been defective in the arts of civilisation. The arrangements they mado were considered by the inhabitants as very oppressive; and one Norman, of the Macleod family, attacked and subdued them so effectually that they not only consented to yield the property of the islands to him, but engaged to obtain the king's pardon for what he had done. In 1589 king James married the princess Anne of Denmark, daughter of king Christian IV., to receive whose hand he made a voyage to that country : a visit which his father-in-law twice repaid. In 1603 James was called to the throne of England by the death of Elizabeth, and the same year took a final leave of Scotland. From this period the history of Scotland, being blended with that of England, is included in the article GREAT BRI-

TAIN.

Dr. Robertson depicts, in his best manner, the

arrival in Scotland of the actual tidings of the

accession of James to the English throne — his

journey — and the revolutions in the constitution

of Scotland consequent upon his accession.

The latter have been sufficiently important to jus-

tify a considerable extract in this place from the

pen of so able a writer : —

‘ As soon as she [queen Elizabeth] had

breathed her last,’ observes our author, ‘ the lords of the privy council proclaimed James king of

England. All the intrigues carried on by fo-

i -ners in favor of the Infanta, all the cabals

formed within the kingdom to support the titles

;ihella and the earl of HartfW 1, liˆap

feared in a moment; the nobles and people,

forgetting their ancient hostilities with Scotland,

and their aversion for the dominion of strangers,

testified their satisfaction with louder acclama-

tions than were usual at the accession of their

native princes. Amidst this tumult of joy, a

motion made by a few patriots, who proposed to

prescribe some conditions to the successor, and to exact from him the redress of some grievances, before they called him to the throne, was scarcely heard ; and Cecil, by stifling it, added to his stock of merit with his new master. Sir Charles Percy, brother of the earl of Northumberland, and Thomas Somerset, the earl of Worcester's son, were despatched to Scotland with a letter to the king, signed by all the peers and privy councillors then in London, informing him of the queen's death, of his accession to the throne, of their care to recognise his title, and of the universal applause with which the public proclamation of it had been attended. They made the utmost haste to deliver this welcome message : but were prevented by the zeal of Sir Robert Carey, lord Hunsdon's youngest son, who, setting out a few hours after Elizabeth's death, arrived at Edinburgh on Saturday night, just as the king had gone to bed, He was immediately admitted into the royal apartment, and, kneeling by the king's bed, acquainted him with the death of Elizabeth, saluted him king of England, Scotland, France, and Ireland ; and, as a token

of the truth of the intelligence which he brought, presented him a ring, which his sister, lady Scrope, had taken from the queen's finger after her death. James heard him with a decent composure. But, as Carey was only a private messenger, the information which he brought was not made public, and the king kept his apartment till the arrival of Percy and Somerset. Then his titles were solemnly proclaimed ; and his own subjects expressed no less joy than the English at this increase of his dignity. As his presence was absolutely necessary in England, where the people were extremely impatient to see their new sovereign, he prepared to set out for that kingdom without delay. He appointed his queen to follow him within a few weeks. He committed the government of Scotland to his privy-council. He entrusted the care of his children to different noblemen. On the Sunday before his departure he repaired to the church of St. Giles's, and after hearing a sermon, in which the preacher displayed the greatness of the divine goodness in raising him to the throne of such a powerful kingdom without opposition or blood-

shed, and exhorted him to express his gratitude, by promoting to the utmost the happiness and prosperity of his subjects ; the king rose up, and, addressing himself to the people, made many professions of unalterable affection towards them ; promised to visit Scotland frequently ; assured them that his Scottish subjects, notwithstanding his absence, sKjuld feel that he was their native prince, no less than when he resided among them ; and might still trust that his ears should be always open to their petitions, which he would answer with the alacrity and love of a parent. His words were often interrupted by the tears of the whole audience; who, though they exulted at the king's prosperity, were melted into sorrow by these tender declarations.

' On the 5th of April he began his journey with a splendid, but not a numerous train ; and next day he entered Berwick. Wherever he came, immense multitudes were assembled to welcome him ; and the principal persons in the different counties through which he passed, displayed all their wealth and magnificence in entertainments prepared for him at their houses.

Elizabeth reigned so long in England that most of her subjects remembered no other court but hers, and their notions of the manners and decorums suitable to a prince were formed upon what they had observed there. It was natural to apply this standard to the behaviour and actions of their new monarch, and to compare him at first sight with the queen on whose throne he was to be placed. James, whose manners were extremely different from hers, suffered by the comparison. He had not that flowing affability by which Elizabeth captivated the hearts of her people ; and, though easy among a few whom he loved, his indolence could not bear the fatigue of rendering himself agreeable to a mixed multitude. He was no less a stranger to that dignity with which Elizabeth tempered her familiarity. And, instead of that well-judged frugality with which she conferred titles of honor, he bestowed them with an undistinjjuishing profusion, that rendered them no longer marks of distinction, or rewards of merit. But these were the reflections of the few alone; the multitude continued their acclamations; and amidst these James entered London

on the 7th of May, and took peaceable posses-

sion of the throne of England. Thus were united

two kingdoms, divided from the earliest accounts

of time, but destined, by their situation, to form

one great monarchy. By this junction of its

whole native force, Great Britain has risen to an

eminence and authority in Europe, which Eng-

land and Scotland, while separate, could never

have attained.'

Our historian's reflections, on the alteration

produced in the political constitution of Scot-

land by this event, regard the state of the aristo-

cracy ; the new consequence given to the com-

mons ; the first establishment of Presbyteriani«m :

and the gradual assimilation of the Scottish to

the English nation in matters of taste, genius,

and literature : —

' The Scots,' he says, ' had so long considered

their monarchs as next heirs to the English throne, that they had full leisure to reflect on all the con-

sequences of their being advanced to that dignity.

But dazzled with the glory of giving a sovereign

to their powerful enemy, relying on the partiality

of their native prince, and in full expectation of

sharing liberally in the wealth and honors which

he would now be able to bestow, they attended little to the most obvious consequences of that great event, and rejoiced at his accession to the throne of England, as if it had been no less beneficial to the kingdom than honorable to the king. They soon had reason, however, to adopt very different sentiments, and from that period we may date a total alteration in the political constitution of Scotland.

‘ The feudal aristocntci/, which had been sub

rcrted in most nations of Europe by the policy of their princes, or had been undermined by the progress of commerce, still subsisted with full force in Scotland. Many causes had contributed gradually to augment the power of the Scottish nobles ; and even the Reformation, which, in every other country where it prevailed, added to the authority of the monarch, had increased their wealth and influence. A king, possessed of a small revenue, with a prerogative extremely limited, and unsupported by a standing army, could not exercise much authority over such po-

tent subjects. He was obliged to govern by expedients ; and the laws derived their force, not from his power to execute them, but from the voluntary submission ot the nobles. But though this produced a species of government extremely feeble and irregular ; though Scotland, under the name, and with all the outward ensigns of a monarchy, was really subject to an aristocracy, the people were not altogether unhappy ; and, even in this wild form of a constitution, there were principles which tended to their security and advantage. The king, checked and overawed by the nobles, durst venture upon no act of arbitrary power. The nobles, jealous of the king, whose claims and pretensions were many, though his power was small, were afraid of irritating their dependents by unreasonable exactions, and tempered the rigor of aristocratical tyranny, with a mildness and equality to which it is naturally a stranger. As long as the military genius of the feudal government remained in vigor the vassals both of the crown and of the barons were generally not only free from oppression, but were courted by their superiors, whose power

and importance were founded on their attachment and love. But, by his accession to the throne of England, James acquired such an immense accession of wealth, of power, and of splendor, that the nobles, astonished and intimidated, thought it vain to struggle for privileges which they were now unable to defend. Nor was it from fear alone that they submitted to the yoke : James, partial to his countrymen, and willing that they should partake in his good fortune, loaded them with riches and honors ; and the hope of his favor concurred with the dread of his power, in taming their fierce and independent spirits. The will of the prince became the supreme law in Scotland ; and the nobles strove, with emulation, who should most implicitly obey commands which they had formerly been accustomed to contemn. Satisfied with having subjected the nobles to the crown, the king left them in full possession of their ancient jurisdiction over their own vassals. The extensive rights vested in a feudal chief became in their hands dreadful instruments of oppression, and, the military ideas on which these rights were

founded being gradually lost or disregarded, nothing remained to correct or to mitigate the rigor with which they were exercised. The nobles, exhausting their fortunes by the expense of frequent attendance vpon the English court, and by attempts to imitate the manners and luxury of their more wealthy neighbours, multiplied exactions upon the people, who durst hardly utter complaints which they knew would never reach the- ear of their sovereign, nor move him to grant them any redress. From the union of the crowns to the Revolution, in 1688, Scotland was placed in a political situation of all others the most singular and the most unhappy : subjected at once to the absolute will of a monarch, and to the oppressive jurisdiction of an aristocracy, it suffered all the miseries peculiar to both these forms of government. Its kings were despotic ; its nobles were slaves and tyrants ; and the people groaned under the rigorous domination of both. During this period, the nobles, it is true, made one effort to shake off the yoke, and to regain their ancient independence. After the death of James, the Scottish nation was no longer viewed by our monarchs

with any partial affection. Charles I., educated among the English, discovered no peculiar attachment to the kingdom of which he was a native. The nobles, perceiving the sceptre to be now in hands less friendly, and swayed by a prince with whom they had little connexion, and over whose councils they had little influence, no longer submitted with the same implicit obedience. Provoked by some encroachments of the king on their order, and apprehensive of others, the remains of their ancient spirit began to appear. They complained and remonstrated. The people being, at the same time, violently disgusted at the innovations in religion, the nobles secretly heightened this disgust ; and their artifices, together with the ill conduct of the court, raised such a spirit that the whole nation took arms against their sovereign, with a union and animosity of which there had formerly been no example. Charles brought against them the forces of England, and notwithstanding their own union, and the zeal of the people, the nobles must have sunk in the struggle. But the disaffection which was growing among his

English subjects prevented the king from acting with vigor. A civil war broke out in both kingdoms ; and after many battles and revolutions, which are well known, the Scottish nobles, who first began the war, were involved in the same ruin with the throne. At the restoration Charles II. regained full possession of the royal prerogative in Scotland ; and the nobles, whose estates were wasted, or their spirit broken, by the calamities to which they had been exposed, were less able and less willing than ever to resist the power of the crown. During his reign, and that of James VII., the dictates of the monarch were received in Scotland with the most abject submission. The poverty to which many of the nobles were reduced rendered them meaner slaves and more intolerable tyrants than ever. The people, always neglected, were now odious, and loaded with every injury on account of their attachment to religious and political principles, extremely repugnant to those adopted by their princes.

‘ The Revolution introduced other maxims into trie government of Scotland. To increase the authority of the prince, or to secure the pri-

vileges of the nobles, had hitherto been almost the sole object of our laws. The rights of the people were hardly ever mentioned, were disregarded, or unknown. Attention began, hence-

forward, to be paid to the welfare of the people. By the ‘ claim of right,’ their liberties were secured ; and, the number of their representatives being increased, they gradually acquired new weight and consideration in parliament. As they came to enjoy more security, and greater power, their minds began to open, and to form more extensive plans of commerce, of industry, and of police. But the aristocratical spirit which still predominated, together with many other accidents, retarded the improvement and happiness of the nation.

‘ Another great event completed what the Revolution had begun. The political power of the nobles, already broken by the union of the two crowns, was almost annihilated by the union of the two kingdoms. Instead of making a part, as formerly, of the supreme assembly of the na-

tion ; instead of bearing the most considerable sway there, the peers of Scotland are admitted into the British parliament by their representatives only, and form but an inconsiderable part of one of those bodies in which the legislative authority is vested. They themselves are excluded absolutely from the house of commons, and even their eldest sons are mt permitted to represent their countrymen in that august assembly. Nor have their feudal privileges remained, to compensate for this extinction of their political authority. As commerce advanced in its progress, and government attained nearer to perfection, these were insensibly circumscribed ; and at last, by laws no less salutary to the public than fatal to the nobles, they have been almost totally abolished. As the nobles were deprived of power, the people acquired liberty. Exempted from burdens to which they were formerly subject, screened from oppression to which they had been long exposed, and adopted into a constitution whose genius and laws were more liberal than their own, they have extended their commerce, refined their manners, made improvements in the elegancies of life, and cultivated the

arts and sciences.

‘ This survey of the political state of Scotland,

in which events and their causes have been men-

tioned rather than developed, enables us to point

out three eras, from each of which we may date

some great alteration in one or other of the three different members of which the supreme legisla-

tive assembly in our constitution is composed.

At their accession to the throne of England, the

kings of Scotland, once the most limited, be-

came, in an instant, the most absolute princes

in Europe, and exercised a despotic authority,

which their parliaments were unable to control,

or their nobles to resist. At the union of the

two kingdoms, the feudal aristocracy, which had

subsisted so many ages, and with power so ex-

orbitant, was overturned, and the Scottish nobles,

having surrendered rights and pre-eminences

peculiar to their order, reduced themselves to a

condition which is no longer the terror and envy

of other subjects. Since the Union, the com-

mons, anciently neglected by their kings, and

seldom courted by the nobles, have emerged

into dignity; and, being admitted to a partici-

pation of all the piivileges which the English had

purchased at the expense of so much blood, must now be deemed a body not less considerable in the one kingdom, than they had long been in the other.

‘ The church felt the effects of the absolute power which the king acquired by his accession ; and its revolutions, too, are worthy of notice. James, during the latter years of his administration in Scotland, had revived the name and office of bishops. But they possessed no ecclesiastical jurisdiction or pre-eminence; their revenues were inconsiderable, and they were scarcely distinguished by any thing but by their seat in parliament, and by being the object of the clergy’s jealousy, and the peoples hatred. The king, delighted with the splendor and authority which the English bishops enjoyed, and eager to effect a union in the ecclesiastical polity which he had in vain attempted in the civil government of the two kingdoms, resolved to bring both churches to an exact conformity with each other. Three Scotsmen were consecrated bishops at London. From them their brethren were commanded to receive orders. Ceremonies un-

known in Scotland were imposed ; and though the clergy, less obsequious than the nobles, boldly opposed these innovations, James, long practised and well skilled in the arts of managing them, obtained at length their compliance. But Charles I., a superstitious prince, unacquainted with the genius of the Scots, imprudent and precipitant in all the measures he pursued in that kingdom, pressing too eagerly the reception of the English liturgy, and indiscreetly attempting a resumption of church lands, kindled the flames of civil war ; and, the people being left at liberty to indulge their own wishes, the episcopal church was overturned, and the Presbyterian government and discipline were re-established with new vigor. Together with monarchy, episcopacy was restored in Scotland. A form of government so odious to the people required force to uphold it ; and though not only the whole rigor of authority, but all the barbarity of persecution, were employed in its support, the aversion of the nation was insurmountable, and it subsisted with difficulty. A. the Revolution, the inclinations of the peopl:

were thought worthy the aitention of the legisla-

ture ; the Presbyterian government was again

established, and, being ratified by the Union, is

still maintained in the kingdom.

‘ Nor did the influence of the accession extend

to the civil and ecclesiastical constitutions alone;

the genius of the nation, its taste, and spirit,

things of a nature still more delicate, were sen-

sibly affected by that event. When learning re-

vived, in the fifteenth and sixteenth centuries, all

the modern languages were in a state extremely

barbarous, devoid of elegance, of vigor, and

even of perspicuity. No author thought of writ-

ing in language so ill adapted to express and em-

bellish his sentiments, or of erecting a work for

immortality with such rude and perishable mate-

rials. As the spirit which prevailed at that time

did not owe its rise to any original effort of the human mind, but was excited chiefly by admira-

tion of the ancients, which began then to be stu-

died with attention in every part of Europe, their

compositions were deemed not only the standards

of taste and of sentiment, but of style ; and even the languages in which

they wrote were thought

to be peculiar, and almost consecrated to learn-

ing and the muses. Not only the manner of the

ancients was imitated, but their language was

adopted ; and extravagant as the attempt may

appear to write in a dead tongue, in which men

were not accustomed to think, and which they

could not speak, or even pronounce, the success

of it was astonishing. As they formed their

style upon the purest models ; as they were un-

infected with those barbarisms which the inac-

curacy of familiar conversation, the affectation

of courts, intercourse with strangers, and a thou-

sand oth/er causes, introduce into living languages;

many moderns have attained to a degree of ele-

gance in their Latin compositions which the Ro-

mans themselves scarcely possessed beyond the

limits of the Augustan age. While this was al-

most the only species of composition, and all

authors, by using one common language, could be

brought to a nearer comparison, the Scottish

writers were not inferior to those of any other

nation. The happy genius of Buchanan, equally

formed to excel in prose and in verse, more vari-

ous, more original, and more elegant, than that of almost any other modern who writes in Latin, reflects, with regard to this particular, the greatest lustre on his country. But the labor attending the study of a dead language was irksome ; the unequal return for their industry which authors met with, who could be read and admired only within the narrow circle of the learned, was mortifying ; and men, instead of wasting half their lives in learning the language of the Romans, began to refine and to polish their own. The modern tongues were found to be susceptible of beauties and graces, which, if not equal to those of the ancient ones, were at least more attainable. The Italians having first set the example, Latin was no longer used in works of taste ; it was confined to books of science ; and the politer nations have banished it even from these. The Scots, we may presume, would have had no cause to regret this change in the public taste, and would still have been able to maintain some equality with other nations, in their pursuit of literary honor. The English and Scottish languages, derived from the same sources, were, at the end of the sixteenth century, in a state nearly similar,

differing from one ano-

ther somewhat in orthography, though not only

the words, but the idioms, were much the same.

The letters of several Scottish statesmen of that

age are not inferior in elegance, or in purity, to those of the English ministers with whom they

•corresponded. James himself was master of a style

far from contemptible ; and, by his example and

encouragement, the Scottish language might have

kept pace with the English in refinement. Scot-

land might have had a series of authors in its

own, as well as in the Latin language, to boast of; and the improvements in taste, in the arts, and

in the sciences, which spread over the other po-

lished nations of Europe, would not have been

unknown there. But, at the very time when

other nations were beginning to drop the use of

I.itm in works of taste, and to make trial of the strength and compass of their own luiigu :,

Scotland ceased to be a kingdom. The trans-

ports of joy which the accession at first occa-

sioned were soon over ; and the Scots being at

once deprived of all the objects that refine or

animate a people — of the presence of their

prince, of the concourse of their nobles, of the

splendor and elegance of a court — a universal

dejection of spirit seems to have seized the nation. The court being withdrawn, no domestic standard of propriety and correctness of speech remained ; tlie few compositions that Scotland produced were tried by the English standard, and every word or phrase that varied in the least from that was condemned as barbarous ; whereas, if the two nations had continued distinct, each might have retained idioms and forms of speech peculiar to itself; and these, rendered fashionable by the example of a court, and supported by the authority of writers of reputation, might have been viewed in the same light with the varieties occasioned by the different dialects in the Greek tongue : they even might have been considered as beauties, and in many cases might have been used promiscuously by the authors of both nations. But, by the accession, the English naturally became the sole judges and lawgivers in language, and rejected as solecisms every form of speech to which their ear was not accustomed. Nor did the Scots, while the intercourse between the two nations was considerable, and ancient prejudices were still so violent as to prevent imi-

tation, possess the means of refining their own tongue according to the purity of the English standard. On the contrary, new corruptions flowed into it from every different source. The clergy of Scotland, in that age, were more eminent for piety than for learning; and, though there did not arise many authors among them, yet being in possession of the privilege of discoursing publicly to the people, and their sermons being too long, and perhaps too frequent, such hasty productions could not he elegant, and many slovenly and incorrect modes of expression may be traced back to that original. The pleadings of lawyers were equally loose and inaccurate, and that profession having furnished more authors,. and the matters of which they treat mingling daily in common discourse and business, many of those vicious forms of speech which are denominated Scotticisms have been introduced by them into the language. Nor did either the language or public taste receive any improvement in parliament, where a more liberal and more correct eloquence might have been expected. All business was transacted there by the lords of articles,

and they were so servilely devoted to the court

that few debates arose, and, prior to the Revolu-

tion, none were conducted with the spirit and

vigor natural to a popular assembly.

‘ Thus, during the whole seventeenth century,

the English were gradually refining their language

and their taste ; in Scotland, the former was much debased, and the latter almost entirely lost. In

the beginning of that period, both nations were

emerging out of barbarity ; but the distance be-

tween them, which was then inconsiderable, be-

came, before the end of it immense. Even after

science had once dawned upon them, the Sr< >ˆ

ted in lie sinking back into ignorance and

5f>?

obscurity ; and, active and intelligent as they na-

turally are, they continued, while other nations

were eager in the pursuit of fame and knowledge,

in a state of languor. This, however, must be

imputed to the unhappiness of their political situa-

tion, not to any defect of genius ; for no sooner

was the one removed in any degree, than the other

began to display itself. The act abolishing the

power of the lords of articles, and other salutary

laws passed at the Revolution, having introduced

freedom of debate into the Scottish parliament,

eloquence, with all the arts that accompany or

perfect it, became immediate objects of attention ;

and the example of Fletcher of Salton alone is

sufficient to show that the Scots were still capable of generous sentiments, and, notwithstanding

some peculiar idioms, were able 10 express

themselves with energy and with elegance. At

length the Union having incorporated the two

nations, and rendered them one people, the

extinctions which had subsisted for many ages

gradually wear away; peculiarities disappear;

the same manners prevail in both parts of the

islann ; the same authors are raad and admired ;

the same entertainments are frequented by the

elegant and polite ; and the same standard of

taste and purity of language is established.

The Scots, after being placed, during a whole

century, in a situation no less fatal to the liberty than to the taste and genius of the nation, were

at once put in possesaion of privileges more va-

luable than those which their ancestors had for-

merly enjoyed; and every obstruction that had

retarded their pursuit, or prevented their acquisi-

tion of littrarv fame, was totally removed.'

Two curious papers, one published by Haynes,

and the other by Strype, are referred to by Dr.

Kobertson as affording a remarkable proof of the

little intercourse between the English and Scots

before the union of the two crowns. ' In the year 1 567 Elizabeth commanded the bishop of Lon-

don to take a survey of all the strangers within

the cities of London and Westminster. By this

report, which is very minute, it appears that the

whole number of Scots at that time was fifty-

eight. Haynes 455. A survey of the same

kind was made by Sir Thomas Row, lord mayor,

A. D.I 568. The number of Scots had then

increased to eighty-eight. Strype, iv. Supple-

ment, No. I. On the accession of James, a con-

siderable number of Scots, especially of the

higher rank, resorted to England ; but it was

not till the Union that the intercourse between

the two kingdoms became great.' We could al-

most suppose the number of our Northern coun-

trymen to be found in the 'Bank of England, at

the present time, would exceed that of either of

the above remarkable reports !

STATISTICS OF SCOTLAND.

In our article BRITAIN many of the great common features of the island of Great Britain are pointed out. In this place it can be only necessary to enter more at large into what is peculiar to Scotland : and we shall first conduct the reader round her romantic and commercial coasts. Our notice of the places must of course be cursory. For farther information, in regard to the chief towns, the reader will consult their alphabetical places.

I. THE EAST COAST OF SCOTLAND, from the entrance of the Tweed to the Frith of Forth, is precipitous and rocky: the shore is covered with sea-weed, chiefly fucus palmatus, which is used as a manure and burnt into kelp. The cliffs are the resort of a prodigious number of sea birds, chiefly scouts and kittywakes (larus rissa) which arrive in the spring, and, after having reared their young, depart in the autumn ; they art-taken for food by the poorer class. The tides on this coast rise twenty feet.

Berwickshire. — The only harbour between Berwick and the Forth is Eyemouth, a tide haven formed by two piers, with twenty feet irt

the spring and sixteen in common tides. The town lias a considerable share in the fishery, and exports many thousand quarters of grain, chiefly to Leith. Between Eyemouth and St. Abb's Head is a fine bay with good anchorage. St. Abb's is a noted promontory with the ruins of a chapel ; it is said to have its name from a certain lady Ebba, abbess of Coldingham, who, together with her nuns on an invasion of the Danes, cut off their noses to prevent their violation by the barbarians. Coldingham Loch is a fresh water lake, one mile west of the head, and a mile in circuit : though it receives no visible stream it always remains full. Lunsden is a fishing village north of the head.

East Lothian or Haddington. — Dunbar, on an eminence, is a genteel and healthy town with a castle on a ledge of rocks running into the sea, and memorable as the scene of the simulated outrage on Mary, queen of Scots, by Bothwel. It has a small pier haven, defended by a battery : its chief business is the fishery and the export of corn. The Tyne River, the only one of any consideration in the county, empties itself below the village of Lintan ; though in summer it is a torpid stream, the melting of the snows or rains

causes it at times to overflow. It has salmon and trout. Tamtallon Castle, two miles east of North Berwick, is a ruin on a rock overhanging the sea which washes it on three sides. North Berwick is a small town of about 2000 inhabitants ; it has a pier haven and exports corn. The Frith of Forth (Bodotria) is a great estuary, whose entrance between the coasts of Haddington and Fifeness, in Fifeshire, is seven miles broad. The breadth decreases regularly to Queensferry, where it is contracted by two promontories to two miles. Above which it again expands to a fine basin four miles broad, and continues this breadth for several leagues. In the Frith are several islands and rocks worthy of notice. The Isle of Bass, near the south shore, is a rock of great elevation overhanging the sea ; on the north side, and on the brow of the precipice, is an abandoned castle, at one period the state prison of Scotland. The isles of Inch Gowry, Inchcolm, Inchkeith, and May, are the others worth notice. Inch Gowry has the ruins of a castle ; and the ruins of a fort are seen on Inchkeith, near the Fife shore of the

Frith. A few sheep are pastured on this island ;

it abounds with rabbits, has three good wells ana

a light-house. The other islands have nothing

deserving mention. See FORTH.

Both shores of the Frith of Forth are thickly

dotted with towns and villages, from which a

considerable fishery is carried on, and which ex-

port salt and coals. Those of the south shore

are port Sealon, a dry tide haven with twelve

feet depth, in springtides. Preston Pans, named

from its salt pans, has also a tide haven for small craft, and employs ten boats in the oyster

fishery. It is the grand rendezvous of Scottish

pedlars, who meet here to enact regulations for

their community.

Edinboroughshire . — Musselburgh, at the mouth

of the little river Esk, has its name from the

mussel banks before it. Fine pearls are often

*found in these fish. The *town has a small*

haven.

Leith, the port of Edinburgh, is two miles

distant from the city ; but the increase of houses has now nearly united them. Leith is on both

banks of the little river of the same name, and has a large trade both foreign and coasting, particularly with London (see LEITH) ; it also sends ships to the Greenland fishery.

Linlitkgow. — Queensferry, the usual crossing place of the Frith of Forth, is a considerable village, with some trade, and ship-building yards. Borrowstownness, on the inner basin of the Frith, is a busy place, having a considerable herring fishery, a large coal trade, and a trade to the Baltic. Its haven has sixteen to eighteen feet spring tides, and is kept clean by a large basin with four sluices, which are shut when the basin is full at high water, and opened at low water, so that the rush of the streams carry out the mud.

Fife. — The places deserving notice on the north or Fife shore of the Frith are Crail, on an elevation ; it has some sloops, and about a dozen herring smacks. Kilrenny, East and West Anstruthers, are also fishing villages, with some sloop trade. Pittenween has a tide haven, with eleven or twelve feet springs. It exports grain, salt, and coals. Largo, on a considerable bay. Dysart, a town of one principal street, builds merchant ships for the Baltic trade ; has large

manufactories of salt. Kirkaldy, on a fine cove,

but is ill built, its principal street being most

disagreeably serpentine ana narrow. It has con-

siderable manufactures, and employs 4000 tons

of shipping. Kinghorn, .opposite Leith, and five

miles from it, is on a cliff overhanging the sea ; its port, named Pettycur, is a fine basin at some

distance to the west, and is the usual crossing

place to Leith. Burnt Island is a village on a

peninsula, forming an excellent haven of easy

access, adapted for repairing or laying up ships;

it has some trade and ship building. Stanlyburn

has a pier haven. Inverkeithing is on the rising

ground of a bay, affording good anchorage ; it is

one of the quarantine harbours for Scotland ; it

exports coals and salt ; as do Terry Burn and

St. David's villages. St. Andrew's Bay is be-

tween Fifeness on the south, and Redhead on

the north, seven leagues distant. Nearly mid-

way is the dangerous Cape or Bell Rock, which

nearly dries at low water, and on which a light-

house has been recently built.

The city of St. Andrew's is on the south side

of the bay on a rocky point, and has a haven

formed by a pier, built on a natural ledge of free stone running into the sea

; the depth is seven

to ten feet high water neaps, and fifteen to six-

teen in the springs. East and West Havens are

fishing Villages or creeks on the south shore of

St. Andrew's Bay. The Tay, which carries a

greater quantity of water to the sea than any

other river of Britain, issues from the loch of the same name, and empties itself by an estuary

named the Frith of Tay, filled with shifting

banks. Vessels of considerable bui len ascend

the river to Perth, the chief town of Perthshire,

and export its corn, linen, linseed, oil, and sal-

mon, the produce of the Tay fishery. This

river had formerly a mussel pearl fishery that

some years produced £10,000, but it has been

entirely exhausted.

Angus. — Dundee on the north or Angus shore

of the Tay, twelve miles from its mouth, where

it is two miles broad, is a flourishing town with

a haven, formed by a pier, dry at low water ;

but, having nine or ten feet at high water neaps,

and fourteen at springs ; receiving vessels of

200 tons. Its trade is very considerable with

the Baltic and London; its exports are sail-

cloth, leather, cordage, thread, buckram, corn,

salmon, and herrings ; and its imports of va-
rious objects are estimated at 80,000 tons. It
also sends vessels to the Greenland fishery.
Passage vessels sail weekly to London. On
Bartonness, the north point of the Frith of Tay,
are two lights. Aberbrothic or Arbroath, at the
mouth of the Brothick, has a fine tide haven for
vessels of 200 tons, defended by a battery of
six twelve-pounders. It exports the linen and
sailcloth of its manufactories. Here are the
ruins of a celebrated Benedictine monastery
founded in 1 178. From the mouth of the Tay
to beyond Arbroath the coast is sandy and lined
with rocks. Here it becomes bold and preci-
pitous, with large caverns worn in the cliffs.
Redhead terminates this tract, rising in red cliffs
200 feet high, and bounding Lunan Bay on the
south, the shores of which are sandy, with sunken
rocks .as far as the North Esk River. In this
bay is good anchorage in southerly winds. On
“Redhead are the ruins of a strong castle said to
have been built in the twelfth or thirteenth
century.
Montrose, the chief town of the county, is a

neat and genteel place, half a mile from the mouth of the South Esk, which at the town forms a basin 250 yards broad, accessible to vessels of 400 tons. The town is built on a point of land surrounded on three sides by water. It exports chiefly salmon of the river and lobsters (60,000 to 70,000 a year) to London. It has also a considerable coasting trade, and some to the Baltic ; and builds vessels.

Kincardine. — Fiscall is a village at the mouth of the North Esk, which separates Angus and Kincardine shires, to which succeeds Johnshaven. Gourdon, a fishing village with a haven, properly the port of Inverberie, two miles further north at the mouth of the Bervie, which receives only fishing boats. Eight or ten sloops belong to this port. Dunnottar Castle is on a high perpendicular cliff, almost surrounded by

the sea, and towards the land defended by a deep ravine. Stonehaven, a fishing town of two streets, on the Cowie, with a good haven formed on the south-east by a projecting rock, and on

the north-east by a pier : it dries at low water, but has nine or ten feet high water neaps, and sixteen to seventeen in the springs. There is a good salmon fishery here. Girdleness, a promontory eighty feet high, is the termination of a ridge of the Grampian hills. On the shores near it beautiful Scotch pebbles and jasper are found, and most of the hills are composed of breccia or pudding stone.

Aberdeenshire. — The coast of Aberdeen is in general bold and rocky, the cliffs presenting many caverns of unknown extent. Aberdeen Bay is limited by Girdleness on the south ; it affords good anchorage in off shore winds. The Dee is a rapid and considerable stream, descending from the Grampians : its mouth, enclosed by two piers, forms the haven of Aberdeen, which is crossed by a bar with but two feet at low water, and twelve and a half feet at high. Vessels that can go over the bar lie at a handsome quay. The no.th pier is 1200 feet long, and terminates in a round head sixty feet in diameter at the base, and thirty-eight feet high; the whole built of huge rocks of granite. The entrance is de-

fended by two batteries of twelve-pounders. Old

Aberdeen on the Don, a mile north of the new

town, is almost joined to it by a long village.

Small vessels enter the river's mouth. Newbo-

rough, on a rock forming a good haven, with

twelve feet depth high water common tides;

close to it on the north is the river Ythan, in

which the tide flows up to the pleasant village of Ellon. This river abounds with pearl mussels.

Slane's Castle, the seat of the earl of Errol, is

built on a cliff overhanging the sea ; near it is a cavern named the Dropping Cave, remarkable

for the quick petrifaction of the water that drops

from its roof. The ward of Gruden is a fishing

village south of Buchanness, near which is a

singular natural curiosity called the Bullerof Bu-

chan ; it is a circular basin surrounded by a ring of frightful rocks, in which on the side next the

sea the waves have worn an arched opening,

through which boats can pass into the basin,

which latter has a depth of thirty fathoms ; the

summit of the ring of rocks is covered with

earth and grass, forming a narrow walk all

round. Peterhead, a league north of Buchan-

ness, has a tide haven formed by a pier, and

sheltered by the little island Chalk Inch. It

has some trade to the Baltic, is engaged in the cod and herring fisheries, and is visited for a mineral spring. Kinnaird Head is the south point of the great gulf formed on the north-east coast of Scotland, terminating in the Murray Frith. A league from the head is Frazerborough, to which succeed Rosehearty and Aberdour, fishing villages with little tide havens.

Banff. — The coast of Banff county is in general very bold, presenting in many parts a front of perpendicular rock 200 to 300 feet high. In the parish of Guarie.is a steep rock, frequented by innumerable kittywakes, which arrive in spring to breed and depart in the autumn. On the same coast is a natural abyss called Hell's chimney, communicating at its base with the sea, whose waves rush into and force a column of water through it, which breaks into vapor. A second cave is pierced through a neck of land, arid from an entrance through which a man can only creep opens into a cavern 150 feet long, thirty broad, and twenty high, supported by vast natural columns of rock. On this coast are many small fishing places, beginning with Gar-

denstone, to which succeeds Macduff, a little town recently founded by the earl of Fife on the right bank of the Doveran, which has the best haven of the Murray eulf. On the opposite bank of the river is Banff, on the declivity of a hill, a genteel town, but with a bad haven from shifting sand-banks. The Doveran is useless to navigation, but has a salmon fishery that rents for £1000. The other exports are ale, corn, thread, cotton and yarn stockings, by coasters. Portsoy is a populous town on a point of land, which forms a safe harbour for vessels of considerable size ; besides the produce of its fishery it exports thread and fine linen to London. The other places accessible to navigation are Cullen, which has only an open and dangerous road, Port Nockie, and Buckie, which receive small craft.

Murray. — The river Spey separates Banff and Murray shires ; its course is about ninety miles to the Murray Frith, where it empties itself at Gairmouth, forming a good haven for small vessels. Gairmouth is a neat town of 700 inhabitants, and has a good deal of business, chiefly from the great quantity of timber floated down

the Spey from the forest of Strathspey. A number of vessels of 500 tons are built here of this timber ; and it has a good salmon fishery, several sloops being employed in conveying the fish to London. On the coast of Murray is a considerable tract of sand downs, called the Maviston Sand-hills, which, according to tradition, were formed by the same inundation of the sea that produced the Goodwin Sands. These downs are constantly increasing towards the north-east, and within the last century have entirely covered the fertile barony of Culbin ; and the same cause has also necessitated the removal of the town of Findhorn, whose ancient site is now obliterated by sand-hills.

On this coast are some fresh water lakes, which were apparently bays of the sea, particularly Loch Spynie, three miles long and one broad, now separated from the sea by a fertile tract of land called Ross Island ; many beds of oyster shells are found on the banks of the lake considerably below the level of the land. The lake abounds in perch and pike, and is frequented by swans. The Loch of Cots is de-

scribed as a bay in the thirteenth century. The Frith of Murray is entered between Burgh Head in Murray, and Tarbet Ness in Ross, distant from each other five leagues ; it contracts gradually to a strait between Fort George and Fortrose, formed by two promontories, within which it again widens to a lake nine miles long and three broad ; at the upper end of which two projecting points at Inverness contract it to a second strait, beyond which it again expands, and forms a second hike nearly as large as the

first, at the head of which the river Beauley empties itself. The river Ness, which issues from Loch Ness, falls into the Frith at Inverness. Lossie Mouth, at the entrance of the little river Lossie, is the port of Elgin, and receives vessels of eighty tons, by which it exports corn «.o Leith, &c. Findhorn is a small town at the mouth of a river, which is navigable to within two miles of Forres, five miles above Findhorn. In the river is a good salmon fishery. In the bay of Findhorn is 1000 acres of soil covered

by the tide of flood, which it is in contemplation to embank.

Nairne. — Nairne, at the mouth of a river, is the only port of the little county of Nairne ; it is neatly built, and exports the produce of its salmon fishery. Its harbour is convenient, and capable of great improvement.

Inverness. — Fort George, on the Inverness side of the strait that communicates between the two inner lakes of the Murray Frith, is a regular fortification, on a promontory surrounded on three sides by the sea, and covering ten acres of ground, mounting 100 cannon, chiefly forty-two pounders, and having barracks for 6000 men. Inverness is a considerable town at the mouth of Ness River, accessible to vessels of 500 tons at all times ; it exports salmon, herrings, cordage, canvas, and sacking, chiefly to London.

The Friths of Murray and Cromarty are separated by a peninsula named Black Isle (Elan-du), through which runs a ridge of hills covered with heath, declining to both gulfs. The peninsula is twenty miles long and four broad, the south shore forming the county of Ross, and the north that of Cromarty. Fortrose and Beauley are in

Ross-shire, on the Murray Frith, the former opposite to Fort George.

Cromarty. — Cromarty Frith is a deep inlet, called for excellence ‘ the Harbour of Safety ;’ it is entered between two high heads called the Sutors of Cromarty, a mile and a half distant from each other, within which it expands to three miles for a length of sixteen, and has good anchorage for the largest ships in every part, so that it is often run into for shelter in easterly winds. The south Sutor is a bold promontory topped with pines, and commanding a magnificent view over the sea and over Ross-shire. Cromarty, on the south shore of the strait, has a commodious quay, at which vessels of 400 tons lie ; it has little other business than the fishery.

Ross. — The Frith of Dornoch, or of Tain, is separated from that of Cromarty by a peninsula of the county of Ross, of which Tarbet Ness is the extreme point. The entrance of the Frith is five leagues wide, decreasing gradually to Mickle Ferry, where it is two miles ; within this it again expands, and forms a good harbour for vessels of considerable burden, though it is

crossed by a bar with but four feet at low water. The south shore of the outer gulf is lined by a bank called the Gizzing Briggs, from the noise the sea makes on it ; in it are several breaks, admitting small craft within it : but all this gulf requires a pilot.

Tain, on the south shore of the Frith, ha some coasting trade ; it is an old irregular built town, with a few new houses.

Sutherland. — On the north or Sutherland shore of the Frith of Tain is Dornoch, the principal one of Sutherland, and the only one deserving-mention. North of the entrance of Dornoch Frith are Fleet Lake, Dunrobbin Castle, the seat of the earls of Sutherland, in good repair, and Brora Haven, at the mouth of the little river of that name.

Caithness. — The county of Caithness occupies the north-east extremity of Great Britain ; its east coast is bold and rocky, forming many little coves into which the fishing boats run, and to which the fishermen descend from the perpendicular cliffs by dangerous flights of steps cut in the rock. To secure their boats from the sea they hoist them to the rocks, into which rings

are fixed for the purpose above the reach of the

waves. At one of these coves, named Faligoi, a

fine cascade falls over the cliffs into the sea. At the bases of the rocks are many sea-worn ca-

verns, accessible only in boats, and frequented

by seals, which are killed for their oil and skins.

Many rocky pyramids also start up from the

sea. The sea air prevents the growth of any

kind of trees on this coast. It abounds in sea

weed, which is burnt into kelp.

The principal places in Caithness are Dun-

beat h Castle and Wick, on the east coast; the

latter is the county town ; its haven is natural

and very indifferent. Staxigo, one mile north of

Wick, has a little dry tide haven. Freswick

castle, on Sinclair Bay, north of Noss Head, is

strongly situated on a promontory. Dungis, or

Duncan's Bay Head, the Berubium of Ptolemy,

is the north-east point of Scotland ; it is a rocky precipitous promontory, eaten into caverns by

the waves. The Stalks of Dungis Bay are two

isolated pyramids of freestone, the resort of sea

birds, and the breeding place of eagles. The

north coast of Caithness, west of Dungis Bay

Head, forms a fine bay, with a white sandy and

shelly beach, near which was the celebrated John O'Groat's house, noted as well for the tradition respecting its erection, as for being the northern-most habitation in Britain. Thurso is on a spacious bay, limited by Dunnet Head (Occas Promont), the north point of England, on the east, and by Welbrow Head on the west, both of which shelter it from the fury of the waves and the stream of the tides. Dunnet Head is a broken rocky promontory, from 100 to 400 feet feet high, joined to the main by an isthmus, one mile and a half broad. It is one of the few places of Britain frequented by puffins.

Thurso, on the river of the same name, has a river navigable two miles for vessels of sixty tons, and its harbour is about to be improved by act of parliament. Thurso has eight vessels employed in coasting, and several fishing boats. It exports corn and meal to' the amount of £12,000, and fish to a greater amount, particularly salmon, which is so abundant that 2500 were caught in one draft, two miles above the town, in 1743. The annual export is estimated at 700 kits of boiled salmon, 250 barrels of

pickled, besides 7000 barrels of salted and

smoked herrings.

Sutherland. — The north coast of Sutherland is

indented by numerous bays, forming good roads

for shipping. The first is Port Skerry, at the

mouth of the Ilollodale River, which separates

this county from Caithness. Five miles north-

west of it is Strathey Head, a long promontory,

sheltering a cove, called Port Strathey, at the mouth of a river of the same name. West of Stralhey

Head, the River Naver, the most considerable of

the county, falls into a fine bay, after a course

of twenty-eight miles. Torrysdale River empties

itself at a village of the same name, and has a

good salmon fishery. Tongue Bay, farther west,

is an inlet of the sea, five miles deep, skirted with farm houses and corn fields. Farther west the

coast is high and rocky, with many little coves,

on one of which, named Voisgag, a quarry of

gray slate is worked. There are here also many

sea-worn caverns, supported by pillars, of which

that named the Great Cave of Fraisgall runs in

more than half a mile, and is covered with sta-

lactites of different resplendent colors. There

are some islands here, of which the most worthy

of notice are, Saints, Seal, and Rabbit Islands,

in the entrance of Tongue: the former presents

a singular appearance, produced by the spouting

of the waves of the sea through a natural tunnel.

Ealan na Roan, or Seal Island, is two miles in

circuit and inhabited by four families. Rabbit

Island has its name from abounding in rabbits.

West of the Bay of Tongue is Loch Eribol,

a spacious inlet, on the west shore of which is

Port Ruspin, a small dry haven. Next in suc-

cession is Far-out Head, the point of a peninsula

between Loch Eribol and the bay of Durness.

Cape Wrath, or Barvehead (Ebudium), the

north-west point of Britain, is a desolate rocky

head, which apparently has its name from the

furious beating of the waves and, the rushing of

the tide, which are increased by a rocky ledge

running off" from the cape five or six miles, with sixteen to twenty-four fathoms on it. Nine miles

due north of the cape is a dangerous sunken

rock covered at high water. The cave of Sino,

near the cape, is seventy or eighty yards high,

and extends backwards in a lake of which the

extent is unknown.

II. THE WEST COAST OF SCOTLAND. Dumfries.— The Solway Frith separates England and Scotland, and is nine leagues wide at its entrance, but is much encumbered by sand banks, that increase annually in height and surface, thereby contracting its navigation. At its head it receives the river Esk, which is also the boundary of the two kingdoms; and about a mile from which, on the Scottish side, is Gretna Green, celebrated in the annals of clandestine marriage. The other places of any note in Dumfriesshire are Anan, on a river of the same name, a ueat town, with a small coasting trade and considerable fishery. Dumfries, on the east bank of the Nith, nine miles from its mouth, having vessels employed in the Baltic and Portugal trade, besides coasters. The Nith separates Dumfries and Kircudbright shires.

Kircudbrightshire. — The River Urr, the most eastern in Kircudbrightshire, is two miles wide at its mouth, spreading to a large basin and forming a good port. It is navigable eight miles for vessels of eighty tons, and by it lime is introduced into the interior from the opposite coast

of Cumberland. Kircudbright, on the west bank of the Dee, five miles from its mouth, is the county town. The Dee flows through Kenmuire Lake, and is navigable to Tongland, two miles above Kircud bright, above which its bed becomes encumbered with rocks. It abounds in salmon, perch, and eels. In the mouth of the river is the little island of Ross, the entrance between it and the east shore being one mile and a half wide, safe and bold on both sides. Above this island are several good anchoring places, with sixteen feet water at low water, and forty-six at high. Opposite Kircudbright the depths are eight feet at low water and twenty-eight at high. On the sand in the river below the town is St. Mary's Island, on which the earl of Selkirk has a mansion. Here are also the remain's of a magnificent castle. The River Fleet empties itself on the east shore of Wilton Bay, and is navigable for vessels of eighty tons to the village of Gatehouse. Creetown, at the mouth of the Cree, which falls into the head of Wiglon Bay, is a newly founded and increasing place, having a number of coasters, and vessels of 500 tons can

ascend to it.

Wigtotukire. — Wigton Bay separates the coun-

ties of Kircudbright and Wigton ; it is three

miles broad for six miles from its entrance, and

has several good anchorages. Borough Head is

its west point. Ascending from which along the

west shore the places are Whitehorn, having a

good haven sheltered by a little Island, and pas-

sage vessels sailing to the Isle of Man in three

hours, to Whitehaven in four, and to Dublin,

Greenock, and Liverpool in eighteen. Wigton,

the county town, is on a hill on the bank of the Bladenoch. Luce Bay is between Burrough

Head, on the east, and the Mull of Galloway, on

the west. Nearly mid-channel between these

points are the rocks named the Scars. In foggy

weather this bay has been frequently mistaken

for the opening of the north channel, and vessels

have run on shore on the quicksands, which line

several parts of the bay, and out of which it is

impossible to extricate a vessel. There are,

however, several good fair weather anchorages

in this bay, but in westerly winds there is al-

ways a great swell in it. The peninsula of Gal-

loway is bold and cavernous on the west. Its

south point, or Mull, is also the south point of

Scotland. Port Nessick, on the west side, has

a little pier for craft of five or six feet. Port Patrick is a neat town with a small haven and a

handsome quay and light-house. A packet sails

daily between it and Donaehadee, the distance

being twenty miles. The principal trade is the

import of cattle from Ireland. One mile south

of it is the castle of Dunskery, on the brink of a frightful precipice. Loch Ryan is a deep inlet

at the north extremity of the peninsula of Gallo-

way, ten miles long and two broad at the en-

trance, widening to four miles within, and form-

ing an excellent harbour, the only danger being

a sand bank running off from the west shore,

which makes it necessary to keep pretty close to

the east shore. This sand-bank is covered with

excellent oysters, and the bay abounds in cod.

haddock, and other fish, lobsters and crabs.

*Stranraer, at the head of the Loch, is one of tb**

principal towns of the west of Scotland, neatly,

built, and a small river runs through it. Vessels

of 300 tons ascend to within a mile of the town, and those of sixty tons lie at its quay. It has 1400 tons of shipping, and trades to Norway and the Baltic.

Airshire. — The Frith of Clyde is a deep gulf between the coast of Air, on the east, and the peninsula of Kintyre, on the west. The Air coast towards the south and north is rocky and elevated, but in the middle between the River Doon and Saltcoats, a distance of twenty miles, is a sandy beach, shoaling a considerable way off. As the ports of Air and Irvine, on this coast, can only receive vessels of 200 tons at spring tides, ships embayed in the curve can only find shelter in westerly winds under Lady Island four miles north-west of Air. The proper marks for anchoring here are the spires of the two beacons on the island in one, where a cable's length off shore, there is ten or twelve fathoms. Trune is the only place on this coast where a good artificial haven may be formed, as it is naturally sheltered from all winds but north-west by a rocky peninsula running a mile into the sea. A vessel taking shelter in it at present may anchor half a cable's length within its extremity, in three fathoms at

half flood. It is a sea bathing place. Ballinhay,

on the Stinser, is a good village. Four miles

north of which is Ailsa Island, in the middle of

the entrance of the Frith of Clyde. It is a co-

nical rock, with many goats and rabbits on it,

and the resort of soland geese and other sea

birds, whose feathers, as well as the rabbit skins, pay the rent of the tenant, which is £25. On it

are the ruins of an old castle. Gnvan, on the

river of the same name, is a poor village, with

lialf a dozen boats. In the river the depths are

nine to eleven feet.

Air, the county town, on a river of its name,

is a small well-built place. The river is crossed

by a bar with but twelve feet high water springs.

It sends some vessels to the Baltic, and to Ire-

land with coals, and builds vessels. Irvine, three

miles up a river of its name, has a haven with

nine to eleven feet water at common springs ;

but with a gale from south-west the tide often

rises to sixteen feet. It has a small ship-build-

ing establishment, some trade with the Baltic,

and exports 24,000 tons of coals. Saltcoats, the

most fashionable sea-bathing place of the west

coast of Scotland,. is built on a rock near Sandy

Hills. It has a manufactory of salt, some coast-

ing trade, ship building, and a herring fishery.

Largs, opposite the Isle of Bute, has 1400 inha-

bitants, and is the general market of the neigh-

bouring country. The River Clyde, supposing

its entrance to be at the Isle of Bute, is four

miles wide, but the channel is narrowed by the

Great and Little Cumbray Islands, nearly in the

middle. The tide flows above Paisley, and it

abounds in salmon and trout.

Renfrewshire. — Greenock, on the south bank

of the Clyde, is the emporium of the north and

west of Scotland. In 1700 it was a mean village,

but now carries on a direct trade to all parts of the world. It also builds a great many merchant

ships for sale, and has a share in the Greenland

whale fishery. The harbour is nearly dry at

low water, and vessels of eleven feet only can go

in with spring tides.

Port Glasgow is three miles east of Greenock.

The Clyde here is two miles wide, but so filled

with banks as only to afford a channel '200 yards

wide close to the Port Glasgow shore. The

largest vessels lie here at the quays, or discharge their cargoes into lighters to be conveyed up to

Glasgow. Renfrew, the chief town of the county, formerly stood on the bank of the Clyde, but the river, changing its course, deserted it. At present it communicates by a little canal.

Glasgow, the principal town of Lanerk, and the second of Scotland, is fifteen leagues above Port Glasgow, vessels of seventy tons ascending to its quays, the rise of tide being seven feet. A board of commissioners is here appointed to improve the river, and operations are constantly carrying on to deepen it. This city receives the greater part of the merchandise imported by the Greenock and Port Glasgow vessels.

Dumbartonshire. — The only port town of Dumbartonshire is Dumbarton, on the Leven, which, issuing from Loch Lomond, falls into the Clyde. The town has 2500 inhabitants, and some brigs belong to it. Near the town is a castle on a two-headed rock, washed on one side by the Clyde and on the other by the Leven. Gare Loch and Long Loch are the first of the numerous sea lakes that intersect the north-west coasts of Scotland. Gare Loch is seven miles long and two wide ; and Long Loch is twelve miles long, approaching the celebrated fresh water lake of

Lomond within one mile and a half. It sepa-

rates Dumbarton and Argyle counties.

Argyleshire. — The county of Argyle is com-

posed of several peninsulas formed by sea locks :

the first of the latter is Loch Fyne, thirty miles long and three wide, in which a great herring

fishery has been carried on at different periods. Ait its head is Inverary, the chief town of the county.

The peninsula of Kintyre is united to the

main land of Argyle by an isthmus a mile

broad, between the east and west Lochs Tarbet ;

the former is a safe and capacious basin, with an

entrance only 100 yards wide. On the south

point of the peninsula, named the Mull of Kin-

tyre, is a light. Campbelltown, on the east side,

has an excellent natural harbour, within the little

island Dever ; it is surrounded by high hills,

and has a depth of six fathoms. Here is the

grand rendezvous of the herring busses. Sanda

Island, two miles north-east of the Mull, is cele-

brated in the Scandinavian annals by the name

of Avona, as the rendezvous of the Danes ;n their

descents on Britain. The circuitous and difficult

navigation round Kintyre, from the Clyde to the

Hebrides and north-west coast of Scotland, is

now avoided by means of a canal, nine miles long, cut from Loch Gilp (abend of Loch Fyne) to Loch Crinan. Having rounded Kintyre and passed West Loch Tarbet and Loch Crinan, above-mentioned, we come to Loch Fellam, on which is Oban, the principal place on the north-west coast of Scotland, though but a village. The Loch forms a harbour capable of receiving 500 merchant vessels. Dunstaffnage, or Loch Etive, the place next in consequence, is a small hamlet, with an ancient castle

Inverness-shire. — Lochs Linne and Lodiabar, which communicate by a strait, penetrate into the heart of the bleak and dreary county of Inverness. At the head of the loch is Fort William, a triangular fortress, with two bastions and barracks for 800 men. The little town of Maryborough adjoins Castle Duart, or Loch Linne, and has a garrison of forty men from Fort William. Glenely is a poor hamlet opposite the east end of the Isle of Sky. A mile north of it are Berneira barracks usually occupied by a Serjeant's guard.

Ross. — The western coast of the county of Ross has no place deserving even the name of village except Ullapool, on Loch Broom, a fishing station, established by the British Society in 1788; it may contain 500 persons. The loch is one of the most abundant in fish, and forms an excellent harbour for the largest fleets.

Sut her lands/tire. — The west coast of Sutherland, which terminates at Cape Wrath, is worn into many sea lochs and inlets, where shipping can find shelter in all winds, but has not even a hamlet.

We have noticed the chief mountain ranges, and some of the most remarkable mountains of Scotland, in the article BRITAIN.

The first and great division of Scotland is into the Highlands and Lowlands. The former engross more than one-half of Scotland ; extending from Dumbartonshire to the most northern part of the island, a space of 200 miles in length, and in breadth from fifty to 100. This tract, however, includes several extensive districts of low, fruitful ground, inhabited by people who are in all respects different from the mountaineers. Nothing can be more wild and tremendous to the eye of a stranger than the appearance of the

Highlands, composed of blue rocks and dusky mountains heaped upon one another even above the clouds, their interstices rendered impassable by bogs, their sides embrowned with heath, and their summits covered with snow, which lies all the year unthawed, pouring from their jagged sides a thousand torrents and roaring cataracts that fall into gloomy vales or glens below, some of them so narrow, deep, and dismal, as to be altogether impenetrable by the rays of the sun : yet these mountains are in some places sloped into agreeable green hills fit for pasture, and skirted or interspersed with present straths or valleys capable of cultivation. Some authors have divided Scotland into that part which lies to the southward of the Frith, and that which lies to the northward. Others consider Scotland, agriculturally, as embracing three natural divisions. The first lies north of the chain of Highland lakes, which stretches from Murray to Mull, and consists of little else than dreary mountains and some moors ; the second, or middle division, extends from this chain of lakes to the rivers Forth and Clyde ; it is mountainous, but culti-

vated in the valleys, and on the eastern shore to a considerable extent ; the remaining division is covered by hills with some mountains, but every where cultivated or improvable, and highly favoruble for most branches of agriculture : and, though Scotland was far behind England in cultivation till the middle of the last century, it has now outstripped this country ; particularly in arable husbandry : in proof of which Mr. London adduces the fact that the improvements introduced, or attempted to be introduced, on arable land in England and Wales are, with few exceptions, the implements and practices of Scotland. In the management of meadows or old pasture, Scotland cannot be conspicuous; as the climate is not naturally calculated for that kind of husbandry. The winters are too long and severe, and the surface too irregular : and in regard to live stock this writer admits the palm of improvement is undoubtedly borne away by England. But though there is not that enthusiasm in Scotland, nor such large prices given for capital specimens, it may be safely asserted that breeding and feeding are conducted as systematically and successfully there as in England.'

The number of the counties is thirty-three,

most of which are again subdivided by local acts

of parliament into two or more districts for the

purposes of police and internal economy; and

several of them comprise a variety of territorial

divisions, founded on the natural circumstances

of the country. Berwick is thus diuided into the

three districts of the Merse, Lauderdale, and

Lammermuir ; Lanarkshire into the I pper,

Middle, and Lower Wards ; and, in the exten-

sive Highland counties, the subdivisions are still

more numerous. The number of parishes is.899,

but liable to vary from annexations and disjunc-

tions. Every parish contains a church and bury-

ing-ground, with a manse, or dwelling-house,

and a few acres of land as a glebe, for the clergy-

man, who, by a happy provision and observance

of the law, is always resident; and a school, with a schoolmaster's house and garden. In several

of the towns one church has two ministers, so

that the number of the clergy is greater than that of the parishes. In 1813 the parochial clergy

amounted to 938, besides assistants. An indefi-

nite number of parishes form the ecclesiastical

division, called a presbytery, and several presby-

teries a synod.

Rivers. — In the northern part of Scotland are several fine streams, amongst which the Beau-ly, Canon, and Naver, may be mentioned ; but those of the middle division of the country far surpass them. Here rise the Spey, the Dee, the Don, the north and south Esk, and the Tay, one of the largest rivers of Great Britain. In the south of Scotland we have the Forth, the Clyde, the Tweed, and numerous minor rivers which empty themselves into the Irish sea and Solway Frith ; the Ayr, the Girwan, the southern Dee, the Nith, the Annan, and the Liddal. The lakes or lochs of Scotland are also numerous and have been many of them long celebrated for their grand and picturesque scenery. Of these, the chief are Loch Lomond, Loch Aw, Loch Tay, Loch Ness, Loch Shin, Loch Lochay, Loch Naver, Loch Leven, &c.

Minerals. — Scotland has boasted mines of the precious metals, as we have seen in the histori-cal part of this article ; but no mines are now wrought solely for silver or gold ; the lead mines are, however, rich in the former. In the last century a silver mine was wrought in the Ochil

hills, in the parish of Alva. Ironstone, iron

ore, and septaria ironstone, are abundant, and

copper has been discovered in many places.

Other metallic substances discovered here are

cobalt, bismuth, manganese, wolfram, plumbago,

and mercury. Coal is abundant in the southern

and middle districts, running from north-east to

south-west, and limestone, freestone or sand-

stone, and slate, are found in every district. Of

late, too, attention has been paid to the marbles,

which prove very fine. Most of the gems and

precious stones, except the diamond, have been

found in Scotland. Pearls are found in the

great horse mussel (the mytilus cygnius and

anatinus), a native of the northern rivers ; in the common oyster and in mussels. The sapphire,

of equal hardness with the oriental, is found in

several places, and of different shades, from a

deep red to a transparent white. The topaz is

found in the mountains of Marr, and in the

range which stretches towards Perth, Inverness,

and Banff. It is the most brilliant of the Scot-

tish gems hitherto found. It occurs in rolled pieces, often imbedded in the granite, and most commonly of a very light green, or greenish white. The ruby and hyacinth have been found in Fifeshire, adhering to the rocks. They are in general small, and of inferior lustre. Emeralds and amethysts are also frequently met with, and some have been valued at thirty or forty guineas. Garnets are found in the Highlands of good sizes; and agates, under the various names of onyx, sardonyx, and pebble, in every part of the country where basaltic rocks are found. The Scotch pebbles are of many beautiful hues ; blue and white, red and white, in veins, and in every gradation of shade. Jasper is so abundant as to be included among the building stones ; there are also many delicate specimens to be met with. The rock crystal, commonly denominated cairngorum, from the mountain of that name in Banffshire, is found in every mountain in the primary districts of Scotland. The colors are yellow of different shades, and clove brown, approaching to black. The deeper yellow specimens sell high : the dove brown colors,

more peculiarly termed cairngorums, are also valued in jewellery ; and chalcedony, equal in lardness and other qualities to the oriental, is found in Fife. The northern and southern mountains are chiefly composed of granite: Ben Vevis is said to be equally beautiful with the Egyptian; at Portsoy that singular kind of granite is found called Moses' Tables ; besides tnese, there are various rare and curious fossils.

Springs. — The chalybeate springs are very lumerous; we may particularise those at Moffat, °eterhead, Dunse, and Aberbrothock. Sulphu-reous springs are also found in the neighbour-hood of Moffat, and near Edinburgh, at St. Bernard's well. Some of the springs also hold some neutral salt dissolved, as at Pitcaithly. Many of the springs proceeding from a bed of limestone, acquire a petrifying property, of which there are examples at the Dropping Cave of Slains in Aberdeenshire, and in many places in Lanark and Ayr.

Of the Caledonian foreatt, the most consider-able remains are in the districts of Mar and Glentanar in Rannoch, in Glenmore and Strath-

spey, and in Alfarig in Ross-shire. Fir is the most common wood ; but the oak and other deciduous trees are not wanting. Some of these forests extend thirty or forty miles in length, and. great quantities of timber are floated down the Spey, the Dee, and the Tummel.

The soil must be considered in general inferior in point of fertility to England; but there are many valleys or straths, even in the Highlands, which are productive ; and the three Lothians, Berwickshire, Fifeshire, the Carses of Stirling and Falkirk, Strathern, the Carse of Gowrie, the province of Moray, &c., contain excellent land. In the middle and southern districts the country has every where assumed a most marked and visible improvement. The soil of Scotland produces wheat, rye, barley, oats, pease, beans, hay, potatoes, turnips, &c. ; also flax and hemp, but in no great quantities, nor does the soil appear to be well qualified for their production. Horticulture is making rapid progress every where, and apples and other fruits are produced in abundance. Of late many extensive tracks of waste land have been

planted with wood, and the success attending this improvement evinces that the soil and climate are well adapted for forest trees. The Scotch fir is the most common pine in the Scottish plantations; the larch has also been introduced, and is a valuable acquisition. Ash, elm, plane, beech, oak, laburnum, and a great variety of other kinds, are intermixed in the plantations, and have a fine effect. The juniper shrub grows naturally on the hills, and the whortle or blae berries grow on the highest mountains. The alga marina, or sea weed, is in great luxuriance on the rocky coasts, and becomes when burnt into kelp, a valuable article of commerce. Speaking of the west of Scotland at the present period as contrasted with sixty years ago, a practical writer observes, — ‘ Good roads and wheel carriages are in such general use, that we reckon them as common place ; yet, by reflecting on the former situation of this country, we may soon form a proper idea of their importance. About the period above-mentioned, luiy was a scarce article in Glasgow ; and in some of the surrounding parishes, ten or twelve miles off,

the roads were so bad, that their hay intended for sale was made up in trusses of ten stones only, and it took a whole day's work for a man and horse to bring that quantity to town, a business which was then performed by placing it across the horse's back, and the man led the animal with one hand, while he employed the other to balance it, owing to the ruggedness of the roads If hay was scarce at th.it time, money was more so, for, afier all the labor of making and transporting the hay, all that the farmer received for it was 3d. per stone, or 2s. 6d. for the whole load, out of which he had to pay part of his rent and the expenses attendant upon raising the crop and keeping his horse. Now-a-days a horse and cart can bring into town 120 stones from the same district, with the greatest ease, and the farmer will be far better paid for his trouble. Sour or butter milk was also then, as it still is, an article much in use in this country, and it was likewise all brought in upon horse's backs. I have myself seen about thirty

horses in a morning, bring in two small casks a

piece, one on each side of them, not exceeding

in content (from recollection of their appear-

ance) a vessel of forty pints each. At present

the farmer can, with the greatest ease, bring in

upon a cart a cask containing 140 pints, and

frequently two of this content, so much are our

roads improved, and the facility of communica-

tion with the surrounding country increased. In

these times, on almost all farms, the country

people had cars for bringing in their crops ;

these cars are now so completely given up that

few individuals in this town under thirty years

of age have ever seen them, though I believe

tliey are in a small degree still used in very steep billy parts of the country, or where the crop is

to be brought in from high grounds. Farmers

now only use carts, drawn by good horses, and

well made harness ; whereas formerly the collars

for these animals were made of straw or rushes.

The farming system is equally improved in every

other respect ; you now see fields of wheat

waving their yellow heads, in places which for-

merly produced but a very poor crop of oats ;

and excellent green crops are common over all

the country. The comfort of the cottagers has

partaken of the general improvement ; instead

of clay, they have wooden floors in their cottages, and even in these humble abodes you will fre-

quently find carpets and other luxuries which

were unknown to our forefathers. From these,

and many other examples that might be adduced

of manifest improvement in the comfort of the

agricultural part of the community, we may see

the gradual progress of civilisation, and the su-

perior blessings we enjoy when compared with

those of the former inhabitants of this part of the island.'

Though somewhat departing from our arrange-

ment, we shall allow this writer to speak of other

improvements in his neighbourhood : — ' When

we turn, on the other hand, to the manufactur-

ing portion, we are struck in a still more forcible manner with the rapid strides of improvement

in their varied departments. The weaving ma-

nufacturer, for instance, who, at the same period

to which I have so repeatedly called your atten-

tion, employed thirty or forty looms to work for

him, was esteemed a person of very extensive

trade and importance in society. Now, some

individuals in this line employ 1200 looms, and

in many shops there are 200 under one roof.

The most wonderful improvement, however, in

this branch of manufacture, is that of the steam

loom ; and, though at present it is restricted to the weaving of plain cotton goods, yet, I believe,

the period is not far distant when it will be ex-

tended to the fabrication of all kinds of woollen

manufactures whatever. I have indeed seen

within these few days an ingenious English me-

chanic who has lately visited Lyons, and he in-

forms me that the best weaver in that city can

only earn a franc a day, and that at the finest

work, namely, the fabrication of those beautiful

silk ribbons so much admired by our ladies.

Having visited Paisley, our grand workshop of

ingenious manufactures, he was pleased with the

beautiful fabrics he saw there, and he is deter-

mined to establish in the neighbourhood of Glas-

gow a silk manufactory, which he has no doubt

will ere long rival those of Lyons. By the im-

provements he intends to introduce from what

he has seen at both places, united to his own

skill, I have little doubt but Glasgow will soon

become as famed for her silk manufactures as

any place in the world.

‘ The Great Canal affords us another instance of the improvements in this part of the country. It has been so long in use that we can scarcely sympathise with strangers when, standing at the Broomielaw and viewing our shipping, they turn round and behold immediately above the city a navigation 150 feet higher than the level of the Clyde ; and when we consider that so many vessels ply on this canal, that £40,000 was collected at Port-Dundas in the year 1824, to which if we add that from £10,000 to £l 5,000 were collected at the sea-port and Bowling Bay, we cannot fail to be convinced of the great importance of this navigation. But, independent of the advantages of this inland navigation, there is no spot round Glasgow so well deserving the inspection of strangers ; for, at the basin of the canal, you are elevated above the whole city, and enjoy a most extensive view over the whole surrounding country, having Dumbarton and Paisley at all times in sight, and in clear weather even the island of Arran, objects of interest which are frequently overlooked by the mere passenger, who generally confines his attention to those at hand. Even in this case, however, the canal affords scope for in-

teresting reflection ; here may be often seen ves-

sels belonging to the French, the Danes, the

Dutch, and other European states, and even

some vessels have sailed from the Black Sea

through this canal to Port-Dundas, and thence to

the West Indies. The Paisley and Ardrossan

Canal (though it has not yet reached the latter

place) is also an object of very considerable in-

terest to the districts through which it passes ;

but, not being finished, its trade is ou that ac-

count much confined, and not in a very pros-

perous state. One feature, however, in its con-

struction deserves to be noticed, namely, that it

passes through a tunnel under some streets and

nouses in Paisley. About the period formerly

mentioned, there was only one bridge over the

Clyde, at or near Bothwell, and that so narrow

that two carts could not pass each other properly ; now there are three commodious bridges for

*carriages near the city, and one for foot pas^*

sengers.'

The climate of Scotland, from its insular situ-

ation and high latitude, is cold and variable, but

the cold in winter is not so intense as in similar latitudes on the continent, and seldom so severe

as in the south of England : that dreary season, on the other hand, is more protracted than in those countries. The greatest height of the thermometer that has ever yet been observed is 92° Fahrenheit, and the lowest at Edinburgh, 31st of December, 1783. is 3° below zero. Its ordinary range is from 84° to 8°, though it seldom maintains these extremes for a length of time. The annualj average temperature may be estimated at from 45° to 47°. The average quantity of rain that falls appears to be from thirty to thirty-one inches. The western coasts, owing to the general

prevalence of the west winds from the Atlantic Ocean, is more liable to rain than the eastern. In general, the proportion of rain is one-fifth more. It has been estimated that it rains or snows on the west coast for 205 days annually. The winds are, as might be expected, extremely variable, both in force and direction. In the more elevated districts, the glens serve as funnels, to receive the blast which was proceeding, perhaps by many points, in a different course,

but which, being arrested by the mountains, is

now diverted into the valleys, and, gathering

strength from the interruption, sweeps along with

redoubled fury. On the west coast it has been

repeatedly asserted, by intelligent observers, that

the wind blows, for two-thirds of the year, from

a southerly point. In the summer and autumn

these winds frequently are injurious to the grain

and fruit. North or north-east winds appear to

prevail, especially on the eastern coast, through

somewhat less than one-third of the year. They

generally prevail in the months of March and

April, frequently extending into those of May

and June, and generally throughout the summer.

South-west winds prevail nearly two-thirds of

the year ; hence trees not sheltered incline to the north- east. Owing chiefly to the vicinity of the

sea, the air in general is more pure, temperate,

and salubrious, than might be expected in so

jiorthern a climate. The following is an abstract

of a register of the weather, kept near Perth, for the year 1820: the temperature is thought not

very different from the average temperature of

Scotland, except that the number of rainy days,

and quantity of rain, are less than on the western coast. — (From the Edinburgh Annual Register,

1820.)

Fair

Days.

Rainy

Days.

Quantity

of rain.

Mean

Tempe-

rature.

January . .

21

10

1-321

30-4

February .

24

5

1-198

39-1

March . .

25

6

0-332

40-6

April . .

24

6

0-690

46-7

May . . .

10

21

5-447

49-4

June . . .

18

12

1-745

54-6

July. . .

22

9

1-635

57-6

August . .

12

19

2-228

56-0

September .

16

14

0-973

52-6

October . .

20

11

2.295

44-5

November .

20

10

1-658

41-6

December .

20

11

2-165

38-7

232

134

21-687

4598

The wild animals of Scotland include the fox, badger, otter, wild -cat, and hedge-hog; but all are now becoming scarce : the stag, wild roe, hare, rabbit, weasel, and mole. The domestic animals are the same as those of England ; but the native breed of black cattleand sheep is considerably different, being smaller in size, and thought to be more delicious food. The colley, or true shepherd's dog, is peculiar to Scotland. Pheasants are found in the woods, but are scarce ; also the beautiful capercailzie, or cock of the wood, now become exceedingly rare; the ptarmigan, the black game, and grouse, are abundant in the heathy mountains ; and, in the low grounds, partridges, snipes, plovers, &c. Scotland has also most of the English singing birds, except the nightingale. All the aquatic fowls of temperate climes are also common in the islands. The domestic fowls are the same as those of England. The fish are the same which are usually found in the North Sea, and the rivers teem with trout, salmon, eels, &c. ; the lakes with pike and perch.

Whales are sometimes thrown upon the coasts of Orkney, Shetland, and the Hebrides ; and, besides other fish which are caught for their oil, we may mention the cearban, or sun-fish, the fishery of which is prosecuted with considerable success. Shell-fish are abundant on all the coasts.

For a considerable time after the union with England, this country appears to have made little progress in manufactures ; and it was not till about the year 1750 that a spirit of enterprise and ingenuity was excited, which has ever since continued. Scotland at present carries on almost ever)- species of manufacture. Flax and hemp are manufactured into sheetings, osnaburghs, bagging, and canvas, which are made chiefly in Forfarshire, and are finally exported, the first of these at least, to the NVest Indies, and die last is purchased for the use of the British navy: but the manufacture of finer linen has fallen off in Scotland, having been superseded partly by the importation of Irish cloth, and partly by the substitution of cotton manufactures. The spinning of flax by the hand used to be an important branch of industry ; but spinning machinery has now almost banished it.

Thesp machines have now been generally introduced in the counties of Aberdeen, Mearns, Fife, and Angus : the cotton manufactures have also bten earned, particulaily in the neighbourhood of Glasgow and Paisley, by means of machinery, to an astonishing degree of perfection in Scotland; and attention has been particularly directed to those of a finer quality. Muslins and other fabrics are beautifully executed : as well as brocades, lappets of all sorts, imitation shawls, plain and Linoe gauzes, spidered, seeded, and numerous species of draw-loom. Many of these fabrics, with the entire mechanism by which they are executed, are exclusively of Scottish invention. Immense quantities of cambrics, shirtings, sheetings, tweels, stripes, checks, pullicates, ginghams, shawls, &c., are also manufactured in Scotlarrd in a superior manner. Of cotton thread, likewise, large quantities are exported to the West Indies. Calico printing in all its branches is also carried to a great extent.

The iron-workt established in Scotland deserve particular attention, and that at Carron, near Falkirk, is the largest manufactory in Europe.

Iron is not only extracted from the ore, but it is finished into every variety of form. The quantity

of metal smelted at Carron is about 6500 tons

yearly, and about 2000 people are constantly

employed ; and, from all the different works in

Scotland, above 30,000 tons of iron are annually

extracted. A considerable proportion of Scottish

ironmongery is exported to America, the ˆ < – •

Indie-, and other Kriti«h colonies.*

SCOTLAND.

567

An idea may be formed of the number of

workmen employed on timber of various kinds,

and the value of the articles they make, when it

is known that in Scotland there are about 3600

water-mills, 5000 thrashing-mills, above 100

wind-mills, and from 350 to 400 steam-engines,

employed in preparing flour, meal, barley, snuff,

bark, and lint ; for teazing, carding, roving, and

spinning wool, flax, and cotton ; for preparing

dye-stuffs, bleaching salts, paints, fire-clay, &c.;

for winding, weaving, tambouring, printing,

washing, wauking, calendering, &c. ; for boring,

blowing, hammering, &c. ; and for raising water

and minerals. The manufacture of machinery is

therefore a most important branch of Scottish industry. Coach-making, musical instrument-making, &c., are also carried on in all the principal towns ; and ship-building forms a most important branch of national industry. The average of the number of vessels belonging to the ports of Scotland amounts to 2509 annually. Minor manufactories we cannot here notice. In all of the considerable towns there are tanneries, breweries, and distilleries, on an extensive scale; and it may be generally remarked that almost all articles of ordinary use are manufactured in Scotland. The fisheries have been prosecuted likewise with great industry and success. See our article FISHERIES.

in the time of Cromwell the shipping of Scotland consisted of only ninety-three vessels, carrying 2724 tons, and eighteen barks. Soon after, however, her foreign trade with the northern and eastern states of Europe began to increase ; and the Dutch cultivated a connexion with the Scots for the conveniency of prosecuting the herring fishery on the coasts of Scotland. About middle of the last century an extensive commer-

cial intercourse was carried on from the ports on the eastern coast of Scotland, to Holland, Norway, Sweden, and the states on the shores of the Baltic. Of late years the imports consist of flax, hemp, yarn, linen, iron, corn, wood, tallow, and other commodities produced in those countries ; and, in return, colonial produce, cotton goods, and other manufactured articles are exported. The trade between Scotland and Russia, including that of Archangel, forms the most considerable branch of the commerce of the eastern coast; and the chief shipping ports are Leith, Dundee, Arbroath, Montrose, Aberdeen, Peterhead, Banff, and Inverness. The trade with Spain, Portugal, and the Mediterranean, is carried on from Leith and other ports ; and the connexion with Canada extends to all the most considerable towns on the east coast of Scotland. The commerce of the west centres almost entirely in the Clyde, which is the grand emporium of the American, West Indian, and South American trade. From Greenock a constant intercourse is carried on with the West Indies, with the British colonies in North America, with the United

States, the Brasils, and South America. Several vessels have also sailed from that port, to carry on the trade to India, since 1814. From the eastern ports a trade is carried on with the northern countries lying round the Baltic ; and the coasting trade with London is now placed under admirable regulations.

The following is the revenue for the first four teen years of this century : —

1801

1802

1803

1804

1805

1806

1807

1808

1809

1810

1811

1812

1813

1814

£

1,985,794

2,230,993

2,246,028

2,171,973

2,692,624

3,182,677

3,558,784

3,544,111

3,632,832

4,188,814

4,031,347

4,236,797

4,383,751

4,483,014

**. d.*

7 114

8 3

0 3$

16 8

19 9i

13 11

*7 7**

7 7i

2 3

15 0

1 7i

5 OJ

7 10

10 10J

The population of Scotland is naturally divided into the two classes of Highlanders and Low-landers ; differing in manners, language, and character, as much as many distinct nations. This distinction cannot be better exhibited than in the language of Mrs. Grant: —

‘ The low country was inhabited by a people driven at a later period from the south, by suc-cessive invaders and oppressors, who were further advanced in the arts of industry and the progress of civilisation than the Highlanders, whom these last regarded as intruders, and who had scarcely any thing in common with them. Though their mountain chiefs were in due time brought to yield a reluctant fealty to the Scottish monarchs, their followers were scarcely conscious of this submission, and most unwilling to believe that a greater man than their own chief existed. No two nations ever were more distinct, or differed

more completely from each other, than the Highlanders and the Lowlanders ; and the sentiment with which they regarded each other was at best a kind of smothered animosity.

'The Lowlander considered the Highlander as a fierce and savage depredator, speaking a barbarous language, and inhabiting a gloomy and barren region, which fear and prudence forbade all strangers to explore. The attractions of his social habits, strong attachments, and courteous manners, were confined to his glens and to his kindred. All the pathetic and sublime charms of his poetry, and all the wild wonders of his records, were concealed in a language difficult to acquire, and utterly despised, as the jargon of barbarians, by their southern neighbours. If such were the light in which the cultivators of the soil regarded the hunters, graziers, and warriors of the mountains, their contempt was amply repaid by their high-spirited neighbours. They again regarded the Lowlanders as a very inferior mongrel race of intruders ; sons of little men, without heroism, ancestry, or genius. Mechanical drudges, who could neither sleep on the snow, compose extempore songs, recite long

tales of wonder or woe, or live without bread and without shelter, for weeks together, following the chase. Whatever was mean or effeminate, whatever was dull, slow, mechanical, or torpid, was in the Highlands imputed to the Lowlanders, and exemplified by some allusion to them : while, in the low country, every thing ferocious

or unprincipled, every species of awkwardness or ignorance, of pride or of insolence, was imputed to the Highlanders.

‘ No two communities, generally speaking, could hate each other more cordially, or despise each other more heartily. Much of this hatred, however, proceeded from ignorance of each other’s character and manners.’ — Essays on the Highlanders.

The Highlanders are a brave and hardy race, ardently attached to the manners, customs, and language of their forefathers, their chieftains, and their country. Stout and active, they are generally capable of sustaining almost every bodily privation and hardship ; but their ancient

costume has now fallen greatly into disuse, and a Highland chief, in the full dress of his country, is seldom seen. This dress, however, is retained by many of the peasantry. Over the shirt, the Highlander wears a waistcoat of the same kind as the plaid, which is twelve or thirteen yards long, and made of a woollen stuff, called tartan, which is composed of various colored stripes, disposed at right angles to each other, and in the arrangement and harmony of which his taste is often displayed. The plaid, thrown over the shoulder, is sometimes fastened round the waist with a leathern belt or girdle, and hangs down before and behind, supplying the place of small doth»s. This dress the Highiundors call a phelig, the Lowlanders a kilt. A kind of short petticoat, made of the same variegated stuff, is also frequently worn, and is called philebeg ; this reaches nearly to the knee, and with short stockings made of tartan, and tied below the knee with garters formed into tassels, completes the dress. A large leathern purse, richly adorned with silver, hanging before, was always an appendage to a Highland chieftain's dress. Almost every Highlander has a large

pouch of skin, dressed with its hair on and ornamented with tassels, dangling before him, to contain his money and tobacco. The lower class wear a flat blue cap, of a particular kind of cloth, called a bonnet, and brogues of untanned skins. The female dress in the Highlands consists of a petticoat and a kind of jerkin, with close sleeves, over which they wear a plaid fastened under the chin, and falling in folds to the feet, sometimes most gracefully. Round the head they fold a piece of linen of different shapes. The young women seldom have more than a riband for this purpose. Shoes and stockings are little worn by the Highland females, except t'ne higher classes, who dress as in England. In l>ad weather the plaid, instead of resting upon the shoulders, is thrown over the head, and then resembles the mantella of Spain.

The generality of the cottages of the Highlands "re so unlike what are to be seen in England, .hat we shall insert Sir John Carr's description of what they were about fifteen years ago. ' At a distance,' he says, ' they resemble piles of turf.

In general they are built in glens and straths, on the side of a lake, or near a river or stream, ad-

joining to which there is a little arable land.

The walls are built of turf or stones, according

to the nature of the adjoining soil, and raised

about six feet Isich, on the top of which a roof

of branches of trees is constructed ; this is covered with squares of turf, of about six inches thick,

closely pressed together, and put on fresh from

its parent moor, with the grass or heath upon it,

which afterwards continues to grow, and renders

it difficult fora traveller, unless he be very sharp-

sighted, to distinguish at a little distance the hut from the moor. A tolerable hut is divided into

three parts : a butt, which is the kitchen ; a benn, an inner room ; and a byar, where the cattle are

housed. Frequently the partition of the cham-

bers is effected by an old blanket, or a piece of

sail-cloth. In the kitchen, and frequently in the

inner room, there are cupboard-beds for the

family ; or, what is more frequent, when the fire

on the ground is extinguished, they put their bed

of heath and blankets upon the spot where it has

burned, on account of the ground being dry. A

true farmer loves to sleep near the byar, that he

may hear his cattle eat. These patriarchal dwel-

lings frequently tremble, and sometimes fall be-

fore the fury of the tempest.1

The Highlander appears to have no idea of

property beyond that of sheep and cattle. His

‘ whole wealth consisting of cattle, what he most

valued himself upon was that pride and joy of

life, ‘ a fine fold of cows,’ to use his own favorite phrase. With his cows his rents were paid, and

with his cows his daughters were portioned and

his sons established in life.’

As he is almost invariably a farmer, the dis-

tribution of labor in a Highland farm becomes

an interesting topic. ‘ The lesser boys take

charge of the weaned lambs ; the stronger attend

the goats to the rocks and perilous precipices,

upon which they love to browse; the young girls

are employed at the distaff; the young men at-

tend the cattle upon the mountains, while the

father cultivates his little patch of ground, re-

pairs his hut, of which he is the designer and

builder, and upon which occasion the knife, the

axe, and the auger, are his simple tools. In

this respect, however, he is better provided than

the Russian boor, who works with more skill,

neatness, and ingenuity, with only his axe. At

evening fall, the children return, the bearers of

fish which they have caught in some neighbour-

ing stream, and of alder bark, and buds of heath and moss, with which their mother may stain her home-spun plaid. Among the Highlanders, both old and young, the season of ‘ summer flithing,” when they remove for the summer to the mountains with their flocks, is always hailed with a rapturous welcome. At this time they live in the mountains in shealings, or little huts constructed for the purpose, and sleep upon beds if heath, leading a life perfectly natural until the autumn is advanced, when they return to their glens.’ The same author also remarks that ‘ the hardihood of the islander is proverbial. It is well known that in cold dry windy weather, when these mountaineers are obliged to sleep among the hills to attend the cattle, they soak their plaid in a bume or brook, in which having rolled themselves, they select a spot of heath on the leeward side of some hill for their bed, where they are kept warm by the wet, which pn-M’iits the wind from penetrating the stuff.’ — hn Carr’s Caledonian Sketches

Mrs. Grant, the wife of a minister, settled in the Highlands, seems eminently to have possessed the requisite qualifications for observing all the minute shades of character by which they are discriminated. The following particulars are selected from her admirable Essays.

On the secluded character of the country, and the obstacles to its improvement, she observes, ‘ There really was not room for a stranger, in a country already overpeopled in proportion to its productions. Especially when it is considered that every inch of ground was occupied by heads of families, who were perhaps the tenth generation on the same spot, and held their lands from a patriarchal chief, to whom, and his ancestors, they and their forefathers had performed services the most important. One of these tenants could not be removed to make room for a stranger, without giving mortal offence to the whole tribe, their ideas of morality • as well as attachment being outraged by such a proceeding. Thus, though a stranger passing through the country, or merely visiting it, was treated with kindness, and indeed with the most liberal hospitality, if

he attempted to settle there, he had nothing but

prejudice and persecution to expect ; by attempt-

ing to domicile himself, he lost all the courtesy of a stranger, without establishing any claims to

good-will as a friend or a neighbour. Such was

the state of society ; and so little could a single individual, even in tolerable circumstances, do

for himself, that a man who did not possess the

general good-will, and receive the hourly good

offices of his neighbours, lived in the state of an outlaw, excluded from the comforts, and de-

prived of the privileges of social life.

‘ No Highlander ever once thought of himself

as an individual. Amongst these people, even

the meanest mind was in a manner enlarged by

association, by anticipation, and by retrospect.

In the most minute, as well as the most serious

concerns, he felt himself one of many connected

together by ties the most lasting and endearing.

He considered himself merely with reference to

those who had gone before, and those who were

to come after him ; to those immortals who lived

in deathless song and heroic narrative ; and to

those distinguished beings who were to be born

heirs of their fame, and to whom their honors,

and perhaps their virtues, were to be trans-

mitted. Whatever might be the motive that

produced a marriage, it was seldom unhappy.

To a genuine Highlander, the mother of his

children was a character so sacred, that to her

he was never deficient in indulgence, or even

respect. To her he could forgive any thing,

provided her conduct did not impeach the ho-

nor of their mutual progeny, or create doubt,

where suspicion would be misery.

‘ A Highlander thrown prematurely among the

polished classes of society, and one obliged to

mingle with the lower orders of civilised coun-

tries, equally cease to be fair specimens of the

mountain race from which they spring : the one

becomes that sort of being which good qualities,

good education, and good company every where

form ; the other, whom ignorance excludes from

the decent class of artisans, is obliged to mingle

\ it!) the dregs of the people, and with their vulgar language he acquires their low ideas, and, shrink-

ing in the ungenial clime of plebeian grossneso,

he assumes an entirely new character. If any thing

recovers him from his hopeless apathy, it must

be the ‘ spirit-stirring fife,’ or the martial pipe of his ancestors, calling him to the field of honor-

able strife. Here, if at all, the Highlander resumes the energy of his character, and finds room to display once more the virtues of habit and of sentiment ; for here he is generally associated with beings like himself. Here his enthusiasm finds an object; his honorable feelings, his love of distinction, his contempt for danger, and, what is of equal importance in the military life, his calm fortitude, stern hardihood, and patient endurance, all find scope for exercise. Here, too, mingled with his countrymen, he tells and hears the tales of other times, — beguiles the weary watch of night with songs that echoed through the halls of his chief, — or repeats, on the toilsome march, the love ditty inspired by the maiden that first charmed him with the smile of beauty, and the voice of melody in his native glen. These recollections and associations preserve, in pristine vigor, the fairest trait of the Highland character. Social and convivial as Donald's inclinations are when others join the mirthful band, and share the cup of festivity, he retires to his barrack or his tent, and adds the hard saved sixpence to the little hoard which the

paymaster promises to remit home, to pay his father's arrear of rent, or purchase a cow for his widowed mother.

' Poor Donald is no mechanic ; he cannot, like other soldiers, work at a trade when in quarters ; yet day after day, with unwearied perseverance, he mounts guard for those who have this resource, to add a little to this fund, sacred to the dearest charities of life — the best feelings of humanity. This sobriety preserves alive the first impressions of principle — the rectitude, the humble piety, and habitual self-denial, to which a camp life, or unsettled wanderings that belong to it, are so averse. There are instances, of a very late occurrence, not of individuals only, but of whole regiments of Highlanders, exercising this generous self-denial, to remit money to their poor relations at home, to an extent which would stagger credulity, were it particularised.

' The officers of one of the regiments to which I allude, finding such means remitted through their hands, and seeing their men constantly either on guard or at hard labor, began to fear that they were living too low to support such

perpetual exertion. Every day they visited the barracks, to be assured that their men made use of a proportion of animal food. They were at first deceived by seeing pots on, with meat boiling in them, as they thought ; but, on a nearer inspection, found that in many of them a great stalk of what we in Scotland call kail was the only article contained in them. They brought long sticks with them afterwards, and sounded the pots, to make sure. This was indeed

' Spare fast, which oft the gods doth diet.'

' I should rather have kept this quotation to grace another instance of still nobler self-denial,

which ought to be recorded in a more durable manner than this perishing paˆe will admit of:—

'A Highland regiment, commanded, I think, at that time, by general Macleod, was, during the wars with Ttppoo Saib, engaged in an unfortunate rencontre, in which above 200 of them fell into the hands of that remorseless tyrant. They were treated with the most cruel indignity,

and fed upon a very sparing portion of unwholesome rice, which operated as a slow poison ; assisted by the burning heat of the sun by day, and the unwholesome dews of night, to which they were purposely exposed, to shake their constancy- Daily some of their companions dropped before their eyes, and daily they were offered liberty and plenty, in exchange for their lingering torture, on condition of relinquishing their religion, and taking the turban ; yet not one could be prevailed upon to purchase life on these terms. These Highlanders were from the isles, and entirely illiterate. Scarcely one of them could have told the name of any particular sect of Christians ; and all the idea they had of the Mahometan religion, was, that it was averse to their own ; and that, adopting it, they should renounce Him who had died that they might live, and who loved them, and could support them under all sufferings. The great outlines of their religion, the peculiar tenets which distinguish it from every other, were early and deeply impressed upon their minds, and proved sufficient in the hour of trial. The self-devoted band

at Thermopylae have had their fame ; they ex-

pected, and deserved it. These .did not even aspire

to such distinction ; far from their native land,

without even the hope of having their graves

beheld by the eyes of mournful regret, they

passed away unseen, like the flower in the desert,

when its head is heavy with the dews of the

night, and the sun arises in its strength, to scatter its leaves on the gale. The Yoice of applause —the hope of future fame — the sympathy of friend-

ship— all that the heart leans to in the last extre-

mity, was withheld from these victims of prin-

ciple. It was not theirs to meet death in the

field of honor, but the mind, wrought up to

fervid eagerness, went forth in search of him.

They saw his slow approach ; and, though sunk

in languid debility, such as quenches the fire of

mere temperament, they never once hesitated at

the alternative set before them. Their fortitude

at least should be applauded, though their faith

and the hope that supported them were not taken

into the account.

‘ Nature never meant Donald for a manufac-

turer ; born to cultivate or defend his native

soil, he droops or degenerates in any mechanical

calling. He feels it as losing his cast; and,

when he begins to be a weaver, he ceases to be a Highlander Fixing a mountaineer on a loom too much resembles yoking a deer to a plough, and will not in the end suit much better.' — Essays on the Highlanders.

For the following summary of the antiquities and curiosities of nature and art in Scotland, we are principally indebted to Dr. Myers' able Geography, vol. i.

Druidical monuments are to be found principally in the northern parts of Scotland, and the adjacent isles. They are easily distinguished by their circular forms ; but they are not of equal magnitude with those of the same kind in South Britain. The vestiges of Roman antiquities, such as the stations of their legions, their castella, and their praitentures, or walls, can now-only be discovered by critical inspection. Various Roman coins, urns, utensils, and inscriptions, have been found in several parts, and especially near the site of the celebrated wall which extended from the Frith of Clyde to that of Forth. It was marked out by Agricola, but completed by Antoninus Pius, and is still dis-

cernible. This wall, which has been traced with great precision by antiquaries and historians, is called Graham's Dyke by the country people, from a tradition that a Scottish warrior of that name was the first who passed it. The remains of several Roman camps are also visible in this part of Scotland. One, near the foot of the Grampian Hills, is perhaps the most striking and best preserved specimen in North Britain. It is situated at Ardoch, in Perthshire, and is generally thought to have been the camp which Agricola occupied before his engagement with the Caledonian king, Galgacus. The vestiges of this camp still present five ditches and six ramparts on the south side ; and three of the four gates, which led into the area, may yet be distinctly traced. A Roman temple, in the form of the pantheon at Rome, stood on the banks of the Carron, supposed to have been built by Agricola, or his successors, and dedicated to their god Terminus, as it stood near the confines of the empire. This venerable relic of antiquity was barbarously demolished for the purpose of repairing a mill-pond.

The monuments ascribed to the Picts are singular buildings. The two principal were hollow columns ; the one at Brechin in Angus, and the other at Abernethy, in Perthshire. That at Brechin is the most entire, and is covered with a kind of spiral roof of stone, with three or four windows above the cornice. It consists of regular courses of hewn stone, tapering to the top. In Perthshire is a barrow, which appears to be of British origin, and resembles the hull of a ship with the keel upwards. It is styled Temay, which some have supposed to be a contraction of Terrse navis, the ship of earth. Danish camps and fortifications are discernible in several northern counties of Scotland, and are distinguished by their square forms and difficult situations. The vestiges of ancient Scottish antiquities are often both curious and instructive, as they frequently relate to events in their history ; and, from the emblematical figures with which they are ornamented, were evidently erected to commemorate victories. These monuments are chiefly obelisks, and are commonly called Danish stones. Of these, the great stone

near Fortrose, in Moray, surpasses all the others. According to Mr. Gordon it ‘ is perhaps the only one of that kind in Europe ; it rises about twenty-three feet above the ground, and is, I am credibly informed, not less than twelve or fifteer. below : so that the whole height is at least thirt-five feet and its breadth nearly five. It is one

entire stone, with a great variety of figures in relievo carved on it, and some of them are still visible ; but the injury of the weather has obscured those towards the upper part.’ This monument is by some ascribed to the Danes.

The wide-spread fame of lona will permit an additional account of its relics in this place. In any other situation, and under almost any other circumstances, the architectural ruins of lona would be consigned to neglect and oblivion. It is not from their magnificence or splendor, from their magnitude or proportions, that they have acquired celebrity, but from their connexion with a barbarous age, and their standing a solitary monument of religion and literature

amidst the gloom of ignorance. It is almost impossible for the mind to contemplate the fragments of these venerable structures, now fast mouldering beneath the hand of time, without involuntarily recurring to the period when this little isle was the ‘ light of the western world.’ ‘ Even at a distance,’ says Dr. Maccullock, in his Description of the Western Islands, • the aspect of the cathedral, insignificant as its dimensions are, produces a strong feeling of delight in him who, long coasting the rugged and barren rocks of Mull, or buffeted by turbulent waves, beholds its tower first rising out of the deep ; giving to this desolate region an air of civilisation, and recalling the consciousness of that human society, which, presenting elsewhere no visible traces, seems to have abandoned these rocky shores to the cormorant and the sea-gull.’ The following perspicuous delineation of these remains of antiquity is extracted from Dr. Playfair’s Statistical Description of Scotland. ‘ From the beginning of the seventh century to the reformation, lona was the seat of the regular clergy of St. Columba. After that period, the

learning of ages, the records of nations, and the

archives of remote antiquity, were destroyed or

removed to Douay College, in France. Some

fragments of buildings remain. St. Mary's

church, which served as a cathedral of the diocess

of the bishops of the Isles, and is almost entire, was built of red granite, 115 feet long, and

twenty-three broad, with a transept of seventy

feet. Over the centre is a handsome tower.

From the south-east corner are two parallel

walls, ten feet distant from each other, which

reach to the sea. West of the church is a cross

of one stone nearly eight feet high, and twenty

inches broad, and six thick. From this place to

the nunnery there is a causeway 300 yards in

length, and fifteen in breadth, intersected at right angles by another of the same kind, that reaches

from the shore to the village. On the left hand

of it, as you go from the shore to the church,

there is a cross of whinstone, ten feet high, or-

namented, but without any inscription. The nun-

nery is a plain square building ; and its church,

v.-hich contains the tombs of ladies of high

rank, is fifty-eight feet long, and twenty broad.

St. Oran's chapel, which is sixty by twenty-two

feet, is surrounded by the burying-ground, where, according to tradition, forty-eight Scots, four Irish, and eight Norwegian chiefs are interred. In 1.540 there were three tombs, like little chapels, with an inscription on a broad stone in the gable of each ; but scarcely a vestige of these tombs now exists. North of the monastery are the ro-niains of a small edifice, called the bishop's house. Such is the present state of that illus-trious island, ' which was once the seminary of the Caledonian regions, whence savage clans and roving barbarians derived the benefits of knowledge and the blessings of religion.'

At Sandwich, in Ross-shire, is a curious obe-lisk, but of a more recent date than those above-mentioned. It stands on a basement of flat stones rising like steps, and is enriched with various specimens of carved works more highly finished than those on the obelisk near Fortrose. On one face is a large cross with a figure of St. Andrew on each side, and some uncouth forms of animals beneath. The reverse contains figures of birds and animals. The ruins of Elgin Cathedral pre-sent some dignified remains. The west door is highly ornamented, and the whole edifice dis-

plays much elaborate workmanship. Among the ancient castles of North Britain that of Kil-d rummy is most distinguished, and was formerly a place of great strength and magnificence, frequently the asylum of noble families in times of civil war and national distress. The castle of Inverugie is a massy pile, standing on the steep bank of a river, rearing its lofty towers above the aged trees, and appearing majestic even in ruins.

At Huntley, also, the remains of a venerable castle attest its former magnificence.

In natural curiosities Scotland is very rich. The picturesque falls of the Clyde, near Lanark, and the beauties of Loch Lomond, have excited much attention, and given rise to many animated descriptions. The rocks on the coast of Aberdeenshire frequently assume singular forms of arches and pillars ; while the vast basaltic columns between the castle and harbour of Dunbar resemble the Giant's Causeway in Ireland. Several large caverns in Fifeshire, a petrifying cave at Slains, in Aberdeenshire, and a quantity of sea-shells and white stones, some of them very clear, are to be met with on the top of a mountain in Ross-shire, about twenty miles from

the sea. Nor are traces of extinguished volca-

noes totally unknown in this country. The hill

of Finchaven is one instance, and that of Bergo-

nium, near Dunstaffage Castle is another. Both

of these exhibit large quantities of pumice stone,

or scoriae, of the same kind as those thrown out

by the volcanoes of Iceland. On the isle of Seal-

pay, one of the Hebrides, there is a hill which

affects the mariner's compass, and causes the

needle to deviate 9° from the north towards the

west. At Ralphitrisk is the famous ringing stone,

about seven feet long, six broad, and four and

a half thick. It is of a dull gray color, spotted with black mica. It is very hard, and when

struck with a hammer or stone sounds like brass

or cast iron.

Between the islands of Jura and Scarba is the

noted whirlpool, denominated Cor-y-bhrechan

supposed to have derived its name from a

Danish prince who perished there. ' Soon after

the flood tide has entered the sound the sea at

this place is violently agitated. It boils, foams,

and passes away in successive whirls. The

commotion increases till near the fourth hour of

flood, when it is most impetuous. The waves are tossed with a great noise, that may be h%ard twelve miles distant. But from the middle of the fifth to the sixth hour of flood, and in neap-tides from the fourth to the sixth hour, the com-motion gradually abates, until at length it totally subsides ; and, at the approach of the lowest ebb, the same tranquillity is restored as takes place at high water."

But perhaps the most remarkable natural curi-osity in Scotland is the precipitous and columnar island of Staffa The bending pillars and the noted caves of this small island have often been described. The island itself is an irregular oval, faced with nearly perpendicular rocks, in which various caves yawn and receive the restless waves that dash against the shore. The height of these rocky coasts varies from about 112 feet to less than ten above the surface of the sea. The natu-ral pillars in many of these places are inclined in various positions from the perpendicular. In some they are bent so as to resemble the inside timbers of a ship. In others, where the ends pre-sent themselves in forming the surface, they have

the appearance of a honey-comb. The celebrity of this island, however, is chiefly derived from its various caves. The principal of these are the Boat Cave, Mackinnon's Cave, and Fingal's Cave. The Boat Cave apparently derives its name from its being accessible by sea only. This cave is small, but its entrance is highly picturesque from the symmetry of the columnar surface of the cliff in which it is situated. Its height is about fifteen feet, breadth twelve, and depth 150 feet. It can be entered by means of boats only, as the tide never ebbs quite out. Mackinnon's Cave presents an aperture of nearly fifty feet square, with a depth of more than 220 feet, which causes it to reflect a deep shadow, that produces a powerful effect. Its dimensions are nearly the same throughout its extent. The roof and sides, being smooth, are deprived of many of those beauties which a more varied appearance, accompanied with a symmetrical arrangement of parts, would present. Fingal's Cave is the most celebrated, and upon it the utmost powers of description have frequently been lavished. It is situated near the eastern ex-

tremity of the principal face, and presents two nearly perpendicular sides ; with a roof resembling that kind of Gothic arch which is termed the contracted. The height from the surface of the water at mean tide is about sixty-six feet ; and from the top of the arch to the summit of the cliff it is thirty feet : the breadth is about forty-two feet. The height of the cave soon diminishes to less than fifty feet, and terminates at forty-four, after running into the rock a depth of 227 feet. These are the dimensions given by Dr. Macculloch, who lately measured it; but those given by Sir Joseph Banks, by whom it was first visited, in his voyage to Ireland, are considerably greater. The sides of the cave, like the rock in front, are columnar and nearly perpendicular, and the roof is formed of pillars that have been broken off, which sometimes produce an ornamental effect. The breadth is preserved nearly to the furthest extremity, and the whole cave is lighted from without, so that the end may be distinctly seen. The air is kept in a pure state from the motion occasioned by the flux and reflux of the tide; and, as this never ebbs out, it forms the only flooring to the cave.

‘ It would be no less presumptuous than useless,’ Dr. Macculloch observes, ‘ to attempt a description of the picturesque effects of that to which the pencil itself is inadequate. But if this cave were even destitute of that order and symmetry, that richness arising from multiplicity of parts, combined with greatness of dimension and simplicity of style which it possesses, still the prolonged length, the twilight gloom, half concealing the playful arid varying effects of reflected light, the echo of the measured surge as it rises and falls, the transparent green of the water, and the profound and fairy solitude of the whole scene, could not fail strongly to impress the mind gifted with any sense of beauty in art or nature.’ It is said that by far the greater part of exported British linens are of Scottish manufacture: some estimate of the importance of that manufacture may be formed by the following table of the countries to which these exports were made in 1821 and 1822, ordered to be printed by the House of Commons May 1823 : —

1821.

1822.

Portugal, the Azores, and Madeira

Spain and the Canaries

Gibraltar

Asia

Africa .....

British North America .....

West Indies. .....

Foreign West Indies

United States .

£ s. d.

53,597 1 8

24,624 15 7

159,849 12 10

22,454 12 0

15,454 14 0

48,639 10 5

552,391 18 3

193,911 8 10

442,204 18 7

£ s. d.

40,627 9 5

78,812 7 0

162,685 2 7

29,026 4 2

6,268 8 0

75,324 19 4

542,947 4 9

161,164 19 10

516,781 3 1

Brasils .....

Foreign colonies on Continent of North America

AH other parts

116,247 11 1

53,982 11 5

18,351 3 8

179,357 15 5

115,206 0 6

24,920 8 4

i

1,701,709 18 4

1,933,152 2 5

SCOTLAND.

573

The quantity of malt made in Scotland from

1786 to 1800 fluctuated from 1,500000 to

2,000,000 of bushels annually ; the ordinary rate

of duty being then 7|d. per bushel. In 1804, when

the duty on malt made from barley was raised to

3s. 8Jrf., and from bear or bias to 3s. O&d., the number of bushels fell to 1,125,482, and never

reached 1,500,000 while these duties were ga-

thered. In 1817, 1818, and 1819, when the duty

was Is. 8£rf., the quantity increased from

1,129,992ˆ to 1,556,586 bushels. But in 1820,

when it was raised to 3s. 6d., the number of

bushels fell to l,284,918f. In 1822, under new

modifications of the duty, it was 1,347,432

bushels ; and for the yˆar ending oth April 1823

the number had increased to 2,150,795 bushels ;

of which 1,816,691£ were made from barley, and

334,103ˆ from bear or bigg. The beer made in

Scotland in 1822 was about 350,000 barrels, 01

about 3000 barrels less than :n 1792. Such is

the effect of high war duties on the necessaries

of life.

The spirits made in Scotland for home con-

sumption only, from 1813 to 1822, and all from

grain or malt (no sugar or molasses being used

in those years), appears, from the Report of the

Malt Duties of Scotland, May 1821, to stand

thus : —

Years.

Gallons of Spirits

made and charged

with duty.

Rate of duty per gallon.

Total Revenue

produced.

£ s. d.

From 10th Dec. 1813)

to 1st Oct. 1814]

1,653,735

(7s. \Qd. in Lowlands,)

I 5s. Hid. in Highlands]

587,781 8 li

1st Oct. 1814 J

to 9th Nov. S

*1 ,784,943**

8s 4|d.

743,506 0 3

Year ending f .

*10th Nov/ *” 6 ‘ ‘*

l,030,772f

8s. 4§d.

427,658 16 8J

1817

2,139,207ˆ

5s. 6]d.

599,168 3 5J

1 R1 R

2,367,9141

5s. 6^/.

663,464 16 4

1819 •

2 366 998

5« 6£d,

658 773 18 4|

-toon

2,167,558

7s. 6ferf.

602,676 18 6i

The following is an account presented to the House of Commons, in May 1823, of the excise-

able articles paying duty iu the years ending 5th July 1792 and 1822 respectively, and the amount of duty on each : —Articles.

1792.

1822.

£ s. d.

£ s. d.

Auctions

4,700 8 8|

13,645 12 6J

Beer and ale .

55,078 8 2

87,217 9 9J

Bricks and tiles

3,283 13 34

6,348 16 4i

Candles

16,804 7 10i

19,704 2 3i

Coaches

99 0 0

...

Cocoa nuts and coffee

443 17 llf

16,785 3 6

Cyder and perry

28 8 1J

Glass

24,719 9 1J

132,770 13 7

Hides and skins

19,618 13 7i

51,045 6 7

Licences

10,813 3 2

90,581 8 5

Malt

74,960 12 0$

199,695 3 9

Paper

5,744 18 2

63,688 19 3

Pepper .

.

305 7 6

Printed goods

78,002 0 4

246,278 7 5$

Salt

106,992 16 8

Soap

43,969 8 4i

122,306 6 8£

Starch . .

9,749 17 3i

5,325 12 3

Spirits (foreign)

56,520 8 1J

124,112 10 1

(British)

52,470 5 2

740,709 14 5|

Stone bottles

*9 4 11**

Sweets

111 1 4

Tea ...

.

49 4 2

Tobacco and snuff .

31,774 8 5i

301,428 2 7f

Vinegar

753 17 0

Wine .

0,990 9 6J

68,716 2 OJ

Totals .

519,743 9 4J

2,398,609 11 5J

The established religion of Scotland is Pres- by an act of the Scottish parliament in 1696, and byterianisra, on the Geneva model, finally settled afterwards secured by the treaty of union with 574

England. As considerable light has been thrown of late by Dr. Cook and Dr. M'Crie on the early progress of the Reformation in Scotland, we shall avail ourselves here of a portion of this information.

In preparing the scheme of future church polity for his country, her great reformer, Knox, adopted the general maxims of Calvin ; yet he accommodated them considerably to the peculiar situation of Scotland. While he abolished the episcopal order as by divine right superior to that of presbyters, finding that absolute equality amongst the pastors would not be expedient, he appointed superintendants, who were in some respects similar to bishops, but in others plainly and explicitly distinguished from them. They superintended the parochial ministers, whose labors were confined to their own parishes, and the readers who, from the small number of pastors, were employed to read and explain the Scriptures, where ministers could not be procured. This intermediate system between episcopacy and presbytery, although it was regarded

with much partiality by Knox, did not long continue. It had little hold of the minds of the people ; and the poverty of the clergy under it rendered them eager that it might be so modified as that their temporal condition should be improved. When, therefore, in 1572, the earl of Mar, who was then regent, was eager, perhaps more from political than religious considerations, to restore the order of bishops, little resistance was made to his wishes ; and, with the acquiescence even of Knox, an episcopalian polity supplanted the superintendent scheme, or rather was combined with it. But it soon appeared that the prejudices which had been early formed against the hierarchy had not subsided ; and the celebrated Andrew Melville, on his arrival in Scotland from Geneva in 1574, taking advantage of these prejudices, and of every political event that might facilitate his design, was enabled to effect, in 1592, the introduction of that presbyterian polity which he found established in Geneva, and which has finally been fixed in Scotland.

To James VI., although he was occasionally

forced to dissemble his real sentiments, this form of church government was most obnoxious. The boldness with which the ministers defended what they believed to be right ill corresponded with the deference which he considered to be due to royalty ; and,, having been often thwarted by them in what they deemed the unconstitutional exercise of his prerogative, he was desirous that episcopacy, as more consonant to monarchy, should be restored. To effect this he made many efforts, even before his accession to the English throne ; and after that event he was enabled to accomplish his object; at the same time gratifying the feelings or the prejudices of his Scottish subjects, by putting restraints upon the bishops, without which he dreaded that he would fail in establishing their authority. His unfortunate son, Charles I., who was attached to episcopacy from sincere religious conviction, as well as from views of political expediency, formed the scheme of assimilating in all respects the churches in England and Scotland, \ith '.his view he determined to introduce a liturgy, which in Scotland had never been regularly used ; and he insisted upon the reception of a set of canons abolishing the control

over ecclesiastical measures which the inferior church judicatories had been permitted to exercise. The violence with which all this was resisted is known to every reader of the history of Scotland. The zeal of the multitude was inflamed to fury : the clergy were insulted, and episcopacy was again contemplated as the engine of popery and of despotism. The dissensions which soon arose in England cherished this state of mind : the discontented in Scotland made a common cause with the disaffected in the southern part of the island : they bound themselves, by the strange deed which they entitled ‘ the solemn league and covenant,’ to exterminate prelacy as a corruption of the Gospel ; and they took an active part in those commotions which terminated in the death of Charles, and the erection of the Commonwealth. Some feeble efforts indeed were made to preserve to Charles II. a shackled sceptre ; but he was soon compelled to leave Britain ; and under Cromwell the violent presbyterians, who were denominated Protesters, enjoyed the free exercise of the form of worship, and of the power which they had acquired. Upon

the restoration of Charles, to which it must be admitted that many attached to presbytery zealously contributed, although at his coronation at Scone he had solemnly sworn to defend that mode of ecclesiastical government, and had, in the prospect of being restored, renewed his protestations that he would do so, he established episcopacy in Scotland, under circumstances little calculated to conciliate the affections and to secure the reverence of the people to that ancient and admirable form of church polity. The desertion of Dr. Sharp from the presbyterians was rewarded by his exaltation to the primacy ; and powers were vested in the bishops much more ample than they had possessed at any time before. The discontent that now prevailed among the presbyterians was openly displayed, and the attempts to restrain it were conducted with a severity more calculated to divide than to heal. The presbyterians, undismayed, adhered to their principles ; and, upon the abdication of James II., they looked forward with confidence to the triumpli of their cause. And, though the prince of Orange was eager to preserve in both parts of the island the same form of ecclesiastical

government, the bishops conceived that they could not conscientiously transfer their allegiance to him, whereby the way was opened for that establishment of presbytery which some of his most zealous adherents had pressed upon him, and which was ratified by act of parliament in 1690. Thus, Scotland and England having been separate kingdoms at the time of the Reformation, a difference of circumstances in the two countries led to different sentiments on the subject of religion, and at last to different religious establishments ; and when they were incorporated into one kingdom, by the treaty of union in 1707, ihe same regard to the inclinations of the commonalty of Scotland, to which presbytery owed its first establishment in that country, produced a declaration, to which both kingdoms gave their

assent, that ‘ Episcopacy shall continue in England, and that the presbyterian church government shall be the only government °f Christ’s church in that part of Great Britain called Scotland.

It is also guaranteed, by the fifth article of the union with Ireland, not only ‘ that the churches

of England and Ireland as now established, be united into one Protestant Episcopal church, to be called the united church of England and Ireland ;' but also that 'in like manner the doctrine, worship, discipline, and government of the church of Scotland shall remain and be preserved, as the same are now established by law

and by the acts for the union of the two king-
doms of England and Scotland.'
The distinguishing tenets of the church of
this important part of the United Kingdom
seem to have been first embodied in the formu-
lary of faith attributed to Knox, and compiled by
that reformer in 1560. Amidst all the outward
changes of polity already detailed this has been
preserved unchanged. It was approved by the
parliament, and again ratified in 1567, and con-
sists of twenty-five articles, and was the confes-
sion as well of the episcopal as of the presby-
terian church. The Covenanters indeed, during
the grand rebellion, adopted the Westminster Con-
fession, in the compilation ofwhich some delegates
from their general assembly had assisted. And,
at the Revolution, this confession was received as
the standard of the national faith ; and the same
acts of parliament which settled presbyterian
church government in Scotland, ordain, ' That no
person be admitted or continued hereafter to be
a. minister or preacher within this church, unless
that he subscribe the (i. e. this) confession of
faith, declaring the same to be the confession of

his faith.' By the act of union, in 1707, the same is required of all professors, principals, regents, masters, and others bearing office in any of the four universities in Scotland.

The Westminster Confession of Faith, then, and what are called the Larger and Shorter Catechisms, which are generally bound up with it. contain the public and avowed doctrines of this church ; and it is well known that these formularies are Calvinistical, if not Supralapsarian. ' The character of these formularies is, in general,' says a highly respectable Calvinistic writer, ' too exclusive, severe, and systematic for certain deliberative minds. Called to the reception of them, they are staggered by the extent of the requisition. For a time, perhaps, they hesitate to obey the voice of conscience, and to desert the national standard. But the resolution, once taken, and the reputation for orthodoxy and conformity sacrificed, they give loose to their fancy or ingenuity, and at length fashion to themselves a system perfectly at variance with truth and reason. It appears to us that Scotland, in this respect, furnishes an important lesson to the more dog-

matic and exclusive theologians of this country, &c.' — Christian Observer, for 1815, p. 685, 686.

It has indeed been often insinuated, or asserted, that many of the ministers, as well as lay members, of the establishment, have departed widely from that confession, holding the Arian or Socinian views of our Lord's person, and the Arminian opinions as to predestination and grace. Such a charge, however, should be received with much caution, and is perhaps entitled to little or no attention. No party in the church avows enmity to the Westminster Confession : and there can be no doubt that the great majority of the clergy are attached to the doctrines which it inculcates. There is a wide difference in the way of preaching these doctrines ; but this is not confined to any one party. Amongst those who are denominated the popular clergy, there are many practical preachers; whilst those who are styled moderate, not unfrequently inculcate the highest tenets of Calvinism.

In this church the public worship is extremely simple, and but few ceremonies are retained.

John Knox, like his master Calvin, seems to have been less an enemy to liturgies and established forms, than their more modern followers; for, though he laid aside the Book of Common Prayer about the year 1662, he then introduced one of his own composition, which more strongly resembled the liturgy of the church of Geneva. There is now, however, no liturgy or public form in use in this church; and the minister's only guide is the Directory for the Public Worship of God, which prescribes rather the matter than the words of our addresses to God : nor is it thought necessary to adhere strictly to it; for, as in several other respects, what it enjoins with regard to reading the holy Scriptures in public worship is, at this day, but seldom practised. By the ecclesiastical laws, the sacrament of the Lord's supper should be dispensed in every parish four times in the year; but this law is now seldom adhered to, unless in most chapels of ease. In country parishes it is often administered not above once a year, and in towns generally only twice a year. The people are prepared for that holy ordinance by a fast and public worship on some day of the preceding week, gene-

rally on Thursday, and by a sermon on the Saturday ; and they meet again in the kirk on the Monday morning for public thanksgiving. They have no altars or chancels in the kirks, and the communion tables are not fixed, but introduced for the occasion ; and are sometimes two or more in number, and of considerable , length. At the first table, the minister, immediately upon concluding what they call the consecration prayer, usually proceeds to read the words of the institution, and, without adding more, to distribute the elements, which he does only to the two communicants who sit nearest him on each hand. It is usual for the elders to administer them to the rest. But before, or during, the services of the succeeding tables, addresses at some length are made to the communicants by the minister, or by one of the ministers (for there are generally two, three, or more present), standing at the head of the communion table.

In conducting public worship, the creed, the ten commandments, and the doxologyare not introduced as essential parts of the service ; and there is no observation in this church of festivals.

Days of public fasting and thanksgiving she does indeed sometimes observe, particularly

those commanded by his majesty, together with the fast previous to the celebration of the holy communion, and the day of thanksgiving after it. But she has no Lent fast — no kneeling; at public prayer — no public worship of God, without a sermon, or public instruction — no instrumental music — no consecration of churches or of burying grounds — no funeral service or ceremony — no sign of the cross in baptism — no regular use of the Lord's Prayer — and no administration of the holy communion in private houses.

With regard to confirmation, her members reject it ; but they do not condemn it. On the contrary, ' we endeavour,' says Dr. Hill, ' to supply the want of it in a manner which appears to us to answer the same purpose. We account ourselves bound to exercise a continued inspection over the Christian education of those who have been baptised, that, as far as our authority and exertions can be of any avail, parents may not

neglect to fufil their vow ; and when young persons partake, for the first time, of the Lord's Supper, we are careful, by private conference and public instruction, to impress upon their minds such a sense of the nature of that action, that they may consider themselves as then making that declaration of faith, and entering into those engagements, which would have accompanied their baptism had it been delayed till riper years.

By the First Book of Discipline, which was compiled by Knox and his associates, and ratified by anact of council in 1560, the apostolical rite of ordination by the imposition of hands was laid aside as superstitious; but it was restored in the second book of Discipline, in 1578, and is now practised as formerly in the kirk of Scotland, where, as in other presbyterian churches, ordination is vested in the presbytery ; and every minister is ordained to his charge in the face of fvs congregation.

The metre of the version of the Psalms used in this church must be allowed to be very inferior ; but, besides the Psalms of David, a col-

lection of translations and paraphrases in verse, of several passages of sacred Scripture, together with some hymns, has been introduced into this church of late years, by permission of the general assembly ; and a new version of the Psalms in metre is now in progress.

The church government and discipline are amongst the most important features of the Scottish church. At the Revolution, the famous statute of 1592 was taken as the model : the different courts specified in it were restored : viz. sessions, presbyteries, provincial synods, and general assem-

blies. Regard was also had to the form of church government agreed upon in the assembly of Westminster divines, and ratified afterwards by an act of the general assembly, in the year 1645 ; and, of the societies at present formed upon the presbyterian model, it may safely be affirmed that the church of Scotland is by much the most respectable. A short view of her constitution may not therefore be unacceptable to the reader ; and hers may be. considered as the fairest specimen, now existing, of presbyterian church government in general. In this church, every regulation of public worship, every act of dis-

cipline, and every ecclesiastical censure, which

in episcopal churches flows from the authority

of a diocesan bishop, or from a convocation of

the clergy, is the joint work of a certain number

of ministers and laymen acting together with equal

authority, and deciding every question by a

plurality of voices.

The laymen, who thus form an essential part

of the ecclesiastical courts of Scotland, are called elders, and ruling elders ; but, though they have

the same name, it does not appear that they hold

the same office with the elders mentioned by St.

Paul in 1 Tim. v. &c. ; for these last labored in the word and doctrine.

The number of elders is proportioned to the ex-

tent and population of the parish ; and few

parishes, except where the unpopularity of the

minister has induced most of the people to

secede, have fewer than two or three. In Edin-

burgh every parish has, at least, twelve elders.

The Canongate parish has betwixt twenty and

thirty; and the West Kirk, or St. Cuthbert's, which is one of the most populous parishes in Scot-

land (containing within its bounds upwards of

40,000 souls), has above fifty. These elders are

grave and sober persons, chosen from among the

heads of families of known orthodoxy and steady adherence to the worship, discipline, and government of the kirk. Being solemnly engaged to use their utmost endeavours for the suppression of vice, and the cherishing of piety and virtue, and to exercise discipline faithfully and diligently, the minister, in the presence of the congregation, sets them apart to their office by solemn prayer, and concludes the ceremony, which is called ordination, with exhorting both elders and people to their respective duties.

This office, in many respects, resembles that of the churchwardens in the church of England ; but the lay elders seem to possess more spiritual jurisdiction than the churchwardens in their respective parishes.

The kirk session, which is the lowest ecclesiastical judicatory, or court, and which the Westminster Assembly in 1645 asserted to be of divine right, consists of the minister and those elders vf the congregation. The minister is, ex officio, moderator, but has no negative voice over the decision of the session ; nor indeed has he a right to vote at all, unless when the voices of the elders are equal and opposite. He may, indeed,

enter his protest against their sentence, if he think it improper, and appeal to the judgment of the

presbytery ; but this privilege belongs equally to

every elder, as well as to every person who may

believe himself aggrieved by the proceedings of

the session. Nor can the minister, though he

may examine, admit any person to the privilege

of membership, till the whole of his session, as

well as himself, are satisfied both as to the candi-

date's knowledge and piety.

The next juaicatory is the Presbytery, which

answers to the consistories in the Protestant

churches on the continent, and is also maintained

by some to be jure divino. It consists of all the pastors within a certain district, and one ruling

elder from each parish, commissioned by his

brethren to represent, in conjunction with the

minister, the session of that parish. It treats en

such matters as concern tlie purticular churches

within its bounds — as the examination, admis-

sion, ordination, and censuring of ministers: the

licensing of probationers ; rebuking of gross or

contumacious sinners ; the directing the sentence

of excommunication ; the deciding upon re-

ferences and appeals from kirk sessions ; resolv-

ing cases of conscience : explaining difficulties

in doctrine or discipline ; and censuring, accord-

ing to their views of the word of God, any

heresy or erroneous doctrine, which hath either

been publicly or privately maintained within the

bounds of its jurisdiction. But that part of the constitution of this church, which gives an equal

vote, in questions of heresy, to an illiterate me-

chanic and his learned pastor, has not been uni-

versally approved, but has been considered by

some as having been the source of much trouole

to many a pious clergyman, who, from the laud-

able desire of explaining the Scriptures, and de-

claring to his flock all the counsel of God, has

employed a variety of expressions, of the same

import, to illustrate those articles of faith which

may be obscurely expressed in the established

standards. The fact, however, is, that in pres-

byteries the only prerogatives which the pastors

have over the ruling elders are the power of or-

dination by imposition of hands, which is lodged

in this ecclesiastical court, and the privilege of

having the moderator chosen from their body.

The number of presbyteries in Scotland is seventy-eight; and those of Edinburgh, Glasgow, Perth, and two or three more, meet every month ; but in country districts they seldom meet above four or five times a year, unless when some business occurs which requires them to meet oftener.

From the judgment of the presbytery there lies an appeal to the provincial synod, which ordinarily meets twice in the year, is opened with a sermon, and exercises over the presbyteries within the province a jurisdiction similar to that which is vested in each presbytery over the several kirk sessions within its bounds. Of these synods, there are in the church of Scotland sixteen, including that of Shetland, which are composed of the members of the several presbyteries within the respective provinces which give names to the synods.

The highest ecclesiastical court, and the fountain of jurisdiction in this church, is the general assembly, which consists of a certain number of ministers and ruling elders, delegated from each presbytery, and of commissioners from the royal

boroughs. By act 5th of the assembly 1694, a presbytery, in which there are fewer than twelve parishes, sends to the general assembly two ministers and one ruling elder ; if it contain between twelve and eighteen ministers, it sends three of these and one ruling elder; if it contain between eighteen and twenty-four ministers, it sends four ministers, and two ruling elders ; and of twenty-four ministers, when it contains so many, it sends five, with two ruling elders.

Every royal borough sends one ruling elder (and Edinburgh- two), whose election must be attested by the kirk sessions of their respective borough ; and every university sends one commissioner from its own bodv.

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According to this proportion of representation, the general assembly, in the present state of the church, consists of the following members, viz. —

Ministers representing presbyteries . . . 200

Elders representing presbyteries 89

Elders representing royal boroughs ... 67

Ministers or elders representing universities 5

The representatives are chosen annually about six weeks before the meeting of the assembly (which always takes place in May) and in Edinburgh ; and the ruling elders are seldom the lay elders of the different parishes, but often gentlemen of the law in Edinburgh, and men of eminence in the kingdom for rank and talents. Yet many of them, it is well known, are not so deeply impressed with a sense of religion, as to be interested in the proceedings of an ecclesiastical court where temporalities are not concerned, and much less to be duly qualified for deliberating and deciding on religious subject's. This assembly is honored with a representative of the sovereign, in the person of the lord high commissioner, who is always a nobleman, and presides, and has a salary of £1500 per annum; but he has no voice in their deliberations. The order of their proceedings is regular, and in general much decorum is observed ; but sometimes opposition runs high between the two parties in the church, who often take this opportunity of trying their strength; and a confusion arises from the number of members, the collision of ministers and laymen,

&c.; which the moderator,

who is annually chosen from among the former,

to be, as it were, the speaker of the house, has

not sufficient authority to prevent. The assem-

bly continues to sit for ten days ; at the end of

which time it is dissolved, first by the mode-

rator, who appoints another assembly to be held

upon a certain day of the month of May in the

following year ; and then by the lord high com-

missioner, who, in his majesty's name, appoints

another assembly to be held upon the day which

had just been mentioned by the moderator.

Appeals are brought from all the other eccle-

siastical courts in Scotland to the general assem-

bly ; and, in questions purely religious, no appeal

lies from its determinations. At the close of

each general assembly, a commission of assem-

bly is appointed; but to the laws already made

no new one can be added, till it has been pro-

posed in one general assembly, and by them

transmitted to every presbytery for their consent.

If this, or at least the consent of the majority, is obtained, the assembly next year may pass it

into an act, which henceforth must be regarded

as a constitutional law of the kirk. In the sub-

ordination of these assemblies and courts of review, parochial, presbyterial, provincial, and national, the less unto the greater, consists the external order, strength, and stedfastness of the church of Scotland.

The discipline of this church, though now somewhat relaxed, was never so rigorous as that of Geneva, the church on whose model it was formed. In that temporal exercise of discipline

which the general practice of the church of Scotland recognises as congenial to her constitution, ‘ care is taken,’ says Dr. Hill, ‘ to avoid every appearance of intermeddling officiously with those matters that fall under the cognisance of the civil magistrate. No solicitude is ever discovered to engage in the investigation of secret wickedness : counsel, private admonition, and reproof are employed in their proper season ; and the public censures of the church are reserved for those scandalous sins which bring reproach upon religion, which give offence to the

Christian society, and which cannot be overlooked without the danger of hardening the sinner, of emboldening others to follow his example, and of disturbing and grieving the minds of many worthy Christians.'

It was formerly the general practice to oblige adulterers and fornicators to present themselves in the kirk, for three different Sundays, oh a bench, known by the name of the stool of repentance, when they were publicly rebuked by their minister, in the face of the congregation ; but this punishment is now often changed iiito a pecuniary fine. For this change, however, there seems to be no law ; and the old practice of publicly rebuking such transgressors, though very much disliked and cried down by the gentry and others, as an occasion of child murder, &c., is still continued in a great majority of the parishes. In Edinburgh it is entirely discontinued, because believed to be impracticable ; but in Glasgow, Paisley, Stirling, and other towns, the old discipline is maintained.

By the discipline of the church, a parent who is under public scandal is disqualified from pre-

senting his child for baptism, till such time as his character is cleared up, or he has satisfied the kirk ; but as it sometimes happens that this does not soon take place, and in the mean time the child is refused the benefit of baptism, this practice is disapproved of by many, as having the appearance of punishing the children for the iniquity of the parents. ‘ Anima quae peccaverit, ista motietur.’

In Scotland, and the islands of Scotland, the kirk contains within her hounds 893 parishes, and about 1,500,000 members. The number of ministers belonging to her, who enjoy benefices, and possess ecclesiastical authority, is 940. Of this number, seventy-seven are placed in collegiate charges, mostly in the proportion of two ministers for each of these charges; and the remaining 863 ministers are settled in single charges, each of them having the superintendence of a whole parish. In very populous parishes, chapels of ease are erected with consent of the kirk, and are supported by voluntary subscriptions; but the ministers who officiate in them are not included in this number, as they

are not members of any ecclesiastical courts.

The duties of the Scotch clergy are numerous

;>nd laborious. They officiate regularly in the

public worship of God ; and, in general, they

must go through this duty twice every Sunday

(exclusive of other occasional appearances), de-

livering every Sunday a lecture and a sermon,

Aith prayers. It is also expected, throughout

Scotland, that the prayers and discourses shall be

of the minister's own composition; and thˆ

prayers in all cases, and the discourses in most

instances, are delivered without the use of papers.

They are expected to perform the alternate du-

ties of examining their people from the Scrip-

tures, and catechisms of the church, and of

visiting them from house to house, with prayers

and exhortations. This is done commonly once

in the year, being omitted only in those cases

wherein the ministers deem it impracticable, or

not acceptable, or at least not necessary. The

charge of the poor devolves, in a very particular

manner, on the clergy ; and in them also is vested the superintendence of all schools within their

bounds.

The provision which has been made, by the

law of Scotland, for the support of the established clergy, consists in a stipend, payable in victual

or money, or partly in each ; a small glebe of

land ; and a manse (parsonage-house) and oflice-

houses. In cities and towns the stipends are

generally paid in money ; in ‘ landward’ (i. e.

country) parishes, they are, for the most part,

liquidated in money and victual. They are de-

rived from a charge on the rents of land, paid by

the landlord, throughout Scotland, upon princi-

ples fixed so far back as the reigns of Charles I.

and II., confirmed by king William, and now

made permanent by the treaty of Union. So

long as there are any free teinds (i. e. tithes) in a parish, belonging to the minister, he can bring

a process for augmenting his stipend, at the end

of every twenty years, before the court of ses-

sion, whose members sit as commissioners for

the plantation of kirks and valuation of teinds.

In this process all the heritors of land in the

parish are called as parties ; and if the minister

can prove that, from change of circumstances,

his stipend should be augmented, the ju

grant his request; but, if they see no cause f. r entertaining his reasons, they refuse his applica-

tion.

An act of parliament passed in 1810, granting £10,000 per annum for augmenting the smaller parish stipends in Scotland. By this act, the lowest stipend assigned to a minister of tlu tablishment is £150 sterling, with a small sum. generally £8 6s. 8d., for communion elements. Stipends, where the tiends are not exhausted, are, with the exclusion of communion elements, wholly paid in victual, generally oatmeal and barley, in equal proportions ; and the court frequently allocates, as it is termed, to a minister, from sixteen to eighteen chalders. If the stipend exhaust the teind, it is sometimes paid in money ; and there are cases in which the teind was originally set apart in money, and not in victual. The glebe consists legally of at least four acres of arable land, and, in fact, generally exceeds that measure. Most of the ministers of country parishes enjoy glebes; but those of royal boroughs in general, as well as those of cities and towns, have no glebes. Besides the glebe, the minister of a landward parish is entitled to as much of grass-lands as may support a horse and two cows ; ‘ yet perhaps one half of the clergy have no grass, nor any allowance for it.’

The whole church establishment, as a burden on land, may be stated in one view, as follows—

viz. a glebe, of perhaps about six or seven acres, out of nearly 21,000, and the grass, where it is allowed ; a stipend of about 9rf. in the pound of the land rents ; and buildings and communion charges, amounting to 4rf. or 5d. more in the pound, of these land rents. All these put together constitute the burdens of the Scottish ecclesiastical establishment, in so far as proprietors of land are affected by them ; and are not supposed to exceed £300,000 per annum. Thus the clergy are removed from the extremes of wealth and poverty. Their revenues, though sufficient, are not ample enough to tempt the cupidity of the higher classes ; and the livings are therefore engrossed by persons sprung from the middle and lower classes, who naturally identify themselves with these classes, understand their situations, and participate in all their joys and sorrows. Being all on nearly a footing of equality, they have no unattained object of ambition to distract their attention from the important labors

of their professions. They have seldom any prospect of changing their livings, and therefore find it their interest, as well as their duty, to establish their character and respectability by a diligent and faithful discharge of professional duties.

The dissenters from the Scottish kirk are numerous, and embrace, in the metropolis and on the eastern coast, particularly in the county of Aberdeen, a considerable number of episcopa lians. They are supposed to amount to upwards of 40,000, having six bishops and seventy clergy-men ; and are the only body of dissenters that have been distinctly recognized by the parliament of Great Britain. Each bishop, as in Sweden, Denmark, and America, as well as exercising a superintendence over the other clergy, is the pas-tor of a particular congregation. The history of this body is interesting. At the Revolution the Scottish church, as we have seen, became by act of parliament presbyterian ; chiefly from the cir-cumstance of her bishops and clergy holding the extreme doctrines, as they have been called, of non-resistance and passive obedience to the

powers that be. That is, they became nonjurors in respect to the government of William and Mary.

Such, say the episcopal writers, being the conduct and consequent circumstances of the governors and clergy of the Scottish episcopal church, they have, on this occasion, exhibited an instance of disinterestedness, of generous attachment to fallen majesty, and of conscientious adherence to principle, than which the history of the world does not furnish one more illustrious. Whether they acted rightly or not is a question that, from the opposite views and discordant principles and passions of mankind, we can scarcely suppose will ever be determined to the satisfaction of all parties. This much, however, is certain, that had those venerable fathers possessed the more pliant principles of many distinguished characters of that turbulent period — had they truckled without scruple to the authorities which then prevailed, or measured their notions of what was just and right by their feelings of what was most conducive to their present and temporal interest —

'Trojaque nunc stares — Priamique arx alta ma acres !'

they might have remained in the peaceable possession of their dignities and benefices; for it is well known that the prince of Orange, afterwards king William III., offered to protect them, and preserve their establishment inviolate, provided they would come over to his interests, and support his pretensions to the throne. But this, from a principle of conscience, they unanimously declined to do ; and the consequences were that they and many of their clergy were given up a prey to their enemies, and were exposed to such hardships and indignities as one cannot read of without emotion, or think of without pain. Some relaxation of the seventies with which they were treated under king William was, however, granted them by queen Anne, in 1712, when an act of parliament was passed ' to prevent the disturbing of those of the episcopal communion in Scotland, in the exercise of their religious worship, and in the use of the liturgy of the church of England.' In consequence of this indulgence that liturgy, which the ablest them had long professed to admire, and which

some of them had already introduced into their assemblies, was universally adopted by them; and public chapels, which had till then been prohibited, were every where built, and well frequented. The same principles which had influenced them to withhold their allegiance from king William and queen Anne, would not allow them, as a body, to transfer it to a new family, clogged as it was by so many oaths, especially by that of abjuration. Yet many individuals complied with the government, and gave every test of allegiance which was required of them ; but, as if the insurgents of 1715 had been wholly of their communion, new restraints were then laid upon their public worship, and upon theirs only, which no doubt revived in some degree their original prepossessions. These restraints, however, were neither very severe, nor of long continuance ; for by the year 1 720 their congregations were as numerous as formerly, consisting, especially in the north, of men of all ranks, even such as held offices of trust under the established government. Yet nothing less than the extinction of this body seems to have been the aim of those whose enmity proposed, and whose influence procured

to be enacted, those penal statutes of 1746 and

1748, which were less calculated to eradicate

the attachment of this society to the house of

Stuart than to produce disaffection to the existing

government, where it did not previously exist.

They had also an unhappy effect on the religion

of the country ; for, by driving out of the epis-

copal church many persons of distinction, whose

principles or prejudices would not allow them

to communicate with any other society of Chris-

tians around them, the consequence was, as

foreseen and foretold by bishop Sherlock, that

neglect of religion, and of the duties of public

worship, which has long furnished matter of

serious regret, and which is still too visible even at the present duy. Upon the clergy, however,

who even then amounted to nearly 200, those

rigorous laws were not long rigorously executed.

After a few years, tlie burning of chapels, and

the imprisonment of ministers, were occurrences

that seldom happened ; but in as far as those laws affected the political privileges of those laymen

who frequented their chapels, in that part of their operation they were in no degree relaxed till

1792, when they were wholly repealed, and the

Scottish episcopalians tolerated, like other well-

affected dissenters from the national establish-

ment.

The act of parliament which at this time

passed for their benefit requires them to sub-

scribe the thirty-nine articles of the church of

England.

The other dissenters from the kirk are of the

same variety in denomination and general cha-

racter as the dissenters of England, and embrace

burghers and antiburghers, now united under the

title of the United Secession ; Quakers, Bereans,

Baptists, and Glassites. There are Catholic

churches also in almost all the principal towns ;

in the northern parts of Scotland this religion

has survived the reformation.

In no country is there ampler provision for

education than in Scotland : perhaps in no other

part of the world is equal attention paid to the

subject. To the efficacy of her institutions for

this purpose is to be ascribed that general cul-

tivation which is diffused among the mass of the

people. An act passed in the reign of William and Mary, ordaining that there shall be a school and a school- master in every parish, his fee not to be under 100 merks, and not to be above 200. These establishments, in which were taught reading, writing, arithmetic, Latin and Greek, placed a superior education within the reach of the poor ; every person was instructed in the ordinary branches of education ; knowledge was eagerly sought afier, and ignorance was accounted disgraceful. This laudable spirit is now so universally spread that a more moral, orderly, or better instructed class of people than the great body of the community in Scotland, is no where found. In consequence of the depreciation of money, the allowances to those parish schoolmasters became gradually insufficient for their decent maintenance ; and in 1803 the legislature most wisely augmented the schoolmaster's salary to 300 merks the lowest, and 400 merks the highest, together with a dwelling-house of at least two apartments, a commodious school-house, and a garden containing a quarter of an acre of ground. Besides these parish-

schools, there are academies in most of the large towns, where every branch of education is taught. Scotland has also four universities, namely, at Edinburgh, St. Andrew's, Glasgow, and Aberdeen. That of Edinburgh has acquired the most extensive and well merited reputation, for the great attainments of its professors in literature and science ; students of medicine in particular have long resorted to it from all parts of the world ; and it has often been considered the very first of medical schools. At the time of the union with England, the ancient constitution of Scotland was so far superseded, that in the parliament of the United Kingdom the Scots nobility are represented by sixteen peers. In the house of commons, the freeholders of the counties, amounting to 2429, are represented by thirty commissioners or knights of the shires. The royal burghs, which are sixty-five in number, exclusive of the city of Edinburgh, which sends one member, are divided into fourteen districts, which return as many members, elected by a delegate from each burgh. Scotland, however, still retains her own ancient laws and in-

stitutions ; and civil and criminal justice is administered by the college of justice, instituted by James V. in 1532, after the model of the French parliament, to supply an ambulatory committee of parliament, who took on themselves the name of the lords of council and session, which the great members of the college of justice still retain.

The court of session is the highest court in Scotland, and consists of a president, and fourteen ordinary lords. This court may be termed a standing jury, who determine all civil causes according to the statutes, the custom of the nation, and the civil law. No appeal lies from it but to the house of lords. In 1807 the court of session was formed into two divisions, the first, consisting of seven members, under the lord president; the second division, under the lord justice clerk, consisting of six members. In 1815 a jury court was established under a lord chief commissioner, and two other commissioners for the trial of civil cases. The court of justiciary is the highest criminal court in Scotland. It consists of a lord justice general, who

has a salary of £2000 per annum ; a lord justice clerk, who is president; and five other judges nominated from the senators of the college of justice. The pannel has not the power, as in England, of setting aside a juryman, without assigning a reason. He must be served with a copy of his indictment, and a list of the witnesses who are to appear against him, and another list of forty-five men, out of which his jury is to be chosen, fifteen free days before his trial. The lords commissioners of justiciary make a circuit twice a year to the different districts of Scotland. All criminal cases before this court are tried by a jury of fifteen persons, whose verdict condemns or acquits by a bare plurality of votes. The court of exchequer has the same powers, privileges, jurisdictions, and authority over the revenue of Scotland, as that of England over the revenue of England. This court consists of a lord chief baron and four other barons, two remembrancers, a clerk of the pipe, &c. All the causes are here tried by jury. In the high court of admiralty there is only one judge, who is the king's lieutenant and justice

general upon the seas, and in all ports and har-

bours. He has a jurisdiction in all maritime

causes ; and by prescription he has acquired a

jurisdiction in mercantile causes not maritime.

His decisions are subject to the review of the

court of session in civil, and to that of the court of justiciary in criminal, cases.

The college or faculty of advocates answers to

the English inns of court ; and, subordinate to

them, is a body of inferior lawyers or attornies,

styled writers to the signet, because they alone

can substantiate the writings that pass the sit;-

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net. The commissary court consists of four

judges nominated by the crown, and 1ms an

original jurisdiction in questions of marriage and

divorce, and reviews the decrees of local com-

missary courts. It sanctions the appointment

of executors, and ascertains debts relating to the

last illness and funeral charges of persons de-

ceased, or obligations arising from testaments,

or actions of scandal, and upon all debts which

do not exceed £40. The keeper of the great

and privy seals, the lord register, and the lord advocate, are officers of state.

Every county has a chief magistrate called a sheriff, whose jurisdiction extends to certain criminal cases, and to all civil matters which are not by special law or custom appropriated to other courts. In cases of inferior importance, also, the magistrates of cities and royal burghs have a jurisdiction, which is subject to review of the sheriff. Justice of peace courts were instituted in 1809, which are in almost every respect similar to those in England, though their powers are not so well denned. There is also a small debt court held monthly in every town of any note, where cases not exceeding £5 are decided in a summary manner. See our article LAW, part III., for a more particular account of the statute and other laws of Scotland.

SCOTT (Daniel), LL.D., a learned English author and critic, who received the first part of his education at Tewksbury, and finished it at Utrecht, where he was graduated. He wrote several treatises on Theology; and, in 1745, published an Appendix to Henry Stephens's

Greek Lexicon, 2 vols. folio.

SCOTT (John), D.D., an eminent English divine, born, in 1638, atChippenham in Wiltshire. He was educated at Oxford ; admitted a commoner in 1657, and made great progress in logic and philosophy. He became minister of St. Thomas s in Southwark. In 1684 he was collated to a prebend in the cathedral of St. Paul's. Dr. Hickes tells us that after the revolution, 'he first refused the bishopric of Chester, because he would not take the oath of homage ; and afterwards another bishopric, the deanery of Worcester, and a prebend of the church at Windsor, because they were all places of deprived men.' In 1691, however, he was made rector of St. Giles's, and canon of Windsor. He published several works : — 1. The Christian Life, which has been often reprinted ; 2. Examination of Bellarmine's Eighth Note on Sanctity ; 3. Texts Examined which Papists quote for Prayer in an Unknown Tongue ; 4. Cases of Conscience. He died in 1695.

SCOTT (Rev. Thomas), an English clergyman of I he established church, was born at Bray toft

in Lincolnshire, February 4th, 1746, 1747. His father, a small farmer with a large family, was a man of strong sense, and ambitious of bringing up one of his family to a profession. The eldest son, therefore, was bred a surgeon, but died young ; on which Thomas was put to school to learn Latin. At the age of sixteen he was bound apprentice to a medical practitioner at Alford ; but at the end of two months he was dismissed, for what cause is not stated by his biographers. He was now employed to keep sheep, but, having a strong desire to enter into orders, he consulted a clergyman at Boston, who encouraged his attempt at qualifying himself for the ministry : and he had acquired a competent knowledge of Greek as well as Latin, when the bishop of Lincoln, Dr. Green, admitted him to orders in 1773. His first situation was a curacy •n Buckinghamshire, where he held a correspondence and controversy with Mr. John Newton, which ended in the conversion of Mr. Scott to '.he Calvinisiic sentiments of his friend : and, on Mr. Newton's removal, Mr. Scott succeeded him in the curacy of Olney: this was in 1781. Four years afterwards he removed to the chap-

lainship of the Lock Chapel, near Hyde Park Corner, and held besides two lectureships in the city. In 1801 he obtained the living of Aston Sandford, in Buckinghamshire; and here he died, April 16th, 1821, much beloved and respected. Mr. Scott was an able defender of Calvinism, and a good practical expositor of the Scriptures. His Family Bible has gone through several editions. His other works are numerous, and very popular with his party.

SCOTT (Sir Walter), Bart., eldest son of Walfer Scott, writer to the signet in Edinburgh, was born in that city, August 15, 1771. His mother, a friend of Burns and Allan Ramsay, was a lady of talent, and author of several small poems of considerable merit. He was educated at the high school of Edinburgh under doctor Adam, and at the university under professor Stewart. According to his own account, he had a distinguished character as a tale-teller, "at a time when the applause of his companions was his recompence for the disgraces and punishments which the future romance writer incurred for being idle himself, and keeping others idle,

during hours that should have been employed on their tasks." It was the favorite amusement of his holidays to wander, with a friend of the same taste, through the solitary environs of Arthur's seat and Salisbury crags, reciting and listening to such wild stories as his own and his friend's imagination were able to devise. This truant disposition seems to have been increased by a long illness, the consequence of the rupture of a blood-vessel, at the age of fifteen, during which he was left to the indulgence of his own taste in reading, and. after having devoured all the romances, old plays, and epic poetry furnished by a considerable circulating library, his time was occupied in perusing histories, memoirs, voyages, and travels. Two years spent in this manner, were followed by a residence in the country, in which he made the same use of a good library, to which he had access, that Waverley is represented to have done in a similar situation. Though lame from his birth, and early of feeble health, his strength was afterwards confirmed ; and, during the greater part of his life, he has been remarkable

for his personal activity, and passionately fond

of field sports. In 1792, having completed his preparatory studies, he was called to the bar; but his literary taste diverted his attention from the practice of his profession, which he soon abandoned for employments more agreeable to his inclination. His patrimonial estate was also considerable, and, in 1800, he obtained the preferment of sheriff of Selkirkshire, of about £300 a year in value. In 1806, he was appointed one of the principal clerks of the session in Scotland. His first literary attempts were translations from the German ballad poetry, which rirst became known in Great Britain towards the close of the last century. In 1796, he published a volume containing a poetical version of Burger's Lenore, and of the ballad of the Wild Huntsman (Der Wilde Jdger). This attempt he himself describes as a complete failure. His first original productions were several excellent ballads (Glenfinlas, the Eve of St. John, &c.), which appeared in Lewis's Tales of \Vonder (1801).

In 1302, appeared his Minstrelsy of the Scottish Border, a collection of ballads, ancient and modern, of the Border districts, with an introduction and notes (2 vols. 8vo.), which very much extended his reputation ; to which succeeded, in 1804, Sir Tristram, a metrical Romance of the Thirteenth Century, by Thomas of Ercildoune, with a preliminary dissertation and glossary. Meanwhile, Mr. Scott had married, and taken up his residence at Ashiesteel, on the banks of the Tweed, about thirty miles from Edinburgh, "a delightful retirement," to use his own words, " in an uncommonly beautiful situation, by the side of a fine river, whose streams are favorable for angling, and surrounded by hills abounding in game." His first original work of considerable extent, was the Lay of the Last Minstrel (1805), which was received with univ.-rsal applause, and was succeeded, two years alter, by Marmion (1808), the appearance of which was hastened by the' misfortunes of a near relation and friend. The Lady of the Lake (18 10), the Vision of Don Roderick (181 1), Rokeby (1812), Lord of the Isles (1814),

Harold the Dauntless, and the Bridal of Trier-

main, the two latter of which appeared anony-

mously, with some other works of less merit,

marked his brilliant poetical career. Upwards

of 30,000 copies of the Lay were sold by the

trade in England, previously to 1829, and of

Marmion (for which the author received £1000),

36,000 copies were sold between 1805 and

1825; for the manuscript of Rokeby the pub-

lishers gave him £3000. If the success of his

first productions is in some measure to be attri-

buted, as the author himself modestly intimates,

to the low state of poetry in Great Britain at the beginning of the present century, and lo the

substitution of the animated and varied octosyl-

labic verse, or romantic stanza, for the more

cumbersome and stately heroic, yet the freshness,

fire, and truth of description, the dramatic dis-

tinctness of the action and characters, the rich-

ness of the imagery, and the vivacity and poeti-

cal beauty of style which characterize them,

would at any time have attracted attention, and

won tiie admiration of the public. Mr. Scott

was, during the period in which his principal

poems appeared, also employed in editing the

works of other authors. In his capacity of editor, he completed the Works of Dryden, with a Life of the Author, and Notes (18 vols. 8vo., 1808); Lord Somer's Tracts (12 vols., 1809 to 1812); Description and Illustration of the I.ay of the Last Minstrel (1810); Sir Ralph Sadler's State Papers (2 vols. 4to., 1810) ; Poetical Works of Anna Seward (3 vols 8vo., 1810); the Woiks of Jonathan Swift (19 vols. 8vo., 1814); and the Border Antiquities of England and Scotland, 4to. In 1811, he removed to Abbotsford, six or seven miles below his former residence, on the Tweed, where he purchased a farm of about 100 acres, for the purpose of having some more quiet out-door occupation than field sports. "The nakedness of the land," says he, " was in time hidden by woodlands ; the smallest of possible cottages was progressively expanded into a sort of dream of a mansion house, whimsical in the exterior, but convenient within. Nor did I forget what is the natural pleasure of every man who has been a reader, I mean the filling the shelves of a tolerably large library." Here he continued

to reside, exercising the most open hospitality, and receiving the hcmage of admiration from all parts of the world His grounds were picturesquely, and at the same time profitably, laid out, and his library amounted to about 15,000 volumes. In 1814, he appeared in a new character — that of a novelist. Although the greater part of his romances were published anonymously, and he did not disclose the fact of his being the author until February, 1827, yet little doubt was previously entertained on the subject. A portion of Waverley was written as early as 1805, and announced under the title of " Waverley, or 'Tis Fifty Years since." On account of the unfavorable opinion of a friend, it was thrown by and forgotten, until, about eight or nine years afterwards, the author accidentally discovered it in searching for some fishing tackle, and immediately set to work to complete it. The subsequent novels have come out in the following order: In 1815, Guy Mannerin^; in 1816, the Antiquary, and Tales of My Landlord (consisting of the Black Dwarf and Old Mortality); 1818, Rob Roy, and Tales of my

Landlord (2nd series, consisting of the Heart of Mid Lothian); 1819, Tales of My Landlord (3rd series, consisting of the Bride of Lammermuir, and the Legend of Montrose) ; 1820, Ivanhoe, the Monastery, and the Abbot ; 1821, Kenilworth ; 1822, the Pirate, and the Fortunes of Nigel; 1823, Quentin Durward, and Peveril of the Peak; 1824, St. Ronan's Well, and Kedgauntlet; 1825, Tales of the Crusaders; 1826, Woodstock; 18'27, Chronicles of the Canongate (1st series); 1828, Chronicles of the Canongate (2nd series); 1829, Anne of Gi-ierstein; and 1831, Tales of My Landlord (4th series). These works, rapidly as they were produced, were not only the fruits of his unaided genius, but the original manuscripts are entirely written in his own hand, excepting those of 1818 and 1819, when his illness obliged him to employ an amanuensis. Among his miscellaneous works, most of which are contained in the col

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TIIK AirnroR OF – WAVE RLE Y,

IN HIS STUDY.

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lection entitled Miscellaneous Prose Works of Sir W. Scott (6 vols. 1827), are Paul's Letters to his Kinsfolk (1815), giving an account of his visit to Waterloo, &c. ; Essays on Chivalry, Romance, and the Drama, in the Supplement to the Encyclopaedia Britannica; Lives of the Novelists; and contributions to different periodical works, &c. In 1820, he was created a baronet. In 1827, appeared his Life of Napoleon (9 vols.) — a work of partial views, and executed with too little care and research to add to the brilliant reputation of the author. The first, second, and third series of the Tales of a Grandfather, illustrative of events in Scottish history. The Letters on Demonology, and the History of Scotland (2 vols., 1830), close the long list of the works of this prolific writer. The revised editions of his poems and novels contain many interesting personal details, and sketches of his literary history, and some of them have been collected and arranged in America, in a single volume, under the title of Autobiography of Sir

Walter Scott, Bart.

In 1831, an indisposition, supposed to have arisen from violent and protracted mental exertion, began to assume a settled character, and his physician recommended a residence in Italy as the best means of delaying the approach of a dangerous illness. He in consequence set sail for Italy on the 29th of October, 1831,; but, after an absence of nine months, returned in a more unfavourable state of health than when he departed. He returned once more to Abbotsford, and lingered on until the 21st of September, when he expired at half-past one in the afternoon. He was buried amidst the ruined walls of Dryburgh Abbey, on the 25th of the month in which he died ; and the hills were covered, and the villages filled, with mourners. He was borne from the hearse by his own domestics, and laid in the grave by the hands of his children.

SCOTT, a county of the north part of Kentucky, United States. The chief place is George Town. Also a county of Virginia, formed in 1814 out of the counties of Lee, Russel, and

Washington.

SCOTUS (Joannes), or John Erigena, a famous scholastic divine, born about the beginning of the ninth century ; but where, is a matter of dispute among authors. All agree, however, in relating that he travelled to Athens, where he acquired a competent knowledge of the Greek and other oriental languages; and, that he afterwards resided many years in the court of Charles the Bald, king of France, who, on account of his singular abilities, treated him as his intimate friend and companion. During his residence with Charles, he wrote several books of scholastic divinity ; which, though absurd enough, were at that time not sufficiently so to secure him from the imputation of heterodoxy; and on that account the pope commanded Charles the Bald to send him to Rome ; but the king had too great a regard for his companion to trust him with his holiness. One of the chief controversies in which Scotus was engaged, and with which the pope was much offended, was concerning thy iv.il presence of the body und blood of Christ in the wafer. His opinion was

expressed in these few words : — ‘ What we receive corporally is not the body of our Lord ; but that which feeds the soul, and is only perceived by faith.’ Whether Scotus returned to England, or ended his days in France, is a matter of doubt. Some historians tell us that he left France in 864 ; and that, after residing about three years in Oxford, he retired to the abbey of Malmsbury. He died about 874. Some relate that he was invited to England by king Alfred ; but in this they confound him with John, abbo of Etheling, who was assassinated in 895 ; and to this mistake the various contradictory accounts of him are to be attributed. He appears from his writings to have been a man of talents, and, in point of learning, superior to any of his contemporaries. He wrote, 1. De Divisione Naturae, lib. v. 2. De Pradestinatione Dei. 3 Excerpta de DitTerentiis et Societatibus Graci Latinique Verbi. 4. De Corpore et Sanguine Domini. 5. Ambigua S. Maxima seu Scholia ejus in difficiles locos S. Gregorii Nazianzeni, Latine Versa. 6. Opera S. Dionysii quatuor in Latinam Ling. Conversa. 7. De Visione Dei,*

and several other works in MS. preserved in different libraries.

SCOTUS, DUNS (John). See DUNS SCOTUS.

SCOUGAL (Henry), M.A., second son of Patrick Scougal, bishop of Aberdeen, was born June 1650, at Salton. On finishing his courses, he was appointed professor of philosophy in the university of Aberdeen. In four years, he was, at the age of twenty-three, ordained a minister, and settled at Auchterless, twenty miles from Aberdeen ; where his zeal and ability were eminently displayed. In the twenty-fifth year of his age he was admitted professor of divinity in the king's college, Aberdeen. He died of a consumption on the 20th of June, 1678, in the twenty-eighth year of his age, and was buried in the King's College Church in Old Aberdeen. The principal work of Scougal is a small treatise entitled, The Life of God in the Soul ot Man.

SCOUN'DREL, n. s. Ital. scondaruolo. A hider. — Skinner. A mean rascal ; a low petty villain. A word rather ludicrous.

Now to be baffled by a tcoundrel,

And upstart sec'tiy, and a mungrel. Hudikras.

St.3vndreli as these wretched Ombites be,

Canopus they exceed in luxury. Tate.

SCOUR, v. a. & v. n. f Goth, skurer ; Dan.

SCOUR'ER, n. s. \ skurer ; Belg. scheu-

ren; Ital. scorrere. To brush hard in order to

clean ; clean by rubbing ; cleanse ; purge ;

range about ; to perform scouring operations :

be purged or lax; rove; range; run here and

there : a scourer is a person or thing that scours.

Divers are kept continually to scour these seas, in-

fested greatly by pirates. Sandyt.

Poor Vadius, loDg with learned spleen devoured,

Can taste no pleasure since his shield was tcoured.

Pope.

SCOURGE, n. s. & v.a. Fr. escourgee ; Ital.

scoreggia ; Lat. corregia. A whip ; lash ; an

instrument of discipline ; punisher of any kind :

to scourge is to use such an instrument.

SCR

Immortal Jove !

Let kings no more with gentle mercy sway,

Or bless a people willing to obey ;

But crush the nations with an iron rod,

And every monarch be the scourge of God. Pope.

SCOUT, n. s. & v. n. Fr. escout, from escou-

ter ; Lat. auscultare, to listen ; Ital. scolta. One who is sent privily to observe the motions of

the enemy : to go out in this way.

Oft on the bordering deep

Encamp their legions ; or with obscure wing

Scout far and wide into the realm of night,

Scorning surprise. MUton.

SCOWL, v. n. & n. s. Sax. j-cyhan, to squint;

Isl. skeeta sig, to look sour. To frown ; pout ;

look angry, or sullen : a look of this kind ;

gloom.

I've seen the morning's lovely raj

Hover o'er the new-born day

With rosy wings so richly bright,

As if he scorned to think of night ;

When a ruddy storm, whose scowl

Made heaven's radiant face look foul,

Called for an untimely night,

To blot the newly-blossomed light. Crashata.

SCRAB'BLE, v. n. Belg. hrubbelen, scraffe-

Un, to scrape or scratch ; Dan. scrabble. To paw

with the hands.

He feigned himself mad in their hands, and scrab-

bled on the doors of the gate. 1 Samuel xxi. 13.

SCRAGG, n. s.) Belg. scraghe. Any thing

SCRAO'GY, adj. J thin or lean : the adjective

corresponding.

From a scraggy rock, whose prominence

Half overshades the ocean, hardy men,

Fearless of rending winds and dashing waves,

Cut samphire. Philips.

SCRAM'BLE, v. n. The same with SCRAB-

BLE, says Johnson. A frequent, of Goth, kranut,

Dan. yranie, the hand. — Thomson. To catch

at any thing eagerly and tumultuously with the

hands ; to catch with haste preventive of ano-

ther ; to contend tumultuously which shall catch

any thing.

Of other care they little reckoning make,

Than how to tcramble at the shearer's feast,

And shove away the worthy bidden guest. Milton.

SCRAN'NEL, adj. [Of this word I know

not the etymology, nor any other example. —

Johnson.] Swed. skrerue. — Thomson. Vile;

worthless. Perhaps grating by the sound.

When they list, their lean and flashy songs

Grate on their scrannel pipes of wretched straw.

Milton.

SCRAP, n. s. From scrape, a thing scraped

or rubbed off; a small particle or piece; a frag

ment ; crumb ; small piece of paper.

SCRAPE, v. a. & n. $. Sax. j-crieopan ; Belg.

schrapen ; apparently from Gr. ypaˆw. To de-

prive of the surface by the light action of a sharp instrument ; pare even ; in a low sense, a diffi-

culty ; perplexity : a scraper is gin instrument

for cleansing by scraping shoes : also a miser

and a vile fiddler.

The chiming clocks to dinner call ;

A hundred footsteps tcre.pt the marble hall. Pope. , SCRATCH, v. a. &rz.. Belg. kratzer. To*

tear or mark with slight ragged incision! : a*

mark thus made.

SCR

I should have scraiched out your unseeing eyes.

To make my master out of love with thee.

Shaktpeare.

I had rather hear my dog bark at a crow, than a

man swear he loves me. — Keep your ladyship still in that mind ; so some gentleman or other shall 'scape a predestinate scratcht face. Id.

Heaven forbid a shallow scratch should dtive

The prince of Wales from such a field as this.

Id. Henry IV.

Francis Cornfield did scratch his elbow, when he

nad sweetly invented to signify his name St. Francis, with a friary cowl in a cora field. Camden.

Or if too hard and deep

This learning be for a scratch'd name to teach

It as a given death's-head keep,

Lovers' mortality to preach,

Or think this ragged bony name to be

My ruinous_anatomy. Donne.

Scots are like witches : do but whet your pen,

Scratch till the blood come, they'll not hurt you then.

Cleaveland.

To wish that there were nothing but such dull

tame things in the world, that will neither bite nor scratch, is as childish as to wish there were no fire in nature. More.

The lab'ring swain

Scratched with a rake a furrow for his grain,

And covered with his hand the shallow seed again.

Dry den.

Unhand me, or I'll scratch your face ;

Let go, for shame. Id.

The coarse file cuts deep, and makes deep scratches in the work ; and, before you can take out those deep scratches with your finer cut files, those places where the risings were when your work was forged, may

become dents to your hammer dents.

Moxons Mechanical Exercises.

A sort of small sand-colored stones, so hard as to scratch glass. Crew's Museum.

These nails with scratches shall deform my breast,

Lest by my look and color be expressed

The mark of aught high-born, or ever better dressed.

Prior.

The smaller the particles of those substances are,

the smaller will be the scratches by which they conti-

nually fret and wear away the glass until it be po-

lished ; but be they never so small, they can wear away the glass no otherwise than by grating and

tcratehing it, and breaking the protuberances ; and

therefore polish it no otherwise than by bringing its roughness to a very fine grain, so that the scratches and frettings of the surface become too small to be visible. Newton't Opticks.

Other mechanical helps AreUcus uses to procure

sleep, particularly the scratching of the temples and the ears. Arbuthnot.

Be mindful, when invention fails,

To scratch your head, and bite your nails. Swift.

If any of their labourers can scratch out a pam •

phlet, they desire no wit, stile, or argument. Id.

SCRATCH-PANS, in the English salt-works.

See SALT. Their use is to receive a selenitic

matter, known by the name of soft scratch,

which falls during the evaporation of the salt

water.

SCRAVV, n. s. Irish and Erse. Surface or

scurf.

Neither should that odious custom be allowed, oi

cutting scraws, which is flaying ofT the green surface of the ground, to cover their cabins, or make up

their ditches. Su-ifi.

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SCRAWL, v. a., v. n., Sc n. s. [I suppose to be

corrupted from scrabble. — Johnson.] To draw

or mark irregularly or clumsily : to write thus ; the writing itself.

The left hand will make such a scrawl, that it will not be legible. Arbuthnot's H. of John Bull.

Mr. Wycherly hearing from me how welcome his

letters would be, writ to you, in which I inserted my scrawl. Pope.

Peruse my leaves through ev'ry part,

And think thou seest its owner's heart,

Scrawled o'er with trifles thus, and quite

As hard, as senseless, and as light. Steift.

Think not your verses sterling,

Though with a golden pen you scrawl,

And scribble in a berlin. Id.

SCREAM, v. n. & n.s. Sax. prieman. To

cry out shrilly, as in terror or agony ; the cry

made.

I heard the owl scream, and the crickets cry.

Shakspeare.

Our chimnies were blown down ; and, as they say,

Lamentings heard in the air, strange screams of death. Id.

The fearful matrons raise a screaming cry,

Old feeble men with fainter groans reply ;

A jarring sound results, and mingles in the sky.

Dry den.

Then flashed the livid lightning from her eyes,

And screams of horror rend the affrighted skies.

Pope.

If chance a mouse creeps in her sight,

Can finely counterfeit a fright ;

So sweetly screams, if it comes near her,

She ravishes all hearts to hear her. Swift.

SCREAMERˆ in zoology. See PALAMEDEA.

SCREECH, v. n. &w.s. ˆ Tslan. skr

SCREECH-OWL, n.s. S cry. To cry out

as in terror or anguish ; the cry : the screech-

owl is noted for a cry of this kind.

Deep night,

The time of night when Troy was set on fire,

The time when screechowls cry, and bandogs howl.

Shakspeare.

Screeching is an appetite of expelling that which

suddenly strikes the spirits. Bacon.

By the screeckowl's dismal note,

By the black night-raven's throat,

I charge thee, Hob. Drayton.

Jupiter, though he had jogged the balance to weigh

down Turnus, sent the screechawl to discourage him.

Dry den.

Sooner shall screechowls bask in sunny day,

Than I forget my shepherd's wonted love. Gay.

The birds obscene, that nightly flocked to taste

With hollow screeches fled from the dire repast ;

And ravenous dogs, allured by scented blood,

And starving wolves, ran howling to the wood.

Pope.

SCREEN, n. s. Fr. escran. Any thing that

affords shelter or concealment ; a sieve.

Now near enough : your leavy screens throw down,

And show like those you are. Shakspeare. Macbeth.

Some- ambitious meri seem as screens to princes in

matters of danger and envy. Bacon.

When there is a screen between the candle and

the eye, yet the light passeth to the paper whereon one writeth. Id.

Back'd with a ridge of hills,

That screened the fruits of the earth, and seats of men,

From cold Septentrion blasts.

*.Villon** Paradise Regained.*

A good magitsrate's retinue of state screens him

from the dangers which he is to incur for the sake of lt- Atterlwry.

This gentle deed shall fairly be set foremost,

To screen the wild escapes of lawless passion.

Rowe.

Our people, who transport themselves, are settled

in those interjacent tracts, as a screen against the in-

sults of the savages. Swift.

One speaks the glory of the British queen,

And one describes a charming Indian screen. Pope.

SCREW, n. s. Fr. escrow ; Belg. scroeve.

One of the mechanical powers, of which there

are two kinds, the male and female ; the former

being cut convex, so that its threads rise out-

wards ; the latter channelled on its concave side,

so as to receive the former. See below. To

turn, or move, or fasten, by a screw ; deform ;

oppress.

We fail !

But screw your courage to the sticking place,

And we'll not fail. Shakspeare. Macbeth.

The screw is a kind'of wedge, that is multiplied

or continued by a helical revolution about a cylinder, receiving its motion not from any stroke, but from a vectisat one end of it. Wilkins's Mathematical Magick.

Sometimes a violent laughter screwed his face,

And sometimes ready tears dropped down apace.

Cowleif.

He resolved to govern by subaltern ministers, who

screwed up the pins of power too high.

Howel's Vocal Forest.

He screwed his face in to a hardened smile,

And said, Sebastian knew to govern slaves.

Dryden.

After your apples are ground, commit them to the

tcre& press, which is the best.

Mortimer's Husbandry.

To screw your lock on the door, make wide holes,

big enough to receive the shank of the screw.

Moron.

Some, when the press, by utmost vigour screw'd,

Has drained the pulpous mass, regale their swine

With the dry refuse. Philips.

With screwed face, and doleful whine, they ply

you with senseless harangues against human inven-

tions on the one hand, and loud outcries for a further reformation on the other. South.

No discourse can be, but they will try to turn

the tide, and draw it all into their own channel ; or they will screw in here and there some intimations

of what they said or did. Government of the Tongue.

Let others screw their hypocritic face,

She shews her grief in a sincerer place. Swift.

Our country landlords, by unmeasurable screwing,

and racking their tenants, have already reduced the miserable people to a worse condition than the pea-

sants in France. Id.

Ask him, if your knotted scourges,

Matches, blood-extorting screws,

Are the means that duty urges

Agents of his will to use? Cotrper.

SCREW. The general principles on which this

instrument is constructed will be found detailed

under our article MECHANICS, and we have now

to examine the theory of the screw in connexion

with its application to the useful arts.

The screw may be considered as composed

of the lever and the inclined plane ; as will be

evident from a more minute account of the man-

ner in which it may be conceived to be generated.

If an isosceles triangle B F G turn about the axis A Z (plate SCREW, fig. 1), there will be generated 585

SCREW.

by that revolution two conic frustums united by

their greater ends ; conceive now that, besides

the motion of rotation, this triangle has also a

motion of translation in the direction of the axis

A Z, so regulatedthat, while the triangle makes a

complete revolution, the point B is moved to G,

and the whole triangle is found in the position

G F G', and so on : the solid thus generated is

called the interior screw ; and the height G B is called the distance of the threads. The exterior

screw is so adapted to the other as if it were its mould ; and is nothing else than the solid gene-

rated by the polygon H G F B C, supposing it

to partake of the same motions as the triangle

BGF. For the sake of distinction we shall

apply the name spindle to the interior screw,

calling the exterior one only the screw. The

spindle then is a cylinder invested with a spiral

band of uniform thickness, and of which the

inclination with respect to the axis of the cylinder is constant : the screw, on the contrary, is a solid having a correspondent spiral hollow. In some

cases the spindle is fixed in a solid block, as

A B, fig. 2, while the screw E is moved upon it

by means of a lever DC. At other times the

screw is fixed and the spindle moveable ; but this

causes no difference in the theory.

The curve which any one of the points of the

generating polygon, as N for instance, describes

about A Z, is obviously traced on the surface of

a right cylinder whose axis is A Z, and radius of its base E N (fig. 3). If we develope this, then

d c (fig. 4), being the circumference which has

EN for its radius, and taking the perpendicular

be equal to the distance between two contiguous

threads, the hypothenusal line d b will be the

development of an entire revolution of the

point N. In effect, the helix being throughout

of constant inclination with respect to any posi-

tion whatever of the generating line of the cylin-

der, every parallel to A D will make with the

development of that curve the same angle ; thus,

the development will be a right line, as d b ; and in like manner the right line a /'will be the de-

velopment of a second revolution. This being

granted, we may demonstrate, in a very satisfac-

tory manner, the truth of the following proposi-

tion : —

There will be an equilibrium in the screw

when the power is to the resistance as the dis-

tance between two contiguous threads in a di-

rection parallel to the axis is to the circumference described by the power.

Let us suppose the spindle A B to be fixed

(fig. 2), and that the screw is moveable by the

aid of a power P applied to the extremity C of

a lever C E— R, acting horizontally perpendicu-

lar to the lever. Let W be the weight of the

screw, or that which the screw supports, or the

resistance opposed by the screw to the power P.

If the screw pressed only on one of the points

of the spindle, suppose it to be at the distance r from the axis, and that its position on the deve-

lopment d b of the spiral be at n ; then will the pressure on the spindle be exactly the same as

on the inclined plane d b. From the theory the

power M, which we suppose applied horizon-

tally in the direction M n, must retain the equi-

librium. We may thus illustrate this proportion :

cb

M : W : : c b : c d ; whence Mi=\V. _— W. — —

cd 2 v r

where h~bc, and ?r~3‘141593, as heretofore.

The force M, which is supposed applied in w,

when the helix is not developed is perpendicular

to the edge of the cylinder, or acts in a tangen-

tial direction to the cylinder, and in consequence

always parallel to the power P.

Now, substituting for this subsidiary power M

the power P, acting at the distance R, we have

from the principles of the lever P R— M r, the

lengths of the arms being R and r. For M, in

this equation, substitute its value in the former

one, and there arises 2 TT R P— W h. This equation, not containing r, is entirely independent of the

distance at which the point n is supposed from

the axis ; it will therefore be the same if we sup-

pose that point any where else on the spindle.

Hence we deduce a general result; for this equa-

tion will even be true, if the screw, instead of

touching the spindle in a single point, as we have hitherto supposed, touch it in any number of

points whatever. In this latter case, every point

on the thread of the spindle bears a portion of

the weight W ; these portions being denoted by

W, \V", W", &c., give \V'+ \V"+ \ "', &:c.— W.

But, on the other hand, the force P, which sup-

ports the weight of the screw, may be considered

as the sum of as many forces P', P", P'", &c., as there are points of contact, each of which is em-

ployed in supporting the weights W', W", \V",

&c. To each of these the last equation applies ;

we have", therefore, W h— 2 IT R P', \" h =r 2 w R P", W" h — 2 ;r R P'", &c., their sum mani

festly producing the equation \V A — 2 TT R P ;

*whence P : W : : A : 2 *• R. Q. E. D.*

If the screw had a square or rectangular fillet

instead of a triangular one, the conclusion would

be the same ; for it is independent of the form of the generating polygon.

In the same screw the effect is always the

greater as the power is applied farther from the

axis.

In two different screws, a force acting with the

same distance of lever produces a greater effect

in proportion as the threads of the screw are

nearer together.

In the endless or perpetual ˆcrew BC (fig. 5),

which drives the teeth of the wheel F D, we shall, in the case of an equilibrium, have P x A B x

rad. of F D iz W x distance of threads x rad.

of axle. For the perpetual screw is a combina-

tion of the axis in peritrochio and the screw.

The screw may be used to measure minute

distances; for its point advances through 1 while

the radius by which it is turned describes 360°.

Instruments for this purpose are named micro-

meters ; their principal part is a fine and accu-

rate screw which carries a frame, across which a

fine wire is stretched at right angles to the axis of a telescope or microscope, and in the plane of

its principal image; by turning the screw the

wire moves parallel to itself, and its distance

from a parallel fixed wire is the magnitude of the portion of the image included between them;

and from this we draw the magnitude of the ob-

ject. This distance is indicated by a circular

head on the screw which is graduated; thus, if

the interval be TJg of an inch, and the circum-

ference of the head three inches, divided into

sixty parts for every one of these which passes

an index, the wire moves through ˆ of an inch.

Smeaton asserts that lie had used a scresv which

agreed with itself to jˆ. The posver of the

screw in producing pressure depends on the fine-

ness of its thread, and this is limited by the

strength of materials ; as, if too fine, it would be broken from the cylinder, and on the other hand

micrometer screws cannot be made beyond a

certain interval. The endless screw is supposed to l>e the engine by which the geometer of Syracuse launched by his single strength one of Hieoro's •.allies, when challenged by that sovereign to give a specimen of the use of mechanics.

In the Philosophical Transactions, vol. Ixxi., a new method of applying the screw, so as to make it act with the greatest accuracy, is described by Mr. Hunter. This method depends upon these general principles, applicable to most machines: 1. That the strength of the several parts of the engine be adjusted in such a manner, to the force they are intended to exert, that they shall not break under the weight they ought to counteract, nor yet encumber the motion by a greater quantity of matter than is necessary to give them a suitable degree of strength. 2. That the increase of power by means of the machine be so regulated that, while the force is thereby rendered adequate to the effect, it may not be retarded in procuring it more than is absolutely necessary. 3. That the machine be as simple as is consistent with other conditions. 4. That it be as portable, and as little troublesome as

oossible in its application. 5. That the moving ~ower be applied in such a manner as to act to .he greatest advantage ; and that the motion ultimately produced may have that direction and velocity which is most adapted to the execution of the ultimate design of the machine. 6. Of two machines, equal in other respects, that deserves the preference in which the friction least diminishes the effect proposed by the whole.

To attain all these advantages in any one machine is perhaps impossible ; but Mr. Hunter's method of applying the screw certainly combines a great portion of them. Let A B (fig. 6) be a plate of metal in which the screw C D plays, having a certain number of threads in an inch, suppose ten. Within the screw C D there is an exterior screw which receives the smaller screw D E of eleven threads in an inch. This screw is kept from moving about with the former by means of the apparatus at A F G B. If the handle C K Lbe turned ten times round, the screw C D will advance an inch upwards ; and, if we suppose the screw D E to move round along with C D, the point E will advance an inch. If we now turn the screw D E ten times backward, the

point E will move downwards $ of an inch, and

the result of both motions will be to lift the

point E an eleventh of an inch upwards. But

if, while the screw C D is turned ten times round, I) E be kept from moving, the effect will be the

same as if it had moved ten times round with

C D, and been turned back again ten times ;

that is, it will advance |j of an inch. At one

turn, therefore, it will advance ˆ of ˆzr Tt0 of

an inch. If now the handle be six inches long,

the power to produce an equilibrium must be to

the weight as 1 to 110 X 6 X 2 ir — 4146‘912.

Thus, the force of Mr. Hunter’s screw is greatly

superior to the common one ; for a common one

with a six inch handle must have 110 threads in

an inch to produce the same effect, and this great number of threads would render it too weak to

resist any considerable violence.

With regard to the second general maxim, both

kinds of screws are equally applicable ; only that

the more complicated structure, and conse-

quently greater expense of Mr. Hunter’s screw,

renders it convenient to use the common screw

where only a small increase of power is requi-

site, and the improved one where a great power

is wanted. The handle being short makes this machine accord with the fourth maxim.

To answer the fifth both seem equally proper ; but, for the sixth, the preference must be given to such as best answer the specific purpose proposed. Thus, if the screw D E be designed to carry an index which must turn round at the same time that it rises upward, the common screw seems preferable ; though Mr. Hunter proposes a method by which his may answer the same purpose : with this view a still smaller screw ought to play within D E, and be connected with CD, so as to move round along with it. It must have, according to the foregoing proportions, 111 threads in an inch: and they must lie in a contrary direction to those of C D ; so tnat when they are both turned together, and C D moves upwards, this other may move downwards. At one turn this will move upwards isjroth part of an inch, and at the same time will move in a circular direction. Similar methods may be applied in many other cases : indeed they have lately been applied very frequently ; though few of those who have adopted them have acknowledged by whom they were

first proposed ; on which account we have given

this brief description of Mr. Hunter's contrivance,

and of his judicious practical maxims.

Mr. Walsh has invented a mode of cutting

screws by means of a very simple apparatus in-

dependent of the guide and slide-rest usually

employed for that purpose. The process may be

thus described : — The first step is to turn a short cylinder of soft steel exactly twice the diameter

of the intended screw. This is then to be fitted

on an arbor in the lathe ; and, by means of a

common screw-stool of the required number of

teeth, is to be cut into a double-threaded screw,

and is then to be hardened : of this latter screw bb, fig. 7, represents a lateral and front view.

Another short cylinder of soft steel is then to be made of exactly the diameter of the intended

screw ; it is then to be fitted on a pin and put into the frame d; in this situation it is to be

pressed against the cylinder b, while revolving

in the lathe, until a good thread is raided on its surface. The thread thus formed will be a

single one, although taken from a double thread,

because, during the process, it revolves in pro-

portion to the larger cylinder as one to two, it

will also be a left-handed thread, because taken

by impression from a right-handed one. After

a few revolutions from the cylinder c the frame

in which it is placed is to be turned upside

down, and the same number of revolutions are to

be made with the frame in this position, by

which alteration the thread will be kept quite

perpendicular to its axis, and the more the two

cylinders are worked together the more will the

cylinder c be free from errors of the first cylinder.

Being completed it is then to be hardened, and is

again to be put into the frame d. The cylinder

a a being put into a lathe, the screw c is to be pressed hard against it in the manner of a mil-

ling-tool, beginning on the right hand : when it

has made a sufficient impression, or thread, it is to be shifted one thread towards the left hand, the fol-

lowing threads of the screw always working in the

preceding impression, which serves as their guide.

This is to be continued till the whole cylinder is impressed with the spiral thread, which will of

course be right-handed, because the impressing

screw is left-handed. The thread thus obtained

is to be eased or cut deeper by the pointed tool

e, and is then to be finished by the screw c, tak-

ing care, as before directed, to reverse the frame

d from time to time. To make a left-handed

screw to suit a given right-handed one, tap a cy-

linder qf steel in the same dies and of the same

diameter as the given screw, and turn each end

down to a pivot and harden it; place it in the

open frame d, and work it hard against the pre-

pared cylinder exactly as described above for the

original screw, by which a left-handed thread

will be obtained, which is to be deepened with the point tool, and finished by the roller as before.

When this screw is obtained it may be hardened,

and left-handed dies may be made from it.

A very ingenious patent process for making

screws, by Mr. Colbert, must now be described :

- *Fig. 1 1 is a side view of the apparatus ; a a a is the lower piece of a pair of cutting shears;*

this is fixed to a work bench or other solid

frame ; the upper part b b works on a centre d,

by the handle c ; ee is the face of a plate used to regulate the lengths of wire to be cut, adjusti-

ble by apparatus shown in fig. 12.

‘ Fig. 12 is a perpendicular geometrical view

of the same, in which the same letters of refe-

rence are affixed respectively to the same parts ;

ee is the upper edge of the plate e e, and gg an horizontal face of the same plate; this plate is

adjustible as to its distance from the cutters a

and 6, by a sliding motion on the two bars h, h, on sockets i, t ; to cut the wires he elevated the upper arm b, of the shears, and introduced the

wires horizontally, and at right angles to the face of the shears, and as far between the cutters as

the vertical plate e e will allow : the patentee

then works the shears in the usual manner of

shears, and similar cutting .instruments ; the re-

quired length of the wires being cut, they are

placed between the cheeks of a vice.

'Fig. 13 is a groove or cavity of suitable dimen-

sions to the size required, and, the cheeks of the

vice being closed, the head of the intended screw

is formed by the spread ing of the metal by strokes of a hammer ; and the solid form of the intended

screw thus obtained. There remained the thread

to be cut on the cylinder of the length, and the

nick or cut to be made across the head; the

thread is cut, and head of the screw turned

•eady for the making of the nick or rut bv the

machinery represented in fiˆs. 14, 15, 16, 17;

a tid is a steel axis, working in supports or up-

rights, b, r , (/, on a frame DD; at the extremity e of the axis, a piece crosses k at right angles, to which is affixed by screws and nuts the two

bent arms ff, ff, which move on the screws

g, g, as centres ; each is furnished with a strong spring h, which bears against the axis, and

presses the corresponding extremity i strongly

towards each other : in each of these extremities

i, i, is fixed, by dovetailed slides and screws, a steel cutter k ; m is a conical tube, which may

be moved forward along the axis a a a (towards

the end to which the bent arms f,f, are fixed),

for the purpose hereinafter described, to cut the

thread of the screw and turn the head of it. The

patentee places the piece of wire of which the

screw is intended to be made, between the hold-

ing pieces_/,y, the head of the intended screw

between and just within the extremities of the

two cutters k, k, as shown in fig. 15.

‘ The fig. 16 represents a side elevation of a

metal frame of two parts a and b, opening from

each other on the joint at c, by the handle or

stem d, the upper or movable piece a, moving

between two cheek pieces, of which one is seen

at e ; into each of these pieces a and b, and in a direction at right angles to their length, is placed in dovetailed grooves, and there secured by

screws, a steel cutter having teeth, or being ser-

rated in the usual way, for the purpose of cut-

ting a screw thread on a metal cylinder intro-

duced between them; these pieces are shown in

the figure at g and h, and they are sufficiently

held together for that purpose, by the action of

the lever and weight shown in the figure at m

and n. This part of the machinery is placed

when in use in a direction at right angles to the direction of the piece shown at fig. 14. The

cutters g and h, being directly opposite to the

extremity of the cutters k, k, of the fig. 14, and within a small distance of it, so that the wire

introduced and held by one extremity by the

cutters fr, k, may by the other extremity intro-

duce itself between the serrated or toothed cut-

ters g, A, of fig. 16. The position herein described for the piece represented in fig. 16 is shown in

the engraving of fig. 14, at X, Y, Z, which repre-

sents a perpendicular geometrical view of the

same ; the same parts of it being respectively

marked with the same letters of reference as in

the side elevation of the same piece shown at

fig. 16.

‘ The patentee thus gives motion to the ma-

chinery : the fig. 1 7 is a front elevation of the upright piece d, of fig. 14, showing an aperture

O, a thin steel edge piece Z Z, moveable on a

centre r. It has a suspended weight W, at a

little distance beyond the centre, and a treadle

S affixed to the other extremity. A steel screw

R is fixed to the extremity of the axis a a, fig. 14, and secured by a small screw T; this screw R passes through the aperture O, of fig. 14, without touching it ; when the treadle is not pressed, the steel edge Z Z remains clear of tho screw R ; but, when the treadle is pressed, the steel edge is forced to enter one of the threads of the screw R : this being done, and the axis a a made to revolve l>y the box BB, or any

other well known method of turning an axis, the axis, being cylindrical through its whole length, will, by the action of the screw R on the fixed edge Z, make a forward progress, viz. towards that part of the machinery marked xyz, and the rate of that progressive advance will be always regulated and beadjustible by the fineness of the screw R ; if the screw R be coarser, the progress will be quicker, and vice versa; for this purpose of regulation and adjustment, the screw It may be changed at pleasure ; the aforesaid progressive advance of the axis a a will thus force the wire, placed as already described at

A k, into the small space between the screw cut-

ters g ht of fig. 16, and v.-ill thus produce the

thread of the screw. The conical piece m is

now moved forward over the bent arms J\j,f,f,

so as by means of the rollers g,g, and the springs h ,//, the extremities i, i, are separated a little, and with them the cutters k, k ; the new screw,

which was before held by the cutters k, k, is thus released from them, and is now held between

the screw cutters g and h, of fig. 16, but is still at liberty to turn on its thread; a pressure on

the handle t, such as to bring the screw A-, fig.

15, to bear on the spring x, will hold the screw

more firmly so that it cannot be turned ; and

now if the conical piece m be moved back on

the axis a a, to its former situation, so that the cutters k, k, may again approach each other ; the

axis a a is then caused to revolve, on which the

cutters k, k, turn, and forms the bevel of the head of the screw ; Mr. Colbert then slides the conical piece a little distance over the bent arms f,f,J',f, as before, so as to detach the cutters k k from the screw ; and releases the pressure on the treadle

S, of fig. 17, and thus causes the steel edge Z to leave the thread of the screw R, fig. 14. The

patentee then causes the axis a a to revolve, and

the small cutter marked at the extremity of the

axis will turn the flat surface of the head of the screw. The screw is now completed except the

nick or cut in the head. By means of the handle

t, of the piece xyz, the workman afterwards

moves the upper part of the said piece on its

lower part by the joint or centre at C, fig. 16,

and then lifts the axis a a a little way upwards, by that extremity of it which has the cutters fixed to it, and the screw, so far formed as described,

will drop out and clear of the machinery ; the

axis a a, fig. 14, may be lifted as described, by means of a contrivance shown in fig. 18, in

which figure 6 is a front elevation of the upright piece also marked b, in fig. 14; in this upright

the part of it in which is the aperture y, through which the axis passes, has a sliding motion up

or down, sufficient to allow the lifting of the

axis as described.

‘ Fig. 19 is a geometrical plan of a rectangu-

lar box or frame, of which A B C D is the lower

part, and E, E, two lids or covers, which are in

this figure shown as opened and thrown back to

show the interior of the frame; the pieces G G,

and M M, form a channel or groove, in which

may be introduced the metal slide 1 1, which

passes on through the whole length of the frame;

it passes under the projections of the screw

heads h,h,h,k, which thus confine it to its in-

tended place ; the plate 1 1 is perforated, as

shown in the engraving, to receive the screws

on which the machine is intended to operate ;

they are placed in it as shown at fig. 20, in

which 1 1 represents a part of the slide, and SS

the heads of screws placed in it. The plate 1 1

being passed entirely into the frame, as far as the projecting pin k allows, the unfinished screws

are placed in it, and the covers E, E, are shut

down and fastened. The covers E, E, when they

are shut down, do not quite meet, but leave a

narrow open space through which the blade of a

steel saw is introduced, and with which the

heads of all the screws placed in the machine

have their nicks or cuts made at the same time.

The following observations published by a

‘ workman’ in the Repertory of Arts are of

great importance : — ‘ Having had considerable

experience in the construction of new and com-

plicated machinery, and knowing of no method

by which minute and accurate movements or di-

visions may be obtained with such certainty as

by means of the screw, it has not unfrequently

been the most trying part of my labors to obtain

a screw that shall be tolerably accurate through-

out, when it has been required of any consider-

able length. The tapping of screws with new

and sharp dies, and great care and slowness, is

undoubtedly one of the best, if not absolutely

the best method of making a good and true

screw. But it is found that, when a stock is

worked by hand, there is generally a stopping

place perceptible on the screw itself, where the

workman changes hands, which is most probably

the chief imperfection that produces inaccuracy

when such screws are set to subdivide their own

threads. If one handle be more depressed than

the other, the screw will have a periodical varia-

tion of obliquity, which workmen call a drunken

screw, and it is difficult to avoid this error where the screw is short. As the dies at best cut ra-

ther by the force of the setting screws than the

keenness of their own edge, they not only bend

the tap or screw, but scarcely ever take equally

off from all sides. The best remedy for this is

to use long dies ; but, even with these, a centred and turned tap will seldom prove straight and

round after it has received the thread. In mi-

nutely considering the action of the dies it will be seen that the opposite sides of the thread in-

cline towards different regions, and therefore, in

effect, cross each other. Hence it is impossible

for the dies to be made to approach each other

in the plane of the helix. (A tangental plane to the helix, having a vertical axis, will in fact revolve round the axis itself, preserving a constant angular inclination to the same.) But the dies approach in a plane at right angles to the axis. It follows, therefore, that there are limits to diameter, depth of cut, and inclination, beyond which the dies cannot operate. These limits are the cause why a true flat thread screw cannot be cut in dies ; and a many-threaded screw, or screw of great obliquity, in a single pair of dies, is impracticable, and can only be cut by a succession of different pairs of dies. If dies arc not well fitted in the stock, and the stuff be veiny or unequally hard, they will yield to the hard parts, and by the effect of this shake produce an undulated thread. Long dies do indeed

greatly remedy this imperfection ; but it must always exist, however small. As a pair of well fixed dies tan never both run alonu: the same stroke till quite home to their natural place, the cut made by the one will tend to draw the other

along the cylinder, so that while one die cuts the upper side of the thread, the other die will cut

the opposite or under side. In this cross action

the frame and the dies themselves will yield from

elasticity, and that the more, where the stuff is

most hard or the work forced. Hence, with a

like pressure, the soft side will have the widest

cut, and be soonest cut down, and the sides of

the thread will be waving. This seems to be

the chief reason why tapping a screw throws it

out of centre and roundness. It is found by ex-

perience, in the attempt to tap a screw much

larger than the original of the dies, that the cor-

ners of the dies, taking hold first, are nearly in-

different as to the run; and, if left to ope-

rate without pressure in the line of the axis,

would as probably cut mere rings, or a left-

handed screw, as the right-handed screw (sup-

posed to be in the dies). In these circumstances,

therefore, the thread at first turns out to be

wavey, with very little rise in the run of each

corner, until it suddenly falls into the cut made

by the corner it follows. Each turn consists ac-

cordingly of four waves, which are amended as

the dies sink deeper, and are led by their own

slope. But it may be questioned if these waves, once produced, are ever completely removed, so that the screw probably approximates to the truth, without ever attaining it. And, in the nature of the operation of tapping, this error in the first instance can only be diminished, but not absolutely removed, because all cutting is begun by the corner of the dies.'

Eddy's screw-wrench. — This screw wrench is actuated by a screw, as that is which is in common use, but differs from this latter in the screw being introduced into the sliding part instead of into the handle. By this arrangement the instrument is rendered much stronger, and is not liable to open and shut by the turn of the hand while using it, as is the case with the common one. In manufactories where the work is heavy, the common wrench is often breaking in the screw, an accident which cannot occur with the new one, as the strain is not on that part which contains the screw. It may be made at nearly the same expense as the one in common use.

Plate SCREW, fig. 8, is a side view. Fig. 9 is an edge view. Fig 10 is a longitudinal section. [The same letters refer to the same parts in all

the figures.] a is the fixed chap, 6 is the fixed bar, c is the moveable chap which passes through

and slides upon the bar, 6 ; d the moveable bar

fixed to the chap c. This bar has a hollow bar-

rel screwed at its orifice, in which the solid

thumb-screw /works. At the extremity of the

bar, 6, is formed a shoulder, on which rests the

square piece, g ; or the bar may be turned up

at right angles, forming a short projecting leg,

which will answer the purpose of the piece g,

and will be both stronger and cheaper. A

square hole is to be made in g, to admit the

screw f, and this hole is to be contracted in one part by the insertion of two square pins, i and /•

which confine the neck of the screw so as to

allow it to turn round, but not to move back-

wards or forwards : e is a plate of iron, wrapped

round the end of the instrument in order to keep

the parts in their proper places, and to prevent

the screws from being choked with dirt. Hence

it is obvious that, when the screw f is turned

in one direction, the barrel d, with' the chap e,

is pushed towards the chap a, and that it is with-

drawn when the screw is turned in the opposite

direction.

SCR I BANI (Charles), a Jesuit, born at Brus-

sels in 1561, was successively. professor and

rector of the college of his native place, but

afterwards removed to Antwerp, as provincial of

his order, and head of the university. He died

in 1629, and is chiefly known by a virulent

publication against the Calvinists, printed under

the fictitious name of Clarus Bonarscius, and

entitled Amphitheatrum Honoris Adversus Cal-

vinistas, 4to. 1606. His other works are — 1. His-

tory of the Civil Wars of the Low Countries, in

Latin, 8vo. 2. Origines Antverpensium, 4to.

3. Orthodoxae Fidei controversa, 4to. 4. Ars

Mentiendi Calvinistica. 5. Meditationes Sacrn?,

2 vols. 8vo. 6. Medicus Religiosus. 7. C'aeno-

barachia. 8. Politico Christianis.

SCRIBE, n. s. \ Fr. scribe ; Lat.

SCRIB'BLE, v. a. & n. ˆscriba. A writer:

SCRIB'BLER, n. s. j scribble is a diminu-

tive of scribe.

Hearts, tongues, figures, scribes, bards, poets, cannot

Think, speak, cast, write, sing, number, ho !

His love to Antony.

Sthakspeare. Antony and Cieopatra.

My master, being the scribe to himself, should

write the letter. ShaAspeare.

How gird the sphere

With centrick and eccentrick, scribbled o'er

Cycle and epicycle, orb in orb.

Milton' Paradise Lost*

By solemnly endeavouring to countenance my

conjectures, I might be thought dogmatical in a hasty scribble. Boyle.

The actors represent such things as they are capa-

ble, by which they and the scribbler may get their

living. Dryden.

The most copious writers are the arrantest scrib-

bler, and in so much talking the tongue runs before the wit. L'Ettrange.*

\Ve are not to wonder, if he thinks not fit to

make any perfect and unerring scribes.

Grew't Cosmologia.

The following letter comes from some notable

young female scribe. Spectator.

The fcribbler, pinched with hunger, writes to dine,

And to your genius must conform his line.

Granville.

If a man should affirm that an ape, casually

meeting with pen, ink, and paper, and falling to

tcribble, did happen to write exactly the Leviathan

of Hobbes, would an atheist believe such a story 1

And yet he can easily digest things as incredible as that. Bentlty.

If Mxvius tcribble in Apollo's spite,

There are who judge still worse than he can write.

Pope.

Nobody was concerned or surprised, if this or

that scribbler was proved a dunce.

Letter to Pope's Dundud.

SCRIPTURE.

59J

If it struck the present taste, it was soon trans-

ferred into the plays and current scribbles of the

week, and became an addition to our language.

Stoift.

To affirm he had cause to apprehend the same

treatment with his father is an improbable scandal

flung upon the nation by a few bigotted French

scribblers. Id.

His court, the dissolute and hateful school

Of Wantonness, where vice was taught by rule,

Swarmed with a scribbliny herd, as deep inlaid

With brutal lust as ever Circe made.

From these a long succession, in a rage

Of rank obscenity, debauched their age. Cowper.

SCRI'MER, n. s. Fr. escrimeur. A gladia-

tor; a fencing-master. Not in use.

The scrimers of their nation,

He swore, had neither motion, guard, nor eye,

If you opposed them. Shakspeare. Hamlet.

SCEINE, n. s. Lat. scrmium. A place in

which writings or curiosities are reposited.

Help, then, O holy virgin,

Thy weaker novice to perform thy will ;

Lay forth out of thine everlasting scrine,

The antique rolls which there lie hidden still.

Faerie Queene.

SCRIP, n. s. Isl. skrappa. A small bag; a

satchel : and (Lat. scriptio) a small writing.

Come, shepherd, let us make an honourable re-

treat ; though not with bag and baggage, yet with

scrip and scrippage. Shaksjteare.

Call them man by man, according to the scrip. Id.

He'd in requital ope his leathern tcrip,

And shew me simples of a thousand names,

Telling their strange and vigorous faculties. Milton.

Bills of exchange cannot pay our debts abroad,

till scrips of paper can be made current coin. Locke.

SCRIPTURE.

SCRIPTURE, n. s. \ Lat. scriptura. Writ-

SCRIP'TURAL, adj. S ing ', particularly sa-

cred writings ; the Bible : commonly used in the

plural : the adjective signifies contained in the

Bible; biblical.

With us there is never any time bestowed in

divine service, without the reading of a great part of the holy scripture, which we account a thing

most necessary. Hooker.

The devil can cite scripture for his purpose :

An evil soul producing holy witness

Is like a villain with a smiling chock. Shakspeare.

It is not only remembered in many scriptures, but

famous for the death and overthrow of Crassus.

Raleigh.

Forbear any discourse of other spirits, till his

reading the scripture history put him upon that en-

quiry. Locke.

There is not any action which a man ought to

do, or to forbear, but the scripture will give him a clear precept, or prohibition, for it. South.

Creatures, the scriptural use of that word deter-

mines it sometimes to men. Atterbury.

Scripture proof was never the talent of these men,

and 'tis no wonder they are foiled. Id.

Why are scripture maxims put upon us without

taking notice of scripture examples that lie cross

them •> Id.

The Author of nature and the scriptures has ex-

pressly enjoined, that he who will not work shall not eat. Seed's Sermons.

SCRIPTURE. The word scripture is most com-

monly used to denote the writings of the Old

and New Testament ; called also sometimes The

Scriptures, sometimes the Sacred or Holy Scrip-

tures, and sometimes Canonical Scriptures.

These books are called the Scriptures by way of

eminence, as they are the most important of all

writings ; they are holy or sacred on account of

the doctrines which they teach ; and they are

termed canonical, because, when their number

and authenticity were ascertained, their names

were inserted in ecclesiastical canons, to distin-

guish them from other books ; which, being of

no authority, were kept as it were out of sight,

and therefore styled apocryphal, from

to put out of sight. See APOCRYPHA.

Our article BIBLE (to which we beg the

attention of the reader as an introduction to this) is chiefly critical ; and regards the formation of

the Jewish and Christian canon considered as a

whole. We shall in this article enter more at large into the question of the authenticity and inspiration of Scripture, and an analysis of its contents.

PART I.

OF THE OLD TESTAMENT.

INTRODUCTION.

The authenticity of the Old Testament may be proved from the character of the Jews, from internal evidence, and from testimony.

1. The character of the Jews forms a strong presumptive evidence that they have not forged or corrupted the Old Testament. Were a person brought before a court of justice on a suspicion of forgery, and yet no presumptive or positive evidence of his guilt could be produced, it would be allowed by all that he ought to be acquitted. But if the forgery alleged were inconsistent with the character of the accused ; if it tended to expose to disgrace and reproach his general principles and conduct; or if we were assured that he considered forgery as an impious and abominable crime, it would require very strong testimony to establish his guilt. This

case corresponds exactly with the character and situation of the Jews. If a Jew had forged any book of the Old Testament, he must have been impelled to so bold and dangerous an enterprise by some very powerful motive. It could not be national pride ; for there is scarcely one of these books which does not severely censure the national manners. It could not be the love of fame ; for that passion would have taught him to flatter and extol the national character ; and the punishment, if detected, would have been infamy and death. The love of wealth could not produce such a forgery ; for no wealth was to be gained by it. The Jews were selected from

all other nations, and preserved a distinct people, from the time of their emigration from Egypt to the Babylonish captivity, a period of 892 years ; and they still continue to be a distinct people, though scattered among all the nations in the world ; which is itself a standing and perpetual miracle in proof of Christianity, unparalleled in the history of mankind; and which the Christian may defy all the enemies of revelation to account for, without admitting the

truth of the Christian system. The principal purposes for which they were selected was to preserve, in a world running headlong into idolatry, the knowledge and worship of the one true God, and to be the guardians of those sacred books that contained the prophecies which were to prove to future ages the divine mission of the Redeemer of mankind. To fit them for these important trusts, the spirit of their laws and the rites of their religion had the strongest tendency. Miracles were orjenly performed, to convince them that the God of Israel was the God of all the earth, and that he alone was to be worshipped. Public calamities always befel them when they became apostates from their God ; yet they continued violently attached to idolatry, till their captivity in Babylon made them' for ever renounce it. The Jews then had two opposite characters at different periods of their history. At first they were addicted to idolatry ; afterwards they acquired a strong antipathy against it. Had any books of the Old Testament been forged before the Babylonish captivity, when the Jews were devoted to idolatry, is it to be

conceived that the impostor would hive in-
veighed so strongly against this vice, and so often
imputed to it the calamities of the state; since
by such conduct he knew that he would render
himself obnoxious to the people, and to those
idolatrous monarchs who persecuted the pro-
phets ? But it may be alleged that the sacred
books were forged after the Babylonish capti-
vity, when the principles of the Jews would lead
them to inveigh against the worship of idols.
But these principles would surely never lead
them to expose the character of their ancestors,
and to detail their follies and their crimes.
Never had any people more national pride, or a
higher veneration for their ancestors than the
Jews. Miracles and prophecies ceased soon
after their return to Jerusalem ; and from that
period their respect for the sacred books ap-
proached to superstition. They preserved them
with pious care, they read them often in their
synagogues, and they considered every attempt
to alter the text as an act of sacrilege. Is it
probabve that such men could be guilty of for-
gery, or could false writings be easily imposed

on them ?

2. There is internal evidence in the books of the Old Testament that proves them to have been written by different persons, and at distant periods ; and enables us with precision to ascertain a time at or before which they must have been composed. It is an undeniable fact that Hebrew ceased to be the living language of the Jews during their captivity in Babylon, and that the Jewish productions after that period were in general written either in Chaldee or in Greek. The Jews of Palestine, some ages before the coming of our Saviour, were unable, without the assistance of a Chaldee paraph-ase, to understand the Hebrew original. It necessarily follows, therefore, that every book which is written in pure Hebrew was composed either before o: about the time of the Babylonish captivity. This being admitted, we may advance a step farther, and insist that the period which elapsed between the composition of the most ancient and the most modern book of the Old Testament was very considerable; or, in other words, that the most ancient books of the Old Testament were

written many ages before the Babylonish cap-

tivity. No language continues stationary; and

the Hebrew, like other tongues, passed through

its several stages of infancy, youth, manhood,

and old age. If, therefore, on comparison, the

several parts of the Hebrew Bible are found to

differ not only in regard to style, but also in re-

gard to character and cultivation, we have strong

internal evidence that they were composed at

different and distant periods. No classical

scholar would believe, independent of the Gre-

cian history, that the poems ascribed to Homer

were written in the age of Demosthenes, the

Orations of Demosthenes in the time of Ori.en,

or the Commentaries of Origen in the time of

Lascaris and Chrysoloras. For the very same

reason, it is certain that the five books which are ascribed to Moses were not written in the time

of David, the Psalms of David in the age of

Isaiah, nor the prophecies of Isaiah in the time

of Malachi ; and, since the Hebrew became a

dead language about the time of the Babylonish

captivity, the book of Malachi could not have

been written much later. Before that period,

therefore, were written the prophecies of Isaiah,

still earlier the Psalms of David, and much earlier than these the books which are ascribed to Moses. But infidels are never critics. A modern one, the apostle of vulgar infidelity, boasts that he had never opened a Bible for many years when he sat down to impugn its divine character.

3. Let us now consider the evidence of testimony for the authenticity of the Old Testament. As the Jews were a more ancient people than the Greeks or Romans, and for many ages totally unconnected with them, it is not to be expected that we should derive much evidence from the historians of those nations ; it is to the Jews alone we must look for information. But it has unfortunately happened that few of their works, except the Scriptures themselves, have been preserved. Josephus is one of the most ancient of the Jewish historians to whom we can appeal. He informs us that the Old Testament was divided into three parts, the Law, the Prophets, and the Hagiographa, or the Holy Writings, or poetical books. No man, says he, hath ever dared to add or take away from them. He tells us, also, that other books were written

after the time of Artaxerxes ; but, as they were not composed by prophets, they were not reckoned worthy of the same credit (see BIBLE). Since the promulgation of the Christian religion, it is impossible that any material alterations or corruptions could have taken place in the books SCRIPTURE.

of the Old Testament ; for, from that period they have been in the hands both of Jews and Christians. Had the Jews attempted to make any alterations, the Christians would have detected and exposed them ; nor would the Jews have been less severe against the Christians, if they had corrupted the sacred text. But the copies in the hands of Jews and Christians agree ; and therefore we justly conclude that the Old Testament is still pure and uncorrupted. The division mentioned by our Saviour into the Law, the Prophets, and the Psalms, corresponds with that of Josephus. We have therefore sufficient evidence to convince even a deist, that the Old Testament existed at that time. And, if the deist will only allow that Jesus

Christ was a person of a virtuous and irreproach-
able character, he will acknowledge that we draw
a fair conclusion, when we assert that the Scrip-
tures were not corrupted in his time ; for when
he accused the Pharisees of making the law of
no effect by their traditions, and when he en-
joined his hearers to search the Scriptures, he
could not have failed to mention the corruptions
or forgeries of Scripture, if any in that age had
existed. But we are assured by very respecta-
ble authority that the canon of the Old Testa-
ment was fixed some centuries before the birth
of Jesus Christ. Jesus, the son of Sirach, the
author of Ecclesiasticus, makes evident refer-
ences to the prophecies of Isaiah, Jeremiah, and
Kzekiel, and mentions these prophets by name.
lie speaks also of the twelve minor prophets.
It appears also, from the prologue, that the law
and the prophets, and other ancient books, existed
at the same period. The book of Ecclesiasti-
cus, according to the best chronologers, was
written in Syriac, about A.M. 3772, that is 232
years before the Christian era, and was translated
into Greek in the next century by the grandson

of the author. The prologue was added by the translator ; but this circumstance does not diminish the evidence for the antiquity of Scripture ; for he informs us that the law and the prophets, and the other books of their fathers, were studied by his grandfather; a sufficient proof that they existed in his time. As no authentic books of a more ancient date, except the sacred writings themselves, have reached our time, we can ascend no higher in search of testimony.

There is, however, one remarkable historical fact which proves the existence of the law of Moses at the dissolution of the kingdom of Israel, when the ten tribes were carried captive to Assyria by Shalmaneser, and dispersed among the provinces of that extensive expire ; that is, about 741 years before Christ. About that time the Samaritans were transported from Assyria to repeople the country which the ten captive tribes of Israel had formerly inhabited. The posterity of the Samaritans still inhabit the land of their fathers, and have preserved copies of the Pentateuch, two or three of which were brought to this country in the seventeenth cen-

tury. The Samaritan Pentateuch is written in old Hebrew characters, and therefore must have existed before the time of Ezra. But so violent were the animosities which subsisted between the Jews and Samaritans, that in no period of

their history would the one nation have received any books from the other. They must therefore have received them at their first settlement ir_ Samaria, from the captive priest whom Shalmaneser sent to teach them how they should fear the Lord (2 Kings xvii.). The canon of the Old Testament, as both Jewish and Christian writers agree, was completed by Ezra and some of his immediate successors. (See BIBLE.) In our copies the sacred books are divided into thirty-nine. The Jews reckoned only twenty-two, corresponding to the number of letters in the Hebrew alphabet. They united the books of Judges and Ruth ; they joined the two books of Samuel ; the books of Kings and Chronicles were reckoned one ; Ezra and Nehemiah one ; the Prophecies and Lamentations of Jeremiah were taken under the same head ; and the twelve

minor prophets were considered as one book — so that the whole number of books in the Jewish canon amounted to twenty-two.

In our article REVELATION will be found several of the general arguments in favor of revealed religion : its connexion with natural religion, &c.

Before closing this introductory essay we may add some excellent observations which modern infidelity has been the means of eliciting on the genuineness as distinct from the authenticity of a book; and then advert to the proofs of the inspiration of scripture as distinguishable from both.

The late bishop Watson, addressing Thomas Paine, says, ‘ You know but of one ancient book that authoritatively challenges universal consent and belief, and that is Euclid’s Elements. If I were disposed to make frivolous objections, I should say that even Euclid’s Elements had not met with universal consent ; that there had been men, both in ancient and modern times, who had questioned the intuitive evidence of some of his axioms, and denied the justness of some of his demonstrations : but, admitting the truth, I do not see the pertinency of your observation.

You are attempting to subvert the authenticity of the Bible, and you tell us that Euclid's Elements are certainly true. — What then ? Does it follow that the Bible is certainly false? The most illiterate scrivener in the kingdom does not want to be informed that the examples, in his Wingate's Arithmetic, are proved by a different kind of reasoning from that by which he persuades himself to believe that there was such a person as Henry VIII., or that there is such a city as Paris. It may be of use to remove this confusion in your argument to state, distinctly, the difference between the genuineness and the authenticity of a book. A genuine book is that which was written by the person whose name it bears as the author of it. An authentic book is that which relates matters of fact as they really happened. A book may be genuine without being authentic ; and a book may be authentic without being genuine. The books written by Kicluirdson and Fielding are genuine books, though the histories of Clarissa and Tom Jones are fables. The history of the island of Formosa is a genuine book ; it was written by Psalmana-

zar : but it is not an authentic book (though it was long esteemed as such, and translated into different languages); for the author, in the latt?.-

part of his life, took shame to himself for having imposed on the world, and confessed that it was a mere romance. Anson's Voyage may be considered as an authentic book, it, probably, containing a true narration of the principal events recorded in it ; but it is not a genuine book, having not been written by Walter, to whom it is ascribed, but by Robins.

' This distinction between the genuineness and authenticity of a book will assist us in detecting the fallacy of an argument, which you state with great confidence in the part of your work now under consideration, and which you frequently allude to, in other parts, as conclusive evidence against the truth of the Bible. Your argument stands thus : if it be found that books ascribed to Moses, Joshua, and Samuel, were not written by Moses, Joshua, and Samuel, every part of the authority and authenticity of these books is gone

at once. — I presume to think otherwise. The genuineness of these books, in the judgment of those who say that they were written by these authors, will certainly be gone; but their authenticity may remain ; they may still contain a true account of real transactions, though the names of the writers'of them should be found to be different from what they are generally esteemed to be. Had, indeed, Moses said that he wrote the first five books of the Bible; and had Joshua and Samuel said that they wrote the books which are respectively attributed to them ; and had it been found that Moses, Joshua, and Samuel, did not write these books ; then, I grant, the authority of the whole would have been gone at once ; these men would have been found liars, as to the genuineness of the books; and this proof of their want of veracity, in one point, would have invalidated their testimony in every other ; these books would have been justly stigmatised as neither genuine nor authentic. A history may be true, though it should not only be ascribed to a wrong author, but though the author of it should not be known ; anonymous

testimony does not destroy the reality of facts, whether natural or miraculous. Had Lord Clarendon published his History of the Rebellion, without prefixing his name to it; or had the history of Titus Livius come down to us under the name of Valerius Flaccus, or Valerius Maximus, the facts mentioned in these histories would nave been equally certain.'

This same perspicuous advocate of Christianity may well introduce the arguments for the inspiration of Scripture.

Addressing his opponent, with more courtesy than he merited at such hands, he says, in the conclusion of the able Apology for the Bible,

' You admit the possibility of God's revealing his will to man : yet ' the thing so revealed,' you say, is ' revelation to the person only to whom it is made ; his account of it to another is not revelation.' — This is true ; his account is simple testimony. You add, ' there is no possible criterion to judge of the truth of what he says.' —This I positively deny : and contend that a real miracle, performed in attestation of a revealed truth, is a certain criterion by which we may judge of the truth of that attestation. I am per-

fectly aware of the objections which may be

made to this position ; 1 have examined them

with care ; I acknowledge them to be of weight ;

but I do not speak unadvisedly, or as wishing to

dictate to other men, when I say that I am per-

suaded the position is true. So thought Moses,

when, in the matter of Koran, he said to the Israel-

ites— ‘ If these men die the common death of all

men, then the Lord hath not sent me.’ So thought

Elijah, when he said, ‘ Lord God of Abraham,

Isaac, and of Israel, let it be known this day that thou art God in Israel, and that I am thy ser-

vant ;’ — and the people, before whom he spake,

were of the same opinion ; for, when the fire of

the Lord fell and consumed the burnt-sacrifice,

they said — ‘ The Lord he is the God.’ So

thought our Saviour when he said — ‘ The works

that I do in ray Father’s name, they bear witness

of me;’ and, ‘ If I do not the works of my Father, believe me not.’ What reason have we to be-

lieve Jesus speaking in the Gospel, and to dis-

believe Mahomet speaking in the Koran? Both

of them lay claim to a divine commission ; and

yet we receive the words of the one as a revela-

tion from God, and we reject the words of the

other as an imposture of man. The reason is

evident; Jesus established his pretensions, not

by alleging any secret communication with the

Deity, but by working numerous and indubitable

miracles in the presence of thousands, and which

the most bitter and watchful of his enemies- could

not disallow; hut Mahomet wrought no miracles

at all. Nor is a miracle the only criterion by which we may judge of the truth of a revelation. If

a series of prophets should, through a course of

many centuries, predict the appearance of a cer-

tain person, whom God would, at a particular

time, send into the world for a particular end ;

and at length a person should appear, in whom

all the predictions were minutely accomplished :

sacn a completion of prophecy would be a crite-

rion of the truth of that revelation, which that

person should deliver to mankind. Or if a per-

son should now say (as many false prophets

have said, and are daily saying) that he had a

commission to declare the will of God ; and, as

a proof of his veracity, should predict that, after his death, he would rise from the dead on the

third day ; the completion of such a prophecy

would, I presume, be a sufficient criterion of the

truth of what this man might have said concern-

ing the will of God. Now I tell you (says Jesus

to his disciples, concerning Judas, who was to

betray him), before it come, that when it is come

to pass, ye may believe that I am he. In vari-

ous parts of the Gospels our Saviour, with the

utmost propriety, claims to be received as the

messenger of God, not only from the miracles

which he wrought, but from the prophecies

which were fulfilled in his person, and from the

predictions which he himself delivered. Hence,

instead of there being no criterion by which we

may judge of the truth of the Christian revela-

tion, there are clearly three. It is an easy mat-

ter to use an indecorous flippancy of language

in speaking of the Christian religion, and, with

a supercilious negligence, to class Christ and

his apostles amongst the impostors who have

figured in the world ; but it is not, I think, an easy matter for any man, of good sense and

sound erudition, to make an impartial examina-

tion into any one of the three grounds of Christ-

ianity which I have here mentioned, and to re-

ject it.'

Dr. Olinthus Gregory has ably collected the

more general arguments for the inspiration of

Scripture, and in particular of the New Testa-

ment, in the following portion of his Letters

on the Evidences of Christianity : —

' A firm and cordial belief of the inspiration

of the Bible is, indeed, of the highest moment ;

for, unless you are persuaded that those who were

employed in the composition of the respective

books were entirely preserved from error, a con-

viction of their honesty and integrity will be but

of little avail. Honest men may err, may point

out the wrong track, however unwilling they

may be to deceive ; and, if those who have pen-

ned what we receive as revelation are thus open

to mistakes, we are still left to jnake the voyage of life in the midst of rocks, and shelves, and

quicksands, with a compass vacillating and use-

less, and our pole-star enveloped in mists and

obscurity. But some of these writers assure us

that ' all Scripture is given us by inspiration of God' (b) ; meaning, at least, the Jewish Scrip-

tures ; a declaration which deserves attention on

the score of the general veracity by which we

have already shown their assertions are always marked. Still, as a like claim is made by writers who, it has been ascertained, were wicked and designing, let us enquire on what grounds and to what extent the divine inspiration of the Bible ought to be admitted.

‘ Theologians have enumerated several kinds of inspiration : such as an inspiration of superintendency, in which God so influences and directs the mind of any person as to keep him more secure from error in some complex discourse, than he would have been merely by the use of his natural faculties : — plenary superintendent inspiration, which excludes any mixture of error whatever from the performance so superintended : —inspiration of elevation, where the faculties act in a regular, and, as it should seem, in a common manner, yet are raised to an extraordinary degree, so that the composition shall, upon the whole, have more of the true sublime, or pathetic, than natural genius could have given : — and inspiration of suggestion, in which the use of the faculties is superseded, and God does, as it were, speak directly to the mind, making such

discoveries to it as it could not otherwise have obtained, and dictating tne very words in which such discoveries are to be communicated, if they are designed as a message to others. It is not my purpose to enter into any enquiry how far different portions of Scripture were composed under one or other of these kinds of inspiration. I have enumerated them merely to show you that those who contend that Scripture is inspired have not arrived at their decision by a gross and careless process, but by sedulous, critical, and discriminating investigation. I mean, however, to affirm, and I trust the references I

(b) 2 Tim. iii. 16.

have thrown at the foot of the page, together with a few particular arguments I shall advance, will prove to you the reasonableness of admitting that, while the authors employed in the composition of the Bib'e exercised generally their own reason and judgment (c), the spirit of God effectually stirred them up to write (d); appointed to each his proper portion and topic, corresponding with his natural talents, and the necessities of the church in his time (e); enlight-

ened their minds and gave them a distinct view of the truths they were to deliver (_/); strengthened and refreshed their memories to recollect whatever they had seen or heard, the insertion of which in their writings would be beneficial (g) ; directed them to select from a multitude of facts what was proper for the edification of the church, and neither more nor less (A) ; excited afresh in their minds such images and ideas as had been laid up in their memories, and directed them to other ends and purposes than themselves would ever have done of their own accord (t) ; suggested and imprinted upon their minds such matters as could not have been discovered or known by reason, observation, or information, but were subjects of pure revelation (/c); superintended every particular writer, so as to render him infallible in his matter, words, and order, especially whenever they related to facts, discourses, or doctrines, the communication of which is the great object of Scripture ; thus rendering the whole canon, at any given period, an infallible guide to true holiness and everlasting happiness (/).*

‘ Now that the Scriptures were actually dictated by an inspiration of this kind may, 1 think, be inferred both from the reasonableness and from the necessity of the thing. It is reasonable that the sentiments and doctrines developed in the Scriptures should be suggested to the minds of the writers by the Supreme Being himself. They relate principally to matters concerning which the communicating information to men is worthy of God : and the more important the information communicated, the more it is calculated to impress mankind, to preserve from moral error, to stimulate to holiness, to guide to happiness, the more reasonable is it to expect that God should make the communication ia a manner free from every admixture or risque of error. Indeed the notion of inspiration enters

(c) Ps. xlv. 1. Mark xii. 36. Luke i. 3. Acts i. 1. 1 Pet. i. 11.

(d) 2 Pet. i 21.

(e) 2 Pet. i. 21. Matt. xxv. 15.

(/) Jer. i. 11—16. xiii. 9—14. Ezek. iv. 4—8 Dan. viii. 15—19. ix. 22—27. x. 1—8. Amos vii 7, 8. viii. 2. Zech. i. 19—21. iv. 11—14. v. 6. John xvi 13. Eph. iii. 3, 4. 1 Pet. i. 10, 11.

(0) Lu« i. 3. John xiv. 26. Jer. xxxi. 3.

(fc) Jonn xx. 30, 31. xxi. 25. Rom. iv. 23, 24

xv. 4. 1 Cor. x. 6—11.

(») Amos i. and ix. Acts xvii. 28. 1 Cor. xv.

33. Tit. i. 12.

(A) Gen. i. ii. iii. Lev. xxvi. Isa. xli. 22, 23.

xlv. 21. xlvi. 9, 10. 1 Tim. iii. 16.

(/) Deut. viii. 1 — 4. Ps. xix. 7 — 11. cxix. Matt, xxii. 29. Luke xiv. 25—31. John v. 39. Rom.

xv. 4. 2 Tim. iii. 15—17. 2 Pet. i. 19.

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essentially into our ideas of a revelation from

God; so that to deny inspiration is tantamount

»o affirming there is no revelation. And why

should it be denied ? Is man out ef the reach

of him who created him ? Has he, who gave

man his intellect, no means of enlarging or il-

luminating that intellect? And is it beyond his

power to illuminate and inform in an especial

manner the intellects of some chosen individuals;

or contrary to his wisdom to preserve them from

error when they communicate to others, either

orally or by writing, the knowledge he imparted

to them, not merely for their own benefit, but

for that of the world at large ?

‘ But, farther, inspiration is necessary. The necessity of revelation I have shown in a former fetter ; and the same reasoning, in connexion with what I have just remarked, establishes the necessity of inspiration. Besides this, the subjects of Scripture render inspiration necessary. Some past facts recorded in the Bible could not possibly have been known had not C»od revealed ‘hem. Many things are recorded there as future, that is, are predicted, which God alone could foreknow and foretel, which notwithstanding came to pass, and which, therefore, were foretold under divine inspiration. Others, again, are far above human capacity, and could never have been discovered by men: these, therefore, roust have been delivered by divine inspiration. The authoritative language of Scripture, too, argues the necessity of inspiration, admitting the veracity of the writers. They propose things not as matters for consideration, but for adoption : they d« not leave us the alternative of receiving or rejecting; do not present us with their own thoughts ; but exclaim, ‘ Thus saith the Lord,’ and on that ground demand our assent. They

must of necessity therefore speak and write as they ‘ were inspired by the Holy Ghost,’ or be impostors : and the last supposition is precluded by reasonings which I have again and again brought forward in these letters. Very striking proofs of the inspiration of the Scriptures might DC deduced from a consideration of their sublimity, their union of perspicuity with profundity, their piety, their pure and holy tendency, their efficacy, their harmony, and their miraculous preservation. But I shall leave you to reflect upon these at your leisure, and proceed to lay before you, as an argument of no small weight, the testimony of those who lived nearest the apostolic times on this point. They may naturally be expected, so far I mean as is independent of the written word, to know more of the mind of those who, in regard to religious topics, had the ‘ mind of Christ,’ than any Christians in subsequent ages.’

Our author then establishes by quotations from these writers (which we have not room to transcribe) that nearly all the Christian writers in the first three centuries, whose performances have wholly or partly reached us, speak of the Scriptures as divine, call them the Holy Scriptures,

the sacred fountain, the divine fountains of salva-

tion, &c., evidently implying their inspiration :

and that in those early ages the whole church

agreed in sentiment that no book should be re-

ceived into the canon of Scripture of whose m-

spiiation there was any doubt. The curious

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reader may consult farther tlu- testimonies col-

lected by Dr. Whitby, vol. t. I'ref., by Dr.

Lardner in the second part of his Credibility, Dr.

Doddridge in his Lectures on Divinity, and in

his Family Expositor, vol. iii.

' Thus, then, we see,' he adds, ' that in the

primitive ages the universal opinion was in favor

of the inspiration of the Scriptures. Let us next

enquire how far this opinion grows naturally out

of an examination of the Scriptures themselves.

Considered in relation to the present subject,

the books of Scripture fall under three classes :

the prophetical books ; the historical books of

the Old Testament ; and the New Testament,

being in part historical, in part doctrinal.

' Now, as to the prophetical books, their di-

vine authority and their inspiration follow at

once from the completion of several of the pre-

dictions they contain : the entire fulfilment of the

whole is not essential to the argument. The in-

spiration of the New Testament may be inferred

from the language of our Lord, and that of the

apostles. Thus, Jesus Christ promised extraordi-

nary assistance to his apostles. He promised them

‘ the Comforter,’ ‘ the Holy Spirit,’ ‘ the Spirit of Truth,’ who should ‘ testify of him,’ should ‘ teach them all things, bring all things to their remem-

brance whatsoever Christ had said unto them,

should guide them into all truth, should abide with them for ever, and show them things to come (;«).’

*Again, he says, * when the Comforter is come,*

whom I will send to you from the Father, even

the Spirit of Truth, which proceedeth from the

Father, he shall testify of me ; and ye also (being so assisted) shall bear witness (n).’ From these

passages it is but fair and reasonable to conclude

that the aid of this Heavenly Guide was to be

vouchsafed them on all suitable occasions ; and

surely no occasions could render it more ex-

pedient than when they were engaged in de-

livering written instructions, whether in the form

of Gospels or of Epistles, which were intended

for the edification of the Christian church till

- *time should be no longer.' In fact, the Spirit*

could not abide with them for ever, in relation to t! e church, in any other way than by preserving

the word they delivered from such human or

*diabolical depreciation and corruption as migh**

render it injurious instead of being salutary. It

will also be worth our while to notice the re-

markable language in which Jesus Christ pro-

mises his apostles the extraordinary assistance of

the Spirit while they are defending his cause be-

fore magistrates. 'Settle it therefore in your

hearts not to meditate before what ye shall

answer ; for I will give you a mouth and wisdom

which all your adversaries shall not be able to

gainsay or resist. Take no thought how or what

ye shall speak ; for it shall be given you in that same hour what ye shall speak ; for it is not you that speak, but the Spirit of your Father thai

speaketh in you (o). If this were to be the case when they pleaded before magistrates, how much*

more reason is there to conclude that, when they

(m) John xiv. 16—26. xvi. 13.

(n) John xv. 26, 27.

(o) Luke xxi. 14, 15. Matt. x. 19, 20. Mark

riii. 11.

were writing for the use of all future generations, it was not so much they who wrote as the Spirit

of the Father who dictated to them, and thus

wrote by them. For the occasion is evidently

much more important in the latter instance than

in the former : an error in their writings would

have a much more extensive, permanent, and

injurious influence, than any error that could oc-

cur in a pleading or argument, necessarily of

transient impression, before a magistrate.

‘ In estimating the authority claimed by the

eight writers of the New Testament, we must not

only consider their unbroken, unimpeachable in-

tegrity, but that five of them were of the number

of the apostles to whom the promises just cited

were made. Of the other three, one, namely

Luke, is generally admitted to have been of the

seventy disciples sent out by Christ, and who

received” the promise of divine superintendence

and inspiration recorded in his Gospel (p).

With regard to Mark, if his own immediate in-

spiration cannot be established, that of his Gospel

can, since it has never been questioned that he

wrote under the superintendence of Peter, an

inspired apostle. There then remains only Paul,

who repeatedly and solemnly asserts his own

inspiration, and his equality in every respect

with all the other apostles ; appealing to miracles

publicly wrought by himself in proof of his di-

vine commission. That the apostles themselves

had a full persuasion that they wrote under Di-

vine inspiration is evident from a great variety

of texts ; to some of the most important of which

I shall refer you (

carefully, and allow them their full impression

upon your mind. You will find, too, that the

apostles considered themselves as communicating

to the world a perpetual rule of faith and prac-

tice, which would be comprehended by all ex-

cept the finally impenitent. If, say they, ‘ if

our gospel be under a veil, it is veiled to those that are perishing (r).’ On these accounts, as it

should seem, they preferred themselves before

the prophets, saying (x) ‘ God hath set in the

church, first, apostles ; secondly, prophets ; thirdly, teachers :’ language which could not properly

have been employed had the apostles been in-

spired only to preach, and not to write ; for in

that case they would manifestly be inferior to

the prophets, who in their writings, as well as

their oral denunciations, ‘ spake as they were

moved by the Holy Ghost.’

Dr. Doddridge, in his valuable Dissertation

on the Inspiration of the Scriptures, well ob-

serves : — ‘ The inspiration, and consequently the

genuineness and credibility, of the Old Testa-

ment, may be certainly inferred from that of the

New, because our Lord and his apostles were so

(p) Luke xii. 11, 12. See also Luke x 16.

(9) 1 Cor. ii. 10—16. iii. 21-23. xi. 23. xiv.

37. 2 Cor. ii. 10. iii. 5, 6. iv. 8. xi. 7. xiii. 3.

Gal. i. H, 12. Ephes. iii. 3—5. 10. iv. 11, 12.

1 Tim. i. 11. 1 Pet. i. 12. 21. 2 Pet. iii. 2. 15, 16. John x. 35. 1 John ii. 20. iv. 6. Rev. i. 1, &c. I Thess. i. 5. 2 Thess. ii. 13.

(r) E« Sc gat «

ijfHov, fv TO»C aTroXAvuei/oic «

2 Cor. iv. 3.

(f) 1 Cor. xii. 28. Ephes. ii. 20.

far from charging the Scribes and Pharisees

(who on all proper occasions are censured so

freely) with having introduced into the sacred

volume any merely human compositions; that,

on the contrary, they not only recommend a

diligent and constant perusal of these Scriptures,

as of the greatest importance to men’s .eternal

happiness, but speak of them as divine oracles, and as written by the extraordinary influence of the Holy Spirit upon the minds of the authors. ' I desire that the following list of Scriptures may be attentively consulted and reflected on in this view. I might have added a great many more, indeed several hundreds, in which the sacred writers of the New Testament argue from those of the Old in such a manner as nothing could have justified but a firm persuasion that they were divinely inspired. Now, as the Jews always allowed that 'the testimony of an approved prophet was sufficient to confirm the mission of one who was supported by it,' so I think every reasonable man will readily conclude that no inspired person can erroneously attest another to be inspired ; and indeed the very definition of plenary inspiration absolutely excludes any room for cavilling on so plain a head. I throw the particular passages which I choose to mention into the margin below (£); and he must be a very indolent inquirer into a question of so much importance, who does not think it worth his while to turn carefully to them ; unless he

have already such a conviction of the argument that it should need no farther to be illustrated or confirmed.' Of late, objections to the evidence from miracles for the inspiration of Scripture having been revived in one of our most popular literary journals, bishop Gleig, of the Scottish Episcopal Church, has inserted a valuable Supplementary Dissertation on the Miracles of our Lord and his Apostles in his new edition of Stackhouse's History of the Bible. The following is an abstract of the most material part of this excellent essay : —

' A miracle has been defined — ' An effect or event contrary to tha established constitution or course of things,' or ' a sensible deviation from the known laws of nature.' To this definition I am not aware tnat any objection has ever been made, or indeed can be made. That the visible world is governed by stated general rules or laws ; or that there is an order of physical causes and effects established in every part of the system of nature, whicli falls under our observation, is a fact, which is not, and cannot be, controverted. Effects which are produced by the regular operation of these laws or physical causes,

or which are conformable to the established

(i) John v. 39. Matt. iv. 4. 7. 10. Mark xii.

24. Luke x. 26, 27. Matt. v. 17, 18; xxi. 42;

xxii. 29. 31. 43 ; xxiv. 15; xxvi. 54. 56. Luke i.

67. 69, 70 : xvi. 31 ; xxiv. 25. 27. John vi. 31 ; x. 35. Acts ii. 16. 25 ; iii. 22. 24 ; iv. 25 ; xvii. 11 ; xviii. 24. 28 ; xxviii. 25. Rom. iii. 2. 10 ; ix. 17.

25. 27. 29 ; x. 5. 1.1. 16 ; xv. 4 ; xvi. 26. 1. Cor.

x. 11. 2 Cor. iv. 13 ; vi. 16, 17. Gal. iii. 8.

1 Tim. v. 18 ; 2 Tim. iii. 15, 16. Heb. i. 1. 5—13 r iii. 7. Jam. ii. 8; iv. 5, 6. 1 Pet. i. 10—13

2 Pet. i. 19—21.

course of events, are said to be natural ; and

every palpable deviation from this constitution

of the natural system, and the correspondent

course of events in it, is called a miracle.

‘ If this definition of a miracle be accurate,

no event can be justly deemed miraculous merely

because it is strange, or even to us unaccount-

able ; for it may be nothing more than the regu-

lar effect of some physical cause operating

according to an established though unknown law

of nature. In this country earthquakes happen

but rarely, and at no stated periods of time ; and for monstrous births perhaps no particular and

satisfactory account can be given : yet an earthquake is as regular an effect of the established laus of nature as the bursting of a bomb-shell, or the movements of a steam engine ; and no man doubts but that, under particular circumstances unknown to him, the monster is nature's genuine issue. It is therefore necessary, before we can pronounce an event to be a true miracle, that the circumstances under which it was produced be known, and that the common course of nature be in some degree understood; for, in all those cases in which we are totally ignorant of nature, it is impossible to determine what is, or what is not, a deviation from her course. Miracles, therefore, are not, as some have represented them, appeals to our ignorance. They suppose some antecedent knowledge of the course of nature, without which no proper judgment can be formed concerning them ; though with it their reality may be so apparent as to leave no room for doubt or disputation. Thus, were a physician to give instantly sight to a blind man, by anointing his eyes with a chemical, preparation, which we had never before seen, and to the

nature and qualities of which we were absolute stangers, the cure would to us undoubtedly be wonderful , but we could not pronounce it miraculcus, because it might be the physical effect of the operation of the uuguent on the eye. But were he to give sight to his patient merely by commanding him to receive it, or by anointing his eyes with spittle, we should with the utmost confidence pronounce the cure to be a miracle ; because we know perfectly that neither the human voice, nor human spittle has, by the established constitution of things, any such power over the diseases of the eye. No one is now ignorant that persons apparently dead are often restored to their families and friends, by being treated, during suspended animation, in the manner recommended by the Humane Society. To the vulgar, and sometimes even to men of science, these resuscitations appear very wonderful ; but, as they are known to be effected by physical agency, they can never be considered as miraculous deviations from the laws of nature, though they may suggest to different minds very different notions of the state of death. On the

other hand, no one could doubt of his having

witnessed a real miracle who had seen a person,

that had been four days dead, come alive out of

the grave at the call of another, or who had even beheld a person exhibiting all the common evi-

dences of death instantly resuscitated merely by

being desired to live. Thus easy is it to distin-

guish between such miracles as those of our

blessed Saviour and the most wonderful phe-

nomena produced by physical causes, operating

according to the established laws of nature.

Yet it seems difficult to admit, on any occasion,

a suspension of these laws ; and we may safely

pronounce that they have never been suspended

but for some important purpose, which could

not otherwise have been accomplished. 'Events,'

says an able writer, ' may be so extraordinary

that they can hardly be established by any tes-

timony ;' and the instance which he gives is of

an event, in which I am not aware that any law

of nature would be suspended. ' We would not

give credit to a man who should affirm that he

saw 100 dice thrown in the air, and that they

all fell on the same faces.' To such an affirma-

tion I certainly would give no credit; for, though

I think that 100 dice might all fall on the same faces without the suspension of any known law of nature, such an event is so extremely improbable, and of so very little importance in itself, that it would require the evidence of more than one witness to establish its credibility. The author however considers it as the violation of some unknown law of nature, and immediately infers, from its not being admitted on the report of one man, 'that the probability of the continuance of the laws of nature is superior to every other evidence, and to that of historical facts the best established.' In this inference I cannot acquiesce; but, before entering into any discussion on the subject, it will be necessary to ascertain with some precision what is meant by the laws of nature, and whence those laws had their origin.

' If this profound mathematician (Laplace is here referred to) be, as his countrymen in general were some years ago, convinced, either that there is no God ; or that, if there be a God, he is not the moral governor of the world ; or that the present laws of nature, or the established course of things, have existed from all eternity independent of him and of every intellectual being, he is perf'-ctly consistent when he says that no

weight of testimony could prove the miraculous

suspension of these laws. It would indeed be

ridiculous to talk of miracles to the atheist or

fatalist ; for if there were no God, or if God were not the moral as well as physical governor of

the world, the- very notion of miracles, as it is

entertained by Christians, would involve in it :

contradiction and absurdity. It is only with

theists, therefore, and such theists as, admitting

the moral attributes of God, believe that the es-

tablished course of things, or the laws of nature,

were established by him for the accomplishment of

some great and good purpose, that any discussion

can be carried on respecting the evidence necessary

to prove the temporary suspension of any one of

these laws ; for if they be all necessary, and

have been from eternity, it is as impossible to

suspend them by any power, or for any purpose,

as it is to render a geometrical axiom false.'

Let us now suppose that, when the Creator of

the world was about to establish that course of

events which we call the laws of nature, in such

order as he knew would produce the greatest

quantity of happiness to the whole sentient and

intelligent creation, lie foresaw that man, for

whose accommodation chiefly we must suppose

this earth to have beeu fitted up, would bring aimself into such circumstances that his happiness would become impossible, unless some one of these laws should for a time be suspended ; may we not suppose that a Being of infinite power and wisdom might make provision for such an event in the very establishment of those laws? To control by force the freedom of the human will would be to destroy that very nature on which depends the greatest happiness of which man is capable ; but might not some por-

tion of inanimate matter be diverted for a short time from its regular course without the smallest injury to any sentient or intelligent being in the universe ? In the journal to which I have already referred, it is confidently affirmed that it could not. ‘ Suppose a man,’ says this critic,

- *not at all versed in astronomy, who considers the moon merely as a luminous circle that, with certain irregularities, goes round the earth from east to west nearly in twenty-four hours, rising once and setting once in that interval. Let this man be told, from some authority that he is accustomed to respect, that on a certain day it had been observed at London that the moon did not set at all, but was visible above the horizon for twenty-four hours : — there is little doubt that, after making some difficulty about it, he would come at last to be convinced of the truth of the assertion. In this he could not be accused of any extraordinary or irrational credulity. The experience he had of the uniform setting and rising of the moon was but very limited ; and the fact alleged might not appear to him more extraordinary than many of the irregularities to*

which that luminary is subject. Let the same thing be told to an astronomer, in whose mind the rising and setting of the moon were necessarily connected with a vast number of other appearances ; who knew, for example, that the supposed fact could not have happened, unless the moon had exceedingly deviated from that orbit in which it has always moved ; or the position of the earth's axis had been suddenly changed ; or that the atmospherical refraction had been increased to an extent that was never known. Any of all these events must have affected such a vast number of others, that, as no such thing was ever before perceived, an incredible body of evidence is brought to ascertain the continuance of the moon in her regular course. The barrier that generalization and the explanation of causes thus raises against credulity and superstition,— the way in which it multiplies the evidence of experience, is highly deserving of attention, and is likely to have a great influence on the future fortunes of the human race. Against the uniformity, therefore, of such laws, it is impossible for testimony to prevail.' Cer-

tainly, it is impossible for such testimony as that supposed, to prevail against the uniformity of any law of nature ; for, as I have already observed, if those laws be necessary and eternal, their uniformity can never be interrupted for any purpose or by any power, and, if they have been established by a God of perfect wisdom and goodness, we may be assured that they will never be suspended for so unworthy a purpose as only to make the citizens of London stare, and enable one of them to try the credulity of some clown, who believes the moon to consist, according to the Scotch expression, of green cheese! What such a ridiculous tale as this, supposing it ever to have been seriously told, would have to do with superstition, it is not easy to conceive ; but the ingenious critic might as well have told us, in plain terms, that it is impossible for testimony to render credible what is said of the sun and moon standing still at the call of Joshua ; for even his friend, who believes the moon to be a mere luminous circle of cheese, if at all conversant with his Bible, must perceive that this is what he intended to say under the cover of a clumsy apologue.

‘ If the laws of nature be the work of fate, I

readily agree with him that the story of the sun and moon standing still cannot be rendered credible by any testimony. If those laws be, as I believe them to be, the constitution of an Almighty and infinitely wise and good God, I likewise readily agree with him that no testimony could render credible the phenomena of the sun and moon's standing still, but for some important purpose that could not have been otherwise so well accomplished. What the purpose was for which the children of Israel were separated from the idolatrous nations around them, and established in the land of Canaan, has been fully stated elsewhere; and the theist, with whom I am now arguing, will admit that, whether it was real or not, that purpose was of great importance. Great, however, as that purpose was, for the reasons elsewhere assigned, no testimony could prevail with me to believe, that, for the sake of it, the rotation of the earth on its axis, and the course of the moon in her orbit, were literally arrested, unless the same Almighty power wrought another miracle at the same instant to prevent the natural consequences of the sudden cessation of motions so rapid. Without

this second miracle, I am as fully aware as our critic, that those events produced by the first must have not only affected a vast number of others, but been also productive of mischief — such as the reducing of the earth to a state of chaos — more than sufficient to balance the good expected from the miracle ; — nay, that they would have rendered the miracle itself useless, by destroying those for whose instruction it was meant to be wrought. I confess, however, that I do not perceive what injury could have been done to any sentient or intelligent being in the solar system, or how the different planets, of which that system is composed, could have been disturbed in their courses, by an extraordinary atmospherical refraction of part of the solar rays, by which I believe the miracle in question to have been affected. It is very true that my knowledge of the sciences of astronomy and optics is very limited when compared with that of Laplace and his friend ; but I may surely be allowed to know more of them than the man, who, without displaying any irrational credulity, believes that on a certain day the moon had at

London forgotten to set. I have likewise con-

versed often, on the subject of miracles in gene-

ral, and of that of Joshua in particular, with

ohilosophical laymen, some of whom, with re-

spect to their knowledge of optics and astronomy,

*mi< *ht, without presumption, have been brought*

into comparison even witli Laplace ; and they

saw as little danger as I do, to any part of the creation, from a temporary increase of the re-

fractive power of the atmosphere to any extent.

Indeed all philosophical theists, with whom I

have conversed freely on such subjects, have

held the will of God to be the immediate cause

(I mean efficient cause) of every law of inani-

mate nature, as well as of every deviation from

those laws, which deviations were foreseen and

provided for from the beginning, when ‘ the

world first rose out of chaos.’ I confess likewise

that I see not how the restoration of a dead man

to life, or any other miracle recorded of our

Lord in the Gospels, could affect such a vast

number of others as (o bring what our critic

calls an incredible body of evidence against the

reality of those miracles. The most astonishing of them all has long appeared to me to be the multiplication of the loaves and fishes, because it seems to imply the power of creation ; and we certainly have the evidence of uniform experience, as far as experience can be had in such a case, that not an atom of matter has been either created or annihilated since the beginning of the world. The quantity, however, of new matter added, on those two occasions, to the old, supposing such to have been the case, was comparatively so small, that the philosophers, who ‘ weigh not only the mountains of the earth,’ but even the earth itself and all the planetary system, ‘ in a pair of scales,’ and who hope, by the aid of ‘ a calculus sufficiently powerful, to make near approaches to omniscience,’ will admit that it could not have greatly disturbed the motions of the earth and moon, or any other planet.

‘ On the principles of pure theism, therefore, though certainly not on those of atheism or fatalism, the possibility of miracles — and even of such miracles as those of our Lord, — will surely be admitted : but the great question is, what

evidence is sufficient to render them credible ?

The Christians say that the evidence of testimony

is sufficient for this purpose, and indeed that no

other evidence can be had. That the truth of

the gospel miracles admits, in the present age,

of no other evidence than that of testimony, will

be readily admitted; but our critic contends, as

Hume had done before him, that the improbabi-

lity of the violation of the order of those events, of which the course is known from experience

to be perfectly uniform, is so strong, that no tes-

timony can prevail against it. 'It will always

be more wonderful,' he says, ' that the violation

of such order should have taken place, than that

any number of witnesses should have been de-

ceived themselves, or should be disposed to de-

ceive others.' If this doctrine be true, how

many facts have taken place in nature, or have

been said by philosophers to take place in nature,

which notone man of 10,000, or even 10,000,000,

can rationally believe to have happened ! ' That

testimony derives all its force from experience,'

says the critic, ' seems very certain ;' and Hume, as he acknowledges, had said the same thing be-

fore him. But, if this be true, upon what evi-

dence can I and hundreds of millions beside me believe, that showers of meteoric stones have, in different ages and distant nations, fallen from the atmosphere on the earth ? I never saw one such stone fall, and I have the evidence of uniform experience that the atmosphere does not regularly generate metallic stones. Every man who is in the same predicament with me has the same immense weight of experience to place in the balance against the testimony of the comparatively very small number who say that they had witnessed such stones fall from the heavens; and, if it be very certain that testimony derives all it;; force from experience, how can it be possible for hundreds of millions of men, possessing common sense, to admit, in opposition to their own uniform experience, the testimony of some dozens of people who may have been deceived themselves, or disposed, like the London citizen with his moon of cheese, to deceive others ? It is vain to say that we liave the experience of ages, and of numbers of chemists who have examined the stones, in corroboratioa of the testimony that they fell from the heavens ; for in this argument, where experience of the uniformity of

the laws of nature is opposed to testimony bearing witness that those laws have been occasionally suspended, no experience can be admitted but individual personal experience. The experience of ages and of distant nations — indeed the experience of every individual but myself — is known to me only by testimony ; and is it possible that any philosopher can seriously contend that testimony derives all its force from that experience, of which we never could have known any thing — of which, indeed, we never could have heard — but through the medium of testimony? This is surely not possible, and therefore it must be by every man's individual personal experience, by which, on the principles of Hume and his followers, the truth of testimony is to lie tried. If so, I ought not to believe that there has ever been an earthquake; for 1 never felt the shock of one, though I have heard of many, and of some which were said to have been felt by numbers in the very town where I then was ! I ought not to believe that a monstrous child was ever born of a woman; for I never saw a human being, who could with any propriety be called a

monster, whilst I know, by uniform personal

experience, that every monstrous birth, if there

have been any such births, has been a deviation

from the regular course of nature. In vain shall

I be told that earthquakes may be accounted for

in certain circumstances, and shown to be pro-

duced by the operation of the laws of nature ;

for those circumstances are probably assumed

for the purpose, and, whether they be or not,

they are made known to me only by testimony

•wnich I ought to disregard, because directly

contrary to my uniform experience.

‘ But even this mode of converting testimony

into experience cannot be had recourse to in

the case of the meteoric stones ; for, according to one of the most scientific chemists of the age,

4 it would be absurd, in the present state of our knowledge, to attempt any explanation of the

manner in which they are formed ; for not even

a conjectural cause for them in the smallest de-

gree probable can be assigned.’ We are told in-

deed that the testimony produced in support of

the origin of those stones, ‘ has been confirmed

by a scrupulous examination into the natural history of the facts (the stones) themselves. When the stones which were said to have fallen from the heavens came to be chemically analyzed, they were found to have every where the same characters, and to consist of the same ingredients, nearly in the same proportions ;' whilst no other stones have any where been found of precisely the same character. ' Here, therefore,' says the reviewer of Laplace, ' we have a testimony confirmed, and rendered quite independent of our previous knowledge of the veracity of the witnesses.' This inference I cannot admit; nor can I conceive by what rule of logic it is drawn from the premises. Not to insist on the unquestionable fact that the result of the chemical analysis of the stones can be known, to those myriads who were not present when it was made, only by testimony, all thatseemsto me to have been proved by that analysis is that the stones in question are of one and the same species, and that the species itself is very uncommon. These two facts I admit to have been completely proved ; for I have no hesitation to receive the testimony of the chemist by whom they were ascertained ; but

why stones of a singular character, found in dif-

ferent regions of the earth, should therefore be

inferred to have fallen from the heavens, I con-

fess that I am yet to learn. That a stone of two

or three tons weight, as some of those meteoric

stones have been, should be generated in the

higher regions of the atmosphere, and float in a

horizontal direction over various countries, at

the distance of sixty miles from the earth, is di-

rectly contrary not only to all my experience,

but likewise to all that I know of the constitution of the atmosphere, as well as of the law of gravi-

tation— the best ascertained, perhaps, of all the

laws of corporeal nature ! Am I then to reject

with scorn all that I have been told of ignited

stones falling from the heavens ? Undoubtedly I

ought to do so, if testimony derives all its force from experience; for though those stones have

been chemically analysed, and their composition

ascertained by experiments, not an individual of

the human race can believe that they fell from

the atmosphere on any other evidence than the

unsupported testimony of those very few persons

who have said that they saw them fall. ‘ But it

will always be more wonderful tiiat masses of

iron, pyrites, and earth, of the weight of two or three tons, should be formed in the higher regions jf the atmosphere, and even float horizontally in that rare medium, as a log of wood floats in water, than that any number of witnesses, who affirm that they say them fall, should have been deceived themselves, or disposed to deceive others.' They may have had their origin in the heart of the earth, and been forced upwards by ubterraneotis fire ; and this may seem the more probable, that the principal ingredient in them is iron in the metallic state ; that they have been generally found hot and buried to a considerable depth in the earth ; and that such eruptions from the bowels of the earth, through the craters of volcanoes, have frequently been accompanied by appearances in the air which might easily be mistaken by a few individuals — almost stupified with astonishment — for meteors descending from the heavens.

' In a word, it appears to me that there is not one objection urged by Hume, Laplace, or any of their pupils, against the sufficiency of testimony to prove the reality of the gospel miracles,

which does not hold with at least equal force

against the reality of those showers of meteoric

stones which are said to have fallen in all the

quarters of the globe. The truth, however, is,

that these objections are in both cases founded

on a palpable mistake. Testimony is so far from

deriving all its force from experience, that as was justly observed long ago (by Dr. Campbell in

his admirable Dissertation on Miracles), it is the

sole foundation of by far the greater part of what the opponents of the gospel call firm, unaltera-

ble, and universal experience ; and that if we

did not, in certain circumstances, repose implicit

confidence in testimony, every man s knowledge

of events would be confined to those which had

fallen under the immediate observation of his

own senses. Hume seems to have been per-

fectly aware of this, when he supposed a case, in

which, were it ever to occur, testimony would be

sufficient to establish the credibility even of a

miracle. ‘ No testimony,’ says he, ‘ is sufficient

to establish a miracle, unless the testimony be

of such a kind that its’ falsehood would be more

miraculous than the fact which it endeavours to

establish. — When any one tells me, that he saw

a dead man restored to life, I immediately con-

sider with myself, whether it be more probable

that this person should either deceive or be de-

ceived, or that the fact, which he relates, should

really have happened. I weigh the one miracle

against the ether, and, according to the superio-

rity which I discover, I pronounce my decision,

and always reject the greater miracle. If the

falsehood of his testimony would be more mira-

culous than the event which he relates; then,

and not till then, can he pretend to command

my belief or opinion.

‘ There is some inaccuracy of language in

talking of greater and less miracles when omni-

potence is supposed to have performed them all;

but it is no more than justice to acknowledge

that the author admitted, in a note, that all real miracles are equally easy to the Almighty, by

observing ‘ that the raising of a feather, when the wind wants ever so little force requisite for that

purpose is as real a miracle as the raising of a

house or ship into the air.’ By greater and less

miracles therefore, and by always rejecting the

greater, it is evident that he meant nothing more

than that of two or more deviations from the known laws of nature, one might iu itself, when con-

templated with all its circumstances, appear less probable than the others ; and that, if he could not reject them all, his principles would compel him to reject that which should appear least probable when viewed in all its bearings. This seems to be a just maxim ; and therefore, if it can be shown that the testimony given by the apostles and other first preachers of the gospel to the miracles of their Lord, would, on the supposition that those miracles were not really performed, have been as great a deviation from the

known laws of nature as the miracles themselves, tural connexion between the signs and the things the balance must be considered as evenly poised signified — between ideas or notions in the mind by opposite miracles ; and, whilst it shall conti- and articulate vocal sounds — yet it is obvious nue so, the judgment must remain in a state of that, without a violent effort of the speaker to suspense. But if it shall appear that, in this the contrary, they must always be in conformity with each other, because, in every language,

rase, the false testimony would have been a deviation from the laws of nature much less probable in itself than the miracles recorded in the gospels, the balance will be instantly destroyed ; and, by Mr. Hume's maxim, we must reject the supposition of falsehood in the testimony of the apostles, and admit the miracles of Christ to

have been really performed.

‘ In this argument it is needless to waste time in proving that those miracles, as they are represented in the writings of the New Testament, were of such a nature, and performed before so many witnesses, that no imposition could possibly be practised on the senses of those who affirm that they were present. From every page of the gospels this is so evident that the philosophical adversaries of the Christian faith never suppose the apostles to have been themselves deceived, but boldly accuse them of bearing false witness. But, if this accusation be well founded, their testimony itself is as great a miracle, or, in other words, as real a deviation from the laws of nature, as any which they record of themselves or of their master. That testimony does not derive all its force from experience has been already proved; and M indeed little less than self-evident from the unquestionable fact that the earliest assent, which is given to testimony by children who have no experience, is unlimited, whilst the experience of age renders men distrustful. Exactly the reverse would be the case,

were our belief in testimony the result of experience. It has therefore been thought that the beneficent Author of nature, who intended man to be a social creature, hath implanted in every human breast an instinctive propensity to speak truth, and likewise a disposition to confide implicitly in the veracity of others; and it cannot be denied that children believe whatever is told them, and that the greatest liar on earth speaks a hundred truths for one falsehood. That truth is indeed always at the door of the lips ; that it requires no effort to bring it forth ; that in ordinary cases men speak truth uninfluenced by any motive moral or political ; and that lying is never practised by the worst of men without some effort to accomplish some end, are positions which daily experience renders it impossible to question. But, notwithstanding all this, I do not think that truth is spoken by an original and instinctive principle ; because men appear not to be impelled by instinct to speak any articulate language at all ; and it is surely inconceivable that instinct should teach the use of arbitrary and artificial signs, such as the words of every language undoubtedly are, or that between

such signs and ideas any natural relation should

ever be formed :' — In human testimony the ideas

in the mind of the speaker are the things signi-

fied, and the words of the language spoken are

the signs by which they are expressed; and,

when these things and signs are in conformity

to each other, the words uttered express so much

truth Now, though in this case there is no na-

evcry

there are words appropriated to the purpose of

denoting every idea, and every relation of ideas,

which can be expressed by that language; and

in the mind of every man those ideas, relations

of ideas, and their appropriate words, have been

constantly associated or linked together from the

time that he first learned to speak. So intimate is this association, and so impossible to be broken, that whoever will pay sufficient attention

to the operations of his own mind, will find that

he thinks as well as speaks in some language ;

and that in cogitation he runs over, silently and

habitually, those sounds which in speaking he

actually utters. Hence it is that hardly any

man has written in perfect purity a language in

which he has not been accustomed to think ; and

hence too, I believe, it is, that so many men of

deep thinking have been remarked for the prac-

tice of speaking to themselves. If this be so, it is impossible that a man, without some effort,

should ever speak any thing but truth ; for the

ideas of what he has seen or heard, &c., are not

of his manufacture ; they are generated in his

mind by external objects, according to the es-

tablished laws of nature ; and, till they be effaced from his memory, they must always, by the law

of association, which is one of those laws, make

their appearance there with all their mutual re-

lations, and in their appropriate dress. In the

very act of learning to speak, we necessarily

learn to speak the truth ; for what I have called

mental truth is impressed upon our minds by

him who cannot err, and, were we not to employ

words for the expression of that truth exactly as

they are employed by those with whom we con-

verse, our language (if language it could be called) would be unintelligible jargon; and we could

neither declare our wants, nor ask relief with any

hope of scccess. Children beginning to speak

may indeed often utter untruths or nonsense

without any motive, and merely from mistake;

and this indeed they often do, because the ideas

and words of children have neither been long

nor closely linked together ; but it is impossible that a man, however wicked, should habitually, and without motives, lie on ordinary occasions, unless the constituent principles of his nature have been totally altered ; unless his brain has been disordered by disease ; unless his ideas and notions have been disarranged ; and all the associations which have taken place among them from his infancy have been dissolved, and quite contrary associations formed in their stead. We know indeed, by woeful experience, that immoral men occasionally utter falsehoods with a view to deceive. But in these cases they are influenced by some motive either of hope or of terror; the falsehood is always uttered with an effort; and so very strong is the association between words and ideas that the truth will at times break out in spite of all their endeavours to conceal it ; so that the end or middle of a false narrative, if it be of any length, and include

a numbc. af particular events or incidents, is commonly inconsistent with the beginning. We entertain a suspicion of falsehood, when those

who relate the same tale either palpably contra-

dict each other, or agree in every minute circum-

stance, and speak throughout the very same

language — when they are but few in number and

of a doubtful character — when they have an in-

terest in what they affirm or deny — when they

deliver their testimony either with hesitation, or

with superfluous and violent asseverations of its

trutli ; because all these are circumstances which

have been generally observed to accompany false

witness. It is likewise wiih reluctance that we

admit a narrative of evenis entirely different

from every thing that we have hitherto seen or

heard ; because we may not be certain that the

narrator is not under some influence to deceive

us in matters concerning which we have nothing

but his testimony on which to ground our judg-

ment. But in every case, where the fact record-

ed is in itself possible, and attributed to a cause which we know to be adequate ; where a compe-

tent number of witnesses had sufficient means of

information, and were certainly under no in-

ducement to deceive, testimony is complete evi-

dence, however extraordinary the fact may be ;

because no fact, which is known to have had an

adequate cause, can be so incredible, as that a number of men of sound understanding should act in a manner inconsistent with the fundamental principles of human nature, or be able, if so disposed, to dissolve every association which had been formed in the mind of each of them from his infancy, and form new ones, all agreeing exactly with one another, and yet all contrary to llie truth.

‘ If this reasoning be just, and if the testimony of the apostles to their own and their Master’s miracles be false, it follows undeniably, either that they concerted a consistent scl erne of falsenood, and agreed to publish it at every hazard ; or that God had dissolved all the associations, which had been formed in their minds, of ideas of sense with the words of language, and arbitrarily formed new associations all in exact conformity with each other, but all in direct contra7 diction to truth. One or other of these events must have taken place; because, upon the supposition of falsehood, there is no other alternative. But such dissolution and formation of associations of ideas with words, as is supposed in the

latter event, is as great a deviation from the es-

tablished laws of nature, or, in other words, as

real a miracle, as the resurrection of a man from

the dead ; and, all real miracles being acknow-

ledged to be equally great, either of these could

have been performed only by a power equal to

the performance of the other. Nor would the

supposed voluntary agreement of the apostles,

in such a scheme of falsehood as they are said to have published to the world, be an event less

miraculous than the Divine interposition for the

unworthy purpose implied in the former hypo-

thesis. When they sat down to fabricate their

pretended revelation, and to contrive a series of

miracles, to which they were all to appeal for its truth, it is plain, since they proved successful in their daring enterprise, that they must have

clearly foreseen every possible circumstance in

which they could be placed, and have prepared

consistent answers to every question that could

be put to them by their most inveterate and most

enlightened enemies ; by the statesman, the law-

yer, the philosopher, and the priest. That such

foreknowledge as this would have been miracu-

lous will not surely be denied ; since it forms

the very attribute which we find it most difficult

to allow even to God himself. . It is not, how-

ever, flie only miracle, which this supposition

would compel us to admit. The very resolution

of the apostles to propagate the belief of false

miracles, in support of such a religion as that

which is taught in the New Testament, would

have been as wide a deviation from the laws of

nature, and therefore as great a miracle, as the

mind of man has ever conceived.

‘ When they formed this design, either they

must have hoped to succeed, or they must have

been convinced that they should fail in their un-

dertaking ; and, in either case, they chose evil,

and what thev knew to be unmixed evil, for its

own sake ! They could not, if they foresaw

that they should fail, look for any thing but that contempt, disgrace, and persecution, which were

then the inevitable consequences of an unsuc-

cessful endeavour to overthrow the established

religion. Nor would their prospects be brighter

on the supposition of their success. As they

knew themselves to be false witnesses, and impi-

ous deceivers, they could have no hope beyond

the grave ; and, by determining to oppose all the

religious systems, superstitions, and prejudices of

the age in which they lived, they wilfully ex-

posed themselves to inevitable misery in the pre-

sent life, to insult and imprisonment, to stripes

and death. Nor can it be alleged that they

might look forward to power and affluence,

when they should through sufferings have con-

verted their countrymen; for, so desirous were

they of obtaining nothing but misery as the end

of their mission, that they made their own perse-

cution a test of the truth of their doctrines. They introduced the Master, from whom they professed

to have received those doctrines, as telling them

that they were ‘ sent forth as sheep in the midst of wolves ; that they should be delivered up to

councils, and scourged in synagogues ; that they

should be hated of all men for his name’s sake ;’

that ‘ the brother should deliver up the brother

to death, and the father the child ;’ and that ‘ he who took not up his cross and followed him was

not worthy of him.’ The very system of religion,

therefore, which they invented and resolved to

impose upon mankind, was so contrived that

the worldly prosperity of its first preachers, and

even their exemption from persecution, was in-

compatible with its success. Had these clear

predictions of the author of that religion, under

whom the apostles and evangelists acted only as

ministers, not been verified, all mankind must

have instantly perceived that their claim to in-

spiration was groundless, and that Christianity

was a scandalous and impudent imposture. All

this the apostles could not but foresee when

they formed their plan for deluding the world.

Whence it follows that, when they resolved to

support their pretended revelation by an appeal

to forged miracles, they wilfully, and with theii

eyes open, exposed themselves to inevitable mi-

sery, whether they should succeed or fail in their

enterprise ; and that they concerted their measures

in such a manner as not to admit a possibility

of recompense to themselves, either in this life or in that which is to come. But if there be a law oi oatuie, for the reality of which we have better

evidence than we have for others, it is, ‘ that no man can choose misery for its own sake,’ or make

the acquisition of it the ultimate end of all his

pursuits. The existence of other laws of nature

we know by testimony and our own observation

of the regularity of their effects. The existence

of this law is made known to us not only by

these means, but also by the still clearer and more conclusive evidence of every man's own consciousness. Thus, then, do miracles force themselves upon our assent in every possible view which we can take of this interesting subject.'

I. Of the Pentateuch. — The Pentateuch consists of the five books of Moses. Some of the strongest arguments in support of the authenticity of the Pentateuch, and inspiration of the writer, have been already given. But we shall present two arguments of a different kind, which would be sufficient to prove at least the former of these conclusions, from the language and contents of the Mosaic writings, and from the testimony of the other books of Scripture.

From the contents and language of the Pentateuch there arises a very strong presumption that Moses was its author. The very mode of writing in the last four books discovers an author contemporary with the events which he relates ; every description, both religious and political, is a proof that the writer was present at each scene ; and the legislative and historical parts are so interwoven with each other that neither

*of them could have been written by a man who lived in a later age. Dr. Marsh justly observes, that the account given in the book of Exodus of the conduct of Pharaoh towards the children of Israel, is such as might be expected from a writer who was not only acquainted with the country at large, but had frequent access to the court of its sovereign ; and the minute geographical description of the passage through Arabia is such as could have been given only by a ‘ man like Moses, who had spent forty years in the land of Midian. The language itself is a proof of its high antiquity, which appears partly from the great simplicity of the style, and partly from the use of archaisms or antiquated expressions, which in the days even of David and Solomon were obsolete. For instance XVI ille, and *\J?J p’uer, which are used in both genders by no other writer than Moses. See Gen. xxiv. 14. 16. 28. 55. 57; xxxviii. 21. 25. But a strong argument, to show that the Pentateuch was written by a man born and educated in Egypt, is the use of Egyptian words ; words which never were, nor ever could have been, used by a native*

of Palestine ; and it is a remarkable circumstance

that the very same thing which Moses had ex-

pressed by a word that is pure Egyptian, Isaiah,

as might be expected from his birth and educa-

tion, has expressed by a word that is purely He-

brew. For instance, iflK, written by the Seventy

ijX« or ax«, Gen. xli. 2, and PQn, written by

*the Seventy 2u3»j or S»/3*c- See La Croze Lexi-*

con .'Egyptiacum, art. AXI and eHBI. The

same thing which Moses expressed by ˆHX, Gen.

xli. 2 ; Isaiah (xix. 7) expresses by r\OJ?, for t!ie Seventy have translated both of these words by

That Moses was the author of the Pentateuch

is proved also from the evidence of testimony.

We shall seek no authority but that of the suc-

ceeding sacred books themselves, which bear in-

ternal evidence that they were written in different

ages, and therefore could not be forged, unless

we were to adopt the monstrous opinion that

there was a succession of impostors among the

Jews who united together in the same fraud.

The Jews were certainly best qualified to judge

of the authenticity of their own books. They

could judge of the truth of the facts recorded,

and they could have no interest in adopting a

forgery. Indeed, to suppose a whole nation combined in committing a forgery, and that this combination should continue for many hundred years, would be the most chimerical supposition that ever entered into the mind of man. Yet we must make this supposition, if we reject the historical facts of the Old Testament. No one will deny that the Pentateuch existed in the time of Christ and his apostles ; for they not only mention it, but quote it. ' This we admit,' reply the advocates for the hypothesis which we are now combating ; ' but you cannot therefore conclude that Moses was the author ; for there is reason to believe it was composed by Ezra.' But, unfortunately for men of this opinion, both Ezni and Nehemiah ascribe the book of the law to Moses. See Ezra hi. 2 ; viii. 14 ; Neh. xiii. 1. 2. The Pentateuch was in the possession of the Samaritans before the time of Ezra. 3. It existed in the reign of Amaziah king of Judah, A. C. 839 years. 4. It was in public use in the reign of Jehosaphat, A. C. 912; for that virtuous prince appointed Levites and priests who taught in Judah, and had the book of the law of the Lord with them, and went about throughout all

the cities of Judah and taught the people. 5. It is referred toby David in his dying admonitions to Solomon. He also makes many allusions to it in the Psalms, and sometimes quotes it. There remains therefore only one resource to those who contend that Moses was not the author, viz. that it was written in the period which elapsed between the age of Joshua and that of David. But the whole history of the Jews from their settlement in Canaan to the building of the temple pre-supposes that the book of the law was written by Moses. 6. We have satisfactory evidence that it existed in the time of Joshua. One passage may be quoted where this fact is stated. The Divine Being makes use of these words to Joshua : ‘ Only be thou strong, and very courageous, that thou inayest observe to do all according to the law which Moses my servant commanded thee. This book of the law shall not depart out of thy mouth,’ &c. See Josh. i. 7, 8 ; viii. 31 ; xxiii. 6. To the foregoing demonstration objections may be stated. ‘ We will admit the force of your arguments, and grant that Moses actually wrote a work

called the book of the law; but how can we be certain that it was the very work which is now current under his name? And, unless you can show this to be at least probable, your whole evidence is of no value.' To illustrate the force or weakness of this objection, let us apply it to some ancient Greek author, and see whether a classical scholar would allow it to be of weight. It is true that the Greek writers speak of Homer us an ancient and celebrated poet ; it is true also that they have quoted from the works which they scribe to him various passages that we find at present in the Iliad and Odyssey ; yet still there is a possibility that the poems which were written by Homer, and those which we call the Iliad and Odyssey, were totally distinct productions.' Now an advocate for Greek literature would reply to this objection, not with a serious answer, but with a smile of contempt ; and would think it beneath him to silence an opponent who appeared to be deaf to the clearest conviction. But still more may be said in defence of Moses than in defence of Homer ; for

the writings of the latter were not deposited in any temple or sacred archive, to secure them from the devastations of time ; whereas the copy of the book of the law, as written by Moses, was intrusted to the priests and the elders, preserved in the ark of the covenant, and read to the people every seventh year. Dent. xxxi. 9 — 11; 14 —26. Sufficient care therefore was taken not only for the preservation of the original record, but that no spurious production should be substituted in its stead. And that no spurious production ever has been substituted in the stead of the original composition of Moses, appears from the evidence both of the Greek and the Samaritan Pentateuch. For as these agree with the Hebrew, except in some trifling variations (see London Polyglot, vol. vi. p. 19), to which every work is exposed by length of time, it is absolutely certain that the five books which we now ascribe to Moses are one and the same work with that which was translated into Greek in the time of the Ptolemies, and, what is of still greater importance, with that which existed in the time of Solomon. And as the Jews could have had no motive whatsoever, during that period which elapsed between the age of Joshua and that of

Solomon, for substituting a spurious production instead of the original as written by Moses, and, even had they been inclined to attempt the imposture, would have been prevented by the care which had been taken by their lawgiver, we must conclude that our present Pentateuch is the very identical work that was delivered by Moses.

II. Of (lie historical Imiiks of the. Old Testament.— The positive evidence being now produced, we shall endeavour to answer some particular objections that have been urged. Most of these occur in the book ofGr.NKsis: we shall reserve them, therefore, for separate examination, and here only consider the objections peculiar to the four last books. They may be comprised under one head, viz. expressions and passages' in these books which could not have been written "by Moses. 1. The account '/f the death of Moˆes, in tho hist chapter of Deuteronomy, we allow must have been added by some succeeding writer ; but this can never prove that the book of Deuteronomy is spurious. What is more common among ourselves than to

see an account of the life and death of an author subjoined to his works, without informing us by

whom the narrative was written? 2. It has been

objected that Moses always speaks of himself in

the third person. This is the objection of foolish

ignorance, and therefore scarcely deserves an an-

swer. Such persons have never read Caesar's

Commentaries, where the author uniformly speaks

of himself in the third person, as writers of the

most correct taste will often do ; who reflects

on the absurdity of employing the- pronoun of

the first person in a work intended to be read

long after his death. 3. As to the objection that

in some places the text is defective, as in Exo-

dus xv. 8, it is not directed against the author,

but against some transcriber; for what is want-

ing in the Hebrew is inserted in the Samaritan

text. 4. The only other objection that deserves

notice is made from two passages. It is said in

one place that the bed of Og is at llamah to this day; and in another (Deut. iii. 14) ' Jair the

son of Manasseh took all the country of Argob

into the coasts of Geshuri and Maacathi, and

called them after his own name, Bashan-havoth-

jair, unto this day.' The last clause in both

these passages could not have been written by Moses; but it was probably placed in the margin by some transcriber by way of explanation and was afterwards by mistake inserted in the text. Whoever doubts the truth of this assertion rnay have recourse to the MSS. of the Greek Testament, and he will find that the spurious additions in the texts of some MSS. are actually written in the margin of others.

That the Pentateuch, therefore, at least the four last books of it, was written by Moses, we have very satisfactory evidence ; which, indeed, at the distance of 3000 years, is wonderful, and which cannot be affirmed of any profane history written at a much later period. But the book of Genesis was evidently not written by a person who was contemporary with the facts which he records ; for it contains the history of 2369 years, a period comprehending almost twice as many years as all the rest of the historical books of the Old Testament put together. Moses has been acknowledged as the author of this book by all the ancient Jews and Christians; but it has been a matter of dispute from what source he derived his materials ; some affirming that

all the facts were revealed by inspiration, and others maintaining that he procured them from tradition.

Some, who pretend to be profound philosophers, have rejected many parts of the book of Genesis as fabulous and absurd ; but it cannot be the wisdom of philosophy, but the vanity of ignorance, that could lead to such an opinion. In fact, the book of Genesis affords a key to many difficulties in philosophy, which cannot otherwise be explained. It has been supposed that the diversities among mankind prove that they are not descended from one pair; but it has been fully shown that all these diversities may be accounted for by natural causes It la»

been reckoned a great difficulty to explain how fossil shells were introduced into the bowels of the earth ; but the deluge explains this fact better than all the romantic theories of philosophers.

See DELUGE. It is impossible to account for the origin of such a variety of language in a more satisfactory manner than is done in the account of the confusion of tongues which took

place at Babel. It would be no easy matter to show why the sea of Sodom is so different from every other sea on the globe which has yet been explored, if we had not possessed the scriptural account of the miraculous destruction of Sodom and Gomorrah. It is saturated with bitumen and salt, and contains few or no fishes. These are very singular facts, which have been fully established by late travellers. The book of Genesis, too, has been treated with contempt, because it makes the world less ancient than is necessary to support the theories of modern philosophers, and because it is difficult to reconcile the chronologies of several nations with the opinion that the world is not above 6000 or 7000 years old. The Chaldeans, in the time of Cicero, reckoned up 470,000 years. The Egyptians pretend that they have records extending 50,000 years back ; and the Hindoos go beyond all bounds of probability, carrying back their chronology, according to Halhed, more than 7,000,000 of years.

An attempt was formerly made by M. Bailly, mayor of Paris, to reconcile these magnified

calculations with the chronology of the Septuagint, which is justly preferred to the Hebrew. See SCPTUAGINT. He affirms that the Hindoos, as well as the Chaldeans and Egyptians, had years of arbitrary determination ; as for instance months of fifteen days, and years of sixty days, or two months. A month is a night and a day of the patriarchs ; a year is a night and a day of the gods ; 4000 years of the gods are as many hundred years of men. By attention to such modes of computation, the age of the world will be found very nearly the same in the writings of Moses and in the calculations and traditions of the Brahmins. With these also we have a remarkable coincidence with the Persian chronology. Bailly has established these remarkable epochas from the creation to the deluge. The Septuagint gives 2256 years ; the Chaldeans 2222 ; the Egyptians 2340 ; the Persians 2000 ; the Hindoos 2000; the Chinese 2300. The same author attempts to show the singular coincidence of the age of the world as given by four distinct and distantly situated people. The ancient Egyptians make it 5544 years ; the Hindoos 5502 ; the Persians 5501 ; the Jews,

according to Josephus, 5555.

Having made these remarks, to show that the facts recorded in Genesis are not inconsistent with truth, we shall now, by a few observations, confirm the evidence, from testimony, that Moses was the author, and answer the objections that seem strongest. There arises a great probability, from the book of Genesis itself, that the author lived near the time of Joseph ; for, as we advance towards the end of that book, the facts jradually become more minute. The materials of the antediluvian history are very scanty. The account of Abraham is more complete; but the history of Jacob and his family is still more fully detailed. This is indeed the case with every history. In the early part the relation is very short and general ; but, when the historian approaches his own time, his materials accumulate. It is certain too that the book of Genesis must have been written before the rest of the Pentateuch ; for the allusions in the last four books to the history of Abraham, of Isaac, and of Jacob, are very frequent. The simplicity of the style shows it to be one of the most ancient

of the sacred books ; and perhaps its similarity to the style of Moses would determine a critic to ascribe it to him. It will be allowed that no man was better qualified than Moses to compose the history of his ancestors. He was learned in all the wisdom of the Egyptians, the most enlightened nation of his time, and he had the best opportunities of obtaining accurate information. The short account of the antediluvian world could easily be remembered by Abraham, who might obtain it from Shem, who was his contemporary. To Shem it might be conveyed by Methuselah, who was 340 years old when Adam died. From Abraham to Moses, the interval was less than 400 years. The splendid promises made to that patriarch would certainly be carefully communicated to each generation, with the concomitant facts ; and thus the history might be conveyed to Moses by the most distinguished persons, and through very few hands. The accounts respecting Jacob and his son Joseph might be given to Moses by his grandfather Kohath, who must have been born long before the descent to Egypt ; and Kohath might

have heard all the facts respecting Abraham and Isaac from Jacob himself. Thus we can easily point out how Moses might derive the materials of the book of Genesis, and especially of tK.. last thirty-eight chapters, from the most authentic source.

But 1. It is objected that the author of the two first chapters of Genesis must have lived in Mesopotamia, as he discovers a knowledge of the rivers that watered paradise, of the cities of Babylon, Erech, Resen, and Calneh ; of the gold of Pison ; of the bdellium and onyx stone. But if he could not derive this knowledge from the wisdom of the Egyptians, which is far from being improbable, he might surely obtain it by tradition from Abraham, who was born and brought up beyond the Euphrates. 2. In Genesis xiv. 14 it is said, Abraham pursued the four confederate kings to Dan, yet that name was not given till after the conquest of Palestine. (Judges xviii. 22.) We answer this might be inserted by a transcriber: but such a supposition is not necessary ; for, though we are told in the book of Judges that a city originally

called Laish received then the name of Dan, this does not prove that Laish was the same cit\ with the Dan which is mentioned in Genesis. The same answer may be given to the objection which is brought from Genesis xxxv. 21, where the tower of Edar is mentioned, which the objectors say was the name of a tower over one of the gates of Jerusalem. But the tower of Edar signifies the tower of the flocks, which in lh«

pastoral country of Canaan might be a very common name. 3. The most formidable objection perhaps is derived from these two passages, Gen. xii. 6 : — ‘ And the Canaanite was then in the land.’ Gen. xxxvi. 31: — ‘These are the kings that reigned over the land of Edoin, before there reigned any king over the children of Israel.’ Now it is certain that neither of these passages could be written by Moses. We allow they were added by a later writer; but this circumstance cannot invalidate the evidence which has been already produced. It does not prove that Moses was not the author of the book of

Genesis, but only that this book has received two additions or interpolations since his death. According to Rivet, our Saviour and his apostles have cited twenty-seven passages verbatim from the book of Genesis, and have made thirty-eight allusions to the sense.

The book of EXODUS contains the history of the Israelites for about 145 years. It gives an account of the slavery of the Israelites in Egypt; of the miracles by which they were delivered, of their passage through the Red Sea, and journey through the wilderness ; of the solemn promulgation of the decalogue on Mount Sinai, and of the building and furniture of the Tabernacle. This book is cited by David, by Daniel, and other sacred writers. Twenty-five passages are quoted by our Saviour and his apostles in express words, and they make up nineteen allusions to the sense.

The book of LEVITICUS contains the history of the Israelites for one month. It consists chiefly of laws. Indeed, properly speaking, it is the code of the Jewish ceremonial and political laws. It describes the consecration of Aaron

and his sons, the daring impiety and exemplary punishment of Nadab and Abihu. It contains also some predictions respecting the punishment of the Israelites in case of apostasy ; and contains an assurance that every sixth year should produce abundance to support them during the seventh or sabbatical year. This book is quoted as the production of Moses in several books of Scripture.

The book of NUMBERS comprehends the history of the Israelites for about thirty-eight years, reckoning from the first day of the second month after their departure from Egypt. It contains an account of two numberines of the people ; the first in the beginning of the second year of their emigration, the second in the plains of Moab towards the conclusion of their journey in the wilderness. It describes the ceremonies employed at the consecration of the tabernacle ; gives an exact journal of the marches and encampments of the Israelites ; relates the appointment of the seventy elders, the miraculous cure performed by the brazen serpent, and the misconduct of Moses when he was commanded to bring water from the rock. There is also added

an account of the death of Aaron, of the conquest of Sihon and Og, and the story of Balaam, with his celebrated prophecy concerning the Messiah. The book of Numbers is quoted as the work of Moses in several parts of Scripture. The book of DEUTERONOMY comprehends a period of about two months. It consists of an interesting address to the Israelites, in which Moses recals to their remembrance the many instances of divine favor which they had experienced, and reproaches them for their ingratitude. He lays before them, in a compendious form, the laws which he had formerly delivered, and makes some explanatory additions. This was the more necessary, because the Israelites, to whom they had been originally promulgated, and who had seen the miracles in Egypt, at the Red Sea, and Mount Sinai, had died in the wilderness. The divine origin of these laws, and the miracles by which they were sanctioned, must already have been well known to them ; yet a solemn recapitulation of these by the man who had miraculously fed the then present generation from their infancy, who, by the lifting

up of his hands, had procured them victory in the day of battle, and who was going to leave the world to give an account of his conduct to the God of Israel, could not but make a deep and lasting impression on the minds of all who heard him. He inculcates these laws by the most powerful motives. He presents before them the most animating rewards, and denounces the severest punishments to the rebellious. The prophecies of Moses towards the end of this book, concerning the fate of the Jews, their dispersions and calamities, the conquest of Jerusalem by the Romans, the miseries of the besieged, and the present state of the Jewish nation, cannot be read without astonishment. They are perspicuous and minute, and have been literally accomplished. This book is cited as the production of Moses by Christ and his apostles, Matt. iv. 4, John i, 45, Sec.

The other historical books of the Old Testament are twelve in number, Joshua, Judges, Ruth, I. and II. Samuel, I. and II. Kings, I. and II. Chronicles, Ezra, Nehemiah, Esther. These, if considered distinctly from the Penta-

teuch, and the writings more properly styled prophetical, contain a compendium of the Jewish history from the death of Moses, A. M. 2552, to the reformation established by Nehemiah after the return from the captivity, A. M. 3595, comprehending a period of 1043 years.

To enable us to discover the' authors of these books, we have no guide but conjecture, internal evidence, or the authority of the modern Jews. From the frequent references in Scripture, and from the testimony of Josephus, it appears that the Jews were in possession of many historical records which might have thrown much light upon this subject if they had been preserved But during the calamities which befel that infatuated nation in their wars with the Romans, and the dispersion which followed, these writings have perished. But though we can produce no testimony more ancient than the age of our Saviour to authenticate the historical books, yet there are some facts respecting the mode of their preservation which entitle them to credit. The very circumstance itself, that the Jews have preserved them in the sacred volume to this day,

while their other ancient books have been lost,

is a proof that they considered them as the

genuine records of their nation. Josephus,

whose authority ;« of great importance, informs

us, in his treatise against Apion, that it was the peculiar province of the prophets and priests to

commit to writing the annals of the nation, and

to preserve them to posterity. That these might

be faithfully preserved, the sacerdotal function

was made hereditary, and the greatest care was

observed to prevent intermarriages either with

foreigners or with the other tribes. No man

could officiate as a priest who could not prove

his descent in a right line by unquestionable

evidence. Ezra ii. 61, 62. Registers were

kept in Jerusalem, which at the end of every

war were regularly revised by the surviving

priests ; and new ones were then composed. As

a proof that this has been faithfully performed,

Josephus adds that the names of all the Jewish

priests, in an uninterrupted succession from

father to son, had been registered for 2000 years ; that is, from the time of Aaron to the age of

Josephus. The national records were not allowed to be written by any man who might think himself fit for the office; and, if the priest falsified them, he was excluded from the altar and deposed from his office. Thus, we 'are assured, the Jewish records were committed to the charge of the priests; and, as they may be considered as the same family from Aaron to the Babylonish captivity and downwards, the same credit is due to them that would be due to family records, which by antiquarians are esteemed the most authentic sources of information.

Of the twenty-two books which Josephus reckoned himself bound to believe, the historical books from the death of Moses to the reign of Artaxerxes, he informs us, were written by contemporary prophets. It appears, then, that the prophets were the composers, >nd the priests the hereditary keepers of the national records. Thus, the best provision possible was made that they should be written accurately, and be preserved uncorrupted. The principal office of these prophets was to instruct the' people in their duty to God, and occasionally to communicate the

predictions of future events. For this purpose they were educated in the schools of the prophets, or in academies where sacred learning was taught. The prophets were therefore the learned men of their time, and consequently were best qualified for the office of historians, it may be objected that the prophets, in concert with the priests, might have forged any writings they pleased. But, before we suspect that they have done so in the historical books of the Old Testament, we must find out some motive which could induce them to commit so daring a crime. But this is impossible. No encomiums are made either upon the prophets or the priests; no adulation to the reigning monarch appears, nor is the favor of the populace courted. The faults of all ranks are delineated without reserve. Indeed there is no history extant that has more the appearance of impartiality. We are presented with a simple detail of facts, and are left to discover the motives and intentions of the several characters ; and, when a character is drawn, it is done in a few words, without exaggerating •he vices or amplifying the virtues of the person.

It is of no real consequence, therefore, whe-

tner we can ascertain the authors of the different

books or not. From Josephus we know that

they existed in his time ; ami, from his account

of the manner in which they were preserved, we

are assured they were not in danger of being

corrupted. They existed also when the Septu-

agint translation was made. Frequent references

are made to them in the writings of later pro-

phets ; sometimes the same facts are related in

detail. In short, there is such a coincidence be-

tween the historical books and the writings of

those prophets who were contemporary, that it

is impossible to suppose the latter true without

receiving the former. Indeed, to suppose that

the Jews could have received and preserved

with such care for so many hundred years false

records, which it must have been in the power

of every person to' disprove, and which at the

same time do so little credit to the character of

their nation, is to suppose one of the greatest

absurdities in the world : it is to suppose that a whole nation could act contrary to all those prin-

ciples which have always predominated in the

human mind, and which must always predo-

minate till human nature undergo a total revo-

lution.

The book which immediately follows the Pen-

tateuch has been generally ascribed td Joshua,

the successor of Moses. It contains, however,

some things which must have been inserted after

the death of Joshua. There is some accidental

derangement in the order of the chapters of this

book which was probably occasioned by the an-

cient mode of fixing together a number of rolls.

If chronologically placed, they should be read

thus, first chapter to the tenth verse ; then the

second chapter ; then from the tenth verse to the

end of the first chapter ; afterwards should fol-

low the sixth, seventh, eighth, ninth, tenth, and

eleventh chapters ; then the twenty-second ; and

lastly the- twelfth and thirteenth chapters to the

twenty-fourth verse of the latter. The facts

mentioned in this book are referred to by many

of the sacred writers. See 1 Chron. ii. 7, xii. 15 ; Psal. cxiv. 3 ; Isa. xxviii. 22 ; Acts vii. 45 ;

Heb. xi. 31, xiii. 5; James ii. 25. 28. In the

book of Kings, xvi. 34, the words of Joshua

are said to be the words of God. See JOSHUA.

By whom the book of JUDGES was written is

uncertain ; but, as it contains the history of the Jewish republic for 317 years, the materials must

have been furnished by different persons. The

book, however, seems to be the composition of

one individual who lived in the reign of Saul,

and before the accession of David : for it is said, in chap i. ver. 21, that the Jebusites were still in Jerusalem ; who, we know, were dispossessed of

that city early in the reign of David, 2 Sam. v.

6. 8. We have reason, therefore, to ascribe this

book to Samuel. The history of this book may

be divided into two parts ; the first contains an

account of the Judges from Othniel to Sampson,

ending at the sixteenth chapter. The second

part relates several remarkable transactions which

occurred soon after the death of Joshua ; but are

thrown to the end of the book, that they might

not interrupt the course of the history. See

JUDCI I.

The book of 1'n a , > a kind of supplement

to the book of Judges, and an introduction to

SCRIPTURE.

the history of David, as it is related in the books of Samuel. Since the genealogy which it con-

tains descends to David, it must have been

written after the birth of that prince, but not at any considerable time after

it ; for the history of Boaz and Ruth, the great-grandfather and great-grandmother of David, could not be remembered above two or three generations. As the elder brothers of David and their sons are omitted, and none of his own children are mentioned in the genealogy, it is evident that the book was composed in honor of the Hebrew monarch, after he was anointed king by Samuel, and before any of his children were born ; and consequently in the reign of Saul. The Jews ascribe it to Samuel ; and indeed there is no person of that age to whom it may be attributed with more propriety. See SAMUEL. We are informed (1 Sam. x. 25) that Samuel was a writer, and are assured that no person in the reign of Saul was so well acquainted with the splendid prospects of David as the prophet Samuel.

The Greeks denominate the books of SAMUEL, which follow next in order, The books of Kingdoms ; and the Latins, The books of Kings I. and II. Anciently there were but two books of Kings; the first was the two books of Samuel, and the second was what we now call the two books of Kings. According to the present divi-

sion, these two books are four, viz. the first and second books of Samuel, and the first and second books of Kings. Concerning the author of the two books of Samuel there are different opinions. Some think that Samuel wrote only twenty or twenty-four chapters of the first book, and that the history was continued by Nathan and Gad. This opinion they ground on the following passage in 1 Chron. xxix. 29 : ‘ Now tl»e acts of David the king, first and last, behold they are written in the book of Samuel the seer, and in the book of Nathan the prophet, and Gad the seer.’ Others think they were compiled by Ezra from ancient records ; but it is evident that the books of Samuel were written before the books of Kings and Chronicles ; for in the latter many circumstances are taken from the former. The first book carries down the history of the Israelites from the birth of Samuel to the fatal battle of Gilboa, comprehending a period of about eighty years. The second relates the history of David, from his succession to the throne of Israel, till within a year or two of his death, containing forty years. There are two beautiful passages in these books, which every

man of sentiment and taste must feel and admire, the lamentation or elegy on Saul and Jonathan, and the parable of Nathan. The impartiality of the historian is fully attested, by the candor and freedom with which the actions of Saul and David are related. There are some remarks interspersed, which were probably added by Ezra. When the two books of KINGS were written, or by whom they were compiled, is uncertain. Some have supposed that David, Solomon, and Hezekiah, wrote the history of their own times. But this seems not probable, as their crimes and vices are so particularly recorded. Others have been of opinion that the prophets, viz. Gad, Na-»han, Isaiah, and Jeremiah, wrote each the his-

tory of the reign m which he lived, which ap pears much more probable. But it is generally believed that Ezra wrote these two books, and published them in the form in which we have them at present. There can be no doubt but the prophets drew up the lives of the kings who reigned in their times ; for the names and writings of those prophets are frequently mentioned,

and cited. Still, however, it is evident that the two books of Kings are but an abridgment of a larger work, the substance of which is contained in the books before us. In support of the opinion that Ezra is the author of these books, it is said that in the time of the penman, the ten tribes were captives in Assyria, whither they had been carried as a punishment for their sins : That in the second of these books the author makes some reflections on the calamities of Israel and Judah, which demonstrate that he lived after that event. But to this it is objected that the author of these books expresses himself throughout as a contemporary, and as one would have done who had been an eye and ear witness of what he related. To this objection it is answered that Ezra compiled these books from the prophetic writings which he had in his possession ; that he copied them exactly, narrating the facts in order as they happened, and interspersed in his history some reflections and remarks arising from the subjects which he handled. The first book comprises a period of 126 years, from the death of David to that of Jehoshaphat. The second book records the transactions of the suc-

ceeding kings of Judah and Israel for about 300 years, from the death of Jehoshaphat to the destruction of Jerusalem and the temple, A. M 3416, A.C. 588.

The Hebrews style the two books of CHRONICLES, Deberi Imim, i. e. Words of days, journals or diaries, in allusion to those ancient journals which appear to have been kept among the Jews. The Greeks call them HapaXinrop.(i>a, Paralipomena, which signifies things omitted ; as if these two books were a kind of supplement, to inform us of what had been omitted or too much abridged in the books of Kings. The two books of Chronicles contain indeed several particulars which are not to be met with in the other books of Scripture : but it is not therefore to be supposed that they are the records of the kings of Judah and Israel, so often referred to in the books of Kings. Those ancient registers were apparently much more copious than these books ; and the compiler of the books of Chronicles often refers to them, and makes extracts from them.

Some suppose that the author of these two books was the same with that of the two books

of Kings. The Jews say that they were written by Ezra, after the return from the captivity, assisted by Zechariah and Haggai, who were then alive. But events are mentioned in them of so late a date as to show that he could not have written them in their present form ; and there is another objection to his being their author, which is little less forcible : between the books of Kings and Chronicles there is a great number of variations both in dates and facts, which could not have happened if Ezra had been the author

of them, or indeed if they had been the work of any one person. The books of Chronicles are not to be considered merely as an abridgment of former histories with some useful additions, but as books written witli a particular view ; which seems to have been to furnish a genealogical register of the twelve tribes, deduced from the earliest times ; to point out those distinctions which were necessary to discriminate the mixed multitude that returned from Babylon ; to ascer-

tain the lineage of .hid ah; and tore-establish on

their ancient footing the pretensions and func-

tions of each individual tribe.

The books of EZRA and NEIIKMIAII '>re attri-

buted by the ancients to the former of these pro-

phets; and they called them the first and second

books of Esdras ; which title is still kept up by ihe Latin church. It is indeed highly probable

that the former of these books, which comprises

the history of the Jews, from the time that Cyrus

made the decree for their return until the twen-

tieth year of Artaxerxes Longimanus (which

was about 100 years, or as others think seventy-

nine years), was all composed by Ezra, except

the first six chapters, which contain an account

of the first return of the Jews upon the decree

of Cyrus ; whereas Ezra did not return till the

time of Artaxerxes. It is of this second return

therefore that he writes the account ; and adding

it to the other, which he found ready composed

to his hand, he made it a complete history of the Jewish restoration. This book is written in

Chaldee from chap. iv. 8 to chap. vii. 27. As

this part of the work chiefly contains letters, con-

versations, and decrees expressed in that lan-

guage, the fidelity of the historian has probably

induced him to take down the very words which

were used. The people, too, had been accus-

tomed to the Chaldee during the captivity, and

probably understood it better than Hebrew ; for

it appears Cro;;; Ni'iicininii's account, chap. viii.

2. 8, that all could not understand the law.

The book of NEHEMIAII bears, in the Latin

bibles, the title of the second book of Esdras ; tl>e ancient canons likewise gave it the same name, be-

cause, perhaps, it was considered as a sequel to the book of Ezra. In the Hebrew Bibles it has the

name of Ne'hemiah prefixed to it ; which name

:s retained in the English Bible. But, though

.nat chief is by the writer of the second book of Maccabees affirmed to have been the author of

it, there cannot, we think, be a doubt, but that

either it was written at a later period, or had

additions made to it after Nehemiah's death.

With the books of Nehemiah and Esther tin;

history of the Old Testament concludes. This

is supposed to have taken place about A. M.

3574. A. C. 434. But Prideaux with more

probability has fixed it at A. M. 3595. See

NEHEMIAH.

It is uncertain who was the author of the book

of ESTHER. Clement of Alexandria, and many

commentators, have ascribed it to Mordecai ;

and the book itself seems to favor this opinion ;

for we are told, in chap. ix. 20, that ‘ Mordecai wrote these things.’ Others have supposed that

Ezra was the author ; but the more probable

opinion of the Talmudists is that the great syna-

gogue (See SYNAGOGUE), to perpetuate the me-

mory of the deliverance of the Jews from the

conspiracy of Haman, and to account for the

origin of the feast of Purim, ordered this book

to be composed very likely of materials left by

Mordecai, and afterwards approved and admitted

it into the sacred canon. The time when the

events which it relates happened, is supposed

by some to have been in the reign of Artaxerxes

Longimanus, and by others in that of Darius

the son of Hystaspes, called by the sacred pen-

man Ahasuerus. See AHASUERUS.

The following TABLE exhibits the Contemporary Reigns of the respective Kings of JUDAH and ISRAEL, and will assist in reading the Historical Books.

A.M.

3029

3046

3049

3050

3051

3074

3075

3086

3090

3106

3108

3112

3119

3120

3126

3148

3163

3165

3179

3194

:5231

3232

3243

Judah.

Rehoboam

Abijam

Asa

Jehoshaphat

Jehoram, or Joram

Aha/.iali

Athaliah

.I oash

Jeroboam

Nadab

BaastiD

Elah

/iinn

Omri

Ahab

Israel.

Ante A. 1).

975

958

955

954

953

930

929

Ahaziah

Jehoram, or- Joram

Jehu

Amaziah

A/ariah, or I ‘zciah

Jehoaha/.

Jehoash, or Joash

Jeroboam II.

Zachariah

Shallum

iMenahem

Pekahial.

761

Judah.

3-2G2

3264

3254

3258

3283

3306

3326

3361

3363

3394

3398

3405

3416

Jotham

Ahaz

Hezekiah

SCRIPTURE.

Israel.

Pekan

First captivity of Israel by Tiglath Pileser

An interregnum

Hoshea

Manasseh

Amon

Josiah

Tehoahaz

Jehoiakim

First captivity of Judah

Jehoiachin, Coniah, or Jeconiah

Second Captivity of Judah

Zedekiah

Third and final captivity

Second captivity, by Shalmanese:

Third captivity, by Esar-haddon

III. — Of the Hagiographa. — The third general

division of the books of the Old Testament,

among the Jews, according to Josephus, was

the Hagiographa, or Holy Writings ; which, however, are generally ranked second in order in all modern bibles. This comprehends the books of Job, Psalms, Proverbs, Ecclesiastes, and the Song of Solomon.

Concerning the author of the book of JOB, there are many different opinions. Some have supposed that Job himself wrote it in Syriac or Arabic, and that it was afterwards translated by Moses. Others have thought that Elihu wrot'e it ; and by others it is ascribed to Moses, to Solomon, to Isaiah, and to Ezra. To give even an abridgment of the arguments brought in support of these various opinions would fill a volume, and at last leave the reader in uncertainty. The most able summary of these opinions is to be found in the worK of Dr. M. Good on Job.

The writer of this article is decidedly of opinion, that Elihu was the author. He is the only one of Job's four friends who incurred no reproof. He listened with attention to them all, and at last delivered his opinion ; and it is therefore highly probable, that he drew up the narrative of the whole. See ELIHU ; and Job, xxxii. 15, 16, where he seems to speak of himself as the writer.

The book of Job, by whomsoever it was writ-

en, has been always esteemed a portion of canoni

cal scripture, and is one of the most sublime

compositions in the sacred volume. It appears

to stand single and unparalleled in the sacred

volume, having apparently little connexion with

the other writings of the Hebrews, and no rela-

tion whatever to the affairs of the Israelites.

The scene is laid in Idumea ; the history of an

inhabitant of that country is the basis of the

narrative ; the characters who speak are Idumeans,

or at least Arabians of the adjacent country, all

originally of the race of Abraham. The language

is pure Hebrew, although the author appears to

be an Idumean ; for it is not improbable that all the posterity of Abraham, Israelites, Idumeans,

and Arabians, whether of the fa'mily of Sarah,

Keturah, or Isr-naei, spoke for a considerable

length of time one common language. That

the Idumaearis, howpver, and the Tcmanites in

606

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588

particular, were eminent for the reputation of

wisdom, appears by the testimony of the prophets

Jeremiah and Obadiah. (Jer. xlix. 7, Ob. 8.)

Baruch also particularly mentions them among

1 the authors (or expounders) of fables, and search-

ers out of understanding.' Chap. iii. 22, 23.

The principal personage in this poem is Job ;

and in his character is meant to be exhibited (as far as- is consistent with human infirmity) an exam-

ple of perfect virtue. This is intimated in the

introduction, but is still more eminently dis-

played in his actions and sentiments. He is holy,

devout, and most piously and reverently im-

pressed with the sacred awe of his divine Crea-

tor ; he is also upright, and conscious of his own integrity ; he is patient of evil, and yet very re-

mote from that insensibility, or rather stupidity,

to which the Stoics pretended. Oppressed, there-

fore, with unparalleled misfortunes, he laments

his misery, and even wishes a release by death ;

in other words, he obeys, and gives place to the

dictates of nature. Irritated, however, by the

unjust insinuations and the severe reproaches of

his pretended friends, he is more vehemently ex-

asperated, and his too great confidence in his own

righteousness leads him to expostulate with God

in terms scarcely consistent with piety and strict

decorum.

The first speech of Job, though it bursts forth

with all the vehemence of passion, consists wholly

of complaint, ‘ the words and sentiments of a de-

spairing person empty as the wind ; ‘ which is

indeed the apology that he immediately makes

for his conduct ; intimating that he is far from

presuming to plead with God, far from daring

to call in question the divine decrees, or even to mention his own innocence in the presence of his

all-just Creator; nor is there any good reason for

the censure which has been passed by some

commentators upon this passage. The poet seems,

with great judgment and ingenuity, to have per-

formed in this what the nature of his work re-

quired, lie has depicted the affliction and an-

guish of Job, as flowing from his wounded heart

in a manner so agreeable to human nature (and

*certainly so far venial) that it may be truly said, ‘ in all this Job sinned not with his lips.’ It is, nevertheless, embellished by *uch affecting ima-*

fiery, and inspired with such A warmth and force

of sentiment, that we find it afforded ample

scope for calumny; nor did the unkind witnesses

of his sufferings permit so fair an opportunity lo escape. The occasion is eagerly embraced by Eliphaz to rebuke the impatience of Job ; and, not satisfied with this, he proceeds to accuse him in direct terms of wanting fortitude, and obliquely to insinuate something of a deeper dye. Though deeply hurt with the coarse reproaches of Eliphaz ; still, however, when Job afterwards complains of the severity of God, he cautiously refrains from violent expostulations with his Creator, and, contented with the simple expression of affliction, he humbly confesses himself a sinner. Hence it is evident that those vehement attestations of his innocence, those murmurs against the divine Providence, which his tottering virtue afterwards permits, are to be considered merely as the consequences of momentary passion, and not as the ordinary effects of his settled character or manner.

The three friends are exactly such characters as the nature of the poem required. They are severe, irritable, malignant censors, readily, and with apparent satisfaction, deviating from the purposes of consolation into reproof and con-

tumely. Even from the very first they manifest this evil propensity, and indicate what is to be expected from them.

The lenity and moderation of Elihu afford a beautiful contrast to the intemperance and asperity of the other three. He is pious, mild, and equitable ; equally free from adulation and severity ; and endued with singular wisdom, which he attributes entirely to the inspiration of God ; and his modesty, moderation, and wisdom, are the more entitled to commendation when we •consider his youth. As the characters of his detractors were in all respects calculated to inflame the mind of Job, that of this arbitrator is admirably adapted to sooth and compose it : to this point the whole drift of the argument tends, and on this the very purport of it seems to depend.

Another circumstance deserving particular attention, in a poem of this kind, is the sentiment; which must be agreeable to the subject, and erottellished with proper expression. It is by Aristotle enumerated among the essentials of a dramatic poem ; not indeed as peculiar to that species of poetry, tut as common, aiid of the

greatest importance to all. Manners or character are essential only to that poetry in which living persons are introduced; and all such poems must afford an exact representation of human manners ; hut sentiment is essential to every poem, indeed to every composition whatever. It respects both persons and things. As far as it regards persons, it is particularly concerned in the delineation of the manners and passions ; and those instances to which we have just been adverting are sentiments expressive of manners.

The poem of Job abounds chiefly in the more vehement passions, grief and anger, indignation and violent contention. It is adapted in every respect to the incitement of terror ; and is universally animated with the true spirit of sublimity. It is, however, not wanting in the gentler affections. The whole abounds with the most beautiful imagery, and is a most perfect specimen of the elegiac. His grief becomes fervent ; hut is at the same time soft and querimonious. It is unnecessary to quote instances. The book is in every body's hands.

The dignity of the style is answerable to that of the subject ; its force and energy to the greatness of those passions which it describes ; and, as this production excels all the other remains of the Hebrew poetry in economy and arrangement, so it yields to none in sublimity of style, and in every grace and excellence of composition. Among the principal of these, may be accounted the accurate and perfectly poetical conformation of the sentences, which is indeed generally most observable in the most ancient of the poetical compositions of the Hebrews. Here, however, as is natural and proper in a poem of so great length and sublimity, the writer's skill is displayed in the proper adjustment of the period, and in the accurate distribution of the members, rather than in the antithesis of words, or in any labored adaptation of the parallelisms.

The chief doctrines of the patriarchal religion, collected from different parts of this poem by Drs. Hales and Good, are as follow : —

1. The creation of the world by one Supreme and Eternal Intelligence. See c. xxxviii. — \li.

2. Its regulation by his perpetual and super-

intending providence. See c. i. 9 — '21 ; ii. 10; v. 8—27; ix. 4—13.

3. The intentions of his providence carried in-

to effect by the ministrations of a heavenly hier-

archy. See c. i. 6, 7; iii. 18, 19; v. 1.; xxxiii.

22, 23.

4. The heavenly hierarchy, composed of vari-

ous ranks and orders, possessing different names,

dignities, and offices. As obelim, servants ; malachim, angels ; melizim, intercessors ; me-

mitim, destinies or destroyers ; alep, the chiliad

or thousand ; kedoshim, sancti, the heavenly

saints or hosts generally. See c. iv. 18;- xxxiii.

22, 23 : v. 2 ; xv. 15.

5. An apostasy, or defection, in some rank 01

order of these powers (c. iv. 18; xv. 15), of

which Satan seems to have been one, and per-

haps chief, c. i. 6 — 12 ; ii. 2—7.

6. The good and evil powers or principles

equally formed by the Creator, and hence equal-

ly denominated ' Sons of God ;' both of. them

employed by him in the administration of his

providence ; and both amenable to him at stated

courts, held for the purpose of receiving an ac-

count of their respective missions. See c. i. G,

7; ii. i.

7. A day of future resurrection, judgment, and

retribution to all mankind. See c. xiv. 13 — 15 ; xix. 25 — 29; xxi. 30; xxxi. 14.

8. The propitiation of the Creator, in the case

of human transgressions, by sacrifices (c. i. .•”>,

xlii. 8), and the mediation and intercession of a

righteous person. See c. xlii. 8, 9.

9. The idolatrous worship of the heavenly

bodies, a judicial offence, to be punished by the

judge. See. c. xxxi. 26 — 28.

10. The innate corruption of man; or what is

generally termed ‘ original sin.’ See c. xiv. 4

xv. 14 — 16 ; xxxv. 4.

SCRIPTURE.

fit3

Mr. Good has remarked that nothing can be

more unfortunate for this most excellent compo-

sition than its division into chapters, and espe-

cially such a division as that in common use ; in

which, not only the unity of the general subject,

but in many instances that of a single paragraph,

or even of a single clause, is completely broken

in upon and destroyed. Various are the divi-

sions which have been adopted. Dr. Hales, who

excludes the exordium and conclusion, divides it

into five parts ; but Dr. Good, who justly re-

inarks that these are requisite to the unity vf the composition, divides it into six. We have then

1. History of Job's character and trials (c. i. —

iii.) 2. First series of conversations or contro-

versy— Eliphaz's address (c. iv. v.) ; Job's

answer (c. vi. vii.) ; Bildad's address (c. viii.) ; Job's answer (c. ix. x.) ; Zophar's address (c.

xi.); Job's answer (c. xii. — xiv.) 3. Second

series of controversy — Eliphaz's address (c. xv.);

Job's answer (c. xvi. xvii.) ; Bildad's address

(c. xviii.); Job's answer (c. xix.) ; Zophar's ad-

dress (c. xx.) ; Job's answer (c. xxi.). 4. Third

series of controversy — Eliphaz's address (c. xxii.);

Job's answer (c. xxiii. xxiv.) ; Bildad's address

(c. xxv.) ; Job's answer (c. xxvi — xxxk). .5.

Elihu's four speeches to Job (c. xxxii — xxxvii.).

6. Jehovah's first and second address to Job, his

humiliation, and final prosperity, c. xxxviii. —

xlii.

The word PSALMS is a Greek term, and signi-

fies songs. The Hebrews call it n'bnfi ISO,

Seper Tehellim, that is, the Book of Praises ; and in tre Gospel it is styled the Book of Psalms,

t veneration has always been paid to this

collection of divine songs. The Christian church

has, from the beginning, made them a principal part of her holy services ; and in the primitive times it was almost a general rule that every bishop, presbyter, and religious person, should have the psalter by heart.

Many learned fathers, and modern writers, have maintained that David was the author of them all. Several are of a different opinion, and insist that David only wrote seventy-two of them, and that those without titles are to be ascribed to the authors of the preceding psalms, whose names are affixed to them. (See DAVID, ASAPH, &.c.) Those who suppose that David alone was the author, contend that in the New Testament, and in the language of the church universal, they are expressly called the Psalms of David. That David was the principal author of these hymns, is universally acknowledged, and therefore the whole collection may properly enough go under his name; but that he wrote them all is a palpa-ble mistake. Nothing certain can be gathered from the titles of the psalms ; for, although un-questionably very ancient, yet authors are not agreed as to their authority, and they differ as

much about their signification. The Hebrew doctors generally agree that the ninety-second psalm was composed by Adam : an opinion which, for many reasons, we are not inclined to adopt. There seems, however, to be no doubt but that some of them were written by Moses ; that Solomon was the author of the forty-ninth ; and that others were occasioned by events long pos-

- *terior to the flourishing era of the kingdom of*

Judah. The 137th particularly "is one of thcwe which mentions the captivity of Babylon. Josephus, and most of the ancient writers, assert that the Psalms were composed in numbers : little, however, respecting the nature and principles of the Hebrew versification is known. There existed a certain kind of poetry among the Hebrews, principally intended, it should seem, for the assistance of the memory ; in which, when there was little connexion between the sentiments, a sort of order or method was preserved, by the initial letters of each line or stanza following the order of the alphabet. Of this there are several examples extant among the sacred poems (Psalms xxv., xxxiv., xxxvii., cxi., cxii.,

cxix., cxlv. ; Prov. xxxi., from the tenth verse to the end ; the whole of the Lamentations of Jere-

miah except the last chapter) ; and in these ex-

amples the verses are so exactly marked and de-

fined that it is impossible to mistake them for

prose ; and particularly if we attentively consi-

der the verses, and compare them with one an-

other, since they are in general so regularly ac-

commodated, that word answers to word, and

almost syllable to syllable. The Hebrew poetry

has likewise another property altogether peculiar

to metrical composition. It admits foreign words,

and certain particles which seldom occur in

prose composition, and thus forms a distinct

poetical dialect. One or two of the peculiarities

also of the Hebrew versification are very obser-

vable in those poems in which the verses are de-

fined by the initial letters. The first is that the verses are very unequal in length ; the shortest

consisting of six or seven syllables ; the longest

extending to about twice that number : the same

poem is, however, generally continued throughout

in verses not very unequal to each other. The

close of the verse generally falls where the mem-

bers of the sentences are divided. The ingeni-

ous Dr. Lowth has, however, with great acute-

ness, examined the peculiarities of Hebrew

poetry, and has arranged them under general

divisions. The correspondence of one verse or

line with another he calls parallelism. When a

proposition is delivered, and a second is sub-

joined to it, equivalent or contrasted with it in

sense, or similar to it in the form of grammatical construction, these he calls parallel lines; and

the words or phrases answering one to another

in the corresponding lines, parallel terms. Pa-

rallel lines he reduces to three sorts ; parallels

synonymous, parallels antithetic, and parallels

synthetic. For examples we refer to his work.

The following arrangement of the Book of Psalms

will be found useful in reading them. It is from

the Scripture Magazine, vol. iii., but chiefly ex-

tracted from Mr. Townsend, the able author of a

Chronological Arrangement of the Old Testa-

ment.

SCRIPTURE

Numbers.

Authors.

Probable Occasions.

Connexions.

B.C.

88.

90.

9.

11.

59.

56.

34.

142.

17.

52. 109. 35. 140.

64. 31.

54.

57. 58.

63.

141.

139.

68.

132.

105. 106. 96.

2.45.22. 16.118.110.

60. 108.

20. 21.

51.

32. 33. 103.

3.

7.

42.43.55.4. 5. 62. 143.

144.70.71. . . .

18.

30.

91.

1-1.5.

40.41.61.65.69.78.

6.8.19.12.23.2428.29.38

39.86.95.101.104.120.

121.122.124.131.133.

72.

47.97.98.99.100.

135. 136.

82.115.46.

44.

73.75.76.

79. 74. 83. 94.

137.130.80.77.37.67.49

53.50.10.13.14.15.25.

26.27.36.89.92.93.123

102.

126. 85.

107. 87. 111. 112. 113.

114.116.117.125.127.

128. 134

84.66

129.

138.

48.81.146.147.148.149.

150. . . .

Hem an.

Moses.

David.

} ;::

}'•'•'•

Solomon.

Asapli and others.

Hezekiah.

Asaph.

{Asaph, Ethan,

i and others.

Daniel.

Sons of Korah.

> Various.

Sons of Korah.

Ezra or Nehem.

Haggai or Zech.

> Various.

Ezra.

Affliction of Israel in Egypt.

Shortening of man's life.

Victory over Goliath.

Advised to flee to the mountains.

Saul's soldiers surrounding the

town.

With Philistines at Gath.

Leaving the city of Gath.

In the cave of Adullam.

Priests murdered by Doeg.

Persecution by Doeg.

Persecution by Saul.

Treachery of the Ziphites.

Refusal to kill Saul.

Wilderness of Engedi.

Driven out of Judea.

King of all Israel.

First removal of the Ark.

Second removal of the Ark.

Ark taken from Obed-Edom's.

Nathan's prophetic address.

Conquest of Edom by Joab.

War with Ammonites and Syrians.

Confession of adultery and murder.

Pardon and thanksgiving.

His flight from Absalom.

The reproaches of Shimei.

By the Jordan, from Absalom.

Conclusion of his wars.

Dedication of Araunah's threshing floor.

After his advice to Solomon.

A review of his past life.

Dates and occasions unknown.

At some periods, after his accession.

The Coronation of Solomon.

Ark removed into the Temple.

Dedication of Solomon's Temple.

The reign of Jehoshaphut.

Message of Rabshakeh.

Destruction of Sennacherib's

army.

Burning of the Temple at Jeru-

salem.

During the Babylonian Cap-

tivity.

Near the close of that Captivity.

Decree for restoring the Jews.

Israel's return from the Capti-

vity.

Foundation of second Temple.

Opposition of the Samaritans.

Rebuilding of the Temple.

Dedication of the second Tem-

ple.

Manuals of devotion.

Exod. ii. 25.

Numb xiv. 45.

I Sam. xviii.4.

xix. 3.

1 7

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xxi. 15.

xxii. 1.

10

xxiii 12.

°3

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xxvii. 1.

iChron.xii 4.

2 Sam. vi. 11.

1 Chron. xv. 4.

lChro.xvi.43.

xvii. 27.

1 Kings xi. 20.

2 Sam. x. 19.

xii. 15.

1058

1048

1042

1040

1036

1034

xv 29.

xvi. 14.

xvii. 29.

1023

1019

1017

1015

1 Chro. xxi 30.

xxviii. 10.

xxviii. 21.

xxix. J9.

2 Chro. vii. 10

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xx. 26.

2 Kings xix. 7.

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Jer. xxxix. 10.

Dan. vii. 28.

Dan. ix. 27.

Ezra i. 4.

iii. 7.

*1 *?*

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541—539

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iv. 24.

vi. 13.

Zech. viii. 23.

Nehem. xiii. 3

1 and 119.

S C R 1 P T U II E.

616

The book of PROVKRBS lias always been ac-

counted canonical. The Hebrew title of it is

ˆiPn, Mishli, which signifies similitudes. It

has always been ascribed to Solomon, whose

name it bears, though some have doubted whether

he really was the author of every one of the

naxims which it contains. Those in chapter

xxx. are indeed called the words of Agur, the

son of Jakeh, and the title of the thirty-first or last chapter is the words of king Lemuel. It

seems certain that the collection called the Pro-

verbs of Solomon was digested in the order in

which we now have it by different hands; but it is not, therefore, to be concluded that they are not the work of Solomon. Several persons might have made collections of them : Hezekiah, among others, is mentioned c. xxv. Agur and Ezra might have done the same. From these several collections the work was compiled which we have now in our hands.

The book of Proverbs may be considered under five divisions. 1. The first, which is a kind of preface, extends to the tenth chapter. This contains general cautions and exhortations for a teacher to his pupil, expressed in elegant language, duly connected in its parts, illustrated with beautiful description, and well contrived to engage and interest the attention. 2. The second part extends from the beginning of c. x. to c. xxii. 17, and consists of what may strictly and properly be called proverbs, viz. unconnected sentences, expressed with much neatness and simplicity. They are truly, to use the language of their sage author, ‘ apples of gold in pictures of silver.’ 3. In the third part, which is included between c. xxii. 16, and c. xxv., the tutor drops the sententious style, addresses his pupil as present, and delivers his advices in a connected

manner. 4. The Proverbs which are included between c. xxv. and c. xxx. are supposed to have been selected by the men of Hezekiah from some larger collections of Solomon, that is, by the prophets whom he employed to restore the service and writings of the church. Some of the proverbs which Solomon had introduced into the former part of the book are here repeated. 5. The prudent admonitions which Agur delivered to his pupils Ithiel and Ucal are contained in the thirtieth chapter, and in the thirty-first are recorded the precepts which the mother of Lemuel delivered to her son. Several references are evidently made to the book of Proverbs by the writers of the New Testament. Rom. ix. 1 6. 20 ; 1 Peter iv. 8, v. 5 ; James iv.

The Proverbs of Solomon afford specimens of the didactic poetry of the Hebrews. They abound with antithetic parallels ; for this form is peculiarly adapted to that kind of writing, to adages, aphorisms, and detached sentences. Indeed, the elegance, acuteness, and force of a great number of Solomon's wise sayings arise in a great measure from the antithetic form, the opposition of diction and sentiment.

The Hebrew title of the book called En i ESI-

ASTES is Keleth, that is, the gatherer or collector ; and it is so called, either because the work itself is a collection of maxims, or because it was

delivered to an assembly gathered together to

hear them. The Greek term Ecdrsiastes is cf

the same import, signifying one whc gathers tc

gether a congregation, or who discourses or

preaches to an assembly convened. That Solo-

mon was the author of this book is beyond all

doubt ; the beautiful description of the phenomena

in the natural world, and their causes ; of the circu-

lation of the blood, as some think (see Horsley's

Sermon before the Humane Society), and the

economy of the human frame, shows it to be the

work of a philosopher. At what period of his

life it was written may be easily found out. The

affecting account of the infirmities of old aˆe

which it contains is a strong indication tha' the

author knew by experience what they were ; and

his complete conviction of the vanity of all

earthly enjoyments proves it to have been the

work of a penitent. Some passages in it seem,

indeed, to express an epicurean notion of Provi-

dence. But it is to be observed that the author,

in an academic way, disputes on both sides of

the question ; and at last concludes properly,

that to ‘ fear God and keep his commandments

is the whole duty of man ; for God will bring

every work to judgment.’

The general tenor and style of Ecclesiastes is

very different from the book of Proverbs, though

there are many detached sentiments and proverbs

interspersed. For the whole work is uniform,

and confined to one subject, namely, the vanity

of the world exemplified by the experience of

Solomon, who is introduced in the character of

a person investigating a very difficult question,

examining the arguments on either side, and at

length disengaging himself from an anxious and

doubtful disputation. The style of this work i->

singular ; the language is generally low ; it is

frequently loose, unconnected, approaching to

the incorrectness of conversation, and possesse-s

very little of the poetical character, even in tin: composition and structure of the periods ; which

peculiarity may possibly be accounted for from

the nature of the subject. Contrary to the opi-

nion of the rabbies, Ecclesiastes has been classed

among the poetical books ; though authority and

opinions might perhaps on this occasion deserve

some attention.

The Soxo OF SONGS, or CANTICLES OF SOLO-

MON, forms one of the books of canonical Scrip-

ture mentioned by Josephus, and one book in

the Jewish divisions of Scripture adopted by our

Saviour and his apostles. The mystical meaning

of this poem seems to afford the only reason for

its insertion in the Jewish canon. Under the

figure of a marriage is typified the intimate rela-

tion subsisting between Christ and his church ;

and the same figures found in this allegory have

been transferred into the New Testament. See

Matt. ix. 15, xxii. 2, xxv. 1 — 11 ; John iii. 29 ; 2 Cor. xi. 2 ; Eph. v. 23. '27 ; Rev. xix. 7. 9 ; xxii. 17. Dr. Good, whose excellent trans-

lation of this book of Scripture will afford

much valuable aid in its perusal, considers it as

a series of idyls, like the cassides of the poets of Arabia. Its style, as remarked by bishop Lowth,

is of the pastoral kind, the two principal person-

ages being represented in the character of shep-

herds. The manner in which the Song of Solo-

mon has been interpreted by most expositors

hi ' ;ul t!ie effect of exposing it to unmerited

c'-ntempt. Not entering into the style and spir.t of oriental poesy, they have given to some passages a coarse and indelicate appearance; and, not distinguishing between the literal and allegorical senses, they have destroyed the consistency and beauty of the poem, and bewildered the mind of the reader. To understand this part of Scripture requires not only a renewed heart and an enlightened mind, but a sober and cautious judgment. The spiritual senses must be exercised to discern clearly spiritual truths, and the imagination must be curbed by a reverential apprehension of the majesty and condescension of God. Among the Jews, it is said, they were not allowed to read it until they had attained the sacerdotal age of thirty years.

IV. Of the prophetical -writings of the Old Testament. — The second of those great divisions under which the Jews classed the books of the Old Testament was that of the PROPHETS, which formerly comprehended sixteen books ; 'and which we now consider last in order, according to their modern arrangement in our bibles. Although the greater part of the Psalms are pro-

phetical, and the Song of Solomon is esteemed a prophetical allegory, yet, these writings being already taken notice of, we mean to restrict the subject of this section to the writings of the prophets, properly so called. The prophets were sixteen in number : Isaiah, Jeremiah, Ezekiel, Daniel, Hosea, Joel, Amos, Obadiah, Jonah, Micah, Nahum, Habakkuk, Zephaniah, Haggai, Zechariah, Malachi. The first four are called the greater prophets ; the other twelve are denominated the minor prophets. The writings of the prophets are to Christians the most interesting part of the Old Testament ; for they afford one of the most powerful arguments for the divine origin of the Christian religion. If we can only prove, therefore, that these prophecies were uttered a single century before the events took place to which they relate, their claim to inspiration is unquestionable. But we can do more ; we can prove that the interval between their enunciation and accomplishment extended much farther, even to 500 or 1000 years, and in some cases much more.

The books of the prophets are mentioned by Josephus, and therefore surely existed in his

time ; they are also quoted by our Saviour under

the general denomination of the prophets. We

are informed by Tacitus arid Suetonius that about

sixty years before the birth of our Saviour there

was a universal expectation in the east of a

great personage who was to arise ; and the source

of this expectation is traced by the same writers

to the sacred books of the Jews. They existed

also in the time of Antiochus Epiphanes, A. C.

166; for when that tyrant prohibited the read-

ing of the law, the books of the prophets were

substituted in its place, and were continued

as a part of the daily service after the interdict against the law of Moses was taken off. We re-

marked that references are made by the author

of Ecclesiasticua, A. C. 200, to the writings of

Isaiah, Jeremiah, and Ezekiel, and that he men-

tions the twelve prophets. We can ascend still

higher, and assert, from the language of the pro-

ph»-, tha.'. al1 their writings must have been com-*

posed before the Babylonish captivity, or within

a century after it ; for all of diem, except Daniel and Ezra, are composed in Hebrew, and even in

them long passages are found in that language ;

but it is a well known fact that all the books

written by Jews about two centuries after that era are composed in the Syriac or Chaldaic, or Greek language. ‘ Let any man,’ says Michaelis, ‘ compare what was written in Hebrew after the Babylonish exile, and I apprehend he will perceive no less evident marks of decay than in the Latin language.’ Even in the time of Ezra, the common people, from their long residence in Babylonia, had forgotten the Hebrew, and it was necessary for the learned to interpret the law of Moses to them. We can therefore ascertain with very considerahle precision the date of the prophetic writings ; which indeed is the only important point to be determined : for, if we can only establish their ancient date, we shall be fully entitled to draw this conclusion, that the predictions of the prophets are inspired.

Much has been written to explain the nature of inspiration, and to show by what methods God imparted to the prophets that divine knowledge which they were commanded to publish to their countrymen. But on this subject we shall not attempt to be wise above what is written. The manner in which the all-wise and unseen God may think proper to operate upon the

minds of his creatures, we might expect a priori to be mysterious and inexplicable. The business of philosophy is not to enquire how almighty power produced the frame of nature, and bestowed upon it that beauty and grandeur which is every where conspicuous, but to discover those marks of intelligence and design, and the various purposes to which the works of nature are subservient. Philosophy has of late been directed to theology and the study of the Scriptures with the happiest effects ; hut it is not permitted to enter within the veil which the Lord of nature has thrown over his councils. Its province, which is sufficiently extensive, is to examine the language of the prophecies, and to discover their application.

The character of the prophetic style varies according to the genius, the education, and mode of living of the respective authors ; but there are some peculiarities which run through the whole prophetic books. A plain unadorned style would not have suited those men who were to wrap the mysteries of futurity in a veil, which was not to be penetrated till the events themselves should be accomplished. For it was never

the intention of prophecy to unfold futurity to our view, as many of the rash interpreters of prophecy fondly imagine; for this would be inconsistent with the free agency of man. It was therefore agreeable to the wisdom of God that prophecies should be couched in language which would render them unintelligible till the period of their completion ; yet such a language as is distinct, regular, and would be easily explained when the events themselves should have taken place. This is precisely the character of the prophetic language. It is partly derived from the hieroglyphical symbols of Kpypt, to which the Israelites during their servitude were fami-

liarized, and partly from that analogy which subsists between natural objects and those which are moral and political.

The prophets borrowed their imagery from the most splendid and sublime natural objects, from the host of heaven, from seas and mountains, from storms and earthquakes, and from the most striking revolutions in nature. The ce-

lestial bodies they used as symbols to express thrones and dignities, and those who enjoyed them. Earth was the symbol for men of low estate. Hades represents the miserable. Ascending to heaven, and descending to earth, are phrases which express rising to power, or falling from it. Great earthquakes, the shaking of heaven and earth, denote the commotions and overthrow of the kingdoms. The sun represents the whole race of kings shining with regal power and glory. The moon is the symbol of the common people. The stars are subordinate princes and great men. Light denotes glory, truth, or knowledge. Darkness expresses obscurity of condition, error, and ignorance. The darkening of the sun, the turning of the moon into blood, and the falling of the stars, signify the destruction or desolation of a kingdom. New moons, the returning of a nation from a dispersed state. Conflagration of the earth is the symbol for destruction by war. The ascent of smoke from any thing burning denotes the continuance of a people under slavery. Riding in the clouds signifies reigning over many subjects. Tem-

pestuous winds, or motion of the clouds, denotes \v;irs. Thunder denotes the noise of multitudes, fountains of water express cities. Mountains and islands, cities with the territories belonging to them. Houses and ships stand for families, assemblies, and towns. A forest is put for a kingdom. A wilderness for a nation much diminished in its numbers. Animals, as a lion, bear, leopard, goat, are put for kingdoms or political communities corresponding to their respective characters. When a man or beast is put for a kingdom, the head represents those who govern, the tail those who art governed ; the horns denote the number of military powers or states that rise from the head. Seeing signifies understanding ; eyes, men of understanding ; the mouth denotes a lawgiver ; the arm of a man is put for power, or for the people by whose strength his power is exercised ; feet represent the lowest of the people.

Such is the precision and regularity of the prophetic language, which we learn to interpret by comparing prophecies which are accomplished with the facts to which they correspond.

So far is the study of it carried already that a dictionary has been composed to explain it; and it is probable that in a short time it may be so fully understood that we shall find little difficulty in explaining any prophecy. But let us not from this expect that the prophecies will enable us to penetrate the dark clouds of futurity: No! The difficulty of applying prophecies to their corresponding events, before completion, will still remain insurmountable. Those men, therefore, however pious and well-meaning they may be, who attempt to explain and apply prophecies which are not yet accomplished, and who delude the credulous multitude by their own romantic conjectures, cannot be acquitted of rashness and presumption

The predictions of the prophets, according to the opinion of Dr. Lowth, are written in a poetic style. They possess indeed all the characteristics of Hebrew poetry, with the single exception that none of them are alphabetical or acrostic, which is an artificial arrangement utterly repugnant to the nature of prophecy. The other arguments, however, ought to be particularly adverted to upon this subject ; the poetic

dialect for instance, the diction so totally different from the language of common life, and other similar circumstances, which an attentive reader will easily discover, but which cannot be explained by a few examples ; for circumstances which, when taken separately, appear but of small account, are in a united view frequently of the greatest importance. To these we may add the artificial conformation of the sentences ; which is a necessary concomitant of metrical composition, the only one indeed which is now apparent, as it has always appeared to us.

The order in which the books of the minor prophets are placed is not the same in the Septuagint as in the Hebrew. According to the latter, they stand as in our translation ; but in the Greek the series is altered, as to the first six, to the following arrangement : — Hosea, Amos, Micah, Joel, Obadiah, Jonah. This change, however, is of no consequence, since, neither in the original nor in the Septuagint, are they placed with exact regard to the time in which their sacred authors respectively flourished. The order in which they should stand, if chronologically arranged, is by Blair and others supposed to be as follows : — Jonah, Amos, Hosea, Micah,

Nahum, Joel, Zephaniah, Habakkuk, Obadiah, Haggai, Zechariah, Malachi. And this order will be found to be generally consistent with the periods to which the prophets will be respectively assigned in the following pages, except in the instance of Joel, who propably flourished rather earlier than he is placed by these chronologers. The precise period of this prophet, however, cannot be ascertained ; and some disputes might be maintained concerning the priority of others also, when they were nearly contemporaries, as Amos and Hosea ; and when the first prophecies of a latter prophet were delivered at the same time with, or previous to those of a prophet who was called earlier to the sacred office. The following scheme, however, in which also the greater prophets will be introduced, may enable the reader more accurately to comprehend the actual and relative periods in which they se~ verally prophesied : —

The PROPHETS in their supposed CHRONOLOGICAL ORDER, according to Blair's Tables, with

some variations.

Prophets.

Years B.C.

Kings of Israel, Judah,

Babylon, and Persia.

Jehu and Jehoahaz.

Between

Lloyd.

Jonah

856and784

Joash and Jeroboam II.

Blair.

Amos

810 — 785

Uzziah and Jeroboam II.

llosea

810 — 725

Uzziah and Jeroboam II.,

Jotharn, and Ahaz, to

the third year of Heze-

kiah.

Isaiah

810 — 698

Uzziah, Jotham, Ahaz,

Hezek iah,and Manasseh .

Joel

810 — 660

Uzziah to Manasseh.

Micah

758 — 699

Jotham, Ahaz, Hezekiah,

Pekah, and Hosea.

Nalium

720 — 698

Hezekiah.

Zephaniah

640 — 609

Josiah.

Jeremiah

628 — 586

Josiah, Jehoahaz, Jehoia-

kim, Jeconiah, Zede-

kiah, and Gedaliah.

Habakkuk

612 — 598

Jehoiakim.

Daniel

606 — 534

Nebuchadnezzar, Evilme-

rodach, Belshazzar, Cy-

axares II. or Darius the

Mede, Cyrus the Great.

Obadiah

588 — 583

Nebuchadnezzar.

Ezekiel

595 — 536

Nebuchadnezzar.

Haggai

520 — 518

Darius Hystaspis.

Zechariah

Malachi

520 — 516 Darius Hystaspis.

436 — 397iAhasuerus or Artaxerxes.

ISAIAH is supposed to have entered upon the

prophetic office in the last year of the reign of

Uzziah, about 758 years A. C., and it is certain

that he lived to the fifteenth or sixteenth year of Hezekiah. This makes the least possible term of

the duration of his prophetical office about forty-

eight years. The Jews say that Isaiah was put

death in the reign of Manasseh, being sawn

asunder with a wooden saw by the command of that tyrant, and this seems to be confirmed by St. Paul in Heb. xi. 37 (see ISAIAH). The time of the delivery of some of his prophecies is either expressly marked, or sufficiently clear from the history to which they relate. The date of a few others may be deduced from internal marks ; from expressions, descriptions, and circumstances interwoven.

Isaiah, the first of the prophets both in order and dignity, abounds in such transcendent excellencies that he may be properly said to afford the most perfect mode of the prophetic poetry. He is at once elegant and sublime, forcible and ornamented ; he unites energy with copiousness, and dignity with variety. In his sentiments there is uncommon elevation and majesty ; in his iiira-ery the utmost propriety, elegance, dignity, and diversity ; in his language uncommon beauty and energy ; and, notwithstanding the obscurity of his subjects, a surprising degree of clearness and simplicity. There is such sweetness in the poetical composition of his sentences that the native grace and harmony of the Hebrew poetry

is chiefly to be found in the writings of Isaiah.

He greatly excels too in all the graces of method, order, connexion, ai:d arrangement ; though in

asserting this we must not forget the nature of

the prophetic impulse, which bears away the

mind with irresistible violence, and frequently in

rapid transitions from near to remote objects,

from human to divine ; we must also remark

limits of particular predictions, since, as they

are now extant, they are often improperly con-

nected, without any marks of discrimination ;

which injudicious arrangement, on some occa-

sions, creates almost insuperable difficulties. It

is, in fact, a collection of different prophecies,

nearly allied to each other as to the subject,

which, for that reason, having a sort of connexion

are not to be separated but with the utmost dif-

ficulty. The general subject is the restoration of

the churcii. Its deliverance from captivity, the

destruction of idolatry, the vindication of the

divine power and truth, the consolation of the

Israelites, the divine invitation to them, their in-

credulity, impiety, and rejection, the calling in

of the Gentiles, the restoration of the chosen

people, the glory and felicity of the churcii in

its perfect state, and the ultimate destruction of the wicked — are all set forth with a sufficient respect to order and method. If we read these passages with attention, and duly regard the nature and genius of the mystical allegory, at the same time remembering that all these points have been frequently touched upon in other prophecies promulgated at different times, we shall neither find any irregularity in the arrangement of the whole, nor any want of order and connexion as to matter or sentiment in the different parts. Dr. Lowth esteems the whole book of Isaiah to be poetical, a few passages excepted, which would not exceed the bulk of five or six chapters. The fourteenth chapter of Isaiah is one of the most sublime odes in the Scripture, and contains one of the noblest personifications to be found in the records of poetry.

The prophet, after predicting the liberation of the Jews from their severe captivity in Babylon, and their restoration to their own country, introduces them as reciting a kind of triumphal song upon the fall of the Babylonish monarch, replete with imagery, and with the most elegant and

animated personifications. A sudden exclamation, expressive of their joy and admiration on the unexpected revolution in their affairs and the destruction of their tyrants, forms the exordium of the poem. The earth itself triumphs with the inhabitants thereof; the fir-trees and the cedars of Lebanon (under which images the parabolic style frequently delineates the kin_rs and princes of the Gentiles) exult with joy, and persecute with contemptuous reproaches the humbled power of a ferocious enemy.

. How forcible is this imaircTV, how diversified, how sublime! how elevated the diction, the fr-rures, the sentiments! The Jewish nation, the cedars of Lebanon, the ghosts of departed kings, the Babylonish monarch, the travellers who find his corpse, and, last of all, Jehovah himself, are the characters which support this beautiful lyric drama. One continued action is kept up, or rather a series of interesting actions are connected together in an incomparable whole. This

indeed is the principal and distinguishc.l excel-

lence of the sublimer ode, and is displayed in its utmost perfection in this poem of Isaiah, which may be considered as one of the most ancient, and certainly the most finished specimens of that species of composition which has been transmitted to us. The personifications here are frequent, yet not confused ; bold, yet not improbable; a free, elevated, and truly divine spirit, pervades the whole: nor is there any thing wanting in this ode to defeat its claim to the character of perfect beauty and sublimity. ‘ If,’ says Dr. Lowth, ‘ I may be indulged in the free declaration of my own sentiments, I do not know a single instance, in the whole compass of Greek and Roman poetry, which, in every excellence of composition, can be said to equal, or even approach it.’ But though we cordially agree with Dr. Lowth, in the encomiums he bestows on the poetical beauties of this inspired prophet, we must observe that his chief merit lies in something of much superior value. The great, the infinite value of Isaiah’s writings to the Christian consists in this, that his prophecies abound with the clearest and most accurate

descriptions of the birth, life, and humiliations, preaching, miracles, propitiatory sufferings, death, resurrection, and divine character of our Saviour, of any of the whole inspired writings ; insomuch that this prophet has been justly styled the evangelical prophet. Without this pre-eminent merit, all the beauties of his style and imagery would be of no more importance to mankind than those in Homer, Virgil, or Milton.

JF.RKMIAH was called to the prophetic office in the thirteenth year of the reign of Josiah the son of Amon, A. M. 3376, A. C. 628, and continued to prophecy upwards of forty years, during the reigns of the degenerate princes of Judah, to whom he boldly threatened those marks of the divine vengeance which their rebellious conduct drew on themselves and their country. After the destruction of Jerusalem by the Chaldeans, he was suffered by Nebuchadnezzar to remain in the desolate land of Judea to lament the calamities of his infatuated countrymen. He was afterwards, as he informs us, carried with his disciple Baruch into Egypt, by

Johanan the son of Kareah. It appears from several passages that Jeremiah committed his prophecies to writing. In the thirty-sixth chapter we are informed that the prophet was commanded to write upon a roll all the prophecies which he had uttered ; and, when the roll was destroyed by Jehoiakim the king, Jeremiah dictated the same prophecies to Baruch, who wrote them, together with many additional circu'mstances. The works of Jeremiah extend to the last verse of the fifty-first chapter, in which we have these words : — ' Thus far are the words of Jeremiah.' Tiie fifty-second chapter was therefore added by some other writer. It is, however, a very important supplement, as it illustrates the accomplishment of Jeremiah's prophecies respecting the fate of Zedekiah.

The prophecies of Jeremiah are not arranged in the chronological order in which they were delivered. What has occasioned this transposition cannot now be determined, it is generally maintained that, if we consult heir dates, they ought to be thus placed : — In the reign of Josiah, the first twelve chapters. In the reign of Jehoiakim, chapters xiii., xx., xxi., xiv. 11,14, xxii.,

xxiii., xxv., xxvi., xxxv., xxxvi., xlv.— xlix. 1 — 33. In the reign of Zedekiah, chap. xxi. 1 — 10, xxiv., xxxvii., xxxiv., xxxviii,, xxxix., xlix., 34—39, 1. and li. Under the government of Gedaliah, chapters xl. xliv. The prophecies which related to the Gentiles were contained in the forty-sixth and five following chapters, being placed at the end, as in some measure unconnected with the rest. But in some copies of the Septuagint these six chapters follow immediately after the thirteenth verse of the twenty fifth chapter.

Jeremiah, though deficient neither in elegance nor sublimity, must give place in both to Isaiah. Jerome seems to object against him a sort o_ rusticity of language, no vestige of which Dr Lowth was able to discover. His sentiments, indeed, are not always the most elevated ; nor are his periods always neat and compact ; but these are faults common to those writers whose principal aim is to excite the gentler affections, and to call forth the tear of sympathy or sorrow. This observation is strongly exemplified in the Lamentations, where these are the prevailing

passions ; it is, however, frequently instanced in the prophecies of this author, and most of all in the beginning of the book, which is chiefly poetical. The middle of it is almost entirely historical. The latter part, again, consisting of the last six chapters, is altogether poetical ; it contains several different predictions, which are distinctly marked ; and in these the prophet approaches very near the sublimity of Isaiah. On the whole, however, not above half the book of Jeremiah is poetical.

*The book of LAMENTATIONS, as we are informed in the title, was composed by Jeremiah. We shall present to our reader an account of this elegiac poem from the elegant pen of Dr. Lowth. * The Lamentations of Jeremiah (foi the title is properly and significantly plural; consist of a number of plaintive effusions, composed upon the plan of the funeral dirges, all upon the same subject, and uttered without connexion as they rose in the mind, in a long course of separate stanzas. These have afterwards been put together, and formed into a collection or correspondent whole. If any reader, however,*

should expect to find in them an artificial and methodical arrangement of the general subject, a regular disposition of the parts, a perfect connexion and orderly succession in the matter, and with all this an uninterrupted series of elegance and correctness, he will really expect what was foreign to the prophet's design. In the character of a mourner, he celebrates, in plaintive strains, – the obsequies of his ruined country ; whatever presented itself to his mind in the midst of desolation and misery, whatever struck him as particularly wretched and calamitous, whatever the instant sentiment of sorrow dictated, he pours forth in a kind of spontaneous effusion. lie frequently pauses, and, as it were, ruminates upon the same object; frequently varies and

illustrates the same, though with different imagery, and a different choice of language ; so that the. whole bears rather the appearance of an accumulation of corresponding sentiments, than an accurate and connected series of different ideas, arranged in the form of a regular treatise.

There is, however, no wild incoherency in the poem ; the transitions are easy and elegant. ‘ The work is divided into five parts; in the first, second, and fourth chapters, the prophet addresses the people in his own person, or introduces Jerusalem as speaking. In the third a chorus of the Jews is represented. In the fifth the whole captive Jews pour forth their united complaints to Almighty God. Each of these five parts is distributed into twenty-two stanzas, according to the number of the letters of the alphabet. In the first three chapters these stanzas consist of three lines. Iu the first four chapters the initial letter of each period follows the order of the alphabet; and in the third chapter each verse of the same stanza begins with the same letter. In the fourth chapter all the stanzas are evidently distichs, as also in the fifth, which is not acrostic. The intention of the acrostic was to assist the memory to retain sentences not much connected. It deserves to be remarked that the verses of the first four chapters are longer by almost one-half than Hebrew verses generally are : the length of them

seems to be on an average about twelve syllables. The prophet appears to have chosen this measure as being solemn and melancholy.

‘ That the subject of the Lamentations is the destruction of the holy city and temple, the overthrow of the state, the extermination of the people ; and that these events are described as actually accomplished, and not in the style of prediction merely, must be evident to every reader; though some authors of considerable reputation (Josephus, Jerome, Usher, &c.) have imagined this poem to have been composed on the death of king Josiah. The prophet, indeed, has so copiously, so tenderly, and poetically bewailed the misfortunes of his country, that he seems completely to have fulfilled the office and duty of a mourner. In my opinion, there is not extant any poem which displays such a happy and splendid selection of imagery in so concentrated a state. What can be more elegant and poetical than the description of that once flourishing city, lately chief among the nations, sitting in the character of a female, solitary, afflicted, in a state of widowhood, deserted by her friends, betrayed by her dearest connexions, imploring

relief, and seeking consolation in vain ? What a beautiful personification is that of the ‘ ways of Sion, mourning because none are come to her solemn feasts !’ How tender and pathetic are the complaints! See chap. i. 12 — 16.

EZEKIEL was carried to Babylon as a captive, and received the first revelations from heaven, in the fifth year of Jehoiakim’s captivity, A. C. 595. The book of Ezekiel is sometimes distributed under different heads. In the first three chapters the commission of the prophet is described. From the fourth to the thirty- second, inclusive, the calamities that befel the enemies of the Jews are predicted, viz. the Ammonites, the Moabites, and Philistines. The ruin of Tyre and of Sidon, and the fall of Egypt, are particularly foretold ; prophecies which have been fulfilled in the most literal and as’onishing manner, as we have been often assured by the relation of historians and travellers. From the thirty-second chapter to the fortieth, he inveighs against the hypocrisy and murmuring spirit of his countrymen, admonishing them to resignation by promises of deliverance. In the thirty-eighth and thirty-ninth

chapters he undoubtedly predicts the final return of the Jews from their dispersion in the latter days, but in a language so obscure that it cannot be understood till the event take place. The last nine chapters of this book furnish the descriptions of a very remarkable vision of a new temple and city, of a new religion and polity.

' Ezekiel is much inferior to Jeremiah in elegance ; in sublimity he is not even excelled by Isaiah ; but his sublimity is of a totally different kind. He is deep, vehement, tragical; the only sensation he affects to excite is the terrible ; his sentiments are elevated, fervid, full of fire, indignant; his imagery is crowded, magnificent, terrific ; his language is pompous, solemn, austere, rough, and at times unpolished; he employs frequent repetitions, not for the sake of grace or elegance, but from the vehemence of passion or indignation. Whatever subject he treats of, that he sedulously pursues, from that he rarely departs, but cleaves as it were to it; whence the connexion is in general evident and well preserved. In many respects he is perhaps excelled by the other prophets ; but in that species of composition to which he seems by nature adapt-

ed, the forcible, the impetuous, the great and solemn, not one of the sacred writers is superior to him. His diction is sufficiently perspicuous; all his obscurity consists in the nature of the subject. Visions (as for instance, among others, those of Hosea, Amos, and Jeremiah) are necessarily dark and confused. The greater part of Ezekiel, towards the middle of the book especially, is poetical, whether we regard the matter or the diction. His periods, however, are frequently rude and incompact. Isaiah, Jeremiah, and Ezekiel, as far as relates to style, may be said to hold the same rank among the Hebrews as Homer, Simonides, and &schyles, among the Greeks.'

A pretty full account of DANIEL and his writings has been already given under that article. Daniel flourished during the reign of five Babylonish kings from Nebuchadnezzar to Belshazzar, until the conquest of Babylon by Cyrus. The events recorded in the sixth chapter were contemporary with Darius the Mede ; but in the seventh and eighth chapters Daniel returns to an earlier period, to relate the visions which he beheld in

the first three years of Belshazzar's reign ; and those which follow in the last four chapters were revealed to him in the reign of Darius ; except the tenth, which is expressly dated in the third year of Cyrus, and records his glorious vision of the Messiah, who therein styles him ' a man greatly beloved.' But the last six chapters are all connected as parts of one great scheme. They extend through many ages, and furnish the most striking description of the fall of successive

kingdoms, which were to be introductory to the establishment of the Messiah's reign. They characterise in descriptive terms the four great monarchies of the world to be succeeded by ' that kingdom which shall never be destroyed.' See Dan. ii. 44, and MONARCHY.

The whole book of Daniel being a plain relation of facts, partly past and partly future, admits not of poetical beauties. Much indeed of the parabolic imagery is introduced in that book ; but the author introduces it as a prophet only ; as visionary and allegorical symbols of objects

and events, totally untinctured with the true poetical coloring. The Jews, indeed, refuse to Daniel even the character of a prophet; but their arguments for this opinion are futile, trifling, absurd, and totally destitute of scriptural authority.

The prophecies of Daniel appear so plain and intelligible, after their accomplishment, that Porphyry, who wrote in the third century, affirms tha they were written after the events to which they refer took place. A little reflection will show the absurdity -of this supposition. Some of the prophecies of Daniel clearly refer to Antiochus Epiphanes, with whose oppressions the Jews were too well acquainted. Had the book of Daniel not made its appearance till after the death of Epiphanes, every Jew who read it must have discovered the forgery. And what motive could have induced them to receive it among their sacred books ? It is impossible to conceive one. Their character was quite the reverse ; their respect for the Scriptures had degenerated into superstition. But we are not left to determine this important point from the character of

the Jews; we have access to more decisive evi-

dence ; we are sure that the book of Daniel con-

tains prophecies, for some of them have been

accomplished since the time of Porphyry; par-

ticularly those respecting Antichrist; some of

them seem to be at present fulfilling ; and others will evidently not be fulfilled till near the final consummation of all sublunary things ; of which,

indeed, his concluding verses seem to point out

the period. Dan. xii. 11, 12.

The language in which the book of Daniel is

composed proves that it was written about the

tune of the Babylonish captivity. Part of it is

pure Hebrew; a language in which none of the

Jewish books were composed after the age of

i'.j'iphanes. These are arguments to a deist. To

a Christian the internal marks of the book itself

will show the time in which it was written, and

t if testimony of Ezekiel will prove Daniel to

have been at least his contemporary. See Ezek.

xiv. 14, xxviii. 3.

The twelve minor prophets were so called, not

from any supposed inferiority in their writings,

but on account of the small size of their works.

Perhaps it was for this reason that the Jews join-

ed them together, and considered them as one

volume. These twelve prophets present in scat-

tered hints a lively sketch of many particulars

relative to the history of Judah and of Israel, as well as of other kingdoms ; they prophesy with

historical exactness the fate of Babylon, of Nine-

veh, of Tyre, of Sidon, and of Damascus. The

last three prophets especially illustrate many cir-

cumstances at a period when the historical pages

of Scripture are closed, and when profane wri-

ters are entirely wanting. At first the Jewish

prophets appeared only as single lights, and fol-

lowed each other in individual succession ; but

they became more numerous about the time of

the captivity. The light of inspiration was col-

lected into one blaze, previous to its suspension ;

.and it served to keep alive the faith and hopes of the Jews during the awful interval which pre-

vailed between the expiration of prophecy and

its grand completion in the advent of Christ.

HOSEA has been supposed the most ancient of

the twelve minor prophets. He flourished in the

reign of Jeroboam II. king of Israel, and during

the successive reigns of Uzziah, Jotham, Ahaz,

and Hezekiah, kings of Judah. He was there-

fore nearly contemporary with Isaiah, Amos, and

Jonah. Hosea is the first in order of the minor prophets, and is perhaps, Jonah excepted, the most ancient of them all. His style exhibits the appearance of very remote antiquity; it is pointed, energetic, and concise. It bears a distinguished mark of poetical composition, in that pristine brevity and condensation which is observable in the sentences, and which latter writers have in some measure neglected. This peculiarity has not escaped the observation of Jerome : ' He is altogether,' says he, ' laconic and sententious.' But this very circumstance, which anciently was supposed no doubt to impart uncommon force and elegance, in the present ruinous state of the Hebrew literature, is productive of so much obscurity, that, although the general subject of this writer be sufficiently obvious, he is the most difficult and perplexed of all the prophets. There is, however, another reason for the obscurity of his style : Hosea prophesied during the reigns of the four kings of Judah, Uzziah, Jotham, Ahaz, and Hezekiah. The duration of his ministry, therefore, in whatever manner we calculate, roust include a very consi-

derable space of time. We have now only a small volume of his remaining, which seems to contain his prophecies ; and these are extant in a continued series, with no marks of distinction as to the times in which they were published, or the subjects of which they treat.

Concerning the date of the prophecy of JOEL there are various conjectures. The book itself affords nothing by which we can discover when the author lived, or upon what occasion it was written. Joel speaks of a great famine, and of mischiefs that happened in consequence of an inundation of locusts ; but nothing can be gathered from such general observations to enable us to fix the period of his prophecy. St. Jerome thinks (and it is the general opinion) that Joel was contemporary with Hosea. Calmet places him under the reign of Josiah, at the same time with Jeremiah, and thinks it probable that the famine to which Joel alludes is the same with that which Jeremiah predicted, chap. viii. 13. The style of Joel is essentially different from that of Hosea ; but the general character of his diction, though of a different kind, is not less

poetical. He is elesrant, perspicuous, copious, and fluent ; he is also sublime, animated, and energetic. In the first and second chapter, ne*

displays the full force of the prophetic poetry, in metaphors, allegories, and comparisons. Nor is the connexion of the matter K-ss clear and evident than the complexion of the style ; this is exemplified in the display of the impending evils which gave rise to the prophecy ; the exhortation to repentance ; the promises of happiness and success, both terrestrial and eiernal, to those who become truly penitent ; the restoration of the Israelites ; and the vengeance to be taken of their adversaries. But, while we allow this just commendation to his perspicuity, we must not deny that there is sometimes great obscurity in his subjects. His prophecy of the plague of locusts is described with great sublimity of expression. See chap. i. 6, 7, 10, &c.

AMOS was contemporary with Hosea. They both began to prophesy during the reigns of Uzziah over Judah, and of Jeroboam II. over Israel.

Amos saw his first vision two years before the earthquake, which Zechariah informs us happened in the days of I'zziah. See AMOS.

Amos was no prophet (as he informed Amaziah), neither was he a prophet's son, that is, he had no regular education in the schools of the prophets. The prophecies of Amos consist of several distinct discourses, which chiefly respect the kingdom of Israel ; yet sometimes the prophet inveighs against Judah, and threatens the adjacent nations, the Syrians, Philistines, Tyrians, Edonutes, Ammonites, and Moabites. Mr. Locke has observed that the comparisons of this prophet are chiefly drawn from lions and other animals with which he was most accustomed ; but the finest images and allusions are drawn from scenes of nature. There are many beautiful passages in the writings of Amos.

The writings of OBADIAH, which consist of one chapter, are composed with much beauty, and unfold a very interesting scene of prophecy. Of this prophet little can be said, as the specimen of his genius is so short, and the greater part of it included in one of the prophecies of Jeremiah. Compare Ob. 1 — 9 with Jer. xlix.

14,15,16. See OBADIAU.

Though JONAH be placed the sixth in order of the minor prophets, both in the Hebrew and Septuagint, he is generally considered as the most ancient of all the prophets, not excepting Hosea. He lived in the kingdom of Israel, and prophesied to the ten tribes under Joash and Jeroboam.

The book of Jonah is chiefly historical, and contains nothing of poetry but the prayer of the prophet. The sacred writers, and our Lord himself, speak of Jonah as a prophet of considerable eminence. See JONAH, and Matt. xii. 39. 41, xvi. 4, and Luke xi. 29.

MIC AH began to prophesy soon after Isaiah, Hosea, Joel, and Amos ; and he prophesied be-

tween A. M. 3246, when Jotham began to reign, and A. M. 3305, when Hezekiah died. One of his predictions saved the life of Jeremiah, who under the reign of Jehoiakim would have been put to death for prophesying the destruction of the temple, had it not appeared that Micah had foretold ».he same thing under Hezekiah about 100 years before. Joseph. Antiq. lib. x. c. 7, Mic. iii. 12. Micah is mentioned as a prophet ir the book of Jeremiah and in Matt. li. 5 ; John vii. 42. He is imitated by succeeding prophets, as he himself had borrowed expressions from his predecessors. Our Saviour himself spoke in the language of this prophet. SPB Micah, vii. 6, aud Matt. x. 35, 36. The style of Micah is for the most part close, forcible, pointed, and concise ; sometimes approaching the obscurity of Hosea; in many parts animated and sublime ; and in general truly poetical. In his prophecies there is an elegant poem, which Dr. Lowth thinks is a citation from the answer of Balaam to the king of the Moabites. See chap. vi. 6 — 8.

Josephus asserts that NAHUM lived in the time

of Jotham king of Judah ; in which case he may be supposed to have prophesied against N'ineveh when Tiglath-Pileser king of Assyria carried captive the natives of Galilee and other parts, about A.M. 3264. It is however probable that his prophecies were delivered in the reign of Hezekiah ; for he appears to speak of the taking of No-Ammon, a city of Egypt, and of the insolent messengers of Sennacherib, as of things past; and he describes the people of Judah as still in their own country, and desirous of celebrating their festivals. While Jerusalem was threatened by Sennacherib, Nahum promised deliverance to Hezekiah, and predicted that Judah would soon celebrate her solemn feasts secure from invasion, as her enemy would no more disturb her peace. In the second and third chapters Nahum foretels the downfal of the Assyrian empire and the final destruction of Nineveh, which was probably accomplished by the Medes and Babylonians, whose combined forces overpowered the Assyrians by surprise, ' while they were folden together as thorns, and while they were drunken as drunkards,' when the gates of the river were

opened, the palace demolished, and an ‘ over-running flood’ assisted the conquerors in their devastation ; who took an endless store of spoil of gold and silver, making an utter end of Nineveh, that vast and populous city, whose walls were 100 feet high, and so broad that three chariots could pass abreast. Yet, so completely was this celebrated city destroyed, that even in the second century the spot on which it stood could not be ascertained, every vestige of it being gone. It is impossible to read of the exact accomplishment of the prophetic denunciations against the enemies of the Jews, without reflecting on the astonishing proofs which that nation enjoyed of the divine origin of their religion. From the Babylonish captivity to the time of Christ they had numberless instances of the fulfilment of their prophecies. ‘ None of the minor prophets,’ says Dr. Lowth, ‘ seem to equal Nahum in boldness, ardor, and sublimity. His prophecy, too, forms a regular and perfect poem ; the exordium is not merely magnificent, it is truly majestic ; the preparation for the destruction of Nineveh, and the description of its down-

fal and desolation, are expressed in the most vivid colors, and are bold and luminous in the highest degree.'

As the prophet HABAKKUK makes no mention of the Assyrians, and speaks of the Chaldean invasions ds near at hand, he probably lived uftcr the destruction of the Assyrian empire in the

Ull of Nineveh, A.M. 3392, and not long before die devastation of Judea by Nebuchadnezzar. Uabakkuk then was nearly contemporary with Jeremiah, and predicted the same events. A general account of llabakkuk's prophecies have already been given under the article HABAKKIK. The prayer in the third chapter is a most beautiful and perfect ode, possessing all the fire of poetry, and the profound reverence of religion. The prophet illustrates his subject throughout with great sublimity; selecting an assemblage of miraculous incidents the most noble and important, displaying them in the most splendid colors, and embellishing them with the sublimest imagery, figures, and diction, the dignity of which is

heightened and recommended by the superior elegance of the conclusion. Habakkuk is imitated by succeeding prophets, and his words are borrowed by the evangelical writers. Ileb. x. 37, 38; Rom. i. 17; Gal. iii. 2; Acts xiii. 41 ; compare with Hab. i. 5.

ZEHHANIAH, who was contemporary with Jeremiah, prophesied in the reign of Josiah king of Judali^; and, from the idolatry which he describes as prevailing at that time, it is probable that his prophecies were delivered before the last reformation made by that pious prince, A.M. 3381.

The account which Zephaniah and Jeremiah give of the idolatries of their age is so similar that St. Isidore asserts that Zephaniah abridged the descriptions of Jeremiah. But it is more probable that the prophecies of Zephaniah were written some years before those of his contemporary ; for Jeremiah seems to represent the abuses as partly removed which Zephaniah describes as flagrant and excessive. In the first chapter Zephaniah denounces the wrath of God against the idolaters who worshipped Baal and the host of heaven, and against the violent and deceitful. In the second he threatens destruction to the Philistines, the Moabites, the Ammonites, and

Ethiopians ; and describes the fate of Nineveh in emphatic terms. In the third he inveighs against the pollutions and oppressions of the Jews ; and concludes with the promise, ‘ That a remnant would be saved, and that multiplied blessings would be bestowed upon the penitent.’ The style of Zephaniah is poetical, but is not distinguished by any peculiar elegance or beauty, though generally animated and impressive.

HAGGAI was the first who flourished among the Jews after the Babylonish captivity. He began to prophesy in the second year of Darius Hystaspis, about 520 years B. C. The intention of his prophecy was to encourage the dispirited Jews to proceed with the building of the temple. The only prediction mentioned refers to the Messiah, who, the prophet assures his countrymen, would fill the new temple with glory. So well was this prediction understood by the Jews that they looked with earnest expectation for the Messiah’s appearing in this temple till it was destroyed by the Romans. But, as the victorious Messiah whom they expected did not appear, they have since applied the prophecy to a third

temple, which they hope to see reared in some future period. The style of Ilaggai, in the opinion of Dr. Lowth, is prosaic. Dr. New-come thinks that a great part of it is poetical. AKI ii A in AH was undoubtedly a contemporary of Ilaggai, and began to prophesy two months after him, in the eighth month of the second year of Darius Hystaspis, A. M. 3484, being also commissioned to exhort the Jews to proceed in the building of the temple, after the interruption which the work had suffered. We are informed by Ezra(vi. 14) that the Jews prospered through the prophesying of Zechariah and Haggai. Zechariah begins with general exhortations to his countrymen, exciting them to repent from the evil ways of their fathers, whom the prophets had admonished in vain. He describes angels of the Lord interceding for mercy on Jerusalem and the desolate cities of Judah, which had experienced the indignation of the Most High for seventy years, while the neighbouring nations were at peace. lie declares that the house of the Lord should be built in Jerusalem, and that Zion should be comforted. The prophet then repre-

sents the increase and prosperity of the Jews under several typical figures. He describes the establishment of the Jewish government, and the coming of the Messiah. He admonishes those who observed solemn fasts without due contrition, to execute justice, mercy, and compassion, every man to his brother ; not to oppress the widow nor the fatherless, the stranger nor the poor. He promises that God would again show favor to Jerusalem ; that their mournful fasts should be turned into cheerful feasts ; and that the church of the Lord should be enlarged by the accession of many nations. The twelfth verse of the eleventh chapter of this book, which exhibits a prophetic description of some circumstances afterwards fulfilled in our Saviour, appears to be cited by St. Matthew (xxvii. 9, 10) as spoken by Jeremiah ; and as the eleventh, twelfth, and thirteenth chapters have been thought to contain some particulars more suitable to the age of Jeremiah than to that of Zechariah, some learned writers are of opinion that they were written by the former prophet, and have been, from similarity of subject, joined by mistake to those of

Zechariah. But others are of opinion that St. Matthew might allude to some traditional prophecy of Jeremiah, or, what is more probable, that the name of Jeremiah was substituted, by mistake, in place of Zechariah. The twelfth., thirteenth, and fourteenth chapters, contain prophecies which refer entirely to the Christian dispensation ; the circumstances attending which he describes with a clearness which indicated their near approach. The style of Zechariah is so similar to that of Jeremiah that the Jews were apcustomed to remark that the spirit of Jeremiah had passed into him. He is generally prosaic till towards the conclusion of his work, when he becomes more elevated and poetical. The whole is beautifully connected by easy transitions, and present and future scenes are blended with the greatest delicacy.

MALACHI was the last prophet that flourished, under the Jewish dispensation ; but neither the time in which he lived, nor any particulars of his history, can now be ascertained. It is even uncertain whether the word "ONˆD, Malachi, be a proper name, or denote, as the Septuagint have

rendered it, his angel, that is, ‘ the angel of the 024

Lord.’ Origen supposed that Malachi was an

angel incarnate, and not a man. As it appears,

from the concurring testimony of all the ancient

Jewish and Christian writers, that the li^ht of

prophecy expired in Malacht, we may suppose

that the termination of his ministry coincided

with the accomplishment of the first seven weeks

of Daniel’s prophecy, which was the period ap-

pointed for sealing the vision and prophecy.

This, according to Prideaux, took place in A. M.

3595 ; but, according to bishop Lloyd, in A. M.

3607, twelve years later. Whatever reckoning

we prefer, it must be allowed that Malachi com-

pleted the canon of the Old Testament 400 years

R. C. It appears certain that Malachi prophesied

under Nehemiah, and after Haggai and Zechariah,

at a time when great disorders remained among

the priests and people of Judah, which are re-

proved by Malachi. He inveighs against the

priests (i. 6, &c.; ii. 1, 2, &c.); lie reproaches the people with having taken strange wives

(ii. 11); he reproves them for their inhumanity

towards their brethren (ii. 10, iii. 5); their too

frequently divorcing their wives ; their neglect of

Sying their tithes and first fruits (Mai. iii 13).

; seems to allude to the covenant that Nehe-

miah renewed with the Lord (iii. 10, and ii. 4, 5, &c.), assisted by the priests and the chief of the nation. He speaks of the sacrifice of the new

law, and of the abolition of those of the old, in chap. i. 10 — 13. He declares that the Lord

was weary with the impiety of Israel; and

assures them that the Lord whom they sought

should suddenly come to his temple, preceded

by the messenger of the covenant, who was to

prepare his way ; that the Lord, when he ap-

peared, should purify the sons of Levi from their

unrighteousness, and refine them as metal from

the dross; and that then the offering of Judah,

the spiritual sacrifice of the heart, should be

pleasant to the Lord. The prophet, like one

who was delivering a last message, denounces

destruction against the impenitent in emphatic

and alarming words. He encourages those who

feared the name of the Lord with the animating

promise, that the ‘ Sun of Righteousness should

arise with salvation in his rays,’ and render them

triumphant over the wicked. And now that

prophecy was to cease, and miracles were no

more to be performed till the coming of the

Messiah — now that the Jews were to be left to

the guidance of their own reason, and the written

instructions of their prophets — Malachi exhorts

them to remember the law of Moses, which the

Lord had revealed from Horeb for the sake of all

Israel. At length he seal? up the prophecies of

the Old Testament, by predicting the commence-

ment of the new dispensation, which should be

ushered in by John the Baptist, with the power

and spirit of Elijah ; who should turn the hearts

of fathers and children to repentance ; but, if his admonitions should be rejected, that the Lord

would smite the land with a curse.

PART II.

OF THE NEW TESTAMENT.

INTRODITTION. — Of the authenticity and inspi-

ration of the Scriptures of the New Tettamtnt. —

The collection of writings composed after the

ascension of Christ, and acknowledged by his

followers to be divine, is known in general

by the name of Kmv?j AiaOntn- This title,

though neither given by divine command nor

applied to these writings by the apostles, was

adopted in a very early age, though the pre-

cise time of its introduction is uncertain, it beini; justified by several passages in Scripture, and

warranted by the authority of St. Paul in particu-

lar, who calls the sacred books before the time

of Christ ira\aia oiaQijeij. Even long before that

period, either the whole of the Old Testament,

or the five books of Moses, were entitled /3i/3Xtoi/

£ia9t]KT]f, or book of the covenant ; 1 Mac.

i. 57.

As the word SiaQnKij admits of a two-fold in-

terpretation, we may translate this title either the

New Covenant or the New Testament. The

former translation must be adopted, if respect be

had to the texts of Scripture from which the

name is borrowed, since those passages evidently

convey the idea of a covenant ; and, besides, a

being capable of death can neither have made an

old, nor make a new testament. It is likewise

probable that the earliest Greek disciples, who

made use of this expression, had no other notion

in view than that of covenant. We, on the con-

trary, are accustomed to give this sacred collec-

tion the name of Testament ; and since it would

be not only improper, but even absurd, to speak

of the Testament of God, we commonly under-

stand the Testament of Christ ; an explanation which removes but half the difficulty, since the new only, and not the old, had Christ for its testator.

In stating the evidence for the truth of Christianity, there is nothing more worthy of consideration than the authenticity of the books of the New Testament. This is the foundation on which all other arguments rest ; and, if it is solid, the Christian religion is fully established. The proofs for the authenticity of the New Testament have this peculiar advantage that they are plain and simple, and involve no metaphysical subtilties. Every man who can distinguish truth from falsehood must see their force ; and if there are any so blinded by prejudice, or corrupted by licentiousness, as to attempt by sophistry to elude them, their sophistry will be easily detected by every man of common understanding who has. read the historical evidence with candor and attention. Instead, therefore, of declaiming against the infidel, we solicit his attention to this subject, convinced that, where truth resides, it will shine with so constant and clear a light that the combined ingenuity

of all the deists since the beginning of the world will never be able to extinguish or to obscure it. If the books of the New Testament are really genuine,

opposition will incite the Christian to bring for-

ward the evidence ; and thus, by the united efforts

of the deist and the Christian, the arguments will

be stated with all the clearness and accuracy of

which they are susceptible in so remarkable a

degree. It is surprising that the enemies of

Christianity have not always made their first

attacks in this quarter ; for if they admit that the writings of the New Testament are as ancient nˆ

we affirm, and composed by the nersons to

whom they are ascribed, they must allow, if

they reason fairly, that the Christian religion is

true.

The stpostles allude frequently in their epistles

to the gift of miracles, which they had commu-

nicated to the Christian converts by the impo-

sition of hands, in confirmation of the doctrine

delivered in their speeches and writings, and

sometimes to miracles which they themselves had

performed. Now, if these epistles are really

genuine, it is hardly possible to deny those mi-

racles to be true. The case is here entirely different from that of an historian, who relates extraordinary events in the course of his narrative, since either credulity or an actual intention to deceive may induce him to describe as true a series of falsehoods respecting a foreign land or distant period. Even to the evangelists might an adversary of the Christian religion make this objection : but to write to persons with whom we stand in the nearest connexion, ‘ I have not only performed miracles in your presence, but have likewise communicated to you the same extraordinary endowments,’ to write in this manner, if nothing of the kind had ever happened, would require such an incredible degree of effrontery that he who possessed it would not only expose himself to the utmost ridicule, but, by giving his adversaries the fairest opportunity to detect his imposture, would ruin the cause which he attempted to support.

St. Paul’s First Epistle to the Thessalonians is addressed to a community, to which he had preached the gospel only three Sabbath days, when he was forced to quit it by the persecution

of the populace. In this epistle he appeals to the miracles which he had performed, and to the gifts of the Holy Spirit which he had communicated. Now is it possible, without forfeiting all pretensions to common sense, that, in writing to a community which he had lately established, he could speak of miracles performed, and gifts of the Holy Ghost communicated, if no member of the society had seen the one, or received the other ? To suppose that an impostor could write to the converts or adversaries of the new religion such epistles as these, with a degree of triumph over his opponents, and yet maintain his authority, implies ignorance and stupidity hardly to be believed. Credulous as the Christians have been in later ages, and even so early as the third century, no less severe were they in their enquiries, and guarded against deception, at the introduction of Christianity. This character is given them even by Lucian, a writer of the second century, who vented his satire not only against certain Christians, who had supplied Peregrinus with the means of subsistence, but also against heathen oracles and pretended wonders.

He relates of his impostor (Pseudomantis) that he attempted nothing supernatural in the presence of the Christians and Epicureans. This Pseudomantis exclaims before the whole assembly, < away with the Christians, away with the Epicureans, and let those only remain who believe in the Deity (TriTtvavrtT rai Qua) '.' upon which the populace took up stones to drive away the suspicious; while the other philosophers, Pythagoreans, Platonists, and Stoics, as credu-

Ions friends and protectors of the cause, were permitted to remain.

It is readily acknowledged that the arguments drawn from the authenticity of the New Testament only establish the truth of the miracles performed by the apostles, and are not applicable to the miracles of our Saviour ; yet, if we admit the three first gospels to be genuine, the truth of the Christian religion will be proved from the prophecies of Jesus. For if these gospels were composed by Matthew, Mark, and Luke, at the time in which all the primitive Christians affirm, that is, previous to the destruction of

Jerusalem, they must be inspired; for they contain a circumstantial prophecy of the destruction of Jerusalem, and determine the period at which it was accomplished. Now it was impossible that human sagacity could foresee that event; for when it was predicted nothing was more improbable. The Jews were resolved to avoid an open rebellion, well knowing the greatness of their danger, and submitted to the oppressions of their governors in the hope of obtaining redress from the court of Rome. The circumstance which gave birth to these misfortunes is so trifling in itself, that, independent of its consequences, it would not deserve to be recorded. In the narrow entrance to a synagogue in Csesarea some person had made an offering of birds, merely with a view to irritate the Jews. The insult excited their indignation, and occasioned the shedding of blood. This seemingly trifling circumstance, ordained by Him without whose permission a sparrow cannot fall to the ground, gave rise to a bloody war, which ended in the fulfilment of our Saviour's prophecy, by the total destruction of Jerusalem, and the dreadful massacre of its inhabitants. See JEWS.

Florus, who was then procurator of Judea, converted this private quarrel into public hostilities, and compelled the Jewish nation to rebel, contrary to its wish and resolution, to avoid what the Jews had threatened, an impeachment before the Roman emperor, for his excessive cruelties. But, even after this rebellion had broken out, the destruction of the temple was a very improbable event. It was not the practice of the Romans to destroy the magnificent edifices of the nations which they subdued ; and, of all the Roman generals, none was more unlikely to demolish so ancient and august a building as Titus Vespasian. So important then is the question, whether the books of the New Testament be genuine ? that the arguments which prove their authenticity prove also the truth of the Christian religion. Let us now consider the evidence which proves the authenticity of the New Testament. We receive the books of the New Testament as the genuine works of Matthew, Mark, Luke, John, and Paul, for the same reason that we receive the writings of Xenophon, Polybius, Plutarch, Caesar, and Livy. We have the uninter-

rupted testimony of all ages, and we have no reason to suspect imposition. This argument is much stronger when applied to the books of the New Testament than when applied to any other writings; for they were addressed to large societies, were often read in their presence, and acknowledged by them to be the writings of the

apostles. Whereas, the most eminent profane writings which still remain were addressed only to individuals, or to no persons at all : and we have the authority to affirm that they were read in public ; on the contrary, we know that a liberal education was uncommon ; books were scarce, and the knowledge of them was confined to a few individuals in every nation.

The New Testament was read over three quarters of the world, while profane writers were limited to one nation or to one country. An uninterrupted succession of writers from the apostolic ages to the present time quote the sacred writings, or make allusions to them ; and

these quotations and allusions are made not only by friends but by enemies. This cannot be asserted of even the best classic authors. And it is highly probable that the translations of the New Testament were made so early as the second century ; and in a century or two after they became very numerous. After this period it was impossible to forge new writings, or to corrupt the sacred text, unless we can suppose that men of different nations, of different sentiments, and different languages, and often exceedingly hostile to one another, should all agree in one forgery. This is so strong that, if we deny the authenticity of the New Testament, we may with a thousand times more propriety reject all the other writings in the word ; we may even throw aside human testimony itself. But, as this subject is of great importance, we shall consider it at more length ; and, to enable our readers to judge with greater accuracy, we shall state, from the valuable work of Michaelis, as translated by the learned bishop Marsh, the reasons which may induce a critic to suspect a work to be spurious : —

1. When doubts have been made, from its first

appearance in the world, whether it proceeded from the author to whom it is ascribed. 2. When the immediate friends of the pretended author, who were able to decide upon the subject, have denied it to be his production. 3. When a long series of years has elapsed after his death, in which the book was unknown, and in which it must unavoidably have been mentioned and quoted, had it really existed. 4. When the style is different from that of his other writings, or, in case no other remain, different from that which might reasonably be expected. 5. When events are recorded which «ippen later than the time of the pretended auihor. 6. When opinions are advanced which contradict those he is known to maintain in his other writings : though this latter argument alone leads to no positive conclusion, since every man is liable to change his opinion, or through forgetfulness to vary in the circumstances of the same relation, of which Josephus, in his Antiquities and Wars of the Jews, affords a striking example.

1. But it cannot be shown that any one

doubted of the authenticity of the New Testa-

ment in the period in which it first appeared. 2.

No ancient accounts are on record whence we may

conclude it to be spurious. 3. No considerable

period elapsed after the death of the apostles, in

which the New Testament was unknown; but,

on the contrary, it is mentioned by their very

contemporaries, and the accounts of it in the

second century are still more numerous. 4. No

argument can be brought in its disfavor from the

nature of the style, it being exactly such as might be expected from the apostles, not Attic but

Jewish Greek. 5. No facts are recorded which

happened after their death. 6. No doctrines are

maintained which contradict the known tenets of

the authors, since, beside the New Testament, no

writings of the apostles exist. But, to the honor

of the New Testament be it spoken, it contains

numerous contradictions to the tenets and doc-

trines of the fathers in the second and third cen-

tury, whose morality was different from that of

the gospel, which recommends fortitude and

submission to unavoidable evils, but not that

enthusiastic ardor for martyrdom for which

these centuries are distinguished; it alludes to

ceremonies which in the following ages were either in disuse or totally unknown ; all which circumstances infallibly demonstrate that the New Testament is not a production of either of those centuries. We shall now consider the positive evidences for the authenticity of the New Testament. These may be arranged under the three following heads: i. The impossibility of a forgery, arising from the nature of the thing itself, ii. The ancient Christian, Jewish, and Heathen testimony it its favor, iii. Its own internal evidence.

i. The impossibility of a forgery, arising from the nature of the thing itself, is evident. It is impossible to establish forged writings as authentic in any place where there are persons strongly inclined and well qualified to detect the fraud. Now the Jews were the most violent enemies of Christianity. They put the founder of it to death ; they persecuted his disciples with implacable fury ; and they were anxious to stifle the new religion in its birth. If the writings of the New Testament had been forged, would not the Jews have detected the imposture ? Is there a single instance on record where a few individuals have

imposed a history upon the world against the testimony of a whole nation ? Would the inhabitants of Palestine have received the gospels, if they had not had sufficient evidence that Jesu» Christ really appeared among them, and performed the miracles ascribed to him ? Or would the churches of Rome or of Corinth have acknowledged the epistles addressed to them as tlugenuine works of Paul, if Paul had never preached among them ? We might as well think to prove that the history of the Reformation is the invention of historians ; and that no revolution happened in Great Britain during the seventeenth century.

ii. The second kind of evidence which we produce, to prove the authenticity of the New Testament, is the testimony < >/' ancii-iit writers, Christians, Jews, and Heathens. In reviewing the evidence of testimony, it will not be ex pected that we should begin at the present age, and trace backwards the authors who have written on this subject to the first ages of Christianity. This indeed, though a laborious task, could be performed in the most complete man

ner; the whole series of authors, numerous in

every age, who hare quoted from the books of

the New Testament, written commentaries upon

them, translated them into different languages,

or who have drawn up a list of them, could be

exhibited so as to form such a perfect body of evi-

dence that we imagine even a jury of deists would

find it impossible, upon a deliberate and candid

examination, to reject or disbelieve it. We do

not, however, suppose that scepticism has yet

arrived at so great a height as to render such a

tedious and circumstantial evidence necessary.

Passing over the intermediate space, therefore,

we shall ascend at once to the fourth century,

when the evidence for the authenticity of the

New Testament was fully established, and trace

it back from that period to the age of the apostles.

Tins method of stating the evidence will appear

more natural, and will afford more satisfaction,

than that which has been usually adopted.

It is surely more natural, when we investigate

the truth of any fact which depends on a series of testimony, to begin with those witnesses who

lived nearest the present age, and whose characters are best established. In this way we shall learn from themselves the foundation of their belief, and the characters of those from whom they derived it; and thus we ascend till we arrive at its origin. This mode of investigation will give more satisfaction to the deist than the usual way ; and we believe no Christian, who is confident of the goodness of his cause, will be unwilling to grant any proper concessions. The deist will thus have an opportunity of examining, separately, what he will consider as the weakest parts of the evidence, those which are exhibited by the earliest Christian writers, consisting of expressions, and not quotations, taken from the New Testament. The Christian, on the other hand, ought to wish that these apparently weak parts of the evidence were distinctly examined, for thsy will afford an irrefragable proof that the New Testament was not forged ; and, should the deist reject the evidence of those early writers, it will be incumbent on him to account for the origin of the Christian religion, which he will find more difficult than to admit the common hypothesis.

In the fourth century we could produce the testimonies of numerous witnesses to prove that the books of the New Testament existed at that time ; but it will he sufficient to mention their names, the time in which they wrote, and the substance of their evidence. This we shall present in a concise form in the following table, taken from Jones's New and Full Method of establishing the canon of the New Testament ; but condensed to save room.

It exhibits, 1. The names of the writers. 2. The times in which they lived. 3. The variation or agreement of their catalogues with ours now received : and, 4. The books in which these catalogues are.

I. Atnanasius, bishop of Alexandria. A. D. 315. The same perfectly with ours now received. Fragment. Epist. Testal. torn. 2, et in Synops. torn. i.

II. Cyril, bishop of Jerusalem, A. D. 340. The same with ours, only the Revelation is omitted. Catech. IV. sect. ult. p. 101.

III. The bishops assembled in the council of Laodicea. A. D. 364. The Revelation is

omitted. Canon. LIX. N. B. The canons of this council were not long afterwards received into the body of the canons of the universal church.

IV. Epiphanius, bishop of Salamis in Cyprus. A. D. 370. The same with ours now received. Haeres. 76. cont. Anom. p. 399.

V. Gregory Nazianzen, bishop of Constantinople, A. D. 375. Omits the Revelation. Carm. de veris et genuin. Scriptur.

VI. Philastrius, bishop of Brixia in Venice. A. D. 380. The same with ours now received ; except that he mentions only thirteen of St. Paul's epistles (omitting very probably the Epistle to the Hebrews), and leaves out the Revelations. Lib. de Haeres. Numb. 87.

VII. Jerome. A. D. 382. The same with ours, except that he speaks dubiously of the Epistle to the Hebrews ; though in other parts of his writings he receives it as canonical. Ep. ad Paulin. 83. Tract. 6. p. 2. Also commonly prefixed to the Latin vulgar.

VIII. Ruffin, presbyter of Aquilegium. A. D.

390. It perfectly agrees with ours. Expos,

in Symb. Apostol. sect. 36. int. Ep. Hieron.

Par. 1. Trac. 3, p. 110, et inter. Op. Cypr.

575.

IX. Austin, bishop of Hippo in Africa. A. D.

394. It perfectly agrees with ours. De

Doctrin. Christ. 1, 2, c. 8. Tom. Op. 3.

25.

X. The XLIV. bishops assembled HI the third

council of Carthage. St. Austin was present

at it. It perfectly agrees with ours. Vid.

Canon. XL VII. et cap. ult.

We now go back to Eusebius, who wrote

about the year 315, and whose catalogue of the

books of the New Testament we shall mention

at more length. ‘ Let us observe,’ says he, ‘ the writings of the apostle John, which are uncon-

tradicted ; and, first of all, must be mentioned,

as acknowledged of all, the gospel according to

him, well known to all the churches under

heaven.’ The author then proceeds to relate the

occasions of writing the gospels, and the reasons

for placing St. John’s the last, manifestly speak-

*ing of all the four as equal in their authority, and the certainty of their original. The second p*as-*

sage is taken from a chapter, the title of which is ‘ Of the Scriptures universally acknowledged,

and of those that are not such.’ Eusebius begins

his enumeration in the following manner: ‘In

the first place are to be ranked the sacred four

Gospels, then the book of the Acts of the Apos-

tles; after that are to be reckoned the Epistles of St. Paul ; in the next place, that called the first Epistle of John and the Epistle of Peter are to

be esteemed authentic : after this is to be placed, if it be thought fit, the Revelation of St. John ; about which we shall observe the different

opinions at proper seasons. Of the controverted,

but yet well known or approved by the most, are

that called the Epistle of James and that of Jude

the second of Peter, and the second and third ot

John, whether they were written by the evan

gelist, or by another of the same name.’ He then

proceeds to reckon up five others, not in our

canon, which he calls in one place spurious, in

another controverted ; evidently meaning the

same thing by these two words. He uses still

stronger terms with respect to the pretended gos-

pels of Peter, and Thomas, and Matthias, and

some others, which he says are altogether absurd

and impious.

A. D. 290, Victorin bishop of Pettaw in Germany, ;'n a commentary upon this text of the ixerelation, 'The first was like a lion, the second was like a calf, the third like a man, and the fourth like a flying eagle,' makes out that by the four creatures are intended the four gospels ; and, to show the propriety of the symbols, he recites the subject with which the evangelist opens liis history. The explication is fanciful, but the testimony positive. He also expressly cites the Acts of the Apostles.

A. D. 230, Cyprian bishop of Carthage gives the following testimony: 'The church,' says this father, ' is watered like Paradise by four rivers, that is, by four gospels.' The Acts of the Apostles are also frequently quoted by Cyprian under that name, and under the name of the Divine Scriptures. In his various writings are such frequent and copious citations of Scripture as to place this part of the testimony beyond controversy. Nor is there, in the works of this eminent African bishop, one quotation of a spurious or apocryphal Christian writing.

A. D. 210, Origen is a most important evi-

dence. Nothing can be more peremptory upon

the subject now under consideration, and, from a

writer of his learning and information, nothing

more satisfactory, than the declaration of Origen,

preserved in an extract of his works by Eusebius : ‘ That the four gospels alone are received with-

out dispute by the whole church of God under

heaven :’ to which declaration is immediately

subjoined abrief history of the respective authors,

to whom they were then, as they are now,

ascribed. The sentiments expressed concerning

the gospels in all the works of Origen which re-

main entirely, correspond with the testimony here

cited. His attestation to the Acts of the Apostles

is no less positive ; ‘ And Luke also once more

sounds the trumpet relating the Acts of the

Apostles.’ That the Scriptures were then uni-

versally read is plainly affirmed by this writer

in a passage in which he is repelling the objec-

tions of Celsus, ‘ That it is not in private books, or such as are read by few only, and those stu-

dious persons, but in books read by every body,

that it is written the invisible things of God, from the creation of the world are clearly seen, being

understood by things that are made.’ It is to

no purpose to single out quotations of Scripture

from such a writer as this. We might as well make a selection of the quotations of Scripture in Dr. Clarke's sermons. They are so thickly sown in the works of Origen, that Dr. Mill says, ' If we had all his works remaining, we should have before us almost the whole text of the Bible.'

A. D. 194, T i- r hi 11 tan exhibits the number of the gospels then received, the names of the evan-

gelists, and their proper designations, in one •hort sentence. ' Among the apostles, John and Matthew teach us the faith ; among apostolical men, Luke and Mark refresh it.' The next pas-

sage to be taken from Tertullian affords as com-

plete an attestation to the authenticity of the gospels as can be well imagined. After enu-

merating the churches which had been founded by Paul at Corinth, in Galatia, at Philippi, Thes-

salonica, and Ephesus, the church of Rome es-

tablished by Peter and Paul, and other churches derived from John, he proceeds thus : ' I say then that with them, but not with them only which are apostolical, but with all who have fel

lowship with them in the same faith, is that gospel of Luke received from its first publication, which

we so zealously maintain ;' and presently after-

wards adds, ' The sam« authority of the aposto-

lical churches will support the other gospels,

which we have from them, and according to them,

I mean John's and Matthew's, although that

likewise which Mark published may be said to

be Peter's, whose interpreter Mark was.' In

another place Tertullian affirms that the three

other gospels, as well as St. Luke's, were in the

hands of the churches from the beginning. This

noble testimony proves incontestably the anti-

quity of the gospels, and that they were univer-

sally received ; that they were in the hands of

all, and had been so from the first. And this

evidence appears not more than 150 years after

the publication of the books. Dr. Lardner ob-

serves ' that there are more and larger quota-

tions of the small volume of the New Testament,

in this one Christian author, than there are of all the works of Cicero, in writers of all characters,

for several ages.'

A. D. 178, Irenaeus was bishop of Lyons, and

is mentioned by Tertullian, Eusebius, Jerome,

and Photius. In his youth he had been a disciple

of Polycarp, who was a disciple of John. He as-

serts, of himself and his contemporaries, that they

were able to reckon up in all the principal

churches the succession of bishops to their first

institution. His testimony to the four gospels

and Acts of the Apostles is express and positive.

' We have not received,' says Irenseus, ' the

knowledge of the way of our salvation by any

others than those by whom the gospel has been

brought to us. Which gospel they first preached,

and afterwards, by the will of God, committed

to writing, that it might be for time to come the foundation and pillar of our faith. For after that

our Lord rose from the dead, and they (the

apostles) were endowed from above with the

power of the Holy Ghost coming down upon

them, they received a perfect knowledge of all

things. They then went forth to all the ends of

the earth, declaring to men the blessing of hea-

venly peace, having all of them, and every one

alike, the gospel of God. Matthew then, among

the Jews, wrote a gospel in their own language,

while Peter and Pau'l were preaching the gospel

at Rome, and founding a church there. And,

after their exit, Mark also, the disciple and inter-

preter of Peter, delivered to us in writing the

things that had been preached by Peter. And Luke, the companion of Paul, put down in a book the gospel preached by him (Paul). Afterwards John, the disciple of the Lord, wl.o also leaned upon his breast, likewise published a gosnel while he dwelt at Ephesus i~

Asia.' Irenaeus then relates how Matthew begins his gospel, how Mark bpgins and ends his; and gives tlie supposed reasons for doing so. He enumerates at length all the passages of Christ's history in Luke, which are not found in any of the other evangelists. He states the particular design with which St. John composed his gospel, and accounts for the doctrinal declarations which precede the narrative. If any modern divine should write a book upon the genuineness of the gospels, he could not assert it more expressly, or state their original more distinctly, than Irenaeus hath done within little more that 100 years after they were published.

Respecting the book of the Acts of the Apostles, and its author, the testimony of Irenaeus

is no less explicit Referring to the account of

St. Paul's conversion and vocation, in the ninth

chapter of that book, ' Nor can they,' says he,

meaning the parties with whom he argues,

- *show that he is not to be credited, who has re-*

lated to us the truth with the greatest exactness.'

In another place, he has actually collected the

several texts, in which the writer of the history

is represented as accompanying St. Paul, which

led him to exhibit a summary of almost the

whole of the last twelve chapters of the book.

According to Lardner, Irenasus quotes twelve

'of Paul's epistles, naming their author ; also

the first epistle of Peter, the two first epistles of John, and the Revelation.
The epistles of Paul

which he omits are those addressed to Philemon

and the Hebrews. Eusebius says that he quotes

the epistle to the Hebrews, though he does not

ascribe it to Paul. The work, however, is lost.

A. D. 172, Tatian, who is spoken of by Cle-

mens Alexandrinus, Origen, Eusebius, and Je-

rome, composed a harmony of the four gospels,

which he called D atessaron, of the four. This

title, as well as the work, is remarkable, because

it shows that then as well as now there were four and only four, gospels in

general use among

Christians.

A. D. 170, the churches of Lyons and Viennp in France sent an account of the sufferings of their martyrs to the churches of Asia and Phrygia, which has been preserved entire by Eusebius. And what carries in some measure the testimony of these churches to a higher age is, that they had now for their bishop Pothinus,who was ninety years old, and whose early life consequently must have immediately followed the times of the apostles. In this epistle are exact reference to the gospels of Lufce and John, and to the Acts of the Apostles. The form of references is the same as in all the preceding articles. That from St. John is in these words : ‘ Then was fulfilled that which was spoken by the Lord, that whosoever killeth you, will think that he doth God service.’ Distinct references ure also made to other books, viz. Acts, Romans, Ephesians, Philippians, 1 Timothy, 1 Peter, 1 John, Revelation.

A. D. 140, Justin Martyr composed several fiooks, which are mentioned by his disciple Ta-

tian, by Tertullian, Methodius, Eusebius, Jerome, Epiphanius, and Photius. In his writings between twenty and thirty quotations from the gospels and Acts of the Apostles are reckoned up, which are clear, distinct, and copious; if each verse be counted separately, a much greater number; if each expression still more. Jones, in his book on the Canon of the New Testament, ventures to affirm that he cites the books of which it consists, particularly of the four gospels, above 200 times. We meet with quotations of three of the gospels within the compass of half a page, viz. from Matthew xxv. 41, Luke x. 19, and Mark viii. 31. But all the references in Justin are made without mentioning the author ; which proves that these books were perfectly well known, and that there were no othei accounts of Christ then extant, or at least no others so received and credited as to make it necessary to add any marks of distinction. But, although Justin mentions not the author's names, he calls the books Memoirs composed by the Apostles ; Memoirs composed by the Apostles and their Companions; which descriptions, the

latter especially, exactly suit the titles which the Gospels and Acts of the Apostles now bear.

He informs" us, in his first apology, that the Memoirs of the Apostles, or the writings of the prophets, are read according as the time allows ; and, when the reader has ended, the president makes a discourse, exhorting to the imitation of such excellent things. A few short observations will show the value of this testimony. 1. The Memoirs of the Apostles, Justin in another place expressly tells us, are what are called gospels. And that they were the gospels which we now use is made certain by Justin's numerous quotations of them, and his silence about any others. 2. He describes the general usage of the Christian church. 3. He does not speak of it as recent or newly instituted, but in the terms in which men speak of established customs. Justin also makes such allusions to the following books as shows that he had read them : Romans, 1 Co•inthians, Galatians, Ephesians, Philippians, Colossians, 2 Thessalonians, Hebrews, 2 Peter ; and he ascribes the Revelation to John, the apostle of Christ.

A. D. 116, Papias, a hearer of John, and com-

panion of Polycarp, as Irenaeus attests, and of the apostolical age, as all agree, in a passage quoted by Eusebius from a work now lost, expressly ascribes the two first gospels to Matthew and Mark ; and in a manner which proves that these gospels must have publicly borne the names of these authors at that titne, and probably long before ; for Papias does not say that one gospel was written by Matthew, and another by Mark ; but, assuming this as perfectly well known, he tells us from what materials Mark collected his account, viz. from Peter's preaching, and in what language Matthew wrote, viz. in Hebrew. Whether Papias was well informed in this statement or not, to the point for which this testimony is produced, namely, that these books bore these names at this time, his authority is complete. Papias himself declares that he received his accounts of Christianity from those who were acquainted with the apostles, and that those accounts which he thus received from the older Christian-, and had committed to memory, he inserted in his books. He farther adds that he was very solicitous to obtain

every possible information, especially to learn what the apostles said and preached, valuing such information more than what was written in books.

A. D- 108, Polycarp was bishop of Smyrna, and disciple of John the Apostle. This testimony concerning Polycarp is given by Irenaeus, who in his youth had seen him. ‘ I can tell the place,’ saith Irenaus, ‘ in which the blessed Polycarp sat and taught, and his going out and coming in, and the manner of his life, and the form of his person, and the discourses he made to the people, and how he related his conversation with John and others who had seen the Lord, and how lie re lated their sayings, and what he had heard concerning the Lord, both concerning his miracles and his doctrines, as he had received them from the eye-witnesses of the word of life; all which Polycarp related agreeable to the Scriptures.

Of Polycarp, whose proximity to the age and country and persons of the apostles is thus attested, we have one undoubted epistle remaining ; which, though a short performance, contains

nearly forty clear allusions to the books of the New Testament. See POLYCARP. This is strong evidence of the respect which was paid to them by Christians of that age. Among these, although the writings of St. Paul are more frequently used by Polycarp than other parts of Scripture, there are copious allusions to the gospel of St. Matthew, some passages in the gospels both of Matthew and Luke, and some which :nore nearly resemble the words in Luke. He thus fixes the authority of the Lord's prayer, and the use of it among Christians. If, therefore, we pray the Lord to forgive us, we ought also to forgive. And again, With supplication beseeching the all-seeing God, not to lead us into temptation.

In another place he quotes the words of our Lord : ' But remember what the Lord said, teaching, Judge not, that ye be not judged. Forgive, and ye shall be forgiven ; be ye merciful, that ye may obtain mercy ; with what measure ye mete, it shall be measured to you again.' Supposing Polycarp to have had these words from the books in which we now find them, it is manifest

that these books were considered by him, and by his readers, as he thought, as authentic accounts of Christ's discourses, and that this point was incontestable. He quotes also the following books, the first of which he ascribes to St. Paul : 1 Corinthians, Ephesians, Philippians, 1 and 2Thessnlonians; and makes evident references to others, particularly to Acts, Romans, 2 Corinthians, Galatians, 1 Timothy, 2 Timothy, 1 Peter, 1 John.

Ignatius, as it is testified by ancient Christian writers, became bishop of Antioch about thirty-seven years after Christ's ascension : and therefore, from his time and place, and station, it is probable that he had known and conversed with ri;uiy of »he apostles. See IGNATH>. Kpistles of Ignatius are referred to by Polycarp his contemporary. Passages found in the epistles now extant under his name are quoted by Irenaeus, A. D. 178, by Origen, A. D. 230 ; and the occasion of writing them is fully explained by Eusebius and Jerome. What are called the smaller epistles of Ignatius are generally reckoned the same which were read by Irenacus, Origen, and

Eusebius. They are admitted as genuine by

Vossius, and have been proved to be so by bishop

Pearson, with a force of argument which seem?

to admit of no reply. In these epistles are un-

doubted allusions to Matt. iii. 15, xi. 16; to John iii. 8 ; and their venerable author, who often

speaks of St. Paul in terms of the highest re-

spect, once quotes his epistle to the Ephesians

by name.

Near the conclusion of the epistle to the Ro-

mans, St. Paul, amongst others, sends the fol-

lowing salutation: ‘ Salute Asyrtcritus, Phlegon,

Hernias, Patrobas, Hermes, and the brethren

which are with them.’ Of Hermas, who appears

in this catalogue of Roman Christians as contem-

porary with St. Paul, there is a book still re-

maining, the authenticity of which cannot be

disputed. See HERMAS. It is called the Shep-

herd or Pastor of Hermas. Its antiquity is

incontestable from the quotations of it in Irenaeus, A. D. 178, Clement of Alexandria, A. D. 194,

Tertullian, A. D. 200, Origen, A. D. 230. The

notes of time extant in the epistle itself agree

with its title, and with the testimonies conerning

it, which intimate that it was written during the

lifetime of Clement. In this piece are tacit allusions to St. Matthew's, St. Luke's, and St. John's gospels ; that is to say, there are applications of thoughts and expressions found in these gospels, without citing the place or writer from which they were taken. In this form appear in Hermas the confessing and denying of Christ ; the parable of the seed sown; the comparison of Christ's disciples to little children; the saying ' he that putteth away his wife, and marrietii another, committeth adultery ;' the singular expression, ' having received all power from his Father,' is probably an allusion to Matt, xxviii. 18, and Christ being the gate, or only way of coming ' to God,' is a plain allusion to John xi». 6, x. 7, 9. There is also a probable allusion to Acts v. 32. The Shepherd of Hermas has been considered as a fanciful performance. This, however, is of no importance in the present case. We only adduce it as an evidence that the books to which it frequently alludes existed in the first century ; and for this purpose it is satisfactory, as its authenticity has never been questioned.

A. D. 96, we have aa epistle written by Clement, the fourth bishop of Rome, whom ancient writers, without any doubt, assert to have been

the Clement whom St. Paul mentions, Philip, iv. 3, ‘ with Clement also, and other my fellow laborers, whose names are in the. book of life.’ This epistle is spoken of by the ancients as an epistle acknowledged by all ; and, as Irenaeus well represents its value, ‘ written by Clement, who had seen the blessed apostles and conversed with them, who had the preaching of the apostles still sounding in his ears, and their traditions before his eyes.’ It is addressed to the church of Corinth ; and, what alone may seem a decisive proof of its authenticity, Dionysius bishop of Corinth, about the year 170, i.e. about eighty or ninety years after the epistle was written, bears witness, ‘that it had been usually read in that church from ancient times.’ This

*epistle affords, amongst others, the following valuable passages : * especially remembering the words of the Lord Jesus, which he spake, teach-‘ng gentleness and long suffering;’ for thus he said, ‘Be ye merciful, that ye may obtain mercy ; forgive, that it may be forgiven unto*

you,' &c. Again, ' Remember the words of the

Lord Jesus ; for he said, wo to that man by whom offences come ; it were better for him that he

had not been born,' &c. He ascribes the first

epistle to the Corinthians to Paul, and makes such

allusion to the following books as is sufficient to show that he had seen and read them : Acts,

Romans, 2 Corinthians, Galatians, Ephesians,

Philippians, Colossians, 1 Thessalonians, 1 Ti-

mothy, 2 Timothy, Titus, 1 Peter, 2 Peter. It

may be said, as Clement has not mentioned the

books by name, from which we assert these al-

lusions or references are made, it is uncertain

whether he refers to any books, or whether he

received these expressions from the discourses

and conversation of the apostles. Mr. Paley has

given a very satisfactory answer to this objec-

tion : 1st. That Clement, in the very same man-

ner, namely, without any mark of reference,

uses a passage now found in the epistle to the

Romans (chap. i. 29) ; which passage, from the

peculiarity of the words that compose it, and

from their order, it is manifest that he must have taken from the epistle. 2dly, That there are

many sentences of St. Paul's first epistle to the

Corinthians to be found in Clement's epistle,

without any sign of quotation, which yet cer-

tainly are quotations; because it appears that

Clement had St. Paul's epistle before him ; for

in one place he mentions it in terms too express

to leave us in any doubt. 'Take into your

hands the epistle of the blessed apostle Paul.'

3dly. That this method of adopting words of

Scripture, without reference or acknowledgment,

was a method in general use amongst the most

ancient Christian writers. St. Paul himself

quotes the heathen poet, Aratus, without naming

him. See ARATUS. These analogies not only

repel the objection, but cast the presumption on

t'ae other side ; and afford a considerable degree

of positive proof that the words in question

!iave been borrowed from the places of Scripture

in which we now find them. But take it the

oilier way, that Clement had heard these words

from the apostles or first teachers of Christianity ; \iih respect to the precise point of our argu-

ment, viz. that the Scriptures contain what the

apostles taught, this supposition may serve al-

most as well.

We have now traced the evidence to the

times of the apostles ; but we have not been

anxious to draw it out to a great length, by introducing every thing. On the contrary, we have been careful to render it as concise as possible, that its force might be discerned at a glance. The evidence which has been stated is of two kinds. Till the time of Justin Martyr and Irenxus it consists chiefly of allusions, references, and expressions, borrowed from the books of the New Testament, without mentioning them by name. After the time of Irenaeus it became usual to cite the sacred books, and mention the authors from which the citations were taken. The only point of importance to be deter, mined is, whether these references are a sufficient proof of the existence of the books to which they allude. This, we presume, will not be denied ; especially in the present age, when it is so common to charge an author with plagiarism, if he happen to fall upon the same train of ideas, or express himself in a similar manner wih authors who have written before him. We may farther affirm, that these tacit references afford a complete proof that those ancient writers had no intention of imposing a forgery

upon the world. They prove the existence of the Christian religion, and of the apostolical writings, without showing any suspicious earnestness that men should believe them. Had these books been forged, those who wished to pass them upon the world would have been at more pains than the first Christians were to prove their authenticity. They acted the part of honest men ; they believed them themselves, and they never imagined that others would suspect their truth. It is a consideration of great importance, in reviewing the evidence which has been now stated, that the witnesses lived in different conntries ; Clemens flourished at Rome, Polycarp at Smyrna, Justin Martyr in Syria, Irenaeus in France, Tertullian at Carthage, Origen at Alexandria, and Eusebius at Caesarea. This proves that the books of the New Testament were equally well known in distant countries by men who had no intercourse with one another. The same thing is proved by testimonies, if possible, less exceptionable. The ancient heretics, whose opinions were sometimes grosser and more impious than those which any modern sectary

has ventured to broach, and whose zeal in the propagation of them equalled that of the most flaming enthusiast of the seventeenth century, never called in question the authenticity of the books of the New Testament. When they met with any passage in the gospels or epistles which they could not reconcile to their own heretical notions, they either erased it, or denied that the author was inspired ; but they nowhere contend that the book in which it stood was not written by the apostle or evangelist whose name it bore. Eusebius relates that the Ebionites rejected all the epistles of Paul, and called him an apostate, because he departed from the Levitical law ; and they adopted as their rule of faith the Gospel of St. Matthew, though indeed they greatly corrupted it. This proves, therefore, that the Gospel according to Matthew was then published, and that St. Paul's epistles were then known.

Of the heretics who erased or altered passages to make the Scriptures agree with their doctrines, we may produce Marcion as an instance, who lived in the beginning of the second cen-

tury. He lived in an ag« when he could have easily discovered if the writings of the New Testament had been forged ; and as he was much incensed against the orthodox party, if such a forgery had been committed unquestionably he would not have failed to make the discovery, as it would have afforded the most ample means of revenge and triumph, and enabled him to estao-lish his own opinions with less difficulty But

hi whole conduct shows clearly that he be-lieved the writings of the New Testament to be authentic. He said that the Gospel according to S . Matthew, the Epistle to the Hebrews, with those of St. Peter and St. James, as well as the Old Testament in general, were writings not for Christians but for Jews. He published a new edition of the Gospel according to Luke, and the first ten epistles of Paul ; in which it has been affirmed by Epiphanius that he altered every passage that contradicted his own opinions : but as many of these alterations are what mo-dern critics call various readings, though we re-ceive the testimony of Epiphanius, we must not*

rely upon his opinion. Dr. Loeffer wrote a dissertation vindicating Marcion from this charge. Hence it is evident that the books of the New Testament above-mentioned did then exist, and were acknowledged to be the works of the authors whose names they bear.

Dr. Lardner, in his General Review, sums up this head of evidence in the following words :

1 Noetus, Paul of Samosata, Sabellius, Marcellus, Photinus, the Novatians, Donatists, Manicheans, Priscillianists, beside Artemon, the Audians, the Arians, and divers others, all received most or all the same books of the New Testament which the Catholics received ; and agreed in a like respect for them as written by apostles or their disciples and companions.'

Celsus and Porphyry, both enemies of the Christian religion, are powerful witnesses for the antiquity of the New Testament. Celsus, who lived towards the end of the second century, not only mentions by name, but quotes passages from the books of the New Testament : and that the books to which he refers were no other than our present gospels is evident from the allusions to

various passages still found in them. Celsus takes notice of the genealogies, which fixes two of these gospels ; of the precepts, resist not him that injures you, and, if a man strike thee on the one cheek, offer to him the Bother also ; of the woes denounced by Christ ; of his predictions ; of his saying that it is impossible to serve two masters ; of the purple robe, the crown of thorns, and the reed which was put into the hand of Jesus ; of the blood that flowed from his body upon the cross, a circumstance which is recorded only by John ; and (what is instar omnium for the purpose for which we produce it) of the difference in the accounts given of the resurrection by the evangelists, some mentioning two angels at the sepulchre, others only one. It is extremely material to remark that Celsus not only perpetually referred to the accounts of Christ contained in the four gospels, but that he referred to no other accounts ; that he founded none of his objections to Christianity upon any thing delivered in spurious gospels.

The testimony of Porphyry is still more important than that of Celsus. See PORPHYBIUS. He was was born in 233, and died in 304, aged seventy-one. Unfortunately for the present age,

says Michaelis, the mistaken zeal of the Christian emperors has banished his writings from the world ; and every real frend of our religion would gladly give the works of one of the pious fathers to rescue those of Porphyry from the flames. But Mr. Marsh, the learned and j« dicious translator of Michaelis, relates that, according to the accounts of Isaac Vossius, a MS. of the works of Porphyry is preserved in the Medicean library at Florence, but kept so secret that no one is permitted to see it. It is universally allowed that Porphyry is the most sensible, as well as the most severe adversary of the Christian religion that antiquity can produce. He was versed not only in history, but also in philosophy and politics. His acquaintance with the Christians was not confined to a single country; for he had conversed with them in Tyre, in Sicily, and in Rome. Enable! by his birth to study the Syriac, as well as the Greek authors, he was of all the adversaries to the Christian religion the best qualified to enquire into the authenticity of the sacred writings. He possessed therefore every advantage which na-

tural abilities or a scientific education could afford, to discover whether the New Testament was a genuine work of the apostles and evangelists, or whether it was imposed upon the world after the decease of its pretended authors. But no trace of this suspicion is any where to be found in his writings. In the fragments, which still remain, mention is made of the gospels of St. Matthew, St. Mark, and St. John, the Acts of the Apostles, and the Epistle to the Galatians ; and it clearly appears, from the very objections of Porphyry, that the books to which he alludes were the same which we possess at present. Thus he objects to the repetition of a generation in St. Matthew's genealogy ; to Matthew's call ; to the quotation of a text from Isaiah, which is found in a psalm ascribed to Asaph ; to the calling of the lake of Tiberias a sea ; to the expression in St. Matthevv, ' the abomination of desolation ;' to the variation in Matthew and Mark upon the text ' the voice of one crying in the wilderness.' Matthew citing it from Isaiah, Mark from the prophets ; to John's application of the term Word ; to Christ's

change of intention about going up to the feast of tabernacles (John vii. 8) ; and to the judgment denounced by St. Peter upon Ananias and Sapphira, which he calls an imprecation of death. The instances here alleged serve in some measure to show the nature of Porphyry's objections, and prove that Porphyry had read the gospels with that sort of attention which a writer would employ who regarded them as the depositories of the religion which he attacked. Besides these specifications, there exists in the writings of ancient Christians general evidence that the places of Scripture, upon which Porphyry had made remarks, were very numerous.

iii. The internal evidence of the authenticity of the New Testament consists of two parts : — The nature of the style, and the coincidence of the New Testament with the history of the times.

1. The STYLE of the New Testament is singular, and differs very widely from the style of classical authors. It is full of Hebraisms and Syriasms; a circumstance which pious ignorance has considered as a fault, and which, even so late as the present century, it has attempted to

remove ; not knowing that these very deviations from Grecian purity afford the strongest pre-

sumption in its favor ; for they prove that the New Testament was written by men of Hebrew origin, and is therefore a production of the first century. After the deatli of the first Jewish converts, few of the Jews turned preachers of the gospel ; the Christians were generally ignorant of the Hebrew, and consequently could not write in the style of the New Testament. After the destruction of Jerusalem, and the dispersion of the Jews, their language must have been blended with that of other nations, and their vernacular phraseology almost entirely lost. The language of the early fathers, though not always the purest classic Greek, has no resemblance to that of the New Testament, not even excepting the works of the few who had a knowledge of the Hebrew ; as Origen, Epiphanius, and Justin Martyr, who, being a native of Palestine, might liave written in a style similar to that of the New Testament, had such a style then prevailed. He that suspects the New Testament to be the forgery

of a more recent period ought to produce some

person who has employed a similar diction ; but

those who are conversant with eastern writings

know well that a foreigner, who has not been

inured to eastern manners and modes of think-

ing from his infapcy, can never imitate with

success the oriental style, much less forge a his-

tory or an epistle, which contains a thousand

incidental allusions which nothing but truth

could suggest. To imitate closely the style of

the New Testament is even more difficult than to

imitate that of any other oriental book ; for there is not a single author, even among the Jews

themselves, since the destruction of Jerusalem,

that has composed in a style in the least degree

like it. The style of Clemens Romanus may

perhaps be an exception. By many eminent

critics it has been thought so like to that of the Epistle to the Hebrews as to give room for the

opinion that Clement either was the author of

that epistle, or was the person who translated it

from the Syro-Chaldaic language, in which it

was originally composed.

But, though the books of the New Testament

bear so close a resemblance in idiom, there is a

diversity of style which shows them to be the work of different persons. Whoever reads with attention the epistles of Paul must be convinced that they were all written by the same author. An equal degree of similarity is to be found between the gospel and first epistle of John. The writings of St. John and St. Paul exhibit marks of an original genius which no imitation can ever attain. The character of Paul as a writer is drawn with great judgment by Michael is : —

‘ His mind overflows with sentiment, yet he never loses sight of his principal object, but, hurried on by the rapidity of thought, discloses frequently in the middle a conclusion to be made only at the end. To a profound knowledge of the Old Testament he joins the acuteness of philosophical wisdom, which he displays in applying and expounding the sacred writings ; and Ins explanations are therefore sometimes so new and unexpected that superficial observers might !->e tempted to suppose them erroneous. The fire of his genius, and his inattention to style, iisi.. n frequently a twofold obscurity, he being often too concise to be understood except

by those to whom he immediately wrote, and not seldom on the other hand so full of his subject as to produce long and difficult parentheses, and a repetition of the same word even in different senses. With a talent for irony and satire, he unites the most refined sensibility, and tempers the severity of his censures by expressions of tenderness and affection ; nor does he ever forget in the vehemence of his zeal the rules of modesty and decorum. He is a writer, in short, of so singular and wonderful a composition that it would be difficult to find a rival. The truly sensible and sagacious Mr. Locke was of the same opinion, and contended that St. Paul was without an equal.'

2. Poems have been forged and ascribed to former ages with some success. Philosophical treatises might be invented which it would be difficult to detect; but there is not a single instance on record, where an attempt has been made to forge a history or a long epistle, where the fraud has not been either fully proved, or rendered so suspicious that few are weak enough to believe it. Whoever attempts to forge a his-

tory or an epistle in the name of an ancient author, will be in great danger of contradicting the history or the manners of that age, especially if he relate events which are not mentioned in general history, but such as refer to a single city, sect, religion, or school. The difficulty of forging such histories as the gospels, and such epistles as those of Paul, cannot be overcome by all the genius, learning, and industry, of any individual or society of men that ever lived. They contain a purer system of ethics than all the ancient philosophers could invent : they discover a candor and modesty unexampled : they exhibit an originality in the character of Jesus, and yet such a consistency as the imagination of our best poets has ever reached. Now it is a very remarkable circumstance that histories, written by four different men, should preserve such dignity and consistency, though frequently relating different actions of Jesns, and descending to the most minute circumstances in his life. The scene of action is too extensive, and the agreement of facts with the state of the times as represented by other historians is too close, to admit the pos-

sibility of forgery.

The scene of action is not confined to one

country, it is successively laid in the greatest

cities of the Roman empire ; in Rome, in An-

tioch, in Corinth, in Athens, as well as in Jeru-

salem and the land of Palestine. Innumerable

allusions are made to the manners and opinions

of the Greeks, the Romans, and the Jews ; and,

respecting the Jews, they extend even to the

trifles and follies of their schools. Yet, after the strictest examination, the New Testament will

be found to have a wonderful coincidence and

harmony with Josephus, the principal historian

of these times, and an enemy of Christianity. It

has been a question who the soldiers were who

are said in the gospel of Luke to have addressed

John the Baptist in these words, What shall w,;

do? An answer to this question maybe found

in Josephus : Antiq. lib. 58. c. 5. § 1, 2. He-

rod the tetrarch of Galilee was engaged in a wai

with his father-in-law Aretas, a petty king in

Arabia Petraea, at the very time that John was

preaching in the wilderness ; and, the road from

Galilee to Arabia running through that wilder-

ness, the soldiers on their march had this inter-

view with the Baptist. A coincidence like this,

which has been overlooked by all the commenta-

tors, would not probably be attended to in a forgery.

Another instance of an agreement no less re-

markable we shall quote from the valuable work

of Michaelis. It has been a question of some

difficulty among the learned, who was the Ana-

nias who commanded St. Paul to be smitten on

the mouth when he was making his defence be-

fore the council in Jerusalem : Acts xxiii. 2 —

5. Krebs, in his remarks taken from Josephus,

has shown him to have been the son of Nebedeni.

But, if so, how can it be reconciled with chrono-

logy, that Ananias was, at that time, called high

priest, when it is certain from Josephus that the

time of his holding that office was much earlier ?

And how comes it to pass that St. Paul says, ‘ I wist not, brethren, that he was the high priest ?’

The sacerdotal garb must have discovered who

he was ; a jest would have ill-suited the gravity

of a tribunal ; and a falsehood is inconsistent

with the character of St. Paul. All these diffi-

culties vanish as soon as we examine the special

history of that period : — ‘ Ananias the son of Nebedeni was high priest at the time that Helena queen of Adiabene supplied the Jews with corn from Egypt, during the famine which took place in the fourth year of Claudius, mentioned in the eleventh chapter of the Acts. St. Paul, therefore, who took a journey to Jerusalem at that period, could not have been ignorant of the elevation of Ananias to that dignity. Soon after the holding of the first council, as it is called, at Jerusalem, Ananias was dispossessed of his office, in consequence of certain acts of violence between the Samaritans and the Jews, and sent prisoner to Rome ; but, being afterwards released, fie returned to Jerusalem. Now from that period he could not be called high priest in the proper sense of the word, though Josephus has sometimes given him the title of apˆitptvf, taken in the more extensive meaning of a priest who had a seat and voice in the Sanhedrim; and Jonathan, though we are not acquainted with the circumstances of his elevation, had been raised in the mean time to the supreme dignity in the Jewish church. Between the death of Jonathan, who was murdered by order of Felix, and the

high priesthood of Ismael, who was invested

with that dignity by Agrippa, elapsed an inter-

val during which the sacerdotal office was vacant.

Now it happened precisely in this interval that

St. Paul was apprehended in Jerusalem ; and,

the Sanhedrim being destitute of a president, he

undertook of his own authority the discharge of

that office, which he executed with the greatest

tyranny. It is possible therefore that St. Paul,

who had been only a few days in Jerusalem,

might be ignorant that Ananias, who had been

dispossessed of the priesthood, had taken upon

himself a trust to which he was not entitled ; he might therefore very naturally exclaim, ‘ I wist

not, brethren, that he was the high priest!’ Ad-

mitiing him on the other hand to have been ac-

quainted with the fact, the expression must be

considered as an indirect reproof, and a tacit rt-

fusal to recognise usurped authority.’ Could sucn

a correspondence as this subsist between truth ana

falsehood, between a forgery and an authentic

history ? or is it credible that these events conld be related by any person but a contemporary ?

Impressed with the love of truth, and feel-

ing contempt as well as detestation at pious

frauds, we hesitate not to acknowledge that in some particular facts there is a difference either real or apparent between Josephus and the writers of the New Testament. The objections arising from these differences are of two kinds ; 1. Such as would prove a book not to have been written by the author to whom it is ascribed. 2. Such as would prove that the author was mistaken, and therefore not divinely inspired. To the first class belongs the follow ing objection : — St. Paul says (2 Cor. xi. 32) that the governor of Damascus was under Aretas the king; but if we are to judge from the eighteenth book of the Jewish Antiquities, which corresponds with the period of St. Paul's journey to 'Damascus, this city must have belonged at that time to the Romans ; and what authority could Aretas, a petty king in Arabia Petrcea, have in such a city ? In answer to this question, J. G. Ayne, in a dissertation published in 1755, has shown it to be highly probable that Aretas, against whom the Romans, not long before the death of Tiberius, made a declaration of war, which they neglected

to put in execution, took the opportunity of seizing Damascus, which had once belonged to his ancestors; an event omitted by Josephus, as forming no part of the Jewish history, and by the Roman historians, as being a matter not flattering in itself, and belonging only to a distant province. 2dly, That Aretas was by religion a Jew; a circumstance the more credible, when we reflect that Judaism had been widely propagated in that country, and that even kings in Arabia Felix had recognised the law of Moses. The difficulty then is so far removed that it ceases to create suspicion against an epistle which has so many evident marks of authenticity ; and it is only to be regretted that, in order to place the subject in the clearest point of view, we are not sufficiently acquainted with the particular history of Damascus.

Examples of the second kind are such as, if allowed their full force, might indeed prove a writer not divinely inspired, but could afford no reason to conclude that he was not the author of the writings which bear his name, since mistakes may be committed by the most accurate historian. The chief difficulties of this nature are

found in the Gospel according to St. Luke, and do not apply to the writings of Matthew, John, Paul, and Peter. Laying aside the idea of inspiration altogether, let us enquire whether Luke or Josephus be most entitled to credit in those passages where they differ : which of them is most accurate, and which of them had the best opportunities of exploring the truth of the facts which they relate. Now Josephus relates the same story differently in different parts of his works, and is sometimes equally mistaken ir

them all. We do not recollect to have seen such inconsistencies in the writings of St. Luke. Luke knew the characters, and witnessed many of the facts, of which he speaks, and he could receive the best information respecting those facts which were transacted in his absence. Josephus was bom A. D. 37, some years after our Saviour's ascension. Now it is a very important observation of Michaelis that the period of history with which mankind are least acquainted is that which includes the time of their childhood

and youth, together with the twenty or thirty

years immediately preceding their birth. Con-

cerning the affairs transacted during that period

we are much more liable to fall into mistakes than concerning those of a remoter age. The reason

is, that authentic history never comes down to the

period of our birth ; our knowledge of the period

immediately preceding depends on hearsay; and

the events which pass within the first eighteen or

twenty years of our lives we are too young and

heedless to observe with attention. This must

have been more remarkably the case in the time

of Josephus than at present, when there were

neither daily papers nor periodical journals to

supply the want of regular annals. There was

no historian from whom Josephus could derive

any knowledge of the times that immediately

preceded his birth. There is a period then of

forty or fifty years, in which, even with the most diligent enquiry, he was exposed to error.

When we find, therefore, the relations of

Luke and Josephus so different as not to be re-

conciled, it would be very unfair to determine,

without any further enquiry, in favor of Jose-

phus. Let their character, works, and situation,

be strictly examined; let their testimony be duly weighed and compared ; and then let the preference be given to that author who, according to the strictest rules of equity and justice, seems entitled to the highest degree of credit. The decision of a jury, we shall venture to say, would in every instance turn out in favor of Luke.

Having thus ascertained the authenticity of the books of the New Testament, the next thing to be considered is their inspiration. It is certainly of some importance to know how far the apostles and evangelists were guided in their writings by the immediate influence of the Spirit of God ; though this knowledge, if attainable, is not equally important with that of the authenticity of these writings. Michaelis indeed asserts that the divinity of the New Testament may be proved whether we can evince it to be written by immediate inspiration or not. ‘ The question,’ says he, ‘ whether the books of the New Testament are inspired, is not so important as the question whether they are genuine I The truth of our religion depends upon the latter, not ab-

solutely on the former. Had the Deity inspired not a single book of the New Testament, but left the apostles and evangelists without any other aid than that of natural abilities to commit what they knew to writing, admitting; their works to be authentic, and possessed of a sufficient degree of credibility | the Christian religion would nil Iv well founded. The miracles in- which it is confirmed would equally demonstrate Us truth, even if the persons who attested them were not inspired, but simply human witnesses; and their divine authority is never presupposed, when we discuss the question of miracles, but merely their credibility as human evidence. If the miracles are true which the evangelists relate, the doctrines of Christ, recorded in the gospels, are proved to be the infallible oracles of God ; and even if we admit the apostles to be mistaken in certain not essential circumstances, yet, as the main points of the religion which Christ commissioned them to preach are so frequently repeated, their epistles would instruct us as well in the tenets of the Christian system as the works of Maclaurin in the philosophy of Newton. It

is possible, therefore, to doubt, and even to deny, the inspiration of the New Testament, and yet be

fully persuaded of the truth of the Christian re-

ligion ; and many really entertain these senti-

ments either publicly or in private, to whom we

should render great injustice, if we ranked them

in the class of unbelievers. Yet the Christian

religion would be attended with difficulty, if our

principium cognoscendi rested not on firmer

ground ; and it might be objected that sufficient

care had not been taken for those whose con-

sciences were tender, and who were anxiously

fearful of mistaking the smallest of the divine

commands. The chief articles, indeed, of Chris-

tianity are so frequently repeated, both by Christ

and his apostles, that even were the New Testa-

ment not inspired we could entertain no doubt

of the following doctrines : ‘ Jesus was the Mes-

sias of the Jews, and an infallible messenger of

God : he died for our iniquity ; and by the satis-

faction made by his death we obtain remission of

sins, if on our part be faith and amendment of

life ; the Levitical law is abolished, and moral

precepts with the ceremonies of baptism and the

Supper of the Lord, are appointed in its stead;

after the present follows an everlasting life, in which the virtuous shall be rewarded and the wicked punished, and where Christ himself shall be the judge.'

' To the epistles indeed/ says Michaelis, ' inspiration is of real consequence ; but with respect to the historical books, viz. the gospels and Acts of the Apostles, we should really be no losers if we abandoned the system of inspiration, and in some respects have a real advantage. We should be no losers, if we considered the apostles in historical facts as merely human witnesses, as Christ himself has done in saying, ' Ye also shall bear witness, because ye have been with me from the beginning,' John xv. 27. And no one that attempts to convince an unbeliever of the truth of Christianity, would begin his demonstration by presupposing a doctrine which his adversary denies, but would ground his arguments on the credibility of the evangelists as human historians, for the truth of the miracles, the death, and the resurrection of Christ. Even those who examine the grounds of their faith for their own private conviction must treat the evangelists as

human evidence ; since it would be arguing in a circle to conclude that the facts recorded in the gospels are true because they are inspired, \litn we conclude the Scriptures to be inspired, in

consequence of their contents. In these cases, then, we are obliged to consider the evangelists as human evidence ; and it would be no detriment to the Christian cause to consider them at all times as such in matters of historical fact. We find it nowhere expressly recorded that the public transactions which the apostles knew by their own experience, and of which St. Luke informed himself by diligent enquiry, should be particular objects of divine inspiration. We should even be considerable gainers, in adjusting the harmony of the gospels, if we were permitted to suppose that some one of the evangelists had committed an immaterial error, and that St. John has rectified some trifling mistakes in the preceding gospels. The most dangerous objections which can be made to the truth of our religion, and such as are most difficult to answer,

are those drawn from the different relations of the four evangelists.

Before any enquiry is made respecting the inspiration of the books of the New Testament, it is necessary to determine the reading of the term ; for theologians have given to it a variety of significations. Most of the German divines make it to consist in an infusion of words as well as ideas. Luther, Beza, and Salmasius, restrict it to ideas alone. Doddridge understands by it an intervention of the Deity, by which the natural faculties of the mind were directed to the discovery of truth. Warburton and Law think it was a negative intervention to preserve the sacred writers from essential errors. Some believe every circumstance was dictated by the Holy Ghost ; others suppose that no supernatural assistance was granted except in the epistolary writings. See INSPIRATION.

As there is an evident distinction between inspiration and revelation, and as the origin of the Christian religion maybe still proved divine, even though it were denied that those who record its facts and doctrines were inspired in the act of writing, it will be most judicious and safe to em-

ploy the word inspiration in that sense which can be most easily defended and supported. By doing this, much may be gained and nothing lost. It is difficult to prove to a deist that the words of Scripture are divine, because he sees that every writer has words and phrases peculiar to himself. It is difficult also to prove that the ideas were infused into the mind of the authors while they were engaged in the act of writing ; because, concerning facts, they appeal not to divine inspiration, but declare what they have seen ana heard. In reasoning, they add their own sentiments to what they had received from the Lord, and subjoin, especially in their epistles, things not connected with religion. The definition which Doddridge gives seems applicable to ordinary gifts, or the usual endowments of rational creatures, rather than to the extraordinary gifts of the Holy Spirit, which were bestowed on the apostles. Those who maintain that every fact or circumstance was suggested bv divine inspiration will find it no easy matter to prove their position. The opinion of Warburtoii and Law, with proper explanations, seems most probable. The opinion of Grotiu«, that only

the epistles were inspired, may be easily refuted. The proof of the authenticity of the New Testament depends on human testimony . the proof of its inspiration is derived from the declaration of inspired persons. In proving that the New Testament is inspired, we presuppose its authenticity ; that the sacred books were written by the apostles whose names they bear ; and that they have been conveyed to us pure and uncorrupted. This we have already attempted to prove, and we hope with success. The evidence of inspiration is the testimony of Christ and his apostles, which we receive as credible, because they confirmed their doctrines by miracles. From the important mission of Christ and his apostles, we infer that every power was bestowed which divine wisdom thought expedient; and from their conduct we conclude that it is morally impossible that they could lay claim to any powers which they did not possess. It is proper, therefore, to enquire into the declarations of Christ and his apostles concerning the nature, degree, and extent of the inspiration bestowed upon the writers of the sacred books.

If we consider Christ's more immediate promises of inspiration to the apostles, we shall find that he has given them, in the most proper sense of the word, at three several periods, 1st, When he sent the apostles to preach the gospel ; '2dly, In holding a public discourse relating to the gospel, at which were present a considerable multitude ; 3dly, In this prophecy of the destruction of Jerusalem. When he sent the apostles to preach the gospel, he thus addressed them :

' When they deliver you up, take no thought how or what ye shall speak; for it shall be given you in that same hour what ye shall speak ;

for it is not you that speak, but the spirit of your Father that speaketh in you.' The same promise was made almost in the same words in the presence of an immense multitude: Lukexii. 11, 12. From these passages it has been urged that, if the apostles were to be inspired in the presence of magistrates in delivering speeches, which were soon to be forgotten, it is surely reasonable to conclude that they would be inspired when they came to compose a standard of faith for the use of all future generations of Christians. If this conclusion be fairly deduced, it would

follow that the writings of the New Testament are the dictates of inspiration, not only in the doctrines and precepts, but in the very words. But it is a conclusion to which sincere Christians have made objections; for, say they, though Christ promises to assist his apostles in cases of great emergency, where their own prudence and fortitude could not be sufficient, it does not follow that he would dictate to them those facts which they knew already, or those reasonings which their own calm reflection might supply. Besides, say they, if the New Testament was dictated by the Holy Spirit, and only penned by the apostles, what reason can be given for the care with which Christ instructed them both during his ministry and after his crucifixion in those things pertaining to the kingdom of God?

In answer to this we may observe that though it be difficult to prove that the identical words of the New Testament were dictated by the Holy

Spirit, or the train of ideas infused into tin? minds of the sacred writers, there is one species

of inspiration to which the New Testament has an undoubted claim. It is this, that the memories of the apostles were strengthened, and their understandings preserved from falling into essential errors. This we prove from these words of our Saviour, ' and I will pray the Father, and he will give you another Comforter, that he may abide with you for ever. He shall teach you all things, and bring all things to your remembrance whatsoever I have said unto you.' John xiv. 16, 26. This promise was surely not restrained to the day of Pentecost; it must have been a permanent gift, enabling the apostles at all times to remember with accuracy the discourses of our Saviour. When the apostles therefore (Matthew and John) relate those precepts of Christ which they themselves had heard, they write indeed from memory, but under 'the protection of the Spirit, who secures them from the danger of mistake : and we must of course conclude that their gospels are inspired.

Were we called upon more particularly to declare what parts of the New Testament we believe to be inspired, we would answer, The

doctrines, the precepts, and the prophecies,

every thing essential to the Christian religion.

From these the idea of inspiration is inseparable.

As to the events, the memory of the apostles was

sufficient to retain them. If this opinion be just, it will enable ns to account for the discrepancies

between the sacred writers, which are chiefly

confined to the relation of facts and events.

I. Of the language of the New Testament

Scriptures. — All the books of the New Testament

weie originally written in Greek, except the

Gospel according to Matthew and the Epistle to

the Hebrews, which there is reason to believe

were composed in the Syro-Chaldaic language,

which in the New Testament is called Hebrew.

Various reasons have been assigned why the

greatest part of the New Testament was written

in Greek ; but the true reason is this: it was the language best understood both by writers and

readers. Had St. Paul written to a community

in the Roman province of Africa, he might have

written perhaps in Latin ; but epistles to the in-

habitants of Corinth, Galatia, Ephesus, Philip-pi,

and Thessalonica, to Timothy, Titus, and Phi-

lemon, from a native of Tarsus, could hardly be

expected in any other language than Greek. The same may be said of the epistles of St. Peter, which are addressed to the Christians of different countries, who had no other language in common than the Greek; and likewise of the epistles of St. James, who wrote to the Jews that lived at a distance from Palestine, and were ignorant of Hebrew. The native language of St. Luke, as well as of Theophilus, to whom he addressed his gospel and Acts of the Apostles, appears to have been Greek, and that St. John wrote his gospel in that language, and not in Hebrew, is by no means a matter of surprise, since he wrote at Ephesus.

With respect to the Epistle to the Romans, it may be asked indeed why St. Paul did not write in Latin 1 Now, whoever proposes this question, n.ujt presuppose that St. Paul was master of the Latin language in such a degree as to find nu difficulty in writing it; a matter which remains to be proved. It is very probable that St. Paul was acquainted with the Latin ; but, between understanding a language and being able to write it, there is a very material difference. As St. Paul was a native ol Tarsus, his native language was

Greek; he had travelled during several years through countries in which no other language was spoken, and when h« addressed the Roman centurion at Jerusalem, he spoke not Latin, but Greek. Is it extraordinary, then, that in writing to the inhabitants of Rome he should have used a language which was there so generally understood ? It has been long remarked that Greek was at that time as well known in Rome as French in any court of modern Europe : that according to Juvenal even the female sex made use of Greek as the language of familiarity and passion ; and that, in letters of friendship, Greek words and phrases were introduced with greater freedom than French expressions in German letters, as appears from Cicero's epistles to Atticus, and from those of Augustus preserved in the works of Suetonius. To this must be added a material circumstance, that a great part of the Roman Christians consisted of native Jews, who were better acquainted with Greek than with Latin, as either they themselves or their ancestors had come from Greece, Asia Minor, or Egypt, in which Greak was the language of the country. At least they read the Bible in that

language, as no Latin translation of the OKI Testament at that time existed; and, the Christian church at that period consisting chiefly of Jews, the heathen converts in Rome were of course under the necessity of accustoming themselves to the Greek language. In short, St. Paul in his Epistle to the Romans made use of a language, in which alone those who were ignorant of Hebrew could read the Bible. What has been here advanced respecting the Epistle to the Romans is equally applicable to the Greek of St. Mark, on the supposition that it was written at Rome.

To the above arguments may be added the example of Josephus, who, as well as the apostles, was by birth a Jew. He even lived in Rome, which is more than can be said of St. Paul and St. Mark, who resided there only a certain time : he was likewise younger than either ; he came to Italy at an age which is highly suitable to the learning of a language, and previous to that period had spent several years in the Roman camp. The -Jewish antiquities, the history of the Jewish war, and the account

of his own life, he wrote undoubtedly with a view of their being read by the Romans ; and yet he| composed all these writings in Greek. He expresses his motive for writing his Greek account of the Jewish war in the following terms : ‘ That having written in his native language (i. e. the Hebrew dialect at that time spoken) a history of the war, in order that Parthians, Babylonians, Arabians, Adiabeues, and the Jews beyond the Euphrates might be informed of those events, he was now resolved to write for the Greeks and Romans, who had not been engaged in the campaigns, a more certain

account than had hitherto been given.’ The motives which induced Joseplms to write in tJreek are fully as applicable to St. Paul and St. Mark.

Michaelis has thus characterised the style of the New Testament. ‘ The New Testament,’ says he, ‘ was written in a languase at that time common among the Jews, which may be named Hebraic Greek ; the first trace of which*

we find in the translation of the LXX. Every man acquainted with the Greek language, who had never heard of the New Testament, must immediately perceive, on reading only a few lines, that the style is widely different from that of the classic authors. We find this character in all the books of the New Testament, in a greater or less degree, but we must not therefore conclude that they possess a uniformity of style. The harshest Hebraisms, which extend even to grammatical errors in the government of cases, are the distinguishing marks of the book of Revelation ; but they are accompanied with tokens of genius and poetical enthusiasm of which every reader must be sensible who has taste and feeling. There is no translation of it which is not read with pleasure even in the days of childhood; and the very faults of grammar are so happily placed as to produce an agreeable effect. The gospels of St. Matthew and St. Mark have strong marks of this Hebraic style ; the former has harsher Hebraisms than the latter, the fault of which may be ascribed to the Greek translator, who has made too literal a version, and yet the Gospel of St. Mark is written in worse language, and in a

manner that is less agreeable.

The epistles of St. James and St. Jude are some-

what better, but even these are full of Hebraisms,

and betray in other respects a certain Hebrew

tone. St. Luke has in several passages written

pure and classic Greek, of which the first four

verses of his gospel may be given as an instance ; in the sequel, where he describes the actions of

Christ, he has very harsh Hebraisms, yet the

style is more agreeable than that of St. Matthew

or St. Mark. In the Acts of the Apostles he is

not free from Hebraisms, which he seems to have

never studiously avoided; but his periods are

more classically turned, and sometimes possess

beauty devoid of art. St. John has numerous,

though not uncouth, Hebraisms both in his

gospel and epistles ; but he has written in a

smooth and flowing language, and surpasses all

the Jewish writers in the excellence of narrative.

St. Paul again is entirely different from them all ; his style is indeed neglected and full of He-

braisms, but he has avoided the concise and

verse-like construction of the Hebrew language,

and has upon the whole a considerable share of

the roundness of Grecian composition. It is

evident that he was as perfectly acquainted with the Greek manner of expression as with the Hebrew, and he has introduced them alternately, as either the one or the other suggested itself the first, or was the best approved.'

Michaelis has shown that the New Testament not only contains Hebraisms, but Rabbinisms, Syriasms, Chaldaisms, Arabisms, Latinisms, and Persian words, of which he has exhibited many specimens. To theologians, whose duty it certainly is to study the language of the New Testament with attention, we would strenuously recommend the perusal of this work, which in the English translation is one of the most valuable accessions to scriptural criticism that has yet appeared. We speak of the English translation, which the large and judicious notes of Mr. Marsh has rendered infinitely superior to the original.

We shall here add a few remarks on the peculiarities of the style and manner of the sacred writers, particularly the historians. These remarks extend to the Old Testament as well as to the New. 1. The first quality, for which the sacred history is remarkable, is simplicity in the

structure of the sentences. The first five verses of Genesis furnish an example, which consist of eleven sentences. The substantives are not attended by adjectives, nor the verbs by adverbs, no synonymes, no superlatives, no effort at expressing things in a bold, emphatical, or uncommon manner. 2. The second quality is simplicity of sentiment, particularly in the Pentateuch, arising from the very nature of the early and uncultivated state of society about which that book is conversant. 3. Simplicity of design. The subject of the narrative so engrosses the attention of the writer, that he himself is as nobody. He introduces nothing as from himself, no remarks, doubts, conjectures, or reasonings. Our Lord's biographers particularly excel in this quality. This quality of style we meet with in Xenophon and Caesar.

The evangelists may be ranked next to Genesis for simplicity of composition in the sentences. John and Matthew are distinguished for it more than Mark and Luke. But the sentiment is not so remarkable for simplicity in the evangelists as in the Pentateuch. The reasons of this differ-

ence are, the state of the Jews was totally changed ; their manners, customs, &c., split into factions

both in religion and politics. 2. The object of our Lord's ministry, which is the great subject of the gospels, was to inculcate a doctrine and morality with which none of their systems perfectly coincided ; besides, being constantly opposed by all the great men, the greater part of his history consists of instructions and disputes. 3. As it is occupied with what our Saviour said, and what he did, this makes two distinctions of style and manner ; that of our Saviour and the sacred penman's. In their own character, they neither explain nor command, promise nor threaten, praise nor blame. They generally omit the names of our Lord's enemies; thus directing our hatred at the vices they committed, not at the persons. They never mention such persons without necessity; which is the case with the high-priest, Pilate, Herod, and Judas : the first three for the chronology, the fourth to do justice to the eleven.

Herodias is indeed mentioned with dishonor, but her crime was a public one. On the other hand, all persons distinguished for any thing vir-

tuous are carefully mentioned, Joseph of Arimathea, Nicodemus, Zaccheus, Bartimeus, Jairus, Lazarus, Mary, and Martha. They record their own faults (Peter's, Thomas's), nor do they make any merit of their confession. In one uniform

strain they relate the most signal miracles and most ordinary facts.

From the narrative is excluded that quality of style which is called animation. Nothing that discovers passion in the writer, or is calculated to excite the passions of the readers. Every thing is directed to mend the heart. But, in the discourses and dialogues of our Saviour, the expression, without losing any of its simplicity, is often remarkable for spirit and energy. Respecting harmony and smoothness, qualities which only add an external polish to language, they had not the least solicitude.

As to elegance, there in an elegance which results from the use of such words as are most in use with those who are accounted fine writers, and from such arrangements in the words and

clauses as have generally obtained their approba-

tion. This is disclaimed by the sacred authors.

But there is an elegance of a superior order more

nearly connected with the sentiment ; and in this

sort of elegance they are not deficient. In all the oriental languages great use is made of tropes,

especially metaphors. When the metaphors em-

ployed bear a strong resemblance, they confer vi-

vacity ; if they be borrowed from objects which

are naturally agreeable, beautiful, or attractive,

they add also elegance. The evangelists furnish

us with many examples of this kind of vivacity

and elegance. Our Lord borrows tropes from

corn-fields, vineyards, gardens, &c.

As a valuable appendage to this part of our

subject, we subjoin Dr. Campbell's method of

studying the books of the New Testament. This

we offer to our readers as a beautiful instance of tiie judicious application of philosophy to sacred

studies. It is the same method of discovering

truth, by analysis and induction, which was pur-

sued by Sir Isaac Newton with such astonishing

success, which since his time has been uniformly

practised in natural philosophy, and has been

also applied to chemistry, to medicine, to natural

history, and to the philosophy of the mind, by the ingenious Dr. Reid. This is the path of sound philosophy, which can alone lead to the discovery of truth. In following it, our progress may be slow, but it will be sure. If all the theologians would steadily adhere to it, we might then entertain the pleasant hope of discarding for ever those absurd systems of religion which are founded on single passages and detached fragments of Scripture, and of establishing opinions and doctrines on a solid foundation.

‘ 1 . To get acquainted with each writer’s style ; to observe his manner of composition, botli in sentences and paragraphs ; to remark the words and phrases peculiar to him, and the peculiar application that he may sometimes make of ordinary words ; for there are few of those writers who have not their peculiarities in all the respects now mentioned. This acquaintance with each can be obtained only by the frequent and attentive reading of his works in his own language.

‘ 2. To enquire into the character, the situation, and the office of the writer, the time, the

place, and the occasion of his writing, and the people for whose immediate use he originally intended his work. Every one of these particulars will sometimes serve to elucidate expressions otherwise obscure or doubtful. This knowledge may in part be learned from a diligent and reiterated perusal of the book itself, and in part be gathered from authentic, or at least probable accounts that have been transmitted to us concerning the compilement of the canon.

‘ 3. The next general direction is, to consider the principal scope of the book, and the particulars chiefly observable in the method by which the writer has purposed to execute his design. This direction is particularly applicable to the epistolary writings, especially those of Paul

‘ 4. If a particular word or phrase occur, which appears obscure, perhaps unintelligible, the first thing we ought to do, if satisfied that the reading is genuine, is to consult the context, to attend to the manner wherein the term is introduced, whether in a chain of reasoning or in a historical narration, in a description, or includ-

ed in an exhortation or command. As the conclusion is inferred from the premises, or as from two or more known truths a third unknown or unobserved before may fairly be deduced ; so from such attention to the sentence in connexion, the import of an expression, in itself obscure or ambiguous, will sometimes, with moral certainty be discovered. This, however, will not always answer.

‘ 5. If it do not, let the second consideration be, whether the term or phrase be one of the writer’s peculiarities. If so, it comes naturally to be enquired, what is the acceptation in which he employs it in other places ? If the sense cannot be precisely the same in the passage under review, perhaps, by an easy and natural metaphor or other trope, the common acceptation may give rise to one which perfectly suits the passage in question. Recourse to the other places wherein the word or phrase occurs in the same author is of considerable use, though the term should not be peculiar to him.

‘ 6’. But 3dly, If there should be nothing in the same writer that can enlighten the place, let

recourse be had to the parallel passages, if there be any such, in the other sacred writers. By parallel passages, I mean those places, if the difficulty occur in history, wherein the same or a similar story, miracle, or event, is related ; if in teaching or reasoning, those parts wherein the same argument or doctrine is treated, or the same parable propounded ; and, in moral lessons, those wherein the same class of duties is recommended ; or, if the difficulty be found in a quotation from the Old Testament, let the parallel passage in the book referred to, both in the original Hebrew, and in the Greek version, be consulted.

‘ 7. But if, in these, there be found nothing that can throw light on the expression of which we are in doubt, the fourth recourse is to all the places wherein the word or phrase occurs in the New Testament, and in the Septuagint version of the Old, adding to these the consideration of the import of the Hebrew or Chaldaic word, whose place it occupies, and the extent of signification, of which in different occurrences such Hebrew or Chaldaic term is susceptible.

‘ 8. Perhaps the term in question is one of those which very rarely occur in the New Testament, or those called aira£ Xeyo/«va, only once read in Scripture, and not found at all in the translation of the LXX. Several such words there are. There is then a necessity, in the fifth place, for recurring to the ordinary acceptation of the term in classical authors. This is one of those cases wherein the interpretation given by the earliest Greek fathers deserves particular notice. In this, however, I limit myself to those comments wherein they give a literal exposition of the sacred text, and do not run into vision and allegory.’ See ALLEGORY.

II. Of the ancient MSS. and early editions of the ffew Testament.— The MSS. of the New Testament are the natural source, from which the genuine readings of the Greek Testament are to be drawn. The printed editions are either copies of more ancient editions, or of MSS., and they have no further authority than as they correspond to the MSS. from which they were originally taken. By MSS. of the New Testament we mean those only which were written before

the invention of printing. The most ancient of these are lost, and there is no MS. now extant older than the sixth century. Few contain the whole New Testament; some contain the four gospels; some the Acts of the Apostles -and epistles ; and others the book of Revelation. The greatest number are those which contain the first part; those which have the second, or the first and second together, are likewise numerous ; but those of the third are extremely few. It must be added, also, that in many MSS. those epistles are omitted whose divine authority was formerly doubted.

Wetstein, in collating many MSS. anew, made discoveries which had entirely escaped the notice of his predecessors. The fourth, class consists of such as have been completely and accurately collated more than once. The fifth class, which is by far the most valuable, consists of such as have been printed word for word, and therefore form an original edition of the Greek Testament. We can boast but of a very few MSS. of this kind. Hearne printed at Oxford, in 1715, the Acts of the Apostles in Greek and

Latin from the Codex Laudianus 3 ; Knittal has

annexed to his edition of Ulpilas, p. 53 — 118, a

copy of two very ancient fragments preserved in

the library of Wolfenbuttle ; the one of the four

gospels in general, the other of St. Luke and St.

John. Woide printed in 1786 the Codex Alex-

andrinus, a MS. of great antiquity ; and the

University of Cambridge has resolved to publish,

in asimilar manner, the Cod. Cant. I., or, as it is sometimes called, the Codex Beza-, the care of

which is entrusted to Dr. Kipling, a publica-

tion which will be thankfully received by every

friend to sacred criticism. It was the intention

of the abbe" Spoletti, a few years ago, to publish the whole of the celebrated Codex Vaticanus;

which would likewise have been a most valuable

accession, since a more important MS. is hardly

to be found in all Europe. He delivered for

this nurpose a memorial to the pope ; but the

design was not put into execution, either because

he pope refused his assent, or the abbe" aban-

doned it himself. See the Oriental Bible, vol.

xxii. No. 333, and vol. xxiii. No. 348.

' A very valuable library/ says Michaelis,

' might be composed of the impressions of ancient

MSS. which, though too expensive for a private person, should be admitted into every university collection, especially the Alexandrine and Cambridge MSS., to which I would add, if it were now possible to procure it, Hearne's edition of the Codex Laudianus 3. A plan of this sort could be executed only in England, by a private subscription, where a zeal is frequently displayed in literary undertakings that is unknown in other countries; and it were to be wished that the project were begun before length of time has rendered the MSS. illegible, and the attempt fruitless. £10,000 would go a great way towards the fulfilling of this request, if the learned did not augment the difficulty of the undertaking, by adding their own critical remarks, and endeavouring thereby to recommend their publication rather than by presenting to the public a faithful copy of the original. Should posterity be pilt in possession of faithful impressions of important MSS., an acquisition which would render the highest service to sacred criticism, all these editions of the New Testament should be regulated on the same plan as Hearne's edition

of the Acts of the Apostles.' It must be highly flattering, to the patriotic spirit of an Englishman, to hear the encomiums which learned foreigners have so profusely bestowed on our liberality in supporting works of genius and learning and public utility. The plan which Michaelis proposed to us, in preference to all other nations in Europe, is noble and magnificent, and would certainly confer immortality on those men who would give it their patronage and assistance. There are many ancient .MSS., especially in Italy, which have never been collated, but lie still unexplored. Here is a field where much remains to be done. See Marsh's Notes on Michaelis, vol. ii.p. 643, and Lectures on Lady Margaret's professor of divinity in the university of Cambridge, published in two parts. Michaelis has given a catalogue of ancient MSS., amounting in number to 292, to which he has added a short account of each. We shall confine our observations to the two most celebrated, the Alexandrine and Vatican MSS., which we have chiefly extracted from Michaelis.

The Alexandrine muntucript consists of four

volumes ; the first three of which contain the

Old Testament, the fourth the New Testament,

together with the first epistle of Clement to the

Corinthians, and a fragment of the second. In

the New Testament, which alone is the object of

our present enquiry, is wanting

far as Matthew xxv. 6,6 vtpˆxoc »;px«ra«, likewise

from John vi. 50 to viii. 52, and from 2 Cor. iv.

13 to xii. 7. The Psalms are preceded by the

epistle of Athanasius to Marcellinus, and followed

by a catalogue, containing those which are to be

used in prayer for each hour, botu of the day and of the night ; also by fourteen hymns, partly

apocryphal, partly biblical, the eleventh of which

is a hymn in praise of the Virgin Mary, entitled

Mapiac rijc StuTOicH : further the Hy-

potheses Eusebii are annexed to the psalms, and

his Canones to the gospels. It is true that this

has no immediate reference to the New Testa-

ment, hut may have influence in determining the

antiquity of the MS. itself. It has neither ac-

cents nor marks of aspiration; it is written with

capital, or, as they are called, uncral letters, and has very few abbreviations. There are no inter-

vals between the words ; but the sense of a pas-

sage is sometimes terminated by a point, and

sometimes by a vacant space. Here arises a

suspicion that the copyist did not understand

Greek, because these marks are sometimes found

even in the middle of a word ; for instance, Levit.

v. 4, avo/ioc ‘ »; for avopoan, and Num. xiii. 29, fiu Yffjjf. This MS. was presented to Charles I. in

1628, by Cyrillus Lucans, patriarch of Constan-

tinople. Cyrillus has given the following ac-

count : — We know so much of this MS. of the

holy writings of the Old and New Testament that

Thecla, an Egyptian lady of distinction (nobilis

fcemina ./Egyptia), wrote it with her own hand

1300 years ago. She lived soon after the council

of Nicaea. Her name was formerly at the end

of the book ; but when Christianity was sub-

verted in Egypt, by the errors of Mahomet, the

books of the Christians suffered the same fate,

and the name of Thecla was expunged. But

oral tradition of no very ancient date (memoria

et traditio recens) has preserved the remembrance

of it.’ After all, its antiquity cannot be deter-

mined with certainty, though it appears from the formation of the letters, which resemble those of the fourth and fifth centuries, and the want of accents, that it was not written so late as the tenth. In this century it was placed by Oudin, while Grabe and Schulze have referred it to the fourth, which is the very utmost period that can be allowed, because it contains the epistles of Athanasius. Wetstein, with more probability, has chosen a mean between these two extremes, and referred it to the fifth century.

The public is now in possession of a perfect impression of this MS., accompanied with a complete and critical collection of various readings. Dr. Woide published it in 1786, with types cast for that purpose, without intervals between the •words. The copy is so perfect a resemblance of the original that it may supply its place. Its title is Novum Testamentum Graecum e codice MSS. Alexandrino, qui Londini in Bibliotheca MusaM Britannici asservatur, descriptum. The preface of the learned editor contains an accurate description of the MS., with an exact list of all its various readings, that takes up no less than

eighty-nine pages 7 and each reading is accom-

panied with a remark, in which is given an

account of what his predecessors Juninus,

Walton, Fell, Mill, Grabe, and Wetstein, had

performed or neglected. See ALEXANDRINE

COPY.

The Vatican manuscript contained originally

the whole Greek Bible, including both the Old

and New Testament ; and in this respect, as well

as in regard to its antiquity, it resembles none so much as the Codex Alexandrinus, but no two

MSS. are more dissimilar in their readings, in

the New Testament as well as in the Old. After

th"1 gospels, which are placed in the usual order,

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come the Acts of the Apostles, which are imme-

diately followed by the seven catholic epistles.

Professor Hwiid, in a letter dated Rome, April

12th, 1781, assured Michaelis that he had seen

them with his own eyes, and that the second

Epistle of St. Peter is placed" folio 1434, the se-

cond of St. John folio 1442, the third folio 1443:

then follow the epistles of St. Paul, but not ir

the usual order ; for the Epistle to the Hebrews

is placed immediately after those to the Thessa-

lonians. The epistles of St. Paul are divided into ninety-three sections by figures written in the margin with red ink ; but the Epistle to the Galatians ends with 59, and that to the Ephesians begins with 70 ; the Epistle to the Hebrews, on the contrary, begins with 60, and ends with 69. With the words a/iw/xovry 5t y, Ileb. ix. 4, the MS. ceases, the remaining leaves being lost. There is wanting, therefore, not only the latter part of this epistle, but the epistles to Timothy, Titus, and Philemon, with the Revelation of St. John ; but this last book, as well as the latter part of the Epistle to the Hebrews, has been supplied by a modern hand in the fifteenth century. In many places the faded letters have been also retouched by a modern but careful hand ; and when the person who made these amendments, who appears to have been a man of learning, found a reading in his own MS. which differed from that of the Codex Vaticanus, he has noted it in the margin, and has generally left the text itself untouched, though in some few examples he has ventured to erase it. It is certain that this MS. is of very high antiquity, though it has been disputed which of the two in this re-

spect is entitled to the preference, the Vaticanus or Alexandrinus. The editors of the Roman edition of the Septuagint, in 1587, referred the date of the Vatican MS. to the fourth century, the period to which the advocates for its great rival refer the Codex Alexandrinus. More moderate are the sentiments of that great judge of antiquity Montfauˆon, who, in his Bibliotheca Bibiiothecarum, p. 3, refers it to the fifth or sixth century; and adds that, though he had seen other MSS. of equal antiquity, he had found none at the same time so complete.

The Codex Vaticanus has a great resemblance to the MSS. noted by Wetstein, C. D. .1 13. 33. 69. 102, and to the Latin, Coptic, and Ethiopic versions ; but it is preferable to most of them in being almost entirely free from those undeniable interpolations, and arbitrary corrections, which are very frequently found in the above-mentioned MSS., especially in D. 1. and 62. It may be applied, therefore, as a mean not only of confirming their genuine readings, but of detecting and correcting those that are spurious. It is written with great accuracy, and is evidently a faithful copy of the more

ancient from which it was transcribed. But this MS. has not throughout the whole New Testament the same uniform text.

As we have now a beautiful printed edition of the Alexandrine manuscript, by Dr. Woide, it is much to be wished that we had also an exact impression of the Vatican manuscript. From the superstitious fears and intolerant spirit of the irquisition at Rome, all access to this MS. was

refused to the abbe Spoletti, who presented a memorial for that purpose. Unless the pope interpose his authority, we must therefore despair of having our wishes gratified.

The most valuable editions of the Greek New Testament are those of Mill, Bengel, and Wetstein. The edition of Mill, which Itas only finished fourteen days before his death, occupied the attention of the author for thirty years. The collections of various readings which had been made before the time of Mill, the Valesian, the Barberini, those of Stephens, the London Polyglot, and Fell's edition, with those which the

bishop had left in manuscript, and whatever he

was able to procure elsewhere, he brought to-

gether into one large collection. He made like-

wise very considerable additions to it. He col-

lated several original editions more accurately

than had been done before : he procured extracts

from Greek manuscripts, which had never been

collated ; and of such as had been before collated, but not with sufficient attention, he obtained

more complete extracts. It is said that he has

collected from MSS. fathers, and versions, not

fewer than 30,000 various readings. This collec-

tion, notwithstanding its many imperfections,

and the superiority of that of Wetstein, is still

absolutely necessary to every critic : for Wet-

stein has omitted a great number of readings

which are to be found in Mill, especially those

which are either taken from the Vulgate, or confirm its readings. Mill was indeed too much attached

to this version ; yet he cannot be accused of

partiality in producing its evidence. Wetstein,

by too frequently neglecting the evidence in

favor of the Vulgate, has rendered his collection

less perfect than it would otherwise have been.

He likewise added, as far as he was able, read-

ings from the ancient versions; and is much to be commended for the great attention which he paid to the quotations of the fathers; the importance of which he had sagacity enough to discern. It cannot, however, be denied, that Mill's Greek Testament has many imperfections, and some of real importance. His extracts from MSS. are often not only incomplete, but erroneous; and it is frequently necessary to correct his mistakes from the edition of Wetstein. His extracts from the oriental versions are also imperfect, because he was unacquainted with these languages. The great diligence which Mill had shown, in collecting so many various readings, alarmed the clergy as if the Christian religion had been in danger of subversion. It gave occasion for a time to the triumphs of the deist, and exposed the author to many attacks. But it is now universally known that not a single article of the Christian religion would be altered, though a deist were allowed to select out of Mill's 30,000 readings whatever he should think most inimical to the Christian cause.

' In 1734 Bengel, abbot of Alpirspach, in the duchy of Wirtemburg, published a new edition

of the Greek Testament. The fears which Mill had excited began to subside upon this new publication ; for Bengel was universally esteemed a man of piety. Bengel was not only diligent in the examination of various readings, but in the strictest sense of trie word conscientious ; for he considered it as an offence against the Deity, if, through his own levity or carelessness, he intioduced a false reading into the sacred text. His object was not merely to make a collection of readings, and leave the choice of them to the judgment of the reader, but to examine the evidence on both sides, and draw the inference : yet he has not given his own opinion so frequently as Mill, whom he resembled in his reverence for the Latin version, and in the preference which he gave to harsh and difficult readings before those which were smooth and flowing. He was a man of profound learning ; and had a cool and sound judgment, though it did not prevent him from thinking too highly of the Latin readings, and of the Codex Alexandrinus ; with other Latinising MSS. The imperfections of Bengel's edition arise chiefly from his diffidence

and caution. He did not venture to insert into the text any reading which had not already appeared in some printed edition, even though he believed it to be the genuine reading. In the book of Revelation indeed he took the liberty to insert readings which had never been printed ; because few MSS. had been used in the printing of that book.

The celebrated edition of John James Wetstein, which is the most important of all, and the most necessary to those engaged in sacred criticism, was published at Amsterdam in 1751 and 1752, in two volumes folio. No man will deny that Wetstein's Prolegomena discover profound erudition, critical penetration, and an intimate acquaintance with the Greek MSS. It is a work which, in many respects, has given a new turn to sacred criticism, and no man engaged in that study can dispense with it. Wherever Wetstein has delivered his sentiments respecting a Greek MS., which he has done less frequently than Mill, he shows himself an experienced and sagacious critic. He is likewise more concise than Mill in delivering his opinion, and does not sup-

port it by producing so great a number of read-

ings. But the critical rules which he has deli-

vered are perfectly just ; and in this respect

there is a remarkable agreement between him and

his eminent predecessors Mill and Bengel. In

regard to the Latin version alone they appear to

differ ; in Mill and Bengel it has powerful, and

perhaps partial advocates, but in Wetstein a

severe and sagacious judge, who sometimes con-

demns it without a cause. But, in consequence

of this antipathy to the Vulgate, his collection of various readings is less perfect than it might

have been.

Wetstein, in his character of a critic, is per-

fectly honest.. With respect to his diligence and

accuracy, Michaelis does not pronounce him

faultless. But Mr. Marsh has examined the

examples on which Michaelis founds his asser-

tion, and declares that Michaelis is mistaken in

every one of them. The diligence of Wetstein

can scarcely be questioned by any who are ac-

quainted with his history. He travelled into

different countries, and examined with his own

eyes a much greater number of MSS. than an)

of his predecessors. His collection of various

readings amount to above a million ; and he has not only produced a much greater quantity of

matter than his predecessors, but has likewise corrected their mistakes. The extracts from MS. versions, and printed editions of the Greek Testament, which had been quoted by Mill, are generally quoted by Wetstein. Whenever Wetstein had no new extracts from the MSS. quoted by Mill, or had no opportunity of examining them himself, he copied literally from Mill ; but wherever Mill has quoted from printed editions, as from the margin of Robert Stephen's for instance, or from the London Polyglot, Wetstein did rot copy from Mill, but went to the original source, as appears from his having corrected many mistakes in Mill's quotations. On the whole it is surprising, when we consider the difficulties and labor which Wetstein had to encounter, that his errors and imperfections are so few.

The proposal of Michaelis, however, of a new collation of MSS., to form a complete collection

of various readings, is worthy the attention of the learned. In mentioning this proposal Michaelis

says, Britain is the only country which possesses

'he will and the means to execute the task.

Should a resolution, he adds, be formed in this

island, so happily situated for promoting the

purposes of general knowledge ; to make the

undertaking a public concern, to enter into a

subscription, and to employ men of abilities in

collating MSS. both at home and abroad, they

would be able to do more in ten years than could

otherwise be done in a century. And could

this nation direct its attention to any object

more glorious or more useful than in ascertain-

ing the text of the sacred Scriptures, and giving

to posterity an accurate edition?

As the sense of Scripture, as well as all other

books, is affected by the punctuation, it is of im-

portance to determine whether the stops or

points which we find in the sacred books were

used by the sacred writers, or have been inserted

by modern transcribers. We are told by Mont-

faucon, in his Palaeographia Graeca, p. 31, that

the person who first distinguished the several

parts of a period in Greek writing, by the intro-

duction of a point, was Aristophanes of Byzantium, who lived under Ptolemseus Epiphanes, in the 145th Olympiad. But, though points were •lot used in books before this period, they were employed in inscriptions above 400 years B.C. See Mont. Pal. Graec. p. 135. As the fact has not been generally known that the ancients pointed their MSS., and as it is an important and interesting fact, we refer our readers to the first six lines of St. John's Gospel, as they are pointed in the Alexandrine MS. exhibited in vol. I. p. 563.

Whether any points for making the sense were used by the apostles, cannot be determined ; but the points now in use have been invented since. In the fourth century Jerome began to add the comma and colon to the Latin version ; and they were then inserted in many more ancient MSS. In the fifth century Euthalius, a deacon of Alexandria, divided the New Testament into lines. This division was regulated by the sense, so that each line ended where some pause was lo be made in speaking. And when a copyist was disposed to contract his space, and therefore

*crowded the lines into each other, he placed a point where Euthalius had terminated the line. In the eighth century the stroke was invented which we call a comma. In the Latin MSS. Jerome's points were introduced by Paul Warnfried and Alcuin, at the command of Charlemagne. *In the ninth century the Greek note of interrogation (;) was first used. At the invention of printing the editors placed the points arbitrarily, probably without bestowing the necessary attention; and Stephens, in particular, varied his points in every edition. The meaning of many passages in the Scripture has been altered by false pointing.*

The ancients divided the New Testament into two kinds of chapters, some longer and some shorter. This method appears to be more ancient than St. Jerome ; for he expunged a passage from the New Testament which makes an entire chapter. The longer kind of chapters were called breves, the shorter capitula. St. Matthew contained, according to St. Jerome, sixty-eight breves; Mark contained forty-eight; Luke eighty-three ; and John eighteen. All the evangelists

together consisted of 217 breves and 1126 capitula. The inventor of our modern division into chapters was Hugo de S. Caro, a French Dominican friar who lived in the thirteenth century. The ancients had two kinds of verses, one of which they called

The remata were lines which contained a certain number of letters like our printed books, and therefore often broke off in the middle of a word. Josephus's twenty books of antiquities contained 60,000 of them, though in Ittiquis's edition there are only 40,000 broken lines. Stichi were lines measured by the sense; according to an ancient written list, mentioned by Father Simon, there were in the New Testament 18,612 of these.

The verses into which the New Testament is now divided are more modern, and an imitation of the division of the Old Testament. Robert Stephens, the first inventor, introduced them in his edition in 1551. He made this division on a journey from Lyons to Paris ; and, as his son Henry tells us in his preface to the Concordance of the New Testament, he made it inter equitandum ; i. e. when he was weary of riding he amused himself

with this work at his inn.

This invention of the learned printer was soon introduced into all the editions of the New Testament; and, it must be confessed that in consulting and quoting the Scriptures, and in framing concordances for them, a subdivision into minute parts is of the greatest utility. But all the purposes of utility could surely have been gained, without adopting the hasty and indigested division of Stephens, which often breaks tne sense in pieces, renders plain passages obscure, and difficult passages unintelligible. To the injudicious division of Stephens we may ascribe a part of the difficulties which attend the interpretation of the New Testament, and many of those absurd opinions which have disgraced the ages of the Reformation. For as separate verses appear to the eyes of the learned, and to the minds of the unlearned, as so many detached sentences, they have been supposed to contain complete sense, and they have accordingly been ex •

plained without any regard to the context, and often in direct opposition to it. Were any modern history divided into fragments, with as little regard to the sense, we should soon find that as many opposite meanings could be forced upon them as have been forced upon the books of the New Testament. The division into v%rses has been still more injurious to the epistles than to the gospels, for there is a close connexion between the different parts of the epistles, which the verses entirely dissolve. It is therefore to be wished that this division into verses were laid aside. The Scriptures ought to be divided into paragraphs, according to the sense ; and the figures ought to be thrown into the margin. In this way, the figures will retain their utility without their disadvantages. Dr. Campbell, in his beautiful translation of the gospels, has adopted this method with great judgment and success ; and he who will read that translation will perceive that this single alteration renders the gospels much more intelligible, and, we may add, more entertaining.

Respecting the chronological order of the books of the New Testament critics are by no

means agreed. The following table is from Mr. Townsend's Chronological Arrangement, where the conflicting opinions of chronologists have been considered and decided upon with great care : —

Book.

Author.

Place at which it was written.

For whose use primarily intended.

A.D.

Gospel of Matthew

Matthew

Judea

Jews in Judea

37

Gospel of Mark

Mark

Rome and Je-

Gentile Christians.

44

rusalem,

—

Acts of the Apostles

Luke

—

Epistle to the Galatians

Paul

Thessalonica

51

First to the Thessalonians

Corinth

—

Second to the Thessalonians

. .

52

Epistle to Titus

Nicopolis

53

First to the Corinthians

Ephesus

56

First Epistle to Timothy

Macedonia

56 or 57

Second Epistle to the Corinthians

Philippi

53

Epistle to the Romans

Corinth

Epistle to the Ephesians

Rome

61

Epistle to the Philippians

.

62

Epistle to the Colossians

.

—

Epistle to Philemon

-^—

—

Epistle of James

James

Jerusalem

Jewish Christians

—

Epistle to the Hebrews

Pa-;

Italy

Jews

—

Gospel of St. Luke

Lake

Achaia

Gentile converts

64

Second Epistle to Timothy

Pad

.65 or 66

First Epistle of Peter

Pete.

Jews and Gentile con-

verts

—

Second Epistle of Peter

Italy or Rome

Jewish and Gentile

Christians of the

Dispersion

—

Epistle of Jude

Jude

Probably

Syria

General

66

Boole of RcvGltition*

TrtTin

\

96

Three Epistles of John

**J Ul 1 II*

-Yvjti .M JIIUI

96 to 106

Gospel according to John

III. — Of the historical books of the New Tes-

tament.—The word EYAITEAION signifies any

joyful tidings, and exactly corresponds to our Eng-

lish word Gospel. In the New Testament this

term is confined to 'The glad tidings of the com-

ing of the Messiah.' Thus, in Mat. xi. 5, our Lord says, ' The poor have the gospel preached ; ' that

is, The coming of the Messiah is preached to the

poor. Hence the name of Gospel was given to

the histories of Christ, in which the good news

of the coming of the Messiah, with all its joyful

circumstances, are recorded.

That the Gospel according to MATTHEW was

composed, says Dr. Campbell, by one born a

Jew, familiarly acquainted with the opinions,

ceremonies, and customs of his countrymen ;

that it was composed by one conversant in the

sacred writings, and habituated to their idiom ;

a man of plain sense, but of little or no learning, except what he derived from the Scriptures of

the Old Testament ; and finally, that it was the

production of a man who wrote from conviction,

and had attended closely to the facts and speeches

which he related, but who in writing entertained

not the most distant view of setting off himself

— we have as strong internal evidence as the na-

ture of the thing will admit, and much stronger

than that wherein the mind in ninety-nine cases

out of 100 acquiesces.

That the author of this history of our blessed

Saviour was Matthew, appears from the testi-

mony of the early Christians. It is attested by

Jerome, Augustine, Epiphanius, and Chrysostom

and in such a manner as shows that they knew

the fact to be uncontroverted, and judged it t?

be incontrovertible. Origen, who flourished in

the former part of the third century, is also re-

spectable authority. He is quoted by Eusebius (Hist. lib. 6. c. 25), wherein he specially treats of Origen's account of the sacred canon. ' As I have learned,' says Origen, ' by tradition concerning the four Gospels, which alone are received without dispute by the whole church of God under heaven ; the first was written by Matthew, once a publican, afterwards an apostle of Jesus Christ, who delivered it to the Jewish believers, composed in the Hebrew language.'

In another place he says, ' Matthew writing for the Hebrews who expected him who was to descend from Abraham and David, says, the lineage of Jesus Christ, son of David, the son of Abraham.' The next authority is that of Irenaeus, bishop of Lyons, who had been a disciple of Polycarp. He says in the only book of his extant, that ' Matthew, among the Hebrews, wrote a gospel in their own language, whilst Peter and Paul were preaching the Gospel at Rome, and founding the church there.'

Irenaeus had the best opportunities of information, having been well acquainted in his youth with Polycarp, the disciple of John ; no objec-

tion can therefore be made to his evidence. But we can quote an authority still nearer the times of the apostles. Papias, bishop of Hierapolis, in Ceesarea, who nourished about 116, affirms that Matthew wrote his gospel in the Hebrew tongue, which every one interpreted as he was able. Papias was the companion of Polycarp, and besides must have been acquainted with many persons who lived in the times of the apostles. The fact, therefore, is fully established, that Matthew, the apostle of our Saviour, was the author of that gospel which is placed first in our edition of the New Testament.

The next subject of enquiry respects the language in which it was written. This we are assured by Papias, by Irenaeus, and Origen, was the Hebrew ; but this fact has been disputed by Erasmus, Whitby, and others. But though we are forced to acknowledge that the Gospel according to Matthew which we possess is a translation, it is evidently a close one ; and the very circumstance that it has superceded the original, is a clear proof that it was thought equally valuable by the ancient Christians. The language in which the Gospel according to Matthew was ori-

ginally composed, and which is called Hebrew by Papias, Irenaeus, and Origen, is not the same with the Hebrew of the Old Testament ; it was what Jerome very properly terms Syro-Chaldaic, having an affinity to both langiiages, but much more to the Chaldean than to the Syrian.

The time when this gospel was composed has not been precisely ascertained. Irenaeus says that ‘ Matthew published his gospel when Peter and Paul were preaching at Rome.’ Now Paul arrived at Rome A. D. 60 or 61, and probably suffered martyrdom in A. D.65. This may be justly concluded from comparing the relation of Tacitus with that of Orosius, a writer of the fifth century. Orosius having given an account of Nero’s persecution of the Christians, and of the death of the two apostles in it, adds, that it was followed by a pestilence in the city, and other disasters.

And Tacitus relates that a pestilence prevailed in the city, and violent storms took place in Italy A. D. 65. Matthew’s gospel was therefore written between the year 60 and 65.

That this history was primarily intended for the use of the Jews, we have, besides historical evidencer’very strong presumption from the book

itself. Every circumstance is carefully pointed

out which might conciliate the faith of that na-

tion ; every unnecessary expression is avoided,

which might in any way serve to obstruct it.

There was no sentiment relating to the Messiah

with which the Jews were more strongly pos-

sessed, than that he must be of the race of Abraham, and of the family of David. Matthew, therefore,

with great propriety, begins his narrative with

the genealogy of Jesus. That he should be born

at Bethlehem in Judea, is another circumstance

in which the learned among the Jews were uni-

versally agreed. His birth in that city, with some

very memorable circumstances that attended it,

this historian has also mentioned. Those passages

in the prophets, or other sacred books, which ei-

ther foretel any thing that should happen to him,

or admit an allusive appellation, or were in that

age generally understood to be applicable to events

which respect the Messiah, are never passed over

by the evangelist in silence. The fulfilment of

prophecy was always to the Jews, who were con-

vinced of the inspiration of their sacred writings,

strong evidence. Accordingly none of the eran-

gelists has been more careful than Matthew, that

nothing of this kind should be overlooked.

That which chiefly distinguishes Matthew's

writings from those of the other evangelists, is

the minute and distinct manner in which he has

related many of our Lord's discourses and moral

instructions. Of these his sermon on the mount,

his charge to the apostles, his illustrations of the nature of his kingdom, and his prophecy on

Mount Olivet, are examples. He has also won-

derfully united simplicity and energy in relating

the replies of his master to the cavils of his ad-

versaries. Being early called to the apostleship,

he was an eye and ear witness of most of the

things which he relates. And Dr. Campbell

thinks, that Matthew has approached as near the

precise order of time in which the events happened

as any of the evangelists. See MATTHEW. The

Gospel according to Matthew is cited seven times

in the epistle of Barnabas, twice in the first epistle of Clemens Romanus to the Corinthians, eight

times in the Shepherd of Hernias, six times in

Polycarp's epistle to the Philippians, and seven

times in the smaller epistles of Ignatius. These

citations may be seen at full length in Jones's

New and Full Method of Settling the Canon,

with the parallel passages in the Gospel according

to Matthew.

That MARK was the author of the gospel which

bears his name, and that it was the second in the order of time, is proved by the unanimous testi-

mony of the ancient Christians. Many authorities

are therefore unnecessary : we shall only men-

tion those of Papias and Irenaeus. Eusebius

has preserved the following passage of Papias : —

‘ This is what is related by the elder (that is

John, not the apostle, but a disciple of Jesus).

Mark being Peter’s interpreter, wrote exactly

whatever he remembered, not indeed in the or-

der wherein things were spoken an’d done by the

Lord ; for he was not himself a hearer or follower of our Lord ; but he afterwards, as I said, followed Peter, who gave instructions as suited the occa-

sions, but not as a regular history of our Lord’s

teaching. Mark, however, committed no mistake

in writing such things as occurred to his me-

mory ; for of this one thing he was careful, to

omit nothing which he had heard, and to insert

no falsehood in his narrative.’ Such is the testi-

mony of Papias, which is the more to be regarded,

as he assigns his authority. He spake not from

hearsay, but from the information which he had

received from a most credible witness, John the

elder, or presbyter, a disciple of Jesus, and a

companion of the apostles.

Irenaeus adds : — < After the departure (i£o-Sov) of Peter and Paul, Mark also, the disciple and interpreter of Peter, delivered to us in writing the things which had been preached by Peter.' Mark's gospel was published in Peter's lifetime, and had his approbation. It is supposed to be but two years posterior in date to that of Matthew. Mark has generally been supposed to be the same person who is mentioned in the Acts and some of Paul's epistles, who is called John, and was the nephew of Barnabas. But as this person was the attendant of Paul and Barnabas, and is nowhere in Scripture said to have accompanied Peter in his apostolical mission, which ancient writers inform us. the author of the gospel did, Dr. Campbell has concluded that these were different persons. The author of the gospel is certainly meant by Peter, when he says, ' Marcus my son saluteth you.' — 1 Pet. v. 13. That Mark wrote his gospel in Greek, is conformable to the testimony of antiquity. From the Hebraisms in the style, we should readily conclude that the author was by birth and education a Jew. There are also expressions which

show, that he had lived for some time among the Latins, as Kivrvpiov, centurion, and gospels. There are other internal evidences that this gospel was written beyond the confines of Judea. The first time the Jordan is mentioned, wora/ioc, river, is added to the name for explanation ; for though no person in Judea needed to be informed that Jordan was a river, the case was different in distant countries. The word Gehenna, which is translated hell in the New Testament, originally signified the Valley of Hinnom, where infants had been sacrificed by fire to Moloch, and where a continual fire was afterwards kept up to consume the filth of Jerusalem. As the words could not have been understood by a foreigner, the evangelist adds, by way of explanation, irvp TO a

Instead of the word mammon, he uses the common term ˆprjˆara, riches. When he employs the oriental werd corhan, he subjoins the interpretation o £?i tfwpov, that is, a gift. These peculiarities corroborate the historical evidence, that Mark intended his gospel for the Gentiles. See Com

It has been affirmed that this evangelist has

been the abridger of Matthew. It is true that

Mark sometimes copies the expressions used by

*Matthew ; but he is not to be considered as a mere abridger, for he omits altogether several thing**

related by Matthew, viz. our Lord's pedigree,

his birth, the visit of the magians, Joseph's flight into Egypt, and the cruelty of Herod. Dr.

Lardner has given a list of thirty-three passages,

wherein circumstances are related, which are

omitted by the other evangelists. There is one

parable and an account of two miracles, peculiar

to Mark. The parable is mentioned in ch.iv. 26.

One of these miracles was the curing of a deaf

and dumb man, ch. vii. 31 — 37. The other was

the giving sight to a blind man at Bethsaida, ch.

viii. 22, 26. The style of Mark, instead of being

more concise than that of Matthew, is more dif-

fuse. That he had read Matthew's gospel cannot

be doubted ; but that he abridged it, is a

mistake.

According to the testimony above quoted,

Mark derived his information from the apostle

Peter. Yet this evangelist has omitted many

things tending to Peter's honor, which are related

in the other gospels, and has given the most particular account of Peter's fall. This gospel is seven times cited by Irenaeus, and nine times by Tertullian.

That the author of the gospel, which is the third in order, was LUKE, the companion of the apostle Paul, is evident from the testimonies of Irenaeus, Clemens of Alexandria, Origen, Te – tullian, and many succeeding writers. But it h s been disputed whether he was a Jew or a Gentile. That Luke was a Jew by birth, or at least by religion, may be argued from his being a constant companion of Paul. If he had been an uncircumcised Gentile, exceptions would have been made to him, especially at Jerusalem. It is also rendered highly probable, from his mode of computing time by the Jewish festivals, and from his frequent use of the Hebrew idiom. It has been supposed that Luke was one of the seventy disciples ; but he does not pretend to have been a witness of our Lord's miracles and teaching ; on the contrary, he tells us in his introduction, that he received his information from others. The design of Luke in writing his gospel was to supersede some imperfect and inaccurate histories

of our Saviour, which had then been published.

It has been supposed that Luke chiefly derived

his information from the apostle Paul, whom he

faithfully attended in his travels ; but from Luke's own words, we may conclude, that the principal

source of his intelligence, as to the facts related in the gospel, was from those who had been eye

and ear witnesses of what our Lord both did and

taught. It was from conversing with some of the

apostles or disciples of our Lord, who heard his

discourses and saw his miracles, that he obtained

his information. The time when this gospel was

written is not ascertained. But as Origen, Eu-

sebius, and Jerome, have ranged it after those of

Matthew and Mark, we have no reason to doubt

but they were written in the same order. The gos-

pel by Luke has supplied u with many inter-*

esting particulars which had been omitted both by

Matthew and Mark. It has given a distinct nar-

ration of the circumstances attending the birth of

John the Baptist and the nativity of our Saviour.

It has given an account of several memorable

incidents and cures which had been overlooked

by the rest ; the conversion of Zaccheus the publican ; the cure of the woman who had been bowed down for eighteen years ; the cure of the dropsical man ; the cleansing of the ten lepers ; the inhospitable treatment of our Saviour by the Samaritans, and the instructive rebuke which he gave on that occasion to two of his disciples for their intemperate zeal ; also the affecting interview which he had after his resurrection with two of his disciples. Luke has also added many edifying parables to those which the other evangelists had recorded. Most of these Irenaeus has specified as particularly belonging to this gospel, and has thereby shown that the Gospel of Luke was the same in his time that it is at present.

The style of St. Luke abounds almost as much with Hebraisms as any of the sacred writings ; but it contains more of the Grecian idiom than any of them. It is also distinguished by greater variety and copiousness ; qualities which may be justly ascribed to the superior learning of the author. His occupation as a physician would induce him to employ some time in reading, and give him easier access to the company of the great, than

any of the other evangelists. As an instance of Luke's copiousness, Dr. Campbell has remarked that each cf the evangelists has a number of words which are used by none of the rest ; but in Luke's gospel the number of such peculiarities or words used in none of the other gospels, is greater than that of the peculiar words found in all the other gospels put together ; and that the terms peculiar to Luke are for the most part long and compound words. He has also observed that there is more of composition in Luke's sentences than in the other three, and consequently less simplicity. Of this the very first sentence is an example, which occupies no less than four verses. Luke, too, has a great resemblance to other historians, in giving what may be called his own opinion in the narrative part of this work, a freedom which the other evangelists have seldom or never used. He calls the Pharisees lovers of money ; in distinguishing Judas Iscariot from the other Judas, he uses the phrase, he who proved a traitor, (oc Kai tytviTo Trpotforijc)- Matthew and Mark express the same sentiment in milder language, ' he who delivered him up.'

In recording the moral instructions of our Lord, especially in parables, Luke has united an affecting sweetness of manner with genuine simplicity. This gospel is frequently cited by Clemens Romanus, the contemporary of the apostles, by Ignatius, and Justin Martyr. Irenaeus has made above 100 citations from it. In his lib. iii. adv. Haeres. c. 14, he vindicates the authority and perfection of Luke's gospel, and has produced a collection of those facts which are recorded only by this evangelist. See LUKE.

That the gospel which is placed last in our editions of the New lestament was written by JOHN, our Saviour's beloved disciple, is confirmed by the unanimous testimony of the ancient Christians. See JOHN. He possessed a high degree of intrepidity and zeal, a warm and affectionate heart, and was strongly attached to his master. He and his brother James were honored with the title of Boanerges, or Sons of Thunder. He vvas anxious to restrain whatever he considered as a mark of disrespect against his Master, and to punish his enemies with severity. He was incensed against some persons for at-

tempting to cast out demons in the name of Je-

sus ; and required them to desist because they

were not his disciples. James and he proposed

to our Saviour to call down fire from heaven to

punish the inhospitable Samaritans. But these

instances of bigotry were reproved by our Lord.

Nor was the courage of John less ardent than his

zeal. When Peter had disowned his Lord, and

all the other disciples had fled, John continued

to attend his master. He was present at his trial, and followed him to the cross, where he was a

spectator of his sufferings and death. The inter-

view between Jesus and his disciple at Calvary,

though concisely related, is an event which will

strongly affect every man of feeling, while it con-

vinces him of the unalterable affection of Jesus

for his beloved disciple, as well as discovers his

respectful tenderness for his mother. See JOHN.

The ancients inform us that there were two mo-

tives which induced John to write his gospel ; the

one that he might refute the heresies of Cerin-

thus and the Nicolaitans, who had attempted to

corrupt the Christian doctrine ; the other that he

might supply those important events in the life

of our Saviour which the other evangelists had

omitted. Of the former of these motives Irenaeus

gives an account; but it seems very improbable

that an apostle should write a history of our Lord on purpose to confute the wild opinions of Cerin-

thus or any other heretic. The intention of John

in writing his gospel was far more extensive and

important. It was evidently, according to Cle-

mens of Alexandria, to supply the omissions of

the other evangelists : It was to exhibit the evi-

dences of the Christian religion in a distinct and

perspicuous manner : It was, as he himself in

the conclusion of his gospel assures us, to con-

vince his readers, < that Jesus is the Messiah, the Son of God, and that believing they might have

life through his name.' — John xx. 31. He has

executed his plan with astonishing ability, and

has given the most circumstantial and satisfactory

evidence that Jesus was the Messiah the Son of

God. After declaring the pre-existence of Jesus,

he gives the testimony of John the Baptist, and

selects some of the greatest miracles of Jesus to

prtrre his divine mission. In the fifth chapter

he presents us with a discourse which our Saviour

delivered in the temple in the presence of the

Jews, wherein he states in a very distinct manner

the proofs of his mission, from 1. The testimony of John ; 2. His own miracles ; 3. The declaration of the Father at his baptism ; 4. The Jewish Scripture. Indeed the conclusion that Jesus was the Messiah, the Son of God, naturally arises from almost every miracle which our Saviour is said to have performed, and from every discourse that he delivered. This declaration i.« very often made by our Saviour himself; particularly to the woman of Samaria, to Nicodemus, and to the blind man whom he had cured.

John studiously passes over those passages irt our Lord's history and teaching which had been treated at large by the other evangelists, or, if he mentions them at all, he mentions them slightly.

This confirms the testimony of ancient writers,

that the first three gospels were written and published before John composed his gospel. Except the relation of our Saviour's trial, death, and resurrection, almost every thing which occurs in this book is new. The account of our Saviour's nativity, of his baptism, and of his temptation in

taken of the calling of the twelve apostl.es, or of their mission during our Saviour's life. Not one

parable is mentioned, nor any of the predictions

relating to the destruction of Jerusalem. All the

miracles recorded by the other evangelists are

passed over, except the miraculous supply of

provisions, by which 5000 were fed. The other

miracles which are mentioned are few in number,

but they are minutely detailed. They are these r

the turning of water into wine at Cana ; the cure of the diseased man at the pool of Bethesda ; the cure of the man blind from his birth ; the restoring of Lazarus to life ; and the healing of the servant's ear which Peter had cut off. But valuable would

this gospel be though it had only recorded the

consolation of Jesus to his disciples previous to

his departure , which exhibits a most admirable

view of our Saviour's character, — of his care and

tender regard for his disciples. Having opened

every source of comfort to their desponding

minds, exhorted them to mutual love, and to the

obedience of his Father's precepts ; having

warned them of the impending dangers and sor-

rows— our Saviour concludes with a prayer, in

the true spirit of piety and benevolence ; ardent

without enthusiam ; sober and rational without

lukewarmness.

The time in which this gospel was written has

not been ascertained. Irenaeus informs ut; that

ST. MATTHEW.

2. Genealogy of Christ,

I. 1—17.

6. Joseph's dream, I

18—24.

8. Birth of Christ, 1. 25

11. Jesus sought and

worshipped by the wise

men : flight into Egypt and

return : massacre of the

children of Bethlehem, ch.

II. 1—23.

ST. MAKE.

it was written at Ephesus, but does not say wii

ther before or after John's return from Patnios-

He was banished to Patmos by Domitian, and

died at Ephesus A. D. 100. The persecution

which occasioned the exile of John commenced

in the fourteenth year of Domitian's reign. John

wrote his gospel after his return to Ephesus, as

is affirmed by Epiphanius, about the year 97.

Thrs gospel is evidently the production of an il-

literate Jew, and its style is remarkable for simplicity. It abounds perhaps with Hebraisms more than any of the other gospels ; and contains some strong oriental figures which are not readily understood by any European. This gospel is cited once by Clemens Romanus, by Barnabas three times, by Ignatius five times, by Justin Martyr six times, by Irenaeus often, and above forty times by Clemens. Alexandrinus.

The following harmonised Table of the contents of the four Gospels is taken from Marsh's Translation of Michaelis's Introduction to the New Testament, vol. iii. p. 40, &c., to which we are so much in this paper indebted. The arrangement of facts as they occur in St. Matthew is here generally followed ; and the other evangelists are collated with his account. The author observes, ' I would not have the reader suppose that the several facts here delivered are arranged,without exception, according to the order in which they really happened ; for it is my intention to give rather a general index to the four Gospels than to draw up a chronological table.' The numbers prefixed to the several sections point out the consecutive order of the facts as

well as it can be ascertained.

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1. Preface, I. 1—4.

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3. Birth of John, I.

5—25.

4. Birth of Christ an-

nounced to Mary, I. 26

—38.

5. Mary's visit to Eli-

zabeth, I. 39—55.

7. Birth of John I.

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9. Circumcision of

Christ, II. 21.

1 0. Presentation of

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12. Education of

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14. Christ baptised, III.

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15. Christ tempted,

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25 — 30. History of a single day, and that a sabbath.

25. Christ teache

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elist relative to the tes-

imonies in favor of

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n numbers, I. 15 — 52.

17—20. History of

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onment of John.

17. Christ returns to Jalilee, and changes water into wine at Cana, I. 1—12.

18. Goes to Jerusalem it the feast of the passaver, and drives the selers out of the temple, . 13—22.

19. Gives Nicodemus, who visits him by night, more complete informaion of his doctrine, II. 23.— III. 21.

20. Remains in Judea : additional testimony of John the Baptist concerning him,III. 22— 36.

21 . Returns (after the mprisonment of John) through Samaria to Galilee : conversation with the woman of Samaria :

many Samaritans believe

in him, IV. t— 42.

IV. 43, 44.

23. Remarkable addi-

tion of a second miracle

at Cana, by which the

absent son of a man of

rank is at once restoied

to health, IV. 45—54.

- *In point of chronology, this does not belong to the present place, not even according to St. Luke ; but I place it here because St. Luke has introduced it immediately after the preceding history. Perhaps it belongs to No. 50. though 1 have not placed it there, because it does not exactly agree with the accounts quoted in that article from St. Matthew and St. Mark.*

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27. Christ delivers a

discourse, in which he con-

demns the morality of the

Pharisees, and opposes to

it a better morality, which

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28. Cleanses a leper,

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29. Heals the servant of

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30. Restores Peter's mo-

ther-in-law, and, after the

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26. Christ ascends

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V. 12—16.

VII. 1—10.

IV. 38—41.

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The day immediately following the preceding sabbath.

31. Christ departs

from Capernaum, I.

35—39. IV. 42—44.

32. Restores to life

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VII. 11— 17.

33. Peter's copious

draught of fishes ; of

which no traces are dis-

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pened, V. 1 — 11,

33—37. Another history of a single day, which was likewise a sabbath.

Christ defends his

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34. Cures a withered

hand, XII. 9—21.

35. Drives out a devil,

and is accused of doing it

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devils. His answer, XII.

22—50.

37. Preaches in parables,

XIII. 1—53.

38. Christ endeavours to

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and sails to the other side

of the lake Gennesaret. Ac-

count of one who offers

himself to be a disciple of

Christ, and of another who

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main witli his father till his

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II. 23—28.

III. 1—12.

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IV. 1—34.

IV. 35—41.

VI. 1—5.

VI. 6— 11.

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36. Dines with a Pha-

risee : conversation at

table, XI. 37. XII. 12.

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39. Drives out a devil,

who calls himself Legion

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40. Heals a lame man,

IX. 1—8.

41 . Calls Matthew, and

Levi : dines with tax-ga-

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42. Heals a woman

afflicted with an hemorrhage

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of Jairus, who was sup-

posed to be dead, IX. 18

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43. Restores two blinc

men to sight, IX. 27—31.

44. Restores a dumb

man to his speech, IX. 32

—34.

45. Sends out his twelve Apostles, IX. 33— XI. 1.

46. Answers John, who enquires of him whether he is the Messiah, XI. 2 — 19.

47. Curses the cities in which he had performec the greatest part of his miracles, XL 20—30.

50. Christ comes to Nazareth, where he is disrespectfully treated, XIII 54—58.

51. Herod, who had be headed John, is doubtfu what he should believe o Christ, XIV. 1—13.

3. 5000 men fed wit five loaves and two fishes XIV. 14—36.

54. Discourses on wash ing of hands, clean and unclean meats, and othe

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II. 13—22.

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48. Is anointed by :

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49. Account of those

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— 30, which I placec

. 24, belongs to thi

article, and contains the

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erently related.

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52. Account of several

remarkable transactions

and discourses at a great

?estival in Jerusalem,

omitted by the other

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tire.

VI. entire.

- *I place the sending out of the seventy disciples in the same article with that of the twelve apostles, merely because the two facts resemble each other ; for we have no knowledge of the precise period in which the former event happened. The evangelists themselves have*

often adopted a similar plan. — Michaelis.

55. Christ heals the daughter of a Canaanit woman, XV. 21 — 28.

56. Performs several mi racles, XV. 29—31.

57. Feeds 4000 men with seven loaves and few small fishes, XV. 32—39.

58. Answers those wh require a sign from heaven XVI. 1—4.

59. Commands his dis ciples to beware of the leaven of the Pharisees which command they mis understand, XVI. 5—12.

61. Asks his disciple: whom they suppose him to be. Peter answers that hi is the Messiah, which Jesu

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62. Fortels his death on

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63. Is transfigured on

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64. Cures a lunatic

XVII. 14—21.

65. Again foretells his

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66. Pays the half sheke

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67. His discourses occa-

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IX. 21—27.

IX. 28—36.

IX. 37—42.

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69—83. Single scattered accounts recorded

nly by St. Luke, some of which belong to the

iree or four last months of the life of Christ,

thers to an earlier period, and which are not ar-

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69. Christ is refused

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1—56.

70. Answers the que«-

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71. Visits Martha a

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burse relative to her too

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72. Teaches his disoi-

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84. Answers the question

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85. Takes little children

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.eproves his disciples, XIX.

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86. Answers a rich

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74. Discourses occa

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76. Answers the ques tion, whether few o many will be saved XIII. 23—30.

77. Replies to those who desire him to retire Decause Herod sough o put him to death XIII. 31—38.

78. Dines with a Pharisee on the sabbath day lis actions and discourses on that occasion, XIV. entire.

79. Dines with publicans, and justifies hi? conduct to those who censure him. Acceptaion of the Gentiles:

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81. His discourse on

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83. Answers the ques-

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97. Christ's entry int

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98. He goes, as Lord

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99. Answers the question

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100. Parable of the neg

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101. Answer to tfo

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X. 35—40.

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XL 27. XII. 12.

XII. 13— 17.

XVIII. 18—30.

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89 — 92. Supplement of several events and discourses, omitted by the first three evangelists, which took place especially at Jerusalem, and which belong to the period between No. 53 and No. 88.

89. Christ's actions ind discourses at Jerusalem, at a feast of tabernacles, VII. 1—X. 21.

90. Discourses at Jerusalem, at the festival of the dedication of the temple, X. 22—42.

91. Christ raises Lazarus from the dead, XL 1-52.

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104. The question pro-

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105. Discourse against the Pharisees, XXIII. entire.

107. Prophecy of the destruction of Jerusalem, XXIV. entire.

108. Addition to the preceding prophecy, found only in the Gospel of St. Matthew, XXV. 1—30.

109. Christ answers the question relative to the last judgment, XXV. 30—46.

110. After the preceding discourses were ended he attain foretels his approaching death, XXVI. 2.

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114. Preparation for the feast of the passover,XXVI.

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118. Institutes the holy

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111. Of the Greeks

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121. Christ goes into the

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123. Prayer that the cup

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124. Christ is taken into

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125. Brought before the

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126. Christ is led before

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128. Is condemned to

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129. And crucified,

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130. Is reviled on the

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132. Extraordinary

events at the death of

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134. Burial of Christ,

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135. Appointment of a

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137. Resurrection of

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120. Another dispute

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131. Supplement of

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>y the other evangelists,

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>ierced in the side with

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139. The guards bring the account to the chief priests, and are bribed to say that the disciples had stolen the body. XXVIII. 11—15.

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140. Christ shows himself a-live to the two disciples, who were going to Em-maus, XVI. 12, 13.

141. Christ shows himself to ten apostles, and to several disci-ples who were with them, XVI. 14—18.

144. Christ shows him-self in Galilee to all his disciples, on a mountain, where he had appointed .nem, XXVIII. 16—20.

The book entitled the Acts of the Apostles con-nects the gospels and the epistles. It is evidently

a continuation of Luke's gospel, which appears both from the introduction and from the attestations of ancient Christians. Both are dedicated to Theophilus; and in the beginning of the Acts a reference is made to his gospel, which he calls ' a former treatise,' recording the actions and discourses of Jesus till his ascension to heaven.

Luke is mentioned as the author of the Acts of the Apostles by Irenaeus, Tertullian, Origen, and Eusebius. From the frequent use of the first person plural it is manifest that Luke was present at many of the transactions which he relates. He appears to have accompanied Paul fromTroas to Philippi. He attended him also to Jerusalem, and afterwards to Rome, where he remained for two years. He is mentioned by Paul in several of those epistles which were written from Rome, particularly in the second epistle to Timothy, and in the epistle to Philemon.

This book contains the history of the Christian church for about twenty-eight or thirty years, from our Saviour's ascension to Paul's arrival at Rome in 60 or 61. As it informs us that Paul resided two years in Rome, it must have been

written after the year 63 ; and, as the death of Paul is not mentioned, it is probable it was composed before that event, which happened A. D. 65. It may be divided into seven parts : — l. The account of our Saviour's ascension, and of the occurrences which happened on the first pentecost after that event, contained in c. i. li. 2.

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XXIV. 13-34.

XXIV. 36—49.

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XX. 19—23.

142. Eight days after he shows himself to the eleven apostles, Thomas likewise being then present, XX. 24—31.

143. Christ shows himself to two disciples and five apostles, at the sea of Tiberias. Remarkable discourse with Peter and John, XXI. entire.

The transactions of the Christians of the circumcision at Jerusalem ; in Judea, and Samaria, c. iii. — ix., xi. 1 — 21 ; xii. 3. Transactions in Caesarea, and the admission of the Gentiles, c. x. 4. The first circuit of Barnabas and Paul among the Gentiles, c. xi. '22, xiii., xiv. 5. Embassy to Jerusalem, and the first council held in that city, c. xv. 6. Paul's second journey, c. xvi. — xxi. 7. His arrestment, trial, appeal to Caesar, and journey to Rome, c. xxi. to the end of the book.

The Acts of the Apostles are cited by Clemens Romanus, by Polycarp, by Justin Martyr, thirty times by Irenseus, and seven times by Clemens Alexandrinus.

IV. Of the epistolary writings of the New Testament. All the essential doctrines and precepts of the Christian religion were certainly taught by our Saviour himself, and are contained in the gospels. The epistles may be considered as commentaries on the doctrines of the gospel, addressed to particular societies, accommodated to their respective situations ; intended to refute the errors and false notions which prevailed among them, and to inculcate those virtues in which they were most deficient. The plan on which these letters are written is, first, to decide the controversy, or refute

the erroneous notions

which had arisen in the society to which the

epistle was addressed : and, secondly, to recom-

mend those duties which their false doctrines

might induce them to neglect; at the same time

inculcating, in general exhortations, the most im-

portant precepts of Christian morality.

2 U

Of the epistles, fourteen were written by St.

Paul. These are not placed according to the

order of time in which they were composed, but

according to the supposed precedence of the so-

cieties or persons to whom they were addressed.

The following is their chronological order ac-

cording to Dr. Lardner : —

A TABLE of ST. PAUL'S EPISTLES, with the

PLACES where, and TIMES when, written,

according to Dr. Lardner.

Epistles. Places. A. D.

1 Thessalonians Corinth 52

2 Thessalouians Corinth 52

i ,• $ Corinth or) near the end of 52

3 ‘ ‘ I Ephesus $ or beginning of 53

1 Corinthians . Ephesus . the beginning of 53

1 Timothy . . Macedonia 56

Titus . , . jMacedonia}bef.theendof56

I or near it J

2 Corinthians . Macedonia about October 57

Romans . . . Corinth . about February 58

Ephesians . . Rome . . about April 61

2 Timothy . . Rome . . about May 61

Philippians’ . . Rome . . bef. the end of 62

Colossians . . Rome . . bef. the end of 62

Philemon . . Rome . . bef. the end of 62

Hebrews

in Spring of 63

A TABLE of the CATHOLIC EPISTLES, and the

REVELATION, according to Dr. Lardner.

Epistles. Places. A. D.

James . . . Judea . or beg. of Thj, two Epistles jRome

1 John . . . Ephesus . . about . 80

2d and 3d of > P u S between 80

John . . i£Phesus ‘ { and . 90

Jude .... Unknown . . . 64 or 65

Revelation . . j P£tmos or \ . 95 or 96

S Ephesus S

It is more difficult to understand the epistolary writings than the gospels; the cause of which is evident. Many things are omitted in a letter, or slightly mentioned, because supposed to be known by the person to whom it is addressed. To a stranger this will create much difficulty. These causes of obscurity are common to all the writers of the epistles; but there are some peculiar to St. Paul. 1. As he had an acute and fertile mind, he seems to have written with great rapidity, and without attending much to method and arrangement. To this cause we may ascribe his numerous and long parentheses. In the heat of argument he sometimes breaks off abruptly to follow out some new thought ; and, when he has exhausted it, he returns from his digression without informing his readers ; so that it requires great attention to retain the connexion. 2. His frequent change of person, too, creates ambiguity ; by the pronoun I he sometimes means himself ; sometimes any Christian ; sometimes a Jew, and sometimes any man. In using the pronoun we, he sometimes intends himself, sometimes comprehends his companions,

sometimes the apostles ; at one time he alludes to ihe converted Jews, at another time to the converted Gentiles. 3. There is a third cause of obscurity ; he frequently proposes objections, and answers them without giving any formal intimation. There are other difficulties which arise from our uncertainty who are the persons he is addressing, and what are the particular opinions and practices to which he refers. To these we may add two external causes, which have increased the difficulty of understanding the epistles. 1. The dividing them into chapters and verses, which dissolves the connexion of the parts, and breaks them into fragments. If Cicero's epistles had been so disjointed, the reading of them would be attended with less pleasure and advantage, and with a great deal more labor. 2. We are accustomed to the phraseology of the epistles from our infancy ; but we have either no idea at all when we use it, or our idea of it is derived from the articles or system which we have Espoused. But, as different sects have arbitrary definitions for St. Paul's phrases, we shall never by following them discover the meaning of St.

Paul, who certainly did not adjust his phraseo-

logy to any man's system.

The best plan of studying the epistles is that

which was proposed and executed by Mr. Locke.

That acute and judicious author says, ' After I

had found by long experience that the reading

of the text and comments in the ordinary way

proved not so successful as I wished to the end

proposed, I began to suspect that reading a

chapter, as was usual, and thereupon sometimes

consulting expositors upon some hard places of

it, was not a right method to get into the true

sense of these epistles. I saw plainly that if any one should write me a letter as long as St. Paul's to the Romans, concerning such a matter as that

is, in a style as foreign, and expressions as du-

bious, as his seem to be, if I should divide it

into fifteen or sixteen chapters, and read one of

them to-day, and another to-morrow, &c., it is

ten to one I should never come to a full and

clear comprehension of it. The way to under-

stand the mind of him that wrote it, every one

would agree, was to read the whole letter through

from one end to the other all at once, to see

what was the main subject and tendency of it ;

or if it had several views and purposes in it, not dependent one on another,

nor in a subordination

to one chief aim and end, to discover what those

different matters were, and wnere the author con-

cluded one and began another ; and, if there were

any necessity of dividing the epistle into parts,

to make these the boundaries of them. In the

prosecution of this thought, I concluded it

necessary, for the understanding ot any one of

St. Paul's epistles, to read it all through at one sitting, and to observe, as well as 1 could, the

drift and design of his writing it. If the first

reading gave me some light, the second gave me

more ; so I persisted on, reading constantly the

whole epistle over at once, till I came to have a good general view of the apostle's main purpose

in writing the epistle, the chief branches of his

discourse wherein he- prosecuted it, the argu-

ments he used, and the disposition of the whole.

This, I confess, is not to be obtained by one or

two hasty readings ; it must be repeated again

and again with a close attention to the tenor of

SCRIPTURE.

the discourse, and a perfect neglect of the divi-

sions into chapters and verses.'

Mr. Locke tells us he continued to read the same epistle over and over again till he discovered the scope of the whole, and the different steps and arguments by which the writer accomplishes his purpose. For he was convinced that Paul was a man of learning, of sound sense, and knew all the doctrines of the gospel by revelation. The speeches recorded in the Acts of the Apostles convinced this judicious critic that Paul was a close and accurate reasoner ; and therefore he concluded that his epistles would not be written in a loose, confused, incoherent style. Mr I ocke accordingly followed the chain of the apostle's discourse, observed his inferences,, and carefully examined from what premises they were drawn, till he obtained a general outline of any particular epistle.

That the Epistle to the ROMANS was written a.t Corinth, by St. Paul, is ascertained by the testimony of the ancient Christians. It was composed A.D. 58, in the twenty-fourth year after Paul's conversion, and is the seventh epistle which he wrote. From the Acts of the Apostles we learn that it must have been written within

three months ; for that was the whole period of Paul's residence in Greece (Acts xx. 1, 2, 3).

The following analysis of this epistle is from a valuable treatise, Dr. Percy's Key to the New Testament. It exhibits the intention and arguments of the apostle, in the most concise, distinct, and connected manner, and affords the best view of this epistle that we have seen.

' The Christian church at Rome appears not to have been planted by any apostle ; wherefore St. Paul, lest it should be corrupted by the Jews, who then swarmed in Rome, and of whom many were converted to Christianity, sends them an abstract of the principal truths of the gospel, and endeavours to guard them against those erroneous notions which the Jews had of justification, and of the election of their own nation.

Now the Jews assigned three grounds for justification. First, ' The extraordinary piety and merits of their ancestors, and the covenant made by God with these holy men.' They thought God could not hate the children of such meritorious parents ; and, as he had made a covenant with the patriarchs to bless their posterity, he was obliged thereby to pardon their sins.

Secondly, ‘ A perfect knowledge and diligent study of the law of Moses.’ They made this a plea for the remission of all their sins and vices. Thirdly, ‘ The works of the Levitical law,’ which were to expiate sin, especially circumcision and sacrifices. Hence they inferred that the Gentiles must receive the whole law of Moses, in order to be justified and saved. The doctrine of the Jews concerning election was, ‘ That as God had promised to Abraham to bless his seed, to give him not only spiritual blessings, but also the land of Canaan, to suffer him to dwell there in prosperity, and to consider him as his church upon earth :’ That therefore this blessing extended to their whole nation, and that God was bound to fulfil these promises to them, whether they were righteous or wicked, faithful or unbelieving. They even believed that a prophet ought not to pronounce against their nation the prophecies with which he was inspired ; but was rather to beg of God to expunge his name out of the book of the living. These remarks will serve as a key to unlock this difficult epistle, Oi which we shall now give a short analysis. See Michaelis’s Lectures on the New Testament.

i. The epistle begins with the usual salutation with which the Greeks began their letters: chap. i. 1—7.

*ii. St. Paul professes his joy at the flourishing state of the church at Rome, and his desire to come and preach the gospel (ver 8 — 1*9) : then he insensibly introduces the capital point he intended to prove, viz.*

iii. The subject of the gospel (ver. 16, 17); that it reveals a righteousness unknown before, derived solely from faith, and to which Jew and Gentiles have an equal claim.

iv. To prove this, he shows (chap. i. 18; iii. 20) that both Jews and Gentiles are ‘ under sin,’ i. e. that God will impute their sins to Jews as well as to Gentiles. His arguments may be reduced to these syllogisms (chap. ii. 1. 17 — 24).

1. The wrath of God is revealed against tho«:e who hold the truth in unrighteousness; i. e. who acknowledge the truth and yet sin against it.

2. The Gentiles acknowledged truths; but partly by their idolatry, and partly by their other detestable vices, they sinned against the truth they acknowledged. 3. Therefore the wrath of God

is revealed against the Gentiles, and punisheth them. 4. The Jews have acknowledged more truths than the Gentiles, and yet they sin. 5. Consequently the Jewish sinners are yet more exposed to the wrath of God: chap. ii. 1 — 12. Having thus proved his point, he answers certain objections to it. Obj. 1. ‘ The Jews were well grounded in their knowledge, and studied the law.’ He answers, If the knowledge of the law, without observing it, could justify them, then God could not have condemned the Gentiles, who knew the law by nature: chap. ii. 13 — 16. Oi;. 2. ‘ The Jews were circumcised.’ Ans. That is, ye are admitted by an outward sign into the covenant with God. This sign will not avail you when ye violate that covenant : chap. ii. 25, to the end. Obj. 3. ‘ According to this doc- trine of St. Paul, the Jews have no advantage before others.’ Ans. Yes, they still have advan- tages ; for unto them are committed the oracles of God. But their privileges do not extend to this, that God should overlook their sins : chap, iii. i — 19. 06;. 4. ‘ They had the Levitical law and sacrifices.’ Ans. From hence is no remission, but only the knowledge of sin : chap,

iii. 20.

v. From all this St. Paul concludes that Jews

and Gentiles may be justified by the same means,

without the Levitical law, through faith in Christ:

And, in opposition to the imaginary advantages

of the Jews, he states the declaration of Zecha-

riah, that God is the God of the Gentiles as well as of the Jews : chap. iii. 21, to the end.

vi. As the whole blessing wa> > promised to

the faithful descendants of Abraham, whom both

Scripture and the Jews call his children, he

proves his former assertion from the example of

Abraham ; who was an idolater before his call,

but was declared just by God, on account of his

faith, long before his circumcision. Hence he

takes occasion to explain the nature and fruits

of faith : chap iv. 1 , v. 11.

vii. He goes on to prove, from God's justice,

that the Jews had no advantage over the Gen-

tiles with respect to justification. Both Jews

and Gentiles had forfeited life and immortality,

by the means of one common father of their

race, whom they themselves had not chosen.

Now as God was willing to restore immortality

by a new spiritual head of a covenant, viz.

Christ, it was just that both Jews and Gentiles

should share in this new representative of the

whole race : chap. v. 12, to the end. Chap. v.

ver. 15, 16, amounts to this negative question: —

‘ Is it not fitting that the free gift should extend as far as the offence ?’

viii. He shows that the doctrine of justifica-

tion, as stated by him, lays us under the strong-

est obligations to holiness : chap vi. 1, to the end.

ix. He shows that the law of Moses no longer

concerns us at all; for our justification arises

from our appearing, in God’s sight, as if actually

dead with Christ on account of our sins ; but

the law of Moses was not given to the dead.

On this occasion he proves at large that the

eternal power of God over us is not affected by

this ; and that, whilst we are under the law of

Moses, we perpetually become subject to death,

even by sins of inadvertency : chap. vii. 1, to

the end.

x. Hence he concludes that all those, and

those only, who are united with Christ, and for

the sake of his union do not live according to the flesh, are free from all condemnation of the law, and have an undoubted share in eternal life : chap. viii. 1 — 17.

xi. Having described their blessedness, he is aware that the Jews, who expected a temporal happiness, would object to him, that Christians notwithstanding endure much suffering in this world . He answers this objection at large : chap, viii. 18, to the end.

xii. He shows that God is not the less true and faithful, because he doth not justify, but rather rejects and punishes, those Jews who would not believe the Messiah : chap, ix., x., xi. In discussing this point, we may observe the cautious manner in which, on account of the Jewish prejudices, he introduces it (chap. ix. 1 — 5), as well as in the discussion itself. He shows that the promises of God were never made to all the posterity of Abraham, and that God always reserved to himself the power of choosing those sons of Abraham, whom, for Abraham's sake, he intended to bless, and of punishing the wicked sons of Abraham ; and that, with respect to temporal happiness or misery, he was not

even determined in his choice by their works. Thus he rejected Ishmael, Esau, the Israelites in the time of Moses, and the greater part of that feople in the time of Isaiah : chap. ix. 6 — 29. Ie then shows that God had reason to reject most of the Jews then living, because they would not believe in the Messiah, though the gospel had been preached to them : chap. ix. 30, x. to the end. However, that God had not rejected all his people, but was still fulfilling his promise upon many thousand natural descendants of Abraham, who believed in the Messiah, and would in a future period fulfil them upon more ; for that all Israel would be converted : chap, xi. 1 — 32. And he concludes with admiring the wise counsels of God : ver. 33, to the end. xiii. From the doctrine hitherto laid down, and particularly from this, that God has in mercy accepted the Gentiles; he argues that the Romans should consecrate and offer themselves up wholly to God. This leads him to mention in particular some Christian duties (chap, xii.), viz. xiv. He exhorts them to be subject to magistrates (chap. xiii. I — 7), the Jews at that time

being given to sedition.

xv. To love one another heartily : ver .2 — 10;

And,

xvi. To abstain from those vices which were considered as things indifferent among the Gentiles : ver. 11, to the end.

xvii. He exhorts the Jews and Gentiles -in the Christian church to brotherly unity : chap. xiv. 2 ; xv. 13.

xviii. He concludes his epistle with an excuse for having admonished the Romans, whom he had not converted; with an account of his journey to Jerusalem ; and with some salutations to those persons whom he meant to recommend to the church at Rome. See Michaelis's Lectures.

CORINTH was a wealthy and luxurious city of Greece. In this city Paul hadj spent two years founding a Christian church, which consisted of a mixture of Jews and Gentiles, but the greater part Gentiles. About three years after the apostle had left Corinth he wrote this epistle from Ephesus, A. D. 56, in the beginning of Nero's reign. That it was written from Ephesus appears from the salutation with which the

epistle closes : chap. xvi. 1 9. From these words it is evident, 1st, that the epistle was written in Asia. 2dly, from Acts xviii. 18, 19, that Aquilaand Priscilla accompanied Paul from Corinth to Ephesus. St. Paul had certainly kept up a constant intercourse with the churches which he had founded ; for he was evidently acquainted with all their revolutions. They seem to have applied to him for advice in those difficult cases which their own understanding could not solve ; and he was ready on all occasions to correct their mistakes. This epistle consists of two parts. 1. A reproof for those vices to which they were most prone. 2. An answer to some queries which they had proposed to him.

The Corinthians, like the other Greeks, had been accustomed to see their philosophers divide themselves into different sects; and, as they brought along with them into the Christian church their former opinions and customs, they wished, as before, to arrange themselves under different leaders. In this epistle Paul condemns these divisions, as inconsistent with the

spirit of Christianity, which inculcates benevolence and unanimity, and as opposite to the conduct of Christian teachers, who did not, like the philosophers, aspire after the praise of eloquence and wisdom. They laid no claim to these, nor to any honor that cometh from men. He de-

dares that the Christian truths were revealed from heaven ; that they were taught with great plainness and simplicity, and proved by the evidence of miracles : chap. i. 1. He dissuades them from their divisions, by reminding them of the great trial which every man's work must undergo ; of the guilt they incurred by polluting the church of God ; of the vanity of human wisdom; and of glorying in men. He admonishes them to esteem the teachers of the gospel only as the servants of Christ ; and to remember that every superior advantage which they enjoyed was to be ascribed to the goodness of God : chap. iii. 4.

2. In the fifth chapter the apostle considers the case of a notorious offender, who had mar-

ried his step-mother ; and tells them that he ought to be excommunicated. He also exhorts the Christians not to associate with any person whe led such an openly profane life.

3. He censures the Corinthians for their litigious disposition, which caused them to prosecute their Christian brethren before the heathen courts. He expresses much surprise that they did not refer their differences to their brethren ; and concludes his exhortations on this subject by assuring them that they ought rather to allow themselves to be defrauded than to seek redress from heathens : chap. v. 1 — 9.

4. He inveighs against those vices to which the Corinthians had been addicted before their conversion, and especially against fornication ; the criminality of which they did not fully perceive, as this vice was generally overlooked in the systems of the philosophers : chap. vi. 9 — 20.

Having thus pointed out the public irregularities with which they were chargeable, he next replies to certain questions which the Corinthians had proposed to him by letter.

1. He determines some questions relating to the marriage state; as 1st, Whether it was good

to marry under the existing circumstances of the church ? And 2d, Whether they should withdraw from their partners if they continued unbelievers? chap. vii.

2. He instructs them how to act with respect to idol offerings. It could not be unlawful in itself to eat the food which had been offered to idols ; for the consecration of flesh or wine to an idol did not make it the property of the idol, an idol being nothing, and therefore • incapable of property. But some Corinthians thought it lawful to go to a feast in the idol temples, which were places of resort for lewdness, and to eat the sacrifices whilst praises were sung to the idols. This was publicly joining in the idolatry. He even advises to abstain from such participation as was lawful, rather than give offence to a weak brother, which he enforces by his own example, who had abstained from many lawful things, rather than prove a scandal to the gospel : chap, viii., ix., x.

3. He answers a third query concerning the manner in which women should deliver any thing in public, when called to it by a divine imputse. And here he censures the unusual dress of Doth sexes in prophesying, which exposed them to the contempt of the Greeks, among

whom the men usually went uncovered, and the women veiled. He goes on to censure the irregularities committed at their love-feasts, or the Lord's Supper. It was a common practice with the Greeks at their social suppers for every man to bring his own provisions along with him, not, however, to share them with the company, but to feast upon them in a solitary manner. Thus the rich ate and drank to excess, while the poor were totally neglected. The Corinthians introduced the same practice in the celebration of the Lord's Supper, thus confounding it with their ordinary meals, and without ever examining into the end of the institution. This gross abuse Paul reproves in the eleventh chapter. He also shows them that all Christians ought to be united in mutual love ; and that tenderness ought to be shown to the most inconsiderable member, as every one is subservient to the good of the whole : chap. xii. In the thirteenth chapter he gives a beautiful description of benevolence. He represents it as superior to the supernatural gifts of the Spirit, to the most exalted genius, to universal knowledge, and even to faith. In the fourteenth chapter he cautions the Corinthians against

ostentation in the exercise of the gift of lan-

guages, and gives them proper advices.

4. He asserts the resurrection of the dead,

founding it upon the resurrection of Jesus Christ,

which he considers as one of the most essential

doctrines of Chnstiaiiity. He then answers

some objections, drawn from our not being

capable of understanding how it will be accom-

plished: chap. xv. He concludes with directions

concerning alms; promises them a visit, and

salutes some of the members.

The second epistle to the CORINTHIANS was

written from Macedonia, A. D. 57. See 2 Cor.

ix. 1 — 5 ; viii. and xiii. 1. St. Paul's first epistle had wrought different effects among the Corin-

thians ; many of them examined their conduct;

they excommunicated the incestuous man; re-

quested St. Paul's return with tears ; and vindi-

cated him and his office against the false teacher

and his adherents. Others of them still adhered

to that adversary of St. Paul, denied his apos-

tolic office, and furnished themselves with pre-

tended arguments from that epistle. He had

formerly promised to take a journey from Ephe-

sus to Corinth, thence to visit the Macedonians,

and return from them to Corinth: 2 Cor. i. 15, 16. But the unhappy state of the Corinthian church made him alter his intention (ver. 23), since he found he must have treated them with severity. Hence his adversaries argued, 1. That St. Paul was irresolute and unsteady, and therefore could not be a prophet. 2. The improbability of his ever coming to Corinth again, since he was afraid of them. Such was the state of the Corinthian church when St. Paul, after his departure from Ephesus, having visited Macedonia (Acts xx. 1), received an account of the above particulars from Titus (2 Cor. vii. 5, 6), and therefore wrote them his second epistle about the end of the same year, or the beginning of 58. But to give a more distinct view of the contents of this epistle : —

1 . The apostle, after a general salutation, expresses his grateful sense of the divine goodness ; professing his confidence in God, supported by a

sense of his own integrity ; makes an apology for not having visited the Corinthians as he had

intended, and vindicates himself from the charge

of fickleness : chap i.

2. He forgives the incestuous man, whose

conduct had made so deep an impression on the

apostle's mind, that one reason why he had de-

ferred his journey to Corinth was that he might

not meet them in grief, nor till he had -received

advice of the effect of his admonitions. He men-

tions his anxiety to meet Titus at Troas, to hear

of their welfare; expresses his thankfulness to

God for the success attending his ministry, and

speaks of the Corinthians as his credentials,

written by the finger of God : chap. ii. iii. 1 — 6.

3. He treats of the office committed to him of

preaching the redemption ; and prefers it to

preaching the law, to which probably his adver-

saries had made great pretences. They had ridi-

culed his sufferings ; which he shows to be no

disgrace to the gospel or its ministers ; and gives a short abstract of the doctrine he preaches:

chap. iii. 6. v. to the end. He expiates on the temper with which, in the midst of afflictions

and persecutions, he and his brethren executed

their important embassy; and with great affection

exhorts them to avoid idolatry : chap. vi. He

tells them how much he rejoiced in their amend-

ment, and how sorry he had been for the distress

which his necessary reproofs had occasioned :

.”•hap. vii. He then exhorts them to make iberal contributions for the Christians in Judea.

He recommends to them the example of the

Macedonians, and reminds them of the benevo-

lence of the Lord Jesus. He expresses his joy

for the readiness of Titus to assist in making the collection : makes honorable mention of other

Christian brethren (chap, viii.) ; and recommends

them to the divine blessing: chap. ix.

4. Next he obviates some reflexions thrown

upon him for the mildness of his conduct, as if

it had proceeded from fear. He asserts his

apostolical power and authority : chap. x. He

vindicates himself against the insinuations of

some for having declined pecuniary support

from the church. To show his superiority over

those designing men who had opposed his preach-

ing, he enumerates his sufferings; gives a detail

of some extraordinary revelation which he had

received ; and vindicates himself from the charge

of boasting, by declaring that he had been forced

to it : chap. xi. xii. He closes the epistle, by assuring them how much it would grieve him

to demonstrate his divine commission by severer methods.

The GALATIANS were descended from those Gauls who had formerly invaded Greece, and afterwards settled in Lower Asia. St. Paul had preached the gospel among them A.D. 51, soon after the council at Jerusalem : Acts xvi. 6. Asia swarmed at that time with zealots for the law of Moses, who wanted to impose it upon the Gentiles : Acts xv. 1 . Soon after St. Paul had left the Galatians, these false teachers had got among them, and wanted them to be circumcised, &c. This occasioned the epistle, which Michaelis thinks was written in the same year, before St. Paul left Thessalonica. Dr. Lardner dates it about th« end of 52, or in the beginning of 53, before St. Paul set out for Jerusalem by way of Ephesus. The subject of this epistle is much the same with that of the Epistle to the Romans ; only this question is more fully considered here, ‘ Whether circumcision, and an observance of the Levitical law, be necessary to the salvation of a Christian convert?’ These Judaizing Christians, whose indirect views St. Paul exposes (Acts xv. 1 ; Gal. v. 3, 9), at first only represented

circumcision as necessary to salvation ; but afterwards they insisted upon the Christians receiving the Jewish festivals: Gal. iv. 10.

As it appears from several passages of this epistle (chap. i. 7, 8, 10, and v. 11) that the Judaizing Christians had endeavoured to persuade the Galatians that Paul himself had changed his opinion, and now preached up the Levitical law ; he denies that charge, and affirms that the doctrines which he had taught were true, for he had received them from God by immediate revelation. He relates his miraculous conversion ; asserts his apostolical authority, which had been acknowledged by the disciples of Jesus ; and, as a proof that he had never inculcated a compliance with the Mosaic law, he declares that he had opposed Peter at Antioch for yielding to the prejudices of the Jews.

He then argues that the Galatians ought not to submit to the law of Moses: — 1. Because they had received the Holy Ghost and the gifts of miracles, not by the law, but by the gospel : chap. iii. 1 — 5. 2. Because the promises which

God made to Abraham were not restricted to his

circumcised descendants, but extended to all

who are his children by faith : chap. iii. 6 — 18.

In answer to the objection, ‘ To what then serveth the law V he replies, That it was given because

of transgression ; that is, to preserve them from

idolatry till the Messiah himself should come.

3. Because all men, whether Jews or Gentiles,

are made the children of God by faith, or by re-

ceiving the Christian religion, and therefore do

not stand in need of. circumcision : chap. iii.

26 — 29. From the first verse of chap. iv. to

the eleventh, he argues that the law was tempo-

rary, being only fitted for a state of infancy ; but that the world having attained a state of man-

hood under the Messiah, the law was of no

farther use. In the remaining part of chap. ir.

he reminds them of their former affection for him,

and assures them that he was still their sincere

friend. He exhorts them to stand fast in the

liberty with which Christ had made them free.

He next confutes the false report which had

been spread abroad among the Galatians that

Paul himself preached up circumcision. He

had already indirectly refuted this calumny, but

he now directly and openly contradicts it; 1. By assuring them that all who thought circumcision necessary to salvation could receive no benefit from the Christian religion : chap. v. 2 — 4. 2. By declaring that he expected justification only by faith : ver. 5, 6. 3. By testifying that they had once received the truth, and had never been taught such false doctrines by him : ver. 7, 8. 4. By insinuating that they should pass some censure on those who misled them (ver. 9, 10), by declaring that he was persecuted for opposing

the circumcision of the Christians: ver. 11. 5. By expressing a wish that those persons should be cut off who troubled them with this doctrine.

This epistle affords a fine instance of Paul's skill in managing an argument. He next cautions them against an idea which his arguments for Christian liberty might excite, that it consisted in licentiousness. He shows them it does not consist in gratifying vicious desires; for none are under stronger obligations to moral duties than the Christian. He recommends gentleness and meekness to the weak

(chap. vi. 1 — 5), and exhorts them to be liberal to their teachers, and unto all men: ver. 6 — 10. He concludes with exposing the false pretences of the Judaizing teachers, and asserting the integrity of his own conduct.

EPHESUS was the chief city of all Asia on this side Mount Taurus. St. Paul had passed through it in the year 54, but without making any stay: Actsxviii. 19 — 21. In 55 he returned to Ephesus again, and staid there three years : chap. xix. During his abode there he completed a very flourishing church of Christians, the first foundations of which had been laid by some inferior teachers. As Ephesus was frequented by persons of distinction from all parts of Asia Minor, St. Paul took the opportunity of preaching in the ancient countries (ver. 10) ; and the other churches of Asia were considered as the daughters of the church of Ephesus ; so that an epistle to the Ephesians,was, in effect, an epistle to the other churches of Asia at the same time. Dr. Lardner shows it to be highly probable that this epistl was written A. D. til, soon after Paul's arrival at Rome.*

As Paul was in a peculiar manner the apostle of the Gentiles, and was now a prisoner at Rome inconsequence of having provoked the Jews, by asserting that an observance of the Mosaic law was not necessary to obtain the favor of God, he was afraid lest an advantage should be taken of his confinement to unsettle the minds of those whom he had converted. Hearing that the Ephesians stood firm in the faith of Christ, without submitting to the law of Moses, he writes this epistle to give them more exalted views of the love of God, and of the excellence and dignity of Christ. This epistle is not composed in an argumentative or didactic style : The first three chapters consist almost entirely of thanksgivings and prayers, or glowing descriptions of the blessings of the Christian religion. The last three chapters contain practical exhortations to unity, love, and concord, from the consideration that all Christians are members of the same body, of which Christ is the head. He then advises them to forsake the vices to which they had been addicted while they remained heathens. He recommends justice and charity ;

and condemns lewdness, obscenity, and intemperance. In the sixth chapter he points out the duties of husbands and wives, parents and children, masters and servants, &c.

The church at PHILIPPI had been founded by Paul, Silas, and Timothy (Acts xvi.) in 51, and had continued to show a strong attachment to the Christian religion, and a tender affection for the apostle. Hearing of his imprisonment at Rome, they sent Epaphroditus, one of their pastors, to supply him with money. It appears from this epistle that he was in great want of necessaries before this contribution arrived , for, as he had not converted the Romans, he did not consider himself as entitled to receive supplies from them. Being a prisoner, he could not work; and it was his maxim never to accept any pecuniary assistance from those churches where a faction had been raised against him. From the Philippians he was not averse to receive a present, as he considered it as a mark of their affection.

This letter was written while he was a prisoner at Rome (chap. -i. 7, 13 ; iv. 22) ; and from the expectation which he discovers (chap. ii. 24) of

*being soon released and restored to them, compared with Philemon ver. 22, and Heb. xiii. 13, where he expresses a like expectation in stronger terms, it is probable that it was written towards the end of his first imprisonment in 62. His design in this epistle seems *o be to comfort the Philippians under the concern the,y had expressed at his imprisonment ; to check a party spirit that had broken out among them ; to promote union and harmony ; to guard them agsinst being seduced by Judaizing teachers; to support them under their trials ; and to inspire them with a desire to adorn their profession by the most eminent attainments. After some admonitions, in the beginning of the fourth chapter, he, in the eighth verse, recommends virtue in the most extensive sense. Towards the close, he makes his acknowledgments to the Philippians for the seasonable and liberal supply which they had sent him, as a proof of their affection for him, and their concern for the support of the gospel.*

The Epistle to the COLOSSIA.NS was written while Paul was in prison (chap. iv. 3), about A. D. 62. The intention of it was to secure the

Colossians from some erroneous doctrines, and to excite them to a behaviour worthy of their sacred character. A new sect had arisen, which had blended the oriental philosophy with the superstitious opinions of the Jews. See GNOS-TICS.

Against these doctrines Paul argues with great skill and address. He describes the dignity of Jesus Christ; declares that he had created all things, whether thrones or dominions, princi-palities or powers ; that he alone was the head of the church, and had reconciled men to the Father: that Jesus was superior to angels; that they were created beings, and ought not to be worshipped.

He censures the observation of the Jewish Sabbath ; rebukes those who required abstinence from certain kinds of food ; and cautions them against persons who assume a great appearance of wisdom and virtue: chap. ii. In the third chapter he exhorts them, that, rnstead of external ceremonies, they ought to cultivate pure morality. He guards them against impurity, to which they had before their conversion been much addicted.

He admonishes them against the irascible passions, and falsehood. He exhorts them to cultivate the benevolent affections, humility, patience, and all the relative duties, with prayer and thanksgiving: chap. iv. 2.

The First Epistle to the THESSALONIANS is addressed to the inhabitants of Thessalonica, the capital of Macedonia. It appears from the Acts (xvii. 1), that the Christian religion was introduced into this city by Paul and Silas, soon after they had left Philippi. At first they made many converts ; but at length the Jews stirred up the rabble, which assaulted the house where the apostle and his friends lodged, so that Paul and Silas were obliged to flee to Berea. The apostle then withdrew to Athens ; and Timothy, at his desire, returned to Thessalonica (1 Thess. iii. 2), to see what were the sentiments of the inhabitants after the persecution. Paul went to Corinth, where he stayed eighteen months ; during which Timothy returned with the joyful tidings that the Thessalonians remained stedfast to the

faith, and firmly attached to the apostle, not-

withstanding his flight. Upon this he sent them

this epistle, A. D. 52, in the twelfth year of

Claudius.

The intention of Paul in writing this epistle

was evidently to encourage the Thessalonians to

adhere to the Christian religion. This church

being still in its infancy, and oppressed by the

Jews, required to be established in the faith. St.

Paul, therefore, in the first three chapters, endea-

vours to convince the Thessalonians of the truth

of his gospel, both by the miraculous gifts of the Holy Ghost which had been imparted, and by

his own conduct when among them.

He expresses a strong affection for them ;

mentions it to their honor that they received

the gospel as the word of God and not of man ;

expresses a strong desire to visit them ; and con-

cludes with various exhortations.

The Second Epistle to the THESSALONIANS ap-

pears to have been written soon after the first,

and from the same place ; for Silvanus, or Silas,

and Timothy are joined with the apostle in the

address of this epistle, as well as of the former.

Paul begins with commending the faith and

charity of the Thessalonians ; expresses great joy on account of the patience with which they supported persecution ; and observes that their persecution was a proof of a righteous judgment to come, where their persecutors would meet with a proper recompense, and the righteous be delivered out of all their afflictions.

From misunderstanding a passage in his former letter, the Thessalonians believed the day of judgment was at hand. To rectify this mistake, he informs them that the day of the Lord will not come till a great apostasy has overspread the Christian world, the nature of which he describes. Dr. Kurd explains this of the papal power, to which it applies with astonishing exactness. Symptoms of this mystery of iniquity had then appeared ; but the apostle expresses his thankfulness to God that the Thessalonians had escaped this corruption. He then proceeds to correct some irregularities. Many of the Thessalonians seem to have led a disorderly life ; these he severely reproves, and commands the faithful to shun their company if they remained incorrigible.

When the First Epistle to TIMOTHY was written it is difficult to ascertain, l^ardner dates it in r.fi; Mill, \hitt.y, and Macknight, place it in 64. Timothy was the intimate friend and companion of Paul, and is always mentioned by that apostle with much affection and esteem. Having appointed him to superintend the church of Ephesus, during a journey which he made to Macedonia, he wrote this letter to direct him how to discharge the important trust. This was the more necessary as Timothy was young and inexperienced : 1 Tim. iv. 12.

In the second chapter he prescribes the manner in which the worship of God was to be performed iti the church of Ephesus ; and in the third explains the qualifications of the persons whom he was to ordain as bishops and deacons. In the fourth he foretels the great corruptions of the church which were to prevail in future times. In the fifth and sixth he teaches Timothy how to admonish both old and young ; and gives rules respecting widows, elders, slaves, trifling controversies, and the excessive love of money.

That the Second Epistle to TIMOTHY was written from Rome is universally agreed ; but

the precise date is uncertain. Timothy was at Ephesus or in Asia Minor when this epistle was sent to him. The false teachers who had before thrown this church into confusion grew every day worse; insomuch that not only Hymenacus, but Philetus, another Ephesian heretic, now denied the resurrection. They were led into this error by a dispute about words. At first they only annexed various improper significations to the word resurrection, but at last they denied it altogether.

Neither the date of the Epistle to TITUS, whom Paul had appointed over the church of Crete, nor the place from which it was sent, is ascertained. The apostle reminds Titus of the reasons for which he had left him at Crete; and directs him how to act in ordaining Chhristian pastors : chap. i. He advises him to accommodate his exhortations to the respective ages, sexes, and circumstances of those whom it was his duty to instruct; and to give an example of what he taught c. ii. : He exhorts him also to teach obedience to the civil magistrate, because the Judaizing Christians affirmed that no obedience

was due from the worshippers of the true God to magistrates who were idolaters. He cautions against censoriousness and contention ; recommends meekness ; and to avoid useless con roversies ; and concludes with directing him how to proceed with heretics.

The Epistle to PHILEMON was written from Rome at the same time with the epistles to the Colossians and Philippians and A.I). 62 or 63 The occasion of the letter was this : Onesimus, Philemon's slave, had robbed his master, and fled to Rome ; where, happily, he met with the apostle, who was then a prisoner at large, and by his instructions was converted to Christianity, and reclaimed to a sense of his duty. St. Paul, when he had made a sufficient trial of him, and found that his behaviour was entirely agreeable to his profession, sent him back to his master, and, as a mark of his esteem, entrusted him, together with Tychicus, with the charge of delivering his epistle to the church at Colosse, and giving them a particular account of the state of things at Rome, recommending him to them, at the same

time, as a faithful and beloved brother : Col. iv. 9. And, as Philemon might well be supposed to be strongly prejudiced against one who had left his service in so infamous a manner, he sends him this letter, in which he employs all his influence to remove suspicions, and reconcile him to the Baking Onesimus into his family again. See PHILEMON.

It is impossible to read over this admirable epistle without being touched with the delicacy of sentiment, and the masterly address that appear in every part of it. We see here, in a most striking light, how perfectly consistent true politeness is, not only with all the warmth and sincerity of the friend, but even with the dignity of the Christian and the apostle. And, if this letter were to be considered in no other view than as a mere human composition, it must be allowed a master-piece in its kind. As an illustration of this remark, it may not be improper to compare it with an epistle of Pliny, that seems to have been written upon a similar occasion (lib. ix. ep. 21); which, though it has many beauties, and was penned by one that is reckoned to excel

in the epistolary style, yet must be acknowledged,

by every impartial reader, vastly inferior to this

animated composition of the apostle.

The Epistle to the HEBREWS has been gene-

rally ascribed to Paul ; but the truth of this

opinion has been suspected by others for three

reasons : — 1. The name of the writer is nowhere

mentioned, neither in the beginning nor in any

other part of the epistle. 2. The style is said to be more elegant than Paul's. 3. There are ex-

pressions in the epistle which have been thought

unsuitable to an apostle's character. 1. In an-

swer to the first objection, Clemens Alexandrinus

lias assigned a very good reason : ' Writing to

the Hebrews.' says he, ' who had conceived a

prejudice against him, and were suspicious of

him, he wisely declined setting his name at the

beginning, lest he should offend them.' 2. Ori-

gen and Jerome admitted the elegance of the

style, and reckoned it superior to that which

1'aul has exhibited in his epistles; but, as ancient testimony had assigned it to Paul, they endea-

voured to answer the objection, by supposing

that the sentiments were the apostle's, but the

language and composition the work of some

other person. If the epistle, however, be a translation, which we believe it to be, the elegance of the language may belong to the translator. As to the composition and arrangement, there are many specimens in the writings of this apostle not inferior in these qualities to the epistle to the Hebrews. 3. It is objected that, in Heb. ii. 3, the writer of this epistle joins himself with those who had received the gospel from Christ's apostles. Now Paul had it from Christ himself. But Paul often appeals to the testimony of the apostles in support of those truths which he had received from revelation. See 1 Cor. xv. 5,6,7,8; 2Tim.ii.2.

This epist.e is not quoted till the end of the second century, and even then does not seem to have been universally received. This silence might be owing to the Hebrews themselves, vho, supposing this letter had no relation to me Gentiles, might be at no pains to diffuse copies of it. The authors, however, on whose testimony we receive it as authentic, are entitled to credit ; for they lived so near the age of the apostles that they were in no danger of being imposed on; and, from the numerous list of

books which they rejected as spurious, we are assured that they were very careful to guard against imposition. It is often quoted as Paul's by Clemens Alexandrinus about A. D. 194.- It is received and quoted as Paul's by Origen, about 230 ; by Dionysius, bishop of Alexandria, in 247 ; and by a numerous list of succeeding writers.

The Epistle to the Hebrews was originally written in Hebrew, or rather Syro-Chaldaic ; a fact testified by Clemens Alexandrinus, Jerome, and Eusebius. To this it has been objected that, as these writers have not referred to any authority, we can only consider this as an opinion. But as they state no reasons for adopting this opinion, but only mention as a fact that Paul wrote to the Hebrews in their native language, we must allow that it is their testimony which they produce, and not their opinion. Eusebius informs us that some supposed Luke the evangelist, and others Clemens Romanus, to have been the translator. According to Clemens Alexandrinus, Jerome, and Euthalius, this epistle was addressed to the Jews in Palestine. The scope

of the epistle confirms this opinion. — The time when it was written may be easily determined ; for the salutation from the saints of Italy (c. iv. 24), together with the apostle's promise to see the Hebrews (v. 23), plainly intimate that his confinement was then either ended or on the eve of being ended. It must therefore have been written soon after the epistles to the Colossians, Ephesians, and Philemon, and not long before Paul left Italy, that is, A.D. 61 or 62.

As the zealous defenders of the Mosaic law would naturally insist on the divine authority of Moses, on the majesty and glory attending its promulgation by the ministry of angels, and the great privileges it afforded those who adhered to it ; the apostle shows —

I. That in all these articles Christianity had an infinite superiority to the law. This topic he pursues from c. i. to xi., wherein he reminds the believing Hebrews of the extraordinary favor shown them by God, in sending them a revelation by his own Son, whose glory was far superior to that of angels (c. i.) ; very naturally inferring from hence the danger of despising Christ

on account of his humiliation, which, in perfect consistence with his dominion over the world to come, was voluntarily submitted to by him for wise and important reasons; particularly to deliver us from the fear of death, and to encourage the freedom of our access to God : c. ii. W ith the same view he magnifies Christ as superior to Moses, their great legislator; and, from the punishment inflicted on those who rebelled against the authority of Moses, infers the danger of contemning the promises of the gospel : c. iii. 2 — 13.

And, as it was an easy transition to call to mind on this occasion that rest in Canaan to which the authority invested in Moses was intended to lead them, the apostle hence cautions them against unbelief, as what would prevent their entering

into a superior state ef rest to what the Jews ever enjoyed: c. in. 14, iv. 11. This caution is still farther enforced by awful views of God's omniscience, and a lively representation of the high-priesthood of Christ (c. iv. and v. to the end).

In the next place he intimates the very hopeless situation of those who apostatise from Chris-

tianity (c. vi. 1 — 9) ; and then, for the comfort and confirmation of sincere believers, displays to them the goodness of God, and his faithful adherence to his holy engagements ; the performance of which is sealed by the entrance of Christ into heaven as our forerunner: c. vi. 9, to the end. Still farther to illustrate the character of our Lord, he enters into a parallel between him and Melchizedec as to their title and descent; and, from instances wherein the priesthood of Melchizedec excelled the Levitical, infers that the glory of the priesthood of Christ surpassed that under the law : c. vii. 1 — 17. From these premises the apostle argues that the Aaronical priesthood was not only excelled, but consummated by that of Christ, to which it was only introductory and subservient ; and of course that the obligation of the law was henceforth dissolved : c. vii. 18, to the end. Then recapitulating what he had already demonstrated, concerning the superior dignity of Christ's priesthood, he thence illustrates the distinguished excellence of the new covenant, as not only foretold by Jeremiah, but evidently enriched with

much better promises than the old (c. viii. throughout) ; explaining further the doctrine of the priesthood and intercession of Christ, by comparing it with what the Jewish high priest did on the great day of atonement : c. ix. 1 — 14. Afterwards he enlarges on the necessity of shedding Christ's blood, and the sufficiency of the atonement made by it (c. ix. 15, to the end); and proves that the legal ceremonies could not by any means purify the conscience ; whence he infers the insufficiency of the Mosaic law, and the necessity of looking beyond it : c. x. 1 — 15. He then urges the Hebrews to improve the privileges which such a high priest and covenant conferred on them, to the purposes of approaching God with confidence, to a constant attendance on his worship, and most benevolent regards to each other: c. x. 15—25. The apostle having thus obviated the insinuations and objections of the Jews, for the satisfaction and establishment of the believing Hebrews, proceeds,

II. To prepare and fortify their minds against the storm of persecution which in part had already

befallen them, and which was likely to continue and be often renewed, he reminds them of those extremities they had endured, and of the fatal effects which would attend their apostasy (chap, x. 26, to the end) ; calling to their remembrance the eminent examples of faith and fortitude exhibited by holy men, and recorded in the Old Testament, (chap. xi. 1 — 29). He concludes his discourse with glancing at many other illustrious worthies; and, besides those recorded in Scripture, refers to the case of several who suffered under the persecution of Antiochus Epiphanes : 2 Mac. chap. viii. &c., xi. 30, xii. 2. Having thus finished the argumentative part of the epistle, the apostle proceeds to a general application in which he exhorts the Hebrew Christians to patience, peace, and holiness (chap. xii. 3 — 14); cautions them against secular views and sensual gratifications, by laying before them the incomparable excellence of the blessings introduced by the gospel, which even the Jewish economy, glorious and magnificent as it was, did by no means equal ; exhorts them to brotherly affection, purity, compassion, dependence on the divine care,

stedfastness in the profession of truth, a life of thankfulness to God, and benevolence to man ; and concludes the whole with recommending their pious ministers to their particular regard, entreating their prayers, saluting and granting them his usual benediction.

The seven following epistles, one of James, two of Peter, three of John, and one of Jude, have been distinguished by the appellation of Catholic or general epistles, because most of them are inscribed, not to particular churches or persons, but to the body of Jewish or Gentile converts over the world. The authenticity of some of these has been questioned, viz. the Epistle of James, the second of Peter, the Epistle of Jude, and the second and third of John. The ancient Christians were very cautious in admitting any books into their canon whose authenticity they had any reason to suspect. They rejected all the writings forged by heretics in the name of the apostles, and certainly, therefore, would not receive any without first subjecting them to a severe scrutiny. Now, though these seven epistles were not immediately acknow-

ledged as the writings of the apostles, this onl shows that the persons who doubted had not received complete and incontestable evidence oi their authenticity. But, as they were afterwards universally received, we have every reason to conclude, that upon a strict examination they were found to be the genuine productions of the apostles. The truth is, so good an opportunity had the ancient Christians of examining this matter, so careful were they to guard against imposition, and so well founded was their judgment concerning the books of the New Testament, that, as Dr. Lardner observes, no writing which they pronounced genuine has yet been proved spurious, nor have we at this day the least reason to believe any book genuine which they rejected.

That the Epistle of JAMES was written in the apostolical age is proved by the quotations of Clemens Romanus, Ignatius, and Origen. There are several reasons why it was not more generally quoted by the first Christian writers. Being written to correct the errors and vices which prevailed among the Jews, the Gentiles might think it of less importance to them, and therefore

take no pains to procure copies of it. As the author was sometimes denominated James the Just, and often called bishop of Jerusalem, it might be doubted whether he was one of the apostles. But its authenticity does not seem to have been suspected on account of the doctrines which it contains. In modern times, indeed, Luther called it a strawy epistle (epistola straminea), and excluded it from the sacred writings, on account of its apparent oppositioti to the SCRIPTURE.

apostle Paul concerning justification by faith. This epistle could not be written by James the elder, the son of Zebedee, and brother of John, who was beheaded by Herod, A. D. 44 ; for it contains passages which refer to a later period. It must, therefore, have been the composition of James the Less, the son of Alpheus, who was called the Lord's brother, because he was the son of Mary, the sister of our Lord's mother. Lardner fixes the date in the year 61 or 62.

James the Less statedly resided at Jerusalem, whence he was styled by some ancient fathers bishop of that city, though without suffi-

cient foundation. Now James being one of the apostles of the circumcision, while he confined his personal labors to the inhabitants of Judea, it was natural for him to endeavour, by his writings, to extend his services to the Jewish Christians who were dispersed abroad in more distant regions. For this purpose there are two points which the apostle seems to have principally aimed at, though he did not pursue them in an orderly and logical method, but in the free epistolary manner, handling them jointly or distinctly as occasions naturally offered. And these were ‘ to correct those errors both in doctrine and practice into which the Jewish Christians had fallen, which might otherwise have produced fatal consequences ; and then to establish the faith and animate the hope of sincere believers, both under their present and their approaching sufferings.’ The opinions which he is most anxious to refute are these, that God is the author of sin (ch. i. 13); and that the belief of the doctrines of the gospel was sufficient to procure the favor of God for them, however deficient they were in good works : chap. ii. He dissuades the Jews in the third chapter from aspir-

ing to the office of teachers, because their prejudices in favor of the law of Moses might induce them to pervert the doctrines of the gospel. He therefore guards them against the sins of the tongue, by representing their pernicious effects ; and as they thought themselves wise and intelligent, and were ambitious of becoming teachers, he advises them to make good their pretensions, by showing themselves possessed of that wisdom which is from above : chap. iii.

The destruction of Jerusalem was now approaching; the Jews were split into factions, and often slaughtered one another ; the apostle, therefore, in the fourth chapter admonishes them to purify themselves from those vices which produced tumults and bloodshed. To rouse them to repentance, he foretells the miseries that were coming upon them. Lastly, he checks an irreligious spirit that seems to have prevailed, and concludes the epistle with several exhortations.

The authenticity of the first Epistle of PETER has never been denied. It is referred to by Clemens Romanus, and Polycarp, and is quoted by Papias, Irenaeus, Clemens Alexandrinus, and

Tertullian. It is addressed to the strangers scattered through Pontus, &c., who are evidently Christians in general, as appears from chap. ii. 10. From Peter's sending the salutation of the church at Babylon to the Christians in Pontus, &c., it is generally believed that he wrote it in Babylon. There was a Babylon in Egypt and another in Assyria. It could not be the former; for it was an obscure place, which seems to have had no church for the first four centuries. We have no authority to affirm that Peter was in Assyria. The most probable opinion is that of Grotius, Whitby, Lardner, as well as of Eusebius, Jerome, and others, that by Babylon Peter figuratively means Rome. Lardner dates it in 63, 64, or 65. St. Peter's chief design is to confirm the doctrine of St. Paul, which the false teachers pretended he was opposing, and to assure the proselytes that they stood in the true grace of Goo. : chap. v. 12. With this view he calls them elect- and mentions that they had been declared such by the effusion of the Holy Ghost upon them : chap. i. 1, 2. He assures them that they were regenerate without circumcision,

merely through the gospel and the resurrection of Christ (ver. 3, 4. 21 — 25) ; and that their sufferings were no argument of their being under the displeasure of God, as the Jews imagined : ver. 6 — 12. He recommends it to them to hope for grace to this end: ver. 13. He testifies that they were not redeemed by the paschal lamb, but through Christ, whom God had pre-ordained for this purpose before the foundation of the world : ver. 18 — 20.

The second Epistle of PETER is not mentioned by any ancient writer extant till the fourth century, from which time it has been received by all Christians, except the Syrians. Jerome acquaints us that its authenticity was disputed, on account of a remarkable difference between the style of it and the former epistle. But this remarkable difference in style is confined to the second chapter of the second epistle. No objections, however, can be drawn from this circumstance; for the subject of that chapter is different from the rest of Peter's writings, and nothing is so well known as that different subjects suggest different styles. Peter, in describ-

ing the character of some flagitious impostors, feels an indignation which he cannot suppress; it breaks out, therefore, in the bold and animated figures of an oriental writer. Such a diversity of style is not uncommon in the best writers, especially when warmed with their subject. This objection being removed, we contend that this epistle was written by Peter, from the inscription, Simon Peter, a servant and an apostle of Jesus Christ. It appears from chap. i. 16, 17, 18, that the writer was one of the disciples who saw the transfiguration of our Saviour. Since it has never been ascribed to James or John, it must therefore have been Peter. It is evident, from chap. iii. 1, that the author had written an epistle before to the same persons, which is another circumstance that proves Peter to be the author.

It is acknowledged, however, that all this evidence is merely internal ; for there is no external evidence upon the subject. Some, therefore, have contended, that if the credit which we give to any fact is to be in proportion to the degree of evidence with which it is accompanied, we

must allow more authority to the gospels than to the epistles; more to those epistles which have been generally acknowledged than to those which have been controverted, &c. To us it

seems that sufficient evidence of inspiration being obtained is the main point. Yet one way of determining the essential doctrines of Christianity would be to examine what are the doctrines which occur oftenest in the gospels ; for the gospels are the plainest parts of the New Testament, and their authenticity is most completely proved. Nor will it be denied that our Saviour taught all the doctrines of the Christian religion himself; that he repeated them on different occasions, and inculcated them with an earnestness proportionable to their importance. The epistles are to be considered as a commentary on the essential doctrines of the gospel, adapted to the situation and circumstances of particular churches, and perhaps sometimes exclaining doctrines of inferior importance. 1.

- *he essential doctrines are therefore first to be*

sought for in the gospels, and to be determined by the number of times they occur. 2. In the .mcontroverted epistles, in the same manner. 3. No essential doctrine ought to be founded on a single passage, nor on the authority of a controverted passage.

That Peter was old, and near his end, when he wrote this epistle, may be inferred from chap. i. 14 : ‘ Knowing that shortly I must put off this tabernacle, even as our Lord Jesus has shown me.’ Lardner thinks it was written soon after the former. Others date it in 67. The general design of it is to confirm the doctrines and instructions delivered in the former ; « to excite the Christian converts to adorn, and stedfastly adhere to their holy religion, as a religion proceeding from God, notwithstanding the artifices of false teachers, whose character is described; or the persecution of their inveterate enemies.

The first Epistle of JOHN is ascribed by the unanimous suffrage of the ancients to the beloved disciple of our Lord. It is referred to by Polycarp, is quoted by Papias, by Irenaeus, and was received as genuine by Clemens Alexandrinus, by Dionysius of Alexandria, by Cyprian, Origen,

and Eusebius. There is such a resemblance between the style and sentiments of this epistle and those of St. John's gospel, as to afford the highest degree of internal evidence that they are the compositions of the same author. In the style of this apostle there is a remarkable peculiarity, and especially in this epistle. His sentences, considered separately, are exceedingly clear and intelligible ; but, when we search for their connexion, we frequently meet with greater difficulties than we do even in the epistles of St. Paul. The principal signature and characteristic of his manner is an artless and amiable simplicity, iuid a singular modesty and candor, in conjunction with a wonderful sublimity of sentiment. His conceptions are apparently delivered to us in the order in which they arose to his own mind, and are not the product of artificial reasoning or labored investigation. It is impossible to fix with any precision the date of this epistle, nor can we determine to what persons it was addressed.

The leading design of the apostle is to show the insufficiency of faith, and the external pro-

fession of religion, separate from morality ; to guard Christians against the delusive arts of the corrupters of Christianity, whom he calls Anti-christ ; and to inculcate universal benevolence. His admonitions concerning the necessity of good morals, and the inefficacy of external pro-fessions, are scattered over the epistle, but are most frequent in the first, second, and third chapters. The enemies or corrupters of Cnris-tianity against whom he contends, seem to have denied that Jesus was the Messiah, the Son of God (chap. ii. 22, v. 1), and had actually come into the world in a human form : chap. iv. 2, 3. The earnestness and frequency with which this apostle recommends benevolence is remarkable. He makes it the distinguishing characteristic of the disciples of Jesus, the only sure pledge of our love to God, and the only assurance of eter-nal life : chap. iii. 14, 15. Benevolence was his favorite theme, which he affectionately pressed upon others, and constantly practised himself. It was conspicuous in his conduct to his great Master, and in the reciprocal affection which it inspired in his sacred breast. He continued to

recommend it in his last words. When his ex-

treme age and infirmities had so wasted his

strength, that he was incapable to exercise the

duties of his office, the venerable old man, anxi-

ous to exert in the service of his Master the little strength which still remained, caused himself to

be carried to church, and in the midst of the con-

gregation he repeated these words, ‘ Little chil-

dren love one another.’

It has been observed by Dr. Mill that the

second and third epistles of JOHN are so short,

and resemble the first so much in sentiment and

style, that it is needless to contend about them.

The second epistle consists only of thirteen

verses, and of these eight may be found in the

first epistle, in which the sense or language is

precisely the same. The second epistle is quoted

by Irenasus, and was received by Clemens Alex-

andrinus. Both were admitted by Athanasius,

by Cyril of Jerusalem, and by Jerome. The

second is addressed to a woman of distinction,

whose name is by some supposed to be Cyria

(taking Kvpia for a proper name), by others Electa.

The third i inscribed to Gaius or Cains, accord-*

ing to the Latin orthography, who, in the opi-

nion of Lardner, was an eminent Christian, that lived in some city of Asia not far from Ephesus, where St. John chiefly resided after his leaving Judea. Or he may be the Gaius whom Paul calls his host, in Rom. xvi. 23. The time of writing these two epistles cannot be determined with any certainty. They are so short that an analysis of them is not necessary.

The Epistle of JUDE is cited by no ancient Christian writer extant before Clemens Alexandrinus about the year 194; but this author has transcribed eight or ten verses in his Stromata and Pedagogue. It is quoted once byTertullian about the year 200; by Origen frequently about 230. It was not however received by many of the ancient Christians, on account of a supposed quotation from a book of Enoch. But it is not certain that Jude quotes any book. He only says that, ' Enoch prophesied, saying, the Ixird cometh with ten thousand of his saints.' These might be words of a prophecy preserved by tradition, and inserted occasionally in different

writings. Nor is there any evidence that there was such a book as Enoch's Prophecies in the thne of Jude, though a book of that name was extant in the second and third centuries. As to the date of this epistle, nothing beyond conjecture can be produced. The design of it is, by describing the character of the false teachers, and tha punishments to which they were liable, to caution Christians against listening to their suggestions, and being thereby perverted from the faith and purity of the gospel.

V.— Of the Revelation of St. John.— The APOCALYPSE or REVELATION has not always been unanimously received as the genuine production of the apostle John. Its authenticity is proved, however, by the testimony of many respectable authors of the first centuries. It is referred to by the martyrs of Lyons ; it was admitted by Justin Martyr as the work of the apostle John. It is often quoted by Irenaeus, by Theophilus bishop of Antioch, by Clement of Alexandria, Tertullian, Origen, and Cyprian of Carthage. It was also received by heretics, as Novatius and his followers, the Donatists, and

the Arians. For the first two centuries no part of the New Testament was more universally acknow-

ledged, or mentioned with higher respect. But,

a dispute having arisen about the millennium,

Caius, with some others, about 2 1 2, to end the

controversy as speedily and effectually as possi-

ble, ventured to deny the authority of the book

which had given occasion to it.

The book of Revelation, as we learn from ch.

i. 9, was written in the Isle of Patmos. Ac-

cording to the general testimony of ancient au-

thors, John was banished into Patmos in the

reign of Domitian, and restored by his successor

Nerva. But the book could not be published

till after John's release, when he returned to

Ephesus. As Domitian died in 96, and his per-

secution did not commence till near the end of

his reign, the Revelation might therefore be

published in 97.

As our readers may wish to be informed how

the predictions revealed in this book of St. John

have usually been interpreted and applied, we

subjoin a key to the prophecies contained in the

Revelation, extracted from the learned dissertations of Dr. Newton, bishop of Bristol, vol. Hi.,

to which the reader is referred for a more full

illustration of the several parts, as the concise-

ness of our plan only admits a short analysis of

them.

Nothing of a prophetical nature occurs in the

first three chapters, except, 1. What is said con-

cerning the church of Ephesus, 'that her candle-

stick shall be removed out of its place,' which

is now verified, not only in this, but in all the other Asiatic churches which existed at that time ;

the light of the Gospel having been taken from

them, not only by their heresies and divisions from within, but by the arms of the Saracens from

without ; and, 2. Concerning the church of

Smyrna, that she shall ' have tribulation ten

days ; ' that is, in prophetic language, ten years, referring to the persecution of Dioclesian, which

alone of all the general persecutions lasted so

long.

The next five chapters relate to the opening of

• the seven seals ; ami by these seals are intimated so many different periods of the prophecy. Six

of these seals are opened in the sixth and seventh chapters.

The first seal or period is memorable for con-

quests. It commences with Vespasian, and ter-

minates in Nerva ; and during this time Judea

was subjugated. The second seal is noted for war and slaughter. It commences with Trajan, and continues through his reign, and that of his successors. In this period the Jews were entirely routed and dispersed ; and great was the slaughter and devastation occasioned by the contending parties. The third seal is characterised by a rigorous execution of justice, and an abundant provision of corn, wine, and oi'. It commences with Septimius Severus. lie and Alexander Severus were just and severe emperors, and at the same time highly celebrated for the regard they paid to the felicity of their people, by procuring them plenty of every thing, and particularly corn, wine, and oil. This period lasted during the reigns of the Septimian family. The fourth seal is distinguished by a concurrence of evils, such as war, famine, pestilence, and wild beasts ; by all which the Roman empire was remarkably infested from the reign of Maximin to that of Dioclesian. The fifth seal begins at Dioclesian, and is signalised by the great persecution, from whence arose that memorable era, the era of martyrs. With Constantine begins the sixth

seal, a period of revolutions, pictured forth by great commotions in earth and in heaven, alluding to the subversion of Paganism and the establishment of Christianity. This period lasted from the reign of Constantine the Great to that of Theodosius I. The seventh seal includes under it the remaining parts of the prophecy, and comprehends seven periods distinguished by the sounding of seven trumpets.

As the seals foretold the state of the Roman empire before and till it became Christian, so the trumpets foreshow the fate of it afterwards ; each trumpet being an alarm to one nation or other, rousing them up to overthrow that empire. Four of these trumpets are sounded in the eighth chapter.

At the sounding of the first trumpet, Alaric and his Goths invade the Roman empire, besiege Rome twice, and set it on fire in several places. See ROME. At the sounding of the second, At tila and his Huns waste the Roman provinces, and compel the eastern emperor Theodosius II., and the western emperor Valentinian III., to submit to shameful terms. At the sounding of the

third, Genseric and his Vandals arrive from

Africa, ; spoil and plunder Rome, and set sail

again with immense wealth and innumerable cap-

tives. See ROME. At the sounding of the fourth

trumpet, Odoacer and the Heruli put an end to

the very name of the western empire. See ROME.

Theodoric founds the kingdom of the Ostrogoths

in Italy ; and at last Italy becomes a province of the eastern empire, Rome being governed by a

duke under the exarch of Ravenna. See ITALY.

As the foregoing trumpets relate chiefly to the

downfal of the western empire, so do the two

following to that of the eastern. They are sounded

in the ninth, tenth, and part of the eleventh chap-

.era. At the sounding of the fifth trumpet, Ma-

homet, that blazing star, appears, opens the bot-

tomless pit, and with his locusts, the Arabians,

darkens the sun and air. At the sounding of the

sixth, a period not yet finished, the four angels,

that is, the four sultans, or leaders of the Turks and Othmans, are loosed from the river Eu-

phrates. The Greek or Eastern empire was cruelly

- *hurt and tormented ‘ under the fifth trumpet ;*

but under the sixth it was ‘ slain,’ and utterly

destroyed

The Latin or Western church not being re-

claimed by the ruin of the Greek or Eastern, but

still persisting in their idolatry and wickedness ;

at the beginning of the tenth chapter, and under

the sound of the sixth trumpet, is introduced a

vision preparative to the prophecies respecting

the Western church, wherein an angel is repre-

sented, having in his hand a little book, or codi-

cil, describing the calamities that should overtake

that church. The measuring of the temple shows,

that during all this period there will be some true Christians, who will conform themselves to the

rule of God’s word, even whilst the outer court,

that is, the external and more extensive part of

this temple or church, is trodden under foot by

Gentiles, i.e. such Christians as, in their idolatrous worship and persecuting practice, resemble and

outdo «.he Gentiles themselves. Yet against these

corrupters of religion there will be always some

•.rue witnesses to protest, who, however they may

be overborne at times, and in appearance reduced

to death, yet will arise again from time to time, till at last they triumph and gloriously ascend. The

eleventh chapter concludes with the sounding of

the seventh trumpet.

In the twelfth chapter, by the woman bearing

a man-child is to be understood the Christian

church ; by the great red dragon, the heathen

Roman empire; by the man-child whom the wo-

man bore, Constantine the Great; and by the

war in heaven, the contests between the Christian

and Heathen religions.

In the thirteenth chapter, by the beast with se-

ven heads and ten horns, unto whom the dragon

gave his power, seat, and great authority, is to

be understood not Pagan but Christian, not im-

perial but papal Rome ; in submitting to whose

religion, the world did in effect submit again to

the religion of the dragon. The ten-horned beast,

therefore, represents the Romish church and state

in general ; but the beast with two horns like a

lamb is the Roman clergy ; and that image of

the ten-horned beast, which the two horned

beast caused to be made, and inspired with life,

is the pope ; whose number is 666, accord intr to the numerical powers of the letters constituting

the Roman name Aar«voc> Latinus, or its equi.

valent in Hebrew, n«Dn Romiith.

A 30 200 1

A 1

T 300

It 5

1 10

N 60

0 70

2 200

666

10

400 n

666

Chap. xvi. By the lamb 6n Mount Sion is meant Jesus; by the 144,000 his church and followers ; by the angel preaching his everlasting gospel, the first principal effort made towards a reformation by that public opposition formed against the worship of saints and images by emperors and bishops in the eighth and ninth centuries ; by the angel crying, « Babylon is fallen,' the Waldenses and Albigenses, who pronounced the church of Rome to be the Apocalyptic Babylon, and denounced her destruction ; and by the third angel, Martin Luther, and his fellow reformers, who protested against all the corruptions

of the church of Rome, as destructive to salva-

tion.

The following very excellent canons of inter-

pretation, in respect to this hook, have been re

cently proposed by Dr. Woodhouse, who has

himself, applied them with great success to its

exposition : —

1. Compare the language, the symbols, and

the predictions of the Apocalypse with those of

former revelations ; and admit only such inter-

pretation as shall appear to have the sanction of

'this divine authority.

**2. Unless the language and symbols of the*

Apocalypse should in particular passages direct,

or evidently require, another mode of applica-

tion, the predictions are to be applied to the pro-

gressive church of Christ.

3. The kingdom which is the subject of this

prophetic book is not a temporal, but a spiritual

kingdom ;—»' not a kingdom of this world ; ' not

established by the means and apparatus of

worldly pomp, not bearing the external ensigns

of royalty ; but governing the inward man, by

possession of the ruling principles : ' the king-

dom of God,' says our Lord, ' is within you.' Luke xvii. 21. The predictions relative to this kingdom, therefore, are to be spiritually interpreted. Wars, conquests, and revolutions, and vast extent and great political import, are not the object of the Apocalyptical prophecies, unless they appear to have promoted or retarded in a considerable degree the real progress of the religion of Jesus Christ, whose proper reign is in the hearts and consciences of his subjects. His reign is advanced when Christian principles, ' when faith, and righteousness, and charity abound. It is retarded when ignorance, impurity, idolatrous superstition, and wickedness prevail.

4. We are not to attempt the particular explanation of those prophecies which remain to be fulfilled.

For an account of the doctrines and precepts contained in the Scriptures, see THEOLOGY.

We cannot conclude this article more satisfactorily to our own minds, nor to that, we would hope, of a large majority of our readers, than in the admirable remarks of Dr. Chalmers on the

‘ If the New Testament be a message from God, it behoves us to make an entire and unconditional surrender of our minds, to all the duty and to all the information which it sets before us. There is, perhaps, nothing more thoroughly beyond • the cognizance of the human faculties than the truths of religion, and the ways of tha

mighty and invisible Being who is the object of it ; and yet nothing, we will venture to say, has been made the subject of more hardy and adventurous speculation. We make no allusion at present to Deists, who reject the authority of the New Testament because the plan and the dispensation of the Almighty, which is recorded there, is different from that plan and that dispensation which they have chosen to ascribe to him. We speak of Christians who profess to admit the authority of this record, but who have tainted the purity of their profession by not acting upon its exclusive authority ; who have mingled their own thoughts and their own fancy with

its information ; who, instead of repairing in every question, and in every difficulty, to the principle of IV hat reddest thou ?' have abridged the sovereignty of this principle, by appealing to others, of which we undertake to make out the incompetency ; who, in addition to the word of God, talk also of the reason of the thing, or the standard of orthodoxy ; and have in fact brought down the Bible from the high place which belongs to it, as the only tribunal to which the appeal should be made, or from which the decision should be looked for.

' It is not merely among partizans or the advocates of a system that we meet with this indifference to the authority of what is written. It lies at the bottom of a great deal of that looseness, both in practice and speculation, which we meet with every day in society, and which we often hear expressed in familiar conversation. Whence that list of maxims which are so indolently conceived, but which, at the same time, are so faithfully proceeded upon ? ' We have all our passions and infirmities; but we have honest hearts, and that will make up for them. Men are not all cast in the same mould. God

will not call us to task too rigidly for our foibles; at least this is our opinion, and God can never

be so unmerciful, or so unjust, as to bring us to a severe and unforgiving tribunal for the mistakes

of the understanding.' Now, it is not licentious-

ness in general, which we are speaking against.

It is against that sanction which it appears to

derive from the self-formed maxims of him who

is guilty of it. It is against the principle that

either an error of doctrine, or an indulgence of

passion, is to be exempted from condemnation,

because it has an opinion of the mind to give

it countenance and authority. What we com-

plain of is, that a man no sooner sets himself

forward and says, ' this is my sentiment,' than

he conceives that all culpability is taken away

from the error, either of practice or speculation,

into which he has fallen. The carelessness with

which the opinion has been formed is of no ac-

count in the estimate. It is the mere existence

of the opinion which is pleaded in vindication,

and under the authority of our maxim, and our

mode of thinking, every man conceives himself

to have a right to his own way and his own pe-

culiarity.

‘ Now this might be all very fair were there no

Bible and no revelation in existence. But it is

not fair that all this looseness, and all this varie-

ty, should be still floating in the world, in the

face of an authoritative communication from God

himself. Had no message come to us from the

fountain-head of truth, it were natural enough for

every individual mind to betake itself to its own

speculation. But a message has come to us,

bearing on its forehead every character of au-

thenticity ; and is it right now, that the question of our faith, or of our duty, should be committed

to the capricious variations of this man’s taste,

or of that man’s fancy? Our maxim, and our

sentiment ! God has put an authoritative stop

to all this. He has spoken, and the right or the

liberty of speculation no longer remains to us.

The question now is not ‘ What thinkest thou?’

In the days of Pagan antiquity no other ques-

tion could be put ; and the wretched delusions

and idolatries of that period let us see what kind of answer the human mind is capable of making,

when left to its own guidance, and its own au-

thority. But we call ourselves Christians, and

profess to receive the Bible as the directory of

our faith ; and the only question in which we are concerned is, ‘ What is whiten in the law? how readest thou ?’

‘ Instead of learning the designs and character of the Almighty from his own mouth, we sit in judgment upon them ; and make our conjecture of what they should be take the precedency of his revelation of what they are. We do Him the same injustice that we do to an acquaintance, whose proceedings and whose intentions we venture to pronounce upon, while we refuse him a hearing, or turn away from the letter in which he explains himself. No wonder, then, at the want of unanimity among Christians, so long as the question of ‘ what thinkest thou?’ is made the principle of their creed, and, for the safe guidance of criticism, they have committed themselves to the endless caprices of the human intellect. Let the principle of ‘ what thinkest thou ?’ be exploded, and that of ‘ what readest thou?’ be substituted in its place. Let us take our lesson as the Almighty places it before us, and, instead of being the judge of his conduct, be satisfied with the safer and humbler office of

being the interpreter of his language.

‘ This principle is not exclusively applicable to the learned. The great bulk of Christians have no access to the Bible in its original languages; but ihey have access to the common translation, and they may be satisfied, by the concurrent testimony of the learned among the different sectaries of this country, that the translation is a good one. We do not confine the principle to critics and translators ; we press it upon all. We call upon them not to form their divinity by independent thinking, but to receive it by obedient reading, to take the words as they stand, and submit to the plain English of the Scriptures which lie before them. It is the office of a translator to give a faithful representation of the original. Now that this faithful representation has been given, it is our part to peruse it with care, and to take a fair and a faithful impression of it. It is our part to purify our understanding of all its previous conceptions. We must bring a free and unoccupied mind to ihe exercise. It must not be the pride or the obstinacy of self-formed opinions, or the haughty independence of him who thinks he has reached

tne manhood of his understanding. We must

bring with us the docility of a child, if we want to gain the kingdom of heaven. It must not be

a partial, but an entire and unexcepted obedience.

There must be no garbling of that which is en-

tire, no darkening of that which is luminous, no

softening down of that which is authoritative or

severe. The Bible will allow of no compromise.

It professes to be the directory of our faith, and claims a total ascendency over the souls and the

understandings of men. It will enter into no

composition with us or our principles. It

challenges the whole mind as its due, and it

appeals to the truth of heaven for the high au-

thority of its sanctions. ‘ Whosoever addeth to,

or taketh from, the words of this book, is accur-

sed,’ is the absolute language in which it delivers

itself. This brings us to its terms. There is no

way of escaping after this. We must bring

every thought into the captivity of its obedience,

and, as closely as ever lawyer stuck to his docu-

ment or his extract, must we abide by the rule

and the doctrine which this authentic memorial

of God sets before us. Now we hazard the assertion, that with a number of professing Christians there is not this unexcepted submission of the understanding to the authority of the Bible; and that the authority of the Bible is often modified, and in some cases superseded, by the authority of other principles.

‘ But is not this an enlightened age? he afterwards asks, and, since the days of the gospel, has not the wisdom of 2000 years accumulated upon the present generation? has not science been enriched by discovery? and is not theology one of the sciences. Are the men of this advanced period to be restrained from the high exercise of their powers ? and, because the men of a remote and barbarous antiquity lisped and drivelled in the infancy of their acquirements, is that any reason why we should be restricted like so many schoolboys to the lesson that is set before us ? It is all true that this is a very enlightened age, but on what field has it acquired so flattering a distinction ? On the field of experiment. The human mind owes all its progress to the confinement of its efforts within the

safe and certain limits of observation, and to the severe restraint which it has imposed upon its speculative tendencies. Go beyond these limits, and the human mind has not advanced a single inch by its own independent exercises. All the philosophy which has been reared by the labor of successive ages is the philosophy of facts reduced, to general laws, or brought under a general description from observed points of resemblance. A proud and a wonderful fabric we do allow ; but we throw away the very instrument by which it was built the moment that we cease to observe, and begin to theorise and excogitate. Tell us a single discovery which has thrown a panicle of light on the details of the divine administration. Tell us a single truth, in the whole field of experimental science, which can bring us to the moral government of the Almighty by any other road than his own revelation.

‘ We do all homage to modern science, nor do we dispute the loftiness of its pretensions. But we maintain that, however brilliant its career in those tracts of philosophy where it

has the light of observation to conduct it, the

philosophy of all that lies without the field of

observation is as obscure and inaccessible as

ever. We maintain that, to pass from the mo-

tions of the moon to an unauthorised specu-

lation upon the chemistry of its materials, is a

presumption disowned by philosophy. \ \ >

ought to feel that it would be a still more glaring transgression of all her maxims, to pass from the

brightest discovery in her catalogue, to the ways

of that mysterious Being whom no eye hath

seen, and whose mind is capacious as infinity.

The splendor and the magnitude of what we do

know can never authorise us to pronounce upon

what we do not know ; nor can we conceive a

transition more violent, or more unwarrantable,

than to pass from the truths of natural science to a speculation on the details of God's administra-

tion, or the economy of his moral government.

We hear much of revelations from heaven. Let

any one of these bear the evidence of an actual

communication from God himself, and all the

reasonings of all the theologians must vanish, and

give place to the substance of this communication.

Instead of theorising upon the nature and proper-

ties of that divine light which irradiates the throne of God, and exists at so immeasurable a distance

from our faculties, let us point our eyes to that

emanation which has actually come down to us.

Instead of theorising upon the counsels of the

divine mind, let us go to that volume which

lighted upon our world nearly 2000 years ago,

and which bears the most authentic evidence

that it is the depository of part of these coun-

sels. Let us apply the proper instrument to

this examination. Let us never conceive it to be

a work of speculation or fancy. It is a pure

work of grammatical analysis. It is an unmixed

question of language. The commentator who

opens this book with the one hand, and carries

his system in the other, has nothing to do with it.

We admit of no other instrument than the voca-

bulary and the lexicon. The man whom we

look to is the Scripture critic, who can appeal to his authorities for the import and significancy of

phrases, and, whatever be the strict result of his

patient and profound philology, we submit to it.

We call upon every enlightened disciple of lord

Bacon to approve the steps of this process, and

to acknowledge that the same habits of philoso-

phising to which science is indebted for all her

elevation in these latter days, will lead us to

cast down all our lofty imaginations, and bring

into captivity every thought to the obedience of

Christ.

SCR

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SCRIVENER, it. s. Fr. escrivnin; Lat. scri-

vano. One who draws contracts among brokers.

We'll pass the business privately and well :

Send for your daughter by your servant here,

5Iy boy shall fetch the scrivener.

Shttkipeiire. Taming of the Shrew.

Yet certain though it be, it hath flaws ; for that the scriveners and brokers do value unsound men to

serve their own turn Boeon't Essays.

How happy in his low degree.

Who leads a quiet country life,

And from the griping scrivener free !

DrydtrCt Horace.

I am reduced to beg and borrow from scriveners

and usurers, that suck the heart and blood.

Arbuthnot's History of John Bull.

A SCRIVKXER, if entrusted with a bond, may

receive the interest: and, if he fails, the obligee shall bear the loss : and so it is if he receive the principal and deliver up the bond ; for, being

entrusted with the security itself, it must be pre-

sumed that he is trusted with power to receive

interest or principal ; and the giving up the

bond on payment of the money shall be a dis-

charge thereof. But, if a scrivener shall be en-

trusted with a mortgage-deed, he hath only

authority to receive the interest, not the prin-

cipal, and the giving up the deed in this case is

not sufficient to restore the estate, but there

must be a reconveyance, &c. It is held, where

a scrivener puts out his client's money on a bad

security, which upon enquiry might have been

easily found so, yet he cannot in equity be charged to answer for the money ; for it is here said, no one would venture to put out money of another upon a security, if he were obliged to warrant and make it good in case a loss should happen, without any fraud in him.

SCRIVER1US (Peter), a learned Dutch author, born at Haerlem, in 1590. He wrote 1. Batavia lllustrata; 2. Notes upon Aquilius's Chronicum Geldricum ; 3. Some other works upon the Antiquities of the United Provinces, lie also corrected a copy of Vegetius ; and died in 1653, aged sixty-three.

SCROFANELLO, in ichthyology, a name •which some have given to a small fish of the Mediterranean more usually known by the name of scorpwna.

SCROF1JLA,n. s.) Lat. scrofa, a sow, as

SCROF'ULOUS, adj. J Or. xotpac. A depravation of the humors of the body, which breaks out in sores ; commonly called the king's evil : the adjective corresponds.

Scrofulous persons can never be duly nourished >

for such as have tumours in the parotides often have them in the pancreas and mesentery.

Arbuthiiot on Aliments.

English consumptions generally proceed from a

scrofulous disposition. Arlulhnot.

If matter in the milk dispose to coagulation, it

produces a scrofula. Wiseman of Tumours.

What wouffl become of the race of men in the

next age, if we had nothing to trust to, beside the icroftilous consumptive production furnished by our

men of wit and pleasure ? Swift.

ScRort'LA. See MEDICINE.

SCROLL, w. s. By Minsheu supposed to be

corrupted from roll; by Skinner from znescrotille

given by the heralds; whence parchment,

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wrapped up in a similar form, has the same

name. A writing wrapped up.

His chamber all was hanged about with rolls,

And old records from ancient times deriv'd ;

Some made in books, some in long parchment scrolls, That were all worm-eaten, and full of canker-holes.

Spenser.

A Numidian priest, bellowing out certain super-

stitious charms, cast divers scrolls of paper on each side the way, wherein he cursed and banned the

Christians. Knolles.

We'll add a royal number to the dead,

Gracing the scroll that tells of this war's loss,

With slaughter coupled to the name of kings.

Shahxpeare.

Here is the scroll of every man's name, which is

thought fit through all Athens to play in our inter-

lude. Id.

He drew forLh a scroll of parchment, and delivered

it to our foremast man. Bacon.

Such follow him as shall be registered ;

Part good, part bad : of bad the longer scroll.

Milton.

With this epistolary scroll,

Receive the partner of my inmost soul. Prior.

SCROON, a lake of the state of New York,

United States. Twelve miles west of George

Lake, eight miles long, and one broad.

SCROON, a river of the United States, in New

York, the north-east branch of the Hudson. It

runs from Scroon Lake into the Hudson, and has

several falls.

SCROPHULA. See MEDICINE.

SCROPHULARIA, figwort, in botany, a

genus of the angiospermia order, and didynamia

class of plants ; natural order fortieth, per-

sonatae : CAL. quinquefid : COR. almost globose, and resupinated : CAPS, biloculated. There are several species, of which the most remarkable are these : —

1 . S. aquatica, water figwort or betony. The root is fibrous ; stem erect, square, about four feet high. The leaves are opposite, elliptical, pointed, slightly scalloped, on decurrent foot-stalks. Flowers purple, in loose naked spikes. It grows on the sides of rivulets and other wet, places, and has a fetid smell. The leaves are used in medicine as a corrector of senna.

2. S. nodosa, or the common figwort, which grows in woods and hedges. The root is tu-brous ; the stalks are four or five feet high, and branched towards the top ; the leaves are heart shaped, serrated, and acute. The flowers are of a dark red color, shaped like a cap or helmet ; the lower lip greenish : they grow in loose dichotomous spikes or racemi at the top of the branches. The leaves have a fetid smell and bitter taste. An ointment made of the root was formerly used to cure scrofulous sores, but is at present out of practice.

3. S. scorodonia, or balm-leaved figwort. The

stem is erect, square, about two feet high. The leaves are opposite, doubly serrated. The flowers are dusky purple, in composite bunches. It crows on the banks of rivulets, &c., in Cornwall.

4. S. vernal is, or yellow figwoit. The stalks are square, hairy, brown, about two feet high. The leaves are heart-shaped, roundish, hairy, in«-dented, opposite. The flowers are yellow, ojj

Dingle forked foot-stalks from the ala? of the leaves. It grows in hedges in Surry.

SCROYLE, n. s. Fr. escroudle. A scrofulous swelling; a mean fellow ; a rascal ; a scabby wretch.

The scroyles of Anglers flout you kings,
And stand securely on their battlements,
As in a theatre. Shaksjeare. King John.

SCRUB, v. a. & n. s. j Belgic schrobben ;

SCRUB'BED, % Swed. skrubba. To

SCRUB'BY, adj. j rub hard with some-

thing coarse : a mean fellow ; any thing mean :

the adjective corresponding.

I gave it to a youth,

A kind of boy, a little tcrubbed boy,

No higher than thyself.

Shahtpeare. Merchant of Venice.

Such wrinkles as a skilful hand would draw

For an old grandam ape, when with a grace

She sits at squat, and scrub her leathern face.*

Dryden.

She never would lay aside the use of brooms and

scrubbing brushes. Arbuihnot.

Now Moll had whirled her mop with dexterous

Prer

airs,

m stairs. Swift.

y vault shall be

repar'd to scrub the entry and the

With a dozen large vessels m

stor'd j

No little scrub joint shall come on my board. Id.

The scene a wood, produced no more

Than a few scrubby trees before. Id.

SCRUB, one of the smaller Virgin Islands of

the West Indies, to the east of the north extre-

mity of Tortola, on which it depends. Long.

62° 57′ E., lat. 18° 25′ N.

SCRU'PLE, n. s. &v.n.\ French scru-

SCRUPULOSITY, (pule; Lat. scrupu-

SCRU'PDLOUS, adj. > lus. Doubt ; diffi-

SCRC'PULOUSLY, adv. i culty of determina-

SCRO'PULOUSNESS, n. s.) tion; perplexity :

the third part of a dram ; any small quantity :

scrupulosity also means doubt, state of, or dispo-

sition to doubt ; minute exactitude : the other

derivatives follow this sense.

The one sort they warned to take heed, that scru-

pulotity did not make them rigorous in giving unad-

vised sentence against their brethren which were

free ; the other, that they did not become scandalous by abusing their liberty and freedom, to the offence of their weak brethren, which were tmipulout.

Hooker.

Macduff, this noble passion,

Child of integrity, hath from my soul

Wiped the black scruples, reconciled my thoughts

To your good truth. Shaktpeare. Macbeth.

Equality of two domestic powers

Breeds tcrvpulous faction. Id. Antony and Cleopatra.

Nothing did more fill foreign nations with admi-

ration of his succession, than the consent of all es-

tates of England for the receiving of the king with-

out the least temple, pause, or question. Bacon.

Milk, one ounce, oil of vitriol a scruple, doth coa-

gulate the milk. Id.

As the cause of a war ought to be just, so the jus-

tice of that cause ought to be evident ; not obscure not scrupulous. Id.

The first sacrilege is looked on with horror : but, when they have made the breach, their scrupulosity

soon retires. Decay of Piety.

For the matter of your confession, let it be severe and serious ; but yet so as it may be without any in-

ordinate anxiety, and unnecessary scruples, which

only entangle the soul. Taylor.

I le scrupled not to eat

Against his better knowledge ; not deceived,

But fondly overcome with female charms.

Milton's Paradise Lor. .

The scruples which many public ministers would

make of the worthiness of parents to have their chil-

dren baptized, forced such questioned parents, who

did not believe the necessity of having their children baptized by such scruplers, to carry their children

unto other ministers. Grawit's Bills of Mortality.

Men make no temple to conclude that those propo-

sitions, of whose knowledge they can find in them-

selves no original, were certainly the impress of God and nature upon their minds, and not taught them

by any one else. Locke.

Some birds, inhabitants of the waters, whose

blood is cold as fishes, and their flesh is so like in taste, that the scrupulous are allowed them on fish days. Id.

So careful, even to scrupulosity, were they to keep their sabbath, that they must not only have a time to prepare them for that, but a further time also to pre-

pare them for their very preparations. South.

Henry V. manifestly derived his courage from his

piety, and was scrupulously careful not to ascribe the success of it to himself. Addison'i Freeholder.

I have been the more scrupulous and wary, in re-

gard the inferences from these observations are of

importance. Woodward.

Dubius is such a scrupulous good man,

Yes — you may catch him tripping, if you can.

He would not, with a peremptory tone,

Assert the nose upon his face his own. Cau-per.

SCRUPLE, among goldsmiths, twenty-fou.-

grains.

SCRUPLE, in Chaldean chronology, is ˆ part

of an hour, called by the Hebrews helakin.

These scruples are much used by Arabs and

other eastern nations, in computation of time.

SCRUPULUM, or SCKUPULUS, Latin, a scru-

ple; the least of the weights used by the an-

cients, which, among the Romans, was the

twenty-fourth part of an ounce, or the third part

of a dram.

SCRUTABLE, idj. J Lat. scrutor. Disco-

SCRUTA'TOR, n. s. i verable by enquiry ; an

enquirer or searcher.

Shall we think God so \crutable, or ourselves s»

penetrating, that none of his secrets can escape us?

Decay of' Piety.

In process of time, from being a simple scrutator,

an archdeacon became to have jurisdiction more

amply. Ayliffe.

*SCRUTINY, n. *. » Lat. scrutinium. En-*

SCRU'TINISE, v. a. >quiry ; search ; examina-

SCRU'TINOUS, adj. j tion with nicety : to

search; examine: captious; careful.

In the scrutinies for righteousness and judgment,

when it is inquired whether such a person be a good man or no, the meaning is not, what does he be-

lieve or hope, but what he loves.

Taylor' Rule of Holy Living.*

Age is froward, uneasy, scnttinoti,*

Hard to be pleased, and parsimonous. Denham.

Their difference to measure, and to reach.

Reason well rectified must nature teach •

And these high scrutiniet are subjects fit

For man's all-searching and enquiring wit. Id

I thought thee worth my nearer view

And narrower scrutiny, that I might learn

In what degree or meaning thou art called

The Son of God. Milton's Paradite Regained

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They that have designed exactness and deep acru-

Jt;iy, have taken some one part of nature. Hnle.

We are admonished of want of charity towards

others, and want of a Christian scrutiny and exami-

nation into ourselves. L'Eitnaigp.

These, coming not within the scrutiny of human

senses, cannot be examined by them, or attested by

any body. Locke.

The compromissarii should chuse according to the

votes of such whose votes they were obliged to scru-

linize. Auli/e.

When any argument of great importance is ma-

naged with that warmth which a serious conviction

of it generally inspires, somewhat may easily escape, even from a wary pen, which will not bear the test of a severe scrutiny. Atterbury.

SCRUTINY (scrutinium), in the early ages of the church an examination or probation practised in the last week of Lent, on the catechumens, who were to receive baptism on the Easter-day. The scrutiny was performed with a great many ceremonies. Exorcisms and prayers were made over the heads of the catechumens ; and, on Palm Sunday, the Lord's Prayer and Creed were given them, which they were afterwards made to rehearse. This custom was more in use in the church of Rome than any where else : though it appears by some missals, to have been likewise used, though much later, in the Gallican church. Tt is supposed to have ceased about A. D. 860.

SCRUTINY is also used, in the canon law, for a ticket, or little paper billet, wherein at elections the electors write their votes privately, so as it may be known for whom they vote. Among us the term scrutiny is chiefly used for a strict perusal and examination of the several votes hastily taken at an election ; in order to find out any irregularities committed therein, by unqualified voters, &c.

SCRUTOIRE', n. s. Fr. scritoire, or escri-

toire. A case of drawers for writings.

I locked up these papers in my scrutoire, and my

scrutoire came to be unlocked. Prior.

SCRUZE, v.a. Perhaps from screw. This

word, says Johnson, though now disused by

writers, is still preserved, in its corruption, to

scrouge, in the London jargon. To squeeze ;

compress.

Though up he caught him 'twixt his puissant

hands,

And having scruzed out of his carrion corse

The loathful life, now loosed from sinful bands,

Upon his shoulders carried him. Faerie Queene.

SCUD, v.n. Ital. squittire ; Swed. skutta ;

Isl. skictur, swift; Goth, skiota. To fly; run

away with precipitation.

The frighted satyrs, that in woods delight,

Now into plains with pricked-up ears take flight ;

And scudding thence, while they their horn-feet ply, About their sires the little sylvans cry. Dryden.

The vote was no sooner passed, but away they

scudded to the next lake. L'Etirange.

Away the frighted spectre scuds,

And leaves my lady in the suds. Swift.

SCUDDING, the movement by which a ship is carried precipitately before a tempest. As a ship flies with amazing rapidity through the water whenever this expedient is put in practice, it is never attempted in a contrary wind, unless when her condition renders her incapable of sustaining the mutual efforts of the wind and waves any longer on her side. A ship either scuds with a sail extended on her fore-mast, or, if the storm is excessive, without any sail ; which, in the sea-phrase, is called scudding under bare poles. In sloops and schooners, and other small vessels, the sail employed for this purpose is called the square sail. In large ships it is either the fore-sail at large reefed, or with its goose-wings extended, according to the degree of the tempest ; or it is the fore-top-sail, close reefed, and lowered on the cap ; which last is particularly used when the sea runs so high as to becalm the foresail occasionally, a circumstance which exposes the ship to the danger of broaching-to. The principal hazards incident to scudding are generally, a pooping sea ; the difficulty of steering, which exposes the vessel perpetually to the risk of broaching-to ; and the want of sufficient sea-

room. A sea striking the snip violently on the stern may dash it inwards, by which she must inevitably founder. In broaching-to (that is, inclining suddenly to windward) she is threatened with being immediately overturned ; and, for want of sea-room, she is endangered by shipwreck on a lee-shore, a circumstance, alas, of too frequent occurrence to require explanation.

SCUDERY (George), de, an eminent French writer, descended of an ancient and noble family in Provence, and born at Havre de Grace in 1603. He was educated at Apt, and afterwards settled at Paris. In 1638 he published Observations on the Cid of Cornell. He afterwards wrote several dramatic pieces, poems of various kinds, and some tracts in prose. He was appointed governor of the castle of Notre Dame de la Garde, near Marseilles ; and, in 1650, was admitted a member of the Royal Academy. He died at Paris 1667.

SCUDERY (Magdalene), de, sister of George, was born at Havre de Grace, in 1607, and became eminent for her writings. She went early to Paris, and soon became a very voluminous

writer; and published many romances which sold rapidly. Her abilities were reckoned superior to her brother's ; the celebrated Academy of the Ricovrati at Padua admitted her an honorary member, and she succeeded the learned Helena Cornaro. She also received the first prize for eloquence given by the academy. She received many valuable presents from several great personages. She died in 1 70 1 , aged ninety-four, and two churches contended fiercely for the honor of receiving her remains ; and it required no less authority than that of cardinal de Noailles to decide the dispute.

SCUF'FLE, n. s. & v. n. Derived by Skinner from shuffle. But there is a Swed. skuffaˆ and Goth, skiufa. A confused quarrel; tumultuous broil ; to fight in confusion.

His captain's heart,
In the scuffle of great fights, hath burst
The buckles on his breast.
Shalapeare. Antony and Cleopatra..

Avowed atheists, placing themselves in the seat of the scorner, take much pleasing drvertisement, by deriding our eager sniffles about that which they think nettling. Decay of Piety.

SCULPTURE.

I must confess I've seen in former days

The best knights in the world, and scujflled in some frays. Drat/tun.

A gallant man would rather fight to great disad-

vantages in the field, in an orderly way, than scuffle with an undisciplined rabble. King Charles.

The dog leaps upon the serpent, and tears it to

pieces ; but in the scuffle the cradle happened to be overturned. L' Estrange.

Popish missionaries mix themselves in these dark

scuffles, and animate the mob to such outrages and

insults. Addison.

SCULK, v. n. Dan. sculcke ; Swed. skulka;

Goth, skiula. To lurk in hiding-places ; lie

close.

Fearing to be seen, within a bed

Of coleworts he concealed his wily head ;

There iculked till afternoon, and watched his time.

Dryden.

It has struck on a sudden into such a reputation,

at it scorns any longer to sculk, but owns itself

ublicly. Government of the Tongue.

My prophets and my sophists finished here

Their civil efforts of the verbal war :

Not so my rabbins and logicians yield ;

Retiring still they combat ; from the field

Of open arms unwilling they depart,

And sculk behind the subterfuge of art.1 Prior.

No news of Phyl ! the bridegroom came,

And thought his bride had srulked for shame ;

Because her father used to say,

The girl had such a bashful way. Swift.

SCULL, n. i. Sax. rcpul. Derived by Ski n-

ier from shell, and in some provinces called

shull. Mr. Lye observes more satisfactorily that

skola is 'in Islandic the skull of an animal. —

Johnson. It is clearly derived from Goth, shot,

skal. The bone which incases and defends the

brain.

Fractures of the $cull are at all times very dange-

rous, as the brain becomes affected from the pressure.

Sharp.

SCULL, n.s. Sax. j-ceole, an assembly. In

Milton's style, a shoal or vast multitude of fish.

Each bay

With fry innumerable swarm, and shoals

Of fish, that with their fins and shining scales

Glide under the green wave, in sculls that oft

Bank the mid sea. Milton.

Like caitiff vile, that for misdeed

Rides with his face to rump of steed ;

Or rowing scutt, he's fain to love,

Look one way and another move. Hudibrat. '

Her soul already was consigned to fate,

And shivering in the leaky sculler sate. Dryden.

They hire the sculler, and, when once abroad.

Grow sick, and damn the climate like a lord. Pope.

- SCULL'CAP, 7i. s. Scull and cap. A head-

piece; nightcap.

SCULL'ERY, n. s. Fr. escueille, a dish ; Isl.

skiolo, a vessel. The place where common

utensils, as kettles or dishes, are cleaned and

kept.

I must, like a whore, unpack my heart with won!'

And fall a-cursing like a very drab,

A scullion, fye upon 't ! foh ! about my brain.

Slialupeare. Hamlet.

Pyreicus was famous for counterfeiting base things,

as pitchers, a tcuLlery, and setting rogues together by the ears. Peacham.

If the gentleman hath lain there, get the cook, the stable-men, and the scullion, to stand in his way.

Siirift.

SCULPTURE.

SCULP, v. a. -\ Fr. sculper ; Lat.

SCULP'TILE, adj. tsculpo. To carve;

SCULP'TOR, n. s. £ engrave: sculptile

SCULP'TURE. n. s. & v. a. J is made by carving.

Words not in use. A sculptor is a carver of

wood or stone into images, busts, &c. : sculpture,

his art, see below : the verb corresponds in

meaning.

O that the tenor of my just complaint

Were sculpt with steel on rocks of adamant !

Sandys.

In a silver medal is upon one side Moses horned,

and on the reverse the commandment against sculp-

tile images. Browns.

Nor did there want

Cornice or freeze with bossy sculpture graven.

Milton.

There too, in living sculpture, might be seen

The mad affection of the Cretan queen. Dryden.

Thy shape's in every part

So clean, as might instruct the iculptor s art. Id.

The Latin poets give the epithets of trifidum and

triMilrum to the thunderbolt, from the sculptors and painters that lived before them, that had given it

three forks. Addison.

Then sculpture and her sister arts revive,

Stones leaped to form and rocks began to live.

Pope.

Gold, silver, ivory vases sculptured high,

There are wljo have not. Id.

HISTORY OF SCULPTURE.

SCULPTURE is an art of remote antiquity, being

practised, as there is reason to believe, before the general deluge. We are induced to assign to it

this early origin, by considering the expedients

by which, in the first stages of society, men have every where supplied the place of alphabetical

characters. These, it is universally known, have

been picture writing, such as that of the Mexi-

cans, which, in the progress of refinement and

knowledge, was gradually improved into the

hieroglyphics of the Egyptians and other ancient

nations. See HIEROGLYPHICS.

That mankind should have lived nearly 1700

years, from the creation of the world to the flood of Noah, without falling upon any method to

make their conceptions permanent, or to com-

municate them to a distance, is extremely im-

probable : especially when we consider that such

methods of writing have been found, in modern

times, among people much less enlightened than

those must have been, who were capable of building such a vessel as the ark. But, if the antediluvians were acquainted with any kind of writing, there can be little doubt of its having been hieroglyphical. Bryant has proved that the Chaldeans were possessed of that art before ths Egyptians; and Berosus CApud. Syncellum, p

87), informs us, that a delineation of all the monstrous forms which inhabited the chaos, when this earth was in that state, was to be seen in the temple of Belus in Babylon. This deli-neation, as he describes it, must have been a history in hieroglyphical characters ; for it con-sisted of human figures with wings, with two heads, and some with the horns and legs of goats. This is exactly similar to the hierogly-phical writings of the Egyptians ; and it was preserved, our author says, both in drawings and engravings in the temple of the god of Babylon. As Chaldea was the first peopled region of the earth after the flood, and as it appears from Pliny, as well as from Berosus, that the art of engraving upon bricks baked in the sun was

there carried to a considerable degree of perfec-

tion at a very early period, the probability cer-

tainly is that the Chaldeans derived the art of

hieroglyphical writing, and consequently the ru-

diments of the art of sculpture, from their ante-

diluvian ancestors.

It is generally thought that sculpture had

its origin from idolatry, as it was found neces-

sary to place before the people the images of

their gods to enliven the fervor of their devotion ; but this is probably a mistake. The worship of

the heavenly bodies, as the only gods of the

heathen nations, prevailed so long before the dei-

fication of dead men was thought of (see POLY-

THEISM) that we cannot suppose mankind to

have been, during all that time, ignorant of the

art of hieroglyphical writing. But the deifica-

tion of departed heroes undoubtedly gave rise to

the almost universal practice of representing the

gods by images of a human form ; and therefore

we must conclude that the elements of sculpture

were known before that art was employed to en-

liven the devotion of idolatrous worshippers.

The pyramids and obelisks of Egypt, which

were probably temples, or other altars, dedicated

to the sun (see PYRAMID), were covered from

top to bottom with hieroglyphical emblems of

men, beasts, birds, fishes, and reptiles, at a period prior to that in which there is any unexception-

able evidence that mere statue worship prevailed

even in that nursery of idolatry. Thus it appears

evident that picture-writing was the first employ-

ment of the sculptor ; and that idolatrous worship

contributed to carry his art to that perfection

which it attained in some of the nations of antiquity .

Even in the dark ages of Europe, when the other

fine arts were almost extinguished, the mummery

of the church of Rome, and the veneration which

she taught for saints and martyrs, preserved

among the Italians some vestiges of the sister

arts of sculpture and printing ; and therefore it

is reasonable to believe that a similar veneration

for heroes and demigods would, among the an-

cient nations have a similar effect. The pre-

sumption therefore is, that the Chaldeans were

the first who invented the art of hewing blocks

of wood and stone into the figures of men and

other animals ; for the Chaldeans were unques-

tionably the first idolaters, and their early pro-

gress in sculpture is confirmed by the united

testimonies of Berosus, Alexander Polyhistor, Apollodorus. and Pliny ; not to mention the eastern tradition that Terah the father of Abraham was a statuary.

Against this conclusion Bromley, in his History of the Fine Arts, has urged some plausible objections. In stating these he professes not to be original, or derive his information from the fountain head of antiquity. He adopts, he says, the theory of a French writer, who maintains that in the year of the world 1949, about 300 years after the Deluge, the Scythians under Brouma, a descendant of Magog the son of Japhet, extended their conquests over the greater part of Asia. According to this System, Brouma \as not only the civiliser of India, and the author of the braminical doctrines, but also diffused the principles of the Scythian mythology over Egypt, Phoenicia, Greece, and the continent of Asia.

Of these principles Mr. Bromley has given us no distinct enumeration : the account which he gives of them is not to be found in one place, but to be collected from a variety of distant passages.

In attempting, therefore, to present the substance

of his scattered hints in one view, we will not be confident that we have omitted none of them.

The ox, says he, was the Scythian emblem of the generator of animal life, and hence it became the principal divinity of the Arabians. The serpent was the symbol of the source of intelligent nature. These were the common points of union in all the first religions of the earth. From Egypt the Israelites carried with them a religious veneration for the ox and the serpent. Their veneration for the ox appeared soon after they marched into the wilderness, when, in the absence of Moses, they called upon Aaron to make them gods which should go before them. The idea of having an idol to go before them, says our author, was completely Scythian ; for so the Scythians acted in all their progress through Asia, with this difference, that their idol was a living animal. The Israelites having gained their favorite god, which was an ox (not a calf, as it is rendered in the book of Exodus), next proceeded to hold a festival, which was to be accompanied with dancing; a species of gaiety common in the festivals which were held in adoration of the emblematic Urotal, or ox, in that

*very part of Arabia near Mount Sinai where this event took place. It is mentioned too, as a curious and important fact, that the ox, which was revered in Arabia was called Adonai. Accordingly Aaron, announcing the feast of the ox or golden calf, speaks thus, to morrow is a feast to Adonai, which is in our translation rendered to the Lord. In the time of Jeroboam we read of the golden calves set up as objects of worship at Bethel and Dan. Nor was the reverence paid to the ox confined to Scythia, to Egypt, and to Asia; it extended much farther. The ancient Cimbri, as the Scythians did, carried an ox of bronze before them on all their expeditions. Mr. Bromley also informs us that as great respect was paid to the living ox among the Greeks as was offered to its symbol among other nation's. The emblem of the serpent, continues Mr Bromley was marked yet more decidedly by thf express direction of the Almighty. That animal had ever been considered as emblematic of the supreme generating power of intelligent life nor was that idea, says lie, discouraged so far ;•.**

it went to bo a sign or symbol of life, when God said to Moses, ‘ Make thee a brazen serpent,

and set it upon a pole, and it shall come to pass that every one who is bitten, when he looketh

upon it, shall live.’ The serpent made a distin-

guished figure in Grecian sculpture. The fable

of Echidna, the mother of the Scythians, gave

her figure terminating as a serpent, to all the

founders of states in Greece ; from which their

earliest sculptors represented in that form the

Titan princes, Cecrops, Draco, and Erichthonius.

Besides the spear of the image of Minerva,

which Phidias made for the citadel of Athens,

he placed a serpent, which was supposed to

guard that goddess. The serpent was combined

with many other figures. It sometimes, was

coiled round an egg as an emblem of the crea-

tion ; sometimes round a trident to show its

power over the sea; sometimes it encircled a

flambeau, to represent life and death.

In Egypt, as well as in Scythia and India, the

divinity was represented on the leaves of the

tamara lotus. Their sphinxes, and all their com-

bined figures of animal creation, took their origin

from the mother of the Scythians, who brought

forth an offspring that was half a woman and

half a serpent. Their pyramids and obelisks

arose from the idea of flame ; the first emblems

of the supreme principle, introduced by the Scy-

thians, and which even the influence of Zoroaster

and the Magi could not remove.

The Bacchus of the Greeks is derived from

the Brouma of the Indians ; both are represented

as seated on a swan swimming over the waves,

to indicate that each was the god of humid na-

ture, not the god of wine, but the gorl of waters.

The mitre of Bacchus was shaped like half an

egg ; an emblem taken from this circumstance,

that at the creation the egg, from which all things sprung, was divided in the middle. Pan also

was revered among the Scythians ; and from

that people were derived all the emblems by

which the Greeks represented this divinity.

It would be tedious to follow our author

through the whole of this subject; and, were we

to submit to that labor, we should still view his

system with suspicion. It is drawn, he says,

from the work of M. D'Ancarvi-lle, entitled lle-

cherches sur 1'Origine, 1'Esprit, et les Progres,

des Arts de la Grece.

To form conclusions concerning the origin of nations, the rise and progress of the arts and sciences, without the aid of historical evidence, by analogies which are sometimes accidental, and often fanciful, is a mode of reasoning which cannot be admitted. There may, indeed, be resemblances in the religion, language, manners, and customs of different nations, so striking and so numerous, that to doubt of their being descended from the same stock would savor of scepticism. But historical theories must not be adopted rashly. We must be certain that the evidence is credible and satisfactory before we proceed to deduce any conclusions. We must first know whether the Scythian history itself be authentic, \ efore we make any comparison with the history of other nations. But what is called the Scy- : Man history, every man of learning knows tobe a collection of fables. Herodotus and Justin are the two ancient writers from whom we have the fullest accounts of that warlike nation ; but these two historians contradict each other, and both write what cannot be believed of the same

people at the same period of their progress.

Justin tells us that there was a long and violent

contest between the Scythians and Egyptians

about the antiquity of their respective nations ;

and after stating the arguments on each side of

the question, which, as he gives them (lib. ii. c.

1.), are nothing to the purpose, he decides in fa-

vor of the claim of the Scythians. Herodotus

was too partial to the Egyptians not to give then: the palm of antiquity ; and he was in the right,

for Justin describes this most ancient of nations,

even in the time of Darius Hystaspis, as igno-

rant of all the arts of civil life. ‘ They occupier, their land in common,’ says he, ‘ and cultivated

none of it. They had no houses nor settled ha-

bitations, but wandered with their cattle from

desert to desert. In these rambles they carried

their wives and children in tumbrels covered

with the skins of beasts, which served as houses

to protect them from the storms of winter. They

were without laws, but governed by the dictates of’

natural equity. They coveted not gold or silver

like the rest of mankind, and lived upon milk

and honey. Though they were exposed to ex-

treme cold, and had abundance of flocks, they

knew not how to make garments of wool, but clothed themselves in the skins of wild beasts.' This is the most favorable account which an ancient writer gives of the Scythians. By Strabo and Herodotus they are represented as the most savage of mortals, delighting in war and blood-shed, cutting the throats of all strangers who came among them, eating their flesh, and making cups and pots of their skulls. Is it conceivable that such savages could be sculptors ; or that, even supposing their manners to have been such as Justin represents them, a people so simple and ignorant could have imposed their mythology upon the Chaldeans, Phoenicians, and Egyptians, whom we know by the most incontrovertible evi-dence to have been great and polished nations so early as in the days of Abraham ? No ! We could as soon admit other novelties, with which the French of the present age pretend to en-lighten the world, as this origin assigned by Mr. Bromley to the art of sculpture.

The inference of our author from the name of the sacred ox in Arabia, and from the dancing and gaiety in the religious festivals of the Ara-

*bians, appears to be very hastily drawn. At the early period of the departure of the Israelites from Egypt, the language of the Hebrews, Egyptians, and Arabians, differed not more from each other than the different*dialects of the Greek tongue which are found in the poems of Homer ; and, for many years after the formation of the golden calf, the Hebrews were strangers to every species of idolatry but that which they had brought with them from their house of bondage. See KEMPUAN. Taking it for granted, therefore, that the Scythians did not impose their mythology upon the eastern nations, and that the art of sculpture, as well as hieroglyphic writing and idolatrous worship, prevailed first among the Chaldeans, we shall trace the progress of this SCULPTURE.*

irt through some other nations of antiquity till we bring it to Greece, where it was carried to the highest perfection to which it has yet at-‘ained.

The first intimation that we have of the art of sculpture is in the book of Genesis, where we

are informed that when Jacob, by the divine command, was returning to Canaan, his wife Rachel carried along with her the teraphim or idols of her father. These we are assured were small, since Rachel found it so easy to conceal them from her father, notwithstanding his anxious search. We are ignorant, however, how these images were made, or of what materials they were composed. The first person mentioned as an artist of eminence is Bezaleel, who formed the cherubim which covered the mercy-seat.

SECT. I. — OF THE ANCIENT EGYPTIAN SCULPTURE.

The Egyptians early cultivated the art of sculpture ; but there were two circumstances that obstructed its progress. 1 . The persons of the Egyptians were not possessed of the graces of form, elegance, or symmetry ; and of consequence they had no perfect standard to model their taste. They resembled the Chinese in the cast of their face, in their great bellies, and in the clumsy rounding of their contours. 2. They were restrained by their iaws to the principles and practices of their ancestors, and were not permitted to introduce any innovations. Their

statues were always formed in the same stiff atti-

tude, with the arms hanging perpendicularly

down their sides. What perfection were they

capable of who knew no other attitude than that

of chairmen ? So far were they from attempting

any improvements, that in the time of Adrian the

art continued in the same rude state as at first ; and, when their slavish adoration of that emperor

induced them to place the statue of his favorite

Antinous among the objects of their worship,

the same inanimate stiffness in the attitude of

the body and position of the arms was observed.

This Egyptian statue, therefore, was different

from the celebrated statue of Autinous, of which

so many moulds have been taken that imitations

of it are now to be met with almost in every ca-

binet in Europe.

Notwithstanding the attachment of the Egyp-

tians to ancient usages, Winkelman thinks he

has discovered two different styles of sculpture

which prevailed at different periods. The first

of these ends with the conquest of Egypt by

Cambyses. The second begins at that time, and

extends beyond the reign of Alexander the Great.

In the first style, the lines which form the con-

tour are straight, and projecting a little : the po-

sition is stiff and unnatural : in sitting figures

the legs are parallel, the feet squeezed together,

and the arms fixed to the sides; but in the figures of women the left arm is folded across the breast; the bones and muscles are faintly discernible;

the eyes are flat and looking obliquely, and the

eyebrows sunk ; features which destroy entirely

the beauty of the head ; the cheek-bones are hi;jh, the chin small and piked; the ears are generally

placed higher than in nature, and the feet are

too large and flat. In short, if we are to look for any model in the statues of Egypt, it is not for

the model of beauty, but of deformity. The sta-

tues of men are naked, only they have a short

apron, and a few folds of drapery surrounding

their waist : the vestments of women are only

distinguishable by the border, which rises a little

above the surface of the statue. In this age it

is evident the Egyptians knew little of drapery.

Of the second style of sculpture practised

among the Egyptians, Winkelman thinks he has

found specimens in the two figures of basaltes

in the capitol, and in another figure at Villa Al-

bani, the head of which has been renewed. The

two first of these, he remarks, bear visible traces of the former style, which appear especially in

the form of the mouth and shortness of the chin. The hands possess more elegance ; and the feet are placed at a greater distance from one another. In the fust and third figures the arms hang down close to the sidr;. In the second they hang more freely. Winkelman suspects that these three statues have been made after the conquest of Egypt by the Greeks. They are clothed with a tunic, a robe, and a mantle. Their tunic, which is puckered into many folds, descends from the neck to the ground. The robe in the first and third statues seems close to the body, and is only perceptible by some little folds. It is tied under the breast, and covered by the mantle, the two buttons of which are placed under the epaulet.

The Antinous of the capitol is composed of two pieces, which are joined under the haunches. But, as all the Egyptian statues which now remain have been hewn out of one block, we must believe that Diodorus, in saying the stone was divided, and each half finished by a separate artisan, spoke only of a colossus. He tells us that the Egyptians divided the human body into

twenty-four parts and three-quarters : but it is to be regretted that he has not given a more minute detail of that division. The Egyptian statues were formed by the chisel, and polished with great care. Even those on the summit of an obelisk, which could only be viewed at a distance, were finished with as much labor as if they had admitted a close inspection. As they are generally executed in granite or basaltes, stones of a very hard texture, it is impossible not to admire the indefatigable patience of the artists.

The eye was often of different materials from the rest of the statue ; sometimes it was composed of a precious stone .or metal. We are assured that the valuable diamond of the em press of Russia, the largest and most beautiful hitherto known, formed one of the eyes of the famous statue of Scheringham in the temple of Brama. Those Egyptian statues which still remain are composed of wood or baked earth ; and the statues of earth are covered with green enamel.

SECT. II. — OF THE PHIENICIAN SCULPTURE.

The Phoenicians possessed both a character and situation highly favorable to the cultivation of statuary. They had beautiful models in their own persons, and their industrious character qualified them to attain perfection in every art

for which they had a taste. Their situation raised a spirit of commerce, and commerce induced them to cultivate the arts. The temples shone with statues and columns of gold, and a profusion of emeralds was every where scattered. All the great works of the Phoenicians have been unfortunately destroyed ; but many of the Carthaginian medals are still preserved, ten of which are deposited in the cabinet of the king of Etruria. But, though the Carthaginians were a colony of Phoenicians, we cannot from their works judge of the merit of their ancestors.

The Persians made no distinguished figure in the arts of design. They were indeed sensible to i he charms of beauty, but they did not study to imitate them. Their dress, which consisted of long flowing robes, concealing the whole person,

prevented them from attending to the beauties of form. Their religion, too, which taught them to worship the divinity in the emblem of fire, and that it was impious to represent him under a human form, seemed almost to prohibit the exercise of this art, by taking away those motives which alone could give it dignity and value ; and, as it was not customary among them to raise statues to great men, it was impossible that statuary could flourish in Persia.

SECT. III. — OF THE ANCIENT ETRURIAN SCULPTURE.

The Etrurians, or ancient Tuscans, in the opinion of Winkelman, carried this art to some degree of perfection at an earlier period than the Greeks. It is said to have been introduced before the siege of Troy by Daedalus, who, to escape the resentment of Minos king of Crete, took refuge in Sicily, whence he passed into Italy, where he left many monuments of his art. Pausanias and Diodorus Siculus inform us that some works ascribed to him were to be seen when they wrote, and that these possessed that character of majesty which distinguished the labors of Etruria.

A character strongly marked forms the chief distinction in those productions of Etruria which have descended to us. Their style was indeed harsh and overcharged ; a fault also committed by Michael Angelo the celebrated painter of modern Etruria ; for it is not to be supposed that a people of such rude manners as the ancient Etrurians could communicate to their works that vividness and beauty which the elegance of Grecian manners inspired. On the other hand, there are many of the Tuscan statues which bear so close a resemblance to those of Greece, that antiquarians have thought it probable that they were conveyed from that country or Magna Graecia oilo Etruria about the time of the Roman conquest, when Italy was adorned with the spoils of Greece.

Among the monuments of Etrurian art two different styles have been observed. In the first the lines are straight, the attitude stiff, and no idea of beauty appears in the formation of the head. The contour is not well rounded, and the figure is too slender. The head is oval, the chin piked, the eyes flat, and looking asquint

These are the defects of ;in art in a state of infancy, which an accomplished master co ild never fall into, and are equally conspicuous in Gothic statues as in the productions of the ancient natives of Florence. They resemble the style of the Egyptians so much that one is almost induced to suppose there had once been a communication between these two nations : but others think that this style was introduced by Daedalus.

Winkelman supposes that the second epoch ot this art commenced in Etruria, about the time at which it had reached its greatest perfection in Greece, in the age of Phidias ; but this conjecture is not supported by any proofs. To describe the second style of sculpture among the Etrurians is almost the same as to describe the style of Michael Angelo and his numerous imitators. The joints are strongly marked, the muscles raised, the bones distinguishable ; but the whole mien harsh. In designing the bone of the leg, and the separation of the muscles o? the calf, there is an elevation and strength above life. The statues of the gods are designed with

more delicacy. In forming them, the artists were anxious to show that they could exercise their power without that violent distension of the muscles which is necessary in the exertions of beings merely human; but in general their attitudes are unnatural, and the actions strained. If a statue, for instance, hold any thing with its fore-fingers, the rest are stretched out in a stiff position.

SECT. IV.— OF THE GRECIAN SCULPTURE.

According to ancient history, the Greeks did not emerge from the savage state till a long time after the Egyptians, Chaldeans, and Indians, had arrived at a considerable degree of civilisation. The original rude inhabitants of Greece were civilised by colonies which arrived among them at different times from Egypt and Phoenicia. These brought along with them the religion, the letters, and the arts of their parent countries ; and, if sculpture had its origin from the worship of idols, there is reason to believe that it was one of the arts which were thus imported ; for that the gods of Greece were of Egyptian and Phoenician extraction is a fact incontrovertible : see MYSTERIES, MYTHOLOGY, PHILOSOPHY, and TITAN. The original statues of the gods, how-

ever, were very rude. The earliest objects of idolatrous worship have every where been the heavenly bodies ; and the symbols consecrated to them were generally pillars of a conical or pyramidal figure. It was not till hero-worship was engrafted on the planetary, that the sculptor thought of giving to the sacred statue any part of the human form (see POLYTHEISM) ; and it appears to have been about the era of this revolution in idolatry, that the art of sculpture was introduced among the Greeks. The first representations of their gods were round stones placed upon cubes or pillars ; and these stones they afterwards formed roughly, so as to give them something of the appearance of a head. Agreeable to this description was a Jupiter which Pausanias saw in Tegeum, in Arcadia. Thc»u representations were called Hermes ; not that they represented Mercury, Lut from the word henna, which signified a rough stone. It is t! < <:

name which Homer gives to the stones which were used to fix vessels to the shore. Pausanias

saw at Pheres thirty deities made of unformed blocks or cubical stones. The Lacedemonians represented Castor and Pollux by two parallel posts ; and a transverse beam was added to express their mutual affection. If the Greeks derived from foreign nations the rudiments of the arts, it must redound much to their honor that in a few centuries they carried them to such wonderful perfection as entirely to eclipse the fame of their masters. It is by tracing the progress of sculpture among them that we are to study the history of this art ; and we shall see its origin and successive improvements correspond with nature, which always operates slowly and gradually.

The great superiority of the Greeks in the art of sculpture may be ascribed to a variety of (Muses. The influence of climate over the human body is so striking that it must have fixed tlie attention of every thinking man who has rellected on the subject. The violent heats of the torrid zone, and the excessive cold of the polar regions, are unfavorable to beauty. It is only in the mild climates of the temperate regions

that it appears in its most attractive charms. Perhaps no country in the world enjoys a more serene air, less tainted with mists and vapors, or possesses in a higher degree that mild and genial warmth which can unfold and expand the human body into all the symmetry of muscular strength, and all the delicacies of female beauty in greater perfection, than the happy climate of Greece; nnd never was there any people that had a greater taste for beauty, or were more anxious to improve it. Of the four wishes of Simonides, the second was to have a handsome figure. The love of beauty was so great among the Lacedemonian women, that they kept in their chambers the statues of Nereus, of Narcissus, of Ilyacinthus, and of Castor and Pollux ; hoping that by often contemplating them they might have beautiful children.

There were a variety of circumstances in the noble and virtuous freedom of the Grecian manners that rendered these models of beauty peculiarly subservient to the cultivation of the fine arts. There were no tyrannical laws, as among the Egyptians, to check their progress. They

had the best opportunities to study them in the public places, where the youth, who needed no other veil than chastity and purity of manners, performed their various exercises quite naked. They had the strongest motives to cultivate sculpture, for a statue was the highest honor which public merit could attain. It was an honor ambitiously sought, and granted only to those who had distinguished themselves in the eyes of their fellow citizens. As the Greeks preferred natural qualities to acquired accomplishments, they decreed the first rewards to those who excelled in agility and strength of body. Statues were often raised to wrestlers. Even the most eminent men of Greece, in their youth, sought renown in gymnastic exercises. Chrysippus and Cleanthes distinguished themselves in the public games before they were known as philosophers. Plato appeared as a wrestler both at the Isthmian and Pythian games ; and Pythagoras carried off the prize at Elis. See PYTHAGORAS. The passion by which they were inspired was the ambition of having their statues erected in the most sacred place of Greece, to be seen and admired by the

whole people. The number of statues erected on different occasions was immense; of course the number of artists must have been great, their emulation ardent, and their progress rapid. As most of their statues were decreed for those who vanquished in the public games, the artists had the opportunity of seeing excellent models; for those who surpassed in running;, boxing, an'd wrestling, must in general have been well formed, yet would exhibit different kinds of beauty. The high estimation in which sculptors were held was very favorable to their art. -Socrates declared the artists the only wise men. An artist could be a legislator, a commander of armies, and might hope to have his statue placed beside those of Miltiades and Themistocles, or of those of the gods themselves. Besides, the honor and success of an artist did not depend on the caprice of pride or of ignorance. The productions of art were estimated and rewarded by the greatest sages in the general assembly of Greece, and the sculptor who had executed his work with ability and taste was confident of obtaining immortality.

It was the opinion of Winkelman, that liberty was highly favorable to this art; but, though liberty is absolutely necessary to the advancement of science, it may be doubted whether the fine arts owe their improvement to it. Sculpture flourished most, in Greece, when Pericles exercised the power of a king; and in the reign of Alexander, when Greece was conquered. It attained no perfection in Rome till Augustus had enslaved the Romans. It revived in Italy under the patronage of the family of Medici, and in France under the despotic rule of Louis XIV.

It is the love of beauty, luxury, wealth, or the patronage of a powerful individual, that promotes the progress of this art.

It will now be proper to give a particular account of the ideas which the Greeks entertained concerning the standard of beauty in the different parts of the human body. And with respect to the head, the profile which they chiefly admired is peculiar to dignified beauty. It consists in a line almost straight, or marked by such slight and gentle inflections as are scarcely distinguishable from a straight line. In the figures

of women and young persons the forehead and

nose form a line approaching to a perpendicular.

Ancient writers, as well as artists, assure us

that the Greeks reckoned a small forehead a

mark of beauty, and a high forehead a deformity.

From the same idea, the Circassians wore their

hair hanging down over their foreheads almost to

their eyebrows. To give an oval form to the

countenance, it is necessary that the hair should

cover the forehead, and thus make a curve about

the temples; otherwise the face, which termi

nates in an oval form in the inferior part, will be angular in the higher part, and the proportion

will be destroyed. This rounding of the fore-

head may be seen in all handsome persons, in all

the heads of ideal beauty in ancient statues, and

especially in those of youth. It has been over-

looked, however, by modern statuaries. Bernini,

who modelled a statue of Louis XIV. in his youth,

turned back the hair from the forehead.

It is generally agreed that large eyes are beau-

tiful ; but their size is of less importance in

sculpture than their form, and the manner in

which they are enchased. In ideal beauty, the

eyes are always sunk deeper than they are in na-

ture, and consequently the eyebrows have a

reater projection. But in large statues, placed

-»t a certain distance, the eyes, which are of the same color with the rest of the head, would have

little effect if they were not sunk. By deepen-

ing the cavity of the eye, the statuary increases

the light and shade, and thus gives the head

more life and expression. The same practice is

used in small statues. The eye is a characteristic

feature in the heads of the different deities. In

the statues of Apollo, Jupiter, and Juno, the

eye is large and round. In those of Pallas they

are also large; but, by lowering the eyelids, the

virgin air and expression of modesty are deli-

cately marked. Venus has small eyes, and the

lower eyelid being raised a little, gives them a

languishing look and an enchanting sweetness.

It is only necessary to see the Venus de Medicis

to be convinced that large eyes are not essential

to beauty, especially if we compare her small

eyes with those which resemble them in nature.

The beauty of the eyebrows consists in the fine-

ness of the hair, and in the sharpness of the bone which covers them ; and

masters of the art considered the joining of the eyebrows as a deformity, though it is sometimes to be met with in ancient statues.

The beauty of the mouth is peculiarly necessary to constitute a fine face. The lower lip must be fuller than the upper, in order to give an elegant rounding to the chin. The teeth seldom appear, except in laughing satyrs. In human figures the lips are generally close, and a little opened in the figures of the gods. The lips of Venus are half open.

In figures of ideal beauty, the Grecian artists never interrupted the rounding of the chin by introducing a dimple ; for this they considered not as a mark of beauty, and only to be admitted to distinguish individuals. The dimple indeed appears in some ancient statues, but antiquaries suspect it to be the work of a modern hand. It is suspected, also, that the dimple which is sometimes found on the cheeks of ancient statues is a modern innovation.

No part of the head was executed by the ancients with more care than the ears, though little attention has been given to them by modern

artists. This character is so decisive, that if we

observe in any statue that the ears are not highly finished, but only roughly marked, we may con-

clude with certainty that we are examining a

modern production. The ancients were very

attentive to copy the precise form of the ear in

taking likenesses. Thus, where we meet with a

head, the ears of which have a very large interior opening, we know it to be the head of Marcus

Aurelius.

The manner in which the ancient artists

formed the hair also enables us to distinguish

their works from those of the moderns. On

hard and coarse stones the hair was short, and

appeared as if it had been combed with a wide

comb; for that kind of stone was difficult to

work, and could not without immense labor be

formed into curled and flowing hair. But the

figures executed in marble in the most flourish-

ing period of the art have the hair curled and

flowing; at least where the head was not in-

tended to be an exact resemblance, for then the

artist conformed to his model. In the heads of

women, the hair was thrown back, and tied be-

hind in a waving manner, leaving considerable

intervals ; which gives the agreeable variety of light and shade, and produces the effects of the claro-obscuro. The hair of the Amazons is disposed in this manner. Apollo and Bacchus have their hair falling down their shoulders ; and young persons, till they arrived at manhood, wore their hair long. The color of the hair which was reckoned most beautiful was fair ; and this they gave without distinction to the most beautiful of their gods, Apollo and Bacchus, and likewise to their most illustrious heroes.

Although the ravages of time have preserved but few of the hands or feet of ancient statues, it is evident from what remains how anxious the Grecian artists were to give every perfection to these parts. The hands of young persons were moderately plump, with little cavities or dimples at the joints of the fingers. The fingers tapered very gently from the root to the point, like well proportioned columns, and the joints were scarcely perceptible. The terminating joint was not bent, as it commonly appears in modern statues.

In the figures of young men the joints of the

knee are faintly marked. The knee unites the leg to the thigh without making any remarkable projections or cavities. The most beautiful legs, and best turned knees, according to Winkelman, are preserved in the Apollo Saurocthones, in the Villa Borghese; in the Apollo which has a swan at its feet ; and in the Bacchus of Villa Medicis. The same able connoisseur remarks, it is rare to meet with beautiful knees in young persons, or in the elegant representations of art. As the ancients did not cover the feet as we do, they gave to them the most beautiful turning, and studied the form of them with the most scrupulous attention.

The breasts of men were large and elevated. The breasts of women did not possess much amplitude. The figures of the deities have always the breasts of a virgin, the beauty of which the ancients made to consist in a gentle elevation. So anxious were the women to resemble this standard, that they used several arts to restrain the growth of their breasts. The breasts of the nymphs and goddesses were never represented swelling, because that is peculiar to those women

who suckle. The paps of Venus contract and

end in a point, this being considered as an essen-

tial characteristic of perfect beauty. Some of the

moderns have transgressed these rules, and have

fallen into great improprieties.

The lower parts of the body in the statues of

men were formed like that of the living body after a profound sleep and a good digestion. The

navel was considerably sunk, especially in female

statues.

As beauty never appears in equal perfection in

every part of the same individual, perfect or ideal beauty can only be produced by selecting the

most beautiful parts from different models ; but

this must be done with such judgment and care

that these detached beauties when united may

form the most exact symmetry. Yet the ancients

sometimes confined themselves to one individual,

even in the most flourishing age. Theodorus,

whom Socrates and his disciples visited, served

as a model to the artists of his time. Phryne

also appears to have been a model to the painters

and sculptors. But Socrates, in his conversation

with Parrhasius, says that, when a perfect beauty was to be produced, the artists joined together the most striking beauties which could be collected from the finest figures. We know that Zeuxis, when he was going to paint Helen, united in one pictuie all the beauties of the most handsome women of Crotona.

SECT. V. — OF THE DRAPERY OF GRECIAN STATUES.

The Grecian sculptors, who represented with such success the most perfect beauty of the human form, were not regardless of the drapery of their statues. They clothed their figures in the most proper stuff, which they wrought into that shape which was best calculated to give effect to their design.

The vestments of women in Greece generally consisted of linen cloth, or some other light stuff, and in latter times of silk, and sometimes of woollen cloth They had also garments embroidered with gold. In the works of sculpture, as well as in those of painting, one may distinguish the linen by its transparency and small uuited folds. The other light stuffs which were worn by the women were generally of cotton pro-

duced in the isle of Cos ; and these the art of sta-

tuary was able to distinguish from the linen vest-

ments. The cotton cloth was sometimes striped,

and sometimes embellished with a profusion of

flowers. Silk was also employed ; but whether

it was known in Greece before the time of the

Roman emperors, cannot easily be determined.

In paintings it is distinguishable by changing its

color in different lights to red, violet, and sky-

blue. There were two sorts of purple ; that which

the Greeks call the color of the sea, and Tyrian

purple, which resembled lac. Woollen garments

are easily known by the amplitude of their folds.

Besides these, cloth of gold sometimes composed

their drapery ; but it was not like the modern

fabric, consisting of a thread of gold or of silver spun with a thread of silk ; it was composed of

gold or silver alone without any mixture.

The vestments of the Greeks, which deserve

particular attention, are the tunic, the robe, and

the mantle.

The tunic was that part of the dress which

was next to the body. It may be seen in sleep-

ing figures, or in those in dishabille; as in the

Flora Farnese.and in the statues of the Amazons

in the capitol. The youngest of the daughters

of Niobe, who throws herself at her mother's

side, is clothed only with a tunic. It was of

linen, or some other light stuff, without sleeves,

fixed to the shoulders by a button, so as to cover the whole breast. None but the tunics of the

goddess Ceres and comedians have long straight

sleeves.

The robes of women commonly consisted of

two long pieces of woollen cloth, without any

particular form, attached to the shoulders by a

great many buttons, and sometimes by a clasp.

They had straight sleeves which came down to

the wrists. The young girls, as well as the

women, fastened their robe to their side by a

cincture, in the same way as the high priest of

the Jews fastened his, as it is still done in many parts of Greece. The cincture formed on the

side a knot of ribbons, sometimes resembling a

rose in shape, which has been particularly re-

marked in the two beautiful daughters of Niobe.

In the younger of these the cincture is seen

passing over the shoulders and the back. Venus

has two cinctures, the one passing over the

shoulder, and the other surrounding the waist.

The latter is called cestus by the poets.

The mantle was called peplon by the Greeks, which signifies properly the mantle of Pallas. The name was afterwards applied to the mantles of the other gods, as well as to those of men. This part of the dress was not square, as some have imagined, but of a roundish form. The ancients indeed speak in general of square mantles, but they received this shape from four tassels which were affixed to them ; two of these were visible, and two were concealed under the mantle. The mantle was brought under the right arm, and over the left shoulder ; sometimes it was attached to the shoulder by two buttons, as may be seen in the beautiful statue of Leucothoe at Villa Albani.

The color of vestments peculiar to certain statues is too curious to be omitted. To begin with the figures of the gods : — The drapery of Jupiter was red, that of Neptune is supposed by Winkelman to have been sea-green. The same color also belonged to the Nereids and Nymphs. The mantle of Apollo was blue, or violet. Bacchus was dressed in white. Martianus Capella

assigns green to Cybele. Juno's vestments were sky-blue, but she sometimes had a white veil. Pallas was robed in a flame-colored mantle. In a painting of Herculaneum, Venus is in flowing drapery of a golden yellow. Kings were arrayed in purple ; priests in white ; and conquerors sometimes in sea-green.

With respect to the head, women generally wore no covering but their hair; when they wished to cover their head, they used the corner of their mantle. — Sometimes we meet with veils of a fine transparent texture. Old women wore a kind of bonnet upon their head, an example of which may be seen in a statue in the capitol, called the Praefica ; but Winkelman thinks it is a statue of Hecuba.

The covering of the feet consisted of shoes or sandals. The sandals were generally an inch thick, and composed of more than one sole of cork. Those of Pallas in Villa Albani have two soles, and other statues had no fewer than five.

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SECT. VI. — OF TUE STYLES OF GRECIAN SCULP-

TURE.

Winkelman has assigned four different styles to this art. The ancient style, which continued until the time of Phidias ; the grand style, formed by that celebrated statuary ; the beautiful, introduced by Praxiteles, Apelles, and Lyssippus ; and the imitative style, practised by those artists who copied the works of the ancient masters.

The most authentic monuments of the ancient style are medals, containing an inscription, which leads us back to very distant times. The writing is from right to left, in the Hebrew manner ; a usage which was abandoned before the time of Herodotus. The statue of Agamemnon at Elis, wh'ch was made by Ornatas, has an inscription from right to left. This artisan flourished fifty years before Phidias; it is in the intervening period therefore between these two artists that we are to look for the cessation of this practice. The statues formed in the ancient style were neither distinguished by beauty of shape nor by proportion, but bore aclose resemblance to those of the Egyptians and Etrurians ; the eyes were long and flat ; the section of the mouth not horizontal ; the chin was pointed ;

the curls of the hair were ranged in little rings, and resembled grains enclosed in a heap of raisins. What was still worse, it was impossible by inspecting the head to distinguish the sex. The characters of this ancient style were these: the designing was energetic, but harsh ; it was animated, but without gracefulness ; and the violence of the expression deprived the whole figure of beauty. The grand style was brought to perfection by Phidias, Polycletus, Scopas, Alcamenes, Myron, and other illustrious artists. Il is probable, from some passages of ancient writers, that in this style were preserved some characters of the ancient manner, such as the straight lines, the squares and angles. The ancient masters, such as Polycletus, being the legislators of proportions, says Winkelman, and of consequence thinking they had a right to distribute the measures and dimensions of the parts of the human body, have undoubtedly sacrificed some degree of the form of beauty to a grandeur which is harsh, in comparison of the flowing contours and graceful forms of their successors. — The

most considerable monuments of the grand style are the statues of Niobe and her daughters, and a figure of Pallas, to be seen in Villa Albani ; which, however, must not be confounded with the statue which is modelled according to the first style, and is also found in the same place. The head possesses all the characters of dignified beauty, at the same time exhibiting the rigidness of the ancient style. The face is defective in gracefulness ; yet it is evident how easy it would have been to give the features more roundness and grace. The figures of Niobe and her daughters have not, in the opinion of Winkelman, that austerity of appearance which marks the age of the statue of Pallas. They are characterised by grandeur and simplicity ; so simple are the forms that they do not appear to be the tedious productions of art, but to have been created by an instantaneous effort of nature. The third style was the graceful or beautiful Lysippus was perhaps the artist who introduced this style. Being more conversant than his predecessors with the sweet, the pure, the flowing, and the beautiful lines of nature, he avoided the square forms which the masters of the se-*

cond style had too much employed. He was of opinion that the use of the art was rather to please than to astonish, and that the aim of the artist should be to raise admiration by giving delight. The artists who cultivated this style did not, ho\vever, neglect to study the sublime works of their predecessors. They knew that grace is consistent with the most dignified beauty, and that it possesses charms which must ever please; they knew also that these charms are enhanced by dignity. Grace is infused into all the movements and attitudes of their statues, and it appears in the delicate turns of the hair, and even in the adjusting of the drapery. Every sort of grace was well known to the ancients ; and great as the ravages of time have been amongst the works of art, specimens are still preserved, in which can be distinguished dignified beauty, attractive beauty, and a beauty peculiar to infants. A specimen of dignified beauty may be seen in the statue of one of the Muses in the palace of Barberini at Rome ; and in the garden of the pope, on the Quirinal, is a statue of another Muse, which affords a fine instance of

attractive beauty. Winkelman says that the most excellent model of infant beauty which antiquity has transmitted to us is a satyr of a year old, which is preserved, though a little mutilated, in Villa Albani.

The great reputation of Praxiteles and Apelles raised an ardent emulation in their successors, who, despairing to surpass such illustrious masters, were satisfied with imitating their works. But it is well known that a mere imitator is always inferior to the master whom he attempts to copy. When no original genius appears, the art must therefore decline.

SECT. VII. — OF THE MATERIALS OF GRECIAN STATUES.

Clay was the first material which was employed in statuary. An instance of this may be seen in a figure of Alcamenes in bas-relief in Villa Albani. The ancients used their fingers, and especially their nails, to render certain parts more delicate and lively : hence arose the phrase ad unguein factu? homo, ‘ an accomplished man.’ It was the opinion of count Caylus that the ancients did not use models in forming their statues. But, to disprove this, it is only necessary

to mention an engraving on a stone in the cabinet of Stosch, which represents Prometheus engraving the figure of a man, with a plummet in his hand to measure the proportions of his model.

The ancients as well as the moderns made works in plaster; but no specimens remain except some figures in bas-relief, of which the most beautiful were found at Baia.

The works made of ivory and silver were generally of a small size. Sometimes, however, statues of a prodigious size were formed of gold and ivory. The colossal Minerva of Phidias, which was composed of these materials, was

twenty-six cubits high. It is indeed scarcely possible to believe that statues of such a size could entirely consist of gold and ivory. The quantity of ivory necessary to a colossal statue is beyond conception. M. de Pauw calculates that the statue of Jupiter Olympus, which was fifty-four feet high, would consume the teeth of 300 elephants.

The Greeki generally hewed their marble sta-

tues out of one block, though they after worked the heads separately, and sometimes the arms. The heads of the famous group Niobe and her daughters have been adapted to their bodies after being separately finished. It is proved by a large figure representing a river, which is preserved in Villa Albani, that the ancients first hewed their statues roughly, before they attempted to finish any part. When the statue had received its perfect figure, they next proceeded to polish it with pumice-stone, and again carefully retouched every part with the chisel.

The ancients, when they employed porphyry, usually made the head and extremities of marble. It is true that at Venice there are four figures entirely composed of porphyry; but these are the productions of the Greeks of the middle age. They also toiade statues of basaltes and alabaster.

SECT. VIII. — OF EXPRESSION, GESIURF, AND ATTITUDE.

Without expression, gesture, and attitude, no figure can be beautiful, because in these the graces always reside. It was for this reason that

the graces are always represented as the companions of Venus.

The expression of tranquillity was frequent in Grecian statues, because, according to Plato, that was considered as the middle state of the soul between pleasure and pain. Experience, too, shows that in general the most engaging manner. Without a sedate tranquillity, dignified beauty could not exist. It is in this tranquillity, therefore, that we must look for the complete display of genius.

The most elevated species of tranquillity and repose was studied in the figures of the gods. The father of the gods, and even inferior divinities, are represented without emotion or resentment. Jupiter is not always exhibited in this tranquil state. In a bas-relief belonging to the marquis Rondini, he appears seated on an armchair with a melancholy aspect. The Apollo of the Vatican represents the god in a fit of rage against the serpent Python, which he kills at a blow. The artist, adopting the opinion of the poets, has made the nose the seat of anger, and the lips the seat of disdain.

To express the action of a hero, the Grecian sculptors delineated the countenance of a noble virtuous character repressing his groans, and allowing no expression of pain to appear. In describing the action of a hero, the poet has much more liberty than the artist. The poet can paint them such as they were before men were taught to subdue their passions by the restraints of law, or the refined customs of social life. But the artist, obliged to select the most beautiful forms, is reduced to the necessity of giving such an expression of the passions as may not shock our feelings, and disgust us with his production.

The truth of these remarks will be acknowledged by those who have seen two of the most beautiful monuments of antiquity ; one of which represents the fear of death, the other the most violent pains and Sufferings. The daughters of Niobe, against whom Diana has discharged her fatal arrows, are exhibited in that state of stupefaction which we imagine must take place when the certain prospect of death deprives the soul of all sensibility. The fable presents us an image of that stupor which Eschylus describes as seiz-

ing Niobe when they vvere transformed into a rock. The other monument referred to is the image of Laocoon, which exhibits the most agonising pain that can affect the muscles, the nerves, and the veins. The sufferings of the body and the elevation of the soul are expressed in every member with equal energy, and form the most sublime contrast imaginable. Laocoon appears to suffer with such fortitude, that, whilst his lamentable situation pierces the heart, the whole figure fills us with ambitious desire of imitating his constancy and magnanimity in the pains and sufferings that may fall to our lot. Philoctetes is introduced by the poets, shedding tears, uttering complaints, and rending the air with his groans and cries; but the artist exhibits him silent, and bearing his pains with dignity. The Ajax of the celebrated painter Timomachus is not drawn in the act of destroying the sheep which he took for the Grecian chiefs, but in the moments of reflection which succeeded that frenzy. So far did the Greeks carry their love of calmness and slow movements, that they thought a quick step always announced

rusticity of manners. Demosthenes reproaches Nicobulus for this very thing ; and from the v»ords he makes use of it appears, that to speak •with insolence and to walk hastily were reckon-ed synonymous.

In the figures of women, the artists have con-formed to the principle observed in all the an-cient tragedies and recommended by Aristotle, never to make women show too much intrepi-dity or excessive cruelty. Conformable to this maxim, Clytemnestra is represented at a little distance from the fatal spot, watching the mur-derer, but without taking any part with him. In a painting of Timomachus representing Medea and her children, when Medea lifts up the dagger they smile in her face, and her fury is immediately melted into compassion for the innocent victims.

In another representation of the same subject, Medea appears hesitating and indecisive. Guid-ed by the same maxims, the artists of most re-fined taste were careful to avoid all deformity, choosing rather to recede from truth than from their accustomed respect for beauty, as may be seen in several figures of Hecuba. Sometimes, however, she appears in the decrepitude of age,

her face furrowed with wrinkles, and her breasts hanging down.

Illustrious men, and those invested with offices of dignity, are represented with a noble assurance and firm aspect. The statues of the Roman emperors resemble those of heroes, and are far removed from every species of flattery, in the gesture,

in the attitude, and action. They never appear with haughty looks, or with the splendor of royalty ; no figure is ever seen presenting any thing to them with bended knee, except captives ; and none addresses them with an inclination of the head. In modern works too little attention has been paid to the ancient costume. Winkelman mentions a bas-relief, which was lately executed at Rome for the fountain of Trevi, representing an architect in the act of presenting the plan of an aqueduct to Marcus Agrippa. The modern sculptor, not content with giving a long beard to that illustrious Roman, contrary to all the ancient marble statues as well as medals which remain, exhibits the architect on his knees.

In general it was an established principle to

banish all violent passions from public monu-

ments. This will serve as a decisive mark to dis-

tinguish the true antique from supposititious

works. A medal has been found exhibiting

two Assyrians, a man and woman tearing their

hair, with this inscription, ASSYRIA. ET. PALES-

TINA. IN. POTEST. P. R. REDAC. S. C. The

forgery of this medal is manifest from the word

Palestina, which is not to be found in any ancient Roman medal with a Latin inscription. Besides

the violent action of tearing the hair does not

suit any symbolical figure. This extravagant

style, which was called by the ancients parenthyr-

sis, has been imitated by most of the modern

artists. Their figures resemble comedians on the

ancient theatres, who, in order to suit the distant spectators, put on painted masks, employed ex-

aggerated gestures, and far overleaped the bounds

of nature. This style has been reduced into a

theory in a treatise on the passions composed by

Le Brun. The designs which accompany that

work exhibit the passions in the very highest de-

gree, approaching even to frenzy : but these are

calculated to vitiate the taste, especially of the

young ; for the ardor of youth prompts them rather to seize the extremity than the middle; and it will be difficult for that artist who has formed his taste from such empassioned models ever to acquire that noble simplicity and sedate grandeur which distinguished the works of ancient taste.

SECT. IX. — OF PROPORTION.

Proportion is the basis of beauty, and there can be no beauty without it ; on the contrary, proportion may exist where there is little beauty. Experience every day teaches us that knowledge is distinct from taste ; and proportion, therefore, which is founded on knowledge, may be strictly observed in any figure, and yet the figure have no pretensions to beauty. The ancients, considering ideal beauty as the most perfect, have frequently employed it in preference to the beauty of nature.

The body consists of three parts as well as the members. The three parts of the body are the trunk, the thighs, and the legs. The inferior parts of the body are, the thighs, the legs, and the feet. The arms also consist of three parts. These three parts must bear a certain proportion to the

whole as well as to one another. In a well-

formed man the head and body must be propor-

tioned to the thighs, the legs, and the feet, in the same manner as the thighs are proportioned to

the legs and the feet, and the arms to the hands.

The face also consists of three parts, that is, three times the length of the nose ; but the head is not four times the length of the nose, as some writers have asserted. From the place where the hair

begins to the crown of the head are only three-

fourths of the length of the nose, or that part is to the nose as nine to twelve.

It is propable that the Grecian, as well as the

Egyptian artists, have determined the great and

small proportions by fixed rules ; that they have

established a positive measure for the dimensions

of length, breadth, and circumference. This

supposition alone can enable us to account for

the great conformity which we meet with in an-

cient statues. Winkelman thinks that the foot

was the measure which the ancients used in all

their great dimensions, and that it was by the

length of it that they regulated the measure of

their figures by giving to them six times that

length. This in fact is the length which Vitru-

vius assigns, Pes vero altitudinis corporis sextse,

1. 3, cap. 1. That celebrated antiquary thinks

the foot is a more determinate measure than the head or the face, the parts from which modern painters and sculptors too often take their proportions. This proportion of the foot to the body, which has appeared strange and incomprehensible to the learned Huetius, and has been entirely rejected by Perrault, is, however, founded upon experience. After measuring with great care a vast number of figures, Winkelman found this proportion observed not only in Egyptian statues, but also in those of Greece. This fact may be determined by an inspection of those statues the feet of which are perfect. One may be fully convinced of it by examining some divine figures, in which the artists have made some parts beyond their natural dimensions. In the Apollo Belvidere, which is a little more than seven heads high, the foot is three Roman inches longer than the head. The head of the Venus de Medicis is very small, and the height of the statue is sevei. heads and a half ; the foot is three inches and a half longer than the head, or precisely the sixth part of the length of the whole statue.

SECT. X. — OF THE PRACTICE OF SCULPTURE.

We have been thus minute in our account of

the Grecian sculpture because it is the opinion

of the ablest critics that modern artists have been more or less eminent as they have studied witli

the greater or less attention the models left us

by that ingenious people ; Winkelraan goes so

far as to contend that the most finished works

of the Grecian masters ought to be studied in

preference even to the works of nature. This

appears to be paradoxical ; but the reason as-

signed by the abbe" for his opinion is that the

fairest lines of beauty are more easily discovered,

and make a more striking and powerful impres-

sion, by their reunion in these sublime copies,

than when they are scattered far and wide in the

original. Allowing, therefore, the study of nature

the high degree of merit it so justly claims, it

must nevertheless be granted that it leads to true

beauty by a much more tedious, laborious, and

difficult path than the study of the antique, which presents immediately to the artist's view the ob-

ject of his researches, and comoines in a clear

and strong point of light the various rays of

beauty that are dispersed through the wide do-

main of nature.

As soon as the artist has laid this excellent foundation, acquired an intimate degree of familiarity with the beauties of the Grecian statues, and formed his taste after the admirable models they exhibit, he may then proceed with advantage and assurance to the imitation of nature. The ideas he has already formed of the perfection of nature, by observing her dispersed beauties combined and collected in the compositions of the ancient artists, will enable him to acquire with facility and to employ with advan~ tage the detached and partial ideas of beauty which will be exhibited to his view in a survey of nature in her actual state. When he discovers these partial beauties, he will be capable of combining them with those perfect forms of beauty with which he is already acquainted. In a word, by having always present to his mind the noble models already mentioned, he will be in rome measure his own oracle, and will draw rules from his own mind.

There are, however, two ways of imitating nature. In the one, a single object occupies the

artist, who endeavours to represent it with pre-

cision arid truth ; in the other, certain lines and features are taken from a variety of objects, and

combined and blended into one regular whole.

All kinds of copies belong to the first kind of

imitation; and productions of this kind must be

executed necessarily in the Dutch manner, that

is to say, with high finishing, and little or no

invention. But the second kind of imitation

leads directly to the investigation and discovery

of true beauty, of that beauty whose idea is con-

nate with the human mind, and is only to be

found there in its highest perfection. This is

the kind of imitation in which the Greeks ex-

celled, and in which men of genius excite the

young artists to excel after their example, viz. by studying nature as they did.

After having studied in the productions of the

Grecian masters their choice and expression of

select nature, their sublime and graceful contours,

their noble draperies, together with that sedate

grandeur and admirable simplicity that consti-

tute their chief merit, the curious artist will

do well to study the manual and mechanical

part of their operations, as this is absolutely ne-

cessary to the successful imitation of their excellent manner.

The ancients almost always formed their first models in wax : to this modern artists have substituted clay, or some such composition : they prefer clay before wax in the carnations, on account of the yielding nature of the latter, and its sticking in some measure to every thing it vouches. We must not, however, imagine hence, that the method of forming models of wet clay was either unknown or neglected among the Greeks; on the contrary, it was in Greece that models of this kind were invented. Their author was Dibutades of Sicyon : and it is well known that Arcesilas, the friend of Lucullus, obtained a higher degree of reputation by his clay models than by all his other productions. Indeed, if clay could be made to preserve its original moisture it would undoubtedly be the fittest substance for the models of the sculptor ; but when it is placed either in the fire, or left to dry imperceptibly in the air, its solid parts grow more compact, and the figure, losing thus a part of its dimensions, is necessarily reduced to a smaller volume. This diminution would be of no consequence, did it equally affect the whole figure, so as to preserve

its proportions entire. But this is not the case;

for the smaller parts of the figure dry sooner than the larger ; and thus, losing more of their di-

mensions in the same space of time than the

latter do, the symmetry and proportions of the

figure inevitably suffer. This inconveniency does

not take place in those models that are made in

wax. It is indeed extremely difficult, in the or-

dinary method of working the wax, to give it

that degree of smoothness that is necessary to

represent the softness of the carnations or fleshy

parts of the body. This inconvenience may,

however, be remedied, by forming the model

first in clay, then moulding it in plaster, and

lastly, casting it in wax. And, indeed, clay is

seldom used but as a mould in which to cast a

figure of plaster, stucco, or wax, to serve hence-

forth for a model by which the measures and pro-

portions of the statue are to be adjusted. In

making waxen models, it is common to put half

a pound of colophony to a pound of wax ; and

some add turpentine, melting the whole with oil

of olives.

So much for the first or preparatory steps in this procedure. It remains to consider the manner

of working the marble after the model so pre-

pared; and the method here followed by the

Greeks seems to have been extremely different

from that which is generally observed by modern

artists. In the ancient statues we find the most

striking proofs of the freedom and boldness that

accompanied each stroke of the chisel, and which

resulted from the artist's being perfectly sure of

the accuracy of his idea, and the precision and

steadiness of his hand : the most minute parts

of the figure carry these marks of assurance and

freedom; no indication of timorousness or diffi-

dence appear ; nothing that can induce us to

fancy that the artist had occasion to correct any

of his strokes. It is difficult to find, even in the second-rate productions of the Grecian artists,

any mark of a false stroke or a random touch.

The firmness and precision of the Grecian chisel

were certainly derived from a more determined

and perfect set of rules than those which are ob-

served in modern times.

The method generally observed by the modern

sculptor is as follows : first, out of a great block of marble he saws another of the size required,

which is performed with a smooth steel saw,

without teeth, casting water and sand thereon

from time to time; then he fashions it, by taking

off what is surperfluous with a steel point and a

heavy hammer of soft iron ; after this, bringing

it near the measure required, he reduces it still

nearer with another finer point ; he then uses a

flat cutting instrument, having notches in its

edge ; and then a chisel, to take off the scratches which the former has left; till at length, taking

raˆps of different degrees of fineness, by de-

grees he brings his work into a condition for

polishing.

After this, having studied his model with all

possible attention, he draws upon this model

horizontal and perpendicular lines intersecting

each other at right angles. He then copies these

lines upon his marble, as the painter makes use

of such transversal lines to copy a picture, or to reduce it to a smaller size. These transversal

lines or squares, drawn in an equal number upon

the marble and upon the model, in a manner

proportioned to their respective dimensions, ex-

hibit accurate measures of the surfaces upon

which the artist is to work ; but cannot deter-

mine, with equal precision, the depths that are

proportioned to these surfaces. — The sculptor, in-

deed, may determine these depths by observing

the relation they bear to his model ; but, as his

eye is the only guide he has to follow in this

estimate, he is always more or less exposed to

error, or at least to doubt ; he is never sure that the cavities made by his chisel are exact; a de-

gree of uncertainty accompanies each stroke ; nor

can he be assured that it has carried away neither too much nor too little of his marble. It is

equally difficult to determine, by such lines as

have already been mentioned, the external and

internal contours of the fiacres, or to transfer

them from the model to the marble. By the

internal contour is understood that which is

described by the parts which approach towards

the centre, and which are not marked in a striking manner.

In a complicated and laborious work, which

an artist cannot execute without assistance, he

is often obliged to make use of foreign hands,

that have not the talents or dexterity that are ne-

cessary to finish his plan. A single stroke of

the chisel that goes too deep is a defect not to

be repaired ; and such a stroke may easily hap-

pen, where the depths are so imperfectly deter-

mined. Defects of this kind are inevitable, if

the sculptor, in chipping his marble, begins by

forming the depths that are requisite in the figure he designs to represent. Nothing is more liable

to error than this manner of proceeding. The

cautious artist ought, on the contrary, to form

these depths gradually, by little and little, with

the utmost circumspection and care ; and the

determining of them with precision ought to be

considered as the last part of his work, and as

the finishing touches of the chisel.

The various inconveniences attending this me-

thod determined several eminent artists to look

out for one that would be liable to less uncer-

tainty, and productive of fewer errors. The

French academy of painting at Rome hit upon a

method of copying the ancient statues, which

some sculptors have employed with success even

in the figures which they finished after models

in clay or wax. This method is as follows : — The

statue that is to be copied is enclosed in a frame that fits it exactly. The upper part of this frame is divided into a certain number of equal parts,

and to each of these parts a thread is fixed with a piece of lead at the end of it. These threads,

which hang freely, show what parts of the statue are most removed from the centre with much more perspicuity and precision than the lines which are drawn upon its surface, and which pass equally over the higher and hollow parts of the block : they also give the artist a tolerable rule to measure the more striking variations of height and depth, and thus render him more bold and determined in the execution of his plan.

But even this method is not without its defects : for as it is impossible, by the means of a straight line, to determine with precision the procedure of a curre, the artist has, in this method, no certain rule to guide him in his contours ; and as often as the line which he is to describe deviates from the direction of the plumb line, which is his main guide, he must necessarily find himself at a loss, and be obliged to have recourse to conjecture.

It is also evident that this method affords no certain rule to determine exactly the proportion which the various purts of the figure ought to bear to each oilier, considered in their mutual relation and connexion. The artist, indeed, endeavours to supply this defect by intersecting

the plumb-lines by horizontal ones. This recourse has, nevertheless, its inconveniences, since the squares formed by transversal lines, that are at a distance from the figure (though they be exactly equal), yet represent the parts of the figure as greater or smaller, according as they are more or less removed from our position or point of view. But, notwithstanding these inconveniences, the matter now under consideration is certainly the best that has hitherto been employed : it is more practicable and sure than any other we know, though it appears, from the remarks we have now been making, that it does not exhibit a sure and universal criterion to a sculptor who executes after a model.

To polish the statue, or make the parts of it smooth and sleek, they use pumice-stone and smelt, then tripoli; and, when a still greater lustre is required, they use burnt straw. For the casting of statues, see FOCSDKY

SECT. XI. — OF THE MODERN HISTORY AND STATE OF THE ART.

The art of sculpture (which never found any very distinguished followers among the Romans)

fell into complete disuse in the middle ages, although ornaments of different kinds, together with rude images, were profusely lavished on the various churches. The revival of painting produced a like resuscitation of the sister art; and, amongst the earliest professors who strove to rescue sculpture from its disrespected state, appeared Donatello, or (to give him his true name) Donate di Bardi, born at Florence in 1383. There had, indeed, been some efforts made even a century before his time towards the same laudable purpose ; and, of those engaged therein, we may mention the names of Nicholas Pisano, who was designated by his countrymen Ritrovatore del buon gusto nella Scultura, ' Restorer of fine taste in Sculpture,' and his son, Giovanni Pisano, who was one of the best artists of his age, and whose works are numerous at Pisa his country ; Angelo and Agostino Sanese, who died about 1340; Andre Ugolino died 1345; Andre Orcagna, surnamed Bufalmaco, who was an excellent artist, for his time, and died 1389, as did also Andre Pisani, the author of several good

figures in the church of Santa Maria del Fiore at Florence. Michelo Aignani died in 1400; Jac. della Quereia in 1418; N. di Banco in 1421 ; Luca della llobbia in 1442. This man possessed the means of overlaying his productions in terra cotta with a fine varnish, which circumstance caused them to be much sought for throughout Europe.

Donate was one of the greatest men concerned in the revival of the art of sculpture. It was one of his figures, a bronze statue of St. Mark, that Michel Angiolo is said to have addressed in these emphatic words — ‘ Marco, per che non mi parli ?’ ‘Mark, why do you not speak to me?’ Another remarkable production of his hand is the figure of an old man with his head shaved, to be found at Florence, and called the Tondu or bald man. Donate died in 1466, at the advanced age of eighty-three. Amongst his most favorite pupils we may class : — Bertolde, a Florentine; Didier da Settignano, a most promising artist, who died at the early age of twenty-eight ; Vellano of Padua ; Rossellino ; F. Camilliani, and M. Micheloizi. Simon, brother of Donatello, also followed his manner. This artist

was summoned to Rome by the pope Eugenius IV., and made one of the bronze gates of St. Peter's. Prato, Rimini, Florence, and Arezzo possess sundry works of Simon. Benedetto di Majana flourished about 1460. Andre Pisano, commonly called Pisanello, a pupil of Andre del Castagno for painting, acquired considerable reputation in sculpture, mote particularly distinguishing himself in the execution of medals. We also find, Giovanni Antonio Amadei, died 1470; A. Rosselino, called Gamberelli, 1490; G. Vellano, 1493; A. Abondio, 1520; G. F. Rustichio, 1528; A. Contucci, 1529; A. R. Briosco, 1532 ; G. Sanctacroce, 1537; A. Busto, called Bambaja, about 1538 ; L. Lotto, called Lorenzetto, 1541 (according to Vasari, this was the first restorer of the antique statues) ; B. Agnolo, 1543 ; P. Clemente, 1548; G. Campagna and L. Leoni, about 1550; S. Mosca, 1554; A. Begarelli and G. Bandini, called Benedetto, about 1555, with A. Zotto; D. Cattaneo, A, Minganti, and F. Mosca, called Moschino, 1560 ; A. Berrugineta, 1561 ; A. and L. Calamech, 1564. Andre Verochio is particularly known

through the celebrity of his pupils Pierre Perugin and Lionardo da Vinci— of the latter of whom becoming jealous, he quitted painting altogether and attached himself wholly to sculpture. Jean Francois Rustici, born at Florence about 1470, was an 61eve of Verochio, and afterwards of Lionardo da Vinci, who taught him the methods of modelling, of carving in marble, and casting in bronze. Rustici was invited to Paris by Francis I., who employed him to work from the model of a horse twice as large as life, and his performance when finished was to have borne a statue of the king himself; but that prince's death suspSded the undertaking. Rustici died ;.t Paris in 1550.

We now cite the name of Michel Angiolo Buonarotti, one of the very greatest names of modern art, whether regarded as sculptor, painter, or architect. He was born in 1474 and died in 1564, at the advanced age of ninety. The pro-

ductions of his chisel enriched several of the Italian cities. The beautiful group of Notre Dame de Pitie in the basilica of St. Peter's ; the colossal statue of Julius II. ; the three figures

executed for the tomb of that pontiff, the centre one of which is the far famed Moses ; the David combating Goliath ; the victory at Florence : — these, among many others, bear abundant evidence of the transcendant skill of the artist. The statue representing Night, upon the tomb of Julian de Medicis, is considered by Keyssler worthy of a parallel with the most admired works of antiquity. Giacomo Tatti, better known under the title of Sansovino (the place where he was born), was architect likewise as well as sculptor. See ARCHITECTURE. This artist made at Rome (at the same time with two other able sculptors) a model of the famous antique group of the Laocoon to cast in bronze. Sansovino's was esteemed the best, on the authority of Raffaelle. The lodge of St. Mark's Place at Venice is the work of the same artist, who placed in niches four bronze statues representing Pal as, Apollo, Mercury, and Peace. One of his celebrated performances (the greater part of which are at Rome and Florence) was a marble statue of Bacchus, lost in the fire at the grand duke's palace in 1762 : an engraving of it remains in

the third volume of the Museede Florence. The Virgin in the church of St. Mark, and a figure St. John Baptist, in that of Casa Granda, pass for the chefs d'ceuvre of this master. He died at Venice in 1570, eighty-three years old. Baccio Bandinelli, born at Florence in 1487, had for his first master his father, who was a goldsmith, but afterwards received instructions from Rustici. He was a good designer ; his manner was learned and striking, and bore some resemblance to that of Michel Angiolo. There is, however, in the Pitti palace, a Bacchus in marble treated in a manner very soft and graceful. To Bandinelli was imputed the heavy charge of his having been seduced by jealousy to destroy the cartoons of Michel Angiolo and of Lionardo da Vinci. It was he who restored, in terra cotta, the right arm of the Laocoon, the original having been lost. Skilful in anatomy, he was accused of having been too fond of displaying that knowledge. He died in 1559. Amongst his most renowned pupils were : — P. da Vinci (nephew of Lionardo), died 1570 ; B. Ammanati, born at Florence in 1511 ; V. Rossi and J. B. D. Lo-

renzi, who sculptured, at Florence, at the tomb of Michel Angiolo, a figure of painting, together with the bust of that great arti§t. Benvenuto Cellini was born at Florence in 1500, and died in 1570. lie was painter, goldsmith, and sculptor. He also was summoned to Paris by Francis I. Propertia Rossi is one of the few female names that we meet with among the sculptors of this early date. This interesting woman lays claim to notice in several ways. She studied and well understood the laws of perspective and architecture ; nor did the science of music escape her observation. She likewise executed some pretty drawings in pen and ink. Her fame as a sculptor rests principally on a bust of the count Guido, and upon two angels in marble with which she decorated the facade of the church

of St. Petronia. This poor young creature fell a victim to the chagrin arising from a hopeless attachment, in 1530. D. Ricciarelli, called Volterra (the town wherein he was born, about 1509), was the friend and imitator of Michel

Aruiolo. L. Ricciarelli, his nephew, was likewise a good sculptor. Amongst his other eleves were : — M. Alberti, of Florence ; F. da San Vito, of Rome ; J. Mazzoni ; Pelegrin, of Bologna, called Tibaldi; M. di Sienne; J. P. Rosetti, of Volterra ; and D. B. da Cormigliano, of Pistoia. The year 1576 witnessed the death of Gaspard Bacerra. V. Dante, who executed the admired statue of pope Julius II., died in 1576. G.D. D'Auria in 1585. A. Fontana in 1587. P. Scavezzi in 1590. G.B. Lorenzi in 1593. G. Delia Porta, born at Milan, studied under his uncle, and cultivated the art of drawing at Geneva from the lessons of P6rin del Vaga. In this town he also produced several works in sculpture. At Rome, he restored several antiques, particularly the legs of the Farnese Hercules, the work of the Athenian Glycon. These were esteemed so very beautiful that, although the antique limbs were subsequently found, Michel Angiolo expressed himself against their being restored. The pupils of Delia Porta were : — G. Tedesco, who executed small statues, and ornaments in basso-rilievo, and B. Torregiani, of

Bologna, who died 1596. There were also in his own family several other renowned sculptors, such as the Chevaliers J. B. and T. Delia Porta.

• — F. Ferrucci, surnamed Tadda, lived towards the middle of the sixteenth century.

J. L. Bernini, born at Naples in 1598, was a great architect as well as sculptor. A. Algardi, born at Bologna in 1602, and died in 1654, studied painting at first in the school of Ludovico Caracci, but he afterwards went over to the sister art. He could not, however, divest himself of his old attachment; and accordingly we find him praised by some and blamed by others for endeavouring to add to the generally understood beauties of sculpture some of the effects previously considered proper to painting. Algardi, however, formed a school, which has produced D. Guidi, J. M. Baratta, J. Peroni, II. Ferrata, G. Brunelli, and C. Mazza, of Bologna. Neither should we omit to state that Algardi likewise occupied himself with engraving. A. Raggi, called the Lombard, was born in 16‘24 at Vicomorto, on the confines of the Milanese territory, and was successively the pupil of

Algardi and Bernini. His works are nume-

rous at Rome. J. Gonnelli, surnamed the blind

man of Cambassi (the name of his country in

Tuscany), studied successfully under PeterTacca.

Having lost his sight, at the early age of twenty, he nevertheless did not abandon the practice of

his art, but executed several figures in terra

cotta, guided by tact alone. It is thus that he

made a statue of Cosmo, first grand duke of

Tuscany. J. B. Tubi saw the light at Rome in

1630. This man appears to have practised

chiefly in France, where he was admitted into

the Royal Academy in 1663. He made a beau-

tiful copy ot the group of the Laocoon, which

ornaments one of the apartments in the palace

of Trianon. He died at Paris in 1700. C.

Rusconi was born at Milan in 1658, where b

learnt sculpture, and afterwards proceeded to

Rome in order to perfect himself therein. Pas-

sionately devoted to the antique, he copied the

Antinous, the Rape of Proserpine, the Belvidere

Apollo, and twice the Farnese Hercules. The

Apollo and one of the latter figures were brought

over to this country. The disciples of Rusconi

were J. Rusconi and J. B. Maini, both artists of

reputation. Angelo Rossi follows, distinguished both as a sculptor and drawer. His claim to merit is more particularly founded on the excellence of his bassi rilievi. Not only has he surpassed all his predecessors in that particular walk, but has served as a model to those succeeding him. Rossi did not treat bassi rilievi in the manner of Algardi, who gave a considerable projection to the figures, but observed that demi-relief which certainly approaches very near to the method taken by the ancients. His basso rilievo made for the tomb of Alexander VIII., and representing several canonisations made by that pope, is regarded as the most exquisite of all the ornaments of a similar character \vhich adorn the basilica of St. Peter's. He left only one pupil of any note — namely, F. Moderati, of Milan, of whom there are extant two stucco figures of Venus in the palace of the apostolical chancery at Rome. G. G. Zumbo, born at Syracuse in 1656, became a sculptor without any other aid than that of his own genius. He used in all his works no other substance than colored wax, which, however, he prepared in a peculiar manner. Warin and Le Bel had pos-

sessed, it is true, this secret before him : but it was reserved for Zumbo to bring it to perfection.

It was this artist who executed for the grand duke of Tuscany the famous subject known by the name of La Corruzione : this singular composition consists of five figures, of which the first is a man dying, the second a dead corpse, the third a body beginning to decay, the fourth, another in a further stage of decomposition, and the fifth an appalling spectacle of complete putrefaction ! Great horror is inspired by the sight of these objects, owing to the truth and correctness which the artist has thrown into their delineation. He died in France in 1701.

The following names will complete our catalogue of Italian sculptors : of their peculiar merits little is now known. — A. Vittoria, died 1608; A. G. Da Faenza, 1609; F. Cordine, surnamed Franciosino, 1612; O.Censore, 1622; C. Garafaglia, 1630; C. Molli and P.G. Tacca, 1640; F. Mocchi, 1646; F. Agnesini and P. Bacci, about 1650; G. B. Bissoni, 1657; F. Baratta, 1666; G. B. Volpi, about 1670; M. Maglia, 1768; L. Bernini, 1682; P. P. Nardini, 1684; F. Ferrata, 1686; L. Ottone, about 1691 ;

G. B. Foggini, about 1700; G. Mazzoli, 1725 ; M. Benzi and G. Mazzo, 1740; P. Mazetti, 1744; A. Corradini, 1752; and, to conclude, F. Schiafino, 1765. The most celeorated name connected in our day with Italian sculpture is that of the lamented Canova. Thorwaldsen, however, although by country a Dane, has been accustomed so long to practise in Italy, that his name may be permitted to stand by the great one just mentioned.

We now proceed to g.ve a Hst of those sculptors who have distinguished themselves in the neighbouring kingdom of France. The first of these, respecting whom their countrymen have much cause to boast, is Jean Gougon, of Paris. The date of his birth is unknown ; nor are there many authentic circumstances related of his life. He must, nevertheless, be regarded as the restorer of sculpture in France. One of his most considerable performances is the fountain of Nymphs, called the Innocents, begun in the reign of Francis I., and completed under that of

Henry II., in 1550. Goujon also distinguished himself, not only as an architect but as an engraver of 'medals. This artist was slain, as a huguenot, on the bloody festival of St. Bartholomew, 1572. G. Pilon, of Paris, was the author of various works, chiefly distributed about the churches of that city, which may be said to possess the principle of grace rather than that of correctness. The town of Douai gave birth to Jean de Bologne, whose works enriched several of the Italian cities. This artist wrought perhaps the most colossal figure that owes its origin to modern art. It is named, we know not why, the Appennine, and represents Jupiter Pluvius seated. It is so large that within the head is a capacious pigeon-house, whilst the hollow of the trunk is occupied by a grotto adorned with shells and jets d'eau. John of Bologna wrought with great skill both in marble and bronze, and his naked figures are particularly elegant and graceful. Born in 1524, he died in 1608. Amongst the great body of his pupils we may select P. Francoville ; Anzirevelle ; Adrian, a Fleming; Moca; A. Susini; F. Delia Bella, and Gasper

his brother, both of Florence; and Pierre Tacca. The latter is, perhaps, the most celebrated of any, and was engaged to complete all the works eft unfinished at his master's death; among '•vhich was the horse which bore the statue of Henry IV., on the Pont Neuf at Paris. He died 1640. S. Guillain was born at Paris in 1581. His father was a sculptor, known by the appellation of Pere Cambrai, the place of his birth. This man, having taught his son the first rudiments of his art, sent him to perfect himself therein at Rome. The greater part of Guillain's works were destroyed, together with those of other artists, during the Revolution. His style may, however, be perceived from the figures ornamenting the portals of St. Gervas, of the Sorbonne, and of the Feuillans. His followers were Anguier, Hutinot, and Jacques Sarrasin ; which latter is well known among French sculptors. He was born at Noyon, but sojourned eighteen years at Rome. The performances of Sarrasin manifest almost throughout a correct taste ; but his chef-d'oeuvre is the group of Caryatides, decorating the grand pavilion of the old Louvre,

figures, although collossal, still light and delicate. The group of Romulus and Remus, at Versailles, is likewise worthy of distinction. The school of Sarrasin has produced many excellent artists ; among whom we may cite Lerambert, Le Gros, and J. Burette, of Paris, who died 1699. Francois Anguier, born at Eu in 1604, wrought under Simon Guillain, and under Algardi at Rome. Sentiment appears to have been his strong point, the expression of which was before his time but comparatively little kxiovvn to the French statuaries. Paris received the ornament of many of this sculptor's works, but the most distinguished was the superb mau soleum of the Due de Montmorency, beheaded at Toulouse. This monument is to be seen at Moulins, in the church of St. Mary. M. Anguier, brother of the preceding, should be classea rather amongst Italian sculptors, since he was born at Rome, and studied in the school of Algardi. The same may be said of Theodon, who died at Paris about 1680. L. Lerambert, born at Paris in 1614, preceded but a little Peter Paul Puget, painter, architect, and sculp-

tor, born at Marseilles in 1622. Of all the performances of this celebrated artist, the most admired are, a basso-rilievo representing the Assumption, at Mantua; the famous statue of Milo, placed in the park at Versailles: the rape of Andromeda by Perseus ; and the Alexander before Diogenes, at Versailles; his last work, also, which uas left unfinished, and is at Marseilles, has been highly esteemed ; its subject is the plague of Milan. Puget died 1694. Gaspard and Balthazar Marsy were born at Carnbray, the former 1624, the latter 1628. They were first educated by their father, and did not go to Paris until 1648, where they received instructions, successively, of Sarrasin, Anguier, and Buyster. These two brothers generally worked in concert ; and a favorable idea of their talent may be gained from the group of tritons giving drink to the horses of the sun, in the baths of Apollo at Versailles. E. Le Hongre, born at Paris 1628, studied under Sarrasin. Of all the sculptors employed during the splendid reign of Louis XIV. the one who has left behind him the highest reputation is Francois Girardon,

born in 1630 at Troyes in Champagne, where he acquired the first elements of his art from studying the beautiful sculptures which then adorned his native town. After having passed some time at Rome, he repaired to Paris, where his talents were duly encouraged. The production most contributing to his fame is the mausoleum of Richelieu, in the church of Sorbonne. The equestrian statue of Louis XIV., in the Place Vendome, is another of his finest works. But, after all, the strongest point in the genius of Girardon is his facility and skill in modelling. Among the number of his pupils were Fremin, Nourrisson, Charpentier, Jean Joly of Troyes, and P. Granier, born near Montpelier in 1635. M. Van den Bogaert, surnamed Desjardins, although a Dutchman by birth (born at Breda, 1640), takes rank among French artists, since he established himself when very young at Paris, where he remained. A. Coysevox, of Spanish origin, was born at Lyons in 1640. His statues, portraits, and bassi-rilievi, have embellished Paris, Versailles, Sceaux, and Chantilly. He particularly excelled in representing horses, his

skill in which respect is abundantly manifested by the two groups of those animals placed at the principal entrance gate of the Tuileries. C. Vancleve was born at Paris in 1645, and studied under Francois Anguier. A. Flamen, born at St. Onier in 1647, had for his master Gasnard

Marsy. P. Francville, a native of Cambray, was remarkable for purity of taste. Pierre Le Gros is a name which served to illustrate greatly the art of sculpture during the seventeenth century. He was born at Paris 1656, but did not long abide among his countrymen, having repaired to Rome at the age of ten years. N. Coustou, born 1658, excelled in the art of modelling to such a degree as rarely to use the pencil. His draperies are rich and flowing ; his style chaste and delicate ; but he does not seem to have caught the genuine spirit of the antique. M. Chabry, a pupil of Puget, was born in 1660. The chief of his performances embellish the town of Lyons. P. Le Pautre was born in the same

year. His name is immortalised in France by the group at the Tuileries of JEneas bearing the body of his father Anchises. J. L. Lemoyne, born at Paris 1665, was an e"leve of Coysevox. R. Le Lorrain, bora in 1660, was distinguished for scientific style, elegant and piquant expression, and masterly handling of the marble. He formed two sculptors, whose productions reflect honor on his tutoring. These were Lemoyne and Pigalle. A. Cayot was born in 1667, and wrought fourteen years under Yancleve. L. Magniere died in 1700. P. Mazeline in 1708. F. Coudrai, pupil of Coysevox, and who became first sculptor to the king of Prussia, died 1727. J. Thierry, born at Lyons 1669, was invited to Spain, where he wrought many years in marble, bronze, and lead, for the gardens and palace of St. Ildefonso. R. Fre'min, born at Paris in 1672, worked at Rome in the school of the chevalier Bernini. C. Falconet was born at Lyons in 1671, and died at Paris 1762. L'Amoureux, born in 1674, was an £leve of Nicolas Coustou. His native city, Lyons, possesses his best productions. G. Coustou, born at Lyons 1678,

was a pupil of Coysevox, his uncle. He was brother of Nicolas. His most celebrated works are — the pediment of the Chateau d'eau, opposite the Palais Royal, and the two fine horses placed at the entrance of the Champs Elys£es. J. Rousseau, eleve of Nicolas Coustou, born in 1681, became first sculptor to the king of Spain, and died at Madrid. A. Vasse was born at Seine, in Provence, in 1683. Dandr6 Bardon commends, among others, his sculpture in the gate of the Capuchins at Paris. F. Dumont, born at Paris in 1688, was the sculptor of the two figures of St. John and St. Joseph, as well as the two corresponding ones of St. Peter and St. Paul, which decorate the portal of St. Sulpice. The Dominicans of Lisle have also a fine specimen of this sculptor's ability, in the mausoleum of Louis de Melun. G. Bouchardon, born in 1698, belongs to the school of Guillaume Coustou. In the construction of the fountain in the Rue de Grenelle at Paris, he has displayed his talent as an architect as well as statuary ; and another performance well worthy of eulogy is the equestrian statue of Louis XV., erected in the place of that name, and destroyed in 1792.

The horse was a perfect chef-d'oeuvre. The expression of this artist was, jjenerally speaking, rather sweet than sublime — his ideas learned rather than bold. L. S. Adam, born at Nancy in 1700, after having studied at Paris under the most able masters, repaired to Rome, where hˆ was employed to restore, among others, twelve antique statues, exhumed from the ruins of the palace of Marius. Two colossal figures by this artist, representing the Seine and the Marne, decorate the head of the cascade at St. Cloud. C. Francin was born at Strasburgh in 1701. Jean Baptiste, son of Jean Louis Lemoyne, was born at Paris in 1704. His two most famous works are a monument dedicated to Louis XV. in 1744, by the states of Bretagne, and the colossal equestrian statue of the same prince at Bordeaux. Lemoyne was likewise author of the mausoleum of Mignard (a very rich piece cf sculpture), as also of that of Crebillon. Rene" Michel Slodtz, better known by the appellation of Michel-Ange, was born at Paris in 1705, and demands the praise due to a style grand although simple, and to a skill in representing draperies

which has, perhaps, seldom found a parallel in modern art. N. S. Adam (brother to the artist of that name before mentioned) was born at Nancy in 1705. A basso-rilievo in the chapel at Versailles, representing the martyrdom of St. Victoire, is amongst the number of his most successful works. He took part with his brother in the principal group of the basin at Versailles. F. G. Adam, another brother of the preceding, was born at Nancy in 1710. J. B. Pigalle, born at Paris in 1714, was a pupil of Le Lorrain, and Lemoyne the father. This sculptor wrought at Lyons a statue of Mercury, which alone sufficed to raise his reputation. The group of infants is also fine, embellishing the facade of St. Louis at the Louvre — more particularly the naive figure of an infant holding a cage from which a bird has escaped. The mausoleum of marshal Saxe at Strasburgh, and the pedestrian statue of Louis XV. in bronze, erected at Rheims, are both regarded as chefs-d'oeuvre of execution. Amongsc the pupils of this artist, we may particularize M. M. Mouchy (his nephew), Moette, Lebrun, Bocquet, and Dupre, which latter passed his life

very obscurely, lending his talents to more fortunate artists, who thus fathered works above their own ability. J. F. J. Saly, born at Valenciennes in 1717, was author of a pedestrian statue of Louis XV., placed in his native town. His ‘ second best’ was an equestrian statue in bronze of Christian IV., king of Denmark, which was erected at Copenhagen.

It may not be uninteresting to the reader to possess the following list of French sculptors who were flourishing at the commencement of the present century, and many of whom are, no doubt, still pursuing their honorable avocation :

— J. L. Boyer, e”leve of Allegrin ; L. F. Boizot ; J. B. Budelot, and Canellier, both pupils of Bridan the elder ; T. N. Delaistre, pupil of Lecomte and of Vasse” ; he made the statue of Phocion at the Conservative Senate; J. Demontreuil ; E. J. Dumont, 61eve of Pajou ; Esparcieux, author of a well known bust of Raynal ; Joplere, pupil of Berruer, and author of an ivory group representing the death of Lucretia ; J. P. Le Sueur ; P. Merard, of the school of Bouchardon ; Monot, e”leve of Claude Vass£ ; Pettitot; C. Ramey ; P. Roland, pupil of Pajou, the exe-

cutor of a marble bust of admiral Ruyter, for th«

gallery of the Tuileries ; Thierard, pupil of Bar-the"limi; J. B. Stouf, pupil of Coustou ; Boquet; P. C. Bridan. the younger, author of a fine bust of the duke of Marlborough ; Brunei; Chardin; J. M. Renaud ; Mouchy, author of a marble bust of the Due de Sully for the gallery of the Tuileries ; F. Masson ; Chaudet, pupil of Stouf, and author of the colossal bust of the emperor Napoleon, formerly in the hall of the Corps Le-gislatif, and of a bust of the empress ; M. Clo-dion ; Comolli, a Piedmontese : C. L. Corbet, pupil of Berruer ; J. L. Couasnon ; J. C. N. Lucas ; J. F. J. Leriche, superintendent of the sculpture at the manufactory of Sevres ; F. F. Lemot; Dumont; Lange, of Toulouse; E. P. A. Gois, and his son and pupil; Dejoux ; Salvage; Renaud ; P. N. Beauvallet ; Blaise, author of a h'ne marble bust of Giulo Romano ; Montpel-lier, pupil of Lemoyne ; Lorta, pupil of Bridan, pere ; Foucou ; D'Egensviller ; Deseine ; Car-delli ; A. Pajou, pupil of Coustou ; Houdon ;

P. Roland ; Allegrin ; and, finally, Moe'tte, pupil of Pigalle. Nor has the gentler sex for borne to pay its devoirs to this interesting art. Madame Julia Charpentier, a pupil of Pajou ; madame Antoniette G. Desfonts, pupil of Carlini; and madame Milot, may be particularised with high commendation.

A wide field for observation presents itself in turning to the catalogue of Spanish sculptors", and we regret that our confined limits will not allow us to dwell on it as the theme deserves! We shall, however, take a rapid glance over the principal names, commencing with that of Apa ricio, who flourished in the eleventh century, and was commissioned by Don Sancho the Great to construct the shrine of St. Millan, still preserved in the monastery of Yuso, and presenting, if we consider its remote date, great merit both of grace and proportion. Aparicio was assisted in his work by Rodolphe. About the same time flourished Mateo, sculptor and architect. Bartolome made, in 1278, nine stone statues, of the size of life, for the gate of the cathedral church of Tarragona. J. Castayls, of

Barcelona, lived towards the end of the four-

teenth century, as did also Annrique, who exe-

cuted the rilievi of the tomb of Don Henry II.

F. Gonzalez flourished in 1399, and Centellasin

1410. A. and F. Diaz, A. F. de Sahagun, A.

Rodriguez, A. Gonzalez, A. Martinez, Alvar

Rodriguez, Christophe Rodriguez, J. Fernandez,

F.Garcia, F., J. and M. Sanchez, J. Alfonzo,

John Fernandez, John Rodriguez, M. Ruiz, P.

Gutierrez Nieto, together with P. and A. Lopez,

were all employed, from 1418 to 1425, in exe-

cuting the ornaments of the principal facade and

tower of the cathedral church of Toledo. To

this number we may add A. Gomez, James Ro-

driguez, Garcia Martinez, and John Ruiz. The

marble altar-piece of the grand altar of the church of Tarragona was commenced in 1426 by P.

Juan, and finished afterwards by his associate

G. De La Mota. A. De Lima flourished at

Toledo in 1459, as did also F. De Las Arenas,

F. Garcia, &c. The sculptors belonging to the

last half of the fifteenth century are : — J. Caste-

luou, sculptor and goldsmith of Valencia, and

James his son ; the works of both are consider-

ably valued. J. Aleman, of Toledo, eminent for

the beautiful attitudes and draperies of his statues. G. De Siloe, who obtained great reputation at Burgos from his tomb of king John II., and of the Infant, Don Alfonso. Paul Ortiz, one of the most famous names in the circle of Spanish art, and the most considerable of the restorers of sculpture. Andres, who wrought in conjunction with Nicolas : — their performances, as also those of J. De La Cruz, have a Gothic character, but display much facility of execution. B. De Ortega must not be forgotten amongst the masters of Seville, nor (still more particularly) Dancart and his pupil Marco.

Amongst the most eminent of Spanish sculptors who adorned the beginning of the sixteenth century maybe ranked A. De Fries, B. J. Moran, Christiano, J. De Guadalupe, F. De Aranda, F. DeCibdad, Guillemin Digante, J. De Aranda, J. De Augos, J. Peti, P. De St. Michel, Rodrigo, Salas, Solorzano, J. De Lanos, Laberrox, and Luxan, each of whom contributed more or less to the advancement of the art generally, and in particular to the sculptures embellishing both exterior and interior, and to the beautiful shrine

of the cathedral of Toledo. In the course of the same half century — namely, from 1500 t6 1550, appeared P. Millan, and his son John ; J. Olotzaga, sculptor and architect ; F. De Lara ; G. Orozco ; S. De Aponte, whose productions manifest a most refined taste ; D. Mieier, pupil of Dancart ; J. Perez, of Seville, author of several colossal figures for the cathedral of that city ; John, pupil of G. F. Aleman ; J. Morlanes, who first among the Spanish sculptors adopted the style of Albert Durer, which subsequently became general ; B. De Aguilar and G. De Cardenas, who were selected, with F. De Sahagun and P. Izquierdo, to adorn with sculptures the ecclesiastical theatre of the TJniversity of Alcada de Henarez ; R. Aleman, remarkable for his grotesque compositions; J. Millan, son and pupil of Peter; B. Ordonez, of Barcelona, one of the most celebrated artists of his time, particularly in bassi-rilievi of marble ; &c. &c. We must not omit the famous Alfonso Berruguete, who likewise adorned this period as sculptor, painter, and architect. This illustrious artist, after having long sojourned at Rome, where he

studied under Yasari and Buonarroti, returned to his native country ; and was the first to establish there perfect correctness of drawing, the most beautiful proportions of the human body, antique grandeur and expression — in short, all which gives life to marble or to canvas. Sara • gossa, Grenada, Valladolid, and Salamanca, as well as the capital itself, all contain evidences of the talent of Berruguete, whose return threw into the shade the artist who had previously occupied the largest share of public attention, Philip De Vigarni.

The interval from 1550 to 1600 was not fruitful with respect to the followers of sculpture in Spain ; there are, however, a few great names to be selected. Among these are : — J. de Navas, pupil of Berruguete, with J. de Valencia, from the same school. P. de Salamanca had the honor of obtaining, in 1558, a royal edict whereby the art of sculpture was elevated from the

:hanical vocations to the rank of a liberal profession. Christopher of Salamanca deserves also honorable notice. But the most celebrated

artist belonging to this era was Paul de Cespedes, born at Cordova, and one of the first of Spanish artists. Not only did he successively practise painting, sculpture, and architecture, but found time also to court the muse of poetry. The elegance and purity of his drawings are admirable, as is the noble air of his figures. He was skilful in anatomy, had a perfect knowledge of chiaro-scuro, and excelled in coloring. The seventeenth century produced A. Sardigna and G. Hernandez or P'ernandez : the latter of whom embellished with his works Madrid, Salamanca, and, above all, Valladolid. This artist followed the impressive style of Michel Angiolo. He had the assistance of his kinsman and pupil ,T. F. de Hibarne. A. Pugol, of Catalonia, composed and designed with great spirit and taste, and his draperies are particularly admirable. E. Pereyra, a Portuguese, who settled early in Spain, left, among other works, a statue of St. Bruno at Madrid, eminent for character and expression. J. M. Montagnez had the talent to give his figures expressive and natural attitudes. A. Cano, born at Grenada in 1601, was an admira-

ble sculptor; abundant proof of which is to be found in the temples of Seville, Cordova, Madrid, &c. L. F. de la Vega, born in Asturias, died at Oviedo in 1675. Don J. de Rebengo, of Saragossa, obtained a high reputation for his little figures in wax, which were remarkable for their grace and finish. J. de Mora died in 1725. Peter Roldan, and Louis his son, were both greatly esteemed among the sculptors of their day. The eighteenth century gave birth in Spain to several excellent sculptors. Don P. Duque Cornesso of Seville, and Don J. de Hinestrosa, both deserve favorable notice. A. Salvador, surnamed the Roman, died in 1766. L. S. Carmona, in 1767. Philip de Castro, of Galicia, is a most prominent artist of this era, and contributed greatly to spread the principles of fine taste throughout his country. He died in 1775. F. Gutierrez, in 1782. Besides these we may particularise Zarcillo y Alcaraz, J. P. de Mena, C Salas, and E. Alvarez. For this list of Spanish artists we are indebted to the work published at Madrid, in 1800, in 6 vols. 12mo., entitled Diccionari Historic© de los mas Illus-

tres Professores de las Bellas Artes en Espasrna, conpuesto por Don Juan Augustin Cean Bermudez.

We select the following names from the list of sculptors who have rendered themselves celebrated in Germany, Holland, or Russia. F. Duquesnoi, born at Brussels in 1594, was surnamed by the Italians the Fleming, by which appellation he is best known. This artist was most successful in the representation of infants, in which department of sculpture he has been rarely excelled. P. Buyster, born at Brussels in 1 595, passed the greater part of his life in France, where he died at the age of eighty-four. Sebastian Slodtz, born at Anvers 1655, went to perfect Itimself in the French school of Girardon. A. Quellms, also of Anvers, embellished his native tiiy with many admirable productions. G. Van Obstal died at Paris in 1668. Albert Durer, so famous in other branches of the fine arts, excelled also in sculpture, both in stone and wood. L. Kern, and his son J. J. Kern, were also celebrated in their day. The latter practised a long while in England where he died in 1668. G. Leygebe, born in 1630 in Silesia, died at Berlin

in 1683, in possession of the singular art of cutting beautiful little equestrian statues out of large ingots of iron. One of his most esteemed performances of this kind is at Dresden, and represents Charles II. of England, as the Chevalier St. George. M. Rauchmiiller just preceded A. de Schliiter, of Hamburgh, who learnt the art of sculpture at Dantzic, and afterwards repaired to Rome, where he attached himself to the manner of Michel Angiolo. B. Permoser, who died in 1732, is better known by his Christian name, Balthazar. F. X. Messerschmidt adorned Vienna, his native town, with many excellent performances. C. Osner, of Nu'rnburg, died at Petersburgh in 1704. The count Rastrelli, of Italian origin, Zwenkof, Dunker, and Stahlmeyer, of Vienna, all practised in Russia ; as likewise did Domacht, of Swiss origin. Schwartz, of Dresden, also settled at Petersburgh ; nor must we omit to notice a Russian artist of the name of Pawlof, who, having studied under Dunker, resorted to Paris for further instruction. To this nomenclature we may add the names of G. Petel, who died in 1636; N. Millich, in or

about 1669; M. Barthel in 1674; G. G. Weyhenmeyer in 1715; A. de Papenhoren, about 1745 ; and A. Nahl, V. Sonnenschein, and Ohnmacht, who were living at the commencement of the present century.

In our own country sculpture has not been very successfully practised until late years. The reader is, however, congratulated on the chance now exhibited of this department of art, like painting, reaching a high point of excellence in these islands. Several admirable modern sculptors elevate with their productions the artistical reputation of the British empire, and we can reflect with pride on such names as Nollekins, Wilton, Gibbons, Scheemaker, and Banks. The following are among the most eminent of our late or living sculptors: — J. Bacon, E. II. Bailey, R. A., J. G. Bubb, F. L. Chantry, R. A.; J. Flaxman, R. A., professor of sculpture to the Royal Academy, S. V. and L. Gahagan, G. Garrard, A. R. A., J. Henning, C. Rossi, R. A., Rouw (modeller of gems and cameos), P. Turnerelli, and R. Westmacott, R. A. Nor must we omit to mention the fair sculptor, Miss C.

Adams.

*In the modern practice of the art of sculpture the greatest name is certainly that of Michel Angiolo. ‘ He considered,’ says Mr. Duppa, ‘sculpture as his profession, and his studies throughout his whole life were more particularly directed to it, than to painting or to architecture. His first work of celebrity was a group of a Madonna with a dead Christ, called in Italian la Pietk. The subject, in its nature, is impressive, and the composition is felt with appropriate simplicity ; and, of all his works, it is that which seems to have cost him the most laborious attention. With Michel Angiolo expression an.**

character were a primary consideration : and, although he set the antique sculpture before him as an example and a guide, this marked distinction is to be taken between his view of the subject and that of the ancients ; he made ideal beauty and form subservient to expression ; they, on the contrary, made expression and animation subservient to form. The Laocoon and his*

two sons have more expression in their countenance than all the other antique statues united ; yet Sir Joshua Reynolds has observed that, even in this instance, there is only the general expression of pain, and that the pain is still more strongly expressed by the writhing and contortion of the body than by the features. In consulting all the examples which are left of ancient sculpture, it would seem, they established it as a general principle that, to preserve the most perfect beauty, in its most perfect state, the passions were not to be expressed ; all of which may be supposed, in some degree, to produce distortion and deformity in the features of the face. The group of the boxers is a remarkable instance in favor of this opinion ; they are engaged in the most animated action with the greatest serenity of countenance ; and, without attributes, it would be difficult to discriminate between the Juno or the Minerva, the Bacchus or the Meleager; nevertheless, in the Apollo Pythius, there is a graceful, negligent, and animated air, and in the Discobulus a vulgar eagerness of expression, which deserves to be re-

*marked, to show the nice discrimination of character which the ancients were capable of making when the expression was not incompatible with what they considered as a higher excellence. The Bacchus of Michel Angiolo is an attempt to unite a degree of drunkenness with his character ; but, inasmuch as t'*at effect is produced, both the sculpture and the deity are degraded : of this character there are several examples in antique gems, but, however skilful the representation may be in so small a size as a gem, it is certainly not a fit subject for a statue of the proportion of life. The two female figures composing part of the present monument of Julius II. are simple and elegant; and those of Morning and Night, in the Lorenzo Chapel, are composed with great grandeur of design. The works of Michel Angiolo have always a strong and marked character of their own, his thoughts are elevated, and his figures are conceived with dignity ; and, if he wants the purity and correctness of the antique (which he certainly does, in an eminent degree), his faults never degrade him into feebleness ; when he is*

- *' The Laocoon is finished with the chisel, show-*

ing an incredible command of execution ; but in

Rome I once heard a very eminent sculptor say that he believed the statue had been previously finished

with the rasp and file, and that the marks of the chisel were made afterwards, to give the appearance

of facility to the execution, and at the same time a roughness to the surface, which was more favorable

to the general effect of the figure than if it had been left quite smooth. If the statue had been brought

down to this surface at once, he said, the dexterity of the artist was more wonderful than any thing he

knew of in sculpture.'

not sublime he is not insipid ; the sentiment of

aggrandising his subject ever prevails, and, how-

ever he may fail in the execution, his works are

still entitled to the first rank among modern

productions in sculpture. Barry has truly ob-

served, when speaking of his statue of Moses,

that, although that figure may be considered as

rather extravagant, yet it contains such proofs of

knowledge and capacity as will ever make his

name sacred among artists ; and this criticism

may be extended with equal propriety to his

other works, whatever may be their faults.

Michel Angiolo was of the middle stature, bony

in his make, and rather spare, although broad

over the shoulders. He had a good complexion ;

his forehead was square, and somewhat project-

ing ; his eyes rather small, of a hazel color, and on his brows but little hair : his nose was flat,

being disfigured by a blow he received from Tor-

rigiano, a contemporary student with Michel

Angiolo, and a sculptor of great merit, but a

proud, inconsiderate, and ungovernable character.

Bevenuto Cellini, in his own life, has recorded

this affair with Michel Angiolo, as it was related

to him by Torrigiano himself: — ‘ His conversa-

tion one day happened to turn upon Michel

Angiolo Buonarroti, on seeing a drawing of mine

made from the celebrated cartoon of the Battle of

Pisa. ‘ This Buonarroti and I,’ said Torrigiano,

‘ when we were young men, went to study in the

church of the Carmelites, in the chapel of Ma-

saccio ; and it was customary with Buonarroti to

rally those who were learning to draw there.

One day, amongst others, a sarcasm of his having

stung me to the quick, I was extremely irritated,

and, clutching my fist, gave him such a violent

blow upon his nose, that I felt the cartilage yield as if it had been made of paste, and the mark I

then gave him he will carry to his grave.’ B.

Cellini’s account of Torrigiano is, ‘ That he was

a handsome man, but of consummate assurance,

having rather the air of a bravo than a sculptor : above all, his strange gesture? and his sonorous

voice, with a manner of knitting his brows

enough to frighten any man who saw him, gave

him a most tremendous appearance, and he was

continually talking of his great feats amongst those bears of Englishmen whose country he had but

recently left.' We are indebted to Torrigiano

for the monument of Henry VII. in Westminster

Abbey, finished, according to Stow, in 1519,

arid for which the sculptor received £1000. His

ungovernable and restless habits often precipitated

him into great difficulties, and the circumstances

of his death furnish a melancholy instance of

the vicissitudes of life, and the baneful effects of inquisitorial jurisprudence.

' Upon leaving England he visited Spain, and,

after distinguishing himself by many excellent

works, was employed by the duke D'Arcus to

execute in marble a Madonna and infant Christ,

of the size of nature, with high promises to be

rewarded in proportion to his merit. As the

duke was a grandee of the first rank, Torrigiano

flattered himself with a proportional expectation.

After mucl- study and application he completed

his work to "uis own satisfaction ; e'.:d i-is performance 'vas seen with delight and reverence. Impatiei' 'o possess this treasure, the 4uke im*

mediately sent for it; and, that his generosity might be displayed to the greatest advantage, he loaded two lacqueys with the money to defray the purchase. The bulk was promising ; but when the bags were found to contain nothing but brass maravedi, which amounted only to the small sum of thirty ducats, vexation and disappointment roused Torrigiano's resentment ; who, considering this present rather as an insult than as a reward for his merit, on a sudden snatched up his mallet, and without regard to the perfection of his workmanship, or the sacred character of the image, he broke it into pieces, and dismissed the lacqueys with their load of farthings to tell the tale. The grandee, with every passion alive to this merited disgrace, and perhaps impressed with horror for the sacrilegious nature of the act, presented him before the court of inquisition, and impeached him for his conduct as an

infidel and a heretic. Torrigiano urged the right of an author over his own creation : Reason pleaded on his side, b'lt Superstition sat in judgment, and he was condemned to lose his life with torture ; but the holy office lost its victim— Torrigiano starved himself to death in prison (1522), to avoid its torments and the horror of the execution ! He was about fifty years of age.' — Vasari, torn. iii. p. 76.

Canova and Thorwaldsen, together with our own Chantrey, occupy the topmost rank among sculptors of the present day, or rather did so until death snatched away the former of these eminent artists. Still we are inclined to think that the performances of Canova have been somewhat over-rated. Many of them have a studied and theatrical air quite inconsistent with good taste as well as with the higher productions of Grecian art, which this sculptor always affected to copy.

Mr. Mathews, in his Diary of an Invalid, speaking of Canova's Venus, one of his most vaunted figures, says : ' The boudoir of the Pitti Palace, in the centre of which stands Canova's Venus, brilliantly illuminated, and lined with mirrors, reflected (he beauties of her figure in all direc-

tions, and exhibited the statue to the highest ad-

vantage. This is the statue which occupied the

pedestal of the Medicean Venus during her

flight to Paris, but I can find nothing divine

about Canova's Venus. She is not worthy to

officiate as chambermaid to the goddess of the

Tribune. It is simply the representation of a

modest woman, who seems to shrink from expo-

sure in such a dishabille ; while her Grecian

prototype, in native innocence and simplicity,

scarcely conscious of nakedness, seems to belong

to an order of beings to whom the sentiment of

shame was as yet unknown. The attitude of

Canova's is constrained, and perhaps even awk-

ward. This may arise from the manner in which

she compresses that scanty drapery which the

sculptor has given her, intending, I suppose, to

' double every charm it seeks to hide.' The

symmetry, too, is by no means perfect. The

head is manifestly too large. It is perhaps un-

fair to attribute to the sculptor the faults of the marble ; but it is impossible not to remark that,

<:ven if the work had been more perfect than it

is, the unfortunate flaws, just in those places

where they are most mal a-propos, must v.till

have detracted much from its beauty. Many of the copies of this statue seem to me quite equal, if not superior, to the original ; an infallible proof, if the remark be correct, of its mediocrity of merit.' The same intelligent traveller thus speaks of the talents of Thorwaldsen, a Danish sculptor practising at Rome : — ' There is a freshness and originality in his designs, guided by the purest taste. What can be more elegant and beautiful than his basso-rilievo of Night? His Venus victrix approaches nearer than any modern statue to the Venus di Medicis. There is a shepherd, too, which is a delightful specimen of simplicity and nature ; and the charm of these statues is, that wh-le they emulate they have not borrowed any thing from the works of the ancients.'

On the works of our own Chantrey we are disposed to enlarge with all the spirit of nation-

ality ; but a recollection of our confined limits, together with that sense of delicacy which restrains us from discussing minutely the merits of a living artist, withhold us. Mr. Chantrey 's principal productions are busts; but the work which first fixed his high reputation, and is still regarded by many as his chef-d'oeuvre, is a group of sleeping infants, to be seen in the cathedral at Litchfield.

Of tlte different modern modes of process. —

Works of sculpture are performed either by hollowing or excavating, as in metals, agates, and other precious stones, and in marbles of every description ; or by working in relief, as in bassirilievi in the materials just mentioned, or in statues of metal, clay, wood, wax, marble, or stone. The excavation of precious stones forms a particular branch of art called intaglio, which, together with the working them in relievo, when the term camayeu is applied to them, belongs to the art of seal-engraving.

The excavation of metals constitutes the art of engraving, in its various branches, on metal of any kind ; and its relief comprises enchasing, casting in bronze, &c.

The process of hollowing hard stone or marble will need no particular description ; especially as it is now wholly in disuse, except for the forming of letter in monumental or other inscriptions.

In working in relievo the process is necessarily different, according to the materials in which the work is performed. As not only the beginning of sculpture was in clay, for the purpose of forming statues, but as models are still made in clay or wax, for every work undertaken by the sculptor; we shall first consider the method of modelling figures in clay or wax.

Few tools are necessary for modelling in clay. The clay being placed on a stand, or sculptor's easel, the artist begins the work with his hands, and puts the whole into form by the same means. The most expert practitioners of this art seldom use any other tool than their fingers, except in such small or sharp parts of their work as the fingers cannot reach.

In modelling in wax, the artist sometimes uses his fingers, and sometimes tools of the same sort as those alluded to for modelling in clay

It is at first more difficult to model in wax than SCULPTURE.

tu clay, but practice will render it familiar and

easy.

Of the use of the model. — Whatever consi-

derable work is undertaken by the sculptor,

whether basso-rilievo, or statue, &c., it is always

requisite to form a previous model of the same

size as the intended work ; and the model being

perfected, according to the method before de-

scribed, whether it is in clay, or in wax, or a

cast in plaster of Paris, becomes the rule whereby

the artist guides himself in the conduct of his

work, and the standard from which he takes all

its measurements.

Of sculpture in wood. — A sculptor in wood

should first take care to choose wood of the best

quality, and the most proper for the work which

he intends to execute. If he undertakes a large

work, requiring strength and solidity, he ought

to choose the hardest wood, and that which

keeps best, as oak and chestnut; but, for works

of moderate size, pear or apple trees serve very

well. As even these latter woods are still of

considerable hardness, if the work consists only

of delicate ornaments, the artist will find it pre-

ferable to take some more tender wood, provided

it is at the same time firm and close; as, for in-

stance, the Indian tree, which is excellent for this purpose, as the chisel cuts it more neatly and

easily than any other wood.

The ancients made statues out of almost every

different kind of wood. At Sicyon was a statue of

Apollo made of box ; the statue of Diana at Ephe-

sus was of cedar. As these two sorts of wood

are extremely hard and undecaying; and as ce-

dar, in particular, is of such a nature as, accord-

ing to Pliny, to be nearly indestructible, the an-

cients preferred them for the images of their

divinities. In the temple built on Mount Cyllene

in honor of Mercury, Pausanias relates, that

there was a statue of that god made of citron-

wood, eight feet in height. This wood was also

much esteemed. The cypress likewise, being a

•wood not apt to spoil, nor to be damaged by

worms, was also used for statues ; as were the

palm-tree, olive, and ebony, of which latter, ac-

cording to Pliny's account, there was another

statue of Diana at Ephesus. Several other kinds

of wood were equally employed for this purpose,

even the vine, of which the same author says there were statues of Jupiter, Juno, and Diana. Felibien speaks of a French artist at Florence, of the name of Janni, who executed several statues in wood, in a style of finishing equal to marble, and particularly one of St. Roque, which Vasari considered as a marvellous production. The beauty of sculpture in wood consists in the tender manner of cutting the wood, free from all appearance of hardness or dryness.

Of sculpture in stone and marble. — For sculpture in marble, and other stone, the artist must make use of tools made of good steel, well tempered, and of strength proportioned to the hardness of the material.

We have in a preceding section adverted to the ordinary practice. By the dexterous and delicate use of the chisel, the sculptor gives all the softness and tenderness to the figure, till at length the rasp prepares it for being polished. Rasps are of several kinds, some straight, some curved, and some harder or softer than others. When the sculptor has thus far finished his work with the best tools he can procure, wherever certain parts or particular works require polishing, he uses pumice-stone to make all the parts smooth

and even. He then goes over them with tripoli, and, when he would give a still higher gloss, he rubs them with leather and straw ashes.

Besides the tools already mentioned, sculptors use also the pick, which is a small hammer pointed at one end, and at the other formed with teeth made of good steel and squared, to render them the stronger. This serves to break the marble, and is used in all places where the two hands cannot be employed to manage the mallet and chisel. The bouchard, which is a piece of iron, well steeled at the bottom, and formed into several strong and short points like a diamond, is used for making a hole of equal dimensions, which cannot be done with cutting tools. The bouchard is driven with the mallet or beetle, and its points bruise the marble and reduce it to powder. Water is thrown into the hole from time to time, in proportion to the depth that is made, to bring out the dust of the marble, and to prevent the tool from heating, which would destroy its temper ; for the freestone dust on which tools are edged is only moistened with water to prevent the iron from heating and taking off the temper of the tool by being rubbed dry; and the

trepans are wetted for the same reason. The sculp-

tor uses the bouchard to- bore or pierce such parts

of his work as the chisel cannot reach without

danger of spoiling or breaking them. In using it

he passes it through a piece of leather, which

leather covers the hole made by the bouchard,

and prevents the water from spirting up in his

face.

The tools necessary for sculpture, on marble or

stone, are the roundel, which is a sort of rounded chisel ; the houguet, which is a chisel squared

and pointed ; and various compasses to take the

requisite measures.

The process of sculpture in stone is the same

as in marble, excepting that, the material being

less hard than marble, the tools used are not so

strong, and some of them are of a different form,

as the rasp, the handsaw, the ripe, the straight

chisel with three teeth, the roundel, and the gra-

ter. If the work is executed in freestone, tools

are employed which are made on purpose, as

the freestone is apt to scale, and does not work

like hard stone or marble. -Sculptors in stone

have commonly a bowl in which they keep a

powder composed of plaster of Paris, mixed with

the same stone in which their work is executed. With this composition they fill up the small holes, and repair the defects which they meet with in the stone itself.

In the work of Junius, De Pictura Veterum (lib. 2, chap. 3), and in the Bibliotheque Grecque of Fabricius (lib. 3, chap. 24, sect, x.), a catalogue is to be found of ancient authors who have treated of the art of sculpture. Among modern works on the theory and practice of this art, we may cite the following : — Pomponii Gaurici, De Sculptura sive Statuaria Veterum Dialogus, Florent. 1504, 4to., and in the ninth volume of the Thesaurus of Gronovius. L. B. de

Albertis, De Sculptum, Basil, 1540, 8vo., De Ccelatura et Sculptura Veterum, by Aid. Manuce, also to be found in the ninth volume of the Thesaurus of Gronovius. The third and fourth books of the work entitled Callus Romae Hospes, by Ludovicus Demontiosius, Rome, 1585. These have been reprinted in theDactyliotheque of Gorlxus, likewise in the ninth vo-

lume of the Thesaurus of Gronovius. Jul. C. Bulengeres, De Pictura, Plastice, et Statuaria, in his Opuscules, Leyden, 1621, 8vo., and in the ninth volume of Gronovius. P. P. Rubenius, De Imitatione Statuarum Gracarum, in the Cours de Peinture, by Depiles, Paris, 1760, 12mo. The first chapter of the first book, and the fifth and sixth chapters of the second book of the Archaeologia Litteraria de Ernesti, treat de Marmoribus, de Toreutice, et de Plastice. Commentationes duae super Veterum Eborae, Eburneiscrue Signis, by M. Heyne, in the first volume of the new Memoirs of the Royal Society ofGottingen; in the fourth and fifth volumes of which same Memoirs we find Monumentorum Etruscorum Artis ad Genera sua et Tempera re-vocatorum Illustratio, by the same.

Among Italian works : — II Disegno del S. Ant. Franc. Doni, ove si Tratta della Scultura e Pit-tura de' Colori, de' Getti, de' Modegli, con molte Cose appartinenti, Venice, 1549, 8vo. Several chapters of the Introduction to Vite de piu ex-cellenti Architetti, Pittori e Scultori Italiani, by Vasari, treat of Sculpture. Due Trattati, uno

dalle otte principale Parti d'Oreficeria, 1'altero in materie dell' Arte della Scultura, dove si vedono infiniti Segreti per lavorare le Figure di Marmo, e del gettarle di Bronzo, da Benvenuto Cellini, Firenze, 1568, 4to. In the Lezione di M. Benedetto Varchi, Sopra diverse Materie Poetiche e filosofiche, Firenze, 1549, we find a letter of Cellini on the advantage which sculpture has over painting ; and another little treatise of this nature is added, by the same author, to the Essequie di Michel Angiolo Buonarroti, Firenze, 1564, 4to. Discorsi sopra le Antichita Romana, di Vincentio Scamozzi, Venice, 1582, with forty folio engravings, contain several articles on sculpture, and on the marbles to be preferred for statues. II Ri]K»so di Raffaele Borghini, in cui si favella della Pittura e della Scultura e de' piu illustri Pittori et Scultori, antichi emoderni, Firenze, 1584, 4to., and 1730, 4to. Discorso intorno alia Scultura e Pittura, di Alessandro Lami, Cremona, 1584, 4to. L'Idea de' Pittori, Scultori, e Architetti, del Cav. Fed. Zuccaro, Torino, 1607, 4to. Avvertimenti e Regole sopra 1'Architettura, civile e milit., la Pittura Scultura, e Prospettiva,' da Pietro Ant. Barca, Milan, 1620, fol. Le

Pompe della Scultura, da Giamb. Moroni, Ferrara, 1640, 12mo. Trattato della Pittura e Scullura, uso ed abuso loro, composto daun Teologo (Father Ottonelli), e da un Pittore (Pietro da Cortona), Firenze, 1652, 4to. Discorso delle Statue, da Giovanni Andrea Borboni, Rome, 1661, 4to. Lettera, nella quale si risponde ad alcuni Quesiti di Pittura, Scultura, &c., addressed to the marquis V. Capponi, by Filippo Baldinucci, Rome, 1681. Sfogamenti d'lngegno sopra la Pittura e la Scultura, dal P. F. Minozzi, Venice, 1739, 12mo. Raccolta di Lettere sulla Pittura, Scultura, ed Architettura, scrette da piu celebri Personnaggi che in dette Arti fionrono dal sec. xv. all. xvii. Rome, 1754, 4to, 7 vols. Dialoghi sopra le tre Arti del Disegno, by Giovanni Bottari, Lucca, 1754, 8vo.

In Spanish is the following : — Varia Commensuracion para la Escultura y Architettura, por Don Juan de Arphez Villafane, Madrid, 1675, 4to.

In the French tongue we find : — Conferences de 1'Acadt'mie Royale de Peinture et Sculpture pendant 1'annee, 1667, by Felibien, Paris, 1668,

4to. Des Principes de 1'Architecture, de la Sculpture, de la Peinture, et des Arts qui en dependent, by Felibien, Paris, 1697, 4to. Sentimens des plus habiles Peintres, sur la Pratique de la Peinture et de la Sculpture, mis en table de Preceptes, avec plusieurs Discours academiques, by Henri Testelin, Paris, 1680, folio. Traite des Statues, by F. Leme"e, Paris, 1688, 8vo. Manuscrit pour connoitre les Medailles et les Statues anciennes, by Nicolas de Porcionaro, and four of the most famous and learned antiquaries of Italy, Naples, 1713, 4to. De la Sculpture, du Talent qu'elle demande, et de TArtdes Bas-reliefs, by Dubos, to be found in the fiftieth chapter of the first part of his Reflexions critiques sur la Poesie et sur la Peinture; — Discours sur le Beau Ide"al des Peintres, Sculpteurs, et Poetes, by L. H. Ten-Rate, included in a translation of Richardson's Works, Amst. 1728, 8vo. Lettre sur la Peinture, Sculpture, et Architecture, Amst., 1749, 8vo. Essai sur la Peinture, Sculpture, et Architecture, by L. P. de Bachaumont, Paris, 1731, I2mo. In the twenty-ninth volume of Memoires de 1'Academie des Inscriptions is a Memoir of the Comte de Cay-

lus, sur un Moyen d'incorporer la Couleur dans le Marbre, et de fixer le Trait. Reflexions sur la Sculpture, by E. Falconet, Paris, 1761, 12mo. Nouveaux Sujets de Peinture et de Sculpture, Paris, 1 755, 12mo. Essai sur la Sculpture, to be found with the Traite- de Peinture of Dandr6 Bardon, Paris, 1765, 2 vols. 12mo. Ilistoire Universelle traite"e relativement aux Arts de Peindre et de Sculpter, Paris, 1769, 2 vols. 12mo. Ichnographie, ou Discours sur les quatre Arts d'Architecture, Peinture, Sculpture, et Gravure, avec des Notes historiques, cosmographiques, chronologiques,ge'ne'alogiques, et Monogram mes, Chiffres, Lettres initiates, Logogriphes, &c., by M. Herbert, Paris, 1767, 5 vols. 12mo. De 1'Usage des Statues chez les Anciens, Essai historique, Brussels, 17.68, 4to, with prints. (The Comte de Guasco is the author of this work). Lettre sur la Sculpture a M. Theodore deSmeth, by M. Hemsterhuis the younger, Amst. 1768, 4to., with engravings. Observations historiques et critiques sur les Erreurs des Peintres, Sculpteurs, &c., dans la Representation des Sujets tires de 1'Histoire-sainte, avec des Eclaircissemens

pour les rendre plus exactes, Paris, 1771, 12mo.

In the Cou.rs d'Architecture de F. Blondel (Paris, 1771), we find a Me" moire sur 1'Origine de la Sculpture.

The following also maybe cited as conveying information with respect to the execution of various works of sculpture : — Discours sur la Statue Equestre de Frederic Guillaume erige'e sin

e Pout-Neuf a Berlin, by C. Ancillon, Berlin, 1703, fol. Description de ce qui a etc pratique pour fondre d'un seul jet la Statue Equestre de Louis XIV. en 1699, by G. Boffrand, Paris, 1743, fol. Description des Travaux qui ont precede, accompagne, et suivi la Fonte en bronze, d'un seul jet, de la Statue Equestre de Louis XV"., Paris, 1768, fol. Description de la Statue Equestre que la Compagnie des Indes Orientales a Copenhague, a consacree a la Gloire de Frederic V., avec les explications des motifs qui ont determine le choix des diffcrentes parties qu'on a suivi dans la composition de ce monument, by J. F. J. Sailly, Copenhagen, 1771, fol.

In German : — Joachim de Sandrart, Admiranda Artis Statuariae, Normandy, 1680, fol. Summary of the History and Principles of the Fine Arts and Sciences, the first division of which relates to the history and principles of sculpture, Berlin, 1772, 8vo. by A. F. Busching. Sketch of a History of the Arts of Design, Hamburgh, 1781, 8vo. by the same. Philosophy of Sculptors, by E. L. Huch, Brandenburgh, 1775, 8vo. The fifth and sixth chapters of the Treatise on Literature and the Works of Art of Antiquity, by J. F. Christ, Leipsic, 1776, 8vo. Treatise on the Plastic Art, including sundry Observations on Form and Figure, Riga, 1778. In the first volume of an Essay on an Academy of Fine Arts, by C. F. Prangen, we find a treatise on the Mechanism of Sculpture. Essay on a History of Sculpture among the Ancients, by Hofstaeter, Vienna, 1778, 8vo. : in addition to which the different works of Winkelman may be consulted.

In our own language the works more particularly useful for reference are : — A Letter on Poetry, Painting, and Sculpture, by H. King,

London, 1768, 8vo. Collection of Greek, Etruscan, and Roman Antiquities, from the Hamilton Cabinet, Naples, 1766, folio, which work contains a paper on Expression in Painting and Sculpture, as well as an Historical Summary on the State of Sculpture among the Greeks.

The following books treat of certain monuments of antique sculpture in particular: — Callistrati, ‘ Ec0pa(mc, sive Descriptio Statuarium, found among the works of Philostrates. The Description of Greece, by Pausanias, and the 33d and 37th books of Pliny’s Natural History. Several Memoires of the Comte de Cay 1 us on passages of Pliny relative to objects of art, are inserted in the 19th, 25th, and 32d vols. of Me”-moires de 1’Academie des Inscriptions et Belles Lettres. Edmundi Figrellii, De Statuis illustrium Romanorum, liber singularis, Holmiae, 1656, 8vo. Joannes Henrici Schlemmii, De Imaginibus Veterum Atriensibus Praelim. et cubicularis Dissertatio, Jena, 1664, 4to. Frederici Mulleri, delineat lib. xi. quos molitus est de Statuis Romanorum et praecipue de Natura Statuarium quibus prisci Romani bene meritos honorabant, Giessae, 1664, 4to. Joannis Nicolai,

Diatribe de Mercuriis et Hermis, Francofurti, 1701, 12mo. Chr. Gottfr. Barthii, De Imaginibus Veterum in Bibliothecis vel alibi positis, Hallae, 1702, 4to. Jacobi Gronovii, De Imaginibus et Statuis principum Dissertatio, Ludg. Ba1., 1 706, 4to. J. Munchii, De Statuis Veterum Romanorum Dissertatio, Hafniae, 1714, 4to. F. G. Freytagii, De Statuis TmXtffpvaic Veterum Dissertatio, Lip., 1715, 4to. Oratorum et Rhetorum Grxcorum, quibus Statuae honoris causa positae fuerunt, decas, Lips., 1752, 8vo., by the same. G. G. Boarneri, De Statuis Achilleis Dissertatio, Lips., 1759, 4to.

With respect to sculpture, as practised by the moderns, the reader is referred to : — Cabinet des Singularites d'Architecture, Peinture, Sculpture, et Gravure, by F. Le Comte, Paris, 1 699, 3 vols. 12mo. Catalogue historique du Cabinet de Sculpture Franyaise de M. de la Live de July, Paris, 1764, 12mo. Monumens eriges en France ai la Gloire de Louis XIV. precedes d'un Tableau du Progres des Arts et des Sciences sur ce Regne, ainsi que d'une Description des Honneurs et des Monumens accordes aux grands

Hommes, tant chez les Anciens que chez les Modernes, et suivis d'un Choix des principaux Projets qui ont ete proposes pour placer la Statue du Roi, by M. Patte, Paris, 1765, fol., with fifty-seven plates. Antiquites Nationales, ou Recueil de Monumens pour serviral'Histoire del'Empire Francais, tels que Tombeaux, Inscriptions, Statues, Vitraux, Frescoes, &c., tires des Abbayes, Monasteres, et Chateaux, by A. L. Millin, Paris, 1791, 5 vols. 4to. and fol., with plates.

A catalogue of ancient sculptors is to be found in the second edition of De Pictura Veterum, by Junius, Rot. 1694, fol., whilst the following treat of modern Italian sculptors : — Vite de' pitk insigni Pittori e Scultori Ferraresi, by G. Baruffaldi, Ferrara, 1705, 4to. Notizie intorno alia Vita ed alle Opere de' Pittori, Scultori ed intagl. di Bassana, by G. Verci, Bass. 1775, 8vo. Catal. Istoriche de Pittori ed Scultori Ferraresi, e dell loro Opere, Ferrara, 1783, 2 vols. 8vo.*

On modern Spanish sculptors, independently of the work by Bˆrmudez, already quoted (see preceding article), we have : — Vidas de los Pintores y Estatuarios eminentes Espagnoles, by

D. A. P. Velasco, London, 1742, 8vo., and, in French, Paris, 1749, 12mo. This forms the third part of the same author's Museo Pittorici, Madrid, 1725, fol.

On German sculptors : — J. C. Schumann, AI-cimedon, or Lives of the most celebrated German Sculptors and Engravers, Dresden, 1684, 8vo.

History of the best Swiss Artists, by J. C. Fussli, Zurich, 1780, 5 vols. 8vo. Notices of sundry Artists of Frankfort, of the Life and Works of its Painters and Sculptors, by Husgen, Frankfort, 1780, 8vo. Several papers on the same subject are likewise to be found in the Journal of Arts of M. de Murr, and in that of Meusel.

We conclude with the admirable practical remarks of Sir Joshua Reynolds. ' The sculptor,' says Sir Joshua, ' may be safely allowed to practise every means within the power of his art to produce a deception, provided this practice does not interfere with or destroy higher excellencies; on these conditions he will be forced, however loath, to acknowledge that the boundaries of his art have long been fixed, and that all endeavours will be vain that hope to pass beyond the best works which remain of ancient sculpture.

‘ Imitation is the means, and not the end, of

art ; it is employed by the sculptor as the language scu

b which his ideas are presented to the mind of

the spectator. Poetry an4 elocution of every sort

make use of signs, but those signs are arbitrary

and conventional. The sculptor employs the

representation of the thing itself; but still as a

means to a higher end — as a gradual ascent

always advancing towards faultless form and

perfect beauty. It may be thought at the first

view that even this form, however perfectly

represented, is to be valued and take its rank

only for the sake of a still higher object, that of conveying sentiment and character, as they are

exhibited by attitude, and expression of the

passions. But we are sure, from experience,

that the beauty of form alone, without the as-

sistance of any other quality, makes of itself a

great work, and justly claims our esteem and

admiration. As a proof of the high value we

set on the mere excellence of form, we may pro-

duce the greatest part of the works of Michel

Angiolo, both in painting and sculpture; as well

as most of the antique statues, which are justly esteemed in a very high degree, though no very marked or striking character or expression of any kind is represented. But, as a stronger instance that this excellence alone inspires sentiment, what artist ever looked at the Torso without feeling a warmth of enthusiasm, as from the highest efforts of poetry? Whence does this proceed ? What is there in this fragment that produces this effect, but the perfection of this science of abstract form ? A mind elevated to the contemplation of excellence perceives in this defaced and shattered fragment, disjecta membra poette, the traces of superlative genius, the relics of a work on which succeeding ages can only gaze with inadequate admiration.

' It may be said that this pleasure is reserved only to those who have spent their whole life in the study and contemplation of this art ; but the truth is that all would feel its effects, if they could divest themselves of the expectation of deception, and look only for what it really is, a partial representation of nature. The only impediment of their judgment must then proceed

from their being uncertain to what rank, or rather

kind of excellence, it aspires ; and to what sort of approbation it has a right. This state of darkness

is, without doubt, irksome to every mind ; but

by attention to works of this kind the knowledge

of what is aimed at comes of itself, without being taught, and almost without being perceived.

The sculptor's art is limited in comparison of

others, but it has its variety and intricacy within its proper bounds. Its essence is correctness :

and when to correct and perfect form is added

the ornament of grace, dignity of character, and

appropriate expression, as in the Apollo, the

Venus, the Laocoon, the Moses of Michel Angi-

olo, and many others, this art may be said to

have accomplished its purpose.'

SCUM, n. s. & v. a. Fr. escume ; Ital. sc/tiuma ; Dan. and Goth. skum. That which rises to

the top of any liquor ; spume ; froth ; refuse : hence, in contempt, the lowest of the people : to clear

off the scum.

The rest had several offices assigned ;

Some to remove the scum as it did rise,

Others to bear the same away did mind,

And others it did use according to his kind.

Faerie Queene.

There flocked unto him all the scum of the Irish

out of all places, that ere long he had a mighty army.

S) > enser.

Some forty gentlemen excepted, had we the very

tcum of the world, such as their friends thought it an exceeding good gain to be discharged of.

Raleigh's Essays.

The salt part of the water doth partly rise into a scum on the top, and partly goeth into a sediment in the bottom. Bacon.

Gathered like scum, and settled to itself,

Self-fed and self-consumed. Milton.

A second multitude

Severing each kind, and tcummed the bullion dross.

Id.

I told tliee what would come

Of all thy vapouring, base scum. Iludinras.

The Scythian and Egyptian scum

Had almost ruined Rome. Rasconunon.

Away, ye tcum,

That still rise upmost when die nation boils.

Dry den.

Hear, ye sullen powers below ;

Hear, ye taskers of the dead !

You that boiling cauldrons blow,

You that tcum the molten lead !

Dryden and Lee's (Edipns.

What corns swim upon the top of the brine, sewn off. Mortimer's Husbandry.

The great and innocent are insulted by the scum and refuse of the people. Additon't Freeholder.

SCUPPER HOLES, n. s. Belg. schoepen, to draw off. In a ship, small holes on the deck, through which water is carried into the sea.

The leathers over those holes are called scupper leathers ; and the nails with which they are fastened, scupper nails.

The blood at scupper holes run out. Ward.

SCUPPERS, in a ship, are certain channels cut through the water-ways and sides of a ship, at proper distances, and liu'ed with plated lead, to carry the water off from the deck into the sea.

The scuppers of the lower deck of a ship of war are usually furnished with a leathern pipe, called the scupper hose, which hangs downward from the mouth or opening of the scupper. The intent of this is to prevent the water from entering when the ship inclines under a weight of sail.

SCURF, n. s. Sav. rcunp ; Goth and Swed. skorfi Dan. skurff; Belg. schorft. A kind of

dry miliary scab ; a soil or stain adhering to the skin or surface.

Her crafty head was altogether bald,

And, as in hate of honourable eld,

Was overgrown with scurf and filthy scald.

Faerie Queene.

There stood a hill, whose grisly top

Shone with a glossy scurf. Milton.

Then are they happy, when by length of time

The scurf is worn away of each committed crime,

No speck is left. Dryden.

scu

Upon throwing in a stone, the water boils • and at the same time are seen little fleaks of scurf rising up.

Addison.

The virtue of his hands

Was lost among Pactolus' sands,

Against whose torrent while he swims,

The golden scurf peels off his limbs. Swift.

SCUR'RIL, adj. -\ Lat. scurrilis. Low ;

SCURRIL'ITY, n. s. (mean; grossly oppro-

SCUR'RILOUS, adj. fbrious: the more com-

SCUR'RILOUSLY, adv. J mon adjective is scur-

rilous, of the same signification ; the adverb and

noun substantive correspond.

Scurrilous and more than satyrical immodesty.

Hooker.

With him Patroclus,

Upon a lazy bed, the live-long-day

Breaks scurriL jests.

Shakspeare. Troilus and Cretsida.

Good master Holofernes, purge ; so it shall please

you to abrogate scurrility. Shaktpeare.

Let him approach singing. Forewarn him that

he use no scurrilous words in's tunes.

Id. Winter's Tale.

Nothing conduces more to letters than to examine

the writings of the ancients, provided the plagues of judging and pronouncing against them be away ;

such as envy, bitterness, precipitation, impudence,

and scurril scoffing. Ben Jonson.

It is barbarous incivility, scurrilously to sport with that which others count religion. Titiotson.

Thou movest me more by barely naming him,

Than all thy foul unmannered tcurril taunts.

Dryden.

Banish scurrility and profaneness, and restrain

the licentious insolence of poets. Id.

Such men there are, who have written scurrilously

against me, without any provocation. Id.

How often is a person, whose intentions are to do

good by the works he publishes, treated in as scur-

rilous a manner as if he were an enemy to mankind !

Addison's Freeholder.

Their characters have been often treated with the

utmost barbarity and injustice by tcurrilous and en-

raged orators. Su-ift.

SCUR'VILY, adv. From SCURVY. Vilely;

basely; coarsely. It is seldom used but in a

ludicrous sense.

Look i' your glass now,

And see how tcwvily that countenance shews :

You would be loth to own it.

Ben Jonton's Catiline.

This alters the whole1 complexion of an action,

that would otherwise look but very scurcily, and

makes it perfect. South.

The clergy were never more learned, or so scvrvily

treated. Su-ift.

SCUR'VY, n. s. & adj. From SCURF. A well-

known disease of low countries and of seamen,

see below. This word was, I believe, originally

an adjective, says Dr. Johnson ; and it signifies

as such scabbed ; diseased with scurvy ; vile ;

bad ; low ; offensive.

Whatsoever man be scurry or scabbed.

Lev. xxi. 20.

I know him for a man divine and holy ;

Not scurvy, nor a temporary meddler. Shaktpeare.

He spoke scurvy and provoking terms

Against your honour. Id.

The scurry is a distemper of the inhabitants of

cold countries, and amongst those such as inhabit

marshy, fat, low, moist soils, near stagnating water, fresh or salt ; invading chiefly in the winter such as 70 SCU

are sedentary, or live upon salted or smcaked fiesij and fish, or quantities of unfermented farinaceous

vegetables, and drink bad water. Arbuthnut.

A crane, which is but scurvy meat, lays but two

eggs. Cheyne.

It would be convenient to prevent the excess of

drink, with that scurvy custom of taking tobacco.

Swift.

SCURVY, in medicine. See MEDICINE.

SCURVY-GRASS, common officinal, or coch-

learia officinahs, grows upon rocks on the sea-

coast, and on the Highland mountains, abun-

dantly. It has an acrid bitter, and acid taste,

and is highly recommended for the scurvy. As

it abound-s with acid salts, there can be no doubt but that it is a great resister of putrefaction.

The best way of taking it is raw in a sallad. It is also diuretic, and useful in dropsies. The

Highlanders esteem it as a good stomachic.

'SCUSES. For excuses. A mere barbarism

of Shakspeare's.

T shifted him away,

A nd laid good souses on your ecstasy.

Shakspeare. Othello.

SCUT, n. s. Isl. skott ; Goth. skot. The tail

of certain animals whose tails are very short.

In the hare it is aversely seated, and in its dis-

tension inclines unto the coccix or scut.

Browne's Vulgar Errours.

He fled to earth, but first it cost him dear ;

He left his icut behind, and half an ear. Suift.

SCUTAGE, n. s. [Sax. scutagium, scildpe-

ning] was a tax or contribution raised by those

that held lands by knights' service, towards fur-

nishing the king's army with one, two, or three

merks for every knight's fee. Henry III., for

his voyage to the Holy Land, had a tenth granted

by the clergy, and scutage, three merks of every

knight's fee by the laity. This was also levied

by Henry II., Richard I., and king John.

SCUTARI, a lake of Albania, Greece, situated

about fifteen miles from the coast. It is about sixteen miles in length, and seven in breadth, containing several small islands. The Moracca enters its northern extremity, and issues from its south-eastern, where it is known as the Bojane.

SCUTARI, or ISKENDERJE, a large fortified town of Albania, on the Bojane, at the south-east extremity of the lake of Scutari. Its highest point is crowned by a castle. The town consists of four quarters ; and has several mosques and Greek churches, being the see of a Greek bishop. The neighbouring plain is one of the richest in Albania in vines and olive plantations. Scutari is the capital of a pachalic, one of the most considerable in Albania. Population 12,000. Fifty miles east by south of Cattaro, and 448 west of Constantinople.

SCUTARI, a large town on the Bosphorus, immediately opposite to Constantinople. Its site is most beautiful, on the slope of several hills, and thickly intermingled with trees. The strait appears here like a lake, planted round with cities : and the minarets of Scutari command the most brilliant views of Constantinople. It carries

on a considerable trade as a rendezvous for caravans from the interior of Asia. Population 30,000.

SCUTCH'EON, n. s. Ital. scuccione, from

Lat. scutum. The shield represented in heraldry ; the ensigns armorial of a family. See ESCUTCHEON.

And thereto had she that scutcheon of her desires, supported by certain badly diligent ministers.

Sidney.

Your tcutcheons, and your signs of conquest, shall Hang in what place you please.

Shakspeare. Antonv and Cleopatra.

Honour is a mere tcutcheon. Id. Henry IV.

The chiefs about their necks the scutcheons wore. With orient pearls and jewels powdered o'er.

Dryden.

SCUTE, a French gold coin of 3. 4d. in the reign of king Henry V. Catherine queen of England had an assurance made her of sundry castles, manors, lands, &c., valued at the sum of 40,000 scutes, every two whereof were worth a*

noble.

SCUTELLARIA, skull-cap, in botany, a ge-

nus of the gymnospermia order, and didynamia

class of plants ; natural order fortieth, personals : CAL. short, tubulated, has the mouth entire, and

close after flowering. There are two species,

natives of Britain, viz.

1. S. galericulata, blue skull-cap, or hooded

willow-herb. The stems are weak, branched,

and above a foot high : the leaves are heart-

shaped, narrow-pointed, on short foot-stalks,

and scallopped ; the flowers are blue, in pairs,

on pedicles from the alae of the leaves, and pen-

dulous. It grows on the banks of rivers and

lakes, is bitter, and has a garlic smell.

2. S. minor, little red skull-cap, or willow-

herb. The stalks are about eight inches high ;

the leaves are heart-shaped, oval ; the flowers are

purple. It grows in fens, and on the sides of

lakes.

SCUTELLATED, adj. Lat. scutella. Di-

vided into small surfaces.

It seems part of the scutellated bone of a sturgeon, being flat, of a porous or cellular constitution.

Woodward.

SCUTTLE, n. ». Lat. scutella ; Celt, scutell.

Ainsworth. A wide shallow basket, so named

**-om a dish or platter which it resembles in*

form.

A tcuttle or skrein to rid soil fro' the corn.

Tusstr.

The earth and stones they are fain to carry from

inder their feet in tcuttles and baskets.

Hake will on Providence.

To the hole A the door have a small scuttle, to

keep in what mice are there. Mortimer't Hutbandwy.

SCDT'TLE, n. s. & v. n. From SCUD or SCOUT.

A quick pace ; a short run ; a pace of affected

precipitation : to run in this manner.

She went with an easy scuttle out of the shop.

Spectator.

The old fellow scuttled out of the room.

Arbuthnot.

SCDTTLKS, in a ship, are square holes cut in

the deck, big enough to let down a man, and

which serve to let the people down into any

room below, or from one deck to another.

SCUTUM, in antiquity, the name of a shield

with which the Roman soldiers were formerly

armed. The scutum differed from the clypeus, inasmuch that the former was oval and the latter round. That which was used among the Grecians was sometimes round, at others square, and not unrrequently oval. The scutum, or buckler, which the Lacedaemonians used, was so lanre that the dead and wounded were carried on it.

SCYLAX, a celebrated mathematician and geographer of Caria, who flourished in the reign of Darius Hystaspis, about 558 B.C. Darius sent him to make discoveries in the east, and, after a journey of thirty months, he visited Egypt. The best edition of his Periplus is that of Gronovius, in 4to., Lug. Bat. 1697. Some have attributed to him the invention of geographical tables. We have under his name a geographical work published by Hoeschelius ; but it is written by a much later author, and is perhaps an abridgment of Scylax's Geography.

SCYLLA, in the mythology, a daughter of Nisus, king of Megara, who fell in love with Minos while he was besieging her father's capital, and offered to make him master of it, if he

would marry her. Minos promising this, she cut off a golden hair of her father's head, while he was asleep, on which the fate of Megara depended. Minos took the city, but treated her with the contempt her treason merited: on which she threw herself into the sea, and was turned into a lark, and her father into a hawk.

SCYLLA, a daughter of Typhon, or Phorcys, who was beloved by the sea-god Glaucus, but rejected his addresses. Glaucus applied to Circe to use her spells, and turn Scylla's affection to him; but Circe, falling in love with Glaucus herself, employed her most poisonous plants to ruin her rival ; and, pouring the juice of them into a fountain where Scylla bathed, all the under part of her body was changed into monsters, which never ceased barking like dogs. On this Scylla threw herself into the sea, between Italy and Sicily, where she was metamorphosed into the rocks opposite to Charybdis, that still bear her name. — Homer. Od. xii. 85. Ovid. Met. xiv. 66, &c.

SCYLLA, in ancient geography, a rock in the Fretum Siculum, near the coast of Italy, dan-

gerous to shipping, opposite to Charybdis, a whirlpool on the coast of Sicily.

SCYLLA AND CHARYBDIS, according to the fables of the poets, were two sea-monsters, continually on the watch to destroy unfortunate mariners ; the one situated on the right, and the other on the left extremity of the strait of Messina, where Sicily fronts Italy. Thus Virgil describes them: —

Dextrum Scylla latus, levura implacata Charybdis
Obsidet, atque imo barathri ter gurgite vastos
Sorbet in abniptum fluctus, rursusque sub auras
Erigit alternos, et sidera verberat unda :
At Scyllam coeds cohibet spelunca latebris
Ora exertantem, et naves in saxa trahentem.
Prima hominis fades et pulchro pectore virgo
Pube tenus ; postrema immani corpore pristii
Delphi nrtm caudas utero commissa luperum.
/F.neid. lib. iii.

Far on the right her dogs foul Scylla hides ;
Charybdis roaring on the left presides,
And in her greedy whirlpool sucks the tides,
Then spouts them from below ; with fury driven
The waves mount up, and wash the face of heavei

But Scylla from her den, with open jaws,

The sinking vessel in her eddy draws,

Then dashes on the rocks : a human face.

And virgin bosom, hide her tail's disgrace ,

Her parts obscene below the waves descend,

With dogs enclosed, and in a dolphin end. Dryden.

The description of Virgil, above cited, differs

from that of Homer only in placing a deep gulf

below. Strabo, Isidorus, Tzetzes, Hesychius,

Didymus, Eustathius, &c., concur in the same

description. The abbe Spallanzani thus describes

Scylla in his time : ' It is a lofty rock, twelve miles from Messina, which rises almost perpen-

dicularly from the sea on the shore of Calabria,

and beyond which is the small city of the same

name. Though there was scarcely any wind, I

began to hear, two miles before I came to the

rock, a murmur and noise like a confused bark-

ing of dogs, and on a nearer approach readily

discovered the cause. Tliis rock, in its lower

parts, contains a number of caverns, one of the

largest of which is called by the people there

Dragara. The waves, when in the least agitated,

rushing into these caverns, break, dash, throw

up frothy bubbles, and thus occasion these various

and multiplied sounds. I then perceived with

how much truth and resemblance of nature

Homer and Virgil, in their personifications of

Scylla, had portrayed this scene, by describing

the monster they drew as lurking in the darkness

of a vast cavern, surrounded by ravenous mastiffs,

together with wolves, to increase the horror.

The same author thus describes Charybdis :

‘ Charybdis is distant from the shore of Messina*

about 750 feet, and is called by the people of the country Calofaro, not from the agitation of the

waves, as some have supposed, but from icaXoc

and 0apoc ; that is, the beautiful tower, from the

light-house erected near it for the guidance of

vessels. The phenomenon of the Calofaro is

observable when the current is descending ; for

when the current sets in from the north, the

pilots call it the descending rema or current; and, when it runs from the south, the ascending rema.

The current ascends or descends at the rising or

setting of the moon, and continues for six hours.

In the interval between each ascent or descent

there is a calm which lasts at least a quarter of an hour, but not longer than an hour. After-

wards, at the rising or setting of the moon, the

current enters foam the north, making various

angles of incidence with the shore, and at length

reaches the Calofaro. This delay sometimes con-

tinues two hours ; sometimes it immediately falls

into the Calofaro ; and then experience has

taught that it is a certain token of bad weather.'

The saying which became proverbial among

the ancients, ' Incidit in Scyllam, qui vult vitare Charybdim ; he who endeavours to avoid Chary –

»dis, dashes upon Scylla,' is still in a great

measure true. If a ship be extricated from the

fury of Charybdis, and carried by a strong

southerly wind along the strait towards the

northern entrance, it will indeed pass out safely ; but, should it meet with a wind in a nearly op-

posite direction, it would become the sport of

both these winds, and, unable to advance or re-

cede, be diiven in a middle course between their

»wo directions, that is to say, full upon the rock of Scylla, if it be not immediately assisted L

the pilots.

The following is an account of these bugbears

of antiquity, given by captain Smyth, an intelli-

gent British seaman: 'The flights of poetry,'

observes our author, 'can seldom bear to be

shackled by homely truth ; and if we are to re-

ceive the fine imagery that places the summit of

this rock (Scylla) in clouds, brooding eternal

mists and tempests ; that represents it as inac-

cessible, even to a man provided with twenty

hands and twenty feet, and immerses its base

among ravenous sea-dogs ; why not also receive

the whole circle of mythological dogmas of Ho-

mer, who, though so frequently dragged forth as

an authority in history, theology, surgery, and

geography, ought in justice to be read only as a

poet ? In the writings of so exquisite a bard, we must not expect to find all his representations

strictly confined to a mere accurate narration of

facts. Moderns of intelligence, in visiting this

spot, have gratified their imaginations, already

heated by such descriptions as the escape of the

Argonauts, and the disasters of Ulysses, with

fancying it the scourge of seamen, and that, in

a gale, its caverns ‘ roar like dogs ;’ but I, as a sailor, never perceived any difference between

the effect of the surges here, and on any other

coast ; yet I have frequently watched it closely

in bad weather. It is now, as I presume it ever was, a common rock, of bold approach, a little

worn at its base, and surmounted by a castle,

with a sandy bay on each side. The one on the south side is memorable for the disaster that happened there, during the dreadful earthquake of 1783, when an overwhelming wave (supposed to have been occasioned by the fall of part of a promontory into the sea) rushed up the beach, and, in its retreat, bore away with it upwards of 2000 people. Outside the tongue of land, or Braccio di St. Rainiere, that forms the harbour of Messina, lies the Salofaro, or celebrated vortex of Charybdis, which has, with more reason than Scylla, been clothed with terrors by the writers of antiquity. To the undecked boats of the Rhegians, Locrians, Zancleans, and Greeks, it must have been formidable ; for, even in the present day, small craft are sometimes endangered by it; and I have seen several men-of-war, and even a seventy-four-gun ship, whirled round on its surface ; but, by using due caution, there is generally very little danger or inconvenience to be apprehended. It appears to be an agitated water, of from seventy to ninety fathoms in depth, circling in quick eddies. It is owing, probably, to the meeting of the harbour, and

lateral currents, with the main one, the latter being forced over, in this direction, by the opposite point of Pezzo. This agrees, in some measure, with the relation of Thucydides, who calls it a violent reciprocation of the Tyrrhene and Sicilian Seas ; and he is the only writer ot remote antiquity I remember to have read who has assigned this danger its true situation, and not exaggerated its effect. Many wonderful stories are told respecting this vortex, particularly some, said to have been related by the celebrated diver Colas, who lost his life here.' See also our article MEDITERRANEAN.

SCY

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SDE

SYCROS, in ancient geography, an island in the ˆgean Sea, at the distance of about twenty-eight miles north-east from Euboea. Fifty miles in circumference. It was originally in the possession of the Pelasgians and Carians. Achilles retired thither to avoid going to the Trojan war, and became father of Neoptoleraus by Deidamia, the daughter of king Lycomedes. Scyros was conquered by the Athenians under Cimon. It

was very rocky and barren. It is now called

Sciro.

SCYTALA LACOXICA, in antiquity, a strata-

gem of the Lacedemonians, for the secret writing

of letters, so that, if they should chance to be in-

tercepted, nobody might be able to read them. —

To this end they had two wooden cylinders, per-

fectly alike and equal ; one of which was kept in

the city, the other by the person to whom the

letter was directed. A skin of very thin parch-

ment was wrapped round Ihe roller, in which the

letter was written ; which done, it was taken off, and sent away to the party, who, upon putting it

in the same manner upon his roller, found the

lines and words in the same order as when they

were first written. This expedient they set a

a very high value on ; though, in truth, artless and simple enough.

SCYTALIA, in botany, a genus of the mono-

gynia order, and octandria class of plants : CAL.

very short, monophyllous, and somewhat quin-

quedentated : COR. pentapetalous ; filaments

hairy at the base; berry unilocular : SEED one of

a soft pulpy consistence. There is only one

species, viz.

S. sinensis, a native of China and the East

Indies.

SCYTHES, in fabulous history, the son of Jupiter and Tellus, who was half man half serpent. According to Diodorus he became king of the country, called from him Scythia.

SCYTIIIA, an ancient name for the northern parts of Asia, now called Tartary, and also for some of the north-east parts of Europe. This vast territory, which extends from the Ister or Danube, the boundary of the Celts, that is, from about 2.5°, to nearly 100° long. E., was divided into Scythia in Europe, and Scythia in Asia, including the two Sarmatias, or Sauromatias. Sarmatia was divided from the European Scythia by the Don or Tanais, which falls into the Palus Meotis ; and from the Asiatic by the Rha, now the NVolga, which runs into the Caspian Sea.

SCYTHIA ASIATICA, the Asiatic Scythia, comprehended, in general, Tartary, and Russia in Asia. As for Sarmatia, it contained Albania, Iberia, and Colchis ; which makes now the Circassian Tartary, and the province of Georgia.

SCYTHIA EUROPˆA, Scythia in Europe, reached towards the south-west, to the Po and

the Alps, by which it was divided from Celto-Gallia. It was bounded on the south by the Ister or Danube and the Euxine Sea. Its northern limits have been supposed to stretch to the spring-heads of the Boristhenes or Nieper, and the Rha or Wolga, and so to those of the Tanais. The ancients divided this country into Scythia Arimaspaea, which lay east, joining to Scythia in Asia; and Sarmatia Europeana on the west. In Scythia, properly so called, were the Arimaspi on the north, the Getaj or Dacians along the Danube on the south, and the Neuri between these two : so that it contained European Russia, and the Lesser Crim Tartary on the ea$t, and on the west Lithuania, Poland, part of Hungary, Transylvania, Walachia, Bulgaria, and Moldavia. The ancient geographers divided the west part of Sweden and Norway from Northern Germany, by the Mare Sarmaticum or Scythicum, which they supposed ran up into the Northern Ocean, and, dividing Lapland into two parts, formed the western part of Sweden, with Norway, into one island, and Finland into another; supposing this also to be cut oft"

from the continent by the gulf of that name.

SCYTHIANS, the natives of Scythia. Although the ancient Scythians were celebrated as a war-like people, yet their history is too uncertain and obscure to enable us to give any detail which would prove interesting. See the very opposite accounts given of the ancient Scythians, by Herodotus and Justin under SCULPTURE. Hist. Mr. Pinkerton, in a dissertation on their origin, endeavours to prove that they were the most ancient of nations ; and he assigns for the place of their first habitation the country known by the name of Persia. From Persia, he thinks, they proceeded in numerous hordes westward, surrounded the Euxine, peopled Germany, Italy, Gaul, the countries bordering on the Baltic, with part of Britain and Ireland. That the Scythians were of Asiatic origin cannot, we think, be questioned ; and, as Persia was peopled at a very early period, it may not improbably have been their parent country ; but when our author contends that their empire had subsisted for more than 1500 years before Ninus the founder of the Assyrian monarchy, and that it extended from Egypt to the Ganges, and from the Persian Gulf and

Indian Sea to the Caspian, we cannot help thinking that his prejudices against the Celts, and his desire to do honor to his favorite Goths, have made him advance a paradox inconsistent with the most authentic records of antiquity. His dissertation, however, is ingenious, and replete with a variety of curious learning.

SCYTHROPS, a generic name given by Mr. Latham to a bird of which hitherto but one species has been observed. It is about the size of a crow, and two feet three inches in length. The bill is large, convex, furrowed on the sides, and bent at the tip; the nostrils are placed at the base of it, and the tongue is cloven at the end. The general color of the plumage is a brownish ash, but the tip of each feather of the back, wings, and tail, is black. The tail has each feather banded with black at the end, and the tip itself white ; but the inner webs of the feather are marked with black and white bands. The toes are placed two forwards and two backwards, as in the parrot genus. This curious bird is a native of New Holland.

SDEIGN, r. a. Ital. sdegnare. Used HJr

Spenser and Milton for disdain.

They DOW, puft up with sdeignfnl in?o!.:rce,

Despise the brood of blessed sapience. Sˆente : Lifted up so high,

I xleigned subjection. Milton.

SEA, n. s. SEAHOLM',

SEA'BF.AT, adj. SEAHORSE',

SEA'BOAT, n, s. SEA'MAID,

SEA'BORN, adj. SEA'MAN,

SEA'BOY, n. s. SEA'MARK,

SEA'BRFACH, SEA'MEW,

SEA'BREEZE, SEAMON STER,

SEA'EUILT, adj. SEA'NYMPH,

SEACAB'BACE, n. s. SEA'OOZE,

SEA'CALF, SEA'PIECE,

SEA'CAP, SEA'POOL,

SEA'CHART, SEA'PORT,

SEA'COAL, SEA'RISK,

SEA'COAST, SEA'ROOM,

SEACOM'PASS, SEASER'VICE,

SEA'COW, SEA'SHARK,

SEA'DOG, SEA'SHELL,

SEA'FARER, SEASHORE',

SEA'FARING, adj. SEA'SICK,

SEA'FTGHT, n. s SEASIDE,

SEA'FOWL, SEASUR'GEON,

SEA'GIRT, adj. SEASURROUND'ED,

SEA'GREEN, n. s. SEA'TERM,

SEA'GULL, SEA'WATER,

SEAHEDGE'HOG, SEA'WEED.

SEAHOL LY,

Sax. pae; Goth. s<£ ; Belg. zee; Teut. see. The

ocean; the water of the earth as opposed to the

land ; any collection of waters ; a lake ; a large quantity of any fluid ; any thing rough or tem-

pestuous : ' half-seas-over' is half-drunk. None

of the compounds appear to require any further

explanation than the extracts in which they occur

will supply.

He made the sea, and all that is therein.

Exodus xx. 11.

Their camels were without number, as the sand

by the seaside. Judges vii. 12.

Seamonsters gave suck to their young.

Lamentations ivl 3.

By the sea of Galilee. Matthew iv. 18.

The sovereign of the seas he blames in vain,

That once seabeat will to sea again.

Spenser's Pastorals.

The venturous mariner that way,

Learning his ship from those white rocks to save,

Which all along the southern seacoast lay,

For safety's sake that same his seamark made,

And named it Albion. Faerie Queene.

Those white rocks,

Which all along the southern seacoast lay,

Threatening unheedy wreck and rash decay.

He for his safety's sake his seamark made,

And named it Albion. Id.

I heard it wished, that all that land were a sea~

pool. Spenser.

Barbarossa was not able to come on shore, for

that he was, as they said, seasick, and troubled with an ague. Knolles.

U ill all great Neptune's ocean wash this blood

Clean from my hand 1 No, this my hand will rather Thy multitudinous spi incarnadine,

Making the green one red. Shakspeare. Macbeth.

Canst thou, O partial sleep ! give thy repose

To the wet teaboy in an hour so rude,

And in the calmest and the stillest night

Dˆny it to a king 7 Shakspeare.

My wife fastened him unto a small spare mast,

Such as seafaring men provide for storms. Id.

I know your favour well,

Though now you have no seacav on your head. Id

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We'll have a posset soon at the latter end of a sea-

coal fire. /

Certain stars shot from their spheres,

To hear the seamaids' musick. Id.

Though you do see me weaponed,

Here is my journey's end, here is my butt,

The very seamark of my utmost sail. Id. Othello.

Witches mummy, maw and gulf

Of the ravening salt seashark. Shaksptare.

She began to be much seasick, extremity of wea-

ther continuing. Id.

The needle in the seacompass still moving but to

the north point only, with moveor immotus, notified

the respective constancy of the gentleman to one

only. Camden's Remains.

Seafights have been often final to the war ; but

this is when princes set up their rest upon the battles.

Bacon.

Seagulls, when they flock together from the sea

towards the shores, foreshow rain and wind.

Id. Natural History.

Seacoal lasts longer than charcoal. Bacon.

*They were executed at divers places upon the sea**

coast, for seamarks or lighthouses, to teach Perkin's people to avoid the coast. Id. Henry VII.

There is searoom enough for both nations, without

offending one another. Id. Advice to Villiers.

By digging of pits in the seashore, he did frustrate the laborious works of the enemies, which had turned the seawater upon the wells of Alexandria.

Id. Natural History.

So do the winds and thunders cleanse the air,

So working seas settle and purge the wine. Davies.

The rivers run into the sea. Careio.

They stiffly refused to vail their bonnets by the

summons of those towns, which is reckoned in-

tolerable contempt by the better enabled seafarers.

Id.

The seahedgehog is inclosed in a round shell,

fashioned as a loaf of bread, wrought and pinched,

and guarded by an outer skin full of prickles, as the land urchin. Id.

Cornwall bringeth forth greater store of seaholm

and samphire than any other county. Id.

That sea of blood, which hath in Ireland been bar-

barously shed, is enough to drown in eternal infamy

and misery the malicious author and instigator of its effusion. King Charles.

This pulmonique indisposition of the air is very

much heightened, where a great quantity of seacoal

is burnt. Harvey.

She, looking out,

Beholds the fleet, and hears the seamen shout.

Denham.

Amphibious between sea and land,

The river horse. Milton.

To sorrow abandoned, but worse felt within,

And in a troubled sea of passion tossed. Id.

Neptune, besides the sway

Of every salt flood and each ebbing stream,

Took in by lot, 'twixt high and nether Jove,

Imperial rule of all the seagirt isles. Id.

An island salt and bare,

The haunt of seals, and orcks, and seamews clang.

Id.

Where luxury lately reigned, seamonsters whelp.

Id.

Like Neptune and his teaborn niece, shall be

The shining glories of the land and sea. Waller.

The bigger whale like some huge carrack lay,

Which wanteth searoom with her foes to play. Id.

But like a rock unmoved, a rock that braves

The raging tempest and the rising waves,

2 Z

SEA

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SEA

Propped on himself he stands : his solid sides

Wash off the seaweeds, and the sounding tides.

Dry den.

All these in order march, and marching sing

The warlike actions of their seaborn sing. Id.

Borne each by other in a distant line,

The seabuitt forts in dreadful order move. Id.

Seahortet floundering in the slimy mud,

Tossed up their heads, and dashed the ooze about

'em. Id.

/Enc?

A stately tomb, whose top a tnimpet bore,

A soldier's falchion, and a seaman's oar ;

Thus was his fnend interred. Id.

The fault of others sway

He set as seama-lu for himself to shun. Id.

That seashore where no more world is found,

But foaming billows breaking on the ground. Id.

In love's voyage, nothing can offend ;

Women are never seasick. Id. Juvenal.

To an impetuous woman, tempests and seabi-eaches

are nothing. V Estrange.

If our sense of hearing were a thousand times

quicker than it is, we should, in the quietest retiie-

ment, be less able to sleep than in the middle of a seajight. Locke.

White, red, yellow, blue, with their mixtures, as

green, scarlet, purple, and seagreen, come in by the eyes. Id.

Seals live at land and at sea, and porpuses have

the warm blood and intrails of a hog, not to mention mermaids or teamen. Id.

To say a man has a clear idea of any quantity,

without knowing how great it is, is as reasonable as to say he has the positive idea of the number of the sands on the seashore. Id.

Hedges, in most places, would be of great ad-

vantage to shelter the grass from the Seabreeze.

Mortimer.

Upon the seacoast are many parcels of land, that

would pay well for the taking in. Id. Husbandry.

Bitterns, herons, and seaguUs, are great enemies

to fish. Id.

SeashelU are great improvers of sour or cold land.

Mortimer.

All seaooze, or oozy mud, and the mud oi rivets,

are of great advantage to all sorts of land. Id.

The seacalf, or seal, so called from the noise he

makes like a calf : his head comparatively not big, shaped rather like an otter's, with teeth like a dog's, and mustaches like those of a cat : his body long, and all over hairy : his fore feet, with ringers clawed, but not divided, yet fit for going ; his hinder feet, more properly fins, and fitter for swimming, being

an amphibious animal. Grew's Musaeum.

Fournier gives an account of an earthquake in

Peru, that reached three hundred leagues along the

seat/tore. But-net.

The whole magistracy was pretty well disguised

before I gave 'em the slip : our friend the alderman was half seas over before the bonfire was out. •

Spectator.

Had they applied themselves to the increase of

their strength by s«a, they might hare had the great-

est fleet, and the most seamen, of any state in Europe.

Addison.

Painters often employ their pencils upon seapiece.*

Id.

Small fragments of shells, broken by storms on

some shores, are used for manuring of sea land.

Woodward.

Part of a large tooth, round and tapering : a tusk of the morse, or waltrons, called by some the sea-

'ufr.-e Id.

They put to sea vith a fleet of three hundred sail.

Arhuthnot.

Shipwrecks were occasioned by their ships being

bad seabixtti, and themselves but indifferent seamen.

Id.

It was death to divert the ships of seafaring people, against their will, to other uses than they were ap-

pointed. Id.

This fleet they recruited with two hundred sail,

whereof they lost ninety-three in a seajight.

Id. on Coins.

He was so great an encourager of commerce that

he charged himself with all the searisque of sucli

vessels as carried corn to Rome in the winter.

Arbuthnflt.

My design was to help the seasurgeon.

Wiseman's Surgery.

The bills of curlews, and many other seafowl, are

very long, to enable them to hunt for the worms.

Derham.

The sea could not be much narrower than it is,

without a great loss to the world. Bentley.

Fierce seadogs devour the mangled friends.

Roscammon.

So when the first bold vessel dared the seas,

High on the stern the Thracian raised his strain,

While Argo saw her kindred trees

Descend from Pelion to the main. Pvpe.

Darkness covered o'er

The face of things ; along the seabeat shore

Satiate we slept. Id. Odyssey.

A wandering merchant, he frequents the main,

Some mean seafarer in pursuit of gain ;

Studious of freight, in naval trade well skilled,

But dreads the' athletick labours of the field. Pope.

A length of ocean and unbounded sky,

Which scarce the seafowl in a year o'er-fly.

Upon his urn reclined,

His seagreen mantle waving in the wind,

The god appeared.

Telemachus, the blooming heir

Of seagirt Ithaca, demands my care :

Tis mine to form his green unpractised years

In sage debates. Id

The chough, the seamew, the loquacious crow,

Scream aloft. Id. Odyssey

There disembarking on the green seaside,

We land our cattle and the spoil divide. Pope.

To seasurrounded realms the gods assign

Small tract of fertile lawn, the least to mine. Id.

I agree with you in your censure of the teaterms in Dryden's Virgil, because no terms of art or cant

words suit the majesty of epick poetry. Id.

You were pressed for the seasenire and got off with much ado. Swift's Directions to Servants.

Weary and seasick, when in thee confined ;

Now, for thy safety, cares distract my mind. Su-ift.

A seafowl properly represents the passage of a

deity over the seas. Kroome.

Seawater has many gross, rough, and earthy par-

ticles in it, as appears from its saltness ; whereas fresh water is more pure and unmixt. 1

Virgil, after Homer's example, gives us a trans-

formation of vKneas's ships into teanymphs. Id.

The situations of the parts of the earth are better learned by a map or seachart, than reading the de-

scription. Walli

Seamen, through dismal storms, are wont

To pass the oyster-breeding Hellespont. Evelyn.

The seacow is of the cetaceous kind. It grows to

fifteen feet long, and to seven or eight in circum-

feieuce : its head is like that of a hog, but longer and more cylindrick : its eyes are small, and it has no external ears, but only two little apertures. Its lips are thick, and it has two long tusks stanaing Id.

Id.

Out. It has two fins, which stand forward on the

breast like hands, whence the Spaniards called it

manatee. The female has two round breasts placed

between the pectoral fins. The skin is very thick

and hard, and not scaly, but hairy. Hill's Mat. JUed.

The species are teaholly, or eryngo. Common

eryngo. The roots of the first are candied, and sent to London for medicinal use, being the true eryngo.

Id.

SEA, in a strict sense, signifies a large portion

of water almost surrounded by land, as the Baltic

and Mediterranean seas ; but it is frequently

used for that vast body of water which encom-

passes the whole earth.

What proportion the superficies of the sea

hears to that of the land cannot be ascertained

with exactness. Buffon has supposed that the

surface of our globe is equally divided between

land and water, and has accordingly calculated

the superficies of the sea to be 85,490,506 square

miles. But it is now well known that the ocean

covers more than the half of the earth's surface.

The French naturalist believed in the existence

of a vast southern continent, which captain Cook

has shown to be visionary. It was this "ircum-

stance which misled him. The sea occupies, according to Le Brun and the best modern writers, about six-tenths of the earth's surface. See our articles OCEAN and GEOGRAPHY. To ascertain the depth of the sea is still more difficult than its superficies, both on account of the numerous experiments which it would be necessary to make, and the want of proper instruments for that purpose. The sea is often found unfathomable ; and, though several methods have been contrived to average its depth, none of them has completely answered the purpose. We know in general that the depth of the sea increases gradually as we leave the shore ; but, if this continued beyond a certain distance, the depth in the middle of the ocean would be prodigious. Indeed, the numerous islands every where scattered in the sea demonstrate the contrary, by showing us that the bottom of the water is unequal like the land, and that, so far from uniformly sinking, it sometimes rises into lofty mountains. If the depth of the sea be in proportion to the elevation of the land, as has been generally supposed, its greatest depth will not excee'd five or six miles,

for there is no mountain six miles perpendicular above the level of the sea. The sea has never been actually sounded to a depth much exceeding a mile ; every thing beyond therefore rests entirely upon conjecture and analogical reasoning, which ought never to be admitted to determine a single point that can be ascertained by experiment. Along the coasts, where the depth of the sea is in general well known, it has ahvays been found proportioned to the height of the shore : when the coast is high and mountainous, the sea that washes it is deep; when, on the contrary, the coast is low, the water is shallow. Whether this analogy holds at a distance from the shore, experiments alone can determine.

To calculate the quantity of water contained in the sea, while its depth is unknown, is of course impossible. But, if we suppose with Buffon, that its medium depth is the fourth part of a mile, the ocean, if its superficies be 128,235,759 square miles, will then contain 32,058,939,75 cubic miles of water. Let us now endeavour to compute the quantity of water which is constantly discharged into the sea.

For this purpose let us take a river whose velocity and quantity of water is known, the Po for instance, which according to Riccioli is 1000 feet (or 100 perches of Boulogne) broad, ten feet deep, and runs at the rate of four miles in au hour consequently that river discharges into the sea 200,000 cubic perches of water in an hour, or 4,800,000 in a day. A cubic mile contains 125,000,000 cubic perches; the Po therefore will take twenty-six days to discharge a cubic mile of water into the sea. Let us now suppose, what is perhaps not very far from the truth, that the quantity of water which the sea receives from the rivers in any country is proportioned to the extent of that country. The Po, from its origin to its mouth, traverses a country 380 miles long, and the rivers which fall into it on every side rise from sources about sixty miles distant from it. The Po therefore, and the rivers which it receives, water a country of 45,600 square miles. Now, since the whole superficies of the dry land is about 42,745,253 square miles, it fohows, from our supposition, that the quantity of water discharged by all the

rivers in the world, in one day, is thirty-six cubic miles, and in a year 13,140. If therefore the

sea contains 32,058,939 cubic miles of water, it

would take all the rivers in the world 2439 years

to discharge an equal quantity.

It may seem surprising that the sea, since it is

continually receiving an immense supply of water,

does not visibly increase, and at last cover the whole earth. But our surprise will cease, if we con-

sider that the rivers themselves are supplied from

the sea, and that they do nothing more than carry

back those waters which the ocean is continually

lavishing upon the earth. Dr. Halley has de-

monstrated that the vapors raised from the sea,

and transported upon land, are sufficient to main-

tain all the rivers in the world. The simplicity

of this great process is astonishing ; the sea not

only connects distant countries, and renders it

easy to transport the commodities of one nation

to another, but its waters rising in the air descend in showers to fertilise the earth, and nourish the

vegetable kingdom; and, collecting into rivers,

flow onwards, bringing fertility, and wealth, and

commerce, along with them, and again return to

the sea to repeat the same round. The know-

ledge of this process of nature might, one would

think, have convinced philosophers that the pro-

portion between sea and land continued always

nearly the same. They however have formed

different theories about this as well as most other subjects, maintaining on the one hand that the

sea is continually encroaching on the land, and,

on the other, that the land is constantly gaining

on the sea. Both sides have supported their

theories by arguments, demonstrations, and in-

controvertible facts ! The height of the moun-

tains, say the philosophers who support the

encroachments of the sea, is continually diminish-

ing; exposed to the violence of every storm, the

hardest rocks must at last give way and tumble

down. The rivers are continually sweeping

along with them particles of earth which they

deposit in the bottom of the sea. Both the depth

of the ocean then, and the height of the dry

lard, must be always decreasing; the waters

therefore roust, unless a part of them were anni-

hilated, spread over a greater extent of surface

in proportion as these causes operate. This rea-

soning, convincing as it is, might be confirmed by a great number of facts : it will be sufficient, however, to mention one or two. In the reign of Augustus, the Isle of Wight made a part of Britain, so that the English crossed over to it at low water with cart loads of tin : yet that island is at present separated from Britain by a channel half a mile wide The Godwin sands on the eastern shore of England were formerly the fertile estate of earl Godwin. Nor are the encroachments of the sea confined to Britain. In the bay of Baise, near Naples, there are remains of nouses and streets still visible below the present level of the sea. The sea therefore is making continual encroachments upon the land ; and the time will come, say they, when the waters will again cover the surface of the earth. Such are the arguments of those philosophers who maintain the continual encroachments of the sea. Those who maintain the opposite theory, that the land is continually gaining on the sea, though they pretend not to deny the facts advanced by their opponents, affirm that they are altogether insufficient to establish their hypothesis. Though the rivers carry down par-*

ticles of earth into the sea, these, say they, are either accumulated on other shores, or, collecting in the bottom of the ocean, harden into stone, which, being possessed of a vegetative power, rises by degrees above the surface of the sea, and form rocks, and mountains, and islands. The vegetative nature of stone indeed is sufficient, of itself, to convince us that the quantity of earth must be daily accumulating, and consequently that the surface of the sea is diminishing in extent. Celsius, a Swedish philosopher (for this dispute has been carried on in Sweden with the greatest keenness), has endeavoured to build this theory with more solid materials than vegetable stone. In a curious memoir, published in 1743, he asserts that the Baltic and the Atlantic, at least that part of it which washes Norway, is constantly diminishing; and he proves this by the testimony of many aged pilots and fishermen, who affirmed that the sea was become much shallower in many places than it had been during their youth ; that many rocks formerly covered with water were now several feet above the surface of the sea ; that

loaded vessel.s used formerly to ride in many places where pinnaces and barks could now with difficulty swim. He produces instances of ancient sea-port towns now several leagues from the shore, and of anchors and wrecks of vessels found far within the country. He mentions a particular rock, which 168 years before was at the bottom of the sea, but was then raised eight feet above its surface. In another place, where the water fifty years before had reached to the knee, there was then none. Several rocks too, which, during the infancy of some old pilots, had been two fret under wnter, were then three feet alwve it. From all these obserrations, M. Celsius concludes that the water of the Baltic decreases in height four lines and a half in a year, four inches five lines in eighteen years, four feet five inches in 100 years, and in 1000 years forty-five feet. Conscious, however, that these facts, how conclusive soever as far as relates to the Baltic, can never determine the general question, M. Celsius advances another argument in support of his theory. All that quantity of moisture, says he, which is imbibed

by plants, is lost to the general mass of water, being converted into earth by the putrefaction of vegetables. This notion had been mentioned by Newton, and was adopted by Van Helmont ; if granted, it follows as a consequence that the earth is continually increasing, and the water diminishing in a very rapid degree. Such are the arguments advanced in support of both theories ; for it is needless to mention a notion of Linnaeus, that the whole earth was formerly covered with water, except a single mountain. When fairly weighed they amount to nothing more than this, that the sea has encroached upon the land in some places, and retired in others ; a conclusion which we are very willing to allow. What was advanced by those philosophers who maintain that the sea is continually encroaching on the land, about the depth of the sea constantly diminishing, must remain a mere assertion till they prove by experiments, either that it is really the case, or that nature has no way of restoring those particles of earth which are washed down by the rivers. Nor have they any good reason to affirm that the height of the

*mountains is decreasing. Can a single instance be produced ? Are the Alps or the Appennines, or Taurus, or Caucasus, less lofty now than they were 1 000 years ago ? We mean not to deny that the rain actually washes down particles of earth from the mountains, nor to affirm that the hardest rocks are able to resist continual storms, nor that many mountains have suffered, and continue to suffer daily, from a thousand accidents. But the effects produced by all these causes are so trifling as to be altogether imperceptible. Nature has assiduously guarded against such accidents; she has formed the mountains of the mo*t durable materials; and, where they are covered with earth, she has bound it together by a thick and firm matting of grass, and thus secured it from the rains ; and should accident deprive it of this covering, she takes care immediately to supply the defect. Even should the earth be swept away, together with its coveting, nature has still such resources left as frequently restore things to their former state. Many kinds of moss, one would be tempted to think, have been created for this very purpose; they take*

root and flourish almost upon the bare rock, and furnish as they decay a sufficient bed for several of the hardy Alpine plants. These perish in their turn, and others succeed them. The roots of the plants bind fast the earth as it accumulates, more plants spring up and spread wider, till by degrees the whole' surface is covered with a firm coat of grass. Even the rain, which always contains in it a good deal of earth, contributes something to hasten tlie process. As

t'ie vegetation of stone is now, we believe, given up by all parties, it is needless to take any farther notice of it here. See STONE. The hypothesis of M. Celsius, that water is converted into mrth, has also shared the same fate, because it \vas unsupported by experiment, and contrary to every thing that we know either about earth or water. It is a little extraordinary that philosophers have been so lavish of water as to convert it in this manner into stone and earth, when they had given it, one would think, sufficient employment before in making new worlds, and

in confuting Moses.

The sea contains the greatest quantity of salt in the torrid gone, where otherwise, from the excessive heat, it would be in danger of putrefaction ; as we advance northward this quantity diminishes, till at the pole it nearly vanishes altogether. Under the line Lucas found that the sea contained a seventh part of solid contents, consisting chiefly of sea salt. At Harwich he found it yielded one-twenty-fifth of sea-salt. At Carlscroon, in Sweden, it contains one-thirtieth part, and on the coast of Greenland a great deal less. This deficiency of salt near the poles probably contributes a good deal towards the prodigious quantities of ice which are met with in these seas ; for salt water requires a much greater degree of cold to freeze it than fresh water. It was this circumstance, probably, together with its constant motion, which induced the ancients to believe that the sea never froze. Even among the moderns, it has been a generally received opinion that sea-ice is originally formed in rivers. Buftbn has made the great quantities of ice with which the South Sea abounds an ar-

gument for the existence of a continent nearer the Antarctic pole. But it is now well known that great quantities of ice are formed at a distance from land. Sea-ice is of two kinds : field-ice which extends along the shore, and is only two or three feet thick ; and mountain ice, which abounds in the middle of the ocean. The size of these mountains is sometimes prodigious. The sea-ice is always fresh, and lias been often of great use to navigators. The weight of sea-water is to that of river water as seventy-three to seventy ; that is, a cubic foot of sea-water weighs seventy-three pounds, while the same quantity of riVer-water weighs only seventy pounds ; but this proportion varies in different places. It is worthy of our attention, too, that the water at the surface of the sea contains less salt than near the bottom ; the difference indeed is inconsider-able, but still it is something. The compte de Marsigli found the same quantity of water, when taken from the bottom of the Mediterranean, to weigh one ounce, three penny-weights, fifty-one grains ; whereas from the surface it weighed only one ounce, three penny-weights, forty-nine grains. He repeated the experiment frequently with nearly the same result ; but see OCEAN.

As the sea covers so great a portion of the

globe, we should, no doubt, by exploring its

bottom, discover a vast number of interesting

particulars. Unfortunately, in the greater part

of the ocean, this has hitherto been impossible.

Part, however, has been examined; and the dis-

coveries which this examination has produced.

may enable us to form some idea of the whole.

The bottom of the sea bears a great resemblance*

to the surface of the dry land, being, like it, full of plains, rocks, caverns, and mountains; some

of which are abrupt, and almost perpendicular,

while others rise with a gentle declivity, and

sometimes tower above the water, and form

islands. Neither do the materials differ which

compose the bottom of the sea, and the basis of

the dry land. If we dig to a considerable depth

in any part of the earth, we uniformly meet with

rock; the same thing holds in the sea. The

strata, too, are of the same kind, disposed in the same manner, and form indeed but one whole.

The same kind of mineral and bituminous sub-

stances are also found interspersed with these

strata ; and it is to them probably that the sea is indebted for its bitter taste. Over these natural

and original strata, an artificial bed has pretty

generally been formed, composed of different materials in different places. It consists frequently of muddy tartareous substances firmly cemented together, sometimes of shells or coral reduced to powder, and near the mouths of rivers it is generally composed of fine sand or gravel. The bottom of the sea resembles the land likewise in another particular; many fresh springs, and even rivers rise out of it, which, displacing the salt water, render the lower part of sea, wherever they abound, quite fresh. An instance of this kind occurs near Goa, on the western coast of Indostan, and another in the Mediterranean Sea. not far from Marseilles. These facts occasioned a notion, which later experiments have exploded, that the sea beyon-l a certain depth was always fresh. Substances of i very beautiful appearance are frequently brought up by the sounding line from the bottom of the sea. The plummet is hollowed below, and this cavity filled with tallow, to which some of the substances adhere which form the bed of the ocean. These are generally sand, gravel, or mud ; but they are sometimes of the brightest

scarlet, vermilion, purple, and yellow ; and sometimes, though less frequently, they are blue, green, or white. These colors are owing to a kind of jelly which envelopes the substances, and vanish entirely as soon as this jelly dries. At times, however, they assume the appearance of tartareous crusts, and are then so permanent that they can be received into white wax melted and poured round them, and perhaps by proper care might be converted into valuable paints. For the temperature, color, &c., of the sea, and other interesting phenomena respecting it, see the articles OCEAN and GEOGRAPHY.

\Ve have to add however the result of some interesting experiments on the specific gravity of sea-water by Dr. Traill of Liverpool, and some remarks on the same subject, and on the temperature of the sea at different depths, made by Dr. J. C. Horner, the naturalist to the expedition of discovery lately undertaken by Kotzebue : —

‘ In the course of some experiments on the specific gravity of different fluids.’ says the first of these gentlemen, ‘ I had occasion to examine sea-water drawn in different latitudes, and from

various depths in the Atlantic Ocean. The re-

suit is somewhat remarkable; and, though the number of my experiments may not entitle me to deduce from them a general law, yet their publication may excite the attention of those who have opportunities of repeating them. The specimens of sea-water were procured at my request by nautical friends some time ago ; but all were taken up within the same year. Each specimen filled a common glass bottle, and had a label immediately affixed to it, indicating the place where it was obtained. The water, from considerable depths, for want of better apparatus, was procured by the following contrivance. It was found that a bottle might be so corked as to prevent the admission of water, until the pressure of the superincumbent column, on sinking it by an attached weight, pushed the cork inwards, when the escape of the air, and the filling of the bottle with water, again forced the cork into its neck, and thus obviated the change of displacement of the included wa-

ter, as the bottle was drawn upward. The pres-

sure required to force the cork being ascertained

by previous experiment, the bottle, thus pre-

pared, was sunk to the requisite depth ; and,

after remaining there for half an hour or more,

was drawn up and immediately secured.

‘ My experiments were carefully conducted

by means of a delicate balance, and a thin flask,

capable of holding upwards of 1050 grains of

distilled water, when its ground stopper was

adjusted. A bottle of distilled water, and all

the specimens of sea-water, were reduced to the

same temperature, by being placed for many

days on the same table, in a room without a fire ; and, to prevent error from this source, each liquid was examined by a good thermometer previously

to the experiment. The weight of the distilled

water bearing the same ratio to the weight of an

equal volume of the other fluids, as 1-0000 to the sought specific gravities, is the simple formula

from which the following table is deduced : —

Table of Specific Gravities at Temperature 51°

Fahrenheit.

1. Sea-water drawn from the surface, lat. 47°

47′ N., long. 10° 40′ W. . = 1-0277

2. Ditto from die depth of forty fathoms, ditto,

ditto .... =: 1-0280

3. Ditto from the surface, lat. 37° N., long. 9° W. off Cape St. Vincent . = 1-0281

4. Ditto from the surface, Maderia, bearing north-east distance, sixteen leag« esn 1-0284

5. Ditto from the depth of forty fatnoms in the same spot = 1-0286

6. Ditto from the depth of thirty-six fathoms, lat. 26° N., long. 64° W., during a voyage to Demerara = 1-0287

7. Ditto from the surface, lat. 92° 11′ N., longitude not given ; but, as it was in the same voyage as No. 6, it was probably more, to the west = 1-0289

8. Ditto from the surface, lat. 8° 20 N., longitude not given ; but as the three last numbers were obtained in the same voyage to Demerara, and this one, at my request, was taken when the captain supposed that he would make land in a day or two, there can i be little doubt of the ship being at this time just off the mouth of the Orinoco — 1-0267*

In calculating these specific gravities, I had carried them to several decimal places farther ;

but I have suppressed these in the Table, because it might appear an affectation of accuracy which the case does not admit ; for the difference of a single one-tenth of a grain in weighing each fluid in the above experiments, would make a difference of nearly jgjjggth in their specific gravities ; or would alter the last figure of the present decimal series.

The inferences to which these experiments lead are, 1st. That the specific gravity of the waters of the Atlantic increases as we approach the equator. 2d. That the specific gravity of sea-water increases with the depth from which it is drawn.

The only exception in the table to the first inference is No. 8 ; but the great diminution of density here observed is undoubtedly owing to the vast mass of rushing water poured into the ocean by the Orinoco, the stream of which is said to discolor the sea many leagues from land, and at a considerable distance from the shore to preserve the freshness of its current.

The results of captain Scoresby's experiments, on the specific gravity of sea-water, seem to

agree with the inferences above mentioned. This intelligent navigator found that the density of the waters of the ocean, near the meridian of Greenwich, gradually diminished from lat. 57° 42′ N., to lat. 66° 45′; being at the former 1-0280, at the latter 1-0263. In higher latitudes, or in confined seas, we cannot expect to find a uniformity in such results ; for the influence of the ice in the one, and of situation in the other, are sufficient to conceal such minute differences. On referring to his valuable work, an examination of his experiments on the density of sea- water, at different depths, will confirm also the second inference. The few exceptions to it in captain Scoresby's Table may be explained by the influence of currents, and irregularities produced by the neighbourhood of ice, which is known to exercise a powerful influence on the atmosphere, and on the waters. In the prosecution of this interesting subject, no instrument appears more admirably adapted to procure water from any required depth, without chance of error, than that gentleman's marine diver; which, with simplicity of construction,

unites every property that can insure accuracy and convenience in those delicate investigations for which it was intended by its ingenious contriver.

‘ I am at a loss, adds this writer, what reason to assign for the increased density of water brought up from considerable depths; unless, according to a suggestion offered by my friend Dr. Brewster, it may be owing to the imperfect elasticity of water, which prevents its particles, when compressed by the superincumbent column, from regaining their original condition, when the pressure is removed. A curious series of experiments might be made on the mechanical compression of wnter, by employing the bathometer of Mr. Perkins, the inventor of the method of multiplying copper-plates by engraving < >ii sipi-l. In this machine, water enclosed in ;i brass tube, the sides of which need not ex ceed one-tentli of an inch in thickness, is com-

pressed by a solid piston, sliding in a leather collar, and acted on by the superincumbent column when sunk in the depths of the ocean.

This seems one of the simplest means of pro-

ducing an immense pressure ; and, when con-

versing with Mr. Perkins, I remember his stating

that the piston did not exactly return to its ori-

ginal position, on bringing up the instrument.'

Dr. Horner has embodied the result of his

observations in a table which demonstrates the

facts also proved by the experiments of Kru-

senstern's voyage, that the sea on the surface,

between the tropics, is specifically heavier, and

that it contains more salt, than in higher lati-

tudes. If we take together the statements from

'25° S. as far as 25° N. lat., and in the same man-

ner, from 50° to 65° of N. lat., the mean of the first is 1-0288, that of the latter 1-0245, which gives

the difference of 0-0043 or ˆ. But this by no

means proves an absolute inequality in the salt-

ness of the water in general. To give a decided

opinion on it, the sea-svater must be fetched up

from considerable depths, and weighed. Pro-

bably the greater saltness arises from the rapid

decrease of the fresh water, in consequence of

evaporation. From the well known slowness of

the transition of chemical elements, in undis-

turbed compounds, this decrease is but slowly

repaired ; and, as the upper layers are also the warmer, they may, notwithstanding their greater specific density, in consequence of their extent, be maintained by the warm swimming above the lower cooler layers, by which a principal agent of commixture, the difference of weight, is rendered of no effect. The slowness of change, and the condensation of the saline solution at the surface, which results from it, has the advantage that the acceleration of the evaporation sets bounds to itself, because, with the increasing condensation, the attraction of the salt to the parts of the water is greater, and, consequently, the diminution of the latter less. Without this arrangement the tropical seas would perhaps be covered, like the frozen seas of the north, with constant fogs. Subsequent experiments will show how far our explanation of this inequality is correct ; of which we have now more hopes, as convenient accurate apparatus have been discovered to fetch up water from any depth, at pleasure, and unmixed.

The considerable number of observations (there are 116 of them) on the temperature of

the sea below the surface, their extent over waters of the ocean remote from each other, and probably, also, their accuracy, give them a decided claim to the attention of the natural philosopher; and the perseverance with which they were continued, under various circumstances, does honor, as well to the naturalist of the expedition, as to the commander, who not only in calms, but in some periods almost daily, afforded the necessary assistance. They were all made \vith Six's Thermometer, which is a good assurance of their accuracy. It is certainly remarkable that an instrument so simple, so convenient in the use, so certain in the results, and which has been long known, is not more frequently used for this purpose; so that in the latest scientific voyages much more uncertain thermometers have been used, to which only the deep sea clamni of captain Ross forms an exception. Our observations fall under two heads : measurements of the temperature in different depths, in the same places of the ocean, and in statements of the warmth in the usual soundings, from sixty to eighty fathoms, in different places.

The most complete observations on the changes of the temperature, in increasing depths, are, in the South Sea, of the 13th and 14th of September, 1817, in 36° N. lat., and 148° W. long. Besides confirming the general law, that the cold increases with the depth, they also afford the following results: — 1. The upper parts of the water show a particular warmth, as the temperature, in the first eight fathoms, diminished only 0° 4', R., but from that depth to twenty five fa thoms full 6°, R. From twenty-five to 100 fathorns' depth the decrease of warmth is considerably less, since in the next twenty-five fathoms, it is only 1° 7', R., and in the next fifty fathoms only 1° 5', R.; a decrease which amounts to only the tenth part of the preceding. It is still slowei between 100 and 300 fathoms. 2. If we compare these observations with those of the 6th of June 1816, in 37° N. and in 199° W. long., consequently in the same parallel of latitude, the influence of the season is particularly observable in the temperature on the surface, which in June is 13°, R., in September 18° R. It, however, does not go much deeper than from twenty-five to fifty fathoms; and at 100 fathoms

it is already within the limits of the accuracy of such observations ; for we have

f 6th June 9° 4′ Reaum.

For 100 fathoms < 13th September 9 4

C 1 4th September 8 6

3. A certain coincidence with these rpsnlN,

only on a greater scale, is shown by the expf n-

ments of the 15th of November, 1817, in 9° N.

lat., and 205° W. long., in which the temperature

decreases from the surface to about sixty or

seventy fathoms, rapidly and uniformly, from

24° 7′, R., to 8° 8′, R. From nine to] 0 1 fathoms, this rapid decrease, instead of proceeding, is

suddenly reduced to the small amount of 0° 9′,

R. But if we compare these observations with

those immediately preceding and succeeding them

of the 13th, 14th, and 17th, of November, we

shall hesitate to draw from them decisive con-

clusions.

4. The observations of the 13th of April,

1816, in 15°S., and 130° W., follow a quite

different course from those in September, 1817,

in 36° N. The decrease of warmth from the

surface, to as far as 100 fathoms' depth, is much

more inconsiderable, being here only 3° 6′, there

nearly treble, namely, 9° 4', R. It becomes more considerable between 100 and 200 fathoms, namely, 8° 8', R. Remarkable as this inequality is, it yet seems impossible to ascribe it to an error in the observation, such as too soon drawing up the thermometer : for, on the one hand, the regular course of the experiments of the 14th of September, 1817, and their coincidence with those of the 13th, at the depths of 0° 25′ and 100 fathoms, does not allow us to suppose any thing of the kind ; on the other side, the observations of the 13th of April, 1816, find tlwir

confirmation in the preceding ones of the 7th of April, in 18° S., which give a difference of 0 to 125 fathoms of 4° 8% K., that is, from 0 to 100 fathoms; likewise 3° 8', 11. The same observations then give for the second hundred of the depth in fathoms, likewise about 8°, R. It is not to be discovered from the observations, whence this difference in the progressive decrease of the warmth arises. It cannot well be ascribed to the influence of the seasons, at least

in lat. 35° N. : the observations of June and September show an agreement with each other. The reason perhaps is, that the perpendicular rays of the sun penetrate the water, between the tropics, to a greater depth than in latitudes where the sun never appears in the zenith. The place of constant temperature, independent of the seasons, must probably lie much deeper between the tropics than beyond them.

5. The observations of the 22nd of September 1817, in 28° N. lat. and in 152° W. long., seem to present a much more uniform course, particularly if we set aside the statement in twenty-five fathoms' depth, which does not appear to agree with the higher or lower observations. We have from them a decrease of heat of 3° 5′ R. for the first fifty fathoms ; 3° 0′ R. for the second fifty fathoms, and 4° 3′ R. from 100 to 200.

The collective observations on the progress of the decrease of heat were made in tlie Jfout!. From the Atlantic Ocean we received only a few insulated statements for depths of 100 to 200 fathoms. The experiments •> i oth oceans are arranged in the following Table : —

WARMTH of the SEA-WATER at different depths, arranged according to

the Geographical Latitudes in degrees of Reaumur's Thermometer.

Month.

Surface.

70 to 90

Fathoms.

IJ

3

to

5J

to

ij

to

5

r1

S

Longitude.

April . . .

21-0

01.4

17-2

17- ft

9-9

*1O*ft*

18 S.

1 £

125 \V.

1 ^_I

May . . .

22-6

13-5

1 N.

177

November . .

24-5

*23*0*

H.i

10-7

9

1 O

204

O1 ft

In the South Sea.

December . .

22-1

12-8

^—

—

-

16

240

01.7

1 fi-r >

1 Q

September

20-1

13-0

8-8

ˆ-

28

152

June . . .

18-7

13-5

9-4

29

199

September

18-0

9-3

7-0

5-4

36

147

*(4-8)**

- *In 400 Fathoms.*

June . . .

13-0

9-3

5-0

37

199

January . .

10-4

3-2

44 S.

57

March . . .

17-3

12-3

34

27

In the Atlantic Ocean.

April . . .

15-8

12-8

7-9

31

15

October . .

18-9

lfi-4

10-6

n-f»

SON.

15

The temperatures, in the usual soundings from seventy to eighty fathoms, appear, on account of their considerable number, from which mean numbers may be deduced, the best calculated to supply fundamental data. Yet some singular results appear in them. Among these is the statement in the South Sea, that in 18° N. lat. and seventy-six fathoms' depth, in December, the water was 2J° R. warmer than in 1 1° N. lat. and seventy fathoms depth in November. Perhaps the local places of observation have had here some influence. The observation in 11° lat. lies in the west of the Mariana Islands, and in the north of the Philippines, consequently shel-tered against the warmer currents from the south

by a kind of wall, and open only to the north,

while, on the other hand, the place in 18° lat.

lies more in the open sea. The temperature

found at the depth of ninety fathoms in the

Chinese Sea to the west of Lucon is remarkably

cold ; perhaps in consequence of the north-east

currents prevailing in December.

Almost daily observations on the temperature

were made in the Atlantic Ocean from the 20th

of April to the 13th of June, 1818, mostly at the depth of seventy fathoms. In order to balance

the possible errors of the observations which may

arise from the difference in the time that the

thermometer was under water, I have added se-

veral together, and noted the mean number.

They are in the following Table. The figures in

parentheses show the number of obsecrations,

the mean of which is given.

SEA

713

SEA

Observation.

Temperature of the

water.

C ”

01

*s*1*

Qt2

Latitude.

Longitude.

On the

Surface.

Below the

Surface.

April 20—26. . . . (5)

27—30. . . . (4)

30— May 4. . . (5)

May 3-10 . . . (8)

10—16. . . . (7)

*15—19. . . • (5)**

2() 24 (**}

18-6

20-8

22-1

22-7

22-6

21-2

20-3

18-3

15-1

13-2

13-0

13-5

11-8

11-4

11-4

11-5

16-1

14-8

12-3

9-6

57

66

67

74

75

67

71

71

68

77

17° 15′ S.

10 24

5 12

0 43 N.

4 51

9 34

19 30

31 0

40 30

48 9

3° 20′ W.

12 2

17 5

20 28

24 38

29 38

35 7

36 30

29 40

17 15

25—30. . . . (6)

*01 iniiM r» f^*

June 7—13. . . . (7)

This table shows a similar anomaly to that

which we noticed in the South Sea. .That is, the

proportionately low temperature near the equator

from 5° S. to 10° N. Perhaps the greater heat between 20° and 30° of S. lat. might be a remnant of the southern summer. But the considerable increase of temperature in the zone, between 15° and 30° N. lat., is still more remarkable. For though, towards the end of May, the sun was near the zenith of those parts, yet this influence, which could be only commencing here, must have shown itself in the waters near the equator, which the sun had just traversed at the time of those observations (in April), which was by no means the case. The temperatures at the surface indicate indeed this influence of the sun, being the highest at the equator (22J° R.), while the southern half of the tropical seas had already assumed an autumnal temperature, since we observe here, in 17° S., the same warmth (18J° R.) as in 30° N.

SEABURY (Samuel), the first bishop of the episcopal church of the United States of America, was born in 1728, and educated at Yale College, after which he went to Scotland to study medicine. His father being a minister in Connecticut, the son finally chose the ecclesiastical

profession; and in 1753 was ordained in Lon-

don. He fixed finally at New London in Con-

necticut, and in 1784 he made a voyage to Eng-

land, to obtain consecration as a bishop of the

new independent episcopal church. Meeting

with obstacles to his wishes from the English

prelates, he went to Scotland, where he was con-

secrated by three bishops of the episcopal church

of that kingdom. He returned thus qualified to

his native country, and fulfilled the duties of his pastoral office in an exemplary manner till his

death, which happened in 1796. Bishop Sea-

bury published two volumes of sermons, to

which a supplement was added in 1798.

SEA CORMORANT. See LARVS.

SEA Cow. See HIPPOPOTAMUS, and TRI-

CHECUS.

SEAFORD, a post and sea-port town of

England, one of the cinque ports. It sent two

members to the imperial parliament. Its inha-

bitants are employed in fishing, but of late it has been resorted to as a bathing place. The privi-

lege of a cinque-port was given it by Charles I.,

ai d it had sent two members to parliament from

the 26th of Edward I. The right of election

was in the inhabitants paying scot and lot; and

the returning officer the bailiff; who is the head

of the corporation, which consists of twelve

juiats, and an indefinite number of freemen. It

was disfranchised in 1832. In 1560 it was at-

tacked by the French, but they were repulsed.

It is eight miles S.S. E. of Lewes, and sixty-

thYee south by east of London.

SEA-GRASS. See Fucus.

SEA-GULL. See LARUS.

SEA-HEDGEHOG. See ECHINUS'.

SEA-HOLLY. See ERYNGIUM.

SEA-HORSE, in ichthyology. See TKICHECUS.

SEAL, 7i. s. Sax. peol, fele ; Dan. seel. The

sea calf.

The seal or soyle is in make and growth not unlike a pig, ugly faced, and footed like a mold-warp : he delighteth in rousick, or any loud noise, and thereby is trained to shew himself above water : they also

come on land. Carew.

An island salt and bare,

The haunt of seals, and orks, and seamews clang.

Milton.

SEAL, n. s., v. a., &t>. n. \ Sax. pjel ; Lat.

SEAL'ING-WAX, n. s. \siglllum. A stamp

engraved with a part icular impression ; the im-

pression made : to attach, confine, or fasten by a

seal: hence to shut up; enclose; mark with a

seal : as a verb neuter, to fix a seal.

We make a sure covenant and write it, and our

princes and priests seal unto it. Nehemiah ix. 33.

When I have performed this, and sealed to them

this fruit, I will come into Spain. Romans xv. 28.

Solyman shewed him his own letters, asking him

if he knew not that hand, and if he knew not that seal 1 Knollet.

The king commands you

To render up the great seal.

Shahtpeare. Henry VIII.

Till thou canst rail the seal from off my bond,

Thou but offendest thy lungs to speak so loud.

Sltakspeare,

He that brings this love to thee,

Little knows this love in me ;

And by him sent up thy mind. Id. A You, Like It.*

God joined my heart to Romeo's ; thou our .

hands ;

And ere this hand, by thee to Romeo sealed,

Shall be the label to another deed,

Or my true heart with treacherous revolt

Turn to another, this shall slay them both.

Shatupeare.

SEA

714

SEA

Seal up your lips, and give n~ words but mum !

Id.

You'd rail upon the hostess,

And say you would present her at the leet,

Because she bought stone jugs, and no sealed quarts.

Id.

I will seal unto this bond. Id.

The sense is like the sun ; for the sun seaU up the ,lobe of heaven, and opens the globe of earth ; so the sense doth obscure heavenly things, and reveals

earthly things. Ba&m.

They their fill of love

Took largely, of their mutual guilt the seal. Milton.

Back to the' infernal pit I drag thee chained,

And seal thee so as henceforth not to scorn

The facil gates of hell, too slightly barred. Id.

The prominent orifice was closed with sealingu-ax.

Boyle.

If the organs of perception, like wax overhardened

with cold, will not receive the impression of the

seal; or, like wax of temper too soft, will not hold it ; or else supposing the wax of a temper fit, but the seal not applied with a sufficient force to make

a clear impression : in any of these cases the print loft by the teal will be obscure. Locke.

He saw his monkey picking the teal wax from a

letter. Arbnthnot.

The same his grandsire wore about his neck

In three teal rings ; which after, melted down,

Formed a vast buckle for his widow's gown. Pope.

A SEAL is a stamp of metal, stone, or some

other convenient substance, whereon are en-

graven the arms, device, &c., of some prince,

state, community, magistrate, or private person,

often with a legend or inscription ; the impres-

sion whereof in wax serves to make acts, instru-

ments, &c., authentic. The use of seals, as a

mark of authenticity to letters and other instru-

ments in writing, is extremely ancient. We read

of it among the Jews and Persians in the earliest

and most sacred records of history. And in the

book of Jeremiah there is a very remarkable in-

stance, not only of an attestation by seal, but

also of the other usual formalities attending a

Jewish purchase. In the civil law also seals

were the evidence of truth, and were required,

on the part of the witnesses, at least at the attes-

tation of every testament. But in the times of

the Anglo-Saxons they were not much in use in

England. For though Sir Edward Coke relies

on an instance of king Edwyn's making use of a

seal, about 100 years before the conquest, yet it

does not follow that this was the usage among

the whole nation, as we are assured by all our

ancient historians that sealing was not then in

common use. The method of the Saxons was

for such as could write to subscribe their names,

and, whether they could write or not, to affix the sign of the cross ; which custom our illiterate

vulgar to this day keep up, by signing a cross

for their mark when unable to write their names.

This inability to write his name, and therefore

making a cross in its stead, is honestly avowed

by Caed walla, a Saxon king, at the end of one

»f his charters. For the same unsurmountable

f^ason, the Normans, a brave but illiterate na-

tion, at their first settlement in France, used the

practice of sealing only, without writing their

names ; which custom continued when learning

li;ul made its way among them, though the reason

had ceased; and hence the charter of Edward

the Confessor to Westminster Abbey, himself

being brought up in Normandy, was witnessed

only by his seal, and is generally thought to be the oldest sealed charter of any authenticity in England. At the Conquest the Norman lords brought over into this kingdom their own customs ; and introduced waxen seals only, instead of the English method of writing their names, and signing with the sign of the cross. The impressions of the seals were sometimes a knight on horseback, sometimes other devices; but coats of §rms were not introduced into seals till about the reign of Richard I.

SEAL is also used for the wax or lead, and the impression thereon, affixed to the thing sealed. The color of impressions of seals has varied considerably. That sort of wax most anciently used was white. The employment of yellow wax on public documents prevailed a good deal about the twelfth century. Ultimately, however, red wax became preferred in almost all the European countries, and remains so at the present moment. The western patriarchs and emperors sealed in green wax certain letters to persons of distinction. This usage was adopted in the twelfth century in France, and at a date somewhat subsequent

introduced into Germany. Specimens of this variety are however extremely rare. In our own country the green seal is still occasionally used on charters. The emperor Charles V., in 1 524, accorded the privilege of sealing in blue, but the example is unique of the employment of that color among European potentates. Certain princes have, at different times, adopted black wax to seal withal ; as, for instance, Jeremy, patriarch of Constantinople. In the thirteenth centnry it was employed in France. Impressions are also found in mixed wax, i. e. of different colors. Seals vary, besides, in size and shape ; they are sometimes large, sometimes small square, round, long, trefoil, lozenge, &c.

SEAL, in zoology. See PHOCA.

SEAL, KING'S GREAT, is that whereby all patents, commissions, warrants, &c., coming down from the king, are sealed ; the keeping whereof is in the hands of the lord chancellor.

SEALER is an officer in chancery appointed by the lord chancellor, or keeper of the great seal, to seal the writs and instruments there made in his presence.

SEALING WAX. See WAX

SEA-LI ox. See PHOCA.

*SEAM, n. *. & v.a. j Saxon ream; Goth.*

SEAM'STRESS, > teym ; Belg. zoom ; Teut

SEAM'Y, adj. J saum. The suture where

the two edges of cloth are sewed together; a

cicatrice ; scar : a seamstress is a woman em-

ployed in sewing : seamy, having or showing

seams.

Some such squire he was.

That turned your wit the teamy side without,

And made me to suspect you. Shahpeare. Othello.

They wanted food and raiment ; so they took

Religion for their seamstress and their cook.

L'Uacelaml.

In velvet white as snow the troop was gowned,

The team with sparkling emeralds set around.*

Dr fen.

SEAMANSHIP.

715

*Precepts should be so finely wrought together in SI:.*M, n. s. Sax. perne ; Welsh sairn. TaU*

the same piece that no coarse seam may discover low ; grease ; hog's lard.

where they join. Addison.

Seamed o'er with wounds, which his own sabre

gave. Pope.

Say, has the small or greater pox

Sunk, down her nose, or seamed her face ? Swift.

Shall the proud lord,

That bastes his arrogance with his own seam,

Be worshipped ? Shakspeare . Troilus and Creuida.

Part scour the rusty shields with seam, and part

New grind the blunted ax. Dryden's JEneid.

SEAMANSHIP.

SEAMANSHIP, n.s. [from sea, man, and ship]

the art of working a ship; including the science,

knowledge, qualifications, and experience, which

enable a man to exercise this noble art. A sea-

man, in the language of the profession, is not

merely a mariner or laborer on board a ship, but

a man who understands the structure of this

machine, and every subordinate part of its me-

chanism, so as to enable him to employ it to the

best advantage for pushing her forward in a par-

ticular direction, and for avoiding the numberless

dangers to which she is exposed by the violence-

of the winds and waves. He also knows what

courses can be held by the ship, according to the

wind that blows, and what cannot, and which of

these is most conducive to her progress in her

intended voyage ; and he must be able to perform every part of the necessary operation with his own hands. As the seamen express it, he must be able ‘ to hand, reef, and steer.’

Seamanship merits the title of a noble art, not only by its importance, which to Britons is peculiarly great, both in peace and in war, as a ˆreat means both of enriching and defending tlieir country, but also by its immense extent and difficulty, and the number and variety of principles on which it is founded — all of which must be possessed in such a manner that they shall offer themselves, without reflection, in an instant, otherwise the pretended seaman is but a lubber, and cannot be trusted on his watch.

This art is practised by seamen without what is called education, and in the humbler walks’ of life ; and therefore it suffers in the estimation of the careless spectator. It is thought little of, because Ijttle attention is paid to it. But if multiplicity, variety, and intricacy of principles, and a systematic knowledge of these principles, entitle any art to the appellation of scientific and liberal, seamanship claims these epithets in an eminent degree. We are amused with the pe-

dantry of the seaman, which appears in his whole language. Indeed it is the only pedantry that amuses. A scholar, a soldier, a lawyer, nay, even the elegant courtier, would disgust us, were he to make the thousandth part of the allusions to his profession that is well received from the jolly seaman ; and we do the seaman no more than justice. His profession must engross his whole mind, otherwise he can never learn it. A ship is a machine. We know the forces which act on it, and we know the results of its construction. All these are as fixed as the laws of motion. What, then, prevents this art from being reduced to a set of practical maxims, as well founded and as logically deduced as the working of a steam engine or a cotton mill ? Ought not the rough seaman to look for the same assistance ; and may not the ingenious speculatist in his closet unravel the intricate thread of mechanism, which connects all thp manual operations with the unchangeable laws of nature, and both furnish the seaman with a better machine, and direct him to a more dexterous use of it ?

We cannot help thinking that much may be done ; nay, we may say that much has been done in this way. We think highly of the progressive labors of Remaud, Pilot, Bouguer, Du Hamel, Groignard, Bernouilli, Euler, Rome, Gordon, Gower, and others. M. Bouguer was professor of hydrology at a marine academy of Franc^ and was enjoined, as part of his duty, to compose dissertations both on the construction and the working of ships. His Traite du Navire, and his Manoeuvre des Vaisseaux, are undoubtedly valuable performances : so are those of Euler and Bernouilli, considered as mathematical dissertations, and they are surprising works of genius, considered as the productions of persons who hardly ever saw a ship, and were totally unacquainted with the profession of a seaman. In this respect Bouguer had great superiority, having always lived at a sea-port, and having made many very long voyages. His treatises therefore are infinitely better accommodated to the demands of tne seaman, and more direcliy instructive ; but still the author is more a mathematician than an artist, and his performance is

intelligible only to mathematicians.

The whole science of the art must proceed on the knowledge of the impulsions of the wind and water. These are the sources which act on the machine ; and its motions, which are the ultimatum of our research, whether as an end to be obtained, or as a thing to be prevented, must depend on these forces. Now it is with respect to this fundamental point that we are as yet almost totally in the dark. And, in the performances of M. Bouguer, and the other authors above named, the theory of these forces, by which their quantity and the direction of their action are ascertained, is altogether erroneous ; and its results deviate so enormously from what is observed in the motions of a ship that the person who should direct the operations on shipboard, in conformity to the maxims deducible from their propositions, would be baffled in most of his attempts, and be in danger of losing the ship. The whole proceeds on the supposed truth of that theory which states the impulse of a fluid to be in the proportion of the square of the sine of the angle of incidence ; and that its action on any small portion, such as a square foot of

the sails or hull, is the same as if that portion were detached from the rest, and exposed, single

and alone, to the wind or water in the same angle. But both these principles are erroneous, and to a very great degree, in cases which occur most frequently in practice, that is, in the small angles of inclination. When the wind falls nearly perpendicular on the sails, theory is not very erroneous ; but. in these cases, the circumstances of the ship's situation are generally such that the practice is easy, occurring almost without thought ; and in this case, too, even considerable deviations from the very best practice are of no great moment. The interesting cases are, where the intended movement requires or depends upon very oblique auions of the wind on the sails, and its practicability or impracticability depends on a very small variation of this obliquity ; a mistake of the force, either as to intensity or direction, then produces a mighty effect on the resulting motion. This is the case in sailing to windward ; the most important of all the general problems of seamanship. The trim of the sails,

and the course of the ship, so as to gain most on the wind, are very nice things ; that is, they are confined within very narrow limits, and a small mistake produces a very considerable effect. The same thing obtains in many of the nice problems of tacking, box-hauling, wearing after lying-to in a storm, &c.

The error in the second assertion of the theory is still greater, and the action on one part of the sail or hull is so greatly modified by its action on another adjoining part, that a stay-sail is often seen hanging like a loose rag, although there is nothing between it and the wind ; and this merely because a great sail in its neighbourhood sends off a lateral stream of wind, which completely hinders the wind from getting at it. Till the theory of the action of fluids be established, we cannot tell what are the forces which are acting on every rlbint of the sail and hull : therefore we cannot tell either the mean intensity or direction of the whole force which acts on any particular sail, nor the intensity and mean direction of the resistance to the hull ; circumstances absolutely necessary for enabling us to say what will be their energy in

producing a rotation round any particular axis.

In like manner, we cannot, by such a compu-

tation, find the spontaneous axis of conversion,

or the velocity of such conversion. In short, we

cannot pronounce with tolerable confidence a

priori what will be the motion in any case, or

what dispositions of the sails will produce the

movement we wish to perform. The experi-

enced seaman learns by nabit the general effects

of every disposition of the sails ; and, though

his knowledge is far from being accurate, it sel-

dom leads him into any very blundering opera-

tion. Perhaps he seldom makes the best adjust-

ment possible, but seldomer still does he deviate

very far from it ; and in the most general and

important problems, such as working to wind-

ward, the result of much experience and many

corrections has settled the trim of the sails, which is certainly not far from the truth, though it de-

viates widely and uniformly from the theory of

the mathematician.

But the theory is defective in one point only ;

and alth'v • • important point, and

the errors in it destroy the conclusions of the

chief propositions, the reasoning remains in full

force, and the modus operandi is precisely such as is stated in the theory. The principles of the art are therefore to be found in these treatises ; but false inferences have been drawn, by computing from erroneous quantities. The rules and the practice of the computation, however, are still beyond controversy : nay, since the process of investigation is legitimate, we may make use of it to discover the very circumstance in which we are at present mistaken ; for by converting the proposition, instead of finding the motions by means of the supposed forces, combined with the known mechanism, we may discover the forces by means of this mechanism and the observed motions.

We shall therefore in this place give a very general view of the movements of a ship under sail, showing how they are produced and modified by the action of the wind on her sails, and of the water on her rudder and on her bows.

SECT. I. — OF THE MOVEMENTS OF A SHIP UNDER SAIL.

We shall not attempt a precise determination of any of toese movements ; but we shall say

as much as may enable the curious landsman to understand how this mighty machine is managed amidst the fury of the winds and waves ; and, what is more to our wish, we hope to enable the uninstructed but thinking seaman to generalise that knowledge which he possesses ; to class his ideas, and give them a sort of rational system ; and even to improve his practice, by making him sensible of the immediate operation of every thing he does, and in what manner it contributes to produce the movement which he has in view.

A ship may be considered as a mass of inert matter in free space, at liberty to move in every direction, according to the forces which impel or resist her ; and when she is in actual motion, in the direction of her course, we may still consider her as at rest in absolute space, but exposed to the impulse of a current of water moving equally fast in the opposite direction : for in both cases the pressure of the water on her bows is the same ; and we know that it is possible, and frequently happens in currents, that the impulse of the wind on her sails, and that of the water on her bows, balance each other so precisely that

she not only does not stir from the place, but

also remains steadily in the same position, with

her head directed to the same point of the com-

pass. This state of things is easily conceived

by any person accustomed to consider mechanical

subjects, and every seaman of experience has ob-

served it. It is of importance to consider it in

this point of view, because it gives us the most

familiar notion of the manner in which these

forces of the wind and water are set in opposition, and made to balance or not to balance each other

by the intervention of the ship, in the same man-

ner as the goods and the weights balance each

other in the scales by the intervention of a beam

or steel-\ aril.

When a ship proceeds steadily in her course,

without changing her rate of sailing, or varying

the direction of her head, we must conceive the

accumulated impulses of the wind on all her sads

is precisely equal and directly opposite to the

impulse of the water on her bows. The seaman

has two principal tasks to perform. The first is

to keep the ship steadily in that course which

will hring her farthest on in the line of her intended voyage. Having chosen such a course as he thinks most advantageous, he must set such a quantity of sail as the strength of the wind will allow him to carry with safety and effect, and must trim the sails properly, or so adjust their positions to the direction of the wind that they may have the greatest possible tendency to impel the ship in the line of her course, and to keep her steadily in that direction.

His other task is to produce any deviations which he sees proper from the present course of the ship ; and to produce these in the most certain, the safest, and the most expeditious manner. It is chiefly in this movement that the mechanical nature of a ship comes into view, and it is here that the superior address and resource of an expert seaman is to be perceived. 'Under the article SAILING some notice has been taken of the first task of the seaman, and it was there shown how a ship, after having taken up her anchor and fitted her sails, accelerates her motion, by degrees which continually diminish, till the increasing resistance of the water becomes pre-

cisely equal to the diminished impulse of the

wind, and then the motion continues uniformly

the same so long as the wind continues to blow

with the same force and in the same direction.

It is perfectly consonant to experience that

the impulse of fluids is in the duplicate ratio of the relative velocity. Let it be supposed that

when water moves one foot per second, its per-

pendicular pressure or impulse on a square foot

is m pounds. Then, if it be moving with the

velocity V, estimated in feet per second, its per-

pendicular impulse on a surface S, containing

any number of square feet, must be m S VJ. In

like manner, the impulse of air on the same sur-

face may be represented by n S V ; and the pro-*

portion of the impulse of these two fluids will

be that of m to n. We may express this by the

ratio of q to 1, making — rz q.

M. Bouguer's computations and tables are on

the supposition that the impulse of sea-water

moving one foot per second is twenty-three

ounces on a square foot, and that the impulse of

the wind is the same when it blows at the rate of twenty-four feet per second. These measures

are all French. They by no means agree with

the experiments of others ; and what we have

already said, under resistance of fluids, is enough

to show that nothing like precise measures can

be expected. It was shown as the result of a

rational investigation, and confirmed by the expe-

riments of Buat and others, that the impulsions

and resistances at the same surface, with the

same obliquity of incidence and the same velo-

city of motion, are different according to the

form and situation of the adjoining parts. Thus

the total resistance of a thin board is greater than that of a long prism, having this board for its

front er bow, &c. We are greatly at a loss what

to give as absolute measures of these impulsions.

1. With respect to water. The experiments

of the French academy on a prism two feet

broad and deep, and four feet long, indicate a

resistance of 0-973 Ib. avoirdupois to a square

foot, moving with the velocity of one foot per

second at the surface of still water. Mr. Buat's experiments on a square foot wholly immersed

in a stream were as follow : —

A square foot as a thin plate . 1-81 Ib.

Ditto as the front of a box one foot

long 142

Ditto as the front of a box three foot

long 129

The resistance of sea-water is about 5lj greater.

2. With respect to air, the varieties are as

great. The resistance of a square foot to air

moving with the velocity of one foot per second

appears from Mr. Robins's experiments on sixteen

square inches to be on a square foot 0-001596 Ib.

Chevalier Borda's on 16 inches 0-001757

on 81 inches 0-002042

Mr. Rouse's on large surfaces 0-002291

Precise measures are not to be expected, nor are

they necessary in this enquiry. Here we are chiefly interested in their proportions, as they may be

varied by their mode of action in the different

circumstances of obliquity and velocity.

We begin by recurring to the fundamental

proposition concerning the impulse of fluids, viz.

that the absolute pressure is always in a direction perpendicular to the impelled surface, whatever

may be the direction of the stream of fluid. We

must therefore illustrate the doctrine by always

supposing a flat surface of sail stretched on a

yard, which can be braced about in any direc-

tion, and giving this sail such a position and such an extent of surface tha< the impulse on it may

be the same both as to direction and intensity with that on the real sails. Thus the considera-tion is greatly simplified. The direction of the impulse is therefore perpendicular to the yard. Its intensity depends on the velocity with which the wind meets the sail, and the obliquity of its stroke. We shall adopt the constructions found-ed on the common doctrine, that the impulse is as the square of the sine of the inclination, be-cause they are simple ; whereas, if we were to introduce the values of the oblique impulses, such as they have beer observed in the excellent experiments of the academy of Paris, the con-structions would be complicated in the extreme, and we could hardly draw any consequqpces which would be intelligible to any but expert mathematicians. The conclusions will be erro-neous, not in kind but in quantity only ; and we shall point out the necessary corrections, so that the final results will be found not very different from real observation.

If a ship were a round cylindrical body like a flat tub, floating on its bottom, and fitted with a mast and sail in the centre, she would always sail in a direction perpendicular to the yard.

This is evident. But she is an oblong body,

and may be compared to a chest, whose length

greatly exceeds its breadth. She is so shaped

that a moderate force will push her through the

water with her head or stern foremost; but it

requires a very great force to push her sidewise

with the saiv.c velocity, A fine sailing ship of

war will require about twelve times as much

force to push her sidewise as to push her head

foremost. In this respect therefore she will

very much resemble a chest whose length is

twelve times its breadth ; and, whatever be the

proportion of these resistances in different ships,

we may always substitute a box which shall have

the same resistances headwise and sidewise.

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A.

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F

~K

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JL.

a

c

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B

H

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Let E F G H of the diagram be the horizontal section of such a box, and A B its middle line and C its centre. In whatever direction this box may chance to move, the direction of the whole resistance on its two sides will pass through C. For, as the whole stream has one inclination to the side E F, the equivalent of the equal impulses on every part will be in a line perpendicular to the middle of E F. For the same reason, it will be in a line perpendicular to the middle of F G. These perpendiculars must cross in C. Suppose a mast erected at C, and Y Cy to be a yard hoisted on it carrying a sail. Let the yard be first conceived as braced right athwart at right angles to the keel, as represented by Y’ y’. Then, whatever be the direction of the wind abaft this sail, it will impel the vessel in the direction C B. But, if the sail has the oblique position Y y,

the impulse will be

in the direction C D perpendicular to C Y, and

will both push the vessel a-head and sidewise.

For the impulse C D is equivalent to the two

impulses C K and C I (the sides of a rectangle

of which C D is the diagonal). The force C I

pushes the vessel a-head, and C K pushes her

sidewise. She must therefore take some inter-

mediate direction a b, such that the resistance of

the water to the plane F G is to its resistance to the plane E F as C I to C K.

The angle b C B between the real course and

the direction of the head is called the leeway ;

and in the course of this dissertation we shall

express it by the symbol x. It evidently de-

pends on the shape of the vessel and on the

position of the yard. An accurate knowledge

of the quantity of leeway, corresponding to

different circumstances of obliquity of impulse,

extent of surface, &c., is of the utmost import-

ance in the practice of navigation ; and even an

approximation is valuable. The subject is so

very difficult that this must content us for the

present.

Let V be the velocity of the ship in the direc-

tion C b, and let the surfaces F G and F E be

called A' and B'. Then the resistance to the

lateral motion is m Vs x B' x sine, b C B,*

and that to the direct motion is m \7> x A' x

sine, b C K, or m V* x A' x cos.* bCB.*

Therefore these resistances are in the proportion

of B' x sine2, x to A' x cos.-, .1 (representing

the angle of leeway 6 C B by the symbol x).

Therefore we have CI:CK, or C I : I D

n. • , , r> sine'j;

=. A cos.8 x : B • sine g, SZ £ •• B,*

COS. JT*

*— A : B; tangent * x.*

Let the angle Y C B, to which the yard is

braced up, be called the trim of the sails, and

expressed by the symbol b. This is the comple-

ment of the angle DC I. Now CI : ID —

rad. : tan. D C I, =: 1 : tan. D C I, n 1 : cotan. b.

Therefore we have finally 1 • cotan. b ~ A' : B' •

tan.2 x, and A' • cotan. b — B' • tangent8 x, and tan. j; — v. cot. b. This equation evidently*

ascertains the mutual relation between the trim

of the sails and the leeway in every case whero

we can tell the proportion between the resistances

to the direct and broadside motions of the ship,

*and where this proportion does not change by the obliquity of the course. Thus, suppose the yard braced up to an angle of 30° with the keel. Then cotan. 30° ~ 1-732 very nearly. Suppose also that the resistance sidewise is twelve times greater than the resistance headwise. This gives A' = 1 and B— 12. Therefore 1-732 = 12 x 1*732*

tan.8 x, and tan. x — — — –, — 0-14434, and tan. x =. 0-3799, and x =: 20° 48', very nearly two points of leeway.*

This computation, or rather the equation which gives room for it, supposes the resistances proportional to the squares of the sines of incidence. The experiments of the academy of Paris show that this supposition is not far from the truth when the angle of incidence is great. In this present case the angle of incidence on the front F G is about 70°, and the experiments just now mentioned show that the real resistance exceed the theoretical ones only T^. But the angle of incidence on E F is only 20° 48'. Experiment shows that in this inclination the resistance is almost quadruple of the theoretical

resistances. Therefore the lateral resistance is

assumed much too small in the present instance.

Therefore a much smaller leeway will suffice for

producing a lateral resistance which %vill balance

the lateral impulse C K, arising from the obli-

quity of the sail, viz. 30°. The matter of fact is, that a pretty good sailing ship, with her sails

braced to this angle at a medium, will not make

above 5° or 6° leeway in smooth water and easy

weather ; and yet in this situation the hull and

rigging present a very great surface to the wind,

in the most improper positions, so as to have a

very great effect in increasing her leeway. And,

if we compute the resistances for this leeway of

6° by the actual experiments of the French aca-

demy on that angle, we shall find the result not

far from the truth ; that is, the direct and lateral resistances will be nearly in the proportion of

C I to I D.

It results from this view of the matter that

the leeway is in general much smaller than what

the usual theory assigns. We also see that, ac

cording to whatever law the resistance changes

by a change of inclination, the leeway remains

the same while the trim of the sails is the same.

The leeway depends only on the direction of the impulse of the wind; and this depends solely on the position of the sails with respect to the keel, whatever may be the direction of the wind. This is a very important observation, and will be frequently referred to in the progress of the present investigation. Note, however, that we are here considering only the action on the sails, and on the same sails. We are not considering the action of the wind on the hull and rigging. This may be very considerable ; and it is always in a lee direction, and augments the leeway ; and its influence must be so much the more sensible as it bears a greater proportion to the impulse on the sails. A ship under courses, or close-reefed topsails and courses, must make more leeway than when under all her canvas t.-immed to the same angle. But to introduce this additional cause of deviation here would ren-

der the investigation too complex to be of any use.

This doctrine will be considerably illustrated

by attending to the manner in which a lighter is

tracked along a canal, or swings to its anchor in

H

a stream. The track rope is made fast to some

staple or bolt E on the deck, and is passed

between two of the timber-heads of the bow at

D, and laid hold of at F on shore. The men or

cattle walk along the path F G, the rope keeps

extended in the direction D F, and the lighter

arranges itself in an oblique position A B, and

is thus dragged along in the direction a b, parallel to the side of the canal. Or, if the canal has a current in the opposite direction b a, the lighter

may be kept steady in its place by the rope D F

made fast to a post at F. In this case it is

always observed that the lighter swings in a

position A B, which is oblique to the stream a b.

Now the force which retains it in this position,

and which precisely balances the action of the

stream, is certainly exerted in the direction I) F; and the lighter would be held in the same man-

ner if the rope were made fast at C amidship,

without any dependence on the timber-heads at

D ; and it would still be held in. the same posi-

tion, if, instead of the single rope C F, it were

riding by two ropes C G and C H, of which C H

is in a direction right a-head, but oblique to the stream, and the other C G is perpendicular to

C H or A B. And, drawing D I and D K per-

pendicular to A B and C G, the strain on the

rope C H is to that on the rope C G as C I to C K. The action of the rope in these cases is

precisely analogous to that of the sail y Y ; and

the obliquity of the keel to the directions of the motion, or to the direction of the stream, is

analogous to the leeway. All this must be evi-

dent to any person accustomed to mechanical

disquisitions.

A most important use may be made of this

illustration. If an accurate model be made of a

ship, and if it be placed in a stream of water,

and ridden in this manner by a rope made fast

at any point D of the bow, it will arrange itself in some determined position A B. There will

be a certain obliquity to the stream, measured by

the angle B o b ; and there will be a correspond-

ing obliquity of the rope, measured by the angle

F C B. Let y C Y be perpendicular to C F.

Then C Y will be the position of the yard or

trim of the sails corresponding to the leeway

b C B. Then, if we shift the rope to a point of the bow distant from D by a small quantity, we

shall obtain a new position of the ship, both

with respect to the stream and the rope ; and in

this way may be obtained the relation between

the position of the sails and the leeway, inde-

pendent of all theory, and susceptible of great

accuracy ; and this may be done with a variety

of models suited to the most usual forms of

ships.

In farther reflection on this subject we are

persuaded that these experiments, instead of

being made on models, may with equal ease be

made on a ship of any size. Let the ship ride

in a stream at a mooring D (fig. 1, Plate SEA-

MANSHIP), by means of a short hawser BCD

from her bow, having a spring A C on it carried

out from her quarter. She will swing to her

moorings, tili she ranges herself in a certain po-

sition A B with respect to the direction a b of

the stream ; and the direction of the hawser D C

will point to some point E of the line of the

keel. Now it is plain, to any person acquainted

with mechanical disquisitions, that the deviation

B E 6 is precisely the leeway that the ship will

make when the average position of the sail is that of the line G E H perpendicular to E D ; at least this will give the leeway which is produced by the sails alone. By heaving on the spring, the knot C may be brought into any other position we please; and for every new position of the knot the ship will take a new position with respect to the stream and to the hawser. And we persist in saying that more information will be got by this train of experiments than from mathematical theory ; fc • all theories of the impulses of fluids must proceed on physical postulates, with respect to the motions of the filaments, which are exceedingly conjectural.

And it must now be farther observed that the substitution which we have made of an oblong parallelepiped for a ship, although well suited to give us clear notions of the subject, is of small use in practice; for it is next to impossible (even granting the theory of oblique impulsions) to make this substitution. A ship is of a form which is not reducible to equations ; and therefore the action of the water on her bow or broad-

side can only be had by a most laborious and intricate calculation for almost every square foot of its surface. See Bezant's Cours de Mathcm. vol. v, p. 72, &c. And this must be different for every ship. But, which is more unlucky, when we have got a parallelepiped which wi'll have the same proportion of direct and lateral resistance for a particular angle of leeway, it will

not answer for another leeway of the same ship ; fo-, when the leeway changes, ttie figure actually exposed to the action of the water changes also. When the leeway is increased, more of the lee-quarter is acted on by the water, and a part of the weather-bow is now removed from. its action. Another parallelepiped must therefore be dis-covered, whose resistances shall suit this new position of the keel with respect to the real course of the ship.

We proceed in the next place to ascertain the elation between the velocity of the ship and, that of the wind, modified as they may be by

the trim of the sails, and the obliquity of the im-

pulse.

Let A B (fig. 2, 3, and 4, plate SEAMANSHIP)

represent the horizontal section of a ship. In place of all the drawing sails, that is, the sails which are really filled, we can always substitute one sail of equal extent, trimmed to the same angle with the

keel. This being supposed attached to the yard

D C D, let this yard be first of all at right angles to the keel, as represented in fig. 2. Let the wind blow in the direction W C, and let C E (in the

direction W C continued) represent the velocity

V of the wind. Let C F be the velocity v of the ship. It must also be in the direction of the

ship's motion, because, when the sail is at right

angles to the keel, the absolute impulse on the

sail is in the direction of the keel ; and there is no lateral impulse, and consequently no leeway.

Draw E F, and complete the parallelogram C F E

e, producing e C through the centre of the yard

to w. Then icC will be the relative or apparent

direction of the wind, and C e or F E will be its apparent or relative velocity : for if the line Ce be carried along C F, keeping always parallel to

its first position, and if a particle of air move

uniformly along C E (a fixed line in absolute

space) in the same time, this particle will always

be found in that point of C E where it is inter-

sected at that instant by the moving line C e ; so that, if C e were a tube, the particle of air, which really moves in the line C E, would always be

found in the tube Ce. While C E is the real

direction of the wind, C e will be the position of the vane at the mast head, which will therefore

mark the apparent direction of the wind, or its

motion relative to the moving ship.

We may conceive this in another way. Sup-

pose a cannon-shot fired in the direction C E at

the passing ship, and that it passes through the

mast at C with the velocity of the wind. It will

not pass through the off-side of the ship at P, in the line C E : for, while the shot moves from C

to P, the point P has gone forward, and the point p is now in the place where P was when the shot

passed through the mast. The shot will therefore

pass through the ship's side in the point p, and a person on board seeing it pass through C and p

will say that its motion was in the line C p.

Thus it happens that when a ship is in motion

the apparent direction of the wind is always

ahead of its real direction. The line w C is al-

ways found within the anijle W C B. It is easy

to see from the construction that the difference

between the real and apparent directions of the

wind is so much the more remarkable as the ve-

locity of the ship is greater : for the angle W C w or E C e depends on the magnitude of E e or

C F, in proportion to C E. Persons not much

accustomed to attend to these matters are apt to think all attention to this difference to be nothing but affectation of nicety. They have no notion that the velocity of a ship can have any sensible proportion to that of the wind. ‘ Swift as the wind’ is a proverbial expression ; yet the velocity of a ship always bears a very sensible proportion to that of the wind, and even very frequently exceeds it. We may form a pretty exact notion of the velocity of the wind, by observing the shadows of the summer clouds flying along the face of a country, and it may be very well measured by this method. The motion of such clouds cannot be very different from that of the air below ; and when the pressure of the wind on a flat surface, while blowing with a velocity measured in this way, is compared with its pressure when its velocity is measured by more unexceptionable methods, they are found to agree with all desirable accuracy. Now observations of this kind frequently repeated, show, that what we call a pleasant brisk gale blows at the rate of about ten miles an hour, or about fifteen feet in a second, and exerts a pressure of half a pound on a square foot. Mr. Smeaton

has frequently observed the sails of a windmill,

driven by such a wind, moving faster, nay much

faster, towards their extremities, so that the sail, instead of being pressed to the frames on the

arms, was taken a-back, and fluttering on them.

Nay, we know that a good ship, with all her

sails set and the wind on the beam, will in such

a situation sail above ten knots an hour on smooth water. There is an observation made by every

experienced seaman which shows this difference

between the real and apparent directions of the

wind very distinctly. When a ship that is sail-

ing briskly with the wind on the beam tacks

about, and then sails equally well on the other

tack, the wind always appears to have shifted

and come more a-head. This is familiar to all

seamen. The seaman judges of the direction of

th« wind by the position of the ship's vanes.

Suppose the ship sailing due west on the star-

board tack, with the wind apparently N.N. W.

the vane pointing S.S.E. If the ship puts

about, and stands due east on the larboard tack,

the vane will be found no longer to point S.S. E.

but perhaps S.S.W., the wind appearing N.N. !'.. ;

and the ship must be nearly close hauled, in order to make an east course. The wind appears to

have shifted four points. If the ship tacks again, the wind returns to its old quarter. We have often observed a greater difference than this. The celebrated astronomer, Dr. Bradley, taking the amusement of sailing in a pinnace on the river Thames., observed this, and was surprised at it, imagining that the change of wind was owing to the approaching to or retiring from the shore. The boatmen told him that it always happened at sea, and explained it to him in the best manner they were able. This explanation struck him, and set him a musing on an astronomical phenomenon which he had been puzzled by for some years, and which he had called the aberration of the fixed stars. Ever)' star ch:. i its place a small matter for half a year, and re-

turns to it at the completion of the year. He compared the stream of light from the star to the wind, and the telescope of the astronomer to the ship's vane, while the earth was like the ship, moving in opposite directions when in the opposite points of its orbit. The telescope must be

always pointed a-head of the real direction of the

star, in the same manner as the vane is always in a direction a-head of the wind ; and thus he as-

certained the progressive motion of light, and

discovered the proportion of its velocity to the

velocity of the earth in its orbit by observing

the deviation which was necessarily given to the

telescope. Observing that the light shifted its

direction about 40, he concluded its velocity to*

be about 11,000 times greater than that of the

earth; just as the intelligent seaman would con-

clude, from this apparent shifting of the wind,

that the velocity of the wind is about triple that of the ship. This is indeed the best method for

discovering the velocity of the wind. Let the

direction of the vane at the mast-head be very

accurately noticed on both tacks, and let the ve-

locity of the ship be also accurately measured.

The angle between the direction of the ship's

head on these different tacks, being halved, will

give the real direction of the wind, which must

be compared with the position of the van, in

order to determine the angle contained between

the real and apparent directions of the wind or

the angle E C e, or half of the observed shifting of the wind, will show the inclination of its true and apparent directions. This being found, the

proportion of E C to F C (fig. 4) is easily measured.

We have been very particular on this point, because, since the mutual actions of bodies depend on their relative motions only, we should make prodigious mistakes if we estimated the action of the wind by its real direction and velocity, when they differ so much from the relative or apparent.

By an easy process we might investigate the following particulars of a ship with its sails at right angles to the keel.

1. The velocity of the ship is (cateris paribus) proportional to the velocity of the wind and to the sine of its incidence on the sail, when no sail becalms another. This observation is not, however, of great importance ; for it is very unusual to put a ship in the situation considered hitherto ; that is, with the yards square, unless she be right before the wind.

2. The surface of sail is proportional to the square of the ship's velocity directly, and to the square of the relative velocity inversely. Thus, if a ship be sailing with one-eighth of the velo-

city of the wind, and we would have her sail

with one-fourth of it, we must quadruple the

sails. This is more easily seen in another way.

The velocity of the ship is proportional to the

velocity of the wind ; and therefore the relative

velocity is also proportional to that of the wind ; and the impulse of the wind is as the square of

the relative velocity. Therefore, in order to in-

crease the relative velocity by an increase of sail

only, we must make this increase of sail in the

duplicate proportion of the increase of velocity.

When the sails stand oblique to the keel it

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might be shown that, while the trim of the sai's

remains the same, the leeway and the angle of

the yard and course remains the same, and that.

the velocity of the ship is as the sine of the

angle of real incidence, that is, as the sine of the angle of the sail and the real direction of the wind.

Let the ship A B (fig. 5) hold the course C F,

with the wind blowing in the direction W C, and

having her yards D C D braced up to the smallest

angle BCD which the rigging can admit. Let

C F be to C E as the velocity of the ship to the velocity of the wind; join F E, and draw C w

parallel to E F ; it is evident that F E is the re-

lative motion of the wind, and w C D is the re-

lative incidence on the sail. Draw F O parallel

to the yard D C, and describe a circle through

the points C O F ; then we say that if the ship, with the same wind and the same trim of the

same drawing sails, be made to sail on any other

course Cf, her velocity along C F is to the velo-

city along Cf as C F is to Cf; or, in other

words, the ship will employ the same time in

going from C to any point of the circumference

C F O. Join f O. Then, because the angles

C F O, cfO, are on the same chord C O, they are equal, and/O is parallel to d C d, the new posi-

tion of the yard corresponding to the new posi-

tion of the keel a b, making the angle d C b —

D C B. Also, by the nature of the circle, the

line C F is to Cf as the sine of the angle C O F

to the sine of the angle C Of, that is (on ac-

count of the parallels C D, OF, and C d, Of),

as the sine of W C D to the sine of W C d.

But when the trim of the sails remains the same

the velocity of the ship is as the sine of the angle of the sail with the direction of the wind ; there-

fore C F is to Cf as the velocity on C F to that on Cf, and the proposition is demonstrated.

Let it now be required to determine the best

course for avoiding a rock R, lying in the direc-

tion C R, or for withdrawing as fast as possible

from a line of coast P Q. Draw C M through

R, or parallel to P Q, and letm be the middle of the arch C m M. It is plain that m is the most

remote from C M of any point of the arch

C m M, and therefore the ship will recede farther

from the coast P Q in any given time by holding

the course C m than by any other course.

This course is easily determined ; for the arch

C m M rr 360° — (arch C O + arch O M), and

the arch C O

CFO, or twice the angle D C B, or twice b + x,

and the arch O M measures twice the angle

E C M. Thus, suppose the sharpest possible

trim of the sails to be 35°, and the observed

angle E C M to be 70° ; then C O + O M is 70°

+ 140° or 210°. This being taken from 360°

leaves 150°, of which the half M m is 75°, and

the angle M C m is 37° 30'. This added to

E C M makes EG m 107° 30', leaving W C m

— 72° 30', and the ship must hold a course

making an angle of 72° 30', with the real direc-

tion of the wind, and W C D will be 3?° 30'.

This supposes no leeway. But if we know

that, under all the sail which the ship can carry with safety and advantage, she makes 5° of lee-way, the angle D C m of the sail and course, or b + x, is 40°. Then C O + O M = 220°, which being taken from 360° leaves 140°, of which the

half is 70°, = M w, and the angle M C ,«n35°, and E C = ro 105°, and W C m — 75°, and the ship must lie with her head 70° from the wind, making; 5° of leeway, and the angle W C D is 35°.

The general rule for the position of the ship is, that the line on shipboard which bisects the angle b + x may also bisect the angle W C M, or make the angle between the course and the line from which we wish to withdraw equal to the angle between the sail and the real direction of the wind. It is plain that this problem includes that of plying to windward. We have only to suppose E C M, to be 90° ; then, taking our example in the same ship, with the trim and the same leeway, we have 6 + r^'K)°. This taken

from 90° leaves 50°, and W C n—90— 25 = 65,

and the ship's head must lie 60° from the wind,

and the yard must be 25° from it. It must be

observed here that it is not always eligible to

select the course which will remove the ship

fastest from the given line C M ; it may be more prudent to remove from it more securely, though

more slowly. In such cases, the procedure is

very simple, viz. to shape the course as near the

wind as is possible.

The reader will also easily see, that the pro-

priety of these practices is confined to those

courses only where the practicable trim of the

sails is not sufficiently sharp. Whenever the

course lies so far from the wind that it is possible to make the tangent of the apparent angle of the

wind and sail double the tangent of the sail and

course, it should be done.

These are the chief practical consequences

which can be deduced from the theory. But we

should consider how far this adjustment of the

sails and course can be performed. And here oc-

cur difficulties so great as to make it almost im-

practicable. We have always supposed the posi-

tion of the surface of the sail to be distinctly

observable and measurable ; but this can hardly be

affirmed even with respect to a sail stretched on

•\ yard. Here we suppose the surface of the sail to have the same inclination to the keel that the

yard has. This is by no means the case ; the sail assumes a concave form, of which it is almost im-

possible to assign the direction of the mean im-

pulse. We believe that this is always considerably

to leeward of a perpendicular to the yard, lying

between C I and C E (fig. 4). This is of some ad-

vantage, being equivalent to a sharper trim. We

cannot affirm this, however, with any confidence,

because it renders the impulse on the weather-

leech of the sail so exceedingly feeble as hardly

to have any effect. In sailing close to the wind,

the ship is kept so near that the weather-leech

of the sail is almost ready to receive the wind

edgewise, and to flutter or shiver. The most

effective or drawing sails with a side-wind, espe-

cially when plying to windward, are the stay-

sails. We believe that it is impossible to say,

with any thing approaching to precision, what is

the position of the general surface of a stay-sail, or to calculate the intensity and direction of the

general impulse ; and we affirm with confidence

that no man can pronounce on these points with

any exactness. If we can guess within a third or

a fourth part of the truth, it is all we can pre-

tend to : and, after all, it is but a guess. Add to this, the sails coming in the way of each other,

and either becalming them, or sending the wind

upon them in a direction widely different from

that of its free motion. All these points we think beyond our power of calculation ; and therefore

that it is in vain to give the seaman mathematical rules, or even tables of adjustment ready calcu-

lated, since he can neither produce that medium

position of his sails that is required, nor tell what is the position which he employs.

This is one of the principal reasons why so lit-

tle advantage has been derived from the very in-

genious and promising disquisitions of Bouˆuer

and other mathematicians, and has made us omit

the actual solutions of the chief problems, con-

tenting ourselves with pointing out the process

to such readers as have a relish for these analyti-

cal operations. But there is another principal

reason for the small progress which has been

made in the theory of seamanship: this is the

errors of the theory itself, which supposes the im-

pulsions of a fluid to be in the duplicate ratio of the sine of incidence. The most careful com-

parison which has been made between the results

of this theory and matter of fact, is to be seen in the experiments made by the members of the

Royal Academy of Sciences at Paris. We sub-

join an abstract of them in the following table ;

where column first gives the angle of incidence,

column second gives the impulsions really ob-

served ; column third the impulses, had they

followed the duplicate ratio of the sines ; and

column fourth the impulses, if they were in the

simple ratio of the sines : —

Angle

of

I IK- ul.

Impul-

sion

observed.

Impulse

as

Sine,.

Impulse

as

Sine.

90

1000

1000

1000

84

989

989

995

78

958

957

978

72

908

905

951

66

845

835

914

60

771

750

866

54

693

655

809

48

615

552

743

42

543

448

669

36

480

346

587

30

440

250

500

24

424

165

407

18

414

96

309

12

406

43

208

6

400

11

105

Here we see an enormous difference in the

great obliquities. When the angle of incidence

is only 6°, the observed impulse is forty times

greater than the theoretical impulse ; at 12° it is ten times greater ; at 18° it is more than four

times greater; and at 24° it is almost three

greater.

No wonder, then, that the ded actions from this

theory are so useless and so unlike what we fami-

liarly observe. We took notice of this when we

were considering the leeway of a reutanjularbjv,

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and thus saw a reason for admitting an incompa-

rably smaller leeway than what would result from

the laborious computations necessary by the

theory. This error in theory has as great an in-

fluence on the impulsions of air when acting ob-

liquely on a sail ; and the experiments of M.

Robins and of the chevalier Borda, on the oblique

impulsions of air, are perfectly conformable (as

far as they go) to those of the academicians on

water. The oblique impulsions of the wind are,

therefore, much more efficacious for pressing the

ship in the direction of her course than the theory allows us to suppose ; and the progress of a ship

plying to windward is much greater, both because

the oblique impulses of the wind are more effec-

tive, and because the leeway is much smaller than

we suppose. Were not this the case, it would

be impossible for a square-rigged ship to get to

windward. The impulse on her sails when close

hauled would be so trifling that she would not

have a third part of the velocity which we see her acquire ; and this trifling velocity would be

wasted in leeway ; for we have seen that the di-

minution of the oblique impulses of the water

is accompanied by an increase of leeway. But

we see that, in the great obliquities, the impulsions continue to be very considerable, and that even

an incidence of 6° gives an impulse as great as the theory allows to an incidence of 40°. We may

therefore, on all occasions, keep the yards more square ; and the loss which we sustain by the diminution of the very oblique impulse will be more than compensated by its more favorable direction with respect to the ship's keel. Let us take an example of this : — Suppose the wind about two points before the beam, making an angle of 68® with the keel. The theory assigns 43° for the inclination of the wind to the sail, and 25° for the trim of the sail. The perpendicular impulse being supposed 1000, the theoretical impulse for 43° is 465. This, reduced in the proportion of radius to the sine of 25°, gives the impulse in the direction of the course only 197.

But if we ease off the lee-braces till the yard makes an angle of 50° with the keel, and allows the wind an incidence of no more than 18°, we have the experimented impulse 4 14, which, when reduced in the proportion of radius to the sine of 50°, gives an effective impulse 317. In like manner, the trim 56°, with the incidence 12°, gives an effective impulse 337 ; and the trim 62°, with the incidence only 6°, gives 353.

Hence it would at first sight appear that the angle D C B of 62° and W C D of 6° would be

better for holding a course within six points of the wind than any more oblique position of the sails ; but it will only give a greater initial impulse. As the ship accelerates, the wind apparently comes a-head, and we must continue to brace up as the ship freshens her way. It is not unusual for her to enquire half or two-thirds of the velocity of the wind ; in which case the wind comes apparently a-head more than two points, when the yards must be braced up to 35°, and this allows an impulse no greater than about 7°. Now this is very frequently observed in good ships, which in a brisk gale and smooth water will go five or six knots close hauled, the ship's bead six points from the wind, and thp sails no more than just full, but ready to shiver by the smallest luff. All this would be impossible by the usual theory ; and in this respect these experiments of the French academy give a fine illustration of the seaman's practice. They account for what we should otherwise be much puzzled to explain ; and the great progress which is made by a ship close hauled, being perfectly agreeable to what we should expect from the law of oblique impulsion dedu.cible from these so

often mentioned experiments, while it is totally incompatible with the common theory, should make us abandon the theory without hesitation, and strenuously set about the establishment of another, founded entirely on experiments. For this purpose the experiments should be made on the oblique impulsions of air on as great a scale as possible, and in as great a variety of circumstances, so as to furnish a series of impulsions for all angles of obliquity. We have but four or five experiments on this subject, viz., two by Mr. Robins, and two or three by chevalier Borda. Having thus gotten a series of impulsions, it is very practicable to raise on this foundation a practical institute, and to give a table of the velocities of a ship s'uited to every angle of inclination and of trim ; for nothing is more certain than the resolution of the impulse perpendicular to the sail into a force in the direction of the keel, and a lateral force. We also think that experiments might be made on a model very nicely rigged with sails, and trimmed in every different degree, which would point out the mean direction of the impulse on the sails, and the comparative force of

these impulses in different directions of the wind.

The method would be very similar to that of ex-

amining the impulse of the water on the hull.

If this can also be ascertained experimentally,

the intelligent reader will easily see that the

whole motion of a ship under sail may be deter-

mined for every case. Tables may then be con-

structed by calculation, or by graphical operations,

which will give the velocities of a ship in every

different course, and corresponding to every trim

of sail. And let it be here observed that the

trim of the sail is not to be estimated in degree**

of inclination of the yards ; because, as we have

already remarked, we cannot observe nor adjust

the lateen sails in this way. But, in making the

experiments for ascertaining the impulse, the ex-

act position of the tacks and sheets of the sail?

are to be noted ; and this combination of adjust-

ments is to pass by the name of a certain trim.

Thus that trim of all the sails may be called forty, whose direction is experimentally found equiva-

lent to a flat surface trimmed to the obliquity 40°.

Having dbne this, we may construct a figure,

for each trim similar to fig. 5, where, instead of a circle,, we shall have a curve COM' F', whose

chords C F', cf, &c., are proportional to the velocities in these courses; and by means of this curve we can find the point m', which is most remote from any line C M from which we wi«- to withdraw ; and thus we may solve all the principal problems of the art.

It will not be accounted presumption to expect more improvement from a theory founded on judicious experiments only, than from a theory

of the impulse of fluids, which is found so inconsistent with observation, and of whose fallacy all its authors, from Newton to IVAlembert, entertained strong suspicions. With these obserrations we conclude our discussion of the first part of the seaman's task, and now proceed to consider the means that are employed to prevent or to produce any deviations from the uniform rectilineal course which has been selected.

SECT. II. — OF THE MEANS USED TO PREVENT OR PRODUCE DEVIATIONS FROM A UNIFORM RECTILINEAR COURSE.

Here the ship is to be considered as a body in

free space, convertible round her centre of inertia. For, whatever may be the point round which she turns, this motion may always be considered as compounded of a rotation round an axis passing through her centre of gravity or inertia. She is impelled by the wind and by the water acting on many surfaces differently inclined to each other, and the impulse on each is perpendicular to the surface. In order therefore that she may continue steadily in one course, it is not only necessary that the impelling forces, estimated in their mean direction, be equal and opposite to the resisting forces estimated in their mean direction ; but also that these two directions may pass through one point, otherwise she will be affected as a log of wood is when pushed in opposite directions by two forces, which are equal indeed, hut are applied to different parts of the log. A ship must be considered as a lever, acted on in different parts by forces in different directions, and the whole balancing each other round that point or axis where the equivalent of all the resisting forces passes. This may be considered as a point supported

by this resisting force, and as a sort of fulcrum ; therefore, in order that the ship may maintain

her position, the energies or momenta of all the

impelling forces round this point must balance

each other.

W hen a ship sails right afore the wind, with

her yards square, it is evident that the impulses

on each side of the keel are equal, as also their mechanical momenta round any axis passing

perpendicularly through the keel. So are the

actions of the water on her bows. But when

she sails on an oblique course, with her yards

braced up on either side, she sustains a pressure

in the direction C I (fig. 3) perpendicular to the sail. This, by giving her a lateral pressure L I,

as well as a pressure C L a-head, causes her to

make leeway, and to move in a line C b inclined

to C B. By this means the balance of action

on the two bows is destroyed ; the general im-

pulse on the lee-bow is increased ; and that on

the weather-bow is diminished. The combined

impulse b therefore no longer in the direction

B C, but (in the state of uniform motion) in the

direction I C.

Suppose that in an instant the whole sails are

annihilated, and the impelling pressure C I,

which precisely balanced the resisting pressure

on the bows, removed. The ship tends, by her

inertia, to proceed in the direction C b. This

tendency produces a continuation of the resist-

ance in the opposite direction I C, which is not

directly opposed to the tendency of the ship in

the direction C 6 ; therefore the ship's head

would immediately come up to the wind. The

experienced seaman will recollect something like-

this when the sails are suddenly lowered when

coming to anchor. It does not happen solely

from the obliquity of the action on the bows : It would happen to the parallelepiped of our se-

cond diagram, which was sustaining a lateral

*impulsion B- sin. *r, and a direct impulsion A-*

*cos. *x. These are continued fora moment after*

the annihilation of the sail ; but being no longer

opposed by a force in the direction C D, but by

a force in the direction C 6, the force B- sin. 2x must prevail, and the body is not only retarded

in its motion, but its head turns towards the wind.

But this effect of the leeway is greatly increased

by the curved form of the snip's bows. This oc-

casions the centie of effort of all the impulsions

of the water on the lee side of the ship to be very far forward, and this so much the more remark-

ably as she is sharper afore. It is in general not much abaft the foremast. Now the centre of the

ship's tendency to continue her motion is the

same with her centre of gravity, and this is gene-

rally but a little before the mainmast in a direc-

tion parallel to C b, and at the foremast by a

force parallel to I C. The evident consequence

of this is a tendency to come up to the wind.

This is independent of all situation of the sail,*

provided only that they have been trimmed ob-

liquely.

This tendency of the ship's head to windward

is called griping in the seaman's language, and

is greatest in ships which are sharp forward, as

we have said already. This circumstance is

easily understood. Whatever is the direction of

the ship's motion, the absolute impulse on that

part of the bow immediately contiguous to B js

perpendicular to that very part of the surface.

The more acute, therefore, that the angle of the

bow is, the more will the impulse on that part be perpendicular to the keel, and the greater will

be its energy to turn the head to windward.

Thus we are enabled to understand or to see

the propriety of the disposition of the sails of a ship. We see her crowded with sails forward,

and even many sails extended far before her bow, such as the spritsail, the bowsprit topsail, the fore top-mast staysail, the jib and flying jib.

The sairs abaft are comparatively smaller. The sails on the mizen-mast are much smaller than those on the foremast. All the staysails hoisted on the mainmast may be considered as headsails, because their centres of effort are considerably before the centre of gravity of the ship ; and, notwithstanding this disposition, it generally requires a small action of the rudder to counteract the windward tendency of the lee-bow. This is considered as a good quality when moderate ; because it enables the seaman to throw the sails a-back, and stop the ship's way in a moment, if she be in danger from any thing a-head ; and the ship which does not carry a little of a weather-helm is always a dull sailer.

In order to judge somewhat more accurately of the action of the water and sails, suppose the ship A B (fig. 6) to have its sails on the mizen-mast D, the mainmast E, and foremast F, braced

- por tnmmea alike, and thai die three lines D i, Ee, F/', perpendicular to the sails, are in the

proportion of the impulses on the sails. The

ship is driven a-head and to leeward, and moves

in the path a C b. This path is so inclined to

the line of the keel that the medium direction of

the resistance of the water is parallel to the di-

rection of the impulse. A line C I may be

drawn parallel to the lines D j, Ee, F_/", and

equal to their sura ; and it may be drawn from

such a point, C, that the actions on all the parts of the hull between C and B may balance the

momenta of all the actions on the hull between

C and A. This point may justly be called the

centre of effort, or the ceri-tre of resistance. We cannot determine this point for want of a pro-

per theory of the resistance of fluids. Nay, al-

though experiments like those of the Parisian

academy should give us the most perfect know-

ledge of the oblique impulses on a square foot,

we should hardly be benefited by them ; for the

action of the water on a square foot of the hull

at p, for instance, is so modified by the interven-

tion of the stream of water which has struck the

hull about B, and glided along the bow Bop,

that the pressure on p is totally different from

what it would have been were it a square foot

or surface detached from the rest, and presented

in the same position to the water moving in the

direction bC. For it is found that the resist-

ances given to planes joined so as to form a

wedge, or to curved surfaces, are widely differ-

ent from the accumulated resistances, calculated

for their separate parts, agreeably to the experi-

ments of the academy on single surfaces. We

therefore do not attempt to ascertain the point

C by theory ; but it may be accurately deter-

mined by the experiments which we have so

strongly recommended , and we offer this as an

additional inducement for prosecuting them.

Draw through C a line perpendicular to C I,

that is, parallel to the sails; and let the lines of 1'iipulse of the three sails cut in the points, i, A-, and m. This line i m may be considered as a

lover, moveable round C, and acted on at the

points t, A, and m, by three forces. The rota-

: .

!) i x i C ; that of the sails on the mainmast is K e X k C ; and the momentum of the sails on

the foremast is K/' x m C. The two first tend

i') press forward the arm C i, and then to' turn

tiio ship's head towards the wind. The action

rf the sails on the foremast tends to pull the arm (‘ in forward, and produce a contrary rotation.

1 1 the ship under these three sails keep steadily

in her course, without the aid of the rudder, we

*must have I)i x *C f Ee X k C •=. F/ X*

m C’. This is very possible, and is often seen in a ship under her mizen topsail, main topsail,

and fore topsail, all parallel to one another, and

their surfaces daily proportioned by reefing. If

more sails are set, we must always have a simi-

lar equilibrium. A certain number of them will

have their efforts directed from the larboard arm

of the lever t m lying to leeward of C », and a certain number will have their efforts directed

from the starboard arm lying to windward of

C I. The sum of the products of each of the first set, by their distances from C must be equal to

the sum of the similar products of the other set.

As this equilibrium is all that is necessary for

preserving the ship’s position, and the cessation

of it is immediately followed by a conversion ;

and as these states of the ship may be had by

means of the three square sails only, when their

surfaces are properly proportioned — it is plain

that every movement may be executed and ex-

plained by their means. This will greatly sim-

plify our future discussions. We shall therefore suppose in future that there are only the three topsails set, and that their surfaces are so adjusted by reefing that their actions exactly balance each other round that point C, of the middle line A B, where the actions of the water on the different parts of her bottom in like manner balance each other. This point C may be differently situated in the ship according to the leeway she makes, depending on the trim of the sails ; and therefore, although a certain proportion of the three surfaces may balance each other in one state of leeway, they may happen not to do so in another state. But the equilibrium is evidently attainable in every case, and we therefore shall always suppose it.

It must no»v be observed that when this equilibrium is destroyed, as, for example, by turning the edge of the mizen topsail to the wind, which the seamen call shivering the mizen topsail, and which may be considered as equivalent to the removing the mizen topsail entirely, it does not follow that the ship will round the point C, this point remaining fixed. The ship must be con-

sidered as a free body, still acted on by a num-

ber of forces, which no longer balance each other ; and she must therefore begin to turn round :i

spontaneous axis of conversion, which must b.-;

determined before proceeding farther. It is of

importance to point out in general where this

axis is situated. Therefore let G (fig. 7) be the

centre of gravity of the ship. Draw the line

G v parallel to the yards, cutting D d in q, E«; in r, CI in /, and F/inv. While the three

sails are set, the line

t] ; E e impelling it forward in the point r ; F/

impelling it forward in the point t;; and CI

impelling it backward in the point /. These

forces balance each other both in respect of pro-

gressive motion and of rotatory energy : for C I

was taken equal to the sum of D d, E e, and

F f; so that no acceleration or retardation of the ship's progress in her course is supposed.

But, by taking away the mizen topzail, both

the equilibriums are destroyed. A part D d of

the accelerating force is taken away ; and yet the ship, by her inertia or inherent force, tends, for

a moment, to proceed in the direction Cp with

her former velocity; and by this tendency exerts

for a moment the same pressure C I on the water,

and sustains the same resistance I C. She must therefore be retarded in her motion by the excess of the resistance I C over the remaining impelling forces E e and F f, that is, by a force equal and opposite to D rf. She will therefore be retarded in the same manner as if the mizen topsail were still set, and a force equal and opposite to its action were applied to G the centre

of gravity, and she would soon acquire a smaller velocity, which would again faring all things into equilibrium ; and she would stand on in the same course, without changing either her leeway or the position of her head.

But the equilibrium of the lever is also destroyed. It is now acted on by three forces only, viz. Ee and F /', impelling it forward in the points r and v, and I C impelling it backward in the point t. Make rv : ro — Ee + F/: F/, and make op parallel to C I and equal to Ee f Yf. Then we know, from the common principles of mechanics, that the force op acting at o will have the same momentum or

energy to turn the lever round any point what-

ever as the two forces E e and F / applied at r

and v ; and now the lever is acted on by two

forces, viz. I C urging it backwards in the point t, and op urging it forwards in the point o. It must therefore turn round like a floating log, which

gets two blows in opposite directions. If we now

make 1C— -op: op~to:tx, or 1C — op :

I C ~ t o : o x, and apply to the point x a force equal to 1C — op in the direction 1C; we

know, by the common principles of mechanics,

that this force 1C — op will produce the same

rotation round any point as the two forces I C

and op applied in their proper directions at t and o. Let us examine the situation of the point T.

The force 1C — op is evidently — D d, and

o p is — E e. -f F/. Therefore o t : t x — D d : op. But because, when all the sails were filled,

there was an equilibrium round C, and therefore

round t, aud because the force o p acting at o is rquivalent to Ee and F/ acting at r and v, we*

must still have the equilibrium ; and therefore we

have the momentum Drf X qt^op X ot. There-

fore o t : t q — D d : op, and t q — t x. There-

fore the point x is the same with the point q.

Therefore, when we shiver the mizen topsail,

the rotation of the ship is the same as if the ship were at rest, and a force equal and opposite to

the action of the mizen topsail were applied at q

or at D, or at any point in the line D q.

This might have been shown in another and

shorter way. Suppose, all sails filled, the ship

is in equilibrio. This will be disturbed by ap-

plying to D a force opposite to D d; and, if the

force be also equal to D d, it is evident that these two forces destroy each other, and that this appli-

cation of the force d D is equivalent to the taking away of the mizen topsail. But we chose to give

the whole mechanical investigation, because it

gave us an opportunity of pointing out to the

reader, in a case of very easy comprehension,

the precise manner in which the ship is acted on

by the different sails and by the water, and what

share each of them has in the motion ultimately

produced. We shall not repeat this manner of

procedure in other cases, because a little reflec-

tion on the part of the reader \ ill now enable him to trace the modus operand! through all its steps.

We now see that, in respect both of progres-

ive motion and of conversion, the ship is af

fected by shivering the sail D in the same man-

ner as if a force equal and opposite to Dd were

.ipplicd at 1), or at any point in the line Dd.

N\ c must now have recourse to the principles

tslalli hut under the article ROTATION.

Let p represent a particle of matter, r ite

radius vector, or its distance p G from an axis

passing through the centre of gravity G, and lei

M represent the whole quantity of matter of the

ship. Then ks momentum of inertia is ~ / p.

r8. The ship, impelled in the point D by a

force in the direction dD, will begin to turn

round a spontaneous vertical axis, passing through

a point S of the line q G, which is drawn through the centre of gravity G, perpendicular to the di-

rection d D of the external force, and the distance G S of this axis from the centre of gravity is —f,

J~ — and it is taken on the opposite side of

G from q, that is, S and q are on opposite sides of G.

Let us express the external force by the sym-

bol F. It is equivalent to a certain number of

pounds, being the pressure of the wind moving

with the velocity V and inclination a on the snr

face of the sail D ; and may therefore he com-

puted either by the theoretical or experimental

law of oblique impulses. Having obtained this,

we can ascertain the angular velocity of the ro-

tation, and the absolute velocity of any given

point of the ship. See ROTATION.

But, before we proceed to this investigation, we shall consider the action of the rudder, which operates precisely in the same manner. Let the ship AB (fig. 8) have her rudder in the position A D, the helm being hard a-starboard, while the ship sailing on the starboard tack, and making leeway, keeps on the course a b. The lee surface of the rudder meets the water obliquely. The very foot of the rudder meets it in the direction D E parallel to a b. Th parts farther up meet it with various obliquities, and with various velocities, as it glides round the bottom of the ship and falls into the wake. It is absolutely impossible to calculate the accumulated impulse. We shall not be far mistaken in the deflection of each contiguous filament, as it quits the bottom and glides along the rudder ; but we neither know the velocity of these filaments, nor the deflection and velocity of the filaments gliding without them. We therefore imagine that all computations on this subject are in vain. But it is enough for our purpose that we know the direction of the absolute pressure which they exert on its surface. It is in the direction D d, perpendicular to that surface. We also may be*

confident that this pressure is very considerable, in proportion to the action of the water on the ship's bows, or of the wind on the sails ; and we may suppose it to be nearly in the propor- tion of the square of the velocity of the ship in her course ; but we cannot affirm it to be accu- rately in that proportion, for reasons that will readily occur to one who considers the way in which the water falls in behind the ship.

It is observed, however, that a fine sailer always steers well, andthatall movements by means of the rudder arc performed with great rapidity when the velocity of the ship is great. We shall see, by and by, that the speed with which the ship performs the angular movements is in the proportion of her progressive velocity: for we shall see that

the squares of the times of performing the evo- lutions are as the impulses inversely, which are as the squares of the velocities. There is per- haps no force which acts on a ship that can be more accurately determined by experiment than this. Let the ship ride in a stream or tideway whose velocity is accurately measured ; and let

her ride from two moorings, so that her bow

may be a fixed point. Let a small tow-line be

laid out from her stern or quarter at right angles to the keel, and connected with some apparatus

fitted up on shore or on board another ship, by

which the strain on it may be accurately mea-

sured ; a person conversant with mechanics will

see many ways in which this can be done. Per-

haps the following may be as good as any : let

the end of the tow-line be fixed to some point as high out of the water as the point of the ship

from which it is given out, and let this be very

high. Let a block with a hook be on the rope,

and a considerable weight hung on this hook.

Things being thus prepared, put down the helm

to a certain angle, so as to cause the ship to sheer off' from the point to which the far end of the

tow-line is attached. This will stretch the rope, and raise the weight out of the water. Now

heave upon the rope, to bring the ship back again

to her former position, with her keel in the di-

rection of the stream. When this position is

attained, note carefully the form of the rope, that is, the angle which its two parts make with the

horizon. Call this angle a. Every person ac-

quainted with these subjects knows that the

horizontal strain is equal to half the weight

multiplied by the cotangent of a, or that 2

is to the cotangent of a as the weight to the

horizontal strain. Now it is this strain which

balances, and therefore measures, the action of

the rudder, or D e in fig. 8. Therefore, to have the absolute impulse D d, we must increase De

in the proportion of radius to the secant of the

angle b which the rudder makes with the keel.

In a great ship, sailing six miles in an hour, the impulse on the rudder, inclined 30° to the keel,

is not less than 3000 pounds. The surface of

the rudder of such a ship contains nearly eighty

square feet. It is not, however, very necessary

to know this absolute impulse D d, because it is

its part D e alone which measures the energy of

the rudder in producing a conversion. Such

experiments, made with various positions of the

rudder, will give its energies corresponding to

these positions, and will settle that long disputed

point which is the best position for turning a

ship. On the hypothesis that the impulsions of

fluids are in the duplicate ratio of the sines of

incidence, there can be no doubt that it should

make au angle of 54° 44′ with the keel. But

the form of a large ship will not admit of this,

because a tiller of a length sufficient for managing the rudder in sailing with great velocity has not

room to deviate above 30° from the direction of

the keel ; and in this position of the rudder the

mean obliquity of the filaments of water to its

surface cannot exceed 40° or 45°. A greater

angle would not be of much service, for it is

never for want of a proper obliquity that the

rudder fails of producing a conversion.

A ship misses stays in rough weather for want

of a sufficient progressive velocity, and because

her bows are beat off by the waves ; and there

is seldom any difficulty in wearing the ship, it

she has any progressive motion. It is, however,

always desirable to give the rudder as much in-

fluence as possible. Its surface should be en-

larged (especially below) as much as can be

done consistently with its strength and with the

power of the steersman to manage it; and it «

should be put in the most favourable situation

for the water to get at it with great velocity ;

and it should be placed as far from the axis of

the ship's motion as possible. These points are

obtained by making the stern-post very upright,

as has always been done in the French dock

yards. The British ships have a much greater rake ; but our builders are gradually adopting the French forms, experience having taught us that their ships, when in our possession, are much more obedient to the helm than our own. In order to ascertain the motion produced by the action of the rudder, draw from the centre of gravity a line Gq perpendicular to D d (D d being drawn through the centre of effort of the rudder). Then, as in the consideration of the action of the sails, we may conceive the line q G as a lever connected with the ship, and impelled by a force D d acting perpendicularly at q. The consequence of this will be an incipient conversion of the ship about a vertical axis passing through some point S in the line q G, lying on the other side of G from q ; and we have, as in the former case, G S —

' Gq-

Thus the action and effects of the sails, ana of the rudder, are perfectly similar, and are to be considered in the same manner. We see that the action of the rudder, though of a small surface in comparison of the sails, must be very great ; for the impulse of water is many hundred

times greater than that of the wind ; and the arm q G of the lever, by which it acts, is incomparably greater than that by which any of the impulsions

on the sails produces its effect; accordingly

the ship yields much more rapidly to its action

than she does to the lateral impulse of a sail.

If G were a fixed or supported axis, it would

be the same thing whether the absolute force D

d of the rudder acts in the direction D d, or its transverse part D e acts in the direction D e, both would produce the same rotation ; but it is not

so in a free body. The force D d both tends to

retard the ship's motion and to produce a rota-

tion : It retards it as much as if the same force Dd had been immediately applied to the centre.

And thus the real motion of the ship is com-

pounded of a motion of the centre in a direction

parallel to D rf, and of a motion round the centre.

These two constitute the motion round S.

Hence we might deduce that the times of per-

forming similar evolutions with similar ships are

proportional to the lengths of the ships when

both are sailing equally fast ; and since the evo-

lutions are similar, and the forces vary similarly

in their different parts, they not only describe

equal angles of revolution, but also similar

curves.

A small ship, therefore, works in less time and

in less room than a great ship, and this in the proportion of its length. This is a great advantage in all cases, particularly in wearing, in order to sail on the other tack close-hauled. In this case she will always be to windward and a-head of the large ship, when both are got on the other tack. It would appear at first sight that the large ship will have the advantage in tacking. Indeed the large ship is farther to windward when again trimmed on the other tack than the small ship when she is just trimmed on the other tack. But this happened before the large ship had completed her evolution, and the small ship in the mean time has been going forward on the other tack, and going to windward. She will therefore be before the large ship's beam, and perhaps as far to windward.

VVe have seen that the velocity of rotation is proportional, caeteris paribus, to F X G q. F means the absolute impulse on the rudder or sail, and is always perpendicular to its surface. This absolute impulse on a sail depends on the obliquity of the wind on its surface. The usual theory says that it is as the square of the sine of incidence : but we find this

is not true. We

must content ourselves with expressing it by

some as yet unknown function 0 of the angle of

incidence a, and call it 0 a ; and if S be the sur-

face of the sail, and V the velocity of the wind,

the absolute impulse is n V2 S X 0 «• This acts

(in the case of the mizen-topsail, fig. 7) by the

lever q G, which is equal to D G X cos. D G q, and D G q is equal to the angle of the yard and keel ; which angle we formerly called 6. There-

*fore its energy in producing a rotation is nV*S*

X $ a x D G X cos. b. Leaving out the constant

quantities n, Vs, S, and D G, its energy is pro-

portional to 0 a x cos. b. In order, therefore,

that any sail may have the greatest power to pro-

duce a rotation round G, it must be so trimmed

that a x cos. b may be a maximum. Thus, if

we would trim the sails on the foremast, so as to pay the ship off from the wind right a-head with

the greatest effect, and if we take the experiments of the French academicians as proper measures

of the oblique impulses of the wind on the sail,

we shall brace up the yard to an angle of 48°

with the keel. The impulse corresponding to

48° is 615, and the cosine of 48° is 669. These

give a product of 411435. If we brace the sail

to 54-44, the angle assigned by the theory, the

effective impulse is 405274. If we make the angle

45°, the impulse is 408774. It appears then that

48° is preferable to either of the others. But

the difference is inconsiderable, as in all cases of maximum a small deviation from the best posi-

tion is not very detrimental. But the difference

between the theory and this experimental mea-

sure will be very great when the impulses of the

wind are of necessity very oblique. Thus, in

tacking ship, as soon as the headsails are taken

aback, they serre to aid the evolution, as is evi-

dent : but, if we were now to a

inculcated by the theory, we should immediately

round in the weather-braces so as to increase the

impulse on the sail, because it is then very small ; and although we by this means make yard more

square, tnd therefore diminish the rotatory mo-

mentum of this impulse, yet the impulse is more

increased (by the theory) thau its vertical lever is diminished. Let us examine this a little more

particularly, because it is reckoned one of the

nicest points of seamanship to aid the ship's

coming round by means of the headsails; and

experienced seamen differ in their practice in

this manoeuvre. Suppose the yard braced up to

40°, which is as much as can be usually done,

and that the sail shivers (the bowlines are usually let go when the helm is put down), the sail im-

mediately takes aback, and in a moment we may

suppose an incidence of 6°. The impulse cor-

responding to this is 400 (by experiment), and

the cosine of 40° is 766. This gives 306400 for

the effective impulse. To proceed, according to

the theory, we should brace the yard to 70°,

which would give the wind (now 34° on the

weather-bow) an incidence of nearly 36°, and

the sail an inclination of 20°, to the intended

motion, which is perpendicular to the keel. For

the tangent of 20° is about one-half the tangent

of 36°. Let us now see what effective impulse

the experimental law of oblique impulsions will

give for this adjustment of the sails. The expe-

rimental impulse for 36° is 480 ; the cosine of

70° is 342: the product is 164160, not much

exceeding the half of the former. Nay, the im-

pulse for 36°, calculated by the theory, would

have been only 346, and the effective impulse

only 118332. And it must be farther observed

that this theoretical adjustment would tend greatly

to check the evolution, and in most cases would

entirely mar it, by checking the ship's motion a-

head, and consequently the action of the rudder, which is the most powerful agent in the evolution, for here would be a great impulse directed almost a-stern.

We are justifiable, therefore, in saying, in the beginning of this article, that a seaman would frequently find himself baffled if he were to work a ship according to the rules deduced from M. Bouguer's work ; and we see by this instance of what importance it is to have the oblique impulsions of fluids ascertained experimentally.

The practice of the most experienced seamen is directly the opposite to this theoretical maxim, and its success greatly confirms the usefulness of those experiments of the academicians so often praised by us.

We return to the general consideration of the ro-

F.yG

*tatory motion. We found the velocity v — s**

It is therefore proportional, caeteris paribus, to q G. We have seen in what manner q G depends on the position and situation of the sail or rudder when the point G is fixed. But it also depends on the position of G. With respect to the action of the rudder, it is evident that it is so much the more powerful as it is more

remote from G. The

distance from G may be increased either by

moving the rudder farther aft, or G farther for-

ward. And, as it is of the utmost importance

for a ship to answer her helm with the greatest

prcvnptitude, those circumstances have been at-

tended to which distinguished fine steering ships

from such as had not this quality ; and it is in a great measure to be ascribed to this that, in the

gradual improvement of naval architecture, the

centre of gravity has been placed far forward.

Perhaps the notion of a centre of gravity did not

come into the thoughts of the rude builders in

early times : but they observed that those boats

and ships steered best which had their extreme

breadth before the middle point, and conse-

quently the bows not so acute as the stern. This

is so contrary to what one would expect that it

attracted attention more forcibly ; and, being

somewhat mysterious, it might prompt to attempts

of improvement, by exceeding in this singular

maxim. We believe that it has been carried as

far as is compatible with other essential requisites in a ship.

This is the chief circumstance in what is called the trim of a ship ; and it were greatly to be wished that the best place for the centre of gravity could be accurately ascertained. A practice prevails which is the opposite of what we are now advancing. It is usual to load a ship so that her keel is not horizontal, but lower abaft. This is found to improve her steerage. The reason of this is obvious. It increases the acting surface of the rudder, and allows the water to come at it with much greater freedom and regularity ; and it generally diminishes the griping of bows out of the water. It has not always this effect ; for the form of the harping aloft is frequently such that the tendency to gripe is diminished by immersing more of the bow in the water. But waving these circumstances, and attending only to the rotatory energy of the rudder, we see that it is of advantage to carry the centre of gravity forward. The same advantage is '.rained to the action of the after-sails. But, on the other hand, the action of the head-sails is diminished by it; and we may call every sail a head-sail whose centre of gravity is before the

centre of gravity of the ship ; that is, all the

sails hoisted on the bowsprit and foremast ; and

the staysails hoisted on the mainmast ; for the

centre of gravity is seldom far before the main-

mast.

Suppose that, when the rudder is put into the

position A D (fig. 8), the centre of gravity could be shifted to g, so as to increase q G, and that this is done without increasing the sum of the

products p r3, it is obvious that the velocity of

conversion will be increased in the proportion

of (j G to q g. This is very possible by bringing to that side of the ship parts of her loading which were situated at a distance from G on the other

side. Nay we can make this change in such a

mannerthat / p r a shall even be less than it was «_/

before, by taking care that every thing which we

sluft shall be nearer to g than it was formerly

to G. Suppose it all placed in one spot m,

and that m is the quantity of matter so shifted,

while M is the quantity of matter in the whole

ship. It is only necessary that m g G1 shall be

less than the sum of the products p r2 correspond-

ing to the matter whicli has been shifted. Now

although the matter, which is easily moveable,

is generally very small in comparison to the

whole matter of the ship, and therefore can make

hut a small change in the place of the centre of gravity, it may frequently be brought from places so remote that it may occasion a very sensible diminution of the quantity / pr3, which expresses the whole momentum of inertia.

This explains a practice of the seamen in small wherries or skiffs, who in putting about are accustomed to place themselves to leeward of the mast. They even find that they can aid the quick motions of these light boats by the way in which they rest on their two feet, sometimes leaning all on one foot, and sometimes on the other. And we have often seen this evolution very sensibly accelerated in a ship of war, by the crew running suddenly, as the helm is put down, to the lee-bow. And we have heard it asserted by very expert seamen that, after all attempts to wear ship (after lying-to in a storm) have failed, they have succeeded by the crew collecting diemselves near the weather fore-shrouds the moment the helm was put down. It must be agreeable to the reflecting seaman to see this practice supported by undoubted mechanical principles.

SECT. III. — OF THE PRINCIPAL EVOLUTIONS.

We conclude this dissertation by describing

some of the chief movements or evolutions. What we have said hitherto is intended for the instruction of the artist, by making him sensible of the mechanical procedure. The description is rather meant for the amusement of the landsman, and enabling him to understand operations that are familiar to the seaman. The latter will perhaps smile at the awkward account given of his business by one who cannot hand, reef, nor steer.

1. To tack ship. — The ship must first of all be kept full, that is, with a very sensible angle of incidence on the sails, and by no means hugging the wind. For, as this evolution is chiefly performed by the rudder, it is necessary to give the ship a good velocity. When the ship is observed to luff up of herself, that moment is to be calched for beginning the evolution, because she will by her inherent force continue this motion. The helm is then put down. When the officer calls out, ‘ Helm’s a-lee,’ the fore-sheet, fore-top bowline, jib, and flag sail sheets forward are let go. The jib is frequently hauled down. Thus the obstacles to the ship’s head coming up to the wind by the action of the rudder are removed.

If the mainsail is set, it is not unusual to clue up the weather side, which

may be considered

as a head-sail, because it is before the centre of gravity. The mizen must be hauled out, and

even the sail braced to windward. Its power in

paying off the stern from the wind conspires with

the action of the rudder. It is really an aerial

rudder. The sails are immediately taken a-back.

In this state the effect of the mizen topsail would be to obstruct the movement, by pressing the stern

the contrary way to what it did before. It is

therefore either immediately braced about sharp

on the other tack, or lowered. Bracing it about

evidently tends to pay round the stern from the

wind, and thus assists in bringing the head up to

the wind. But in this position it checks the

progressive motion of the ship, on which the evo-

lution chiefly depends. For a rapid evolution,

therefore, it is as well to lower the wizen-topsail.

Meantime the head-sails are all a-back, and I'HK

action of wind on them tends greatly to pay

the ship round. To increase this effect it is not

unusual to haul the fore-top bowline again. The

sails on the mainsail are now almost becalmed ;

and therefore when the wind is right a-head, or a little before, the mainmast is hauled round and braced up sharp on the other tack with all expedition. The stay-sail sheets are now shifted over to their places for the other tack. The ship is now entirely under the power of the headsail and of the rudder, and their actions conspire to promote the conversion. The ship has acquired an angular motion, and will preserve it, so that now the evolution is secured she falls off apace from the wind on the other tack. The farther action of the rudder is therefore unnecessary, and would even be prejudicial, by causing the ship to fall off too much from the wind before the sails can be shifted and trimmed for sailing on the other tack. It is therefore proper to right the helm when the wind is right a-head, that is, to bring the rudder into the direction of the keel. The ship continues her conversion by her inherent force and the action of the headsails.

When the ship has fallen off about four points from the wind, the headsails are hauled round, and trimmed sharp on the other tack with all expedition ; and although this operation was be-

gun with the wind four points on the bow it will be fixed before the sails are braced up, and therefore the headsails will immediately fill. The aftersails have filled already, while the headsails were inactive, and therefore immediately check the farther falling off from the wind. All sails now draws, for the staysail sheets have been shifted over while they were becalmed or shaking in the wind. The ship now gathers way, and will obey the smallest motion of the helm to bring her close to the wind.

We have here supposed that during all this operation the ship preserves her progressive motion. She must therefore have described a curve line advancing all the while to windward. Fig. 10 is a representation of this evolution when it is performed in the completest manner. The ship standing on the course £ a, with the wind blowing in the direction W F, has her helm put hard a-lee when she is in the position A. She immediately deviates from her course, and, describing a curve, comes to the position B, with the wind blowing in the direction W F of the yards, and the square sails now shiver. The

mizen-topsail is here represented braced sharp on the other tack, by which its tendency to aid the angular motion (while \t checks the progressive motion) is distinctly seen. The main and fore-sails are now shivering, and immediately after are taken aback. The effect of this on the head-sails is distinctly seen to be favorable to the con-ˆL>rsion, by pushing the point Fin the direction 1 i ; but for the same reason it continues to re-lard the progressive motion. When the ship lias attained to the position C, the mainsail, is hauled round and trimmed for the other tack. The impulse in the direction Fi still aids the conversion and retards the progressive motion. When the ship has attained a position between (and D, such that the main and mizen topsail-yards are in the direction of the wind, there is nothing to counteract the force of the headsails, to pay the ship's head off from the wind. Nay, during the progress of the ship to this interme-diate position, if any wind gets at the main or mizen topsails, it acts on their anterior surfaces, and impels the after parts of the ship away from the curve abed, and thus aids the revolution.

We have therefore said that when once the sails are taken fully aback, and particularly when the wind is brought right a-head, it is scarcely possible for the evolution to sail ; as soon, therefore, as the main topsail (trimmed for the other tack) shivers, we are certain that the head sails will be filled by the time they are hauled round and trimmed. The staysails are filled before this, because their sheets have been shifted and they stand much sharper than the square-sails ; and thus every thing tends to check the falling off from the wind on the other tack, and this no sooner than it should be done. The ship immediately gathers way, and holds on in her new course dG.

But it frequently happens that in this conversion the ship loses her whole progressive motion. This sometimes happens while the sails are shivering before they are taken fully a-back. It is evident that in this case there is little hope of success, for the ship now lies like a log, and neither sails nor rudder have any action. The ship drives to leeward like a log, and the water acting on the lee-side of the rudder checks a lit-

tle the driving of the stern. The head therefore

falls off again, and by and by the sails fill, and the ship continues on her former tack. This is

called missing stays, and it is generally owing

to the ship's having too little velocity at the be-

ginning of the evolution. Hence the propriety

of keeping the sails well filled for some little

time before. Rough weather, too, by raising a

wave which beats violently on the weather bow,

frequently checks the first luffing of the ship,

and beats her off again.

If the ship loses all her motion after the head

sails have been fully taken a-back, and before

we have brought the wind right a-head, the evo-

lution becomes uncertain, but by no means des-

perate ; for the action of the wind on the head-

sails will presently give her stern-way. Suppose

this to happen when the ship is in the position

C. Bring the helm over hard to windward, so

that the rudder shall have the position represent-

ed by the small dotted line of. It is evident

that the resistance of the water to the stern-way

of the rudder acts in a favorable direction, push-

ing the stern outwards. In the mean time the

action of the wind on the headsails pushes the

head in the opposite direction. These actions conspire therefore in promoting the evolution ; and, if the wind is right a-heud, it cannot fail, but may even be completed speedily, because the ship gathers stern-way, and the action of the rudder becomes very powerful ; and, as soon as the wind comes on the former lee-bow, the action of the water on the now lee-quarter will greatly accelerate the conversion. When the wind therefore has once been brought nearly right a-head, there is no risk of being baffled.

But, should the ship have lost all her head-way considerably before this, the evolution is very

uncertain ; for the action of the water on the rudder may not be nearly equal to its contrary action on the lee-quarter; in which case the action of the wind on the headsails may not be sufficient to make up the difference. When this is observed, when the ship goes astern without changing her position, we must immediately throw the headsails completely a-back, and put the helm down again, which will pay off the

ship's head from the wind enough to enable us

to fill the sails again on the same tack, to try

our fortune again ; or we must boxhaul the ship,

in die manner to be described by and by.

Such is the ordinary process of tacking ship;

a process in which all the different modes of ac-

tion of the rudder and sails are employed. To

execute this evolution in the most expeditious

manner, and so as to gain as much on the wind

as possible, is considered as the test of an expert seaman. We have described the process which

is best calculated for ensuring the movement.

But if the ship be sailing very briskly in smooth

water, so that there is no danger of missing stays, we may gain more to windward considerably by

keeping fast the fore-top bowline, and the jib

and staysail sheets, till the square-sails are all

shivering ; for these sails, continuing to draw

with considerable force, and balancing each

other tolerably fore and aft, keep up the ship's

velocity very much, and thus maintain the power

of the rudder. If we now let all fly when the

square-sails are shivering, the ship may be con-

sidered as without sails, but exposed to the ac-

tion of the water on the lee-bow ; from which

arises a strong pressure of the bow to windward which conspires with the action of the rudder to aid the conversion. It evidently leaves all that tendency of the bow to windward which arises from leeway, and even what was counteracted by the formerly unbalanced action of these head-staysails. This method lengthens the whole time of the evolution, but it advances the ship to windward. Observe, too, that keeping fast the fore-top bowline till the sail shivers, and then letting it go, insures the taking a-back of that sail, and thus instantly produces an action that is favorable to the evolution.

The most expert seamen, however, differ among themselves with respect to these two methods, but the first is the most generally practised in the British navy, because least liable to fail. The forces which oppose the conversion are sooner removed, and the production of a favorable action by the backing of the fore-topsail is also sooner obtained, by letting go the fore-top bowline at the first. Having entered so minutely into the description and rationale of this evolution, we have sufficiently turned the

reader's attention to the different actions which co-operate in producing the motions of conversion. We shall therefore be very brief in our description of the other evolutions.

2. To u-ear ship. — When the seaman sees that nis ship will not go about head to wind, but will miss stays, he must change his tacK the other way ; that is, by turning her head away fiom the wind, going a little way before the wind, and then hauling the wind on the other tack. This is called wearing or veering ship. It is most necessary in stormy weather with little sail, or in very faint breezes, or in a disabled ship. The process is exceedingly simple ; and the mere narration of the procedure is sufficient for showing the propriety of every part of it. Watch for the moment of the ship's falling off, and then haul up the mainsail and mizen, and shiver the mizen top-sail, and put the helm a-weatlier. When the ship falls off sensibly (and not before) let go the bowlines. Ease away the fore-sheet, raise the fore-tack, and gather aft the weather fore-sheet, as the lee-sheet is eased away. Round in the weather-braces of the fore and main masts, and keep the yards nearly bi-

secting the angle of the wind and keel, so that when the ship is before the wind, the yards may be square. It may even be of advantage to round in the weather-braces of the main-topsail more than those of the headsails ; for the main-mast is abaft the centure of gravity. All this while the mizen topsail must be kept shivering, by rounding in the weather-braces as the ship pays off from the wind. Then the main-topsail will he braced up for the other tack by the time that we have brought the wind on the weather quarter. After this it will be full, and will aid the evolution. When the wind is right aft, shift the jib and staysail sheets. The evolution now goes on with great rapidity ; therefore briskly haul on board the fore and main tacks, and haul out the mizen, and set the mizen-staysail as soon as they will take the wind the right way. We must now check the great rapidity with which the ship comes to the wind on the other tack, by righting the helm before we bring the wind on the beam ; and all must be trimmed sharp fore and aft by this time, that the headsails may take and check the coming-to. All being trimmed,

stand on close by the wind.

We cannot help losing a great deal of ground

in this movement. Therefore, though it be very

simple, it requires much attention and rapid

execution to do it with as little loss of ground as possible. One is apt to imagine at first that it

would be better to keep the headsails braced up

on the former tack,, or at least not to round in

the weather-braces so much as is here directed.

When the ship is right afore the wind, we should

expect assistance from the obliquity of the head-

sails ; but the rudder being the principal agent

in the evolution, it is found that more is gained

by increasing the ship's velocity, than by a

smaller impulse on the headsails more favorably

directed. Experienced seamen differ, however,

in their practice in respect of this particular.

3. To boxhaul a ship. — This is a process per-

formed only in critical situations, as when a rock,

or ship, or some danger, is suddenly seen right

a-head, or when a ship misses stays. It requires

the most rapid execution.

The ship being close-hauled on a wind, haul

up the mainsail and mizen, and shiver the top-

sails, and put the helm hard a-lee altogether.

Raise the fore-tack, let go the head bowlines, and brace about the headsails sharp on the other tack. The ship will quickly lore her way, get stern-way, and' then fall off, by the joint action of the headsails and of the inverted mdder. When she has fallen off eight points, brace

the after-sails square, which have hitherto been kept shivering. This will at first increase the power of the rudder, by increasing the stern-way, and at the same time it makes no opposition to the conversion which is going on. The continuation of her circular motion will presently cause them to take the wind on their after surfaces. This will check the stern-way, stop it, and give the ship a little headway. Now shift the helm, so that the rudder may again act in conjunction with the headsails in paying her off from the wind. This is the critical part of the evolution, because the ship has little or no way through the water, and will frequently remain long in this position. But, as there are no counteracting forces, the ship continues to fall off.

Then the weather-braces of the after-sails may be gently rounded in, so that the wind acting on their hinder surfaces may both push the ship a little a-head, and her stern laterally in conjunction with the rudder. Thus the wind is brought upon the quarter, and the hfadsails shiver. By this time the ship has acquired some headway. A continuation of the rotation would now fill the headsails, and their acti'on would be contrary to the intended evolution. They are therefore immediately braced the other way, nearly square, and the evolution is now completed in the same manner with the wearing ship.

Some seamen brace all the sails a-back the moment that the helm is put hard a-lee, but the after-sails no more a-back than just to square the yards. This quickly gives the ship stern-way, and brings the rudder into action in its inverted direction; and they think that the evolution is accelerated by this method.

There is another problem of seamanship deserving of our attention, which cannot properly be called an evolution. This is lying-to. This is done in general by laying some sails back, so as to stop the head-way produced by others. But

there is a considerable address necessary for

doing this in such a way that the ship shall lie

easily, and under command, ready to proceed in

her course, and easily brought under weigh.

To bring-to with the fore or main-topsail to

the- mast, brace that sail sharp a-back, haul out

the mizen, and clap the helm hard a-lee.

Suppose the fore-topsail to be a-back ; the other

sails shoot the ship a-head, and the lee-helm

makes the ship come up to the wind, which

makes it come more perpendicularly on the sail

which is a-back. Then its impulse soon exceeds

those on the other sails, which are now shivering,

or almost shivering. The ship stands still awhile,

and then falls off, so as to fill the after-sails, which again shoot her ahead, and the process is

thus repeated. A ship lying-to in this way goes

a good deal a-head and also to leeward, if the

main-topsail be a-back, the ship shoots a-head,

and comes up till the diminished impulse of the

drawing sails in the direction of the keel is ba-

lanced by the increased impulse on the main-

topsail. She lies a long while in this position,

driving slowly to leeward; and she at last falls

off by the beating of the water on her weather-

bow. She falls off but little, and soon comes

up again.

Thus a ship lyinar-to ;« not like a mere lo-r,

but has a certain motion which keeps her unde.

command. To get under weigh again, we must

watch the time of falling oft'; and when this is

just about to finish, brace about briskly, and fill the sail which is a-back. To aid this operation,

the jib and fore-topmast staysail may be hoisted,

and the mizen brailed up ; or, when the intended

course is before the wind or large, back the fore-

topsail sharp, shiver the main and mizen topsail,

brace up the mizen, and hoist the jib and fore-

top-mast staysails altogether.

In a storm with a contrary wind, or on a lee

shore, a ship is obliged to lie-to under a very

low sail. Some sail is absolutely necessary, in

order to keep the ship steadily down, otherwise

she would kick about like a cork, and roll so

deep as to strain and work herself to pieces.

Different ships behave best under different sails.

In a very violent gale, the three lower staysails

are in general well adapted for keeping her

steady, and distributing the strain. This mode

seems also well adapted for wearing, which may

be done by hauling down the mizen-staysail.

Under whatever sail the ship is brought-to in a

storm, it is always with a fitted sail, and never

with one laid a-back. The helm-is lashed down

hard a-lee; therefore the ship shoots a-head, and

comes up till the sea on her weather-bow beats

her oft' again. Getting under weigh is generally

difficult ; because the ship and. rigging are lofty

abaft, and hinder her from falling off readily

*when the helm is put*hard a-weather. We mu.->L*

watch the falling off, and assist the ship by some small headsail. Sometimes the crew get up on

the weather fore-shrouds in a crowd, and thus

present a surface to the wind.

These examples of the three chief evolutions

will enable those who are not seamen to un-

derstand the propriety of the different steps,

and also to understand the other evolutions as

they are described by practical authors. \f

are not acquainted with any performance in our

language where the whole are considered in a con-

nected, scientific, and systematic manner.

We add the following collection and explana

tion of terms used in seamanship as useful not

merely to seamen but to all voyagers : —

Aback. The situation of the sails, when their surfaces are pressed aft against the mast by the force of the wind.

Abaft. The hinder part of a ship, or towards the stern. It also signifies farther aft or nearer to the stern ; as, the barricade stands abaft the main mast ; that is, nearer to the stern.

Abaft the beam denotes the. relative situation of any object with the ship, when the object is placed in any part of that arch of the horizon which is contained between :i line at right angle with the keel and that point of the compass which is directly opposite to the ship's course. See Bearing.*

Aboard. The inside of a ship.

Aboard main tack! The order to draw the lower corner of the mainsail down to tlie dies-tree.

About. The situation of a ship as soon as she has tacked or changed her course.

About ship! The order to the ship's en w i» prepare for tacking.

4-Vf

D; E \ SF

Abreftst. The situation of two or more ships

lying with their sides parallel, and their heads

equally advanced ; in which case they are abreast of each other, as are the

ships A RC. But, if their sides

be not parallel, then that ship – fi- • -•••

which is in a line with the beam

of the other is said to be

abreast of her, as the ship E is

abreast of D :md F. With re-

i;:ird to objects within the ship

it implies on a line parallel

with the beam, or at right angles

with the ship's length. Abreast of any place

means off or directly opposite to it.

Adrift. The state of a ship broken from her

moorings, and driving about without control.

Afloat. Buoyed up by the water from the

ground.

Afore, All that part of a ship which lies for-

ward, or near the stem. It also signifies farther

forward ; as, the manger stands afore the fore-

mast ; that is, nearer to the stem.

Aft. Behind, or near the stern of a ship.

After. A phrase applied to any object in the hinder part of the ship, as the after-hatchway, the after-sails, &c.

A-ground. The situation of a ship when her bottom or any part of it rests on the ground.

A-head. Any thing which is situated on that point of the compass to which a ship's stem is directed is said to be a-htad of her. See Bea~-Ulf.

A-hull. The situation of a ship, when all her snils are furled and her helm is lashed to the lee side ; by which she lies nearly with her side to the wind and sea, her head being somewhat inclined to the direction of the wind.

A-lee. The position of the helm when it is pushed down to the lee-side.

All in the wind. The state of a ship's sails, when they are parallel to the direction of the wind, so as to shake or shiver.

All hands hoay ! The call by which all the ship's company are summoned upon deck.

Aloft. Up in the tops, at the mast-heads, or any where about the higher rigging.

Along-side. Side by side, or joined to a ship,

wharf, &c.

Along-shore. Along the coast ; a course

which is in sight of the shore, and nearly parallel to it.

Amain. At once, suddenly : as, let go amain !

A-mid ships. The middle of a ship, either with

regard to her length or breadth.

To anchor. To let the anchor fall into the

Aground, for tli£ ship to ride thereby.

Anchorage. Ground, fit to hold a ship by her

anchor.

The anchor is a cock-bill. The situation of the

anchor, when it drops down perpendicularly

from the cat-head, ready to be sunk at a mo-

ment's warning.

An-end. The position of any mast, &c.,

when erected perpendicularly on the deck. The

top-masts are said to be an-end when they are

hoisted up to their usual stations.

A-peek. Perpendicular to the anchor; the

cable having been drawn so tight as to bring the

ship directly over it. The anchor is then said to be a-peek.

A-shi>re. On the shore, as opposed to aboard.

It also means a-ground.

A-stern. Any distance behind a ship, as op-

posed to a-head. See Bear inn.

At anchor. The situation of a ship riding by

her anchor.

Athwart. Across the line of a ship's course.

Athwart-hause. The situation of a ship when

driven by accident across the fore part of ano-

ther, \vhether they touch or are at a small dis-

tance from e ich other, the transverse position of

the former being principally understood.

Athwart the fore foot. When any object

crosses the line of a ship's course, but a-head of her, it is said to be athwart her fore foot.

Athicurt-ships. Reaching, or in a direction

across the ship from one side to the other.

Atrip. When applied to the anchor, it means

that the anchor is drawn out of the ground, and

hangs, in a perpendicular direction, by the cable

or buoy-rope. The topsails are said to be atrip

when they are hoisted up to the mast-head, or to

their utmost extent.

Avast! The command to stop, or cease, in

any operation.

Aweigh. The same as atrip, when applied to

the anchor.

To back the anchor. To carry out a small an-

chor a head of the large one, in order to support

it in bad ground, and to prevent it from loosen-

ing or coming ho.ne.

To back a-stern, in rowing, is to impel the

boat with her stern foremost, by means of the oars.

To back the sails. To arrange them in a situ-

tion that will occasion the ship to move a-stern.

To bagpipe the mizen. To lay it a-back, by

bringing the sheet to the mizen shrouds.

To balance. To contract a sail into a narrower

compass, by folding up a part of it at one comer.

Balancing is peculiar to the mizen of a ship,

and the mainsail of those vessels wherein it is

extended by a boom.

Bare poles. When a ship has no sail set she

is under bare poles.

Bearing. The situation of one place from

another, with regard to the points of the com-

pass. The situation also of any di.-tant object,

estimated from some part of the ship, according

to her situation :

these latter bear-

ings are either on

the beam, as A

and B ; before

the beam, as the

arcs A D and

DB; abaft the

beam, as the arcs

AC andCB; on

the lee or weather

bow, as the lines

E E ; on the lee

or weather quar-

E

ter, as the lines F F ; a-head, as the line D ; or a-stern, as the line C.

Bear a-hand! Make haste, despatch.

To bear in with the land is when a ship sails

towards the shore.

To bear off". To thrust or keep off from the

ship's side, &LC., any weight, when hoisting.

To tear up, or away.

The act of changing a

*ship's course, to make **

her sail more before the jj

wind. Thus the ship A ˆ ... ˆˆ..

bears away from a close- jj %£

hauled course, when she ••” ˆw.

gets into either of the

courses B and C.

Beating to windward. The making a progress

against the direction of the wind, by steering

alternately close hauled on the starboard and lar-

board tacks.

To becalm. To intercept the current of the

wind, in its passage to a ship, by any contiguous

object, as a shore above her sails, a high sea be-

hind, &c. ; and thus one sail is said to becalm

another.

Before the beam denotes an arch of the horizon

comprehended between the line of the beam and

that point of the compass on which the ship

sterns. See Bearing.

To belay. To fasten a rope, by winding it

several times round a cleat or pin.

To bend a sail is to affix to it its proper yard or stay.

Beneaped. See Neaped.

Berth. The station in which a ship rides at

anchor, either alone or in a fleet; the due dis-

tance between two ships ; and also a room or apartment on board for the officers of a mess.

Between decks. The space contained between any two decks of a ship.

Bilge water is that which, by reason of the flatness of a ship's bottom, lies on her floor, and cannot go to the well of the pump.

To bitt the cable is to confine the cable to the bitts, by one turn under the cross piece and another turn round the bitt-head. In this position it may be either kept fixed or it may be veered away.

Bitter. The turn of the cable round the bitts.

Bitter-end. That part of the cable which stays within board roundabout the bitts when the ship is at anchor.

A board is the distance run by a ship on one tack ; thus they say, a good board, when a ship does not go to leeward of her course ; a short board and along board, according to the distance run.

Board-and-buard. When two ships come so near as to touch each other, or when they lie side-by-side.

To board a ship. To enter an enemy's ship in

an engagement.

Bold shore. A steep coast, permitting the close approach of shipping.

Boot-topping. Cleaning the upper part of a ship's bottom, or that part which lies immediately under the surface of the water ; and daubing it over with tallow, or with a mixture of tallow, sulphur, resin, &c.

Both sheets aft. The situation of a ship sailing right before the wind.

Bow grace. A frame of old rope or junk, laid out at the bows, stems, and sides, of ships, to prevent them from being injured by flakes of

To bowse. To pull upon any body with a tackle, in order to remove it.

Boxhauling. A particular method of veering a ship, when the swell of the sea renders tacking impracticable.

Basing. An operation somewhat similar to boxhauling. It is performed by laying the headsails a-back, to receive the greatest force of the wind in a line perpendicular to their sudaces, in order to return the ship's head into the line of her course, after she had inclined to windward

of it.

To brace the yards. To move the yards, by means of the braces, to any direction required.

To brace about. To brace the yards round for the contrary tack.

To brace sharp. To brace the yards to a position in which they will make the smallest possible angle with the keel, for the ship to have head-way.

To brace-to. To ease off the lee braces, and round in the weather braces, to assist the motion of the ship's head in tacking.

To brail up. To haul up a sail by means of the brails, for the more readily furling it when necessary.

Brails. A name peculiar to certain ropes belonging to the mizen, used to truss it up to the mast. But it is likewise applied to all the ropes which are employed in hauling up the bottoms, lower corners, and skirths, of the other great sails.

To break bulk. The act of beginning to unload a ship.

To break sheer. When a ship at anchor is forced by the wind or current from that position

in which she keeps her anchor most free of her-

self and most firm in the ground, so as to endan-

ger the tripping of her anchor, she is said to

break her sheer.

Breaming. Burning off the filth from a ship's

bottom.

Breast-fast. A rope employed to confine a

ship side-ways to a wharf or to some other ship.

To bring by the lee. See to Broach to.

To bring to. To check the course of a ship

when she is advancing, by arranging the sails in

such a manner as that they shall counteract each

other, and prevent' her from either retreating or

advancing. See to lie to.

To broach to: To incline suddenly to wind-

ward of the ship's course, so as to present her

side to the wind, and endanger her oversetting.

The difference between broaching to and bringing

by the lee may be thus defined : Suppose a ship

under great sail to be steering south, having the

wind at N. N. W.J: then west is the weather-side,

and east the lee-side. If, by any accident, her

head turns round to the westward, so as that her

sails are all taken a-back on the weather-side, she is said to broach to. If, on the contrary, her

head declines so far eastward as to lay her sails

a-back on that side which was the lee-side, it is

called bringing by the lee.

Broadside. A discharge of all the guns on

one side of a ship both above and below.

*Brokenbacked. The state of a ship which is**

so loosened in her frame as to drop at cacli erm.

By the board. Over the ship's side.

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By the head. The state of a ship when she is

so unequally loaded as to draw more water for-

ward than aft.

By the wind. The course of a ship as near

as possible to the direction of the wind, which

is generally within six points of it.

To careen. To incline a ship on one side so

low c ,wn, by the application of a strong pur

chase to her masts, as that her bottom on the

other side may be cleansed by breaming.

Casting. The motion of falling off, so as to

bring the direction of the wind on either side of

the ship after it had blown some time right a-head.

It is particularly applied to a ship about to weigh anchor.

To cat the anchor is to hook the cat-block to the ring of the anchor and haul it up close to the cat-bead.

Cat's paw. A light air of wind perceived at a distance in a calm, sweeping the surface of the sea very lightly, and dying away before it reaches the ship.

Centre. This word is applied to that squadron of a fleet, in line of battle, which occupies the middle of the line; and to that column (in the order of sailing) which is between the weather and lee columns.

Change the mizen. Bring the mizen-yard over to the other side of the mast.

Chapeling. The act of turning a ship round in a light breeze of wind when she is close-hauled, so as that she will lie the same way she did before. This is usually occasioned by negligence in steering or by a sudden change of wind.

Chase. A vessel pursued by some other.

Chaser. The vessel pursuing.

Cheerly. A phrase implying heartily, quickly, cheerfully.

To c'aw aft'. The act of turning to windward from a lee-snore to escape shipwreck, &c.

Clear is variously applied. The weather is said to be clear when it is fair and open ; the sea-coast is clear when the navigation is not interrupted by rocks, Sec. It is applied to cordage, cables, &c., when they are disentangled, so as to be ready for immediate service. In all these senses it is opposed to foul.

To clear the anchor is to get the cable off the flukes, and to disencumber it of ropes ready for dropping.

Clt-ur lumse. When the cables are directed to their anchors without lying athwart the stem.

To clear the hause is to untwist the cables when they are entangled by having either a cross, an elbow, or a round turn.

Clenched. Made fast, as the cable is to the ring of the anchor.

Close-hauled. That trim of the ship's sails when she endeavours to make a progress in the nearest direction possible towards that point of the compass from which the wind blows.

To club-haul. A method of tacking a ship when it is expected she will miss stays on a lee-shore.

To clue up. To haul up the clues of a sail

to its yard by means of the clue-lines.

Coatting. The act of making a progress along the sea-coast of any country.

To coil the cable. To lay it round in a ring: one turn over another.

To come home. The anchor is said to come home when it loosens from the ground by the effort of the cable, and approaches the place where the ship floated, at the length of her moorings.

Coming to denotes the approach of a ship's head to the direction of the wind.

Course. The point of the compass on which a ship steers.

Crank. The quality of a ship, which, for want of sufficient ballast, is rendered incapable of carrying sail without being exposed to the danger of oversetting.

To croud sail. To carry more sail than ordinary.

Cunning. The art of directing the steersman to guide the ship in her proper course.

To cut and run. To cut the cable and make sail instantly, without waiting to weigh anchor.

To deaden a ship's way. To impede her pro

gress through the water.

Dead wattr. The eddy of water which ap-

pears like whirl-pools, closing in with the ship's

stern as she sails on.

Dismasted. The state of a ship that has lost

her masts.

Doubling. The act of sailing round or passing

beyond a cape or point of land.

Doubling upon. The act of enclosing any part

of a hostile fleet between two fires, or of can-

nonading it on both sides.

To dowse. To lower suddenly, or slacken.

To drag the anchor. To trail it along the bot-

tom, after it is loosened from the ground.

To draw. When a sail is inflated by the

wind, so as to advance the sail in her course,

the sail is said to draw ; and so to keep alldraw~

ing is to inflate all the sails.

Drift. The angle which the line of a ship's

motion makes with the nearest meridian, when

she drives with her side to the wind and waves,

and not governed by the power of the helm. It

also implies the distance which the ship drive'

on that line.

Driving. The state of being carried at ran-

dom, as impelled by a storm or current. It is

generally expressed of a ship when accidentally

broke loose from her anchors or moorings.

Drop. Used sometimes to denote the depth

of a sail ; as the fore-top-sail drops twelve yards.

To drop anchor. Used synonymously with tc

anchor.

To drop a-stern. The retrograde motion of a

ship.

To ease, to ease away, or to ease off". To

slacken gradually ; thus they say, ease the bow-

line, ease the sheet.

Ease the ship ! The command given by the

pilot, to the steersman, to put the helm hard

a-lee, when the ship is expected to plunge her

fore part deep in the water when close-hauled.

To edge away. To decline gradually from

the shore or from the line of the course which

the ship formerly held, in order to go more

large.

To edge in with. To advance gradually tow-

ards the shore or any other object.

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Elbow in the huuse. A particular twist in the

cables by which a ship is moored ; explained

heretofore at length.

End-for-end. A reversal of the position of any

thing is turning it end-for-end. It is applied

also to a rope that has run quite out of the block in which it was reeved, or to a cable which has

all run out of the ship.

End on. When a ship advances to a shore,

rock, &c., without an apparent possibility of

preventing her, she is said to go end on for the

shore, &c.

Even keel. When the keel is parallel with

the horizon a ship is said to be upon an even keel.

Fair. A general term for the disposition of

the wind when favorable to a ship’s course.

Fair-way. The channel of a narrow bay,

river, or haven, in which snips usually advance

in their passage up and down.

To fall a-board of. To strike or encounter

another ship when one or both are in motion.

To fall a-stern. The motion of a ship with

her stern foremost.

To fall calm. To become in a state of rest by a total cessation of the wind.

To-, fall down. To sail or be towed down a river nearer towards its mouth.

Falling off' denotes the motion of the ship's head from the direction of the wind. It is used in opposition to coming to.

Fall not off! The command to the steersman to keep the ship near the wind.

To fetch way. To be shaken or agitated from one side to another so as to loosen any tiling which was before fixed.

To fill. To brace the sails so as to receive the wind in them, and advance the ship in her course, after they had been either shivering or braced a-back.

To fish the anchor. To draw up the flukes of the anchor towards the top of the bow, in order to stow it, after having been catted.

Flat aft. The situation of the sails when their surfaces are pressed aft against the mast by the force of the wind.

To fiat in. To draw in the aftermost lower corner or clue of a sail towards the middle of

the ship, to give the sail a greater power to turn the vessel.

To fiat in forward. To draw in the forersheet,

jib-sheet, and fore-staysail sheet, towards the

middle of the ship.

Flaw. A sudden breeze or gust of wind.

Floating. The state of being buoyed up by

the water from the ground.,

Flood tide. The state of a tide when it flows

or rises.

Flowing-sheets. The position of the sheets bf

the principal sails when they are loosened to the

wind, so as to receive it into their cavities more nearly perpendicular than when close-hauled,

but more obliquely than when the ship sails be-

fore the wind. A ship going two or three points

large has flowing sheets.

Fore. That part of a ship's frame and ma-

chinery that lies .near the stem.

Fore-and-aft. Throughout the whole ship's

length. Lengthways of the ship.

To fore-reach t-pon. To gain ground of some

other ship.

To forge over. To force a ship violently over

a shoal by a great quantity of sail.

Forward. Towards the fore part of a ship.

Foul is used in opposition both to clear and

fair. As opposed to clear, we szyfoul weather,

foul bottom, foul ground, foul anchor, foul house.

As opposed to fair, we say foul wind.

To founder. To sink at sea by filling with

water.

To free. Pumping is said to free the ship

when it discharges more water that leaks into

her.

To freshen. When a gale increases it is said

to freshen.

To freshen the hause. Veering out or heaving

in a little cable to let another part of it endure the stress at the hause-holes. It is also applied

to the act of renewing the service round the

cable at the hause-holes.

Fresh way. When a ship increases her ve-

locity she is said to get fresh way.

Full. The situation of the sails, when they

are kept distended by the wind.

Full-and-by. The situation of a ship, with re-

gard to the wind, when close-hauled ; and sail-

ing so as to steer neither too nigh the direction

nor to deviate to leeward.

To furl. To wrap or roll a sail close up to the

yard or stay to which it belongs, and winding a

cord round it to keep it fast.

To gain the wind. To arrive on the weather-

side, or to windward of, some ship or fleet in

sight, when both are sailing as near the wind as

passible.

To gather. A sbip is said to gather on ano-

ther as she comes nearer to her.

Gimbleting. The action of turning the an

chor round by the stock, so that the motion of the stock appears similar to that of the handle of a

gimblet, when employed to turn the wire.

To give chase to. To pursue a ship or fleet.

Goose-wings of a sail. The clues or lower

corners of a ship's mainsail or foresail, when the

middle part is furled or tied up to the yard.

Griping. The inclination of a ship to run to

windward of her proper course.

Grounding. The laying a ship a-shore, in

order to repair her. It is also applied to running a-ground accidentally.

Ground-tackle. Every thing belonging to a

ship's anchors, and which are necessary for an-

choring or mooring ; such as cables, hawsers,

tow-lines, warps, buoy-ropes, &c.

Growing. Stretching out ; applied to the di-

rection of the cable from the ship towards the anchors ; as, the cable grows on the starboard bow.

Gybing. The act of shifting any boom-sail from one side of the mast to the other.

To hail. To salute or speak to a ship at a distance.

To hand the fails. The same as to furl them.

Hand-over-hand. The pulling of any rope, by the men's passing their hands alternately one before the other or one above another. A sailor is said to go aloft hand-over-hand, when he climbs into the tops by a single rope, dexterously throwing one hand over another.

Handsoiiiciy. Gradually; as, lower band-somelv-J

Hank-for-hank. When two ships tack and make a progress to windwaid together.

Hard a-lee. The situation of the helm, when pushed close to the lee side of the ship.

Hard a-weather. The situation of the helm, when pushed close to the weather side of the

ship.

To haul. To pull a single rope without the

assistance of blocks.

To haul the wind. To direct the ship's course

nearer to the point

from which the wind t

blows. Thus the ship

A hauls the wind,

*when, by the trim of "^^ Ji^*

*her sails and the ac- ""•-.. J^. '^^*

tionof her rudder, she

»ets on either of the courses B and C.

Hause. The situation of the cables before

the ship's stem, when she is moored with two

anchors out from forward. It also denotes any

small distance a-head of a ship, or the space

between her head and the anchors employed to

ride her.

Head-fast. A rope employed to confine the

head of a ship to a wharf or to some other ship.

Headmost. The situation of any ship or ships

which are the most advanced in a fleet.

Head-sails. All the sails which belong to the

fore-mast and bowsprit.

Head-sea. When the waves meet the head of a sbj.p in her course they are called a head-sea. It is likewise applied to a large single wave coming in that direction.

Head-to-wind. The situation of a sbip vrheˆ her head is turned to the point from which the wind blows, as it must when tacking.

Head-way. The motion of advancing used in opposition to stern-way.

To heave. To turn about a capstan, or other machine of the like kind, by means of bars, handspecs, &c.

To heave a-head. To advance the ship by heaving-in the cable or other rope fastened to an anchor at some distance before her.

To heave a-peek. To heave in the cable, till the anchor is a-peek.

To heave a-stern. To move a ship backwards by an operation similar to that of heaving a-head.

To heave down. To careen.

To heave in the cable. To draw the cable into the ship, by turning the capstan.

To heave in stays. To bring a ship's head to the wind, by a management of the sails and

rudder, in order to get on the other tack.'

To heave out. To unfurl or loose a sail ;

more particularly applied to the staysails ; thus

we say, loose the topsails and heave out the stay-

sails.

To heave short. To draw so much of the

cable into the ship as that she will be almost

perpendicularly over her anchor.

To heave tight or taught. To turn the cap-

stan round, till the rope or cable becomes

straightened.

To heave the capstan. To turn it round.

To heave the lead. To throw the lead over-

ooard, in order to find the depth of water.

To heave the log. To throw the log over-

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board, in order to calculate the velocity of tl-e

ship's way.

To heel. To stoop or incline to one side; thus

they say to heel to port, that is, to heel to tlie lar-

board side.

Helm a-lee! A. direction to put the helm

over to the lee side.

Helm a-weather ! An order to put the helm

over to the windward side.

High-and-dry. The situation of a ship when so far run a-ground as to be seen dry upon the strand.

To hoist. To draw up any body by the assistance of one or more tackles. Pulling by means of a smgle block is never termed hoisting, except only the drawjng of the sails upwards along the masts or stays.

To hold its own is applied to the relative situation of two ships when neither advances upon the other ; each is then said to hold its own. It is likewise said of a ship which, by means of contrary winds, cannot make a progress towards her destined port, but which however keeps nearly the distance she had already run.

To hold on. To pull back or retain any quantity of rope acquired by the effort of a capstern, windlass, tackle, block, &c.

Home implies the proper situation of any object ; as to haul home the topsail-sheets is to extend the bottom of the top-sail to the lower yard, by means of the sheets. In stowing a hold, a

cask, &c., is said to be home, when it lies close to some other object.

To hull a ship. To fire cannon-ball into her

bull within the point-blank range.

Hull-to. The situation of a ship when she

lies with all her sails furled ; as in trying.

In stays. See to heave in stays.

Keckled. Any part of a cable, covered over

with old ropes, to prevent its surface from rub-

bing against the ship's bow or fore-foot.

To keep away. To alter the ship's course to

one rather more large, for a little time, to avoid some ship, danger, Sec. Keep away is likewise

said to the steersman, who is apt to go to wind-

ward of the ship's course.

To keep full. To keep the sails distended by

the wind.

To keep hold of the land. To steer near to or

in sight of the land.

To keep off. To sail off or keep at a distance

from the shore.

To keep the land aboard. The same as to keep

hold of the land.

To keep the luff". To continue close to the

wind.

To keep the wind. The same as to keep the luff.

Knot. A division of the log-line, answering, in the calculation of the ship's velocity, to one mile.

To labor. To roll or pitch heavily in a turbulent sea.

Laden in bulk. Freighted with a cargo not packed, but lying loose, as corn, salt, 8cc.

Laid-up. The situation of a ship when moored in a harbour for want of employ.

Land-fall. The first land discovered after a sea-voyage. Thus a good land-rall implies the

rand expected or desired; a bad land-fall the reverse.

Land-locked. The situation of a ship surrounded with land, so as to exclude the prospect of the sea, unless over some intervening land.

Larboard. The left side of a ship, looking towards the head.

Larbourd-tach. The situation of a ship when sailing will) the wind blowing upon her larboard side.

Laying the land. A ship which increases her

distance from the coast, so as to make it appear lower and smaller, is said to lay the land.

Leading-wind. A fair wind fora ship's course.

Leak. A chink or breach in the sides or bottom of a ship, through which the water enters into the hull.

To leak. To admit water into the hull through chinks or breaches in the sides or bottom.

Lee. That part of the hemisphere to which the wind is directed, to distinguish it from the other part which is called to windward.

Lee-gage. A ship or fleet to leeward of another is said to have the lee-gage.

Lee-lurches. The sudden and violent rolls which a ship often lakes to leeward, in a high sea ; particularly when a large wave strikes her «n the weather side.

J^ee of the shore. See under the lee of the shore.

Lee-quarter. That quarter of a ship which is on the lee-side.

Lee-tshore. That shore upon which the wind blows.

Lee-side. That half of a ship, lengthwise,

which lies Between a line drawn through the

middle of her length and the side which is far-

thest from the point of wind.

To leeward. Towards that part of the horizon

to which the wind blows.

Leeward ship. A ship that falls much to lee-

ward of her course, when sailing close-hauled.

Leeward tide. A tide that sets to leeward.

Lee-way. The lateral movement of a ship to

leeward of her course; or the angle which the

line of her way makfs with a line in the direc-

tion of her keel.

To lie along. To be pressed down sideways

by a weight of sail in a fresh wind.

To lie to. To retard a ship in her course, by

arranging the sails in such a manner as to coun-

teract each other with nearly an equal effort, and

render the ship almost immoveable, with respect

to her progressive motion •

or headway. Thus the po-

sition of the yards, in the

figures A and B, causes "•-«^J

the sails to counteract each jj^""

other, the wind blowing

*upon the after surface of ***

one and the fore-surface of the other.

A long sea. A uniform motion of long waves.

Ijook out. A watchful attention to some im-

portant object or event that is expected to arise.

Thus persons on board of a ship are occasion-

ally stationed to look out for signals, other ships, for land, &c.

To loose. To unfurl or cast loose any sail.

To lower. To ease down gradually.

Luff! The order to the steersman to put the

helm towards the lee-side of the ship, in order to sail nearer to the wind.

To make a board. To run a certain distance

upon one tack, in beating to windward.

To make foul water. To muddy the water, by

running into shallow places, so that the ship's

keel disturbs the mud at bottom.

To make sail. To increase the quantity of

sail already set, either by u-nreefing or by setting others.

To make sternway. To retreat, or move with

the stern foremost.

To make the land. To discover it from afar.

To make water. To leak.

To man (Jic yard, &c. To place men on the

yard, in the tops, down the ladder, &c., to exe-

cute any necessary duties.

Masted. Having all her masts complete.

To middle a rope. To double it into two equal parts.

Midships. See a-midships.

To miss stays. A ship is said to miss stays when her head will not fly up into the direction of the wind, in order to get her on the other tack.

Mooring. Securing a ship in a particular station by chains or cables, which are either fastened to an adjacent shore or to anchors at the bottom.

Mooring service. When a ship is moored, and rides at one cable's length, the mooring service is that which is at the first splrce.

Neaped. The situation of a ship left a-ground on the height of a spring tide, so that she cannot be floated till the return of the next spring tide.

Near ! or no near ! An order to the steersman not to keep the ship so close to the wind.

Off-and-on. When a ship is beating to windward, so that by one board she approaches towards the shore, and by the other stands out to sea, she is said to stand off-and on shore.

Offing. Out at sea, or at a competent dis-

tance from the shore, and generally out of an-

chor-ground.

Offward. From the shore ; as, when a ship

lies a-ground and leans towards the sea, she is

said to heel offward.

On the beam. Any distance from the ship on

a line with the beams, or at right angles with the keel. See Bearing.

On the bow. An arch of the horizon, com-

prehending about four points pf the compass on

each side of that point to which the ship's head

is directed. Thus, they say, the ship in sight

bears three points on the starboard bow ; that is,

three points towards the right hand, from tli;it

part of the horizon which is right a head. See

Searing.

On the quarter. An arch of the horizon,

comprehending about four points of the com-

pass on each side of that point to which the

ship's stern is directed. See On the bow and

Bearing.

Open. The situation of a place exposed to

the wind and sea. It is also expressed of any

distant object to which the sight or passage is not intercepted.

Open house. When the cables of a ship at

her moorings lead straight to their respective an-

chors, without crossing, sire is said to ride with

an open hause.

Over-board. Out of the ship.

Over-grown sea is expressed of the ocean when

the surges and billows rise extremely high.

To over-haul. To open and extend the

several parts of a tackle, or other assemblage of

ropes, thereby fitting them the better for running

easily.

Over-rake. When a ship at anchor is ex-

posed to a head-sea, the waves of which break

in upon her, tlieVaves are said to over-rake her.

Over-set. A. ship is overset when her keel

turns upwards.

Out-of-trim. The state of a ship when she is

not properly balanced for the purposes of navi-

gation.

Parliament-heel. The situation of a ship when

she is made to stoop a little to one side, so as to clean the upper part of her bottom on the other

side. See Boot-topping.

Parting. Being driven from the anchors, by

the breaking of the cable.

To pawl the capstan. To fix the pawls, so as

to prevent the capstan from recoiling, during any

pause of heaving.

To pay. To daub or cover the surface of any

body with pitch, tar, &c., in order to preserve it from the injuries of the weather.

To pay away or pay out. To slacken a cable

or other rope, so as to let it run out for some

purpose particular.

To pay off. To move a ship's head to lee-

ward.

To peek the mizen. To put the mizen yard

perpendicular by the mast.

Pitching. The movement of a ship, by which

she plunges her head and after-part alternately

into the hollow of the sea.

To ply to windward. To endeavour to make

a progress against the direction of the wind. See

Beating to windward.

Point-blank. The direction of a gun when

levelled horizontally.

Pooping. The shock of a high and heavy sea

upon the stern or quarter of a ship, when she

scuds before the wind in a tempest.

Port. A name given on some occasions to

the larboard side of the ship ; as, the ship heels to port ; top the yards to port ! &c.

Port the helm ! The order to put the helm

over to the larboard side.

Port-last. The gunwale.

Portoise. The same as port-last ; to ride a

portoise is to ride with a yard struck down to the deck.

Press of sail. All the sail a ship can set or

carry.

Prizing. The application of a lever to move

any weighty body.

Purchase. Any sort of mechanic power em-

ployed in raising or removing heavy bodies.

Quarters. The several stations of a ship's

crew in time of action.

Quartering. When a ship under sail has the

wind blowing on her quarter.

To Raise. To elevate any distinct object at

sea by approaching it; thus to raise the land is

used in opposition to lay the land.

To lluke. To cannonade a ship at the stem

or head, so that the balls scour the whole length

of the docks.

Range of cable. A sufficient length of cable drawn upon deck before the anchor is cast loose, to admit of its sinking to the bottom without any check.

Reach. The distance between any two points on the banks of a river, wherein the current flows in an uninterrupted course.

Ready about ! A command of the boatswain to the crew, and implies that all the hands are to be attentive and at their stations for tacking.

Rear. The last division of a squadron, or the last squadron of a fleet. It is applied likewise to the last ship of the line, squadron, or division.

Reef. Part of a sail from one row of eyelet-holes to another. It is applied likewise to a chain of rocks lying near the surface of the water.

Reefing. The operation of reducing a sail by taking in one or mere of the reefs.

To reeve. To pass the end of a rope through any hole, as the channel of a block, the cavity of a thimble, &c.

Rendering. The giving way or yielding to the efforts of some mechanical power. It is used in opposition to jambing or sticking.

Riding, when expressed of a ship, is the state

of being retained in a particular station by an

*anchor and cable. Thus she is said to ride eas^*

or to ride hard, in proportion to the strain upon

her cable. She is likewise said to ride leeward

tide,\L anchored in a place at a time when the tide sets to leeward, and to ride windward tide if the

tide sets to windward : to ride between wind and

tide, when the wind and tide are in direct oppo-

sition, causing her to ride without any strain

upon her cables.

Rigging out a boom. The running out a pole

at the end of a yard to extend the foot of a sail.

To rig the capstan. To fix the bars in their

respective holes.

Righting. Restoring a ship to an upright po-

sition, either after she has been laid on a careen, or after she has been pressed down on her side

by the wind.

To right the helm is to bring it into midships,

after it has been pushed either to starboard or

larboard.

Rolling. The motion by which a ship rocks

from side to side like a cradle.

Rough-tree. A name applied to any mast,

*yard, or boom, placed in merchant ships, as a rail or fence above the vessel's side, from the quarter-**

deck to the fore-castle.

Rounding-in. The pu..ing upon any rope

which passes through one or more blocks in a di-

rection nearly horizontal ; as, round-in the wea-

ther-braces.

Round-turn. The situation of the two cables

of a ship when moored, after they have been

s«veral times crossed by the swinging of the ship.

Rounding-up. Similar to rounding-in, except

that it is applied to ropes and blocks which act

in a perpendicular direction.

To row. To move a boat with oars.

Rou'sing. Pulling upon a cable or rope

without the assistance of tackles.

To run out a warp. To carry the end of a

rope out from a ship in a boat, and fasten it to some distant object, so that the ship may be re-

moved by pulling on it.

To sag to leeward. To make considerable lee-

way.

Sailing-trim is expressed of a ship when in the

best state for sailing.

Scanting. The variation of the wind, by which it becomes unfavorable to a ship's making great progress, as it deviates from being large, and obliges the vessel to steer close-hauled, or nearly so.

Scudding. The movement by which a ship is carried precipitately before the wind in a tempest.

Scuttling. Cutting large noles through the bottom or sides of a ship, either to sink her or to unlade her expeditiously when stranded.

Sea. A large wave is so called. Thus they say, a heavy sea. It implies likewise the agitation of the ocean, as, a great sea. It expresses the direction of the waves, as, a head sea. A Umg sea means a uniform and steady motion of long and extensive waves ; a short sea, on the contrary, is when they run irregularly, broken, and interrupted.

Sea-boat. A vessel that bears the sea firmly, without straining her masts, &.c.

Sea-clothes. Jackets, trousers, &c.

Sea-r>:ark. A point or object on shore conspicuously seen at sea.

Sea-room. A sufficient distance from the

coast or any dangerous rocks, &c. : so that a

ship may perform all nautical operations without

danger of shipwreck.

Sending. The act of pitching precipitately

into the hollow between two waves.

Setting. The act of observing the situation of

any distant object by the compass.

To set sail. To unfurl and expand the sails

to the wind in order to give motion to the ship.

To set up. To increase the tension of the

shrouds, backstays, &c., by tackles, laniards, &c.

To settle the land. To lower in appearance.

It is synonymous with to lay the land.

To shape a course. To direct 01 appoint the

track of a ship in order to prosecute a voyage.

Sheering. The act of deviating from the line

of the course, either to the right or left.

To sheer off". To remove to a greater distance.

To sheet-home. To haul the sheets of a sail

home to the block on the yard-arm.

To shift the helm. To alter its position from

starboard to port, or from port to starboard.

To ship. To take any person, goods, or ar-

ticle, on board. It also implies to fix any thing

in its proper place; as, to ship the oars, to fix them in their rowlocks.

Shivering. The state of a sail when fluttering

in the xvind.

Slioul. Shallow.

To shoe the anchor. To cover the flukes with

a piece of plank to give it firmer hold in soft

ground.

To skoot a-head. To advance forward.

Shore. A general name for the sea-coast of

any country.

To shorten sail. Used in opposition to wake

tail.

Slack-water. The interval between the fiax

and reflux of the tide, when no motion is per-

ceptible in the water.

Slatch is applied to the period of a transitory

breeze.

To slip the cable. To let it run quite out when

there is not time to weigh the anchor.

Stops. Look to Sea-clothes.

To slue. To turn any cylinclric piece of

timber about its axis without removing it. Thus,

to slue a mast or boom is to turn it in its cap or boom-iron.

Sounding. Trying the depth of the water with

a plummet, sunk from a ship to the bottom.

To spell the mizen. To let go the sheet and

peek it up.

To spill. To discharge the wind out of the

cavity or belly of a sail, when it is drawn up in the brails, in order to furl or reef it.

Split. The state of a sail rent by the violence

of the wind.

Spoon-drift. A sort of showery sprinkling of

the sea-water, swept from the surface of the waves

in a tempest, and flying like a vapor before the

wind.

Spray. The sprinkling of a sea, driven occa-

sionally from the top of a wave ; but not con-

tinual as spoon-drift.

To spring a mast, yard, &c. To crack a mast,

yard. &c., by means of straining in blowing

weather, so that it is rendered unsafe for use.

To spring a leak. When a leak first com-

mences, a ship is said to spring a leak.

To spring the luff". A ship is said to spring

her luff when she yields to the effort of the helm, by sailing nearer to the wind than before.

Squall. A sudden violent blast of wind.

Square. This term is applied to yards that are

very long, as taunt is to high masts.

To square the yards. To brace the yards, so as

to hang at right angles with the keel.

To stand on. To continue advancing.

To stand in. To advance towards the shore

To stand off". To recede from the shore.

Starboard. The right hand side of the ship

when looking forward.

Starboard-tack. A ship is said to be on the

starboard-tack, when sailing with the wind blow-

ing upon her starboard-side.

Starboard the helm ! An order to push the

helm to the starboard-side.

To stay a ship. To arrange the sails and move

the rudder, so as to bring the ship's head to the direction of the wind, in order to get her on the other tack.

Steady! The order to the helmsman to keep

the ship in the direction she is going at that in-

stant.

Steering. The art of directing the ship's way

by the movement of the helm.

Steerage-way. Such degree of progressive

motion of a ship as will give effect to the mo-

tions of the helm.

To stem the tide. When a ship is sailing

against the tide at such a rate as enables her to overcome its power she is said to stem the tide.

Stern fast. A rope confining a ship by her

stern to any other ship or wharf.

,S'/i inmost. The farthc.st a-stern, opposed to

headmost.

SEA :,i A •:: s H I p.

Stcrnway. The motion by which a ship falls

back with her stern foremost.

Stiff". The condition of a ship when she will

carry a great quantity of sail without hazard of

oversetting. It is used in opposition to crank.

To stow. To arrange and dispose aship's cargo.

To stream the buoy. To let it fall from the

ship's side into the water, previously to casting

anchor.

To strike. To lower or let down any thing.

Used emphatically to denote the lowering of

colors, in token of surrender to a victorious

enemy.

To strike sounding. To touch ground, when

endeavouring to find the depth of water.

Surf. The swell of the sea that breaks upon

shore or on any rock.

To surge the capstan. To slacken the rope

heaved round upon it.

Swell. The fluctuating motion of the sea

either during or after a storm.

Sweeping. The act of dragging the bight or

loose part of a rope along the surface of the

ground, in a harbour or road, in order to drag up something lost.

Swinging. The act of a ship's turning round

her anchor at the change of wind or tide.

*To tack. To turn a ship about""^^*

from one tack to another, by "'—..

*bring her head to the wind. Thus *

the ship A passes from the lar-

board to the starboard tack a.

Taking in. The act of furling the sails.

Used in opposition to setting.

Taken a- back. See A-back.

Taught. Improperly, though very generally,

used for tight. .

Taunt. High or tall : particularly applied to

masts of extraordinary length.

Tending. The turning or swinging of a ship

round her anchor in a tide-way at the beginning

of ebb and flood.

Thwart. See A-thwart.

Thwart ships. See A-thwart ships.

Thus! An order to the helmsman to keep the ship in her present situation, when sailing with a scant wind.

Tide-way. That part of a rivei in which the tide ebbs and flows strongly.

Tier. One range of any thing placed hori-zontally.

Topping. Pulling one of the ends of a yard higher than the other.

To tow. To draw a ship in the water by a rope fixed to a boat or other ship which is rowing or sailing on.

Trim. The state or disposition by which a ship is best calculated for the purposes of navigation.

To trim the hold. Toarrange the cargo regularly.

To trim the sails. To dispose the sails in the best arrangement for the course which a ship is steering.

To trip the anchor. To loosen the anchor from the ground, either by design or accident.

Trough (>/' the i«i. The hollow between two waves.

Trying. The situation in which a ship, in

tempest, lies to in the trough or hollow of the

sea, particularly when the wind blows contrary

to her course.

Turning to windward. That operation in sail-

ing whereby a ship endeavours to advance against

the wind.

Van. The foremost division of a fleet in one

line. It is likewise applied to the foremost ship

of a division.

*To veer. To change a **

ship's course, from one f

tack to the other, by turn-

ing her stern to windward; A

*thus the ship A veers in ^^*

passing from the course A " A

ta the course C. The ... ™

wind is said to veer when '^^ ...-•'

it changes more aft. C

To veer and haul. To pull a rope tight, by

alternately drawing it in and slackening it.

To unballast. To discharge the ballast out of a

ship.

To unbend. To take the sails off from their

yards and stays : to cast loose the anchor from the cable : to untie two ropes.

To unbit. To remove the turns of a cable from off the bits.

Under foot is expressed of an anchor that is directly under the ship.

Under sail. When a ship is loosened from moorings, and is under the government of her sails and rudder.

Under way. The same as under sail.

Under the lee of the shore is to be close under the shore which lies to windward of the ship.

To unmoor. To reduce a ship to the state of riding at single anchor, after she has been moored-

To unreevc. To dra-vr a rope from out of a hlock, thimble, &c.

To unrig. To deprive the ship of her rigging.

Wake. The print or track impressed upon the surface of water by a ship in her course. A ship is said to be in the wake of another when she follows her in the same track, or on a line supposed to be formed on a continuation of her keel. Thus the ship

A is sailing in the ^^^ ^^^^ ‘

*wake of B, and the ”” “^^*

ship C is crossing

in the wake of A and B.

To ware. See to veer.

Warp. A small rope employed occasionally

to remove a ship from.one place to another.

To Warp. To remove a ship by means of a

warp.

Water-borne. The state of a ship, when there

is barely a sufficient depth of water to float het off from the ground.

Water-logged. The stale of a ship, become

heavy and inactive on the sea, from the great

quantity of water leaked into her.

Water-tight. The state of a ship when not

leaky,

Weather. Synonymous with windward.

Weather-beaten. Shattered by a storm.

Weather-bit. A turn of the cable about the

end of the windlass.

Heather-gage. When a ship or fleet is tt

windward of another, she is said to have the

weather-gage of her.

Weather-quarter. That quarter of the ship

which is on the windward side.

Weather-side. The side upon which the wind

Uows.

To weigh anchor. To heave up an anchor

lorn the bottom.

To wind a ship. To change her position,

Singing her head where her stern was.

Wind-road. When a ship is at anchor, and

the wind, being against the tide, is so strong as to overcome its power and keep the ship to lee-

ward of her anchor, she is said to be windroad.

Wind's eye. The point from which the wind

blows.

To windward. Towards that part of the ho-

rizon from which the wind blows.

Windward-tide. A tide that sets to windward.

To work a ship. To direct the movements of

a ship, by adapting the sails and managing the

rudder accord ing to the course the ship has to make.

To work to windward. To make a progress

against the direction of the wind.

Yawing. The motion of a ship, when she

deviates from her course to the right or left.

SEA MARKS. The erection of beacons, ligbt-houses, and sea-marks, is a branch of the royal prerogative. By 8 Eliz. 13, the corporation of the Trinity-house are empowered to set up any beacons or sea-marks wherever they shall think them necessary ; and if the owner of the land or any other person shall destroy them, or take down any steeple, tree, or other ‘ known sea-mark, he shall forfeit £100 sterling, or, in case of inability to pay it, he shall be ipso facto out-lawed.

SEA MEW. See LARUS.

SEA NYMPHS. See NEREIDS, NYMPHS, and OCEANIDES Or OCEANITIDES.

SEA ONION, or squill. See SCILLA.

SEAPOYS, or SEPOYS, natives of Hindostan, serving in a military capacity under the Euro-pean powers, and disciplined after the European manner. The seapoys of the English East India company compose perhaps the most numerous, regular, and best disciplined body of black troops in the world. They are raised from among the natives of the country, and consist of

Moors or Mahometans, Raja-poots, Hindoos, Farias, besides many intermediate casts peculiar to themselves; the whole modelled in all corresponding particulars, and disciplined in every respect as the army of Great Britain. The sea-poys are formed into complete, uniform, and regular batallions, like our marching regiments, being intended to answer fully every purpose in India of the like troops in Europe. Their arms are a firelock and bayonet ; their accoutrements, or cross belts, black leather, with pouches of the same. A battalion unite in their exterior traits both the Indian and European appearance. They are brought to the utmost exactness of discipline ; go through their evolutions and manoeuvres with a regularity and precision equal to, and rarely surpassed by European troops. In action they are brave and steady, and have stood where Europeans have given way. Their discipline [•uts them on a footing with European troops, «ith whom they are always ready to act in con-«Srt. Their utility and services are evident ; ;hey secure to the company the internal good order and preservation of their territorial dis-

tricts, which, though possible to be enforced with a strong hand by Europeans, requires numbers, and can only be conducted with that ease and address peculiar to the native forces of the country. Dr. Robertson has remarked, as a proof that the ingenuity of man has recourse in similar situations to the same expedients, that the European powers have, in forming the establishment of these native troops, adopted the same maxims, and, probably without knowing it, have modelled their battalions of seapoys upon the same principles as Alexander the Great did his phalanx of Persians.

SEAR, adj. & v. a. Saxon feanian, to dry.

Dry ; not any longer green : to dry ; burn ; cauterize.

Some shall depart from the faith, speaking lies, having their conscience seared with a hot iron.

1 Timothy iv. 2.

The scorching flame sore singed all his face,
And through his armour all his body seared.

Faerie Queene.

I have lived long enough • my May of life
Is fallen into the sear, the yellow leaf.

Shakspeare. Macbeth.

Ye myrtles brown, with ivy never sear. Miliott.

Cherish veins of good humour, and star up those

of ill. Temple,

Some may be cherished in dry places, as in sear

wood. Rail.

I'm seared with burning steel, till the scorched

marrow

Fries in the bones. Hmce's Royal Convert.

He lives, nor yet is past his manhood's prime.

Though leared by toil, and something touched by

time. Byron.

SEARCE, v. a. Fr. sasser. To sift finely.

Put the finely tearced powder of alabaster into

a flat-bottomed and well-heated brass vessel.

Boyle.

For the keeping of meal, bolt and uarce it from

the bran. Mortimer's Hutbandry.

SEARCH, v. a., v. n.t &».. <.{ Fr. chercher;

SEARCH'ER, 7. s. \ Ital. circu:d> ;*

of Lat. circo. To examine ; try ; explore ; en-

quire ; probe surgically ; taking out (intens.) : as a verb neuter, to look ; make enquiry ; seek : the noun substantives both correspond.

They returned from searching of the land.

Numbers xiii. 25.

Who went before you, to search you out a place to pitch your tents in ? Deuteronomy i. 33.

For the divisions of Reuben there were great

Marchings of heart. Judges v. 16.

Help to search my house this one time : if I find not what I seek, let me forever be your table sport.

Shahtpeare.

With this good sword,

That ran through Caesar' U;\el>. ft arch this bosom.*

Id

SEA

743

SEA

Satisfy me once more ; once more search with me.

Id.

His ;easons are as two grains of wheat hid in two bushels of chaff: you shall seek all day ere you find them, and when you have them they are not worth

the search. fd.

The searchers found a marvellous difference be-

tween the Anakins and themselves. Raleigh.

Through the void immense

To search with wandering quest a place foretold.

Milton.

To ask or search I blame thee not. Id.

The orb he roamed

With narrow search, and within inspection deep.

Id.

The searchen, who are ancient matrons sworn to

their office, repair to the place where the dead corps lies, and by view of the same, and by other inquiries, examine by what disease the corps died.

Graunt's Bills of Mortality.

Who great in search of God and nature grow,

They best the wise Creator's praise declare.

Dry it en.

Now mourn thy fatal search :

It is not safe to have too quick a sense. fd.

It suffices that they have once with care sifted

the matter, and searched into all the particulars that could give any light to the question. Locke.

'>y the philosophical use of words, I mean such

an use as conveys the precise notions of things, which the mind may be satisfied with in its search after knowledge. Id.

The parents, after a long search for the boy, gave him for drowned in a canal. Addison.

Religion has given us a more just idea of the di-

vine nature : he whom we appeal to is truth itself, the great searcher of hearts, who will not let fraud go unpunished, or hold him guiltless that taketh his

name in vain. Id.

In vain we lift up our presumptuous eyes

To what our Maker to their ken denies ;

The searcher follows fast, the object flies. Prior.

The signs of wounds penetrating are discovered

by the proportion of the searching candle, or probe which enters into the cavity. Wiseman' Suryery.*

With piercing eye some search where nature plays,

And trace the wanton through her darksome maze.

Ticket.

This common practice carries the heart aside from

all that is honest in our search afler truth. Watts.

They may sometimes be successful to search out

truth. Id.

Avoid the man who practises any thing unbecom-

ing a free and open searclier after truth. Id.

SEARCHER, an officer in the customs, whose

business it is to search and examine ships out-

ward-bound, if they have any prohibited goods

on board, Sec.: 12 Car. II.. There are also

searchers of leather, &c.

SEARCHER, in ordnance, is an iron-socket with

branches, from four to eight in number, a little

bent outwards, with small points at their ends ;

to this socket is fixed a wooden handle, from

eight to twelve feet long, of about an inch and a quarter diameter. After the gun has been fired

this searcher is introduced into it, and turned

round, in order to discover the cavities within.

The distances of these cavities, if any be found,

are then marked on the outside with chalk, when

another searcher that has only one point, about

which a mixture of wax and tallow is put, is in-

troduced to take the impression of the holes ; and

if there be any hole a quarter of an inch deep, or of any considerable length, the gun is rejected «

unserviceable.

SEARCH WARRANT, in law, a kind of genera!

warrant issued by justices of peace, or magis-

trates of towns, for searching all suspected places

for stolen goods. In some English law-books

there are precedents requiring the constable to

search all such suspected places as he and the

party complaining shall think convenient ; but

such practice is condemned by lord Hale, Mr.

Hawkins, and the best authorities both amongst

the English and Scottish lawyers. However, in

case of a complaint, and oath made of goods

stolen, and that the party suspects that those

goods are in a particular house, and shows the

cause of such suspicion, the justice may grant a

warrant to search not only that house but other

suspected places ; and to attach the goods, and

the party in whose custody they are found, and

bring them before him or some other justice, to give an account how he came by them, and to abide such order as to law shall appertain ; which warrant should be directed to the constable or other public officer, who may enter a suspected house and make search.

SEAR'CLOTH, n. s. Sax. ranclaS, from rap pain, and claS a plaster ; so that cerecloth, as written, from cera wax, seems to be wrong. A plaster ; a large plaster.

Bees' wax is the ground of all searcloth salves. Mortimer.

The SEA SERPENT is a fabulous animal, said to inhabit the northern seas about Greenland and the coasts of Norway. The following marvellous account of this monster is given by Guthrie.

' In 1756 one of them was shot by a master of a ship ; its head resembled that of a horse ; the mouth was large and black, as were the eyes, a white mane hanging from its neck; it floated on the surface of the water, and held its head at least two feet out of the sea ; between the head and neck were seven or eight folds, which were very thick ; and the length of this snake was more than 1 00 yards ; some say fathoms. They

have a remarkable aversion to the smell of cas-
tor ; for which reason, ship, boat, and bark mas-
ters provide themselves with quantities of that
drug, to prevent being overset, the serpent's
olfactory nerves being remarkably exquisite.
The particularities related of this animal would
be incredible, were they not attested upon oath.
Egede, a very reputable author, says that on the
6th day of July, 1734, a large and frightful sea-
monster raised itself so hii'h out of the water
that ils head reached above the main-top-mast of
the ship ; that it had a long sharp snout, broad
paws, and spouted water like a whale ; that the
body seemed to be covered with scales ; the
skin was uneven and wrinkled, and the lower
part was formed like a snake. The body of th«
monster is said to be as thick as a hogshead
his skin is variegated like a tortoise shell ; arx}
his excrement, which floats upon the surface o1
the water, is corrosive.'

SEA SHARK. See SwAi.rs.

SEA SICKNESS, a disorder incident to most
persons on their first going to sea, occasioned by
the agitation of the vessel. In voyages, sea-sick-

ness, though it continues in general only for the

first day or two, is extremely harrassing to some people at intervals, especially on any increased motion of the vessel. Sometimes, by long continuance, it causes fever, headach, quick pulse, thirst, white tongue, and a total deprivation of the retention of the stomach ; evils which are always difficult to remove, and frequently terminate only with the voyage. This indisposition is considerably alleviated by a small tea-spoonful of ether, taken now and then in a glass of water, and applying some of it to the temples and nostrils. The ancient writers recommend acid fruits, bread and vegetables soaked in vinegar, after the stomach has been cleansed by vomiting; but not to attempt to suppress the vomiting until that end was obtained. An old remedy for sea-sickness, and a very common one among sailors, is a draught or two of sea-water ; which, though a disgusting medicine at such a time, yet where the first passages are foul and loaded, generally produces the desired effect when the per-

turbation it occasions ceases.

SEA'SON, n. s., v. a., &". Fr. saison ; Span.*

SEA'soNA&LEytw//. [v.n. | sazon ; barb. Lat.

SEA'SONABLENESS, n. s. Isatio. One of the

SEASONABLY, adv. [four quarters of the

SEA'SONER, n.s. \ year; any particular

SEA'SONING. j or fit time; any

short time ; relish ; that which gives a relish : to give a relish to; qualify; imbue; taint; fit or

mature for office or use : to become fit : the de-

rivatives corresponding.

Every oblation of thy meat-offering- shall thou

season with salt. Leviticus ii. 13.

Mercy is seasonable in the time of affliction, as

clouds of rain in the time of drought. Ecclus. v. 2.

The fairest flowers o' the season

Are our carnations and streaked gillyflowers.

Sliuktpeare.

We'll slip you for a vason, but our jealousy

Does yet depend. Id. Cymbeline.

You lack the season of all natures, sleep.

Id. Macbeth.

Mercy is above this sceptered sway ;

It is an attribute to God himself ;

And earthly power does then shew likest God's,

When mercy teutons justice.

Id. Merchant of Venice.

The crow doth sing as sweetly as the lark,

When neither is attended; and, I think,

The nightingale, if she should sing by day,

When every goose is cackling, would be thought

No better a musician than the wren :

flow many things by season seasoned are

To their right praise and true perfection !

Sliakit])eare.

We charge you, that you have contrived to take

From Home all seasoned office, and to wind

Yourself unto a power tyrannical". Id. Coriolanns.

Breads we have of several grains, with divers

liinls of leavenings and seatimings ; so that some do extremely move

appetites, and some do nourish so

«s divers do live af them alone. Bacon.

The archers of his guard shot two arrows, every

jhan together, against an inch board of well seasoned limber. Hay ward.

Some abound with words without any seasoning or

taste of matter. fan /orison.

Secure their religion, season their younger years

with prudent and pious principles. Taylor.

The futon prime for sweetest scents and airs.

Milton.

SEASONS. The year is remarkably diversified

by the seasons, which depend upon the oblique

position of the sun's path through the heavens,

whereby this luminary rises to different heights

above the horizon, making the days sometimes

longer, and sometimes shorter, than the nights.

When the sun rises highest at noon, its rays fall

most nearly in the direction of a perpendicular,

and consequently a greater number is received

upon any given spot; their action, also, at the

same time, continues the longest. These cir-

cumstances make the difference between summer

and winter. It is true, that the sun is some-

times nearer to us by one thirtieth of his whole

distance than at others. This is evident from his diameter being found, by actual measurement, to be one thirtieth larger at one time of the year than at the opposite. But the greatest proximity in the northern hemisphere takes place in winter ; the sun is farthest from us in July, and nearest in January; and the difference between summer and winter temperature would undoubtedly be greater than it now is, if the sun were to remain at the same invariable distance through the year. In southern latitudes, mid-winter occurs in July, when the sun is at his greatest distance. This may be one cause of the excessive cold which prevails in high southern latitudes, as at Cape Horn and about the south po!e, beyond that which belongs to similar latitudes on this side of the equator. It is found, that the sun does not rise so high in summer, or descend so low in winter, at the present time, as it did formerly : in other words, the obliquity of the ecliptic, which is half the difference between the sun's greatest and least meridian altitudes, is growing less and less continually, and the seasons are thus tending, though slowly, towards one unvaried spring. This diminution

of the sun's utmost range north and south, since the time of the earliest observations, or during a period of 3000 years, amounts to nearly a fiftieth part of the whole quantity. This may be one of the causes of a melioration of winter, which seems to be so considerable in those places where there are the means of making a comparison of the degree of cold that has prevailed at different times. The year is naturally divided into four periods by the equinoxes and solstices, or those epochs when the day is equal to the night, namely, 21st of March and 23rd of September, and those when there is the greatest difference, namely, 21st of June and 22nd of December. Our winter, spring, summer, and autumn (q. v.) have reference to these epochs, although their commencement and termination do not correspond exactly to the astronomical times above indicated. We are apt to imagine, that the four seasons are equal to each other, and that spring and summer are together just half the year. This is not the case, however, more especially with respect to the natural periods, so denominated. If, for example, we

compare the time from the 21st of March to the

23rd of September, with the rest of the year.

we shall find a difference of about one week,

the former being the longer. This benefit of a

long summer is confined, at present, to the

northern hemisphere ; but this natural distinc-

tion is not a permanent one. This longer con-

tinuance of the sun in the northern hemisphere

arises from the particular position of the sun's

oval orbit, or path through the heavens. We

have already stated that the sun is nearest to us

in the winter season : in other words, the earth

.1 i .• •

,s nearest to the sun, and on 1m account its mo-

tion is more rapid, so that the part of the orbit from the autumnal equinox (September 23rd) to

the vernal (March 21st), is completed a week

sooner than the other half, in which the motion

is slower. But the point of the sun's nearest

approach, or perihelion, on the position of which

the above-mentioned physical advantages de-

pend, is in motion, whereby we are gradually

losing the benefit of a prolonged summer, and in about 5000 years shall cease to enjoy any such privilege. In about 10,000 years the condition will be reversed, and the southern hemisphere wj,l be the favored portion of the globe. It may be worth mentioning that at the date fixed by chronologists for the first residence of man upon the earth, the sun's influence was equally distributed to the two hemispheres.

SEASONING, a name given to the first illness to which persons, habituated to colder climates, are subject on their arrival in the West Indies, particularly if at first they expose themselves in a shower of rain, or too long in the sun, or in the night air ; or when the body is much heated, if they drink large draughts of cold liquors, or bathe in water, or use much exercise, or commit excess in drinking wine or spirits ; or by heating the body and inflaming the blood; or by subjecting themselves to any cause that may suddenly check perspiration, which at first is generally excessive. The disorders are various that constitute this seasoning of new comers, as they are called ; depending on age, constitution, and habit of body. But all seasoning diseases are

said to be of the inflammatory kind; and yield

lo antiphlogistic treatment proportioned to their

O earth, how like to heaven ! if not preferred

Most justly, seat worthier of gods, as built

w>th second thoughts, reforming what was old.

r Milton.

. , °.1 “aDy’on>

?or ff2.AkS?’ suc,h magnificen,ce*

Equalled in all their glories, to ins hnne

B^lus or Ser [& ^ ^ Q. sgut

Their kins-s Id

From their foundations loosening to and fro,

They plucked the seated hills. Id.

The iady of the leaf ordained a feast,

And made the lady of the flower her guest;

When, lo, a bower ascended on the plain,

With sudden seats ordained, and large for either

train. Dryden.

^n Alba he shall fix his royal seat ;

And, born a king, a race of kings beget. fd.

„ l

Co,y,?r the mountain and command the plain. Prior.

*° ^ “**

bKAT, n. s. & v. a. Sax. reot; Swed. sate ;

Teut. sett; Lat. secies. A chair; bench; any

thing on which one may sit: hence a throne, or

royal or episcopal seat ; hence also residence ; si-

tuation ; site : to seat is, to place on seats, or in authority or office ; fix.

The fittest and the easiest to be drawn

To our society and to aid the war,

The rather for the,r «a», being next borderers

Bv /n m BenJomon, Catthne.

My no means build too near a great neighbour.

which were in truth to be as unfortunately mated on the earth as Mercury is in the heavens : fqr the most part ever in combustion or obscurity, uuder brighter beams than his own. Wotton.

Whatsoever be the manner of tbe world's end,

Host certain it is an end it shall have, and as cer-

Aiin that then we shall appear before the judgment

teat of Christ, that every man may receive according to that which he hath done in his body, whether it be good or evil. Habevill 0,1 Providence.

He that builds a fair house upon an ill scat com-

mittetb himself to prison. Baa-n

It followeth now that we find out the teat of Eden –

for in it was Paradise by God planted. Raleiah.

The sons of light

Hastcd, resorting to the summons high,

A u

A irit of or oppositioil makes mankind un-

easy to see others of the same species mated above

them in a sort of perfection. Pope.

Themselves perhaps, when weary they retreat

To' enjoy cool nature in a country seat,

To' exchange the centre of a thousand trades,

ˆor clumps, and lawns, and temples, and cascades,

May now and then their velvet cushions take,

And seem to Pray for &ood examPle sake- Cowper.

SEATER, one of the chief deities of the an-

«ˆient Saxons, reckoned by mythologists analogous

to the Saturn of the Greeks and Romans. Sa-

turday was named from this idol.

SEA'WARD, adv. Sea and Sax. peajVo.

Towards the sea.

The rock rushed seaward with impetuous roar,

Ingulfed, and to the' abyss the boaster bore. Pope; SEA- WATER, ANALYSIS OF. In June, 1776,

Sir Torbern Bergman analysed a pint of sea-

water, taken from the depth of sixty fathoms in the latitude of the Canary Islands, and found the so

Hd contents as follows :— Of common salt 253

u grs-, sallied magnesia 69 n grs., and gypsum

8 ft ars. ; in all 330 fT grs., or~5 drams, 1 scru-

ple,"and 10 grs.,. and }, parts. The principal

salts contained in sea-water are, 1st, Common

marine or culinary salt, compounded of fossil

alkali or soda and marine acid ; 2dly, A salt

formed by the union of the same acid with mag

nesian earth ; and, lastly, A small quantity of

syenite. The quantity of saline matter contained

*jn •< of sea_water in the British seas iSj ac_*

S Neum about one ounce in each

• & j o

P1"1′ See OcEA» and S£A' ~ n

SEA-WATER, MEDIC AL USES OF. Dr. Uussel

published a dissertation on the medical uses of

sea-water in diseases of the glands, &c., wherein

the author premises some observations upon the

nature of sea-water, considered as impregnated

with particles of all the bodies it passes over,such as submarine plants, fish, salts, minerals, &C.,

and saturated with therr several effluvia, to enrich it and keep it from putrefaction ; whence this fluid j sup 'd to cont^ct a soapiness ; and the whole

• i • j i i i_ i i

collectlon> beln? P^'aded by the sulphureous

*steams \> ™*m% through it, constitutes what we*

ca'l sea-water; the confessed distinguishing cna-

racteristics of which are saltness, bitterness, nitro-

sity, and uiictiioiity : whence the author con-

SKA

eludes that it may be justly expected to contribute signally to the improvement of physic. The cases

in which our author informs us we are to expect

advantage from the sea- water are, 1. In all recent obstructions of the glands of the intestines and me-

sentery. 2. All recent obstructions of the pulmo-

nary glands, and those of the viscera, which fre-

quently produce consumptions. 3. All recent

glandular swellings of the neck, or other parts.

4. Recent tumors of the joints, if they were not

suppurated or become schirrous or cancerous,

and have not carious bones for their cause. 5.

Recent deductions upon the glands of the eye-lids.

6. All defoedations of the skin, from an erysipelas to a lepra. 7. Diseases of the glands of the nose, with their usual companion a thickness of the lip.

8. Obstructions of the kidneys, where there is no

inflammation, and the stone not large. 9. In re-

cent obstructions of the liver, this method will

be proper, where it prevents constipations of the

belly, and assists other medicines directed in ic-

terical cases. The same remedy is said to be of

signal service in the bronchocele ; and is likewise

recommended for the prevention of those bilious

colics that so frequently afflict our mariners.

The method of making sea-water fresh was

long a desideratum in navigation. Many methods have been proposed for this purpose. Mr. Appteby published an account of a process which he had instituted in 1734. He distilled sea-water with a quantity of lapis infernalis and calcined bones ; but this process was soon laid aside, as it •was not only difficult in itself, but rendered the water unpalatable. Dr. Butler proposed soap-leys in place of Mr. Appleby's ingredients ; but the water was still liable to the same objection. Dr. Stephen Hales recommended powdered chalk ; but his method was expensive, and did not improve the taste of the water. Dr. Lind of Portsmouth distilled sea-water without any ingredients ; but as the experiment he made was performed in a vessel containing only two quarts, with a glass receiver, in his study, nothing conclusive could be drawn from it for the use of sailors. At length Dr. Irving brought the process to a very high degree of simplicity and perfection, by which the water is obtained pure, without much expense of fuel, or a complicated apparatus. For this discovery he received a reward of £5000. The advantages of this method remain to be stated, which may be reduced to the following :

I.The abolishing all stills, still-heads, wonn-pipes, and their tubes, which occupy so much

space as to render them totally incompatible with

the necessary business of the ship ; and using in

the room of these the ship's kettle or boiler, to the top whereof may occasionally be applied a simple

tube, which can be easily made on board a vessel

at sea, of iron plate, stove funnel, or tin sheet ; so that no situation can prevent a ship from being completely supplied with the means of distilling

sea-water. 2. In consequence of the principles

of distillation being fully ascertained, the contriv-

ance of the simplest means of obtaining the

greatest quantity of distilled water, by making

the tube sufficiently large to receive the whole

column of vapor, and placing it nearly in a ho-

rizontal direction, to prevent any compression of

the fluid, which takes place so much with the

comrron worm. 3. The adopting of the sim|.iey.

and most efficacious means of condensing vapor;

?or nothing more is required in the distillation but keeping the surface of the tube always wet, which

is done by having some sea-water at hand, and a

person to dip a mop or swab into this water, and

pass it along the upper surface of the tube. By

this operation the vapor contained in the tube

will be entirely condensed with the greatest rapi-

dity imaginable ; for by the application of the

wet mop thin sheets of water are uniformly spread,

and mechanically pressed upon the surface of the hot tube ; which, being convened into vapor, make way for a succession of fresh sheets ; and thus, both by the evaporation and close contact of the cold water constantly repeated, the heat is carried off more effectually than by any other method yet known. 4. The carrying on the distillation without any addition, a correct chemical analysis of sea-water having evinced the futility of mixing ingredients with it, either to prevent an acid from rising with the vapor, or to destroy any bituminous oil supposed to exist in sea-water, and to contaminate the distilled water, giving it that fiery unpalatable taste inseparable from the former processes. 5. The ascertaining the proper quantity of sea-water that ought to be distilled, whereby the fresh water is prevented from contracting a noxious impregnation of metallic salts, and the vessel from being corroded and otherwise damaged by the salts caking on the bottom of it. 6. The producing a quantity of sweet and wholesome water, perfectly agreeable to the taste, and sufficient for all the purposes of shipping. 7. The taking advantage of the dressing the ship's provisions, so

as to distil a very considerable quantity of water from the vapor, which would otherwise be lost, without any addition of fuel. To sum up the merits of this method in a few words : — The use of a simple tube, of the most easy construction, applicable to any ship's kettle. The rejecting all ingredients; ascertaining the proportion of water to be distilled, with every advantage of quality, saving of fuel, and preservation of boilers. The obtaining fresh water, wholesome, palatable, and in sufficient quantities. Taking advantage of the vapor which ascends in the kettle while the ship's provisions are boiling. All these advantages are obtained by the above mentioned simple addition to the common ship's kettles. But Dr. Irving proposes to introduce two further improvements. The first is a hearth, or stove, so constructed that the fire which is kept up the whole day for the common business of the ship may serve likewise for distillation ; whereby a sufficient quantity of water for all the economical purposes of the ship may be obtained, with a very inconsiderable addition to the expense of fuel. The other improvement is that

of substituting, even in the largest ships, cast-

iron boilers, of a new construction, in the place

of coppers. As soon as sea-water is put into the

boiler, the tube is to be fitted either into the top or lid, round which, if necessary, a bit of \vet

linen may be applied, to make it fit close to the mouth of the vessel; there will be no occasion

for luting, as the tube acts like a funnel in car-

rying off the vapor. When the water begins to

boil, the vapor should be allowed to pass freely

for a minute, which will effectually clean the

tube and upper part of the boiler. The tube is

afterwards to be kept constantly wet, by passing

a mop or swab, dipped in sea-water, along its

upper surface. The waste water running from

the mop may be carried off by means of a board

made like a spout, and placed beneath the tube.

The distillation may be continued till three-

fourths of the water be drawn off, and no further.

This may be ascertained either by a gauge-rod

put into the boiler, or by measuring the water

distilled. The brine is then to be let out. Water

may be distilled in the same manner while the provisions are boiling. When the tube is made on shore, the best substance for the purpose is thin copper well tinned, this being more durable in long voyages than tin-plates. Instead of mopping, the tube, if required, may have a case made also of copper, so much larger in diameter as to admit a thin sheet of water to circulate between them by means of a spiral copper thread, with a pipe of an inch diameter at each end of the case ; the lower for receiving cold water, and the upper for carrying it off when heated.

SEA-WATER, METHOD OF PRESERVING. As it is sometimes necessary to preserve sea-water in casks, for bathing and other purposes, it is of importance to know how to keep it from putrefaction. Many experiments were made to determine this point by Mr. Henry, and are recorded in the first volume of the Memoirs of the Literary and Philosophical Society of Manchester. His first experiment we shall here present to our readers : — ‘ To one quart of sea-water were added two scruples of fresh quicklime ; to another half an ounce of common culinary salt ; and a third was kept as a standard without any

addition. The mouths of the bottles being loosely covered with paper, they were exposed to the action of the sun in some of the hottest weather in summer. In about a week the standard became very offensive ; and the water, with the additional quantity of salt, did not continue sweet many hours longer ; whereas that with lime continued many months without ever exhibiting the least marks of putridity.' When he added a dram more of quicklime, the whole of the magnesia contained in the water was separated ; and, when a further addition was made, a lime-water was immediately formed. He therefore concluded that two scruples of quick-lime are sufficient to preserve a quart of sea-water. The proportions, however, may vary a little, according to the strength of the quick-lime employed.

SEA-WEED, or SEA WARE, alga marina, is com monly used as a manure on the sea-coast, where it can be produced in abundance. The best sort grows on rocks and is that from which kelp is made. The next to this is called the peasy sea-weed; and the worst is that with a long

stalk. In the neighbourhood of Berwick, the farmers mix it with stable dung and earth, and thus obtain a great quantity of excellent manure. Sea-weed is found also to be a very fit manure for gardens, as it not only enriches them, but destroys the vermin by which they are usually infested. See A.LCS..

SEBA (Albert), a learned Dutch naturalist, born at Etzeel, in East Frieseland. He wrote an extensive work on natural history, published at Amsterdam in 1734, in 3 vols. folio. The explanations are in Latin and French.

SEBACIC ACID, the acid procured from fat. See CHEMISTRY, Index. Dr. Thomson gives the following account of it : — ‘ Chemists had long suspected that an acid could be obtained from tallow, on account of the acrid nature of the fumes which it emits at a high temperature ; but it was M. Grutzmacher who first demonstrated it in a dissertation De Ossium Medulla, pubfished in 1748. M. Rhodes mentioned it in 1753. Segner published a dissertation on it in 1754; and Crell examined its properties very fully in two dissertations in the Philosophical Transactions

for 1780 and 1782. It was called at first acid of fat. It may be procured by the following process : — Mix quick -lime with melted tallow, and keep the mixture for some time in a melting heat. Then let it cool, and wash it in a great quantity of water. Evaporate this water, and there will be obtained a brown salt, which is impure sebate of lime. Heat this pretty strongly in a crucible, dissolve it in water, filter it, separate the excess by carbonic acid; then evaporate. Pure crystallised sebate of lime is obtained. Mix this with sulphuric acid, and distil with a moderate heat. Sebacic acid comes over. It is a liquid of an acid, sharp, bitterish taste. When concentrated, it exhales a white smoke, which has a strong, disagreeable, peculiar odor, and irritates the eyes and throat. It reddens tincture of turnsole. Heat causes it to assume a yellowish color. When distilled, it yields a brownish liquid, and, when distilled to dryness, it leaves a little charcoal. When passed through a red-hot tube, it is decomposed and converted into water, carbonic acid, carbonated hydrogen gas, and charcoal. It combines with alkalies, earths, and metallic oxides, and forms salts, called sebates.

It oxidates silver, mercury, copper, iron, lead, tin, zinc, antimony, and manganese. It does not act upon bismuth, cobalt, or nickel. When mixed with nitric acid it dissolves gold. Its affinities, according to Morveau, are as follows : — barytes, potassa, soda, lime, magnesia, ammonia, alumina, metallic oxides.'

SEBASTIAN, king of Portugal, the posthumous son of the infant John, by Joanna, daughtj • of the emperor Charles V., succeeded to the crown, at three years of age, in 1577, on th? death of his grandfather John III. At the age of twenty he undertook a romantic expedition against the Moors in Africa, in which, however, he performed nothing of consequence : but, impressed with this object, on the application ot Muley Hamet, king of Fez and Morocco, to assist him against his uncle, Muley Moloch, he determined to renew his attempt against the infidels, lie accordingly embarked with the flower of his nobility and military in the summer of 1578 and proceeded to Arzilla. Here he was met by an overwhelming force, headed by Muley Moloch in person, although so debilitated by

sickness as to be carried on a litter. In the

battle that ensued the Portuguese army broke

the first line of the Moors; and Mule'- in rally-

ing his men, was so exhausted, that he died in

the arms of his guards ; his last and much ex-

tolled action being to lay his fingers to his lips, as an injunction to keep his death secret, in

order not to depress the spirits of his army.

Sebastian, on the other hand, fought with great

bravery, and had two horses killed under him.

He at length, after his attendants were all slain,

disappeared, nor was it ever known what became

of him, although a body, supposed to be his, was

restored by the Moors, and buried at Belem.

Not more than fifty Portuguese are said to have

survived this expedition; yet such was the at-*

tachment of the people to Sebastian's memory,

that a disposition to believe that he would appear

again prevailed for many years. Various impos-

tors took advantage of it.

SEBASTIAN, a town in the intendency of So-

nora, Mexico, situated on the skirt of a moun-

tain. It is of a hot temperature, and the sur-

rounding territory abounds in maize ; but the principal pursuit is its fisheries, which are carried on to a great extent on the Mazatlan. They consist of mulattoes, mestizoes, and Indians. Long. 106° W., lat. 24° N.

SEBASTIAN, a river of the New Kingdom of Granada, in the province of Santa Martha, which has a northern course and enters the swamp of Santa Martha.

SEBASTIAN, SAN, DE Bu EN AVISTA, a decayed town of New Granada, 140 miles S.S.W. of Carthagena, at the mouth of the gulf of Darien. It was formerly of much importance.

SEBASTIAN (St.), a considerable town and fortress of Spain, the capital of the district of Guipuscoa, in the province of Biscay. It stands on a bay between two inlets, forming a peninsula at the mouth of the river Uramea. It has long been a place of great strength : the town being fortified with bastions and half moons, and the citadel standing on a conical eminence, accessible only by a path winding round it in a spiral form. The harbour is small and capable of containing only about thirty merchantmen ; but it is

nearly enclosed by the two moles, and protected

from winds by the adjacent eminences. Here

are three churches, five convents, and an hospi-

tal. The streets are wide, straight, and well

paved ; and the houses respectable. St. Sebas-

tian exports ships' anchors, cables, and leather,

the manufactures in the town. The environs are

pleasant, the view commanding both the sea and

the Pyrenees. The principal walk is in a de-

lightful vale to the north. St. Sebastian has

been often taken by the French, being only ten

miles from the Spanish frontier; it fell into their hands in the war of 1719, in the revolutionary

contest of 1794, and in Buonaparte's invasion in

1808. On the last occasion it remained five

years in their possession ; and when the victory

of Vittoria had opened to the British the prospect

of its capture, the French had time to throw into

it a garrison capable of making an obstinate de-

fence. An attempt on the part of our army to

take it by assault on the 25th of July, 1813, was repulsed with great loss. It became necessary to

;n:ike approaches with great caution, and even to

incur a severe sacrifice of lives in the final attack, on the 31st of August, when it fell into the hands of the British. A fire burst out in the town at

this time, which, joined to the preceding bom-

bardment, laid it almost entirely in ashes ; but it was afterwards rebuilt. Inhabitants about 12,000. Eight miles west of Fontarabia, and forty east of Bilboa.

SEBASTIAN (St.), a sea-port, and capital of the island of Gomera, one of the Canaries.

SEBASTIAN (St.), an island in the Atlantic, separated from the coast of Brasil by a strait about three leagues wide. Lat. 23° 45′ S. It is said to produce the best sugar, rum, and pulse, as well as the finest cattle in Brasil ; and is situated on a low tract of ground about 300 yards from the beach. The inhabitants subsist chiefly on fish. The town has been noted for its very large canoes scooped out of the solid timber.

SEBASTIAN, (St.), DE LOS REYES, a city of Columbia, in the Caraccas, standing on the shore of the river Guarico. It was founded towards the end of the sixteenth century : it is rendered rather disagreeable for residence, by the very great heats which the continual and strong breezes from the north-east faintly temper. The water is abundant. The soil of its jurisdiction, fit for many commodities, produces scarcely any thing but maize., but its pastures feed large herds of

cattle. Population 3500. Twenty-eight leagues S. £ S.W. of Caraccas.

SEBASTIANO, an eminent Venetian painter, called Del Piombo, from an office in the lead mines given him by pope Clement VII., was born in 1485. He was first a disciple of old John Bellini ; continued his studies under Giorgione ; and, having attained an excellent manner of coloring, went to Home, where he obtained the favor of Michael Angelo. He invented the art of preparing plaster-walls for oil-painting ; but was so slow in his work that other hands were often employed to finish what he began. He died in 1547.

SEBAT, or SHEBET, in chronology, the fifth month of the civil year among the Jews, and the llth of their sacred year. It consists of thirty days, and begins on January, and ends in February. The Jews observe two fasts in it ; on the tenth for the death of the elders, who outlived Joshua, and on the 17th for the people of Gibeah. Judges xx.

SEBENICO, an old town of Austrian Dalmatia, near the mouth of the Kerka. It stands on

the slope of a rocky hill, extending to the edge of the water, and is surrounded by fortifications. The Kerka here expands into a lake which forms an excellent and capacious harbour, protected by a fort, and communicating with the Adriatic by means of a short and narrow strait. The town is defended by two forts on the top of the hill. It is said to have been more considerable in the sixteenth century, but has long been a bishop's see, and has a Gothic cathedral, admired for the bold construction of its roof, formed of marble slabs. The environs are fertile. Inhabitants 6300. Thirty-seven miles south-east of Zara, and 143 north-west of Ragousa.

SEBOO, or SAIU-, a considerable river of Morocco, which rises in the Atlas, near the frontier, traverses the province of F« >. |SECEDERS.

sea. The mouth is, however, much incommoded by wind.

SEC ALE, rye, in botany, a genus of the digynia order, and triandria class of plants ; natural order fourth, gramina: CAL. a glume of two leaves, which are opposite to one another, erect,

linear, pointed, and less than the corolla: COR.

consists of two valves, the exterior of which ends

in a beard. There are several species.

1. S. cereale, common rye, has glumes with

rough fringes. It is a native of the island of

Candia, was introduced into England many ages

ago, and is the only species of rye cultivated in

this kingdom. There are, however, two varieties,

the winter and spring rye. I. The winter rye,

which is larger in the grain than the spring rye,

is sown in autumn, at the same time with wheat,

and sometimes mixed with it ; but, as the rye

ripens sooner than the wheat, this method must

be very exceptionable. II. The spring rye, sown

along with the oats, usually ripens as soon as

the winter rye ; but the grain produced is lighter, and it is therefore seldom sown except where the

autumnal crop has failed. Rye is commonly

sown on poor, dry, limestone, or sandy soils,

where wheat will not thrive. By continuing to

sow it on such a soil for two or three years, it will at length ripen a month earlier than that

which has been raised for years on strong cold

ground. Rye is commonly used for bread, either

alone or mixed with wheat. This mixture is

called meslin, and was formerly a very common crop in some parts of Britain. Mr. Marshall tells us, that the farmers in Yorkshire believe that this mixed crop is never affected by mildew, and that a small quantity of rye sown among wheat will prevent this destructive disease. Rye is much used for bread in some parts of Sweden and Norway. About a century ago rye bread was also much used in England ; but, being made of a black kind of rye, it was of the same color, clammy, very detergent, and consequently not so nourishing as wheat. Rye is subject to a disease which the French call ergot, and the English horned rye; which sometimes happens when a very hot summer succeeds a rainy spring. According to Tissot, horned rye is such as suffers an irregular vegetation in the middle substance between the grain and the leaf, producing an excrescence of a brownish color, about an inch and a half long, and two-tenths of an inch broad. Bread made of this kind of rye has a nauseous and acrid taste, and produces spasmodic and gangrenous disorders. In 1596 an epidemic disease prevailed in Hesse, which the physicians

ascribed to bread made of horned rye. Some,

we are told, were seized with an epilepsy, and

these seldom ever recovered ; others became lu-

natic, and continued stupid the rest of their lives ; those who apparently recovered had annual re-

turns of their disorder in January and February.

The same disease was occasioned by the use of

this bread in several parts of the continent in

1648, 1675, 1702, 1716, 1722, and 1736; and

has been very minutely described by Hoffman,

A. (). Goelicke, Vater Burghart, and J. A.

Srink. In 1709 one-fourth part of all the rye

raised in the province of Salone in France was

Corned, and the surgeon to the hospital of Or-

leans had no fewer than 500 patients under his

care that were distempered by eating .it ; they

consisted chietly of men and boys, the number

of women and girls being very small. The first

symptom was a kind of drunkenness, then the

local disorder began in the toes, and thence ex-

tended sometimes to the thigh, and the trunk it-

self, even after amputation. In 1710 the cele-

brated Fontenelle describes a case in the History

of the Academy of Sciences of France. A peasant

at Blois, who had eaten horned rye in bread,

was seized with a mortification, which first caused

all the toes of one foot to fall off, then the toes of the other, afterwards the remainder of the feet ; and, lastly, it ate off the flesh of both his legs and thighs, leaving the bones bare. Horned rye

is not only hurtful to man, but to other animals ; it has been known to destroy even the flies that

settled upon it ; sheep, dogs, deer, geese, ducks,

swine, and poultry, that were fed with it for ex-

periment, died miserably, some convulsed, others

mortified and ulcerated.

2. S. creticum, the Cretan rye, has glumes

fringed on the outside.

3. S. orientale, the oriental rye, has shaggy

glumes, and the scales of the calyx are shaped

like an awl.

4. S. villosum, the wood rye grass, has a calyx

with wedge-shaped scales, and the fringes of the

gloom is woolly.

SECANT, in geometry, is a line that cuts

another, or divides it into parts. The secant of

a circle is a line drawn from the circumference

on one side to a point without the circumference

on the other ; and it is demonstrated by geome-

ters that, of several secants drawn to the same

point, that is the longest which passes through

the centre of the circle. The portions, however,

of these several secants that are without the circle, are so much the greater as they recede from the centre, and the least external portion is of that secant which passes through it.

SECEDE', v. n. \ Lat. secedo. To with-
SECE'DER, n. s. >draw from society or asso-
SECES'SION. j elation : he who withdraws or departs: the act of withdrawing.

The accession of bodies upon, or secession thereof from the earth's surface, perturbs not the equilibration of either hemisphere. Browne.

SECEDERS, in church history, a numerous body of Presbyterians in Scotland, who have withdrawn from the communion of the established church. As they take up their ground upon the establishment of religion from 1638 to 1650, which they hold to be the purest period of the Scottish church, we shall introduce our account of them by a short review of ecclesiastical history from that period to the era of the secession, and give a fair statement of those events with which, as they say, their secession is connected. James I. having for some time previous to his death entertained a wish to

form the church of Scotland as much as possible

upon the model of that of England, his son

Charles, with the assistance of archbishop Laud,

endeavoured to carry the design into execution,

by establishing canons for ecclesiastical disci-

pline, and introducing a liturgy into the puhlic

service of the church. Numbers of the clergy

and laity of all ranks took the alarm at what they considered to be a bold and dangerous innova-

tion; and, after frequent applications to the

throne, they at last obtained the royal proclama-

tion for a free parliament and general assembly.

The assembly met in 1638, and began their

labors with a repeal of all the acts of the six

preceding parliaments, which had favored the

designs of James. They condemned the liturgy,

together with every branch of the hierarchy.

They cited all the Scottish bishops to their bar ;

and after having excommunicated nine of them,

and deposed five from their episcopal office, they

restored kirk-sessions, presbyteries, and synods,

provincial as well as national. These proceed-

ings were ratified by the parliament which met

in 1640. The law of patronage was in full force for several years after this period ; yet great care was taken that no minister should be obtruded on the Christian people contrary to their inclinations ; and in 1649 it was abolished as an oppressive grievance. The restoration of Charles II., in 1660, changed the face of affairs in the church of Scotland. All that the general assembly had done, from 1638 to 1650, was rendered null and void, their covenants were pronounced to be unlawful, episcopacy was restored, and the king was declared to be the supreme head of the church in all causes civil and ecclesiastical. During this period the Presbyterians were subjected to fines and imprisonment, while numbers of them were publicly executed for their adherence to their political and religious tenets. The Revolution in 1688 gave a different turn to the affairs of the church. The first parliament which met after the event abolished prelacy, and the king's supremacy in ecclesiastical affairs. They ratified the Westminster Confessions of Faith, together with the Presbyterian form of church government and discipline, ' as agreeable to the word of God, and most conducive to the

advancement of true piety and godliness, and the establishment of peace and tranquillity within these realms.' The same parliament abolished patronage, and lodged the election of ministers in the hands of heritors and elders, with the consent of the congregation. In the reign of queen Anne the true Protestant religion was ratified and established, together with the Presbyterian form of church government and discipline; and the unalterable continuance of both was declared to be an essential condition of the union of the two kingdoms in all time coming. In 1712 the law respecting patronage was revived, in resentment, it has been said, of that warm attachment which the church of Scotland discovered to the family of Hanover ; but the severity of that law was greatly mitigated by the first parliament of George I. stat. 50, by which it is enacted that if the presentee do not signify his acceptance, in six months, the presentation shall become void and null in law. The church, however, did not avail herself of this statute ; and an event which happened not many years afterwards gave rise to the secession.

In 1732 more than forty ministers presented

an address to the general assembly, S|>ecifyingin

a variety of instances \ hat they considered to be great defections from the established constitution

of the church, and craving a redress of these grie-

vances. A petition to the same effect, subscribed

by several hundreds of elders and private Chris-

tians, was offered at the same time ; but the as-

sembly refused a hearing to both, and enacted

that the election of ministers to vacant charges,

where an accepted presentation did not take

*place, should be competent only to a conjunc**

meeting of elders and heritors, being Protes

tants. To this act objections were made by num

bers of ministers and private Christians. They

asserted that more than thirty to one in every

parish were not possessed of landed property,

and were on that account deprived of what they

deemed their natural right to choose their own

pastors. It was also said that this act was ex-

tremely prejudicial to the honor and interest of"

the church as well as to the edification of the

people ; and, in fine, it was directly contrary to

the appointment of Jesus Christ, and the prac-

tice of the apostles, when they filled up the first vacancy in the apostolic college, and appointed

the election of deacons and elders in the primitive church. Many of those also who were thought to be the best friends to the church expressed their fears that this act would have a tendency to overturn the ecclesiastical constitution which was established at the Revolution. Mr. Ebenezer Erskine, minister at Stirling, distinguished himself by a bold and determined opposition to the measures of the assembly in 1732. Being at that time moderator of the synod of Perth and Stirling, he opened the meeting at Perth with a sermon from Psalm cxviii. 22 : ‘ The stone which the builders rejected is become the head stone of the corner.’ In the course of his sermon he remonstrated, with no small degree of freedom, against the act of the preceding assembly with regard to the settlement of the ministers, and alleged that it was contrary to the word of God and the established constitution of the church. A formal complaint was lodged against him, for uttering several offensive expressions in his sermon before the synod. Many of the members declared that they heard him utter nothing but sound and seasonable doctrine ; but his ac-

cusers, insisting on their complaint, obtained an appointment of a committee of synod to collect what were called the offensive expressions, and to lay them before the next diet in writing. This was done accordingly ; and Mr. Erskine gave in his answer to every article of the complaint. After three days' warm reasoning on this affair, the synod by a majority of six found him censurable ; against which sentence he protested, and appealed to the next general assembly. When the assembly met, in May 1733, it affirmed the sentence of the synod, and appointed Mr. Erskine to be rebuked and admonished from the chair. Upon which he protested, that, as the assembly had found him censurable, and had rebuked him for doing what he conceived to be agreeable to the word of God and the standards of the church, he should be at liberty to preach the same truths, and to testify against the same or similar evils, on every proper occasion. To this protest Messrs. William Wilson minister at Perth, Alexander Moncrieff minister at Abernethv, and James Fisher minister at Kinclaven, g;ui> in a written adherence, under the form of

instrument ; and these four withdrew, intending

1o return to their respective charges, and act

agreeably to their protest whenever they should

have an opportunity. Had the affair rested here,

there never would have been a secession ; but the

assembly, resolving to carry on the process,

cited them by their officer to appear next day.

They obeyed the citation ; and a committee

•was appointed to retire with them to persuade

them to withdraw their protest. The committee

having reported that they still adhered to their

protest, the assembly ordered them to appear

before the commission in August following and

retract their protest ; and if they should not comply, and testify their sorrow for their conduct, the

commission was empowered to suspend them from

the exercise of their ministry, with certification

that, if they should act contrary to thesaid sentence, the commission should proceed to a higher cen-

sure. The commission met in August accordingly;

and the four ministers, still adhering to their

protest, were suspended from the exercise of their

office, and cited to the next meeting of the com-

mission in the November following. From this sentence several ministers and elders, members of the commission, dissented. The commission met in November, and the suspended ministers compeared. Addresses, representations, and letters from several synods and presbyteries, relative to the business now before the commission, were received and read. The synods of Dumfries, Murray, Ross, Angus and Mearns, Perth, and Stirling, craved that the commission would delay proceeding to a high censure. The synods of Galloway and Fife, as also the presbytery of Dornoch, addressed the commission for lenity, tenderness, and forbearance towards the suspended ministers ; and the presbytery of Aberdeen represented that, in their judgment, the sentence of suspension inflicted on the aforesaid ministers was too high, and that it was a stretch of ecclesiastical authority. Many members of the commission reasoned in the same manner, and alleged that the act and sentence of the last assembly did not oblige them to proceed to a higher censure at this meeting of the commission. The question, however, was put, Proceed to a

higher censure, or not? and the votes, being numbered, were found equal on both sides : upon which Mr. John Goldie, the moderator, gave his casting vote to proceed to a higher censure ; which stands in their minutes in these words: — ‘ The commission did and hereby do loose the relation of Mr. Ebenezer Erskine minister at Stirling, Mr. William Wilson minister at Perth, Mr. Alexander Moncrieff minister at Abernethy, and Mr. James Fisher minister at Kinclaven, to their respective charges, and declare them no longer ministers of this church ; and do hereby prohibit all ministers of this church to employ them, or any of them, in any ministerial function. And the commission do declare the churches of the said ministers vacant from and after the date of this sentence.’ This sentence being intimated to them, they protested that their ministerial office, and relation to their respective charges, should be held as valid as if no such sentence had passed; and that they were now obliged to make a secession from the prevailing party in the ecclesiastical courts ; and that it shall be lawful and warrantable for them to preach the gospel and discharge every branch of the pastoral office, according to

the word of God and the established principles of the church of Scotland. Mr. Ralph Erskine minister at Dunfermline, Mr. Thomas Mairministei at Orwel, Mr. John M'Laren minister at Edinburgh, Mr. John Currie minister at Kinglassie, Mr. James Wardlaw minister at Dunfermline, arid Mr. Thomas Nairn minister at Abbotshal, protested against the sentence of the commission, and that it should be lawful for them to complain of it to any subsequent general assembly of the church. The secession properly commenced at this date. And accordingly the ejected ministers declared, in their protest, that they were laid under the disagreeable necessity of seceding, not from the principles and constitution of the church of Scotland, to which they said they stedfastly adhered, but from the present church-courts, which had thrown them out from ministerial communion.

The assembly which met in May 1734 did so far modify the above sentence that they empowered the synod of Perth and Stirling to receive the ejected ministers into the communion of the church, and restore them to their respective

charges; but with this express direction, ‘ that the said synod should not take upon them to judge

of the legality or formality of the former proce-

dure of the church judicatories in relation to this

affair, or either approve or censure the same.’ As

this appointment neither condemned the act of

the preceding assembly, nor the conduct of the

commission, the seceding ministers considered it

to be rather an act of grace than of justice, and therefore they said they could not return to the

church-courts upon this ground ; and they pub-

lished to the world the reasons of their refusal,

and the terms upon which they were willing to

return to the communion of the established

church. They now erected themselves into an

ecclesiastical court, which they called the Asso-

ciated Presbytery, and preached occasionally to

numbers of people who joined them in different

parts of the country. They also published what

they called an Act, Declaration, and Testimony,

to the doctrine, worship, government, and disci-

pline of the church of Scotland, and against se-

veral instances, as they said, of defection from

these, both in former and in the present times.

Some time after this several ministers of the

established church joined them, and the Associated Presbytery now consisted of eight ministers. But the general assembly which met in 1738, finding that the number of seceders was much increased, ordered the eight ministers to be served with a libel, and to be cited to the next meeting of the assembly in 1739. They now appeared at the bar as a constituted presbytery, and, having formally declined the assembly's authority, they immediately withdrew. The assembly which met next year deposed them from the office of the ministry, which, however, they continued to exercise in their respective congregations, who still adhered to them, and erected meeting-houses, where they preached till their death. Mr. James Fisher, the last survivor of them, \vas by a unanimous call, in 1741, translated from Kinclaven to Glasgow, where he continued in the exercise

of his ministry among a numerous congregation, respected by all ranks in that large city, and died in 1775, much regretted by his people and friends. In 1745 the seceding ministers were

become so numerous that they were erected into three different presbyteries, under one synod, •when a very unprofitable dispute divided them into two parties. The burgess oath, in some of the royal burghs of Scotland, contains the following clause : — ‘ I profess and allow with my heart the true religion presently professed within this realm, and authorised by the laws thereof. I will abide at and defend the same to my life’s end, renouncing the Romish religion called Papistry.’ Messrs. Ebenezer and Ralph Erskine, James Fisher, and others airirmed that this clause was no way contrary to the principles upon which the secession was formed, and that therefore every seceder might lawfully swear it. Messrs. Alexander Moncrieff, Thomas Mai r, Adam Gib, and others, contended, on the other hand, that the swearing of the above clause was a virtual renunciation of their testimony. And this controversy was so keenly agitated that they split into two different parties, and long met in different synods. Those of them who asserted the lawfulness of swearing the burgess oath were called burghers, and the other party who condemned it anti-

burgher seceders, each party claiming to itself the lawful constitution of the associate synod. The antiburghers, after several previous steps, excommunicated the burghers on the ground of their sin, and of their contumacy in it. This rupture took place in 1747, since which period no successful attempts to effect a re-union were made until recently. The parties remained under the jurisdiction of different synods, and held separate communion ; at length their former hostility was laid aside, and they finally became one body. See BURGHERS.

SECERN', v. a. Lat. secerno. To separate finer from grosser matter ; to make the separation of substances in the body.

Birds are better meat than beasts, because their flesh doth assimilate more finely, and secerneth more subtilly. Bacon.

The pituite or mucus secerned in the nose and windpipe, is not an excrementitious but a laudable humour, necessary for defending those parts, from which it is secerned, from excoriations. Arbuthnut.

SECHIUM, in botany, a genus of the syngenesia order, and moncecia class of plants ; natural order thirty-fourth, cucurbitaceae : MALE

CAL. quinquedentate and monophyllous : COR. monopetalous ; the five filaments are united in an erect tube. In the female flower the pistillum is cylindrical and erect; the stigma large, peltated, and reflected ; the pericarpium large, oval, unequal, fleshy, and unilocular, containing one seed, which is smooth, compressed, and fleshy. Of this there is only one species, viz. S. edule, or Chocho vine. This is cultivated and grows very luxuriantly in many places in Jamaica. The vines run and spread very much. The fruit is boiled, and served up at table by way of greens ; and the root of the old vine is somewhat like a yam (dioscorea), and, on being boiled roasted, tastes farinaceous and wholesome.

SECKENDOIIF (Guy Lewis de), a very-learned German, descended from an ancient and noble family, was born at Aurach in Franconia in 162G. He was a good linguist ; learned in law, history, and divinity ; and is said to have been a tolerable painter and engraver. He was honorably employed by several German princes ; and died counsellor of state to Frederick III. elector of Brandenburg, and chancellor of the university of Halle, in 1692. He wrote A History

and Defence of Lutheranism, 2 vols., fol., Frankfort, 1702, in Latin, &c. &c.

SECKER (Thomas), a learned prelate of the church of England, born in 1693, at Sibthorp, in Nottinghamshire. His father was a protestant dissenter, who, having a small paternal fortune, followed no profession. His mother was the daughter of Mr. George Brough, a substantial gentleman farmer of Shelton in the same county. He received his education at several private schools and academies in the country. Notwithstanding the disadvantage of changing his teachers, he had, at the age of nineteen, not only made a considerable progress in Greek and Latin, but in French, Hebrew, Chaldee, and Syriac ; logic, algebra, geometry, and conic sections, and gone through a course of lectures on Jewish antiquities, lie had been destined by his father for taking -orders among the dissenters. With this view his studies were chiefly turned towards divinity, in which he had made such quick advances that, by the time he was twenty-three, he had carefully read over a great part of the Scriptures, particularly the New Testament, in the original, and the best comments upon it; Euse-

bius's Ecclesiastical History ; The Apostolical Fathers; Whiston's Primitive Christianity; and the principal writers for and against Ministerial and Lay Conformity. But, though the result of these enquiries was a well-grounded belief of the Christian revelation, yet, not being then able to determine what communion he should embrace, he resolved to pursue some profession, which should leave him at liberty to weigh the various disputed points more maturely before he should decide upon them. In 1716, therefore, he studied physic, and, after gaining all the medical knowledge he could by reading and attending the best lectures in London, to improve himself farther, in January 1718-9, he went to Paris. There he lodged in the same house with the famous anatomist Winslow, whose lectures he attended, as he did those on the materiamedica, chemistry, and botany, at the king's gardens. The operations of surgery he saw at the Hotel Dieu, and attended also for some time M. Gregoire, the accoucheur, but without any design of practising surgery. Here he became acquainted with Mr. Martin Benson, soon afterwards bishop of Gloucester,

one of the most virtuous men of his time. During his continuance at Paris he also kept up a correspondence with Mr. Joseph Butler, afterwards bishop of Durham. Mr. Butler, having been appointed preacher at the rolls on the recommendation of Dr. Clarke and Mr. Edward Talbot, son to bishop Talbot, he mentioned his friend Mr. Seeker, without his knowledge, to Mr. Talbot, who promised, if he chose to take orders in the church of England, to engage the

bishop his father to provide for him. This was communicated to Mr. Seeker in a letter from Mr. Butler, in May 1720. Having continued his studies in theology, his former difficulties with regard to conformity had gradually lessened as his reading and knowledge became more extensive. After deliberating on Mr. Butler's proposal of such a change for two months, he resolved to embrace the offer, and left France in August 1720. On his arrival in England he was introduced to Mr. Talbot, but in December that gentleman died of the small-pox. This was a great shock to all his friends, but especially to an

amiable lady whom he had lately married, and who was very near sinking under so sudden and grievous a stroke. It was some encouragement, however, to Mr. Seeker to find that Mr. Talbot had, on his death-bed, recommended him, with Mr. Benson and Mr. Butler, to his father's notice. Thus did that excellent young man (for he was but twenty-nine when he died) raise up, when he least thought of it, the truest friend and protector to his wife and unborn daughter ; who afterwards found in Mr. Seeker all that tender care and assistance which they could have hoped for from the nearest relation. Mr. Seeker next went over to Leydeu, and took his degree of M. D. in March 1721 : and as part of his exercise for it he composed and printed a dissertation, De Medicina Statica, which is still extant, and is esteemed a sensible and learned performance. In April 1721 he entered commoner of Exeter College, Oxford ; after which he obtained the degree of A. B. He now spent a considerable part of his time in London, where he gained the esteem of some of the most learned men of those days, particularly of Dr.

Clarke, rector of St. James's, and the celebrated dean Berkeley, afterwards bishop of Cloyne. He paid frequent visits of gratitude to Mrs. Talbot, widow of Mr. Edward Talbot, by whom she had a daughter five months after his decease. With her lived Mrs. Catharine Benson, sister to bishop Benson, whom in several respects she resembled. She had been for many years Mrs. Talbot's inseparable companion, and was of unspeakable service to her at the time of her husband's death. Bishop Talbot, being in 1721 appointed to the see of Durham, Mr. Seeker was, in 1722, ordained deacon by him, and priest not long after, in St. James's church, where he preached his first sermon, March 28th, 1723. The bishop's domestic chaplain at that time was Dr. Rundle, a man of warm fancy and very brilliant conversation. With him Mr. Seeker was associated in the bishop's family, and both taken down by his lordship to Durham in July 1723. In 1724 the bishop gave Mr. Seeker the rectory of Houghton le Spring. This enabling him to fix himself in the world, he proposed marriage to Mrs. Benson ; which being accepted, they were married by bishop Talbot in 1725. At the earnest request

of both, Mrs. Talbot and her daughter consented to live with them, and the two families from that time became one. About this time bishop Talbot also gave preferments to Mr. Butler and Mr. Benson, whose rise and progress in the church is here itjterwoven with the history of Mr. Seeker. In the -••ijiter of 1 725-6 Mr. Butler first published his in-

comparable sermons; on which Mr. Seeker took pains to render the style more familiar, and the meaning more obvious. Mr. Seeker gave his friend the same assistance in that noble work the Analogy of Religion, &c. He now devoted all the time he possibly could to his residence at Houghton, fulfilling all the duties of a country clergyman with the strictest propriety. He brought down his sermons to the level of the understandings of his people ; he visited them in private, catechised the young and ignorant, received his neighbours and tenants kindly and hospitably, and was of great service to the poorer sort by his skill in physic. Though this place was in a very remote part of the world, yet the solitude of it perfectly suited his studious dispo-

sition, and the income satisfied his ambition.

Here he would have been content to live and die;

but Mrs. Seeker's health, which was injured by

the dampness of the situation, obliged him to

think of exchanging it for a more healthy one.

Accordingly an exchange was made, through the

interposition of Mr. Benson, with Drv Finney,

prebendary of Durham, and rector of Ilyton ; and

Mr. Seeker was instituted to Ryton and the pre-

bend June 3d, 1727. In July 1732 he was ap-

pointed chaplain to the king ; for which favor he

was indebted to Dr. Sherlock, who, having heard

him preach at Bath, had conceived the highest

opinion of his abilities. From that time an inti-

macy commenced between them. On Sunday

the 27th of August he preached before the queen,

the king being then abroad. A few days after

her majesty sent for him into her closet, and held a long conversation with him ; in the course of

which he mentioned to her his friend Mr. Butler;

which occasioned his rise to those high dignities

which he afterwards attained. See BUTLER. Mr.

Seeker now began to have a public character,

and was esteemed an eminent preacher. He was

accordingly instituted rector of St. James's on

the 18th May, 1733 ; and in July went to Oxford to take his degree of LL. D. On this occasion he preached his celebrated Act Sermon, on the advantages and duties of an academical education, which was universally allowed to be a masterpiece. It was printed at the desire of the heads of houses, and quickly passed through several editions. It is in the second collection of Occasional Sermons, published by himself in 1766. The reputation he acquired by this sermon contributed towards his farther promotion. In December 1734 the king fixed on him to be bishop of Bristol. Dr. Benson was at the same time appointed to the see of Gloucester, and Dr. Fleming to that of Carlisle ; and the three new bishops were all consecrated together in Lambeth Chapel, January 19th 1734-5, the consecration-sermon being preached by Dr. Thomas, afterwards bishop of Winchester. The honors to which Dr. Seeker was thus raised in the prime of life did not abate his diligence, for which, indeed, there was now more occasion than ever. The affairs of his parish of St. James's being likewise in great disorder, he regulated and adjusted every thing, particularly the management of the

poor ; and thus became of signal service to his

parishioners, even in a temporal view ; though

their spiritual welfare eagaged his chief attention,

He allowed out of his own income a salary for

reading early and late prayers. He held a con-

firmation once a year ; examined the candidates

several weeks before in the vestry ; and gave

them religious tracts, which he also distributed

very liberally to all that needed them. He drew

up, for the use of his parishioners, that admirable course of Lectures on the Church Catechism

which has been since published, and read them

once a week, and every Sunday evening, either

at the church or one of the chapels. The ser-

mons which he composed were truly excellent

and original. He reproved the follies and vices

of all ranks without distinction or palliation.

Few ever possessed, in a higher degree, the rare

talent of touching on the most delicate subjects

with the nicest propriety, of saying the most

familiar things without being low, the plainest

without being feeble, the boldest without giving

offence. His preaching was, at the same time,

highly rational and truly evangelical. He explained, with perspicuity and dignity, the peculiar characteristic doctrines of the gospel. He inculcated the utility, the necessity of them, not merely as speculative truths, but as actual instruments of moral goodness, tending to purify the hearts and regulate the lives of men ; and thus, by God's gracious appointment, as well as by the inseparable connexion between true faith and right practice, leading them to salvation. By such doctrines, and with such powers, he quickly became one of the most popular preachers of his time. In 1737 he succeeded to the see of Oxford, on the promotion of Dr. Potter to that of Canterbury. In spring 1748 Mrs. Seeker died of the gout in her stomach. She was a woman of great sense and merit. The bishop's affection for her was suited to his character. In 1750 he was installed dean of St. Paul's, for which he gave in exchange the rectory of St. James's and his prebend of Durham. When he preached his farewell sermon the whole audience melted into tears ; and he was followed with their prayers and good wishes. Having now leisure both to

prosecute his own studies, and to encourage those of others, he gave Dr. Church considerable assistance in his First and Second Vindication of the Miraculous powers, &c., against Dr. Middleton, and he was of equal use to him in his Analysis of Lord Bolingbroke's Works. About the same time began archdeacon Sharp's controversy with the followers of Mr. Hutcheson, which was carried on to the end of 1755. Bishop Seeker read over all Dr. S-harp's papers, amounting to 3 vols. 8vo., and improved them throughout. But the ease which his change of situation gave him was disturbed by a heavy and unexpected stroke, viz. the loss of his three friends, bishops Butler, Benson, and Berkely, who were all cut off within one year. Dr. Seeker bore an active part in the house of lords in the famous repeal of the Jew Bill ; for which the duke of Newcastle moved, and was seconded by the bishop, in a speech which was remarkably well received. On the death of archbishop Hutton, he was promoted to the see of Canterbury, and was confirmed at Bow church, April 21st, 1758; on which occasion his biographers, Messrs. Porteus and Stinton, observe, that, ' iu accepting this high and burdensome

station, Dr. Seeker sacrificed his own ease and comfort to considerations of public utility ; that the mere secular advantages of granaeur were objects below his ambition ; and were but poor compensations for the anxiety and difficulties attending them. He had never once through his whole life asked preferment for himself," and the use he made of his newly acquired dignity showed that rank, wealth, and power, had no other charms for him, than as they enlarged the sphere of his active and industrious benevolence.' He sought out and encouraged men of real genius and extensive knowledge ; he expended £300 in arranging and improving the MS. library at Lambeth ; and, observing that the' library of printed books in that palace had received no additions since the time of archbishop Tennison, he collected books in all languages from most parts of Europe, at a very great expense, to supply that chasm ; which he did, by leaving these to the library at his death, and thereby rendered that collection one of the most useful in the kingdom. All institutions which tended to advance good morals and true religion, he

patronised with zeal and generosity: he con-

tributed largely to the maintenance of schools

for the poor; to rebuilding or repairing par-

sonage houses and places of worship ; and gave

£600 towards erecting a chapel in the parish of

Lambeth. To the society for promoting Chris-

tian knowledge he was a liberal benefactor ; and

to that for propagating the gospel in foreign

parts, of which he was the president, he paid

much attention ; was constant at all the meetings

of its members, and superintended their delibe-

rations. Whenever any publications came to his

knowledge that were calculated to corrupt good

morals, or to ridicule Christianity, he did his ut-

most to stop the circulation of them ; yet th

wretched authors he was so far from wishing to

treat with rigor, that he often extended his bounty to them in distress. And when their writings

could not properly be suppressed (as was too

often the case) by lawful authority, he engaged

men of abilities to answer them, and rewarded

them for their trouble. Even the falsehoods and

misrepresentations of writers in the newspapers,

on religious or ecclesiastical subjects, he took

care to have contradicted; and when they seemed

likely to injure the cause of virtue and religion, or the reputation of eminent and worthy men, he would sometimes take the trouble of answering them himself. One instance of this kind was his defence of bishop Butler, who, in a pamphlet published in 1767, was accused of having died a Papist. The conduct which he observed towards the several sects of Christians in this kingdom was such as showed his way of thinking to be truly liberal. The dangerous spirit of popery, indeed, he tliought should always be kept under proper legal restraints, on account of its natural opposition, not only to the religious, but. the civil rights of mankind. He therefore observed its movements with care, and exhorted his clergy to do the same, especially those who were situated in the midst of Roman Catholic families ; against whose influence they were charged to be upon their guard, and were furnished with proper books for that purpose.

He took all fit opportunities of combating the errors of the church of Rome in his own writings ; and the best answers that were published to

some of the late bold apologies for popery were written at his instance, and under his direction. See his Sermons on the Rebellion in 1745; on the Protestant working schools in Ireland ; on the 5th of November ; and many occasional passages in his other works. With the Dissenters he was desirous of cultivating a good understanding. He considered them, in general, as a conscientious and valuable class of men. With some of the most eminent of them, Watts, Doddridge, Leland, Chandler, and Lardner, he maintained an intercourse of friendship. By the most candid part of them he was highly esteemed ; and to such among them as needed help he showed no less kindness and liberality than to those of his own communion. Nor was his concern for the Protestant cause confined to his own country. He was the great patron and piotector of it in various parts of Europe ; whence he had frequent applications for assistance, which never failed of being favorably received. To several foreign Protestants he allowed pensions, tr others he gave occasional relief, and to some of their universities was an annual benefactor. In public affairs, he acted the part of an honest

citizen, and a worthy member of the British legislature. From his first entrance into the house of peers, his parliamentary conduct was uniformly upright and noble. He kept equally clear from the extremes of factious petulance and servile dependence ; never wantonly thwarting administration from motives of party zeal, private pique, personal attachment, or a passion for popularity ; nor yet going every length with every minister from views of interest or ambition. He admired and loved the constitution of his country, and wished to preserve it unimpaired. When the measures of government were inconsistent with the public welfare, he opposed them with freedom and firmness. Yet his opposition was always tempered with the utmost fidelity, respect, and decency, to the excellent prince upon the throne ; and the most candid allowances for the unavoidable errors even of the very best ministers, who govern a free and high spirited people. He seldom spoke in parliament, except where the interests of religion and virtue seemed to require it ; but, when he did, he spoke with propriety and strength, and was heard with

attention and deference. His chief political connexions were with the late duke of Newcastle and lord chancellor Hardwicke, to whom he principally owed his advancement ; and he lived long enough to show his gratitude. During more than ten years that Dr. Seeker enjoyed the see of Canterbury, he resided constantly at his archiepiscopal house at Lambeth. He had been for many years subject to the gout, which, in the latter part of his life, returned with more frequency and violence, and did not go off in a regular manner, but left the parts very weak, and was succeeded by pains in different parts of the body. On Saturday July 30th, 1768, he was seized, as he sat at dinner, with a sickness at his stomach. He recovered before night ; but the next evening, while his servants were raising him on his coucli, he suddenly cried out that his thigh-bone was broken. When the surgeons arrived, and discovered that the bone was broken, he was perfectly resigned. A fever soon ensued. On Tuesday he became lethargic, and continued so tiU'Wednesday about 5 P. M., when he expired with great calmness, in the seventy-fifth year of his age. On examination, the thigh-bone

was found to be carious about four inches in length, and at nearly the same distance from its head. The disease took its rise from the internal part of the bone, and had so entirely destroyed its substance, that nothing remained at the part where it was broken but a portion of its outwan1 integument; and even this had many perforations, one of which was large enough to admit two fingers, and was filled with a fungous substance arising from within the bone. There was no appearance of matter about the caries, and the surrounding parts were in a sound state. It was apparent that the torture which he underwent during the gradual corrosion of this bone must have been inexpressibly great. Except some very slight defects of memory, he retained all his faculties and senses. He was buried in a covered passage, between the palace and the church ; and he forbade any monument or epitaph to be placed over him. By his will he appointed the Rev. Dr. Daniel Burton, canon of Christ church, and Mrs. Catherine Talbot, his executors ; and left £13,000 in trust to Drs. Porteus and Stinton, his chaplains ; to pay the

interest thereof to Mrs. Talbot and her daughter during their lives, or the life of the survivor ; and after their decease £11,000 of the said £13,000 to be transferred to charitable purposes ; amongst which were £1000 to the Society for the Propagation of the Gospel, and £1000 to the same society for a bishop or bishops in the king's dominions in America. He was ta'l and comely ; in the early part of his life slender ; but as he advanced in years his constitution gained strength, and his size increased, yet never to a degree of corpulency. The dignity of his form corresponded with the greatness of his mind, and inspired at all times respect and awe ; but peculiarly so when he was engaged in any of the more solemn functions of religion, which added new life and spirit to the natural gracefulness of his appearance. His countenance was open, ingenuous, and expressive. It varied easily with his feelings, so as to be a faithful interpreter of his mind, which was incapable of dissimulation. It could speak dejection, and, on occasion, anger, very strongly ; but, when it meant to show approbation, it softened into a

most gracious smile, and diffused over all his

features the most benevolent and reviving com-

placency.

SEC'LE, n. x. Fr. siecle ; Lat. sectdum. A

century.

Of a man's age, part he lives in his father's life-

time, and part after his son's birth ; and thereupon it is wont to be said that three generations make one secle, or hundred years, in the genealogies.

Hammond' Practical Catechism.*

SECLUDE', v. a. Lat. secludo. To confine

from ; shut up apart ; exclude.

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None is secluded from that function, of any de-

gree, state, or calling. Whitgiflt.

Some parts of knowledge God has thought fit to

seclude from us ; to fence them not only, as he did the interdicted tree, by combination, but with difficulties and impossibilities. Decay of Piety.

The number of birds described may be near five

hundred, and of fishes, secluding shell-fish, as many ; but, if the shell-fish be taken in, more than six times the number. Roy.

Let eastern tyrants from the light of heaven

Seclude their bosom slaves. Thomson.

Inclose your tender plants in your conservatory,

secluding all entrance of cold. Evelyn's Kalendar.

SECOMI/E, in the old system of mineralogy, a genus of fossils of the class of septariae. The characters are, That they are bodies of dusky hue ; divided by septa, or partitions of a sparry matter, into several more or less regular portions; of a moderately firm texture; not giving fire with steel ; but fermenting with acid menstrua, and easily calcining. The septarise of this genus are of all others the most common, and are what have been known by the mistaken names of the waxen vein, or ludus Ilelmontii. Of the whitish or brownish, we have thirteen ; of the yellowish five; and of the ferruginous ones four.

SEC'OND, adj.,n.s.&v.a.~\ Fr. second; Lat.
SEC'OND-HAND, adj. j secundus. It is
SEC'OND-SIGHT, n. s. '.observable that
SEC'ONDARY, adj. & n.s. j we have no ordi-
SEC'ONDARILY, adv. \ nal of two, says

SEC'ONDRATE. J Dr. Johnson, as

the Latins, and the nations deriving from them,

have none of duo. What the Latins call secundus,

from sequor, the Saxons term ofcen, or zeptena.

The next in order to the first; the ordinal of two: second-hand and second-rate mean in the next

place of order or value : a second is the supporter of the principal in a duel ; any supporter : a

second, or second minute of time, the second di-

vision of an hour by sixty : to second is, to fol-

low next in place; maintain; support: a se-

condary is a deputy or delegate ; and the other

derivatives correspond.

First, «he hath disobeyed the law ; and, tecondly,

trespassed against her husband. F.cclus. xxiii. 23.

The authors of the former opinion were presently

seconded by other wittier and better learned, who

being loth that the form of church polity, which they sought to bring in, should be otherwise than in the highest degree accounted of, took first an exception against the difference between church polity and

matters of necessity to salvation. Hooker.

Though we here fall down,

We have supplies to tecond our attempt ;

If they miscarry, theirs shall second them.

Shakspeare. Henry VI.

Having formerly discoursed of a maritimal voyage,

I think it not impertinent to tecond the same with iome necessary relations concerning the royal navy.

Raleigh.

I shall not speak superlatively of them, lest 1 be suspected of partiality; but this I may truly say,

•they are second to none in the Christian world.

Bacon's Advice to Villien.

Two are the radical differences : the secondary dif-

ferences are as four. Bacon't Natural Histori/.

•First, metals are more durable than plants ; and,

tecnndly. they are more solid and hard. Bacon. _.

Their seconds minister on oath,

Which was indifferent to them both.

That on their knightly faith and troth

No magick them supplied ;

And sought them that they had no charms.

Wherewith to work each other's hanns,

But came with simple open arms

To have their causes tried. Drayton's Nytnpkiad.

He propounded the duke as a main cause of divers

infirmities in the state, being sure enough of leconds after the first onset. Woitm.

It is primarily generated out of the effusion of me-

lancholick blood, or secondarily out of the dregs and remainder of a phlegmonous or cedematick tumour.

Harvey.

These atoms make the wind primarily tend down-

wards, though other accidental causes impel it

secondarily to a sloping motion. Digby.

Four flames of an equal magnitude will be kept

alive the space of sixteen second minutes, though one of these flames alone, in the same vessel, wdl not last above twenty-five, or at most thirty seconds.

Wilkins's Mathematical Magick.

None I know

Second to me, or like ; equal much less. Milton.

I to be the power of Israel's God

Avow, and challenge Dagon to the test,

Offering to combat thee, his champion bold

With the' utmost of his godhead seconded. Id.

That we were formed then, sayest thou, and the

work

Of secondary hands, by task transferred

From father to his son ">. *Id. Paradise Lost.*

Familiar Ovid tender thoughts inspires,

And nature seconds all his soft desires. Ruscommon.

He confesses that temples are erected, and festivals kept, to the honour of saints, at least secondarily.

Stillingfleet.

They pelted them with satires and epigrams, which

perhaps had been taken up at first only to make their court, and at second-hand to flatter those who had

flattered their king. Temple.

A second Paris, differing but in name,

Shall fire his country with a second flame. Dryden.

My eyes are still the same ; each glance, each grace, K«ep their first lustre, and maintain their place,

Not second yet to any other face. Id.

He was not then a second-rate champion, as they

would have him who think fortitude the first virtue in a hero. Id.

Wheresoever there is moral right on the one hand,

no secondary right can discharge it. L'Estrange.

Sounds move above 1140 English feet in a tecond

of time, and in seven or eight minutes of time about 100 English miles. I.oche.

Some men build so much upon authorities, they

have but a second-hand or implicit knowledge. Id.

That which is peculiar and discriminative must be

taken from the primariness and secondanness of tho

perception. Norris.

ID imitation of preachers at second-hand, I shall

transcribe from Bruyere a piece of raillery. Taller.

Sin is seconded with sin ; and a man seldom com.

mils one sin to please, but he commits another to

defend himself. '• South.

Not these huge bolts, by which the giants slain

Lay overthrown on the Phlegrean plain ;

'Twas of a lesser mould and lighter weight ;

They call it thunder of a tecond rate. Addison.

Their first encounters were very furious, till, after soW toil and bloodshed, they were parted by tlie

seconds. Id.

Sawney was descended of an ancient family, re-

nowned for their skill in prognostics : roost of hii SECOND SIGHT.

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ancestors were second sighted, and his mother but nar-

rowly escaped for a witch. !&•

As he was going out to steal a sheep, he was seized with a fit of second siyht : the face of the country pre-

sented him with a wide prospect of new scenes,

which he had never seen before. Id. Freeholder.

They call it thunder of the second-rate. Id. Ovid.

As in a watch's fine machine

Though many artful springs are seen,

The added movements which declare

How full the moon, how old the year,

Derive their secondary power

From that which simply points the hour. Prior.

Courage, when it is only a second to injustice, and falls on without provocation, is a disadvantage to a character. Collier.

Gravitation is the powerful cement which holds

together this magnificent structure of the world,

which stretcheth the north over the empty space,

and hangeth the earth upon nothing, to transfer the words of Job from the first and real cause to the tecondarv. Bentley.

If the system had been fortuitously formed by the

convening matter of a chaos, how is it conceivable

that all the planets, both primary and secondary,

should revolve the same way, from the west to the

east, and that in the same plane 1 Id.

By a sad train of miseries alone

Distinguished long, and second now to none. Pope.

En human works, though laboured on with pain,

A thousand movements scarce one purpose gain ;

In God's, one single can its ends produce,

Yet serves to second too some other use. Id.

Persons of second rate merit in their own country,

like birds of passage, thrive here, and fly off when their employments are at an end. Su-ift.

Spurious virtue in a maid ;

A virtue but at second-hand. Id.

If in company you offer something for a jest, and

nobody seconds you in your laughter, you may con-

demn their taste, but in the mean time you make a

very indifferent figure. Id.

The house of commons in Ireland, and, secondly,

the privy council, addressed his majesty against these half-pence. Id.

Personal brawls come in as seconds to finish the

dispute of opinion. Watts.

SECOND, in geometry, chronology, &c., is the sixtieth part of a prime, whether of a degree or of an hour.

SECOND, in music, one of the musical intervals; being only the difference between any sound and the next nearest sound, whether above or below it. See INTERVAL.

SECOND SIGHT (in Erse Taisch), is a mode of seeing supposed to be superadded to that which nature generally bestows. This gift or faculty, which is neither voluntary nor constant, is in general rather troublesome than agreeable to the possessors of it, who are chiefly found among the inhabitants of the Highlands of Scotland, those of the Western Isles, of the Isle of Man, and of Ireland. It is an impression made either by the mind upon the eye, or by the eye upon the mind, by which things distant or future are perceived, and seen as if they were present. A man on a journey far from home falls from his horse ; another, who is perhaps at work about the house, sees him bleeding on the ground, commonly with a landscape of the place where

the accident befals him. Another seer, driving home his cattle, or wandering in idleness, or musing in the sunshine, is suddenly surprised by the appearance of a bridal ceremony, or funeral procession, and counts the mourners or attendants, of whom, if he knows them, he relates the names ; if he knows them not, he can describe the dresses. Things distant are seen at the instant when they happen. Of things future, Johnson says that he knows no rule pretended to for determining the time between the sight and the event ; but we are informed by Mr. Grose that in general the time of accomplishment bears some relation to the time of the day in which the impressions are received. Thus visions seen early in the morning (which seldom happens) will be much sooner accomplished than th,ose appearing at noon ; and those seen at noon will take place in a much shorter time than those happening at night ; sometimes the accomplishment of the last does not fall out within a year or more. These visions are not confined to solemn or important events ; nor is it true, as is commonly reported, that to the second sight nothing is presented but phantoms to evil. The

future visit of a mountebank, or piper ; a plen-

tiful draught of fish ; the arrival of common tra-

vellers ; or, if possible, still more trifling matters than these, — are foreseen by the seers. A gen-

tleman told Dr. Johnson that, when he had once

gone far from his own island, one of his laboring

servants predicted his return, and described the

livery of his attendants, which he had never worn

at home ; and which had been, without any pre-

vious design, occasionally given him. As many

men eminent for science and literature have ad-

mitted the reality of this apparently useless gift,

we shall, without interposing our own opinion,

give the reflections of two of the first characters of the age upon it, and leave our readers to form their own judgment : — By Dr. Beattie it is thus

accounted for. ‘ The Highlands of Scotland are

a picturesque but a melancholy country. Long

tracts of mountainous desert, covered with dark

heath, and often obscure by misty weather ; nar-

row valleys, thinly inhabited, and bounded by

precipices resounding with the fall of torrents;

a soil so rugged, and a climate so dreary, as in

many parts to admit neither the amusements of

pasturage nor the labors of agriculture; the

mournful dashing of waves along the friths and

lakes that intersect the country ; the portentous noises which every change of the wind and every increased diminution of the waters is apt to raise in a lonely region full of echoes and rocks and caverns ; the grotesque and ghastly appearance of such a landscape by the light of the moon : objects like these diffuse a gloom over the fancy, which may be compatible enough with occasional and social merriment, but cannot fail to tincture the thoughts of a native in the hour of silence and solitude. If these people, notwithstanding their reformation in religion and more frequent intercourse with strangers, do still retain many of their old superstitions, we need not doubt but in former times they must have been much more enslaved to the horrors of imagination, when beset with the bugbears of Popery and Paganism. Most qf their superstitions are of a melancholy cast.

'That of second sight, by which some are sti)

gupposed to be haunted, is considered by themselves as a misfortune, on account of the many

dreadful images it is said to obtrude upon the

fancy. It is said that some of the Alpine re-

gions do likewise lay claim to a sort of second

sight. Nor is it wonderful that persons of a lively imagination, immured in deep solitude, and sur-

jounded with the stupendous scenery of clouds,

precipices, and torrents, should dream (even

when they think themselves awake) of those few

striking ideas with which their lonely lives are di-

versified : of corpses, funeral processions, and

other subjects of terror ; or of marriages, and the arrival of strangers, and such like matters of

more agreeable curiosity. Let it be observed,

also, that the ancient Highlanders of Scotland

had hardly any other way of supporting them-

selves than by hunting, fishing, or war ; profes-

sions that are continually exposed to fatal acci-

dents. And hence, no doubt, additional horrors

would often haunt their solitude, and a deeper

gloom overshadow the imagination even of the

hardiest native. A sufficient evidence can hardly

be found for the reality of the second sight, oral least of what is commonly understood by that

term. A treatise on the subject was published

in the year 1762, in which many tales were told

of persons whom the author believed to have

been favored, or haunted, with these illumina-

tions ; but most of the tales were trifling and ridi-

culous : and the whole work betrayed, on the

part of the compiler, such extreme credulity, as

could not fail to prejudice many readers against

his system. That any of these visionaries are

apt to be swayed in their declarations by sinister

views we will not say ; but this may be said

with confidence, that none but ignorant people

pretend to be gifted in this way. And in them

it may be nothing more, perhaps, than short fits

of sudden sleep or drowsiness, attended with

lively dreams and arising from some bodily dis-

order, the effect of idleness, low spirits, or a

gloomy imagination. For it is admitted, even

by the most credulous Highlanders, that, as know-

ledge and industry are propagated in their coun-

try, the second sight disappears in proportion ;

and nobody ever laid claim to the faculty who

was much employed in the intercourse of social

life. Nor is it at all extraordinary that one should have the appearance of being awake, and should

even think one's self so, during those fits of

dosing ; that they should come on suddenly,

and while one is engaged in some business. The

same thing happens to persons much fatigued, or long kept awake, who frequently fall asleep for a moment, or for a long space, while they are standing, or walking, or riding on horseback. Add but a lively dream to this slumber, and (which is the frequent effect of disease) take way the consciousness of having been asleep, and a superstitious man may easily mistake his dream for a waking vision ; which, however, is soon forgotten when no subsequent occurrence recals it to his memory; but which, if it shall be thought to resemble any future event, exalts the poor dreamer into a Highland prophet. This conceit makes him more recluse and more melancholy than ever ; and so feeds his disease, and multiplies his visions which, if they are not dissipated by business or society, may continu to haunt him as long as he lives ; and which, in their progress through the neighbourhood, receive some new tinctures of the marvellous from every mouth that promotes their circulation. As to the prophetical nature of this second sight, it cannot be admitted at all. That the Deity should work a miracle in order to give intima-

tion of the frivolous things that these tales are

made up of, the arrival of a stranger, the nailing of a coffin, or the color of a suit of clothes ; and that these intimations should be given for no end,

and to those persons only who are idle and soli-

tary, who speak Gaelic, or who live among moun-

tains and deserts — is like nothing in nature or pro-

vidence that we are acquainted with ; and must,

therefore, unless it were confirmed by satisfactory

proof (which is not the case), be rejected as ab-

surd and incredible. These visions, such as they

are, may reasonably enough be ascribed to a dis-

tempered fancy. And that in them, as well as

in our ordinary dreams, certain appearances

should, on some rare occasions, resemble certain

events, is to be expected from the laws of chance ; and seems to havre in it nothing more marvellous

or supernatural, than that the parrot, who deals

out his scurrilities at random, should sometimes

happen to salute the passenger by his right ap-

pellation.' To the confidence of these objections

Dr. Johnson replies, « that by presuming to deter-

mine what is fit, and what is beneficial, they pre-

suppose more knowledge of the universal system

than man has attained; and therefore depend upon

principles too complicated and extensive for our

comprehension ; that there can be no security in the consequence when the premises are not understood ; that the second sight is only wonderful because it is rare, for, considered in itself, it involves no more difficulty than dreams, or perhaps than the regular exercise of the cogitative faculty ; that a general opinion of communicative impulses, or visionary representations, has prevailed in all ages and all nations; that particular instances have been given with such evidence as neither Bacon nor Bayle have been able to resist; that sudden impressions, which the event has verified, have been felt by more than own or publish them ; that the second sight of the Hebrides implies only the local frequency of a power, which is no where totally unknown ; and that, where we are unable to decide by antecedent reason, we must be content to yield to the force of testimony. By pretension to second sight, no profit was ever sought or gained. It is an involuntary affection, in which neither hope nor fear is known to have any part. Those who profess to feel it do not boast of it as a privilege, nor are considered by others as advantageously distinguished. They have no temptation

to feign, and their bearers have no motive to encourage the imposture.' Dr. Johnson affirms that the Islanders of all degrees, whether of rank and understanding, universally admit it, except the ministers, who, according to him, reject it, in consequence of a system, against conviction. He affirms, too, that in 1773 there was in the Hebrides a second-sighted gentleman, who complained of the terrors to which he was exposed.

SECOND TERMS, in algebra, those where the

unknown quantity has a degree of power less than it has in the term where it is raised to the highest. The art of throwing these second terms out of an equation, that is, of forming a new equation where they have no place, is one of the most ingenious and useful inventions in all algebra.

SECONDARY, or SECUNDARY, an officer who acts as second or next to the chief officer. Such are the secondaries of the courts of king's bench and common pleas; the secondaries, of the compters, who are next the sheriffs of London

in each of the two compters ; two secondaries of

the pipe ; secondaries to the remembrancers, &c.

SECONDARY CIRCLES OF THE ECLIPTIC are

circles of longitude of the stars ; or circles which, passing through the poles of the ecliptic, are at

right angles to the ecliptic. See CIRCLES.

SE'CRET, adj., n. s. & v. a.~} Fr. secret ; Lat-

SECRETE', v. a. secretus. Hidden >

SECRE'TION, n. s. private; affording

SECRETIT'IOUS, n. s. privacy; retired;

SE'CRETIST, J^unseen ; faithful

SE'CRETLY, adv. to a secret; oc-

SE'CRETNESS, n. s. cult ; privy : as a

SECRE'TORY, adj. noun substantive,

SE'CRECY, n.s. J something con-

cealed or hidden ; something not yet discovered

or known ; privacy ; seclusion : to secret or se-

crete is to keep private, and the latter (in the

animal economy) to put aside or separate ; to

secern : secretitious follows this sense : a se-

cretist is a dealer in secrets : the adverb and

noun substantive following, as well as secrecy,

correspond with secret as an adjective : secretory

means performing the office of secretion.

The secret things belong unto the Lord our God ;

but those things which are revealed belong unto us.

Deut. xxix. 29.

Bread eaten in secret is pleasant. Prov. ix. 17.

There is no secret that they can hide frora thee.

Ezek. xxviii.

It is not with publick as with private prayer : in this rather secrecy is commanded than outward shew ; whereas that, being the publick act of a whole so-

ciety, requireth accordinglyx more care to be had of external appearance. Hooker.

That's not suddenly to be performed,

But with advice and silent secrecy.

Shakspeare. Henry VI.

In Nature's book of infinite secrecy

A little can I read. Id. Antony and Cleopatra.

Secret Romans, that have spoke the word,

And will not palter. Shakspeare. Julius Ctesar.

Infected minds

To their deaf pillows will discharge their secrets.

Shakspeare.

Give him this letter ; do it secretly. Id.

Great care is to be used of the clerks of the coun-

cil, for the secreting of their consultations.

Bacon's Advice to Villien.

I could muster up

My giants and my witches too,

Which are vast constancy and secretness. Donne.

Thou open'st wisdom's way

And givest access, though secret she retire :

And 1 perhaps am secret. Milton.

The secret top

Of Oreb or of Sinai. Id.

Or sympathy, or some connatural force

1'oweiful at greatest distance to unite

With secret amity things of like kind,

By secreiest conveyance. Id.

We not to explore the secrets ask

Of his eternal empire. Id.

'Thou, in thy secresy, although alone,

Best with thyself accompanied, seek'st not

Social communication. Id. Paradise Lost..

Some things I have not yet thought fit so plainly

to reveal ; not out of any envious design of having them buried with me, but that I may barter with

those fecretists, that will not part with one secret but in exchange for another. Boyle.

Those thoughts are not wholly mine ; but either

they are seeretly in the poet, or may be fairly de-

duced from him. Dryden.

All the glands are a congeries of vessels compli-

cated together, whereby they give the blood time to

separate through the capillary vessels into the secre-

tory, which afterwards exonerate themselves into one

duct. Ray.

Secresy and fidelity were their only qualities.

Burnet.

There is no such thing as perfect secresv. to encou-

rage a rational mind to the perpetration of any base action ; for a man must first extinguish and put out the great light within him, h's conscience ; he must get away from himself, and shake off the thousand

witnesses which he always carries about him, before

he can be alone. South' Sermons,*

Now secretly with inward grief he pined ;

Now warm resentments to his griefs he joined.

Addison.

Some may place their chief satisfaction in giving

secretly what is to be distributed ; others in being the open and avowed instruments of making such distri-

butions. Atterbury.

There secret in her sapphire cell

He with the Nals wont to dwell. Fenton.

All secrets of the deep, all nature's works.

Milton.

The Romans seem not to have known the secret of

paper credit. Arbuthnot.

They have a similitude or contrariety to the secre-

titious humours in taste and quality.

Floyer on the Humours.

SEC'RETARY, n. s. Fr. secretaire; low Lat. secretariat. One entrusted with the management of business ; one who writes for another.

Call Gardiner to me, my new secretary.

Shakspeare.

That which is most of all profitable is, acquaintance with the secretaries, and employed men of ambassadors. Bacon.

Cottington was secretary to the prince.

Clarendon.

SECRETARY, in ornithology, the falco serpentarius and Sagittarius of Linnaeus, but classed by Latham under the genus vultur. See FALCO and VULTUR.

A SECRETARY, in a public office, is an officer who, by his master's orders, writes letters, despatches, and other instruments, which he renders authentic by his signet. Of these there are several kinds : as secretaries of state, or officers that have under their management and direction the most important affairs of the kingdom, and are obliged constantly to attend on the king : they receive and despatch whatever comes to their

hands, either from the crown, the church, the army, private grants, pardons, dispensations, Sec., as likewise petitions to the sovereign, which, when read, are returned to them ; all which they

despatch according to the king's direction. They hare authority to commit persons for treason, and other offences against the state, as conservators of the peace at common law, or as Justices of the peace throughout the kingdom. They are members of the privy council, which is seldom or never held without one of them being present. As to the business and correspondence in all parts of this kingdom, it is managed by either of the secretaries without any distinction ; but, with respect to foreign affairs, the business is divided into two provinces or departments, the southern and the northern, comprehending all the kingdoms and states that have any intercourse with Great Britain ; each secretary receiving all letters and addresses from, and making all despatches to, the several princes and states comprehended in his province.

SECT, n. s. ~\ Fr. sttcte ; Lat. sccta, from

SEC'TARISM, fteeUmdo. A body of men fol-

SEC'TARY, i lowing some particular master,

SECTA'TOR. J or united in some settled

tenets. Often in a bad sense : sectarism is dis-

position to party : a sectary is one who joins a

party, or indulges a party spirit : sectator, an

obsolete word for a follower or imitator.

The sectaries of my celestial skill,

That wont to be the world's chief ornament,

They are under keep. Spenser.

We'll wear out,

In a wall'd prison, packs, and sects of great ones, That ebb and flow by the moon.

Shakspeare. King Lear.

Of out unbilled lusls, I lake this lhat you call

love to be a sect or cion. Id. Othello.

My lord, you are a sectary ;

Thai's ihe plain truth. Shakspeare.

Hereof the wiser sort and the best learned philo-

sophers were not ignorant, as Cicero witnesseth,

gathering the opinion of Aristotle and his sectuton.

Kaleigh.

Romish catholick tenets are inconsistent, on ihe

one hand, with the trulh of religion professed and

protested hy the church of England, whence we are

called protestanis ; and the anabaptists, and sepa-

ratists, and tectaries, on the other hand, whose tenets are full of schism, and inconsistent with monarchy.

Bacon.

The greatest vicissitude of things is the vicissi-

tude of lecii and religion ; the true religion is built upon a rock ; the rest are tossed upon the waves of time. Id. Essays.

Nothing has more marks of schism and sectarism

than this presbyterian way. K'nig Charles.

The jealous sects lhal dare nol trusl iheir cause

So far from Iheir own will as to the laws,

You for their umpire and their synod take.

Dry den,

A sect of freethinkers is a sum of cyphers.

Bent li'i/.

I'liu number of sectaries doos not concern the

clergy in poinl of interest or conscience. Snij't.

SECTION, ». s. Fr. section ; Lat. sn-/io.

The act of cutting or dividing ; the part cut off.

Instead of their law, which they mi»ht not read

openly, they read of the prophets, lhat which in like-

ness of mailer came nearest lo each section of their law. /.„„-.

In the section of bodies, man, of all sensible

es, has the fullest brain to liis '»• .portion.

The production of volatile salts I reserve till I

mention them in another section. Boi/le.

Without breaking in upon the connection of his.

language, it is hardly possible to give a distinct view of his several arguments in distinct sections. Locke.

SECTION, in general, denotes a part of a di-

vided thing, or the division itself. Such, parti-

cularly, are the subdivisions of a chapter; called

also paragraphs and articles : the mark of a sec-

tion is §.

SECTION, in geometry, denotes a side or surface

of a body or figure cut off by another ; or the

place where lines, planes, &c., cut each other.

SECTIONS, CONIC. See CONIC SECTIONS.

SECTOR, 71. s. Fr. secteur. In geometry.

Sector is an instrument made of wood or metal,

with a joint, and sometimes a piece to turn out t&

make a Irue square, wilh lines of sines, langenls,

secanls, equal parts, rhumbs, polygons, hours, lati-

tudes, metals, and solids. It is generally useful in all the practical parts of the mathemalicks, and par-

ticularly contrived for navigation, surveying, astro-

nomy, dialling, and projeclion of ihe sphere. All

the lines of the sector can be accommodated to any radius, winch is done by taking off all divisions pa-

rallelwise, and not lengthwise ; the ground of which practice is this, that

parallels to the base of any plain triangle bear the same proportion to it as the parts of the legs above the parallel do to the whole legs. Harris.

SECTOR, in geometry, is a part of a circle com-

prehended between two radii and the arch ; or it

is a mixed triangle, formed by two radii and the

arch of a circle.

SECTOR OF AN ELLIPSE, or OF AN HYPERBOLA,

&c., is a part resembling the circular sector, being contained by three lines, two of which are radii,

or lines drawn from the centre of the figure to-

the curve, and the intercepted arc or part of that curve.

SECTOR OF A SPHERE is the solid generated

by the revolution of the sector of a circle about

one of its radii ; the other radius describing the

surface of a cone, and the circular arc a circu-

lar portion of the surface of the sphere of the

same radius. So that the spherical sector consists

of a right cone, and of a segment of a sphere

having the same common base with the cone.

And hence the solid content of it will be found

by multiplying the base or spherical surface by

the radius of the sphere, and taking a third part

of the product.

SECTOR is also a mathematical instrument of

great use in finding the proportion oetween quan-

tities of the same kind : as between lines and

lines, surfaces and surfaces, &c.; whence the

French call it the compass of proportion. The

great advantage of the sector above the common

scales, &c., is, that it is made so as to fit all radii and all scales. By the lines of chords, sine?

&c., on the sector, we have lines of chords, sines, &c., to any radius betwixt the length and breadth

of the sector when open. The real inventor of

this valuable instrument is unknown ; yet of so

much merit has the invention appeared that il

was claimed by Galileo, and disputed hy nations.

The sector is founded on the fourth proposition

of the sixth book of Euclid ; where il is demon-

strated that similar triangles have their homo

i sides proportional. An idea of the theory

of its construction may be thus conceived : — Let

the "lines A B, AC (plate SECTOR, &c.), represent

the legs of the sector ; and A D and A E two equal sections from the centre : if now the points C B

and D E be connected, the lines C B and D E

will be parallel ; therefore the triangles A D E

A C B will be similar ; and consequently the

sides AD, D E, A B, and B C, proportional ;

that is, as AD: DE:: AB: BC; whence, if

A D be the half, third, or fourth part of A B,

D E will be a half, third, or fourth part of C B ; and the same holds of all the rest. If, therefore, A D be the chord, sine or tangent, of any number

of degrees to the radius AB; D E will be the

same to the radius B C.

The instrument (fig. 3, 4), consists of two ru-

lers or legs, of brass or ivory, or any other mat-

ter, representing the radii, moveable round an

axis or joint, the middle of which expresses the

centre : whence are drawn on the faces of the

rulers several scales, which may be distinguished

into single and double. The double scales or

lines graduated upon the faces of the instrument,

and which are to be used as sectoral lines, pro-

ceed from the centre; and are, 1. Two scales of

equal parts, one on each leg, marked LIN. or L. ; each of these scales, from the great extensive-

ness of its use, is called the line of lines. 2.

Two lines of chords marked CHO. or c. 3. Tuo

lines of secants marked SEC. or s. A line of poly-

gons marked POL. Upon the .other face the sec-

toral lines are, 1. Two lines of sines marked

SIN. or s. 2. Two lines of tangents marked TAN.

or T. 3. Between the line of tangents and sines

there is another line of tangents to a lesser radius, to supply the defect of the former, and extend-

ing from 45° to 75°, marked t. Each pair of

these lines (except the line of polygons) is so

adjusted as to make equal angles at the centre;

and consequently, at whatever distance the sector

be opened, the angles will be always respec-

tively equal. That is, the distance between 10

and 10, on the line of lines, will be equal to 60

and 60 on the line of chords, 90 and 90 on the

line of sines, and 45 and 45 on the line of tan-

gents. Besides the sectoral scales, there are

others on each face, placed parallel to the out-

ward edges, and used as those of the common

plane scale. These are 1. A line of inches. 2.

A line of latitudes. 3. A line of hours. 4. A

line of inclination of meridians. 5. A line of

chords. Three logarithmic scales, namely, one

of numbers, one of sines, and one of tangents ;

these are used when the sector is fully opened,

the legs forming one line. The value of the di-

visions on most of the lines is determined by

the figures adjacent to them ; these proceed

by tens, which constitute the divisions of the first order and are numbered accordingly ; but the

value of the divisions of the line of lines, that are distinguished by figures, is entirely arbitrary, and may represent any value that is given to them ; hence the figures 1, 2, 3, 4, &c., may denote either 10, 20, 30, 40, or 100, 200, 300, 400, and so on. The line of lines is divided into ten equal parts, numbered 1, 2, 3, to 10; these may be called divisions of the first order; each of these is again subdivided into ten other equal parts, which may be called divisions of the second order ; each of these is divided into two equal parts, forming divisions of the third order. The divisions on all the scales are contained between four parallel lines ; those of the third order extend to the most distant ; those of the third to the least ; those of the second to the intermediate parallel. When th'e whole line of lines represents 100, the divisions of the first order, or those to which the figures are annexed, repiesent tens ; those of the secon'd order units ; those of the third order the halves of these units. If the whole line represent ten, then the divisions of the first order are units; those of the second tenths ; the third twentieths. In the line of tangents, the divisions to which the numbers are

affixed are the degrees expressed by those num-

bers. Every fifth degree is denoted by a line

somewhat longer than the rest; between every

number and each fifth degree there are four

divisions, longer than the intermediate adjacent

ones : these are whole degrees ; the shorter ones, or those of the third order, are thirty minutes.

From the centre to 60° the line of sines is di-

vided like the line of tangents, from 60 to 70;

it is divided only to every degree, from 70 to 80, to every two degrees, from 80 to 90 : the divi-

sion must be estimated by the eye. The divi-

sions on the line of chords are to be estimated

in the same manner as the tangents. The lesser

line of tangents is graduated every two degrees,

from 45 to 50 ; but from 50 to 60 to every de-

gree; from 60 to the end to half degrees. The

line of secants from 0 to 10 is to be estimated by the eye ; from 20 to 50 it is divided into every

two degrees ; from 50 to 60 to every degree ;

from 60 to the end to every half degree.

1 . To open the sector so as the two lines of

chords may make an angle or number of degrees,

suppose 40. Take the distance from the joint

to 40, the number of the degrees proposed, on

the line of chords: open the sector till the dis-

tance from 40 to 60 on each leg be equal to the given distance of 40 ; then will the two lines on the sector form an angle of 40°, as was required.

2. The sector being opened, to find the degrees of its aperture. Take the extent from 60 to 60, and lay it off on the line of chords from the centre; the number whereon it terminates will show the degrees, &c., required. 3. To lay off any number of degrees upon the circumference of a circle. Open the sector till the distance between 60 and 60 be equal to the radius of the given circle ; then take the parallel extent of the chord of the number of degrees on each leg of the sector, and lay it o.T on the circumference of the given circle. Hence any regular polygoi- may be easily inscribed in a given circle.

1. To divide a given line into any number of equal parts, suppose seven. Take the given line in your compasses ; and setting one foot in a division of equal parts, that may be divided by 7, for example 70, whose seventh part is 10, open the sector till the other point fall exactly on 70, in the same line on the other leg. In this disposition, applying one point of the compasses to 10 in the same line, shut them till the other rail in 10 in the same line on the other leg, and this opening will be the

seventh part of the given line. Note, if the line to be divided be too long to be applied to the leirs of the sector, divide

only one-half or one-fourth by seven, and the

double or quadruple thereof will be the seventh

part of the whole. 2. To measure the lines of the perimeter of a polygon, one of which contains a

given number of equal parts. Take the given line

in your compasses, and set it parallel, upon the

line of equal parts, to the number on each leg ex-

pressing its length. The sector remaining thus,

set off the length of each of the other lines parallel to the former, and the number each of them falls

on will express its length. 3. A right line being

given, and the number of parts it contains, sup-

pose. 120, to take from it a shorter line contain-

ing any number of the same parts, suppose 25.

Take the given line in your compasses, open the

sector till the two feet fall on 120 on each leg ; then will the distance between 25 on one leg, and

the same number on the other, give the line re-

quired. 4. To multiply by the line of equal parts

on the sector. Take the lateral distance from the

centre of the line to the given multiplicator;

open the sector till you fit that lateral distance to the parallel of 1 and 1, or 10 and 10, and keep

the sector in that disposition; then take in the

compasses the parallel distance of the multipli-

cand, which distance, measured laterally on the

same line, will give the product required. Thus,

suppose it were required to find the product of 8

multiplied by 4 : take the lateral distance from the centre of the line to 4 in your com passes, i. e. place one foot of the compasses in the beginning of the

divisions, and extend the other along the line to

4. Open the sector till you fit this lateral distance to the parallel of 1 and 1, or 10 and 10. Then

take the parallel distance of 8, the multiplicand ; i. e. extend the compasses from 8, in this line, on one leg, to 8 in the same line on the other ; and that extent, measured laterally, will give the pro-

duct required. 5. To divide by the line of equal

parts on the sector. Extend the compasses late-

rally from the beginning of the line to 1, and open the sector till you fit that extent to the parallel of the divisor ; then take the parallel distance of the dividend ; which extent, measured in a lateral di-

rection, will give the quotient required. Thus, sup-

pose it were required to divide 36 by 4 ; extend

the compasses laterally, the beginning of the line

to 1, and fit to that extent the" parallel of 4, the divisor ; then extend the compasses parallel from

36 on one leg to 36 on the other, and that extent, measured laterally, will give 9, the quotient re-

quired. 6. Proportion by the line of equal

parts. Make the lateral distance of the second

term the parallel distance of the first term ; the pa-

rallel distance of the third term is the fourth pro-

portional. Example. — To find a fourth propor-

tional to 8, 4, and 6, take the lateral distance of 4, and make it the parallel distance of 8 ; then the parallel distance of 6, extended from the centre,

shall reach to the fourth proportional 3. In the

same manner, a third proportional is found to

two numbers. Thus, to fina a third proportional

to 8 and 4, the ?ector remaining as in the former example, the parallel distance of 4, extended

from the centre, shall reach to the third propor-

tional 2. In all these cases, if the number to be

made a parallel distance be too great for the sec-

tor, some aliquot part of it is to be taken, and

»he answer is to be multiplied by the number by

which the first number was divided.

1. To inscribe a regular polygon in a given

circle. Take the semidiameter of the given cir-

cle in the compasses, and adjust it to the num-

ber 6, on the line of polygons, on each ley of the sector ; then, the sector remaining thus opened,

take the distance of the two equal numbers, ex-

pressing the number of sides the polygon is to

have ; e. gr. the distance from 5 to 5 for a penta-

gon, from 7 to 7 for a heptagon, &c. These dis-

tances, carried about the circumference of the

circle, will divide it into so many equal parts.

2. To describe a regular polygon, e. gr. a penta-

gon, on a given right line. Take the length of

the line in the compasses, and apply it to the ex-

tent of the number 5, 5, on the lines of polygons.

The sector thus opened, upon the same lines take

the extent from 6 to 6 ; this will be the semidia-

meter of the circle the polygon is to be inscribed

in. If then, with this distance from the ends ot

of the given line, you describe two arches of a

circle, their intersection will be the centre of the circle. 3. On a right line, to describe an isos-

celes triangle, having the angles at the base double that at the vertex. Open the sector, till the ends of the given line fall on 10 and 10 on each leg ; then take the distance from 6 to 6. This will be

the length of the two equal sides of the triangle.

By the several lines disposed on the sector,

we have scales to several radii ; so that, having

a length or radius given, not exceeding the length

of the sector when opened, we find the chord,

sine, &c., thereto : e. gr. Suppose the chord,

sine, or tangent, of 10°, to a radius of three inches required ; make three inches the aperture, between

60 and 60, on the lines of chords of the two legs ; then will the same extent reach from 45 to 45 on

the line of tangents, and from 90 to 90 on the

line of the sines on the other side; so that to

whatever radius the line of chords is set, to the

same are all the others set. In this disposition,

therefore, if the aperture between 10 and 10, on

the lines of chords, be taken with the compasses,

it will give the chord of 10°. If the aperture of 10 and 10 be in like manner taken on the lines

of sines, it will be the sine of 10°. Lastly, if

the aperture of 10 and 10 be in like manner taken on the lines of tangents, it gives the tangent of

10°. If the chord, or tangent, of 70° were re-

quired ; for the chord, the aperture of half the

arch, viz. 35, must be taken, as before ; which

distance, repeated twice, gives the chord of 70°.

To find the tangent of 70° to the same radius,

the small line of tangents must be used, the other only reaching to 45 ; making, therefore, three

inches the aperture between 45 and 45 on the

small line ; the extent between 70 and 70° on the same, will be the tangent of 70° to three inches

radius. To find the secant of an arch, make the

given radius the aperture between 0 and 0 on the

lines of secants ; then will the aperture of 10

and 10, or 70 and 70, on the said lines, give the tangent of 10° or 70°. If the converse of any of

these things were required, that is, if the radius

be required, to which a given line is the sine, tan-

gent, or secant, it is but making the given line,

if a chord, the aperture on the line of chords, be-

tween 10 and 10, and then the sector will stand

at the radius required ; that is, the aperture be-

tween 60 and 60 on the said line is the radius

If tne given line were a sine, tangent, or secant, it is but the making 't the aperture of the given number of degrees , then will the distance of 90

and 90 on the sines, of 45 and 45 on the tangents, of 0 and 0 on the secants, be the radius.

SEC'ULAR, adj. I Fr. seculier ; Lat. secu-

SEC'ULARLY, adv. S larit. Not spiritual ; re-

lating to affairs of the present world ; worldly :

in the Romish church not bound by monastic

rule.

This, in every several man's actions of common

life, appertained unto moral, in publick and poli-

tick tecular affairs, unto civil wisdom. Hooker.

Then shall they seek to avail themselves of names,

Places, and titles ; and with these to join

Secular po»rer, though feigning still to act

By spiritual. Milton's Paradise Lost.

Those northern nations easily embraced the reli-

gion of those they subdued, and by their devotion

gave great authority and reverence, and thereby ease, to the clergy, both secular and regular. Temple.

Littleness and secularly of spirit is the greatest

enemy to contemplation.

Burnet's Theory of the Earth.

In] France vast numbers of ecclesiasticks, tecular

and religious, live upon the labours of others.

Addison.

The secular year was kept but once in a century.

Id.

SECULAR is peculiarly used for a person who

lives at liberty in the world, not shut up in a

monastery, in which sense it stands opposed to

regular. The Romish clergy are divided into se-

cular and regular, of which the latter are bound

by monastic rules, the former not.

SECULAR GAMES, in antiquity, were solemn

games held among the Romans once in an age.

These games lasted three days and as many

nights; during which time sacrifices were per-

formed, theatrical shows exhibited, with com-

bats, sports, &c., in the circus. The occasion of

these games, according to Valerius Maximus, was

to stop the progress of a plague. Valerius Publi-

cola was the first who celebrated them at Rome,

A. U. C. 245. The solemnity was as follows : —

The whole world were invited by a herald to a feast which they had never seen already, nor ever

should see again. Some days before the games

began, the quindecemviri, in the capitol and the

Palatine temple, distributed to the people puri-

fying compositions, of various kinds, as flam-

beaux, sulphur, &c. From hence the populace

passed to Diana's temple on the Aventine Mount,

with wheat, 'barley, and oats, as an offering. Af-

ter this, whole nights were spent in devotion to

the Destinies. When the time of the games was

fully come, the people assembled in the Campus

Martius, and sacrificed to Jupiter, Juno, Apollo,

Latona, Diana, the Parcae, Ceres, Pluto, and

Proserpine. On the first night of the feast the

emperor, with the quindecemviri, caused three

altars to be erected on the banks of the Tiber,

which they sprinkled with the blood of three

lambs, and then proceeded to regular sacrifice.

A space was next marked out for a theatre, which

was illuminated with innumerable flambeaux

and fires. Here they sung hymns, and celebrated

all kinds of sports. On the clay after, having

offered victims at the capitol, they went into the Campus Martius, and celebrated sports »o the honor of Apollo and Diana. These lasted till the next day, when the noble matrons, at the hour appointed by the oracle, went to the capitol to sing hymns to Jupiter. On the third day, which concluded the solemnity, twenty-seven boys and as many girls sung in the temple of Palatine Apollo hymns and verses in Greek and Latin, to recommend the city to the protection of those deities whom they designed particularly to honor by their sacrifices. The inimitable carmen secu-lare of Horace was composed for this last day in the secular games, held by Augustusˆ It has been much disputed whether these games were held every 100, or every 110 years. Valerius Antius, Varro, and Livy, are quoted in support of the for-mer opinion ; in favor of the latter may be pro-duced the quindecemviral registers, the edicts of Augustus, and the words of Horace in the secular poem, ccetus undenos decies per annos. It was a general belief that the girls who bore a part in the song should be soonest married ; and that the children who did not dance and sing at the

coming of Apollo, should die unmarried, and at

an early period of life.

SECULAR POEM, a poem sung or rehearsed at

the secular games ; of which kind we have a very

fine piece among the works of Horace, being a

sapphic ode at the end of his epodes.

SECULARIZATION, the act of converting a

regular person, place, or benefice, into a secular

one. Almost all the cathedral churches were an-

ciently regular; that is, the canons were to be

religious ; but they have been since secularized.

For the secularization of a regular church, there

is required the authority of the pope, that of the prince, the bishop of the place, the patron, and

even the consent of the people. Religious that

want to be released from their vow, obtain briefs

of secularization from the pope.

SEC'UNDINE, n. s. Yr.secondines, secondes ;

Lat. secundtf, viz. partes, quod nascentem infantem

sequantur. Ainsworth. The membrane in

which the embryo is wrapped ; the after birth.

The casting of the skin is by the ancients com-

pared to the breaking of the tecundine, or cawl, but not rightly ; for the secundine is but a general cover, uot shaped according to the parts, but the skin is.

Bacon's Natural History.

Future ages lie

Wrapped in their sacred secvndine a sleep. Cowley.

If the foetus-be taken out of the womb inclosed in the secundines, it will continue to live, and the blood to circulate. Ray.

SECUNDINES, in anatomy, are the chorion and

amnios, with the placenta, &c. See ANATOMT

and MIDWIFERY.

SECUNDREPORE, the name of two towns

in Hindostan, one in the province of Ajmeer,

district of Jyepore ; the other in the province of Allahabad, district of Gazypoor.

SECUNDUS (Julius), a Roman orator, who

flourished under Titus Vespasian, and published

Orations, &c.

SECUNDUS (Nicholas Everard), a descendant of

an ancient and honorable family in the Nether-

lands, was born in the neighbourhood of Mid-

dleburgh, and was jn high favor with the empe-

ror Charles V., haujng been employed by tliat

monarch in several stations of considerable im-

portance. He was first a member of the grand

parliament or council of Mechlin ; afterwards

president of the states of Holland and Zealand

at the Hague; and, lastly, held a similar office at Mechlin, where he died, August 5th, 1532, aged seventy. These various employments did not occupy the whole of Everard's time. Notwithstanding the multiplicity of his business, he found leisure to cultivate letters with great success, and even to act as preceptor to his own children, who were five sons and three daughters, and all took the name of Nicholas from their father.

SECUNDUS (Joannes Nicolaus, or John Nicholas), youngest son of the preceding, improved the education given him by his father, and became a most eminent writer of Latin poetry. Poetry, however, was by no means the profession which his father wished him to follow. He intended him for the law, and, when he could no longer direct his studies himself, placed him under the care of Jacobus Valeardus. This man is said to have been every way well qualified to discharge the important trust which was committed to him ; and he certainly gained the affection of his pupil, who, in one of his poems, mentions the death of Valeardus with every

appearance of unfeigned sorrow. Another tutor was provided, but the law did not suit Secundtis. Poetry, painting, and sculpture, had engaged his mind at a very early period. Secundus wrote verses when only ten years old ; and, from }he vast quantity which he left behind him, such writing was evidently his principal employment. He found time, however, to carve figures of all his own family, of his mistresses, of the emperor Charles V., of several eminent personages of those times, and of many of his intimate friends ; and in the last edition of his works, published by Scriverius at Leyden, 1631, there is a print of one of his mistresses, with this inscription round it, VATIS AMATORIS JULIA SCULPTA MANT. Secundus having nearly attained the age of twenty-one, and .being determined to comply with the wishes of his father, quitted Mechlin, and went to France, where at Bourges he studied the civil law under the celebrated Andreas Alciatus. Alciatus was one of the most learned civilians of that age. But what endeared him most to our author was his acquaintance with literature and his taste in poetry. Having studied a year under this eminent professor, and taken

his degrees, Secundus returned to Mechlin, where he remained a few months. In 1533 he went into Spain, with warm recommendations to the count of Nassau and other persons ofhigh rank ; and soon afterwards became secretary to the cardinal archbishop of Toledo, in a deoartment of business which required a facility in writing with elegance the Latin language. During his residence with this cardinal, he wrote his Basia, a series of wanton poems, of which the fifth, seventh, and ninth carmina of Catullus seem to have given the hint. Secundus was not, however, a servile imitator of Catullus. His expressions seem to have been borrowed rather from Tibullus and Propertius ; and, in the warmth of his descriptions, he surpasses every thing that has been written on similar subjects by Catullus, Tibullus, Propertius, C. Callus, Ovid, or even Horace. In 1535 he accompanied Charles \ . to the siege of Tunis, but gained no laurel as a soldier. The hardships of that memorable sie«e were little suited to the disposition of a votary of Venus and the Muses ; and, upon an enterprise which might have furnished ample matter

for an epic poem, it is remarkable that Secundus

wrote nothing worthy of preservation. Having

returned from his martial expedition, he was

sent by the cardinal to Rome to congratulate

the pope upon the success of the emperor's arms ;

but was taken so ill OH the road that he was not able to complete his journey. He was advised

to seek the benefit ef his native air ; and that

happily recovered him. Having quitted the ser-

vice of the cardinal, he was employed in the

same office by the bishop of Utrecht; and so

great was his fame for classical elegance that he

was called upon to fill the post of private Latin

secretary to the emperor, who was then in Italv ;

but, before he could enter upon it, death put a

stop to his career of glory. Having arrived at

St. Amand, to meet with the bishop of Utrecht,

he was on the 8th of October, 1536, cut off by a violent fever, in his twenty-fifth year. He was

interred in the church of the Benedictines, of

which his patron, the bishop, was abbot ; and his

relations erected to his memory a marble monu-

ment, with a Latin inscription. His works have

gone through several editions, of which the best

and most copious is that of Scriverius. It con-

sists of Julia, Eleg. lib. i. ; Amores, Eleg. lib. ii. ; ad Diversos, Eleg. lib. iii. ; Basia, styled by the editor incomparabilis et divinus prorsus liber ; Epigrammata ; Odarum liber unus ; Epistolarum liber unus Elegiaca ; Epistolarum liber alter, heroico carmine scriptus ; Funerum liber unus ; Sylvae et Carminum fragmenta ; -Poemata nonnulla fratrum; Itineraria Secundi Tria, &c.; Epistolae totidem, soluta oratione. To these works ample testimonies are prefixed by Lelius, Gregory Gyraldus, the elder Scaliger, Theodore Beza, and others, who all speak of them with rapture. A French critic, indeed, after having affirmed that the genius of Secundus never pro duced any thing which was not excellent 'in its kind, adds, with too much truth, ' Mais sa muse est un peu trop lascive.' For this fault our au thor makes an apology in a Latin epigram addressed to the grammarians ; but, as the poet observes, —

Immodest words admit of no defence,
For want of decency is want of sense.

SECURE/, adj. & v. a.~\ Lat. secants. Free

SECURF/LY, adv. (from fear; exempt

SECURE'MENT, n. s. £ from, terror; easy;

SECU'KITY. J assured ; confident ;

careless; the derivatives corresponding.

(Jideon smote the host, for the host were secure.

Judges.

When they had taken security of Jason, they let

them go. Acts xvii. 9.

Love, that now long time securely slept

In Venus lap, unarmed then and naked,

'CJan rear his head, by Clotho being waked.

Speruer.

There is scarcely truth enough alive to make socie-

ties >ecure • but security enough to make fellowships accurst.
± >haks.peart.

SEC

765

SED

Tis done, like Hector, but tecurely done,

A little proudly, and great deal misprising

The knight opposed.

Shukspeare. Troilus and Cressida.

How senseless then and dead a soul hath he

Which thinks his soul doth with his body die ;

Or thinks not so, but so would have it be,

That he might sin with more security ! Davies.

Marvellous security is always dangerous, when men

will not believe any bees to be in a hive, until t':ey have a sharp sense of their stings. Hayward.

Confidence then bore thee on secure

To meet no danger. Milton.

Haply too secure of our discharge

From penalty. Id.

Nothing left

That might his happy state secure. Id.

His daring foe tecurely him defied. Id.

They, like Judas, desire death ; Cain, on the con-

trary, grew afraid thereof, and obtained securement

from it. Browne's Vulgar Errours.

If the providence of God be taken away, what se-

curity have we against those innumerable dangers to

which human nature is continually exposed ?

Tiltotson.

But thou, secure of soul, unbent with woes,

The more thy fortune frowns, the more oppose.

Dri/den.

I spread a cloud before the victor's sight,

Sustained the vanquished, and secured his flight ;

Even then secured him, when I sought with joy

The vowed destruction of ungrateful Troy. Id.

Secure from fortune's blows,

Secure of what I cannot lose,

In my small pinnace I can sail. Id. Horace.

A soul that can securely death defy,

And count it nature's privilege to die. Id. Juvenal.

Actions have their preference, not according to the

transient pleasure or pain that accompanies or follows them here, but as they serve to secure that perfect durable happiness hereafter. Locke.

Deeper to wound, she shuns the fight ;

She drops her arms to gain the field :

Secures her conquest by her flight,

And triumphs when she seems to yield. Prior.

It concerns the most secure of his strength, to pray to God not to expose him to an enemy. Rogers.

The portion of their wealth they design for the

uses of the poor, they may throw into one of these publick repositories, secure that it will be well em-

ployed. Atterbury.

We live and act as if we were perfectly secure of the final event of things, however we may behave

ourselves. Id.

Whether any of the reasonings are inconsistent, I

securely leave to the judgment of the reader. Id.

The Romans do not seem to have known the secret

of paper credit, and securities upon mortgages.

Id. on Coins.

It is possible for a man, who hath the appearance

of religion, to be wicked and an hypocrite ; but it is impossible for a man who openly declares against

religion to give any reasonable security that he will not be false and cruel. Swift.

Exchequei bills have been generally reckoned the

surest and most sacred of all securities. Id. Examiner.

Some, who gave their advice for entering into a

war, alledged that we should have no security for our trade while Spain was subject to a prince of the

Bourbon family. Id.

Nothing can be more artful than the address of

Ulysses : he secures himself of a powerful advocate, by paying an ingenuous and laudable deference to

his friend. Broome.

Where two or three sciences are pursued at the

same time, if one of them be dry, as logick, let

another be more entertaining, to secure the mind

from weariness. Watts.

SECUTO11ES, a species of gladiators among

the Romans, whose arms were a helmet, a shield,

and a sword or a leaden bullet. They were

armed in this manner, because they had to con-

tend with the retiarii, who were dressed in a

short tunic, bore a three-pointed lance in their

left hand, and a net in their right. The retiarius attempted to cast his net over the head of the se-

cutor; and, if he succeeded, he drew it together

and slew him with his trident ; but, if he missed his aim, he immediately betook himself to flight till he could find a second opportunity of entangling his adversary with his net. He was pursued by the secutor in his flight.

SEDAN', n. s. 1 believe because first made at Sedan. — Johnson. A kind of portable coach ; a chair.

Some beg for absent persons, feign them sick,
Close mewed in their sedans for want of air,
And for their wives produce an empty chair.
Dryden.

By a tax of Cato's it was provided that women's wearing cloaths, ornament, and sedan, exceeding 121/. 1. lOd. halfpenny, should pay 30*. in the •hundred pound value. Arbuthno'*

SEDAN, a considerable town of France, in the department of the Ardennes, situated on the right bank of the Meuse, and strongly fortified, partly by Vauban. The old castle, in which Turenne was born, is now converted into a fine arsenal. The town is divided into Upper and Lower, and is very uneven and irregular, but not ill-built. Sedan has been long noted for its ma-

nufactures of superfine woollens, of fire-arms and copper articles ; it has likewise a cannon foundry. It was formerly the seat of a Protestant university. Inhabitants 11,000. Thirty-seven miles south-east of Charlemont, and 170 north-east of Paris. Long. 4 57 50′ E., lat. 49 42 29′ N.

SEDATE', adj. i Lat. sedatus. Calm ;

SED ATE' LY, adv. > quiet ; still ; unruffled ; un-

SEDATE'NESS,n.s. j disturbed : the adverb and noun substantive corresponding.

With countenance calm and soul sedate,

Thus Turnus. Dryden's JEneid.

That has most weight with them that appears te-dately to come from their parents' reason. Locke.

There is a particular sedateness in their conversa-tion and behaviour that qualifies them for council, with a great intrepidity that fits them for action. Addison on the War.

Disputation carries away the mind from that calm and sedate temper which is so necessary to contem-plate truth. Watts.

SEDATIVES, in medicine, a general name for such medicines as weaken the powers of nature,

such as blood-letting, cooling salts, purgatives,

&c.

SEDATIVES, in the new system of medicine,

are denied to have any existence. Opium was

long considered by physicians as a sedative, be-

cause it allays pain, and induces sleep, &c., but

its first and chief effect is highly stimulant, and these are only the consequences of the indirect

debility that arises in the body, when the stimu-

lant effect is gone off (see OPIUM), as is the case in excess of wine, spirits, and all other intoxicat-

ing liquors. In short, the late Dr. Brown and

his followers, insist, that what have hitherto been

reckoned sedative powers are only inferior de-

grees of stimuli, and that no direct sedatives, as

such, exist in nature.

SEDATIVE SALT, in the old system of chemis-

try, borax, now called boracic acid.

SE DEFENDENDO, in law, a plea used for

him that is charged with the death of another,

by alleging that he was under a necessity of doing what he did in his own defence : as that the

other assaulted him in such a manner that, if he

had not done what he did, he must have been in

hazard of his own life. See HOMICIDE and

MURDER.

SEDENTARY, adj. Fr. sedentaire ; Ital.

sedentario ; Lat. sedentarita, of sedeo. Passed in

sitting still ; wanting motion or action.

A tedeiitaryhfe, appropriate to all students, crushes the bowels ; and, for want of stirring the body, suf-

fers the spirits to lie dormant.

Harvey on Consumptions.

The sedentary earth,

That better might with far less compass move,

Served by more noble than herself, attains

Her end without least motion. Milton.

Till length of years,

And tedentary numbness, craze ray limbs

To a contemptible old age obscure. Id. Agonistet.

The soul, considered abstractedly from its passions,

is of a remiss sedentary nature, slow in its resolves, and languishing in its executions.

Additon't Spectator.

The blood of labouring people is more dense and

heavy than those who live a sedentary life.

Arbuthnot.

*SEDGE, n.s. \ Sax. r*cj. A growth of*

SED'GY, adj. } narrow flags ; a narrow flag.

He hid himself in the sedges adjoining. Sandys.

Adonis, painted by a running brook,

And Cytherea all in ted get hid ;

U hich seem to move and wanton with her breath,

Kven as the waving tedge play with wind.*

Shaiapeare.

On the gentle Severn's sedgy bank,

In single opposition, hand to hand,

He did confound the best part of an hour,

In changing hardiment with great Glendower.

Id. Henry IV.

In hotter countries a fly called lucciole, that

shineth as the glowworm, is chiefly upon fens and

marshes ; yet is not seen but in the height of sum-

mer, and sedge or other green of the fens gives as good shade as bushes. Bacon.

My bonds I brake,

Fled from my guard, and, in a muddy lake,

Amongst the tedget, all the night lay hid. Denham.

Niphates, with inverted urn,

And drooping sedge, shall his Armenia mourn.

Dry den.

Old father Thames raised up his reverend head,

But feared the fate of Simoeis would return :

Deep in his ooze he sought his tedgy bed,

A ad shrunk his waters back into his urn. Id.

SEDHOUT, a noted fortress of Hindostan,

in the province of Golcoodah, and district of

Cuddapah. It is the capital of a small district of the same name, belonging to the British, and

was taken by Meer Joomla, about the year 1650.

At this period Sedhout and the adjoining district

were celebrated for their diamond mines, which

*do not now exist. The fortress is six mile**

north-east of Cuddapah.

SEDIMENT, n. s. Fr. sediment ; Lat. sedi-

mentum. That which subsides or settles at the

bottom.

The salt water rises into a kind of scum on the

top, and partly goeth into a sediment in the bottom, and so is rather a separation than an evaporation.

Bacon's Natural History.

It is not bare agitation, but the sediment at the

bottom, that troubles and defiles the water.

South' t Sermons.

That matter sunk not down till last of all, settling at the surface of the sediment, and covering all the rest. Woodward.

SEDITION, n. s. Fr. sedition ; Lat. icditio.

A tumult ; insurrection ; popular commotion.

That sunshine brewed a shower for him,

That washed his father's fortunes forth of France,

And heaped sedition on his crown at home.

Shakspeare. Henry VI.

In soothing them, we nourished 'gainst our senate

The cockle of rebellion, insolence, sedition.

Id. Coriolanus.

The cause why I have brought this army hither,

Is to remove proud Somerset from the king,

Seditious to his grace and to the state.

Id. Henry VI.

Very many of the nobility in Edinborough, at that

time, did not appear yet in this seditious behaviour., Clarendon.

Thou returnest

From flight, sfditious angel. Milton.

But, if she has deformed this earthly life

With murderous rapine and seditious strife,

In everlasting darkness must she lie ;

Still more unhappy that she cannot die. Prior.

SEDITION, in the civil law, is used for a fac-

tious commotion of the people, or an assembly

of a number of citizens without lawful authority,

tending to disturb the peace and order of so-

ciety. This offence is of different kinds: some

seditions more immediately threatening the su-

preme power, and the subversion of the constitution j others tending only towards the redress of private grievances. Among the Romans, therefore, it was variously punished, according as its end and tendency threatened greater mischief. See lib. 1, Cod. de Seditiosis; and Mat. de Crimin. lib. ii. n. 5, de Laesa Majestate. In the punishment the authors and ringleaders were justly distinguished from those who, with less wicked intention, joined and made part of the multitude. The same distinction holds in the law of England and in that of Scotland. Some kinds of sedition in England amount to high treason, and come within the statute 25 Edw. III. as levying war against the king. And several seditions are mentioned in the Scottish act of parliament as treasonable. — Bayne's Crim. Law of Scotland, pp. 33, 34. The law of Scotland makes riotous and tumultuous assemblies a species of sedition. But the law there, as well as in England, is now chiefly regulated by the riot act, made 1 Geo. I. ; only it is to be observed that the proper officers in Scotland, to make the proclamation thereby enacted, are*

sheriffs, stewards, and bailies of regalities, or their deputies ; magistrates of royal boroughs, and all

other inferior judges and magistrates ; high and

petty constables, or other officers of the peace,

in any county, stewartry, city, or town. And in

that part of the island, the punishment of the

offence is any thing short of death which the

judges, in their discretion, may appoint.

SEDLEY (Sir Charles), an English poet and

•wit, the son of Sir John Sedley, of Aylesford, in Kent, born about 1639. At the restoration he

came to London to join the general jubilee, and

commenced wit, courtier, poet, and gallant. He

was so much admired that he became a kind of

oracle among the poets; which made king

Charles tell him that nature had given him a

patent to be Apollo's viceroy. The productions

of his pen were some plays, and some delicately

tender amorous poems>, in which the softness of

his verses was so exquisite, as to be called by the duke of Buckingham Sedley's witchcraft. 'There

were no marks of genius or true poetry to be

described,' say the authors of the Biographia

Britannica; 'the art wholly consisted in raising

loose thoughts and lewd desires, without giving

any alarm ; and so the poison worked gently and

irresistibly. Our author, we may be sure, did

not escape the infection of his own art, or rather •was first tainted himself before he spread the in-

fection to others.' A very ingenious writer of

the present day, however, speaks much more fa-

vorably of Sir Charles Sedley's writings. ' He

studied human nature; and was distinguished

for the art of making himself agreeable, particu-

larly to the ladies ; for the verses of lord Ro-

chester, beginning with, ' Sedley has that prevail-

ing gentle art,' &c., so often quoted, allude not to his writings, but to his personal address.' — Lang-

horn's Effusions, &c. But while he thus grew

in reputation for wit, and in favor with the king, he grew poor and debauched ; his estate was im-

paired, and his morals were corrupted. One of

his follies, however, being followed by an indict-

ment and a heavy fine, Sir Charles reformed, ap-

plied himself to business, and became a member

of parliament, in which he was a frequent

speaker. He was in the house of commons in

the reign of James If., whose attempts upon the

constitution he vigorously withstood; and he

was very active in bringing on the Revolution. This was thought more extraordinary as he had received favors from James. But that prince had taken a fancy to Sir Charles's daughter, and, in consequence of his intrigues with her, he created her countess of Dorchester. This honor so far from pleasing, greatly shocked Sir Charles. However libertine he himself had been, yet he could not bear the thoughts of his daughter's dishonor ; and, with regard to her exaltation, he only considered it as rendering her more conspicuously infamous. He therefore conceived a hatred for the king ; and from this and other motives, perhaps patriotic, readily joined to dispossess him of his throne. ' I hate ingratitude,' said he, 'and therefore, as the king has made my daughter a countess, I will endeavour to make his daughter a queen; meaning the princess Mary, married to the prince of Orange, who deprived James of his crown at the Revolution. He lived to the beginning of queen Anne's reign ; and his works were printed in 2 vols. 8vo. 1719.

SEDIl, or SEDRE, the high-priest of the

sect of Ali among the Persians. The sedre ii

appointed by the emperor of Persia, who usually

confers the dignity on his nearest relation. The

jurisdiction of the sedre extends over all effects

destined for pious purposes, over all mosques,

hospitals, colleges, sepulchres, and monasteries.

He disposes of all ecclesiastical employments,

and nominates all the superiors of religious

houses. His decisions in matters of religion are

received as so many infallible oracles ; he judges

of all criminal matters in his own house without

appeal. His authority is balanced by that of

the mudsitehid, or first theologue of the empire.

SEDUCE', v. a. \ ¥t.seduire;Lai.seduco.

SEDUCE'MENT, n. s. /To draw aside from the

SEDU'CER, Bright; tempt; corrupt;

SEDU'CIBLE, adj. i deprave; deceive: se-

SEDUC'TION, n. s. J ducement is the practice

of seduction : seducer and the other derivatives

correspond.

In the latter times some shall depart from the

faith, giving heed to seducing spirits. I Tim. iv. 1.

Me the gold of France did not teduce,

Although I did admit it as a motive

The sooner to effect what I intended.

Shakspeare. Henry V.

A beauty-waining and distressed widow

Seduced the pitch and height of all his thoughts

To base declension. Id. Richard III.

Grant it me, O king ; otherwise a seducer flourishes, and a poor maid is undone. Shabspeare.

1 shall never gratify the spitefulness of a few with any sinister thoughts of all their allegiance, whom

pious frauds have seduced. King Charles.

Whatsoever men's faith, patience, or perseverance

were, any remarkable indulgence to this sin, the se-

duction of Balaam, was sure to bring judgments.

Hammond.

Subtle he needs must be who could seduce

Angels. Milton.

To season them, and win them early to the love

of virtue and true labour, ere any flattering seduce –

ment or vain principle seize them wandering, some

easy and delightful book of education should be read to them. Id. on Education.

We owe much of our errour to the power which

our affections have over our so easy seducible under-

standings. Glanrilte.

The deceiver soon found out this soft place of

Adam's, and innocency itself did not secure him

from this way of seduction. Id. Scepsis.

To procure the miseries of others in those extremi-

ties, wherein we hold an hope to have no society our-

selves, is a strain above Lucifer, and a project beyond the primary seduction of hell.

Browne's Vulgar Errour.*

The vicious example of ages past poisons the

curiosity of the present, affording a hint of sin unto seducible spirits. Browne.

Nor let false friends seduce thy mind to fame

By arrogating Jonson's hostile name ;

Let father Flecknoe fire thy mind with praise,

And uncle Ogleby thy envy raise. Dryden.

He, whose firm faith no reason could remove,

Will melt before that soft seducer, love. Id.

There is a teaching by restraining seducers, and

so removing the hindrances oftnowledge. South.

Her hero's dangers touched the pitying power,

The nvmph's seducements, and the magick bower.

Pope.

llttkn ascribes her seduction to Venus, and men-

tions nothing of Paris. la

A woman who is above flattery, and despises all

praise but that which flows from the approbation of her own heart, is, morally speaking, out of the reach of seduction. C'torisw.

I know that the devil is continually lying in wait to seduce and destroy the souls of men. Patey.

SEDUCTION, is the act of tempting and draw-

ing aside from the right path, and comprehends

every endeavour»to corrupt any individual of the

human race. This is the import of the word in

its largest and most general sense; but it is

commonly employed to express the act of tempt-

ing a virtuous woman to part with her chastity.

The seducer of female innocence practises the

husbands, and evils so great result from the

violation of that fidelity, that, whatever con tri

butes in any degree to its preservation, m;;st he-

agreeable to him who, in establishing the laws of

nature, intended them to be subservient to the

real happiness of all his creatures. But nothing

contributes so much to preserve the fidelity of

wives to their husbands as the impressing upon

the minds of women the highest veneration for

the virtue of chastity. She who, when unmar-

ried, has been accustomed to grant favors to

different men, will not find it easy, if indeed

possible, to resist afterwards the allurements of

variety, after marriage. It is therefore a wise

institution, and agreeable to the will of Him who

same stratagems of fraud to get posession of a made us, to train up women so as that they may woman's person, that the swindler employs to look upon the loss of their chastity as the most get possession of his neighbour's goods or money ; disgraceful of all crimes, as that which sinks yet the law of honor, which pretends to abhor them in the order of society, and robs them of deceit, and which impels its votaries to murder all their value. In this light virtuous women every man who presumes, however justly, to actually look upon the loss of chastity. The suspect them of fraud, or to question their ve- importance of that virtue has been so deeply racity, applauds the address of a successful in- impressed upon their minds, and is so closely trigue, though it be well known that the seducer associated with the principle of honor, that they could not have obtained his end without swear-

ing to the truth of a thousand falsehoods, and

cannot think but with abhorrence upon the very

deed by which it is lost. He therefore who, by

calling upon God to witness promises which he fraud and falsehood, persuades the unsuspecting never meant to fulfil. The law of honor is in-

deed a very capricious rule, which accommo-

girl to deviate in one instance from the honor of

the sex, weakens in a great degree her moral

dates itself to the pleasures and conveniences of principle ; and, if he reconcile her to a repetition high life; but the law of the land, which is

enacted for the equal protection of high and

of her crime, he destroys that principle entirely,

as she has been taught to consider all other vir-

low, may be supposed to view the guilt of tues as inferior to that of chastity. Hence it is seduction with a more impartial eye. Yet, for that the hearts of prostitutes are generally this offence, even the laws of this kingdom have steeled against the miseries of their fellow-crea-

provided no other punishment than a pecuniary tures ; that they lend their aid to the seducer in satisfaction to the injured family, which, in Eng- his practices upon other girls ; that they lie and land, can be obtained only by one of the quaint- swear, and steal without compunction ; and that est fictions in the world, by the father's bringing too many of them hestitate not to commit murder, his action against the seducer for the loss of his daughter's service during her pregnancy and

nurturing. (See Paley's Moral Philosophy, book

III., part iii. chap. 3.) The moralist, however,

who estimates the merit or demerit of actions,

not by laws of human appointment, but their

general consequences as established by the laws

of nature, must consider the seducer as a crimi-

nal of the deepest guilt. In every civilised

country, and in many countries where civilisa-

if it can serve any selfish purpose of their own.

The loss of virtue, though the greatest that man

or woman can sustain, is not the only injury

which the seducer brings upon the girl whom he

deceives. She cannot at once reconcile herself

to prostitution, or even to the loss of character ; and while a sense of shame remains in her mind,

the misery which she suffers must be exquisite.

She knows that she has forfeited what in the

female character is most valued by both sexes ;

tion has made but small progress, the virtue of and she must be under the perpetual dread of a women is collected as it were into a single point, which they are to guard above all things, as that

on which their happiness and reputation wholly

depend. At first sight this may appear a capri-

cious regulation ; but a moment's reflection will

convince us of the contrary. In the married

state so much confidence is necessarily reposed

in the fidelity of women to the beds of their

discovery. She cannot even confide in the ho-

nor of her seducer, who may reveal her secret in

a fit of drunkenness, and thus rob her of her

fame as well as of her virtue ; and, while she is in this state of anxious uncertainty, the agony of

her mind must be insupportable.

We shall resume this subject at the beginning

of the next volume.

END OF VOL. XIX.

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THE

LONDON ENCYCLOPEDIA.

VOL. XX.

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SEDUCTION TO SPHERE.

J. Haddon, Printer, Castle Street, London.

THE

LONDON ENCYCLOPAEDIA,

UNIVERSAL DICTIONARY

SCIENCE, ART, LITERATURE, AND PRACTICAL MECHANICS,

COMPRISING A

POPULAR VIEW OF THE PRESENT STATE OF KNOWLEDGE.

ILLUSTRATED BY

NUMEROUS ENGRAVINGS, A GENERAL ATLAS,

AND APPROPRIATE DIAGRAMS.

Sic oportet ad libnim, presertim mjscellauei generis, legendum accedere lectorem, ut solet ad couviviim conviva civilis. Convivator annititnr omnibus satisfacere ; et tamen si quid apponitur, quod hujus aut illius palato non respondeat, et hie ct illc urbane dissimulant, et alia fercula probant. ne quid consistent convivatorem. Eraimus.

A reader should, it down to a book, especially of the miscellaneous kind, as a well-behaved visitor does to a. banquet The master of the feast exerts himself to satisfy his guests; but if, after all his care and pain,, something should appear o« the table that docs uo« suit this or that person's taste, they politely pas. it over without notice, and commend ..ther dishes that they may not distress a kind host.

translation.

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BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITANˆ

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

IN TWENTY-TWO VOLUMES. VOL. XX.

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1837.

THE

[SEDUCTION, continued from Vol. XIX.] We have seen that the loss of virtue is not the only injury which a woman sustains, but that many others follow. One of these is, that she cannot even confide in the honor of her seducer, who may reveal her secret in a fit of drunkenness, and thus rob her of her fame as well as of her virtue; and, while she is in this state of anxious uncertainty, the agony of her mind must be insupportable. That it is so, in fact, the many instances of child-murder by unmarried women of every rank leave us no room to doubt. The affection of a mother to her new-born child is one of the most unequivocal and strongest instincts in human nature, and nothing short of the extremity of distress could prompt any one so far to oppose her nature as to embrue her hands in the blood of her imploring infant. Even this deed of horror seldom prevents a detection of the mother's frailty, which is indeed commonly discovered, though no child has been the consequence of her intrigue. He who can seduce is base enough to betray ; and no woman can part with her honor, and retain any well-grounded hope that her amour shall be kept secret. The villain to whom she surrendered will glory in his victory, if it was with difficulty obtained ; and if she surrendered at discretion her own behaviour will re-veal her secret. Her reputation is then irretrievably lost, and no future circumspection wijl be of the smallest avail to recover it. She will be shunned by the virtuous part of her own sex, and treated as a mere instrument of pleasure by the other. In such circumstances she cannot expect to be married with advantage. She* may perhaps be able to captivate the heart of a heedless youth, and prevail upon him to unite his fate with her's before the delirium of his passion shall give him time for reflection; she may be addressed by a man who is a stranger to her story, and married while he has no suspicion of her secret; or she may be solicited by one of a station inferior to her own, who, though acquainted with every thing that has befallen her, can barter the delicacy of wedded love for some pecuniary advantage ; but from none of these marriages can she look for happiness. The delirium which prompted the first will soon van-ish, and leave the husband to the bitterness of his own reflections, which can hardly fail to produce cruelty to the wife. Of the secret to which, in the second case, the lover was a stranger, the husband will soon make a discovery, or at least find room for harbouring strong suspicions ; and suspicions of having been deceived in a point so delicate have hitherto been uniformly the parents of misery. In the third case Vol.. XX- -PA in 1.

the man married her merely for money, of which having got the posssesion, he has no farther inducement to treat her with respect. Such are some of the consequences of seduction, even when the person seduced has the good fortune to get afterwards a husband ; but this is a fortune which few in her circumstances can reasonably expect. By far the greater part of those who have been defrauded of their virtue by the arts of the seducer sink deeper and deeper into guilt, till they become at last common prostitutes. The public is then deprived of their service as wives and parents; and instead of contributing to the population of the state, and to the sum of domestic felicity, these outcasts of society be-come seducers in their turn, corrupting the morals of every young man whose appetites they can inflame, and every young woman whom they can entice to their own practices. All this complication of evil is produced at first by arts, which, if employed to deprive a man of his property, would subject the offender to the execration of his fellow subjects, and to an ignominious death : but while the forger of a bill is pursued with relentless vigor by the ministers of justice, and the swindler loaded with universal reproach, the man who, by fraud and forgery, has enticed an innocent girl to gratify his desires at the expense of her virtue, and thus introduced her into a path which must infallibly lead to her own ruin, as well as to repeated injuries to the public at large, is not despised by his own sex, and is too often caressed even by the virtuous part of the other. Yet the loss of property may be easily repaired ; the loss of honor is irreparable ! It is vain to plead, in alleviation of this guilt, that women should be on their guard against the arts of the seducer. Most unquestionably they should ; but arts have been used which hardly any degree of caution would have been sufficient to counteract. It may as well be said that the trader should be on his guard against the arts of the forger, and accept of no bill without previously consulting him in whose name it is written. Cases, indeed, occur in trade in which' this caution would be impossible; but he must be little acquainted with the workings of the hu-man heart who does not know that situations likewise occur in life, in which it is equally impossible for a girl of virtue and tenderness to resist the arts of the man who has completely gained her affections. The mentioning of this circumstance leads us to consider another species of seduction, which, though not so highly criminal as the former, is yet far removed from innocence ; we mean the practice, which is too prevalent among young men of fortune, of employ ing every art in their power to gam the hearts of

I had a mind to see him out, and therefore did not care for contradicting him. Id. Spectator.

We are in hopes that you may prove a dreamer of dreams, and a seer of visions. Id.

By day your frighted *eert Shall call for fountains to express their tears, And wish their eyes were floods': by night from

dreams

Of opening gulphs, black storms, and raging flauies, Starting amazed, shall to the people show Emblems of heavenly wrath, and mystick type* of woe. 1'iit'T.

You may see into the spirit of them all, and form your pen from those general notions. Felton.

Seeing they explained the phenomena of vision, imagination, and thought, by certain thin fleeces of atoms that flow from the surfaces of bodies, and by their subtlety penetrate any obstacle, and yet retain the exact lineaments of the several bodies from which they proceed : in consequence of this hypothesis they maintained that we could have no phantasy of any thing, but what did really subsist either intire or in its several parts. Bentley't Sermons.

See! the sole bliss heaven could on all bestow, Which who but feels can taste, but thinks can-know.

Pope.

A little busy mind runs on at all events, must be doing, and, like a blind horse, fears no dangers, because he tee* none. Chesterfield.

SEED (Jeremiah), an English divine, born at Clifton, near Penrith, in Cumberland, and educated at Queen's College, Oxford ; of which he became a fellow in 1732. He was minister of Enham in Hampshire, and died in 1747. He published two volumes of Sermons, which were much admired; and his posthumous works made other two.

SEED, n. ». & v. n. ~) Sax. r-SE'c; Dan.*efd; SEED'-CAKE, Belg. sued; Goth. s<ed.

SEED'LINC, The organised germ from

SEED’NESS, which plants and ani—

SECD’-PEARL, . S>mals are produced ; first

SEEDPLOT, j principle; original; oflf—

SEED’-TIME, • spring; descendant:

SEF.DS’MAN, | seedpearl is pearl of

SEEDY, adj. J small grain : the other

derivatives are of obvious meaning.

While the earth remaineth, seedtime and harvest shall not cease. Gen. vii. 22.

Remember, wife, The seedcake, the pasties;, and furmety pot. Tower

Next him kkig Lear in happy peace long reigued , Hut had no issue male him to succeed,

But three fair daughters which were well uptrained In all that seemed fit for kingly seed. Faerie Queene.

The teed of whatsoever perfect virtue groweth from u; is a right opinion touching things divine.

Hooker.

If you can look into the feeds of time, Ajid say which grain will grow, and which will not, Speak then to roe. Shakspeare. Macbeth.

Blossoming time

From the teedneu the bare fallow brings To teeming foyson. Id. Measure for Measure.

The higher Nilus swells The more it promises : as it ebbs, the seedsman Upon the slime and ooze scatters his grain, And shortly comes to harvest.

Id. Antony and Cleopatra.

Seed of a year old is the best, though some seed and grains last better than others.

Bacon’s Natural Uitten-.

1 SEE

If he would have two attributes in one year, he-must give them two seedtimes and two harvests.

Bacon.

To counsel others, a man must be furnished witii an universal-store in himself to the knowledge of al! nature ; that is, the matter and seedplot : there are the seats of all argument and invention. Ben Jonton.

Our hatred of the serpent and his teed is from God : their hatred of the hol_v. seed is from the serpent.

Bp. Hall.

Their very teedtime was their harvest, and by sow-ing tares they immediately reaped gold.

Decay of Piety. The thing doth touch

The main of all vour states, your blood, your teed.

Daniel.

Humility isaseedplot of virtue, especially Christian, which thrives best when ‘tis deep rooted in the hum-ble lowly heart. Hammond.

It will not be unuseful to present a full narration of this rebellion, looking back to those passages by which the seedplott were made and framed, from ‘whence those mischiefs have successively grown.

Clarendon. Day and night,

Seedtime and harvest, heat and hoary frost, Shall hold their course till fire purge all things.

Milton.

The first rain fell upon the seedtime about October, and was to-make the seed to root ; the latter was to fill the ear. Browne.

Praise of great acts he scatters, as a >enl Which may the like in coming ages breed. Waller.

Of mental teed they were nol. held, Which other mortals so excelled ; And beauty too in such excess As yours, Zelinda ! claims no less. Id.

That every plant has its seed is an evident sign of divine providence. Mure.

In the dissolution of seedpearl in some acid menstruum, if a good quantity of the little pearls be cast in whole, they will be carried in swarms from the bottom to the top. Koyle.

When God gave Canaan to Abraham, he thought fit to put his seed into the grant too. Locke.

Did they ever see any herbs, except those of the grass-leaved tribe, come up without two seed leaves ; which to me is an argument that they came all ofseed, there being no reason else why they should produce two seed leaves different from the subsequent. R<iy.

They pick up all the old roots, except what they design for seed, which they let stand to seed the next year. Mortimer.

Carry into the shade such seedlings or plants as are for their chbiceness reserved in plots.

Evelyn's Kaleiidar.

Just gods ! all other things their like produce ; The vine arises from her mother's juice : When feeble plants or tender flowers decay, They to their seed their images convey. Prior.

He that too curiously observes the face of the heavens, by missing his seedtime, will lose the hopes of his harvest. Atterbury.

Whate'er I plant, like com on barren earth, By an equivocal birth, Seeds and runs up to poetry. Swift.

SEEDS, preservation of, in a slate fit for vegetation, is a matter of great and general importance, because, if it can be accomplished, it will enable us to rear many useful plants in one country which are there unknown, being indigenous only in others at a great distance from it. There is a letter on this subject in the Transactions of the Society of Arts, vol. xvi.,

from which we extract what follows : ‘ Many years ago,’ says the author, ‘ having observed some seeds which had got accidentally amongst raisins, and that they were such as are generally attended with difficulty to raise in England after coming in the usual way from abroad, T sowed them in pots, within a framing ; and, as all of them grew, I commissioned my sons, who were then abroad, to pack up all sorts of seeds they, could procure in absorbent paper, and send some of them surrounded by raisins, and others by brown moist sugar ; concluding that the former seeds had been preserved by a peculiarly favorable state of moisture thus afforded them. It occurred, likewise, that as many of our common seeds, such as clover, charlock, &c., would lie dormant for ages within the earth, well preserved for vegetation whenever they might happen to be thrown to the surface, and exposed to the atmosphere; so these foreign seeds might be equally preserved, for many months at least, by the kindly covering and genial moisture that either raisins or sugar af-rorded them : and this conjecture was really fulfilled, as not one in twenty of them failed to /egetate, when those of the same kinds, that I ordered to be sent lapped in common parcels, and forwarded with them, would not grow at all. T observed, upon examining them all before they were committed to the earth, that there was a prevailing dryness in the latter, and that the former looked fresh and healthy, and were not in the least infected by insects, as was the case with the others. It has been tried repeatedly to convpy seeds (of many plants difficult to raise) closed up in bottles, but without success ; some greater proportion of air, as well as a proper state of moisture, perhaps, being necessary. No difference was made iu the package of the seeds, respecting their being kept in husks, pods, &c. so as give those in raisins or sugar any advantage over the others, all being sent equally guarded by their natural teguments.’

SEEDY, in the brandy trade, a term used by the dealers to denote a fault that is found in several parcels of French brandy, which renders them unsaleable. The French suppose that these I trandies obtain the flavor which they express by this name, from weeds that grow among the vines whence the wine of which this brandy is pressed was made.

SEEDY DOUDE, a sanctuary of Tunis, Africa, at the northern extremity of the peninsula of Dakkul, and surrounded with the ruins of the ancient Misua. It received its present name in honor of Doude, or David, a Moorish saint, and a cavity is shown, five yards long, which they pretend to be his sepulchre ; but Dr. Shaw was convinced that it is nothing more than a fragment of some Roman praetorium. Three tesse-lated or Mosaic pavements bear marks of the workmanship of that people, being wrought with the greatest exactness, in a great

yariety of shapes and colors. 150 miles northeast of Tunis.

SEEK’, v. a. & v. n. } Fret . I sought ; part.

SEEK’ER, n. s. >p«ss., sought. Saxon

SEEK’-SORROW. ‘ recan ; Dut. soecken.

To look for ; search for ; often taking out ; solicit: to make search, pursuit, endeavour or

to pre—

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enquiry after : the noun-substantive corresponding: a seek-sorrow is a moper, one who resigns himself to vexation.

And in tho dales men schulen seke deeth, and thei schulen not fynde it, and thei schulen desire to die, and deeth schal fle from hem. Wiclif. Apoc. 9.

Because of the money returned in our sacks are we brought in, that he may seek occasion against us, and take us for bondmen. Gen. xliii. 18.

Unto his habitation shall ye seek, and thither thou shall come. Dent. xii. 5.

David saw that Saul was come out to seek his life.

1 Sam. xxiii.

All the earth sought to Solomon to hear his wis-dom. 1 Kings.

The young lions roar after their prey, and seek their meat from God. Psalm civ. 21.

Violent men have sought after my soul.

Id. Ixxxvi. 14.

He seeketh unto htm a cunning workman, to pare a graven image.

Isaiah xi

I am sought of them that asked not for me : I am found of them that sought me not. Id. Ixv. 1.

Ask, and it shall be given to you ; seek, and ye shall find. Matt. vii. 7.

Others, tempting him, sought of him a sign.

Luke xi. 16.

Afield they go, where many lookers be, And thou seek-torrow, Klaius, them among :

Indeed thou saidst it was thy friend to see, Strephon, whose absence seemed unto thee long.

Sidney.

Being brought and transferred from other services abroad, though they be of good experience in those, yet in these they will be new to seek ; and, before they have gathered experience, they shall buy it with great loss to his majesty. Spenser.

lieing a man of experience, he wished by wisdom to otder that which the young prince sought for by war. Knolles.

He did range the town to seek me out.

Shakspeare. I had a son,

Now outlawed from my blood ; he sought my life.

Id.

Sweet peace, where dost thou dwell ? I humbly crave,

Let me once know ;

I sought thee in a secret cave, And asked if peace were there. Herbert.

The king meant not to seek out nor to decline fighting with them if they put themselves in his way.

Clarendon.

God hath bid dwell far off all anxious cares, And. not molest us, unless

we ourselves Seek them with wandering thoughts. Milton.

Let us seek death, or, he not found, supply His office. Id.

Unpractised, unprepared, and still to seek. Id.

Though I confess that in philosophy I am a seeker, yet cannot believe that a sceptick in philosophy must be one in divinity. Glanville.

But they misplace them all ; And are as much to seek, in other things, A s he that only can design a tree Would be to draw a shipwreck. Roscommon.

So fatal ‘twas to seek temptation out ! Most confidence has still most cause to doubt.

1 Dry den.

Dardanus, though born On Latin plains, yet sought the Phrygian shore. Id.

Ask not what pains, nor further seek to know Their process, or the forms of law below. Id.

We must seek out some other original of powei

SEE

(i

for the government of politicks than this of Adam, or else there will be none at all in the world. Locke.

A language of a very witty volatile people, seekers after novelty, and abounding with variety of notions.

Id.

I have been forced to relinquish that opinion, and have endeavoured to seek after some better reason.

Addison's Spectator.

Since great Ulysses sought the Phrygian plains, Within these walls inglorious silence reigns. Pope. SEEKS, a religious sect of Patna, so called from a word contained in one of the commandments of their founder, which signifies ' learn thou.' In books giving an account of oriental sects and oriental customs, we find mention made both of Seeks and Seiks ; and some think that the same tribe is meant by both names. If so, different authors write very differently of their principles and manners. See SEIKS. In the Asiatic Researches, Mr. Wilkins gives a much more amiable account of the Seeks. The Seeks, he says, are a sect distinguished both from the Mussulmans and the worshippers of Brahma. Our author asked leave to enter into their chapel. They said it was a place of worship, open to all men, but intimated that he must take off his shoes. He was then politely conducted into the hall, and seated upon a carpet in the midst of the assembly. The whole building forms a square of about forty feet. The hall is in the centre, divided from four other apartments by wooden arches upon wooden pillars. The walls above the arches were hung with European looking glasses in gilt frames, and with pictures ; on the left hand is the chancel, which is furnished with an altar covered with cloth of gold. About it were several flower-pots and rose-water bottles, and three urns to receive charity. On a low desk, near the altar, stood a great book, of folio size, from which some portions are daily read in the divine service. At noon, the congregation arranged themselves upon the carpet. The great book and desk were brought from the altar, and placed at the opposite extremity. An old silver-haired man kneeled down before the desk, with his face towards the altar, and by him sat a man with a drum, and two or three with cymbals. The book was now opened, and the old man be-gan to chant to the time of the instruments, and at the conclusion of every verse most of the congregation joined chorus in a response, with countenances exhibiting joy. Their tones were not harsh ; the time was quick; and Mr. Wilkins learned that the subject was a hymn in praise of the unity, omnipresence, and omnipotence of the deity. The hymn concluded, the whole company got up and presented their faces, with joined hands, towards the altar in the attitude of prayer. The prayer was a sort of litany pronounced by a young man in a loud and distinct voice ; the people joining, at certain periods, in a general response. This prayer was followed by a short blessing from the old man, and an invitation to the assembly to partake of a friendly feast. A share was offered to Mr. Wilkins. It was a kind of sweetmeat composed of sugar and flower mixed up with clarified butter. They were next served with a few sugar-plums ; thus ended the feast and ceremony. The foun- "der

of this sect was Naneek Sah, who lived

SEE

about 400 years ago; who left behind him a book, composed by himself in verse, containing the doctrines he had established : this book teaches that there is but one God, filling all space, and pervading all matter ; and that there will be a day of retribution, when virtue will be rewarded, and vice punished. It forbids mur-der, theft, and other crimes, and inculcates the practice of all the virtues ; but particularly a universal philanthropy and hospitality to strangers and travellers. It not only commands universal toleration, but forbids disputes with those of another persuasion. If any one show a sincere inclination to be admitted among them, any five or more Seeks being assembled in any place, even on the highway, they send to the first shop where sweetmeats are sold, and procure a very small quantity of a particular kind called batasa, which having diluted, in pure water, they sprinkle some of it on the body and eyes of the proselyte, whilst one of the best instructed repeats to him the chief canons of their faith, and exacts from him a solemn promise to abide by them the rest of his life. They offered to admit Mr. Wilkins into their society ; but he declined the honor, contenting himself with their alphabet, which they told him to guard as the apple of his eye, as it was a sacred character. -The-language is a mixture of Persian, Arabic, and Shanscrit, grafted upon the provincial dialect of Punjah, which is a kind of Hindowee, or, as we commonly call it, Moorish.

SEEL, v. a. Fr. sceller, to seal. To close the eyes. A term of falconry, the eyes of a wild or haggard hawk being for a time seeled or closed.

Now she brought them to see a seeled dove, who the blinder she was, the higher she strave. Sidney.

Mine eyes no more on vanity shall feed, But teeled up with death shall have their deadly meed.

Faerie Quecne. Come, seeling night, Scarf up the tender eye of pitiful day.

Shakspeare. Macbeth.

Some ambitious men seem as screens to princes in matters of danger and envy ; for no man will take such parts, unless he be like the seeled dove, that mounts and mounts because he cannot see about him.

Bacon.

Since, blinded with ambition, he did soar Like a seeled dove, his crimes shall be his punishment.

To be deprived of sight. Denhamt Sophy.

SEEL, v. n. Sax. fyllan. To lean on one side. When a ship seels or rowls in foul weather, the breaking loose of ordnance is a thing very dangerous.

Raleigh.

SEELY, adj. Sax. peel, lucky time. Lucky ;

happy.

Peacock and turkie, that nibbles off top,

Are very ill neighbours to seely poor hop. Tutxr. My seely sheep like well belBw,

For they been hale enough and trow,

And liken their abode. Spenser.

SEEM', v. n. ˆ Fr. sembler, unless it

SEEM'ER, n. s. has a Teutonic original,

SEEM'ING, adj. \ as seemly certainly has SEEM'INGLY, adv. }>To appear; make * SF.EM'INGNESS, n.s. I show, or a becoming ap-Si i M'UNESS, (pearance; have sem—

SEEM'LY, aJj.&adv.J blance : it sro-rs. nic'iin/

SEE

it appears, and is often used in irony : seeming is appearance, show, opinion ; the adverb and noun-substantive corresponding : seemliness, decency, or fitness of appearance ; the adjective and adverb corresponding.

Nothing more clear unto their seemirg, than that, a new Jerusalem being often spoken of in scripture, they undoubtedly were themselves

that new Jerusalem. Hooker. Suspense of judgment and exercise of charity, were safer and seemlier for Christian men, than the hot pursuit of these controversies. Id.

My lord, you've lost a friend indeed ; And I dare swear you borrow not that face Of seeming sorrow ; it is sure your own.

Shakspeare. Henry IV. Speak : we will not trust our eyes Without our ears : thou art not what thou seemest.

Shakspeare. Sir, there she stands :

If aught within that little seeming substance May fitly like your grace, She's there, and she is yours. Id. King Lear.

Angelo scarce confesses That his blood flows, or that his appetite Is more to bread than stone : hence shall we see, If power change purpose, what our seemers be.

Shakspeare, All good seeming,

By thy revolt, oh husband, shall be thought Put on for villainy. Id. Cymbeline.

For you there's rosemary and rue ; these keep Seeming and savour all the winter long. Sliakspeare.

I am a woman lacking wit To make a seemly answer to such persons.

Id. Henry VII.

When substantialness combineth with delightfulness, seemliness with portliness, and currentness with stayedness, how can the language sound other than full of sweetness 1 Camden.

The seemingness of those reasons persuades us on the other side. •£% %•

So spake the Omnipotent ; and with his words All seemed well pleased ; all seemed, but were not all.

Milton.

His persuasive words impregned With reason to her seeming. Id,

They to their viands fell, not seemingly The angels nor in mist. Id.

The wife safest and seemliest by her husband stays.

Id.

I have touched upon them, though seemingly collateral to my scope ; and yet I think they are more than seemingly so, since they pertinently illustrate my design. Glanville's Scepsis.

It seems the camel's hair is taken by painters for the skin with the hair on. Browne's Vulgar Errours.

In holy nuptials tied j A seeming widow, and a secret bride. Dry den.

Observe the youth Already seems to snuff the vital air. Id. Mneid.

The king and haughty empress, to our wonder, If not atoned, yet seemingly at peace. Dryden.

The city dame was so well bred as seemingly to take all in good part. L' Estrange.

May we enjoy

Our humid products, and with seemly draughts Enkindle mirth and hospitable love. Philips.

The raven, urged by such impertinence, Grew passionate, it seems, and took offence.

Addison.

This the father seemingly complied with ; but afterwards refusing, the son was likewise set aside.

Id. Freeholder.

SEE

The earth by these, 'tis said, This single crop of men and women bred ; Who, grown adult (so chance, it seems, enjoined) Did male and female propagate.

Kliickmore's Creation.

He had been a chief magistrate ; and had, it seems executed that high

office justly and honorably.

Atterbury.

It seems that when first I was discovered sleeping on the ground, the emperor had early notice.

Gulliver.

There, seemly ranged in peaceful order, stood Ulysses' arms, now long disused to blood. Pope.

SEE-MA-KOANG, a learned Chinese writer, highly celebrated for his humanity, charity, and other virtues, as well as for his literary and political abilities. He was born A. D. 1018, in the reign of the emperor Jentsoung, who promoted him to the highest offices in the empire. He wrote a General History of the Chinese Empire, in 294 volumes. Upon the deatli of the emperor he retired from court, but was recalled to act as tutor to the young emperor, and as prime minister during his minority. But ten years afterwards his ungrateful imperial pupil, listening to calumniators, put this great man to death on suspicion of treason. His successor, however, did justice to the memory of See-ma-koang ; and the Chinese historians still celebrate him as ' one of the best men that ever lived.'

SEE-MA-TSIEN, another Chinese writer of the same family with the preceding, who flourished in the third century, and is famed for having been the Restorer of the Chinese history after the destruction of their ancient records, by the tyrant Shi-whang-ti. See CHINA. This author rendered the family or tribe of See-ma famous.

SEER, a principality of the province of Om-mon, Arabia, extending from Cape Mussendoon, along the coast of the Persian gulf. It is called by the Persians Dsjulfar ; and Europeans frequenting these seas have given this name to the Arabs who inhabit it. The Arabs, however, call it Seer, from the town of the same name, which has a good harbour, and is the seat of the sheik. The country not long since acknowledged the authority of the Imam ; but the sheik has shaken off this dependence, and makes some figure among the maritime powers in those parts. His subjects are much employed in navigation and commerce.

SEERDHUNA, a town of Hindostan, in the province of Delhi, and district of Merat. This town was assigned as a jagier to Somroo, a German, who, by command of the nabob Cossim Aly Khan, massacred the English-prisoners at Patna, in the year 1763. This territory, which is

twenty miles long by twelve in breadth, is very fertile in grain, sugar, cotton, &c. After the death of Somroo, his wife succeeded him in his possessions, and in the command of his army, at the head of which she distinguished herself on various occasions.

SEE'RWOOD, n. s. See SEARWOOD. Dry wood.

Caught, like dry stubble fired, or (ike searvoood ; Yet from the wound ensued no purple flood, But looked a bubbling mass of frvmg blood.

Dryden.

SEE

SEE'SAW, n. s. From saw. A reciprocating motion.

Sometimes they were like to pull John over, then it went all of a sudden again on John's side ; so they went teetawing up and down from one end of the room to the other. Arbithnot.

His wit all seetaw, telween that and this ; Now high, now low, now master up, now miss. And he himself one vile antithesis. Pope.

SEETACOOND, a town of Bengal, in Chit-tagong, having a warm spring, from which there frequently issues a flame, which the Hindoos consider as an emanation of the deity, and make offerings to it. The water is fine, and will keep for any length of time. Long. 91° 36' E., lat. 22° 37' N. There is another place of this kind in the vicinity of Monghir, province of Bahar, and indeed several others in different parts of Hindostan, all dedicated to Seeta, the wife of Ram.

SEETH, v. a. Fret. I sod or seethed ; part, pass, sodden. Sax. feo'oan ; Belg. soiden. To boil ; decoct in hot liquor.

Set on the great pot, and teeth pottage for the sons of the prophets. 2 Kings iv.

The priest's servant came, while the flesh was in teething, with a flesh-hook, and stuck it into the pan.

1 5am. ii. 13.

The Scythians used to teeth the flesh in the hide, and so do the northern Irish. Spenser.

I will make a complimental assault upon him ; for my business teeths.

Shakspeare. Troilus and Creuida.

Lovers and madmen have their uething brains, Such shaping phantasies, that apprehend More than cool reason ever comprehends.

Sliakspeare.

The fire thus formed, shts sets the kettle on; Like burnished gold the little teether shone.

Dry den.

SEETZEN (Ulric Jasper), a German travel-er, a native of East Friseland, was educated at Gottingen, under professor Blumenbach. He was early, in life appointed aulic counsellor to the czar for Jever : but, being desirous of visiting Africa and the east, and being encouraged by the dukes Ernest and Augustus of Saxe-Gotha, he set off in August 1802 for Constantinople. He proceeded to Syria, and remained a considerable time at Aleppo. In 1806 he explored the course of the Jordan and the Dead Sea, travelled through Palestine, and went to Hebron and Mount Sinai. His enthusiastic desire of knowledge prompted him to profess Mahometanism, that he might undertake a pilgrimage to Mecca and Medina in 1809 and 1810. In the month of November of the last year he was at Mocha, whence he wrote the last letters which arrived from him. Having had his property seized by the Arabs, he proceeded towards Saana, in December 1811, to complain to the imam ; and a few days after died suddenly at Taes, as it has been thought from the effects of poison given him by order of that barbarian. No account of the researches of this traveller ever appeared ; but his letters, addressed to baron von Zach, were inserted in his Geographical and Astronomical Correspondence, a periodical work published at Gotha; and a translation was printed in the French Anuales des Voyages, 1809—14.

Extracts from his letters to Blumenbach and others were also published in the Magasin Encyclopedique.

SEEZ, an old town of France, in Normandy, situated on the One, in the middle of a fertile plain. It is the see of a bishop, and has a good cathedral, having manufactures of woollens, cottons, fustians, and

stockings. Inhabitants 5500.

SEGALIEN, a large island separated by a narrow channel from the coast of Chinese Tartary, and called by the natives Tchoko, and by the Chinese Oku-Jesso. It lies between lat. 46° and 54° N., but its breadth from east to west is not known. Indeed hardly any thing about it was known till 1787, that La Perouse penetrated almost to the bottom of the channel which separates it from the continent, and which grew so very shallow as he advanced northward that the island may soon become a peninsula. The French frigates came to anchor in different bays on the coast of Segal ien; and the finest of these bays, to which the commodore gave the name of Baie d' Estaing, is situated in 48° 59' N. lat., and 140° 32' long. E. of Paris. La Perouse and M. Rollin, the surgeon of his ship, both describe the natives of this island as a worthy and intelligent people. Of the presents which were made to them, they seemed to set a value only on such as were useful. Iron and stuffs prevailed over every thing ; they understood metals as well as their guests, and for ornament preferred silver to copper, and copper to iron. They use looms, whieh, though small, are very complete ; and by means of spindles they prepare thread of the hair of animals, of the bark of the willow, and the great nettle, from which they make their stuffs. They are of a moderate size, squat, and strong built, with the muscles of their bodies very exactly defined : their common height is five feet, and the greatest does not ex-ceed fire feet four inches ; but men of this size are uncommon. They have all a large head, and a broader and more rounded face than Europeans ; their countenance is animated and agreeable, though destitute of that grace which we esteem essential to beauty : they have large cheeks, a short nose rounded at its extremity, with very broad nostrils ; their eyes are lively, of a moderate size, for the most part black, though some are blue ; their eyebrows are bushy, voice strong, lips rather thick, and of a dull red : in several the upper lip was tattoed, and tinge-l blue ; these, as well as their eyes, are capable of every variety of expression ; their teeth are white and even; their chin is rounded and a little advancing ; their ears are small ; they bore and wear in them glass ornaments or silver rings. The women are not so large as the men, and are of a more rounded and delicate figure, though there is little difference between their features. Their upper lip is tattoed all over of a blue color, and they wear their hair long and flowing ; their dress hardly differs from that of the men ; the skin in both sexes is tawny, and their nails, •which they suffer to grow to a great length, are a shade darker than that of Europeans. These" islanders are very hairy, and have long beards, which gives to the old men a venerable air : these last appear to be held in much respect.

The hair of their head is black, smooth, and moderately strong ; in some it is of a chestnut color : they all wear it round, about six inches long be-hind, and curt into a brush on the top of their head, and over the temples. Their clothing consists of a kind of surtout which wraps over before, where it is fastened by little buttons, strings, and a girdle placed above the haunches. This surtout is made of skin or quilted nankeen, a kind of stuff that they make of willow bark : it generally reaches to the calf of the leg, sometimes lower. Some of them wear seal-skin boots, the feet of which, in form and workmanship, resemble the Chinese shoe ; but the greater num-ber go barefooted and bare-headed : a few wear a bandage of bearskin round the head, as an ornament. Like the Chinese, they all wear a gir-dle, to which they hang their knife as a defence against the bears, and several little pockets, into which they put their flint and steel, their pipe, and their box of tobacco ; for they make a general practice of smoking. Their huts are sufficient to defend them against the rain, but are very small in proportion to the inhabitants. The roof is formed of two inclined planes, which are from ten to twelve feet high at their junction, and three or four on the sides ; the breadth of the roof is about fifteen feet, and its length eighteen. These cabins are constructed of frame work, strongly put together, the sides being filled up with the bark of trees, and the top thatched with dry grass in the same manner as our cottages are. On the inside of these houses is a square of earth raised about six inches above the ground, and supported on the sides by strong planking ; on this they make the fire : along the sides of the apartment are benches, twelve or fifteen inches high, which they cover with mats, on which they sleep. The utensils that they employ in cooking their food consist of an iron pot, shells, vessels made of wood and birch bark, of various shapes and workmanship ; and, like the Chinese, they take up their food with little sticks; they have generally two meals in the day, one at noon, and the other in the evening. The habitations in the south part of the island are much better built and furnished, having for the most part planked floors : our author saw in them some vessels of Japan porcelain. They cultivate no kind of vegetable, living chiefly on dried and smoked fish, and what little game they take by hunting. Each family has its own canoe, and implements for fishing and hunting. Their arms are bows, javelins, and a kind of spontoon, which they use principally in bear hunting. By the side of their houses are the magazines, in which they lay up provisions for winter. These consist of dried fish, garlic, wild celery, angelica, a bulbous root called ape, or the yellow lily of Kamschatka,

and fish oil, which they preserve in the stomachs of bears. These magazines are made of planks, strongly put together, on stakes about four feet high. Doers are the only domestic animals ; they are of a middling size, with shagey hair, pricked ears, and a sharp long muzzle ; their cry is loud and not savage. These people, who are of a very mild and unsuspecting disposition, appear to have commercial intercourse with the Chinese

oy means of the Mantchou Tartars, with the Russians to the north of their island, and the Japanese to the south : but the articles of trade are of no great consequence, consisting only of a few furs and whale oil. This fish is caught only on the southern coast of the island. Their mode of extracting the oil is by no means economical ; they drag the whale on shore on a sloping ground, and, suffering it to putrify, receive in a trench, at the foot of the slope, the oil, which separates spontaneously. The island is well wooded, and mountainous towards the centre, but is flat and level along the coast, the soil of which appears admirably adapted to agriculture : vegetation is extremely vigorous ; forests of pine, willow, oak, and birch, cover nearly the whole surface. The sea abounds with fish, as well as the rivers and brooks, which swarm with salmon and trout of an excellent quality. The weather is, in general, foggy and mild. All the inhabitants have an air of health and strength, which they retain even to extreme old age; nor did our author observe among them any instance of defective organisation, or the least trace of contagious or eruptive disorders.

SEGE’RS (Gerard), an eminent historical and portrait painter, born at Antwerp, in 1589. lie studied under Abraham Janssens, and improved himself in Italy, with such success, that he acquired a fortune by his art. lie died in 1651.

SEGERS (Daniel), brother of Gerard, was born in 1590, studied under Velvet Breughel, and acquired great .reputation in painting flowers, fruits, and insects to the life. He joined the society of Jesuits; and died in 1651.

SEG’MENT,7z.s. Fr. segment; Lat. segmen-f-um. A figure contained between a chord and an arch of the circle, or so much of the circle as is cut off by that chord.

Unto a parallel sphere, and such as live under the oles, for half a year,

some segments may appear at any time, and under any quarter, the sun not setting, but walking round. Browne.

Their segments or arcs, which appeared so numerous, for the most part exceeded not the third part of a circle. Newton.

SEGMENTS, LINE OF, are two particular lines so called, on Gunter's sector. They lie between the lines of sines and superficies, and are numbered with 5, 6, 7, 8, 9, 10. They represent the diameter of a circle, so divided into 100 parts as that a right line drawn through those parts, and perpendicular to the diameter, shall cut the circle into two segments, the greater of which shall have the same proportion to the whole circle as the parts cut off have to 100.

SEGO, a large city of Central Africa, the capital of the kingdom of Bambarra. We are almost entirely indebted for our knowledge of it to Park, the celebrated traveller. It was here that he first came in view of what he calls the Niger, which flows t' rough the middle of it, dividing the' city into two parts. He found it flowing majestically to the eastward, ' as broad as the Thames at Westminster.' This city is divided into four distinct towns, two of which are on the northern, and two on the southern bank. The former are called Sego Korro and Sego Boo, the latter Sego Soo Korro and Sego. See Korro. The last o

these contains the royal residence. These towns are surrounded with high mud walls ; the houses being of clay, of a square form, with flat roofs; some of them have two stories. Moorish mosques also are seen in every qnarter. According to the information of Mr. Park, Sego may contain altogether about 30,000 inhabitants. There is a constant thoroughfare of boats upon the river, the boatmen employed upon which are slaves to the king. Their canoes are singularly constructed, being each formed of the trunks of two trees joined end-ways

together. The Moors are powerful here, and influenced the king in Park's first visit to send him away ; and even hastened to forbid his entrance into the city. Long. 2° 3tf W., lat. 14° Iff N.

SEGORBE, a town of Spain, in Valencia, on the Murviedro, which takes here the name of Segorbe. It stands in a fertile valley, surrounded by gardens, and has a number of squares, churches, and fountains. It is a bishop s see, and the cathedral has some good paintings ; but the best are to be found in the church of the nunnery, which is the most elegant building in the town. Here are manufactures of paper, starch, and pottery. The chief natural curiosity is a fountain near the town, so copious as to turn two mill wheels at its source. Inhabitants 15,000. It lies thirty-four miles northwest of Valencia.

SEGOVIA, an inland province of Spain, in Old Castile, situated between the provinces of Madrid and Valladolid! Its territorial extent is 3650 square miles, intesected by the mountain ranges of the Sierra de Guadarama and de Ayl-lon. The soil is in many parts sandy or stony though there are some rich tracts well watered, and of considerable fertility. The rivers are the Ebro, the Eresma, the Xarama, and the Duraton. The climate in the plains is mild, and in the hills the sky is generally clear, and the air healthy. The principal products are corn, wine, hemp, and flax. In the mountains are copper, iron, antimony; marble and porcelain earth. Sheep, however form the% staple commodity, and wool the great article of export. The manufactures are of little account. Population

171,000.

SEGOVIA, a considerable town of Old Castile, is situated on a rocky eminence, between two deep valleys. Its form has been compared to that of a ship with the stern towards the east. One of the valleys is watered by the river Eres-ma, the other by a brook. Segovia is surrounded with a wall in the Moorish style, crowned at intervals with turrets ; its circumference is between three and four miles ; the streets are nar-row, crooked, and in several parts very steep. Segovia is the see of a bishop, and contains a number of convents and churches, of which the most remarkable is the cathedral, a large pile partly Grecian, partly Gothic, erected in the sixteenth century. Among the other public buildings are the convent of the Carmelites, and that of the Capuchins, with a subterraneous chapel : the alcazar or ancient palace, the apartments of which are incrusted with mosaic and other ornaments, and contain the statues of the princes who reigned in

Asturias, Leon, and Castile, from the eighth to the sixteenth century. It

isused for a state prison. But the most remarkable monument of Segovia is the Roman aqueduct, of great boldness and grandeur. It is built of freestone without cement, begins about fifty paces from the town, and after extending in a direction at first from north to south, and afterwards from east to west, and distributing a copious supply of water to every part of the town, terminates at the alcazar. It contains in all 159 arches, supported on pillars, some of which are eighty feet in height. The town has long been noted for its woollen manufactures. The quantity of cloth made at present is about 4000 pieces, coarse and fine, and it probably never was greater. The other branches of industry are dyeing and the making of pottery, paper, and lead. The town contains several hospitals and an artillery school. Inhabitants 10,000. Forty-seven miles N. N.W. of Madrid.

SEGRAIS (John Renaud de), a celebrated French poet, born at Caen in 1624. He studied in the college of the Jesuits at Caen. Being left by his parents, he raised himself by his talents to comparatively easy circumstances. He was not, however, without his patrons, the chief of whom were Madame Montpensier, and Madame de La Fayette. After spending many years with these ladies, as their gentleman in ordinary, he married a rich heiress in 1679. He was admitted a member of the French Academy in 1662, and modelled that of Caen on the same plan. His Nouvelles Francoises, La Princesse de Cleves, »nd Zaide, in prose, were admired for their •tyle: but he was chiefly admired for his poems, *viz.* Diverses Poesies, 4to., Paris, 1658 : Athis, a pastoral ; and his translation of Virgil's Georgics and JEneid. He died of a dropsy at Caen in

1701.

SEGREGATION, n. t. Fr. segregation, from segregate. Separation from others.

What shall we hear of this ? — A segregation of the Turkish fleet, For do but stand upon the foaming shore, The chiding billows seem to pelt the clouds.

Shakspeare. Othello.

SEGUE, in the Italian music, is often found before aria, alleluja, amen,

&c., to show that these portions or parts are to be sung immediately-after the last note of that part over which it is written ; bnt if these words, si placet, or ad libitum, are joined therewith, it signifies that these portions may be sung or not at pleasure.

SEGUIERIA, in botany, a plant belonging to the class of polyandria, and the order of monogynia : CAL. pentaphyllous : PHYLLA oblong, concave, colored, and permanent : COR. none. The capsule is oblong and monospermous, the large ala terminating in small lateral alae. There is only one species, *viz.* S. Americana.

SEGUR (Joseph Alexander, viscount de) second son of the marshal de Seˆur, engaged when young in military service, and was successively colonel of the regiments of Noailles, of royal Lorraine, and of the dragoons of his own name. Having attained the post of mareschal de camp in 1790, he gave up his time to literature. His first production was a romance, entitled Correspondence Secrfete entre Ninon de 1'Enclos, le Marquis de Villurceaux, et Madame de Maintenon. In 1791 he published anothe*

romance, La Femme Jalouse ; and between 1789 and 1804 a number of dramatic pieces. His last work, which has been translated into English, is entitled Les Femmes, leur Condition, et leur Influence dans 1'Ordre Social, 1802, 3 vols. 8vo. He died at Bagnieres, July 27th, 1805.

SEJANT, in heraldry, is used when a lion, or other beast, is drawn in an escutcheon, sitting like a cat, with his forefeet straight.

SEJANUS (jˆlius), a native of Vulsinum in Tuscany, who distinguished himself in the court of Tiberius. His father was Seius Strabo ; a Roman kinght, commander of the praetorian guards. His mother was descended from the Junian family. Sejanus first gained the favor of Caius Caesar, the grandson of Augustus, but afterwards attached himself to the interest and views of Tiberius. The emperor, who was naturally suspicious of every other person, was free and open with Sejanus, and communicated his greatest secrets to this fawning favorite. Sejanus improved this confidence ; and ingratiated himself with the soldiers and the senate. As commander of the pretorian guards he became the second man in Rome ; and, by appointing his

own adherents to places of trust and honor, all the officers and centurions became devoted to his interest. Yet, however successful with the best and noblest families in the empire, Sejauus had to combat many in the house of the emperor; but these seeming obstacles were soon removed. All the children and grandchildren of Tiberius were sacrificed to the ambition of this favorite, under various pretences. Livia, the wife of Drusus, the emperor's son, was corrupted by Sejanus ; and this monster assisting her adulterer in the murder of her husband, consented to marry him, when Drusus was poisoned. But the marriage was strongly opposed by Tiberius. When Sejanus could not gain the consent of the emperor, he persuaded him to retire to solitude from the troubles of government. Tiberius, naturally fond of ease, retired to Campania, leaving Sejanus at the head of the empire. This was highly gratifying to the favorite. He called together his friends and followers ; paid his court to the disaffected ; held forth rewards and promises ; and, having increased his partisans, resolved to seize the sovereign power. A powerful league was rapidly formed, and great numbers of all descriptions, senators as well as military men, entered into the plot. Among these, Sa-trius Secundus was the confidential friend and prime agent of Sejanus. But he resolved to betray the secret to Tiberius. For this purpose he addressed himself to Antonia, the daughter of Marc Antony, the widow of Drusus, and the mother of Germanicus. When this illustrious woman, who was honored by the court and revered by the people, heard the particulars, she sent immediate information to the emperor. Tiberius was astonished but not dismayed : the danger pressed ; the time called for vigorous and .'.ecisive measures. He sent Macro to Rome, .v ith a commission to take the command of the praetorian guards. In the morning, on the 15th •Jay before the kalends of November, a .report was spread that the emperor intended to asso- .ate Sejanus with himself in the tribunitian

power. The senate was summoned to meet in the temple of Apollo, near the imperial palace. Sejanus attended. A party of the praetorians followed him. Macro met him in the vestibule of the temple, and, with all demonstrations of profound respect, said, ‘ Be not surprised that you have no letter from the prince : it is his pleasure to declare you his colleague in the tribunitian power; I am going to deliver the emperor’s orders.’ Sejanus, flushed with his new dignity, entered the senate house ; Macro followed him. As soon as the consuls arrived, he delivered the letter from Tiberius, and immediately went forth to the praetorian guards. He informed them that, by order of the prince, a large donative was to be distributed among the soldiers ; adding that, by a new commission, he himself was appointed their commander; and, if they followed him to the camp, they would there receive the promised bounty. The praetorian guards followed, and Laco immediately surrounded the senate-house with a body of the city cohorts. Tiberius’s letter to the consuls was confused, obscure, and tedious, only glancing at Sejanus; till at last the language of invective left no room for doubt. Sejanus sat benumbed, senseless, and stupid with astonishment. His flatterers, who had just congratulated him on his new dignity, deserted him on every side. He was commanded by the consul to rise and follow him, and, being loaded with irons, was conducted to prison. His downfall filled the city with exultation. The populace rejoiced at his sad catastrophe, and followed in crowds, pouring forth a torrent of abuse. They reviled him for his acts of cruelty, and dashed his statues to pieces. He was doomed by Tiberius to suffer death, and was strangled in prison. His body was dragged to the Gemoniae, and, after every species of insult from the populace for three days, was thrown into the Tiber. Such was the end of this unprincipled monster. He fell a terrible example to all who endeavour by their vices to rise above their fellow citizens. His cruelties and his other crimes are related under the article ROME.

SEID MOUSTAPHA, a Turkish engineer, employed by Selim III., in whose misfortunes he became involved, and perished in the insurrection at Constantinople in 1808. He published in 1803 a French work, entitled Diatribe sui 1’Etat actuel de 1’Art Militaire, du Genie et des Sciences a Constantinople, 8vo. M. Langles reprinted it in the Magasin Encyclopedique, 1809, vol. v.

SEIGNIOR, n. s.-\ Fr. seigneur; Lat.

SE’IGNIORY, 9 senior. A lord. The

SE’IGNIORAGE, £ title of honor given by

SE’IGNIORIZE, v. a. J Italians : seigniory is a

lordship ; seigniorage a tribute or acknowledgment due to lordship : seigniorize to play the

lord.

O’Neil never had any seigniory over that country, but what by encroachment he got upon the English.

Spenser.

Were you not restored To all the duke of Norfolk’s seigniories?

Shakspeare. Hc-..:$ IV.

Hosea. in the person of God, sayeth of the Jews, they have reigned, out not by me ; they have set a teigniory over themselves : which place Pro]‘etj* Dlainlv.’ that there are governments which God doth n* avow. -Baco’.t—

William, earl of Pembroke, being lord of all Lem-ster had royal jurisdiction throughout that province, and’ every one of his five sons enjoyed that teigmory successively. Daviet’

As fair he was as Cytherea s make, As proud as he that seigniorueth hell. tarjax.

Those lands were teigneurial. Temple.

They brought work to the mint, and a part of the money coined to the

crown for seiyniorage. Locke.

vers work much prejudice to the commonwealth of fishermen, and reap small gain to themselves.

Id. Surwy of Cornwall.

The SEINE is one of the four great rivers of France, and the only one of the four that flows into the English Channel. Rising in the mountains of Burgundy, it first flows northward through Champagne to Troyes, receives the Aube, and, turning to the west, is joined by the Yonne from the south, and before reaching Paris, by the Marne, from the west. At Paris, the Seine va-ries from 300 to 500 feet in width ; and it soon after receives the Oise, when, pursuing a winding course to the northwest, it passes Rouen, and

SEIGNIOR is particularly used for the lord of. discharges itself into the sea at Havre de Grace, the fee as of a manor, as seigneur among the Its volume of water is less than that of the feudists is he who grants a fee or benefit out of Loire or Garonne, and far smaller than that of the land to another; the reason is, because, hav-the Rhone ; but, its course being in general ing granted away the use and profit of the land, through a flat country, it is of easy navigation, the property or dominion he still retains in him-and communicates by canals with several other

rivers to the north and south. It admits vessels of considerable burden as far as Rouen, and boats to Troyes. Its mouth, however, is of difficult navigation, from the accumulation of sand. Its course exceeds 400 miles in length.

SEINE, a department in the north of F ranee, which, though the smallest in the kingdom, takes

self.

SEIGNIOR, GRAND, a title given to the emperor of the Turks. , •

SEIGNIORAGE is a prerogative of the king, •whereby he claims an allowance of gold and sil-ver bought in the mass to be exchanged for com. See COINING.

SEIKS, a numerous and powerful nation of the first rank in wealth and population as con—

Hindostan Proper, consisting of several small intaining the capital. It is in fact little more than

dependent states, who have formed themselves the capital ; its district forming a tract nearly

into a kind of federal union. They possess the square, of which the breadth is about sixteen the principal part

whole country of Lahore, of Monltan, and the west part of Delhi. This territory extends about 400 miles from northwest to southeast, and in general is between 150 and 200 broad ; although in the part between Attock and Behkef, along the banks of the Indus, the extent is not less than 320. Their capital is Lahore. Their government is said to be very mild, but in their mode of warfare they are cruel and barbarous. Their army

miles. Its surface is in general level, the soil fertile, and its product partly corn and vines, but more fruit and vegetables. It is divided into three arrondissements, *viz.* Paris, St. Denis to the north, and Sceaux, to the south of the capital, subject in a judicial sense to the royal court of Paris ; in an ecclesiastical, to the archbishop of the city. The number of villas and country seats, though great, is far less considerable than in the district of London. The population is

consists almost entirely of cavalry, of which they about 70,000, exclusive of Paris, which contains

can bring at least 100,000 into the field. Like the other Hindoos, they

are very tolerant in matters of religion, and require only a conformity in certain signs and ceremonies ; but they are more liberal than the other Hindoos, as they admit proselytes ; although those from the Mahometan system are not much esteemed.

SEIL, one of the Western Islands of Scotland, on the coast of Argylshire. It is about three miles long, and two broad, and is separated from the mainland by a narrow strait, over which there is a bridge. The surface is mostly level, but has a few eminences, the tops of which afford a pleasant view of the numerous islands adjacent, and of the distant mountains of Mull and Jura. The island abounds with basaltes, schistus, quartz, pyrites, slates, and other minerals.

SEIN, an island of France, on the coast of Brittany, and in the arrondissementof Qnimper. It is inhabited by fishermen, who have retained the language and manners of ancient Brittany. Jt lies in long. 4° 42’ W., lat. 48° 2’ N.

SEINE, n. $. Sax. r*3n«- Fr. ”” tenne, feme. A net used in fishing.

They have cock-boats for passengers, and trine boats for taking of pilchards. Carew.

Seiner$ complain, with open mouth, that these dro-

713,000. See PARIS.

SEINE, LOWER, a department of the north of France, bounded on the north and west by the English Channel. Its extent is about 2500 square miles ; in general level, or undulating, the hills seldom attaining the height of mountains. The coast is for the most part bounded with sandy downs ; the climate humid, and suitable to corn and pasture, but by no means to the vine. The observations in our article NORMANDY, in regard to soil, mode of culture, extent of pasturage, and state of the peasantry, are applicable to this department. The principal fruits are pears and apples ; the drink cider ; the exports horses, black cattle, cheese, and butter. Hemp, flax, and coleseed, are cultivated to a great extent : the only large river is the Seine. The fisheries at Dieppe and other parts of the coast supply fish for Paris. The department is divided into the five arrondissements of Rouen (the capital), Havre de Grace, Dieppe, Yvetol, and Neufcha-tel. Population about 660,000, of whom about a twelfth part are Protestants.

SEINE ANP MARNE, a department of France, occupying the western

part of Champagne. Its extent is about 2320 square miles ; consisting of gently undulating plains; its climate mild, and

,‘s soil fertile. The rivers are the Seine, the iVlarne, the Great and Little Morin, and a num ber of lesser streams : the canal of Briare, which connects the Seine with the Loire, traverses the southern cantons. The products here, as in the north of France generally, are wheat, barley, oats, flax, hemp, and vines. Paris affords an ample market for produce. This department is subject, in a judicial sense, to the royal court of the capital ; in an ecclesiastical, to the bishop of Meaux. It is divided into the arrondissements of Melun (the chief town), Coulommiers, Meaux, Fontainbleau, and Provins. Population about

310,000.

SEINE AND OISE, a department of France, adjacent to that of the Oise, and to that of the Seine and Marne. It comprises in an interior circle the district of Paris, under the name of department of the Seine, and has, exclusive of that district, an extent of 2200 square miles, with a population of 440,000. The surface is level, or gently undulating, the climate temperate, and the soil good. Its chief rivers are the Seine, the Marne, and the Oise. Its products are wheat, barley, oats, hemp, and flax ; also fruit and vegetables. Vines are reared in small quantities, and the drink of the peasantry is cider. Paris is the great market. The chief manufactures are those of printed calicoes at Jouy, of porcelain at Sevres, of arms and clocks at Versailles. This department is subject to the royal court of Paris, and is divided into the six arrondissements of Versailles (the capital), Mantes, Pontoise, Corbeil, Etampes,and Rambouillet.

SEIR, or Hor, a mountain of Asia, in Arabia Petrea, which anciently bounded Judea on the south, and separated it from Idumea, or Edom. It was so named from Seir, a chief of Edom the progenitor of the Horites : Gen. xxxvi. 20. It is now called Sardeny, and is 140 miles east of Cairo.

SEISIN, in English law, signifies possession, as premier seisin, for the first possession, &c. See SEIZIN. A seisin in law is held to be sufficient to avow on ; though, to the bringing of an assize, actual seisin is

required ; and, where sei-sin is alleged, the person pleading it must show of what estate he is seised, &:c. Seisin of a superior service is deemed to be a seisin of all superior and casual services that are incident thereto ; and seisin of a lessee for years is sufficient for him in reversion.

SEISIN, LIVERY OF, in English law, is an essential ceremony in the conveyance of landed property; being the pure feudal investiture, or delivery of corporeal possession of the land or tenement. Nam feuda sine investitura nullo modo constitui potuit : an estate was then only perfect when, as Fleta expresses it, fit juris et seisinae conjunctio. See FECFMENT. Investitures, in their original rise, were intended to demonstrate, in conquered countries, the actual possession of the lord ; and that he did not grant a bare litigious right to the soldier, but a peaceable and firm possession. At a time when writing was seldom practised, a mere oral gift, at a distance from the spot that was given, was not likely to be either long or accurately retained in the memory of by-standers. After-

wards they were retained as a public and notorious act, that the country might testify the transfer of the estate; and that such as claimed title by other means might know against whom to bring their actions. In all well governed nations, some notoriety of this kind has been held requisite, to acquire and ascertain the property of lands. Even in ecclesiastical promotions, where the freehold passes to the person promoted, corporal possession is required at this day to vest the property completely in the new proprietor; who, according to the distinction of the canonists, acquires, the jus ad rein, or inchoate and imperfect right, by nomination and institution ; but not the jus in re, or complete and full right, unless by corporal possession. Therefore in dignities possession is given by instalment; in rectories and vicarages by indiction ; without which no temporal rights accrue to the minister, though every ecclesiastical power is vested in him by institution. So also even in descents of lands, by the English law, which are cast on the heir by act of the law itself, the heir has not full and complete owner-ship, till he has made an actual corporal entry into the lands : for, if he dies before entry made, his heir shall not be entitled to take the possession, but the heir of the person who was last actually seized. It is not therefore only a mere right to enter, but the actual entry, that

makes a man complete owner, so as to transmit the inheritance to his own heirs : non jus, sed seisina, facit stipitem. Yet, the corporal tradition of lands being sometimes inconvenient, a symbolical delivery of possession was in many cases anciently allowed ; by transferring something near at hand, in the presence of credible witnesses, which by agreement should serve to represent the thing designed to be conveyed ; and an occupancy of this sign or symbol was permitted as equivalent to occupancy of the land itself. Among the Jews we find the evidence of a purchase thus defined in the book of Ruth : ch. iv. 7. With the Anglo-Saxons the delivery of a turf was a necessary solemnity to establish the conveyance of lands. And, to this day, the conveyance of copyh'old estates is usually made from the seller to the lord or his steward by delivery of a rod or verge, and then from the lord to the purchaser by re-delivery of the same in the presence of a jury of tenants. Conveyances in writing were the last and most refined improvement. The mere delivery of possession, either actual or symbolical, depending on the ocular testimony and remembrance of the witnesses, was liable to be forgotten or misrepre-sented, and became frequently incapable of proof. Besides, the new necessities introduced by commerce required means to be devised of charging estates, and of making them liable to a multitude of minute designations, for the purpose of raising money, without an absolute sale of the land ; and sometimes the like proceedings were found useful to make a decent and competent provision for the numerous branches of a family ; none of which could be effected by a mere simple, corporal transfer of the soil from one man to another. Written deeds were therefore introduced, to specify and perpetuate the

peculiar purposes of the party who conveyed; yet still, for a very long series of years, they were never made use of, but in company with the more ancient and notorious method of transfer by delivery of corporal possession. Livery of seisin, by the common law, is necessary to be

made upon every grant of au estate ~of freehold in hereditaments corporeal, whether of inheritance or for life only. In hereditaments incorporeal, it is impossible to be made ; for they are not the object of the senses ; and in leases for years, or other chattel interests, it is not necessary. In leases for years indeed an actual entry is necessary, to vest the estate in the lessee ; for a bare lease gives him only a right to enter, which is called his interest in the term ; and, when he enters in pursuance of that right, he is then, and not before, in possession of his term, and complete tenant for years. This entry by the tenant himself serves the purpose of notoriety as well as livery of seisin from the granter could have done. And this is one reason why freeholds cannot be made to commence in futuro, because they cannot be made but by livery of seisin ; which livery, being an actual manual tradition of the land, must take effect in prasenti, or not at all. Livery of seisin is either in deed or in law.

SEISIN, LIVERY OF, IN DEED, is thus performed. The feoffer, lessor, or his attorney, come to the land or to the house ; and there, in the presence of witnessess, declare the contents of the feoffment or lease on which livery is to be made. And then the feoffer, if it be of land, doth deliver to the feoffee, all other persons being out of the ground, a clod or turf, or a twig or bough there growing, with words to this effect : ‘ I deliver these to you in the name of seisin of all the lands and tenements contained in this deed.’ But, if it be of a house, the feoffer must take the ring or latch of the door, the house being quite empty, and deliver it to the feoffee in the same form ; and then the feoffee must enter alone, and shut the door, and then open it and let in the others. If the conveyance or feoffment be of divers lands, lying scattered in one and the same county, then in the feoffer’s possession, livery of seisin of any parcel, in the name of the rest, sufficeth for all ; but, if they be in several counties, there must be as many liveries as there are counties. For, if the title to these lands come to be disputed, there must be as many trials as there are counties, and the jury of one county are no judges in another. Besides, anciently, this seisin was obliged to be delivered coram paribus de vicin-eto, before the peers or freeholders of the neighbourhood, who attested such delivery on the back of the deed. And though afterwards the ocular attestation of the pares was held unnecessary, and livery might be made before any credible witnesses, yet the trial, in case it was disputed, was still reserved to the pares or jury of the county. Also, if the lands be but on lease, though all lie in the same county, there must he as many liveries as there are tenants ; because no other livery can be made in this case but by the consent of the particular tenant, and the consent of one will not bind the rest.

A’nd in all these cases it is usual to indorse the livery of seisin on the back of the deed, specifying the manner, place, and time of making it, together with the names of the witnesses.

SEISM?, LIVEEY OF, in law, is where the same is not made on the land, but in sight of it only, the feoffer saying to the feoffee ‘ I give you yonder land ; enter and take possession.’ Here, if the feoffee enters during the life of the feoffer, it is a good livery, but not otherwise, unless he dares not enter through fear of his life or bodily harm; and then his continual claim, made yearly in due form of law, as near as possible to the lands, will suffice without an entry. This livery in law can-not, however, be given or received by attorney, but only by the parties themselves.

SEISTAN, or SEGESTAN, au extensive province of Persia, lying between Candahar^nd Korassan on the north, Mekran and Balouchistan on the south ; about 300 miles in length, and 160 in breadth. It formed anciently part of Ariana, and Sarangea, and in modern times was flourishing. It was the country of Jumsheid and Rustom, the heroes of. the Shah Nama, or great Persian epic, and of Jacob Ben Leth, the conqueror of the caliph of Bagdad. In course of time, however, the winds which blew from the great moving sands of Mekran and Balouchistan, have covered all its plains, and reduced it almost to desolation. Its remaining fertility is derived from the river Heermund, which, rising in Cabul, traverses a great part of it from east to west. A recent account of this region is given by captain Christie, who in 1810 traversed it on his route from Balouchistan to Herat. In the way from Nooshky, he did not see a single town or even village; and the only inhabitants of this solitary wild were a few Balouche and Patan shepherds, who lived in tents pitched in the vicinity of the springs. The banks of the Heermund, however, consist of a valley, varying from one to two miles in breadth ; while the desert on each side rises in perpendicular cliffs. This is irrigated by the waters of the river, and covered with verdure and brushwood. Along this valley are found an astonishing number of ruined towns, villages, and forts, and at one, Kulcauput, a. noble palace in a tolerable state of preservation. The remains of a city named Poolkee are described as immense. The modern capital is Dooshah, forming a small and compact town, in the neighbourhood of which are immense ruins, situated in long. 63° 10’ E., lat. 31° 8* N., about eight or nine miles from the river. The western part of the country, to which the waters of the Heermund do not reach, consists of a vast arid plain, intersected with one or two ranges of mountains, in the midst of which is situated

the city of Kubbees. There is a path through it, by which couriers can go from Ker-man to Herat in eighteen days ; but the risk of perishing is so great that a person of that description demanded 200 rupees to carry a letter. Although Seistan forms nominally a province of Persia, it is now entirely independent, and is divided into a number of small states, governed by chiefs who live in fortified villages, chierly situated on the banks of the Heermund. Bah-rain Khan Kyanee assumes the title of cl.ief of

.Seistan ; and has a revenue of about 80,000 rupees.

SEIZE, v.a.&v. n. » Fr. salsir. To take

SEIZ'URE, n. s. >hold of; gripe; grasp;

SEIZ'IN. J take possession of by

force : the act of doing so : seizin is explained below.

So the one for wrong, the other strives for right : As when a griffin, seised of his prey,

A dragon fierce encountereth in his flight, Through wildest air making his idle way.

Faerie Queene. Fairest Cordelia,

Thee and thy virtues here I teize upon : Be't lawful I take up what's cast away 1

Shakspeare. King Lear.

Thy lands, and all things that thou dost call thine, Worth seizure, do

we seize into our hands.

Shakspeare.

An escheator of London had arrested a clothier that was outlawed, and seized his goods. Camden.

It was judged, by the highest kind of judgment, that he should be banished, and his whole estate confiscated and seized, and his houses pulled down.

Bacon.

In the general town he maintained a seizure and possession of the whole. Wotton.

When there is a design of supplanting, that necessarily requires another of accusing : even Jezebel projects not to seize on Naboth's vineyard without a precedent charge. Decay of Piety.

Every indulged sin gives Satan livery and seisin of his heart, and a power to dispose of it as he pleases.

Id.

Then as a tiger, who by chance hath spied, In some purlieu, two gentle fawns at play, Straight couches close, then, rising, changes oft His couchant watch, as one who chose his ground, Whence rushing he might surest seize them both, Both griped in each paw. Milton.

Sufficient that thy prayers are heard, and death, Then due by sentence when thou didst transgress, Defeated of his seizure, many days Given thee of grace. Id. Paradise Lost.

Many recoveries were had, as well by heirs as successors, of the seizin of their predecessors. Hale.

Make o'er thy honour by a deed of trust, And give me seizure of the mighty wealth. Dryden.

So Pluto, seized of Proserpine, conveyed To hell's tremendous gloom the' affrighted maid ; There grimly smiled, pleased with the beauteous prize, Nor envied Jove his sunshine and his skies.

Addison's Cato.

Seisin is the same, in the canon law, as livery and seisin at the

common law. Ayliffe's Parergon.

In her sad breast the prince's fortunes roll, And hope and doubt alternate seize her soul. Pope.

Henry continued to burn protestants after he had cast off the pope ; and his seizure of ecclesiastical revenues cannot be reckoned as a mark of the church's liberty. Swift.

Let there be no sudden seizure of a lapsed syllable to play upon it. Watts.

SEISURE, in commerce, an arrest of some merchandise, moveable, or other matter, either in consequence of some law or of some express order of their sovereign. Contraband goods, those fraudulently entered, or landed without entering at all, or at wrong places, are subject to seizure. In seizures, among us, one half goes to the informer, and the other half to the king.

SELAGO, in botany, a genus of the angiospermia order, belonging to the didynamia class

of plants: and in the natural method ranking under the forty-eighth order aggregate. The calyx is quinquefid ; the tube of the corolla capillary, with the limb nearly equal, and a single seed. There are twenty-one species.

SELAH, Heb. rt?D, a word often used in the book of Psalms, and three times in the prayer of Habakkuk, iii. 3, 9, 13. Commentators are not agreed about its use or meaning. Some consider it as a note of music, others as a mark of attention or emphasis ; others take it for a name of the Deity; and others consider it as synonymous with Amen.

SELAH, in ancient geography, the capital of the ancient Edomites, in Arabia, seated in a plain surrounded with rocks, as its name signifies. It was taken by Amaziah king of Judah, who changed its name to Joktheel, and massacred its inhabitants. — 2 Kings, xiv. 7.

SELBURY HILL, an ancient artificial hill of England in Wiltshire, near Rennet, and half a mile from Aubury on the road from Marlborough to Bath. It is high and round, but its age and object of erection are equally unknown.

SELBY, a market-town in the West Riding of Yorkshire, on the west

bank of the Ouse, twelve miles south by east from York, and 178£ north by west from London. The town has been greatly improved of late years by a canal which connects the Ouse with the Aire and Calder. Large ships are built here, and a pretty good trade is carried on to London. Here has lately been erected a most complete and handsome timber bridge over the river Ouse, particularly admired for the despatch used in admitting vessels through it, by means of a swivel in the centre, working on balls similar to cannon-balls : although estimated to weigh seventy tons, or upwards, it can be opened and shut in a minute. Here are an iron-foundery, a good ship-yard, and a branch custom-house. A Benedictine abbey was founded here by William the Conqueror, the conventual church belonging to which is now the parish church, and is a fine specimen of the architecture of that period. King Henry I. was born at this town. Market on Monday. Fairs, Easter Tuesday, 22d of June, and 10th of October. It is a vicarage. Patron the archbishop of York.

SEL'DOM, adv. } Sax. rel'ean, rarely ; j-el—

SEL'DOMNESS, n. s. > 'con, more rarely ; j-eltopt,

SELD'SHOWN, adj. j most rarely. Seh>anis supposed to be contracted from j-el'osen or feli>, rare, and hpaenne, when ; Belg. selden. Rarely ; not often ; not frequently : seldshown is, seldom seen.

The lack we all have, as well of ghostly as of earthly favours, is in each kind easily known ; but the'gifts of God are so diversly bestowed, tha't it sel-dom appeareth what all receive : what all stand in need of seldom lieth hid. Hooker.

Degrees of well-doing there could be none, except perhaps in the seldomness and oftenness of doing well.

Id.

Seldshown flamins Do press among the popular throngs.

Shakspeare. Conolanus.

Where the flight of fancy is managed with good judgment, the seldomer it is seen it is the more valuable. Grew.

There is true jo) rcnveyed to tne heart by preventing grace, which pardoning grace seldom gives.

South' i Sermons.

SELDON (John), called by Grotius the glory of England, was born at Salvington in Sussex in 1584. He was educated at Chichester; whence he was sent to Hart Hall in the university of Oxford, where he studied four years. In 1612 he entered in Clifford's Inn to study the law ; and in 1614 removed to the Inner Temple, where he soon acquired great reputation. He had already published several works ; and wrote verses in Latin, Greek, and English, upon Mr. William Browne's Brrtannia's Pastorals. In 1614 he published his Titles of Honor; and in 1616 his Notes on Sir John Fortescue's book De Laudibus Legum Angliae. In 1618 he published his History of Tythes ; which gave great offence to the clergy, and for which he was called before the high commission court, and obliged to make a public acknowledgment of his sorrow for having published it. In 1621, being sent for by the parliament, though he was not then a mem-ber of the house, and giving his opinion very strongly in favor of their privileges, in opposition to the court, he was committed to the custody of the sheriff of London, but liberated five weeks afterwards. In 1623 he was chosen M. P. for Lancaster; but, amidst all the divisions of the nation, kept himself neuter, prosecuting his studies with such application, that* though he was die next year chosen reader of Lyon's Inn, he refused that office. In 1625 he was chosen M. P. for Great Bedwin in Wiltshire, in the first parliament of king Charles I., in which he declared himself warmly against the duke of Buckingham ; and, on the duke's impeachment, was appointed one of the managers of the articles against him. In 1627 and 1628 he opposed the court party with great vigor. The parliament being prorogued to January 20th, 1629, he retired to the earl of Kent's house at Wrest, in Bedfordshire, where he finished his Marmora Arundeliana. The parliament being met, he, among others, again distinguished himself by his zeal against the court ; when the king, dissolving the parliament, ordered him and several other members to be committed to the tower. Mr. Seldon insisting on the benefit of the laws, and refusing to make his submission, was removed to the king's bench prison. Being here in danger of bis life on account of the plague, then raging in Southwark, he petitioned the lord high treasurer, at the end of Trinity-term, that he might be re-Bioved to the Gate-house, Westminster, which was granted; but in Michaelmas following the judges issued an order for conveying him back to the king's tench, whence he was released in the end of the same year; but fifteen years after the parliament ordered him £5000 for the losses he had sustained on this occasion. He was afterwards committed, with

several other gentlemen, for dispersing a libel ; hut the author, who was abroad, being discovered, they were set at liberty. In 1634 a dispute arising between the English and Dutch, concerning the herring fishery on the British coast, he was prevailed upon by archbishop Laud to draw up his Mare Clausum, in answer to Grotius's Mare Liberum; which

greatly recommended him to the favor of tlic court. In 1640 he was chosen M. P. for the university of Oxford ; where he again opposed the court, though he might, by complying, have raised himself very considerably. In 1643 he was appointed one of the lay members in the assembly of divines at Westminster, and keeper of the records in the tower. In 1645 he was made a commissioner of the admiralty, and elected master of Trinity College Cambridge ; but declined accepting. He died in 1654 ; and was interred in the temple church, where a monument is erected to his memory. Dr. Wilkie says he was a man of uncommon greatness of soul, averse to flattery, liberal to scholars, charitable to the poor ; and, though he had great latitude in his principles with regard to ecclesiastical power, yet he had a sincere regard for the church of England. He wrote many learned works besides those already mentioned ; as, 1 . De Jure Naturali et Gentium, juxta Disciplinam Hebraeorum ; 2. De Nuptiis et Divorciis ; 3. De Anno Civili veterum Hebraeorum ; 4. De Nummis ; 5. De Diis Syris; 6. Uxor Hebraica; 7. Jani Anglorum Facies altera, &c. All his works were printed together in 1726, in 3 vols. folio.

SELECr,v.a.&a<#.-\ Lat. selectus. To SELEC'TION, n. s. f choose in preference to SELECT'NESS, Bothers rejected; nicely

SELEC'TOR. J chosen ; choice : selection is the act of choosing ; choice made : select-ness, the state of being select.

The footmen, selected out of all the provinces, were greatly diminished, being now scarce eight thousand strong. Knolles.

To the nuptial bower

I led her, blushing like the morn : all heaven, And happy constellations, on that hour Shed their selectest influence.

Milton's Paradise Lost.

While we single out several dishes, and reject others, the selection seems but arbitrary.

Browne's Vulgar Errtrs. The pious chief A hundred youths from all his train selects. Dryden.

Select from vulgar herds, with garlands gay, A hundred bulls ascend the sacred way. Prior. SELEFKEH, a town of Caramania, near the mouth of a river called Ghiuk Sooyoo, the ancient Calicadnus. It is the residence of an aga, from Cyprus ; but the modern town is only an assemblage of mud and wooden huts. It is chiefly distinguished by being on the site of the ancient Seleucia, vestiges of which remain. They are scattered over a large extent of ground on the west, and include the remains of a theatre, partly cut out of the side of a hill, and facing the southeast ; and in front of it a long line of considerable ruins, with porticoes and other large buildings. Farther on is a temple, which was once converted into a Christian church, and several large Corinthian columns about four feet in diameter, a few of which are still standing. A quarter of a mile southward of the theatre, near a marble quarry which seems to have supplied all the materials of the town, is an extensive cemetery, containing several sarcophagi of coarse workmanship ; and in a vein of soft stone on the northern side of the hill some catacombs, which, as usual, have been all emptied. At these two

places appear a variety of inscriptions. Near the catacombs there is an enormous reservoir, hewn out of this soft stone. The roof is supported by parallel rows of square pillars. Its dimensions are 150 feet by seventy-five, and thirty-five in depth. On a hill west of the town are the remains of the citadel, o. an oval form, surrounded by a well built wall, flanked by towers and a double ditch. The interior is full of ruined houses and columns. Long. 33° 55' E., lat. 36° 20' N.

SELENGA, a considerable river of Siberia, in the government of Irkoutsk, rising beyond the frontier, in the country of the Mongols, where it receives the Kharatale and the Iga. On approaching the frontiers it begins to be navigable, then flows from southeast to northwest, and falls by three mouths into the lake Baikal. The Russians have built several towns on its right bank, particularly

Verschnei Oudinsk, Selen-ginsk, and Kiachta. A great quantity of a species of white fish, called omouli, is taken in this river towards the end of August.

SELENITE is the term used by Dr. Thomson and other modern chemists for what was formerly called selenites. It is the same with gypsum.

SELENITES, in the old system of mineralogy, is the name of a large class of fossils, of which it is now unnecessary to describe the - characters, since better arrangements and more accurate descriptions have been made. See MINERALOGY. Of the first order there were three genera ; *viz.* 1. Leptodecarhombes , 2. Pachodecarhombes ; 3. Tetradecarhombes. Of the second there were also three genera: — l.Ischnambluces; 2. Isambluces; 3. Oxuciae. Of the third one, inamblucia. Of the fourth also only one genus, the sanidia. Of the fifth one, cathetolipes. Of the sixth order there were two genera*- *viz.* 1. Lepastra; 2. Tri-ihestra. Of the seventh one genus, symplexia.

SELENITES, in chemistry, called also gypsum spatosum, a species of gypsum or plaster of Paris. See GYPSUM, and MINERALOGY.

SELENIUM, in chemistry, is a new elementary body, extracted by M. Berzelius from the pyrites of Fahlun, which, from its chemical properties, he places between sulphur and tellu-rium, though it has more properties in common with the former than with the latter substance. It was obtained in exceedingly small quantity from a large portion of pyrites. For the mode of extraction we must refer to his long and elaborate papers, translated from the Annales de Chimie et de Physique, ix. et seq. into the Annals of Philosophy, for June, August, October, and December 1819, and January 1820.

When selenium, after being fused, becomes solid, its surface assumes a metallic brilliancy of a very deep brown color, resembling polished haematites. Its fracture is conchoidal, vitreous, of the color of lead, and perfectly metallic. The powder of selenium, has a deep red color, but it sticks together readily when pounded, and then assumes a gray color and a smooth surface, as happens to antimony and bismuth. In very thin coats selenium is transparent, with a ruby red color. When heated it softens; and at 212° it is semi-liquid, and melts completely at a tempe-Vor. XX.

rature a few degrees higher. During its cooling it retains for a long time a soft and semifluid state. Like Spanish wax it may be kneaded between the fingers, and drawn out into long threads, which have a great deal of elasticity, and in which we easily perceive the transparency when they are flat and thin. These threads, viewed by transmitted light, are red ; but, by reflected light, they are gray, and have the metallic lustre. When selenium is heated in a re-tort, it begins to boil at a temperature below that of a red heat. It assumes the form of a dark yel-low vapor, which, however, is not so intense as that of the vapor of sulphur ; but it is more intense than chlorine gas. The vapor condenses in the neck of the retort, and forms black drops, which unite into larger drops, as in the distillation of mercury.

If we heat selenium in the air, or in vessels so large that the vapor may be condensed by the cold air, a red smoke is formed, which has no particular smell, and which is condensed in the form of a cinnabar-red powder, yielding a species of flowers, as happens to sulphur in the same circumstances. The characteristic smell of horse-radish is not perceived till the heat becomes great enough to occasion oxidation.

Selenium is not a good conductor of heat. We can easily hold it between the fingers and melt it at the distance of one or two lines from the fingers without perceiving that it becomes hot. It is also a non-conductor of electricity. On the other hand M. Berzelius was not able to render it electric by friction. It is not hard ; the knife scratches it easily. It is brittle like glass, and is easily reduced to powder. Its specific gravity is between 4‘3 and 4‘32.

The affinity of selenium for oxygen is not very great. If we heat it in the air, without touching it with a burning body, it is usually volatilised, without alteration ; but if it is touched by flame its edges assume a fine sky-blue color, and it is volatilised with a strong smell of horse-radish. The odorous substance is a gaseous oxide of selenium, which, however, has not been obtained in an insulated state, but only mixed with atmospherical air. If we heat selenium in a close phial filled with common air, till the greatest part of it is evaporated, the air of the phial acquires the odor of oxide of selenium in a very high degree. If we wash the air with pure water, the liquid acquires the odor of the gas ; but, as there are always formed traces of selenic acid, this water acquires the property of reddening litmus paper feebly, and of becoming muddy when mixed with sulphureted hydrogen gas. Selenic oxide gas is but very little soluble in water, and does not communicate any taste to it.

If we heat selenium in a large flask filled with oxygen gas, it

evaporates without combustion, and the gas assumes the odor of selenic oxide, just as would have happened if the sublimation had taken place in common air; but, if we heat the selenium in a glass ball of an inch diameter, in which it has not room to volatilize and disperse, and if we allow a current of oxygen gas to pass through this ball, the selenium takes fire just when it begins to boil, and burns with a feeble flame, white towards the base, but green

or greenish-blue at ihe summit, or towards the upper edge. The oxygen gas is absorbed, and selenic acid is sublimed into the cold parts of the apparatus. The selenium is completely consumed without any residue. The excess of oxy-gen gas usually assumes the odor of selenic oxide. Selenic acid is in the form of very long four-sided needles. It seems to be most readily formed by the action of nitre-muriatic acid on selenium. The selenic acid does not melt with heat; but it diminishes a little in bulk at the hottest place, and then assumes the gaseous form. It absorbs a little moisture from the air, so that the crystals adhere to each other, but they do not deliquesce. It has a pure acid taste, which leaves a slightly burning sensation on the tongue. It is very soluble in cold water, and dissolves in almost every proportion in boiling water. M. Berzelius infers the composition of selenic acid, from several experiments, to be, Selenium, 71-261 100 00 1 prime 4-96 Oxygen, 28-739 40-83 2 primes 2‘00 If into a solution of selenic acid in muriatic acid we introduce a piece of zinc or of polished iron, the metal immediately assumes the color of copper, and the selenium is gradually precipitated in the form of red, or brown, or blackish flocks, according as the temperature is more or less elevated. When seleniate of potassa is heated with muriate of ammonia, selenium is obtained by the deoxidising property of the ammonia ; but in this case we always lose a small quantity of selenium, which comes over with the water in the form of an acid. If we pour dilute muriatic acid on the compound of selenium and potassium dissolved in water, seleniureted hydrogen gas is evolved. Water impregnated with it precipitates all the metallic solutions, even those of iron and zinc, when they are neutral. Sulphur, phosphorus, the earths, and the metalj, combine with selenium, forming seleniurets. Selenic acid neutralises the bases. Selenium has beenlfecently found in two minerals ; one is from Skrickerum, in the parish of Tryserum, in Smoland.

SELENOG'RAPHY, n. $. Fr. selenographie ; Cr. fftXJivTj and ypoˆw. A description of the moon. Hevelius, in his accurate telenograpky , or description of the moon, hath well translated the known appellations of regions, seas, and mountains, unto the parts of that luminary. Rraume.

SELEUCIA, in ancient geography, a city ot Asia, surnamed Babylonia, because situated on its confines, at the confluence of the Euphrates and Tigris. Ptolemy places it in Mesopotamia. It is called also Seleucia ad Tigrim, by Polybius, Strabo, Isidorus, and Chancenus. It is watered on the south by the Euphrates, and east by the Tigris (Theophylactus), generally agreed to have been built or enlarged by Seleucus Nicator, by means of which Babylon came to be deserted. It is said to have been originally called Coche (Ammian, Eutropius), though others, as Arian, distinguish it, as a village, from Seleucia ; and, acco -ding to Zosimus, the ancient name of Seleuci i was Zochasia. It is now called Bagdad. SE'.EUCIA was also the name of no fewer than eight ither cities, all named from Seleucus Nicator, and situated in the kingdom of Syria, in (Jilicia and near the Euphrates.— Flor. iii. 11.

Plut. Mela. i. 12. Strab. xi. 5. Plin. vi. 23. Lempr.

SELECCIA ILBKR, an ancient town of Syria on the sea coast, with a bishop's see ; eight mile? north of Antioch.

SELFUCID/E, a surname or patronymic of the Syro-Grecian monarchsof Syria, who reigned in that country from the death of Alexander the Great, till it was reduced to a Roman province : so named from Seleucus Nicator, the *irst of them. See SYRIA.

SELEUCIDS:, ,£RA OF THE, in chronology, or the Syro-Macedonian era, is a computation of time commencing from the establishment of the Seleucidae in Syria. This era we find expressed in the books of the Maccabees, and on a great number of Greek medals struck by the cities 01 Syria, &c. The rabbins call it the era of contracts, and the Arabs therick dilkarnain, that is, the ' era of the two horns.' According to the best accounts, the first year of this era falls in the year 31 1 B. C. being twelve y«ars after Alexander's death.

SELEUCIS, or SELEUCENA, a division of Syria, so named from

Seleucus Nicator. It was also called Tetrapolis, from its containing four cities: *viz.* Seleucia, so named from Seleucus; Antioch from his father; Laodocea, after his mother ; and ApameaJ from his wife. — Strabo xvi.

SELEUCUS I., surnamed Nicator, or the conqueror, one of the chief generals under Alexander the Great, and, after his death, founder of the race of princes called Seleucidse. He i* equally celebrated as a renowned warrior, and as the father of his people; yet his virtues could not protect him from the fatal ambition of Ceraunus, one of his courtiers, by whom he was assassinated, A. C. 280. See SYRIA.

SELEUCUS was also the name of other five kings of Syria ; distinguished by the surnames of Callinicus, Ceraunus, Philopater, &c. See SYRIA.

SELF, pron.y plur. selves, ~\ Sax. j-ylp, ry'pa ; SELF'ISH, adj. I Belg. self, selve.

SELF'ISHNESS, n. s. ˆ>Its primary signi—

SELF'ISHLY, adv. i fication seems to

SELF'-SAME, adj. J be that of an adjective. Very ; particular ; this above others ; sometimes, one's own. Dr. Johnson's observations on the force of this word are so much in point that we must add them all. — Itˆis united both to the personal pronouns, and to the neutral pronoun it, and is always added when they are used reciprocally, or return upon themselves: as, I did not hurt him, he hurt himself s the people hiss me, but I clap myself; thou lovest thyself, though the world scorns thee. It is sometimes used emphatically in the nominative case : as, myself will decide it ; I myself 'will come ; himself shall revenge it. This use of self, thus compounded, without the pronoun personal, is chiefly poetical. Compounded with him, a pronoun substantive, self is in appearance an adjective : joined to my, thy, our, your, pronoun adjectives, it seems a substantive. Even when compounded with him it is at last found to be* a substantive, by its variation in the plural, contrary to the nature of English adjectives, as himSEL iy

self', themselves. Myself, himself, themselves, and the rest may, contrary to the analogy of my, him, them, be used as nominatives. It often adds only emphasis and force to the pronoun with which it is compounded : as, he did it himself. It signifies the individual, as subject to his own contemplation or action. It is much used in

composition, which it is proper to explain by a train of examples. It is to be observed that its composition in Shakspeare is often harsh.

In their anger they slew a man, and in their self-will they digged down a wall. Genesis xlix. 6.

The spark of noble courage now awake, And strive your excellent self to excel.

Faerie Queerie.

Before the door sat se//-consuming care, Day and night keeping wary watch and ward. Id.

I have no great cause to look for other than the self-same portion and lot, which your manner hath been hitherto to lay on them that concur not in opinion with you. Hooker's Preface.

Then held she her tongue, and cast down a self-accusing look, finding that in herself she had shot out of the bow of her affection a more quick opening of her mind than she minded to have done. Sidney.

Alas ! while we are wrapt in foggy mist Of our seZf-love, so passions do deceive, We think they hurt when most they do assist. Id.

Till Strephon's plaining voice him nearer drew, Where by his words his self-like case he knew. Id.

Shoot another arrow that self-way Which you did shoot the first.

Shakspeare. Merchant of Venice. The cruel ministers, by self and violent hands, Took off her life. Shaktpeare.

My strange and seˆ-abuse Is the initiate fear that wants hard use.

Id. Macbeth. I have heard so much,

And with Demetrius thought t' have spoke thereof ; But, being over full of *e//'-affairs, My mind did lose it.

Id. Midsummer Night's Dream. He walks, and that seJ/-chain about his neck, Which he forswore. Shakspeare.

It is in my power, in one self-born hour, To plant and o'erwhelm custom. Id. Winter's Tale.

The stars above us govern our conditions ; Else one se//-mate and

mate could not beget such different issues. Shakspeare.

I'm made of that self -metal as my sister, And prize me at her worth. Id. King Lear.

In my school-days, when I lost one shaft, I shot his fellow of the self -same flight The self-same way. Shakspeare.

He conjunct, and flattering his displeasure, Tript me behind : being down, insulted, railed, Got praises of the king For him attempting who was seZf-subdued. Id.

The Everlasting fixt His cannon 'gainst *eJ/'-slaughter. Id. Hamlet.

He's full of alteration And ^/-reproving. Id. King Lear.

More or less to others paying, Than by se//"-offences weighing : Shame to him whose cruel striking Kills for faults of his own liking ! Shakspeare. Self love, my liege, is not so vile a sin As se//'-neglecting. Id. Henry V.

His lords desire him to have borne His bruised helmet and his bended sword Before him through the city ; he forbids it, Being free from.. vainness and se//-glorious pride.

Shakspeare.

SEL

On these self hills the air is so thin that it is not sufficient, to bear up the body of a bird. Raleigh.

Since consciousness always accompanies thinking-, and it is that that makes every one to be what he calls self, and thereby distinguishes himself from all other thinking things ; in this alone consists personal identity, *i.e.* the sameness of a rational being.

Bacon.

The most ordinary cause of a single life is liberty, especially in certain se//-pleasing and humourous minds. Id.

They turn round like grindle-stones, Which they dig out fro' the dells,

For their bairns bread, wives, and sells.

Ben Jonson.

Up through the spacious palace passed she To where the king's proudly reposed head,

If any can be soft to tyranny, And se(/'-tormenting sin, had a soft bed. Crashaw.

Hast thou set up nothing in competition with God ; no pride, profit, *e//-love, or se//-interest of thy own 1

Duppa.

Seneca approves this se[f-homicide. Hakewill. Thyself from flattering se//-conceit defend, Nor what thou dost not know, to know pretend.

Denham.

Farewell, my tears ;

And, my just anger, be no more confined To vain complaints or se//-devouring silence. Id. Repent the sin ; but, if the punishment Thou canst avoid, se//-preservation bids. Milton.

Him fast sleeping soon he found, In labyrinth of many a round seZ/-rolled. Id

Oft times nothing profits more • Than self-esteem, grounded on just and right, Well managed. Id. Paradise Lost.

He sorrows now, repents, and prays contrite, My motions in him : longer than they move, His heart I know how variable and vain, Self -left.' Milton.

Flight pursued one way the self-same hour. Id. Next to the knowledge of God, this knowledge of our selves seems most worthy of our endeavour.

Hale.

They are yet more mad to think that men may rest by death, though they die in se//'-murder, the greatest sin. Graunl.

With a joyful willingness these self-loving reformers took possession of all vacant preferments, and with reluctance others parted with their

beloved colleges and subsistence. Walton.

This sublimer love, being, by an intimate conjunction with its object, thoroughly refined from all base dross of selfishness and interest, nobly begets a perfect submission of our wills to the will of God.

Boyle's Seraphick Love.

By all human laws, as well as divine, telf-mmder has ever been agreed on as the greatest crime.

Temple.

At that self moment enters Palamon The gate of Venus. Dry den.

From Atreus though your ancient lineage came ; Yet my *eZf-conscious worth, your high renown, Your virtue, through the neighbouring nations blown.

Id.

He has given you all the commendation which his self-sufficiency could afford to any. Id.

All these receive their birth from other things, But from himself the phoenix only springs ; Self -born, begotten by the parent flame In which he burned, another and the same. Id.

Thou first, O king ! release the rights of sway ; Power, se//-restrained, the people best obey. Id. A seJf-conceited fop will swallow any thing.

L' Estrange. C2

It is by the consciousness it has of its present thoughts and actions, that it is self to it self now, and so will be the same self, as far as the same consciousness can extend to actions past or to come.

Locke.

Eighteen and nineteen are equal to-thirty-seven, by the same ˆ//-evidence that one and two are equal to three. Id.

I am as justly accountable for any action done many years since, appropriated to me now by this ˆ/ˆ-consciousness, as I am for what I did the last moment. W.

Each intermediate idea agreeing on each side with those two, it is immediately placed between : the ideas of men and ˆ//'-determination appear to be connected. Id.

Consciousness being inteirupted, and we losing sight of our past selves, doubts are raised whether we are the same. Id.

Body cannot be *e//-existent, because it is not self-moved ; for motion is not of the essence of body, because we may have a definitive conception of body, abstracted from that of motion : wherefore motion is something else besides body, something without which body may be conceived to exist.

Grew.

Light, which of all bodies is nearest allied to spirit, is also most diffusive and se/f-communicative.

Norris.

God, who is an absolute spiritual act, and who is such a pure light as in which there is no darkness, must needs be infinitely ˆ(/-imparting and communicative. Id.

Are not these strange *e//-delusions, and yet attested by common experience 1 Smith's Sermons.

If the image of God is only sovereignty, certainly we have been hitherto much mistaken, and hereafter are to beware of making ourselves unlike God, by too much v/f-denial and humility. South.

lˆet a man apply himself to the difficult work of ˆ//-examination, by a strict scrutiny into the whole estate of his soul. Id.

A fatal se//”-imposture, such as defeats the design, and destroys the force, of all religion. Id.

When he intends to bereave the world of an illustrious person, he may cast him upon a bold self-opinioned physician, worse than his distemper, who shall make a shift to cure him into his grave. Id.

This fatal hyprocisy and self-deceit is taken notice of in these words, Who can understand his erronrs? cleanse thou me from secret faults.

Addison’s Spectator.

Men had better own their ignorance, than advance doctrines which are *e//”-contradictory. Id.

What could the most aspiring selfish man desire more, were he to form the notion of a being to whom he would recommend himself, than such a knowledge as can discover the least appearance of perfection, and such a goodness as will proportion a reward to it ? Id.

The guilt of perjury is so self-evident, that it was always reckoned amongst the greatest crimes, by those who were only governed by the light of reason.

Aildison.

•ˆ//-sufficiency proceeds from inexperience. Id. 13 y the blast of w/ /”-opinion moved, We wish to charm, and seek to be beloved. Prior.

Confidence, as opposed to modesty, and distinguished from decent assurance, proceeds from self-opinion occasioned by ignorance or flattery.

Collier of Confidence. Bewildered, I my author cannot find, Till some first cause, some .«•,’ /”-existent mint!, Who termed and rules all uatt re, is assi»nc<l.

Blaclanore.

Nick does not pretend to be a gentleman : he is a tradesman, a sef/’-seeking wretch.

Arhittlitwl’i History of John Bull. Every animal is conscious of some individual, self-moving, s<7/-determining principle.

Pope arid Arbuthnot. Mart. Scribb. Shall nature, erring from her first command, &//”-preservation, fall by her own hand] Granville^ Living and understanding substances do clearly demonstrate to philosophical inquirers the necessary self -existence, power, wisdom, and beneficence of their Maker. Bentley.

If it can intrinsically stir itself, and either commence or alter its course, it must have a principle of *e//-activity, which is life and sense. Id. Sermont.

The philosophers, ana even the Epicureans, maintained the ^//-sufficiency of the godhead, and seldom or never sacrificed at all. Bent ley.

Matter is not endued with self-motion, nor with ? power to alter the course in which it is put : it is merely passive, and must ever continue in that state it is settled in. Cheyne.

I heard in Crete, this island’s name ; For ‘twas in Crete, my native soil, I came Se//”-banished thence. Pope’s Odyssey.

Achilles’ courage is furious and untractable ; tha of Ajax is heavy and ^//-confiding. Pope.

What is loose love ? a transient gust, A vapour fed from wild desire, A wandering s«/f-consuming fire. Id.

By mighty Jove’s command, Unwilling have I trod this pleasing land ;

For who se//-moved with weary wing would sweep Such length of ocean 1 Id.

They who reach Parnassus’ lofty crown Employ their pains to spurn some others down ; And, while *e//-love each jealous writer rules, Contending wits become the sport of fools. Id.

He can your merit selfishly approve, And show the sense of it without the love. Id.

No wonder such a spirit, in such a situation, is provoked beyond the regards of religion or self-con- viction. Swift.

It may be thought that Ulysses here is too ostentatious, and that he dwells more than modesty allows upon his own accomplishments ; but se/f-praise is sometimes no fault. Eroome.

1 took not arms till urged by se/fdefence, The eldest law of nature.

Rome's Ambitious Stepmother

The fondness we have for self, and the relation which other things have to our selves, furnishes another long rank of prejudices. Watts.

His labour and study would have shown his early mistakes, and cured him of se/f-flattering delusions.

Id.

This is not to be done in a rash and se//-sufficient manner ; but with an humble dependance on divine grace, while we walk among snares. Id.

The religion of Jesus, with all its self-denials, virtues, and devotions, is very practicable. Id

But, hark ! I'll tell you of a plot, Though dinna ye be speaking o't ; I'll nail the s«/^'-conceited Scot

As dead's a herrin : Niest time we meet, I'll wad a groat,

He gets his fairin ! Bums.

Great censoriousness is great hypocrisy. Thou hypocrite, &c., all this is nothing but the. effect of woeful se//"-ignorance. Mason.

The reason they are not better acquainted with them is, because they hate se//"-inspection. Id.

Humility is not more necessary to salvation, than ^//'-knowledge is to humilitv. Id.

He trod the very self-same ground you tread, \nd victory refuted all he said. Cowper.

SELF-ACCENSION, or spontaneous inflammation, the burning of a body, animal or vegetable, by a fire produced from the person or body itself.

SELF-COMMAND is that steady equanimity which enables a man in every situation to exert his reasoning faculty with coolness, and to do what the existing circumstances require. It depends much upon the natural temperament of the body, and much upon the moral cultivation of the mind. He who enjoys good health, and has braced his frame by exercise, has always a greater command of himself than a man of equal mental powers, who has suffered his constitution to become relaxed by indolence ; and he who has from his early youth been accustomed to make his passions submit to his reason, must, in any sudden emergency, be more capable of act-ing properly than he who has tamely yielded to his passion. Hence recluse and literary men, when forced into the bustle of public life, are incapable of acting where promptness is requisite ; and men who have once or twice yielded to a sense of impending danger seldom acquire afterwards that command of themselves which may be necessary to extricate them from subsequent dangers. In one of the earliest battles fought by - Frederick the Great, king of Prussia, the sovereign was among the first men who quitted the field : had he done so a second and third time, he would never have become that hero whose actions astonished Europe.

SELF-DEFENCE implies not only the preservation of one's life, but also the protection of one's property, because without property life can-not be preserved in a civilised nation. The ex-tent of property essential to life is indeed small, and this consideration may enable us to decide a question which some moralists have made intricate. By what means, it has been asked, may a man protect his property? May he kill the person who attacks it, if he cannot otherwise repel the attack? That a man, in the state ot nature, may kill the person who makes an attack on his life, if he cannot otherwise repel the attack, is a truth which has never been controverted ; and he may do the same in civil society, if his danger be so imminent that it cannot be exerted Ky the interposition of the protection provided by the state. In all possible situations, except the three following, whatever is absolutely necessary to the preservation of life may be lawfully performed, for the law of self-preservation is the first and most sacred of those laws

which are impressed upon every mind by the Author of nature. The three excepted situations are those of a soldier in the day of battla, of a criminal about to suffer by the laws of his country, and of a man called upon to renounce his religion. The soldier hazards his life in the most honorable of all causes, and cannot betray his trust, or play the coward, without incurring a high degree of moral turpitude. But the soldier needs hardly be excepted ; as, by the very profession in which he is engaged, while he fights ibr his country, he is necessarily obliged to de-itiid himself against every individual of the

enemy, who attacks him. The criminal under sentence of death cannot, without adding to his guilt, resist the execution of that sentence ; for the power of inflicting punishment is essential to society, and society is the ordinance of God. The man who is called upon to renounce hi? religion ought to submit to the cruellest deatli rather than comply with that request, since religion is his only security for future and permanent happiness. But, even in this case, Christianity allows the persecuted to fly from persecution if it be possible. In every other situation, that which is absolutely necessary to the preservation of life is undoubtedly lawful. Hence, a person sinking in water is never thought guilty of any crime, though he drag his neighbour after him by his endeavours to save himself; and a man in danger of perishing by shipwreck may drive another from a plank which cannot carry them both, for, since one of two lives must be lost, no law, human or divine, calls upon either of them to prefer his neighbour's life to his own. But though the rights of self-defence authorise us to repel every attack made upon our life, and in case of extremity to save ourselves at the expense of the life of our innocent neighbour, it is not so evident that, rather than give to an unjust demand a few shillings or pounds, we may lawfully deprive a fellow creature of life. A few pounds lost may be easily regained; but life can never be restored. If these pounds, indeed, be the whole of a man's property ; if they include his clothes, his food, and the house where he shelters his head — there cannot be a doubt but that, ra-ther than part with them, he may lawfully kill the aggressor, for no man can exist without shelter, food, and raiment. But it is seldom that an attempt is made, or is indeed practicable, to rob a man at once of all that he possesses. The important question then is, may a man put a robber to death rather than part with a small part of his property? Paley doubts whether he could innocently do so in a state of nature, ' because it cannot be contended to be for the augmentation of human happiness, that one ma-should lose his life or limb, rather than anotht a pennyworth of his property.' But we think that the protection of

property by the death of the aggressor may be completely vindicated upon more general principles. It is necessary, in every state, that property be protected, or manˆ kind could not subsist ; and the sum of human happiness will be more augmented by cutting off such worthless wretches than by exposing property to perpetual depredation ; and therefore, if general utility be the criterion of moral good, a man may in every case lawfully kill a robber, rather than comply with his unjust demand. But if a man may, without guilt, preserve his property by the death of the aggressor, when it can-not be preserved by any other means, much more may a woman have recourse to the last extremity to protect her chastity from forcible violation. This, indeed, is admitted by Paley himself, and will be controverted by no man who reflects on the importance of the female character, and the probable consequences of the smallest deviation from the established laws of female honor. See SEDUCTION.

SELF-EXAMINATION, a duty much insisted on by divines, and particularly the ancient fathers, by way of preparation to repentance. St. Ignatius reduces it to five points, viz: — 1. A returning thanks to God for his benefits. 2. A begging of grace and light, to know and distinguish our sins. 3. A running over all our actions, occupations, thoughts, and words, to learn •vhat has been offensive to God. 4. A begging A pardon, and conceiving a sincere sorrow for having displeased him. 5. Making a firm resolution not to offend him any more; and taking the necessary precautions to preserve ourselves from it.

SELF-KNOWLEDGE, the knowledge of one’s own character, abilities, opinions, virtues, and vices. This has always been considered as a difficult though important acquisition. It is difficult, because it is disagreeable to investigate our errors, our faults, and vices ; because we are ;ipt to be partial to ourselves, even when we have done wrong

; and because time and habitual attention are requisite to enable us to discover our real character. But these difficulties are more than counterbalanced by the advantages of self-knowledge. By knowing the extent of our abilities, we shall never rashly engage in enterprises where our ineffectual exertions may be productive of harm: by investigating our opinions, we may discover those which have no foundation, and those also which lead us insensibly into vice. JJy examining our virtues and vices, we shall learn what principles ought to be strengthened, and what habits ought to be removed. One of the first advices of the philosophers of antiquity was, Know thyself. It is difficult to lay down rules for the acquisition of this self-knowledge, because almost every man is blinded by a fallacy peculiar to himself. Bui, when owe has got rid < >f that partiality which arises from self-love, he may easily form a just estimate of his moral improvements, by comparing the general course of his conduct with the standard of his duty ; and, if he has any doubt of the extent of his intellectual attainments, he will most readily discover the truth by comparing them with the attainments of others who have been most successful in the same pursuits. Should vanity arise in his mind from such a comparison, let him then compare the extent of his knowledge with what is yet to be known, and he will then be in no danger of thinking of himself more highly than he ought to think.

SEI.F-LOVE is that instinctive principle which impels every animal, rational and irrational, to preserve its life and promote its own happiness. It is very generally confounded with selfishness ; but the one propensity is quite distinct from the other. Every man loves himself; but every man is not selfish. The selfish man grasps at all immediate advantages, regard-loss of the consequences which his conduct may nave upon his neighbour. This principle is the parent of every vice and crime that disgrace human nature. Self-love only prompts him who is actuated by it to procure to himself the greatest possible sum of happiness during the whole of),i-existence. Self-love, as distinguished from . lustiness, always comprehends the whole of a

man’s existence ; and, in that extended sense of the phrase, every man is a self-lover ; for, with eternity in his view, it is surely not possible for the most disinterested of the human race not to pre-fer himself to all other men, if their future and everlasting interests could come into competition. But this they never can do; for in the pursuitcf a prize which is to be gained only by sobriety, righteousness, and piety, there can be no rivalship ; the success of one being no injury to another. It has been a question in morals, whether self-love be not the incentive

to every action, however virtuous or apparently disinterested ? Those who maintain the affirmative say that the prospect of immediate pleasure, or the dread of immediate pain, is the only apparent motive to action in the minds of infants, and indeed of all who look not before them, and infer the nature from the past. They own that when a boy has had some experience, and is capable of making comparisons, he will often decline an immediate enjoyment which he has formerly found productive of evil more than equivalent to all its good ; but in doing so they think justly, that he is still actuated by the principle of self-love, pursuing the greatest good of which he knows himself to be capable. After experiencing that truth, equity, and benevolence in all his dealings is the readiest, and indeed the only certain method of securing to himself the kindness and good offices of his fellow-creatures, and much more when he has learned that they will prove infinitely advantageous to him in a future world, they admit that he will practise truth, equity, and benevolence ; but still, from the same principle, pursuing his own ultimate happiness as the object which he has always in view. The prospect of this great object will make him feel an exquisite pleasure in the performance of the actions necessary to its attainment, till at last, without attending to their consequences, he will, by the great associating principle, feel a refined enjoyment in the actions themselves, and perform them, as occasions offer, without deliberation or reflection. Such, they think, is the origin of benevolence itself, and of every other virtue. Those who take the other side of the question can hardly deny that self-love, thus modified, may prompt to virtuous and apparently disinterested conduct ; but they think it degrading the dignity of man to suppose him actuated solely by motives which can be traced back to a desire of his own happiness. The other theory supposes that the exciting motive is the hope of future happiness, and the dread of future misery ; the instinctive scheme supplies a present motive, in the self-complacency arising in the heart from a consciousness of right conduct. The former is a rational motive ; the latter has nothing more to do with reason than the enjoyment arising from eating or drinking, or from the intercourse between the sexes. But we need not pursue the subject farther, but conclude with observing that there is certainly a virtuous as well as a vicious self-love, and that

‘ All true self-love and social are the same/

M 1.1 -MURDER. See SUICIDE. SELF-PAKTIALIT\ is a phrase employed by some philosophers to express that weakness

of human nature through which men overvalue themselves when compared with others. (See Lord Kaimes's Art of Thinking). It is distinguished from general partiality, because it is thought that a man is led to overrate his own accomplishments, by a process of intellect different from that by which he overrates the accomplishments of his friends or children. The former kind of partiality is wholly selfish ; the latter partakes much of benevolence. This distinction may perhaps be deemed plausible by those who consider the human mind as little more than a bundle of instincts; but it must appear ridiculous to such as resolve the greater part of apparent instincts into early and deep-rooted associations of ideas. If the partialities which most men have to their friends, their families, and themselves, be instinctive, they are certainly instincts of different kinds; but an instinctive partiality is a contradiction in terms. Partiality is founded on a comparison between two or more objects ; but genuine instincts form no comparisons. See INSTINCT. The origin of self-partiality is not difficult to be found ; and our partialities to our friends may be traced to a similar source. By the constitution of our nature we are impelled to shun pain, and to pursue pleasure ; but remorse, the severest of all pains, is the never-failing consequence of vicious conduct. By magnifying to himself the tempta-tions which led him astray, and diminishing the injuries which his conduct has done in the world, and by adopting a course diametrically the reverse when estimating the morality or immorality of the conduct of his neighbours, one soon becomes to believe that he is at least not more wicked than they. Thus is self-partiality formed in the mind, and quickly blinds him who is under its influence so completely, as to hide from him the very faults which he sees and blames in others. Partiality is formed in the very same manner to natural or acquired accomplishments, whether mental or corporeal. These procure respect to him who is possessed of them; and, as respect is accompanied with many advantages, every man wishes to obtain it for himself. If he fail in his attempts, he consoles himself that it is due to his merits, and is only withheld by envy. He compares the

particular branch of science or bodily accomplishment in which he himself most excels, with those which have conferred splendor on his rival ; and finds that his own ext-ellencies are of the highest order, and entitled to the greatest share of public es-teem. Hence the polite scholar despises the mathematician ; the reader of Aristotle and Plato all the modern discoveries in physical and moral science ; and the mere experimentalist holds in contempt a critical knowledge of the ancient languages. The pupil of the ancients denies the merits of the moderns, whilst the mere modern allows nothing to the ancients; and thus each becomes partial to his own acquisitions, and of course to himself, for having been at the trouble to make them. All partialities are prejudices of the worst kind. They ought therefore to be guarded against with the utmost care. And he who is partial to his own virtue or knowledge will do well to compare the former, not

with the conduct of his neighbour, but with the express rule of his duty ; and to consider the latter as no farther valuable than as it contributes to the sum of human happiness.

SELIM I., emperor of the Turks, was the second son of Bajazet II. He made war upon his father, and, though defeated in 1511, he at last dethroned him, took him prisoner, and poisoned him, with his elder brother Achmet, and his younger Korkud, an amiable and enlightened prince. He next marched against Campson Gaury, sovereign of Egypt, gained a great victory at Aleppo, and slew their general. But, though the sultan perished in that battle, the Mamelukes determined to oppose the emperor. Selim, entering their country at the head of his army, defeated the Egyptians in two battles, and ordered Tumanbey, the new elected sultan, who had fallen into his hands, to be hanged. He then took Cairo and Alexandria, and soon reduced all Egypt. Thus ended the dominion of the Mamelukes in Egypt, which had continued for more than 260 years. See EGYPT. He confirmed the ancient privileges of the Venetians in Egypt and Syria, by which they carried on their commerce with India, and formed a league with them to destroy the power of the Portuguese in that country. Selim had before this gained a great victory over the Persians, and stripped them of Tauris and Keman. lie was preparing to attack Christendom, when he was seized with an ulcerous sore in the back. Thinking that the air of Adrianople would restore his health, he ordered himself to be conducted thither ; but he died at Clari in Thrace, on his road to that city, in 1 520, in the very spot where he had poisoned his father. He reigned eight years and lived fifty-four. He was a prince of great courage, sobriety, and liberality ; he was fond of history, and wrote

some verses. But these good qualities were obscured by the most abominable crimes that ever disgraced human nature : he made his way to the throne by shedding the blood of his father, and secured it by murdering his brothers and eight nephews, and every bashaw who had been faithful to his duty.

SELIM II., the son of Solyman II. and grandson of Selim I., succeeded his father in 1566. He made a truce for eight years with the emperor Maximilian, and confirmed his father's treaty with the Venetians: but, in 1570, declared war against them, and took Cyprus, where his general Mustapha committed great cruelties. 'In 1571 he lost the battle of Lepanto, which threw all Constantinople into consternation, and obliged him to make peace with the emperor. He died in 1574, aged fifty-two, with the character of a weak and dissolute prince.

SELINGUNSTAD, or SELiGENSTADT,atown in Hesse-Darmstadt. Population, 2300.

SELINTY, a cape of Caramania, in Asia Minor, formed by a -omantic headland, on which are the ruins of the ancient Trajanopolis. The hill rises steeply from the plain, and breaks off into a chain of magnificent cliff's. On the highest point are the ruins of a castle, whk-j commands the hill in every direction, and lot ks perpendicularly down upon the sea. The ancient line of fortification is marked by a wall , within

which there are many remains of houses ; while outside of them, between the foot of the hill and the river, are the remains of large buildings. The most remarkable of these is a low edifice, of about seventy feet by fifty, the top of which is flat, and which appears to have been formerly the basement of some splendid structure It stands in the centre of a quadrangle, along each side of which there was a row of thirty small columns; but they have been all broken off close to

the ground. Lower down the river are the remains of a small theatre. Near its mouth are some baths ; and fronting the theatre is a long ruined aqueduct on arches, which, crossing the stream, communicates with a distant hill. At the southeast point of the hill are numerous tombs. The coast is marked by petrified gravel, which, at a distance, has the appearance of loose stones; but, on approaching, proves to be a solid crust of pudding stone. The ancient city was called originally Selinus, until Trajan gave his own name to it.

SELINUM, in botany, milk parsley, a genus of the digynia order, and pentandria class of plants; natural order forty-fifth, umbellatae. The fruit is oval, oblong, compressed, plane, and striated in the middle: the involucrum is reflex-eel ; the petals cordate and equal. There are seven species, *viz.*

S. camfolia, Chabrai, custriacum, Monnieri, palustre, seguieri, and sylvestre.

SELINUNS, SELINUS, or SELINUNTUM, in ancient geography, a town on the south of Sicily, founded A. U. C. 127, by a colony from Megara. It was so named from atXtvov, parsley, which it abounded with. It was anciently a place of great importance, as is proved by the venerable relics of its ruins still visible at Mazara which was built on its site. — Paus. vi. c. 19.

SELINUS, or SELINUNTE, a ˆcelebrated ancient city on the south coast of Sicily, at the mouth of the Heraclea. Its ruins are seen about seven miles south of Castro Vetrano, and are described as of enormous bulk. From the traces of the walls, the town appears to have been built in the form of a horseshoe, having a port in the centre; but the latter is now filled up. The chief ruins are two temples, of great extent. A stone of one of them has been lately found to measure twenty-one feet in length, five feet eight inches in height, and six feet nine inches in breadth. On the west side, the walls are in a considerable degree of perfection ; ‘and there are two vast flights of steps between this port and the upper part of the city.

SELINVS, in ancient geography, the name of six rivers ; *viz.* one each in Achaia, Cilicia, Elis, and Sicily ; and of two in Ephesus : also, 7. of a town in Cilicia, where Trajan died : and, 8. of a lake at the origin of the Cayster. — Livy Strabo, Pliny.

SELISIA, a river of Maritime Austria, in Friuli, which joins the Cobera and forms the Mpduna.

SELKIRK (Alexander), whose adventures pave rise to the well-known historical romance of Robinson Crusoe, was born at Largo, in Fife, in 1676, and was bred a seaman. He went from England in 1703, in the capacity of master of a

small vessel called the Cinque Ports, Charles Pickering captain, burthen about ninety tons, with sixteen guns, and sixty-three men ; and in September the same year sailed from Cork, in company with another ship of twenty-six guns, and 120 men, called the St. George, commanded by that famous navigator William Dampier, intending to cruise against the Spaniards in the South Sea. On the coast of Brasil Pickering died, and was succeeded in his command by his lieutenant Stradling. They proceeded on their voyage round Cape Horn to the island of Juan Fernandez, whence they were driven by the appearance of two French ships of thirty-six guns each, and left five of Stradling's men there on shore, who were taken off by the French. Hence they sailed to the coast of America, where Dampier and Stradling quarrelled, and separated by agreement, on the 19th of May, 1704. In September following, Stradling came again to the island of Juan Fernandez, where Selkirk and his captain had a difference, which, with the circumstance of the ship's being very leaky and in bad condition, induced him to determine on staying there alone ; but, when his companions were about to depart, his resolution was shaken, and he desired to be taken on board. The captain, however, refused to admit him, and he was obliged to remain, having nothing but his clothes, bedding, a gun, and a small quantity of powder and ball ; a hatchet, knife, and kettle; his books, and mathematical and nautical instruments. He kept his spirits tolerably till he saw the vessel put off, when (as he afterwards related) his heart yearned within him, and melted at parting with his comrades and all human society at once.

Such is the rooted love we bear mankind, All ruffians as they are. Thomson.

Left sole monarch of the island, with plenty of the necessaries of life, he found himself m a situation hardly supportable. He had fish, goat's flesh, turnips and other vegetables ; yet he grew dejected, languid, and melancholy, to such a de-gree as to be scarcely able to refrain from doing violence to himself. Eighteen months passed before he could, by reasoning, reading his Bible, and stady, be thoroughly reconciled to his condition. At length he grew happy, employing himself in decorating his huts, chasing the goats, whom he equalled in speed, and scarcely ever failed of catching. He also tamed young kids, and

kept a guard of tame cats about him, to defend him when asleep from the rats, which were very troublesome. When his clothes were worn out, he made others of goat skins, but could not succeed in making shoes, with the use of which, however, habit, in time, enabled him to dispense. His only liquor was water. He computed that he had caught 1000 goats during his abode in the island ; of which he had let go 500, after marking them by slitting their ears. Commodore Anson's people, who were there about thirty years after, found the first goat which they shot upon landing was thus marked, and, as it appeared to be very old, concluded that it had been under the power of Selkirk. He made companions of his tame goats and cats, often dancing and singing with them ; but he dreaded

nothing so much as the thought of being eaten Crusoe do, by cutting notches in a post, or many by his cats when he should be dead. Though other methods. A story was raised and propa-he constantly performed his devotions at stated gated by Daniel Defoe's malignant enemies, that hours, and read aloud ; yet, when he was taken Selkirk put his papers into Defoe's hands, to ar-off the island, his language, from disuse of con-range and form them into a regular narrative, and versation, was become scarcely intelligible. that from these papers he formed his celebrated

In this solitude he continued four years and Adventures of Robinson Crusoe. But, not to four months ; during which time only two inci-mention that Selkirk had no means of writing a dents happened which he thought worth relating, journal whilst he was upon the island, so dis-the occurrences of every day being in his cir-honest an action does not correspond with De-cumstances nearly similar. The one was, that foe's general character. We therefore refei ou. pursuing a goat eagerly, he caught it just on the readers, for what appears to us to be the truth edge of a precipice, which was covered with to our article DEFOE. Of

the time, or place, or bushes, so that he did not perceive it, and he manner of this extraordinary man's death we fell over to the bottom, where he lay (according have no account; but in 1792 the chest and to captain Rogers's account) twenty-four hours rnusket which Selkirk had with him on the island senseless ; but, as he related it to Sir R. Steele, were in the possession of his grand-nephew, Johr he computed, by the alteration of the moon, that Selkirk weaver of Largo, in Scotland, he had lain three days. When he came to him-SELKIRK, the capital of Selkirkshire, is a small self, he found the goat lying under him dead, town pleasantly situated on a rising ground, and It was with great difficulty that he could crawl to enjoys an extensive prospect in all directions, his habitation, whence he was unable to stir for especially up and down the Etterick. It was a ten days, and did not recover of his bruises for royal borough, and joined with Lanark, Linlith-a long time. The other event was the arrival of gow, and Peebles, in sending a member to the a ship, which he at first supposed to be French ; British parliament. It is governed by two bau and such is the natural love of society in the lies, a dean of guild, treasurer, and ten coun-human mind, that he was eager to abandon his sellers. The citizens were anciently famous for solitary felicity, and surrender himself to them, their valor. Of 100, who followed James IV. although enemies; but upon their landing, ap-to the fatal battle of Floddon, in 1513, a few reproaching them, he found them to be Spaniards, turned with trophies of victory, some of which of whom he had too great a dread to trust him-are still preserved, and the sword of William self in their hands. They were by this time so Brydon, the town clerk, who commanded them, near that it acquired all his agility to escape, The English, provoked with their desperate va-which he effected by climbing into a thick tree, lor, burned their town ; but James V. rewarded being shot at several times as he ran off. Fortu-them by a grant of the wood and ground of an nately the Spaniards did not discover him, though extensive tract of Etterick forest. It has manu-they stayed some time under the tree where he factures of boots, shoes, and inkle. The town, was hid, and killed some goats just by. In this till of late, was but poorly built, but lately it has solitude Selkirk remained until the 2d of Fe-been greatly improved ; the streets have been bruary 1709, when he saw two ships come into levelled and paved, the old gaol, and another the bay, and knew them to be English. He im-house which stood in the middle of the street mediately lighted a fire as a signal; and, on their have been removed, and many new houses have coming on shore, found they were the Duke, cap-been built in a good style, together with a new tain Rogers, and the Duchess, captain Courtney, town house, containing apartments for the town two privateers from Bristol. He gave them the

and sheriff's court and a library ; it has a hand-best entertainment he could afford ; arid, as they some spire and clock, A new prison has also had been a long time at sea without fresh Y>rovi-been erected at the back of the town, with a sions, his goats were highly acceptable. His spacious area, enclosed with a wall, for the use habitation, consisting of two huts, one to sleep of the prsoners. It has fairs March 25th, April in, the other to dress his food in, was so obscurely 15th, August 10th, October 20th, and December situated, and so difficult of access, that only one 8th, O. S. It is thirty miles southeast of Edin-of the ship's officers would accompany him to burgh, and thirty southwest of Berwick, it. Dampier, who was pilot on board the Duke, SELKIRK, or SELKIRKSHIRE, called also the and knew Selkirk very well, told captain Rogers sheriffdom of Etterick Forest, a county of Scot-that, when on board the Cinque Ports, he was land, extending about twenty-four miles in length the best seaman on board that vessel ; upon from east to west, and from eight to fifteen in which captain Rogers appointed him master's breadth from south to north. It is bounded on mate of the Duke. After a fortnight's stay at the north by Peebles-shire ; east by Berwick-Juan Fernandez, the ships proceeded on their shire; southeast and south by Roxburghshire; cruise against the Spaniards ; plundered a town southwest by Dumfries-shire ; and west by on the coast of Peru ; took a Manilla ship off Peebles-shire. This county was formerly re-California, and returned by way of the East In-served by the Scottish princes for the pleasure of dies to England, where they arrived the 1 st of the chase, and they had houses for the reception October 1711, Selkirk having been absent eight of their train. At that time the face of the coun-years, more than half of which he had spent try was covered with woods, in which there were alone in the island. Captain Cook remarks, as great numbers of red and fallow deer, whence it an extraordinary circumstance, his keeping an ac-had the name of Etterick V'orest. The woods, count of the days of the week and month ; but however, are now almost entirely cut down, and tins might be done, as Defoe makes Robinson the county is chiefly supported by the breed of

sheep. They are generally sold into England, but sometimes into the Highlands, in March, where they are kept during summer ; and, after being improved by the mountain grass, are returned into the Lowlands in the beginning of winter. This county, though not very populous at present, was once the nurse of heroes, who were justly accounted the bulwark of their native soil, being ever ready to brave danger and death in its defence. Of this we have a memorable proof in the pathetic lamentations of their wives and daughters for the disaster of the field of Floddon, ‘ where their brave foresters were a’ wed away.’ The rivers Etterick and Yarrow unite a little above the town of Selkirk, and terminate in the Tweed. For five miles above its junction with Etterick, the Tweed is still adorned with woods, and leads the pleased imagination to contemplate what this country must have been in former times. The Yarrow, for about five miles above its junction with the Etterick, exhibits nature in a bold and striking aspect. Its native woods still remain, through which the stream has cut its tuibid course, deeply engulphed amidst rugged rocks. Here in a flood stood the descriptive Thomson when he saw it

Work and boil, and foam and thunder through.

Upon a peninsula, cut out by the surrounding stream, in the middle of this fantastically wild scene of grandeur and beauty, stands the castle of Newark.

SELL, v. a. & v. n.) Sax. ryllan ; Island.

SEL’LER, n. s. J sela. To give for a

price ; the word correlative to buy ; to vend : to have traffic : a seller is a vender.

The Midianites sold him into Egypt, unto Poti-phar. Genesis.

Let us sell him to the Ishmaelites.

Id. xxxvii. 27.

Consult not with a buyer of selling.

Eccles. xxx vii. 11.

You would have sold your king to slaughter, His princes and his peers to servitude. Shaktpeare.

I will buy with you, sell with you ; but I will not eat with you. Id.

Merchant of Venice.

To things of sale a seller's praise belongs.

Shaktpeare.

This sense is likewise mistress of an art, Which to soft people sweet perfumes doth sell.

Davits.

All the inns and public houses are obliged to furnish themselves with corn, which is sold out at a much dearer rate than 'tis bought up.

Addison on Italy.

The name of the agent, or the seller, notary, and witnesses, are in both instruments. Id.

You have made an order that ale should be sold for three halfpence a quart. Swift.

SELLIUS (Godfrey), F. R. S., a learned historian and naturalist, born at Dantzic. He resided chiefly in France. He wrote 1. A Voyage to Hudson's Bay ; 2. A Dictionary of Mono-grams ; 3. The Natural History of Ireland ; 4. History of the Ancient Revolutions of the Globe. He died in France in 1767.

SELTZER WATER, a mineral water which spings up at Lower Seltzer, is very useful medicinally. It contains, according to some, a very small portion of calcareous earth, of a native mineral alkali, and an acid; but of these the

quantity is too small to attribute any medicinal virtues to ; but it contains also nearly one-seventh of its bulk of fixed air, which is more than is found in any other mineral water, and to this it owes its principal virtues. Others have said that it is of the same nature with Pyrmont water (see MINERAL WATERS), and contains a subtile aqueous fluid, a volatile iron, and a predominant alkali, all joined together into one brisk spirituous water. The consequence of these different opinions respecting its constituent parts is that different methods have been recommended for imitating it.

From the experiments of Dr. Brocklesby on Seltzer water we learn

that, upon dropping twelve drops of very highly colored syrup of violets into a wine-glass of it, the syrup seemed first to manifest a purple hue, but, upon their intimate union, the whole changed into a beautiful green : that the same quantity of oil of tartar per deliquium dropped into a glass of sparkling, fresh, clear water, quickly turned the whole milky, and, after standing, a fine pearl*colored powder fell to the sides and bottom of the glass ; on adding an equal number of drops of pure dephlegmated spirit of vitriol to a glass of this water, a light cloud was seen suspended towards the middle of the glass, and numerous air-bubbles rose from all parts of the' water, and the sparkling might be renewed by adding one or more drops of the acid, and shaking the glass; and the like ebullition was more readily produced by a solution of sugar and Rhenish wine, or vinegar with the same : and the same appearances were exhibited by dropping any vegetable or mineral acids into this water, as are observed when alkalies and acids are mixed together : a volatile caustic al-kali, in half an hour after it had been dropped into this water, produced at first a cloud and afterwards a precipitation. Lixivium saponarium so far decomposed a glass of Seltzer water, that a cloud instantly appeared in the middle of it, and the air-bubbles, emerging from the lower part of it, were greedily absorbed by the caustic alkali, which is known to imbibe fixed air, whenever it comes into contact with it. This water, says Dr. Brocklesby, poured into a glass, separates more air-bubbles .than any other water which he had tried, and continues longer to do so in the open air ; but its sparkling may be renewed by adding any sub-acid vegetable,, and a little sugar, as sharp cyder and Rhenish wine and sugar ; but he adds that the best Seltzer water here will not perfectly curdle milk, nor lather with soap, and that with powder of gall-nuts no farther change of color appeared than in pure water. By evaporating twenty-four ounces of the best Seltzer water, he obtained thirty-six grains of a saline residuum; and the greatest quantity he could ever get from a pint, wine measure, was less than thirty grains. Ten drops of strong spirits of vitriol, poured on as many grains of salt of Seltzer water, caused great and instant ebullition, and suffocating steam, which tinged blackish a silver spoon held in them, and gave to its polished surface a bitter taste.

Having dissolved sixty-six grains of pure white salt, obtained from this water, in distilled water, and filtrated it, he thereby obtained seven

grains of a calcareous earth, perfectly soluble in all weak acids; but by several different modes of trial he was led to conclude that this water contains no ferruginous principle.

Finding that the salts and earths contained in Seltzer water are too inconsiderable, both in quantity and quality, to promise any very material medicinal effects, he proceeded to investigate what might be ascribed to the great quantity of fixed air which this water constantly discharges, in a heat not exceeding that of the human body ; and the result was, that the factitious air, yielded by a bottle full of water, containing exactly fourteen ounces seven drachms, in a heat never exceeding 116° by Fahrenheit's scale, amounted to a quantity which occupied a space that required two ounces two and a half drachms of water to fill it ; or, allowing 265 grains of common water for a cubic inch, the whole water amounted to twenty-seven cubic inches, and that which would fill the space occupied by the air four ounces and one-fifth ; and so large a quantity of interstitial air, he says, was generated in a heat not incompatible with life in any part of the world, as the fever heats in all climates testify, and less than the heat which is often experienced without instantaneous prejudice, in some tropical climates. However, this generated air soon began to be re-absorbed into the body of the water, and, in about eight hours, the space occupied by the remaining air did not exceed one-fifth of what it had formerly done. From another experiment with the salt of Seltzer water, he found that this seemed to have let go much the greatest part of its fixed air, and probably thereby lost most of the virtues inherent in the pure fresh water itself.

From such experiments Dr. Brocklesby infers that Seltzer mineral water contains, besides the mere elementary water, a very small quantity of calcareous earth, and a much greater portion of a native mineral alkali, together with some acid retained a while within the water, but which either evaporates into the open air, or else is soon combined with the mineral alkali : and he thinks it probable that the active virtues of this water depend more on this elastic matter, or fixed air, which it contains in such uncommon abundance beyond other mineral waters, than in any combination of its saline and earthy contents, which are found in such small quantities as to be incapable of any material service, though this water is known to be exceedingly beneficial. This account of the analysis of Seltzer water is closed with the history of some medical cases, in which the use of this water

completed a cure, after a great variety of other remedies had proved insufficient.

The operation of this water, according to Hoffman, is chiefly by urine, for it has no purgative virtues. It corrects acidities, renders the blood and juices more fluid, and promotes » brisk and free circulation ; and, therefore, it is good in obstructions of the glands, and against gross and viscid humors. It is of great use in the gravel and stone, and other disorders of the kidneys and bladder. It is also excellent in gouty and rheumatic complaints, especially when mixed with milk, or improved by the addition of Rhenish wine and a little sugar. It is drunk •with great success in scorbutic, cutaneous, and

putrid disorders. It relieves the b<jart-burn, and is an excellent stomachic. On account of its diuretic quality, it is serviceable in dropsical complaints : and, mixed with asses' milk, it is much recommended in consumptive cases, and in disorders of the lungs ; with or without milk, it is in great esteem in nervous disorders, and also in hypochondriacal and hysteric complaints, and in obstructions of the menses, accompanying the use of it with proper exercise. It is also administered with success in purging and fluxes arising from acidity in the bowels; and, it is said, if drunk by nurses, to render their milk more wholesome and nourishing, and to prevent it from turning sour on the stomachs of children. See London Med. Observ. vol. iv. p. 7, &c., and our own article MINERAL WATERS.

According to the former analysis, artificial Seltzer water may be prepared by adding one scruple of magnesia alba, six scruples of fossil alkali, and four scruples of common salt, to each gallon of water, and saturating the water with fixed air or carbonic acid. According to the latter it may be imitated by adding to a quart of the purest and lightest water thirty drops of a strong solution of iron made in spirit of salt, a drachm of oil of tartar per deliquium, and thirty drops of spirit of 'vitriol, or a little more or less as is found necessary, not to let the alkali of the oil of tartar prevail too strongly, though it must prevail a little. If the proportions be carefully observed, and the whole of these ingredients shaken briskly together, the artificial Seltzer or Pyrmont water thus made will strongly resemble the natural, and have the same good effect in medicine. But, as fixed air is the only efficacious medicinal part of the composition of Seltzer water, the best method of imitating it is by impregnating common water with that acid by a process for which we are indebted to Dr. Priestley. In 1767, having placed shallow vessels of water within the region of fixed air, on the

surface of the fermenting vessels of a brewery, and left them all night in that situation, he found that the water had acquired a very sensible and pleasant impregnation. He proceeded to accelerate the impregnation .by pouring the water from one vessel into another, while they were both held within the sphere of the fixed air. The method of effecting this by air dislodged from chalk and other calcareous substances did not occur to him till 1772, when he published his directions for this purpose, together with a drawing of the necessary apparatus, which he had before communicated to the board of admiralty. That apparatus afterwards gave way to another, invented by Dr. Nooth.

Dr. Withering of Birmingham after this contrived a new apparatus for impregnating water with fixed air, which, he says, is preferable to that in common use, because it can be made at less expense, and is more easily prepared ; because the whole quantity of fixable air produced is converted to use without any waste of the vitriolic acid ; because it impregnates three times the quantity of water at one time, more completely, and with less trouble ; and the impregnated water will always retain its virtue, if the .joints and cocks of the machine are perfectly

air-tight ; for which purpose they should once a-year be supplied with a small quantity of un- •.alted lard.

SEL'VAGE, n. $. Of this word I know not the etymology, says Johnson. Skinner thinks selvage is said as salvage, from its saving the cloth. Mr. Thomson says, Belg. zelfegg, or zul-voeg from zeil, a cord, and voege, a joining. The edge of cloth where it is closed by complicating the threads.

Make loops of blue upon the edge of the one curtain from the talvage in the coupling. Ex. xxvi. 4.

SEMAYLA, a gold mine of Bambouk, in Central Africa. It is situated in a hillock about 200 feet high, and 5000 in circumference. The gold is

contained in a kind of reddish sandstone, extremely hard, mixed with a species of calculous emery, and very hard red marble. At the depth of about thirty feet, the miners find a solid stratum of red marble, richly impregnated with gold, upon which their skill does not ena-ble them to make any impression. The difficulties in working cause the mine of Semayla, though the richest in Bambouk, to be considered only of secondary value.

SKM'BLE, v. n. ~] Fr. sembier ; Lat.

SEM'HLABLE, adj. simulo. To repre—

SEM'BLABLY, adv. [sent ; make a like—

SEM'BLANCE, n. s. (ness: semblable is,

SEM'BLANT, adj. & n. s. | like, the adverb cor-SEM'BLATIVE, adj. J responding: semblance is, likeness ; similitude : semblant, resembling; show; figure: semblative, suitable; fit ; resembling.

Her purpose was not such as she did feign, Ne yet her person such as it was seen ;

But under simple show, and semblimt plain, Lurks false Duessa, secretly unseen.

Faerie Queene. Full lively is the semblant, though the substance

dead. Spenter.

Be you the soldier, for you likest are, For manly semblance, and for skill in war. Id.

Then be abhorred

All feasts, societies, and throngs of men ! His semblable, yea himself, Timon disdains.

Shakspeare.

A gallant knight he was, his name was Blunt ; Sembtubly furnished like the king himself.

Id. Henry IV.

Solicit Henry with her wondrous praise : Bethink thee on her virtues that surmount Her natural graces, that extinguish art: Repeat their

semblance often. Shakspeare.

Diana's lip

Is not more smooth and ruby ; thy small pipe Is as the maiden's organ shrill and sound ; And all is lemblntive a woman's part.

Id. Twelfth Night. Their semblance kind, and mild their gestures

were, Peace in their hands, and friendship in their face.

Fairfax.

He with high words, that bore Semblance of worth, not substance, gently raised Their fainting courage, and dispelled their fears.

Milton.

With umbtable reason we might expect a regularity in the winds. Browne's Vulgar Errours.

Thy picture, like thy fame, Entire may last ; that, as their eyes survey The itmblant shade, men yet unborn may say,

SEM

Thus great, thus gracious, looked Britannia's queen . Her brow thus smooth, her look was thus ser-ne.

Pnu, .

Let Europe, saved, the column high erect, Than Trajan's higher, or than Antonine's,

Where sembling art may carve the fair effect And full achievement of thy great designs. Id.

This last effort brought forth the opinion that these bodies are not what they seem to be ; that they are no shells, but mere sportings of active na-ture, and only semblances or imitations of shells.

Wood mi ril.

If they (early impressions) will not bear this after hard rubbing,, they must be dismissed, as no genuine principles of truth, but as

counterfeits imposed upon us under guise and semblance of it.

Mason .

It is not his meaning that we put on the outward face and semblance of virtue, only to conceal and disguise our vice. Rogers.

SEMECARPUS, in botany, a genus of the trigynia order, belonging to the pentandria class of plants : COR. qumquepetalous ; the drupa is heart-shaped, cellulous, and monospermous. There is but one species.

SEMELE, in mythology, the daughter of Cadmus by Ilennione, the daughter of Mars and Venus. She was beloved by Jupiter, and had received his visits. Juno, becoming jealous, visited her in the form of her nurse Beroe, and advised her to ask Jupiter next time he should visit her to honor her by coming in all his glorv, as he visited Juno. Semele, having obtained his promise of whatever she should ask, confirmed by Styx, made her request. The god of thunder was thunder-struck; but being bound by his oath was obliged to comply, and Semele perished in celestial fire. But being six months gone with child of Bacchus, the child was preserved, and sewed up for other three months in Jupiter's thigh ; during which period the god is said to have limped, as the votaries of Bacchus have often done since. But when Bacchus grew up, and visited the infernal regions, he was permitted to bring back his mother to life again. She was worshipped under the name of Thyone, at Bra-siae in Laconia, which she had visited with her son. See BACCHUS, MYSTERIES, and MYTHOLOGY

SEMEN, in botany, seed. See BOTANY, Index. With respect to number, plants are either furnished with one seed, as sea-pink and bistort ; two, as wood-roof and the umbelliferous plants ; three, as spurge; four, as the lip-flowers of Tournefort and rough-leaved plants of Ray ; or many, as ranunculus, anemone, and poppy. The form of seeds is likewise extremely various, being large or small, round, oval, heart-shaped, kidney-shaped, angular, prickly, rough, hairy, wrinkled, sleek or shining, black, white, or brown. Most seeds have only one cell or internal cavity ; those of lesser burdock, valerian, lamb's lettuce, cornelian cherry, and sebesten, have two. With respect to substance, seeds are either soft, membranaceous, or of a hard bony substance ; as in gromwell, tamarind, and all the nuciferous plants. In point of magnitude, seeds are either very large, as in the cocoa-nut ; or very small, as in campanula, ammannia, and throat-wort. With respect to situation they are either disSEM i

persed promiscuously through the pulp (semina nidulantia), as in

water-lily; affixed to a suture or joining of the valves of the seed-vessel, as in the cross-shaped and pea-bloom flowers ; or placed upon a placenta or receptacle within the seed vessel, as in tobacco and thorn-apple. Seeds are said to be naked (semina nuda) which are not contained in a cover or vessel ; such are those of the lip and compound flowers, the umbelliferous and rough-leaved plants ; covered seeds (semina tecta) are contained in some vessel, whether of the capsule, pod, berry, apple, or cherry kind. A simple seed is such as bears neither crown, wing, nor downy pappus ; the varieties in seeds, arising from these circumstances, are particularly enumerated under their respective heads. In assimilating the animal and vegetable kingdoms, Linnaeus denominates seeds the eggs of plants. The fecundity of plants is frequently marvellous; from a single plant or stalk of Indian Turkey wheat, are produced, in one summer, 2000 seeds ; of ele-campane 3000 ; of sun-flower 4000 ; of poppy 32,000; of a spike of cat's tail 10,000 and upwards ; a single fruit, or seed vessel of tobacco, contains 1000 seeds ; that of white poppy 8000 Mr. Ray relates, from experiments made by himself, that 1012 tobacco-seeds are equal in weight to one grain ; and that the weight of the whole quantum of seeds in a single tobacco plant is such as must, according to the above proportion, determine their number to be 360,000. The same author estimates the annual produce of a single stalk of spleen-wort to be upwards of 1,000,000 of seeds. The dissemination of plants respects the different methods or vehicles by which nature has contrived to disperse their seeds for the purpose of increase. These by naturalists are generally reckoned four : — 1. Rivers and running waters. 2. The wind. 3. Animals. 4. An elastic spring, peculiar to the seeds themselves. 1. The seeds which are carried along by rivers and torrents are frequently conveyed many hundreds of leagues from their native soil, and cast upon a very different climate, to which, however, by degrees, they render themselves familiar. 2. Those which are carried by the wind are either winged, as in fir-tree, trumpet-flower, tulip-tree, birch, arbor-vitee, meadow rue, and Jessamine, and some umbelliferous plants; furnished with a pappus, or downy crown, as in valerian, poplar, reed, succulent swallow-wort, cotton-tree, and many of the compound flowers ; placed within a winged calyx or seed-vessel, as in scabious, sea-pink, dock, dioscorea, ash, maple, and elm-trees, logwood and woad; or, lastly, contained within a swelled calyx or seed-vessel, as in winter-cherry, cucubalus, melilot, bladder-nut, fumitory, bladder-sena, heart seed, and chick-peas. 3. Many birds swallow the seeds of vanelloe, juniper, misletoe, oats, millet, and other grasses, and void them entire. Squirrels, rats, parrots, and other animals, suffer many of the seeds which they devour to escape, and thus in effect disseminate them. Moles, ants, earthworms, and other

insects, by ploughing up the earth, admit a free passage to those seeds which have been scattered upon its surface. Again, some seeds attach themselves to animals, by means of hooks, crotchets, or hairs, which are

either affixed to the seeds themselves, as in hound's tongue, mouse-ear, vervain, carrot, bastard parsley, sanicle, water hemp-agrimony, arctopus and verbesina; to their calyx, as in burdock, agrimony, rhexia, small wild bugloss, dock, nettle, pellitory, and lead-wort ; or to their fruit or seed-vessel, as in liquorice, enchanter's nightshade, cross-wort, clivers, French honey-suckle, and arrow-headed grass. 4. The seeds which disperse themselves by an elastic force have that force resident either in their calyx, as in oats and the greater number of ferns ; in their pappus, as in centaurea crupina ; or in their capsule, as in geranium, herb-bennet, African spiraea, fraxinella, horse-tail, balsam, Malabar nut, cucumber, elaterium, and male balsam -apple.

SEMEN, in the animal economy. See ANATOMY, MIDWIFERY, and PHYSIOLOGY.

SEMENDRIA, a town of Servia in the northwest of European Turkey, situated1 on the south side of the Danube. It is defended by an old castle, and was, in remote times, the residence of the kings of Servia. It has been repeatedly taken and retaken by the Turks and their opponents, vi/. in 1688 by the Hungarians ; in 1690 by the Turks ; and again by the Hungarians in 1718, after which it was ceded to the Turks. Inhabitants 9000. Twenty miles southeast of Belgrade, and fifty south of Temesvar.

SEMENTINˆE, FEROL, in antiquity, feasts held annually among the Romans, to obtain of the gods a plentiful harvest. They were celebrated in the temple of Tellus, where solemn sacrifices were offered to Tellus and Ceres. These feasts were held about seedtime, usually in the month of January ; for, as Macrobius observes, they were moveable feasts.

SEMI ARIANS, in ecclesiastical history, a branch of the ancient Arians, consisting, according to Epiphanes, of such as, in appearance, condemned the errors of that heresiarch, but yet acquiesced in some of the principles thereof, only palliating and hiding them under softer and more moderate terms. Though they separated from the Arian

faction (see ARIANS), they could never be brought to acknowledge that the Son was ‘o/joserioc, that is, consubstantial, or of the same substance with the Father; they would only •allow him to be ‘opoiuffioc, that is, of a like substance with the Father, or similar to the Father in his essence, not by nature, but by a peculiar privilege. The semi-arianism of the moderns consists in their maintaining that the Son was from all eternity begotten by the will of the Father, contrary to the doctrine of the orthodox, who seem to teach that the eternal generation is necessary. Such at least are the respective opinions of Dr. Clarke and bishop Bull. See THEOLOGY.

SEMIAN’NULAR, adj. Lat. semi and an-nulus, a ring. Half round.

Another boar tusk, somewhat slenderer, and of a semiannular figure. Grew’s Museum.

SEM’IBREF, n. s. Fr. semibreve.

He takes my hand, and as a still which stays A semibref ‘twixt each drop, he niggardly, As loth to enrich me, so tells many a lye. Donne.

Semibref is a note in musick relating to time, and

is the last in augmentation. It is commonly called the master-note, or measure-note, or time-note, as being of a certain determinate measure or length of time by itself ; and all the other notes of augmentation and diminution are adjusted to its value .

Harris.

SEMICIRCLE, n. ». Lat. semicirculus, semi rwid circle. A half round ; part of a circle divided by the diameter. Black brows

Become some women best, so they be in a semicircle Or a half moon, made with a pen. Shahspeare.

The firm fixture of thy foot would give an excellent motion to thy gait in a semicircled farthingale. Id.

The rainbow is caused by the rays of the sun falling upon a rorid and opposite cloud, whereof some reflected, others refracted, beget the semicircular variety we call the rainbow. Browne's Vulgar Errours.

The seas are inclosed between the two semicircular moles that surround it. Addison on Italy.

The chains that held my left leg gave me the liberty of walking backwards and forwards in a semicircle. Swift.

SEMICOLON, in grammar, is one of the points or stops used to distinguish the several members of a sentence from each other. The semicolon has its name as being of somewhat less effect than a colon ; or as demanding a shorter pause. The proper use of the semicolon is to distinguish the conjunct members of a sentence, i. e. such as contain at least two simple members. Whenever, then, a sentence can be divided into two several members of the same degree, which are again divisible into other simple members, the former are to be separated by a semicolon. For instance : 'If fortune bear great sway over him, who has nicely stated and concerted every circumstance of an affair; we must not commit every thing, without reserve, to fortune, lest she have too great a hold of us.' But though the proper use of the semicolon be to distinguish conjunct members, it is not necessary that all the members divided hereby be conjunct. For, upon dividing a sentence into great and equal parts, if one of them be conjunct, all those other parts of the same degree are to be distinguished by a semicolon. Sometimes also members that are opposite to each other, but relate to the same verb, are separated by a semicolon. Thus Cicero : — Ex hac parte pudor, illinc petulantia ; hinc fides, illinc fraudatio; liinc pietas, illinc scelus, &c. To this likewise may be referred such sentences, where, the whole going before, the parts follow : as, ' The parts of oratory are four ; invention, disposition, elocution, and pronunciation.'

SEMICUBIUM, in medicine, a half bath, wherein the patient is only placed up to the navel.

SEMIDIAM'ETER, n. s. Semi and diameter. Half the line which, drawn through the centre of a circle, divides it into two equal parts ; a

straight line drawn from the circumference to the centre of a circle.

The force of this instrument consists in the disproportion of distance betwixt the temidiameter of the cylinder and the semidiameter of the rundle with the spokes. Wilkins.

Their difference is as little considerable as a serr.idiameter of the earth in two measures of the highest heaven, the one taken from the surface of the earth,

the other from its centre : thu disproportion is just nothing. Mare.

SEMIDIAPHANE'ITY, n. s. Lat. semi and diaphaneity. Half transparency ; imperfect transparency.

The transparency or semitliaphaneity of the superficial corpuscles of bigger bodies may have an interest in the production of their colors. Boyle on Colours.

Another plate, finely variegated with a semidiaplm-nous grey or sky, yellow and brown.

Woodward on Fossils.

SEMIFLUID, n. s. & adj. Semi and fluid. Imperfectly fluid.

Phlegm, or pituite, is a sort of semifluid; it bei-g so far solid that one part draws along several other parts adhering to it, which doth not happen in a perfect fluid ; and yet no part will draw the whole mass, as happens in a perfect solid. Arbutlinot.

SEMILU'NAR, adj.) Fr. semilunaire ; Lat. SEMILU'NARY. $ semi and luna. Resembling in form a half moon.

The eyes are guarded with a semilunar ridge.

Grew.

SEMIMETAL, n.s. > Semi and metal. Half metal ; imperfect metal.

Semimetals are metallic fossils, heavy, opaque, of a bright glittering surface, not malleable under the hammer ; as quicksilver, antimony, cobalt, the arse-nicks, bismuth, zink, with its ore calamine . to these may be added the semimetallick recrements, tutty and pampholyx. Hill.

SEM’INAL, adj. ˆ FT. seminal; Lai. semims.

SEMINAL’ITY, n.s. I Belonging to seed; con—

SEMINA’RY, n. s. I tained in the seed; radi—

SEMINA’TION, jcal: the adverb corres—

SEMINIF’IC, adj. \ ponding : seminary is

SEMINIF’ICAL. J strictly a seed plot ; place where any thing is sown to be transplanted ; seminal state; principle; causality; breeding place ; place of education : semination is the act of sowing : seminific and seminifical is productive of seed.

It was the seat of the greatest monarchy, and tlit seminary of the greatest men of the world, whilst ii was heathen. Bacon.

Nothing subministrates apter matter to be con verted into pestilent seminaries sooner than steams ol nasty folks and beggars. Harvey on the Plague.

Seminification is the propagation from the seed or seminal parts. Hate’s Origin of Mankind.

Had our senses never presented us with those obvious seminal principles of apparent generations we should never have suspected that a plant or ani-mal would have proceeded from such unlikely materials. Glanmlle’s Scepsis.

As though there were a seminality in urine, or that, like the seed, it carried with it the idea of every part, they conceive we behold therein the anatomy of every particle. Browne.

The hand of God, who first created the earth, hath wisely contrived them in their proper seminaries, and where they best maintain the intention of their species. Id.

We are made to believe that in the fourteenth year males are seminifical and pubescent ; but he that shall inquire into the generality will rather adhere unto Aristotle. Id.

Some, at the first transplanting trees out of then seminaries, cut them off about an inch from the ground, and plant them like quickset.

Mortimer’s Huslx > ndru.

This stratum is expanded, serving for a common

integument, and being the seminary or promptuary that furnisheth forth ma.tter for the formation and increment of animal and vegetable bodies. Woodward.

Though we cannot prolong the period of a commonwealth beyond the decree of heaven, or the date of its nature, any more than human life beyond the strength of the seminal virtue, yet we may manage a sickly constitution, and preserve a strong one. Swift.

The inns ,f court must be the worst instituted seminaries in any Christian country. <.

SEMINARY, in Catholic countries, is particularly used for a kind of college or school, where youth are instructed in the ceremonies, &c., of the sacred ministry. Of these there are great numbers ; it being ordained by the council of Trent that there be a seminary belonging to each cathedral under the direction of the bishop.

SEMIOPA'COUS, adj. Lat. semi and opacus. Half dark.

Semiopacous bodies are such as, looked upon in an ordinary light, and not held betwixt it and the eye, are not wont to be discriminated from the rest of opacous bodies. "Boyle.

SEMIPALATNOI, a fortress of Asiatic Rus-sia, in the government of Tomsk, built in 1718, with a view of protecting the trade there carried on with the Calmucs and Buchanans. But as the current of the Irtysch, on whose banks it was situated, continually carried away the adjacent ground, it was successively removed to different spots, and is now in its fourth position ; the river is here so shallow, and so obstructed, that it has been found impossible to make a passage to the fort. The rendezvous, therefore, made for the purpose of trade with the Kirghisian and Bucharian caravans, has been fixed about ten miles below. The principal fortress forms a square, composed of wooden ramparts, and surrounded by a ditch : two villages stand, one above, and the other below, both palisaded like the fort, and containing about 200 houses. The most profitable trade carried on is with the Kirghises, who give their horses and cattle at a very cheap rate, for mere toys and trifles. It is also frequented by traders from Taschkent and Little Bucharia, who bring chiefly inferior cotton goods. The name

of Semipalatnoi, which signifies the Seven Palaces, is derived from some ruins situated in the neighbourhood. Long. 80° 10’ E., lat. .r>0° 29′ 45″ N.

SEMIPALMATI, in ornithology, a subdivision of the order of palmipedes, in Mr. Latham’s system, comprehending birds that have only half-webbed feet. See PALMIPEDES.

SEMIPELAGIANS, in ecclesiastical history, a name anciently, and even at this day, given to such as retain some tincture of Pelagianism. See PELAGIANS. Cassian, who had been a deacon of Constantinople, and was afterwards a priest of Marseilles, was the chief of these Semipelagians ; whose leading principles were, 1 . That God did not dispense his grace to one more than another in consequence of predestination, i. e. an eternal and absolute decree, but was willing to save all men, if they complied with the terms of his gospel. 2. That Christ died for all men. 3. That the grace purchased by Christ, and necessary to salvation, was offered to all men. 4. That man, before he received grace, was capable of faith and holy desires. 5. That man was

born free, and was consequently capable of resisting the influence? of grace, or of complying with its suggestion. The Semipelagians were very numerous ; and the doctrine of Cassian, though variously explained, was received in the greatest part of the monastic schools in Gaul, whence it spread itself far and wide through the European provinces. As to the Greeks and other eastern Christians, they had embraced the Semipelagian doctrines before Cassian, and still adhere to them. In the sixth century, the controversy between the Semipelagians and the disciples of Auguslin prevailed much, and continued to divide the western churches.

SEMIPELLU’CID, adj. Lat. semi and yel-lucidus. Half clear ; imperfectly transparent.

A light grey semipellucid flint, of much the same complexion with the common Indian agat.

Woodward.

SEMIPERSPIC’UOUS, adj. Lat. temi and perspicuous. Half transparent ; imperfectly clear.

One entire massy stone, semi perspicuous, and of a pale blue, almost of the colour of some cows’ horns.

Grew.

SEMIRAMIS, in ancient and partly fabulous history, a celebrated queen of Assyria, daughter of the goddess Derceto by a young Assyrian. She was exposed in a desert ; but her life was preserved by doves for one whole year, till Sim-mas, one of the shepherds of Nuius, found her and brought her up as her own child. Semiramis, when grown up, married Menones, the governor of Nineveh, and accompanied him to the siege of Bactria : where, by her advice and prudent directions, she hastened the king's operations, and took the city. These eminent services, together with her uncommon beauty, endeared her to Ninus. ' The monarch asked her of her husband, and offered him his daughter Sosana in her stead ; but Menones, who tenderly loved Semiramis, refused; and, when Ninus had added threats to entreaties, he hanged himself. No sooner was Menones dead than Semiramis, who was of an aspiring soul, married Ninus, by whom she had a son called Ninyas. Ninus was so fond of Semiramis that at her request he resigned the crown, and commanded her to be proclaimed queen and sole empress of Assyria. Of this, however, he had cause to repent : Semiramis put him to death, to establish herself on the throne ; and, when she had no enemies to fear at home, she began to repair the capital of her empire, and by her means Babylon became the most superb and magnificent city in the world. She visited every part of her dominions, and left every where immortal monuments of her greatness. To render the roads passable, and communication easy, she hollowed mountains and filled up valleys, and water was conveyed at a great expense by large and convenient aqueducts to barren deserts and unfruitful plains, She was not less distinguished as a warrior : many of the neighbouring nations were conquered. Semiramis has been accused of licentiousness ; and some authors have observed that she regularly called the strongest and stoutest men in her army to her arms, and afterwards put them to death, that they might not be living witnesses of her incontinence. Her passion for her

son was also unnatural ; and it was this criminal propensity which induced Ninyas to destroy his mother with nis own hands. Mythologists say that Semirarais was changed into a dove after death, and received immortal honors in Assyria. It is supposed that she lived about eleven centuries before the Christian era, and that she died in the sixty-second year of her age and the twenty-fifth of her reign. Many fabulous reports have been propagated about Semiramis. See

MYTHOLOGY.

SEMI-SPINALIS, in anatomy, the name of two muscles of the back. See ANATOMY, Index.

SEMITERTIAN, n. s. Semi and tertian. An ague compounded of a tertian and a quo-tidian.— Bailey.

The natural product of such a cold moist year are tertians, semitertians, and some quartans.

ArbtUhnot on Air.

SEMIVOWEL, n. s. Semi and vowel. A consonant which makes an imperfect sound, or does not demand a total occlusion of the mouth.

When Homer would represent any agreeable object, he makes use of the smoothest vowels and most flowing semivowels. Broome.

SEMLER (John Solomon), a Lutheran divine, was born in 1725, at Saalfeld in Saxony, and educated under professor Baumgarten at Halle. After quitting the university he resided some time at Saalfeld, whence in 1750 he removed to Coburg, to become editor of the Gazette. In 1751 he obtained the professorship of rhetoric and poetry at Altorf ; and two years after that of theology at Halle, where he remained till his death, March 14th, 1791. Semler was one of those divines who, semi-infidel, explain away every thing miraculous in the Gospel history, and of whom Michaelis said, ‘ Heretofore I was reckoned heterodox by my brethren, but now I am only too orthodox.’ The principal works of Semler are Historicae Ecclesiasticae selecta Capita, 1767—69, 3 vols., 8vo.; An Introduction to Exegetic Theology, 8vo. ; Apparatus ad libe-ralem N. Test. Inte>-pretationem, 8vo. ; Apparatus ad lib. V. T. Interpretationem, 8vo. ; he also wrote the history of his own life, published at Halle, 1781, 2 vols. 8vo.

SEMLIN, a town in the frontier district near the confluence of the Save and the Danube, separated from Belgrade by the Save. It is the seat of an arch priest of the Greek church, and the residence of the Austrian commander. It is also the principal place for carrying on the transit trade between Turkey and Sclavonia. From the frequent prevalence of the plague, in the neighbourhood of Belgrade, great precautions are necessary to prevent the introduction of infection : all persons coming from Belgrade must undergo a quarantine here. A market is held daily in a meadow between the two towns, where two rows of palisades separate the dealers ; sentinels are continually on the watch, to see that no hazardous communication takes place ; and all the goods

bought from the Turks must be exposed to the air, and fumigated. Inhabitants

8000.

SKMNONES, two ancient nations in Europe : one in Germany, inhabiting the banks of the

Elbe and the Oder ; the other in Italy, on the borders of Umbria.

SEMONES, in the Roman mythology, inferior deities, who were not among the number of the twelve great gods. Among these were Janus, Faunus, Pan, Vertumnus, Priapus, Silenus, the Satyrs, and all the illustrious heroes who had received divine honors after death. The word is derived from semi homines, i. e. half men, because they were inferior to the gods, though superior to men.

SEMOSANCTUS, a deity of the Romans, one of those called Indigetes, or gods born in their country.

SEM'PERVIVE, n. s. Lat. semper and vivus, always alive. A plant.

The greater sempervive will put out branches two or three years ; but they wrap the root in an oil-cloth once in half a year. Bacon.

SEMPERVIVUM, house-leek, in botany, a genus of the dodecagynia order, and dodecandria class of plants ; natural order thirteenth, succu-lentffi : CAL. divided into twelve parts; the petals are twelve, and the capsules twelve, containing many seeds. Linnaeus enumerates only eight species, but there are twelve, viz., S. arach-noideum, arboreum, Canariense, glandulosum, globiferum, glutinosum, menanthes, montanum, sedeforme, tectorum, tortuosum, and viHosum. Of these the

S. tectorum alone is a native of Britain. The stalk is about a foot high ; the radical leaves are thick, oval, pointed, fringed, and spreading in a rose ; those on the stem are imbricated and membranous : the flowers are pale red and sessile, and grow on curved terminal bunches. It is frequent on the tops of houses, and flowers in July. The species is thus described by Lew: : ' The leaves of house-leek, of no remarkable smell, discover to the taste a mild subatiil austerity : their expressed juice, of a pale yellovish hue, when filtered, yields on inspiration a deep

yellow, tenacious, mucilaginous mass, considerably acidulous and acerb : whence it may be presumed that this herb has some claim to the refrigerant and restringent virtues that have been ascribed to it. The filtered juice, on the addition of an equal quantity of the rectified spirit of wine, forms a light white coagulum, like cream of fine pomatum, of a weaK but penetrating taste : this, freed from the fluid part, and exposed to the air, almost totally exhales. From this experiment it is concluded by some that house-leek contains a volatile alkaline salt : but the juice coagulates in the same manner with volatile alkalies themselves, as also with fixed alkalies : acids produce no coagulation.

SEMPITER'NAL, adj. Fr. sempiternel; La'. sempiternus, from semper and ezternm. Eu-nu 1 in futurity ; having no end.

Those, though they suppose the world not to be eternal, a parte ante, are not contented to suppose it to be sempiternal, or eternal a parte post ; but will carry up the creation of the world to an immense antiquity. Hale.

The future eternity or aempiterniiy of the world being admitted, though the eternity a parte ante be denied, there will be a future infinity for the emanation of the divine goodness. Id.

Should we the long-depending scale ascend Of sons and fathers, will it never end ? If 'twill, then must we through the order run To some one man whose being ne'er begun ; If that one man was sempiternal, why Did he, since independent, ever die 1 Blackmore.

SEMPRONIA; 1 . A Roman matron, mother of the Gracchi, celebrated for her learning as well as for her public and private virtues. See GRACCHUS and ROME. 2. Her daughter, who was married to Scipio

Africanus, junior; but is accused of having admitted the triumvirs Carbo, Gracchus, and Flaccus to murder him. No pretence of patriotism* can vindicate such crimes.

SEMPRONIUS, the family surname of the Gracchi. See GRACCHUS.

SEM'STRESS, n. s. Sax. reamertrie. A woman whose business is to sew ; a woman who lives by her needle.

Two hundred semstresses were employed to make me shirts, and linen for bed and table, which they were forced to quilt together in several folds.

Gulliver's Travels.

The tucked up senutrett walks with -hasty strides.

Swift.

SEN'ATE, n. s. ~\ Lat. senatus ; Fr. senrtf.

SEN'ATE-HOUSE, I An assembly of counsel—

SEN'ATOR, > lors ; a body of men set

SENATORIAL, adj. i apart to consult for the

SENATO'RIAN. J public good : a senator is a member of a senate : senatorial, or senatorian, belonging to, or befitting, a senator.

We debase

The nature of our seats, which will in time break ope The locks o' th' senate, and bring in the crows To peck the eagles. Shakspeare. Coriolanus.

Most unwise patricians, You grave but reckless senators. Id.

The nobles in great earnestness are going All-to the senate-house ; some news is come.

Shakspeare.

When Caesar would have discharged the senate, in regard of a dream of Calphurnia, this man told him he hoped he would not dismiss the senate till his wife had dreamed a better dream. Bacon.

He had not used excursions, spears, or darts, But counsel, order, and such aged arts ; Which if our ancestors had not retained, The senate's name our council had not gained.

Denham.

i There they shall found Their government, and their great senate chuse.

Milton.

As if to every fop it might belong, Like senators, to censure right or wrong. Granville.

Gallus was welcomed to the sacred strand, The senate rising to salute their guest. Dryden.

A SENATE is an assembly of the principal inhabitants of a state, who have a share in the government.

SENATE, in the university of Cambridge, is equivalent to the convocation of Oxford, and consists of all masters of arts and higher graduates, being masters of arts who have each a voice in every public measure, in granting degrees, in electing members of parliament, a chancellor, &c. &c.

SENATE, CONSERVATIVE, in the last constitution of the ci-devant French republic, was a body of eighty men, who, for a short period, possessed the enormous power of nominating

the whole legislative and executive rulers of the state, yet could not themselves hold any office in either branch of government. It was one of those political engines invented by Buonaparte and his junto, by which he so rapidly accumulated and concentrated the whole power of the republic in himself.

The SENATE OF ANCIENT ROME was of all others the most celebrated. It exercised no contentious jurisdiction ; but appointed judges, either from among the senators or knights, to determine processes : it also appointed governors of provinces, and disposed of the revenues of the commonwealth, &c. Yet the whole sovereign power did not reside in the senate, since i; could not elect magistrates,

make laws, or de-cide of war and peace ; in all which cases the senate was obliged to consult the people. The senate, when first instituted by Romulus, consisted of 100 members, to whom he afterwards added the same number, when the Sabines had migrated to Rome. Tarquin I. made the senate consist of 300, and this number remained fixed for a long time; but afterwards it fluctuated greatly, and was increased first to 700, and afterwards to 900, by Julius Cffisar, who filled the senate with men of every rank and order. Under Augustus the senators amounted to 1000, but this number was reduced, and fixed to 60t>. The place of a senator was bestowed upon merit ; the kings had at first the privilege of choosing the members ; and, after this expulsion, it was the right of the consuls, till the election of the censors, who from their office seemed most capable of making choice of men whose character was irreproachable, whose morals were pure, and relations honorable. Only particular families were admitted into the senate; and, when the plebeians were permitted to share the honors of the state, it was then required that they should be born of free citizens. Tt was also required that the candidates should be knights before their admission into the senate. They were to be above the age of twenty-five, and to have previously passed through the inferior offices of quaestor, tribune of the people, aedile, praetor, and consul. The senate always met on the 1st of January for the inauguration of the new consuls ; and in all months, universally, there were three days, *viz.* the kalends, nones, and ides, on which it regularly met ; but it met also on extraordinary occasions, when called together by a consul, tribune, or dictator. To render their decrees valid and authentic, a certain number of members was requisite, and such as were absent without some proper cause were fined. In the reign of Augustus 400 senators were requisite to make a senate. Nothing was transacted, before sunrise or after sun-se't. In their office the senators were the guardians of religion, they disposed of the provinces, they prorogued the assemblies of the people, they appointed thanksgivings, nominated ambassadors, distributed the public money, and in short had the management of every thing political or civil in the republic, except the creating of magistrates, the enacting of laws, and • the declarations of war and peace, which were confined to the assemblies of the people. The senate, as a body,

were styled Patres conscript!, ‘ conscript fathers .’ See CONSCRJHT. Their decrees were published in the name of Senatus Populusque Romanus, by contraction, S. P. Q. II., i. e. the Senate and People of Rome. The tribunes of the people could stop their debates and decrees by the word veto. Their rank and authority were so great in the time of Pyrrhus that his minister Cineas declared them to be ‘a venerable assembly of kings.’ But under the emperors who succeeded Augustus they lost their importance, by flattering their vices. At last the senate was abo-ished by Justinian, thirteen centuries after its institution by Romulus.

A SENATOR is properly a member of some senate. The dignity of a Roman senator could not be supported without the possession of 80,000 sesterces, or about £7000 English money; and therefore such as squandered away their money, and reduced their fortune below this sum, were generally struck out of the list of senators. This regulation was not made in the first ages of the republic, when the Romans boasted of their poverty. The senators were not permitted to be of any trade or profession. They were distinguished from the rest of the people by their dress ; they wore the laticlave, naif boots of a black color, with a crescent or silver buckle in the form of a C ; but this last honor was confined to the descendants of those hundred senators who had been elected by Romulus, as the letter C is a contraction for centum. See SENATE.

SENATOR, in British polity, is a member o, either house of parliament. In the laws of king Edward the Confessor, we are told that the Britons called those senators whcsn the Saxons called afterwards aldermen and borough-masters, though not for their age but their wisdom ; for some of them were young men, but very well skilled in the laws. Kenulph, king of the Mercians, granted a charter, which ran thus, *viz.* : — Consilio et consensu episcoporum et senatorum gentis sure largitus fuit dicto monasterio, &c.

SENATUS ACADEMICUS, the title assumed by the professors of the University of Edinburgh, as a learned body, in their diplomas, granted to students.

SKNATUS CONSULTUM anciently made part of the Roman law. When any public matter was introduced into the senate, which was always called referre ad senatum, any senator whose opinion was asked was permitted to speak about it as long as he pleased, and on that account it was often usual for the senators to protract their speeches till it was too late to determine. When the question was put, they passed to the side of that speaker whose opinion they approved, and a majority of votes was easily collected, without the trouble of counting the numbers. When the majority was known, the matter was determined, and a senatus consultum was immediately written by the clerks of the house, at the feet of the chief magistrates, and it was signed by all the principal members of the house. When there was not a sufficient number of members to make a senate, the decision was called senatus aucto-ntas, but it was of no force if it did not after-waras pass into a senatus consultum. The sena-

>us consulta were at first in the custody of tlie kings, and afterward of the consuls, who could suppress or preserve them ; but, abont A. U. C. 304, they were always deposited in the temple of Ceres, and afterwards in the treasury, by the ediles of the people. . SEND, v. a. & v. n. } Preterite and part.

SEND'ER, n. s. \pass. sent. Sax. j-en-

"z>an; Goth, senda ; Belg. zenden. To despatch persons or things from one place to another ; transmit ; dismiss ; emit ; let fly : as a verb ac-tive, to despatch a message; require by message : a sender is one who sends.

I pray thee send me good speed this day, and shew kindness unto my master. Gen. xxiv. 12.

This son of a murderer hath sent to take away my head. Kings.

I make a decree that all Israel go with thee ; for-asmuch as thou art sent of the king. Ezra. vii. 14.

He tent letters by post on horseback. Esther.

0 send out thy light and thy truth ; let them lead me. Psalms.

His citizens sent a message after him, saying, We will not have this man to reign over us.

Luke xix. 14.

There have been commissions Sent down among them, which have flawed the heart Of all their loyalties. Shakspeare. Henry VIII.

1 have made bold to tend in to your wife : My suit is that she will to Desdemona

Procure me some access. Id. Otheltu.

This was a merry message. — We hope to make the sender blush at it.

Id. Henry V.

The water sends forth plants that have no roots, fixed in the bottom, being almost but leaves.

.Bacon's Natural History.

Go with me, some few of you, and see the place ; and then you may send for your sick, which bring on land. Bacon.

They could not attempt their perfect reformation in church and state, till those votes were utterly abolished ; therefore they sent the same day again to the king. Clarendon.

My overshadowing spirit and might with thee I send along. Milton.

But first, whom shall we send In search of this new world 1 Here he had need All circumspection, and we now no less Choice in our suffrage ; for on whom we send The weight of all and our last hope relies. Id.

Cherubic songs by night from neighbouring hills Aerial music send. Id.

Best with the best, the sender, not the sent. Id.

His wounded men he first *ends off to shore.

Dry den.

He sent for me ; and, while I raised his head, He threw his aged arms about my neck, And, seeing that I wept, he pressed me close. Id.

The senses send in only the influxes of material things, and the imagination and memory present only their pictures or images, when the objects themselves are absent. Cheyne.

When the fury took her stand on high, A hiss from all the snaky tire went round : The dreadful signal all the rocks rebound, And through the' Achaian cities send the sound.

Pope.

Servants, sent on messages, stay out somewhat longer than the message requires. " Swift.

SENECA (Marcus Annaeus), a celebrated orator, born atCorduba. in Spain, but descended

of an equestrian Roman family, which had emigrated with the colony from Rome. He married Helvia, a Spanish lady, by whom he had three sons, Annaeus Novatus, Lucius, the philosopher, and Annaeus Mela, the father of the poet Lucan. He came to Rome with his family, where he be-came so eminent as an orator that he was styled declamator, or the rhetorician. He published a collection from the most celebrated orators of that age ; part of which is extant, and printed under the title of Suasoriae et Controversiae ; cum Declamationum exeerptis.

SENECA (Lucius Annaeus), a celebrated Stoic philosopher, the second son of Marcus, born at Corduba, about the beginning of the Christian era. He was removed to Rome in his infancy, where he was educated in the most liberal man-ner, under the best masters. He learned eloquence from his father ; but, his genius rather leading him to philosophy, he put himself under the Stoics Attalus, Sotion, and Papirius Fabianus ; three celebrated philosophers, of whom he has made honorable mention in his writings. He also travelled when he was young, as in his Quaestiones Naturales he makes very exact and curious observations upon Egypt and the Nile. But this, though agreeable to his own humor, did not at all correspond with that plan of life which his father had intended for him ; who therefore forced him to the bar, and the solicitation of public employments ; so that he afterwards became quaestor, praetor, and, as Lipsius says, even consul. In the first year of the reign of Claudius, when Julia, the daughter of Germanicus, was accused of adultery by Messalina, and banished, Seneca was banished too, being charged as one of the adulterers. Corsica was the seat of his exile, where he lived eight years, * happy in the midst of those things which usually make other

people miserable ; ‘ and where he wrote his books of consolation, addressed to his mother Helvia, and to his friend Polybius, and perhaps some of those tragedies which go under his name ; for he says, ‘ modo se levioribus studiis ibi oblectasse.’ Agrippina be-ing married to Claudius, upon the death of Messalina, she prevailed with the emperor to recal Seneca from banishment ; and afterwards procured him to be tutor to her son Nero, whom she designed for the empire. Afranius Burrhus, a praetorian prefect, was joined with him in this important charge ; and these two preceptors, who were entrusted with equal authority, had each his respective department. By the bounty and generosity of his imperial pupil, Seneca acquired that prodigious wealth which rendered him in a manner equal to kings. His houses and walks were the most magnificent in Rome. His villas were innumerable ; and he had immense sums of money placed out at interest in almost every part of the world. The historian Dio reports him to have had £250,000 sterling at interest in Britain alone ; and reckons his calling it in all at a sum as one of the causes of a war with that nation. All this wealth, however, together with the luxury and effeminacy of a court, does not appear to have had any ill effect upon the temper and disposition of Seneca. He continued abste-mious, exact in his manners, and, above all, free

from the vices so commonly prevalent in such places, flattery arid ambition. ‘ I had rather, said he to Nero, ‘ offend you by speaking the truth, than please you by lying and flattery °ma-luerim veris offendere, quam placere adulando. How well he acquitted himself, in quality of preceptor to his prince, may be known from the first five years of Nero’s reign, which have always been considered as a perfect pattern of good government ; and, if that emperor had but been as observant of his master through the whole course of it as he was at the beginning, he would have been the delight, and not, as he afterwards proved, the curse and detestation of mankind. But when Poppaea and Tigellinus had got the command of his humor, and hurried him into the most extravagant and abominable vices, he soon grew weary of his master, whose life must indeed have been a constant rebuke to him. Seneca, perceiving that his favor declined at court, and that he had many accusers about the prince, who were perpetually whispering in his ear the great riches of Seneca, his magnificent houses and fine gardens, and what a favorite he was grown with the people, made an offer of them all to Nero. Nero refused to accept them; which, however, did not hinder Seneca from changing his way of life ; for, as Tacitus relates, ‘ he kept no more levees, declined the usual civilities which had been paid to him, and under a pretence of indisposition, or

some engagement or other, avoided as much as possible appearing in public.' Nero, in the mean time, who had despatched Burrhus by poison, could not be easy till he had rid himself of Seneca also; for Burrhus was the manager of his military concerns, and Seneca conducted his civil affairs. Accordingly he attempted, by means of Cleonicus, a freed man of Seneca, tc take him off by poison ; but, this not succeeding he ordered him to be put to death, upon an information that he was privy to Piso's conspiracy against his person. Not that he had any real proof of Seneca's being concerned in this plot. but only that he was glad of any pretence foi destroying him. He left Seneca, however, at liberty to choose his manner of dying ; who caused his veins to be opened immediately. His wife Paulina, who was very young in comparison of himself, had yet the resolution and affection to bear him company, and thereupon ordered her veins to be opened at the same time; but Nero gave orders to have her death prevented ; upon which her wounds were bound up, and the blood stopped, just in time to save Jier; though, as Tacitus says, she looked miserably pale and wan all her life after. In the mean time Seneca, finding his death slow and lingering, desired Statius Annaeus, his physician, to give him a dose of poison ; but, this not having its usual effect, he was carried to a hot bath, where he was at length stifled with the steams. He died, as Lipsius thinks, in the sixty-third or sixty-fourth year of his age, and in about the tenth or eleventh of Nero's reign. Tacitus, on mentioning his death, observes, that, as he entered the bath, he took of the water, and with it sprinkled some of his nearest domestics, saying, ' That he offered those libations to JupiteV the deliverer.' These words are an evident proof that Seneca was not a Christian,

as some have imagined him to have, been ; and that the thirteen epistles from Seneca to St. Paul, and from St. Paul to Seneca, are supposititious pieces. His philosophical works are well known. They consist of 124 epistles and distinct treatises ; and, except his books of physical questions, are chiefly of the moral kind, treating of anger, consolation, providence, tranquillity of mind, constancy, clemency, the shortness of life, a happy life, retirement, benefits. He has been justly censured, by Quintilian and other critics, as one of the first corrupters of the Roman style ; but his works are highly valuable, on account of the vast erudition which they discover, and the beautiful

moral sentiments which they contain.

SENECA, a county of the United States, westward of Albany, erected from Cayuga county, in 1804. It is bounded by Cayuga county north, east by Cayuga county and lake, south by Tompkins county, and west by Seneca lake. The surface of this county is either quite level, or gently undulated with hill and dale; though Hector and Ulysses, the two southern townships, are considerably hilly. The soil is principally a calcareous loam, or a well mixed vegetable mould, and in general will suit both grain and grass. Chief towns Waterloo and Ovid.

SENECA, a river of New York, which rises in the former country of the Seneca Indians, runs east and receives the waters of the Seneca and Cayuga lakes ; and afterwards falls into the Onon-dago, at Three Rivers, fourteen miles above the falls.

SENECA, GUM, properly Senegal gum. See SENEGAL. The consumption of this article in our manufactories is so considerable as to make it an object to find any kind of substitute that is cheaper and that will answer the purpose. In the Repertory, vol. Hi., we rind the following pa-tent receipt for making a gum, which the inventor recommends under the name of the ‘ Britan-nic Elastic Gum,’ and which, among a variety of less important uses, is said to be suitable ‘ for painting, pencilling, and staining silks, calicoes, occ., and in dressing of silk, linen, and cotton, in the loom.’ The receipt is, linseed, or nut-oil, one gallon ; bees’ wax, one pound ; glue or size, six pounds ; verdigris, four ounces ; and the same of litharge. These he directs to be put into an iron kettle with two quarts of water, and the whole melted down together. Another invention is described in the same work, professedly as a ‘ substitute for gum, in thickening colors for printing.’ The patent was granted to Blakie of Glasgow, in 1788, and he describes his invention in the following words: — ‘ The gum substitute, to thicken colors for calico-printing, and making up or furnishing printers’ color-tubs, and which may also be applied to several other uses, is prepared by boiling any quantity of flax-seed in a sufficient quantity of water, until the whole substance be extracted thereby ; and, hav-ing strained it through a linen or woollen cloth, again boil down the liquor to the consistence of a jelly. Put it into a close vessel, and, for preservation, put in almle strong spirits, or pour a little sweet-oil on the top of it; bitters may also b« used to preserve it. 1 n using the substitute,

the printer may either put a certain quantity into a gallon of color, according to the nature of it, and the particular kind of work to be done, and regulate himself by trial, as is common in using gum ; or reduce the substitute, by boiling in water to the consistence wanted.'

SENECAI, or SENECE (Anthony Bauderon de), a French poet, born at Macon, in 1 <545, was great-grandson of Brice Bauderon, a physician, famed for his Pharmacopoeia. He purchased the place of first valet-de-chambre to queen Mary Theresa, wife to Louis XIV. He wrote many novels, satires, and epigrams; but was most famed for his poem, entitled Les Travaux d'Apollon, which is highly praised by Rousseau. He died in 1737.

SENECIO (Sossius), a learned Roman, the intimate friend of Plutarch. He was four times consul. See PLUTARCH.

SENECIO, groundsel, in botany, a genus belonging to the class of syngenesia, and to the order of polygamia superflua; natural order forty -ninth, compositae. The receptacle is naked ; the pappus simple: CAL. cylindrical and calycu-lated. The scales are equal and contiguous, so as to seem entire ; those at the base are few, and have their apices or points decayed. There are fifty-seven species. Of these seven are British, *viz.* : — 1 . S. crucifolius, hoary perennial ragwort ; the corollae are radiant; the leaves are pinnatifid, dentated, and downy beneath ; the stem is erect, and two feet high ; the flowers are yellow, and grow in clusters. It is frequent in woods and hedges. 2. S. jacobaeus, common ragwort ; the corollae are radiant; the leaves pinnated and lyre-shaped, and of a dark-green color ; the stalk is erect, round, and generally purplish ; the flowers grow in clusters on the tops of the stalks. The leaves have a bitterish subacrid taste, and extremely nauseous. Simon Paulli says that a decoction of them cured many soldiers of an epidemic dysentery 3. S. paludosus, marsh ragwort; the corollac are radiant; the leaves sword-shaped, acutely serrated, and somewhat downy underneath ; the stem is erect, branched towards the top, and four or five feet high ; the flowers are large and yellow. It is frequent in fens and ditches in England. 4. S. saracenicus, or sarrasin, broad-leaved ragwort; the corollae are radiant ; the leaves are lanceolated, serrated, and somewhat smooth ; the stem is erect, simple, and four or five feet high ; there are several flowers on each footstalk, which are yellow, and grow in clusters on the top. It grows in moist pastures in England ; and flowers in July or August. 5.

S. sylvaticus, or mountain groundsel, has its corollae revolute, its leaves pinnatind and dentated, the stem corurybus and erect. It flowers in July, and is frequent in woods and heaths. 6. S. viscosus, or cotton groundsel, has its corollae revolute, its leaves pinnatifid, viscid, and downy. The scales of the calyx are lax and hairy, and are of the same length with the perianthium. 7. S. vulgaris, the common groundsel, has its corollae naked ; its leaves sessile, smooth, and sinuated ; their segments short, broad, and minutely serrated ; the flowers are yellow, and without radii. It grows in cultivated ground every where, and flowers in May.

SENEGAL.

Its leaves have been used in medicine externally as a vulnerary and refrigerant, and internally as a mild emetic ; but they have little efficacy.

SENEGAL, a remarkable river of Africa, one of the principal which falls into the sea on its western coast. In early maps of Africa it was laid down as identical with the Niger, and delineated as coming from the most distant regions of the interior. The French, however, having fixed their head settlement at St. Louis, at the mouth of the Senegal, in the beginning of the last century, penetrated up the river as far as Gallam, where they established a fort. Tombuctoo, early celebrated as the centre of African wealth, being situated on the Niger, anxious enquiries were made as to the means of penetrating to that city by the Senegal. It was found, however, that about sixty miles above Gallam the country assumed a mountainous aspect, and the rocks intersected the river in such a manner as to render it impossible for l>arks to ascend. This was called the cataract of 1 elu ; and about forty leagues higher were the fills of Govinea, which have not been carefully ovamined, but have been reported as very formidable. These obstacles served to account for the taci, which was soon ascertained, that there •was no instance of a vessel sailing between Tombuctoo and Gallam. Still it was conceived that, by transporting goods from the rock of Felu to beyond that of Givonea, the benefit of the navigation of the supposed Niger might be obtained. In endeavouring, however, to trace

the higher part of its course, the parties sent were perplexed by various and contradictory reports. According 1o some the Niger, after passing Tombuctoo, continued to flow westward, till it discharged Uself into the Atlantic : others asserted that the river passing Tombuctoo flowed eastward, and had no communication with the Senegal. These last statements appeared so well attested that the learned French geographers, Delisle and D'Anville, hesitated not, in the course of the century, to make an essential change in the geography of Vli is part of Africa, describing the Senegal as a lompletely distinct river from the Niger. They derived it erroneously, however, from the lake Maberia, which appears to be the same described by Mr. Park, under the name of Dibbe. At this time the persons best acquainted with the French settlement on the Senegal continued to cherish the old ideas, and to hope for a navigable intercourse with Tombuctoo.

The journey of Park, however, clearly ascertained the distinction between the two rivers and the eastward course of the Niger, to which a portion of what even Delisle and D'Anville had assigned to the Senegal belonged. He learned moreover the source of the Senegal, in the great range of mountains which traverses Manding and Jallonkadoo ; from the other side of which the Niger takes its rise. Hence indeed descend a succession of rivers, the principal of which, called the BaFing, or Black River, is considered as the principal branch of the Senegal. Its source may be fixed pretty nearly in 7° 0' W. long, and 1 1° 50' N. lat. The Faleme, and the Ba Lee, or Rokoro, are also great streams, which joining

the Senegal, in Gallam, render" it a river of the first magnitude. The whole of the early course of this river, and its tributaries, is through a country diversified by rugged and precipitous hills, and intersected by numerous streams, the sands of which, being impregnated with gold dust, afford a considerable source of wealth. The gold is ektricated by women, by the mere process of agitation. Having passed Gallam, the Senegal rolls over a level plain, through Foota Torra, the states of the Siratik, and the country of the Foulahs : after passing Podor, about sixty leagues from its mouth, the level is so complete that Adamson does not conceive i to descend more than two feet and a half. The river in this part is bordered with vast woods, filled with numberless species of birds, and all the different kinds of monkeys and parrots in particular. Crocodiles, and other species of amphibia, also abound here, where finally the Senegal separates into branches, which form several large islands. The entrance is obstructed by a formidable bar,

or ridge of sand, stretching across it at a little distance under water. It is in lat. 16° 5’ N.

There are two principal channels used by vessels, named the great and little passes. The former, though its breadth and direction often vary, is usually 100 fathoms wide, and from nine to thirteen feet deep, but, on account of the swell on it, vessels of eight feet only can pass it with safety, and even the smallest craft requires a pilot, who visits the pass everyday; its length is about a mile and a half, and when within it the water becomes perfectly smooth, and the depth increases to four and six fathoms. The little pass is only fit for canoes. The most favorable time for entering the river is from April to June, when the winds blow from the south, and, the water being low, there is little current setting out. The most dangerous time is from September to December, when strong easterly winds and a rapid current cause a heavy surf to break quite across the bar. The river is navigable at all seasons for small vessels to Podor, sixty leagues from the bar, and in the rainy season” for vessels of 150 tons to Galam, 200 leagues farther. From the bar the direction of the river is to the north ; the western, or right bank, which separates it from the sea, being a narrow strip of sand, only 100 fathoms broad, and devoid of all vegetation. Its extremity is named Barbary Point, from which the bar stretches across to the main.

Four leagues above the bar is the isle St. Louis, the principal establishment of the French in Senegal. It is about a mile and a half Ion?, and no where more than 300 yards broad ; it is flat, and without other vegetation than mangroves at the northern extremity, some scattered palms, and some kitchen vegetables raised in gardens. It has no fresh water, and, that of the river being brackish from December to July, during this period the inhabitants are obliged either to send boats for the necessary supply above the reach of the tide, or to content themselves with what they can procure from holes dug in the sand on the shores of the island, but which loses little of its salt. The establishment of St. Loui? consists

of a fort, an hospital, a church, about twenty of a secure situation,

began to flourish. The

brick houses, and the huts of the negroes. The present streets are said to be well arranged, fort is of an irregular form, consisting of walls The chief branch of the commerce of this set—

of brick, with four round towers and some has-tlement consists in procuring the gum known by

tions; the magazines are within the fort. On the name of gum Senegal. It has been ascer—

thewest side of the island is a battery of four-tained,by experiment, that this is much superior

teen twenty-four pounders, which commands to all the eastern kinds, and even to that of Ara—

the strip of sand that separates the river from bia; that it is both more mucilaginous and

the sea; another battery of sixteen heavy guns gummy; that in some arts and trades no other

on the south point of the island ; a third on the gum can be used as a substitute ; in short the

north point of five guns ; and a fourth a little use of it has become general within the last half

north of the town of six eighteen pounders. The century, it is now sought after with avidity,

population of the island in 1801 was 10,000 The acacia forests, from which this substance

persons, of whom 300 only were whites and free exudes, are in the track of desert extending

people of color, the remainder being slaves, northwards from the Senegal, arid in the posses—

The garrison in time of war ought to consist of sion of three tribes of Moors, called Trarshaz,

600 Europeans, and of 400 in peace ; but these Braknaz, and Darmanko, who occupy about

numbers were never complete. seven oases or verdant spots, in that vast tract

Twenty-five leagues from St. Louis, ascending bounded on the south by the Senegal, on the

the Senegal, is L'Escale de Desert, on the right west by the Atlantic, and on the east and north,

bank, a considerable trading place for gum. A which extends indefinitely into the expanse of

little higher up on the opposite bank is a creek, the Sehara. The three great gum forests are

called Sahel, Al Fatack, and El Hiebar. The former, producing the white gum, held in highest

or natural canal, called Portuguese River, which communicates with a lake called Panier Foulah, into which the waters of the Senegal rush with estimation, is in the possession of the Trarshaz ;

great rapidity in the rainy season. Sixty leagues the forest of Al Fatack belongs to the Braknaz, above St. Louis is the fort of Podor on the left and that of El Hiebar to the Darmanko. These bank, and on the opposite bank below Podor two last produce the red gum. ' The gum tree the establishment Du Coq, and above it the set-of the Senegal is in general not more than eigh-tlement named Terrier Rouge ; 255 leagues above teen or twenty feet high, and its circumference St. Louis on the left bank is Galam, to which seldom exceeds three feet. On the banks of the the free people of color of St. Louis and Goree river, the trees have been observed from twenty-make an annual voyage on the river, to purchase five to twenty-eight feet high ; but there the soil slaves. The boats, to the number of about forty, is covered with a stratum of vegetable earth, and leave St. Louis in July, and do not arrive at the trees are also few in number. In general, Galam before October. A fair is held here the too, the gum tree of the desert is crooked, and first fifteen days of November, where are ex-has a rough and irregular appearance; such an changed European goods for gold dust, ivory, appearance is common to all the productions of bullocks' hides, slaves, rice, millet, and maize, this tract, which are, as it were, stunted, so that the latter for the provisioning of Goree and St. the

plants appear rather like bushes than shrubs. Louis. When the waters of the river begin to The aridity of the soil, and the severity of the fall the boats descend, and arrive at St. Louis in winds, are probably the causes of this imperfect fifteen days. Besides the tedious ascent of the growth. The leaves of these trees are alternate, river, and the unhealthiness at this season, which of a dry and dirty green ; (he branches are is almost certain destruction to Europeans, the thorny at the points where the leaves project, merchants are laid under heavy contributions by the blossoms are white and very short, the bark the chiefs on the banks. The journey to Galam is smooth, and of dark green. The period when by land, it is said, may be made in twenty-five the trees begin to give out their gum is about days with ease, during eight months of the year; the 10th of November, when the great periodical but the most favorable season is in April, when rains have newly ceased. No artificial incision

the strong north winds moderate the heat.

is necessary ; for, as soon as the harmattan or

Under the reign of Louis XIV. the energies of hot wind of the desert begins to blow, the dry-France began first to be directed towards colo-ing process is so powerful that the bark cracks nies and commerce. When, in 1637, Jannequin in numberless places. The gum then issues out undertook his voyage to the Senegal, he found in various forms, but chiefly in drops about the no settlement by any European nation, and his size of a partridge’s egg. The tenacity of the party were obliged to erect temporary habita-substance, however, is such as to prevent the r ions at the village of Biyurt, on the left bank of drops from falling to the ground, when they .he river. In 1664 the first West India com-would be in danger of being buried in the sand. pany, being established at Dieppe, directed its They remain attached to the bark, near the spot operations towards this part of Africa : but it whence they issued ; they are always transpa-was soon involved in bankruptcy; and several rent and brilliant at the part where they are similar companies, which followed in succession, broken off, and, when they have been kept a few were equally unfortunate. Each, however, at moments in the mouth, have all the clearness, their commencement, made vigorous exertions to limpidity, and

transparency of the finest rock

iromote the trade, of which they had obtained crystal. About the beginning of December the

the monopoly ; so that the settlement soon ac-Moors of the three tribes quit their residences

juired prosperity ; and St. Louis, the capital of in the desert, where they leave only the aged,

(he new settlers having the great advantage decrepid, and infants, with a few who are ne-

cessary to tend the cattle ; all the rest set out in a confused and tumultuous crowd, the kings, princes, and rich men, riding on horses and camels, while the poor march on foot. In twelve days, or a fortnight, each tribe reaches the forest which belongs to it, and on the borders of which it forms an encampment. The harvest continues about six weeks, when the gum, being collected in heaps, is placed on the backs of camels and oxen, for the purpose of being transported to the banks of the Senegal. The camel generally carries from 4 cwt. to 5 cwt.; the ox about 150 Ibs.; and the gum is contained in immense leathern sacks, made of tanned oxhides. . The great gum fair is at a spot on the northern bank of the Senegal, about mid-way between Podor and Fort St. Louis. There is not in the world a more barren and desolate spot ; it is merely an immense plain, formed of white and moving sands ; not a herb, plant, or shrub, varies the uniformity of this immense solitude. It does not even afford a drop of potable water, which must be brought from the river, or from the neighbourhood. Hither, at the usual time, the French merchants repair, to wait the arrival of the Moors. On the morning of their approach, there may be heard, even at a great distance, the confused noise of their armies in motion ; and, towards noon, this vast and solitary plain appears covered with a multitude of men, women, camels, oxen, and goats, all enveloped in clouds of dust. Some of these animals carry the tents and baggage; on others are placed the women, who may be seen in the act of suckling their children. The kings and chiefs are mounted on beautiful horses, while their wives appear seated on a few chosen camels, elegantly caparisoned, in a kind of baskets covered with an

awning. A band of Moors, armed with muskets and lances, escort this ambulatory horde, and vainly attempt to preserve some appearance of order. The air resounds with the voices of men, women, children, and animals; and the living creatures who fill the plain appear truly innumerable. At length, when the whole of this barbarous assemblage is collected, the camps are fixed ; a cannon is then fired as a signal for beginning the fair. In carrying on the treaty there is no artifice to which these Moors do not resort ; no lies which they do not invent to obtain a higher price for their merchandise ; address and threats are alternately employed ; and the kings and chiefs in-vent a hundred lies to extract higher prices, and more considerable presents. The most ridiculous pretensions are every year renewed by these artful savages, who purposely raise innumerable difficulties in the course of the negociation. Europeans are driven almost distracted by the extreme slowness and apathy of the Moors, who incessantly defer the termination of the business. Between the years 1785 and 1787 the quantity of gum actually bought by the French amounted to 800,000 Ibs., independently of 400,000 Ibs. carried to Portendick, and sold to the English. It is purchased in kantars, which originally contained about 500 Ibs. ; but the French, that they might not be behind hand in cheating, gradually increased the size of the kantar, without any observation being made by the Moors, who are

entire strangers to this kind of geometry. Tlif kantar thus amounts now to about 2000 Ibs. It is paid almost exclusively in East India cotton cloths, dyed with indigo, called pieces of guinea; each of these is seven or eight ells long, and half an ell broad. Attempts have been made to make them receive cottons of French manufacture; but the Moors immediately distinguish, by the smell, the genuine productions of the East In-dies, and will accept of no other. The standard price of the kantar is fifteen pieces of guinea ; and as these may be averaged at 25 francs, the original price of the kantar will be 375 francs (15s. 7%d.\ which gives the pound of gum at nearly 3 sols, 6 deniers (not quite Id.}. The gum has sold in Europe at from 30 to 40 sols (I5d. to 20rf.); so that, after ample allowance for freight and charges, the profit must still be very great. The trade might admit of considerable extension, as there are two other foiests at Guerouf and Gallam, farther up the Senegal, the gum from which might be procured at a cheaper rate, though with greater expense of transport.' — Edinb. Gazetteer.

In 1786, besides gum, there were exported from the Senegal slaves to the number of 2200, valued at 2,640,000 livres ; gold to the amount

of 90,000 livres ; ivory and miscellaneous ar tides to 130,000 livres. In the war of 175f this settlement yielded to the victorious arms ot Britain, and was ceded to this country at the peace of 1763. The French, however, retook it in 1779, and retained it at the peace of 1783. They lost it again in the revolutionary war ; but, on the restoration of the Bourbons, it was again ceded to France. In sailing to resume possession, the Medusa frigate sustained that terrible shipwreck which seems to have paralysed all the further attempts to restore the importance of these settlements.

SENEGAMBIA, a name which has been given to those countries of Africa lying between the south limits of the Great Sahara and the mountains of Kong. They are watered by the Gambia, Senegal, and Rio Grande.

On passing from Sahara to the banks of the Senegal, we exchange an ocean of sand for a region of fertility, and the morose and ferocious Moor for the cheerful and placid negro ; but the first feeling that springs from the-transition is a recollection of that iniquitous traffic which equally .degraded the negro and disgraced the European. Though the Senegal is the common line of de-marcation, a few Moors are scattered among the negroes on the south of that river, and some negroes are intermixed with1 the Moors on its northern banks.

The interior of this part of western Africa had scarcely been visited by Europeans, previously to the end of the eighteenth century. The French had long before settled near the mouth of the Senegal, and the English had possessed themselves of the Gambia ; but, as their object was trade, their descriptions were confined to the productions and inhabitants of the coast and the banks of the rivers. Since 1790, however, various travels have been undertaken, and several valuable works relative to Senegambia published. The two journeys of Park are well

known ; the works of Golberry and Durand have added much to our knowledge of this part of Africa ; the accounts published by the

African Association have further increased our store of information; and M. Mollien's late travels to the interior, and to the sources of the Senegal and the Gambia, have also disclosed several particulars. For the following brief sketch of the results, we are principally indebted to Dr, Myers.

The coast of this part of Africa is flat and sandy. The heights near Cape Verd, and some sand-hills about the fourteenth parallel, alone break the uniformity, till we reach the southern bank of the river of Sierra Leone, which presents some considerable elevations, in the prolongation of the mountains of the interior. The part of the country near the sea, as far as below 12° lat., is flat and sandy, and altogether free from stones. Eastward of this, for more than 100 miles, the soil is partly sandy, and partly argillaceous, quite smooth, and without stones. This tract ends toward the south on the banks of the river Rio Nunez. The third district, stretching as far as the base of the mountains, exceeds 150 miles in breadth, and terminates at the river Sierra Leone. The soil of this division is argillaceous, hilly, and stony. Beyond the waving line that bounds the eastern part of this district, the country is mountainous for about 10° long., rising in parallel terraces and chains, which increase in altitude as they approach the south, till they attain their greatest elevation between 8° and 10° N. lat. They begin to decline about 7° W. long.; and the declivity appears to be steeper towards the east than the west, and on the southern than the northern side. The extent of this mountainous country towards the south remains to be explored. Having entered the northern part of Foota Jallo, M. Mollien observes, ' from the summits of these heights, I discovered a considerable tract of country, studded with rocky mountains, whose summits were lost in the clouds, and separated from each other by frightful precipices ! Desolation reigned throughout ; some meadows, situated at the foot of these steep hills, but partially interrupted the dreary uniformity.' Having reached the top of the mountains of Tangua, about 11° of lat, and a little north of the source of the Gambia, the same traveller remarks, ' the mountains situated at the foot of that on which I stood resembled immense plains covered with a thick fog. The mountains of Tangue are of great elevation, and are crowned by a peak which is frequently concealed in the clouds. In the rainy season the clouds gather round their tops, the thunder is incessantly rolling there, and deluges of rain inundate the country below.' The air was so cold, in these elevated tracts, that this traveller was glad to find a sheltered place exposed to the rays of the sun to rest in. The whole of these elevated regions are said to be metallic, and particularly to abound in gold and iron. The courses of the rivers are often interrupted by ridges of rock which produce

cataracts.

From M. Mollien's observations it appears that the sources of the great rivers which issue from the nucleus of African Mountains are

situated a little northwest of Teemboo. Another object which this French traveller was instructed to accomplish, if possible, was to discover the source of the Dialli B£, or Niger; but this he was not able to reach. From the inhabitants of Teemboo, however, he learned, that the river was well known by that name, and that its source was situated in the mountains between Kouranco and Soliman. The account places it about eight days' journey southeast of that city. Its distance from Sierra Leone was also stated to be eleven days' journey on foot, which, through such a rugged district, cannot be estimated at much more than fifteen milej a day, which, therefore, makes it 165 miles. — The countries beyond the basins of these rirers we shall consider as belonging to the interior of the continent. This space, which stretches from about 8° to 17° N. lat., and from 5° to 17° W. long., is divided into such a labyrinth of small states that it would be impossible with our present knowledge to describe the boundaries and physical peculiarities of each. The most perspicuous view of this group of kingdoms, countries, and people, will therefore, be exhibited by first specifying a few of the leading distinctions of territory, and thea delineating the peculiarities of the different tribes by whom they are inhabited. The most numerous people of these regions are the Jaloffs, or Yaloffs, which the French call the Oualofs. The empire of the Jaloffs was anciently bounded on the north by the Senegal, and on the south by the Gambia, and it stretched from the sea to the Faleme. But this empire has been* dismembered, and split into a variety of states, the principal of which are the following : — The kingdom of Brack or Wallo, occupies the northwest corner, and is situated on the south bank of the Senegal, where that river makes its principals weep before it en-ters the sea. The title of the reigning prince is Brack, and the crown is hereditary ; but it is the eldest son of the sovereign's sister who is the legitimate heir.

Cayor is the name of a kingdom extending along the coast, beyond Cape Verd. Between the southern confines of Cayor, and the northern bank of the Gambia, the kingdoms of Baol, Sin, and Barra, border on the coast. Behind the latter that of Badiloo extends along the same bank of the Gambia, till it forms nearly a line with the eastern parts of Baol and Sin. East of these three, stretches the kingdom of Salum, which, from its extent, with the number and civilisation of its

inhabitants, is one of the most important of the Senegambian states. East of Salum and Cayor is the extensive kingdom of the Bourb-Jaloffs. In the interior of these he the kingdoms of Foota-Toro and Woolli ; the former stretching along the southern bank of the Senegal to about 11° W. long. ; and the latter along the northern shore of the Gambia.

In the mountainous region, near the sources of the Senegal, spreads the native country of the Mandinsioes. Its precise limits are uncertain ; but if we may judge from the celebrity of the people, the conquests they have made, the civilisation they have attained, the commercial spirit they have manifested, and the colonies they have

established, the kingdom must have been extensive, and the people powerful. It seems to be bounded on the west by Bambarra, on the north by Fooladoo and on the south by Jallonkadoo. Fooladoo is considered as the native region of the Foulahs, who are now so widely spread through various parts of Western Africa. Their most important and populous kingdom is Foota-Jallo, a mountainous country near the source of the Gambia. The hilly regions that approach the interior comprise a number of separate states, among which are Bondou, Bambouk, Galam, or Kajaaga, and some others; but their limits, and even their names and situations, become more uncertain as we approach the interior. — South of the Gambia, the Feloops, the Bissagos, and other tribes, are intermixed with the Mandigoes and the Foulahs, as far as the British colony of Sierra Leone.

From the coast the ground rises imperceptibly to the confines of Foota-Toro, where it becomes level, and forms what may be denominated the first terrace in this part of Africa. Foota-Toro is one of the most extensive and important kingdoms of Senegambia. The country is watered by several rivers, and much of it is fertile. The land in the vales throughout which the rivers flow has been compared to the richest parts of France. Much of it is cultivated %vith great care; but the planting of trees is neglected, which gives the country a naked appearance. These cultivated grounds produce good crops of rice, millet, indigo, and tobacco. Various fruits are also grown, and many

domestic cattle reared, while lions, panthers, hyaenas, and jackals, are ‘very numerous, and elephants are sometimes met with. Ostriches, vultures, Guinea-fowls, pigeons, turtle doves, partridges, paroquets, and several other birds, are common. The heat in this country is often intense, as Fahrenheit’s thermometer frequently rises to 96° in the shade. The population is also considerable, and has been estimated at 2,000,000. The inhabitants trade with the Moors on the north, with the Foota Jallos on the south, and with Europeans by means of the ‘ Senegal. The government of Foota Toro, a kind of theocratic oligarchy, is virtually exercised by seven chiefs, each of whom possesses a part of the country, and all appear to be descendants of the original nation. These seven choose an al-mamy, or iman, from the common Maraboots, who is the nominal sovereign. All the acts of government are performed in his name, but he cannot take any step without consulting the council, formed of the seven electors. When they are not satisfied with the conduct of the almamy they retire during the night to an elevated spot, and deliberate on the choice of another, and, having fixed upon one, they desire attendance, and address him, saying, ‘ We have chosen thee to govern our country with wisdom.’ He is then brought to the people, who are addressed by one of the chiefs, saying, ‘ Here is your king, obey him.’ The people applaud the choice, salute the new king by discharging muskets, and the former almamy returns to the class of private citizens. So precarious, however, is the sovereign power, that they had no less than three successive almamies in 1818.

Bondou, which lies in the cast of Foota Toro, is of an elongated form, and is little more than a vast forest, much of which is either covered with hills or stones. Springs are common, ana the lands, where free from stones and woods, are fertile. The soil near the banks of the Faˆ leme is rich, but the drought is such as only to admit of cultivation in the rainy season. The western parts of the kingdom contain iron, the eastern gold. Where it is cultivated, cotton, maize, millet, indigo, and tobacco, are grown. Wild beasts and game are plentiful, and afford the hunter a rich booty. The crown of Bondou is elective in the king’s family, and the brother of the late king, when there is one, is usually preferred. The government is despotic.

Bambouk, which has always been considered the Peru of Africa, joins Bondou on the east. It is a country of mountains, which serve as a defence against the inhabitants of Bondou and Bambarra, by whom its gold has always been considered a tempting prize. Nor have the contiguous people been the only rapacious enemies with whom the

Bamboukians have had to contend ; for the ruins of the forts erected by the Portuguese show that their zeal for the possession of this precious metal had early led them to the conquest of this distant region, but which they were long since obliged to abandon. The gold is generally found in conical hills of moderate elevation, mixed with earth and other substances, from which it is separated by the simple process of washing. Notwithstanding the imperfect manner in which these mines are worked, the quantity of gold obtained .in Bambouk must be very great, as not only most of that which is brought down the Senegal and the Gambia is originally procured there, but much is carried to the east, and afterwards across the desert to Northern Africa and Egypt. Very malleable iron also abounds in this mountainous country, but want of skill in the working renders the quantity obtained comparatively small. Some parts of Bambouk are excessively hot; yet the mountainous nature of the country gives rise to numerous springs which diffuse a partial freshness through the atmosphere, and favor the growth of vegetation. Many of the valleys, therefore, produce rice, millet, peas, and other vegetables ; while the baobab and the tamarind tree are very common. Herds of goats and horned cattle are kept in most parts of the country.

Galam, which lies between Bambouk and the Senegal, is esteemed one of the most fertile in Africa ; millet, cotton, rice, maize, tobacco, and indigo, grow in great plenty ; while milk, flesh, and fish, form a great part of the food of the inhabitants. Cameleopards, lions, and wild boars, of large size, abound in the forests ; and the hippopotamus and crocodile, with abundance of fish, stock the Senegal and its tributary streams. Large trees also shade the banks of many of these rivers.

Foota-Jallo spreads over the hilly region south of Bondou, where the great rivers of this part of Africa take their rise. It is a mountaui-ous country, and the ranges by which it is intersec'.ed are considered as the branches of a

more lofty chain, situated southeast; the elevated summits of which, the negroes say, are constantly covered with a white hat. If this

representation be correct, the mountains of Kong, to which it refers, and which are situated about 10° lat., in the hottest part of the globe, must be very elevated. The soil of the valleys in Foota Jallo is a rich mould which the torrents have washed from the mountains, and, being watered by numerous streams, is rendered very productive. Rice and maize are cultivated. The orange, the banana, and the papaw tree abound ; but the immense baobab, the queen of the forest, is not met with, though other trees of large growth form almost impenetrable woods. The climate and temperature of Foota Jallo are subject to great variation. In the valleys the heat is often intense, while the elevation of some of the mountains exposes the traveller to the sensation of severe cold, fhough it does not cause that depression of the thermometer which would produce the same feeling in colder climates. Teemboo, or Timbo, is the capital of this country, and is esteemed one of the largest cities in this part of Africa, where scarcely any thing but villages, composed of a few huts, are to be met with. It is situated at the foot of ahigh mountain, and is supposed to contain about 9000 or 10,000 inhabitants. It has a spacious mosque and three forts, one of which contains the king's palace, which is composed of five or six large huts. The fortifications of the town are of earth, and in some places have loop holes ; but when M. Mollien was there, in 1818, they were falling into decay. He thinks Teemboo an ancient place, as all the country round it bears the name. Though the houses are only huts, they are built with taste, and many of them have courts planted with papaw and banana trees. According to the same traveller, Tenda Maie is a small country enclosed by a bend of the Rio Grande, west of Foota Jallo, not yet mentioned by any geographer. It is a flat fertile tract, though in some places sandy. The rains do not last so long by a month as among the hills of Foota Jallo. It produces millet, maize, rice, and cattle. Deer and wild cattle are also to be seen ; but the elephant is not found, and beasts of prey are rarely met with. Many valuable woods grow in the forests, and iron is obtained, which is in much request among the neighbouring nations. The inhabitants are a mixture of Mahometans and Pagans. The Jaloffs, or Oualoffs, which have also been called Yoloffs, occupy the greatest part of the country between the lower parts of the Senegal and the Gambia. M. Golberry estimates the extent of their territory at 4800 square leagues. They are considered as the handsomest negroes in this part of Africa. Their color is a bright black, their hair woolly, their noses flat, and lips protuberant, but less so than in the Mandingoes. Their features, however, are regular, and their physiognomy open and agreeable. They consider themselves the most ancient inhabitants of these regions, and were formerly all subject to one empire, called the Bourb-Jaloff, which still occupies a large tract of country in the interior. The

Jaloffs are professed Mahometans, but the doctrines and precepts of the Koran are intermixed with the superstitious practices of ther ancient paganism. The number of pagans among them is still great, the religion of whom is pure fetishism. A tree, a stone, a serpent, a ram's-horn, or a scrap of paper covered with Arabic characters, or any other figures, are equally deities to them. Their language is superior to that of their neighbours ; but, like them, they have no written characters. They reckon by five figures only, instead of ten, as in our mode of notation, and all their computations are performed by the motions of the fingers. They are great hunters, and excel in the number and management of their horses. They are also reputed to be courageous warriors when engaged with negroes, but pusillanimous in opposition to the Moors. The Jaloffs are not entirely destitute of manufactures, though these are still in thoir infancy among all the African nations. Some few metallic articles and domestic utensils are made, and the Jaloffs surpass most of the others in manufacturing and dyeing cotton ; but, as among the other negroes, necessity and industry are correlative terms. As they find dexterity more congenial than laborious exertion, it is much practised, and those who reside in the neighbourhood of European settlements are considered as accomplished thieves.

The Feloops are spread over a wide space on the south of the Gambia. Their country is extensive, and being a low tract, produces rice and other kinds of grain, where properly cultivated. They have also plenty of goats and poultry, with which they supply European traders that touch at the coast. They are described as a wild unsociable race, speaking a peculiar language, which few Europeans understand. They have abundance of honey, of which they make an intoxicating liquor like mead. They appear to be complete Pagans.

SENES'CENCE, n.s. Lat. senesco. The state of growing old ; decay by time.

The earth and all things will continue in the state wherein they now are, without the least senescence or decay ; without jarring, disorder, or invasion of one another. Woodward.

SEN'ESCHAL, n. s. Fr. seneschal. See its etymology below. One who had in great houses the care of feasts or domestic ceremonies.

John earl of Huntingdon, under his seal of arms, made Sir John Arundel of Trerice, seneschal of his household, as well in peace as in war.

Carew’s Survey of Cornwall. MarshalPd feast,

Served up in hall with sewers and seneschals, The skill of artifice, or office, mean !

Milton’s Paradise Lost.

The seneschal rebuked in haste withdrew ; With equal haste a menial train pursue.

Pope’s Odyssey.

SENESCHAL (seneschallus), derived from the German sein, a house or place, and scale, an officer, is a steward, and signifies one who has the dispensing of justice in some particular cases : as the high seneschal or steward of England ; seneschal de la hotel de roi, ‘ steward of the king’s household, seneschal, or steward of courts,’ &c. — Co. Lit. 61. Kitch. 83. See STEWARD. This is the most ancient of all the

titles or dignities which were attached to those individuals that undertook the command of armies, when the kings of France, belonging to the second race, ceased to go in person. The seneschal was selected by the sovereign from among those vassals and subjects who were highest in nobility, and were most distinguished for their rank, wealth, and talents. The title of grand seneschal of France was first created by Lotharius, in 928, and conferred upon Geoffrey, count of Anjou, surnamed Grisegonnelle. -This rank or situation continued to be attached to the count of Anjou, until the reign of Philip Augustus, in whom it was extinguished, when he ascended the throne of France in 1121. The grand seneschal likewise exercised the functions of lord steward of the king’s household ; having under him several subordinate seneschals, who also held places of considerable trust.

These were called senechaux de France, seneschals of •France.

SE’NILE, adj. Lat. senilis. Belonging to old age ; consequent on old age.

My green youth made me very unripe for a task of •hat nature, whose difficulty requires that it should ‘•e handled by a person in whom nature, education, and time, have happily matched a senile maturity of judgment with youthful vigor of fancy.

Boyle on Colours.

SE’NIOR, n. s. J Lat. senior. One older . SENIORITY. J than other ; one who, on account of longer time, has some superiority : the state or honor of a senior ; eldership.

How can you admit your seniors to the examination or allowing of them, not only being inferior in office and calling, but in gifts also. Whitgifte.

A. senior of the place replies, Well read, and curious of antiquities. Dryden.

As in insurrections the ringleader is looked on with a peculiar severity, so, in this case, the first provoker has, by his seniority and primogeniture, a double portion of the guilt.

Government of the Tongue.

He was the elder brother, and Ulysses might be consigned to his care by the right due to his senioiity.

Broome.

SENLIS, an old town in the department of the Oise, France, situated on a rising ground, in the middle of an extensive forest, near the Nonette. Its streets are narrow and the houses ill-built ; the cathedral is, however, admired. Senlis has some trade in corn, wine, and wood, and manufactures on a small scale of cotton, coarse woollens, paper, lace, and porcelain. Its quarries afford good stone. Here are two great yearly fairs,‘one in April, the other in October. Inhabitants 4300. Thirty miles north of Paris.

SENN, a kind of itinerant cow-keeper in Switzerland, particularly in the canton of Appenzell. These men do not grow so much hay themselves as they require for their cattle during the winter season,

and some of them have no grass lands at all. To supply this deficiency, they employ agents throughout the canton, who are to inform them where good hay may be obtained, which farmers made in favorable weather, &c., and then the senn, or the great cow-keeper, who is in want of fodder, makes his agreements for the winter with the wealthier farmers, to whom he successively drives his cattle as soon

as they return from grass. Thus the itinerant senn, with his cows, often visits five different places during the winter season. He who sells the hay furnishes the senn not only with stabling for his beasts, but boards and lodges him as well as his whole family. In return, the senn, besides paying the stipulated price for the hay, allows to his host as much milk, whey, and zieger (a kind of lean cheese), as may be used in the house, and leaves him also the manure of his cows. In the middle of April, when nature revives, the senn again issues forth with his herd to the meadows and fertile Alps, which he rents for the summer. Thus the life of these men is constant migration, affording the most pleasing variety, and blessing them with health, content, and cheerfulness ; but they had not been then cursed with French fraternity. Fine cattle are the pride of the cow-keeper who inhabits the Alps; hut, not satisfied with their natural beauty, he will likewise please his vanity. He adorns his best cows with large bells suspended from broad thongs; and the expense in such bells is carried even to a luxurious excess. Every senn has an harmonious set of at least two or three bells, chiming in with the famous ranz des vaches, or song of the cow-herds. The Tyrolese bring bells of all sizes to every fair kept in the canton of Appenzell. They are fixed to a broad strap, neatly pinked, cut out, and embroidered; which is fastened round the cow's neck by a large buckle. A bell of the largest size measures upwards of a foot in diameter, is of a uniform width at top, swells out in the middle, and tapers towards the end. It costs from forty to fifty guilders ; and the whole peal of bells, including the thongs, will sometimes be worth 140 or 1 50 guilders ; while the whole apparel of the senn himself, when best attired, does not amount to the price of twenty guilders. The finest black cow is adorned with the largest bell, and those next in appearance have two smaller. These ornaments, however, are not worn every day, but only on solemn occasions; *viz.* when in the spring they are driven up the Alps, or removed from one pasture to another; or when they descend in the autumn, or travel in the winter, to the different farms where their owner has contracted for hay. On such days, the senn, even in the depth of winter, appears dressed in a fine white shirt, of which the sleeves are rolled up above the elbow ; neatly embroidered red braces keep up his yellow linen

trousers, which reach down to the shoes ; a small leather cap or hat covers his head, and a new milk bowl of wood, skilfully carved, hangs across the left shoulder. Thus arrayed, the senn precedes, singing the ranz des vaches, and followed by three or four fine goats; next comes the handsomest cow with the great bell; then the two other cows with smaller bells; and these are succeeded by the rest of the cattle walking one after another, and having in their rear the bull with a one-legged milking-stool hanging on his horns; the procession is closed by a trianeu, or sledge, on which are placed the implements for the dairy. It is surprising to see how proud and pleased the cows stalk forth when ornamented with the\r bells. Who would imagine that even thesex »nimals are

sensible of their rank, nay, touched with vanity and jealousy ! If the leading cow, who hitherto bore the largest bell, be deprived of her honors, she very plainly manifests her grief at the disgrace, by lowing incessantly, abstaining from food, and growing lean. The happy rival, on whom the distinguishing badge of superiority has devolved, experiences her marked vengeance, and is butted, wbunded, and persecuted by her in the most furious manner ; until the former either recovers her bell, or is entirely removed from the herd. However singular this phenomenon may appear, it is placed beyond all doubt by the concurring testimony of centuries. The cows, when dispersed on the Alps, are brought together by the voice of the senn, who is then said to allure them (locken). How well the cattle distinguish the note of their keeper, appears from the circumstance of their hastening to him, though at a great distance, whenever he begins to hum the ranz des vaches. He furnishes that cow which is wont to stray farthest with a small bell, and knows by her arrival that all the rest are assembled.

SEN’NA, n. s. Lat. sena. A physical tree.

What rhubarb, senna, or what purgative drug, Would scour these English hence.

Shakspeare. Macbeth.

Senna tree is of two sorts ; the bastard senna, and the scorpion senna ; both which yield a pleasant leaf and flower. Mortimer.

SENNA is the leaf of the cassia senna of Linnaeus. See CASSIA. It appears to have been cultivated in England, in the time of Parkinson (1640); and Miller tells us that, by keeping these plants in a hot-bed all the summer, he frequently had them in flower ; but adds, it is very rarely that they perfect their seeds in England. Senna, which is in common use as a purgative, was first known to the Arabian physicians Serapion and Mesue ; the first among the Greeks who takes any notice of it is Actuarius, but he only speaks of the fruit not of the leaves. To remove the disagreeable taste of this medicine, Dr. Cullen recommends coriander seeds; and, for preventing the griping with which it is sometimes attended, he thinks the warmest aromatics, as cardamoms or ginger, would be more effectual.

SENNA, ITALICA, or blunt-leaved senna, is a variety of the Alexandrian species ; which, by its cultivation in the south of France (late Provence), has been found to assume this change. It . is less purgative than the pointed-leaved senna, and is therefore to be given in larger doses. It was employed as a cathartic by Dr. Wright at Jamaica, where it grows on the sand-banks near the sea.

SENNAAR, an extensive country of the ancient Abyssinia, on the southern borders of Nubia, appears to be contiguous to both Abyssinia and Kordofan. Where the soil is overflowed by the Nile it is extremely fertile, and produces abundant crops of dhourra, the principal food of the inhabitants. Wheat and rice are also grown in small quantities. Though rich in vegetable products, and contributing so largely to the support of both man and beast, the soil of this country is said to be singularly unfavorable to their propagation. This Mr.

Bruce ascribes to some noxious quality in the earth. Most of it is impregnated with a species of salt, which is extracted in great quantities in various parts of the country, particularly at Holfaia.

Sennaar has to boast of an excellent breed of horses, praised alike for their size, strength, movements, and general symmetry, their capability of enduring fatigue, and their docility of temper. The town of Sennaar stands on t?ie bank of the Nile, and is described as very populous, and containing many good houses, at least in comparison with the other places. They are all built of clay with a little straw intermixed. Poncet says in his time they had only one story ; but now

all the principal have two. and parapet roofs, though in most other regions within the influence of the tropical rains the roofs are conical.

Sennaar is a place of considerable trade. Caravans travel in various directions, to Egypt, to Souakin, on the shores of the Red Sea, to Darfur, and other places in the interior. Commerce is indeed the very life of society, and there is not a single family which is not more or less connected with some branch of trade.

The people of Berber, Shendy, and Sennaar, appear to be traders in the strictest sense of the term. Their dress is extremely simple. A long shirt of blue Surat cloth, called marowty, covers them from the lower part of the neck down to the feet ; the neck itself is left open, which alone distinguishes the dress of the men from that of the women, who button this shirt round the neck. The men sometimes tie a sash round the middle; and respectable people of both sexes go through the house barefooted. The apartments, particularly those of the females, have the floor covered with Persian carpets. In going out they wear sandals, and a kind of wooden patten, ornamented with shells. With a view to coolness, they have buckets of water thrown upon them in the middle of the day ; and, in order to preserve themselves from cutaneous eruptions, of which they entertain a great dread, they anoint themselves daily with camel's grease mixed with civet ; and for the same reason, though they put on every day a clean shirt, they lie all night upon one dipt in grease, which forms their only covering. The couch itself is made generally of a tanned bull's hide, much softened by this constan* greasing, which occasions a smell from which nothing can free them. The principal diet of the poor consists of bread and flour made of millet. The rich make it into a pudding toasted before the fire, with milk and butter; besides which they eat beef, partly roasted and partly raw. Their horned cattle are the largest and fattest in the world ; but camel's flesh is the meat chiefly sold in the market. The liver of the animal and the spare-rib are eaten raw. Hog's flesh is not sold in the market, but is eaten publicly by the people at large, and secretly by those who pretend to be Mahometans. The prevalent diseases are the dysentery and the bloody flux, frequently accompanied by intermitting fever, for which bark is found a sovereign cure. Epilepsies and schirrous livers are likewise very frequent. Those who live much in

camps, or in quarters distant from rivers, have more or less the gravel, occasioned probably by the use of well water; but at Sennaar this malady is rare. The elephantiasis is not known, nor is the small pox endemial.

The commerce of Sennaar consists chiefly in exchanging the productions of interior Africa with those of Egypt and Arabia. The most extensive communication is with Suakin and Jidda, by Shendi, and across the track extending from the Nile to the Red Sea. With Egypt the intercourse is conducted by two different routes. One leads along the east of the Nile, and follows the course of that river to Shendi, when the caravans strike across the vast deserts of Nubia. The other track is west of the Nile. The caravans here, in coming from Egypt, quit the Nile at Siout, then strike across the equally extensive desert to the west of that river. They refresh themselves at Charje or the Great Oasis, then proceed for some time by the same track as the caravans to Darfur, till they rejoin the Nile at Moscho, in the territory of Dangola. After passing through the capital of that kingdom, they come to Korti, where they proceed across the desert of Bahiouda, and, joining the Nile at Derri, follow its course to Sennaar. The commodities drawn from interior Africa, for export to Egypt and Arabia, are gold dust, called tibbar, ivory, civet, rhinoceros' horns, but, above all, slaves. The gold still maintains its reputation as the purest and best in Africa. The foreign commodity chiefly sought after is blue cloth from Surat. They receive also spices, hardware, and toys, particularly a kind of black beads made at Venice.

In the early ages of Christianity this country, like Abyssinia, underwent a nominal conversion. The greater part of the inhabitants are now Mahometans however; but practise Pagan as well as Christian rites. The government is an absolute monarchy, founded as late as the sixteenth century by a body of Shilluk negroes. On the accession of a new king, all his brothers who can be found are almost invariably put to death : no female is allowed to reign, and the princesses, who are very numerous, meet with little more respect than their female attendants. This absolute power, however, is tempered by an extraordinary limitation, which is, that the king may lawfully be put to death by a council of the great officers, whenever they choose to decide that his reign is no longer for the benefit of the public. The execution of the sentence is en-» trusted to an officer called the sid-el-koom, who is a member of the monarch's own family, and master of

his household. The fact appears to be, that the hereditary kings have sunk into a species of pageants, kept up merely to amuse the people, and that the real power is now in the hands of the chief officers, civil and military. The troops stationed immediately around the capital consist of about 14,000, of a race of negroes called Nuba, from which is derived the general name of Nubia. The infantry are armed with a short javelin and a round shield, and appear to be by no means good troops ; but the horse amounting to 1800, though armed only with coats of mail and a broad Sclavonian

sword, appeared to Mr. Bruce equal to any he

had seen. Sennaar has three tributary governments : Kordofan, situated between Sennaar and Darfur, to which latter country it is occasionally subjected ; Fazuclo, to the south, a mountainous territory, affording a large supply of gold and slaves, the staples of interior Africa. The government of Sennaar, on conquering this territory, continued its mek or sovereign in the capacity of governor. The third government is that of El Acie, or Alleis, on the Bahr el Abiad, including the original country of the Shilluk tribes. The inhabitants are fishermen, and possess a vast number of boats, with large fleets of which they made their invasion in 1504, and possessed themselves of this sovereignty.

Mr. Bruce, who passed through this country in hft return from Abyssinia, gives a list of twenty kings who have reigned in it since its conquest by the Shilluks, and of the remarkable custom by which the king ascends the throne with the expectation of being murdered, whenever the general council of the nation thinks proper. The dreadful office of executioner belongs to a single officer, he says, styled, in the language of the country, Sid-el-Coom ; and who is always a relation of the monarch himself. It was from his registers that Mr. Bruce took the list of the kings already mentioned, with the number of years they reigned, and which may therefore be received as authentic. The Sid-el- Coom in office at the time that Mr. Bruce visited this country was named Achmet, and was one of his best friends. He had murdered the late king, with three of his sons, one of whom was an infant at its mother's breast ; he was also in daily expectation of performing the same office to the reigning sovereign. He was by no means reserved concerning the nature of his office. When asked by Mr. Bruce why he murdered the king's young son in his father's presence ? he answered that he did it from a principle of duty to the king himself, who had a right to see his son killed in a lawful and

regular manner, which was by cutting his throat with a sword, and not in a more painful or ignominious way, which the malice of his enemies might possibly have inflicted. The king, he said, was very little concerned at the sight of his son's death, but he was so very unwilling to die himself that he often pressed the executioner to let him escape ; but, finding his entreaties ineffectual, he submitted at last without resistance. On being asked whether he was not afraid of coming into the presence of the king, considering the office he might possibly have to perform ? he replied that he was not in the least afraid on this account ; that it was his duty to be with the king every morning, and very late in the evening ; that the king knew he would have no hand in promoting his death ; but that, when the matter was absolutely determined, the rest was only an affair of decency; and it would undoubtedly be his own choice rather to fall by the hand of his own relation in private than by a hired assassin, an Arab, or a Christian slave, in sight of the populace. On the death of any of the sovereigns of this country, his eldest son succeeds ; on which as many of his brothers as can be found are apprehended,

and put to death by the Sid-el-Coom. Women are excluded from the sovereignty here as well AS in Abyssinia. The princesses of Sennaar, however, are worse off than those of Abyssinia, having no settled income, nor being treated in any degree better than the daughters of private persons. The king is obliged, once in his lifetime, to plough and sow a piece of ground, whence he is named Baady, the ' countryman or peasant,' a title as common among the monarchs of Sennaar as Caesar was among the Romans. The royal family marry Arab women ; the white color of the mother is communicated to the child. This, Ve are told by Mr. Bruce, is invariably the case when a negro man of Sennaar marries an Arab woman ; and it holds equally good when an Arab man marries a negro wo-man ; and he likewise informs us that he never saw one black Arab all the time that he was at Sennaar. The soil and climate of this country is extremely unfavorable both to man and beast. The men are strong and remarkable for their size, but shortlived ; and there is such a mortality

among the children that, were it not for a constant importation of slaves, the metropolis would be depopulated. The shortness of their lives, however, may perhaps be accounted for, from their indulging themselves from their infancy in every kind of excess. No horse, mule, nor ass, will live at Sennaar, or for many miles round it. The case is the same with bullocks, sheep, dogs, cats, and poultry; all of them must go to the sands every half year. Bruce assures us this is the case every where about the metropolis of this country, where the soil is a fat earth during the first season of the rains. Two greyhounds which he brought along with him from Atbara, and the mules he brought from Abyssinia, lived only a few weeks after their arrival at Sennaar. Several of the kings of Sennaar have tried to keep lions, but it was almost found impossible to preserve them alive after the rains. They will live, however, as well as other quadrupeds, in the sands, at no great distance from the capital. No species of tree, except the lemon, flowers near this city. In other parts the soil of Sennaar is exceedingly fertile, being said to yield 300 fold.

About twelve miles to the northwest of Sennaar is a collection of villages named Shaddly, from a great saint of that name who constructed several granaries here. These granaries are large pits dug in the ground, and well plastered in the inside with clay, then filled with grain when it is at its lowest price, and afterwards covered up and plastered again at top : these pits they call matamores. On any prospect of dearth they are opened, and the corn sold to the people. About twenty-five miles north of Shaddly there is another set of granaries named Wed-Aboud, still greater than Shaddly ; and upon these two the subsistence of the Arabs principally depends : for as these people are at continual war with each other, and direct their fury rather against the crops than the persons of their enemies, the whole of them would be unavoidably starved, were it not for this extraordinary resource. Small villages of soldiers are scattered up and down this country to guard the grain after it is sown,

which is only that species of millet named dora. There are great hollows made in the earth at pro-per distances throughout the country, which fill with water in the rainy season, and are afterwards of great use to the Arabs as they pass from the cultivated parts of the sands. The fly, which is such a dreadful enemy to the cattle, is never seen to the northward of Shaddly. To the west of these granaries the country is quite full of trees as far as the river Abiad, or El-aice. In this extensive plain there are two ridges of mountains, one called Jebbel Moira, or the Mountain of Water ; the other Jibbel Segud, or the Cold

Mountain. Both enjoy a fine climate, and serve for a protection to the farms about Shaddly and Aboud already mentioned. ‘ Here also are fortresses placed in the way of the Arabs, which oblige them to pay tribute in their flight from the cultivated country, during the rains, to the dry lands of Atbara. Each of these districts is governed by the descendants of their ancient and native princes, who long resisted all the power of the Arabs. Sacrifices of a horrid na-ture are said to have been offered up on these mountains till about the year 1554, when one of the kings of Sennaar besieged first one and then the other of the princes in their mountains ; and, having forced them to surrender, he fastened a chain of gold to each of their ears, exposed them in the market-place at Sennaar, and sold them for slaves at less than a farthing each. Soon after this they were circumcised, converted to the Mahometan religion, and restored to their kingdom. ‘ Nothing,’ says Mr. Bruce, ‘ is more pleasant, than the country around Sennaar in the end of August and beginning of September. The grain, being now sprung up, makes the whole of this immense plain appear a level green land, interspersed with great lakes of water, and ornamented at certain intervals, with groups of villages ; the conical tops of the houses presenting at a distance the appearance of small encampments. Through this very extensive plain winds the Nile, a delightful river there, above a mile broad, full to the very brim, but never overflowing. Every where on these banks are seen herds of the most beautiful cattle of various kinds. The banks of the Nile about Sennaar resemble the pleasantest part of Holland in summer : but soon after, when the rains cease, and the sun exerts its utmost influence, the dora begins to ripen, the leaves to turn yellow and to rot, the lakes to putrefy, smell, become full of vermin, and all its beauty suddenly disappears : bare scorched Nubia returns, and all its terrors of poisonous winds and moving sands, glowing and ventilated with sultry blasts, which are followed by a troop of terrible attendants ; epilepsies, apoplexies, violent fevers, obstinate agues, and lingering painful dysenteries, still more obstinate and mortal. War and treason seem to be the only employments of this horrid people, whom Heaven has separated by almost impassable deserts from the rest of mankind; confining them to an accursed spot, seemingly to give them an earnest in time of the only other curse which he has reserved to them for an eternal hereafter.’

With regard to the climate of the country round Sennaar, Mr. Bruce has several very curious obser-

rations. The thermometer rises in the shade to 119°; but the degree indicated by this instrument does nptat all correspond with the sensations occasioned by it, nor with the color of the people who live under it. ‘ Nations of blacks,’ says he, ‘ live within lat. 13° and 14°; about 10° south of them, nearly under the line, all the people are white, as we had an opportunity of observing daily in the Galla Sennaar, which is in lat. 13°, and is hotter by the thermometer 50°, when the sun is most distant from it, than Gondar, which is a degree farther south when the sun is vertical. At Sennaar, from 70° to 78° of Fahrenheit’s thermometer is cool ; from 79° to 92° temperate ; at 92° begins warmth. Although* the degree of the thermometer marks a greater* heat than is felt by us strangers, the sensations of the natives bear still a less proportion to that degree than ours. On the 2nd of August, while I was lying perfectly enervated on a carpet in a room deluged with water at twelve o’clock, the thermometer at 116°, I saw several black laborers pulling down a house, working with great vigor, without any symptoms of being incommoded.’ The dress of the people of Sennaar consists only of a long shirt of blue cloth, which wraps them up from the under part of the neck to the feet. The men sometimes have a sash tied about their middle; and both men and women go barefooted in the houses, whatever their rank may be. The floors of their apartments, especially those of the women, are covered with Persian carpets. Both men and women anoint themselves, at least once a day, with camels’ grease mixed with civet, which, they imagine, softens their skins, and preserves them from cutaneous eruptions, of which they are so fearful that they confine themselves to the house, if they observe the smallest pimple on their skins. With the same view of preserving their skins, though they have a clean shirt every day, they sleep with a greased one at night, having no other covering but this. Their bed is a tanned bull’s hide, which this constant greasing softens very much ; it is also very cool, though it gives a smell to their bodies from which they cannot be freed by any washing. Our author gives a very curious description of the queens and ladies of the court at Sennaar. He had access to them as a physician, and was permitted to pay his visit alone. He was first shown into a large square apartment, where there were ‘ about fifty black women, all quite naked, excepting a very narrow piece of cotton rag about their waists. As he was musing whether these were all queens, one of them took him by the hand, and led him into another apartment much better lighted than the former. Here he saw three women sitting upon a bench or sofa covered with blue Surat cloth ; they themselves being clothed from the neck to the feet with cotton shirts of the same color. These were three of the king’s wives ; his favorite, who was one of the number, appeared to be about six feet

high, and so corpulent that our traveller imagined her to be the largest creature he had seen next to the elephant and rhinoceros. Her features perfectly resembled those of a ne-gro ; a ring of gold passed through her under Up, and weighed it down, till, like a flap, it

covered her chin, leaving her teeth bare, which were small and very fine. The inside of her lip was made black with antimony. Her ears reached down to her shoulders, and had the appearance of wings ; there was a gold ring in each of them about five inches in diameter, and somewhat smaller than a man's little finger; the weight of which had drawn down the hole, where her ear was pierced, so much that three fingers might easily pass above the ring. She had a gold necklace of several rows, one below another ; to which were hung rows of sequins pierced. She had two manacles of gold upon her ancles, larger than those used for chaining felons. Our author could not imagine how it was possible for her to walk with them, till he was informed that they were hollow. The others were dressed much in the same manner ; only there was one who had chains coming from her ears to the outside of each nostril, where they were fastened. A ring was also put through the gristle of her nose, and which hung down to the opening of her mouth ; having altogether sorrrething of the appearance of a horse's bridle ; and Mr. Bruce thinks that she must have breathed with difficulty.

SENNACHERIB, king of Assyria, succeeded his father Salmanasar, about A. A. C. 714. He-zekiah, king of Judea, having refused to pay him tribute, though he afterwards submitted, he invaded Judah with a great army, took several forts, and after repeated insolent and blasphemous messages besieged Jerusalem ; but his army being suddenly smitten with a pestilence, which cut off 185,000 in a night, he returned to Nineveh, where he was murdered in the temple of Nisroch by his sons Adramelech and Sharezer, and was succeeded by his other son Esar-haddon. (See ASSYRIA, and 2 Kings xviii. and xix.) Herodotus tells us that he also attempted to in-vade Egypt, but was defeated by an army of rats. See EGYPT.

SENNAR. See SENNAAR. SENNE, a river of the French empire, in the department of the Dyle, and ci-devant province of Austrian Brabant, which runs into the De-mer, a little below Malines.

SENNEFIELD, an imperial town of Germany, allotted by the division of the indemnities to the king of Bavaria, the same with Sennfield in Franconia, two miles southeast of Schwein-furt.

SENNERTUS (Daniel), an eminent physician, born in 1572 at Breslaw. In 1593 he was sent to Wirtemberg, where he made great progress in

philosophy and physic. He visited the universities of Leipsic, Jena, Francfort on the Oder, and Berlin ; but soon returned to Wirtemberg, where he obtained the degree of M. D., and soon after a professorship in the same faculty He was the first who introduced the study of chemistry into that university, and gained great reputation by his works, his practice, and his benevolent disposition. He died of the plague at Wirtemberg, in 1637. By contradicting the ancients, he raised himself enemies. Having asserted that the seed of all living creatures is animated, and that the soul of this seed produces organisation, he was accused of impiety, and even blasphemy. Among his writings

are, Epitome Naturalis Scientist, 1618, 8vo., repeatedly printed ; Liber de Chymicorum consensu et dissensu cum Aristotelicis et Galenicis, 1629, 4to. ; and Hypomnemata Physica,' -1650. These were much in request in the seventeenth century, and were published collectively at Lyons, 1676, 6 vols. folio.

SENXERTUS (Andrew), eldest son of the pre* ceding, also received his education at Wirtemberg, and after visiting Leipsic, Jena, and Strasburg, and the Dutch universities, became professor of the oriental languages in that university. He died in 1679, aged sixty-three. Besides a number of philological dissertations, he was the author of Hypotyposis Harmonica Linguarura Orientalium, Chaldeae, Syrse, Arabics cum Matre Hebraea, 1666, 4to.; Sciagraphia, Doctrinae inextricabalis adhuc de! Accentibus Hebraorum, 1664, 4to; Dissertatio de Lingua-rum Orientalrum Originibus, Antiquitate, Pro-gressione, Incrementis, 1669 ; &c. &c.

SEN'NIGHT, n.s. Contracted from sevennight. The space of seveft nights and days ; a week. See FORTNIGHT. If mention is made, on Monday, of Thursday sennight, the Thursday that follows the next Thursday is meant.

Time trots hard with a young maid between the contract of her marriage and the day it is solem nized ; if the interim be but a se'nnight, time's pace is so hard that it seems the length of seven years. Shakspeare. As You Like It.

SENOC'ULAR, adj. Lat. seni and oculus. Having six eyes.

Most animals are binocular, spiders octonocular, and some tenocular.

Derham's Physico-Theology.

SENOGALLIA, or SEX A, an ancient town of Italy, in Umbria, oh the Adriatic ; built by the Galli Senones, A. U. C. 396.

SENONES, in ancient history and geography, a people of Gallia Celtica, situated on the Se-quana to the south of the Parisii, near the confluence of the Jeavana or Yonne with that river. Their most considerable exploit was their invasion of Italy, and taking and burning of Rome. See ROME. This was done by a colony of them long before transported into Italy, and settled on the Adriatic. Their chief towns in Italy were Sena, Pisaurum, Ariminum, and Fa-num Fortunae. Their capital Agendicum, in Gaul, was in the lower age called Senones, now Sens. In Italy, the Senones extended themselves as far as the river Aesis ; but were afterwards driven beyond the Rubicon, which became the boundary of Galla Cisalpina. — Polybius, Strabo.

SENS, a considerable town of France, in the department of the Yonne, situated on a hill watered by that river, and by the Vanne. It is the see of an archbishop, and to the college belongs a mu-seum and library. It has manufactures of woollens, velvet, stockings, gloves, and leather ; the trade consists in corn, wine, wool, coal, and hemp. Several ecclesiastical councils have been held here ; among others that of 1140, in which the famous Abelard was condemned. It was taken by an allied force, chiefly Austrian, on the llth of February, 1814, but evacuated soon after. Thirty-four miles west of Troyes, and eighty-four southeast of Paris.

SEN

~| Fr. xens; Lat. sen-sus. Faculty or power by which external objects are perceived ; perception of such objects; hence intellectual perception ; apprehension ; understanding; reason ;

conscousness ; hence also, meaning; im-port : sensation is, perception by means of the senses ; hence men-tal emotion ; sensed (obsolete), perceived

SENSE, n. s.

SENSA’TIOX,

SENS’ED, adj

SEXSE’FUL,

SENSE’LESS,

SENSE’LESSLY, adv.

SEXSE’LESSNESS, n. s.

SEXSIBIL’ITY,

SENS’IBLE, adj.

SENS’IBLENESS, n. «.

SENS’IBLY, adv.

SENSITIVE, adj.

SENS’ITIVELY, adv.

SENSO’RHJM, n. s. . SENS’ORY,

SENSU’OUS, adj.

by the senses : senseful, reasonable, judicious (also disused) : senseless, wanting sense of any kind ; ignorant ; stupid ; unreasonable : the adjective and adverb corresponding : sensibility is quickness or delicacy of sensation; delicate perception : sensible, having the use of the senses or power of perception by them ; perceptible by the senses or by the mind ; perceiving by the mind or senses ; having moral or intellectual perception ; convinced, persuaded ; judicious ; wise : the noun substantive and adverb following correspond : sensitive is having sense or perception as distinct from reason ; the adverb corresponding : the sensorium or sensory is the seat of sense, or that part of the body whence the senses transmit the perceptions to the mind : sensuous is tender; pathetic; (used only by Milton).

This Basilius, having the quick tense of a lover, took as though his mistress had given him a secret reprehension. Sidney.

The charm and venom which they drunk, Their blood with secret filth

infected hath, Being diffused through the senseless trunk, That through the great contagion direful deadly stunk. Faerie Queene.

In this tense, to be preserved from sin is not impossible. Hooker.

Endless and senseless effusions of indigested prayers oftentimes disgrace, in most unsufferable manner, the worthiest part of Christian duty towards God.

Id.

By reason man attaineth unto the knowledge of things that are and are not sensible : it resteth, therefore, that we search how man attaineth unto the knowledge of such things unsensible as are to be known. Id.

That church of Christ, which we properly term his body mystical, can be but one ; neither can that one be sensibly discerned by any, inasmuch as the parts thereof are some in heaven already with Christ.

Would your cambrick were as sensible as your finger, that you might leave pricking it for pity.

Skakspeait.

If thot wert sensible of courtesy, I should not make so great a shew of zeal. Id.

The feasibleness of the eye renders it subject to pain, as also unfit to be dressed with sharp medicaments. Id.

He should have lived,

Save that his riotous youth, with dangerous sente. Might in the times to come have ta'en revenge. Id*

My hearty friends, You take me in too dolorous a sense

Id,

SEN

SEN

You blocks ! you worse than senseless things ! Id. He is your brother, lords ; sensibly fed Of that self-blood that first gave life to you. Id.

These be those discourses of God, whose effects those that live witness in themselves ; the sensible in their sensible natures, the reasonable in their reasonable souls. Raleigh.

Spiritual species, ‘both visible and audible, will work upon the sensories, though they rrove not any other body. Bacon.

In a living creature, though never so great, the sense and the effects of any one part of the body instantly make a transcursion throughout the whole. Id. Bacon’s Natural History. This color often carries the mind away, yea, it deceiveth the sense ; and it seemeth to the eye a shorter distance of way, if it be all dead and continued, than if it have trees or buildings, or any other marks whereby the eye may divide it.

Eacnn .

Though things sensible be numberless, Yet only five the senses’ organs be !

And in those five all things their forms express, Which we can touch, taste, feel, or hear, or see.

Davies.

If we had nought but sense, then only they Should have sound minds which have their senses

sound ;

But wisdom grows when senses do decay, And folly most in quickest sense is found. Id.

To draw Mars like a young Hippolitus, with an effeminate countenance, or that hot-spurred Harpa-iice in Virgil, proeeedeth from

a senseless and over-cold judgment. Peacham.

The brain, distempered by a cold, beating against the root of the auditory nerve, and protracted to the tympanum, causes the sensation of noise.

Harvey on Consumption.

If we be not extremely foolish, thankless, or senseless, a great joy is more apt to cure sorrow than a great trouble is. Taylor.

Some balances are so exact as to be sensibly turned with the eightieth part of a grain.

Wilkins's Math. Magic.

They would repent this their senseless perverseness when it would be too late, and when they found themselves under a power that would destroy them.

Clarendon. Both contain

Within them every lower faculty Of tense, whereby they hear, see, smell, touch, taste.

Milton.

God, to remove his ways from human seme, Placed heaven from earth so far. Id.

All before Richard I. is before time of memory, and what is since, is, in a legal sense, within the time of memory. Hak.

Diversity of constitution, or other circumstances, vary the sensations ; and to them of Java pepper is cold. Gtanville's Sceptis.

Let the sciolist tell me, why things must needs be so as his individual senses represent them ; is he sure that objects are not otherwise sensed by others, than they are by him ? And why must his sense be the infallible criterion? It may be, what is white to us, is black to negroes. Id.

A blind man conceives not colours, but under the notion of some other sensible faculty. Id.

The space left and acquired in every sensible mo-ment in such slow progressions, is so inconsiderable, that it cannot possibly move the

sense. Id.

I speak my private but impartial sense, With freedom, and, I hope, without offence.

Roscotnmon.

A haughty presumption, that because we are en-VOL. XX

couraged to believe that in some sense all things are made for man, that therefore they are not made at all for themselves. More.

In one sense it is, indeed, a building of gold and silver upon the foundation of Christianity. Tillotson.

The great design of this author's book is to prove this, which I believe no man in the world was ever so senseless as to deny. /^.

Of the five senses two are usually and most properly called the senses of learning, as being most capable of receiving communication of thought and notions by selected signs : and these are hearing and seeing. Holder's Elements of Speech.

Idleness was punished by so many stripes in pub-lic, and the disgrace was more sensible than the pain.

Temple.

A sudden pain in my right foot increased sensibly.

Id.

All the actions of the sensitive appetite are in painting called passions, because the soul is agitated by them, and because the body suffers and is sensibly altered. Dryden."

Even I, the bold, the sensible of wrong, Restrained by shame, was forced to hold my tongue.

Id.

Such is the mighty swiftness of your mind, That, like 'the earth's, it leaves the sense behind. Id.

In the due sense of my want of learning, I only make a confession of

my own faith. Id.

The wretch is drenched too deep ; His soul is stupid, and his heart asleep, Fattened in vice ; so callous and so gross, He sins and sees not, senseless of his loss. Id.

Some are so hardened in wickedness as to have no sense of the most friendly offices. L'Estrange.

I do not say there is no soul in man because he is not sensible of it in his sleep ; but I do say he cannot think at any time, waking or sleeping, without being sensible of it. Locke.

Other creatures, as well as monkies, little wiser than they, destroy their young by senseless fondness and too much embracing. Id.

If any one should be found so senselessly arrogant as to suppose man alone knowing and wise, and but yet the product of mere ignorance and chance, and that all the rest of the universe acted only by that blind hap-hazard, I shall leave with him that very rational and emphatical rebuke of Tully. Id.

This great source of most of the ideas we have depending wholly upon our senses, and derived by them to the understanding, I call sensation. Id.

Vegetables have many of them some degrees of motion, and, upon the different application of other bodies to them, do very briskly alter their figure and motion, and so have obtained the name of sensitive plants, from a motion which has some resemblance to that which in animals follows upon sensation. Id.

Bodies are such as are endued with a vegetative soul, as plants ; a sensitive soul, as animals ; or a rational soul, as the body of man. Ray.

The sensitive plant is so called because, as soon as you touch it, the leaf shrinks. Mortimer.

The senselessness of the tradition of the crocodile's moving his upper jaw, is plain, from the articulation of the occiput with the neck, and the nether jaw with the upper. Grew.

Men, otherwise senseful and ingenious, quote such things out of an author as would never pass in conversation. N orris.

It is a senseless thing, in reason, to think that one

of these interests can stand without the other, when,

in the very order of natural causes, government is

preserved by religion. South' s Sermons.

The senseless grave feels not your pious sorrows.

Rowe E

We name the lentilive, should move and feel ? Whence know her leaves to answer her command, And with quick horror fly the neighb'ring hand?

Prior.

She saw her favour was misplaced ; The fellows had a wretched taste ; She needs must tell them, to their face, They were a senteleti stupid race. Swift.

SENSES. The internal organs of the five senses— seeing, hearing, feeling, smelling, and tasting — are the nerves, small, thread-like fibres, distributed all over the body, and all connected with the brain. (See Nerves.) Few subjects, in comparative anatomy and physiology, have given rise to more various and contradictory opinions than the external organs of sense in some classes. Much misunderstanding on this point has arisen from the hasty application of inferences drawn from the human subject to other animals. Thus it has been supposed that those which possess a tongue must have it for the purpose of tasting, and that the sense of smell must be wanting where we are unable to trace the existence of a nose. But, in many instances, the tongue cannot, from its substance and mechanism, be considered as an organ of taste, and roust be merely subservient to the ingestion and

deglutition of food ; while in many animals, particularly insects, an acute sense of smell seems to exist, although no part can be pointed out in the head which analogy would justify us in describing as the nose. The sense of touch appears to exist only in four classes of animals, — in most mammalia, in a few birds, in serpents, and probably in insects ; and although all animals may possess that feeling which makes them sensible to the impressions of warmth and cold, very few possess, like the human subject, organs exclusively appropriated to the sense of touch, and expressly constructed for the purpose of feeling, examining, and exploring the qualities of external objects. (See Touch.) The sense of taste, as we have above remarked, does not appear to be confined to the tongue, that member being wanting in many animals which do not seem destitute of the sense ; and in many which possess it, the tongue is employed for other and different purposes. (See Taste.} The sense of smelling prevails much more extensively in the animal kingdom than that of taste, since it not only assists several genera in selecting their food, which they have not aiterwards the power of tasting, but is also of service in finding out proper objects for the satisfaction of their sexual appetites. (See Smell.) We should naturally expect to find an organ of hearing in most classes of animals, when we consider the various services which this sense performs, as that of indicating the approach of danger, of conducting beasts of prey to their food, &c. ; and even in those animals, in which no external organ of hearing is discoverable, the sense is evidently not wanting. (See Ear, and Hearing.) The power of vision is confined to those animals which are provided with eyes for the reception of the images of external objects. Some species, even of the higher orders, are destitute of the organ of vision, which is also entirely wanting

in the lower classes of the animal creation. (See Eye, and Optics.) It is by the senses that the mysterious communication between the spiritual soul and the external world of being is kept up. The manner in which this is done, is unknown to us ; we can trace the operation of outward matter, upon the organized material system, a few steps; but we soon lose sight even of these vestiges, and are obliged to acknowledge our ignorance of the workings of our own frame. We cannot give even a sketch of the speculations of philosophers on this subject, on which the history of philosophy, in fact, chiefly turns. SENSE, COMMON, is a term that has been variously used both by ancient and modern writers. With some it has been synonymous with public sense ; with others it has denoted prudence ; in certain instances it has been confounded with some of the powers of taste;

and, accordingly, those who commit egregious blunders with re-gard to decorum, saying and doing what is offensive to their company, and inconsistent with their own character, have been charged with a defect in common sense. Some men are distinguished by an uncommon acuteness in discovering the characters of others ; and this talent has been sometimes called common sense; similar to which is that use of the term which makes it to signify that experience and knowledge of life which is acquired by living in society. To this meaning Quintilian refers, speaking of the advantages of a public education, lib. i. cap. 2. But the term common sense hath in modern times been used to signify that power of the mind which perceives truth, or commands be-lief, not by progressive argumentation, but by an instantaneous, instinctive, and irresistible impulse ; “derived neither from education nor from habit, but from nature ; acting independently of our will whenever its object is presented, according to an established law, and therefore called sense ; and acting in a similar manner upon all, or at least upon a great majority of mankind, and therefore called common sense. See METAPHYSICS, and MORAL PHILOSOPHY.

SENSE, MORAL, is a determination of the mind to be pleased with the contemplation of those affections, actions, or characters, of rational agents, which we call good or virtuous. This moral sense of beauty in actions and affections may appear strange at first view ; some of our moralists themselves are offended at «it in lord Shaftesbury, as being accustomed to deduce every approbation or aversion from rational views of interest. It is certain that his lordship has carried the influence of the moral sense very far, and some of his followers have carried it farther. The advocates for the selfish system seem to drive their opinions to the opposite extreme, and we have elsewhere endeavoured to show that the truth lies between the contending parties. See MORAL PHILOSOPHY.

SENSE, PUBLIC, is defined by the noble author of the Characteristics to be an innate propensity to be pleased with the happiness of others, and to be upeasy at their misery. It is found, he says, in a greater or less degree in all men, and was sometimes called tcotvovoij/ta, or sensus communis, by ancient writers. Of the reality of this

public sense, we have great doubts: The conduct of savages, who are more under the influence of original instinct than civilised men, gives no countenance to it. Their affections seem all to be selfish, or to spring from self-love variously modified. For the happiness of their wives they hare very little regard ; considering them merely as instruments of their own pleasure, and valu-ing them for nothing else. Hence they make them toil, while they themselves indulge in listless idleness. To their children, we believe, they exhibit strong symptoms of attachment, as soon as they derive assistance from them in war, or in the business of the chase ; but, during the helpless years of infancy, the child is left by the selfish father wholly to the care and protection of its wretched mother ; who, impelled by the storge" of all females to their young, cherishes her offspring with great fondness. The savage is, indeed, susceptible of strong attachments, similar to that which we call friendship ; but such attachments are no proofs of disinterested benevolence, or what his lordship calls the public sense. Two barbarous heroes are probably first linked together by the observation of each other's prowess in war, or their skill in pursuing their game ; for such observations cannot fail to show them that they may be useful to one another; and we have elsewhere shown how real friendship may spring from sentiments originally selfish. The savage is very much attached to his horde or tribe, and this attachment resembles patriotism ; but patriotism itself is not a sentiment of pure benevolence, delighting in the happiness of others and grieving at their misery : for the patriot prefers his own country to all others, and is not very scrupulous with respect to the rectitude of the means by which he promotes its interest, or depresses its rivals. Witness Cato, whose patriotic attachment to his own country was equalled or exceeded by his vindictive ma-lice against the Carthaginians. See CATO. The savage pursues with relentless rigor the enemies of himself, or the tribe to which he belongs ; shows no mercy to them when in his power, but puts them to the cruellest death, and carries their scalps to the leader of his party. These facts, which cannot be controverted, are perfectly irre-concilable with innate benevolence, or a public sense, comprehending the whole race of men ; and show the truth of that theory by which we have in another place endeavoured to account for all the passions, social as well as selfish. See MORAL PHILOSOPHY.

SENSIBILITY, is a nice and delicate perception of pleasure or pain, beauty or deformity. It is very nearly allied to taste ; and, as far as it is

natural, seems to depend upon the organization of the nervous system. It is capable, however, of cultivation, and is experienced in a much higher degree in civilised than in savage nations, and among persons liberally educated than among boors and illiterate mechanics. He who has been long accustomed to that decorum of. manners which characterises the polite part of the world, perceives almost instantaneously the smallest deviation from it, and feels himself almost as much hurt by behaviour harmless in itself, as by the grosses* rudeness ; and the man

who has long proceeded steadily in the paths of virtue, and often reflected on the deformity of vice, and the miseries of which it is productive, is more quickly alarmed at any deviation from rectitude, than another who, though his life has been stained by no crime, has yet thought less upon the principles of virtue and consequences of vice. That sensibility which we either have from nature, or necessarily acquire, of the miseries of others, is of the greatest use when properly regulated, as it powerfully impels us to relieve their distress ; but, if it by any means becomes so exquisite as to make us shun the sight of misery, it counteracts the .end for which it was implanted in our nature, and only deprives us of happiness, while it contributes nothing to the good of others. Indeed there is reason to believe that all such extreme sensibilities are selfish affectations, employed as apologies for withholding from the miserable that relief which it is in our power to give ; for there is not a fact better established in the science of human nature, than that passive perceptions grow gradually weaker by repetition, while active habits daily acquire strength. It is every man's duty to cultivate his moral sensibilities, so as to make them subservient to the purposes for which they were given to him ; but if he either feel, or pretend to feel, the miseries of others to so exquisite a degree as to be unable to afford them the relief which they have a right to expect, his sensibilities are perverted. That the man of true sensibility has more pains and more pleasures than the callous wretch, is universally admitted, as well as that his enjoyments and sufferings are more exquisite in their kinds ; but as no man lives for himself alone, no man will acknowledge his want of sensibility, or express a wish that his heart were callous. See PHYSIOLOGY.

SENSITIVE PLANT. SeeDiONˆA, HEDYSARUM, and MIMOSA. The sensitive plants are well known to possess a kind of motion, by which the leaves and stalks are contracted and fall down upon being slightly touched, or shaken with some degree of violence. The contraction of the leaves and branches of the sensitive plant when touched is a very

singular phenomenon. Different hypotheses have been formed by botanists to explain it ; but these have generally been deduced rather from analogical reasoning than from a collection of facts and observations. The following arc the most important facts collected upon this curious subject. 1. It is difficult to touch the leaf of a healthy sensitive plant so delicately that it will not immediately collapse, the foliola or little leaves moving at their base till they come into contact, and then applying themselves close together. If the leaf be touched with a little more force, the opposite leaf will exhibit the same appearance. If a little more force be applied the partial footstalks bend down towards the common footstalk from which they issue, making with it a more acute angle than before. If the touch be more violent still, all the leaves situated on the same side with the one that has been touched will instantly collapse, and the partial footstalk will approach the common footstalk to which it is attached, in the same manner a* the partial footstalk of the leaf approaches tht

stem or branch from which it issues ;' so that the whole plant, from having its branches extended, •will immediately appear like a weeping willow. 2. These motions of the plant are performed by means of three distinct and sensible articulations. The first, that of the foliola or lobes to the partial footstalk; the second, that of the partial footstalk to the common one ; the third, that of the common footstalk to the trunk. The primary motion of all is the closing of the leaf upon the partial footstalk, which is performed in a similar manner, and by a similar articulation. This, however, is much less visible than the others. These motions are wholly independent on one another. 3. Winds and heavy rains make the leaves of the sensitive plant contract and close ; but no such effect is produced from slight showers. 4. At night, or when exposed to much cold in the day, the leaves meet and close in the same manner as when touched, folding their upper surfaces together, and in part over each other, like scales or tiles, so as to expose as little as possible of the upper surface to the air. The opposite sides of the

foliola or leaves do not come close together in the night, for when touched they apply themselves closer together. Dr. Darwin kept a sensitive plant in a dark place for some hours after day-break ; the leaves and footstalks were collapsed as in its most profound sleep ; and on exposing it to the light ,above twenty minutes passed before it was expanded. 5. In August a sensitive plant was carried in a pot out of its usual place into a dark cave, the motion that it received in the carriage shut, up its leaves, and they did not open till twenty-four hours afterwards ; at this time they became moderately open, but were afterwards subject to no changes at night or morning, but remained three days and nights with their leaves in the same moderately open state. At the end ‘of this time they were brought out again into the air, and there recovered their natural periodical motions, shutting every night, and opening every morning as naturally and as strongly as if the plant had not been in this forced state ; and while in the cave it was observed to be very little less affected with the touch than when abroad in the open air. 6. The great heats of summer, when there is open sunshine at noon, affect the plant in some degree like cold, causing it to shut up its leaves a little, but never in any very great degree. The plant, however, is least of all affected about 9 A. M., and that is consequently the most proper lime to make experiments on it. A branch of the sensitive plant cut off, and laid by, retains yet its property of shutting up and opening in the morning for some days ; and it holds it longer if kept with one end in water, than if left to dry more suddenly. 7. The leaves only of the sensitive plant shut up in the night, not the branches ; and if it be touched at this time the branches are affected in the same manner as in the day, shutting up, or approaching to the stalk or trunk, in the same manner, and often with more force. It is of no consequence what the substance is with which the plant is touched ; but there is a little spot, distinguishable by its paler color in the articulation of its leaves, where the greatest and nicest sensibility is evidently placed. 8. Du

Hamel having observed, about the 15lh of September, in moderate weather, the natural motion of a branch of a sensitive plant, remarked that at 9 A. M. it formed with the stem an angle ot 100°; at noon 112°; at 3 P.M. it returned to 100° ; and after touching the branch the angle was reduced to 90°. Three-quarters of an hour after it had mounted to 112°; and at 8 P. M. it descended again without being touched to 90°. The day after, in finer weather, the same branch, at 8 A. M., made an angle of 135° with the stem ; after being touched the angle was diminished to 80°; an hour after it rose again to 135°; being touched a second time it descended again to 80° ; an hour and a half after it had

risen to 145° ; and upon being touched a third time descended to 135°; and remained in that position till 5 P. M. when, being touched a fourth time, it fell to 110°. 9. The parts of the plant which have collapsed afterwards unfold themselves, and re-turn to their former expanded state. The time required for that purpose varies according to the vigor of the plant, the season of the year, the hour of the day, the state of the atmosphere. Sometimes half an hour is requisite, sometimes only ten minutes. The order in which the parts recover themselves varies in like manner; sometimes it is the common footstalk; sometimes the rib to which the leaves are attached ; and sometimes the leaves themselves are expanded before the other parts have made any attempt to recover their former position. 10. If, without shaking the other smaller leaves, we cut off the half of a leaf or lobe belonging to the last pair, at the extremity or summit of a wing, the leaf cut, and its antagonist, that is to say, the first pair, begin to approach each other; then the second, and so on successively, till all the lesser leaves, or lobes of that wing, have collapsed in like manner. Frequently, after twelve or fifteen seconds, the lobes of the other wings, which were not immediately affected by the stroke, shut ; whilst the stalk and its wing, beginning at the bottom, and proceeding in order to the top, gradually recover themselves. If, instead of one of the lesser extreme leaves, we cut off one belonging to the pair that is next the footstalk, its antagonist shuts, as do the other parts successively, from the bot-tom to the top. If all the leaves of one side of a wing be cut off, the opposite leaves are not affected, but remain expanded. With some address it is possible even to cut off a branch without hurting the leaves, or making them fall. The common footstalk of the winged leaves being cut as far as three-fourths of its diameter, all the parts which hang down collapse, but quickly recover without appearing to have suffered any considerable violence by the shock. An incision being made into one of the principal branches, to the depth of half the diameter, the branches betwixt the section and the root will fall down ; those above the incision remain as before, and the lesser leaves continue open; but this direction is soon destroyed by cutting off one of the lobes at the extremity. A whole wing being cut oh with precaution, nearits insertion into the common footstalk, the other wings are not affected by it, and its own lobes do not shut. No motion en-sues from piercing the branch with a meedle or

other sharp instrument. 11. If the end of one of the leaves be burned with the flame of a candle, or by a burning glass, or by touching it with hot iron, it closes up in a moment, and the opposite leaf does the same, and after that the whole series of leaves on each side of the partial or little footstalk; then the footstalk itself; then the brancli or common footstalk ; all do the same if the burning has been in a sufficient de-gree. This proves that there is a very nice communication between all the parts of the plant, by means of which the burning, which only is applied to the extremity of one leaf, diffuses its influence through every part of the shrub. If a drop of aquafortis be carefully laid upon a leaf of the sensitive plant, so as not to shake it in the least, the leaf does not begin to move till the acrid liquor corrodes the substance of it ; but at that time not only that particular leaf, but all the leaves placed on the same footstalk, close themselves up. The vapor of burning sulphur has also this effect on many leaves at once, according as they are more or less exposed to it ; but a bottle of very acrid and sulphureous spirit of vitriol, placed under the branches unstopped, produces no such effect. Wetting the leaves with spirit of wine has been observed also to have no effect, nor the rubbing oil of almonds over them ; though this last application destroys many plants. From the preceding experiments the following conclusions may be fairly drawn : 1. The contraction of the parts of the sensitive plant is occasioned by an external force, and the contraction is in proportion to the force. 2. All bodies which can exert any force affect the sensitive plant ; some by the touch or by agitation, as the wind, rain, &c. ; some by chemical influence, as heat and cold. 3. Touching or agitating the plant produces a greater effect than an incision or cutting off a part, or by applying heat or cold. Attempts have been made to explain these curious phenomena. Dr. Darwin, in the notes to his admired poem entitled the Botanic Garden, lays it down as a principle, that ‘ the sleep of animals consists in a suspension of voluntary mo-tion ; and, as vegetables are subject to sleep as well as animals, there is reason to conclude, says he, that the various action of closing their petals and foliage may be justly ascribed to a voluntary power ; for without the faculty of volition sleep would not have been necessary to them.’ Whether this definition of sleep when applied to animals be just, we shall not enquire ; but it is evident that the supposed analogy between the sleep of animals and the sleep of plants has led Dr. Darwin to admit this astonishing conclusion, that plants have volition ! As volition presupposes a mind or soul, it were to be wished that he had given us some information concerning the nature of a vegetable

soul, which can think and will. We suspect, however, that this vegetable soul will turn out to be a mere mechanical or chemical one ; for it is affected by external forces uniformly in the sˆame way, its volition is merely passive, and never makes any successful resistance against those causes by which it is influenced. All this is a mere abuse of words. The sleep of plants is a metaphorical expression, and has not the least resemblance to the sleep of

animals. Plants are said to sleep when the flowers or leaves are contracted or folded together ; but we never heard that there is any similar contraction in the body of an animal during sleep. See PHYSIOLOGY. The fibres of vegetables have been compared with the muscles of animals, and the motions of the sensitive plant have been supposed the same with muscular mo-tion. Between the fibres of vegetables and the muscles of animals, however, there is not the least similarity. If muscles be c>it through, so as to be separated from the joints to which they are attached, their powers are completely destroyed ; but this is not the case with vegetable fibres. The following very ingenious experiment, which was communicated to us by a respectable member of the university of Edinburgh, is decisive on this subject. He selected a growing poppy, at that period of its growth, before unfolding, when the head and neck are bent down al-most double. He cut the stalk where it was curved half through on the under side, and half through at a small distance on the upper side, and half through in the middle point between the two sections, so that the ends of the fibres were separated from the stalk. Notwithstanding these several cuttings on the neck, the poppy raised it? head, and assumed a more erect position. There is, therefore, a complete distinction between muscular motion and the motions of a plant; fo no motion can take place in the limb of an ani •• mal when the muscles of that limb are cut. In fine, we look upon all attempts to explain the motions of plants as absurd, and all reasoning from supposed analogy between animals anci vegetables as the source of wild conjecture, and not of sound philosophy. We view the contraction and expansion of the sensitive plant in the same light as we do gravitation, chemical attraction, electricity, and magnetism, as a singular fact, the circumstances of which we may be fully acquainted with, but must despair of understanding its cause. What has been said under this article chiefly refers to the mimosa sensitiva and pudica. For a full account of the motions of vegetables in general, see MOTION.

SENSITIVE PLANT, BASTARD. See JESCHYNO-MENE.

SENSORIUM, in anatomy. See ANATOMY.

SEN’SUAL, adj. -\ Fr. sensual. Consisting

SEN’SUALIST, n. s. I in sense; depending on

SENSUAL’TTY, >or affecting the senses;

SEN’SUALIZE, v. a. i devoted to sense ; affect—

SEN’SUALLY, adv.) ing the senses ; lewd i all the derivativesifollow these senses.

The greatest part of men are such as prefer their own private good before all things, even that good which is sensual before whatever is most divine.

Hooker.

But you are more intemperate in your blood Than Venus, or those pampered animals That rage in savage sensuality. Shaltspeare.

Kill not her quickening power with surfeiting* ; Mar not her sense with sensualitu ;

Cast not her serious wit on idle things ; Make not her free-will slave to vanity. Dacii«»

From amidst them rose Belial, the dissolutest spirit that fell ; The sensuallest, and after Asmodai The fleshliest incubus. Milton.

Men in general are too partial in favour of a sentual appetite, to take notice of truth when they have found it. L’ Estrange.

Let atheists and tentualists satisfy themselves as they are able ; the former of which will find, that, as long as reason keeps her ground, religion neither can nor will lose hers. South.

Seniuality is one kind of pleasure, such an one as it is. (d.

They avoid dress, lest they should have affections tainted by any sensuality, and diverted from the love of him who is to be the only comfort and delight of their whole beings. ˆAMison.

No small part of virtue consists in abstaining from that wherein sentual men place their felicity.

Atterbury.

Impure and bnital sensuality was too much confirmed by the religion of those countries, where even Venus and Bacchus had their temples.

Bentley.

Far as creation's ample range extends, The scale of sensual, mental powers ascends. Pope.

Not to suffer one's self to be sensualized by pleasures, like those who were changed into brutes by Circe. U.

SENTENCE, n. s. & u.a.-x Fr. sentence;

SEN'TENTIOSITY, I Latin sententia.

SENTENTIOUS, adj. > Determination or

SEN'TENTIOUSLY, adv. i decision ; legal

SEN'TENTIOUSNESS, n. &. J decision or doom ; maxim ; short paragraph or period : sententiosity is comprehension in a sentence : sententious, abounding in maxims or proverbs ; comprising sentences : the adverb and noun substantive corresponding.

Now also will I give sentence against them.

Jeremiah iv. 12.

An excellent spirit, knowledge, understanding, and shewing of hard sentences were found in Daniel.

Dan. v. 12.

If we have neither voice from heaven, that so pro-nounceth of them, neither sentence of men grounded upon such manifest and clear proof, that they, in whose hands it is to alter them, may likewise infallibly, even in heart and conscience, judge then? so : upon necessity to urge alteration, is to trouble and disturb without necessity. Hooker.

After this cold considerance sentence me ; And, as you are a king, speak in your state, What I have done that misbecame my place.

Sluikspeare.

He is very swift and sententious.

Id. As You Like It.

By the consent of all laws, in capital causes, the evidence must be full and clear ; and if so, where one man's life is in question, what say we to a war, which is ever the sentence of death upon many 2

Bacon's Holy War.

They describe her in part finely and elegantly, and in part gravely and sententiously : they say, look how many feathers she hath, so many eyes she hath underneath. Id. Essays.

Eyes are vocal, ears have tongues : Sententious showers ! O let them fall ! Their cadence is rhetorical. Craihaw.

What rests but that the mortal sentence pass ?

Stilton.

Came the mild judge and intercessor both To sentence man. Id.

Vulgar precepts in morality carry with them nothing above the line, or beyond the extemporary untentiosity of common conceits with us.

Pitw-ne's Vulgar Errours.

Eloquence, with all her pomp and charms, Foretold us useful and sententious truths. Waller.

Idleness, sentenced by the decurions, was punished by so many stripes. Temple.

Could that decree from our brother come ? Nature herself is sentenced in your doom : Piety is no more. Dryden.

The Medea I esteem for the gravity and sententiousness of it, which he himself concludes to be suitable to a tragedy. Id. .

The making of figures being tedious, and requiring much room, put men first upon contracting them, as by the most ancient Egyptian monuments it appears they did : next, instead of sententious marks, to think of verbal, such as the Chinese still retain. Grew's Cesmologia.

If matter of fact breaks out with too great an evidence to be denied, why, still there are other lenitives, that friendship will apply, before it will be brought to the decretory rigours of a condemning sentence. South's Sermons.

How he apes his sire, Ambitiously sententious ! Addison's Cato.

Let him set out'some of Luther's works, that by them we pass sentence upon his doctrines.

Atterbury.

A sentence may be defined a moral instruction couched in few words. Broome's Notes on Odyssev.

Nausicaa delivers her judgment sententiously, to give it more weight. Broome.

SENTENCE, in grammar, denotes a period, or a set of words comprehending some perfect sense or sentiment of the mind. The business of pointing is to distinguish the several parts or members of sentences, so as to render the sense thereof as clear, distinct, and full as possible. See PUNCTUATION. In every sentence there are two parts necessarily required : a noun for the subject, and a definite verb ; whatever is found more than these two affects one of them, either immediately, or by the intervention of some other, whereby the first is affected. Again, every sentence is that consisting of one single subject and one finite verb. A compound sentence contains several subjects and finite verbs, either expressly or implicitly. A simple sentence needs no point or distinction ; only a period to close it : as, ' A good man loves virtue for itself. ' — In such a sentence the several adjuncts affect either the subject or the verb in a different manner. Thus the word good expresses the quality of the subject, virtue the object of the action, and for itself, the end thereof. Now none of these adjuncts can be separated from the rest of the sentence ; for if one be why should

not all the rest? and, if all be, the sentence will be minced into almost as many parts as there are words. But if, several adjuncts be attributed in the same manner either to the subject or the verb, the sentence becomes compound, and is to be divided into parts. In every compound sentence as many subjects, or as many finite verbs as there are, either expressly or implied, so many distinctions may there be. Thus, ‘ My hopes, fears, joys, pains, all centre in you.’ And thus, Catilina abut, excessit, evasit, erupit. The reason of which pointing is obvious ; for as many subjects or finite verbs as there are in a sentence, so many members does it really contain. Whenever, therefore, there occur more nouns than verbs, or contrariwise, they are to be conceived as equal. Since, as every subject requires its

verbs, so every verb requires its subject, wherewith it may agree ; excepting, perhaps, in some figurative expressions.

SE’NTICOSE (from sentis, a briar or bramble), the name of the thirty-fifth order in Lin-nffius’s fragments of a natural method, consisting of rose, bramble, and other plants, which resemble them in port and external structure. See BOTANY, Index.

SEN’TIENT, adj. Lat. sentiens. Perceiving; laving perception.

This acting of the sentient phantasy is performed by a presence of sense, as the horse is under fhe . sense of hunger, and that, without any formal syl- .ogism, presseth him to eat. Hale.

If the sentient be carried, passibus aequis, with the b>dy whose motion it would observe, supposing it regular, the remove is insensible.

Glanville’s Scepsis.

SENTIMENT, n. s. Fr. sentiment. Thought; notion; opiniQn; the sense or meaning of a composition; a particular or striking thought.

The consideration of the reason why they are an-rexed to so many other ideas, serving R> give us <he sentiments of the wisdom and goodness of the scvereign Disposer of all things, may not be un-su table to the main end of these enquiries. Locke.

Those who could no longer defend the conduct of Cito, praised the sentiments. Dennis.

9ne of differing sentiments would have drawn Luher over to his party. Atterbury.

Alike to council or the assembly came, Wth equal souls and sentiments the same. Pope.

“homas Tusser, who though he wrote in verse now alnost unintelligible, was a very honest and a very setsible man, was a great friend to inclosures, and for this reason quoted by Blith and others in support of tieir concurring sentiments on this subject.

Campb. Pol. Surv.

Tiere is nothing in itself valuable or despicable, desiable or hateful, beautiful or deformed ; but thes attributes arise from the particular constitution and’abric of human sentiment and affection.

Hume.

SBTTIMENT, according to lord Kames, is a term appropriated to such thoughts as are prom>ted by passion. It differs from a perception ; for a perception signifies the act by which wt become conscious of external objects. It diFers from consciousness of an internal ac-ti<n, such as thinking, suspending thought, inclining, resolving, willing, &c. And it dif-feg from the conception of a relation among obects ; a conception of that kind being termed opnion.

SENTIMENTS, in poetry. To talk in the language of music, each person has a certain tone, to vhich every sentiment proceeding from it ougt to be tuned with the greatest accuracy: whih is no easy work, especially where such harrony ought to be supported during the courg of a long theatrical representation. To react such delicacy of execution, it is necessary that writer assume the precise character and passici of the personage represented ; which requiis an uncommon genius. But it is the only cfficulty ; for the writer, who, annihilating himsel can thus become another person, need be in r> pain about the sentiments that belong to the fcsumed character : these will flow without stuv, or even preconception ; and will fre-

quently be as delightfully new to himself as to his reader. But if a lively picture even of a single emotion require an effort of genius, how much greater the effort to compose a passionate dialogue with as many different tones of passion as there are speakers ! With what ductility of feeling must that writer be endued, who approaches perfection in such a work ; when it is necessary to assume different and even opposite characters and passions in the quickest succession ! - Yet this work, difficult as it is, yields to that of composing a dialogue in genteel comedy, exhibiting characters without passion. The reason is, that the different tones of character are more delicate, and less in sight, than those of passion; and, accordingly, many writers, who have no genius for drawing characters, make a shift to represent, tolerably well, an ordinary passion in its simple movements. But of all works of this kind, what is truly the most difficult is a characteristical dialogue upon any philosophical or philological subject; to interweave characters with reasoning, by suiting to the character of each speaker a peculiarity not only of thought but of expression, requires the perfection of genius, taate, and judgment. A deficiency in this leads a writer to convert himself into a spectator, so as to figure, in some obscure manner, an action as passing in his sight and hearing. In that figured situation, being led to write like a spectator, he entertains his readers with his own reflections, with cool description, and florid declamation ; instead of making them eye-witnessesˆ as it were, to a real event, and to every movement of genuine passion. Thus most of our plays appear to be cast in the same mould ; personages without character, the mere outlines of passion, a tiresome monotony, and a pompous declamatory style. Unhappy is the player of genius who acts a part in what may be termed a descriptive tragedy ; after assuming the very passion that is to be represented, how he is cramped in action, when he must utter, not the sentiments of the passion he feels, but a cold description in the language of a by-stander ! It is that imperfection, undoubtedly, in the bulk of our plays, which confines our stage almost entirely to Shakspeare, notwithstanding his many irregularities. In our late English tragedies, we sometimes find sentiments tolerably well adapted to a plain passion : but we must not in any of them expect a sentiment expressive of character ; and, upon that very account, our late performances of the dramatic kind are for the most part intolerably insipid. But it is proper to illustrate this subject by examples. The first examples shall be of sentiments that appear the legitimate offspring of passion ; to which shall be opposed what are descriptive only, and illegitimate ; and, in making this comparison, the instances shall be borrowed from Shakspeare and

Corneille, who for genius in dramatic composition stand uppermest in the rolls of fame. I. Shakespeare shall furnish the firsv example, being of sentiments dictated by a violent and perturbed pas •

Lear.

• Filial ingratitude !

Is it not as if this mouth should tear this hand For lifting food to't ?— But I'll punish home : No, I will weep no more. — In such a night

To sh«t me out !

SENTIMENT.

-Pour on, I will endure.

In such a night as this ! O Regan, Goneril ! Your old kind father, whose frank heart gave all —

0 ! that way madness lies ; let me shun that ;

No more of that. •• Act 3, sc. 3,

With regard to the French author, truth obliges us to acknowledge thai he describes in the style of a spectator, instead of expressing passion like one who feels it; which naturally betrays him into a pompous declamatory style. It is scarcely necessary to give examples, for he never varies from that tone. We shall, however, take two passages at a

venture, to be confronted with the above. In the tragedy of Cinna,, after the conspiracy was discovered, ˆEmilia, having nothing in view but racks and death to herself and her lover, receives a pardon from Augustus, attended with the brightest circumstances of magnanimity and tenderness. This is a lucky situation for representing the passions of surprise and gratitude in their different stages, which seem naturally to be what follow. These passions, raised at once to the utmost pitch, and being at first too big for utterance, must, for some moments, be expressed by violent gestures only; so soon as there is vent for words, the first expressions are broken and interrupted : at last, we ought to expect a tide of intermingled sentiments, occasioned by the fluctuation of the mind between the two different passions. ./ Emilia is made to behave in a very different manner: with extreme coolness she describes her own situation, as if she were merely a spectator; or rather the poet takes the task off her hands : — Kt je me rends, Seigneur, a ces hautes bontes ; Je recouvre la vile aupres de leurs clart£s. Je connois mon forfait quime sembloit justice ; Et ce que n'avoit pfl la terreur du supplice, Je sens naitre en mon ame un repentir puissant, Et mon cceur en secret me dit, qu'il y consent, &c.

Act 5, sc. 3.

So much in general upon the genuine sentiments of passion. We proceed to particular observations. And, first, passions seldom continue uniform any considerable time ; they generally fluctuate, swelling and subsiding by turns, often in a quick succession ; and the sentiments cannot be just unless they correspond to such fluctuation. Accordingly, a climax never shows better than in expressing a swelling passion ; the following passage may suffice for an illustration : —

1 would not be the villain that thou think'st For the whole space that's in the tyrant's grasp. And the rich earth to boot. Macbeth, act 4, sc. 4. The following passage expresses finely the progress of conviction : —

Let me not stir nor breathe, lest I dissolve That tender, lovely form, of painted air, So like Almeria. Ha ! it sinks, it falls : I'll catch it ere it goes, and grasp her shade. 'Tis life ! 'tis warm ! 'tis she ! 'tis she herself ! It is Almeria ! 'tis, it is my wife !

Mourning Bride, act 2, sc. 6. In the progress of thought, our resolutions be-come more vigorous as well as our passions : —

If ever I do yield or give consent, By any action, word, or thought, to wed Acother lord, may then just heav'n shower down, &c. Mourning Bride, act 1, sc. 1.

This leads to a second observation, That the dif ferent stages of a passion, and its different directions, from birth to extinction, must be carefully represented in their order, because otherwise the sentiments, by being misplaced, will appear forced and unnatural. Resentment, for example, when provoked by an atrocious injury, discharges itself first upon the author ; sentiments therefore of revenge come always first, and must in some measure be exhausted before the person injured think of grieving for himself. See examples of this in the Cid of Corneille, act 1, sc. 7; the Aminta of Tasso, act 4, sc. 2, and the tragedy o' Jane Shore, act 3, sc. 1. 3. A person sometime* is agitated at once by different passions ; and the mind in that case, vibrating like a pendulum, vents itself in sentiments that partake of the same vibration.

Queen. Would I had never trod this English

earth,

Or felt the flatteries that grow upon it ! Ye've angel's faces, but heav'n knows your hearts. What shall become of me now ? wretched lady ! I am the most unhappy woman living. Alas ! poor wenches, where are now your fortunes ?

[To her woman

Shipwreck'd upon a kingdom, where no pity, No friends, no hope, no kindred weep for me ! Almost no grave allowed me.

Henry VIII., act 3, sc. ?. JEmilia. Oh ! my good lord, I would speal a

•word with you. Othello. Yes, 'tis ˆEmilia— By and by.— Sfo's

dead.

Tis like she comes to speak of Cassio's death ; The noise was high— Ha ! no more moving ? Still as the grave. Shall she come in ? wer't god ? I think she stirs again — No — what's the best 1 If she come in, she'll sure speak to my wife : My wife ! my wife ! what wife ? I have no wife; Oh insupportable ! oh heavy hour ?

Othello, act 5, sc.7.

4. A fourth observation is, That nature, vuich gave us passions, and made them extremel; beneficial when moderate, intended undoubedly

that they should be subjected to the government of reason and conscience. It is therefore against the order of nature that passion in am case should take the lead in contradiction to reasm and conscience : such a state of mind is a scrt of anarchy which every one is ashamed of a'd endeavours to hide or dissemble. Even loe, however laudable, is attended with a consciftis shame when it becomes immoderate ; it is o-vered from the world, and disclosed only to.he beloved object : —

Et que 1'amour souvent de reraors combattu Paroisse une foiblesse, et non une vertu.

Boileau, I' Art Poet, chant. 3, 1. 01.

O, they love least that let men know they lot.

Two Gentlemen of Verona, act 1, si 3. Hence a capital rule in the representation c immoderate passions, that they ought to be Id or dissembled as much as possible. And thisholds in a special manner with respect to crimifll passions : one never counsels the commissin of a crime in plain terms; guilt must not apear in its native colors, even in thought; the foposal must be made by hints, and by represe(ing the action in some favorable liglu. Of the fopriety

of sentiment upon such an occasion, Shakspeare, in the Tempest, has given us a beautiful example, in a speech by the usurping duke of Milan, advising Sebastian to murder his brother the king of Naples : —

Antonio. • • — What might,

Worthy Sebastian, — O, what might, — no more.

And yet, methinks I see it in thy face

What thou should'st be : the occasion speaks thee,

and

My strong imagination sees a crown Dropping upon thy head. Act 2, sc. 2.

A picture of this kind, perhaps still finer, is exhibited in king John,

where that tyrant solicits (act 3, sc. 5.) Hubert to murder the young prince Arthur; but it is too long to be inserted here. II. As things are best illustrated by their contraries, we proceed to faulty sentiments, of which we shall quote examples from the most approved authors. The first class contains faulty sentiments of various kinds, which we shall endeavour to distinguish from each other. 1. Of sentiments that are faulty by being above the tone of the passion, the following is an example : —

Othello. • O my soul's joy !

If after every tempest comes such calms,

May the winds blow till they have waken'd death ;

And let the laboring bark climb hills of seas

Olympus high, and duck again as low

As hell's from heaven ! Othello, act 2, sc. 6.

This sentiment may be suggested by violent and inflamed passion, but is not suited to the satisfaction, however great, that one feels upon escaping danger. 2. Instance of sentiments below the tone of the passion. Ptolemy, by putting Pompey to death, having incurred the displeasure of Caesar, was in the utmost dread of being dethroned : in that agitating situation, Corneille makes him utter a speech full of cool reflection, that is in no degree expressive of the passion. See La Mort de Pompe, act 4, sc. 1. 3. Sentiments that agree not with the tone of the passion ; as where a pleasant sentiment is grafted upon a painful passion, or the contrary. In the following instances the sentiments are too gay for a serious passion : —

No happier task these faded eyes pursue; To read and weep is all they now can do.

Eloisa to Abelard, 1. 47.

4. Sentiments too artificial for 'a serious passion. The first example is a speech of Percy expiring:—

0, Harry, thou hast robb'd me of my growth : I better brook the loss of brittle life, Than those proud titles thou hast won of me ; They wound my thoughts worse than thy sword my

flesh.

But thought's the slave of life, and life time's fool ; And time, that takes survey of all the world Must have a stop.

First Part, Henry IV., act 5, sc. 9.

The sentiments of the Mourning Bride are for the most part no less delicate than just copies of nature. In the following exception the picture is beautiful, but too artful to be suggested by severe grief : —

Almeria. O no ! Time gives increase to my

afflictions. The circling hours, that gather all the woes i

Which ire diffused through the revolving year, Come heavy laden with the oppressive weight To me ; with me, successively, they leave The sighs, the tears, the groans, the restless cares, And all the damps of grief, that did retard their

flight ;

They shake their downy wings, and scatter all The dire collected dews on my poor head ; Then fly with joy and swiftness from me.

Act 1, sc. 1.

In the same play, Almeria seeing a dead body, which she took to be Alphonso's, expresses sentiments strained and artificial, which nature suggests not to any person upon such an occasion.

See act 5, sc. 11.

5. Fanciful or finical sentiments. Sentiments that degenerate into point or conceit, however they may amuse in an idle hour, can never be the offspring of any serious or important passion. In the Jerusalem of Tasso, Tancred, after a sin-gle combat, spent with fatigue and loss of blood, falls into a swoon ; in which situation, understood to be dead, he is discovered by Erminia, who was in love with him to distraction. A more happy situation cannot be imagined to raise grief in «in instant to the highest pitch; and yet, in venting her sorrow, she descends most abominably into antithesis and conceit even of the lowest kind. See Canto 19, st. 105.

Armida's lamentation respecting her lover Hi-naldo is in the same vicious style. See Canto 20, st. 124, 125, 126.

Queen. Give me no help in lamentation ; I ‘am not barren to bring forth complaints ; All springs reduce their currents to mine eyes, That I, being governed by the wat’ry moon, May send forth plenteous tears to drown the world, Ah for my husband, for my dear lord Edward.

King Richard III. act 2, sc. 2. Jane Shore utters her last breath in a witty conceit : —

Then all is well, and I shall sleep in peace -

‘Tis very dark, and I have lost you now

Was there not something I would have bequeath’d

you ?

But I have nothing left me to bestow, Nothing but one sad sigh. Oh mercy, Heav’n !

[Dies. Act 5.

Corneille, in his Examen of the Cid, answering an objection, that his sentiments are sometimes too much refined for persons in deep distress, observes that, if poets did not indulge sentiments more ingenious or refined than are prompted by passion, their performances would often be low, and extreme grief would never suggest but exclamations merely. This is to assert that forced thoughts are more agreeable than those that are natural, and ought to be preferred. 2. The second class is of sentiments that may belong to an ordinary passion, but are not perfectly con-cordant with it, as tinctured by a singular cnaracter. In the last act of that excellent comedy The Careless Husband, Lady Easy, upon Sii Charles’s reformation, is made to express more violent and turbulent sentiments of joy than are consistent with the mildness of her character. Lady Easy. — O the soft treasure ! O the dear re-ward of long desiring love. — Thus ! thus to have you mine is something more than happiness ; ‘tis double life, and madness of abounding >oy.

3. The following instances are descriptions rather than sentiments, which compose a third class. Of this descriptive manner of painting the passions there is in the Hippolytus of Euripides, act 5, an illustrious instance, *viz.* the speech of Theseus, upon hearing of his son's dismal exit. In Racine's tragedy of Esther, the queen, hearing of the decree issued against her people, instead of expressing sentiments suitable to the occasion, turns her attention upon herself, and describes with accuracy her own situation. Juste ciel ! tout mon sang dans mes veines se glace. Act 1, sc. 3.

4. The fourth class is of sentiments expressed too early or too late. The following, from Venice Preserved, act 5, at the close of the scene between Belvidera and her rather Priuli, is of this class. The account given by Belvidera of the danger she was in, and of her husband's threatening- to murder her, ought naturally to have alarmed her relenting father, and to have made him express the most perturbed sentiments. Instead of which, he dissolves into tenderness and love for his daughter, as if he had already deli-T-ered her from danger, as if there were a perfect tranquillity : —

I'll henceforth be indeed a father ; never Never more thus expose, but cherish thee, Dear as the vital warmth that feeds my life, Dear as those eyes that weep in fondness o'er thee : Peace to thy heart.

5. Immoral sentiments exposed in their native colors, instead of being concealed or disguised, compose the fifth class. The Lady Macbeth, projecting the death of the king, has the following soliloquy : —

Come, all you spirits

That tend on mortal thoughts, unsex me here, And fill me from the crown to the toe, top full Of direct cruelty ; make thick my blood, Stop up the access and passage to remorse, That no compunctious visitings of nature Shake my fell purpose. Macbeth, act 1, sc. 7.

This speech is not natural. A treacherous mur-der was never perpetrated even by the most hardened miscreant without compunction : and that the lady here must have been in horrible agitation appears from her invoking the infernal spirits to fill her with cruelty, and to stop up all avenues to remorse. But in that state of mind it is a never-failing artifice of self-deceit to draw the thickest veil over the wicked action, and to extenuate it by all the circumstances that imagination can suggest ; and, if the crime cannot bear disguise,

the next attempt is to thrust it out of the mind altogether, and to rush on to action without thought. This last was the husband's method : —

Strange things I have in head, that will to hand : Which must be acted ere they must be scann'd.

Act 3, sc. 5.

The lady follows neither of these courses, but in a deliberate manner endeavours to fortify her heart in the commission of an execrable crime, without even attempting to color it. This, we think, is not natural; we hope there is no such wretch to be found as is here represented. 6.

The last class comprehends sentiments that are unnatural, as being suited to no character nor passion. These may be subdivided into three branches : — 1. Sentiments unsuitable to the constitution of man, and to the laws of his nature; 2. inconsistent sentiments; 3. sentiments that are pure rant and extravagance. When the fable is of human affairs, every event, every incident, and every circumstance, ought to be natura., otherwise the imitation is imperfect. But an imperfect imitation is a venial fault, compared with that of running cross to nature. In the Hippolytus of Euripides (activ. sc. 5.) Hippolytus, wishing for another self in his own situation, ' How much,' says he, ' should I be touched with his misfortune ! ' as if it were natural to grieve more for the misfortune of another than for one's own.

Omyn. Yet I beheld her — yet — and now no

more.

Turn your light inward, eyes, and view my thought - So shall you still .behold her— Twill not be. O impotence of sight ! &c.

Mourning Bride, act 2, sc. 8. No man in his senses ever thought of applying his eyes to discover what passes in his mind ; far less of blaming his eyes for not seeing a thought or idea. In Moliere's 1' Avare (act iv. sc. 7) Harpagon, being robbed of his money, seizes himself by the arm, mistaking it for that of the robber. This is so absurd as scarce to provoke a smile, if it be not at the author. Of the second branch the following example may suffice : — • — Now bid me run,

And I will strive with things impossible,

Yea, get the better of them.

Julius Caesar, act 2, sc. 3.

Of the third branch, take the following samples. Lucan, talking of Pompey's sepulchre, lib. vii. 1. 798. According to Howe's translation:

Where there are seas, or air, or earth, or skies, Wher'er Rome's empire stretches, Pompey lies. If Fate decrees he must in Egypt lie, L«t the whole fertile realm his grave supply. Yield the wide country to his awful shade, J

Nor let us dare on any part to tread, Fearful we violate the mighty dead ! 3

This supposed omnipresence of Pompey's body is not only unnatural, but ridiculous. The following passages are pure rant. Coriolanus, speaking to his mother, says, What is this ?

Your knees to me ? to your corrected son? Then let the pebbles on the hungry beach Fillop the stars : then let the mutinous winds Strike the proud cedars 'gainst the fiery sun : Murd'ring impossibility, to make What cannot be, slight work !

Coriolanus, act. 5, sc. 3.

Lassar. -Danger knows full well,

That Caesar is more dangerous than he, We were two lions litter'd in one day, And I the elder and more terrible.

Julius Caesar, act. 2, tc. 4.

Ventidius. Fram'd in the very pride and boast of

nature So perfect, that the gods who formd you wonder'd

At their own skill, and cry'd, A lucky hit Has mended our design. Dryden. All for Love, act

SEW

Not to talk of the impiety of this sentiment, it is ludicrous instead of being lofty.' The famous epitaph on Raphael is not less absurd than any of the foregoing passages :

Raphael, timuit, quo sospite, vinci, Rerum magna parens, et moriente mori.

Imitated by Pope, in his epitaph on Sir Godfrey

Kneller :

Living, great Nature fear'd he might outvie Her works ; and dying fears herself may die.

Such is the force of imitation: for Pope of himself would never have been guilty of a thought so extravagant.

SENTIMENTAL, from sentiment. Of or belonging to sentiments, in the last sense of the primitive word. This adjective, though in very general use, seems to have been almost overlooked by the lexicographers, much as we daily hear of sentimental plays, toasts, songs, and even journeys. See STERNE. Applied to a person, it signifies the being endued with the most refined and delicate sentiments ; applied to a literary work, it implies that the work abounds with sentiments of that kind.

SENTINEL, n.s. Fr. sentinelle ; from Lat. sentio. One who watches or keeps guard.

Norfolk, hie thee to thy charge ; Use careful watch, chuse trusty sentinels.

Shakspeare. Richard III.

Counsellors are not commonly so united, but that one counsellor keepeth sentinel over another, so that, if any do counsel out of faction or private ends, it commonly goes to the king's ear.

Bacon's Essays.

First, the two eyes, which have the seeing power, Stand as one

watchman, spy, or sentinel,

Being placed aloft, within the head's high tower ; And, though both see, yet both but one thing tell.

Davies.

Love to our citadel resorts, Through those deceitful sally ports : Our sentinels 'lietray our forts. Denham.

Perhaps they had sentinels waking while they slept ; but even this would be unsoldierlike.

Browne.

The senses are situated in the head, as sentinels in a watchtower, to receive and convey to the soul the impressions of external objects.

Ray on the Creation. From afar

The watchdog bayed beyond the Tiber ; and More near from out the Carsar's palace came The owl's long cry, and, interruptedly, Of distant sentinels the fitful song Began and died upon the gentle wind. Byron.

And, Sire, your limbs have need of rest, And I will be the sentinel Of this your troop. Id.

SENTINEL, or SENTRY, from the Latin sen-tio, or the Italian sentinella, a private soldier, placed in some post, to watch the approach of the enemy, to prevent surprises, and to stop such as would pass without order, or being discovered who they are. Sentries are placed before the arms of all guards, at the tents and doors of general officers, colonels of regiments, &c. All sentries are to be vigilant on their posts; they are not, on any account, to sing, smoke tobacco, nor suffer any noise to be made near them. They are to have a watchful eye over the things

committed to their charge, not to suffer any light to remain, or any fire to be made near their posts in the night time ; neither is any sentry to be relieved, or removed from his post, but by the corporal of the guard. They are not to suffer any one to touch or handle their arms, or in the night time to come within ten yards of their post.

No person is to strike or abuse a sentry on his post ; but, when he has

committed a crime, he is to be relieved, and then punished according to the rules and articles of war. A sentinel, on his post in the night, is not to know any body, but by the countersign ; when he challenges, and is answered, relief, he calls out stand, relief; advance corporal ! upon which the corporal halts his men, and advances alone within a yard of the sentry's firelock, first ordering his party to port arms, on which the sentry does the same, and gives him the same countersign, taking care that no one hears it.

A RUNNING SENTINEL is a sentry who is upon the look out, at an advanced post, or near the gates of a fortified place, and is not confined to a particular spot.

SENTINEL PERDU, a soldier posted near an enemy, or in some very dangerous post where he is in hazard of being lost.

SENTINUM, an ancient town of Italy, in Umbria, Liv. x. c. 27 and 30.

SENTIUS (Cneius), a Roman historian, who flourished in the reign of Alexander Severus. He wrote the history of Alexander's life in Latin, or, as others say, in Greek.

SENTRY, or > Corrupted, I believe, from

SEN'TERY, n., s. $ sentinel, says Johnson ; but there is in Ital. sentare, and Span, sentar. A watch ; sentinel ; one who watches in a garrison, or army, to keep them from surprise.

If I do send, dispatch

Those sentries to our aid ; the rest will'serve For a short holding. Shakspeare. Coriolanut.

What strength, what art, can then Suffice, or what evasion bear him safe Through the strict senteries, and stations thick Of angels watching round 1

Thou, whose nature cannot sleep, O'er my slumbers sentry keep ; Guard me 'gainst those watchful foes, Whose eyes are open while mine close. Browne.

The youth of hell strict guard may keep, And set their sentries to the utmost deep. Dryden.

One goose they had, 'twas all they could allow, A wakeful sentry, and on duty now. Id.

Here toils and death, and death's half-brother,

sleep, Forms terrible to view, their sentry keep. Id.

SEP'ARATE, v.a., v.n., &-| *Fr. separer*;

SEPARABILITY, n. s. [adj.

SEP'ARABLE, adj.

SEP'ARABLENESS, «. *.

SEP'ARATELY, adv.

SEP'ARATENESS, n. s.

SEPARATION,

SEP'ARATIST,

SEPARA'TOR,

SEP'ARATORY, adj.

Milton.

Lat. separo. To break ; divide into parts; se-ver ; set apart ; 'withdraw : as a verb neuter, to part; be divided: as an ad-J jective, divid-

ed ; disjoined ; secluded ; disunited ; disengaged from body or matter : separability is the quality of admitting disunion or division : separable,

divisible ; possible to be disjoined from something else; the noun substantive corresponding: separately, separateness, and separation, Follow the sense of separate as an adjective: a separatist is one who separates ; a schismatic : separator, one who divides or makes a separation : separatory, used in, or conducive to, separation.

Separate thyself from me : it thou wilt take the left, I will go to the right. Gen. xiii. 9.

David leparated to the service those who should prophesy. 1 Chron. xxv. 1.

Separate me Barnabas and Saul, for the work wheieunto I have called them. Act* xiii. 2.

I'll to England.

— To Ireland, I : our separated fortunes Shall keep us both the safer. Shahtpeare. Macbeth.

Did you not hear A buzzing of a separation Between the king and Catharine 1 Shakspeare.

It is of singular use to piinces, if they take the opinions of their council both separately and together : for private opinion is more free, but opinion before others is more reserved. Bacon.

As the confusion of tongues was a mark of separation, so the being of one language was a mark of onion. Id.

A fifteenth part of silver, incorporate with gold, will not be recovered by any matter of separation, un-less you put a greater quantity of silver, which is the last refuge in separations…-. • Id.

The anabaptists', teparatists', and sectaries' tenets are full of schisms, and inconsistent with monarchy.

Id.

They have a dark opinion that the soul doth live after the separation from the body. Abbot.

Our modern separatists pronounce all those heretical, or carnal, from whom they have withdrawn.

Decay ff Piety.

Death from sin no power can separate. Milton.

Eve separate he wished. Id.

Separability is the greatest argument of real distinction. Glanville.

Trials permit me not to doubt of the separableness of a yellow tincture from gold. Boyle.

Can a body be inflammable, from which it would nuzzle a chemist to separate an inflammable ingredient ? , Id.

In a secret vale the Trojan sees A sep'rate grove. Dryden.

If you admit of many figures, conceive the whole together ; and not every thing separately and in particular. Id.

Expansion and duration have this farther agreement, that though they are both considered by us as having parts, yet their parts are not separable one from another. Locke.

When there was not room enough for their herds to feed, they by consent separated, and enlarged their pasture. Id.

Whatever ideas the mind can receive and contemplate without the help of the body, it can retain without the help of the body too , or else the soul, or any separate spirit, will have but little advantage by thinking. Id.

The greatest argument of real distinction is $eparc-b lity and actual separation ; for nothing can be sepa- "a'ed from itself. Norris.

'Twere hard to conceive an eternal watch whose pieces were never separate one from another nor ever in any other form. Burnet's Theory ofthe Earth.

Says the separatist, if those who have the rule over you should command you any thing about church

affairs you ought not, in conscience, to obey them.

South' *Sermon*.

Earths are opake, insipid, and, when dried, friable, or consisting of parts easy to separate, and soluble in water ; not disposed to burn, flame, or take fire. Woodward.

The infusions and decoctions of plants contain the most separable parts of the plants, and convey not only their nutritious but medicinal qualities into the blood. Arbuthnot.

The most conspicuous gland of an animal is the system of the guts, where the lacteals are the emissary vessels, or separatory ducts.

/ Cheyne's Philosophical Principles.

SEPHARVAIM, or SEPHARVITES, a tribe of the Samaritans, supposed by Calmet to be originally the Safpires on the north of Media ; but by Dr. Gill natives of Sipporhae in Syro-Pho3- nicia. They were partly cut off by the Assyrians ; and the rest were transplanted into the land of Israel, after the overthrow of that king dom, and the captivity of the ten tribes.

SEPIA, the cuttle-fish, or ink-fish, a genus belonging to the order of vermes mollusca. There are eight brachia interspersed on the interior side with little round serrated cups, by the contraction of which the animal lays fast hold of any thing. Besides these eight arms, it has two tentacula longer than the arms, and frequently pendunculated. The mouth is situated in the centre of the arms, and is horny and hooked, like the bill of a hawk. The eyes are below the tentacula, towards the body of the animal. The body is fleshy, and received into a sheath as far as the breast. Their food are tunnies, sprats, lobsters, and other shell fish. With their arms and trunks they fasten themselves, to resist the motion of the waves. Their beak is like that of a parrot. The females are distinguished by two paps. They copulate as the polypi do, by a mutual embrace, and lay their eggs upon sea-weed and plants, in parcels like bunches of grapes. Immediately after they are laid they are white, and the males pass over and impregnate them with a black liquor, after which they grow larger. On opening the egg, the embryo-cuttle is found alive. The males are very constant, accompany their females every where, face every danger in their defence, and rescue them intrepidly at the hazard of their own lives. The timorous females fly as soon as they see the males wounded. The noise of a cuttle-fish, on being dragged out of the water, resembles the grunting of a hog. When ths male is pursued by the sea-wolf or other ravenous fish, he shuns the danger by stratagem. He squirts his black liquor, sometimes to the quantity of a dram, by which the water becomes black as ink, under shelter of which he baffles the pursuit of his enemy. This ink or black liquor has been denominated by M. le Cat sethiops animal, and - is reserved in a particular gland. In its liquid state it resembles that of the choroid in man ; and would then communicate an indelible dye; when dry, it might be taken for the product of the black liquor in

negroes dried, and made a precipitate by spirit of wine. This aethiops animal in negroes, as well as in the cuttle-fish, is more abundant after death than even during life. It may serve either for

writing or printing; in the former of which ways the Romans used it. It is said to be an ingredient in the composition of Indian ink mixed with rice. There are five species : — 1. S. loligo, the great cuttle, with short arms and long tentacula ; the lower part of the body rhomboid and pinnated, the upper thick and cylindric. They inhabit all our seas, where, having blackened the water by the effusion of their ink, they abscond, and with their tail leap out of the water. They are gregarious, and swift in their motions : they take their prey by means of their arms, and, embracing it, bring it to their central mouth. They adhere to the rocks, when they wish to be quiescent, by means of the concave discs placed along their arms. 2. S. media, the middle cuttle, with a long slender cylindric body, tail finned, pointed, and carinated on each side; two ‘long tentacula; the body almost transparent green, but convertible into a dirty brown ; confirming the remark of Pliny, that they change their color through fear, adapting it, chamelion-like, to that of the place they are in. The eyes are large and smaragdine. 3. S. octopodia, the eight-armed cuttle. The arms are connected at their bottom by a membrane. This is the polypus of Pliny, which he distinguishes from the loligo and sepia by the want of the tail and tentacula. They inhabit our seas, but abound most ‘in the Mediterranean. In hot climates these are found of an enormous size. The Indians affirm that some have been seen two fathoms broad over their centre, and each arm nine fathoms long. When the Indians navigate their little boats they go in dread of them ; and, lest these animals should fling their arms over and sink them, they never sail without an axe to cut them off. When used for food they are served up red from their own liquor, which, from boiling with the addition of nitre, becomes red. Barthol says, upon cutting one of them open, so

great a light broke forth, that at night, upon taking away the candle, the whole house seemed to be in a blaze. 4. S. officinalis, the officinal cuttle, with an ovated body, has fins along the whole of the sides, almost meeting at the bottom ; and two long tentacula. The body contains the bone, the cuttle-bone of the shops, which was formerly used as an absorbent. The bones are frequently flung on all our shores ; the animal very rarely. The conger eels bite off their arms or feet; but they grow again, as does the lizard's tail (Plin. ix. 20;. They are preyed upon by the plaise. This fish emits (in common with the other species), when frightened or pursued, the black liquor which the ancients supposed darkened the circumambient wave, and concealed it from the enemy. The ancients sometimes made use of it instead of ink. Persius mentions this species in his description of the noble student. This animal was esteemed a delicacy by the ancients, and is eaten even at present by the Italians. Rondeletius gives us two receipts for the dressing. Athenaeus also gives the method of making an antique cuttle-fish sausage ; and we learn from Aristotle that these animals are in highest season when pregnant. 5. S. sepiola, the small cuttle, with a short body rounded at the bottom, has a round fin on each

side and two tentacula. They are taksn off

Flintshire, but chiefly inhabit the Mediterranean.

SEPIARIyE (from sepes, a hedge), the name of the forty-fourth order of Linnaeus's Fragments of a Natural Method, consisting of a beautiful collection of woody plants, some of which, from their size and elegance, are very proper furniture for hedges. See BOTANY, Index.

SEPIAS, in ancient geography, a cape of Thessaly, now called St. George.

SEPS, in zoology. See LACERTA.

SEPT, n. s. Fr. cep ; Lat. septum. A clan ; race; family; generation. A word used chiefly with regard or allusion to Ireland.

This judge, being the lord's brehon, adjudgeth a better share unto the lord of the soil, or the head of that sept, and also unto himself for his judgment a greater portion, than unto the plaintiffs.

Spenser on Ireland.

The English forces were ever too weak to subdue so many warlike nations, or septi of the Irish, as did possess this island. Davies on Ireland.

The true and ancient Russians, a sept whom he had met with in one of the provinces of that vast em-pire, were white like the Danes. Boyle.

SEPTARI.ˆE, in the old system of mineralogy, a large class of fossils, named also ludus Hel-montii and waxen veins. They were defined to be fossils not inflammable, nor soluble in water; of a moderately firm texture and dusky hue, divided by several septa or thin partitions, and composed of a sparry matter greatly debased by earth ; not giving fire with steel ; fermenting with acids, and in great part dissolved by them; and calcining in a moderate fire. Of this class were reckoned two distinct orders of bodies, and under these six genera. The first order were those which are usually found in large masses, of a simple uniform construction, but divided by large septa either into larger and more irregular portions, or into smaller and more equal ones catted talc. The genera of this order are four: 1. Those divided by septa of spar, called seco-miae. 2. Those divided by septa of earthy matter, called gaiophragmia. 3. Those divided by septa of the matter of the pyrites, calied pyritercia. And, 4. Those divided by septa of spar, with an admixture of crystal, called diaugophragmia. Those of the second order are such as are usually found in smaller masses, of a crustated structure, formed by various incrustations round a central nucleus, and divided by a very thin septa. Of this order were only two genera : 1 . Those with a short roundish nucleus, enclosed within the body of the mass ; and, 2. Those with a long nucleus, standing out beyond the ends of the mass.

SEPTAS, in botany, a genus of plants belonging to the order of heptagynia, and the class of heptandria; natural order thirteenth, succulents : CAL. divided into seven parts ; the petals are seven ; the germens seven : CAPS, also seven, and contain many seeds. There is only one species, *viz.*

S. Capensis, which is a native of the Cape of Good Hope, is round-leaved, and flowers in Au-gust and September.

SEPTEM [Lat.J, seven, forms part of the names of some ancient places : as Septem Aqua;,

a lake near Reate, in Italy. Cic. 4. Alt. 15. Septem Aquae Maria, the entrance of the seven mouths of the Po into the Adriatic. Septem Fratres [q. d. Seven Brethren], a mountain of Mauritania, with seven summits; now called Gebel or Gebel Mousa.

SEPTEM'BER, n. s. Fr. Septembre; Lat. September. The ninth month of the year ; the seventh from March.

September hath his name as being the seventh month from March : he is drawn with a merry and cheerful countenance in a purple robe.

Peacham on Ihawing.

SEPTEMBER consists of only thirty days ; it took its name as being the seventh month from March, with which the Romans began their year.

SEPTEMBRISERS [Fr. Septembriseurs], a name invented to stigmatise those bloody Parisians, who, in September 1792, went to the state prisons, and, without trial by judges or juries, massacred most of the prisoners who were confined in them.

SEPTEN'NIAL, adj. Lat. septennis. Lasting seven years ; happening once in seven years.

Being once dispensed with for his septennial visit, by a holy instrument from Petropolis, he resolved to govern them by subaltern ministers.

Howel't Vocal Forest.

The days of men are cast up by septenaries, and every seventh year conceived to carry some altering character in temper of mind or body.

Broiane't Vulgar Errours.

These constitutions of Moses, that proceed so much upon a septenary, or number of seven, have no reason in the nature of the thing. Burnet.

Every controversy has seven questions belonging to it ; though the order of nature seems too much neglected by a confinement to this septenary number.

Watts.

SEPTENNIAL ELECTIONS. Blackstone, in his Commentaries, vol. i. p. 189, says (after observing that the utmost extent of time allowed the same parliament to sit by the stat. 6 W. & M. c. 2, was three years), ‘ But by the statute 1 Geo. I. st. 2. c. 38 (in order professedly to prevent the great and continued expenses of frequent elections, and the violent heats and animosities consequent thereupon, and for the peace and security of the government, just [then recovering from the late rebellion), this term was prolonged to seven years ; and, what alone is an instance of the vast authority of parliament, the very same house that was chosen for three years enacted its own continuance for seven.

SEPTENTRIO, in astronomy, a constellation more usually called ursa minor.

SEPTENTRION, n. s. & adj.-\ Fr. septen—

SEPTEN’TRIONALLY, adv. > ‘ri°n ; Lat.

SEPTEN’TRIONATE, v. n. j septentrio.

The north : northerly : to send northerly.

Thou art as opposite to every good As the antipodes are unto us, Or as the south to the septentrion.

Shaktpeare. Henry VI. Backed with a ridge of hills, That screened the fruits of the’ earth and seats of

men From cold septentrion blasts.

Milton’* Paradise Regained. If they be powerfully excited, and equally let fall, they commonly sink down, and break the water, at

that extreme whereat they were septentrionally ex-citefl. Browne.

Steel and good iron, never excited by the loadstone, septentrionate at one extreme, and australiseat another. Id.

If the spring

Preceding should be destitute of rain, Or blast septentrional with brushing wings Sweep up the smoaky mists and vapours damp, Then woe to mortals ! Phillips.

SEPTERION, a festival observed once in nine years in honor of Apollo. It was a representation of his victory over Python. See PY-THON.

SEPTFOIL [from Lat. septem and folia, q. d. seven leaves], the English name of a species of tormentilla.

SEP'TICAL, adj. Gr. <nj7rnroc. Having power to promote or produce putrefaction.

As a septical medicine Galen commended the ashes of a salamander. Browne's Vulgar Errours.

SEPTICS, substances which promote putrefaction, chiefly the calcareous earths, magnesia, and testaceous powders. From many curious experiments made by Sir John Pringle, to ascertain the septic and antiseptic virtues of natural bodies, it appears that there are very few substances of a truly septic nature. Those commonly reputed such by authors, as the alkaline and volatile salts, he found to be no wise septic. However, he discovered some, where it seemed least likely to find any such quality ; these were chalk, common salt, and testaceous powders. He mixed twenty grains of crabs' eyes, prepared with six drams of ox's gall, and an equal quantity of water. Into another phial he put an equal quantity of gall and water, but no crabs' eyes. Both these mixtures being placed in the furnace, the putrefaction began much sooner where the powder was than in the other phial. On making a like experiment with chalk, its septic virtue was found to be much greater than that of the crabs' eyes : nay, what the doctor had never met with before, in a mixture of two drams of flesh wilh two ounces of water and thirty grains of prepared chalk, the flesh was resolved into a perfect mucus in a few days. To try whether the testaceous powders would also dissolve vegetable substances, the doctor mixed them with barley and water, and compared this mixture with another of barley and water alone. After a long maceration by a fire, the plain water was found to swell the barley, and turn mucilaginous and sour; but that with the powder kept the grain to its natural size, though it softened it, yet made no mucilage and remained sweet. Nothing could be more unexpected than to find sea salt a hastener of putrefaction ; but the fact is thus : one dram of salt preserves two drams of fresh beef, in two ounces of water, above thirty hours uncorrupted, in a heat equal to that of the human body ; or, which is the same thing, this quantity of salt keeps flesh sweet

twenty hours longer than pure water ; but then half a dram of salt does not preserve it above two hours longer; twenty-five grains have little or no antiseptic virtue, and ten, fifteen, or even twenty grains, manifestly both hasten and heighten the corruption, Theˆ quantity which had the most putrefying

quality, was found to be about ten grains to the above proportion of flesh and water. Many inferences might be drawn from this experiment : one is, that since salt is never taken in aliment beyond the proportion of the corrupting quantities, it would appear that it is subservient to digestion chiefly by its septic virtue, that is/ by softening and resolving meats; an action very different from what is commonly .believed. The above experiments were made with the salt kept for domestic uses. See Pringle on the Diseases of the Army, p. 3”48, et seq.

SEPTILATERAL, adj. Lat. septem and lateris. Having seven sides.

By an equal interval they make seven triangles, the bases whereof are the seven sides of a septilateral figure, described within a circle.

Browne’s Vulgar Errours.

SEPTIMIUS (Titus), a Roman knight, celebrated for his poems, both tragic and lyric. He was intimate with the emperor Augustus, and the poet Horace, who addressed the sixth ode of his second book to him.

SEPTIZON, or SEPTIZONIUM, in Roman antiquity, a celebrated mausoleum, built by Septimius Severus, in the tenth region of the city of Rome : it was so called from septem and zona, by reason it consisted of seven stories, each of which was surrounded by a row of columns.

SEPTUAGINT, n. s. Lat. septuaginta. The old Greek version of the Old Testament, so cal-led as being supposed the work of seventy-two interpreters. See be!6w.

The three hundred years of John of times, or Nes-tor, cannot afford a reasonable encouragement beyond Moses's septuagenary determination.

Browne's Vulgar Errours.

In oui abridged' and septuagesimal age, it is very rare to behold the fourth generation. Id.

Which way soever you try you shall find the product great enough for the extent of this earth ; and, if you follow the Septuagint chronology, it will still be far higher. Burnet.

The SEPTUAGINT is said to be the work of seventy-two Jews, who are usually called the seventy interpreters, because seventy is a round number. The history of this version was expressly written by Aristeas, an officer of the guards to Ptolemy Philadelphus. The substance of his account is as follows : — Ptolemy having erected a fine library at Alexandria, which he took care to fill with the most curious and valuable books from all parts of the world, was informed that the Jews had one containing the laws of Moses, and the history of that people ; and, being desirous of'enriching his library with a Greek translation of it, applied to the high-priest of the Jews ; and, to engage him to comply with his request, set at liberty all the Jews whom his father Ptolemy Soter had reduced to slavery. After such a step he easily obtained what he desired ; Eleazar the Jewish high-priest sent back his ambassadors with an exact copy of the Mosaical law, written in letters of gold, and six elders of each tribe, in all seventy-two, who were received with marks of respect by the king, and then conducted into the Isle of Pharos, where they were lodged in a house prepared for - heir reception, and supplied with every thing necessary. They set about the translation without

loss of time, and finished it in seventy-two days, and, the whole being read in the presence of the king, he admired the profound wisdom of the laws of Moses, and sent back the deputies laden with presents, for themselves, the high-priest, and the temple. Aristobulus, who was tutor to Ptolemy Physcon ; Philo, who lived in our Saviour's time, and was contemporary with the apostles ; and Josephus, spe; k of this translation as made by seventy-two interpreters, by the care of Demetrius Phalareus, in the reign of Ptolemy Philadelphus. All the Christian writers, during the first fifteen centuries of the Christian era, have admitted this account of the Septuagint as an undoubted fact.

But, since the Reformation, critics have boldly called it in question, because it was attended with circumstances which they think inconsistent or improbable. Du Pin has asked, why were seventy-two interpreters employed, since twelve would have been sufficient? Such an objection is trifling. We may as well ask, why did king James I. employ" fifty-four translators in rendering the Bible into English, since twelve, or even two, might have been sufficient? 1. Prideaux objects that the Septuagint is not written in the Jewish, but in the Alexandrian dialect, and could not therefore be the work of natives of Palestine. But these dialects were probably at that time the same ; for both Jews and Alexandrians had received the Greek language from the Macedonians about fifty years before. 2. Prideaux farther contends that all the books of the Old Testament could not be translated at the same time ; for they exhibit great difference of style. To this it is sufficient to re-ply that they were the work of seventy-two men, each of whom had separate portions assigned him. 3. The dean also urges that Aristeas, Aristobulus, Philo, and Josephus, all directly tell us that the law was translated without mentioning any of the other sacred books. But nothing was more common among writers of the Jewish nation than to give this, name to the Scriptures as a whole. In the New Testament law is used as synonymous with what we rail the Old Testament. Besides, it is expressly said by Aristobulus, in a fragment quoted by Eusebius (Praep. Evan. T. 1), that the whole sacred Scripture was rightly translated through the means of Demetrius Phalereus, and by the command of Philadelphus. Josephus indeed, says the learned dean, asserts, in the preface of his Antiquities, that the Jewish interpreters did not translate for Ptolemy the whole Scriptures, but the law only. Here the evidence is contradictory, and we have only to enquire whether Aristobulus or Josephus had the best opportunity of knowing the truth. Aristobulus was an Alexandrian Jew, tutor to an Egyptian king, and lived within 100 years after the translation was made, and certainly had ac-cess to see it in the royal library. Josephus was a native of Palestine, and lived not until 300 years or more after the translation was made, and many years after it was burnt, along with the whole library of Alexandria, in the wars of Julius Caisar. Supposing the veracity of these two writers equal, as We have no proof of the contrary, which of them ought we to consider as the best evidence? Aristobulus surely. If the writings which have passed under his name were

a forgery of the second century, it is surprising that they should have imposed upon Clemens Alexandrinus, who lived in the same century, and was a man of abilities, learning, and well acquainted witli the writings of the ancients. Eusebius, too, in his Praep. Evan., quotes the commentaries of Aristobulus. And in answer to the dean's objections, that neither Philo nor Josephus have quoted Aristobulus, it is sufficient to observe that it was not the uniform .practice of these times to name the authors from whom they derived their information. 4. Prideaux farther contends that the sum which Ptolemy is said to have given to the interpreters is too great to be credible. If his computation were just, it certainly would be so. He makes it £2,000,000 sterling; but Dr. Blair reduces it to £85,421, and others to £56,947 ; neither of which is a sum so very extraordinary in so great and magnificent a prince as Philadelphus, who spent, according to a passage in Athenaeus, lib. v., no less than 10,000 talents on the furniture of one tent ; which is six times more than what was spent in the whole of the embassy and translation, which amounted only to 1552 talents. 5. Prideaux says, that which convicts the whole story of Aristeas of falsity is, that he makes Demetrius Phalereus to be the chief actor in it, and a great favorite of the king ; whereas Philadelphus, as soon as his father was dead, cast him into prison, where he soon after died. But it is replied that J'hiladelphus reigned two years jointly with his father Lagus; and it is not said by Hermippus that Demetrius was out bf favor with Philadelphus during his father's life. Now, if the Septuagint was translated in the beginning of the reign of Philadelphus, as Eusebius and Jerome think, the difficulty will be removed. Demetrius might have been librarian during the reign of Philadelphus, and yet imprisoned on the death of Lagus. Indeed, as the cause of Philadelphus's displeasure was the advice which Demetrius gave to his father, to prefer the sons of Arsinoa before the son of Berenice, he could scarcely show it till his father's death. The Septuagint translation might therefore be begun while Philadelphus reigned jointly with his father, but not be finished till after his father's death. 6. Besides the above objections, there is only one more that deserves notice. The ancient Christians not only differ from one another concerning the time in which Aristobulus lived, but even contradict themselves in different parts of their works. Sometimes they tell us he dedicated his book to Ptolemy Philometer, at other times they say it was addressed to Philadelphus and his father. Sometimes they make him the same person who is mentioned in 2 Maccabees, chap, i., and sometimes one of the seventy-two

interpreters, 152 years before. It is difficult to explain how authors fall into such inconsistencies ; but it is probably occasioned by their quoting from memory. This was certainly the practice of almost all the early Christian writers, and sometimes of the apostles themselves. Mistakes were therefore inevitable. Josephus has varied in the circumstances of the same event, in his Antiquities and Wars of the Jews, probably from the same cause ; but we do not hence conclude that every circumstance of *uch a relation is entirely false. In the account

of the marquis of Argyle's death, in the reign of Charles II., we have a very remarkable contradiction. Lord' Clarendon relates that he was condemned to be hanged, which was performed the same day : on the contrary, Burnet, Wood-row, Heath, and Echard, concur in stating that he was beheaded; and that he was condemned upon the Saturday and executed upon the Mon-day. Was any reader of English history ever sceptic enough to raise from hence a question, whether the marquis of Argyle was executed or not ? Yet this ought to be left in uncertainty, according to the way of reasoning in which the facts respecting the translation of the Ssptuagint are attempted to be disproved. Such are the objections which the learned and ingenious Prideaux has raised against the common account of the Septuagint translation, and such are the answers which may be given to them. We support that opinion which is sanctioned by historical evidence, in preference to the conjectures of modern critics, however ingenious ; being persuaded that there are many things recorded in history which, though perfectly true, yet, from our imperfect knowledge of the concomitant circumstances, may, at a distant period, seem liable to objections. To those who require positive evidence, it may be s ated thus : Aristeas, Aristobulus, Philo, and Josephus, assure us that the law was translated. Taking the law in the most restricted sense, we have at least sufficient authority to as-sert that the Pentateuch was rendered into Greek under Ptolemy Philadelphus. Aristobulus affirms that the whole Scriptures were translated by the seventy-two. Josephus confines, their labors to the books of Moses. He therefore who cannot determine which of the two is the most respectable, may suspend his opinion. It is certain, however, that many of the other books were translated before the age of our Saviour; for they are quoted both by him and his apostles; and, perhaps, by a minute examination of ancient authors, in the same way that Dr. Lardner has examined the Christian fathers to prove the antiquity of the New Testament, the precise period in which the whole books of the Septuagint were composed might, with considerable accuracy, be ascertained. For 400

years this translation was in high estimation with the Jews. It was read in their synagogues in preference to the Hebrew ; not only in those places where Greek was the common language, but in many synagogues of Jerusalem and Judea. But, when they saw that it was equally valued by the Christians, they became jealous of it ; and at length, in the second century, Aquila, an apostate Christian, attempted to substitute another Greek translation in its place. In this work he was. careful to give the ancient prophecies concerning the Messiah a different turn from the Septuagint, that they might not be applicable to Christ. In the same design he was followed by Symmachus and Theodotion, who also, as St. Jerome informs us, wrote out of hatred to Christianity. In the mean time the Septuagint, from the ignorance, boldness, and carelessness of transcribers, became full of errors. To correct these, Origen published a new edition in the beginning of the third century, in which he placed the translations of Aquila, Symmachus, and Theodotion. Thisedi-SEP

lion was called Tetrapla : the translations being arranged opposite to one another in four columns. He also added one column, containing the He-brew text in Hebrew letters, and another exhibiting it in Greek. In a second edition he published two additional Gre'ek versions ; one of which was found at Nicopolis, and the other at Jericho ; this was called the Hexapla. By comparing so many translations, Origen endeavoured to form a correct copy of the Scriptures. Where they all agreed, he considered them as right. The passages which he found in the LXX., but not in the Hebrew text, he marked with an obelisk : what he found in the Hebrew, but not in the LXX., he marked with an asterisk. St. Jerome says that the additions which Origen made to the LXX., and marked with an asterisk, were taken from Theodotion. From this valuable work of Origen, the version of the LXX. was transcribed in a separate volume, with the asterisks and obelisks, for the use of the churches ; and from this circumstance the great work itself was neglected and lost. About the year 300 two new editions of the LXX. were published ; the one by Hesychius an Egyptian bishop, and the other by Lucian a presbyter of Antioch. But, as these authors did not

mark with any note of distinction the alterations which they had made, their editions do not possess the advantages of Origen's. The best edition of the LXX. is that of Dr. Grabe, which was published in the beginning of the last century. He had access to two MSS., nearly of equal antiquity, the one found in the Vatican library at Rome, the other in the Royal library at St. James's, which was presented to Charles I. by Cyril, patriarch of Alexandria, and hence it is commonly called the Alexandrian MS. Anxious to discover which of these was according to the edition of Origen, Dr. Grabe collected the fragments of the Hexapla, and found they agreed with the Alexandrian MS., but not with the Vatican, where it differed with the other. Hence he concluded that the Alexandrian MS. was taken from the edition of Origen. By comparing the quotations from Scripture in the works of Athanasius and St. Cyril', who were patriarchs of Alexandria at the time St. Jerome says Hesychius' edition of the LXX. was there used, with the Vatican MS., he found they agreed so well that he justly inferred that that MS. was taken from the edition of Hesychius. This version was in use to the time of our blessed Saviour, and is that out of which most of the citations in the New Testament from the Old are taken. It was also the ordinary and canonical translation made use of by the Christian church in the earliest ages ; and it still subsists in the churches both of the east and west. Those who desire a more particular account of the Septuagint translations may consult Hody de Bibliorum Textibus, Prideaux's Connections, Owen's Enquiry into the Septuagint Version, Blair's Lectures on the Canon, and Michaelis's Introduction to the New Testament, last edition.

SEPTUAGINT CHRONOLOGY, the chronology

which is formed from the dates and periods of

time mentioned in the Septuagint translation of

the Old Testament. It reckons 1500 years more

from the creation to Abraham than the Hebrew Bible. Dr. Kennicot, in the dissertation prefixed to his Hebrew Bible, has shown it to be very probable that the chronology of the Hebrew Scriptures, since the period just mentioned, was corrupted by the Jews, between the year 175 and 200, and that the chronology of the Septuagint is more agreeable to truth. It is a fact, that during the second and third

centuries the Hebrew Scriptures were almost entirely in the hands of the Jews, while the Septuagint was confined to the Christians. The Jews had therefore a very favorable opportunity for this corruption. The following is the reason which is given by oriental writers : it being a very ancient tradition that the Messiah was to come in the sixth chi-liad, because he was to come in the last days (founded on a mystical application of the six days' creation), the contrivance was to shorten the age of the world from about 5500 to 3760 : and thence to prove that Jesus could not be the Messiah. Dr. Kennicot adds that some Hebrew copies having the larger chronology were extant till the time of Eusebius, and some till the year

700.

SEPTUM, in anatomy, an enclosure or partition ; a term applied to several parts of the body, which serve to separate one part from another ; as, septum narium, or partition between the nostrils, &c.

SEPTUM LUCIDUM. See ANATOMY.

SEPULCHRE, n. s. & i Fr. sepulchre;

SEPUL'CHRAL, adj. [v. a. > Lat. sepulchrum. A

SEP'ULTURE, n. s. J grave ; tomb : to

entomb ; bury : sepulture is, burial ; interment.

His miracles, and our redemption, wrought ; Where I, by thee inspired, his praises sung, And on his sepulchre my offering hung. Sandys.

To entail him and 's heirs unto the crown, What is it but to make thy sepulchre ?

Shakspeare. Henry VI.

Go to thy lady's grave, and call her thence ; Or, at the least, in hers sepulchre thine. Sliakspeare.

Flies and spiders get a sepulchre in amber more durable than the monument and embalming of any king. Bacon.

Whilst our souls negotiate there,

We like sepulchral statues lay ;

All day the same our postures were,

And we said nothing all the day. Donne.

I am glad to see that time survive, Where merit is not sepulchred alive ; Where good men's virtues them to honours bring, And not to dangers. Sen Jonson

Perpetual lamps for many hundred years have continued burning, without supply, in the sepulchres of the ancients. Wilhins.

Mine eye hath found that sad sepulchral rock, That was the casket of heaven's richest store.

Milton.

Thou so sepulchred in such pomp dost lie, That kings for such a tomb would wish to die. Id.

That Niobe, weeping over her children, was turned into a stone, was nothing else but that during her life she erected over her sepulture a marble tomb o» her own. Browne.

If not one common sepulchre contains Our bodies, or one urn our last remains, Yet Ceyx and Aicvone shall join. Dryden.

SEQ 6

Where we may royal tepulture prepare , With speed to Meselinda bring relief, Recal her spirits and moderate her grief. Id.

ID England sepulture, or burial of the dead, may be deferred and put off for the debt* of the person deceased. Ayliffe.

Disparted streams shall from their channels fly, And, deep surcharged, by sandy mountains lie Obscurely sepulchred. Prior.

Sepulchral lies our holy walls to grace, And new-year odes. Pope's Dunciad.

SEPULCHRE is chiefly used in speaking of the burying places of the ancients, those of the moderns being usually called tombs. Sepulchres were held sacred and inviolable ; and the care taken of them has

always been held a religious duty, grounded on the fear of God, and the be-lief of the soul's immortality. Those who have searched or violated them have been thought odious by all nations, and were always severely punished. The Egyptians called sepulchres eternal houses, in contradistinction to their ordinary houses or palaces, which they called inns, on account of their short stay in the one in comparison of their long abode in the other. See TOMB.

SEPULCHRE, KNIGHTS OF THE HOLY, a military order, established in Palestine about the year 1114. The knights of this order in Flanders chose Philip II., king of Spain, for their master, in 1 558, and afterwards his son ; but the grand-master of the order of Malta prevailed on the last to resign ; and, when afterwards the duke of Nevers assumed the same quality in France, the same grand-master by his interest and cre-dit procured a like renunciation of him, and a confirmation of the union of this order to that of Malta.

SEPULCHRE, REGULAR CANONS OF ST., a religious order, formerly instituted at Jerusalem, in honor of the holy sepulchre, or the tomb of Jesus Christ. Many of these canons were brought from the Holy Land into Europe, particularly into France, by Louis the Younger; into Poland, by Jaxa, a Polish gentleman ; and into Flanders, by the counts thereof; many also came into England. This order was, however, suppressed by Pope Innocent VIII., who gave its revenues and effects to that of our Lady of Bethlehem ; which also becoming extinct, they were bestowed on the knights of St. John of Jerusalem. But the suppression did not take effect in Poland, where they still subsist, as also in several provinces of Germany. These canons follow the rule of St. Augustine.

SEPULVEDA (John Genes de), a Spanish writer, born at Cordova in 1491. He became chaplain and historiographer to the emperor Charles V.; and wrote A Vindication of the Cruelties of the Spaniards against the Indians ;. and other works. He died at Salamanca, in

1572.

SEQUACIOUS, adj. } Lat. sequax. Duc—

SEQUAC'JTY, n. s. J tile ; pliant : ductility ;

toughners.

Matter whereof creatures are produced, hath a closeness, lentor, and

sequacity.

Bacon’s Natural Hittory.

Orpheus could lead the savage race, And trees uprooted left their place,

5 SEQ

Sequacious of the lyre :

But bright Cecilia raised the wonder higher

When to her organ vocal breath was given,

An angel heard,

And straight appeared,

Mistaking earth for heaven. Drifden.

In the greater bodies the forge was easy, the mat-ter being ductile and sequacious, and obedient to the hand and stroke of the artificer, and apt to be drawn, formed or moulded. Kay.

Above those superstitious horrors that enslave The fond sequacious herd, to mystick faith And blind amazement prone, the' enlightened few The glorious stranger hail. Thomson.

SEQUANA, a river of ancient Gaul, which separated the territories of the Belgae and the Celtae. It is now called the Seine. Strabo 4, Mela iii. 2, Lucan i. v. 425.

SEQUANI, a people anciently inhabiting a part of Gallia Celtica, annexed to Belgica~by Augustus, separated from the Helvetii by Mount Jura, with the Rhine on the east (Strabo), bordering on the ./ Edui, and Segustiano to the south, and Lingones to the west (Tacitus). It was lately called FRANCHE COMTE. See that article.

SE'QUEL, n. s. Fr. sequelle ; Lat. sequela. Conclusion ; succeeding part.

Let any principal thing, as the sun or the moon, but once cease, fail or swerve, and who doeth not easily conceive that the sequel thereof would be ruin both to itself and whatsoever dependeth on it 1

Hooker.

What sequel is there in this argument ? An archdeacon is the chief deacon : ergo, he is only a dea-con. Whitgift.

If black scandal or foul-faced reproach Attend the sequel of your imposition, Your mere enforcement shall acquittance me.

Shakspeare. Richard III. In these he put two weights, The sequel each of parting and of fight. Milton.

Was he not a man of wisdom 1 Yes, but he was poor : but was he not also successful ? True, but still he was poor : grant this, and you cannot keep off that unavoidable sequel in the next verse, the poor man's wisdom is despised. South.

SE'QUENT, adj. & n. s. > Latin, sequens. SE'QUENCE, n. s. j Following ; succeeding : a follower : sequence is order of succession.

How art thou a king, But by fair sequence and succession 1

Shakspeare. Richard III. Let my trial be my own confession : Immediate sentence then, and sequent death, Is all the grace I beg. Id. Measure for Measure.

Here he hath framed a letter to a sequent of the stranger queen's, which accidentally miscarried.

Shakspeare.

The cause proceedeth from a precedent sequence and series of the seasons of the year.

Bacon's Natural History There he dies, and leaves his race Growing into a nation ; and now grown Suspected to a sequent king, who seeks To stop their overgrowth. Milton's Paradise Lost.

SEQUESTER, adj. *\ Fr. seguestrer ; low SEQUES'TRABLE, v. a. i Lat. sequestra. To se-SEQUES'TRATE, v. n. > parate from others for SEQUESTRA'TION, n.$. i the sake of privacy; SEQUESTRA'TOR. ./ separate generally;

remove; set aside from :the owner's 11;? for tiun

of his creditors: all the derivatives follow one or other of these senses.

A thing as seasonable in grief as in joy, as decent being added unto actions of greatest weight and solemnity, as being used when men most sequester themselves from action. Hooker,

Why are you sequestered from all your train ?

Shakspeare.

His addiction was to courses vain ; I never noted in him any study, Any retirement, any sequestration From open haunts and popularity. Id, Henry V.

Although I had wholly sequestered my civil affairs, yet I set down, out of experience in business and conversation in books, what I thought pertinent to this affair. Bacon.

I am fallen into the hands of publicans and seques-trators, and they have taken all from me. Taylor.

In shady bower

More sacred and sequestered, though but feigned, Pan or Silvanus never slept. Milton.

Hartshorn, and divers other bodies belonging to the animal kingdom, abound with a not uneasily sequestrable salt. Boyle.

The metals remain unsevered, the fire only dividing the body into smaller particles, hindering rest and continuity, without any sequestration of elementary principles. Id.

It was his taylor and his cook, his fine fashion, and his French ragouts, which sequestered him ; and, in a word, he came by his poverty as sinful as some usually do by their riches. South.

There must be leisure, retirement, solitude, and a sequestration of a man's self from the noise of the world ; for truth scorns to be seen by eyes much fixt upon inferior objects. Id.

In general contagions more perish for want of necessaries than by the malignity of the disease, they being sequestrated from mankind.

Arbuthnot on Aliments.

Ye sacred Nine ! that all my soul possess, Whose raptures fire me, and whose visions bless, Bear me, oh bear me, to sequestered scenes Of bowery mazes, and surrounding greens. Pope.

If there be a single spot in the glebe more barren the rector or vicar may be obliged, by the caprice or pique of the bishop, to build upon under pain of sequestration. Swift.

SEQUESTRATION, in common law, is setting aside the thing in controversy, from the possession of both the parties that contend for it. In which sense it is either voluntary, as when done by the consent of the parties ; or necessary, as where it is done by the judge, of his own authority, whether the parties will or not.

SEQUESTRATION, in the civil law, is the act of the ordinary, disposing of the goods and chattels of one deceased, whose estates no man will meddle with. A widow is also said to sequester, when she disclaims having any thing to do with the estate of her deceased husband. Among the Romanists, in questions of marriage, where the wife complains of impotency in the husband, she is to be sequestered into a convent, or into the hands of matrons, till the process be determined.

SEQUESTRATION is also used for the act of gathering the fruits of a benefice void, to the use of the next incumbent. Sometimes a benefice is kept under sequestration for many years, when it is of so small value that no clergyman fit to serve the cure will be at the charge of taking it

by infraction ; in which case the sequestration is committed either to the curate alone, or to the curate and church-wardens jointly. Sometimes the profits of a living in controversy, either by the consent of the parties, or the judge's authority, are sequestered and placed for safety in a third hand till the suit is determined, a minister being appointed by the judge to serve the cure, and allowed a certain salary out of the profits. Sometimes they are sequestered for neglect of duty, for dilapidations, or for satisfying the debts of the incumbent.

SEQUESTRATION, in chancery, is a commission usually directed to seven persons therein named, empowering them to seize the defendant's personal estate, and the profits of his real, and to detain them, subject to the order of the court. It issues on the return of the Serjeant at arms, wherein it is certified that the defendant had secreted himself. Sequestrations were first introduced by Sir Nicholas

Bacon, lord keeper in the reign of queen Elizabeth ; before which the court found some difficulty in enforcing its process and decrees ; and they do not seem to be in the nature of process to bring in the defendant, but only intended to enforce the performance of the court's decree.

A SEQUESTRATION is also made, in London, upon an action of debt ; the course of proceeding in which case is this : — The action being entered, the officer goes to the defendant's shop or warehouse, when no person is there, and takes a padlock, and hangs it on the door, uttering these words : ' I do sequester this warehouse, and the goods and merchandise therein, of the defendant in this action, to the use of the plaintiff,' &c., after which he sets on his seal, and makes a re-turn of the sequestration in the compter; and, four days being passed after the return made, the plaintiff may, at the next court, have judgment to open the shop or warehouse, and to have the goods appraised by two freemen, who are to be sworn at the next court held for that compter ; and then the serjeant puts his hand to the bill of appraisement, and the court grants judgment thereon ; but yet the defendant may put in bail before satisfaction, and by that means dissolve the sequestration; and, after satisfaction, may put in bail to disprove the debt, &c.

SEQUIN, a gold coin, struck at Venice, and in several parts of the grand seignior's dominions. In Turkey it is called dahab, or piece of gold, and according to Volney is in value about 6s. 3d. sterling. It varies, however, considerably in its value in different countries. At Venice it is (or was) equal to about 9s. 2d. sterling. The Venetian sequins are in great request in Syria, from the fineness of their standard, and the practice they have of employing them for women's trinkets. The fashion of these trinkets does not require much art ; the piece of gold is simply pierced, to suspend it by a chain, likewise of gold, which flows upon the breast. The more sequins that are attached to this chain, and the greater the number of these chains, the more is a woman thought to be ornamented. This is the favorite luxury, and the emulation of all ranks. Even the female peasants for want of gold wear piastres or smaller pieces : but the wonien of a

certain rank disdain silver ; they will accept of nothing but sequins of Venice, or large Spanish pieces, and cmsadoes. Some of them wear 200 or 300, as well lying flat, as strung one on another, and hung near the forehead, at the edge of the head dress. It is a real load ; but they do not think they can pay too dearly for the satisfaction of exhibiting this treasure at the public bath, before a crowd of rivals, to awaken whose jealousy constitutes their chief pleasure. The effect of this luxury on commerce is the withdrawing considerable sums from circulation, which remain dead ; besides, that when any of these pieces return into common use, having lost their weight by being pierced, it becomes necessary to weigh them. The practice of weighing money is general in Syria, Egypt, and all Tur-key. No piece, however effaced, is refused there ; the merchant draws out his scales and weighs it, as in the days of Abraham. Tn considerable payments, an agent of exchange is sent for, who lounts paras by thousands, rejects all the false money, and weighs all the sequins, either sepa- -•ately or together.

SEQU1NIUS, a native of Alba, who gave one af his daughters in marriage to Curiatius of Aiba, and the other to Horatius of Rome. The two sisters were delivered of three sons each on the same day ; and these youths, when they grew up, fought the famous battle to decide the superiority of their respective countries, and which ended in favor of Rome. See HORATII, and ROME.

SERA'GLIO, n. s. Italian ; perhaps oriental.— Johnson. Heb. SHIP is a mansion. A house of women kept for debauchery.

There is a great deal more solid content to be found in a constant course of well living, than in the voluptuousness of a seraglio. Norris.

SERAGLIO is formed from the Persian word seraw, or Turkish word saria, which signifies a house, and is commonly used to express the house or palace of a prince. In this sense it is frequently used at Constantinople; the houses of foreign ambassadors are called seraglios. But it is commonly used by way of eminence for the palace of the grand seignior at Constantinople.

The SERAGLIO OF THE GRAND SEIGNIOR is in fact his court, where his concubines are lodged, and where the youth are trained up for the chief posts of the empire. It is a triangle about three Italian miles

round, wholly within the city of Constantinople, at the end of the promontory Chrysoceras, now called the Seraglio Point. The buildings run back to the top of the hill, and thence are gardens that reach to the edge of the sea. It is enclosed with a high and strong wall, upon which there are several watch towers : and it has many gates, some of which open towards the sea side, and the rest into the city ; but the chief gate is one of the latter, which is constantly guarded by a company of capoochees, or porters ; in the night it is well guarded towards the sea. The outward appearance is not elegant ; the architecture being irregular, consisting of separate edifices in the form of pavilions and domes. The ladies are a collection of beautiful young women, chiefly sent until of late as presents from the provinces and the Greek islands, and most of them the children of Christian parents. The brave prince Heraclius for some years abolished the infamous tribute of children of both sexes, which Georgia formerly paid every year to the Porte. The number of women in the Harem depends on the taste of the reigning sultan. Sultan Selim had 2000, Achmet had but 300, and the late sultan had nearly 1600. On their admission they are committed to the care of old ladies, taught sewing, embroidery, music, dancing, 8cc., and furnished with the richest clothes and ornaments. They all sleep in separate beds, and between every fifth there is a preceptress. Their chief governess is called Katon Kiaga. They are said to be obliged to wait on one another by rotation ; the last that is entered serves her who preceded her and herself. These ladies are scarcely ever suffered to go abroad, except when the grand seignior removes from one place to another, when a troop of black eunuchs conveys them to the boats, which are enclosed with lattices and linen curtains ; and when they go by land they are put into close chariots, and signals are made at certain distances, to give notice that none approach the roads through which they march. Among the emperor's attendants are a number of mutes, who act and converse by signs with great quickness, and some dwarfs, who are exhibited for the sultan's amusement. When he permits the wo-men to walk in the gardens of the seraglio all people are ordered to retire, and on every side there is a guard of black eunuchs, with sabres in their hands, while others go their rounds to hinder any person from seeing them. If any one is found in the garden, even through ignorance or inadvertence, he is instantly killed, and his head brought to the feet of the grand seignior, who rewards the guards for their vigilance. Sometimes the grand seignior passes into the gardens to amuse himself when the women are there ; and it is then that they make use of their utmost efforts, by dancing, singing, seducing gestures, and amorous blandishments, to attract his affections. It is not permitted that the monarch should take a virgin to his bed, except during the solemn festivals, and on occasion

of some extraordinary rejoicings, or the arrival of some good news. Upon such occasions, if the sultan chooses a new companion, he enters into the apartment of the women, who are ranged in files by the governesses, to whom he speaks, and intimates the person he likes best. The others now follow her to the bath, washing, perfuming, and dressing her superbly, and finally conducting her, singing and dancing, to the imperial bed-chamber of the grand seignior. Scarcely has the new elected favorite entered the chamber, introduced by the grand eunuch who is upon guard, than she kneels down, and at the call ,of the sultan creeps into the foot of the bed : after a certain time, upon a signal given by the sultan, the governess of the girls, with all her suite, enter the apartment, and take her back again, conducting her with the same ceremony to the women' apartments : if by good fortune she becomes pregnant, and is delivered of a boy, she is called asaki sultaness, that is to say, sultaness-mother;

for the first son she has the honor to be crowned and she has the liberty of forming her court. Eunuchs are also assigned for her guard, and particular service. No other ladies, though delivered of boys, are either crowned or maintained with such costly distinction as the first ; however, they have their service apart, and handsome appointments. After the death of the sultan, the mothers of the male children are shut up in the old seraglio, whence they can never come out any more, unless any of their sons ascend the throne. Baron de Tott informs us that the fe-male slave who becomes the mother of a sultan, and lives long enough to see her son mount the throne, is the only woman who at that period alone acquires the distinction of sultana-mother; she is till then in the interior of her prison with her son. The title bachl-kadun, or principal woman, is the first dignity of the grand seignior's harem.

SERAGLIO, or HAREM, OF THE EMPEROR OF MOROCCO. — The account of this seraglio, by M. Lempriere, is still interesting. Being a surgeon, he was admitted into the harem to prescribe for some of the ladies who were indisposed, and was therefore enabled to give a particular account of this female prison. The harem forms a part of the palace. The apartments, which are all on the ground floor, are square, very lofty, and four of them enclose a spacious square court, into which they open by means of large folding doors. Jn the centre of

these courts, which are floored with blue and white chequered tiling, is a fountain, supplied by pipes from a large reservoir on the outside of the palace, which serves for the frequent ablutions recommended by the Mahometan religion. The whole of the harem consists of about twelve of these courts, communicating with each other by narrow passages, which afford a free access from one part of it to another, and of which all the women are allowed to avail themselves. The apartments are ornamented on the outside with beautiful carved wood. In the inside most of the rooms are hung with rich da-mask of various colors ; the floors are covered with beautiful carpets, and there are mattresses disposed at different distances, for the purposes of sitting and sleeping. The apartments are also furnished at each extremity with an elegant European mahogany bedstead, hung with damask, having on it several mattresses placed one over the other, which are covered with various colored silks ; but these beds are merely for ornament. In all the apartments the ceiling is wood, carved and painted. The principal ornaments were large and valuable looking glasses, hung on different parts of the walls; clocks and watches of different sizes, in glass cases, were disposed in the same manner. The sultana Lalla Batoom and another favorite were indulged with a whole square to themselves ; but the concubines were only each allowed a single room. Each female had a separate daily allowance from the emperor, proportioned to the estimation in which they were held by him. The late emperor's allowance was very trifling : Lalla Douyaw, the favorite sultana, had very little more than half-a-crown English a day, and the others less. He indeed made them occasional presents of money, dress,

and trinkets; but this, could never be sufficient to support the expenses they must incur. Their greatest dependence therefore was on the presents they received from those Europeans and Moors who visited the court, and who employed their influence in obtaining some particular favor from the emperor. This was the most successful mode that could be adopted. When M. Lempriere was at Morocco, a Jew, desirous of obtain - ing a very advantageous favor from the emperor, for which he had been a long time unsuccessfully soliciting, sent to all the principal ladies of the harem presents of pearls to a very large amount : the consequence was that they all went in a body to the emperor, and immediately obtained the wished for concession. The ladies separately furnish their own rooms, hire their own domestics, and, in fact, do what they please in the harem, but are not permitted to go out without an express order from the emperor, who very seldom grants them that favor, except when they are to be removed

from one palace to another. In that case a party of soldiers is despatched a little distance before them to disperse the male passengers, and prevent their being seen. This previous step being taken, a piece of linen cloth is tied round the lower part of the face, and afte wards these miserable females cover themselves entirely with their haicks, and either mount mules, which they ride like men, or, what is more usual, are put into a square carriage or litter, constructed for this purpose, which by its lattice-work allows them to see without being seen. In this manner they set off, under a guard of black eunuchs. This journey, and sometimes a walk within the bounds of the palace, is the only exercise they are permitted to take. The late emperor's harem consisted of between sixty and 100 females, besides their numerous domestics and slaves. Many of the concubines were Moorish women : several were European slaves, who had either been made captives, or purchased by the emperor ; and some were negroes. In this group the Europeans, or their descendants, had by far the greatest claim to the character of handsome. There was one, in particular, who was a native of Spain, and taken into the harem at about the same age as Lalla Douyaw, who was indeed a perfect beauty j and many others were almost equally handsome. The eunuchs, who have the entire charge of the women, and who in fact live always among them, are the children of negro slaves. They are general y either very short and fat, or else tall, deformed, and lame. Their voices have that particular tone which is observable in youths who are just arriving at manhood ; and their persons altogether afford a disgusting image of weakness and effeminacy.

M. Lempriere gives a very curious account of the manners of these immured females: — 'Attended by a eunuch,' says he, ' after passing the gate of the harem, which is always locked, and under the care of a guard of eunuchs, we entered a narrow and dark passage, which soon brought us to the court, into which the women's chambers open. We here saw numbers of both black and white women and children ; some concubines, some slaves. Upon their observing the unusual figure of a European, the whole

multitude in a body surrounded me, and expressed the utmost astonishment at my dress and appearance. Some stood motionless with their hands lifted up, their eyes fixed, and their mouths open, in wonder and surprise. Some burst into fits of laughter ; while others with uncommon attention eyed me from head to foot. The parts of my dress which seemed most to attract their notice were my buckles, buttons, and stockings ; for neither men nor women in this country wear any thing of the kind. With respect to the club of my hair, they seemed utterly at a loss in what view to consider it ; but the powder they conceived to be employed for destroying vermin. Most of the children, when they saw me, ran away in consternation ; and I appeared as singular an animal, and I dare say had the honor of exciting as much curiosity and attention, as a lion or a man-tiger just imported from abroad, and introduced into a country town in England on a market-day. Every time I visited the harem I was surrounded and laughed at by this curious mob, who, on my entering the gate, followed me close to the very chamber to which I was proceeding, and on my return universally escorted me out. The greater part of the women were uncommonly fat and unwieldy ; had black and full eyes, round faces, with small noses They were of different complexions ; some very fair, some sallow, and others again perfect negroes. One of my new patients being ready to receive me, I was desired to walk within he' room ; where to my great surprise I saw nothing but a curtain drawn quite across the apartment, similar to that of the theatre which separates the stage from the audience. A female domestic brought a very low stool, placed it near the curtain, and told me I was to sit down there, and feel her mistress's pulse. The lady, who had by this time summoned up courage to speak, introduced her hand from the bottom of the curtain, and desired me to inform her of all her complaints, which she conceived I might perfectly do by merely feeling the pulse. It was in vain to ask her where her pain was seated ; the only an-swer I could procure was a request to feel the pulse of the other hand. I was under the necessity of informing her in positive terms that to understand the disease it was absolutely necessary to see the tongue as well as to feel the pulse ; and that without it. I could do nothing for her. My eloquence, or that of my Jewish interpreter, was, however, long exerted in vain ; and she would have dismissed me without any further enquiry, had not her invention supplied her with a happy expedient. She contrived to cut a hole through the curtain through which she extruded her tongue, and thus complied with my injunction, but most effectually disappointed my curiosity. I was afterwards ordered to look at another of the prince's wives, who was affected with a scro-phulous swelling in her neck. This lady was, in the same manner as the other, at first excluded

from my sight ; but, as she was obliged to show me her complaint, I had an opportunity of seeing her face, and observed it to be very handsome.' It is curious to observe the childish notions of persons who have been totally secluded from the world. AH the ladies of the harem expected that

our author should have instantly discovered their complaints upon feeling the pulse, and that he could cure every disease instantaneously. He found them proud and vain of their persons, and extremely ignorant. ' Among many ridiculous questions, they asked my interpreter,' says M. Lempriere, ' if I could read and write ; upon being answered in the affirmative, they expressed the utmost surprise and admiration at the abilities of the Christians. There was not one among them who could do either ; these rudiments of learning are indeed only the lot of a few of their men, who on that account are named Talbs, or explainers of the Mahometan law.' Their needle-work is performed by Jewesses; their food is dressed, and their chambers taken care of, by slaves and domestics. They have no amusement but a rude and barbarous kind of melancholy music, without melody, variety, or taste ; and conversation with one another, which must indeed be very confined, uniform, and inanimate, as they never see a new object. Excluded from the enjoyment of fresh air and exercise, so necessary for the support of health and life ; deprived of all society but that of their fellow sufferers, a society to which most of them would prefer solitude itself; they are only to be considered as the most abject of slaves — slaves to the vices and caprice of a licentious tyrant, who exacts even from his wives themselves a degree of submission and respect which borders upon idolatry, and which God never meant should be paid to a mortal.

SERAI, a building on the high-road or i : large cities in India, erected for the accommodation of travellers.

SERAMPEI, a district in the interior of Sumatra, bounded on the north and northwest by Korinchi, on the east, southeast, and south, by Pakalang, Jambee, and Sungei-tenang ; and on the west and southwest by the greater Ayer Dikit River, and chain of high mountains bordering on the Sungei-ipu country. It comprehends fifteen fortified independent villages, besides several talangs, or small open ones. Their entrenchments consist of large trees laid horizontally between stakes driven into the ground, about seven feet high, and six feet thick, with loop-holes for firing through. The inhabitants further defend themselves by planting ranjaus which are small sharp-pointed

rods, in the paths and carefully concealed, which wound the feet in a distressing manner. They decapitate the bodies of their enemies, stick the heads on poles, and address abusive language to them. Those taken alive are made slaves. In general the inhabitants seem to be quiet and inoffensive. The women are ugly, and their manners uncouth. These people are very strong, being capable of carrying heavy loads during journeys of twenty or thirty days. They acknowledge themselves the subjects of the sultan of Jambee. The country produces cocoa-nuts and cassia. Of thewu-mal productions the rhinoceros is the most considerable ; unless we except an annoying insect which drops in myriads from the trees, and being very long and slender, penetrates the clothes, when travellers sometimes strip, and go into the water in irder to wash them off. Part of Se-rampei is hilly ; it is intersected by several

rivers, and contains hot springs, near which columns of smoke are seen to issue from the earth. The inhabitants are Mahometans.

SERAMPORE, so called after Siri Ram, one of the Hindoo deities, a town of Bengal, belonging to the Danes, and pleasantly situated on the western bank of the Bhaggarutty or Hoogly River, twelve miles north of Calcutta. The territory attached extends about a mile along the river, by half a mile in breadth. The houses are of brick, plastered with mortar, and have flat roofs, with balconies and Venetian windows, but few of them are more than two stories high. There is a handsome church, and a battery of twelve pieces of cannon near the flag-staff. It carries on a trifling trade with Europe, China, &c., but is principally distinguished as the residence of the Baptist missionaries, and of the British subjects who take refuge here from their creditors. About the year 1676 the Danes obtained this site for their factory, from the nabob Shaista Khan, who gave great countenance to European and other merchants. During the short war with the Danes it

was taken possession of by a British force, but soon after restored. Long. 88° 26’ E., lat. 22° 45’ N.— There are several other places of this name in Hindostan.

SERANGANI, a cluster of islands in the eastern seas, about five leagues from the southern extremity of Magindanao, and between 5° and 6J of N. lat. The largest, named Hummock, is about thirty miles, and the next in size about twenty-five miles in circumference. There is also another of inferior dimensions. This island, which is the most westerly, is very high, making a sugar loaf. Its north coast Is bold : it is well cultivated, and is called Belk. It produces most of the tropical fruits, together with rice, sugar-canes, pine-apples, mangoes, sour oranges, limes, jacks, plantains, cocoa-nuts, sago, sweet potatoes, tobacco, Indian corn, and honey. The eastern has not near so good an appearance, neither are there any cocoa-nut trees to be seen on it. These islands abound in refreshments, with which they abundantly supply ships. The articles most in request among them are white or printed cottons, such as loose gowns or jackets, colored handkerchiefs, clasp knives, razors, and bar iron : metal buttons are also in demand, and a coat is soon stripped. The inhabitants speak the same language, and are of the same description, as those on the sea coast of Magindanao, being complete Malays. They have canoes, and larger boats, armed with small brass cannon ; and, like the other natives of the eastern isles, are addicted to piracy. Their prows are covered with an awning of split bamboos. The Dutch East India Company claimed a sovereignty here, but do not appear to have exercised any of its functions, or to have founded any colonies.

SERAPEUM, Lat., in archaiology, a temple of Serapis, the Egyptian deity. The most fa-mous of these edifices was that at Alexandria. Rufinus, wh ., witnessed it while standing, has left us the fcllowingdescription : — ‘ This vast mass of builiu.ig is square, and forms an immense platform, supported on arches, and upon which stand;; the temple itself. The vaults of the plat-

form are separated into a great number of different apartments, which afford lodging to the priests and attendants ; and around are refectories, council chambers, &c. The temple itself is adorned with columns, and has walls of marble.’ Ptolemy, the son of Lagus, had built this sera-peum on a spot by which, for a long time before, had stood a chapel consecrated to Serapis and Isis. Both this and the new temple, however, were destroyed by order of the Christian emperor Theodosius. The statue of Serapis, according to Macrobius, was of a

human form, with a basket or bushel on his head, signifying plenty. His right hand leaned on the head of a serpent, whose body was wound round a figure with three heads — of a dog, a lion, and a wolf. In his left hand he held a measure of a cubit length, as it were, to take the height of the waters of the Nile. This celebrated statue was destroyed with the temple ; its limbs first carried in triumph through the city, and then thrown by the Christians into a fierce fire kindled for that purpose in the amphitheatre. The figure of Serapis is found on many ancient medals.

SER'APH, n. s. \ Heb. *)tniP, literally, a SERAPH'IC, adj. } burning one. One of the supposed orders of angels : seraphim is the pro-per plural : seraphic is relating to or like seraphim.

Then flew one of the seraphims unto me, having a live coal in his hand. Isaiah vi. 6.

To thee cherubim and seraphim continually do cry.

Common Prayer.

Love is curious of little things, desiring to be of angelical purity, of perfect innocence, and seraphical fervor. Taylor.

Of seraphim another row. Milton.

Seraphich arms and trophies. Id.

He is infinitely more remote, in the real excellency of his nature, from the highest and perfectest of all created beings, than the purest seraph is from the most contemptible part of matter, and consequently must infinitely exceed what our narrow understandings can conceive of him. Locke.

As full, as perfect, in vile man that mourns, As the rapt seraph that adores and burns. Pope.

Tis to the world a secret yet, Whether the nymph, to please her swain, Talks in a high romantic strain ; Or whether he at last descends To like with less seraphick ends. Swift.

SERAPH, or SERAPHIM, has been considered, but upon what grounds we know out, as a spirit of the highest rank in the hierarchy of angels; who are thus called from their being supposed to be most inflamed with divine love, by their nearer and more immediate attendance at the throne of God, and to communicate their fervor to the remoter and

inferior orders. See ANGEL.

SERAPIAS, in botany, a genus of the dian-dria order, and gynandria class of plants ; natural order seventh, orchideae ; the nectarium is egg-shaped and gibbous, with an egg-shaped lip. The species, according to Linnaeus, are eleven ; *viz.* S. Capensis; 2. cordigera; 3. erecta; 4. falcata; 5. grandiflora, or ensifolia; 6. lanci-folia; 7. latifolia; 8. lingua; 9. longifolia ; 10. palustris; 11. rubra. Of these the following are the most remarkable: — 1. S. grandiflora, or white-flowered helleborme, grows in woods,

and flowers in June. Its characteristics are, fibrous bulbs, sword-shaped leaves, erect flowers ; and the lip of the nectarium is obtuse and shorter than the petals. The flowers are large and erect, and consisting of six or eight in a thin spike ; the petals are all white, and connive together; the lip of the nectarium is inclosed within the petals, is white and streaked with three yellow prominent lines. It is a native of Britain. 2. S. latifolia, the broad-leaved helleborine, is distinguished by fibrous bulbs, by ovate stem-clasping leaves, and pendulous flowers. The stalk is erect, about a cubit high, and furnished with six or eight nervous oval leaves; the spike is about six inches long ; the three upper petals are of a green color, and of an oval acute form ; the lateral ones are a little shorter, and of a white color, with a little tinge of green. It is a native of Britain. 3. S. longifoiia, the long leaved helleborine, is also a native of Britain. It has long leaves. 4. S. palustris, the marsh helleborine, grows in rough boggy pastures and marshes, and flowers in July. It is distinguished by fibrous bulbs, sword-shaped sessile leaves, pendulous flowers ; and the lip of the nectarium is obtuse, somewhat serrated, and longer than the petals. Tht flowers grow to the number of fifteen or twenty in a loose spike. The three exterior petals are green mixed with red ; the lateral ones are white with a red blush ; and the nectarium is marked with

red lines and yellow tuberculous spots.

SERAPIO, a Greek poet, who flourished in the reign of Trajan. He was intimate with Plutarch.

SERAP.ION, a physician of Alexandria. He and Philinus of the isle of Cos were both scholars of Herophilus, and founders of the empiric sect ; about A. A. C. 287.

SER APION (John), an Arabian physician, who flourished about A. D. 890. He is by some confounded with the Alexandrian, though he lived 600 years later. His works were printed at Ve-nice, in folio, in 1497, and 1550.

SERAPIS, in mythology, an Egyptian deity, who was worshipped under various names and Attributes, as the tutelary god of Egypt in general, and as the patron of several of their principal cities. Herodotus, who describes all the other Egyptian deities, makes no mention of Serapis. Tacitus informs us that he was worshipped as a kind of universal deity that represented ./Esculapius, Osiris, Jupiter, and Plato ; and he was sometimes taken for Jupiter Ammon, the Sun, and Neptune; and the honors that were rendered to him at Alexandria were more solemn and extraordinary than those of any other place. Plutarch, Clemens of Alexandria, and Tacitus inform us, that while the first PtOiemy was employed in fortifying Alexandria with waHs, adorning it with temples and stately buildings, there appeared to him in his sleep a young man of extraordinary oeauty, of a stature more than human, admonish-ing him to dispatch into Pontus some of his most trusty friends to bring thence his statue : he assured him that the city and kingdom which possessed it should prove happy, glorious, and powerful. The young man, having thus spoke, disappeared, mounting up into heaven in a blaze

of fire. Ptolemy discovered his vision to the priests ; but, finding them ignorant of Pontus, he had recourse to an Athenian, who informed him that near Sinope, a city of Pontus, there was a temple much resorted to by the natives, which was consecrated to Pluto, where he had a statue, near which stood that of a woman. Ptolemy neglecting the injunctions of the apparition, it again appeared to him in a menacing attitude; and the king immediately dispatched ambassadors to the Serapian monarch, loaded with presents. The king of Sinope consented ; but his subjects opposed the removal of the statue. The god, however, of his own accord, as we are informed, conveyed

himself to the ambassador's ship, and in three days landed in Alexandria. The statue of Serapis was erected in one of the suburbs of the city, where a magnificent temple was afterwards reared. This statue, according to Macrobius, was of a human form, with a basket or bushel on his head, signifying plenty ; his right hand leaned on the head of a serpent, whose body was wound round a figure with three heads; of a dog, a lion, and a wolf; in his left hand he held a measure of a cubit length, as it were to take the height of the waters of the Nile. The figure of Serapis is found on many ancient medals. The famous temple of Serapis at Alexandria was destroyed by order of Theodosius ; and the celebrated statue of this deity was broken in pieces, and its limbs carried first in triumph by the Christians through the city, and then thrown into a fierce fire, kindled for that purpose in the amphitheatre. As the Egyptians ascribed the overflowing of the Nile, to which was owing the fertility of their country, to the benign influence of their god Serapis, they concluded that now he was destroyed the river would no longer overflow, and that a general famine would ensue ; but when they observed, on the contrary, that the Nile swelled to a greater height than had been known in the memory ot man, and thereby produced1 an immense plenty of all kinds of provisions, many of the Pagans, renouncing the worship of idols, adored the god of the Christians.

SERE, adj. Sax. j-earuan, to dry. Dry; withered ; no longer green. See SEAR.

The muses, that were wont green bays to wear, Xow bringen bitter elder-branches sere. Spenser.

He is deformed, crooked, old, and sere, Ill-faced, worse bodied, shapeless every where ; Vitious, ungentle. Shakspeure. Comedy of Errourt.

Ere this diurnal star

Leave cold the night, how we his gathered beams Reflected may with matter sere foment. Milton.

They sere wood from the rotten hedges took, And seeds of latent fire from flints provoke. Dryden.

On a Kre branch,

Low bending to the bank, I sat me down, Musing and sti:l. Howe's Eoyal Convert.

SERE, n. s. Of this word I know not the etymology. Can it come, like sheers, from Sax. r-cyrtan, to cut ? — Johnson. Ital. serri ; Fr. serre ; of Lat. sero. — Thomson. Claw ; talon

Two oagks,

That mounted on the winus, together s'ill Their strokes extended ; but arriving now Amidst the council, over every brow

Shook their thick wings, and threatening death's cold

fears, Their necks and cheeks tore with their eager seres.

Chapman.

SERE, in hawking, is used for the yellow part of a hawk between the beak and the eyes (see FALCONRY) j but this cannot be Chapman's meaning.

SEREGIPPE, or SERGIPPE, a province of Brasil, bounded north by Pernambuco, south by the proviuce of Todos Santos, east, by the sea, and west by interior deserts. It is very fertile and well cultivated, abounding in cattle, grain, tobacco, and sugar, in all of which it carries on a flourishing trade. Its ports do not admit large vessels. Population 20,000.

SEREGIPPE, the capital of the above province, is situated on the shore of the river Vazabaris, five miles from the coast. It has a very handsome parish church, but is not a large or very flourishing place.

SERENADE', n. s. Fr. serenade ; Ital. sere-nata, whence in Milton serenate, from Lat. serenus, the lovers commonly attending their mistresses in fair nights. Music or songs with which ladies are entertained by their lovers in the night.

Mixt dance, or wanton mask, or midnight ball, Or serenate, which the starved lover sings To his proud fair ; best quitted with disdain.

Milton.

Foolish swallow, what dost thou So often at my wih'dow do, With thy tuneless serenade 1 Cowley.

Shall I the neighbours' nightly rest invade, At her deaf doors, with some vile serenade?

Dryden.

He continued to serenade her every morning, till the queen was charmed with his harmony.

Spectator.

Will fancies he never should have been the man he is, had not he broke windows, and disturbed, honest people with his midnight serenade, when he was a young fellow. Addison.

A SERENADE is a kind of concert given in the night by a lover to his mistress, under her win-dow. These sometimes consist only of instrumental music, but at other times voices are added ; the music and songs composed for these occasions are also called serenades.

SERENE', n.s. & v. a.~\ Fr. serein; Latin SERENE'LY, adv. f serenus. Calm;

SEREN'ITUDE, n. s. £ placid; quiet: the SEREN'ITY. J adverb and noun

substantive corresponding.

Wherever death doth please t'appear, Seas, serenes, swords, shots, sickness, all are there.

Ben Jonson.

From the equal distribution of the phlegmatick humour will flow quietude and serenitude in the affections. Wotton.

Spirits live insphered In regions mild of calm and serene air. Milton.

There wanted yet a creature might erect His stature, and upright with front serene Govern the rest. Id.

t These eyes that roll in vain, So thick a drop serene hath quenched their orbs.

Id.

A general peace and serenity newly succeeded a gene al trouble and cloud throughout all his kingdoms. Temple.

Whatever practical rule is generally broken, can-not be supposed innate; it being impossible that men would, without shame or fear, confidently and serenely break a rule which they could not but evidently know that God had set up. Lor.he.

I cannot see how any men should ever transgress those moral rules, with confidence and terenity, were they innate, and stamped upon their minds. Id.

Take care

The muddy beverage to serene, and drive Precipant the baser ropy lees. Philips.

Exciting them, by a due remembrance of all that is past, unto future circumspection, and a serene expectation of the future life. Grew's Cosmolooia.

The nymph did like the scene appear, Serenely pleasant, calmly fair : Soft fell her words as flew the air. Prior.

In the constitution of a perpetual equinox, the best part of the globe would be desolate ; and, as to that little that would be inhabited, there is no reason to expect that it would constantly enjoy that admired calm and serenity. Bentley.

The moon, serene in glory, mounts the sky. Pope.

The setting sun now shone serenely bright. Id.

Pure serenity apace Induces thought and contemplation still. Thomson.

A black cloud hangs hovering over their minds ; which, when it falls in showers through their eyes, is dispersed, and all within is serene again. Mason.

Can hopes of Heaven, bright prospects of ac

hour

That come to waft us out of Sorrow's power, Obscure or quench a faculty that finds Is happiest soil in the serenest minds ? Religion

curbs indeed its wanton play, And brings the trifler under rigorous sway.

Cowper.

SERENE is also a title of honor given to several princes, and to the principal magistrates of republics. The king of Britain, and the children of the king of Spain, are called most serene ; as were also the late republic and doge of Venice : and, when the pope or the sacred college write to emperors or kings, they give them no other titles.

SERENUS SAMMONICUS,ˆ. celebrated physician, who flourished in the reigns of Severus and Caracalla, about A. D. 200. He wrote several treatises on history and the works of nature ; but there is only one poem extant, On the Remedies of Diseases. The best edition is that of Amsterdam, in 8vo., 1706, He was murdered, at a festival, by the order of Caracalla. He had a library that contained 62,000 volumes, which Quintus Serenus Sammonicus, his son, gave to Gordian the Younger, to whom he was preceptor.

SERERES, a tribe of the Joloffs, in Western Africa, inhabiting the country in the vicinity or Cape Verd. They are dispersed into small republics, which unite into one body against a common enemy, and go naked. They appear to have few or no ideas of religion ; but seem an inoffensive industrious people, and hospitable to strangers.

SERES, or SIRUS, a large inland town of mo-dern Macedon, situated in an elevated plain, at some distance to the east of the ancient Strymon, now the Carasou or Pondus. It has a number of handsome mosques, baths, awl other public edifices. Its manufacture of ‘jwel* and strong

linen cloth is the most noted in the Levant: those of cotton stuffs are also very extensive. The surrounding district is fertile in cotton, tobacco, and different kinds of corn and fruit. It is to this fertility, and the health of the situation, that the town owes its increase. It is the residence of a Greek archbishop. Population 30,000. Forty-five miles

northeast of Salonica.

SERGE, n. s. Fr. serge ; Span, xerga, which Covaruvias derives from Arab, xirica, Skinner from Germ, serge, a mat. A kind of woollen cloth.

The same wool one man felts into a hat another weaves into cloth, another into kersey or serge, and another into arras. Hale.

Ye weavers, all your shuttles throw, And bid broad-cloths and serges grow. Gay.

SERGE is a woollen quilted stuff, manufactured commonly on a loom with four treddles, after the manner of rateens, and other stuffs that have a wale. The goodness of serges is known by the quilting, as that of cloth by the spinning. Of serges there are various kinds, denominated either from the different qualities thereof or from the places where they are' wrought. The most considerable is the London serge, highly valued abroad, particularly in France, where a manufacture is carried on with considerable success, under the title of serge facon de Londres. The method of making the London serge is as follows : — For wool, the longest is chosen for the warp, and the shortest for the woof. Before either kind is used it is first scoured, by putting it in a copper of liquor, somewhat more than lukewarm, composed of three parts of fair water and one of urine. After having staid loug enough therein for the liquor to dissolve, and had the grease taken off, &c., it is stirred briskly about with a wooden peel ; taken out of the li-quor, drained, and washed in a running water, dried in the shade, beaten with sticks on a wooden rack to drive out the coarser dust and filth, and then picked clean with the hands. Thus far prepared, it is greased with oil of olives, and the longest part, destined for the warp, is combed with large combs, heated in a little furnace for the purpose. To clear off the oil again, the wool is put in a liquor composed of hot water with soap melted therein : whence being taken out,, wrung, and dried, it is spun on a wheel. The shorter wool, intended for the woof, is only carded on the knee with small cards, and then spun on the wheel, without being scoured of its oil. It must be remarked that the thread for the warp is always to be spun much finer, and better twisted than that of the woof. The wool, both for the warp and the woof, being spun, and the thread divided into skains, that of the woof is put on spools (unless it has been spun upon them) fit for the cavity or eye of the shuttle ; and that for the warp is wound on a kind of wooden bobbins, to fit it for warping. When warped, it is stiffened with a kind of size, whereof that made of the shreds of parchment is held the best; and when dry is put on the loom. When

mounted on the loom, the workman raising and lowering the threads (which are passed through a reed), by means of four treddles placed underneath the loom, which he makes to act trans-SER

versely, equally, and alternately, one after another, with his feet, in proportion as the threads are raised and lowered, throws the shuttle across from one side to the other ; and each time that the shuttle is thrown, and the thread of the woof is crossed between those of the warp, strikes it with the frame to which the reed is fastened, through those teeth the threads of the warp pass; and this stroke he repeats twice or thrice, or even more, till he judges the crossing of the serge sufficiently close : thus he proceeds till the warp is all filled with woof. The serge now taken off the loom is carried to the fuller, who scours it in the trough of his mill with a kind of fat earth, called fuller's earth, first purged of all stones and filth. After three or four hours' scouring, the fullers' earth is washed out in fair water, brought by little and little into the trough, out of which it is taken when all the earth is cleared : then, with a kind of iron pincers, or plyers, they pull off all the knots, ends, straws, &c., sticking out on the surface on either side, and then return it into the fulling trough, where it is worked with water somewhat more than lukewarm, with soap dissolved therein, for nearly two hours ; it is then washed out till the water becomes quite clear,, and there be no signs of soap left; then it is taken out of the trough, the knots, &c., again pulled off, and then put on the tenter to dry, taking care as fast as it dries to stretch it out both in length and breadth till it be brought to its just dimensions. When well dried, it is taken off the tenter, and dyed, shorn, and pressed.

SER'GEANT, n.s. ˆ Fr. sergent ; Ital. serSER'GEANTRY, >gente ; from Lat. serSER'GEANTSHIP. j vicns. An officer whose

business it is to execute the commands of

others ; his office : for the legal use see below.

When it was day, the magistrates sent the tergeants, saying, Let these men go. Acts xvi. 35.

Had I but time, as this fell sergeant, Death, Is strict in his arrest, oh ! I could tell.

Shakspeare. Hamlet. This is the sergeant, Who like a good and hardy soldier fought.

Id. Macbeth.

None should be made sergeants but such as probably might be held fit to be judges afterwards.

Bacon.

Grand tergeantry is that where one holdeth lands of the king by service, which he ought to do in his own person unto him : as to bear the king's banner or his spear, or to lead his host, or to be his marshal, or to blow a horn, when he seeth his enemies invade the land ; or to find a man at arms to fight within the four seas, or else to do it himself ; or to bear the king's sword before him at his coronation ; or on that day to be his sewer, carver, butler, or chamberlain. Petit sergeantry is where a man holdeth land of the king, to yield him yearly some small thing towards his wars ; as a sword, dagger, bow, knife, spear, pair of gloves of mail, a pair of spurs, or such like.

Cowet.

SERGEANT, in war, is an uncommissioned officer in a company of foot or troop of dragoons, armed with a halberd, and appointed to see discipline observed, to teach the soldiers the exercise of their arms, to order, straighten, and form their ranks, files, &c. He receives the orders

from the adjutant, which he communicates to his officers. Each company generally has two Serjeants.

SERJEANT AT ARMS, or MACE, an officer appointed to attend the person of the king; to arrest traitors, and such persons of quality as offend ; and to attend the lord high steward when sitting in judgment on a traitor. Of these, by stat. 13 Rich. II. c. 6, there aye not to be above thirty in the realm. There are ordinarily nine at court called the king's Serjeants at arms, to distinguish them from others, who are created with great ceremony ; the person kneeling before the king, his majesty lays the mace on his right shoulder, and says, Rise up serjeant at arms, and esquire for ever. They have besides a patent for the

office, which they hold for life. They have their attendance in the presence-chamber, where the band of gentlemen pensioners wait; and, receiving the king at the door, they carry the maces before him to the chapel door, whilst the band of pensioners stand foremost, and make a lane for the king, as they also do when the king goes to the house of lords. There are four other Serjeants at arms created in the same manner ; one who attends the lord chancellor ; a se-cond the lord treasurer; a third the speaker of the house of commons; and a fourth the lord mayor of London on solemn occasions. They have a considerable share of the fees of honor, and travelling charges allowed them when in waiting, *viz.* five shillings per day when the court is within ten miles of London, and ten shillings when twenty miles from London. The places are in the lord chamberlain's gift. There are also Serjeants of the mace of an inferior kind, who attend the mayor or other head officer of a corporation.

SERJEANT AT LAW, or OF THE COIF, is the highest degree taken at the common law, as that of doctor is of the civil law ; and, as these are supposed to be the most learned and experienced in the practice of the courts, there is one court appointed for them to plead in by themselves, which is the common pleas, where the common law of England is most strictly observed : but they are not restricted from pleading in any other court, where the judges, who cannot have that honor till they have taken the degree of serjeant at law, call them brothers.

SERJEANT, COMMON, an officer in the city ot London, who attends the lord mayor and court of aldermen on court days, and is in council with them on all occasions, within and without the precincts or liberties of the city. He is to take care of orphans' estates, either by taking account of them, or to sign their indentures, before their passing the lord mayor and court of aldermen : and he was likewise to let and manage the orphans' estate according to his judgment, to their best advantage. See RECORDER.

SERGEANT MAJOR, a non-commissioned officer suboidinate to the adjutant.

SERGEANTY, serjentia, signifies, in law, a service that cannot be due by a tenant to any lord but the king. Though all tenures are turned into soccage, by 12 Car. II. c. 24, yet the honorary services of grand sergeantry still remain, being therein excepted. See KNIGHT-SERVICE.

This word is the same with serjeantry ; but would puzzle an antiquarian to tell how or wh" such trifling variations of spelling have been h\ troduced

SERGESTES, a sailor in *Eneas's fleet, from whom the Roman family of the Sergii claimed their descent. Virg.* .En. v. 121.

SERGII, the surname of a patrician family of ancient Rome, which produced several great men and one great villain See CATILINE, and SERGIUS.

SERGINES, a town of France, in the department of the Yonne : nine miles north of Sens, and thirteen and a half south of Provins.

SERGIPO DEL REY. See SEREGIPPE.

SERGIUS CATILINA. See CATILINE.

SERGIUS I., pope of Rome, was born at Palermo, and elected pope in 687. He died in 701, with a good reputation, after a reign of thirteen years and eight months.

SERGIUS II. was a native of Rome ; succeeded Gregory IV. in 844 ; and died in 847.

SERGIUS III. was elected pope by the Ro-mans in 898; but, the party of John IX. prevailing, he was driven from his seat, and did not recover it till A D. 905. He disgraced his dignity by his vices, and died in 911.

SERGIUS IV. succeeded John XVIII. in 1009. He was humble and liberal minded. He died in

1112.

SE'RIES, n. s. Fr. serie ; Lat. series. Sequence; order.

Draw out that antecedent, by reflecting briefly upon the text, as it Jies in the series of the epistle.

Ward of Infidelity.

The chasms of the correspondence 1 cannot sup-ply, having destroyed too many letters to preserve any series. Pope.

This is the series of perpetual woe, Which thou, alas ! and thine, are born to know.

Id.

SERIES, in general, denotes a continual succession of things in the same order, and having the same relation or connexion with each other ; in this sense we say, a series of emperors, kings, bishops, &c. In natural history, a series is used for an order or subdivision of some class of natural bodies; comprehending all such as are distinguished from the other bodies of that class, by certain characters which they possess in .common, and which the rest of the bodies of that class have not

SERIES, in music. See Music,

SERIES, in arithmetic and algebra, a rank or number of terms in succession, increasing or diminishing in some certain ratio or proportion. There are several kinds of series ; as arithmetical, geometrical, infinite, &c. The two first of these are, however, more generally known or distinguished by the names of arithmetical and geometrical progression. These series have already been explained and illustrated in the article ALGEBRA, particularly the two first : it therefore only remains, in this place, to add a little to what has already been done to the last of these ; *viz.* INFINITE SERIES.

SERIES, HARMONIC, a series of terms formed in harmonical proportion. It has been observed in the article PROPORTION, that if three numbers

be in harmonical proportion the first is to the third as the difference between the first and second is to the difference between the second and third. Let a, &, and x be three terms in harmonical proportion ; then a ; x \ ‘. a — b \ b — x.

whence a — *6 j ± :a b — a* ,

and 2 a JT — b x~a b

then x — r . Hence the

2 a — b

first three terms of this is a, b,

2a — 6

Again : let x be the fourth term ; to find which, in terms of a and 6, we have

a b a b

ab

Then b x — 2 a — b3 a 6 — 26*

ab1 ‘ x=2a—b~—bx

* =

2 fl — b

06*

2 a — b

2 a—b

~~2a — b’ 3 a — 1 6s 3 a — ab;

a b therefore thf first four terms are a b’

ab

a — 26,

. Whence the law of the series is ob-a — 2 b

vious, and it may be continued as follows : a. b.

-, &c.,

ab

ab

ab

ab

2 a — b ‘ 3 a — 26’ 4 a — 3 6’ 5 a — 46

and the ninth term i«_ ; — • If, in

n— 1. a — n — 2.

a series in harmonical proportion, a and 6 be two affirmative quantities, and such that a •< 6 ; then this series, which is positive at first, will become negative as soon as n — 2 . 6 exceeds n — 1 . a. But, if a >• 6, the series will converge ; and, although produced to infinity, will not become negative. Let a and b be equal to 2 and 1 respectively ; then this series becomes f . ?• §. j, &cc. ; and, since if each term of an harmonical series be divided by the same quantity, the series will still be harmonical, therefore f £. i-J. ‘, &c., is an harmonical series : whence the denominators of this series form a series of numbers in

arithmetical progression ; and conversely, the reciprocals of an arithmetical progression are in harmonical proportion.

SERIES, INFINITE, is formed by dividing the numerator of a fraction by its denominator, be-ing a compound quantity ; or by extracting the root of a surd. An infinite series is either converging or diverging. A converging series is that in which the magnitude of the several terms gradually diminish ; and a diverging series is that in which the successive terms increase in magnitude. The law of an infinite series is the order in which the terms are observed to proceed. This law is often easily discovered from a few of the first terms of the series ; and then the series may be continued as far as may be thought necessary, without any farther division or evolution. An infinite series is obtained by division or evolution; but, as that method is very tedious, various other methods hare been proposed for performing the

same in a more easy manner ; as, by assuming series with unknown coefficients, by the binomial theorem, &c.

SERIES, INFINITE, method of, by division anc evolution. — Rule. Let the division or evolution of the given fraction which is to be converted into an infinite series, performed as in Chap. I. and IV. of the article ALGEBRA, and the required series will be obtained. Examples. 1.

Convert the fraction— into an infinite series.

1 — JT

1— or) 1 (1 + x ‘+ *» + x3 + x4, &c.

1— x

Hence the fraction z_ 1 -f-x + x* -f x*

+ x4, &c. From inspection of the terms of this series, it appears that each term is formed by multiplying the preceding term by x; and hence it may be continued as far as may be thought necessary without continuing the division.

a t/

2. Let the fraction — — be converted into an l+x

infinite series.

(ay — uyx + ayx* — ayx3 + ayx*, 8cc. ay + ax

—ayx

— ayx — ayx’

ayx9

ay i* --ayx3

—ayx9

— ayx3 — ayx4

ayx* ‘ ayx4 --ayx*

— ayx*

Hence -^- = ay x 1— x + x3— I3-)-!4, &c., and the law of the series is obvious.

3. Reduce the fraction - into an infinite m -|- jr

series.

2 x* 2 x3 2 x4

m* -f

— mx -f-x*

— ins — .i2

a x’

neglected whose dimensions exceed those of the last term to which the root is to be continued.

SERIES, INFINITE, method of, by the assumption of a series with unknown coefficients. — Rule. Assume a series with unknown coefficients to represent that required. Let this se-ries be multiplied or involved, according to the nature of the question ; and, the quantities of the 4 same dimension being put equal to each other.

, x f &c. tne coefficients will be determined ; and hence

w* ‘ the required series will be known.

Hence :ri m — x -\ 1 H ‘ Examples. 1. Let — ,be converted into an inm + x m I m m3 a-x

&c.. and the laws of the series is evident. ,, .. 1

finite series. Assume — — A 4-B x 4-«C r* a3 a-s

4. Convert the quantity -y—— — ˆ into an -f D x3 4-E t4, &c.

infinite series. ‘ay~T~y ˆ Then this assumed series multiplied by a— x

a E x*, &c.,— A .r— B x3— C x3— D x*, &c. Now, by equating the coefficients of the same powers of ,r, we have a A ~ l,aB — — o, aC — B — o, a D — C — o, a E — D — o, &c. Hence — 2 ay—y1 i A 1 B 1 P

9 .9 0,,j A — * r> — — J. P ° r» — ˆ

„ „ 2 V « — ~> ” — — TJ> ˆ — ~~ — — „» L) ~ — —

— 2 a w — 4 «•* — : — a a a* a a3 a

a 1 D 1 -7>E — ~— ~s> &c-> whence, by substitu-

2 v3

3 y3 -I — 1 1 JT x3 j:* .r4

17 « tion, we have — — — ˆ — +— H — H — • ,

* 3 04 a~x a a2 a3 a a5

. 2. Convert the quantity — — into an

4.3Q.4 c2 + 2 cy — y1

—2- —ˆ~- infinite series. Let the assumed series be A -fa a* By + Cy3 + Dy, which multiplied by c3 +

,,r, fl2 ˆ 2 y 3 ?/2 4 w3 2 c v — y9, gives

\Vhence — — — — ~~ i L. i • -7 j j *

a2 + 2 ay + «/3 ~ a a2 a3 ‘ c2 = c2 A + c2 By + c2 Cy8 + c2 Dy3, &c.

&c. ; and each term is found by multiplying the + 2cAˆ + 2cBy2 -f-2cCˆ3

preceding by ‘-‘and increasing the coefficient by . . , ,

a Now, by equating the coefficients of the homolo—

umty. gous terms, we have c2— c2 A, c2 B -f-2 c A —

5. Let *J a- -- j:2 be converted into an infinite o, c2C + 2cB — A ~ o, c2 D + 2oC — Bˆ:

senes-o,&c.; whence A= 1, B = — iˆ=-, C =

iX” iX* ‘ ;T X C C

2ˆ Q~a~3 + T6ˆ3 128ˆ A— 2cB *1* + *4 5*ˆ B — 2 c C _

c3 c2 ~ cs’ c2

r4 —2— 10 12 c2

zz — , &c. ; whence

4 a* c3 c3 ‘ c2 +

3’ c c2 c ‘

o 8a3//4ˆa* ˆ ˆ 3. Required the square root of a* — x\ Let

x _£_ i ˆ ai st\ i 3ˆ; A + B ˆ2 + C j4 + D jˆ, &c.,

4 a2 8 a* 64 a” which befng squared gives a2 — x3 = A2 + 2 A

2 g ~ g B x3 + B*x* + 2 A D x8, &c.,

2 a -j. T _ fl_ i *f* \ ˆ +2ACj4+2BCˆ6.

, 4a3 16fl5/ 8a4 64a« ˆ Hence A1 = a2, 2 A B + 1 = o,B2 + 2 AC

ˆ , ‘r8 A”°_ , .J” o, 2AD + 2B’Crzo, &c. Then A r= a, B — ? “*”
16a664a8”r 256a10 1 *1]B*ˆ _ 1 BC

8 io 2~A~”*2a ‘ 2*A”~8a3’ A

256ˆ5 = —L, &c. ; whence a” - *”|* =-af—

64 a6 64 a8 256 a10 — ˆg-ˆ5» «c.; w • «£

Hence the square root of a! + x3 — a + — - -~ — ?—., &c.

O n R «3 « ,,3 1 « «S’

8 a3 16 a5

5 8

-J J ? &c_ Surd and fractional quantities may be reouced

16 a* 128 jr7’ to infinite series by the binomial theorem, which

In continuing the operation, those terms may oe may be consulted. See ALGEBRA and BINOMIAL.

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An infinite series may be involved to any given power, or any proposed root of a given series may be extracted by means of the following general theorem :— r” A (a + bx + cx’ + dx3 + ex*, &c., ” = = 2”, multiplied by

m ,

a + mba

SERIES.

. m — 1 m — 2 m — 3 m — 4 m — 5

. m—1 m— 2 m— 3

y**

.m—1 m— 2

_.2a

m— al

j

+ ma

m — 1 m— 2 m — 3 m — 4 •—.— •-4—° ‘

m — 2 m — 2 >n — 3 + m ‘ 2 • 3 • 30

. m—1 m— 2 5 2 6d 2 ‘°

m—1 + mo e

m — 1 m — 2 m — 3 m — 4 m — 5 m — 6,6~

+m-2–3—— — -~6-a

m — 1 m — 2 m — 3 m — 4 m — 5.

2 • 3 • 4 • 5 m — 1 m— 2 m — 3 m — 4 $ g &V +WI’ 2 • 3 ‘ 4

m — 1 m — 2 m — 3

•36’e

+ m a

m—1 g

Now each term of the given series is to be compared with the correspondent terms in the first part of the above theorem ; and, by substitution in the second, several terms of the required series will be obtained.

Example 1. — What is the square of the series y — y3 + y* — y7 + &c.?

By comparing this with the general theorem, we find Z — y, a = 1, 6 = o, c = — 1,0*1=0, g = — 1, &c., and m = 2 ; whence y—y+y* — y7|l=*y X (1— 2 a x + c*^4 — 2 ce x*\, kc., — y*

i ft „ i rt — _8 I

4, &c.

x (i-sy + 3^—4^), &c., =y»_2y + sy— 4/, &c.

2. Required the fourth power of the series 1 + + *x* + .r3, &c

Here ?=: 1, o— 1, 6:z 1, err 1, d= 1, and m^:4. Then 1 + x + x + *x*, &c.|«= 1 + 4bx + 6Vx* + 4 fc» jr» +

+ 4c +126c

+ 12 bd + 4e = 1 + 4 T + 10 x8 + 2° x3 + 35 **, &c.

SERIES, RECURRING, a series of which any term is formed by the addition of a certain num-ber of preceding terms, multiplied or divided by any determinate numbers, whether positive or negative. Thus 2, 3, 19, 101,543, 2917, 15671, &c^ is a recurring series, each term of which is formed by the addition of the two preceding terms, the first of which being previously multiplied by the constant quantity 2 and the other by 5. Thus the third term 19=2x2+3X5; the fourth term 101 = 2 x 3 + 19 X 5, &c. The principal operation in a series of this nature is that of finding its sum. — For this purpose, the two first and two last terms of the series must be given, together with the

constant multipliers. Let a,b,c,d, e,f, &c., be any number of terms of a series formed according to the above law, each successive term being equal to the sum of the products of the two preceding terms, the first being multiplied by the given quantity m, and the other by the given quantity n. Hence we shall have the following series of equations c = ma + nfc, dzr mt + nc, erzmc + nd,f— md + ne, &c. Then adding these equations, we obtain r + d +

X a + b + c + d + n X b + c

of all the terms except the two first; the quantity by which m is multiplied, in the second mem-ber, is the sum of all the terms except the two last; and that by which n is multiplied is the sum of all the terms except the first and last. Now let s n: sum of the series ; then * — a — b = m x s — e — / + ra x s — or—f. Hence s rz

m + n — 1

the first seven terms of the above series be required.

5 15671 First term 2 (2917 Last term 15671

Two last terms

Sum

Sum

Now the first member of this equation is the sum

— 2 + 3

2 + 5—1 = 6

18588 Sum . . 15673

2 n 5

37176 78364 78365

115536

19256 z= sum of the series’,

SERIES.

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SERIES, REVERSION OF, is the method of finding the value of the quantity whose several powers are involved in a series, in terms of the quantity which is equal to the given series. In order to this, a series must be assumed, which ueing involved and substituted for the quantity equal to the series, and its powers, neglecting those terms whose powers exceed the highest power to which it is proposed to extend the se-ries. Let it be required to revert the series a x + bx* +cxi+dx4 + ex*, &c. — y ; or, to find s in an infinite series expressed in the powers of y. Substitute y” for x, and the indices of the powers of y in the equation will be ra, 2 n, 3 ra, &c., and 1, therefore wrz 1 ; and the differences are 0, 1, 2, 3, 4, 5, Sec. Hence, in this case, the series to be assumed is A.y + By* + Cy3 + Dy4, &c., which being involved, and substituted for the respective powers of x, then we have

bx* = + b Ay + 26ABj/3 +26AC;y4) .

ex3 zz + c A3y3+ 3cA8By4, &c. ‘

dx4 — + dA.*y4, &c. .

Whence, by comparing the homologous terms,

we have a Ay zz y ; therefore A zz -, B zz — ,

/ 26AB + cA3\ 2 6s — a c

C (— • I — 1 ; L)

\ a s a*

L C + b B1 + 3 c A* B + d A

/

\

-, &c., and consequently xzz 3 — 5o6c + asd

X V3 —

a a3 a

X y4, &c.

X* x3 x4 Example 1. — Let x — — -\ , &c., zz

At o 4

y. Then a being in this case equal to 1, b zz — — , c— , dzz , &c., we shall, by substituting

* o 4

these values, have xrzy + ˆ-~ + ˆ — hˆ~ &c.

2 6 24

2. Let x — i* + x3— x4 + ar5, &c., =y; to find x. In this example we have x :=: x, o iz 1, irz — 1 , c zz 1, d zz — : 1, &c. ; whence x zz V_l 2 — l”

11 1

— y + y* + y3 +y4

—5+5—1

T v4, &c.,

3. Let a =r — -f -

2 r 24

_6

&c., to find x.

720 r5-

4032 r7

,r Put r — a z= u ; then t; zr

2r

1

720T* ~ 403277 ‘

<i = Joˆ’&c-

1

v3, &c., = 2ru + —t)» + -. 3 T 45r

&c., whence x ~ ./2rt) x

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S*r. X (1 + £ +

-

160 r1 896 r

SERIES, SUMMATION OF, is the method of finding the sum of the terms of an infinite series produced to infinity, or the sum of any number of terms of such a series. The value of any arithmetical series, as 1* -f 2s + 33 + 4« ..... n»

varies according as (n) the number of its terms varies : and, therefore, if it can be expressed in a general manner, it must be explicable by n, and its powers with determinate coefficients; and those powers, in this case, must be rational, or such whose indices are whole positive numbers ; because the progression, being a whole number, cannot admit of surd quantities. Lastly, it will appear that the greatest of the said indices can-not exceed the common index of the series by more than unity : for, otherwise, when n is taken indefinitely great, the highest power of n would be indefinitely greater than the sum of all the rest of the terms. Thus the highest power of n in an expression exhibiting the value of la -|- 2a + 3* + 4-..n3, cannot be greater than n3; for 1* -j-2a -j-32 -f-4*...n2 is manifestly less than n3, or na + n2 -f-n» -f , &c., continued to n terms ; but re4, when n is indefinitely great, is indefinitely greater than n3, or any other inferior power of n, and therefore cannot enter into the equation. This being premised, the method of investigation may be as follows : —

Example 1. — Required the sum of n terms of the series 1 -f-2 + 3 + 4 + ... n. Let A n* -f-B n be assumed, according to the foregoing observations, as a universal expression for the value of 1 + 2 + 3 + 4 ..... n, where A and B represent unknown but determinate quantities. Therefore, since the equation is supposed to hold universally, whatsoever is the number of terms, it is evident that if the number of terms be increased by unity, or, which is the same thing, if ra + 1 be written therein instead of n, the equation will still subsist; and we shall have A x n+ l|a + Bxn + 1 = l + 2 + 3 + 4 ..... n -- n — 1. From which the first equation being subtracted, there remains A x n + [‘ — An2 + B _j. 7i — i — B n — n + 1 ; this contracted will be2An-|-A-|-Br:7i+l; whence we have 2 A— 1 X n + A + B — 1 = 0: Wherefore by taking 2 A— 1 = 0, and A + B — 1 — 0, we have A = i, and B = i ; and consequently

1 + 2 -f-3 + 4 ..... n(— An* + Bn) = - +

comparison we find - zz

Hence j:3 zz 2 rv 1

— 1

2Tr» 288 r6 ~~ 1440 r6

-— » X ” + 1

2~ 2

What is the sum of the ten first terms of the series 1 + 2 + 3, &c.?

ra x n + 1 10x 11 In this case nzz 10, then zz —

= 55.

2. Required the sum of the series 1’ + 2s + 3» n9, or 1, + 4 + 9 + 16 n. Let A n3

32 rs

SER

80

SER

-f B n* -j-C n, according to the aforesaid observations, be assumed — 1s + 2* + 3* …… n’ ;

then, as in the preceding case, we shall have A X n + ll» + B X n + H* + C~X n + 1 = 1» -f 2* + 3* ….. .n* x n -f-II* ; that is, by involving » -f 1 to its several powers, A nj + 3 ‘A n1 + 3 A n + A + Bn* + 2 B n + B + C »

+ C = 1* + 2* + 3»…n» + » + if1; from which subtracting the former equation, we obtain 3 An* + 3An+A + 2Bn+B-t-C(:= n + 1|*) r: n’ + 2 n +1 ; and consequently 3 A — 1 x n» + 3 A -I-2 B — 2 x n + A + B + C — 1 = 0; whence 3 A — 1=0, A + 2B — 2 = 0, and A -f B + C — 1 = 0; therefore

A = i, B = 2 ~ 3 A = j, C = 1 — A— B

B z= j, and consequently 1 + 4 -f 9 + 16 ….. n’

_ 2? i_2l i n n • n + 1 • 2 n -f-1 ~ 3 +T + 6’ °r 6~

What is the sum of the ten first terms of the series 1* -f-2* + 3* , &c. ? Here n = 10, then

n + 1 • 2n+ 1 10 x 11 +21 *n* - = • — ooa.

3. Let the sum of the series — rr H —

n R n R3

H — 55- &c., be required ? This series is equal n K

to the difference of the two following : —

nil + dr- + ,nr* &c”= it + sr

.,.,_.

Second, -+-

-,, &c., = +

, . —

TT» + T73’ &c-> = — X K1 K3 n r

The difference of these series is — • — x

r n

- X — , which reduced becomes

r _ r

« + a— I X r’+a — l

nr»

To proceed farther would lead us far beyond the limits assigned for this article ; we must therefore refer those who require more information on this subject to the following authors : — Bertrand’s Developement, &c., vol. 1 ; Dod-son’s Mathematical Repository, vol. 1

; Emer-son's Algebra ; Appendix to Gravesend's Algebra ; Hutton's Paper on Cubic Equations and Infinite Series, in the Philosophical Transactions for 1780; Maclaurin's Fluxions; Malcolm's Arithmetic ; Masere's Annuities ; and Scriptores Logarithmici, &c. ; De Moivre's Doctrine of Chances, and a Paper by the same author in the Philosophical Transactions, No. 240 ; Simpson's Algebra, Essays, Fluxions, and Miscellanies ; Stirling's Summatio et Interpolate Serierum ; Syntagma Mathesios, 8cc.

SERINAGUR, or Gerwall, a principality of Hindostan, situated chiefly between 30° and 32° of N. lat., and between 77° and 79° of E. long. It is estimated at 140 miles in length by sixty in breadth, and is an assemblage

of hills or mountains, some of which are covered with trees, others bare rocks. The valleys are fertile, but confined. It produces the oak, ana several other European trees and fruits ; and a number of elephants. Previous to the invasion of Serinagur by the Nepaulese, the revenue was estimated at £65,000 per annum, and was governed by a Hindoo prince, whose authority was absolute. It produces a considerable quantity of copper and some gold. The animals used for the transport of its traffic are sheep and goats, which are loaded with small sacks, containing about twelve pounds of borax, salt, or grain, &c., and travel in Hocks of 100 or 200, guarded by dogs and a few shepherds, led on by a stout ram, bearing a large bell, and travel at the rate of ten or fifteen miles per day. The natives are, generally speaking, Hindoos.

This country does not appear ever to have been conquered by the Mahometans ; but tribute was frequently exacted from it. In the year 1791 the Nepaulese invaded Serinagur ; but the rajah having collected about 5000 men, armed with matchlocks, bows and arrows, &c., defended the passes and a fortress called Sunggur, with such perseverance, that the invaders were compelled to retreat; but in the year 1803 the rajah of Nepaul marched in person at the head of his army, and was met at the village of Gurudwara, by the Serinagur chief with a very inferior force. A bloody battle ensued, in which the latter with a number of his followers were killed. After this the Nepaulese became complete masters of the country, and divided into numerous subdivisions, over each of which they appointed a native superintendant. During the war between the Nepaulese and the British, in 1815 and 1816, a relation of the late rajah having joined the latter, was admitted as an auxiliary, and at the conclusion of the

peace was re-established in his principality, and the Nepaulese compelled to resign every claim on the country. Serinagur may be therefore now considered as entirely under the British protection and influence.

SERINAGUR, the capital of the above province, is situated in a valley of three miles in length, watered by the river Alcananda. The town is about three-quarters of a mile in length. The houses, of rough stone and mud, are covered with slate, but are seldom more than two stories high. The palace of the rajah is, however, elevated to four stories. The streets are narrow and dirty, but there are some good shops. The river is about eighty yards wide in the dry sea-son, and is crossed by means of a bridge of ropes. Except about seventy Mahometan families the inhabitants are Hindooj. On the opposite side of the river is a celebrated temple, dedicated to Ishwara, which is attended by a number of dancing girls, who are accused of being very licentious. The air is unfavorable to foreigners. Long. 79° 18' E., lat. 30° 11' N.

SERINGAPATAM, or SIRI RUNGA PATAN, a city of the south of India, once the capital of the province of Mysore, is situated at the upper end of an island of four miles in length, by one and a half in breadth, in the Cavery. It has existed as a fortress from an early period ; but in the year 1610 was taken from the viceroy of

ihe dynasty of Bijanagur, by rajah Wadeyar, and made his capital of Mysore. His successors continued to enlarge the town, and increase its fortifications ; but it was not till the reigns of Hyder Aly and Tippoo Sultan that it attained its first degree of splendor and strength. It was frequently besieged by the Mahrattas and by the Nizam, but without any other effect than compelling Hyder to pay sums of money. In February 1 792 it was invested by the British and allied armies, under the command of lord Corn-wallis, amounting, with their followers, to

the immense number of 400,000 men. Terrified by such a host, Tippoo Sultan relinquished half his dominions, and paid the sum of three millions and a half sterling to the conquerors. In 1799, a war having again broken out between the British and Mysore, Seringapatam was again invested ˆy the British and Nizam's forces, on the 14th of April, and was stormed about two o'clock in the afternoon of the 4th of May. On this occasion Tippoo Sultan, and nearly 8000 of his followers, fell, and the whole of his family and treasures were taken by the conquerors. Previous to the siege, the city and island are said to have contained 150,000 inhabitants ; but in the following year the number of inhabitants was reduced to less than 32,000. Seringapatam has of course declined since, and, having proved unhealthy, it has been in contemplation to demolish the fortifications. By the treaty made with the allied powers, Seringapatam became the property of the British, and is now protected by a garrison, and is the residence of a judge, collector, &c. Besides the city, the island contains a very celebrated temple, dedicated to Vishnu, and a handsome garden, called the Loll Bang, in which are deposited the remains of Hyder Aly and his son Tippo Sultan under a handsome mausoleum. See MYSORE.

SERINGHAM, an island of Hindostan, formed about six miles northwest of Trinchino-poly by the river Cavery, which divides itself into two branches ; that to the northward takes the name of Coleroon, but the southern branch preserves its name the Cavery. Each of these rivers, after a course of about ninety miles, falls into the sea ; the Coleroon at Devicottah, and the Cavery near Tranquebar, about twenty miles from each other. In this island, facing Trin-chinopoly, stood a famous pagoda surrounded by seven square walls of stone, twenty-five feet high and four feet thick. The space between the outward and second walls measured 310 feet, and so proportionably of the rest. Each enclosure had four large gates, with a high tower; which were placed, one in the middle of each side of the enclosure, and opposite to the four cardinal points. The outward wall was about four miles in circumference, and its gateway to the south was ornamented with pillars, some of which were single stones thirty-three feet in length and five in diameter; while those that formed the roof were still larger ; and in the inmost enclosure were the chapels. About half a mile to the east was another large pagoda called Jumbikistna, which had but one enclosure. The pagoda of Seringham was held in great veneration, from a belief that it contained the VOL. XX.

identical image ot the god Vishnu; and pilgrims came here from all parts of India with offerings of money to procure absolution. A large

part of the revenue of the island was allotted for the maintenance of the Brahmins who inhabited the pagoda ; and these, with their families, formerly amounted to no fewer than 40,000 persons, all maintained by the superstitious liberality of the adjacent country.

SERIOLA, in botany, a genus of plants belonging to the order of polygamia sequalis, and to the class of syngenesia; natural order forty-ninth, composite. The receptacle is paleaceous ; the pappus is somewhat plumose. There are four species. 1. S. .ZEthnensis, a native of Italy. 2. S. Cretensis, a plant of Crete. 3. S. levigata, another native of Crete or Candia, which flowers in July and August. 4. S. urens, the burning seriola, is a native of the South of Europe.

SE'RIOUS, adj. } Fr. serieux ; Lat. serius.

SE'RIOUSLY, adv. > Grave; solemn; not vo—

SE'RIOMSNESS, n.s. j latile, or light of behaviour : the adverb and noun substantive corresponding.

I'll hence to London on a serious matter.

Shakspeare. Henry VI, There's nothing serious in mortality ! All is but toys. Id. Macbeth,

All laugh to find

Unthinking plainness so o'erspread thy mind, That thou couldest seriously persuade the crowd To keep their oaths, and to believe a God. Dryden.

It cannot but be matter of very dreadful conside - rat'on to any one, sober and in his wits, to think seriously with himself, what horror and confusion must needs surprise that man, at the last day of account, who had led his whole life by one rule, when God intends to judge him by another. South.

Justin Martyr, Tertullian, Lactantius, and Arno-bius, tell us, that this martyrdom first of all made them seriously inquisitive into that religion, which could indue the mind with so much strength, and overcome the fear of death, nay, raise an earnest desire of it, though it appeared in all its terrors.

Addison.

The youth was received at the door by a servant, who then conducted

him with great silence and seriousness to a long gallery, which was darkened at noon day. Id. Spectator.

That spirit of religion and seriousness vanished all at once, and a spirit of libertinism and profane-ness started up in the room of it.

Atterbury's Sermons.

Ah ! my friends, while we laugh, all things are serious round about us : God is serious, who exer-ciseth patience towards us : Christ is serious, who shed his blood for us ; the Holy Ghost is terious, who striveth against the obstinacy of our hearts ; the holy Scriptures bring to our ears the most serious things in the world ; the Holy Sacraments represent the most serious and awful matters ; the whole creation is serious in serving God, and us ; all that are in heaven or hell are serious ; how then can we be gay 1 To give these excellent words their full force, it should be known that they came not from the priesthood, but the court : and from a courtier as eminent as England ever boasted. Young.

SERIPERES, the lowest and most degraded class of the meanest tribe of Hindoos. See FARIAS.

SER

SERIPHIA RAN A, a proverbial saying concerning a person who can neither sing nor say ; frogs in Seriphus being said to be dumb. — Pliny.

SERIPHI, the ancient people of Seriphus, who, together with the Siphnii, joined Greece against Xerxes, and were almost the only islanders who refused to give him earth and water in token of submission. — Herodotus.

SERIPHIUM, in botany, a genus of plants belonging to the order of monogamia, and to the class of syngenesia : CAL. imbricated : COR. monopetalous and regular, with one oblong seed under it. There is only one species. S. cine-reum, a native of the Cape of Good Hope.

SERIPHOS, or SERIPHUS, in ancient geography, one of the Cyclades or islands in the ./Egean Sea, called Saxum Seriphium by Tacitus, as if all a rock. It was one of the usual places of banishment among the Romans. It was on the coast of Seriphus that the chest was discovered, according to the poets, in which king Acrisius had exposed his

daughter DANAE, and her son PERSEUS (see these articles). It is now called Serphos, or Sereo

SER'MON, n. t. & v. a. } Fr. sermon ; Lat.

SERMOC'INATOR. >sm»o. A discourse

of instruction for the edification of the people : to make sermons : a sermocinator is a preacher or speech-maker.

As for our termons, be they never so sound and perfect, God's word they are not, as the sermon* of the prophets were ; no, they are but ambiguously termed his word, because his word is commonly the subject whereof they treat, and must be the rule whereby they are framed. Hooker.

Some would rather have good discipline delivered plainly by way of precept, or sermoned at large, than thus cloudily inwrapped in allegorical devices.

Spenser.

This our life, exempt from public haunt, Finds tongues in trees, books in the running brooks, Sermons in stones, and good in every thing.

Shakspeare.

Come, sermon me no farther : No villainous bounty yet hath passed my heart.

Id. Timon.

Sermon* he heard, yet not so many As left no time to practise any : He heard them reverently, and then His practice preached them o'er again. Crashaw.

These obstreperous termocinators make easy impression upon the minds of the vulgar. Hoicel.

His preaching much, but more his practice

wrought ; A living sermon of the truths he taught. Dryden.

Many, while they have preached Christ in their sermons, have read a lecture of atheism in their practice. South.

SE'ROUS, adj. I Fr. sereux ; Lat. serosus

SEKOS’ITY, n. s. { Thin ; watery : the noun substantive corresponding.

In these the salt and lixiviated sero*iti/ is divided between the guts and the bladder ; but it remains undivided in birds. Browne.

The tumour of the throat, which occasions the difficulty of swallowing, and breathing, proceeds from a terosity obstructing-the glands, which may be watery, tedematose, or schirrhous. according to the viscosity of the humour. Arbuthnot.

This disease is commonly an extravasation of se-rum, received in some cavity of the body ; for then-may be also a dropsy by a dilatation of the serous vessels, as that in the ovarium. Id, on Diet.

SERF ENS, in astronomy, a constellation in the northern hemisphere, called also serpens ophiuchi. See ASTUONOMY.

SERPEXS, the serpent, in the Linnsean system of zoology, an order of animals belonging to the class of amphibia, and comprehending six gene-ra, *viz.* the CROTALUS, or rattlesnake ; the BOA ; the COLUBER, or viper; the ANCCIS, or snake; the AMPHISBALNA, or annulated snake ; and the CJECILIA, or tentaculated snake, the body and. tail of which are wrinkled, without scales, and the upper part furnished with two feelers. See these articles. The characters of serpents are these : they are amphibious animals, breathing through the mouth by means of lungs only ; hav-ing a tapering body, no distinct neck ; the jaws not articulated, but dilatable, and destitute of feet, fins, and ears.

SERPENS BICEPS, the double-headed snake; a monster of the serpent kind, there being no per manent species of this conformation. That represented by Edwards came from the island of Barbadoes ; and was said to have been taken out of an egg of the size of a small pullet's egg by a man who found it under ground as he was digging. The heads were not in an horizontal position when the snake lay on its belly, but inclined to each other on their under sides, leaving an opening for the throat to come in between the two heads underneath. The upper side, for the whole length, was covered with small scales, falling one over another; the belly was covered with single scales running across it, in the form of half rings. It was all over of a yellowish color, without any spots or variation. Mr. Edwards also informs us that a person brought to him a common English snake, which had two heads quite separate from each other, the necks parting about an inch from the head.

SER'PENT, n. s. ˆ Lat. serpens. An aniSER'PENTINE, adj. S mal that moves by undulation without legs : the adjective corresponding See below.

His hand the' adorned firmament displayed, Those serpentine yet constant motions made. Sandys.

I craved of him to lead me to the top of this rock, \rith meaning to free him from so serpentine a companion as T am. Sidney.

She was arrayed all in lily white, And in her right hand bore a cup of gold,

With wine and water filled up to the height; In which a serptnt did himself enfold, That horror made to all that did behold.

Faerie Queene.

She struck me with her tongue, Most serpent-\ike, upon the very heart.

Shaktpeare. King Lear. Nor can the sun

Perfect a circle, or maintain his way One inch direct ; but where he rose to-day He comes no more, but with a cozening line Steals by that point, and so is serpentine. Donne,

Accept in good part a bottle made of a serpentine stone, which hath the quality to give any wine 01 water, that should be infused therein for four-and twenty-hours, the taste and operation of the spa

water, and is very medicinable for the cure of the spleen and gravel. Wotlon.

They, or under ground, or circuit wide, With serpent error wandering, found their way.

Milton.

Nothing wants but that thy shape Like his, and color serpentine, may shew Thy inward fraud. Id. Paradise Lost.

1 VLs of ours is described with legs, wings, a serpentine and winding tail, and a crest or comb somewhat like a cock. Browne.

The figures and their parts ought to have a serpentine and flaming form naturally : these sorts of outlines have 1 know not what of life

and seeming mo-tion in them, which very much resembles the activity of the flame and serpent. Dryden.

How many spacious countries doth the Rhine, In winding banks, and mazes serpentine, Traverse, before he splits in Belgia's plain, And, lost in sand, creeps to the German main !

Blackmore.

There were three species of this (the serpent stone) known among the ancients, all resembling one another, and celebrated for the same virtues. The one was green, variegated with spots of black, thence called the black ophites; another, called the white ophites, was green also, but variegated with spots of white : the third was called tephria, and was of a grey color, variegated with small black spots. The ancients tell us that it was a certain remedy against the poison of the bite of serpents ; but it is now justly rejected. Hill's Materia Medico..

SERPENTS, ANCIENT ACCOUNTS OF. The serpent has from the beginning been the enemy of man ; and it has hitherto continued to terrify and annoy him, notwithstanding all the arts which have been practised to destroy it. Formidable in itself, it deters the invader from the pursuit ; and, from its figure, capable of finding shelter in a little space, it is not easily discovered by those who would venture to encounter it. Thus possessed at once of potent arms, and inaccessible or secure retreats, it baffles all the arts of man, though ever so earnestly bent upon its destruction. For this reason, there is scarcely a country in the world that does not still give birth to this poisonous brood. Mankind have driven the lion, the tiger, and the wolf, from their vicinity ; but the snake and the viper still defy their power. Their numbers, however, are thinned by human assiduity. In none of the countries of Europe are they sufficiently numerous to be truly terrible. The various malignity that has been ascribed to European serpents of old is now utterly unknown ; there are not above three or four kinds that are dangerous, and their poison operates in all in the same manner. The drowsy death, the starting of the blood from every pore, the insatiable and burning thirst, the melting down the solid mass of the whole form into one heap of putrefaction, said to be occasioned by the bites of African serpents, are horrors with which we are entirely unacquainted. But though we have thus reduced these dangers, having been incapable of wholly removing them, in other parts of the world they still rage with all their ancient malignity. In the warm countries within the tropics, as well as in the cold regions of the north, where the inhabitants are few, the serpents propagate in equal proportion. But of all countries those regions have them in the greatest

abundance where the fields are unpeopled and fertile, and where the climate supplies warmth and humidity. All along the swampy banks of the Niger or Oronoco, where the sun is hot, the forests thick, and the men but few, the serpents cling among the branches of the trees in infinite numbers, and carry on an unceasing war against all other animals in their vicinity. Travellers have assured us that they have often seen large snakes twining round the trunk of a tall tree encompassing it like a wreath, and thus rising and descending at pleasure. We cannot, therefore, reject as wholly fabulous, the accounts given by the ancients of the terrible devastations committed by single serpents. It is probable, in early times, when the arts were little known, and mankind were but thinly scattered over the earth, that serpents, continuing undisturbed possessors of the forest, grew to an amazing magnitude ; and every other tribe of animals fell before them. It then might have happened that serpents reigned the tyrants of a district for centuries together. To animals of this kind, grown by time and rapacity to 100 or 150 feet in length, the lion, the tiger, and even the elephant itself, were but feeble opponents. That horrible fcetor, which even the commonest and the most harmless snakes are still found to diffuse, might, in these larger ones, become too powerful for any living being to withstand ; and, while they preyed without distinction, they might thus also have poisoned the atmosphere around them. In this manner, having for ages lived in the hidden and unpeopled forest, and finding the quantity of their prey decreasing, they might venture boldly from their retreats into the more cultivated parts of the country, and carry consternation among mankind. We have many histories of antiquity representing such facts, and exhibiting a whole nation sinking under the ravages of a single serpent. At that time man had not learned (he art of uniting the efforts of many to effect one great purpose. The animal was therefore to be singly opposed by him who had the greatest strength, the best armor, and the most undaunted courage. In such an encounter, hundreds must have fallen ; till one, more lucky than the rest, by a fortunate blow, or by taking the monster in its torpid interval, and surcharged with spoil, might kill, and thus rid his country of the destroyer. Such was the original occupation of heroes ; and those who first obtained that name, from their destroying the ravagers of the earth, gained it much more deservedly than their successors, who acquired their reputation only for their skill in destroying each other. But, as we descend into more enlightened antiquity, we find these animals less formidable, as being attacked in a more successful manner. While Regulus led his army along the banks of the river Bagrada, in Africa,

an enormous serpent disputed his passage over it. Pliny says that it was 120 feet long, and that it had destroyed many of the army. At last, however, the battering engines were brought out against it ; and these assailing it at a distance, it was soon destroyed. Its spoils were carried to Rome, and the general was decreed an ovation for his success. There are, perhaps, few facts better ascertained in his-G 2

lory than this : an ovation was a remarkable ho-nor; and was given only for some signal exploit that did not deserve a triumph. See OVATION. The skin was kept for several years after in the capitol; and Pliny says he saw it there. At present, indeed, such ravages from serpents are scarce seen in any part of the world; not but that ill Africa and America, some of them are powerful enough to brave the assaults of men to this day.

If we take a survey of serpents in general, they have marks by which they are distinguished from all the rest of animated nature. They have the length and the suppleness of the eel, but want fins to swim with ; they have the scaly covering and pointed tail of the lizard, but they want legs to walk with ; they have the crawling mo-tion of the worm, but, unlike that animal, they have lungs to breathe with : like all the reptile kind, they are resentful when offended ; and na- :ure has supplied them with terrible arms to vevenge every injury. 1. Though they are pos- : essed of very different degrees of malignity, yet .hey are all formidable to man, and have a strong similitude of form to each other. With respect :o their conformation, all serpents have a very >vide mouth in proportion to the size of the head ; ind can gape and swallow the head of another inimal which is three times PS big as their own. However, it is no way surprising that the skin of the snake should stretch to receive so large a morsel ; the wonder seems how the jaws could take it in. But the jaws of this animal do not open as ours, where bones are applied to bones, and play upon one another : on the contrary, the serpent’s jaws are held together at the roots by a stretching muscular skin; by which means they open as widely as the animal chooses to stretch them, and admit of a prey much thicker

than the snake's own body. The throat dilates to admit the morsel ; the stomach receives it in part, and the rest remains in the gullet, till putrefaction and the juices of the serpent's body unite to dissolve it. 2. Some serpents have fangs or canine teeth, and others are without them. The teeth in all are crooked and hollow ; and, by a peculiar contrivance, are capable of being erected or depressed at pleasure. 3. The eyes of all serpents are small, if compared to the length of the body; and though differently colored in different kinds, yet the appearance of all is malign and heavy ; and, from their known qualities, they strike the imagination with the idea of a creature meditating mischief. In some the upper eyelid is wanting, and the serpent winks only with that below ; in others, the animal has a nictitating membrane of skin, resembling that which is found in birds, which keeps the eye clean and preserves the sight. The substance of the eye in all is hard and horny ; the crystalline humor occupying a great part of the globe. 4. The ˆoles for hearing are very visible in all : but there are no conduits for smelling, though it is orobable that some of them enjoy that sense in olerable perfection. The tongue in all these uimals is long and forky. It is composed of wo long fleshy substances, which terminate in '•iarp points, and are very pliable. At the root t is connected very strongly to the neck by two

tendons, that give it a variety of play. Some of the viper kind have tongues a fifth part the length of their bodies ; they are continually darting them out; but they are entirely harmless, and only frighten those who are ignorant of the real situation of their poison. 6. If from the jaws we go on to the gullet, we shall find it very wide for the animal's size, and capable of being distended to a great degree ; at the bottom of this lies the stomach, which is not so capacious, and receives only a part of the prey, while the rest continues in the gullet for digestion. When the substance in the stomach is dissolved into chyle, it passes into the intestines, and thence goes to nourishment, or to be excluded by the vent. 7. Like most other animals, serpents are furnished with lungs, which seem serviceable in breathing, though we cannot perceive the manner in which this operation is performed ; for though serpents are often seen apparently to draw in their breath, yet we cannot find the smallest signs of their ever respiring it again. Their lungs, however, are long and large, and doubtless are necessary to promote their languid circulation. 8. The heart is formed as in the tortoise, the frog, and the lizard kinds, so as to work without the assistance of the lungs. It is single; the greatest part of the blood flowing from the great vein to the great "artery by the shortest course. By this contrivance we easily gather two consequences; that snakes

are amphibious, being equally capable of living on land and in the water; and that also they are torpid in winter, like the bat, the lizard, &c. 9. The vent in these animals serves for the emission of the urine" and the faeces, and for the purposes of generation. The instrument of generation in the male is double, being forked like the tongue ; the ovaries in the female are likewise double : and the aperture is very large, in order to receive the double instrument of the male. They copulate in their retreats. 10. As the body of this animal is long, slender, and capable of bending in every direction, the number of joints in the backbone are very numerous. In the generality of quadrupeds they amount not to above thirty or forty; in the serpent kind they amount to 145 from the head to the vent, and twenty-five more from that to the tail. The number of these joints must give the backbone a surprising degree of pliancy ; but this is increased by the manner in which each of these joints is locked into the other. In man and quadrupeds the flat surfaces of the bones are laid one against the other, and bound tight by sinews; but in serpents the bones play one within the other, like ball and socket, so that they have full motion upon each other in every direction. 1 1. Though the number of joints in the backbone is great, yet that of the ribs is still greater; for, from the head to the vent, there are two ribs to every joint, which makes their number 290 in all. These ribs are furnished with muscles, four in number; which, being inserted into the head, run along to the end of the tail, and give the animal <jreat strength and agility in all its motions. iv>. The skin also contributes to its motions, heinˆ composed of a number of scales, united to each other by a transparent membrane, which ˆ, ws harder as it

grows older, until the animal changes, which is generally done twice a-year. This cover then bursts near the head, and the serpent creeps from it by an unclulatory motion, in a new skin much more vivid than the former. If the old slough be then viewed, every scale will be distinctly seen like a piece of network, and will be found greatest where the part of the body they covered was largest. There is much geometrical neatness in the disposal of the serpent's scales, for

assisting the animals' sinuous motion. As the edges of the foremost scales lie over the ends of their following scales, so those edges, when the scales are erected, which the animal has a power of doing in a small degree, catch in the ground, like the nails in the wheel of a chariot, and so promote and facilitate the animal's progressive motion. The erecting these scales is by means of a multitude of distinct muscles, with which each is supplied, and one end of which is tacked each to the middle of the foregoing. In some of the serpent kind there is the exactest symmetry in these scales ; in others they are disposed more irregularly. In some there are larger scales on the belly, and often answering to the number of ribs ; in others, however, the animal is without them. Upon this slight difference Linnaeus has founded his distinction of the various classes of the serpent tribe. 13. When we come to compare serpents with each other, the first distinction appears in their size; no other tribe of animals differing so widely in this particular. This tribe, like that of fishes, seems to have no bounds put to their growth : their bones are in a great measure cartilaginous, and they are consequently capable of great extension : the older, therefore, a serpent becomes, the larger it grows ; and, as they seem to live to a great age, they ar-rive at an enormous size. Legnat assures us that he saw one in Java that was fifty feet long. Carli mentions their growing to above forty feet; and we have now the skin of one in the British Musseum that measures thirty-two. Mr. Wentworth, who had large concerns in the Berbices in America, assures us that in that country they grow to an enormous length. He one day sent out a soldier, with an Indian, to kill wild fowl for the table ; and they accordingly went some miles from the fort : in pursuing their game, the Indian, who generally marched before, beginning to tire, went to rest himself upon the fallen trunk of a tree, as he supposed it to be ; but, when he was just .going to sit down, the enormous monster began to move; and the poor savage perceiving that he had approached a boa, the greatest of all the serpent kind, dropped down in an agony. The soldier, who perceived at some distance what had happened, levelled at the serpent's head, and, by a lucky aim, shot it deatl : however, he continued his fire until he was assnred that the animal was killed; and then going up to rescue his companion, who was fallen motionless by its side, he to his astonishment found him dead likewise, being killed by the fright. Upon his return to the fort, and telling what had happened, Mr. Wentworth ordered the animal to be brought up, when it was measured, and found to be thirty-six feet long. He had the skin stuffed, and then sent to Europe as

a present to the prince of Orange, in whose cabinet it was lately to be

seen at the Hague : but the skin is shrunk, by drying, two or three feot. In the East Indies they grow also to an enormous size, particularly at the island of Java, where we are assured that one of them will destroy and devour a buffalo. See BOA. 14. But it is happy for mankind that the gluttony of these frightful creatures is often their punishment ; for whenever any of the serpent kind have gorged themselves in this manner, whenever their body is seen particularly distended with food, they then become torpid, and may be approached and destroyed with safety. Patient of hunger to a surprising degree, whenever they seize and swallow their prey, they seem, like surfeited gluttons, unwieldy, stupid, helpless, and sleepy : they at that time seek some retreat, where they may lurk for days together, and digest their meal in safety : the smallest effort at that time is capable of destroying them ; they can scarcely make any resistance ; and they are equally unqualified for flight or opposition : that is the happy opportunity of attacking them with success ; at that time the naked Indian himself does not fear to assail them. But it is otherwise when this sleepy interval of digestion is over ; they then issue, with famished appetites, from their -etreats, and with accumulated rage, while every animal of the forest flies before them. 15. But though these animals are of all others the most voracious, and though the morsel which they swallow without chewing is greater than what any other creature, either by land or watei, can devour; yet no animals upon earth bear abstinence so long as they. A single meal, with many of the snake kind, seems to be the adventure of a season ; it rs an occurrence of which they have been for weeks, nay sometimes for months, in patient expectation. When they have seized their prey, their industry for several weeks is entirely discontinued ; the fortunate capture of an hour often satisfies them for the remaining period of their annual activity. As their blood is colder than that of most other terrestrial animals, and as it circulates but slowly through their ‘jodies, so their powers of digestion are but feeble. Their piey continues, for a longtime, partly in the stomach, partly in the gullet, and is often seen in part hanging out of the mouth. In this manner it digests by degrees; and in proportion as the part below is dissolved, the part above is taken in. It is not therefore till this tedious operation is entirely performed that the serpent renews its appetite and its activity. But, should any accident prevent it from issuing once more from its cell, it still can continue to bear famine for weeks, months, nay for years together. Vipers are often kept in boxes for six or eight months without any food whatever (see ABSTINENCE); and there are little serpents sometimes sent over to Europe from Grand Cairo that live for several years in glasses and never eat at all, nor even stain the glass with their excrements. 1 6. Other creatures have a choice in their

provision ; but the serpent indiscriminately preys upon all ; the buffalo, the tiger, and the gazelle. One would think that the porcupine's quills might be sufficient to protect

it; but whatever has life sen is to appease the hunger of these devouring creatures ; porcupines, with all the/- quills, have often been found in their stonlnchs when killed and opened ; nay, they even frequently devour each other. A life of savage hostility in the forest is a most tremendous scene. In those burning countries, where the sun dries up every brook for hundreds of miles round, a lake that is never dry, or a brook that is perennial, is considered by every animal as the greatest convenience of nature. \Vhen they discover one of these, no danger can deter them from attempting to slake their thirst. Thus it becomes the place where all the hostile iribes draw up for engagement. On the banks of this spot thousands of animals are seen venturing to quench their thirst, or preparing to seize their prey. The elephants, the buffaloes, the gazelles, rely upon their swiftness; the lion and tiger wait a proper opportunity to seize ; but chiefly the larger serpents are upon guard, and defend the accesses of the lake. Not an hour passes without some dreadful combat ; but the serpent, defended by its scales, and capable of sustaining a multitude of wounds, is of all others the most formidable.

In comparing serpents as to their voices, some are found silent, some have a peculiar cry ; but hissing is the sound which they most commonly send forth, either as a call to their kind, or as a threat to their enemies. In the countries where they abound they are generally silent in the day, when they retire from the heat of the sun ; but, as the cool of the evening approaches, they are heard issuing from their cells with continued hissings. As to motion, some serpents, particularly vipers, move slowly; while others dart with amazing swiftness. The motion in all is similar; but superior strength in some gives a different appearance. The viper, that is but a slow feeble-bodied animal, makes way in a heavy undulating manner ; advancing its head, then drawing up its tail behind, and bending the body into a bow ; then, from the spot where the head and tail were united, advancing the head forward as before. This, which is the motion of all serpents, is very different from that of the earthworm. The serpent has a backbone with numerous joints ; and this bone the animal has the

power of bending ia every direction, but without being able to shorten or lengthen it at pleasure. The earthworm has no backbone ; but its body is composed of rings, which, like a barber's puff, it can lengthen or shorten as it finds necessary. The earthworm, therefore, to move forward, lengthens the body; then by the forepart clings to the ground where it has reached, and contracts and Brings up its rear : then the forepart is lengthened again for another progression, and so on. The serpent, instead of shortening the body, bends it •into an arch ; and this is the principal difference between serpentine and vermicular progression. We have instanced this motion in the viper, as most easily discerned; but there are many serpents that dart with such amazing swiftness that they appear rather to leap than crawl. The man-ner of progression in the swiftest serpent we know, which is the jaculus, is by instantly coiling itself upon its tail, and darting thence to its

full extent : then, carrying the tail as quick a» lightning to the head, coiling and darting again and thus proceeding with extreme rapidity without ever quitting the ground. Though all serpents are amphibious, some are much fonder of the water than others ; and, though destitute of fins or gills, remain at the bottom, or swim along the surface, with great ease. From their internal structure we see how well adapted they are for either element : and how capable their blood is of circulating at the bottom as freely as in the frog or the tortoise. They can, however, endure to live in fresh water only ; for salt is an effectual bane to the whole tribe. The greatest serpents are most usually found in fresh water where they find their prey in the greatest abundance. But that all will live and swim in liquids appears from an experiment of Rhedi, who put a serpent into a large glass vessel of wine, where it lived swimming about for six hours ; though, when it was by force immersed and put under that liquid, it lived only one hour and a half. He put another in common water, where it lived three days ; but, when it was kept under water, it lived only about twelve hours. Their motion there, however, is perfectly the reverse of what it is upon land ; for, to support themselves upon an element lighter than their bodies, they are obliged to increase their surface in a very artificial manner. On earth their windings are perpendicular to the surface ; in water they are parallel to it. Some serpents have a most horrible fcetor attending them. This proceeds from two glands near the vent, like those in the weasel or polecat ; and, like those animals, in proportion as they are excited by rage or by fear, the scent grows stronger. Such serpents as are most venomous are least offensive in this particular : the rattlesnake and the viper have no-smell whatever: nay, we are told

that at Calecut and Crangannon, in the East Indies, there are some very noxious serpents whose excrements are sought after and kept as perfumes. The Esculapian serpent. is also of this number. Some serpents bring forth their young alive, as the viper ; some bring forth eggs, which are hatched by the heat of their situation, as the common black snake, and the majority of the serpent tribe. The viper hatches her eggs, and brings them to maturity within her body ; the snake is more premature in her pro ductions, and sends her eggs into the light some time before the young ones are capable of leaving the shell'. Thus, if either are opened, the eggs will be found in the womb, covered with their membranous shell, and adhering to each other like large beads on a string. In the eggs of both the young ones will be found, though at different stages of maturity : those of the vipfn will crawl and bite the moment the shell that en closes them is broke open : those of the snake are not yet arrived at their perfect form. Labat took a viper that was nine feet long, and ordered it to be opened in his presence. He then saw the manner in which the eggs of these animals lie in the womb. In this creature there were six eggs, each of the size of a goose's egg, but longer, more pointed, and covered with a membranous skin, by which also they were united to each other. Kach of these eggs contained from thir-SERPENTS.

teen lo fifteen young ones, about six inches long, and as thick as a goose-quill. Though the female, whence they were taken, was spotted, the young had a variety of colors very different from the parent. These little mischievous animals were no sooner let loose from the shell, than they crept about and put themselves into a threatening posture, coiling themselves up and biting the stirk with which he was destroying them. In this manner he killed seventy-four young ones ; those that were contained in one of the eggs escaped at the place where the female was killed, by the bursting of the egg and by getting among tlie_ bushes.

The fascinating power asciibed to serpents, especially to rattlesnakes, by which they are said lo draw animals to them, is very curious. It has been described by so many different persons, who affirm that they have seen instances of it, and has been believed by so many men of penetration and discernment, that it deserves at least to be mentioned. The rattlesnake fixes its eyes upon an animal, such as a bird or a

squirrel. When the animal spies the snake, it skips from spray to spray, hovering and approaching nearer the enemy; descending, with distracted gestures and cries, from the tops of the loftiest trees to the mouth of the snake, who opens his jaws, and in an instant swallows the unfortunate animal. The following instances of fascination have so much the appearance of fiction, that it would require a very uncommon degree of evidence to render them credible. They are extracted from a paper in the Gentleman's Magazine for 1765, p. 511, which was communicated by Mr. Peter Collin-son from a correspondent in Philadelphia. ' A person of good credit was travelling by the side of a creek or small river, where hesaw a ground squirrel running to and fro between the creek and a great tree a few yards distant; the squirrel's hair looked very rough, which showed he was scared, and. his returns being shorter and shorter, the man stood to observe the cause, and soon spied the head and neck of a rattlesnake pointing at the squirrel through a hole of the great tree, it being hollow ; the squirrel at length gave over running, and laid himself quietly down with his head close to the snake's ; the snake then opened his mouth wide, and took in the squirrel's head ; opon which the man gave th' snake a whip across the neck, and so the squirrel being released, he ran into the creek. When I was about thirteen years old, I lived with William Atkinson, an honest man in Bucks county, who, returning from a ride in Warm weather, told us, that, while his horse was drinking at a run, he heard the cry of a blackbird, which he spied on the top of a sapling, fluttering and straining the way ; he seemed unwilling to fly, and holding so fast the sprigs he was perched upon that the sapling top bent. After he had viewed the bird a few minutes, it quitted the place, and made a circle or two higher in the air, and then resumed its former standing, fluttering and cry-ing. William thereupon rode the way the bird strained, and soon spied a large black snake in a coil, steadily eyeing the bird. He gave the snake a lash with his whip, and, this taking off lie snake's eye from his prey, the charm was

broken, and away fled the bird, changing its note to a song of joy. Mr. Nicholas Scull, a surveyor, told me that when he was a young man, as he happened once to be leaning upon a fence, and looking over it. be saw a large snake in coil, looking stedfastlyat him. He found himself surprised and listless immediately, and had no power for about a minute (as he thinks) but to look at the snake ; and then he had the resolution to push himself from the fence, and turn away, feelino-such horror and confusion as he would not undergo again for any consideration. Dr. Chew tells me, a man in Maryland was found fault

with by his companion, that he did not come along ; the companion, coming towards him, observed that his eyes were fixed upon a rattlesnake, which was gliding slowly towards him, with his head raised as if he was reaching up at him ; the man was leaning towards the snake, and saying to himself, ‘ he will bite me ! he will bite me !’ Upon which his companion caught him by the shoulder, and pulled him about, am cried out, ‘ What the devil ails you ? He wil’ bite you sure enough ! ‘ This man_ found himsel very ‘sick after his enchantment.’ This fascinating power of serpents was believed by Dr. Mead and other eminent men, who certainly thought they had sufficient evidence for admitting it. Incredible, therefore, as it appears, it ought not to be rejected without examination ; though, being of a very extraordinary nature, it cannot be received without unquestionable evidence. Scepticism is no less absurd than incredulity, and the true philosopher will carefully avoid both. Human knowledge is founded on observation and experience; not, however, on every man’s personal observation and experience, but on the united observation and experience of all mankind. Bat this presupposes the credibility of human testimony in every case that does not involve an impossibility. AH the laws of nature are not yet known, nor all the wonderful powers of which she is possessed. It is not more incredible, a priori, that the eye of a serpent should attract an animal, than that a magnet should attract a niece of iron, or a piece of iron attract electrical matter. The evidence of these facts rests entirely on personal observation or authentic testimony. The only thing requisite with respect to objects of testimony is, when the fact is so extraordinary as has not fallen within the observation jf the generality of men, the strength of the evidence must be in proportion to the extraordinary nature of the fact. To apply this to the present case : We have the testimony of many persons that some serpents have a power of fascination ; but the generality of men have never observed this; it is therefore an extraordinary fact, and requires extraordinary evidence. But the evidence is not satisfactory ; therefore we do not receive it as a fact ; on the other hand, it is unphilosophical to reject it a priori.

We shall subjoin the prescription of Dr. Moseley, who spent twelve years in the West Indies, and whose abilities and extensive practice very justly entitle his opinion to the attention of the public, for the cure of the bite of serpents : — ‘ The bites and stings of all venomous animals are cured bv the same local moans.

which are very simple, if they were always at hand. The injured part must be instantly destroyed or cut out. Destroying it is the most safe, and equally certain ; and the best application for that purpose is the lapis infernalis, or the butter of antimony. These are preferable to a hot iron, which the ancients used ; because a hot iron forms a crust, which acts as a defence to the under parts, instead of destroying them. The lapis infernalis is much better than any other caustic, as it melts and penetrates during its application. The bitten part must be destroyed to the bottom, and, where there is any doubt that the bottom of the wound is not sufficiently exposed, butter of antimony should be introduced into it on the following day, as deep as possible ; and incisions should be made to lay every part open to the action of these applications. Besides destroying, burning, or cutting out the part, incisions should be made round the wound, to prevent the communication of the virus. The wound is to be dressed for some time with poul-tices, to assuage the inflammation caused by the caustics; and afterwards with acrid dressings and hot digestives to drain the injured parts. Where the abovemen tioneo caustics cannot be procured, corrosive sublimate, oil of vitriol, aquafortis, spi-rit of salt, common caustic, or a plaster made of quick limeand soap, may be applied to the wound. Gunpowder laid on the part, and fired has been used with success. When a person is bitten remote from any assistance, he should make a tight ligature about the part, until proper application can be made. The Spanish writers say, that the habilla de Carthagena, or Carthagena bean, is a specific for poisonous bites, taken inwardly. Ulloa says, it is ‘one of the most effectual antidotes known in that country (Carthagena) against the bites of vipers and serpents ; for a little of it being eaten, immediately after the bite, it presently stops the effect of the poison ; and accordingly all who frequent the woods, either for felling trees or hunting, never fail to eat a little of this habilla fasting, and repair to their work without any apprehension. The natives tell you that, this habilla being hot in the highest degree, much of it cannot be eaten; that the common dose of is less than the fourth part of a kernel; and that no hot liquor, as wine, brandy, &c., must be drunk immediately after taking it.’ The Carthagena bean, or habilla, is found in great abundance in the West Indian Islands, where it is generally known by the name of antidote or cocoon, or antidote cocoon. In small doses it is stomachic and diaphoretic ; and in large doses emetic and purgative. In several

disorders it is a powerful remedy ; but its virtues are not sufficiently known, except among the Indians and negroes, who chiefly use an infusion or tincture of it made in rum. This is externally as well as internally used for many complaints. This bean is the seed of the fevillea foliis cordatis of Pluraier, Ed. Burmanni, p. 203, tab. 209. Fevillea foliis cordatis, angulatis, of Linnaeus, Spec. P. — I have been informed by some intelligent Indians, that any of the red peppers, such as bird pepper, or bell pepper, or what is called Cayenne pepper, powdered and taken in a glass of rum as much as the stomach can possiblv bear, so as to cause,

and keep up for some time, a great heat and in flammation in the body and a vigorous circula-lation, will stop the progress of the poison of serpents, even after its effects are visible; and that the bitten part only afterwards mortifies and separates, and that the patient, with bark, wine, and cordials, soon recovers. This fiery practice is certainly agreeable to that of the ancients, and probably the only internal treatment that can have any good effect ; as in these cases the powers of life, and the actions of the heart, are suddenly enfeebled, and the pulse in strength and frequency observes almost a regular declension from the time of the bite until it entirely ceases in death.' Polygala senega, or rattlesnake root, was formerly considered as a sovereign remedy for the bite of the rattlesnake ; but this opinion is now exploded.

No subject has excited more philosophical controversy than the poison of serpents, with regard to its nature and mode of operating. Antiquity has not been sparing in conjecture and fiction upon this subject, and its errors have been retained with the most reverential obstinacy by the vulgar ; among these we are to reckon the fictitious sting fixed in the tail of the serpent ; a similar fiction of a black forked tongue which the serpent vibrates on both sides, while others, affecting an air of superior discernment, have ascribed the noxious effects to the teeth in general ; these are all errors which a very little attention to the subject would have removed. There is a very small bone closely fixed to the upper jaw, in the inside of the lip of a poisonous serpent, which has a power of moving backwards or forwards ; to this two or three fangs are annexed, larger than the teeth, which the serpent, by its assistance, when enraged, darts forward,, or withdraws and conceals at his pleasure, in a similar manner to the claws of a cat. These fangs are excellently described by Tyson in the anatomy of the rattle snake, in the Philosophical Transactions. ' In these (the fangs) we observed a considerable cavity near the base ; and near the point a very discernible fissure of some length like the slit of a pen : the part of the

tooth from the fissure to the root was manifestly channelled, which we first discovered by lightly pressing the gums ; we then saw the poison ascend through the cavity of the fang, and flow out of the fissure ; and as these fangs are so very acute, so firm and solid toward the point (the fissure being on the external and convex, not the internal side), nothing could be conceived more convenient either for inflicting a wound, or to insure the infusion of the poison.' Each of the fangs is surrounded with a vesicle furnished with glands secreting a certain fluid ; which, upon the vesicle being pressed, seems to flow out of the point of the fang. The serpent when incensed, raising his head, extends the small bone armed with the fangs mentioned above ; and, attacking his enemy with a force combined of the weight of his body and the action of the muscles, he wounds him with the expanded fangs, and, the vesicle being compressed, the poison immediately flows into the wound : this is clear from the experience of those, u-lio, having broken off their tangs with •*

pair of forceps, handled the serpent thus disarmed without any hurt. The North Americans, after carefully extracting these venomous fangs, suffer the rattlesnake to bite and gnaw them with his teeth till the blood flows freely, with total impunity. Towards the end of the seventeenth century, this subject was greatly illustrated under the auspices of Ferdinand II., grand duke of Tuscany. This prince, desirous of enquiring into that mysterious question, the nature of serpents, invited Steno, Rhedi, and some other philosophers of the first eminence, to his court ; and, a multitude of the most poisonous serpents being collected, Rhedi made several experiments upon them, which discovered to him a number of particulars before unknown ; of which the following seem to have the best claim to our attention. When he either caused a living viper to bite a dog, or wounded him with the teeth of one newly dead (the poisonous vesicle remaining unbroken), the event was the same. If the bite was repeated, its effect be-came weaker, and at last was lost, the poison contained in the vesicle being totally exhausted. That the teeth of serpents, when extended to bite, were moistened over with a certain liquor ; and,

when the vesicle at the base was pressed, a drop of poison flowed to the point of the fang. When the poison thus flowing from the vesicle was received in soft bread, or a sponge, an animal bitten by the serpent received no more harm from the wound than from being pricked by a needle, till after a few days, when the venom was restored afresh ; but, when an animal was wounded with a point of a needle dipped in the poison, it was tormented with the same pains as •f it had been bitten by the viper itself. Preserving some of this poison in a glass, and totally evaporating the moisture in the sun, when the residuum was diluted again with water, and the point of a needle dipped in the solution, Rhedi found that it had the same effect as when recent. But the boldness of Tozzi, one who charmed vipers, flung all these men, who were deeply versed in natural philosophy, into the utmost astonishment. They happening to mention (while the prince was present) the certain death which would attend any person's swallowing this poison of the viper by mistake, Tozzi, confiding in his art, drank a considerable portion of it without hesitation; they were all astonished at his apparent rashness, and predicted instant death to him ; but he was no more hurt than if he had drunk only so much water. This event, which astonished the prince and his illustrious associates, was well known to the ancients. Lucan, in the ninth book of the Pharsalia, speaking of the serpent says (Phar. 1. 9, v. 614),

Mixed with the blood that venom slays alone, His bite is poison ; death is in his fang ; Yet is the draught innoxious.

Barbarous nations are perfectly acquainted with the property of the poison of serpents, by which it retains its deadly power after it has been long kept; they have been possessed of this fatal 5ecret forages ; it being their custom to tinge the points of their arrows with the juice of spurge, putrid flesh, or oil' of tobacco, but more particu-

larly with the poison of vipers. Some modtrn Indians continue the practice to this day ; and we have the testimony of Pliny, in his Natural History, that the Scythians had long ago the same custom. < The Scythians, says that author, clip their arrows in the poison of vipers and human blood ; a horrid practice, as the slightest wound inflicted by one of them defies all the art of medicine.' The poison of serpents produces fatal effects only by mixing with the blood. To confirm this principle, the Florentine philosophers collected a quantity of poison and gave it to different animals without producing the least inconvenience ; but, when applied to an external wound, every one of those horrid symptoms which accompany the real bite followed, *viz.* :

inflammatory and malignant fevers, ending in death ; unless nature, by a Spontaneous haemorrhage, discharged this poison. With respect to the experiments of Rhedi, his Observations prove that the liquid pressed out of the vesicle which moistens the fangs of the serpents is only noxious by being conveyed into the blood, by means of a puncture or wound ; and the case of Tozzi proves that it hurts the blood only when externally mixed with it. The experiments of Rhedi have not, however, in the opinion of some celebrated philosophers, so far cleared the theory of the operation of the poison of the viper, as to leave nothing further to be desired upon that subject. Fontana and Carminati have endeavoured to investigate his operations more clearly. Carminati, from eleven experiments, deduces the following conclusions : 1. That if poison be instilled into a nerve the animal wounded dies almost instantly ; and the whole nervous system, to which it is rapidly conveyed, is deprived of its quality called sen- , sibility. 2. If a muscle be wounded, it is deprived of its irritability. This is confirmed by the experiments of Fontana. 3. The poison injected into a wounded muscle or tendon is considerably longer in killing an animal than that introduced into a nerve. 4. The symptoms which precede the death of the animal bitten are, stupor, lethargy, tremors, convulsions, paralysis of the legs (or part wounded) entire dissolution of the limbs. The blood is not always coagulated, nor its crasis dissolved. Marks of inflammation are sometimes discovered in certain parts of the animal after death, sometimes not. 5. Not the least sign of the jaundice was discoverable in the eyes of any of the animals upon which Carminati made his experiments. 6. The stomach in every one of them was very much inflated ; a symptom remarked only by Fallopius and Albertini. 7. A ligature applied instantly above the part bittten, if it be so placed as to admit one, was found by some experiments a good preventative against the diffusion of the poison ; its compression should be considerable but not excessive.

Characteristic marks have been pointed out by some writers to distinguish poisonous from harmless serpents (see Philosophical Transactions, vol. Ixxix) ; but all of them that are drawn from the outside marks are quite ambiguous and uncertain; and those from the fangs, which afford the only decisive marks, cannot be per-

ceived at a distance. To those who form their ideas of the fangs of a venomous serpent from those of the rattlesnake, or even from those of the English viper, it will appear strange that there should be any difficulty in distinguishing those weapons in other serpents from common teeth; and indeed the distinction would be easy, were all venomous serpents furnished with fangs as large as those of that species. But the fact is, that in many species the fangs are full as small as common teeth, and consequently can-not, by their size, be known from them ; this is the case with the coluber laticaudatus lacteus, and several others. Linnaeus thought that the fangs might be distinguished by their mobility and situation; but other naturalists have not found it a general fact that fangs are loose in their sockets, nor have they observed any difference in situation between the fangs of venomous serpents and the teeth of others. The following distinction is established by Dr. Gray, in a paper inserted in the Philosophical Transactions, vol. Ixxix. : — All venomous serpents have only two rows of teeth in the upper jaw, and all others have four. If this holds true it is certainly a most decisive mark; but still it requires too near, and of course too dangerous, an inspection.

In the preface to the Museum Regis, and in the introduction to the class amphibia, in the Systema Naturae, Linnaeus says, that the proportion of venomous serpents is one in ten; yet in the Systema Naturae, of which the sum total in species is 131, he has marked twenty-three as venomous, which is somewhat more than one in six. How he came to make such a variation it is not easy to say ; but the last mentioned proportion seems to be near the truth, as Dr. Gray, after examining 154 species of serpents, found only twenty-six that seemed to be venomous. The coluber stolatus and mycterizans, though marked by Linnaeus, we are assured by Dr. Gray are not poisonous ; he thinks the same may be said of the lebris and dypsas. On the other hand he observes, that the boa contortrix, coluber cerastes, laticaudatus, and coluber ful-vus, none of which are marked in the Systema Naturae, are all poisonous.

Under the article POISON we have mentioned a variety of chemical tests for discovering the presence of poison of the mineral kingdom. We shall now supply what has been omitted in that article, by describing the symptoms which accompany the bite of serpents. The symptoms attending the bite of the coluber prester, a native of Sweden, are, pain in the wound, tumor, thirst, asthma, anxieties, convulsions, and death. There is a serpent still more dreadful than any of the former, found in Swe-den, called coluber carcia. The bite of this

is followed by immediate change of color, coldness, stupor, palpitation of the heart, acute pain all over the body, and death. Linnaeus tried oil in this case, but it proved ineffectual. The crotalus horridus of Linnaeus, the rattlesnake, kills in a very sudden manner ; its bite usually producing death within twelve hours. The following account of the poison serpent of the East Indies is given by M. d'Obsonville : — ' Among the serpents of India that which I believe to be the

most formidable is but about Uvo feet long, and very small. Its skin is freckled with little traits of brown or pale red, and contrasted with a ground of dirty yellow : it is mostly found in dry and rocky places, and its bite mortal in less than one or two minutes. In 1759, and in the province of Cadapet, I saw several instances of it ; and among others one very singular, in the midst of a corps of troops commanded by M. de Bussy. An Indian Gentoo merchant perceived a Mahometan soldier of his acquaintance going; to kill one of these reptiles, which he had found sleeping under his packet, the Gentoo flew to beg its life, protesting it would do no hurt if it was not first provoked : passing at the same time his hand under its belly to carry it out of the camp, when suddenly it twisted round, and bit Kis little finger ; upon which this unfortunate martyr of a fanatic charity gave a shriek, took a few steps, and fell down insensible. They flew to his assistance, applied the serpent stone, fire, and scarification, but they were all ineffectual, his blood was already coagulated. About an hour after I saw the body as they were going to burn it, and I thought I perceived some indications of a complete dissolution of the blood. The serpens brulans, or burning serpent, is nearly of the same form with the last mentioned ; its skin is not quite so deep a brown, and is speckled with dark green spots : its poison is almost as dangerous, but it is less active, and its effects are very different : in some persons it is a devouring fire, which, as it circulates through the veins, presently occasions death ; the blood dissolves into a lymphatic liquor resembling thin broth, without apparently having passed through the intermediate state of coagulation, and runs from eyes, nose, and ears, and even through the pores. In other subjects the poison seems to have changed the very nature of the humors in dissolving them ; the skin is chapped and becomes scaly, the hair falls off, the members are tumefied, the patiert feels all over his body the most racking pains and numbness, and is not long in perishing. It is said, however, that people have been cured by remedies well and soon applied. Be this as it may, it seems to me that the poison of these different reptiles is in general more powerful the more they live in hot and dry places, where they feed upon insects that are full of saline, volatile, and acrimonious particles.' We are

ignorant of what species the haemorrhois was, which is described by Lucan as causing by its bite a flux of blood from every part of the body. But the bite of an American serpent named de la crux kills in the same manner. The dipsasas is at present likewise unknown. Lucan informs us that the person wounded by it was attacked by un-quenchable thirst. This is finely painted by him where A. Tuscus, standard-bearer of Cato, is described as bitten by that serpent : Pharsal. lib 9. The phytas or amodytes of Linnaeus, or, according to others, the coluber aspis, seems to have been the serpent made use of by Cleopatra to destroy herself. This woman, to terminate a dissipated life with an easy death, ordered her physicians to prepare a poison for her which might best effect this purpose. Having tried a number cf different experiments upon condemned

criminals, they at last discovered this species of asp, which brings on death without any previous appearance of distemper : the face seems in a slight perspiration, an easy insensibility and lethargy creeps upon the whole frame, and the person bitten seems almost totally ignorant of his approaching dissolution. Having acquainted the queen with their discovery, she applied the asp either to her bosom or her arms ; or, according to some authors, dipping the point of a needle in the poison, and pricking herself with it, she expired in an easy sleep. The bite of the naja is so fatal that a man dies by it in the space of an hour, his flesh entirely falling off his bones in a semi-dissolved putrid state : this makes it probable that it is the same serpent which the ancients named the sepe.

The Psylli of old were famous for charming and destroying serpents. See PSYLLI. Some moderns pretend to the same art. Casaubon says that he knew a man who could at any time sum-mon 100 serpents together, and draw them into the fire. Upon a certain occasion, when one of them, bigger than the rest, would not be brought in, he only repeated his charm, and it came forward like the rest, and submitted to the flames. Many other feats have been often practised upon these animals by artful men, who had first prepared the serpents for their

exercise, and then exhibited them as adventitiously assembled at their call. In India there is nothing so common as dancing serpents, which are carried about in a broad flat vessel somewhat resembling a sieve. They erect and put themselves in motion at the word of command. When their keeper sings a slow tune they seem by their heads to keep time ; when he sings a quicker measure they ap-pear to move more brisk arid lively. All animals have a certain degree of docility ; and serpents can be brought to move at the voice of their master. From this trick, successfully practised before the ignorant, it is most probable have arisen most of the boasted pretensions which some have made to charming of serpents ; an act to which the native Americans, pretend at this very day, and which we are assured by Mr. Hasselquist exists amongst the native Egyptians.

If it be asked for what purpose were serpents created with such destructive weapons ? we an-swer that they were given for self-defence. Without these, serpents, of all other animals, would be the most exposed and defenceless ; without feet for escaping a pursuit, without teeth capable of inflicting a dangerous wound, or without strength for resistance ; incapable from their size of finding security in very small retreats like the earthworm, and disgusting all from their deformity, nothing was left for them but a speedy extirpation. But, furnished as they are with powerful poison, every rank of animals approach them with dread, and never seize them but at an advantage. Nor is this all the benefit they derive from it. The malignity of a few serves for the protection of all. Though not above a tenth of their number are actually venomous, yet the similitude they all bear to each other excites a general terror of the whole tribe ; and the uncertainty of their enemies about what serpents are poisonous, .nakes even the most, harmless formidable. Thus

Providence seems t« have acted with double precaution : it has given some o: them poison for the general defence of a tribe naturally feeble ; but it has thinned the numbers of those which are venomous, lest they should become too powerful for the rest of animated nature. From these noxious qualities in the serpent kind, it is uo wonder that not only man, but beasts and birds, carry on an unceasing war against them. The ichneumon of the Indians, and the peccary of America, destroy them in great numbers. See Sus, and VIVERRA. These animals have the art of seizing them near the head ; and it is said that they can skin them with great dexterity. The vulture and the eagle also prey upon them in great abundance ; and often, sousing down from the clouds, drop upon a long serpent, which they snatch up struggling and

writhing in the air. Dogs also are bred up to oppose them." Father Feuillee tells us that, being in the woods of Martinico, he was attacked by a large serpent, which he could not easily avoid, when his dog iir mediately came to liis relief, and seized the assailant with great courage. The serpent entwined him, and pressed him so violently that the blood came out of his month, and yet the dog never ceased till he had torn it to pieces. The dog was not sensible of his wounds during the fight ; but soon after his head swelled prodigiously, and he lay on the ground as dead. But his master having found a banana tree hard by, he applied its juice mixed with treacle to the wounds, which recovered the dog, and quickly healed his sores. SERPENTS, WORSHIP OF. Though the generality of mankind regard this formidable race with horror, yet there have been some nations, and there are some at this day, that consider them with veneration and regard. The adoration paid by the ancient Egyptians to a serpent is well known : many of the nations at present along the western coast of Africa retain the same unaccountable veneration. Upon the Gold and Slave coasts, a stranger, entering the cottages of the natives, is often surprised to see the roof swarming with serpents, that cling there without molesting and unmolested by the natives. But his surprise will increase upon going farther southward to the kingdom of Whidah, where he finds that a serpent is the god of the country. This animal, which travellers describe as a huge overgrown creature, has its habitation, its temple, and its priests. These impress the vulgar with an opinion of its virtues; and numbers are daily seen to offer not only their goods, their provisions, and their prayers, at the shrine of their hideous deity, but also their wives and daughters. These the priests readily accept of, and aftei some days of penance return them to their sup pliants, much benefited by the serpent's supposed embraces. The serpent, in ancient mythology, was a very common symbol of the sun, and he is represented biting his tail, and with his body formed into a circle, to indicate the ordinary course of this luminary, and under this form it was an em-blem of time and eternity. The serpent was also the symbol of medicine, and of the gods which presided over it, as of Apollo and ˆEsculapius : and this animal was the object of very ancient and general worship, under various appellations

and characters. In most of the ancient rites we find some allusion to the serpent, under the several titles of Ob, Ops, Python, &c. This idolatry is alluded to by Moses, Lev. xx. 27. The woman of Endor who had a familiar spirit is called Oub, or Ob, and it is interpreted Pythonissa. The place where she resided, says the learned Mr. Bryant, seems to have been named from the worship then instituted : for Endor is compounded of En-ador, and signifies fons py-thonis, ‘ the fountain of light,’ the oracle of the god Ador ; which oracle was probably founded by the Canaanites, and had never been totally suppressed. His pillar was also called Abbadir, f.r Abadir, compounded of ab and adir, and meaning the serpent deity Addir, the same as Adorus. In the orgies of Bucchus the persons who partook of the ceremony used to carry serpents in their hands, and with horrid screams call upon Eva ! Eva ! Eva being, according to Mr. Briant, the same as epha, or opha, which the Greeks render ophis, and by it denoted a serpent. These ceremonies, and this symbolic worship, began among the Magi, who were the sons of Chus ; and by them they were propagated in various parts. Wherever the Ammonians founded any places of worship, and introduced their rites, there was generally some story of a serpent. There was a legend about a serpent at Colchis, at Thebes, and at Delphi ; and likewise in other places. The Greeks called Apollo himself Py-thon, which is the same as Opis, Oupis, and Oub. • In Egypt there was a serpent named Thermuthis, which was looked upon as very sacred ; and the natives made use of it as a royal tiara, with which they ornamented the statues of Isis. The kings of Egypt wore high bonnets, terminating in a round ball, and surrounded with figures of asps ; and the priests likewise had the representation of serpents upon their bonnets. Abadon, or Abaddon, mentioned in the Revelations, xx. 2, is supposed by Mr. Bryant to have been the Ophite god, with whose worship the world had been so long infected. This worship began among the people of Chaldea, who built the city of Ophis upon the Tigris, and were greatly addicted to divination, and to the worship of the serpent. From Chaldea the worship passed into Egypt, where the serpent deity was called Canoph, Caneph, and C’neph. It had also the name of Ob or Oub, and was the same as the Basiliscus or royal serpent, the same as Thermuthis, and made use of by way of ornament to the statues of their gods. The same learned writer discovers traces of the serpent worship among the Hyperboreans, at Rhodes, named Ophjusa, in Phrygia, and upon the Hellespont, in the island Cyprus, in

Crete, among the Athenians, in the name of Cecrops, among the natives of Thebes in Bceotia, among the Lacedemonians, in Italy, in Syria, &c., and in the names of many places as well as of the people where the Ophites settled. One of the most early heresies introduced into the Christian church was that of the Ophitae. See Bryant's Analysis of Ancient Mythology, vol. i. p. 43, &c. ; p. 473, 8cc.

SERPENT, a musical instrument, serving as a bass to the cornet, or small shawn, to sustain a chorus of singers in a large edifice. It has its

name from its figure, as consisting of several folds or wreaths, which serve to reduce its length, which would otherwise be six or seven feet. It is usually covered with leather, and consists of three parts, a mouth-piece, a neck, and a tail. It has six holes, by means whereof it takes in the compass of two octaves. Mersennus, who has particularly described this instrument, mentions some peculiar properties of it, e. gr. that the sound of it is strong enough to drown twenty robust voices, being animated merely by the breath of a boy, and yet the sound of it may be attempered to the softness of the sweetest voice ; and that, great as the distance between the third and fourth hole appears, yet, whether the third hole be open or snut, the difference is but atone.

SERPENTARIUS, in astronomy, a constellation of the northern hemisphere, called also Ophiuchus, and anciently ./Esculapius. See ASTRONOMY.

SERPENTINE, in the manege. A horse is said to have a serpentine tongue, if it is always frisking and moving, and sometimes passing over the bit, instead of keeping in the void space called the liberty of the tongue.

SERPENTINE STONE, in the old system of mineralogy, a genus of magnesian earths, of which mineralogists enumerated four different species; 1. The fibrosus, composed of fibrous and cohe-. rent particles. This resembles the asbestos so much that it might be confounded with it, were not the fibres of the serpentine so closely coherent, that they cannot be distinguished when the stone is cut or polished. The fibres are large, and seem twisted. There are two varieties, a dark green and light one; the former from Germany, the latter from Sweden. 2. The Zoeblitz serpentine, found near that 'place, of many different colors, as black, deep green, light green, red, bluish-gray, and white; but the green is most predominant. 3. Porcelain earth, mixed with iron, is met

with either diffusible in water or indurated. The former is of a red color, from China and Montmartre. There are two varieties of the indurated kind, *viz.* the martial soap-earth, of a red color, from Jasberg and •other places in Norway, or black from.some parts of Sweden. 4. The telgston of Sweden, the same with the lapis ollaris. It is found in various places of Norway, as light and dark gray, whitish yellow, and dark green. It is employed with great advantage for building fire-places, furnaces, &c., thfe extremities of the strata being turned towards the fire when it is slaty. M. Magellan says, the texture of serpentine is either indistinct, obscurely laminar, or fibrous. It is harder than steatites, though not hard enough to strike fire with steel ; being less smooth to the touch, but susceptible of a good polish, looking like marble ; and is often met with in thin semitransparent plates. It melts in a strong heat without addition, and corrodes the crucibles, but hardens in a lower degree of heat. It is slowly and partially soluble in acids, but does not effervesce with them ; has its name from being variegated with green, yellowish, and brown spots, like the skin of some serpents ; great quantities of it are found in Italy and Switzerland, where it is frequently worked into dishes, &c.

SERPENT.KE VERSES are such as begin and end with the sance word : as,

Ambo florentes aetatibus, Arcades ambo : Or such as begin in one half of the line, and end in the other, with precisely the same letters, so tlfet they may be read either from right to left like the Hebrew*, or from left to right ; as, Otto tenet mappam, madidam mappam tenet Otto.

SERPENTINE WORM, the worm or pipe of a still, twisted in a spiral manner.

SERPICULA, in botany, a genus of the mo-ncecia class and tetrandria order of plants : MALE CAL. quadridentate : COR. consists of four petals : FEMALE CAL divided into four parts, and the pericarpium is a tomentose nut. There are •wo species, the verticillata and repens.

SERPI’GO, n.s. Lat. serpigo. A kind of tetter.

For thy own bowels, which do call thee sire, Do curse the gout, serpigo, and the rheum, For ending thee no sooner. Shakspeare,

She had a node, with pains, on her right leg, and a serpigo on her right hand. . Wiseman.

The skin behind her ear downwards became serpi-ginous, and was covered with white scales. Id.

SERPJGO, in surgery, is a kind of herpes, popularly called a tetter, or ringworm. See SURGERY.

SERPULA, in zoology, a genus belonging to the class of vermes, and to the order of testacea. The shell is single, tubular, and adhering to other bodies. The animal which inhabits it is the te-rebella.

SERR, v. a. Fr. serrer. To drive hard together ; crowd into a little space. Disused.

The frowning and knitting of the brows is a gathering or terring of the spirits, to resist in some measure ; and also this knitting will follow upon earnest studying, though it be without dislike.

Bacon’s Natural History. With them rose

A forest huge of spears, and thronging helms Appeared, and serred shields in thick array, Of death immeasurable. Milton’s Paradise Lost.

SERRANUS, a surname given to Cincinnalus, because he was found sowing his fields, when the deputation from the senate came to inform him that he was elected dictator.

SERRANUS, a Latin poet of considerable merit, who flourished under Domitian. Juv. vii. v. 80.

SERRANUS (Joannes, or John de Serres), a learned French Protestant, br>rn in 1548. He acquired the Greek and Latin languages at Lausanne, and grew very fond of the philosophy of Aristotle and Plato. On his return to France he studied divinity. He began to distinguish himself in 1572 by his writings, but was obliged to forsake his country after the dreadful massacre of St. Bartholomew. He became minister of Nismes in 1582, but was never regarded as a very zealous Calvinist. He was one of the four clergymen whom Henry IV. consulted about the Ro-mish religion, and who returned for answer that Catholics

might be saved. He wrote afterwards a treatise to reconcile the two communions, entitled De fide Catholica, sive de principiis religionis Christianae, communi omnium Christia-norum consensu, semper et ubique ratis. This

work was disliked by the Catholics, and received with such indignation by the Calvinists of Geneva that many writers affirm they poisoned the au-thor. It is certain that he died at Geneva in 1598, aged fifty ; and, his wife also dying suddenly along with him, it was suspected that both were poisoned. His principal works are, 1. A Latin translation of Plato, published by Henry Stephens, which owes much of its reputation to the elegance of the Greek copy which accompanies it. 2. A Treatise on the Immortality of the Soul. 3. De Statu religionis et reipublicx in Francia. 4. Meˆnoire de la 3 me guerre civile et derniers troubles de France sous Charles IX., &c. 5. Inventaire general de 1'Histoire de France, illustre par la conference de 1'Eglise et de 1'Empire, &c. 6. Recueil de choses memorabies avenues en France sous Henri II., Francois II., Charles IX., Henri III. These three historical treatises have been justly accused of partiality and passion ; faults which it is next to impossible for a contemporary writer to avoid, especially if he bore any part in the transactions which he describes. His style is exceedingly incorrect and inelegant ; his mistakes too and mis-statements of facts are very numerous.

SER'RATE, adj. ˆ Lat. serratus. Formed SERIATED, >with jags or indentures

SER'RATURE.) like the edge of a saw : serrature is indenture of this kind.

All that have serrate teeth are carnivorous. Ray.

This stick is usually knotted and always armed : one of them with a curious shark's tooth near an inch long, and indented or serrated on both edges : a scurvy weapon. Grew.

These are serrated on the edges ; but the serratures are deeper and grosser than in any of the rest.

Woodward.

The common heron hath long legs for wading, a long neck answerable thereto to reach prey, a wide throat to pouch it, and long toes, with strong hooked talons, one of which is remarkably serrate on the edge.

Derham's Physico-Theology.

SERRATED, is a term much used inthe description of the leaves of plants. See BOTANY.

SERRATULA, saw-wort, in botany, a genus of the syngenesia class, and polygamia sequalis order of plants ; natural order forty-ninth, composite: CAL. subcylindrical, imbricated; the scales of it pointed, but not spinous. There are fifteen species: *viz.* S. Alpina; 2. amara ; 3. arvensis; 4. centauroides ; 5. coronata; 6. glauca: 7. Japonica ; 8. multiflora; 9. Nove bora-censis; 10. paeralta; 11. salicifolia; 12. scariosa ; 13. spicata; 14. squarrosa; and, 15. tinctoria. Of these three are British : *viz.* 1. S. alpina, mountain saw-wort. The root and stem are woody ; the latter being from one to two feet high. The leaves are numerous, triangular, long pointed, substantial, dark green above, white beneath, and serrated, with round intervals between the teeth, on footstalks. The flowers are purple. The scales of the calyx are very short and downy. It grows on high mountains, and flowers commonly in July or August. 2. S. arvensis, corn saw-wort, or way thistle. The stem is generally erect, branched, and two or three feet high. The leaves are sinuated, serSER

rated and spinous ; those above being almost en-tire. The flowers are of a pale purple; the down is very long. This plant grows in cultivated grounds and by way sides, and flowers in July or August. When burned it yields good ashes for making glass or fixed alkali. 3. S. tinctoria is distinguished by a stem erect and slender, branched at the top, and three feet high. The leaves are smooth, pinnatifid, and serrated : the flowers are purple, and in umbels, and terminal. The down of the seed is glossy, with a brown or gold tinge. It grows in woods and wet pastures. It dyes cloth of an exceedingly fine yellow color, which stands well when fixed with alum. Goats eat this plant; horses are not fond of it ; cattle, swine, and sheep, leave it untouched.

SERRATUS, in anatomy, a name given to several muscles, from their resemblance to a saw. See ANATOMY.

SERRES (John Thomas), a French artist of considerable merit and reputation in sea pieces. He was descended of a noble family, long resident at Beauperre, near Oche, whence his father, count Dominic de Serres, nephew of the then archbishop of Rheims, eloped, in order to avoid an ecclesiastical life. Entering the Spanish service, he was taken prisoner by the English, received his liberty on parole, and, though afterwards this restriction was removed, he continued to reside in this country, and to exercise his talents as a draughtsman, which at length procured him the honor of a seat among the fellows of the Royal Academy. His eldest son, the subject of this article, inherited his father's genius, and, besides the many proofs of his talents as a painter yet extant, was the author of a work entitled the Little Sea Torch, a Guide for Coasting Pilots, folio, 1801. Mr. Serres was husband to the soi-disant princess Olive of Cumberland. He died December 28th, 1825.

SERRES (Oliver), a French agriculturalist, was born in 1539, at Villeneuve de Bery, near Viviers, and showed himself so able a manager of his own estate, that Henry IV. called him to Paris, and entrusted him with the management of the royal domains. He had the merit of introducing the white mulberry into France, and was the author of many valuable improvements. He died in 1619. The works of this respectable individual are, a Treatise on the Culture of Silk, 1599; Feconde Richesse du Meurier Blanc, 1603; Theatre d'Agriculture et Menage des Champs ; which last work has been repeatedly printed, and is much esteemed.

SERT, a town of Kurdistan, Asiatic Turkey, the ancient Tigranocerta, the capital of Tigranes, who peopled it chiefly by the prisoners seized during his invasion of Syria and Cappadocia, A. C. 69. It was taken and plundered by Lucullus, but retained its importance till after the Saracen invasion. It is now only a large village, containing about 3000 inhabitants, Mahometans and Armenian Christians, who have three small mosques, a college, and Armenian church. It is surrounded on every side by hieh mountains, and washed by the Kabour. The surrounding territory is in an improved state of culture : and the chief of this place is a powerful

feudal lord. Seventy-five miles southeast 01 Diarbekir.

SERTIO (Sebastian), a celebrated architect and writer, born at Bologna, in the sixteenth century. On the invitation of Francis II. he embellished his palace at Fontainbleau. He wrote a Treatise on

Architecture, which does honor to his judgment and taste.

SERTOR1US (Quintus), a celebrated Roman general, born at Nursia. He accompanied Ma-rius into Gaul, and fought bravely against the Teutones and Cimbri, but lost an eye in the first battle. He followed Marius and Cinna to Home, but disapproved of the cruelties committed by these monsters. Being afterwards proscribed by the equally bloody Sylla, he fled into Spain, where he beaded the other proscribed exiles, and acted with such valor and address that he be-came for a time sovereign of the country. See ROME and SPAIN. While Rome itself was subjected to repeated bloody massacres, and all law and justice seemed to be abolished, Sertorius erectedˆ a republic in Spain, and governed the people with so much justice, mildness, and humanity, that the Lusitanians almost adored him. But a villain named Perpenna, envious of his fame, conspired with one Antonius, and murdered him at a banquet, A. A. C. 73.

SERTULARIA, in zoology, a genus belonging to the class of vermes, and to the order of zoophyta. The stem is radicated, fibrous, naked, and jointed ; the florets are hydra, and there is one at each joint. This genus comprehends forty-two species of corallines.

SERVAL, the mountain cat. See FELIS.

SERVAN (St.), a town of the north department of the Ille and Vilaine, France, situated at the mouth of the Ranee, about a mile to the south of St. Malo. It is tolerably built, has a fine port, divided into two parts by a rock, on which stands the tower of Solidor, and manufactures of linen, sail cloth, soap, and tobacco ; ship-build- ing is likewise carried on to some extent. One of the divisions of the port is fitted for men of war or large merchantmen ; the other for smaller vessels. This place is the resort of a number of English families : and in time of war sends out numerous privateers

SERVANDONI (John Nicholas), an eminent architect, born at Florence in 1695. He rendered himself famous by his exquisite taste in architecture, and by his genius for decorations, fetes, and buildings. He was employed and rewarded by most of the princes in Europe. He was honored in Portugal with the order of Christ. In France he was architect and painter to the king, and member of the different academies established for the advancement of these arts. He received the same titles from the kings of Britain, Spain, and Poland, and from the duke of Wirtemberg. With all these advantages, his want of economy was so great, that he left nothingbehind him. He made decorations for the theatres of Paris, London, and Dresden. The French

king’s theatre, called la salle des Machines, was under his management His shows and decorations were astonishly sublime; his Descent of .Eneas into Hell in particular, and his Enchanted Forest. He built a theatre at Chambord for count Saxe; and furSER

nished the plan of the theatre royal at Dresden. His genius for fetes was remarkable; he conducted a great number in Paris and London ; and one at Lisbon for a victory gained by the duke of Cumberland. He presided at the magnificent fete given at Vienna on the marriage of the archduke Joseph and the infanta of Parma. He died at Paris in 1766.

SER’VANTji.s.&w.a.”) Fr. server; Lat. SERVE, v.a. Scu.n. servio. To attend;

SER’VICE, n. s. work for ; obey ; asSER’VICEABLE, adj. I sist; promote; help; SER’VICEABLY, adv. (“satisfy ; stand instead SER’VICEABLENESS, n. s. j of any thing to an-SER’VINO-MAN, | other ; treat ; disSER’VITUDE. J charge, as an office ;

and (a Gallicism) to make use of, as in the phrase (Fr. se servir de) to serve himself of: as a verb neuter, to be in attendance; be a servant or slave ; wait ; be convenient ; produce a desired end : suit ; conduce ; officiate : a servant is he who in any way serves, obeys, or attends ; one in a state of subjection ; one in menial employ : used by Shakspeare as a verb active for to subject : service, such employ, or any occupation or duty of a servant ; military duty ; purpose ; use ; use-ful office ; course ; order : the adverb and noun substantive corresponding: a serving-man is a menial servant: servitude, the state of a servant, particularly of a menial one.

And we distrien counseils and al highnesse that higheth itself aghens the science of God and dryuen into caitvfte al understondyng into the seruyse of Crist. Wiclif. 2 Cor. 10.

We will give thee this also for the service which thou shall serve with

me. Genesis xx. 27.

Thou hast made me to serve with thy sins ; thou hast wearied me with thine iniquities.

Isaiah xliii. 24.

They that serve the city shall serve it out of all the tribes of Israel. Ezek. xlviii. 19.

Israel served for a wife, and for a wife he kept sheep. Hosea.

-Martha was cumbered about much serving, and said, Lord, dost thou not care that my sister hath left me to serve alone 1 Luke x. 40.

The look bewrayed, that, as she used these ornaments not for herself, but to prevail with another, so she feared that all would not serve. Sidney.

He was sent to the king's court, with letters from that officer, containing his own serviceable diligence in discovering so great a personage ; adding withal more than was true of his conjectures. Id.

He might continually be in her presence, shewing more humble serviceableness and joy to content her than ever before. Id.

When he cometh to experience of service abroad, or is put to a piece or pike, he maketh a worthy soldier. Spenser.

They think herein we serve the time because thereby we either hold or seek preferment. Hooker.

Our speech to worldly superiors we frame in such sort as serveth best to inform and persuade the minds of them, who otherwise neither could nor would greatly regard our necessities. Id.

According to this form of theirs, it must stand for a rule, No sermon, no service. Id.

Religion hath force to qualify all sorts of men and to make them, in public affairs, the more serviceable ; governors the apter tc rule with conscience ; inferiors, fr.- conscience sake, the willinger to obey. Id.

Aristotle speaketh of men whom nature hath framed for the state of servitude, saying, They have reason so far forth as to conceive when

others direct* them. /a

Many noble gentlemen came out of all parts of Italy, who had before been great commanders, but now served as private gentlemen without pay.

Knolles's History of the Turks. Bid them cover the table, serve in the meat. And we will corne in to dinner.

Id. Merchant of Venice.

Both more or less have given him the revolt ; And none serve with him but constrained things, Whose hearts are absent too. Shakspeare. Macbeth.

As occasion serves this noble queen And prince shall follow with a fresh supply.

Id. Henry IV Being unprepared,

Our will became the servant to defect, Which else should free have wronged.

Id. Macbeth. My affairs

Are servanted to others : though I owe My revenge properly, remission lies In Volscian breasts. Id. Coriolanus.

The banish'd Kent, who in disguise Follow'd his king, and did him service Improper for a slave. Id. King Lear.

To thee a woman's services are due, My fool usurps my body. Id.

I know thee well, a serviceable villain ; As duteous to the vices of thy mistress As badness could desire. Id.

Thou, Nature, art my goddess ; to thy law My services are bound. Id.

Both fell by our servants, by those men we lov'd

most : A most unnatural and faithless service. Shakspeare.

By oppressing and betraying me, Thou might'st have sooner got another service. Id.

That service is not service, so being done, But being so allowed. Id. Cymbeline.

I am a woman lacking wit To make a seemly answer to such persons Pray do my service to his majesty.

Id. Henry VIII.

Your niece did more favours to the duke's serving-man, than ever she bestowed on me.

Id. Twelfth Night.

You would have sold your king to slaughter, His princes and his peers to servitude, His subjects to oppression and contempt.

Id. Henry V.

Soon after our dinner was served in, which was right good viands, both for bread and meat : -we had also drink of three sorts, all wholesome and good.

Bacon.

Riches gotten by service, though it be of the best rise, yet, when gotten by flattery, may be placed amongst the worst. Id.

Although they built cashes, and made freeholders, yet were there no tenures and services reserved to the crown ; but the lords drew all the respect and dependency of the common people unto themselves.

Davies's State of Ireland.

At the parliament at Oxford, his youth, and want of experience in sea-service, had somewhat been shrewdly touched, even before the sluices of popular liberty were yet set open. Walton's Buck.

Just in the nick ; the cook knock'd thrice, And all the waiters in a trice

His summons did obey : Each servant-man, with dish in hand, Marched boldly up, like our train'd band,

Presented, and away. Suckling

SER S

All the vessels of the king's house are not for uses of honour ; some be common stuff, and for * mean services, yet profitable. . Spetman.

I will serve mytelf of this concession.

Chillinguiorth.

I know no necessity why private and single abilities should quite justle out and deprive the church of the joint abilities and concurrent gifts of many learned and godly men, such as the composers of the service book were. Aiuj Charles.

Cleopatra made Antony a supper sumptuous and royal ; howbeit there was no extraordinary service seen on the board. Hakewill.

A complete brave man must know solidly the main end he is in the world for : and withal how to serve himself of the divine's high contemplations, of the metaphysician's subtle speculations, and of the natural philosopher's minute observations.

Digby on the Soul.

They would serve themselves of this form. Taylor. Besmeared with the horrid juice of sepia, they danced a little in phantastick postures, retired awhile, and then returned, serving up a banquet as at solemn funerals. Id.

When a storm of a sad mischance beats upon our spirits, turn it into some advantage, by observing where it can serve another end, either of 'religion or prudence. Id.

When wealthy, shew thy wisdom not to be To wealth a servant, but make wealth serve thee.

Denham.

A goddess among gods ador'd, and served By angels numberless, thy daily train. Milton.

Bodies bright and greater should not serve The less not bright. Id.

Matters hid leave to God, him serve aud fear.

Id.

Who lessens thee, against his purpose serves To manifest the more thy might. Id.

After him a cumb'rous train Of herds, and flocks, and numerous servitude. Id.

It is much more easy for men to serve their own ends of those principles, which they do not put into men, but find there. Tillotson.

God requires no man's service upon hard and unreasonable terms. Id. Sermons.

A court, properly a fair, the end of it trade and gain ; for none would go to service that thinks he has enough to live well of himself. Temple.

Others, pampered in their shameless pride, Are served in plate, and in their chariots ride.

Dryden.

If they elevate themselves, 'tis only to fall from a higher place, because they serve themselves of other men's wings, neither understanding their use nor virtue. Id. Dufresnoij.

Take it, she said ; and, when your needs require, This little brand will serve to light your fire.

Dryden.

Read that ; 'tis with the royal signet signed. And given me by the king, when time should serve, To be perused by you. Id. Spanish Fryar.

This poem was the last piece of service I did for my master king Charles. Dryden.

Nothing would serve them but riding. L' Estrange.

The stork's plea, when taken in a net, was the service she did in picking up venomous creatures.

Id.

If any subject, interest, or fancy has recommended, their reasoning is after their fashion ; it serves their turn. Locke.

All action being for some end, its aptness to be commanded or forbidden must be founded upon its terviceablenest or disserviceableness to some end.

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Shall he thus serve his country, and the muse The tribute of her just applause refuse ? Tate.

As the former empty plea served the sottish Jews, this equally serves these to put them into a fool's paradise, by feeding their hopes, without changing their lives. South.

Though it is necessary that some persons in the world should be in love with a splendid servitude, yet certainly they must be much beholding to their own fancy, that they can be pleased at it ; for he that rises up early, and goes to bed late, only to receive addresses, is really as much abridged in his freedom, as he that waits to present one. Id.

The order of human society cannot be preserved, nor the services requisite to the support of it be supplied, without a distinction of stations, and a long subordination of offices. Rogers.

His own inclinations were to confine himself to his own business, and be serviceable to religion and learning. Atterlntry.

The same mess should be served up again for sup-per, and breakfast next morning.

Arbuthnat's History, of John Bull.

One half-pint bottle serves them both to dine. And is at once their vinegar and wine. Pope.

Gentle streams visit populous towns in their course, and are at once of ornament and service to them. Id.

Our victory only served to lead us on to further visionary prospects. 6«; > t.

If stations of power and trust were constantly made the rewards of virtue, men of great abilities would endeavour to excel in the duties of a religious life, in order to qualify themselves for public service.

Id.

The clergy prevent themselves from doing much service to religion, by affecting so much to converse with each other, and caring so little to

mingle with the laity. Id.

A book to justify the revolution archbishop Tillotson recommended to the king, as the most serviceable treatise that could have been published then. id. With Dennis you did ne'er combine.

Not you, to steal your master's wine ;

Except a bottle, now and then,

To welcome brother serving -men. Id.

That service may really be done, the medicine must be given in larger quantities. Mead.

The congregation was discomposed, and divine service broken off. H'uNs.

If my name, therefore, will serve them in any de-cree, as a pass-port into the public notice, they arc welcome to it. Cowper's Private Correspondence

SERVANT is a term of relation signifying a person who owes and pays obedience for a certain time to another in quality of a master. The law of England therefore abhors, and will not endure, the existence of slavery within this na-tion : so that when an attempt was made to introduce it by stat. 1 Edw. VI. c. 3, which ordained that all idle vagabonds should be made slaves, and fed upon bread, water, or small drink, and refuse meat; should wear a rinˆ of iron round their necks, arms, or legs; and should be compelled, by beating, chaining, or otherwise, to perform the work assrgned them, were it ever so vile ; the spirit of the nation could not brook this condition, even in the most abandoned rogues ; and therefore this statute was repealed two years afterwards. And now it is laid down that a slave or negro, the instant he lands in Britain, becomes a freeman ; that is, the law \ ill protec* him in the enjoyment of his person and hispio-SER

perty. Hence, too, it follows, that the infamous and unchristian practice of withholding baptism from negro servants, lest they should thereby gain their liberty, is totally without foundation, as well as without excuse. The law of England acts upon general and extensive principles; it gives liberty and protection to a Jew, a Turk, or a Heathen, as well as to those who profess the true religion of Christ ; and it will not dissolve a civil obligation between master and servant, on account of the alteration of faith in either of the parties ; but the slave is entitled to the same protection in England before as after baptism ; and, whatever service the Heathen negro owed of right to his American master, by general, not by local law, the same (whatever it be) is he bound to render when brought to England and made a Christian. 1. The first sort of servants, therefore, acknowledged by the laws of England, are mental servants ; so called from being intra moenia, i. e. between the walls, or domestics. The contract between them and their masters arises upon the hiring. If the hiring be general, without any particular time limited, the law construes it to be a hiring for a year; upon a principle of natural equity, that the servant shall serve, and the master maintain him, throughout all the revolutions of the respective seasons; as well when there is work to be done, as when there is not ; but the contract may be made for any larger or smaller term. All single men between twelve years old and sixty, and married ones under thirty years of age, and all single women between twelve and forty, not having any visible livelihood, are compellable by two justices to go out to service in husbandry or certain specific trades, for the promotion of honest industry ; and no master can put away his servant, or servant leave his master, after being so retained, either before or at the end of his term, without a quarter's warning; unless upon reasonable cause, to be allowed by a justice of the peace: but they may part by consent, or make a special bargain. 2. Another species of servants are called apprentices (from apprendre, to learn), and are usually bound for a term of years. See APPRENTICE and APPRENTICESHIP. 3. A third species of servants are laborers, who are only hired by the day, or the week, and do not live intra moenia, as part of the family, concerning whom the statutes before cited have made many very good regulations ; 1. Directing that all persons who have no visible effects may be compelled to work ; 2. Defining how long they must continue at work in summer and in winter : 3. Punishing such as leave or desert their work : 4. Empowering the justices at sessions, or the sheriff of the county, to settle their wages : and, 5. Inflicting penalties on such as either give or exact more wages than are so settled. There is yet a fourth species of servants, if they may be so called, being rather in a superior, a ministerial, capacity ; such as stewards, factors, and bailiffs ; whom> however, the law

considers as servants pro tempore, with regard to such of their acts as affect their master's or employer's property. As to the manner in which this relation affects the master, the servant himself, or third parties, see MASTER

SERVETUS (Michael), M. D., a learned Sp»- nish physician, born at Villaneuva, in Arragon, in 1509. He studied the civil law at the university of Toulouse. The Reformation, which had awakened the most polished nations of Europe, directed the attention of thinking men to the' errors of the Romish church, and to the study of the Scriptures. Servetus, from the love o"f novelty, or of truth, carried his enquiries far be-yond the other reformers, and not only renounced the false opinions of the Roman Catholics, but went so far as to question the doctrine of the Trinity. Accordingly, after spending several years at Toulouse, he went into Germany to propagate his new opinions. At Basil he had some conferences with Oecolampadius. He went next to Strasburg to visit Bucer and Capito, two eminent reformers of that town. From Strasburg he went to Hagenau, where he printed a book, entitled De Trinitatis Erroribus, in 1531. In 1532 he published two other treatises on the same subject ; in an advertisement to which he informs the reader that it was not his intention to retract any of his former sentiments, but only to state them in a more distinct and accurate manner. To these two publications he had the courage to put his name, not suspecting that, in an age when liberty of opinion was granted, the exercise of that liberty would be attended with danger. After publishing these books, he left Germany, probably finding his doctrines not so cordially received as he expected. He went first to Basil, and thence to Lyons, where he lived two or three years. He then removed to Paris, where he studied medicine under Sylvius, Fernelius, and other professors, and obtained the degrees of M. A. and M. D. His love of controversy involved him in a serious dispute with the physicians of Paris ; and he wrote an Apology, which was suppressed by an edict of the parliament. The misunderstanding which this dispute produced with his colleagues, and the chagrin which so unfavorable a termination occasioned, made him leave Paris in disgust. He settled two or three years in Lyons, and engaged with the Frellons, eminent printers of that age, as a-corrector of their press. At Lyons he met with Peter Palmier, the archbishop of Vienne, with whom he had been acquainted at Paris. That prelate, who was a great encourager of learned men, pressed him to accompany him to Vienne, offering him at the same time an apartment in his palace. Servetus

accepted the offer, and might have lived a tranquil and happy life at Vienne, if he could have confined his attention to medicine and literature. But an eagerness to establish his opinions always possessed him. At this time Calvin was at the head of the reformed church at Geneva. With Servetus he had been acquainted at Paris, and had there opposed his opinions. For sixteen years Calvin kept up a correspondence with him, endeavouring to reclaim htm from his errors. Servetus had read the works of Calvin, but did not think they merited the high eulogies bestowed on them, nor did they convince him of his errors. He continued, however, to consult him; and for this purpose sent from Lyons to Geneva three questions, which respected the divinity of Jesus

Christ, regeneration, and the necessity of baptism. To these Calvin returned a civil answer. Servetus treated the answer with contempt, and Calvin replied with warmth. From reasoning he had recourse to abusive language ; and this produced a polemical hatred, the most implacable disposition in the world. Calvin, having obtained some of Servetus's papers, sent them to Vienne along with the private letters which he had received during their correspondence. The consequence was that Servetus was arrested ; but, having escaped from prison, he resolved to retire to Naples, where he hoped to practise medicine with the same reputation which he had so long enjoyed at Vienne. He imprudently took his route through Geneva. Calvin informed the magistrates of his arrival ; Servetus was apprehended, and appointed to stand trial for heresy and blasphemy. It was a law at Geneva that every accuser should surrender himself a prisoner, that, if the charge should be found false, the accuser should suffer the punishment in which he meant to involve the accused. Calvin, not choosing to go to prison -himself, sent one of his domestics to present "the impeachment against Servetus. The articles brought against him were collected from his writings with great care ; an employment which took up three days. One of these articles was, ' that Servetus had denied that Judea was a beautiful, rich, and fertile country; and affirmed, on the authority of travellers, that it was poor, barren, and disagreeable.' He was also charged with ' corrupting the Latin Bible, which he was employed to correct at Lyons, by introducing impertinent, trifling, whimsical, and impious notes of his own through every page.' But the main article, which was certainly fatal tc him, was, ' that in the person of Mr. Calvin, minister of the word of God in the church of Geneva, he had defamed the doctrine that is preached, uttering all imaginable

injurious blasphemous words against it.' Calvin visited Ser-vetos in prison, and had frequent conferences with him ; but finding that, in opposition to all the arguments he could employ, the prisoner remained inflexible in his opinions, he left him to his fate. Before sentence was passed, the magistrates of Geneva consulted the ministers of Bale, of Berne, and Zurich ; and, as another account informs us, the magistrates of the protestant cantons of Switzerland. And, to enable them to form a judgment of the criminality of Servetus, they transmitted the writings of Calvin, with his answers. The general opinion was that Servetus ought to be condemned to death for blasphemy. He was accordingly sentenced to be burnt alive on the 27th of October, 1553. > As he continued alive in the midst of the flames more than two hours, it is said, finding his torment thus protracted, he exclaimed : ' Unhappy wretch that I am! Will the flames be insufficient to terminate my misery ! What then! \VilJ the 1 00 pieces of gold, and the rich collar which they took from me, not purchase wood enough to consume me more quickly !' Though the sentence of death was passed against Servetus by the magistrates of Geneva, with the approbation of a great number of the magistrates and ministers of Switzerland, yet it is the opinion of

most historians that this dreadful sentence was imposed at the instigation of Calvin. This act of severity for holding a speculative opinion, however erroneous and absurd, has left a stain on the character of this illustrious reformer, which will attend the name of Calvin as long as history shall preserve it from oblivion. See CALVIN. Servetus was a man of great acuteness and learning, and well versed in the art* and sciences. In his own profession his genius exerted itself with success. In his tract entitled Chnstianismi Restitutio, published in 1553, he remarks that the whole mass of blood passes through the lungs by the pulmonary artery and vein, in opposition to the opinion which was then universally entertained, that the blood passes through the partition which divides the two ven-tricles. This was an important step towards the discovery of the circulation of the blood. His works consist of controversial writings concerning the Trinity : an edition of Pagninus's Version of the Bible, with a preface and notes, published under the name of Michael Villanovanus ; an Apology to the Physicians of Paris ; and a book entitled Ratio Syruporum. Mosheim wrote in Latin A History of the Heresy and Misfortunes of Servetus, which was published at Helmstadt. in 4to., in 1728; and is extremely interesting.

SERVIA, a considerable province of European Turkey, the Maesia Superior of the Romans. Its form is nearly oblong, its length being about 190 miles, its breadth 100, and its superficial extent 19,000 square miles. It is an inland province, bounded on' the north by a part of the Hungarian frontier, but on all other sides by portions of the Turkish territory, *viz.* on the west by Bosnia, on the east by Bulgaria, and on the south by Albania. Population about 1,000,000.

Servia is uneven and even mountainous, and its surface contains a number of forests, and large uncultivated heaths. The mountains in the south extend in a regular chain, but throughout the chief oart of the province they have little regular connexion. One of the highest is called Haloga, situated to the southwest of Belgrade. The rivers are on its frontiers, *viz.* the Save and Danube on the north : the Morawa on its eastern, the Drina on its western boundary, both flow to the northward until falling into the Danube, after receiving a number of inferior streams. The Da-nube, in this part of its course, is in many places bordered by lofty rocks, rising almost perpendicularly from the river, or appearing to hang suspended above it. The scenery is highly picturesque.

The climate of Servia, though temperate, is less mild than might be expected in 43° and 44° of N. lat, the winter being of considerable length, and spring not beginning till April. This is partly owing to the height of the ridge of the Argentaro or Glubotin mountains, extending along its southern boundary ; partly to the num-ber of forests, and the general neglect of cultivation. In the month of June the southwest winds bring on periodical rains, which are succeeded in July and August by great heat, although the nights are generaHy cool. September is often a rainy month ; but, in October and No- \ : mber, the weather is :'n general pleasant. Its

soil is in general fertile, the cultivated tracts producing abundant crops ; but a small proportion of the country is as yet under tillage. The common products are rice, wheat, barley, oats, hemp, flax, and tobacco ; also vines and fruits. Cotton is raised in the valleys. Timber is every where abundant, and mines of iron and salt have been discovered in several parts ; but are almost entirely neglected : the only articles of export being hemp, wool, flax, and tobacco ; cattle and

hogs. The manufactures of woollen, cotton, and hardware, are wholly for home consumption. Of large towns, Servia reckons only Belgrade, Semendria, and Nissa ; the other places are mere villages, meanly built, and ill peopled. There are, however, spread over the country, many vestiges of antiquity.

The inhabitants of Servia are divided into Servians, Turks, and Jews ; the last two found.only ;n the towns. The Servians were originally a tribe of Sclavonians from Galicia, in Poland ; and are not confined to the territory strictly called Servia, but are spread over other parts of Europe, particularly over a considerable proportion of Hungary. The language has a great resemblance to the Russian. The Servians are not devoid of spirit ; but their natural activity is little improved by culture, and debased by bigoted superstition.

On the decline of the empire, Servia shared the fate of the other frontier provinces, and was occupied by invaders, from a tribe of whom, called Serbis, or Serbi, it received its modern name. In the middle ages it formed a separate and independent khigdom, which yielded to the Turks about the year 1365. The Servians have often since experienced the hardships of a frontier province, and still oftener the unbounded tyranny of its pachas and other provincial governors. A sense of these injuries, and an implacable hatred to the Turks, led to an insurrection about the year 1801. It soon became general, and the Servians flocking round the standard of Czerni Georges, previously known only as the head of a band of robbers, honored him with the name of avenger of his country. This chieftain at first confined himself to the forests ; in time his followers increased, and found themselves of sufficient strength to meet the enemy in the open country. In December, 1806, he besieged and took Belgrade, after an obstinate resistance, and in a great measure expelled the Turks from the country. The Turks brought from time to time fresh forces against him, which he resisted with various success until 1814, when he judged proper to withdraw into Russia ; and by a convention, concluded between his country and the Porte in 1815, the Servians acknowledged the sovereignty of the sultan, but secured the free exercise of their religion, as well as various civil rights. Every father of a family pays a ducat of yearly tax to the Porte, and every other individual a piastre ; no Servian can settle in Tur-key, nor travel in that countiy but for commercial purposes. The Turkish division of it is into four sandgiacats, *viz.* Belgrade, Semendria, No-vibasar, and Kratow.

SERVIA, or NEW SERVIA, a district of European Russia, in the government of Ekaterinoslav, between the Dniepet and the Bog It

takes its

name from a number of Servian hussars and Pandours, who emigrated hither in 1754. Being a frontier province, it has a military form : and the territory is divided into ten districts, each occupied by a regiment.

SERVICE, n. s. Lat. sorbus. A tree and fruit.

The flower of service consists of several leaves, which are placed orbicularly, and expand in form of a rose, whose flower-cup afterwards becomes a fruit shaped like a pear or medlar ; to which must be added, pennated leaves like that of the ash.

Miller.

October is drawn in garment of yellow and carnation ; in his left hand a basket of services, medlars, and other fruits that ripen late. Peacliam.

SERVICE, in law, is a duty which a tenant, on account of his fee, owes to his lord. There are many divisions of services ; as, 1. Into personal, where something is to be done by the tenant in person, as homage and fealty. 2. Real, such as wards, marriages, &c. 3. Accidental, including heriots, reliefs, and the like. 4. Entire, where, on the alienation of any part of the lands by a tenant, the services become multiplied, j. Frank-service, which was performed by freemen, who were not obliged to perform any base service, but only to find a man and horse to attend the lord into the army or to court. 6. Knight's service, by which lands were anciently held of the king, on paying homage, service in war, &c.

SERVICE, in domestic economy. As in every free and well regulated society there must be a great number of persons employed in service, both in agriculture and domestic affairs, in this country service is a contract into which the servant voluntarily enters ; and the master's authority extends no farther than to the performance of that species of labor for which the agreement was made. Dr. Paley has some judicious remarks on this subject, in his Moral and Political Philosophy, p. 139.

SERVICE, CHORAL, in church history, denotes that part of religious worship which consists in chanting and singing. The advocates for the antiquity of singing, as a part of church music, urge the authority of St. Paul in its favor (Ephesians v. 19, and Colossians iii. 16), and assert that songs and hymns were from the establishment of the church sung

in the assemblies of the faithful. It appears from undoubted testimony that singing, which was practised as a sacred rite among the Egyptians and Hebrews at a very early period, and which likewise constituted a considerable part of the religious ceremonies of the Greeks and Romans, made a part of the religious worship of Christians, not only before churches were built and their religion established by law, but from the first profession of Christianity. However, others have dated the introduction of music into the service of the church in that period during which Leontius governed the church of Antioch, i. e. between A. D. 347 and 356. See ANTIPHONY. From Antioch the practice soon spread through the other churches of the east ; and, in a few ages after its first introduction into the divine service, it not only received the sanction of public authority, but those were forbid to join in it who were ignorant of music, by a canon of the council oJ

, about A. D. 372. Singing was introduced into the western churches by St. Ambrose •about A. D. 374, who was the institutor of the Ambrosian chant established at Milan about 386; and Eusebius (lib. ii. cap. 17) tells us that a regular choir, and method of singing the service, were first established, and hymns used in the church at Antioch, during the reign of Constantine ; and that St. Ambrose, who had long resided there, had his melodies thence. This was about 230 years afterwards amended by pope Gregory the Great, who established the Gregorian chant; a plain, unisonous, kind of melody. This still prevails in the Roman church ; it is known in Italy by the name of canto fermo ; and in Germany and most other countries by that of the cantus Gregorianus. All writers on this subject agree that St. Ambrose only used the four authentic modes, and that the four plagal were added by St. Gregory. Each of these had the same final, or key-note, as its relative au-Jientic : from which there is no other difference, than that the melodies in the four authentic or principal modes are generally confined within •he compass of the eight notes above the key-note, and those in the four plagal or relative modes, within the

compass of the eight notes below the fifth of the key. See MODE. Ecclesiastical writers unanimously allow that pope Gregory, about 590, collected the musical fragments of such ancient psalms and hymns as the first fathers of the church had approved and recommended to the first Christians ; and that he selected, methodised, and arranged them in the order which was long continued at Rome, and soon adopted by the chief part of the western church. From the time of Gregory to that of Guido there was no other distinction of keys than that of authentic and plagal ; nor were any semitones used but those from E to F, B to C, and occasionally A to B ˆ . With respect to the music of the primitive church, though it consisted in the singing of psalms and hymns, yet it was performed in many different ways ; sometimes the psalms were sung by one person alone, whilst the rest attended in silence; sometimes they were sung by the whole assembly; sometimes alternately, the congregation being divided into separate choirs ; and sometimes by one per-son, who repeated the first part of the verse, the rest joining in the close of it. Of these four methods of singing, the second and third were named symphony and antiphony ; and the latter was sometimes called responsaria, in which wo-men were allowed to join. St. Ignatius is said to have been the first who suggested to the primitive Christians in the east the method of singing hymns and psalms alternately, or in dialogue; and the custom soon prevailed in every place where Christianity was established ; though Theodoret in his history (lib. ii. cap. 24), tells us that this manner of singing was first practised at Antioch. It is the opinion of the learned Martini that the music of the first five or six ages of the church consisted chiefly in a simple chant of unisons and octaves, of which many fragments are still remaining in the canto fermo of the Ronv.sh missals. For, with respect to music in parts, it does not appear in these early ages that

either the Greeks or Romans were in possession' of harmony or counterpoint, which has been generally ascribed to Guido, a monk of Arezzo in Tuscany, about 1022. See ARETIN. The cho-ral music, which had its rise in the church of Anticxch, and thence spread through Greece, Italy, France, Spain, ana Germany, was brought into Britain by the singers who accompanied Austin the monk, when he came over, in 596, with a commission to convert the inhabitants of this country to Christianity. Bede tells us that when Austin and the companions of his mission had their first audience of king Ethelbert, in the Isle of Thanet, they approached him in procession, singing litanies, and that some time afterwards, when they entered Canterbury, they sung a litany, and at the end of it, Hallelujah. But,

though this was the first time the Anglo-Saxons had heard the Gregorian chant, yet Bede tells us that our British ancestors had been instructed in the rites and ceremonies of the Gallican church by St. Germanus, and heard him sing Hallelujah many years before the arrival of St. Austin. In 680 John, prsecentor of St. Peter's in Rome, was sent over by pope Agatho to instruct the monks of Weremouth in the art of singing ; and he was prevailed upon to open schools for teaching music in other places in Northumberland. Benedict Biscop, the preceptor of Bede, Adrian the monk, and many others contributed to disseminate the knowledge of the Roman chant. At length, the successors of St. Gregory and of Austin having established a school for ecclesiastical music at Canterbury, the rest of the island was furnished with masters from it. The choral service was first introduced in the cathedral church of Canterbury ; and till the arrival of Theodore, and his settlement in that see, the practice of it seems to have been confined to the churches of Kent ; but after that it spread over the whole kingdom. This mode of religious worship prevailed in all the European churches till the Reformation : the first deviation from it is that which followed the Reformation by Luther, who, being himself a lorer of music, formed a liturgy, which was a musical service, in a work entitled Psalmodia, h. e. C'an-tica sacra Veteris Ecclesise selecta, printed at Norimberg in 1553, and at Wittemberg in 1561. But Calvin, in his establishment of a church at Geneva, reduced the whole of divine service to prayer, preaching, and singing; the latter of which he restrained. He excluded the offices of the antiphon, hymn, and motet, of the Romish service, with that artificial and elaborate music to which they were sung ; and adopted only that plain metrical psalmody, which is now in general use among the reformed churches, and in all the parish churches of Scotland. For this purpose he used Marot's version of the Psalms, and employed a musician to set them to easy tunes only of one part. In 1553 he divided the Psalms into small portions, and appointed them to be sung in churches. Soon after they were bound up with the Geneva catechism ; from which time the Catholics were forbid the use of them, under a severe penalty. Soon after the Reformation in England, complaints were made by many of the dignified clergy and others of the intricacy and

difficulty of the church music of those times : in consequence of which it was once proposed tha organs and curious singing should be removed from the English churches. Latimer, in his diocese of Worcester, went still farther, and issued injunctions to the prior and convent of St. Mary, forbidding in their service all manner of singing. In the reign of Edward VI. a commission was granted to eight bishops, eight divines, eight civilians, and eight common lawyers, to compile a body of ecclesiastical laws to be observed throughout the realm. The result was a work first published by Fox the martyrologist, in 1571, and afterwards in 1640, under the title of Reformatio Legum Ecclesiasticarum. These thirty-two commissioners, instead of reprobating church music, merely condemned figurative and operose music, or that kind of singing which abounded with fugues, responsive passages, and a commixture of various and intricate proportions; which is by musicians termed descant. However, notwithstanding the objections against choral music, the compilers of the English liturgy in 1548, and the king himself, determined to re-tain musical service. Accordingly, the stat. 2 and 3, Edward VI. c. 1, clearly recognises the practice of singing; and in 1550 a formula was composed, which continues with little variation, to be the rule for choral service at this day. The author of this work was John Marbecke, or Marbeike : and it was printed by Richard Graf-ton, in 1550, under the title of the Book of Com-mon Prayer, noted. Queen Mary labored to re-establish the Roman choral service; but the accession of Elizabeth was followed by the act of uniformity; in consequence of which, and of the queen's injunctions, the Book of Common Prayer, noted by Marbecke, was considered as the general formula of choral service, fn 1560 another musical service, with some additions and improvements, was printed by John Day ; and in 1565 another collection of offices, with musical notes. Many objections were urged by Cart-wright and other Puritans, against the form and manner of cathedral service, to which Hooker replied in his Ecclesiastical Polity. In 1654 the statutes of Edward VI. and Elizabeth for uniformity in the Common Prayer were repealed ; and the Directory for Public Worship, which allows only of the singing of-psalms, established. But upon the restoration of Charles II. choral service was revived, and has since uniformly continued. See Hawkins's History of Music, vol. i. p. 404, vol. ii. p. 264, vol. iii. p. 58—468, &c , vol. iv. p. 44 — 347.

R’VILE, adj. -\ Fi I’VILELY, adv. tlis. ˆVILENESS, n. s. fent; IVIL’ITY. J and

Fr. servil ; Lat. servi-Slavish ; depend-mean : the adverb noun - substantive

SER’VILE, adj. SER’VILELY, SER’VILENESS, SERVII/I corresponding. ,

The most servile flattery is lodged the most easily in the grossest capacity ; for their ordinary conceit draweth a yielding to their greaters, and then have they not wit to discern the right degrees of duty.

Sidney.

Fight and die, is death destroying death ; Wliere fearing dying, pays death servile breath.

Sfuikspeare.

To be queen in bondage is more vile Than is a slave in base servility ; For princes should be free. Id. Henry VL

From imposition of strict laws to free Acceptance of large grace, from servile fear To filial. Milton.

T’ each changing news they changed affections

bring, And servilely from fate expect a king.

Dry den’s Aurengzehe.

What, besides this unhappy servility to custom, can possibly reconcile men, that own Christianity, to a practice widely distant from it 1

Government of the Tongue. Even fortune rules no more a servile land, Where exil’d tyrants still by turns command.

Pope.

He affects a singularity in his actions and thoughts, rather than servilely to copy from the wisest. Swift.

She must bend the servile knee, And fawning take the splendid robber's boon.

Thomson.

The angelˆ and daemons, those by their subservi-ency, and these by the servility of their obedience, manifestly declared Christ and his apostles to be vested with an authority derived from their Lord.

West.

SERVILIA, a sister of the celebrated Cato of Utica, who was deeply enamoured of Julius Caesar, though her brother was one of his most inveterate enemies. One day she sent Caesar a letter full of the most tender expressions of affection. This epistle was delivered to Caesar in the senate-house, while the senate were debating about the punishing of Catiline's associates. Cato, supposing that the letter was from one of the conspirators, insisted on its being publicly read. Upon this Caesar gave it to Cato, who, having read it, returned it, saying, ' Take it, Drunkard !' From his connexion with Servilia, Caesar is generally belie red to have been the fa-ther of the famous patriot, Marcus Brutus, whose parricidal hand, in spite of numberless favors bestowed on him by Caesar, was joined with those of the other conspirators in Caesar's murder. This seems to be confirmed by Caesar's dying words : ' Et tu, mi fili, Brute !' See ROME.

SERVILIUS (Ahala), a celebrated Roman, whom the dictator Cincinnatus appointed his master of horse, and who slew Maelius for refusing to obey the dictator's summons. For this he was banished, but was soon recalled, and was afterwards raised to the dictatorship.

SERVILIUS (Nonianus), a Latin historian, who flourished under Nero, and wrote a History of Rome, which is lost.

SERVITES, a religious order in the church of Rome, founded about 1233, by seven Florentine merchants, who, with the approbation of the bishop of Florence, renounced the world, and lived together in a religious community on Mount Senar, two leagues from that city.

SER'VITOR, n.s. Fr. serviteur. Servant; attendant. Obsolete.

This workman, whose servitor nature is, being only one, the heathens imagining to be more, gave him in the sk) the name of Jupiter; in the

air of Juno ; in the water of Neptune ; in the earth of Vesta and Ceres. #""*' ' •

Thus are poor servitors, When others sleep upon their quiet beds, Constrained to watch in darkness, rain, and cold.

Shakspeare.

My noble queen, let former grudges pass, And henceforth I am thy true servitor.

Id. Henry VI.

Our Norman conqueror gave away to his tei-vitors the lands and possessions of such as did oppose his invasion. Dames.

His learning is much of a size with his birth and education ; no more of either than what a poor hungry tervitor can be expected to bring with him from his college. >•• Swift.

SERVITOR, in the university of Oxford, a student who attends on another for his maintenance and learning. See SIZAR.

SERVITUDE, the condition of a servant, or rather slave. On the declension of the Roman empire, a new kind of servitude was introduced, different from that of the ancient Romans; it consisted in leaving the lands of subjugated nations to the first owners, upon condition of certain rents, and servile offices, to be paid in acknowledgment. Hence the names of servi censiti, ascriptitii, and addicti glebas ; some whereof were taxable at the reasonable discretion of the lord ; others at a certain rate agreed on ; and others were mainmortable, who, having no legitimate children, could not make a will to above the value of 5d., the lord being heir to all the

rest ; and others were prohibited marrying, or going to live out of the lordship. Most of these servitudes existed in France till the Revolution ; but they were long ago abolished in England. Such, however, was the original of our tenures, &c. See SLAVE.

SERVIUS GALBA. See GALBA and ROME.

SERVIUS MAURUS HONORATUS, a celebrated grammarian and critic of antiquity, who flourished about the time of Arcadius and Honorius ; now-»chiefly known by his Commentaries on Virgil. There is also extant his work upon the feet of verses and the quantity of syllables, called Centimetrum.

SERVIUS TUI.LIUS, the sixth and best king of Rome. See ROME.

SE'RUM, n.s. Lat. serum. The thin and watery part that separates from the rest in any liquor : particularly the part of the blood which in coagulation separates from the grume.

Blood is the most universal juice in an animal body : the red part of it differs from the serum, the tervm from the lymph, the lymph from the nervous juice, and that from the several other humours separated in the glands. Arbuthnot.

SERUM is a thin, transparent, saltish liquor, which makes a considerable part of the mass of blood. See ANATOMY and BLOOD.

The chemical properties and phenomena of serum are thus enumerated by Dr. Thomson, in his System of Chemistry: — 'The serum is of a light greenish yellow color ; it has the taste, smell, and feel of the blood, but its consistence is not so great. Its mean specific gravity is about 1-0287. It converts syrup of violets to a green, and therefore contains an alkali. On examination, Ilouelle found that it owes this property to a portion of soda. When heated to the tem-ire of 156°, the serum coagulates, ns Har-

vey first discovered. It coagulates also when boiling water is mixed with it; but, if serum be mixed with six parts of cold water, it does not coagulate by heat. When thus coagulated, it has a greyish white color, and is not unlike the boiled white of an egg. If the coagulum be cut into small pieces, a muddy fluid may be squeezed from it, which has been termed the serosity. After the separation of this fluid, if the residuum be carefully washed in boiling water and examined, it will be found to possess all the properties of albumen. The serum therefore

contains a considerable proportion of albumen. Hence its coagulation by heat, and the other phenomena, which albumen usually exhibits. If serum be diluted with six times its quantity of water, and then boiled to coagulate the albumen, the liquid which remains after the separation of the coagulum, if it be gently evaporated till it becomes concentrated, and then be allowed to cool, assumes the form of a jelly, as was first observed by D. Haen. Consequently it contains gelatine. If the coagulated serum be heated in a silver vessel, the surface of the silver becomes black, being converted into a sulphuret. Hence it is evident that it contains sulphur; and Proust has ascertained that it is combined with ammonia, in the state of hydrosulphuret. If serum be mixed with twice its weight of water, and after coagulation by heat, the albumen be separated by nitration, and the liquid be slowly evaporated till it is considerably concentrated, a number of crystals are deposited, when the liquid is left standing in a cool place. These crystals, first examined by Rouelle, consist of carbonate of soda, muriate of soda, phosphate of soda, and phosphate of lime. The soda exists in the blood in a caustic state, and seems to be combined with the gelatine and albumen. The carbonic acid combines with it during evaporation. Thus it appears that the serum of the blood contains albumen, gelatine, hydrosulphuret of ammonia, soda, muriate of soda, phosphate of soda, and phosphate of lime. These component parts account for the coagulation occasioned in the serum by acids and alcohol, and the precipitation produced by tin, acetite of lead, and other metallic salts.'

SESAMOIDEA OSSA, certain small bones somewhat resembling the seeds of sesamum, whence their name. They are placed at the un-der part of the bones of the last joints of the fingers and toes.

SESAMUM, oily grain, in botany, a genus of plants belonging to the class of didynamia, and to the order of angiospermia ; natural order twentieth, luridae : CAL. divided into five parts : COR. campanulated, the tube of which is nearly the length of the calyx : the throat is inflated, and very large ; the border is divided into five parts, four of which are spreading and nearly equal ; the fifth is the lowest and largest. There are four filaments, and the rudiments of a fifth. The stigma is lanceolated : CAPS, has four cells. There are only two species, viz : — 1. S. Indicum, with trifid lower leaves, grows naturally in India: this is an annual plant ; the stalk rises taller tlran that of the orientale ; the lower leaves are cut Mito three part? which is the only difference

SES

between them. 2. S. orientale, has ovate, ob-part of the late Piedmontese, waters the ci-long, entire leaves. It is an annual, and grows devant lordship of Vercelli, and gives it its present

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naturally on the coast of Malabar, and in the island of Ceylon ; rising with an herbaceous four cornered stalk, two feet high, sending out a few short side branches ; the leaves are oblong, oval, a little hairy, and stand opposite. The flowers terminate the stalks in loose spikes ; they are small, of a dirty white color, shaped somewhat like those of the fox-glove. After the flowers are past, the germen turns to an oval acute-pointed capsule with four cells, filled with oval compressed seeds, which ripen in autumn. It is often cultivated in all the eastern countries, and also in Africa, as a pulse ; and of late years the seeds have been introduced into Carolina by the African negroes, where they succeed extremely well. The inhabitants of that country make an oil from the seed, which will keep good many years, without having any rancid smell or taste, but in two years become qxiite mild ; so that when the warm taste of the seed, which is in th’e oil when first drawn, is worn off, they use it as a salad oil, and for all the purposes of sweet oil. The seeds of this plant are also used by the negroes for food ; which seeds they parch over the fire, and then mix them with water, and stew other ingredients with them, which makes an hearty food. Sometimes a sort of pudding is made of these seeds, in the same manner as with millet or rice, and is by some persons esteemed, but is rarely used for these purposes in Europe. This is called benny or bonny in Carolina. In England these plants are preserved in botanic gardens as curiosities. Their seeeds must be sown in the spring upon a hot -bed ; and, when the plants are come up, they must be transplanted into a fresh hot-bed to bring them forward.

name ; and falls into the Po, a little below Casal.

SF.SIA, or SF.ZIA, a department of the French empire, one of the six into which the ci-devant principalities of Piedmont, Montferrat, &c , were divided on the ilth of September 1802. It comprehends the late lordship of Vercelli, and some adjacent districts. Vercelli is the capital.

SESOSTRIS, king of Egypt. See EGYPT. ETHIOPIA, and SHISHAK. Besides being a great conqueror, some say he taught the Egyptians astronomy. See ASTRONOMY.

SESQUI, a Latin particle, signifying a whole and a half; which, joined with altera, terza, quarta, &c., is much used in the Italian music to express a kind of ratios, particularly several species of triples.

SESQUIALTER, adj. i Fr. sequialtere ,

SESQUIAL'TERAL.] Lat. sesquialter. In

geometry, a ratio where one quantity or number contains another once and a half as much more, as tj and 9.

As the six primary planets revolve about the sun, so the secondary ones are moved abor.t them, in the same sesquialteral proportion of their periodical motions to their orbs. Bentley.

In all the revolutions of the planets about the sun, and of the secondary planets about the primary ones, the periodical times are in a sesquialter proportion to the mean distance. Cheyne.

SESQUIALTERAL, or SESQUIALTERATE, in geometry and arithmetic : e. g. 6 and 9 are in a ses-qui-alterate-ratio ; since 9 contains 6 once, and 3, which is half of 6, over ; and 20 and 30 are in the same; as 30 contain 20, and half 20 or 10.

SESQUI-DUPLICATE ratio is when ot two

After they have acquired a tolerable degree of terms the greater contains the less twice, and

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strength, they should be planted into pots, and plunged into another hot-bed, managing them as has been directed for amaranths ; for, if these plants are not thus brought forward in the for-mer part of the summer, they will not produce good seeds in this country. From 9 Ibs.

of this seed which came from Carolina, there were upwards of two quarts of oil drawn, which is as great a quantity as has been obtained from any vegetable whatever. This might occasion its being-called the oily grain.

half the less remains ; as 15 and 6 ; 50 and 20.

SESQUIP'EDAL, adj. \ Lat. sesquipedalis.

SESQUIPEDA'LIAN. i Containing a foot and a half.

As for my own part, I am but a sesquipedal, having only six foot and a half of stature.

Addiion's Guardian.

Hast thou ever measured the gigantic Ethiopian, whose stature is above eight cubits high, or the sesquipedalian pigmy 7 Arbuthnot and Pope.

SESQUIP'LICATE, adj. From sesqui and

SESELI, meadow saxifrage, or hartwort of pHcatUs. In mathematics. The proportion one Marseilles, in botany, a genus of plants belong- quantity or number has to another, in the ratio ing to the class of pentandria, and to the order of one naif of digynia ; natural order forty-fifth, umbellatas. The umbels are globular ; the involucrum consists of one or two leaflets ; the fruit is egg-shaped and streaked. There are eleven_species.

The periodical times of the planets are in sesqvi-plicate proportion, and not a duplicate proportion of the distances from the center of the radii ; and con-

sequently the planets cannot be carried about by an

viz:— S. ammoides; 2. Annuum ; 3. El'atum ; harmonically circulating 4. Glaucum ; 5. Hyppomarathrum ; 6. Montanum ; 7. Pimpinelloides ; 8. Pyrenaeum ; 9. Saxifragum; 10. Tortuosum ; and, ll.Turbi-thum. Of

these, 1. S. ammoides grows in the

Cheyne's Philosophical Principles. SESS, n. s. For assess, cess, or cense. Rate ; cess charged ; tax.

His army was so ill paid and governed, as the -,0-lkh suffered more damage by the sess of his

south' of Europe; 2. S. glaucum is a native of English suffered more damage by theses of his Fran™- a. S Wnnnmarathrum. of Austria : 4. soldiers, than they gamed profit or security by

France ; 3. S. hyppomarathrum, of Austria ; 4 S. niontanum, of France and Italy; 5, S. tortuo-south of Europe.

empire, which rises in the Alps, on the borders of the ci-devant province ofValais, runs through

abating the pride of their enemies.

Davies's History of Ireland.

SES'SION, ra. s. Fr. act of sitting; emphati sitting of magistrates, or public

hence

the time during which such an assembly continues to sit.

He hath as man, not as God only, a supreme dominion over quick and dead ; for so much his ascension into heaven, and his teuton at the right hand of God, do import. Hooker.

They are ready to appear Where you shall hold your seuion.

Shakspeare. King Lear.

Summon a session, that we may arraign Our most disloyal lady. Shakspeare.

The old man, mindful still of moan, Weeping, thus bespake the tetsion.

Chapman's Odystey.

Many, though they concede a table -gesture, will hardly allow this usual way of session.

Browne'i Vulgar Errours.

It was contrary to the course of parliament that any bill that had been rejected should be again preferred the same session. Clarendon.

Of this session ended they bid cry The great result. Milton.

The second Nicene council affords us plentiful assistance in the first session, wherein the pope's vicar declares that Meletius was ordained by Arian bishops, and yet his ordination was never questioned.

Stillingfleet.

Many decrees are enacted, which at the next tession are repealed. Norris.

Called to council all the Achaian states, Nor herald sworn the sesiion to proclaim.

Pope's Odyssey.

SESSION, KIRK, the lowest ecclesiastical court in Scotland. See KIRK

SESSION. A kirkses- sion, when regularly constituted, must always consist of the minister, elder, session-clerk, and kirk-treasurer. None of these ever receive any salary except the session-clerk, who is usually ihe schoolmaster of the parish, and has a small salary allowed for minuting the transactions. The kirk -treasurer is for the most part one of the elders ; and he is an important member of this court. Without his intervention no distribution of the poor's funds is deemed legal ; nor can any payments be made, receipts granted, or money transferred, but by him ; the minister and session being personally liable to make good all money that may otherwise be given away, should it ever afterwards be challenged by any heritor in the parish.

SESSION OF PARLIAMENT, the time from its meeting to its prorogation. See PARLIAMENT.

SESSIONS for weights and measures. In Lon-don, four justices from among the mayor, recorder, and aldermen (of whom the mayor or recorder is to be one), may hold a session to enquire into the offences of selling by false weights and measures, contrary to the statutes ; and to receive indictments, punish offenders, &c. Char, king Charles I.

SESSIONS, QUARTER, or COURT OF QUARTER SESSIONS, an English court that must be held in every county once in every quarter of a year : which, by stat 2 Hen. V. c. 4, is appointed to be in the first week after Michaelmas day, the first week after the epiphany, the first week after the close of Easter, and in the week after the translation of St. Thomas the martyr, or the 7th of July. It is held before two or more justices of the peace, one of which must be of the quo-rum. The jurisdiction of this court, by 34 Kdw.

HI. c. 1, extends to the trying and determining all felonies and trespasses whatsoever : though they seldom, if ever, try any greater offence than small felonies within the benefit of clergy ; their commission providing, that if any case of difficulty arises, they shall not proceed to judgment, but in the presence of one of the justices of the courts of king's bench or common pleas, or one of the judges of assize : and therefore murders, and other capital felonies, are usually remitted for a more solemn trial to the assizes. Neither can they try any new-created offence, without express power given them by the statute which creates it. But there are many offences and particular matters which, by particular statutes, belong properly to this jurisdiction, and ought to be prosecuted in this court; as, the smaller misdemeanors against the public, not amounting to felony ; and

especially offences relating to the game, highways, alehouses, bastard children, the settlement and provision for the poor, vagrants, servants' wages, and Popish recusants. Some of these are proceeded upon by indictment; others in a summary way, by motion, and order thereupon ; which order may for the most part, unless guarded against by particular statutes, be removed into the court of king's bench by writ of certiorari facias, and be there either quashed or confirmed. The records or rolls of the sessions are committed to the custody of a special officer, styled custos rotulorum, who is always a justice of the quorum ; and among them of the quorum (saith Lambard) a man for the most part especially picked out, either for wisdom, countenance, or credit. The nomination of the custos rotulorum (who is the principal officer in the county, as the lord-lieutenant is chief in military command) is by the king's sign-manual ; and to him the nomination of the clerk of the peace belongs ; which office he is expressly forbidden to sell for money. In most corporate tpwns there are quarter sessions kept before justices of their own, within their respective limits ; which have exactly the same authority as the general quarter sessions of the county, except in a very few instances ; one of the most considerable of which is the matter of appeals from orders of removal of the poor, which, though they be from the orders of corporation justices, must be to the sessions of the county, by stat. 8 and 9 W. III. c. 30. In both corporations and counties at large there is sometimes kept a special or petty session, by a few justices, for despatching smaller business in the neighbourhood between the times of the general sessions ; as for licensing ale houses, passing the account of parish-officers, and the like.

SESSITES, in ancient geography, a river of Gallia Cisalpina, running into the Eridanus (Plin. iii. c. 16), now called Sesia.

SESTERCE, n.s. Fr. sesterce ; Lat. sestertium. Among the Romans, a sum of about £8 Is. b\d. sterling. See below.

Several of them would rather chuse a sura in tet-tercet, than in pounds sterling. Additon an Medals.

SESTERCE, SESTERTIUS, a silver coin, in use among the ancient Romans, called also simply nummus, and sometimes nummus sestertius. The sestertius was the fourth part of the den%

rius, and originally contained two asses and a half. It was at first denoted by LLS ; the two L's signifying two librae, and the S half. But the librarii, afterwards converting the two L's into an H, expressed the sestertius by HS. The word sestertius was first introduced by way of abbreviation for semistertius, which signifies two, and a half of a third, or, literally, only half a third ; for, in expressing half a third, it was understood that there were two before. Some authors make two kinds of sesterces; the less called sestertius, in the masculine gender ; and the great one, called sestertium, in the neuter : the first, that we have already described ; the latter containing 1000 of the other. Others will have any such distinction of great and little sesterces unknown to the Romans : sestertius, say they, was an adjective, and signified as sestertius, or two asses and a half; and when used in the plural, as in quinquaginta sestertium, or sestertia, it was only by way of abbreviation, and there was always understood centena, millia, &c. This matter has been accurately stated by Mr. Raper, in the following manner: — The substantive to which sestertius referred is either as, or pon-dus; and sestertius as is two asses and a half; sestertium pondus, two pondera and a half, or 250 denarii. When the denarius passed for ten asses, the sestertius of two asses and a half was a quarter of it ; and the Romans continued to keep their accounts in these sesterces long after the denarius passed for sixteen asses; till, growing rich, they found it more convenient to reckon by quarters of the denarius, which they called nummi, and used the words nummus and sestertius indifferently, as synonymous terms, and sometimes both together, as sestertius num-mus ; in which case the word sestertius, having lost its original signification, was used as a substantive; for sestertius nummus was not two nummi and a half, but a single nummus of four asses. They called any sum under 2000 sesterces so many sestertii, in the masculine gender ; 2000 sesterces they called duo, or bina sestertia, in the neuter; so many quarters making 500 denarii, which was twice the sestertium ; and they said dena, vicena, &c.? sestertia, till the sum amounted to 1000 sestertia, which was 1,000,000 of sesterces. But, to avoid ambiguity, they did not use the neuter sestertium in the singular number, when the whole sum amounted to no more than 1000

sesterces, or one sestertium. They called 1,000,000 of sesterces decies minimum, or decies sestertium, for decies-centena millia nummorum, or sestertiorum (in the masculine gender), omitting centena millia for the sake of brevity. They likewise called the same sum decies sestertium (in the neuter gender) for decies centies sestertium, omitting centies for the same reason ; or simply decies, omitting centena millia sestertium, or centies sestertium ; and with the numeral adverbs decies, vicies, centies, millies, and the like, either centena, millia, or centenies, was always understood. These were their most usual forms of expression ; though for bina, dena, vicena, sestertia, they frequently said bina, dena, vicena millia nummum. If the consular denarius contained sixty troy grains of fine silver, it was worth somewhat

more than eight pence farthing and a half sterling ; and the as, of sixteen to the denarius, a little more than a halfpenny. To reduce the ancient sesterces of two asses and a half, when the denarius passed for sixteen, to pounds sterling, multiply the given number by 5454, and cut off six figures on the right hand for decimals. To reduce nummi-sestertii, or quarters of the denarius, to pounds sterling; if the given sum be consular money, multiply it by 8727, and cut off six figures on the right hand for decimals ; but for imperial money diminish the same product by one-eighth of itself. — Philosophical Transactions, vol. Ixi. part ii. art. 48. To be qualified for a Roman knight an estate of 400,000 sesterces was required ; and for a senator, of

800,000.

SESTERCE, or SESTERTIUS, was also used by the ancients for a .thing containing two wholes and a half of another, as as was taken for any whole or integer.

SESTERCE, COPPER, was worth about one-third of a penny English.

SESU VII, an ancient nation of Gallia Celtica. CZES. de Bello Gall.

SESUVIUM, in botany, a genus of the icosandria class and tryginia order of plants: CAL. colored and divided into five parts ; there are no petals: CAPS, egg-shaped, three celled, opening horizontally about the middle, and containing many seeds. There is only one species. S. portulacastrum, purslane-leaved sesuvium, which, is a native of the West Indies.

SET, v. a. & v. n., part. adj. & n. s. “) Sax. j-e- SET’TER, n. s. > tan; Goth.

SET’TING-DOG. j seta ; Belg.

setten ; perhaps of Lat. sedeo. To place ; put ; fix ; plant ; adjust ; regulate ; value ; adapt ; set to music ; variegate ; intersperse with any thing ; re-fix in a natural state ; determine ; predeter-mine ; appoint ; exhibit ; display (taking before). This verb takes in composition almost all the prepositions after it; and the extracts below seem sufficient to illustrate their meaning : as a verb neuter to set means to be fixed ; put one’s self into a particular state, as of removal, commencement of a journey, &c. ; applying one’s self; plant : and in respect to the heavenly bodies, to fall below the horizon : hence to be extinguished or darkened, applied both to the eyes and in a general metaphorical sense : the verb neuter also takes after it various prepositions. See below. Set, as an adjective, means fixed ; regular ; according to rule : as a noun substantive, a fixed number or order of things ; something planted, not sown ; the apparent fall of a heavenly body below the horizon ; a wager at dice ; a game : a setter is applied generally, and particularly to a man who acts as a setting-dog at game, or as one taught to find game and point it out to the sportsman.

God set them in the firmament, to give light upon the earth. Gen. i. 17.

The sun was set. Id. xxviii. 11.

Every sabbath ye shall set it in order.

Lev. xxiv. 8

Unto thy brother thou shah not lend upon usury, that the Lord may bless thee in all that thou settest thine hand to. ‘ Deuteronomy.

Ahijah could not see ; ‘for his eyes were set, by reason of his age. 1 Kings xiv. 4.

Thou shall pour out into all those vessels, and set aside that which is full. 2 Kings iv. 4.

It pleased the king to send me, and I s-t him a time. Neh. ii.

Am I a sea, or a whale, that thou set test a watch over me 1 Job vii. 12.

He setteih an end to darkness, and searcheth out all perfection. Id. xxviii. 3.

They that are younger than I have me in derision, whose fathers I would have disdained to have set with the dogs of my flock. Id. xxx. 1.

The proud have laid a snare for me, they have set gins. Psalms.

Because sentence against an evil work is not executed speedily, the heart of men is fully set in them to do evil. Eccl.

There is not a more wicked thing than a covetous man ; for such an one seiteth his own soul to sale.

Ecclus. x. 9.

I will set mine eyes upon them for good, and bring them again to this land. Jer. xxiv. 6.

The fathers have eaten a sour grape, and the childrens* teeth are set on edge. Id. xxxi. 29.

I am come to set a man at variance against his father. Matthew.

He seemeth to be a setter forth of strange gods.

Acts xvii.

Set your affections on things above, not on things on the earth. Col. iii. 2.

When he was gone I cast this book away : I could not look upon it but with weeping eyes, in remembering him who was the only setter on to do it.

Ascham.

They thought the very disturbance ot tilings established an hire sufficient to set them on work.

Hooker.

We may still doubt whether the Lord, m such indifferent ceremonies as those whereof we dispute, did frame his people of set purpose unto an utter dis-similitude with Egyptians, or with any other nation.

Id.

After it was framed, and ready to be set together, he was, with infinite labour and charge, carried by land with camels through that hot and sandy country.

Knolles.

He would not perform that service by the hazard of one set battle, but by dallying off the time. Id.

Ere I could

Give him that parting kiss which I had set Betwixt two charming words, comes in my father.

Shakspeare.

That man that sits within a monarch's heart, Would he abuse the countenance of the king, Alack, what mischiefs might he set abroach ! Id.

This present enterprise set off his head, I do not think a braver gentleman Is now alive. Id. Henry IV.

Can honour set to a leg ? no : or an arm ? no : honour hath no skill in surgery then 1 no.

Shakspeare. Henry IV. Be you contented

To have a son set your decrees at nought, To pluck down justice from your awful bench ?

Shakspeare.

Who sets me else ? I'll throw at all.

Id. Richard II.

Will you set your wit to a fool's 1 Shakspeare.

That I might sing it, madam, to a tune, Give me a note : your ladyship can set, — As little by such toys as may be possible. Id. On Wednesday next, Harry, thou shall tet forward, On Thursday we ourselves will march. Id.

If they set down before 's, 'fore they remove Bring up your army. Id.

Rude am I in my speech, And little blessed with the set phrase of peace.

Id. Othello.

Shameless Warwick, peace ! Proud setter up and puller down of kings !

Id. Henry VI.

The weary sun hath made a golden set ; And, by the bright Irack of his fiery car, Gives signal of a goodly day lo-morrow.

Id. Richard III.

Have I not here the best cards for the game, To win this easy malch play'd for a crown 1 And shall I now give o'er the yielded set ?

Shakspeare.

The shipping might be -set on work by fishing, by transportation from port to port. Bacon.

Whatsoever fruil uselh to be set upon a rool or a slip, if il be sown will degenerate.

Id. Natural History.

In studies, whatsoever a man commandeth upon himself, let him set hours for it ; but whatsoever is agreeable to his nature, let him take no care for any set times ; for his ihoughls will fly to it of themselves, so as ihe spaces of olher business or sludies will suffice. Bacon.

Through the variety of my reading, I set before ine many examples

both of ancienl and latter limes.

Id.

Grief he tames that fetters it in verse ; But when I have done so, Some man, his art or voice to show, Doth set and sing my pain ; And, by delighting many, frees again Grief, which verse did restiaiD. Donne.

Hereon the prompter falls to flat railing in the bilteresl terms ; which the gentleman, with a set gesture and countenance, still soberly related ; un-til the ordinary, driven at last inlo a mad rage, was fain to give over. L'ttreia.

In court they determine the king's good by his desires, which is a kind of setting the sun by the dial.

Suckling.

For using set and prescribed forms, there is no doubl but thai wholesome words, being known, are aplest to excite judicious and fervent affections.

King Charles.

Considering what an orderly life I had led, I only commanded thai my arm and leg should be set, and my body anointed wilh oil. Herbert.

If he sets induslriously and sincerely to perform the commands of Christ, he can have no ground of doubting but it shall prove successful to him.

Hammond.

That this may be done with the more advantage, some hours must be set apart for this examination.

Duppa.

When we are well, our hearts are set, Which way we care not, to be rich or great.

Denham.

Though *et form of prayer be an abomination, Set forms of petitions find great approbation. Id.

By his aid aspiring To set himself in glory above his peers. Milton.

As with stars, their bodies all, And wings, were set with eyes. Id.

Set not thy heart

Thus overfoud on that which is not thine. Id.

His seed, when is not set, shall bruise my head.

Id,

Reject not then, what offered means : who knows But God hath set before us to return thee, Home lo ihy country and his sacred house ? Id. Whereas the setting of the pleiades and seven

stars is designed the term of autumn and the beginning of winter, unto some latitudes the stars do never get. Browne's Vulgar Errours.

In gard'ning ne'er this rule forget,

To sow dry, and set wet. Old Proverb.

Equal success had set these champions high, And both resolved to conquer or to die. Walle~.

Joy salutes me when I set My blest eyes on Atnoret. , Id.

Solomon did not deliver his observations at ran-dom, but methodised them, and set them in order, that they might appear in more strength and lustre. Henry, Eccles. xii. 9.

They that set light by their parents are in the highway to all wickedness. Id. Ezek. xxii. 7.

That fluid substance in a few minutes begins to set, as the tradesmen

speak ; that is, to exchange its fluidity for firmness. Boyle.

When I go a-hawking or setting, 1 think myself beholden to him that assures me, that in such a field there is a covey of partridges. Id.

Should we set our hearts only upon these things, and be able to'taste no pleasure but what is sensual, we must be extremely miserable when we come unto the other world, because we should meet with nothing to entertain ourselves. Tillotson.

All that can be done is to set the thing before men, and to offer it to their choice. Id.

Therefore, setting aride all other considerations, I will endeavour to know the truth, and yield to that.

Id.

Credit is gained by course of time, and seldom recovers a strain ; but, if broken, is never well set again. Temple.

She sets the bar that causes all my pain ; One gift refused, makes all their bounty vain.

Dry den.

The fire was formed, she sets the kettle on. Id.

Set calf betimes to school, and let him be Instructed there in rules of husbandry. Id.

Over-laboured with so long a course, 'Tis time to set at ease the smoking horse. Id.

Jove call'd in haste The son of Maia, with severe decree, To kill the keeper, and to set her free. Id.

Set thy own songs, and sing them to thy lute. Id.

High on their heads, with jewels richly set, Each lady wore a radiant coronet. Id.

He remembers only the name of Conon, and forgets the other, on set purpose, to shew his country swain was no greater scholar. Id.

Long has my soul desired this time and place, To set before your sight your glorious race. Id.

With what'er gall thou sett'st thyself to write, Thy inoffensive satires never bite. Id.

Ccenus has betray'd

The bitter truths that our loose court upbraid : Your friend was set upon you 'for a spy, And on his witness you are doomed to die. Id.

Now the latter watch of wasting night, And setting stars, to kindly rest invite.

Dry den, Mntid. My eyes no object meet But distant skies that in the ocean set.

Id. Indian Emperor.

The faithless pirate soon will set to sea, And bear the royal virgin far away. Dryden.

In ten set battles have we driven back These heathen Saxons, and regained our earth. Id.

That was but civil war, an equal set, Where piles with piles, and eagles eagv.es fight. Id.

Some are reclaimed by punishment, and some are let right by good nature. L'Estrange.

Our hearts are so much set upon the value of the benefits received, that we never think of thebestower.

id.

When the father looks sour on the child, every body else should put on the same coldness, till forgiveness asked, and a reformation of his fault has set him right again, and restored him to his former credit. Locfe on Education.

If the fear of absolute and irresistible power set it on upon the mind, the idea is likely to sink the deeper. Locke.

Our palates grow into a liking of the seasoning and cookery which by custom they are set to. Id.

No sooner is one action dispatched, which we are set upon, but

another uneasiness is ready to set us on work. id.

That law cannot keep men from taking more use than you set, the want of money being that alone which regulates its price, will appear, if we consider how hard it is to set a price upon unnecessary commodities ; but how impossible it is to set a rate upon victuals in a time of famine. Id.

Set him such a task, to be done in such a time.

Id.

He may learn to cut, polish, and set precious stones. Id.

‘Tis raised by sets or berries, like white thorn, and lies the same time in the ground.

Mortimer’s Husbandry.

God bears a different respect to places set apart and consecrated to his worship to what he bears to places designed to common uses. Snath.

Set places and set hours are but parts of that worship we owe. Id.

Another set of men are the devil’s setters, who continually beat their brains how to draw in some innocent unguarded heir into their hellish net, learning his humour, prying into his circumstances, and observing his weak side. Id.

I had one day set the hundredth psalm, and was singing the first line, in order to put the congregation into the tune. Spectator

Have I not set at nought my noble birth, A spotless fame, and an unblemished race, The peace of innocence, and pride of virtue ? My prodigality has given thee all.

Howe’s Jane Shore,

Struck with the sight, inanimate she seems, Set are her eyes, and motionless her limbs. Garth.

The Julian eagles here their wings display, And there like setting stars the Decii lay. Id

This river,

When nature’s self lay ready to expire, Quenched the dire flame that

set the world on fire.

Addison.

A couple of lovers agreed, at parting, to set aside one half hour in the day to think of each other. (.

The town of Bern has handsome fountains planted, at set distances, from one end of the streets to the other. Id.

Minds altogether set on trade and. profit often contract a certain narrowness of temper. Id.

I am much concerned when I see young gentlemen of fortune so wholly set upon pleasures, that they neglect all improvements in wisdom and knowledge

Id.

As in the subordinations of government the king is offended by any insults to an inferior magistrate, so the sovereign ruler of the universe is affronted by a breach of allegiance to those whom he has set over us. Id.

A spacious veil from his broad shoulders flew, That set the unhappy Phaeton to view : The flaming chariot and the steeds it shewed, And the whole fable in the mantle glowed. Id.

If we act by several broken views, and will not only be virtuous but wealthy, popular, and every thing that has a value set upon it by the world, we shall live and die in miserv. Id.

‘ Tis not a set of features or complexion,

The tincture of a skin, that I admire. Id.

Will obliges young heirs with a tetting dog he has made himself. Id.

When his fortune sets before him all The pomps and pleasures that his soul can wish, His rigid virtue will accept of none. Id. Cato.

What sad disorders play begets ! Desperate and mad, at length he sets Those darts, whose points make gods adore. Prior.

He rules the church's blest dominions, And tet* men's faith by his opinions. Id,

Against experience he believes, He argues against demonstration ;

Pleased when his reason he deceives, And tels his judgment by his passion. Id.

Sensations and passions seem to depend upon a particular set of motions. Collier.

Should a man go about, with never so set study and design, to describe such a natural form of the year as that which is at present established, he could scarcely ever do it in so few words that weie so fit. Woodward.

The body is smooth on that end, and on this it is set with ridges round the point. Id.

All corpuscles of the same set or kind agree in every thing. Id.

What we hear in conversation has this general advantage over set discourses, that in the latter we are apt to˚attend more to the beauty and elegance "of the composure than to the matter delivered. Eager*. Take tet times of meditating on what is future.

Atterbury.

Before set of sun that day I hope to reach my win-ter quarters. Id. to Pope.

The fracture was of both tlie focils of the left leg : he had been in great pain from the time of the setting.

Wiseman.

Their first movement and impressed motions de-mand the impulse of

an almighty hand to set them a-going. . Cheyne.

They refer to those critics who are partial to some particular tet of writers to the prejudice of others.

Pope.

Though the same sun, with all-diffusive rays, Blush in the rose and in the diamond blaze, We prize the stronger effort of his power, And always set the gem above the flower. Id.

That the wheels were but small, may be guessed from a custom they have of taking them off, and setting them on. Id.

He must change his comrades ; In half the time he talks them round, There must another set be found. Swift.

He supplies his not appearing in the present scene of action, by setting his character before us, and continually forcing his patience, prudence, and valour upon our observation. Broome.

Homer introduced that monstrous character to show the marvellous, and paint it in a new iet of cplors. Id.

Perhaps there is no man, nor set of men, upon earth, whose sentiments I entirely follow. Wattt.

Be frequent in setting such causes at work whose effects you desire to know. Id.

SET, or SETS, a term used by the farmers and gardeners to express the young plants of the white thorn and other shrubs, with which they use to raise their quick or quickset hedges. The white thorn is the best of all trees for this purpose ; and, under proper regulations, its sets seldom fail of answering the farmer's utmost expectations.

SET OFF, in law, is an act whereby the de-

fendant acknowledges the justice of the plaintiffs demand on the one hand, but on the other sets up a demand of his own, to counterbalance that of the plaintiff, either in the whole or in part; as, if the plaintiff sues for £10 due on a n(*e of hand, the defendant may set off £9 due to himself for merchandise sold to the plaintiff; and, in case he pleads such set off, must pay the remaining balance into court. This answers

very nearly to the compensatio or stoppage of the civil law, and depends upon the statutes 2 Geo. II. c. 22, and 8 Geo. II. c. 24.

SETABIS,an ancient town of Spain, between Carthage and Saguntum, near a river of the same name. Sil. Ital. 16, v. 474.

SETA'CEOUS, adj. Lat. seta. Bristly ; set with strong hairs ; consisting of strong hairs.

The parent insect, with its stiff setaceout tail, tere-brates the rib of the leaf when tender, and makes way for its egg into the very pith. Derham.

SETACEOUS WORM, in natural history, a name given by Dr. Lister to that long and slender water worm which so much resembles a horse-hair, that it has been supposed by the vulgar to. be an animated hair of that creature. These creatures, supposed to be living hairs, are a peculiar sort of insects, which are bred and nourished within the bodies of other insects, as worms of the ichneumon flies are in the bodies of the caterpillars. Aldrovand describes the creature, and tells us it was unknown to the ancients ; but called seta aquatica, and vermis setarius, by the moderns, either from its figure resembling that of a hair, or from a supposition of its once having been the hair of some animal. We generally suppose it, in the imaginary state of the hair, to have belonged to a horse ; but the Germans say it was once the hair of a calf, and call it by a name signifying vitulus aquaticus, the water calf. Albertus has declared that this ani-mal is generated of a hair ; and adds that any hair, thrown into standing water, will in a very little time obtain life and motion. Other authors have dissented from this opinion, and supposed them generated of the fibrous roots of water plants ; and others of the parts of grasshoppers fallen into the water. This last opinion is rejected by Aldrovand as the most improbable of all. Standing and foul waters are most plentifully stored with them ; but they are sometimes found in the clearest and purest springs, and sometimes out of the water, on the leaves of trees and plants, as on the fruit trees in our gardens, and the elms in hedges. They are from three to five inches long, of the thickness of a large hair ; and are brown upon the back, and white under the belly, and the tail white on every part.

SE-TCHOU, a city of China of the first rank, in the province of Koei-tchou, in a mountainous country, abounding with quicksilver and other minerals, 982 miles S. S. W. of Peking.

SE-TCHIN, or SE-TCHING, a city of China of the first rank, in the

province of Quang-si, 1100 miles S. S. W. of Peking.

SE-TCHUEN, a mountainous province on the western frontier of China, bounded on the north by Chen-si, on the east and south by TIou-quang and Yunan, and on the west bv Thibet.

T!iis province is traversed from west to east by i lie great river Yangtse-kiang, is highly fertile, and in a state of complete cultivation. It is j > articularly noted for its rhubarb, silk, sugar-cane, and orange and lemon trees. The mountains produce iron, tin, lead, loadstone, and lapis lazuli. It has a breed of small but handsome and swift horses, and abounds with the animal that produces musk. Among a variety of other birds is a species of hen, with wool like that of sheep. Salt is procured, by < evaporation, from wells among the mountains. The province contains ten cities of the first rank, eighty-eight of the second and third, and a great number of fortified places. Sir George Staunton states the population at 27,000,000.

SETEEF, a town of Algiers, the ancient Siti-pha, the capital of this part of Mauritania. The old city is now in a stale of complete ruin, presenting scarcely one fragment of the Roman walls or arts : but the fountains, which flow plentifully near the centre of the city, are still delightful. Fifty miles southwest of Constantina.

SETFOIL is a species of tormentilla.

SETH, a son of Adam, to whom he seems from the text (.Gen. v. 3) to have had a very striking resemblance, both in body and mind. By some Encyclopaedists, and even by the learned Dr. Watkins, he is erroneously styled the third son of Adam. It is astonishing that learned authors should pay so little attention to facts. The supposition is totally incredible; for Adam was 130 years old when Seth was born ;

and it is extremely imp-obable, that, after the divine blessing, ‘ increase and multiply,’ Eve should have remained barren for 126 years, the shortest period we can estimate from the birth of her second son Abel. Besides it is contrary to fact ; for the first murderer in his reply to his divine judge, after his sentence, expresses his fears that ‘ every one that findeth him should slay him’ (chap. iv. 14), which clearly proves that the world was become considerably populous before the birth of Seth. By Mr. Whiston’s calculation the descendants of Adam and Eve amounted at the birth of Seth to above 4000 persons. See ANTEDILUVIANS. From all that is said of the birth of Seth (Gen. iv. 25, and v. 3), we can only infer that Seth was the first son born by Eve aftter the murder of Abel. Had .Seth been only the third son of Adam there would have been no occasion for setting a mark upon Cain, to prevent others from avenging Abel’s death. Seth was the second of the antediluvian patriarchs, and the father of Enos. Chronologists place his birth in the year B. C. 3874. He lived 912 years. Some say he was a great astronomer. See ASTRONOMY, Index.

SETHIANS, in church-history, Christian heretics ; so called because they paid divine worship to Seth, whom they looked upon to be Jesus Christ, the Son of God, but who was made by a third divinity, and substituted in the room of the two families of Abel and Cain, which had been destroyed by the deluge. These heretics appeared in Egypt in the second century ; and, as they were addicted to all sorts of debauchery, they did nor *ant followers ; and continued in Egypt above 200 years.

SETHfTES, the descendants of Seth. See Dr. Doig’s account of them under PHILOLOGY.

S ETIION, an ancient king of Egypt, who was delivered from a formidable invasion by an immense multitude of rats. See EGYPT.

SET LA, an ancient town of Italy, in Latium, above the Pontine IVlarshes, famous for its wines, which Augustus preferred to all other. — Pliny xiv. c. 6.

SETINES, the modern name of Athens. SETONS, in surgery, are said to be very useful in catarrhs, inflammations, and other disorders, particularly those of the eyes, as a gutta serenna, cataract, and incipient suffusion ; to these we may add intense headachs, with stupidity, drowsiness, epilepsies, and even the apoplexy itself.

SETTEE, in ship-building, a vessel very common in the Mediterranean with one deck and a very long-and sharp prow. They carry some two masts, some three, without topmasts. They have generally two masts, equipped with triangular sails, commonly called lateen sails. The least of them are of sixty tons burden. They serve to transport cannon and provisions for ships of war and the like. These vessels are peculiar to the Mediterranean Sea, and are usually navigated by Italians, Greeks, or Mahometans.

SETTING, in the sea-language. To set the land or the sun by the compass is to observe how the land bears on any point of the compass, or on what point of the compass the sun is. Also, when two ships sai' in sight of one another, to mark on what point the chased bears, is termed setting the chase by the compass

SETTING, among sportsmen, a term used to express the manner of taking partridges by means of a dog peculiarly trained to that purpose. See SHOOTING.

SETTLE, n. s. Saxon, retol. A seat ; a bench ; something to sit on.

From the bottom to the lower tettle shall be two cubits. Ezek. xliii.

The man, their hearty welcome first exprest, A common settle drew for either guest, Inviting each his weary limbs to rest. Dryden.
SET'TLE, v. a. & v. n. } Sax. retol. Proba-SET'TLEDNESS, n. *. >bly, as Dr. Johnson SETTLEMENT. j suggests, from the

noun substantive above, or a frequentative of set. To fix; confirm; establish; compose; applied, both literally and metaphorically: as a verb neuter, to fix one's self; to subside; be-come fixed ; repose ; grow calm ; fix a contract : settledness means the state of being settled : settlement the act or place of settling, or arrangement made ; residence.

I will settle you after your old estates, and will do better unto you than at your beginnings.

Ezek. xxxvi.

Till the fury of his highness settle, Come not before him. Shakspeare. Winter's Taleˆ The wind came about and settled in the west, so as we could make no way. Bacon.

So do the winds and thunders cleanse the air, So working seas settle and purge the wine. Daviei.

What one party thought to rivet to a settiediitt* l»y the strength and influence of the Scots, that tlie other rejects and contemns. King Chailet.

When thou art settling thyself to thy devotions, imagine thou hearest thy Saviour calling to thee as he did to Martha, Why art thou so careful 1 Duppa.

In hope to find

Better abode, and my afflicted powers To settle here. • Milton.

Settled in his face I see Sad resolution. fd.

That country became a gained srround by the mud brought down by the Nilus, which settled by degrees into a firm land. Bruivne's Vulgar Errours.

Exalt your passion by directing and settling upon an object, the due contemplation of whose loveliness may cure perfectly all hurts received from mortal beauty. Boyle.

Every man living has a design in his head upon wealth, power, or settlement in the world.

L' Estrange.

My flocks, my fields, my woods, my pastures take, With tettlement as good as law can make. Dryden.

Your fury then boiled upward to a foam ; But, since this message came, you sink and settle, As if cold water had been poured upon you. Id.

His banished gods restored to rites divine, And settled sure succession in his line. Id. JEneid.

This exactness will be troublesome, and therefore men will think they may be excused from settling the complex ideas of mixed modes so precisely in their minds. Locke.

This, by a settled habit in things whereof we have frequent experience, is performed so quick that we take that for the perception of our sensation which is an idea formed by our judgment '.

One part being moist and the other dry occasions its settling more in one place than another, which causes cracks and settlings in the wall.

Mortimer's Husbandry.

Cover ant-hills up, that the_ rain may settle the turf before the spring. Id.

Fullers' earth left a thick settlement. Id.

According to laws established by the divine wis-dom, it was wrought by degrees from one form into another, till it settled at length into an habitable earth. Burnet.

When time hath worn out their natural vanity, and taught them discretion, their fondness settles on its proper object. Spectator.

Medals give a very great light to history, confirming such passages as are true in old authors and settling such as are told after different manners.

Addison.

He sighs with most success tha.t settla well. Garth. SETTLE, Elkanah, an English poet, was born in 1648. At the age of eighteen, he entered at Oxford, but quitted the university without taking a degree, and, going to London, commenced author by profession. He wrote numerous political pamphlets, and, in reply to Dryden's poem entitled the Medal, occasioned by the whig party striking a medal to commemorate the throwing out of the bill against the earl of Shaftesbury, a piece called the Medal Reversed ; and, soon after, a poem entitled Azaria and Hushai, designed as an answer to the Absalom and Achitophel. In 1685, he published a poem on the coronation of James II., and, about the same time, obtained a pension from the city, for writing an annual inauguration panegyric on lord

mayor's day. Settle was, besides, an indefatigable writer for the stage, and produced fifteen dramatic pieces, none of which are now known on the boards. In the decline of life, he received a salary from the proprietor of a

booth at Bartholomew fair, as a writer of " Drolls," which were generally very successful, and is said to have been, at that time, the best contriver of theatrical machinery in the kingdom. He died at the Charter-house, in 1724.

SETTLE, a market-town in the West Riding of Yorkshire, situate on the river Ribble, among the hills which separate the counties of York and Lancaster, sixty miles west by north from York, and 233 northwest by north from Lon-don. The town is irregularly built, at the base of a limestone rock which rises 300 feet above the level of the town, and the parish church is at Giggleswick, on the opposite side of the river, over which there is a stone bridge. The cotton mills here and in the vicinity employ a great number of the inhabitants. The market-place is spacious, and the market on Tuesday is well attended ; there is also a good market for cattle every fortnight. Fairs, Thursday before Good-Friday for cattle ; three fairs every other Friday thence till Whitsuntide, also for cattle ; April 26th for sheep ; Whit-Tuesday for woollen-cloth and pedlary; August 19th for leatner and cattle ; August 20th for sheep and wool ; the day following for woollen cloth and pedlary, and the first Tuesday after October 27th for cattle. In the neighbourhood are several vestiges of Ro-man fortifications, and on the top of an adjacent moor is Malham Tarn, "a lake abounding with trout. Near the town is a curious ebbing and flowing well; a square reservoir of stone, four feet by three, is placed over it, and in this trouuh the water rises and falls about a foot in ten or fifteen minutes.

SETTLEMENT, ACT OF, in British history, a name given to the statutes 12 and 13 W. III. c. 2., whereby the crown was limited to his present majesty's illustrious house ; and some new provisions were added, at the same fortunate era, for better securing our religion, laws, and liberties ; which the statute declares to be the birthright of the people of England, according to the ancient doctrine of the common law.

SETUAN, a province of China, bounded on the north by Chansi, east by Koei-tcheou and Yunnan, and west by Thibet. It is watered by the Yangtse-kiang ; and its divisions, productions, animals, minerals, &c., being the same with those of Se-tchuen, we suppose they are one and" the same. They are both represented as far from the seacoast. Setuan

abounds with stags, deer, partridges, parrots, &c., and a peculiar species of fowls which are covered with wool instead of feathers.

SETUBAL, or ST. UBES, a laree town of Portugal, at the mouth of the river Sado, sixteen miles S. S.E. of Lisbon. In the earthquake of 1755 it was almost entirely levelled, but soon rebuilt in a much better style, and the whole fortified with a mound, a citadel called San Felippe, &c. The streets are now paved, and the harbour and the quays broad and spacious. It contains five churches, eleven monasteries, a hospital and • arsenal. Its trade is active in the export of lemons, olives, oil, wine (particularly a species of muscadel), and, above all, in bay salt, of which no less than 200,000 tons are made annually. Population 12,000.

SEV

ill

SEV

Saxon j-eopon.

Four and three : sevenfold is repeated

(seven times : seven-

‘night, a week: the

other compounds

seem obvious in

their meaning.

SEVASTOPOL, a town of European Russia, in the Crimea, on a bay of the Euxine. This was one of the chief mercantile towns of the ancient Colchis : in modern times it has been known only as a petty Tartar

village, called Achtiar, which has been erected into a town by Russia. Its increase has since been rapid ; it has several good hospitals, docks and dockyards, barracks, an arsenal, a lazaretto, a large market-place, &c. The harbour is excellent, and is the station of part of the Russian fleet. The principal bay runs up between four and five miles into the land, is perfectly sheltered, and without a single shoal. Inhabitants 3000. Forty-two miles south of Eupatoria, and forty-two southwest of Simfe-ropol.

SEVEN, adj. SEV'ENFOLD, adj. & adv. SEV'ENNIGHT, n. s. SEV'ENSCORE, adj. SEV'ENTEEN, SEVENTEENTH, SEV'ENTH, SEV'ENTHLY, adv. SEV'ENTIETH, adj. SEV'ENTY.

Whosoever slayeth Cain, vengeance shall betaken on him sevenfold. Genesis iv. 15.

Of every clean beast thou shalt take to thee by sevens. Gtneris.

In the six hundredth year of Noah's life, the second month, the seventeenth day, were all the fountains of the great deep broken up. Id. vii. 11.

Rome was either more grateful to the beholders, or more noble in itself, than justs with the sword and lance, maintained for a sevennight together.

Sidney.

Let every man be master of his time 'Till sewn at night. Shakspeare. Macbeth.

The sevenfold shield of Ajax cannot keep The battery from my heart.

Id. Antony and Cleopatra. lago's footing here anticipates our thoughts A se'nnight's speed. Id. Othello.

Worthy Marcius,

Had we no quarrel else to Rome, but that Thou art thence banished, we would muster all, From twelve to seventy. Id. Coriolanui.

Upon this dreadful beast with sevenfold head He set the false Duessa, for more awe and dread.

Faerie Queene.

Pharmis, king of the Medes, it is said, he overthrew and cruelly

murdered, with his seven children.

Raleigh.

Shining woods, laid in a dry room, within a sevennight lost their shining. Bacon's Natural History.

The old countess of Desmond, who lived till she was sevenscore years old, did dentize twice or thrice ; casting her old teeth, and others coming in their place. Bacon.

The child born in the seventh month doth com-moaly well. Id.

Seventhly, living bodies have sense, which plants have not. Id.

Not for that silly old morality, That, as these links were knit, our loves should be, Mourn I, that I thy sevenfold chain have lost, Nor for the luck's sake, but the bitter cost. Donne.

We call not that death immature, if a man lives til) seventy. Taylor.

What if the breath that kindled those grim fires, Awaked, should blow them into sevenfold rage.

Milton .

Wrath meet thy flight sevenfold. Id.

The conquest of Ireland was perfected by the king in the seventeenth year of his reign.

Judge Hale.

So Pharaoh, or some greater king than he, Provided for the seventh necessity : Taught from above his magazines to frame; That famine was prevented ere it came. Dryden.

The weight of seventy winters prest him down, He bent beneath the burthen of a crown. 'id.

Fair queen,

Who swayest the sceptre of the Pharian isle, And sevenfold falls of disemboguing Nile. Id

In the Hebrew there is a particle consisting but of one single letter, of which there are reckoned up seventy several significations. Locke.

This comes from one of those untuckered ladies, whom you were so sharp upon on Monday was se'nnight. Addison.

SEVENOAKS, a town of England, in Kent, so named from seven large oaks, near which it was built, twenty-three miles and a half southeast from London. The town is well built, and consists chiefly of two wide streets, in one of which stands the ancient market-house in which the petty sessions for the lathe of Sutton-at-Hone are held. The church is a conspicuous object for many miles round the country. The town is governed by a warden, a bailiff, and four assistants. In it is a good free grammar-school, and an alms-house for thirty-two aged people, erected by Sir William Sevenoaks, who was a deserted child and was found in Seven-Oaks, and afterwards became lord mayor of London. At the end of the town is Knowle Park, the seat of the duke of Dorset. The building is quadrangular, and is a noble pile of architecture, covering, with its adjacent buildings, above five acres of land. The whole of the galleries and chambers are furnished with pictures, which are the best performances of most of the celebrated masters. Market on Saturday. Fairs, July 10th, and October 12th. The rectory is valued at £13 6s. 8d., and the vicarage at £15 3s. Id.

SEVENOAKS (Sir William), a fortunate foundling, born and exposed in the above town in the latter part of the fourteenth century. Having the good fortune to be taken care of, and educated by a benevolent citizen, whose name is not recorded, though it deserves to be eternized, he rose by his industry and merit to be lord mayor of London, and to be knighted, in 1418 In gratitude for the attention bestowed on his helpless infancy in the above town, he built a hospital in it for aged people, with a free school for children. Queen Elizabeth augmented its revenues, and it was rebuilt in 1727.

SEVER, v.a. & v.n.-\ Fr. sevrer ; barb.

SEV'ERAL, adj. & n. s. / Lat. severo, of Lat.

SEV'ERALLY, adv.

SEV'ERALTY, n. s.

SEV'ERANCE.

rate ; disjoin ; keep apart or distinct : make a separation ; suffer a separation : hence several means distinct ; differently from another ;

divers ; particular ; single ; appropriate : the adverb corresponding : severally is state of separation : severance, the act of separating ; partition.

The angels shall sever the wicked from among the just. Matthew.

separo. To divide ; part by violence ; force asunder; sepa-

More profit is quieter found Where pastures in several be, Of one silly aker of ground Than champion maketh of three

Ttuser't Husbandry.

They are not so far disjoined and severed, but that they come at length to meet. Hooker.

They had their tneral for heathen nations, their several for the people of their own nation, their several for men, their several for women, their teveral for their priests, and for the high priest alone their several. !<*•• Consider angels each of them severally in himself, and their law is. All ye his angels praise him. Id.

This by some teverals Of headpiece extraordinary, lower messes Perchance are to this business purblind. Shakspeare.

There was not time enough to hear The severals. Id.

Our force by land

Hath nobly held ; our tevered navy too Have knit again, and float.

Shakspeare. Antony and Cleopatra. This axiom is of large extent, and would be severed and refined by trial. Bacon.

There was a nobleman that was lean of visage, but immediately after his marriage he grew pretty plump and fat. One said to him, Your lordship doth contrary to other married men ; for they at first wax lean, and you wax fat. Sir Walter Raleigh stood by and said, There is no beast, that if you take him from the common, and put him into the several, but will wax fat. Id.

The jointure or advancement of the lady was the third part of the principality of Wales, the dukedom of Cornwall, ana the earldom of Chester, to be set forth in severally. Id.

The conquest of Ireland was made piece and piece, by several attempts, in teveral ages.

Daviei's History of Ireland. Having considered the apertions in severally, according to their particular requisites, I am now come to the casting and contexture of the whole work.

Wotton.

Those rivers inclose a neck of land, in regard of its fruitfulness not unworthy of a severance.

Carew's Survey of Cornwall. This country is large, having in it many people, and teveral kingdoms.

Abbot's Description of the World. That will appear to be a methodical successive observation of these severals, as degrees and steps preparative the one to the other.

Hammond's Fundamentals.

The night came and severed them, all parties being tired with the duty of the day. Clarendon.

What thou art is mine : Our state cannot be severed, we are one, One flesh ; to lose thee were to lose myself. Milton. This else to several spheres thou must ascribe.

Id.

Four teveral armies to the field are led, Which high in equal hopes four princes head.

Dry den.

He, with his guide, the farther fields attained ; Where, tevered from the rest, the warrior souls remained. Id. The' apostles could not be confin'd To these or those, but teverally design'd Their large commission round the world to blow.

Several of them neither arose from any conspicuous family, nor left any behind them.

A dditon't Freeholder. Others were so very small and close togethet , that

I could not keep my eye steady on them teverally, so as to number them. Newton's Opticks

Forgetful queen, who severed that bright head, Which charmed two mighty monarchs to her bed.

Granville.

Each might his several province well command, Would all but stoop to what they understand. Pope.

SEVER (St.), a considerable town of France, the chief place of an arrondissement in the department of the Landes. It is not a sea-port, but stands on the Adour, has 9000 inhabitants, and carries on a considerable trade in wine and brandy. Twenty-four miles east of Dax, and seventy-three south by east of Bourdeaux. Also a small town of France, in Normandy, department of Calvados, near the forest of St. Sever. Population 1500. Six miles west of Vire, and thirty-one southwest of Caen.

SEVERANCE, in law, is the singling or severing two or more that join or are joined in the same writ or action. As if two join in a writ, de libertate probanda, and the one be afterwards nonsuited ; here severance is permitted, so as, notwithstanding the nonsuit of the one, the other may severally proceed. There is also severance of the tenants in assize, when one, two, or more disseisees appear upon the writ, and not the other. And severance in debt, where two executors are named plaintiffs, and the one refuses to prosecute. We also meet with severance of summons, severance in attaints, &c. An estate in joint-tenancy may be severed and destroyed by destroying any of its unities. 1 . That of time, which respects only the original commencement of

the joint estate, cannot indeed, being now part, be affected by any subsequent transaction. But, 2. The joint tenants' estate may be destroyed without any alienation, by merely disuniting their possession. 3. The jointure may be destroyed, by destroying the unity of title. And, 4. By destroying the unity of interest.

SEVERE', adj. ~\ Fr. severe ; Lat. severus.

SEVERE'LY, adv. > Sharp; rigorous: hard; ri—

SEVER'ITY, n. s.) gid ; not lax : hence censorious : austere ; grave ; sober ; sedate : the adverb and noun substantive corresponding.

I laugh to see your ladyship so fond, To think that you have aught but Talbot's shadow Whereon to practise your severity. Shakspeare.

Never were so great rebellions expiated with so little blood ; as for the severity used upon those taken in Kent, it was but upon a scum of people.

Bacon.

Let your zeal, if it must be expressed in anger, be always more tevere against thyself than against others. Taylor.

Soon moved with touch of blame, thus Eve : What words have passed thy lips, Adam tevere ?

Milton.

Truth, wisdom, sanctitude, severe and pure, Severe, but in true filial freedom placed. Id.

These piercing fires are soft, as now severe. Id.

Though nature hath given insects sagacity to avoid the winter cold, yet its severity finds them out.

Halt's Origin of Mankind.

Your looks must alter, as your subject does, From kind to fierce, from wanton to tevere. Walter.

Their beauty I leave it rather to the delicate wit of poets, than venture upon so nice a subject with my severer style. Mcrt.~

What made the church of Alexandra be so severe

with Origen for, but holding the incense in his Lands, which those about him cast from thence upon the altar? yet for this he was cast out of the church.

Stillingfleet.

The Latin, a most severe and compendious language, often expresses that in one word, which modern tongues cannot in more. Dryden.

More formidable Hydra stands within ; Whose jaws with iron teeth severely grin Id.

Confining myself to the severity of truth, becoming, I must pass over many instances of your military skill. Id.

If a man would have his conscience deal clearly with him, he must deal severely with that.

South’s Sermons,

To be or fondly or severely kind. Savage.

There is a difference between an ecclesiastical censure and severity : for under a censure we only include excommunication, suspension, and an interdict ; but under an ecclesiastical severity every other punishment of the church is intended ; but, according to some, a censure and a severity are the same. Ayliffe.

Nor blame severe his choice, Warbling the Grecian woes. Pope’s Odyssey.

Taught by thy practice steadily to steer From grave to gay, from lively to severe. Pope.

We have wasted our strength to attain ends different from those for which we undertook the war ; and often to effect others, which after a peace we may severely repent. Swift.

SEVERINA (St.), a considerable town in the south part of Naples, in Calabria Ultra, situated on a rocky eminence neai the Neto. It is the see of an archbishop, and contains 6000 inhabitants. Eighteen miles south of Cosenza, and ninety-three northeast of Reggio.

SEVERN, a river of England and Wales, which rises in the mountain of Plynlirnmon, in Montgomery and Cardiganshires, and flows, first, across the south side of Montgomeryshire, then, turning northward, enters Salop, above the Brythen Hills, at its confluence with the Wirnew. In its course it flows by Welshpool, Shrewsbury, Bridgnorth, Worcester, Tewksbury, and Gloucester, and, entering the sea, its mouth, at its confluence with the Avon, ten miles below Bristol, is called the Bristol Channel. This river, by means of its numerous canals, extends its navigation to all the principal trading districts of the kingdom, being united with the Thames on the «vj't, and with the Trent, Mersey, and Humber, on tlie north.

SEVERUS (Alexander), an excellent Roman emperor. See ALEXANDER SEVK.RU?, and ROME.

SEVERUS (Lucius Cornelius j, an ancient Latin poet of the Augustan age; whose .ZEtna, together with a fragment De morte Ciceronis, were published, with notes and a prose interpretation, by Le Clerc, 12mo., Amsterdam, 1703. They were before inserted among the Catalecta Virgilii published byˆScaliger; whose notes, with others, Le Clerc has received among his own.

SEVERUS I. (Lucius Septimius), a Roman emperor, who has been so much admired for his military talents that some have called him the most warlike of the Roman emperors. As a monarch he was cruel ; and it has been observed that he never performed an act of humanity, or forgave a fault. In his diet he was temperate ; and he always showed himself an open enemy VOL. XX.

to pomp and splendor. He loved the appellation of a man of letters, and he even composed a History of his own reign, which some have praised for its correctness and veracity. However cruel Severus may appear in his punishments and in his revenge, many have endeavoured to exculpate him, and observed that there was need of

severity in an empire where the morals were so corrupted, and where no fewer than 3000 persons were accused of adultery during the space of seventeen years. Of him, as of Augustus, some say that it would have been better for the world he had never been born, or had never died. See ROME.

SEVERUS II. (Flavius Valerius), a shortlived emperor, who was raised to the purple by Ga-lerius ; but, being deserted by his soldiers when ready to engage Maxentius, he killed himself, A. D. 307. See ROME.

SEVERUS III., called also Olybius, another shortlived emperor, who was saluted Augustus at Ocavenna, on the death of Majorianus and Anthemius ; and his election was approved by the senate ; but he was soon after poisoned, A. D. 461. See ROME.

SEVERUS, in church history, a sectary of the second century, a follower of Tatian, and chief of the sect of the Severians. He flourished about A.D. 178.

SEVERUS (Sulpicius), a historian who flourished in the beginning of the fifth century, and by his writing acquired the title of the Christian Sallust. He was born at Aquitain, entered into orders, and built a church at Primuliacum. His principal work is Sacred History, which reaches from the Creation to A. D. 400.

SEVERUS'S WALL, in British topography, the fourth and last barrier erected by the Romans against the incursions of the North Britons. See ADRIAN and ANTONINUS'S WALLS. We learn from the Roman historians that the country between the walls of Adrian and Antoninus continued to be a scene of perpetual war and subject of contention between the Romans and Britons, from the beginning of the reign of Commodus (o the arrival of the emperor Septimius Severus in Britain, A.D. 206. This last emperor, having subdued the Maeatse and repulsed the Caledonians, determined to erect a stronger and more impenetrable barrier than any of the former against their future incursions. Though neither Dio nor Herodian makes any mention of a wall built by Severus in Britain for the protection of the Roman province, yet we have abundant evidence from other writers of equal authority that he really built such a wall. ' He fortified Britain,' says Spartian, 'with a wall drawn cross the island from sea to sea; which is the greatest glory of his reign. After the wall was finished, he retired to the next station, York, not only a conqueror, but the founder of an eternal peace.' To the same purpose Aurelius Victor and Oro-sius, to say nothing of Eutropius and Cassiodo-rus : < Having repelled the enemy in Britain, he fortified the country, which was suited to that

purpose, with a wall drawn cross the island from sea to sea.' ' Severus drew a great ditch, and built a strong wall, fortified with several turrets, from sea to sea, to protect that part of the islani1

which he had recovered from the yet unconquered nations.' As the residence of the emperor Severus in Britain was not quite four years, it is probable that the two last of them were employed in building ihis wall ; according to which account, it was begun A. I). 209, and finished A.D. 210. This wall of Severus was built nearly on the same tract with Adrian's rampart, at the distance only of a few paces north. The length of this wall, from Cousin's House, near the mouth of the Tyne on the east, to Boulness on the Solway Frith on the west, hath been found, from two actual mensurations, to be a little more than sixty-eight English miles, and a little less than seventy-four Roman miles. To the north of the wall was a broad and deep ditch, the original dimensions of which cannot now be ascertained, only it seems to have been larger than that of Adrian. The wall itself, which stood on the south brink of the ditch, was built of freestone; and, where the foundation was not good, it is built on piles of oak : the interstice between the two faces of this wall is filled with broad thin stones, placed not perpendicularly, but obliquely, on their edges; the running mortar or cement was then poured upon them, which, by its great strength and tenacity, bound the whole together, and made it firm as a rock. But, though these materials are sufficiently known, it is not easy to guess where they were procured; for many parts of the wall are at a great distance from any quarry of freestone, and, though stone of another kind was within reach, yet it does not appear to have been any where used. The height of this wall was twelve feet . besides the parapet, and its breadth eight feet, according, to Bede, who lived only at a small distance from the east end of it, and in whose time it was almost quite entire in many places. Such was the wall erected by the command and under the direction of the emperor Severus in the north of England ; and considering the length, breadth, height, and solidity, it was certainly a work oi" great magnificence, and prodigious labor. But the wall itself was but a part, and not the most extraordinary part,

of this work. The great number and different kinds of fortresses which were built along the line of it for its defence,and the military ways with which it was attended, are still more worthy of our admiration, and come now to be described. The fortresses which were erected along the line of Severus's wall for its defence were of three different kinds, and three different degrees of strength ; and were called by three different Latin words, which may be translated stations, castles, and turrets. Of each of these in their order. The stationes, stations, were so called from their stability and the stated residence of garrisons. They were also called castra, which has been converted into chesters, a name which many of them still bear. These were by far the largest, strongest, and most magnificent of the fortresses which were built upon the wall, and were designed for the head-quarters of the cohorts of troops which were placed there in garrison, and thence detachments were sent into the adjoining castlesand turrets. These stations, as appears from the vestiges of them which are still visible, were nut all exactly of tlte same figure nor of the same

dimensions ; some of them being exactly squares, and others oblong, and some of them a little larger than others. These variations were no doubt occasioned by the difference of situation and other circumstances. The stations were fortified with deep ditches and strong walls : the wall itself coinciding with and forming the north wall of each station. Within the stations were lodgings for the officers and soldiers in garrison ; th% smallest of them being sufficient, to contain a co hort, or 600 men. Without the walls of each station was a town, inhabited by laborers, artificers, and others, both Romans and Britons, who chose to dwell under the protection of these fortresses. The number of the stations upon the wall was exactly eighteen; and, if they had been placed at equal distances, the interval between every two of them would have been four miles and a few paces : but the intervention of rivers, marshes, and mountains ; the conveniency of situations for strength, prospect, and water ; and many other circumstances to us unknown, determined them to place these stations at unequal distances. The situation which was always chosen by the Romans, both here and every where else in Britain where they could obtain it, was the gentle declivity of a hill, near a river, and facing the meridian sun. Such was the situation of the far greatest part of the stations on this wall. In general the stations stood thickest near the two ends and in the middle, probably because the danger of invasion was greatest in these places. But the reader will form a clearer idea of the number of these stations, their.Latin and English names, their situation and distance from one another, by inspecting the following

table, than we can give him with equal brevity in any other way. The first column contains the number oi the station, reckoning from east to west; the second contains its Latin, and the third its English name ; and the last three its distance from the next station to the west of it, in miles, furlongs, and chains.

No.

1

2

Latin name.

English name.

M.F.C.

Segedunum Pons JElii

Cousins'-house Newcastle

3 5 IJ

209

3

Condercum

Benwell hill

665

4

Vindobala

Rutchester

70 3J

5

Hunnum

Haston-chesters

5 1 7

6

Cilurnum

Walwick-chesters

3 1 8

7 8

Procolitia Borcovicus

Carrawbrugh Ilousesteeds

4 5 3*1 1 3 8

9

Vindolana

Little Chesters

364

10

jEfica

Great Chesters

2 1 6J

11 12 13

Magna Amboglanna Petriana

Carrvoran Burdoswald Cambeck

260 628 266

14

Aballaba

Watchcross

519

15 16 17 18

Congavata Axelodunum Gabrosentum Tunnocelum

Stanwix Brugh Brumbrugh Boulness

334 409 3 4 1 000

Length of the wall

The castella, or castles, were the second kind of fortifications, which were built along the side of this wall for its defence. These castles were neither so large nor strong as the stations, but much more numerous, being no fewer than eighty-one. The shape and dimensions of the castles, as appears from the foundations of many of them which are still visible, were exact squares of sixty-six feet every way. They were fortified on every side with thick and lofty walls, but without any ditch, except on the north side ; on which the wall itself, raised much above its usual height, with the ditch attending it, formed the fortification. The castles were situated in the intervals between the stations, at the distance of about seven furlongs from each other ; though particular circumstances sometimes occasioned a little variation. In these castles guards were constantly kept by a competent number of men detached from the nearest stations. The turres, or turrets, were the third and last kind of fortifications on the wall. These were still much smaller than the castles, and formed only a square of about twelve feet, standing out of the wall on its south side. Being so small they are more entirely ruined than the stations and castles, which makes it difficult to discover their exact number. They stood in the intervals between the castles ; and from the faint vestiges of a few of them it is conjectured that there were four of them between every two castles, at the distance of about 300 yards from one another. According to this conjecture the number if the turrets amounted to 324. They were designed for watchtowers and places for sentinels, who, being within hearing of one another, could convey an alarm or piece of intelligence to all parts of the wall in a very short time. In these stations, castles, and turrets, a very considerable body of troops was constantly quartered for its defence. The usual complement allowed for this service was as follows : —

1. Twelve cohorts of foot, consisting of

600 men each …. 7,200

2. One cohort of mariners in the station

at Boulness 600

3. One detachment of Moors, probably

equal to a cohort ….. 600

4. Four alae or wings of horse, consisting, at the lowest computation,

of 400 each … ‘ . . 1,600

10,000

For the conveniency of marching these troops from one part of the wall to another, with the greater ease and expedition, on any service, it was attended with two military ways, paved with square stones in the most solid and beautiful manner. One of these ways was smaller, and the other larger The smaller military way ran close along the south side of the wall, from tur-ret to turret, and castle to castle. The larger way did not keep so near the wall, nor touch at the turrets or castles, but pursued the most direct course, and was designed for marching larger bodies of troops. There have been discovered, in or near the ruins of this wall, a great number of small square stones, with very short and gene-

rally imperfect inscriptions upon them ; men, tioning particular legions, cohorts, and centuries Of these the reader may see no fewer than twen. ty-nine among the Northumberland and Cumberland inscriptions in Mr. Horsley’s Britannia Romana. It is highly probable that they have, been originally placed in the face of the wall. From the uniformity of these inscriptions they were all intended to intimate that the adjacent wall was built by the troops mentioned in them. This great work was executed by the second and sixth legions, these being the only legions mentioned in these inscriptions. Now if this prodigious wall, with all its appendages of ditches, stations, castles, turrets, and military ways, was executed in the space of two years by two legions only, which, when most complete, made no more than 1200 men, how greatly must we admire the skill, the industry, and discipline of the Roman soldiers, who were not only the valiant

guardians of the empire in times of war, but its most active and useful members in times of peace ! This wall of Severus, and its fortresses, proved an impenetrable barrier to the Roman territories for nearly 200 years. But about the beginning of the fifth century, the Roman empire being assaulted on all sides and the bulk of their forces withdrawn from Britain, the Maeatse and Caledonians, now called Scots and Picts, became more daring; and some of them breaking through the wall, and others sailing round the ends of it, they carried their ravages into the very heart of Provincial Britain. These invaders were indeed several times repulsed after this by the Roman legions sent to the relief of the Britons. The last of these legions, under Gallic of Ravenna, having, with the assistance of the Britons, thoroughly repaired the breaches of Severus's wall and its fortresses, and exhorted the Britons to make a brave defence, took their final farewell of Britain. It soon appeared that the strongest walls and ramparts are no security to an undisciplined rabble, as the unhappy Britons then were. The Scots and Picts met with little resistance in breaking through the wall, while the towns and castles were tamely abandoned to their destructive rage. In many places they levelled it with the ground, that it might prove no obstruction to their future inroads. From this time no attempts were ever made to repair this noble work. Its beauty and grandeur procured it no respect in the dark and tasteless ages which succeeded. It became the common quarry for more than 1000 years, out of which all the towns and villages around were built ; and it is now so entirely ruined that the penetrating eyes of the most poring and patient antiquarian can hardly trace its vanishing foundation.

SEVIGNE' (Mary de Rabutin, marchioness of), a French lady, born in 1626. When only a year old she lost her father, who was killed in the descent of the English on the isle of Rhe, where he commanded a company of volunteers. In 1644 she married the marquis of Sevigne, who was slain in a duel by the chevalier d'Al-bert in 1651. She had by him a son and a daughter, to the education of whom she afterwards devoted her whole attention. Her daughter was married in 1669 to the count of Grignan,

who conducted her to Provence. •'Madame de Sevigne" consoled

herself by writing frequent letters to her daughter. She fell at last the victim to her maternal tenderness. In one of her visits to Grignan she fatigued herself so much during the sickness of her daughter that she was seized with a fever, which carried her off on the 14th of January 1696. The Comptede Bussi describes her as a lively gay coquette, a lover of flattery, fond of titles, honors, and distinction : M. de la Kayette as a woman of wit and good sense, as possessed of a noble soul, formed for dispensing benefits, incapable of debasing herself by avarice, and blessed with a generous, obliging, and faithful heart. Both these portraits are in some measure just. That she was vain-glorious appears from her own letters, which also exhibit undoubted proofs of her virtue and goodness of heart. She •was acquainted with all the wits of her age. She decided the famous dispute between Perrault and Boileau concerning the preference of the ancients to the moderns, thus, ‘ The ancients are the Snest, and we are the prettiest.’ She left behind *ier a most valuable collection of letters, the best edition of which is that of 1775, in 8 vols. 12mo. These letters,’ says Voltaire, ‘ are filled with anecdotes, written with freedom, and in a natural and animated style ; are an excellent criticism upon studied letters of wit, and still more upon those fictitious letters which aim at the epistolary style, by a recital of false sentiments and feigned adventures to an imaginary correspondent.’ What makes them in general so interesting is that they are in part historical. They are a record of the manners, the ton, the genius, the fashions, the etiquette, which reigned in the court of Louis XIV. They contain many curious anecdotes no where else to be found. A volume entitled Se-vigniana was published at Paris in 1756, which is a collection of the fine sentiments, literary and historical anecdotes, and moral apophthegms, scattered throughout these letters.

SEVILLE, a beautiful province of Spain, forming the western half of Andalusia, and still retaining the title of kingdom Its form, though irregular, is compact, containing an area of 9500 square miles. The ecclesiastical division is into two dioceses ; the civil into ten districts. The chief towns are : —

Seville, the capital

Cadiz

Kcija

Xeres

(>ssuna

St. Mary's", near Cadiz

Inhabitants.

100,000 70,000 28,000 20,000 15,000 12,000

Population of the entire province 750,000

This province is diversified with beautiful plains, and hills covered in the south with vines • and the finest fruit trees. The principal mountain chains are the Sierra Morena, the Sierra de Ronda, the Sierra de Constantina ; but none are of great elevation. They are intersected in some parts by ravines, in others by fertile valleys. The chief rivers are the Guadalquivir, the Guadiana, the Xenil, the Tinto, and the Odiel. The climate is warm, but the extremes are tempered

by cool breezes from the s»a or from the mountains : the solano or hot African wind, though not so prevalent as in o».her provinces, is at times scorching, and blights the crop on the ground in a few hours. The chief hazards to the labors of the husbandman arise from drought. The winter may be compared to a mild spring in the south of England.

The basis of most of the mountains is limestone or marble ; and mines of gold and silver are said to have been formerly wrought. The sail differs greatly according to situation, being in some places very stony and unproductive, in others a fine black mould. Agriculture is extremely backward. The pasturage is good in those situations where either the frequerfcy of rain, the height of the fields, or »H« use of irrigation, protects it from intense hex*. , the climate is very favorable to vines, and the environs of Xeres produce the well known sherry wine ; those of Rota, tent wine (vino tinto); of St. Lucar, the mancinillo. Large tracts in the southern districts are covered with oranges, lemons, citrons, and limes ; but other tracts of equal extent are almost desolate ; and this in a great measure from the old provincial laws and usages confining the culture of oil and wine to certain families. The price of oxen is generally moderate, but the town dues on butcher's meat at Seville make it cost as much as in London. The chief export is bay salt, prepared and shipped from Cadiz.

The silk manufacture of the province is chiefly conducted in the capital : in other parts there are also manufactures on a small scale of coarse woollen, linen, leather, soap, pottery, and hats, all for home consumption. The export trade is carried on at Cadiz, and consists chiefly in the article of wine sent to England, and of miscellaneous articles to America. The chief sea-port in the south is Algesiras.

To the bad government, and the other drawbacks of Spain in general, this province has to add causes of peculiar suffering ; the disturbances since 1810 in the colonies with which its trade is carried on ; and the repeated occurrence of pestilential disease in Cadiz and the neighbourhood.

SEVILLE, a large city of Spain, in Andalusia, the capital of the province of this name, stands in a fine plain on the left bank of the Guadalquivir, surrounded by an old wall of considerable height, having twelve gates, and 16G turrets. Its circuit is between five and six miles. The population is commonly stated at 100,000 The streets are in the Moorish style, being often so narrow that a person can touch the houses on either side by extending his arms. This mode of building was said to be adopted for the sake of coolness, and to prevent the rays of the sun from penetiating. The streets are in central badly paved ; but most of them have a fountain in the centre : as the water however is seldom cool, the inhabitants are largely supplied from stalls, in .different parts of the town, for the sale of filtered water. There are here several beau • tiful public walks ; one in particular on the bank of the Guadalquivir. The suburbs are tolerably built.

Tne nouses of Seville cover a large space, there being in the middle of each a court with a fountain. On the side towards the streets they have often a mean appearance. There are no fewer than thirty churches, eighty-four convents, and twenty-four hospitals, great and small. The cathedral is a large and magnificent Gothic pile, built in the fifteenth century, and containing eighty-two altars. Its tower, 250 feet in height, is reckoned the finest in Spain. Of the other churches and

convents the chief attraction consists in their paintings. A convent called De Buenavista, situated on the opposite side of the Guadalquivir, is remarkable for its extensive prospect, which takes in the mountains of Ronda at a distance of seventy miles to the east, and the Sierra Morena at nearly the same distance northwest.

The other most consoicuous public buildings are the Alcacar or palace, the Lonja or exchange, the artillery school, and the mint. The Alcazar, a Moorish building, was extended by several Christian princes : though the outside is mean, the inside contains several handsome courts, with fountains, galleries, and baths ; the garden, said to have remained unchanged since the time of the Moors, has also its fountains, evergreens, and marble walks. In one of the saloons is a collection of Roman antiquities, from the ancient town of Italica in the vicinity. . The Lonja, is a modern edifice, of the Tuscan order, finely situated in the centre of a square. It was built by the merchants for an exchange ; but now serves chiefly as a deposit for the old official correspondence with America. Here are collections of letters from Cortez, Pizarro, and other invaders of the new world.

Water is brought to Seville from a distance of eight miles by an old Roman aqueduct. The principal rooms of a Moorish residence are also in complete preservation in the form of a double cube, sixty feet in height, and about thirty in breadth and width : the walls are covered with a network of exquisite workmanship, on a plaster which does not exhibit a single flaw.

In the time of the Moors Seville had an academy and public library. At present it has an academy for physical sciences, for the fine arts, and a medical society : a university founded in 1502, but almost as backward in science as at the time of its constitution ; yet the number of under graduates is about 200. A humbler institution, called St. Elmo, is appropriated to the education of young men for the sea service. This was founded by the son of Christopher Columbus. There is a public library in the cathedral, and another in the archbishop's palace. Seville has genteel society ; and the Spanish manners are exhibited here more conspicuously than in most parts of Spain.

The number of silk looms lately at work va-ried from 2000 to 3000; the silk is brought chiefly from the provinces of Granada and Valencia. Woollens of the coarser kind are also made, but, from the awkwardness of the machinery, are dearer than English cloth : there is here a considerable manufactory of leather for private account, and a very conspicuous one of tobacco and snuff for that o< the government.

The mills, to tne number, it is said, of 100, are all driven by horses and mules; and a similar work of mechanical power exists in the public cannon foundry

Vessels drawing more than ten feet water are obliged to load and unload eight miles below Seville; and the largest vessels stop at St. Lucar, at the mouth of the river. The navigation is limited from this cause, but more from a want of industry in the inhabitants, who in general confine their exertions to the supply of immediate wants. Among the exports are wool, goat-skins, fruit, and, in a small quantity, oil and silk. The imports are various manufactures from England, Nuremberg wares from Germany, iron from Bil-boa, and colonial produce. The adjacent country is of great fertility, and the markets are plentifully supplied ; but the lowness of the ground exposes it to inundations and fogs, which engender agues and fevers.

Seville stands on the site of the HispaVis of the Romans : the date of its foundation is unknown ; but it opened its gates to the Moors in 711, soon after their invasion of Spain, and continued in their possession above five centuries. It was taken from them in 1247, after one of the most obstinate sieges mentioned in Spanish history. Since then it has seldom been the scene of military exploits. A treaty was concluded here in 1729 between Spain, England, France, and Holland. In 1755 the city felt the shock of the earthquake of Lisbon, its cathedral having sustained considerable injury. In 1800 it was visited by the pestilential fever which caused such mortality at Cadiz, and it was computed that, between 12th of August and 1st of November of that year, Seville lost nearly a fourth of its inhabitants. On the invasion of Spain by Buonaparte, in 1808, Seville asserted the national independence, and received the junta driven from Madrid. It surrendered, however, to the French, on the 1st of February 1810, and remained in their harids till the 27th of August 1812, on their defeat at Salamanca. It is 254 miles south by west of Madrid, and forty-five north of Cadiz.

Mr. Jacob’s observations on the different pub-lic buildings of this city, its paintings, manufactures, manners, &c., afford so lively a sketch of this part of Spain, and indeed of Spanish manners and customs generally, that we are induced to make a considerable extract from them. Speaking of the government tobacco works, he says : — < J went through the interior of the buildings, consisting ‘of twenty-eight courts, round which the rooms for the different branches of the manufactory are arranged. It contains upwards of 100 mills for

grinding the snuff, which are turned by horses and mules, while some hundreds of men and boys are employed in rolling leaf tobacco into cigars ; but at present, either from the diminished consumption or the contraband trade from Gibraltar, there is not one-eighth part of either the mills, or the apartments for other branches of the manufactory, employed. The snuffs made here are of various kinds. The rappee is a bad imitation of the French snuff of that name ; but that which is most esteemed is mixed with an earth from

Almazarron, between Lorca and Carthagena, called almagre, a species of ochre; it is mixed with the tobacco in a damp state, and gives it the color, as well as that pungency and flavor, which are so much admired. By calculating the quantity of snuff manufactured and ready for delivery, I found it would produce when sold about 2,000,000 dollars, but this is calculating it at the price at which it is delivered here, which is about ten times as much as it costs the government, unless the expenses of the establishment are, as I suspect them to be, most extravagantly high : indeed I learnt that though the number of laborers was reduced to one-fifth of the usual establishment, yet, that that of the officers, whose salaries are considerable, is the same as when the consumption and consequently the revenues were much greater. I was greatly struck with the rigorous examination the laborers underwent on their leaving the fabrica : they were stripped almost naked, and examined as closely as if they had been working in a diamond mine ; and yet, in spite of all these precautions, I was informed that they contrived to secrete considerable quantities.

' I went from the Fabrica de Tobaco to see St. Elmo, a naval institution founded by Ferdinand Columbus, son of the discoverer of America, in the year 1 526, bift the building was not finished till several years after. Its extent and beauty are very considerable, as it was erected at a period when the architecture of Spain was at its height. The objects of this institution are most miserably neglected : it was originally designed for 1 50 youths, but the number at present amounts to no more than seventy ; they are divided into four classes, in one of which

merely reading and writing are taught; the other three are designed for the different branches of mathematics ; some pretensions are also made to teach geography, algebra, geometry, and trigonometry; but having neither books, nor instruments, nor professors possessing any knowledge, their progress, I fear, is very trifling. The principal employment of the elder boys consists in copying from charts on Mercator's Projection ; but their copies were fac-similes of those from which they were taken, and, as they have have no Gunter's scale, nor any other scale of lines, sines, rhumbs, and tangents, they are incapable of constructing charts on a scale different from those before them. The name of algebra is, indeed, upon the list of studies, but the professor did not affect to understand it, and, on every subject connected with nautical science, displayed little more knowledge than most of the masters of our coasting merchant ships; he had heard of ascertaining the situation of a ship by lunar and stellar observations, and by two altitudes of the sun ; but understood neither the practice nor the principles, nor even the mode of calculating azimuths and amplitudes ! After seeing this institution, the superiority of British navigators is no longer surprising. In our schools for naval education, such as Christ s Hospital, Greenwich school, and especially the academy at Portsmouth, every facility is afforded to the pupils, which 'instruments, books, and tutors can bestow ; and it is the boast of science, jhat some of the bravest

officer? that ever conducted British seamen to victory have been the best practical mathematicians and astronomers of their age. But, to return from this digression, the library is very deficient in books ; with the exception of the French Encyclopa-dia, and a few works on astro nomy in the same language, there are none adapted to a naval institution. The religious part of the establishment is, as usual, not neglected; a handsome church, with some tolerable pictures, rich plate, and a good house for the spiritual tutor, seem to have had more attention bestowed upon them than any other department The expenses of this institution are defrayed by a small tonnage duty upon every ship that sails to America.

' The aqueduct which supplies the city with water terminates at the gate leading to Madrid ; it is called Los Canos de Carmona, not because the water is conveyed from that city, but because the name of this gate is Puerto de Carmona. It has been a matter of dispute whether this be a Roman or Moorish work, to me it appears a mixture of both ; it was probably constructed originally by the former, and afterwards, as the work decayed, repaired by the latter. The arches are

of different construction, some resembling the Roman, others the Moorish; which last approach nearer to the form of a horseshoe, and terminate within the perpendicular that supports them. The water is conveyed from a hill, where it rises, near the town of Alcala, about eight miles from the city. The aqueduct stands on arches twelve feet in diameter, and is supported by pillars nearly thirty feet high, in the part which I examined; but these necessarily, vary in height according to the level of the ground over which the aqueduct is carried. The water is conducted in an open canal on the top of the arches, and forms a constant stream three feet wide and two feet deep, and is esteemed excellent ; a part is received into a large reservoir near the gate, and the remainder is conveyed by pipes to the alcazar, the public fountains, and the houses of private individuals. It is obvious that the Romans, as well as the Moors, were acquainted with the method of taking the levels necessary for conducting water to their cities, though they do not appear ever to have applied that knowledge in the construction of canals, to transport heavy productions from one part of a country to another. It is also no less evident that they were unacquainted with the fact that water in a tube or pipe will ascend to its original level, or they would have supplied their cities with water by means of pipes, in preference to the far more expensive mode of conveying it by aqueducts.

‘ The royal cannon foundry is a very fine building, where 200 men are constantly employed in casting and boring guns of a large calibre. The shape and ornaments of the guns are very beautiful, and they are turned and bored by the machinery used in England for similar purposes. The greatest deficiency, I observed, was the total want of machinery to facilitate labor. It is, however, the best arranged institution I have hitherto seen in Spain. The principal manager is Senor Vedal. a native of Catalonia,

who politely attended us through the building, and explained every part with great minuteness. lie is not only a practical man, but understands chemistry and mineralogy ; he is also well acquainted

with the English, French, and Swedish writers on those subjects, and speaks with rapture of the recent discoveries of our countryman Davy, whose account of the new metals reached him only a short time ago. I expressed some surprise at the great number of brass guns, and remarked that the English used iron for battering cannon, which were equally serviceable, and cost no more than one-fifth the expense ; he admitted the fact, but observed that, as in Spain all the copper mines paid a certain proportion of their produce to the king, that produce, which thus costs nothing, was used for cannon, and sufficiently supplied the exigencies of the state. ‘ One of the buildings in Seville which displays the best architectural taste is La Lonja, built originally at the expense of the merchants, and designed for an exchange. It forms a square, and each front is 200 feet in length, and, being raised on steps, has a magnificent appearance. The staircase leading to the upper rooms is superbly built of colored marble, about twenty-five feet in breadth, with balustrades, supported by pillars of the same substance : the apartments consist of three rooms in” front, each 180 feet long, and four others, lighted from the patio, of smaller dimensions ; the whole forms a grand building, and does honor to the taste of the age in which it was erected. The apartments are furnished with book-cases, which contain all the correspondence with America, from its first . discovery to the present time, arranged and neatly docketed ; and reference may be made to any paper with great facility. The original letters of Cortez and Pizarro are deposited in these cases, and will some day probably throw light on the history of that period. It is certain that the Spanish historians have neglected to examine these valuable documents, and the writers of later date have contented themselves with quoting Robertson, whose book, with all its deficiencies, contains more accurate views, and more extensive knowledge, of the affairs of the Spaniards in America 300 years ago, than the work of any author of their own nation. La Lonja was completed in the year 1598 by Juan de Herrera, one of the most celebrated architects in Spain. In early life he visited Italy in a military capacity, and availed himself of that opportunity to study the various models of art with which that country abounds ; he was an excellent mathematician, and applied his knowledge and taste to the study of architecture. After the death of Juan Bautista de Toledo he was employed in completing the Escurial, which established his fame, and occasioned his being created a knight of St. lago, quarter-master-general of the royal palace, and superintendant of the royal mansions. I wished to make a sketch of this building, and one of the canons of the cathedral introduced me to the house of a lady opposite, where I had a good view of it. As I used the camera lucida, the astonishment of the pood lady and her domestics was not a little excited ; and

perhaps I might have been taken

for a magician if 1 had not been the friend of a priest, for nothing could exceed their surprise when they saw the building before them reflected on the paper, reduced to a small compass, and every part exact.

‘ The Casa Moneda, or mint, is at present very little used ; owing to the scarcity of silver, few of the presses were at work, but enough were employed to show the imperfection of the machinery : the presses are worked by manual labor, and the dyes are very bad ; the slowness of the work renders the coinage expensive even here, where manual labor is comparatively cheap.

‘ The outside of the Alcazar is miserable in its appearance ; but the first court, after entering the gate has a very grand effect : the front, looking into that court, is purely Arabic in its style, and the inscriptions favor the idea of its being built by that people ; it is, nevertheless, ascertained to have been constructed since the conquest, by the Christians ; and, indeed, the arms of Castile and Leon are mingled with the Ara-bic characters. The flight of stairs leading to the royal apartments, now occupied by Garay, is of marble ; and some galleries of the same material lead to other parts of the building. The courts are ornamented with marble fountains, and are well shaded with corridors, supported by marble pillars. The hall, now occupied by the Junta, formerly called the Hall of Ambassadors, is a beautiful apartment, adorned with elegant designs in stucco, and with a floor of the most transparent marble, of various colors. The rooms adjoining are occupied by the different committees, or, as they are called, sections, into which the Junta is divided, and the whole pa-lace, which is very extensive, is filled by the different branches of the government, whose clerks have offices very well adapted for the despatch of business, from their proximity to each other. The garden of the Alcazar is said to have been laid out by the Moors, arid is preserved in its original state, it contains walks paved with marble, parterres laid out with evergreens, and well shaded with orange trees. In many parts of it tnere are baths, supplied by mar-ble fountains from the aqueduct, and they have a contrivance for rendering the walks one continued fountain, by forcing up small streams of water from minute pipes in the joining of the slabs, which in this climate produces a most grateful effect. As a specimen of an Arabian garden, in its original state, this is an interesting object, and we naturally associate with it recollections gathered’ from the eastern writers, especially from the

Song of Solomon, in the Scriptures, m which the descriptions very well agree with this garden : for, in addition to the other circumstances, it is completely walled round, and is secluded from every one except the inhabitants of one part of the palace.

‘ On Sunday I went to the cathedral, to see the ceremony of high mass. There is a pomp and splendor in the Catholic worship, when performed in a country where that religion is established, which, like any other pageant, dazzles for a moment, and confines the attention to the imposing spectacle ; but it is so different from any of our feelings of religion, that the impres-

sion it makes upon us differs little from that which the best scenes in a theatre produce. On those, however, who from early and repeated association have connected these ceremonies with religious ideas, and with the strong feelings of adoration and gratitude, the effect produced must be very great, though I should suspect very transient. I have frequently visited this church before, and every time with such increased admiration that I am afraid to attempt a description of it, from a consciousness of the difficulty to do justice to my own impressions. From the climate, it is necessary to exclude the heat, and of course the light ; there are consequently but few windows, and those of painted glass, barely sufficient to give light enough to distinguish, on first entering, the various surrounding objects. This produces a solemn effect on the high altar, which is brilliantly illuminated with wax-tapers of an enormous size. The decorations of this altar are splendid and sumptuous beyond description ; the quantity of gilding on the borders of the different compartments, filled with images and pictures, the massy silver and gold OTta-ments,and the rails of bronze, tastefully desjgned, compose a most impressive whole. The priests kneeling before the altar, and in silence offering up their devotions, the clouds of ascending incense, and the pious on their knees, in the most striking attitudes, altogether form a scene that at once captivates the imagination, and suspends the reasoning faculties ; it is a scene to be felt but not described ; the sensations it

produces may be indulged, but cannot long delude a reflecting mind.

‘ In the midst of the gaieties which commence about five o’clock in the evening, when the paseo, or public walk, is crowded with company dressed in their most splendid attire, and indulging in the liveliest conversation, the sound of a bell announces the approaching hour of sun-set. At this signal, which is called oracion, every one, as if by magic, seems fixed in his place ; every head is uncovered, and the whole company repeats, or is supposed to repeat, a mental prayer ; after a few minutes, devoted to these formalities, the lively scene is resumed, and the conversation continued from the point at which it met this pious interruption. This ceremony takes place in every part of Spain ; and, where theatres or other public amusements are open, the sound of this bell suspends the entertainment till the prayer is over ; so great is its effect, that it is even said that assassins, at the moment of executing their horrid design, have held their hand at the sound of the oracion, and, after repeating the habitual prayer, have perpetrated their diabolical purpose. I have reason to suspect that this practice, as well as some others, arises more from conformity to the usages of their country, than from any strong religious feelings; for I have observed in private houses, that the attention paid to this bell diminishes in proportion to the rank of the family; among the lower classes of people it is usual to kneel or stund up ; among those of greater consequence they merely sit still and remain silent ; while those of the highest rank suffer the bell to toil unheard and unregarded.

‘ No one of the various religious observances with which this city abounds, appears more ludicrous to me or more solemn to the inhabitants, than the procession of the host to the houses of the sick, at the hour of approaching dissolution. A priest, seated in a sedan chair, with the holy elements in a gold case on his lapr escorted by a guard of soldiers; and preceded by a bellman, is literally denominated by the people ‘ his majesty coming down the street.’ To increase the singularity of the spectacle, the bellman strikes three strokes, in allusion to the three persons of the Trinity, and then ceases. At thi-t well known sound, whatever be the state of the weather, or the condition of the streets, even one drops on his knees, and continues in this devout posture till the object of adoration is out of sight. If this procession should pass through a street containing a theatre or a ball-room, the actors on the stage, and the dancers at the assembly, alike drop on their knees till the sound is lost, when they resume their thoughtless dissipation.

‘ There are nightly processions through the streets of this city, called the rosario, one of which I mentioned having met, in a former letter, as I entered this place. The different wards conduct this procession by turns, so that it is every night parading in some part of the town ; being more or less splendid, according to the revenues of the church or convent whence it proceeds. The rosario is complimented by the inhabitants of the streets through which it passes, by illuminations, that have a splendid effect, but which is in a great measure counteracted by the horrid noise of the singers and chanters.

‘The common forms of salutation, perhaps, partake no more of religion than those of other countries ; and ‘ va ja usted con dios,’ is only equivalent to the French ‘ adieu,’ or the English ‘ good bye;’ but a mode of expression is adopted much more striking and singular on visiting any family ; when you ring or knock, a servant within enquires, ‘ who calls ? ‘ and the person who wishes for admission exclaims, ‘ Ave Maria purissima,’ to which those within, on opening the door, make response, ‘ Sin pecado conce-Uda;’ and as the first of these sentences cannot be uttered by the devil, and the second will not be said by a heretic, there is no danger in the visit when such orthodox formalities have been mutually exchanged. When our party has been introduced into a family, I have frequently heard the enquiry made in a whisper, ‘ Are they Christians ?’ if the persons who introduced us te-plied ‘ they are Protestants,’ a sigh, with the exclamation ‘que lastima’(what a pity), frequently escaped their lips. However decorous the Spaniards may be in the performance of their public devotions, nothing can be more indecent and slovenly than the manner in which their domestic worship is conducted ; a circumstance which I have frequently noticed in the family with whom I lodge. Towards the conclusion of supper, when seated round the table, the master of the house commences with repeatinc; ten Ave Maria’s ; the wife repeats the Pater Noster and her ten Ave Maria’s, others at table repeat in the snme manner, while cue of them with a

rosary of beads keeps the account, till they have repeated th» Ave

Maria fifty times, and the Lord's prayer five times, the number being accurately corrected by the string of beads. They then say a litany, adding to the name of every saint of a long list, ' ora pro nobis ; ' then a prayer for the dead, another for protection during the night, and conclude the whole with a Gloria Patri. The words are uttered with as much rapidity as possible; and, if any employment calls away the person who is repeating, he performs the work without interrupting the prayer, or losing any time ; in fact the Spaniards ap-pear to act slowly and deliberately in every thing they undertake, except it be in this single instance of family worship.'

Mr. Jacob adds, ' It would have appeared singular, had I not been prepared for the fact, that among the warmest advocates for the destruction of ancient institutions I have seldom heard the inquisition spoken of as an evil of great magnitude. I have introduced the subject frequently, and have uniformly found it treated as an institution which, though originally bad, is now too insignificant to merit attention ; and yet two instances have occurred within my own knowledge, since I have been here, which show its meddling disposition. An Englishman had imported some printed handkerchiefs, with patriotic emblems, and the names of the patriot generals. But the printer in England had unfortunately mixed with these patriotic emblems some of the symbols of religion, such as the crosier, the cross, and the mitre. The inquisition became acquainted with the fact, and, fearing that using handkerchiefs on which such sacred objects were imprinted, would tend to bring religion into contempt, seized the whole parcel, and they were burnt by the holy office. Another merchant had a number of bales of Spanish wool, which were about to be shipped for England ; by accident these bales were marked with a cross ; information of it was conveyed to the inquisitors, and a consultation was held, to determine in what mode proceedings should be instituted against a person who could apply that sacred symbol to so common a purpose. As the person in question was an undoubted Catholic, a friend gave him information of what was going forward, and, being aware of the consequences, he immediately rectified his error by protracting the upright line of the cross, and adding to the bottom of it two flukes, so that, when the officers of the inquisition came to seize the bales, they were found to be marked with an anchor, and not with a cross, as the information had stated.

'The terror of the inquisition has considerably abated of late years ; one of the last victims in this city was Olavide, a most respectable man, who applied the wealth he had acquired in South America to the patriotic purpose of cultivating the Sierra Morena, with a number of German settlers and to adorning and improving the pub-lic walks of

the city, as well as the wharfs on the banks of the Guadalquivir. He had read the writings of some of the French unbelievers, and was suspected of having imbibed a portion •>f their opinions, and for this unproved, if not

unfounded charge, he was immured within the walls of a prison, and passed many years of hi* life amid the horrors of solitary confinement. Since that period the discipline has been confined to a lower class of crimes, and I am informed that the only prisoners, of late, have consisted of those who merited punishment fo having acted as the panders to illicit pleasure. I found no difficulty in obtaining permission to see the inquisition, and went through the whole. It is a cheerful, pleasant abode, and does not at all correspond with the ideas of Englishmen respecting it. The hall of judgment contains simply a table, three chairs for the inquisitors, a stool for the secretary, and one which is lower for the prisoner. On the table is a silver crucifix, upon which the deposition is made; and on a small stand a Latin prayer, said by each inquisitor before the trial commences. The prayer is appropriated to a judge, and merely implores divine guidance to enable him to discharge his duty with uprightness and impartiality. The records of this court, with all the processes against those who have been confined, are preserved with regularity in an adjoining room, but are not allowed to be examined. The church is simple and elegant. The interior is of white marble. The form is circular ; and it is lighted from a beautiful dome. I saw one of the apartments in which prisoners are confined, and was told the others were similar; it is light and airy, placed in a little garden planted with orange and fig-trees ; the door of this garden is strongly secured. and no person can have access to it when the cell is occupied. I enquired if there were any prisoners in confinement, any subterraneous cells or instruments of torture ; but to these questions I could obtain no replies. The alcayde, who attended us, exulted not a little at our remarking the neatness and comforts of the building, and, I suspect, mistook us for pious Catholics, because we gave vent to no execrations at the existence of such an infamous tribunal. This building was formerly the college of the Jesuits, the most able and enlightened, but the most dangerous of all the religious orders of the Catholic church. On the abolition of that order, the inquisition was removed, from its former situation in the suburb of Triana, to this building, which I hope will be the last it will occupy in Spain; for, whatever political events may take place, its destruction is inevitably at hand. The remarks I have made on the religion of Spain, you will recollect, are drawn from what I have seen in Seville, a city more esteemed for its piety than any other in Spain ;

so rigid, indeed, is the religion of this place, and so great the influence of the clergy, that neither a theatre, nor any place of public amusement, is permitted.'

' Of the university of Seville,' he says, « it is al-most solely appropriated to the education of the clergy : the course of study occupies five years, which are principally devoted to the acquirement of the Latin language, the knowledge of civil law, the philosophy of Aristotle, and scholastic divinity. Scarcely any improvement has been introduced within the last 400 years ; the philosophy of Bacon, Locke, and Newton, is ut-terlv unknown to either professors or pupils.

The war has considerably lessened the number of students, as a large portion has entered into the army. They do not reside within the university, but have private lodgings in different parts of the city. The education of the females of the best families is, if possible, still worse. They are early sent to a convent as pensioners, and under the care of some of the aged nuns are instructed in reading, writing, and needle-work, but especially in the outward forms of religion. They are usually kept in these houses of seclusion till they arrive at a proper age, and frequently till some matrimonial engagement is formed. From the retirement of a convent, with all its uniformity and dulness, they are suddenly introduced into circles of gaiety and dissipation, and it is not wonderful that from so violent a change, and from the example of the married females, witli whom they associate, they become victims to the dissolute habits of their country. '

Of its paintings.—' Few places in Europe, with the exception of London and Paris, contain so many good pictures as are to be found in this city. About 170 years ago some of the best painters resided here, especially Murillo, Velas-quez, Zubaran, Spagnolete, and Cano ; and such was its celebrity, as a school for painting, that several eminent masters, from other countries, resorted hither for improvement in their profession. Spain made considerable progress in the art of painting during the reign of Charles V., and it was the general custom among the Spanish nobles, who attended that monarch in his visits to

Italy and the Netherlands, to purchase and send home to this city, then the capital of Spain, the best pictures they could procure ; some of them have been retained by private families, and others were given to the different churches and convents. Our unhappy sovereign Charles I.,when Prince of Wales, contributed to increase the taste for this art in Spain by the love he manifested for the profession, by the honor he paid to the artists, and by the liberal price he gave for their works. He purchased some excellent pictures for his collection, and left directions for some of the best pictures in Madrid to be copied ; especially the works of Titian in the royal palaces, Mi-quel de la Cruz, an artist of considerable eminence in the court of Philip IV., was occupied several years in copying the best pictures for our unfortunate monarch, which were not all completed when he met his untimely fate.

‘ The best ancient pictures are mostly upon subjects connected with religion ; some of them are portraits of saints and martyrs, whose names as well as sufferings would perhaps have remained unknown, were they not immortalized by the genius of the artist. A great number of excellent paintings have been accumulated here ; and indeed a general taste for the art has been established for ages. Most of the well informed men are connoisseurs, and more especially the priests and monks, who, from habitually contemplating, in their churches, the finest specimens of the art. acquire a correctness in their notions of painting, which renders them good judges of even those paintings that are unconnected with religion. A general fondness for the art prevails

in this capital, and most people, particularly the ladies, have in their apartments the best pictures of the Holy Virg’n, or some favorite saint, which their circumstances can afford. To these they are much attached, and retain them with care, even when reduced by poverty to sell every thing else. I was yesterday at the house of a lady, the widow of an officer, to see some pictures which necessity compelled her to sell, but which decent pride forbade her to part with to any ex-cept a foreigner. In her chamber was a crucifixion, which I admired, and asked if it were to be sold; ‘ No, Senor, lo tengo por mi devocion ; ‘ she then asked with surprise, ‘ Are you a Christian ? ‘ On my answering ‘ Yes, ‘ and that I respected the saints, she expressed herself delighted that among the English, whom she had been told were all Protestants, she had found one who was a Catholic ; for, though she appeared a woman who had moved in a respectable sphere, she had no conception that Christian and Catholic were not precisely synonymous

; and I was too intent on her pictures to find time to correct her vocabulary.

‘It is scarcely right in relating any thing to commence with the best ; and perhaps I should be wiser were I to delay writing about the pictures of Murillo, till I had described those of some inferior artists ; but, as it happens, I am just returned from inspecting his works in the chapel of St. George, in the Caridad : I shall therefore begin my account with them. The pictures of Murillo which have been brought to England are of small size, and generally contain few figures, so that you can form but a very imperfect idea of the powers of this distinguished artist ; but the pictures of this painter in the Caridad, are about eighteen feet in length, and twelve in breadth. One of them, representing the queen Isabella attending the sick, and washing the wounds on the head of a beggar boy, while a crowd of other invalids, are waiting round in expectation of similar relief, is considered, and I think justly, one of the best compositions of that great master : the pious countenance of the queen, and the anxious looks of the expecting group, are admirably depicted. Another painting, by the same master, is the miracle of the loaves and fishes, in which the figures on the foreground are finely conceived, and the light and shade admirably managed. The picture of the angels appearing to Abraham is finely painted ; but as the idea prevailing in Spain is, that those three angels were the three persons of the Trinity, the artist has thought proper to show the unity in the Trinity by painting all the three angels with exactly the same countenance : notwithstanding this whimsical conceit the picture is a fine one, and the scene of the tent of the Arabian patriarch is most exquisitely painted.

‘ Moses striking the rock is a most wonderful production; the anxious countenances of the Israelites, all eagerly crowding to the water, are exact representations of what might be supposed the expressions of people in such a state : the figure of the mother with an infant, eagerly stretching out her hand to catch a few drops for her child, another lamenting the delay in obtaining a supply, and a boy mounted on a horse, stretching

forward to the stream, are esteemed the best figures, while the countenances of all discover gratitude to God for this unexpected supply. I never felt so much pleasure from the contemplation of any work of art as from this picture; but, notwithstanding the admirable expressions of the countenances, I could not help admiring the shadow of the r«ck from which the water gushes out. A passage in the sacred writings mentions as a luxury ‘ the shadow of a great rock in a de-sert wilderness ; ‘ it is here displayed most admirably ; the rock is high and large ; within its shade the people appear protected from the rays of the sun, which seem to diffuse a burning heat over every other part of the scene.

‘ The Cathedral of Seville contains some paintings by Murillo, but in my judgment very far inferior to those at the Caridad ; the best are on the altar of Baptistery ; representing St Anthony of Padua, the Baptism of Cnnst; and the Birth of the Virgin, in the chapel dedicated to St. Paul. Besides these, almost every convent and church in Seville is adorned with some of this master’s productions. I have had the good fortune to meet with some of his sketches, and an admirable portrait of his son, which, if I get them to England, will please you, though they give but a very faint idea of his great powers.

‘ Few pictures have been more praised than those in the church of Santa Cruz, by Pedro ae Campana, especially the Descent from the Cross. It is said of this picture, by the learned doctor Francisco Pacheo, that the remaining in this church alone filled him with terror, as he could not divest himself of the idea that the body of Christ was a real object. Two men above are lowering the body to St. John, who receives it with the strongest expression of grief and sensibility. Mary Magdalen kissing the feet, and the Holy Virgin, are admirable figures. The whole piece is an exquisite composition ; and, in the judgment of the Spanish connoisseurs, equal to the best productions of Michel Angelo, under whom Campana studied. The picture is about eighteen feet in height and nine in breadth. There are several others in this church by the same master, but this one engrossed my attention too much to allow me to examine the others.’

But we must hasten to conclude our extracts : — ‘The architecture of Seville’, adds our author, ‘ deserves particular notice, as it is the work of different ages, and possesses very distinct characters. The Arabian, the Gothic, and the Greco-Roman styles, all enter into the structure of the cathedral. Its tower, constructed in the year 1000, is of the Arabian architecture, as well as one of the courts, called the Patio de

las Narangas. The Gothic style was not introduced into Spain till the twelfth century ; and it still retains the more appropriate epithet of Tudesco or German. The greater part of the cathedral, which was begun in 1482 and finished in 1519, is of this species of architecture. The Greco-Roman, used in Spain, is miserable in the distribution of the parts, lavish in the ornaments, and wants elegance in the whole. The royal chapel of the cathedral is in this style of building, though erected at the same period with the Gothic. The length of the church is 398 feet,

and the breadth 290; the choir and the high altar being in the centre, and the whole crowded with chapels, altars, statues, and pictures, it does not appear so large as it is in reality. The in-side of the tower has one singularity ; it has no steps, but in their stead a road winds to the top, by which it is said the Emperor Charles V. once rode on horseback to the summit. This certainly would not be difficult if the door to the road were larger, but at present it is so narrow that a man can scarcely enter it. The cathedral contains a fine organ of great power, which is filled with air in a singular manner, by means of a plank placed on the bellows, on which a man walks backwards and forwards, and, as it balances on its centre, his motion fills the organ with air.

‘ A few days ago, I went, with a small party, to see the convent of the Carthusians. It is situated on the banks of the Guadalquiver, above the city, and we found a boat the cheapest and most agreeable conveyance. The convent is a fine building, and the interior is sumptuously decorated. The monks, who are all descended from good families, live with frugality, or rather austerity, and never leave the convent after they have taken the vows. They are not permiettd to converse, except with each other, and they are allowed only an hour’s conversation twice in a week ; but, if I may judge from the rubicund faces and portly figures of the superiors, when they arrive at the higher stations, they indulge privately in luxuries beyond the limits of their vows. It is easy to conceive that that fanaticism which can induce gentlemen to enter into this order, and to endure the severities during the year of their noviciate, may, after a time, cease ; that the fervor of devotion may subside ; thˆt some embers of the feelings and habits of past life may be rekindled; and that, after they have begun to languish in their piety, they may fall from the grace of celibacy, or exchange their fasts and penances for a luxurious table, generous wines, and an affectionate mistress. We found the prior a good-tempered friendly man ; he expressed much regard for Englishmen,

but lamented the wickedness and sensuality of Henry VIII., whose unruly passions, he said, had caused that change of religion so unfortunate for our country. I cannot help remarking, in this place, that there is a material difference between the Catholics and Protestants, in the mode of treating each other on religious subjects. The former generally speak of our religion with a sigh : we too frequently speak of theirs with a sneer. I am afraid something of this kind escaped me, or my younger companions, as his officious kindness evidently ceased after his remark on Henry VIII. ; and, though he behaved with politeness, it was ceremonious, and obviously constrained.

‘The church is very splendid, and elegantly adorned with holy utensils of gold and silver, with some good pictures and statues, and a remarkably fine organ. Among the pictures is the head of John the Baptist and a Salvator Mundi, by Murillo ; a St. Peter by Morales, called by way of distinction (as there were several painters of that name) the divine Morales ; and, what pleased me more than any others, some fine pieces of Zubaran, an artist whose works are

highly valued in Spain, though they are scarcely known in any other part of Europe. There are three of his productions in the sacristy of this church, with figures as large as life. The subject of one is, St. Bruno conversing with pope Urban II. : the saint is seated ; his countenance has the expression of benevolence, and that of the pope of piety and submission. The subject of another picture is St. Hugh in the refectory of this convent, eating with the monks ; and a third represents our Saviour on foot, conversing with some Carthusians : there is nothing in the stories, but the artist has contrived to make them irf-teresting. Zubaran’s manner somewhat resembles that of Caravaggio ; his outlines are correct, and his compositions simple ; they contain only a few figures, which are arranged in grave and

natural attitudes. I have always had a curiosity to see the collections of books in these repositories of idle devotion, but what I saw here were of no greater value than those in convents less richly endowed. The Carthusians are the richest order in Spain, and the estates of this convent are very extensive and valuable; their revenues are all appropriated to determinate purposes, one portion for subsistence another for the repairs and decoration of the church, and others for the relief of the poor, &c.; all of which being badly administered, the society is considerably involved. They cultivate some large farms, and have in their barns and outhouses a good stock of corn, straw, and oil, as well as horses, cows, and mules, which the government have lately found very beneficial ; for, in the present exigences of the country, the property of these religious houses has not been exempted from contributions. They have a fine garden, and a summer-house overlooking the river. The consumption of wax for candles is so considerable, that they have in this garden all the necessary conveniences for bleaching it. ‘

SEVRES, DEPARTMENT OF TˆE TWO, a department of France, comprising about a third of the old province of Poitou, and bounded by the departments of the Maine and Loire, the Charente, and the Vendee. Its superficial extent is 2450 square miles ; watered by the Two Sevres, the Dive, the Loire, the Thoue, and a number of inferior streams. The surface is uneven, being intersected from northeast to southwest by a chain of lofty mountains covered with wood ; in the southwest it is marshy, but the soil generally is fertile, and the climate favorable. The products are wheat, barley, rye, oats, buck-wheat, and maize ; hops grow wild, particularly in the. neighbourhood of Niort. Tobacco is partially cultivated, and chestnuts abound, as well as almonds, in the warmer exposures. The tracts of pasture are considerable, and hence a large proportion of horses, cattle, and sheep. The high grounds afford mines of iron, antimony, saltpetre, also quarries of marble. The manufactures (on a small scale) consist of pottery, saltpetre, leather, woollens, cotton, and paper. This department suffered severely in the Vendean war. It is divided into the four arrondissements of Niort, the capital, Bressuire, Parthenay, and Melle. Population 260,000, of whom above 32,000, are Protestants.

SEVUM MINERALS, mineral tallow, a substance somewhat resembling tallow, found on the seacoasts of Finland in 1736. It burns with a blue flame, and smell of grease, leaving a black viscid matter which cannot easily be consumed. It is extremely light ; being only of the specific gravity 0-770 ; whereas tallow is not less than 0-969. It is partly

soluble in highly rectified spirit of wine, but entirely so in expressed oils when boil- ‘ing. It is met with in some of the rocky parts of Persia, but there it appears to be mixed with petroleum. Dr. Herman of Strasburg mentions a spring in the neighbourhood of that city, which contains a substance of this sort diffused through it, separating, and capable of being collected on ebullition. A fat mineral matter resembling but-ter or tallow has lately been extracted from peat in Lancashire. See PEAT.

SEW, v. n. Lat mo. To alter any thing by the use of the needle.

My transgression is sealed up in a bag, and thou sewett up mine iniquity. Job xiv. 17.

A time to rent and a time to sew. Eccl. iii. 7.

No man sevieth a piece of new cloth on an old garment. Mar* ii. 21.

If ever 1 said loose-bodied gown sew me up in the skirts of it. Shakspeare. Taming of tlie Shrew.

SEWARD (Thomas), an English divine, born in 1708. He was rector of Eyam in Derbyshire, and prebend of Litchfield. He wrote a work on the Conformity between Popery and Paganism, and published an edition of Beaumont and Fletcher’s plays. He was father of the celebrated Miss Anna Seward. He died at Litchfield, in 1790.

SEWARD (William), F. R. S., an ingenious English writer, the son of an eminent brewer in London, born in 1747. He was educated at the Charter-house, and at the university of Oxford, but never took any degree, nor adopted any profession. He had a fine taste for literature ; was intimate with the most eminent men of the age ; and was chosen fellow of the Royal and Antiquarian Societies. He published Anecdotes of Distinguished Persons, in 5 vols., and a supplement to that work, entitled Biographiana, in 2 vols. He died April 12th, 1799.

SEWARD (Anna), the daughter of the Rev. Thomas Seward, rector of Eyam, Derbyshire, prebendary of Sarum, and canon residentiary of Litchfield, was born in the year 1747. Her fa-ther was himself a poet, and seems to have inspired his daughter with a strong predilection for that department of literature, in which her taste was excellent, and her talents considerable. In the Literary Society of Litchfield, where Miss Seward lived, she held a very distinguished place, and her correspondence with learned and distinguished characters was extensive. For a considerable period her poetical effusions were confined to her social circle; the applause of which at length induced

her to commit to the press, Elegiac Commemorations of Major An-dre and Captain Cook, which were favorably received by the public. In 1782, besides other occasional pieces, she published a poetical novel, entitled Louisa, which was also favorably received, and passed through several editions. In 1799 she published a collection of original son-SEW 12,

nets of considerable merit, with translations from Horace of less value. In 1804 Miss Seward published a Biographical Memoir of Dr. Dar-win, the friend of her youth ; in which there is much curious and interesting literary anecdote, chiefly of the early part of Dr. Darwin's life, and of the Society of Litchfield, while it was the place of his residence. In 1807 our authoress was engaged in arranging for the press the edition of her poems, which was edited, in 1810, by Walter Scott, esq., in 3 vols., with a sketch of her life by that poet, and extracts from her literary correspondence. To Mr. Scott she bequeathed by letter her literary performances, particularly that which she had been so long preparing for the press. Miss Seward died on tht 25th of March 1809, having also bequeathed to Mr. A. Constable twelve quarto volumes of letters, from the year 1784 to the period of her death, for publication. Six volumes of these have been published, containing a vast variety of miscellaneous matter, of which the world will judge variously. That Miss Sewavd's talents and acquirements were considerable will not be questioned. Her prejudices were also great, and her reflections on many persons and subjects are unnecessarily harsh, and severe. In politics, amidst the ever varying scenes of the French Revolution, and of domestic policy connected with that great event, she cannot be exempted from the charge of rashness, injustice, and inconsistency. Miss Seward was undoubtedly a distinguished person ; but she already holds in public estimation a far less eminent place than she fixed for herself. In hen^ conduct she was always respectable

SEWAURY, a Hindoo word, used in Bengal, signifying the train of attendants that accompany a nabob.

SEW ELL (George), an English physician and poet , born at Windsor and educated at Eton School : whence he removed to Peter House, Cambridge. He wrote, 1. The Life of John Philips : 2. A Vindication of the English Stage : 3. Sir Walter Raleigh, a tragedy ; which was acted, in 1719, at Lincoln's-Inn-Fields. He died in 1726.

SEWELL (William), a native of Holland, born about 1654. He was bred to surgery, and practised it at Amsterdam. He wrote the History of the Rise and Progress of the People called Quakers; and compiled a

Dictionary of the English and Low Dutch Tongues.

SEW'ER, n. s. Fr. escuyer trenchant ; or old r'r. asseour, from asseoir to set down ; for those 'fficers set the dishes on the table. — Newton. An officer who serves up a feast.

Marshalled feast,

Served up in hall with sewers and seneschals : The skill of artifice or office mean. Stilton.

The cook and sewei each his talent tries, In various figures scenes of dishes rise. Swift.

SEW'ER, n. s. From issue, issuer. A passage for water to run through, often corrupted to shore.

The fenmen hold that the sewers must be kept so, as tta water may not stay too long ;n the spring, till the weeds and sedge be grown up. Bacon.

; SEW

Men suffer their private judgment to be drawn into the common sewer or stream of the present vogue.

King Cliarles

As one who long in populous city pent, Where houses thick, and sewers annoy the air, Forth issuing on a summer's morn to breathe Amonj; the pleasant villages and farms Adjoined from each thing met conceives delight.

Milton.

SEWERS, COMMON, in ancient Rome, were executed at a great expense. It was proposed that they should be of sufficient dimensions to admit a waggon loaded with hay. When these common sewers came to be obstructed, or out of repair, under the republic, the censors contracted to pay 1000 talents, or about £l 93,00 / for clearing and repairing them. They were again in disrepair at the accession of Augustus, and the reinstating them is mentioned among the great works of Agrippa. He is said to have turned the course of seven rivers into these subterraneous passages, to have made them navigable, and

to have actually passed in barges under the streets and buildings of Rome. These works are still supposed to remain ; but, as they exceed the power and resources of the present city to keep them in repair, they are quite concealed, except at one or two places. They were, in the midst of the Roman greatness, and still are, reckoned among the wonders of the world ; and yet they are safd to have been works of Tarquin I., a prince whose territory did not extend, in any direction, above sixteen miles ; and, on this supposition, they must have been made to accommodate a city that was calculated chiefly for the reception of cattle, herdsmen, and banditti. Rude nations sometimes execute works of great magnificence, as fortresses and temples, for the purposes of war and superstition; but seldom palaces, and still more seldom works of mere convenience and cleanliness, in which for the most part they are long defective. It is not un • reasonable, therefore, to question the authority of tradition in respect of this singular monument of antiquity, which so greatly exceeds what the best accommodated city of modern Europe could undertake : and as those works are still entire, and may continue so for thousands of years, it has been suspected that they were even prior to the settlement of Romulus, and may have been the remains of a more ancient city, on the ruins of which the followers of Romulus settled, as the Arabs now encamp on the ruins of Palmyra and Balbeck. Livy owns that the common sewers were not accommodated to the plan of Rome, as it was laid out in his time ; they were carried in directions across the streets, and passed under buildings of the greatest antiquity. This derangement indeed he imputes to the hasty rebuilding of the city after its destruction by the Gauls ; but haste, it is probable, would have determined the people to build on their old foundations, or at least not to change them so much as to cross* the direction of former streets.

SEWERS, COURT OF COMMISSIONERS OF, a temporary tribunal in England, erected by vir-tue of a commission under the great seal; which formerly used to be granted pro re nata at the pleasure of the crown, but now at the discretion and nomination of the lord chancellor, lord trea

surer, and chief justices, pursuant to the statute 23 Hen. VIII. c. 5. Their jurisdiction is to overlook the repairs of sea-banks and sea-walls and the cleansing of rivers, public streams, ditches, and other conduits, whereby any waters are carried off; and is confined to such county or particular district as the commission shall expressly name. The commissioners are a court of record, and may fine and imprison for contempts ; and in the execution of their duty may proceed by jury, or upon their own view, and may take order for the removal of any annoyances, or the safeguard and conservation of the sewers within their commission, either according to the laws and customs of Romney-marsh, or otherwise at their own discretion. They may also assess such rates or scots upon the owners of lands within their district as they shall judge necessary ; and, if any person refuse to pay them, the commissioners may levy the same by distress of his goods and chattels ; or they may, by statute 23 Hen. VIII. c. 5, sell his freehold lands (and by the 7 Ann. c. 10, his copyhold also), in order to pay such scots or assessments. But their conduct is under the control of the court of king's-bench, which will prevent or punish any illegal or tyrannical proceedings. And yet in the reign of king James I. (8th of November 1616) the privy council took upon them to order that no action or complaint should be prosecuted against the commissioners unless before that board ; and committed several to' prison who had brought such actions at common law, till they should release the same : and one of the reasons for discharging Sir Edward Coke from his office of lord chief justice was for countenancing those legal proceedings. The pretence for these arbitrary measures was no other than the tyrant's plea for the necessity of unlimited powers in works of evident utility to the public — ' the supreme reason above all reasons, which is the salvation of the king's lands and people.' But now it is clearly held that this (as well as all other inferior jurisdictions) is subject to the discretionary coercion of his majesty's court of king's bench.

SEX, n. s. Fr. sexe ; Lat. sexus. The property by which any animal is male or female.

These two great texet animate the world. Milton.

Under his forming hands a creature grew, Manlike, but different sex.

Id.

Shame is hard to be overcome ; but, if the tei once get the better of it, it gives them afterwards no more trouble. Garth.

SEXACESSES, in Roman antiquity, a coin valued at sixty asses.

SEXAGENARY, or SEXAGESIMAL ARITHMETIC, is a method of computation proceeding by sixties ; such is that used in the division of a de-gree into sixty minutes, of the minute into sixty seconds, of the second into sixty thirds, &c.

SEXAGENARY TABLES are tables of proportional parts, showing the product of two sexage-naries that are to be multiplied, or the quotient of the two that are to be divided.

SEXAGESIMA is the Sunday next to Shrove Sunday, so called as being about the sixtieth day before Easter.

SEXAGESIMALS, or SEXAGESIMAL FRAC-

TIONS, fractions whose demoninators proceed in a sexagecuple ratio ; that is a prime, or the first in i-nute, = d,; a second = 3ˆ; a third = 5ˆ. Anciently there were no other than sexagesimals used in astronomy ; and they are still retained in many cases, though decimal arithmetic begins to grow in use now in astronomical calculation. In these fractions, which some call astronomical fractions, the denominator being always 60, or 3 multiple thereof, is usually omitted, and th numerator only written down : thus, 4°, 59\ 32” 40”, 16’”, is to be read, 4 degrees, 59 minutes, 32 seconds, 40 thirds, 16 fourths, &c.

SEXAN’GLED, adj. > From Lat. tex and

SEXAN’GULAR. J angulus. Having six

corners or angles ; hexagonal.

The grubs from their sexangular abode Crawl out unfinished like the maggot’s brood.

Dry den.

SEXTANS, SEXTANT, a sixth part of certain things. The Romans having divided their as into twelve unciae or ounces, the sixth part of that, or two ounces, was the sextans.

SEXTANS was also a measure which contained two ounces of liquor, or two cyathi.

SEXTANS, in astronomy, a constellation of the southern hemisphere, made by Hevelius out of unformed stars. See ASTRONOMY.

SEXTANT, in mathematics, denotes an arch comprehending 60°.

SEXTANT is also particularly used for an astronomical instrument made like a quadrant, excepting'that its limb only comprehends 60°. The use and application of the sextant is the same with that of the quadrant. See QUADRANT, and NAVIGATION.

SEXTL/E AQU.E, an ancient town of Gallia Cisalpina, built by Caius Sextius, a lieutenant of Julius Caesar, famous for its hot and cold baths. The Cimbri were defeated near it by Marius. (Liv. 61, Vel. Pat. 1. c. 15). It is now called Aix.

SEXTILE, adj. Lat. sextilis. In such a position or aspect of two planets, when at 60° distance, or at the distance of two signs from one another, marked thus *.

Planetary motions and aspects, la textile, square, and trine. Milton.

The moon receives the dusky light we discern in its textile aspect from the earth's benignity.

f"'anville.

SEXTILE TWICE, or BISSEXTILE, in chronology, the name given by the Romans to the in-tercalary day which followed the sixth of the kalends of March every leap-year, which is hence still called bissextile.

SEXTILIS (Lat. i. e. the sixth month, from March), in chronology, the name given by the Romans to the month of August, during the whole time of the kingdom and republic, and until the reign of the emperor Augustus, when it was changed in compliment to him, as Quintilis had been previously changed to July in honor of his uncle Julius Caesar. See ROME. -

SEXTIUS (Quintus), a Pythagorean philosopher, who nourished, under Augustus. He seem-ed formed to rise in the republic ; but he shrunk from civil honors, and declined accepting the rank of senator when it was offered him bv

Julius Cssar, that he might have time to apply to philosophy. It appears that he wished to establish a school at Rome, and that his tenets, though chiefly drawn from the doctrines of Pythagoras, in some particulars resembled those of the Stoics. His laws were tinctured with great severity ; and, in an early period of his establishment, he found his mind so harassed, and the harshness of the doctrines which he wished to establish so repulsive to his feelings, that he nearly worked himself up to such a height of desperation, as to put a period to his existence. Of the school of Sextius were Fabianus, Sotion, Flavianus, Crassitius, and Celsus. Of his works only a few fragments remain ; and whether any of them formed a part of the work which Seneca admired so much cannot now be determined. Some of his maxims are valuable. He recommended an examination of the actions of the day to his scholars when they retired to rest; he taught that the road to heaven (ad astra) was by frugality, temperance, and fortitude. He used' to recommend holding a looking-glass before persons disordered with passion. He enjoined his scholars to abstain from animal food.

SEXTON, n. s. Corrupted from sacristan. An under officer of the church, whose business is to dig graves.

A stool and cushion for the sexton. Shakspeare.

When any dies then, by tolling a bell or bespeak-ing a grave of the sexton, the same is known to the searchers corresponding with the said texton.

Graunt.

They may get a dispensation to hold the clerk-ship and sextowhip of their own parish in commen-dam. Swift.

SEXTON is thus called by corruption of the Latin sacrista, or Saxon

segerstone, which denotes the same. His office is to take care of the vessels, vestments, Sec., belonging to the church ; and to attend the minister, church-warden, &c., at church. He is usually chosen by the parson only. Sextons, as well as parish-clerks, are regarded by the common law as persons who have freehold in their offices ; and therefore, though they may be punished, yet they cannot be deprived, by ecclesiastical censures. The office of sexton in the pope's chapel is appropriated to the order of the hermits of St. Augustine. He is generally a bishop, though sometimes the pope only gives a bishopric in partibus to him on whom he confers the post. He takes the title of Prefect of the pope's Sacristy, and has the keeping of the vessels of gold and silver, the relics, &c. When the pope says mass, the sexton always tastes the bread and wine first. If it be in private he says mass, his holiness, of two wafers, gives him one to eat ; and, if in public, the cardinal, who assists the pope in quality of deacon, of three wafers, gives him two to eat. When the pope is desperately sick, he administers to him the sacrament of extreme unction, &c., and enters the conclave in quality of first conclavist. The office of a sexton in Sweden is somewhat singular. During M. Outhier's stay at Stockholm, in 1736, he visited the church of St. Clara, and during divine service he observed a sexton going about with a long rodj-waking those persons who had fallen asleep.

SEXTUPLE, adj. Lat. sextupha. Sixfold; six times told.

Man's length, being a perpendicular from the ver-tex unto the sole of the foot, is sextuple unto his breadth, or a right line drawn from the ribs of one side to another. Browne.

SEXTUPLE, in music, denotes a mixed sort of triple, which is beaten into double time.

SEXTUS, a Stoic philosopher, born at Chae-ronaea in Boeotia, and said to be nephew of Plutarch. He was preceptor to the emperors Mar-cus Aurelius and Lucius Verus.

SEXTUS EMPIRICUS, a famous Pyrrhonian philosopher, who lived in the second century, under Antoninus. He was a physician of the sect of the Empirics, and is said to have been one of the preceptors of Antoninus the philosopher. There are still extant his Pyrrhonian Institutions, and a large work against the mathematicians, &c. The best edition of Sextus Empiricus is that of Fabricius in Greek and Latin, printed at Leipsic in 1718, folio.

SEXTUS POMPEIUS FESTUS. See FESTUS.

SEXTUS TARQUINIUS, one of the sons of Tarquin II., the last king of Rome; — whose unbridled lust occasioned the suicide of Lucretia, and the consequent revolution of Rome, by the abolition of the monarchy, and the erection of the Roman republic. See ROME. .

SEXUAL SYSTEM, the beautiful system of bo-tany discovered and arranged by Linnaeus. See BOTANY, Index.

SEXUALIST/E (Sexualists), among botanical writers, those who have established the classes of plants upon the differences of the sexes and parts of fructification in plants, according to the modern method ; as Linnaeus, &,c.

SEYDLER SALT, or SEDLITZ SALT, names given to Epsom salt (see MINERAL WATERS); now named, with more propriety, sulphate of magnesia.

SEZAWUL [Hindoo], in Bengal, an officer employed occasionally to collect the revenue, and enforce payment.

SFOIIZA (James), the founder of the illustrious house of Sforza, which acted so conspicuous a part in Italy during the fifteenth and sixteenth centuries, which gave six dukes to Milan, and contracted alliances with almost every sovereign in Europe. James Sforza was born on the 28th of May, 1369, at Catignola, a small town in Italy, between Imola and Fae'nza. His father was a day-laborer, or, according to Commines, a shoemaker. A company of soldiers happening one day to pass through Catignola, he was seized with the desire of accompanying them to the wars. ' I will go,' sajd he to himself, ' and dart my hatchet against that tree ; and, if it stick fast in the wood, I will immediately become a soldier.' The hatchet accordingly stuck fast, and our adventurer enlisted ; and because, says the abbe de Choisi, he had thrown the axe with all his force, he assumed the name of Sforza; for his true name was Gia-comuzzo or James Attendulo. He rose rapidly in the army, and soon became commander of 7000 men. He defended the cause of Jane II. queen of Naples for many years, and was made constable of her kingdom. He was created

count of Catignola by pope John XXII. by way of paying a debt of 14,000 ducats, which the church of Rome owed him. His exploits

became every day more illustrious ; he obliged Alphonso king of Arragon to raise the siege of Naples ; and reduced several places that had revolted in Abruzzo and I-e Labour ; but while in pursuit of his enemies he was unfortunately drowned in the river Aterno on the 3d of January, 1424, at the age of fifty-four years. In his youth he fell in love with a woman called Lucia Trezana, whom he married, after she had borne him several children. He married afterwards Antoinette Salembini, who brought him several excellent estates ; she bore him Bosio Sforza, compte of Srnta-Flor, a warrior and governor of Or vietta for pope Martin V. His third wife was Catharine Alopa, sister of Rodolpho, grand chamberlain to the sovereign of Naples. His last wife was Mary Marzana, daughter to the duke of Sessa. She bore him Charles Sforza, who was general of the order of Augustines, and archbishop of Milan.

SFORZA (Francis), the son of James Sforza, by Lucia Trezana, was bom in 1401, and trained up by his father to the profession of arms. At the age of twenty-three he defeated the troops of Braccio, who disputed with him the passage of the Aterno. In this action his father was drowned, and Francis, though illegitimate, succeeded him. He fought successfully against the Spaniards, and contributed a great deal both towaids raising the siege of Naples, and to the victory which was gained over the troops of Braccio near Aquila, in 1425, where that general was killed. After the death of queen Jane, in 1435, he espoused the interests of the duke of Anjou, to whom she had left her crown, and by his courage and abilities ably supported that unfortunate prince. He made himself master of several places in Ancona, from which he was driven by pope Eugenius IV., who defeated and excommunicated him ; but he soon re-established his affairs by a victory. His reputation was now so great that the pope, the Venetians, and the Florentines, chose him for their general against the duke of Milan. Sforza had already conducted Venetian armies against that prince, though he had espoused his daughter. The duke dying, in 1447, the inhabitants of Milan invited Sforza, his son-in-law, to lead them against that duke. But, after some exertions in their favor, he turned his arms against themselves, laid siege to Milan, and obliged them to receive him as duke, notwithstanding the rights of Charles duke of Orleans, the son of Valentine of Milan. In 1464 Louis XI., who hated Orleans, gave up to Sforza the rights which the crown of France had over Genoa, and even put into his hands Savona, a town belonging to that republic. The duke of Milan soon after made himself master of Genoa. He died in 1466, with the reputation of a man who was willing to sell his blood to the best purchaser, and who was not too scrupulous an observer of his word. His second wife was Blanche

Marie, natural daughter of Philip Marie duke of Milan. She bore him Galeas Marie, and Ludovic Marie, dukes of Mi-fan, Philip Marie count of Pavia, Sforza Marie

duke of Bari, Ascanius Marie bishop of Pavia and Cremona, and a cardinal. He was taken prisoner by the troops of Louis XII., and confined for some time in the tower of Bourges. He was a cunning man, and deceived cardinal d'Amboise when that prelate aspired at the pa-pacy. His daughters were Hyppolita, married to Alphonso of Arragon, afterwards king of Na-ples, and Elizabeth, married to William marquis of Montferrat. He had also several natural children.

SHAB'BY, adj. ˆ Belg. schaben. A word

SUAB'BINESS, n.s. J that has crept into conversation and low writing, but ought not to be admitted into the language, says Johnson. Mean ; paltry : the noun substantive corresponding.

He exchanged his gay shabbiness of clothes, fit for a much younger man, to warm ones that would be decent for a much older one. Spectator.

The dean was so shabby, and looked like a ninny. That the captain supposed he was curate to Jenny.

Svift.

SHACK, in ancient customs, a liberty of winter-pasturage. In the counties of Norfolk and Suffolk the lord of the manor has shack, i. e. a liberty of feeding his sheep at pleasure in his tenants' lands during the six winter months. In Norfolk, shack also extends to the common for hogs, in all men's grounds, from the end of harvest till seedtime. Whence to go a-shack, is to feed »t large.

SHAC'KLE, v. a. & n. s. Belg. schaeckelen. To chain ; to fetter ; to bind : the noun substantive corresponding.

Himself he frees by secret means unseen, His shackles empty left, himself escaped clean.

Faerie (Jueen. It is great,

To do that thing that ends all other deeds ; Which shackles accidents, and bolts up change.

Shuitsp"iire.

The forge in fetters only is employed ; Our iron mines exhausted and destroyed In shackles. _ Dryden't Juvenal.

You must not skackle and tie him up with rules about indifferent matters. Locke.

So the stretched cord the shackled dancer tries, As prone to fall as impotent to rise. Smith.

A servant commonly is less free in mind than in condition ; his very will seems to be in bonds and shackles, and desire itself under durance and captivity. , Sou th.

No trivial price

Should set him free, or small should be my praise To lead him shackled. Philips.

SHACKLES, aboard a ship, are those oblong iron rings, bigger at one end than at the other, with which the ports are shut fast, by thrusting the wooden bar of the port through them. There is also a sort of shackles to lift the hatches up with, of a like figure, but smaller. They are fastened at the corners of the hatches.

SHAD, a large species of herring (dupea)* which inhabits the sea near the mouths of lar_e rivers, and in the spring ascends them for the purpose of depositing its spawn in tiie shallow water about their sources. The young fry re-main for a season in the waters which gave them birth, but on the approach of cold weather descend the rivers, and take ref ge in the oceau.

The old ones likewise return, and at this time, are emaciated and unfit for food. The form oi the shad is the same as that of the other herrings, very much compressed, with the abdomen gradually becoming thinner, and forming a serrated edge; and, like them, the bones are much more numerous and more slender than in other fish.

The shad which frequents the waters of America has not been accurately compared with the European, but is probably a different species. It usually weighs four or five pounds, but sometimes twelve : the scales are easily detached, when a row of dark spots is exposed on each side. It is found in all the rivers of the Atlantic coast, is highly esteemed for food, and is consumed in great quantities, in the fresh state, in some American cities. During the sea-son they are an important source of wealth to the inhabitants of the borders of the Hudson, Delaware, and Chesapeake. Great quantities are salted, but are less esteemed than when eaten fresh.

SHADDOCK, a large species of orange, attaining the diameter of seven or eight inches, with a white, thick, spongy and bitter rind, and a red or white pulp, of a sweet taste, mingled with acidity. It is a native of China and Japan, and was brought to the West Indies by a Captain Shaddock, from whom it has derived its name. It is often called pumpelmoes. See ORANGF.

SHA'DE, n. s. & v. a. -> Sax peatm ; Belg. SHAD'OW, n. s. r schade ; Teut. schntten,

SHAD'OWY, adj. fTrre darkness caused

SHA'DY. jbyan interception of

light ; obscurity ; an obscure or retired place ; coolness made by the interception of light; screen ; shelter; the darker parts of a picture; a gradation of light; the dark outline of a body, formed by its being placed between any surface and the light ; the soul, considered as separate from the body : to shade is to cover from light or heat ; shelter ; protect ; mark the gradations of light : shadow is synonymous with shade in most of its senses, but is more commonly used for the representation of a body which intercepts the light ; an imperfect or faint representation of any^ind; an inseparable companion or follower; a typical or mystical representation : the verb and adjective strictly corresponding with shade, noun substantive : shady expressing an abundance of shade.

A shadow is a diminution of the first and second light. The first light is that which proceeds immediately from a lightened body, as the beams of the sun. The second is an accidental light, spreading itself into the air, or medium, proceeding from the other. Shadows are threefold : the first is a single shadow, and the least of all : and is proper to the plain surface, where it is not wholly possessed of the light. The second is the double shadow, and it is used when the surface begins once to

forsake your eye as in columns. The third shadow is made by crossing over your double shadow again, which dark-eneth by a third part. It is used for the inmost sha-dow, and farthest from the light, as in gulfs, wells, and caves. Peacham.

Turnsoil is made of old linen rags dried, and laid in a saucer of vinegar, and set over a chafing-dish of coals, till it boil ; then wring it into a shell, and put VOL. XX.

it into a little gum arabick : it is good to shadow carnations and all yellows. /j.

The wakeful bird

Sings darkling, and in shadiest covert hid Tunes her noctuinal note. Milton's Paradise Lost.

Then to the r'esarl. takes his night ; Where still from wade to shade the Son of God, After forty days fasting, had remained. Milton.

Leave not the faithful side

That gave tliee being, still shades thee and protects.

la

The portal shone, inimitable on earth By model, or by shading pencil drawn. Id.

If substance might be call'd that shadow seemed.

' Id. Without the least impulse or shadow of fate. Id.

Thou my shadow

Inseparable must with me be long. Id.

Types and shadows of that destined seed. Id.

Whereat I waked, and found Before mine eyes all real, as the dream Had lively shadowed. Id. Paradise Lost.

More pleasant light Shadowy sets off the face of things. Milton.

The weaker light unwillingly declined, And to prevailing shades the

murmuring world resigned. Roscommon.

By the revolution of the skies Night's sable shadows from the ocean rise. Denham.

Amongst the creatures are particular excellencies scattered, which are some thadows of the divine perfections. Tillotsm.

Stretched at ease you sing your happy loves, And Amaryllis fills the shady groves. Dryden.

And, after these, came armed with spear and

shield

An host so great as covered all the field ; And all their foreheads, like the knights before, With laurels ever green were shaded o'er. /./.

'Tis every painter's art to hide from sight, And cast in shades, what seen would not delight.

Id.

To Tranchin, swift as thought, the flitting shade Thro' air his momentary journey made. Id.

To the secret shadows I retire, To pay my penance till my years expire. Id.

After great lights there must be great shadows.

Id

If the parts be too much distant, so that there be void spaces which are deeply shadowed, then place in those voids some fold, to make a joining of the parts.

Id. Dufresnoy. Augustus is shadowed in the person of yEneas.

Dryden.

White, red, yellow, blue, with their several degrees or shades and mixtures, as green, come in only by the

eyes.

Locke.

The body, though it moves, yet, not changing per-ceivable distance with some other bodies, the thing seems to stand still, as in the hands of clocks, and shadows of sun-dials. Id, *

From a round globe of any uniform color, the idea imprinted on our minds is of a flat circle, variously shadowed with different degrees of light coming to our eyes. Id.

His countrymen probably lived within the shake of the earthquake, and shadow of the eclipse.

Addison.

Milton has brought into his poems two actors of a ihadowy and fictitious nature, m the persons of sin and death ; by which he hath interwoven in his fable a very b«autiful allegory. Id.

The shield being to defend the body from weapons, aptly shadows out to us the continence of the empo-

•or, which made him proof to all the attacks of pleasure. ‘ < *•

With thadowy verdure flourished high, A sudden youth the groves enjoy. Fenton.

In Brazil are trees which kill those that sit under their shade in a few hours. Arbuthnot.

Ne’er to these chambers, where the mighty rest, Since their foundation came a nobler guest ; Nor e’er was to the bowers of bliss conveyed A fairer spirit or more welcome shade. Ticket.

Envy will merit, as its shade, pursue. Pope.

Sing, while beside the shaded tomb I mourn, And with fresh bays her rural shrine adorn. Id.

Let the arched knife,

Well sharpened, now assail the spreading shades Of vegetables, and their thirsty hmbs dissever.

Philips.

SHADOW, in optics, is a privation or diminution of light by the interposition of an opaque body ; or it is a plane where the light is either altogether obstructed, or greatly weakened, by the interposition of some opaque body between it and the luminary.

SHADOW, in painting, is an imitation of a real shadow, effected by gradually heightening and darkening the colors of such figures as by their dispositions cannot receive any direct rays from the luminary that is supposed to enlighten the piece.

SHADOW, in perspective, the appearance of an opaque body, and a luminous one, whose ra’ys diverge (e. gr. a candle, lamp, &.C.), being given, to find the just appearance of the shadow, according to the laws of perspective. The method is this : — From the luminous body, which is here considered as a point, let fall a perpendicular to the perspective plane or table ; i. e. find the appearance of a point upon which a perpendicular, drawn from the middle of the luminary, falls on the perspective plane ; and from the several an-gles, or raised points of the body, let fall perpendiculars to the plane. These points, whereon the perpendiculars fall, connect by right lines with the point upon which the perpendicular let fall from the luminary falls; and continues the lines to the side opposite to the luminary. Lastly, through the raised points, draw lines through the centre of the luminary, intersecting the former; the points of intersection are the terms or bounds of the shadow.

SHADOWS, colored, a curious optical phenomenon, which was observed, a considerable number of years ago, by professor Scherffer of Vienna, and more lately by count Rumford. The count made the discovery when prosecuting his experiments upon light : of which the

reader will find some account under PHOTOMETER. ‘ Desirous,’ says he, ‘ of comparing the intensity of the light of a clear blue sky by day with that of a common wax-candle, I darkened my room, and letting the day-light from the north, coming through a hole near the top of the window-shut- ter, fall at an angle of about 70° upon a sheet of very fine white paper, I placed a burning wax-candle in such a position that its rays fell upon the same paper, and, as near as I could guess, in the line of reflection of the rays of day-light from without ; when, interposing a cylinder of wood, about half an inch in diameter, before the centre of the paper, and at the distance of about

two inches from its surface, I was much surprised to find that the two shadows projected by the cylinder upon the paper, instead of being merely shades without color, as I expected ; the one of them, that which, corresponding with the beam of day-light, was illuminated by the light of the most beautiful blue that is possible to imagine. This appearance, which was not onN unexpected, but was really in itself in the highest degree striking and beautiful, I found upon repeated trials, and after varying the experiment in every way I could think of, to be so perfectly permanent, that it is absolutely impossible to produce two shadows at the same time, from the same body, the one answering to a beam of day-light, and the other to the light of a candle or lamp, without these shadows being colored, the one yellow, and the other blue. If the candle be brought nearer to the paper, the blue shadow will become of a deeper hue and the yellow shadow will gradually grow fainter ; but, if it be removed farther off, the yellow shadow will be-come of a deeper color, and the blue shadow will become fainter; and, the candle remaining stationary in the same place, the same varieties in the strength of the tints of the colored shadows may be produced merely by opening the window-shutter a little more or less, and rendering the illumination of the paper, by the light from without, stronger or weaker. By either of these means, the colored shadows may be made to pass through all the gradations of shade, from the deepest to the lightest, and vice versa ; and it is very amusing to see shadows thus glowing with all the brilliancy of the purest and most intense prismatic colors, then passing suddenly all the varieties of shade, preserving in all the most perfect purity of tint, growing stronger and fainter, and vanishing and returning, at command.’

SHADRACH, MESHACH, AND ABEDNEGO, names given by the prince of the Babylonian eunuchs to the three captive Jewish princes, Hananiah, Mishael, and Azariah, the companions of Daniel. Their temperance, wisdom, and promotion along with Daniel; their heroic

refusal to worship Nebuchadnezzar's golden image ; and their miraculous deliverance from the fiery furnace, with the appearance of the Messiah, the destruction of their enemies, and subsequent promotion over the province, are recorded in Daniel, ch. i. and iii.

SHADWELL (Thomas), an English poet, descended of an ancient family in Staffordshire, born in 1640, and educated at Caius College, Cambridge. He then was placed in the Middle Temple to study the law ; where having spent some time, he travelled abroad. Upon his return home he became acquainted with the most celebrated persons of wit in that age. He applied himself chiefly to dramatic writing, in which he had great success ; and upon the Revolution was made poet laureat and historiographer to William and Mary, in the room of Mr. Dryden. These employments he enjoyed till his death, in 1692. The chief of his poetical pieces are his congratulatory poem on the prince of Orange's coming to England ; another on queen Mary ; his translation of Juvenal's tenth satire, Sec. Mr.

Dryden treats him with great contempt, in his satire called Mac-Fleckno. The best judges of that age, however, gave their testimony in favor of his comedies ; which have in them fine strokes of humor; the characters are often original, strongly marked, and well sustained. An~ edition of his works, with his life prefixed, was published in 1 720, in 4 vols. 8vo.

SHADWELL (Charles), the younger son of the poet, according to Chetwood, or his nephew, as Jacob has it, turned out a dramatic writer of considerable talents iii Ireland. He wrote a good number of plays, but the piece he is most tamed for is The Fair Quaker of Deal. He died in 1726.

SHAFT, n. s. Sax.]-ceapt. An arrow ; a missive weapon; a narrow, deep pit.

To pierce pursuing shield, By parents trained, the Tartars wild are taught, With shafts shot out from their back-turned bow.

Sidney. They sink a shaft or pit of six foot in length.

Carew.

Practise to draw small and easy things, as a cherry with the leaf, the shaft of a steeple.

Peacham.

Who, in the spring, from the new sun Already has a fever got,

Too late begins those shafts to shun Which Phoebus through his veins has shot. Waller.

They are both the archer and shaft taking aim afar off, and then shooting themselves directly upon the desired mark. More.

So lofty was the pile, a Parthian bow With vigour drawn must send the shaft below.

Dryden.

The fulminating damp, upon its ascension, gives a crack like the report of a gun, and makes an explosion so forcible as to kill the miners, and force bodies of great weight from the bottom of the pit up through the shaft. Woodward.

Suppose a tube, or, as the miners call it, a shaft were sunk from the surface of the earth to the center.

Arbuthnot.

SHAFT, in mining. In the tin-mines, after this is sunk about a fathom, they leave a little, long, square place, which is called a shamble. Shafts are sunk some ten, some twenty fathoms, deep into the earth, more or less. Of these shafts there is the landing or working shaft, where they bring up the work or ore to the surface ; but, if it be worked by a horse engine or whim, it is called a whim shaft; and, where the water is drawn out of the mine, it is indifferently named an engine-shaft, or the rod shaft. See MINE. SHAFT, in ornithology. See TROCHrms. SHAFT OF A COLUMN, in building, is the body thereof between the base and capital ; so called from its straightness. See ARCHITECTURE.

SHAFTESBURY, a borough and market-town, in Redland hundred, Sherborne division, Dorset, situate on a high hill, ten miles north from Blandford, and 101 W. S.W. from London. It is supposed by Camden to have been founded by Alfred; and is recorded to have been a populous city, and to have had twelve churches before the conquest: four only of which now remain ; *viz.* St. Peter's, the Holy Trinity, St. James's, and St. Rumbold's, of which St. Peter's is the principal. This place sends one member to the imperial parliament. Here

ara also meeting-houses, a free-school, and two alms-houses. In the corn market is a neat town-hall, in. which the quarter sessions are held. Water is so scarce here that the inhabitants used to be supplied with it from Melcomb, an adjacent village. Latterly, two deep wells have been dug which afford plenty of good water.

SHAG, n.s. ~i Saxon rceacjja. Rough SHAG'GED, adj. > woolly hair; rough; rug-SHAG'GY, adj. j ged. Where is your husband? He's a traitor.

— Thou lyest, thou stay-eared villain ! Shakspeare. They plucked the

seated hills with all their load, Rocks, waters, woods ; and by the shaggy tops Uplifting, bore them in their hands.

Milton's Paradise Lost. There, where very desolation dwells, By grots and caverns shagged with horrid shade, She may pass on with unblemished majesty, Be it not done in pride. Milton.

They change their hue, with haggard eyes they

stare, Lean are their looks, and shagged is their hair.

Dryden.

A lion's hide he wears ; About his shoulders hangs the shaggy skin, The teeth and gaping jaws severely grin. Id.

From the nhag of his body, the shape of his legs, his having little or no tail, the slowness of his gait, and his climbing up of trees, he seems to come near the bear kind. Grew.

How would the old king smile To see you weigh the paws when tipt with gold, And throw the shaggy spoils about your shoulders.

Addison.

True Witney broad cloth, with its shag unshorn, Be this the horseman's fence. Gay.

Ye rugged rocks ! which holy knees have worn ; Ye grots and caverns shagged with horrid thorn !

Pope.

From the frosty north,

The early valiant Swede draws forth his wings In battailous array, while Volga's stream Sends opposite, in shaggy armour clad, Her borderers, on mutual slaughter bent. Philips.

As yet black breeches were not ; satin smooth, Or velvet soft,. or plush with shaggy pile. Cowper.

SHAG, n. s. Lat. phalacrocorax. A sea-bird.

Among the first sort we reckon shags, duck, and mallard. Carew.

SHAGREEN, or CHAOREEN, in commerce, a kind of grained leather

prepared of the skin of a species of squalus, much used in covering cases, books, &c. Shagreen is also made of the skin of the onager, or wild ass, as well as of horses ; of the part that covers the rump. There are great manufactures of it at Astracan, and in all Persia.

Professor Pallas says that no accurate account of the method of preparing shagreen has ever been published in Europe previous to his own; of which we now give an abridgment : — ‘ All kinds of horses or asses skin, which have been dressed so as to appear grained, are, by the Tartars, called sauwer, by the Persians sogre, and by the Turks sagri, from which the Europeans have made shagreen or chagrin. The Tartars who reside at Astracan, with a few of the Armenians of that city, are the only people in the Russian empire acquainted with the art of mak—

jng shagreen. Those who follow this occupation .iot only gain considerable profit by the sale of their production to the Tartars of Cuban, Astracan, and Casan, who ornament with it their Turkey leather boots, slippers, and other articles made of leather, but they derive considerable advantage from the great sale of horses’ hides, which have undergone no other process than that of being scraped clean, and of which several thousands are annually exported, at the rate of from seventy-five to eighty-five roubles per 100, to Persia, where there is a scarcity of such hides, and from which the greater part of the shagreen manufactured in that country is prepared. The hind part only of the hide, however, which is cut out in the form of a crescent about a Russian ell and a half in length across the loins, and a short ell in breadth along the back, can properly be employed for shagreen. The remaining part is improper for that purpose, and is therefore rejected. The preparation of the skins, after being cut into the above form, is as follows : — They are deposited in a tub filled with pure water, and suffered to remain there for several days, till they are thoroughly soaked, and the hair has dropped off. They are then taken from the tub, one by one, extended on boards placed in an

oblique direction against a wall, the corners of them, which reach beyond the edges of the board, being made fast, and the hair with the epidermis is then scraped off with a blunt iron scraper called urak. The skins thus cleaned are again put in pure water to soak. They are then taken from the water a second time, spread out as before, and carefully scraped on both sides. They then take frames, made of a straight and a semicircular piece of wood, having nearly the same form as the skins. On these the skins are extended in as even a manner as possible by cords; and, while extending them, they are several times besprinkled with water, again moistened, and carried into the house, where the frames are deposited close to each other on the floor with the flesh side next the ground. The upper side is then thickly bestrewed with the black, smooth, and hard seeds of a kind of goose foot (chenopodium album), and, that they may make a strong impression on the skins, a piere of felt is spread over them, and the seeds are trod down with the feet, and thus deeply imprinted into the soft skins. The frames, without shaking the seeds, are then carried out into the open air, and placed in a reclining position against a wall to dry. In this state the skins are left several days to dry in the sun, until no moisture is observed in them, when they are fit to be taken from the frames. When the impressed seeds are beat off from the hair side, it appears full of indentations or inequalities, and has acquired that impression which produces the grain of the shagreen. The operation of smoothing is performed on an inclined bench or board, which is furnished with an iron hook, and is covered with thick felt of sheep's wool, on which the dry skin may gently rest. The skin is suspended in the middle of the bench to its iron hook, by one of the holes made in the edge of the skin for extending it in its frame as before mentioned ; and a cord, having

at its extremity a weight, is attached to each einl of the skin, to keep it in its position while; under the hands of the workman. It is then smoothed and scraped by two different instruments. The first is a piece of sharp iron bent like a hook, with which the surface is pretty closely scraped to remove all the projecting inequalities. This operation, from the hardness of the skin, is attended with difficulty ; and great caution is required that too much of the impression of the alabuta seed be not destroyed. After all these operations, the shagreen is again put into water, partly to make it pliable, and partly to raise the grain. As the seeds occasion indentations in the surface of the skin, the intermediate spaces, by the operations of smoothing and scraping, lose some part of their projecting substance ; but the parts which have been depressed, and which have lost none of their substance, now

swell up above the scraped parts, and thus form the grain of the shagreen. To produce this effect the skins are left to soak in water for twenty-four hours; after which they are immersed several times in a strong warm ley, obtained by boiling from a strong alkaline earth named schora, which is found in great abundance in the neighbourhood of Astracan. When the skins have been taken from this ley they are piled up, while warm, on each other and suffered to remain in that state several hours ; by which means they swell and become soft. They are then left twenty-four hours in a moderately strong pickle of common salt, which renders them exceedingly white and beautiful, and fit for receiving any color. The color most usual for these skins is a sea-green ; but old experienced workmen can dye them blue, red, or black, and even make white shagreen. For the green color nothing is necessary but filings of copper and sal ammoniac. Sal ammoniac is dissolved in water till the water is completely 'saturated ; and the shagreen skins, still moist, after being taken from the pickle, are washed over with the solution on the ungrained flesh side, and, when well moistened, a thick layer of copper filings is strewed over them : the skins are then folded double, so that the side covered with the filings is innermost. Each skin is then rolled up in a piece of felt; the rolls are all ranged together in proper order, and they are pressed down by some heavy bodies placed ever them, under which they remaili twenty-four hours, after which the skins are spread out and dried. For the blue dye indigo is used. AboufT two. pounds of it, reduced to a fine powder, are put into a kettle : cold water is poured over it, and the mixture is stirred round till the color begins to be dissolved ; five pounds of pounded alafcar, which is a kind of barilla or crude soda, are then dissolved in it, with two pounds of lime and one pound of pure honey, and the whole is kept several days in the EUU and often stirred round. The skins intended to be dyed blue must be moistened only in the natrous ley schora, but not in the salt brine. When still moist they are folded up and sewed together at the edge, the flesh side being innermost, and the shagreened hair side outwards ; after which they are dipped three times in the remains of an exhausted kettle of the same dye, the superfluous

dye being each time expressed ; and, after this process, they are dipped in the fresh dye prepared as above, which must not be expressed. The skins are then hung up in the shade to dry ; after which they are cleaned and paired. For black shagreen gall-nuts and vitriol are employed. The skins, moist from the pickle, are thickly bestrewed with finely pulverised gall-nuts. They are then folded and laid over each other twenty-four hours. A new ley, of bitter saline earth or schora, is prepared and poured hot into small troughs. In this ley each skin is several times dipped ; after which they are again bestrewed with pounded gall-nuts, and placed in heaps for a certain period, that the galls may thoroughly penetrate them, and they are dried -and beat to free them from the dust of the galls. They are then rubbed over, on the shagreen side, with melted sheep's tallow, and exposed a little in the sun, that they may imbibe the grease. The shagreen makers roll up each skin separately and squeeze it with their hands to promote the absorption of the tallow. The superfluous particles are removed by a blunt wooden scraper; and, when the skins have lain some time, a sufficient quantity of vitriol of iron is dissolved in water, with which the shagreen is moistened on both sides, and thus acquires a beautiful black dye. To obtain white shagreen the skins must first be moistened on the shagreen side with a strong solution of alum. When the skin has imbibed this liquor it is daubed over on both sides with a paste made of flour which is suffered to dry. The paste is then washed off with alum water, and the skin is placed in the sun till it is completely dry. As soon as it is dry it is gently besmeared with pure melted sheep's tallow, which it is suffered to imbibe in the sun ; and, to promote the effect, it is pressed and worked with the hands. The skins are then fastened in succession to the, before-mentioned bench, where warm water is poured over them, and the superfluous fat is scraped off with a blunt wooden instrument. Shagreen perfectly white is thus obtained, and nothing remains but. to pare the edges and dress it. But this white shagreen is not intended so much for remaining in that state as for receiving a dark red dye ; because, by the above previous process, the color becomes much more perfect. The skins destined for a red color, after they have been whitened, must be left to soak in the pickle for twenty-four hours. The dye is prepared from cochineal. About a pound of the dried herb tschagann, which grows in great abundance near Astracan, and is a kind of soda plant or kali (salsola ericoides) is boiled a full hour in a kettle containing about four common pailfuls of water ; by which means the water acquires a greenish color. The herb is then taken out,

and about half-a-pound of pounded cochineal is put into the kettle, and the liquor is left to boil a full hour. About fifteen or twenty drachms of orchilla is added, and, when the liquor has been boiled for some time longer, the kettle is removed from the lire. The skins taken from the pickle are then placed over each other in troughs ; and the dye liquor is poured over them four different times, and rubbed into them with the hands, that the color may be equally

imbibed and diffused. The liquor each time is expressed : after which they are fit for being dried. Skins prepared in this manner are sold at a much dearer rate than any of the other kinds.'

SHAHABAD, a large fertile district of the province of Bahar, Hindostan ; it is advantageously situated between the rivers Soane and Ganges, as they approach their confluence. It is estimated to contain a million of inhabitants, in the proportion of nineteen Hindoos to one Mahometan. Its towns are Chunar, Boujepore, and Arrah. It constitutes one of the British Bahar collector-ships, and is governed by a judge, who is amenable to the circuit court of Patna. Its capita! is Arrah.

SHAH JEHAN PORE, a town of Hindostan, in the province of Delhi, and district of Bareily, on the east side of the Gurrah River. Long. 79s 53' E., lat. 27° 51' N.

SHAHJEHANPORE, a town of Hindostan, province of Malwah, on the banks of the Sagor-mutty River, belonging to the Mahrattas. It is a place of consequence, being the capital of a district. Long. 76° 18' E., lat. 23° 38' N. There are several other places of the same name, called after the emperor Shah Jehan.

SHAHNOOR, SANORE, or SEVANOOR, an extensive district of Hindostan, province of Beja-pore, belonging to the Mahrattas. It is situated between the Kistna and Tungbudra, and lat. 15° N. The country is fertile and under a good government would be very productive.

SHAHNOOR, SANORE, SEVANORE, or SAVA-NOOR, a city of Hindostan, the ruined capital of the above mentioned district. It was formerly fortified, contained a palace and many good buildings, and is said to have been taken by the Mahometans so early as the' year 1397. In the course of time it became the capital of one of the many nabobs who arose into power on the decline of the empire of Delhi. The first who is mentioned is the person who attended the Nizam Nasir Jung,

when he entered the Carnatic in 1749, and in the following year took a part in the mutiny which cost Nasir “Jung his life; in the year 1751 he was himself killed in a second rebellion. The successor of this nabob seems to have sought protection from the Mahrattas against the viceroy; for in 1756 a French army, in the service of the Nizam Salbut Jung, advanced to Sevanore, to exact the tribute due from the na-bob; but, by the intrigues of the Mahratta chief, Moiari Row, this object was defeated. In 1763 Hyder Aly sent to the nabob of Shahnoor, soliciting his alliance, and that of the two other Af-ghaun nabobs of Cuddapah and Kurnoul, against the Mahrattas ; but, the former having rejected the overture, Hyder invaded his dominions, totally defeated him in a general engagement, and compelled him to submit to humiliating terms. Subsequently his country was invaded by the Mahrattas, who took permanent possession of one half of his dominions. In 1779 Hyder compelled the nabob to enter into a double marriage with his family, the nabob taking Hyder’s sister for wife, and giving his daughter to Kereem Sa-hib, the second son of Hyder. This, however, could not save the nabob from the merciless treatment of Tippoo Sultan, who, in 1 786, took ,

Shahnoor, plundered it of every thing valuable, and forced the nabob to take refuge with the Mahrattas. At the conclusion of the war Shahnoor was included in the portion of territory assigned to the Mahrattas.

SHAIL, v. n. Belg. and Teut. tchail. To walk sideways. A low word.

Child, you must walk straight, without skiewing and shading to every step you set. L’ Estrange.

SHAKE, u. a.,v.n., &n.«. J Saxon j-ceacan;

SHA’KER, n. s. \ Swedish shaka ;

Goth, skeaka. To agitate ; make to tremble or totter, or to throw down by violent motion ; to drive off ; drive away by such motion;

sometimes taking off”: to be agitated, driven, &c., in this way; be in terror : and, as a noun substantive, the concussion or motion produced : shaker corresponding.

I will shake mine hand upon them, and they shall be a spoil to their servants. Zectt. ii. 9.

The stars fell unto the earth, even as a fig-tiee casteth her untimely figs when she is thahen of a mighty wind. Rev-vi.

When ye depart, ihake off the dust of your feet.

Matt. x.

Who honours not his father, Henry the fifth, that made aU France to quake, Shake he his weapon at us, and pass by. Shakspeore.

Macbeth is ripe for shaking, and the powers above Put on their instruments. Id.

The tyrannous breathing of the north Shakes all her buds from blowing. Id.

A sly and constant knave, not to be shak’d.

Id. Cymbeline.

This respite shook The bosom of my conscience. Id. Henry VIII.

With the slave

He ne’er shook hands, nor bid farewell to him, Till he unseamed him from the nape to th’ chops.

Shakspearc. Be pleased that I ‘hake off these names you give

me : Antonio never yet was thief or pirate. Id.

Thy sight, which should

Make our eye» flow with joy, hearts dance with comforts, Constrains them weep, and shake with fear and sor-

• row. Id.

If that thy fame with every toy be pos’d, ‘Tis a thin web, which poisonous fancies make ;

But the great soldier's honour was compos'd Of thicker stuff, which could endure a ihake : Wisdom picks friends ; civility plays the rest, A toy, shunn'd cleanly, passeth with the best.

Herbert.

The rapid wheels shake heaven's basis. Milton.

Under his burning wheels The stedfast empyrean shook throughout, All but the throne itself of God. Id.

Go, then, the guilty at thy will chastise : He said ; the shaker of the earth replies.

Pope' i Odyssey.

SHAKERS, or SHAKING QUAKERS, a sect which arose at Manchester, in England, about 1747, and has since been transferred to America, where it now consists of a number of thriving familiei. The founders were a number of ob-

scure Quakers ; and the Shakers still agree with the Friends in their rejection of the civil and ecclesiastical authority, and military service, in their objection to taking oaths, their neglect of the common courtesies of society, their rejection of the sacraments, and their belief in the immediate revelations of the Holy Ghost (gifts). At first, the motions from which they derive their name were of the most violent, wild, and irregular nature — leaping, shouting, clapping their hands, &c. ; but at present, they move in a regular, uniform dance, to the singing of a hymn, and march round the hall of worship, clapping their hands in regular time. There are at present fifteen families, as their communities are called, in the United State?, comprising 6000 individuals. In these communities, the property is held in common, and the members are distinguished for their industry, frugality, honesty, and good morals. Celibacy is enjoined, and their numbers are recruited by converts. The office of leader is bestowed by impulse or revelation on him who has the gift to assume it. The sect of Shakers was first introduced into America by Anne Lee, who, in 1770, be-came their leader. She was born at Manchester, in 1736, and was the daughter of a blacksmith of Manchester, where she also, at an early age, became the wife of a blacksmith. Her first " testimony of salvation and eternal life," borne in 1770, was the injunction of celibacy as the perfection of human nature, and the holding forth herself as a divine person. She was from this time honored with the

title of ” mother Anne,” and she sty led herself ” Anne the word.” Having been persecuted in England, she went out to America in 1774, with several members of the society, and formed the first community at Watervliet, near Albany, where she died in 1784. Societies were soon organized at New Lebanon, in New York, and at Enfield, in Connecticut, and have gradually increased to their present number.

SHAKSPEARE, or SHAKESPEARE(William), the prince of dramatic writers, was born at Stratford-upon-Avon, in Warwickshire, on the 23d of April, 1564. From the register of that town it. appears that a plague broke out there on the 30th of June following, which raged with great violence ; but fortunately it did not reach the house in which this infant prodigy lay. His father, John Shakspeare, enjoyed a small patrimonial estate, and was a considerable dealer in wool; his mother was the daughter and heir of Robert Arden, of Welliugcote. Our illustrious poet, being designed for the business of his father, received no better education than the master of the fiee-sehool of Stratford could afford. After applying some time to the study of Latin, he was called home to assist his father, who seems to have been reduced in his circumstances. Before he was nineteen he married the daughter of Mr. Hathaway, a substantial yeoman near Stratford. This lady was eight years older than her husband. Having fallen into bad company, he was seduced into some profligate actions, which drew on him a criminal prosecution, and at length forced him to take refuge in the capital. In concert with his associates he broke into a park

belonging to Sir Thomas Lucy of Charlecote, and carried off some deer of his. If any thing can extenuate his guilt in this it must be the opinions of the age. One thing is certain, that Shakspeare thought the crime venial, and that the prosecution which Sir Thomas raised against him was carried on with great severity. Shakspeare testified his resentment against Lucy by writing a satirical ballad, which exasperated him so much that the process was carried on with redoubled violence; and the young poet, to avoid the punishment of the law, was obliged to fly. Of this ballad tradition has only preserved

the first stanza : —

A parliamente member, a justice of peace, At home a poor scare-crow, at London an asse. If lowsie is Lucy, as some volke miscalle it, Then Lucy is lowsie whatever befall it :

He thinks himself great,

Yet an asse in his state, We allowe by his ears but with asses to mate. If Lucy is lowsie, as some volke miscalle it, Sing lowsie Lucy whatever befall it.

If the rest of the ballad were of a piece with this stanza, it might assist us to form some opinion of the irritability of the baronet, but could convey no idea of the opening genius of Shakspeare. Thus expelled from his native village, he repaired to London, where he was glad to accept a subordinate office in the theatre. It has been said that he was first engaged, while the play was acling,in holding the horses of those who rode to the theatre. As his name is found printed among those of the other players, before some old plays, it is probable that he was some time employed as an actor ; but we are only told that the part which he acted best was that of the Ghost in Hamlet; and that he appeared in the character of Adam in As You Like It. In Ben Jonson's play of Erery Man in his Humor, Shakspeare is said to have played the part of Old Knowell. See Malone's Chronology, in his edition of Shakspeare. But, though not qualified to shine as an actor, he was now in the situation which could most effectually rouse those latent sparks of genius which afterwards burst forth with so resplendent a flame. Being well acquainted with the mechanical business of the theatre and the taste of the times ; possessed of a knowledge of the characters of men resembling intuition, an imagination that ranged at large through nature, selecting the grand, the sublime, and the beautiful ; a judicious caution, that disposed him to prefer those plots wnich had already been found to please ; an uncommon fluency and force of expression ; he was qualified at once to eclipse all who had gone before him. Notwithstanding the unrivalled genius of Shakspeare, most of his plots were the invention of others, which, however, he certainly much improved, if he did not entirely new-model. Among his patrons, the earl of Southampton is particularly honored by him, in the dedication of two poems, Venus and Adonis, and Lucrece; in the latter, especially, he expressed himself in such terms as gives countenance to what is related of that patron's distinguished generosity to him. In the beginning of king James I.'s reign (if not sooner) he was one of the principal managers of the playhouse, and

continued in it several years afterwards; till, having acquired such a fortune as satisfied his moderate wishes and views in life, he quitted the stage, and all other business, and passed the remainder of his time in an honorable ease, at his native town of Stratford, where he lived in a handsome house of his own purchasing, to which he gave the name of New Place ; and he had the good fortune to save it from the flames in the dreadful fire that consumed the greatest part of the town in 1614. In the beginning of 1616 he made his will, wherein he testified his respect to his quondam partners in the theatre ; he appointed his youngest daughter, jointly with her husband, his executors, and bequeathed to them • the best part of his estate, which they came into the possession of not long after. He died on the 23rd of April following, being the fifty-third year of his age ; and was interred among his ancestors on the north side of the chancel, in the great church of Stratford, where there is a handsome monument erected for him, inscribed with the following elegiac distich in Latin : — Judicio Pylium, genio Socratem, arte Maronem, Terra tegit, Populus moeret, Olympus habet. In 1740 another very noble one was raised to his memory at the public expense, in Westminster Abbey ; an ample contribution for this purpose being made upon exhibiting his tragedy of Julius Caesar, at the Theatre-Royal in Drury Lane, April 28th, 1738. A mulberry tree, planted upon his estate by his own hands, was cut down not many years ago; and the wood being converted to several domestic uses was all eagerly bought at a high price, and each single piece treasured up by its purchaser as a precious memorial of the planter. The character of Shakspeare as a dramatic writer has been often drawn, but perhaps never with more accuracy than by Dr. Johnson :— ‘ Shakspeare,’ says he, ‘ is, above all writers, at least above all modern writers, the poet of nature ; the poet that holds up to his readers a faithful mirror of manners and of life. His characters are not modified by the customs of particular places, unpractised by the rest of the world ; by the peculiarities of studies or professions, which can operate but upon small numbers ; or by the accidents of transient fashions or temporary opinions; they are the genuine progeny of common humanity, such as the world will always supply, and observation will alvvays find. His persons act and speak by the influence of those general passions and principles by which all minds are agitated, and the whole system of life is continued in motion. In the writings of other poets a character is too often an individual ; in those of Shakspeare it is commonly a species. It is from this wide extension of design that so much instruction is derived. It is this which fills the plays of Shakspeare with practical axioms and domestic wis-

dom. It wa<(said of Euripides that every verse was a precept; and-it may be said of Shakspeare that from his works may be collected a system of civil and economical prudence. Yet his real power is not shown in the splendor of particular passages, but by the progress of his fable, and the tenor of his dialogue ; and he that tries to recommend him, by select quotations,

will succeed like the pedant in Hierocles, who, when he offered his house to sale, carried a brick in his pocket as a specimen. Upon every other stage the universal agent is love, by whose power all good and evil is distributed, and every action quickened or retarded. But love is only one of many passions ; and, as it has no great influence upon the sum of life, it has little operation in the dramas of a poet who caught his ideas from the living world, and exhibited only what he saw before him. He knew that any other passion, as it was regular or exorbitant, was a cause of happiness or calamity. Characters thus am.p!e and general were not easily discriminated and preserved ; yet perhaps no poet ever kept his personages more distinct from eacli other. Other dramatists can only gain attention by hyperbolical or aggravated characters, by fabulous and unexampled excellence or depravity, as the writers of barbarous romances invigorated the reader by a giant and a dwarf; and he that should form his expectations of human affairs from the play, or from the tale, would be equally deceived. Shakspeare has no heroes ; his scenes are occupied only by men, who act and speak as the reader thinks that he should himself have spoken or acted on the same occasion : eveh where the agency is supernatural, the dialogue is level with life. Other writers disguise the most natural passions and most frequent incidents : so that he who contemplates them in the book will not know them in the world : Shakspeare approximates the remote, and familiarises the wonderful ; the event which he represents will not happen, but, if it were possible, its effects would probably be such as he has assigned ; and it may be said that he has not only shown human na-ture as it acts in real exigences, but as it would be found in trials to which it cannot be exposed. This, therefore, is the praise of Shakspeare, that his drama is

the mirror of life ; that he who has mazed his imagination, in following the phantoms which other writers raise up before him, may here be cured of his delirious ecstacies, by reading human sentiments in human language; by scenes from which a hermit may estimate the transactions of the world, and a confessor predict the progress of the passions.' The learning of Shakspeare has frequently been a subject of enquiry. That he possessed much classical knowledge does not appear, yet he was certainly acquainted with the Latin poets, particularly with Terence, as Colman has justly remarked, which appears from his using the word thraso-nical. Nor was he unacquainted with French and Italian. We are indeed told that the passages in which these languages occur might be impertinent additions of the players; but is it probable that any of the players so far surpassed Shakspeare ? That much knowledge is scattered over his works is very justly observed by Pope ; but it is often such knowledge as books did not supply. ' There is, however, proof enough,' says Dr. Johnson, ' that he was a very diligent reader; nor was our language then so indigent of books, but that he might very liberally indulge his curiosity without excursion into foreign literature. Many of the Roman authors were trans-lilted, and some of the GreeTc ; the Reformation

had filled the kingdom with theological learning , most of the topics of human disquisition had found English writers ; and poetry had been cultivated, not only >fith diligence, but success. This was a stock of knowledge sufficient for a mind so capable of appropriating and improving it.' The works of Shakspeare consist of thirty-,five dramatic pieces. The following is the chronological order, which Mr. Malone has endeavoured to establish, after a minute investigation, in which he has in general been successful : —

1. First Part of King Henry VI. . 1589

2. Second Part of King Henry VI. . 1591

3. Third Part of King Henry VI. . 1591

4. A Midsummer Night's Dream . 1592

5. Comedy of Em>rs … 1593

6. Taming of the Shrew … 1594 • 7. Love's Labor Lost … 1594

8. Two Gentlemen of Verona . . 1595

9. Romeo and Juliet … 1595

10. Hamlet 1596

11. King John …. 1596

12. King Richard II. … 1597

13. King Richard III… . 1597

14. First Part of King Henry IV. . 1597

15. Second Part of King Henry IV. 1598

16. The Merchant of Venice . . 1598

17. All’s Well that Ends Well . .1598

18. King Henry V 1599

19. Much Ado About Nothing . . 1600

20. As You Like It … .1600

21. Merry Wives of Windsor . .1601

22. King Henry VIII… . 1601

23. Troilus and Cressida … 1602

24. Measure for Measure … 1603

25. The Winter’s Tale …1604

26. King Lear 1605

27. Cymbeline 1605

28. Macbeth 1606

29. Julius Caesar … .1607

30. Antony and Cleopatra … 1608

31. Timon of Athens …1609

32. Coriolanus 1610

33. Othello … . . 1611

34. The Tempest …. 1612

35. Twelfth Night …. 1614

The first three of these, Mr. Malone thinks, there is very strong reason to believe are not the original productions of Shakspeare ; but that he probably altered them, and added some new scenes. In the first folio edition, in 1623, these plays were entitled ‘ Mr. William Shakspeare’s Comedies, Histories, and Tragedies.’ They have been published by various editors. The first folio edition by Isaac Jaggard and Edward Blount ; the second folio, 1632, by Thomas Cotes for Robert Allott ; the third, 1664, for P. C.; the fourth, 1685, for H-Herringham. E. Brewster, and R. Bentley. Rowe published an 8vo. edition in 1709, in 7 vols, and a 12mo. edition in 1714 in 9 vols., for which he received £36 10s. Pope published a 4to. edition in 1725 in 6 vols., and a 12mo in 1728 in 10 vols., for which he was paid £217 12s. Theobald gave a new edition in 8vo. in 1733 in 7 vols., another in 12mo in 1740 in 8 vols., and received for his labor £625 10s. Sir Thomas Ilanmer published

an edition in 1744 in 6 vols. 4to. Dr. Warburt-CMi’s 8vo. edition came out in 1747 in 8 vols., for which he was paid £560. The editions published since that time are Dr. Johnson’s in 1765 in 8 vols. 8vo. ; Steven’s in 1766 in 4 vols. 8vo. ; Capell’s in 1768 in 10 vols. crown 8vo., for this the author was paid £300. A second edition of Hanmer’sin 1771 in 6 vols. ; Johnson’s and Stevens’s in 1773 in 10 vols. 8vo. ; a second edition in 1778; a third by Reed in 1785 ; and Malone’s crown 8vo. edition in 1789 in 10 vols. The most authentic of the old editions is that of 1623. ‘At last,’ says’ Dr. Johnson, ‘ an edition was undertaken by Rowe ; not because a poet was to be published by a poet, for Rowe seems to have thought very little on correction or explanation, but that our author’s works might ap-pear like those of his fraternity, with the appendages of a life and recommendatory preface, Rowe has been clamorously blamed for not

performing what he did not undertake, and it is time that justice be done him, by confessing, that though he seems to have had no thought of correction beyond the printer's' errors, yet he has made many emendations, if they were not made before, which his successors have received without acknowledgment, and which, if they had produced them, would have filled pages with censures of the stupidity by which the faults were committed, with displays of the absurdities which they involved, with ostentatious expositions of the new reading, and self-congratula- tions on the happiness of discovering it. The nation had been for many years content with Mr. Rowe's performance, when Mr. Pope made them acquainted with the true state of Shakspeare's text, showed that it was extremely corrupt, and gave reason to hope that there were means of reforming it. Mr. Pope's edition, however, he observes, fell below his own expectations; and he was so much offended, when he was found to have left any thing for others to do, that he passed the latter part of his life in a state of hostility with verbal criticisms. The only tisk, in the opinion of Mr. Malone, for which Pope was eminently and indisputably qualified, was to mark the faults and beauties of his author. When he undertook the office of a commentator, every anomaly of language, and every expression that was not currently in use, were considered as errors or corruptions, and the text was altered or amended, as it was called, at pleasure. Pope is openly charged with being one of the great corrupters of Shakspeare's text. Pope was succeeded by Theobald, who collated the ancient copies, and rectified many errors. He was, however, a man of narrow cpmpfehension and of little learning; and, what is worse, in his reports of copies and editions, he is not to be trusted without examination. From the liberties taken by Pope, the edition of Theobald was justly preferred, because he professed to adhere to the ancient copies more strictly, and illustrated a few passages by extracts from the writers of our poet's age. Still, however, he was a considerable innovator; and, while a few arbitrary changes made by Pope were detected, innumerable sophistications were silently adopted. Sir Thomas Hanmer, who comes next, was a man of critical

abilities, and of extensive learning. His correc-tions are commonly just, but sometimes capricious. He is censurable, too, for receiving without examination almost all the innovations of Pope. The original and predominant error of Warburton's commentary is acquiescence in his first thoughts ; that precipitation which is produced by consciousness of quick discernment ; and that confidence which presumes to do, by surveying the surface, what labor only can perform by penetrating to the bottom. His notes exhibit sometimes perverse

interpretations, and sometimes improbable conjectures; he at one time gives the author more profundity of meaning than the sentence admits, and at another discovers absurdities where the sense is plain to every other reader. But his emendations are likewise often happy and just; and his interpretation of«obscure passages learned and sagacious. It has indeed been said by his defenders, that his great object was to display his own learning ; and certainly, in spite of the clamor raised against him for substituting his own chimerical conceits instead of the genuine text of Shakspeare, his work increased his reputation. But as it is of little value as a commentary on Shakspeare, since Warburton is now gone, his work will probably sink into oblivion. In 1765 Dr. Johnson's edition, which had long been impatiently expected, was given to the public. His vigorous and comprehensive understanding threw more light on his author than all his predecessors had done. The character which he gave1 of each play is generally just. His refutation of the false glosses of Theobald and Warburton, and his numerous explications of involved and difficult passages, entitle him to the gratitude of every admirer of Shakspeare. The last editoris Mr. Malone, who was eight years employed in preparing his edition. By collating the most authentic copies, he has been careful to purify the text. He has been so industrious to discover the meaning of the author, that he has ransacked many volumes, and trusts that, besides his additional illustrations, not a single valuable explication of any obscure passage in these plays has ever appeared which he has not inserted in his edition. He rejects Titus Andronicus, as well as the three plays formerly mentioned, as not being the authentic productions of Shakspeare. To the whole he has added an appendix, and a copious glossary. Of this work a less expensive edition has been published in 7 vols. 12mo., in which the general introductory observations prefixed to the different plays are preserved, and the numerous notes abridged. This judicious commentator has certainly done more for the elucidation and correction of Shakspeare than all who came before him, and has followed with indefatigable patience the only road which a commentator of Shakspeare ought to observe. Within fifty years after our poet's death, Dryden says that he was become ' a little obsolete ;' and in the beginning of the eighteenth century lord Shaftesbury complains of his rude unpolished style, and his antiquated phrase and wit. These complaints were owing to the great revolution which the English language has undergone, and to the want of an enlightened com

rnentaUR. These complaints are now removed, tor an enlightened commentator has been found in Mr. Malone. In 1790 a copious index to the remarkable passages and words in the plays of Shalupeare was published by the Rev. Mr. Ayscough, a gentleman to whom the literary world is much indebted for several very valuable keys of knowledge. In fine, the admirers of Shakspeare are now furnished with every help that can enable them to understand the sense and to taste the beauties of this illustrious poet. SHALE, n. s. Sax. j-cala. A husk ; the case of seeds in siliquous plants.

Behold yon poor and starved band, And your fair shew shall suck away their souls, leaving them but the shales and husks of men.

Shakspeare.

SHALE, in the old system of mineralogy, a species of schistus. It is a black slaty substance, or a clay hardened into a stony consistence, and so much impregnated with bitumen that it becomes somewhat like coal. The acid emitted from shale, during its calcination, uniting itself to the argillaceous earth of the shale, forms alum. About 120 tons of calcined shale will make one ton of alum. The shale, after being calcined, is steeped in water, by which means the alum, which is formed during the calcination of the shale, is dissolved : this dissolved alum undergoes various operations before it is formed into the alum of the shops. Watson's Chemical Essays, vol. ii. p. 315. See ALUM. This kind of slate forms large strata in Derbyshire. It is found in large strata, generally above the coal, in most coal counties of this kingdom. Dr. Short says that the shale wastes the lead ore near it, by its strong acid ; and that it corrodes and destroys all minerals near it, except iron or coal, of whose vitriol it partakes.

SHALL, verb defect. Sax. j-ceal. I owe, or I ought. In Chaucer, the faithe I shall to God, means the faith I owe to God : thence it became a sign of the future tense. It has no tenses but shall future, and should imperfect.

It is a mind that shall remain. — Shall remain !

Hear you this triton of the minnows ? Mark you An absolute ihall ? Shakspeare. Coriolanut.

Some praises come of good wishes and respects, when, by telling men what they are. they represent to them what they should be. Bacon.

There is a fabulous narration that in the northern countries there should be an herb that groweth in the likeness of a lamb, and feedeth upon the grass.

Bacon's Natural History. Let not a desperate action more engage you Than safety should. Ben Jonson's Catiline.

That he shall receive no benefit from Christ is the affirmation where all his despair is founded : and the one way of removing this dismal apprehension is, to convince him that Christ's death, and the benefits thereof, either do, or, if he perform the condition required of him, shall certainly belong to him.

Hammond's Fundamentals. To do thes honour I will shed their blood. Which the just laws, if I were faultless, should.

Waller.

See Romulus the great :

This prince a priestess of your blood thall bear ; And, like his sire, in arms he shall appear.

Dryden's sEneid.

So subjects love just kings, or so they should.

Dry den.

The girls look upon their father as a clown, and the boys think their mother no better than she should be. ‘ Additon.

I conclude that tidings are not as they should be.

Swift.

SHALLOON’, n.s. From Chalons, in France. A slight woollen stuff.

In blue shalloon shall Hannibal be clad, And Scipio trail an Irish purple plaid. Swift.

SHAL’LOP, n. s. Fr. chaloupe. A small boat.

You were resolved, after your arrival into Oroo-noque, to pass to the mine ; and, to that end, you desired to have Sir John Fearne’s shallop : I do not allow of that course, because ye cannot land so secretly but that some Indians on the river side may discover you, who giving knowledge of your passage to the Spaniards, you may be cut off before you can recover your boat. Raleigh.

Our hero set

In a small shallop, fortune in his debt. Waller.

A SHALLOP, or SLOOP, is a small light vessel, with only a small mainmast, and foremast, and lug-sails, to hale up, and let down, on occasion. Shallops are commonly good sailers, and are therefore often used as tenders upon men of war.

SHAL’LOW,a$. & n. s.-\ Probably com-SHALLOW’BRAIN, adj. f pounded of shoal SH ALLOW’ LY, adv. £and low. — John—

SHALLOVNESS, n. s. 3 son. From Goth. sigu la, to sink low. — Thomson. Not deep; having the bottom at no great distance from the surface : not intellectually deep ; not profound ; not deep of sound : the noun substantive and ad-verb corresponding.

This is a very shallow monster, Afraid of him ? A very shallow

monster, The man i’ th’ moon ! A most poor credulous monster. Shahspeare.

I had been drowned, but that the shore was shelvy and shallow ; a death that I abhor.

Id. Merry Wives of Winder.

I should not see the sandy hourglass run, But I should think of shallows and of fh*.s ; And see my wealthy Andrew docked in sand, Veiling her high top lower than her ribs. To kiss her burial. Id. Coriolanns.

Most shallowly did you these arms commence, Fondly brought here, and foolishly sent hence.

Shahspeare.

That inundation, though it were shallow., had a long continuance, whereby they ol the vale, that were not drowned, perished for want of food.

Bacon.

The king was neither so shallow nor so ill advertised, as not to perceive the intention of the French king, for the investing himself of Britaigne.

Id. Henry VII.

A swift stream is not heard in the channel, but upon shallows of gravel. Id. Natural History.

If a virginal were made with a double concave, the one all the length of the virginal, and the other at the end of the strings, as the harp hath, it must make the sound perfecter, and not so shallow and jarring. Bacon.

The load lieth open on the grass, or but shallowly covered. Carew.

SHA

By it do all things live their measured hour : We cannot ask the thing which is not there, Blaming the shallow/less of our request. Herbert.

I cannot wonder enough at the shatlowness and impertinent zeal of the vulgar sort in Drunia, who were carried away with such an ignorant devotion for his successes, when it little concerned their religion or security. Howel.

You that so oft have sounded

And fathomed all his thoughts, that know the deeps And shallows of his heart, should need no instruments To advance your ends. Denham.

Having but newly left those grammatic flats and shallows, where they stuck unreasonably, to learn a few words with lamentable construction, and now on the sudden transported, to be tossed with their un-ballasted wits in fathomless and unquiet deeps of controversy, they do grow into hatred of learning.

Milton.

Uncertain and unsettled he remains, Peep versed in books, and shallow in himself. Id.

I am made a shallow forded stream, Seen to the bottom : all my clearness scorned, And all my faults exposed. Dryden's All for Lave.

Shallow brooks, that flowed so clear, The bottom did the top appear. Dry den.

He sounds and fathoms him to find The shallows of his soul. Id. Spanish Fryar.

Three more fierce Eurus in his angry mood Dashed on the shallows of the moving sand, And in mid ocean left them moored a-land.

Id. Mneid.

Their spawn being lighter than the water, there it would not sink to the bottom : but be buoyed up by it, and carried away to the shallows.

Ray on the Creation.

With the use of diligence and prudent conduct, he may decline both rocks and shallows. Nofris.

In arms of the sea, and among islands, there is no great depth, and some places are plain shalluws.

Burnet.

It cannot but be matter of just indignation to all good men, to see a company of lewd shallow -brained huffs making atheism, and contempt of religion, the sole badge of wit. South.

One would no more wonder to see the most shallow nation of Europe the most vain, than to find the most empty fellows of every nation more conceited than the rest. Addison.

The sea could not be much narrower than it is, without a great loss to the world ; and must we now have an ocean of mere flats and shallows, to the utter ruin of navigation ? Bentley.

The like opinion he held of Meotis Palus, that by the floods of Tanais, and the earth brought down thereby, it grew observably shallower in his days, and would in process of time become a firm land.

Browne's Vulgar Errours.

SHALM, n. s. Germ, shelm ; Teut. schemme. A kind of musical pipe.

Every captain was commanded to have his soldiers in readiness to set forward upon the sign given, which was by the sound of a shatm or hoboy.

Knolles's History of the Turks.

SHAM, v. n., n. s., & adj. Welsh shommi, to cheat. To trick ; cheat ; fool with a fraud : a low word : the derivatives corresponding.

Mea tender in point of honour, and yet with little regard to truth, are sooner wrought upon by shame than by conscience, when they find themselves fooled and shammed into a conviction. L' Estrange.

We must have a care that we do not, for want of laying things and things together, sham fallacies upon the world for current reason. Id

It goes a great way when natural curiosity and vulgar prejudice shall be assisted with the shams of astrological judgments. Id.

He that first brought the sham, wheedle, or banter in use, put

together, as he thought fit, those ideas he made it stand for. Locke.

That in the sacred temple needs would try Without a fire the' unheated gums to fry, Believe who will the solemn sham, not I. Addison. Then all your wits that fleer and sham,

Down from Don Quixote to Tom Tram,

From whom I jests and puns purloin,

And slily put them off for mine,

Fond to be thought a country wit. Prior.

Never join the fray, Where the sham quarrel interrupts the way. Lray.

SHAMAMS are wizards or conjurers, in high repute among several idolatrpus nations inhabiting different parts of Russia. By their enchantments they pretend to cure diseases, to divert misfortunes, and to foretel futurity. They are great observers of dreams, by the interpretation of which they judge of their good or bad fortune. They pretend likewise to chiromancy, and to foretel a man's good or ill success by the lines of his hand. By these and such like tricks they have a very great ascendency over the understandings, and a great influence on the conduct, of those people

SHAM'BLES, n. s. Of uncertain etymology; Ital. scannaglia. — Johnson : orLat. scamnimacelli. The place where butchers kill or sell their meat; a butchery.

Far be the thoughts of this from Henry's heart, To make a shambles of the parliament-house.

Shakspeare. Henry VI.

I hope my noble lord esteems me honest, — Oh, ay, as summer flies are in the shambles, That quicken even with blowing. Id. Othello.

He warned a flock of sheep, that were driving to the shambles, of their danger ; and, upon uttering some sounds, they all fled. Arbuthnot.

When the person is made the jest of the mob, or his back the shambles of the executioner, there is no more conviction in the one than in the other.

Watts.

SHAMBLES, among miners, a sort of niches or landing places, left at such distances in the adits of the mines that the shovel-men may conveniently throw up the ore from shamble to shamble till it comes to the top of the mine.

SHAM'BLING, adj. See SCAMBLING. Mov-ing awkwardly and irregularly. A low bad word.

By that shambling in his walk, it should be my rich banker, Gomez, whom I knew at Barcelona. Dryden's Spanish Fryar.

So when nurse Nokes to act young Atnmon tries, With shambling legs, long chin, and foolish eyes, With dangling hands he strokes the' imperial robe, And with a cuckold's air commands the globe.

Smith.

SHAME, n. s., v.a.&v.n. SHAME'FACED, adj. SHAME'FACEDLV, adv. SHAME'FACEDNESS, n. s. SHAME'FUL, adj. SHAME'FULLY, adv. SHAME'LESS, adj. SHAME'LESSLY, adv. SHAME'LESSNESS, n. s.

Saxon f ceam ;

Teut. scham ; Belg.

scheam. Pudicity;

the passion felt at

>a supposed loss of

reputation ; the

cause or reason of

shame ; disgrace ;

ignominy ; re-

proach : to shame is, to make ashamed ; disgrace ; to be ashamed : shamefaced, modest ; bashful ; easily discountenanced : the adverb and noun substantive corresponding : shameful is, disgraceful ; infamous ; ignominious ; raising shame : the adverb corresponding : shameless is, devoid of shame ; impudent ; audacious : the ad-verb and noun substantive corresponding.

The king to day, as one of the vain fellows, shamelessly uncovereth himself. 2 Samuel vi. 20.

A foul shame is upon the thief. Ecctus. v. 14.

Would she shamefully fail in the last act in this contrivance of the nature of man ? More.

Philoclea, who blushing, and withal smiling, making shamefacednets pleasing, and pleasure thutne-factd, tenderly moved her feet, unwonted to feel the naked ground. Sidney.

Lamenting sorrow did in darkness lie. And thame his ugly face did hide from living eye.

Spenser

Great shame it is, thing so divine in view, Made for to be the world’s most ornament,

To make the bait her gazers to erabrew ; Good shamet to be to ill an instrument. Id.

She is the fountain of your modesty ; You shamefaced are, but shamefacedness itself is she.

Faerie Queene.

None but that saw, quoth he, would ween for

truth, How shamefully that maid he did torment. Id.

This all through that great prince's pride did fall, And came to shameful end. Id.

Peace, peace, for thame, if not for charity. — Urge neither charity nor shame to me : Uncharitably with me have you dealt. And shamefully my hopes by you are butchered : My charity is outrage, life my thame ; And in my shame still lives my sorrows' rage.

Shakspeare. Richard III. To tell thee of whom derived,

Were shame enough to shame thee, wert thou not shameless. Shakspeiire.

If thou hast power to raise him, bring him hither, And I've power to shame him hence : Oh, while you live, tell truth and shame the devil.

Id.

Sham'st thou not, knowing whence thou art ex—

traught, To let thy tongue detect thy base-born heart ? Id.

Conscience is a blushing thamefaced spirit that mutinies in a man's bosom : it fills one full of obstacles. Id. Richard III.

Hyperbolus by suffering did traduce The ostracism, and shamed it out of use.

Cleaveland.

To the trunk of it authors give such a magnitude, as I shame to repeat. Raleigh's History of the World.

The shameless denial hereof by some of their friends, and the more shameless justification by some of their flatterers, makes it needful to exemplify, which 1 had rather forbear. Paleigh.

Cruel Auster thither hied him ;

And, with the rush of one rude blast,

Shamed not spitefully to waste

AH his leaves, so fresh, so sweet,

And lay them trembling at his feet. Crashaw.

Being most impudent in “her heart, she could, when she would, teach her cheeks blushing, and make shamefacedness the cloak of shamelessness. Sidney.

He that blushes not at his crime, but adds shamelessness to his sfiame, hath nothing left to restore him to virtue. Taylor.

Despoiled Of all our good, shamed, naked, miserable. Miltvn.

Applause

Turned to exploding hiss, triumph to shame, Cast on themselves from their own mouths. Id.

But I his holy secret

Presumptuously have published, impiously, Weakly at least, and shamefully. Id. Agonistes.

For this he shall live hated, be blasphemed, Seized on by force, judged, and to death condemned, A shameful and accurst ! Milton.

He must needs be shamelessly wicked that abhors not this licentiousness. Hale.

Hide, for shame,

Romans, your grandsires images,

That blush at their degenerate progeny. Dryden. The coward bore the man immortal spite,

Who shamed him out of madness into flight. Id.

Your shamefaced virtue shunned the people’s

praise, And senate’s honours. • Id.

None but fools, out of ihamefacedness hide their ulcers, which, if shown, might be healed.

Id. Dufresnay.

A man may be shamefaced, and a woman modest, to the degree of scandalous. L'Estrange.

In the schools men are allowed, without shame, to deny the agreement of ideas ; or, out of the schools, from thence have learned, without shame, to deny the connection of ideas. Locke.

Were there but one righteous man in the world, he would hold up his head with confidence and honour ; he would shame the world, and not the world him. South.

God deliver the world from such guides, who are the shame of religion. Id.

Those who are ready enough to confess him, both in judgment and profession, are, for the most part, very prone to deny him shamefully in their doings.

Id. Sermons.

God deliver the world from such hucksters of souls, the very shame of religion, and the shamel ,s< subverters of morality. Id.

From this time we may date that remarkable turn in the behaviour of our fashionable Englishmen, that makes them shamefaced in the exercise of those du-ties which they were sent into the world to perform. Addison's Freeholder.

His naval preparations were not more surprising than his quick and shameful retreat ; for he returned to Carthage with only one ship, having fled without striking one stroke. Arbuthnot.

O shame to manhood ! shall one daring boy The scheme of all our happiness destroy ?

Pope's Odusseu.

Who shames a scribbler, breaks a cobweb through : He spins the slight self-pleasing thread anew. Pope.

Such shameless bards we have ; and yet, 'tis true, There are as mad, abandoned criticks too. Id.

The knave of diamonds tries his wily arts, And wins, O shameful chance! the queen cf hearts.

Id. But that effeminacy, folly, lust,

Enervate and enfeeble, and needs must ;

And that a nation shamefully debased

Will be despised and trampled on at last,

Unless sweet Penitence her powers renew,

Is truth if history itself be true. Coirper.

SHAMGAR, the son of Anath, the third judge of Israel after Joshua. He delivered his country from the yoke of the Philistines, and slew 600 of them with an ox-goad, about A.M. 2657. See ISRAEL.

SHAMMAH, the name of three heroes of Israel, under David. See 2 Sam. xxiii. 11 — 17

25. 33.

SHAM'OIS, n.s. Fr. chamois. See CHAMOIS. A kind of wild goat.

I'll bring thee

To clustering filberds, and sometimes I'll get thee Young shamois from the rocks. Shakspeare.

SHAMOIS, in zoology. See CAPRA.

SHAMOIS, CHAMOIS, or SHAMMY, in commerce, a kind of leather, either dressed in oil or tanned, much esteemed for its softness, pliancy, &c. It is prepared from the skin of the chamois or shamois, a kind of rupicapra, or wild goat, called also isard, inhabiting the mountains of the ci-devant French and Italian provinces of Dauphiny, Savoy, Piedmont, and the Pyrenees. Besides the softness and warmth of the leather, it has the faculty of bearing soap without damage; which renders it very useful on many accounts. In France, &c., some wear the skin raw, without any preparation. Shammy leather is used for the purifying of mercury, which is done by passing it through the pores of this skin, which are very close. The true chamois leather is counterfeited with common goat, kid, and even with sheep skins, the practice of which makes a particular profession, called by the French cha-moisure. The last, though the least esteemed, is yet so popular, and such vast quantities of it are prepared, especially about Orleans,

Marseilles, and Thoulouse, that it may not be amiss to giv.e the method of preparation.

The skins, being washed, drained, and smeared over with quicklime on the fleshy side, are folded in two lengthwise, the wool outwards, and laid on heaps, and so left to ferment eight days, or, if they have been left to dry after flay-ing, then fifteen days. Then they are washed out, drained, and half dried ; laid on a wooden leg, or horse, the wool stripped off with a round staff" for that purpose, and laid in a weak pit, the lime whereof had been used before, and has lost the greatest part of its force. After twenty-four hours they are taken out, and left to drain twenty-four more ; Ihey are then put in another stronger pit. This done, they are taken out, -drained, and put in again, by turns ; which begins to dispose them to take oil ; and this practice they continue for six weeks in summer or three months in winter : at the end whereof they are washed out, laid on the wooden leg, and the surface of the skin on the wool side peeled off, to render them the softer; then made into parcels, steeped a night in the river, in winter more, stretched six or seven over one another on the wooden leg, and the knife passed strongly on the flesh side, to take off any thing superfluous, and render the skin smooth. Then they are steeped as before, in the river, and the same operation is repeated on the wool side ; they are then thrown into a tub of water, with bran in it, which is brewed among the skins till the greatest part sticks to them, and then separated into distinct tubs, till they swell, and rise of themselves above the water. By this means the remains of the lime are cleared out ; they are then wrung out, hung up to dry on ropes, and sent to the mill, with the quantity of oil necessary to scour them : the best oil is that of stock-fish. Here they are first thrown in bundles into the river for twelve hours, then laid in the mill-trough, and fulled without

oil till they be well softened ; then oiled with tire hand, one by one, and thus formed into parcels of four skins each; which are milled and dried on cords a second time ; then a third ; and then oiled again and dried. This process is repeated as often as necessary ; when done, if there be any moisture remaining, they are dried in a stove, and made up into parcels wrapped up in wool ; after some time they are opened to the air, but wrapped up again as ‘before, till such time as the oil seems to have lost all its force, which it ordinarily does in twenty-four hours. The skins are then returned from the mill to the chamoiser to be scoured : which is done by putting them in a lixivium of wood-ashes, working and beating them in it with poles, and leaving them to steep till the ley hath had its effect : then they are wrung out, steeped in another lixivium, wrung again ; and this is repeated, till all the grease and oil be purged out. When this is done, they are half dried, and passed over a sharp-edged iron instrument, placed perpendicular in a block, which opens, softens, and makes them gentle. Lastly, they are thoroughly dried, and passed over the same instrument again ; which finishes the preparation, and leaves them in form of shammy. Kid and goat skins are shamoised in the same manner as those of sheep, excepting that the hair is taken off without the use of any lime ; and that, when brought from the mill, they undergo a particular preparation called ramalling, more delicate and difficult than the others. It consists in this, that, as soon as brought from the mill, they are steeped in a fit lixivium, taken out, stretched on a round wooden leg, and the hair is scraped off with the knife ; this makes them smooth, and, in working, to cast a kind of fine knap. The difficulty is in scraping them evenly.

SHAM’ROCK, n. s. Irish scam rag. The Irish name for three-leaved grass.

If they found a plot of watercresses or shamrocks, there they flocked as to a feast for the time.

Spenser on Ireland.

SHANGALLA, a race of negroes, on the northern frontier of Abyssinia, particularly on the lower part of the Mareb and Tacazze. The tract which they occupy consists of a belt varying in breadth, though averaging about forty miles. It is entirely covered with almost impenetrable forests, fit only for the production of wild animals. The

Shangalla are complete savages, who go naked, neither sow nor plant, and have no axed habitations. During the dry part of the year they live under the shade of trees, the lowest branches of which they cut near the stem, on the upper part, planting the ends of the branches in the earth. Having then covered them with the skins of beasts, and cut away the interior branches, they form-a spacious pavrlion, which, at a distance appears like a tent, the trunk serving for the pole, the top overshadowing it. During this season every tree is a house, peopled by a family. In the rainy season the soil dissolves completely into mire, and it is no longer possible to live above ground. The Shangalla then seek their winter quarters in caves of the mountains, which are of a soft gritty sandstone, easily excavated. Here they live upon the

flesh which they have dried and prepared during the dry season. The elephant and rhinoceros are taken and killed by various devices. Those who reside where water abounds kill the hippopotami or river horses, which are exceedingly numerous : in sandy tracts, ostriches, and a beautiful species of lizard, form the principal food. Some feed chiefly upon locusts. These various tribes are correctly described by Ptolemy, according to their food, under the titles of Rhizophagi, Elephantophagi, Acridophagi, &c. The meat caught in the fair season is cut into thongs as thick as a man's thumb, like so many ropes, and hung up on the surrounding trees, where the sun dries and hardens it almost to the consistence of leather. In winter they beat it with a wooden mallet, then boil, and then roast it upon the embers.

SHANK, n. s. Sax. yceanca; Belg. schenckel ; Swed. skank. The middle joint of the leg ; that part which reaches from the ankle to the knee : the long or hollow part of an instrument.

Eftsoons her white straight legs were altered To crooked crawling shanks, of marrow emptied : And her fair face to foul and loathsome

hue, And her fine corps to a bag of venom grew.

Spenser.

The sixth age shifts Into the lean and slippered pantaloon, With spectacles on nose, and pouch on side ; His youthful hose, well saved, a world too wide For his shrunk shanks.

Shakspe.ure. At You Like It. Shut me nightly in a charnel-house, O'er covered quite with dead men's rattling bones, With reeky shanks, and yellow chapless skulls.

Shakspeare.

A stag says, if these pitiful shanks of mine were but answerable to this branching head, I can't but think how I should defy all my enemies.

L'Ettrange.

The shank of a key, or some such long hole, the punch cannot strike, because the shank is not forged with substance sufficient. Moxon.

SHANK, or SHANK-PAINTER, in a ship, is a short chain fastened under the foremast-shrouds, by a bolt, to the ship's sides, having at the other end a\ope fastened to it. On this shank-painter the whole weight of the aft part of the anchor rests when it lies by the ship's side. The rope, by which it is hauled up, is made fast about a timber-head.

SHANK, in the manege, that part of a horse's fore leg which lies between the knee and the fetlock.

SHANKER, or CHANCRE, in medicine, a malignant ulcer, usually occasioned by some venereal disorder. See MEDICINE.

SHANK-PAINTER. See SHANK.

SHANNON, the largest river in Ireland, and one of the finest in the British dominions, not only on account of its lengthened course of 200 miles, but also of its great depth in most places, and the gentleness of its current, by which it might be made exceedingly serviceable to the improvement of the country, the communication of its inhabitants, and consequently the promoting of inland trade. But the peculiar prerogative of the Shannon is its situation, running from north to south and separating the province of Connaught from Leinster and Munster, and

of consequence dividing the greatest part of Ireland into what lies on the east, and that on the west of the river ; watering in its passage the valuable county of Leitrim, the plentiful shire of Roscommon, the fruitful county of Galway, and the pleasant county of Clare ; the small but fine shire of Longford, the King's county, and fertile county of Meath, in Leinster, the populous county of Tipperary, the spacious shire of "Limerick, and the rough but pleasant county of Kerry, in Munster; visiting ten counties in its passage, and having on its banks the following remarkable places, *viz.* Leitrim, Jamestown, Lanesborough, Athlone, Clonfert, Killaloe, and Limerick ; at twenty leagues below the latter it spreads gradually several miles in extent, so that some have considered its expansion as a lake. It at last joins its waters to the sea, being navigable all that way for the largest vessels.

SIIANSCRIT, the language of the Brahmins of Hindostan. See PHILOLOGY.

SHAPE, v. a. & n. s.) Prefer, shaped ; part.

SHAPE'LESS, adj. $ pass, shaped and shapen. Sax. j-cyppan ; Belg. scheppen ; Goth, and Swed. skapa. To form ; mould with respect to external dimensions ; regulate ; image : the noun substantive and adjective corresponding.

I was shapen in iniquity, and in sin did my mother conceive me. Psalm li. 5.

The shapes of the locusts were like unto horses prepared for battle. Rev. ix. 7.

I, that am not shaped for sportive tricks, Nor made to court an amorous looking-glass , I, that am rudely stampt, and want love's majesty, To strut before a wanton ambling nymph.

Shakspeare. Richard III.

Lovers and madmen have their seething brains, Such shaping fantasies that apprehend More than cool reason ever comprehends.

Shakspeare.

He beat me grievously in the shape of a woman ; for in the shape of a man, master Brook, I fear not Goliah with a weaver's beam. Id.

He is deformed, crooked, old, and sere ; 111 faced, worse bodied, shapeless every where. Id.

Mr. Candish, when without hope, and ready to shape his course by the east homewards, met a ship which came from the Philippines. Ralelqh.

Thrice had I loved thee, Before I knew thy face or name, So in a voice, so in a shapeless flame, Angels affect us oft, and worshipped be. Donne.

Those nature hath shaped with a great head, nar-row breast, and shoulders sticking out, seem much inclined to a consumption. Harvey.

To the stream, when neither friends, nor force, Nor speed, nor art avail, he shapes his course.

Denhum. The other shape,

If shape it may be called, that shape had none Distinguishable in member, joint, or limb. Milton.

When fancy hath formed and shaped the perfectest idea of blessedness, our own more happy experiences ,of greater must disabuse us. Boyle.

In vegetables and animals the shape we most fix on. and are most led by. Locki.

No shapesmith yet set up and drove a trade, To mend the work that providence had made.

Garth First a charming shape enslaved me,

An eye then gave the fatal stroke ;

Till by her wit Corinna saved me,

And all my former fetters broke. Addison.

Mature the virgin was, of Egypt's race ; Grace shaped her limbs, and beauty decked her face.

Prior.

Charmed by their eyes, their manners I acquire, And shape my foolishness to their desire. Id.

Now the victor stretched his eager hand, Where the tall nothing stood, or seemed to stand ; A shapekss shade, it melted from his sight, Like forms in clouds, or visions of the night !

Pope.

Fathers and mothers, friends and relations, seem to have no other wish towards the little girl, but that [she may have a fair skin, a fine shape, dress well, and dance to admiration. Law.

SHAPINSHAY, one of the Orkney Islands, lying about three miles north of Pomona, or Mainland. It is about seven miles long from east to west, and five broad from north to south, resembling the form of a cross. Along the whole coast the surface is low, pretty level, and the soil fertile in oats, barley, and grass ; although agriculture is not improved. Towards the mid-dle the land is higher ; and, having never been cultivated, is fit only for pasture. Relics of ancient superstition appear in the Standing stone of Shapinshay, and the Black Stone of Odin. A small bay is named Grucula, which, tradition says, is from one of the celebrated Agricola's ships having been stranded in it, during a storm, when he sailed round the island. In farther proof of this, Roman coins have been lately found near it. There are several subterraneous habitations called Picts' Houses. The only harbour in the island is Elwick, and it is an excellent one. It has from four to six fathoms water, over a bottom of hard clay covered with sand. On the west it has a fine beach. About eighty boats are employed in fishing. Kelp is also manufactured. Long. 0° 28' E. of Edinburgh, lat. 58° 55' N.

SHAPOUR, a ruined and once celebrated city, at the end of the valley of Kazeroon, in the province of Fars, Persia. It is said to have existed prior to the time of Alexander the Great, and to have been destroyed by him. It was rebuilt with augmented splendor by Sapor, who made

it his capital. Though deserted, the breadth and circumference of the ramparts, and the remains of some public buildings, show its former extent and magnificence. It is situated under a range of mountains, on the banks of a small rapid river, and in a wild romantic spot. The hills in the immediate vicinity appear to have been formerly fortified; and an extraordinary cavern, farther up the river, has given rise to many fabulous stories. Eighteen miles west of Kazeroon.

SHARD, n. s. Sax. j-ceard ; Frisick schaerde. A fragment of an earthen vessel. Used by Spenser for a frith or strait.

Upon that shore he spied Atin stand, There by his master left, when late he fared J n Phedria's fleet bark, over that perilous shard.

Faerie Queene. Often shall we find The tharded beetle in the safer hold, Than is the full winged eagle.

Shakspeare. Cynibeline.

i"or charitable prayers,

Shards, flints, and pebbles, should be thrown on her; Yet here she is allowed her virgin chants, Her maiden strewments. Id. Hamlet

Ere to black Hecat's summons The shardborn beetle, with his drowsy hums, Hath rung night's yawning peal, there shall be done A deed of dreadful note. Shukspeare.

Shards or mallows for the pot Keep the loosened body sound. Dryden. Horace.

SHARE, v.a.,v.n.&7i.s.ˆ Saxon j-ceananj SHARE'BONE, n.s. £j-cyrian. To divide;

SHA'RER. j part among many;

partake with others ; cut ; separate ; have part ;

the noun substantives corresponding.

The captain, half of whose soldiers are dead, and the other quarter never mustered or seen, comes shortly to demand payment of his whole account ; where, by good means of some great ones, and privy sharings with the officers of other some, he receiveth his debt. Spenser on Ireland.

Good fellows all The latest of my wealth I'll share among you.

Shaks'eare.

Any man may take trial of his fortune, provided he acknowledge the lord's right, by sharing out unto him a toll. Careic.

Most it seemed the French king to import, As sharer in his daughter's injury.

Daniel's Civil Wa~. In vain does valour bleed, While avarice and rapine share the land. Milton.

With swift wheel reverse deep entering shared All his right side. Id.

If everv just man, that now pines with want, Had but a moderate and beseeming share Of that which lewdly-pampered luxury Now heaps upon some with vast excess. Id.

The subdued territory was divided into greater and smaller shares, besides that reserved to the prince.

Temple.

Well may he then to you his cares impart, And share his burden where he shares his heart.

Dryden.

Waved by the wanton winds his banner flies, All maiden white, and shares the people's eyes. Id.

Scalp, face, and shoulders, the keen steel divides. And the shared visage hangs on equal sides. Id.

I'll give you arms ; burn, ravish, and destroy : For my own share one beauty I design ; Engage your honours that she shall be mine. Id. Great cities shall with walls be compassed round, And sharpened shares shall vex the fruitful ground.

Id.

People not allowed to be sharers with their companions in good fortune, will hardly agree to be sharers in bad. L'Estrange.

You must have known it. — Indeed I did, then favoured by the king, And by that means a sharer in the secret. Rowe.

Though the weight of a falsehood would be too heavy for one to bear, it grows light in their imaginations when it is shared among many.

Addison's Spectator. The youths have equal share In Marcia's wishes, and divide their sistei .

Id. Cato.

An overgrown estate falling into the hands of one that has many children, it is broken into so many portions as render the sharers rich enough. Addison.

In the primitive times the advantage of priesthood was equally shared among all the order, and none of that character had any superiority. Collier.

SHA

If, by taking on himself human nature at large, he hath a compassionate and tender sense of the infirmities of mankind in general, he must needs, in a peculiar manner, feel and commiserate the infirmities of the poor, in which he himself was so eminent a tharer~ Atterbury.

The cartilage bracing together the two ossa pubis, or shareboiies, Bartholine saith, is twice thicker and laxer in women than men. Derham.

In poets as true genius is but rare, True taste as seldom is the critick's share. Pope.

I suffer many things as an author militant, whereof in your days of probation you have been a sharer.

Id. to Swift.

This is Dutch partnership, to thare in all our beneficial bargains, and exclude us wholly from theirs.

Swift.

He who doth not perform that part assigned him is a very mischievous member of the publick ; because be takes his share of the profit, and yet leaves his share of the burden to be born by others. Id.

Suppose I thare my fortune equally between my children and a stranger, will that unite them ? Id.

Incumbent o'er the shining share The master leans, removes the' obstructive clay.

Thomson.

By being desirous that every one should have their full share of the favours of God, they would not only be content, but glad, to see one another happy in the little enjoyments of this transitory life. Law.

For clay the coulter is long and bending, and the share narrow. Mortimer.

These, although they bear a share in the discharge, jet have different offices in the composition.

B'VWne'i Vulgar Errour*.

SHARE OF A PLOUGH, that part which cuts the ground ; the extremity forwaids being covered with a sharp pointed iron, called the point of the share, and the end of the wood behind the tail of the share. See PLOUGH and RURAL ECONOMY.

SHARK, n. s., v. a. Sc v. n. Lat. ckarcharias, of Gr. xapafffui. A voracious sea fish ; a greedy fellow ; trick ; fraud : to pick up ; devour ; to play the petty thief.

Young Fontinbras, Of unimproved mettle, hot and full, Hath in the skirts of Norway, here and there, Sharked up a list of landless resolutes.

Shahspeare. Hamlet.

The fly leads a lazy, voluptuous, scandalous, diurking life, hateful wherever she comes.

L’ Estrange.

There are cheats by natural inclination as well as by corruption ; nature taught this boy to shark, not discipline. id.

David’s messengers are sent back to him, like so many sharks and runnagates, only for endeavouring to compliment an ill nature out oif itself, and seeking *hat by petition which they might have commanded by their sword. Snuth.

Wretches who live upon the sttark, and other men’s sins, the common poisoners of youth, equally desperate in their fortunes and their manners, and getting their very bread by the damnation of souls. Id.

The old generous English spirit, which heretofore made this nation so great in the eyes of all the world, seems utterly extinct ; and we are degenerated into a mean, sharking, fallacious, undermining converse ; there being a snare and a trapan almost in every word we hear, and everv action we see. Id.

His jaws horrifick armed with threefold fate. The direful thark. Thomson’* Summer.

And such things as the entrails and the brains Regaled two sharks, who followed o’er the billow — The sailors ate the rest of poor Pedrillo. Byron.

SHARK, in ichthyology. See SQUALUS.

SHARON, in ancient geography, the name of three cantons of Palestine. The first lay between Mount Tabor and the sea of Tiberias ; the se-cond between the city of Caesarea of Palestine, and Joppa ; and the third lay beyond Jordan. To give an idea of perfect beauty, Isaiah said, the glory of Lebanon and the beauty of Carmel must be joined to the abundance of Sharon. Isaiah xxxiii. 9 ; xxxi. 2. The plains of Sharon are of vast extent; and, when surveyed by the abbe Mariti a few years ago, they were sown with cucumbers ; and he says that such a number is annually produced as not only to supply the whole neighbourhood, but all the coasts of Cy-prus and the city of Damietta. 4. In the mid-dle of the plain, between Arsus and Lydda, rises a small mountain, upon the ridge of which there is a village called Sharon, from the ancient city whose king was conquered by Joshua.

SHARP, adj., n. s., v. a.,’} Saxon r-ceaj\j>;

SHARP’EN, v.a. [& v. n. I Teut. scharjf ; Dan.

SHARP’ER, n. s. \ sharp. Acute; keen;

SHARP’LY, adv. ˆcutting; piercing;

SHARP’NESS, n. s. [“terminating in a

SHARP’SET, udj. point or edge :

SHARP’-SIGHTED, j hence witty ; inge—

SBARP’-VISAGED. J nious; acute of

mind ; attentive ; vigilant ; quick ; sour, but not austere; shnll of sound; painful; afflictive ; emaciated ; Jean : a sharp or acute sound ; a pointed weapon : to make keen : play thievish tricks : to sharpen is also to make sharp or keen; give edge or point to; make quick, ingenious, &c. ; make sour : a sharper is a low, tricky fellow : the adverb and noun substantive following correspond with sharp, as an adjective : sharp-set is hungry ; ravenous ; eager : sharp-sighted and visaged explain themselves.

The Israelites went down to the Philistines, to sharptn every man his share and his coulter.

1 Sam. xiii.20.

Mine enemy sharpeneth his eyes upon me.

Job xvi. 9.

Thy tongue deviseth mischiefs, like a sharp razor, working deceitfully. Ps. lii. 2.

Overmuch quickness of wit, either given by na-ture, or sharpened by study, doth not commonly bring-greatest learning, best manners, or happiest life in the end. Ascham.

Now as fine in his apparel as if he would make me in love with a cloak, and verse for verse with the sharpest wilted lover in Arcadia. Sidney.

Basilius forced her to stay, though with much ado, she being sharp-set upon the fulfilling of a shrewd office, in overlooking Philoclea. Id.

Palladium neither suffering us nor himself to take in hand the party

till the afternoon ; when we were to fight in troops, nor differing otherwise from earnest, but that the sharpness of the weapons was taken away. Id.

So we, if children young diseased we find, Anoint with sweets the vessel's foremost parts, To make them taste the potions sharp we give ; They drink deceived, and so deceived they live.

Spenter.

They are more sharply to be chastised and reformed

than the rude Irish, which, being very wild at the first, are now become more civil. Id.

Sharp and subtile discourses procure very great applause ; but, being laid in the balance with that which sound experience plainly delivereth, they are over-weighed. Hooker.

The weaker their helps are, the more their* need is to sharpen the edge of their own industry. Id.

If the understanding or faculty of the soul be like unto bodily sight, not of equal sharpness in all ; what can be more convenient than that, even as the dark-sighted man is directed by the clear about things visible, so likewise, in matters of deeper discourse, the wise in heart doth shew the simple where his way lieth. Id.

He caused his father's friends to be cruelly tortured ; grieving to see them live to whom he was so much beholden, and therefore rewarded them with such sharp payment. Knolles.

She hath tied Sharp toothed unkindness like a vulture here.

Shaksˆeai-e.

If tie should intend his voyage towards my wife, I would turn her loose to him ; and what he gets more of her than sharp words, let it lie on my head.

(.

There, gentle Hermia, may I marry thee : And to that place the sharp Athenian law Cannot pursue us. Id.

My falcon now is sharp and passing empty, And, till she stoop, she must not be full gorged ; For then she never looks upon her lure. Id.

That she may feel

How sharper than a serpent's tooth it is, To have a thankless child. Id. King Lear.

It is the lark that sings so out of tune. Straining hard discords and unpleasing sharps.

Shakspeare. Epicurean cooks Sharpen with cloyless sauce his appetite. Id.

There's gold for thee ; Thou must not take my former sharpness ill, I will employ thee back again. Id.

There was seen some miles in the sea a great pillar of light, not sh(trj>, but in form of a column or cylinder, rising a great way up towards heaven.

Bacon.

In whistling you contract the mouth, and, to make it more tharp, men use their finger.

Id. Natural History.

Let one whistle at the one end of a trunk, and hold your ear at the other, and the sound strikes so sharp as you can scarce endure it Bacon.

The grating of a saw, when sharpened, offends so much, as it setteth the teeth on edge. Id.

You contract your eye when you would see sharply ; and erect your ear when you would hear attentively.

Id.

If we had nought but sense, each living wight Which we call brutes, would be more sharp than we.

Davies.

As the sharpest eye discerneth nought, Except the sun-beams in the air do shine ;

So the best soul with her reflecting thought, Sees not herself without some light divine. Id.

If she were the body's quality, Then would she be with it sick, maimed, and blind ;

But we perceive where these privations be, An healthy, perfect, and sharp-sighted mind. Id.

At the arrival of the English ambassadors, the soldiers were sharply assailed with wants. Hayward.

The mind and memory are more sharply exercised in comprehending another man's things than our own. t Ben Jonson.

Whom the whetstone sharps to eat, They cry, millstones are good meat. Id.

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Force consisteth in the roundings and nsiugs of the work, according as the limbs do more or less require it ; so as the beholder shall spy no sharpness in the bordering lines. Wotlon.

The instances you mention are the strongest and sharpest that can be urged. , -Digby.

Your majesty's clear and sharp-sighted judgment has as good a title to give law in matters of this na-ture as in any other. Denham.

I am not so sharp-sighted as those who have discerned this rebellion contriving from the death of queen Elizabefh. Clarendon.

Their embryon atoms

Light armed or heavy, sharp, smooth, light, or slow.

Milton.

The sharp desire I had Of tasting. Id.

Their piety feign'd

In sharp contest of battle found no aid-Id. Death becomes

His final remedy ; and after life

Tried in sharp tribulation, and refined

By faith and faithful works. Id. Paradise Lost.

His visage drawn he felt to sharp and spare.

Milton.

The squadron bright, sfuirp'ning in moored horns Their phalanx. Id.

The air sharpened his visual ray

To objects distant far. Id.

The Welsh that inhabit the mountains are commonly sharp-visayed. Bale's Origin of Mankind.

It is a very small comfort that a plain man, lying under a sharp fit of the stone, receives from this sentence. Tillotson.

Such an assurance as will sharpen men's desires, and quicken their endeavours for obtaining a lesser good, ought to inspire men with more vigour in pursuit of what is greater. Id.

It is so much the firmer, by how much broader the bottom, and sharper the top. Temple.

Provoking sweat extremely, and taking away all sharpness from whatever you put in, must be of good effect in the cure of the gout. Id.

To come near the point and draw unto a sharper angle, they do not

only speak and practise truth, but really desire its enlargement.

Browne's Vulgar Errours.

In shipping such as this the Irish kern, And untaught Indian, on the stream did glide,

Ere sfcarp-keeled boats to stem the flood did learn, Or fin-like oars did spread from either side.

Dry den.

Sharp to the world, but thoughtless of renown, They plot not on the stage, but on the town. Id.

To s/(orp-eyed reason this would seem untrue ; But reason I through love's false opticks view. Id.

Sharp tasted citrons Median climes produce ; Bitter the rind, but generous is the juice. Id.

Cease contention : be thy words severe, Sharp as he merits ; but the sword forbear. Id.

No : 'tis resistance that inflames desire ; Sharpens the darts of love, and blows the fire.

Dry den.

Ere ten moons had sharpened either horn, To crown their bliss a lovely boy was born. Id.

The sharpness of his satire, next to himself, falls most heavily on his friends. Id.

Nothing so fierce but love will soften, nothing so sharp-sighted in other matters but it throws a mist before the eyes on't. L'Estrange.

I live upon what's my own ; whereas your scandalous life is only cheating or sharping one half oJ the year, and starving the other. Id.

Sharpers, as pikes, prey upon their own kind. Id.

Our senses are sharp-set on pleasures. Id,

SHARP.

For the various modulation of the voice, the upper end of the windpipe is endued with several cartilages to contract or dilate it, as we would have our voice flat or sharp. Ray.

The windpipe is continually moistened with a glutinous humour, issuing out of small glandules in its inner coat, to fence it-against the sharp air. Id.

With edged grooving tools they cut down and smoothen away the extuberances left by the sharp pointed grooving tools, and bring the work into a perfect shape. Moxon.

My haughty soul would swell, Sharpen each word, and threaten in my eyes.

Smith.

This is a subject of which it is hard to speak without satirical sharpness, and particular reflections on many churches of Christians. Sprat.

How often may we meet with those who are one while courteous, but within a small time after are so supercilious, sharp, troublesome, fierce, and exceptious, that they are not only short of the true character of friendship, but become the very sores and burdens of society ! South.

It may contribute to his misery, heighten the anguish, and sharpen the sting of conscience, and so add fury to the everlasting flames, when he shall reflect upon the abuse of wealth and greatness. Id.

Not a single death only that then attended this profession ; but the terror and sharpness of it was redoubled in the manner and circumstances. Id.

There is nothing makes men sharper, and sets their hands and wits more at work, than want.

Additim on Italy.

Her nails are tharpened into pointed claws ; Her hands bear half their weight, and turn to paws.

Addison.

The son returned with strength of constitution, sharpness of understanding, and skill in languages.

Id.

Is a man bound to look out sharp to plague himself, and to take care that he slips no opportunity of being unhappy 1 Collier.

If butchers had but the manners to go to sharps, gentlemen would be contented with a rubber at cuffs.

Id.

He should retrench what he lost to sharpen, and spent upon puppet plays, to apply it to that use.

Arbuthnot.

NOT here the sun's meridian rays had power, Nor wind sharp piercing, nor the rushing shower, The verdant arch so close its texture kept.

Pope's Odyssey.

I only wear it in a land of Hectors, Thieves, supercargoes, sharpen, and directors.

Pope.

A comedy of Johnson's, not Ben, held seven nights ; for the town is sharp-set on new plays. Id.

A clergyman, established in a competent living, is not under the necessity of being so sharp and exacting. Swift.

Many other things belong to the material world wherein the sharpest philosophers have never yet arrived at clear and distinct ideas. Watts.

Different simple ideas are sometimes expressed by the same word, as sweet and sharp are applied to the objects of hearing and tasting. Id.

There is a sharpnest in vinegar, and there is a sharpness in pain, in

sorrow, and in reproach ; there is a sharp eye, a sharp wit, and a sharp sword : but there is not one of these several sharpnesses the same as another of them ; and a sharp east wind is different from them all. Id. Logich.

SHARP (Abraham), an eminent mathematician, mechanist, and astronomer, descended from an

ancient family at Little Horton, near Bradford, in the West Riding of Yorkshire, where he was born about 1651. He was put apprentice to a merchant at Manchester ; but his genius led him strongly to the study of mathematics, both theoretical and practical. By the consent, therefore, of his master, he quitted business and removed to Liverpool, where he studied mathematics, astronomy, &c. ; and where, fora subsistence, he opened a school, and taught writing and accounts, &c. He had not been long at Liverpool when he fell in with a merchant from Lon-don, in whose house the astronomer Mr. Flamsteed then lodged. To become acquainted with this eminent man, Mr. Sharp engaged with the merchant as a book-keeper, and soon contracted an intimate friendship with Mr. Flamsteed, by whose interest and recommendation he obtained a more profitable employment in the dockyard at Chatham ; where he continued till his friend and patron, knowing his great merit in astronomy and mechanics, called him to his assistance, in contriving, adapting, and fitling up the astronomical apparatus in the royal Observatory at Greenwich, which had been recently built, about 1676. He was principally employed in the construction of the mural arch; which in fourteen months he finisned greatly to the satisfaction of Mr. Flamsteed. According to Mr. Smeaton, this was the first good instrument of the kind ; and Mr. Sharp the first artist who cut accurate divisions upon astronomical instruments. When it was constructed, MJ. Flamsteed was thirty and Mr. Sharp twenty-five years of age. These two friends continued together for some time, making observations on the meridio nal zenith distances of the fixed stars, sun, moon, and planets, with the times of their transits over the meridian; also the diameters of the sjn and moon, and their eclipses, and those of Jupiter's satellites, the variation of the compass, &c. Mr. Sharp assisted Flamsteed also in making a catalogire of nearly 3000 fixed stars, with their longitudes and magnitudes, their right ascensions and polar distances, with the variations of the same while they change their longitude by one degree. See ASTRONOMY. But from the fatigue of continually observing the stars at night, in a cold thin air, he was reduced to a bad state of health ; for the recovery of which he retired to his house at

Horton ; where, on his recovery, he fitted up an observatory of his. own ; having first made an elegant and curious engine for turning all kinds of work in wood or brass, with a maun-dril for turning irregular figures, as ovals, roses, wreathed pillars, &c. Besides these, he made most of the tools used by joiners, clock-makers, opticians, mathematical instrument makers, &c. The limbs of arcs of his large equatorial instrument, sextant, quadrant, &c., he graduated with the nicest accuracy, by diagonal divisions into degrees and minutes. The telescopes he made use of were all of his own making, and the lenses ground, figured, and adjusted with his own hands. It was at this time that he assisted Mr. Flamsteed in calculating most of the tables in vol. 2 of his Historia Caelestis, and executed the curious drawings of the charts of all the constellations visible in our hemisphere, with the still

jnore excellent drawings of the planispneres both of the northern and southern constellations. And, though these were sent to be engraved at Amsterdam by a masterly hand, yet the originals far exceeded the engravings in point of beauty and elegance: these were published by Mr. Flamsteed, and both copies may be seen at Hoiton. The mathematician, says Dr. Hutton, meets with something extraordinary in Sharp's elaborate treatise of Geometry Improved (in 4to. 1717, signed A. S. Philomath.): 1st, by a large and accurate table of segments of circles, its construction and various uses in the solution of several difficult problems, with compendious tables for finding a true proportional part; and their use in these or any other tables exemplified in making logarithms, or their natural numbers, to sixty places of figures ; there being a table of them for all primes to 1100, true to sixty-one figures. 2dly, His concise treatise of Polyedra, or Solid Bodies of many Bases, both the regular ones and others : to which are added twelve new ones, with various methods of forming them and thejr exact dimensions in surds, or species, and in numbers ; illustrated with a variety of copper-plates, neatly engraved by his own hands. Also the models of these polyedra he cut out in box-wood with amazing neatness and accuracy. Indeed few or none of the mathematical instrument makers could exceed him, in exactly

graduating or neatly engraving any mathematical or astronomical instrument, as may be seen in the equatorial instrument abovementioned, or in his sextants, quadrants, and dials of various sorts ; also in a curious armillary sphere, which, beside the common properties, has moveable circles, &c., for exhibiting and resolving all spherical triangles; also his double sector, and many other instruments, all contrived, graduated, and finished, in a most elegant manner, by himself. In short, he possessed at once a remarkably clear head for contriving, and an extraordinary hand for executing, any thing, not only in mechanics, but likewise in drawing, writing, and making tlie most exact and beautiful schemes or figures in all his calculations and geometrical constructions. The quadrature of the circle was undertaken by him for his own private amusement in 1699, deduced from two different series, by which the truth of it was proved to seventy-two places of figures ; as may be seen in the introduction to Sherwin's Tables of Logarithms. In the same book may also be seen his ingenious improvements on the making of logarithms, and the constructing of the natural sires, tangents, and secants. He also calculated the natural and logarithmic sines, tangents, and secants, to every second in the first minute of the quadrant ; the laborious investigation of which may be seen in the archives of the Royal Society, exhibiting his very neat and accurate manner of writing and arranging his figures, not to be equalled by the best penman now living. Mr. Sharp kept up a correspondence by letters with most of the eminent mathematicians and astronomers of his time, as Mr. Flamsteed, Sir Inac Newton, Dr. Halley, Dr. Wallis, Mr. Hodgson, Mr. Sherwin, &c., the answers to which letters are all written upon the backs, or empty spaces, of the letters

he received, in a short hand of his own contrivance. From a great variety of letters (of which a large chestful remain with his friends) from these and many other celebrated mathematicians, it is evident that Mr. Sharp spared neither pains nor time to promote real science. Indeed, being one of the most accurate and indefatigable computers that ever existed, he was for many years the common resource for Mr. Flamsteed, Sir Jonas Moore, Dr. Halley, and others, in all sorts of troublesome and delicate calculations. Mr. Sharp continued all his life a bachelor, and spent his time as recluse as a hermit. He was of a middle stature, but very thin, being of a weakly constitution. He was remarkably fee-ble the last three or four years of his life. He died on the 18th of July 1742, aged ninety-one. In his retirement, at Little Horton, he employed four or five rooms or apartments in his house for different purposes, into which none of his family could enter at any

time without his permission. He duly attended the dissenting chapel at Bradford, of which he was member, every Sunday ; when he took care to be provided with plenty of halfpence, which he very charitably suffered to be taken singly out of his hand, held behind him during his walk to the chapel, by a number of poor people who followed him, without his ever looking back, or asking a question. Mr. Sharp was very irregular as to his meals, and remarkably sparing in his diet; so very much so, in-deed, that the breakfast, dinner, and supper, have often remained untouched by him, when the servant has gone to remove what was loft — so deeply engaged had he been in calculations.

SHARP (James), archbishop of St. Andrews, was born of a good family in Banffshire in 1618. He devoted himself very early to the church, and was educated for that purpose in the University of Aberdeen. When the solemn league and covenant was framed, in 1638, the learned men in that seminary, and young Sharp in particular, declared themselves decidedly against it. To avoid the insults and indignities to which he was subjected, in consequence of this conduct, he retired to England, where he contracted an acquaintance with some of the most celebrated divines in that country. At the commencement of the civil wars he returned to Scotland. Dur-ing his journey thither, he accidently met with Lord Oxenford, who, pleased with his conversation, invited him to his house. While he resided there, he became known to the earl of Rothes, who procured him a professorship at St. An-drew's. By the interest of the earl of Crawford he was soon after appointed minister of Crail. Sharp had always inclined to the cause of royalty, and had for some time kept up a correspondence with his exiled prince. After the death of the protector he began to declare himself more openly, and seems to have enjoyed a great share of the confidence of Monk, who was at that time planning the Restoration of Charles II. When that general marched to London, the presbyterians sent Sharp to attend him to support their interests. At the request of general Monk and the chief presbyterians in Scotland, Mr. Sharp was sent over to the king at Breda to procure from him, if possible, the establishment of

Presbyterianism. On his return, he assured his friends that ‘ he had found the king very affectionate to Scotland, and resolved not to wrong the settled government of the church ; but he apprehended they were mistaken who went about to establish the Presbyterian government.’ Charles was soon after restored without any terms. All the laws passed in Scotland since 1633 were repealed ; the king and his ministers resolved at all hazards to restore prelacy. Mr. Sharp, who had been commissioned by the Scottish Presbyterians to manage their interests with the king, was prevailed upon to abandon the party ; and, as a reward for his compliance, he was made archbishop of St. Andrew’s. This conduct rendered him very odious in Scotland; he was accused of treachery and perfidy, and reproached by his old friends as a traitor and a renegado. The cruelties which were afterwards committed, which have been denominated absurd and wanton by one party, while by another they were considered as the necessary punishment of absolute rebellion, were in a great measure imputed to the archbishop, and rendered him still more detested. It may be well doubted whether these accusations were to their full intent well founded, though they will continue to be believed as long as any poAion of the party and spirit of that age remains. They are the more easily credited, in that, having been formerly of the Presbyterian party, he might thence be induced, after forsaking them, to treat them with severity. He is accused of having, after the route at Pentland Hill, received an order from the king to stop the executions, and of having kept it for some time before lie produced it to the council. There was one Mitchell, a preacher, who had formed the de-sign of tajcing vengeance for these cruelties by a?sa5*<ii!ating the archbishop. He fired a pistol at him as he was sitting in his coach ; hut the bishop of Orkney, lifting up his hand at the mo-ment, intercepted the ball. Though this happened in the midst of Edinburgh, the primate was so much detested, that nobody stopped the assassin ; who, having walked leisurely home, and thrown off his disguise, returned, and mixed unsuspected with the crowd. Some years after, the archbishop observing a man eyeing him with keenness, suspected that he was the assassin, and ordered him to be brought before him. It was Mitchell. Two loaded pistols were found in his pocket. The primate offered him a pardon if he would confess the crime : the man complied ; but Sharp, regardless of his promise, conducted him to the council. The council also gave him a solemn promise of pardon, if he would confess his guilt and discover his accomplices. They were much disappointed to hear (hat only one man was privy to his purpose, who was since

dead. Mitchell was then brought before a court of justice, and ordered to make a third confession, which he refused. He was imprisoned for several years, and then tried. His own confession was urged against him. It was in vain for him to plead the illegality of that evidence, and to appeal to the promise of pardon previously given. The council took an oath that they had given no such promise; and Mitchell was condemned. Lauderdale, who at that time governed Scotland ˆ -mid have pardoned him, but the primate insisted on his execution. Mitchell was accordingly executed. Sharp hail a servant, one Carmichael, who by his cruelty had rendered himself particularly odious to the zealots. Nine men formed the resolution of waylaying him in Magus muir, about three miles from St. Andrew's. While they were waiting for this man, the primate himself appeared \ith very few attendants. This they looked upon as a declaration of heaven in their favor ; and calling out ' the Lord has delivered him into hands,' they ran up to the carriage. They fired at him without effect ; a circumstance which was afterwards imputed to magic. They then despatched him with their swords, regardless of the tears and intreaties of his daughter, who accompanied him. Thus fell archbishop Sharp, whose memory is even yet detested by the people of Scotland. His abilities were certainly good, and in the early part of his life he appears with honor and dignity; but his conduct afterwards was censured as cruel and insincere. His treatment of Mitchell was infamous, unjust, and vindictive. That he contributed greatly to the measures adopted against the Presbyterians is certain. That they were cruel and impolitic may be proved ; nor did their effects cease with the measures themselves. The unheard-of cruelties exercised by the ministers of Charles II., against the adherents of the covenant, raised such a flame of enthusiasm and bigotry, as remained long unextinguished. It must be granted, at the same time, that the very essence of faction and insolent rebellion was combined with the religious prejudices of the covenanters, such as no government could tolerate ; though it might have been opposed by happier means, and with better temper.

SHARP (John), D. D., archbishop of York. was descended from the Sharps of Little Horton, a family of Bladford Dale in Yorkshire ; and was son of an eminent tradesman of Bradford, where he was born in 1644. He was educated at Cambridge, and in 1667 entered into orders, and became chaplain to Sir Heneage Finch, then attorney-general. In 1672 he was appointed archdeacon of Berkshire ; in 1675 a prebendary-in the cathedral church of Norwich ; and 1676, rector of St. Bartholomew, London. In 1681 he was, by the interest of Sir Heneage Finch, then lord chancellor, made dean of Norwich ; but in

1686 was suspended for vindicating the doctrine of the church of England in opposition to Popery. In 1688 he was sworn chaplain to king James II., and was also chaplain to king Charles II., and attended at the coronation of king James II. In 1689 he was declared dean of Canterbury.; but always refused to fill up any of the vacancies made by the deprived bishops. Upon the death of Dr. Lamplugh he was promoted to the see of York. In 1 702 he preached the sermon at the coronation of queen Anne ; and was sworn of the privy council, and made lord-almoner to her majesty. He died at Bath in 1713 ; and was interred in the cathedral of York, where a monument is erected to his memory. His sermons, which were collected after his death, and published in 7 vols. 8vo., are justly admired.

SHARP (Gregory). See SHARPE.

SHARP (Granville), a modern English phi-

lanthropist of considerable learning, was the son of archbishop Sharp, and born in 1743. He was educated for the bar, but obtained a place in the ordnance office, which he resigned at the commencement of the American war, the principles of which he did not approve. He now for the rest of his life resided in the temple, and led a life of private study. He became known lo the public by his spirited defence of a poor negro named Somerset, who, having been brought to England by his master, was turned into the streets in a fit of sickness. When, by the charity of Mr. Sharp and his friends he had been restored to health, he was claimed again as property. The result was a series of law proeeed-ings, which not only cleared Somerset from his tyrant, but determined that slavery could not exist in Great Britain. Having succeeded in this case, he interested himself in the condition of others, and at his own expense sent a number of wandering negroes to Sierra Leone, and soon after became the institutor of the society for the abolition of the slave trade. He was likewise the warm advocate of parliamentary reform, in support of which he published A Declaration of the People's Natural Right to a Share in the Legislature. This worthy individual, who attained the age of seventy-nine, died July 6th, 1813, active in

benevolence to the last. His library was very extensive, and he possessed a curious collection of Bibles, which he presented to the British and Foreign Bible Society. His

S'incipal works are, Remarks on the Uses of the efinitive Article in the Greek Testament, &c., to which is added a plain matter of fact Argument for the Divinity of Christ, 1798, 8vo. ; A Short Treatise on the English tongue ; Remarks on the prophecies ; Treatises on the Slave Trade, on Duelling, on the Law of Nature and Principles of Action in Man ; Tracts on the Hebrew Language; Illustrations of the sixty-eighth Psalm, &c. In regard to most of these productions, the impression is likely to be very temporary ; but, as connected with a standing controversy, the Remarks on the Definitive Article may probably form .a lasting manuaj in defence of the doctrine of the divinity of Christ, against the arguments of the Unitarians.

SHARP (William), a modern engraver of great skill, was the son of a gun-maker in the Minories, where he was born January 29th, 1740. His father, observing his early taste for drawing, apprenticed him to Mr. Longmate, an artist who practised what is technically termed bright engraving. At the expiration of his indentures, Sharp, then very young, married a Frenchwoman, and commenced business on his own account in Bartholomew Lane. Here he soon found himself capable of greater things than the engraving of dog-collars and door-plates, and resolutely applied himself to the higher branches of his art. One of his first essays was a plate of Hector, an old lion then in the Tower, frpm a drawing by himself. In 1782 he removed to the neighbourhood of Vauxhall ; but, increasing in business and reputation, soon after took a larger residence in Charles Street, Middlesex Hospital. He became about this period a convert to the reveries of Mesmer and Emannel Swedenborg, then to thoac of Richard Brothers,

of whom he engraved two separate plates, lest one should be insufficient to produce the requisite number of impressions which would be called for on the arrival of the predicted Millen-nium. When Brothers was incarcerated in a mad -house, Mr. Sharp attached himself to Jo-anna Southcote, of whose pretensions he continued a staunch supporter to the day of his death, although he survived considerably the object of his credulity, whom he persisted in affirming to be only in a trance. From London Mr. Sharp latterly resided at Chiswick, where he died of a dropsy in the chest, July 25th, 1824. He was at one time a member of the Society for Constitutional Information, and narrowly escaped beinbr put on his trial for high treason, with Messrs.

Home Tooke, Holcroft, and Thelwall. He was arrested by order of government, and examined before the privy council, when it is said the naivete of his answers and behaviour fully convinced ministers that a person of his description was little likely to engage in any conspiracy, and he was liberated after exciting a hearty laugh among the members of the board. Among the best productions of this artist are his St. Cecilia, after Do-menichino ; Diogenes, from a painting by Salvator Rosa ; and Ecce Homo, from Guido ; a Madonna and child, from Carlo Dolce ; and a Zenobia, from a picture by Michel Angelo in the collection of Sir J. Reynolds. He also engraved several valuable portraits, and a large historical picture by Turnbull, of the Sortie from Gibraltar on the morning of November 27th, 1781.

SHARPE (Gregory), D. D., F. R., et A. S. S., a learned English divine, born in Yorkshire in 1713. Afrer acquiring grammar at Hull, he came to Westminster, and studied under the ce-x lebrated Dr. Friend. A piece of juvenile indiscretion made his friends withdraw him from this seminary in 1731, and place him under the care of principal Blackwell in Aberdeen : where he also studied under professor William Duff and John Stewart. On his return to England, he entered into orders, and, after some inferior promotions, succeeded Dr. Nicolls, as master of the temple, and was appointed one of the king's chaplains. He died unmarried, January 8th, 1 771 . He published several respectable works, and many sermons : and his skill in the oriental languages was extensive.

SHARPS, in flour, the finer part of what are denominated POLLARDS. See that article.

SHARROCK (Robert), LL.D., a learned English divine and civilian.; born at Adotock in Bucks, and educated at Oxford, where he graduated. He was afterwards appointed prebendary and archdeacon of Winchester, and rector of Bishop's Waltham in Hants. He wrote A Treatise on the Propagation of Plants ; and some other works; and died in 1784.

SHASTAH, SHASTER, SHASTREM, or Bedang, the name of a sacred book, in high estimation among the Hindoos, containing all the dogmas of the religion of the Brahmins, and all the ceremonies of their worship : and serving as a commentary on the Vedam. The term Shaster denotes science or system ; and is applied to other works cf astronomy and philosophy, whirh have no relation to the religion of the Indians.,

S H A S T A H.

INone but the Brahmins and rajahs of India are allowed to read the Vedam ; the priests of the Banians, called Shuderers, may read the Shaster ; and the people, in general, are allowed to read only the Paran or Pouran, which is a commentary on th« Shaster. The Shaster is divided into three parts : the first containing the moral law of the Indians ; the second the rites and ceremonies cf their religion; and the third the distribution of the people into tribes or classes, with the duties pertaining to each class. The principal precepts of morality contained in the first part of the Shaster are the following : — That no animal 6e killed, because the Indians attribute souls to brutes as well as to mankind : that they neither hear nor speak evil, nor drink wine, nor eat flesh, nor touch any thing that is unclean ; that they observe the feasts, prayers, and washings, which their law prescribes ; that they tell no lies, nor be guilty of deceit in trade ; that they neither oppress nor offer violence to one another ; that they celebrate the solemn feasts and fasts, and appropriate certain hours of ordinary sleep for prayer; and that they do not steal, or defraud one another. The ceremonies contained in the second part of the Shaster are such as these : — that they wash often in the rivers, to wash away their sins ; that they mark their forehead with red, in token of their relation to the Deity ; that they present offerings and prayers unto certain trees ; that they pray in the temples, make oblations to their pagodas, or idols, sing hymns, and make processions, &c. ; that they make pilgrimages to distant rivers, especially to the Ganges, to wash themselves and make offerings ; that they make vows to particular saints, according to their respective departments ; that they render homage to the Deity at the first sight of the sun ; that they pay their respect to the sun and moon, which are two eyes of the Deity ; and that they treat with particular veneration those animals that are deemed more pure than others ; as the cow, buffalo, &c., because the souls of men have transmigrated into these animals. The third part of the Shaster records the distribution of the people into four classes: the first being that of the Brahmins or priests, appointed to instruct the people ; the second, that of the kutteris or nobles, who are the magistrates ; the third that of the shuddries or merchants ; and the fourth that of the mechanics. Eacb person is required to remain in the class in which he was born, and to pursue the occupation assigned to

him by the Shaster. According to the Brahmins, the Shaster was imparted by God himself to Brahma, and by him to the Brahmins; who communicated the contents of it to the people. See GENTOOS, and HINDOOS. Modern writers have given us very different accounts of the antiquity and importance of the Shaster. Mr. Holwell, who has made considerable progress in the translation of this book, apprehends that the mythology as well as the cosmogony of the Egyptians, Greeks, and Ro-mans, were borrowed from the doctrines of the Brahmins, contained in it, even to the copying of their exteriors of worship, and the distribution of their idols, though grossly mutilated and adulterated. With respect to the Vedam and Shaster, or scriptures of the Gentoos, Mr. Holwell

says that Vedam, in the Malabar language, signi fies the same as Shaster in the Shajiscrit ; and tha the first book is followed by the Gentoos of the Malabar and Coromandel coasts, and also of tht-island of Ceylon. The Shaster is followed by the Gentoos of the provinces of Bengal, and by all the rest of India, commonly called India Proper, along the course of the Ganges and Jumna to the Indus. Both these books (he says) contain the institutes of their respective religion and worship, as well as the history of their ancient rajahs and princes, often couched under fable. Their antiquity is contended for by the partisans of each ; but be thinks that the similitude of their names, idols, and a great part of their worship, leaves little room to doubt, that both these scriptures were originally one. He adds, if we compare the great purity and chaste manners of the Shaster with the great absurdities and impurities of the Vedam, we need not hesitate to pronounce the latter a corruption of the former. With regard to the high original of these scriptures, the account of the Brahmins is as follows: — Brahma, or the Mighty Spirit, about 4866 years ago, assumed the form of man and the government of Hindostan. He translated the divine law (designed for the restoration of mankind, who had offended in a pre-existent state, and who are now in their last scene of probation, to the dignity from which they were degraded) out of the language of angels into the well known Shanscrit language, and called his translation the Chartah Bhade Shastah of Birmah, or the Six Scriptures of Divine Words of the Mighty Spirit. He appointed the Brahmins (so named from him) to preach the word of God ; and the doctrines of the Shaster were accordingly preached in their original purity 1000 years. About this time there was published a paraphrase on the Chartah Bhade ; and, about 500 years afterwards, a second exposition called the Aughtorrah Bhade Shasta, or Eighteen Books of Divine Words, written in a character compounded of the common

Indostan and the Shanscrit. This innovation produced a schism among the Gentoos ; on which occasion, it is said, those of Coromandel and Malabar formed a scripture of their own, which they pretended to be founded on the Chartah Bhade of Brahmah, and called it the Vedam of Birmah, or Divine Words of the Mighty Spirit. The original Chartah Bhade was thrown aside, and at length wholly unknown, except to a few families ; who can still read and expound it in the Shanscrit character. With the establishment of the Aushtorrah Bhade, and Vedam, which, according to the Gentoo account, is 3366 years ago, their polytheism commenced ; and the principles of religion became so obscure, and their ceremonies so numerous, that every head of a family was obliged to keep a Brahmin as a guide both in faith and practice. Mr. Holwell is of opinion that the Chartah Bhade, or Original Scriptures, are not copied from any other system of theology promulgated to or obtruded upon mankind. The Gentoos do not attribute them to Zoroaster ; and Mr. Holwell supposes that both Zoroaster and Pythagoras visited Indostan, not to instruct, but to be instructed. From the account of Mr. Dow we learn that the books which contain the religion and philosophy of the

Hindoos are distinguished by the name of Bedas ; that they are four in number, and said to be penned by the Divinity. Beda, he says, in the Shanscrit language, literally signifies science; and these books treat not only of religion and moral duties, but of every branch of philosophic knowledge. The Brahmins maintain that the Bedas are-the divine laws which Brimha, at the creation of the world, delivered for the instruction of mankind ; but they affirm that their meaning was perverted in the first age by the ignorance and wickedness of some princes, whom they represent as evil spirits who then haunted the earth. The first credible account we have of the Bedas is, that about the commencement of the Cal Jug, of which era the year 1768 was the 4886th year, they were written, or rather collected, by a great philosopher and reputed prophet, called Beass Muni, or Beass the Inspired. The Hindoos, says Mr. Dow, are divided into two great religious sects (see HINDOOS) : the followers of the doctrine of

Bedang, •which is the original Shaster, or commentary upon the Bedas ; and those who adhere to the principles of the Neadirsen. The original Shaster is called Bedang, and is a commentary upon the Bedas. This book, he says, is erroneously called in Europe the Vedam. It is ascribed to Beass Muni, and is said to have been revised some years after by one Serrider Swami, since which it has been reckoned sacred, and not subject to any farther alterations: Almost all the Hindoos of the Decan, and those of the Malabar and Coromandel coasts are of this sect. The followers of the Bedang Shaster do not allow that any physical evil exists ; they maintain that God created all things perfectly good ; but that man, being a free agent, may be guilty of moral evil, •which may be injurious to himself, but can be of no detriment to the general system of nature. God, they say, being perfectly benevolent, never punished the wicked otherwise than by the pain and affliction which are the natural consequences of evil actions ; and hell, therefore, is no other than a consciousness of evil. The Neardirsen Shaster is said to have been written by a philosopher called Goutam, nearly 4000 years ago. The Brahmins, from Mr. Dow's account of their sacred books appear to believe invariable in the unity, eternity, omniscience, and omnipotence of God ; and their polytheism is no more than a symbolical worship of the divine attributes, which they divide into three classes. Under the name of Brimha they worship the wisdom and creative power of God ; under the appellation of Bishen his providential and preserving quality ; and under that of Shibah that attribute which tends to destroy. But similar apologies have been made by or for idolaters in all ages. As few of our readers may have an opportunity of perusing the Shaster, we shall, by way of specimen, subjoin a passage from the first chapter of it, which is a dialogue between Brimha, the Wisdom of the Divinity, and Narud, or Reason, the son of Brimha : —

Narud. — O father ! thou first of God ! thou art said to have created the world, and thy son Narud, astonished at what he beholds, is desirous to be instructed how all these things were made.

Brimha. — Be not deceived my son. Do n->: imagine that I was the creator of the world, independent of the Divine Mover, who is the j>rt.u original essence and creator of all things. Look, therefore, only upon me as the instrument of tin: great Will, and a part of his being, whom he called forth to execute his eternal designs. Narud. — What shall we think of God ? Brimha. — Being immaterial, he is above all conception; being invisible, he can have no form ; but, from what we behold in his works, we may conclude that he is eternal, omnipotent,

knowing all things, and present every where. Narud. — How did God create the world ? Brimha. — Affection dwelt with God from all eternity. It was of three different kinds ; the creative, the preserving, and the destructive. The first is represented by Brimha, the second by Bishen, and the third by Shibah. You, O Na-rud ! are taught to worship all the three in various shapes and likenesses, as the Creator, the Preserver, and the Destroyer. The affection of God then produced power ; and power, at a proper conjunction of time and fate, embraced goodness, and produced matter. The three qualities then acting upon matter produced the universe, &c. Order rose over the universe. The seven heavens were formed, and the seven worlds were fixed in their places, there to remain till the great dissolution, when all things shall be absorbed into God.

Narud. — Shall not then the souls of good men receive rewards ? nor the souls of the bad meet with punishment?

Brimha. — The souls of men are distinguished from those of other animals ; for the first are en-dued with reason, and with a consciousness of right and wrong. If therefore man shall adhere to the first, as far as his powers shall extend, his soul, when disengaged from the body by death, shall be absorbed into the divine essence, and shall never more reanimate flesh ; but the souls of those who do evil are not, at death, disengaged from all the elements. They are immediately clothed with a body of fire, air, and akash (a kind of undefined celestial element), in which they are for a time punished in hell. After the season of their grief is over, they reanimate other bodies; but till they shall arrive at a state of purity they can never be absorbed into God.

Narud. — What is the nature of that absorbed state which the souls of good men enjoy after death ?

Brimha. — It is a participation of the divine nature, where all passions are utterly unknown, and where consciousness is lost in bliss !

Narud. — How long shall this world remain ? Brimha. — Until the four lugs shall have revolved. Then Rudder (the same with Shibah, the destroying quality of God), with the ten spirits of dissolution, shall roll a comet under the moon, that shall involve all things in fire, and reduce the world into ashes. God shall then exist alone, for matter will be totally annihilated. Those who desire more information on this subject may consult Dow's History of Indostan, Holwell's Interesting Historical Events.

SHATTER, v. a., v. n., & I Belg. schetteren ;

SHAT'TERY, adj. [n. s. > Teut. ncheiteren. To break at once into pieces ; break so as to scatter the parts : dissipate : be broken : a broken part : the adjective corresponding.

He raised a sigh so piteous and profound, That it did seem to shatter all his bulk, And rend his being. Shakspenre.

Of bodies some are fragil, and some are tough and not fragil ; and, in the breaking, some fragil bodies break but where the force is ; some shatter and fly in many places. Bacon.

Ye myrtles brown, with ivy never sear, I come to pluck your berries harsh and crude, And with forced fingers rude Shatter your leaves before the mellowing year.

Milton.

They escape dissolution, because they can scarce ever meet with an agent minute and swiftly enough moved to shatter or dissociate the combined parts.

Boyle.

A monarchy was shattered to pieces, and divided amongst revolted subjects, into a multitude of little governments. , Locke.

Black from the stroke above, the smouldring pine Stands as a shattered trunk. Thomson's Seasons.

A man of a loose, volatile, and shattered humour, thinks only by fits and starts. Norris.

A brittle shattery sort of spar, found in form of a white sand chiefly in the perpendicular fissures amongst the ores of metal. Woodward.

Stick the candle so loose that it will fall upon the glass of the sconce, and break it into shatter*.

Swift.

SHAVE, v. a. -\ Preterite shaved ; part.

SHAVE'LING, n. s. f shaved or shaven. Sax.

SHA'VER, f r-ceapan ; Belg. schaeven

SHA'VING. JTopare; pare close; skim;

cut into thin slices : shaveling, a man shaved ; a friar: a shaver, a man closely attentive to his own interest ; a cheat : a shaving is a thin piece of any thing shaved off.

He that is to be cleansed shall shave off all his hair. Leviticus.

Of elfes, there be no such things ; only by bald friars and knavish shavelings so feigned. Spenter.

Dost thou not know this shaven pate ? Truly it is a great man's head. Knotles's History of the Turks.

They fell all into the hands of the cruel mountain people, living for the most part by theft, and waiting for wrecks, as hawks for their prey : by these shavers the Turks were stript of all they had.

Knollei.

Zelim was the first of the Ottomans that did shave his beard : a bashaw asked, Why he altered the custom of his predecessors 1 He answered, Because you bashaws may not lead me by the beard, as you did them. Bacon.

Make some medley of earth, with some other plants bruised or shaven in leaf or root. Id.

Take lignum aloes in gross shavings, steep them in sack, changed twice, till the bitterness be drawn forth ; then take the shavings forth, and dry them in the shade, and beat them to powder. Id.

Sweet bird !

Thee, chauntress, oft the woods among I wooe, to hear thy evening song ; And, missing thee, I walk unseen On the dry smooth shaven green. Milton.

He shaves with level wing the deep ; then soars Dp to the fiery concave towering high. Id.

The shavings are good for the fining of wine.

Mvrtimrr.

The bending scythe

Shatjes all the surface of the waving green. Gay

I caused the hair 6f his head to be shaved off.

Wiseman. My lord

Was now disposed to crack a jest, And bid friend Lewis go in quest ; This Lewis is a cunning shaver. Su-ift.

SHAW (Cuthbert), an English poet of considerable genius, but of humble origin, being the son of a shoemaker. His poems, however, are far above mediocrity. But he had the fortune o' Ferguson, not of Burns ; for, meeting with no generous patron, he died in great distress in 1 77 1 ,

SHAW (Peter), M. D., an eminent English physician, was author of several medical treatises, and editor of the great Bacon's Philosophical Works. He died in 1763.

SHAW (Samuel), an eminent English nonconformist divine of the seventeenth century, born at Repton in Derbyshire in 1635, and educated at the free school there. He afterwards became a member of St. John's College, Cambridge. In 1658 he obtained from Oliver the Protector a presentation to the rectory of Long Wharton ; but was ejected, in 1622, for nonconformity. In 1668 he was chosen master of the free-school at Ashby de la Zouch ; where he acquired great reputation, and educated many celebrated men of letters. He wrote a valuable work, entitled Immanuel ; and died in 1696.

SHAW (Stebbing), a modern divine and topographer, was the son of a clergyman, and born in 1762, in Staffordshire. He was educated at

Queen's College, Oxford, where he obtained a fellowship, and entered into orders : subsequently he became tutor to Sir Francis Burdett, with wh6m he made the tour of the Highlands. In 1788 he travelled through the western counties or" England, a narrative of which journey he published. In 1789 he commenced a periodical publication, entitled The Topographer, in monthly parts, after which he gave the public his History of Staffordshire, the first volume of which appeared in 1798 ; a part of the second followed in 1801, previously to which the author had succeeded his father as rector of Hartshorn in Derbyshire. He died in the prime of life, the 28th of October, 1802.

SHAW (Thomas), D. D., and F. R. S., a learned English divine, celebrated for his Travels to Barbary and the Levant, was born -in Kendal in Westmoreland about 1692. He was educated first at Kendal, afterwards at Queen's College, Oxford, where he graduated. He was appointed chaplain to the English consul at Algiers, in which station he continued for several.y ears ; and thence took opportunities of travelling into different parts. He returned in 1733 ; was elected F. R. S., and published the account of his travels at Oxford, folio, 1738. In 1740 he was nominated principal of St. Edmund Hall, which was raised from a ruinous state by his munificence ; and was regius professor of Greek at Oxford until his death in 1751. Dr. Clayton, bishop of Clogher, having attacked these Travels in his Description of the East, Dr. Shaw published a supplement by way of vindication, which is incorporated in the second edition of liis travels,

prepared by himself, and published in 4to., 1757.

SHAW (George), M. D., and F. II. S., an eminent naturalist, was born at Bierton, in Buckinghamshire, of which parish his father was vicar, in 1751. At the age of fourteen he went to Magdalen-hall, Oxford, where he took his master's degree in 1772 ; after which he entered

into orders, and became assistant to his father. His predilection for scientific pursuits, however, induced him to relinquish the clerical profession; and after studying at Edinburgh he took his degrees in medicine at Oxford ; where also he stood candidate for the botanical professorship ; but lost it in consequence of his having been ordained. He now settled in London; and, on the formation of the Linnaoan society, was chosen one of the vice-presidents. While the Leverian Museum existed he delivered lectures there on natural history, and afterwards published a description of that collection -in English and Latin. He also conducted the Naturalist's Miscellany, and the Speculum Linnaeum, or Linnaean Zoology. In 1789 he was chosen a fellow of the Royal Society, and in 1791 appointed librarian and assistant keeper of natural history in the British Museum ; where, in 1807, he became the principal of that department. He died July 22d, 1813. His other works are, — 1. The Zoology of New Holland. 2. Cimelia Physica. 3. General Zoology, 7 vols. 4to. 4. Zoological Lectures, 2 vols. 8vo. 5. An Abridgement of the Philosophical Transactions, in conjunction with Drs. Pearson, Hutton, Sec. 6. Papers in the Linneean Transactions.

SHAWLS. The most beautiful shawls come from Cashmire : their price is from 150 livres (about six guineas) to 1200 livres (or £50 sterling). In the Transactions of the Society for encouraging Arts, Manufactures, &x., for 1792, we are informed that a shawl counterpane, four yards square, manufactured by Mr. P. J. Knights of Norwich, was presented to the society, and that, upon examination, it appeared to be of greater breadth than any goods of equal fineness and texture that had ever before been presented to the society, or to their knowledge woven in this country. The shawls of Mr. Knights's manufacture can scarcely be distinguished from Indian shawls, though they can be afforded at one-twen- tieth part of the price. When the shawl is sixteen quarters square, Mr. Knights says, it may be retailed at £20 ; if it consisted of twelve quarters, and embroidered as the former, it will cost £15; if plain, with a fringe only, a shawl of sixteen quarters square may be sold at £8 8s. ; if twelve quarters and fringed, at £6 6s. Mr. Knights maintains that his counterpane of four yards square is equal in beauty, and superior in strength, to the Indian counterpanes which are sold at 200 guineas. The principal consumption of this cloth isin train-dresses for ladies; as likewise for long scarfs, in imitation of the real In-dian scarfs, which are sold from £60 to £80; whereas scarfs of this fabric are sold for as manv shillings, and the ladies square shawls in proportion.

SHAWM', n.s. Teut. schawme. A hautboy ; a cornet; written likewise shalm.

With trumpets also and shawtm.

Psalms. Common Player.

SHE, pron. In oblique cases her. Sax. j-eo ; Goth, si ; old Eng. sche. The female pronoun demonstrative ; the* woman ; the woman before mentioned ; the female ; sometimes used in contempt.

This once disclosed,

The ladies did change favours, and then we,

Following the signs, wooed but the sign of she.

Shakspeare •

What, at any time, have you heard her say”? Id.

The shes of Italy shall not betray Mine interest and his honour. Id. Cymbeline.

Lady, you are the cruellest she alive, If you will lead these graces to the grave, And leave the world no copy. Id. Twelfth Night.

I would outstare the sternest eyes that look, Pluck the young sucking cubs from the she bear, To win thee, lady. Id. Merchant of Venice.

He lions are hirsute, and have great manes ; the shes are smooth, like cats. Bacon.

She, of whom the ancients seemed to prophesy, When they called virtues by the. name of she ; She, in whom virtue was so much refined, That for allay unto so pure a mind She took the weaker sex. Donne:

The most upright of mortal men was he; The most sincere and holy woman she. Dryden.

Stand it in Judah’s chronicles confest, That David’s son, by impious passion moved, Smote a she slave, and murdered what he loved.

Prior.

SHEA, the name of a tree, from the fruit of which the negroes, in the interior parts of Africa, between the tropics, prepare a kind of

vegetable butter. These trees are not planted by the natives, but are found growing naturally in the woods; and in clearing wood-land for cultivation every tree is cut down but the shea. The tree itself very much resembles the American oak ; and the fruit, from the kernel of which, being first dried in the sun, the butter is prepared, by boiling the kernel in water, has somewhat the appearance of a Spanish olive. The kernel is enveloped in a sweet pulp, under a thin green rind ; and the butter produced from it, besides the advantage of its keeping the whole year without salt, is whiter, firmer, and, Mr. Park says, to his palate, of richer flavor, than the best butter which he had tasted made from cows' milk. The growth and preparation of the commodity seem to be among the first objects of African industry in this and the neighbouring states ; and it constitutes a main article of their inland commerce. In some places they dry the fruit in kilns, containing each about half a cart load of fruit, under which is kept up a clear wood fire. Our author, who saw the fruit in one of these kilns, was informed that in three days the fruit would be ready for pounding and boiling ; and that the butter thus manufactured is preferable to that which is prepared from fruit dried in the sun; especially in the rainy season, when the process by insolation is always tedious, and oftentimes ineffectual. Might it not be worth while, i. practicable, to cultivate shea trees in some of our West India Islands?

SHEAF, M.S. Plural sheaves. Sax. j-ceap; Belg. schoof. A bundle of stalks of corn bound together; any bundle or collection held together.

SHE !£

These be the theaves that honour's harvest bears, The seed, thy valiant acts ; the world, the field.

Fairfax.

He beheld a field,

Part arable and tilth ; whereon were sheave* New reaped : the other part sheep-walks and folds.

Milton.

The reaper fills his greedy hands, And binds the golden sheaves in brittle bands.

Dry den. She vanished ; The sheaf of arrows shook and rattled in the

case.

In (he knowledge of bodies, we must glean what we can -, since we cannot, from a discovery of their real essences, grasp at a time whole sheaves, and in bundles comprehend the nature of whole species.

Locks.

SHEAL,v.a. To shell. See SHALE. Thou art a shealed peasecod.

Shakspeare. King Lear.

SHEAR, v. a.&n.s.\ Prefer, shore or shear-SIIEAR'ER, >ed, part. pass, shorn.

SHEAR'MAN. j Sax. j-cearian, j-cyrien.

This word, says Johnson, is more frequently written sheer; but sheer cannot analogically form shore or shorn : shear, shore, shorn ; as tear, tore, torn. To clip or cut by interception between two blades moving on a rivet : the plural shears is the name of the instrument used : also a name for wings (in Spenser) and for the age of sheep : a shearer and shearman is one who clips with, or uses shears.

Laban went to shear his sheep. Gen. xxxi. 19. Alas ! thought Philoclea to herself, your sheers come too late to clip the bird's wings that already is flown away. Sidney.

Two sharp-winged sheers Decked with divers plumes, like painted jays, Were fixed at his back to cut his airy ways.

Spenser.

So many days, my ewes have been with young ; So many weeks, ere the poor fools will yean ; So many months, ere I shall shear the fleece.

Shakspeare.

U'hy do you bend such solemn brows on me 1 Think you I bear the shears of destiny ? Have I commandment on the pulse of life ? Id.

Thy father was a plaisterer, And thou thyself a shearman. Id.

When wool is new shorn, they set pails of water by in the same room to increase its weight.

Bacon's Natural History. To lay my head, and hollow pledge Of all my

strength, in the lascivious lap Of a deceitful concubine, who shore me, Like a tame wether, all my precious fleece. Milton.

Of other care they little reck'ning make, Than how to scramble at the shearers feast, And shove away the worthy bidden guest. Id. The same ill taste of sense would serve to join Dog foxes in the yoke, and sheer the swine.

Dryden. The fates prepared their sharpened sheers. Id.

When the fleece is shorn,

Then their defenceless limbs the brambles tear ; Short of their wool, and naked from the sheer. Id.

When sheep is ones/tear, they will have two broad teeth before ; when two shear, four ; when three, six ; when four, eight : and, after that, their mouths break. Mortimer.

The sharp and toothed edge of the nether chap strikes into a canal cut into the bone of the upper

and the toothed protuberance of the upper into a canal in the uether : by which means he easily sheers the grass whereon he feeds. Grew.

That people live and die, I knew, An hour ago, as well as you ; And, if fate spins us longer years, Or is in haste to take the shears, 1 know we must both fortunes try, And bear our evils, wet or dry. Prior.

Was he to be led as a lamb to the slaughter, patient and resigned as a sheep before her shearers ?

Rogers. Mayest thou henceforth sweetly sleep !

Shear, swains, oh shear your softest sheep,

To swell his '-ouch ! Gay.

Beneath the shears they felt no lasting smart ; They lost but fleeces, while I lost a heart. Id.

Fate urged the shears, and cut the sylph in twain, But airy substance soon unites again. Pope.

O'er the congenial dust enjoined to shear The graceful curl, and drop the tender tear. Id.

How happy should we be if we had the privilege of employing the sheers, for want of a mint, upon foreign gold, by clipping it into half-crowns !

Swift.

SHE ARBILL, the rynchops nigra of Linnaeus, the black skimmer of Pennant and Latham, and cutwater of Catesby. See RYNCHOPS. Its bill is much compressed ; the edges are sharp ; the lower mandible is four inches and a half long; the upper only three ; the base red ; the rest is black ; the forehead, chin, front of the neck, the breast, and belly, are white ; the head and whole upper part of the body are black ; the wings are of the same color ; the lower part of the inner webs of the primaries is white ; the tail is short, and a little forked ; the middle feathers are dusky ; the others are white on their sides ; the legs are weak and red ; the length is one foot nine inches ; the extent is three feet seven inches. It inhabits America from New York to Guiana. It

skims nimbly along the water, with its under mandible just beneath the surface, feeding on the insects and small fish as it proceeds. It frequents also oyster banks, its bill being partly like that of the oyster-catcher, adapted for preying on those shell-fish.

SHEARD, n. s. Sax. j-ceapb. A fragment. It is now commonly written shard, and applied to fragments of earthenware.

In the bursting of it, not a sherd to take fire from the hearth, or to take water out of the pit.

Isaiah xxx. 14.

SHEATH, n.s. ˆ Sax. rc«E«e. The SHEATHE, v. a. 9 case of any thing ; the

SHEATH'-WINGED, adj. f scabbard of a weapon : SHEATH'Y.) to enclose in a scabbard; fit with a sheath ; enclose : sheathwinged is having sheaths over the wings : sheathy, forming a sheath.

The dead knight's sword out of his sheath he drew, With which he cut a lock off all their hair.

Faerie Queene.

There was no link to color Peter's hat, Walter's dagger was not come from sheathing.

Shakspeare.

It were to be wished that the whole navy throughout were sheathed as some are. Raleigh.

Doth not each look a flash of lightning feel, Which spares the body's sheath, yet melts the steel "

In his hair one hand he wreaths, His sword the other in his bosom

sheaths. Denham. This, drawn but now against my sovereign's breast, Before 'tis sheathed shall give him peace and rest.

Walter.

Those active parts of a body are of differing natures when sheathed up or wedged in amongst others, in the texture of a concrete, and when extricated from these impediments. Boyle.

Is this her hate to him, her love to me ? 'Tis in my breast she sheaths her dagger now.

Dry den.

The leopard, and all of this kind as goes, keeps the claws of his forefeet turned up from the ground, and sheathed in the skin of his toes, whereby he preserves them sharp for rapine, extending them only when he leaps at the prey. Grew.

Swords by the lightning's subtile force distilled, And the cold sheath with running metal filled.

Addlson.

Other substances, opposite to acrimony, are called demulcent or mild, because they blunt or sheath those sharp salts ; as pease and beans. Arbuthnot.

Some insects fly with four wings, as all vaginipen-nous or sheathwinged insects, as beetles and dorrs

Browne.

With a needle put aside the short and sheathy cases on earwigs backs, and you may draw forth two wings. Id.

SHEATHING, in the sea language, is the casing that part of a ship which is to be under water with fir-board of an inch thick ; first laying hair and tar mixed together under the boards, and then nailing them on, in order to prevent worms from eating the ship's bottom. Ships of war are now generally sheathed with copper : but copper sheathing is liable to be corroded by the action of salt water, and something is still wanting to effect this purpose. It is very probable that tar might answer very well. In the Cornish mines copper or brass pumps are often placed in the deepest parts, and are consequently exposed to the vitriolic or other mineral waters with which some of these mines

abound, and which are known to nave a much stronger effect on copper than sea water These pumps are generally about six feet long, and are screwed together, and made tight by the interposition of a ring of lead, and the joinings are afterwards tarred. One of these pumps was so much corroded as to render it un-fit for use ; but the spots of tar, which by accident had dropped on it, preserved the parts they covered from the action of the water. These projected in some places more than a quarter of an inch; and the joints were so far defended, by tbe thin coat of tar, that it was as perfect as when it came from the hands of the manufacturer. If tar thus effectually defends copper from the acrimonious waters, can tbere remain a doubt of its preserving it from the much milder waters of the sea?

SHEATS, in a ship, are ropes bent to the clews of the sails ; serving in the lower sails to haul aft the clews of the sail ; but in topsails they serve to haul home the clew of the sail close to the yard-arm.

SHEAVE, in mechanics, a solid cylindrical wheel, fixed in a channel, and moveable about an axis, as being used to raise or increase the mechanical powers applied to remove any body.

SHEBA, or SEBA a country of Arabia Felix

or Abyssinia, which in the reign of Solomon king of Israel was governed by a queen named Makeda, or Balkis, who, hearing of that monarch's fame for wisdom and riches, waited on him personally, accompanied by a numerous train of attendants, and bringing a vast quantity of costly presents, as recorded in 1 Kings, x. According to the Abyssinian historians, this lady was not contented with the communication of Solomon's wisdom alone. Wishing to have a succession of wise monarch? in Sheba, she formed a closer connexion with him ; and accordingly had a son by him named David whose posterity, according to Mr. Bruce, still continue to reign in Abyssinia or Ethiopia. See ETHIOPIA. The compilers of the Universal History are of opinion, as well as Mr. Bruce, that the queen of Sheba was really sovereign of Ethiopia. ' Ethiopia,' say they, ' is more to the south of Judea than the territory or kingdom of Saba in Arabia Fe-lix ; consequently it had a better claim than that country for the dominions of the princess whom our Saviour calls ' the queen of the south.' Ethiopia is styled the remotest part of the habitable world by Herodotus and Strabo; and therefore better agrees with what our Saviour has said of the queen of Sheba, that she ; came from the uttermost parts of the earth,' than Arabia. Nor can it be deemed a

sufficient reply to this argument, that Arabia Felix was the uttermost part of the earth in respect to Judea, since it was hounded by the Red Sea ; for that not only Egypt, but even Ethiopia, regions beyond that sea, were known to the Jews, and had a communication with them, both before and in our Saviour's time, is indisputably clear. Lastly, from what has been suggested, it appears no improbable conjecture that Judaism was not only known, at least in a part of Ethiopia, but nearly related to the established religion there, at the beginning of the apostolic age, if not much earlier. After all, these two opinions, so contrary in appearance, may be made consistent without great difficulty ; since it is agreed that Arabia and Ethiopia have anciently borne the same name, been included during certain intervals in one empire, and governed by one prince. Part of the Arabs and Ethiopians had the same origin, and very considerable numbers of the Abaseni transported themselves from Arabia Felix into Ethiopia ; a circumstance which sufficiently proves the intercourse that formerly subsisted between the Cushites or Ethiopians of Asia and Africa.'

SHEBA, or SEBA, the name of four patriarchs mentioned in Scripture, one or other of whom gave name to the above country, *viz.* the eldest of Cush, grandson of Ham and brother of Nimrod : Gen. x. 7. 2. The son of Raamah, and grandson of Cush: Gen : x. 7. 3. The son of Joktan: Gen. x. 28. And, 4. A son of Jokshan, and grandson of Abraham by Keturah. All these took up their residence in Arabia.

SHEBA, the son of Bichri, a Benjamite who attempted to raise a rebellion, after the death of Absalom ; but was pursued by Joab, and beheaded by the people of Abel-Bethmaacah, to whom he had fled, and who delivered his head to Joab, who thereupon raised the siege of it. See ABEL-BETHMAACAH.

SHEBA, in geography, is the same with Beer-Sheba, i. e. The Well of the Oath (Gen. xxxi. 23); and where it is mentioned in Joshua, xix. 2, it should read ' Beer-Sheba or Sheba,' not 'and Sheha;' which makes exactly thirteen cities, as enumerated in the sixth verse. See BEER-SHEBA and BERSABE.

SHEBAT. SeeSEBAT.

SHEBBEARE (John), M. D., was born at Bufdeford, in Devonshire, in 1709. His fatherwas an attorney; but having small practice, and little fortune, he carried on also the business of a corn-factor. He had four children, two sons and two daughters. Of the sons, John was the eldest. The other son was called Richard, and entirely the reverse of his brother in disposition ; he was bred to the sea, and died young, john received the rudiments of his education at the free school of Exeter, then conducted by the learned Mr. Zachary Mudge (author of an Essay for a new Version of the Psalms, and a volume of excellent Sermons), afterwards rector of St. Andrew in Plymouth. In the fifteenth or sixteenth year of his age young Shebbeare was bound an apprentice to a very eminent and worthy surgeon in his native town ; in which situation he acquired a considerable share of medical knowledge. His genius for lampoon appeared at this early period, and he could not forbear from exercising it on his master. The chief marks, however, of the arrows of his wit were the gentlemen of the corporation : one or other, and sometimes all of them, were exposed in a libel upon the public posts. But, though the wiser part of them only laughed at these harmless trifles, yet some were more irritable, and many a prosecution was commenced against, but not one could fix itself upon him, so artfully had he contrived to conceal himself. He was also several times summoned to appear at the sessions, for daring to speak and write irreverently of the worshipful magistrates; but the laugh was always on the side of Shebbeare, nor could they ever come at his back, so closely had he fitted on his armour, with the whip of authority. When he was out of his time he set up trade for himself, and then showed a taste for chemistry ; and .soon after he married a very agreeable and amiable young woman of no fortune, but of a genteel family. Whether his insuperable propensity to satire deprived him of friends and of business, or that he spent too much in chemical experiments, we know not ; but failing, at Biddeford, he removed about 1736 to Bristol, where he entered into partnership with a chemist, and never afterwards set his foot in his native town. In 1739 he attracted the attention of the public, by an epitaph to the memory of Thomas Coster, esq; member for Bristol ; in which he has contrived to raise emotions of pity, grief, and indignation, to a very high degree. In 1740 he published a pamphlet on the Bristol waters ; from which period there is a chasm in our author’s life we are unable to fill up. In 1752 he was at Paris, where he obtained his degree. Until this time he appears to have lived in obscurity ; but at an age when vigorous exertion usually subsides, he seems to have resolved to place himself in a conspicuous Mtuation, whatever hazard might attend it, and

commenced a public writer with a degree of asperity and virulence for which it would be difficult to find a parallel even in the most intemperate times. To read over his works now, when the passions they then raised have subsided, we feel surprise at the effect they produced ; and it is within the memory of many yet living that their influence was very considerable. In 175-1 he began his career with the Marriage Act, a political novel ; in which he treated the legislature with such freedom that it occasioned his being taken into custody ; whence, however, he was soon released. The performance*, however, most celebrated, were a series of Letters to the People of England, well calculated to make an impression on common readers ; they were accordingly read with avidity, and circulated with diligence. On the publication of the Third Letter, warrants dated 4th and 8th of March, 1756, were issued by lord Holdernesse, to take up both Scott the publisher and the author. This prosecution, however, seems to have been dropt, and the culprit proceeded for some time unmolested having declared that he would write himself into a post or into a pillory; in the last of which he at length succeeded. On the 12th of January, 1758, a general warrant was signed by lord Holdernesse, to search for the author, printer, and publishers, of a wicked, audacious, and treasonable libel, entitled A Sixth Letter to the People of England, on the Progress of National Rum ; in which is shown that the present grandeur of France and calamities of this nation are owin<r to the influence of Hanover on the councils of England. At this juncture government seem to have been effectually roused ; for, having received information that a seventh letter was printing, by virtue of another warrant, dated January 23d, all the copies were seized and entirely suppressed. In Easter term an information was filed against him by Mr. Pratt, then attorney-general, afterwards lord Camden; in which the crown officer, in his application to the court, in express terms admitted a point afterwards much disputed, but now established, that of the jury's right to determine both the law and the fact in matters of libel. Oh the 17th of June the information was tried, when our author was found guilty ; and on the 28th of November he was fined £5 ; ordered to stand in the pillory December 5th, at Charing Cross ; to be confined three years; and to give security for his good behaviour for seven years, himself in £500, and two others in £250 each. On the day appointed that part of the sentence which doomed him to the pillory was put in execution, amidst a prodigious concourse of people assembled on the occasion. The under sheriff at that time happened to be Mr. Beard more, who had sometimes been assisted by the doctor in writing the Monitor, a paper in its principles

of the same tendency with the writings of the culprit, who consequently might expect every indulgence from the officer to whom the execution of his sentence was committed. Accordingly the defendant stood upon the platform of the pillory, unconfined,and at his ease, attended by a servant in livery, holding an umbrella over his head all the time ; but his head, hands, neck, and arms, were not at all

confined, or put into the holes of the pillory. For this neglect of duly, Beardmore was fined £50, and suffered two months' imprisonment. Some time before he was tried for the above publication, the duchess of Queensbury, as heir of lord Clarendon, obtained an injunction in the court of chancery to stop the publication of the continuation of that nobleman's history ; a copy of which had got into 'the hands of Francis Gwyn, esq , between whom and the doctor there had been an agreement to publish it. The care and expenses attending the ushering this work into the world were to be wholly Dr. Shˆbbeare's, who performed his part of the agreement, and caused it to be handsomely printed in quarto, with frequent reflections on, and allusions to re-cent events. On the injunction being obtained, Dr. Shebbeare was under the necessity of applying to the aid of law to recover the money expended by him in printing, amounting to more than £500. And it may be easily imagined that his circumstances were not improved by three years' imprisonment. During his confinement, he declares, he never received as presents more than twenty guineas from all the world, although receipts were issued for a first volume of the ' History of England, and of the Constitution thereof from its origin.' That volume he wrote, and had transcribed ; but it was never published, for which he assigned various reasons, too tedious to be quoted. He said, however, that he did not intend to die until what he had proposed was finished ; a promise which he was unable to perform. He was detained in prison during the whole time of the sentence, and with some degree of rigor ; for when his life was in danger from an ill state of health, and he applied to the court of king's bench for permission to be carried into the rules a few hours in a day, though lord Mansfield acceded to the petition, yet the prayer of it was denied and defeated by judge Forster. But at the expiration of the time of his sentence, a new reign had commenced ; and shortly afterwards, during the administration of Mr. Grenville, a pension was granted him by the crown. This he obtained by the personal application of Sir John

Philips to the king, who, on that occasion, spoke of him in very favorable terms, which he promised to endeaVour to deserve. From that event we find Dr. Shebbeare a uniform defender of the measures of government, and the mark against whom every opposer of administration threw out the grossest abuse. Even the friends of power were often adverse to him. Dr. Smollet introduced him, in no very respectful light, under the name of Ferret, in the novel of Sir Launcelot Greaves, and Mr. Hogarth made him one of the group in the third election print. Scarcely a periodical publication was without some abuse of him, which lie seems to have m general had the good sense to neglect. In 1774, however, he defended himself from some attacks made upon him, and represented the character of king William in such a light as to excite the indignation of every whig in the kingdom. Early in life he appears to have written a comedy, which in 1766 he made an effort to get represented at Covent Garden. In 1768 he wrote the review of books in the Political Re-157 SHE

gister for three months, and was often engaged t«> write for particular persons, with whom he frequently quarrelled when he came to be paid. This was the case with Sir Robert Fletcher. His pen seems to have been constantly employed, and he wrote with great rapidity, what certainly can now be read with little satisfaction. Though pensioned by government, he can scarcely be said to have renounced his opinions; for, in the pamphlet already mentioned, his abuse of the Revolution is as gross as in that for which he suffered the pillory. His violence defeated his own purpose. He was a strenuous supporter of the ministry during the American war, and published in 1775. An Answer to the Speech of Edmund Burke, esq., April 19th, 1774. And An Essay on the Origin, Progress, and Establishment of National Society ; in which the principles of government, the definitions of physical, moral, civil, and religious liberty, contained in Dr. Price's Observations, &c., are fairly examined and refuted ; together with a justification of the legislature, in reducing America to obedience by force. His publications, satirical, political, and medical, amount to thirty-four; besides a novel, entitled Lydia or Filial Piety ; in which religious hypocrisy and bluster-ing courage are very properly chastised. He died on the 1st of August, 1788, leaving, among those who knew him best, the character of a benevolent man ; notwithstanding the violence of his party spirit.

SHECH£M, the son of Hamor, the Hivjte, prince of the country so named, a contemporary of the patriarch' Jacob, who purchased from him a field for a burial ground. Upon this occasion, or soon after it, the prince, falling in love with Dinah, the patriarch's only daughter, seduced her ; but, contrary to the villanous practice of most seducers

of female innocence, generously and honorably proposed marriage to her father and brethren. But through the vindictive vil-lany of her two brethren, Simeon and Levi, a scene of hypocrisy, cruelty, and massacre, followed, which has scarcely a parallel, in the history of the most savage nations. Under pretence of religion, the prince, his father, and the whole men of the city were massacred ; the women and children carried captives, and the city plundered. See Gen. xxxiv. The patriarch Jacob not only complained at the time, that their barbarity had made him to stink among the inhabitants, but pronounced a well merited curse upon the monsters, on his death bed, when he blessed the rest of his sons. Gen. xlix.‘5 — 7.

SHECHEM, SCHECHEM, or SICHEM, a city of Canaan, the capital of the Shechemites, built by Hamor, and named after his son. It stood upon mount Ephraim, about ten miles north of Shiloh, and thirty or thirty-five north of Jerusalem, and belonged to the tribe of Ephraim. It was one of the cities of refuge, and is memorable for being the place where Joshua assembled the tribes, and gave them his last solemn advice, a short time before his death. Josh. xxiv. 1 — 28. On the death of Gideon, the Shechemites made his bastard son, Abimelech, king, and murdered seventy of his legitimate sons ; but afterwards, rebelling against the usurper, he massacred the

people, razed their city, and burned their tower, •with 1000 persons in it. See ABIMELECH. Shechem, however, was afterwards rebuilt, and about the end of Solomon’s reign was a place of so much consequence that it became the scene of the revolution under his son Rehoboam, who was dethroned in it, and Jeroboam I. elected king, who repaired it, and made it his capital. It continued to be the capital of several of his successors, whose luxury and drunkenness procured it the name of Sychar, till the captivity of Shalmaneser. See SAMARIA. About A. M. 3870 it was taken, pillaged, and razed, by John Hyrcanus, king of the

Jews. About A. D. 72 it was rebuilt by Vespasian, and named Flavia, and Neapolis. It is now called Naplouse or Nablous. See NABLOUS, and SAMARITANS. Near Jacob's Well, at this town, a church was erected about the ninth century, of which there are still relics.

SHECK'LATON, n. s. Fr. sheklatone. A kind of embroidery.

He went to fight against the giant in his robe of shecklaton, which is that kind of gilded leather with which they use to embroider the Irish jackets.

Spenser.

SHED, v. a., v. n., & J Sax. rceT>an. To

SHED'DER, n. s. [»'. s. { effuse ; to pour out; spill; scatter; let fall its parts : a slight covering.

Neither men putten newe wyn in to olde hotels, ellis the hotels ben to broken and destroyed, and the wyn ached out ; but men putten newe wyn into newe hotels and bothe ben kept. IVicklif, Matt. 9.

4 thedder of blood shall surely die.

Ezek. xviii. 10.

For this is my blood which is shed for many, for the remission of sins. Mait. xxvi. 28.

Though he his house of polished marble build, With jasper floored, and carved cedar cieled j Yet shall it ruin like the moth's frail cell, Or sheds of reeds which summer's heat repel.

Sandys.

Trees that bring forth their leaves late, and cast them late, are more lasting than those that sprout their leaves early, or shed them betimes.

Bacon's Natural History.

Some think one general soul fills every brain, As the bright sun sheds light in ev'ry star. Varies.

The first Aletes born in lowly shed, Of parents base, a rose sprung from a bride.

Fairfax.

In such a season born, when scarce a ihed Could be obtained to shelter him or me From the bleak air. Milton's Paradise Regained.

So all our minds with his conspire *o grace The Gentile's great apostle, and deface Those state-obscuring sheds, that like a chain Seem'd to confine and fetter him again. Waller.

Aiound its entry nodding poppies grow, And all cool simples that sweet rest bestow ; Night from the plants their sleepy virtue drains, And passing sheds it on the silent plains. Dryden.

Unhappy man ! to break the pious laws Of nature, pleading in his - children's cause : 'Tis love of honour, and his country's good ; The consul, not the father, sheds the blood. Id.

Those houses then were caves, or homely sheds With twining osiers fenced, and moss their beds.

Id.

While oats are apt to shed most as they lie, and lack as they stand. Moiti-ner's Husbandry.

Then out he steals, and finds where oy the head Their horse hung fasten'd underneath a shed.

Bctterton. So the returning year be blest,

As his infant months bestow

Springing wreaths from William's brow ;

As his summer's youth shall ihed

Eternal sweets around Maria's head. Prior.

In these lone walls, their days eternal bound, These moss-grown domes with spiry turrets crown'd, Where awful arches make a noon-day night, And the dim windows shed a solemn light, Thy eyes diffused a reconciling ray, And gleams of glory brightened all the day. Pope.

Here various kinds, by various fortunes led, Commence acquaintance underneath a shed. Swift.

Weak as the Roman chief, who strove to hide His father's cot, and once his father's pride, By casing a low shed of rural mould With marble walls, and roof adornea with gold.

Harte.

SHEEN, adj.) Probably only the old pro—

SHEEN'Y. 5 nunciation of shine. Bright; glittering ; showy. A word now not in use.

When he was all dight, he took his way Into the forest, that he might be seen Of the wild beasts, in his new glory sheen.

Hubberd's Tale.

Now they never meet in grove or green, By fountain clear, or spangled starlight sheen.

Shaltspeare.

Up rose each warrior bold and brave, Glistering in filed steel and armour sheen. Fairfax.

By the rushy fringed bank, Where grows the willow and the osier dank, My sliding chariot stays, Which set with agat, or the azure sheen, Of turcois blue, and emerald green. Milton.

Or did of late earth's sons besiege the wall Of sheeny heaven. Id.

SHEEN, EAST, a beautiful village of Surrey, in the parish of Mortlake, seated on an eminence, near the Thames, between Richmond and Roeh-ampton.

SHEEN, WEST, an ancient hamlet of Surrey, in the parish of Richmond, which stood a quarter of a mile northwest of the old palace of Richmond, where Henry V. founded a Carthusian convent, in which Perkins Warbeck sought an asylum. Its last remnant, the ancient gateway, was taken down in 1770; when the whole ham-let, consisting of eighteen houses, was demolished, and the ground made into a lawn, and added to the king's enclosures.

SHEEP, n. „. "} Sax.fceap, of which

SHEEP'BITE, v. n.

the plural was reeP 5

SHEEP’BITER, n. s.

Belgic scliaep ; Gothic

SHEEP’COT,

sky fa. A well-known

SHEEP’FOLD,

animal. See below. To

SHEEP’HOOK,

sheepbite is to practise

SHEEP’ISH, adj.

petty thefts : a sheep—

SHEEP’ISHNESS, n. s.) > biter is a petty thief:

SHEEP’M ASTER,

sheepcot and sheep—

SHEEP’S’EYE,

fold, enclosures of

SHEEP’SHEARING,

sheep : sheepish, timo—

SHEEP’WALK,

rous ; awkward ; mean :

SHEP’HERD,

the noun substantive

SHEP’HERDESS.

corresponding : the o—

SUEP’HERDISH, adj.

ther compounds do not

seem to require explanation.

SHEEP.

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We are his people, and the sheep of his pasture.

Psalms.

His gate like a sheepbiter fleering aside. Tusser. She put herself into the garb of a shepherdess, and in that disguise lived many years ; but, discovering herself a little before her death, did profess herself the happiest person alive, not for her condition, but in enjoying him she first loved ; and that she would rather, ten thousand times, live a shepherdess in contentment and satisfaction, Sidney.

He would have drawn her elder sister, esteemed her match for beauty, in her shepherdish attire. Id.

She saw walking from her ward, a man in shepherdish apparel. Id.

Shew your knave’s visage, with a pox to you ; shew your sheepbiting face, and be hanged.

Shahspeare.

Wouldst thou not be glad to have the niggardly rascally sheepbiter come to some notable shame 1 Id.

Bedlam beggars, with roaring voices, Fom low farms, sheepcots, and mills, Inforce their charity. Id. King Lear.

I am shepherd to another man, And do not sheer the fleeces that I graze.

Shakspeare.

These your unusual weeds to each part of you Do give a life : no shepherdess, but Flora Peering in April's front. Id. Winter's Tales.

If that the world and love were young, And truth in every shepherd's tongue, These pretty pleasures might me move, To live with thee and be thy love. Raleigh.

A nobleman was a great grazier and sheepmaster.

Bacon.

The one carried a crosier of balm-wood, the other a pastoral staff of cedar like a sheep-hook.

Id. New Atlantis.

Thy gentry bleats, as if thy native cloth Transfused a sheepishness into thy story, Herbert.

He beheld a field,

Part arable and tilth, whereon were sheaves New reaped ; the other part sheep-walks and folds.

Milton.

Up to a hill anon his steps he reared, From whose high top to ken the prospect round, If cottage were in view, sheepcot, or herd ; But cottage, herd, or sheepcot, none he saw. Id.

The like some shepherdess did shew, Who sat to bathe her by a river's side. Dryden.

His dorick dialect has incomparable sweetness in its clownish ness, like a fair shepherdess in country russet. Id.

If you dare think of deserving our charms, Awav with your sheephooh, and take to your arms.

Id.

Fire the bramble, snare the birds, and steep In wholesome water-falls the fleecy sheep. Id.

Cast a sheep's-eye behind you : in before me. Id. There are political sheepbiters as well as pastoral ; betrayers of public trust as well as of private.

If Estrange,

Of substances there are two sorts of ideas ; one of single substances, as they exist separately, as a man, or sheep. Locke.

Wanting change of company, he will, when he comes abroad, be a sheepish or conceited creature.

Id.

Sheepishness and ignorance of the world, are not consequences of being bred at home. Id.

Without success, let a man be never so hardy, he will have some degree of sheepishness. Grew.

There happening a solemn festivity, such as the sheepshearings used to be, David begs some small re-past. South.

The bear, the lion, terrors of the plain ;

The sheepfold scattered, and the shepherd slain.

Prior :

Lead up all those who heard thee, and believ'd ; 'Midst thy own flock, great shepherd, be received, And glad all heaven with millions thou hast saved.

Id.

SHEEP, in zoology. See Ovis and WOOL. Among the various animals with which Divine Providence has stored the world, for the use of man, none is to be found more useful, or -more valuable, than the sheep. It supplies us with food and clothing, and finds ample employment for our poor at all seasons of the year, whereby a variety of manufactures of woollen cloth is carried on without interruption to domestic comfort and loss to friendly society, or injury to health, as is the case with many other occupations. Every lock of wool that grows on its back contributes to the support of staplers, dyers, pickers, scourers, scribblers, carders, combers., spinners, spoolers, warpers, quillers, weavers, fullers, tuckers, burlers, shearmen, pressers, clothiers, and packers, who, one after another, tumble, and toss, and twist, and bake, and boil, this raw material, till they have each

extracted a livelihood out of it; and then comes the merchant, who, in his turn, ships it, in its highest state of improvement, to all quarters of the globe, whence ne brings back every kind of riches to his country in return for this valuable commodity which the sheep affords. Besides this, the useful animal, after being deprived of his coat, produces another against the next year ; and, when we are hungry, and kill him for food, he gives us his skin to employ the feltmongers and parchment-makers, who supply us with a durable material for securing our estates, rights, and possessions ; and, if our enemies take the field against us, supplies us with a powerful instrument for rousing our courage to repel their attacks. When the parchment-maker has taken as much of the skin as he can use, the glue-maker comes after and picks up every morsel that is left, and therewith supplies a material for the carpenter and cabinet-maker, which they cannot do without, and which is essentially necessary before we can have elegant furniture in our houses ; tables, chairs looking-glasses, and a hundred other articles of convenience. And, in absence of the sun, the sheep supplies us with an artificial mode of light, whereby we pres'erve every pleasure of domestic society, and with whose assistance we can continue our work, or write or read, and improve our minds, or enjoy the social mirth of our friends. Another part of the slaughtered animal supplies us with an ingredient necessary for making good common soap, a useful store for producing cleanliness in every family, rich or poor. Even the horns are converted by the button-makers and turners into a cheap kind of buttons, tips for bows, and many usefu1 ornaments. From the very trotters an oil is extracted useful for many purposes ; and they afford good food when baked in an oven. Even the bones are useful also; for, by a late invention, they are found, when reduced to ashes, to be a useful and essential ingredient in the composition of the finest artificial stone in

ornamental work for chimney-pieces, cornices of rooms, houses, &c., which renders the composition more durable by effectually preventing its cracking. This meek inoffensive creature can feed where every other animal has been before him and grazed all they could find ; and,

if he takˆs a little grass on our downs or in our fields, he amply repays us in the richness of the manure which he leaves behind him. He protects the hands from the cold wintry blast, by providing them with the softest leather gloves. Every gentleman's library is also indebted to him for the neat binding of his books, for the sheath of his sword, and for cases for his instruments ; in short, there is hardly any furniture or utensil of life but the sheep contributes to render either more useful, convenient, or ornamental.

Wales breeds a small hardy kind of sheep, which has the best tasted flesh, but the worst wool of all. Nevertheless it is of more extensive use than the finest Segovian fleeces ; for the benefit of the flannel manufacture is universally known. The sheep of Ireland vary, like those of Great Britain; those of the south and east being large and their flesh rank; those of the north and the mountainous parts small, and their flesh sweet. The fleeces in the same manner differ in degrees of value. Scotland breeds a small kind in Shetland, and their fleeces are remarkably fine. But the new Leicestershire breed is perhaps one of the most profitable breeds in the island. See RURAL ECONOMY. Joseph Altom of Clifton, who raised himself from a plough-boy, was the first who distinguished himself in the midland counties of England for a superior breed of sheep. How he improved his breed is not known ; but it was customary for eminent farmers in his time to go to Clifton in summer to choose and purchase ram-lambs, for which they paid two or three guineas. This man was succeeded by Mr. Bakewell ; and it may reasonably be supposed that the breed, by means of Altom's stock, had passed the first stage of improvement before Mr. Bakewell's time. Still, however, it must be acknowledged that the Leicestershire breed of sheep owes its present high state of improvement to the ability and care of Mr. Bakewell.

This subject is pretty fully treated of under RURAL ECONOMY. The feeding sheep with turnips is a great advantage to the farmers. When they are made to eat turnips they soon fatten ; but there is some difficulty in bringing this about. The old ones always refuse them at first, and will sometimes fast till almost famished ; but the young lambs fall to at once. The common way of turning a flock of sheep at large into a field of turnips is very disadvantageous ; for they would thus destroy as many in a fortnight as will keep them a whole winter. There are three other ways of feeding them on this food. The first is to divide the land into hurdles, and allow the sheep to come upon such a portion only at a time as they can eat in one day, and so advance the hurdles farther into the ground daily till all be eaten. This is infinitely better than the former random method ; but they never eat them clean even this way, but leave the bottoms and outsides scooped in the

ground : the

people pull up these indeed with iror. crooks and lay them before the sheep again ; but they are commonly so fouled that they do not care for them. The second way is by enclosing the sheep in hurdles, as in the former ; but in this they pull up all the turnips which they suppo e the sheep can eat in one day, and daily remove the hurdles over the ground whence they have pulled up the turnips : thus there is no waste, and less expense ; for a person may in two hours pull up all those turnips, the remaining shells o*” which would have employed three or four laborers a day to get up with their crooks out of the ground trodden hard by the feet of the sheep ; and the worst is that, as in the method of pulling up first, the turnips are eaten up clean ; in this way, by the hook, they are wasted ; the sheep do not eat any great part of them ; and, when the ground comes to be tilled afterwards for a crop of corn, the fragments of the turnips are seen in such quantities on the surface that half the crop at least seems to have been wasted. The third method is to pull up the turnips, and remove them in a cart to some other place, spreading them on a fresh place every day ; thus the sheep will eat them up clean, both root and leaves. The great advantage of this method is, when there is a piece of la:.d not far off which wants dung more than that where the turnips grew, which perhaps is also too wet for the sheep in winter ; and then the turnips will, by the too great moisture and dirt of the soil, sometimes spoil the sheep, and give them the rot. Yet such ground will often bring forth more and larger turnips than dry land ; and, when they are carried off, and eaten by the sheep on ploughed land in dry weather, and on green sward in wet weather, the sheep will succeed much bettei , and the moist soil where the turnips grew, not being trodden by the sheep, will be much fitter for a crop of corn than if they had been fed with turnips on it. The expense of hurdles, and the trouble of moving them, are saved in this case, which will counterbalance at least the expense of pulling the turnips and carrying them to the places where they are to be eaten. They must always be carried off for oxen.

The manner in which Mr. Bakewell raised his sheep to the degree of celebrity in which ttyey long stood, is, notwithstanding the recentness of the improvement, a thing in dispute; even among men high in the profession, and living in the very district in which the improvement has been carried on ! This proprietor alone perhaps was in possession of the minutiae of his own improvement : it is most probable that no cross with any alien breed whatever was used ; but that the improvement was effected by selecting individuals from kindred

breeds, or varieties of long-woolled sheep, with which Mr. Bakewpll was surrounded on almost every side, and by breeding in and in (i. e. from the same family) with this selection : solicitously seizing the superior accidental varieties produced ; associating these varieties ; and still continuing to select, with judgment, the superior individuals. It now remains to give a description of the superior class of individuals of this breed, especially ewes and wedder*, in full condition, but not immoder-SHEEP

ataly fat. The rams will require to be distinguished afterwards. The head is long, small, and hornless, with ears somewhat long, and standing backward, and with the nose shooting forward. The neck thin, and clean toward the head ; but taking a conical form ; standing low, and enlarging every way at the base ; the fore end altogether short. The bosom broad, with the shoulders, ribs, and chine extraordinarily full. The loin broad, and the back level. The haunches comparatively full towards the hips, but light downward ; being altogether small in proportion to the fore parts. The legs of a moderate length ; with the bones extremely fine. The bone throughout remarkably light. The carcase, when fully fat, takes a remarkable form ; much wider than it is deep, and almost as broad as it is long. Full on the shoulder, widest on the ribs, narrowing with a regular curve towards the tail ; approaching the form of the turtle nearer perhaps than any other animal. The pelt is thin, and the tail small. The wool is shorter than long wools in general, but much longer than the middle wools ; the ordinary length of staple five to seven inches, varying much in fineness and weight. This breed surpasses every other ‘ in beauty of form ; they are full and weighty in the fore quarters ; and are remarkable for smallness of bone.

Mr. Marshall, who has been of so much benefit to agriculture and his country by his publications, informs us, in his Rural Economy of the Midland Counties, that he has seen a rib of a sheep of this breed contrasted with one of a Norfolk sheep: the disparity was striking; the latter nearly twice the size ; while the meat which covered the former was three times the thickness : consequently the proportion of meat to bone was in the one incomparably greater than in the other. Therefore, in this point of view, the improved breed has a decided preference : for surely while mankind continue to eat flesh and throw

away bone, the former must be, to the consumer at least, the more valuable.

The manner of managing sheep iu Spain, a country famous for producing the best wool in the world, is as follows : — Here there are two kinds of sheep : the coarse-woolled sheep, which always remain in their native country, and are housed every night in winter ; and the fine woolled sheep, which are always in the open air, and travel every summer from the cool mountains of the northern parts of Spain, to feed in winter on the southern warm plains of Andalusia, Mancha, and Estremadura. Of these latter it appears, from accurate computation, that there are about 5,000,000, and that the wool and flesh of a flock of 10,000 sheep produced yearly about twenty-four reals a-head, or about the value of twelve English sixpences, one of which belongs to the owner, three to the king, and the other eight are allowed for the expenses of pasture, ty thes, shepherds, dogs, salt, shearing, &c. In the sixteenth century the travelling sheep were estimated at 7,000,000; 10,000 sheep form a flock, which is divided into ten tribes, under the management of one person, who has absolute dominion over fifty shepherds and fifty doss. M. Bourgoanne, a French gentlemen, who resided many years in VOL. XX. “

Spain, and directed his enquiries chiefly to the civil government, trade, and manufactures of that country, gives the following account of the wandering sheep of Segovia. ‘ It is,’ says he, ‘ in the neighbouring mountains that a part of the wandering sheep feed during the fine season. They leave them in October, pass over those which separate the two Castiles, cross New Castile, and disperse themselves in the plains of Estremadura and Andalusia. For some years past those of the two Castiles, which are within reach of the Sierra Morena, go thither to pass the winter ; which, in that part of Spain, is more mild ; the length of their day’s journey is in proportion to the pasture they meet with. They travel in flocks from 1000 to 1200 in number, under the conduct of two shepherds ; one of whom is called the mayoral, the other the zagal. When arrived at the place of their destination, they are distributed in the pastures previously assigned them. They return in April; and whether it be habit or natural instinct that draws them towards the climate, which at this season becomes most proper for them, the inquietude which they manifest might, in case of need, serve as an almanac to their conductors.’ Mr. Arthur Young, in that patriotic work which he conducted with great industry and judgment, the Annals of Agriculture, gives us a very accurate and interesting account of the

Pyrenean or Catalonian sheep. ‘ On the northern ridge, bearing to the west, are the pastures of the Spanish flocks. This ridge is not, however, the whole ; there are two other mountains, quite in a different situation, and the sheep travel from one to another as the pasturage ig short or plentiful. I examined the soil of these mountain pastures, and found it in general stony ; what in the west of England would be called a stone brash, with some mixture of loam, and in a few places a little peaty. The plants are many of them untouched by the sheep ; many ferns, narcissus, violets, &c., but burnet (poterium sanguisorba) and the narrow leaved plantain (plantago lanceolata) were eaten close. I looked for trefoils, but found scarcely any : it was very apparent that soil and peculiarity of herbage had little to do in rendering these heights proper for sheep. In the northern parts of Europe, the tops of mountains half the height of these (for we were above snow in July) are bogs ; all are so which I have seen in our islands, or at least the proportion of dry land is very trifling to that which is extremely wet : — Here they are in general very dry. Now a great range of dry land, let the plants be what they may, will in every country suit sheep. The flock is brought every night to one spot, which is situated at the end of the valley on the river I have mentioned, and near the port or passage of Picada : it is a level spot sheltered from all winds. The soil is eight or nine inches deep of old dung, not at all enclosed : from the freedom from wood all round, it seems to be chosen partly for safety against wolves and bears. Near it is a very large stone, or rather rock, fallen from the mountain. This the shepherds have taken for a shelter, and have built a hut against it ; their beds are sheep skins, and their door so small that they crawl in. I saw no place for fire ; but they

have it, since they dress here the flesh of their sheep, and in the night sometimes keep off the bears by whirling fire brands : four of them belonging to the flock mentioned above lie here. I viewed their flock very carefully, and, by means of our guide and interpreter, made some

enquiries of the shepherds, which they answered readily, and very civilly. A Spaniard at Venasque, a city in the Pyrenees, gives 600 livres French a-yeai for the pasturage of this flock of 2000 sheep. In winter he sends them into the lower parts of Catalonia, a journey of twelve or thirteen days, and when the snow is melted, in the spring, they are conducted back again. They are the whole year kept in motion, and moving from spot to spot, which is owing to the great range they every where have of pasture. They are always in the open air, never housed or under cover, and never taste of any food but what they can find upon the hills. Four shepherds, and from four to six large Spanish dogs, have the care of this flock ; the latter are in France called the Pyrenees breed ; they are black and white, of the size of a large wolf, a large head and neck, armed with collars stuck with iron spikes. No wolf can stand against them ; but bears are more potent adversaries.' But, as we have neither wolves nor bears in Britain, we need not quote Mr. Young's remarks on this subject. ' He adds respecting the sheep : ' They are in general polled, but some have horns ; which in the rams turn backwards behind the ears and project half a circle forward ; the ewes' horns turn also be-hind the ears, but do not project : the legs white or reddish; speckled faces, some white, some reddish ; they would weigh fat, I reckon, on an average, from fifteen to eighteen pounds a quarter. Some tails short, some left long. A few black sheep among them : some with a very little tuft of wool on their foreheads. On the whole they resemble those on the South Downs ; their legs are as short as those of that breed ; a point which merits observation, as they travel so much and so well. Their shape is very good ; round ribs and flat straight backs ; and would with us be reckoned handsome sheep; all in good order and flesh. To be still better acquainted with them, I desired one of the shepherds to catch a ram for me to feel, and examine the wool, which I found very thick and good of the carding sort. I took a specimen of it, and also of a Koggit, or lamb of last year. In re-gard to the mellow softness under the skin, which, in Mr. Bakewell's opinion, is a strong indication of a good breed, with a disposition to fatten, he had it in a much superior degree to many of our English breeds, to the full as much so as the South Downs, which are for that point the best short-woolled sheep which I know in England. The fleece was on his back, and weighed, as I guessed, about eight pounds English ; but the average, they say, of the flock is from four to five, as I calculated by reducing the Catalonian pound of twelve ounces to ours of sixteen, and is all sold to the French at 30s. the pound, French. This ram had the wool of the back part of his neck tied close, and the upper tuft tied a second knot by way of ornament ; nor do they ever shear this part of the fleece for

that reason : we saw several in the flock with this species of decoration. They said that this ram would sell in Catalonia for twenty livres. A circumstance which cannot be too much commended, and deserves universal imitation, is the extreme docility they accustom them to. When I desired the shepherd to catch one of his rams, I supposed he would do it with his crook, or probably not be able to do it at all ; but he walked into the flock, and, singling out a ram and a goatr bid them follow him, which they did immediately ; and he talked to them while they were obeying him, holding out his hand as if to give them something. By this method he brought me the ram, which I caught, and held without difficulty.'

To find a proper composition for marking sheep is a matter of great importance, as great quantities of wool are every year rendered useless by the pitch and tar with which they are usually marked. The requisite qualities for such a composition are, that it be cheap, that the color be strong and lasting, so as to bear the changes of weather, and not to injure the wool. Dr. Lewis recommends for this purpose melted tallow, with so much charcoal in fine powder stirred into it as is sufficient to make it of a fult black color, and of a thick consistence. This mixture, being applied warm with a marking iron, on pieces of flannel, quickly fixed or hardened, bore moderate rubbing, resisted the sun and rain, and yet could be washed out freely with soap, or ley, or stale urine. In order to-render it still more durable, and prevent its being rubbed off, with the tallow may be melted an eighth, sixth, or fourth, of its weight of tar, which will readily wash out along with it from the wool. — Lewis's Com. Phil. Techn. p. 361.

The criteria of good and bad flesh, while the animal is alive, differ in different species, and are not properly settled in the same species. One superior breeder is of opinion that, if the flesh is not loose, it is ef course good; holding that the flesh of sheep is never found in a state of hardness, like that of ill-fleshed cattle ; while others make a four fold distinction of the flesh of sheep ; as looseness, mellowness, firmness, hardness, ; considering the first and the last equally exceptionable, and the second and third equally desirable; a happy mixture of the two-being deemed the point of perfection. The flesh of sheep when slaughtered is well known to be of various qualities. Seme is composed of large coarse grains, interspersed with wide empty pores like a sponge ; others of large grains, with wide pores filled with fat ; others of fine close grains, with smaller pores filled with fat ; and a fourth of close grains without any intermixture of fatness. The flesh of sheep when dressed is equally well known to possess a variety of

qualities; some mutton is coarse, dry, and insipid ; a dry sponge, affording little or no gravy of any color. Another sort is somewhat firmer, imparting a light colored gravy only. A third plump, short, and palatable ; affording a mixture of white and red gravy. A fourth likewise plump and well flavored, but discharging red gravy and this in various quantities. Some mutton when dressed appears covered with a thick, tough.

parchment-like integument; others with a membrane comparatively fine and flexible. But these, and some of the other qualities of mutton, may not be wholly owing to breed, but in part to the age and the state of fatness at the time of slaughter. Examined in this light, whether we consider the degree of fatness, or their natural propensity to a state of fatness, even ,at an early age, the improved breed of Leicestershire sheep appear with many superior advantages. The degree of fatness to which the individuals of this breed are capable of being raised will perhaps appear incredible to those who have not had an opportunity of being convinced by their own observation. ‘ I have seen wedders,’ says Mr. Marshall, ‘ of only two shear (two or three years old), so loaded with fat as to be scarcely able to make a run; and whose fat lay so much without the bone, it seemed ready to be shaken from the ribs on the smallest agitation. It is common for the sheep of this breed to have such a projection of fat upon the ribs, immediately behind the shoulder, that it may be easily gathered up in the hand as the flank of a fat bullock. Hence it has gained, in technical language, the name of the fore-flank; a point which a modern breeder . never fails to touch, in judging of the quality of this breed of sheep. What is perhaps still more extraordinary, it is not rare for the rams, at least of this breed, to be ‘ cracked on the back;’ that is, to be cloven along the top of the chine, in the manner fat sheep generally are upon the rump. This mark is considered as an evidence of the best blood. Extraordinary, however, as are these appearances while the animals are living, the facts are still more striking after they are slaughtered. At Litchfield, in February, 1785, I saw a fore-quarter of mutton, fatted by Mr. Princep of Croxall, which measured upon the ribs four inches of fat. It must be

acknowledged, however, that the Leicestershire breed do not produce so much wool as most other long-wooled sheep.'

As the practice of letting rams by the season is become profitable, it may be useful to mention the method of rearing them. ' The principal ram-breeders,' says Mr. Marshall, ' save annually twenty, thirty, or perhaps forty ram-lambs ; castration being seldom applied in the first instance to the produce of a valuable ram ; for in the choice of these lambs they are led more by blood, or parentage, than by form; on which, at an early age, little dependence can be placed. Their treatment from the time they are weaned, in July or August, until the time of shearing, the first week in June, consists in giving them every indulgence of keep, in order to push them forward for the show; it being the common practice to let such as are fit to be let the first season, while they are yet yearlings, provincially ' sharhogs.' Their first pasture, after weaning, is pretty generally, I believe, clover that has been mown early, and has got a second time into head ; the heads of clover being considered as a most forcing food of sheep. After this goes off, turnips, cabbages, colewort, with hay, and (report says) with corn. Something considerable depends on the art of making up, not lambs only, but rams of all ages. Fat, like charity,

covers a multitude of faults ; and besides is the best evidence of their fatting quality which their owners can produce (i. e. their natural propensity to a state of fatness), while in the fatness of the sharhogs is seen their degree of inclination to fat at an early age. Fatting quality being the one thing needful in grazing stock, and being found in some considerable degree at least to be hereditary, the fattest rams are of course the best ; though other attachments, well or ill placed, as to form or fashionable points, will perhaps have equal or greater weight in the minds of some men, even in this enlightened age. Such shearlings as will not make up sufficiently as to form and fatness are either kept on to another year to give them a fair chance, or are castrated or butchered while sharhogs.' From the first letting, about forty years ago, to the year 1780, the prices kept gradually rising from 15.?. to a guinea, and from one to ten. In 1780 Mr. Bakewell let several at ten guineas each ; and, what is rather inexplicable, Mr. Parkinson of Quarndon let one the same year for twenty-five guineas; a price which then astonished the whole country. From that time to 1786 Mr. Bakewell's stock rose rapidly from ten to 100 guineas ; and that year he let two-thirds of one ram (reserving one-third of the usual number of ewes to himself) to two principal breeders, for 100 guineas each, the entire services of the ram being rated at 300 guineas ! Mr.

Blakewell making that year, by letting twenty rams only, more than £1000! Since that time the prices have been still rising ; 400 guineas have been repeatedly given. Mr. Bakewell this year (1789) makes, says Mr. Marshall, 1200 guineas by three rams (brothers we believe) ; 2000 of seven ; and of his whole letting, full 3000 guineas! Besides this extraordinary sum, made by Mr. Bakewell, there are six or seven other breeders who make from 500 to 1000 guineas each. The whole amount of moneys produced that year in the Midland counties, by letting rams of the modern breed for one season only, is estimated by those who are adequate to the subject at the almost incredible sum of- £10,000.

The diseases to which sheep are subject are, rot, red-water, foot-rot and hoving, scab, dunt, rickets, fly-struck, flux, arid bursting. The rot, which is a very pernicious disease, has of late engaged the attention of scientific farmers. But neither its nature nor its cause has yet been fully ascertained. Some valuable and judicious observations have, however, been made upon it, which may furnish an antidote for this malignant distemper, or be the means of leading others to some more efficacious remedy. Some have supposed the rot owing to the quick growth of grass or herbs that grow in wet places. But the constant practice of most farmers in the kingdom, who with the greatest security feed their meadows in the spring, when the grass shoots quick, and is full of juices, militates directly against this opinion. Mr. Arthur Young ascribes this disease to moisture. In confirmation of this opinion, which has been generally adopted, we are informed in the Bath Society papers (vol. 1. art. xlvi.) by a correspondent, that there was a

paddock adjoining to his park which had for several years caused the rot in most of the sheep which were put into it. In 1769 he drained it, and from that time his sheep were free from this malady. But there are facts which render it doubtful that moisture is the sole cause., We are told the dry limed land in Derbyshire will produce the rot as well as

water meadows and stagnant marshes ; and that in some wet grounds sheep sustain no injury for many weeks. On dissecting sheep that die of this disorder, a great number of insects called flukes (see FASCIOLA), are found in the liver. That these flukes are the cause of the rot therefore is evident ; but to explain how they come into the liver is not so easy. It is probable that they are swallowed by the sheep along with their food or drink, while in the egg state. The eggs deposited in the tender germ are conveyed with the food into the stomach and intestines of the animals, whence they are received into the lacteal vessels, carried off in the chyle, and pass into the blood ; nor do they meet with any obstruction until they arrive at the capillary vessels of the liver. Here, as the blood filtrates through the extreme branches, answering to those of the vena porta in the hu-man body, the secerning vessels are too minute to admit the impregnated ova, which, adhering to the membrane, produce those animalculse that feed upon the liver and destroy the sheep. They much resemble the flat fish called plaice, are sometimes as large as a silver two-pence, and are found both in the liver and in the pipe (answering to that of the vena cava), which conveys the blood from the liver to the heart. It is therefore easy to conceive that sheep may, on wet ground especially, take multitudes of these ova or eggs in with their food ; and, that the stomach and viscera of the sheep being a proper nidus for them, they of course hatch, and, appearing in their fluke or last state, feed on the liver of the animal, and occasion this disorder. It is a singular fact that no ewe ever has the rot while she has a lamb by her side. The reason of this may be, that the impregnated ovum passes into the milk, and never arrives at the liver. The rot is fatal to sheep, hares, and rabbits, and sometimes to calves, but never infests animals of a larger size. Miller says that parsley is a good remedy for the rot in sheep. Perhaps a strong decoction of this plant, or the oil extracted from its seeds, might be of service. Salt is also a useful remedy. It seems to be an acknowledged fact that salt marshes never produce the rot. Salt indeed is pernicious to most insects. Common salt and water expel worms from the human body; and sea-weed, if laid in a garden, will drive away insects ; but if the salt is separated by steeping it in the purest spring-water for a few days it abounds with animalculae of various species. Lisle, in his book of husbandry, informs us of a farmer who cured his whole flock of the rot by giving each sheep a handful of Spanish salt for five or six mornings successively. In wet and-warm seasons the prudent farmer will remove his sheep from the lands liable to rot. Those who have it not in their power to do this, may ‘{rive each sheep a spoonful of common salt, with the same quantity of flour, in a quarter of a pint

of water, once or twice a-week. When the rot is recently taken, the same remedy, given four or five mornings successively will in all probability effect a cure. The addition of the flour and water (in the opinion of Mr. Price of Salisbury) will not only abate the pungency of the salt, but dispose it to mix with the chyle in a more gentle and efficacious manner. A farmer of a considerable lordship in Bohemia, visiting the hot-wells of Carlsbad, related how he preserved his flocks of sheep from the mortal distemper which raged in the wet year 1769, of which so many perished His preservative was very simple and very cheap : — ‘ He fed them every night, when turned under a shed, cover, or stables, with hashed fod-der straw ; and, by eating it greedily, they all escaped.’ ‘ Red-water is a disorder most prevalent on wet-grounds. I have heard,’ says Mr. Arthur Young, ‘ that it has sometimes been cured by tapping, as for a dropsy. This operation is done on one side of the belly towards the flank, just below the wool.’ ‘ The foot-rot and hoving, which is very common on low fenny grounds, is cured by keeping the part clean, and lying at rest in a dry pasture.’ The scab is a cutaneous disease, owing to an impurity of the blood, and is most prevalent in wet lands or in rainy seasons. It is cured by tobacco-water, brimstone, and alum, boiled together, and then rubbed over the sheep. If only partial, tar and grease may be sufficient. But the simplest and most efficacious remedy for this disease was communicated to the society for the Encouragement of Arts, &c., by Sir Joseph Banks : — ‘ Take one pound of quicksilver, half a pound of Venice tin - pentine, half a pint of oil of turpentine, and four pounds of hog’s lard. Let them be rubbed in i mortar till the quicksilver is thoroughly incorpo rated with the other ingredients : for the proper mode of doing which, take the assistance of somp apothecary. In using the ointment, begin at the head of the sheep, and, proceeding from between the ears along the back to the end of the tail, the wool is to be divided in a furrow till the skin can be touched ; and, as the furrow is made, the finger slightly dipped in the ointment is to be drawn along the bottom of it, where it will leave a blue stain on the skin and adjoining wool : from this furrow similar ones must be drawn down the shoulders and thighs to the legs, as far as they are woolly ; and, if the animal is much infected, two more should be drawn along each side parallel to that on the back, and one down each side between the fore and hind legs. Immediately after being dressed, it is usual to turn the sheep among other stock, without any fear of the infection being communicated ; and there is scarcely an instance of a sheep suffering any injury from the application. In a few days the blotches dry up, the itching ceases, and the ani-mal is completely cured : it is generally,

however, proper not to delay the operation beyond Michaelmas. The hippobosca ovina, called in Lincolnshire sheep fagg, an animal well known to all shepherds, which lives among the wool, and is hurtful to the thriving of sheep both by the pain its bite occasions and the blood it sucks, is destroyed by this application, and the wool ts not at all iniured. Our wool buyers

purchase the fleeces on which the stain of the ointment is visible, rather in preference to others, from an opinion that the use of it having preserved the animal from being vexed either with the scab or faggs, the wool is less liable to the defects of joints or knots; a fault observed to proceed from every sadden stop in the thriving of the animal, either from want of food or from disease. This mode of curing is now so generally received that the scab, which used to be the terror of the farmers, and which frequently deterred the more careful of them from taking the advantage of pasturing their sheep in the fertile and extensive commons with which that district abounds, is no longer regarded with any apprehension : the most of them have their stock anointed in autumn, when they return from the common, whether they show any symptoms of scab or not; and, having done so, conclude them safe from infection. There are people who em-ploy themselves in the business, and contract to anoint our large sheep at 5s. a score, insuring for that price the success of the operation ; that is, agreeing, in case many of the sheep break out afresh, to repeat the operation gratis even some months afterwards.' The dunt is a distemper caused by a bladder of water gathering in the head. No .cure for this has yet been discovered. The rickets is a hereditary disease for which no antidote is known. The first symptom is a kind of light headedness, which makes the affected sheep appear wilder than usual when the shepherd or any person approaches him. He bounces up suddenly from his lare, and runs to a distance, as though he were pursued by dogs. In the second stage the principal symptom is the sheep's rubbing himself against trees, &c., with such fury as to pull off his wool and tear away his flesh. ' The distressed animal has now a violent itching in his skin, the effect of a highly inflamed blood ; but it

does not appear that there is ever any cutaneous eruption or salutary critical discharge. In short, from all circumstances, the fever appears now to be at its height.' The last stage of this disease ' seems only to be the progress of dissolution, after an unfavorable crisis. The poor animal, as condemned by Na-ture, appears stupid, walks irregularly (whence probably the name .rickets), generally lies, and eats little; these symptoms increase in degree till death, which follows a general consumption, as appears upon dissection of the carcase; the juices and even solids having suffered a general dissolution.' To discover the seat and nature of this disease, sheep that die of it ought to be dissected. This is said to have been done by one gentleman, Mr. Beal ; and he found in the brain or membranes adjoining a maggot about a quarter of an inch long, and of a brownish color. A few experiments might easily determine this fact. The fly-struck is cured by clipping the wool off as far as infected, and rubbing the dry parts with lime or wood ashes ; currier's oil will heal the wounds, and prevent their being struck any more ; or they may be cured with care without clipping, with oil of turpentine, which will kill all the vermin where it goes ; but the former is the surest way. The flux is another disease to which sheep are subject. The best remedy is

said to be, to house the sheep immediately when this distemper appears, to keep them very warm, and feed them on dry hay, giving them frequent glisters of warm milk and water. The cause of that distemper is either their feeding on wet lands, or on grass that is become mossy by the lands having been fed many years without being ploughed. When the farmer perceives his sheep-walks to become mossy, or to produce bad grass, he should either plough or manure with hot lime, making kilns either very near or in the sheep-walks, because the hotter the lime is put on the sweeter the grass comes up, and that early in the year. Bursting, or as it is called in some places the blast, attacks sheep when driven into fresh grass or young clover. They overeat themselves, foam at the mouth, swell exceedingly, breathe very quick and short, then jump up, and instantly fall down dead. In this case, the only chance of saving their life is by stabbing them in the maw with an instrument made for the purpose. The instrument is a hollow tube, with a pointed weapon passing through it. A hole is made with the pointed weapon ; which is immediately withdrawn, and the hole is kept open by inserting the tube till the wind is discharged. Sheep are infested with worms in their nose called oestrus ovis, and produced from the egg of a large two-winged fly. See (EsiRus* The frontal sinuses above the nose in sheep and other animals are the places where these worms live and attain their full

growth. These sinuses are always full of a soft white matter, which furnishes these worms with a proper nourishment, and are sufficiently large for their habitation ; and when they have here -acquired their destined growth, in which they are fit to undergo their changes for the fly-state, they leave their old habitation, and, falling to the earth, bury themselves there ; and, when these are hatched into flies, the female, when she has been impregnated by the male, knows that the nose of a sheep or other animal is the only place for her to deposit her eggs, in order to their coming to maturity. Mr. Vallisnieri, to whom the world owes so many discoveries in the insect class, is the first who has given any true account of the origin of these worms, though the creatures themselves were very early discovered. The fly produced from this worm has all the time1 of its life a very lazy disposition, and does not like to make any use either of its legs or wings. Its head and ctorselet together are about as long as its body, which is composed of five rings, streaked on the back ; a pale yellow and brown are there disposed in irregular spots ; the belly is of the same colors but they are there more .regularly disposed, for the brown here makes three lines, one in middle and one on-each side, and all the intermediate spaces are yellow. The wings are nearly of the same length with the body, and are a little inclined in their position, so as to lie upon the body : they do not, however, cover it ; but a naked space is left between them. The ailerons, or petty wings, which are found under each of the wings, are of a whitish color, and perfectly cover the balancers, so that they are not to be seen without lifting up these. The fly will live two months after it is first produced, but will take no nourishment ol

any kind ; and possibly it may be of the same nature with butterflies, which never take any food during the whole time of their living in that state. — Reaumer, Hist. Ins. vol. iv. p. 552. kc.

The following instructions for purchasing sheep may be useful to our country readers : — The farmer should always buy his sheep from a worse land than his own, and they should be big-boned, and have a long greasy wool, curling close and well. These sheep always breed

the finest wool, and are also the most approved of by the butcher for sale in the market. For the choice of sheep to breed, the ram must be young, and his skin of the same color with his wool, for the lambs will be of the same color with his skin. He should have a large long body; a broad forehead, round, and well rising ; large eyes ; and straight and short nostrils. The polled sheep, that is, those which have no horns, are found to be the best breeders. The ewe should have a broad back ; a large bending neck ; small, but short, clean, and nimble legs ; and a thick, deep wool covering her all over. To know whether they be sound or not the farmer should examine the wool that none of it be wanting, and see that the gums be red, the teeth white and even, and the brisket-skin red, the wool firm, the breath sweet, and the feet not hot. Two years old is the best time for beginning to breed ; and their first lambs should not be kept too long, to weaken them by suckling, but be sold as soon as convenient. They will breed advantageously till they are seven years old. Farmers have a method of knowing a sheep's age, as a horse's is known, by the mouth. When a sheep is one 'shear, as they express it, it has two broad teeth before ; when it is two shear it will have four, when three six, and when four eight. After this their mouths begin to break. The difference of land makes a very great difference in the value of sheep. The fat pastures breed straight tall sheep, and the barren hills and downs breed square short ones ; woods and mountains breed tall and slender sheep ; but the best of all are those bred upon new ploughed land and dry grounds. On the contrary, all wet and moist lands are bad for sheep, especially such as are subject to be overflowed, and to have sand and dirt left on them. The salt marshes are, however, an exception to this general rule, for their saltness makes amends for their moisture ; salt, by reason of its drying quality, being of great advantage to sheep.

Rams, previous to the season, are reduced from the cumbrous fat state in which they are shown. The usual time of sending them out is the middle of September. They are conveyed in carriages of two wheels with springs, or hung in slings, twenty or thirty miles a-day, sometimes to the distance of 200 or 300 miles. They are not tamed loose among the ewes, but kept apart in a small enclosure, where a couple of ewes only are admitted at once. When the season is over, every care is taken to make the rams look as fat and handsome as possible. In the choice of ewes the breeder is led by the same criteria as in the choice of rams. Breed is the first ob-ject of consideration. Excellency in any species

or variety of live stock cannot be attained with any degree of

certainty, let the male be ever so excellent, unless the females employed likewise inherit a large proportion of the genuine blood, be the species or variety what it may. Hence no prudent man ventures to give the higher prices for the Dishley rams, unless his ewes are deeply tinctured with the Dishley blood. Next to breed is flesh, fat, form and wool. After the lambs are weaned, the ewes are kept in common feeding places, without any alteration of pasture, previous to their taking the ram. In winter they are kept on grass, hay, turnips, and cabbages. As the heads of the modern breeder are much finer than most others, the ewes lamb with less difficulty. The female lambs, on being weaned, are put to good keep, but have not such high indulgence shown them as the males, the prevailing practice being to keep them from the ram the first autumn. At weaning time, or previously to the admission of the ram, the ewes are culled, to make room for the thaves or shearlings, whose superior blood and fashion entitle them to a place in the breeding stock. In the work of culling, the ram-breeder and the mere grazier go by somewhat different guides. The grazier's guide is principally age, seldom giving his ewes the ram after they are four shear. The ram-breeder, on the contrary, goes chiefly by merit ; a ewe that has brought him a good ram or two is continued in the flock so long as she will breed. There are instances of ewes having been prolific to the tenth or twelfth year; but in general the ewes of this breed go off at six or seven shear. In the practice of some of the principal ram-breeders, the culling ewes are never suffered to go out of their hands until after they are slaughtered, the breeders not only fatting them, but having them butchered, on their premises. There are others, however, who sell them ; and sometimes at extraordinary prices. Three, four, and even so high as ten, guineas each have been given for these outcasts. There are in the flocks of several breeders ewes that would fetch at auction twenty guineas each. Mr. Bakewell is in possession of ewes which, if they were put up to be sold to the best bidder, would, it is estimated, fetch no less than fifty each ; and perhaps, through the present spirit of contention, much higher prices. As to the time of putting the rams to the ewes, the farmer must consider at what time of the spring his grass will be fit to maintain them and their lambs, and whether he has turnips to do it till the grass comes ; for very often both the ewes and lambs are destroyed by the want of food ; or if this does not happen, if the lambs are only stinted in their growth by it, it is an accident that they never can recover. The ewe goes t%venty weeks with lamb, and according to this it is easy to culculate the proper time. Where there are not enclosures to keep them in, they should yean in January, that the lambs may be strong by May-day, and be able to follow the dam over the fallows and water-furrows ; but the lambs that come so early

must have a great deal of care taken of them ; and so indeed should all other lambs at their first falling, else, while they are weak, the crows and magpies fill pick their eyes out.

SHE

SHE

SHEEPHAVEN, a harbour on the north coast of the county of Donegal, Ireland, situated west of the Mulroy, and separated from it by a long and narrow peninsula. The surrounding country is mountainous and thinly inhabited ; nor is there any town of consequence in the neighbourhood. Dunfanaghy, near Hornhead, is no more than a village, though ruins near it seem to indicate that it was formerly much larger. The siliceous sand found in this district is of excellent quality for making glass, and it is carried to Belfast for that purpose. ‘ About a century ago, an elegant edifice, according to the taste of that age,’ says Dr. W. Hamilton, was built on the peninsula, between the harbours of Sheephaven and Mulroy, which at present stands ‘ like Tadmor of the east, the solitary wonder of a surrounding desert.’ The gardens are totally denuded of trees and shrubs by the fury of the western winds ; their walls, unable to sustain the mass of overbearing sands, have bent before the accumulated pressure; and, overthrown in numberless places, have given free passage to this restless enemy of all fertility. The courts, the flights of steps, the terraces, are all involved in equal ruin ; and their limits only discoverable by tops of embattled walls, visible amid hills of sand. The mansion itself, yielding to the unconquerable fury of the tempest, approaches fast to destruction; the freighted whirlwind, howling through every avenue and crevice, bears incessantly along its drifted bur-den, which has already filled the lower apartments of the building, and begins now to rise above the once elevated thresholds. Fields, fences, villages, involved in common desolation, are reduced to one undistinguishable scene of sterile uniformity, and 1200 acres of land are said thus to have been buried within a short period in irrecoverable ruin.’ — Transactions of the Irish Academy, vol. vi.

SHEER, adj. Saxon, j-cyn.. Pure ; clear ; unmingled : clean ; quick ; at once.

If she say, I am not fourteen pence on the score for slieer ale, score me up for the lying'st rogue in Christendom. Shakspeare.

Thrown by angry Jove

Sheer o'er the crystal battlements ; from morn To noon he fell : from noon to dewy eve, A summer's day ; and with the setting sun Dropped from the zenith, like a falling star, On Lemnos. Mi/ton.

The sword of Satan with steep force to smite Descending, and in half cut sheer. Id.

Sheer argument is not the talent of the man ; little wrested sentences are the bladders which bear him up, and he sinks downright, when he once pretends to swim without them, Atterbury.

SHEERGOTTA, a town of Hindostan in the province of Bahar, stands at the foot of a steep and narrow pass through the Ramgur hills, being part of the great military road from Calcutta to Benares. It takes its name from the number of tigers which formerly infested the route. Long. 84° 55' E., lat. 24° 32' N.

SHEERHORN, a lofty mountain of Switzerland, in the canton of Uri, ten miles southeast of Altorf. It rises to the height of 10,700 feet, and at the top is divided into two parts. It is covered with glaciers of great extent. Long. 8° 40' 5* E., lat 46° 49' 50' N.

SHEERNESS, a market-town on the north >

west point of Sheppey-Tsland, where the Med* way joins the Thames, forty-six miles and a half east from London, in the parish of Minster. In 1667 this place was taken by the Dutch. It has now a regular fortification and garrison, under a governor, lieutenant-governor, fort-major, and other officers, and such a line of heavy cannon, commanding the mouth of the river, as to bid defiance to any force that may attempt to pass it. The harbour, dockyard, and public buildings have of late been much enlarged and improved ; a chapel has also been erected at the expense of government. The town contains several good streets. Here is an ordnance-office, with apartments for the different officers, all ordnance stores being delivered here to the fleet stationed at the Nore; here is also a yard for

building ships, and a dock intended chiefly for repairing. It has a neat chapel of ease to the mother church. Market on Saturday.

SHEERS, a name given to an engine used to hoist or displace the lower masts of a ship. The sheers employed for this purpose in the royal navy are composed of several long masts, whose heels rest upon the side of the hulk, and having their heads declining outward from the perpendicular, so as to hang over the vessel whose masts are to be fixed or displaced. The tackles, which extend from the head of the mast to the sheer-heads, are intended .to pull in the latter toward the mast head, particularly when they are charged with the weight of a mast after it is raised out of any ship, which is performed by strong tackles depending from the sheer-heads. The effort of these tackles is produced by twc-capsterns, fixed on the deck for this purpose In merchant ships this machine is composed o two masts or props, erected in the same vesse wherein the mast is to be planted, or whencˆ it is to be removed. The lower ends of these props rest on the opposite sides of the deck, and their upper parts are fastened across, so as that a tackle which hangs from the intersection may be almost perpendicularly above the station of the mast to which the mechanical powers are applied. These sheets are secured by stays which extend forward and aft to the opposite extremities of the vessel.

SHEET, 7i. s. & v. a. Sax. r-ceat. A large broad piece of linen ; any thing expanded ; a single fold of such a thing: to furnish with sheets.

He saw heaven opened, and a vessel descending unto him, as a great sheet, knit at the four corners.

Acts x. 1 1 If I die before thee, shroud me

In one of these same sheets. Shakspeare

As much love in rhime As could be crammed up in a sheet of paper, Writ on both sides the leaf, margin and all. Id

Like the stag, when snow the pasture sheets, The .bark of trees thou browsedst. fa.

The little word behind the back, and undoing whisper, like pulling off a sheet-rope at sea, slackens the sail. Suckling

Fierce Boreas drove against his flying sails, And rent the sheets. Dryden.

Some unequal bride in nobler sheets Receives her lord. ˆ

SHE

When I first put pen to paper, I thought all I s.muld have to say would have been contained in one sheet of paper. Iˆocke.

I let the refracted light fall perpendicularly upon a sheet of white paper upon the opposite wall.

Newton’s Opticks.

To this the following sheets are intended for a full and distinct answer. Waterland.

SHEET, in sea-language, a rope fastened lo one or both the lower confines of a sail, to extend and retain it in a particular station. When a ship sails with, a lateral wind, the lower corner of the main and foresail are fastened by a tack and a sheet; the former being to windward, and the latter to leeward ; the tack, however, is entirely diffused with a stern-wind, whereas the sail is never spread without the assistance of one or both of the sheets. The staysails and studding-sails have only one tack and one sheet each ; the staysail tacks are always fastened forward, and the sheet drawn aft ; but the studding-sail tack draws the under clew of the sail to the extremity of the boom, whereas the sheet is employed to extend the inmost.

SHEFFIELP (John), duke of Buckingham, an eminent writer of the seventeenth and eighteenth centuries, of great personal bravery, and an able minister of state, was born about 1 650. Ht lost his father at nine years of age, and his mother marrying lord Ossulston, the care of his education was left to a governor, who neglected it. Finding himself deficient in many parts of literature, he resolved to devote a certain number of hours every day to his studies ; and thereby improved himself to a high degree of learning. He entered a volunteer in the second-Dutch war ; and was in that famous naval engagement where

the duke of York commanded as admiral ; on which occasion he behaved so gallantly that he was appointed commander of the Royal Catherine. He afterwards made a campaign in the French service under M. deTurenne. As Tangier was in danger of being taken by the Moors, he offered to head the forces which were then sent to defend it ; and accordingly was appointed to command them. He was then earl of Mulgrave, and one of the lords of the bed-chamber to king Charles II. The Moors retired on the approach of the king's forces ; and the result was the blowing up of Tangier. He continued in several great posts during the reign of king James II., till that unfortunate prince was dethroned. Lord Mulgrave, though he paid his respects to king William before he was advanced to the throne, yet did not accept of any post in the government till some years after. In the sixth year of William and Mary he was created marquis of Normanby. He was one of the most active and zealous opposers of the bill which took away Sir John Fenwick's life ; and exerted the utmost vigor in carrying through the treason bill, and the bill for triennial parliaments. He had some considerable posts under king William, and enjoyed much of his favor and confidence. In 1702 he was sworn lord privy seal; and in the same year was appointed one of the commissioners to treat of an union between England and Scotland. In 1703 he was created duke of Normanby, and soon after duke of Buckingham.

In 1711 he was made steward of the household to queen Anne, and president of the council. During her reign he was but once out of employment ; when he resigned, being attached to Tory principles. He was instrumental in the change of the ministry in 1710. A circumstance that reflects the highest honor on him is the vigor with which he acted in favor of the unhappy Catalans, who afterwards were so inhumanly sacrificed. He was survived by only one legitimate son (who died at Rome in 1735); but left several natural children. His worst enemies allow that he lived on very good terms with his last wife, natural daughter to king James II., the late duchess of Buckingham, a lady who always behaved with a dignity suitable to the daughter of a king. He died in 1721 . He was admired by the poets of his age ; by Dryden, Prior, and Garth. His Essay on Poetry was applauded byAddison, and his Rehearsal is still universally admired, as a piece of true and original satire. His writings were splendidly printed in 1723, in 2 vols. 4to ; and have since been reprinted in 1729, in 2 vols. 8vo. The first contains his poems on various subjects ; the second his prose works, which consist of historical memoirs, speeches in parliament, characters, dialogues, critical observations, essays, and letters. The edition of 1729 is castrated ; some particulars

relating to the Revolution in that of 1 723 having given offence.

SHEFFIELD, a market-town in the West Riding of Yorkshire, at the junction of the rivers Don and Sheaf, thirty-six miles south of Leeds, and 162 N. N. W. of London, celebrated throughout Europe for all kinds of hardware, cutlery, and plated goods. It has a singular appearance, from its occupying a long hill, and extending over the adjoining valleys, being almost enveloped in the smoke from its numerous fire-engines, foundries, &c. The thrci-churches, St. Peter's, St. Paul's, and St. James's, erected on a hill, have a fine effect ; their spires overtop the whole town, and look still more majestic at a small distance, by the interveniittr atmosphere being almost continually loaded with sooty exhalations. The extent of the town each way is about three-quarters of a mile. The streets are in general wide, well-built, open, clean, and lighted by gas. The slaughterh" are built close to the river. Over each of the rivers is a good stone bridge; that over the Don,, called the Lady's Bridge, consists of three arches, and was widened and repaired in 1768. Thut over the Sheaf consists of one arch, erectc'l in 1769. On the eastern side of the Sheaf stands the duke of Norfolk's hospital, erected in 1070, consisting of two quadrangles of eighteen chambers in each, for eighteen poor men, and eighteen poor women. It has a neat chapel. Here is another hospital, erected in 1703, for the benefit of sixteen poor cutlers' widows ; and a good free grammar and charity schools. Here are nine different meeting-houses for dissenters, and a Roman Catholic chapel.

Between the rivers Don and Sheaf, in tl> < > north-eastern part of the town, anciently stooil a castle of a triangular form ; this castle surn n-dered to the parliament forces in 1644, and \as demolished. The market-place, which is ex ten-

sive and commodious, was erected by the duke of Norfolk, who is nearly the sole proprietor of the town. Here is a neat theatre, and assembly room. ˆln the southeast corner of Trinity church-yard is the old town-hall ; a new town-house has lately been erected, handsomely built with stone. Here are also a general infirmary, commodious military barracks, and two excellent schools on the Bell and Lancasterian system. From the convenience of the rivers and adjoining coal mines, the whole of the heavy work has of late years been performed by machinery, and its workmen have made such improvements in •heir trade that they are now able to undersell every

other market. The nature of their manufactures gives the town a very sombre appearance, and the houses all look black from the continual smoke. A canal has been cut to the verge of the town, which, with the navigation of the Don, conveys the manufactures of Sheffield to all parts of the kingdom. On the south side of Trinity church-yard is the cutlers' hall, erected in 1725. The corporation of cutlers are styled ' The Company of Cutlers of Ilallamshire,' and is governed by a master, two wardens, and two assistants; but the public affairs of the town are under seven of the principal inhabitants, who are termed regents or collectors. The town is well supplied with water, by means of pipes, and at a moderate rate. Here are two banking-houses Markets Tuesday and Saturday. Fairs Tuesday aftet Whitsun week, and November 28th. The old church of the Holy Trinity, a fine ancient Gothic structure, is a vicarage. The new churches are curacies. Patron, the vicar.

SHEFF1ELDIA, in botany; a genus of plants belonging to the class of pentandria, and to the order of monogynia. The corolla is bell-shaped ; the filaments are ten, of which every second is barren. The capsule consists of one cell, which nas four valves. There is only one species, *viz.* S. repens.

SHEIK, in the oriental customs, the person who has the care of the mosques in Egypt ; his duty is the same as that of the imams at Constantinople. There are more or fewer of these to every mosque, according to its size or revenue. One of these is head over the rest, and answers to a parish priest with us ; and has under him, in large mosques, the readers, and people who cry out to go to prayers ; but in small mosques the sheik is obliged to do all this himself. In such it is their business to open the mosque, to cry to prayers, and to begin their short devotions at the head of the congregation, who stand rank and file in great order, and make all their motions together. Every Friday the sheik makes an ha-rangae to his congregation.

SHEIK-BELLET, an officer in the oriental nations. In Egypt the sheik-bellet is the head of the city, and is appointed by the pacha. The business of this officer is to take care that no innovations be made which may be prejudicial to the Porte, and that they send no orders which may hurt the liberties of the people. But all his authority depends on his credit and interest, not his office : for the government of Egypt is of such a kind that often the people of the least power by their posts have the greatest influence ; and a caia of the Janizaries or Arabs, and sometimes

one of their meanest officers, an odabasha, finds means, by his parts and abilities, to govern all things.

SHEK'EL, n. s. Heb. "?p«r. An ancient Jewish coin equal to four Attic drachms, orfou. Roman denarii, value about 2s. 6d. sterling.

The Jews, albeit they detested images, yet imprinted upon their sheckte on one side the golden po* which had the manna, and on the other Aaron's rod,

Camden.

The huge iron nead six hundred shekels weighed, And of whole bodies but one wound it made : Able death's worse command to overdoe, Destroying life at once and carcase too. Cowley.

This coat of mail weighed five thousand shekels of brass. Broome

SHEKOABAD, a considerable town of Hir dostan in the province of Agra. It was formerly fortified. The vicinity produces very fine indi-go, in which, and cotton, it carries on a good trade. This town is said to have been founded by the unfortunate Dara Sheko, the elder brother of Aurungzebe. Long. 78° 38' E., lat. 27° 6' N.

SHELBY, a county of the United States, in Kentucky, bounded north by Henry, west by Bullet, east by Franklin, and south by Nelson. It is fertile, and copiously watered by the creeks which run into Salt River.

SHELBYVILLE, the principal town of Shelby county, Kentucky, situated on Brashan's Creek, twelve miles above its junction with Salt River.

SHELDON (Gilbert), archbishop of Canterbury, an eminent and munificent English prelate, born in 1598. He was entered of Trinity College, Oxford, in 1613, and in 1622 was elected fellow of All Souls, and became chaplain to lord Coventry, keeper of the great seal, who made him a prebendary of Gloucester, and recommended him to king Charles I. The king made him vicar of Hackney, and rector of Ickford and Newington. In 1635 he was chosen warden of All Souls. During the civil wars, he continued attached to the king, and attended as one of his commissioners at the treaty of Uxbridge, where he argued warmly for the king and the church. Hence he was afterwards imprisoned by the parliament for six months, and deprived of his wardenship and lodgings. He was liberated by the reforming

committee, October 24th, 1648, on condition that he should not come within five miles of Oxford. On the Restoration he was replaced in his wardenship, made master of the Savoy, dean of the chapel royal, and bishop of London ; and in 1663 archbishop of Canterbury. In 1C67 he was chosen chancellor of the University of Oxford, but lost king Charles II.‘s favor by honestly advising him to ‘dismiss his mistress, Barbara Villiers. He died November 9th, 1677, aged eighty. He spent no less than £60,000 in public and private charities.

SHELF, n. s.) Sax. j-cylp ; Belg. scelf. A SHEL’FY, adj. $ board fixed to lay any thing on ; a sand-bank or rock in the sea.

About his shelves A beggarly account of empty boxes. Shakspeare.

Her chamber is aloft, far from the ground ; And buiit so shelving, that one cannot climb it Without apparent hazard of his life. /a.

SHELF, among; miners, the same with what they otherwise call fast ground or fast country; being that part of the internal structure of the earth which they find lying even and in an orderly manner, and evidently retaining its primitive form and situation.

SHELLEY, Percy Bysshe, the eldest son of Sir Timothy Shelly, Sussex, was born at Field-place, in that county, August 4, 1792. He was sent to Eton, whence he was early removed to Oxford. This removal was owing to his eccentricity of character, which led him to neglect the studies and violate the rules of the school, and finally resulted in his expulsion from Ox-ford. His family, naturally offended with his conduct, and not less with his free opinions on matters of religion, was still further estranged by an ill-assorted marriage. The result was very unfortunate, for after the birth of two children, a separation took place by mutual consent ; and the death of the lady soon after exposed

him to much obloquy On the decease of his first wife, he married Miss Godwin, daughter of the celebrated author of Political Justice, by Mary Wolstonecraft, and soon after retired to Marlow, in Buckinghamshire, where he wrote his Revolt of Islam. About this time, application was made by his family to deprive him of the guardianship of his two children, a boy and a girl, on the ground of his atheistical and sceptical notions, and certain dangerous opinions respect-the intercourse of the sexes. The application succeeded, principally owing to a juvenile production, called Queen Mab, written while at Oxford, and published without the consent of the author. This event caused him much uneasiness, and probably induced him to quit England, and repair, with his secbnd wife and their children, to Italy, where he' renewed an acquaintance with Lord Byron, to whom he had become known during a former visit to the continent. With him and Leigh Hunt, Shelley joined in a periodical miscellany, published in London, entitled The Liberal. This publication, which contained the Vision of Judgment, by Lord Byron, and other original productions, was interrupted by the untimely death of Mr. Shelley, who was drowned in his return from Leghorn to his house, on the gulf of Lerici, in the bay of Spezia, by the wreck of his sailing boat, in a sudden storm, July, 1822. A few days afterwards, the body was washed on shore near Via Reggio, and was subsequently reduced to ashes by his friends. Shelley's remains were deposited in the Protestant burial-ground at Rome. At the time of his decease, Mr. Shelley had nearly completed his thirtieth year. His principal works are The Revolt of Islam ; Alas-tor, or the Spirit of Solitude; The Cenci, a tragedy (see Cenci Beatrice); Adonias; Hellas; Prometheus Unbound ; and a posthumous vol-ume of poems.

SH ELL, n. *., v. a., &"\ Saxon rey'l> rcea'l >

SHELL'DUCK, [v , n. 1 Belg. schtlle. The

SHELL'FISH, {crustaceous covering

SHF.L'LY, adj. 3 of certain animals and

vegetables ; covering of an egg ; the outer part of

any thing; hence a musical instrument (in poetic

language) ; a superficial part : to shell is, to

take out of a shell ; to fall off as broken shells ; to cast the shell : a

shell-duck is a kind of wild duck: shell-fish, fish protected by shells; shelly, abounding in, or consisting of, shells.

Think him a serpent's egg,

Which hatched would, as his kind, grow mischievous, And kill him in the shell. Sftakspeare. J'dius Caesar.

Changed loves are but changed sorts of meats ; And, when he hath the kernel eat, •

Who doth not throw away the shell ? Donne.

Her women wear The spoils of nations in an ear ; Changed for the treasure of a shell , And in their loose attires do swell.

Ben Jonson's Catiline. Albion •

Was to Neptune recommended ; Peace and plenty spread the sails ; Venus, in her shell before him, From the sands in safety bore him.

Dry dens Albion. Less than a god they thought there could not

dwell

Within the hollow of that shell,

That spoke so sweetly. Dryden.

Whatever we fetch from underground is only what

is»lodged in the shell of the earth. Locke.

To preserve wild ducks, and shclldvcks, have a place walled in with a pond.

Mortimer's Husbandry.

SHELLS, in natural history, are hard crustaceous, or bony coverings, with which certain animals are defended, and thence called shell fish. See PHYSIOLOGY and CONCHOLOGY.

M. Herissant, in the Memoirs of the Academy of Sciences, 1766, suggested that the structure of shells was organical. In the numerous experiments that he made on an immense number, and a very great variety, of animal shells, he constantly found that they were composed of two distinct substances; one of which is a cretace-ous or earthy

matter ; and the other appeared, from many experiments made upon it by burning, distillation, and otherwise, to be evidently of an animal nature. These two substances he dexterously separated from each other by a very easy chemical analysis ; by the gentle operation of which they were exhibited distinctly to view, without any material alteration from the action of the solvent, or instrument employed for that purpose. On an entire shell, or a fragment of one contained in a glass vessel, he poured a sufficient quantity of the nitrous acid, considerably diluted either with water or spirits of wine. After the liquor has dissolved all the earthy part of the shell (which may be collected after precipitation by a fixed or volatile alkali), there remains floating in it a soft substance, consisting of innumerable membranes of a retiform appearance, and disposed in different shells, in a variety of positions, which constitutes the animal part of it. This, as it has not been affected by the solvent, retains the exact figure of the shell ; and, on being viewed through a microscope, exhibits satisfactory proofs of a vascular and organical structure. He shows that this membranous substance is an appendix to the body of the animal, or a continuation of the tendinous fibres that compose the ligaments by which it is

fixed to its shell; and that this last owes its hardness to the earthy particles conveyed through the vessels of the animal, which fix themselves into, and incrust, as it were, the meshes formed by the reticular filaments of which this membranous substance is composed. In the shell called porcelaine, in particular, the delicacy of these membranes was so great, that he was obliged to put it into spirit of wine, to which he had the patience to add a single drop of spirit of nitre day by day, for the space of two months ; lest the air generated, or let loose by the action of the acid on the earthy substance, should tear the compages of its fine membranous structure into shatters; as it certainly would have done in a more hasty and less gentle dissolution. The delicate reticulated film left after this operation had all the tenuity of a spider’s web ; and accordingly he does not attempt to delineate its organisation. In other shells he employed even five or sis.

months in demonstrating the complicated membranous structure of this animal substance by this kind of chemical anatomy. In general, however, the process does not require much time.

The singular regularity, beauty, and delicacy in the structure of the shells of animals, and the variety and brilliancy in the coloring of many of them, at the same time that they strike the attention of the most incurious observers, have at all times excited philosophers to enquire into and detect, if possible, the causes and manner of their formation. But the attempts of naturalists, ancient and modern, to discover this process, have constantly proved unsuccessful. M. de Reaumur hitherto appears alone to have given a plausible account, at least, of the formation of the shell of the garden-snail in particular, founded on a course of very ingenious experiments, related in the Mem. de 1'Acad. 1709. He then endeavours to show that this substance is produced merely by the perspirable matter of the animal condensing and afterwards hardening on its surface, and accordingly taking the figure of its body, which has performed the office of a mould to it ; in short, that the shell of a snail, and, as he supposed, of all other animals possessed of shells, was only the product of a viscous transudation from the body of the animal, containing earthy particles united by mere juxtaposition. This hypothesis, however, is liable to very great and insurmountable difficulties, if we apply it to the formation of some of the most common shells : for how, according to this system, it may be asked, can the oyster, for instance, considered simply as a mould, form to itself a covering so much exceeding its own body in dimensions ?

On this subject Dr. Thomson has the following remarks in his System of Chemistry, vol. iv. p. 366 — 368. ' The crustaceous coverings of animals, as of echini, crabs, lobsters, prawns, and crawfish, and also the shells of eggs, are composed of the same ingredients as bones (see BONES) ; but in them the proportion of carbonate of lime far exceeds that of phosphate. Thus 100 parts of lobster crust contain sixty carbonate of lime, fourteen phosphate, and twenty-six cartilage ; 100 parts of crawfish crust.

contain sixty carbonate of lime, twelve phosphate of lime, and twenty-eight cartilage ; 100 parts of hen's egg shells contain 89'6 carbonate of lime, 5-7 phosphate of lime, and 4-7 animal matter. Hatchett found traces of phosphate of lime also in the shells of snails. The shells of sea animals may be divided into two classes. The first has the appearance of porcelain, their surface is enamelled, and their texture is often

slightly fibrous. Mr. Hatchett has given them the name of porcellaneous shells. The second kind of shells is known by the name of mother-of- pearl. It is covered with a strong epidermis, and below it lies the shelly matter in layers. The shell of the fresh water mussel, mother-of-pearl, heliotis iris, and turbo olearius, are instances of these shells.'

Of the many singular configurations and appearances of the membranous part of different shells, which are described in M. Herissant's memoir, and are delineated in several well executed plates, we shall mention only, as a specimen, the curious membranous structure observed in the laminae of mother-of-pearl, and other shells of the same kind, after having been exposed to the operation of the author's solvent. Beside the great variety of fixed colors, with which he found the animal filaments of these shells adorned, the shell presents a succession of rich and changeable colors, the production of which he explains from the configurations of their membranes. These brilliant decorations are produced at a very small expense. The membranous substance is plaited and rumpled in such a manner .that its exterior laminse, incrusted with their earthy and semitransparent matter, form an infinite number of little prisms, placed in all kinds of directions, which refract the rays of light, and produce all the changes of color observable in these shells. With respect to the figures and colors of shells, river shells have not so agreeable or diversified a color as the land and sea shells ; but the variety in the figure, colors, and other characters of .sea shells, is al-most infinite. The number of distinct species in the cabinets of the curious is very great; and doubtless the deep bottoms of the sea, and the shores yet unexplored, contain multitudes still unknown to us. It is rare to find any two shells exactly alike in all respects. This wonderful variety, however, is not all the produce of one sea or one country. Bonani observes that the beautiful shells come from the East Indies and from the Red Sea. The sun, by the great heat that it gives to the countries near the line, exalts the colors of the shells produced there, and gives them a lustre and brilliancy that those of colder climates generally want.

Of fossil shells, or those buried at great depths in the earth, some are found remaining almost entirely in their native state, but others are variously altered by being impregnated with particles of stone and of other fossils ; in the place of others there is found mere stone or spar, or some other native mineral body, expressing all their lineaments in the most exact manner, as Laving been formed wholly from them, the shell having been first deposited in some solid matrix, and thence dissolved by very slow degrees, and

this matter left in its place, on the cavities of stone and other solid substances, out of which shells had been dissolved and washed away, being afterwards filled up less slowly with these dif- ‘ ferent substances, whether spar or whatever else ; these substances, so filling the cavities, can necessarily be of no other form than that of the shell, to the absence of which the cavity was owing, though all the nicer lineaments may not be so exactly expressed. Besides these, we have also in many places masses of stones formed within various shells ; and these having been received into the cavities of the shells while they were perfectly fluid, and having therefore nicely filled all their cavities, must retain the perfect figures of the internal part of the shell, when the shell itself should be worn away or perished from their outside. The various species we find of these are, in many genera, as numerous as the known recent ones : and as we have in our own island, not only the shells of our .own shores, but those of many other very distant ones, so we have also many species, and those in great numbers, which are, in their recent state, the inhabitants of other, yet unknown seas and shores. The cockles, mussels, oysters, and the other common bivalves of our own seas, are very abundant : but we have also an amazing number of the nautilus kind, particularly of the nautilus graecorum, which, though a shell not found living in our own or any neighbouring seas, yet is found buried in all our clay pits about London and elsewhere ; and the most frequent of all fossil shells in some of our counties are the con.chae anomiae, which yet we know not of in any part of the world in their recent state. Of this sort also are the cornua ammonis and the gryphitae, with several of the echinitae and others. The exact similitude of the known shells, recent and fossil, in their several kinds, will by no means suffer us to believe that these, though not yet known to us in their living state, are, as some have idly thought, a sort of lusus naturae. It is certain that, of the many known shores, very few, not even those of our own island, have been yet carefully searched for the shell-fish that inhabit them ; and as we see in the nautilus graecorum an instance of shells being brought from very distant parts of the world to be buried here, we cannot wonder that yet unknown shores, or the unknown bottoms of

deep seas, should have furnished us with many unknown shell-fish, which may have been brought with the rest ; whether that were at the time of the general deluge (see DELUGE), or the effect of any other catastrophe of a like kind, or by whatever other means, to be left in the yet unhardened matter of our stony and clayey strata.

Shells are subject to several imperfections, natural and accidental. The natural defects are the effects of age or sickness in the fish. Connoisseurs pretend to be able to distinguish a shell taken up with the fish alive from one found on the shores; they call the first a living, the second a dead shell ; and say that the colors are always much fainter in the dead shells. Shells are also subject to other deformities, such as morbid cavities, or protuberances. When the shell is valuable, these faults may be hid, and

much added to the beauty ‘of the specimen, without injuring it as an object of natural history, which should always be the great end of collecting these things. The cavities may be filled up with mas-tic, dissolved in spirit of wine, or with isinglass ; these substances must be either colored to the tinge of the shell, or else a pencil dipped in water colors must finish them up to the resemblance of the rest ; and then the whole shell being rubbed over with gum-water, or with the white of an egg, scarcely any eye can perceive the artifice : the same substances may also be used to repair the battered edge of a shell, provided the pieces chipped off be not too large. And, when the excrescences of a shell are faulty, they are to be taken down with a fine file.

On the coast of Guinea there is a prodigious quantity of that small species of porcelain which is used there as money ; and there is another species all over white: the women make bracelets of these, and the people of the Levant adorn their hair with them. The coast of Zanguebar is very rich in shells ; particularly large porcelains of great beauty ; the nux maris, or sea-nut, and all the species of nautili. The Canary isles abound with the murices; Madeira abounds with echini ; and the auris marina is nowhere more abundant. The Red Sea is beyond all other parts of the world abundant in shells; scarcely any kind is wanting there.

America affords many very elegant shells. Panama is famous for cylinders or rhombi, good porcelains, and a very fine species of dolium, or concha globose called the Panama purple shell. About Brasil, and in the gulf of Mexico, there are murices and dolia of

extreme beauty ; also a great variety of porcelains, purpurae, pectens, neritae, bucardiae, or heart-shells, and elegant limpets. The isle of Cayenne affords one of the most beautiful of the buccinum kind, and the Midas ear is found principally about this place. Jamaica and Barbadoes have their shores covered with porcelains, chamae, and buccina : and at St. Domingo there are almost all the same species of shells that we have from the East Indies ; only they aie not quite so beautiful. The' pearl oyster is found also, but smaller than in the Persian Gulf. At Martinico there are in general the same shells as at St. Domingo. About Canada are found the violet chamae ; and the lakes of that country abound with mussels of very elegant pale blue and pale red colors. On the Great Bank of Newfoundland the principal kind are mussels of considerable beauty. About Carthagena there are many mother-of-pearl shells. The island of Magellan furnishes us with a very remarkable species of mussels, and several very elegant species of limpets, particularly the pyramidal.

The shores of Asia furnish us with the pearl oysters and scallops in great perfection. About Amboyna are found the most beautiful specimens of the cabbage shell, the arrosoir, the ducal mantle, and the coral oysters, or echinated oysters : aiso a great variety of extremely beautiful mussels, tellinae, and volutae; some fine buccinums, and the shell called the Ethiopian crown, in its greatest perfection. The dolia, the murices. and the cassandrae, are also found on these

coasts in great beauty. Many elegant snails and screw-shells are also brought thence: and the serapion and spider shells. The Maldive and Philippine Islands, Bengal, and the coast of Malabar, abound with the most elegant of all the species of snails, and furnish many other kinds of shells in great abundance and perfection. China abounds in the finest species of porcelain shells, and has also a great variety of beautiful snails. Japan furnishes us with all the thicker and larger bivalves ; and the isle of Cyprus is famous above all other parts of the world for the beauty and variety of the patella or limpet. Our own British, coasts produce also very

/pretty shells. About Plymouth are found oysters, mussels, and solens, in great abundance : and there, and on most of our other shores, are numbers of the aures marinas and dentalia, with pectens, which are excellent food ; and many elegant species of the chamae and tellmse are

, fished up about Scarborough, &c Ireland affords great numbers of mussels, and some very elegant scallop-shells; and the pholades are frequent on most of our shores. We have also great variety of the buccina and cochleae, some volutae : and, on the Guernsey coast, a peculiarly beautiful snail, called the Guernsey snail.

The ports of Marseilles, Toulon, and Antibes, in France, are full of pinnae marinae, mussels, tellinae, and chamae. The coasts of Bretagne afford great numbers of the conchae anatiferse and poussepieds ; they are found on old rotten boards, on sea substances, and among clusters of sponges. The other \ports of France, as llochelle, Dunkirk, Brest, St. Maloes, and others, furnish oysters excellent for the table, but of the common kind, and of no beauty in their shells ; great numbers of mussels are also found there ; and the common tellinae, the onion-peel oysters, the so-lens, and conchae anatiferae, are also frequent there. At Granville there are found very beautiful pectens, and some of the cordiform or heart-shells.

The fresh water shells are found much more frequently, and in much greater plenty than the sea kinds ; there is scarcely a pond, a ditch, or a river of fresh water in any part of the world in which there are not found vast numbers of these shells with the fish living in them. All -rtese shells are small, and they are of very little beauty, being usually of a plain grayish or brownish color. Our ditches afford us chamae, buccina, neritae, and some patellae ; but the Nile and some other rivers furnished the ancients with a species of tellina which was large and eatable, and so much superior to the common sea tellina in flavor, that it was commonly named tellina, regia, i. e. the royal tellina. We have a small species of buccinum common in our fresh waters, which is very elegant, and always has its operculum in the manner of the larger buccina; a small kind of mussel is also very common, which is so extremely thin and tender that it can hardly be handled without breaking. The large fresh water mussel, called the horse mussel, is well known : and the size sufficiently distinguishes it from all other fresh water shells.

The Mediterranean and Northern ocean con-ain a great variety of shells’, and many of very

remarkable elegance and beauty. The gulf of Tu-rentum affords great variety of purpurae porcelains, nautili, and elegant oysters; the coasts of Naples and Sardinia afford the same, and with them a vast number of the 3olens of all the known species, Sicily is famous for a very elegant kind of oyster which is white all over ; pinnae marinae and porcelains are also found in great plenty there, with tellinae and chamae of many species. Corsica is famous, beyond all other places, for vast quantities of the pinnae marine ; and many other very beautiful shells are found there. (Lister. Hist. Conchyl.) About Syracuse are found the gon-dola shell, the alated murex, and a great variety of elegant snails, with some of the dolia and neritte. The Adriatic Sea is less furnished with shells than the rest of these seas. Mussels and oysters of several species are however found there, and some of the cordiform or heart-shells • there are also some tellinae. About Ancona there are vast numbers of the pholades buried ii stone (see PHOLAS); and the aures marinae are particularly frequent alout Puzzoli. — (Bonani, Kecreat. Ment. et Ocul).

The coasts of Spain and Portugal afford much the same species of shells with the East Indies, but they are greatly inferior in beauty. There are, according to Tavernier and others, sonv rivers in Bavaria in which there are found pearls of a fine water. About Cadiz there are very large pinnae marinae, and some fine buccina. The isles of Majorca and Minorca afford a great variety of extremely elegant shells. The pinnae marine*} are also very numerous there, and their silk is wrought into gloves, stockings, and other things. The Baltic affords many beautiful species, particularly an orange-colored pecten, or scallop shell, which is not found in any other part of the world.

In collecting shells it is most advisable, whenever it can be done, to get those which have in them the living animals ; because we shall thus obtain the natural history of the animals, and the shells themselves in their natural beauty, and the full glow of their colors. Shells should be also procured from the deeper parts of their resorts, and immediately after storms on the sea beaches and shores; because, by being much exposed to the sun, their colors fade, and they are liable to other accidents that injure them. To kill the fish that inhabits them M. Da Costa advises to give them aquick dip in boiling water, and, when they are cooled, to lay them in cold water till they are cleaned ; and in this operation they should not be touched with aquafortis, or any other acid, nor exposed to the heat of the fire and sun. The art of polishing shells arrived but lately at its present state of perfection. Among the immense variety of shells, some are taken np

out of the sea, or found on its shores, in all their perfection and beauty ; with a natural polish superior to any thing that art could give. In others, where the beauties are la-tent, art is to be called in ; and the outer veil being taken off all the internal beauties appear. Among the shells found naturally polished are the porcelains, or cowries; the cassanders; the dolia, or conchae globosse, or tuns ; some buccina, the volutes, and the cylinders, or olives

or as they are generally, though improperly, called, the rhombi. But there are several other genera, in which most of the species are taken up naturally rough and covered with a coarse outer skin. The naturalists insist upon having all their shells in their native and genuine appearance as they are found when living at sea ; but the ladies will have all such polished. But both kinds of collectors ought to have the same shells in different specimens both rough and polished : the naturalist would thus, besides knowing the outside of the shell, be better acquainted with its internal characters, and the lady would have a pleasure in comparing the beauties of the shell, in its wrought state, to its natural coarse appearance. When a shell is to be polished, first examine whether it have naturally a smooth surface, or be covered with tubercles or prominences. A shell which has a smooth surface, and a natural dull polish, need only be rubbed with the hand, or with a piece of chamoy leather, with some tripoli, or fine rotten-stone, and it will become of a perfectly bright and fine polish. Emery is not to be used, because it wears away too much of the shell. This operation requires an experienced person, who knows where he is to stop ; for in many of these shells the lines are only on the surface, and their beauty is easily defaced. A shell that is rough, foul, and crusty, or covered with a tartareous coat, must be left a whole day steeping in hot water; when it has imbibed a large quantity of this, it is to be rubbed with rough emery on a stick, or with the blade of a knife, to get off the coat. After this, it may be dipped in diluted aquafortis, spirit of salt, or any other acid : and, after remaining a few moments in it, be again plunged into common water. After this it is to be well rubbed with linen cloths, impregnated with common soap ; and, when

thus made perfectly clean, it is to be polished with the fine ornery and a hair-brush. If after this the shell, when dry, appears not to have so good a polish as was desired, it must be rubbed over with a solution of gum arabic, which will add greatly to its gloss. When a shell is covered with a thick and fatty epidermis, as is the case with several of the mussels and tellinae ; in this case aquafortis will do no service, as it will not touch the skin ; then a rough brush and coarse emery are to be used ; and, if this does not succeed, seal-skin, or, as the workmen call it, fish skin and pumice-stone are to be employed. When a shell has a thick crust, which will not give way to any of these means, the best way is to plunge it into strong aquafortis, till the stubborn crust is wholly eroded. The limpets, auris marina, the helmet-shells, and several other species of this kind, must have this sort of management : a long piece of wax must be provided, and one end of it made perfectly to cover the whole mouth of the shell ; the other end will then serve as a han-dle, and, the mouth being stopped by the wax, the liquor cannot get in to the inside to spoil it ; then there must be placed on a table a vessel full of aquafortis, and another full of common water. The shell is to be plunged into the aquafortis ; and, after remaining a few minutes in it, is to be taken out, and plunged into the common water.

The progress the aquafortis makes in eroding the surface is thus to be carefully observed; the point of the shell, and any other tender parts, are to be covered with wax, to prevent the aquafortis from eating them away ; and, if there be any worm -holes, they also may be stopped up with wax, otherwise the aquafortis would soon eat through in those places. When the coat is sufficiently eaten away, the shell is to be wrought carefully with fine emery and a brush ; and, when it is thus polished as high as can be, it must be wiped clean, and rubbed over with gum water or the white of an egg. In this sort of work the operator must take care lest the aquafortis burn his fingers, or eat off the skin and the nails. These are the methods to be used with shells which require but a moderate quantity of the surface to be taken off; but there are others which require to have a largei quantity taken off, and to be uncovered deeper ; this is called entirely scaling a shell. This is done by means of a horizontal wheel of lead or tin, impregnated with rough emery ; and the shell is wrought down in the same manner in which stones are wrought by the lapidary, whom it will be proper to consult on such occasions. After the shell is cut down to a proper degree, it is to be polished with fine emery, tripoli, or rotten-stone, with a wooden wheel turned by the same machine as the leaden one. When a shell is full of tubercles, or protuberances, which must be

preserved, it is then impossible to use the wheel; and, if the common way of dipping into aquafortis be attempted, the tubercles, being harder than the rest of the shell, will be eaten through before the rest is sufficiently scaled, and the shell will be spoiled. In this case a camel's hair pencil must be dipped in aquafortis ; and with this the intermediate parts of the shell must be wetted, leaving the protuberances dry : this is to be often repeated; and the shell always to be plunged into water to stop the erosion of the acid, which would otherwise eat too deep. It is then to be polished with emery of the finest kind, or with tripoli, or the common polishing-stone used by the goldsmiths. The Dutch are very fond of shells, and are very nice in working them, but use the most violent methods, so as often to destroy all their beauty. They file them down on all sides, and often take them to the wheel, whicn destroys the very characters of the species. They even add some lines and colors with a pencil, afterwards covering them with varnish, so that they seem the natural lineations of the shell ; the Dutch cabinets are by these means made very beautiful, but rendered totally useless as instructors in natural history. Connoisseurs are often imposed upon by these tricks to purchase them for new species.

Mother-of-pearl shells are ' composed of alternate layers of carbonate of lime and a thin membranaceous substance, which resembles exactly coagulated albumen in its properties. This membrane still retains the figure of the shell, after all the carbonate of lime has been separated by acid. Mother-of-pearl contains sixty-six carbonate of lime, and thirty-four membrane.'

Various are the means used by artists to brighten the colors, and add to the beauty of

shells : and the changes produced by polishing in this manner are so great that the shell can scarcely be known afterwards to be the same it was ; and hence we hear of new shells in the cabinets of collectors, which have no real existence as seperate species, but are disguised by polishing. To caution the reader against impositions of this kind, it is

proper to mention the most remarkable species thus usually altered. The onyx shell or volute, called the purple or violet tip, which in its natural state is of a sim-pie pale brown, when wrought slightly, or polished with just the superficies taken off, is of a fine bright yellow; and, when eaten away deeper, it appears of a fine milk-white, with the lower part bluish ; it is in this state that it is called the onyx-shell ; and it is preserved in many cabinets in its rough state, and in its yellow appearance, as different species of shells. The violet shell is a species of porcelain or common cowry, which does not appear in that elegance till it has been polished ; and the auris marina appears in different forms, as it is more or less deeply wrought. In its rough state it is dusky and coarse, of a pale brown on the outside, and pearly within ; when it is eaten down, a little way below the surface, it shows variegations of black and green : and, when farther eroded, it appears of a fine pearly hue within and without. The nautilus, when polished down, appears all over of a fine pearly color ; but, when it is eaten away but to a small depth, it appears of a fine yellowish color, with dusky hairs. The burgau, when entirely cleared of its coat, is of the most beautiful pearl color: but, when only slightly eroded, it appears of a variegated mixture of green and red, whence it has been called the paroquet shell. The com-mon helmet shell, when wrought, is of the color of the finest agate ; and the mussels, in general, though very plain shells in their common appearance, become very beautiful when polished, and show large veins of the most elegant colors. The Persian shell, in its natural state, is all over white, and covered with tubercles; but when ground down on a wheel, and polished, it appears of a gray color, with spots and veins of a very bright and highly polished white. The limpets, in general, become very different when polished, most of them showing very elegant colors ; among these the tortoise shell limpet is the principal ; it does not appear at all of that color or transparence till it has been wrought. That elegant species of shell called the junquil-chama, which has deceived so many judges of these things into an opinion of its being a new species, is only a white chama with a reticulated surface; but, when this is polished, it loses at once its reticular work and its color, and becomes perfectly smooth, and of a fine bright yellow. The violet colored chama of New England, when worked down and polished, is of a fine milk-white, with a great number of blue veins, disposed like the variegations in agates. The asses ear shell, when polished after working it down with the file, becomes extremely glossy, and obtains a fine rose color all about the mouth. These are some of the most frequent important changes wrought on shells by polishing ; and many of the very greatest beauties of this part of the

creation must have been tor ever hid, but for this method of searching deep in the substance of the shell for them.

Marine shells may be divided, according to Mr. Hatchett, into two kinds ; those that have a porcellanous aspect with an enamelled surface, and when broken are often in a slight degree of a fibrous texture ; and those that have generally, if not always, a strong epidermis, under which is the shell, principally or entirely composed of the substance called nacre, or mother-of-pearl. The porcellanous shells appear to consist of carbonate of lime, cemented by a very small portion of animal gluten. Tins animal gluten is more abundant in some, however, as in the pa-tellse. The mother-of-pearl shells are composed of the same substances. They differ, however, in their structure, which is lamellar, the gluten forming their membranes, regularly alternating with strata of carbonate of lime. In these two the gluten is much more abundant.

Mr. Hatchett made a few experiments on land shells also, which did not exhibit any differences. But the shells of the crustaceous animals he found to contain more or less phosphate of lime, though not equal in quantity to the carbonate, and hence approaching to the nature of bone. Linnzeus, therefore, he observes, was right in considering the covering of the echini as crustaceous, for it contains phosphate of lime. In the covering of some of the species of asterias, too, a little phosphate of lime occurs ; but in that of others there is none.

Fossil and live shells of the same species differ, according to locality, distance, &c. — It has been remarked that the same fossil shells, found in places at a distance from each other, always exhibit some differences in their form, the deepness of their grooves, the degree of projection of their spines, &c. Mr. Basterodt affirms the same to be-the case with living species, as he found that they do not exhibit the same characters in places separated at considerable distances from each other, or even in near localities, when the heat, humidity, nourishment, &c., are different. Hitherto but little attention has been paid to those local differences ; hence it has happened that new species have been proposed, which were only varieties of known species. This fact is of great importance in a geognostical point of view.

The above writer seems also to have established that the same fossil species of shells are associated with different suites of species in different localities. The same species of fossil shell may occur in

deposits situated at considerable distances from each other, but in these different localities the species are not grouped with the same set of species. It is also a matter of observation that fossil shells of the same species are more and more numerous in different basins of the same era of formation, the nearer these basins are to each other. In illustration of this latter fact, Basterodt informs us, that, of the 270 species which he found in the vicinity of Bourdeaux, but eighty-two occur in the depots of Italy, fifty-two around Paris, twenty-one in the tertiary basins of England, and only seventeen in the basin of Vienna in Austria.

SHELLS

SHELL, the outward part of a tent or mar-quee.

SHELL, a short jacket without arms, which was worn by light dragoons, and in some instances by the infantry, before the new regulations took place respecting the clothing of the British army. At the commencement of the late wars, some militia colonels derived no inconsiderable emolument from this mode of dress.

SHELL, LOADED, an invention for preserving the lives of people in danger of shipwreck.

SHELL OF A SWORD (plaque d?epe”e, Fr.), a particular part of a sword, which serves as a shield to the hand when it grasps the hilt. The regulation sword, which is directed to be worn in a cross belt, has its shell so constructed that one side can fall down, by which means the hilt hangs more conveniently.

A spring-shell of a sword (plaque d’epee a ressort, Fr.), a shell which by means of a spring can lie flat against the hip, when the sword is worn in a cross-belt. The proper word is co-quille, not plaque.

SHELLS, in gunnery, are hollow iron balls to throw out of mortars or howitzers, with a fuse hole of about an inch diameter, to load them with powder, and to receive the fuse. The bot-tom, or part opposite to the fuse, is made thicker than the rest, that the fuse may fall

uppermost. But in small elevations this does not always happen, nor indeed is it necessary; for, let the shell fall as it will, the fuse sets fire to the pow-der within, which bursts the shell, and causes great devastation. The shells had much better be of an equal thickness, for then they burst into more pieces. Mortars are thought to have been full as ancient as cannon. They were employed in the wars of Italy, to throw balls of led hot iron, stones, &c., long before the invention of shells. These last are thought to be of German invention, and the use of them in war to have been taught by the following accident : — A citizen of Venlo, at a festival celebrated in honor of the duke of Cleves, threw a number of shells, one of which fell on a house and set fire .to it, by which misfortune the greatest part of the town was reduced to ashes. The first account of shells used for military purposes is in 1435, when Naples was besieged by Charles VIII. Shells were thrown out of mortars at the siege of Wachten-donk, in Guelderland, in 1 588, by the earl of Mansfield. Mr. Matter, an English engineer, first taught the French the art of throwing shells, which they practised at the siege of Motte, in 1634. The method of throwing red hot balls out of mortars was first practised at the siege of Stralsund, in 1675, by the elector of Brandenburgh ; though some say in 1653, at the seige of Bremen. See MORTAR.

To find the weight of a shell. Rule. — Double the difference of the cubes of the diameters of the shell and hollow sphere, and seven times the result gives the weight in pounds, cutting off the two right hand figures of whole numbers. Example.— Let the diameter of the shell be 13 inches, and that of the hollow sphere 9-5. Then the cube of 13 is 2197, and that of 9-5r is 857-357; the difference is!339-625; itsdouhleis 2679-25, which, multiplied by 7, gives 18754-625,

and cutting off two places, in whole numbers, the result is 187lbs., or 1 cwt. 2 qrs. 2 libs., the weight of the shell.

SHELLS, SHRAPNEL, or SPHERICAL CASE-SHOT, are shells of a peculiar construction, invented by colonel Shrapnel of the royal artillery. They were used with peculiar effect against the French army, which Sir Arthur Wellesley, now duke of Wellington, fought on the 21st of August, 1808 ; and also at the battle of Waterloo in 1815. The following explanation of the effects and advantages that might be derived by firing this species of shot is extracted from a book lately pub lished : —

1. The whole charge takes effect on the enemy at any distance. By the

present mode of firing the greatest part of the charge disperses as soor. as it leaves the muzzle of the gun, and cannot be directed.

2. Grape, or case shot, may be fired with an effect equally close and collected, to any distance-within the range of the piece ; and the artillery need not advance within musket shot of the ene-my to make use of this kind of fire with its full effect, and are not so subject to have their guns charged either by cavalry or infantry.

3. It requires less precision and exactness to point a piece of ordnance charged with spherical case shot than with round shot, because case shot is a wide and dispersed fire, and the difficulty in elevation consequently less.

4. Its comparative destruction with that of round shot will be, generally, as the number of shot within the shells to one ; that is to say, a three pounder, twenty-two to one in its favor; a six pounder, fifty to one, 8cc., in which calculation is not enumerated any effect from the splinters of the shell.

5. Small balls cannot be projected to very considerable distances, unless enclosed in heavy spherical cases, which, from ‘ their form and weight, are not much influenced by the resistance of the air, or diverted from their direction.

6. The explosion of the shell makes no change in the direction of the shot within it : they consequently complete the shell’s track, or curve, which has sometimes been observed to be 400 yards.

7. From the unevenness of the ground, such as hillocks, hanks, fallow-fields, &c., all shot which graze most commonly lodge ; whereas, by using this shell, the whole charge will be carried over these irregularities, and reach the object with its full contents of balls.

N. B. Firing this kind of shells from guns is managed with more facility than the ordinary howitzer practice both as to the length of fuse, as well as the elevation required, and may be carried on in the field precisely the same as firing round shot.

Mode of examining the different natures of lieutenant colonel Shrapnel’s shells in the royul laboratory. — 1. The shells are to be well examined with a pick hammer of a proper weight to the diameter of each nature, to find they are not damaged by sand holes, or other flaws.

2. They are to be well scraped inside, with scrapers that will get under

the clip of the fuse hole, so that all the bore, sand, cr gravel may be

cleaned out, which is done by rolling and shaking the shell with the fuse-hole downwards. It may be taken out of large shells with a proper ladle, that will go into the fuse-hole.

3. They are to b”e proved with a strong bellows and water as usual ; the shot being placed under in a tub or bucket, introduce the nose of the bellows into the fuse, and by blowing them the water will bubble if the shell be porous.

4. They are to be examined, by the new cal-liper instruments, round the side and at the bottom, to ascertain their thickness and concentricity.

5. They are to be examined by a circular gauge, and appropriated to the respective ordnance they are found to answer. If any are too high by 0-3 of an inch, or too low by 0-3 of an inch, they are to be rejected.

6. When each shell is ascertained to be perfectly dry inside, it is to be placed with its fuse-hole up, and the nose of a strong bellows, forming an angle downwards, being introduced into it, a few blasts being given, will blow the remaining particles of dust out of the shell.

7. The shells are to be classed, by their fuse-holes, into different numbers, *viz.* 1, 2, 3, and 4 ; those of an equal size to be packed in boxes by themselves.

8. A file to be used occasionally to try if the metal is soft, instead of breaking the shell.

9. Each shell to be sounded, by striking it gently, as the ringing tone will be lost should there be an imperceptible crack in it.

N. B. In the examination of spherical case shot shells, the thick side of

the shell need not be taken into consideration, but the thinnest part only ; for when the thinnest part is too thin, by the rule given, the thickest part must be too thick, which needs no examination to discover.

Supposing an eighteen-pounder shell ought to be five inches thick in every part, subtract the non-concentricity allowed of 0-83 from it, and there remains 4-17 inches, forthe thinnest part of an eighteen-pounder shell which can be received.

Method of making fuses of colonel Shrapnel's construction. — The fuses, after being turned so as to fit the fuse-holes, are bored, and a deep thread grooved inside, to hold the composition firm ; and, instead of being turned with cups, they are hollowed conical, and roughed with a tool that cuts under, the better to receive the priming. After they are driven, with fuse composition, one and one-half inch, the yare sawed across the top, about one-fifth of an inch down, so as not to touch the composition, and divided into five equal parts, of two-tenths of an inch each ; after which a bit of quick match is placed across, and drawn tight in the same grooves ; they are then primed, with mealed powder and spirits of wine capped and packed for service.

TABLE 01 the DIMENSIONS and WEIGHT of SHELLS for MORTARS and HOWITZERS.

M

§.SM.

h

Diameter of

o

to

Species.

Weight.

1

U.S

Fuse holes.

01 •

8s

^4 0>

3

^ ””* rS

? 3

.!i ^

ft

> ed ^J

O *- Ol

Outside

Inside.

H

Cwt. qrs. Ibs. oz.

Inch.

Ibs. oz.

Ibs. oz.

Inch.

Inch.

Inch.

13-Inch.

1 32

12f

10 4

6 12

1-837

1-696

205

10 do.

— 3 9

9|

4 5

2 10

1-57

1-45

1-575

8 do.

— 1 11 8

2 12

1 14

1-219

1-127

1-2

5j do.

— — 15 4

5?

1 —

— 12

0-894

0-826

0-822

48 do.

8

45

— 7

— 5

0-832

0-769

0-653

H. Gren. —

I— — 3 11 I— — 1 13

3-49 2-77

- n

DIMENSIONS of SHELLS for GUNS and CARRONADES made with an equal thickness of metal.

Species.

42-pr.

32.

24.

18.

12.

Inch.

Inch.

Inch.

Inch.

Inch.

(“Diameter of > Exterior

6-684

6-105

5-547

5-05

4-4

j the Shell 3 Interior

4-404

4-005

3-767

3-4

2‘8

p J Thickness of Metal

1-14

1-05

0-89

0-82

0-8

‘ “‘j Diameter of J Exterior

0-894

0-894

0-893

0-832

0-832

| Fuse-hole i Interior

0-826

0-826

0-826

0-76

0-769

lˆ Powder for bursting . .

14 oz.

11 oz.

12 oz.

9 oz.

5J or.

/“Diameter of i Exterior

6-64

605

5-48

4-935

4-295

j the shell f Interior

4-36

3-95

3-48

3-235

2-695

Carro-j Thickness of Metal . .

1-14

1-35

10-85

0-98

nades. | Shell’s weight … Ibs.

0-22

0-12

1 Contains powder . oz.

0‘12£

00-9

I Powder for bursting 02.

o-io

00-7

VOL. XX.

N

SHE

178

SHE

The following snells may also be fired from guns : —

Hand-grenades, from 6-pounders. 4fshells . . 12 .

5i-shells . . 24 . 8-inch … 68-pr. carronades. Shells may likewise be thrown from guns to short distances, in cases of necessity, though the bore be not of a diameter sufficient to admit the shell. For this purpose the gun may be elevated to any degree that will retain the shell upon its muzzle, which may be assisted by a small line going from the lugs of the shell round the neck of the gun. To produce a greater effect, the space between the shell and the charge may be filled with wads or other substances.

To SHELL, among horses, to have the teeth completely bare and uncovered, which happens about the fifteenth or sixteenth year.

SHELLS, MESSAGE, are nothing more than howitz shells, in the inside of which a letter ox other paper is put ; the fuse hole is stopped up with wood or cork, and the shells are fired out of a royal or howitz, either into a garrison or camp. It is supposed that the person to whom the let-ter is sent knows the time, and accordingly appoints a guard to look out for its arrival.

SHELL-FISH are in general oviparous, very few instances having been found of such as are vivi-parous. Among the oviparous kinds anatomists have found that some species are of different sexes in the different individuals of the same species ; but others are hermaphrodites, every one being in itself both male and female. In both cases their increase is very numerous, and scarcely inferior to that of plants, or of the most fruitful of the insect class. The eggs are very small, and are hung together in a sort of clusters by means of a glutinous humor which is always placed about them, and is of the nature of the jelly of frog's spawn. By means of this they are not only kept together in the parcel, but the whole cluster is fastened to the rocks, shells, or other solid substances ; and thus they are preserved from being driven on shore by the waves, and left where they cannot succeed. See TESTACEA.

SHELL-GALL-INSECT, a gall-insect, somewhat resembling those which are called the boat-fashioned ones, but differing in this, that as the two ends of that species are not very different in form, in this kind one of the ends is sharp and pointed in comparison with the other. It has its name of shell-insect from the resemblance it has to a mussel shell ; as it is, in its whole form, not unlike one of the two shells in which the com-mon sea-mussel is enclosed, but the pointed end of this insect is much more extended in length than the smaller end of this shell.

This species is extremely small, and may be easily mistaken for the minute case out of which some small insect has escaped ; or, in an other state, for the nest in which some small insect has deposited its eggs ; but, if the assistance of the microscope be called in, they will easily be discovered to be true gall-insects, even as soon as they are hatched from their eggs. This species, at its full growth, is so small that it requires good eyes to discover it: it is brown, very

smooth, and polished on the surface, and much of the color of the bark of some trees; it has usually an edge of a cottony matter, visible where its sides touch the tree, and its eggs are always deposited on a fine cottony bed ; the young ones are white, flat, and have two small horns and six legs ; in this state they are known to be of the gall-insect .class, not by their likeness to their parent, but to the young gall-insects of other species. They march about very briskly for some time after they are hatched, and after that fix themselves, and then begin to grow, and by degrees alter their form, till they at length are of the same shape with their parent. — Reaumur, Hist. Ins. torn iv. p. 69, 70.

SHELL-TOOTHED HORSE is one that from four years, to old age, naturally bears a mark in all his fore-teeth, and there still keeps that hollow place with a black mark, which we call the ey*- of a bean, insomuch, that at twelve or fifteen he appears with the mark of a horse that is not yet six.

SHELLA, an ancient town of Africa, in Mc-rocco ; containing several Moorish tombs, which are highly venerated. The town is considered as an asylum so sacred that none but Mahometans are permitted to enter it. It is supposed to have been anciently the metropolis of the Carthaginian colonies on the west coast of Africa.

SHELLIF, the most considerable river of Algiers, the Chinalaph of the ancient geography. It rises among the mountains of Atlas, in a place called the Seventy Fountains ; flows north during the first part of its course, then west, and then nearly parallel to the sea. Its whole length is about 200 miles. In its early course it forms the lake of Titterie.

SHELTER, n.s.,v. a. &v.n. 3 Skinner de-SHEL'TERLESS, adj. J duces it from

shell; Davis from Sax. j-cylfc, a shield. There is also a Goth, skiut, and Isl. skildu. Protection ; cover from outward violence or inclemency ; a defender or protector ; state of being covered : to cover in this way ;

defend : to take or give protection of this kind : shelterless is, defenceless • without home or refuge.

Thou hast been a shelter for me, and a strong tower from the enemy. Psalm Ixi. 3.

We hear this fearful tempest sing, Yet seek no shelter to avoid the storm.

Shakspeure . Richard II.

They theltered themselves under a rock. Abbot Low at his foot a spacious plain is placed, Between the mountain and the stream embraced ; Which shade and shelttr from the hill derives, While the kind river wealth and beauty gives.

Denham.

They wish the mountains now might be again Thrown on them, as a shelter from his ire. Milton. We besought the deep to shelter us. Id.

Heroes of old, when wounded, shelter sought ; But he, who meets all dangers with disdain,

Even in their face his ship to anchor brought, And steeple high stood propt upon the main.

Dryden

Those ruins sheltered once his sacred head, When he from Worcester's fatal battle fled, Watched by the genius of this royal place. Id.

Now sad and shelterless, perhaps, she lies, Where piercing winds blow sharp.

Ituwe's Jane S/it"-«

SHE

,In vain I strove to check my growing flame, Or shelter passion under friendship's name ; You saw my heart. Prior.

Comfort thyself with such thoughts, chiefly when all earthly comforts fail thee ; then do thou particularly retreat to those considerations, and shelter thyself under them. Atterbury,

The healing plant shall aid,

From storms a shelter, and from heat a shade. Pope.

Then seeks the farthest ooze, the sheltering weed,

The caverned bank, his old secure abode. Thomson.

Who into shelter takes their tender bloom, And forms their minds to fly from ills to come.

Young. November hirples o'er the lea,

Chill, on thy lovely form ; And gane, alas ! the sheltering tree,

Should shield thee frae a storm. Burns.

At a thoughtless age, allured By every gilded folly, we renounced His sheltering side, and wilfully forewent That converse, which we now in vain regret.

Cowper.

SHEM, or SEM, the second son of Noah, born about A. M. 1558. His filial piety and modesty in endeavouring, along with his elder brother Japhet, to conceal the effects of the only act of folly which the excellent old patriarch had fallen into, and which their brother Ham, with probably his son Canaan, had made a subject of ridicule, are recorded in Genesis ix. 23, together with the remarkable benediction pronounced upon them in consequence, and the dreadful curse upon Ham's posterity, the effects of which continue even to the present period. The posterity of Shem by his five sons Elam, Ashur, Arphaxad, Lud, and Aram, peopled most of the south part of Asia and the adjacent islands, and gave rise to the kingdoms of Persia, Assyria, Phoenicia, Lydia, Syria, Sic. See PHILOLOGY. In that branch of it from which the Hebrews descended, from Heber, the grandson of Arphaxad,

the true church, and the knowledge of the true God were continued for above 2000 years, till the coming of Jesus Christ, by the promulgation of whose glorious gospel among the Gentiles the prophecy respecting the posterity of Japhetwas completely fulfilled. Shem lived to the age of 600 years, and died about A. A. C. 2467.

SHEMAIAH, an inspired prophet of Judah, in the reign of Rehoboam, who prevented a civil war between Israel and Judah, and prevailed on Rehoboam's new raised army of 180,000 warriors to disband, by assuring them, that the division of the kingdom which had just taken place was ordained by the Almighty. See 1 Kings xii. 21 — 24. He delivered other two messages to the king and the people. Shemaiah was also an author, and wrote the history of Rehoboam ; which is quoted in 2 Chron. xii. 5, 7, and 15.

SHEMINITH, in Hebrew antiquity, a musical instrument of eight strings. It is mentioned in

he title of Psalms vi. and xii. SHENAN, a drug used in the east for dyeing

eather red. It is the eastern jointed kali, a species of salicornia, which grows plentifully in Turkey, Syria, Africa, &c. The salicornia perennis has been used for it, but not always with success.

SIIENANDOAH, a county of Virginia, Unit ed States, bounded north by Frederick county southeast by Culpeper and Maddison counties' southwest by Rockingham county, and west by Hardy county. Chief town Woodstock.

SIIENANDOAH,, a river of Virginia, Unrted States, which rises in Augusta county, and, after a course of about 200 miles, joins the Potomac, in lat. 38° 4' N., just before the latter bursts through the Blue Ridge. It is composed of the South, Middle, and North rivers, and is navigable for boats 100 miles.

SHEND, v. a. Preter. and part. pass, shent. Sax. j-cenban ; Belg. schenden. To ruin ; spoil ; mischief. Obsolete.

Provide for thy wife, or else look to be shent, Good milchcow for winter, another for Lent.

Tusser.

Shepherds, should it not yshent Your roundels fresh, to hear a doleful verse Of Rosalind, that Colin made ? Spenser.

She passed the rest as Cynthia doth shend The lesser stars. Id.

Sore bruised with the fall, he slow uprose, And, all enraged, thus him louldly shent :

Disleal knight ! whose coward courage chose To wreck itself on beast. Faerie Queene.

My tongue and soul in this be hypocrites ; How in my words soever she be shent, To give them seals never, my soul, consent.

Shakspeare. Hamlet. Such a dream I had of dire portent, That much I fear my body will be shent ; It bodes 1 shall have wars. Dryden.

SHENSTONE (William), an admired English poet, the eldest son of a country gentleman, who farmed his own estate in Shropshire, was born in November 1714. He learned to read of an old dame, whom his poem of the School Mistress has immortalised ; and soon received such delight from books that he always expected, when any of the family went to market, a new book should be brought him. As he grew older he went to the grammar school in Hales Owen, and afterwards to Mr. Crumpton,an eminent schoolmaster at Solihul, where he distinguished himself by his quick progress. In his tenth year (June 1724) he was deprived of his father; and soon after (August 1726) of his grandfather ; and was with his brother, who died afterwards unmarried, left to the care of his grandmother, who managed the estate. From school he was sent, in 1732, to Pembroke College in Oxfprd, a society which, for half a century, has been eminent for English poetry and elegant literature. Here he continued his name ten years, though he took no degree. After the fourth year he put on the civilian’s gown, but without any intention to engage in the profession. About the time he went to Oxford the death of his grand mother devolved his affairs to the care of the Rev. Mr. Dolman, of Brome, in Staffordshire, whom he always mentioned with gratitude. At Oxford he, in 1737, published a small Miscellany, without his name. He published, in 1740, his Judgment of Hercules, addressed to Mr. Lyttleton, whose interest he supported with great warmth at an election ; this was two years afterwards followed by the School Mistress. Mr. Dolman died in 1745, and the care of his fortune now felfupon himself. H«?

then took the whole estate into his own hands, and rather improved its beauty than increased its produce. Now began his delight in rural pleasures, and his passion for rural elegance ; but in time his expenses occasioned clamors that overpowered the lamb's bleat and the linnet's song, and his groves were haunted by beings very different from fawns and fairies. He spent his estate in adorning it, and his death was probably hastened by his anxieties. He was a lamp that spent its oil in blazing. He died at the Leasows of a putrid fever, February llth, 1763 ; and was buried by the side of his brother, in the churchward of Hales-Owen. In his private opinions our author adhered to no particular sect, and hated all religious disputes. Tenderness, in every sense of the word, was his peculiar characteristic; and his friends, domestics, and poor neighbours, daily experienced the effects of his benevolence. This virtue he carried to an excess that seemed to border upon weakness; yet if any of his friends treated him ungenerously he was not easily reconciled. On such occasions he used to say, ' I never will be a revengeful enemy; but it is not in my nature to be half a friend." lie was no economist ; for the generosity of his temper prevented his paying a proper regard to the use of money ; he exceeded, therefore, the bounds of his parental fortune. But, if we consider the perfect paradise into which he had converted his estate, the hospitality with which he lived, his chanties to the indigent, and all out of an estate that did not exceed £300 a year, one should rather wonder that he left any thing behind him than blame his want of economy ; he yet left more than sufficient to pay all his debts ; and by his will appropriated his whole estate to that purpose. Though he had a high opinion of many of the fair sex, he forbore to marry. A passion Tie entertained in his youth was with difficulty surmounted. The lady was the subject of that admirable pastoral, in four parts, which has been so universally and so justly admired, and which, one would have thought, must have softened the proudest and most obdurate henrt. Another of his poems does no less honor to his feelings and his virtuous sentiments. It displays, in the most affecting terms, the grief and remorse of an ingenuous mind upon the unfortunate issue of a licentious amour, and is founded on fact. This beautiful poem, falling into the hands of a

young gentleman at the critical period of a similar connexion, had the effect of preventing a similar fatal catastrophe to that of Henry and Jessy, described by our poet, by determining him to marry the object of his affection. Mr. Shenstone's works have been published by Mr. Dodsley, in 3 vols., 8vo. The first volume contains his poetical works, which are particularly distinguished by an amiable elegance and beautiful simplicity ; the second contains his prose works ; the third his letters, &c. SHEPHERD. In the General Treatise on Cat-tle, it is remarked that the method of encouragement adopted in some districts, of allowing the shepherd to possess a small flock, or as many ewes as his means will allow, is probably one of the most powerlui. Jt gives him that steadiness appertaining to ,>rowrty, and is an additional

and strong incentive to the attainment of knowledge in his business. A shepherd should be naturally active, both in body and mind, clear-headed and clear-sighted ; such a one, for instance, as can distinguish the individual countenances of a numerous flock, and, running over them with his bodily and mental eye, instantly give the exact number and condition ; or perceive, at a glance, a bird's nest in the thickest quickset. Fond of animals and attractive to them, the latter quality of which is well known to inhere in some persons ; possessing a musical voice and shrill whistle ; hardy, patient, watchful; satisfied with little sleep, and temperate in drink. It is conceived that he ought never to be suffered, if he profess, to practise physic, nor any but the most easy and common operations, a farce that too often ends in a tragedy ; for, if of two evils we ought to choose the least, the office of medical practice had better devolve on the master. And for his comfort in the severe weather, in some situations, the moveable wooden house on wheels may be of use. Also that he ought to be clad durinjr winter with substantial woollen next his skin, from his feet upwards, as the best defence against those rheumatic ails, to which he must be necessarily subject; and he should always go provided with the instruments proper to his profession, ready for immediate occasions, namely, scissors, knife, steel, fleam, salve-box, &c. And in folding, as the shepherd will have the flock perpetually under his eye, the first writer thinks, he will be capable of judging with certainty and precision respecting the state of every individual, so that the earliest remedy may be applied to every disorder, and such sheep may be turned out of the fold as are found not to be able to go through their work without manifest injury in their health ; and, if a sheep or lamb be seized with a dangerous and incurable malady, to kill and dress it immediately ; for it is one part of the business of a shepherd to be so

far skilled in the butcher's trade as to be able to slaughter, flea, and dress a sheep on occasion. Farther, that a good shepherd will be careful that his flock be driven late to fold in an evening, and released early in the morning from their confinement, in order that they may enjoy the coolest parts of the day on the food. He will be cautious that they are allowed a sufficient time to graze in the uplands previous to their being driven into the told, that they may retire to rest with full bellies, by which the quantity of the dung and urine will be considerably augmented. He will likewise be careful in reviewing the hurdles, and providing that these are fixed in the ground, lest by any accident they should be thrown down during the night, and the flock by these means get into mischief, or intermix with other sheep; he will count his sheep regularly every evening when he drives them to the fold, and take a fresh tale in the morninir, when he turns them on their feed ; he will, pr< .— vious to dismissing them from the fold, worry them gently round the same, in order to cause them to dung and stale plentifully, that the ma-nure may be left in the field, otherwise the greatest part of the trundles will be dropt on the road, or carried on to the marsh, where/lying

thin, this dressing can do but little service, and where in truth it is not wanted ; he will bestow a particular attention on every individual in his flock, and, for those which show any appearance of being stung by the fly, he will be prepared with a pair of shears to clip away the wool from the part, and, having taken out the maggots, will anoint the place with a mixture of train oil and brimstone; but, if slightly attacked, he will destroy the maggots by strewing on them powder of white lead ; and if any of the flock should haply break with the scab, a disorder to which folding sheep are continually subject, and which seldom fails to show itself in the spring and fall, he will be provided with a proper remedy to keep it under, and prevent the contagion from spreading. Jt is thought that one shepherd will be able to look after 300 sheep.

In respect to the necessity of a dog, as an assistant to the shepherd,

Mr. Lawrence thinks that it has of late very rationally become a question among the most intelligent sheepmasters : it may be thus settled : there can be no occasion for such aid, nor any necessity for incurring the danger of it, amidst convenient enclosures, or where quiet breeds of sheep are kept, and where it is made an object to render them tame and docile : and if, upon extensive wastes and mountain districts, the service of dogs cannot well be dispensed with, it ought to be made a main point that they be trained early to a kindness for the sheep, and to view them rather as their companions than their prey ; a thing which he knows by experience to be most easy.

The SHEPHERDS, SHEPHERD KINGS, or ROYAL SHEPHERDS, OF EGYPT, in ancient history, is a denomination given to a class of inhabitants of a part of Egypt, concerning whose origin, abode, and migration, both ancient and modern writers have entertained very different opinions. The learned Bryant has published an elaborate Dissertation on this subject. Differing from others concerning the situation of the land of Goshen, ne conceives it to have been the Nome called the Arabian, from the Arabian shepherds who had formerly settled in those parts, and held them for many years, and denominated by the LXX, rtffffftft rijc Apa/3iac-The province of Arabia, says this author, was one of the three most remarkable nomes, the othe^ two being those of Bubastus and Heliopolis. These three nomes were contiguous to each other, and towards the summit of Lower Egypt. The nome of Heiiopolis, according to his statement, was a Mediterranean district; and consequently the two provinces, or that of Phacusa (i. e. the Arabian nome), and that of Bubastus, that are always mentioned with the former, were so likewise. Phacusa, mentioned by Strabo only as a village, was the province at whose summit the Nile was first divided, where stood the city of Cercasora. Jt was called the Arabian nome for the reason bovementioned, and had for its metropolis Phacusa, and the places situated upon its borders ivere Babylon, Heliopolis, and Heroum. From Syncellus we learn that Egypt had been in subAction to a threefold race of kings, who are termed the Auritac, the Mestraei, and the Egyptian. The Auritae were the Arabian shepherds

and their kings, \vno reigned here a considerable time, maintaining themselves by force; till, afier many struggles they were finally expelled by the natives.

According to Manetho, the whole body of this people bore the

appellation of Ilnksos, that is, royal shepherds ; the first syllable in the sacred dialect, signifying a king, and the latter, in the popular language, signifying a shepherd; and by a composition of these two was formed the word 11 uksos. These people are said to have been Arabians. Josephus further informs us, from Manetho, that the shepherds maintained themselves in Egypt 511 years. At last the people of Upper Egypt rose in opposition to them, and after some time expelled them the country. However, on their departure, they were afraid of going towards Assyria, and therefore resorted to the country called afterwards Judea, and built Jerusalem. We learn also, from the same authority, that, another class of people sojourned in Egypt iu the reign of Amenophis; and that they were treated as slaves by the prince of the country, because they were infected with the leprosy. As their num-ber very much increased, he employed them in the stone quarries that lay on the east side of the Nile, in company with some of the Egyptians. Upon a remonstrance afterwards made to him, he granted them for a retreat the city of Abaris, where the former shepherds had resided, that now lay desolate. The people belonging to each of the two classes now mentioned were esteemed shepherds : the first shepherds were lords and conquerors ; the others were servants, to whom was assigned the city which the former had evacuated. The latter were Israelites, as appears from the name of their leader and lawgiver, Moses ; and the former were Arabians, who are said to have come from the east ; and they are, without doubt, the Aurit-oe, who founded the city of Auris, or Abaris, which is no other than the city “flX, Ur or Aur, signifying light and fire, of which element the Auritee must have been worshippers, as all the Arabians were. Their chief god was Alorus (Al Orus), the god of fire. Accordingly the shepherds were called Auritae, from the chief object of their worship, and their kings were styled priests of Alorus, or, according to the Greeks, priests of Vulcan. Hence it has been inferred that they came from Babylonia, a country that lay due east from Egypt, which country was the original seat of the genuineAra-bians, and the true source whence their religion flowed. The two principal cities of that country were Ur or Aur, and Babylon : in memory of which they built two of the same name in Egypt. Wherever they resided they introduced the TzebaSchanain, or Zabian worship, together with the worship of fire. Hence we are informed by Herodotus that Vulcan was particularly honored at Heliopolis and Memphis, which places they are said to have built. The true name of these people, says Bryant, who were called by the Greeks and Romans Arabians, was Cushan or Cusaeans, the same that they gave to the province where they settled. See CUSH. These strangers, therefore, who settled in Egypt, were no other than the Cusa-ans ; and they have been styled Arabian shepherds, because

tive Arabians were Normades or shepherds. These people, becoming lords of the country, undoubtedly chose that part which was the most eligible, and their profession would lead them to the Itestland for pasturage ; in respect of which Goshen had not its equal. For it was part of the vttiiov Aijvirra, the rich champaign of Egypt ; so that this circumstance among others would induce one to think that they settled here. This is confirmed by the worship which they settled in these parts ; the cities they built ; and the names which they bequeathed to the province. According to the Mosaic account, the land of Goshen is repeatedly said to be in the land of Egypt, ‘ in the best of the land ; ‘ and yet the LXX call it Yiaatft rijc Apo/3iac, which could be owing to no other reason besides its being the land of Cushan (Goshen), which was interpreted Arabian ; for in Arabia it was not situated . Hence it has been concluded that the place where the children of Israel resided in Egypt was the principal Arabian nome, at the extreme and highest part of Lower Egypt, called Cushan. This was the land to which the children of Israel succeeded, after it had been abandoned by its former inhabitants ; but it is uncertain at what interval. It appears to have been an unoccupied district; and, as it was the best of the land, there is no accounting for its being unoccupied but by the secession of the Cusaeans, whose property it nad lately been. Accordingly Manetho expressly affirms that the second shepherds succeeded to the places which had been deserted by the for-mer ; and he moreover says, that the city Abaris, which had been built by the first shepherd king, was given to those of their body who were employed in the quarries.

Bryant suggests that the migration of the shepherds was about the time of Serug or Nahor : and this is the time when archbishop Usher supposes it to have happened, who refers it to the year A. M. 1920, according to the Hebrew computation, in the 101st year of the life of Serug, the seventh from Noah, and in the forty-second year of Te-rab, eighty-eight years before the birth of Abraham. Bishop Cumberland supposes that the shepherds invaded Egypt A.M. 1937, in the time of the same patriarchs, according to the Hebrew chronology. Our author has alleged several arguments to prove that the Arabian shepherds were distinct from the Israelites, and prior to them. When the Arabians came into Egypt, they are said to have been 240,000 in number, whereas the Israelites were but seventy persons. The former took possession by force ; the latter were invited, and had a grant of all that they possessed. The one held the people in slavery; the others were themselves enslaved. The Arabians were driven out of the land ; the Israelites were not suffered to depart. See Bry-ant’s Observations

and Enquiries, &c.Cont. 1767. SHEPPEY, an island of Kent, situated at the mouth of the Thames and Medway, separated from the main land of the county by the Swale. It is about twenty-one miles in circumference ; the principal places in it are Sheerness, Queen-borough, and Eastchurch, Leysdown, and M-n- ster parishes. Its name is supposed to be derived from the number of sheep formerly bred

here. It yields good corn, but is bare of wood, and the water is but indifferent, except at Sheerness, where wells sunk below the bottom of the sea produce excellent water.

SHEPPERTON, a parish of Spelthorne hundred, Middlesex, four miles S. S. E. from Staines, on the banks of the Thames, and eighteen from London. A detached part of this parish remains in Surrey, owing to the Thames having altered its course ; and that river now passes over the foundation of its ancient church. Near the bridge over the river at Walton are Cowey-stakes, supposed to be the remains of those driven into the river by the Britons, to prevent Caesar's army from fording it ; one of these is preserved in the British Museum. It is recorded that the learned Erasmus passed much of his time in the parsonage-house here with his preceptor the rector of the parish.

SHEPREVE (John), a learned English ori-entalist, born at Sugworth, near Abingdon, in Berkshire. He was fellow, and became Greek recorder of Corpus Christi College, Oxford ; and in 1538 he was appointed professor of Hebrew in it. He had a very profound knowledge of the Hebrew Scriptures. He published many poems, and died at Agmondesham, in Bucks, in 1542.

SHEPTON-MALLET, a market town and parish in Whitestone hundred, Somersetshire, five miles east of Wells, and 115ˆ from London. The inhabitants are largely employed in knitting stockings, and various other woollen manufactures. The town is situated on several small hills, and the streets irregularly built. There is no curious or remarkable public building except the market cross, erected in 1500 on five arches, and supported by pentagonal columns.

SHERARD (William), a learned botanist, was born in 1659, and educated at Merchant Tailor's School, and St. John's College Oxford. Appointed travelling tutor to lord Howland, son of the murdered lord Russel, he formed an acquaintance with all the learned botanists of the continent, and attended three courses of Tournefort's botanical lectures, in 1686, 87, and 88, at Paris. In the summer of 1688 he describes himself as having passed some time in Holland, collecting specimens of plants from the rich gardens of that country, and getting them named by professor Herman himself, who allowed him to peruse the manuscript rudiments of his Para-disus Batavus, to examine his herbarium, and to compose a Prodromus of that work. Sherard

afterwards became the editor of Herman's book itself.

In 1700 Mr. Sherard communicated to the Royal Society a paper relative to the making of Chinese or Japan varnishes, which is printed in the Philosophical Transactions, v. '22. The information which it contains was sent by the Jesuits to the grand duke of Tuscany, and probably obtained by our author at Florence. He now became one of the commissioners for sick and wounded seamen at Portsmouth, and about the year 1702, or soon after, was sent out as British consul to Smyrna. Here his botanical taste met with fresh gratification. He visited the «pven churches of Asia, copied several ancient inscriptions, and communicated to the Royal

Society an account of the new volcanic island, near Santorini, which rose out of the sea May 12th, 1707. Botany, however, continued to be his leading object. He had a villa at Sedekio near Smyrna, where he began his great herbarium. Hasselquist visited this spot, with the devotion of a pilgrim, in the spring of 1750. Whatever specimens Sherard could obtain from Greece, and the neighbouring countries, he here carefully preserved; and being well aware of the insufficiency of Bauhin's Pinax, as a clue to the botanical knowledge then in the world, he is said to have here formed the project of continuing it before he returned to his native country in 1718. Soon after his return he received at Oxford the degree of LL. D. In 1721 Dr. Sherard revisited the continent. Vaillant was now in a declining state of health, and died in May 1722. Previous to his decease he concluded, through the mediation of Sherard, the sale of his manuscripts and drawings of Parisian plants, to Boerhaave, who published in 1727 the splendid Botanicon Parisiense. This work is said to have owed much to the superintendance of Sherard, who passed a summer with Boerhaave in revising the manuscript. Our great botanist had already rendered a more important service to his favorite science by bringing with him from Germany, in August 1721, the celebrated Dillenius. By a comparison of dates, it appears that Sherard made several visits to the continent. He went from Paris to Holland in 1721, and thence with Dillenius, the same year, to England. He staid some time with Boerhaave again in 1724, or perhaps 1725. We know not precisely when it happened that he was, like Linnaeus in Norway, in danger of being shot for a wolf, or a thief, by some rustic.

James Sherard, seven years younger than his brother, who had

acquired opulence by medical practice in London, had a great fondness for the same pursuit, and reared at his country seat, at Eltham, a number of exotic plants. Hither the more learned subject of this article frequently resorted : and, having acquired affluence by his public appointments, he lent his aid to all who required it. He assisted Catesby with information and with money, to bring out his Natural History of Carolina, though neither that work, nor the Hortus Elthamensis of Dillenius, appeared till some time after his decease, which happened on the 12th of August, 1728, when he was sixty-nine years of age. His brother died February 12th, 1737, aged seventy-two, and is buried in Evington church, near Leicester. The most splendid service to botany, though it for a long time yielded little fruit, was rendered by the will of Dr. William Sherard, who left £3000 to found and support a botanical professorship at Oxford. He bequeathed to this establishment his choice botanical library, his ample herbarium, and the manuscript of his Pinax.

The herbarium of Sherard is considered, excepting that of Linnseus, the most ample and valuable botanical record in the world. In it may be seen original specimens from Tournefort, and all the writers of that day, named by themselves, accompanied by remarks, or by queries. He collected also copies of original drawings, from botanists whose specimens were

not to be had, such as Plumier. The most rare, and even unique, books are to be found in his library. All these collections are still in good preservation, though the noble stone building, originally constructed to receive them, was sacrificed a few years since that the adjoining street might be widened.

SHERARDIA, in botany, little field madder, a genus of the monogynia order, and tetrandria class of plants ; natural order forty-seventh, stellatae : CAL. small, and quadrideritate : COR. monopetalous, long, and funnel-shaped : SEEDS two. naked, and crowned with the calyx. There are three species, *viz.* 1. arvensis; 2. fruticosa; and, 3. muralis.

SHERBET', w.s. Arab, sharbat. The juice of lemons or oranges mixed with water and sugar.

They prefer our beer above all other drinks ; and considering that water is with the rarest, especially in this clirne, the dearest of sherbets, and plenty of barley, it would prove infinitely profitable to such as should bring in the use thereof. Sandys.

SHERBET, or SHERBIT, was first brought into England from Turkey and Persia, consisting of water, lemon-juice, and sugar, in which are dissolved perfumed cakes made of excellent Damascus fruit, containing an infusion of some drops of rose water. Another kind of it is made of violets, honey, juice of raisins, &c.

SHERBORNE, a market-town and parish in the hundred and division of Sherborne, Dorsetshire, seventeen miles north by west from Dordhes-ter, and 116J. W.S.W. from London; pleasantly situate on the side of a hill near the border of the White-Hart Forest, and divided into two parts, by the river Ivel, called Sherborne and Castleton ; that part called Castleton had a strong castle, of which only the ruins are now to be seen. The inhabitants are employed in various trades and manufactures, principally in those of woollen cloth, linen, and silk. Anciently it was a bishopric; but, in the eleventh century, the see being removed to Salisbury, the cathedral was converted into an abbey. This was originally a noble structure ; but, at the dissolution of the monasteries, it was made parochial, and is now the finest parish church in the west of England. The inside, beautifully decorated, contains many Saxon monuments of kings and nobles. Near the church is a free-school, built and endowed by Edward VI., and an alms-house

for sixteen men and eight women. In the town is a market-house, a workhouse, a dissenters' chapel, and several schools and benefit societies. The general quarter-sessions are held here. The mansion called Sherborne Castle is a beautiful structure, the seat of lord Digby. Near Sherborne is White-Hart Forest. Market on Saturday. Fairs, the day before Holy Thursday, 18th and 26th of July, and the first Monday in October, O. S.

SHERBRO, a country and river of Wester > Africa, at the northern extremity of the Grain or Pepper coast of Guinea. The river, with a large island at its mouth, is navigable twenty leagues up for ships of burden, and vessels of seventy or eighty tons may ascend 250 miles. The channel, however, is encumbered with rushes, and subject to frequent tornadoes The country abounds in

grain, fruits, poultry, and a species of pearl oyster.

SHERD, n. s. Sax. pecan.*. A fragment of broken earthenware. See SHARD.

The trivet-table of a foot was lame ; She thrusts beneath the limping leg a sherd.

Dryden.

SHEREBATOF (Prince), a learned Russian nobleman, who published several Works in the Russian language. Of these the principal is his History of Russia from the earliest Times ; which is » faithful and well written work.

SHERIBON, or CHERIBON, a town in the island of Java, the capital of a district of the same name, and situated about 150 miles east from Batavia. The surrounding country is remarkably fertile, and produces

the finest coflfee raised on the island. Its other productions are timber, cotton, yarn, areca, indigo, sugar, and some pepper. The horses of this district are reckoned the best in Java, and in the contiguous woods and mountains the rhinoceros is sometimes discovered. The roadsted at Cheribon is open, and only sheltered to the west by a large sand - bank, with four and a half and five fathoms water, two leagues from the shore, at which distance ships of burden are obliged to anchor. Smaller vessels run along the bank to within three-fourths of a league from the land. In order to enter the river, country craft, drawing from four to six feet, are obliged to wait for the high tides on account of the small bank at the mouth. The appearance of this place resembles a large village more than a town. It is at present the capital of a principality, divided between two princes of the same i'.imily, each of whom takes the title of sultan, ;md resides in it; but the exterior of their palace exhibits little of Asiatic pomp and grandeur, being built of plank and bamboos. On the right bank of the river is a small brick fort surrounded by a ditch, over which is a bridge protected by a redoubt. This fortress is of little strength, its embrasure parapet being only eighteen inches thick, with only four small guns, kept more for the purpose of making signals than for defence. The mole and battery are in a state of the greatest decay, and the garrison only fifteen Maduran soldiers, commanded by a European Serjeant and two corporals ; the whole scarcely sufficient to resist the attacks of the roving" Malay pirates who infest the adjacent seas. The European inhabitants of the town are the resident, secretary, book-keeper, serjeant-major, and three subalterns ; the rest are natives, who compose two-thirds of the population, and Chinese, employed in the retail trade and agriculture. This state put itself under the protection of the Dutch East India Company in 1680, since which justice and injustice have been administered by the princes of the country in conjunction with the resident on the part of the company. These chiefs are under an obligation to deliver to the Dutch East India Company exclusively the produce of their respective territories at fixed prices. — Tombe, Stavorinus, &c.

SHERIDAN (Thomas), D. D., the intimate friend of dean Swift, is said by Shield, in Gib-ber's Lives of the Poets, to have been born about 1684, in the county of Cavan, where his parents lived in no very elevated stale. They are de-

scribed as being unable to afford their son the advantages of a liberal education ; but he, being observed to give early indications of genius, attracted the notice of a friend to his family, who sent him to the

college of Dublin, and contributeu towards his support there. He afterwards entered into orders, and set up a school in Dublin, which long maintained a very high degree of reputation, as well for the attention bestowed on the morals of the scholars as for their proficiency in literature. So great was the estimatun in which this seminary was held that it is asserted to have produced in some years the sum 01 £1000. It does not appear that he had any considerable preferment ; but his intimacy with Swift, in 1725, procured for him a living in the south of Ireland worth about £150 a year, which he went to take possession of, and) by an act of inadvertence, destroyed all his future expectations of rising in the church ; for being at Cork on the 1st of August, the anniversary of kin? George's accession, he preached a sermon on this text, ' Sufficient for the day is the evil thereof.* On this being known he was struck out of the list of chaplains to the lord lieutenant, and forbidden the castle. This living Dr. Sheridan afterwards changed for that of Dunboyne, which, by the knavery of the farmers and power of the gentlemen in the neighbourhood, fell so low as £80 per annum. He gave it up for the free school of Cavan, where he might have lived well in so cheap a country on £80 a year salary, besides his scholars ; but the air being, as he said, too moist and unwholesome, and being disgusted with some persons who lived there, he sold the school for about £400 ; and, having soon spent the money, he fell into bad health, and died September 10th, 1738, in his fifty-fifth year. Lord Corke has given the following character of him : 'Dr. Sheridan was a school master, and in many instances perfectly well adapted for that station. He was deeply versed in the Greek and Roman languages, and in their customs and antiquities. He had that kind of good nature which absence of mind, indolence of body, and carelessness of fortune, produce ; and, although not over strict in his own conduct, yet he took care of the morality of his scholars, whom he sent to the university remarkably well founded in all the kinds of classical learning, and not ill instructed in the social duties of life. He was slovenly, indigent, and cheerful. He knew books mucli better than men ; and he knew the value of mo-ney least of all. In this situation, and with this disposition, Swift fastened upon him, as upon a prey with which he intended to regale himself, whenever his appetite should prompt him.' His lordship then mentions the event of the unlucky sermon, and adds, ' This ill-starred, good-natured, improvident man, returned to Dublin, unhinged from all favor at court, and even banished from the castle. But still he remained a punster, a quibbler, a fiddler, and a wit. Not a day passed without a rebus, an anagram, or a madrigal. His pen and his fiddlestick were in continual motion.' One of the volumes of Swift's miscellanies consists almost entirely of letters between him and the dean. He published a

prose translation of Persius; to which he added the best notes of former editors, with many judicious ones

of his own. This work was printed at London, 1739, in 12mo.

SHERIDAN (Thomas), A. M.,son of the doctor, and an eminent actor, philologist, and lexicographer, was born at Quilca, in Ireland, in 1721. In 1734 and 1735 he studied at Westminster; and, on his return to Ireland, attended Trinity College, Dublin, where he took his degree. On his father's death, he entered on the stage. His first appearance was at Dublin in 1743 in the character of Richard III., wherein he met with unbounded applause. In 1744 he came to Lon-don, and appeared in Hamlet at Covent Garden. In 1745 he engaged at Drury Lane, and performed Siffredi, in Tancred and Sigismunda. About this time a quarrel took place between Sheridan and Garrick, which was not made up when Sheridan left London. On his return to Dublin, he undertook the management of the Dublin theatre ; and, finding that Mr. Garrick was then unemployed, he very politely invited him over, upon the most liberal terms, which Mr. Garrick accepted. But, though Miss Bel-lamy and Mr. Barry often acted along with them, they were not able to exhibit plays oftener than twice a-week, and the receipts for the season did not exceed £3400. Mean time, in winter 1747, Mr. Sheridan's popularity was interrupted, and the peace of the theatre disturbed, by the riotous behaviour of a young gentleman, who, being the worse for liquor, raised a quarrel, and formed such a powerful party that the theatre was obliged to be shut for some time. Two trials were commenced before the' court of king's bench; the manager was tried for an assault on the young gentleman, and acquitted ; but, in the other trial, the rioter was found guilty, and sentenced to pay a fine of £500, and to be imprisoned three months. After being confined one week, he made concessions to Mr. Sheridan, who solicited government to remit the fine, and succeeded. He also became bail himself for the young man's enlargement, and obtained it. This aifair, so disagreeable in its commencement, and so honorable to Mr. Sheridan in its conclusion, was productive of a very fortunate event. During the

public controversy about the riots, Miss Frances Chamberlaine, a m9St accomplished young lady, wrote a pamphlet in favor of the manager, which attracted Mr. Sheridan's attention and gratitude to such a degree that he soon after obtained an introduction to his fair champion, and married her. The harmony of the theatre, after this event, met with no interruption till 1754, when politics ran high. Mr. Sheridan had instituted a club, consisting of about fifty noblemen and members of parliament, who dined weekly at his apartment in the theatre. No lady was admitted but Mrs. Woffington, who presided. The manager had no party views, but Mrs. Woffington diverted it from its original de-sign ; and, the toasts being generally in favor of the court, Mr. Sheridan himself became obnoxious. On the 25th of February, 1754, Mr. Digees, in the tragedy of Mahomet, was en-rort-d for a speech that contained some severe /mprecations against venal senators and courtiers. Digges gratified the audience, repeated ti:e speech, and received reiterated plaudits. In

the green-room Mr. Sheridan remarked Digges's conduct as a circumstance of self degradation. The tragedy was again acted, and Digges's speech again encored. Digges expressed his Teadinessto comply, but urged that his compliance ••vould in-jure him with the manager. The vociferation for the manager then became universal. Sheridan, afraid of personal insult, went home. Repeated messages were sent for him in vain ; and, after waiting a full hour, the audience rose in a mass and destroyed the inside of the house. Mr. Sheridan published a state of his case, left the theatre for two years, and embarked for England. At London he appeared, in 1754, on the Covent Garden boards in Hamlet. He also performed Coriolanus, Cato, CEdipus, Richard III., Shy-lock, lord Townly, Romeo, &c., but his profits fell short of his hopes. Besides, Garrick was a rival whom it was impossible for any man to rival. In 1756, the term of this theatre at Dub-lin being expired, he went over, in hopes that the public ferment was also expired. An apology, however, was deemed necessary: the house was crowded, and never did any man, in such a situation, appear with more address, or speak to the passions with so much propriety Tears fell from many, and pardon was sealed by the plaudits of all. Rivalship and opposition, however, arose from a new quarter. Barry and Woodward had engaged to erect a new theatre in Crow Street. Mr. Sheridan struggled to maintain his ground for three years ; but gave it up on the 27th of April, 1759. Meantime, he had composed his Lectures on Elocution, and began to deliver them at London, Oxford, Cambridge, &c., with great 4 success. In 1759 he took his degree at Cambridge. In 1760 he engaged with Mr. Garrick at Drury

Lane. But the king's public approbation of Mr. Sheridan's John excited Garrick s jealousy so much that he would not permit that play to be again performed. Hence disputes arose, and they parted. In 1769 Mr. Sheridan exhibited at the Hay-market, the Attic Evening Entertainment, consisting of reading, singing, and music, and met with great success. Previous to this, in 1756, he had published British Education, or the Source of the Disorders of Great Britain; being an essay to prove that the immorality, ignorance, and false taste, which so generally prevail, are the consequences of the present defective system of education ; &c. This was followed, in 1758, by a very spirited Oration on the Establishment of a Proper Mode of Education in Ireland. He had delivered it before the nobiJity and gentry at the Music Hall in Dublin, December 6th, 1757. In 1759 he published a discourse delivered at Oxford, introductory to his Lectures on Elocution. In 1762 appeared his Dissertation on the Causes of the Difficulties which occur in learning English : also his Course of Lectures on Elocution. In 1769 he pub-blished A Plan of Education for the Young Nobility and Gentry of Great Britain. In 1775 Lectures on the Art of Reading, and in 1780 his General Dictionary of the English Language ; in 2 vols. 4to. Its main object is to establish a plain and permanent standard of pronunciation. In 1784 he published a new edition of Swift's

Works, in 17 VQ.S. 3vo. His last work was, in 1785, Elements of English; being a new me-thod of teaching the whole art of reading; 12mo. At the accession of his majesty, in 1760, a pension was conferred on Mr. Sheridan. He also gave lectures on reading in Scotland, where he was honored with much attention, by the principal literati. About 1764 he went to France, and resided at Blois, where his wife died. On Mr. Garrick's retiring from the stage, in 1776, the purchasers of his share in Drury Lane invested Mr. Sheridan with the powers of manager; but he relinquished it in 1779. In 1786 he visited Ireland, but returned to England, and died at Margate, August 14th, 1788.

SHERIDAN (Mrs. Frances), wife to the preceding, was born in Ireland about 1724, but descended from a good English family which had removed thither. Her maiden name was Chamberlaine. Her first literary performance procured her marriage. She was a person of the most engaging manners. After lingering some years ID a very weak state of health, she died at Blois, in the South of France, September 26th, 1766. Her Sidney Biddulph may be ranked with the first productions of that class in our or any other language. She also wrote a little romance in one volume called Nourjahad, in which there is a great deal of imagination, productive of an admirable moral. And she was the authoress of two comedies, the Discovery, and the Dupe". By Mr. Sheridan, she became the mother of two splendid ornaments to this family of ge-nius: *viz.* Charles Francis Sheridan, esq., late secretary at war in Ireland, and author of an excellent History of the Revolution in Sweden, in 1772; and Richard Brinsley Sheridan, esq., M. P., a celebrated dramatic writer, and one of the most eminent orators, and uniformly steady patriots in the British senate.

SHERIDAN (Richard Brinsley), esq., the third and youngest son of Thomas Sheridan, was distinguished both as a statesman and a dramatist. He was born in Dorset Street, Dublin, October 30th, 1751. The early development of his talents was greatly aided by the instructions of his mother : he was afterwards placed at a grammar school in Dublin, whence, in 1759, he was removed in consequence of his parents leaving Ireland. They settled at Windsor, and he remained at home till 1762, when he was sent to Harrow, which seminary he left at the age of eighteen, owing to his father's embarrassments. He entered subsequently as a student of the middle temple ; but the close application and industry requisite for success as a lawyer were incompatible with his disposition ; and an early marriage induced him to look out for some more immediate means of support. Having very soon after his marriage dissipated the moderate property with which he set out in the world, he turned his attention to dramatic composition. His first production was the comedy of the Rivals, acted at Cerent Garden in January 1775, with moderate success ; but the Duenna, a musical entertainment, which followed, was received with general admiration ; and his School for Scandal gained him the highest reputation as a comic Writer. On the-retirement of Garrick from the

management of Drury Lane Theatre, Sheridan in conjunction with Dr. Forde and Mr. Linley4 purchased Garrick's share of the patent. This property qualified him for a seat in parliament; and in 1780 he was

chosen member for the borough of Stafford. Sheridan joined the opposition, and displayed so much ability that on the retreat of the premier, and the conclusion of the American war, he was made under secretary of state for the war department. He resigned with his principal, in consequence of a dispute with lord Shelburne, afterwards marquis of Lans-downe, who was at the head of the ministry. His intimate connexion with Fox brought him again into office on the coalition of that statesman with lord North, when Sheridan held the post of joint secretary of the treasury under the late duke of Portland. The dissolution of that ministry threw him again into the ranks of opposition, where he remained during the whole pe-riod of the ministry of Mr. Pitt. He now attained distinguished celebrity as a parliamentary orator : but the grandest display of his eloquence occurred during the progress of the impeachment of Warren Hastings. In 1792 Mr. Sheridan lost his wife, who left one son ; and three years afterwards married Miss Ogle, daughter of the dean of Winchester. With this lady he had a fortune, which enabled him to purchase the estate of Polesdon, in Surrey ; and he held the office of receiver-general of the duchy of Cornwall, worth £1200 a year. The political changes consequent to the death of Mr. Pitt, in 1806, occasioned the exaltation of the party with which Sheridan was connected, and he obtained the lucrative post of treasurer of the navy, and the rank of a privy counsellor. This administration being weakened by the death of Mr. Fox, new alterations took place, and Sheridan was deprived of office, to which he never returned. At the election in 1806 he obtained a seat for Westminster, the great object of his ambition; but was afterwards nominated for the borough of II-chester, which he continued to represent during the remainder of his public career. The latter part of the life of this talented individual was embittered by misfortunes, arising principally from his own indolence and mismanagement, the destruction of Drury Lane Theatre by fire, &c. When the affairs of that establishment were arranged, in 1811, Mr. Sheridan and his son were to have on various accounts £40,000 for their share of the property ; but the portion of the former was not sufficient to liquidate his debts. The dissolution of parliament, and his failure in an attempt to obtain a seat for Stafford, the borough he had formerly represented, completed his ruin. In 1812 he had relinquished all thoughts of returning to the house of commons ; and the remainder of his existence was spent in attempts to ward off the evils to which his improvidence had exposed him. At length the disappearance of his property was followed by arrest, and though, after a few days' detention, he was released, it was only to experience apprehension and alarm, from which he sought a temporary relief in that unrestrained indulgence which had occasioned his misfortunes.

Intemperance had sndermined his constitution ; and, until on the

bed of death, he was not exempted from the terrors of arrest for debt ; his death took place July 7th, 1816. Besides the plays already mentioned, Sheridan was the author of St. Patrick's Day, or the Scheming Lieutenant, a farce; A Trip to Scarborough, a comedy, altered from Vanbrugh ; the Camp, a farce ; the Critic, or the Tragedy Rehearsed ; Robinson Crusoe, or Harlequin Friday, a pantomime; and Pizarro, a play, from the German of Kotzebue. He also wrote Verses to the Memory of Garrick, 1779, 4to. ; and a Comparative Statement of the two Bills for the better Government of the British Possessions in India. 1738, 4to. As a dramatist he may be deemed the head of that line of comedy which exhibits the malice, detraction, intrigue, and persiflage, of the more cultivated stations of life. Like Congfeve, Sheridan has incurred the imputation of giving a portion of wit to all his characters to a correspondent destruction of nature. This may be true, and still leave the School for Scandal the head of the comic modern drama in its own peculiar walk. The works of Sheridan appeared in 1821, in 2 vols. 8vo., edited by Mr. Thomas Moore, who has published an interesting life of our author.

SHERIDAN (Elizabeth), daughter of Thomas Linley, the musician, first wife of the celebrated R. B. Sheridan. She was alike distinguished for her beauty, her manners, and her musical talents. In Handel's pathetic songs, in Purcell's Mad Bess, in the upper part of serious glees, or in any vocal music expressive of passion, she was sure to delight. Sacchini, on hearing Miss Linley sing for the last time in public at Oxford, observed that, if she had been born in Italy, she would have been as much superior to all Italian singers as she was then to all of her own country. She relinquished her profession on her marriage with Sheridan in 1773 ; her death took place in

1792.

SHERIFF, n. s. ~\ Sax. pcyr1*? Sˆepa? from

SHER'IFFALTY, S-rˆyJ16? a shire, and peve,

SUE-R'IFFWICK. y a steward. Sometimes pronounced shrieve, which the poets have therefore injudiciously adopted. An officer to whom is entrusted, in each county, the execution of the laws (see below) ; his office.

A great power of English and of Scots

Are by the sheriff' of Yorkshire overthrown.

S/iaksj)eare.

Concerning ministers of justice, the high sheriffs of the counties have been very ancient in this kingdom.

Bacon.

There was a resumption of patents of gaols, and reannexing of them to the sheriffwick* ; privileged officers being no less an interruption of justice than privileged places. Bacon.

Now mayors and shrieves all hushed and satiate lay.

Pope.

A SHERIFF is an officer, in each county in England, nominated by the king, invested with a judicial and ministerial power, and who takes place of every nobleman in th_e county during the time of his office. The office is of very great antiquity. He is called in Latin vice-comes, as being the deputy of the comes, or earl, to whom the custody of the shire was committed at the first division of England into counties. But the larls, in process of time, by their high employ-

ments and attendance on the king's person, not being able to transact the business of the county, were delivered of that burden ; reserving themselves the honor, but the labor was laid on the sheriff. So that now the sheriff does all the king's business in the county ; and, though he be still called vice-comes, yet he is entirely independent of, and not subject to, the earl ; the king, by his letters patent, committing custodiam comitatus to the sheriff, and to him alone. Sheriffs were formerly chosen by the inhabitants of the several counties. It was

ordained by stat. 28 Edw. I. c. 8, that the people should have an election of sheriffs in every shire where the sherivalty is not of inheritance. For anciently in some counties the sheriffs were hereditary : a* they were in Scotland till the stat. 20 Geo. II. c. 43 ; and still continue in the county of Westmoreland to this day : the city of London having .also the inheritance of the sherivalty of Middlesex vested in their body by charter. The reason of these popular elections is assigned in the same statute, c. 13, 'that the commons might choose such as would not be a burden to them.' And herein appears plainly a strong trace of the democratical part of our constitution; in whiih form of government it is an indispensable requisite that the people should choose their own magistrates. This election, however, was not absolutely vested in the commons, but required the royal approbation. For, in the Gothic constitution, the judges of their county courts (which office is executed by the sheriff) were elected by the people, but confirmed by tht king ; and the form of their election was thus managed : the people, or incolzs territorii, chose twelve electors, and they nominated three persons, ex quibus rex unum confirmabat. But with us, in England, these popular elections, growing tumultuous, were put an end to by the stat. 9 Edw. II. st. 2, which enacted that the sheriffs should henceforth be assigned by the chancellor, treasurer, and the judges. By stat. 14 Edw. III. c. 7, 23 Hen. VI. c. 8, and 21 Hen. VIII. c, 20, the chancellor, treasurer, president of the king's council, chief justices, and chief baron, are to make this election ; and that on the morrow of All Souls, in the exchequer. And the king's letters patent, appointing the new sheriffs, used commoniy to bear date the 6th day of November. The stat. of Cambridge, 12 Rich. II. c. 2, ordains that the chancellor, treasurer, keeper of the privy seal, steward of the king's house, the king's chamberlain, clerk of the rolls, the justices of the one bench and the other, barons of the exchequer, and all other that shall be called to ordain, name, or make justices of the peace, sheriffs, and other officers of the king, shall be sworn to act indifferently, and to name no man that sueth to be put in office, but such only as they shall judge to be the best and most sufficient. And the custom now is (and has been since the time of Fortescue, chief justice and chancellor to Henry VI.) that all the judges, with the other great officers, meet in the exchequer chamber on the morrow of All Souls yearly (now altered to the morrow of St. Martin by the last act for abbreviating Michaelmas term), and thei-.

and there propose three persons to the king, who afterwards appoints one of them to be sheriff'. But, notwithstanding the unanimous resolution of all the judges of England to the above purpose, and the statute 34 and 35 Hen. VIII. c. '26. § 61, which expressly recognises to be the law of the land, some have affirmed that the king, by his prerogative, may name whom he pleases to be sheriff, whether chosen by the judges or not. This is grounded on a very particular case in the fifth year of queen Elizabeth, when by reason of the plague there was no Michaelmas term kept at Westminster ; so that the judges could not meet there incrastino ani-marum to nominate the sheriffs : whereupon the queen named them herself, without such previous assembly, appointing for the most part one of two remaining in the last year's list. And this case, thus circumstanced, is the only authority in our books for the making these extraor-nary sheriffs. It is true, the reporter adds, that it was held that the queen by her prerogative might make a sheriff without the election of the judges non obstante aliquo statute in contrarium ; but the doctrine of non obstante, which sets the prerogative above the laws, was effectually demolished by the bill of rights at the revolution, and abdicated Westminster-hall when king James abdicated the kingdom. However, the practice of occasionally naming what are called pocket sheriffs, by the sole authority of the crown, uniformly continued to the reign of his late majesty ; in which it is believed, few (if any) instances occurred. Sheriffs, by virtue of several old statutes, are \o continue in their office no longer than one year ; and yet it has been said that a sheriff may be appointed durante bene placito, or during the king's pleasure ; and so is the form of the royal writ. Therefore, till a new sheriff be named, his office cannot be determined, unless by his own death, or the demise of the king ; in which last case it was usual for the successor&to send a new writ to the old sheriff; but now, by statute 1 Anne st. 1 c. 8, all officers appointed by the preceding king may hold their offices for six months after the king's demise, unless sooner displaced by the successor. By statute 1 Ric. II. c. 11, no man that has served the office of sheriff for one year can be compelled to serve the same again within three years after. The power and duty of a sheriff are either as a judge, as the keeper of the king's peace, as a ministerial officer of the superior courts of 'justice, or as the king's bailiff. 1 . In his judicial capacity he is to hear and determine all causes of 40*. value and under, in his county court; and he has also a judicial power in divers other civil cases. He is likewise to decide the elections of knights of the shire (subiect to the control of the house of commons),

of coroners, and of verderers ; to judge of the qualification of voters, and to return such as he shall determine to be duly elected. 2. As the keeper of the king's peace, both by common law and special commission, he is the first man in the county, and superior in rank to any nobleman therein during his office. He may apprehend and commit to prison all persons who break the peace, 01 attempt to break it ; and may bind any

one in recognizance to keep the king's peace, He may, and is bound, exofficio, to pursue am. take all traitors, murderers, felons, and other misdoers, and commit them to gaol for safe custody. He is also to defend his county against any of the king's enemies when they come into the land ; and for this purpose, as well as for keeping the peace and pursuing felons, he may command all the people of his county to attend him; which is called the posse comitatus, or power of the county ; which summons, every person above fifteen years old, and under the degree of a peer, is bound to attend upon warning, under pain of fine and imprisonment. But though the sheriff is thus the principal conservator of the peace in his county, yet, by the express directions of the great charter, he, together with the constable, coroner, and certain other officers of the king, are forbidden to hold any pleas of the crown, or, in other words, to try any criminal offence. For it would be highly unbecoming that the executioners of justice should be' also the judges ; should impose, as well as levy, fines and amercements ; should one day condemn a man to death, and personally execute him the next. Neither may he act as an ordinary justice of the peace during the time of his office ; for this would be equally inconsistent, he being in many respects the servant of the justices, 3. In his ministerial capacity, the sheriff is bound to execute all processes issuing from the king's courts of justice. In the commencement of civil causes, he is to serve the writ, to arrest, and to take bail; when the cause comes to trial, lie must summon, and return the jury; wlien it is determined, he must see the judgment of the court carried into execution. In criminal matters, he also arrests and imprisons ; he returns the jury; he has tiie custody of the delinquent, and he executes the sentence, of the court, though it extend to death itself. 4. As the king's bailiff, it is his business to preserve the rights of the king within his bailiwic ; for so his county is frequently called in the writs : a word introduced by the princes of the Norman line, in imitation of the French, whose territory was anciently divided into bailiwics as that of England into counties. He must seize to the king's use all lands devolved to the ciown by attainder or escheat ; must levy all fines and forfeitures, must seize and keep all waifs, wrecks, estrays,

and the like, unless they be granted to some subject ; and must also collect the king's rents within his bailiwic, if commanded by process from the exchequer. To execute these various offices, the sheriff has under him many inferior officers ; as under-sheriff, bailiffs, and gaolers, who must neither buy, sell, nor farm their offices, on forfeiture of £500. The under-sheritf usually performs all the duties of the office ; a very few only excepted, where the personal presence of the high sheriff is necessary. But no under sheriff shall abide in his office above one year ; and if he does, by stat. 23 Hen. VI. c. 8, he forfeits £200, a very large penalty in those early days. And no under-sheriff or sheriff's officer shall practise as an attorney during the time he continues in such office : for this would be a great inlet to partiality and oppression. Bu»

SHE l«:

these salutary regulations are shamefully evaded, by practising in the names of other attorneys, and putting in sham deputies by way of nominal under-sheriffs : by reason of which, says Dalton, the under-sheriffs and bailiffs do grow so cunning in their several places that they are able to deceive, and it may well be feared that many of them do deceive, both the king, high-sheriff, and the county.

The Scotch sheriff differs very considerably from the English sheriff. The Scotch sheriff is properly a judge ; and, by stat. 20 Geo. II. c. 43, he must be a lawyer of three years' standing : and is declared incapable of acting in any cause for the county of which he is sheriff. He is called sheriff depute : he must reside within the county four months in the year : he holds his office ad vitam aut culpam. He may appoint substitutes, who as well as himself receive stated salaries. The king may appoint a high-sheriff for the term of one year only. The civil jurisdiction of the sheriff depute extends to all personal actions on contract, bond, or obligation, to the greatest extent : and generally in all civil matters not especially committed to other courts. His criminal jurisdiction extends to the trial of murder, though the regular circuits of the court of justiciary prevent such trials occurring before him. He takes cognizance of theft and other felonies, and all offences against the police. His ministerial duties are similar to those of sheriffs in England.

The lord mayor and citizens of London have the shrievalty of London and Middlesex in fee, by charter; and two sheriffs are annually elected by them, for whom they are to be answerable. If one of these sheriffs

dies, the other cannot act till another is made ; and there must be two sheriffs of London, which is a city and county ; though they make but one sheriff of the county of Middlesex; they are several as to plaints in their respective courts. 3 Rep. 72 : Show. Rep.

SHERLOCK (Dr. Richard), an English di-vine, who was educated first at Magdalene College Oxford, and afterwards at Trinity College Dublin. During the civil war he came to England, where he was appointed chaplain of a regiment. About 1660 he received the degree of D. D. from the university of Dublin, and was presented by the earl of Derby with the rich benefice of Winwick. He wrote a treatise entitled The Practical Christian, and died in 1689.

SHERLOCK (Dr. William), a learned English divine, born in 1641, and educated at Eton school, where he distinguished himself by the vigor of his genius. Thence he was removed to Cambridge, where he took his degrees. In 1669 he became rector of the parish of St. George, Botolph Lane, London; and in 1681 prebendary of Pancras, in the cathedral of St. Paul's. He was likewise chosen master of the Temple and rector of Therfeld in Hertfordshire. After the Revolution he was suspended for refusing the oaths to king William and queen Mary ; but at last he took them, and publicly justified what he had done. In 1691 he was installed dean of St. Paul's. His Vindication of the Doctrine of the Trinity engaged him in a warm controversy

with Dr. South and others. Bishop Burnet says he was ‘ a clear, a polite, and a strong writer ; but apt to assume too much to himself, and to treat his adversaries with contempt.’ He died in 1702. His works are very numerous; among these are, 1. A Discourse concerning the Knowledge of Jesus Christ, against Dr. Owen. 2. Several pieces against the Papists, the Socinians. and Dissenters. 3. A Practical Treatise on Death, which is much admired. 4. A practical Discourse on Providence. 5. A practical Discourse on the future judgment; and many other works.

SHERLOCK (Thomas), D. D., bishop of London, the son of the preceding, was born in 1678. He was educated in Catherine Hall, Cambridge, where he took his degrees, and of which he be-came

master ; he was made master of the Tem-ple very young, on the resignation of his father ; and it is remarkable that this mastership was held by father and son successively for more than seventy years. He was at the head of the opposition against Dr. Hoadly bishop of Bangor ; during which contest he published a great number of pieces. He attacked the famous Collins's Grounds and Reasons of the Christian Religion, in a course of six sermons, preached at the Temple church, which he entitled The Use and Intent of Prophecy in the several Ages of the World. In 1728 he was appointed bishop of Bangor; and of Salisbury in 1734. In 1747 he refused the archbishopric of Canterbury, on account of ill health ; but, recovering, he accepted the see of London in 1748. On occasion of the earthquakes, in 1750, he published an excellent Pastoral Letter to the clergy and inhabitants of London and Westminster : of which it is said there were printed in 4to. 5000 copies ; in 8vo. 20,000; and in 12mo. about 30,000; besides pirated editions, of which not less than 50,000 were said to have been sold. Under the weak state of body in which he lay for several years, he revised and published 4 vols. of Sermons in 8vo., which are particularly admired for their ingenuity and elegance. He died in 1762, worth £150,000. *His learning,' says Dr. Nicholls, 1 was very extensive : God had given him an understanding mind, a quick comprehension, and a* solid judgment. His skill in the civil and canon law was very considerable ; to which he added such a knowledge of the common law of England as few clergymen attain to.' Dr. Nicholls mentions also his exemplary piety, his zeal in preaching the duties, and maintaining the doctrines of Christianity, and his diffusive munificence and charity ; particularly to the corporation of clergymen's sons, to several hospitals, and to the society for propagating the gospel in foreign parts : his bequeathing to Catherine Hall in Cambridge, the place of his education, his valuable library of books, and his donations for the founding a librarian's place and a scholarship, to the amount of several thousand pounds.

SHERRIFFE OF MECCA, the title of the descendants of Mahomet by Hassan Ibn Ali. These are divided into several branches, of which the family of Ali Bunemi, consisting at least of 300 individuals, enjoy the whole right to the throne of Mecca. The Ali Bunemi are again subdivided into two subordinate branches, Darii

Sajid, and Darii Barkad ; of whom sometimes the one, sometimes the other, have given sovereigns to Mecca and Medina, when these were separate states. Not only is the Turkish sultan indifferent about the order of succession in this family, but he seems even to foment the dissensions which arise among them, and favors the strongest, merely that he may weaken them all. As the order of succession is not determinately fixed, and the sherriffes may all aspire alike to the sovereign power, this uncertainty of right, aided by the intrigues of the Turkish officers, occasions frequent revolutions. The grand sherriffe is seldom able to maintain himself on the throne ; and it still seldomer happens that his reign is not disturbed by the revolt of his nearest relations. There have been instances of a nephew succeeding his uncle, an uncle succeeding his nephew : and sometimes of a person, from a remote branch, coming in the room of the .eigning prince of the ancient house. When Niebuhr was in Arabia, 1763, the reigning sherriffe had sat fourteen years on the throne, and during all that period had been continually at war with the neighbouring Arabs, and with his own nearest relations. A few years before the pacha of Syria had deposed him, and raised his younger brother to the sovereign dignity in his stead. But after the departure of the caravan, jafar, the new sherriffe, not being able to maintain himself on the throne, was obliged to resign the sovereignty again to Mesad. Achmet, the se-cond brother of the sherriffe, who was beloved by the Arabs, threatened to attack Mecca while Niebuhr was at Jidda. Our traveller was soon after informed of the termination of the quarrel, and of Achmet's return to Mecca, where he continued to live peaceably in a private character. The dominions of the sherriffe comprehended the cities of Mecca, Medina, Jambo, Taaif, Sadie, Ghunfujje, Hali, and thirteen others less considerable, all situated in Hedjas. Near Taaif is the lofty mountain of Gazvan, which, according to Arabian authors, is covered with snow in the midst of-summer. As these dominions are neither opulent nor extensive, the revenue of their sovereign cannot be considerable. He finds a rich resource, however, in the imposts levied upon pilgrims, and in the gratuities offered him by Mussulman monarchs. Every pilgrim pays a tax of from ten to 100 crowns, in proportion to his ability. The great Mogul remits annually 60,000 rupees to the sherriffe, by an assignment upon the government of

Surat. Indeed, since the English made themselves masters of this city and the territories belonging to it, the nabob of Surat has no longer been able to pay the sum. The sherriffe once demanded it of the English possessors of Surat; and, till they should satisfy him, forbade their captains to leave the port of Jidda. But. the English disregarding this prohibition, the sherriffe complained to the Ottoman Porte, and they communicated his complaints to the English ambassador. He at the same time opened a negociation with the nominal nabob, who resides at Surat. But these steps proved all fruitless : and the sovereign of Mecca seems not likely to be ever more benefited by the contribution from India. The power of the sherriffe

extends not to spiritual maiters , these are en tirely managed by the heads of the clergy, ofdit-ferent sects, who reside at Mecca. Rigiˆ Mussulmans, such as the Turks, are not very favorable in their sentiments of the sherriffes. but suspect their orthodoxy, and look upon them as secretly attached to the tolerant sect of the Zedi.

SHER'RIS, n. s.~\ From Xeres, a town o\ SHER'RIS SACK, >
Andalusia in Spain. A SHER'RY.) kind of Spanish wine.

Your sherris warms the blood, which, before cold and settled, left the liver white, which is the badge of pusillanimity ; but the sherris makes it course from the inwards to the parts extreme. Shaksjieare.

Good sherris sack ascends me into the brain, dries me there all the foolish dull vapours, and makes it apprehensive. Id.

SHERSHELL, a town of Africa, in Algiers, supposed to be the ancient Jol, which was called Csesarea by Juba II. in honor of Augustus Csesar. The ruins upon which it is situated are not inferior in extent to those of ancient Carthage ; and its former magnificence appears from its numerous fine pillars, capitals, mosaic pavements, capacious cisterns, and other relics of antiquity that are still te be seen. Tradition says that all this catastrophe was occasioned by a great earthquake ; and that the harbour, formerly large and commodious, was destroyed and choked up by the arsenal and other adjacent buildings being thrown into it by the shock. This tradition, though not recorded in history, is confirmed by the rubbish, walls, pillars, marbles, 8cc., being distinctly visible at low water, as well as by another recent catastrophe of the same kind ; for in 1738 this city was entirely overthrown by another earthquake. In 1730, eight years before this last catastrophe, Dr. Shaw visited it, and describes it as then in high

reputation for manufactures in iron and steel, earthen wares, &c. What remains of the harbour is nearly of a circular form, about 200 yards in diameter, and has an island in the middle of it ; which, being a high rock, is its chief defence against the blasts of Boreas. Long. 2° 36’ E., lat. 36° 35’ N.

SHERWIN (John Keyse), an eminent modern English engraver, was originally a wood cutter on the estate of Mr. Mitford, in Sussex ; but going one day to that gentleman’s house on some business, he was admitted into a room where some of the family were drawing, to whom he paid such attention that Mr. Mitford asked him if he could draw any? Sherwin replied ‘he could not tell, but should like to try :’ on which a portcrayon was given him, when he immediately produced a drawing that astonished not only all present, but the Society of Arts, to whom Mr. Mitford presented it, and who voted him their silver prize medal in consequence. Being soon after removed to London he entered under Bartolo/zi, and in three years made such surprising proficiency that he obtained both the gold and the siher prize medals given by the society. After this he executed many capital engravings ; among which his Finding of Moses is esteemed one of the best works of the present age. He died in 1790.

SHERWOOD, a spacious forest in the west

part of Nottinghamshire, which formerly occupied the greatest part of it. It was so thick that it was hardly passable; but it is now thinner, and its extent is much contracted. In the twelfth and thirteenth centuries this forest was the head quarter of Robin Hood, Little John, and their gang of thieves. It now feeds a vast number of fleer and stags ; and has some towns in it, of which Mansfield is the chief. It abounds in coal, and a road lies through it for thirty miles together. Since the reign of king Edward I. the nobility and gentry have had grants of it. It was once governed by a great number of officers under the earl of Chesterfield, chief forester; whose ancestor, Sir John Stanhope, had a grant of it, with liberty to kill deer at pleasure, reserving only 100 deer in the whole walk.

SHETLAND, or ZETLAND, the name of certain islands belonging to Stotland, and lying northeast of Orkney, between lat. 59° 56' and 61° 11'. There are many convincing proofs that these islands were very early inhabited by the Picts, or rather by those nations who were the original possessors of the Orkneys; and at the time of the total destruction of these nations, if any credit be due to tradition, their woods were entirely ruined, either by the Scots or Norwegians. It is highly probable that the people in Shetland, as well as in the Orkneys, flourished under their own princes dependent upon the crown of Norway ; yet this seems to have been rather through what they acquired by fishing and commerce than by the cultivation of their lands. Many reasons might be assigned why these islands, though part of our dominions, have not hitherto been better known to us. They were commonly placed two degrees too far to the north in all the old maps, to make them agree with Ptolemy's description of Thule, which he asserted to be in lat. 23° ; which we find urged by Camden as a reason why Thule must be one of the Shetland isles, to which Speed also agrees, though from their being thus wrong placed he could not find room for them in his maps. Another cause was the many false and fabulous relations published concerning them, as if they were countries inhospitable and uninhabitable ; and, lastly, the indolence or rather indifference of the natives, who, contenting themselves with those necessaries and conveniences procured by their intercourse with other nations, and conceiving themselves neglected by the mother country, have seldom troubled her with their applications. There are few countries that have gone by more names than these islands : they were called in Islandic Hialt-landia, from hialt the hilt of a sword ; this might be corrupted into Hetland, Hitland, or Heth-land, though some tell us this signifies a high land. They have been likewise, and are still in some maps, called Zetland and Zealand, in reference, as has been supposed, to their situation. By the Danes and by the natives they are styled Yealtaland ; and, notwithstanding the oddness of the orthography, this differs very little if at all from their manner of pronouncing Zetland, out of which pronunciation grew the modern names of Shetland and Shetland.

The Shetland Isles contain nearly three times as much land as the Orkneys ; they are consi-

dered also as equal in size to the island of Madeira, and not inferior to the provinces of Utrecht, Zealand, and all the rest of the Dutch islands taken together ; but of climate and soil they have little to boast. The longest day in the island of Unst is nineteen hours fifteen minutes, and

of consequence the shortest day four hours and forty-five minutes. The spring is very late, the summer very short ; the autumn also is of no long duration, dark, foggy, and rainy; the winter sets in about November and lasts till April, and sometimes till May. They have frequently in that season storms of thunder, much rain, but little frost or snow. High winds are indeed very frequent and very troublesome, yet they seldom produce any terrible effects. The aurora borealis is as common here as in any of the northern countries, and it contributes greatly to dispel the gloom of the long winter nights; as the splendor of its irradiations through the whole atmosphere often affords a light equal to that of the full moon. See AURORA BOREALIS. In winter the sea swells and rages in such a manner that for five or six months their ports are inaccessible, and the people during that space have no correspondence with the rest of the world.

‘ These islands,’ says Mr. Jameson, F.A. S.S., and F. R. M. S., in his Mineralogy of the Shetland Islands, ‘ are very numerous, but few or them of any considerable magnitude ; thirty-three of them are inhabited. On viewing these islands in general a wonderful scene of rugged, bleak, and barren rocks, presents itself to view. No tree or shrub is to be seen to relieve the eye in wandering over these dreary scenes. Sometimes, however, a few scanty portions of cultivated ground catch the eye of the traveller, exciting emotions of pleasure, and forming a striking contrast to the barren heath-covered mountains which skirt them. The coasts are in general rugged and precipitous, presenting in many places scenes truly grand and magnificent ; vast rocks of various heights dreadfully rugged and broken, opposing their rude fronts to all the fury of a tempestuous ocean ; which in some places has formed great detached pillars, in others has excavated great natural arches and caverns, that mock all human magnificence, and strike the beholder with that awe and wonder which must affect every one on viewing these amazing wrecks of nature.’

The Shetland Islands are well situated for trade. The nearest continent to them is Norway ; the port of Bergen lying forty-four leagues east • whereas they He forty-six leagues N.N.E. of Buchanness ; about seventeen or eighteen E. N. E. of Sanda, one of the Orkneys ; six or seven northeast of Fair Isle ; fifty-eight east of Ferroe Isles ; and at nearly the same distance northeast of Lewis. The southern promontory of the main land, called Sumburgh Head, lies 59° 59’ lat. N., and the north extremity of Unst, the most remote of them all, in lat. 61° 15’. The meridian of London passes through this last island, which lies about 2° 30’ W. of Paris, and about 5° 15’ E. of cape Lizard.

The ancient history of these islands, like that of most other countries,

is lost in the wreck of time. It is even uncertain who were the first

inhabitants. The general opinion is that they were first settled by a colony of Norwegians ; but the Rev. James Gordon thinks it more probable that the Picts were the first who settled in them, for the following reasons : — 1. We have no accounts in ancient history that the Danes were possessed of these islands previous to the year 830 ; when the Picts were so completely defeated and dispersed by Kenneth II. that they were obliged to desert their ancient territories and fly northward, as recorded by Bede, Boece, and all our ancient historians. 2. The Frith that divides Caithness from Orkney is often called the Pict-land Frith, from a great number of the Picts having been drowned in it in their flight from the Scots after Kenneth's victory. As the whole of the Picts who got safe landed in Orkney could not be accommodated in that country, a great number of them set sail again for the next land which was in view, *viz.* the island of Fowla ; but, this being still too small to accommodate them all, they were at a loss what course to take, till some of them observing a thick mist, directly northeast of Fowla, they steered towards it, and the first person who observed the land cried out, ' There is zet land, and we shall he safe/ — zet being the ancient spelling at least, if it was not the pronunciation of the word yet ; and hence it was named Zetland. This use of the Z instead of Y was retained in Scotland so late as the reign of queen Mary, when books in the Scottish language were printed at Edinburgh with the words ze, zow, and zieres, for ye, you, and yours. And the same orthography is still retained in Mackenzie, Menzies, Zuill (for Yule), and some other surnames in Scotland. The Picts accordingly settled on the Zetland Isles, which till that period had never been inhabited, and erected troughs or castles on the highest hills in each of the islands, that by lighting fires in them they might all have speedy warning of the approach of an enemy within less than an hour. Having thus secured themselves they sent ambassadors to the court of Norway, soliciting assistance to recover their ancient country from the Caledonians. Ha-rold, then king of Norway, being a warlike prince, readily complied, espoused their cause, and sent a powerful

fleet, which landed on the isle of Fetlar; but, as no safe anchorage could be procured on that coast, they sailed to the isle of Unst, to a bay which still retains his name, being rolled Harold's Wick ; and this is still the tradition of the country respecting this name. Harold temained in this bay with his fleet tift he had collected all the Picts in Scotland able to bear arms ; when he set sail for the coast of Sutherland and Caithness ; both of which countries he soon conquered, and they remained tributary to the crown of Norway till the end of the twelfth century ; when William the Lion, king of Scots, conquered the Norwegians, and reannexed these two countries to Scotland. The Picts, being thus frustrated in their hopes of recovering their ancient dominions, contented themselves with returning to Orkney and Zetland again ; and, being joined by a great number of Danish adventurers, they intermarried together, and became one peo-ple, acknowledging the king of Denmark as their sovereign. At last they were finally ceded by

Christian IV., king of Denmark and Norway, to king James VI. by way of dowry, with his daughter the princess Anne. See SCOTLAND.

The inhabitants are a stout well-made people ; tne lower sort of a swarthy complexion, harpy, robust, and laborious people. Generally speaking they get their bread by fishing in all weathers in their yawls, which are little bigger than Gravesend wherries ; live hardily, and in the summer season mostly on fish ; their drink, which, in reference to the British dominions, is peculiar to the country, is called bland, and is a sort of butter-milk, long kept, and very sour. Many live to a great age ; while others, by drinking great quantities of malt spirits of the very worst sort, are afflicted with an inveterate scurvy ; but the majority enjoy as good health as in any other country in Europe. They have no great propensity to agriculture, and are persuaded that their country is not fit for it. But they are 'very successful in their pasture grounds, which are kept well enclosed, in good order, and, together with their commons, supply them plentifully with beef and mutton. They pay their rents generally in butter at Lammas, and in money at Martinmas. As they find no difficulty in providing for a family they marry very early, and a bachelor is considered as a sort of phenomenon. All that is requisite to enter on a married life in Shetland is a cow, a small hut, a pot, a yawl and fishing-tackle, and a rug or blanket. With these, though their crops could not maintain them above eight months in the year, yet, by the immense quantities of fish they catch, the cheapness of provisions in general, and the abundance of fuel, they live as comfortably, or more so, than most

people of the same rank on the continent of Scotland.

The chief of the thirty-three inhabited islands of Shetland are, MAINLAND, YELL, UNST, BRES-SAY, BTJRRAY, QUARFF, HAVERA, HOUSE, Noss, FETLAR, FAIR, FOWLA, PAPASTOUR, the RHOES, SKERRIES, TRONDRAY, and WHALSAY. See these articles. The inhabitants of the Shetland Islands elect delegates, who join with those of the Orkney Islands in electing a representative in the British parliament. There are considerable quantities of marie in different islands, though they use but little ; hitherto there has been no chalk found ; limestone and freestone there are in the southern parts of the main land in great quantities, and also in the neighbouring islands, particularly Fetlar; and considerable quantities of slate, very good in its kind. No mines have been hitherto wrought, though there are in many places appearances of several kinds of metal. Some solid pieces of silver, it is said, have been turned up by the plough. In some of the smaller isles there are strong appearances of iron. See Jameson's Mineralogy.

The black cattle in this country are in general of a larger sort than in Orkney, which is owing to their having more extensive pastures ; a clear proof that still farther improvements might be made in respect to size. Their horses, called Shelties, are small, but strong, stout, and well shaped, live very hardy, and to a great age. They have likewise a breed of small swine, the flesh of which, when fat, is esteemed very deli

cious. They have also a breed of small sheep, whose wool is equal, if not superior, to the finest Spanish wool. Otters, seals, and other amphibious animals, abound greatly on the coasts. They have no goats, hares, or foxes; in general no wild or venomous creatures of any kind ; but there are rats in some few islands. They have no moor-fowl, which is the more remarkable as there are every where immense quantities of heath ; but there are many sorts of wild and water-fowls, particularly the dunter, clack, and solan geese, swans, ducks, teal, whaps, foists, lyres, kittiwaiks, gulls, maws, plovers, cormorants, &c.

There is likewise the amber goose, which is said to hatch her egg under her wing. Eagles, hawks, ravens, crows, mews, &c., abound here ; and every per-son who kills an eagle is entitled to a reward of 5s. from the commissioners of supply.

All these islands are well watered ; and there are every where excellent springs, some of them mineral and medicinal. They have, indeed, no rivers; but many pleasant burns, rills, or rivulets, of different sizes ; in some of the largest they have admirable trouts, some of which are of fifteen and even of twenty pounds weigh't ; and some of the larger rivulets even have salmon. They have likewise many fresh-water lakes, well stored with trouts and eels, and in most of them there are also large and fine flounders, in some very excellent cod. These fresh-water lakes, if the country was better peopled, and the common people more at their ease, are certainly capable of great improvement. They have, besides, haddocks, whitings, turbot, and a variety of other sea-fish. In many of the inlets there are .prodigious quantities of excellent oysters, lobsters, mussels, cockles, and other shell-fish. Amber, ambergris, and other spoils of the ocean, are frequently found upon the coasts.

SHETLAND, MAINLAND OF, the largest of the Shetland islands, extends sixty miles from north to south, and is from six to eighteen in breadth. The interior parts are mountainous, craggy, and barren ; but along the shores are verdant spots. The coast is so deeply indented with voes, or in-lets of the sea, that no part of the island is five miles distant from some creek or harbour ; while the extent of the coast, including all its windings, may be 300 miles. The hills run, in the longest direction of the island, from north to south; but none of them is very high, except Rona, near the northwest coast, which is between 1500 and 2000 feet above the level of the sea. On the h ighest eminence is a watch-house constructed of four , large stones, and two covering the top for a roof. It will contain six or seven persons. The east side of the island is comparatively low; but the cliffs on the western coast are steep and irregular. There are many small fresh-water lakes, and some mineral springs impregnated with iron. Remains of what are called Picts' houses abound in this island. The soil is unfavorable for vegetation ; and agriculture is little attended to. The best crops are black oats and bear, which would not supply the inhabitants nine months in the year. The hills are mostly covered with heath, and afford good pasture for black cattle and sheep, which, after receiving the mark of their owner, run wild, without the attendance of any shepherd. A coii-VOL. XX.

siderable number of sheep and black cattle are purchased by the Lerwick merchants, who kill them, and either send them to Leith, or to the Greenland and other vessels which rendezvous in Bressay Sound. They have also a very small but hardy breed of horses, called Shetland poneys ; and a peculiar breed of swine, the flesh of which is esteemed very delicate. Eagles, hawks, ravens, and other birds of prey, are numerous, and so destructive to the lambs that the commissioners of supply give a crown for every eagle destroyed. Swans, in great numbers, annually visit this island, and geese and ducks abound. Bare of trees except roan and willow. Metallic ore found, iron, copper, lead, and silver. A copper mine was formerly wrought : at present its chief mineral production is limestone and excellent slate. Manufactories of woollen and linen are conducted on a small scale, but the chief occupation is fishing. The island is divided into eight parishes, and contains about 14,000 souls.

A Description of the Shetland Islands, comprising aa Account of their Geology, Scenery, Antiquities, and Superstitions, has recently been published by Dr. Hibbert, and will be perused with interest by the geologist, the antiquary, and the general reader. We limit our extracts at present to those objects of general science which he so ably brings forward.

Aecount of the pursuit and capture of a drove of whales. — I had landed at Mr. Leisk's of Burra Voe in Yell, when a fishing-boat arrived with the intelligence that a drove of Ca'ing whales had entered Yell Sound. Females and boys, on hearing the news, issued from the cottages in every direction, making the hills reverberate with joyful exclamations of the event. The fishermen armed themselves with a rude sort of harpoon, formed from long iron-pointed spits ; they hurried to the strand, launched their boats, and at the same time stored the bottom of them with loose stones. Thus was a large fleet of yawls soon collected from various points of the coast, which proceeded towards the entrance of the sound. Some slight irregular ripples among the waves showed the place where a shoal of whales were advancing. They might be seen sporting on the surface of the ocean for at least a quarter of an hour, disappearing and rising again to blow. The main object was to drive them upon the sandy shore of HamnaVoe, and it was soon evident that, with their enemy in their rear, they were taking this direction. Most of the boats were ranged in a semicircular form, being at the distance of about fifty yards from the animals. A few skiffs, however, acted as a force of reserve, keeping, at some little distance from the main body, so that they might be in readiness to intercept the whales, should they change their course. The sable herd appeared to follow certain leaders ; who, it was soon

feared, were inclined to take any other route than that which led to the shallows on which they might ground. Immediately the detached crews rowed with all their might, in order to drive back the fugitives, and, by means of loud cries and large stones thrown into the water, at last succeeded in causing them to re sume their previous course. In this temporary diversion from the shore the van of the boats was

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thrown into confusion ; and it was a highly interesting scene to witness the dexterity with which the Shetlanders handled their oars, and took up a new semicircular position in rear of the whales. Again the cetacea hesitated to proceed into the inlet, and again a reserve of boats intercepted them in their attempt to escape, while a fresh line of attack was assumed by the main body of the pursuers. It was thus that the whales were at length compelled to enter the harbour of Hamna Voe. Then did the air resound with the shouts that were set up by the boatmen, while stones were flung at the terrified animals, in order to force them upon the sandy shore of a small creek ; but, before this object could be effected, the whales turned several times, and were as often driven back. None of them, however, were yet struck with the harpoon ; for, if they were to feel themselves wounded in deep water, they would at all hazards betake themselves to the open sea. The leaders)f the drove soon began to ground, emitting at he same time a faint murmuring cry, as if for .•elief : the sand at the bottom of the bay was disturbed, and the water was losing its transpa- «ncy. The shoal of whales which followed increased, as they struck the shore, the muddiness of the bay ; they madly rolled about, irresolute from the want of leaders, uncertain of their course, and so intimidaled by the shouts of the boatmen, and the stones that were thrown into the water, as to be easily prevented from regaining the ocean. Crowds of natives of each sex, and of all ages, were anxiously collected on the banks of the Voe, hailing with loud acclamations the approach of these visitants from the northern seas; and then began the work of death. Two men, armed with sharp iron spits, rushed breast high into

the water, and, seizing each a fin of the nearest whale, bore him unresistingly along to the shallowest part of the shore. One of the deadly foes of this meekest of the inhabitants of the sea deliberately lifted up a fin, and beneath it plunged into the body of the animal the harpoon that he grasped, so as to reach the large vessels of the heart. A i'ong state of insensibility followed, succeeded by the most dreadful convulsions ; the victim lashed the water with his tail, and deluged the land for a considerable distance : another death-like pause ensued ; throes still fainter and fainter were repeated with shorter intermissions, until at length he lay motionless on the strand. The butchers afterwards set off in a different direction, being joined by other persons assuming the same functions. Female whales, appearing by their hasty and uncertain course to have been wrested from their progeny, and sucklings no less anxiously in quest of those from whose breasts they had received their nutriment, were, by the relentless steel of the harpooner, severally arrested in their pursuit. Numerous whales which had received their death-wound soon lined the bay, while others, at a greater distance, were rolling about among the muddy and crimsoned waves, doubtful whether to flee, and appearing like oxen to wait the return of their slaughterer. W anton boys and females, in their anxiety to take a share of the massacre, might be observed to rankle with new tortures the gaping wound

t'nat had been made ; while, in their blood-thirsty exultation, they appeared to surpass those whose more immediate duty it was to expedite the direful business. At length the sun set upon a bay that seemed one sheet of blood : not a whale was allowed to escape ; and the strand was strewed over with carcases of all sizes, measuring from six to twenty feet, and amounting to not fewer than eighty in number. Several of the natives then went to their homes in order to obtain a short repose ; but, as the twilight in this northern latitude was so bright as to give little or no token of the sun's departure, many were unremittingly intent upon securing the profit of their labor, by separating the blubber, which was of the thickness of three or four inches. It was supposed that the best of these whales would yield about a barrel of oil ; and it was loosely computed that they were on an average worth from £2 to £3 sterling a piece, the value of the largest being as much as £6.

The division of the profits that accrue from these whales was, from very ancient times, regulated by strict laws, which on the introduction of feudality varied from those of Denmark. ' As soon,' says Mr. Gifibrd, ' as the whales are got ashore, the bailie of the parish is advertised,

who comes to the place, and takes care that none of them are embezzled ; and he acquaints the admiral thereof, who forthwith goes there, and holds a court, where the fiscal presents a petition, narrating the number of whales, how and where drove ashore ; and that the judge thereof may give judgment thereupon, according to law and the country practice. Whereupon the admiral ordains the whales driven on shore to be divided into three equal parts ; one of the parts to belong to the admiral, one part to the salvers, and one-third to the proprietor of the ground on which the whales are driven ashore ; and he appoints two honest men, who are judicially sworn, to divide them equally. The minister or vicar claims the tithes of the whole, and commonly gets it ; the bailie also claims the heads for his attendance, and, if the admiral finds he has done his duty, the heads are decerned to him, otherwise not.' In consequence, however, of frequent disputes that took place on this tripa-tite division of the whales, the earl of Morton, who was invested with the droits of admiralty, appears to have compounded with the landed proprietors of Shetland, by agreeing to accept a definite sum for his share of the capture; but his successors have, I believe, relinquished the claim altogether.

Account of the ling fishery at the Haaf. — On the north of the parish of Northmavine the low hilly ridges, formed by the sea into deep fissures or caverns, terminate in a line of ragged coast, agreeably diversified by a long narrow peninsula of green land jutting out far into the Northern Ocean, which is named Feideland, an appellation of true Scandinavian origin, that is explained by Debes in his description of Feroe. lie observes that where grass is found so abundant and juicy, that oxen feed thereon both winter and summer, such places are named Feidelands ; and it is very remarkable, he adds, that where there are any Feidelands they invariably turn to the northeast and north. Every where the coast is

awfully wild, the peninsula is broken on each side into steep precipices, exhibiting now and then a gaping chasm, through which the sea struggles, while numerous stacks rise from the surface of a

turbulent ocean, — the waves beating around them in angry and tumultuous roar. This is a great station for the ling fishery, which commences in the middle of May, and ends on the 12th of August. When any fishermen resort, for the first time, to a conyenient place of this kind, they are allowed by the law to build for themselves huts, on any site which may be unen-closed, uncultivated, and at a distance of not more than 100 yards from the high water-mark. These are constructed of rude stones, without any cement, being made no larger than is sufficient to contain a six-oared boat's crew. The men form the roof of thin pieces of wood, on which they lay turf; — they then strew a little straw upon the ground, and snatch from their severe labors a short repose. On the narrow isthmus of low marshy land, that connects the peninsula of Feideland to the mainland, is interspersed, with all the disorder of a gypsey encampment, a number of these savage huts named summer lodges, and in the centre of them is a substantial booth, used by a factor for curing fish. Here I met with excellent accommodation, owing to the kindness of Mr. Hoseason, who had sent from his house at Lochend every refreshment I might need, together with a comfortable bed for the evening. Feideland is a place possessing no little interest; a remarkably busy scene is presented by the numerous crews sailing to the Haaf, or returning from it laden with fish ; — some men are busily engaged in weighing the stock of ling, cod, and tusk, as it is brought in to the factors ; others in spreading their lines on the rocks to dry, or in cooking victuals for their comrades who may be employed on the haddock grounds, or in brushing, slitting, and salting the fish that are brought to the door of the booth. But to the naturalist, Feideland presents attractions of no mean kind; the numerous rare marine productions that are continually drawn up by the lines of the fishermen, which a, small perquisite might induce them to preserve and bring to the shore, would richly repay him for lingering several days in such a station.

I shall now take an opportunity of giving an account of the Ling Fishery, as it is prosecuted at the Haaf.

The Haaf is a name applied to any fishing-ground outside of the coast, where ling, cod, or tusk, may be caught. Not much above a century ago, the fishery for ling and cod was prosecuted much nearer shore than it is now, and fishing places, designated Raiths,were pointed out by certain landmarks called Meiths, so that every one knew his own raith, and any undue encroachment upon it was considered no less illegal and actionable, than if it had been upon a landed enclosure. The fishermen, however, at the present day, find it their interest to seek for ling at a much greater distance, even to the extent of thirty or forty miles. The men employed at the Haaf are from eighteen years of

age and upwards. Six tenants join in a boat, their landlords importing for them frames ready modelled and cut out in

Norway, which, when put together, form a yawl of six oars, from eighteen to nineteen feet in keel, and six in beam ; it . is also furnished with a square sail. On the 25th of May, or on the 1st of June, the fishermen repair to their several stations. They either endeavour, with rod and line, to procure for bait the fry of the coalfish, of the age of twelve months, named pillocks, or they obtain at the ebb mussels and limpets ; and then going out to sea, six miles or more, lay their lines for haddocks, and, after obtaining a sufficient sup-ply of these fish, reserve them for bait.

The Feideland Haaf being thirty or forty miles from land, the fishermen endeavour to leave their station in the morning of one day, so as to be enabled to return in the course of the day following. And if, owing to boisterous weather, they have suffered long detention in their lodges, the first boat that is launched induces every weather-bound crew to imitate the example; it is, therefore, no unusual circumstance to see, in a fleet of yawls, all sails set, and all oars plied, nearly at the same instant of time. Each boat, in the first turn that it makes, observes the course of the sun, and then strives to be the first which shall arrive at the fishing station. Some few of the fishermen, during their voyage, superstitiously forbear to mention in any other name than one that is Norse, or in some arbitrary word of their own coinage, substituted for it, various objects, such, for instance, as a knife, a church, the clergyman, the devil, or a cat. When, after a tug of thirty or forty miles, the crew has arrived at the Haaf, they prepare to set their tows, which is the name they designate the lines by that are fitted with ling-hooks. Forty-five or fifty fathoms of tows constitute a bught, and each bught is fitted with from nine to fourteen hooks. It is usual to call twenty bughts a packie, and the whole of the packies that a boat carries is a fleet of tows. Thus, while a boat in the south or east of Shetland carries only two or three packies, a fleet of tows used on the Feideland Haaf amounts to no less than six, these being baited with seldom less than 1200 hooks, provided with three buoys, and extending to a distance of from 5000 to 6000 fathoms.

The depth at which ling are fished for varies from fifty to 100 fathoms. In setting the tows, one man cuts the fish used for bait into pieces, two men bait and set the lines, and the remaining three or four row the boat. They sink at certain distances what they call cappie-stanes, the first that is let down being called the steeth. These keep the

tows properly fixed to the ground. When all this labor is finished, which, in moderate weather, requires three or four hours, and when the last buoy has floated, the fishermen rest for nearly two hours, and ta'ke their scanty sustenance ; but it is lamentable to think that their poverty allows them nothing more than oatmeal bread, and a few gallons of water. Their severe labors hare never yet excited the commiseration of the British government ; for, owing to the excessive duty on spirits, they can rarely afford to carry with them the smallest supply of whisky. At length one man, by means of the buoy-rope, undertakes to haul up the tows,— another extricates the fish from the hooks, and throws them into a place in the stern named the shot,— a third

uts them and deposits their livers and heads in the middle of the boat. Along with the ling that is caught, there is a much l«ss quantity of cod and of the gadus brosme or tusk ; these are all valuable acquisitions. Six to ten wet lings are about a hundred weight, and hence six or seven score of fish are reckoned a decent haul, — fifteen or sixteen a very good one, — twenty scores of ling are rarely oaught, but in such a case gar-bage, heads, and small fish, are all thrown overboard, nor can these lighten the boat so much as that she will not appear, according to the phrase of the fishermen, just lippering with the water. The skate and halibut which may be taken are reserved to supply the tables of the fishermen. That formidable looking fish the stone-biter (anarhichus lupus) is also esteemed good eat-ing. When all the tows are heaved up, they are deposited in the bow of the boat. If the weather be moderate, a crew does not need to be detained at the Feideland llaaf more than a day and a half. But too often a gale comes on, — the men are reluctant to cut their lines, and the most dreadful consequences ensue. About two years ago Mr. Watson, the respectable minister of Northmavine, communicated to the editor of an Edinburgh paper a striking instance of the misfortunes to which the fishermen are liable. In speaking of a number of boats that went off to the Haaf, he remarked that, 'about the time they were laying their lines, it blew strong from the southeast, so that it was with much difficulty they could haul them in again. The storm increased and blew off land ; two boats particularly were in great distress ; they having lost their sails,

and being quite worn out with fatigue, were able to do very little for their own safety. Luckily, the wind shifted to the westward, and on the third day the crews all reached land, completely exhausted with hunger and labor, having had nothing but a very little bread and some water. Two of the men, one in each of the boats which suffered most, died before they came to land, and the rest were not able to walk to their houses without assistance.'

Account of the Isle of Stenness, the Holes of Scraada, and the Grind of the Navir. — The Isle of Stenness, and the Skerry of Eshaness, appear at a short distance exposed to the uncontrolled fury of the Western Ocean. The isle presents a scene of unequalled desolation. In stormy winters huge blocks of stones are overturned, or are removed far from their native beds, and hurried up a slight acclivity to a distance almost incredible. In the winter of 1802 a tabular-shaped mass, eight feet two inches by seven feet, and five feet one inch thick, was dislodged from its bed, and removed to a distance of from eighty to ninety feet. I measured the recent bed from which a block had been carried away the preceding winter (A. D. 1818), and found it to be seventeen t'eet and a half by seven feet, and the depth two feet eight inches. The removed mass had been borne to a distance of thirty feet, when it was shivered into thirteen or more lesser fragments, some of which were carried still farther, from thirty to 120 feet. A block, nine feet two inches by six feet and a half, and four feet thick, was hurried up the acclivity to a distance of 150

feet. Such is the devastation that has taxen place amidst this wreck of nature. Close to the Isle of Stenness is the Skerry of Eshaness, formidably rising from the sea, and showing on its westerly side a steep precipice, against which all the force of the Atlantic seems to have been expended : it affords a refuge for myriads of kitti-wakes, whose shrill cries, mingling with the dashing of the waters, wildly accord with the terrific scene that is presented on every side.

The fishing station of Stenness is occupied by the tenants of Messrs. Cheyne, who, from the liberal manner in which they are treated, bear the character of being the best fishermen in the country. About seventy boats are annually employed at the Stenness Haaf. It is computed that between the middle of May and the 12th of August, when the ling fishery ceases, a boat makes about eighteen trips to the Haaf. Most of the ling, cod, and tusk that are cured in Northmavine go to Ireland; other markets are found for them by Scottish and English merchants, in Barcelona, Lisbon, Ancona, and Hamburgh. The dangers

that the boats run at the Haaf have often suggested the expediency of employing small decked vessels for the fishery. Accordingly, there was an undertaking of this kind set on foot about half a century ago, but it was in every respect ill managed, and failed.

Leaving Eshaness, where may be observed an immense block of granite, not less than three yards in diameter, thrown up by the sea, I pursued my way north, along a high gradually ascending ridge that impends the ocean, which is covered with the finest and softest sward that ever refreshed the tired feet of the traveller, be-ing frequently resorted to by the inhabitants of Northmavine, on a fine Sabbath evening, as a sort of promenade. The verdure that embroiders this proud bank, on which numerous sheep continually feed, pleasingly harmonizes, on a calm day, with the glassy surface of the wide Atlantic ; nor is the pleasure less perfect when the smooth coating of so luxuriant a green turf is contrasted with the naked red crags that form the precipice below, whitened with the spray of the breakers which continually dash against them with angry roaring. The rich surface of pasture that thus gradually shelves from the elevated ridge of the coast bears the name of the Villians of Ure ; — and well might we apply to this favoured spot of Thule the compliment that has been often paid to some rich vale of England, — ‘ Fairies joy in its soil.’ After a distance of three miles, this gladdening prospect of fertility is suddenly closed with the harsher features that Hialtland usually wears. Near the mountain lake of Hou-land, where a burgh, built on a holm close to its shore, displays its mouldering walls, the coast resumes its wild aspect.

A large cavernous aperture, ninety feet wide, shows the commencement of two contiguous immense perforations, named the Holes of Scraada, where, in one of them that runs 250 feet into the land, the sea flows to its utmost extremity. Each has an opening at ‘a distance from the ocean, by which the light of the sun is partially admitted. Farther north other ravages of the ocean are displayed. A mass of rock,

dimensions of which may perhaps be rated at twelve or thirteen feet square, and four and a half or five feet in thickness, was first moved from its bed, about fifty years ago, to a distance of thirty feet, and has since been twice turned over. But the most sublime scene is where a mural pile of porphyry, escaping the process of disintegration that is devastating the coast, appears to have been left as a sort of rampart * against the inroads of the ocean ; — the Atlantic, when provoked by wintry gales, batters against it with all the force of real artillery, — the waves having in their repeated assaults forced for themselves an entrance. This breach, named the Grind of the Navir, is widened every winter by the overwhelming surge, that, finding a passage through it, separates large stones from its side, and forces them to a distance of no less than 180 feet. In two or three spots the fragments which have been detached are brought together in immense heaps, that appear as an accumulation of cubical masses, the product of some quarry.

Account of the Religious Paroxysms of the Shetlanders. — The kirk was remarkably crowded, since there was a sermon to be preached incidental to the administration of the Sacrament ; on which occasion I had an opportunity of seeing the convulsion fits to which the religious congregations of Shetland are subject. The introduction of this malady into the country is referred to a date of nearly a century ago, and is attributed to a woman who had been subject to regular paroxysms of epilepsy, one of which occurred during divine service. Among adult females, and children of the male sex, at the ten-der age of six, fits then became sympathetic. The patient complained, for a considerable time, of a palpitation of the heart; fainting ensued, and a motionless state lasted for more than a hour. But, in the course of time, this malady is said to have undergone a modification such as it exhibits at the present day. The female, whom it had attacked, would suddenly fall down, toss her arms about, writhe her body into various shapes, move her head suddenly from side to side, and, with eyes fixed and staring, send forth the most dismal cries. If the fit had occurred on any occasion of public diversion, she would, as soon as it had ceased, mix with her companions, and continue her amusement as if nothing had happened. Paroxysms of this kind prevailed most during the warm months of sum-mer ; and, about fifty years ago, there was scarcely a Sabbath in which they did not occur. Strong passions of the mind, induced by religious enthusiasm, were also the exciting causes of these fits ; but, like all such false tokens of divine workings, they were easily counteracted, by producing in patients such opposite states of mind, as arise from a sense of shame : thus they are under the control of any sensible preacher, who will administer to a mind diseased, — who will expose the folly of voluntarily yielding to a

sympathy so easily resisted, or of inviting such attacks by affectation. An intelligent and pious minister of Shetland informed me that, being considerably annoyed on his first introduction into the country by these paroxysms, whereby the devotions of the church were much impeded,

he obviated their repetition, by assuring his parishioners that no treatment was more effectual than immersion in cold water, and, as his kirk was fortunately contiguous to a fresh water lake, he gave notice that attendants should be at hand, during divine service, to ensure the proper means-of cure. The sequel need scarcely be told. The fear of being carried out of the church and into the water, acted like a charm ; not a single Naiad was made, and the worthy minister has, for many years, had reason to boast of one of the best regulated congregations in Shetland. When I attended the kirk of Baliasta, a female shriek, the indication of a convulsion fit, was heard ; the minister (Mr. Ingram of Fetlar) very properly stopped his discourse, until the disturber was removed ; and, after advising all those who thought they might be similarly affected, to leave the church, he gave out in the mean time a psalm. The congregation was thus preserved from farther interruption ; for, on leaving the kirk, I saw several females writhing and tossing about their arms on the green grass, who durst not, for fear of a censure from the pulpit, exhifcit themselves after this manner within the sacred walls of the kirk.

Account of the Teutonic fortress called the Burgh of Mowsa. — I passed along the shore of the open bay of Sandwick, which has been the grave of many seamen, who, by mistaking it for Bressay Harbour, have suffered all the horrors of shipwreck upon its exposed shores. In crossing a headland, to the east of the Inlet, a small low island, named Mousa, separated from the Mainland by a narrow strait, first rises to - the view : this spot is little diversified with hill and dale; it contains one good house with out-buildings and cottages. But the most conspicuous object that lines its shores is the Burgh of Mousa, a circular building, which, if it did but taper towards its summit, would present no unapt similitude of a modern glass-house. This ancient fortress stands close to the water’s edge ; by crossing, therefore, in a boat, a narrow channel, little more than half a mile in breadth, we are landed immediately under its walls.

The Burgh of Mousa occupies a circular site of ground, somewhat more than fifty feet in diameter, being constructed of middle sized schistose stones of tolerably uniform magnitude, well laid together,

without the intervention of any cement. This very simple round edifice attains the elevation of forty-two feet ; it swells out, or bulges from its foundation, and draws smaller as it approaches the top, when it is again cast out from its lesser diameter; which singularity of construction is intended to obviate the possibility of scaling the walls. The door that leads to the open area contained within the structure is a small narrow passage, so low that an entrance is only to be accomplished by crawling upon the hands and knees ; and, in creeping through it, the wall appears of the great thickness of fifteen feet, naturally leading to the suspicion of a vacuity within. On arriving at the open circular area included within this mural shell, I found the diameter of the space to be about twenty-one feet. On that part of the wall, within the court, which is nearly opposite to the entrance, the ct-198

tenlion is excited by a number of small apertures resembling the holes of a pigeon-house. There are three or four vertical rows of them, having each an unequal proportion of openings, varying from eight to eighteen in number. It was now evident that the mural shell of the structure was hollow, and that it contained chambers, to which these holes imparted a feeble supply of light and air. Beneath the whole, at a little distance from the ground, there is a door that leads to a winding flight of stone steps, of the width of three feet, which communicates with all these apartments : I then discovered that the shell of the Burgh was composed of two concentric walls, each of about four feet and a half to five feet in breadth, and that a space of nearly a similar dimension was devoted to the construction of the inner apartments. In ascending these steps, which wound gradually to the top of the wall, I observed that they communicated at regular intervals with many chambers or galleries, one above another, that went round the building. These were severally of such a height that it was possible to walk within them nearly upright. The roof of the lowest chamber was the floor of the second, and after this manner seven tiers wˆre raised. On reaching the highest step of the flight of stairs, there appeared no reason for supposing that any roof had ever protected the summit of the building, so that the Burgh of Mousa must have been originally nothing more than a circular mural shell, open to the top. The height of the inside wall was thirty-five feet, being seven feet less than that of the outside : this difference was partly owing to

the accumulation of stones and earth, which had filled the inner court.

The mode was now evident in which this burgh had been intended to give security to the persons and property of the ancient inhabitants of Shetland against the sudden landing of predatory adventurers. The tiers of apartments contained within the thick walls would afford a shelter to women and children from the missile weapons of assaulters, besides being repositories for grain and other kinds of property, as well as for the stores whereby a long siege might be sustained. The low narrow door within the court, which admits of no entrance but in a creeping posture, might be easily secured at a short notice by large blocks of stone. It has been remarked of the rude forts, similar to these which occur on the shores of Scandinavia, that they were seldom taken by an enemy, unless by surprise, or after a long blockade ; that frequently terraces and artificial banks were raised near that side of the wall which was the lowest ; and that the besieged were then annoyed with arrows, stones, boiling water, or melted pitch, being thrown into the fort — offensive weapons which they did not neglect to return. The history of the Burgh" of Mousa confirms the correctness of this observation ; its high walls, bulging out from their foundation, defied any attempt to scale them ; for, when they were encompassed by one of the earls of Ork-ney, he had no hopes of inducing the fortress to surrender but by cutting off' all supplies of food, and then waiting the event of a long siege. Altogether the building was well adapted for resisting the attacks of the ancient piratical hordes of these seas, who, from the short summers of northern latitudes, and from the incapability of their vessels to sustain a winter's navigation, durst not allow themselves to be detained on the coast by any tedious operations of assault.

Before quitting the Burgh of Mousa, I endeavoured to explore some of the chambers belonging to it, but owing to the ruined state of the floors the attempt was too hazardous. A lively historian has remarked that in Scandinavia such recesses were often devoted in days of yore to the security of young damsels of distinction, who were never safe while so many bold warriors were rambling up and down in quest of adventures. It is also surmised that galleries like these, which run winding around the walls, were, from the direction which they took, not unfrequently distinguished by the name of serpents or dragons ; and hence the many allegorical romaunts that were coined concerning princesses of great beauty being guarded by such monsters. It is unlucky, however, for the historical interest of the dragon-fortress of Mousa, that within the dismal serpentine windings of its apartments was confined a damsel past her prime of lifc, and as well entitled to be ' shrined for her brittleness ' as any of the frail heroines of antiquity.

In the fourteenth century, when, by the rights of udal succession, there were joint earls of Orkney, dame Margareta, the widowed mother of one of them, listened to the lawless importunity of the gay Brunnius. Harold, her son, became impatient of the family disgrace, and banished from the islands his mother's paramour, as well as the illegitimate offspring that were the fruits of the connexion. But, in the course of a short time, dame Margareta's beauties attracted the notice of a more honorable suitor, who was no other than Harold's partner in the earldom of Orkney and Shetland. Erlend proffered love to the dame, which she returned ; but as her son, from some cause, was averse to the nuptials, the parties entered into a tender engagement without his consent, and afterwards fled from his fury with al. speed into Mousa. Then must Harold need? follow them, his hostile barks sailing in pursuit as fast as if all the winds of heaven had driven them ; and then, anon, fled the dame Margareta and Erlend into the fort, within the dark recesses of which they nestled like two pigeons in a dove-cot. The burgh was beset with troops, but sc impregnable was its construction that the assaulter found he had no chance of reducing it but by cutting off" all supplies of food, and by this means waiting the result of a tedious siege. And now turn we to the gentle pair in the fortress, that we may speak of what pain they must there endure, what cold, what hunger, and what thirst. In such a dog-hole, — ' a conjurer's circle gives content above it ; — a hawk's mew is a princely palace to it.' But Harold had powerfu foes in other places wherewith to contend, and, on this account, he gave heed to the advice of his followers, that Erlend should be retained as a friend and not as an enemy, and that he ought not to despise the new family alliance. A reconciliation took place, and then, with great joy, returned the parties to their several pursuits,

veil satisfied with each other. Such is the story chronicled by Torfaeus concerning the siege of Moseyaburgura and the loves of dame

Margareta and Erlend her last leman.

Method of bloodletting in Shetland.— In Shetland there are several native popular medicines. Scurvy grass, for instance, is used in cutaneous complaints, butter-milk in dropsy, the shells of whelks calcined and pounded for dyspepsia, and a variety of steatite named in the country kleber for excoriations. But the mode of letting blood, known from time immemorial, deserves the most particular notice. When the native chirurgeon is called in, he first bathes the part from which the detraction is to be made with warm water, and then draws forth his cupping machine, which consists of nothing more than the upper part of a ram's horn, perforated at the top, and bound round with a soft piece of cotton or woollen rag. In applying it to the skin he sucks out a little of the included air, takes off the horn, makes upon the surface of the part that has thus been gently raised six or seven slight incisions, again fixes the cupping instrument, freely draws out the air by the re-application of his lips to it, and, either by insinuating his tongue within the perforation or by twisting round it a piece of leather or bladder, prevents the ingress of fresh air. He next uses coarse cloths, wrung out with warm water, to stimulate the flowing of the blood, and when the horn is half filled it leaves the skin and falls down. The same process is repeated several times, until a sufficient depletion has been made. It is worthy of remark that the African negroes, described by Park, have a similar mode of cupping.

SHETLAND, NEW SOUTH, a large tract of uninhabited land to the southward of cape Horn, discovered in 1819 by Mr. William Smith,vthe master of a British merchant brig, and which revived, in some quarters, the belief of a vast continent within the Antarctic circle. Mr. Smith gave to it the name of South Shetland, on account of its lying nearly in the same degree of south as the Shetland Isles of N. lat. It rather appears that the first discovery of it was made >o long ago as the year 1599, by a Dutch navigator of the name of Gherritr. See our article POLAR REGIONS.

SHETUCKET, a river of Connecticut, formed by the junction of the Willomantic and Mount Hope rivers, and running into the Thames.

SHEVAGUNGA, a town of the Carnatlc, south of India, and district of Little Marawar. The government had, according to the Nair cus-tom, been from time immemorial in the hands of a female, styled the Ranny, till about the middle of the last century, when two brothers named Murdoo, of low birth, usurped the power, as rajahs. They were expelled by the nabob of Arcot, but afterwards, through bribery, restored. Again proving refractory, they were attacked by a British

detachment, and defended themselves in the fortress of Callarcoil, five months. It was at length taken by storm, and the usurpers hanged. Of the old Shevagunga family there remained no lineal heir ; the place was therefore given to a female, a relation of the late Ranny's, and the tribute continued at the former sum of

50,000 pagodas, value 8s 4a. each. Lon"-. 78° 30' E., lat. 9° 54 N.

SHEVAGUNGA, a town of Hindostan, in the Mysore ; twenty-five miles northwest of Ban-galore, and thirty-three southwest of Chinna Balabaram.

SHEVOCK, a small river of Scotland, in Aberdeenshire, which joins the Gady near its conflux with the Ury.

SHEW. See SHOW.

SHEW BREAD, the loaves of bread which the priest of the week put every Sabbath day upon the golden table in the sanctuary before the Lord, in the temple of the Jews. They were twelve in number, and were offered to God in the name of the twelve tribes of Israel. They were shaped like a brick, were ten palms long and five broad, weighing about eight pounds each. They were unleavened, and made of fine flour by the Levites. The priests set them on the table in two rows, six in a row, and put frankincense upon them to preserve them from moulding. They were changed every Sabbath, and the old ones belonged to the priest upon duty. Of this bread none but the priests might eat, except in cases of necessity. It was called the bread of faces, because, the table of the show bread being almost over against the ark of the covenant, the loaves might be said to be set before the face of God. The original table was carried away to Babylon,but a new one was made for the second temple. It was of wood overlaid with gold. This, with the candlestick and some other spoils, was carried by Titus to Rome.

SHIBBOLETH, Heb. rbw, i. e. an ear of corn. The word proposed by Jephtha to distinguish the Gileadites from the Ephraimites, as the latter pronounced sh like s. Hence it is still used metaphorically for the cant criterion, or distinguishing mark of a party.

SHIEL, LOCH, a lake of Inverness-shire, in the parish of Ardnamurchan, ten miles long and two broad. It has a small island in it called Finan.

SHIELD, n. s. & v. a. Sax. pcylb-A “buckler ; a broad piece of defensive armour held on the left arm to ward off blows : defence ; a defender : to cover with a shield ; to defend.

Out of their cold caves and frozen habitations, into the sweet soil of Europe, they brought with them their usual weeds, fit to shield the cold to which they had been inured. Spenser.

Were ‘t my fitness

To let these hands obey my boiling blood, They’re apt enough to dislocate and tear Thy flesh and bones : howe’er a woman’s shape Doth shield thee. Shakspeare. King tear.

My lord, I must intreat the time alone. — God shield I should disturb devotion. Shakspeare.

Now put your shields before your hearts, and fight With hearts more proof than shields. Id. Coriolanu*

His ponderous shield,

Ethereal temper, massy, large, and round, Behind him cast ; the broad circumference Hung on his shoulders like the moon. Milt™

The terror of the Trojan field, The Grecian honour, ornament, and shield, High on a pile the’ unconquered chief is placed.

Dryden.

At Auxur’s shield he drove, and at the blow Both shield and arm to ground together go.

Id.

Shouts of applause ran ringing through the field, To see the son the vanquished father ihield. Dryden.

Hear one that comes to shield his inj ured honour, And guard his life with hazard of her own. Smith.

The SHIELD was an ancient weapon of defence, in form of a light buckler, borne on the arm to fend off lances, darts, &c. The form of the shield is represented by the escutcheon in coats of arms. The shield was that part of the ancient armour on which the persons of distinction in the field of battle always had their arms painted ; and most of the words still used to express the space that holds the arms of families are derived from the Latin name for a shield, scutum. The French escu and escussion, and the English word escutcheon, or, as we com-m»nly speak it, scutcheon, are evidently from this origin; and the Italian scudo signifies both the shield of arms and that used in war. The Latin name clypeus, for the same thing, seems also to be derived from the Greek word yXu0«v, to engrave ; and it had this name from the several figures engraved on it as marks of distinction of the person who wore it. The shield in war, among the Greeks and Romans, was not only useful in the defence of the body, but it was also a token, or badge of honor, to the wearer ; and he who returned from battle without it was al-ways reckoned infamous. This honorable piece of armour has always been esteemed the pro-perest place to engrave the signs of dignity of the possessor of it ; and hence, when arms came to be painted for families, the heralds always chose to represent them upon a shield, but with several exterior additions and ornaments ; as the helmet, supporters, and the rest. The form of the shield has not only been different in various nations, but even the people of the same nation, at different times, have varied its form greatly ; and among several people there have been shields of several forms and sizes in use at the same period of time, and suited to different occasions. The most ancient and universal form of shields seems to have been the triangular. This we see instances of in all the monuments and gems of antiquity ; our own most ancient monuments show it to have been the most antique shape with usj and the heralds have found it the most convenient, when they had any odd number of figures to represent ; as if three, then two in the broad bottom part, and one in the narrow upper end, it held them very well ; or, if five, they stood as conveniently, three below, and two above. The other form of a shield, now universally used, is square, rounded, and pointed at the bottom : this is taken from the figure of the Samnitic shield used by the Romans, and since copied very generally by the English, French, and

Germans. The Spaniards and Portuguese have the like general form of shields, but they are round at the bottom without the point; and *he Germans, beside the Samnite shield, have two others, *viz.* 1. The bulging shield, distinguished by its bulging out at the flanks ; and, 2. The indented shield, or shield chancree, which has a number cf notches and indentings all round

its sides. The use of the ancient shield of this form was, that the notches served to rest the lance upon, that it might be firm while it gave the thrust ; but, this form being less proper for the receiving armorial figures, the two former have been much more used in the heraldry of that nation. Beside this different form, we find the shields also often distinguished by their different positions, some standing erect, and others slanting various ways, and in different degrees ; this the heralds express by the word pendant i. e. hangjng, they seeming to be hung up not bj the centre, but by the right or left corner. Th» French call these ecu pendant, and the common antique triangular ones ecu ancien. The Italians call this scuto pendente ; and the reason given for exhibiting the shield in these figures in heraldry is, that, in the ancient tilts and tournaments they who were to just at these military exercises were obliged to hang up their shields with their armories, or coats of arms on them, out at the windows and balconies of the houses near the place ; or upon trees, pavilions, or the barriers of the ground, if the exercise was to be performed in the field. Those who were to fight on foot, according to Columbier, had their shields hung up by the right corner, and those who were to fight on horseback had their's hung up by the left. This position of the shields in heraldry is called couche by some writers, though by the generality pendant. It was frequent in all parts of Europe, in arms given between the eleventh and fourteenth centuries ; but the hanging by the left corner, as it was the token of the owner's being to fight on horseback, so it was esteemed the most noble situation ; and all the pendant shields of the sons of the royal family of Scotland and England, and of our nobility at that time, are thus hanging from the left corner. The hanging from this corner was a token of the owner's be-ing of noble birth, and having fought in the tournaments before; but no sovereign ever had a shield pendant jany way, but always erect, as they never formally entered the lists of the tournament. The Italians generally have their shields of arms of an oval form, in imitation of those of the popes and dignified clergy ; but their herald, Petro Sancto, seems to regret the use of this figure of the shield, as an innovation brought in by the painters and engravers as most convenient for holding the figures, but derogatory to the honor of the possessor, as not

representing either antiquity or honors won in war, but rather the honors of some citizen or person of learning. In Flanders, where this author lived, the round and oval shields are in the disrepute he speaks of; but in Italy, beside the popes and dignified prelates, many of the first families of the laitv have them. The secular princes, in many othe countries, also retain this form of the shield, as the most ancient and truly expressive of the Roman elypeus.

SHIELD, in heraldry, the escutcheon or field on which the bearings of coats of arms are placed See HERALDRY.

SHIELD OF SCIPIO, a silver shield made by order of prince Allucius, and presented by him to Scipio Africanus the younger, as an acknowledgment, and in memory of the unparalleled

virtue and generosity he had experienced from that young Roman. Historians have unnecessarily enlarged on this part of Scipio's biography, by filling the mouths of all parties with the most pompous speeches. We give them no credit for their invention. We believe little was said, but much was felt by all parties, at this virtuous and happy meeting : — this triumph of generous sensibility over self-gratification. We give historians full credit, however, when they assure us that Allucius and the lady's parents had brought an immense sum of money to purchase her ransom. This being nobly refused by Scipio gave birth to the silver shield. Allucius, having no other means to express his gratitude, had a massy silver shield made, upon which the •whole transaction was most elegantly and expressively engraved, and presented it to his generous benefactor. But Providence does not always favor even the most virtuous, but in the course of its mysterious events often tries their patience. This shield, which Scipio valued so highly and so justly, was lost with part of the baggage in crossing the Rhone. It lay in that river above 1800 years, till 1665,

when some fishermen found it, and it was carried to Louis XIV.'s cabinet.

SHIELDS, NORTH, a township and sea-port in Tynemouth parish, Northumberland, eight miles east from Newcastle, and 232ˆ north by west from London, on the north side of the river Tyne. The inhabitants are largely employed in the exportation of coals, and the various trades connected with shipping. This extensive and populous town, a few years since, was little better than a dark alley, with a few dirty fishing huts; but wide and airy streets are now built in every direction. Overlooking the river, to the west, stands a range of neat buildings, called Millburn Place; and to the north Dockwray Square commands a fine prospect of the river and county to the south, the houses of which are equal to any in the metropolis ; and many elegant detached mansions have recently been erected in the neighbourhood. The church, or chapel of ease, was erected in 1659. In the tovA are many chapels for dissenters, and a variety of institutions for pleasure, and also for charitable purposes. With the daily increasing population of the town, the trade also keeps pace, and may vie even with that of Newcastle, upwards of 400 vessels being annually laden at this port. Market on Wednesday.

SHIELDS, SOUTH, a market-town, and parish in Chester ward, Durham, situate on the south bank of the Tyne, opposite to North Shields. The inhabitants are chiefly employed in ship-building, and in the glass works, soap works, roperies, and various trades. This place, similarly to North Shields, enjoys all the advantages of trade and commerce, in common with Newcastle, particularly in the coal trade. A great number of trading vessels are built here. The town consists principally of one long, narrow, crooked street, neaily two miles in extent, about the centre of which is an open square, or mar-ket-place, enclosed in which is the town-hall. The church has lately been rebuilt at an expense of upwards of £5000. In this town are nume-

rous places of worship for dissenters. Pett} sessions are held in the town-house, which is also used as an exchange. This town supports an unusual number of benefit societies, and charity schools. The number of vessels belonging to this port is upwards of 500. At this place was established the first laudable society for the saving of sailors from shipwreck. Th« church is a curacy. Markets on Wednesday and Saturday. Fairs, 24th of June, and 1st of September.

SHIFT, v.n., v. a., & \ Saxon j-cyptan, of

SHIFT'ER,W. s. [w. s. > Gothic skypta, to

SHIFT'LESS, adj. j change. To change

place or appearance ; practise some deceptive art for safety : change ; alter ; transfer from place to place; dress in fresh clothes : 'to shift off' is to defer ; put away : a shift, an expedient ; refuge; mean or last resource ; fraud ; evasion ; a woman's under linen : a shifter is one who plays shifts or tricks ; shiftless, wanting expedients or means.

Pare saffron between the two St. Mary's days Or set or go shift it that kntwest the ways. Tusser.

She, redoubling her blows, drave the stranger to no other shift than to ward and go back ; at that time seeming the image of innocency against violence.

tfidneii.

Of themselves, for the most part, they are so cautious and wily-headed, especially being men of so small experience and practice in law matters, that you would wonder whence they borrow such subtilties and sly shifts. Spenser.

The very custom of seeking so particular aid and relief at the hands of God, doth, by a secret contradiction, withdraw them from endeavouring to help themselves, even by those wicked shifts, which they know can never have his allowance whose assistance their prayers seek. Hooker.

I shifted him away, And laid good 'scuses on your ecstacy.

Shaltspeare. Othello.

As it were to ride day and night, and not to have patience to shift me. Id. Henry IV.

If I get down and do not break my limbs, I'll find a thousand shifts to get away.

Id. King John.

All those schoolmen, though they were exceeding witty, yet better teach all their followers to shift than to resolve by their distinctions. Raleigh.

Neither use they their sails, nor place their oars in order upon the

sides ; but, carrying the oar loose, shift it hither and thither at pleasure. Id.

The wisdom of all these latter, times, in princes affairs, is rather fine deliveries, and shifting* of dan gers and mischiefs, when they are near, than solid and grounded courses to keep them aloof. Bacon.

To say, where the notions cannot fitly be recon ciled, that there wanteth a term, is but a thift of ignorance. “*•

We cannot shift : being in we must go on.

Daniel.

Know ye not Ulysses’ shifts ? Their swords less danger carry than their gifts.

Denham.

Not any beast of skill, but extreme shift, How to regain my sever’d company, Compelled me to awake the courteous echo, To give me answer from her mossy couch. Milton

I was such a shifter, that, if truth’ were known, Death was half glad when he had got him down.

Now thift your sails.

Dryden’s JSneid.

SHt

SHI

Slow to icsolve, but in performance quick ; So true, that he was awkward at a trick ; For little souls on little shifts rely. Dryden.

The most beautiful parts must be the most finished, the colours and words most chosen ; many things in both, which are not deserving of this care, must be shifted off, content with vulgar expressions.

Driiden's Dujresnoy.

Men in distress will look to themselves, and leave their companions to shift as well as they can.

L'Estrange,

Nature instructs every creature to shift for themselves in cases of danger. Id.

A fashionable hypocrisy shall be called good manners, so we make a shift somewhat to legitimate the abuse. Id.

If the ideas of our minds constantly change and shift, in a continual succession, it would be impossible for a man to think long of any one thing.

Locke.

Struggle and contrive as you will, and lay your taxes as you please, the traders will thift it off from their own gain. Id.

Here you see your commission ; this is your duty, these are your discouragements : never seek for shifts and evasions from worldly afflictions : this is your reward, if you perform it ; this your doom if you decline it. " South.

Those little animals provide themselves with wheat ; but they can make shift without it.

Addison.

Vegetables being fixed to the same place, and so not able to shift and seek out after proper matter for their increment, it was necessary that it should be brought to them. Woodward.

By various illusions of the devil they are prevailed on to shift off the duties, and neglect the conditions, on which salvation is promised. Rogers's Sermons.

For the poor shiftless irrationals, it is a prodigious act of the great Creator's indulgence, that they are all ready furnished with such clothing.

Derham's Physico Theology.

Since we desire no recompense nor thanks, we ought to be dismissed, and have leave to shift for ourselves. Swift.

Come, assist me, muse obedient, Let us try some new expedient ; Shift the scene for half an hour, Time and place are in thy power. Id.

This perfect artifice and accuracy might have been omitted, and yet they have made shift to move up and down in the water.

More's Antidote against Atheism.

She begs you just would turn you while she shifts.

Young.

Our herbals are sufficiently stored with plants, and we have made a tolerable shift to jeduce them to classes. Baker.

Then shifting his side (as a lawyer knows how), He pleaded again in behalf of the Eyes :

But what were his arguments few people know, For the court did not think they were equally wise.

Cowper.

SHIFTERS, on board a man of war, are certain raen who are employed by the cooks to shift and change the water in which the flesh or fish is put, and laid for some time, in order to fit it for the kettle.

SHIFTING OF PLANTS, in horticulture, the business of removing plants from smaller pots to larger ones, &c., to give them fresh earth or mould. It is necessary occasionally, in all plants ui pots, to assist them with larger ones, accord-

ing as the advanced growth of the particular sorts proceed ; and at the same time to supply an additional proportion of fresh earth about the root-fibres of the plants, to promote their growth : and sometimes, for the application of fresh compost, either in part or wholly.

Some sorts, of a strong free growth, require shifting once every year or two : others, more moderate growers, or of more settled growths, once in two or three years ; and some large growing kinds, that are advanced to a considerable size, having been occasionally shifted, in their increasing growth, from smaller into larger pots of different proportionable sizes, and some from large pots into tubs of still larger dimensions, as large plants of the American aloe, orange, and lemon-tree kinds, $tc. In that advanced state, they sometimes only need occasional shifting once in three or several years, especially when the pots or tubs are capacious, containing a large supply of earth, and are occasionally refreshed with some new compost at top, and a little way down, round the sides about the extreme roots : and in some small slow-growing plants, as in many of the succulent tribe, shifting them once in two or three years may be sufficient ; other sorts want shifting annually into larger pots, according as they advance in a free growth, as the hardy and tender kinds of herbaceous and shrubby plants, &c. Some of the tender annual flower-plants, cultivated in pots, and forwarded in hot-beds, being planted first in small pots, want shifting, in their increasing growth, into larger sizes, once or twice the same season, as from April to the beginning of June, when, being shifted finally into the requisite full-sized pots, they remain during their existence. But though large grown plants, either of the shrub or tree kind, as we'l as other plants of large growths, after being finally stationed in the fullest-sized large pots and tubs, succeed several years without shifting, they should in the interval have the top earth loosened, and down round the sides to some little depth, removing the loosened old soil, and filling up the pots, tubs, &c., with fresh earth, settling it close by a moderate watering. *

The season for occasional shifting plants is principally the spring and autumn, as from March to May for the spring shifting ; and from August to the end of September for the autumn ; though, in plants that can be removed with the full balls of earth about the roots, it may be occasionally performed almost at any time; however, for any general shifting, the spring and autumn are the most successful seasons, as the plants then sooner strike fresh root; and many sorts preferably in the spring, by having the benefit of the same growing season, and that of summer. In performing the business, it is mostly proper to remove the plants from the smaller to the larger pots, with the balls of earth about the roots, either wholly, or some of the outward old earth, the dry or matted radical fibres only being carefully trimmed away, so as not to disturb the principal roots in the bodies of them, as by this means the plants receive but little check in their growth by the removal. Sometimes, when any particular plants, shrubs,

or trees, &c , in their pots, discover by their tops that they are in a declining state, as probably the defect may be either in the root, or the old balls of earth, it may be proper to shake all the earth entirely away, in order to examine the roots, and to trim and dress them as the case may require, replanting them in entire fresh compost or mould.

In preparing for this work, where necessary to give larger pots, &c., it is proper to provide them of suitable sizes, in some regular gradation larger than the old ones, according to the nature and growth of the plants, the whole being placed ready, with a proper quantity of fresh compost earth, in proportion to the number and size of the plants intended to be shifted : then let those plants intended to be removed with balls oe taken out of their old pots separately, with the whole balls or clumps of earth about the roots as entire as possible ; and when large, or tolerably full, with a knife trim off some of the outward loosest earth, and the extreme fibres of the roots ; but when small, and adhering together compactly, the whole may be preserved entire; and in either case, where there are very matted, dry, or decayed fibres surrounding the balls, they should be trimmed as it may seem necessary : in those of a fresh lively growth, the loose straggling parts only should be cut away. The requisite pruning, trimming, or dressing in the heads or tops, should also be given where it may seem proper, according to the state of growth, and the natural habit of the different plants ; but many sorts require little or none of this sort of attention. Then having placed some pieces of tile or oyster shell, &c., loosely over the holes at bottom, and laid in a little fresh earth, two, three, or four inches deep, or more, according to the size of the pot, the plant should be set in with its ball of earth, as above, filling up around it with more fresh mould, raising it an inch or two over the top of the ball; and giving directly a moderate watering, to settle the earth close about the ball and roots regularly in every part, in a proper manner : in such cases, where the ball in particular plants appears very

compactly hard and binding, it may be proper to loosen it a lit-tle, by thrusting a sharp pointed stick down into the earth into different parts, giving it a gentle wrench, to open the earth moderately ; or sometimes it may also be proper to trim away some of the old earth on the top and sides, then planting it as above, and filling up round and over the ball with fresh earth, and watering it afterwards. Also, in shifting hardy or tender, shrubby, succulent, or herbaceous plants, when any appear of a sickly, weak, or unhealthy growth, it may be adviseable to clear off a considerable part of the outward old earth from the balls about the roots, or, in some cases, to shake it wholly away, that the defects in the growths, occasioned either by faults in the roots or in the earth, may be removed by pruning out any decayed or bad parts of the roots, and replanting them wholly in fresh earth. After shifting a moderate watering will of course be required.

SHIFTING A TACKLE, in sea-language, the act of removing the blocks of a tackle to a greater distance from each other, on the object

to which they are applied, in order to give a greater scope of extent to their purchase. This operation is otherwise called fleeting. Shifting the helm denotes the alteration of its position, by pushing it towards the opposite side of the ship. Shifting the voyal signifies changing its position on the capstern, from the right to the left, and vice versa.

SHIGGAION, in ancient Hebrew music, is either the name of a musical instrument, or of a tune whose notes were very much diversified. Psal. vii. title.

SHIITES, a religious sect, or rather a religious political party among the Mahometans, which originated on the death of Mahomet, from the rejection of his son-in-law Ali, and which still divides all his followers in Turkey, Arabia, and Persia. If Christians may presume to de-cide in a Mahometan controversy, we would say the Shiites have justice on their side. Their opponents are called Sonnites.

The name Shiites properly signifies sectaries or adherents in general, but is peculiarly used to denote those of Ali Ebn Abi Taleb; who maintain him to be lawful caliph and imam, and that the supreme authority, both in spirituals and temporals, of right belongs to his descendants. The principal sects of the Shiites are five, which are subdivided into an almost incredible num-ber; so that some understand Mahomet's prophecy of the seventy odd sects, of the Shiites only. Their general opinions are, 1. That the peculiar

designation of the imam, and the testimonies of the koran and Mahomet concerning him, are necessary points. 2. That the imams ought necessarily to keep themselves free from light sins as well as more grievous. 3. That every one ought publicly to declare who it is that he adheres to, and from whom he separates himself, by word, deed, and engagement, and that herein there should be no dissimulation. But in this last point some of the Zeidians, a sect so named from Zeid, the son of Ali, surnamed Zein al Abedin, and great grandson of Ali, dissented from the rest of the Shiites. As to other articles, wherein they agreed not, some of them came pretty near to the notions of the Motazalites, others to those of the Moshab-behites, and others to those of the Sonnites. Among the latter of these, Mahommed al Baker, another son of Zein al Abedin's, seems to claim a place : for his opinion as to the will of God was, that God willeth something in us, and something from us, and that he willeth from us he has revealed to us; for which reason he thought it preposterous that we should employ our thoughts about those things which God willeth in us, and neglect those which he willeth from us : and, as to God's decree, he held that the way lay in the middle, and that there was neither compulsion nor free liberty. A tenet of the Khattabians, or disciples of one Abu'l Khattab, is too peculiar to be omitted. These maintained paradise to be no other than the pleasures of this world, and hell-fire to be the pains thereof, and that the world will never decay : which proposition being first laid down, it is no wonder they went farther, and declared it lawful to indulge themselves in drinking wine and whoring, and

to do other things forbidden by the law, and also to omit doing the things commanded by the law. Many of the Shiites have carried their veneration for Ali and his descendants so far that they transgressed all bounds of reason and decency ; though some of them are less extravagant than others. The Gholaites, who had their name from

their excessive zeal for their imams, were so highly transported therewith that they raised them above the degree of created beings, and attributed divine properties to them; trangres-sing on either hand, by deifying of mortal men, and by making God corporeal : for one while they liken one of their imams to God, and another while they liken God to a creature. The sects of these are various, and have various appellations in different countries. Abd'allah Ebn Saba (who had been a Jew, and had asserted the same thing of Joshua the son of Nun), was the ringleader of one of them. This man gave the following salutation to Ali, *viz.* Thou art Thou, i. e. thou art God : and hereupon the Gholaites became divided into several species; some maintaining the same thing, or something like it, of Ali, and others of some of one of his descendants ; affirming that he was not dead, but would return again in the clouds, and fill the earth with justice. But, how much soever they disagreed in other things, they unanimously held a metempsychosis, and what they call al Holul, or the descent of God on his creatures ; meaning thereby that God is present in every place, and speaks with every tongue, and appears in some individual persons; and hence some of them asserted their imams to be prophets, and at length gods. The Nosairians and the Isha-tians taught that spiritual substances appear in grosser bodies ; and that the angels and the devil have appeared in this mariner. They also assert that God has appeared in the form of certain men ; and since, after Mahomet, there has been no man more excellent than Ali, and, after him, his sons have excelled all other men, that God has appeared in their form, spoken with their tongue, and made use of their hands, for which reason, say they, we attribute divinity to them. And, to support these blasphemies, they tell several miraculous things of Ali, as his moving the gates of Khaibar, which they urge as a plain proof that he was endued with a particle of divinity, and with sovereign power, and that he was the person in whose form God appeared, •with whose hands he created all things, and with whose tongue he published his commands ; and therefore they say he was in being before the creation of heaven and earth. In so impious a manner do they seem to wrest those things which are said in Scripture of Christ, by applying them to Ali. These extravagant fancies of the Shiites, however, in making their imams partakers of the divine nature, and the impiety of some of those imams in laying claim thereto, are so far from being peculiar to this sect, that most of the other Mahometan sects are tainted with the same madness ; there being many found among them, and among the Susis especially, who pretend to be nearly related to heaven, and who boast of strange revelations before the credulous people. To this account of the Shiites

of the first ages we shall subjoin a brief mention of the great schism at this day subsisting between the Sonnites and the Shiites, or partisans of Ali, and maintained on either side with implacable hatred and furious zeal. Though the difference arose at first on a political occasion, it has, notwithstanding, been so well improved by additional circumstances, and the spirit of contradiction, that each party detest and anathe-matise the other as abominable heretics, and farther from the truth than either the Christians or the Jews. The chief points wherein they differ are, 1 . That the Shiites reject Abu Beer, Omar, and Othman, the three first caliphs, as usurpers and intruders; whereas the Sonnites acknowledge and respect them as rightful imams. 2. The Shiites prefer Ali to Mahomet, or at least esteem them both equal ; but the Sonnites ad-mit neither Ali, nor any of the prophets, to be equal to Mahomet. 3. The Sonnites charge the Shiites with corrupting the koran, and neglecting its precepts ; and the Shiites retort the same charge on the Sonnites. 4. The Sonnites receive the Sonna, or book of traditions of their prophet, as of canonical authority ; whereas the Shiites reject it as apocryphal and unworthy of credit. And to these disputes, and some others of less moment, is principally owing the anti-pathy which has long reigned between the Turks, whc are Sonnites, and the Persians, who are of the sect of Ali. — Sale's Koran, Introduction.

SHILLER SPAR, in mineralogy, a species of hornblende. See MINERALOGY.

SHIL'LING, n. s. Saxon and Erse fcyllinˆ, Belg. schelling. A coin of various value in different times. It is now twelve pence.

Five of these pence made their shilling, which they called stilling, probably from scillingus, which the Romans used for the fourth part of an ounce ; and forty-eight of these settlings made their pound ; and four hundred of these pounds were a legacy for a king's daughter, as appeareth by the last will of king Alfred. Camden's Remains.

The very same shilling may at one time pay twenty men in twenty days, and at another rest in the same hands one hundred days. Locke.

Who, with much pains exerting all his sense, Can range aright his shillings, pounds, and pence.

Young.

SHILLING, an English silver coin, equal to the twentieth part of a pound. Freherus derives the Saxon scilling, whence our shilling, from

a corruption of siliqua ; proving the derivation by several texts of law, and, among others, by the twenty-sixth law, De annuis legatis. Skinner deduces it from the Saxon scild, shield, by reason of the escutcheon of arms thereon. Bishop Hooper derives it from the Arabic schecle, signifying a weight; but others, with greater probability, deduce it from the Latin sicilicus, which signified a quarter of an ounce, or the forty-eighth part of a Roman pound. In confirmation of this etymology it is alleged that the shilling kept its original signification, and tore the same proportion to the Saxon pound as sicilicus did to the Roman and the Greek, being exactly the forty-eighth part of the Saxon pound; a discovery which we owe to Mr. Lam-barde. (Explic. Rer. et Yerl'. Sax. vov. l.iljiai.

However, the Saxon laws reckon the pound in the round number at fifty shillings, but they really coined out of it only forty-eight ; the value of the shilling was five-pence ; but it was reduced to fourpence above a century before the conquest; for several of the Saxon laws, made in Athelstan's reign, oblige us to take this estimate. Thus it continued to the Norman times, as one of the conqueror's laws sufficiently ascertains ; and it seems to have been the common coin by which the English payments were adjusted. After the conquest the French solidus of twelve pence, which was in use among the Normans, was called by the English name of shilling ; and the Saxon shilling of fourpence took a Norman name, and was called the groat, or great coin, because it was the largest English coin then known in England. It has been the opinion of the bishops Fleetwood and Gibson, and of the antiquaries in general, that, though the method of reckoning by pounds, marks, and shillings, as well as by pence and farthings, had been in constant use even from the Saxon times, long before the Norman conquest, there never was such a coin in England as either a pound or a mark, nor any shilling, till the year 1504 or 1505, when a few silver shillings or twelvepences were coined, which have long

since been solely confined to the cabinets of collectors. Mr. Clarke combats this opinion, alleging that some coins mentioned by Mr. Folkes, under Edward I., were probably Saxon shillings new minted, and that archbishop Aelfric expressly says (Gram. Saxon, p. 52) that the Saxons had three names for their money, *viz.* mancuses, shillings, and pennies. He also urges the different value of the Saxon shilling at different times, and its uniform proportion to the pound, as an argument that their shilling was a coin ; and the testimony of the Saxon gospels, in which the word we have translated pieces of silver is rendered shillings, which, he says, they would hardly have done, if there had been no such coin as a shilling then in use. Accordingly the Saxons expressed their shilling in Latin by siclus and argenteus. He farther adds that the Saxon shilling was never expressed by solidus till after the Norman settlements in England ; and, howsoever it altered during the long period that elapsed from the conquest to the time of Henry VII., it was the most constant denomination of money in all payments, though it was then only a species of account, or the twentieth part of the pound sterling : and when it was again revived as a coin, it lessened gradually as the pound sterling lessened, from the twenty-eighth of Edward III. to the forty-third of Elizabeth. In 1560 there was a peculiar sort of shilling struck in Ireland, of the value of ninepence English, which passed in Ireland for the value of twelvepence. The motto on the reverse was posui Deum adjutorem meum. Of these shillings, according to Malynes, eighty-two went to the pound ; they therefore weighed twenty grains one-fourth each, which is somewhat heavier in proportion than the English shilling of that time, sixty-two whereof went to the pound, each weighing ninety-two grains seven-eighths ; and the Irish shilling being valued at the tower at ninepence English, that is, one-fourth

part less than the English shilling, it should therefore proportionably weigh one-fourth part less, and its full weight be somewhat more than sixty-two grains ; but some of them found at this time, though much worn, weighed sixty-nine grains. In 1598 five different pieces of money of this kind were struck in England for the service of the kingdom of Ireland at twelvepence each; half shillings to be current at sixpence, and quarter shillings at threepence. Pennies and halfpennies were also struck of the same kind, and sent over for the payment of the army in Ireland. The money thus coined was of a very base mixture of copper and silver; and two years after there were more pieces of the same kind struck for the same service, which were still worse; the former being three ounces of silver to nine ounces of copper ; and these latter only two ounces eighteen pennyweights to

nine ounces two pennyweights of the alloy. The Dutch, Flemish, and Germans have likewise their shilling, called schelin, schilling, scalin, &c., but these, not being of the same weight or fineness with the English shilling, are not current at the same value. The English shilling is worth about twenty-three French sols ; those of Holland and Germany about eleven sols and a half; those of Flanders about nine. The Dutch shillings are also called sols de gros, because equal to twelve gros. The Danes have copper shillings worth about one-fourth of a farthing sterling.

SHILL-I-SHALL-I. A corrupt reduplication of ‘ shall I ?’ The question of a man hesitating. To stand shill-I-shall-I is to continue hesitating and procrastinating.

I am somewhat dainty in making a resolution, because, when I make it, I keep it : I don’t stand ihill-I-shaU-l then : if I say ‘t, I’ll do ‘t.

Congreve’s Way of the World.

SHILLUK, a town of«Africa, on the banks of the Bahr el Abiad, or true Nile. The houses are built of clay, and the inhabitants are idolaters, have no other clothing than bands of long grass, which they pass round the waist and between the thighs. They are all black; both sexes are accustomed to shave their heads. The people of Shilluk have the dominion of the river, and take toll of all passengers, in such articles of traffic as pass among them. They are hospitable to such as come among them in a peaceable manner, and never betray those to whom they have once accorded protection. Long. 32° 26’ E., lat. 130°0° N..

SHILOH, a term much disputed among interpreters and commentators upon Scripture. In Gen. xlix. 10 it denotes the Messiah. The patriarch Jacob foretels his coming in these words : ‘ the sceptre shall not depart from Judah, nor a lawgiver from between his feet, until Shiloh come : and unto him shall the gathering of the people be.’ The Hebrew text reads rbv IO» ‘3”>J7 until Shiloh come. All Christian commentators agree that this-word ought to be understood of the Messiah, or Jesus Christ; but all are not agreed about its literal and grammatical signification. St. Jerome, who translates it by Qui mittendus est, manifestly reads Shiloach, sent, instead of Shiloh. The Septuagint have it

SHI

Eo > c av t\$i) TO. airtoKifiiva civrw ; or, Eu > e av t\$n ‘w awoKiiTcu (as if they had read fiv instead of rblff), i. e. ‘ Until the coming of him for whom it is reserved ;’ or, ‘ till we see arrive that which is reserved for him.’ Some translate, ‘ the sceptre shall not depart from Judah till he comes t0 whom it belongs ;’ rbv or ‘SttT instead o(~]h* »”?. Others, ‘till the coming of the peace-maker ;’ or, ‘ the pacific ;’ or, ‘ of prosperity,’ n*?CT prosperatus est. Shalah signifies ‘ to be in peace, to be in prosperity ;’ others, ‘ till the birth of him who shall be born of a woman that shall conceive without the knowledge of a man,’ “?HP or K’b > 57, secundina, fluxus. Le Clerc explains it, « the sceptre shall not depart from Judah, till its end, its ruin ; till the downfal of the kingdom of the Jews,’ “?KttT or rhff it has ceased, it has finished. But this explains nothing. It is only saying, the sceptre shall not depart till it depart ! A more modern author derives Shiloh from rhv, fatigare, which sometimes signifies to be weary, to suffer; ‘till his labors, his sufferings, his passion, shall happen.’ But, whatever be the precise grammatical signification of Shiloh, it is sufficient for us to show that the ancient Jews are in this matter agreed with the Christians ; they acknowledge that this word stands for the Messiah, the Ring. It is thus that the paraphrasts Onkelos and Jonathan, that the ancient Hebrew commentaries upon Genesis, and that the Talmudists themselves explain it. If Jesus Christ and his apostles did not make use of this passage to prove the coming of the Messiah, it was because then the completion of this prophecy was not sufficiently manifest. The sceptre still continued among the Jews; they seemed to have still kings of their own nation, though the royal family was extirpated by Herod ; but soon after the sceptre was entirely taken away from them, and has never been restored to them since. But that Jacob’s prophecy was literally fulfilled is clear from the whole history of the Jews. Nothing is more evident than that the posterity of Judah preserved their distinct existence as a tribe, or rather as a nation, together with a power of government and legislation, even when they were occasionally subject to other nations, till Jesus Christ was born into the world. The tribe of Judah was the most numerous of the twelve when they came out of Egypt : under Moses they led the van in the wilderness : after leaving it they were divinely ordered to make the first attack on the remaining Canaanites (Judges, i. 1, 2), as well as

afterwards against the Benjamites (xx. 18). Caleb, and his son-in-law Othniel, the first judge of Israel after Joshua, were of this tribe : and, from the death of Saul, the royal house of David held the supreme power till the Babylonish captivity. Even under the Chaldeans, Medes and Persians, Jeconiah, Zerubbabel, and Nehemiah, who were all of this tribe, held an evident superiority over the Jews. (See 2 Kings xxv. Ezra, i — vi. Neh. i — xiii.) And foi a period of about 450 years, from the death of Zerubbabel to the. usurpation of Herod, the government of Judah continued in the descendants of Zerubbabel, and afterwards in the Asmonean, or Maccabbean family ; till the usurpation of Herod the Ascalonite or Idumean, a few years before the birth of our Saviour, showed that the completion of the prophecy by the coming of Shiloh, and the departure oif the sceptre from Judah, was about to take place. See HEROD, and the chronological series of the princes of Judah, under JUDAH. The total conquest and dispersion of the Jews soon after, and the dreadful destruction of Jerusalem by the Romans, completely fulfilled the prophecies of Jacob and our Saviour. See JEWS.

SHILOH, in ancient geography, a celebrated city of Israel, in the tribe of Ephraim, about ten miles south of Shechem, and twenty-five north of Jerusalem. In this city Joshua divided the Western Canaan among the nine tribes and a half (Josh, xviii.) ; and here he fixed the Tabernacle of God ; where it remained for about 350 years, till it was taken by the Philistines, little to their advantage. Here too the remaining 200 Benjamites provided themselves with wives at the vintage festival (Judges xxi. 23.); as the Romans afterwards did with the Sabine virgins.

SHIM, in agriculture, a tool of the tillage kind, used in breaking down and reducing the more stiff and heavy sorts of land, as well as cutting up and clearing them from weeds. In the Hertford Agricultural Survey by the Board of Agriculture, the writer remarks that a tool of this kind is in use by Mr. Calvert, which differs from those usually employed, in which the cutting-iron or plate, which for the work it is adapted for, as that of cutting up weeds on two-bout or four-furrow Essex ridges, or of cleaning land without ploughing or burying the soil, is a small segment of a large circle. It despatches a ridge at a time, and is an implement that performs its business well, and which deserves the notice of the tillage-farmer in other places. It is readily altered for flat work, and is said to be had recourse to by other farmers with success in the same district. A useful tool of this sort has also been recommended by Mr. Young, in his Annals, the bint of which he took from the Berkshire one, and to which the beam and block is capable of being applied. In a wide interval, the three shares maybe worked on a

level. Between the rows of cabbages, after earthing up, the two external shares may be set to cut the weeds that are apt to rise on the sides of the ridges, without disturbing too much earth, and the centre share sunk to scrape the bottom of the furrow. The centre one may also be worked alone, between narrow rows. In forging the shares of all shims, he has well observed that the blacksmith should be careful to give them tendency enough into the ground, by bending them downwards : for want of this caution, he has found many of them to work badly. The wheel in the beam counteracts this tendency sufficiently when at work. These tools should be upon all tillage farms.

SHIM, POTATOE, a tool of the shim kind, usea for cleaning the potatoe crops.

SHIN, n. s. Saxon j-cina; Teut. schien. Tlie forepart of the leg.

j. bruised my shin the other day with playing at sword and dagger.

Shakspeare. Merry Wives of Windsor. The shin bone, from the knee to the instep, is made by shadowing one half of the leg with a single shadow. Peacham.

His leg then broke, Had got a deputy of oak; For when a thin in fight is cropt, The knee with one of timber’s propt. Hudibras, As when to an house we come, To know if any one’s at home, We knock ; so oue must kick your shin, Ere he can find your soul’s within. Anonymous.

SHINAR, a province of Babylonia, where the famous tower of Babel was built. See BABEL. It had mountains named Zagraei, and a city and river named Singara. Ashur the son of Shem emigrated out of it.

SHINE, v. n. & n. s. > Pret. I shone, I have SHI’NY, adj. S shone ;

sometimes I

shined, I have shined. Sax. j-cman ; Belg. tchijnen. To have bright resplendence ; to glitter ; glisten ; gleam ; fair weather : the adjective corresponding.

They are waxen fat, they shine. Jer. v. 28.

The Lord make his face shine upon thee, and be gracious. Numbers vi. 25.

The light of righteousness hath not shined unto us, and the sun of righteousness rose not upon us.

Wisdom v. 6.

So proud she shined in her princely state, Looking to heaven, for earth she did disdain, And sitting high. Faerie Queene.

When Aldeboran was mounted high, Above the shiny Cassiopeia's chair, One knocked at the door, and in would fare. Id.

To-day the French,

All clinquant, all in gold, like heathen gods, Shone down the English ; and to-morrow Made Britain India : every man that stood Shewed like a mine. Shukspeare

The moon shines bright : in such a night as this, When the sweet wind did gently kiss the trees, And they did make no noise.

Id. Merchant of Venice. How bright and goodly shines the moon ! — The moon ! the sun : it is not moonlight now.

Sliakspeare. The night

Is shiny, and they say we shall embattle By th' second hour o' th' morn.

Id. Antony and Cleopatra.

Clear pools greatly comfort the eyes, wheu the sun is overcast, or when the moon shineth. Bacon.

He that has inured his eyes to that divine splendour which results from the beauty of holiness is not dazzled with the glittering shine of gold, and considers it as a vein of the same earth he treads on.

Decay of Piety.

Fair daughter, blow away these mists and clouds, And let thy eyes shine forth in their full lustre.

Denham.

True paradise inclosed with shining rock. Milton. We can dismiss thee ere the morning shine. Id. Fish with their fins and shining scales. Id.

Her face was veiled ; yet to my fancied sight Love, sweetness, goodness, in her person shined So clear, as in no face with more delight. Id.

Celestial light

Shine inward, and the mind through all her powers

Irradiate. Id.

Be it fa:- or foul, or rain or shine. - Dryden.

While from afar we heard the cannons play, Like distant thunder on a shiny day, For absent friends we were ashamed to fear. Id.

The sun shines when he sees it. Iˆocke..

The colour and shining of bodies is nothing but the different arrangement and refraction of their mi-nute parts. J,j.

Cato’s soul

Shines out in every thing she acts or speaks ; While winning mildness and attractive smiles Dwell in her looks, and with becoming grace Soften the rigour of her father’s virtues. Addisoii.

The reformation, in its first establishment, produced its proper fruits, and distinguished the whole age with shining instances of virtue and morality.

Id. Freeholder.

Of all the’ enamelled race, whose silvery wing Waves to the tepid zephyrs of the spring, Or swims along the fluid atmosphere, Once brightest shined this child of heat and air.

Pope.

Say, in what mortal soil thou deignest to grow ? Fair opening to some court's propitious shine, Or deep with diamonds in the flaming mine 1 Id.

Few are qualified to sldne in company ; but it is in most men's power to be agreeable. Swift.

SHI'NESS, n. s. From SHY. Unwillingness to be tractable or familiar.

An incurable shiness is the vice of Irish horses, and is hardly ever seen in Flanders, because the winter forces the breeders there to house and handle their colts. Temple.

They were famous for their justice in commerce, but extreme shiness to strangers : they exposed their goods with the price marked upon them, and then retired. Arbuthnot.

SHIN'GLE, n. s. Teut. schindel. A thin board to cover houses.

The best to cleave is the most useful for pales, laths, shingles, and wainscot.

Mortimer's Husbandry.

SHINGLES, in building, are small pieces of wood, or quartered oaken boards, sawn to a certain scantling, or, as is more usual, cleft to about an inch thick at one end, and made like wedges, four or five inches broad, and eight or nine long. They are used instead of tiles or slates, especially for churches and steeples ; however, this covering is dear ; yet, where tiles are very scarce, and a light covering is required, it is preferable to thatch ; and, where they are made of good oak, cleft, and not sawed, and well seasoned in wate • and the sun, they make a sure, light, and durable covering. The building is first to be covered all over with boards, and the shingles nailed upon them.

Sax. r-cip ; Belg. I schip. A large hol-low vessel made to 1 pass on or over the [seas : to put into a ship : the derivatives correspond-

) ingsent in the navy shipmen that had know-of the sea. 1 Kings ix. 27.

They have made all thy shipboards of fir-trees, and brought cedars from Lebanon to make masts.

Ezek. xxvii. 5.

The shipmaster came to him. and said unto him, What meanest thou, O sleeper 1 arise, call upon thy God Jonah i. 6.

SHIP, n. s. & v. a. SHIP'BOARD, SHIP'BOY, SHIP'MAN, SHIP'M ASTER, SHIP'PING, SHIP'WRECK, n. s. & v. n. SHIP'WRIGHT, n. s.

They took shipping and came to Capernaum, seeking for Jesus. John vi. 24.

Holding faith and a good conscience, which some having put away, concerning faith, have made shipwreck. 1 Timothy 1.

Two other ships loaded with victuals were burnt, and some of the men saved by their shipboats.

Knolles.

The emperor, shipping his great ordnance, departed down the river. Id. History of the Turkt.

All my followers to the eager foe Turn back, and fly like ships before the wind.

Shakspeare. Henry VI. My father at the road Expects my corning, there to see me slapped.

Shakspeare.

I myself have the very points they blow, AH the quarters that they know I' th' ihipman't card. Id. Macbeth.

Few or none know me : if they did, This thipbou's semblance hath disguised me quite.

Shakspeare.

Whence the sun ‘gins his reflection, Shipwrecking storms and direful thunders break. Id. Why such impress of shipwright!, whose sore task Does not divide the Sunday from the week ? Id.

Before Caesar’s invasion of this land, the Britons had not any shipping at all, other than their boats of twigs covered with hides. Raleigh.

There made forth to us a small boat, with about eight persons in it, whereof one of them had in his hand a tipstaff, who made aboard our ship. Bacon.

Let him go on shipboard, and the mariners will not leave their starboard and larboard. Bramhalt.

Instead of a ship, he should levy upon his country such a sum of money, and return the same to the treasurer of the navy : hence that tax had the denomination of *Wp-money, by which accrued the yearly sura of two hundred thousand pounds.

Clarendon. Friend, What dost thou make a shipboard ? To what end ?

Dry den.

A breeze from shore began to blow, The sailors ship their oars, and cease to row ; Then hoist their yards a-trip, and all their sails Let fall. Id.

Fishes first to shipping did impart ; Their tail the rudder, and their head the prow. Id.

Nor is indeed that man less mad than these, Who freights a ship to venture on the seas, With one frail interposing plank to save From certain death, rolled on by every wave. Id.

They might have it in their own country, and that by gathering up the shipwrecks of the Athenian and Roman theatres. Id.

We are not to quarrel with the water for inundations and shipwrecks. L’ Estrange.

Bold were the men, who on the ocean first Spread their new sails, when shipwreck was the worst.

Waller.

In Portugal men spent with age, so as they can-not hope for above a year, ship themselves away in a Brazil fleet. Temple.

The numbers and courage of our men, with the strength of our shipping, have for many ages past made us a match for the greatest of our neighbours at land, and an overmatch for the strongest at sea.

Id.

\ ship carpenter of old Rome could not have talked more judiciously. Addison.

The canal that runs from the sea into the Arno, pives a convenient carriage to all goods that are to he shipped o/T. Id.

A square piece of marble shews itself to have been a little pagan monument of two persons who were shipwrecked. Id.

Thou that canst still the raging of the seas, Chain up the winds, and bid the tempests cease, Redeem my shipwrecked soul from raging gusts Of cruel passion and deceitful lusts. Prior.

This sea war cost the Carthaginians five hundred quinquiremes, and the Romans seven hundred, including their shipwrecks. Arbuthnot.

The Roman fleet, although built by shipwrights, and conducted by pilots, both without experience, defeated that of the Carthaginians. Id.

A single leaf can waft an army o'er, Or ship off senates to some distant shore. Pope.

As when a shipwright stands his workmen o'er, Who ply the wimble some huge beam to bore, Urged on all hands it nimbly spins about, The grain deep piercing, till it scoops it out. Id.

Vast numbers of ships, in our harbours, and shipwrights in our sea-port towns. Swift.

It curbs their impetuosity ; puts the reins into the hands of reason ; quells the rising storm ere it make shipwreck of the conscience ; and teaches a man to leave off contention before it be meddled with.

Mason.

SHIP is a general name for all large vessels, particularly those

equipped with three masts and a bowsprit; the masts being composed of a lower-mast, topmast, and top-gallant mast ; each of these being provided with yards, sails, &c. Ships, in general, are either employed for war or merchandise.

SHIP, HOSPITAL, a vessel fitted up to attend on a fleet of men of war, and receive their sick or wounded ; for which purpose her decks should be high, and her ports sufficiently large. Her cables ought also to run upon the upper deck, to the end that the beds or cradles may be more commodiously placed between decks, and admit a free passage of the air to disperse that which is offensive or corrupted.

SHIP, MERCHANT, a vessel employed in commerce to carry commodities of various sorts from one port to another. The largest merchant-ships are those employed by the different companies of merchants who trade to the East Indies. They are, in general, larger than our forty-gun ships ; and are commonly mounted with twenty guns on their upper deck, which are nine pounders ; and six on their quarter-deck, which are six pounders.

SHIP'S FORM GAUGE, an instrument that has been recommended as fit to ascertain any alteration in the bottom of a ship, by its hogging or sagging ; and also to regulate the stpwage of a ship. ' All ships,' says Mr. Hutchinson, ' of any consequence are built with staunchions fixed from the kelson to the middle of all the lower-deck beams fore and aft, in order to support them in their exact, regular height, as well as the whole frame of the ship in the regular form in which she was built upon the stocks ; yet, notwithstanding these staunchions, it is proved from experience that our ships' bottoms, hitherto, by the pressure of water and improper stowage, have generally been hogged upwards, or sagged downwards, and most about the midship frame or main body of the ship, which is commonly about the fore part of the main hatchway ; which natu rally makes it the best place at which to fix the ship's form gauge, where either the hogging or

sagging c flier bottom may be observed and seen •:oonest and best, to

regulate the stowage of leavy materials to the greatest advantage, so as :o keep her bottom nearly in the same form in which she was built. The gauge I recommend is nothing more than a narrow plate of iron divided into inches and quarters like the side of a carpenter's rule. Let this be fixed to the after side of the staunchion now mentioned, with its upper end projecting two or three inches above the staunchion; a groove being cut out for it in the after side of the lower-deck beam, and a mark being made (when the ship is on the stocks) at the part of the beam which corresponds to the 0 on the gauge. When the ship alters in he. shape the gauge will slide up and down in this groove, and the quantity of hogging or sagging-will be pointed out on the gauge by the mark o. the beam. The stowage may then be so manager as to bring this mark to coincide again with the 0, or to approach it as near as we see necessary.' SHIPS, MANAGEMENT OF, AT SINGLE ANCHOR, is the method of taking care of a ship while rid-ing at single anchor in a tideway, by preventing her from fouling her anchor, &c. The following rules for this purpose are given by the ingenious Mr. Henry Taylor of North Shields, and will be found of consequence : — Riding in a tideway, with a fresh-of-wjnd, the ship should have what is called a short or windward service, say forty-five or fifty fathoms of cable, and al-ways with the helm hard down, but more or less so according to the strength or weakness of the tide. It is a known fact that many ships sheer their anchors home, drive on board of other ships, and on the sands near which they rode, before it has been discovered that the anchor had been moved from the place where it was let go. When the wind is cross, or nearly cross, off shore, or in the opposite direction, ships will always back. This is done by the mizen-top-sail, assisted, if needful, by the mizen-stay-sail ; such as have no mizen-top-sail commonly use the maintop-sail, or if it blows fresh, a top-gallant-sail, or any such sail at the gaff. In backing, a ship should al-ways wind with a taught cable, that it may be certain the anchor is drawn round. In case there is not a sufficiency of wind for that purpose, the ship should be hove apeak. Riding with the wind afore the beam, the yards should be braced forward ; if abaft the beam they are to be braced all a-back. If the wind is so far aft that the ship will not back (which should not be attempted if, when the tide ceases, the ship forges ahead and brings the buoy on the lee-quarter), she must be set a-head : if the wind is far aft, and blows fresh, the utmost care and attention are necessary, as ships riding in this situation often break their sheer, and come to windward of their anchors again. When the ship lies in this ticklish situation, the after-yards must be braced forward, and the fore-yards the contrary way : she will lie safe, as the buoy can be kept on the lee-quarter, or, suppose the helm is a-port, as long as the buoy is on the larboard quarter. With the helm thus, and

the wind right aft, or nearly so, the starboard, main, and fore braces should l>e hauled in. This supposes the main braces to lead forward. When the ship begins to tend to VOL. XX.

leeward, and the buoy comes on the weather-quarter, the first thing to be done is ty brare about the fore-yard ; and, when the wind comes near the beam, set the fore-stay-sail, and keep it standing until it shakes; then brace all the yards sharp forward, especially if it is likely to blow strong. If lying in the aforesaid position, and she breaks her sheer, brace about the main yaro immediately; if she recovers and brings tht, buoy on the lee or larboard quarter, let the main-yard be again braced about ; but if she come to a sheer the other way, by bringing the buoy on the other quarter, change the helm and brace the fore-yard to. Riding leeward tide with more cable than the windward service, and expecting the ship will go to windward of her an-chor, begin as soon as the tide ceases to shorten an the cable. This is often hard work ; but it is jiecessary to be done, otherwise the anchor may be fouled by the great length of cable the ship has to draw round ; but, even if that could be done, the cable would be damaged against the bows or cutwater. It is to be observed that, when a ship rides windward tide, the cable should be cackled from the short service towards the anchor, as far as will prevent the bare part touching the ship. When the ship tends to windward, and must be set a-head, hoist the fore staysail as soon as it will stand, and, when the buoy comes on the lee-quar- ter, haul down the fore-stay-sail, brace to the fore-yard, and put the helm a-lee ; for till then the helm must be kept a-weather and the yards full. When the ship rides leeward tide, and the wind increases, care should be taken to give her more cable in time, otherwise the anchor may start, and probably it will be troublesome to get her brought up again ; and this care is the more necessary when the ship rides in the hause of another ship. Previous to giving a long service it is usual to take a weather-bit, that is, a turn of the cable over the windlass end, so that in veering away the ship will be under command. The service ought to be greased, which will prevent its chafing in the hause. If the gale continues to increase, the topmasts should be struck in time ; but the fore-yard should seldom, if ever, be lowered down, that in case of parting the foresail may be ready to be set. At such times there should be more on deck than the common anchor-watch, that no accident may happen from inattention or falling asleep. In a tideway, a second anchor should never be let go but when absolutely necessary ; for a ship will sometimes ride easier and safer, especially if the sea runs high, with a very long scope of cable and one anchor, than with less length and two cables ; however, it is advisable,

as a preventive, when ships have not room to drive, and the night is dark, to let fall a second anchor under foot, with a range of cable along the deck. If this is not thought necessary to be done, the deep sea lead should be thrown overboard, and the line frequently handled by the watch, that they may be assured she rides fast. If at any time the anchor watch, presuming on their own knowledge, should wind the ship, or suffer her to break her sheer without calling'the mate, he should immediately, on the very first opportunity, oblige the crew to neave the anchor in sight, which will prevent the commission of

the like fault aaain ; for, besides the share of trouble the watch will have, the rest of the crew will blame them for neglecting their duty. Prudent mates seldom lie a week in a road stead without heaving their anchor in sight ; even though they have not the least suspicion of its being foul. There are other reasons why the anchor should be looked at ; sometimes the cable receives damage by sweeping wrecks or anchors that have been lost, or from rocks or stones ; and it is often necessary to trip the an-chor, in order to take a clearer birth, which should be done as often as any ship brings up too near

Method for the safe removal of ships when driven on shore. — For this purpose empty casks are usually employed to float off the vessel, especially if she is small, and at the same time near the port to which it is proposed to conduct her. In other cases, the following method adopted by Mr. Barnard will answer. ' On January 1st, 1777,' says Mr. Barnard (Philosophical Transactions, vol. Ixx., part. 1), in a most dreadful storm, the York East Indiaman, of 800 tous, homeward bound, with a pepper cargo, parted her cables in Margate roads, and was driven on shore, within JOO feet of the head and thirty feet of the side of Margate pier, then drawing twenty-two" feet six inches water, the flow of a good spring tide being only four feet at that place. On the 3d, I went down, as a ship-builder, to assist, as much as lay in my power, my worthy friend Sir Richard Hotham, to whom the ship belonged. I found her perfectly upright, and her shere (or side appearance) the same as when first built, but sunk to the twelve feet

water mark fore and aft in a bed of chalk mixed with a stiff blue clay, exactly the shape of her body below that draft of water : and from the rudder being torn from her as she struck coming on shore, and the violent agitation of the sea after her being there, her stern was so greatly injured as to admit free access thereto, which filled her four days equal to the flow of the tide. Having fully informed myself of her situation and the flow of spring-tides, and being clearly of opinion she might be again got off, I recommended, as the first necessary step, the immediate discharge of the cargo ; and, in the progress of that business, I found the tide always flowed to the same height on the ship; and when the cargo was half discharged, and I knew the remaining part should not make her draw more than eighteen feet water, and while I was observing the water at twenty-two feet six inches by the ship's marks, she instantly lifted to seventeen feet eight inches; the water and air being before excluded by her pressure on the clay, and the atmosphere acting upon her upper part equal to 600 tons, which is the weight of water displaced at the difference of these two drafts of water. The moment the ship lifted, I discovered she had received more damage than was at first apprehended, her leaks being such as filled her from four to eighteen feet water in an hour and a half. As nothing effectual was to be expected from pumping, several

scuttles or holes in the ship's side were made, and the valves fixed thereto to draw off tlie water at the lowest ebb of the tide, to facilitate the discharge of the remaining part of the cargo ; and, after many attempts, I succeeded in an external application of sheep skins, sewed on a sail and thrust under the bottom, to stop the body of water from rushing so furiously into the ship. This business effected, moderate pumping enabled us to keep the ship to about six feet water at low water, and by a vigorous effort we could bring the ship so light as (when the cargo should be all discharged) to be easily removed into deeper water. But as the external application might be disturbed by so doing, or totally removed by the agitation of the ship, it was absolutely necessary to provide some permanent security for the lives of those who were to navigate her to the Thames. I then recommended as the cheapest, quickest, and most effectual plau to lay a deck in the hold, as low as the \aiei could be pumped to, frarm-d so solidly and SH-ctirely, and caulked so tight, as to swim the ship independent of her own leaky bottom. Beams of fir timber twelve inches square were placed in the hold under every lower deck beam in the ship, as low as the water could permit ; these were in two pieces for the conveniency of getting them down, and also for the better fixing them, of an exact length, and well bolted together when in their

places. Over these were laid long Dantzic deals of two inches and a half thick, well nailed and caulked. Against the ship's side, all fore and aft, was well nailed a piece of fir twelve inches broad, and six inches thick on the lower and three inches on the upper edge to prevent the deck from rising at the side. Over the deck, at every beam, was laid a cross piece of fir timber six inches deep and twelve broad, reaching from the pillar of the hold to the ship's side, on which the shores were to be placed to resist the pressure of the water beneath. On each of these, and against the lower deck beam, at equal distances from the side and middle of the ship, was placed an upright shore, six inches by twelve, the lower end let two inches into the cross piece. From the foot of this shore to the ship's side, under the end of every lower deck beam, was placed a diagonal shore six inches by twelve, to ease the ship's deck of part of the strain by throwing it on the side. An upright shore of three inches by twelve was placed from the end of every cross piece to the lower deck beams at the side, and one of three inches by twelve on the midship end of every cross piece to the lower deck beam, and nailed to the pillars in the hold. Two firm-tight bulkheads or partitions were made as near the extremes of the ship as possible. The ceiling or inside plank of the ship was very securely caulked up to the lower deck and the whole formed a complete ship with a flat bottom within side, to swim the outside leaky one ; and that bottom being depressed six feet below the external water, resisted the ship's weight above it equal to 581 tons, and safely conveyed her to the dry dock at Deptford.

SHIP-BUILDING.

This important subject, taken in its strict and proper signification may be defined, the art of constructing or building ships : in its less confined and more extended application, however, it embraces, 1st. The plan or form of the construction of ships, comprehending all that falls within the science or theory of naval architecture ; 2d The execution of the plans formed, or the art of ship-building.

History. — Naval architecture can hardly be said to have existed amongst the ancient nations of Europe, and all the researches that have been made into its origin and progress have but ill rewarded the labor and loss of time bestowed upon them. To whom we are indebted for this noble invention is uncertain; the probability is that to no nation in particular can it be attributed, but that it was the

simultaneous offspring of necessity in different parts of the world. ”The truth is,” as sir Walter Raleigh justly observes, “that all nations, how remote soever, being able and reasonable creatures, and enjoying one and the same imagination and fantasy, have devised according to their means and materials the same thing.” Thus, we find boats precisely similar to the ancient British coracles, made of wattled twigs of willow, and covered with the hides of oxen, employed, in the time of Herodotus, to bring down to Babylon the productions of the higher parts of Assyria, and the countries watered by the Euphrates. In Hannibal’s invasion of Italy, his army was transported over the Rhone by the Gauls in canoes made of the trunks of trees, exactly resembling those in almost universal use among the Indians of America, and the savage islanders of the South Seas.

The first who appear to have made any though but little progress in the art, were the Egyptians and Phoenicians. The Nile, which intersected their country, presented to the former a less dangerous opportunity of making their first attempts in navigation than the sea did; whilst the enterprising spirit which marked the Phoenician character, together with the advantageous situation of their two great cities, Tyre and Sidon, urged them to bolder attempts. The bark used on the Nile, when Herodotus visited Egypt, was formed of the acantha tree, a species of thorn, cut into pieces about three feet square; these were lapped over like tiles, and fastened together by a number of wooden pins similar to the tree nails-of modern times. The hull being thus completed, a mast formed of a straight stick of the acantha, and a sail of papyrus, furnished the means of impelling it, while a rudder passing through the keel or bottom of the vessel served to direct it. The religious prejudices of the Egyptians confining their navigation to the Nile during several centuries, and this mode of construction sufficing for all purposes connected with it, they did not make any further attempts at improvement. The case was entirely different with the inhabitants of Tyre and Sidon, whom *’»p united

testimony of ancient authors warrants us in considering as the boldest and most experienced navigators of the ancient world. No particular account is however afforded us of the form or mode of construction of their ships farther than this, — that for the purposes of commerce they were considerably shorter and broader than those which in after times were devoted to the destructive ends of war and plunder.

However, while we attribute this comparative pre-eminence in the early improvement of the art to the Phoenicians, we are not to

consider every other nation as totally ignorant of it. One nation of the East, scarcely known to the ancients even by name, had in all probability made a very considerable progress in naval Architecture. The ships of the Chinese, as described by that accurate observer and faithful narrator, Marco Polo, were precisely in the thirteenth century what they now are, and what they probably were thirteen centuries before that period. We know, from the account of one of the Mahometan travellers who visited China four centuries before Marco Polo's time, that these ships were in the habit of trading to the Persian Gulph, and that they were large ships, for "in this sea," says he, "are rocks called Oman, and a narrow strait called Dordur, between two rocks, through which small vessels do venture, but the Chinese ships dare not. " They are now and were such as may fairly be put on a level with the ships of Great Britain in the early part of the reign of Henry VIII. Still in the East in general, the art was in the lowest state, especially if we are to believe that 3000 ships of Semiramis, carried on camels' backs from the shores of Syria to the banks of the Indus, overcame 4000 ships of Staurobates on that river. The state in which the art of ship-building was found when Europeans revisited India certainly does not invalidate the accounts given of it by ancient authors.

The principal improvements introduced by the Greeks and Romans upon the vessels of the Phoenicians were, an increase of their bulk, and an adaptation of their form and construction to the peculiar use for which they were designed. Experience soon taught them that sails, applicable and even necessary as they were to vessels engaged in the purposes of commerce, were by no means proper to be used at aH times in ships of war, the effect and almost the utility of the latter depending entirely on their celerity of motion at a-particular point of time, while the benefits of the former were mainly derived from the greatest abridgment of labor and expense that could possibly be made. On the same principle it was that they introduced a distinction between the form of their ships of war and those of burthen ; a distinction which became common to all nations as soon as the art of navigation was applied to two purposes, and which has in some degree been continued even to the present day. The "navis longa," or ship of war, was much longer in proportion to its breadth than

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the ” navis oneraria,” or ship of burthen, which, built either for the purposes of commerce, or for the conveyance of troops and warlike stores, was deeper and broader, so as to be capable of containing a much larger quantity of commodities than under the adoption of any other practised form.

The hull of the ships of the ancients consisted of the ” prora” or head, the ” puppis” or jtern, and the ” alveus ” or midship frame. Under the bottom and along the centre of the latter passed the “carina” or keel, which served as it does in modern use for the foundation of the ribs or timbers which strengthened the sides. To the keel subsequent experience suggested the iddition of the keelson, which confining the leads of the floor timbers, then in two parts, ointed into and divided by the keel, very ma-erially contril’uted to the strength and safety of 36 vessel. Close to the keelson was the well, jtendt d as a receptacle for the bilge water, and ˆmediately above it was the hold. Aloft, earns were fixed which served both to support le deck and strengthen the fabric, and the tanking being put on, completely enclosed the •ame, being firmly attached and fastened to it >y means of large nails or bolts of iron. As it vas found impossible, particularly for vessels of arge dimensions, to procure planks of sufficient ength to extend from stem to stern, the danger >r inconvenience that might have arisen from he starting of an end was in a great measure obviated by the ingenious method of dovetail-ing them into one another. To render the seams water-tight, the frame was then besmeared with a mixture of wax and pitch or resin, and with the addition of holes in the sides to receive the oars, and seats for the rowers, the hull was complete.

Up to the period of the commencement of the empire, the Romans had vessels of different sizes, variously named from their rows or ranks of oars. Those which had two rows or tiers were called biremes ; three, triremes ; four, quadriremes ; and five, quinqueremes or penteres. But during the reign of Augustus, and the subsequent ages of the empire, scarcely any vessels were used except the Liburnse, a species of light vessel without decks and with only one tier of oars, which obtained their great celebrity on account of the very singular service they rendered Augustus at the battle of Actium against the ” floating castles and towers ” of his opponent. - ” The navy maintained by the emperors might seem inadequate to their greatness, but k was fully

sufficient for every useful purpose of government. The ambition of the Ro-mans was confined to the land, nor was that warlike people ever actuated by the enterprising spirit which had prompted the navigators of Tyre, of Carthage, and even of Marseilles, to enlarge the bounds of the world, and to explore the most remote coasts of the ocean."

Amidst the ravages committed by the Goths against science and the arts, naval architecture did not escape, and the decline of commerce consequent upon the fall of the Roman Empire, depriving it of its chief, if not sole support, it sunk into a state of the lowest obscurity.

It is singular, too, that its revival should haT. taken place among a people now almost unknown, to speak of them in the highest terms as a maritime power. The Veneti, driven from the' lands of their forefathers during the invasion o. Italy by Attila, retired to a cluster of smal. islands at the head of the Adriatic, where, in a situation admirably adapted for the purposes to which they devoted themselves, they slowly, but progressively raised themselves to a high pitch of affluence and power. The effect on naval architecture was such as might have been expected, and though the Venetian galley of the ninth century could not boast of the ostentatious magnificence of the floating palaces of Trajan and Caligula, yet as it combined much of their elegance and splendour with more of strength and real utility than they possessed, it may in-deed be said to have surpassed them.

The Mediterranean galley of that period bore a great resemblance to that of ancient Rome ; it was low-built, sharp, of great length in proportion to its breadth, and was nearly identical with it in the arrangement of the head and stern ; in fact, it possessed all those peculiarities which have for ages distinguished it from every class of vessels in existence. The rivalry of the Venetians and Genoese, was a source of material improvement in the mechanical portion of the art of ship-building, although the peculiarity of their local situation, and the contracted scale on which naval warfare was then conducted, rendered any great extension of ideas, or very considerable alteration in ma-rine architecture, impossible because unnecessary. The vessels of the Italian states, both of commerce and of war, fully answered the purposes to which they were devoted ; and so little alteration, except in the mechanical arrangement of their parts, took place from the tenth to the fourteenth century, that a description of the galley of the one period would almost suffice for that of the other.

The discoveries of the manner's compass and of gunpowder, which

followed closely upon the heels of each other in the fourteenth century, gave however a new and powerful impulse to ship-building and navigation; but it was not until after the introduction of cannon and their more general application to the purposes of naval warfare, that we find that material variation and enlargement in the structure of vessels, especially of those intended for war, which quickly grew into general use, and has indeed been gradually increasing down to the present day. The progressive steps by which this was effected, and by which the galley was converted into what is now called a ship of war, may be traced in a comparison of the three classes of vessels in use among the Mediterranean powers during the fifteenth and sixteenth centuries, the galley, the galleas, and the galleon. The first of these did not differ materially from its predecessor of the fourteenth century, except in being furnished with a few pieces of cannon at the head and stern ; but the galleas, independently of being considerably larger and broader, carried guns also on its broadside; still it cannot be considered other than a galley of superior size, as it

still retained the use of oars, and indeed varied very little in general appearance from that vessel. Hut when the use of artillery in ships of war became more general and particularly towards the end of the fifteenth century, when port-holes were first introduced, it became necessary to elevate their sides considerably more than it had been customary to do before. To have effected this by continuing them to the requisite height in a prolongation of the same curved line in which the sides of the galley rose, •would have been both inexpedient and dangerous ; for, independent of the length of beam which would have been necessary, the form of that curve was but ill adapted to resist the great pressure occasioned by the weight of the heavy cannon on the deck. To remedy this the builders of Venice fell into the strange absurdity of contracting vessels in their upper works to such a degree that the deck was scarcely half the breadth of the hold. This we observe in the galleon, which was much broader and somewhat shorter than the galley. Its superiority also over which was strikingly evinced at the battle of Lepanto, where six Venetian galleons

effectually withstood the onset of the whole Turkish fleet.

The Spaniards and Portuguese followed the example of the Venetians; the Dutch and other northern powers derived their knowledge from the same masters; and the English were indebted to Italian shipwrights, whom Henry VIII. invited over to his kingdom, that they might impart to his subjects a portion of their own superior skill in the art. Previous to his reign England had no regular navy, and on occasions of emergency ships were hired from the Venetians, Genoese, the Hanse Towns, and other trading people, which, together with the complement furnished by the Cinque Ports, formed the strength of her fleets. Aware of the inconvenience of this, Henry resolved to -establish a permanent naval force, and at the same time he encouraged his people to change their rude ill-constructed barks for the superior pieces of mechanism exhibited by their preceptors. He caused several " shippes royall " to be built, of which the Regent was the largest, being of about 1000 tons, and carrying from 600 to 700 men. Being burnt in action the same year she was launched, she was replaced by the " Harry grace a Dieu." If we are to trust the curious representation transmitted to us of this ship by a drawing in the Pepysian Library, the slightest inspection will be sufficient to convince any one that a vessel so constructed could never have been serviceable at sea as a ship of war, or even safe to the navigators were the water otherwise than perfectly calm. Her high and lofty poop, and her forecastle of three tier of guns, her shapeless body and her four short masts, bear altogether a striking resemblance to a large Chinese junk.

We must not however attempt to estimate the size of these ships as we are accustomed to do with those of the .present day, from the number of their guns ; and we shall readily conceive how unfit they were for carrying those allotted to them, wten we are told that in coming out of

Portsmouth Harbour, " the Marie Rose by a littie sway of the ship in casting about (her ports being within sixteen inches of the water) was overset and lost, &c.v

Of the general contour or shape of ships only one idea seems to have been entertained by maritime powers, till towards the end of the seventeenth century ; but as regards their burthen and force the case was different, the Spanish and Portuguese ships of war having attained a pre-eminence which they continued to maintain for a long period of time. Before the end of the sixteenth century some of their vessels mounted nearly 80 carriage guns ; and in tonnage their

superiority was still greater. The largest ship in the British Navy at the same period, the Triumph, carried only 50 guns, or cannon which deserved that name. The Dutch and Northern powers were still more moderate, endeavouring however to make up their deficiency in this respect, by increasing their numbers.

The earliest ship of three whole tiers of guns, of which we have any distinct records appears to have been the Sovereign of the Seas, of 100 guns, built by Phineas Pett, in 1637. Considering the then very imperfect state of naval science, and the almost total absence of data to guide him, this attempt of Pen's was certainly a very hazardous one, and nothing but the bold increase of dimensions, which his science enabled him to give to this ship, rendered it at all successful. She was found however to partake too largely of the prevailing defect which characterised the' tr-ssels of her day; the great weight of her enormous upper works, rendered her so top-heavy, that it became necessary to remove one of her decks, and her name was changed to the Royal Sovereign ; in this state she continued for nearly 60 years, one of the best and most durable ships in the British Navy.

But about this period, towards the end of the seventeenth century, a new era may be said to have commenced in Naval Architecture. While, in this country after the death of Pett. the subject was entirely neglected, in France every incitement was held out, under the auspices of Louis XIV7., and his successors, for men of genius and learning, to cultivate the matheme-tical principles of naval construction. The physico-mathematical laws of floating bodies which from the time of Archimedes, had lain dormant, began to be applied to ships, and the gradual developement of the fundamental principles of naval construction, by some of the most eminent mathematicians of the eighteenth century, gave rise to ships of the line of greatly enlarged dimensions and improved qualities. The superior knowledge of the French constructors enabled them at an early period of their efforts, to overcome those obstacles in the construction of two-decked ships of the line, which baffled the skill of our naval architects ; and though at first they did not meet with equal success in their ships of 90 and 1O4 t'uns (which still however in qualities greatly surpassed our own of a similar class,) yet the constant patronage bestowed on them by their govern-214

ment was at length rewarded by the production of three-decked ships of the line of superior force, and endowed with every desirable qualification in almost as eminent a degree as were those of two decks ; and a further improvement in 1786, which increased, their force to 120 guns, and carried the length to 209 feet, may be said to have completed their triumph of the French architects. At this time, and until 1790, the largest three-decker in the English navy, was the Victory, of 100 guns, and 186 feet in length. In that year was built the Ville de Paris, of 100 guns, and 190 feet in length, and the victory of St. Vincent, in 1797, put in our possession the San Josef of 112 guns, which was for many years the largest and finest ship in the fleet. But that which contributed most materially to the improvement of, and in fact furnished a model for, our first class ships was the obtaining possession of that splendid proof of the skill and science of the French naval constructors, the Commerce de Marseilles, which was brought to England, from Toulon, in 1793, and on the plan of which the Caledonia was formed in 1808. The following are the comparative dimensions of the two ships.

Length of

Gun Deck.

ft. in.

Caledonia 205 0

Extreme Breadth. Tonnage.

53 3 2616

™’ *•»

If we attentively examine the progress of marine architecture, since the introduction of cannon into naval warfare, and more particularly during the last century and a half, we shall clearly perceive that one cause of the improvements that have been made in the sea-going qualities of ships of the line is the gradual increase of dimensions which has taken place, more especially as regards the length, the ratio of which to the breadth has been augmented within the last century, from 3J. 1 to 4. 1. Whether that principle is capable of still further application, or whether we have arrived at its utmost practicable limits, is a question which remains to be decided. The French are said to be constructing a first-rate of 232 English feet in length, and the Americans have ventured on a still bolder attempt; they are said to have built a three decker of 245 feet in length, and 56 feet in breath, to carry 135 guns. But it yet remains to be seen on actual trial, whether this be really an improvement and whether as has been supposed by some, it will not render the maneuvering of a ship too slow. On a subject involving such a complication of circumstances an opinion cannot with propriety be hazarded either the one way or the other.

SECT. I. — OF THE PROPERTIES OF SHIPS.

The principal elements to be determined in the formation of a design for a ship of war are 1st, its displacement, or the quantity of water which it will displace, when permanently at rest, together with the centre of gravity of that displacement; 2nd, its stability, or the power of

resistance, which it will possess, to the nclination produced by the action of the wind upon the sails ; and 3rd, the centre of gravity of the vessel itself considered as a heterogeneous body. We shall proceed to consider each of those three subjects as comprehensively as our limits will allow.

CHAP. I. — OF THE DISPLACEMENT.

When a solid floats in a liquid it displaces a quantity of that liquid, equal in weight to the entire solid, and in bulk to only that portion of

it which is immersed ; and the greater the weight of the solid, the greater will be the magnitude of the volume displaced, and of the part immersed. Therefore the quantity of water displaced by the immersion of a ship is equal in weight to the ship itself. In ships of war it is absolutely necessary that the line of floatation, or the line marking the depth of immersion be previously determined, so that on actual trial, the immersion may be found neither too great or too small, in the one case endangering the stability of the ship, in the other its immediate safety. This line varies with the displacement, to find an expression for which in terms of some known properties of the ship becomes then of the highest importance. Were a ship any regular figure, this might easily be accomplished by the aid of geometry, but the irregularity and variety of its curves render it a matter of impossibility to obtain an exact measure of the solid contents of its displacement. A method of approximation is given by Bouguer, which consists in dividing it by horizontal and vertical planes into a number of small solids, the contents of each of which are found separately by considering its curved lines and surfaces as straight lines and planes, arid the sum of the solidities of all is the measure of the displacement.

This operation gives a result sufficiently accurate for general practice, and, by increasing the number of sections, the error which arises from the supposition of right lines and planes would become insensible ; still it is better to employ the more rigorous method of Chapman, which, when both are applied to the same num-ber of sections, is much more exact, without being less expeditious. It proceeds upon the supposition that the curves of the displacement are portions of a parabola, which, from the infinite variation of which it admits, may be made almost to coincide with any curve for a small distance ; and from the properties of that curve and those of the trapezoid is obtained an expression sufficiently simple for practical application. ‘This is effected by what is termed the method of equidistant ordinates, which was originally employed by Stirling and Simpson to approximate the areas of curves of any kind, though to Chapman certainly belongs the merit of having first applied it to naval mensurations. We shall endeavour briefly to develope it.

Let A II L O G (PLATE I, FIG I.) be a plane bounded by any curved line whatsoever ; it is required to find the area of that plane. Divide

the line A G into a number of equal parts, and through the points of division A, B, C, D, E and F, draw AH, B I, C K, D L, E M, FN, and G O, perpendicular to A G, and cutting the curve in the points H, I, K, L, M, N, and O, and join the straight line H K. Each of the spaces such as A H I K C will then be made up of a trapezoid, A H K C, and a parabolic segment, H I K R. As the distance between the points H, I and K, is by supposition small, any other curved line passing through those points would not differ materially from the curve H I K.

and Q F may be respectively equal to the areas of the corresponding circular sections (those areas being here considered as abstract numbers), and through T, G, and F draw the curve TGF. It is evident that the area FQHT will be an expression for the solidity of MPRV. Then if p be the area of a circle whose diameter is unity, p a3, p b3, p c2, will be the areas of the sections made by the planes R V, O L, P M, and the ordinates H T, N G, and Q F being respectively equal to p a-, p b1, pc3, the expression which we obtained for the area of a surface

Therefore in calculating the area of H I K R we bounded by a curved line is also applicable to

shall not commit any considerable error if we find the contents of a solid, bounded by a curved

substitute for that curve any other passing plane. Thus if Q H be divided into only two

through the same points ; and as we have a equal parts, the area of H T F Q will— (F Q-j—

simple expression for the value of a parabolic 4 G ,N + TH) £ N II, and consequently the so—

segment, let us suppose the substituted curve to lidity of the body M P R V— (c* + 4 62 + al)

be of that nature. Then I R will be a diameter, px$ N H. If H QrzS Q— £ S H = l,m, and

and H R, RK, ordinates to the parabola H IK. the plane which passes through S being O, the

Put A H, B I, C K, D L, &c., — a, b, c, d, e, f, solidity of the whole body S R \ ‘ = . (o + 4 c’-f

g, respectively, and let m express their common a*)/ > Xi H Qn(4 c3-- a?) px^m distance. The area of the trapezoid A H K C If the generating line S M V were a right

— m, (a--c), (Art. Mensuration, Prob. V); line, the solid would be a cone, and then R V— and the area of the parabolic segment H I K R 2 P M, or R V*n 4 P M3 or a2 = 4 c2 and the

— two-thirds of the parallelogram H K. I R, expression for the solidity in this case would (Art. Mens. Prob. XIX.)— f (H Px I R). Put become^a^XgW^p^x-Jm, or:r the product 1 11 = B I— B R, and B R = % (A H + C K) of the surface of the base by one-third of the

c ir t v -o s *i i* • \ o height: the same result as that which is ob—

therefore H 1 K Rzif I b — k («+c) I x2»zrr .. • ° j ,. / -vr r > u

s ^ z v -T ij * tamed by ordinary geometry. (Art. Mens. Prob.

(2 b— a— c) fm. Therefore A H I K C—$m XXVI). Again, if S M V were a parabola, the

(a + 46 + c). In, the same manner it will be solid would be a paraboloid, and RV3: PM2

found that C K L M E = lm (c + 4 d + e) and E : :S II : S Q or ; : 2 : 1. Therefore R V2rz2

M NOG:r|m (e + 4/4-g). Therefore the area P M3 or aazz2 c2, and the expression would

of the whole surface A H L O G will be equal to become:— 3a?p\m— pa? ^m, the same as that which

the sum of these three quantities or rz(a-(-4 b is determined by other means. (Mens. Prob.

+ 2 c-f4 d + 2 e + 4/4-g) tm. This expression XXXIX). When S M V is a quarter of a circle,

shows us that to find the area of a figure bounded or of an ellipse, the

solid becomes a hemisphere

by a curve of any kind, we must first divide a or a semiellipsoid, and the result obtained for

line supposed to pass through the figure in the its solidity in those cases by means of the above

direction of its greatest length, and which we formula agree precisely with those obtained by

may call its axis into an even number of equal the ordinary method. The expression is then a

parts, and then erect perpendiculars or ordinates general one; it is also applicable to the meato this axis through the points of division, surement of solids whose generating curve does

which ordinates will thus be uneven in number, not take its origin from the axis. LetS'S"RV (FIG.

Giving the first ordinate unity for a coefficient, 3.) be such a solid whose generating line S'M V

we must multiply the second by 4, the third by does not commence from the axis S Q H. Calling

2, the fourth by 4, the fifth by 2, and so on alter- / the diameter of its extreme vertical section

nately multiply by those numbers until the last and preserving the preceding denominations, it

ordinate which, as the first, is multiplied by 1. is evident that the solidity of this body will be

Adding these products together, the sum is to be :zr(/2-j-4c!!-|-a*) p \m ; an expression which

multiplied by one-third of the common distance becomes the same as the formula we have ob—

of the ordinates, and the result will be the area tained above if we suppose f—o. If the line

required. S'M V be a right line and parallel to the axis

We must now apply this demonstration to find S H, the solid will be a cylinder, all the sections

the contents of solid bodies bounded by curved of which pa?,pc*,pf3, will be equal to the base,

surfaces of any kind. Let S R V (Fio. 2) be a and the expression for the solidity becomes zz

solid generated by the revolution of any curve 6a?p\m,—pa > m, or the product of the base by

S M V about its axis S H ; it is required to the height.

ascertain the solidity of the whole body S R V If S'M V be a right line, but not parallel to

and a part M V R P. Divide the line Q H into the axis, the solid will be a truncated cone ; if

a certain number of equal parts and supposed it be a parabola the solid will be a truncated

planes passing through the points of division, paraboloid ; if a portion of the circumference

perpendicular to the axis S H, which call m. of a circle or of an ellipse, it will be a portion

Put «, b, c, respectively equal to the diameters of a sphere or of an ellipsoid. In all these V R, L O, and M P of those circular planes or cases the formula must contain three terms, and sections, produce HV, N L, and Q M to the we can only reduce it to two, but in considering points T, G, and F, so that the lines HT, N G, the first term as equal to the sum of the two

first, as in the case where f~o, when the expression («4"tc2 + a2) p\m

becomes (4cs-|-as) Up.

We have before observed, that it is of the ut-most importance to know, previous to actual trial, what will be the amount of immersion of a ship, especially of war; for it is absolutely necessary that her lower ports should be elevated a certain distance from the water, and it is equally indispensable that that distance be not too great To ascertain then from the plans which have been laid down, what this amount will he, a line must be found such that a horizontal plane drawn through it shall cut off a portion of the vessel equal in bulk to a quantity of water, whose weight is that of the entire ship and its contents. That line will mark the depth of immersion of the ship.

Let FIG. 1, PLATE II., be the plan of elevation of a ship. Assume A B, its line of floatation when fully equipped, it is required to know if the portion A B C D, cut off by a horizontal passing through that line, will be equal in bulk to a quantity of water, equal in weight to the ship. Draw the lines marked *, 3, 6, 9, 12, &c., C, F, I, &c., which ˆwill represent as many vertical sections at equal distances, and perpendicular to the keel. The elevation of these sections is given in FIG. 2,* is the midship or greatest section, to the right of which is represented the half of each after section, 3,6,9, 12, &c.; to the left of each forward section, C,

F, L, M, &c. At any given equal distances draw lines parallel to A B (FIG.I) ; these lines are also represented on the vertical elevation, FIG. 7, PL. 1, by those marked 1, 2, 3, 4, 5, 6, 7 ; the figure 1 expressing the first or upper line of floatation, 2 the second, 3 the third, and so on. Each section will then have seven ordinates to it, whose dimensions are known, and its area may be obtained by the application of the expression which we have found for the surface of a plane bounded by any curved line — (a + 4 6 + 2 c + 4 d + 2 e + 4/ + g) \m,a, b, c, d, &c., representing severally the first, second, third, fourth, &c., ordinates. Substituting then for these ordinates their respective values which are obtained by admeasurement from the plans laid down, and giving them for.co-erficients, 1,4, 2, 4, 2,4, 1, their sum multiplied by one-third of the common distance m of the lines of floatation will give the area of the half of that portion of the section which is included between the first and last ordinates. The area of the remaining triangular portion contained between the last line of floatation, and the keel being added, the result will be the area of the entire half section. Our limits necessarily preclude us from entering into the process ‘of the calculation of the area of every section, we shall, therefore, content ourselves with giving the following tabular

view, which exhibits the operation for three sections, the midship *, the foremost W, and the aftermost 27.

TABLE I.

SECTION $.

SECTION W.

SECTION 27.

Lines ui Float.

Ordinates.

Coefficients.

Area.

Ordinates.

Coefficients.

Area.

Ordinates.

Coefficients.

Area.

1

14-80

X 1 =

14-80

5‘00

X 1 =

5-00

4-67

X 1 =

4-67

2

14-40

X 4 =

57-60

3-73

X4 =

14-92

2-16

X 4 =

864

3

13-C7

X 2 =

27-34

2-59

X2 =

5-18

1-25

X 2 =

2-50

4

12-48

X 4 =

49-92

1-70

X 4 =

6-80

0-86

X 4 —

3-44

5

10-78

X 2 =

21-56

1-05

X 2 =

2-10

0-62

X 2 =

1‘24

6

8-05

X 4 =

32-20

0-60

X 4 —

2-40

0-45

X 4 =

1-80

7

3-00

X 1 =

3-00

0-30

X 1 =

0-30

0-40

X 1 =

0-40

206-42

36-70

22‘69

JofOT = :l-62— 0-54

0‘54

0-54

82568

14680

9076

103210

18350

11345

Part between 1 1 1 -4668

19-8180

12-2526

last ord. & keel 2*4

0*15

Area 1 1 3-87

19-97

12-77

As the two parts into which a ship is divided by a vertical plane passing through the longer axis and coincident with the keel, are equal and similar, it is usual in ascertaining the displacement, to perform the calculation for only one of those parts, and then double the result ; it is for this reason that we have, as will be seen above, operate.i fo-each half section.

Let us suppose the formula by tne application of which, we have obtained those results to have been extended to every vertical section, and the areas of all to have been thus found. In conformity with the demonstration which we have given above, we must, to find the solidity of the displacement, employ those areas as we have just employed their ordinates ; ttat is to say,

SHIP-BUILDING.

giving the first and last unity for coefficients, we must multiply the intervening ones alternately by 4 and 2, the sum of these products being then multiplied by one-third of the com-mon distance between the sections, the result will be the solid contents of the portion included between the two extreme sections. Adding to this the solidity of the two portions comprised between the foremost section and the stem, and the aftermost one and the stern, the sum will be the measure of the entire contents of the displacement, exclusive of the planking, the stem, the stern-post, and the keel. The following table shows the operation.

TABLE II.

Sections.

Areas.

Coefficients.

Products.

t

27

12-77

X 1 =

12-77

24

31‘61

X 4 =

126-44

21

48-93

X 2 =

97-86

18

64-16

X 4 =

25664

15

78-17

X 2 =

156-34

12

90-79

X 4 =

363-16

9

101-27

X 2 =

202-54

6

108-57

X 4 = r

434-28

3

113-13

X 2 =

226-26

*

113-87

X 4 =

455-48

C

111-97

X 2 =

223-94

F

106-10

X 4 =

424-40

I

97-18

X 2 =

194-36

M

83-66

X 4 =

334-64

P

66-02

X 2 =

132-04

S

44-32

X 4 =

177‘28

w

19-97

X 1 =

19-97

3838-40

X J common dist. = 6.27 2-09

3454560

767680

8022-2560

Between Sec. W &, stem = 60

Sec. 27 & stern — 23

8105

2

Total Displacement 16210

Having thus found the number of cubic feet which the immersed part of the vessel ought to displace, we must multiply it by the number of pounds contained in one cubic foot of water, and the product will be the weight which the vessel fully equipped and armed ought to possess in order to fulfil the condition of its being immersed in the fluid to the depth of that which we have assumed as the line of floatation, A B. If the actual weight of the ship, which is of course known, be greater or less than the product, that line will not be its true line of floatation, and if it be desired to know that which really will, it is only necessary to reduce the

excess or deficiency of that weight to the denomination of cubic feet of volume, which is easily accomplished in dividing that difference by the number of pounds contained in a cubic foot of water; and then to divide the number of cubic feet thus found, by the area of the plane of floatation A B. The result will give the quantity by which the true line will be more or less elevated than the line A B. This operation is founded upon the fact, that the vessel ouˆht to be immersed, more or less, and consequently, displace a new volume, greater or less than that which we have obtained, by a quantity equal to a portion of the fluid, whose weight is the difference of the weight of the ship, and that of the displacement calculated. But the base of this displacement is the section or plane of floatation A B, and its altitude is the quantity expressing the greater or less depth to which the vessel ought to sink. Therefore, dividing the volume of difference by the area of the plane of floatation, the quotient will be the difference of elevation between the real and assumed lines.

CHAP. II. — THE CENTRE OF GRAVITY OF THE DISPLACEMENT.

Having thus given a method of ascertaining the displacement, our next object will be to find the centre of gravity of that displacement, both in relation to its length and breadth. The position of this point, as regards its distance from the plane ot floatation, greatly affects the

stability, and its situation in reference to the middle of the length, influences the sailing properties of a ship. We, therefore, proceed., first, to find the centre of gravity of the plane A H O G, FIG. 1, PL. 1.

The centre of gravity of the parabolic segment, H I K R H, is evidently in the line 1 11, and its distance from the line A H is = A B = M. The distance of the centre of gravity of the sectangle A H P C, from the same line is = m, and that of the triangle H K P is = § A C = § m. The distance of their common centre of gravity is equaˆ to the sum of their momenta, or products of their areas multiplied each by the distance of its centre of gravity from A H, divided by the sum of those areas. Hence the distance of the centre of gravity of A H K C, from A H

a. 2m. m + (c— a)m. %m /a -f 2c\ ,

is = = • = I I S”’>

(a -- c) m \a + c ‘

and therefore the ‘momentum of the trapezoid in relation to the line AH=(— — — j §OT x (a-f c) m

_ (fl -f 2c) §»»‘J., The area of the parabolic segment H I K R H = (2b— a— c) § m, and its momentum in relation to AH, therefore =(26 — a — c)jjwiz; adding together then this momentum, and that of the trapezoid, and dividing the sum by the area of the ‘whole A H I K C, the quotient will be the distance of the centre of gravity of that space from the line A H

(a x 2Q j m3 + (26-fl-c) jm» _ / 4b + 2c \ (o + 46 + c)£>« —\a + 4b+c/ In like manner the distance of the centre of gravity of C K L M N E from the line C K

\ ,. … / 4rf4-2f \

) m, and from A H =(—)

-/ /

2J8

T? Mivrnr- *w> uiw

, from E M =

m; and that of

1/”+

\ ™}e> the distance o’f the centre of gravity of

) m, or these three spaces, or of A H O G

/»•<*+ 1-46 + 2. 2c + 3.4rf+ 4. 2 e + 5. 4/ + 6.

The numerator of this expression contains the third by 2, ofnhe fourth by 3, &c.; in dividing same functions of the ordinates as the denomina- the sum of these products by the area, and then tor, or the same as the formula for the surface of multiplying the quotient by the distance between

the ordinates, the result of which will give the distance of the centre of gravity of the plane from its first ordinate. Our next object is the application of this principle to finding the centre of gravity of solids. We have seen that the solidity of the body MPRV, FIG. 2.

the plane; but they are also multiplied respec-lively by the natural numbers, 0, 1, 2, 3,4, &c. Kence the distance of the centre of gravity of a plane from the line which bounds it, is found by means of the expression for the area of that plane; in multiplying the function of the first ordinate by 0, that of the second by 1, of the

= (c* + 46s + aj) p \ N H, and that of S R V = (o + 4 c2 + a2) p J m, therefore the distance of the

centre of gravity of M P R V, from the plane M P = (°-l£!+l^±|^!)NH

= (**+** \

ˆ (c2 + 462+a2) ‘ V

N H ; and that of the solid S R V from the plane which passes through S N _ (0. 0 4-1. 4c2 + 2. a2) £ m (4 c2 + 2 a2) $ m (o + 4 c2 + a2)

If the solid be a cone, a2 = 4 c2, and the distance is = f >« *if a paraboloid n2 = 2 c2, and the distance becomes = | m ; results which agree with those obtained by ordinary means. To apply this principle to bodies whose generating line does not commence from the axis, we must recur to the expression for the solidity of such bodies. The functions of the ordinates which enter into this expression, are* 2, 4 c2, a2, and multiplying these by 0, 1, 2, we shall have

the distance required = (TTT; Za ? ,3) ˆ mIf the solid be a cylinder, all these sections or ordinates being equal, we have e2=/2 = a2, and 4eJ = 4a2, consequently in that case, the exˆ pression becomes = £ m.

To find then the centre of gravity of the displacement, we must commence by ascertaining the distance of the centre of gravity of the portion included between the two extreme sections, from one of those sections, that marked 27 for example, in the following manner. Multiply the functions of tue area of each section, (or the values which we have termed products in Table II.), the first, or that of the area 27 by 0, the second by 1, the third by 2, &c. ; divide the sum of these products by the sum of the areas of the sections, and the quotient multiplied by the common distance between the sections, will give the distance required. The respective centres of gravity of the portions comprised between the section 27 and the stern, and that marked W and the stem must then be found ; and subtracting from the sum of the moments of the portion< con’ˆiripl between the two extreme sections,

4ca+o2

and of that contained between the section W and the stem in relation to the section 27, the mo-ment of the part comprised between that section and the stern, divide the remainder by the whole displacement, the quotient will be the distance of the centre of gravity of that displacement from the section 27 ; whence may easily be found

its distance from the midship or any other section. In like manner must be found the distance of that point from the upper line of floatation ; with this difference, that instead of employing the areas of the sections, we must make use of those of the different planes of floatation, and the com-mon distance m must be not that of the sections but of those planes. The same ordinates by means of which we found the areas of the sections, will also serve to enable us to ascertain those of the planes of floatation, but employed in a contrary order. Having found the centre of gravity of the portion included between the upper and lower planes of floatation, the mo-ment of that portion must be added to that of the volume contained between the lower plane of floatation and the keel ; the sum divided by the whole displacement will give the distance of the centre of gravity of that displacement from the upper plane of floatation, and as its distance from one of the extreme sections has been already ascertained, the position of the point is determined.

CHAP. III. — OF THE STABILITY OF SHIPS.

A floating body is impelled downward by its weight acting in the direction of a vertical line

passing through the centre of gravity of its en-tire bulk; the pressure of the fluid by which the solid is supported, acts upward in the direction of a vertical line called the line of support or the line of buoyancy, which passes through the cen-tre of gravity of the part immersed, or as it may otherwise be termed the centre of buoyancy, or the point in which we may conceive the buoyancy or action -by which the body is sustained to be concentrated ; unless, therefore, these two lines are coincident so that the two centres of gravity may be in the same vertical line, the floating body thus impelled by forces, acting in parallel and contrary directions, must revolve on an axis until it find a position in which it will be at rest. To ascertain when this will be the case, it is necessary to find the proportion of the immersed part to the whole, and it must then be determined by geometrical or analytical methods in what positions the solid can he placed on the surface of the fluid, so that the two centres of gravity already mentioned, may be in the same vertical line when a given part of the solid is im» mersed under the surface of the fluid. These particulars having been

determined, evidently re-duce the statement of the problem to a narrow compass, but they alone are insufficient to limit it ; for although it has been shown that a body cannot float permanently on a fluid unless the two centres of gravity are situated in the same vertical line, it does not follow that whenever those centres are so situated, the body will float permanently. Positions may be assigned in which the conditions in question are fulfilled, yet, in none of which will the solid rest, but on the contrary, assume some other, in which it will continue permanently to float. Thus, if a cylinder, having its specific gravity to that of the fluid on which it floats, as 3 to 4, and its axis to the diameter of its base as 2 to 1, be placed on the fluid with its axis vertical, it will sink to a depth equal to a diameter and a half of the base; and while its axis is preserved in a vertical position by external force, the centres of gravity of the whole of the part immersed will remain in the same vertical line : but when the external force that sustained it is removed, it will decline from its upright position, and will permanently float with its axis horizontal. If the axis be supposed to be only one-half instead of twice the diameter of the base, and be placed vertically, the cylinder will sink to the depth of three-eights of its diameter, and in that position will float permanently. Even if the axis be placed not exactly coincident with the vertical direction, but in a line somewhat inclined to it, the solid will change its position until it settles permanently with the axis perpendicular to the horizon. Whether, therefore, a solid floats permanently, or oversets when placed on the surface of a fluid, provided the centre of gravity of the whole, and that of the part immersed, be in the same vertical line, it is said to be in a position of equilibrium ; and of this equilibrium there are three species, *viz.* the equilibrium of stability, instability, and the equilibrium of indifference, or the neutral equilibrium. If the figure and position of the solid be

such, that upon a slight change, by which it still displaces its own weight of fluid, its centre of gravity takes a higher position than it had when in equilibrium, then the solid will float permanently in that position, and that equilibrium will be stable; because the centre of gravity having always a tendency to descend, will return to its former position, and will oscillate from side to side of it until the solid by its friction with the fluid at length attain a state of rest. If on the other hand, a slight disturbance, which still causes the solid to displace its own weight of liquid, make the centre of gravity take a lower position, the body will not return to Us former position of equilibrium, nor will it oscillate from side to side of that position, as in the former case ; for to do so it would be necessary that the centre of gravity should

ascend, an effect which is contrary to its characteristic property. The centre of gravity will, therefore, continue to descend until it gets into another position, such that the line joining it with the centre of gravity of the part immersed, shall be perpendicular to the surface of the fluid. Any disturbance from this position must necessarily cause the centre of gravity to ascend, and the position is, therefore, that of stable equilibrium.

The shape and position of the body may be such that whatever be the position in which it displaces its own weight of the liquid, the elevation of its centre of gravity will be the same ; in other words, any motion which it may receive, allowing it still to displace its own weight of liquid, will cause its centre of gravity to move in a horizontal plane, and as in this case the centre of gravity neither ascends nor descends, it will rest in equilibrio in all positions. Such is the state of indifferent, or neutral equilibrium.

When a solid body floats permanently on the surface of a fluid, and external force is applied to incline it from its position, the resistance opposed to that inclination is termed the stability of floating. It is obvious that some floating bodies are more easily inclined from their quiescent position than others, that after having been inclined, some will return to their original situation with more force and celerity than others ; a difference which is particularly observable in ships at sea, in some of which a given impulse of the wind will cause a much greater inclination from the perpendicular than in others. To be enabled to resist this inclination, or, in other words, to possess a certain degree of stability, is one of the most indispensable properties of a ship ; and, consequently, several eminent mathematicians have investigated rules for determining its amount from the known weight and dimensions of a ship, independently of any recurrence to actual trial. This is effected in a very simple and elegant manner by the meta-centric method of Bouguer, which infers the force or measure of the stability from the relative positions of the centre of gravity of the vessel, and a point termed the metacentre, which is obtained as follows : —

Let W AT B F (Plate 1, Fig. 4), be a vertical section of a ship, floating in equilibrio, passing

through its centre of gravity; let A B be the upper line of floatation, or water line, G the centre of gravity of the whole body, and D that of the immersed part, A T B. Suppose the vessel now to receive a very small inclination, by which A' T B' becomes the immersed part, and D' its centre of gravity. From D' draw D M perpendicular to A B, and meeting D G, produced if necessary in M. If the point M thus found be higher than G, the centre of gravity of the whole body, the ves-el will, when the inclining force is removed, return to its former position. If it coincide with G, the vessel will remain in its inclined state : but if it be below G, the inclination will continually increase, until the vessel be entirely overset. That point of intersection M, is called the metacentre, and is the limit of the altitude of the centre of gravity of the vessel. Hence it must be evident that the stability of a ship increases with the elevation of the metacentre above the centre of gravity ; and that, if those two points coincide, the ship will have no disposition whatever to move out of the situation into which it may be placed, but will rest on the fluid, indifferent to motion, without tendency to right itself when inclined, or to incline itself further. In this case she would therefore be unable to carry sail, and, consequently, totally unfit for the purposes of navigation. Thirdly, if the metaoentre be below the centre of gravity, the vessel will instantly overset. The force of the stability is therefore measured by the height of the metacentre above the centre of gravity ; and a mode of ascertaining the exact measure of that force is given by Bouguer ; our limits, however, necessarily preclude us from continuing the subject so far, and we shall therefore pass to the more rigorous and general, though at the same time more laborious method of Atwood, for effecting the same object. The theorem which we have given above is in one respect general, not being confined to bodies of any particular form ; but, in respect to the angles of inclination, it is restrained to the condition that the deflection from the quiescent position shall be evanescent, or, in a practical sense, very small. In consequence of this restriction the rule in question cannot be generally applied to ascertain the stability of ships at sea; because the angles to which they are frequently inclined being of considerable magnitude, the stability will depend not only on the conditions which enter into Bouguer's solution, but also on the shape given to the sides of the vessel above and beneath the water line, of which he takes no account. Notwithstanding its long calculations, then, it cannot be for one moment doubted that the method of Atwood is greatly superior, and we shall therefore give a brief account of it.

Let W A T B F (Fig. 4) be a vertical section of a vessel floating in the upright position, and at rest, and let A B be its water-line. Suppose another plane to be at right angles to the plane of the section, W A T B F, and divide it into two equal and similar parts in the vertical line, M T, the common section of this last-mentioned plane, with the water's surface, will be a line at right angle-to the section W A T B F, and cut-

ting it in the point S. Let us imagine, for th« sake of simplicity, that the body of the vessel has been generated by the invariable section WATBF, moving parallel to itself on the common section of the water's surface and longitudinal plane, passing through M T : moreover, suppose that an equal solid is formed in this way, on each side of the plane, WATBF. It is clear that the centres of gravity of the vessel, and of the displacement, are in this plane, WATBF, and both in the vertical line M T, since the body is at rest : let these two points be G and D respectively. Now, supposing the length of the uniform solid, of which the area, A T B (cut off by the line A B) is the base, to be represented by *, we have the volume of the displacement equal to the area ATB.* Suppose the vessel to have been inclined round the longer axis, so that the points B' and A', of the section WATBF, are coincident with the water's surface, the line joining A' and B' cutting-the line A B, in some point S : it follows that there is a solid emerged, of which the area ASA', is the base, and another immersed, of which the area, B S B' is the base ; the new displacement being equal to the area ATB'. /. But as the weight of the vessel is the same both before and after the inclination, the two volumes, of which the areas ATB, and A'TB', are respectively the bases, must be equal ; and as the volume, whose base is the area A'T B, is common to both, the volumes immersed and emerged must also be equal. The centre of buoyancy corresponding to the inclined position of the vessel remains on the plane WATBF, since there is still an equal and uniform volume on each side of it ; for the like reasons, the centres of gravity of the volumes immersed and emerged must be in the same plane. Let the new centre of buoyancy be in the point D', and draw D'M, perpendicular to the water's surface, A'B' ; from G draw GP, parallel to A'B' ; then will G P be the perpendicular distance from G to the line of support, in which the buoyancy of the waler is supposed to act ; hence, when the weights and therefore the displacements of different vessels are equal, the stability will be measured by the magnitude of the line G P ; but when this is not the case, the stability will be truly estimated by the quantity G P. W ; where Wn the weight of the vessel with its entire equipment. The quantity G P.W ; is called the moment of stability.

The analytical value of G P. may be thus obtained ; let R and V be the centres of gravity of the volumes of immersion, and from these points draw R N and V L perpendicular to A' B' : also draw D Q parallel to A' B', meeting D' M in Q. It is evident from the preceding article, that the volume of emersion "area A S A'./, and, conceiving it to be concentrated in the point R, we may imagine that it is transferred to the centre of gravity V of the volume of immersion ; this transfer will, by a well-known property of the centre of gravity, cause the point D to move through a space (in a direction parallel to the line joining the points R and V) reciprocally proportional to the magnitudes of the A S A'. *, and ATB.*; and since the motion of the centre of gravity of the volume of emersion is estimated,

in a horizontal sense, by the line N L, and that of the centre of buoyancy in the same direction by *he line D Q, we have, by putting N L -(-/>, thi? proportion —

(1.) b : D Q = area AT B. /: area A S A. I, or (2., b : D Q =area A T B. : area ASA' and putting area A T B. I = V and area A S A.'

b A

/=A. we derive the equation D Q— —. It is

seen from proportion (2), that when the vertical sections made at right angles to the longer axis, are equal and similar, the lines N L and D Q are proportional to the simple areas A T B and A S A' which may therefore be taken, in this case, to represent the volumes of displacement and of emersion or immersion respectively. But if the body be of an irregular ferm, the construction and demonstration will be precisely similar to that above, supposing the section W A T B F to pass through the centre of gravity of the body, and the following modifications of expression taking place ; viz., the volumes of displacement, immersion, and emersion, must be obtained by calculations founded on their shape and dimensions, as also the positions of the centres of gravity of the same volumes. We may

therefore

assume the expression D Q zi as general.

Draw GC parallel to M D', then will the angle D GC be equal to the angle of inclination B S B' ; putting G D = d, and sine of the angle B S B' = i, we ˆhave D C = ds and G P = D Q

— DC = ~— ds, orGjPx V—bA — dsV.

We may infer from the above expression that whatever form the volume whose base is the area A' T B, may assume, provided the distance between the points D and G is not affected thereby, and the whole volume of displacement remains the same, the stability will depend on the configuration of the vessel being unaltered in those parts immersed and emerged by the inclination ; for the term b A of the expression will then experience no change, whilst V is constant, and the quantity, d, kept unchanged by means of ballast or other expedients ; consequently the stability of the vessel will remain the same. It is also seen that the space D Q, moved through by the centre of buoyancy, varies directly as b A, and inversely as V ; and if two vessels, of different forms and displacements, have the centres of gravity and of buoyancy coincident in each, their stabilities will be measured by the

value of rj-in both.

It is evident from the preceding general investigation of the equilibrium of stability, that to give a vessel a certain inclination, and to keep it to that inclination, we must employ a power whose moment, with regard to the centre of gravity of the vessel, is equal to the moment of stability. When the inclining force is supposed to vary in quantity, or in the point of application, greater or less inclinations will be produced, and maintained according as its moment is greater or less. If the inclining force cease, the force of stability immediately operates to restore the vessel to the upright position, and continuing to

act at every successive decreasing angle, it will produce an accelerated rotatory motion about an horizontal axis passing through the centre of gravity, until the vessel arrives at the upright position. The angular motion by this time generated in the body will then cause it to pass this position, and incline it on the other side, till such motion is destroyed by the force of stability again called into action, but which

is now a retarding force instead of an accelerating one. Thus, the first half of a vibration will be accelerated, and the second half retarded by the force of stability. The species of vibration spoken of here, constitutes what is usually termed the rolling ; and we may observe, that the force of stability which tends to produce it should be regulated with the angle of inclination, so as to prevent too rapid or sudden a variation in the angular velocity ; otherwise the ship will be subject to violent and percussive action when brought to her bearings.

In the Philosophical Transactions for the year 1798, Atwood has exhibited the comparative stability of a variety of known geometrical forms ; but the analysis used by him in the investigation of the problems is by no means so consise and general as could be wished, as he treats each case separately, and in a manner both tedious and laborious. The several cases which he considers are —

First. When the sides of a vessel are parallel to the plane of the masts both above and below the water-line.

Second. When the sides fall outwards, at equal angles above, and are parallel to the plane of the masts, under the water-line.

Third. The sides incline inwards, at equal angles above, and are parallel to the masts, under the water-line.

Fourth. The sides fall outwards, both above and beneath the water-line, at equal inclinations to the plane of the masts.

Fifth. When the sides incline inwards, and are at equal angles of inclination to the plane of the masts, both above and beneath the water-line.

Sixth. The sides coincide with the sides of an isosceles wedge ; meeting, if produced, at a point beneath the water's surface.

Seventh. The sides are coincident with the sides of an isosceles wedge ; meeting, if produced, at a point, which is above the water's surface.

Eighth. The sides of a vessel are parallel to the masts above, and incline outwards, beneath the water-line, at equal angles.

Ninth. The sides are parallel to the masts above, and are inclined inwards, at equal angles, below the water-line.

Tenth. The sides of a vessel are coincident with the surface of a cylinder ; the vertical sections being equal circles.

Eleventh. The vertical sections of a vessel are terminated by the arcs of a conic parabola.

And lastly, the case of a vessel of the usual form, in which all the vertical and horizontal sections are not as they are in the above eleven cases, equal and similar. For the application of the general expression to these several cases we

must refer our readers to the original paper of Mr. Atwood above referred to.

CHAP. IV — OF THE CENTRE OF GRAVITY.

The knowledge of the position of the centre of gravity of a ship, its contents is a point of the greatest importance. It may be admitted as an axiom, that a body put in motion revolves round its own centre of gravity while uninterrupted by any external force, and that the force which imparts that motion does not cause it to revolve about any other point. The centre of gravity is, therefore, the centre of rotation in a ship, and the point to which the different motions of rolling and pitching must be referred. We may also see by a simple inspection of the general expression which we have obtained for the stability, that the determination of the centre of gravity is indispensably necessary in order to ascertain the measure of that force, which consists in fact, in rinding the distance of the vertical central line of buoyancy from the centre of gravity. The position of this point may be ascertained by considering the ship as composed of a system of bo-dies, and finding the common centre of gravity, in the usual manner. Thus the momentum of every part of the ship and its contents, must be found separately, both in relation to a horizontal and a vertical plane. The sums of these two momenta, being divided by the weight of the ship, the quotients will be respectively, the altitude of the centre of gravity, and its distance from the vertical plane ; and as this centre is in a vertical line passing through the axis of the keel, its position is therefore determined. This operation has been performed on only two ships in this country, the Bulwark and the Ajax ; the position of the

centre of gravity of both of which was ascertained at the school of Naval Architecture, under Dr. Inman, in 1817. The great objection to this method is, that the operation is exceeding long and laborious, when every component element is taken into account ; for each of the above ships it occupied two persons a whcile ye-.ir, independent of the assistance of la-bour in weighing many of the component articles, as stores, blocks, &c.

It becomes then an object of considerable importance to find the position of the centre of gravity of a ship, without regard to the specific circumstances of each component weight of its en-lire substance. This has been effected by the eminent Spanish author, Don Jorge Juan, and the Swedish architect, Chapman, both in a similar manner, and by means of an experiment on the ship. Their method consists in removing the artillery and component weights of the ship from one side to the other, and by this means inclining it so as to elevate and expose a portion which is ordinarily submerged ; and by means of a formula previously obtained, the distance of the centre of gravity from the metacentre is then found. Chapman's mode has, however, two objections which attach to it. In the first place, he uses the metacentre as a measure of stability at an angle of 8° or 10°, which is decidedly erroneous ; this is, however, easily corrected by substituting Atwood's equation ; but, secondly, he appears to have entirely overlooked the change of place which the centre of gravity undergoes by the transfer of the guns from one side to the other. These are, however, altogether obviated in a method recommended first, we believe, by M r. Major, which is as follows: — Let the ship be heeled to the same angle by two separate horizontal forces applied at different heights in the plane of the masts. It is evident that their moments of inclining power must be equal, since they are both custained by the same force of stability. Let P represent one power, and p the other ; and let a and b be respectively their distances of action from the centre of gravity of the displacement. Put x for the distance of the cen-tre of gravity of the ship from that point, and let A be the angle of inclination of the ship from the upright. We shall have then the following equations of their forces, the radius being always unity.

P (o— *). Cos. A = p (b—x). Cos. A Pa — Px = p b—p x Pa—pb

P-p.

From which we obtain the following rule. Di-vide the difference of the momenta of the inclining forces by the difference of the same forces, and the result will he the distance of the centre of gravity of the ship

from the centre of gravity of the displacement.

Let us now examine the effect which the force concentrated in this point produces on the rolling and pitching of a ship. Let A D B (FIG. 5), be the section of a vessel whose line of floatation is A B ; let E be its centre of gravity, and G the metacentre. Suppose a force at B to act on the side of the vessel in the direction of B H, so as to give it the inclination a b. The momentum of the force which produces that inclination is as the distance E H, and the momentum of that which tends to cause the vessel to return to the upright position, is as the distance E G ; as these forces act in contrary directions, there results a motion termed rolling ; and the effect of the forces producing it is as the sum of E H and E G. But the vessel during the inclination, must revolve on its centre of gravity, and its displacement mnst be the same as when it is upright ; therefore, the vessel, and consequently its centre of gravity E, must be elevated a certain distance e E equal to the versed sine of the angle G eg, the radius being E G. It follows, therefore, that when the force which operated to produce the inclination ceases, the vessel will descend with its whole weight, in a vertical direction from e to E, with a force continually accelerating until the action of the buoyancy of the water ceases to operate upon the point G, and as the inclination extends frequently to an angle of 30°, the distance e E becomes considerable, and consequently the rolling very quick. If the cen-tre of gravity E of the ship were in the plane of floatation, and the distance E G still the same as above, the motion would be less and easier than when that point is situated lower ; for in the first

place the distance E H would be less, and the inclination produced by the force at B acting in the direction B H, would not be so great as if the centre of gravity were lower since the sum of F G and E H would be loss ; and secondly, the centre of gravity being in the plane of floatation, the vessel is capable of a rotatory motion without itself or its centre of gravity being elevated or depressed, and, therefore, without causing the concussion to which we have alluded. Hence we

may conclude, that the motion of rolling is more uniform and less exposed to sudden concussions, when the centre of gravity is in the plane of the water section or near it, than elsewhere; and as this position of the centre of gravity has the same effect upon the pitching, or a vibratory motion of a ship about a horizontal transverse axis, it follows that it ought to be there placed. But it is a matter of exceeding difficulty to construct a vessel which shall possess the requisite degree of stability, and at the same time roll easily for the increase of the distance EG, which augments the stability, contributes also to increase the mo-tion of rolling ; and the difficulty becomes still greater in the case of merchant ships where the object is to combine economy of construction with a capability of carrying the greatest possible burthen. A vessel of this nature should be built very broad in its bottom, and should be elevated above the water but very little in proportion to its breadth ; consequently it must have the centre of gravity of its displacement, and, therefore the metacentre situated very low. In order to give it stability, it becomes necessary then to place the centre of gravity of the cargo as low as possible, and thus the common centre of gravity of the ship and cargo is situated exceedingly low, and occasions the motions of rolling to be very uneasy.

The preceding remarks apply to the situation of the centre of gravity with reference to its altitude only; it remains, therefore, to consider its position in relation to the length, as it affects the motion of pitching, or the alternate elevation and depression of the two extremities of the vessel. This motion results entirely from the action of the waves ; thus, when a wave has passed the forepart of a ship and arrived towards the mid-dle, it leaves a great cavity under the stem where the ship is entirely uusupported ; that portion, therefore, descends with a certain momentum, which is the product of its component weights, multiplied by their distance from that point where the vessel is really supported. This kind of mo-tion is much greater in vessels which are very full and broad, both fore and aft, towards the water line, and which slope considerably beneath ; but, if the weights in the forepart be transferred nearer to the middle, the momentum with which the elevated portion of the ship descends would be lessened, and not only would the motion become easier, but the waves would have less difficulty in raising it. The same observation applies to the after-part of the ship, and we, therefore see that to diminish the motion of pitching, the weights should be brought towards the middle, in which position, we may hence conclude, the centre of gravity ought to be in relation to the length.

CHAP. V. — Ox TIII: RESISTANCE OF THE WATER.

When the body is moved through a fluid, such as water, a force is required to overcome the resistance thereof. The same, or a similar force, is required to retain a body at rest, floating in a fluid in motion ; in either case the fluid lieaps up, or accumulates, in front of the floating body, until the increasing pressure in all directions produced by this accumulation is sufficient to re-move sideways that portion of the fluid intercepted by the floating body, and which afterwards falls into the general current. The effect of this accumulation on the bows has been called the plus pressure. Again, the fluid, after passing, will require some time and force to fall in towards the after part or stern of the floating body : this deflection is also caused by some force or hydrostatic pressure, *viz.* by the water at the stern being somewhat below the level of the passing stream. A portion of the stern, therefore, is not pressed upon by the same force as the bow, even reckoned from the general level of the stream, and independently of the accumulation at the bow ; and, therefore, this depression increases the power or resistance of the fluid, by a quantity which has been called the minus pressure, or stern resistance. Lastly, the fluid in passing along the side of the floating body h> subjected to a certain degree of adhesion 6r friction, which increases with the extent of surface.

According to the common theory of the impulse of fluids, it is assumed that each particle of the fluid in motion will strike a solid body in its path in the same manner, and with the same force, as in the collision of hard bodies in free space ; therefore since the number of particles striking in a given time will be as the velocity, and the force of each particle also proportional to the velocity, we have —

1st. The resistance or impulse is as the square of the velocity.

2nd. The number of particles, and consequently the resistance, will be as the density of the fluid and the magnitude of the surface impinged on.

Again, in oblique impulses, let A B (FIG. 6), be the plane exposed to d irect impulse/ A, /“B ; and BC the same plane exposed to oblique impulse in the same fluid. The number of particles intercepted by B C, will be only as D B or C E, that is the sine of the angle of incidence O.rB; but also the perpendicular action of each particle o, as Om, will be diminished in the ratio of xm to xn = B C : C E, that is, as the sine of incidence ; so that we have,

3dly, The direct resistance or impulse is to the oblique effective impulse as the square of ra-dius to the square of the sine of incidence.

From these principles Newton determined that the impulse on a cylinder is § that on the transverse section through its axis, and that the impulse on a sphere is £ that on its great circle.

In like manner, from the same principle, ic has been deduced, that the resistance or direct impulse of an inelastic fluid on any plane surface is equal to the weight of a column of the fluid whose base is equal to the surface struck,

and height equal to twice the fall required for producing a velocity equal to that with which the plane moves in the fluid. In elastic fluids the impulse is double of the above (Principia, vol. ii. p. 35 — 38). It does not, however, ap-pear that the theory of resistance here given, from Newton's investigations, is at all accordant with experiments ; but, since we have as yet no better to direct our researches, we may endeavour to modify it only so far as the numerous experiments made on the subject may require. In fact, the action of a fluid on any solid body can-not at all be considered as that of a number of hard particles striking it, and then thrown off into free space ; for the mobility of the fluid, and the property it possesses of rising above the level, (if like water), or of being compressed, (if like air,) gives it all the properties of an elastic body, and makes its action on the solid that of a sim-ple pressure, the amount of which may be readily measured by that accumulation. This accumulation becomes, in its turn, a moving power, impelling the parts of the fluid below it to escape in all directions, and of course communicating a motion transverse to the general direction of the stream, or rather, perhaps, along the surface of the fluid, and with an increased velocity. The figure of that surface, and its adaptation to the natural path, followed by the filaments of water in passing round and closing in behind the body, greatly affect the observed resistance.

With respect to the agreement of experiments with the above

principles, it has been found that the resistance increases nearly as the square of the velocity, little deviation appears in the smaller velocities, and Newton has shown, that by subtracting a certain uniform quantity for the adhesion of the fluid, the remainder agreed exactly with the theory ; and that in the greater velocities there is a deviation arising from the inertia of the fluid which accumulates in front, and is rarefied or depressed behind the body.

According to Borda's experiments the resistance to the surface of

Ratio of Theory to Experiment.

** or 9 inches, being - 9 =1:1 4s or 16 — was - 17.535 =1 : 1.096

6* or 36 42.750=1 : 1.168

9* or 81 104.737 = 1 : 1.294

In larger surfaces, the deviation would probably be much greater, as the smaller afford greater facility of escape.

It appears from the experiments of Mr. Robins, that the resistance of a square foot of air moving with the velocity of one foot per second on 16 inches, is - - - -001596 Ibs.

By Borda's experiments the resistance on 16 inches is - - '001757 Ibs.

On 81 inches -002042 Ibs.

Bonguer has calculated that the impulse of sea-water, with a velocity of 1 foot per second, is 23oz. on a square foot, French measure, and that of wind is the same when blowing 24 feet per second. This last velocity would rather be v/900 — 30 feet, if we were to take the density of the air to determine it.

The experiments of the French Academy make the resistance to a square foot moving 2-56 feet per second, to be 7'625lbs. ; or, in English maxims, 1-136 square foot moving 2-7263 feet per second, gives a resistance of 8-234 Ibs. avoird., which is nearly the weight of a column of water of this base, having its height equal to the fall necessary for communicating this velocity, ana only J the resistance assigned by the Newtonian Theory. If we calculate from the last number, the impulse on 1 square foot moving 1 foot per second, we have 0-973 Ibs. avoird. Much, however, depends on the form and

situation of the adjoining parts. The experiments of the academy were made on a prism, or box, 2 feet square, and 4 feet long. The resistance on a thin board, of the size of the end of this box, would have been greater. Thus, according to Buat, the resistance on a square foot, whoHy immersed in a stream, was,

A square foot as a thin plate - - 1-81 Ibs.

Ditto, as the front of a box 1 ft. long 1 -42

Ditto, as ditto, 3 feet long - - - 1-29 Sea water about ˆ greater.

The resistance to sailing vessels is, therefore, considerably less in the direction of their length then in that of their breadth, upon equal portions of surface, while the resistance to their surface of sail or an oar is the greatest possible. Both these properties are to be appreciated.

We may, therefore, assume that the resistance of water in sailing vessels is about 1-5 Ib. per square foot, moving 1 foot per second, and that the impulse on a sail is -002 Ib., or 555 Ib. for liie same surface and velocity ; proportions not very distant from that of their relative densities, when modified as before mentioned.

If we estimate the resistance for a velocity of 1 nautical mile per hour, we shall have air per square foot -005 Ib., and water per square foot 4-l7lb.

However, the bows of vessels are never made square, and the sails are most frequently placed obliquely. Theory, in this instance, appears at variance with experiments. The best experiments hitherto made in this department of our subject are those of the French Academy. A box, of 3 feet square and 4 long, was made and fitted with prows of a wedge-like form, the angles of which varied by 12° in each set of experiments from 12° to 180°, so that the angles of incidence varied 6° from each other. These boxes being immersed 2 feet in a large basin of water, were drawn obliquely by a line and weights, the motion after a little time becoming very uniform. The time of passing over 96 French feet was then carefully noted, and the resistance calculated from the weight employed, after deducting a certain quantity for friction and the accumulation of water on the anterior surface. The following table exhibits the result of these experiments. Col. 1 is the angle of the prow; col. 2, the angle of incidence; col. 3, the observed resistance ; col. 4, the resistance calculated from col. l,as the squares of the sines of incidence ; col. 5, the same reduced as the sines only of incidence.

TABLE III.

Angle of Prow.

•Vnitle of Incidence.

Impulse observed.

•Square of Sine.

Sine only.

180°

90°

1000

1000

1000

168

84

989

989

995

156

78

959

957

978

144

72

908

905

951

132

•66

845

835

914

120

60

771

750

866

108

54

693

655

809

96

48

615

552

743

84

42

543

448

669

72

36

^480

346

587

60

30

440 •

250

500

48

24

424

165

407

36

18

414

96

309

24

12

406

43

208

12

6

400

11

105

1

2

3

4

5

The error of the theory is as important in the action on sails; for the experiments of Borda and Robins on the oblique impulse of air are very conformable to those of the Academecians on waters, and the neat experiments of the Society for Naval Architecture exhibit similar results. We may therefore observe, that the oblique impulse of the wind is much more efficacious in preserving the ship in the direction of the course than they would suppose ; and, in the same manner, the oblique action of the water is more efficacious in resisting lee-way.

From the experiments of the1 Society for the Improvement of Naval Architecture, it would appear, that in the ordinary velocities, the total resistance of sharp-ended vessels is little more than one-third of those with square ends. The impression of the wind being at the same time more, we are justified, at least, in calculating for velocities of five miles per hour, or upwards, in assuming a pressure of only five pounds per square foot of the cross section of the vessel for a velocity of one foot per second.

CHAP. VI. — POWER OF SAILS.

From the preceding data we may proceed to calculate the rate at which a vessel may pass through the water, her own dimensions, and those of her sails being given.

Case 1. The ship sailing before the wind; let the breadth = b., draft of water = d, the area of sail = a. Let p = the pressure of the wind at one foot per second, q = pressure of water on one square foot at one foot per second,

w = velocity of the wind,

v = velocity of the ship passing through the

water.

The ship sailing before the wind, we have the velocity with which the wind strikes the sails = w — v, and the impulse on the sails = w — v \ *p a. The resistance of the water on the ship will bebdqv*. Hence, when

the motion has become uniform, we have, VOL. XX.— PART I.

The velocity v of the ship therefore will be, w

ap

Case 2. As to the motion of a vessel in a side wind, the problem is somewhat more complicated.

Suppose A B (PI. 2, Fig. 2) to be the keel, C the centre of the mast, D H the yard, trimmed square, W C the direction and velocity of the wind, and C E the velocity of the ship. Then, relatively to the ship, the direction of the wind on the sail will be in the diagonal y C, and C/ will be the direction of her vane when in motion, though C g will be its direction when at rest ; this apparent change or heading of the wind when a ship is in motion is familiar to seamen. Now, since the wind, y C, acts obliquely on the sail, D H, we must reduce its direct impulse in the ratio of the square of the sine of obliquity. Draw H K parallel to y C, and D K perpendicular to H K ; also draw K L perpendicular to D H, then D K will be as the number of particles striking the surface of the sail, and the perpendicular action will be represented by K L. The other portion of that force acting parallel to the face of the sail, and perpendicular to the keel, can have no effect on the progressive motion of the ship, except that its friction, or the bagging of the sail, may tend to carry the vessel to leeward, which we do not at present consider, looking on the sail as a plain surface. Draw the perpendicular y G, then C G is the sine of obliquity y C H, and the impression of y ij is as the square of C G.

Preserving the same notation as before, we have CE = v, WC = w, EG = w >, sin Gy E = w, sin W C H, and C G = E G — E C = w. sin W C H — v ; and since the impulse =

*

of

a p < w sn W C H — v > 2, where a = area

sail, and p the impulse on the square foot, we have,

ap\ w. siraWCH — v >z =

and w. sin W C H= j 1 + +/— q I av

ap

and w =

ap

X v

tin W C H w.si»WCH w.sinWCHˆ/ap

/bdq

1 +V l

ap

ˆ/ up + V bdq

which is precisely the former result, reduced by the sine of obliquity.

In either of these cases, it may be perceived that the coefficient of t; being constant, w and v

are proportional to each other, the velocity of the ship with the same sail is proportional to the velocity of the wind. But the quantity a, expressing the area of sail, being under the radical sign, the velocity of the ship, the wind remaining the same, will be as the square root of the area of sail ; so that to procure a double velocity, four times the area of sail is required.

.Case 3. But it is not usual to keep the yards square when the wind is oblique to the course ; a considerable portion of the wind that might be intercepted would be lost ; and if the wind were before the beam, the sails would be taken aback. Besides, ships exposing more surface of sail when their sides are exposed to the wind, are enabled to make up for the loss of power occasioned by the obliquity of action.

Let the sail D H (Fig. 3) be trimmed obliquely : it is evident, that since the impulse of the wind must be perpendicular to the sail, the vessel will not move in the direction of her length A B, but in some other line to leeward of it, as C E. Her head therefore must be kept to windward of her intended course ; the amount of this deviation, — viz., the angle B C E is called the lee-way. If the ship were a round tub, to be equally moveable in all directions, and fitted with a mast and sail in the centre, it is clear that if prevented from turning round, it would move in the direction C L perpendicular to the yard. But being from the construction much more easily moveable in the direction of the length than the breadth, the course of a ship will be somewhere between C L and C B ; and whatever be the amount of the impulse on the sail in the direction C L, the angle of lee-way, B C E, will remain the same, for the impulse of the resisting surfaces will still be proportionate ; and this impulse must be in the direction C L, so long as the yard remains in the same trim. Whatever may be the direction of the wind, it follows therefore that the lee-way depends on the shape of the vessel and trim of the sails, not considering the effect produced by the action of the wind on the hull and rigging, which, when the quantity of sail carried is small, becomes a very important part of the whole impelling power. If we knew the proportionate resistance made to longitudinal and transverse motion, we could ascertain the lee-way for any angle of impulse. But we have seen that the resistance on the sides, if calculated according to the theory, would not present us with a true result, since the action of the fluid on them in this case would be very oblique. In common vessels, besides, the form cannot be reduced to an equation, and the surfaces of action

change with every variation in the direction of the impelling power. As matter of fact it is known that a good-sailing ship, with all her sails in action, will not make more than from 5° to 12° lee-way. The amount increases as she is obliged to take in her sails, and in the shallow vessels employed in inland navigation, the lateral resistance being less in proportion, the lee-way must in general be greater. Hence the adoption of lee-boards, sliding-knots, &c., which increase the lateral resistance, without diminishing much the direct motion. But, to proceed in the investigation

before us, take C E to represent the motion of the ship, W C that of the wind, then the diagonal y C will be the relative direction and force of the wind on the sail D H, and its impulse, as in the former case, will be represented by the square of C G. Draw the perpendiculars m E and W K ; then, because of parallels, mC = GK = EC. sin ECH, and C K = C W. sin WCB; and with the former notation EC = v, \V C = w; thenCG = CK — GK = w;.si« W CH — v.sin ECH; and the impulse on the sail will be —

ap w. sin W C H — v. sin E C H *

Now, the vessel moving uniformly, this impulse will be equal and opposite to that produced by the resistance to the ship's side, in the direction L C, when the ship is moving with the velocity and direction C E. Let CL represent this impulse, or that of the wind on the sail, and resolve It into C M and M L, of which C M will represent that part effective in the direction B A, and M L that in the transverse direction, when sailing with the lee-way B C E : putting s = surface or side of the ship exposed to the action of the water in the direction CL; q s will be the impulse of the water on it —

and apt w.tinWC H — v.sin ECU * ^

ap

and u; = ^i > -

oru>: t> =

sin W

£33

CH >

ap

sinWCH

Where, by diminishing ECH, that is, by trimming sharp, and enlarging a the quantity of sail in proportion to s the side exposed to the water, the third term of this proportion may be less than the fourth, and consequently that the velocity of the ship may exceed that of the wind.

SEC. II. — IMPROVEMENTS IN PRACTICAL CONSTRUCTION.

In the present state of naval architecture, it is hardly possible to offer observations on any part of a ship's construction, without associating with those remarks the name of sir Robert Seppings, .. the late Surveyor of the Navy, who has, within a period of about fifteen years, effected a complete-revolution in the principles of practical construction ; so much so, indeed, that two distinctive appellations are now commonly applied to particularise his from the former mode of ship-build- ing — the " new, or diagonal system," and the " old system."

Of all large machines destined to undergo se-vere shocks, a ship, is perhaps, the least skilfully and artificially contrived. The frame of a seventy-four gun ship, constructed on the old principle, is formed of more than eight hundred different timbers, placed at right angles to the keel, which may be considered as the backbone of an animal, and the frame timbers its ribs. Each rib is composed of several pieces, of the thickness of fourteen inches, or thereabouts.

Between the several divisions of the frame, or ribs, is a space from one to five inches wide. The whole exterior frame is covered with planks of different thicknesses, or, to carry on the figure, the ribs are covered by a skin of greater or less substance, from the extreme ends of them to the keel or backbone. The inside of the frame is also almost entirely lined with planks ; within which is another partial range, as it were, of interior ribs, at a considerable distance from each other, termed riders. Across this frame are pieces of timber called beams, united together so as to be of sufficient length to reach from one side of the ship to the other.

The use of these beams is to secure the sides of the ship so as to prevent her upper works from spreading, and to keep that part which is under water from being compressed by the fluid. They are also the supports or bearers of the decks, (or what we call in houses the girders for the floors), and must, therefore, be of such strength as to en-dure the weight of the cannon, and whatever else is to be placed upon them. The usual mode of fastening these to the sides, has, generally speaking, been merely local, by two angular pieces of timber or iron (called knees) bolted to each beam, and also to the sides of the ship, by which means they were only partially held to the side, and there was wanting that continuity of materials, and consequently of strength, which the new system gives. Between the beams, and at right angles with them, are placed pieces of wood called callings, and at right angles with these, (consequently parallel to the beams,) ledges, which correspond with joists in a house. The planks or flat of the deck (flooring) is laid nearly in parallel lines from head to stern, upon and at right angles with the beams, and is fastened to them, and to the carlings and ledges, by bolts, nails, or wooden pins, called treenails. It will thus appear evident that the decks, according to the old construction, are in nowise connected with the sides of the ship.

From this sketch, it will be perceived, that all the materials composing the fabric of such a ship are disposed nearly at right angles to each other. This disposition, which, in every wooden fabric is well known

to the meanest mechanic to be the weakest, is particularly so in a ship, the immense body of which, subject to violent action from impulses in every direction, is sustained by a greater pressure on the centre than the extremities, arising chiefly from the difference in the fore and after parts of the body to that of the midship, or middle part. From the want of a continued succession of support from the centre to the extremities originates the tendency to arching, or hogging. This tendency shows it-self in a ship from the moment of her launching; when it is invariably found that the two extremities, being less supported by the water than the middle, drop, and give to the ship a convex curvature upwards in the direction of her length, an effect, which from its resemblance to the shape of a hog's back, is usually termed hogging. In very weak or old ships, it may be traced in all the port-holes of the upper deck, by their having taken the form of lozenges, declining different

ways from the centre of the ship fo each extremity.

To discover the law which influencesashipwheu floating quiescently in the water, we may suppose the vessel to be divided into vertical sections of an indefinitely small constant thickness, perpendicular to a vertical longitudinal plane. If we commence our consideration at the stern, and advance gradually forward, it is evident that the sections comprising the counter and its connecting parts, being free from the water, will be subject to no reaction from it; and when at last any reaction does take place, it must be at first, from the peculiar form of the body, be infinitely less than the weight of the section whose displacement occasions it. As we approach, however, the midship section of the vessel, the upward pressure of the fluid will approximate more and more loan equality with the weight of its corresponding section, and ultimately become equal to it ; and if we pass beyond this section, which may bedeno. minated the section of hydrostatic equilibrium, we shall find the weight of the water displaced, become greater than the weight of the section above it. In like manner, if we commence at the bow of the vessel, we shall find a similar section of hydrostatic equilibrium, and afterwards a like increase of the weight of the water displaced above that of the section reposing on it.

In Dr. Young's " Remarks on the Employment of Oblique Riders," inserted in the Philosophical Translations for 1814, he gives the following as the results of his calculations on the distribution of the forces operating en the hull of a seventy-four gun ship, fitted for sea,

whose length is 176 feet, and breadth 47£.

TABLE IV.

Distance from

Weight of

Pressure of their

Difference of ~

the stern.

the SectioDs.

Displacement—

weight and pressure

.. 49

+ 699

— 627

+ 72

Next 20

+ 297

— 405

— 108

.. 50

+ 1216

— 1098

+ 118

.. 20

+ 290

— 409

— 119

.. 37

+ 498

— 461

+ 37

176

+ 3000

— 3000

= 000

Dupin in his paper De la Structure des vais-seaux Anglais, in the Transactions for 1817, has given an elaborate analytical view of this subject, and has furnished the different equations on which the whole problem of arching depends; from which he deduces the following theorems.

I. That when a vertical plane divides a ves-sel into two parts, so that the weight of each is equal to the weight of water displaced by it, the moments of those parts estimated in relation to the same plane, to produce what is denominated arching, will he either a maximum or a minimum.

II. That this effect will be a maximum, when the infinitely small section contigious to the plane of the moments, has its own moment in a contrary direction to the total moment.

III. That the effect will be a minimum when this section has its own moment acting in the same direction as the total moment.

Q2

These theorems are applied by Dupin to the distribution of the forces in a seventy-four gun ship, the numerical elements relating to the weights and displacements bei:tg derived from the paper above mentioned of Dr. Young. We must, however, observe that the causes of arching are not be attributed entirely to the unequal distribution of the weight and pressure, but that the partial horizontal pressure in a longitudinal direction of the water, also contributes to this alteration of form, affecting the lower parts of the ship only, and tending to compress and shorten the keel, while it has no immediate action on

the upper decks. The pressure thus applied, must obviously occasion a curvature, if the angles made with the decks by the timbers, be supposed to remain unaltered, while the keel is shortened in the same manner as any soft and thick substance pressed at one edge between the fingers, will be-come concave at the part compressed ; and this strain upon the most probable supposition respecting the comparative strength of the upper and lower parts of the ship, must amount to more than one-third as much as the mean value of the former, being equivalent to 1000 tons, acting on a lever of one foot in length, while the strain, arising from the unequal distribution of the weight and displacement amounts where it is greatest, that is about 37 feet from the head, to 5260 in a seventy-four gun ship of the usual dimensions; and, although the strain is considerably less than this exactly in the middle, and throughout the aftermost half of the length, it is no where converted into a tendency to ” sag,” or become concave.

In addition to these forces as operating to produce arching, we must take into account the ac-tion of the waves ; for the magnitude of the strain on the different parts of a ship is subjected to very material alterations when she is exposed to the forces of the wind and waves. The effect of the ‘wind is generally compensated by a change of the situation of the water line or line of floatation, so that its amount may be estimated from the temporary or permanent inclination of the ship ; and the force of the waves may be more directly calculated from their height and breadth. These two forces can seldom be so applied as to combine their effects in producing a strain of the same kind in their full extent ; it will, therefore be sufficient to determine the probable amount of the force of the waves, which is more materially concerned in affecting the longitudinal curvature than that of the wind. As a fair specimen of the gieatest strain that is likely to arise from this cause in any common circumstances, we may consider the case of a series of waves twenty feet in height, and seventy in breadth ; the form being such that the curvature of the surface may be nearly proportional to the elevation or(depression ; a single wave might indeed act more powerfully than a continued series, but such a wave can scarcely occur singly. We shall then find upon calculation, that the greatest strain takes place in a seventy-four gun ship at the distance of about eighteen feet from the midships, arr.oi.nt ng to about 10,000 tons ; at the inMnnt when the slcip is in a horizontal position, while in more common ca-.’<. when the waves are narrower, the strain will be proportionably smaller and nearer to the extremity. Hence it appears, that the strain produced by the action of the waves, may very considerably exceed in magnitude the more permanent forces derived from the ordinary distribution of the weight and pressure, being

according to this statement nearly three times as great ; so that when both strains co-operate, their sum may be equivalent to about 15,000 tons, acting on a lever of one foot, and their difference in opposite circumstancces to about 5000. It may also be remarked, that the pressure of the water against the sides of a ship has a tendency to cause a curvature in a t runs-verse direction, which is greatly increased by the distribution of the weight, the parts near the sides being the heaviest, while the greatest \ertical pressure of the water is in the neighbourhood of the keel.

To correct the alterations of form arising from the action of these various forces, has been the great object of the labors of Seppings. As we have before observed, the manner in which the principal materials composing the hull of a ship is inartificial in the extreme ; the ribs form u right angle with the keel, the inside and outside planks are at right angles to the ribs, the beams at ri&ht angles to these, the carlings the same to the beams, the ledges to the carlings, and the planks of the decks to the ledges, the beams, and the ribs. The weakness of a disposition of this nature, may be illustrated by putting together four pieces of wood, and securing them by iron pins at the four corners, in the form of a square or parallelogram ; this, on the least pressure, may be made to change its form to the rhombus. But, let another piece be fixed to it diagonally, and the figure of the frame will be found immoveable. Place a bar in the middle parallel to two of the sides, and secure it firmly by iron pins, still the figure will be easily moved by the hand, like a parallel ruler, and assume the rhomboidal shape of A (PL. 3, FIG. 1), or B, (PL. 3, FIG. 2); but, apply to the frame where carpenters term the brace in a common field gate, as Z (FIG. 3), and the figure will remain as before, immoveable. If this brace or diagonal piece be not fitted to it, the outer part of the gate (or that part most distant from the hinges) will have a constant tendency downwards, until at length it will reach the ground.

Let FIG. 4 and 5, represent two frames of wood composed of parts strongly connected by bolts or iron pins, of which the former is put together on the old, and the other on the new principle. Let C C represent a fulcrum or point of support, and D D be two weights, to be attached to the extremities for the purpose of ascertaining the comparative strength and stiffness of each frame. This experiment will show that the stiffness of FK;. 5 is to that of FIG. 4, as 6 to 1, and the strength as 3 to 1 ; and the greater the length of the frames, the more manifest will be the decided advantage of the new principle, as respects both of those qualities. The substitution of the triangle, as in the frame, FIG. 5, the rectangle in the frame, FIG. 4, comprehends the principle of the new system, which consists in the application to the

ribs or timbers of the ship from one ex-S H I P - B U I I. D I N G.

2i > &

tremity to the other, and from the orlop deck downwards to the kelson, a series of diagonal braces disposed in the form of triangles, the sides of which give to each other a mutual support and counteraction. These triangles are firmly bolted to the frame ; and in order to give a continuity of strength to the whole machine, and leave no possible room for play, the spaces between the frames were filled up originally with old seasoned tim-ber, cut into the shape of wedges, but recently, with a prepared cement, thus rendering the lower part of a ship, one solid complete mass, possessing the strength and firmness of a rock.

The same principle of trussing is carried from the gun-deck upwaids, from whence, between every port, is introduced a diagonal brace, which completely prevents the tendency of ships to stretch, or draw asunder their upper works. The decks, too, are made subservient to the securing more firmly the beams to the sides of the ship, by the planks being laid diagonally in contrary directions, from the midships to the sides, and at an angle of 45° with the beams, and at right angles with the ledges. In frigates and smaller vessels, iron plates Ij ing at an angle of 45°, with the direction of the trusses, are substituted for the diagonal frame of wood in ships of the line.

By this mode of construction the ceiling, or internal planking, is wholly dispensed with, and a very considerable saving of the finest oak tim-ber thereby effected ; and what is more important, tVuxe receptacles of filth and vermin between the tiinberS), which were before closed up by the planking, entirely got rid of. This is not the least important part of the improvement, either as it concerns the soundness of the ship, or the health of the crew. It is stated that a ship which had been three years in India, on being laid open, exhibited a mass of filth, mixed up with dead rats, mice, cockroaches, and other vermin, which was taken out in cakes, not unlike in appearance, the oil-cakes with which certain animals are fed ; that the stench was abominaa-ble, and the timbers with which it was in contact rotten. No such filth can find a lodgement in ships of war as they are now huilt.

The first ships of war on which the new principle was tried were those

rebuilt or repaired in docks, from which they were quietly floated out without any shock from launching; several of them sustained several gales of wind, without showing the least symptoms of weakness, but quite the contrary, not even a crack appearing in the white-wash with which their sides within were covered. If these ‘experiments were not satisfactory, the launching of two of the largest ships in the navy established the fact of superior strength beyond the possibility of a doubt — the Nelson and the Howe. The Nelson, constructed on the old principle, was probably in every respect the best built ship in modern times ; the timber sound and well-seasoned ; the workmanship admirable; no pains were omitted by Mr. Sison, the builder, to have her as perfect as she could be made ; and her motion, when launched from the stocks, was slow, easy, and majestic, without a shake or a plunge; yet the Nelson, after launching, was found to have arched no less than 0ˆ inches. The Howe is a sister ship

to the Nelson, but built on the new principle ; and after launching she was found to have arched only 3| inches. The St. Vincent, built on the old principle, and otherwise the same in every respect as the Howe, likewise hogged on launching 9£ inches, and the whole fabric in both cases, was found on examination to be greatly disturbed ; whereas, the Howe exhibited no sucli symptoms. Fig. 6, P|ate III. will show the mode of trussing ships of the line according to the plans of Sir Robert Seppings, now almost universally adopted in the British Navy.

By the same individual a great variety of other improvements in the different parts of the construction of a ship have been proposed and introduced into general use in the navy. It was he who, in 1807, first suggested the plan of rounding the form of the bow in ships of the line, which is considered by nautical men of great utility and importance, and has been since generally adopted. The removal of the head-railing, and the continuing of the rounded form, give not only great additional strength, but also much more comfort and convenience to the crew, and security in that part of the ship when in action.

The scarcity of compass, or crooked timber, was for some time attended with serious injury to those ships of war while on the stocks into which it was considered necessary to be introduced. The difficulty with which it was procured, the length of time which a ship sometimes remained ou the stocks, waiting for a few pieces of compass timber, and the necessity of adding immediately the green wood when found, to the ‘seasoned timber in other parts of the frame,

gave to the ship different periods of durability ; though, in the long run, the seasoned parts be-came affected by the green wood with which, they were in contact, and a premature decay of the whole fabric was the consequence. Seppings therefore proposed a plan in 1806, which, by uniting short timbers according to a method called searphing, enabled him to obtain every species of compass form that could be required from straight timber. Since that period the whole frame of a ship can be prepared at once, without waiting for particular pieces, and thus every part of it be made to undergo an equal degree of seasoning.

By the same ingenious and indefatigable shipwright, a plea was proposed and adopted in the year 1813, by which ships of the line were built with timber hitherto considered as applicable only to the building of frigates, and that which had been deemed only fit for inferior uses was appropriated to principal purposes. The Talavera was the first ship built on this principle, and the expense of her hull is stated to have been about £1000 less than that of the Black Prince, a ship of similar dimensions built on the old principle. The method by which the timbers were united was found, on trial of the two ships while in frame, to give so much additional strength to the former., that it furnished the ground-work of the present mode of framing the British navy, by the introduction of the same union of materials in the application of the large as was practised in that of the

small ; from which a union of strength and economy has resulted.

The building of the Talavera, and the great strength of her frame, led to the practice of putting together the frames of ships of the line from timbers of reduced lengths, and dispensing altogether with the chocks used for uniting their extremities, or, as they are technically termed, their heads and heels. These chocks are of the form of an obtuse wedge, as A (Fig. 7), and they are used to unite the two pieces of timber, as B and C, by firmly bolting the piece A to the two timbers B and C. It generally happened, however, that in the operation of fixing this chock its two extremities split, and the surfaces of the chock and

timbers not being in perfect contact, the moisture and air were admitted, and naturally occasioned the dry-rot to exist in those parts of the ship than in most others ; and, as there were from 400 to 500 of these chocks in a 74 gun ship, it will readily be conceived what mischief was done to the whole fabric, if the greatest care were not taken by the workmen to prevent their splitting, and to bring their surfaces immediately into contact. It is obvious, also, that a great deal of timber must have been cut to waste in making these chocks ; in fact, they consumed in each ship timber to the value, wheu it was at a high price, of from £1500 to £2000, independent of the expense of workmanship, which was considerable ; and when the ship came to be repaired not one chock in six was found to be in a fit state to be used again. To obviate these disadvantages, Sir Robert Seppings brought the butt ends of the timbers together, as represented in Fig. 8, and kept them in that position by means of a round dowal or coak, in a manner similar to that by which the fellies of a carriage-wheel are united. He justly observes that the simplicity of the workmanship, the economy of the convertion of the timber, and the greater strength and durability, although of considerable moment, are of trifling importance when compared with the advantage of rendering timber generally applicable to the frames of ships which had heretofore been but partially so.

Of all the designs brought forward by the distinguished individual to whom the merit of the above improvements is due, there is one which has been questioned with a keenness and severity of a very uncommon kind, and which, it may be not unfairly added, has been opposed by prejudices of no ordinary nature, we mean that of the substitution of the circular form in the sterns of war, for that at present existing. Circular sterns, when contrasted with those of a square form, may be contemplated under two points of view. In the first place we should inquire into the strength peculiar to each form, considered as a system of mechanical forces ; and secondly into the means which each affords for carrying into effect the more immediate objects of a ship of war namely, attack and defence.

In the mechanical construction of a ship, every part of its structure ought to possess a proper degree of strength ; no one part possessing — if such an expression may be made use of — more strength than is absolutely necessary, nor any part less strength than the nature and office of

that particular part is destined to maintain. The change which Sir

Robert Sepj-mgs contemplates, and which he has actually applied to several ships, is, to communicate to the stern the strength and fipmness of the bow ; and to continue the diagonal system of building,which he has lately introduced, round the stern, in order to make the strength of the fabric uniform and complete. It is now universally admitted that the diagonal system has communicated great strength to every part to which it has been hitherto applied ; and there seems no good reason why the same increase of strength should not be communicated to a part so notoriously weak as the present square stern, particularly when by doing so, not only the mechanical frame of the ship is materially strengthened, but its means of defence aiso very much increased.

In the consideration of the means which each form of the stern afferds for attack and defence, the same objections may be urged against the defence of a square stern, as is known to attach to a redoubt of a square form. ” Redoubts,” says Malorti de Martemont, in his theory of Field Fortification, ” when they are not flanked by some other fire, have two essential defects ; the first is, that their saliants are unprotected, which cannot be remedied but by adapting to those saliants a few teeth of cremaillere, or, when the ground and every other circumstance will allow it, by directing the saliants towards some inaccessible points, or by placing in front of them, when possible, some artificial obstacles.” ” But,” continues Malorti, ” circular redoubts have not that defect, as their fire, which has no fixed direction, may incessantly vary, and spread itself on every point of the ground that surrounds them ;” and, ” the defence which they present is uniform on every part of the circumference.” Now the defects which this able writer attributes to square redoubts, hold, in all their force, against the defence of the square stern ; while the reason he gives in favor of redoubts of a circular form, applies most favorably to ships with round sterns. It is true that the defence of the stern only includes the form of a semicircle, while the defence of the redoubt here alluded to, embraces the whole range of its circumference ; still the reasoning holds good for the latter figure as well as for the perfect circle, because the chord of the semicircle, in the case of the circular stern, requires no defence.

In the case of an attack on the quarter of a ship, as by a steam-vessel for instance, of the kind just alluded to, Sir R. Seppings’ plan gives a superiority, not only on account of the additional number of guns which the ship is enabled to bring into action, and the sweep of the ocean which those guns are able to command ; but also an advantage of another kind, arising from the diminution of the distance of that point from the ship where the shot from the two after-guns cross each

other, when the guns are trained to their greatest angle, — a point, it is presumed, of no small importance in case of an attack from a steam vessel. These united considerations tend unquestionably to prove that the circular stern is the form best capable of defence.

In concluding these remarks we myy not im-

properly glance at the improvements which have and the Americans seem to place but little con—

of late years been introduced in the preservation fidence in the plan. Rodgers, the commissioner

of the navy. Not only is the new mode of con-of their navy, states in an official report address—

struction highly favorable to the duration of ed to the secretary, that ” experiments have been

ships, but the ravages of the disease known by made to arrest the dry-rot in ships by sinking

the name of the dry-rot, occasioned principally them for months in salt water, but without sue-

by the hurry in which they were built during the late war and the unseasoned state of the timber made use of, led to such measures as tend most effectually to the preservation of the fleet.

In the first place, various modes were put in practice for assorting and seasoning the timber,

cess. The texture of the wood was found to be essentially injured by being thus water-soaked, and it became more subject to this disease than before it was sunk. The ships were also injured in their fastenings, and the atmosphere within them was kept in a constant state of humidity, whence, among other ill effects, pro-

and for protecting it from the vicissitudes of the ceded injury to provisions and stores, and sick-weather. The oak and fir of Canada, which had ness to the crews." Now we know that not one been introduced to a great extent in our dockyards, during the time the Baltic was shut against

of these injurious effects happened to the Eden, which was sunk in Hamoaze, remained under

this country, are now excluded ; those woods water three or four months, was sent to India, having been found not only to possess little and continued at sea for a long period ; but lurability, but so friendly to the growth of fungi, from being covered with fungus before the operation, she has not since shown a single symptom of dry-rot. The truth is, that the American

that they communicated the baneful disease to all other descriptions of timber with which they came in contact. The greatest of all improve-

timber, with the single exception, perhaps, of

ments, however, for the preservation of the navy, the live oak, is remarkably subject to dry-rot

is the roofing thrown over them while building, and in ordinary ; a practice, the utility of which is so obvious that it is quite extraordinary it should not have been earlier adopted. By filling in between the timbers masses of cement, and

of which, during the late war, we had fatal experience. Mr. Knowles, in his Treatise on the means of preserving the British navy, is led to conclude, from a variety of experiments, " that timber is better

seasoned when kept for two

then injecting, by forcing-pumps, a mixture of years and a half under cover, than when placed

oil and tar into all the joints and crevices of the frames; and lastly by the constant care and attention bestowed on ships after leaving the dockyard, and being placed in a state of ordinary, it may be said that the dry-rot has no longer any existence in the British navy.

A ship now placed in ordinary, whether new or newly repaired, is carefully housed over, so that no rain can reach her lower decks ; several streaks of planks are removed from her sides and decks, to admit a thorough draft of air, which is

for six months in water, and then for two years in the air, protected from the rain and sun ; that it loses more in seasoning, by having been, during the six months of immersion, alternately wet and dry, than it does from having been the whole of the time under water; and that the loss in moisture is greater in all cases in a given time, when the butt-ends are placed downwards.”

The following are the most celebrated works on Naval Architecture: — Ele”mens de 1’Archi-

sent down by wind-sails, and which pervades tecture Navale, ou Trait £ Pratique de la Con-

every part of the ship ; this, with the addition of two small airing-stoves, in which a few cinders are burned, render her perfectly dry and

struction des Vaisseaux, by M. du Hamel du Monceau, an excellent work, which possesses the merit of having been the first to illustrate, in

comfortable on all the decks and store-rooms, a satisfactory manner, the theory and practice of

All the shingle-ballast is removed out of the the art Traite du Navire, by Bouguer. The—

hold, which is thoroughly cleared and re-stowed orie complete de la Construction, et de la Ma—

with iron-ballast, which is completed by the nceuvre des Vaisseaux, by Euler. The Scientia

lower tier of iron tanks being filled with pure Navalis, of the same author, is a learned and

water. The former practice of mooring two conspicuous work. Essai Ge”ometrique et Pra—

ships together, by which the two sides next to tique sur 1’Architecture Navale, by M, Vial du

each other, deprived of the sun and a free cir-Clairbois. Manuel de Construction Pratique,

culation of air, were generally found to be de-by M. de Lironcourt. Traite de la Construction

cayed, is discontinued. The lower masts are des Vaisseaux, by M. Dumaits de Goimpy.

left standing and their tops housed over; the Examen Maritimo, in Spanish, by Don Jorge

gun-carriages and several of the stores are left Juane. This work contains a most excellent

on board ; and such, in short, is the state of a theory, founded on experience and practice. It

ship in ordinary, that she may be fitted in all has been translated into French by M. Leveque,

respects for proceeding to sea in half the time who has added several valuable notes. A Trea—

formerly required. tise on Neval Architecture, in Swedish, by

A practice has recently been introduced into Chapman; translated into French by M. Vial

the dockyards, of steeping oak timber in salt du Charbois, and into English by Dr. Inmnn,

water for several months, and then stacking it the learned professor at the Naval College,

till it becomes perfectly dry, which is said to Portsmouth. To these must be added the

have entirely put a stop to the dry-rot where it papers of Attwood on stability in the Philoso—

had already commenced, and to act in general phical Transactions for the years 1796 and 1798;

as a preventative to that disease. Some doubts that of Steppings and of Young in those of 1814

have, however, been entertained on this point, and that of Dupin of 1817.

SHIP-CARPENTER. A ship-builder. See CARPENTER.

SHIFRAH AND PUAH, two midwives of Go-shen, in Egypt, deservedly celebrated in sacred history, and rewarded by the Almighty himself for their humanity, in disobeying the bloody mandate of the tyrant of Egypt to murder the Hebrew boys at their birth. Exod. i. 15 — 19. •Some commentators have expressed doubts whether these worthy women were Egyptians or Hebrews; but we think it hardly admits of a question that they were Hebrews, as otherwise their pagan superstition would have led them to comply with the royal mandate, and to think that at the same time they served their gods, by

murdering the children of a race who despised their deities.

SHIP-MONEY, was an imposition charged upon the ports, towns, cities, boroughs, and counties of this realm, in the reign of king Charles I., by writs, commonly called ship writs, under the great seal of England, in the years 1635 and 1636, for the providing and furnishing of certain ships for the king's service, &c., which was declared to be contrary to the laws and statues of this realm, the petition of right and liberty of the subject, by stat. 17 Car. I. c. 14. See Blackstone's Commentaries, vol. iv. p. 30.

SHIPWRECK, MEANS OF PRESERVING LIVES, IN CASES OF. In the Philosophical Magazine we have an account of means for preventing that loss, when the ship is in danger between 200 or 300 fathoms of the shore. The only certain means of saving the crew of a vessel in such a state is to establish a rope of communication from the shore to the ship, by fixing the end of the rope to a bomb or oannon ball, and extending the rope afterwards, in a zig-zag direction, before the mortar or cannon, or suspending it on apiece of wood raised several feet. A rope, so placed, will not break by the greatest velocity which can be given to the bomb or ball ; and thus the end of it can be sent ashore by a discharge of artillery. The writer prefers the bomb to the cannon ball. He proposes, however, other means to effect his benevolent purpose. ' It ought to be remembered that a vessel is never cast away, or perishes on the coast, but because it is driven thither against the will of the captain, and by the violence of the waves and the wind, which almost always blows from the sea towards the shore, without which there would be no danger to be apprehended; consequently, in these circumstances, the wind comes always from the sea, either directly or obliquely, and blows towards the shore. 1st. A common paper kite, therefore, launched from the vessel and driven by the wind to the shore, would be sufficient to save the crew, consisting of 1500 seamen, if such were the number of a ship of war. This kite would convey to the shore a strong packthread, to the end of which might be affixed a cord, to be drawn on board by means of the string of the kite ; and with this cord a rope, or as many as should be necessary, might be conveyed to the ship. 2d. A small balloon, of six or seven feet in diameter, and raised by rarified air, would be also an excellent means for the like purpose : r>eing driven by the wind from the vessel to the

shore, it would carry thither a string capable of drawing a cord with which several ropes might be afterwards conveyed to the vessel. Had

the discovery of Montgolfier produced no other benefit, it would on this account be of great importance. 3d. A skyrocket, of a large diameter, would be of equal service. It would also carry, from the vessel to the shore, a string capable of drawing a rope after it. Lastly. A fourth plan for saving the crew of a shipwrecked vessel, is that of throwing from the vessel into the sea an empty cask with a cord attached to it. The wind and the waves would drive the cask to the shore, and afford the means of establishing that rope of communication already mentioned. Mr. John Bell, of the royal artillery, afterwards promoted to a lieutenancy, contrived a similar method of saving persons from stranded ships, in the year 1791, by providing a mortar between 500 and 600 weight, with a chamber, &c., capable of containing one pound of powder, and a bore to admit a leaden ball sixty pounds or upwards. When a ship is stranded, the mortar is to be elevated about 45°, and a rope or deep-sea line is to be fastened by one end to the ball, while the line itself, being coiled round parallel handspikes, may be easily and rapidly unfolded to its full extent. On the discharge of the mortar towards the shore, the ball will carry with it the line or rope, and by burying itself in the earth make that end of the rope fast, while the other end is in the stranded vessel : thus the rope becomes stretched between the vessel and the shore, and a communication thence established by means of rafts. The rafts recommended by lieutenant Bell are each formed by lashing together with ropes five empty water-casks belonging to the ship, and lying above them a seaman's chest, with holes cut in its sides, to prevent its filling, and to allow the person who rides in it better convenience for taking hold; pullies are attached to this chest, through which the rope is to run : the raft is also to be ballasted underneath, to prevent its upsetting. The mortar and necessary balls or shells that would be used on such an occasion might form a part of the ballast of the vessel ; and whenever a ship is driving or unmanageable near the shore, the mortar might be brought on deck, and the apparatus prepared. In some cases grapnels may be advantageously fired from common ordnance to answer the same purpose.-

The following is a relation of some trials made before a committee of the Society of Arts at Woolwich, in August, 1791. From a boat moored about 250 yards from shore, the shell was thrown 150 yards on shore, with the rope attached to it; the shell was of cast iron, filled with lead ; it weighed seventy-five pounds ; its diameter eight inches ; the rope in the trial was a deep-sea line, of which 160 yards weighed eighteen pounds; the angle of the mortar, from whence the shell was fired, was 45°. By means of the line, lieutenant Bell and another man worked themselves on shore upon his raft of casks ; there were many links in

the rope, but they were cleared with ease by lieutenant Bell, with the assistance of ‘.is match-blocks. The second trial \vas repeated in a similar manner, and with equal success, t«>e

shell falling within a few yards of the former place; the gale of wind was brisk, and the water rough. The direction of the shell was nearly from north to south, and the wind blew nearly northwest. In the third trial, the mortar was elevated to 70° ; the rope attached to the shell was an inch and half tarred rope, of which every fifty yards weighed fourteen pounds and a half. The shell was of the kind above mentioned ; it fell 160 yards from the mortar, and buried itself about two-thirds in the ground ; the line or rope run cut was about 200 yards, and it required the force of three men to draw the shell out of the ground at that distance.

There can be little doubt that, in many cases when vessels are stranded near the shore, the adoption of the means pointed out by lieutenant Bell would tend to the preservation of many valuable lives; and since a suitable piece of ordnance, with a block carriage and leaden balls, would not cost above eleven or twelve pounds sterling, the expense furnishes no objection of moment. Indeed, in trading vessels, such a piece might farther answer the purpose of making signals of distress, by filling the chamber with powder, and well wadding it, when the report of the firing would be heard to the distance of some miles; and, in defence of a ship, such a gun would be highly useful, on account of the facility which its shortness gives to its loading and firing. The Society of Arts, &c., rewarded Mr. Bell, at that time a sergeant in the royal artillery, with fifty guineas for his invention : they published the particulars in the tenth volume of theirTransactions, and thought it expedient again, in the year 1807, to insert a descriptive engraving that had been omitted at that time, with some farther particulars in the twenty-fifth vo-lume. Models and drawings of the whole apparatus are reserved in the society’s repository for the instruction of the public.

To save the lives of shipwrecked persons, and to rescue mariners from

a watery grave, seems, even in idea, a contemplation so eminently benignant, and in its execution, to a warlike, commercial, and generous nation like this, an undertaking so truly benevolent, so extensively philanthropic, that we cannot sufficiently applaud the humanity of the inventor of an apparatus to save the lives and property of the shipwrecked mariners in the extremity of danger. As there are few in this great nautical nation that are not directly, collaterally, or generally connected with marine affairs and marine adventures, the consideration, therefore, takes strong possession of the feelings of individuals, and of society at large, by the patriotic means of protecting the lives of a class of the most important members of the latter, and giving the former, that kind of moral security, and, consequently, mental happiness, which must arise from the perusal of a small octavo volume, published by captain G. W. Manby, of the royal navy, and an honorary member of the Humane Society.

The captain informs us, that while he was statiotied at North Yarmouth, in the year 1807, * place remarkable for the beautiful features its coasts present in a calm, and for the* terrific

distortion of them in a storm, he had been witness to the loss of several vessels; and, after describing the dreadful catastrophe, he very appropriately observes, that,

‘ The horrors of shipwreck at a distance from land, a scene I had unhappily too often witnessed suggested to me also the benefit that must result from enabling a life or pilot-boat to go over a flat beach, with facility and certainty, to the re-lief of sufferers. This observation was corrobo-rated by the opinions of various residents on the coast, whose assurances gave evidence, too conclusive, of the many lives and immense property annually lost for the mere want of the means 1 have hinted at : the chief difficulty was, that no boat could be forced over a high and raging surf without some powerful artificial aid. Among other desiderata that have grown out of my researches in this ardent and important work, there is one I presume to thkik of much worth. Boats, in common, where occasion has required their being launched in cases of shipwreck, have often failed, owing to their want of buoyancy, and Bother properties of the life-boat. I have devised a simple method of giving to every kind of boat these advantages, and at a most inconsiderable expense. Thus every vessel provided with a boat so prepared, would possess within herself the power of preserving the life of any person fallen or washed overboard, in a high wind and heavy sea; and boats around the coast, by the same means,

may be converted into life-boats.'

From this benevolent idea, this treatise, in which captain Manby has reduced theory to practice, has emanated ; and we are gratified to find, that pailiament has, ' in the most liberal manner,' been pleased to countenance his undertaking. 'And why,' he philanthropically observes, ' may not the glorious cause of humanity be fostered on foreign shores ? It would be heart-cheering indeed to learn, that the invention of an Englishman had been adopted for the salvation of the shipwrecked in every clime, and on every coast !'

This woik contains representations of the apparatus, with directions for using it in the assistance of persons on board stranded vessels on a lee-shore, in the day, as well as in a similar situation at night.

SHIPWRIGHT. The company of shipwrights was instituted in the reign of James I., and consisted of a master, two wardens, and sixteen assistants. It appears in the twelfth volume of the Archseologia, that Mr. Phineas Pett, who had been educated at Emanuel College, Cambridge, and afterwards served his apprenticeship in Deptford dockyard as a shipwright, was appointed master-shipwright at Woolwich dockyard, in November 1605. He was elected and sworn master of the shipwright's company in April 1606, and their meetings were then held at the King's Head, in New Fish Street. That a new charter was granted in 161 2 for incorporating-the shipwrights of England, when Mr. Pett appears also to have been ordained the first master. According to Derrick's Memoirs of the R,oyai Navy,- he became an assistant commissioner in Februar", 1630, and a principal commissioner

of the navy in Decemberfollowing. In 1637, by order of Charles I., he built the famous ship named the Sovereign of the Seas, the largest that had ever been built in England ; she was afterwards cut down and called the Royal Sovereign.

In Pepy's Naval Minutes it is mentioned ' that Shipwright's Hall did

anciently view and approve of the draught of the ships that were to be built for the king ;' and by the lord high admiral's warrant, dated in April, 1638, carpenters were not to be appointed to ships until they had been examined and licensed at Shipwrights' Hall. It appears from Mr. Pett's Manuscript in the British Museum, that it was customary, in his time, to hire and victual the shipwrights and caulkers on any emergency, and to discharge them when the work for which they were employed was performed. It also appears that there was at that time a small permanent establishment of artificers for ordinary service in each of the dockyards. Previous to the year 1691 the mas-ter shipwrights and artificers at our naval ports were borne on board one of his majesty's ships of war, fitted up purposely for their reception. The average number employed in the several dockyards in the year 1700, were about 1780 ; and in 1800 the number of shipwrights were 3776, an increase by no means proportionate to the augmentation of the number of ships and tonnage of the navy during that period, which may be accounted for in some degree by the increased quantity of work that is now performed by any given number of artificers in that class, and by the great saving of labor from the introduction of coppering and copper-bolting of ships, as they do not now require docking near so often as formerly, in order to have their bottoms cleaned and their bolts replaced ; for the copper bolts do not decay as the iron bolts did.

Under the description of shipwrights are included the persons employed in the occupations of mast-making and boat-building, which in private concerns are generally considered as separate branches: but in our dockyards, the execution of, such work is under the direction of distinct officers, denominated master mast-maker, and master boat-builder. The shipwrights are formed into gangs or companies, over whom officers, called quarterrhen, are placed; each of those gangs, according to the directions of the Navy Board, should consist of twenty men and six apprentices : but the apprentices depend on the proportion they bear to the working shipwrights. The quartermen have the selection of their respective companies ; each, according to his seniority, nominating one man in turn, beginning with those who have apprentices.

The artificers and laborers in our dockyards, when hurt in his majesty's service, are attended by the surgeons, and are allowed 2s. Id. per day, whatever class they belong to, for six weeks, unless they are able to resume their labor at a shorter period. There is likewise an establishment of superannuation for the different classes, to which they are admitted, if rendered incapable of labor from hurts received, or after an uninterrupted service of thirty years.

appointed to each of his majesty's dock-yarus, to superintend and direct the building and repairing of the different classes of ships, &c. He has the direction and superintendence of nearly the whole operative business of the dockyard to which he is appointed ; in the execution of which he is assisted by other subordinate professional officers, termed ' Assistants to the master shipwright;' one of whom is particularly entrusted with the management and conversion of timber, and is styled ' timber master,' who has also an assistant for measuring all the timber taken into the yard. It is likewise his duty to inspect the quality of all stores received from contractors, which are used in his department, and to attest their fitness for the service ; to survey and value all vessels hired or purchased into his majesty's navy ; to keep an account and certify to the navy board the quantity of all works performed by contract in the dockyard ; and to keep an account of the earnings of the respective artificers under his superintendence, and to certify the amount from time to time to the clerk of the check. Over the shipwrights and caulkers, an assistant is appointed, who conducts and directs the execution of the work, which is also considered under the superintendence of the master shipwright.

THE FOREMAN OF THE SHIPWRIGHTS, is one of a class of officers between the quartermen and shipwright's assistants, whose duty it is to direct and superintend the building and repairing of ships, and the several works in the docks. There are also foremen afloat, who are appointed to survey and report to the master shipwright the state and condition of the ships and vessels afloat.

THE SHIPWRIGHTS' APPRENTICES, in his majesty's dockyards, are boys bound to certain persons under the direction of government, for a term of seven years, who, in the course of their apprenticeship, are instructed by some of the deserving shipwrights, in the art of building, caulking, and repairing ships and vessels. They are now divided into two classes, *viz.* the superior and inferior.

Superior class. By the king's order in council, September 20th, 1809, a superior class of shipwrights' apprentices, consisting of twenty-five young men of liberal education, has been established at the royal navy college in Portsmouth dockyard : and on the 5th of November, 1810, the principal officers and commissioners of his Majesty's navy, gave notice that a plan of education had been established for them. The number of students in this class was at first limited to twelve, but have

gradually increased to twenty-five.

The period of apprenticeship is seven years, but for a student who may have previously served in an inferior class of apprentices in his majesty's yards for the space of two years, it is only six years, and only five years for a student who may have previously served in the said class for the space of three years. An instructor in the theory of naval architecture is added to the present establishment of the Royal Naval College, to assist particularly in the instruction of the superior class of apprentices.

' SHIR A, a river of Scotland, in Argyllshire, which rises in the mountains behind Inverary, and after forming a small lake called Loch Dub falls into Loch Fyne, near Inverary. It gives name to the valley of Glenshira, through which it runs. Its name, in the Gaelic, is Sio-reidh, i. e. always smooth, the opposite of Ao-reidh, i. e. never smooth. See AO-REIDH.

SHIRAZ, the capital of Fars, a noted city of Persia, esteemed the second in the kingdom, is situated near the ruins of the ancient Persepolis. The distant view is rather pleasing than grand, although much enriched by the lofty domes of the mosques, seen among the trees : on entering the town the houses are found to be small and the streets narrow, and the stranger is impressed with but a mean idea of the place which was long esteemed the second city in the empire. It was the residence of Kurim Khan, and bears evident marks of his fTtrrfsficence. It enjoys a salubrious climate, and its environs have been celebrated by several eminent men, among whom was Hafiz, the Anacreon of the east, who was a native of this city, and whose tomb is about half a mile from it. Without the city are several avenues, leading to beautiful gardens, perfumed with flowers, and refreshed by fountains. The population is about 40,000, and the commerce

extensive. It has increased of late years, and is principally carried on with Bushire, Yezd, and Ispahan. Its mosques and other public buildings are more numerous than those of Teheran ; and the great bazaar, built by Kurim Khan, is a noble structure, in which the different trades of the city have their respective stations assigned them. See PERSEPOLIS.

SHIRE, n. s. Sax. j-ciri, from rcinan, to di-vide. A division of the kingdom ; a county ; so much of the kingdom as is under one sheriff.

His blazing eyes, like two bright shining shields, Did burn with wrath, and sparkled living fire ;

As two broad beacons, set in open fields, Send forth their flames far off to every shire.

Faerie Queene. The noble youths from distant shires resort. Prior.

SHIRE is the same with county. See COUNTY. County, comitatns, is plainly derived from comes, the count of the ancient Franks ; that is, the earl or alderman (as the Saxons called him) of the shire, to whom the government of it was entrusted. This he usually exercised by his de-puty, still called in Latin vice-comes (whence viscount), and in English the sheriff, or shire reeve, signifying the officer of the shire ; upon whom, in process of time, the civil administration of it totally devolved. See SHERIFF. In some counties there is an intermediate division between the shire and the hundred; as lathes in Kent and rapes in Sussex, each of them containing about 300 or 400 a piece. These had formerly their lathe-reeves and rape-reeves, act-ing in subordination to the shire-reeve. Where a county is divided into three of these intermediate jurisdictions, they are called trithings, which were anciently governed by a trithing-reeve. These trithings still subsist in the large county of York, where, by an easy corruption, they are denominated ridings ; the north, the east, and the west riding.

SHIRL, or cockle, in mineralogy. See COCKLE.

SHIRLEY (Selina), countess of Huntingdon. See HUNTINGDON.

SHIRLEY (Henry), an English dramatic writer of the seventeenth century, who wrote a number of plays, but only one of them seems to have been printed, viz.The Martyred Soldier, in

1631.

SHIRLEY (James), another eminent English dramatic writer, said to be elder brother to Henry. He was born in London, in 1594, and educated at Merchant Tailor's school, whence he removed to St. John's College, Oxford. He published thirty-nine plays at different times; a volume of Poems in 8vo. 1656; and three Treatises on Grammar. He died in 1666.

SHIRT, n. g. & v. a.) Sax. rcyAC, fcyriic;

SHIRT' LESS, adj. $ Dan. shiert ; Goth, and Swed. shut. The under linen garment of a man • to cover with a shirt : wanting this useful gar ment.

Shift a shirt : the violence of action hath made you reek as a sacrifice. Shakspeare. Cymbeline.

I take but two shirts out with me, and I mean not to sweat extraordinarily. Id. Henry IV.

When we lay next us what we hold most dear, Like Hercules, envenomed shirts we wear, And cleaving mischiefs. Dryden.

Ah! for so many souls, as but this morn Were clothed with flesh, and warmed with vita'

blood, But naked now, or skirted but with air. Id.

Linsey-woolsey brothers,

Grave mummers! sleeveless some, and shirtless others. Pope.

Several persons in December had nothing over their shoulders but their shirts. Addison on Italy.

SHIRVAN, a province in the north of Persia, the largest and most important division of southern Caucasus. It is a triangular peninsula, the point of which stretches into the Caspian ; varying extremely in breadth, which, at the extremity of the peninsula, is scarcely sixteen miles, while in the interior part it amounts to 160. It is bounded on the north and east by Georgia and Daghestan : on the south by the Kur, which separates it from Ghilan and Ader-bijan. The northern part consists of an extensive plain, enclosed by the mountains that extend towards the sea near Derbend. Numerous streams from the mountains contribute towards the fertility of this plain, at the same time that

they render the passage of an army difficult. The plain is interspersed with small woods and clumps of bushes, and the villages surrounded with orchards, vineyards, and mulberry plantations. The second division of Shirvan extends from the coast to the plain watered by the Kur, and is bounded by a higher range of mountains, which run in a southeast course through the province. The higher districts are here the most fertile. The plain along the Kur is about 140 miles in length, and from forty to fifty in breadth. It is in a great degree surrounded with mountains, and being exposed to frequent inundation, is greatly overgrown with rushes. The most elevated tract in Shirvan is that which extends towards Lesghistan. It is intersected by narrow

valleys, in many of which are small lakes, which continue filled in the greatest heat of summer. Shirvan may in general be esteemed fertile, being watered by numberless rivers, some of which fall into the Kur, and others into the Caspian. This province v»ns annexed to the Persian empire in 1500, by Shah Ismael, and continued subject till the decline of the Sen" dynasty. Recently, however, the Russians have obtained possession of all the sea coast. The principal towns are Schamachi and Bak.u

SHISHAK, SESAC, or SESACUS, a king of Egypt, mentioned in Scripture, and believed by Sir Isaac Newton and others to be the same with Sesostris. Some commentators snppose him, with great probability, to have been the brother of Solomon's queen ; and that, being offended with his brother-in-law for dishonoring his sister by his subsequent marriages, he had the more rea dily given encpuragement and protection to Jeroboam, though he did not choose to venture a war with such a powerful monarch as Solomon. This appears the more probable from Shishak's conduct after his brother-in-law's death; for having in the fifth year of Rehoboam raised a great army of 60,000 horsemen, 1200 chariots, and an innumerable multitude of Egyptians,

Ethiopians, Lybians, &c., he invaded Judah, took Jerusalem, and plundered the palace and temple of their most valuable articles; while he allowed his ally Jeroboam to enjoy his newly acquired kingdom in peace. See 1 Kings, xiv. 25, 26 ; and 2 Chron. xii. 2 — 9. See also EGYPT and ETHIOPIA.

SHITAKOONTHA, a name of a Hindoo deity Siva. It means the blue-throated ; and the fable accounting for the name is often alluded to in the writings of that people When the ocean was churned, we aie told, poison was produced among the fourteen precious articles resulting from that operation. The word, as well as poison, means medicinal drugs. This was swallowed by Siva : and, in the songs of Jayadeva, translated by Sir W. Jones, in praise of Vishnu and Lakshmi, under their names of Krishna and Radha, the following passage occurs (Heri and Narayana, we should premise, are names of Vishnu ; and Pad ma, or the Lotos, of Lakshmi :) — ‘ Whatever is delightful in the modes of music ; whatever is divine in meditations on Vishnu ; whatever is exquisite in the sweet art of love ; whatever is graceful in the fine strains of poetry ;— all that let the happy and wise learn from the songs of Jayadeva, whose soul is united to the foot of Narayana. May that Heri be your support who expanded himself into an infinity of bright forms, when, eager to gaze with myriads of eyes on the daughter of the ocean, he displayed his great character of the all-pervading deity, by the multiplied reflections of his divine person in the numberless gems on the many heads of the king of serpents, whom he chose for his couch : that Heri who, removing the lucid veil from the bosom of Pad ma, and fixing his eyes ou the delicious buds that grew upon it, diverted her attention by declaring, that when she nad chosen him as her bridegroom, near the sea of milk, the disappointed husband of Parvati drank in despair the venom which dyed his neck

azure. Jones’s Works, vol. x. As. Res. vol. iii.

SHITTAH, n. s.) Heb. A sort of precious

SHIT’TIM. $ wood, of which Moses

made the greatest part of the tables, altars, and planks, belonging to the tabernacle.

Bring me an offering of badgers’ skins and ihittim-wood. Exodus.

SHITTIM WOOD is supposed to be the wood of the Acacia, which is the only tree that grows in Arabia Deserta. Jerome says it resembled

the wood of the white thorn. See CRAT.EGUS. It is said to have been almost incorruptible.

SH1TTLECOCK, n. s. Commonly, and perhaps as properly, shuttlecock. Skinner derives it from Teut. schutteln, to shake ; or Sax. pceatan, to throw ; and thinks it is called a cock from its feathers. Perhaps it is properly shuttlecork, a cork driven to and fro, like the instrument in weaving, and softened by frequent and rapid utterance from cork to cock. — Johnson. But see SHUTTLE. A cork stuck with feathers, and driven by players from one to another with battledoors.

SHIUMLA, CHOUMLA or SHUMLA, a Turkish fortress in the mountains of the Balkan. Varna and Choumla are called, on account of their great military importance, t he gates of Constantinople. The town of Choumla, properly so called, is nearly surrounded by a natural rampart, consisting of a portion of mount Haemus, or the Balkan. The steep slopes of this great bulwark are covered with detached rocks, and close, thorny bushes. The nature of the ground makes it a very advantageous position for the Turkish soldier, who, when sheltered by the inequalities of the ground and a few entrenchments, displays great resolution and address. The town is about a league in length and half a league in breadth, and may contain from 30,000 to 35,000 souls. The fortifications are rudely constructed, but its situation in the midst of a vast natural fortress, capable of containing an immense army, with its magazines, &tc., secures it from the enemy's artillery. The air is very healthy in the elevated parts of the Balkan, and in the narrow valleys which lie between its ridges. On the other hand, there cannot be a more unhealthy country than that which extends from the Balkan to the borders of the Danube and the Pruth. This difference between the climate* of the mountains and that of the plain is the most effectual defence which nature has given to Choumla. In the late war between Russia and Turkey, it was besieged by the troops of the former power from July 20, 1828, until October 25, of the same year, when they retired, after the conquest of Varna, October 11. On the llth of June, 1 829, a decisive victory was gained by the Russians over the Turks, not far from Choumla. The grand vizier commanded the Turks, who are said to have lost 6000 killed, 1500 prisoners, and 60 pieces of cannon, with large quantities of ammunition and baggage. The loss of the Russians amounted only to 1400 killed and 600 wounded.

SHIVE, n.s. Belg. schyve, of Goth, skyfu, to divide. A slice of bread. Obsclete.

SHIVER, v.u.,v.n.,&i f Teut. fchawren,of

SHIV'ERY, adj. [n. *. J Goth, skyfa, to split or divide. To quake ; tremble with some de-gree of violence : shudder ; fall to pieces : break into pieces; shatter: shivery is incoherent; falling easily into fragments or shivers.

The ground « ith si ivered ariiu ur strown. Milton.

Give up Laius to the realms of day, Whose ghost, yet shivering on Cocytus' sand, Expects its passage to the farther strand. Pope.

Prometheus is laid On icy Caucasus to shiver, While vultures eat his growing liver. Stoift.

Showers of granados rain, by sudden burst Disploding murderous bowels, fragments of steel ; A thousand ways at once the shivered orbs Fly diverse, working torment. Philips.

SHIVERS, in the sea language, little rollers, or round wheels of pulleys.

SHOA, or XOA, a province of Abyssinia, where the royal line of Solomon lived during their expulsion from the throne. See ETHIOPIA.

SHOAD, among miners, denotes a train of metalline stones, serving to direct them in the discovery of mines.

SHOAD'STONE, n. s. From SHED. See below.

Certain tin stcnes lie on the face of the ground, which they call shoad, as shed from the main load, and made somewhat round by the water.

Carew's Survey of Cornwall.

Shoadstoiie is a small stone, smooth without, of a dark liver colour, and of the same colour within, only with the addition of a faint purple. It is a fragment broke off an iron vein.

Woodward on Fossils.

The loads or veins of metal were by this action of 'the departing water made easy to be found out by the thoads, or trains of metallick fragments borne off from them, and lying in trains from those veins towards the sea, in the same course that water falling thence would take. Id.

SHOAD-STONES, a term used by the miners of Cornwall and other parts of England, to express such loose masses of stones as are usually found about the entrances into mines, sometimes running in a straight course from the load or vein of ore to the surface of the earth. These are stones of the common kinds, appearing to have been pieces broken from the strata or larger masses ; but they usually contain mundic, or marcasitic matter, and more or less of the-orb to be found in the mine. They appear to have been at some time rolled about in water, their corners being broken off, and their surface smoothed and rounded. The antimony mines in Cornwall are alvyays easily discovered by the shoad-stones, these usually lying up to the surface or very nearly so; and the matter of the stone being a white spar, or debased crystal, in which the native color of the ore, which is a shining bluish-black, easily discovers itself in streaks and threads. Shoad-stones are of so many kinds, and of such various appearances, that it is not easy to describe or know them : but the miners, to whom they are of the greatest use in tracing or searching after new mines, distinguish them from other stones by their weight; for if very ponderous, though they look ever so much like common stones, there is great reason to suspect that they contain some

metal. Another mark of them is their being spongy and porous ; this is a sign of especial use in the tin countries ; for the tin shoad-stones are often so porous and spongy that they resemble large bodies thoroughly calcined. There are many other appearances of tin shoads, the very hardest and firmest stones often containing this metal. When the miners, in tracing a shoad up hill, meet with such odd stones and earths that they know not well what to make of them, they have recourse to vanning, that is, they calcine and powder the stone, clay, or whatever else is supposed to contain the metal ; and then washing it in an instrument prepared for that purpose, and called a vanning

shovel, they find the earthy matter washed away, and of the remainder the stony or gravelly matter lies behind, and the metalline matter at the point of the shovel. If the person who performs this operation has any judgment, he not only easily discovers what the metal is that is contained in the shoad, but also will make a very probable guess at what quantity the mine is likely to yield of it in proportion to the ore.

SHOAL, n. s., v. n., & ˆ Sax. pcole; Belg.

SHOAL'Y, adj. [adj. $ school, of Goth, kule, full. A crowd ; a great multitude ; a throng : hence a number of shelving rocks; a sand-bank ; shallow sea : as a verb neuter, to crowd ; throng : be or grow shallow : the adjective corresponding.

A league is made against such routes and shoals of people as have utterly degenerated from nature.

Bacon.

Where there be great shoals of people which go on to populate without forseeing means of sustentation, once in an age they discharge part of their people upon other nations. Id.

The wave-sprung entrails, about which fausens and fish did shole. Chapman.

The haven's mouth they durst not enter, for the dangerous shoals. Abbot'i Description of the World.

The vices of a prince draw shoals of followers, when his virtue leaves him the more eminent, because single. Decay of Piety.

What they met

Solid, or slimy, as in raging sea, Tost up and down, together crowded drove From each side shoaling towards the mouth of hell.

Milton.

A shoal of silver fishes glides And plays about the barges. Waller.

The watchful hero felt the knocks, and found The tossing vessel sailed on shoalty ground.

Drydeii.

He heaves them off the shales. fd.

The depth of your pond should be six foot ; and on the sides some sholes for the fish to lay their spawn. Mortimer.

God hath the command of famine, whereby he could have carried them off by skoals. Woodward.

Around the goddess roll

Broad hats, and hoods, and caps, sable shoal ; Thick and more thick, the black blockade extends.

Pope.

SHOAL, in sea language, is the same as shallow, and is applied to flats in the water. They say it is good shoaling, when a ship sailing towards shore, they find by her founding it grows shallower and shallower by degrees, and not too suddenly ; for then the ship goes in safety.

SI1OALNESS, a low point on the northwest coast of North America. Captain Cook thus describes the character of the natives : — ‘ While we lay here, twenty-seven men of the country, each in a canoe, came off to the ships, which they approached with great caution, hallooing and opening their arms as they advanced. This, we understand, was to express their pac.tic intentions. At length some approached near enough to receive a few trifles that were thrown to them. This brought on a traffic between them and our people, who got dresses of skins, bows, arrows, darts, wooden vessels, &c. ; our visitors taking in exchange whatever was offered them. Tiity seemed to be the same kind cf people that we had lately met with along this coast ; wore the same ornaments in their lips and noses, but were far more dirty and hot so well clothed. They appeared to be wholly unacquainted with people like us ; knew not even the use of tobacco ; nor was any foreign article seen in their possession, unless a knife may be considered as such. This indeed was no more than a piece of common iron fitted into a wooden handle. They, however, knew the value and use of this instrument so well that it seemed to be the only article they wished for. Most of them had their hair shaved or” cut short off, leaving only a few locks behind, or on one side. As a covering for the head they wore a hood of skins, and a bonnet apparently of wood. One part of their dress was a kind of girdle, very neatly made of skin,

with trappings depending from it, and passing between the legs, so as to conceal the adjoining parts. By the use of such a girdle, it should seem that they sometimes go naked, even in this high latitude; for they hardly wear it under their own clothing. The canoes were made of skins, like all the others we had lately seen ; except that these were broader, and the hole in which the man sits was wider than in any I had before met with.' Long. 198° 12' E., lat. 60° N.

SHOALS, ISLES OF, or Smith's Islands, seven islands on the coast of New Hampshire, eleven miles southeast of Portsmouth. Long. 70° 33' W., lat. 42° 59' N. Staten Island, on which is the town of Gosport, belongs to New Hampshire; the rest to Maine. They are inhabited by about 1 00 fishermen.

SHOAL-WATER BAY, a bay on the east coast of New Holland, visited by captain Flinders in 1802, who says that it offers no advantages to ships which may not be had on any other part of the coast, except that the tides rise higher, and that in the winter season fish are more plentiful. Long, of Aken's Island, situated at its entrance, 150° 15' E., lat. 22° 21′ 35″ S.

SHOAL-WATER BAY, a bay on the west coast of North America. Long. 124° 10' W., lat. 46° 50' N.

SHOCK, n. t., v. a., & v. n. Saxon j-caeoc ; Fr. choc ; Belg. schocken. . Conflict ; mutual impression of violence ; concussion ; offence ; a pile of corn thrown together ; a rough dog : as a verb active, to shake by violence ; offend ; disgust : as a verb neuter, to meet with violence ; be offensive : pile corn in sheaves.

In a full age, like as a shock of corn cometh in his season. Ji>f>.

a SHO

Corn tithed, Sir parson, together to get, And cause it on shocks to be by and by set. Tusser

Reap well, scatter not, gather clean that is shorn . Bind fast, shock apace, have an eye to thy corn. /a.

Thou, full of days, like weighty shocks of corn fn season reaped, shall to thy grave be borne.

Sandy i.

These her princes are come home again : Come the three corners of the world in arms, And we will shock them. Shtikspeare. King John.

Thro' the thock

Of fighting elements, on all sides round Environed, wins his way. Milton.

It is inconceptible how any such man, that hath stood the shock of an eternal duration without corruption or alteration, should after be corrupted or ai • tered. Judge Hale.

Supposing verses are never so beautiful, yet, "* they contain any thing that shocks religion or good manners, they are —

Versus inopes rerum, nugaeque canorae. Dryden.

Those that run away are in more danger than the

others that stand the shock. L'Estrange.

I would fain know why a shock and a hound are not distinct species. Locke.

Such is the haughty man ; his tow'ring soul, 'Midst all the shocks and injuries of fortune, Rises superior, and looks down on Caesar.

Addhfln.

The French humour, in regard of the liberties they take in female conversations, is very shocking to the Italians.'who are naturally jealous.

Id. Remarks on Italy

These strong unshaken mounds resist the shocks Of tides and seas tempestuous, while the rocks, That secret in a long-continued vein Pass through the earth, the pond'rous pile sustain.

Elackmore.

Those who in reading Homer are shocked that 'tis always a lion, may as well be angry that 'tis always a man. Pope.

And now with shouts the shocking armies clos'd : To lances lances, shields to shields oppos'd ; Commutual death the fate of war confounds, Each adverse battle gored with equal wounds.

Pope.

Behind the master walks, builds up the shocks, Feels his heart heave with joy. Thornton.

The mighty force

Of Edward twice o’erturned their desp’rate king : Twice he arose, and joined the horrid shock.

Philip*.

Fewer shocks a statesman gives his friend. Young. Julian, who loved each sober mind to shock, Who laugh’d at God, and offered to a cock. Harte.

[Plural shoes, an • ciently shoon,pre£. and

>pass. /:art. shod.] Sax. pceo, re˚e ; Belˆic

‘ schoe; Goth. sko. The

SHOE, n. s. & v. a.,-

SHOE’BOY,

SHOE’INGHORN,

SHOE’MAKER,

SHOE’TYE. ,

cover of the foot, of* horses as well as men : to fit with a shoe or shoes ; cover at the bottom : a shoeboy is the boy who cleans and has the care of shoes : shoeing-horn, a horn used to put on shoes : hence a low tool of any kind : the other compounds are plain.

Strong axletree’d cart that is clouted and shod.

Tusser.

Your hose should be ungartered, your shoe un-tied, and every thing about you demonstrating a careless desolation. Shakrpeare.

Spare none but such as go in clouted thoon, For they are thrifty honest men. Id. Henry VI.

The smith's note for shoeing and ploughing irons.

Shakspeare.

The wheel composed of cricket's bones, And daintily made for the nonce, For fear of rattling on the stones, With thistle down they shod it. Drayton.

Madam, I do, as is my duty,- Honour the shadow of your shoetye. Hudibras. I was in pain, pulled off my shoe, and some ease that gave me. Temple.

This hollow cylinder is fitted with a sucker, upon which is nailed a good thick piece of tanned shoe-ieather. Boyle.

Unknown, and like esteemed, and the dull swain Treads on it daily with his clouted shoon, And yet more medicinal than that moly That Hermes once to wise Ulysses gave ; He called it haemony. Milton.

I have been an arrant shoeing-horn for above these twenty years. I served my, mistress in that capacity above five of ˆhe number before she was shod. Though she hao. many who made their applications to her, I always thought myself the best shoe in her shop. Spectator.

If I employ a shoeboy, is it in view to his advantage, or my own convenience 1 Swift. Tell your master that the horses want shoeing.

Id.

A cobler or shoemaker may find some little fault with the latchet of a shoe that an Apelles had painted, when the whole figure is such as none but an Apelles could paint. Watts.

SHOES, among the Jews, were made of leather, linen, rush, or wood ;

those of soldiers were sometimes of brass or iron. They were tied with thongs which passed under the soles of the feet. To put off their shoes was an act of veneration ; it was also a sign of mourning and humiliation: to bear one's shoes, or to untie the latchets of them, was considered as the meanest service. Among the Greeks shoes of various kinds were used. Sandals were worn by women of distinction. The Lacaedemonians wore red shoes. The Grecian shoes generally reached to the middle of the leg. The Romans used two kinds of shoes ; the calceus, which covered the whole foot somewhat like our shoes, and was tied above with lat-ehets or strings ; and the solea or slipper, which covered only the sole of the foot, and was fastened with leathern thongs. The calceus was always worn along with the toga when a person went abroad ; slippers were put on during a journey and at feasts, but it was reckoned effeminate to appear in public with them. Black shoes were worn by the citizens of ordinary rank, and white ones by the women. Red shoes were sometimes worn by the ladies, and purple ones by the coxcombs of the other sex. Red shoes were put on by the chief magistrates of Rome on days of ceremony and triumphs. The shoes of senators, patricians, and their children, had a crescent upon them, which served for a buckle ; these were called calcei lunati. Slaves wore no shoes : hence they were called cretati, from their dusty feet. Phocion also and Cato Uticensis went without shoes. The toes of the Roman shoes were turned up in the point ; hence they were called calcei rostrati, repandi, &c. In the ninth and tenth centuries the greatest princes, of Europe wore wooden shoes, or the upper part

of leather and the sole of wood. In the reign of William Rufus, a great beau, Robert, surnamed the horned, used shoes with long sharp points, stuffed with tow, and twisted like a ram's horn. It is said the clergy, being highly offended, declaimed against the long-pointed shoes with great vehemence. The points, however, con- • tinued to increase, till in the reign of Ricnardll. they were of so enormous a length that they were tied to the knees with chains sometimes of gold, sometimes of silver. The upper parts of these shoes in Chaucer's time were cut in imitation of a church window. The long pointed shoes were called crackowes, and continued in fashion for three centuries in spite of the bulls of popes, the decrees of councils, and the declamations of the clergy. At length the parliament of England interposed by an act, A. D. 1463, prohibiting the use of shoes or boots with pikes exceeding two inches in length, and prohibiting all shoemakers from making shoes or boots with longer pikes under severe penalties. But even this was not sufficient : it was necessary to

denounce the dreadful sentence of excommunication against all who wore shoes or boots with points longer than two inches. The present fashion of shoes was introduced in 1633; the buckle was not used till 1670. In Norway they use shoes of a particular construction, consisting of two pieces, and without heels ; in which the upper leathei fits close to the foot, the sole being joined to it by many plaits or folds. The shoes or slippers of the Japanese, as we are informed by professor Thunberg, are made of rice straw woven, but sometimes, for people of distinction, of fine slips of ratan. The shoe consists of a sole without upper leather or hind piece; forwards it is crossed by a strap of the thickness of one's finger, which is lined with linen ; from the tip of the shoe to the strap a cylindrical string is carried, which passes between the great and second toe, and keeps the shoe fast on the foot. As these shoes have no hind piece, they make a noise when people walk in them, like slippers. When the Japanese travel, their shoes are furnished with three strings made of twisted straw, with which they are tied to the legs and feet, to prevent them from falling off. Some people carry one or more pairs of shoes with them' on their journeys, in order to put on new, when the old ones are worn out. When it rains, or the roads are very dirty, these shoes are soon wetted through, and one continually sees a great num-ber of worn out shoes lying on the roads, especially near the brooks, where travellers have changed their shoes after washing their feet. Instead of these, in rainy or dirty weather, they wear high wooden clogs, which underneath are hollowed out in the middle, and at top have a band across like a stirrup, and a string for the great toe ; so that they can walk without soiling their feet. Some of them have their straw shoes fastened to these wooden clogs. The Japanese never enter their houses with their shoes on ; but leave them in the entry, or place them on the bench near the door, and thus are always barefooted in their houses, so as not to dirty their neat mats. During the time that the Dutch live at Japan, when they are sometimes under an obligation of paying visits at the houses of the

Japanese, their own rooms at the factory being likewise covered with

mats of this kind, they wear, instead of the usual shoes, red, green, or black slippers, which on entering the house they pull off: however, they have stockings on, and shoes made of cotton stuff with buckles in them, which shoes are made at Japan, and can be washed when dirty. Some have them of black satin, to avoid washing them.

SHOES. For a method of making shoes by rivetting, instead of sewing, a patent was taken out in 1809 by Mr. David Mead Randolph, an American. In his specification, he describes that the rivetting, which he proposes to substitute for sewing, is only applicable to the soles and heels of boots or shoes, all the other parts being made in the usual manner. The last which is used for this method is the only implement which demands a particular description. It is first made in wood, of the same figure as the common last, and adjusted in the usual manner to the size and shape of the shoe which is intended to be made or put together upon it. The lower part or sole of the last is then covered with a plate of iron or steel, about the same thickness as a stout sole leather : this plate, being formed to the exact shape which is desired, is fastened down upon the wood by screws or rivets. The iron plate has three circular ho'es made through it, one at the toe, another about half way between the toe and the heel, and a third at the heet : the holes are about an inch in diameter, and being filled up with wooden plugs, and cut down even with the surface of the iron, they will admit the points of temporary nails to be driven through the leather sole to penetrate into the wood, and fix the sole upon the last whilst the work goes on. The making of the shoe is conducted iti the usual manner, until it is ready for putting on the last. To do this, the inner sole is put upon the iron sole of the last ; then the upper-leathers are put upon the opposite part, and the edˆes of the leather are turned down over the edges of the inner sole : the outer sole is then applied over the turning-down, and fastened in a temporary manner upon the last, by driving one or two nails, through both soles, into the wooden plugs before mentioned, which fill up the holes in the iron face of the last. Now, to unite the two soles to the upper-leathers, holes are pierced all round the edges of the sole, and small nails are driven in, which are of sufficient length to penetrate through the sole and the turning-in of the upper-leathers, and also through the inner sole, so as to reach the metal face of the last, and, being forcibly driven, their points will be turned by the iron, so as to clench withinside, or rivet through the leather, and serve instead of the sewing or stitching commonly employed to unite the sole to the upper-leathers.

Mr. Brunei's machines for making shoes are an improvement of the above plan. He established, not long since, at Battersea an extensive manufactory, chiefly intended to supply the army with this article,

where all the operations were performed by the aid of machines, which act with such facility that they can be managed by the invalid soldiers of Chelsea Hospital, the only workmen employed, and most of them disabled by wounds, or the loss of their legs, from any

other employment. Of the shoes made by these machines, the upper-leathers are the same as those of any other shoes, and consist of three pieces ; *viz.* the vamp, or pan which covers the upper part of the foot, and the two quarter* which surround the heel, and are sewed together behind it; they are also sewed to the vamp at about the middle of the length of the shoe. The. sole part of the shoe is composed of the real or lower sole, with its welt, the heel, and the inner or upper sole. The lower sole has an additions border, which is called the runner, or welt, fixed upon its upper side, all round the edge, by a row of rivets, so that it makes a double thick ness to the sole towards the edge ; but this additional piece is only of small width from the outside of the sole inwards, and gradually'diminishes away in thickness to nothing, as it recedes from the edge of the sole, so that the middle part of the sole is only of the same thickness as the single leather. The upper-leathers are made sufficiently large to turn in, all round, beneath the foot, under the edge of the inner sole, for about three-quarters of an inch wide, and the outer sole, reinforced by the welt, is applied beneath, so that the turning-in is included between the two soles; that is, it is included between the edge of the inner sole and the welt, or extra thickness which surrounds the lower sole. To hold the shoe together, a row of rivets is put through the sole, all round the edge, and they are of sufficient length to pass through all the four thicknesses ; *viz.* the lower sole, the welt, the upper-leathers (where they are turned in), and also through the inner sole; and these rivets, being made fast, unite the parts of the shoe together in a much firmer manner than sewing. The rivets have no heads, but are made tapering, and the largest ends are on the outside of the sole, which prevents them from dra\uii'_r through; and at the same time the strength of the rivetting will not be materially impaired by the gradual wearing away of the sole leather.

These rivets prevent the wear in a very great degree, and for this reason there is a greater number of rivets put into the sole than merely those which hold the shoe together. The different nails are, first, the short nails, or rivets, which only penetrate through the single thickness of the lower sole ; these are arranged in parallel rows across the tread of the foot, that is, about two-thirds of the length from the heel; there is likewise a double row of short nails, which is carried

round parallel to the outline of the toe, at about three-quarters of an incn from the edge, and extends as far as the middle of the foot. Next the tacking nails, which are of a sufficient length to reach through both the sole and the welt, and thus fix the two together : of these, there is a row all round the edge of the foot, nearer to the edge than the row of short nails before mentioned. Lastly, the long nails, which, as before described, fasten the shoe together : these lorm also a complete row round the edge of the whole shoe, and nearer to the edge than any of the preceding rows. The heel is also fastened on by a row of long nails round its circumference. The heads or thick ends of all these nails appear on the lower surface of the sole, and all contribute to preserve the leutiu r

from wearing. We must confine ourselves to a description of that part of the machinery which strictly performs shoemaking.

The leather is hardened by passing it between rollers, to produce the same effect as hammering does in the ordinary method of shoemaking. The rollers used for this purpose are made of brass, about five inches diameter, and as much in length; they are mounted in the usual kind of frame, except that instead of screws to hold down the upper roller, and regulate its distance from the lower one, two plain cylindric pins are inserted into the holes which usually receive the screws, and these pins have a strong lever bearing upon their upper ends, to press the upper roller down upon the lower, by the action of a weight at the extremity of the lever. These pins are only about four inches distant from the cen-tre or fulcrum of the lever, and the weight (of about 100 Ibs.) is at a distance of four feet from the centre, it therefore presses down the upper roller upon the lower with a force of nearly 1200 Ibs. The lower roller has a cog-wheel upon the extremity of its spindle, which is moved by a pinion upon the end of an axis turned by a winch ; one man turns this winch, and another puts the soles between the rollers. Two soles are presented together, being laid one upon the other, with the flesh sides of the leather towards each other, and an iron plate is placed between them, which is made thick

in the middle, and diminishes every way to the edges, where it is thin. The grain or hair side of the leather of the two soles is outside, so as to be in contact with the rollers when the soles are presented to the machine which draws them in ; and, when they have nearly passed through, the man who turns the winch reverses the motion, and rolls them back again, then forwards, and so on for four or five times, in the same mannsr as the motion for mangling linen. After this operation the leather becomes hard and solid, and much reduced in thickness, particularly at the middle part. The heels being so small cannot conveniently be rolled ; but to produce the same effect they are stamped in a fly-press : for this purpose, a heel-piece is put into a small box or cell of cast-iron, of a proper shape to receive it, and a thick plate, which is fitted to the box, be-ing laid upon it, the whole is put beneath the screw of the press, one blow of which is sufficient to press the iron plate upon the leather with a force which will render it hard and solid. The sole is made complete by joining to it the small semicircular piece at the heel ; for this purpose, the parts which are to be joined together are cut bevelled, so that they will overlap without increasing the thickness, and then three or four nails are driven through the bevelled parts to hold them together. To cut the joints bevelled, a simple press is used ; the sole is laid flat upon the edge of the bench, and a piece of iron is pressed down upon it by a lever, upon which the workman leans his elbow. The edge of the bench is bevelled and faced with iron, and this, together with the upper piece of iron, guides the knife, so that it will cut the joint bevelled : the heel-piece is then cut in the same manner, but reversed.

The leather for the sole is next inlaid wit'i short copper or iron nulls, which are put throug'i holes in the leather, in the broad part of the foot, where the greatest wear will take place; and there is also a double row of similar rivets, in-laid round the toe part, at about three-quarters of an inch within the edge of the sole. The holes for these nails are first punched in the leather of the sole by a punching machine, and then a second machine cuts the nails, and inserts them into the holes.

The punching machine is moved by the foot of the workman, who is seated before a small semicircular table of cast iron, on which he places the leather. This table is supported by a strong column, rising from the floor to a height of about two feet above the table, which is joined to the column by a projecting bracket, so that the co-lumn is on

the opposite side to that where the workman is seated. The upper part of the co-lumn has two arms, projecting forwards from it towards the workman, and extending over the table ; at their extremities they are formed info sockets, to sustain a square iron rod or perpendicular slider, which at the lower end has the piercer or awl screwed into it : one of the sockets guides the upper part of the slider, and' the other the lower part, so that it has a freedom of mo-tion in a perpendicular direction, but no other. The slider is caused to descend by means of a treadle moving on a centre pin, attached to the foot of the iron column, beneath the bench ; from this treadle an iron rod ascends through a hole in the bench (and also through holes in the arms, which project from the column to sustain the slider), and at the upper end this rod is connected with a lever, which moves on a joint at the upper end of the iron column, whilst the extreme end of the lever is connected with the top of the perpendicular slider. By this arrangement it is clear that the foot, being pressed upon the treadle, will communicate motion by the iron rod and upper lever to the slider and piercer, and force its point through the leather, which is placed upon the small iron table. A short lever and counterpoise are provided to raise up the slider again the instant the pressure is removed. To prevent the piercer striking upon the iron of the table, and breaking the point, a screwis inserted in a piece projecting from the slider, and its point in descending comes to rest upon the upper of the two arms which sustain the slider, and thus stops the descent of the slider at the proper place. The piece of leather for the sole is fixed upon a pattern made of iron plate, cut to the same size and shape as the sole, which is united to it by two sharp gauge pins, which are fixed in the pattern, one at the middle of the tread, and the other in the centre of the heel ; and these pins project so far that they will just penetrate through the leather, to hold it fast against the pattern, which is perforated with all the holes which are intended to be pierced in the sole. The leather is applied upon the pattern, and struck with a mallet, so as to force the gauge pins into the leather, and unite the sole and the pattern together ; the pattern is then laid flat upon the table of the machine, with the leather uppermost, and is brought beneath the point

of the piercer, so that it will penetrate in the de-the piercer, in the same manner as before desired place To ascertain this place, a small scribed. In his left hand he holds the strip of tud or pin is inserted into a hole in the table, iron or copper which is to make the nails ; and

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in the exact spot where the point of the piercer descends; the stud projects a little above the surface of the table, but is only held up by a spring, so that it can easily be pressed down

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he introduces the end of it through a small hole which conducts to the cutters, pushing it for ward with a gentle force : this causes the end of

the strip to enter between the cutters when the

ThTpattern being placed so'that any of the holes shears are open. Then adjusting the sole by the

therein receive the point of the stud', it is evident pattern, so that one of the holes in the leather

that when the pressure of the foot makes the will be beneath the nail contained in the cell, 1m

piercer descend, its point will make a puncture presses down the treadle : this forces the nail

in the leather which is fastened upon the pat-down from the cell into the leather, by the de—

tern which puncture will be opposite to the scenUof the piercer, and at the same time closes

hole in the pattern ; and, though it perforates the the shears, and cuts off a nail across the end of

leather quite through the thickness, the point of the strip. The nail

immediately descends by

the piercer cannot be blunted against the iron, the tube into the cell, where it places itself per—

because it is received in the hole in the pattern, pendicularly, and ready to be put in its place in

and the stud descends by the pressure, so that its turn. Thus the machine, at every stroke,

the pattern will lie quite flat upon the surface of cuts a fresh nail to supply the place of that

the table. In this manner the workman pierces which it puts in the leather by the same stroke.

any number of holes in the leather, placing it The strip of copper is turned over every time to

beneath the point of the piercer by the aid of the . form the nails alternately head and point. When

pattern, and then pressing the foot to bring the all the nails are put in they are battered down

point down and pierce the hole. As soon as ~:*1* ” u ””-1 ”” *k u”* i;*””

the piercer rises he removes the pattern to another hole, and so on. A small piece of iron is fixed just above the leather which prevents its being lifted up and following the piercer when it rises. The piercer passes through a hole in this piece.

The sole being thus pierced with holes is

prepared for nailing, and the short nails are put is made from the feather-edged slips which we

into it by a very curious machine, which at the have before mentioned, and is fastened to the

same time forms the nails, by cutting them off sole by tacking nails of sufficient length to pass from the end of a strip of iron or copper, of the same breadth as the length of the intended nails. The sole is presented” to this machine by lay-

with a hammer; and, as they are but very little longer than the thickness of the sole, this reduces them to an even surface.

The welt, or runner, is a narrow slip of leather applied upon the sole, round its edge, to make the sole of a double thickness round the edge, where the upper leather joins to the sole, although the sole is only single within. The welt

through both the sole and the welt. These nails are arranged all round the circumference of the sole, and the holes are first pierced through the

ing it upon a small table similar to the last ma-sole by the punching machine, which we have

chine, and is directed by means of the same pattern ; so that each of the holes in the leather will be successively brought beneath the point of a blunt piercer, which descends by the action of a treadle. In the upper part of the machine is a pair of shears to cut the nails : they consist of a lever, loaded at the extremity with a weight, and connected with the treadle, so that the end of the lever is lifted up when the treadle is de-

before described, but by a different pattern of iron, which is attached to the sole by its two gauge pins entering the same holes which were made through the leather in the first operation. This pattern is pierced with a row of holes all round the circumference, which are arransed within the former row of rivets, or farther from the edge of the sole ; but around the toe and tread of the foot, for half its length, the holes are

pressed by the foot. Wear the centre of this leveV in double number, or at half the distance that is a cutter, which is fixed to it and moves with they are in the heel part. This pattern being it. Another cutter is supported by the frame, so as to be stationary, and in the proper situation

to come in contact with the edge of the moving cutter when the end of the lever is lifted up

used in the same manner as before described, the punching machine pierces the sole with holes, exactly corresponding to it ; which holes are filled with tacking nails in a separate machine,

The cutters act in a manner similar to a pair of something similar to the nailing machine before

shears, to cut off a small piece from across the described. But, as the nails are longer, it would

end of a slip of iron, which is introduced be-be too laborious to cut them by the same mo—

tween the cutters. This piece forms the nail or tion ; the nails are, therefore, cut by a machine

rivet which is to be put into the hole in the lea-made on purpose, and applied to the leather by the

ther ; and immediately after it is cut it falls into — :1: — f - *— • •• “«- •- -J

a tube, by which it is conducted down to a small cell or tube, situated immediately over the leather. In this the nail stands perpendicular, and ready, when the piercer descends, to be forced down into the hole in the leather; because the cell which, receives the nail is exactly beneath the point of the piercer, so as to hold it perpendicularly in the proper situation. The workman is seated before the machine, and with his right hand directs the sole, with its pattern beneath

nailing machine for long nails. This is made exactly the same as the punching machine before described, but with additional apparatus to sup-ply the nails and put them into the holes. The additional parts are as follow: — A circular plate, or wheel of brass, about nine inches

diameter, and of a thickness nearly equal to the length of the nails ; it is perforated with a great number of holes, to contain the same number of nails ; the holes being made round its circumference, as close together as convenient, and arranged iu

four circles, one within the other. Th? interior space within the circles is formed with six arms like a wheel ; and in the centre is a hole, which fits loosely upon an upright centre pin, standing in the centre of a small circular table, which is fixed sideways to the upper of the two arms, which, as before mentioned, project from the vertical column of the machine, and sustain the upper end of the perpendicular slider. Upon this circular table the wheel is supported in a horizontal position, at the height of eighteen or twenty inches above the table on which the leather is placed, and with liberty to turn upon its centre pin. The wheel is filled with nails when it is used, one being put into every hole of its circumference, with the points downwards ; and the holes are sufficiently large to let the nails drop through the wheel, except when their points rest upon the circular table which supports the wheel. At one part of the circumference of this table an opening is cut through it, and a small tube descends from it, to, conduct a nail down to the point of the piercer. The motion of the wheel upon its centre brings the nails successively over the opening or mouth of the tube; and therefore each nail in its turn drops by its weight through the hole in the wheel into the tube, which is made so small that the nail must descend with its point downwards, and fall into a small cell, so situated that the nail will stand exactly beneath the point of the piercer when the same is at its highest position. But, when the piercer is depressed by the action of the treadle, its point will act upon the head of the nail, and force it. down through the cell into the leather placed upon the table of the machine ; the hole in the leather having been previously pierced by the punching machine. The cell which receives the nail is very ingeniously contrived to hold it in a perpendicular direction beneath the end of the piercer. It is situated immediately above the leather, and is conical within, so that the nail drops down into it until it becomes fixed fast ; but when the nail is to

be forced down by the piercer, the cell opens in two halves, being formed by notches in two pieces of steel, which are only held together by being screwed together at one end, and are made so thin as to spring together, and form a cell for the reception of the nail, although they will readily separate when the piercer forces down the nail. It is during the ascent of the piercer that another nail is dropped down from the wheel through the tube, and received into the cell, whilst its two halves are still kept open by the piercer ; or rather, as the piercer at this moment occupies the interior of the cell, the nail is received in the space or open joint at which the two halves of the cell separate, so that the nail lies close by the side of the piercer. But, when the piercer has risen up completely out of the cell, its two halves spring together, and the joint in which the nail is placed being formed with faces inclining inwards, they throw the nail into the cell itself, in which it drops down till it sticks fast ; because, as before stated, the cell is smaller at the bottom ; and in this situation the nail is certain to be held perpendicular, with its head vinder the po;nt of *.he pieroer. To turn the

wheel round, so as to supply a fresh nail every time that one has been put into the leather, the edge of the wheel is cut into serrated or sloping teeth ; the number of teeth being equal to the number of holes made in each of the four circles to contain the nails. A small detent or click takes into these teeth by a hook, so that it will turn the wheel when moved in one direction, but slide over the teeth when moved in the other direction. The click is jointed to a short lever, fixed upon the upper end of an upright axis, which passes down through the two projecting arms of the main column, so as to be very near the perpendicular slider ; and a short lever, fixed to this axis, bears, by the action of a spring, against a wedge fixed to the slider. The action of this mechanism is to turn the wheel round one tooth at a time ; thus, when the slider descends, its wedge forces the end of the short lever farther away from it; this movement is communicated by the upright axis and upper lever to the click, which slides over the sloping sides of the teeth of the wheel; but, on the. re-ascent of the slider, the wedge allows t\i° lever and click to return by the action of a spring, and the hook of the click, having caught a tooth of the wheel, will turn the wheel round the space of one tooth. In this manner, at every descent of the slider, the click engages a fresh tooth of the wheel ; and at every ascent the wheel is turned round upon its centre pin; the weight of the wheel, resting upon the flat circular table, being sufficient to retain it as it is placed.

The nailing machine acts with the same rapidity as the other machines, to put a nail into every one of the holes previously made ; and for this purpose the leather is kept upon the same pattern by which those holes were pierced, not only for the purpose of placing the leather so that the nails shall be inserted into those holes, but that the thickness of the pattern may allow the nails to penetrate and project through the leather on the under side. When the nails are all put in, they are beat down with a hammer to drive all the heads to a level with the surface. The leather is then separated from the pattern and put into a frame called the welting stand.

A small square table of cast-iron, fixed on the top of a pedestal, in which it is capable of turning round, forms the welting stand. For the convenience of the workman, and to enable him to work at the different sides, he remains seated before the table. An iron frame is connected with the table by hinges at one side, so that it can be lifted up or turned down, to lie flat upon the surface of the table ; and in this situation it can be fastened down by means of a simple clamp. This frame is intended to hold fast the leather which is placed beneath the frame; the interior opening of the iron frame is nearly of the same size and shape as the sole of the shoe. The sole is placed flat upon the table, in the proper position, which is determined by two gauge pins fixed into the table, and entering the holes made in the sole ; then the iron frame, being turned down upon the leather, will enclose the sole as it were with an iron hoop, or raised border all round the edge ; and, the frame being

•Mamped fast down, the sole is confined, as if lying in the bottom of a cell of iron, of the same figure as itself, and with the nail points projecting upwards from the sole. In this frame the welt is applied by laying the strip of leather upon the edge of the sole in contact with the inside of the iron frame, and bending it to follow the curves of the outline of the sole. As fast as any part of the length of the strip is settled to its position, it is attached to the sole by striking it down

with a mallet upon the points of the nails. The thin or feathered edge of the strip of leather is put inside, so that the edge of the sole, for about the breadth of half an inch, is of a double thickness; but, within this, the extra thickness diminishes away to nothing, leaving only the thickness of the sole. The ends of the strip of leather which compose the welt, where they join and complete the circuit of the sole, are cut sloping so as to lap over each other, and make a joint, without any increase of thickness or apparent division. When the ‘sole is taken out of this frame, the welt and sole are beat well down together to make a good joint ; jt is then carried to the cutting-press, in which the edge or outline of the sole and welt are cut smooth, and to the same size ; because, as the frame of the welting machine must be rather less than the sole, in order that the frame may bear upon the edges of the sole all lound, and thus hold it fast, the welt, which is moulded or bent - ound within the frame, will be a small quantity !ess all round than the sole. To guide the knife in cutting round the edge of the sole, it is confined lietween two iron patterns, which are made exactly to the size to which the edge is to be pared. They are attached to the sole by two pauge pins fixed into one of the plates, and, passing through the holes in the sole, project far enough on the opposite side for the other plate to be fastened on in its required position, by two holes which receive the ends of the pins.

The cutting-press resembles a conuuou lathe. A horizontal spindle is supported in a frame consisting of two standards, erected from a horizontal plate, to sustain the spindle, which passes through a collar in one of these standards, and projects some inches beyond it, having at the extremity a piece of wood flat on the surface, and of the same shape as the sole. Against this flat surface the two iron plates with the sole between are placed, and they are forcibly pressed together by the action of a screw, fitted into a third iron standard, erected from the same horizontal plate, and pressing by means of a lever upon the iron plates exactly opposite the end of the spindle. This pressure causes the spindle to retre it a small quantity in the direction of its length, and then a flat circular plate fixed upon the spindle (in the same situation as the pulley of a common lathe), is made to press against a similar flat plate, which is fastened to the frame, and therefore cannot turn round. By the friction between these two surfaces, the spindle becomes immoveable, and the press holds the sole firm, whilst the workman, who is sealed before the machine, cuts all round the edge with a drawing-knife, which is made sharp in the mid-dle, and is worked with both hands by having a

handle at each end. When he has with this too pared down that part of the edge which i* uppermost, he releases the screw of the press, and a spring then causes the spindle to advance so far as to relieve the flat circular plate, which is fixed upon the spindle, from its contact with the fixed plate. This leaves the spindle at liberty to be turned round, and the sole turns with it, so as to bring up a new part of the edge of the leather to a convenient situation to be pared or cut ; and the screw is then turned to fasten the spindle as before described, and at the same time to press the sole between the two patterns. When the edge of the sole is thus cut, it is carried to a grindstone, and ground smooth; the stone is turned with a quick motion, by means of a band and large wheel ; the leather is afterwards polished by applying it to the edge of a wooden wheej, on which a little bees'-wax is spread.

The sole, thus reinforced by the welt, is re- • turned to the punching machine, and, being attached to another pattern, a range of holes is pierced all round the outer edge, through both, just within the former row of tacking nails ; after which, by the nailing machine, these holes are filled with nails which project through the upper side of the welt, being longer than any of the former, and being also intended to penetrate through the upper-leather and inner soles, and thus fasten the shoe together. In this state the sole is ready to be put to the upper-leathers.

The upper-leathers are prepared for applying to the sole in the same manner as the ordinary shoe, *viz.* by sewing the vamp, or piece which covers the upper part of the foot, to the two quarters which go round the heel, and also sewing these two quarters together behind the heel. The workmen do not hold the work upon their knees to sew it, but four men work at a square table, the corners of which are cut oflf, and a small piece of wood projects from each angle ; the two pieces of leather which are to be sewed together are laid upon one of these pieces of wood, in the proper position to be sewed, and are held fast by an endless strap, which is laid over them, and the workman binds it fast down, by pressing his foot in the strap, like a stirrup. This method of sewing, which is far superior to the common mode, might, from its simplicity, be used by all shoemakers, and would render their business less unhealthy.

The upper-leathers are put upon a last, and held tight thereupon whilst the sole is applied. This is done by the clumping machine, which is a small oval table, supported on a column, but capable of turning round upon the column, to enable the workman to work at any side. In the centre of the table a last is fixed with the sole upwards ; it is supported at a height of about six inches from the table. The sole

is made of cast-iron in a solid piece with the stem or part by which the last is supported ; but the under part, upon which the upper-leathers are to be moulded, is made of wood, for the convenience of altering the figure when necessary. The last is fixed upon the table by means of two steady pins; and a strong pin, which projects from the lower part of the last, and passes

through th« table, is oound rast by a wedge, which confines the last firmly upon the table in the same manner as if it was made in a piece therewith. The table has a number of pieces of brass attached to it by hinges, and arranged all round the last in such a manner that they can be turned up against the lower part of the last, and then form clamps, which are exactly adapted to the figure of the lower part of the last, and will therefore clamp or bind the leather firm upon the last at the toe, heel, and every part thereof, ex-cept at the flat part of the sole. The brass clamps are of such dimensions that they will touch each other when turned up, and thus form a complete jell or box, in which the lower part of the last will be contained, and the leather confined upon it ; but, the cell being made in several pieces or clamps, they can be removed one by one, as found necessary. The clamps are forced up to their situation by means of an independent screw for each, which is tapped in an oblique direction through the edge of the table, and the point forces up the end of a small rod, which is jointed to the clamp near the part where it acts upon the leather; by this means the force of the screw acts to turn the clamp up upon its hinge, and at the same time press it against the leather. When the pressure is released by displacing the end of the small rod from the point of the screw, the clamp will be suffered to fall back upoi. the table : and, this being dqne to all the clamps, the last stands insulated in the middle of the table, from which it can be detached by withdrawing the wedge which confines it. The inner sole of the shoe is first put upon the sole of the last, being slightly fastened thereto by two short pins, one of which is driven through UIP gauge hole in the toe of the sole, and enters a hole made in the last; and the other pin is fixed in the heel part of the last, and enters the hole in the sole. The upper-leathers are now put upon

the last in the true position. In this state the last is taken to the clamping machine, and fastened into its place in the centre of the . table; the clamps are then turned up one by one, beginning at the heel, and the upper -leathers being pulled up all round by a pair of pincers, so as to make them fit tight upon the last, the clamps are screwed tight. In this state the upper-leathers are made to take the form of the last, being firmly attached thereto, except at the sole part ; at this part the leather stands up all round about three-quarters of an inch, which quantity is turned down flat upon the edge of the inner sole (previously fastened upon the sole of the last), and a small quantity of paste is put in to make it stick fast ; four or five notches are cut out in the leather at the toe and at the heel, to make the part which is turned down lie flat upon the sole, without folds or overlapping, and then, to make a close contact, the leather is beaten down. Parings of leather are likewise pasted, and stuck flat upon the inner sole for levelling, to make up the sole to the same thickness in the centre as it acquires towards the edges all round by the turning-in of the upper-leathers. In this state the nail which fastened t!ie inner sole to the last is withdrawn, being now unnecessary, and the real sole is applied,

an iron frame or saddle being employed to determine its proper position upon the last. This frame is made of thin iron, and its figure within is similar, and of the same size as the row of nails which project through the sole, and by which the sole is to be rivetted into its place ; it is made in two halves, which are united by a joint or hinge at the heel part ; and at the toe part are two holes, through which a pin can be put to hold the frame together. This pin, as well as the joint pin of the hinge at the heel, projects downwards sufficiently to enter into a hole made in each of the two clamps at the toe and heel, in such a position as to guide the frame, so that it will apply the sole exactly in the proper position.

The sole, when prepared, by inserting all the long nails in the holes, so that their points project through the leather, is put into an iron box or mould, and, a plate being laid upon it, is put into the fly-press, and by a single blow the sole is rendered concave withinside, so as to adapt itself to the last. When it is taken out of the moult], the iron frame before mentioned is put together round the row of nails, the size of the inside of the frame being made exactly of the proper size to receive the projecting points of the nails, and retain them perpendicular to the leather, and prevent them from spreading out. The sole is then applied in its place by the two guide pins of the

frame, and by striking upon the heads of the nails, their points penetrate through the turning-iii of the upper leather, and also through the inner sole. When they are well entered the iron frame is taken away, by withdrawing its pins, and opening its two halves on their joint, and the nails are driven down into their places. This causes them to project through the inner sole into the shoe, and the points meeting the iron last are turned back, and thus clenched into their places. To render this more certain, the sole of the last is made with a slight groove all round, where the points of the nails will fall, and, the groove being of a semicircular figure, the points are more readily turned thereby, and are all turned the same way, so that they will not interfere.

The shoe is now put together, and, the clamps being relieved and turned down, the shoe is taken off the last ; for which purpose the heel of the last is made in a separate piece, and jointed to the other by inclined fittings, and with a tongue or rebate, so that it can be held fast in its place by a single hook or spring catch ; but, this being relieved, the shoe draws off" the last with the greatest ease, the heel part remaining within the shoe, and is taken out afterwards. The shoe is now carried to the rivetting last, where it is put upon a last exactly similar to that of the clamping machine, but fastened down upon a bench, and the sole is smooth without the groove which caused the points of the nails to turn up. Upon this last the nails are beaten down, to rivet all fast, and make the sole smooth withinside . the heel is then put on by laying it in its place, and driving down the long nails which have been put through it by the nailing machine, in the same manner as for the sole. The sole of the shoe is now rasped with a coarse file, to level all the nail-heuls, and render the

leather smooth ; the shoes are then carried to the grindstone, by which they are polished, and finished up in every part, the soles blacked, and polished by the wheel with a composition of bees' wax and ivory black, which renders them glossy : the upper leathers are then brushed by a circular brush, which is turned by the lathe, and the shoes are rendered fit for sale, except those which require binding and lining, with a lining of thin leather, in which case they are finished in the same manner as common shoes.

The Society of Arts have shown a laudable desire to recommend various machines to the trade, to enable the workman perform his operations without so much sitting in a bent posture. The first of these was Mr. Holden's, then Mr. Parker's, and next Mr Stas's, whose machine, being the most approved, demands some description. A small bench, or table, is firmly supported on four legs, at about four feet from the ground ; a circular cushion is affixed upon the bench, having a hollow or basin in the centre of it, with a hole from the bottom of the hollow, quite through the cushion, and also through the centre of the bench. This hole receives a strap, which is doubled, and the two ends sewed together. The last is put into the double of the strap, and it is drawn down by a treadle, so as to hold the last firmly in the hol-low of the cushion, which is stuffed soft withinside ; and, as the hole through the cushion is too small for the shoe to pass down, the last can be set in any direction which is most convenient for the sewing; but, by relieving the treadle, it can be removed in an instant, turned round, and fixed again to sew another part. A seat can be applied in front of the machine, for the workman to rest himself occasionally : this seat is supported by only two legs, and a piece of wood, which projects horizontally from beneath the seat, and enters into a mortise, made in a part of the frame. Upon this the workman sits astride, as if upon a saddle ; and, as his work is held before him at a proper height, he sits in an upright posture, which is not attended with the same prejudicial effects as stooping to work upon the knee. The machine is provided with a small tray, or box, behind the cushion, to contain all the small articles which the work requires; also a drawer beneath it for tools, &c. ; a whetstone fixed up at a convenient height; and an anvil, which fits into the hollow of the cushion, so as to lie firmly, to hammer the leather upon instead of a lapstone.

SHOE OF AN ANCHOR, a small block of wood, convex on the back, and having a small hole, sufficient to contain the point of the anchor fluke, on the foreside. It is used to prevent the anchor from tearing or wounding the planks on the ship's bow, when ascending or descending ; for which purpose the shoe slides up and down along the bow, between the fluke of the anchor and the planks, as being pressed close to the latter by the wi'L'ht of the former.

To SHOE AN ANCHOR, is to cover the flukes with a broad triangular piece of plank, whose ure;i or superficies is much larger than that of the flukes. It is intended to give the anchor a surer 'loldof the bottom in very soft and oozy ground.

SHOEING, in farriery. Horses, and other animals destined to labor, are shod with iron, in order to defend and preserve their hoofs. As feet differ, so should shoes.

In a treatise on this subject, by Mr. Clark of Edinburgh, the common form of shoes and the method of shoeing are, with great reason, condemned, and a new method recommended, which seems founded on rational principles, and to have been confirmed by experience. ‘ In preparing the foot for the shoe according to the common method,’ our author observes, ‘ the frog, the sole, and the bars or binders, are pared so much that the blood frequently appears. The common shoe by its form (being thick on the in-side of the rim, and thin upon the outside) must of consequence be made concave or hollow on that side which is placed immediately next the foot, in order to prevent its resting upon the sole. The shoes are generally of an immoderate weight and length, and every means is used to prevent the frog from resting upon the ground, by making the shoe heels thick, broad, and strong, or raising cramps or caukers on them. From this form of the shoe, and from this method of treating the hoof, the frog is raised to a considerable height above the ground, the heels are deprived of that substance which was provided by nature to keep the crust extended at a prrper wideness, and the foot is fixed as it were in a vice. By the pressure from the weight of the body, and resistance from the outer edges of the shoe, the heels are forced together, and retain that shape impressed upon them, which it is impossible ever afterwards to remove ; hence a contraction of the heels, and of course lameness. But farther : —

‘ The heels being forced together, the crust presses upon the processes of the coffin and extremities of the nut-bone : the frog is confined, and raised so far from the ground that it cannot have that support upon it which it ought to have : the circulation of the blood is impeded, and a wasting of the frog, and frequently of the whole foot, ensues. Hence proceed all those diseases of the feet known by the names of founder, hoof-bound, narrow heels, thrushes, corns, high-soles, &c. The bad effects of this practice are still more obvious upon the external parts of the hoof. The crust towards the toe, being the only part of the hoof free from compression, enjoys a free circulation of that fluid necessary for its nourishment, and grows broader and longer; from which extraordinary length of toe, the horse stumbles in his going, and cuts his legs. The smaller particles of sand insinuate themselves between the shoe and the heels, which grind them away, and thereby produce lameness. All this is entirely owing to the great spring the heels of the horse must unavoidably have upon the heels of a shoe made in this form. This concave shoe in time wears thin at the toe, and, yielding to the pressure made upon it, is forced wider, and of consequence breaks

off all that part of the crust on the outside of the nails. Instances of this kind daily occur, insomuch that there hardly remains crust sufficient to fix a shoe upon.

‘It is generally thought that the broader a

shoe is, and the more it covers the sole and frog, a horse will travel the better. But, as has been formerly remarked, the broader a shoe is of this form, it must be made the more concave ; and, of consequence, the contracting power upon the heels must be the greater. It is likewise to be observed that, by using strong broad-rimmed concave shoes in the summer season, when the weather is hot and the roads very dry and hard, if a horse is obliged to go fast, the shoes, by repeated strokes (or friction) against the ground, acquire a great degree of heat, which is communicated to the internal parts of the foot; and, together with the contraction upon the heels occasioned by the form of the shoe, must certainly canse exquisite pain. This is frequently succeeded by a violent inflammation in the internal parts of the hoof, and is the cause of that disease in the feet so fatal to the very best of our horses, commonly termed a founder. This is also the reason why horses, after a journey or a hard ride, are observed to shift their feet so frequently, and to lie down much. If we attend further to the convex surface of this shoe, and the convexity of the pavement upon which horses walk, it will then be evident that it is impossible for them to keep their feet from slipping in this form of shoe, especially upon declivities of the streets.

‘ It is also a common practice to turn up the heels of the shoes into what are called cramps or caakers, by which means the weight of the horse is confined to a very narrow surface, *viz.* the inner round edge of the shoe-rim and the points or caukers of each heel, which soon wear round and blunt; besides, they for the most part are made by far too thick and long. The consequence is, that it throws the horse forward upon the toes, and is apt to make him slip and stumble. To this cause we must likewise ascribe the frequent and sudden lameness horses are subject to in the legs, by twisting the ligaments of the joints, tendons,

&c. I do not affirm,' says our author, ' that caukers are always hurtful, and ought to be laid aside : on the contrary, I grant that they, or some such-like contrivance, are extremely necessary, and may be used with advantage upon flat shoes where the ground is slippery; but they should be made thinner and sharper than those commonly used, so as to sink into the ground, otherwise they will rather be hurtful than of any advantage.

' In shoeing a horse, we should in this, as in every other case, study to follow nature : and certainly that shoe which is made of such a form ;i > to resemble, as near as possible, the natural tread and shape of the foot, must be preferable to any other. But it is extremely difficult to lay ciown fixed rules with respect to the proper me-thod to be observed in treating the hoofs of dif ferent horses : it is equally difficult to lay down any certain rule for determining the precise form to be given to their shoes. This will be obvious to every judicious practitioner, from the various constructions of their feet, from disease, and from other causes that may occur ; so that a great deal must depend upon the discretion and judgment of the operator, in proportioning the shoe to the foot, by imitating the natural tread, to prevent the hoof from contracting a bad shape.

' It is to be remembered that a horse s shoe ought by no means to rest upon the sole, otherwise it will occasion lameness ; therefore it must rest entirely on the crust: and, in order that we may imitate the natural tread of the foot, the shoe must be made flat (if the height of the sole do not forbid it) ; it must be of an equal thickness all around the outside of the rim ; and, on that part of it which is to be placed immediately next the foot, a narrow rim or margin is to be formed, not exceeding the breadth of the crust upon which it is to rest, with the nail-holes placed exactly in the middle ; and from this narrow rim the shoe is to be made gradually thinner towards its inner edge.

' The breadth of the shoe is to be regulated by the size of the foot, and the work to which the horse is accustomed : but, in general, it should be made rather broad at the toe, and narrow towards the extremity of each heel, in order to let the frog rest with freedom upon the ground. The necessity of this has been already shown. The shoe being thus formed and shaped like tht .oot, the surface of the crust is to be made smooth,' and the shoe fixed on with eight or at most ten nails, the heads of which should be sunk into the holes, so as to be equal with the surface of the shoe. The sole, frog, and bars, as I have already observed, should never be pared, farther than taking off what is

ragged from the frog, and any excrescences or inequalities from the sole. And it is very properly remarked by Mr. Osmer, ‘ That the shoe should be made so as to stand a little wider at the extremity of each heel than the foot itself: otherwise, as the foot grows in length, the heel of the shoe in a short time gets within the heel of the horse ; which pressure often breaks the crust, and produces a temporan lameness, perhaps a corn.’ But so much are farriers, grooms, &c., prejudiced in favor of the common method of shoeing and paring out the feet, that it is with difficulty they can even be prevailed upon to make a proper trial of it. They cannot be satisfied unless the frog be finely shaped, the sole pared, and the bars cut out, in order to make the heels appear wide. This practice gives them a show of wideness for the time ; yet that, together with the concave form of the shoe, forwards the contraction of the heels, which, when confirmed, renders the animal lame for life.

‘ In the flat form of shoe, its thickest part is upon the outside of the rim, where it is most ex posed to be worn; and, being made gradually thinner towards its inner edge, it is therefore much lighter than the common concave shoe : yet it will last equally as long, and with more advantage to the hoof; and, a# the frog or heel is allowed to rest upon the ground, the foot en-joys the same points of support as in its natural state. It must therefore be much easier for the horse in his way of going, and be a means of making him surer footed. It is likewise evident that, from this shoe, the hoof cannot acquire any bad form ; when, at the same time, it receives every advantage that possibly could be expected from shoeing. In this respect it may very properly be said that we make the shoe to the foot, and not the foot to the shoe ; as is but too much the case in the concave-shoes, where the foot

rery much resembles that of a cat’s fixed into a walnut-shell. It is to be observed that the hoofs of young horses, before they are shod, for the most part are wide and open at the heels, and that the crust is sufficiently thick and strong to admit of the nails being fixed very near the extremities of eac.h. But, as I have formerly remarked, from the

constant use of concave shoes, the crust of this part of the foot grows thinner and weaker; and when the nails are fixed too far back, especially upon the inside, the horse becomes lame: to avoid this, they are placed more towards the forepart of the hoof. This causes the heels of the horse to have the greater spring upon the heels of the shoe, which is so very detrimental as to occasion lameness ; whereas, by using this flat form of shoe, all these inconveniences are avoided ; and if the hoofs of young horses, from the first time that they were shod, were continued to be constantly treated according to the method here recommended, the heels would always retain their natural strength and shape.

‘ It has been alleged that, in this form of shoe, horses do not go so well as in that commonly used. This objection will easily be set aside, by attending to the following particulars. There are but few farriers that can or will endeavour to make this sort of shoe as it ought to be. The iron, in forming it, does not so easily turn into the circular shape necessary as in the common shoe; and, perhaps, this is the principal reason why they object to it, especially where they work much by the piece. And, as many horses that are commonly shod with concave shoes have their soles considerably higher than the crust, if the shoe is not properly formed, or if it is made too flat, it must unavoidably rest upon the sole, and occasion lameness. The practice of paring the sole and frog is also so prevalent, and thought so absolutely necessary, that it is indiscriminately practised, even to excess, on all kinds of feet : and, while this method continues to be followed, it cannot be expected that horses can go upon hard ground (on this open shoe) with that freedom they would do if their soles and frogs were allowed to remain in their full natural strength. There is one observation I would farther make ; which is, that the shoe should be made of good iron, well worked, or what smiths call hammer-hardened, that is, beaten all over lightly with a hammer when almost cold. The Spanish and Portuguese farriers use this practice greatly, insomuch that many people, who have seen them at work, have reported that they form their horses’ shoes without heating them in the Tire as we do. It is well known that heating Ton till it is red softens it greatly ; and, when shoes thus softened are put upon horses’ feet, hey wear away like lead. But, when the shoes are well hammered, the iron becomes more compact, firm, and hard ; so that a well-hammered shoe, though made considerably lighter, yet will .ast as long as one that is made heavier ; the advantage of which is obvious, as the horse will move his feet with more activity, and be in less danger of cutting his legs.

‘ The common concave shoes are very faulty

in this respect : for, in fitting or shaping them to the foot, they require to be frequently heated, in order to make them bend to the unequal surface which the hoof acquires from the constant use of these shoes : they thereby become soft : and to attempt to harden them by beating or hammering when they are shaped to the foot would undo the whole. But flat shoes, by making them, when heated, a little narrower than the foot, will, by means of hammering, become wider, and acquire a degree of elasticity and firmness which it is necessary they should have, but impossible to be given them by any other means whatever ; so that any farrier, from practice, will soon be able to judge, from the quality of the iron, how much a shoe, in fitting it to the circumference of the hoof, will stretch by hammering when it is almost cold : this operation, in fitting flat shoes will be the less difficult, especially when it is considered that, as there are no inequalities on the surface of the hoof (or at least ought not to be) which require to be bended thereto, shoes of this kind only require to be made smooth and flat ; hence they will press equally upon the circumference or crust of the hoof, which is the natural tread of a horse.'

Mr. Moorcroft, a late ingenious veterinary practitioner in London, avowed a preference to this kind of shoe, which he calls the ' seated shoe,' and which he formed in a die, in the same manner that money is struck in coining. His account of it is as follows :— •' The shoe best calculated to answer the purpose,ˆ says he, ' is that so strongly recommended by Mr. Osmer and Mr. Clark. The upper surface of this shoe consists of two parts : an outer part, which is a perfect plane near the rim, corresponding with the breadth of the crust, and called the seat ; and an inner part, sloping from the seat, and distinguished by the name of the bevel. The seat is obviously intended to support the crust in its whole extent, the bevel to lie off the sole; and this part, being more or less broad, according to the kind of work proposed to be done, will give the requisite strength to the shoe. As th£ whole of the crust bears on the seat, it is less liable to be broken than when only a small part of it rests on the shoe. In consequence, likewise, of the crust resting on the flat seat, the weight of the body has a tendency to spread the foot wider in every direction, rather than to contract it, as has been observed to happen with the common shoe : and it has in fact been found, in various instances, that a foot contracted by the common shoe, and afterwards shod with the seated one, has become wider without the horse having been taken from his usual work ; and again, that a foot, being of a full size and proper form when first shod with the seated shoe, has retained the same size

and form, without the slightest alteration, as long as the seated shoe was used. By the slope or bevel in the shoe, a cavity is formed between it and the sole, sufficient to admit a picker, and to prevent pressure on this part, without the sole itself being hollowed, and consequently weakened. For if it be one of the functions of the horny sole to defend the sensible sole, of whic'n, from its situation and nature, no one can doubt, it must

be evident, that the more perfect it is left, the stronger it must necessarily be, and of course the more competent to perform its office.'

Mr. Coleman, however, states as objections, that the sole may be pressed by this form of the shoe, and that the flat part of the shoe is made of the same breadth at the quarters as at the toe. These objections, however, bear rather on an imperfect practice, than an erroneous principle, in Osmer's mode of shoeing, as may be seen above, where direction is given to slope or bevel the shoe, that a cavity may be formed between it and the sole. But the grand objection of the smiths, probably, to Osmer's shoe, subsists in its being somewhat more difficult to forge than the common one to which they have been accus- • tomed.

Professor St. Bel, who has not on all points reasoned so correctly, observes, ' that the feet of horses at their inferior surface are naturally concave, flat, or convex. Suppose, for instance, a foot well formed and properly concave ; a se-cond flat; and a third convex. The inconveniences attending the convex and flat foot will be considerably increased by shoes with a similar surface, because the iron of the shoe being harder than the horn of the hoof presents a smoother and more polished surface, and, consequently, more liable to slip. On this account, therefore, it is, that I have proposed the concave shoe, that is to say, concave in its lower surface, because it represents the natural shape of the foot, and because it fulfils, in every respect, the views and intentions of nature ; and I am therefore convinced that it ought to be applied to all good feet. As some cases are to be excepted from

every general rule, so here the use of the concave shoe is to be excepted from the case of a flat foot, and especially of a convex one : but it does not follow from this exception that the use of this shoe may not become general in time ; because it must be remembered that feei. only become flat and convex through bad shot-ng, or by some accident, as when a horse is founaered ; and that no horses, not even those bred in marshy and low lands, are foaled with this imperfection. Nor can we be justified in accusing nature with having neglected to provide sufficiently for the foundations of this admirable machine, when at the same time the same machine affords us so many convincing proofs both of her wisdom and her providence. It is also of principal importance to determine the weight of the shoe ; for it is matter of astonishment to see some horses with shoes weighing each five pounds, making together a burden of twenty pounds of iron attached to their four feet. It is obvious to common sense that such an additional weight fixed to the extremity of the leg must be productive of some inconvenience or other ; and, in fact, the muscles are thereby compelled to greater exertion, the ligaments are stretched, and the articulations continually fatigued : and, besides all these evil consequences, the shoe by its weight forces out the nails, and so entirely spoils the texture of the wall, or crust, that it becomes often extremely difficult to fix the shoe to the hoof. The weight which we propose for shoes ‘if different kinds is nearly as follows:

Ib.oe.

1. For the strongest sort of cart-norses . 2 12

2. For the smaller horses of this kind . . 1 12

3. For the largest coach-horses … . 1 12

4. For the smaller ditto 14

5. For saddle-horses of any height lib. 2oz. to 10

6. For race-horses 5 oz. to 4

By reducing the superfluous breadth of these shoes, their thickness may be increased without making any addition to their weight.'

Mr. Coleman expresses his sentiments of the shoe proposed by Mr. St. Bel in the following words : — ' Mr. St. Bel employed a shoe with a flat upper surface; but, from not attending to the very important operation of removing the sole under the heels of the shoe, to every kind of hoof, it frequently failed of success.

' The best form for the external surface of the shoe is a regular concavity ; that is, the com-mon shoe reversed. This shoe leaves the hoof of the same figure when shod as before its application. And it is evident that a concavity has more points of contact with pavement and other convex bodies than a flat or convex surface, and that the horse is consequently more secure on his legs. A shoe that is flat externally may preserve the hoof equally well in health ; but this form is not so well calculated to prevent the horse from slipping as a concavity. There are two circumstances necessary to be attended to in shoeing, *viz.* to cut the hoof and apply the shoe. Before the hoof is protected by iron, some parts require to be removed, and others preserved. This is even of more importance than the form of the shoe. But many have attended chiefly to the shoe, and not to its application, or to the hoof; and this error has produced more mischief, and more enemies to the Veterinary College, than all the prejudices and calumnies of grooms and farriers. The first thing to be attended to is to take away a portion of the sole between the1 whole length of the bars and crust, with a drawing-knife ; for the heels of the sole cannot receive pressure without corns. To avoid this, the sole should be made concave, so as not to be in contact with the shoe. If there be any one part of the practice of shoeing more important than the rest, it is this removal of the sole, between the bars and crust. When this is done, the horse will always be free from corns, whatever may be the form of the shoe. Besides this, the heels of the shoe should be made to rest on the junction of the bars with the crust : whereas, if the bars are removed, the shoe is supported by the crust only, and not by the solid broad basis of crust and bars united.

' It is necessary that the sole should be cut before any other part of the

hoof be removed. If the heels have been first lowered by the butteris, then possibly there may not be sufficient sole left to enable a drawing-knife to be applied, without reaching the sensible sole; whereas, by cutting the sole in the first instance, we can determine on the propriety of lowering the heels and shortening the toe. The sole can then descend, without the motion being obstructed by the shoe ; and any foreign bodies that may have got into this cavity are always forced out when the sole descends, without producing any mischiet

When the shoe is applied, the cavity between the sole and shoe should be sufficiently large at every part to admit a large horse picker, and particularly between the bars and crust. If the sole is naturally concave, a shoe with a flat surface applied to the crust will not touch any part of the sole ; and if the sole be flat, or even con-vex in the middle, or towards the toe, the quarters and heels of the sole will generally admit

its length, breadth, and thickness, at the heel, surfaces, &c., according to the hoof. If the heels of the fore feet are two inches and a half or more in depth, the frog sound and prominent, and the ground dry, then only the toe of the hoof requires to be shortened, and afterwards protected by a short shoe made of the usual thickness at the toe, but gradually thinner towards the heel. For a common sized saddle-horse it

of being made concave with a drawing-knife, so may be about three-eighths of an inch thick at as not to receive any pressure from a flat shoe, the toe, and one-eighth at the heel. The mten-If a shoe with a flat upper surface does not tion is, to bring the frog completely into con-leave ample space for a picker, between the sole tact with the ground, to expand the heels, prevent and shoe, then it is requisite to make either the corns, thrushes, and canker. If applied in May sole or

the shoe concave. When the sole appears in flakes, and thick in substance, it will be better to make the whole of the] sole concave by a drawing-knife ; and this operation should always be performed before the toe is shortened or the heels lowered. When we have made the sole

hollow, then a shoe with a flat surface will rest

or June, when the ground is dry, it may be continued all the summer ; and in warm climates, where this is the case, no other protection for the hoof is requisite.'

The professor here observes that, so long as the wear of the hoof is not greater than the supply afforded by nature from the coronet, so long may

only on the crust ; but if the sole be flat, or con-the short shoes be worn ; but in wet weather

vex and thin towards the toe and middle of the this is not the case. ' I have known,' says he,

hoof, so as to prevent the possibility of removing ' son

the sole at these parts to form a concavity, year

then it is necessary to employ a shoe sufficiently vertheless, the short shoe can be employed on

some light horses to wear them the whole but such instances are not common. Ne-

concave to avoid pressure, and to admit a picker In this case, however, the sole at the heels and quarters, even in convex feet, will generally allow of removal with a drawing-knife, and then the quarters and heels of the shoe may be flat. It therefore follows that, where the sole can be made concave, a shoe with a flat surface may

with safety be applied ; but where parts of the sole, from disease or bad shoeing, become flat, a shoe with a concave surface is required. As the hoof is always growing, and as the shoe preserves it from friction, the toe of the crust requires to be cut once in about twenty-eight days. The more horn we can remove from this part, the sooner it will be proper to apply a shoe thin at the heels, without mischief to the muscles and tendons, and the horse will be less liable to trip. ‘ The bars and frog should never be removed. What is ragged and detached had better be cut off with a knife by the groom than left to the farrier, who will perhaps remove some of the sound parts. Where the frog is not large and projecting, the heels may be lowered by a rasp or the butteris ; foi in every case we are to endeavour to bring the frog in contact with the ground. The frog must have pressure or be diseased. See FROG. Nevertheless, when the frog has been disused for a considerable period, and become soft, it must be accustomed to pressure by degrees. If the quarters are high, and much exceed the convexity of the frog, we should gradually lower the heels, and endeavour to bring the frog and heels of the shoe on the same parallel line. V\ here work is required of the horse, while the frog is soft and diseased, it may be gradually used to pressure, by lowering the hoof about the tenth of an inch every time of shoeing, until the frog be hard, and equally prominent with the heels ; or, if the horse u not wanted, great advantage would be derived from his standing without shoes on a hard pavement. After the hoof has been properly prepared, then it is requisite to apply a shoe, and to ” “y

most horses with advantage in summer, when the heels are from two and a half to three inches in depth, and the frog equally prominent ; but, unless the hoof has been properly preserved, the heels and frog are generally too low for the short shoe. The toe of the horse requires to be shortened as much as possible ; but, if the frog touches the ground, no part of the heels should be cut ; and, by pursuing this practice, the heels will frequently grow sufficiently high to receive the shorv shoe.’

Mr. Lawrence, on the other hand, in his Philosophical and Practical Treatise on Horses, questions, on various grounds, the correctness of the term pressure, as of late years applied to the frog of the horse’s foot ; asserting that, in great numbers of feet, in their natural and healthy state, the frog is not of sufficient growth or bulk for such purpose ; and that the frogs of most horses, even amply furnished by nature with that part, are too sensible and tender to admit of being exposed to constant contact with the hard roads, for which, however,

he is a strenuous advocate whenever practicable, as he is for the concavity of the external surface of the shoe, the discovery of which he attributes not to St. Bel, but to Caesar Fiaschi, who lived many centuries past. Mr. Lawrence observes — ‘ By the experiment of weakening or lowering the shoe heels, in order to bring a deficient frog into contact with the ground, however gradually I proceeded, I have lamed several horses. St. Bel also did the same, on the first establishment of ‘the Veterinary College. It is sufficiently obvious that, by such means, the back sinews, as they are commonly styled, must be exposed to unusual extension. Such a plan is perhaps scarcely ever eligible, excepting in-deed when necessary to reduce the feet to their proper level, in the fortunate case of a natural luxuriance of growth in the frog, which it is the epidemic madness of farriers and smiths to cut away, in order to the miserable and useless substitute of a thick-heeled shoe. The friction of our

hard roads, indeed of any roads, will always keep within bounds the most luxuriant frogs. In the first shoeing a colt, it is of the utmost importance that his frogs, if he have a sufficient growth of them, which is not always the case, be brought to touch the earth, not, however, by the use of any measures of force, or of setting the foot in an unnatural or uneven position : the paring around, or moderately lowering the crust of the foot, when so deep as to compress and injure the growth of the frog, is yet not only perfectly safe, but highly necessary. It will soon appear whether the horse’s frogs and heels be of that nature to endure the concussion of the hard roads, which most assur-edly, notwithstanding much confident assertion, too many never can endure ; and, if a bruised frog be not very common, all practical horsemen are enough convinced how extremely liable the heels of horses are to contusion and inflammation. In bad cases of this kind, the only, and too much neglected, remedy of the bar-shoe has been already appreciated : in general, to set such feet upon their natural level, all which ought to be attempted, will require shoe-heels of considerable strength.’

This author professes to be unaware of any essential improvement of the shoe of Osmer, with the exception of the revival by St. Bel of the concave external surface, notwithstanding the numerous variations which have been attempted ; and represents the shoes of Osmer and Clark, already described, as still of the highest repute ; those of the superior kind of farriers being imitations of the former in certain degrees ; whilst those of the lower smiths, especially of the country, resemble yet too much the convex surface, internal concavity, inordinate length, and weight of former days.

Mr. Moorcroft formerly published a pamphlet, consisting chiefly of the directions of the French Veterinary School, for preventing a horse from ‘ striking the foot or shoe against the opposite leg.’ This accident happens to the horse in two modes, by which he either strikes the pastern joint, or the shank above, near the inside of the knee : the old English stable terms in this case were knocking, applied to the pastern, and the speedy cut to the shank above. These revived directions produced no more success, nor so much attention, as they originally experienced, and for the following reasons, assigned by Mr. John Lawrence, just quoted, a writer allowed on all hands to be practical. The general cause of knocking and cutting in the horse is mal-con-formation, crookedness of the pastern joints, and the toe pointing inward or outward, whence he will strike the opposite leg with either the toe or heel, even if ridden without shoes. Width of chest is no kind of security against this defect : and if any preventive measures by shoeing, recommended by Moorcroft and others, which, beside, have the disadvantage of placing the horse in an unnatural and dangerous position, may have a temporary good effect, it ceases the instant the horse becomes, in the smallest de-gree fatigued and leg-weary, and even, perhaps, after a few miles travel. On this account, the possessors of horses which wound their legs in action have generally, in former days, and at present,

been under the necessity of adopting the leathern guard as their only resource. The same author disputes, on his own experience, the idea promulgated of late, that the running thrush on the horse’s foot is invariably caused by bad shoeing, averring that it is often a constitutional defect in the horse ; questions the utility of the ancient practice lately revived, of exposing the naked feet of horses to stone pavement, with the view of hardening them ; and strongly reprobates another revival of the practice of unenlightened times, on the obvious principles of -quackery, namely, the barbarous and useless mechanical extension of naturally narrow heels.

Mr. Bracy Clark, a respectable veterinary sur-gepn, has published certain experiments on the foot of the living horse. His object appears to be the partial or total abolition of the use of the iron shoe. Whenever the roads are covered with ice, it becomes necessary to have the heels of a horse's shoes turned up, and frequently sharpened, in order to prevent him from slipping and falling : but this cannot be done without the frequent moving of the shoes, which breaks and destroys the crust of the hoof where the nails enter. To prevent this, it is recommended to those who are willing to be at the expense to have steel points screwed into the heels or quarters of each shoe, which might be taken out and put in occasionally. The method of doing this properly, as directed by Mr. Clark, is first to have the shoes fitted to the shape of the hoof, then to make a small round hole in the extremity of each heel, or in the quarters, about three-eighths of an inch in diameter, or more, in proportion to the breadth and size of the shoe ; in each of these holes a screw is to be made : the steel points are likewise to have a screw on them, exactly fitted to that in the shoes. Care must be taken that the screw on the points is no longer, when they are screwed into the shoe, than the thickness of the latter. The steel points are to be made sharp ; they may either be made square, triangular, or chisel pointed, as may be most agreeable ; the height of the point above the shoe should not exceed a quarter of an inch for a saddle horse ; they may be made higher for a draught horse. The key or handle that is necessary to screw them in and out occasionally is made in the shape of the capital letter T, and of sufficient size and strength. At the bottom of the handle a socket or cavity must be made, properly adapted to the shape of the steel point, and so deep as to receive the whole head of the point that is above the shoe. In order to prevent the screw from breaking at the neck, it will be necessary to make it of a gradual taper ; the same is likewise to be observed of the female screw that receives it, that is, the hole must be wider on the upper part of the shoe than the under part : the sharp points may be tempered or hardened, in order to prevent them from growing too soon blunt ; but when they become blunt they may be sharpened as at first. These points should be unscrewed when the horse is put into the stable, as the stones will do them more in-jury in a few minutes than a day's riding on Ice. A draught horse should have one on the point of each shue, as that gives him a firmer footing in

drawing on ice ; but for a saddle horse, when points are put there, they are apt to make him trip and stumble. When the shoes are provided with these points, a horse will travel on ice with the greatest security and steadiness, much more so than on causeway or turnpike roads, as the weight of the horse presses them into the ice at every step he takes.

Besides the common shoe for horses that have sound feet, there are also others of various shapes, determined by the necessity of the case, that is to say, by the different derangements and diseases to which the horse's foot is liable. Such, for instance, are what farriers call the covered, flat, or convex shoe ; the patten shoe ; the shoe for all feet, simple, double, and hinged ; the shoe without nails ; the half-moon shoe ; the Turkish shoe; and the slipper shoe. Eight nails for each shoe are enough for saddle and light draught horses ; but, for such as are employed in heavy draught, ten are required. A smaller number, it is found, do not hold the shoe sufficiently fast ; and a greater number, by acting like so many wedges, weaken the hoof, and rather dispose the crust to break off than give additional security.

The manner of disposing the nails has differed considerably at different times. Some writers have directed four to be placed on each side of the foot, and the hindmost near the heel : leaving between the two rows of nails a considerable space of the fore part of the foot without any. The nails thus placed certainly confined the foot at the sides and heels, left the toe at liberty, and assisted materially the effect of the sloping surface of the common shoe, in altering the form of the foot from nearly a round to a lengthened figure. Latterly, it has been strongly recommended to place the nails principally at the fore part of the foot, in order to prevent the heels from being confined. And certainly this is a wiser practice than the former ; but, as the foot should rest on the shoe in the whole extent of the crust, it may be thought that the best way of connecting them in every part alike would be that of placing the nails at equal distances from each other in the whole round of the shoe.

However, the objection to this is, that when the foot strikes the ground with considerable force, the back part of it becomes a little broader than when it is in the air, or when the foot is at rest. This spreading is not considerable, nor floes it extend far along the sides of the foot, but it is sufficient to act upon the hindmost nails, when near

the heels ; hence arises the necessity for there being a greater distance between the last nail and the heel of the shoe than between any two nails. Accordingly it may be laid down as a general rule that the last nail should not be nearer the heel than from two inches to an inch and a half. Such a distance has been found sufficient to prevent the heels being confined, and not sufficiently great to allow the shoe to spring, and loosen the last nails, as frequently happens when they are farther distant from the heel.

All the nails should be at equal distances from each other, except the two in front, which should be a little wider apart than the rest ; this, however, is not a matter of essential consequence ;

but it is of importance that there should not be any nail in the middle of the toe. For, generally, the action of the foot on the ground has n direct tendency to push the shoe, as it were, backwards along the foot ; and it sometimes happens that the shoe is actually thus displaced ; in which case, it necessarily follows that the nail in the middle of the toe must be driven immediately against the sensible parts behind it; whilst the rest of the nails, in great measure, follow the line of the crust, and so avoid doing mischief to the parts within. The nail-holes on the upper surface of the shoe should come through the seat, close to the edge of the bevel, that the nails may have a proper and equal hold on every part of the crust, which will be shown by the clenched ends being each equally distant from the shoe. As the nail-hole is always made with a taper and square pointed punch, a nail with a head of the same form will fit it better than one of any other shape.

To prevent the necessity of frequent removes, several expedients have been put in practice. Sometimes a few nails, of a larger size than the rest, have been so put in that the heads stood considerably beyond the level of the shoe ; but when these did not break off, as was often the case, they soon wore down. At other times nails with large heads, tapering to a point, were screwed into the web of the shoe. Of these, one was usually placed at the toe, and one at each heel. And by this contrivance of the screw it was imagined that the nails might be easily replaced when worn out. They are apt, however, to break off at the neck, and are too expensive for common use. There is, notwithstanding, another plan, which, as far as it has been tried, justifies the author in recommending it. This consists in having nails with a lozenge head, or what may be called a double countersink, terminating in an edge, instead of coming to a point. This greater breadth of surface prevents its being rubbed away as fast as a point ;

the thickness in the middle gives it strength ; and the regular taper to the shank causes it to apply exactly to the sides of the hole in the shoe, by which it is equally supported, and prevented from bending or breaking. There should be four nails to every shoe ; that is to say, two in the forepart, and one at each heel.

The heads of these nails must be struck in tools, or dies ; the four holes in the shoe must be made to correspond with the neck of the nail ; and, when the nail is driven, the workman must cover the head with a tool, which will receive its upper part, and prevent its being injured by the hammer. These nails are, in effect, so many caulkings, with the advantages of allowing ?. more level tread ; of being easily replaced, by putting new nails in the old holes ; and, by being at a distance from the heel of the shoe, they are not so likely to hurt the opposite leg. The nails and nail-holes, however, employed at the Veterinary College, are very different from those in common use. The latter are stamped with a punch of a particular form : and, the heads being of a conical shape, are received into the nail-holes, so as to preserve their hold as long as the shoe exists. Mr. Spencer is the inventor of

these nails, which, though made of a more clura-ole metal, are little more in price than the com-mon sort.

‘The head of the common nail,’ says Mr. Coleman, ‘ is not conical, hut nearly square and no part is received into the nail-hole. When the nail is driven into the shoe, up to the nead, the farrier generally continues to hammer with great violence ; and, as the nail-hole cannot admit the head, the texture of the nail contiguous to the head is shivered, and, in a few days, is broken : — whereas the head of Mr. Spencer’s nail operates as a wedge ; the more it is hammered, the more closely it is connected with the nail-hole, so as to become part of the shoe.

Moreover, the head of the common nail, when not injured by the farrier, projects beyond the shoe; and, when worn out, the shoe is liable to come off. This accident will more frequently happen if the nails are placed in the old nail-holes of the crust , before the nail-holes of the shoe are punched, the farrier should examine the situation of the former nails ; and, by having new crust for the nails, the shoe will be more firmly connected with the hoof.'

It now only remains for us to conclude with some few remarks on the shoeing of other animals employed in the service of man, and especially the mule, the ox, and the ass.

The shoe for the fore feet of the mule is, in general, very similar to that which the farriers call the bar shoe. It is very wide and large, especially at the toe, where it sometimes projects four inches and upwards beyond the hoof. This excess is given it with a view to enlarge the basis of the foot, which is in general exceedingly nar-row in this animal. The shoe for the hind feet is open at the heels, like the horse's shoe ; but it is lengthened at the toe, like the preceding one. The former is called in French planche, and the latter florentine. The foot of the ass, having the same shape as that of the mule, requires the same kind of shoe, with this only difference, that the shoe for the fore foot is not closed at the heels, and that its edges do not project so much beyond the hoof. The same form of shoe is used for the hind feet of this animal.

The ox's shoe consists of a flat plate of iron, with five or six stamp-holes on the outward edge to, receive the nails; at the toe is a projection of four or five inches, which, passing in the cleft of the foot, is bent over the hoof, so as to keep the shoe in its proper place. In many parts of France, where the ox is used for draft, it is sometimes necessary to employ eight shoes, one under each nail ; or four, one under each external nail ; and sometimes only two, one under the external nail of each fore foot. In the description here given of the mule's and ass's shoe, we cannot avoid condemning the cruel and ignorant practice of extending the toe of the shoe so far beyond the toe of the hoof. See VETERINARY ART.

SHOOMSKA, one of the Kurile islands, three leagues south of Cape Lopatka, in Kamtschatka. Its inhabitants consist of a mixture of natives and Kamtschadales.

SHOOT, v'. a., v. n.,&l Pret. I shot ; part.

SFIOOT'ER, n. s. \n. s.) shot or shotten. Sax.

fce&tan : Goth. skiot(> ; Swed. skiuta. To put forth; emit; push forward ; discharge anything so as to make it fly with speed or violence ; to perform the act of shooting ; germinate ; protu-berate ; be emitted ; move along swiftly : as a noun substantive, the act or impression of any thing emitted : endeavour to strike, or act of striking with a missive ; a branch from a main stock : a shooter is one who shoots, or uses a missive weapon.

The archers have sorely grieved him, and s/;of at him. Genesis.

Not an hand shall touch the mount, but he shall be stoned or shot through. Exodus xix. 13.

They that see me shoot out the lip, they shake the head. Psalms.

None of the trees exalt themselves, neither shoc.t up their top among the thick boughs.

Ezekiel xxxi. 14.

A grain of mustard groweth up and shonteth out great branches. Mark iv. 32.

I owe you much, and, like a witless youth That which I owe is lost ; but if you please To shoot an arrow that self way Which you did shoot the first, I do not doubt To find both. Shakspeare.

This murderous shaft that's shot Hath not yet lighted ; and our safest way Is to avoid the aim. Id.

The noise of thy cross-bow Will scare the herd, and so my shoot is lost. Id.

Such trees as love the sun do not willingly descend far into the earth ; and therefore they are commonly trees that shoot up much. Bacon.

If the menstruum be overcharged, metals will shoot into crystals. Id.

The Turkish bow giveth a very forcible shoot, insomuch as the arrow hath pierced a steel target two inches thick ; but the arrow, if headed with wood, hath been known to pierce through a piece of wood of eight inches thick. Id.

They will not come just on the tops where they were cut, but out of those shoots which were water-boughs. Id.

The shooter ewe, the broad-leaved sycamore.

Fairfax.

We are shooters both, and thou dost deign To enter combat with us, and contest With thine own clay. Herbert.

The men's/ioot strong shoots with their bows.

Abbot.

The land did shoot out with a very great promontory, bending that way.

Id. Description of the World.

The tree at once both upward shoots, And just as much grows downward to the roots.

Cleaveland.

Tell like a tall old oak how learning shoots To heaven her branches, and to hell her roots.

Denham. Light

Shoots far into the bosom of dim night

A glimmering dawn. . Milton.

A pomp of winning graces waited still,

And from about her shot darts of desire

Into all eyes to wish her still in sight. Id.

Materials dark and crude, Of spiritous fiery spume, till touched With heaven's ray, and tempered, they*Aoot forth So beauteous, opening to the ambient light. • Id.

A shooting star in Autumn thwarts the night. Id.

Where Tigris at the foot of Paradise Into a gulf stu>t under ground, till part Rose up a fountain by the tree of life. li.

SHOOTING.

1 saw them under a green mantling vine. Plucking ripe clusters from the tender shoots. Id.

The two ends of a bow tfto'. off, fly from one another. •Boj/k—

When he has that his best, he is sure that none ever did thont better. Temple.

Men who know not hearts should make examples, Which, like a warning-piece, must be shot off, To fright the rest from crimes. Dryden.

Ye who pluck the flowers, Beware the secret snake that shoot* a sting. Id.

I have laughed sometimes when 1 have reflected on those men who have thot themselves into the world ; »ome bolting out upon the stage with rast applause ; and some hissed off, quitting it with disgrace. WThe liquid air his moving pinions wound, And in the moment shoot him on the ground. Id. Thus having said, she sinks beneath the ground With furious haste, and shoots the Stygian sound.

Id.

A shining harvest either host displays, And ihoots against the sun with equal rays. Id.

The monarch oak, the patriarch of the trees, Shoot* rising up, and spreads by slow degrees. Id.

New creatures rise,

A moving mass at first, and short of thighs ; Till tlwoting out with legs, and imp'd with wings.

Id.

Let me but live to shadow this young plant From blites and storms : he'll soon thoot up a hero.

Id.

At first she flutters, but at length she springs To smoother flight, and shoots upon her wings. Id. Heaven's imperious queen shut down from high ; At her approach the brazen hinges fly, The gates are forced. Id.

As a country-fellow was making a shoot at a pigeon, he trod upon a snake that bit him.

U Estrange.

Straight lines in joiner's language are called a joint ; that is, two pieces of wood, that are shot, that is, planed, or else pared with a paring chisel.

Moxon.

That rude mass will shoot itself into several forms, till it make an habitable world : the steady hand of Providence being the invisible guide of all its motions. Burnet't Theory.

The last had a star upon its breast, which shot forth pointed beams of a peculiar lustre. Addison. The corn laid up by the ants would ihoot undei ground, if they did not bite off all the buds ; and therefore it will produce nothing. Id.

This valley of the Tyrol lies inclosed on all sides by the Alps, though its dominions shoot out into several branches among the breaks of the mountains.

Id. on Italy.

When you thoot, and shut one eye, You cannot think he would deny To lend the other friendly aid, Or wink, as coward and afraid. Prior.

Where the mob gathers, swiftly shoot along, Nor idly mingle in the noisy throng. Gay.

Expressed juices of plants, boiled into the consistence of a syrup, and set into a cool place, the essential salt will shoot upon the sides of the vessels.

Arbuthnot on Aliment/

A wild where weeds »nd flowers promiscuous shoot, Or garden tempting win forbidden fruit. Pope.

Not half so swiftly shoots along in air The gliding lightning. Id.

Now should my praises owe their truth To beauty, dress, or paint, or youth, Twere grafting on an annual stock, That must our expectations mock ;

And, making one luxuriant thoot, Die the next year for want of root. Swift.

Tell them that the rays of light shoot from the sun to our earth at the rate of one hundred and eighty thousand miles in the second of a minute, they stand aghast at such talk. H'utts.

The grand aetherial bow Shoots up immense. Thornton.

Fired by the torch of noon to tenfold rage, 'Hie' infuriate hill forth shoots the pillared flame.

Id.

Pride pushed forth buds at every branching shoot, And virtue shrunk almost beneath the root. Harte.

SHOOTING, among sportsmen, is the killing of game by the gun, with or without the help of dogs. It is now generally confined to flying or running, especially the first ; which, by experience, is found to be the best and most diverting way of shooting ; indeed there is scarcely any other than these two in use now among gentlemen, for few will watch by a river side to shoot wild fowl ; although, about a century ago, to shoot flying was looked on as a rare accomplishment in a sportsman. It is necessary for any person who sports much to have two guns ; the barrel of one about two feet nine inches, which will serve very well for the beginning of the sea-son, and for wood-shooting ; the other about three feet three inches, for open-shooting after Michaelmas ; the birds by that time are grown so shy that your shoots must be at longer distance. But, if you intend one gun to serve for all purposes, a three-feet barrel, or thereabouts, is most proper. You should always have it cocked iti readiness, holding your thumb over the cock, lest it go off when you would not have it.

It is generally accounted the best way to aim at the head, if the game fly over your head ; but to aim as it were under the belly, if it fly from you; and it will be best to let the game fly a lit-tle past you before you fire, for so doing the shot will the better enter the body. Shot delivered from a gun in general lose or decrease half the quantity every ten yards, or thereabouts; so that at forty yards there will not be

thrown in above a fourth of what would be into the same space at twenty yards. From which it appears that, if you take aim a foot before a cross shoot at forty yards, you will be the most likely to meet the bird with the centre shot ; and which is looked upon to fly the strongest, and to be the more efficacious at long distances, than the diverging shot; for, whatever be the cause of tlieir diverging, it must in some degree retard tlieir motion. But, if there be a brisk wind, it \ill certainly bend the course of the shot ; you must therefore consider, whether the wind blow with the bird, or against it ; if it blow with it, you need little more than to observe the general rule ; because the wind helps the bird forward nearly as much as it diverts the shot : but, if it fly against the wind, the shot declines more than the bird is retarded, and therefore you ought to take aim at a greater distance before the bird.

One good pointer in the field at a time, ifyou have patience to attend him, will be sufficient for two men to shoot with ; but if you have an old spring spaniel, that is so well under command that you can always keep him near you

such a dog may be used with your pointer with great advantage : as he will better find birds that are wounded, and also spring such as are near you, which you otherwise might pass. But if you should be fond of hunting many pointers together in a field, as is frequently done, you should rot have more than one amongst them who has been taught to fetch his game ; lest, by endeavouring to get it from each other, they should tear it. Two persons in the field with guns are better than more at partridge shooting; who should with patience pay a due attention to each other. When your dog points, walk up without any hurry, separating a few yards, one to the right, the other to the left of your dog : if a covey spring, never shoot into the midst of them, but let him on the left single out a bird which flies to the left, and him on the right a bird to the right, that you may not interrupt each other, nor both shoot at the same bird, and readily fire at the first aim. Let each of you mark the fall of his bird, and immediately run to the place

; and if the dog do not secure it, or the bird should be only wounded, and have run,

down, for which purpose it is sufficient to press the ramrod two or three times on the wadding, and not (as the usual practice is) to ram down the wadding by main force, by drawing up the ramrod, and then returning it into the barrel with a jerk of the arm, many successive times. For, by compressing the powder in this violent manner, some of the grains will necessarily be bruised, whilst the explosion will not be so quick, and the shot will be spread wider. Tn pouring the charge of powder into the barrel, care should be taken to hold the measure as much as possible in a perpendicular line, that the powder may the more readily fall to the bot-tom. It is even of service to strike the butt end of the gun gently on the ground, in order to de-tach those grains of powder, which, in falling down, adhere to the sides of the barrel. The shot should never be rammed down tight : after having given a stroke on the ground with the butt-end of the gun, in order to settle it, the same as for the powder, the wadding should then be gently put down, but much less close than that over the powder ; for, when the shot is

put him upon the scent ; but if your dog under-wadded too tight, it spreads wide, and the piece

will recoil. In this, therefore, as well as in every other mode of loading, the sportsman should never carry his gun under his arm, with the muzzle inclined to the ground; that practice

stand his business, and will fetch his game, it is better to trust to him, and load again as quick as you can. It will always be of great use, and save much time and trouble, to have a person

without a gun, to mark the flight of the birds. If at all times loosens the wadding and charge too

a single bird be sprung, let him take the shoot to whose side it flies :

the bird being killed, cause your dog to lie by it whilst you load, lest he spring other birds that are near you. If you n-ace the birds to a hedge, double the row by •walking one on each side, taking your dog on the ditch side : here, if you have a spaniel, he will be of great use; as you may make him go along in the ditch, and your pointer on the other side ; by which means you will not pass a bird, and one of you will most likely get a good shoot at it. Your own judgment, with very little experience, will best direct where the birds are most likely to be found, at different times of the day, according to the grounds you have to hunt in. A fowling-piece should not be fired more than twenty or five-and-twenty times without being washed ; a barrel, when foul, neither shoots so ready, nor carries the shot so far as when clean. The flint, pan, and hammer, should be well wiped after each shot; this contributes greatly to make the piece go off quick, but then it should be done with such expedition that the barrel may be reloaded whilst warm. The flint should be frequently changed, without waiting till it misses fire before a new one is put in. Fifteen or eighteen shots, therefore, should only be fired with the same flint ; the expense is too trifling to be regarded, and, by changing it thus often, much vexation will be prevented. A gun, also, should never be fired with the prime of the

much : sometimes produces the loss of shot, and always indicates laziness in the shooter, and indifference to the sport.

When the piece is fired, it should, if possible, be reloaded immediately, whilst the barrel is warm, lest, by delaying it, a certain moisture should be formed in the barrel, which would re-tain a part of the powder when pouring in the charge, and hinder it from falling to the bottom. Powder, also, will imbibe moisture from the air, and, therefore, it is of additional advantage to load the piece whilst the barrel is warm, because some part of the moisture will be thereby evaporated. For the same reason, the sportsman should fire off a little powder before he loads the first time ; for it has been found, even in the driest seasons, that the coldness of the barrel, and perhaps some little moisture condensed in its cavity, have sensibly diminished the force of the powder in the first discharge.

Some sportsmen prime before they load ; this may be proper when the touchhole is enlarged, and the barrel is very thin at that place, because, in this case, if the piece is not first primed, it will in loading prime itself, which diminishes the charge : but, when the touchhole is of its pro-per size, the piece should never be primed until after it is

loaded ; for then it will be known, from the few grains of powder which usually make their way into the pan, that the touch-holft is clear and unobstructed ; and, on the contrary,

preceding day ; it may happen that an old prim-if no grains come through, that it will be proper ing will sometimes go off' well, but it will more to strike the butt -end of the gun smartly with, frequently contract moisture and fuse in the the hand, and to prick the touchhole till they

firing ; then the object will most probably be missed, and that because the piece was not fresh primed.

Some attention is requisite in loading a piece; the powder should be only slight!" rammed

appear. But, whether the practice is to prime before or after loading the piece, it is highly proper, after every discharge, to prick the touchhole, and what is still better, to guard against all remains of fuse or squib, by inserting into

tiie touchhole the feather of a partridge's wing, which will not only clear it of these dangerous remains, but, if the piece is delayed to be re-charged, will take away all humidity that may be contracted there.

Every sportsman has his own manner of bringing his gun up to his shoulder, and of taking aim ; and each follows his own fancy with respect to the stock of his fowling-piece, and its shape. Some like it long, others short; one prefers it straight, another bent. And, although there are some sportsmen who shoot equally well with pieces stocked in different ways and shapes, yet certain principles may be laid down

as well upon what is the proper length, as upon the proper bent, that the stock of a gun should have. But in the application such principles are very frequently, nay, most commonly, counteracted, by the whim or the particular convenience of the shooter. Generally speaking, however, it is certain, that for a tall long-armed man the stock of a gun should be longer than for one of a less stature and shorter arm. That a straight stock is proper for him who has high shoulders, and a short neck ; for, if it be much bent, it would be very difficult for him, especially in the quick motion required in shooting at a Hying or running object, to place the butt of the gun-stock firmly to the shoulder; the upper part alone would in general be fixed, which would not only raise the muzzle, and consequently shoot high, but make the recoil more sensibly felt than if the whole end of the stock were firmly placed on the shoulder. Besides, supposing the sportsman to bring the butt home to his shoulder, he would scarcely be able to level his piece at the object. On the contrary, a man with low shoulders, and a long neck, requires a stock much bent : for, if it is straight, he will, in the act of lowering his head to that place of the stock at which his cheek should rest, in taking aim, feel a constraint, which he never experiences, when, by the effect of the proper degree of bent, the stock lends him some assistance, and, as it were, meets his aim half-way. Independently, however, of these principles, the application of which is subject to a variety of modifications, we venture to advise the sportsman in the choice of a fowling-piece, that a long stock is preferable to a short one, and, at the same time, rather more bent than usual ; for a long stock sits firmer to the shoulder than a short one, and particularly so when the shooter is accustomed to plage his left hand, which principally supports the piece, near to the entrance of the ramrod into the stock. The practice of placing that hand near the bridge of the guard is undoubtedly a bad one : the aim is never so sure, nor has the shooter such a ready command over his piece, as when he places his hand near the entrance of the ramrod, and at the same time strongly grasps the barrel ; instead of resting it between his fore-finger and thumb, in conformity with the general custom. It may, therefore, be depended upon, that a stock bent a little more than ordinary is better for shooting true than one too straight, because the latter, in com-ing up to the aim, is subject to the inconvenience of causing the sportsman to shoot too high.

— We would also advise him to have his fowling-piece a little elevated at the muzzle, and the sight small and flat; for the experienced well know, that it is more usual to shoot low than high. It is, therefore, of service that a piece should shoot a little high, and

then, the more flat the sight, the better the line of aim will coincide with the line of fire, and in consequence the gun will be less liable to shoot low.

The method by which to avoid missing a cross-shot, whether it be flying or running, is not only to take aim before the object, but likewise not involuntarily to stop the motion of the arms, at the moment of pulling the trigger ; for the instant the hand stops in order to fire, although the space of time be almost imperceptible, the object, if a bird, gets beyond the line of aim, and the shot will fly behind it; and if a hare or rab-bit be shot at in this manner, whilst running, and especially if at a distance, the animal will only be slightly struck in the buttocks, and will be taken but by hazard. When a bird, however, is flying in a straight line from the shooter, this fault can do no harm ; the object can scarcely escape, if the piece be but tolerably well directed, unless, indeed, it is fired at the moment the game springs, and before the birds have take i a horizontal flight. In that case, if the hand stop ever so little at the instant of firing, the sportsman will shoot low, and inevitably miss the mark. It becomes, therefore, extremely essential to accustom the hand, in taking aim, to follow the object, without suspending the mo-tion in the least degree, which is a capital point towards acquiring the art of shooting well: the contrary habit, which is very difficult to correct, when once contracted, prevents that person from attaining perfection in the art, who, in other respects, may eminently possess quickness of sight and steadiness of aim.

Nor is it less essential in a cross-shot to aim before the object in proportion to its distance, at the time of firing. If a partridge, for instance, fly across at the distance of thirty or five-and-thirty paces, it will be sufficient to take aim at the head, or, at most, but a small space before. The same rule will nearly hold in the cases of shooting quails, woodcocks, pheasants, or wild ducks, although these birds move their wings slower than the partridge. But, if the object be fifty, sixty, or seventy paces distant, it then becomes necessary to aim at least half a foot before the head. The same practice should be observed in shooting at a hare or rabbit when running in a cross direction, making due allowance for the distance, and for the swiftness of the pace, which is not always the same. It is also proper, in shooting at an object very distant, to take aim a little above it, because shots, as well as balls, have but a certain range in point blank, beyond which each begins to describe the curve of the parabola.

When a hare runs in a straight line from the shooter he should take his aim between the ears, otherwise he will run the hazard either of

missing, or at least of not killing dead, or, as it is sometimes called, ‘ clean.’ A true sportsman, who has the ambition of shooting well, is not content with only breaking the whig of a partridge, or the thigh of a hare, when he shoots at a fair distance

for, in such case, the hare or the partridge ought to be shot in such a manner that it should remain in the place where it falls, and not require the assistance of dogs to take it. But if he shoots at a great distance it is no reproach that the partridge is only winged, or the hare wounded, so that it cannot escape.

Practice soon teaches the sportsman the proper distance at which he should shoot. The distance at which he ought infallibly to kill any kind of game with patent shot (No. 3), provided the’aim be well taken, is from twenty-five to thirty-five paces for the footed, and from forty to forty-five paces for the winged game. Beyond this distance, even to fifty or fifty-five paces, both partridges and hares are sometimes killed, but, in general, hares are only slightly wounded, and carry away the shot ; and partridges, at that distance, present so small a surface, that they frequently escape untouched between the vacant spaces of the circle. Yet it does not follow that a partridge may not be killed with No. 3, patent shot, at sixty, and even seventy paces distance ; hut then these shots are very rare. Those who know the range of a fowling-piece, and the closeness of its shot, shrug up their shoulders at the romances of sportsmen who, according to their own accounts, daily kill with shot (No. 3) at the distance of ninety and 100 paces. Nay, some even go so far as to assert that they have killed, with this sized shot, hares at 110 paces, and pheasants at 120. It cannot, however, be denied, that with shot No. 5, a man may have killed a hare or a partridge at 110, or possibly at 120 paces; but then these shots are so extraordinary, and occur so seldom, that the whole life of a sportsman will scarcely afford more than two or three instances ; and when it does happen it will be found to be by a single pellet, which, by great chance, has hit either the wing or the head of the partridge, or has struck the head of the hare, by which it is stunned,

or perhaps has penetrated the small part of the shoulder, where there is, to prevent the wound being mortal, only a very thin skin, which, being stretched by the animal in running, is thereby rendered more easy to be pierced by the shot.

For expertness in finding the game a sportsman must pay attention to the difference of the seasons, and the weather ; to the temperature of the air, and even to those hours of the day which are more or less favorable for shooting. In warm weather he should hunt for the game in plains and in open grounds, at the same time bearing in mind that, during the heat of the day, the birds frequent moist places, marshes where there is little water and much high grass, the sides of rivers and brooks, and hills exposed to the north. But, in cold weather, they will most commonly be found on little hills exposed to the south, along hedge-rows, among the heath, in stubbles, and in pastures where there is much furze" and fern. In hard frosts they get into thickets, low places, and marshes, where they seek to shelter themselves from the cold, as well as the heat, in different seasons. The greatest part, however, of these rules will only apply when the weather is extremely hot or severely .cold, at both of which times the hares and partridges almost to-VOL. XX.

tally desert the plains and open grounds. The game is more easily approached, or, in the language of sporting, ' lies better,' in covert than in open places: a double advantage is therefore obtained by hunting for them in the former. He should, at all times of the shooting season, go out in the morning before the dew is off. At that time the shepherds and their flocks, the husbandmen and their teams, have not entirely spread over the fields, and have as yet sprung but a small quantity of game ; the scents of the preceding night will also be more warm, and the dogs will hit them off better. Besides, if he be not early, he loses such opportunities of shooting as he will not meet again during the remainder of the day. All these advantages, therefore, greatly counterbalance the notion generally received, that, as the birds will not lie well while the ground is wet, the sportsman should not go out early in the morning, or before the dew is gone off.

The color of the dress which the shooter should wear is worthy of notice. Green is unquestionably the best in the early part of the season, whilst the leaves remain on the trees. For, if he be clad in a glaring color when the face of the country retains its verdure, the game will perceive his approach more easily, and from a greater distance. In winter, for the same reason, his dress should be composed

of a dark brown, or some color resembling that of the dead leaf.

It is best to hunt as much as possible against the wind, not only to prevent the game from perceiving the approach of the sportsman and his dog, but also to enable the dog to scent the game at a greater distance. We say as much as possible, because in advancing and returning upon his steps in order to range the ground well, the shooter cannot always keep the advantage of the wind. When, therefore, it is proposed to hunt any particular tract of country in which game is expected to be found, it is indispensably necessary to take the wind, and it behoves the shooter to range and quarter his ground in such manner and direction as to preserve it in his favor.

He should never be discouraged from hunting and ranging the same ground over and over again, especially in places covered with heath, brambles, high grass, or young coppice-wood. A hare or rabbit will frequently suffer him to pass several times within a few yards of its form without getting up. He should be still more patient when he has marked partridges into such places ; for it often happens that, after the birds have been sprung many times, they lie so dead that they will suffer him almost to tread upon them before they will rise. Pheasants, quails, and woodcocks do the same. He should always keep a sharp eye, and carefully look about him, never passing a bush or a tuft of grass without examination ; but he should never strike either with the muzzle of his gun, for the reasons assigned where we speak of wadding. It is alsr proper to stop every now and then ; for this interruption of motion frequently determines the game to spring, which would otherwise have suffered him to pass. He who patiently beats and ranges his ground over and over again, without being discouraged, will always kill the greatest

quantity of game ; and, if he be shooting in company, he will find game where others have passed without discovering any. As soon as he has fired he should call in his dog, and make him lie down until he

has reloaded his piece ; for, without this precaution, he will frequently have the mortification to see the game rise when he is not prepared to shoot.

In shooting in an open country, one of the most essential points to be observed is, to mark the place where the partridges alight; therefore, when he has killed his bird, he should not immediately run to pick it up, or attend to make his dog bring it to him, but he ought to follow the others with his eye until he sees them settle, or as far as his sight can extend, without interruption from a wood or a hedge. In the latter case, although he have not been able to distinguish the exact spot on which they have alighted, yet he may tolerably well guess whereabout they are, especially if acquainted with the country in which he is shooting. And, when two or more sportsmen shoot in company, each should mark the birds which fly on his own side. These general rules will, with equal propriety, apply to all game of course or feather. We might next proceed to the detail of particular directions for hare and rabbit, partridge, pheasant, grouse, woodcock, snipe, and wild fowl shooting ; but, as these would draw this article to too great a length, we shall conclude it with a few observations respecting guns, powder, and shot.

To make gun barrels of a fine brown color. — As a brown barrel seems to be the most pleasing to a sportsman, the following is a certain and easy method of giving it this hue : — Rub your barrel bright with sand paper, or if bright, scour it with dry brickdusi to take off all greasiness, and fit a stick or piece of wood into the muzzle long enough to hold it by. Bruise roughly about half an ounce of stone-brimstone, and sprinkle it over a gentle fire either of wood, or coal, or charcoal ; hold your barrel over the smoke, turning and drawing it backward and forward until it be equally tinged all over ; this done, set it in a cellar or damp room till next day, in which time you will find it has thrown out a fine rust, over which you may draw your finger to spread it even, and let it stand another day. If you perceive any parts that have not taken the rust, scour such parts bright, and repeat the above operation. It is then to be polished with a hard brush (first rubbed with bees'-wax), and afterwards with a dry woollen or rough linen rag, which will make it look of a beautiful brown color. This rubbing must be repeated every day so long as it throws out any roughness. No oil or grease should come on it for some time, as that may bring off the rust in places ; but if by neglect it should get so strong a roughness that you cannot get it down with common rubbing, in that case wipe it over with sweet oil, and nib it off gently with a clean linen rag, and the next day you may polish it down with your brush as before directed.

Directions for keeping your guns in order. — If your lock and furniture be bright, the best way to save the trouble, as well as to prevent the damage that may be done by unskilful polishing,

is never to suffer them to rust, which may easily be prevented by frequently rubbing all the bright parts with a small brush, dipped in sweet oil, which should be well rubbed off wjth a linen rag : and this should never be neglected both before and after using it. It is needless to lake the lock often to pieces : if you take it off and brush it with plenty of oil, and pull up the cock and hammer a few times, the dirt with the oil will work itself out, which is to be wiped off, and a little clean oil, put on those parts where there is any friction, will answer the purpose.

To wash out the barrel. — Fill it either with cold or warm water, and empty it, and let it stand a few minutes, and the air and moisture will soften the soil left from the firing of the powder, so as to come off the easier. You may use sand with your rag or tow to wash it out, which will remove any of the soil that sticks hard to it without hurting its smoothness. Care must be taken to wipe it very dry, and, if it is to be set by for a time, it will be proper to wipe it out with an oily rag, and to stop the muzzle with the same, otherwise it will be apt to rust.

Of the stock, lock, 4”C- — The wood which is most commonly employed for the slock, and which appears the best for the purpose, is walnut. It is only necessary, however, to observe, that the grain be even and close, and as free as possible from knots and burs, which, though they may add to the beauty of the stock, seldom fail to take away from its strength, unless they are confined entirely to the butt part. As to the curvature, no particular degree can be assigned as a standard ; different persons requiring different degrees, according to the length of their neck, and to the manner in which they hold their head whilst taking aim. This, however, as well as the length of the butt, which depends partly upon the circumstances just mentioned, but chiefly upon the length of the arms, can be determined with great accuracy by the gunsmith from observing the manner in which the shooter presents his piece and takes his aim.

Wilh regard to the locks, we shall only observe that the genius and industry of the English workmen have already brought them to such a de-gree of elegance and perfection that we have scarcely any thing farther to hope for, or require. The real improvements are not confined to any particular maker ; and, though the minutiae peculiar

to each may determine the purchaser in his preference, no person need fear much disappointment in the essential qualities of a lock, provided he goes to the price of a good one. It is of much more consequence to the excellence of a lock, that the springs be proportioned to each other, than that they should all be made very strong. A moderate degree of force is sufficient to produce the required effect ; and whatever exceeds this proves detrimental, by rendering the trigger difficult to draw, or producing such a stroke as breaks the flints, or throws the piece from the direction in which it was pointed. If the main-spring be very strong, and the hammer-spring weak, the cock is often broken for want of sufficient resistance to its stroke, until it is stopped all at once by the check of the lock-plate. Whilst, on the other hand, if the liamtDer-sprinjr be stiff, and the main-SHOOTING,

spring weak, the rock has not sufficient force to drive back the hammer. And, in both cases, the collision between the flint and steel is too slight to produce the necessary fire. The face of the ham-mer, also, may be too hard or too soft. The for-mer is known by the flint making scarcely any impression upon it, and the sparks being few and very small. The latter by the flint cutting deep into the hammer at every stroke, whilst the sparks are also few in number, and of a dulUred color. When the strength of the springs, and the temper of the hammer, are in due degree, the sparks are numerous, brilliant, and accompanied with a considerable whizzing noise. To explain these differences, it is necessary to observe that the sparks produced by the collision of flint and steel are particles of the metal driven off in a strongly heated state, and which, falling among the powder, inflame it instantly. By snapping a gun or pistol over a sheet of white paper, we may collect these sparks, and, by submitting them to a microscope, demonstrate the fact. If the sparks be very brilliant, and accompanied with a whizzing noise, we shall find the particles collected on the paper to be little globules of steel, which have not only been melted, but have actually undergone a considerable degree of vitrification from the intensity of the heat excited by the collision, their surface exactly resembling the slag thrown out from an iron foundry. When the face of the hammer is too hard, the particles which the flint strikes off are so small that they are cooled before they fall into the pan ; and, when the hammer is too soft, the particles driven off are so large as

not to be sufficiently heated to fire the powder. We think the conical form of the touchhole a real improvement ; but do not approve of its widening so much as it does in the patent-breech, as the force of the fuse against the opening into the pan is greatly increased by it. Gold pans are of very little advantage ; for, as the iron must be softened before they can be applied, it is very liable to rust, and thus destroy its connexion with the gold ; the tin, also, by means of which the gold lining is fixed, is frequently melted by the fire of the fuse being directed upon the bottom of the pan, and the gold thereby detached from its hold : this will happen more readily when the touchhole is placed very low, and when, from its form or width, the fire of the fuse is considerable. A great improvement, however, has lately been made in the manner of putting in the gold pans ; they are now dovetailed in before the lock-plate is hardened, by which means they seldom or never blow out ; and it is now found that they will stand better than any other species of pan, provided the lock is eased from the touchhole, or taken off when the barrel is taken out of the stock. Still we are of opinion that the steel pan will be found, with common care in cleaning it, to last as long, and to an-swer every purpose as well, as when lined with gold.

Of the choice of gunpowder. — The excellence of this article as to its properties, and the relative condition in which it is at the time of using it, with respect to dryness, dampness, or age, are in themselves circumstances so obviously

important to the sportsman, that we have often been astonished at the almost total neglect which attends this part of the shooting science : but he may henceforward be assured, that, without the utmost circumspection and care herein, his high-priced fowling-piece will but little avail him ; mortification and disgust will generally ensue, and the gunsmith too frequently be blamed for the fault which the sportsman alone has created by his own neglect. Gunpowder is composed of very light charcoal, sulphur, and well refined saltpetre. The powder used by sportsmen in shooting game is generally composed of six parts of saltpetre, one of charcoal, and one of sulphur ; but these proportions, as well as the introduction of other ingredients, and the sizes of the grains, are undoubtedly varied by the dif ferent manufacturers in the composition of tho powders of the same denomination, and are always kept profoundly secret. Powder, however well dried and fabricated it may have been, loses its strength when allowed to become damp. If daily observations on powder put into damp magazines, and carefully preserved in barrels, are not

sufficient to establish this fact, the following experiment will render it incontestable : — Let a quantity of well-dried powder be nicely weighed, and put into a close room, where the air is temperate, and seemingly dry, and be left for three or four hours ; on weighing it again, its weight will be increased. This same powder, exposed to an air loaded with vapor, acquires much additional weight in a short time. Now the increase of the weight being proportional to the quantity of vapor contained in the atmosphere, and to the length of time that the powder is exposed to it ; it follows, that powder easily attracts moisture. Wherefore, if a degree of heat sufficient only to fire dry powder be applied to powder that is damp, the moisture will oppose the action of the fire, and the grains either will not take fire at all, or their inflammation will be slower ; thus, as the fire will spread more slowly, fewer grains will burn ; and the penetration of the fire from the surface to the centre of each grain, and consequently their consumption, will require more time. Whence it may be concluded that all degrees of moisture diminish the force of powder. Saltpetre, not sufficiently refined, attracts moisture very readily ; and as the substances that render it impure lessen the quantity of fluid, and prevent its detonation, it should be refined as much as possible before it is employed in the fabrication of gunpowder. The force of powder is owing to an elastic fluid generated at the explosion, the suddenness of which depends upon the proportion of the ingredients, the contact between the nitrous and combustible particles, and the size of the grains, &c. Hence it may be concluded that when several powders, equally well dried, and fired under the same state of the atmosphere, are compared together, that which produces the greatest quantity of the elastic fluid, in a given space of time, is the strongest. There are two general methods of examining gunpowder; one with regard to the purity of its composition, the other with regard to its strength. Its purity is known by laying two or three little heaps near each other upon

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white paper, and firing one of thefn. For if this takes fire readily, and the smoke rises upright, without leaving any dross or feculant matter be-hind, and without burning the paper, or firing the other heaps, it is esteemed a sign that the sulphur and nitre were well purified, that the

coal was good, and that the three ingredients were thoroughly incorporated together, but, if the other heaps also take fire at the same time, it is presumed that either common salt was mixed with the nitre, or that the coal was not well ground, or the whole mass not well beat and mixed together ; and, if either the nitre or sulphur be not well purified, the paper will be black or spotted. For proving the strength of gunpowder, a num-ber of machines have been invented, all of which are liable to many objections, and, upon trial with the same powder, are found to give results so different that no dependence can be placed in them ; to so many modifications are the principal properties of powder subject, even in experiments conducted with the utmost care. These variations have been attributed, by many, to the different density of the atmosphere at the time of the different experiments ; but the opinions upon this matter are so improbable in themselves, and so contradictory to each other, that they claim neither attention nor belief. Thus, some will have it that gunpowder produces the greatest effect in the morning and evening, when the air is cool and dense ; whilst others assert that its force is greatest in sunshine, and during the heat of the day. Mr. Robins concludes from the result of several hundred trials, made by him at all times of the day, and in every season of the year, that the density of the atmosphere has no effect in this matter, and that we ought to attribute the variations observed at these times to some other cause than the state of the air : probably they are owing to the imperfection of the instrument, or to the manner in which the trial was conducted. In this state of uncertainty, then, upon the theory of the effects of gunpowder, we remain at this day.

If experiments, however, are made with the prover, great care must be taken not to press the powder in the smallest degree into the tube, but ‘o pour it gently in; and particularly in trying the strength of different powders, which is the best use to which the instrument, imperfect as it is, can be applied, attention must be paid that one powder is not pressed closer than another at each experiment, nor the successive experiments made until the prover is cool, otherwise no comparative certainty can be gained. By far the nost certain method, however, of determining the quality of powder, is by drying some of it very well, and then trying how many sheets of paper it will drive the shot through, at the distance of ten or twelve yards. In this trial we should be careful to employ the same sized shot in each experiment, the quantity both of the shot and the powder being regulated by exact weight; otherwise we cannot, even in this experiment, arrive to any certainty in comparing the strength of different powders, or of the same powder at •lifferent times. Powder ought to be kept very dry :

pvery degree of moisture injures it. Good powder, however, dees not readily imbibe moisture ; and, perhaps, there is no greater proof of the bad quality of powder than its growing damp quickly when exposed to the air: this readiness to become moist depends upon the saltpetre employed in the composition not having been freed from the common salt it contains in its crude state, and which, in consequence, has a strong attraction for watery particles. Powder may acquire a small degree of dampness, and be freed from it again by drying, without much in-jury to its quality. But, if the moisture be considerable, the saltpetre is dissolved, and the intimate mixture of the ingredients thereby entirely destroyed. Drying powder with too great a heat also injures it; for there is a degree of heat, which, although not sufficient to fire the powder, will yet dissipate the sulphur, and impair the composition by destroying the texture of the grains. The heat of the sun is, perhaps, the greatest it can with safety be exposed to, and, if properly managed, is sufficient for the purpose: when this cannot be had, the heat of a fire, regulated to the same degree, may be employed ; and for this end a heated pewter plate is perhaps as good as any thing, because pewter retains so moderate a heat that there can be little danger of spoiling the powder by producing the consequences before-mentioned.

It is observable that damp powder produces a remarkable foulness in the fowling-piece after firing, much beyond what arises from an equal quantity of dry powder; and this seems to arise from the diminution of the activity of the fire in the explosion. Unless the sportsman is very particular indeed in the mode of keeping his powder, we would recommend him always to air it and his flask, before he takes the field. Flasks made of copper or tin are much better for keeping powder in than those made of leather, or than small casks: the necks of these should be small, and well stopped with cork. After this dissertation on gunpowder, it will naturally be expected thai we point out to the sportsman the best powder for shooting ; for this purpose we shall recommend the Dartford powder of Messrs. Pigou and Andrews, for being not only stronger, but the cleanest in burning -and the quickest in firing, of any other at this time manufactured in the kingdom ; and we also venture to give it as our opinion that the manufacturers of this powder seem to have attained, a”s nearly as any purpose can require, that accuracy of granulation, and of the proportions and qualities of all the ingredients, which most readily produces the destruction of all the composition, and yields the greatest possible quantity of the permanent elastic fluid in a given time ; which properties alone can constitute powder of the best quality.

Of shot. — The choice of this article is highly worthy of the

sportman's care. It should be equal, round, and void of cavities. The patent milled shot is, at this time, to be preferred to all other sorts, and is in such general use that the instructions which here follow on the size of the shot to be adopted in the different chases must be understood to relate to the patent shot only.

It is extremely important for the success of the chase that the sportsman should proportion the size of his shot, as well to »he particular spe-

cies of game he means to pursue as to the season o» killing it. Thus, in the first month of partridge shooting, shot No. 1 should be used ; for since, at this time, the birds spring near at hand, and we seldom fire at more than the distance of forty paces, if the shooter takes his aim but tolerably well, it is almost impossible for a bird at this distance to escape in the circle, or disk, which the shot forms. Hares also, at this season of the year, sit closer ; and, being at this time thinly covered with fur, may easily be killed with this sized shot at thirty or thirty-five paces. In snipe and quail shooting, this sized shot is peculiarly proper; for, in using a larger size, however true the sportsman may shoot, yet he will frequently miss; the objects being so small that they have great chance of escaping in the vacant spaces of the circle or disk.

About the beginning of October, at which time the partridges are stronger in the wing, No. 3 is the proper shot to be used. This size seems to be the best of any ; it preserves a proper me-dium between shot too large and that which is too small, and will kill a hare from the distance of thirty-five to forty paces, and a partridge at fifty, provided the powder be. good. It will serve also for rabbit shooting. In short, it is excellent for all seasons, and many sportsmen use no other the season round. It is true that distant objects are frequently missed for the want of larger shot ; but then these bear no proportion to the number which are daily missed by using shot of too large a size, especially with the feathered game. If a man were to shoot constantly with shot No. 5, for one partridge, *hich he might chance to kill with

a single pel-et, at the distance of eighty paces, lie would miss twenty birds at fifty paces which would in such case escape in the vacant spaces of the circle. But if the sportsman expressly proposes to shoot wild ducks, or hares, then, indeed, he had better use the No. 5. However, in shooting with a double barrelled gun, it may be prudent to load one of the barrels with large shot, for the necessary occasions ; and, in any case where large shot is required, No. 5, will be found to be bet-ter than any other ; for its size is not so large as to prevent it from sufficiently garnishing, or be-ing equally spread in the circle, and it can at the same time perform, in effect, all that a larger sized shot can do, which garnishes but very little, if any at all.

In order, therefore, to show clearly, at one view, the comparative difference in the garnishing of shot of different sizes, we here subjoin a table, which indicates the number of pellets precisely composing an ounce weight of each sort of shot.

Patent Shot.

Common Shot.

No. B. B. 1 oz.

60

No. 7.

1 oz.

350

B. id.

67

6.

id.

260

1. id.

86

5.

id.

235

a. id.

109

4

id.

190

3. id.

160

3.

id.

140

4. id.

200

•2.

id.

110

5. id.

2.56

I.

id.

95

6. id.

444

f. id.

530

H. i.l

600

The Proportions of Powder and Shot in t/ie Charge. — To find the charge that gives the longest range, in fowling pieces of different dimensions, must be allowed to be a discovery of iiin-nite importance to every sportsman ; and, as it seems to be an opinion pretty generally received and established, that every barrel has a particular load (not a measure estimated by any rules to be drawn from a comparison made between the proportions of the calibre and the length of the barrel) with which it will shoot with greater certainty and effect : it cannot be doubted that he will make some experiments witii his own barrels, in order to attain this end. Before we proceed, therefore, to lay down rules for the loading or fowling pieces of different dimensions, we beg leave to engraft an excellent principle in the practice of the artillery, on this point, upon the shooting science, it is asserted that by using small charges at first, and increasing the quantity of powder by degrees, the ranges will increase to a certain point; after which, if the charge be augmented, they will progressively diminish ; though the recoil will still continue iu the ratio of the increase of the charge. This

is a consequence that may be deduced from a variety of experiments, and is perfectly agreeable to the principles of mechanics ; since the recoil and the range ought to be in the reciprocal ratio of the gun and the shot, making allowance for the resistance which these bodies meet with.

For a fowling piece of a common calibre, which is from twenty-four to thirty balls to the pound weight; a drachm and a quarter, or at most, a drachm and a half, of good powder ; and an ounce, or an ounce and a quarter, of shot, is sufficient. But when shot of a larger size is used, such as No. 5, the charge of shot may be increased one-fourth, for the purpose of counterbalancing, in some degree, what the size of the shot loses in the number of pellets, and also to enable it to garnish the more. For this purpose the sportsman will find a measure mark-ed with the proper gauges very convenient to him. An instrument of this nature may now be purchased at most of our locksmiths.

Different opinions, however, are entertained on the proportions of the charge. Some determine the charge of a fowling piece by the weight of a ball of the exact size of the calibre ; estimating the weight of the powder at one-third of that of the ball, whether it is proposed to shoot with ball or with shot; and the weight of the shot they estimate at a moiety more, or, at the most, at double the weight of the ball. This calculation comes pretty near to the propositions we have just laid down, except in the difference of size between the calibres twenty-four and thirty, which, notwithstanding, is not sufficiently great in the two cases to require a gradation in the weight of the charge. Others again lay down as a rule for the charge of powder, a measure of the same diameter as the banel : and double that diameter in depth : and, for the shot, a measure of the like diameter, but one-third less in depth than that for the powder ; this also agrees tolerably well with the proportions we have mentioned, at least for the powder, but the.

measure of shot seems to be too small. In shooting with a rifle-piece, some persons proportion the quantity of powder to three times the quantity which the mould of the ball adapted to the piece will contain.

Although proverbs are generally true, or at least possess some portion of truth, yet nothing is so glaringly absurd, or less founded in rational principles, than that old adage, ‘ Sparing of pow-der, and liberal of shot :’ a saying which is not only in the acquaintance, but in the constant practice of most sportsmen. As a consequence of overloading with shot, the powder has not sufficient strength to throw it to its proper distance ; for, if the object be distant, one-half of the pellets composing the charge, by their too great quantity and weight, will strike against each other, and fall by the way; and those which reach the mark will have small force, and will produce but little or no effect. Thus to overload is the strange fancy of poachers, who imagine they can-not kill unless they put two ounces, or more, of large shot into their pieces. It is true, that they destroy a great quantity of game, but then it is not fairly shot. Such men are in some measure punished by the severe strokes they receive on the shoulders and cheeks, in consequence of the excessive recoil.

SHOOTER’S-HILL, on the road to Dartford, in Kent, eight miles and a half from Lon-don, is supposed to have derived its name from the exercise of archery, in the neighbouring woods, in former times. On the summit of this hill are some pleasant houses, particularly the Bull Inn, which commands a most extensive prospect of Kent and the adjoining counties. This neighbourhood was formerly noted for robberies, till the road was widened, and much of the coppice -wood cut down. Within the last few years the road on the summit has been lowered many feet, leaving the Bull Inn thirty feet above the level. On the right of the road stands a triangular tower, 482 feet above the level of the sea, which was erected by the lady of Sir E. \V. James, in commemoration of his conduct in the East Indies at the taking of Severndroog, from which it is named ; near it stands the Admiralty telegraph.

SHOP, n. x. ~\ Sax. j-ceop, a magazine ; SHOP’BOARD, I Fr. eschoppe ; low Lat. shopa. SHOP BOOK, \Ainsworth. A place where SHOP’KEEPER, i any thing is sold, and hence SHOP’MAN. J where certain things are manufactured : the derivatives corresponding.

Our windows are broke down, And we for fear compelled to shut our shop*.

Shakipeare.

In his needy shop a tortoise hung, An alligator stuft, and other skins Of ill-shaped fishes ; and about his shelves A beggarly account of empty boxes. Id.

We have divers mechanical arts and stuffs made by them ; and shops for such as are not brought into Tulg*r use. Bacon.

That beastly rabble, that came down From all the garrets in the town, And stalls, and shopboards, in vast swarms, With new-chalked bills, and rusty arms. HtuiHirns.

Scarce any sold in shops could be relied on as faithfully prepared. Boyle.

Garth, generous as his muse, prescribes and gives ‘ The thopman sells, and by destruction lives.

Dryden.

They that have wholly neglected the exercise of their understandings, will be as unfit for it, as one unpractised in figures to cast up a thopbooh. Locke.

it dwells not in shops or workhouses : nor till the late age was it ever known that any one served seven vears to a smith or a taylor, that he should commence doctor or divine from the shopboard or the anvil ; or from whistling to a team come to preach to a congregation. South’ t Sermons.

Nothing is more common than to hear a shop-heeper desiring his neighbour to have the goodness to tell him what is a clock. Addison.

What a strange thing is it, that a little health, c the poor business of a shop, should keep us so sense • less of these great things that are coming so fast upon us ! Law.

SHOP-LIFTERS (from shop and lifter), those that steal goods prirately out of shops ; which, being to the value of 5s., though no person be in the shop, is felony without the benefit of clergy, by the 10 and 11 W. III. c. 23.

SHORE, n. s. & v. a. > Sax. rcone ; Goth.

SHORE'LESS, adj. 1 skier. The coast of the sea : hence both a drain, and a prop or support : to support ; hold up ; and, in an obsolete sense, to set on shore ; the adjective corresponding.

Beside the fruitful shore of muddy Nile, Upon a sunny bank outstretched lay, In monstrous length, a mighty crocodile. Spenser.

They undermined the wall, and, as they wrought, thored it up with timber. Knolles.

I will bring these two blind ones aboard him ; if he think it fit to shore them again, let him call me rogue. Shakspeare.

There was also made a shoring or under-propping act for the benevolence ; to make the sums which any person had agreed to pay leviable by course of law. Bacon't Henry VII.

He did not much strengthen his own subsistence in court, but stood there on his own feet, for the most of his allies rather leaned upon him than shored him up. Wotton.

Sea covered sea ; Sea without shore. Milton.

This ocean of felicity is so shoreless and bottom-less that all the saints and angels cannot exhaust it.

Boyle.

There is commonly a declivity from the shore to the middle part of the channel, and those thory parts are generally but some fathoms deep.

Burnet's Theory of the Earth.

When I use the word shore, I may intend thereby a coast of land near the sea, or a drain to carry off water, or a prop to support a building.

Watti'i Logich.

SHORE is otherwise defined a place washed by the sea, or by some large river. Count Marsieli divides the sea shore into three portions ; the first of which is that tract of land which the sea just reaches in storms and high tides, but which it never covers ; the second is that which is covered in high tides and storms, but is dry at other times; and the third is the descent from this, which is always covered with water. The first part is only a continuation of the continent, and suffers no alteration from the neighbourhood of the sea, except that it

is rendered (it for the growth of some plants, and wholly unfit for that

of others, by the saline streams and impregna-tions ; and it is scarcely to be conceived by any but those who have observed it, how far on land the effects of the sea reach, so as to make the earth proper for plants which will not grow without this influence, there being several plants frequently found on high hills and dry places at three, four, and more miles from the sea, which yet would not grow unless in the neighbourhood of it, nor will ever be found elsewhere. The second portion of the shore is much more affected by the sea than the former, being frequently washed and beaten by it. Its productions are rendered salt by the water, and it is covered with sand, or with the fragments of shells in form of sand, and in some places with a tartarous matter deposited from the water ; the color of this whole extent of ground is usually dusky and dull, especially where there are rocks and stones, and these covered with a slimy matter. The third part of the shore is more affected by the sea than either of the others ; and is covered with a uniform crust of the true nature of the bottom of the sea, except that plants and animals have their residence in ‘£, and the decayed parts of these alter it a little.

SHORE (Jane), the celebrated concubine of king Edward IV., was the wife of Matthew Shore, a goldsmith in Lombard-street, London. Kings are seldom unsuccessful in their amorous pursuits ; therefore there was nothing wonderful in Mrs. Shore’s removing from Lombard-street to <hme at court as the royal favorite. Historians represent her as extremely beautiful, remarkably cheerful, and of most uncommon generosity. The king, it is said, was no less captivated with her temper than with her person; she never made use of her influence over him to the prejudice of any person ; and, if ever she importuned him, it was in favor of the unfortunate. After the death of Edward, she attached herself to lord Hastings: and, when Richard III. cutoff that nobleman

as an obstacle to his ambitious schemes, Jane Shore was arrested as an accomplice, on the ridiculous accusation of witchcraft. This, however, terminated only in a public penance ; excepting that Richard rifled her of her little property : but, whatever severity might have been exercised towards her, it appears that she was alive, though sufficiently wretched, in the reign of Henry VIII. when Sir Thomas More saw her poor, old, and shrivelled, without the least trace of her former beauty. Mr. Rowe, in his tragedy of Jane Shore, has adopted the popular story related in the old historical ballad, of her perishing by hunger in a ditch where Shoreditch now stands. But Stow assures us that street was so named before her time.

SHOREHAM, a parish in Codsheath hundred and lathe of Sutton-at-Hone, Kent, four miles north from Seven Oaks, and twenty from London, near the river Darent. Here is an .antique house still called Shoreham Castle. It has a charity-school, and a fair on the 1st of May. It is a rectory, value £34 9s. 9d., united with Ot-ford. Patrons, the dean and chapter of Westminster.

SHOREHAM, NEW, a sea-port, borough, and market-town, in Fishergate hundred, rape of

Bramber, Sussex, six miles west from Brighton, and fifty-six south by west from London, on the river Adar. The town lies about a mile within the haven, is singularly built, in the centre ot which is the market-house, standing on Doric pillars. It has a considerable traffic, and has a custom-house with a collector, comptroller, and inferior officers. Along the neighrrouring coast, during peace, much smuggling is carried on. The church is an extensive building, and was formerly collegiate ; of late it has been repaired and greatly beautified. Although it is only a tide •haven, yet, as it is the best upon the coast, vessels of considerable burden come into it, it hav-ing eighteen feet water at spring tides, but does not rise higher than twelve in common, and has only three feet at the ebb. High-water, full and change, a quarter before ten o'clock. Seven leagues west from Beachy Head. Beyond the town, across the river, is a timber bridge, leading to Arundel and Chichester. The town is a borough by prescription, and has sent members to parliament ever since 1298. It was disfranchised for corruption in 1771; but soon after restored, which circumstance produced an extension of the elective franchise to all the freeholders of 40s. within the rape of Bramber, being in number about 1300. Shoreham has a considerable trade in ship-building, and is noted for the excellence of its oysters. Ella is supposed to have landed here with

his three sons, in the year 477, when he defeated the Britons, and founded the kingdom of the South Saxons. Market on Saturday. Fair, July 25th. It is a vicarage, value 6/ 18s., in the patronage of Magdalen College, Oxford. The church is in lat. 50° 49′ 69″ N., long. 0° 16′ 19″ W.

SHORLING AND MORLING, are words to distinguish fells of sheep; shorling being the fells after the fleeces are shorn off the siieep's back ; and morling the fells flead off after they die or are killed. In some parts of England they understand by a shorling, a sheep whose face is shorn off; and by a morling a sheep that dies.

SHORN. The participle passive of SHEAR : which see : with of.

So rose the Danite strong, Shorn of his strength. Milton.

Vile shrubs are shorn for browze : the towering

height Of unctuous trees are torches for the night.

Dry den,

He plunging downward shot his radiant head ; Dispelled the breathing air that broke his flight ; Shorn of his beams, a man to mortal sight. Id.

SHORT, n. s., adj., & adv."} saxon j-co&nt ;

SHORT'EN, v. a. SHORT'HAND, n. s. SHORTLIV'ED, adj. SHORT'LY, adv. SHORT'NESS, n. s. SHORT'RIBS, SHORTSIGHTED, adj. SHORTSIGHTEDNESS, n.s. SHORTWAIST'ED, adj. SHORTWIND'ED, SHORTWING'ED.

Goth, and Swed. short ; qu. Latin curtus ? Scanty ; inadequate ; defective ; contractI ed ; not long in space, extent, time, or duration ; brittle ; friable : a brief account : as

J an adverb, used

in composition for not long : to shorten is to

make short in any way ; contract ; confine ; restrain: shorthand, a compendious or short method of writing: the other compounds and derivatives seem obvious in their meaning.

They changed their night into day : the light is tltort, because of darkness. Job xvii. 12.

Some cottons here grow, but thort in worth unto those of SmyAa. Sandys.

The Turks give you a quantity rather exceeding nan short of your expectations. Id.

Her breath, then short, seemed loth from home to

pass, Which more it moved the more it sweeter was.

Sidney. •

Immoderate praises the foolish lover thinks short of his mistress, though they reach far beyond the heavens. ^.

The Irish dwell together by their septs, so as they may conspire what they will ; whereas, if there were English placed among them, they should not be able to stir but that it should be known, and they shortened according to their demerits. Spenser.

Because they see it is not fit or possible that churches should frame thanksgivings answerable to each petition, they shorten somewhat the reins of their censure. Hooker.

The necessity of shortness causeth men to cut off impertinent discourses, and to comprise much matter in few words. Id.

Would you have been so brief with him, he would Have been so brief with you to shorten you, For taking so the head, the whole head's length.

Shakspeare.

The thort and long is, our play is preferred. Id.

To be known, shortens my laid intent ; My boon I make it, that you

know me not. Id.

I must leave thee, love, and shortly too. Id.

Thou art no friend to God, or to the king ; Open the gates, or I'll shut thee out shortly.

Id. Henry VI.

Sir, pardon me in what I have to say, Your n'ainnessaad yo\ir shortness please me well.

Shakspeare.

And breathe shortwinded accents of new broils To be commenced in strands afar. Id. Henry IV.

It is better to sound a person afar off than to fall upon the point at first ; except you mean to surprise him by some short question. Bacon.

They move strongest in a right line, which is caused by the shortness of the distance.

Id. Natural History.

Whatsoever is above these proceedeth of thort-tesi of memory, or of want of a stayed attention.

Bacon.

The English were inferior in number, and grew ihort in their provisions. f/ayward.

We shortened days to moments by love's art, Whilst our two souls Perceived no passing time, as if a part Our love had been of still eternity. Suckling.

Repentance is, in thort, nothing but a turning from sin to God ; the casting off all our former evils, and, instead thereof, constantly practising all those Christian duties which God requireth of us.

Duty of Man.

With this the Mede thortwinded old men eases, And cures the lung's unsavory diseases.

May's Virgil.

The foolish and shortsighted die with fear That they go nowhere, or they know not where.

Denham.

ˆ In sho-,-thand skilled, where little marks comprise ‘Vholt words, a sentence in a letter lies. Creech.

‘I U-armies came shortly in view of each other.

Clarendon.

SHO

He commanded those, who were appointed to at-tend him, to be ready by a short day. Id,

This less voluble earth, By shorter flight to the east, had left them there.

Milton.

Nor love thy life, nor hate, but what thou livest Live well ; how long or short permit to heaven. Id.

I know them not ; nor therefore am I short Of knowing what I ought. Id. Paradise Regained.

To attain

The height and depth of thy eternal ways, All human thoughts come short, supreme of things.

MHtm.

His flesh is not firm, but short and tasteless.

Walton.

To place her in Olympus’ top a guest, Among the’ immortals, who with nectar feast ; That poor would seem that entertainment short Of the true splendour of her present court. Waller.

We err, and come short of science, because we are so frequently misled by the evil conduct of our imaginations. Glancille.

Another account of the shortness of our reason, and easiness of deception, is the forwardness of our understanding's assent to slightly examined conclusions. Id. Sceyfis.

It may be easily conceived, by any that can allow for the lameness and shortness of translations out of languages and manners of writing differing from ours. Temj'le.

Short were her marriage joys : for in the prime Of youth her lord expired before his time Dryden.

He wills not death should terminate their strife, And wounds, if wounds ensue, be short of life. Id.

He seized the helm ; his fellows cheered, Turned short upon the shelfs, and manly steered.

Id.

As one condemned to leap a precipice. Who sees before his eyes the depth below, Stops short. Id.

None shall dare

With shortened sword to stab in closer war, But in fair combat. Id.

War, and luxury's more direful rage, Thy crimes have brought, to shorten mortal breath, With all the numerous family of death. Id.

If he meet with no reply, you may conclude that I trust to the goodness of my cause : the short on't is, 'tis indifferent to your humble servant whatever youi party says. Id.

From Medway's pleasing stream To Severn's roar be thine : In short, restore my love, and share my kingdom.

Id.

Beauty and youth, And sprightly hope, and dAori-enduring joy. Id.

Dishonest with lopt arms the youth appears, Spoiled of his nose, and shortened of his ears. Id.

Your follies and debauches change With such a whirl, the poets of your age Are tired, and cannot score them on the stage p Unless each vice in thorthand they indite, Even as nocht 'prentices whole sermons write. Id.

Unhappy parent of a shortlived son ! Why loads he this embittered lite with shame? la.

H”e celebrates the anniversary of his father’s funeral, and shortly after arrives at Cum*. /..’.

Skorttritiged, unfit himself to fly, His fear foretold foul weather. la,

Ducklegged, sliartwaisted, such a dwarf she is, That she must rise on tip-toes for a kiss.

Id. Juvenal.

So soon as ever they were gotten out of the hearing of the cock, the lion turned short upon him :\:,d to* him to pieces. ;.’ ! fiˆnujc.

SHO

In thort, she makes a man of him at sixteen, and a boy all his life after. Id.

Other propositions were designed for snares to the thort sighted and credulous. Id.

If speculative maxims have not an actual universal assent from all mankind, practical principles come short of an universal reception. Locke.

Boys have but little use of shorthand, and should by no means practise it till they can write perfectly well. Id.

Where reason came short, revelation discovered on which side the truth lay. Id.

To shorten its way to knowledge, and make each perception more

comprehensive, it binds them into bundles. Id.

Marl from Derbyshire was very fat, though it had

so great a quantity of sand that it was so short, that,

when wet, you could not work it into a ball, or make

it hold together. Mortimer.

My breath grew thort, my beating heart sprung

upward, And leaped and bounded in my heaving bosom.

Smith.

The short is, to speak all in a word, the possibility of being found in a salvable state cannot be sufficiently secured, without a possibility of always persevering in it. Norris.

As in many things the knowledge of philosophers was short of the truth, so almost in all things their practice fell short of their knowledge : the principles by which they walked were as much below those by which they judged as their feet were below their head. South's Sermons.

They, since their own sh<yrt understandings reach No farther than the present, think even the wise, Like them, disclose the secrets of their breasts.

Rowe.

The people fall short of those who border upon them in strength of understanding. Addi.wu.

The frequent alterations in publick proceedings, the variety of shortlived favourites that prevailed in their several turns under the government of her successors, have broken us into these unhappy distinctions. Id. Freelwlder.

Cunning is a kind of shortsightedness, that discovers the minutest objects which are near at hand, but is not able to discern things at a distance. Spectator.

May they not justly to our climes upbraid Shortness of night, and penury of shade ? Prior. As the language of the face is universal, so 'tis very comprehensive : no laconism can reach it : 'tis the shorthand of

the mind, and crowds a great deal in a little room. Collier.

When I made these, an artist undertook to imitate it ; but, using another way of polishing them, he fell much sJiort of what I had attained to, as I afterwards understood. Newton.

Shortsighted men see remote objects best in old age ; therefore they are accounted to have the most lasting eyes. Id.

Some vices promise a great deal of pleasure in the commission ; but then, at best, it is but shortlived and transient, a sudden flash presently extinguished.

Caiamy't Sermons.

The time will shortly come wherein you shall more rejoice for that little you have expended for the benefit of others, than in that which by so long toil yon shall have saved. Co/ami/.

It is not credible that the Phoenicians, who had established colonies in the Persian gulph, stopt short, without pushing their trade to the Indies.

Arbnthnnt.

Whatever shortens the fibres, by insinuating them- *el«es into their parts, as water in a rope, contracts.

Id.

One strange draught prescribed by Hippocrates, for a s/>oj-t-breathed man, is half a gallon of hydro-mel, with a little vinegar. Id.

A gentleman was wounded in a duel : the rapier entered into his right side, slanting by his shorcribs under the muscles. Wiseman's Surgery.

The signification of words will be allowed to fall much short of the knowledge of things., Baker.

Weak though I am of limb, and short of sight. Far from a lynx, and not a giant quite, I'll do what Mead and Cheselden advise, To keep these limbs, and to preserve these eyes.

Pope.

Though short my stature, yet my name extends To heaven itself, and earth's remotest ends. Id.

Virgil exceeds Theocritus in regularity and brevity, and falls short of him in nothing but simplicity and propriety of style. Id.

Then palaces shall rise ; the joyful son

Shall finish what his shortlived sire begun. Id.

Even he, whose soul now melts in mournful lays, Shall shortly want the generous tear he pays. Id.

To see whole bodies of men breaking a constitution ; in short, to be encompassed with the greatest dangers from without, to be torn by many virulent factions within, then to be secure and senseless, are the most likely symptoms in a state of sickness unto death. Swift.

That great wit has fallen short in his account.

More.

Think upon the vanity and shortness of human life, and let death and eternity be often in your minds.

Law.

SHORT (James), A. M. and F. R. S., an eminent optician, born in Edinburgh on the 10th of June, O. S,. 1710. At ten years of age, having lost his father and mother, and being left in a state of indigence, he was received into Heriot's Hospital, where he soon displayed his mechanical genius in constructing for himself little chests, book-cases, and other conveniences, with such tools as. fell in his way. At the age of twelve he was removed from the hospital to the High School, where he showed a considerable taste for classical literature, aud generally kept at the head of his class. In 1726 he was entered into the university, where he passed through the usual course of education, and took his master's degree with great applause. By his friends he was intended for the church ; but, after attending a course of theological lectures, he thought that profession little suited to his talents ; and devoted his whole time to mathematical and mechanical pursuits. Having the celebrated M'Laurin for his preceptor, he soon discovered the bent of his genius, made a proper estimate of the extent of his capacity,and encouraged him to prosecute those studies in which nature had qualified him to make the greatest figure. Under the eye of that eminent master, he began, in 1732, to construct

Gregorian telescopes; and, as the professor observed in a letter to Dr. Jurin, ‘ by taking care of the figure of his specula, he was enabled to give them larger apertures, and to carry them to greater perfection, than had ever been done be-fore him.’ See OPTICS, Index. In 1736 Mr. Short was called to London, at the desire of Queen Caroline, to give instructions in mathematics to William duke of Cumberland: and, immediately on his appointment to that very honorable office, he was elected F. 11. S. and

patronised by the earls of Morton and Maccles-neld. In 1739 he accompanied the former to the Orkney Isles, where he was employed in adjusting the geography of that part of Scotland. Mr. Short having returned to London, and established himself there, was in 1743 employed by lord Thomas Spencer to make for him a reflector of twelve feet focus, for which he received 600 guineas. He made several other telescopes of the same focal distance with greater improvements and higher magnifiers ; and in 1 752 finished one for the king of Spain, for which, with its whole apparatus, he received £1200. This was the noblest instrument of the kind that had then been constructed, and perhaps it has never yet been surpassed except by the astonishing reflectors of Herschel. See TELESCOPE. Mr. Short was wont to visit the place of his nativity once every two or three years during his residence in London, and in 1766 he visited it for the last time. On the 15th of June 176R he died, after a short illness, at Newington Butts, near London, of a mortification in his bowels, having nearly completed his fifty-eighth year. He left a fortune of about £20,000, of which £15,000 was bequeathed to two-nephews and the rest in legacies to his friends. In gratitude for the steady patronage of the earl of Morton, he left to his daughter, the Lady Mary Douglas, afterwards countess of Aboyne, £1000 and the reversion of his fortune, should his nephews die without issue ; but this reversionary legacy the lady, at the desire of her father, generously

relinquished by a deed in favor of Mr. Short's brother, Mr. Thomas Short, and his children. Mr. Short's eminence as an artist is universally known, and he is said to have been a man of amiable manners ; but if, out of such a fortune, he left nothing to the hospital in which he received the rudiments of that education by which he acquired it, he was guilty of an omission highly criminal.

SHORTFORD, q. d. fore-close, an ancient custom in the city of Exeter, when the lord of the fee cannot be answered rent due to him out of his tenement, and no distress can be levied for the same. The lord is then to come to the tenement, and there take a stone, or some other dead thing off the tenement, and bring it before the mayor and bailiff, and thus he must do seven quarter days successively ; and, if on the seventh quarter day the lord is not satisfied of his rent and arrears, then the tenement shall be adjudged to the lord to hold the same a year and a day ; and forthwith proclamation is to be made in the court, that, if any man claims any title to the said tenement, he must appear within the year and day next following, and satisfy the lord of the said rent and arrears : but if no appearance be made, and the rent not paid, the lord comes again to the court, and prays that according to the custom the said tenement be adjudged to him in his demesne as of fee, which is done accordingly, so that the lord hath from thenceforth the said tenement, with the appurtenances to him and his heirs.

SHORTHAND WRITING. See STEHOUKAPHV.

SnoRT-Jo'NTED, in the manege. A horse is said to be short-jointed that has a short pastern ; when this joint or the pastern is too short, the

horse is subject to have his fore legs from the knee to the cornet all in a straight line. Commonly short-jointed horses do not manege so well as the long-jointed ; but out of the manege the short-jointed are the best for travel or fatigue.

SHORTSIGHTEDNESS, myopia, that defect in the conformation of the eye wherein the crystalline, &c., being too convex, the rays reflected from different objects are refracted too much, and made to converge too fast, so as to unite before they reach the retina, by which means vision is rendered dim and confused. See MYOPS. A learned author thinks it probable that, out of so great a number of shortsighted persons as are daily to be met with, few are born so ; for it generally

grows upon young people at the age of twenty or twenty-five, and therefore might possibly be prevented by using their eyes while young to all sorts of conformations, that is, by often looking through glasses of all sorts of figures, and by reading, writing, or working with spectacles of several degrees of convexity ; for, whatever be the powers by which the eye conforms itself to distinct vision, they may possibly grow weak, or lose their extent one way or other, for want of variety of exercise. It seems an opinion without foundation to think that such an exercise of the eyes can any wise injure them, provided" due care be taken to avoid looking at objects that are too bright.

Dr. Smith mentions a young gentleman who became shortsighted immediately after coming out of a cold bath, in which he did not totally immerse himself, and has ever since used a concave glass for many years. It is commonly thought that shortsightedness wears off in old age, on account of the eye becoming flatter : but the learned doctor questions whether this be matter of fact or hypothesis only.

It is remarkable that shortsighted persons commonly write a small hand, and love a small print, because they can see more of it at a view. That it is customary with them not to look at the person they converse with, because they cannot well see the motion of his eyes and features, and are therefore attentive to his words only. That they see more distinctly, and somewhat farther off, by a strong light than by a weak one ; because a strong light causes a contraction of the pupil, and consequently of the pencils, both here and at the retina, which lessens their mixture, and consequently the apparent confusion; and, therefore, to see more distinctly, they almost close their eyelids, for which reason they were anciently called myopes. — Smith's Optics, vol. ii. Rem. p. 10, &c.

Jurin observes that persons who are much and long accustomed to view objects at small distances, as students in general, watch-makers, gravers, painters in miniature, &c., see better at small distances, and not so well at great distances, as the rest of mankind. The reason is, that in the eye, as well as in other parts, the muscles, by constant exercise, are enabled to contract themselves with more strength, and by disuse are brought to less strength. Hence, in the persons before-mentioned, the greater muscular ring of the nvea contracts more easily and strongly, and tho cornea more rea-

dily obeys the contraction of the ring, whence they see better at small distances. And the cor-nea, by being thus often and long bent into ?. greater convexity, does by degrees lose something of its elasticity, so as not to return to its natural elasticity, when the muscular ring ceases to act upon it. This is one cause of their not seeing so well at great distances : also the liga-mentum ciliare, being seldom employed to lessen the convexity of the capsula, does by degrees become less capable of performing that office: and the capsula, being seldom drawn out and put into tension, must lose something of its dis-tensile quality, so as less easily to comply with the action of the ligament. And this is another cause of their not seeing so well at great distances. — Jurin, Essay on Dist. and Indist. Vision. The general remedy for shortsightedness is a concave lens, held before the eye, which, making the rays diverge, or at least diminishing much of their convergency, makes amends for the too great convexity of the crystalline.

SHOT, part. & n. s. i The pret. and part.

SHOTFREE, adj. > pass, of SHOOT, which

SHOTTEN, adj. j see. The act of shooting : the path or flight of a missile ; the missile emitted; a gun charged ; Fr. escot, an account: shotfree is clear of the reckoning : not to be hurt by shot : shotten is having shot or ejected the spawn. ˆ

She sat owr against him, a good way off, as it were a bow shot. Genesis xxi. 16.

Their tongue is as an arrow shot out, it speaketh deceit. Jeremiah.

A shot unheard gave me a wound unseen. Sidney.

On the other side a pleasant grove Was shot up high, full of the stately tree That dedicated is to Olympick Jove.

Faerie Queene.

I shall here abide the hourly shot Of angry eyes. Shakspeare. Cymbeline.

Proud death !

What feast is towered in thy infernal cell, That thou so many princes at a shot So bloodily hast struck ? Id. Hamlet.

Though I could ‘scape skotfree at London, I fear the shot here : here’s no scorning but upon the pate.

Id. Henry IV.

Go thy ways, old Jack ; die when thou wilt, if good manhood be not forgot upon the earth, then am I a shotten herring. Id.

At this booty they were joyful, for that they were supplied thereby with good store of powder and shot.

Hay ward.

As the fund of our pleasure, let each pay his

shot ; Far hence be the sad, the lewd fop, and the sot.

Ben Jonton.

The fortifier of Pendennis made his advantage of the commodiousness afforded by the ground, and shot rather at a safe preserving the harbour from sudden attempts of little fleets, than to withstand any great navy. Carew.

He caused twenty shot of his greatest cannon to be made at the king’s array. Clarendon,

He only thought to crop the flower. New shot up from a vernal shower. Milton.

From before her vanished night, Shot through with orient beams. Id. Paradise Lost.

Impatient to revenge the fatal shot, His … hand doubly to his left succeeds.

Dryden.

Shepherd, leave decoying, Pipes are sweet a summer’s day ;

.But a little after toying, Women have the shot to pay. Id,

Ask for what price thy venal tongue was sold ! Tough withered truffles, ropy wine, a dish Of shotten herrings, or stale stinking fish. Id.

Sometimes they shot out in length, like rivers ; and sometimes they flew into remote countries in colonies.

Burnet.

The same metal is naturally shot into quite different figures, as quite different kinds of th«m are of the same figure. Woodward.

He, prone on ocean in a moment flung, Stretched wide his eager arms, and shot the sea» along. Pope.

He touched the pence when others touched the

pot ;

The hand that signed the mortgage paid the shot.

Swift.

SHOT (Fr. boulet, et en general toutes sortes de charges pour les canons), a name given to all sorts of balls used for artillery and fire-arms, from the pistol to the cannon : those for cannon and carronades being of iron, and those for small-arms of lead.

Cannon shot is distinguished by the nature of the ordnance for which it is intended ; as forty-two, thirty-two, twenty-four, eighteen, twelve, nine-pounders, &c., and those for small-arms by the names of the pieces ; as musket, carbine, pistol, &c.

SHOT, PATE.NT MILLED, is thus made : sheets of lead, whose thickness corresponds with the size of the shot required, are cut into small pieces, or cubes, of the form of a die. A great quantity of these little cubes are put into a large hollow iron cylinder, which is mounted horizontally and. turned by a winch ; when by their friction against one another, and against the sides of the cylinder, they are rendered perfectly round, and very smooth. The other patent shot is cast in moulds, in the same way as bullets are.

SHOT, SMALL, or that used for fowling, should be well sized, and of a moderate bigness; for should it be too great, then it flies thin, and

scatters too much ; or if too small, then it hath not weight and strength to penetrate far, and the bird is apt to fly away with it. In order, therefore, to have it suitable to the occasion, it not being always to be had in every place fit for the purpose, we shall set down the true method of making all sorts and sizes under the name of mould shot. Its principal good properties are to be round and solid. Take any quantity of lead you think fit, and melt it down in an iron vessel ; and as it melts keep it stirring with an iron ladle, skimming off all impurities whatsoever that may arise at the top; when it begins to look of a greenish color, strew on it as much auripigmentum or yellow orpiment, finely powdered, as will lie on, a shilling, to every twelve or fourteen pounds of lead ; then, stirring them together, the' orpiment will flame. The ladle should have a notch on one side of the brim, for more easily pouring out the lead; the ladle must remain in the melted lead, that its heat may be the same with that of the lead, to prevent inconveniences which otherwise might hap-pen by its being either too hot or too cold : then, to try yuur lead, drop a little of it into water.

and, if the drops prove round, then the lead is of a proper heat ; if otherwise, and the shot have tails, then add more orpiment to increase the heat, till it be found sufficient. Then take a plate of copper, about the bigness of a trencher, which must be made with a hollowness in the middle, about three inches compass, within which must be bored about forty holes according to the size of the shot which you intend to cast ; the hollow bottom should be thin ; but the thicker the brim, the better it will retain the heat. Place this plate on a frame of iron, over a tub or vessel of water, about four inches from the water, and spread burning coals on the plate, to keep the lead melted upon it : then take some lead and pour it gently on the coals on the plate, and it will make its way through the holes into the water, and form itself into shot ; do thus till all your lead be run through the holes of the plate, taking care, by keeping your coals alive, that the lead do not cool, and so stop up the holes. While your are casting in this manner, another person with another ladle may catch some of the shot, placing the ladle four or five inches underneath the plate in the water, by which

means you will see if they are defective, and rectify them. Keep the lead in a just de-gree of heat, that it be not so cold as to stop up the holes in your plate, nor so hot as to cause the shot to crack ; to remedy the heat, you must refrain working till it is of a proper coolness ; and, to remedy the coolness of your lead and plate, you must blow your fire ; observing that the cooler your lead is, the larger will be your shot ; as the hotter it is, the smaller they will be. After casting, take them out of the water, and dry them over the fire with a gentle heat, stirring them continually that they do not melt ; when dry, separate the great shot from the small, by the help of a sieve made for that purpose, according to their several sizes. But those who would have very large shot, make the lead trickle with a stick out of the ladle into the water, without the plate. If it stop on the plate, and yet the plate be not too cool, give but the plate a little knock, and it will run again ; care must be had that none of your implements be greasy, oily, or the like ; and when the shot, being separated, are found too large or too small for your purpose, or otherwise imperfect, they will serve again at the next operation. The sizes of com-mon shot for fowling are from No. 1 to 6, and smaller, which is called mustard seed, or dust shot ; but No. 5 is small enough for any shooting whatsoever. The No. 1 may be used for wild geese ; the No. 2 for ducks, widgeons, and other water-fowl : the No. 3 for pheasants, partridges after the first month, and all the fen-fowl ; the No. 4 for partridges, woodcocks, &c. ; and the No. 5 for snipes and all the smaller birds.

Shot thus made is not without considerable imperfections. The exterior coat of the lower part of the drop becoming suddenly fixed by the contact of the water, its superior portion, which

I Lower-deck …

Round for ships < … .,,

J Middle, upper, and

V. quarter-deck . . Ditto for sloops . .

is still liquid, as it also cools and contracts, necessarily pits, like the surface of metal in tne channel of a mould, so that the greater part of the shot are somewhat hollow, and of an irregular form ; consequently too light for the purpose to which they are destined, and liable to unequal resistance in their passage through the air. These defects are

remedied in the patent-shot, the manufacture of which differs only froi.! that of the preceding kind in the addition of a larger portion of arsenic, which varies according to the quality of the lead ; in dropping it from such a height that it becomes solid before it enters the water, which is from forty to 100 feet ; and, in some subsequent operations, which are as follows : — it is first dried and sifted. It is then boarded, which consists in scattering it on several polished slabs or trays of hard wood, with rims, in the form of a n, except that the sides converge towards the lower part, to which a slight inclination and alternate motion in their own planes are given by boys employed in the manufacture. The shot, whose form is imperfect, are detected by the sluggishness of their motion, and remain behind, whilst the others roll off from the board. The last operation is the polishing ; which is performed by agitating it with the addition of a very small quantity of black lead, not exceeding two spoonfuls to a ton, in an iron vessel, turning on an horizontal axis like a butter churn. It does not appear that any higher degree of perfection than that which is thus attained remains to be desired. The argentine brilliancy of the shot when newly made, the beautiful accuracy of its form, and the curious instance of inanimate tactics which it presents when scattered on a plate, render it even an agreeable object of contemplation.

The shot now used in the royal navy is principally confined to three sorts, namely, round, grape, and case or canister.

Round-shot (Fr. boulet rond) is the most simple, and composed of a ball or globe of cast-iron, whose weight is in proportion to the size of the cannon, or to the diameter of its bore.

Grape-shot (Fr. charge a la suedoise, ou charge en grappe) is a combination of balls, fig. 6, plate V., put into a canvas bag, and corded strongly together, so as to form a sort of cylinder, whose diameter is equal to that of the ball which is adapted to the cannon.

Case or canister-shot (Fr. charge a mitraille), fig. 7, is formed by putting a quantity of small shot into a case or canister.

The tin case is cylindrical, in diameter a little less than the calibre of the gun or howitzer. It is filled with lead balls, so as to make up the weight of the shot. These balls are seldom less than one ounce and a quarter in weight. But little effect is to be expected from firing case-shot beyond 300 yards, from the very great divergency of the balls. The proportions of shot for the royal navy are,

5 60 round each gun for Chan. Serv. I 80 do. for Foreign do.

{ 70 do. for Chan. do.

? 100 do. for Foreign do.

1 50 do. for Chan. do.

) 60 do. for Foreign do.

SHOT.

Grape ami case-shot are supplied each in the proportion of from five to twelve rounds for every gun, as the nature of the service may require. There are other sorts of shot formerly used, such as the chain, cross-bar, langrel, &c., but these are now nearly discontinued in the British navy.

Chain-shot (Fr. boulets enchaine”s), fig. 8, consists of two balls linked together, being principally designed to destroy the masts and rigging, which they are better fitted to perform than the single bullets.

Double-headed or bar-shot (Fr. boulet rame, ou boulet a deux tetes), fig. 9, is a ball cut into two equal parts, and joined together by a bar of iron. In the French service the middle is sometimes filled with a composition, and the whole covered with linen dipped in brimstone ; the cannon in firing also inflames the combustibles or composition of this ball, which sets fire to the sails of the vessel. One of the heads of this ball has a hole to receive a fuse, which communicates with the charge of the cannon.

Spherical case-shot, or Shrapnell’s shell, so termed from the inventor colonel Shrapnell, of the royal artillery. See SHELL.

Sfar-SnoT consists of four pieces of iron, whose bases, when separate, form the quadrant of a circle ; so that the whole, being joined, forms a cylinder equal to the shot of the cannon. Each of those pieces is furnished with an iron bar, the extremity of which is attached to a sort of link, as keys are strung upon a rin?- Being discharged from the gun, the four branches or arms extend every way from the link in the

centre. These also are chiefly intended to destroy the sails or rigging, but their flight and execution are very precarious at a tolerable distance.

A SHOT of a most destructive nature has been invented by a Mr. Fane, and experiments on its effects were exhibited in 1811, before the lords of the admiralty. It is a four-pounder shot, wrapped round with a prepared cotton, and made very hard, so as to appear like a large cannon-ball — on firing of which, it has the usual effect of a cannon-shot ; but, the moment it starts from the cannon's mouth, it presents one solid mass of fire ; and whatever it may happen to strike, whether rigging or hull of a ship, it will immediately take fire. ,

To find the weight of an iron shot, whose diameter is given ; and the contrary. Rule. — Dou-ble the cube of the diameter in inches,' and multiply it by 7 ; so will the product (rejecting the two last or right hand figures) be the weight in pounds. Example. — What is the weight of an iron shot of seven inches diameter? The cube of 7 is 343, which doubled is 686, and this multiplied by 7 produces 4802, which, with the

right hand figures rejected, gives 481bs., the weight required.

To find the diameter of the shot, when the weight is given. Rule.— Multiply the cube root of the weight in pounds by 1-923, and the product is the diameter in inches. Example. — What is the diameter of an iron shot of 52 Ibs ? The cube root of 52 is 3-732, which, multiplied by 1-923, gives 7-177 inches, the diameter required.

Rule, by logarithms : —

To one-third of the logarithm of 52 . 0-572001 Add the constant logarithm … 0-283979

Logarithm of the diameter . 7-117 — 0-855980 TABLE of DIAMETERS of ENGLISH ROUND SHOT.

Nature.

42

32

24

18

Inches.

8

6-684

6-105

5-475

5-043

Nature.

12

9

6

3

1

Inches.

4-403

4-000

3-498

2-775

1-92

TABLE of GRAPE SHOT for SEA-SERVICE.

Nature.

Weight of each Shot.

Total Weight of the G rape complete.

Ibs. oz.

Ibs. oz.

24 pounder

4 —

46 6

32 .

3

34 1

24 …

2

25 5

18 …

1 8

19 15£

12 …

1 —

10 15

9 …

— 13

7 6

6 …

— 8

5 8£

4 …

— 6

3 14i

3 …

— 4

2 10J

5 …

— | lead.

— 8f

Small shells, as four inches and two-fifths, and hand-grenades, were quilted into grape for thirteen-inch mortars, at Gibraltar. The fuses were turned inwards next the iron tompion, and leaders of quick-match for communicating fire to the fuses were introduced through holes made in the wooden bottom, and placed as near the fuse as possible, in the centre of the grape These answered very well for short ranges.

SHOT.

TABLE OF ENGLISH CASE-SHOT FOR SEA-SERVICE.

Sea Service.

Carronades.

For Mortars.

Howitzers.

Nature.

Weight of 1 each Shot. |

Number in each Case.

Weight of each Case filled.

Nature.

“So*

*2

si

Number in each Case.

Weight of each Case filled.

Nature.

“o o

*!

1« -Q

> 5 .- <u

Number of Shot in each.

- _a”2 t>o « S

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•» 0)

•H

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Is

II

CQ

Weight of each Case filled.

Prs.

oz.

No.

Ibs. oz.

Prs.

oz.

No.

Ibs. oz.

Inches.

OZ.

No.

Ibs. oz.

OZ.

No.

Ibs. oz.

8

70

33 8

24

8

42

22 15

18

6

42

16 8

12

4

42

11 5

68

8

90

46 2

9

3

44

8 9

42

8

66

32 8

6

2

40

5 2

32

8

40

21 4

10

—

170

91 8

—

— —

4

2

28

4 —

24

8

32

16 1

8

6

90

38 4

6

90

38 8

a

2

20

2 15

18

6

31

12 2

5J

3

55

12 6

3

55

12 8

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12

1 2i

12

4

32

8 2

4§

2

55

8 1?

2

55

If at any time case-shot cannot be procured, or tin for the purpose of making cases, a very pood substitute may be made by the following method : — Take a wooden bottom of one-fourth of an inch less than the ordinary size, roll strong cartridge paper which has been sponged over two or three times with water, and nearly dry, ou a former of the same diameter to the proper dimensions ; paste down the exterior edge of the cylindrical case, and nail it on to the bottom with small tacks ; when dry, pour in a quantity of hot pitch and rosin, or kitt composition ; then a layer of musket-balls ; continuing them alternately till the case is filled in length equal to two diameters of a round shot, independent of the wooden bottom ; over the last tier put another bottom two inches in thickness, and nail it on.

To SHOT THE GUNS (Fr. mettre les boulets dans les canons) is to load the pieces of ordnance with the necessary quantity of gunpowder and ball.

SHOT, TIN CASE, in artillery, is formed by putting a great quantity of small iron shot into a cylindrical tin box called a cannister, that just fits the bore of the gun. Leaden bullets are sometimes used in the same manner ; and it must be observed that, whatever number of sizes of the shots are used, they must weigh with their cases nearly as much as the shot of the piece.

SHOT FLAGGON, a sort of flaggon somewhat bigger than ordinary, which in some counties, particularly Derbyshire, it is the custom for the host to serve his guests in, after they have drunk above a shilling.

SHOT OF A CABLE, on shipboard, is the splicing of two cables together, that a ship may ride safe in deep waters and in great roads ; for i ship will ride easier by one shot of a cable, than by three short cables out a-head.

SHOT-BOXES (Fr. caisse a munitions) are boxes in which grape, case, and small-arms' shot, are packed for service.

SHOTE,n. *. Sax. rceota; Lat. trutla minor. A fish.

The thote, peculiar to Devonshire and Cornwall, in shape and colour resembleth the trout ; howbeif in bigness and goodness cometh far

behind him.

Carew.

SHOT-GUAGE, an instrument for measuring the diameter of shot.

SHOT-RACKS, wooden frames bolted to the coamings and head-ledges round the hatchways on the decks, to contain the different species of shot.

SHOVE, v. a., v. n., & n. s. Sax. pcupan ; Belg. schuyven ; Swed. skufwa. To push by main strength ; drive ; rush against ; impel : tc push before one ; move by a pole in a boat : the act of shoving or pushing.

The hand could pluck her back that shoved her on.

Shakspeare.

In the, corrupted currents of this world, Offence's gilded hand may shove by justice ; And oft the wicked prize itself Buys out the law. Id.

Of other care they little reckoning make, Than how to scramble at the shearer's feast, And shove away the worthy bidden guest. Milton.

There the British Neptune stood, Beneath them to submit the officious flood, And with his trident shoved them off the sand.

Dryden.

Shoving back this earth on. which I sit, I'll mount. Id. Tyrannick Love.

He grasped the oar, Received his guest aboard, and thoved from shore.

Garth.

A strong man was going to shove down St. Paul's cupola. Arbulhnot.

He used to shove and elbow his fellow-servants to get near his mistress, when money was a paying or receiving. id.

Behold a reverend sire Crawl through the streets, shoved on or rudely

pressed

By his own sons. Pope.

You’ve played and loved, and cat and drank your

fill ;

Walk sober off, before a sprightlier age Come tittering on, and shove you from the stage.

la

Eager to expiess your love, You ne’er consider whom you shove, But rude press before a duke. Swift.

The seamen towed, and I shoved, till we arrived within forty yards of the shore. Gulliver’s Travels.

I was forced to swim behind, and pushed the boat forward with one of my hands ; and, the tide favouring me, I could feel the ground : I rested two minutes, and then gave the boat another shove.

Id.

Cards were superfluous here, with all the tricks That idleness has ever yet contrived To fill the void of an unfurnished brain, To palliate dulness, and give time a shove. Cowper.

SHOV’EL,n.s.&t;.a. j Sax. pcopl; Teut—

SHOV’ELBOARD, n. s. ˆschoeffcl. An instru—

SHOV’ELLER. j merit to throw or heap

up with : to throw or heap up; to gather in great

quantities : shovelboard is a board on which

metal pieces are shoved along at a mark: a

shoveller is one who uses a shovel, also a bird.

A handbarrow, wheelbarrow, shovel, and spade.

Tusser. I thought

To die upon the bed my father died, To lie close by his honest bones ; but now Some hangman must put on my shroud, and lay me Where no priest shovels in dust.

Shahspeare. Winter's Tale.

Pewets, gulls, and shovellers, feed upon flesh, and yet are good meat. Bacon.

Ducks shovel them up as they swim along the waters ; but divers insects also devour them.

Denham.

The brag of the Ottoman, that he would throw Malta into the sea, might be performed at an easier rate than by the shovels of his janizaries.

Glanville's Scepsis. So have I seen in hall of lord, A weak arm throw on a long shovelboard ; He barely lays his piece. Dryden.

This formation of the wizzon is not peculiar to the swan, but common unto the platea, or shovelard, a bird of no musical throat.

Browne's Vulgar Errours.

Shoveller, or spoonbill • the former name the more proper, the end of the bill being broad like a shovel, but not concave like a spoon, but perfectly flat.

Grew's Museum.

SHOVEL, DRAINING, a tool employed for the purpose of clearing out the loose crumbly earthy materials from the bottom parts of drains. It is formed with a crooked handle, the edges of the shovel part being turned up on the sides, in or-der to prevent the materials which are scraped up from falling off. In consequence of the crookedness of the handle, the workman is prevented from stooping so much as would otherwise be the case, in performing the work. There are different

constructions of this implement made use of, in managing business of this sort. A scoop is sometimes made use of, both with and without this implement, for the purpose of scooping up and clearing out all the crumbs, loose mould, and other similar materials, from the bottom parts of drains, before they are laid or filled with spray, brushwood, or any other substance, in order that they may be quite clear and free of any sort of obstruction. The tool is formed in a crooked scoop-like manner at the Stead, and of different shapes, sizes, and breadths,

according to the nature of the drains and openings in which it is to be employed ; being, in working, drawn, or pushed along the bottoms of the cuts or drains. The handle has also occasionally a crooked form, in order to ease the workman in using it.

SHOVEL, PARING, a tool employed in paring off the sward or turf from the surface of ground, in order to burn it. The shovel which is used in Devonshire for this purpose has a hollow heart-shaped form in the shovel part, with a long handle, which makes it a very powerful implement. The plate of the mouth part is from nine to ten inches in width, where the handle is inserted, which is made with a considerable curve upwards; the blade is about twelve inches in length, terminating with a broad angular point, which, with its sides, are constantly kept very sharp and keen for cutting ; on the left hand, or land side of the tool, a sharp wing, comb, or coulter, rises up in an oblique manner, to cut and divide the slice part from the whole ground. This, however, in consequence of the toughness of the surface, and the impediments presented by the roots of furze, flags, heather, and other similar matters, is not unfrequently dispensed with ; the slice being rent or torn off by the workman from the side of the whole ground, while it is cut up and separated from the earth below. When a foot or fifteen inches of the slice rises upon the handle of the shovel, it is separated from the uncut part of the surface by a sudden effort or exertion with the tool, and by a turn of it is whelmed or laid over the mould side upwards. Where the state and circumstances of the surface will permit, as by not being too much loaded and encumbered with the above sorts of plants, the effort of separating the cut from the uncut sward may in all cases be much lessened by having the slice, which is next to be pared, cut or nicked in such lengths as may be most convenient to the workmen. And, in some particular places and situations of land, the regular nicking of the slice to be pared from the ground is indeed found indispensably necessary, as where the ground is of such a moory quality as to render the operation impracticable without it. In all such instances it is, however, probably much better,

as being more convenient and expeditious, to have the shovel formed with a cutting wing, by which the whole may be done at once, without any sort of delay in the business.

SHOVEL (Sir Cloudesly), a brave English admiral, born about 1650, of parents rather in the lower rank of life. He was put apprentice to a shoemaker ; but, disliking this profession, he abandoned it and went to sea. He was at first a cabin boy with Sir Christopher Mynns, but, applying to the study of navigation with indefatigable industry, his skill as a seaman soon raised him. The corsairs of Tripoli having committed great outrages on the English in the Mediterranean, Sir John Narborough was sent in 1 674 to reduce them to reason. As he had received orders to try the effects of negociation before he proceeded to hostilities, he sent Mr. Shovel, then a lieutenant in his fleet, to demand satisfaction. The dey treated him with a great deal of disrespect, and sent him back without an answer. Sir

.lonn despatched him a second lime, with orders to remark particularly the situation of things on shore. The behaviour of the dey was worse than ever. Upon Mr. Shovel's return he informed Sir John that it would be possible, notwithstanding their fortifications, to burn all the ships in the harbour. The boats were accordingly manned, and the command of them given to lieutenant Shovel, who seized the guardship and burnt four others, without losing a man. This action so terrified the Tripolins that they sued for peace. Sir John Narborough gave so favorable an account of this exploit that Mr. Shovel was soon after made captain of the Sapphire, a fifth rate ship. In the battle of Bantry Bay, after the revolution, he commanded the Edgar, and, for his gallant behaviour in that action, was knighted by king William. Next year he was employed in transporting an army into Ireland ; a service which he performed with so much diligence and dexterity that the king raised him to the rank of rear admiral of the blue, and

delivered his commission with his own hands. Soon after he was made rear admiral of the red, and shared the glory of the victory at La Hogue. In 1694 he bombarded Dunkirk. In 1703 he commanded the grand fleet in the Mediterranean, and did every thing in his power to assist the Protestants who were in arms in the Cevennes. Soon after the battle off Malaga he was presented by prince George to queen Anne, who received him graciously, and next year employed him as commander-in- chief. In 1705 he commanded the fleet, together with the earls of Peterborough and Monmouth, which was sent into the Mediterranean ; and it was owing to him chiefly that Barcelona was taken. After an unsuccessful attempt upon Toulon, he sailed for Gibraltar, and thence homeward with a part of the fleet. On the 22nd of October, at night, his ship, with three others, was cast away on the rocks of Scilly. See SCILLY. All on board perished. His body was found by some fishermen on the island of Scilly, who stripped it of a valuable ring and afterwards buried it. Mr. Paxton, the purser of the Arundel, hearing of this, found out the fellows, and obliged them to discover where they had buried -the body. He carried it on board his own ship to Portsmouth, whence it was conveyed to Lon-don, and interred with great solemnity in Westminster Abbey. A monument was afterwards erected to his memory by the direction of the queen. He had married the widow of his patron, Sir John Narborough, by whom he left two daughters, co-heiresses.

SHOVELLER, in ornithology. See ANAS. The shoveller and spoonbill, mentioned above as synonymous by Dr. Grew, are quite different species or rather genera of birds : the shoveller is a species of anas : the spoonbill is the English name of the genus platalea. Brown is also in the same mistake.

SHOUGH, n. t. For shock. A species of shaggy or shock dog.

In the catalogue ye be for men, As hounds and greyhounds, mongrels, spaniels, curs, Shmghi, water-rugs, and demi-wolves, are ‘cleped AH by the name of dogs. Shuhfpeare. Macbeth,

SHOULD, v. n. See SHALL.

SHOUL’DER, n. s. & v. a.} Sax. rculderi ;

SHOUL’DERBLADE, j Belg. scholder ;

SHOUL’DERBELT, ˆ Dan. skulder.

SHOUL’DERCLAPPER, (The upper joint

SHOUL’DERSHOTTEN, adj. \ of the arm ; upper

SHOUL’DERSLIP. J joint of the fore

leg of certain animals ; any prominent or rising part : the .strength of any thing : the shoulderblade is the scapula : shoulderclapper, one who coaxes or one who betrays : should ershotten is strained : shoulderslip, dislocation in the shoulder.

If I have lifted up my hand against the fatherless, when I saw my help in the gate, then let mine arm fall from my shoulderblade, and mine arm be broken from the bone. Job xxxi. 22.’

I have seen better faces in my time Than stand on any shoulder that 1 see Before me. Shakspeare.

We must have shoulder of mutton for a property.

Id.

His horse waid in the back, and shoulder -shotten.

Id.

A fiend, a fury, pitiless and rough, A back friend, a shouldrr-clapper, one that commands The passages of alleys. Id. Comedy of Errours.

Dudman, a well-known foreland to most sailors, here shoulders out the ocean, to shape the same a large bosom between itself.

Carew’s Survey of Cornwall.

It is a fine thing to be carried on men’s stuwlders; but give God thanks that thou art not forced to carry a rich fool upon thy shoulders, as those poor men do.

Taylor.

Archimedes’s, lifting up Marcellus’s ships, finds little more credit than that of the giant’s shouldering mountains. Glanvitle.

Emily dressed herself in rich array ; Fresh as the month, and, as the morning fair, Adown her shoulders fell her tength of hair. Dryden.

So vast the navy now at anchor rides, That underneath it the pressed

waters fail, And, with its weight, it shoulders off the tides. Id.

When you rivet a pin into a hole, your pin must have a shoulder to it thicker than the hole is wide, that the shoulder slip not through the hole as well as the shank. Moion.

Around her numberless the rabble flowed, SJiouldering each other, crowding for a view.

Howe's Jane Shore.

He took occasion from a shoulder of mutton to cry up the plenty of England. A ddison's Freeholder.

The head of the shoulder bone, being round, is inserted into so shallow a cavity in the scapula, that, were there no other guards for it, it would be thrust out upon every occasion. Wiseman.

When Hopkins dies, a thousand lights attend The wretch who living saved a candle's end ; Shouldering God's altar a vile image stands, Belies his features, nay, extends his hands. Pope.

The horse will take so much care of himself as to come off with only a strain or a shoulderslip. Swift.

But rude at first, and not with easy slope Receding wide, they pressed against the nbs, And bruised the side ; and, elevated high, Taught the raised shoulders to invade the ears. Long time elapsed or e'er our rugged sires Complained, though incommodiously pent in, And ill at ease behind. Cowper.

SHOUT, v. n. & n. s. l A word of which no

SHOUI'ER, n.s. S etymology is known,

says Dr. Johnson. Arab, soul, z»ut ; Goth. taula. — Thomson. To cry in triumph or exhor-

ution : a vehement or loud ‘cry of this kind ; the other noun substantive corresponding. Shout unto God with the voice of triumph.

Psalm xlvii. i

The shouting for thy summer fruits and harvest is fallen. Isaiah.

It is not the voice of them that shout for mastery.

Ex. xxxii.

The Ehodians, seeing the enemy turn their backs, gave a great shout in derision.

Knolles’s History of the Turks. Thanks, gentle citizens : This general applause and cheartul shout Argues your wisdom and your love to Richard.

Shakspeare.

They shouted thrice : what was the last cry for 1

Id.

He storms and thouts ; but flying bullets now To execute his rage appear too slow : They miss, or sweep but common souls away ; For such a loss Opdam his life must pay. Waller.

All clad in skins of beasts, the javelin bear ; And shrieks and shoutings rend the suffering air.

Dry den.

What hinders you to take the man you love 1 The people will be glad, the soldiers shout ; And Bertran, though repining, will be awed. Id.

A peal of loud applause rang out, And thinned the air, till even the birds fell down Upon the shouter’s head. Id. Cleomenes.

There had been nothing but howlings and shoutings of poor naked men, belabouring one another with snagged sticks. More.

SHOUT, clamor, in antiquity, was frequently used on ecclesiastical,

civil, and military occasions, as a sign of approbation, and sometimes of indignation. Thus as Cicero, in an assembly of the people, was exposing the arrogance of L. Antony, who had the impudence to cause himself to be inscribed the patron of the Romans, the people, on hearing this, raised a shout to show their indignation. In the ancient military discipline shouts were used, 1 . Upon occasion of the general's making a speech or harangue to the army from his tribunal. This they did in token of their approving what had been proposed. 2. Before an engagement, in order to encourage and spirit their own men, and fill the enemy with dread. This is a practice of great antiquity; for, as mankind are endowed with two senses, hearing and seeing, by which fear is raised in the mind, it is proper to make use of the ear as well as the eye for that purpose. Shouts were also raised in the ancient theatre, when what was acted pleased the spectators. It was usual for those present at the burning of the dead to raise a great shout, and call the dead person by his name, before they set fire to the pile.

SHOW, v. a., v. n., 8f\ Pret. showed and SHOWBREAD, [n.s. (shown; part. pass. SHOW'ISH, adj. £ shown. Sax. j-ceapan;

SHOW'Y. J Belg. schowen. This

word, frequently written shew, is always pronounced show; which is favored by the Belg. schowen and Teut. schauen. To exhibit ; give to sight ; make to see ; prove ; explain ; inform ; publish ; discover : to appear ; look ; have appearance : a show is a spectacle ; mere appearance ; semblance ; likeness ; exhibition ; pomp ; phantom: for the bread see SHEWBREAD: showish and showy mean, glaring; ostentatious; pompous. VOL. XX.

I raised thee up to shew in thee my power.

Lx. ix. 16. Set upon the table shew-bread before me.

Id. xxv. 30.

Thou shall utterly destroy them ; make no covenant with them, nor shew mercy unto them.

Deut. vii. 2.

To him that is afflicted pity should be shewed from his friend. Job vi. 14.

Wilt thou shew wonders to the dead ? Shall the dead arise and praise thee 1 Psalm Ixxxviii. 10.

Forasmuch as knowledge and shewing of hard sentences, and dissolving of doubts, were found in the same Daniel, let him be called. Dan. v. 12.

Felix willing to shew the fews a pleasure, left Paul bound. Acts xxiv. 27.

Ye are a chosen generation, that ye should shew forth the praises of him who hath called you out of darkness. 1 Peter ii.

Shall I say O Zelmane ? Alas, your words be against it. Shall 1 say prince Pyrocles? Wretch that I am, your show is manifest against it. Sidney.

The places of Ezechiel have some show in them, for there the Lord commanded the Levites which had committed idolatry to be put from their dignity, and serve in inferior ministries. Whitgifte.

My lord of York, it better showed with you, When that your flock, assembled by the bell, Encircled you, to hear with reverence Your exposition on the holy text, Than now to see you here, an iron man, Cheering a rout of rebels with your drum.

Shakspeare. Henry IV. She shews a body rather than a life, A statue than a brother.

Id. Antony and Cleopatra. When devils will their blackest sins put on They do suggest at first with heavenly shows.

Id. Othello.

As for triumphs, masks, feasts, and such shews, men need not be put in mind of them. Bacon.

Mild heaven

Disapproves that care, though wise in show, That with superfluous burden loads the day.

Milton.

Nor doth his grandeur and majestic show Of luxury, though called magnificence, Allure mine eye. Id. Paradise Regained.

He through passed the midst unmarked, In show plebeian angel militant. Milton.

Nothing wants, but that thy shape, Like his, and color serpentine may show Thy inward fraud, to warn all creatures from thee.

Id.

A shooting star

In autumn thwarts the night, when vapours fired Impress the air, and shows the mariner From what point of his compass to beware Impetuous winds. Id.

Nor want we skill or art, from whence to raise Magnificence, and what can heaven shew more 1

Id.

This I urge to show Invalid that which thee to doubt it moved. Id.

I through the ample air in triumph high, Shall lead hell captive, maugre hell, and show The powers of darkness bound. Id.

Achates' diligence his duty shows. Dryden.

Stand before her in a golden dream ; Set all the pleasures of the world to show And in vain joys let her loose spirits flow. Id,

The kindred of the slain forgive the deed , But a short exile must for show precede. /rfft

Just such she shou>s before a rising storm. Id, T

What you saw was all a fairy show ; And all those airy shapes you now behold Were human bodies once. MMen should not take a charge upon them that they are not fit for, as if singing, dancing, and showing of tricks, were qualifications for a governor.

L'Estrangt.

I do not know what she may produce me ; but, provided it be a show, I shall be very well satified.

Addison.

f he city itself makes the noblest show of any in the world : the houses are roost of them painted on the outside, so that they look extremely gay and lively. Id—

Florio was so overwhelmed with happiness that he could not make a reply ; but expressed in dumb <show those sentiments of gratitude that were too big for utterance. Id—

Men of warm imaginations neglect solid and substantial happiness for what is ihou-y and superficial.

Id.

Never was a charge maintained with such a show of gravity which had a slighter foundation.

Atterbury. The dwarf kept the gates of the show room.

Arbuthnot. The radiant sun

Sends from above ten thousand blessings down, Nor is he set so high for show alone. GramtiUe.

She taking him for some cautious city patient, that came for privacy, shews him into the dining-room.

Swift.

The escutcheons of the company are showish, and will look magnificent. Id.

Still on we press ; and here renew the carnage, So great that in the stream the moon showed purple.

Philips.

I envy none their pageantry and show, I envy none the gilding of their woe. Yovng.

SHOWER, n.s. 8c v. a. { Sax. pcuri; Belg. SHOW'ERY, adj. 4 scheure ; Goth.

tkura. Rain either moderate or violent : hence any liberal distribution : to pour down; wet with rain ; scatter or distribute profusely : showery is rainy ; abundant in showering.

He and myself

Have travelled in the great shower of your gifts, And sweetly felt it. Shakyieare. Timon.

I'll set thee in a. shower of gold, and hail Rich pearls upon thee. Id. Antony and Cleopatra.

If tne boy have not a woman's gift, To rain a shower of commanded tears, An onion will do well for such a shift. Shakspeare.

A hilly field where the stubble is standing, set on fire in the showery season, will put forth mushrooms.

Bacon.

The ancient cinnamon was, while it grew, the driest ; and in showers it prospered worst. Id.

After this fair discharge, all civil honours having showered on him before, there now fell out occasion to action. Wotton.

Give me a storm ; if it be love, Like Danae in the golden shower, 1 swim in pleasure. Cwew.

Serve they as a flowery verge, to bind The fluid skirts of that same watery cloud, Lest it again dissolve and shower the earth ? Milton. These, lulled by nightingales, embracing slept ; And on their naked limbs the flowery roof Shuuered roses, which the morn repaired.

Id. Paradise Lost.

Murranus came from Anxur*s sh.wery height, V» ith ragged rocks and stony quarries white, Seated on hills. .-.ddhan uu Italy.

Caesar’s favour, That showers down greatness on his friends, will

raise me To Rome’s first honours. Id. Cat*.

With showers of stones he drives them far away ; The scattering dogs around at distance bay. Pope.

His frisking was at evening hours, For then he lost his fear,

But most before approaching showers,

Or when a storm drew near. Couper.

When no soft shower descends, no dew distils, Her wave worn channels dry, and mute her rills ; When droops the sickening herb, the blossom fades, And parched earth gapes beneath the withered glades.

Darwin.

SHOWER, in meteorology, a cloud condensed to rain. See CLOUDS, METEOROLOGY, and RAIN.

SHOWER (John), an eminent nonconformist di-vine, born in London in 1660, and educated under Mr. Doolittle at Islington. In 1687 he became pastor of a congregation in Jewin Street. He was eminent for his piety, and published Sacramental Sermons, and Reflections on Time and Eternity ; two works much esteemed. He died at Hoxton in 1718, aged fifty-eight.

SHOWERS OF STONES, &c. In the ancient histories of most nations marvellous anecdotes are told, and wonderful facts seriously recorded, of preternatural rains ; such as the raining of stones, of sand, of dust, of blood, nay even of living animals, such as fish, young frogs, &c., from the clouds. That in th£ early periods of society, when historical records were not regularly kept, and when consequently historical facts were few and of little importance, historians should have been anxious to collect every thing wonderful that tradition or credulity invented or reported, to render their histories entertaining and agreeable to the taste of those times, is by no means surprising. Herodotus, one of the most ancient and respectable of the Grecian historians, has filled his history with miracles of every kind that he could collect in all the countries through which he travelled. Livy, one of the best of the Roman historians, followed his example, and has interlarded his history, otherwise respectable, with numerous fables and pretended miracles. In the dark ages of modern times, when history was chiefly entrusted to the priests and monks, it is not

surprising that the same plan should have been continued of collecting and recording every report, and the more wonderful, i. e. the more incredible, the better. But that in the present age, when scepticism is so prevalent that not only the most important truths of revealed religion are called in question, but mathematical demonstration is required for almost every thing in history and science ; that at such a period, and in such a nation as France, where infidelity still prevails, in spite of Buonaparte's hypocrisy, more than in any other nation in Europe, a philosopher should be found pleading seriously for the truth and possibility of such preternatural showers, is one of those phenomena in the history of the human mind which seems totally unaccountable. Yet the learned Joseph Izarn, M. D., professor of natural philosophy, member of thn Society of Sciences, Belles Lettres, and Arts, of Paris, &c. &c., has, within these two years, published a work at Paris, consisting of 430 pages.

entitled Des Pieires tombees du Ciel, &c., i. e. A Treatise on Stones fallen from the Clouds ; or, Atmospheric Lithology ; exhibiting the Progress and actual State of the Science ; a View of the Phenomena of Thunder Stones, Showers of Stones, Stones fallen from the Heavens, &c., several unpublished Observations, with an Essay on the Theory of the Formation of the Stone. From this extraordinary work we suppose a very few extracts will sufficiently gratify the curiosity of our readers: — I. 'According to Paul Lucas,' says the Dr., ' an eye witness, a stone fell from the air at Larissa, in Macedonia, in January 1706. It weighed 72 Ibs., resembled the dross of iron, and was seen to proceed from the north, with a loud hissing, apparently enveloped in a small cloud, from whicR it burst, and fell with a very loud explosion.' II. ' The celebrated Gassendi, whose accuracy is allowed to have equalled his knowledge, relates that, on the 27th November 1627, when the sky was very clear, he saw a burning stone, apparently four feet in diameter, fall on , mount Vaiser, between the towns of Guillaumes and Perne in Provence. It was surrounded by a luminous circle of different colors, like a rainbow; and its fall was accompanied by a noise like that of many cannons fired at once. This stone weighed 59 Ibs. Its

weight was to that of marble as 14 to 11.' III. ' A shower of common and very fine sand fell in the Atlantic, at eight or nine leagues from land, on the 6th of April 1719, and continued from teno'clock P. M. till one P. M. of the following day.' IV. 'In September 1753, about one P. M., the weather being very warm and serene, without any clouds, a great noise was heard like the firing of two or three cannons. Though of very short duration, it was audible at the distance of six leagues in every direction. It was loudest in the neighbourhood of Pont de Vesle. A hissing sound, like that of a squib, was likewise heard at Liponas, a village three leagues from Pont de Yesle, and four from Bourg. On the same evening there were found at Liponas, and at Pin, a village near Pont de Vesle, three leagues from Liponas, two blackish masses, of a figure nearly circular, but very unequal, which had fallen on ploughed ground, into which they had sunken half a foot by their own weight. One of them weighed about 20 Ibs. They were broken, and the fragments were shown to all the curious. A similar noise was heard on St. Peter's day, in 1750, in Lower Normandy; and a mass very nearly of the same nature, but much larger, fell at Niort. One of the stones, weighing 11 £ Ibs., may be seen at Dijon, in the museum of M. Varenne de Beost, principal secretary to the states of Burgundy, and correspondent of the Royal Academy of Sciences at Paris.' — M. De Lalande's Narrative, in the Historical Almanack ofBresse, 1756. V. Messrs. Chladen, Pallas, A. G. Duluc, Patrin, and others, mention a mass of native iron that fell from the clouds in Siberia. But, as the truth of this story rests on a doubtful tradition among the Tartars, it merits no credit. VI. A more remarkable instance of the fall of stones than any which Dr. Izarn has recorded, has been related with artless simplicity by M. Marais, in inhabitant of Aigle in Normandy,

and in more scientific language by M. Biot, member of the National Institute, who was commissioned by government to investigate the fact. This gentleman observes, in his truly wonderful report, that ' the district in which the stones were precipitated forms an elliptical extent of nearly two leagues and a half, and of about one in breadth; the greater dimension being in a direction from southeast to northwest, with a declination of about 22°, thus curiously coinciding with the magnetic meridian. The largest stone which fell weighed about 17J Ibs., and the smallest about 1000th part of that weight. The whole number of stones exceeded 2000 or 3000 !' See Journal de. Physique; Prairial, Annee xi, and Journal des Debates, 14 Thermidor, Annee xi. Such are the principal facts related by Dr. Izarn in support of his system of atmospheric lithology. His anecdotes of showers of fire we need not quote, as no person who knows how universally the electric

fluid is diffused through the atmosphere, and who has considered its powerful effects in producing storms of thunder and lightning, fire-balls, luminous meteors, &c., will doubt that it may on some occasions have assumed the form of a shower of fire. But Dr. Izarn, in his zeal for his system of atmospherical lithology, endeavours to establish and account for it, by connecting it with something like atmospherical electricity (though he elsewhere rejects all connexion with that powerful fluid), in the following conclusions: — 1. That very considerable masses have sometimes fallen to the earch. 2. That these masses, penetrated by fire, roll in the atmosphere, like burning globes, which diffuse light and heat to great distances. 3. That they seem to have received a motion parallel to the horizon, though they really describe a curve. 4. That they become soft, or are fused into a paste-like consistency", as is proved by their varnished substance, and the impressions formed on their surface by the bodies which they encounter. 5. That they have fallen in England, Germany, Italy, France, and the East Indies. 6. That all these stones resemble one another in their physical characters and chemical composition.' After having laid down some general maxims relative to natural appearances, illustrated the principal, that substances may exist in a solid, liquid, or gaseous modification, without undergoing any change of identity, and estimated the application of this recognized fact, Dr. Izarn endeavours to establish his philosophical transubstantiation by these four conclusions : 1 . ' That there must exist, in the gaseous mass which envelopes our globe, different aeriform substances, which are unknown to us, which are mostly insulated by one another, and disposed in spherical masses (masse"es sphe-riquement), by the pressure which is exercised on them in all directions. 2. That detonations take place in the atmosphere, which are not the consequence of electrical phenomena ; and which perhaps have nothing in common with electricity. 3. That we ought not to ascribe every luminous matter to the combustion of hydrogen, since the phenomena present us only with a disengagement of light, which may be effected by any gaseous substance passing into another state. 4. Lastly, T 2

S1IR

SHREW, n.s. SHREWD, adj. SHREWD'LY, adv. SHREWD'NESS, n. s. SHREW'ISH, adj. SHREW'ISHLY, adv.

that the disengagement of light does not necessarily imply that of caloric ; and that the more vivid it is the less are we warranted to state it a* a cause of fusion, vitrification,' &c. ' Gaseous substances,' adds the Dr., ' arranged in spherical masses, in the upper regions of the air, being admitted, the various agitations of the atmosphere ^ ^ ^

should naturally waft some of these masses from shrefa as the world throws away, the medium which insulates them, into a medium capable of combining with them. If, then, the combination begins, the disengagement of light is explained. Hence this theory explains the phenomenon in its most minute details, and even when the phenomenon is incomplete !' By such dexterous management of his spherical gaseous masses, and with the help of double, treble, and nicely reduced combinations, Dr. Izarn concocts a subtle explanation of showers of sand, of winds, of stones, and of metalliferous vapors ; and on the whole draws this general conclusion : — ' Each of these bodies then, strictly speaking, is only a mineral abortion ; a premature union of gaseous principles, combined in trouble and disorder, by perturbing circumstances ; while, in the natural course of their destiny, they would proceed separately and in silence to their prototypes on the surface or in the bowels of the earth. This fact, therefore, is a mere anomaly in the grand act of mineralisation.' If any thing can exceed the absurdity of this incoherent mass of words without meaning, it is the doctor's lunatic idea of giving 'an algebraical demonstration of the possibility of stony substances being driven off from the moon into the earth's prevailing attraction !' ' Hence,' says this French physician, ' we infer that, taking for granted the existence of a propelling cause at the moon's surface, a cause adequate to the projection of bodies in every direction beyond the sphere of her attraction, a great many of these bodies would revolve in space, as satellites to our planet, while scarcely any but those which were driven off at small angles would fall on the earth's surface!!' If this ridiculous supposition of Dr. Izarn's were possible, that any particle of matter could be driven off from one planet, beyond its atmosphere, so as to fall under the prevailing attraction of another planet, then all the celestial bodies might fall into their supposed

original chaos, and the proverbial tale told by the Scottish nurses to children might be realized, that the lift (firmament) would fall and smother the laverocks, or larks.' But see METEOROLOGY, and METEORIC STONES.

SHRED, v. a. & n. s. Pret. shred. Saxon j-criea'&an. To cut into small pieces : the small pieces so made. Commonly used of cloth or herbs.

One gathered wild gourds, and >hi-ed them.

2 Kiiit/s.

It hath a number of short cuts or shredding! , which may be better called wishes than prayers. Hooker.

1'hey said they were an hungry ; sighed forth proverbs,

That hunger broke stone walls ; that dogs must eat : And with these shreds they vented their complainings.

Shakspeare.

Gold, grown somewhat churlish by recovering, is made moie pliant by throwing in shreds of tanned leather. Bacon.

The mighty Tyrian queen, that gained With subtle shreds a tract of land, Did leave it with a castle fair To his great ancestor. Hudibras.

Where did you whet your knife to night, he cries And shred the leeks that in your stomach rise ?

Dryden't Juvenal. A beggar might patch up a garment with such

Pop,

Shreds of wit and senseless rhimes Blundered out a thousand times. Swift.

His panegyrick is made up of half a dozen shred, like a schoolboy's theme, beaten general topicks. Id.

Belg. schreyen, to clamor. A peevish, clamorous, vexatious >woman. It appears from Robert of Glou- | cester and Shakspeare SHREW'ISHNESS, n. s.J that this word signified anciently any one perverse or obstinate, of eithe. sex : shrewd seems originally to have

been contracted from shrewed, i. e. having the qualities of a shrew ; sly ; mean ; mischievous ; troublesome : the derivatives corresponding.

There dede of hem vor hunger a thousand and mo, and yat nolde the screwen to none pes go.

Robert of Gloucester. Be merry, be merry, my wife has all ; For women are shrews both short and tall.

Shakspeare. Henry I V. By this reckoning he is more shrew than she.

Shakspeare.

Her eldest sister is so curst and shrewd, That till the father rids his hands of her, Your love must live a maid. Id.

This practice hath most shrewdly past upon thee. Id.

Her garboiles, which not wanted shrewdness of policy too, did you too much disquiet. Id.

Angelo, you must excuse us ; My wife is shrewish, when I keep not hours. Id.

He speaks very shrewishly • one would think his mother's milk were scarce out of him. Id.

I have no gift in shrewishness, I am a right maid for my cowardice ; Let her not strike me. I<1—

At Oxford, his youth, and want of experience in maritime service, had somewhat been shrewdly touched, even before the sluices of popular liberty were set open. Wotton.

It was a shrewd saying of the old monk, that two kind of prisons would serve for all offenders, an inquisition and a bedlam : if any man should deny the being of a God, and the immortality of the soul, such a one should be put into the first, as being a desperate heretick ; but, if any man should profess to believe these things, and yet allow himself in any known wickedness, such a one should be put into bedlam. Tillotton.

Her sallow cheeks her envious mind did shew, And every feature spoke aloud the shrew. Dryden.

This last illusion rubbed upon the sore ; Yet seemed she not to winch, though shrewdly pained.

Id.

A man had got a ihrewto his wife, and there could be no quiet in the house for her. L'Estrunge.

No enemy is so despicable but he may do a body a shrewd turn. Id.

When a man thinks he has a servant, he finds a traitor that eats his bread, and is readier to do him a mischief, and a shrewd turn, than an open adversary.

South. The obstinate and schismatical are like to think

themselves shrjwdly hurt, forsooth, by being cut off from that body which they choose not to be of. Id.

Corruption proceeds from employing those who have the character of shrewd worldly men, instead of such as have had a liberal education, and trained up in virtue. Addison.

Every one of them, who is a shrew in domestick life, is now become a scold in politicks.

Id. Freeholder.

The neighbours round admire his shrewdness, For songs of loyalty and lewdness. Swift.

SHREWSBURY, an ancient borough, mar-ket-town, and capital of the county of Shropshire, is 154 miles from London, 112 from Bath, and nearly equidistant from Chester, Worcester, Birmingham, Stafford, and Hereford. Although no doubt can be entertained of the high antiquity of Shrewsbury, it being frequently mentioned by our earliest historians, there is no authentic record of its origin. Probable conjecture, however, has assigned that event to the fifth century, when the Britons were forced by the Saxons to abandon all the country to the eastward of the river Severn, and this proposition is

well supported from its name, which is apparently of Saxon derivation, in which language it is called Scrobbesbyrig, or Scrobbesbyri, and in the ancient British language Pengwern; all signifying ‘ the head of the alder groves.’ Shrewsbury, from its lofty and peninsular situation, presents at every approach a pleasing variety of views ; and the noble sweep of the river, which seems to embrace it, heightens at every turn the charms of the scene, except on the north and. west sides, where the streets approach close to its banks, a narrow margin of meadow or of garden ground interposes between the houses and the river. The exterior circle of the town is lined with an unbroken range of well-built houses, most of which command beautiful views over the adjacent country. On its western side is a public field, called the Quarry, which occu-oies about twenty acres of ground, and is adorned with avenues of trees.

Shrewsbury, being esteemed the most important town and fortress on the marches of Wales, continued during several centuries to be one of the principal places of rendezvous for the English armies, and hence it was often visited by its several monarchs. Numerous conflicts took place in its immediate vicinity, and its inhabitants frequently suffered the evils incident to sieges. Shrewsbury is a corporation, both by charter and prescription. By the charter now in force, granted by king Charles I., the corporation consists of a mayor, recorder, steward, town-clerk, twenty-four aldermen, forty-eight assistants, or common councilmen, two chamberlains, a sword-bearer, Serjeants at mace, &,c. Four general quarter sessions are held in the course of the year; and the mayor and some of the aldermen, who are magistrates, hold a court every Tuesday ; and the assizes for the county are held in the months of March and August. The chartered companies, besides the general corporations, are sixteen in number, of which those of the drapers and mercers are the most considerable. This town has sent members to parliament from its earliest establishment, who are elected by

about 1200 burgesses, born and being resident in the town, and paying scot and lot. The public buildings of Shrewsbury, besides the churches and chapels, are the castle, the town-hall, the town and county gaol and bridewell the market-house, the butter market, the theatre] the bridges, and the splendid column in honor of lord Hill. The charitable institutions are, formerly dedicated to St. Giles ; another called Millington’s hospital ; several alms-houses ; an infirmary ; a dispensary for the diseases of the eye and ear, lately established in Raven Street ; a house of industry; the charity schools;

and various private societies for the relief of the sick and poor. A new infirmary is in progress of erection, upon a most extensive scale and praiseworthy plan ; the expense of which, estimated at £20,000, will be defrayed entirely by the town and county. One of the principal ornaments of Shrewsbury is the royal free-school of Edward VI. erected in 1630, and in which upwards of 300 young gentlemen from all parts of the kingdom are here prepared for the university. The established churches are St. Chad's, in the patronage of the king; St. Mary's, the benefice in the gift of the corporation and the head master of the free-school ; St. Alkmond's, in the patronage of the king ; St. Julian's living is with the right hon. earl of Tankerville; Holy Cross and St. Giles's is in the patronage of lord Berwick. The most ancient religious edifice is the Abbey church, which is in the parish of Holy Cross, and is formed partly from the ruins of the old abbey. There are, besides, chapels for the various sects of dissenters; Wesleyan Methodists, Welsh Methodists, Quakers, and Roman Catholic chapels. In its manufactures the town of Shrewsbury is by no means prominent or noted. An extensive cotton manufactory was carried on from the year 1803 to 1817, by Messrs. Charles and Samuel Hulbert; the buildings have subsequently been converted into fifty dwelling houses, &c. Two very considerable thread manufactories, and the iron foundry of Mr. Hazeldine, are in a flourishing state. The extensive porter brewery of Messrs. Heathcote and Co. has been recently abandoned. The neighbourhood of Shrewsbury is highly respectable ; the country beautifully picturesque, studded with gentlemen's seats, and for fertility not to be surpassed, if equalled, in England. The chief market'is on Saturday, but there is another on Wednesday; and every second Wednesday in the month a fair is held, when the produce of the rich and fertile country around is disposed of. Races take place , in September annually, and are well attended. The borough, town, and liberties of Shrewsbury, according to the parliamentary census of 1821, contained within the town and liberties 3538 houses, and 22,195 inhabitants.

SHRIEK, v. n. & n. s. Dan. skrieger ; Ital. scricciolare. To cry out inarticulately with anguish or horror ; to scream : a cry of this kind.

Una, hearing evermore

His rueful shrieks and groanings, often tore •• . Her guiltless garments, and tier golden hair, For pity of his pain. Faerie Queen-,

Oc top whereof ay dwelt the ghastly owl, Sliriekiiig his baleful note. Id.

It was the owl that thrieked, the fatal belman Which gives the sternest good night. Shaktpeart.

Time has been, my senses would have cooled To hear a night shriek, and my fell of hair Would at a dismal treatise rouse and stir As life were in't. Id. Macbetn.

In a dreadful dream I saw my lord so near destruction, Then thrieked myself awake. Denham.

Hark ! peace !

At this she thrieked aloud ; the mournful train Echoed her grief. Dryden't Knight's Tale.

The corps of Almon and the rest are shown ; Shrieks, clamours, murmurs, fill the frighted town.

Dry den.

SHRIFT, n.t. Sax. j-crupt. Confession made to a priest. A word out of use.

Off with

Bernardine's nead : I'll give a present shrift, And will advise him for a better place.

Skakspeare.

The duke's commands were absolute ; Therefore, my lord, address you to your thrift, And be yourself ; for you must die this instant.

Rowe.

SH RILL, adj. Sew. n. Swed. skr&lla. A word supposed to be made per onomatopceiam, in imitation of the thing expressed, which indeed it images very happily. — Johnson. Sounding with a piercing, tremulous, or vibratory sound : to pierce the air with such sounds.

Hark how the minstrels ‘gin to shrill aloud Their merry musick that resounds from far,

The pipe, the tabor, and the trembling crowd, That well agree withouten breach or jar. Spenser. Thy hounds shall make the welkin answer them, And fetch thrill echoes from the hollow earth.

Shahspeare,

Look up a height, the shrill gorged lark so far Cannot be seen or heard. Id. King Lear.

A thrilling trumpet sounded from on high, And unto battle bade themselves address.

Shakspeare.

Here no clarion’s shrilling note The muse’s green retreat can pierce ;

The grove, from noisy camps remote, Is only vocal with my verse.

Fenton’s Ode to Lord Gamer. The females round,

Maids, wives, and matrons, mix a shrilling sound.

Pope. Up springs the lark, shrill voiced and loud.

Thomson.

SHRIMP, n. s. Teut. schrunipe, a wrinkle ; Belg. tcrympe. A small crustaceous vermiculated fish.

It cannot be, this weak and writhled shrimp Should strike such terror in his enemies. Shalupeare.

He hath found. Within the ground, At last, no thrimp, Whereon to imp

His jolly club. Ren Jonton.

Of shell fish there are wrinkles, thrimps, crabs.

Carew.

Hawks and gulls can at a great height see mice on the earth, and shrimpt in the waters. Derham.

SHRINE, n. *. Sax.j-crun ; Lat. scrinium. A case in which something sacred is reposited.

You living powers, inctosed in stately ihritie Of growing trees ! you rural gods, that wield

Your scepters here, if to your ears divine A voice may come, which troubled soul doth yield.

Sidney. Come offer at my shrine and I will help thee.

Shaktpeare. They often placed

Within his sanctuary itself their shrines, Abominations ! and with cursed things His holy rites profaned. Milton.

Falling on his knees before her shrine, He thus implored her power. Dryden.

Lovers are in rapture at the name of their fair idol ; they lavish out all their incense upon that thrine, and cannot bear the thought of admitting a blemish therein. Waits.

SHRINK, v.n., v. a., & n. s. Pret. I shrunk, or shrank ; part, shrunken. Sax. j-cjimcan. To contract into less room ; shrivel; be drawn together : fall back ; express in this way fear or hor-ror : to make to shrink ; a contraction or corruga-tion of this kind.

The children of Israel eat not of the sinew which thrank upon the hollow of the thigh. Gen. xx'xii 32.

The wicked shrunk for fear of him, and all the workers of iniquity were troubled. 1 Maccabeet.

Leaving the two friends alone I shrank aside to the banqueting-house, where the pictures were. Sidney.

She, weighing the decaying plight, And shrunken sinews, of her chosen knight, Would not awhile her forward course pursue.

Faerie Queene.

There is no particular object so good T>ut it may have the shew of some difficulty or unpleasant quality annexed to it, in respect whereof the will may shrink and decline it. Hooker.

I am a scribbled form, drawn with a pen Upon a parchment, and against this fire Do I shrink up. Shakspeare. King John.

Ill-weaved ambition how much art thou shrunk ! When that this body did contain a spirit, A kingdom for it was too small a bound : But now two paces of the vilest earth Is room enough. Shakspeare.

I'll embrace him with a soldier's arm, That he shall shrink under my courtesy. Id.

The sixth age shifts Into the lean and slippered pantaloon, His youthful hose, well saved, a world too wide For his shrunk shanks. Id.

I have not found that water, by mixture of ashes, will shrink or draw into less room.

Bacon's Natural History.

If there were taken out of men's minds vain opinions, it would leave the minds of a number of men poor shrunken things, full of melancholy. Bacon.

Many thrink, which at the first would dare, And be the foremost men to execute.

Daniel's Civil War.

This public death, received with such a chear, As not a sigh, a look, a shrink bewrays The least felt touch of a degenerous fear. Id.

If he lessens the revenue he will also shrink the necessity. Taylor.

I laugh when those who at the spear are bold And ventVous, if that fail them, thrink and fear To endure exile, ignominy, bonds. Milton*

The noise increases ; She comes, and feeble nature now I find Shrinkt back in danger, and forsakes my mind.

Dryden.

The sky thnmk upward with unusual dread, And trembling Tyber dived beneath his bed. f<l

SHR

The gold-fraught vessel, which mad tempests

beat, He sees now vainly make to his retreat ;

And, when from far the tenth wave doth appear, Shrinks up in silent joy that he's not there. Id.

Fall on : behold a noble beast at bay, And the vile huntsmen shrink. Id.

Inuring children to suffer some pain without shrinking, is a way to gain firmness and courage.

Locke.

Keep it from coming too long lest it should shrink the corn in measure. Mortimer.

If a man accustom himself to slight those first motions to good, or shrinkings of his conscience from evil, conscience will by degrees grow dull and unconcerned. South's Sermons.

There is in this a crack which seems a shrink or contraction in the body since it was first formed.

Woodward.

All fibres have a contractile power, whereby they shorten ; as appears if a fibre be cut transversely, the ends shrink, and make the wound gape.

Arbuthnot.

Love is a plant of the most tender kind, That shrinks and shakes with every ruffling wind.

Granville.

What happier natures shrink at with affright, The hard inhabitant contends is right. Pope.

SHRIVE, v. a. ˆ Sax. rcnipan. To hear at

SHRI'VER, n. s. $ confession : a shriver is a confessor. Not in use.

What, talking with a priest, lord chamberlain 1 Your honour hath no shriving work in hand.

Shakspeare.

If he had the condition of a saint, and the complexion of a devil, I had rather he should shrive me than wive me. Id.

The ghostly father now hath done his shrift ; When he was made a shriver 'twas for shift. Id.

Shrive but their title, and their monies poise, A laird and twenty-pence pronounced with noise, When construed but for a plain yeoman go, And a good sober two-pence, and well so.

Cleaveland.

SHRIVEL, v. n. & v. a. Belg. schrompelen. To contract itself into wrinkles ; to contract into wrinkles.

He burns the leaves, the scorching blast invades The tender corn, and shrivels up the blades. Dryden.

When the fiery suns too fiercely play, And shrivelled herbs on withering stems decay, The wary ploughman on the mountain's brow, Undams his watery stores. Id.

Leaves, if they shrivel and fold up, give them drink. Evelyn.

If she smelled to the freshest nosegay it would shrivel and wither as it had been blighted.

Arbuthnot.

SHROPSHIRE, or SALOP, an inland county of England, bounded on

the north by Denbigh, a detached part of Flintshire, and by Cheshire ; on the east by Staffordshire ; on the south by Worcestershire and Herefordshir ; ; and on the west by Radnorshire, Montgomeryshire, and Denbighshire. It is about forty miles in length from north to south, thirty-five in breadth from east to west, 218 in circumference, and contains 1341 square miles, and 858,240 acres. Its shape is an irregular parallelogram. This county contains fifteen hundreds or divisions ; *viz.* Os-westry, Pimhill, Bradford-north, Bradford -south,

and Brimstay, on the northeast side of the Se-vern ; the liberty of Shrewsbury, the franchises of Wenlock, and the hundred of Stoddesden, extending on both banks of that river; the hundreds of Ford, Chirbury, Condover, MunsloWj Overs, Purslow, and the honor of Clun, on the southwest side of the Severn. Shropshire is partly in the three dioceses of Hereford, Litchfield and Coventry, and St. Asaph, and is included in the Oxford circuit. There are in this county 262 churches, of which 229 are parochial. The air is, generally, very salubrious. There are mines of lead ore, of a good quality on the western side of the county, which have been productive. In some of these, tools, judged to be Ro-man, have been found, a few of which are preserved in the library of Shrewsbury free-school. Calamine is also met with, and the rock at Pimhill is strongly tinctured with copper. Symptoms both of copper and lead appear in the Card ing-ton hills. Coal of an excellent quality is found on the eastern side of the county, particularly in the parishes of Wellington. Lilleshall, Wrockwardine, Wombridge, Stirchley, Dawley, Little-Wenlock, Madeley, Barrow, Benthall, and Broseley, which promise a great and lasting sup-ply for the extensive iron manufactories in the neighbourhood, for domestic uee, and for exportation. In this district are the following iron works : — On the south side of the Severn are Willey, Broseley, Calcot, Benthall, and Bar-nett's-Leason ; on the north of that river is Madeley Wood, Colebrook-dale, Lightmoor, Horsehay Old-Park, Ketley, Snedshill, Donning-ton, Queen's-Wood, and Wrockwardine Wood. These works employ about 6000 hands, and about 260,000 tons of coal are raised annually in this district. In the year 1802 there were on the different iron and coal works 180 fire engines ; and, thirty years preceding, there were not more than twenty.

This county is also well supplied with lime; and in general the limestone is at no great distance from coal ; it is also well supplied with building-stone. At Pitchford, near Shrewsbury, a mineral pitch is found exuding from a red sand stone ; near Jackfield, south of the

Severn, is carried on a manufacture of coal tar ; and in the hundred of North-Bradford, are found several salt springs. The river Severn runs through the county, from northwest to southeast, and is navigable the whole way, neither lock nor weir being upon it from Poolquay, in Montgomeryshire, to the mouth of the Avon near Bristol, a distance of 155 miles. The other rivers are the Camlet, the Teme, the Clunn, the Vyrnwy, the Perry, the Weaver, the Cund-brook, and several smaller streams. Here are several lakes or meres, each covering from forty to 116 acres of ground. The turnpike roads are kept in tolerable repair, but the private roads are generally bad, particularly in the clayey part of the county : and accommodation by canal navigation in Shropshire is very considerable by means of the Shropshire, the Shrewsbury, the Ketley, the Ellesmere, and other canals. The Shropshire canal may be called a system of water levels and inclined planes ; its general direction is from north to south, and it commences in the Severn ai

Coalport. It was completed in the year 1792, and is said to have cost only £45,000. The Shrewsbury canal commences in that town, and terminates in the Shropshire canal ; it was completed and opened in 1797. The Ellesmere canal is, rather than one, a system of canals, distributed over that extensive and fertile district of country which lies between the banks of the Severn and the Mersey, and between the skirts of North Wales and the borders of Stafford shire ; this canal unites the rivers Severn, Mersey, and Dee, and opens a communication by water to the ports of Liverpool and Bristol. There are seventeen market-towns in Shropshire, and nine towns or villages which have fairs but not markets. Various branches of the linen, flannel, and woollen manufactures are carried on near Shrewsbury ; and at Coalport and Caughley are manufactures of China ware of great excellence, the blue and white, and the blue, white, and gold China made there is in many instances equal to that from the east. Shropshire, though not remarkable for its agriculture, is in general well cultivated. Its chief products are wheat, coal, iron, limestone, lead, &c., and its manufactures are flannel, broad-cloth, Welsh cottons, mineral tar, cast-iron, tec. This county sends twelve members to parliament, two for the shire ; and the boroughs of Shrewsbury, Ludlow, Bridgenorth, Wenlock, and Bishop’s Castle, two each. In history, this county has been conspicuous for its military events from the time of the Roman invasion ; and during the civil war of Charles I. it was distinguished for its loyalty.

SHROUD, n. *., v. a., & v. n. Sax. ftnu'D. A shelter; a cover; winding sheet ; the sails and sail-ropes of a ship : the verb active and verb neuter corresponding.

I turned back to the mast of the ship ; there ' found my sword among some of the shrouds. Sidney.

By me invested with a veil of clouds, And swaddled, as new-born, in sable shrouds, For these a receptacle I designed. Sandys.

That same evening, when all shrouded were In careless sleep, all without care or fear, They fell upon the flock. Spenser.

He got himself to-Mege, in hope to ihroud himself until such time as the rage of the people was appeased. Knolles.

The tackle of my heart is crackt and burnt ; And all the shrouds wherewith my life should sail Are turned to one little hair. Shakspeare.

It would warm his spirits, To hear from me you had left Antony, And put yourself under his shroud the universal landlord. Id. Antony and Cleopatra.

Now the wasted brands do glow ; Whilst the screech-owl, screeching loud, Puts the wretch that lies in woe In remembrance of a shroud. Shakspeare.

One of these trees, with all his young ones, may shroud four hundred horsemen. Raleigh.

Whoever comes to shroud me, do not harm That subtle wreath of hair about mine arm. Donne.

Besides the faults men commit, with this immediate avowed aspect upon their religion, there are others which slily shroud themselves under the skirt of its mantle. Decay of Piety.

A weather-beaten vessel holds Gladly the port, tho' shrouds and tackle torn.

Milton.

The winds

Blow moist and keen, shattering the graceful locks Of these fair spreading trees ; which bids us seek Some better shroud, some better warmth, to cherish Our limbs benumbed. Id. Paradise Lost.

If your stray attendants be yet lodged Or shroud within these limits, I shall know Ere morrow wake. Milton.

So Venus from prevailing Greeks did shroud The hope of Rome, and saved him in a cloud.

Waller.

The flaming shrouds so dreadful did appear, All judged a wreck could no proportion bear.

Dry den.

Moon, slip behind some cloud • some tempest rise, And blow out all the stars that light the skies, To shroud my shame. Id.

The SHROUDS are a range of large ropes extending from the mast-heads to the right and left side of the ship, to support the masts and enable them to carry sail, &c. The shrouds as well as the sails are denominated from the masts to which they belong. Thus they are called the main, fore, and mizen shrouds ; the maintop- mast, fore - topmast, or mizen-top-mast shrouds; and the maintop-gallant, fore-top-gallant, or mizen-top-gallant shrouds. The number of shrouds by which a mast is sustained, as well as the size of rope of which they are formed, is al-ways in proportion to the size of the mast and the weight of the sail it is intended to carry. Bowsprit shrouds are those which support the bowsprit. Bumkin shrouds are those which support thebumkins. Puttock shrouds are shrouds which connect the efforts of the topmast shrouds to the lower slirouds. Bentick shrouds are additional shrouds to support the marks in heavy gales. Preventer shrouds are similar to bentick shrouds, and are used in bad weather to ease the lower “gg’ng-See MAST and SAIL.

SHROVETIDE, n. s.) From shrove, the

SHROVE-TU’ESDAY. J preterite of shrive. The time of confession ; the day before Ash Wednesday or Lent.

At shrovetide to shroving. Tuner.

SHROVE-TUESDAY is the Tuesday after Quin-quagesima Sunday, and is so called from the Saxon shrive, i. e. to confess. On this day all the people in every parish throughout England, while popery prevailed, were obliged to confess their sins, one by one, to their own pa-rish priests, in their own parish churches ; and, that this might be done the more regularly, the great bell in every parish was rung at ten o'clock ; and, though the Romish religion is now abolished, the custom of ringing the great bell in several ancient parish churches of England, still remains, and obtains in London the name of pancake-bell ; perhaps because, after the confession, it was customary for the confessed to dine on pancakes. Most churches, indeed, have dropt the custom of ringing the bell on Shrove-Tuesday ; but the dining on pancakes still continues.

SHRUB, n. s.) Sax. rcrubbe. A bush ; a SHRUB'BY, adj. ji small tree ; abounding in shrubs.

He came unto a gloomy glade, Covered with boughs and shrubs from heaven's light

Faerie Queeim

The humble shrub and bush with frizzled hair.

Milton.

Gentle villager,

What readiest way would bring me to that placet — Due west it rises from this shrubby point. Id.

Comedy is a representation of common life, in low subjects ; and is a kind of juniper, a shrub belonging to the species of cedar. Dryden.

Trees generally shoot up in one great stem or body, and then at a good distance from the earth spread into branches ; thus gooseberries and currants are shrubs, oaks and cherries are trees. Locke.

Plants appearing withered, shrubby, and curled, are the effects of immoderate wet.

Mortimer's Husbandry. I've lived Amidst these woods, gleaning from thorns and

shrubs •

A wretched sustenance. Addison.

On that cloud-piercing hill Plinlirnmon, the goats their shrubby brows Gnaw pendent. Philips.

All might have been as well brushwood and shrubs.

Mure.

SHRUB (frutex), is a low dwarf tree, or a 'woody vegetable, of a size less than a tree ; and which, instead of one single stem, frequently from the same root puts forth several sets of stems. See PLANT and TREE. Such are privet, phillyrea, holly, box, honey-suckle, &c. Shrubs and trees put forth in autumn a kind of buttons, or gems, in the axis of the leaves ; these buttons are as so many little ova, which, coming to ex-pand by the warmth of the following spring, open into leaves and flowers. By this, together with the height, some distinguish shrubs from suffrutices, or under shrubs, which are low bushes, that do not put forth any of these buttons, as sage, thyme, &c. The two hardiest shrubs we have in this country are the ivy and box; these stand the severity of our hardest winters unhurt, while other shrubs perish, and trees have their solid bodies split and torn to pieces. In the hard winter of 1683 these two shrubs suffered no injury any where ; though the yews and hollies, which are generally supposed very hardy, were that winter in some places killed, and in others stripped of their leaves,and damaged in their bark. Furze-bushes were found to be somewhat hardier than these, butthey sometimes perished, at least down to the root. The broom seemed to oc-cupy the next step of hardiness beyond these. This lived where the others died, and where even this died the juniper shrubs were sometimes found un-hurt. This last is theonly shrub that approaches to the hardiness of the box and ivy, but even does not quite come up to them ; for, while they suffer nothing in whatever manner they are exposed, the juniper, though it bears cold well under the shelter of other trees, yet cannot bear the

vicissitudes of heat and cold ; insomuch that some juniper shrubs were found half dead and half vigorous; that side which faced the mid-day sun having perished by the successive thawings and freezings of its sap ; while that which was not exposed to the vicissitudes of heat, had borne the cold perfectly well. Such shrubs as are not hardy enough to defy the winter, but appear half dead in the spring, may often be recovered by Mr. Evelynjs method of beating their branches .with a slender hazel wand, to strike off the withered leaves and buds, and give a free passage to the air, to the internal parts. Where this fails, the method is to cut them down to the quick, and, if no part of the trunk appears in a growing condition, they must be taken off down to the level of the ground. — Philos. Trans«No. 165.

SHUCKFORD (Samuel), a learned English divine, who was curate of Shelton in Norfolk, prebendary of Canterbury, and chaplain in ordinary to the king. His manners were those of a philosopher, uncorrupted by the manners of the world. He wrote a History of the World, sacred and profane, to serve as the introduction to Prideaux, in 3 vols. Qtro. It is heavily written, but displays a great deal of erudition. His death, in 1756, prevented him from carrying it down to the year 747 B. C., where Prideaux begins.. He wrote also a treatise on the Creation and Fall of Man, to serve as a supplement to the preface to his history.

SHRUG, v. n. & v. a. Belg. schricken, to tremble. To express horror or dissatisfaction by motion of the shoulders or whole body ; to contract ; draw up.

Like a fearful deer that looks most about when he comes to the best feed, with a shrugging kind of tremor through all her principal parts, she gave these words. Sidney.

The touch of the cold water made a pretty kind of shrugging come over her body, like the twinkling of the fairest among the fixed stars. Id.

Be quick, thou wert best

To answer other business ; shruggest thou malice ?

Shaltspeare.

He grins, smacks, shrugs, and such an itch endures,

As ‘prentices or schoolboys, which do know Of some gay sport abroad, yet dare not go. Donne.

And yet they ramble not to learn the mode How to be drest, or how to lisp abroad, To return knowing in the Spanish shrug.

Cleaveland.

He shrugged his sturdy back, As if he. felt his shoulders ake. Hudibras.

He shrugs his shoulders when you talk of securities. Addison.

They grin, they shrug, They bow, they snarl, they scratch, they hug.

Swift.

SHUD'DER, v. a. Belg. schuddren. To quake with fear or aversion.

All the other passions fleet to air, As doubtful thoughts, and rash embraced despair, And shuddering fear. Shahˆeare.

The fright was general ; but the female band With horror shuddering on a heap they run.

Dryden.

I love — alas ! I shudder at the name, My blood runs backward, and my faultering tongue Sticks at the sound. Smith.

Caesar will shrink to hear the words thou utterest, And shudder in the midst of all his conquests.

Addison.

SHUF'FLE, v. a., v. n., & n. s. Sax. ryFekn?» a bustle, tumult. To throw into disorder ; to agitate or throw together tumultuously : to play mean tricks ; taking off and up : a shuffle is a trick; artifice; the act of disordering : shufflingly, with disordered gait.

In that sleep of death, what dreams may come, When we have shuffled off this mortal coil, Must give us pause. Shakspeurc.

I myself, leaving the fear of heaven on my left hand, and hiding mine honour in my necessity, am fain to shuffle. Id.

Your life, good master, Must shuffle for itself. U.

Mincing poetry, Tis like the forced gait of a shuffling nag. Id.

The motions of shuffling of cards, or casting of dice are very light. Bacon.

They sent forth their precepts to convent them be-fore a court of commission, and there used to shuffle up a summary proceeding by examination, without trial by jury. Id.

When the heavens shuffle all in one, The torrid with the frozen zone, Then sybil, thou and I will greet. Cleaveland.

He shuffled up a peace with the cedar, in which the Bumelians were excluded. t Howel.

1 have nought to do with that shuffling sect, that doubt eternally and question all things. Glanvilte.

From a new shuffling and disposition of the component particles of a body, might not nature compose a body dissoluble in water 1 Boyle.

A glimpse of moonshine sheathed with red, A thujjied, sullen, and uncertain light, That dances through the clouds and shuts again.

Dry den.

I may go shufflingly, for I was never before walked in trammels ; yet 1 shall drudge and moil at constancy, till I have worn off the itching in my pace.

Id.

If any thing hits we take it to ourselves ; if it miscarries, we shuffle it off to our neighbours.

L'Estrange.

A sharper both shuffle* and cuts. Id.

The crab advised his companion to give over thuffling and doubling, and practice good faith. Id.

The gifts of nature are beyond all shams and shuffles. Id.

We shall in vain, shuffling the little money we have from one another's hands, endeavour to prevent our wants ; decay of trade will quickly waste all the remainder. Locke.

If, when a child is questioned for any thing, he persist to shuffle it off with a falsehood, he must be chastised. Id.

To these arguments concerning the novelty of the earth, there are some shuffling excuses made. '

Burnet.

In most things good and evil lie shuffled, and thrust up together in a confused heap : and it is study which must draw them forth and range them.

South.

If a steward be suffered to run on without bringing him to a reckoning, such a sottish forbearance will teach him to shuffle, and strongly tempt him to be a cheat Id.

We sure in vain the cards condemn, Ourselves both cut and shuffled them. Prior.

Tis not strange that such a one should believe that things were blindly shuffled and hurled about in the world ; that the elements were at constant strife with each other. Woodward.

Shuffled and entangled in their race, They clasp each other. Blackmore.

He has shuffled the two ends of the sentence together, and, by taking out the middle, makes it speak just as he would have it. Atterbury.

Though he durst not directly break his appointment, he made many a shuffling excuse. Arbuihnot.

Cards we play

A round or two ; when used, we throw away, Take a fresh pack ; nor is it worth our grieving Who cuts or shuffles with our dirty leaving.

Grannlle.

Is it not a firmer foundation for contentment to believe that all things were at first created, and are continually disposed for the best, than that the whole universe is mere bungling, nothing effected for any purpose, but all ill-favoured cobbled and jum-bled together, by the unguided agitation and rude shuffles of nature. Bentley.

SHUN, v. a.) Sax. aj-cuman. To avoid ;

SHUN'LESS, adj. S decline; endeavour to es-cape : shunless is unavoidable.

Consider death in itself, and nature teacheth Christ to shun it. Hooker.

Alone he entered

The mortal gate of the city, which he painted With shunless destiny. Shakspeare.

The lark still shuns on lofty boughs to build, Her humble nest lies silent in the field. Waller.

Birds and beasts can fly their foe : So chanticleer, who never saw a fox, Yet shunned him as a sailor shuns the rocks.

v Dryden.

Cato will train thee up to great And virtuous deeds ; do but observe him well,

Thou'lt shun misfortunes, or thou'lt learn to bear them. Addison.

SHUNAMITE, a native of Shunem.

SHUNEM, a city of Israel, belonging to the tribe of Issachar, five miles south of Tabor. Josh. xix. 18. A lady of rank in this city was extremely hospitable to the prophet Elisha ; in recompense for which, being previously barren, she got a son, who was afterwards restored to life by the prophet. 2 Kings, iv. 8 — 37.

SHUR, in ancient geography, a city of Ara-oia on the northeast side of

the Red Sea, which gave name to the adjacent desert, where the angel appeared to Hagar, the mother of Ishmael. Gen. xvi. 7; Exod. xv. 22. It appears to have been seated on the west border of the Amalekites (1 Sam. xv. 7 ; and xxviii. 8) ; and is supposed to be the Surratte of Ptolemy.

SHUS, a mass of ruins in the province of Khusistan, in Persia, extending for the space of about twelve miles from the Kerah to the Alzal. Like the ruins of Ctesephon, Babylon, and Cufa, they consist of hillocks of earth and rubbish, covered with broken pieces of brick and colored tile. The two largest and most remarkable of these mounds stand at the distance of about two miles from the Kerah. The first, at the lowest computation, is a mile in circumference, and nearly 100 feet high-; the other, though not quite so high, has double the circumference. These mounds bear some resemblance to the pyramids of Babylon, with this difference that, instead of being formed of brick, they consist of clay and pieces of tile, with irregular layers of brick and mortar, five or six feet thick, intended, it should seem, as a kind of prop to the mass. The Arabs, in digging for hidden treasure, often discover here large blocks of marble, covered with hieroglyphics. Major Rennell and Mr. Kinneir seem to fix this site as that of the ancient capital of Susa, instead of Shuster.

SHUSHAN, or SUSA, in ancient geography, a city of Persia, capital of the province of Susiana, or Khusistan. It had a palace, the residence ot several of the Persian kings. When it was taken by Alexander the Great he found in it 50,000 talents of gold, besides jewels and plate to an

immense value. It has been long in ruins, and is now called Valdak, or, as others say, luster. See SUSA.

SHUSTER, a principal district and city of the province of Khusistan, in Persia. It forms the fairest portion of the ancient Susiana, being watered by four fine rivers, and a number of smaller streams. The oppression of the governor, however, joined to the depredations of the tribes who occupy the fortresses of the neighbouring mountains, have reduced it almost to a desert.

SHUSTER, the capital of the province of Khusistan, at the foot of a range of mountains, and on an eminence overlooking the rapid course of the Karoon, is defended on the western side by the river, and on the other sides by an old stone wall. The houses are good, and principally built of stone. The population exceeds 15,000; and there is a considerable manufactory of woollen stuffs. This city has been generally believed to be the ancient Susa. It contains ruins which testify it to have been a place of vast extent, and considerable magnificence. The most remarkable are the castle, built on a small hill at the eastern extremity of the town ; the dyke erected by Sapor across the Karoon, with the'view of directing the waters into a channel more advantageous to agriculture ; and the bridge, of hewn stone, and consisting of thirty.-two arches, twenty-eight of which are still entire. Long. 48° 59' E., lat. 32° 0' N.

SHUT, v. a., v. n., n. s., adj.,) Fret. I shut ;

SHUTTER, n. s. [Stpart.) part, pass. shut. Sax. j-cittan : Belg. schutten. To close; confine; prohibit; bar; exclude (taking out}; and often taking up : to be closed : as a noun substantive the act of shutting ; a small door : as an adjective, rid ; clear : a shutter is a door or cover.

They went in, male and female of all flesh ; and the Lord shut him in. Genesis.

To a strong tower fled all the men and women, and shut it to them, and gat them up to the top.

Judges.

Thou hast known my soul in adversities ; and not shut me up into the hand of the enemy .> Psalms.

Kings shall s/i (it their mouths at him. Isaiah.

Woe unto you, scribes! for you shut up the kingdom of heaven against men. Matthew.

Before faith came, we were kept under the law, thut up unto the faith

which should afterwards be revealed. Galatians.

Beat in the reed, The juster you drive it'to shut out the rain. Tuster.

Although he was patiently heard as he delivered .iis embassage, yet, in the shutting up of all, he received no more but an insolent answer. Knolles.

In such a night To shut me out ! pour on, I will endure. Shakspeare.

The king's a-bed ; He is shut up in measureless content. , Id.

Dangerous rocks shut up the passage. Raleigh.

We see more exquisitely with one eye shut than with both open ; for that the spirits visual unite more, and become stronger. Bacon.

The wind-gun is charged by the forcible compression of air ; the imprisoned air serving, by the help of little falls or shuts within, to stop the vents by which it was admitted. Wilkins.

She opened, but to shut Excelled her power ; the gates wide open stood.

Milton,

Shall that be shut to man which to the beast Is open 1 \d.

Wisdom at one entrance quite thut out. Id.

On various seas not only lost, But shut from every shore, and barred from every coast. Dryden.

He, in his walls confined, Sliut out the woes which he too well divined. Id.

To leave you blest, I would be more accurst Than death can make me ; for death ends our woes. And the kind grave shuts up the mournful scene.

Id.

What barbarous customs ! Shut up a desart shore to drowning men, And drive us to the cruel seas agen. Id.

The wealthy,

In lofty litters borne, can read and write, Or sleep at ease, the shutters make it night. Id.

We must not pray in one breath to find a thief, and in the next to get shut of him. L'Estrange.

Sometimes the mind fixes itself with so much earnestness on the contemplation of some objects, that it shuts out all other thoughts. Locke.

There were no shuts or stopples made for the ani-mal's ears, that any loud noise might awaken it.

Ray.

His mother shut up half the rooms in the house, in which her husband or son had died. Addison.

When the scene of life is shut up, the slave will be above his master, if he has acted better. Collier.

In a very dark chamber, at a round hole, about one-third part of an inch broad, made in the shut of a window, I placed a glass prism. Newton.

Lucullus, with a great fleet, shut up Mithridates ir." Pitany. . Arbuthnot.

SHUTER (Edward), an English actor of some fame His father was a chairman, and Edward was employed as a marker at a billiard table ; but discovering some genius for the stage he was engaged at Covent Garden theatre-; where he became a performer of some consequence in low comedy. He died in 1776.

SHUTTLE, n. s. > Isl. skutul ; Goth, shut

SHUT'TLECOCK. J tul, i. e. shot tool. A weaver's tool for throwng the weft : shuttlecock or cofk, one thrown backwards and forwards in a manner similar to the shuttle.

Like shuttles through the loom, so swiftly gHde My father's hours. Sandys.

With dice, with cards, with billiards far unfit, With shuttlecocks misseeming manly wit.

Hubberd's Tale.

I know life is a shuttle. Shakspeare.

The SHUTTLE, in the manufactures, is an instrument used by the weavers, which guides the thread it contains, either of woollen, silk, flax, or other matter, so as to make it form the woofs of stuffs, cloths, linens, ribands, &c., by throwing the shuttle alternately from left to right, and from right to left, across between the threads of the warp, which are stretched out lengthwise -on the loom. In the middle of the shuttle is a kind of cavity, called the eye or chamber of the shuttle, wherein is enclosed the spool, which is a part of the thread destined for the woof; and this is wound on a little tube of paper, rush, or other matter.

The riband weaver's shuttle is very different from that of most other weavers, though it serves for the same purpose ; it is of box, six or seven incher long, one broad and as much deep, shod

with iron at both ends, which terminate in points, and are a little crooked, the one towards the right and the other towards the left, representing the figureofanyj horizontally placed. See WEAVING.

SHY, adj. Swed. & Dan. sky; Ital. schifo. Reserved; not familiar; not free of behaviour; suspicious.

A thy fellow was the duke ; and, I believe, I know the cause of his withdraw! ag.

Shakrpeare. Meature for Measure.

Princes are, by wisdom of state, somewhat shy of their successors*; and there may be supposed in queens regnant a little proportion of tenderness that way more than in kings. Wotton.

We grant, although he had much wit. He was very shy of using it, As being loath to wear it out, And therefore bore it not about. Hvdibras.

We are not ihy of assent to celestial informations, because they were hid from ages. Glanvilte.

I am very ihy of employing corrosive liquors in the preparation of medicines. Boyle.

She is represented in such a shy retiring posture, and covers her bosom with one of her hands.

Addisim's-Guardian.

The bruise irapostlumated, and turned to a stinking ulcer, which made every body shy to come near her. Arlntthnot.

What makes you so shy, my good friend 1 There's nobody loves you better than I. Id.

But when we come to seize the inviting prey, Like a thy ghost it vanishes away. JVorri*.

The horses of the army, having been daily led be-fore me, were no longer shy, but would come up to my very feet without starting. Swift.

I know you shy to be obliged, And still more loth to be obliged by me. Southern.

SIAM, or SYAMA, BLACK, a kingdom of India beyond the Ganges, situated principally between lat. 10° and 15° N. To the north its boundaries are unknown ; on the south it has the sea and the Malay peninsula*; on the east are the countries now comprehended in the Cochin-Chinese empire; and the west the dominions of the Birmans. Before its extent was so much contracted, by the victories of the latter nation, its length was estimated at 360 miles by 300 (lie average breadth ; but these must have been the extreme dimensions, and liable to an-nual fluctuation. The proper seat of the Thay, or Siamese race, is along the banks of the great river Menam ; but their sovereignty and language have, in prosperous periods, had a much wider range.

Siart may be described as a vast plain intersected by the Menam, on the banks of which all the principal towns are situated, and separated from the Birman and Cochin-Chinese empires by two long ridges of mountains. In addition to this it possesses a great extent of seacoast along the Gulf of Siam, which is, however, but thinly inhabited, the Siamese having an aversion to settle on the margin of the sea, probably through dread of the Malay pirates. Like the provinces of Bengal it is subject to annual inundations, which begin in July, and

when at their height overflow the country, except the artificial sites of the villages and the trees. The stalks of rice rise with the flood, and keep on the surface until it subsides. Near the shores of the Menam, the only part of the country to which Europeans

have recently had access, the land is flat and the soil alluvial, on which account, after the rainy season is over, many extensive morasses remain, and render the climate extremely pestilential to European constitutions, causing fluxes, dysenteries, and acute fevers. In the more elevated tracts, remote from the river, the country is parched and dried up. To the overflowing of the river the land in its vicinity owes its fertility, and is very productive of rice and other plants that require a redundant supply of moisture. Wheat is also raised on the higher grounds, but in very small quantities ; the Europeans formerly settled here, having been obliged to import what they required for their own use. Besides these the soil is capable of raising all the richest of the productions for which Bengal is celebrated ; but little comparatively is cultivated, owing to the miserable government by which the peasantry are oppressed and harassed. Here are many medicinal plants and gums ; also oil of jessamine, benzoin, lack, crystal, emery, antimony, cotton, wood, oil, wax, lac, varnish, wild cinnamon, cassia buds, and iron wood, the last of which is much used by the natives, Malays, and Chinese, as anchors for their vessels. Betel nut is produced and exported in considerable quantities by the Portuguese ships and Chinese junks. Most of the fruits of Hindostan thrive in Siam, and there are in addition the durian and man-gosteen.

The domesticated quadrupeds are horses, cows, buffaloes, sheep, goats, and elephants; and, in the jungles, tigers, rhinoceroses, deer, and hares, are found. There is great abundance of common poultry; besides wh>ch there are peacocks, pigeons, partridges, snipes, parrots, and other birds. The cows give but little milk, which is mostly supplied by the female buffaloes, but the natives have not the art of converting it into butter. The horses are of a very inferior race, the best being imported from Bafavia. The insects and vermin are the same as in other parts of India, and the sea and rivers yield excellent fish, upon which a great proportion of the lower classes subsist. In addition to these there are fine lobsters, turtle of a good quality, oysters, and the mango fish, so much esteemed in Calcutta. The mountains in the interior yield diamonds but little inferior to those of Hindostan, sapphires, rubies, and agates. Among the mountains and rivulets gold is also collected, and probably in considerable quantities,

as much is used in Siam for the gilding of idols, temples, and other public edifices, and there is none known to be imported by sea. In the interior, iron, tin, lead, and, copper, are procured — the latter of a good quality, but scarce.

The Siamese have never been in the habit of carrying on foreign commerce in their own vessels, the tonnage being principally supplied by the Portuguese, Chinese, and Cochin-Chinese, comparatively little intercourse subsisting with Hindostan. The Menam, by which ships enter, discharges itself into the Gulf of Siam ; but has a bar at its mouth, to cross which the assistance of a pilot is required. The southerly monsoon is the best season for ships to visit Siam, and the northerly for returning to Hindostan through the

Straits of Malacca. Bancok, or Bancasay, situated on the river near the bay, is the principal place of trade, and the king is the chief merchant. No private merchant here dares to trade in tin, tutenague, elephants' teeth, lead, or sapan wood, without permission from his majesty, who monopolises these articles, and receives them from his subjects in lieu of revenue. The excellent sauce, named ballachong, is best procured here, where it is composed of dried shrimps, pepper, salt, and sea-weed, beaten together to the consistence of a tough paste, and then packed in jars for sale. Vessels bound for Siam, by taking out a fresh port clearance at Malacca, escape a number of charges. Unlike the Malays, although so near them, the Siamese have the ut-most aversion to quit their own homes, and have consequently made no maritime excursions, and planted no colonies.

The constitution of the Siam government is despotic, and there are no hereditary nobility. All the inhabitants are liable to be called on for military services, and very few standing troops are maintained. Their arms are matchlocks, al-ways in a bad condition, spears, and creeses. They make their own gunpowder, but it is of so very inferior quality that considerable quantities are imported. Their fortifications are stockades of trees and posts encircled by a ditch, but the real defence of Siam consists in the natural obstacles presented to invaders by the

jungles, morasses, and numerous branches of rivers ; to which may be added the unhealthiness of the •climate, which soon thins the ranks of an army. As in the Malay states, the heir apparent to the throne possesses a legitimate authority almost equal to that of the reigning monarch. A small part of the taxes are levied in money, but much the greater part of the revenue is received in kind, and realized by sale to foreign traders. In 1750 the population was computed, by the French missionaries, at 1,900,000, but apparently without any proper foundation for the estimate.

The Siamese nation, properly so called, consists of two races, the Thay, and the Thay Jhay. Of these the latter are the most ancient, and were formerly famous for their learning and the power of their empire, of which many monuments are said still to exist. The Thay Jhay inhabit the country between the Menam and the Mekan, or river of Cambodia ; but the Thay, for the most part, inhabit on the west of the Menam or Siam River, or between that and the frontiers of the Tinnavv (Tennasserim), Mon (Pegu), and Barma (Birman) nations. By the Birmans they are denominated Syan, whence the Portuguese seem to have borrowed their Siam and Siaom, and from whom the other European nations have adopted the term. The former capital of Siam was named Yudia, or Yoodra ; from which circumstance the Siamese are frequently, by the Birmans, called Yoodras. In their manners and customs they greatly resemble the Birmans and Peguers. The females here are obliged to drudge in all the laborious employments; by them the woods are cleared, the earth cultivated, and the harvest reaped. Both males and females take as much pains to blacken their teeth as the Europeans do to preserve them white. The men

eradicate their beards, but allow their nails to lengthen like the Chinese. They are extremely gross feeders, in which they resemble the other nations east of the Ganges. Among their edibles are rats, lizards, grasshoppers, and other insects, disgusting to the natives of Hindpstan. Their houses are raised on posts, and are ascended to by a ladder on the outside. Like all the semi-barbarous nations in this quarter of the globe, their artists in gold are remarkably expert, and their nllagree work singularly beautiful. They excel also in beating out gold leaf, of which a great deal is expended in adorning their temples and idols. The Chinese practitioners, who are their chief physicians, have long been accustomed to the use of the bath in fevers and other distempers, and if they are not successful in the cure they receive no pay. The Siamese generally are so addicted to singing, on all occasions, that the missionaries found the best way of imprinting

their, precepts on the memories of this people was to form them into short Latin songs adapted to popular turles. They have a variety of musical instruments, but all disagreeable to a European ear ; of the European instruments they prefer the organ, on account of the loudness of its melody, and were much attracted by it to the Roman Catholic churches. Time is still measured by vessels having a small hole perforated and placed in a tub of water, the construction of clocks being beyond their mechanical powers.

The Thay language is that which is used by the Siamese, who in their own tongue assume this name as their national appellation. It appears to be in a great measure original, and is purely monosyllabic, and more powerfully accented than any of the other Indo-Chinese languages. The Siamese contains a great variety of compositions ; their poems and songs are very numerous, as are their Cheritras, or historical and mythological fables. Many of the Siamese princes have been celebrated for their poetic powers, and several of their historical and moral compositions are still preserved. The Siamese Cheritras, or romantic fictions, are very' numerous ; and the personages introduced, with the exception of Rama, and the heroes of the Ra-mayuna, have seldom much similarity to those of the Brahmins. On the eastern coast of the peninsula the Siamese language extends as far south as Patani, where it meets the Malay dialect. Besides the natives there are many colonies of foreigners established in Siam, particularly Chinese, Portuguese, Malays, Macassars, and Buggesses. At an early period the English, Dutch, and French, had also settlements, but none of them continued permanent. The commerce of the country is, at present, almost entirely conducted by the Chinese and native Portuguese ; the latter of whom have now scarcely any thing of the European but the name.

The national religion of Siam is that of Buddha, or Sammonacodom, and entirely resembles thnt of the Birmans described under the article AVA, but all sects are tolerated. The doctrines of the Siamese faith are singularly severe, and admit of no indulgencies whatever; but the bulk of the nation are persuaded that rigid virtue and perfection are not prescribed to them but only to

their priests ; and trust to their mortifications the Bay of Bengal, and along the west coast «.,f and austerities as expiations for .the faults of the the Malay peninsula. But although, by the whole. As among the Hindoos, suicide rs regarded favorably, but is by no means so generally practised. The first French missionaries

chance of war, the Siamese have been subjected to many vicissitudes, and brought frequently to the brink of destruction, they have never ceased

reached Siam in A. D. 1662, after a most pain-to exist as a distinct and independent nation, for ful and arduous journey over land to the Bay of which they are probably indebted to the do-Bengal, where they embarked ; but prior to this mestic dissensions of the Birmans, and the natural the Christian religion had made some progress strength of their country.

so early as 1621, through the medium of the SIAM, a city in the kingdom of Siam, of which Portuguese. The French mission was subse- it is the capital, (lat. 14° 5’ N. long. 100° 25’ E.) quently prosecuted with great zeal for more than situated on an island formed by the Menam, or a century, and was occasionally assisted by po-Siam River, intersected by several canals, and litical emergencies, but no essential progress was has several other islands adjacent. Although of ever made towards effecting the benevolent in-great extent it is now very thinly populated.

tent ions of the missionaries.

The palace of the king is a large irregular con-

The Siamese histories of the Thay dynasty fused building, covering a

great space of ground,

are said to detail, with much minuteness and and surrounded by high walls, which include

great exaggeration, the events that have occurred also several temples. In this town there are

in Siam, and the adjacent states and countries, many casts of statues and cannon, the latter of a

during the last 1000 years, and also the events prodigious calibre, which indicate a greater per—

of 400 years prior to that period, from the build-flection in the arts at some former era than is

ing of the city Maha Nakkon, but with less pre-now found among the Siamese. In 1766 this

cision. The records of the other dynasty, the place was captured by the Birmans after a long

Thay Jhay, are supposed still to exist. Notwith-blockade. By the Birmans the town of Siara is

standing these documents, the Siamese nation frequently named Dwarawuddy, but by the nawas wholly unknown in Europe, until the dis-lives it is called See-y-thaa. Most places of

covery of the route to India by the Cape of Good consequence are here distinguished by two ap—

Hope. The first traces of their authentic his-pellations, one in the vulgar tongue, and the other

tory begin about A. D. 1550, and were acquired in the Pali or learned language.

through the medium of the Portuguese, who fre-SIAMPA (Champa), a province in the Cochin—

quently acted as auxiliaries to the factions con-Chinese empire, situated principally between

tending for the government. From the records lat. 10° and 11° N. To the north its boundaries

of the East India Company it appears that, in are undefined ; on the south it has the sea of

1684, they sustained considerable losses by a China; on the east Cochin-China and the sea;

Mr. Constantine Faulcon (a Cephalonian Greek) and on the west Cambodia. It is a small moun—

one of their inferior servants, who ran away in tainous territory, separated into three divisions,

their debt, and obtained possession of their pro-SIANG-YANG, a city of China, of the second

perty, by making presents to the king of Siam, rank, in the province of Quang-si, 1045 miles

whose prime minister he afterwards became. In 1684 ambassadors were sent from Siam to Louis XIV. on board of an English vessel ; and, in consequence, Messrs. Ceberet and La Loubere were

Long. 111° 39’ E. lat. 32°

S. S. W. of Pekin.

5’N.

SIBBALD (Sir Robert), M. D., a celebrated

and learned Scottish physician, writer, and anti—

dejspatched as ambassadors to Siam, where they quarian, born in Fifeshire in 1643. He was edu-arrived the 27th of September, 1787, and imme-cated at the university of St. Andrew’s, where he diately solicited the king to embrace the Roman took his degrees, and afterwards travelled into Catholic religion. In this request they were die France and Italy. On his return to Scotland hue moTe urgent from learning that an envoy had projected the plan for establishing the Roya1 arrived from the court of Persia to convert him College of Physicians. He likewise planned to the Mahometan faith. The Siamese

mo-and commenced the Botanical Garden at Edin-narch declined the conversion proposed, but burgh, which has since been so highly improved, entered into a strict alliance with the French, His medical practice was very extensive ; yet he whom he allowed to garrison Bancok and Mergui, spent much time on the study of Scottish antithe two most important havens in his dominions, quities. He wrote The Natural History of Scot-This intimacy was, however, of short duration ; land, and The History of Fifeshire. He died m as in 1688, by a sudden revolution, the king 1750.

was dethroned and murdered, Faulcon executed, SIBBALDIA, in botany, a genus of the pen-and the French expelled. From this period tagynia order, and pentandria class of plants ; Siam experienced much internal discord, and natural order thirty-fifth, senticosse: CAL. divided many sanguinary massacres ; but remained ex-into ten segments ; the petals are five, and are eropt from external annoyance until 1754, when, inserted into the calyx : STYLES attached to the in consequence of the conquest of Pegu, the side of the germens : SEEDS five. There are three Birman dominions came in contact with those species:—!. S. altaica; 2. S. erecta; and, 3. S. of Siam. War immediately ensued, and has procumbens, the reclining sibbaldia, is a native continued, with the exception of a few short in-of North Britain, having never been discovered tervals, ever since; and, greatly to the detriment in the southern parts of the island. It grows on of the Siamese, who were repeatedly defeated Ben-Ix>mond and Ben-Mor, witnin a mile of the with great slaughter, had their capital sacked in summit. It is distinguished by a procumbent 1766. and lost all their maritime possessions on or trailing stem ; by three leaves growing on the

Vop of a small footstalk, which are trifid at the extremity, and somewhat hairy. The flowers are yellow, and blossom in July or August.

SIBBENS,or SIVVENS, in medicine, an infectious disease of a chronic nature, somewhat resembling syphilis, prevalent in the western parts

of Scotland. It is said to be so denominated from the appearance of a fungous extuberance from some of the cutaneous sores, not unlike a raspberry ; the word sibben, or sivven, being the Highland appellation for a wild raspberry. Whence it has also been sometimes confounded with the yaws, a disease of tropical climates, brought from Africa, and so denominated by the negroes from the same fruit. The disease is commonly communicated by the direct conveyance of the infectious matter by some species of contact, and generally through the medium of the mouth. The extensive propagation of the disease in Scotland seems ascribable to the uncleanly practices which prevailed among the lower classes of the people, such as using the same utensils in eating and drinking, passing the same pipe from mouth to mouth, sleeping in the same bed, using the same towel, &c. ; the most effectual check, therefore, to the progress of it, was to be expected from a system of prevention, which consisted in adopting a more decent and cleanly proceeding. Dr. Gilchrist recommended the persons employed in harvest-work each to carry with him a dish, cup, knife, spoon, and a cloth to wipe them with, that all the party might not eat with the same utensils, and transfer contagion. He also strongly urged the impropriety of admitting that common familiarity which every one claims by custom to kiss and fondle children, and especially to deny it to strangers, and those of low rank. By attending to these and similar means of prevention the disease appears to have been materially controlled.

SIBERIA, sometimes denominated Asiatic Russia, is that part of the immense territory of the Russian empire which lies to the east of the Ural chain, by which the empire is intersected from north to south. It has already received our attention under the article RUSSIA, which see. It may be described, distinctly, as a flat tract of land of considerable extent, declining imperceptibly towards the Frozen Ocean, and by equally gentle gradations rising towards the south ; where at last it forms a great chain, constituting the boundary of Russia on the side of China. The greatest breadth from the cape of Cevero Vostochnoi, called in some maps Taimara,to the Altaian mountains south of the sea of Baikal, may be estimated at 28°, or 1680 geographical miles. In British miles the length, at a gross computation, may be stated at 5350, and the breadth at 1960, which extent exceeds that of Europe. The vast country of Siberia, says Mr. Tooke, contains, by calculation, upwards of 10,500,000 of square versts, comprehending within it several kingdoms, taken by roving Kozaks (Cossacks) on their own account, and then surrendered to the czar, who completed the conquest.

One of the chief sources of Russian wealth has long been the mineral

treasures of Siberia. These were first explored by order of Peter the Great, and have since been worked with much

advantage. The eastern side of the Uralian mountain is the chief mining district in the Asiatic part of the empire ; and the metals obtained in that region are mostly gold, copper, and iron. Valuable gold mines are worked at Catherinburg in lat. 57°, a”nd those of BerezofT, in the same vicinity, are esteemed the richest in the Russian dominions. Metallic veins extend in various directions from this centre, and there are numerous iron and copper foundries in the same neighbourhood. The silver mines of Kolyvan, in the Altaian range, are near the place where the Oby enters the southern confines of Siberia, and were first opened in 1745. They have proved very advantageous. The mines at Nertschink, in the Daourian range, were discovered in 1704, but they are less productive. The Altai range contains mines of lead and copper, with which gold and silver are sometimes mixed. But the most valuable of the Russian mines are those of iron, which are principally in the eastern branches of the Ural mountains. The inferior metals are less plentiful. Antimony is obtained in the mines of Nertschink, and zinc is found both there and in the Altaian chain, where nickel, cobalt, and bismuth, have been obtained in small quantities. Quicksilver has also been discovered in the eastern part of Siberia. Coal is scarcely known ; but salt, sulphur, alum, nitre, vitriol, and natron, abound. A variety of gems and precious stones likewise exist in the mountains. The topaz is found in the Daourian hills, and the beryl is met with both there and near Catherinburg. Red garnets are numerous near the sea of Baikal; and others of a pale yellow have also been obtained in the same region. The onyx, agate, jasper, and lapis lazuli, are also found in the distant mountains of Siberia ; while many parts of the Uralian chain afford fine marble, and others supply granite and porphyry. An ample field for mineralogical research, however, is still open in this portion of the globe.

The mineral waters of Siberia have been little explored. The principal that are known are the warm baths near the Caucasan mountains, particularly at Terek, and at Tiflis, the capital of Georgia, with those in the vicinity of the sea of Baikal, and some others in the most eastern part of the same mountains. There is also a fetid sulphureous spring at Sarepta, a few versts from Astracan, and others in Siberia. Kamtschatka likewise contains several mineral springs. Those near the southern extremity are of a very hot and penetrating quality, and emit clouds of smoke. Chalybeate springs are found among the iron mines in the vicinity of Catherinburg.

The whole of northern Asia was first known by the name of Sibir, or Siberia; but the appellation is gradually passing into disuse. When the Monguls established a kingdom in these regions, the first residence of the princes was on the river Tura, on the site of the town now called Tiumen, about 180 miles southwest of Tobolsk ; but they afterwards removed to the eastern shore of the Irtisch, and there founded the city of Isker near Tobolsk. This new residence was also called Sibir, of unknown etymology, and the name of the city passed to the Mongul principality. Although this is doubted by Coxe,

Pallus says that the ruins of Sibirare still visible twenty-three versts from Tobolsk, and that it gave name to the rivulet Sibirka, and the whole of Siberia. When the Russians began the conquest of the country they were unapprised of its ex-tent ; and the name of this western province was gradually diffused over the half of Asia. The principality established by the Monguls under Sheibuni in 1242 in the western part of Siberia, around Tobolsk and. the river Tura, from which it has sometimes been called Tura, has been already mentioned. The actual conquest of Siberia commenced in the reign of Ivan Vassillievitch II., who ascended the Russian throne in 1534. Induced by the prospect of establishing a traffic for Siberian furs, he determined to undertake the conquest of the country, and in 1558 added to his titles that of lord of Sibir, or Siberia. Yar-mak, a Cossack chief, being driven by the Russian conquests in the south to take refuge, with 6000 or 7000 of his followers, near the river Kama, afterwards marched down the Ural chain, defeated the Tartar Kutchun, khan of Sibir, and pressed forwards to the Tobol and the Irtisch, and also to the Oby, and, in this astonishing expedition, subjugated Tartars, Vogules, and Ostiaks. Finding it impossible to maintain and complete his conquests with his small army, he surrendered them in 1581, by a formal capitulation, to the czar Ivan Vassillievitch, who nobly rewarded his magnanimity and exertions. This conqueror of Siberia, however, did not live to witness the full accomplishment of this enterprise. He died in 1584 ; and after his death the discovery and conquests which he had made were

prosecuted by regiments of Donskoi Cossacks, sent thither for that purpose, as far as the Eastern Ocean and the mountains of China ; and in the middle of the seventeenth century this whole part of the world had become a Russian province. A person, whose name was Cyprian, was appointed first archbishop of Sibir in 1621, and at Tobolsk, where he resided, he drew up a narrative of the conquest. About the middle of the seventeenth century the Russians had extended east as far as the river Amur; but Kamtschatka was not finally reduced till the year 1711. Behring and other navigators afterwards proceeded to discover the other extreme parts of Asia. In his first voyage in 1728 Behring coasted the eastern shore of Siberia as high as lat. 67° 18', but his important discoveries were made during his voyage of 1741. The Aleutian Isles were visited in 1745; and in the reign of the empress Catharine II. other important discoveries followed, which were completed by captain Cook. In the south the Mon-gul kingdom of Kazan was subdued in 1552, and that of Astrakhan in 1554, and the Russian monarchy extended to the Caspian Sea. In 1/27, after previous conflicts, the Russian limits were continued westward from the source of the Argoon to the mountain Sabyntaban, near the conflux of two rivers with the Yenisei ; the boundary being thus ascertained between the Russians and the Monguls subject to China. The trade with China has been conducted at Zuruchaitu, on the river Argoon, lat. 50° N., long. 337° E., and at Kiachta, about ninety miles south of the sea of Baikal, lat. 51° N., long. 106°

E. This boundary between two states is th«> most extensive on the globe, reaching from about 65° to 145° of long., or 80° (lat. 50°) ; yielding, by the allowance of thirty-nine geographical miles to 1°, 3120 miles. See RUSSIA.

SIBILATION, n. s. Lat. sibUo. A hissing sound.

Metals, quenched in water, give a sibilation or hissing sound. Bacon'i Natural History.

A pipe, a little moistened on the inside, maketh a more solemn sound than if the pipe were dry ; but yet with a sweet degree of sibilation or purling.

Id.

SIBIR, an ancient city of Asia, and the capital of Siberia, to which it gave name. It was seated on the right bank of the Irtisch, about

eighteen versts from Tobolsk, and was the residence of the ancient sovereigns of Siberia. The ruins of a rampart are all that remain of this ancient seat of Siberian monarchs.

SIBIRIA, the ancient name of Siberia, from Sibir, its capital ; still used by authors who write in Latin respecting that country or its products ; as Ovis Sibiricus, &c., Pallas.

SIBRECHTS (John), an eminent Flemish painter, born at Antwerp, in 1625. He came over to London, where he was much employed by the nobility. He excelled in painting land scapes with cattle. He died in 1703.

SIBTHORP (John), a late celebrated botanist, was the youngest son of Dr. Humphrey Sibthorp, professor of botany at Oxford, where the subject of this article was born, October 28th, 1758ˆ. He received the first rudiments of his education at Magdalen school, whence he was; removed to that of Lincoln. In due time he entered Lincoln College, Oxford; but upon obtaining the Radcliffe travelling fellowship, became a member of University College. Being intended for the medical profession, he was sent to Edinburgh; but he took the degree of doctor of physic in his own university. The taste he had early imbibed for natural history, especially botany, was indulged in a tour to the Highlands of Scotland : after his return from which he visited France and Switzerland, spending a considerable time at Montpelier, where he formed an intimacy with Broussonet, collected many plants of that country, and communicated to the Academic des Sciences of Montpelier, of which he became a member, an account of his numerous botanical discoveries. The death of an elder brother of his father, by which a considerable estate devolved on the latter, occasioned Dr. J. Sibthorp to return to England in 1783, when, on his father's resignation, he was appointed to the botanical professorship.

Dr. Sibthorp, having passed a portion of the year 1784 at Gottingen, projected there his first tour to Greece; the botanical investigation of which celebrated country, and especially the determination of the plants mentioned by its classical authors, had, for some time past, become his leading object. He first visited the principal seats of learning in Germany, and cultivated the friendship of the two professors Jacquin, father and son ; studied with peculiar care the celebrated manuscript of Dioscorides, which has so long been preserved in the imperial libra

ry of Vienna; and procured a most excellent draughtsman, Mr. Ferdinand Bauer, to be the companion of his expedition. Qn the 6th of March, 1786, they set out together from Vienna, and passed through Carniola to Trieste, Venice, Bologna, Florence, Rome, and Naples, keeping an exact record of their botanical observations. After viewing the celebrated environs of Naples, they sailed thence early in May, and touching at Messina, as well as at the Isle of Milo, proceeded to Crete. Having narrowly escaped shipwreck, in returning to Milo by one of the country vessels, Dr. Sibthorp and his companion touched successively at several islands of the Archipelago, visited Athens, and remained for a while at Smyrna : they traced the steps of Sherard and Hasselquist, proceeded by land to Bursa, climbed the Bithynian Olympus, and at length reached Constantinople, where they spent the ensuing winter, in the course of which Dr. Sibthorp devoted himself to the study of modern Greek. In a botanical excursion to Belgrad, on the 17th "of February 1787, and another to Bu-juckderi, March 5th, the plants found in flower were almost entirely the same as are met with, at the same season, in England. Dr. Sibthorp's residence at Constantinople, or in the neighbouring Isle of Karki, proved very favorable to his investigations of the fishes and birds of those regions.

Having on the 14th of March, 1787, joined company with captain Emery and Mr. Hawkins, Dr. Sibthorp sailed from Constantinople in a Venetian merchant ship for Cyprus, taking the islands of Mytilene, Scio, Cos, and Rhodes, and touching at the coast of Asia Minor, in their way. A stay of five weeks at Cyprus enabled Dr. Sibthorp to draw up a Fauna and Flora of that island. The former consists of eighteen mammalia, eighty-five birds, nineteen amphibia, and 100 fishes; the latter comprehends 616 species of plants. The particular stations, domestic and medical uses, and reputed qualities of these last, are amply recorded; and the vernacular names of the animals, as well as of the economical plants, are subjoined. The same method is pursued, in a subsequent part of this journal, respecting the plants and animals of Greece, with every thing that could be collected relative to the medicine, agriculture, and domestic economy of that country and the circumjacent isles. The illustration of the writings of Dioscorides, in particular, was Dr. Sibthorp's chief object. The names and reputed

virtues of several plants, recorded by that ancient writer, and still tradi-tionally retained by the Athenian shepherds, served occasionally to elucidate, or to confirm their synonomy. The first sketch of the Flora 3 raeca comprises about 850 plants. ‘This,’ says ihe author, ‘ may be considered as containing only the plants observed by me in the environs of Athens, on the snowy heights of the Grecian Alp Parnassus, on the steep precipices of Delphis, the empnrpled mountain of Hymettus, the Pentele, the lower hills about the Piraeus, the olive grounds about Athens, and the fertile plains of Bceotia. The future botanist, who shall examine this country with more leisure, and at a moie favorable season of the year, before the Voi,. XX.

summer sun has scorched up the spring plants, may make a considerable addition to this list. My intention was to have travelled by land through Greece : but the disturbed state of this country, the ere of a Russian war, the rebellion of its bashaws, and the plague at Larissa, rendered my project impracticable.’ Of the mammalia of Greece, thirty-seven are enumerated, with their modern names, twenty-five reptiles, and eighty-two birds. All these catalogues were greatly augmented by subsequent observations, insomuch that the number of species, collected from an investigation of all Dr. Sibthorp’s manuscripts and specimens for the materials of the Prodromus Florae Graecs, amounts to about 3000.

We cannot particularly trace our traveller’s steps through Greece, or the various islands of the Archipelago. His health, which suffered from the confinement of a ship, and the heat of the weather, was restored at Athens, where he arrived on the 19th of June, 1787. Thence he prosecuted his journeys in various directions, and with various successes : the ascent of Mount Delphis, or Delphi, in Negropont, in a storm of wind and rain, on the 3d of August, was one of his most laborious, if not perilous adventures; but his botanical harvest was abundant. With regard to scenery, Mount Athos, which he visited a week after, seems to have made most impression on his mind. This spot also greatly enriched his collection of rare plants. Hence he proceeded to Thessalonica, Corinth, and Pa-tras, at which last place he embarked with Mr. Bauer, on board an English vessel, for Bristol, on the 24th of September. After a tedious and stormy voyage, they arrived in England the first week in December. He became a fellow of the Royal Society in 1789, and was among the first members of the Linnaean Society, founded in

1788.

On the 20th of March, 1794, Dr. Sibthorp set out on his second tour to Greece. He travelled to Constantinople in the train of Mr. Lis-ton, ambassador to the Porte, and was attended by Francis Borone, as a botanical assistant. They reached Constantinople on the 19th of May, not without Dr. Sibthorp's having suffered much from the fatigues of the journey, which had brought on a bilious fever. He soon recovered his health at Constantinople, where he was joined by his friend Mr. Hawkins from Crete. Towards the end of August they made an excursion into Bithynia, and climbed to the summit of Olympus, whence they brought a fresh botanical harvest. Dr. Sibthorp discovered at Fanar an aged Greek botanist, Dr. Dimitri Argyrami, who had known the Danish traveller Forskall, and who was possessed of some works of Linnaeus. Recovered health caused Dr. Sibthorp to set out with alacrity on his voyage to Greece, on the 9th of September. Passing down the Hellespont, on the 13th, with a light but favorable breeze, they anchored at Koum Cale, in the Troad, spent two days in examining the plains of Troy, and then proceeded to the Isles of Im-bros and Lemnos. On the 25th they anchored at Mount Athos, and passed ten days in examining some of the convents and hermitages, with the romantic scenery, and botanical rarities, of

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that singular spot, on all which Dr. Sibthorp descants at length, with great delight, in his journal. Their departure was for some time prevented, by a few Barbary pirates hovering on the coast, whom these monks, unlike the priests of the Athenian Bacchus, were not potent or valiant enough to defeat, or to turn into dolphins. Our voyagers sailed on the 5th of October, and on the 7th landed at Skiatho. Hence, on the llth, they proceeded down the strait of Negropont, and on the 1 3th passed under the bridge of five arches which connects that island with the main land of Greece. On the 15th, at noon, they entered the harbour of the Pyraeus, and proceeded to Athens, where the four succeeding weeks were employed in collecting

information relative to the present state of the government, the manufactures, and the domestic economy of that celebrated spot. Here Dr. Sibthorp lost his assistant Borone, who perished by an accidental fall from a window, in his sleep, on or about the 20th of October. November 16th Dr. Sibthorp and Mr. Hawkins left Athens by the ancient Eleusinian way, where the classical streams of the Cephisus, the heights of Helicon and Parnassus lay before them. They proceeded to Patras and to Zante, where they arrived in the middle of December, enriched with a large collection of seeds, the only botanical tribute that could, at this season, be collected from those famous mountains. An apothecary at Zante furnished Dr. Sibthorp with an ample and splendid herbarium, of the plants of that island, with their modern Greek names ; nor did the winter pass unprofitably or unpleasantly in this sequestered spot ; where neither agreeable society, nor copious information relative to our learned travellers' various objects, was wanting. The season was sufficiently favorable, in the middle of February 1795, to allow them to visit the Morea, of which peninsula they made the complete circuit in somewhat more than two months. The violet and prim-rose welcomed them in the plains of Arcadia ; and the Narcissus tazzetta, which Dr. Sibthorp was disposed to think the true poetic Narcissus, decorated in profusion the banks of the Alpheus. The barbarian horde, under whose escort they were obliged to travel, had taste enough to collect nosegays of these flowers. The oaks of the Arcadian mountains presented them with the true ancient miseltoe, loranthus europaeus, which still serves to make birdlime; whilst our miseltoe, viscum album, in Greece grows only on the •ilver fir. The jay, still called by its ancient name Kierva, which is generally taken for the magpie, was screaming among these oa'<s : and the water ouzel, sturnus cinclus, flying along the rocky sides of the alpine rivulets of Arcadia, presented itself to Dr. Sibthorp's recollection, as probably the white blackbird, which Aristotle says is peculiar to the neighbourhood of Mount Cyllene. Proceeding to Argos, and thence to Mycena, the travellers were highly gratified by finding, on the gate of the latter, those ancient lions which Pausanias describes as the work of the Cyclops; and near it the reputed tomb of Agamemnon, a circular building, formed of immense masses of stone, placed with such geometrical precision, though without mortar, that not

one had given way. That which forms the portal is described by Dr. Sibthorp as the largest stone he ever saw employed in any edifice. A num-ber of fragments of vases, like those commonly called Etruscan, lay among the ruins of My-cena. At Hermione, now called Castri, in the Argolic peninsula, famous for the purple dye anciently prepared

there, a vast pile of the shells from which that dye was obtained, and still denominated porphyri, served to ascertain the species, which is murex truncirlus of Linnaeus, figured by Fabius Columna in his rare and learned work, de Purpura, under the name of Purpura nostras violacea. See PURPLE FISH. From this place Dr. Sibthorp and his friend intended to have coasted along the bay of Argos in a boat, but the sea was then infested with pirates, which obliged them to give up that project, and to re-turn by land to Argos, whence they proceeded to Corinth, Patras, and by way of Elis to Pyrgos. Here they obtained another escort from Said Aga, to whose protection they had before been indebted, and safely reached Calamata, on the gulf of Corone, where they were detained by the celebration of Easter, on the 12th of April, amid a profusion of skyrockets and crackers. Proceeding in a boat along the barren and craggy shore, covered with bushy and prickly euphor-bias, they reached Cardamoula. Here the Greeks were tolerably, free from the tyranny of the Turks, and their persons and demeanour exhibited less marks of degeneracy.

From Cardamoula the travellers were escorted by the dependents of a hospitable Grecian chief, along a precipitous road, to Mistra, where they had the unexpected pleasure of meeting a party of their English friends, in the garb of Tartars, with whom they explored the site of ancient Sparta. After returning to Calamata, and surveying from the summit of a neighbouring precipice the ruins of Messenia, with the rich plains watered by the Paniscus, and bounded by the hills of Laconia, Dr. Sibthorp and Mr. Hawkins hastened to Corone, where a Venetian vessel waited to convey them to Zante, which place they reached on the 29th of April. Here Dr. Sibthorp parted from the companion of his tour, whom he was destined never to see again, but in whose friendship he safely confided in his last hours. Mr. Hawkins returned to Greece ; while the subject of our memoir, leaving Zante on the 1st of May, experienced a most tedious voyage of twenty-four days to Otranto, though five -days is the most usual time for that passage. He touched at the island of Ceplialonia, and next at Preversa, on the Grecian shore, where, being detained by a contrary wind, he employed the 7th of May in visiting the ruins of Nicopolis. The weather was unfavorable, and Dr. Sibthorp here caught a severe cold, from which he never recovered. It seems to have proved the exciting cause of that disease which had long been latent in the mesenteric and pulmonary glands, and which terminated in a consumption. Being obliged by the weather to put in at the little island of Fanno, May llth, the violent northwest wind ‘continued,’ as he too expressively says in his journal, ‘to nurse his cough and fever.’ He was confined to his bedt in a miserable hovel, to which, after frequent

attempts to sail, he was driven bacit six times by the unfavorable wind. At length the vessel was enabled to cast anchor in the port of Otranto on the 24th of May. Here he was obliged to submit to a quarantine of three weeks, part of which, indeed, was allowed to be spent in proceeding to Ancona. Thence he passed through Germany and Holland to England in the autumn of 1795, and his few succeeding months were chiefly marked by the progress of an unconquerable disease, for which the climates of Devonshire and Bath were, as usual, resorted to in vain. He died at Bath, February 8th, 1796, in the thirty-eighth year of his age, and lies interred in the abbey church.

By his will, dated Ashburton, January 12th, 1796, Dr. Sibthorp gives a freehold estate in Oxfordshire to the university of Oxford, for the purpose of first publishing his Flora Graeca, in ten folio volumes, with 100 colored plates in each, and a Prodromus of the same work, in 8vo., without plates. His executors, the honorable Thomas Wenman, John Hawkins, and Tho-mas Platt, esqrs., were to appoint a sufficiently competent editor of these works, to whom the manuscripts, drawings, and specimens, were to be confided. The plan of the Prodromus was drawn out by Dr. Sibthorp, but nothing of the Flora except the figures was prepared, nor any botanical characters or descriptions whatever.

The only work which professor John Sibthorp published in his life time is a Flora Oxoni-ensis, in one volume 8vo., printed in 1794. It has the merit of being entirely founded on his own personal observation. The species enumerated amount to 1200, all gathered by himself, and disposed according to the Linnaean system, with the alterations of Thunberg, which were then new, but which are now not admitted as improvements. The adoption, though imperfect, of Hedwig's genera of mosses in this Flora, must be esteemed a more fortunate measure.

SIBTHORPIA, in botany, a genus of the angiospermia ordet and didynamia class of plants ; natural order doubtful : CAL. spreading, and divided into five parts almost to the base : COR. divided into five parts in the same manner, which are rounded, equal, spreading, and of the length of the calyx ; the stamina grow in paiks at a distance from each other : CAPS, compressed, orbicular, bilocular, the partition being transverse. There are two species, *viz.* 1. S. evolvulacea; and, 2. S. Europaea, or bastard moneywort, is a native of South Britain. The stems are slender, and creeping: the leaves are small, round, and notched. The flowers grow under the wings of the leaves, are small, and of a pale ved color. It blossoms from July to September, and is found in Cornwall on the banks of rivulets.

SIBYLS, Lat. sibyllae, in pagan antiquity, certain women said to have been endowed with a prophetic spirit, and to have delivered oracles, showing the fates and revolutions of kingdoms. Their number is unknown. Plato speaks of one, others of two, Pliny of three, ./Elian of four, and Varro of ten ; which last opinion is universally adopted by the learned. These ten Sibyls generally reside in the following ilaces, Persia, Libya,

Delphi, Cumai in Italy, Erythroea, Samos, Cumae in JEolia, Marpessa on the Hellespont, Ancyru in Phrygia, and Tiburtis. The most celebrated of the Sibyls is that of Cumae in Italy, whom some have called by the different names of Amal-thsea, Demiphile, Herophile, Daphne, Manto, Phemonoe, and Deiphobe. It is said that Apollo became enamoured of her, and offered to give her whatever she should ask. The Sibyl demanded to live as many years as she had grains of sand in her hand, but unfortunately forgot to ask for the continuance of her beauty, health, vigor, and bloom. The god granted her request, but she refused to gratify his passion, though he offered her perpetual youth and beau-ty. Some time after she became old and decrepit, her form decayed, melancholy paleness and haggard looks succeeded to bloom and cheerfulness. She had already lived about 700 years when .ZEneas came to Italy, and had three centuries more to live before her years were as numerous as the grains of sand which she had in her hand. She gave ./Eneas instructions how to find his father in the infernal regions, and even conducted him to the entrance of hell. It was usual for the Sibyl to write her prophecies on leaves, which she placed at the entrance of her cave ; and it required particular care in such as consulted her to take up these leaves before they were dispersed by the wind, as their meaning then became incomprehensible. According to the most authentic historians of the

Roman republic, the Erythrean Sibyl came to the palace of Tarquin II., with nine volumes, which she offered to sell for a very high price. The monarch disregarded her, and she immediately disappeared, and soon after returned, when she had burned three of the volumes. She asked the same price for the remaining six books; and, when Tarquin refused to buy them, she burned three more, and still persisted in demanding the same sum of money for the three that were left. This extraordinary behaviour astonished Tarquin ; he bought the books, and the Sibyl instantly vanished, and never after appeared to the •world. These books were preserved with great care by the monarch, and called the Sibylline verses. A college of priests was appointed to have the care of them ; and such reverence did the Romans entertain for these prophetic books that they were consulted with the greatest solemnity, and only when the state seemed to be in danger. When the capitol was burnt, in the troubles of Sylla, the Sibylline verses, which were deposited there, perished in the conflagration ; and, to repair the loss which the republic seemed to have sustained, commissioners were immediately sent to different parts of Greece to collect whatever verses could be found of the inspired writings of the Sibyls. The fate of these Sibylline verses which were collected after the conflagration of the capitol is unknown. There are now many Sibylline verses extant, but they are universally reckoned spurious ; and it is said that they were composed in the second century by some of the followers of Christianity, who wished to convince the heathens of their error, by assisting the cause of truth with the arms of pious artifice.

i: 2

SIC

SICAMBH1, or SvoAMHiti.an ancient nation of Germany, who were conquered by the Ro-mans. They revolted under Augustus, who marched against them, but did not entirely sub-due them. Drusus, however, conquered them, \nd they were carried away from their native country to inhabit some of the more western provinces of Gaul. (Dio. 54. Strabo, 4. Tac. ii. Ann. 26). See SAXONS.

3ICAMBRAI, the country of the Sicambn, on the banks of the Rhine. It now forms the ci-devant province of Guelderland.

SIC’AMORE, n. s. I -it. sicamorus. A tree

Of trees you have the palm, olive, and sicamnre.

Peacluim.

SICANA. See SICANIA.

SICANI, an ancient people of Spain, who emigrated from their native country into Italy, and afterwards into Sicily, which they called Sicania. See SICILY.

SICANIA, or SICANA, an ancient name of Sicily, from the Sicani, or their king Sicanus.

SICARD (Roch Ambrose Cucurron), successor of the abb£ 1'Epee at the Parisian institution for the education of the deaf and dumb, was bora September 20th, 1742, at Fousseret, near Toulouse, in which city he completed his studies for holy orders. He, however, devoted himself to the instruction of persons born deaf and dumb, and became director of a school established for that purpose by the archbishop of Bourdeaux ; whence in 1789 he removed to Paris, and was chosen successor to the abb6 1'Epee. On the 26th of August 1792 he was arrested in the midst of his pupils, by order of the commune of Paris : and, notwithstanding various efforts of his friends, was on the 2nd of September transferred to the prison of the abbey of St. Germain, where he narrowly escaped being a victim in the ensuing massacres. After a few days' imprisonment he was set at liberty. On the foundation of the normal school, in 1795, he was appointed professor of grammar ; and about the same time was made a member of the Institute. He now became one of the conductors of a periodical work entitled Annales Religieuses, Politiques, et Littˆraires, on account of which he was included by the directory in the number of the journalists exiled to Synamari. This persecution obliged him to conceal himself, and it was not till after the overthrow of the directory that he was able to return to his situation. The old age of Sicard was clouded with misfortunes arising from his own improvidence, and Buonaparte, to whom he applied in his difficulties, treated him with neglect. After the restoration he was more fortunate, being successively made a knight of the legion of honor, administrator of the hospital ofQuinze Vingts, administrator of that of blind youths, and knight of the order of St. Michael. He wa-also honored with attentions from the foreign princes who visited Paris in 1814 and 1815. His death took place May 10th 1822. He was the author, besides other works, of ElSmens de Grammaire g£ne"rale ap-pliquee a la Langue Fran9aise, 2 vols. 8vo. ; Cour; d'Instruction d'un Sourd-muet de Nais-sance, 8vr.; and Thˆorie des Signes pour 1'Instruc'ion dt-s Sourds-muets, 2 vols. 8vo. He

also contrived a method of pasigraphy, or universal language.

SICANUS, 1. a king of Sicani; and 2. A river of Spain, one of which gave the name Sicania to the islantl of Sicily.

SIC'CITY, n. s. Fr. siccite, Lat. sice Has, of sicctis. Dryness ; aridity ; want of moisture.

That which is coagulated by a fiery siccitv will suffer colliquation from an aqueous humidity, as salt and sugar. Browne.

The reason some attempt to make out from the Verity and dry ness of its flesh. Id. Vulgar Errourt.

In application of medicaments, consider what degree of heat and siccity is proper.

Wiseman's Surgpri/.

SICE, w. s. Fr. $ix. The number six ?.t dice.

My study was to cog the dice, And dexterously to throw the lucky sice ; To shun ames-ace, that swept my stakes away.

Dry den.

SICELIDES; 1. the inhabitants of Sicily :— 2. A name given to the Muses, by Virgil, because Theocritus, whose Bucolic poetry he professed to imitate, was a native of Sicily. — Virg. Eel. 4.

SICERA, a name given to any inebriating liquor by the Hellenistic Jews. St. Chrysostom, Theodoret, and Theophilus of Antioch, who were Syrians, and who therefore ought to know the signification and nature of sicera, assure us that it properly signifies palm-wine. Pliny acknowledges that the wine of the palm tree was very well known through all the east, and that it was made by taking a bushel of the dates of the palm-tree, and throwing them into three gallons of water ; then squeezing out the juice, it would intoxicate like wine. The wine of the palm-tree is white : when it is drunk new, it has the taste of the cocoa, and is sweet as honey. When it is kept longer, it grows strong and intoxicates. After long keeping, it becomes vinegar.

SIGH. adj. A corruption of such. See SUCH.

I thought the soul would have made me rich ; But now I wole it is nothing tick ; For either the shepherds been idle and still, And led of their sheep what they will.

Spenser's Pastorals.

SICH&US, SICHARBUS, or ACHERBAS, the son of Phisthenes, uncle and husband of Eliza, or Dido, and priest of Hercules ; who was murdered by Pygmalion, his wife's brother. See DIDO and PYGMALION. ,

SICILIA (Lat.), Sicily. See SICILY. The ancient name of the three capes of Sicilia were Pelores, Pachynum, and Lilybeum.

SICILIAN (from Sicilia), of, or belonging to, or produced from, or in Sicily.

SICIL'AN, in music, denotes a kind of gav sprightly air, or dance, probably invented in Si-cily, somewhat of the nature of an English jig ;

usually marked with the characters -, or — . I

consists of two strains ; the first of four, and the second of eight, bars or measures.

SICILIAN VESPERS, a horrible massacre of the French in Sicily, A. D. 1282. See NAPLES.

SICILIES, RING OF THE Two, the title of the king of Naples ; for Naples and Sicily are the

two Sicilies meant, there being no other place of the name in Europe, or perhaps on the globe; nor is Naples itself properly so named, excepting in this political connexion. See NAPLES.

SICILY, a large island in the Mediterranean Sea, adjoining to tho southern extremity of Italy, and extending from lat. 36° 25’ to lat. 38° 25’ N., and from long. 12° 50’ to long. 16° 5’ E.

Anciently this island was called Sicania, Sicilia, and Trinacria, or Triquetra ; the two former from the Sicani and Siculi, who peopled a considerable part of the country ; the two latter from its triangular figure. Its first inhabitants, according to the most respectable ancient authors, were the Cyclopes and Laestrigones, who are said to have settled in the countries adjoining to Mount YEtna; but of their origin we know nothing, ex-cept what is related by the poets. After them came the Sicani, who called themselves the original inhabitants of the country ; but several ancient historians inform us that they came from a country in Spain watered by the river Sicanus. Diodorus, however, is of opinion that the Sicani were the most ancient inhabitants of this island. He tells us that they were in possession of the whole, and applied themselves to cultivate and improve the ground in the

neighbourhood of JEtna, which was the most fruitful part of the island ; they built several small towns and villages, on the hills, to secure themselves against thieves and robbers ; and were governed, not by one prince, but each city and district by its own king. Thus they lived till /Etna began to throw out flames, and forced them to retire to the western parts of the island, which they continued to inhabit in the time of Thucydides. Some Trojans, after the destruction of their city, landed in the island, settled among the Sicani, and built the cities of Eryx and Egesta, uniting themselves with them, and taking the general name of Elymi or Elymaei. They were afterwards joined by some Phocenses, who settled here on their re-turn from the siege of Troy. After the Sicani had for many ages enjoyed an undisturbed possession of the whole of Sicily, or such parts of it as they chose to inhabit, they were visited by the Siculi, who were the ancient inhabitants of Ausonia properly so called ; but, being driven out thence by the Opici, they took refuge in the island of Sicily. Not being contented with the narrow bounds allowed them by the Sicani, they began to encroach upon their neighbours ; upon which a war ensuing, the Sicani were utterly defeated, and confined to a corner of the island, the name of which was now changed from Sicania into that of Sicilia.

Both the ancients and moderns have supposed that Sicily was separated from the continent by an earthquake, the strait of Messina, between it and Calabria, being only a mile in breadth, from Cape Faro in Sicily, to Cape Volpe in Calabria, but widens as it proceeds, and at Messina, four leagues from cape Faro, is four miles. Pom-ponius Mela observes, ‘ Sicilia, ut ferunt, ali-quondo agro Brutio arlnexa.’ To the same purpose Virgil (/K.n. 1. iii. v. 414) says : —

Hac loca vi quondam, ct. vasta convulsa ruina

Dissiluisse ferunt. cum protmus utraque Tellus

Una foret. Venit medio vi pontus ct undis Hespeiium siculo latus abscidit.

Silius Italicus details this event, lib. xiv. :

Ausoniae pars magna jacet Trinacria Tellus lit semel expugnante noto, et vestantibus undis Accepit freta ecerules propulsa tridente, Namque per occultum cajca vi turbinis olim Impactum Pelagus lacerata viscera terrae Discidit, et medio perrumpens arva profundo, Cum populis

pariter convulsas transtulit urbes.

Claudian states positively

Trinacria quondam Italia; pars fuit.

On cape Faro, the ancient Pelorium, is a lighthouse, or pharos, whence its modern name, and whence also the strait is called by seamen the Faro of Messina.

Sicily is throughout intersected by ridges of hills, but none of any considerable height except Mount *Etna, one of the most celebrated volcanoes of Europe (see* .ETNA), and Mount Eryx, on the northwest, which, like *Etna, is isolated, and was anciently celebrated for a temple of Venus Erycina. The climate approaches to that of the tropics, the only appearance of winter being towards the summit of* Etna, which retains the snow throughout the year, and supplies a valuable object of commerce. The natural fertility of the island, which formerly acquired it the name of the granary of Rome, remains undi-minished,but the sloth of the present inhabitants scarcely draws from the soil more than sufficient for their own nourishment. In the mineral kingdom it possesses gold, silver, lead, copper, antimony, and sulphur.

The labor of the fields, and even 1he dragging of carts and waggons on the roads, is in Sicily generally performed by oxen. For travelling, recourse is had to mules, who here, as in other parts of the south of Europe, discover great steadiness in traversing a wretched road, and no less patience in supporting fatigue. In general the breed of cattle and horses has been much neglected, and is at present advancing very slowly towards improvement. Game is found in abundance, and mogt of the wild animals of the continent.

The only manufacturing establishments of ex-tent are at Palermo, Messina, and Catania : they consist of silk, cotton, and linen ; in part also of woollens, though the wool of the island is of indifferent qual'ty. If to these we add hats, cutlery, harness, carriages, and household furniture, made at Palermo and the principal towns, we have the amount of the Sicilian manufactures. A number of articles for the peasantry are in this, as in other backward countries, made at their own houses, without the benefit of machinery or division of labor. Hence comparatively few exchanges, a slow intercourse between town and country, and in ceneral those symptoms of stagnation which strike an Englishman so forcibly on visiting a foreign country.

In respect to commerce, Sicily, from the variety of its products, the excellence of several of its harbours, and the general safety of its coast for navigation, would, under an enlightened government, acquire great importance. The exports and imports are, however, comparatively small, neither

exceeding £1,500,000 for :he whole island. Here are no banks, no insurance companies, and very little confidence in government. The interior trade is cramped by the want of roads, the navigation by the quarantine laws, which are said to be enforced very unequally, and to be unfairly dispensed with in favor of those who are in connexion with the public officers. The occupancy of the island by the British troops, from 1806 to 1816, was a source of considerable advantage; and in the latter year a treaty was concluded between the courts of Naples and London, affording considerable privileges to the British. The chief exports of Sicily are silk, corn, salt, olive oil, sumac, wine, fruits of various kinds ; also goat, kid, and other skins. The imports consist of colonial produce, hardware, jewellery, lead, and manufactured articles in great variety, but small quantity. Of the fisheries carried on along the coast the principal is the tunny fishery. Money accounts are here kept in ounces, taris, and grains.

1 grain is equal to \d. sterling.

20 grains = 1 tan or bd. sterling.

30 taris r= 1 ounce or 12s. 6d. sterling.

Of late, attempts have been made to raise the Sicilian from a provincial to a national tongue. A dictionary has been printed, and several poets have published in their native language. In ancient times Sicily produced several writers of note, as Theocritus, Empedocles, Stesichorus, and Epicarmus ; also painters and sculptors not unworthy of competition with those of Greece. In modern times, or rather since the beginning of the seventeenth century, there have appeared some successful candidates in the belles lettres, poetry, and natural history ;

and at present Palermo, Catania, and Messina, contain individuals of distinguished attainments ; but their efforts have been discouraged by the want of a free press, the inadequacy of the public libraries, and the difficulty of intercourse with the more enlightened part of Europe. Education may be said to be in almost the same incipient state : there has yet been no general establishment of elementary schools ; and the colleges of Palermo, Catania, and other large towns, have been conducted on a very antiquated plan, Latin and the doctrines of the Catholic church having excluded every branch of ordinary knowledge. The schools called Scuoli Normal!, established in 1789, are on a better footing, the pupils being limited in number, and the teachers subjected to a previous examination. Girls, as in other Catholic countries, are put, at the age of eight or ten, into a convent or retire, where, during six or eight years, they are taught little else than reading, writing, or the ceremonies of the Catholic faith. Fortunately the new plan of teaching (of Bell and Lancaster) is at present (1820) finding its way into Sicily. The religion of Sicily is the Catholic ; the number of ecclesiastics in Sicily is said to amount to 70,000, exclusive of a still greater number of monks and nuns ; all, or al-most all, marked by the uniform character of ignorance and superstition.

The Sicilian parliament is composed of three branches: the nobles to the number of 227 ; the

prelates to the number of sixty-one ; the dema-nial or deputies from universities, cities, and crown estates, to the number of only forty-three. Its authority is in a great measure nominal, and it has done little or nothing towards repressing the abuses which prevail notoriously in every branch of administration. The public officers are so inadequately paid as necessarily ‘to have recourse to peculation. The hospitals and other public establishments, even when well endowed, are in a very uncomfortable state. As to the administration of justice, the laws, however good in the letter, are inoperative against a delinquent of influence or fortune. The judges are open to all kinds of corruption. The rarity of capital punishment would claim our praise were it not accompanied, in cases of doubtful evidence, by a recourse to torture : in short no country could be more in want of that political reform which was begun by the British government when in possession of the island, and is now (1821) likely to be carried on by the inhabitants themselves.

The revenue of Sicily is computed at £1,000,000; a sum that would not be exorbitant were the taxes judicious in their nature, and equal in

the mode of levying; but, until lately, the barons or landholders were to a certain de-gree exempt, and the burden was unmercifully imposed on the commons. The executive branch is subject to no enquiry or responsibility in regard to the application of the public funds. The Sicilian army in time of peace does not exceed 10,000 men ; the pay of the soldiers, adequate only to their subsistence in a plentiful year, makes them dependent on public charity in a season of dearth and scarcity. A number of the officers are foreigners. The navy is limited to one ship of the line, two frigates, and five sloops : the gun boats are numerous ; but the whole is in a poor state.

Sicily has been recently divided into seven intendancies, instead of the three great provinces which before formed its component parts. These mtendancies, and their population, and principal cities, are as follows : —

Intendancies.

Population in 1817.

Capitals and their population.

Palermo

405,231

Palermo

180,000

Messina

236,784

Messina

44,650

Catania

289,406

Catania

45,081

Siragosa

192,710

Siragosa

13,850

Caltanisetta

155,225

Caltanisetta

15,627

Girgente

288,877

Girgente

14,882

Trapani

145,712

Trapani

24,330

1,713,945

The principal promontories, most of which, as well as its rivers, are celebrated by the ancient poets, are Cape Faro, the northeast point. Cape Passaro (Pachynum), the south point, on an island, half a league from the main, and a mile in circuit, surrounded by rocks : on it is a torti-fied tower and lighthouse. On the south coast from the east are Cape Scalnmbri, Cape St.

Marco, and Cape Sorello. Cape Baeo (Lyli-beum), at the west end, is a low promontory, north of which is the island San Pantaleo (Motya). On the north coast are Cape St. Vito, the west point of the gulf of Castel-a-Mare, Cape Orlando, Cape Biancho, and others.

The north coast, being bounded by mountains (Nebrodes Mons), has but few streams that deserve the name of rivers. Those of the east and south are more considerable. Amongst the for-mer are the Alcantara (Onobala), south of Taormina, the Giaretta (Symoethus), south of Catania, the largest of the island, and the Atellaro, north of Cape Passaro. On the south coast the rivers are the Salso (Himera), which empties itself at Alicata, the Platani (Camicus), and the Bellici (Hypsa).

Messina (Messana), from its ancient splendor, as well as from being formerly the residence of the viceroy for six months of the year, disputes the honor of being the capital : it is situated near the north extremity of the east coast. The ravages of the plague in 1743, and other causes, have greatly leduced its population, which is thought not to exceed 25,000, though it has means of containing ive times that number. Its port is entirely natu-nl, and one of the best in Europe, being formed b/ a semicircular peninsula on the southeast, fire miles in circuit, with an entrance three-quarters of a mile wide, and capable of holding 1000 sail in thirty-five to forty fathoms depth. The largest vessels can also make fast to the quay, which lines the peninsula for a mile in length. The harbour is protected by the castle of St. Sal-vador, on the isthmus of the peninsula, by four ibrts on its points, and by a battery on the west shore. With these advantages, and that of being i free port, its trade is trifling.

Taormina (Tauromenium), a celebrated city of antiquity, is now a poor village, on a hill two miles above the level of the sea, at the foot of which is the village and road of Giardini. At Taormina are seen the most entire remains of a Roman theatre in Italy, with other antiquities.

Jaci d'Aquila is a little town at the mouth of the Fiume-Freddo, cold river, the ancient Acis, celebrated by the fable of Acis and Galatea, and whose waters, though said to be colder than ice, never freeze. They were praised by the ancients for their salubrity, but at present are thought to be poisonous from containing vitriol.

Catania, the third city of Sicily, contains 40,000 inhabitants. It has several times been destroyed by earthquakes and eruptions of ./Etna, whose foot is but five miles distant. Since the earthquake in 1693, which totally overturned it, it has been rebuilt on a regular plan, with straight and wide streets, and the houses only one story. It has a good port, but little or no trade.

Augusta, a fortified town of 9000 inhabitants, and 'a good port, is on the south side of an island, formerly a peninsula, but separated from the main by the earthquake of 1693. "

Syracuse, called by the natives Saragoza, one of the most celebrated cities of the Roman empire, whose walls had 180 stades of circuit, is now a poor town of 14,000 inhabitants. The land on vv'iich it stands was anciently a peninsula, but the isthmus has been cut through for its defence.

Besides which it has a very strong citadel. Its two ancient ports still exist, the southern named Porto Maggiore (Portus Magnus), has six miles at its greatest breadth, and is entered by a strait one-third of a mile wide. In this port, twenty yards from the shore, a spring of fresh water bubbles up amidst the salt. The northern port, Porto Picolo (Portus Minor and Marmoreus), held the naval force of ancient Syracuse. • The fountain of Arethusa, celebrated by poets and historians, and to which divine honors were paid, is now a brackish stream, which issues suddenly from the earth by two openings, and serves to wash the dirty rags of the modern Syracusians.

About 300 years after the arrival of the Siculi, the island first began to be known to the Greeks, who established various colonies, and built many cities in different parts of the island; and it is only from the time of their arrival that we have any history of the island. The first of the Greeks that came into Sicily were the Chalcidians of Euboea, under the conduct of Thucles, who built Naxus, and a famous altar of Apollo, which, as Thucydides tells us, was still standing in his time without the city. The year after, which was, according to Dionysius Halicarnassensis, the third of the seventeenth Olympiad, Arcliias the Corinthian,

one of the Heraclidae, laid the foundations of Syracuse. Seven years after, a new colony of Chalcidians founded Leontim and Catana, after having driven out the Siculi, who inhabited that tract. About the same time, Lamas with a colony from Megara, a city of Achaia, settled on the river Pantacius, at a place called Trotilum, where his adventurers lived some time in common with the Chalcidians of Leontini ; but, being driven thence by the Leontines, he built the city of Thapsus, where he died. Upon his death, the colony left Thapsus ; and under the conduct of Hyblon, king of the Siculi, founded Megara Hyblaea, where they resided 245 years, till they were driven out by Gelon, tyrant of Syracuse. During their abode at Megara they sent one Pamilus, who was come from Megarian Achaia their original city, to build Selinus. This city was founded about 100 years after the foundation of Megara. Anti-phemus and Entimus, the former a Rhodian, the other a Cretan, led each a colony of their countrymen, and jointly built the city of Gela on a river of the same name, establishing in' their new settlement the Doric customs, about forty-five years after the founding of Syracuse. The inhabitants of Gela founded Agrigentum 108 years after their arrival in Sicily, and introduced the same customs there. A few years after, Zancle was built by the pirates of Cumse in Italy ; but chiefly peopled by the Chalcidians, Samians, and lonians, who chose rather to seek new settlements than live under the Persian yoke. Some time after Anaxales, tyrant of Rhegium, drove out the ancient proprietors ; and, dividing his lands among his followers, called the city ˆes-sena, or Messene, which was the name of his native city in Peloponnesus. The city of Hi-mera was founded by the Zancleans under the direction of Eucleides, Simus, and Sacon ; but peopled by the Chalcidians and some Syracusan

exil ?s, who had been driven out by the contrary faction. The Syracusians built Acne, Chasmenae, and Camarina; the first seventy years, the se-cond ninety, and the third 135, after the foundation of their own city. This is the account which Thucydides, a most judicious and exact writer, gives us of the various nations, whether Greeks or

barbarians, who settled in Sicily. Strabo counts, among the ancient inhabitants of Sicily, the Morgetes, who being driven out of Italy tiy the Oeuotrians, settled in that part of the island where the ancient city of Morgantium stood. The Campani, who assumed the name of Mamertini, that is, invincible warriors, and the Carthaginians, who settled very early in Si-cily, ought likewise to be counted among the ancient inhabitants of the island. Before this period the history of Sicily is blended with fa-bles, like the early history of almost every other country. After the settlement of the Greeks in the island, its various revolutions have been traced from their several sources by many writers ; but by none with greater accuracy or brevity than Mr. Swinburne. From Ins account of his Travels in the two Sicilies, we therefore quote the following concise history of this kingdom : —

'Aristocracy prevailed at first in the Greek settlements, but soon made way for tyranny ; which in its turn was expelled by democracy. One of the earliest destroyers of common liberty was Phalaris of Agrigentum, who reigned about A. A. C. 600. See PHALARIS. His example was contagious ; a legion of tyrants sprang up, and not a commonwealth in the island escaped the lash of a usurper. Syracuse was most oppressed and torn to pieces by dissension ; as its wealth and preponderance in the general scale held out a greater temptation than other cities to the ambition of wicked men. It requires the combined testimony of historians to enforce our belief of its wonderful prosperity, and the no less extraordinary tyranny of some of its sovereigns. These Grecian colonies attained to such excellence in arts and sciences as emboldened them frequently to vie with the learned and ingenious in the mother country : nay, often enabled them to bear away the palm of victory. There needs no stronger proof of their literary merits than a bare recital of the names of Archimedes, Theocritus, Gorgias, and Charondas. But the Sicilian Greeks were not destined to enjoy the sweets of their situation without molestation. Very soon after their arrival, the inhabitants of the neighbouring coast of Africa began to aspire to a share of'Sicily. Carthage sent large bodies of forces at different times to establish their power in the bland, and about 500 years before the Christian era they had made themselves masters of all the western parts of it. The Siculi retained possession of the midland country, and the south and east coasts were inhabited by the Greeks. About that time Gelo was chosen prince of Syracuse on account of his virtues, which grew still more conspicuous after his exaltation; had the example he set been followed by his successors, the advantages of freedom would never have been known or wished for by the Syracusans. The Carthaginians found in him a

vigorous opponent to their project of enslaving Sicily ; a project invariably pursued, but never accomplished. Hiero I. succeeded his brother Gelo, and, contrary to the usual progression, began his reign by a display of bad qualities. Sensible of his error, and improved by experience, he afterwards adopted more equitable measures. At his death the Syr,acusans threw off the yoke, and for sixty years revelled in all the joys of freedom. Their peace was, however, disturbed by the Athenians and the Carthaginians. The latter plundered Agrigentum, and threatened ruin to the rest of the Grecian states ; but a treaty of peace averted that storm. The Athenians, under pretence of supporting their allies the people of Segesta, but in reality from a thirst of dominion, invested Syracuse with a formidable land and naval armament under the command of Nicias ; but in consequence of a rash indigested plan, ill conducted attacks, and inadequate supplies, their whole host was cut to pieces, or led away into captivity. Syracuse had scarcely time to breathe after her victory,, ere intestine wars broke out, and raised Dionysius I. to supreme command.' See DIONYSUS. ' Avarice, despotism, and cruelty, marked his reig., , but his military enterprises were crowned with constant success.' Like tt>e moderc tyrant of Europe, he patronised men of letters, and was even ambitious of literary fame. ' He died in peace, and bequeathed a powerful sovereignty to a son of his name, tainted with the same and worse vices, but not endowed with equal capacity and martial ability ; in such hands the rod of tyranny ceased to be formidable, and the tyrant was driven out of Sicily by the patriotic party ; but matters were not sufficiently settled for popular government, and Dionysius II. resumed the sceptre for a while, till Timoleon forced him into perpetual exile.'

Liberty seemed now to be established on a permanent basis ; but in Syracuse such prospects always proved illusory. Agathocles, a tyrant more inhuman than any preceding usurper, seized the throne, and deluged the country with blood. He was involved in a perilous contest with the Carthaginians, who obtained many advantages over him, drove his troops from port to port, and at last blocked up his capital. In this desperate situation, when all foreign, helps were precluded, and hardly a resource remained at home, the genius of Agathocles compassed his deliverance by a plan that was imitated amonˆ the ancients by Hannibal, and among the moderns by the famous Cortes. He embarked with the flower of his army ; forced his way through innumerable obstacles; landed in Africa; and, having burnt his fleet, routed the Carthaginians in a pitched battle, and laid thejr territory waste. Carthage seemed to be on the brink of ruin, anu that hour might have marKed her downfal had the Sicilian host been composed

of patriotic soldiers, and not of ungovernable assassins ; discord pervaded the victorious camp, murder and riot ensued ; and the tyrant, after beholding his children and friends butchered before his face, escaped to Sicily, to meet a death as tragical as his crimes deserved. See AGATHOCLES. Anarchy now raged throughout the island, and every

faction was reduced to the necessity of calling in the assistance of foreign power ; among whom Pyrrhus king of Epirus took the lead, and reduced all parties to some degree of order and obedience. But ambition soon prompted him to invade those rights which he came to defend ; he cast off the mask, and made Sicily feel under his sway as heavy a hand as that of its former oppressors; but the Sicilians soon assumed courage and strength enough to drive him out of the island. About this period the Mamertini, whom Mr. Swinburne indignantly styles a crew of miscreants, surprised Messina, and, after a general massacre of the citizens, established a republican form of government. See MAMER-IINI. Their commonwealth became so troublesome a neighbour to the Greeks that Hiero II., who had been raised to the chief command at Syracuse in consideration of his superior wisdom and warlike talents, found himself necessitated to form a league with Carthage to destroy this nest of villains. In their distress the Mamertini implored the assistance of Rome, though the senate had recently punished with exemplary severity one of their own legions for a similar outrage committed at Rhegium. The virtue of the Romans gave way to the temptation, and the desire of extending their empire beyond the li-mits of Italy cast a veil over every odious circumstance attending this alliance. A Roman army crossed the Faro, relieved Messina, defeated the Carthaginians, and humbled Hiero into an ally of the republic. Thus began the first Punic war, which was carried on for many years in Sicily with various success.

The genius of Hamilcar Barcas supported the African cause under numberless disappointments, and the repeated overthrows of his colleagues; at last, finding his exertions ineffectual, he advised the

Carthaginian rulers to purchase peace at the price of Sicily. Such a treaty was not likely to be observed longer than want of strength should curb the animosity of the vanquished party ; when their vigor was recruited, Hannibal, son of Hamilcar, easily persuaded them to resume the contest, and for sixteen years waged war in the heart of the Roman territories. Meanwhile Hiero conducted himself with so much prudence that he retained the friendship of both parties, and preserved his portion of Sicily in perfect tranquillity. He died in extreme old age, beloved and respected both at home and abroad. See HIERO II. His grandson Hieronymus, forsaking this happy line of politics and contracting an alliance with Carthage, fell an early victim to the troubles which his own folly had excited. Once more, and for the last time, the Syracusans found themselves in possession of their independence; but the times were no longer suited to such a system ; dissensions gained head and distracted the public councils. Carthage could not support them, or prevent Marcellus from undertaking the siege of Syracuse, immortalised by the mechanical efforts of Archimedes, and the immensity of the plunder. See SYRACUSE.

The Sicilians after t> is relinquished all martial ideas, and, during a long series of generations, turned their attention solely to the arts of

peace and the labors of agriculture. Their position in the centre of the Roman empire preserved them both from civil and foreign foes, except in two instances of a servile war. The rapacity of their governors was a more constant and insupportable evil. In this state of apathy and opulence Sicily remained down to the seventh century of our era, when the Saracens began to disturb its tranquillity. The barbarous nations of the north had before invaded and ravaged its coasts, but had not long kept possession. The Saracens were more fortunate. In 827 they availed themselves of quanrels among the Sicilians to subdue the country. Palermo was chosen for their capital, and the standard of Mahomet triumphed about 200 years. In 1038 George Maniaces was sent by the Greek emperor with a great army to attack Sicily. He made good his landing, and pushed his conquests with vigor ; his success arose from the valor of some Norman troops, which were at that time unemployed and ready to sell their services to the best bidder. Maniaces repaid them with ingratitude ; and by his absurd conduct gave the Mussulmans time to breathe, and the Normans a pretext and opportunity of invading the Imperial dominions in Italy. Robert and Roger of Hauteville afterwards conquered Sicily on their own account, not as mercenaries ; for, having substantially settled their power on the continent, they turned their arms against this island in obedience

to the dictates of zeal and ambition. After ten years struggle, the Saracens yielded up the rich prize, and Robert ceded it to his brother Roger, who assumed the title of great earl of Sicily, ruled the state with wisdom, and ranks deservedly among the greatest characters in history. He raised himself from the humble station of a poor younger son of a private gentleman, to the exalted dignity of a powerful monarch, by the sole force of his own genius and courage ; he governed a nation of strangers with vigor and justice, and transmitted his possessions undisputed to his posterity. Such an assemblage of great qualities is well entitled to our admiration.

Earl Roger was succeeded by his son Simon, whose reign was short, and made way for a second son called Roger II. In 1127 this prince joined to his Sicilian possessions the whole inheritance of Robert Guiscard (see NAPLES), and assumed the regal style. The greatest part of his reign was taken up in quelling revolts in Italy, but Sicily enjoyed profound peace. In 1154 his son William ascended the throne, and passed his life in war and confusion. William II. succeeded his father and died without issue. His defeat by Saladin is noticed under the article EGYPT. Tancred, though basely born, was elected his successor, and after him his son William III., who was vanquished by Henry of Suabia. During the troubles that agitated the reign of his son, the emperor Frederick, peace appears to have been the lot of Sicily. A shortlived sedition, and a revolt of the Saracens, are the only commotions recorded. For greater security the Saracens were removed to Puglia, 400 years after the conquest of Sicily by their ancestors. Under Conrad and Manfred Sicily

remained quiet; and from that time the history of Sicily is related under the article NAPLES. At the death of Charles II. of Spain his spoils became an object of furious contention; and, at the peace of Utrecht, Si«ily was ceded to Victor, duke of Savoy, who, not many years after, was forced by the emperor Charles VI. to relinquish that fine island, and take Sardinia as an equivalent. But, as the Spaniards had no concern in these bargains, they made a sud-den attempt to

recover Sicily, in which they failed, through the vigilance of the English admiral Byng. He destroyed their fleet in 1718, and compelled them to drop their scheme for a time. In 1734 the Spanish court resumed their design with success. The infant Charles drove the Germans out, and was crowned king of the two Sicilies at Palermo. When he passed into Spain, to take possession of that crown, he transferred the Sicilian diadem to his son Ferdinand III. of Sicily and IV. of Naples, and it has ever since remained in the possession of the same family. See NAPLES. We conclude the history of Sicily with a piece of very important local history. About 1785 Count Caraccioli was appointed viceroy. The government of this nobleman was very beneficial to Sicily, as he, in a great measure, cleared the island of the banditti that used to infest it, and made several excellent regulations for the establishment of social order and personal security. He deserves the thanks of every well-wisher to mankind for having abolished the court of inquisition which had been established in this country by Ferdinand the Catholic, and made dependent on the authority of the grand in-C|uisitor of Spain. Its last auto-da-fe was held in 1724, when two persons were burnt. At length Charles III. rendered it independent of the Spanish inquisitor, and abridged its power, by forbidding it to make use of the torture, and to inflict public punishments. The marchese Squillace and his successor for the marchese Tanucci, were both enemies to the hierarchy; and, during their vice-royalties, took care to appoint sensible and liberal men to the office of inquisitor ; the last of whom was Ventimiglia, a man of a most humane arfd amiable character, who heartily wished for the abolition of this diabolical court, and readily contributed towards it. While he held the office of inquisitor, he always endeavoured to procure the acquittal of the accused ; and, when he could succeed no other way, would pretend some informality in the trial. The total annihilation of this instrument of the worst of tyranny was reserved for Caraccioli. A priest, being accused to the inquisition, was dragged out of his house and thrown into the dungeon. He was condemned ; but on account of informality, and a violation of justice in the trials, he appealed to the viceroy, who appointed a committee of jurists to examine the process. The inquisitor refused to acknowledge the authority of this commission; pretending that to expose the secrets of the holy office, and to submit its decisions to the examination of lay judges, would be so inconsistent with his duty, that he would see the inquisition abolished rather than consent to it. Caraccioli took him at his word, and procured

a royal mandate by which the holy office was at once annihilated. He

assembled all the nobility, judges, and bishops, on the 27th of March, 1782, in the palace of the inquisition, and commanded the king's order to be read ; after which he took possession of the archives, and caused all the prisons to be set open : in these were at that time only two prisoners who had been condemned to perpetual confinement for witchcraft. The papers relating to the finances were preserved; but all the rest were publicly burned. The possessions of the holy office were assigned to the use of churches and charitable institutions : but the officers then belonging to it retained their salaries during their lives. The palace itself is converted into a custom-house, and the place where heretics were formerly roasted alive, for the honor of the Catholic faith, is now changed into a public garden. The cognizance of offences against orthodoxy is committed to the bishops ; but they cannot cite any one to appear before them without permission from the viceroy ; neither can they confine any person in a solitary prison, nor deny him the privilege of writing to his friends, and conversing freely with his advocate. In 1798 the king of the two Sicilies having irritated the French republicans, by taking part in the war, they soon made reprisals and obliged him to flee for refuge, with the whole royal family, on board the British fleet under lord Nelson; who landed them safely at Palermo in Sicily, on the 27th of December, where they continued till the French were finally expelled from Italy ; after which they returned to Naples. Thence they were again driven in the beginning of the year 1806 : NAPLES, see that article, was given to Buonaparte's brother-in-law, Murat; until, in May, 1815, he participated in the general overthrow of that despot's schemes; and, in the June of that year, the old royal family was restored.

SICK, adj. & v.n. -\ Saxon, j-eoc ;

SICK'EN, v. a. & v.n.

Dutch, sieck. Af-

SICK'LY, adv., adj., & v. a. i flicted with dis-SICK'NESS, n. s. J ease; with of before the disease ; disordered ; corrupted ; disgusted: as a verb neuter (obsolete) to take a disease : to sicken, verb active, is to make sick ; disease; weaken : as a verb neuter, to grow sick ; grow weak ; decay; be filled with disgust: the adverb, adjective, and noun

substantive following, correspond.

Himself took our infirmities and bare our sicknesses.

Matthew.

In poison there is physic ; and this news, That would, had I been well, have made me sick, Being sick, hath in some measure made me well.

Shahspeare. Cassius I am tick of many griefs Id. Juliut Cccsar.

What we oft do best, By sick interpreters, or weak ones, is Not ours, or not allowed : what worst, as oft Hitting a grosser quality, is cried up For our best act. Id. Henry VIH

A little time before Our great grandsire Edward sicked and died.

Id. Henry IV Kinsmen of mine have By this so sickened their estates, that never They shall abound as formerly. Id. Henry VIJ1.

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I know the more one sickens the worse he is.

Shakspearc. Impute His words to wayward sickliness and age.

Id. Richard II.

We wear our health but sickly in his life, Which in his death were perfect. Id. Macbeth.

I'm fallen out with more headier will, To take the indisposed and sickly fit For the sound man. Id. King Lear.

A pleasing cordial, Buckingham, Is this thy vow unto my sickly heart.

Id. Richard HI. The native hue of resolution Is sicklied o'er with the pale cast of thought.

Shakspeare.

My people are with sickness much enfeebled, My numbers lessened. Id. Henry V.

The judges that sat upon the jail, and those that attended, sickened upon it and died. Bacon.

Where's the stoick can his wrath appease, To see his country sick of Pym's disease 1

Cleaveland. Despair Tended the sick, busiest from couch to couch.

Milton.

Merely to drive away the time, he sickened, Fainted, and died ; nor would with ale be quickened.

Id.

Next compare the sichliness, healthfulness, and fmitfulness of the several years. Graunt.

Time seems not now beneath his years to stoop, Nor do his wings with sickly feathers droop.

Dryden.

The ghosts repine at violated night, And curse the' invading sun, and sicken at the

sight. Id.

The moon grows sickly at the sight of day, And early cocks have summoned me away. Id.

Would we know what health and ease are worth, let us ask one that is sickly, or in pain, and we have the price. Grew.

He was not so sick of his master as of his work.

L' Estrange. Why should one earth, one clime, one stream,

one breath, Raise this to strength, and sicken that to death?

Prior.

To animate the doubtful fight,, Namur in vain expects that ray ,

In vain France hopes the richly light Should shine near William's fuller day. Id.

Nothing makes a more ridiculous figure in a man's life than the disparity we often find in him sick and well. Pope.

Why will you break the sabbath of ray days, Now sick alike of envy and of praise "! Id.

Abstract what others feel, what others think, All pleasures sicken, and all glories sink. Id.

Trust not too much your now resistless charms, Those age or sickness soon or late disarms. Id.

There affectation with a sickly mien, Shows in her cheek the roses of eighteen ; Practised to lisp, and hang the head aside, Faints into airs, and languishes with pride. Id.

When on my sickly couch I lay, Impatient both of night and day, Then Stella ran to my relief. ' Swift,

When 1 say every sickness has a tendency to death, 1 mean every individual sickness as well as every kind. Watts.

Your bodies are not only poor and perishing, like your clothes, but, like infected clothes, fill you with all diseases and distempers, which oppress the soul with sickly appetites and vain cravings. Law.

SICK-BAY, or SICK-BIRTH (Fr. poste aux malades), in line of battle ships, is a place immediately under the forecastle, usually fitted up on the starboard side, and appropriated to the reception of the sick and wounded seamen. It is partitioned off by wooden frames screened with canvas, and may be easily taken down and folded on coming to action. When there is not sufficient room in the sick bay for the patients, other places are fitted up between decks, &c.

The sick and hurt and transport board for prisoners of war consists in time of war of six commissioners and a secretary, one of whom is always physician, who are called commissioners of that board. Their duty consists in arranging, in the most advantageous manner, the various departments relating to the prisoners of war in the United Kingdom, with respect to receiving, discharging, exchanging, victualling, and clothing them. It also extends to our naval hospital

departments, so far as victualling, clothing, and supplying medicines, necessaries, &c. ; and they have the appointment of all officers thereto, ex-cept governors, chaplains, physicians, and lieutenants, who are within the patronage of the admiralty board. They appoint first and second lieutenants, stewards, and clerks to prison-ships ; also all medical officers to the navy. The medical commissioner has the examining of the surgeons and assistant surgeons, intended for the royal navy, in physic, chemistry, &c., after they have passed Surgeon's Hall ; he has also the examination of all the surgeon's journals. The commissioner's power is united in the appointment of all officers within the limits of the board, which has an immediate intercourse with the Admiralty Board.

Regulations for sick and hurt seamen on board our own ships. — In every ship convenient room must be made between decks for the reception of sick and hurt seamen, who are placed under the immediate care of the surgeon, or assistant where no surgeon is allowed, who visits them twice a day, or oftener if occasion requires. The captain is to appoint some of the ship's company, by turns, to serve the sick night and day, and keep the place clean, to be washed with vinegar, and fumigated if the surgeon shall deem it necessary.

By orders from the captain, the cooper may make buckets out of the old staves and hoops ; and the carpenter cradles for the use of the sick, and those who have fractured bones. When men are taken ill with infectious fevers, they are to be stripped at their entry into the sick birth, and, if practicable, washed with soap and warm water ; their clothes are also to be immersed and washed in boiling water, in order to destroy infection, and the strictest attention must be paid to the cleanliness of the patient. The surgeon is also to direct in regulating the diet of the sick, according to their several symptoms and disorders, restricting salted provisions, and such articles as he may judge improper; in cases where wine is required, he is to apply to the captain, that the purser may supply them with the quantity he shall judge necessary. When fish is caught for the ship's company, he is to give the captain a list of the men who stand

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most in need of such refreshment, that they may be the first attended to.

Regtdatutns for sending sick and hurt seamen from their ships for cure. — Sick men are never to be ttent to hospitals, neither attending the ship nor on shore, except when their distempers or hurts render it inconvenient to keep them on board their own ships. In that case they must be sent under the charge of an officer and a surgeon's assistant, as the case may require, with their clothes, bedding, and a sick ticket, expressing their names, entry, and number on the ship's books, with a case from the surgeon particularising the previous symptoms and treatment which he or his assistant has experienced and adopted. An officer is never to be sent to an hospital except in cases of urgency, without the approbation of the commander-in-chief, who is to direct the captains to visit the hospitals, and euquire into the conduct of the medical attendants, &c., and to attend to any complaints the patients may have to make. The commander-in- chief, or senior-officer present, must occasionally visit the hospital when other duties will admit of it. The captain is to send an officer on discharging days, to receive such men as are recovered, and to take an account of such as are dead, discharged, &c.

\Vhen any are discharged from sick-quarters, and do not return to their ship in twenty-eight days, a D. S. Q. is placed against their names, in order to stop their pay. Captains are to receive such men as the agent of an hospital shall send to them ; and if they think them unserviceable, they are to apply for their being surveyed. Slop clothes are not to be issued to any man during his [continuance in sick-quarters, unless when it is absolutely necessary, and then they must be entered in the ship's books to be charged against his wages. When ships are in a foreign port where there is not a naval hospital, nor any person appointed by the commissioners for sick and wounded seamen, when necessity requires, the commander-in-chief, senior officer, or captain present, must cause tents to be made for their reception with the old sails of the ship, and appoint the best qualified surgeon in the squadron, &c., to attend them. . But, if the raising of tents and the attendance of surgeons be impracticable, the commander-in-chief, &c., may contract with proper persons to supply the sick with lodgings," provisions, &c.; and to appoint some well-qualified medical man or

surgeon of the place to attend them, who shall be allowed a specified sum for medicines and attendance. With the sick men are sent the usual sick-tickets, which the surgeon is never to deliver to them, but is to send them to the captain of the ship into which they may be discharged ; and he is to receive from the captain a certificate of the day on which the men are sent on board.

SICK-LIST (Fr. ctat des malades), a list contaming the names of all those who are unable to do duty in the ship, is daily sent up by the surgeon to the captain, for his inspection and guidance.

SICK'ER, adj. Welsh, siccr ; Belg. seker. Sure; certain; firm. Obsolete.

Sicker thou's but a lazy loord, And rekes much of thy swink,

That with fond terms and witless words

To bleer mine eyes dost think. S/vu.-vr.

Being some honest curate or some vicar, Content with little, in condition sicker.

Hubberd's Tale.

SICK'LE, n. s. Sax. f icol ; Belg. sickel, of Lat. secale or sicula. The hook with which corr is cut; a reaping hook.

Their ticklers reap the corn another sows. Sandys.

God's harvest is even ready for the sickle, and all the fields yellow long ago. Spenser on Ireland.

You sunburnt ticltiemen of August weary, Come hither from the furrow, and be merry.

Sliahspeare. Time should never, In life or death their fortunes sever ; But with his rusty sickle mow Both down together at a blow. Hudibras.

O'er whom Time gently shakes his wings of down, Till with his silent tickle they are mown. Dryden.

\V hen com has once felt the sickle, it has no more benefit from the sunshine. South's Sermons.

SICKLE. The, same instruments are denominated sickles and hooks. Some of them are also used in one part of the country and some in another.

The common sickle is a sort of semicircular piece of wrought iron faced with steel, which in general is from about twenty to thirty inches in length, and about half an inch in breadth, having a sharp toothed edge cut in the steel part, from twenty-six to thirty teeth being formed in every inch in length. The teeth all incline towards the handle of ‘the tool, so that it only cuts when it is drawn towards the person using it, and not when introduced through the standing corn in the act of reaping. The Furness sickle, a valuable tool of this kind, made use of in a district of that name in the northern part of Lancashire, has a blade two feet six inches long, edged with fifteen teeth in every inch, and in the span of its curvature measures two feet from the heel to the point. It is a powerful tool, and capable of doing much work in a given time when in good hands, as seen below.

The smooth-edged sickle, or reap hook, has a shape and length which are much the same as those in the common sickle, only a little broader; but the edge is smooth or sharp, and without teeth.

The badging or bagging sickle, or hook, is a tool of the same kind, but which is a great deal larger and heavier, as well as broader at the point. It can, however, be used with great effect and expedition by those who are accustomed to this mode of reaping.

The sickle-hook is also another tool of this nature, which is made use of in some districts. It is only toothed from about the middle to the point end, by which the waste of grain in cutting is said to be prevented.

The most ancient of these tools is the common sickle, and it is probably on the whole the best of them, though it is getting much out of use in many parts of the country, being now even scarcely known or employed in the counties of Devon, Cornwall, and Somerset, and many other places in the more western districts of the kingdom, having long since given place to the hooks, the reason of which seems to be the greater east

of performing the work by them, as is commonly supposed, but by no means proved. The sickle is by far the most frugal and economical tool

for accomplishing the work with, as causing the least loss of grain.

SICLOS, a town of Hungary, with a castle on a mountain, in which the emperor Sigismund was imprisoned. In 1543 it was betrayed to the Turks by its commander; but in 1664 it was recovered by the Imperialists. It is sixty-four miles southeast of Canischa.

SICON, a town of Cuba, 125 miles west of Havanna.

SICORUS, in ancient geography, a river of Hispania Tarraconensis, rising in the Pyrenees. Near it Julius Caesar conquered Afranius and Petreius. See ROME. Lucan iv. 14, 130. Plin. iii. 3. It is now called Segre.

SICULI, an ancient people of Ausonia, who invaded the Sicanians in Sicily, and gave their name to the island, about A. A. C. 1059.

SICULUM FRET UM, the ancient name of the Straits of Messina. See SICILY.

SICYON, an ancient town of Peloponnesus, the capital of Sicyonia. It was taken by Agamemnon, and afterwards by the Heraclidffi. It became very powerful at the time of the Achaean League, which the citizens joined, at the persuasion of Aratus. The people are said to have been dissolute and luxurious. Sicyonian shoes were deemed marks of effeminacy. It is now called Basilico.

SICYONIA, a kingdom or province of Peloponnesus, on the bay of Corinth, one of the most ancient and eminent in Greece. ./Egialeus, the son of Phoroneus, was the first king, who began to reign about A. A. C. 2089, and reigned fifty-two years. This country in its flourishing state gave name to all Peloponnesus. It is fertile, and abounds with corn, wine, olive oil, iron, fee.

SICYONIAN. Of or belonging to Sicyon.

SICYOS, in botany, single-seeded cucumber ; a genus of plants belonging to the class of mo-ncecia, and to the order of syngenesia; and in the natural system ranged under the thirty fourth order, cucurbitaceae. The male flowers have their calyx quinquedentated, their corolla quinquepar-tite, and there are three filaments. The female flowers have their calyx and corolla similar ; but their style is trifid, and their drupa monospermous. There are three species : 1. S. angulata. 2. S. garcini, and 3. S. Laciniata, which are all foreign plants.

SID, a river of England, in Devonshire, which runs into the English channel at Sidmouth.

SIDA, or SIDE, in fabulous history, the wife of Orion.

SIDA, yellow, or Indian mallow, in botany, a genus of plants belonging to the class of mona-delphia, order polyandria; and in the natural system ranging under the thirty-seventh order, columniferae. The calyx is simple and angulated ; the style is divided into many parts ; there are several capsules, each containing one seed. There are twenty-seven species ;

1. S. Abutilon. The Chinese make cords of this plant. It delights in water, and may be ad-vantageouslv planted in marshes and ditches, where nothing else will grow. From experiments

made by the abbe" Cavanilles, a Spaniard, insert od in the Mem de 1' Acad. Royale, it appears that the plants succeed best when sown in May, and they arrive at perfection in three months and a half. The maceration of the smaller stalks is finished in about fifteen days ; of the larger in a month. The strength and goodness of the thread appeared to be in proportion to the perfection of the vegetation and to the distance the plant was kept at from other plants. The fibres lie in strata, of which there are sometimes six ; they are not quite straight, but preserve an undulating direction, so as to form a network in their natural positions. Their smell resembles that of hemp ; the fibres are whiter, but more dry and harsh than those of hemp. The harshness is owing to a greenish gluten which connects the fibres ; and the white color must be always obtained at the expense of having this kind of thread less sup-ple ; when of its natural hue, it is very soft and flexible. This description belongs chiefly to the sida : but it will also apply to the malva crispa, Peruviana, and Mauri tiana. See MALVA. The malva crispa gave, however, the greatest quantity of fibres, and its gluten was most copious. The fibres of the sida abutilon and the malva crispa are the longest and the strongest ; those of the Peruviana and Mauritiana are the shortest and the weakest. The fibres of those plants which had lost their leaves are less strong, though of equal length with those which had preserved them. 2. S. Alba; 3. Alnifolia; 4. Angustifolia ; 5. Arborea; 6. Atrosanguinea ; 7. Carpimfolia ; 8. Ciliaris; 9. Cordifolia; 10. Jamaicensis; 11. Paniculata; 12. Peripiocifolia ; 13. Retusa; 14. Rhombifolia; 15. Spinosa; 16. Triquetra

; 17. Viscosa; 18. Umbellata; and 19. Urens. These eighteen species have fifteen capsules each. 20. S. Americana; 21. Asiatica; 22. Crispa; 23. Crustata; 24. Indica; 25. Mauritiana; 26. Occidentalis ; and 27. Ter-nata. These eight species, with the Abutilon above described, are all multicapsular. They are all natives of warm climates ; and most of them are found in the East or West Indies.

SIDDEE. or SEDEE, an Arabic title, by which the Abyssinians or Habashys are always distinguished in the court of Ilindostan ; where, being in great repute for firmness and fidelity, they are generally employed as commanders of forts or in posts of great trust.

SID EL COOM, the established legal resicide, or king-killer, in the barbarous kingdom of Sennaar. See SENNAAR.

SIDDONS, (Mrs.,) daughter of Roger Kem-ble, the manager of an itinerant company of players, was born at Brecknock, in South Wales, in 1755. She commenced her theatrical career as a singer, but soon relinquished that line, and attempted tragedy. In her fifteenth year, she conceived a passion for a young man, who was an actor of all work in her father's company ; • but her parents considering her too young ˆto form a connexion wilh him, placed her as lady's maid with a lady in Warwickshire. In her eighteenth year, however, she was married to Siddons, with their consent ; and the new-married pair entered into a strolling company. She and her husband played at Liverpool, Birmingham, and other places, gaining both reputa-

tion and profit. The theatrical cnaracter which she had acquired induced the manager of Drury lane to offer an engagement, which she accepted. It was, however, only in secondary parts that she appeared But in a short time she quitted the London boards, in consequence of the scurrilous attacks of a disappointed editor of a newspaper, in whose condemned after-piece she had been unlucky enough to perform. Bath was the next scene of her exertions ; and, while there, she improved rapidly, and became a general favourite. The duchess of Devonshire, then in the zenith of her charms and influence, became

her friend , and, through the intervention of that accomplished lady, she was again engaged at Drury lane. The re-appearance of Mrs. Siddons in London took place on the 10th of October, 1782, in the character of Isabella. Her success was complete. The public were astonished by her powers. She was acknowledged to be the fir-t tragic actress of the English stage, and tragedy became fashionable. The manager gave her an extra benefit, and increased her salary, For that benefit she came forward as Belvidera. and at once exalted her fame, and made a considerable increase to her fortune. Such was the delight which she gave, that the gentlemen of the bar subscribed a hundred guineas as a present to her. She subsequently visited Dublin and Edinburgh with equal applause. In 1784, some calumnies circulated against her, with respect to her conduct towards an unhappy sister, occasioned her to meet with an unkind reception from a London audience, and affected her so much, iliat .she resolved to retire from the stage ; but tl>e calumnies were speedily refuted, and her resolution was given up. For more than twenty years she continued to astonish and enchant the lovers of the drama ; and she was often invited to Buckingham house and to Windsor to read plays to their majesties. But her readings there were rather productive of honour than of profit. The fortune which she had accumulated was, however, large, and for many years she enjoyed it in the privacy of domestic life. It was not only as an. actress that Mrs. Siddons displayed talents. She had considerable merit as a sculptor, in which capacity she produced, amongst other things, a medallion of herself, a bust of her brH'ier, John Philip Kemble, in the character of Coriolanus, a study of Brutus before the <!(ath of Ca;sar, and a bust of president Adams. 'I he symmetry of her person was captivating. Her face was peculiarly happy, having strength of features, but so well harmonized when quiescent, and so expressive when impassioned, that most people thought her more beautiful than she was. So great, too, was the flexibility of her countenance, that it caught the instantaneous transitions of passion with such variety and effect, as never to fatigue the eye. Her voice was plaintive, yet capable of firmness and exertion. Her eye was large ; her brow capable of contracting with disdain or dilating with sympathy or pity ; and her articulation clear, penetrating, and distinct. So entirely was she mistress of herself, so collected and so determined in her i;estures, tone, and manner, that she seldom erred, like other actors, because she doubted her own

powers of comprehension : she studied her au-thor attentively ; she was sparing in action ; though her acting was the result of the most refined and assiduous attention, no studied trick or start could be

predicted ; none of those arts in which the actress is seen, and not the character, could be found in Mrs. Siddons. What was still more delightful, she was an original ; she copied no one, living or dead, but acted from na-ture and herself. Mrs. Siddons, having acquired an ample fortune, took her leave of the stage, in 1812, before an audience which melted into tears on the occasion. She, however performed in 1816, for the benefit of her brother, Mr. Charles Kemble, and a few nights in Edinburgh, to as-sist her daughter-in-law. Her greatest characters are well known to have been Catherine, in Henry VIII., and lady Macbeth, in which she manifested a dignity and sensibility rarely equalled. She died June 8th, 1831. — See Boa-den's Memoirs of Mrs. Siddons (2 vols. 1827.)

Sax. j-r&e ; Goth. sijde. The rib part of an animal; edge; margin ; verge ; any part, person, or thing placed in opposition, local or metaphorical, to something else, or some other part or interest : as an adjec-

SIDE, w. s., adj. & v. w?

SIDE'BOARD, n. s.

SIDE'BOX,

SJDE'FLY,

SIDE'LONG, adj. & adv.

SIDE'SADDLE, n. s.

SIDES'MAN,

SIDE'WAYS, adv.

SIDE'WISE,

SI'DLE, v. n. person ; faction ; party ;

live, side means lateral, indirect, oblique ; as a verb neuter, to lean on one side ; to take or lean to a party ; sidefly is an insect : sidelong, synonymous with side, as an adjective ; in a lateral direction, which also sideways and sidewise mean : to sidle, to go sideways with another body or thing; also to be on the side : the other compounds

seem to explain themselves.

Take of the blood, and strike it on the two tide posts, and on the upper door post, of the houses.

Exodus xii. 7.

The tables were written on both their sides, on the one side and on the other. Id. xxxii. 15.

When two boars with rankling malice meet, Their gory tides fresh bleeding fiercely fret.

Faerie Queene.

They presume that the law doth speak witli all in-difierency, that the law hath no side respect to their persons. Hnoker.

There began a sharp and cruel fight, many being slain and wounded on both sides.

Knulless History of the Turks.

Vexed are the nobles who have sided In his behalf. Shakspeare, Coriolanus.

Their weapons only

Seemed on our side ; but for their spirits and souls, This word rebellion it had froze them up, As fish are in a pond. Id. Henry IV.

All rising to great place is by a winding stair ; and if there be factions, it is good to side a man's self whilst rising, and balance himself when placed.

Bacon. The princes differ and divide,

Some follow law, and some with beauty siae.

Granville.

What natural agent could turn them aside, could impel them so strongly with a transverse side blow

against that tremendous weight and rapidity, when whole worlds are a-falling ? Bentley't Sermons.

He not only gives us the full prospects, but several unexpected peculiarities, and side views, unobserved by any painter but Homer.

Pope'* Preface to the Iliad. All siae .n parties, and begin the' attack. Pope. He from the taste obscene reclaims our youth, And sets the passions on the tide of truth ; Forms the soft bosom with the gentlest art, And pours each human virtue in the heart. Id. Why round our coaches crowd the white-gloved

beaux'? Why bows the sidebox from its inmost rows'? Id.

Those who pretended to be in with the principles upon which her majesty proceeded, either absented themselves where the whole cause depended, or sided with the enemy. Swift.

My secret enemies could not forbear some expressions, which by a side wind reflected on me. Id.

The chaffering with dissenters is but like opening a few wickets, and leaving them a-jar, by which no more than one can get in at a time, and that not without stooping and sidling, and squeezing his body.

Swift.

Ere the soft fearful people to the flood Commit their woolly sides. Thomson.

The kiss snatched hasty from the sidelong maid. Id.

Two nations still pursued Peculiar ends, on each side resolute To fly conjunction. Philips.

Sl'DERAL, adj. ~) Lat.sid«s,astar. Starry;

SI’DERATED, > astral: siderated is blasted

SIDERA’TION, n.s.) (supposed by the stars); planet-struck : the noun substantive corresponding.

These changes in the heavens, though slow, produced

Like change on sea and land : sideral blast, Vapour and mist, and exhalation hot, Corrupt and pestilent ! Milton’s Paradise Lost.

Parts cauterized, gangrenated, siderated, and mortified, become black ; the radical moisture, or vital sulphur, suffering an extinction.

Browne’s Vulgar Errours.

The contagious vapor of the very eggs produces a mortification or sideration in the parts of plants on which they are laid. Ray on the Creation.

The musk gives

Sure hopes of racy wine, and in its youth, Its tender nonage, loads the spreading boughs With large and juicy offspring, that defies The vernal nippings and cold sideral blasts. Philips.

SIDERATIO. See NECROSIS.,

SIDEREAL, or SIDEREAN, from Latin side-reus, starry. Of or belonging to the stars ; like a star ; starry ; the same with sideral, but more used, as well as sideriaL

SIDERIA, in the old system of mineralogy, a genus of crystals, used to express those altered in their figure by particles of iron. These are of a rhomboidal figure, and composed only of six planes. Of this genus three species were enumerated: 1. A colorless, pellucid, and thin one ; found in considerable quantities among the iron ores of the forest of Dean in Gloucestershire, and in several other places. 2. A dull, thick, and brown one ; not uncommon in the same places with the former. And, 3. A black and very glossy kind, a fossil of great beauty ; found in the same places, also in Leicestershire and Sussex. SIDERIAL, or SIDEREAL. Set SIDEREAL.

SIDERIAL DAYS. See ASTRONOMY, Index.

SIDERIAL YEAR. See ASTRONOMY, Index.

SIDERITIS, iron-wort, in botany, a genus of plants belonging to the class of didynamia, and to the order of gymnospermia ; and in the natural system ranging under the forty-second order, verticillatse. The stamina are within the tube of the corolla. There are two stigmas, one of which is cylindrical and concave ; the other, which is lower, is membranous, shorter, and sheathing the other. The species are fifteen. 1. S. Cana-riensis, the Canary iron-wort, is a native of Madeira and the Canary Islands; 2. S. candicans, the whitish iron-wort, is also a native of Madeira; 3. S. ciliata, the ciliated, or hairy iron-wort; 4. S. elegans,the elegant iron-wort ; 5. S. hirsuta, the rough iron-wort, is indigenous in the south parts of Europe ; 6. S. hyssopifolia, the hyssop-leaved iron-wort, is a native of Italy and the Pyrennees ; 7. S. incana, the hoary iron-wort, is a native of Spain ; 8. S. lanata, the woolly iron-wort ; 9, S. montana, the mountain iron-wort, is a native of Italy and Austria; 10. S. perfoliata, the full-leaved iron-wort, is a native of the Le-vant; 11. S. Romana, the Roman iron-wort, is a native of Italy; 12. S. scordioides, the Ger-mander iron-wort, a native of the south of France; 13. S. Syriaca, Syrian iron-wort, a native of the Levant.

SIDEROXYLON, iron-wood, in botany, a genus of plants belonging to the class of pentandria, and to the order of monogynia ; and in the natural system ranging under the forty-third order, dumosa?. The corolla is cut into ten parts, the laciniae or segments being incurvated alternately ; the stigma is simple ; the berry contains five seeds There are ten species: 1. S. cymosum, the sproutful iron-wood, a native of the Cape of Good Hope , 2. S. decandrum, the ten-chived iron-wood, has ten stamina ; 3. S. foetidissimum, the stinking iron-wood," is a native of the Cape of Good Hope ; 4. S. inerme, smooth iron-wood, in this country requires a warm stove ; 5. S. lycioides, the willow-leaved iron-wood, is a native of North America; 6. S. melanophelum, laurel-leaved iron-wood; 7. S. mite, the mild iron-wood, requires a warm stove in this country ; 8. S. siriceum, silky iron-wood, is a native of New South Wales ; 9. S. spinosum, thorr.y iron-wood, or argan, is a native of Morocco; 10. S. tenax, silvery-leaved iron-wood, is a native of Carolina. The wood of these trees, being very close and solid, has given occasion for this name to be applied to them, it being so heavy as to sink in water. As they are natives of warm countries, they cannot be preserved in this country unless they are placed in a greenhouse. They are propagated by seeds procured from abroad.

SIDERUM, the name first given by Sir T. Bergman to the phosphuret of iron, 'which he took to be a new metal. See PHOSPHCRET.

SIDLA, SIDLAW, or SIDLEY HILL, the piin-cipal and the highest of the

Sidlaw Hills, which gives name to the whole ridge, is 1406 feet above the level of the sea.

SIDLA, SIDLAW, SIDLEY, or SUDLAW HILLS, a ridge of hills of Scotland, extending from west to east, through the counties of Perth and For-

far, commencing at Kinnoul and terminating near Brechin. This ridge «tands on the south side of the valley of Strathmore, and is so named from its situation ; sud-laws, in the Gaelic language, signifying south hills. The mountains are of various heights. Next to Sidlaw, the highest, are King's Seat, Kinpurnie, and Dun-sinnan.

SIDMOUTH, a market-town in the hundred of East-Budleigh, Devonshire, situate at the mouth of the small river Sid, near the sea, twelve miles southeast of Exeter, and 158 west by south from London. It was anciently a considerable sea-port, but its harbour has long since been choked with sand. Of late years it has been much frequented as a watering-place, and is much improved. It has an elegant ball-room, and on the beach a commodious tea-room and shade. The town stands between two hills, and although open to the ocean, is entirely free from fogs, so that it is esteemed a very healthy as well as pleasant situation. Markets on Tuesday and Saturday. Fairs Easter Monday and Tuesday, and the third Monday in September. It is a vicarage, value £18. \5s. 5d.

SIDNEY (Sii Philip), was born at Penshurst, in Kent, in 1554 ; his father was Sir Henry Sid-ney, an Irish gentleman, -uid his mother Mary, the eldest daughter of John Dudley, duke of Northumberland. He was sent when very young to Christ-church College at Oxford, but left the university at seventeen to set out on his travels. After visiting France, Germany, Hungary, and Italy, he returned to England in 1575,

and was next year sent by queen Elizabeth as her ambassador to Rodolphll. emperor of Germany. On his return he visited Don John of Austria, governor of the Netherlands, and was received with great respect. In 1579, when queen Elizabeth seemed on the point of concluding her long-projected marriage with the duke of Anjou, Sir Philip wrote her a letter, in which he dissuaded her from the match with unusual elegance of expression, as well as force of reasoning. About this time a quarrel with the earl of Oxford occasioned liis withdrawing from court; during which retirement he is supposed to have written his celebrated romance, called Arcadia, which is so often quoted by Dr. Johnson in his dictionary. In 1585, after the queen's treaty with the United States, he was made governor of Flushing and master of the horse. Here he distinguished hirrhself so much that his reputation rose to the highest pitch. He was named, it is said, by the republic of Poland, as one of the competitors for that crown, and might even have been elected, had it not been for the interference of the queen. But his illustrious career was soon terminated ; for in 1586 he was wounded at the battle of Zutphen, and carried to Arnheim, where he soon after died. His body was brought to London, and buried in St. Paul's Cathedral. He is described by the writers of that age as the most perfect model of an accomplished gentleman that could be formed, even by the wanton imagination of poetry or fiction. Virtuous conduct, polite conversation, heroic valor, and elegant erudition, all concurred to render him the ornament and delight of the English court ; and, as the credit

which he enjoyed with the queen and the earl of Leicester was wholly employed in theencourage-ment of genius and literature, his praises have been transmitted with advantage to posterity. No person was so low as not to become an object of his humanity. After the battle of Zutphen, when he was lying on the field, mangled with wounds, a bottle of water was brought him to relieve his thirst ; but, observing a soldier near him in a like miserable condition, he said, ' This man's necessity is still greater than mine,' and resigned to him the bottle of water. Besides his Arcadia, he wrote several smaller pieces both in prose and verse, which have been published.

SIDNEY (Algernon), the celebrated English patriot, was the second son of Robert earl of Leicester, and Dorothy, eldest daughter of the earl of Northumberland. He was born about 1617. During the civil wars he took part against the king, and distinguished himself as a colonel in the army of the parliament. He was afterwards appointed one of king Charles's judges, but declined appearing in tnat court. During the

usurpation of Cromwell, Sidney, who was a violent republican, retired to the country, and spent his time in writing those discourses on government which have been so deservedly celebrated. After the death of the protector, he again took part in the public transactions of his country, and was abroad on an embassy to Denmark, when king Charles was restored. Upon this he returned to Hamburgh, and afterwards to Frank-fort, where he resided till 1677, when he returned to England, and obtained from the king a pardon. After his return he made repeated attempts to procure a seat in parliament, but all of them proved unsuccessful. After the intention of the commons to seclude the duke of York from the throne had been defeated by the sudden dissolution of parliament, Sidney joined with eagerness the councils of Russel, Essex, and Monmouth, who had resolved to oppose the duke's succession by force of arms. Frequent meetings were held at London ; while, at the same time, a set of subordinate conspirators, who were not, however, admitted into their confidence, met and embraced the most desperate resolutions. Keiling, one of these men, discovered the whole conspiracy ; and Algernon Sidney, together with his noble associates, was immediately thrown into prison, and no art was left unattempted to involve them in the guilt of the meaner conspirators. Howard, an abandoned nobleman, without a single spark of virtue or honor, was the only witness against Sidney ; but, as the law required two, his Discourses on Government, found unpublished in his closet, were construed into treason, and declared equivalent to another witness. It was in vain for Sidney to plead that papers were no legal »evidence ; that it could not be proved they were written by him ; and that, if they were, they contained nothing treasonable. The defence was over-ruled ; he was declared guilty, condemned, and executed on the 7th December, 1683. His attainder was re versed in the first year of king William. He was a man of extraordinary courage, steady even to obstinacy ; of a sincere but rough and boisterous temper. Though he professed his belief in

the Christian religion, he was an enemy to an established church, and even, according to Bur-net, to every kind of public worship. In his

principles he was a zealous republican ; government was always his favorite study, and his essays on that subject are a proof of the progress which he made.

SIDON, in ancient geography, a city of Phoenicia, in Asia, famous in Scripture for its riches, arising from the extensive commerce carried on by its inhabitants. Heavy judgments were denounced against the Sidonians on account of their wickedness, which were accomplished in the time of Artaxerxes Ochus, king of Persia ; for that monarch having come against them with an army, on account of their rebellion, the city was betrayed by its king ; upon which me wretched inhabitants were seized with despair; they set fire to their houses, and 40,000, with their wives and children, perished in the flames. This city is now called Saide ; and, according to Brace's account, not only its harbour is filled up with sand, but the pavement of the ancient city stood seven feet and a half lower than the ground on which the present city stands. Volney describes it as an ill-built dirty city. See SAIDE.

SIDONIA, an epithet of Dido (Ovid. Met. xiv. 80) ; also of Carthage, because built by Sidonians.:— Virg. &n. 1, v. 682.

SIDONIAN, of or belonging to Sidon.

SIDONIANS, the people of Sidon. They were extremely ingenious in arts and manufactures, and were particularly famous for embroidery and dyeing.

SIDONIORUM INSULT, in ancient geography, islands in the Gulf of Persia. — Strabo, xvi.

SIDONIS, an ancient country of Asia, in the west of Syria, or Phoenicia, on the coast of the Mediterranean. Sidon was the capital.

SIDONIUS, APOLLINARIS. See APOLLINARIS.

SIDRA, an extensive gulf in the eastern part of the territory of Tripoli, in the interior of which are extensive quicksands, celebrated in antiquity under the appellation of Syrtis, from a corruption of which the modern name is derived. It extends from long. 15° 30' to 19° 30' E., and from lat. 30° 30' to 32° 30' N.

SIDUS GEORGIUM, in astronomy, a name sometimes given to the primary planet, discovered by Dr. Herschell in 1781. By most foreign, and some British philosophers, it is named Herschell. See ASTRONOMY, Index.

SIEGE, n. s. & v. a. FT. siege ; qu. Lat. sedis ? The act of besetting a fortified place; a leaguer; a seat; throne; stool; place: to besiege (obsolete).

Drawing to him the eyes of all around, From lofty siege began these words aloud to sound.

Faerie Queene.

Him he had long opprest with tort, And fast imprisoned in sieged fort. Id.

It seemed, by the manner of theii proceeding, that the Turks purposed rather by long siege than by assault to take the town.

Knolles's History of the Turks. Our castle's strength

Will laugh a siege to scorn : here let them lie,

Till famine eat them up. Shakspeare. Macbeth. Beat away the busy meddling fiend,

That lays strong siege unto this wretch's soul, VOL. XX.

And from his bosom purge this black despair.

Id. Henry VI.

Give me so much of your time, in exchange of it, as to lay an amiable siege to the honesty of Ford's wife. Shakspeare.

I fetch my life and being From men of royal siege. Id. Othello.

Your sum of parts

Did not together pluck such envy fron him, As did that one, and that in my regard Of the unworthiest siege. Id. Hamlet.

The more I see

Pleasures about me, so much more I feel Torment within me, as from the hateful siege Of contraries. Milton 'i Paradise Lost.

It entereth not the veins, but taketh leave of the permeant parts, as the mouths of the meseraicks, an 1 accompameth the inconvertible

portion unto the siege. Browne's Vulgar Errours.

Love stood the siege, and would not wield his breast. Dryden.

SIEGE. The first operation of asiege, says colonel James, is investing. The body of troops investing a town should at least be as strong again as the garrison ; so as to be able to divide itself into several parties, in order to take possession of all the avenues leading to the place. By day they should keep themselves out of cannon-shot ; but, as soon as it is dusk, they must approach much nearer, the better to be able to support each other, and to straiten the town.

To undertake the siege of a town (entrepren-dre le siege d'une ville Fr.), to invest it, to form lines of circumvallation, to open trenches, &c.

To lay siege to a town (faire le siege d'une ville, Fr.), to draw your forces round a town for the purpose of attacking it.

To carry on a siege (continuer un siege, Fr.), to persevere by regular approaches, &c., in gaining ground upon the garrison.

To lay close siege (presser le siege, Fr.), tc approach close to the walls for the purpose of making a breach and storming, or of starving out the garrison. For a full and scientific explanation of the different methods which are adopted in modern times, for the attack and defence of places, particularly of sieges, see Essai General de Fortification et d'attaque et defense des places, torn. i. page 61, &c. &c.

General phrases and terms used at a siege are, viz: — To besiege a place. See SIEGE.

To accelerate the siege (acce"le"rer siege, Fr.) is when an army can approach so near the place as the covert-way, without breaking ground, un-der favor of some hollow roads, rising grounds, or cavities, and there begin their work.

An attack is when the besieging army can approach the town so near as to take it, without making any considerable works.

To form the siege, or lay siege to a place (mettrc le siege a une place, Fr.), there must be an army sufficient to furnish five or six reliefs for the trenches, pioneers, guards, convoys, escorts, &c., and artillery, with all the apparatus thereto belonging; magazines furnished with a sufficient quantity of all kinds of warlike stores ; and a general hospital, with physicians, surgeons, medicines, &c.

To raise the siege (lever le siege, Fr.) is te give over the attack of a place, quit the works

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thrown up against it, and the posts formed about IL If there be no reason to fear a sally from the place, the siege may be raised in the day time. The artillery and ammunition must have a strong rear guard, lest the besieged should attempt to charge the rear: if there be any fear of the enemy in front, this order must be altered discretionally, as safety and the nature of the country will admit.

To turn the siege into a blockade (convertir Ie siege en blocus, Fr.) is to give over the attack and endeavour to take it by famine ; for which purpose all the avenues, gates, and streams, leading into the place, are so well guarded that no succor can get in to its relief.

To insult a work, to attack it in a sudden and unexpected manner, with small arms, or sword in hand.

Surprise, the taking a place by a coup de main, by stratagem, or treason.

To escalade a place, to approach it secretly, then to place ladders against the wall or rampart, for the troops to mount and get into it that way.

To petard a place, privately to approach the gate, and fix a petard to it, so as to break it open for the troops to enter.

Line of circumvallatioa, a kind of fortification, consisting of a parapet or breast-work, ard a ditch before it, to cover the besiegers against any attempt of the enemy in the field.

Line of contravallation, a breast-work, with a ditch before it, to cover the besiegers against any sally from the garrison, in the same manner that the line of circumvallation serves to protect them in the field.

Lines, works made to cover an army, so as to command a part of the country, with a breast-work and ditch before them.

Retrenchment, a work made round the camp of an army, to cover it against any surprise.

Line of counter-approach, a trench which the besieged make from the covert-way to the right and left of the besieger's attacks, in order to scour their works. This line must be perfectly enfiladed from the covert-way and the half moon, &c., that it may be of no service to the enemy, in case he gets possession of it.

Batteries at a siege cannot be erected till the trench is advanced within reach of the cannon of the place ; that is, within what is generally understood to be a point-blank range, which is reckoned about 300 toises, 1800 feet.

Cannon is made use of at a siege for two different purposes ; the first to drive away the ene-my from their defences ; and the second to dismount their guns. To produce these two effects, the batteries should not be above the mean reach of cannon shot from the place : therefore there is no possibility of constructing them till the first parallel is formed, as that work is usually traced at 300 toises from the place : therefore the batteries must be on this liue, or between it and the town.

The completion of the batteries is in some services left to the officers of the royal artillery, itfter the engineers have thrown up the mass of cover ; but in the British service the engineers *ji>ish«very part of them. They must be parallel

to the works of the town which they are to batter. It is customary to place the mortar-batteries and gun-batteries side by side, and in the same line, to the end that they may batter the same parts. The use of both is to demolish the enemy's works, to dismount their guns, to penetrate into their powder magazines, and to drive the besieged from their works and defences ; as also to ruin and destroy the principal buildings, by setting fire to the town; and to fatigue and distress the inhabitants in such a manner that they shall press the garrison to surrender.

To sally at a siege is to go privately out of a besieged town, fall suddenly upon the besiegers, and destroy part of their works, spike their can-non, and do every other possible damage.

A sally, a secret movement which is made out of a besieged town or place, by a chosen body of troops, for the purpose of destroying an ene-my's outworks, &c. Sallies are seldom made when the garrison is weak; for although they molest the enemy, and keep him on the alert, yet the chance of losing men renders it prudent to keep within the works.

Saps. To sap at a siege is the method of carrying on the approaches when so near the place as to be unable to work without cover. It is performed by men on their knees behind a mantlet or stuffed gabion : they make the sap three feet deep, and three feet six inches wide ; then common workmen widen it to the usual size, and it bears the name of trench. There are various sorts of saps, *viz.*

Single sap, that which is made on one side only, or, which is the same thing, has only one parapet.

Double sap has a parapet on each side, and is carried on wherever its two sides are seen from the place.

Flying sap is that in which the working parties of the besiegers place their gabions themselves, and instantly fill them with earth, and continue to work under their cover : it is made where the workmen are not much exposed, and in order to accelerate the approaches.

Sap-faggots are a kind of fascines, only three feet long, and about six inches in diameter.

Saucissons are another species ot fascines, from twelve to nineteen feet long, and from eight to ten inches in diameter, and are used in making batteries, and repairing the breaches.

Sortie. See Sally.

Tail, or rear of the trench (queue de la tran-chee, Fr.), is the first work the besiegers make when they open the trenches.

Tambour, a kind of traverse, at the upper end of the trench, or opening made in the glacis to communicate with the arrows. This work hinders the besiegers from being masters of the arrow, or discovering the inside of the place of arms belonging to the covert-way.

Traverse in a siege, a kind of retrenchment, which ;s made in the dry ditch, to defend the passage over it

Trenches are passages or turnings dug in the earth, in order to approach a place without being seen from its defences.

Wooipacks used in a siege differ from sand-bags in this only, that they are much larger, and

instead of earth, they are filled with wool. They are used in making lodgments in places where Ihere is but little earth, and for other similar purposes. They are about five feet high and fifteen inches in diameter.

Rear of an attack is the place where the at-tack begins.

Front, or head of an attack, that part next to the place

Mantlets are wooden fences, rolling upon wheels, of two feet diameter ; the body of the axletree is about four or five inches square, and four or fire feet long ; to which is fixed a pole of eight or ten feet long, by two spars ; upon the axletree is fixed a wooden parapet, three feet high, made of three-inch planks, and four feet long, joined with dowel-pins, and two cross-bars : this parapet leans somewhat towards the pole, and is supported by a brace, one end of which is fixed to the pole, and the other to the upper part of the parapet. Mantlets are used to cover the sappers in front against musket-shot.

Maxims in sieges, 1. The approaches should be made without being seen from the town, either directly, obliquely, or in flank.

2. No more works should be made than are necessary for approaching the place without being seen ; i. e. the besiegers should carry on their approaches the shortest way possible, consistent with being covered against the enemy's fire.

3. All the parts of the trenches should mutually support each other ; and those which are farthest advanced should be distant from those that defend them about 120 or 130 toises, that is, within musket-shot.

4. The parallels, or places of arms the most distant from the town, should have a greater ex-tent than those which are the nearest, that the besiegers may be able to take the enemy in flank, should he resolve to attack the nearest parallels.

5. The trench should be opened or begun as near as possible to the place, without exposing the troops too much, in order to accelerate and diminish the operations of the siege.

6. Care should be taken to join the attacks ; that is, they should have communications, to the end that they may be able to support each other.

7. Never to advance a work, unless it be well supported ; and for this reason, in the interval between the second and third place of arms, the besiegers should make on both sides of the trenches smaller places of arms, extending forty or fifty toises in length, parallel to the others, and constructed in the same manner, which will serve to lodge the soldiers in, who are to protect the works designed to reach the third place of arms.

8. Take care to place the batteries of cannon in the continuation of the faces of the parts attacked, in order to silence their fire ; and to the end that the approaches, being protected, may advance with greater safety and expedition.

9. For this reason, the besiegers should al-ways embrace the whole front attacked, in order to have as much space as is requisite to place the batteries on the produced faces of the works attacked.

10. Do not begin the attack with works that lie close to one another, or with rentrant angles, which would expose the attack to the cross-fire of the enemy.

Stores required for a month's siege are nearly as follow : —

Ibs. Powder, as the garrison is

more or less strong . 800,000 or 900,000 Shot * for batterinS? pieces … 6000) of a lesser sort … 20,000 Battering cannon …. 80

Cannons of a lesser sort … 40

Small field pieces for defending the lines 20

Mortars for throwing { Sˆells ‘ ‘ J4

0 (stones . . 12

Shells for mortars … 15,000 or 16,000

Hand-grenades ….. 40,000

Leaden bullets 180,000

Matches in braces …. 10,000

Flints for muskets, best sort . . 100,000

Platforms complete for guns . . 100

Platforms for mortars … 60

/• carriages for guns . . 60

Spare) mortar beds 60

> sponges, rammers, and lav. dies, in sets. … 20

Tools to work in trenches … 40,000 Several hand-jacks, gins, sling-carts, travelling forges, and other engines proper to raise and carry heavy burdens ; spare timber, and all sorts of miners’ tools, mantlets, stuffed gabions, fasr cines, pickets, and gabions.

Siege brusque., Fr., an expression used among the French to signify the prompt and immediate movement of a besieging army, against a fortified town or place, without waiting for the regular formation of lines, &c. In this case the troops make a vigorous attack upon all the outworks, and endeavour to make a lodgment upon the counterscarp. When they have suceeded, they instantly throw up temporary lines, &c., behind them, in order to secure a retreat, should the garrison force them to quit their ground.

The following are some of the most important sieges from the twelfth century to the year 1815. Acre, 1192; 1799, by Buonaparte. — The siege

raised after sixty days’ open trenches. Agria, 1566, 1687. Aiguillon, 1345. Alba Regalis (Stulweissenberg), 1543, 1601,

1602, 1688.

Alcantara, 1706. Alessandria (Italy), 1801. Algiers, besieged by an armament from Charles V. of Spain, in 1541. — Bombarded by order of Louis XIV., in 1682, on which occasion bomb vessels were first employed by a French engineer of the name of Renau. — Bombarded again in 1683 ; again in 1689, by tho French; arid finally by lord Exmouth on the 27th daj-of August, 1816. Algesiras, 1341. Alhama, 1481. Alkmaar, 1573.

Almeida, August 27th, 1810.— Lost by the accidental explosion of the principal magazine, and the after-treachery of major Jose de Barreiros, the Portuguese artillery commander.

Amiens, 1597. Ancona, 1799.

Angely (St. Jean d'), 1569, 1621. Angouleme, 1345. Antequera, 1410.

Antwerp, 1576, 1583; 1585, use of infernal machines; 1706,1792, 1814. Aretino, 1800. Arras, 1414. Arisch (El), 1800. Astorga, April 12th, 1810. Azoff, 1736. Asti, 1745, 1746. Atella, 1496. Ath, 1697, 1700 ; 1745.— First general adoption

of firing with artillery a ricochet, at a siege. Avignon, 1226.

Badaioz, March llth, 1811; besieged by lord Wellington in May, the siege raised; a second time during May and June, again raised June 9th, from an insufficiency of means ; besieged by his lordship, the third time, in 1812, and taken by escalade on the night of April 6th. If the British had failed, in this last attempt, the army must have gone back to the lines of Torres Vedras— Remarfc.— After twenty days' open trenches, three breaches were made ; the assault of these failed, while an attack of the same walls by escalade succeeded. — Such were the exertions, and so daring was the intrepidity of the British troops

during the escalade, particularly that made by general Leith, and the late lamented Sir Thomas Picton, K. B., that a few years hence they will scarcely ob-tain belief. Bagdad, 1248.

Barcelona, 1697, 1705, 1706, 1714. Bastia, 1511,1793. Bayonne, 1451. Beauvais, 1472. Belgrade, 1439, 1455, 1521, 1688, 1690, 1717,

1739, 1789.

Bellegarde, 1793, 1794. Belle- [sle, April 7th, 1761. Belvedere (Calabria), 1289. Bene, 1551, 1795. Bergerac, 1345.

Bergen-op-zoom, 1588, 1622, 1747, 1814.— During one of the most obstinate sieges against this strong place, the Dutch, from the prevalence of a thirst for lucre, actually sold gunpowder arid other materials to enable the enemy to destroy their own property. Berwick, 1293. Besan9on, 1668, 1674. Bethune, 1710. Blisecastel, 1674, 1794. Bois-le-duc, 1603, 1629, 1794. Bologna, 1512, 1796. Bommel, 1599, invention of the covert-way;

1794.

Bonifacio, 1553. Bonn, 1587, 1689, 1703. Bordeaux, 1451, 1452, 1653. Bouchain, 1676; 1711,— last seige of the duke

of Marlborough. Boulogne, 1545.

Bourbon (Ft.), Martinique, 1794; 18— Taken and blown up.

Bourges, 1412. Braunau, 1744, 1805. Breda, 1590, 1625, 1793, 1794. Brescia, 1439, 1512, 179G, 1799. Breslaw, 1741, 1757, 1759; January 8th, 1807. Brest, 1 373.

Brieg, 1741,1806, 1807. Brisac, 1638, 1703, 1704. Brussels (bombardment), 1695, 1746. Buda, 1526,1528, 1541, 1684, 1686. Burgos (Castle of), September 19th, to Octobe-22d, 1812.— The siege of this insignificant place was raised from the want of sufficient means

of attack— there not being a miner, a sapper, hardly an artificer in the attacking party. — The fortifications were blown up by the French in 1813, in their retreat, June 13th, Cadiz, February 10th, 1810, raised August 12th5 1812, in consequence of the defeat of Marmont at the battle of Salamanca. Caen, 1346,1450. Calais, 1347. starved into a surrender by Ld—

ward III. ; 1436, 1558, 1596. Calvi (Corsica), 1794.

Campo-Mayor, March 23d, 1811 ; April 15th. Candia, 1667 to 1669.— The largest cannon at that time known in Europe cast by the Turks in their camp. — Parallels to support the approaches, invented by an Italian engineer, first used. Capua, 1501. Carignan, 1544. Carthagena, 1706. Casal, 1534, 1629, 1630. Cassel, 1328. Cassel (Hesse), 1761. Castillon, 1452, 1586. Ceuta, 1790. Chalus, 1199.— Death of Richard Cceur-deLion.

Charleroi, 1672, 16.77, 1693,1736, 1794. Chartres, 1568, 1591. Ch&teau-gaillard, 1203, 1418. Chaves, March 25th, 1809. Cherbourg, 1450. Chincilla, October 30th, 1812. Chio, 1346. Ciudad Rodrigo, 1706; July 10th, li

nuary 19th, 1812. Colberg, 1760, 1761, 1807. Colchester, 1645. Colliouri, 1794.

Compiegne, 1430.— Joan of Arc taken prisoner. Conde", 1676, 1792, 1794-Coni 1691, 1744. Constantinople, 1453.

Copenhagen, 1700, 1801 ; September 1807. Corbeil, 1590. Corfu, 1715. Courtrai, taken and retaken twenty times, in

1302 to 1800. Cracow, 1772.

€remona, 1702.-Surprised by prince Eugene, who carried off marshal Villeroy prisoner ; bu was finally driven out of the town, after a combat of several hours. Crevecoeur, 1672, 1794. Croye, 1442 to 1467. Damien(St.), 1617.

Dantzic, 1734, 1793, 1807; 1813 to January 12th, 1814.

Denia, 1707. — The siege raised by the marquis d'Asfeld, to prevent the entire destruction of his army, after having given three general assaults.

Dewinter, 1591.

Dinant, 1466, 1674.

Diu, 1538, 1546.

Dole, 1479, 1636; 1668 completed the conquest of Tranche Comte ; 1674.

Domingo (St.), 1805.

Douai, 1710.

Dover, 1216.

Dresden, 1745, 1760, 1814.

Dunemonde, 1710.

Dunkirk, 1646, 1793.

Duren, 1543.

Egra, 1742, 1743.

Elmo (St.), 1793.

Epernay, 1592.

Erie (North America), August 12th, 1814.

Esseck, 1690.

Faria, 1373.

Figueras, August 19th, 1811.

Flushing, August 15th, 1809, taken by the British.

Fontenay, 1242, demolished.

Fossano, 1536. •

Frederickshall, December 1718.— Charles XII. killed.

Frederickstein, August 13th, 1814.

Fumes, 1675, 1744, 1793—

Gaeta, 1433, 1707, 1734, 1799: July, 1806;

1815.

Gavi, 1625.

Genoa, 1747, 1800.

Gerona, December 10th, 1809.

Gertruidenberg, 1593, 1793, 1795.

Ghent, 1576 ; 1708. A French garrison of thirty-seven battalions surrendered to the duke of Marlborough in four days open trenches and previous to the first batteries being completed : had the place resisted till the following day, in all probability the siege would have been raised, in consequence of the intense cold which set in the night of the capitulation. 1745,

1789.

Gibraltar, 1704, 1779 ; September, 1782.

Giorgewo, 1790, 1807.

Girona, 1286, 1711.

Glatz, 1742, 1807.

Glogau, 1109, 1741, 1806.

Gottingen, 1760.

Graves, 1586, 1602, remarkable defence, 1674,

1794.

Gravelines, 1644.

Grenada, 1491, and 1492. — End of the Moorish power in Spain, after a dominion of 762 years.

Groll, 1527, 1606.

Groningen, 1580, 1594, 1672, 1795.

Guastalla, 1702.

Gueldres, 1637, 1639, 1640, 1703.

Haarlem, 1572, 1573.

Haguenau, 1675, 1705.

Ham, 1411.

Harfleur, 1415, 1450.

Havannah and dependencies, 176‘2.

Heidelberg, 1688.

Hennebon, 1341.

Ilesdin, 1639. — Shells brought into general use. Ilostalrich, May 12th, 1810. Hulst, 15Q1, 1596, 1747.

Huningen, 1815. — The fortifications destroyed. Ingolstadt, 1632, 1743.

Ismae’l, 1789, taken by the Russians, when the inhabitants and soldiers were put to the sword by the order of prince Suwarrow; 1807. Ispahan, 1723. Kaminiek, 1672. Kehl, 1733, 1796, 1797. Keyserwert, 1702, 1794. Kinburn, 1787. Knotesembourg, 1591. Kcenigstein, 1745, 1792, 1793, 1796. Kosel, 1807. Lagni, 1432, 1590.

Landau, 1702, 1703, 1704, 1713, 1792, 1793. Landrecis, 1543, 1637; 1712. The imperialists defeated at Denain, and the siege raised in consequence of prince Eugene having established his magazines at too great a distance for his army to protect the communication with them,

1794. Laon, 991, 1594. Leipsic, 1637 ; taken and retaken several times

afterwards, particularly in 1815. Lemberg, 1704. Lens, 1647.

Lerida, 1647, 1707; May 14th, 1807. Leucate, 1590, 1637. Leutmeritz, 1742. Leyden, 1574. Liege, 1468, 1702.

Lille, 1296, 1667; August, 1708; 1793. Lillo, 1747. Limerick, 1651, 1691. Livron, 1547. Loja, 1482. Londonderry, 1689. Louisbourg, 1758. Lourde, 1373.

Lyons, 1793.

Maestricht, 1576, 1579 ; 1673, Vauban first Game into notice; 1676, 1743, 1748, 1794.

Magdebourg, 1631, 1806.

Malaga, 1487.

Malta, 1565, 1798, 1800.

Manilla, 1734, 1797, 1799. Taken by Buonaparte.

Marseilles, 1544.

Martos, 1238.

Mentz, by Charles V., 1552; 1689, 1792, 1793

1794,1796, 1797.

Meaux, 1422, 1439.

Melun, 1420, 1559.

Menin, 1706, 1744.

Mequinenza, June 8th, 1810.

Messina, 1282 ; 1719—91 days.

Metz, 1552, 1553,

Mezieres, 1521.

Middelbourg, 15*2.

Milhaud, 1586.

Mons, 1572, 1691, 1709, 1746, 1792. 1794

Montargis, 1427.

Montauban, 1621.

Monte-Calvo, 1558.

Monterau-Fault- Yonne, 1437.

Montevideo, January 1808.

Monttnedi, 1657.

Montme”lian, 1600, 1691.

Mortagne, 1378, 1794.

Mothe (de la), 1634. The French, taught by Mr. Muller, an English engineer, first practised the art of throwing shells.

Murviedro (Saguntum), October 25th, 1811.

Naerden, 1572.

Namur, 1692, 1695, 1746, 1792.

Naples, 1253, 1381, 1435, 1442, 1503, 1557,

1792, 1799, 1806.

Neiss, 1741, 1807.

Nemez, 1686.

Neuhausel, 1621, 1663, 1685.

Nice, 1705, remarkable for the mode of attack adopted by marshal Berwick; — see his Memoirs.

Nieuport, 1745 ; 1794, inundated and obstinately defended by a handful of British troops against a large French force under the command of general Pichegru.

Nocera, 1386.

Olivpnca (blockade), January 22d, 1811.

Olmutz, 1758.

Oran, 1509, 1708, 1732.

Orleans, 1428, 1563.

Ostend, from 1701 to 1704, the Spaniards lost 40,000 men in the attack ; 1706, 1745.

Oudenarde, 1582, 1708, 1745.

Padua, 1509.

Palaraos, 1694, 1695.

Pampeluna, 1312; October31st, 1813 (blockade).

Paris, 1411, 1429, 1485, 1594.

Parma, 1248.

Pavia, 1524 and 1525, siege raised, and Francis made prisoner; 1655, 1796.

Peronne, 1536.

Perpignan, 1542, 1642.

Philipville, 1578.

Philipsbourg, 1644, 1675; 1688, first experiment of firing artillery a ricochet ; 1734, duke of Berwick killed ; 1795.

Pizzighitone, 1706, 1733, 1796, 1799.

Plattsbourg (Lake Champlain, N. A.) September llth, 1814.

Pletzkow, 1581.

Polocz, 1550.

Pondicherry, 1748, 1761, 1778, 1792.

Pontoise, 1419, 1437, 1451.

Prague, 1741, 1743, 1744.

Quesnoy (Ie), 1712, 1794.

Randan, 1380.

Rees, 1599.

Rennes, 1357.

Retiro (Madrid), August 14th, 1812.

Rheims, 1359.

Rhodes, besieged three times, the last in 1522.

Riga, 1700, 171O.

Rochelle, 1372, 1573, 1627.

Rome. 1527, 1798.

Romorantin. 1356. — Artillery first used in sieges.

Ronda, 1485.

Rosas, 1645, 1795, 1808.

Rotweil, 1640.

Roiien. 1204, 1419, 1449, 1562, 1591.

Royan, 1621.

Salamanca (forts of— St. Vicente, Gayetano* Merced), June 27th. 1812.

Salisbury, 1349.

Saragossa, 1710 ; 1808, four months ; February

21st, 1809, taken after fifty-two days open

trenches, twenty-nine of which the enemy were

in the streets. Saverne, 1675. Sbarras, 1676. Schweidnitz, 1762, the first experiment to reduce

a fortress by springing globes of compression ;

1807.

Schonoven, 1575. Sebastian (St.), next to Gibraltar, the strongest

place in Spain, 1719; September 8th, 1814,

most obstinately defended by the French ; till

general Graham directed the guns to be fired

against the curtain, over the men's heads as

they advanced to the breach. Serezanella, a town in Tuscany, 1487; the first

mines, since the invention of gunpowder, were

made at the siege of this place, by the Genoese. Seringapatam, 1799. Seville, 1096, 1248. Skid, 1678. Sienna, 1544. Sigeth, 1566. Silberberg, 1807. Sluys, 1587, 1604, 1757, 1794. Smolensko, 1611. Soissons, 1414. Stralsund, 1675, the method of throwing red-hot

balls first practised with certainty; 1713,1807. Straubing, 1742. St. Philip (Fort), in Minorca, 1756; 1782; the

garrison nearly destroyed from being lodged in

damp casemates, and the defence very much

abridged thereby.

Tarifa, 1292; December 20th, 1811. Tarragona, June 28th, 1811, stormed by the

French — man, woman, and child put to the

sword. — May, 1813, besieged by Sir John

Murray, — siege raised. Temeswar, 1716. Terremonde, 1584. Tergoes, 1572. Therouanne, 1513, 1553. Thionville, 1643, 1792. Thorn, 1703. Thouars, 1372,1793. Tortona, 1734, 1745, 1799. Tortosa, January 2d, 1811. Toulon, 1707, 1793. Toulouse, 1217. Tournai, 1340, 1352, 1581, 1667; 1709, the

best defence ever drawn from countermines ;

1745, 1794.

Trembawla, 1 675. Treves, 1675. Tunis, 1270, 1535. Turin, 1640, 1706, 1799. Urbino, 1799. Vachtendonck, 1588.

Valencia. 1098, 1238 ; December 25th, 1811 Valencia (of Alcantara), 1705. Valencia (New, Spanish America), August 18th,

1811, surrendered to Miranda. Valenciennes, 1557, 1677; 1794, taken by the

allied army under the command of H. 11.17,

the duke of York. t;alognes, 1364.

Vannes, 1343.

Velez, 1487.

Venloo, 1702, first siege undertaken by the duke of Marl bo rough ; 1794.

Verceil, 1617, 1704.

Verdun, 1792.

Vienna, 1529, 1683.

Vintimiglia, 1746.

Wakefield, 1460.

Walcheren (Island of), taken by the British. See Flushing.

Woygnaff, 1676.

Xativa, 1707; a most memorable defence made by the inhabitants, assisted by a garrison of 600 English troops : as a punishment, the whole town, with the exception of the principal church, was razed, and Us name changed to St. Philippe.

Xeres, 1262.

Ypres, 1584, 1648, 1744, 1794.

Ziriczee, 1576.

Zurich, 1544.

Zutphen, 1572, 1586.

SIENITE or SYENITE, in mineralogy, a compound granular aggregated rock, composed of felspar and hornblende, and sometimes quartz and black mica. The hornblende is the characteristic ingredient, and distinguishes it perfectly from granite, with which it is often confounded ; but the felspar, which is almost always red, and seldom inclines to green, forms the most abundant and essential ingredient of. the rock. Some varieties contain a very considerable portion of quartz and mica, but little hornblende. This is particularly the case with the Egyptian varieties, and hence these are often confounded with real granite. As it has many points of agreement with greenstone, it is necessary to compare them together. In greenstone the hornblende is usually the predominating ingredient; in sienite on the contrary it is the felspar that predominates. In greenstone the felspar is almost always green or greenish ; here on the contrary it is as constantly red or reddish. Quartz and mica are very rare in -greenstone, and in inconsiderable quantity; whereas they are rather frequent in sienite. Lastly, greenstone commonly contains iron pyrites, which never occurs in sienite.

It has either a simple granular base, or it is granular porphyritic ; and then it is denominated porphyritic sienite. When the parts of the granular base are so minute as to be distinguished with difficulty, and it ˆcontains imbedded in it large crystals of felspar, the rock is termed sienite-porphyry. It is sometimes unstratified, sometimes very distinctly stratified. It sometimes shows a tendency to the columnar structure. It contains no foreign beds. It occurs in unconformable and overlying stratification, over granite, gneiss, mica-slate and clay-slate, and is pretty continuous', and covers most of the primitive rocks. It is equally metalliferous with porphyry. In the island of Cyprus it affords much copper ; many of the important silver and gold mines in Hungary are situated in it. The sienite of the forest of Thuringia affords iron. In tins country there is a fine example of sienite in Galloway, where it.forms a considerable portion

of the hill called Criffle. On the continent it occurs in the electorate of Saxony; and in Upper Egypt at the city of Syena, in Thebaid, at the cataracts of the Nile, whence it derives its name. The Romans brought it from that place to Rome, for architectural and statuary purposes.

SIENNA, TERRITORIO m SIENNA, or SIEN-NESE, a province of Tuscany, bounded by the Florentine and the territory of Pisa; sixty-two iiiiles in length, and of nearly an equal breadth ; its superficial extent is about SlOOsquare miles. It is divided into two districts,

called Upper and Lower ; the former enjoying a pure and healthy atmosphere, the latter marshy, and much affected with the mal aria. This province contains le-vel tracts of great fertility, and several of its mountains yield mineral products. Population

190,000.

SIENNA, or SIENA, an ancient and considerable city of Tuscany, the capital of the abo\;e province, situated in a pleasant and healthy district, on three eminences. Population 24,000. The approach on the southern road is through a fine avenue planted with trees, and affording, from a distance, too favorable a view of the town, 01 which the streets are extremely uneven, winding, and narrow, so that for the chief part they are impassable for carriages. The streets are paved with brick. The only handsome square is that in which is the town-house ; it contains a beautiful fountain. The piazza here is one of the principal attractions : it is a large space, well laid out with walks, and planted with statues. The esplanade is a fine shady avenue leading to the citadel, the ramparts of which, planted with trees, and laid out in the form of terraces, afford several interesting views.

The cathedral of Sienna is a marble Gothic structure, accounted inferior to none in Italy, except St. Peter's. Its nave is supported by beautiful columns ; its pavement embellished with mosaics, and with delineations of sacred subjects. Several of the chapels and altars are deserving of minute attention. The town-house is a large building, also in the Gothic style, and surrounded with porticoes. Adjoining is the theatre, rebuilt since 1750. There are also in Sienna several fine family mansions, or palaces, as they are termed.

The manufactures include woollen, leather, paper, and hats, but all on a small scale. Some traffic is carried on in corn, and in the valuable marble of the environs. The town is the seat of a university, founded in 1321, and still reckoning so many as sixty professors ; but it is of little repute. The academies of physics and natural history have acquired some note from their memoirs. The Siennese lay claim to a reputation for politeness, to a taste in learning and the arts, and in particular to speaking Italian with great purity. This town has, from first to last, supplied seven popes ; it gave birth also to Socinus.

Sienna was long a petty place". Augustus sent thither a colony, and Pliny mentions the town under the name of Colonia Senensis. Its prosperity was greatest during the middle ages, when it enjoyed an

extensive commerce. It even long maintained itself as an independent republic; but, intestine divisions favoring the

designs of foreign powers, it became successively subject to French and Spanish invaders ; and, in the latter part of the sixteenth century, was ceded to Florence by Philip II. of Spain. Since then it has had no separate government. It is the see of an archbishop, and is thirty miles south by east of Florence.

SIERRA LEONA, a country of western Africa, on the Atlantic, and distinguished for the colony formed there by the British nation from the most laudable motives of generosity and philanthropy It is traversed by a considerable river, derived from an unknown source in the interior, called the Mitomba or Sierra Leona. The extent to which this last name may be applied, either to the north or south of the river, or in the interior, is very indefinite. The name is derived from a long ridge of mountains rising at no great distance from the southern bank of the river. From these descend many streams or torrents, a number of which unite, in a place called the bay of France, into a large basin, which affords the best watering-place in all Gui-nea. This is described as a most delightful spot, shadowed by tall trees, mingled with rocks. The country consists generally of one vast, almost impenetrable forest, only particular spots of which have been cleared and cultivated. Even at a few steps from the shores and villages the ground becomes encumbered with trees and shrubs, penetrated only by narrow paths formed by the natives to their cleared fields. The houses are low, little huts, built with wooden posts fastened in the ground, of a round or square form, and thatched with straw. The villages consist of thirty or forty of such huts, and are moved without the least difficulty from place to place as convenience or fancy direct. Rice is raised wherever the ground is sufficiently watered for its production, and forms the constant food of the rich ; but the poor content themselves with millet, yams, and plantains. There is great abundance of fruits. The pine-apple is pre-eminent ; to which are added oranges, lemons, limes, and a fruit resembling a melon. The

palm tree yields a liquor which is eagerly drank, and possesses intoxicating qualities. Elephants' teeth brought to the coast here are valued above any other on the same coast, being remarkably clean, white, and free from specks, though they occur elsewhere of larger size. A considerable quantity of civet is brought to market, the produce of a peculiar species of cat. The woods and mountains are considerably infested with wild animals, particularly lions, from the multitude of which the country appears to have derived its name. Apes, also, move about in vast bodies. The exuberance of life in a tropical climate gives rise also to numerous and troublesome swarms of insects, flies, mosquitoes, and particularly ants, the white species of which commit extraordinary devastation. The same cause multiplies the serpent species to a remarkable degree. The rivers contain large alligators, and the manatea or sea cow.

The Portuguese were the first who formed settlements in the river of Sierra Leona; but afterwards all the nations of Europe found their way thi«her. The English established their fac-

tory upon Bance Island, situated in the middle of the river, being merely a rock ascended by steps, and possessing no advantage except that of security. The fort was substantially built of stone and lime, defended by ten or twelve guns, and garrisoned by about twenty whites and thirty grumettas or free negroes. The main object of this, as of every other establishment on the same coast, was that which it has since been made so active an instrument in overthrowing, the slave trade; and the supply here afforded, of these unfortunate victims of European cupidity, was very considerable.

SIERRA LEONA, or LEOXE, mountains of Africa, between Nigritia and Guinea, extending as far as Abyssinia. See MOUNTAIN. Sierra Leona, being thinly inhabited, appeared to some benevolent gentlemen in England a place where, without incommoding the natives, a sufficient quantity of ground might be bought, on which to settle a great number of free negroes, who, in 1786, swarmed in London in idleness and want. About 400 of these, with sixty whites, mostly women of bad character and in ill health, were accordingly sent out, at the charge of government, to Sierra Leona. Necessity, it was hoped, would make them industrious and orderly ; and captain Thomson of the navy, who conducted them, obtained for their use a grant op }an(j to his majesty from king Tom, the neighbouring chief, and afterwards from Naimbanna, the king of the country. The colony, however, soon went to ruin ; but the land which they occupied, being about twenty miles

square, his majesty was enabled to grant it, by act of parliament, to another colony, founded on better principles, and for a still nobler purpose. The most intelligent members of that society, which has labored so strenuously to procure an abolition of the slave trade, justly concluding that the natives of Guinea would reap very little benefit from the attainment of their object, unless they should be taught the principles of religion and the arts of civil life, which alone can render them really free, conceived the plan of a colony at Sierra Leona, to be settled for the truly generous purpose of civilising the Africans, by maintaining with them a friendly intercourse, and a commerce in every thing but men. This plan could not be carried into effect but at a very great expense. Subscriptions were therefore opened upon rational and equitable terms, and a sum deemed sufficient was speedily raised. An act of parliament was passed in favour of the subscribers, by which they were incorporated by the denomination of the Sierra Leona Company; aifd in pursuance of that act they held their first meeting at London on the 1 9th of October, 1791, when the following gentlemen were chosen directors for that year: — ‘ Henry Thornton, esq., M. P., chairman; Philip Sansom, esq., deputy chairman ; Sir Charles Middleton, bart. ; Sir George Young, knt. ; William Wilberforce, esq., M. P.; Rev. Thomas Clarkson, A. M.; Joseph Hardcastle, esq.; John Kingston, esq. ; Samuel Parker, esq. ; Granville Sharp, esq. ; William Sandford, esq. ; Vickeris Taylor, esq. ; George Wolfe, esq.’ The directors having stated the natural advantages of Sierra Leona, and its present miserable condition, ob-SIERRA LEON A.

served that they had not merely to establish a commercial factory, but that, to introduce civilisation, cultivation, and a safe trade, the company must provide for the security of the persons and property of the colonists. The directors therefore resolved that three or four vessels should sail at once, with such a number of people as would be able to protect and assist each other; with goods both for trade and for the supply of the colony. Accordingly several vessels sailed, hav-ing on board a council for the government of the colony and the management of the company’s affairs ; a number of artificers and other servants of the company, some soldiers, and a very few English settlers. The directors were laudably cautious in the choice of colonists. They admitted into the society no white man of bad character, or who was not a declared enemy to the slave trade ; and,

as the chief object of their enterprise was the civilisation of the natives, it was with great propriety that they chose more than three-fourths of their settlers from the free negroes in Nova Scotia, who had borne arms for the British government during the American war. The superintendant and council were particularly instructed to secure to all blacks and people of color at Sierra Leona equal rights and equal treatment, in all respects, with whites. They were to be tried by jury, as well as others; and the council was desired to allot to the blacks, employments suited to their abilities, and to af-ford them every opportunity of cultivating their talents. All practicable means of maintaining subordination were directed to be used ; and the council was especially instructed .to promote religion and morals, by supporting public worship and the due observance of the Sabbath, and by the instruction of the people, and the education of children. But no person was to be prevented from performing or attending religious worship, in whatever place, time, or manner, he might think fit, or from peaceably inculcating his own religious opinions. Orders were given in choosing the site of a town to consider health as the first object ; and the first town was directed to be called Free Town. Articles for building and cultivation were sent out, besides the cargoes for prosecuting the company's commerce ; and schools for reading, writing, and accounts, were ordered to be set up for the purpose %f instructing the children of such natives as should be willing to put them under the company's care. The leading object of the company was to substitute for that disgraceful traffic, which has too long subsisted, a fair commerce with Africa, and all the blessings which might be expected to attend it. Considerable advantages appeared hereby likely to result to Great Britain, not only from our obtaining several commodities cheaper, but also from opening a market for British manufactures. From this connexion Africa was likely to derive the still more important benefits of religion, morality, and civilisation.

To accomplish these purposes, it was necessary for the company to possess a tract of land as a repository for their goods, and which the Africans might cultivate in peace, secure from the ravages of the slave trade. It had been ascertained, be-yond a doubt, that the climate and soil of Africa

were admirably suited to the growth of sugar spices, coffee, cotton, indigo, rice, and every other species of tropical produce. The company proposed to instruct the natives to raise these articles, and to set them the example, by a spirited cultivation on its own account. Directions were given to the company's commercial agent to push forward a

trade, in a mode prescribed, in the present produce of Africa. Measures were taken for cultivating, on the company's account, the most profitable tropical pro duce ; and, in particular, a person of h>ng experience in the West Indies was ordered to begin a sugar plantation. A mineralogist and botanist were likewise engaged to go out and explore the country for new articles of commerce. Every thing being thus settled, upon the most equitable and benevolent principles, the ships sailed with the British colonists, to whom, in March 1792, were added 1131 blacks from Nova Scotia. The native chiefs being reconciled to the plan, and made to understand its beneficent tendency towards their people, the colony proceeded to build Free Town, on a dry and rather elevated spot on the south banks of the river. It occupied between seventy and eighty acres, its length be-ing about one-third of a mile, and its breadth nearly the same; and it contained nearly 400 houses, each having one-twelfth of an acre annexed, on which a few vegetables were raised. There were nine streets running from northwest to southeast, and three cross streets, all eighty feet wide, except one of 160 feet, in the middle of which were all the public buildings. These consisted of a governor's house and offices ; a large storehouse ; a large hospital ; six or eight other houses, offices, and shops, occupied by the company's servants; and a church capable of containing 800 people. The colonists at first suffered much from the rainy season, against which it was not in their power to provide sufficient protection ; but at the end of it they reco vered in a great measure their health and spirits, and proceeded with alacrity to execute the various purposes of their settlement. To excite emulation in culture, the government gave premiums to those colonists who raised the greatest quantities of rice, yams, eddoes, cabbages, Indian corn, and cotton, respectively. To limit the excesses of the slave trade, and gain the favor of the neighbouring chiefs, the directors instructed the governor and council to redeem any native from the neighbourhood, who should be unjustly sold either to or by a British subject. The servants of the company conducted themselves with the utmost propriety, being sober, moral, and exemplary; and from the labors of the clergymen were derived services highly important in every point of view. Before the end of two years from the institution of the colony, order and industry had begun to show their effects in an increasing prosperity. The woods had been cut down to the distance of about three English miles all round the town. By these means the climate had become healthier, and sickness had greatly abated. The fame of the colony had spread-not only along the whole western coast of Africa, but also to parts far distant from the coast ; embassies had been received of the most

friendly nature from kings and princes several hundred miles distant; and the native chiefs had begun to send their children to the colony, with full confidence, to be taught reading, writing, and accounts, and to be brought up in the Christian religion. In a word, it was not without grounds that the directors looked forward to that joyful period when, by the influence of the company's measures, the continent of Africa should be rescued from her present state of darkness and misery, and exhibit a delightful scene of light and knowledge, of civilisation, and order, of peaceful industry and domestic comfort. On their beneficent exertions they hoped with confidence for the blessing of providence ; they were countenanced and supported by the British government ; and, upon the breaking out of the present war, the French Convention authorised one of their agents to write to the directors, requesting a full account of the design of the institution, and the names of the ships employed in the service, and assuring them of the good wishes of the French government totso noble an undertaking. How completely that government fulfilled its promise is very generally known. Having vindicated the rights of man in Europe by the violation of every principle of truth and justice, they determined by the same means to give light and liberty to the Africans ; and that they have fully carried their determination into effect will be seen by the following extract of a letter from Mr. Afzelius, the company's botanist, dated Sierra Leona, 15th of November, 1794: — * The French have been here and ruined us. They arrived on the 28th of September last, early in the morning, with a fleet consisting of one large ship, two frigates, two armed brigs, and one cutter, together with two large armed merchant ships, taken by them at the Isle de Los, an English slave factory to the north of our co-lony, and which they have also destroyed 'and burnt. So well had they concealed their nation, that we took them at first for English. They had English-built vessels, which were rigged in the English way. They showed the English flag, and had their sailors, at least those we saw on deck, dressed like English. In short, we did not perceive our mistake till we observed them pointing their guns. We had not strength sufficient to resist, and therefore our governor gave orders that, as soon as they

should begin to fire, the British flag should be struck, and a flag of truce hoisted. Accordingly this was done, bud still they continued firing, and did much damage, both within and without the town. They killed two people and wounded three or four. But, as we did not understand the meaning of this proceeding, we asked them for an explanation ; and they answered us that we should display the flag of liberty as a proof of our submission. We assured them that it should already have been done if we had had any, which terminated the hostilities from the ships. In the mean time, most of the inhabitants had fled from the town, having taken with them as much of their pro-] my as they conveniently could in such a hurry. I was with the governor, together with a number of others ; but, as soon as I was certain they were enemies, I went towards my own house with a

view to save as much as possible of my property and natural collections; but was received in such a manner that I could not venture to proceed. My house was situated near the shore, and unfortunately just opposite the frigate which fired. I saw the balls passing through the house, and heard them whizzing about my ears. I saw that I should lose all my property; but -life was dearer to me, and I hastened to the woods. In the afternoon the enemy landed, finding the town almost destitute of people, but rich in provisions, clothing, and other stores. They began immediately to break open the houses and to plunder. What they did not want they destroyed, burnt, or threw into the river. They killed all the c.u-tle and animals they found in the fields or streets, yards, or elsewhere, not sparing even asses, dogs, and cats. These proceedings they continued the whole succeeding week, till they had entirely ruined our beautiful and prospering colony; and, when they found nothing more worth plundering, they set fire to the public buildings and all the houses belonging to the Europeans ; and burnt, as they said, by mistake nine or ten houses of the colonists. At last, after inflicting on us every hardship we could suffer, only sparing our lives and the houses of the colonists, they sailed on the 13th of October last, at noon, proceeding downwards to the Gold Coast, and left us in the most dreadful situation, without provisions, medicines, clothes, houses, or furniture, &c. &c., and I fear much that most of us should have perished had not our friends in the neighbourhood, both natives and Europeans, who were so happy as to escape the enemy, been so kind as to send us what they could spare. In the mean time most of us have either been, or still are, very sick, and many have died for want of pro-per food and medicine. The worst, however, is now past. At least we are not in any want of provision, although of the coarsest kind, but are destitute

of the most necessary articles and utensils for the house, the table, and the kitchen.' It was thus that the French Convention executed their purpose of spreading light and liberty through the world. The Sierra Leona colony was established for no other end than to abolish the slave trade, to enlighten the Africans, and to render them virtuous, rational, free, and happy ; and those powerful patrons of the rights of man destroyed that colony with many circumstances of the most wanton cruelty.

Even this disaster was repaired by the active exertions of the company ; the settlement resumed its prosperity, extended its survey over the neighbouring coasts, and received embassies even from remote African states. The company, however, exhausted by its losses, and by that profusion to which such establishments are liable, finally found it expedient to make an arrangement with government, by which Sierra Leona was placed under its immediate jurisdiction, like other colonies. About the same time the African Institution was set on foot by a number of excellent and distinguished individuals, for the purpose of devoting their efforts to the general improvement of this great continent. Sierra Leona appeared the most advantageous centre from which their efforts might emanate ; and it

Was tcierefore placed under their entire management. The character of the members was a sufficient pledge for the purity of that zeal with which they would pursue every object tending to the improvement of the colony, and the general benefit of Africa. This is, moreover, fully evinced in the successive reports which they hare published on the subject. Yet in these they candidly admit the obstacles which have obstructed the full accomplishment of the objects ir view. The volatile and turbulent disposition of the na-tive powers renders them always prompt to take offence, and to embark in hostilities ; and this unfriendly disposition is increased by the abolition of the slave trade, to which they were accustomed to look as the chief means of purchasing European luxuries. It has thus been found impossible to avoid repeated ruptures, the effects of which were always pernicious

to the interests of the colony. One mode of recruiting its numbers was derived from the negroes captured on their way to the West Indies, by the vessels destined to put a stop to the slave trade ; but the disposal of these was attended with considerable difficulty. The first plan was to make them purchase their liberty by a temporary bondage, under the name of indenture ; but it was naturally objected that this was running into the very evil which the colony was established to prevent; and the practice has been properly discontinued. Still, to preserve the requisite order and propriety among such a motley population left at full liberty, has not been found an easy task. The introduction of the forms of English law, a measure in itself so salutary, seems to have produced rather injurious effects upon this African race. It has inspired them with an unbounded rage for litigation, and called forth innumerable petty suits for assault and defamation, in which it appears that the female sex are usually in the proportion of four to one. Lastly, the distance from Britain, the unhealthy nature of the settlement, and the very moderate amount of. the salaries, render it very difficult to procure respectable and duly qualified persons to fill the different official situations. Notwithstanding all these disadvantages, a gradual but decided improvement has taken place, and is becoming more sensible, as experience teaches the best modes of administering such an establishment. Within the last few years, both the extension and improvement of the colony have been particularly remarkable. With the efforts of the institution have been combined those of the Church Missionary Society, who have introduced, with great advantage, the British system of education. Its first establishment was in the country schools ; and in Freetown, where a different method had been originally employed, there occurred ‘considerable obstacles to its introduction, from the murmurs of the parents, and the disinclination of the children. At length, however, the plan was completely successful, and the schools contain now 350 boys and girls, and 180 adults. In consequence of the great increase of population from disbanded soldiers, and still more from captured negroes, a number of new towns have been founded in different parts of the territory. The principal of these is Regent’s

Town, which was found in 1816 by Mr. Johnson, the missionary teacher, in a state of the utmost barbarism. It contained 1100 captured negroes, belonging to twenty -two nations in all differen: parts of the continent, without any tie to each other, and many of them separated by deadly enmity. Some would live in the woods, apart from society; others, particularly those of the Eho nation, subsisted chiefly by

thieving and plunder, stealing fowls, and eating them raw. One of them, having stolen a litter of nine pigs, was traced by the owner, who found that the animals had been all thrown alive into a pot of boiling water. Another, having lost a clog and pot, discovered the thief, and found the dog boiling in the pot for dinner. It was some time before any impression could be made on this savage population ; but at length the laoors of the excellent missionary, seconded by those of some intelligent negroes, produced the happiest effects. In the course of the few years which have since elapsed an entirely new scene has arisen. The town itself is laid out with regularity ; nineteen new streets are formed and levelled, with good roads round the place ; a large stone church rises in the midst of the habitations; a government-house, a parsonage-house, school-houses, storehouses, a bridge of several arches, some native dwellings, and other buildings, all of stone; are either finished, or on the point of being so. The state of cultivation farther manifests the industry of the people: all are farmers; gardens fenced in are attached to every house; all the land in the immediate neighbourhood is under cultivation ; and there are fields even to the distance of three miles ; vegetables and fruits are raised in abundance ; and there is a good supply of domestic animals. Many of them, besides the cultivation of the ground, carry on trades ; fifty are masons and bricklayers, forty carpenters, thirty sawyers, thirty shingle makers, twenty tailors, four blacksmiths, and two butchers. In these various ways upwards of 600 of the negroes provide for their own maintenance. The appearance and manners of the people have improved in an equal, degree. They are all now decently clothed : almost all the females have learned to make their own clothing ; about 400 couple are married ; the attendance on public worship is regular and large, comprising on an average not less than 1200 or 1 300 negroes, while Mr. Johnson's first congregation amounted only to nine; and the schools, which opened with 140 children and sixty adults, now contain upwards of 500 scholars. In the more immediate vicinity of Freetown, there are also the townships of Charlotte, Leopold, Gloucester, and Wilberforce. These, with Freetown, contain upwards of 2000 scholars, adults and children, in a course of regular instruction. Within the last two years, in consequence of the accessions to the population, four new and more distant stations have been formed; Waterloo, bordering on the Timmanees, and containing already 700 inhabitants ; Wellington, near to Kissey ; and Hastings, not yet risen to any importance. These are on the eastern side of the colony, tvhile on the southwest- ern is York, bordering on the Sherbros, where a settlement called Kent had already been formed

Connected also with the colony, a settlement has been formed called Bathurst, at St. Mary's, on the Gambia. The population is increasing. The climate is said to be healthy, and provisions much cheaper than at Sierra Leona ; and the opportunity afforded of communicating with the populous countries on that river renders it extremely valuable.

The following is the distribution and amount of the population of Sierra Leona, according to a census taken on the 8th of July 1820 : — Freetown and suburbs . . '. 4785

Leopold 469

Charlotte : . 268

Bathurst 469

Gloucester ""•'• . . • 563

Regent and vicinity … « 1218 Kissey and neighbourhood . • 1033

Wilberforce … . 4 . 409 Kent and vicinity …. 296

Waterloo 353

Hastings … … 195

Wellington . … . 456

York 297

Leicester hamlet . .' . 78

Villages in peninsula … 1468 Peninsula and isles in river . . 115 Gambia island . . 37

12.509

Of these, there are

Men 5796

Women 3020

Boys 2015

Girls … . 1678

12,509

1* According to nations, the above population is classed as follows : —

Europeans . .. • . 120

Nova Scotians …. 730

Maroons 594

Natives 2989

Liberated negroes …. 8076

These statements are exclusive of the military (European and native) and their families. The increase since the census of the 31st of December 1818 is 2944, chiefly arising from the liberated negroes and discharged soldiers.

The following are the number of scholars educating according to the national system, in the different establishments : — Freetown and suburbs … 575

Leopold 144

Charlotte 106

Bathurst 113

Gloucester 258

Regent town 432

Kissey 158

Wilberforce 75

Kent 77

Waterloo 86

Hastings 57

Wellington 16

2097

Uovernment at one period contemplated the abandonment of this settlement, but subsequently changed its purpose.

SIERRA M ADRE, a ridge of mountains in North America, forming part of that vast chain which, under the different appellations of the Andes and Rocky Mountains, runs through the whole extent of the American continent, beginning at Terra del Fuego, and ending at the Icy Ocean in the north. The term of Sierra Madre, or Topia, is, however, more strictly applied to that elevated part of this immense ridge which commences near Guadalaxara, and extends 450 miles in a northerly direction into New Mexico. The breadth of all its ridges or parallel crests, at this part, is sometimes 120 miles, where the chain is called more distinctively by the appellation of Sierra Madre, or Mother Ridge, on account of its great altitude above the other parts. Its sides are said to present the most sublime specimens of mountain scenery. This part of the chain, and indeed nearly the whole of it, is jn general densely covered with forests of the most gloomy appearance, composed principally of pines and oaks. Here birds of every description, peculiar to the country, inhabit ; and their variegated and beautiful plumage throws a ray of lustre on the sombre scene. On the summits of some of these mountains snow eternally lodges. Many rivers take their rise in the sides and near the tops of this Cordillera,

and rush with impetuous force into the valleys below, whence they take their courses to the Atlantic and Pacific Oceans. During this period, when the natives are forced to much manual labor and bodily exertion in the open air, to repress the ravages^ of the waters, the mosquitoes become intolerable. The Sierra Ma-dre sends off a branch in the west part of the province of New Mexico. This ramification is called Gemes, and bears a south-easterly direction ; whilst on the eastern side it throws off another arm, called the ridge of Nahmi, which is, however, of inferior height, and of shorter duration, than that of Gemes. From the shore of the Pacific to the great Topian ridge, the general distance may be computed at 140 miles : in many places, however, it is greater, and in some, where the continent begins to straighten its bounds, not one-half that distance. The Topian chain takes the name of Sierra de las Grullas from 38° to 40° N. lat. ; beyond that, to 42° N. lat., it receives the name of Sierra Verde. During its southern course it bears several distinct names, besides the general one of Sierra Madre. SIERRA DE QUINEROPUCA AND PACARAIMO, a chain of the Andes, in New Granada, branching eastward from the main chain, near the lake Pa-rima and the Amazons. It stretches towards French Guiana, where its form is little known, as the interior of that country is inhabited by Car-ribs and negroes, who keep the settlers at bay. The rivers of Berbice, Surinam, Marony, and Essequibo, rise in this part of the chain.

SIERRA MORENA, a chain of mountains in Spain, between the provinces of Cordova and Jaen on the south, and those of Estramadura and La Mancha on the north. About twenty-seven years ago this district was the dread of travellers ; but by the exertions of M. Le Maur, a French engineer, who, in 1779, \vas appointed by count Florida Blanca to superintend the business, a new road has been made over, which if.

equal to the finest in Europe; and, of consequence, several new towns have been built, and new settlements formed, in a district that had for many centuries continued barbarous and uncultivated.

SIEVE, n. s.) From sift. Hair or lawn

SIFT, v. a. J strained upon a hoop, by which

flower is separated from bran, or fine powder

from coarse; a boulter: to use a sieve; separate;

try.

We have sifted your objections against those pre-eminences royal. Hooker.

All which the wit of Calvin could from thence draw, by sifting the very utmost sentence and syllable, is no more than that certain speeches seem to intimate that all Christian churches ought to have their elderships. Id.

Thy counsel

Falls now into my ears as profitless As water in a sieve. -Shakspeare.

I fear me, if thy thoughts were sifted, The king thy sovereign is not quite exempt From envious malice of thy swelling heart.

Id. Henry VI. As near as I could sift him on that argument.

Shakspeare.

In the sifting of such favour, all that came out could not be expected to be pure meal, but must have a mixture of padar and bran. Wotton.

Opportunity I here have had To try thee, tift thee, and confess have found thee Proof against all temptation, as a rock Of adamant. Miltim's Paradise Regained.

If life sunk through you like a leaky sieve, Accuse yourself, you lived not while you might.

Dry den.

When yellow sands are sifted from below, The glittering billows give a golden show. Id. An innocent found a sieve, and presently fell to stopping the holes. L'Estrange.

One would think that every member, who embraces with vehemence the principles of either of these parties, had thoroughly sifted and examined them, and was secretly convinced of their preference to those he rejects. . Additon.

SIEUR, n. s. a ci-devant title of respect among the French, like that of master among us, restored, we suppose, with many worse things of the old system. Il was much used by lawyers, as also by superiors in their

letters to inferiors.

SI-FANS, or TOTJ-FANS, a people inhabiting the country on the west of China. Their country is only a continued ridge of mountains, enclosed by the rivers Hoang-ho on the north, Ya-long on the west, and Yangtse-kiang on the east, between lat. 30° and 35° N. The Si-fans are divided into two kinds of people ; the one are called by the Chinese Black Si-fans, the other Yellow, from the different colors of their tents. The black are the most clownish and wretched ; they live in small bodies, and are governed by petty chiefs, who all depend upon a greater. The yellow Si'fans are subject to families, the oldest of which becomes a lama, and assumes the yellow dress. These lama princes, who command in their respective districts, have the power of trying causes, and punishing criminals ; but their government is by no means burdensome ; provided certain honors are paid them, and they receive punctually the dues of

the god Fo, which amount to very little, they molest none of their subjects. The greater part of the Si-fans live *m tents ; but some of them have houses built of earth, and -even brick. Theirhabitations are not contiguous ; they form at most but some small hamlets, consisting of five or six families. They feed a great number of flocks, and are in no want of any of the necessaries of life. The principal article of their trade is rhubarb, which their country produces in great abundance. Their horses are small; but they are well shaped, lively, and robust. These peo-ple are of a proud and independent spirit, and acknowledge with reluctance the superiority of the Chinese government, to which they have been subjected': when they are summoned by the mandarins they rarely appear; but the government, for political reasons, winks at this contempt, and endeavours to keep these intractable subjects under by mildness and moderation : it would, besides, be difficult by rigorous means to reduce them to perfect obedience; their wild and frightful mountains .(.the tops of which are always covered with snow, even in July) would afford them places of shelter, from which they could never be driven by force. The customs of these mountaineers are totally different from those of the Chinese. It is, for example, an act of great politeness anrong them to present a white handkerchief of taffety or linen when they accost any person whom they are desirous of honoring. All their religion consists in their

adoration of the god Fo, to whom they have a singular attachment : their superstitious veneration extends even to his ministers, on whom they have considered it as their duty to confer supreme power and the government of the nation.

SIGjˆEUM, or SIGEUM, in ancieni geography, a celebrated town of Troas, on a promontory so named, near the mouth of the Scamander, extending six miles along the coast. Near this town and promontory most of the battles between the Greeks and Trojans were fought, according to Homer, and there too Achilles was buried. This cape is now called Inehisari.

SIGAULTIAN OPERATION, a rrfethod of delivery in cases of difficult labor, first practised by M. Sigault. It consists in enlarging the dimensions of the pelvis, in order to procure a safe passage to the child without injuring the mother. See MIDWIFERY.

SIGESBECKIA, in botany, a genus of plants belonging to the class of syngenesia, and to the order of polygamia superflua; and in the natural' system ranging under the forty-ninth order, composite The receptacle is paleaceous; the pappus is wanting ; the exterior calyx is pentaphyllous, proper, and spreading; the radius is halved. There are three species : 1. S. floscu-losa, a native of Peru ; 2. S. occidentalis, a na-tive of Virginia; 3. S. orientalis, a native of China and India.

SIGH, v. n., v. a. & n. s. Sax. pcan, f icettan ; Dut. suchten. To emit the breath audibly, as in grief : to lament ; mourn : a violent and audible emission of the breath, as in sadness.

For the oppression of the poor, for the sighing of the needy, will I arise. Psalm xii. 5.

He sighed deeply in his spirit, and saith, Why doth this generation seek after a sign? Mark viii. 12.

Full often has my heart swoln with keeping my tight imprisoned ; full often have the tears 1 drove back from mine eyes turned back to drown my heart.

Sidney.

Love is a smoke raised with the fume of sight ; Being purged, a fire sparkling in lovers' eyes.

S/iakspeare . What a tigh is there! The heart is sorely charged.

Id.

I'll not be made a soft and dull-eyed fool. To shake the head, relent, and tigh, and yield To Christian intercessors.

Shakipeare. Merchant of Venice. Laughing, if loud, ends in a deep sigh ; and all pleasures have a sting in the tail, though they carry beauty on the face. Taylor.

In Venus' temple, on the sides were seen Issuing tight, that smoked along the wall. Dryden.

Happier he,

Who seeks not pleasure through necessity, Than such as once on slippery thrones were placed, And, chasing, tigh to think themselves are chased.

Id.

Ages to come, and men unborn, Shall bless her name, and tigh her fate. Prior.

SIGHT, n. s. } Sax. jepSe ; Belg. sichl ;

SIGUT'ED, adj. I Swed. sigte. Perception by

SIGHT'FUL, *. the eye ; the sense of seeing;

SIGHT'LESS, iview; notice; knowledge;

SIGHT' IA. J eye; opening for the eye; to use ; show ; object of vision : sighted is, seen in a particular manner : sightful, watchful : sightless,

blind ; not sightly : sightly, agreeable to the sight.

Moses said, I will turn aside, and see this great tiyl < t, why the bush is not burnt. Exodus iii. 3.

Thus are my eyes still captive to one sight ; Thus all my thoughts are slaves to one thought still.

Sidney.

As they might, to avoid the weather, pull the •dints of the coach up close, so they might put each end down, and remain as discovered and open sighted as on horseback. Id.

But still, although we fail of perfect rightfulness, Seek we to tame these childish superfluities ; Let us not wink, though void of purest siyhtfulness.

Id.

Them seemed they rever saw a sight so fair Of fowls so lovely, that they sure did deem Them heavenly born. Spenser.

Full of unpleasing blots and sightless stains, Patched with foul moles, and eye-offending marks.

Sliakspeare.

It lies as tightly on the back of him, As great Alcides shews upon an ass.

Id. King John.

Their armed staves in charge, their beavers down, Their eyes of file sparkling through sights of steel.

Sliakspeare. Not an eye

But is a-weary of thy common sight, Save mine, which hath desired to see thee more.

Id.

If bees go forth right to a place, they must needs have sight. Bacon.

Nine things tc tight required are -v 1’he power to see, the light, the visible thing.

Being not too small, too thin, too nigh, too far, Clear space, and time the form distinct to biing.

Davies.

‘Tis still the same, although their airy shape All but a quick poetick sight escape. Deuham.

Undaunted Hotspur Brings on his army, eager unto fight, And placed the same before the king in sight.

Daniel.

The king was very quick sighted in discerning difficulties, and raising objections, and very slow in mastering them. Clarendon.

0 loss of sight, of thee I most complain ! Blind among enemies, O worse than chains, Dungeon, or beggary, decrepit age!

Milton’s Aganistes.

Things invisible to mortal sight. Milton.

Mine eye pursued him still, but under shade Lost sight of him. Id. Paradise Lost.

What form of death could him affright, Who unconcerned, with stedfast sight, Could view the surges mounting steep, And monsters rolling in the deep!

Dryden’s Horace.

./Eneas cast his wondering eyes around, \nd all the Tyrrhene army had in sight, Stretched on the spacious plain from left to right.

Dryden.

A great many brave tightly horses were brought out, and only one plain nag that made sport.

L’ Estrange.

Having little knowledge of the circumstances of those St. Paul writ to, it is not strange that many things lie concealed to us, which they who were concerned in the letter understood at first sight.

Locke.

1 took a felucca at Naples to carry me to Rome, that I might not run over the same sights a second time. Addison.

We have thirty members, the most sightly of all her majesty's subjects ; we elected a president by his height. Id.

It was writ as a private letter to a person of piety, upon an assurance that it should never come lo any one's sight but her own. Wake.

The latent tracts, the giddy heights explore, Of all who blindly creep or sightless soar. Pope.

Not proud Olympus yields a nobler sight, Though gods assembled grace his towering height, Than what more humble mountains offer here, Where, in their blessings, all those gods appear.

Id.

Before you pass the' imaginary sights Of lords, and earls, and dukes, and gartered knights, While the spread fan o'ershades your closing eyes, Then give one flirt, and all the vision flies. Id.

My eyes are somewhat dimmish grown ; For nature, always in the right, To your decays adapts my sight. Swift.

Their having two eyes and ears so placed is more sightly and useful.

More's Antidote against Atheism.

SPGIL, n. s. Lat. sigillum. Seal ; signature.

Sorceries to raise the' infernal powers, And iigils framed in planetary hours.

Dryden's Knight's Tale.

SIGISMUND, of Luxemburg, emperor of Germany, was the son of Charles IV. and born in 1368. He married Mary, queen of Hungary, daughter of Louis the Great, and was elected king of Hungary in 1386. In 1396 he was defeated by Bajazet I. emperor of the Turks, and obliged to fly for refuge to Manuel, emperor of the East. See CONSTANTINOPLE. After the de-feat of Bajaz«t by Tamerlane (see BAJAZET I.), he recovered his dominions, and in 1410 was elected emperor. See GERMANY. To restore peace to the church, then disturbed by the

?c!nsms occasioned by the antipopes John XXIII. .md Benedict XIV., he called the Council of Constance, 1414. To this council the celebrated John Huss was summoned, and obtained a safe conduct from Sigismund for his protection ; notwithstanding which he was basely murdered. See Huss. This infamous treachery provoked the Hussites to take up arms under Zisca, and gave rise to a bloody and barbarous war, which lasted eighteen years. Sigismund died in 1437.

SIGMA, Greek <nypa, in archaiology. Among the Greeks the letter S had at first the form of a C, and the Romans having adopted this form in the construction of their tables, instead of the triclinium, the name of sigma was given to those which resemble the shape of a horseshoe, round which was placed a couch following the diameter of the table. The most honorable places were those at the two extremities of this bed, and at the void space left by the semicircle the servants introduced the meats.

SIGN, n. s. & v. a. \ Fr. $igne. A token ;

SIGNPOST, n. s. t that by which any thing is shown; a wonder; prodigy; memorial; distinctive mark ; a constellation qf the zodiac ; a typical representation ; symbol ; to betoken ; mark ; ratify by signature : a signpost is a post on which a sign is exhibited.

If they will not hearken to the voice of the first iign, they will not believe the latter sign.

Exodus iv. 8.

The fire devoured two hundred and fifty men, and they became a sign. Numbers xxvi. 10.

An outward and visible sign of an inward and spiritual grace.

Common Prayer.

They made signs to his father. Luke.

Signs must resemble the things they signify.

Hooker.

Underneath an alehouse' paltry sign.

Shakspeare. Henry VI.

There stay until the twelve celestial signt Have brought about their annual reckoning.

Shakspeare.

You tign your place and calling in full seeming, With meekness and humility, but your heart Is crammed with arrogancy. Id. Henry VIII.

Now did the sign reign, and the constellation was come, under which Perkin should appear.

Bacon's Henry VII.

He barely named the street, promised the wine, But his kind wife gave me the very tign. Donne.

He should share with them in the preserving A shed or signpost. Ben Jonson's Catiline.

True sorrow's like to wine, That which is good does never need a sign.

Suckling.

The holy symbols or signs are not barely significative ; but what they represent is as certainly delivered to us as the symbols themselves. Browne.

The sacraments and symbols are just such as they seem ; but, because they are made to be signs of a secret mystery, they receive the names of what they themselves do rign. Taylor.

The ensign of Messiah blazed, Aloft by angels borne, his sign in heaven. Milton.

Compelled by signs and judgments dire. Id.

Signt for communication may be contrived from any variety of objects of one kind appertaining to either sense. ‘ Holder.

After every foe subdued, the sun Thrice throng1: the signs his annual race shall run.

Dryden.

that gives notice : as an adjective, noted ; eminent ; remark-

To express the passions which are seated in tl:e heart by outward signs, is one g;eat precept of tbe painters, and very difficult to perform.

Dryden’s Dufresnoy.

This noble invention of our author’s hath been copied by so many signpost dawbers, that now ‘tis grown fulsome, rather by their want of skill than by the commonness. Id.

L5e pleased to sign these papers : they are all Of great concern. Id. CUomenes.

When any one uses any term, he may have in his mind a determined idea which he makes it the sign of, and to which he should keep it steadily annexed.

Locke.

Wit and fancy are not employed in anv one article so much as that of contriving signs to hang over houses. &ieift.

SIGN, in general, is , the mark or character of something absent, or invisible. See CHARACTER.

SIGN, among physicians, denotes some appearance in the human body, which serves to indicate or point out the condition of the patient with regard to health or disease.

SIGN, in algebra. See ALGEBRA.

SIGN, in astronomy. See ASTRONOMY.

SIG’NAL, n. s. & adj. -\ Fr. signal. Notice

SIGNAL’ITY, n. s. j by a sign; the sign

SIG’XALIZE, v. a.

SIG’NALLY, adv.

SIGNA’TION. n.s.

able : the adverb corresponding : signality, remarkable quality (obsolete) : to signalize is to make eminent or noted : signation, sign given ; act of betokening.

The weary sun hath made a golden set, And, by the bright track of his fiery car, Gives signal of a goodly day to-morrow.

Shakspeare. Richard III.

He was esteemed more by the parliament, for the tig nal acts of cruelty committed upon the Irish.

Clarendon.

It seems a signality in providence, in erecting your society in such a juncture of dangerous humours.

Glancille.

Of the ways whereby they enquired and determined its signality, the first was natural, arising from physical causes. Brotcne.

A horseshoe Baptista Porta hath thought too low a signation, he raised unto a lunary representation.

Id.

Scarce the dawning day began to spring. As, at a signal given, the streets with clamours ring.

Dryden.

Persons signally and eminently obliged, yet missing of the utmost of their greedy designs in swallowing both gifts and giver too, instead of thanks for received kindnesses, have betook themselves to barbarous threatenings. South.

Many, who have endeavoured to signalise themselves by works of this nature, plainly discover that they are not acquainted with arts and sciences.

Add turn.

The Thames frozen twice in one year, so as men to walk on it, is a very signal accident. Sicijt.

Some one eminent spirit, having signalised his valour and fortune in defence of his country, or by popular arts at home, becomes to have great influence on the people. Jd.

SIGNALS BY THE DRUM, made use of, in tne exercise of the army, instead of the word of command, *viz.*

SIGNALS.

A flam To arms

Signals. Operations.

A short roll … To caution.

S To perform any distinct ‘ ‘ i thing.

l To form the line or bat- ‘ i talion.

rTo advance, except The march … •] when intended for a

v. salute.

The quick march . To advance quick. The point of war . To march and charge. The retreat … To retreat. Drum ceasing . . To halt. _ {To perform the flank

Two short rolls . . j Jng

The dragoon march To open the battalion. The grenadier march To form the column. The troop … To double divisions. The long roll … To form the square.

(To reduce the square to The grenade march J the column.

The preparative . . To make ready and fire. The general … To cease firing.

-, < To bring or lodge the

Two long rolls . . J colors =

SIGNALS, NAVAL. When we read the account of an engagement, or other interesting operations of an army, our attention is generally so much engaged by the results that we give but little heed to the movements which led to them, and produced them, and we seldom form any distinct notion of the conduct of the day. But a professional man follows every regiment in its movements, endeavours to see their connexion, and the influence which they, have had on the fate of the day, and even to form to himself a general notion Df the whole scene of action. He looks with the eye of the general. But few trouble themselves farther about the narration. The movement is ordered ; it is performed ; and the fortune of the day is determined. Few think how all this is brought about ; and when they are told that, during the whole of the battle of Custrin, Frederic the Great was in the upper room of a country inn, whence he could view the whole field, while his aids-de-camp, on horseback, waited his orders in the yard below, they are struck with wonder, and can hardly conceive how it can be done ; but, on reflection, they see the possibility of the thing. Their imagination accompanies the messenger from the inn yard to the scene of action, where the general's orders are delivered and executed. But when we think on the situation of the commander of a fleet, confined on board one ship, and this ship as much, or more closely, engaged than any other of the fleet ; and when we reflect that here are no messengers ready to carry his orders to ships of the squadron at the distance of miles from him, and to deliver them with precision and distinctness, and that, even if this were possible by sending small ships or boats, the vicissitudes of wind and weather may render the communication so tedious that the favorable moment may be irretrievably lost before the order can be conveyed ; when we think of all these circumstances, our thoughts are bewildered, and we are ready to imagine that a sea-battle is nothing but the unconnected struggle of individual ships ; and that when the admiral has once ' Cried havoc, and let slip the dogs of war ;' he has done all that his

situation empowers him to do, and he must leave the fate of the day to the bravery and skill of his captains and sailors. Yet it is in this situation, apparently the most unfavorable, that the orders of the commander can be conveyed with a despatch that is not attainable in the operations of a land army. The scene of action is unincumbered, so that the eye of the general can behold the whole without interruption. The movements which it is possible to execute are few, and they are precise. A few words are sufficient to order them, and then the mere fighting the ships must always be left to their respective commanders. This simplicity in the duty to be performed has enabled us to frame language fully adequate to the business in hand, by which a correspondence can be kept up as far as the eye can see. This is the language of signals, a language by writing, addressed to the eye, and which he that runneth may read. As in common writing certain arbitrary marks are agreed on to express certain sounds used in speech, or rather, as in hieroglyphics certain arbitrary marks are agreed on to express certain thoughts, or the subjects of these thoughts ; so here certain exhibitions are made, which are agreed on to express certain movements to be executed by the commander to whom they are addressed, and all are enjoined to keep their eyes fixed on the ship of the conductor of the fleet, that they may learn his will. It is scarcely possible for any number of ships to act in concert, without some such mode of communication between the general and the commanders of private ships.

HISTORY OF NAVAL SIGNALS. — We have no di-rect information in the naval tactics of the ancient nations, how the Greeks and Romans managed their signals ; but the necessity of the thing is so apparent that we cannot suppose it to have been omitted by the most ingenious and the most cultivated people who have appeared on the great theatre of the world ; and we are persuaded that Themistocles, Conon, and other renowned sea commanders of Athens, had signals by which they directed the movements of their fleet. One signal was invented so early as the reign of king ./Egeus ; but so little were the Athenian tars then accustomed to signals that Theseus forgot to change it, and so the king perished. See JEcEus. We find, in the history of the Punic wars by Polybius, frequent allusions to such a mode of communication ; and Ammianus Marcellinus speaks of the speculatores and vexillarii who were on board the ships in the Adriatic. The coins both of Greece and Rome exhibit both flags and streamers. In short, we cannot doubt of the ancients having practised this hieroglyphical language. In “the naval occurrences of modern Europe, mention is frequently made of signals. We find, in particular, that queen Elizabeth, on occasion of the expedition to Cadiz, ordered her secretaries to draw up instructions,

which were to be communicated to the admiral, the general, and the five councillors of war, and by them to be copied and transmitted to the several ships of

the navy, not to be opened till they should arrive in a certain latitude. It was on this occasion, says our historian Guthrie, ‘ that we meet with the first regular set of signals and orders to the commanders of the English fleet.’ But, till the “movements of a fleet have attained some sort of uniformity, regulated and connected by some principles of propriety, and agreed on by persons in the habit of directing a number of ships, we may with confidence affirm that signals would be uothing but a parcel of arbitrary marks, appropriated to particular pieces of naval service, such as attacking the enemy, landing the soldiers, &c-, and that they would be considered merely as referring to the final result, but by no means pointing out the mode of execution, or directing the movements which were necessary for performing it. It was James II., when duke of York, who first considered this practice as capable of being reduced into a system, and who saw the importance of such a composition. He, as well as the king his brother, had always showed a great predilection for the sea service ; and, when appointed admiral of England, he turned his whole attention to its improvement. He had studied the art of war under Turenne, not as a pastime, but as a science, and was a favorite pupil of that most accomplished general. When admiral of England, he endeavoured to introduce into the maritime service all. those principles of concert and arrangement which made a number of individual regiments and squadrons compose a great army. When he commanded in the Dutch war, he found a fleet to be little better than a collection of ships, on board of each of which the commander and his ship’s company did their best to annoy the enemy, but with very little dependence on each other, or on the orders of the general : and, in the different actions which the English fleet had with the Dutch, every thing was confusion as so’on as the battle began. The famous pensionary De Witt, who from a statesman became a navigator and a great sea commander in a few weeks, made the same representation to the

States General on his return from his first campaign. In the Memoirs of James II., written by himself, we have the following passage : ‘ 1665. On the 15th of March the duke of York went to Gunfleet, the general rendezvous of the fleet, and hastened their equipment. He ordered all the flag officers on board with him every morning, to agree on the order of battle and rank. In former battles, no order was kept, and this, under the duke of York, was the first in which fighting in a line and regular form of battle was observed.’ This must be considered as full authority for giving the duke of York the honor of the invention. For, whatever faults may be laid to the charge of this unfortunate prince, his word and honor stand unimpeached, and we are anxious to vindicate his claim to it, because our neighbours the French, as usual, would take the merit of this invention, and of the whole of naval tactics, to themselves. True it is that Colbert, the great and justly celebrated minister of Louis XIV., created a navy for his ambitious and vain-glorious master, and gave it a constitution which may be a model for other aations to copy. By his encouragement, men of VOL XX,

the greatest scientific eminence were engaged to contribute to its improvement; and they gave us the first treatises of naval evolutions. But it must ever be remembered that our accomplished, though misguided sovereign, was then residing at the court of Louis ; that he had formerly acted in concert with the French as commander and flag officer, and was at this time aiding them with his knowledge of sea affairs. In the memorable day of La Hogue, the gallant Kussel, observing one of Tourville’s movements, exclaimed, ‘ there ! they have got Pepys among them.’ It was on this occasion, then, that the duke of York made the movements and evolutions of a fleet the ob-ject of his particular study, reduced them to a system, and composed that ‘ System of Sailing and Fighting Instructions’ which has ever since been considered as the code of discipline for the British navy, and which has been adopted .by our rivals and neighbours as the foundation of their naval tactics. It does great honor to its author, although its merit will not appear very eminent to a careless surveyor, on account of that very simplicity which constitutes its chief excellence, It is unquestionably the result of much sagacious reflection and painful combination of innumerable circumstances, all of which have their influence ; and it is remarkable that, although succeeding commanders have improved the subject by several subordinate additions, no change has to this day been made in its general principles or maxims of evolution. Till some such code be established, it is evident that signals can be nothing but arbitrary and unconnected hieroglyphics, to be learned by rote, and retained by memory, without any exercise of

the judgment ; and the acquisition of this branch of nautical skill must be a more irksome task than that of learning the Chinese writing. But, such a code being once settled, the character in which it may be expressed becomes a matter of rational discussion. Accordingly, the sailing and fighting instructions of the duke of York were accompanied by a set of signals for directing the chief or most frequent movements of the fleet. These also were contrived with so much judgment, and such attention to distinctness, simplicity, and propriety, that there has hardly been any change found necessary ; and they are still retained in the British navy as the usual signals in all cases when we are not anxious to conceal our movements from an enemy. Notwithstanding this acknowledged merit of the duke of York's signals, it must be admitted that great improvements have been made on this subject, considered as an art. The art military has, in the course of a century past, become almost an appropriate calling, and has therefore been made the peculiar study of its professors. Our rivals, the French, were sooner, and more formally placed in this situation, and the ministers of Louis XIV. took infinite and most judicious pains to make their military men superior to all others by their academical education. A mbre scientific turn was given to their education, and the assistance of scientific men was liberally given them ; and all the nations of Europe must acknowledge some obligations to them for information on every thing connected with the art of. war. They

have attended very much to this subject, have greatly improved it, and have even introduced a new principle into the art ; and thus have reduced it to the most simple form of reference to the code of sailing and fighting instructions, by making the signals immediately expressive, not of orders, but of simple numbers. These numbers being prefixed to the various articles of the code of instructions, the officer who sees a signal thrown out by the admiral reads the number, and reports it to his captain, perhaps without knowing to what it relates. Thus simplicity and secrecy, with an unlimited power of variation, are combined. M. de la Bourdonnais, a brave and intelligent officer,

during the war 1758, was the author of this ingenious thought.

We do not propose to give a system of British signals. This would evidently be improper. But we shall show our readers the practicability of this curious language, the extent to which it may be carried, and the methods which may be practised in accomplishing this purpose. This may make it an object of attention to scientific men, who can improve it ; and the young officer will not only be able to read the orders of the commander in chief˜ but will not be at a loss should circumstances place him in a situation where he must issue orders to others. Signals may be divided into, I. Day signals ; II. Night signals ; and, III. Signals in a fog. They must also be distinguished into, 1. Signals of evolution addressed to the whole fleet, or to squadrons of the fleet, or to divisions of these squadrons ; 2. Signals of movements to be made by particular ships; and, 3. Signals of service, which may be either general or particular. The great extent of a large fleet, the smoke in time of battle, and the situation of the commander-in-chief, who is commonly in the midst of the greatest confusion and hottest fire, frequently makes it very difficult for the officers of distant ships to perceive his signals with distinctness. Frigates, therefore, are stationed out of the line, to windward or to leeward, whose sole office it is to observe the admiral's signals, and instantly to re-peat them. The eyes of all the signal officers in the private ships of war are directed to the repeating frigates, as well as to the admiral ; and the officers of the repeating frigates, having no other duty, observe the admiral incessantly, and, being unembarrassed by the action, can display the signal with deliberation, so that it may be very distinctly seen. Being minutely acquainted with the substitutions which must be made on board the admiral when his masts and rigging are in disorder, his (perhaps imperfect) signal is exhibited by the repeating frigate in its proper form, so as to be easily understood. And, to facilitate this communication, the commanders of the different squadrons repeat the signals of the commander in chief, and the commanders of division repeat the signals of the commanders of their squadron. Every evolution signal is preceded by a signal of advertisement and preparation, which is general, and frequently by a gun, to call attention ; and, when all the signals have been made which direct the different parts of that evolution, anolher signal is made, which in .iks the close of the complete signal, and divides it from others which may immediately follow it : and, as the orders of the commander-in-chief may relate either to the movements of the whole fleet, those of a single division, or those of certain private ships, the executive si«nui, which dictates the particular movement, is accompanied by a directive signal, by which these ships are pointed

out to which the order is addressed. The commander of the ship to which any signal is addressed is generally required to signify by a signal, which is general, that he has observed it. And, if he does not thoroughly understand its meaning, he intimates this by another general signal. And here it is to be observed that, as soon as the signal is answered by .he ships to which it is addressed, it is usual to haul it down, to avoid the confusion which might arise from others being hoisted in the same place. The order remains till executed, notwithstanding that the signal is hauied down. It may happen that the commander who throws out the signal for any piece of service sees reasons for altering his plan. He intimates this by a general annulling signal, accompanying the signal already given. This will frequently be more simple than to make the signals for the movements which would be required for re-establishing the ships in their former situation. All these things are of very easy comprehension, and require little thought for their contrivance. But, when we come to the particular evolutions and movements, and to combine these with the circumstances of situation in which the fleet may be at. the time, it is evident that much reflection is necessary for framing a body of signals which may be easily exhibited, distinctly perceived, and well understood, with little risk of being mistaken one for another. We shall take notice of the circumstances which chiefly contribute to give them these qualities as we proceed in describing their different classes.

DAY SIGNALS. — These ‘are made by means of the ship’s sails, or by colors of various kinds. Those made with sails are but few in number, and are almost necessarily limited to the situation of a fleet at anchor. Thus,

The following Signals

Main top-gallant staysail hoisted

Fore topsail loose Main topsail loose Main topsail sheets

hauled home Main topsail sheets

clewed up, and the

yard hoisted Top-gallant sails loose,

and the sheets flying Main top-gallant sail

loose and hoisted.

Topsail yard down. Mizen topsail hoisted,

and the sheets clew-ed up.

usually signify.

Officers and men belonging to the ship to come on hoard.

To prepare for sailing.

To unmoor.

To weigh.

Annul the former sig-nal, and the ship to come to an anchor.

Discovering strange sails.

Recal ships in chase.

Moor.

SIGNAL S.

Before we proceed to the description of the signals by means of colors, such as flags, banners \or triangular flags), pendants, or vanes, we must take notice of the ostensible distinctions, of the various divisions and subdivisions of a fleet, so that we may understand how the same signal may be addressed to a squadron, division, or single ship or ships. We suppose it known that a fleet of ships of war is distributed into three grand divisions, which we shall term squadrons, called the van, centre, and rear. These denominations have not always a relation to the one' being more advanced than the other, either towards the enemy, or in the direction of their course. In a land army, the position of every part is conceived from its reference to the enemy ; and the

reader, conceiving himself as facing the enemy, easily understands the terms van, centre, and rear, the right and left wing, &c. But, the movements of a sea army having a necessary dependance on the wind, they c;innot be comprehended unless expressed in a language which keeps this circumstance continually in view. The simplest and most easily conceived disposition of a fleet, is that in which it is almost indispensably obliged to form in order to engage an enemy. This is a straight line, each ship directly a-head of its reighbour, and close hauled. This is therefore called the line of battle. In this position the two extremities of the fleet correspond to the right and left wings of an army. Suppose this line to be in the direction east and west, the wind blowing from the N. N.W., and therefore the fleet on the starboard tack ; the ships' heads are to the west, and the westernmost division is undoubtedly the van of the fleet, and the easternmost division is the rear. And it is in conformity to this arrangement, and situation, that the list of the fleet is drawn up. But the ships may be on the same east and west line, close hauled, with their heads to the west, but the wind blowing from S. S. W. They must therefore be on the larboard tack. The same ships, and the same division, are still, in fact, the van of the fleet. But, suppose the ships' heads to be to the eastward, and that they are close hauled, having the wind from, S. S. E. or N. N. E., the ships which were the real van, on both tacks in the former situation, are now, in fact, the rear on both tacks ; yet they retain the denomination of the van squadron of this fleet, and are under the immediate direction of the officer of the second rank, while the other extremity is under the direction of the third officer. This subordination therefore is rather an arrangement of rank and precedence than of evolution. It is, however, considered as the natural order to which the general signals must be accommodated. For this reason the division which is denominated van, in the list of this fleet, is generally made to lead the fleet when in the line of battle on the starboard tack, and to form the weathermost column in the order of sailing in columns ; and, in general, it occupies that station from which it can most easily pass into the place of the leading division on the starboard line of nattle a-head. Although this is a technical nicety of language, and may frequently puzzle a lands-man in reading an account of naval operations, the reflecting and intelligent reader will see the

propriety of retaining tins mode of oonceivina the subordinate arrangement of a fleet, and will comprehend the employment of the signals which are necessary for re-establishing tins arrangement, or directing the movements while another arrangement is retained. This

being understood, it is easy to contrive various methods of distinguishing every ship by the place which she occupies in the fleet, both with respect to the whole line, with respect to the particular squadron, the particular division of that squadron, and the particular place in that division. This may be done by a combination of the position and color of the pendants and vanes of each ship. Thus the color of the pendants may indicate the sijiiadron ; their position or mast on which they are hoisted may mark the division of that squadron ; and a distinguishing vane may mark the place of the private ship in her own division. The advantages attending this method are many. In a large fleet it would hardly be possible for the commander-in-chief to find a sufficient variety of single signals to mark the ship to which an order is addressed, by hoisting it along with the signal appropriated to the intended movement. But by this contrivance one-third part of these signals of address is sufficient. It also enables the commander-in-chief to order a general change of position by a single signal, which otherwise would require several. Thus, suppose that the fore, main, and mizen masts, are appropriated, with the proper modifications, for exhibiting the signals addressed to the van, the centre, and the rear squadrons of the fleet, and that a red, a white, and a blue flag, are chosen for the distinguishing flags of the officers commanding these squadrons ; then, if the commander-in-chief shall hoist a red flag at his mizen top-gallant mast head, it must direct the van squadron to take the position then occupied by the rear squadron, the evolution necessary for accomplishing this end, being supposed known by the commander of the squadron, who will immediately make the necessary signals to the squadron under his particular direction. In the same manner, the distinguishing signal for the leading ship of a squadron being hoisted along with the signal of address to the whole fleet, and the signal for any particular service, will cause the three or the nine leading ships to execute that order, &c, &c. All that has been said hitherto may be considered as so many preparations for the real issuing of orders by the commander-in-chief. The most difficult part of the language remains, *viz.* to invent a number of signals which shall correspond to that almost infinite variety of movements and services which must be performed. Distinctness, simplicity, and propriety, are the three essential qualities of all signals. A signal must be some object easily seen, strongly marked, so that it may be readily understood, with little risk of its being mistaken for another. When made by flags, banners, or pendants, they must be of the fullest colors, and strongest contrasts. The ships are frequently at a very great distance, so that the intervening air occasions a great degradation of color. They are seen between the eye and a very variable sky ; and in this situation,

especially in the morning or evening, or a dark day, it is not easy to

distinguish one full color from another, all of them approaching to the appearance of a black. At the distance of a very few miles hardly any full colors can he distinguished but a scarlet and abl-ie. Ked, blue, yellow, and white, are the colors which can be distinguished at greater distances than any others, and are therefore the only colors admitted as signals. Even these are sometimes distinguished with difficulty. A yellow is often confounded with z. dirty white, and a blue with a red. All other dark colors are found totally unfit. But, as these afford but a small variety, we must combine them in one flag, by making it striped, spotted, or chequered, taking care that the opposition of color may be as great as possible, and that the pieces of which the flags are made up may not be too minute. Red must never be striped nor spotted with blue, and the stripes, spots, or chequers, should never be less than one-third of the breadth of the flag. Their colors are represented by hatching, in the same manner as in heraldry. See HERALDRY. Difference of shape, as flags, banners, or pendants, is another distinction by which the expression may be varied. And, in doing this, we must recollect that in light \vinds it may be difficult to distinguish a flag from a banner, as neither are fully displayed for \ant of wind to detach the fly from the staff. And, lastly, signals may be varied by their position, which may be on any lofty and well detached part of the masts, yards, tor rigging. Simplicity is an eminent property in all signals. They are addressed to persons not much accustomed to combinations, and who are probably much occupied by other pressing duties. It were to be wished that every piece of service could be indicated by a’single flag. This is peculiarly desirable with respect to the signals used in time of battle. The rapid succession of events on this occasion call for a multitude of orders from the commander-in-chitf, and his ship is frequently clad over with flags and pendants, so that it is exceedingly difficult forthe signal officer of a private ship to distinguish the different groups, each of which make a particular

signal. These considerations are the foundation of a certain propriety in signals, which directs us to, a choice among marks which appear altogether arbitrary. Signals which run any risk of being confounded, on account of some resemblance, or because their position hinders us from immediately perceiving their difference, should be appropriated to pieces of service which are hardly possible to be executed, or can hardly be wanted in the same situation. No bad consequence could easily result, though the signal for coming to closer action should resemble that for unmooring, because the present situation of the ships makes the last operation impossible or absurd. Such considerations direct us to select for battle signals those wnich are of easiest exhibition, are the most simple, and have the least dependence on the circumstance of position ; so that their signification may not be affected by the damages sustained in the masts or rigging of the flag ship. Such signals as are less easily seen at a distance should be appropriated to orders which can occur only in the middle of the fleet, &c., &c Signals which are made to the admiral

by private ships may be the same with signals of command from the flag-ship, which will considerably diminish the number of signals per fectly different from each other. With all these attentions and precautions, a system of signals is at last made up, fitted to the code of sailing and fighting instructions. It is accompanied by another small set for the duty of convoys. It must be engrossed in two books; one forthe officer of the flag-ship, who is to make the signals, and the other is delivered to every private ship. In the first the evolutions, movements, and other operations of service, are set down in one column, and their corresponding signals in another. The first column is arranged, either alphabetically, by the distinguishing phrase, or systematically, according to the arrangement of the sailing and fighting instructions. Thp officer whose duty it is-to make the signals, turns to this column for the order which he is to communicate, and in the other column he finds the appropriated signal. In the other book, which is consulted for the interpretation of the signals, they are arranged in the leading column, either by the flags, or by the places of their exhibition. The first is the best method, because the derangement of the flag-ship's masts and rigging in time of action may occasion a change in the place of the signal. The Tactique Navale of the chevalier de Morogues contains a very full and elaborate treatise on signals. We recommend this work to every sea-officer, as full of instruction. The art of signals has been greatly simplified since the publication of this work, but we cannot but ascribe much of the improvements to it. We believe that the author is the inventor of that systematic manner of

addressing the order or effective signal to the different squadrons and divisions of the fleet, by which the art of signals is made more concise, the execution of orders is rendered more systematic, and the commanders of private ships are accustomed to consider themselves as parts of an army, with a mutual dependence and connexion. We are ready enough to acknowledge the superiority of the French in manoeuvring, but we affect to consider this as an imputation on their courage. Nothing can be more unjust ; and dear-bought experience should long ere now have taught us the value of tbis superiority. What avails that courage which we would -willingly arrogate to ourselves, if we cannot come to action with our enemy, or must do it in a situation in which it is almost impossible to succeed, and which needlessly throws away t.ie lives of our gallant crews ? Yet this must hap-pen, if our admirals do not make evolutions their careful study, and our captains do not habituate themselves, from their first hoisting a pendant, to considertheir own ship as connected with the most remote ship in the line. We cannot think that this view of their situation would in the least lessen the character which they have so justly acquired, of fighting their ship with a courage and firmness unequalled by those of any other nation. And we may add that it is only by such a rational study of their profession that the gentleman can be distinguished from the mercenary commander of a privateer.

Night signals. — It is evident that the com-

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munication of orders by night must be more difficult and more imperfect than by day. We must, in general, content ourselves with such orders as are necessary for keeping the fleet together, by directing the more general movements and evolutions which any change of circumstances may render necessary. And here the divisiou and subordinate arrangement of the fleet is of indispensable necessity, it being hardly possible to particularise every ship by a signal of address, or to see her situation. The orders are therefore addressed to

the commanders of the different divisions, each of whom is distinguished by his poop and top-lights, and is in the midst of, and not very remote from, the ships under his more particular charge. Yet, even in this unfavorable situation, it is frequently necessary to order the movements of particular ships. Actions during the night are not uncommon. Pursuits and rallyings are still oftener carried on at this time. The common dangers of the sea are as frequent . and more disastrous. The system of signals therefore is very incomplete till this part be accomplished. Night signals must be made by guns, or by lights, or by both combined. Gun-signals are susceptible of variety both in num-ber and in disposition. The only distinct variation which can be made in this disposition is by means of the time elapsed between the discharges. This will easily admit of three varieties, slow, moderate, and quick. Half-minute guns are as slow as can easily be listened to as appertaining to one signal. Quarter-minute guns are much better, and admit of two very distinct subdivi- sions. When the gunners, therefore, are well trained to this service (especially since the employment of firelocks for cannon), intervals of fifteen or twelve seconds may be taken for slow firing, eight or ten seconds for moderate, and four or five seconds for quick firing. If these could be reduced one-half, and made with certainty and precision, the expression would be incomparably more distinct. A very small number of firings varied in this way will give a considerable number of signals. Thus five guns, with the variety of only quick and moderate, will give twenty very distinguishable signals. The same principle must be attended to here as in the flag-signals. The most simple must be appropriated to the most important orders, such as occur in the worst weather, or such as are most liable to be mistaken. Quick firing should not make part of a signal to a very distant ship, because the noise of a gun at a great distance is a lengthened sound, and two of them, .with a very short interval, are apt to coalesce into one long continued sound. This mode of varying gun-signals by the time must therefore be employed with great caution, and we must be very certain of the steady performance of the gunners. Note, that a preparatory signal, or advertisement that an effectual signal is to be made, is a very necessary circumstance. It is uˆial (at least in hard weather) to make this by a double discharge, with an interval of half a second, or at most a second. Gun-signals are seldom made alone, except in ordinary situations and moderate weather ; because accident may derange them, and inattention may cause them to escape notice, and, once

made, they are over, and their repetition would change their meaning. They are also improper on an enemy’s coast, or where an enemy’s

cruisers or fleets may be expected. Signals by lights are either made with lights, simply so called, i. e. lanterns shown in different parts of the ship, or by rockets. Lights may differ by number, and by posiiion, and also by figure. For the flag-ship, always carrying poop or top liglits, or both, presents an object in the darkest nights, so that we can tell whether the additional lights are exhibited about the mainmast, the foremast, the mizenmast, &c. And if the lights, shown from any of these situations are arranged in certain distinguishable situations in respect to each other, the number of signals may be greatly increased. Thus three lights maybe in a vertical line, or in a horizontal line, or in a triangle, and the point of this triangle may be up, or down, or forward, or aft, and thus may have many significations. Lights are also exhibited by false fires or rockets. These can be varied by number, and by such differences of appearance as to make them very distinguishable. Rockets may be with stars, with rain fire, or simple squibs. By varying and combining these, a very great number of signals may be produced, fully sufficient to direct every general movement or evolution, or any ordinary and important service. The chevalier de Morogues has given a specimen of such ? system of night signals, into which he has even introduced signals of address or direction to every ship of a large fleet; and has also given signals of number, by which depths of soundings, points of the compass, and other things of this kind, may be expressed both easily and distinctly. He has made the signals by rockets perfectly similar in point of number to those by lanterns, so that the commander can take either ; a choice which may have its use, because the signals by rockets may cause the presence of a fleet to be more extensively known than may be convenient. The commander-in-chief will inform the fleet by signal, that guns, or perhaps rockets, are not to be used that night. This signal, at the same time, directs the fleet to close the line or columns, that the light signals may be better observed. It is indeed a general rule to show as few lights as possible ; and the commander frequently puts out his own poop and top lights, only showing them from time to time, that his ships may keep around him. The signal lanterns on board the flag-ship, and a lantern kept in readiness on board of every private ship, to answer or acknowledge signals from the commander-in-chief, are all kept in bags, to conceal their lights till the moment they are fixed in their places, and the preparatory or advertising signal has been made. The commander-i-n-chief sometimes orders by signal every ship to show a light for a minute or two, that he may judge of the position of the fleet; and the admiral’s signal must always be acknowledged by those to whom it is addressed. It is of particular importance that the fleet be kept together. Therefore the leading ships of the fleet, on either tack, are enjoined to acknowledge the signals of

the commander-in-chief by a signal peculiar to their station. Thus the commander-in-chief learns the position of the extre

mities of his fieet. In framing a set of night 5-gnals, great attention must be given to their >osition, that they be not obscured by the sails. The nature of the order to be given will frequently determine this. Thus an order for the rear ships to make more sail, will naturally direct us to exhibit the signal at the mizen peek ; and so of other pieces of service. Lanterns, exposed in groups, such as triangles, lozenges, &c., are commonly suspended at the corners of large frames of laths, at the distance of a fathom at least from each other. Attempts have been made to show lights of different colors ; but the risk of mistake or failure in the composition, at the laboratory, makes this rather hazardous. Colored lanterns are more certain ; but, when the glasses are made of a color sufficiently intense, the vivacity of the light (which at no time is very great) is too much diminished. Besides, the very distance changes the color exceedingly and unaccountably.

Signals in a fog. — These can be made only by noises, such as the firing of cannon and muskets, the beating of drums and ringing of bells, &c. Fog signals are the most difficult to contrive of any, and are susceptible of the least variety. The commander in chief is principally concerned to keep his fleet together ; and. unless something very urgent requires it, he will make no change in his course or rate of sailing. But a shift of wind or other causes may make this necessary. The changes which he will order, it will be prudent to regulate by some fixed rule, which is in general convenient. Thus, when a fleet is in the order of sailing upon a wind, and a fog comes on, the fleet will hold on the same course. If the wind should come a little more on the beam, the fleet will still keep close to the wind. Certain general rules of this kind being agreed on, no signals are necessary for keeping the fleet together ; and the ships can separate or run foul of each ether only by difference in their rate of sailing, or by inaccurate steerage. To prevent this the commander-in- chief fires a gun from time to time, and the ships of the fleet judge of his situation and distance by the

sound. The commanders of divisions fire guns, with some distinction from those of the commander-in-chief. This both informs the commander-in-chief of the position of his squadrons, and enables the private ships of each division to keep in the neighbourhood of their own flag ship. On board of every private ship the drum is beaten, or the bell is chimed, every quarter of an hour, according as the ship is on the starboard or larboard tack. By such contrivances it is never difficult to keep a fleet in very good order when sailing on a wind. The wind is almost always moderate, and the ships keep under a very easy sail. It is much more difficult when going large, and separation can be prevented only by the most unwearied attention. The greatest risk is the falling in with strange ships steering another course. But evolutions and other movements are frequently indispensable. The course must be changed by tacking or wearing, and other services must be performed. None, however, are admitted but the most probable, the n»«st simple, and the most necessary. The commander-in-chief first informs the fleet, by the preparatory fog signal, that he is about to order an evolution, and that he is to direct it by fog signals. This precaution is indispensable to prevent mistakes. Along with this advertising signal lie makes the signal of the movement intended. This not only calls the attention of the fleet, but makes the ships prepare for the precise execution of that movement. The commanders of divisions repeat the advertising signal, which informs their ships of their situation, and the private ships beat their drums or chime their bells. Thus the whole ships of the fleet close a little, and become a little better acquainted with their mutual position. It is now understood that a movement is to be made precisely a quarter of an hour after the advertisement. At the expiration of this time, the effective signal for this movement is made by the commander-in-chief, and must be instantly repeated by the commanders of divisions, and then the movement must be made by each ship, according to the sailing and fighting instructors. This must be done with the utmost attention and precision, because it produces a prodigious change in the relative position of the ships : and, even although the good sense of the commander-in-chief will select such movements for accomplishing his purposes as produce the smallest alterations, and the least risk of separation or running foul of each other, it is still extremely difficult to avoid these misfortunes. To prevent this, as much as possible, each ship which has executed the movement, or which has come on a course thwarting “hat of the fleet, intimates this by a signal pro-] erly adapted, often adding the signal of the tack on which it is now standing, and even its particular signal of recognisance. This is particularly incumbent on the flag ships and leading ships of each division. After a reasonable interval, the

commander-in-chief will make proper signals for bringing the fleet to a knowledge of their reunion in this new position. This must serve for a general account of the circumstances which must be attended to in framing a code of signals. The arbitrary characters in which the language is written must be left to the sagacity of the gentlemen of the profession. It must be observed that the stratagems of war make secresy very necessary. It may be of immense hazard if the enemy should understand our signals. In time of battle it might frequently frustrate our attempts to destroy them, and at all times would enable them to escape, or to throw us into disorder. Every commander of a squadron, therefore, issues private signals, suited to his particular destination; and therefore it is necessary that our code of signals be susceptible of endless variations. This is exceedingly easy without any increase of their number. The commander needs only intimate that such and such a signal is so and so changed in its meaning during his command. We cannot leave this article without returning to an observation which we made almost in the beginning, *viz.* that the system of signals, or, to speak more properly, the manner of framing this system, has received much improvement from the gentlemen of the French navy, and particularly from the ingenious t'-ought of M. de la Bourdonnais, of making the

gnals the immediate expressions of numbers only, which numbers may be afterwards used to indicate any order whatever. We shall present our readers with a scheme or two of the manner in which this may be done for all signals, both day, night, and fog. This alone may be considered as a system of signals, and is equally applicable to every kind of information at a distance. Without detracting in the smallest degree from the praise due to M. de la Bourdonnais, we must observe that this principle of notation is of much older date. Bishop Wilkins, in his Secret and Swift Messenger, expressly recommends it, and gives specimens of the manner of execution ; so does Dr. Hooke in some of his proposals to the Royal Society. Caspar Schottus also mentions it in his Technica Curiosa; and Kircher, among others of his Curious Projects. M. de la Bourdonnais's method is as follows : He chooses

pendants for his effective signals, because they are the most easily displayed in the proper order. Several pendants, making part of one signal, may be hoisted by one halyard, being stopped on it at the distance of four or six feet from each other. If it be found proper to throw out another signal, at the same time and place, the/ are separated by a red pendant without a point. His colors are chosen with judgment, being very distinctly recognised, and not liable to be confounded with the addressing signals appropriated to the different ships of the fleet. They are,

For No. 1. Red.

2. White.

3. Blue.

4. Yellow.

5. Red, with white tail.

6. Red, with blue tail.

7. White, with blue tail.

8. White, with red tail.

9. Blue, with yellow tail. 0. Yellow, with blue tail.

Three sets of such pendants will express every number under 1000, by hoisting one above the other, and reckoning the uppermost hundreds, the next below it tens, and the lowest units. Thus the number 643 will be expressed by a pendant red with blue tail, a yellow pendant below it, and a blue one below the last. This method has great advantages. The signals may be hoisted in any place where best seen, and therefore the signification is not affected by the derangement of the flag ship's masts and rigging. And, by appropriating the smaller numbers to the battle signals, they are more simple, requiring fewer pendants. As this method requires a particular set of colors, it has its inconveniences. An admiral is often obliged to shift his flag, even in time of action. He cannot easily take the colors along with him. It is therefore better to make use of such colors as every private ship is provided with. One set of eleven will do, with the addition of three, at most of four pendants, of singular make, to mark '100, 200, 300, 400. Two of these flags, one above the other, will express any number under 100, by using the eleventh as a substitute for any flag that should be repeated. Thus the eleventh flag, along with the flag for 8 or

for 6, will express the number 88 or 66,

&c. Thus we are able to express every number below 500, and this is sufficient for a very large code of signals. And, in order to diminish as much as possible the number of these compound signals, it will be proper that a number of single flag signals be preserved, and even varied by circumstances of position, for orders which are of very frequent occurrence, and which can hardly occur in situations where any obstructions are occasioned by loss of masts, &c. And farther, to avoid all chance of mistake, a particular signal can be added, intimating that the signals now exhibited are numerary signals; or, which is still better, all signals may be consi- ‘dered as numerary signals; and those which we have just now called single flag signals may be set down opposite to, or as expressing the largest numbers of the code. This method requires the signal of advertisement, the annulling signal, the signal of address to the particular ship or division, the signal of acknowledgment, the signal of indistinctness, of distress, of danger, and one or two more, which, in every method, must be employed. Another method of expressing numbers with fewer colors is as follows : — Let the flags be A, B, C, D, E, F, and arrange them as follows :

ABC D E F

123456

A 7 8 9 10 11 12 B 13 14, 15 16 17 18 C 19 20 21 22 23 24

1) 25 26 27 28 29 30

E 31 32 33 34 35 36 E 37 38 39 40 41 42

The number expressed by any pair of flags is found in the intersection of the horizontal and perpendicular columns. Thus the flag D, hoisted along with and above the flag F, expresses the number 40, &c. In order to express a greater number (but not exceeding 84) suppose 75, hoist

the flags p, which expresses 33, or 75, wanting

42, and above them a flag or signal G, which alone expresses 42. This method may be still farther improved by arranging the flags thus :

A B C D E F

123456

A 7 8 9 10 11 12

B — 13 14 15 16 17

C — — 18 19 20 21

D — — — 22 23 24

E — — — — 25 26

F — — — — — 27

In this last method the signification of the signal is totally independent of the position of the flags. In whatever parts of the ship the flags D and E are seen, they express the number twenty-three. This would suit battle signals. Another method still may be taken. Flags hoisted anywhere on the foremast may be accounted units, those on the mainmast tens, and those on the mizenmast hundreds. Thus numeral signals may be made by a ship dismasted, or having only poles in their place. Many other ways may be contrived for expressing numbers by colors, and there is great room for exercising the judgment of the

contriver. For it must always be remembered, that these signals must be accompanied with a signal by which it is addressed to some particular ship or division of the fleet, and it may be difficult to connect the one with the other, which is perhaps shown in another place, and along with other executive signals. One great advantage of these numeral signals is, that they may be changed in their signification at pleasure. Thus, in the first method, it can be settled that, on Sundays, the colors A, B, C, D, &c., express the cyphers 1, 2, 3, 4, &c., but that on Mondays they express the cyphers 0, 1, 2,3, &c.,

and on Tuesdays the cyphers 9, 0, 1, 2, &c.; and so on through all the days of the week. This mean of secrecy is mentioned by Dr. Hooke for the coast and alarm signals, where, by the bye, he shows a method for conveying intelligence over land very similar to what is now practised by the French with their telegraph. It is equally easy to express numbers by night signals. Thus M. de la Bourdonnais proposes that one discharge of a great gun shall express 7, and that 1, 2, 3, 4, 5, 6, shall be expressed by lights. Therefore, to express twenty-four, we must fire three guns and show three lights. This is the most perfect of all forms of night and fog signals. For both the manner of firing guns and of exhibiting lights may be varied to a sufficient extent with a very few guns or lights, and with great distinctness. Thus, for guns, let F mark the firing of a single gun at moderate intervals, andy/“a double gun, that is, two discharged at the interval of a second. We may express numbers thus : —

F, F. F, F, F. F, F, F, F.

F,//. F, F,//.

10 //

100,&c. //,//, or///.

it might be done with fewer guns if theˆ/were admitted at the, first firing. But it seems better to begin always with the single gun, and thus the double gun beginning a signal, distinguishes the tens, &c. In like manner, a small number of lights will admit of a great variety of very distinct positions, which may serve for all signals to ships not rery remote from the cominander-in- chief. For orders to be understood at a very great distance, it will be proper to appropriate the numbers which are indicated by signals made with rockets. These can be varied in number and kind to a sufficient extent, so as to be very easily distinguished and understood. It is sufficient to have shown how the whole, or nearly the whole, notation of signals may be limited to the expression of numbers. We have taken little notice of the signals wade by private ships to the commander-in-chief. This is a very easy business, because there is little risk of confounding them with other signals. Nor have we spoken of signals from the flag-ships, whose ultimate interpolation is number, as when ships are

directed to change their course so many points. Those also are easily contrived in any of the methods already described : also when a private ship wishes to inform the commander-in-chief that soundings are found at so many fathoms. In like manner, by numbering the points of the compass the admiral can direct to chase to any one of them, or may be informed of strange ships being seen in any quarter, and what is their number.

The following are some of the principal significations now in use :

1. To denote being on the starboard tack.

2. To denote being on the larboard tack.

3. To anchor.

4. To denote being anchored, half an hour after.

5. To moor, or, if before moored, to unmoor.

6. To weigh.

7. To tack.

8. To haul to the wind on the starboard tack.

9. To haul to the wind on the larboard tack.

10. To wear, the sternmost and leewardmost ships first in succession, and continue in the same situation, whether of sailing, or lying-to as before.

11. To alter course to starboard.

12. To alter course to larboard.

13. Tb lie-to on the starboard tack.

14. To lie-to on the larboard tack.

15. On discovering danger.

16. If in distress and in want of immediate assistance.

17. On striking and sticking fast on a shoal.

In the Instructions, it is observed, that the signal guns will be all fired to windward, or on the same side during the continuance of a fog.

The admiral, in the execution of his intentions to tack, wear, &c., will not begin to change his situation until ten minutes after the respective signals shall have been made, except upon any extraordinary emergency : meaning thereby to allow a sufficient time for the ships near him to be prepared for the same movement. In case of a sudden shift of wind, or wind springing up after a calm, and not being then favorable for continuing the course before steered, or that the admiral thinks proper to steer a different course ; on such occasions he will make the signals for lying-to or the signals for sailing by the wind on either tack that will best correspond with his further intentions. And, if the wind by such alteration becomes favorable for sailing large on the course he intends to steer, he will soon after signify, by the proper signal, the number of points he means to steer from the wind on either tack accordingly.

During a fog, the admiral will continue the same course on whicb he was steering before the fog commenced, whilst the wind continues favorable for enabling him to do so : but if it comes a-head when before sailing large, or before the wind, he will keep the wind with a full sail, not to go more than three knots an hour. If the wind decreases, he will make sail in proportion, for continuing his former rate of sailing, except by setting studding-sails. If the fleet is to bring to under the topsail, the main topsail will be to the mast. If under courses, it will be with

the mainsail, and the fore-yard braced up. When in the channel, or on a coast, and the sig-nal is made for anchoring, the ships are to anchor immediately. And it is to be remembered that the firing of muskets in volleys, is to denote the being anchored; it should, therefore, be continued some time in each ship, until there is reason to think the whole or greater part of the fleet have anchored. The repeating frigates are not to repeat signals during a fog.

SIGNALS, COMPASS (Fr. compas de signaux,), are made with certain flags and pendants, and occasionally used as auxiliaries to the Numerical day signals to be hereafter noticed. When any general .signal is accompanied with either of the compass signals, expressive of a particular point, the direction in which the ships are to proceed, to carry the purpose of such signal into execution, is meant to be thereby denoted ; as when the signal is made to chase, to alter course, &c. On strange ships being discovered (and so of any other occasion when the bearing is necessary to be made known), the quarter is to be denoted .by the proper compass signal ; and, when answered by the admiral, the compass signal is to be hauled down once for each strange ship seen ; or the number may be indicated by a numeral signal.

John M'Arthur, esq. LL. D., formerly secretary to admiral lord Hood, made various improvements in day and night signals, as well as telegraphic communications. That is, early in the year 1790, he laid before the earl of Chatham, then first lord of the admiralty, a code of day signals, combining a tabular and numerary plan, on very simple principles, and susceptible of great variety and extent of ideas. He observes, in his introduction, ' that having been frequently stationed during the American war to observe signals in fleets, .and with a view of obviating the difficulties that frequently arose from showing flags at a particular part of a ship, as well as for facilitating the signification of all signals, it had been the pursuit of his leisure moments, since the year 1 782 ; when he first digested a compendium on a plan analogous, though not mature, and presented it to admiral Digby, then commander-in-chief of his majesty's ships and vessels in North America.

' The precise execution,' he observes, ' of all naval evolutions, is attainable by the good order and discipline of the respective ships, and a harmonious and speedy compliance with the signals. It is this which gives force and agility to the movements of a fleet, uniting or separating the divisions, or the bodies composing it, according to the exigencies of the mpment ; and the fewer evolutions that are put in execution in presence of an enemy the better, unless with a view of obtaining an advantageous position, to arrange the fleet in line of battle. In the formation or change of positions, in all evolutions with large bodies, there must at times occur, in the best disciplined fleets, a temporary disunion, separation, or irregularity of some of the ships, in getting into that compact order necessary.

' The order of sailing, in as compact an order as the weather will permit, is essential for the

due observance of signals, and for forming with celerity and precision the line of battle. In fleets from twelve to twenty sail, the order of sailing is generally in three squadrons or divisions, and, in fleets consisting of twenty-four to thirty-six sail of the line, the order of sailing is usually in six divisions ; for it is a known truth in naval, as well as in military tactics, that the more compact or collected the order of sailing in divisions, or the order of march of armies in columns, are adhered to in approaching an enemy, the more power and agility they will have in the arrangement for action. ‘ As, therefore, the regularity and prompt execution of all naval evolutions depend on the nice observation and speedy understanding of ideas attached to signals, it was Mr. M’Arthur’s aim to simplify them, though combining different plans, and to divest them of every ambiguity and misunderstanding. For that purpose, he not only devised the plan of signals alluded to, by partly uniting to the methodical ideas of Locke on his Common-place Book, a numerical moveable index of the flags ; but also had arranged and classed all signals under eight general and relative heads, *viz.* 1. Anchoring. 2. Calling officers and boats. 3. Chasing. 4. Convoys and prizes. 5. Fighting evolutions. 6. Sailing evolutions. 7. Private ships’ signals to the admiral. 8. Miscellaneous.

The compartments or leaves of the book appropriated to these heads respectively were subdivided alphabetically into the emphatical words, or purport of the signals, connected with the general heads ; thus serving as an index, incorporated with the table of flags and significations, for the admiral’s . greater promptitude and fa’cility in making the necessary signals, as well as for private ships immediately referring to the significations indicated.

The signals are comprised into two tables opening from the centre of the book. The tabular flags used are only twelve in number, which, with the aid of an auxiliary or substitute flag, to save the expense of having duplicate flags, express 312 literal significations (independent of a vast variety of signals in a numeral sense to be hereafter noticed), being more than is requited for any code of navy signals. The plan being simple and homogeneous, no pendants nor triangular flags are requisite, either for denoting the points of the compass, duty of launches and boats, or for distinguishing signals, denoting particular squadrons, divisions, &c., of the fleet. The whole, as well as private ships’ signals, are compressed into one code, &c., indicated by thirteen flags only, instead of thirty flags, besides a variety of pendants and triangular flags, &c., as were formerly, and are still used in the navy.

There is also a consideration of some importance recommended in the adoption of this plan, namely, that the captain of every private ship in the fleet, being at all times furnished with the thirteen established signal flags, may on any emergency be immediately detached on a particular service, and thereby as a commanding officer can communicate his ideas, in the language of signals, with the same facility he was

accustomed to obey them, while i-s a subordinate situation.*

Each table has twelve leaves annexed, corresponding to the number of tabular flags, and each page or leaf is subdivided into twelve different compartments, on a line with the flags denominated inferior, for the more speedy finding the signification of any signal. Flags of any color or description may be used, but the twelve tabular flags selected for this code are not only such as are capable of expressing a second arrangement of distinct signals when invertedf or reversed, but have also two colors contrasted in each flag, as are best seen at a distance, and according to the ascertained observations on the change or vicissitudes of the atmosphere, namely, red and white, blue and white, yellow and white.

In the proper order of hoisting the signals, the red, blue, or yellow color of the flag, is always uppermost, or next the mast ; in the inverted or reversed order, the white part of the flag, is uppermost, or next the mast. In the first table the flags are shown proper, and in the second they are exhibited inverted or reversed. Hence twelve tabular flags, with a substitute flag, indicate, as already noticed, 312 literal significations; and, by way of illustration, the first table is exhibited in plate SIGNALS, comprising 156 numbers, referring to signals composed in sentences or distinct significations. The same flags, inverted and reversed, form a second table (which, being easily understood, it is not* necessary to explain by a plate), making with the former 312 significations, besides the numerary and alphabetic plans of which the code is susceptible, indicating upwards of 20,000 additional ideas, all of which are illustrated by examples given in the

introduction to these signals.

Explanation of the plate exhibiting the twelve tabular flags in the proper order,! with the substitute flag.

The twelve flags are exhibited horizontally in the upper column, and these identical flags are again shown vertically in the lateral or left side column, and the substitute is shown separately at the bottom. The numbers from one to twelve, placed immediately under the upper column of flags, not only denote signals, appropriated to single flags, but are indices to refer to the compartments of significations allotted to each of the superior flags, whether hoisted singly or with an inferior flag.

* It was usual to furnish captains of private ships with certain flags only for making signals to the admiral, but they were not supplied with the general signal-flags of the commander-in-chief ; consequently no junior officer could be detached on any service without much detriment and inconvenience.

t The term ‘.inverted is to be understood when a flag is shown upside down ; namely, half red and half white horizontally divided, will be inverted when the white is shown uppermost. — Reversed is applied when a flag is turned the contrary way to the mast, or where it is hoisted, namely, a red and white, divided vertically, is reversed when the white part is neTt to the mast.

t Red color is indicated in the plate of flags by vertical strokes or lines, blue by horizontal strokes, and yellow by small dots.

The superior flags, with the index numbers attached, have the intervening leaves cut transversely, in order to exhibit at one view the compartment or leaf, on which the signification corresponding to the signal made is to be found, where, casting the eye on the lateral or side co-lumn flag, the signification is instantly found.

Each table has twelve leaves annexed ; thaf is, one leaf of paper for each flag, and each page or leaf is divided horizontally by lines of separation for the written signification of signals into thirteen compartments. The superior flags with index numbers being cut transversely, in the form of a merchant’s alphabet to a ledger ; and the flags in the lateral columns being painted in their proper colors, on the twelfth leaf back from the opening of the table are, by this contrivance, always in view with the superior flag, both in front and

whatever part of the book may be turned to ; therefore when any signal is made, suppose with two flags, the observer has only to place his thumb on the upper flag ; and turning over to its compartment, and looking on the left for the inferior, he will instantly find the same number as is shown in the angle of meeting in the table, or opening of the book, as well as the signification of the signals; while, to prevent mistakes, he has at the same time the superior and inferior flags of the signal constantly in view.

Thus, for example, if flag B were hoisted superior, and flag M inferior ; or, in other words, if No. 2, blue and white flag in the upper co-lumn, was placed over No. 1, red and white in the lateral column, the number 25 will be found in the corresponding angle or square of the table ; and, by placing the thumb on the superior flag B, you turn over the cut leaves immediately to the page where the literal signification of the signal to the corresponding number twenty-five is expressed, in a line to the inferior flag M. If the same superior flag B were hoisted with the substitute flag, or which, in other words, implies in this tabular form a duplicate of the superior, the number 26 will be found in the angle of meeting, and the signification is written at length on the page back, on a line facing the duplicate or inferior flag on the side column ; hence the substitute is here used merely to stand in the place of a duplicate flag, and giving a value to the tabular numbers as expressed in the angles of meeting or squares of the table. Thus the signals expressing the tabular numbers 13, 26, 39, 52, 65, 78, 91, 104, 117, 130, 143, and 156, have the superior and lateral flags represented as of the same denomination, the substitute in these instances is to be always hoisted inferior, as standing in place of a duplicate of the superior flag ; but in the numerary application of the plan to be hereafter noticed, the substitute will express a repetition of the superior flag in corresponding units.

When the substitute flag is hoisted alone, in the tabular plan, it signifies annulling the preceding signal ; and, by being hoisted superior to any of the other twelve flags, it may be appropriated to particular signals, independent of the tabular or numeral ones.

The twelve flags, by being painted in duplicates

on silk or vellum, may be made to shift or slide on i thin box-wood attached to the upper and lateral columns, in order that the order or place of the flags may be changed or transposed to different numbers, when the admiral may think it necessary, so that nothing need be apprehended from the code of signals falling into the hands of an enemy. In this respect the substitute flag may, when hoisted over any other flag, indicate the transposition of that tabular flag to the place of No. 1, and the other eleven flags are to follow such change of place in the progressive order they stand, whereby the tabular system, with respect to flags indicating numbers, becomes totally changed, while the original significations of the signals remain permanent.*

Numerary and alphabetic combinations, with the thirteen flags of the table in theplate — The plan is not confined solely to the simple tabular form already explained, and which would suffice to denote a greater number of signals than has heretofore been practised in the navy ; but it is susceptible of a numerary combination capable of expressing 20,000 additional ideas, applicable to so many words of a dictionary or vocabulary regularly numbered from 1, to 20,000. The letters of the alphabet can also be easily denoted, by applying as marked in the table the signals first in order from 1 to 26 inclusive. This is so obvious that it requires no further explanation. For the better understanding of the numerary combination, reference will be first made to the ten flags numbered in the lateral column from one to ten, which, with the aid of the substitute, can express 10,000 signals, by hoisting the flags in the proper order as represented ; and, when these flags are shown inverted or reversed, 10,000 additional ideas can be denoted.

1. With one or two flags. — The signal flags from 1 to 9, hoisted singly, will express their corresponding numbers as units, and flag 10 is to be considered the cypher flag. When two flags are shown at the same time, the one hoisted superior will express tens, and the under one units : thus flag 2 over flag 4 would express 24 : flag 3 over flag 10, or cypher, would express 30 : and flag 4 hoisted over the substitute would denote 44. The substitute in this combination being always considered a repetition in units of the number immediately above it ; the signals, therefore, that can be expressed by one or two flags are 99 in number.

2. With three flags. — When three flags are shown at the same time,

the superior denotes hundreds, the next tens, and the lower one units. Thus, if 346 were to be expressed, flag 3 would be hoisted superior for hundreds, the flag 4 next for tens, and flag 6 for units ; consequently, the number of signals, with the combination of three flags, will be 999 in number.

3. With four flags. — When four flags are

* This suggestion of a transposition-flag was afterwards adopted in the New Arrangement of lord Howe's Signals, prepared by Mr. M'Arthur in 1792 ; and a single flag was then appropriated to that purpose.

shown, at the most conspicuous parts ot a ship, the superior flag will denote thousands, and the three others hundreds, tens, and units, as in thp preceding article. The number of signals, with the combination of four flags, will be 9999 in number.

Additional substitute flags. — Having assigned one substitute flag for the first combination with two flags, which for distinction's sake is termed the integral substitute, it is proper that a second and third should be assigned to the other combinations, so as to leave no chasm in the progressive numbering of hundreds and thousands; therefore the flag 11, with the letter W prefixed, is termed the decimal substitute, when three flags, including it, are hoisted : and flag 12, with the letter X prefixed, is termed the centesi-mal substitute when four flags are hoisted.

Example with three flags. — If 333 were to be expressed, flag. 3 would be hoisted uppermost ; next to it the decimal substitute, and the lowest would be the integral substitute.

Example with four flags. — If 4444 were to be denoted, the flag 4 would be superior, the cen-tesimal substitute next, then the decimal and integral subtitutes. If 4044, the cypher-flag would be under flag 4 the superior, then the decimal and integral substitutes, and so on of the other numbers wherever a substitute flag was necessary to the last in the combination ; namely, 9999, which would be expressed by flag 9 superior to the three substitutes in their proper" order.

To complete the series to 10,000, the cypher-flag is to be hoisted superior to the three substi • tutes in their natural order.

By inverting or reversing the numerical flags, the value of 10,000 is added to each signal, whereby 10,000 additional ideas on the same

principles can be expressed ; consequently, the two arrangements, with only thirteen flags, will denote 20,000 signals or words of a dictionary.

Example in the inverted order of the tabular flags. If 10,023 were to be expressed, it would only be necessary to hoist flag 2 inverted over flag 3, also inverted. To denote 10,123, the three flags 1, 2, 3, would be inverted. To de-note 12,345, the superior flag 2 for so many thousands would be shown inverted, next flag 3 would be shown inverted, then the diagonal flags 4 and 5 would be shown reversed ; that is, the white part next the mast, and so forth, always bearing in mind that by this order of inverting or reversing the flags, there are 10,000 added to the original numbers which the signals would otherwise express, if the flags were hoisted in the original or proper order.

The above plan of tabular and numerary signals was illustrated by plates containing a variety of essential evolutions in the order of sailing and lines of battle. But although it was allowed to possess great ingenuity, and met with a favorable reception from the admiralty, there appears to have been an insurmountable obstacle to its adoption, principally, it was said, arising from a numerary plan of day signals digested by earl Howe, then in contemplation to have been brought into general practice, when an opportunity offered.

Alterations and improvements to the code of day and night signals now established-in the lavy. — In the4 Spanish armament of 1790, and Russian armament of 1791, earl Howe’s day signals, printed in quarto, with instructions, also his night signals, were issued to his majesty’s ships under the orders of admiral lord Hood, commander-in-chief, then also one of the lords commissioners of the admiralty. In the summer of 1792, when a rupture with the French republic was apprehended, lord Hood was appointed to the command of a squadron in the Channel, ‘ for the purpose of exercising the officers and men in the order of battle, and of sailing, and other duties in their several stations, which might best qualify them for service, preparatory to and

in battle against an enemy.'

During this service, in which a squadron of fifteen sail, including frigates, was exercised in the various evolutions indicated by earl Howe's day signals, Mr. M'Arthur, the admiral's secretary, turned his attention to render them more simple and perspicuous, by preparing a new arrangement, in which several important alterations and additions were incorporated, drawn from the code which he had, as already noticed, presented two years antecedently to the admiralty. From motives of respect and delicacy towards earl Howe, sir Hyde Parker, then act-ing as captain of the fleet under lord Hood, transmitted to the former a copy of Mr. M'Ar-thur's explanatory observations on the proposed new arrangement of day signals and instructions. The whole having been subsequently laid before the lords commissioners of the admiralty, they were approved of and printed in the latter end of 1792, under Mr. M'Arthur's superintendence, with all the alterations and additions he had suggested, together with a new code of night signals, he had at the same time compiled, and submitted for approval.

From that period these day signals and instructions, together with the new code of night signals alluded to, and to be hereafter noticed, have been issued to his majesty's ships, with little or no variation in form or substance. The following being the principal heads of the explanatory observations prefixed to the new arrangement of lord Howe s signals, submitted to the admiralty, they will suffice to give the reader a competent idea of the improvements suggested, and which were ultimately adopted.

Signal book. — 1. The column of purport in earl Howe's quarto Signal Book is proposed to be done away entirely, and a copious alphabetical and numerical index substituted; the present arrangement, therefore, may be printed in a convenient octavo size, with as large a type as lord Howe's quarto impression.

2. By leaving a small blank space on the outer margin of the leaves, the index to the signals and instructions, as well as the numbers on each page, may be exhibited in the form cut out in the accompanying Signal Book ; whereby both books become at once arranged either for a flag or private ship. Similar attention has been paid to private ships' signals, to which is added a numerical index, whereby signals are made w"ith facility, and their significations found without any further arrangement.

3. Every signal has immediate reference to the article relative to it in the Instruction Book ; and, that the articles may not be mistaken for the pages, they are always referred to in Roman numerals. The like is attended to in the indices, and the numbers of the signals are placed in figures on the left hand, so as not to be mistaken for the pages referred to on the right.

4. Instead of the leaves formerly allotted to the supplemental flags, they are now exhibited to view on two pages only, under the title of Single Flags appropriated to particular Signals independent of the Numerals; therefore no num-ber or article is attached to them as formerly, but the purport of each retained, by which it is distinguished when referred to, either in the Signal or Instruction Book ; thus, affirmative flag, annulling flag, rendezvous, preparative, &c.

5. The single flags appropriated to particular signals being arranged as in the preceding article, the numeral signals are made to commence at No. 1, instead of No. 13, as formerly in lord Howe's code, and from 13 the numbers and significations follow as heretofore.

6. To the end that the numbers and significations may be permanent, and to remove every apprehension of their being useful to the enemy in case of getting possession of them in this regular form, in the accompanying model of a signal board, the numerical flags, painted in a duplicate order, are made to change or slide, with observations on an additional signal proposed to be inserted in the department allotted. Single flags (namely, by the introduction of what is called a key or transposition flag, which, when hoisted, denotes that the numeral or integral flag hoisted under it is to be transposed or changed to the upper place allowed, No. 1 ;) and the other eight integral flags are to follow such change of place in the progressive order they stand, whereby the numeral system becomes totally changed. This suggestion may, perhaps, on a due consideration, be deemed worthy of adoption.

7. The table of triangular flags, page 6, Signal Book, is proposed to be substituted for the former one, as being more simple in form.

8. In some signals it has been thought necessary to insert a N. B. illustrative of them taken from the Instructions; such as signals 4, 24, 25, &c., whereby signals that formerly appeared on a perusal of the Instructions only, are now brought forward to view in the proper departments of the respective signals.

9. Should the new signals 10, 11, and 12, relative to enforcing the

general station signal, No. 4, not be deemed essential, they may remain blanks, or be appropriated for other significations.

10. If the Signal Book were printed on stout paper, and half bound, it would admit the margin to be cut out in the form submitted, with great regularity, as alphabetical and numerical indices, and be equally adapted for a commander-in-chief to make signals, as well as private ships to refer immediately to the significations indicated. Eight plates are annexed of the most essential evolutions, with instructions on the principal movements. These are entirely new, and have been introduced for the reasons to be noticed in tr»«? subsequent article

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INSTRUCTION BOOK TO THE DAY SIGNALS.

AH the instructions are arranged and consoli-dated in one book under general heads, having a copious alphabetical index annexed ; and it is

humbly submitted, whether it may not be deemed proper to print this Instruction Book in folio, as a size more convenient than octavo for being left open on a table under either of the general heads or running titles corresponding to the situation of the fleet ; for were it printed octavo size*, the same as the Signal Book, “it would be too thick and bulky to remain open on a table. On the other hand, the necessity of having the Instruction Book carried on the quarter-deck seldom occurs, but the Signal Book is always necessary to have recourse to, and, as such, an octavo is the most convenient form for the latter, more particularly as the signals are now arranged for that purpose.

In order to avoid all ambiguity and confusion, one mode of technical expression has been adhered to, both in the Signal Book and Instruction ; *viz.* squadrons, to express the three component parts of a fleet, either in the order of sailing or in line of battle : divisions, to express such parts into which squadrons may be divided either in the order of sailing by divisions, or in the line of battle : column is applied only to the fleet in the order of sailing in two columns or grand divisions.

The only chain of new matter that has been attempted to be introduced into earl Howe’s General Instructions for Ships of War are the following instructions for the conduct of the fleet in the execution of the principal movements of the evolutions, which are illustrated by figures projected on principles consonant to those of the best naval tactitians, and in strict conformity to the ideas of lord Howe, diffused in his General Instructions. In the practice of evolutions it is obvious that rules for the execution of the movements of a fleet in order of battle are useful and requisite ; and the want of which has been often regretted by flag-officers and captains, more especially, as a due observance of them will tend to make the squadrons or divisions move with promptitude and regularity in the order indicated by general signal.

I. Instructions for the conduct of the fleet in the execution of the principal movements of the evolutions, as referred to in the preceding explanatory observations. When the admiral makes general signals, for any intended evolution, it is to be understood that the movements thereby indicated are to be put in execution the instant the preparative flag is hauled down, and the general signal left fly-ing ; and the respective commanders of squadrons, instead of repeating such general signals, are (so soon as conveniently may be after answering it) to prepare their squadrons to act together, or in succession, by putting abroad the signal corresponding to the established movements herein contained ; and, when the admiral

hauls down the preparative flag to the evolution, the commanders of squadrons are likewise to haul down the preparative to the movements, that the squadrons, divisions, or ships denoted may forthwith put the same in execution.

‘J o the end that the squadrons or division may act with regularity and promptitude, in the formation of the evolution, indicated by general signal, and thereby preserve in all movements the compact order necessary, the subordinate flag-officers, and captains of ships respectively, are enjoined to adhere to the established instructions to the movements, and not to deviate from them unless upon some extraordinary emergency rendering the same expedient.

When the admiral would have the fleet form a line of battle, one ship a-head of another, he hoists a union flag on the mizen-peek, and fires a gun ; and every flag-ship does the like. But when they are to form a line of battle, one abreast of another, he hoists a pendant with the union-flag, &c. When he would have the admiral of the white, or him that commands in the second post, to tack, and endeavour to gain the wind of the enemy, he spreads a white flag under the flag at the main-topmast-head, and fires a gun ; and when he would have the vice-admiral of the blue do so, he does the same with the blue flag. If he would have the rear-admiral of the red do so, he spreads a red flag from the cap on the fore-topmast-head, downward on the back-stay ; if the vice-admiral of the blue, he spreads a blue flag, &c., and fires a gun. If he would have the rear-admiral of the red do so, he hoists a red flag at the flag-staff at the mizen-topmast head ; if the rear-admiral of the white, a white flag ; if the. rear admiral of the blue, a blue flag, and under it a pendant of the same color, with a gun. If he be to leeward of the fleet, or any part of it, and he would have them bear down into his wake or grain, he hoists a blue flag at the mizen-peek, and fires a gun ; and all the flag-ships are to do the same. The fleet being in a line of battle, if he would have the ship that leads the van hoist, lower fet, or hawl up any of her sails, he spreads a yellow flag under that at the mizen-topmast-head, and fires a gun, which signal the flag-ships are to answer ; and the admiral will hoist, lower, fet, or hawl up the sail, which he would have the ship that leads the van do, which is to be answered by the flag-ships of the fleet. When the enemies retreat, and he would have the whole fleet follow them, he makes all the sail he can after them himself, and takes down the signal for the line of battle, and fires two guns out of his fore-chase, which the flag-ships answer; and then every ship is to endeavour to come up with, and board the enemy. When he would have the chase

given over, he hoists a white flag at the fore-topmast-head, and fires a gun. If he would have the red squadron draw into a line of battle, one abreast of another, he puts abroad a flag, striped with red and white, on the flag-staff at the main-topmast-head, with a pendant under it, and fires a gun ; if the white or second squadron is to do so, the flag is striped red, white, and blue ; if the blue, or third squadron is to so, the flag is a Genoese ensign and pendant ; but if they are to draw into a line of battle, one a-head of another, the same signals are made with a pendant. If they are to draw into a line of battle, one a-stern of another, with a large wind, and he would have the leaders go with the starboard tacks, aboard the wind, he hoists a red and white

flag at the mizen-peek, and fires a gun ; but if they should go with the larboard tack aboard by the wind, he hoists a Genoese flag at the same place, which signals, like others, must be answered by the flag-ships.

Before we enter on the subject of night signals, it may be advisable to notice a mode of preparing an artificial light for the purpose, which has generally been kept a secret. It is sold in wooden boxes ; the fire produced from one of these boxes of six inches diameter, and four inches high, which was lighted by General Roy on the English coast, was seen very distinctly by M. Michain, with the naked eye, on the French coast, at the distance of forty miles over the sea, in overcast and cloudy weather.

The fire from another of these boxes, lighted by M. Legendree of Dunkirk, was seen with the naked eye by M. Cassini, at Cape Blanc-nez, as distinctly as the planet Venus when brightest, although the distance was 20,000 toises.

The powder was prepared in the following manner : —

Twenty-four parts of saltpetre, seven parts of flower of sulphur, and two parts of red arsenic, are pulverised and well mixed together. This mixture is inclosed in round or square boxes of thin wood ; in general the height of the round box is half their diameter, and the square are

made double the size of the round. They are closed with a cover of the same wood, in the middle of which a small hole is made, by which the powder is lighted.

When these boxes are made for carriage, paper is pasted all round them, and also over the hole in the lid, that the powder may not be scattered. When the box is lighted, the paper that covers the joining of the lid is first taken off, and then that which is over the hole ; it is lighted with a common match, and takes fire in an instant, without explosion. It spreads a very brilliant light, with a little smoke, which the person who lights it must be careful to avoid ; a box of six inches diameter, and three inches high, burns nearly for the space of three minutes, and the light may be perceived a little before sunset, at the distance of 36,000 loises. The light of this fire is so dazzlingly bright, that it effects the eyes of those who approach very near it, in the same manner as the sun, rendering them incapable of distinguishing objects for some time afterwards.

The price of this powder is nearly the same as common powder.

The matches are prepared as follows ; four parts of refined saltpetre are pulverised, and well mixed with two parts of gunpowder, two parts of charcoal, and one part of flowers of sulphur; the whole is then passed through a sieve. This powder is put into paper cartridges the length of the quill of a pen, the cartridges are made of strong paper rolled round a stick two feet long, and the powder is pressed in with a piece of round wood of the same dimensions. These matches are fastened to a stick of a suitable length, the edge of the paper is cut with scissars, and the match is lighted by a candle. The effect never fails, and the matches are proof against wind and rain. In order to extinguish them the lighted end must be cut off.

An artificer of Marseilles proposes to make these matches of a mixture of eight parts of flowers of sulphur, four of saltpetre, and two of gunpowder, the whole reduced to a fine powder, and well mixed together.

Another mode by which night-signals may be made, with advantage to the service, must also be adverted to. It consists in the employment of oxygen and hydrogen gasses, impelled, when in a state of combustion, against a conical piece of chalk. This process is of a purely chemical nature, and the laboratory mode of producing light by this means would be perfectly inapplicable at sea. The chemist employs two

japanned copper tanks floating in water, and the pressure of the water displaces the gas. Now this apparatus is not sufficiently stable for nautical purposes ; — it will be necessary, therefore, to have the gases condensed in strong iron receivers, and the openings connected with the gas burners defended with safety tubes.

When well-burned Carvara marble is made into a thin paste, it is almost equal to pure chalk, both in the intensity of its light and the purity of its colour. Lime from chalk, however, admits of being turned in the lathe so that any number of small balls with a slender stem of the same material, uniform in size, and perfect in figure, may be kept ready for use. The surface of the ball, by the continued action of the heat, is nearly in a state of fusion during the whole operation. With an apparatus of this kind a distance of thirty or forty miles is no bar to the most accurate reading of the signals. The plan was, we believe, first adopted by Lieutenant Drummond in the great trigonometrical survey of England.

NIGHT SIGNALS.

Observations on the numerary night signals established in the navy : — The code of night-signals now used had been chiefly arranged from a plan devised by that ornament to his profession the late admiral Kempenfelt, on numerary principles, by the combination of guns, lights, and false fires. Sir Hyde Parker, captain of the fleet under admiral lord Hood, having in his possession admiral Kempenfelt's ideas of MS., relative to this new mode of communicating signals in the night, and which from his lamented death had not been brought to maturity ; they were put into the hands of Mr. M'Arthur, secretary to the commander-in-chief, at the time he was as already noticed preparing, in the autumn of 1792, a new arrangement of earl Howe's Day Signals and Instructions, to be submitted to the consideration of the admiralty. From these original sources, Mr. M'Arthur presented to the lords commissioners of the admiralty in a digested form, with some alterations and additions, the Numerary Code of Night Signals alluded to.

Admiral Kempenfelt having left no instructions to his plan, the principal part of earl Howe's old Night Instructions was very judiciously selected, so far as was applicable to the New Code of Night Signals ; but some additional instruc-. tions were deemed necessary to complete the

arrangement. These night signals and instructions, thus prepared and comprised, with indices, in one small octavo volume, were then adopted, and have ever since been used in his majesty's navy. As it may be deemed improper to give publicity to these night signals, or to exhibit in this work a detail of the principles on which they are founded, suffice it to observe that the utility of the plan, compared to that formerly in practice by showing lights at particular parts of a ship, or in the form of triangles, squares, or lozenges, where best seen, is too obvious to be dwelt upon ; yet, when a fleet is in the presence of an enemy, it may be proper to make signals in the night by lights only.

Lord Hood, knowing well how to appreciate every improvement in naval tactics, was the first cornmander-in-chief of a fleet who issued to the flag-officers of squadrons and captains of ships under his orders, at the commencement of the var in 1793, the New Arrangement of Day and Night Signals above noticed ; and their utility tince that period has been confirmed by the practice and experience of every successive commander-in-chief. From the observations of many intelligent officers, it was found that the code of numerary night signals, although it had advantages in some respects over every other known mode practised, yet there was a desideratum sought after, namely, to give privacy to night signals when in expectation of falling in with an enemy, or approximating the line of an enemy's coast. It is, therefore, the object of the following auxiliary plan, proposed by Mr. M'Arthur, to remedy the disadvantages that might eventually result by firing guns, as the component part of the numerary combination to night signals, and which may still be continued as the standing system, when the fleet is not in expectation of falling in with the enemy. This can be effected by the combinations of four distinct lights, without the aid of guns or false fires ; and the mode proposed will have the superadded advantage of being occasionally employed as a nocturnal telegraph, for naval or military purposes.

General principles to be adopted.

1. An improvement in the construction of signal lanterns ; and, as only four are required for each ship, they ought to be issued as an article of store by the navy office.

2. The signals are to be made from on board ship where best seen, forward or abaft ; or if a ship be directly a-head or a-stern of other ships to whom these signals are to be communicated. The signal lanterns may be shown at the larboard and starboard yard-arms, where best seen ; but, if used on shore, the left hand post or signal staff; and the right hand post or staff, are to be considered synonymous terms to the application, at sea, of forward and abaft, or larboard and starboard yard-arms.

3. The combination of two, three, or four lights, shown at sea forward or abaft, or at the larboard and starboard yard-arms ; but, if on

shore, hoisted on the left post or right, togethec with one or two obscurations of the lights, either in a horizontal or vertical position, will denote more ideas than is required for any code of night signals.

The lanterns are to be made in a cylindrical form ; dimensions about nine inches “diameter, and proportionable height. A lamp with four burners is to be placed in a socket in the centre, and so constructed that, if a lantern should hap-pen to be upset, the oil cannot be spilt. Instead of horn or glass to the lanterns it is proposed to substitute talc, or what is commonly known by the name of Muscovy glass, which is equally as transparent as common glass, is much lighter,- and will not consume by fire.

Each lantern to have an obscurer of tin or canvas, to denote the combinations to be hereafter explained. These obscurers to be in the form of cylinders, perforated with air-holes at the tops and open at the bottoms so as to encircle or cover the lanterns, and thereby eclipse the lights when necessary.

The obscurations, or eclipses, of the lights, are thus practised with facility : — Suppose the four lights hoisted vertically, or one over the other, at the usual distance of ten or twelve feet asunder, each lantern to have its obscurer placed from five to six feet over it, and, by a line passing through a small block attached to the lantern halyards, any of the lights at the word of command would be obscured. In exposing the light again, it is only necessary to haul the topping line of the obscurer, while the lantern remains in the same permanent situation.

The lanterns and mode of ‘obscuring the lights being premised, the plan is susceptible of the following arrangement : — The first will denote, as by preparatory signal, that the combinations are to be applied telegraphically, to the letters of the alphabet. The second arrangement will de-note, by preparatory signal, the first twenty-five numbers allotted to the significations in the standing Night Signal book for the navy, and in order to express fifty additional numbers, mak-ing in all seventy-five signals, which is more than the numerary code with guns, lights, and false-fires comprehend, an obscuration of one light for an interval of twenty or thirty seconds will denote the numbers from 26to50 inclusive; and the obscuration of two lights will denote the numbers from 51 to 75 inclusive, as expressed in the following table : — The open cyphers, thus O> in the annexed table, denote the lights shown, and the shaded ones, thus •, denote the lights obscured or eclipsed.

It is to be observed.1 that, when one or two lights are to be obscured, the lights composing the signal are first shown for a few minutes ; then one or two lights, as indicated in the table, to be obscured for twenty or thirty seconds, and which is to be repeated by showing the lights again until answered and understood by the ships to which the signal may be addressed.

TABLE exhibiting the Letters of the Alphabet, and Seventy-five Numeral Signals, by the Combination of Four Lights, shown and obscured.

Lights, where shown.

Lights shown, and 1 obscured.

Lights shown, and 2 obscured.

Letters.

No.

Forward, j Aft.

No.

Forward.

Aft.

No. Forward. Aft.

A

i OO

26 •Q

51 ••

5

2 000

27 •OO

52 ••()

c

3 oooo

28 •OOO

53 ••OO

D

4 OO

29 +Q

54 | 99

E

5 OOO

30 •OO

55 | ••Q

F .

6 OOOO

3i •OOO

56 ••CO

G

7 0 0

32 • O

57 • *

11

8 OO O

33 *Q O

58 •• O

I. J.

9

OO OO

34 •Q OO

59 •• OO

K

10

OOO O

35 •OO O

60 ••O 1 O

L

11

O OO

36 • OO

61 O ••

M

12

O OOO

37 • OOO

62 O

• •O

N

13

O

O O

38

•

O G

63

O

• •

O

14

O O

O

39

8

O

64

• •

O

P

15

OO

O O

40

•O

O O

65

••

0

O

Q

16

O

O

00

41

O

00

66

• •

OO

R

17

O O

O O

42

• O

0

O

67

• •

O

0

S

18

O O

43

•

0

68

• •

T

U

19

O O

44

•

O

69

• •

20

O O O

45

• O O

70

• •

O

V

w

21

O O O

46

O

O

71

• oi

22

0 0

O

O

47

•

0

O

O

72

• • O

O

X

23

O

0

O O

48

O

•

O O

73

0

• •

0

Y Z

24

O ‘ O O

0

49

O O O

74

• •

O O

25

O O O O

50

•

0

O O

75

•

0 0

1 G N A

S.

337

A FABLE of the number of GUNS, LIGHTS, and BLUE LIGHTS, employed to express numbers which refer to certain significations, as set forth in the following table.

Guns.

Blue-Lights.

Lights.

Numbers.

1

—

—

0

One gun to call the attention of the fleet.

—

—

1

1

A general acknowledgment that the signal is understood.

—

—

2

2

Stand upon the starboard tack.

—

—

3

3

Stand upon the larboard tack.

—

—

4

4

Annul the foregoing signal.

—

1

—

5

To show my situation.

—

1

1

6

Heave to upon the starboard tack. \

—

1

2

7

Heave to upon the larboard tack.

-

1

3

8

Make sail.

—

1

4

9

Shorten sail.

2

—

—

10

We are overpressed with sail.

2

—

1

11

Headmost ship shorten sail.

2

—

2

12

Request to speak the commodore.

2

—

3

13

Continue as before, although the commodore acts otherwise.

2

—

4

14

We have carried away a topmast, or topsail-yard.

2

—

1

15

We see danger.

2

1

1

16

A stranger is in the fleet.

2

1

2

17

Show no light.

2

1

3

18

Haul two points to starboard.

2

1

4

19

Haul two points to port.

r 3

—

—

20

North.

3

—

1

21

Northeast.

3

—

2

22

East.

3

—

3

23

Southeast.

3

—

4

i 24

South.

3

1

—

25

Southwest.

3

1

1

26

West.

3

1

2

27

Northwest.

3

1

3

28

3

1

4

29

4

—

—

30

Explanation of the table. — Each lantern-light to four expresses 1, 2, 3, 4, respectively. One hlue-light expresses 5. Two guns express 10, three guns express 20, and four guns 30. To express any number, therefore, as for instance 19, fire two guns, burn one blue-light, and hoist four vertical lights where they can best be seen.

Previous to making any of the first nine signals, which do not require guns to express the num-ber, one gun will be fired to draw the attention of the fleet, and in making the remaining signals, the necessary guns will be fired to draw the attention of the fleet previous to hoisting the lights, or burning the blue-light. To prevent a confusion of lights, when a signal is made from the commodore, the top light will be covered.

It is recommended to use glass signal-lanterns, as horn admits a very dull light. Such lanterns should be well strengthened down the sides, and be provided with a secure ring at the bottom as well as at the top, for the convenience of bending them to each other ; and to the top ring of three of the signal-lanterns a tack should be fitted, about a fathom long, to admit their being bent to each other with regularity and despatch.

SIGNAL, PREPARATORY (Fr. signal prepara-toire), a signal given by

the admiral to the whole, or any part of his fleet, and is immediately answered by those to whom it is directed; by showing the same signal, to testify that thev are VOL. XX.

ready to put his orders in execution. Having observed their answer, he will show the signal which is to direct their operations : as, to chase, to form the line, to begin the engagement, to board, to double upon the enemv, to rally or return to action, to discontinue the fight, to retreat and save themselves. The dexterity of working the ships in a fleet depends on the precise moment of executing these orders ; and on the general harmony of their movements : a circumstance which evinces the utility of a signal of preparation.

As the extent of the line of battle, and the fire and smoke of the action, or other circumstances in navigation, will frequently prevent the admiral's signals from being seen throughout the fleet, they are always repeated by the officers next iu command ; by ships appointed to repeat signals*; and, finally, by the ship or ships for which they are intended.

The ships that repeat the signals, besides the chiefs of squadrons or divisions, are usually frigates lying to wiudward or to leeward of the line. They should be extremely vigilant to observe and repeat the signals, whether they are to transmit the orders of the commander-in-chief, or his seconds, to any part of the fleet , or to report the fortunate or distressful situation of any part thereof. By this means all the-ships from the van to the rear will, unless disabled, be ready

at a moment's warning, to put the admiral's designs in execution.

To preserve order in the repetition of signals, and to favor their communication, without embarrassment, from the commander-in-chief, to the ship for which they are calculated, the commanders of the squadrons repeat after the admiral ; the chiefs of the divisions,

according to their order in the line, after the commanders of the squadrons ; and the particular ships after the chiefs of the divisions ; and those in return, after the particular ships, and vice versa, when the object is to convey any intelligence from the latter to the admiral.

Signal of attack or assault, in the land service (Fr. signal d'une attaque, ou d'un assaut). This signal may be given in various ways: by the dis-oharge of a lighted shell, by skyrockets, by colors displayed from a conspicuous spot, &c. In 1747 marshal Lowendbal made use of lighted shells or bombs, when he laid siege to the town of Bergen-op-zoom. During the consternation of the inhabitants, which was excited by a continual discharge of these signal shells, the grenadiers entered a practicable breach, and took the town by storm.

Signals made by the colors of an army (Fr. signaux des enseignes). — The ancients had recourse to all the various methods which could be used by signals, to express the particular situation of affairs, and to indicate measures that should be adopted. If, during an engagement, victory seemed inclined more to one side than another, the colors belonging to the victorious party were instantly bent towards its yielding antagonist. This signal was conspicuous to the men, and excited them to fresh efforts. They imbibed the most lively hopes of success, and eagerly pressed forward to reap the advantages of bravery and good conduct. When an army was hard pressed by its enemy the colors of the former were raised high in air, and were kept in a perpetual flutter and agitation, for the purpose of conveying to the soldiers that the issue of the battle was still doubtful, and that nothing but courage and perseverence could determine the victory. If, in the heat of action, any particular regiment seemed to waver and give way, so as to cause an apprehension that it might finally be broken, its colors were instantly snatched out of the bearer's hands by the general or commanding officer, and thrown into the thickest of the enemy. It frequently happened that the men who were upon the point of yielding ground and flying received a fresh impulse from this act, rallied, and, by a desperate effort of courage, recovered the colors, and restored the day. This method of reanimating their legions was generally resorted to by the Romans. We have had instances in modern times in which the fortune of the day has been wholly decided by some sudden and unexpected act of an individual. In the reign of Louis XIV. a private soldier threw his hat into the midst of the enemy, during a hard fought and doubtful battle, expressing thereby that fresh succors •were arrived to strengthen the French army. This circumstance, so apparently trifling, produced the desired effect. It threw the enemy ituo confusion, gave the French fresh spirits, and

finally determined the victory in their favor. We read of various instances in which signals have been used to express the personal danger of a king or general, who was fighting at the head of a se-lect body of men. The knowledge of the critical position in which their leader stood, excited fresh courage in the rest of the troops, and drove them to acts of the greatest intrepidity. In the course of the late war some examples of the same sort might be adduced, both on the side of Austria and on that of France. The action on the bridge of Lodi, the passage of the Tegliementi, &c., would illustrate any observations we could make upon the subject.

Nor are the advantages which arise from the use of signals confined to these particular cases. Various circumstances grow out of the desultory nature of military operations to render flags of communication indispensably necessary. The vast scope which is given to modern tactics makes it impossible that the human eye or voice should take in all the critical manoeuvres or evolutions that occur when an extended line is actually engaged. The right wing may be giving way, while the left is gaining ground, and the centre might be in danger, while the two flanks were rapidly advancing with apparent security against the enemy ; as was the case in the battle of Marengo. Under these circumstances a general, by means of communicating signals, would be enabled to provide for every contingency without losing time by sending his orders verbally. Although signal flags, in modern engagements, have been generally laid aside, their use has been acknowledged in the adoption of warlike instruments, which, by the variety of their sounds, convey the necessary directions to an engaging army.

The ancients had signals which they called mute signals (signaux muets). These consisted in certain actions or signs that were made by a general ; such as waving the hand, brandishing a stick or sword, or by exhibiting to view any part of his dress, accoutrements, &c. Instances of the same kind have occurred among the moderns. Under this denomination may likewise be classed the different signals made for the movement, marching, and manoeuvring of troops, in and out of quarters. When troops are scattered, or separated from one another, it is usual to communicate by means of fires lighted upon eminences during the night, and by smoke during the day.

In former times large pieces of wood were hung above the towers of cities or castles, which, by being drawn up or lowered, gave intelligence of what passed. This method has been succeeded by the

invention of telegraphs, which answer every purpose of communication, when they can be established through any extent of country. Besides those signals there are others which may be called vocal and demi-vocal. The vocal signals are those of the human voice, which consist in the necessary precautions that are adopted to prevent a guard or post from being surprised, to enounce words of command in action, &c. Of the first description are paroles and countersigns, which are exchanged between those to whom they are entrusted, and which are frequently altered, during the day and night, to prevent the enemy from receiving any information by means

of spies. The demi-vocal signals are conveyed by military instruments ; the different soundings of which indicate, instantaneously, whether an army is to halt or to advance, whether troops are to continue in the pursuit of an enemy, or to retreat.

The demi-vocal signals, directed to be observed in the British service, as far as regards the manoeuvring of corps, &c., consist of signals for the government of light infantry, and of cavalry regi-n.ˆnts, squadrons, or troops : the latter are properly v,:11’” ‘ aoundings. Light infantry signals are to give notice — to advance ; to retreat ; to halt ; to cease firing; to assemble ; to call in all parties. In the regulations, printed by authority, it is observed that these signals are to be always considered as fixed and determined ones, and are never to be changed. The bugle horn of each company is to make himself perfect master of them. All signals are to be repeated ; and all those signals which are made from the line or column are to convey the intention of the commanding officer of the line to the officer commanding the light infantry, who will communicate them to the several companies or detachments either by word or signal.

SIGNAL-FLAG, in ancient military history, was a gilded shield hung out of the admiral’s galley ; it was sometimes a red garment or banner. During the elevation of this signal the fight continued, and by its depression, or inclination towards the right or left, the rest of the ships were directed how to attack their enemies, or retreat from them.

SIGNAL-STAFF. In matters of military parade it is usual to fix a red flag, somewhat larger than a camp color, to point out the spot where the general, or officer commanding, takes his station in front of a line. This is called the signal-staff.

SIG’NATURE, n. s. { Fr. signature ; Lat.

SIG’NATURIST. S signatura, signo. A

sign or mark impressed ; stamp ; a mark ; proof: signaturist, one who holds the old doctrine of signatures.

All bodies work by the communication of their nature, or by the impression and signatures of their motions : the diffusion of species visible seemeth to participate more of the former, and the species audible of the latter. Bacon’s Natural History.

Seek out for plants and signatures, To quack of universal cures. Hudibras.

The most despicable pieces of decayed nature are curiously wrought with eminent signatures of divine wisdom. Glanville.

Signaturists seldom omit what the ancients delivered, drawing unto inference received distinctions.

Browne.

That natural and indelible signature of God, which human souls, in their first origin, are supposed to be stampt with, we have no need of in disputes against atheism. Bentley.

Vulgar parents cannot stamp their race With signatures of such majestick grace.

Pope’s Odyssey.

The brain being well furnished with various traces, tignatures, and images, will have a rich treasure always ready to be offered to the soul. Watts.

Herbs are described by marks and signatures, so far as to distinguish them from one another.

Baker on Learning

•D SIG

Some plants bear a very evident signature of their nature and use. More against Atheism.

Some rely on certain marks and tignatures of their election, and others on their belonging to some particular church or sect. Rogers.

SIGNATURE, in printing, is a letter put at the bottom of the first -page, at least, in each sheet, as a direction to the binder in foMing, gathering, and collating them. The signatures consist of the capital letters of the alphabet (omitting J, V, and W), which change in every sheet; if there be more sheets than letters in the alphabet, to the capital letter is added a small one of the same sort, as A a, B b ; which are repeated as often as necessary. In large volumes it is easy to distinguish the number of alphabets, after the first three or four, by placing a figure befoie the signature, as 5 B, 6 B, &c. •>

SIGNATURES are used, in a particular sense, to denote those external marks by which physiognomists and dabblers in the occult sciences pretend to discover the nature and internal qualities of every thina; on which they are found. According to Lavater, every corporeal object is characterised by signatures peculiar to itself The doctrine of signatures, like alchymy and astrology, was very prevalent during the fifteenth and sixteenth centuries ; and was considered as one of the occult sciences which conferred no small degree of honor on their respective professors. Some of these philosophers, as they styled themselves, maintained that plants, minerals, and animals, but particularly plants, had signatures impressed on them by the hand 01 nature, indicating to the adept the therapeutic uses to which they might be applied. Others, such as the mystic theosophists and chymists ot that day, proceeded much farther in absurdity, maintaining that every substance in nature had either external signatures immediately discernible, or internal signatures, which, when brought into view by fire or menstrua, denoted its connexion with some siderial or celestial archetype. Oi the doctrine of signatures, as it relates merely to the therapeutic uses of plants and minerals, traces are to .be found in the works of some of the greatest authors of antiquity ; but the celestial signatures were discovered only by the moonlight of the monkish ages.

SIGNATURE OF THE COURT OF ROME is a supplicatiori answered by the pope, by which he grants a favor, dispensation, or collation to a benefice, by putting the fiat at the bottom of it, in his own hand ; or the concessum est written in his presence. This signature, at the bottom of the supplication, gives name to the whole instrument.

The signature contains the clauses, derogations, and dispensations, with which the pope grants the favor, or the benefice, with a commission for the execution of it, either in forma dignum, or in

gracious form.

A signature of the pope's own hand, by which he answers, fiat ut petitur, is preferred to another answered by the prefect, in his presence, in these words, Concessum uti petitur in praesentia D. N. papa?. Sometimes in signatures with the fiat the pope adds, proprio motu ; which clause gives them still farther force.

Z'2

There are three kinds of signatures: one in forma gratiosa, despatched on an attestation of the ordinary ; another in forma dignum antiqua, despatched for canonicates; the third in forma diguum novissima, which is a kind of second signature, or executorial letter, granted where, upon the ordinary's failing to execute the first, within thirty days, the nearest other ordinary is enjoined to execute it.

SIG'NET, n. t. Fr. signette. A seal commonly used for the seal manual of a king, or sovereign authority.

Give thy signet, bracelets, and staff.

Genetis xxxviii. 18.

He delivered him his private signet. Knollei.

I've been bold To them to use your signet and your name.

Shaktpeare. Timon.

Here is the hand and seal of the duke : you know the character, I doubt not, and the signet .

Id. Measure for Measure.

Proof of my life my royal signet made. Dryden.

The impression of a signet ring.

Ayliffe's Par ergon.

The SIGNET is one of the king's seals, made use of in sealing his private letters, and all grants that pass by bill signed under his majesty's hand : it is always in the custody of the secretaries of state. -•'

SIGNET, in Scottish law. See LAW.

SIGNIFICAVIT, a writ issuing out of the chancery, upon certificate given by the ordinary of a man's standing excommunicate by the space of forty days, for the laying him up in prison till he submit himself to the authority of the church : and it is so called because significavit is the emphatical word in the wr«t. Reg. Orig. There is also another writ of this name in the register, directed to the justices of the bench, commanding them to stay any suit depending between such and such parties, by reason of an excommunication alleged against the plaintiff, 8cc.— Reg. Orig. 7. And in Fitzherbert we find writs .of significavit in other cases ; as significavit pro corporis, deliberatione, &c. — F. N. B. 62, 66. The common writ of significavit is the same with the writ excommunicate capiendo.

SIGNIFY, v. a. & v. n.ˆ Fr. signifier; Lat.

SIGKIF'ICANCE, n. s. I significo. To de—

SIGNIF'ICANCY, \ dare by a sign or

SIGNIFICANT, adj. I token; import;

SIGNIFICANTLY, adv. J make known : to express a meaning with force or emphasis : significance or significancy is power of signifying; meaning; weighty or important meaning; ener-gy; consequence: the adjective and adverb corresponding.

He sent and tignified it by his angel unto John. Revelation i. 1.

Whereas it may be objected, that to add to religious duties such rites and ceremonies as are significant, is to institute new sacraments. Hooker. Since you are tongue-tied, and so loth to speak, In dumb

signijicantt proclaim your thoughts.

Shaktpeare. Henry VI. Stephano, *ignify Within tbe house your mistress is at hand.

Shaktpeare.

Life s but a walking shadow ; a poor player, 1 hat struts and frets his hour upon the stage,

And then is heard no more ! It is a tale, Told by an ideot, full of sound and fury, Signifying nothing ! /rf. Macbeth.

It was well said of Plotinus, that the stars were significant, but not efficient. Raleigh.

Neither in the degrees of kindred they were destitute of significative words ; for whom we call grandfather, they called ealdfader ; whom we call great-grandfather, they called thirdafader.

Camden's Remains.

f the words be but comely and signifying, and the sense gentle, there is juice; but where that wanteth the language is thin. Ben Jonson.

The holy symbols or signs are not barely significative, but what by divine institution they represent and testify unto our souls is truly and certainly delivered unto us. Brerewood.

Here is a double signijicatory of the spirit, a word and a sign. Taylor.

Though he that sins frequently, and repents frequently, gives reason to believe his repentances before God signify nothing, yet that is nothing to us.

Id.

He hath one way more, which, although it signify little to men of sober reason, yet unhappily hits the suspicious humour of men, that governors have a de-sign to impose. Tillotson.

Speaking is a sensible expression of the notions of the mind, by discriminations of utterance of voice, used as signs, having by consent several determinate lignijicanciet. Holder.

Common life is full of this kind of significant expressions, by knocking, beckoning, frowning, and pointing ; and dumb persons are “sagacious in the use of them.]d, vn Speech.

Brute animals make divers notions to have several significations, to call, warn, cherish, and threaten.

Holder.

if he declares he intends it for the honour of another, he takes away by his words the significance of his action. StiUotgJktt.

The clearness of conception and expression, the boldness maintained to majesty, the significance and sound of words, not strained into bombast,” must escape our transient view upon the theatre.

. Dryden.

The maid from that ill omen turned her eyes, Nor knew what signified the boding sign, But found the powers displeased. Id.

What signifies the splendour of courts, considering the slavish attendances that go along with it.

L’Estrange.

If the first of these fail, the power of Adam, were it never so great, will signify nothing to the present societies in the world. Locke.

By scripture, antiquity, and all ecclesiastical writers, it is constancy appropriated to Saturday, the day of the Jews’ Sabbath, and but of late years used to signify the Lord’s day. Nelson.

Those parts of nature, into which the chaos was divided, they signified by dark and obscure names : as the night, Tartarus, and Oceanus.

Biirnet’s Theory of the Earth.

Christianity is known in scripture by no name so significantly as by the simplicity of the gospel.

South.

A. lye is properly a species of injustice, and a violation of the right of lhat person to whom the false speech is directed ; for all speaking, or signification of one s mind, implies an act or address of one man to another. 2J

How fatal would such a distinction have proved in former reigns, when many a circumstance of less significancy has been construed into an overt act of treason. Addiu*.

The Romans joined both devices, to make the emblem the more significant ; as, indeed, they could riot too much extol the learning and military virtues of this emperor. Id.

As far as this duty will admit of privacy, our Saviour hath enjoined it in terms of particular signijicancy and force. Atterburii.

I have been admiring the wonderful signiftcancy of that word persecution, and what various interpretations it hath acquired. Swift.

What signifies the people’s consent in making and repealing laws, if the person who administers hath no tie 1 Id.

The government should signify to the protestants of Ireland that want of silver is not to ae remedied.

Id.

SIGNINUM OPUS, in archaiology, is a name given by Vitruvius (book viii. chap. 7), to a particular kind of work made use of in the construction of wells and cisterns. The following is the plan pursued : — They mixed five parts of pure sand and two of lime ; and, having stirred these well together, added pieces of soft sandy stone, about a pound weight each. This mass served to cover the walls or ground work ; and, for the purpose of additional solidity, they beat it with masses of wood pointed with iron. According to Pliny, the signinum opus was constructed of pounded tiles and lime.

SIGN’IORY, n. s. Ital. seignoria. Lordship ; dominion ; seniority.

If ancient sorrow be most reverent, Give mine the benefit of signiory, And let my griefs frown on the upper hand.

Shakspeare. Richard III. At that time

Through all the signiories it was the first, And Prospero the prime duke. Id. Tempest.

The earls, their titles, and their eigniories, They must restore again. Daniel's Civil War.

My brave progenitors, by valour, zeal, Gained those high honours, princely signiories, And proud prerogatives. West,

SIGNORELLI (Luke), an eminent Italian painter, born at Florence in 1439. He excelled chiefly in naked figures ; and painted much for Sextus IV. He. died in 1521.

SIGONIUS (Charles), a learned Italian, bora of an ancient family in Modena in 1525. He taught Greek at Venice, Padua, and Bologna; had some disputes with Robertellus and Gru-chius on Roman antiquities, in which he was well versed. He wrote a vast number of books ; the chief are, 1. De Republica Hebraeorum. 2. De Republica Atheniensium. 3. Historia de Occidentali Imperio. 4. De Regno Italia:. He died in 1584, aged sixty.

SIGUENZA, the ancient Segontium, a city of Spain in Old Castile, and province of Guadalaxara, stands on an eminence near the source of the Henares. It is a bishop's see, and was, until 1807, the seat of a university founded by cardinal Ximenes : at present it contains about 5000 inhabitants, three churches, two hospitals, a castle and arsenal. Here Pompey fought a celebrated battle with Sertorius, and the Goths were afterwards defeated in the neighbourhood by the troops of the empire. It is seventy-five miles east .of Madrid. In the neighbourhood are salt springs.

SIGUN7E, SIGYKT, or SIGYNN/E, an ancient

nation of European Scythia, wlio inhabited the territory beyond the Danube. — Ilerodot. v. c. 9.

SIHON, a king of the Amorites, on the east banks of the Jordan. About A. M. 2540, he invaded the kingdom of Moab, and seized a considerable part of it. About A. M. 2552, having refused a passage to the Israelites through his territories, Moses attacked him, subdued and depopulated his country, and gave it to the Reubenites. Numb. xxi. 21 — 31. Deut. ii. 26—34.

SIHON, in modern geography, a large riv T of Asia, called also Amu and Gihon. It rises in Bukharia, and runs into Lake Aral. It formerly ran into the Caspian Sea, but the Tartars changed its course.

SIKHS, SEIKS, or SEEKS. Under the word SEEKS we have given Mr. Watkins's account of this formidable sect of Hindoo religionists. Sir J. Malcolm and other modern writers supply many additional facts of their political history. During the interval that elapsed between the defeat and death of Banda, and the invasion of India by Nadir Shah, a period of nearly thirty years, we hear nothing of the Sikhs ; but on that event they are said to have fallen upon the inhabitants of the Panjab, who sought shelter in the hills, and to have plundered them of that property which they were endeavouring to se-cure from the rapacity of the Persian invader. Enriched with these spoils, says the author whose account of them we now cite, the Sikhs left the hills, and built the fort of Dalewal, on the Ravi, whence they made predatory incursions, and are stated to have added both to their wealth and reputation by harassing and plundering the rear of Nadir Shah's army, which, when it returned to Persia, was encumbered with spoil, and marched, from a contempt of its enemies, with a disregard to all order.

The weak state of Hindostan, and the confusion into which the provinces of Lahore and Cabul were thrown, by the death of Nadir, were events of too favorable a nature to the Sikhs to be neglected ; they became daily more bold, from their numbers being greatly increased by the union of all those who had taken shelter in the mountains ; the re-admission into the sect of those who, to save their lives, had abjured for a period their usages ; and the conversion of a number of proselytes, who hastened to join a standard under which robbery was made sacred, and to plunder was to be pious. Aided with these recruits, the Sikhs extended their irrup-tions over most of the provinces of the Panjab ; and though it was some time before they re-pos- sessed themselves of Amritsar, they began, immediately after they quitted their fastnesses, to flock to that holy city at the periods of their sacred feasts. Some performed this pilgrimage in secret and in disguise ; but in general, according to a contemporary Mahometan author, the Sikh horsemen were seen riding at full gallop towards ' their favorite shrine of devotion. They were often slain in making this attempt, and sometimes taken prisoners ; but they used on such occasions to seek, instead of avoiding, the crown of martyrdom :' and the same authority states ' that an instance was never known of

a Sikh, taken in his way to Amritsar, consenting to abjure his faith.'

A. D. 1746 the Sikhs made themselves masters of a considerable part of the Dooab of Ravi and Jelendra, and the country between the rivers Ravi and Beyah, and that river and the Setlej, and extended their incursions to the neighbouring countries. But though they were severely and repeatedly checked by MirManu, the governor of Lahore, yet, after liis death, they availed themselves of all the advantages which the local distractions of a falling empire afforded them of extending and establishing their power. Their bands, under their most active leaders, plundered in every direction, and were successful in obtaining possession of several countries, from which they have never since been expelled ; and their success, at this period, was promoted, instead of being checked, by the appointment of their old friend, Adina Beg Khan, to Lahore ; as that brave chief, anxious to defend his own government against the Afghans, immediately entered into a confederacy with the Sikhs, whom he encouraged to plunder the territories of Ah-med Shah Abdali. The Afghan monarch, resenting this, determined upon invading India, when Adina Beg, unable to oppose him, fled : and the Sikhs could only venture to plunder the baggage, and cut off the stragglers of the Afghan army, by which they so irritated Ahmed Shah, that he threatened them with punishment on his return ; and, when he marched to Cabul, he left his son Taimur Khan, and his vizier Jehan Khan, at Lahore, with orders to take vengeance on the Sikhs for all the excesses which they had committed. The first expedition of Taimur Khan was against their capital, Amritsar, which he destroyed, filling up their sacred tank, and polluting .all their places of worship; by which action he provoked the whole race to such a degree that they all assembled at Lahore, and not only attempted to cut off the communication between the fort and country, but collected and divided the revenues of the towns and villages around it. Taimur Khan, enraged at this presumption, made several attacks upon them, but was constantly defeated ; and. being at last reduced to the necessity of evacuating Lahore, and retreating to Cabul, the Sikhs, under one of their celebrated leaders, called Jasa Sinh Calal, immediately took possession of the vacant soubah of Lahore, and ordered rupees to be coined, with an impression to the

following import: ‘Coined by the grace of Khalsah Ji, in the country of Ahmed, conquered by Jasa Sinh Calal.’ Although they were afterwards expelled, together with the Afghans, from Lahore, yet after the death of Adina Beg Khan, the governor of this province, they eagerly seized the opportunity that was thus afforded them of making themselves again masters of Lahore. Their success was, however soon checked by Ahmed Shah Abdali, who, irritated by their unsubdued turbulence and obstinate intrepidity, made every effort (after he had gained thtT’victory of Panipat’h, which estab lished his supremacy at Delhi) to destroy their power; and, with this view, he entered the ranjab early in 1762, and overran the whole of that country with a numerous army, defeating

and dispersing the Sikhs in every direction. That sect, unable to make any stand against the army of the Abdali, pursued their old plan of retreat ing near the mountains ; and collected a large force in the northern districts of Sirhind, a distance of above 100 miles from Lahore, where the army of Ahmed Shah was encamped. Here they conceived themselves to be in perfect safety ; but that prince made one of those rapid movements for which he was so celebrated, and, reaching the Sikh army on the second day, completely surprised and defeated it with great slaughter. In this action, which was fought in February 1762, the Sikhs are said to have lost upwards of 20,000 men; and the remainder fled into the hills, abandoning all the lower countries to the Afghans, who committed every ravage that a barbarous and savage enemy could devise. Amritsar was razed to the ground, and the sacred reservoir again choked with its ruins. Pyramids were erected, and covered with the heads of slaughtered Sikhs; and it is mentioned that Ahmed Shah caused the walls of those mosques which the Sikhs had polluted to be washed with their blood, that the contamination might be removed, and the insult offered to the religion of Mahomet expiated. This species of retaliation appears to have animated instead of depressed the courage of the Sikhs, who, though they could not venture to meet Ahmed Shah’s army in action, harassed it with an incessant predatory warfare ; and, when that sovereign was obliged, by the commotions of Afghanistan, to return to Cabul, they attacked and defeated the general he had left in Lahore, and made themselves masters of that city, in which they levelled with the ground those mosques which the Afghans had, a few months before, purified with the blood of their brethren.

A. D. 1763, when Ahmed Shah, after retaking Lahore, was obliged, in the ensuing year, to re-turn to his own country, the Sikhs again

expelled his garrison, and made themselves masters of the Panjab; and, from that period until his death, a constant war was maintained, in which the enterprize and courage of the Afghans gradually gave way before the astonishing activity, and invincible perseverance, of their enemies ; who, if unable to stand a general action, retreated to impenetrable mountains, and, the moment they saw an advantage, rushed again into the plains with renewed vigor and recruited numbers. Several Sikh authors, treating of the events of this period, mention a great action having been fought by their countrymen, near Amritsar, against tbe whole Afghan army, commanded by Ahmed Shah in person ; but they differ with regard to the date of this battle, some fixing it in 1762, and others later. They pretend that the Sikhs, inspired by the sacredness of the ground on which this action was fought, contended for victory against superior numbers with the most desperate fury, and that the battle terminated in both parties quitting the field, without either being able to claim the least advantage. The historians of Ahmed Shah are, however, silent regarding this action, which indeed, from all the events of his long contests with the Sikhs appears unlikely to have occurred.

When oppressed, the Sikhs became as formid-

able for their union, as for their determined courage and unconquerable spirit of resistance : but a state of persecution and distress was most favorable for a constitution like theirs, which required constant and great sacrifices of personal advantage to the public good ; and such sacrifices can only be expected from men who act under the influence of that enthusiasm which the fervor of a new religion, or a struggle for independence, only imparts, and which are always most readily made when it becomes obvious to all that a complete union in the general cause is the only hope of individual safety.

The Sikhs may be considered as forming the most western nation of Hindostan ; for the king of Candahar possesses but an inconsiderable ex-tent of territory on the east of the Indus. Since the complete

downfal of the Mogul empire, they have acquired very extensive domains. But major Rennell observes that' their power ought not to be estimated in the exact proportion to the extent of their population, since they do not form one entire state; but a number of small ones, independent of each other in their internal government, and only connected by a federal union. They have extended their territories on the southeast, that is, into the province of Delhi, very rapidly of late years ; and perhaps the zemindars of that country may have found it convenient to place themselves under the protection of the Sikhs, in order to avoid the more oppressive government of their former masters. It is certain that the eastern * boundary of the Sikh's dominions has been advanced to the banks of the Jumnah River, above Delhi, and to the neighbourhood of that city; for the adjoining territory of Schaurunpour is subject to their depredations, if not actually tributary to them ; and they make incursions even to the side of the Ganges. On the south they are bounded by the northern extreme of the sandy desert of Registan, and on the southwest their boundary meets that of Sindy, or Tatta, at the city of Behker or Bhekr, on the Indus. On the west the Indus is their general boundary, as high up as the city of Attock ; near to which begin the territories of the king of Candahar ; and their northern boundary is the chain of mountains that lies towards Thibet and Cashmere. As this is the case, they will be found to possess the •whole soubah or province of Lahore, the principal part of Moultan, and the western part of Delhi ; the dimensions of which tract are about 400 British miles from northwest to southeast, and from 150 to 200 broad, in general; although in the part between Attock and Bekhr (that is, along the Indus) the extent cannot be less than 320. Their capital city is Lahore.

According to Sir J. Malcolm, the country now possessed by the Sikhs, which reaches from N. !at. 28° 40' to beyond N. lat. 32°, and includes all the Panjab, a small part of Moultan, and most of that tract of country which lies between the Jumnah and the Setlej, is bounded to the northward and westward by the territories of the king of Cabul ; to the eastward by the possessions of the mountaineer rajas of Jammu, Nadon, and Srinagar ; and to the southward by the territories of the English government, and

the sandy deserts of Jasalmer and Hansya Hisar. A general estimate of the value of the country possessed by the Sikhs may be formed, when it is stated that it contains, besides other countries, the whole of the province of Lahore ; which, according to Mr. Bernier, produced, in the reign of Aurungzebe, 246 lacks and 95,000 rupees ; or £2,469,500

sterling. The Sikhs who inhabit the country between the Setlej and the Jumnah are called Malwa Sinh, and were almost all converted from the Hindoo tribes of Jats and Gu-jars. The country of the Malwa Sinh is in some parts fruitful ; but those districts which border on Hansya and Carnal are very barren ; being covered with low wood, and in many places al-most destitute of water. Its former capital was Sirhind, but it is now a complete ruin. Patiala is now the largest and most flourishing town of this province, and next to it is T'hanesur, which is still held in high veneration by the Hindoos, who have also a high reverence for the river Serasweti, which flows through this province. The country of Jalendra Dooab, which reaches from the mountains to the junction of the Setlej and the Beah, is the most fruitful of all the possessions of the Sikhs, and is perhaps excelled, in climate and vegetation, by no province in India. The soil is light, but very productive ; the country,, which is open and level, abounds in every kind of grain. The towns of Jalendra and Sultanpour are the principal in the Dooab. The country between the Beyah and Ravi Rivers is called Bari Dooab, or Manj'ha ; and the Sikhs inhabiting it are called Manj'ha Sinh. The cities of Lahore and Amritsar are both in this province, and consequently it becomes the great centre of the power of this nation. The country of Bari is said to be less fertile, particularly towards the mountains, than Jalendra, but, lying on the same level, its climate and soil must be nearly the same. The inhabitants of the country been Ravi and Chanhab are called D'harpi Sinh, from D'harpi, the name of the country : the D'hanigheb Sinh are beyond the Chanhab, but within the Jehalam river. The Sind Sinh is the term by which the inhabitants of the districts under the Sikhs bordering on the Sind are known ; and Nakai Sinh is the name given to the Sikhs who reside in Moultan.

Their government may be termed a theocracy. Although they obey a temporal chief, that chief preserves his power and authority by professing himself the servant of the khalsa, or government, which can only be said to act, in times of great public emergency, through the means of a national council, of which every chief is a member, and which is supposed to deliberate and resolve under the immediate inspiration and impulse of an invisible being ; who, as they believe, always watches over the interests of the commonwealth. It is natural, however, to imagine that the power of this assembly should decline; and, from colonel Malcolm's account, we may infer that it is nearly destroyed. The last Guru-mata was called in 1805, when the British army pursued Holkar into the Panjab. The government is mild ; but in their mode of making war the Sikhs are unquestionably savage and cruel. Among the Sikhs there is a class of devotees, called Acalis, or

immortals, who, under the double character of fanatic priests and desperate soldiers, have usurped the sole direction of all religious affairs at Amritsar ; and who, of course, are leading men in a national council held at that sacred place, and which deliberates under all the influence of religious enthusiasm. This order of Sikhs was first founded by Guru Govind, and are distinguished by their dress, as well as by their having almost the sole direction of the religious ceremonies at Amritsar. They have a place on the bank of the sacred reservoir of Amritsar, where they generally resort, but are individually possessed of property, though they affect poverty, and subsist on charity. The principal chiefs of the Sikhs are all descended from Hindoo tribes. The lower order of Sikhs, compared with the wretched Mahometans who are doomed to oppression and hard labor, are happy ; they are protected from the tyranny and violence of the chiefs under whom they lire by the precepts of their common religion, and by the condition of their country, which enables them to abandon, whenever they choose, a leader whom they dislike. The civil officers, to whom the chiefs entrust their accounts, and the management of their property and revenue concerns, as well as the conduct of their negociations, were in general Sikhs of the Khalasa cast, who, being followers of Nanac, and not of Guru Govind, are not devoted to arms, but educated for peaceful occupations, in which they often become very ex-pert and intelligent. In the collection of the revenue of the Panjab, it is said to be a general rule that the chiefs to whom the territories belong should receive the half of the produce, grain paying fa kind, but sugar, melons, &c., in cash, and the fanner the other : but the chief never levies the whole of his share ; and in no country, perhaps, is the ryat, or cultivator, treated with more indulgence. Commerce is rather restrained than encouraged by the heavy duties and the distracted state of the country. However, a great part of the shawl trade now flows through the cities of Lahore, Amritsar, and Patiala, to Hindostan.

The administration of justice among the Sikhs is in a very rude and imperfect state. Their law is unwritten. Nothing is consigned to any

express form of words. There is no definition of any thing. The custom of the country, the cus-tom of the court (that is to say, as far as the judge is pleased to be governed by those customs), and the will of the judge, — are the circumstances which guide the decision. Among the Hindoos some of the sacred books, among the Mahometans the Koran, are used as the books of law. Among the Sikhs there is no such reference to any sacred books ; and their situation is, in all probability, so much the better: far the Koran or Hindoo books afford scarcely any rules or principles of law, which are not so vague as to speak any language which the interpreter chooses to give them ; and while their authority is sufficient to supersede that of the natural dictates of justice and equity, which are the only guides of the Sikh judges, the Hindoo or Mahometan has only to find or to feign a principle of his book, which toay enable him to decide as he pleases. Trifling

disputes, in civil matters, are settled by the heads of the village, by arbitration, or by the chiefs. The court of arbitration is called panchayat, or a court of five, the general number of arbitrators chosen to adjust differences and disputes. It is usual to assemble a panchayat, or a court of arbitration, in every part of India under a native government ; and, as they are always chosen from men of the best reputation in the place where they meet, this court has a high character for justice. The decision obtained by either of these modes is final. If a theft occurs, the property is recovered, and the party punished, not with death, by the person from whom it was stolen, or by the inhabitants of the village, or his chief. Murder is sometimes punished by the chief ; but more generally by the relatives of the deceased, who, in such cases, rigorously retaliate on the muiderer, and sometimes on all who endeavour to protect him.

The Sikhs have, in general, the Hindoo cast of countenance, somewhat altered by their long beards, and are to the full as active as the Mahrattas, and much more robust, from their living fuller, and enjoying a better and colder climate. Their courage is equal at all times to that of any natives of India; and, when wrought upon by prejudice or religion, is quite desperate. They are all horsemen, and have no infantry in their own country, except for the defence of their forts and villages, though they generally serve as infantry in foreign armies. They are bold, and rather rough in their address, which appears more to a stranger from their invariably speaking in a loud tone of voice : but this is quite a habit, and is alike used by them to express the sentiments of regard and hatred. The Sikhs have been

reputed deceitful and cruel, but Sir John Malcolm knew no grounds upon which they could be considered more so than the other tribes of India : they seemed to him, from all the intercourse he had with them, to be more open and sincere than the Mahraltas, and less rude and savage than the Afghans. They have, indeed, become, from national success, too proud of their own strength, and too irritable in their tempers, to have patience for the wiles of the former : and they retain, in spite of their change of manners and religion, too much of the original character of their Hindoo ancestors (for the great majority are of the Hindoo race) to have the constitutional ferocity of the latter. The Sikh soldier is, generally speaking, brave, active, and cheerful; without polish, but destitute neither of sincerity nor attachment ; and, if he often appears wanting in humanity, it is not so much to be attributed to his national character, as to the habits of a life, which, from the condition of the society in which he is born, is generally passed in scenes of violence and rapine. The Sikh merchant, or cultivator of the soil, if he is a Sinh, differs little in character from the soldier, except that his occupation renders him less boisterous. He also wears arms, and is, from education, prompt to use them, whenever his individual interest, or that of the community in which he lives, requires him to do so. The general occupation of the Khalasa Sikhs has been before mentioned. Their character differs widely from that of tl»R

Sinhs. Full of intrigue, pliant, versatile, and insinuating, they have all the art of the lower classes of Hindoos, who are usually employed in transacting business ; from whom, indeed, as they have no distinction of dress, it is very difficult to distinguish them

The general character of the religious tribes of Acalis, Shahid, and Nirmala, is formed from their habits of life. The Acalis are insolent, ignorant, and daring : presuming upon those rights which their numbers and fanatic courage have established, their deportment is hardly tolerant to the other Sikhs, and insufferable to strangers, for whom they entertain a contempt which they take little pains to

conceal. The Shahid and the Nirmala, particularly the latter, have more knowledge and more urbanity; they are almost all men of quiet peaceable habits; and many of them are said to possess learning. There is another tribe among the Sikhs, called the Nanac Pautra, or descendants of Nanac, who have the character of being a mild, inoffensive race ; and, though they do not acknowledge the institutions of Guru Govind, they are greatly revered by his followers, who hold it sacrilege to injure the race of their founder ; and, under the advantage which this general veneration affords them, the Nanac Pautra pursue their occupations ; which, if they are not mendicants, is generally that of travelling merchants. They do not carry arms ; and profess, agreeably to the doctrine of Nanac, to be at peace with all mankind.

The Sikh converts continue, after they have quitted their original religion, all those civil usages and customs of the tribes to which they belonged, that they can practise, without infringement of the tenets of Nanac, or the institutions of Guru Govind. They are most particular with regard to their intermarriages ; and on this point Sikhs descended from Hindoos almost invariably conform to Hindoo customs, every tribe intermarrying within itself. The Hindoo usage regarding diet is also held equally sacred ; no Sikh descended from a Hindoo family ever violating it, except upon particular occasions, such as a Guru-mata, when they are obliged, by their tenets and institutions, to eat promiscuously. The strict observance of these usages has enabled many of the Sikhs, particularly of the Jat and Gujar tribes, which include almost all those settled to the south of the Setlej, to preserve an intimate intercourse with their original tribes ; who, considering the Sikhs not as having lost caste, but as Hindoos that have joined a political association, which obliges them to conform to general rules established for its preservation, neither re-fuse to intermarry, nor to eat with them.

The higher caste of Hindoos, such as Brahmins and Cshatriyas, who have become Sikhs, continue to intermarry with converts of their own tribes, but not with Hindoos of the caste they have abandoned, as they are polluted by eating animal food, all kinds of which are lawful to Sikhs, ex-cept the cow, which it is held sacrilege to slay. The Mahometans who become Sikhs intermarry with each other, but are allowed to preserve none of their usages, being obliged to eat hog's-flesh, and abstain from circumcision. The Sikhs are forbidden the use of tobacco, but allowed to

indulge in spirituous liquors, which they almost all drink to excess ; and it is rare to see a Sinh soldier, after sun-set, quite sober. Their drink is an ardent spirit, made in the Panjab ; but they have no objection to either the wine or spirits of Europe, when they can obtain them. The use of opium to intoxicate is very common with them. They also take b'hang (cannabis sativa), another inebriating drug.

The conduct of the Sikhs to their women differs in no material respect from that of the tribes of Hindoos or Mahometans : their moral character, with regard to women, and indeed in most other points, may, from the freedom of their habits, generally be considered as much more lax than that of their ancestors, who lived under the restraint of severe restrictions, and whose fear of excommunication from their caste, at least obliged them to cover their sins with the veil of decency. This the emancipated Sikhs despise ; and there is hardly an infamy with which this debauched and dissolute race are not accused, and with justice, as Sir John Malcolm believed, of committing in the most open manner.

The Sikhs are almost all horsemen, and they take great delight in riding. Their horses were formerly famous for their strength, temper, and activity; but they are now no better mounted than the Mahrattas. They use swords and spears, and most of them now carry match - locks, though some still use the bow and arrow, a species of arms for excellence in the use of which their forefathers were celebrated, and which their descendants appear to abandon with great reluctance.

The education of the Sikhs renders them hardy, and capable of great fatigue ; and the condition of the society in which they live affords constant exercise to that restless spirit of activity and enterprise which their religion has generated. Such a race cannot be epicures ; they appear, indeed, generally to despise luxury of diet, and pride themselves in their coarse fare. Their dress is also plain, not unlike the Hindoos, equally light, and divested of ornament. Some of the chiefs wear gold bangles, but this is rare ; and the general characteristic of their dress and mode of living is simplicity. The principal leaders among them affect to be familiar and easy of intercourse with their inferiors, and to despise the pomp and state of the Mahometan chiefs ; but their pride often counteracts this disposition ; and they ap-pear to have, in proportion to their rank and consequence, more state, and to maintain equal, if not more, reserve and dignity with their followers, than is usual with the Mahrattah chiefs.

They boast that they can raise more than 100,000 horse ; and, if it were possible to assemble every Sikh horseman, this statement might

not be an exaggeration ; but there is, perhaps, no chief among them, except Ranjit Sinh of Lahore, that could bring an effective body of 4000 men into the field ; and the force of Ranjit Sinh did not in 1805 amount to 8000, and part of that was under chiefs who had been subdued from a state of independence, and whose turbulent minds ill-brooked a usurpation which they deemed subversive of the constitution of their commonwealth. His army is now more numerous than it was, but it is composed of

materials that have no natural cohesion, and the first serious check which it meets will probably cause its dissolution.

The religion of the Sikhs seems, says Sir John Malcolm, to hare been a sort of pure deism, grounded on most sublime general truths, blended with the belief of all the absurdities of the Hin-doo mythology, and the fables of Mahometanism ; for Nanac professed to conciliate Hindoos and Mahometans to the belief of his doctrine, by persuading them to reject those parts of their respec-thre belief and usages, which, he contended, were unworthy of that God whom they both adored. He endeavoured to impress both Hindoos and Mahometans with a love of toleration, and an abhorrence of war ; and his life was as peaceable as his doctrine. But is it not evident, says an anonymous writer, that so far as absurdities are mixed with a religious creed, so far the purity of its deism is excluded ? But to proceed ; Guru Govind gave a new character to the religion of his followers, by establishing institutions and usages, which not only separated them from other Hindoos, but which, by a complete abolitiorr of all distinctions of castes, destroyed a system of civil polity, which, from being interwoven with the religion of a weak and bigoted race, fixed the rule of its priests upon a basis that had withstood the shock of ages.

SILARUS, a river of Italy, in Picenum, rising in the Appennine

mountains, and falling into the Tyrrhene Sea. Its waters had a petrifying virtue. Strabo. v. Mela ii.

SILAS, or SYLVAKUS, the fellow-traveller with St. Paul, and one of the primitive teachers of Christianity in the apostolic age. He is styled a prophet in Acts xv. 32. Some writers conjecture that he and Carpus were the two disciples whom John the Baptist sent to Jesus. (Matt. xi. 2, 3.) Some make him the same with Tertius, who mentions himself as Paul's amanuensis in Rom. xvi. 21 ; but why he should hare called himself Tertius in that epistle, while he is called Silas or Sylvanus in the Acts and other epistles, we know not. In the two epistles to the Thessalonians, his name is expressly joined with those of Paul and Timotheus in the incipient salutations. He was sent with Paul from Antioch to the synod at Jerusalem; and he and Judas were sent by the synod with Paul and Barnabas, with their decrees to the churches. He accompanied Paul to Lycaonia, Phrygia, Galatia, and Macedonia ; and was his fellow prisoner at Philippi. Along with Timothy he instructed the disciples at Berea, and preached at Corinth. St. Peter also wrote his first epistle to the dispersed Jews by him (chap. v. 12). He died in Macedonia.

SILBURY HILL, the remains of a stupen-dous Roman barrow, near the village of Ave-bury, Selkely hundred, Wiltshire, seven miles from Marlborough ; it rises 170 feet in perpendicular height, and its form is the frustum of a cone, its diameter at the top being 105 feet, and at the bottom 500.

SILCHESTER, a parish in Holdshott hundred, and division of Basingstoke, Hants., on the border of Berkshire, seven miles north from Basingstoke, and forty-five from London ; con-

taining but eighty-nve houses, but is supposed to have been once a populous city, called by the Romans Segontiaci, by the Britons Caer-Segont, and by the Saxons Silcester, or the great city. Leland records the walls to have been two miles in compass, comprising eighty acres of ground. These are remaining at present, and are of nine unequal sides, formed of rows of stones and flints alternately, being about eighteen feet high and fifteen thick; the remains of the ditches are in some places twelve yards over, with the appearance of having had four principal gates. Many British coins have been dug up at different times. Without the walls on the northeast is a pond, which was the site of an amphitheatre. A military road called Lonbank and Grimsdike, pitched with flints, runs from the south gate to Winchester;

and another, called the Portway, leads from the south-gate, by Andover, to Old Sarum.

state of holding peace; stillness; secrecy; ol> livion : be still ! to silence is, to oblige to hold peace ; still ; forbid to speak : the adjective and adverb corresponding.

0 my God, I cry in the day time, and in the night season I am not silent. Psalm xxii. 2.

Unto me men gave ear, and waited and kept silence at my counsel. Job xxix. 21.

1 suffer not a woman to teach, nor to usurp authority over the man, but to be in silence.

1 Timothy ii. 12. Sir, have pity ; I'll be his surety. — Silence! one word more Shall make me chide thee, if not hate thee.

. Shaktpearc.

We must suggest the people, that to 's power He would have made them mules, silenced their

pleaders, and Dispropertied their freedoms. Id.

Silence that dreadful bell ; it frights the isle From her propriety. Id. Othello.

l)eep night, dark night, the silent of the night, The time of the night when Troy was set on fire, The time when screech-owls cry, and ban-dogs howl.

Shakspeare.

Second and instrumental causes, together with na-ture itself, without that operative faculty which God gave them, would become silent, virtueless, and dead.

Raleigh's History.

This passed as an oracle, and silenced those that moved the question. Bacon's Henry VII.

Since in dark sorrow I my days did spend, I could not silence my

complaints. Denham.

This would silence all further opposition.

Clarendon. Silent, and in face Confounded, long they sat as stricken mute. Milton.

Nameless in dark oblivion let them dwell ; For strength from truth divided, and frona just, Illaudable, nought merits but dispraise And ignominy ; yet to glory aspires, Vain-glorious, and through infamy seeks fame ; Therefore eternal silence be their doom. Id.

The sun to me is dark, And tilent as the moon, When she deserts the night, Hid in her vacant interlunar cave. Id.

This new created world, whereof in hell Fame is not silent. Id.

SILESIA.

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Thus could not the mouths of worthy martyrs be silenced, who, being exposed unto wolves, gave loud expressions of.their faith, and were heard as high as heaven. Browne.

Hail, happy groves ! calm and secure retreat Of sacred silence, rest's eternal seat ! Roscommon.

These dying lovers, and their floating sons, Suspend the right, and silence all our guns. Waller.

You to a certain victory are led ; Your men all armed stand silently within. Dryden.

The difficulties remain still, till he can show who is meant by right heir, in all those cases where the present possessor hath no son : this he silently passes over. Locke.

Had they duly considered the extent of infinite knowledge and power, these would have silenced their scruples, and they had adored the amazing mystery.

Rogtrt,

If it please him altogether to silence me, so that I shall not only speak with difficulty, but wholly be disabled to open my mouth to any articulate utterance ; yet I hope he will give me grace, even in my thoughts, to praise him. Wake.

Speech submissively withdraws From rights of subjects, and the poor man's cause ; Then pompous silence reigns, and stills the noisy laws.

Pope.

The thunderer spoke, nor durst the queen reply ; A reverend \OTtor' silenced all the sky. Id. Iliad.

Ulysses, adds he, was the most eloquent and most silent of men ; he knew that a word spoken never wrought so much good as a word concealed.

Bfoome.

SILENCE | Lat. silentium], in emblematical painting and sculpture, has been personified by Harpocrates, as a young man with his finger in his mouth. Silence, or rather secresy, is also expressed by a figure lifting a seal to his lips. The allegory was furnished by Alexander the Great, who, observing Hephestion reading at the same time with himself a letter which he had received from his mother, drew from his finger the ring which he used as a signet, and placed it on the other's lip.

SILENE, catchfly, fly-bane, fly-wort, or viscous campion, in botany, a genus of plants belonging to the class of decandria, and order of vrigynia ; and in the natural system arranged under the twenty-second order, caryophyleae. The calyx is ventricose; the petals are five in number, bifid and unguiculated, and crowned by a nectarium ; the capsule is cylindrical, covered, and trilocular. There are twenty-six species, of which seven are natives of Britain and Ireland. 1. S. acaulis, moss campion. The radical leaves are spread on the ground like a tuft of moss ; the stalks are about an inch long, and naked, bearing each a single purple flower. This species grows on mountains, and has been found in Wales and Scotland within half a mile from their top. It is in flower in July. 2. S. amoena, sea campion. The stem is two or three feet long, slender, procumbent, and branched alternately ; the leaves are long and narrow ; the flowers are white, and grow on the opposite footstalks, three on each, in unilateral bunches ; the calyx is hairy and purplish, and has ten angles. It grows on the south coast, and flowers in June and July. 3. S. anglica, the small torn campion, or English

catchfly. The stem is weak, hairy, and above a foot high ; the leaves are

oblong, and grow in pairs at the joints ; the flowers are small, white, and entire ; they stand on footstalks which issue from the alae of the leaves ; they are erect, alternate, single, and lateral. It grows in corn-fields, and flowers in June and July. 4. S. armeria, broad-leaved catch fly. The stem is about eighteen inches, and erect, with a few branches ; the leaves are smooth, sessile, and broad at the base ; the flowers terminal, in fastigiate bundles, small and red. It may be seen on the banks of rivers, and is in flower in July and August. 5. S. conoidea, greater corn catchfly, or campion. The leaves are narrow and soft ; the calyx is conical, with thirty striae ; the flowers proceed from the divarications of the stem ; the petals are entire. It grows in corn-fields, and flowers in June. 6. S. noctiflora, the night flowering catchfly. The stem is about two feet high, and forked; the calyx has ten angles, is somewhat clammy, and oval, with longer teeth than the other species ; the petals are of a reddish white. 7. S. nutans, Nottingham catchfly. The stem is about two feet high and firm ; the radical leaves are broad, obtuse, and grow in a tuft ; those on the stem are narrow and acute ; the flowers are white, and grow in lateral panicles; the petals are bifid and curled ; the calyx is long, bellying a little, with ten longitudinal striae. It grows in pastures, and flowers in June and July.

SILENI, an ancient nation of India, who dwelt on the banks of the Influs.

SILENT, in the mythology, the fawns and satyrs, so called from Silenus.

SILENUS, in mythology, the son of Pan, or Mercury, by Tetra,and one of the sylvan deities, born at Malea, in Lesbos. He became the nurse, preceptor, and constant attendant of Bacchus. He had a temple in Elis. He is generally represented as a jolly fat old man, riding on an ass, crowned and wreathed round with flowers, and often intoxicated, with a cup in his hand. In this situation he was once found by some Phrygian peasants, sleeping on the road, having lost his way (as many others have done), following Bacchus. They took him to king Midas, who entertained him hospitably for ten days, and then restored him to Bacchus, who rewarded Midas by giving him the power of turning every thing he touched into gold. See MIDAS. Those authors who celebrate Bacchus as the conqueror of India, say that Silenus was a great phik>sophert and assisted Bacchus in his Indian expedition by

his wise counsels. Paus. iii. c. 25 ; Philost. Ovid. Met. iv. &c.

SILENUS is also the name of two ancient historians, *viz.* 1. A Carthaginian, who wrote a history of Carthage in Greek. 2. An Italian, who wrote an account of Sicily.

SILESIA, an important province of Prussia, is situate between Poland on the east, and Bohemia on the west, extending from long. 14° 25’ to 18° 12’ E., and from lat. 49° 40’ to 51° 59’ N. The county of Glatz, and a portion of Lusatia, are annexed to it. In form it is oblong, extend- , ing in length, from southeast to northwest, 210 miles, in breadth about 100, ana contains an area computed at 15,000 square miles, with a population of more than 2,000,000. Silesia,

formerly divided into Upper and Lower, and subdivided into a number of smaller principalities or duchies, has these distinctions now abolished, and forms a military division along with Posen, is divided into the four governments of Breslau, Reichenbach, Liegnitz, and Oppeln. The chief towns are —

Population. Breslau, the capital . 63,000 Liegnitz . 10,000 Glogau . . 9,500 Neisse . . 9,000 Schweidnitz 8,000 Langen-Bie- lau . . 6,800 Glatz . . 6,700

Population Hirschberg . 6,00& Jauer . . 4,600 Frankenstein 4,200 Schniedeberg 3,800 Oels … 3,600 Oppeln . . 3,500 Leobschutz . 3,400 Reichenbach 3,350 Landshut . 3,000

A long range of mountains, all included in the Sudetic chain, but bearing different names, such as the Riesengebirge, the Glatz mountains, Moravian mountains, fee., divides Silesia from Bohemia and Moravia. From Hungary it is separated by the Carpathians. The Sudetic range is steep, and full of narrow defiles, particularly on the northwest ; they become broader as they stretch to the southward. So

great an extent of high ground renders the climate on the whole cold ; the whole south of Silesia being often covered with snow, while at Breslau, and farther north, the progress of spring is sensibly felt. The Oder is the next great natural feature of Silesia, and, flowing from south to north, traverses it nearly in the middle, passes Breslau, and receives all the lesser rivers flowing from east and west. To the east the country is called the Polish side : it is perfectly level, with a soil often sandy, marshy, and unproductive ; while the western or German side, though hilly, is cultivated by a more improved race, and is superior both in mineral and vegetable products. It is in fact one of the best portions of the Prussian territory, containing mines of coal and iron, and, on a smaller scale, copper, vitriol, and co-balt mines. This is likewise a great manufacturing country, linen manufactures being as general here as in Normandy or the north of Ireland : the value annually made is estimated at £1,500,000 sterling, of which more than half is exported. Attention is consequently bestowed on the culture of flax, the quality of which is equal to that of any part of the world. The wool has also been improved since the latter part of the eighteenth century. Foxes and other beasts of game abound : and the lynx, as well as the beaver, is sometimes found in the mountains. The forests are of great importance to the local manufactures, affording abundant fuel.

It is also a received notion that the water on the Silesian side of the Sudetic range is better for bleaching than that on the Bohemian side. The spinning of flax, for so large a manufacture, occupies a great number of hands : in many houses it is the sole occupation ; and scarcely anywhere is there a family where some person is not employed in spinning or weaving it. The distaff, and not the wheel, is generally employed ; and all is carried on with a very limited capital,

there being here no factories or collective establishments.

Woollens are likewise a considerable object of manufacture, but they are in general coarse, and the value made is computed at little more than £500,000 sterling : they are made chiefly at Goldberg and Grunberg. Cotton works arose here in the latter part of the eighteenth century, and hardware has been extensively made only about the same period. The tanneries are hardly enough to supply the consumption. The total annual value of manufacture is computed at £3,000,000 sterling. In these, and the raw produce, coal, timber, and madder, Silesia carries on a considerable traffic. The imports are hemp, lintseed, and hides from Russia ; wine, potash, and hardware

from Austria; colonial produce, silk, and the fruits of southern climates from different countries, almost all through the medium of the Oder.

The Silesians are in general of good moral habits, with little information, credulous and superstitious, impressed with a blind veneration for aristocracy and etiquette. The gentry, or, as they are styled, the noblesse, are numerous and poor as in any part : a number of them find employment in the military service. The Reformation was introduced here early. In 160'J Rodolph II. found it necessary to grant the Protestants full liberty of conscience : his successors, however, revoked tVie concession, the effect of which was to deprive Silesia of a number of its inhabitants. In 1 708, when the Swedes under Charles XII. overran Poland, occupied Sax-ony, the emperor, to ward off this assailant, consented to restore to the Protestants of Silesia the free exercise of their worship : on the conquest of Silesia by Frederick II. he put all religious creeds on an equal footing. The proportion of Protestants, long inferior to that of Catholics, has of late begun to exceed it : of Jews the number in Silesia is about 12,000.

A number of parish schools have been founded by the aid of government ; but, on the eastern or Polish side, much ignorance prevails. At Breslau there is a university, partly Protestant, partly Catholic. In the provincial towns there are gym-nasia or high schools, Protestant colleges, and seminaries for educating Catholic priests. The common language of the country is German, but in the mountainous districts, and on the tracts bordering on Poland, the ancient dialect of the country, which is a mixture of the Polish and Bohemian, is preserved.

The tribes called the Quadi and Lygii seem to have first peopled Silesia, and to have yielded in the sixth century to a Sclavonic tribe, who adopted the name of Zlesy. At present the Polish name of this country is Zlesien, and it was long a province of Poland. It was afterwards ceded to the sons of Boleslaus II., an expelled king of Poland, in the eleventh century ; and, being thus divided and subdivided, was without much difficulty subdued by the kings of Bohemia in the fourteenth century ; the crown seizing, as vacant fiefs, the possessions of such of the great families as became extinct. Silesia passed with Bohemia to the house of Austria, in the early part of the sixteenth ceEtury, and continued in its undis-

turbed possession until the death of Charles VI. in 1740, when Frederick II., who revived along dormant claim to the western part of Silesia, *viz.* the principalities of Liegnitz, Brieg, and Wohlau, supported it by an immediate invasion. Austria took up arms, and, on being attacked on another side by Bavaria and France, received the aid of England. The result was a contest, conducted with alternate success, but terminated, as far as regarded Silesia, by the cession of that country to Prussia. But the house of Austria had no intention of definitively relinquishing it. It formed in 1756, against Prussia, a coalition of France, Russia, Saxony, and Sweden, which threatened the entire subversion of that kingdom : a danger from which she was saved by the talents of her sovereign, the aid of England, and heavy sacrifices of her wealth and population. The peace of Hubertsburg, in 1768, left Silesia in the hands of Frederick. It was now allowed to breathe from its ravages, and enjoyed a peace of forty years, inviting colonists from Germany and Po-land to repair the havock of war. In 1807 it was overrjjn by the French.

SILESIA, AUSTRIAN, that part of Silesia retained by Austria in 1742, has an area of 1845 square miles, with nearly 350,000 inhabitants. It is divided into the circles of Troppau and Teschen, and is completely incorporated with Moravia, being subject to the same civil courts, and the same military administration. It is hilly, and does not produce a sufficiency of corn for the population ; but has good pasturage, abundance of flax and hemp, and flourishing linen and woollen manufactures. See MORAVIA.

SILESIAN EARTH, in the materia medica, a fine astringent bole. It is very heavy, of a firm compact texture, and in color of a brownish yellow. It breaks easily between the fingers, and does not stain the hands ; is naturally of a smooth surface, is readily diffusable in water, and melts freely into a butter-like substance in the mouth. It leaves no grittiness between the teeth, and does not ferment with acid menstrua. It is found in the perpendicular fissures of rocks near the gold mines at Strigonium in Hungary, and is supposed to be impregnated with the

sulphur of that metal. It is a good astringent, and better than most of the boles in use.

SILHET (Srihata, a rich market), a district in ihe province of Bengal, situated principally between 24° and 25° of N. lat. To the north and east it is bounded by a lofty ridge of mountains inhabited by many wild tribes ; on the south by Tipperah and Mymunsingh ; and it has Mymunsingh to the west. In 1784 it contained 2861 square miles, and the revenue was only 233,924 rupees.

It is the most easterly of the Company's possessions in Hindostan, being within 350 miles of the province of Yunan in China. Although so near to this rich empire, no sort of intercourse subsists betwixt them, the intermediate country being a confused mass of mountains covered with jungle, and inhabited by some of the most uncivilised tribes in Asia. This region has been examined only a very short way from the frontiers'of Silhet; but, from the most consistent accounts supplied by the natives, there is reason

to believe the intervening space is destitute ot navigable rivers, without towns or villages, and wholly trackless. These difficulties, however, are not insurmountable, and it is to be hoped the Bengal government will not leave it much longer unexplored.

Under the Mogul government, Silhet was formed into a foujedarry, or military station, more on account of its remote and secluded situation, beyond the Brahmapootra and Soormah, than from any reasonable apprehensions of foreign invasion, protected as it is by inaccessible hills, or impenetrable jungles. Its actual dimensions, since the dismemberment of several pergunnahs, are computed at 2861 miles, divided into 146 small pergunnahs, held by about the same number of zemindars. Near to the town of Silhet the country presents a novel appearance to an eye long habituated to the flat su-face of the lower districts of Bengal. It is composed of a number of irregularly insulated hills, placed at a short distance from each other, and covered with trees and verdure to their summits; while to the north and east lofty mountains rise abruptly like a wall, to the height of several thousand feet, and appear as if they had, at some remote period, withstood the surge of the ocean.

' During the rains the greater proportion of the land is laid under water, by the overflowing of the Soormah and other rivers, by which it is intersected, and the passage from Dacca is performed for nearly

the whole way over rice and pasture fields, which in the cold season are perfectly dry. Over this tract, when the floods are at their height, there is above ten feet of water ; the elevated sites of the villages appear like islands ; the masts of the vessels are entangled with the branches of trees, while their progress is impeded by the thickness and adhesion of the paddy stalks. When the inundation drains off, the land is left in an excellent condition for rice cultivation ; food of all sorts is consequently remarkably cheap — the average price of rice per rupee being four or five maunds (of 80 Ibs. each), and coarser grains still cheaper. In addition to this supply every stream and puddle swarms with fish, which are caught, with scarcely any trouble, with a small hand net, or even a piece of a mat. As may be supposed, wages are extremely low, being from half a rupee to one rupee and a quarter per month ; but the laborers being naturally averse to exertion, and never working but when stimulated by hunger, the country is on the whole very indifferently cultivated. The necessaries of life being so very cheap, there is little occasion for gold and silver coins — a more minute subdivision of value being required ; the whole rents are consequently paid in cowries, which are the medium also of commercial transˆ actions. Formerly large boats were built here for the royal fleet stationed at Dacca, and square-rigged vessels have also been occasionally constructed. The chief export from Silhet is chunam or lime, which is found in inexhaustible quantities ; and hence Calcutta, and the most remote stations in Bengal, are furnished with that article. Another principal export is cargoes of oranges — a considerable tract of country consisting almost entirely of orange plantations, the fruit of which

sells on the spot at 1000 for a rupee. The other productions are aguru or iragrant aloe wood, and a manufacture of wild silk, named mugga-dooties. Great numbers of elephants are also caught in this district, but their quality is inferior to those caught near the sea coast. Silhet and Azmerigunge are the chief towns, and the Soormah' and Megna the principal rivers. In 1801, when an investigation respecting the population of Bengal took place, this district was found to contain

492,495 inhabitants, in the proportion of two Mahometans to three Hindoos.'— J. Grant, Rennell, &c.

SILHET, a town in the province of Bengal, the capital of a district of the same name? Lat. 24° 55 N., long. 91° 40' E. The travelling distance from Calcutta to Silhet is 325 miles, the direct distance 260. •

SILHOUETTE, in drawing, a new French word, signifying a profile taken in shade. In a late translation of Lavater's Physiognomy, by the Rev. Dr. C. Moore (Lond. 8vo. 1797), this word is often used, but is never once translated, or its derivation mentioned ; whence it would seem that the doctor considers it as already adopted into the English language, at least among connoisseurs.

SILICA, in chemistry and mineralogy, one of the primitive earths, which in consequence of Sir H. Davy's researches on the metallic bases of the alkalis and earths, has been recently regarded as a compound of a peculiar combustible principle with oxygen. If we ignite powdered quartz with three parts of pure potash in a sil-ver crucible, dissolve the fused compound in water, add to the solution a quantity of acid, equivalent to saturate the alkali, and evaporate to dryness, we shall obtain a fine gritty powder, which being well washed with hot water, and ignited, will leave pure silica. By passing the vapor of potassium over silica, in an ignited tube, Sir II. Davy obtained a dark-colored pow-der, which apparently contained silicon, or silicium, the bases of the earth. Like boron and carbon, it is capable of sustaining a high temperature without suffering any change. Aqueous potash seems to form with it an olive-colored solution. But, as this basis is decomposed by water, it was not possible to wash away the pot-ash by this liquid. Berzelius and Stromeyer tried to form an alloy of silicon or silicium with iron, by exposing to the strongest heat of a blast furnace, a mixture of three parts iron, 1-5 silica, and 0 66 charcoal. It was in the state of fused globules. These, freed from the charcoal, were white and ductile, and their solution in muriatic acid evolved more hydrogen than an equal weight of iron. The specific gravity of the alloy was from 6-7 to 7*3, while that of the iron used was 7-8285. From Mr. Mushet's experiments, however, as wjell as from the constitution of plumbago, we know that carbon will combine with iron in very considerable proportions, and that in certain quantities it can give it a whitish color and inferior density. Nothing absolutely definitive, therefore, can be inferred from these experiments.

M. Berzelius has lately obtained pure silicium by the combustion of potassium in silicated fluo-

ric gas ; as also by !he action of potassium on the double fluate of silica and potash, or of silica and soda. The latter salt having the advantage of containing a greater quantity of fluate of silica, under the same weight and bulk, deserves the preference. The salt is easily prepared by saturating aqueous silicated fluoric acid with carbonate of soda, when the very sparingly double salt precipitates, which is to be washed and dried, at a temperature considerably above 212° Fahrenheit. This dry matter in fine powder is to be stratified, with thin slices of potassium, in a glass tube sealed at the end, which is to be uniformly heated at once with a spirit flame. Even before ignition the silicium is reduced with a slight hissing sound, and some appearance of heat. No gas is disengaged when the salt has been well dried. The mass is allowed to cool. It is hard, agglutinated, porous, of a deep brown color, which does not alter in the air, merely exhaling the smell of hydrogen, as manganese does when pressed between the fingers or breathed upon. It is to be washed with water in successive quantities to remove the fluate of potash that is formed. Some gas is disengaged, but this soon ceases, and, though the water be raised to ebullition, the brown powder does not decompose it. The solution obtained by ebullition being very acid, the substance is to be boiled with new portions of water till the liquid manifests no signs of acidity, when it is to be passed through a filter. The powder, being dried, is of a chestnut brown (maroon) color, containing visibly heterogeneous points of a brighter hue. The first of the above washings should be with a large quantity of water, so that the liquid which becomes alkaline by the oxidisement of the potassium, may be so dilute as to have no tendency to oxidise the silicium and to dissolve it. For this reason the mass must not be treated with hot water till all the alkalinity be removed. It is thereafter to be treated with boiling water, till a drop of this leaves no stain on evaporation. This process requires much time, and a large bo'ly of water.

Silicium, obtained by this process, contains some hydrogen, but in less quantity, and probably in the same way as the charcoal of wood, which Sir II. Davy regards as hydrogenated car-bon. It contains, besides, some silica, which proceeds frem a small portion of the potassium getting oxidised at first, and in this state separating a little silica from the double salt. The hydrogenated silicium is to be heated for some time almost to redness in an open crucible, then it is finally to be ignited. Should the silicium offer to take fire, the crucible is to be instantly covered, and the heat lowered, which will immediately stop the inflammation. After this calcination, the silicium is incombustible in the air, and may be washed from its adhering silica

by pure liquid fluoric acid, taking care that no iron or manganese is present ; for the alloy thence resulting would dissolve entirely with disengagement of hydrogen. After being treated with this acid, the silicium is to be v ashed and dried. Obtained in this way, silicivrn lias a deep nut-brown color, but not the least metallic lustre. When rubbed with a steel burnisher, it presents no

trace of brilliancy, opposing a resistance to friction, like an earthy substance. ‘It is incombustible in the atmospheric air, and in oxygen gas. It suffers no change in the flame of the blowpipe, apparently belonging to the most infusible class of bodies. These properties appear at variance with what takes place with the silicium immediately after its reduction by potassium, for it readily burns. M. Berzelius ascribes this difference to the presence of hydrogen in the latter substance, which may be regarded as a siliciuret of potassium at first, and after simple washing a hydruret of silicium. Ignition, well regulated, expels the hydrogen, without setting the compound on fire ; but, if hastily induced, the hydrogen kindles the silicium, which then becomes covered with a coat of silica. The condensation which the silicium undergoes by ignition is the cause of its becoming insoluble in fluoric acid.

Silicium stains and sticks strongly, even when dry, to the glass vessels in which it is kept.

Silicium does not conduct electricity. After its ignition it is not affected by chlorate of pot-ash, even at a red heat : nor by nitre, till the temperature has become high enough to decompose the nitric acid, and to allow the affinity of its alkaline base to act. At a white heat nitre attacks it violently.

With carbonate of potash silicium burns very readily with a lively flame. Gaseous oxide of carbon is disengaged, and the mass blackens from intermixture with charcoal. By taking a small proportion of carbonate of potash, or of soda, as one-half the bulk of the silicium, the inflammation takes place much below ignition. With larger

proportions of the carbonate, the mass swells up from the development of the gaseous oxide of carbon, takes fire, and burns with a blue flame. With a still greater proportion there is no sign of combustion ; the mass does not blacken, but merely exhales the above gaseous oxide. If the incombustible silicium be heated to moderate redness on platinum foil with nitre, no effect ensues ; but, if a bit of dry carbonate of soda be made to touch the silicium, a detonation will take place at the expense of the carbonate, and the mass will retain for some time its black color.

Silicium explodes with lively incandescence with the hydrated fixed alkalis at their melting temperature, much below a red heat. Hydrogen is disengaged, which burns visibly when the bulk of the materials is not too small. The same phenomenon takes place with hydrate of barytes. With acid fluate of potash, silicium explodes at the melting point of the salt, which is far under ignition. It is not altered by borax in a state of fusion. Silicium, heated to distinct redness in the vapor of sulphur, takes fire and burns, but much less vividly than in oxygen ; but the combination will not take place with the incombustible silicium. In moist air, sulphuret of silicium diffuses a strong smell of sulphureted hydrogen, and speedily loses all its sulphur ; but in dry air it may be preserved for a long time. At a -ed heat, it is roasted, affording sulphurous acid and silica.

Siliciuret of potassium combines readily at a

red heat with sulphur, constituting a true double sulphuret of a deep brown or black color. Sim-ple sulphuret of silicium, when thrown intc water, dissolves immediately, with disengagement of sulphureted hydrogen. The silicium changes into silica, which dissolves in the water, and if this be in small quantity, such a concentrated solution may be obtained as to gelatinise after a slight evaporation, and to leave silica, after dry-ing in a transparent cracked mass. It is remarkable to see silica dissolve in such a large proportion in water, at the instant of its formation, and to lose this property by evaporation to such a degree as to become insoluble in acids. This solubility may explain the origin of the crystallisations of silica in drusy cavities, which in many cases could not contain a volume of liquid ap-preciably larger than that of the crystals themselves. Berzelius did not succeed in combining silicium with phosphorus.

When silicium is heated in a current of chlorine, it takes fire, and continues to burn. If the gas contain some atmospheric air, silica

remains in a slender skeleton form. Silicium burns equally well in chlorine, whether or not it had previously been deprived of its combustibility in air. The product condenses into a liquid, which is yellowish with excess of chlorine, but colorless when this is expelled. This liquid is very fluid ; it evaporates almost instantaneously in the open air, affording white vapors, and leaving a little silica. It has a very penetrating odor, which maybe compared to that .of cyanogen. Thrown into water, it floats, then dissolves in it, and leaves some silica. When silicium is heated in vapor of potassium, it takes fire, producing a compound of silicium and potassium. The io-dide of potassium does not unite with silicium.

Silicium is neither dissolved nor acted upon by the sulphuric, nitric, and muriatic acids, nor even by the nitro-muriatic. But it dissolves rapidly even in the cold, in a mixture of nitric and fluoric acid, with disengagement of nitrous gas. Combustible silicum dissolves on digestion in water of caustic potash ; but in its incombustible state it is not affected by the alkalis in the moist way.

Once insulated, silicium combines very reluctantly with the metals. Its remarkable affinity for platinum is known, from the experiments of M. Boussingault ; but it may be heated as often and as long as we please in a platinum crucible, without any combination taking place. But when we try to reduce silicium (from silica) by potassium, in a platinum crucible, the silicium penetrates deeply into the platinum, in the spot where the potassium presses. 100 parts of pure silicium, dried in vacuo, were heated with carbonate of soda. The mass, treated with muriatic acid, evaporated to dryness, and strongly heated, was then dissolved in water. It left silica colored gray by charcoal, which,* being washed and ignited, became snow-white, and weighed 203-75 parts. A little silica was afterwards procured from the washings, making in all 205-25. Hence 100 parts of silicium had absorbed 105-25 ot oxygen. In another experiment, 208 parts ot silica were obtained from 100 of silicium. Hence silica consists of

Silicium •Oxygen

48-5 51-5

The proportion which M. Berzelius inferred from the capacity of saturation of silica with the saline bases was 50-3 oxygen to 49‘7 silicium. The number of atoms of oxygen in silica has not been determined. M. Berzelius is inclined to consider it as a tritpxide, and to call the atom of silicium 277 oxygen, being 100, or 2‘77 oxygen

= 1.

Silicium does not seem to belong to the metallic class of bodies, but rather resembles carbon and boron. Some philosophical methodists, says Berzelius, will consequently give it the name of silicon ; but I regard this denomination as useless, since there is no true limit between the metals and the metalloids (such as boron and carbon). Carbon has the metallic lustre, and conducts electricity, and still it is not reckoned a metal. If silicium could be fused, it would possibly acquire the properties wanting in its pulverulent state. Uranium, in this form, can hardly be distinguished by its aspect from silicium ; but when crystallised, it has the metallic lustre. Columbium and titanium approach also to silicium in their chemical properties. Finally, when the electrical relation of a body is regarded as its only decisive feature, it is indifferent whether we place a combustible body among the

Proportions. 80 silica 20 barytes 75 silica 25 barytes 66 silica 33 barytes 50 silica 50 barytes 20 silica 80 barytes 25 silica 75 barytes 33 silica 66 barytes

When the barytes exceeds the silica in the proportion of three to one, the fused mass is soluble in acids, a circumstance recently applied with great advantage in the analysis of minerals which contain alkaline matter.

The habitudes of strontian with silica are

Heat. 150° Wedg.

148 148

150

150

metals or not. — Ant:ales de China. et.Phys. xxvii.

337.

Mr. Smithson has ingeniously suggested, that silica might be viewed in many mineral compounds as acting the part of an acid. This, however, is a vague analogy, and cannot justify us in ranking silica with acid bodies. SVhen obtained by the process first described, silica is a white powder, whose finest particles have a harsh and gritty feel. Its specific gravity is 2-66. It is fusible only by the hydroxygen blowpipe. The saline menstruum formed by neutralising its alkaline solution with an acid is capable of holding it dissolved, though silica seems by experiment to be insoluble in water. Yet in the water of the Geyser spring a portion of silica seems to remain dissolved, though the quantity of alkali present appears inadequate to the effect. Silica exists nearly pure in transparent quartz or rock crystal. It forms also the chief constituent of flints. By leaving a solution of silica in fluoric acid, or in aqueous potash, undisturbed for a long time, crystals of this earth have been obtained. The solution in alkaline lixivia is called liquor silicum. Glass is a compound of a similar nature, in which the proportion of silica is much greater. Mr. Kirwan made many experiments on the mutual actions of silica and the other earths, at high degrees of heat. The following are some of his results : —

Effects. A white brittle mass.

A brittle hard mass, semitransparent at the edges. Melted into a hard somewhat porous porcelain.

A hard mass, not melted.

The edges were melted into a pale greenish matter, between a porcelain and enamel.

Melted into a somewhat porous porcelain mass

Melted into a yellowish and partly greenish-white porous porcelain.

nearly the same as those with barytes. Lime water, added to the liquor silicum, occasions a precipitate which is a compound of the two earths. The following are Mr. Kirwan's results in the dry way : —

Proportions.

Heat.

50 lime 7 50 silica I

. 150° Wedg.

80 lime)

20 silica J

. 156

20 lime)

i KG

80 silica >

. loo .

Effects.

Melted into a mass of a white color, semitransparent at the edges, and striking fire, though feebly, with steel : it was intermediate between porcelain and enamel.

A yellowish white loose powder. Not melted : formed a brittle mass.

When exposed to the highest possible heat, magnesia and silica, in equal parts, melt into a white enamel. Silica and alumina unite both in the liquid and dry way. The latter compound constitutes porcelain and pottery ware. Equal parts of lime, magnesia, and silica, melt, according to Achard, mto a greenish colored glass, hard

enough to strike fire with steel. When the magnesia exceeds either of the other two ingredients, the mixture is infusible; when tlie silica exceeds, the only fusible proportions were, 3 silica, 2 lime, 1 magnesia ; and, when the lime is in excess, the mixture usually melts in a strong heat. With mixtures of lime, alumina, and

silica, a fusible compound is usually obtained when the lime predominates. Theonly refractory proportions were —

Lime … 2 3 Silica ..11 Alumina ..22

Excess of silica gives a glass or porcelain, but excess of alumina will not furnish a glass. When, in mixtures of magnesia, silica, and alumina, the first is in excess, no fusion takes place at 150° ; when the second exceeds, a porcelain may be formed : and 3 parts of silica, 2 magnesia, and 1 alumina, form a glass. From Achard's experiments it would appear that a glass may be produced by exposing to a strong heat, equal parts of alumma, silica, lime, and magnesia. Other proportions gave fusible mixtures, provided the silica was in excess.

The mineral sommite, or nephelin, consists, according to Vauquelin, of 49 alumina + 46 silica. If we suppose it to consist of a prime equivalent or atom of each constituent, then that of silica would be 3 ; for 49 : 3-2 : : 46 : 3. But, if we take Vauquelin's analysis of euclase for the same purpose, we have the proportion of silica to that of alumina as 35 to 22. Hence 22 : 3-2 : : 35 : 5-09 the prime equivalent of silica, which is not reconcileable to the above number, though it agrees with that deduced from Sir H. Davy's experiments on silicon. I give these examples to show how unprofitable such atomical determina-tions are. See IRON and ACID (FLCOSILICIC). 1 SILICENSE, in ancient geography, a river of Spain.

' SILI'CIOUS, adj. Lat. cilicium, it should be therefore written cihcious. Made of hair.

The silidous and hairy vests of the strictest orders of friars derive their institution from St. John and Elias. Browne.

SILICERNIUM (from silex and coana, a supper on a stone), among the Romans, a feast of a private nature, provided for the dead some time after the funeral. It consisted of beans, lettuces, bread, eggs, Sec. These were laid upon the tomb, and they foolishly believed that the dead would come out for the repast. What was left was generally burnt on the stone. Eating what had thus been provided for the dead was esteemed a mark of the most miserable poverty. A similar entertainment was made by the Greeks at the tombs of the deceased ;

but it was uˆual among them to treat the ghosts with the fragments from the feast of the living. See FUNERAL, and

SILICIS MONS, in ancient geography, a town of Italy, near Padua, on a mountain so named. SIL'IQUOSE, adj. \ Lat. siliqua. Having SIL'IQUOU*. > a pod or capsula.

All the tetrapetalous siliquose plants are alkalescent.

Arbuihnot.

SILIS, in ancient geography, a river of Italy, in Venetia. — Plin..iii. c. 18.

SIL1STRIA, or D-RISTRA, a large town in Bulgaria, European Turkey, situated on the Da-nube, on its south bank, at the influx of the Mis-sova. It is well fortified, tolerably built, and has several handsome mosques and baths. Being-V:>L. XX

out of the usual road from Turkey to Germany, it is rarely visited ; but in the environs are to be " seen the ruins of the wall erected by the Greek emperors. It is one of the most important frontier towns of Turkey ; and in 1773 several sharp actions took place here with the Russians. It is the see of an archbishop. Population 20,000. 155 miles N. N. E. of Adrianople. Long. 27° 6' E., lat 44° 15' N.

SILIVRI, or SELIVREA, the ancient Selym-bria, a sea-port of Turkey, in Romania, on the western side of a promontory, near the sea of Marmora. It contains 6000 inhabitants, of whom 1500 are Greeks, and 200 Jews, and commands a beautiful prospect of the Propontis. Thirty-two miles west of Constantinople.

SILIUS ITALICUS (Caius), an ancient Roman poet, and author of an epic poem in seventeen books, containing a history of the second Punic war, which decided the empire of the world in favor of the Romans. He was born in the reign of Tiberius, and is supposed to have got the name of Italicus from the place of his birth ; but whether he was born at Italica in Spain, or at Corfinium in Italy, which, according to Strabo, had the nane of Italica given it during the Social war, is a point which cannot be known : though if his birth had happened at either of these places, grammarians justly observed, he should have been called Italicensis, and not Italicus. When he came to Rome he

applied himself to the bar; and, by a close imitation of Cicero, succeeded so well that he became a celebrated advocate, and most accomplished orator. His merit and character recommended him to the highest offices in the empire, even to the consulship, of which he was possessed when Nero died. He is said to have been aiding and assisting in accusing persons of high rank and fortune whom that wicked emperor had devoted to destruction : but he r&- trieved his character afterwards by a long and uniform course of virtuous behaviour. Vespasian sent him as proconsul into Asia, where he behaved with clean hands and an unblemished reputation. After having thus spent the best part of his life in the service of his country, he bade adieu to public affairs, resolving to consecrate the remainder to polite retirement and the Muses. He had several fine villas in the country : one at Tusculum, celebrated for having been Cicero's ; and a farm near Naples, said to have' been Virgil's, at which was his tomb, which Silius often visited. Thus Martial compliments him on both these accounts (Epig. 49, lib. xi.) ; and politely concludes,

Could those great shades return to choose their heir, The present owner they would both prefer.

In these retirements he applied himself to poetry : led not so much by force of genius as by his exceeding great veneration for Virgil. He has imitated him in his poeiˆ ; and, though he falls far short of him, yet he has discovered a great and universal genius, which would have enabled him to succeed in some degree in whatever ht undertook, especially if he had begun earlier. Having been for some time afflicted with an im-posthume, which was deemed incurable, lie grew weary of life, to which, says Pliny, he put an

end with determined courage. There have been many editions of Silius Italians. A correct one was published at Leipsic, in 1690, in 8vo., with notes by Cellarius : but the best is that cum notis integris variorum et Arnoldi Drakenborch. Traject. ad Rhen. 1717, in 4to.

SILK, n.i. -v Sax. j-eolc ; Goth, silk;

Si LK’EN, <«/?*. (Dan. silke. The produce

SILK’WEAVER, n. s. £ of the bombyx, see below :

SILK’WORM. 3 the derivatives following

the root: and silken being often useti for soft; tender.

Full raauy a lady fair, in court full oft Beholding them, him secretly envids,

And wished that two such fans, so silken soft, And golden fair, her love would her provide. Spenser.

He caused the shore to be covered with Persian iitk for him to tread upon. Knolles.

The worms were hallowed that did breed the silk ; And it was dyed in mummy, which the skilful Conserved of maidens’ hearts. Shakspeare. Othello.

Let not the creaking of shoes, or rustling of silks, betray thy poor heart to woman. Shaks/eare.

Men counsel and give comfort to that grief Which they themselves not feel ; but, tasting it, Their counsel turns to passion, which before Would give perceptial medicine to rage, Fetter strong madness in a silken thread, Charm ach with air, and agony with words. Id. All the

youth of England are on fire,

And silken dalliance in the wardrobe lies.

Id. Henry V. Shall a beardless boy,

A cockered, tilken wanton, brave out fields,

And flesh his spirit in a warlike soil.

Mocking the air with colours idly spread,

And find no check? ” Id. King John.

These kinds of knaves, in plainness,

Harbour more craft, and more corruptei ends,

Than twenty silky ducking observants

That stretch their duties nicely. Id. King Lear.

Grasshoppers eat up the green of whole countries, and silk-worms devour leaves swiftly.

Bacou’i Natural History.

She weeps, and words addressed seem tears dissolved, Wetting the borders of her silken veil. Milton.

Without the worm, in Persian silks we shine.

Waller.

Broad were the banners, and of snowy hue, A purer web the tilk-worm never drew. . Dryden.

The Chinese are ingenious silhweavers. Watts.

Dress up virtue in all the beauties of oratory, and you will find the wild passions of men too yiolent to be restrained by such mild and silken language.

Id. on the Mind.

SILK. The culture of this important article of manufacture has hitherto been considered as the exclusive property of other climes, although we have the most positive evidence that the worms when reared in

this country produce a material as well calculated for the manufacturers' use as those of France and Italy. As this is a subject that has lately occupied the attention of the Society for the promotion of Arts and Manufactures, who have printed a series of valuable practical observations from the pen of Mr. Stephenson, we cannot do better than commence our article by an analysis of their contents.

It appears that Mr. Stephenson was for several years a resident in the provinces of Languedoc and Quercy, where the utmost attention

is paid to the manufacture of silk. He begins by giving some account of the mulberry tree. He observes that there are two kinds of the black mulberry tree which have been cultivated in France. The first of these bears a fruit well known, and frequently presented at table, being the same which is cultivated in our gardens in the neighbourhood of London. But the leaves of this tree have been found, from experience, to be too harsh and too succulent, to prove in every respect a proper food for the silk-worm ; and the silk it yields turns out to be coarse, and of an inferior quality. The second kind of the black mulberry tree carries a fruit inferior to the other in point of size, and improper for the ta-ble; but the leaf of it has been found to be superior to the first, as food for the silk-worm ; and it is less harsh, less succulent, and yields silk of a finer quality than the one first mentioned. This second sort of the black mulberry is, in all probability, the particular kind which is said to be at present cultivated in the kingdom of Valencia, in Spain, for the use of their silk-worms : and, indeed, many of their old plantations in France consist of this sort. But thei new plantations consist wholly of the white mulberry tree, hereafter to be mentioned, which is the only one they now cultivate in all their nursery grounds, for the use of their silk-worms. There is a third sort, known by the name of the white mulberry, the leaf of which is more tender and less succulent than either of the other two, and has been found to produce silk of the finest and best quality.

Some people hate been led to think that this kind of the mulberry treo does not carry any fruit, and that it can only be propagated by lay-ers ; but in this particular the fact stands much the other way. For, though the white mulberry may not peihaps produce any fruit in a climate so far to the north as ours, yet the truth is, that in climates such as that of the south of France, this tree carries fruit in very great quantities, though it is of a smaller kind than either of the two already mentioned. It is of a dusky white color, rather inclining a little to the yellow. ; and contains a number of small seeds, like mustard seed ;

from which large nurseries of this valuable tree are now annually raised all over the southern parts of France.

For a number of years after the culture of silk was introduced into France, the people were accustomed to employ the leaves of all the different kinds of mulberry trees before mentioned, promiscuously : and some grafts of the white mulberry from Piedmont, and from Spain, which carried a larger leaf than the one they had got in France, having been obtained from these countries, these grafts were put upon French seedling stocks, which had the effect of increasing greatly the size of the leaves, and was regarded as an acquisition, as it certainly produced a larger stock of leaves as food for the worms. The consequence of which was that this practice of grafting prevailed for a great many years all ever Provence and Languedoc. But Mon-sieur Marteloy, a physician at Montpelier, who had made the culture of the silk-worm his particular study for a number of years together, at

last made it clearly apparent to the conviction of every body, by a regular course of attentive and well conducted experiments, that the leaf of the seedling white mulberry was the food of all others the best for this valuable insect ; as the worms which were fed with this particular leaf were found to be more healthy and vigorous, and less subject to diseases of any kind, than those that were fed upon any of the other kinds of leaves above mentioned ; and that their silk turned out to be of the very best quality. Since that time, namely, 1765, a decided preference has been given to this particular leaf beyond all the others.

As our British gardeners are more intelligent in their business than any of the French gardeners, it may, by some, perhaps be reckoned unnecessary to say any thing here, with respect to the culture of the mulberry tree : but when it is considered that the culture of this tree has been so anxiously attended to in France, for a long period of years past, and they succeed perfectly in this culture, it may not be deemed altogether improper to add here the method used in France in cultivating the mulberry tree.

Mr. Stephenson goes on to observe that their first object is to make choice of a spot of ground for their seed bed, of a gravelly or sandy soil, which has been in garden culture, or under tillage for some time, and which they know to be in good heart. When this ground is thoroughly dressed, they make drills at the distance of two feet from each other, in which they sow the seeds, in the same manner as they usually do lettuce for salads. They then cover the seeds lightly with some of the finest earth, after putting it through a sieve ; and, if the weather happens to be dry, they water it slightly once or twice a week, as they judge to be necessary. These seeds they sow as abpve, at any time from the end of April to the ehd of May, and even during the first week in June ; and some gardeners, the better to ensure success, were in the practice of sowing the seeds at three different times during the same season : to wit, the first sowing in the last week of April ; the second about the middle of May; and the third in the beginning of June. When the plants are fairly above ground, they take particular care to keep them clear from weeds, and, from time to time, to point with a spade or a hoe the ground in the intervals betwixt the different drills.

After remaining for two years in the seer1 bed, they take up the plants : such of them as are of the size of a writing quill, they plant out in the nursery grounds ; each plant at two feet distance from each other in the row, and the rows at three feet distance from each other, that there may be room for cleaning and dressing the ground betwixt the plants. At transplanting, they cut off nearly half the root, and also cut off the tops at about six or seven inches above the ground. All the other plants, which are too small for the nursery, they plant out thick by themselves, to remain for another year, or two, if necessary: after which they plant them out in the nursery grounds as above. The most proper time for transplanting the mulberry tree is just after the fall of the leaf in autumn.

When the plants in the nursery are sprung, they take care to strip off the side buds, and leave none but such as are necessary to form the head of the tree. If the plants in the nursery do not shoot well the first year, in the month of March following they cut them over about seven inches from the ground, which makes them come on briskly the year following. When the plants are grown to the size of one inch diameter, they plant them out in the fields where they are to remain, making the pits where they plant them of the size of six feet square, and dressing the ground for twenty inches, or two feet deep.

During the first year of planting out, they leave the whole buds which the trees have pushed out on the top until the following spring, when they take care to leave none but three or four branches to form the head of the tree ; and, as the buds come out, they take off all those which appear upon the body of the tree, from the bot-tom all the way up to those which are left to form the head of the tree ; and for1 several years after, at the seasons above mentioned, they take care to open the heads of the trees, when too thick of wood, and particularly to cut off any branch which seems to take the lead from the rest, and to engross more of the sap than what falls to its share, that the different branches may increase equally as much as possible. After the trees are planted out, and likewise while the plants are in the nursery grounds, they take care to dress the ground about the trees regularly three or four times a year, which greatly assists the trees to get on.

Here it is proper to mention that it is the practice in France to plant out some of their young plants from the nursery by way of espa-lier, in some sheltered situation, in a garden, for example, where the soil is not over rich : and, if it can be had, where the soil has a great proportion of gravel or sand ; the intention of which is, to procure early leaves for the worms in their infant state ; as these leaves generally come out more early upon dwarfish plants in a sheltered situation, than upon the trees planted out in a more open exposure ; and upon this occasion they have also recourse for tender leaves to their young plants in the seed bed and nursery grounds.

Any quantity of the seed of the white mulberry can be obtained either from Montpelier or Marseilles, where it is regularly to be found for sale in the seed shops. It may also be obtained by the same means from Spain ; the seed from which country is even preferable to that from France, as the Spanish tree carries a larger leaf than that of France, and has the leaf equally tender and good as the other, when used from the seedling trees.

From the experiments carried on by M. Marteloy, that gentleman made it fully appear that the leaves of the trees which grew in a rich soil were by no means proper food for the silk-worm, as they were too luxuriant and full of juice for them ; and that the leaves of those trees which were raised in a gravelly or sandy soil, where no manure was employed, were greatly to be preferred.

From these experiments, also, one of the rea-2 A2

sons, and apparently the principal one, may now be pretty clearly pointed out, which rendered abortive the trials made in England, during the reigns of James I. and Charles II., for introducing the culture of silk intO|Great Britain ; though that reason was altogether unknown in England, at the times these different trials were made. It appears to have been only this, that they had on other food to give to their worms but the leaves of the black mulberry, carrying the large fruit usually presented at our tables, which is now altogether rejected ia France as an improper food for the worms; and which was rendered infinitely more destructive for these insects by the trees which produced them having been all of them reared in the richest grounds in England, namely, in the garden grounds about London, which we know are in a manner yearly loaded with dung.

The mulberry trees ought not to be pruned the first year after planting out, for fear of mak-ing them bleed too much ; but in the second spring it is reckoned advisable to dress their heads, and to continue to repeat that dressing yearly, during the next ten or twelve years; taking care to make them hollow in the middle, so as to give a free passage for the air, and to render it easy to gather the leaves. After the first twelve years are over, it will be sufficient if a dressing of the same kind is regularly given to them once every three years. But as some of the branches may probably be broken annually, in gathering the leaves, care must be taken to prune all such branches as may happen to be thus broken, to pjevent the trees from suffering materially by such accidents. In planting out the mulberry tree, in the field where it is to re-main, care must be taken to cover the roots properly, so that the earth may not lie hollow upon them, which would injure the plant. They should also take care to prop the different trees with stakes, to prevent them from wind-waving ; placing straw next the body of the tree, to prevent the bark from being hurt ; and it will be proper also to surround them with briars or brambles, to preserve them from all injury from cattle.

Here it is proper to remark that the second crop of leaves which come out upon the mulberry trees, after havrhg been stripped of their first leaves for the use of the s.lk-worm, are not allowed to fall off

themselves in the autumn. They are gathered for the second time with care, a little before the time they would fall naturally, and are given for food to their sheep, and eater, by them with greediness, and by that means turn out to good account to the farmer. Before the culture of silk was introduced into that part of Languedoc which is near to the mountains of Cevennes, the peasantry over all that neighbourhood were miserably poor, as their soil, which is mostly gravel and sand, was incapable of carrying crops of any kind of grain whatever. But as it was found, upon trial, to answer remarkably well for the mulberry tree, the people entered with great alacrity into the culture of silk ; and they have succeeded so well in that lucrative branch, that, from having been amongst the poorest, they are now more at their ease than most of fhe peasantry of that kingdom.

As an encouragement to the small heritors and farmers to plant mulberry trees upon their grounds, the French government are at an an-nual expense in keeping up large nurseries 01 these trees in many different parts of the country, whence the small heritors and farmers are, liberally supplied gratis with whatever numbers of these trees they desire to plant out upon their grounds; and proper directions are oraered to be given along with the trees, hy the gardeners who are charged with the cats of these public nurseries, that the people to whom the trees are thus given may know how to treat them properly. This beneficent public measure is attended with great advantage to the country, as the poorer people are by this means saved from the trouble and expense of rearing the trees, until they come to be of a proper size for planting out in the fields, where they are intended to remain.

When the young mulberry trees are in the’ seed bed, and even when afterwards planted out in nursery grounds, and likewise for several years after they are planted out in the fields to remain, you must be careful every night, in the spring and summer seasons, to examine with care, all round your plants, for a little snail without a shell, which is very fond of the bark of these trees when young, and preys upon them prodigiously. These snails will cut over your young plants in the seed beds and nursery grounds, and will even continue to prey upon the trees till they are pretty old ; and, though they do not absolutely kill the trees when planted out, yet they hurt them greatly, and retard their growth. These snails, therefore, must be gather«d up every night as above mentioned, a little after sun-set, which is better than in the morning, because the mischief they occasion is generally done in the night; and they must be burnt, or otherwise effectually

destroyed ; for if you do not kill them they will find their way again to the trees.

Mr. Stephenson then proceeds to give an account of the manner used in France for disengaging the seeds from the fruit of the mulberry, which requires a considerable degree of labor as well as attention. Having gathered the quantity of fruit you propose to set apart for seed, which must be thoroughly ripe before it is pulled, you put the fruit into a large tub or vessel, where you cause a person to tramp and press it with his bare feet, in order to bruise the whole of it thoroughly, and by that means disengage the seed from the little pods or cells in which it is contained. You must at the same time have in readiness another tub, which must be pretty deep, into which you introduce a piece of flat wood, which must be made to rest upon the sides of the tub, at the distance of six, eight, or more inches from the bottom of the tub, as you shall judge to be necessary for your quantity of fruit. This cross piece of wood is calculated to support a round cane sieve, which is to rest upon it. This sieve must be very fine, that is, the holes must be very small and close set together, that as little of the pulp of the fruit as possible may go through the holes along with the seed.

Things being thus prepared, and the tub filled

so far with water that it nyy rise more than half way up the brim of the sieve, when placed upon the piece of wood, you then put a handful or two of the bruised fruit into the sieve, which you rub hard with your hands upon the bottom of the sieve, in order to make the seed pass through the holes, and every now and then you lift up the sieve with both hands, and shake it to make the water pass through it, which carries the seed along with it. Besides rubbing the fruit with your hand upon the bottom of the sieve, as above, you also take it and rub it heartily betwixt the palms of your hands, rubbing the one hard against the other ; as it takes a great deal of work and pains to get the seeds disengaged out of their little cells, and must be done effectually before the seeds will pass through the holes of the sieve. This work

must be repeated till you observe that the whole of the seed has passed through the holes of the sieve ; after which you throw aside the pulp, and must proceed in the same manner with the rest of the fruit, till you have finished the whole. You then take the sieve and piece of wood out of the tub, and pour off all the water, when you will find the seed at the bottom ; but along with it a great quantity of the pulp, which has been forced through the holes of the sieve, in rubbing the fruit hard upon the bottom of it with your hand, as above mentioned.

It should be noticed that all the seeds which swim upon the surface of the water are light and good for nothing, and must, therefore, be thrown aside. You then put the pulp and seed, which you find mixed together at the bottom of the tub, into another vessel, and fill the tub with water as at first, having put the piece of wood and the sieve in their proper places as before, after which you pass the pulp and seed, by degrees, through the sieve, by rubbing it with your hand upon the bottom as before, and lifting up the sieve from time to time, with both hands, and shaking it, as already mentioned. In passing it this second time you will disengage a great quantity of the pulp, which you throw aside from time to time, as soon as you observe that none of the seed remains amongst it. You then pour off" the water as before ; and, if you find that there is still some of the pulp remaining with the seed, you must pass it a third time through the sieve, which will effectually clean it, if your sieve is fine enough. If your sieve is too coarse, that is, if the holes are too large, it will occasion you a great deal more work, as you will be obliged to pass it oftener through the sieve, since that operation must be repeated till the seed is perfectly clean ; after which you must spread the seed upon a clean cloth, and expose it to the sun, till it is thoroughly dry. Three days, or even four days, of a full sun are necessary to dry and harden the seed properly for keeping.

Upon this part of our subject it seems proper to add that in a cool moist country, such as about Paris or London, it is reckoned the nul-berry tree carries a double, nay, nearly a triple quantity of leaves to what it can do in the hotter or drier climates, such as that of the south of France, which is judged to be owing to the moisture of the climate, and the superior rich-

ness of the soil. In a cold moist climate a person is not able, even with the utmost care, to produce above the half of the cocoons from the same quantity of eggs which can be done in a warmer and drier climate. But, as in the colder climate the mulberry tree carries nearly three times the quantity of leaves, which it can do in the other, thence

it arises that the colder climates, such as those before mentioned, are able, upon the whole, to raise at least as much silk, from the same quantity of eggs, as the warmer countries ; because the quantity of food is the great article, as the grain or eggs of the silk-wqrm can easily be multiplied to as great a quantity as you please.

Having thus gone through the articles of greatest importance in relation to the first and leading branch of our subject, the next which naturally falls to be considered is the method observed in France in hatching the worms. But, before proceeding to this article, it may not be improper to premise the following particulars, as they seem justly to demand a very particular attention. .

Here then it must be observed that the greatest care ought to be taken to procure healthy good seed or eggs, because0 it has been ascertained, from repeated experience, that the eggs from those houses where the worms were infected with bad" air carries along with it, to the worms produced therefrom, the same distempers to which the worms of the preceding year were subject. The eggs, in order to be properly preserved, should be kept in some dry place, with a free air not too hot ; and you should avoid keeping them in any vault or cellar under ground, because any kind of damp is found to be destructive to them.

The eggs of the silk-worm have been found to degenerate in the space of five years ; hence a change from time to time is judged to be necessary, taking care to have the eggs brought from a warmer to a colder climate. This, however, must be done by degrees, and not carried at once from one extreme to another. For example, eggs brought from the Levant, the Isle of Cyprus, or from other countries of the same latitude, ought not to be brought at once into such a cold climate as that of Flanders or the north of France ; but should be first brought into such a climate as that of Provence or Languedoc, whence, after having remained there for two years, they can be brought with safety into the colder countries.

The first year that the eggs are brought from a warm to a cold climate, you must not expect great success from them : on the contrary, you will find, though the utmost care and attention are given to them, that the greatest part of the worms will die. But still you will be able to save enough to stock yourself sufficiently with eggs, which every succeeding year will be found to answer better as the worms become naturalised to the climate, which can only be brought about gradually ; and indeed more time will be requisite for this purpose in Britain than in France, as the climate upon the continent is more fixed and

steady than with us in England.

In transporting the eggs from one country to

another, especially when this is done by sea, you must order them to be put into a bottle, which ought not to be filled more than half full, that the eggs may not lie too close together, which might run the risk of heating them, and causing them to hatch. The bottle being but half full, leaves sufficient room to the eggs to be tossed upsrde down, by the motion of the vessel, which keeps them cool and fresh, and hinders them from heating. After putting the eggs into the bottle, let it be carefully corked ; a cover of leather put over the cork ; and let that be sealed, to prevent any danger of changing the eggs. When corked and sealed, as above, put trie bottle into a double case, or box of wood ; not only to preserve the eggs from all damp from the sea or other ways, but also to protect them from too much heat, which would cause them to hatch. If the bottle is too full, the eggs will lie too close upon one another, and will in that case h»at of themselves, and hatch, and consequently in both cases must be lost.

The eggs that are duly impregnated by the male butterfly are of a gray cindery color, which color they preserve till they are properly prepared for hatching. The eggs which are not duly impregnated are readily to be distinguished from this circumstance, namely, that after having been kept for some time they always continue to be of a yellow color; and I need scarcely add that all such eggs are good for nothing, and ought therefore to be thrown away. There is no distinguishing betwixt good and bad eggs, but by the change of color, after being kept for some time as aboVe mentioned. One ounce of eggs will produce 40,000 worms; and so in proportion for a larger or smaller quantity.

The advancement of the season determines the time of preparing your eggs for hatching, as you proceed to that as soon as you observe that there is a prospect of having a sufficient quantity of food for your worms, by the advancement of the leaves of the mulberry. But, in

order to be properly prepared for this work, you must begin a month before the usual time of hatching; first, to put your eggs in little divisions, from half an ounce to an ounce, which you must place upon a piece of clean white paper, upon plates, for example; and put those plates containing the eggs in a place a little warmer then where you had kept them during the winter; for example, if you have an alcove bed, place them upon the shelf within the alcove. Let them re-main in that situation for the first five or six days ; after which you must prepare some little chip boxes, perfectly clean and neat, seven mclirs long, four inches broad, and four inches high, and cover them on the inside with clean white paper, into which put the different divisions of your eggs, having a small box for each division, and place these boxes in a basket, upon a stool or chair, at the foot of your bed, making one of the mattresses of your bed go underneath the basket ; and cover the basket on the top, first with some cover of woollen cloth, which pin close over it, and above that place a bed cover above all, so as to keep in the heat communicated by the mattress to the eggs ; in which situation let them remain for six days longer ;

after which increase the heat to 14° of Reaumur's-thermometer, preserving that heat equal, night and day, by means of a little fire in some corner of the room at a distance from the bed. In the morning, when you get up, put a heater of one kind or other ; for example, a tin bottle with hot water, or a foot stove, into your bed betwixt the sheets, and proportion that heat so as to equal the heat you give to the bed when you lie in it yourself, keeping up the same heat, as nearly as you can, until you go to bed again yourself in the evening. Having kept them in this situation for eight or nine days, you must then put your different divisions of eggs into little pieces of old linen cloth, which must be washed thoroughly x:lean for that purpose, as the lea-a dirtiness in the cloth would prove prejudicial to the eggs : each piece of cloth should be of the size of a foot square ; turn up the ends of the piece of cloth, and tie them with a bit of thread as near to the top or end as possible, by means of which the eggs will lie loose, and can be shook and turned from time to time, without untying the knot; replace these packets in the basket, and cover them up as before, turning and shaking the seed in the packets three or four times a day, that it may receive the heat equally. On putting the eggs into these packets, increase the heat to 14J° of the thermometer, and keep up that heat night and day, as equally as possible : for which purpose have a couple of thermometers in your room for your direction. After the eggs have remained in the little packets for three or four days, increase the heat to 15° ; and in four days more, if the weather seems

settled and very promising, increase the heat gradually to 16°, visiting and turning the eggs from time to time as before.

When the eggs begin to turn white, and tlte mulberry trees are so far advance*! as to be out of danger from cold winds or slight degrees of frost, increase the heat gradually to 17°, or 18° at most, to quicken the hatching of your eggs, and to make the worms come out as nearly at the same time as possible ; but never increase the heat to more than 18°, because a greater heat never fails to push the worms too fast, and to render them red at their first coming out. When the worms are red at their first coming out, it is a sign the eggs have either been bad, or ill kept over winter, or overheated ; that is, too much forced when laid to hatch. Worms of this color are good for nothing, and are therefore to be thrown away, to avoid the expense of feeding them, since they will never produce cocoons. When the worms are entirely black, upon their first appearance, it is a sign of their having been perfectly well managed, which gives great hopes of success.

When the eggs first begin to take a white color, put them into little chip boxes, and cover each box with a piece of clean white paper, pricked with many holes in it, to allow the worms to come through, taking care to inspect and shake the eggs from time to time in the boxes, that they may have equal access to the heat ; and, when the worms are ready to appear, put a few mulberry leaves upon the paper, to which the worms will readily attach themselves as they

come out ; and, by means of the leaves, you can easily take out the worms as they appear, in order to put them into different little boxes ; and then give them some of the tenderest leaves, cut into small pieces, to feed on, giving them at the rate of three meals each day. As the leaves when very young will dry so much, even in an hour's time, if exposed to the open air, as to be unfit for the use of the young worms, you must put them into a clean glazed pot ; but take care to place them loose, that they may not press too much upon each other; cover the head of the pot with a wet linen cloth, and place the pot in a vault or cellar (or, in case you have none, into the coolest part of your

house), by which means the leaves will keep fresh and good for two or three days together. Besides, you must take care ‘to have always in the house at a time a stock of leaves sufficient at least for three days’ provision for your worms, to secure you in food for them during such length of time, in case of wet weather, as nothing is more pernicious to the worms than giving them wet leaves for their food ; for which reason be careful never to pull the leaves when wet, either with rain or dew, except on absolute necessity ; and in that case you must spread them out, and turn them from time to time with a long wooden fork, that the leaves may be perfectly dry before you give them to the worms.

It may here be added that it is the general opinion, in France, that the leaves afford a more •wholesome food for the worms when they have been gathered four or five hours, than fresh from the tree — and more particularly so if the trees grew upon any soil other than sand or gravel, because the keeping them so long so far diminishes the over richness of the leaf.’ The persons employed in pulling the leaves must be careful to have their hands clean, and free from every strong offensive smell, such as that of garlick, onions, or tobacco, &c. ; and they ought to be particularly attentive not to bruise the leaves in pulling them.

When the worms are first hatched, keep each day’s production separate by themselves, as it is of high consequence to have each parcel brought up as equal as possible, that all the worms contained in it may be in readiress to mount for making their cocoons at one and the same time. After setting apart separately the production of each of the first four days, what then remains of the eggs to be hatched may be thrown away, as these later worms are always found to be weakly, few of them completing their cocoons; so that the attempt to rear them is always attended with an unnecessary waste of leaves, besides the trouble they occasion to no purpose. When the worms are just come out, keep them in a heat not exceeding 15° ; and even then there is no occasion to cover them by putting on the heads of the boxes, as it is better for the worms to have abundance of free air. But, if the weather should happen to prove cold, you must in that case put on the heads of the boxes at night, or cover them with a double napkin, taking care, however, not to let it touch the worms, for fear of hurting them ; and take off the head of the vox or napkin in the morning, when you give a

feed to the worms, as early as you can ; at four or five o’clock, but not

later than the last. In that early state the three different meals should be given to the worms at the distance of six hours from each other. When the worms are coming out they are not to be left scarcely a moment, as they ought to be gathered from the boxes as fast ars they make their appearance ; and, as this work goes on in the night as well as the day, it becomes a very hard task at that time. M. Marteloy, who always carefully attended to this particular himself, generally went to bed at nine o'clock in the evening during this critical period and rose again at midnight, which was quitting them as little as possible. But this great attention at this time is only requisite in large operations ; for example a pound of eggs, or any quantity above it.

Before proceeding to the further treatment of the worms newly hatched, it may be proper here to give some description of the stage and baskets necessary for the carrying on of this culture, as these ought to be in readiness some time before they are wanted. The stage ought to be erected in a large room, with windows on each side of it, so as to be able to command a thorough air when necessary, the walls and floor of which should be examined with the strictest attention, in order to fill up every little hole or crevice that can give access either to rats or mice, as both these animals eagerly devour the silk-worms whenever they can find an opportunity for that purpose. In Languedoc and Quercy they make the stage six feet, but more frequently only four feet and a half broad, so that a person, by going first to the one side and afterwards to the other, may be able with ease to reach over the whole breadth, both for the advantage of giving the leaves to the worms, and for clearing away their litter more easily. At every nine feet distance, in the length of the stage, they fix a post in the floor of a height sufficient to support the roof, and to those posts they nail a piece of wood across the stage, which piece of wood serves to support the baskets to be hereafter mentioned which rest upon the cross-bars of wood at the two ends ; so that these bars ought to be four inches broad, which allows two inches for each basket to rest on, as the baskets join the one to the other at the cross bars. The stage, being four feet and a half broad, takes two of these baskets to fill up its breadth. They make theit stage to consist of as many shelves as the height will admit of, keeping at the distance of twenty inches from each other. The lowest table or shelf ought to be made six inches broader than the shelf immediately above it, that the lowest may project three inches on each side farther than the one above it ; and so on in proportion with all the other tables or shelves ; the uses for making this difference of breadth in the different shelves shall be afterwards particularly explained.

It has been already observed that rats ana mice are extremely

destructive to the silk-worms when they can get access to them; for which reason every precaution should be used to protect them against such dangerous visitors. For this purpose, therefore, the following one is ge-

nerally attanded to :-— They cover the foot of each of the posts of wood which support the stage with a piece of strong smooth paper, which is nailed to the wood with tacks, to the height of a foot above the floor ; by which means, when these vermin attempt to mount, their feet slide upon the paper, so that they can get no hold. A hoop of glass of the same height, made of a size proper for the wood, might, perhaps, be found to answer the purpose better. The ant, or pis-mire, is also a most dangerous enemy to the silk-worms ; to guard them from which, the usual practice, where there is any danger from these insects, is to put a quantity of hot lime round the foot of each of the posts which support the stage, which fully answers for that purpose. Cats and poultry 01 all kinds are likewise destructive to the worms, and must therefore also be guarded against with care. When the worms are young, they are put into wicker baskets three feet long, and eighteen inches bioad, the edges or sides of which are made from two to three inches high. They make them of that size in order to be the more portable.

When the worms come to be placed upon the stage, they are put into baskets four feet and a half long, and two feet three inches broad, and the sides or edges of them are from two to three inches high, and of the thickness of about three quarters of an inch. The bottoms of the baskets are made of plaited reeds, after being split in order to make them lie flat. They are bound all round with a slip of wtJod, a little more than an inch broad, and about a quarter of an inch thick, to keep them together, which is nailed down, and three cross bars of wood are nailed across the back of each basket to keep it firm.

It is proper to observe that care should be taken to place the stage in such a position as not to allow the sun to dart directly upon the worms, as they are not able to bear the heat of it in this manner when

it is great. It will even kill them, especially when they are young; and, if it should not go that length in a colder climate than the south of France, it will, notwithstanding, have the effect to torment them, and render them very unquiet, and prevent them from eating with their usual appetite. If the sun darts upon them when they are large, you will see them fly from it as fast as they can, and seek for shelter in the shade, even at the expense of the want of their food. When young, they are not able to get out of the way, and by that “means are often killed l>y it, as above mentioned.

But to return to the treatment of the worms upon their being newly hatched : it is proper to observe that too many leaves should not be given to them at one time, and that the leaves given should be spread very thin ; because, if too thickly put on, a great number of the worms, as they are then so small, will run the risk of being lost amongst the litter, from which they will not be able to disengage themselves; and you must be careful to cut the leaves small during the first ten or twelve days, where the number of your worms is such as to admit of your doing so : but, if yoor quantity of worms is large, it would require too much work to cut the leaves for them, •o that in such case you must give them entire.

When the worms are in their first age you ne*d only clear away the litter once, because their or-dure at that time dries as fast as they make it, being in small quantity. When the litter is to be taken away for the first time, you have only to turn the parcel upside down, and so pull off such a quantity of the litter as you find necessary, which is the most expeditious way of cleaning them at that time. In giving the leaves to the young worms, you must make the leaves lie hollow upon them, to give air to the worms. When put on too flat and close, they prevent that free circulation of the air which is at all times necessary for the health of these insects.

During the whole of the first age, the leaves of the young plants of the mulberry, in the seed bed and nursery, as being the tenderest, are greatly preferable to the leaves of older trees as food for the young worms, for which reason it becomes of importance to have always a sue-, cession of young plants coming on yearly in your nursery grounds.

When the silk-worms enter upon their sickness, they abstain from that moment from all manner of food. As soon, therefore, as you observe some worms of a parcel begin to grow sick, in place of three give them

only two meals a day ; when more of them sicken, confine them to one meal only ; and from the time you observe most of them sick you must give them no more food, till the whole parcel, or at least the far greatest part of them, get over their sickness (by having cast off their old skin), that you may carry them all equally on, at least as nearly so as possible, which saves a vast deal of trouble in the management.

When the silk-worm gets over his first age or sickness, he is of a grayish color, and his little trunk, or point of his head, is of a jet black color, by which he is then distinguished. When he gets over his second sickness that little trunk is of a brown color. When he gets over his third sickness his head is remarkably large, which is the distinguishing mark at that time. And, when he gets over his (ourth sickness, he is of a brownish-yellow, or deep buff color.

You must not clear away the litter from the worms while they are about changing their skin, or what is called their sickness ; but as soon as they have sot clear of their old skin then you are to remove all litter.

During the second age it is advisable still to continue to feed your worms with the leaves from the young plants in your nursery, as these are still preferable to those of older trees for the worms at this time. You must now be-gin to be attentive to clear away the litter from time to time, so as to prevent all danger of its heating, which proves highly injurious to the worms. These insects are remarkably fond of cleanness, which besides helps to enliven them, arid gives them a keen appetite for the first leaves which are given to them always after cleaning. The litter is taken away in the following manner : — You scatter some fresh leaves upon one corner of the basket, to which the worms having attached themselves, which they will readily do, you then take up the worms by means of the leaves and stalks they cling to, leaving the litter under-SILK.

neath. Having thus taken up all the worms from that corner, and placed them above those adjoining to them, you then clear away the litter from that corner, and carefully sweep together, with a little broom of twigs or heath, all the re-fuse and excrement, which you must remove entirely before you replace the worms in their station ;

and in the same manner you must proceed with the rest, till you have thoroughly cleaned the whole basket.

During the third age make use of the leaves of such trees as have been planted out in the field, but reserve the leaves of your oldest trees for the fourth age, as these last leaves are reckoned the best for the worms when come to their maturity. Be attentive to cleaning away the litter as be-fore directed, which, during the third age, should be done at least four or five times ; and take care to clear away, from time to time, all dead worms the moment you observe them ; and to throw aside also regularly all such worms as ap-pear to be diseased, to prevent them from infecting the rest, which will happen if this article is not pursued with the strictest attention. All the worms which you observe to grow of a yellow color, and to have their skin shining, are strongly diseased, and must be immediately thrown away, for fear of infecting the sound ones. These diseased worms sometimes void a 'yellow liquid at the tail, and it often also bursts out at other places of their bodies. These must always be attentively removed the moment they are observed ; but it becomes more essentially necessary before the worms enter into their third sickness, because at this time they become most dangerous, by voiding the yellow liquid above mentioned, which is poisonous to the worms, and exceedingly contagious ; insomuch that every worm that happens to touch this liquid is sure to be infected with the same distemper, which has hitherto been found to be incurable.

It has been remarked that it is improper to change the worms during their sickness, because it may occasion the loss of some of them. But it is necessary to add that, if the litter at that time should prove to be in such quantity as evidently to run the risk of heating, before the worms can get quit of their old skins, which they generally do not accomplish in less time than two days and a half, it is better to suffer the loss of a few worms, by removing the litter at that time, than to run the risk of losing the whole parcel, which undoubtedly would happen if the litter should be heated before the operation is over of their changing their skins. This article of keeping the worms clean will appear to be of high importance in the silk culture, when it is added that it is commonly computed that the loss sustained yearly in France, by the death of the worms during the times of their four different sicknesses, by being smothered in the litter, by the great quantity of litter, leaves, and worms above them, and by the litter's happening to grow damp, and to heat at these critical periods, is not less, upon an average, than between 2,000,000 and 3,000,000 of livres annually, which is equal almost to a tenth part of the whole yearly produce of silk in France, which is computed at 30,000,000 of livres.

Being now arrived at the fourth age, the time approaches when the worms will mount in order to form their cocoons ; and the person, therefore, who pursues the culture of silk, must now begin to prepare for that important period. One°of the first objects of his attention must be to provide himself with a sufficient quantity of small brushwood, for making the cabins of the worms ; and there is nothing more proper for this purpose than heath or broom, .when either of these can be obtained ; when neither heath nor broom is to be had, any other ki-nd of small brushwood will answer, preferring always such as is bushy at the top, and whose twigs are of a sufficient strength to support the weight of the worms. But it is to be remembered that the slender brushwood is the best, that you may be able to bend itwhich way you will. Strong brushwood is not so pliable, and by that means not proper for the purpose. Having provided your brushwood, it may be proper to prepare a par-cel of baskets, for such of your worms as are soonest ready for mounting, in the manner practised at Montauban, in Quercy, which is done as follows : — You take a round willow basket, which you dress with brushwood, putting the wood round two-thirds of the basket, and leaving the other third open for putting in the worms, and to give an opportunity to clear away their litter. You then pull the ends of the wood together at the top, so as not to press too closely upon each other, and so tie them with a little twine or packthread, to keep them in their place ; after which you put a paper cap, pretty large, upon the top of the wood, it having been found that the worms are fond of making their cocoons under a cover of this kind, as it affords an opportunity of attaching some threads of silk to the paper, which enables them to fix their cocoons the more firmly in their place.

In putting up the cabins, on the stage, the two rows of brushwood at the extremities of the stage are made much thicker than the others, especially for six or eight inches above the shelf, to prevent the worms from getting out at the ends and falling over the stage. In putting up the other rows, you lay a little piece of wood, or a reed, across the stage for each row ; and, in putting up the brushwood, you make the first turn to the right hand, and the second to the left; and so alternately, keeping the reed in the middle, which binds all fast.

In dressing the stage with the brushwood it is advisable to cover the pillars which support it, and to cover likewise the top of the stage with brushwood. In constructing the cabins great care must be taken to put up the brushwood in such a manner as to allow a passage for the worms between the different branches, which, however, must not be too wide ; and it is right to make a great number of the points of

the brushwood touch the shelf, because it affords the greater opportunity to the worms to mount. Many people at Montauban put a number of roses, or other sweet-smelling flowers, upon the pillars which support the stage, and in other parts of the room, with a view to sweeten the air. But the best apparent means for this purpose is to take care to keep up a free circulation of fresh

air in the room, by keeping open all the windows, and the doors also, it you find that to be necessary.

In forming the arches of the little cabins with the brushwood there is always a little opening at the top of each pillar, occasioned by the curve or top of the circle. Take care to make this opening pretty wide, because it has been observed that the worms make choice of that opening, by preference, to fix themselves in making of their cocoons. In order to make this opening of the width it ought to be, the brushwood should not be altogether straight, but rather crooked or bending. These openings are not only evidently the choice of the worms ; but another advantage also arises from them, namely, that your cabins by this means contain a greater number of worms than it is possible for them to do when these openings are too small, and consequently fewer cabins will answer your purpose. When the brushwood is quite straight, it must necessarily occasion these openings to be made. The brushwood ought to be quite stripped of its leaves, and perfectly dry.

If, in forming the cabins, you place the brushwood quite upright, the worms when mounting run a great risk of tumbling down ; and those worms which tumble down are for the most part destroyed by the fall. In order to avoid this inconvenience, you must make the brushwood which forms the sides of the arch slope a little, by which means you secure much firmer footing to the worms in mounting. Besides, when you form the cabins, you must be at pains to cut off all the very small slender shoots, which when left to themselves, and not properly bound in with one another, have not strength sufficient to carry the weight of one worm, far less of several ; and which, if left, must for that reason

always occasion the loss of a good many worms, by their tumbling down, as above mentioned.

In describing the stage, it was said to be pro-per to make the lowest shelf six inches broader than the one above it, that the lowest may project three inches on each side further than the one immediately over it ; and to make the same difference of breadth in all the other shelves progressively as you go up to the top of the stage, which three inches of breadth in the different shelves is intended to receive the worms which may happen to fall from the shelf above. And therefore these different projections must be covered with brushwood, when once your cabins are well furnished with worms, as this will help to break the fall of such worms as may happen to tumble down. And for the same reason it is advisable, when once your cabins are well furnished with worms, to put a little brushwood in the bottom, and at the entrance of each cabin, as it will be of service to such worms as fall from the brushwood above, and afford them a proper convenience for making their cocoons in case they should be so stunned with the fall as to disable them from mounting again on the branches.

But, to return to the treatment of the worms during the fourth age : as soon as you find several of your worms have got over their fourth sickness. ˆ on must pick them out and put them by

themselves ; that is, alt those that get over that disease for the first two days may be put into one parcel, those of the next two days into another parcel, and so on with the rest, that each separate parcel may be carried on as equally as possible. The most attentive care must also be given to clear away the litter regularly every day ; and, if it can be done, it would be advisable to clear away the litter twice in the twenty-four hours, especially during the four or five days immediately before mounting. If this cannot be done, as it is often found to be difficult to get it accomplished when the quantity of worms is large, you must, however, constantly make it a rule to clear away the litter regularly in such a manner as to prevent it at any time from increasing so much in quantity as to make it run the smallest risk of growing damp and heating, which never fails to destroy the worms.

Many people, during the four or five days which precede mounting, which the French call the grande fraize, are in the custom of giving from four to five meals a day to the worms, giving a large quantity of leaves at each meal. But it seems much more advisable to give them fewer leaves at a time, and, to repeat their meals oftener even to the

number of eight or nine times in the twenty-four hours, according as you find them in appetite ; by which means the leaves are more quickly and thoroughly eaten up, without occasioning so great an increase of the litter. But, what is of still more consequence, the fresh leaves so often repeated never fail to give a fresh edge to their appetite ; so that, in fact, in the space of twenty-four hours, the worms actually eat up a much larger quantity of leaves than they could have done by following the other practice of four or five meals a day, as none of the fresh leaves are spoiled by their treading upon them. This practice of course hastens the worms to their full maturity, and upon the whole saves a considerable quantity of leaves, because few or none of them are lost amongst the litter, besides that the operation is by this means sooner brought to a conclusion, and the* worms always kept in high health and appetite by it. Upon these occasions let it be a fixed rule to feed them at night immediately before going to bed, and as early as you possibly can in the morning.

There is another particular to which it is pro-per to pay attention, and that is, that, the mo-ment a basket of worms is cleared from the litter, the litter should be instantly carried out of the room, and along with it all the dead worms you can find, in order to prevent, as far as you can, any bad smell from taking place in the room, which is always hurtful to the worms, nothing conducing more to their health than cleanness and preserving always good air in the room.

During the four or five days which precede the mounting, the worms eat with the most vora cious appetite, and in that period consume an incredible quantity of leaves; so that the supplying them with fresh leaves, and the clearing away of the litter, become at this time a most laborious, incessant, and fatiguing work for those who at-tend them. You will know when the worms are ripe by observing them with attention when you give them fresh leaves. Those that are ripe, in-

stead of eating, avoid the fresh leaves, and run over them as fast as they can ; and you will observe them wandering about on the sides or rim of the basket. You will also know it by looking at them on the side opposite to the light, as you will then find them to be transparent, like a new laid egg, and of the color of the silk, which is also much the same with that of a new laid egg. When they are nearly ripe their

bellies begin to grow transparent first of all; but they are never thoroughly ripe till their heads are transparent a'so. You must not be too hasty in putting up the brushwood on the baskets on the stage for the worms to mount. This ought not to be done till you observe a good many of your worms offering to mount, because the brushwood keeps the worms too close and warm, and exposes them to the danger of that disorder which the French call the touff", which is very fatal to the worms, and which does not seize them till they are jus* ready to mount. When they are perfectly full, and ready to mount, they are rendered feeble by too great heat, and the silk fairly chokes them, so that a great deal of fresh air becomes more particularly necessary for them at this time than at any other. For this reason it is even thought advisable not to put up your brushwood until you have seen a cocoon fairly made upon the stage. At any rate you can have some of your large baskets (of which you should have an ample provision) ready dressed with brushwood, into which you can from time to time, as you observe them, put such of your worms as you find are fully ripe for mounting. Besides, when you see a whole parcel ready to mount, you have only to take the basket which contains them out of its place, and put up one of those which are already dressed with the brushwood, by which means you can put your worms directly into the little cabins prepared for them, which will render your work much easier than it would be otherwise, and make it less hurrying. The basket thus emptied of the worms should be instantly dressed with brushwood, to be in readiness for the next parcel that shall be ready for mounting. Not a minute is to be lost when the worms are fully ripe, so that a number of these additional prepared baskets are of the utmost consequence at this time.

In preparing the little cabins for the worms you must make choice of such small brushwood as is bushy at tne tops, as already mentioned ; and, in arranging them, you must intermix the tops of them with each other, which will render them thicker in the heads ; but taking care always to leave little openings betwixt the twigs, so as the passage for the worms may not be stopped, which is attended with this advantage, that it affords a great many little places proper for the worms to form their cocoons in. When the heads of the brushwood are too thin, the worms find themselves at a loss to fix themselves, and spend a great deal of their strength in ranging from branch to branch to find a proper place for them. In placing your brushwood, you must order it so that the bottom parts of it shall stand as close to one another as possible, that the worms in groping about may every where find bushes to cling to. In using many kinds of

biush-wood, where the tops are very bushy, this will of course put the bottoms at a distance from each other. But these vacancies you must fill up with little twigs, for the purpose above mentioned ; to wit, that the worms may every where find branches to crawl on.

When you put up the brushwood betwixt two baskets, that is, when there is one basket placed over the head of another, as is always the case on the stage, you have only to cut the branches of an equal length with one another, but about eight or nine inches longer than the distance betwixt the two baskets ; then, resting the bottom part upon the undermost, you bend the top in a curve downwards, either entirely to one side or to both, as the bushy ness of the brushwood will allow of it. The ranges are made across the breadth of the basket, at the distance of about eighteen or twenty inches from each other, so that you may easily put in your hand from one side to the other, to enable you to clean the intervals from time to time from the litter, as you shall find it necessary, which ought to be done at least once in twenty-four hours after the bushes are put up, and even twice if you can find time for it. The bushes are placed in such manner as to form with their heads little arches betwixt each row of the branches. By placing the bushes as above, they stand erect and firm, because they press equally upon the undermost as well as on the upper basket.

When the worms are mounted on the brushwood, care must be taken not to suffer anybody to disturb them by handling or touching the brushwood ; because, when they begin to work, their first operation is to fix so many threads of silk to different parts of the branches, which threads are to serve to support and hold up their cocoons in their proper poise. If any one of these silk threads is broken, by handling the branches, the worm finds, when he comes to work in the cocoon, that by the loss of that thread the cocoon has lost its poise, by which means, as it does not remain steady, he cannot work with advantage, so as to finish his cocoon properly. Disappointed by this means of continuing his work, he pierces the cocoon, quits it altogether, and throws out his silk at random wherever he goes, by which means his silk is wholly lost, as is the worm also, as he finds no place to lodge in with propriety, in order to prepare for his last change of state, when he is to come out a butterfly. Some of the threads of silk, which it has been already said the worm attaches to the different branches, upon his first beginning to work, are likewise sometimes broken by another worm working in his neighbourhood, which is attended with the fatal consequences above mentioned, though this last is an accident which happens but very seldom. Such of your worms as you find loiter below, without mounting, notwithstanding they are ripe, you must be careful from time to time to place upon the brushwood, which is

ranged at the two ends and along the sides of the stage. There are always some of the worms which are lazy, or have not strength enough to mount on the branches, which however are strong enough to make good cocoons when they are placed where

they can make them without the fatigue of mounting the brushwood. Those which are so unlucky as to tumble from the brushwood should also be placed with the other weak •worms, because the fall generally diminishes their strength greatly ; and those which you then place upon the brushwood should be covered over with a piece of paper, to which they attach the threads of silk to keep their cocoons steady. You may also place some of the weak worms in papers, made up in the form of a cone or sugar-loaf, in which they will make their cocoons extremely well.

Great attention must also be paid to visit carefully from time to time all the different cabins, in order to remove immediately all diseased and dead worms ; because the last, if left, will presently stink, and occasion a bad smell in the room, which would particularly annoy the worms •which are at work in making their cocoons in the same cabin ; and the diseased ones would infect the others which are sound.

When it is observed that a great proportion of the worms of the same basket are ripe, and that they are wandering about in quest of the brushwood, the common practice has been to place the whole worms of that basket at once into the cabins for mounting. But this practice is attended with no small degree of inconvenience and danger, because it is impossible to manage your worms in such a manner that the contents of a whole basket shall all of them be ready to mount at the same instant. The consequence then is, that those which are ripe mount directly, and those which are not ripe remain in the cabins, and must have food given to them till such time as they are ready to mount in their turns, during which time the litter must be changed frequently to prevent corruption : but, what is worst of all, the worms which are mounted on the brushwood, before beginning to shut themselves up entirely in their cocoons, discharge a quantity of liquid

matter, which falls upon the worms below in the cabins, and wets and dirties them prodigiously; and that glutinous liquor, drying and hardening upon their skins, prevents their perspiration, and deprives them of that pliancy and agility which are so requisite to enable them to mount, as well as to make their cocoons. The consequence often is that the worms thus wet with that glutinous liquor contract diseases and die, at the very instant they are ready to mount ; and as these diseases are too often contagious, by the worms bursting, the contagion is spread over the rest, which become also infected, and so the whole which remained in the cabins are often entirely lost.

Some few people, who are more attentive, and are sensible of the dangerous consequences of the above method, follow a different practice. They have the patience to pick out the worms, one by one, from time to time as they observe them to be ripe, which they then place in the cabins, and which never fail to mount immediately, when they are properly chosen ; that is, when the person who gathers them is a proper judge of their real point of maturity, which discovers itself by their bo-dies, but mort particularly their heads being perfectly transparent, as before mentioned. The

other worms, which arc not ripe, they leave in the basket, and give them their food in the usuai manner, till they become ripe in their turns, when they are constantly gathered up from time to time, and put into the cabins as they come to maturity. By this means you change them with ease, and they are safe against being wet with that glutinous liquor above mentioned, which from repeated experience has been found to have such pernicious and destructive consequences.

In putting the ripe worms into the cabins, take care to place them first of all in the middle of the cabins, that the middle may be well furnished with worms before you place any at the sides. Should you begin first with the sides, or outward ends of the cabins, you will find it extremely difficult to supply the middle of the cabins with worms, without disturbing and even destroying some of those which are mounting on the sides, in reaching in with your hand towards the middle.

The cocoons should be allowed to remain upon the brushwood for six or seven days after the last of the worms of that particular parcel art-mounted. After the cocoons are taken down they should be assorted according to their color? setting apart all the weak cocoons, and such a? are double. Those of each color which have a shine upon their

surface, and thence called sat-tiny, should also be put by themselves, as thev form the second sort of silk. The double cocoons form the coarsest silk of the whole. All the floss, or loose silk, which is round the outside of the cocoons, must be carefully taken off; because the better the cocoons are cleared from that oute • silk the better they play in the basin, and of course the better the silk will wind off.

In clearing off the floss silk from the cocoons, when taken down from the branches, it is customary to make choice of those which are judged to be the best for seed, which are put aside by themselves, and afterwards from the whole of those to pick out in pairs such as are judged best for the purpose; taking care in this last choice to pick out an equal number of males and females, as far as one can judge of the different sexes by the cocoons. In doing this care must be tak«»n to keep the cocoons of the same day's mounting always separate by themselves, that the butterflies may pierce the cocoons at the same time. If the good cocoons taken from the whole are all first mixed together, and from this general heap the cocoons are afterwards picked out in pairs for breeding, the consequence will be that there will be set aside the cocoons of wontis that have mounted the brushwood upon different days, which of course will have the ef-fect that the butterflies will pierce the cocoons unequally ; that is, not on the same day, but at times distant from each other ; so that there will not be an equal number of males and females produced at the same time, which must occasion the loss of a great many of the butterflies, and consequently the quantity of eggs or seed will fell short of what was intended ; which shows the necessity of precision in keeping the cocoons of each day apart. When you happen to have more females than males you must employ the

males of the preceding day a second time, that you may not lose your supernumerary females. But this is only to be done upon an urgent case of this kind : because it is greatly preferable to cause the males to serve only once if you can calculate so as to have always an equal number of both sexes for copulation. The double cocoons are to be distinguished ?/y being much thicker than the others, generally broad, and not quite round.

In taking the cocoons off the brushwood pick them off carefully,

especially if there are any dead worms amongst them, which presently corrupt; because such of the cocoons as touch these dead worms are spoiled by them, as they contract by that touch a gluiness from the dead worms, which hinders the silk from winding off properly from the cocoon. The best manner to know the good from the bad cocoons is to press them at the two ends with your fingers. If they resist well that pressure, and appear hard and firm betwixt your fingers, the cocoons are certainly good. Though they appear firm, upon pressing their sides with your fingers, they may still not be entirely good, the pressure at the two ends being of all others the best manner of knowing the good ones.

After the cocoons are taken down from the brushwood, such of them as are intended for seed must, with the utmost care, be cleaned from all the floss or loose sick which is about them ; which, if allowed to remain, would greatly hin-der the butterfly from getting out of his cell ; after which, with a needle and thread, you must thread the cocoons by the middle, like a string of beads. But in doing this you must take care not to hurt the insect in the cocoon with' the needle. You are only to pierce just as much of the skin of the cocoon as is sufficient to attach it to the thread, and this is done at the middle of the cocoon, to leare the two ends of it free, as you cannot be certain at which of the ends the insect will pierce the cocoon. This being done, you hang up the cocoons against the wall of the room by a nail, until such time as the butterflies come out.

When putting the cocoons upon the thread, in order to prepare them for breeding, be at the pains to place a male and female cocoon alternately upon the thread, that they may be near each other for copulation when they come to pierce the cocoons; and, when the butterflies come out, you place them upon a piece of clean woollen cloth, that is perfectly smooth, having no nap or pile upon it, which may be hung upon the back of a chair. The male is easily to be distinguished from the female by his body being more slender, and by fluttering his wings oftener and with a great deal more force than the female. The fe-male, after copulation, will proceed to lay her eggs upon the cloth, to which they will closely adhere ; and upon which you let the eggs remain till about a month before the usual time for hatching, when they are to be taken from the cloth, which is generally done by means of a thin piece of copper coin, which in France passes for a penny (un sol marque), and which is found perfectly to answer the purpose. The cloth upon v hieh the eggs are laid is folded up lightly and

kept till the proper season in a drawer or closet in a dr.y room, but not too hot. Every female butterfly is calculated to produce from 300 to 400 eggs. The reason for recommending the eggs to be taken off the cloth, about a month be-fore the usual time of hatching, is this, that it can then be done without the smallest injury to the eggs, which at that time are perfectly hard and firm; but, if delayed till the time of hatching, the case becomes greatly altered, because the eggs gradually soften by the approach of the spring, so that they cannot then be taken from the cloth without the evident risk of destroying a great part of them.

Was it possible to wind off the silk from the other cocoons before the insect naturally pierces them, that is the best time for doing it, because the silk at that time winds off with much greater ease than afterwards. But, as that is found to be impossible, two methods have been pursued to destroy the insect in the cocoon, that they may wind off the silk at leisure and with full convenience. The first method, which was followed in France for that purpose, was to destroy them by placing the cocoons in baskets in a baker's oven ; but, if the oven happened to be a little hotter than was proper, the silk was by that means scorched and often very much hurt by it. They therefore tried to kill the insect by the steam of boiling water, which could not at all hurt the silk, and they succeeded ; so that the placing them in the oven is now wholly laid aside. The killing of the insect by the steam of boiling water is performed in the following man-ner : — They build a little furnace of brick of a kind of oval form, the ground part of which is for holding the wood or charcoal which they use upon this occasion ; and, to make the fire burn properly, they have a little iron grate in the furnace, upon which they place the wood or charcoal ; and over that, at a little distance, they place a little copper cauldron, which they fill with water, and make it bo'l by means of the fire underneath. Above this cauldron they have another iron grate, upon which they place the cocoons, in a little open basket composed of twigs, which is made pretty open between the twigs, to let the steam and heat of the boiling water have the easier access to the cocoons. To this cauldron, and the grate above it for holding the basket with the cocoons, you have access by a little door which opens above the entrance for the fire. The furnace is arched over the top with bricks, that, when the door above mentioned is shut, the steam may be retained within, which, in the space of eight minutes, is found effectually to kill the insects within the cocoons. The basket is then taken out and put aside, to let the cocoons dry, as, upon coming out of the furnace, they will be all of them wet with the steam ; and they then place another basket in the furnace with more cocoon*, taking care so to keep up the fire as

to have the water in the cauldron always boiling. Charcoal is preferable to wood for fuel, upon this occasion, because it has no smoke. The smoke of wood spoils the color of the silk, and diminishes its lustre. The smoke of pit coai would be still worse.

Here it is proper to add that after the insects

nave been killed by the steam, as above mentioned, care must be taken to stir about and move the cocoons regularly, at least once a day-If this is neglected, the insects will corrupt, and breed worms in the cocoons, which will destroy the silk. After the cocoons are taken out of the furnace, and dried a little, as before directed, they should be wrapped up in a good thick woollen blanket, to keep in all the hot steam, and to prevent all access to the exterior air. This is ‘done with a view to stifle any of the insects which may happen to be yet alive, and which, if immediately exposed too much to the open air, might revive ana recover their strength. They are left covered up in that manner with the blanket for five or six hours together; after which they are to be taken out of the basket, and spread out upon a table, and are afterwards to be stirred and moved about regularly every day, as directed above. And you ihen assort the cocoons according to their different colors, of which they have three sorts in France; namely, the white, the yellow, and those of a greenish color.

When the insects are once killed, the sooner you wind off the silk from the cocoons the bet-ter; because it can then be done more easily than after they have been kept some time ; upon which account they always wind off the silk as fast as they possibly can ; and it is done in the following manner : — They build a little copper cauldron into a small furnace of brick, with a fire-place under it, as in the other furnace already described, exactly in the same manner as we do in Britain at the sides of our rivers, for the washing of linen at our bleach fields; at the end of which they have a large reel, which turns round with the hand, and by a foot-board, and two or three little pieces of iron at proper distances, with eyes to them, by which to conduct the threads to the reel. The cauldron above mentioned they fill with water, and keep it always boiling with a fire of wood or charcoal ; the last, however, being preferable, ‘on account of its being free from smoke. They then put from twenty to thirty cocoons at once into the

boiling water, and with a small brush of little twigs (of heath for example) they keep stirring the cocoons about. The heat of the boiling water dissolves the gum that is naturally about the silk, upon which, as the cocoons are continually touched and tossed from side to side amongst the water by the little brush, the ends of the silk attach themselves to the brush. When the woman who manages the brush perceives that she has got hold of the ends of the silk by it, she takes hold of the silk thread with her hand, puts aside the brush, and pulls the silk towards her, which disengages itself with ease from the cocoon ; and this she continues to do till she has got away all the floss or outside silk of the cocoons. When she observes she has come to the fine silk, she breaks off and separates the coarse from it, which coarse silk she puts aside. She then applies her brush again till she has got hold of the end of the fine silk, all of which she sets apart, every fine thread by itself, by fixing it to a piece of wood kept near to the furnace for that purpose, till she has arranged the whole, or 3t least the greatest part, in this manner, which

by «bat means are In readiness ‘.o be thrown in to form the thread of silk which is to be wound off. This done she puts together the threads of as many of the cocoons as she inclines, according as she wants to make the thread fine or coarse. These she joins together ; and, aftor having put the silk through one of the eyes of two of the pieces of iron which are placed for conducting the thread to the reel, she fixes the silk thread to the reel ; upon which another woman, who attends to manage the reel, begins to turn it about with her hand, and keeps it in motion by applying her foot to the foot-board, and by this means winds off the silk frota the cocoons, which is done with great swiftness.

As soon as one or more of the cocoons are exhausted, the woman who manages the cocoons in the cauldron, or basin, supplies their places from time to time with others; taking care while these are winding off to prepare others for keeping up a continual supply, and taking care also to observe that the silk winds off regularly from all the cocoons she puts in play together. A* she is obliged to have her fingers almost every other instant amongst the boiling water, in order to manage the cocoons properly, she has a basin of cold water at hand, into which she dips her fingers alternately with the other, to prevent scalding

them. But, in spite of her best care, a woman who works any time at this management finds her fingers at last so affected, by the influence of the boiling water, that they are for some time in such a state she has scarcely any feel-ingwith them : but this afterwards goes off gradually. Here it must be observed that, in forming the brush before-mentioned, great care must be taken to have the points of it exceedingly small ; because, if the points are large and coarse, the silk will not take up fine from the cocoons, but will rise off thick and clotty, which will prevent its winding off properly upon the reel.

The winding off the silk is always performed in the open air, generally in some garden, to prevent any accident from the fire, and more particularly to prevent any bad effects from the bad smell of the dead worms, which stink prodigiously. For these reasons this work is not suffered to be performed in any large town, but must always be done without thQ walls. When the day's work is over they make a fire of brushwood, into which they throw all the dead insects, which are taken from the bottoms of the cocoons opened with a pair of scissors for that purpose, and burn them together, in order to prevent any bad consequences from their stench and smell. This is done every night regularly before the work-peo- ple retire for the evening. As the manufacturers of the silk, and merchants who want to sell it, buy up large quantities of the cocoons, some of these people will have from ten to twenty of these little furnaces going at a time in the same garden, and even sometimes more. As the whole of the silk cannot be entirely got off by the reel, what remains upon the dead insect is put aside with the coarse part of the silk, which is taken from the cocoons in the beginning, till you meet with the fine thread which is proper for the reel. The dimensions of the stove and basin made use of at Montauban arii described above, are as follows :

Height of the stove from the ground, twenty-two inches and a-quarter. Length of the stove twenty-nine inches and a-half. Breadth of the stove twenty-four inches. Height of the iron bars for supporting the charcoal from the ground, for holding the fire, twelve inches and a quarter.

Width of the door, or opening, at the bottom of the stove for taking out the ashes by, and for giving air to the fire, nine inches and a quarter. Width of the door, or opening, at which you put in the charcoal for supporting the fire, seven inches and a half. Length of the oval copper basin, -which is built in on the top of the stove, for containing the hot water, in which the cocoons are put when they wind off the silk, twenty inches and three-quarters. Width of that basin sixteen inches and a half. ‘ Depth of the basin three inches and three-quarters. Breadth of the rim of the basin one inch and a quarter.

Spring water or rain water, as being soft, is the only proper water to be used in the basin. Draw-well water is altogether improper for this purpose, because it is hard, and does not properly dissolve the gum which is naturally upon the silk.

The water in the basin must be wholly changed twice a day; it is filled in the morning before setting to work, and the second time immediately before the people go to dinner, as it requires some time to make it boil.

When you first put the cocoons into the hot water, if the silk rises thick upon the brush, it is a proof that the water is too hot. If you cannot catch the threads of silk with the brush, it is a sign that the water is too cold.

W hen the cocoons are in play, if they rise often to the little iron conductors, it is a proof that the water is too hot. If the cocoons will not follow the thread, it is a sign that the water is too cold. By attending to these observations, you can easily manage so as to give that degree of heat to the water that is proper for the cocoons.

If there should happen to be any sand amongst the water in the basin, the heat makes it rise to the surface, where it fixes itself upon the cocoons. This is easily known, because, where there is any sand upon the cocoons, it makes the thread break, as if cut with a knife. For this reason the utmost care must be taken to guard against it, by cleaning the basin with the greatest attention. The fear of having sand is one of the reasons for changing the water of the basin at mid-day, and even oftener, if found to be necessary. When they find that tfiere is a little sand, and that they wish to avoid changing the water, on account of the loss of time which that operation requires, as the water must be boiling before you can go on with the winding ; in this last case, they cover the face of the brush all over with a parcel of the coarse silk, which is laid aside, and then put the face of the brush into the water, making it reach the bottom of the basin, along which you draw the

brush gently, to catch hold of the sand with the coarse silk, to which it will immediately cling when it comes in contact with it. You then drag the brush gently up the side of the basin, and thus bring out the sand along with it. This operation, several times repeated,

cleans your basin of the sand, without your being put to the trouble and loss of time in changing the water.

Take care to keep up your fire under the basin in such a manner as to secure having the water always of the same degree of heat, and to throw in your additiou of cold water by little and little at a time, so as it may make as little odds as possible in the degree of heat. When you throw in too much cold water at a time, so as to alter the requisite degree of heat, the silk of the cocoons which are in the basin at that time, loses its color, and grows perfectly pale; which, silk, so rendered pale, it is said, will not take any dve properly, which by that means diminishes the value of your silk.

In beating the cocoons in the basin, with the brush, you must carry your hand as lightly as possible, so as just to touch the cocoons slightly. If you beat too hard, the threads of silk, in place of conning off singly, cling together in lumps, which, as it prevents its winding off, occasions the loss of the silk, as it will then only answer as waste silk. When you take the fine threads to throw them to that which is winding off, they must not overlap your finger more, than an inch; if too long, they will not join well, but hang down and occasion a lump, which causes the thread to break, as it is then too large to pass through the eye of the little iron conductor.

In winding off the silk you must be attentive to keep the thread wet, to make it slip along the more easily towards the reel. And, when the wheel has remained any time idle, you must also wet all the thread betwixt the basin and two pieces of iron, which makes the thread run the more easily.

Be attentive also from time to time to wet with water the cord, and the little wooden wheel, which moves the wooden regulator, in order to make it act properly. If this is neglected, the cord, by being dry, will not turn the regulator as it ought, by which means the silk wL. be placed unequally upon the reel, which may have this farther disadvantage, to cause the silk threads upon the reel to cling and stick to each other, by having been brought into contact before the first threads have had time to dry. For that wooden regulator is calculated

to place the threads in such a manner upon the wheel as to make them touch one another only obliquely, and in as few places as possible at first, that the silk as it comes from the cocoons may have the time requisite to dry, before it comes to be fully in contact with that which follows. When the silk threads cling together, by being too soon brought into contact, the silk is rendered good for nothing.

The cocoons called satiny, from their resemblance to satin, require only that the water should be moderately hot in the basin. The same de-gree of heat that is necessary for the fine cocoons would entirely spoil the others, by making the silk come off thick, and what they call bourry. You find out the degree of heat necessary for these, by examining with care in what manner the silk comes off from. the first quantity of cocoons you put into the basin ; and, if you find it comes off thick, you must add cold water by

degrees, till you find the just proportion for them. They must not be allowed to remain long in the hot water, and there should only be a few Df these cocoons put into the water at a time. If ihese circumstances are not attended to, the silk comes off thick, as already mentioned, which, in winding, makes the thread break at every mo-ment, and not only greatly diminishes the quantity of your silk upon the reel, but also considerably hurts its quality, by rendering it coarser.

When once the reel has the quantity of silk upon it judged to be sufficient — the produce of about three pounds of cocoons, for example— you take it off, and put another reel in its place, that the work may not be interrupted. The silk ought to remain for six or eight hours, or even more, if you can allow it with your convenience, as it aught to be perfectly dry before it is taken from the reel.

When the cocoons which were first put into the basin are nearly finished, you must cause the wheel to be stopped ; at which time, with a ladle full of holes, like a drainer, you take out the oocoons which were in play, each parcel on the opposite side. They are put into plates

kept at the side of the furnace for that purpose ; and are taken out of the basin for the following two reasons : first, that they may not be mixed with the new cocoons, which are put into the basin to be prepared tor winding, as already mentioned ; secondly, because if these cocoons, which are already in part wound off, were left in the boiling water till the new ones are prepared, it would have the effect to prevent the silk from winding off from the cocoons with that dispatch and propriety which are necessary in that operation.

As soon as you observe that the silk is wound off from the cocoon, yon must take out the bottom of the cocoon containing the insect from the basin and throw it aside ; because, if left in the basin, it will spoil the water, and consequently destroy the color of the silk.

You must be at pains to keep an equal num-ber of cocoons working at each end of the basin, in order to keep the thread of silk of an equal size. When you have fewer on one side than the other, the silk becomes smaller at that side, of course, which also has the constant effect to break the thread. In order to keep the thread at both sides of an equal size, you must throw in the cocoons, one by one, and never more than two at a time. If you throw in many together, for example, four or five at once, it throws the weight to that side, when the thread immediately breaks, because by that means the equilibrium is lost.

In putting the silk thread round the two little pieces of wire, for conducting it to the reel, fixed to the little wooden wheel, you must turn the thread round to the right-hand for the bit of wire placed on the right ; and turn it round to the left hand, for the piece of wire placed on-the left.

The quicker the motion of the wheel is, the better the silk winds off, and the better the ends join to the thread, which is, indeed, one of the great reasons that make it wind off well. One might be apt to imagine that the rapidity of the

motion might overstrain and break the thread, but from constant experience it has been found that the thread never once breaks from the rapidity of the motion ; but, on the contrary, that the quicker the motion is the more advantageous it is for winding the silk.

When you have put the quantity of silk upon the reel which you think proper, you then pick and clean off all the loose silk with your fingers ; after which you take a little handful of the coarse silk, and after

washing it to make it throughly clean, and squeezing it, you nnist dip it in some cold clean water, with which, in the flat of your hand, you rub over the silk upon the reel, a great many different times, all round the reel; stroking up also the silk with the flat or palm of your hand. After which you then pour some clear cold water also upon the silk ; and you then turn round the reel with all the velocity in your power, for about eight or ten minutes, in order to shake off all the water effectually; which done, you take off the reel, and put it in some airy place to dry; but you must not ex-pose it to the sun, which would quite eat away and spoil the color. This is done to clean the silk effectually and to give it a gloss. * In preparing the double cocoons for winding off, they pu-t more of them into the basin at once than of the finest kind. But, before putting them into the basin, they must be well cleaned from all the floss, or waste silk, which is on the outside of them, that they may play properly in the basin. The water also musˆbe boiling hot ; and as the silk they yield is of a coarser quality than the other, and has a good deal of the floss silk or hour upon it, the girl who turns the wheel takes the opportunity, while the other woman is preparing the cocoons in the basin for winding, to clean and pick off the loose silk from that which is already on the reel. In winding off the fine silk, there are always two hanks of silk put upon the reel at the same time. But, in winding off the silk from the double cocoons, they confine themselves to one hank only at a time upon the reel.

The next object which occurs is the method observed by the French, in the preparation of their floss, or waste silk, which they call filoselle ; and which they do in the following manner : — all the cocoons which have been pierced by the butterflies being collected together, they add to these all the light cocoons, which they judge to be improper for winding off, after the insects have been cut out, as before-mentioned ; and to these they also add all the bottoms of the cocoons which had been thrown aside from the basin, after winding off their silk.

Such of the floss silk as you wish should re-tain the yellow color, you put into a large copper kettle, and cause a person to tramp it with her bare feet, in the same manner as the women in some parts of Scotland tramp their linens when they are washing them. From time to time they turn the cocoons upside down with their hands and so go on tramping them again with their feet. This operation is continued for nearly two hours together, turning them, and giving them a little more fresh water from time to time, till it is found that the silk of the cocoons sepa-

rates properly, upon tedding it out with your ringers : and as, in tramping with the feet, the edges of the heap of cocoons will very often escape the stroke of the foot, you turn the edges into the middle. When you find it properly separated, you carry it to the river; put the cocoons into a clean cloth tied up, to prevent the silk from mixing together. You then pour fresh water upon them from time to time, till you find that the water runs off from the silk perfectly clear, without being tinged with any sort of color. When you find this to be the case, you spread out the silk to dry by the sun ; and, when it is thoroughly dry, the operation is completed. For the subsequent processes in the manufacture of silk see WEAVING.

SILL, n. s. Sax. ryl ; Fr. sueil. The timber or stone at the foot of the door.

The farmer's goose, Grown fat with corn, and sitting still, Can scarce get o'er the barn-door till ; And hardly waddles forth. Swift.

SILLA, a town on the Niger of Park, which bounded his travels eastward. He gives no description of the place, which he had not spirits or health to survey ; but fills a page of his work with the reasons which determined him to proceed no farther. ' When I arrived,' says he, ' I was suffered to remain till it was quite dark, under a tree, surrounded by hundreds of people. But their language was very different from the other parts of Bambarra : and I was informed that, in my progress eastward, the Bambarra tongue was but little understood, and that when I reached Jenne I should find that the majority of the inhabitants spoke a different language, called Jenne Kummo by the negroes, and Kalam Soudan by the Moors. With a great deal of entreaty the Dooty allowed me to come into his baloon to avoid the rain : but the place was very damp, and I had a smart paroxysm of fever during the night. Worn down by sickness, exhausted with hunger and fatigue, half naked, and without any article of value by which I might procure provisions, clothes, or

lodgings, I began to reflect seriously on my situation. I was now convinced, by painful experience, that the obstacles to my farther progress were insurmountable. The tropical rains were already set in with all their violence ; the rice grounds and swamps were every where overflowed ; and, in a few days more, travelling of every kind, unless by water, would be completely obstructed. The cowries which remained of the king of Bambar- . ra's present were not sufficient to enable me to hire a canoe for any great distance ; and I had but little hopes of subsisting by charity in a country where the Moors have, such influence. But, above all, I perceived that I was advancing more and more within the power of those merciless fanatics ; and, from my reception both at SEGO and SANSANDING (see these articles), I was apprehensive that, in attempting to reach even Jenne (unless under the protection of some man of consequence amongst them, which I had no means of obtaining), I should sacrifice my life to no purpose ; for my discoveries would perish with me. The prospect either way was gloomy. In returning to the Gambia, a journey on foot of VOL. XX.

many hundred miles presented itself to my contemplation, through regions and countries unknown. Nevertheless this seemed to be the only alternative; for I saw inevitable destruction in attempting to proceed to the eastward. W ith this conviction on my mind, I hope my readers wil! acknowledge that I did right in going no farther. I had made every effort to execute my mission, in its fullest extent, which prudence could justify. Had there been the most distant prospect of a successful determination, neither the unavoidable hardships of the journey, nor the dangers of a second captivity, should have forced me to de-sist. This, however, necessity compelled me to do ; and it affords me inexpressible satisfaction that my honorable employers have been pleasedˆ since my return, to express their full approbation of my conduct.' He must be a very unreasonable man, indeed, who could on this point think differently from Mr. Park's employers. Long. 1° 24' W., lat. 14° 48' N.

SIL'LABUB, n. <s. Mmshew thinks this word is corrupted from swilling bubbles. Junius omits it. Henshaw, whom Skinner follows, deduces it from the Dutch sulle, a pipe, and buyck, a paunch ; because sillabubs are commonly drunk through a spout, out of a jug with a large belly. It seems more probably derived from esil, in old English, vinegar: esil a bouc, ,vinegar for the mouth, vinegar made pleasant. — Johnson. Mr. Thomson says from Belg. azil bub, acid drink. Curds made by milking upon vinegar Joan takes her neat rubbed pail, and now

She trips to milk the sandred cow ;

Where, for some sturdy foot-ball swain,

Joan strokes a syllabub or twain. Wotton.

A feast,

By some rich farmer's wife and sister drest, Might be resembled to a sick man's dream, Where all ideas huddling run so fast, That syllabubs come first, and soups the last. King

SILLAH-MEW, a large town in the Birman empire, situated on the east side of the Irrawaddy. Lat. 20° 50' N., long. 94° 30' E. This large town is remarkable for its manufactures of silk, the raw material for which is procured from the province of Yunan in China. The colors are bright and beautiful, but do not appear durable ; the texture is close and strong. It is said to wear much longer than any China of Hindostany fabric; but the price is proportionally high. Sillah-mew is a handsome town, shaded by wide spreading trees, and embellished with several temples. The soil is in general poor ; but some of the fields are regularly fenced, and there are numerous herds of cattle in the neighbourhood.

SILLIMANITE, in mineralogy, is a new mineral from Saybrook, Connecticut. Color dark gray, passing into olive brown. It is harder than the quartz in which it occurs, and is crystallised in rhomboidal prisms, having angles of 106-30 and 73-10 ; the inclination of the base to the axis of the prism being about 113°. The sides and angles of the crystals are frequently rounded. In hardness it exceeds quartz; and, in some specimens, topaz. Translucent in small fragments. Brittle. Fracture in the longer diagonal lamellar, brilliant. Cross fracture uneven and splintery. Specific gravity 3-41. Infusible at the blow-

pipe even with borax. Acids have no action on

it. Its constituents are,

Silica … . 42-666 Alumina …54-111 Oxide of iron . . 1-999 Water . … 0-510 Loss …- . 0-714

100-000

SILLON, in fortification, an elevation of earth made in the middle of the moat to fortify it when too broad. It is more usually called the envelope.

SII/LY, adj. } Germ, selig. — Skinner.

SIL’LILY, adv. > Harmless; innocent; inof—

SIL’LINESS, n. s. J fensive ; plain; artless ; foolish : the adverb and noun substantive corresponding.

After long storms,

In dread of death and dangerous dismay,

With which my silly bark was tossed sore,

I do at length descry the happy shore. Spenser.

I wonder much what thou and I Did till we loved ? were we not weaned till then,

But sucked on childish pleasures sillily 1 Or slumbered we in the seven sleepers den 1 Donne. Perhaps their loves, or else their sheep,

Was that did their silly thoughts so busy keep.

Milton.

The meanest subjects censure the action of the greatest prince ; the silliest servants, of the wisest master. Temple.

Do. do, look sillily, good colonel ; ‘tis a decent melancholy after an

absolute defeat. Dryden.

We are caught as sillily as the bird in the net.

L'Estrange.

The silliness of the person does not derogate from the dignity of his character. Id.

I have no discontent at living here ; besides what arises from a silly spirit of liberty, which I resolve to throw off. Swift.

Such parts of writings as are stupid or silly, false or mistaken, should become subjects of occasional criticism. Watts.

He is the companion of the silliest people in their most silly pleasure ; he is ready for every impertinent entertainment and diversion. Law.

SIL'LYHOW, n. s. Perhaps from nappy, and heopt, the head. The membrane that covers the head of the foetus.

Great conceits are raised of the membranous covering called the sillyhme, sometimes found about the heads of children upon their birth.

Browne's Vulgar Errmtrs.

The SII.LYHCW, in midwifery, is a portion of the chorion, which sometimes comes away with the child. In Scotland it is called the hally or holy how, and, without punning on the English name, many silly stories are still told by midwives of the good fortune that is to attend such lucky children, provided the membrane is carefully preserved by the mother, and the child never sees it !

SI-LONG, a town of China of the second rank, in the province of Quang-si, 1115 miles S. S. W. of Pekin.

SILPHA, carrion -beetle, in entomology, a genus of animals belonging to the class of insectae, and to the order of coleopterae. The antenna are clavated ; the clava are perforated ; the

elytra marginated ; the head is prominent ; and the thorax marginated. There are ninety-four species, of which only seven

arenatives of Britain and Ireland, *viz.* 1. S. aquatica, the water carrion beetle, is brown, with a green bronze tinge. There are four ribs on the thorax. On each shell there are ten strise. The length is one-fifth or an inch. 2. S. bipustulata is black ; the antennae are long and small, and there are two red spots on the middle of each shell. The length is one-third of an inch. 3. S. pulicaria is black and oblong ; the shells are abbreviated ; the abdomen is rounded at the extremity ; the thorax and shells are scarcely marginated ; the length is one line. It is found frequently running on flowers. 4. S. pustulata is black and oblong ; there are four brown spots on the shells ; the length is one-fifth of an inch. It lives on trees. 5. S. quadripunctata. The head, antennae, and legs black. Margin of the thorax and shells are of a pale yellow, with four black spots. The length half an inch. It is found in Caen wood, near Hampstead. 6. S. sabulosa is black ; the antennae are short and globular; there are five strise on each shell. The shells and wings are short. There are five joints on the two first feet, four on the rest. It lives in sand. 7. S. vespillo, the margin of the thorax broad. The shells are abbreviated, black, with two yellow belts. The thighs of the hind legs large, with a spine near the origin. Length nearly one inch. It infests dead bodies.

SILPHIUM, in ancient geograpiy, a country of Libya.

SILPHIUM, in botany, bastard chrysanthemum, a genus of the polygamia necessaria order, and syngenesia class of plants ; natural order forty-ninth, compositae; the receptacle is paleaceous; the pappus has a two-horned margin, and the CAL. is squarrose. There are eight species. 1. S. asteriscum ; 2. connatum ; 3. laciniatum; 4. perfoliatum ; 5. soldaginoides; 6. terebinthinum ; 7. trifoliatum ; 8. trilobatum. They are all natives of North America, except the soldaginoides, and the last..

SILPIA, an ancient town of Spain. — Liv. 28.

SILT, n. s. Of uncertain origin. Mud ; slime.

Several trees of oak and fir stand in firm earth be-low the moor near Thorny, in all probability covered by inundation, and the silt and moorish earth exaggerated upon them. Hale.

SIL’VAN, adj. Lat. silva. Woody ; full of woods.

Betwixt two rows of rocks, a sylvan scene Appears above, and groves for ever green. Dryden.

SILVANUS, the companion and amanuensis of St. Paul. See SILAS.

SILVANL-S, in the mythology, a rural deity, the son of Picus, king of Latium, and brother of Faunus, according to Virgil. Other mythologists make him the son of Mars; others of Valeria Tusculanaria, by her own father (Plutarch) ; others of an Italian shepherd by a she goat. He is indeed represented by painters as half a man, half a goat. Some say he reigned in Italy in the age of Evander. Be that as it may, this monster of a deity was worshipped in Italy as the parton of gardens, orchards, and woods, as his name im-

plies. He is generally ranked in Bacchus's train,

with Faunus, Silenus, and the Satyrs.

SIL'VER,rz.s.,ac?;. &v.a.^| Sax. j-eolpen.; SIL'VERBEATER, n. s. I Belg. silver ; Goth. IL'VERLING, ! silfur. Awhiteand

SIL'VERLY, adv. f hard metal, next in

SIL'VERSMITH, n. s. \ weighttogold. See

SIL'VERY, adj. J below. Any thing

of soft splendor: made of silver: the derivatives

corresponding.

Put my silver cup in the sack's mouth.

Gen. xliv. 2.

A thousand vines, at a thousand silverlings, shall be for briars and thorns. Isaiah vii. 23.

Demetrius, a silversmith, made shrines for Diana.

Acts xix.

The great in honour are not always wise, Nor judgment under silver tresses lies. Sandys. From all the groves, which with the heavenly noises Of their sweet instruments were wont to sound,

And the' hollow hills, from which their silver voices Were wont redoubled echoes to rebound, Did now rebound with nought but rueful cries, And yelling shrieks thrown up into the skies.

Spenser.

Old Salisbury, shame to thy silver hair, Thou mad misleader of thy brain-sick son.

Shakspeare.

So sweet a kiss the golden sun gives not To those fresh morning drops upon the rose,

As thy eye-beams, when their fresh rays have smote The night of dew that on my cheeks down flows ;

Nor shines the silver moon one half so bright, Through the transparent bosom of the deep,

As doth thy face through tears of mine give light.

Id.

It is my love that calls upon my name ; How silver sweet sound lovers' tongues by night ! Like softest musick to attending ears. Id.

There be fools alive, I wis, Silvered o'er, and so was this. Id.

Let me wipe off this honourable dew That silverly doth progress on thy cheeks. Id. The splendour of silver is more pleasing to some eyes than that of gold ; as in cloth of silver, and silvered rapiers. Bacon. Silvering will sully and canker more than gilding.

Id.

Hence had the huntress Dian her dread bow, Fair s;7«er-shafted queen for ever chaste. Milton.

Others on silver lakes and rivers bathed Their downy breast. Id.

A gilder shewed me a ring silvered over with mer-curial fumes, which he was then to restore to its na-tive yellow. Boyle.

Sitverbeaters choose the finest coin, as that which is most extensive under the hammer. Id.

A gritty stone, with small spangles of a white silvery talc in it. Woodward on Fossils.

Here, retired, the sinking billows sleep, And smiling calmness silvered o'er the deep. Pope.

Pallas, piteous of her plaintive cries, In slumber closed her si/«er-streaming eyes. Id. The st/t'er-shafted goddess of the place.

Id. Odyssey.

Of all the' enamelled race whose silvery wing Waves to the tepid zephyrs of the spring, Once brightest shined this child of heat and air.

Dunciad.

SILVER, as well as gold, was long distinguished as one of the perfect metals, but all distinctions between perfect and imperfect metals, as well as between metals and semimetals, are now laid

aside by modern chemists as unnecessary and improper. See METALLURGY.

Silver is found in various parts of the world, particularly in Peru and Mexico; in Saxony, Bohemia, Suabia, and Hungary ; in Norway, Sweden, Russia, and Siberia. This noble metal occurs in a metallic state; also in that of an alloy ; of a sulphuret, of a salt, and in that of an oxide. A considerable quantity of silver has also been obtained from some of the lead mines in Great Britain and Ireland.

Silver is a heavy, sonorous, brilliant, white metal, without either taste or smell ; it is only moderately hard, but exceedingly ductile, and of great malleability and tenacity. It possesses these latter properties in so great a degree that it may be beaten into leaves much thinner than any paper, or drawn out into wire as fine as a hair, without breaking. Under certain circumstances it is capable of combustion. It melts when heated to about 1000° of Fahrenheit, and on cooling crystallises in four-sided pyramids. Its specific gravity is 10-474. It forms alloys with many of the other metals.

Silver cannot be oxidised by atmospheric air, unless exposed to an

intense heat; but the oxide of silver may be procured by dissolving the metal in an acid, and then precipitating it by lime-water or by an alkali. The brown oxide of silver is the only one that is known with certainty.

The nitrate of silver is best known; but in analysis the sulphate of silver is also a most useful test : many other salts of this metal may likewise be formed. The muriate and the carbonate of silver are both found native. Silver may also be combined with chlorine, with iodine, with phosphorus, and with sulphur.

Silver is used chiefly for ornamental work, for domestic utensils, and for current coin ; but for these purposes it is generally alloyed with cop-per, without which it would not have sufficient hardness to sustain much wear.

Silver is the whitest of all metals, says Dr. Ure, considerably harder than gold, rery ductile and malleable, but less malleable than gold ; for the continuity of its parts begins to break when it is hammered out jnto leaves of about the hundred and sixty thousandth of an inch thick, which is more than one-third thicker than gold leaf; in this state it does not transmit the light. Its specific gravity is from 10‘4 to 10-5. It ignites before melting, and requires a strong heat to fuse it. The heat of common furnaces is insufficient to oxidise it; but the heat of the most powerful burning lenses vitrifies a portion of it, and causes it to emit fumes ; which, when received on a plate of gold, are found to be silver in a metallic state. It has likewise been partly oxidised by twenty successive exposures to the heat of the porcelain furnace at Sevres. By passing a strong electric shock through a silver wire, it may be converted into a black oxide ; and by a powerful galvanic battery silver leaf may be made to burn with a beautiful green light. Lavoisier oxidised it by the blowpipe and oxygen gas ; and a fine silver wire burns in the kindled united stream of oxygen and hy-progen gases. The air alters it very little, thongh

it is disposed to obtain a thin purple or black coating from the sulphurous vapors which -ore emitted from animal substances, drains, or putrefying matters. This coating, after a long series of years, has been observed to scale off from images of silver exposed in churches ; and was found, on examination, to consist of silver united with sulphur. There seems to be only one oxide of silver, which is formed either by intense ignition in an open vessel, when an olive-colored glass is obtained, or by adding a solution of caustic barytes to one of nitrate of silver, and heating the precipitate to dull redness. Sir H. Davy found that 100 of silver combine with 7-3 of oxygen in the above oxide; and, if we suppose it to consist of a prime equivalent of each constituent, we shall have 13-7 for the prime of silver. Silver leaf burned by a voltaic battery affords the same olive-colored oxide.

The prime equivalent of silver seems to be 13-75, or 110 on the hydrogen scale.

Silver combines with chlorine, when the metal is heated in contact with the gas. This chloride is, however, usually prepared by adding muriatic acid, or a muriate, to nitrate of silver. It has been long known by the name of luna-cornea or horn-silver, because, though a white powder, as it falls down from the nitrate solution, it fuses at a moderate heat, and forms a horny-looking substance when it cools. It consists of 13-75 silver -f-4-5 chlorine.

The sulphnret of silver is a brittle substance, of a black color and metallic lustre. It is formed by heating to redness thin plates of silver stratified with sulphur. It consists of 13‘75 silver + 2 sulphur. Fulminating silver is formed by pouring lime water into the pure nitrate, and filtering, washing the precipitate, and then digesting on it liquid ammonia in a little open capsule. In twelve hours the ammonia must be cautiously decanted from the black powder, which is to be dried in minute portions, and with extreme circumspection, on bits of filtering paper or card If struck, in even its moist state, with a hard

body, it explodes ; and if in any quantity, when dry, the fulmination is tremendous. The decanted ammonia, on being gently heated, effervesces, from disengagement of azote, and small crystals appear in it when it cools. These possess a still more formidable power of detonation, and can scarcely bear touching even under the liquid. It seems to be a compound either of oxide of silver and ammonia, or of the oxide and azote. The latter is probably its true constitution, like the explosive iodide and chloride. The sudden extrication of the condensed gas is the cause of the detonation.

Silver is soluble in the-sulphuric acid when concentrated and boiling, and the metal in a state of division. The muriatic acid does not act upon it; but the nitric acid, if somewhat diluted, dissolves it with great rapidity, and with a plentiful disengagement of nitrous cas ; which, during its extrication, gives a blue or green color to the acid, that entirely disappears if the silver made use of be pure ; if it contain copper, tne solution remains greenish ; and, if the aciu conxam either sulphuric or muriatic

acicl, these combine with a portion of the silver, and form scarcely soluble compounds, which fall to the bottom. If the silver contain gold, this metal separates in blackish-colored flocks. The nitric acid dissolves more than half its weight of silver ; and the solution is very caustic, that is to say, it destroys and corrodes animal sub-stˆnces very powerfully.

The solution of silver, when fully saturated, deposits thin crystals as it cools, and also by evaporation. These are called lunar nitre, or nitrate of silver. A gentle heat is sufficient to fuse them, and drive off their water of crystallisation. In this situation the nitrate, or rather subnitrate (for the heat drives off part of the acid) is of a black color, may be cast into small sticks in a mould, and then forms the lapis infernalis, or lunar caustic used in surgery. A stronger heat decomposes nitrate of silver, the acid flying off, and the silver remaining pure. It is obvious that, for the purpose of forming the lunar caustic, it is not necessary to suffer the salt to crystallise, but that it may be made by evaporating the solution of silver at once to dryness ; and as soon as the salt is fused, and ceases to boil, it may be poured out. The nitric acid driven off from nitrate of silver is decomposed, the products being oxygen and nitrogen.

The sulphate of silver, which is formed by pouring sulphuric acid into the nitric solution of silver, is sparingly soluble in water ; and on this

account forms crystals, which are so small that they compose a white powder. The muriatic acid precipitates from nitric acid the saline compound called lunar cornea, or horn-silver; which has been so distinguished, because, when melted and cooled, it forms a semitransparent and partly flexible mass, resembling horn. It is supposed that a preparation of this kind has given rise to the accounts of malleable glass. This effect takes place with aqua regia, which acts strongly on silver, but precipitates it in the form of muriate as fast as it is dissolved. If any salt with base of alkali, containing the muriatic acid, be added to the nitric solution of silver, the same effect takes place by double affinity ; the alkaline base uniting with the nitric acid, and the silver falling down in combination with the muriatic acid.

Since the muriatic acid throws down only silver, lead, and mercury, and the latter of these two is not present in silver that has passed cu-pellation, though a small quantity of copper may elude the scoritication in that process, the silver which may be revived from its muriate is purer than can readily be obtained by any other means. When this salt is exposed to a low red heat, its chlorine is not expelled ; and a greater heat causes the whole concrete either to rise in fumes, or to pass through the pores of the vessel. To reduce it, therefore, it is necessary that it should be triturated with its own weight of fixed alkali and a little -water, and the whole afterwards exposed to heat in a crucible, the bottom of which is covered with soda ; the mass of muriate uf silver being likewise covered with the same substance. In this way the acid will be separated from the silver, which is reduced to its metal,. c state.

As the precipitate of muriate of silver is very perceptible, the nitric solution of silver is used as a test of the presence of “muriatic acid in wa-ters; for a drop of this solution poureJ into such waters will cause a very evident cloudiness. The solution of silver is also used by assayers to purify the nitric acid from any admixture of muriatic acid. In this state they call it precipitated aquafortis. M. Chenevix found that a chlorate of silver may be formed by passing a current of

chlorine through water in which oxide of silver is suspended ; or by digesting phosphate of silver with hyperoxymuriate of alumina. It requires only two parts of hot water for its solution, and this affords, on cooling, small white, opaque, rhomboidal crystals. It is likewise somewhat soluble in alcohol. Half a grain, mixed with half as much sulphur, and struck or rubbed, detonates with a loud report and a vivid flash.

Compounds of silver with other acids are best formed by precipitation from its solution in ni-tric acid; either by the acid itself, or by its alkaline salts. Phosphate of silver is a dense white precipitate, insoluble in water, but soluble in an excess of its acid. By heat it fuses into a greenish opaque glass. Carbonate of silver is a white insoluble powder, which is blackened by light. The fluate and borate are equally soluble. Distilled vinegar readily dissolves the oxide of silver, and the solution affords long white needles, easily crystallised. See SALTS.

The precipitates of silver, which are formed by the addition of alkalis or earths, are all reducible by mere heat, without the addition of any combustible substance. A detonating pow-der has been sold lately at Paris as an object of amusement. It is enclosed between the folds of a card cut in two lengthwise, the powder being placed at one end, and the other being notched, that it may be distinguished. If it be taken by the notched end, and the other be held over the flarne of a candle, it soon detonates, with a sharp sound, and violent flame. The card is torn, and changed brown ; and the part in contact with the composition is covered with a slight metallic coating of a grayish-white color.

This compound, which M. Descotils calls detonating silver, to distinguish it from the fulminating silver of M. Berthollet, may be made by dissolving silver in pure nitric acid, and pouring into the solution, while it is going on, a sufficient quantity of rectified alcohol ; or by adding alcohol to a nitric solution of silver with considerable excess of acid. In the first case, the nitric acid into which the silver is put must be heated gently, till the solution commences, that is, till the first bubbles begin to appear. It is then to be removed from the fire, and a sufficient quantity of alcohol to be added immediately, to prevent the evolution of any nitrous vapours. The mixture of the two liquors occasions an extrication of heat; the effervescence quickly recommences, without any nitrous gas being disengaged ; and it gradually increases, emitting at the same time a strong smell of nitric ether. In a short time the liquor becomes tur-bil. and a very heavy, white, crystalline powder falls down, which must be separated when it

ceases to increase, and washed several times with small quantities of water.

If a very acid solution of silver previously made be employed, it must be heated gently, and the alcohol then added. The heat exciied by the mixture, which is to be made gradually, soon occasions a considerable ebullition, and the powder immediately precipitates. It would be superfluous to remind the chemist that the mixture of alcohol with hot nitric acid is liable to occasion accidents, and that it is consequently prudent to operate on small quantities. Tins powder has the following properties : — It is white and crystalline; but the size and lustre of the crystals are variable. Light alters it a little. Heat, a blow, or long continued friction, causes it to inflame with a brisk detonation. Pressure alone, if it be not very powerful, has no effect on it. It likewise detonates by the electric spark. It is slightly soluble in water. It has a very strong metallic taste. Concentrated sulphuric acid occasions it to take fire, and is thrown by it to a considerable distance. Dilute sulphuric acid appears to decompose it slowly.

Process for separating silver from copper by Mr. Keir. — Put the pieces of plated metal into an earthen glazed pan; pour upon them some acid liquor, which may be in the proportion of eight or ten pounds of sulphuric acid to one pound of nitre ; stir them about, that the surfaces may be frequently exposed to fresh liquor, and assist the action by a gentle heat from 100° to 200° of Fahrenheit's scale. When the liquor is nearly saturated, the silver is to be precipiiated from it by common salt, which forms a muriate of silver, easily reducible by melting it in a crucible with a sufficient quantity of potash ; and lastly, by refining the melted silver, if necessary, with a liule nitre thrown upon it. In this man-ner the silver will be obtained sufficiently pure, and the copper will remain unchanged. Otherwise, the silver may be precipitated in its metallic state, by adding to the solution of silver a few of the pieces of copper, and a sufficient quantity of water to enable the liquor to act upon the copper.

Mr. Andrew Thomson, of Banchory, has recommended the following method of purifying silver, which he observes is equally applicable to gold. The impure silver is to be flatted out to the thinness of a shilling, coiled up spirally, and put into a crucible, the bottom of which is covered with black oxide of manganese. More of this oxide is then to be added, till the silver is completely covered, and all the spaces between the coils filled. A cover is then to be luted on, with a small hole for the escape of the gas ; and after it has been exposed to a heat

sufficient to melt silver, for about a quarter of an hour, the whole of the alloy will be oxidised. The contents of this crucible are then to be poured into a larger, into which about three times as much powdered green glass has been previously put ; a cover luted on as before, to prevent the access of any inflammable matter; and the crucible exposed to a heat sufficiently strong to melt the glass very fluid. On cooling and breaking the crucible, the silver will be found reduced at the bottom, and perfectly pure.

Sulphur combines very easily with silver, if thin plates, imbedded in it, be exposed to a heat sufficient to melt the sulphur. The sulphuret is of a deep violet color, approaching to black, with a degree of metallic lustre, opaque, brittle, and soft. It is more fusible than silver, and this in proportion to the quantity of sulphur combined with it. A strong heat expels part of the sulphur. Sulphureted hydrogen soon tarnishes the surface of polished silver, and forms on it a thin layer of sulphuret.

The alkaline sulphurets combine with it by heat, and form a compound soluble in water. Acids precipitate sulphuret of silver from this solution.

Phosphorus left in a nitric solution of silver becomes covered with the metal in a dentritic form. By boiling, this becomes first white, then a light black mass, and is ultimately converted into a light brown phosphuret. The best method of forming a phosphuret of silver is Pelletier's, which consists in mixing phosphoric acid and charcoal with the metal, and exposing the mixture to heat.

Most metallic substances precipitate silver in the metallic state from its solution. The assayers make use of copper to separate the silver from the nitric acid used in the process of parting.

The precipitation of silver by mercury is very slow, and produces a peculiar symmetrical arrangement, called the tree of Diana. In this, as in all piecipitations, the peculiar form may be affected by a variety of concomitant circum-. stances ; for which reason one process usually

succeeds better than another. Make an amalgam, without heat, of four drachms of leaf silver with two drachms of mercury. Dissolve the amalgam in four ounces or a sufficient quantity of pure nitric acid of a moderate strength ; dilute this solution in about a pound and a half of distilled water ; agitate the mixture, and preserve it for use in a glass bottle with a ground stopper. When this preparation is to be used, the quantity of one ounce is put into a phial, and the size of a pea of amalgam of gold, or silver, as soft as butter, is to be added; after which the vessel must be left at rest. Soon afterwards, small filaments appear to issue out of the ball of amalgam, which quickly increase, and shoot out branches in the form of shrubs.

Silver unites with gold by fusion, and forms a pale alloy, as has been already mentioned in treating of that metal. With platina it forms a hard mixture, rather jellower than silver itself, and of difficult fusion. The two metals do not unite well. Silver melted with one-tenth part of crude platina, from which the ferruginous particles had been separated by a strong magnet, could not be rendered clear of scabrous parts, though it was repeatedly fused, poured out, and laminated between rollers. It was then fused, and suffered to cool in the crucible, but with no better success. After it had been formed, by rolling and hammering, into a spoon for blowpipe experiments, it was exposed to a low red heat, and became rough and blistered over its whole surface. The quantities were 100 grains of silver, and ten grains of platina. Nitre was added during the fusions.

Silver very readily combines with mercury. A very sensible degree of heat is produced when silver leaf and mercury are kneaded together in the palm of the hand. With lead it forms a soft mass, less sonorous than pure silver. With copper it becomes harder and more sonorous, at the same time that it remains sufficiently ductile: this mixture is used in the British coinage. Twelve parts and one-third of silver, alloyed with one of copper, form the compound called standard silver. The mixture of silver and iron has been little examined. With tin it forms a compound, which, like that of gold with the same metal, has been said to be brittle, however small the proportion; though there is probably as little foundation for the assertion in the one case as in the other. With bismuth, arsenic, zinc, and antimony, it forms brittle compounds. It does not unite with nickel. The compound of silver and tungsten, in the proportion of two of the former to one of the latter, was extended under the hammer during a few strokes; but afterwards split in pieces. See IRON.

The uses of silver are well known : it is chiefly applied to the forming of various utensils for domestic use, and as the medium of exchange in money. Its disposition to assume a black color by tarnishing, and its softness, appear to be the chief objection to its use in the construction o: graduated instruments for astronomical and other purposes, in which a good white metal would be a desirable acquisition. The nitrate of silver, besides its great use as a caustic, has been employed as a medicine, it is said with good success. in epileptic cases, in the dose of one-twentieth of a grain, gradually increased to one-eighth, three times a-day. Dr. Cappe gave it in a dose of one-fourth of a grain three times a-day, and afterwards four times, in what he supposed to be a case of angina pectoris, in a stout man of sixty, whom he cured. He took it for two or three months. Dr. Cappe imagines that it has the effect of increasing the nervous power, by which muscular action is excited.

The frequent employment in chemical researches of nitrate of silver as a re-agent for combined chlorine, occasions the production of a considerable quantity of the chloride (muriate) of silver, which is usually reconverted into metal by fusion with potash in a crucible. But, as much of the silver is lost in this way, it is better to expose the following mixture to the requisite heat :-

Chloride of silver Dry quicklime • ‘ Powdered charcoal

100

19-8

4-2

An easier method, however, is to put the metallic chloride into a pot of clean iron or zinc, to cover it with a small quantity of water, and to add a little sulphuric or muriatic acid. The reduction of the chloride of silver by the zinc or iron is an operation which it is curious to observe, especially with the chloride in mass (luna-cornea). It begins first at the points of contact, and speedily extends, in the form of ramifications over its whole surface, and into its interior. Hence, in less than an hour, considerable pieces of horn-silver are entirely reduced. If the mass

operated on be considerable, the temperature rises, and accelerates the revivification. On the small scale, artificial heat may be applied. — Ann. de Chimie, July 1820.

SILVERING. There are various methods of giving a covering of silver or silvery aspect to the surfaces of bodies. The application of silver leaf is made in the same way as that of gold, for which see GILDING.

Copper may be silvered over by rubbing it with the following powder: two drachms of tartar, the same quantity of common salt, and half a drachm of alum, are mixed with fifteen or twenty grains of silver precipitated fiom nitric acid by copper. The surface of the copper becomes white when rubbed with this powder, which may afterwards be brushed off and polished with leather.

Saddlers and harness-makers cover their wares with tin for ordinary uses, but a cheap silvering is used for this purpose as follows : half an ounce of silver that has been precipitated from aquafortis by the addition of copper, common salt and muriate of ammonia of each two ounces, and one drachm of corrosive muriate of mercury, are triturated together, and made into a paste with water; with this, copper utensils of every kind, that have been previously boiled with tar-tar and alum, are rubbed, after which they are made red-hot, and then polished. The intention of this process appears to be little more than to apply the silver in a state of minute division to the clean surface of the copper, and afterwards to fix it there by fusion ; and accordingly this silvering may be effected by using the argentine precipitate here mentioned, with borax or mercury, and causing it to adhere by fusion.

The dial-plates of clocks, the scales of baro-meters, and other similar articles, are silvered by rubbing upon them a mixture of muriate of

silver, sea salt, and tartar, and afterward carefully washing off the saline matter with water. In this operation, the silver is precipitated from the muriatic acid, which unites with part of the coppery surface. It is not durable, but may be improved by heating the article, and repeating the operation till the covering seems sufficiently thick. The silvering of pins is effected by boiling them with tin filings and tartar.

Hollow mirrors or globes are silvered by an amalgam, consisting of one part by weight of bismuth, half a part of lead, the same quantity of pure tin, and two parts mercury. The solid metals are to be first fused together, and the mercury added when the mixture is almost cold. A very gentle heat is sufficient to fuse this amalgam. In this state it is poured into a clean glass globe intended to be silvered, by means of a paper funnel, which reaches to the bottom. At a certain temperature, it will stick to the glass, which, by a proper motion may thus be silvered completely, and the superfluous amalgam poured out. The appearance of these toys is varied by using glass of different colors, such as yellow, blue, or green.

SILVERUS (St.), pope of Rome, was the son of pope Hormisdos, who had been married be-fore he entered into orders. On the death of pope Agapetus I. he was placed in the pontifical

chair by Theodatus king of the Goths, A. D. 536; but this appointment was not considered as canonical. He was afterwards, however, duly elected. But the empress Theodora persecuted him violently, till she got him banished into Ly-cia. He died in the isle of Palmaria, in 538, according to Dr. Watkins, or 540, as Marcell says ; and was sainted for his sufferings.

SILVESTER I. pope of Rome, succeeded pope Miltiades, A. D. 314. He sent deputies to the councils of Aries and of Nice. He died A. D

335.

SILVESTER II. rose by his merit from obscurity to the highest dignities in the church. He was one of the most learned men of his age, being well versed in the mathematics and other sciences. In 992 he was made archbishop of Rheims ; and on the death of Gregory V., in 999, was raised to the triple crown. He died in

1003.

SILVIUM, in ancient geography: 1. A town of Istria; 2. A town of Apulia, now called Gor-goglione. — Plin. iii. c. 11.

SILVIUS, or SYLVIUS (j£neas). See Pius II.

SILURES, an ancient nation of South Britain, who inhabited South Wales.

SILURES, an ancient name of the Scilly Islands. See SCILLY.

SILURIS, m ichthyology, a genus belonging to the order of pisces abdominales. The head is naked ; the mouth set round with hairy filaments ; the bronchiae have from four to fourteen rays ; the ray of the pectoral fins, or the first dorsal one, is prickly, and dentated backwards. There are twenty-one species, most of them natives of the Indian and American seas. 1. S. clarias of Linnaeus, called scheilan by the Arabians, is mentioned by Hasselquist. If it pricks one with the bone of the breast fin, it is dangerous; and our author saw the cook of a Swedish merchant ship die of the poison communicated by the prick of one of these fish. 2. S. electricus is a most extraordinary species, described under the article ELECTRICITY.

SI'MAR, n. s. Fr. simarre. A woman's robe.

The ladies dressed in rich simars were seen, Of Florence sattin, flowered with white and green.

Dryden.

SIMBIRSK, a town and government of European Russia, on the borders of Asia. It lies along both sides of the Wolga, between 52° and 57° of N. lat., having the government of Kasan on the north, and that of Saratov on the south. Its superficial extent is calculated at 30,000 square miles ; its population at 850,000. The rivers are the Wolga and Sura, and the lakes are numerous. The majority profess the religion of the Greek church, but a number are Mahometans and Arminians.

SIMBRIVIUS, or SIMBRUVIUS, in ancient geography, a lake of Italy, in Latium, formed by the Anio. Tac. 14, An. 22.

SIM EN A, a town of Lycia, near Chimaera.

SIMEON, Heb. ryOBT, i-e. Hearing, the se-cond son of Jacob, by Leah, and the most wicked of all the twelve patriarchs. Besides his bloody

combination with Levi, in the massacre of the Shechemites (see LEVI and SHECHEM) lie is said by the rabbies to have been the person

who proposed to murder Joseph ; and this seems the more probable from Joseph's singling him out, binding him, and detaining him as a prisoner and hostage, till the rest should return with Benjamin : Gen. xlii. 24. He had six sons, one of whom, Ohad, seems to have died without issue.

SIMEON, or the SIMEOMTES, the descendants of the above patriarch, one of the twelve tribes' of Israel. When they came out of Egypt, they amounted to 59,300 men fit to bear arms, under Shelumiel, their chief; but they never made any distinguished figure, either during the republic or under the monarchy. They appear in general to have been as deeply guilty, in the criminal affair of Peor, as Zimn their prince; and the 25,000 cut off in that affair had been mostly of this tribe ; for at the enumeration, immediately after, their number was decreased to 22,000. See Num. xxv. and xxvi. 14, 15. This their recent wickedness appears to have been the reason why Moses omitted them in the farewell blessirfg which he pronounced upon all the other tribes : Deut. xxxiii. It is said that the narrow limits of their inheritance compelled them to become scribes, and disperse themselves among the other tribes, according to the curse denounced upon their father by Jacob.

SIMEON, a respectable old man of Jerusalem, who waited for the fulfilment of the prophecies respecting the coming of the Messiah, whom he had a divine intimation that he should live to see, and who bore public testimony to our Saviour in the temple in his infancy : Luke ii. 25 — 35. From his speech, or address of thanks to God, on that occasion, and particularly from his prophetic address to the mother of Jesus, he appears to have had much clearer views of the nature of the Messiah's kingdom than the most of his countrymen of that age. But these too, perhaps, he had by immediate revelation. Tradition says that Simeon was the sou of the fa-mous Hillel, president of the Jewish Sanhedrim, and that he taught the celebrated Gamaliel. See

HlLLEL.

SIMEON OF DURHAM, an English historian, the contemporary of William of Malmesbury, who took great pains in collecting the monuments of the history of England, especially in the north, after they had been scattered by the Danes. From these he composed a history of the kings of England, from A. D. 616 to 1130; with some smaller historical pieces. Simeon both studied and taught the sciences, ind particularly the mathematics, at Oxford ; and became precentor of the church at Durham, where he died. His history was continued by John, prior of Hexham, to A.D. 1156.

SIMEON STILITES, or STYLITES, a native of Syria, an anchoret, the founder of a sect, and the inventor of a ridiculous discipline, practised by him and his followers, called Stilites, or Pillar Saints, in the fifth century. Simeon passed thirty-seven years of his useless life on the top of these pillars ; the first of which was six cubits high ; the second twelve ; the third twenty-two ; the fourth thirty-six ; and the last forty cubits btofc.

SIMETIiUS, or SYMITHUS, an ancient town

of Sicily, near a river so named; where Virgi! says the gods Palici were born. See PALICI. Virg. TEn. ix. v. 584.

SIMI, or SYMI, an island in the Mediterranean, between Rhodes arid the continent of Asia, six miles north of Rhodes. Long. 45° 19’ E. of Ferro, lat. 36° 36’ N.

SIMLA, the monkey, a genus of quadrupeds, belonging to the class of mammalia, and order of primates, in the Linnaean system, but by Mr. Pennant arranged under the digitated quadrupeds. According to the Linnaean system, the characteristics of this genus are these : There are four close set fore-teeth in each jaw ; single tusks on each side in both jaws, which are longer than the rest, and somewhat remote from them. The grinders are obtuse, and the feet are formed like hands. Mr. Pennant gives the following generic description of the simia : There are four cutting teeth in each jaw, and two canine. Each of the feet is formed like a hand, generally with flat nails, and, except in one instance, has four fingers and a thumb. There are eyebrows both above and below. They are a numerous race ; but almost all confined to the torrid zone. Mr. Kerr enumerates sixty-five species, and twenty varieties. They fill the woods of Africa from Senegal to the Cape, and

thence to Ethiopia. They are found in all parts of India and its islands; in Cochin-China, in the south of China, and in Japan; one species is met with in Arabia; and they swarm in the forests of South America, from the isthmus of Darien as far as Paraguay. They are lively, agile, full of frolic, chatter and grimace. From the structure of their members, they have many actions in common with the hu-man kind. Most of them are fierce and untameable; some are of a milder nature, arid will show a degree of attachment ; but in general they are endowed with mischievous propensities; and are filthy, obscene, lascivious, and thieving. They inhabit the woods, and live on trees ; feeding on fruits, leaves, and insects. In general they are gregarious, going in vast companies : but the different species never mix with each other, always keeping apart, and in different quarters. They leap with vast activity from tree to tree, even when loa led with their young, which clin_' to them. They are the prey of leopards and others of the feline race ; and of serpents, which pursue them to the summits of the trees, and swallow them entire. They are not carnivorous, but for mischiefs sake will rob the nests of birds of the eggs and young. In the countries where they most abound, the sagacity of the feathered tribe is marvellously shown in their contrivances to fix the nest beyond the reach of these invaders. The simia being more numerous in their species than any other animals, and differing greatly in their appearances, it seemed necessary to methodise and subdivide the genus. Accordingly Mr. Ray first distributed them into three classes. 1. Simiae, apes, such as want tails. 2. Cercopitheci, monkeys, such as have tails. 3. Papiones, baboons, those with short tails ; to distinguish them from the common monkeys, which have very long ones. The principal marks by which the species of this genus are distinguishable from each other are derived, 1st, from ihe tail, which is either

long, short, or altogether wanting; or is straight jr prehensile; 2dly, from the buttocks, which ire naked, and furnished with callosities, or are ;overed with hair; 3dly, from the nails, which are flat and rounded like those of man, or sharp-pointed like the claws of beasts in general ; 4thly; from the presence or absence of a beard on the chin ; and,

5thly, from the cheeks being provided with, or wanting, pouches in their un-der parts. For greater convenience, the species of this genus, which are very numerous, are arranged under five subordinate divisions, considered as distinct genera by some authors, and not without reason. Three of these subdivisions were adopted by Linnaeus; but Dr. Gmelin, following Buffon, has added other two, taken from the third division of his great precursor. These are the simiae, papiones, cercopitheci, sa-paji, and sagoines, which we proceed to describe in their alphabetical order :

I. S. apes have no tails. The visage is flat ; The teeth, hands, fingers, feet, toes, and nails, resemble those of man, and they walk naturally erect. This division includes the simise, or apes properly so called, which are not found in America.

II. S. cercopitheci, monkeys, have long tails, which are not prehensile; the under parts of their cheeks are furnished with pouches, in which they can keep their victuals; the partition between the nostrils is thin, and the apertures are, like those of man, placed in the under part of the nose ; the buttocks are naked and provided with callosities. These animals, which are never found native in America, are the cercopitheci and KV($OI of the ancients.

1. S. cercopithecus sethiops, the mangabey, or white-eyed monkey, has a long, black, naked, and dog-like face ; the upper eyelids of a pure white ; ears black, and like the human : no canine teeth ; hairs on the sides of the face, beneath the cheeks, longer than the rest; tail long; color of the whole body tawny and black ; flat nails on the thumbs and fore fingers ; blunt claws on the others ; hands and feet black. One was shown in London some years ago, of place uncertain; that described by M. de Burton came fpom Madagascar, was very good-natured, and •vent on all fours.

2. S. cercopithecus aygula, the egret, has a long face, and an upright sharp-pointed tuft of hair on the top of the head. The hair on the forehead is black: the tuft and the upper part of the body light-gray ; the belly white : the eyebrows are large ; the beard very small. They are the size of a small cat; inhabit Java; fawn on men, on their own species, and embrace each other. They play with dogs, if they have none of their own species with them. If they see a monkey of another kind, they greet him with a thousand grimaces. When a number of them sleep, they put their heads together. They make

continual noise during the night.

3. S. cercop. cephus, the moustache, has a leard on the cheeks ; the crown of the head is yellowish : the feet are black, and the tip of the tail is of an ash color. Its tail is much longer than the body and head, being nineteen or twenty inches in length. The female menstruates.

4. S. cercop. cynocephalus, the dog-headed monkey, has no beard, and is of a yellow color • me muzzle is long ; the tail long and straight' and the buttocks naked. It is a native of Africa!

5. S. cercop. cynomologus, the macaque of Buffon, or hare-lipped monkey of Pennant, has no beard; the nostrils are thick and divided ; the tail is long and arched, and the buttocks are naked. He has cheek pouches, and callosities on the buttocks. His tail is from eighteen to twenty inches long. His head is large, his muzzle very thick, and his face naked, livid, and wrinkled. His ears are covered with hair. His body is short and squat, and his limbs thick and short. The hair on the superior parts of his body is of a greenish-ash color, and of a yellowish-gray on the breast and belly. He has a small crest of hair on the top of the head. He walks on four and sometimes on two feet. The length of his body, comprehending that of the head, is about eighteen or twenty inches. They are mild and tractable, but dirty.

6. S. cercop. cynosures, the dog-tailed mon-key, has a long tail and no beard ; the face is long, with a sooty-colored forehead, and a whitish band over the eyes ; the male parts are highly colored ; the nails are convex. It is about the size of a middling dog ; two feet high when erect. The species are deceitful, restless, and libidinous. — Kerr.

7. S. cercop. diana, the spotted monkey, has a long white beard : the color of the upper parts of the body reddish, as if they had been singed, marked with white specks ; the belly and chin whitish ; tail very long; is a species of a middle size. It inhabits Guinea and Congo, according to Marcgrave ; the Congese call it exquima. M. de Buffon denies it to be of that country ; but from the circumstance of the curl in its tail, in Marcgrave's figure, and the description of some voyagers, he supposes it to be a native of South America. Linnaeus describes his S. diana somewhat differently : he says it is of the size of a large cat; black spotted with white: hind part of the back ferruginous ; face black ; from the top of the nose is a white line passing over each eye to the ears, in an arched form ; beard pointed, black above, white beneath, placed on a fattish excrescence ; breast and throat white ; from the rump, cross the thighs, a white line ; tail long, straight, and black ; ears and feet of the same color ; ca-nine teeth, large.

8. S. cercop. faunus, the marlbrouck, has a long tail, and is bearded : the tail is bushy at the extremity. It is a native of Bengal. This species has cheek-pouches, and callosities on the buttocks ; the tail is nearly as long as the body and head ; and it is a mistake of Clusius that it terminates* in a tuft ; the face is of a cinereous gray color, with a large muzzle, and large eyes, which have flesh-colored eyelids, and a gray band cross the forehead instead of eyebrows ; the ears are large, thin, and flesh-colored ; the upper parts of the body are of a uniform yellowish brown color, and the lower of a yellowish gray : it walks on all fours, and is about a foot and a half from the muzzle to the extremity of the tail. The females menstruate.

9. S. cercop. fulvus, the tawny monkey, \ M

long tusks in the lower jaw : the visage is long and flesh-colored, with flesh-colored ears, and a flattish nose. Inhabits India. This is a very ill-natured animal, about the size of a cat : it was lately in the possession of a Mr. Brook, an animal merchant and exhibiter in London: the upper parts of the body are covered with a pale tawny colored fur, which is ash-colored at the roots ; the hinder part of the back is orange-colored, the legs ash-colored, the belly white, and the tail shorter than the body.

10. S. cercop. hamadryas, the Tartarin, or dog-faced baboon of Pennant, with a long, thick, and strong nose, covered with a smooth red skin ; ears pointed and hid in the hair ; head great, and flat ; hair on the head, and forepart of the body as far as the waist, very long and shaggy ; gray and olive brindled ; the sides of the head very full, the hair on the limbs and hind part of the body very shprt ; limbs strong and thick ; hands and feet dusky ; the nails on the forefeet flat; those on the hind like a dog's; buttocks very bare and covered with a skin of a bloody color ; tail scarcely the length of the body, and carried generally erect. They inhabit the hottest parts of Africa and Asia ; where they keep in vast troops, and are very fierce and dangerous. They rob gardens. They will run up trees when passengers go by, shake the boughs at them with great fury, and chatter very loud. They are excessively impudent, indecent, lascivious ; most detestable animals in their manners as well as appearance. They range the woods in hundreds ; which obliges the owners of the coffee

plantations to be continually on their guard against their depredations. One of them was shown in London some years ago : it came from Mokha, in the province of Yeman, in Arabia Felix, in the Persian Gulph ; and was about five feet high. It was very fierce and untameable ; so strong as easily to master its keeper, a stout young man. Its inclinations to women appeared in the most violent manner. A footman, who brought a girl to see it, in order to teaze the animal, kissed and hugged her: the beast, enraged at being so tantalised, caught hold of a quart pewter pot, which he threw with such force and so sure an aim, that, had not the man's hat and wig softened the blow, his skull must have been fractured ; but he fortunately escaped with a common broken head.

11. S. cercop. mona, the monina of Buffon and Kerr, has a prominent, semilunar, whitish-gray arch, over each eye; and is gray bearded. This is the most common species of the monkeys, and agrees best with the climate of Europe. It has cheek-pouches and callosities on the buttocks; is about eighteen inches long from the muzzle to the rump ; the tail is two feet ; the head small and round ; the face a bright tawny brown ; the muzzle is thick and short ; the cheeks are surrounded with a beard of white, yellow, and black hairs; on the head a mixture of yellow and black, with a gray baud over the forehead, and a black band from the eyes to the ears, shoulders, and arms : the hair on the body is reddish-black ; the belly and inside of the thighs whitish ; the outsides of the legs and feet are black ; the tail grayish-brown with two white

spots on the rump. This species inhabit Morocco, Barbary, Persia, Arabia, and other places in Asia.

12. S. cercop. nemaeus, the douc, has a beard on the cheeks, and a white tail ; is from three feet and a half to f<.ur feet high, but Pennant says he is as tall as a man. The skin of the face and ears is almost scarlet ; with a dark brown band on the forehead ; the shoulders and upper parts of the arms., thighs, and toes, are black. It walks as often on two feet as on ft>4|. This species inhabit Cochin-China, and Madagascar.

13. S. cercop. nictitans, the nodding monkey, is of a black color, mottled with paler spots, and has a white nose; the thumbs are very short ; the buttocks covered, and the chin is beardless. Therei is, however, a variety with a beard. They are about two feet and a half high, and inhabit Guinea. They are playful animals, and nod

frequently with their heads ; whence the name.

14. S. cercop. petauristus, the agile monkey, is a gentle docile animal, inhabiting Guinea, about thirteen inches long, from the muzzle to the rump, and having a tail nearly twenty inches. It has a beard; the back, upper part of the tail, and outer sides of the legs are of a very dark blackish-olive color, and the face is black except a triangular white spot on the nose.

15. S. cercop. regalis, the king monkey, or full-bottom monkey, is above three feet high when erect : the head is small, with a short, black, naked face ; and the head, cheeks, throat, neck, and shoulders, are covered with long, coarse, flowing hairs, of a dirty-yellowish color, mixed with black, and resembling a full-bottomed wig ; the body, arms, and legs, are covered with short hairs of a fine glossy black color ; the hands are naked and have no thumbs ; the feet have five very long slender toes, which are armed with narrow pointed claws ; the tail is very long, and is covered with snow white hairs, having a tuft at the end ; the body and limbs are very slender. Its skin is held in high estimation by the negroes for making pouches and gun-cases. They inhabit the forests of Sierra Leona.

16. S. cercop. ruber, the patas, or red mon-key, has a beard on the cheeks; the top of the head, bqpk, and tail, are of a blood-red color ; and in some of a brilliant red. There are other two varieties ; the one with a black band over the eyes, and a yellow beard ; the other with a white band, and a white beard. They all inhabit Senegal, Congo, and other hot parts of Africa. They have cheek-pouches, and callosities on the buttocks. They are from eighteen to twenty-four inches long, from muzzle to rump ; the tail about twenty-six inches. The females menstruate.

17. S. cercop. sabaeus, the green monkey, has a black and flattish face : the side of it bounded by long white hairs, falling backwards, and almost covering the ears, which are black, and like the human : head, limbs, and whole upper part of the body and tail covered with soft hair, of a yellowish-green color at their ends, cinereous at their roots : under side of the body and tail, and inner side of the limbs, of a silvery color: tail

very long and slender. They are of the size of a small cat ; inhabit different parts of Africa : keep in great flocks, and live in the woods : are scarcely discernible when among the leaves, ex-cept by their breaking the boughs with their gambols : in which they are very agile and si-lent : even when shot at, they do not make the least noise: but will unite in company, knit their brows, and gnash their teeth, as if they meant to attack the enemy : they are very com-mon in the Cape de Verd Islands. The females menstruate.

18. S. cercop. silenus albibarbatus, the white-bearded black wanderu, the ouanderou of Butfon, and lion-tailed baboon of Pennant, has a dog-like face, is naked, and of a dusky color ; a very large and full white or hoary beard ; large canine teeth ; body covered with black hair ; belly of a light color ; tail terminated with a tuft of hair like that of a lion. Its bulk that of a middling sized dog. It inhabits the East Indies and the hotter parts of Africa.

19. S. cercop. silenus purp\;ratus, the purple-faced monkey, has a great triangular white beard, short and pointed at the bottom, and on each side of the ears, extending in a winged fashion far beyond them ; face and hands purple, body black. They inhabit Ceylon ; are very harmless ; live in the woods, and feed on leaves and buds of trees ; and when taken soon become tame

9,0. S. cercop. sinicus, the rillow or Chinese bonnet, has a long smooth nose, of a whitish color ; hair on the crown of the head long, lying lat, and parted like that of a man ; color, a pale cinereous brown. They inhabit Ceylon; keep in great troops ; and rob gardens of their fruit, and fields of their corn ; to prevent which the natives are obliged to watch the whole day; yet these animals are so bold, that, when driven from one end of the field, they will immediately enter at the other, and carry off with them as much as their mouths and arms can hold. Bos-man, speaking of the thefts of the monkeys of Guinea, says that they will take in each paw one or two stalks of millet, as many under their arms, and two or three in their mouth ; and, thus laden, hop away on their hind legs ; but, if pursued, they fling away all, except what is in their mouths, that it may not impede their flight. They are very nice in the choice of the millet; examine every stalk ; and, if they do not like it, fling it away; so that this delicacy does more harm to the fields than their thievery.

21. S. cercop. talaponius, the talapoin, is a native of India; about a foot long from nose to rump, and has a tail nearly eighteen inches long. It has cheek-pouches, with a beard on the chin and cheeks, and callosities on the buttocks; it is abeautiful figure, of a brownish-green

color ; with the tip of the nose, ears, and soles of the feet black. The species are gentle and playful. There is a variety which differs only in being all black.

22. S. cercop. veter, the lowando, has a long tail and is bearded ; the body and limbs are white ; the beard black. This animal has all the characters of a baboon in figure and dispositions. It is so wild and ferocious that it must be kept in an iron cage. It is from three feet to

three feet and a half high ; the tail is eight inches long ; it has cheek-pouches, and callosities on the buttocks ; its tusks are larger and longer than in man ; the muzzle is thick and strong; the head is environed with a broad mane and a large black beard ; it both walks erect and on all fours. In the woods, where they are in a state of liberty, they are exceedingly wild ; and, being violently fond of women,°a woman would have no chance of resistance, if meeting one of them alone. The females menstruate. Dr. Kerr enumerates several other species and varieties of cercopitheci, but their history is uncertain and unimportant.

23. S. inuus, the maggot, or Barbary ape, has a long face, not unlike that of a dog ; canine teeth, long and strong ; ears like the human ; nails flat; buttocks bare ; color of the upper part of the body adirty greenish-brown ; belly of a dull pale yellow; grows to above four feet in length. They inhabit many parts of India, Arabia, and all parts of Africa, except Egypt. A few are found on the hill of Gibraltar, which breed there ; probably from a pair that had escaped from the town, as they are not found in any other part of Spain. They are very ill-natured, mischievous, and fierce ; agreeing with the character of the ancient cynocephalia. They are very common in exhibitions. By discipline they arc; made to play some tricks ; otherwise they are more dull than the rest of this genus. They assemble in great troops in the fields of India, and will attack women going to market, and take their provisions from them. The females carry the young in their arms, and will leap from tree to tree with them. Apes were worshipped in India, and had magnificent temples erected to them. When the Portuguese plundered one in Ceylon, they found in a little golden casket the tooth of an ape ; a relic held by the natives in such veneration that they ctU ed 700,000 ducats to redeem it, but in vain ; for it was burnt by the viceroy, to stop the progress of idolatry.

24. i. S. lar, the great gibbon, or long-armed ape, has a flat swarthy face, surrounded with grey hairs ; hair on the body black and rough ;

buttocks bare ; nails on the hands flat ; on the feet long; arms of a most disproportionate length, reaching quite to the ground when the animal is erect, its natural posture. They inhabit India, Malacca, and the Molucca isles ; are mild and gentle ; grow to the height of four feet, sometimes as tall as a man. The great black ape of Mangsi, in China, seems to be of this kind. ‘ This species,’ says Mr. Kerr, ‘ is impatient of cold and rain; and approaches nearer to the manners of mankind than even the orang-outang, being more inclined to the erect posture.’ The female has the catamema.

24. ii. S. lar argentea, the silvery gibbon, is a variety resembling the great gibbon, except in color, and it is more elegantly shaped. The body and arms are covered with silvery hairs ; the face, ears, crown of the head, and hands an? black. It is three feet high when erect. They inhabit the forests of Devat in Bengal. Lord Clive brought home one of them. They are good natured and frolicksome.

24. iii. S. lar minor, the lesser gibbon, resem

bles the great gibbon, but is much less, being only about a foot and a half high; the body and face are of a brown color. They inhabit Malacca.

III. S. papiones, baboons. These have short tails ; a long face ; a broad high muzzle ; longish dog-like tusks, or canine teeth; and naked callosities on the buttocks. They are only found ;u the old world, and are the papiones and KVVO-Ki<;>a\a of the ancients.

25. S. papio apedia, the little baboon, has a roundish head, with a projecting muzzle, and roundish naked ears ; the hair on the body is v<jllow, tipt with black ; the face is brown, and almost naked, having only a few scattered hairs ; the nails are all compressed and oblong, except on the thumbs and great toes, the nails of which resemble man; the tail is very short, being hardly an inch long ; the body is about the size of a cat. It is uncertain, says Gmelin, if this animal should be considered as a distinct species, or only as a variety of the simia

sciurea.

26. S. papio cinerea, the cinereous baboon, is about two feet high, and has a dusky face with a pale brown beard ; the body and limbs are of a cinereous brown; and the crown of the head is mottled with yellow. — Pennant.

27. S. papio cristata, the crested baboon, has very long and dishevelled hair on the head and cheeks. It is about two feet high, and the tail seven inches, taper and slender ; the body and limbs are covered with long black hair ; the breast is whitish ; the face, hands, and feet, are naked and black. They inhabit Africa.

28. S. papio livea, the blue-faced baboon, has a pale brown beard, a bluish face, and two very broad, flat, fore-teeth. It is about three feet high ; has long hairs over its eyes, and a tufl behind each ear.

29. S. papio maimon, the mandril, or ribbed nose baboon, has a short tail, and a thin beard on the chin ; the cheeks are blue and striped, and the buttocks are naked. This species is found on the Gold coast, and in other southern provinces of Africa, where he is called boggo by the negroes, and mandril by the Europeans. Next to the orang-outang, he is the largest of all the apes or baboons. Smith relates that he had a present of a female mandril, which was only six months old, and that it was as large as an adult baboon. He adds that these mandrils walk always on two feet ; that they weep and groan like men ; that they have a violent passion for women, which they never fail to gratify when they find a woman at a distance from relief.

30. S. papio mormon, the mantegar, or man tiger, commonly called the tufted ape ; but it is improperly named an ape, as it has a tail. It is described in the Philos. Trans. Abr. No. 290. It had a nose and head fourteen inches in length ; the nose of a deep red, face blue, both naked ; black eyebrows ; ears like the human ; on the top of the head a long upright tuft of hair ; on the chin another ; two long tusks in the upper jaw ; fore feet exactly resembling hands, and the nails on the fingers flat ; the fore part of the body, and the inside of the legs and arms naked ; the outside covered with mottled brown and olive hair. Length, from the nose to the rump, three

feet two inches. It was very fierce and falaci ous ; went on all fours, but would sit up on its rump, and support itself witli a stick ; in this attitude, it would hold a cup in its hand, and drink out of it. Its food

was fruits.

31. S. papio nemestrina, the maimon, or pig-tailed baboon, with a pointed face, which is naked, of a swarthy redness ; two sharp canine teeth; ears like the human; hair on the limbs and body brown, inclining to ash-color, palest on the belly ; finders black ; nails long and flat ; thumbs on the hind feet very long, connected to the nearest toe by a broad membrane; tail four inches long, slender, exactly like a pig's, and almost naked ; the bare spaces on the rumˆ red, and but small ; length, from head to tail, twenty-two inches. They inhabit the isles or Sumatra and Japan, and are very docile. In Japan they are taught several tricks, and carried about the country by mountebanks. Kempfer was informed by one of these people that the baboon he had was 102 years old. Mr. Ken says, it has check pouches, callosities on the but tocks, and a naked curled up tail, five or six inches long. The male organs are concealed under the skin. When erect it is from two to two and a-half feet high. The female menstruates. This is a vivacious, gentle, tractable, and even caressing animal, without any of the immodesty of most baboons.

32. S. papio platypygos, the brown baboon, has pointed ears ; face of a dirty white ; nose large and broad ; hairs round the face short and straight; color of the upper part of the body brown; of the under ash-color; a tail about four inches long ; taper and almost bare of hair ; beneath quite naked. Mr. Pennant refers the new baboon, described in his first edition, to this species.

33. S. papia porcaria, the hoggish baboon, lias a short tail, and colored buttocks ; the head is like that of a hog, with a naked snout; the body is of an olive brown color, the nails are sharp and compressed. Inhabits Africa, and is about three feet and a-half high when standing erect. This probably is the same animal wkh the hog-faced ape, adopted from Pennant.

34. S. papio sphinx, the great baboon, witli hazel irides ; ears small and naked ; face canine, and very thick; middle of the face and forehead naked; and of a bright vermilion color; tip of the nose of the same, and ending truncated like that of a hog; sides of the nose broadly ribbed, and of a fine violet hue ; the opening of the mouth very small ; cheeks, throat, and goat-like beard, yellow ; hair on the forehead very long, turns back, is black, and forms a kind of pointed crest. Head, arms, and legs, covered with short hair, yellow and black intermixed ; the breast with long whitish-yellow hairs, the shoulders with long brown hair. Nails flat; feet and hands black ; tail four inches long, and very hairy ; buttocks bare, red, and filthy ; but the space

about them is of a most elegant purple color, which reaches to the inside of the upper part of the thighs. This was described by Mr. Pennant from a stuffed specimen in Sir Ashton Lever's museum. In August 1779 a live animal of this species was shown at Edinburgh, and in October

following at Chester, where, being seen by Mr. Pennant, that inquisitive naturalist has described it in his History of Quadrupeds. ' It differed little,' he observes, ' in color from the above, be-ing in general much darker. Eyes much sunk in tha head and small. On the internal side of each ear was a white line, pointing upwards. The hair on the forehead turned up like a tou-pee. Feet black; in other respects resembled the former. In this I had an opportunity of examining the teeth. The cutting teeth were like those of the rest of the genus ; but, in the upper and lower jaw, were two canine, or rather tusks, nearly three inches long, and exceedingly sharp and pointed. This animal was five feet high, of a most tremendous strength in all its parts ; was excessively fierce, libidinous, and strong.' Mr. Iverr confirms this account, and adds that they are very apt to offer violence to women. Mr. Schreber says, that this species lives on succulent fruits and on nuts ; is very fond of eggs, and will •jut eight at once into its pouches, and, taking them out one by one, break them at the end, and swallow the yolk and white ; rejects all flesh meat, unless it be dressed ; would drink quantities of wine or brandy ; was less agile than other baboons ; very cleanly : for it would fling its excrements out of its hut. That which was shown at Chester was particularly fond of cheese. Its voice was a kind of roar, not unlike that of a lion, but low and somewhat inward. It went upon all fours, and never stood on its hind-legs unless forced by the keeper; but would frequently sit on its rump in a crouching manner, and drop its arms before the belly. They inhabit the hotter parts of Africt.

35. S. papio sylvatica, or, as Mr. Kerr has it, sylvicola, the wood baboon ; has a long dog-like face, covered with a small glossy black skin; hands and feet naked, and black like the face; hair on all parts

long, elegantly mottled with black and tawny; nails white: is about three feet high when erect ; tail not three inches, and very hairy on the upper top. Inhabits Guinea, where it is called by the English the man of the woods.

36. S. papio vanegata, the yellow baboon, is of a bright yellow color, variegated with black. It strongly resembles the wood baboon, except in size, and in having hairy hands. The face is long, black, and naked ; the ears are hid in the fur. It is two feet high.

IV. S. sagoini, sagoins; these have long tails, which are proportionally longer than those of the sapajous, straight, flaccid, entirely covered with hair, and not prehensile; that is, incapable of laying hold of any object : the cheeks have no pouches; and the buttocks, which are covered with hair, have no callosities, the partition between the nostrils is very thick, and the apertures are placed on the sides of the nose. The females do not menstruate. This race of animals is only found in America. There are six species.

37. S. sagotnus argenteus, or argentatus, the mico, or fair monkey, with a small round head ; face and ears of the most lively vermilion color ; body covered with most beautiful long hairs of a bright and silvery wruleness, of matchless elegance : tail of a shining dark chestnut : head

and body eight inches long, tail twelve. They inhabit the banks of the Amazons ; and were discovered by M. de Condamine.

38. i. S. sagoinus jacchus, the sanglin, or striated monkey, with a very round head ; about the ears two very long full tufts of white hairs standing out on each side ; irides reddish ; face a swarthy flesh color ; ears like the human ; head black ; body ash-colored, reddish, and dusky ; the last forms striated bars across the body ; tail full of hair, annulated with ash-color and black ; body seven inches long ; tail nearly eleven ; hands and feet covered with short hairs ; fingers like those of a squirrel ; nails, or rather claws, sharp. They inhabit Brasil ; feed on vegetables ; will also eat fish ; make a weak noise ; are very restless, and are often brought over to Europe.

38. ii. S. sagoinus Jacchus moschatus, the yellowish sanglin, is a variety of a whitish yellow color, smelling strongly of musk. It also inhabits Brasil.

39. S. sagoinus Midas, the tamarin, or great-eared monkey, with a

round head, swarthy, flesh-colored, naked face ; upper lip a little divided ; ears very large, erect, naked, and almost square ; hair on the forehead upright and long ; on the body soft, but shaggy ; the head, whole body, and upper part of the limbs, .black, except the lower part of the back, which is tinged with yel-low ; hands and feet covered with orange-colored hairs, very fine and smooth; nails long and crooked ; tail black, and twice the length of the body ; teeth very white. It is of the size of a squirrel. It inhabits the hotter parts of South America, and the isle of Gorgona, South of Pana-ma, in the South Sea.

40. S. sagoinus oepidus, the pinche, or red-tailed monkey, is beardless ; has a flowing head of hair, which hangs down on each side; a red tail and sharp claws. It has neither cheek-pouches nor callosities on the buttocks. His tail is not prehensile, and is more than twice the length of the head and body. The partition of the nostrils is thick, and the apertures are placed at a side. The face, throat, and ears, are black ; on the head are long white hairs. The muzzle is broad, and the face round. The hair on the body is pretty long ; of a yellowish-brown, or reddish color till near the tail, where it becomes orange ; on the breast, belly, hands, and feet, it is white, and shorter than on the body. The tail, from the origin to one-half of its length, is a vivid red, then brownish-red, and toward the point it is black. He is about nine inches long, and walks on fpur feet. The females are not subject to the menstrual evacuation.

41. S. sagoinus pithecia, the saki, or fox-tailed monkey, with a swarthy face, covered with shoit white down ; forehead and sides of the face with whitish and pretty long hair; body with long dusky browu hairs, white or yellowish at their tips ; hair on tht tail very long and bushy ; sometimes black, sometimes reddish ; belly and lower part of the limbs a reddish white ; length from nose to tail nearly a foot and a half; tail longer, and like that of a fox ; hands and feet black, with claws instead of nails. They inhabit Guiana.

S I M I A.

42. S. sagoinus rosalius, the marikma, or silky monkey, is beardless ; has a very hairy head ; the circumference of the face and the feet are red ; and the claws are sharp and narrow. A brisk animal, less impatient of cold than the rest of this race ; the body is of a yellowish white co-lor ; the nails on the thumbs and great toes are rounded ; the

ears are naked, but are hidden beneath the fur. It has a round head and a brown face, which is surrounded with a kind of mane of a bright red color ; the hair on the body and tail is long, silky, and of a pale but vivid yellow color, almost white, with a considerable tuft at the extremity of the tail. It walks on four feet, and is eight or nine inches long, from the muzzle to the rump ; and the tail is above thirteen inches long. This species has the same manners and vivacity with the other sagoins, but is more robust in constitution, as an individual lived five or six years in Paris, being kept in a warm room during* winter. They inhabit South America.

V. S. sapaji, sapajous, have no cheek-pouches, but long prehensile tails, which, at the extremity, are generally deprived of hair on the under side, and covered with a smooth skin ; this part they can fold, extend, curl up, and unfold at pleasure ; by which they are enabled to hang upon branches, or to lay hold of any thing which is beyond the reach of their hands, usicg the extremity of the tail like a finger ; the partition between the nostrils is very thick ; and the apertures are situated on the sides of the nose ; the buttocks are clothed with hair, and have no callosities ; the females of this subgenus do not menstruate ; and this race of animals is only to be found in America. This subdivision of the genus is made with great propriety by Dr. Gmelin, after the count de Buffon.

43. S. sapajus apella, the brown sapajou, has a long sub-prehensile tail, and no beard ; the body is brown ; the legs black, and the buttocks hair)'. It is a lively active animal; constantly looking about on all sides ; bears cold well ; its cry resembles that of a young turkey ; the circumference of its face appears as if shaved.

44. S. sapajus beelzebub, the guariba, or preacher monkey, has black shining eyes ; short round ears; and a round beard under the chin and throat. The hairs on the body are of a shining black, long, yet He so close on each other that the animal appears quite smooth ; the feet and end of the tail are brown ; the tail is very long, and always twisted at the end. They are of the size of a fox ; inhabit the woods of Brasil and Guiana in vast numbers, and make a most dreadful howling. Sometimes one mounts on a higher branch, the rest seat themselves beneath ; the first begins as if it was to harangue, and sets up so loud and sharp a howl as may be heard at a vast way, and a person at a distance would think that a hundred joined in the cry ; after a certain space, he gives a signal with his hand, when the whole assembly join in chorus ; but on another signal are silent, and the orator finishes his address. This is related by Marcgrave, a writer of credit, from his own knowledge, having long resided in Brasil. Their

clamor is the most disagreeable and tremendous that can be

conceived ; owing to a hollow and hard bone placed in the throat, which the English call the throttle-bone. These monkeys are very fierce, untameable, and bite dreadfully. There is a variety of a ferruginous or reddish bay color, which the Indians call the king of the monkeys ; it is large, and as noisy as the former. The natives eat, and are fond of this species, as well as several other sorts of monkeys. Europeans will also eat it, especially in those parts of America where food is scarce; but, in doing so, they become a kind of cannibals.

45. S. sapajus capucinus, the sai, or weeper, with a round and flat face, of a reddish brown color, very deformed ; the hair on the head and upper part of the body black, tinged with brown ; beneath and on the limbs tinged with red ; tail black, and much longer than the head and body ; the young excessively deformed ; their hair very long, and thinly dispersed. In the British Mu-seum are specimens of old and young. M. de Buffon had a variety with a white throat. They inhabit Surinam and Brasil ; appear as if always weeping ; are of a melancholy disposition ; but ready to imitate what they see done. These probably are the monkeys Dampier saw in the bay of All Saints, which he says are very ugly, and smell strongly of musk. They keep in large companies ; and make a great chattering, especially in stormy weather ; reside much on a species of tree which bears a podded fruit, which they feed on.

46. S. sapajus exquima, theexquima of Con-go, is of the same size with the quato (No. 48), and has a prehensile tale, but differs in the co-lor, and in having a beard. It is of a variegated black and yellow color on the back ; the throat and belly are while. They inhabit Guinea, Congo, &c.

47. S. sapajus fatuellas, the horned sapajou, has two tufts of hair on the head, resembling little horns ; and is beardless. The face, sides, belly, and fore parts of the thighs are brown ; the top of the head, middle of the back, tail, legs, and posterior parts *of the thighs, are black ; the nails are long, and rather blunt ; the tail is prehensile, and twisted spirally. Perhaps of the same species with the simia appella or capuchin (Grn.). They inhabit South America.

48. S. sapajus paniscus, the quato, or four-fingered monkey, has a long flat face, of a swarthy flesh color; the eyes are sunk in the head; ears like the human; limbs of a great length, and uncommonly slender ; the

hair” is black, long, and rough. There are only four fingers on the hands, being quite destitute of a thumb ; five toes on the feet. The tail is long, and naked below, near the end. The body is slender, about a foot and a half long ; the tail nearly two feet, and so prehensile as to serve every purpose of a hand. They inhabit the neighbourhood of Carthagena, Guiana, Brasil, and Peru ; associate in vast herds ; and are scarcely ever seen on the ground. Dampier describes their gambols in a lively manner : ‘ There was,’ says he, ‘ a great” company dancing from tree to tree over my head, chattering, and making a terrible noise, and a great many grim faces and antic gestures; some broke down dry sticks and flung

them at me, others scattered their urine and Hung about my ears ; at last one bigger than the rest came to a small limb just over my head, and, leaping directly at me, made me leap back ; but the monkey caught hold of the bough with the tip of its tail, and there continued swinging to and fro, making mouths at me. The females with their young ones are much troubled to leap after the males ; for they have commonly two ; one she carries under her arm, the other sits on her back, and claps its two fore-paws about her neck ; are very sullen when taken ; and very hard to be got when shot; for they will cling with their tail or feet to a bough as long as any life remains. When I have shot at one, and broke a leg or arm, I have pitied the poor creature to see it look and handle the broken limb, • and turn it from side to side.’ — They are the most active of monkeys, and quite enliven the forests of America. In order to pass from top to top of’lofty trees, whose branches are too distant for a leap, they will form a chain, by hanging down, linked to each other by their tails, and swinging in that manner till the lowest catches held of a bough of the next tree, and draws up the rest ; and sometimes they pass rivers by the same expedient. They are sometimes brought to Europe ; but are very tender, and seldom live long in our climate.

49. S. sapajus sciureus,the samairi, or orange-monkey, has no beard ; the hinder part of the head is prominent ; and the nails on the four

toes of the hind paws are narrow and pointed. They inhabit South America, and are the most beautiful of all the sapajous; their movements are graceful ; size small ; color a brilliant yellow ; visage round, with large vivacious eyes, surrounded by flesh-colored rings ; hardly any forehead ; the nose is elevated at the base, and flattened at the point ; the mouth small, the face flat and naked, and the ears are garnished with hair, and a little pointed ; the tail is only half prehensile : they stand with ease on two feet, but commonly walk on all four.

50. S. sapajus seniculus, the arabata, is of a dusky red color, and has a beard on the chin, which is large, and resembles the Jiuman chin. It is a savage animal, as large as a calf, and by a singular boney structure in the throat, makes a terrible noise, which is heard at a great distance. They assemble in great flocks on trees, and salute passengers with loud cries in a hoarse disagreeable voice.

51. S. sapajus syrichtus, the magu of Petiver, is beardless, but has the mouth and orbits surrounded with long hairs. It is of a small size, and inhabits the Philippines.

52. S. sapajus trepidus, the sajou, or fearful monkey of Pennant, has a black erect hemispherical tuft of hair on the forehead, and no beard ; the hands and feet are blue ; it is a foot long ; the tail is long and hairy ; the nails are rounded ; the face and ears are flesh colored. There are two varieties, the brown and the gray. They agree with the climate of Europe, live long, and propagate. They are nimble, dexterous, and amusing.

53. S. sapajus variegatus, the variegated sapajou, or Antigua monkey of Pennant, has the hair

on the sides and back of an intimately mixed orange and black color. It is lively, good natured, and full of tricks ; the body is eighteen inches long, from nose to rump ; the tail, which is prehensile, twenty inches long. The face is black, nose short, belly white, legs black, insides ash-color, and tail a dusky ash.

54. i. S. satyrus, the orang-outang, or great ape, has a flat face, and a deformed resemblance of the human ; ears like those of a nian ; the hair on the head longer than on the body. The body and limbs are covered with reddish and shaggy hair ; longest on the back, thinnest on the fore parts. The face and paws are swarthy ; the buttocks

covered with hair. They inhabit the interior parts of Africa, the Isles of Sumatra, Borneo, and Java ; are solitary, and live in the most de-sert places. They grow to the height of six feet; have prodigious strength, and will overpower the strongest man. The old ones are shot wih ar-rows, the young alone can be taken alive. They live entirely on fruits and nuts. They will attack and kill the negroes who wander in the woods ; will drive away the elephants, and beat them with their fists or pieces of wood ; and will throw stones at people that offend them. They sleep in trees ; and make a sort of shelter from the inclemency of the weather. They are of a grave appearance and melancholy disposition, and even when young not inclined to frolic. They go erect, and are vastly swift and agile. Froger informs us (Descr. Hist, du Macacar, p. 51), ‘ that those along the banks of the river Ganges are larger and more mischievous than in any part of Africa : the negroes dread them, and cannot travel alone in the country without running the hazard of being attacked by these animals, who often present them with a stick, and force them to fight. I have heard the Portuguese say that they have often seen them hoist up young girls, about seven or eight years old, into trees, and that they could not be wrested from them without a great deal of difficulty. The most part of the negroes imagine them to be a foreign nation come to inhabit their country, and that they do not speak for fear of being compelled to work.’ When taken young, they are capable of being tamed, and taught to perform many menial offices. Francis Pyrard relates (in his Voyages, rol. ii. p. 331), ‘ that in the province of Sierra Leona there is a species so strong limbed, and so industrious, that, when properly trained and fed, they work like servants; that they generally walk on the two hind feet ; that they pound any substances in a mortar; that they go to bring water from the river in small pitchers, which they carry full on their heads. But, when they arrive at the door, if the pitchers are not soon taken off, they allow them to fall ; and, when they perceive the pitchers overturned and broken, they weep and lament.’ Father Jarric, quoted by Nieremberg, says the same thing, nearly in the same terms. With regard to the education of these animals, the testimony of Shoutten accords with that of Pyrard. ‘ They are taken,’ he remarks, ‘ with snares, taught to walk on their hind feet, and to use their fore feet as hands in performing different operations, as rinsing glasses, carrying drink round to the com-384

pany, turning a spit,' &c. ' I saw at Java,' says Guat, ' a very extraordinary ape. It was a fe-male. She was very tall, and often walked erect on her hind feet. On these occasions, she concealed with her hands the parts which distinguish the sex. Except the eyebrows, there was no hair on her face, which pretty much resembled the grotesque female faces I saw among the Hot-tentots at the Cape. She made her bed very neatly every day, lay upon her side, and covered herself with the bed clothes. When her head ached, she bound it up with a handkerchief; and it was amusing to see her thus hooded in bed. She died in our ship, about the latitude of the Cape of Good Hope. The figure of this ape had a very great resemblance to that of man,' &c. Gmelli Carreri tells us that he saw one of these apes, which cried like an infant, walked upon its hind feet, and carried a mat under its arm to He down and sleep upon. An orang-outang, which Buffon saw, is described by him as mild, affectionate, and good natured. ' His air was melancholy, his gait grave, his movements measured, his dispositions gentle, and very different from those of other apes. He had neither the impatience of the Barbary ape, the maliciousness of the baboon, nor the extravagance of the monkeys.' ' It may be alleged,' says our author, ' that he had the benefit of instruction ; but the other apes which I shall compare with him were educated in the same manner. Signs and words were alone sufficient to make our orang-outang act; but the baboon required a cudgel, and the other apes a whip ; for none of them would obey without blows. I have seen this animal present his hand to conduct the people who came to visit him, and walk as gravely along with them as if he had formed a part of the company. I have seen him sit down at table, unfold his towel, wipe his lips, use a spoon or a fork to carry his victuals to his mouth, pour his liquor into a glass, and make it touch that of the person who drank along with him. When invited to take tea, he brought a cup and a saucer, placed them on the table, put in sugar, poured out the tea, and allowed it to cool before he drank it. All these actions he performed without any other instigation than the signs or verbal orders of his master, and often of his own accord. He did no injury to any person ; iie even approached company with circumspection, and presented himself as if he wanted to be caressed. He was very fond of dainties, which every body gave him : his breast was diseased, and he was afflicted with a teasing cough. He lived one summer in Paris, and died in London the following winter. He ate almost every thing ; but preferred ripe and dried fruits to all other kinds of food. He drank a little wine ; but spontaneously left it for milk, tea, or other mild liquors.* This was only two feet four inches high, and was a young one. This is the variety called ihe Jocko. (See No. ii.) There is a great possibility that these animals may vary in size

and in color, some being covered with black, others with reddish hairs. They are not the satyrs of the an-cieuts, which had tails, and were a species of monkey. Linnseus's homo nocturnus, an animal of ihis kind, is unnecessarily separated from

his simia satyrus. Buffon describes the differences and conformities which make the orang-outang approach or recede from the human species. ' He differs from man externally by the flatness of his nose, by the shortness of his front, and by his chin, which is not elevated at the base. His ears are proportionally too large, his eyes are too near each other, and the distance between his nose and mouth is too great. These are the only differences between the face of an erang-outang and that of a man. With regard to the body and members, the thighs are proportionally too short, the arms too long, the fingers too small, the palm of the hands too long and narrow, and the feet rather resemble hands than the human foot. The male organs of generation differ not from those of man, except that the prepuce has no fraenum. The female organs are extremely similar to those of a woman. The orang-outang differs internally from the human species in the TI umber of ribs ; man has only twelve, but the orang-outang has thirteen. The vertebrae of the neck are also shorter, the bones of the pelvis narrower, the buttocks flatter, and the orbits of the eyes sunk deeper. He has no spinal process on the first vertebra of the neck. The kidneys are rounder than those of man, an<* the ureters have a different figure, as well as tin bladder and gall-bladder, which are narrower and longer than in the human species. All the other parts of the body, head, and members, both external and internal, so perfectly resemble those of man, that we cannot make the comparison without being astonished that such a similarity in structure and organisation should not produce the same effects. The tongue, and all the organs of speech, for example, are the same as in man ; and yet the orang-outang enjoys not the faculty of speaking; the brain has the same figure and proportions ; and yet he possesses not the power of thinking. Can there be a more evident proof than is exhibited in the orang-outang that matter alone, though perfecty organised, can produce neither language nor thought, unless it be animated by a superior principle? Man and the orang-outang are the only animals who have buttocks and the calf of the legs, and who of course are formed for walking erect ; the only animals who have a broad chest, flat shoulders, and vertebras of the same structure ; and the only animals whose brain, heart, lungs, liver, spleen, stomach, and intestines, are perfectly similar, and who have an appendix vermiformis, or blind-gut. In fine, the orang-outang has a greater

resemblance to man than even to the baboons or monkeys, not only in all the parts we have mentioned, but in the largeness of the face, the figure of the cranium, of the jaws, of the teeth, and of the other bones of the head and face; in the thickness of the fingers and thumbs, the figure of the nails, and the number of vertebrae ; and, lastly, in the conformity of the articulations, the magnitude and figure of the rotula, sternum, &c. Hence, a? there is a greater similarity between this animal and man than between those creatures which resemble him most, as the Barbary ape, the baboon, and monkey, who have all been designed by the general name of apes, the Indians

are to be excused for associating him with the human species, under the denomination of orang-outang, or wild man. In fine, if there were a scale by which we could descend from human nature to that of brutes, and if the essence of this nature consisted entirely in the form of the body, and depended on its organisation, the orang-outang would approach nearer to man than any other animal. Placed in the second rank of beings, he would make the other animals feel his superiority, and oblige them to obey him. If the principle of imitation, by which he seems to mimic human actions, were a result of thought, this ape would be still farther removed from the brutes, and have a greater affinity to man. But the interval which separates them is immense. Mind, reflexion, and language, depend not on figure or the organisation of the body. These p.re endowments peculiar to man. The orang-outang, though he counterfeits every human movement, performs no action that is characteristic of man, no action that has the same principle or the same design.'

54. ii. S. satyrus jocko, the jocko, a variety of the orang-outang, is only about two feet and a half high. This is the variety above described by count Buffon, as so extremely mild and do-cile. He very much resembles the pongo, allowing for the difference of size. Mr. Pennant makes them both one species with the troglodytes, or chimpanzee, but he seems to be mistaken. Mr. Kerr arranges both very properly as varieties of the orang-outang.

54. iii. S. satyrus pongo, the pongo, inhabits the island of Java, and the interior parts of Guinea, lie has no pouches within his cheeks, no tail, and no callosities on the buttocks; which last are plump and fleshy. All the teeth are similar to those of man. The face is flat, naked, and tawny ; the ears, hands, feet, breastj and belly, are likewise

naked : the hair of the head descends on both temples in the form of tresses ; the hair on the back and loins is in small quantities. It is five or six feet high, and walks always erect on the two hind feet. It has not Leen ascertained whether the females of this species, or variety, are subject to periodical discharges ; but analogy renders this almost unquestionable. This animal is, by Dr. Gmelin, considered only as a variety of the orang-outang, and we rank it as such accordingly.

55. S. sylvanus, the pigmy, has no tail; the buttocks are naked ; the head roundish ; and the arms shorter than the body. It inhabits Africa and Ceylon ; and is not uncommon in our exhibitions of animals ; is very tractable and good-natured', and was most probably the pigmy of the ancients It abounds in ˆEthiopia, one seat of that imaginary nation ; was believed to dwell near the fountains of the Nile, whence it descended annually to make war on the cranes, *i.e.* to steal their eggs, which the birds may be supposed naturally to defend ; whence the fiction of their combats.

56. S. troglodytes, the chimpanzee ofv Lin-naus, common in the mountains of Sierra Leona, resembles man more than the orang-outang. This animal was first brought to Europe in August 1738, when it was exhibited in London.

The following description of one that was kept some months at the colony of Sierra Leona is given by Wadstrom, in his Essay on Colonisation. He was nearly two feet high ; but the full stature is nearly five feet. He was covered with black hair, long and thick on the back, but short and thin on the breast and belly. His face was bare ; his hands and his head resembled those of an old black man, except that the hair on his head was straight. He ate, drank, slept, and sat at table, like a human being. At first he crept on all. fours, on the outside of his hands; but, wl<m grown larger, he endeavoured to go erect, supporting himself by a stick. He was melancho'y, but always good natured. Mr. Kerr's description is similar : — ' He has no tail. The head is conical ; the whole body is of a robust brawny make ; the back and shoulders are covered with hair, and the rest of the body is naked.'

SIMILAR, adj. ~\ Fr. similaire ; Lat. similis SIM'ILARY, /

Homogeneous; having one

SIMILARITY, n. s.\ part like another; uniform: SIM'ILE, i a simile is a likeness; il—

SIMIL'ITUDE. j lustration by way of comparison : tlje other noun substantives correspond with similar.

Lucentio slipped me, like his greyhound, Which runs himself, and catches for his master, — A good swift simile, but something currish.

Shakspeare.

Our immortal souls, while righteous, are by Gcd himself beautified with the title of his own image and similitude. Raleigh.

Similitude of substance would cause attraction, where the body is wholly freed from the motion of gravity ; for then lead would draw lead.

Bacon's Natural History.

Plutarch, in the first of his tractates, by sundry similitudes, shews us the force of education. Wotton.

Let us make man in our image, man In our similitude, and let them rale Over the fish and fowl. Miltim.

The laws of England, relative to those matters, were the original and exemplar from whence those similar or parallel laws of Scotland were derived.

Hole's Common Law of England. Minerals appear to the eye to be perfectly similar, as metals ; or at least to consist but of two or three distinct ingredients, as cinnabar. Boyle.

Similitude to the Deity was not regarded in the things they gave divine worship to, and looked on as symbols of the god they worshipped. Slillingjieet .

Tasso, in his similitudes, never departed from the woods ; that is, all his comparisons were taken from the country. Dryden.

If we compare the picture of a man drawn at the years of seventeen, with that of the same person at the years of threescore, hardly the least trace or similitude of one face can be found in the other.

South.

Poets, to give a loose to a warm fancy, not only expatiate in their similes, but introduce them too frequently. Garth.

The blood and chyle are mixed, and by attrition attenuated ; by which the mixture acquires a greater degree of fluidity and similarity, or homogeneity of parts. Arbuthnot.

In argument,

Similes are like songs in love ; They much describe, they nothing prove. Prior.

Fate some future bard shall join, In sad similitude of griefs to mine;

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Condemned whole years in absence to deplore, And image charms he must behold no more. Pope.

SIMILE, or SIMILITUDE, in rhetoric, a comparison of two things, which, though different in other respects, yet agree in Some one. The difference between a simile and comparison is said to consist in this, that the simile properly belongs to whatever we call the quality of a thing, and the comparison to the quantity. See COMPARISON and ORATORY.

SIM'MER, v. n. A word made probably from the sound, but written, by Skinner, simber. To boil gently ; to boil with a gentle hissing.

Place a vessel in warm sand, increasing the heat by degrees, till the spirit simmer or boil a little.

Boyle.

Their vital heat and moisture may always not only

timber in one sluggish tenour, but sometimes boil up

higher, and seeth over ; the fire of life being more

than ordinarily kindled upon some emergent occasion.

Mare against Atheism.

SIMMONS (John). This artist was born at Nailsea, in Somersetshire, about 1715, and served his apprenticeship to a house and ship painter at Bristol. He carried on the same business in that city till his death,

which happened! January 18th, 1780. Simmons painted many portraits, from some of which engravings were made ; but his principal works are the altar-piece in All Saints' church, Bristol ; and in St. John's church, Devizes. The subject of the first is the Annunciation, and is a very creditable performance; that of the latter the Resurrection. Hogarth thought very highly of the talents of Simmons, whose portrait of Ferguson, the astronomer, was in one of the early exhibitions of the Royal Academy.

SIMOIS, in ancient geography, a river of Troas, rising in mount Ida, and falling into the Xanthus : famous in poetry, for the many battles fought on its banks, and recorded by Homer, &c.

SIMON (Heb. IJflDEf, i. e. hearing), the original name of the apostle Peter. See PETER.

SIMON I., surnamed the Just, high-priest of the Jews, succeeded his father Onias 1. in the reign of Ptolemy Philadelphus. He is celebrated for his justice, and for having repaired the temple of Jerusalem, which had fallen to decay, and surrounding the city with a wall.

SIMON II., grandson of Simon I., succeeded his father Onias II. in the reign of Ptolemy Philopater. This monarch visited Jerusalem in the time of Simon, and, notwithstanding the high-priest's remonstrances, entered and profaned the temple, and would have even gone into the sanctum sanctorum, if he had not been suddenly struck down. The particulars of this visit, with its consequences, and the extraordinary event that happened to the Jews at Egypt, are related under EGYPT and JEWS.

SIMON, a Cyrenian, the father of Alexander and Rufus, who were afterwards eminent Christians. He had the singular honor to assist our Saviour in bearing his cross. Some commentators think him the same with N iger, the teacher at Antioch, Acts xiii. 1. He was afterwards made bishop or presbyter of Bezer, or Bostra.

SIMON, a pharisee, who entertained our Saviour, but neglected some of the marks of polite atten-

tion usually paid to guests amon-i t!ie Jews on such occasions, for which he was justly reproved (Luke vii. 36—50) : and which affords a proof that true politeness is not inconsistent with Christianity. Some think he was the same person with Simon whom Jesus cured of a leprosy, and in whose house at Bethany he supped along with Lazarus,

and was anointed by Mary, a few days before his death. Matth.xxvi.6. John xit. 1—5.

SIMON, a currier at Athens, whom Socrates often visited, on account of his uncommon genius and talents. He collected all the information he could procure from Socrates, and published it, with his own remarks, in thirty-three dialogues. He was the first of Socrates's disciples who gave an account of his master's opinions on virtue, justice, honor, music, poetry, &c. His Dialogues were extant in the age of Diogenes, the biogra-pher. Diog. ii. c. 14.

SIMON (Richard) was born at Dieppe the 15th May 1638. He began his studies among the priests of the Oratory in that city, but soon left them. From Dieppe he went to Paris, where he made great progress in the oriental languages. Some time afterwards he joined the society of the Oratory again, and became a priest of it in 1660. In 1670 he published some small pieces. In 1678 his Critical History of the Old Testament appeared, but was immediately suppressed by the intrigues of Messieurs du Port Royal. It was reprinted in 1679, and its merits soon drew the attention of foreigners ; an edition of it was accordingly published at Amsterdam in Latin, and at London in English. He died at Dieppe in 1712, at the age of seventy-four. He was very learned ; his criticism is exact, but not always moderate ; and there reigns in his writings a spirit of novelty and singularity which raised him many adversaries. The most celebrated of these were Le Clerc, Vossius, Jurieu, Du Pin, and Bossuet. Simon wrote an answer to most of the books published against him, in which he displays great pride and obstinacy. The following are his principal works : 1 . The Ceremonies of the Jews, translated from the Italian of Leo of Modena, with a supplement concerning the Barraites and Samaritans. 2. L'Histoire Critique du Vieux Testament. This work deserves the attention of every clergyman. He sometimes, however, deviates from, integrity, to serve the cause of the church of Rome. These passages have been very justly exposed and confuted by Dr. Campbell, in his ingenious Preliminary Dissertations to his new Translation of the Gospels. 3. Critical History of the Text of the New Testament. 4. Critical History of the Versions of the New Testament. 5. Critical History of the principal Commentators on the New Testament. 6. Inspiration of the Sacred Books. 7. A Translation of the New Testament. This was censured by cardinal de Noailles and Bossuet. 8. The History of the Rise and Progress of Ecclesiastical Revenues, which is commended by Voltaire, as is his Critical History of the Old Testament. 9. A New Select Library, which points out the good books in various kinds of literature, and the use to be made of them. 10 Critical History of the Belief and Customs of

the Nations on the Levant. 1 1 . Critical Letters, &c.

SIMON MACCABEUS, a celebrated leader and high-priest of the Jews, who, after rendering the most important services to his country, was at last treacherously murdered by his son-in-law. See JEWS.

SIMON MAGUS, or the sorcerer, was a native of Gitton, a village of Samaria. He visited Egypt, where he probably became acquainted with the mysteries taught in the Alexandrian school, and learned those theurgic or magical operations by means of which it was believed that men might be delivered from the power of evil demons. Upon his return to Samaria, the author of the Clementine Recognitions relates, that he imposed upon his countrymen by high pretensions to supernatural powers. And St. Luke attests that this artful fanatic, using sorcery, had bewitched the people of Samaria, giving out that he was some great one ; and that he obtained such general reverence in Samaria, that the people all believed him to be 'the great power of God,' By the preaching of Philip the deacon he was, with other Samaritans, converted to the Christian faith, and admitted into the qhurch by baptism. His conversion, however, seems not to have been real; for, upon seeing the miraculous effects of the laying on of the apostles' hands, he offered them money to purchase similar powers. He probably thought Peter and John magicians like himself, but better skilled in the art of deceiving the multitude. Being sharply reproved for this impiety, he seems by his answer to have been sensible of his sin ; but his repentance, if sincere, was of short duration. Returning to his former practices of imposture, he travelled through various provinces of the empire, opposing the progress of the gospel ; and, arriving at Rome, he led astray vast numbers of people by his pretended miracles. How long he lived in that metropolis, or in what manner he died, we have no certain accounts. The Christian writers tell us, that being raised in the air by two daemons, he was deprived

of their support by the prayers of St. Peter and St. Paul, and falling, broke his legs. By some he is thought to have»been the person mentioned by Suetonius, who, undertaking to fly in the presence of Nero, fell to the ground with such violence that his blood spurted up to the gallery where the emperor was sitting. The sum of this impostor's doctrine was, that from the Di-vine Being, as a fountain of light, flow various orders of aeons, or eternal natures, subsisting within the plenitude of the divine essence; that beyond these, in the order of emanation, are different classes of intelligences, among the lowest of which are human souls ; that matter is the most remote production of the emanative power ; which, on account of its infinite distance from the Fountain of Light, possesses sluggish and malignant qualities, which oppose the divine operations, and are the cause of evil ; that it is the great design of philosophy to deliver the soul from its imprisonment in matter, and restore it to that divine light from which it was derived ; and that for this purpose God had sent him, one of the first jeons, among men. To his wife Helena he also ascribed a similar kind of divine nature,

pretending that a female aeon inhabited the body of this woman, to whom he gave the name of Evvoia, Wisdom; whence some Christian fathers have said that he called her the Holy Spirit. He also taught the transmigration of souls, and de-nied the resurrection of the body.

SIMON MENNO. See MENXO.

SIMON OF DURHAM. See SIMEON.

SIMON (St.), the brother of our Saviour, in the language of the Jews, or more properly his cou-sin german, was the son of Cleophas, or Alpheus, by Mary, the sister of our Lord's mother. He is said to have been chosen bishop or presbyter of Jerusalem, after the martyrdom of his brother James the Less. He is said to have suffered martyrdom during the persecution under Trajan, when strict enquiry was made after all the remnants of the family of David ; and, after being tortured for some days, he was crucified in Syria, A.D. 107, in the 102d year of his age.

SIMON THE CANAANITE, or SIMON ZELOTES (St.), one of the twelve apostles. He is said to have been styled Zelotes, from his zeal, before his conversion, in refusing to pay tribute to the Ro-mans ; and Canaanite, instead of Canaite, from his being a native of Cana in Galilee. He is said to have preached the gospel in Britain, as well as in

Egypt, Lybia, Cyrenaica, and Mauritania ; in which last country he suffered martyrdom ; though others say he was martyred at Lunir in Persia, along with St. Jude.

SIMONEAU (Charles), an eminent French engraver, born at Orleans in 1639. He was pupil to Noel Quipel ; and became famous for the medals he engraved to complete the history of Louis XIV. He died in 1728,

SIMONIDES, the name of several poets celebrated in antiquity ; but, by the Marbles, it appears that the eldest and most illustrious of them was born in the 55th Olympiad, 538 years B. C., and that he died in his ninetieth year ; which nearly agrees with the chronology of Eusebius. He was a native of Ceos, one of the Cyclades, and the preceptor of Pindar. His father's name was Leoprepis, or Theoprepis. Both Plato, and Cicero give him the character, not only of a good poet and musician, but of a person of great virtue and wisdom. His longevity gave him an opportunity of knowing a great number of the first characters in antiquity. Fabricius tells us, from ancient authority, that Simonides was contemporary and in friendship with Rittacus of Mitylene, Hipparchus tyrant of Athens, Pausanias king of Sparta, Hiero tyrant of Syracuse, with Themistocles, and with Alevades king of Thessaly. He is mentioned by Herodotus ; and Xenophon, in his Dialogue upon Tyranny, makes him one of the interlocutors with Hiero king of Syracuse. Cicero relates, what has often been quoted in proof of the modesty and wisdom of Simonides, that, when Hiero asked him for a definition of God, the poet required a whole day to meditate on so important a question ; at the end of which, upon the prince putting the same question to him a second time, he asked two days respite ; and in this manner he always doubled the delay each time he was required to answer it ; till at length he frankly confessed that he found the question so difficult, that the more he meditateo.

upon it, the less was his hope of being able to <solve it. In his old age he became somewhat mercenary, lie was often employed by the victors at the games to write panegyrics and odes in their praise; but he would never gratify their vanity till he had first tied them down to a stipulated sum for his trouble. He was frequently reproached for this vice; however, he always defended himself with good humor; of which many anecdotes are recorded. The best reason he gave for accumulating wealth was that ‘ he would rather leave money to his enemies after death, than be troublesome to his friends while Jiving.’ He obtained the prize in poetry at the public games when he was eighty years of age. According to Suidas, he added four letters to the Greek alphabet, *viz.* ij, u, £, and ¥. Pliny assigns to him the eighth string of the lyre ; but these claims are disputed by the learned. His poetry was so tender and plaintive that he acquired the surname of Melicertes, i. e. sweet as honey ; and the tearful eye of his muse was proverbial. Dionysius places him among those polished writers who excel in a smooth volubility, and flow on, like perennial rivers, in a course of eien and uninterrupted harmony. Dionysius has preserved a fragment of this poet, upon the exposure of Danae, and her infant son Perseus, by Acrisius.

SIMONIDES, a second great poet, recorded on the Marbles, supposed to have been grandson to the above, and who gained, in 478 B. C., the prize in the games at Athens. He flourished a few years before the Peloponnesian War; and wrote some books on Inventions, Genealogies, &c

SIM’ONY, n.s \ Fr. simonie ; Lat. simo—

SIMO’NIAC, n. s. >nia. The crime of buy—

SIMONI’ACAL. adj. y ing or selling church pre- ‘erment : the adjectives corresponding. One that by suggestion

Tied all the kingdom ; simony was fair play.

His own opinion was his law.

Shakspeare. Henry VIII.

Many papers remain in private hands, of which one is of simony ; and I wish the world might see it, that it might undeceive some patrons, who think they have discharged that great trust to God and man, if they take no money for a living, though it may be parted with for

other ends less justifiable. Walton't Life of Bisliop &tnderson.

Add to your criminals the simoniacal ladies, who

seduce the sacred order into the difficulty of breaking

their troth. Spectator.0

f the bishop alleges that the person presented is a

'imnniack, or unlearned, they are to proceed to trial.

Ayliffe.

No simony nor sinecure is known ; There works the bee, no honey for the drone.

Garth.

SIMONY is the corrupt presentation of any one to an ecclesiastical benefice for money, gift, or reward. It is so called from its resemblance to the sin of Simon Magus, though the purchasing of holy orders seems to approach nearer to his offence. It was by the canon law a very grievous crime : and is so much the more odious, because, as Sir Edward Coke observes, it is ever accompanied with perjury; for the presentee is sworn to have committed no simony. However, it WES not ar. offence punishable in a criminal way

at the common law, it being thought sufficient to leave the clerk to ecclesiastical censures. But, as these did not affect the simoniacal patron, nor were efficacious enough to repel the notorious practice, divers acts of parliament have been made to restrain it by civil forfeitures; which the modern prevailing usage calls aloud to be put in execution. The statute 31 Eliz. c. 6, enacts that if any patron, for money or any other corrupt consideration or promise, directly or indirectly given, shall present, admit, institute, induct, install, or collate, any person to an ecclesiastical benefice or dignity, both the giver and taker shall forfeit two years' value of the benefice or dignity ; one moiety to the king, and the other to any one who will sue for the same. If persons also corruptly resign or exchange their benefices, both the giver and taker shall in like manner forfeit double the value of the money or other corrupt consideration. And persons who shall corruptly ordain or license any minister, or procure him to be ordained or licensed, shall incur a like forfeiture of £40 ; and the

minister himself of £10, besides an incapacity to hold any ecclesiastical preferment for seven years afterwards. Corrupt elections and resignations in colleges, hospitals, and other eleemo-synary corporations, are also punished, by the same statute, with forfeiture of the double value, vacating the place or office, and a devolution of the right of election, for that turn, to the crown.

SIMOOM, ahot wind which blows occasionally in the deserts of Africa, and probably in other widely extended countries parched in the same manner by a vertical sun. Its effects on the hu-man body are dreadful. If inhaled in any quantity, it produces instant suffocation, or at least leaves the unhappy sufferer oppressed with asthma and lowness of spirits. See ARABIA.

SIMON'S (St.), the easternmost of the three large islands at the mouth of the Alatamaha River, in Georgia, having on the N. N. E. Little St. Simon's Island ; between these is the eastern mouth of the river. It formerly had a strong battery erected here, for the defence of Jekyl Sound, in which ten or twelve forty-gun ships may ride in safety. The island is about forty-five miles in length, and from two to four in breadth, of a rich and fruitful soil, full of oak and hickory trees, intermixed with meadows. In the middle is the town of Frederica. The bar or entrance is south by west, nineteen leagues from Tybee Inlet.

SIMON'S BAY, a bay of Southern Africa, in the colony of the Cape of Good Hope, forming the head of False Bay, and bounding on the east the Cape peninsula. Lat. 34° 12' S.

SIM'PER, v. n. Sax. rymbelan, to keep holiday. — Skinner. He derives simmer from the same word. To smile ; generally to smile foolishly.

A made countenance about he-mouth, between simpering and smiling, her head bowed somewhat down, seemed to languish with over-much idleness.

Sidney .

I charge you, O men, for the love you bear to women, as I perceive by your simpering none of you hate them, to like as much as pleases them.

Shakspeare. As You Like It.

The wit at his elbow stared him in the face, with so bewitching a grin, that the whistler relaxed liis

fibres into a kind of simper, and at length burst out into an open laugh. Addison.

Stars above simper and shine, As having keys unto thy love, while poor I pine, i Herbert.

Let then the fair one beautifully cry, Or drest in smiles of sweet Cecilia shine, With simpering angels palms, and harps divine.

Pope.

Great Tibbald nods : the proud Parnassian sneer, The conscious simper, and the jealous leer, Mix on his look. Id. Dunciad.

SIM’PLE, adj., n. s., & v. n.ˆ Fr. simple ;

SIM’PLENESS, n. s. j Latin simplex.

SIM’PLESS, I Plain ; single ;

SIM’PLETON,)> unmingled ;

SIMPLICITY, I uncompound—

SIM’PLIST, | ed ; hence art—

SIM’PLY, adv. J less ; sincere ;

harmless; unskilled; foolish: a-simple is a single ingredient ; an herb : as a verb neuter to gather simples : simpleness and simplicity mean the quality or state of being simple ; and the latter is more frequently used to express plainness; artlessness; singleness of character or purpose : also weakness ; silliness : simpless is Spenser’s word for

simplicity : a simpleton is a silly fellow ; a trifler ; a fool : a simplist, he who gathers simples or is particularly skilled in them : simply corresponds with simple, adjective.

How long, ye simple ones, will ye love simplicity, and fools hate knowledge ? Prow. i. 22.

The limple believeth every word ; but the prudent man looketh well to his going. Id. xv.

The sweet-minded Philoclea was in their degree of well-doing, to whom the not knowing of evil serveth for a ground of virtue, and hold their inward powers in better form, with an unspotted simplicity, than many who rather cunningly seek to know what goodness is, than willingly take unto themselves the following of it, Sidney. They meet upon the way

A simple husbandman in garments gray.

Hubberd's Tales.

Their weeds been not so nighly were, Such simplesse moght them shend, They been yclad in purple and pall, They reign and rulen over all. Spenser's Pastorals.

Under man, no creature in the world is capable of felicity and bliss; because their chiefest perfection consisteth in that which is best for them, but not in that which is simply best, as ours doth.

Hooker.

Were it not to satisfy the minds of the simpler sort of men, these nice curiosities are not worthy the la-bour which we bestow to answer them. Id.

They keep the reverend simplicity of ancienter ' times. Id.

I am a simple woman, much too weak To oppose your cunning. Shakipeare. Henry VIII,

In low timplicity

He lends out money gratis, and brings down The rate of usance. Shakspeare.

I will hear that play : For never any thing can be amiss, When simpkness and duty tender it. Id.

Our foster nurse of nature is repose The which he lacks ; that to provoke in him, Are many simples operative, whose power Will close the .eye of anguish. Id. King Lear.

I will eat and drink, and sleep as soft As captain shall : simply the thing I am Sliall make me live. Slialtspeare.

To make the compound pass for the rich meta!- simple, is an adulteration or counterfeiting. Bjcon.

Marquis Dorset, a man for his harmless simplicity neither misliked nor much regarded, was created duke. Hat/ward.

Of simples in these groves that grow,

We'll learn the perfect skill ; The nature of each herb to know, Which cures and which can kill.

Drayton's Ci/nth.

Those enter into farther speculation therein, which is the itch of curiosity, and content not themselves with the simplicity of that doctrine, within which this church hath contained herself.

Hammond's Fundamentals.

Such perfect elements may be found in these four known bodies that we call pure ones ; for they are least compounded, and approach most to the simpleness of the elements. Digby.

Suspicion sleeps

At wisdom's gate, and to simplicity Resigns her charge. Milton.

He would ope his leathern scrip, And shew me simples of a thousand names, Telling their strange and vigorous faculties. Id. Accomplishing great things by things deemed

weak ;

Subverting worldly strong and worldly wise By simply meek. Id. Paradise Lost.

Mandrakes afford a papaverous unpleasant odour in the leaf or apple, discoverable in their simplicity and mixture. Browne's Vulgar Errotirs.

A plant so unlike a rose, it hath been mistaken by some good simplists for amomum. Id.

What virtue is in this remedy lies in the naked simple itself, as it comes over from the Indies.

Temple.

Medicine is mine : what herbs and simples grow In fields and forests, all their powers I know.

Dry den.

They represent our poet, when he left Mantua for Rome, dressed in his best habit, too fine for the place whence he came, and yet retaining part of its simplicity. Id.

A country farmer sent his man to look after an ox ; the simpleton went hunting up and down.

L'Estrange.

We are led to conceive that great machine of the world to have been once in a state of greater simplicity than now it is, as to conceive a watch once in its first and simple materials. Burnet.

0 Ethelinda,

My heart was made to fit and pair with thine, Simple and plain, and fraught with artless tenderness.

Rowe.

As once the foaming boar he chased, Lascivious Circe well the youth surveyed, As simpling on the flowery hills he strayed. Garth.

Dick, simple odes too many show ye My servile complaisance to Chloe. Prior.

Those letters may prove a discredit, as lasting as mercenary scribblers, or curious simpletons, can make it. P°P*-

Of manners gentle, of affections mild ; In wit a man, simplicity a child. Id.

Among substances, some are called simple, some compound, whether taken in a philosophical or vul-gar sense. If we take simple and

compound in a vulgar sense, then all those are simple substances which are generally esteemed uniform in their natures : so every herb is called a simple, and every metal a mineral ; though the chymist perhaps may find all his several elements in each of them.

Watti'i Logick.-

Let Newton, pure intelligence, whom God To mortals lent, to trace his boundless works, From laws, sublimely timple, speak thy fame la all philosophy. Thomson'* Summer.

In simple manners all the secret lies ; Be kind and virtuous, you'll be blest and wise.

Young.

SIMPLE, in the rriateria medica, is a general name for all herbs, as having each its particular virtue, whereby it becomes a simple remedy.

SIMPLE WORDS, in grammar, stand opposed to compound : a simple word is denned ' that which was never more than one.'

SIMPLICITY i» WRITING. If we examine the writers whose compositions have stood the test of ages, and obtained that highest honor, ' the concurrent approbation of distant times and nations,' we shall find that the character of simplicity K the unvarying circumstance which alone has been able to gain this universal homage from mankind. Among the Greeks, whose writers in general are of the simple kind, the divinest poet, the most commanding orator, the finest historian, and deepest philosopher, are, above the rest, conspicuously eminent in this great quality. The Roman writers rise towards perfection according to that measure of simplicity which they mingle in their works ; though indeed they are all inferior to the Greek models. Lucretius, Horace, Virgil, Livy, Terence, Tully, Tacitus, are at once the simplest and best Roman writers. This one circumstance has

raised the venerable Dante above the succeeding poets of his country, who could never long maintain the local and temporary honors bestowed upon them ; but have fallen under that just neglect, which time will ever decree to those who desert a just simplicity for the florid colorings of style, contrasted phrases, affected conceits, the mere trappings of composition and Gothic minutiae. This has given to Boileau the most lasting wreath in France, and to Shakspeare and Milton in England ; especially to the former, whose writings contain specimens of perhaps the purest and simplest English that is any where to be found, except in the Bible. As simplicity is the only univeral characteristic of just writing, so the superior eminence of the sacred Scriptures in this quality has been generally acknowledged. Longinus, one of the greatest critics in antiquity, himself conspicuous in the sublime and simple manner, has borne this testimony to the writings of Moses and St. Paul. It has been observed by some writers that the ‘ Scriptures suffer in their credit by the disadvantage of a literal version, while other ancient writers enjoy the advantage of a free and embellished translation.’ But the truth is, * that most other writings are impaired by a literal translation; whereas, giving only a due regard to the idiom of different languages, the sacred writings, when literally translated, are then in their full perfection.’ This is an internal proof that in all other writings there is a mixture of local, relative, exterior ornament, which is often lost in the transfusion from one language to another. But the internal beauties which depend not on the particular construction of tongues, no change of tongue can destroy. Hence the Bible preserves

its native beauty and strength alike in every language, by the sole energy of unadorned phrase, natural images, weight of sentiment, and great simplicity. It is in this respect like a rich vein of gold, which, under the severest trials of heat, cold, and moisture, retains its original weight and splendor, without loss or alloy ; while baser metals are corrupted by earth, air, water, fire, and assimilated to the various elements through which they pass. This circumstance, then, may be justly regarded as at once the excellence and security of the Scriptures. It is their excellence, as it renders them intelligible and useful to all ; it is their security, as it prevents their being disguised by the false and capricious ornaments of vain or weak translators. We may appeal to experience for the confirmation of these remarks on the superior simplicity, utility, and excellence of the style of the Holy Scripture. No book in the world is so perfectly adapted to all capacities; or contains such sublime and exalted precepts, conveyed in such an artless and intelligible strain, that can be read with such

pleasure and advantage by the lettered sage and the unlettered peasant.

As to simplicity in painting and sculpture, the great masters have sometimes produced works the composition of which is extremely rich, but only when the subject necessarily demanded such profusion. When Poussin painted the gathering ot manna by the Israelites in the desert, he could not limit himself to a small number of figures. But often, in the finest specimens of pictorial art, a single group, composed of four or five figures, is found sufficient to tell an interesting story, and to display the most consummate ability in the artist. In order to attain this most desirable quality, the artist should take care to propose to himself one great aim, one principal point de vue, to which every thing else should be subordinate. The grand style presupposes simplicity in all its parts : — in subject, in forms, in attitudes, in composition, in ordonnance, in accessories, &c. It presupposes also a great mind in him who practises — a high taste in him who appreciates and applauds it.

On simplicity in painting we may read with advantage the second of Hagedorn's Considerations surla Peinture. On simplicity in architecture we may consult the third book of the first volume of the Principes de 1'Architectuie Civile, by Milizia.

SIMPLICIUS, an ancient philosopher, born in Silicia, or, as Dr. Watkins says, in Phrygia, in the end of the fifth century. He was a follower of Ainmonius, and like him a firm adherent to Paganism. He was one of those, who, thinking themselves not safe under Justinian, went with Areobindus to Cosroes, king of Persia ; but, he not answering their expectation, they returned to Athens, A. D. 549, after stipulating for liberty to adhere to the religion of their ancestors. He was a professor of the peripatetic philosophy, and wrote commentaries upon Aristotle's works, some of which are lost ; but of all that are extant none is more highly valued than his Commentary upon Epictetus ; which has been often printed in Greek and Latin. His whole works were published at Leyden, in 1640. He died about 566.

S I M S O N.

SIMPUCIUS (St.), pope of Rome, was born at Tivoli, went through the usual clerical education and gradation of offices in the church ; and was at last, on the death of pope Hilary, elected into the pontifical chair, A. D. 468. He was very learned for the age he lived in ; and eighteen of his letters have been published and esteemed. He died in 483, and was succeeded by Felix III.

SIMPLON, or SIMPELN, the great Alpine barrier which separates the south of Switzerland from the Piedmontese territory. The old road across being impracticable for heavy carriages, a new one was formed at the joint expense of France and the kingdom of Italy, in the reign of Buonaparte. It was a work of great labor, and occupied several years ; to avoid steepness of as-cent, it was made more circuitous than heretofore ; and from the small town of Glis, or Glys, near Brieg, where it begins, to Dorno d'Ossola on the Italian side, where it ends, the distance is about thirty-six English miles, which may be travelled in eleven hours with a change of horses, or in fifteen hours allowing an interval for rest. The breadth of the road is no where less than twenty-five feet, and parapets are erected along the brinks of the precipices, around which it winds. The hazard, particularly in spring, is from the occasional descent of avalanches. From this cause, and from the masses of earth and stone detached from the high grounds after heavy rains, the road is exposed to periodical injury, and an expense of from £2000 to £3000 a-year is necessary to keep it in repair. It forms the usual access to the central part of Lombardy, in the same man-ner as Mont Cenis to the west of Piedmont. The scenery is awful, and the road goes through no less than six galleries or passages, cut through the superintending rocks. The highest point of the road is nearly 6000 feet above the level of the sea, and the top of the mountain is seen rising 5000 feet above this.

SIMPSON (John), M. A., a learned Scottish professor, born near Dumfries, in 1677, and educated at the University of Glasgow, where he graduated. He was afterwards appointed professor of divinity in that university ; but having published some tracts wherein he ventured to inculcate opinions different from those of the established church, respecting the doctrine of the Trinity, he was, after a legal process of ten years before the various judicatories of the church, at last formally deposed and excommunicated by the venerable assembly. The late queen Caroline, considering him as a sufferer for matters of principle and conscience, exerted herself so zealously in his favor, that a pension, equal to his former salary, was settled upon him for life. He died at Edinburgh in 1744.

SIMPSON (Thomas), F. R. S., professor of mathematics at the Royal

Academy at Woolwich, and member of the Royal Academy at Stockholm, was born at Market Bosworth in Leicestershire, in 1710. His father, a stuff weaver, taught him only to read English, and brought him up to his own business ; but meeting with a scientifical pedlar, who likewise practised fortune-telling, young Simpson, by his assistance and advice, left off weaving, and professed astrology.

As he improved in knowledge, however, he grew disgusted with his pretended art ; and, renouncing it, was driven to such difficulties for the subsistence of his family that he went to London, where he worked as a weaver, and taught mathematics at his spare hours. As his scholars increased, his abilities became better known, and he published his Treatise on Fluxions, by subscription, in 1737 ; in 1740 he published his Treatise on the Nature and Laws of Chance; and Essays on Speculative and Mixed Mathematics. After these appeared his doctrine of Annuities and Reversions; Mathematical Dissertations ; Treatise on Algebra ; Elements of Geometry ; Trigonometry, Plane and Spherical ; Select Exercises; and his Doctrine and Application of Fluxions. In 1743 he obtained the mathematical professorship at Woolwich academy; and soon after was chosen F.R.S. In teaching he had a dignity and perspicuity, tempered with such mildness, as engaged the attention and friendship of his scholars, and gained applause from his superiors. His application and close confinement, however, injured his health; his spirits sunk gradually, till he became incapable of reading the letters of his friends. At length his physicians advised his native air for his recovery, and he set out in February 1 761 ; but was so fatigued, that upon his arrival at Bosworth, he grew continually worse till he died, May 14th, aged fifty-one.

SIMSON (Dr. Robert), professor of mathematics in the university of Glasgow, was born in 1687, of a respectable family, which had held a small estate in the county of Lanark for some generations. He was the second son. He was educated in the university of Glasgow, under some of his relations, and soon became an adept in the philosophy and theology of the schools, in the oriental languages, and in botanical and historical knowledge. During his theological studies, mathematics engaged his fancy. When tired with speculations, in which he did not meet with certainty to reward his labors, he had recourse to mathematics which never failed to refresh him. At last a prospect began to open of making them his profession. He preferred the ancient method of studying pure geometry, and even felt a dislike to the Cartesian method of substituting symbols for operations of the mind, and still more to their substitution for the very objects of discussion,

for lines, surfaces, solids, and their affections. He was rather disposed, in the solution of an algebraic problem, where quantity alone was considered, to substitute figure and its affections for the algebraic symbols, and to convert the algebraic formula into an analogous geometrical theorem. And he came at last to consider algebraic analysis as little better than a kind of mechanical knack, in which we proceed without ideas of any kind, and ob-tain a result without meaning, and without being conscious of any process of reasoning, and therefore without any conviction of its truth. And surely, if genuine unsophisticated taste alone is to be consulted, Dr. Simson was in the right : for, though the reasoning in algebra is as strict as in the purest geometry of Euclid or Apollonius, the expert analyst has little perception of it

as he goes on, and his fnal equation is not felt by himself as the result of ratiocination, any more than if he had obtained it by Pascal's Arithmetical mill. Such, however, was the strong bias of Dr. Simson to the analysis of the ancient geometers. It increased as he went forward ; and his veneration for the ancient geometry was carried to a degree of idolatry. His chief labors were exerted in efforts to restore the works of the ancient geometers ; and he bestowed little pains upon modern discoveries. The noble inventions of fluxions and logarithms attracted the notice of Dr. Simson ; but he contented himself with demonstrating their truth on the genuine principles of the ancient geometry. About the age of twenty-five Dr. Simson was chosen regius professor of mathematics in the university of Glasgow. He went to London immediately after, and there formed an acquaintance with the most eminent men of that bright era of British science. Among these he always mentioned Dr. Halley with particular respect. He also admired the wide and masterly steps which Newton took in his investigations. He often remarked, 'That the thirty-ninth proposition of the first book of the Principia was the most important proposition that had ever been exhibited to the physico-mathematical philosopher ; ' and he used to illustrate the superiority of the geometrical over the algebraic analysis, by comparing the solution given by Newton of the

inverse problem of centripetal forces in the forty-second proposition of that book with the one given by John Bernouilli in the Memoirs of the Academy of Sciences at Paris for 1713. Returning to his academical chair, Dr. Simson discharged the duties of a professor for more than fifty years. In his prelections he followed strictly the Euclidian method in elementary geometry. He made use of Theodosius as an introduction to spherical trigonometry. In the higher geometry he prelected from his own Conies ; and he gave a specimen of the linear problems of the ancients, by explaining the properties of the conchoid and the cissoid, with their proper application. In the advanced class he gave Napier's mode of conceiving logarithms, i. e. quantities as generated by motion ; and Mr. Cotes's view of them, as the sums of ratiunculffi ; demonstrated Newton's lemmas on the limits of ratios ; then gave the elements of the fluxionary calculus ; and finished his course with select propositions in optics, gnomonics, and central forces. His method of teaching was simple and perspicuous, and his manner impressive. He had the affection of his scholars. He said that it was owing to Dr. Halley, who gave him a copy of Pappus with his own notes, that he so early directed his efforts to the restoration of the ancient geometers. The perspicuity of the ancient geometrical analysis, and the elegance cf the solutions it affords, especially by the local theorems, took hold of his fancy, and made him direct his efforts to the recovery of this in toto ; and the restoration of Euclid's Porisms was the first task which he set himself. The accomplished geometer knows what a desperate task this was, from the scanty and mutilated account which we have of this work in a single passage of Pappus.

See PORISM. He succeeded; and so early as 1718 seemed to have been in complete possession of this method. He gave a specimen of his discovery in 1723, in the Philosophical Transactions. Having thus gained his favorite point, he turned his attention to the more ancient geometers. The loci plani of Apollonius he completed about 1738; but, after it was printed, he imagined that he had not given the ipsissimce propositiones of Apollonius, and it was with great reluctance that he yielded to the intreaties of his friends, and published the work in 1746 as the restitution of Apollonius. He had published his Conic Sections, a work of uncommon merit, whether considered as a complete restitution of the work of Apollonius Pergoeus, or not. Much about this time Dr. Simson seriously began to prepare his edition of Euclid's Elements. The intimate acquaintance he had now acquired with all the original works of the ancient geometers, and their ancient commentators and critics, encouraged him to hope that he could restore to his original lustre this leader in mathematical science ; and

the errors which had crept into this celebrated work, and which still remained in it, appeared of magnitude sufficient to merit the most careful efforts for their removal. The Data also of Euclid had fortunately been preserved, but the book was neglected, and the only ancient copies, which are but three or four, are miserably erroneous. Dr. Simson made it a joint task with the elements. All the lovers of true geometry will acknowledge their obligations to him for the edition of the Elements and Data which he published about 1758. The text is corrected with the most judicious and scrupulous care, and the notes are inestimable. The accomplished reader will perhaps smile at the axiom which seems to pervade the notes, ‘ that a work of Euclid must be supposed without error or defect.’ If this was not the case, Euclid has been obliged to his editor in more instances than one. There is another work of Apollonius ou which Dr. Simson bestowed great p-\ins, and restored omnibus numeris perfectum, *viz.* the Sectio deter-minata; one of those performances which are of indispensable use in the application of the ancient analysis. This also seems to have been an early task. It did not appear till after his death, being then published along with the great work, the Porisms of Euclid, at the expense of the late earl Stanhope, a nobleman intimately conversant witli the ancient geometry, and who had kept up a constant correspondence with the doctor on mathematical subjects ; and at his death, in 1768, engaged professor Clow, to whose care the doctor had left all his valuable papers, to make a selection of such as would serve to support and increase his reputation as the restorer of ancient geometry. Dr. Simson’s supposition, that Euclid’s original work was a perfect work, has very probably made the doctor fail of his anxious purpose, and give us even a better than the original. His admiration of the ancient analysis is the prominent feature of his literary character. Yet Dr. Simson’s predilection for the geometrical analysis of the ancients did not so far mislead him as to make him neglect the symbolical analysis of the present times; on the

• contrary, he was completely master 01” it, and frequently employed it. He spoke in high terms of the analytical works of Mr. Cotes, and of the two Bernouillis, as well as of an improvement of the infinitesimal calculus by D’Alembert and De la Grange. That Dr. Simson was master of this calculus, in general, appears from two valuable dissertations in his posthumous works j the one on logarithms, and the other on the limits of ratios. Having never married, he lived entirely a college life ; and thus, instead of the commodious house to which his place in the

university entitled him, he contented himself with chambers, good indeed, and spacious enough, but without any decoration. His official servant sufficed for valet, footman, and chambermaid. As this retirement was devoted to study, he entertained no company, but in a neighbouring house, where his apartment was sacred to him and his truests. Retired from promiscuous intercourse, he contented himself with a small society of intimate friends, with whom he could lay aside every restraint, and indulge in all the innocent frivolities of life. Every Friday evening was spent in a party at whist, in which he excelled. The card-party was followed by an hour or two of playful conversation. Every Saturday he had a less select party to dinner at a house about a mile from town. The doctor's long life enabled him to see the dramatis personse of this little theatre several times completely changed, while he continued to give it a personal identity : so that it became, as it were, his own house ; and he, as its father and head, was respected and beloved by all. He never exerted his presidial authority, unless to check some infringement of good breeding, religion, or purity of manners ; for these he had the highest reverence. Having a fine voice, and most accurate ear, he sometimes sung some lines of a Latin hymn to the divine geometer, with a kind of celestial rapture. Dr. Simson was of an advantageous stature, with a fine countenance ; and, even in his old age, had a graceful carriage, and always, except when in mourning, dressed in white cloth. He was of a cheerful and affable disposition ; and strangers were at perfect ease in his company. He enjoyed a long course of uninterrupted health, and died in 1768, aged eighty-one. He left to the university his valuable library, which is considered as the most choice collection of mathematical books and MSS. in the kingdom, rendered doubly valuable by Dr. Simson's notes.

SIMSON (professor), a younger brother of the learned Dr. R. Simson. This gentleman was professor of medicine in the uni/ersity of St. Andrew's, and is famed for some works of reputation ; particularly a Dissertation on the Nervous System, occasioned by the Dissection of a Brain completely Ossified.

SIMUL CUM (together with), in English law, words used in indictments and declarations of trespass against several persons, where some of (hem are known, and others not known : as, the plaintiff declares against A. B. the defendant, together with C.D., E. F., and divers others unknown, for that they committed such a trespass, &c. 2 Li!. Abr. 469. If a writ is generally against two or more persons, the plaintiff may

declare against one of them, with a simul cum, but if a man bring an original writ against one only, and declares with a simul cum, he abates his own writ. Comber. 260.

SIM'ULAR, n. s. Lat. simulo. One that counterfeits. Obsolete.

Hidethee, thou bloody hand, Thou perjurer, thou simular of virtue, That art incestuous. Shakspeare. King Lear.

SIMULATION, ». s. Fr. simulation ; Lat. simulutio. That species of hypocrisy which pretends that to be which is not.

Simulation is a vice rising of a natural falseness, or Tearfulness ; or of a mind that hath some main faults ; which, because a man must needs disguise, it maketh him practise simulation. Bacon.

For the unquestionable virtues of her person and mind, he well expressed his love in an act and time of no simulation towards his end, bequeathing her all his mansion-houses, and a power to dispose of his whole personal estate. Wotton.

For distinction sake, a deceiving by word is commonly called a lye ; and deceiving by actions, gestures, or behaviour, is called simulation or hypocrisy.

South.

SIMULTANEOUS, adj. Lat. simultaneus. Acting together ; existing at the same time.

If the parts may all change places at the same time, without any respect of priority or posteriority to each other's motion, why may not bullets, closely crowded in a box, move by a like mutual and simultaneous exchange ! Glanville.

SIMULUS, an ancient Latin poet, who wrote a poem on the Tarpeian rock. Plut. in Rom.

SIMYRA, an ancient town of Phoenicia.

SIN, n. s. "\ Sax. fyn; Goth, synia.

SIN'FUL, adj. An act against or in con—

SIN'FULLY, adj. tempt of the laws of God.

SIN’FULNESS, n. s. ; > See below. Used by

SIN’LESS, adj. Shakspeare for a very

SIN’LESSNESS, n. s. wicked man: to sin is so

SIN’NER. J to act; to offend against

right: the derivatives all corresponding.

The flesh of the bullock shalt thou burn without the camp : it is a sin offering. Ex. xxix. 14.

Stand in awe and sin not. Psalm iv. 14.

He shall ask, and he shall give him life for them that sin not unto death. 1 John, v. 16.

Thrice happy man, said then the father grave, Whose staggering steps thy steady hand doth lead,

And shews the way his tinful soul to save, Who better can the way to heaven read.

Faerie Qaeene.

All this from my remembrance brutish wrath Sinfullii plucked, and not a man of you Had so much grace to put it in my.mind.

Shakspeare. Richard Iff.

Here’s that which is too weak to be a tinner, honest water, which never left man i’ th’ mire.

Id. Timon.

It is great sin to swear unto a MB, But greater «n to keep a sinful oath. Shakspeare.

But those that sleep, and think not on their sim, Pinch them. Id. Merry Wives of Windsor.

Thy ambition,

Thou scarlet sin, robbed this bewailing land Of noble Buckingham. Mi Henry VIII.

I am a man More sinned against than sinnitia. Shakspeare.

Light from her thought, a summer's careless robe Fell each affection of this sin-worn globe. Brooke.

Is there no means, but that a sin-sick land Should be let blood with such a boisterous hand ?

Daniel.

Dishonest shame

Of nature's works : honour dishonourable, Sin-bred, how have ye troubled all mankind !

Milton.

Nature herself, though pure of sinful thought, Wrought in her so, that seeing me, she turned. Id.

I am sent

To shew thee what shall come in future days To thee, and to thy offspring : good with bad Expect to hear ; supernal grace contending With sinfulness of men. Id.

Infernal ghosts and hellish furies round Environed thee; some howled, some yelled, some

shrieked,

Some bent at thee their fiery darts, while thou Sat'st unappalled in calm and tiniest peace. Id. We may the less admire at his gracious condescensions to those, the sinlessness of whose condition will keep them from turning his vouchsafements into any thing but occasions of joy and gratitude.

Boyle's Seraphick Love.

No thoughts like mine his sinless soul profane, Observant of the right. Dryden's Ovid.

Over the guilty then the fury shakes The sounding whip, and brandishes her snakes, And the pale sinner with her sisters takes. Dryden.

The Stoicks looked upon all passions as rinful defects and irregularities, as so many deviations from right reason, making passion to be only another word for perturbation. South.

The humble and contented man pleases himself innocently and easily, while the ambitious man attempts to please others sinfully and difficultly, and perhaps unsuccessfully too. Id.

Let the boldest tinner take this one consideration along with him when he is going to sin, that, whether the sin he is about to act ever come to be pardoned or no, yet, as soon as it is acted, it quite turns the balance, puts his salvation upon the venture, and makes it ten to one odds against him. Id.

Did God, indeed, insist on a sinless and unerring observance of all this multiplicity of duties, had the Christian dispensation provided no remedy for our lapses, we might cry out with Balaam, Alas! who should live, if God did this t Rogers.

Peevishness, the general fault of sick persons, is equally to be avoided for the folly and sinfulness.

Wake.

Whether the charmer tinner it or saint it, If folly grows romantick, I must paint it. Pope.

And who but wishes to invert the laws Of order, sin* against the eternal cause.

Id. Essay on Man.

Vice or virtue chiefly imply the relation of our actions to men in this world ; *in and holiness rather imply their relation to God and the other world.

Watts's Logick.

Sad waste ! for which no after thrift atones ; The grave admits no cure for guilt or sin ; Dewdrops may deck the turf that hides the bones, But tears of godly grief ne'er flow within.

Cottrper.

Never consider yourselves as persons that are to be seen, admired, and courted by men ; but as poor sinners, that are to save yourselves from the vanities and follies of a miserable world, by humility, devotion, and self-denial. Law. SIN, in theology, has been defined to be any want of conformity to the law of God, and under this definition are comprehended both the sins of omission and of commission. Plato defines sin to

be something void, both of number and measure : by way of contradiction to virtue, which he makes to consist in musical numbers ! Simplicius, and after him the schoolmen, assert that evil is not any positive thing, contrary to good ; but a mere defect and accident. Sins are distinguished into original and actual.

Original sin has been divided by some divines into inherent and imputed : the former term being used to denote that corruption or degeneracy of nature which is said to be propagated by the laws of generation from the first man to all his offspring, by reason of which man is utterly indisposed, disabled, and made opposite unto all that is spiritually good, and wholly inclined to all evil, and that continually. Hence, it is said, proceed all actual transgressions. The general cause and ground of this propagation of a sinful nature are referred originally to man's common interest in the guilt or condemnation of Adam's first sin ; but the manner in which this hereditary corruption is conveyed is not particularly explained, though some have supposed that it may result from the constitution of the body, and the dependence of the mind upon it. Malebranche accounts for it from men at this day retaining in the brain all the traces and impressions of their first parents ! All animals, he argues, produce their like, and with like traces in the brain ; whence it is that animals of the same kind have the same sympathies and antipathies, and do the same things on the same occasions ; and our first parents, after their transgression, received such deep traces in the brain by the impression of sensible objects, that it was very possible they might communicate them to their children. Now as it is necessary, according to the order established by nature, that the thoughts of the soul be conformable to the traces in the brain, it may be said that, as soon as we are formed

in the womb, we are infected with the corruption of our parents ; for, having traces in the brain like those of the persons who gave us being, it is necessary we have the same thoughts, and the same inclinations, with regard to sensible objects. Thus, of course, we must be born with concupiscence and original sin. With concupiscence, if that be nothing but tbe natural effort the traces of the brain make on the mind to attach it to s«n-sible things ; and with original sin, if that be nothing but the prevalency of concupiscence ; nothing, in reality, but these effects considered as victorious, and as masters of'the mind and heart of the child.

Imputed original sin denotes that guilt or obligation to punishment to which all the posterity of Adam are subject by the imputation of his transgression. This is called the guilt of Adam's first sin, in which the sinfulness of that state into which man fell, is said partly to consist ; and it is denominated original sin, in order to distinguish it from actual sin, or personal guilt. This doctrine of imputed guilt has been explained and vindicated by supposing a covenant made with Adam (called by divines the covenant of works,) as a public person, not for himself orrly, but for his posterity, in consequence of which he became the federal head, surety, or representative of all mankind •

and they, descending from him by ordinary generation, sinned in him, and fell with him, in his first transgression. It has been debated how far the imputation of Adam's sin reaches: some have maintained that it extends to final condemnation, and eternal misery : others have suggested that the sin of Adam has subjected his posterity to an utter extinction of being ; so that all who die in their infancy fall into a state of annihilation, excepting those who are the seed of God's people, who, by virtue of the blessings of the covenant made with Abraham, and the promise to the seed of the righteous, shall, through the grace and power of Christ, obtain a part in a happy resurrection, in which other infants shall have no share. It seems best to acknowledge, says Dr. Doddridge, that we know nothing certain concerning the state of infants, and therefore can assert nothing

positively ; but that they are in the hands of a merciful God, who, as he cannot consistently with justice and truth give them a sense of guilt for an action they never committed, so probably will not hold their souls in being merely to make them sensible of pain for the guilt of a remote ancestor, their existence in a state of everlasting insensibility (which was Dr. Ridgley's scheme) seems hardly intelligible; we must, therefore, either fall in with the abovementioned hypothesis, or suppose them all to have a part in the resurrection to glory, which seems to put them all on a level, without a due distinction in favor of the seed of believers ; or else must suppose they go through some new state of trial, concerning which the Scripture is wholly silent. Such is the doctrine of original sin, both inherent and imputed, as some divines, eminent as scholars and theologians, have stated it. In proof of their view of the depravity of human nature they have appealed to observation and experience, and referred to a variety of texts of Scripture, in which, according to their ideas of them, it is either implied or expressed. Those who maintain that the sin of Adam is imputed to all who descend from him in the way of ordinary generation, allege, in proof of this opinion, that we are all born with such constitutions as will produce some evil inclinations, which we probably should not have had in our original state ; which evil inclinations are represented in Scripture as derived from our parents, and therefore may be ultimately traced up to the first sinful parents from whom we descended ; — that infants are plainly liable to diseases and death, though they have not committed any personal transgression, which, while they cannot know the law, it seems impossible they should be capable of (Rom. v.l 2 — 14) ; — that the seeds of diseases and death were undoubtedly derived to children from their immediate parents, and from them may be traced up to the first diseased and mortal parent, i. e. Adarn; — that the Scripture teaches us to consider Adam as having brought a sentence of death upon his whole race, and expressly says that many were Constituted sinners, i. e. on account of it are treated as such (1 Cor. xv. 22; Rom. v. 12—19) ;— that the sin of Adam brought upon himself depraved inclinations, an impaired constitution, and at length death : — and there is no reason to believe that if man had continued in a state of innocence his

offspring would have been thus corrupt, and thus calamitous from their birth. Hence it has been inferred that the covenant was made with Adam», not only for himself, but in some measure for his posterity ; so that he was to be considered as the great head and representative of all that were to descend from him. On the other

hand, many divines have disputed the validity of the arguments alleged in proof of the doctrine of original sin; and whilst some of them have disowned the doctrine in toto, as irrational and unscriptural, others have allowed that part of it which comprehends the depravity of the human species, but have rejected the imputation of Adam's sin to his posterity.

Limborch, rejecting and refuting the imputation of Adam's sin, acknowledges that men are now born less pure than Adam was created, and with a certain inclination to sin ; but this inclination cannot properly be called sin, or a habit of sin propagated to them from Adam ; but merely an inclination to esteem and pursue what is agreeable to the flesh, arising from the bodily constitution transmitted to them by their parents. Inclinations and appetites of this kind, being most agreeable to the flesh, are contrary to the divine will, as God, by prohibiting them, tries the readiness of our obedience, and of course these inclinations are inclinations to sin. But if it be asked, says this author, whether there be in human nature a certain original corruption or habit of sin propagated from Adam to his posterity, which may truly and properly be called sin, by which the understanding, and will, and all the affections are so depraved that they are inclined only to evil, and that all mankind are by nature subject to the wrath of God, such kind of corruption is consistent neither with Scripture nor with right reason. The Scripture, he says, teaches no such doctrine as that which charges infants with a moral corruption that is truly and properly sin. See Deut. i. 39; Jonah iv. 11 ; Rom. ix. 11. Our Saviour recommends it to his disciples to be as little children. See also 1 Cor. xiv. 20. This notion, says Limborch, is contrary to the justice of God, who would not punish men with this moral corruption, from which all actual sins proceed, and which leads to future perdition and misery. God cannot be the author of sin. Besides it cannot be conceived how this sin can be propagated ; it cannot belong to the mind, which proceeds immediately from God ; nor can it exist in the body, which is incapable of sin. But, as diseases may be propagated, so may a peculiar temperament or constitution, and together with this an inclination to certain objects, which, immoderately indulged, may be-come sinful, but is not sinful in itself. Moreover, no sin is liable to punishment which is involuntary ; but original corruption is involuntary. Limborch explains many texts, and refutes many arguments, urged by the advocates of original sin. Another writer (Dr. Taylor), who has taken a lead in this controversy on the same side of the question, proceeds, in the examination of the doctrine of original sin, upon the same plan with Dr. Clarke in his ' Scripture Doctrine of the Trinity, ' by citing and explaining all those

passages of Scripture which expressly speak of the consequences of the first transgression.

lie observes that the consequences of the first transgression are spoken of certainly and plainly but five times in the whole Bible, twice in the Old, and thrice in the New Testament. The first passage is Gen. ii. 17. In this passage, he says, death is opposed to life, and must be so understood. But not one word occurs in this text relating to Adam's posterity. 2. The consequences of the transgression of Adam and Eve are related in Gen. iii. from the seventh verse to the end of the chapter. The natural consequences were shame and fear, the common effects of guilt, which was personal, and could belong only to themselves. The judicial consequences pertained either to the serpent, the wo-man, or the man. As far as they relate to the man, Adam became obnoxious to death, which, as our author conceives, was death in law, or eternal death ; and, if the law had been immediately executed, his posterity then included in his loins must have been extinct. But it is alleged that there is not a word of a curse upon the souls of our first parents, i. e. upon the powers of their minds ; nor does the least intimation occur with respect to any other death, besides that dissolution which all mankind undergo, when they cease to live in this world. It is also observed that we, their posterity, are in fact subject to the same afflictions and mortality here inflicted by sentence upon our first parents; but they are not inflicted as punishments for their sin, because punishment includes guilt ; but we neither are, nor in the nature of things could be, guilty of their sin. We may suffer by their sin, and actually do suffer by it ; but we are not punished for their sin, because we are not guilty of it ; and this suffering is eventually a good. Accordingly it appears evident in our world, that the increase of natural evil (at least in some degree) is the lessening of moral evil. 3. The third text occurs in the New Testament, *viz.* 1 Cor. xv. 21, 22. Here it is said, the death from which all mankind shall be released at the resurrection, is the only death that came upon all men in consequence of Adam's sin ; that as all men die, all men are mortal ; all lose their life in Adam, and from him our

mortality commences ; and it is equally undeniable that by Christ came the resurrection of the dead. From this place we cannot conclude, says our author, that any other evil or death came upon mankind in consequence of Adam's first transgression, besides that death from which all mankind shall be delivered at the resurrection, whatever that death be. 4. The most difficult passage is that which occurs in Rom. v. 12 — 19. A popular advocate of the doctrine of original sin (Dr. Watts) thinks that Adam's being a federal head, and our deriving a sinful nature from him, may be collected from this text. In this passage our author apprehends that the apostle is speaking of that death which takes place with regard to all mankind, when the present life is extinguished ; and that by judgment to condemnation, or a judicial act of condemnation, the apostle means the being adjudged to the fore-mentioned death. The words, ' as by one man's disobedience many were made sinners,' are (says Dr. Taylor) of the same signification with those in the foregoing

verse, ' as by the offence of one judgment came upon all men to condemnation ;' and therefore they mean nothing more nor less than that by one man's disobedience the many, that is, man kind, were made subject to death by the judicial act of God. The apostle, being a Jew, was well acquainted with the idiom of the Hebrew language ; and, according to that language, ' being made sinners' may very well signify being adjudged or condemned to death. See Exod. xxii. 9; Deut. xxv. 1 ; 1 Kings, viii. 32; Job, ix. 20, x. 2, xxxii. 3, xxxiv. 17, xl. 8; Ps. xxxvii. 33, xciv. 21 ; Prov. xvii. 15 ; Is. 1. 9, liv. 17. In the Greek text it is not fjtvovTo, became sinners but icar£<ra0jj(rav, were constituted sinners ; *viz.* by the will and appointment of the judge. Besides, it is here expressly said that the many, i. e. mankind, are made sinners, not by their own disobedience, but by the disobedience of another man ; and therefore they can be sinners in no other way than as they are sufferers. Upon the whole, our author thinks it plain that ' by one man's disobedience many were made sinners,' means that by Adam's offence, the many, i. e. mankind, were made subject to death by the judgment of God. In this passage there is an evident contrast or comparison between something which Adam did and its consequences, and something which Christ did and the consequences of that : by the former the many, i. e. all men, are brought into condemnation ; and by the latter, all men are justified unto life. The whole of the apostle's argument and assertion are supposed by our author to rest upon two principles ; *viz.* that it is by the one offence of Adam that death passed upon all men, and not by their own personal sins ; and again, that it is by the obedience of one, or the one act of

Christ's obedience (in his sufferings and death upon the cross), that all men are justified unto life, and not by their own personal righteousness. He adds, that through-cut the whole paragraph, the apostle says nothing of any federal relations or transactions either on the part of Adam or Christ, nor of our deriving a sinful nature from Adam. 5. The text 1 Tim. ii. 14 declares a fact, with regard to Eve, which needs no explanation.

Dr. Taylor, in the second part of his book, proceeds to examine other passages of Scripture, which some divines have applied to original sin, We shall here select two or three of the principal, that our readers may be able to form a judgment for themselves ; one is Ephes.ˆii. 3, ' and were by nature the children of wrath, even as others,' The apostle, our author apprehends, cannot mean that they were liable to divine wrath or punishment by that nature which they brought into the world at their birth. For this nature, whatever infirmities belong to it, is no other than God's own work or gift ; and he thinks that to assert that the nature which God gives us is the hateful object of his wrath, is little less than blasphemy against our good and bountiful Creator. In his address to the Ephesians, the apostle is not speaking of their nature, or the natural constitution of their souls and bodies, as they came into the world, but evidently of the vicious course of life they had led among the Gentiles. Nature frequently signifies an acquired nature which

men bring upon themselves by contracting either good or bad habits. Besides, by nature may here signify really, properly, truly ; for TIKVO., children, strictly signify the genuine children of parents by natural generation ; and figuratively the word denotes relation to a person or thing by way of friendship, regard, imitation, obligation, &c. ; so that ' children of wrath' are those who are related to wrath, or liable to rejection or punishment. The Ephesians, as the apostle tells

them, were rtxva Qvffti, natural genuine children of wrath, not by natural birth, or the natural constitution of their bodies or souls, but they were related to wrath in the highest and strictest sense, with regard to sin and disobedience:— Nature, in a metaphorical expression, signifying that they were really and truly children of wrath, i. e. stood in the strictest and closest relation to suffering. Another passage, sometimes referred to in connexion with this subject, *viz.* Rom. viii. 7, 8, contains not so much as a single word that can carry our minds to Adam, or any consequences of his sin upon us.

Gen. yi. 5, expresses the universal wickedness of the old world, but does not so much as intimate that our nature is corrupted in Adam ; for the historian does not charge their sin in any way upon Adam, but upon themselves : and besides, Noah is exempted out of the number of the corrupt and profligate ; but this could not have been the case if the alleged text is a good proof that by Adam's transgression the nature of all mankind is corrupted.

Ps. li. 5, 6, is another text which has been considered as of great importance in this controversy. ' I was shapen in iniquity, and in sin did my mother conceive me.' The word lfiV?in, which we translate shapen, signifies, says our author, to bring forth or bear. Is. li. 2 ; Prov. viii. 24, 25. Again, the word 'JfiOn', conceived me, properly signifies warmed me ; and the expression conveys the idea, not of his being conceived, but warmed, cherished, or nursed by his mother, after he was born. Accordingly, the verse is thus translated, ' Behold I was born in iniquity, and in sin did my mother nurse me ;' which has no reference to the original formation of his constitution, but is a periphrasis" for his being a sinner from the womb, and is as much as to say, in plain language, I am a great sinner; or I have contracted habits of sin. This, it is said, is a scriptural way of aggravating wickedness. See Ps. Iviii. 3 ; Isaiah xlviii. 8. In the whole psalm there is not one word about Adam, or the effects of his transgression upon us. The psalmist is charging himself with his own sin. But if the words be taken in the literal sense of our version, then it is manifest that he chargeth not himself with his sin and wickedness, bujt some other person. But our limits will not allow of our enlarging farther. Dr. Taylor's hypothesis has been ably examined, and, as many divines think, successfully refuted, by the acute Jonathan Edwards on Original Sin.

SIN.ZE, an ancient people of India, reckoned by Ptolemy the most eastern nation in the world.

SINAI, a mountain of Arabia, near the head of the Red Sea, the spot

history as that whence the Jewish law was given to Moses. It is situated in a vast desert, the few inhabited spots of which are occupied by hordes of Arabs, who render the road impassable, unless for a well defended caravan. The range to which Sinai belongs is called by the Arabs Jibbel Musa, and consists of several lofty summits, the valleys of which are composed of immense chasms, between rugged and precipitous rocks. At the foot of the mountain is the Greek convent of St. Catherine, founded in 1331 by William Bouldesell, and ever since affording hospitality to the few pilgrims who brave the perils of this road. It is situated on the slope of the mountain. The edifice is 120 feet in length, and almost as many in breadth, built of hewn stone, which, in such a desert, must have cost prodigious labor. The gate of entrance is never opened, unless on occasion of the visit of the archbishop. At all other times, men, as well as provisions, are introduced by a basket drawn up by a cord and pulley over the wall. The Arabs often fire upon the convent from the adjacent rocks we are told ; and, when they find the monks without the walls, will refuse to release them without a considerable ransom. There is an excellent garden at a little distance, reached by a subterraneous passage, secured by iron gates. The climate is temperate here, and snow falls in winter. The interior of the convent presents little remarkable, except the church of the Transfiguration. It is eighty feet long, and fifty-three broad, paved with marble, adorned with a variety of figures : that event is represented in mosaic. There are many lamps of gold and silver, and the great altar is gilt over. The ascdnt of the mountain beyond the convent is steep, and rendered practicable only by steps cut in the rock, or loose stones piled. The traveller, after a short ascent, comes to a delightful spring of fresh water, a little above which is a chapel dedicated to the Virgin Mary. Higher up is shown the impression made by the foot of the camel on which Mahomet was carried up to heaven, under the guidance of Gabriel ; but the Greeks acknowledge that this impression was made by themselves. The summit is marked by a Christian church and a Turkish mosque, the former of which was once much more extensive. It commands a most extensive view over the Red Sea and the opposite coast of the Thebais ; immediately beneath being Tor, once the main channel by which the commodities of India were conveyed to Egypt. The descent is steep and rough, and terminates at the monastery of the Forty Saints, which has suffered much from the depredations of the Arabs. On the other side of it is the mountain of St. Catherine, still loftier than Sinai, 150 miles southeast of Suez.

SINAPIS, mustard, in botany, a genus of plants belonging to the class of tetradynamia, and to the order of siliquosa; and in the natural system ranged under the thirty-ninth order, siliquosae. The calyx consists of four expanding strap-shaped deciduous leaves; the ungues or bases of the petals are straight ; two glandules between the shorter stamina and pistillum, also between the longer and the calyx. There are seventeen species: — 1. S. alba; 2. allioni; 3. ar-

vensis ; 4. brassicata ; 5. cernua ; 6. Chinensis ; 7. erucoides; 8. Hispanica; 9. Japonica; 10. In-cana; ll.Juncea; 12. liEvigata; 13. millefolia; 14. nigra; 15. orientalis ; 16. pubescens; and 17. Pyrenaica. Of these, three are natives of Britain; *viz.*

1. S. alba, white mustard, is generally cultivated as a salad herb for winter and spring use. This rises with a branched hairy stalk two feet high ; the leaves are deeply jagged on their edges, and rough. The flowers are disposed in loose spikes at the end of the branches, standing upon horizontal footstalks ; they have four yellow petals in form of a cross, which are succeeded by hairy pods, that end with long, compressed, oblique^ beaks ; the pods generally contain four white seeds.

2. S. arvensis grows naturally on arable land in many parts of Britain. The seed of this is commonly sold under the title of Durham mustard seed. Of this there are two varieties, if not distinct species ; the one with cut, the other with entire leaves. The stalks rise two feet high ; the leaves are rough ; in the one they are jagged like turnip-leaves ; in the other they are long and entire. The flowers are yellow; the pods are turgid, angular, and have long beaks.

3. S. nigra, common mustard, which is frequently found growing naturally in many parts of Britain, but is also cultivated in fields for the seed, of which the sauce called mustard is made. This rises with a branching stalk four or five feet high ; the lower le.ives are large, rough, and very like those of turnip ; the upper leaves are smaller and less jagged. The flowers are small, yellow, and grow in spiked clusters at the end of the branches ; they have four petals placed in form of a cross, and are succeeded by «mooth four-cornered pods. Mustard, by its acrimony and pungency, stimulates the solids, and attenuates viscid juices ; and hence stands deservedly recommended for exciting appetite, assisting digestion, promoting the fluid secretions, and for

the other purposes of the acrid plants called antiscorbutic. It imparts its taste and smell in perfection to aqueous liquors, and by distillation with water yields an essential oil of great acrimony. To rectified spirit its seeds give out very little either of their smell or taste. Subjected to the press, they yield a considerable quantity of mild insipid oil, which is as free from acrimony as that of almonds. They are applied as an external stimulant to benumbed or paralytic limbs ; to parts affected with fixed rheumatic pains; and to the soles of the feet, in the low stage of acute diseases, for raising the pulse : in this intention, a mixture of equal parts of the powdered seeds and crumb of bread, with the addition sometimes of a little bruised garlic, are made into a cataplasm with a sufficient quantity of vinegar.

SINAPISM (from sinapis), in pharmacy, an external medicine, in form of a cataplasm, composed chiefly of mustard seed pulverised, and other ingredients mentioned in the last article.

SINGAPORE, or SINGAPORE, a town and island in the Straits of Malacca, at the extremity of the peninsula of that name, upon which a British settlement was formed in 1819, under the direction of Sir Stamford Raffles, the lieute-

nant-governor of Bencoolen. The interior of the island is said to exhibit a succession of hills and dales covered with woods. The soil is fruitful, the water of good quality, and the temperature remarkably cool and healthy for a tropical region.

The town is, of course, but an infant settlement, but it is rapidly extending. It is built near the shore, the mercantile part extending along an inlet of the sea, which penetrates into the interior, and is nearly 300 feet wide at its mouth. The harbour is safe, easily approached, and well sheltered. Several mercantile houses of respectability are already established ; and there seems every reason to believe that, if maintained on ihe footing of a free port, Sincapore will at no distant day become one of the greatest emporiums of the east. Its situation, in the centre, so to speak, of a vast archipelago, in a strait through which the vessels of various countries are constantly passing, and within a few days' sail of China, clearly points it out as well fitted to become the entrepot of an extensive commerce. ' The rapid rise of this« important station,' says its founder, in a letter written in 1820, 'is, perhaps, without a parallel. When I hoisted the

British flag, the population scarcely amounted to 200 souls ; in three months the number was not less than 3000 ; and it now exceeds 10,000, principally Chinese. No less than 173 sail of vessels of different descriptions, principally native, arrived and sailed in the course of the first two months; and it already has become a commercial port of importance.'

The latest accounts with which we are acquainted are found in the Asiatic Journal for September, 1823 (No. 93, p. 245). It states in 1822 the tonnage was,

EXPORTS. Tons.

By ships .... Tons 51,076 i -fi Q/,ft By native vessels • • • . 15,892 5 '

IMPORTS.

By ships 48,037 }

By native vessels • • • • 15,624 \ '

Total tonnage 130,629 Number of vessels importing in!822 1,593 Ditto exporting ditto • • • • 1 ,733

Total 3,326 Value of imports in 1822. Drs.

By ships • Dollars 2,597,975 > „ g.

By native vessels • 1,012,231 5 ' ' Value of exports in 1822.

By ships .... 2,044,871 > ,

By native vessels • 1,127,461 5 "z'

Not included in official returns

6,782,538 1,713,634

Total dollars 8,496,172

SINCE, adv. & prep. Contracted from sithence, or sith thence, from Sax. rr&e. Because that ; from the time that ; before this : as a preposition, after.

Am not I thine ass, upon which thou hast ridden ever since I was thine unto this day 1

Numbers xxii. 30.

About two years since, it so fell out, that he was brought to a great lady's house. Sidney.

Spies held me in chace, that I was forced to wheel Three or four miles about ; else had I, Sir, Half an hour since, brought my report.

Shahspeare. Corialanus.

A law was made no longer lince than the twenty-eighth of Henry the Eighth.

Davies's History of Ireland.

He since the morning hour set out from heaven.

Milton.

How many ages since has Virgil writ ?

Roscommon.

If such a man arise, I have a model by which he may build a nobler poem than any extant since the ancients. Dryden.

Since the clearest discoveries we have of other spirits, besides God and our own souls, are imparted by revelation, the infoimation of them should be taken from thence. Locke.

Since truth and constancy are vain, Since neither love, nor sense of pain, Nor force of reason can persuade, Then let example be obeyed. Granmlle.

He is the most improved mind since you saw him that ever was. Pope.

SINCERE’, adj. -\ Fr. sincere ; Lat. j;inSINCERE’LY, adv. tcerus. Unhurt; unin-SINCERE’NESS, n. s. /jured ; pure; unmin-SINCER’ITY. * gled ; hence honest ;

artless ; uncorrupt : the adverb and noun substantive corresponding.

The purer and perfecter our religion is, the worthier effects it hath in them who stedfastly and sincerely embrace it. Hooker.

This top proud fellow,

Whom from the flow of gall I name not, but From sincere motions by intelligence I do know to be corrupt. Shahspeare. Henry VIII.

That you may, fair lady, Perceive I speak sincerely, the king’s majesty Does purpose honour to you. Id.

Nor troubled at these tidings from the earth, Which your sincerest care couldˆ not prevent ; Foretold so lately what would come to pass, When first this tempter crossed the gulf from hell.

Milton.

He tried a tough well chosen spear ; The inviolable body stood sincere. Dryden.

Pardon my tears, ‘tis joy which bids them flow, A joy which never was sincere till now ; That which my conquest gave I could not prize, Or ‘twas imperfect, till I saw your eyes. Id.

Jesus Christ has purchased for us terms of reconciliation, who will accept of sincerity instead of perfection ; but then this sincerity implies our honest endeavours to do our utmost. Rogers.

The pleasures of sense, beasts taste sincere and pure always, without mixture or allay ; without being distracted in the pursuit, or disquieted in the use of them. Atterburij.

Animal substances differ from vegetable, in that, being reduced to ashes, they are perfectly insipid, and Jn that there is no rincere acid in any animal juice. Arbuthnot on Aliments.

In English I would have all Gallicisms avoided, that our tongue may be sincere, and that we may keep to our own language. Felton on the Clasticks.

The more sincere you are, the better it will fare with you at the great day of account. In the mean while, give us leave to be sincere too, in condemning heartily what we heartily disapprove.

Water land.

In thy consort cease to fear a foe ; Forthee she feels sincerity of woe. Pope't Odyssey.

In your whole reasoning, keep your mind sincereln intent in the pursuit of truth. Watts'a Loqick.~

Through the want of a sincere intention or pleasing God in all our actions, we fall into such irregularities of life as, by the ordinary means of grace, we should have power to avoid. Law.

SINCLAIR (C. Gideon, baron), a Swedish general, who served in his youth in France, Prussia, and Saxony, and was subsequently engaged in various parts of Europe. He made himself known likewise by his writings and a profound acquaintance with military tactics. Among his works are Regulations for Infantry, still adopted in Sweden ; and Military Institutions, or an elementary Treatise on Tactics, Deux Fonts, 1773, 3 vols. 8vo. Baron Sinclair died near Westerns, in Sweden, September 1st, 1803, aged seventy-three.

SINDE, or SINDHU, a considerable province of Hindostan, formerly included in that of Mooltan, and situated on both sides of the Indus, between 23° and 28° N. lat. The general boundaries, including Tatta, are Mooltan and Afghanistan on the north; Cutch and the sea to the south; on the east it has Ajmeer, the Sandy Desert, and Cutch ; and on the west the sea, and the mountains of Baloochistan. In length it may be estimated at 300 miles, by eighty miles the average breadth, and is intersected in a diagonal line throughout its whole extent by the Indus.

On the north it adjoins the country of -Behawal Khan, and the fort of Subzul. Proceeding from thence south, the country is possessed by an infinite number of petty chiefs, in general tributary to the ameers of Sinde. The names of the principal districts on the east bank, proceeding from the north to the south, areBhoongbaree, Durelee,

Loheree, Khyrpoor, and Puhlanee. The boundaries of these distrcts are, the Sandy Desert and the country of Jesselmere to the east. Further soutli are the fort of Deenghur, forty miles from Khyrpoor, the districts of Koondeeyamy, Noushehree, Feroze, Puneeche, and Sudaya, Norudunya Kohinee, Koohjur, Juneejee, Lakat, Shadapoor, Halakundy, Novejanee, Kakabegaree (through which flows a branch of the Indus), Nussurua, Ropa, and Nusserpoor, and the Tandee of Illahyar Khan, from which Jesselmere is distant about 160 miles to the eastward. Of these districts the Sandy Desert forms the eastern boundaries. At the Tandee of Illahyar Khan, the branch of the Indus named the Fulalee commences, and flows in a southwest direction to Seidpoor, when it rejoins the main stream, after forming the insular district of Killee, named also the Doabeh, the hills of Jaree and Canja, the fort of Hyderabad, with Seidpoor and some other villages. On the eastern bank of the Fulalee is situated the district of Chuckurhalee.

The Goonee, a branch of the Fulalee, takes its rise near the village of Seidpoor ; to the eastward of it is situated the district of Chachgam, which yielded, when possessed by the Calories, a revenue of four lacks of rupees, which is now reduced to two. Also the district of Koodara. villages of Buhna, Sayekpoor, Dholee, and the

district of Pulujar, and the islands of Wah and Alibukeer. These are bounded on the east by the Sandy Desert. The district of Khyrpoor is on a branch of the Goonee; the fort of Illyabad is ten miles distant, and Futtyghar forty miles distant from Khyrpoor. The fort of Parkur, situated on the borders of the Joudpoor territories, is 110 miles to the eastward of Hyderabad, Islampoor fifty miles from Khyrpoor,Alighur forty miles from Khyrpoor, and Shahgur, eighty miles from Khyrpoor. • Amercote, now belonging to Joudpoor; the districts of Majur Jamee and Kitee, a fort on the borders of the Sandy Desert ; the districts of Doka, Behrampoor, Ameerpoor, and Bhoondea.

On the west bank of the Indus, Sinde is bounded on the north by the Shekarpoor district, of which a considerable portion of the southern quarter is held by the Sinde chiefs. Proceeding from thence south are

the districts of Noushehra, Berkapoor, Khanua, Ladgoonee, Kumburgundee, Meil, Nalookshahpoor, Nalu-medu, Chandye, formerly included in the province of Chandookee, which province, during the government of the Calories, is said to have yielded a revenue of sixteen lacks of rupees, now reduced to four. The villages of Eesan had Hoojree, the small district of Janee Duny, and an island formed by the Naree, a branch of the main stream, containing the districts of Nuggen Bhagban, Rhodabad, Wuchootee, Jamtanee, and Kurreempoor. The districts situated to the westward of the Naree are Kacha, Bhoobak, Jungar, Bazar ; a hill, 100 miles from Corachie, besides numerous small villages, occupied by Baloochees, and other migratory tribes. The district of Tharn, from which Corachie is said to be sixty miles distant, is possessed by the No-murdies, who have also half the district of Shal. The districts of Jurukhee, Sonda, and many smaller ones, are adjacent to Tatta. The Sita and its streams, and the Nusserpoor and Naree branches of the Indus, are said to be now dried up.

A great part of this province, lying to the westward of the confines where the monsoon ceases, is a barren and totally unproductive soil, from the absence of moisture. Easterly from the meridian of 67° 40', the land near to the Indus appears capable of the highest degree of improvement ; but to the northward of Tatta, and a small distance to the westward of that river, the country is mountainous, rocky, and thinly inhabited. In June and July the thermometer ranges from 90° to 100°, but the air in the northern parts of Sinde is so pure, and so much refreshed by the cooling breezes from the westward, that the heat is not excessive. About Hyderabad the climate is healthy, and the air, in the month of August, remarkably clear, the difference of refraction in astronomical observations being then scarcely perceptible.

The Indus, from Tatta to a branch called the Folicly, has from two to two and a half fathoms of water ; off Tatta it has three,four, and more frequently five fathoms, with a muddy bottom. The banks in the province about Hyderabad are in general well cultivated, except where the Ameers have made enclosures to confine game ; but

these are so numerous and extensive as to occupy many of the most valuable spots of land. In the month of August the Indus has generally two and three fathoms of water, but during the fair season it is dried up. The Goonee is much the same as the Folicly, with respect to inhabitants and cultivation, but has less water on an average, being only from one fathom and a half to two fathoms. It is also much narrower, contracting in many places to thirty yards, and can only be

termed navigable in the month of Au-gust.

The cultivation here depends on the periodical rains, and the process of irrigation by means of canals and water-courses. During the swelling of the river, grain and other seeds are raised ; the remainder of the year is employed in the production of indigo, sugar-canes, huldee, &c., &c. Every beegah of land, watered by a canal or wheel, pays a revenue of from one rupee and a quarter to three rupees and a half to the government : one wheel is capable of watering sixteen beegahs. A duty of one rupee is also levied on each khunwar (120 Ibs.) of grain reaped by the farmer.

The principal articles of home produce exported from Sinde are rice, ghee, hides, shark fins, pot-ash, saltpetre, asafoetida, b'dellium, madda, frankincense, Tatta cloths, horses, indigo, oleaginous, and other seeds. Alum, musk, and horses, are imported from Moultan, and the countries to the northward for re-exportation. The other imports into Sinde are tin, iron, lead, steel, ivory, European manufactures, sandal and other scented woods, from the south of India ; swords and carpets from Khorasan and Candahar; silk and other articles from the Persian Gulf. The Mooltany merchants settled in Sinde are the principal traders, and the wealthiest part of the community. The exports from Sinde to Bombay are shark fins and flesh, b'dellium, ghee, pot-ash, saltpetre, hides, oil of sesame, wheat, asafoetida, raujeet, sirshif oil, raisins, almonds, coloring plants, pistachio flowers and nuts, shawls, cloths, mustard, wild saffron, black cum-min seed from Kerman, white cummin seed, chintzes both from Sinde and Khorasan. The imports to Sinde from Bombay are white sugar, sugar-candy, steel, iron, tin, tutenague, lead, cochineal, betel nut, black pepper, dried cocoa nuts, vermilion, red lead, quicksilver, Bengal and China silks and cloths, cinnamon, cardamoms, cloves, nutmeg, sandal wood, ginger, chinaware, pearls, aloes, and amuttas.

To Muscat are exported dressed leather, rice, wheat, sirshif oil, ghee, b'dellium, chintzes, and other cloths. The imports from Muscat to Sinde are dates, limes, roses, Ghilaun silk, elephants' teeth, pearls, almonds, preserved fruit, cowries, slaves, arsenic, senna from Mecca, quince seeds, and gum. The imports to Sinde from Cutch are cotton, snuff, unwrought iron found in Cutch, and the small Arabian aloe. The intercourse between this province and the countries to the northward is chiefly carried on by means of the Indus, which is navigable for small vessels to a great distance from the sea. There are no established land caravans from Sinde to Moultan and Cabul, but an intercourse is carried on by mer-

chants and travellers. The East India Company had formerly a factory, and carried on a considerable trade in the province of Sinde ; but it was withdrawn, probably owing to the disorderly state and poverty of the country. An unsuccessful attempt was recently made by the Company from Bombay to renew the commercial intercourse.

The government of Sinde is a military despotism, vested in three brothers of the Talpoony family. The Mahometan inhabitants compose the military strength of the country ; and, during the intervals of peace, are employed as husbandmen, artificers, and menial servants — the internal commerce of the country beingalmost exclusively carried on by the Hindoo part of the population. Although Sinde is now but scantily peopled, it appears, at some former period, to have been thickly settled and inhabited. The armies of Sinde are collected from the various tribes who hold lands by a military tenure from the Ameers. These tribes are reckoned forty -two in number; many of whom have retained their distinctive appellations since the first Mahometan invasion, and consisted principally of adventurers, who descended from the lofty mountains of Baloochistan into the plains of Sinde, with the exception of the Jokia and Jhut tribes, which are both of Sindean origin. On the whole, the Ameers can bring into the field an army of 35,000 men.

The revenues, during the Calorie government, were estimated at eighty lacks of rupees per annum, but are now reduced, in consequence of the rapacity and ignorance of the present rulers, to forty -two lacks ; from which should be deducted the Cabul tribute of twelve lacks, which is liable to be enforced should that state recover from the effects of its internal discord. After the death of Meer Futteh Ali, his surviving three brothers divided the territorial possessions and revenues ; the eldest, Meer Gholaum Ali, receiving one-half as the ostensible head of the government, and being bound to defray the permanent, civil, and military expenses of the state. These charges, however, are inconsiderable, as, during a cessation of external hostilities, very few soldiers are retained.

The revenues of Sinde are farmed to private persons ; and the Ameers, with the view of creating competition, remove the farmers annually, and they,- having consequently no interest in the improvement of the country, direct their attention to the realising the greatest possible profit within the period of their contract. In effecting this object they are guilty of many extortions. If a person, finding a thief in his house, use force to drive him away, and in the contest either is killed, no injury is made. It often happens that villages are attacked J by thieves; if in the conflict any are killed, no enquiries are made ; but if they are taken prisoners, and then put to death, the parties are subjected to trial. Thieves taken in a contest of this kind are brought before a magistrate, who examines the transaction, and compels them to restore the property, or imposes a heavy fine, which, if they are unable to pay, they suffer death. One-fourth of all pioperty recovered belongs to the govern-Vot. XX.

ment. If either a denizen or a foreigner die, leaving a son or brother, his property devolves on them. If he leaves a wife with child, and the child prove a son, he succeeds to the property, otherwise it is seized for the state. A daughter only receives a certain allowance from her father's property ; and a widow is merely entitled to her jewels, &.c., or to a pecuniary compensation of 100 rupees.

The men of Sinde are well made, of a middle size, and more robust than the more southern natives of India. Their complexions are very tawny, with dark eyes and eyebrows, and uncommonly good teeth ; like the Seiks, they allow their hair to grow. The Mahometans are all Soonees, and most of them of the sect of llaueefe« ; but they have few religious prejudices, nor do their females suffer any strict seclusion. Thu dancing girls in Sinde are, in figure, manners, and appearance superior to those commonly seen in Hindostan. The Sinde province generally swarms with mendicants; here also, as in other Mahometan countries, are seen a class of sturdy beggars pretending to be Seids, or descendants of1 the prophet, who demand charity in the most insolent manner. They frequently go about soliciting alms in parties of seven or eight on horseback, well dressed, armed, and mounted, and having a green flag carried before them. When their demands are not gratified they bestow the most abusive language.

Sinde was the first conquest in Hindostan effected by the Mahometans. It was accomplished under the khaliff Walid, by Mahommed Casim, in the year of the hegira 99 ; but, on account of the distance and the natural strength of the country, it did not long

remain attached to the khaliphat. Subsequently to this there appears to have existed two contemporaneous authorities in Sinde ; the one a Rajpoot family, and the other a Ma-hommedan. The Lomra, a Rajpoot race, are said to have retained possession for the long pe-riodlof 500 years ; after which it was occupied by different chiefs, one of whom, Mirza Eesau, of the Turkannee tribe, having called in the Portuguese to his assistance against the soubahdar of Mooltan, they plundered Tatta, then the seat of government. Sinde thus remained with the Turkannees until the reign of Acber, who succeeded in effecting its conquest ; and from thai era it became tributary to Delhi. About A. D. 1737, during the alarm excited by the threatened invasion of Hindostan, Mahommed Abassee Caloree, of Sewee, availed himself of the apprehensions of the soubahdar of Sinde, and influenced him to resign the government into his hands. In 1739 Nadir Shah defeated the Caloree chiets, and obliged them to take refuge in Amercote on the borders of the desert, but he afterwards permitted them to resume the government as tributaries. The family was expelled in 1783, when the present dynasty succeeded.

SINDIAH, or SCINDIA< (Mahadjee), the son of a Mahratta chief, was born about 1743 at the court of the Peishwa, in Hindostan. He was at the battle of Panniput in 1761, and badly wounded and taken prisoner. Having made his escape, he took refuge in the Decan ; when the Mahrattas recovered Malwa, some years after, he

was restored to his patrimonial territory, and his ambition prompted him to aspire to sovereign power. In 1770, ne, in concert with Holkar, •invaded Hindostan, when he made himself mas-ter of Delhi, and obtained the tutelage of the nominal emperor Shah Aulum. He now attacked the Rohillas, who were supported by Shujah-Doulah and the English ; and this contest was terminated by the treaty of 1782. After this he pursued his ambitious projects; and in 1785 made himself a second time master of Delhi. He also took Agra, where he established a cannon foundry ; and was the first Indian prince who possessed troops trained to the European discipline. He had taken into his service Leborgne de Boigne, a Frenchman, to whose talents and courage he was much indebted ; and it was this officer who, at the head of an army of Mahrattas and Moguls, gained the battle of Patan in June 1790. Sindiah was called a third time to Delhi, to the assistance of Shah Aulum, who had been deposed and cruelly treated by a rebel : ‘he Mahratta prince restored him to the title of sovereignty, reserving to himself the imperial power. In 1791 he returned to the Decan, where he endeavoured to obtain the office of minister of the Peishwa, who was a minor; but was disappointed. He seems to have conceived ambitious designs of much greater importance, frustrated by his sudden death in 1794. He was succeeded by his nephew Dowla Rao Sindiah.

SIN’DON, n. s. Latin, sindon. A fold ; a wrapper.

There were found a book and a letter, both written in fine parchment, and wrapped in sintluns of linen.

Bacon.

SINE, n. s. Lat. sinus. A line drawn from one end of an arch perpendicularly upon the diameter drawn from the other end of that arch. See below.

Whatever inclinations the rays have to the plane of incidence, the sine of the angle of incidence of every ray, considered apart, shall have to the sine of the angle of refraction a constant ratio.

Cheyne's Philosophical Principles.

SINE, or RIGHT SINE OF AN ARCH, in trigonometry. See GEOMETRY and TRIGONOMETRY.

SINE ASSENSU CAPITULI, in ecclesiastical law, a writ where a bishop, dean, prebendary, or master of an hospital, aliens the lands holden in right of his bishopric, deanery, house, &c., without the assent of the chapter, or fraternity; in which case his successor shall have this writ : and if a bishop or prebendary be disseised, and afterwards he reUaseth to the disseisor, this is an alienation, upon which may be brought a writ De sine assensu capituli : but the successor may enter upon the disseisor, if he doth not die seised, notwithstanding the release of his predecessor ; for, by the release, no more passeth than he may rightfully release. A person may also have this writ of lands upon demises of several predecessors, &c.

SIXE DIE, in English law, is when judgment is given against the plaintiff, and for the defendant, when it is said, eat inde sine die ; i. e. he is dismissed the court. The phrase is also used in parliament for the adjournment of a question indefinitely.

Sl'NECURE, n. s. Lat. sine, without, and r«r«, care. An office which has revenue without employment.

A tinecure is a benefice witbout cure of souls.

Ayliffi.

No simony nor sinecure were known, Nor would the bee work honey for the drone. Garth.

SINECURES, in ecclesiastical law, are benefices, without cure of souls. Their original was as follows : — The rector (with proper consent) had a power to entitle a vicar in his church to officiate under him ; and this was often done : and by this means two persons were instituted to

the same church and both to the cure of souls, and both did actually officiate. So that however the rectors of sinecures, by having been long excused from residence, are in common opinion discharged from the cure of souls (which is the reason of the name), and however the cure is said in the law books to be in them habitualiter only ; yet in strictness, and with regard to their original institution, the cure is in them actua-liter, as much as it is in the vicar. Gibs. 719, Johns. 85. That is to say, where they come in by institution ; but, if the rectory is a donative, the case is otherwise : for then, coming in by donation, they have not the cure of souls committed to them. And these are most properly sinecures, according to the genuine signification of the word. Johns. 85.

No church where there is but one incumbent can properly be a sinecure : and, though the church being down, or the parish being become destitute of parishioners, the incumbent may be thereby necessarily acquitted from the actual performance of public duty, yet he is still under an obligation to do it, whenever a church shall be built, and there is a competent number of inhabitants ; and, in the mean while, if the church be presentative, as most of such churches are, the incumbent is instituted into the cure of souls. Such benefices are rather depopulations than sinecures ; and it will be proper for the new incumbent to read the thirty-nine articles, and the liturgy, in the church-yard, &c., and to do whatever other incumbents usually do. But a rectory, or portion of it, may properly be a sinecure, if there be a vicar under the rector endowed amd charged with the cure ; in whicn case it does not come within the statute of pluralities, 21 Henry VIII. c. 13.

Here, therefore, no dispensation is necessary to hold the sinecure with a former living ; nor need the incumbent read the articles, or divine service, as required by 13 Eliz. c. 12, which extends only to a benefice with cure.

A sinecure donative wants no institution and induction, but one presentative must have both, especially if it consist in glebe and tithes, and not in a portion of money. By the above mentioned statute (21 Henry VIII.), not only pie-bends, and rectories with vicarages endowed, but deaneties and archdeaconries are declared to lrf> benefices without cure.

SIN’EW, n. s. & v. a. } Sax. renpe ; Belg.

SIN’EWED, adj. ssenewen; Goth. sina.

SIN’EWY.) A tendon; ligament;

muscle ; strength : to knit by sinews : obsolete : sinewed and sinewy signify furnished with sinews, nervous: strong.

Her knight was feeble, and to faint, And all his sinewes waxen weake and raw, Through long enprisonment and hard constraint. Spenser. Faerie

Some other sinews there are, from which that overplus of strength in persuasion doth arise. Hooker.

The torrent roared, and we did buffet it With lusty sinews. Shakspeare. Julius Caesar.

Ask the lady Bona for thy queen ; So shall thou sinew both these lands together.

Id. Henry VI.

He will the rather do it, when he sees Ourselves well sinewed to our defence.

Id. King John.

Worthy fellows, and like to prove Most sinewy swordsmen. Shakspeare.

The feeling power, which is life’s root, Through every living part itself doth shed

By sinews, which extend from head to foot ; And, like a net, all o’er the body spread. Davies.

The sinewy thread my brain lets fall Through every part, Can tie those parts, and make me one of all. Donne.

The northern people are large, fair-complexioned, strong, sinewy, and courageous.

Hale's Origin of Mankind.

The rooted fibres rose, and from the wound Black bloody drops distilled upon the ground : Mute and amazed, my hair with terror stood ; Fear shrunk my sinews, and congealed my blood.

Dry den.

In the principal figures of a picture the painter is to employ the sinews of his art ; for in them consists the pnncipal beauties of his work. Id. Dufresnoy.

Strong sinewed was the youth and big of bone.

Dry den.

A sinew cracked seldom recovers its former strength.

Locke.

Such discouraging of men in the ways of an active conformity to the church's rules, cracks the sinews of government ; for it weakens and damps the spirits of the obedient. South.

Fainting, as he reached the shore, He dropt his sinewy arms : his knees no more Performed their office. Pope's Odyssey.

SING, v.n. & v. a. \ Preterite I sang, or

SING'ER, n. s. > sung ; ˆparticiple pass.

SINGINGMASTER. j sung. Sax. rHnjan ; Isl.

singia ; Belg. singhen. To form the voice to

melody ; articulate musically ; utter sweet

sounds ; tell in poetry ; celebrate : the noun

substantives corresponding.

Then sang Moses and Israel this song unto the Lord. Exod. xv.

Then shall the trees of the wood sing out at the presence of the Lord. 1 Chron. xvi. 33.

The morning stars sang together. Job.

They that wasted us required of us mirth, saying, Sing us one of the songs of Zion. Psalm cxxxvii. 3.

The time of the singing of birds is come.

Cant. ii. 12.

I gat me men singers and women singers and the delights of the sons of men. EecL ii. 8.

Incles, caddisses, cambricks, lawns, why he sings them over as they were gods and goddesses.

Shakspeare.

Then they for sudden joy did weep, And some for sorrow sung. Id. King Lear.

They rather had beheld

Dissentious numbers pestering streets, than see Our tradesmen singing in their shops, and going About their functions friendly. Id. Coriolanus.

A man may hear this shower sing in the wind.

Shakspeare.

You leaden messengers,

Fly with false aim ; pierce the still moving air, That sings with piercing ; do not touch my lord. Id.

His filching was like an unskilful singer, he kept not time. Id. Merry Wives of Windsor.

You will sooner bind a bird from singing than from flying. Bacon.

Cock birds amongst singing birds are ever the bet-ter singers, because they are more lively.

Id. Natural History. I sing the man who Judah's sceptre bore In that right hand which held the crook before.

Cowley.

How could we to his godhead sing Forced hallelujahs 1 Milton.

Join voices, all ye birds,

That singing up to heaven's gate ascend. Id.

Thee next they sang, of al! creation first. Id. The birds know how to chuse their fare ; To peck this fruit they all forbear : Those cheerful singers know not why They should make any haste to die. Waller.

Their airy limbs in sports they exercise, Some in heroick verse divinely sing. Dryden.

And parrots, imitating human tongue, And singing birds in silver cages hung. Id. Ovid. Arms and the man I sing. Id. JEneid.

The Grecian tragedy was at first nothing but a chorus of singers. Dryden.

Well might he sing the day he could not fear, And paint the glories he was sure to wear. Smith.

He employed an itinerant singing-master to instruct them rightly in the tunes of the psalms.

Addisons Spectator. The last, the happiest British king, Whom thou shall paint or I shall sing. Addison.

Bid her exalt her melancholy wing, And raised from earth, and saved from passion, sing Of human hope by cross event destroyed, Of useless wealth, and greatness unenjoyed. Prior.

O'er his head the flying spear Sung innocent, and spent ils force in air. Pope. And aye she wrought her mammie's wark,

And aye she sang sae merrily : The blithest bird upon the bush

Had ne'er a lighter heart than she. Burns. SINGjEI, an ancient nation on the borders of Thrace and Macedonia.

SIN-GAN, a city of China of the first rank, in Chen-si, the largest and finest in the empire, ex-cept Peking. It is built on a great plain, and is the residence of the governors of Chan-si and Se-tchuen. It comprehends six cities of the second rank, and thirty-one of the third. It was anciently the seat of the emperors, and is still very populous. The walls are twelve miles in circuit, nearly square, fortified with towers, and surrounded with a deep ditch. The gates are high and magnificent. It has a great trade, and lies 510 miles southwest of Pekin.

SINGARA, a city and river of the ancient Shinar, north of Mesopotamia. The city is now called Sinjiar.

SINGE, v. a. Sax. j-aenjan ; Belg. senghen ; Teut. sengen. To scorch ; burn slightly or superficially.

They bound the doctor, Whose beards they have singed off with brands of

fire. Shakspeare.

Drake, in the vaunting stile of a soldier, would call this enterprise the ringing of the king of Spain's beard. Bacon.

They leave a singed bottom all involved With stench and smoke. Milton's Paradise Los',

Thus riding on his curls, he seemed to pass A rolling fire along, and singe the grass. Dryden.

That neither was tinged in the combustion of Phaeton nor

overwhelmed by the inundation of Deu-calion. Rroicne.

I singed the toes of an ape through a burning glass, and he never would endure it after. L' Estrange.

SINGERS, in the temple of Jerusalem, were a number of Levites employed in singing the praises of God, and playing upon instruments before his altar. They had no habits distinct fiom the rest of the people ; yet, in the ceremony of removing the ark to Solomon's temple, the chanters appeared dressed in tunics of byssus or fine linen. 2 Chron. v. 12.

SINGHEA, a town of Bahar, district of Ila-jypoor, on the east side of the Gunduck, near to which is the site of an ancient city, where a remarkable pillar stands : two days' journey further up the Gunduck, near a place called Kesserah, is a remarkable edifice, which appears to have been originally a cylinder placed on the frustrum of a cone, for the purpose of being seen at a distance. The cone and cylinder are of brick, and appear solid throughout. The following are the dimensions : —

Feet.

Diameter of the cylindrical part . . 64

Height of the cylinder 65

Height of the conic frustrum on which) g, the cylinder is placed J

Diameter of the cone at the base . .336

For what purpose these columns were originally intended it seems impossible to tell.

SINGING, the action of making divers inflections of the voice agreeable to the ear, and correspondent to the notes of a song or piece of melody. See MELODY. The first thing to be done in learning to sing is to raise a scale of notes by tones and semitones to an octave, and descend by the same notes ; and then to rise and fall by greater intervals, as a third, fourth, fifth, &c., and to do all this by notes of different pitch. Then these notes are represented by lines and spaces, to «'•! •'». the syllable fa, sol, la, mi, are applied, a> .! the pupil taught to name each line and space thereby; whence this practice is called solfaing, the nature, reason, effects, &c., whereof, see under SOLFAING.

SINGING, PROCESSIONAL. About the -year 386, during the persecution of the orthodox Christians by the empress Justina, mother to the then young emperor Valentinian II., ecclesiastical music was introduced in favor of the Arians. ‘ At this time,’ says St. Augustine, ‘ it was first ordered that hymns and psalms should be sung after the manner of eastern nations, that the people might not languish and pine away with a tedious sorrow, and from that time to the present it is retained at Milan, and imitated by almost all the other congregations of the world.’ Music is said by some of the fathers to have drawn the Gentiles frequently into the church, wjio liked its ceremonies so well that they were baptised before their departure. About this time, we find by Socrates the historian (1. vi. c. 8), that the heretics used to sing hymns, marching through the streets of Constantinople in procession, with which the vulgar were so much captivated that the orthodox, under the direction of St. .Chrysostom, thought it necessary to follow the example which had been set them by their greatest enemies. Processional singing had been long practised by the Pagans, but no mention is made of it among Christians before this period.

SINGING BY THE PRIMITIVE CHRISTIANS. With respect to the music that was first used by the Christians, as no specimens remain, it is difficult to determine of what kind it was. That some part of the sacred music of the apostles and their immediate successors, in Palestine and the adjacent countries, may have been such as was used by the Hebrews, is probable ; but it is no less probable that the music of the hymns which were first received in the church, wherever Paganism had prevailed, resembled that which had been many ages used in the heathen temple worship. Of this the versification of those hymns affords an indisputable proof; and examples may be found in all the breviaries, missals, and antiphonaries, ancient and modern, of every species of versification which has been practised by the Greek and Roman poets, particularly the lyric. Hilary, bishop of Poic’iers, and St. Ambrose, are said to have been the rirst that composed hymns to be sung in the western churches. Both these fathers flourished about the middle of the fourth century ; but Pruclen-tius, a Christian poet, contemporary with Theodosius, who died in 395, was author of most of the hymns in the Roman breviary.

The ancient hymn, ‘ Te Deum laudamu?,’ still retained in the church, appears to have furnished the poet Dante with a model of the twenty-eighth canto of his Paradiso, where, under three different hierarchies, consisting eacli of three choirs or choruses, the heavenly host of cherubim and seraphim are singing perpetual hosannahs. Milton has assigned them the same employment : —

No voice exempt, no voice but well could join Melodious part, such concord is in heaven.

ˆ Parad. Lost, book iii.

See PSALMODY.

SINGING OF BIRDS. It is worthy of observation that the female of no species of birds ever sings ; with birds it is the reverse of what occurs in human kind. Among the feathered tribe, all the cares of life fall to the lot of the'tender sex ; theirs is the fatigue of incubation ; and the principal share of nursing the helpless brood ; to alleviate these fatigues, and to support her under them, nature has given to the male the song, with all the little blandishments and soothing arts; these he fondly exerts, even after courtship, on some spray contiguous to the nest, during the time his mate is performing her parental duties. But that she should be silent is also another wise provision of nature; for her song would discover her nest; as would also a gaudiness of plumage, which, for the same reason, seems to have been denied her. On the song of birds several curious experiments and observations have been made by the Hon. Daines Barrington. See Philosophical Transactions, vol. Ixiii., and SONG.

SIN

SIN'GLE, adj. &.v. a. ~\ Lat. singulus, sin—

SIN'GLENESS, w. s. \guluris. One; sole;

SIIS'G'LY, adv. [particular; indivi—

SIN'GULAR, adj. [dual; pure; simple;

STNGULAU'ITY, w. s. | unmarried ; alone:

SING'ULARLY, adv. J to single is to take alone or separately ; choose out from others : the noun substantive and adverb correspond with single adjective : singular is particular ; uncommon; alone; expressing singleness: the adverb and noun substantive corresponding.

The light of the body is the eye : if thine eye be single thy whole body shall be full of light.

Matt. vi. 22.

Hardly they herd, which by good hunters singled are. Sidney.

Tea simply, saith Basil, and universally, whether it be in works of nature, or of voluntary choice, 1 see not any thing done as it should be, if it be wrought by ‘an agent singling itself from consorts. Honker.

It is not the deepness of their knowledge, but the singleness of their belief, which God accepteth. Id.

The spirit of singularity in a few ought to give place to public judgment. Id.

1 s the single man therefore blessed 1 no : as a walled town is more worthier than a village, so is the forehead of a married man more honourable than the bare brow of a bachelor. Sliahspeare.

I saw him in the battle range about, And how he singled Clifford forth. Id. Henry VI.

Look thee, ‘tis so; thou singly honest man, Here take : the gods out of my misery Have sent thee treasure. Id. Timon of Athens.

Your gallery

Have we passed through, not without much content In many singularities ; but we saw not That which my daughter came to look upon, The statue of her mother. Id. Winter’s Tale.

Pliny addeth this lingutarity to that soil that the second year the very falling down of the seeds yield-etli corn. Ualeigh.

To make flowers double is effected by often removing them into new earth ; as, on the contrary, double flowers, by neglecting and not removing, prove single. Bacon’s Natural History.

Kvery man may have a peculiar favour, which, al-lliough not perceptible unto man, is yet sensible unto dogs, who hereby can single out their master in the dark. Bacon.

They were of their own nature circumspect and slow, discountenanced and discontent ; and those the earl singled as fittest for his purpose. Hayward.

If the injured person be not righted, every one of them is wholly guilty of the injustice, and theiefore bound to restitution singly and entirely.

Taylor’s Rule of Living Holy. So singular a sadness Must have a cause

as strange as the effect.

Denham's Sophy. His wisdom such,

Three kingdoms wonder, and three kingdoms fear, Whilst single he stood forth. Denham.

Servant of God, well hast thou fought The better fight, who single hast maintained Against revolted multitudes the cause of truth.

Milton.

Dost thou already single me 1 I thought Gyves and the mill had tamed thee.

Milton's Agonistes. His zeal

None seconded as singular and rash. Milton.'

Catholicism, which is here attributed unto the church, must be understood in opposition to the legal •singularity of the Jewish nation. Pearson.

They tend to the perfection of human nature, 'and to make men singly and personally good, or tend to the happiness of society. Tillotson's Sermons.

Though, according to the practice of the world, it be singular for men thoroughly to live up to the principles of their religion, yet singularity in this matter is a singular commendation of it. la.

Some were single acts, though each complete ; But every act stood ready to repeat. Id.

Then Theseus joined with bold Pirithous came, A single concord in a double name. Dryden.

In sweet possession of the fairy place, Single, and conscious to myself alone Of pleasures to the excluded world unknown. Id.

Begin, auspicious boy, to cast about Thy infant eyes, and with a smile thy mother tingle out. Id.

If St. Paul's speaking of himself in the first per-son singular has so various meanings, his use of the first person plural has a greater

latitude. Locke.

The words are clear and easy, and their originals are of single signification without any ambiguity.

South

Singularity in sin puts it out of fashion, since to V>e alone in any practice seems to make the judgment of the world against it ; but the concurrence of others is a tacit approbation of that in which they concur. Id.

Solitude and singularity can neither daunt nor disgrace him, unless we could suppose it a disgrace to be snignlurlii good. Jd.

High Alba,

A lonely uesart, and an empty land, Shall scarce afford, for needful hours of rest, A single hou?e to their benighted guest.

Addison on Italy.

These busts of the emperors and empresses are all very scarce, and some of them almost singular in their kind. Addison.

I took notice of this little figure for the singularity of the instrument : it is not unlike a violin.

Id. On Italy.

Single the lowliest of the am'rous youth ; Ask for his vows, but hope not for his truth. Prior.

As no single man is born with a right of controul-ing the opinions of all the rest, so the world has no title to demand the whole time of any particular person. Pope.

Belinda

Burns to encounter two advent'rous knights, At ombre ringly to decide their doom. . Id.

As simple ideas are opposed to complex, zndsinyle ideas to compound, so propositions are distinguished : the English tongue has some advantage above the learned languages, which have no usual word to distinguish single from simple. Watts.

That idea which represents one particular determinate thing is called a singular idea, whether simple, complex, or compound. «••

Men must be obliged to go through their business with singleness of heart. I&o,

Doubtless, if you are innocent, your case is extremely hard, yet it is not singular. Female Quixote

SINGROWLA, a district and rajah's territory in the province of Gundwana, situated about 24° N. lat, and bounded on the east by the district of Palamow in Bahar. The rajah's territory begins on the northwest, at a narrow defile on the Bickery Hills, called Bulghaut.

tn this district, between the hills, are extensive uncultivated valleys, frequently covered with forests. A few small villages are scattered over the face of the country, in the vicinity of which

some cultivation is seen — but the land generally is very desolate. Iron is found in abundance. —Blunt, &c.

SINGUMNERE, a district belonging to the Mahratta peshwa, in Aurungabad, situated about 20° N. lat., and estimated to yield a revenue of ten lacks of rupees per annum. It is hilly, but fertile. The chief towns are Singumnere, Batto-wal, and Bejapoor.

SIN'ISTER, adj.) Fr. sinistre ; Lat. «-

SIN'ISTROUS, \nister. Being on the

SIN'ISTROUSLY, ado.) left hand; left; not

right ; not dexter ; not auspicious. It seems to

be used with the accent on the second syllable,

at least in the primitive, and on the first in the

figurative sense. The other adjective is a syno—

nyme, and the abverb corresponds.

The duke of Clarence was soon after by sinister means m»de clean away. Spenser on Ireland.

Is it so strange a matter to find a good thing furthered by ill men of a sinister intent and purpose, whose forwardness is not therefore a bridle to such as favour the same cause with a better and sincere meaning 1 Hooker.

When are there more unworthy men chosen to offices, when is there more strife and contention about elections, or when do partial and sinister affections more utter themselves, than when an election is committed to many 1 Whitgifte.

My mother's blood

Huns on the dexter cheek, and this tinisier Bounds iu my sire's.

Shakspeure. Troilus and Cressida. He professes to have received no sinister measure from his judge, but most willingly humbles himself to the determination of justice.

Id. Measure for Measure.

Those may be accounted the left hands of courts ; persons that are full of nimble and sinister tricks and shifts, whereby they pervert the plain courses of courts, and bring justice into oblique lines and labyrinths. Bacon's Essays.

Tempt it again ; that is thy act, or none : What all the several ills that visit earth, Brought forth by night with a sinister birth, Plagues, famine, fire, could not reach unto, The swords, nor surfeits, let thy fury do.

Ben Jonson. But a rib,

Crooked by nature, bent, as now appears, More to the part sinister from me drawn. Milton.

The spleen is unjustly introduced to invigorate the sinister side, which,

being dilated, would rather in-firm and debilitate it. Browne's Vulgar Errours.

Many in their infancy are sinistrously disposed, and divers continue all their life left-handed, and have but weak and imperfect use of the right. Id.

In his sinister hand, instead of ball, He placed a mighty mug of potent ale. Dryden.

The just person has given the world an assurance, by the constant tenor of his practice, that he makes a conscience of his ways, and that he scorns to undermine another's interest by any sinister or inferior arts. South.

A knave or fool can do no harm, even by the most sinutrous and absurd choice. Bentley.

To condescend to mean arts and low dissimulation for the sake of a name : and in a sinister, indirect way, sue hard for a little incense, not caring from whom he receives it : his ambition then becomes vanity. Mason.

SINISTER is ordinarily used among us for unlucky, though, in the sacred rites of divination,

the Romans used it in an opposite sense. Thus av,s sinistra, or a bird on the left hand, was esteemed a happy omen : whence, in the law of the twelve tables, Ave sinistra populi magister esto.

SINISTER, in heraldry. The sinister side of an escutcheon is the left hand side ; the sinister chief, the left angle of the chief; the sinister base, the left hand part of the base.

SINISTER ASPECT, among astrologers, is an appearance of two planets happening according to the succession of the signs ; as Saturn in Aries, and Mars in the same degree of Gemini.

SINISTRI, a sect of ancient heretics, thus called because they held the left hand in abhorrence, and made it a point of religion not to receive any thing therewith.

SINK, v. n., v. a. &, n. s. Pret. I sunk, anciently sank ; part, sunk or sunken. Sax. pen-can; Belg. senken; mod. Germ, sigguan. To fall down

through any medium; to go to the bottom : hence to fall gradually ; lose height or prominence; tend to ruin: as a verb active to put under water; depress; degrade; make to fall ; depress ; suppress : a sink is a drain ; any place where offal or corruption is gathered.

Heaven bear witness,

And, if I have a conscience, let it sink me, Even as the ax falls, if I be not faithful.

Shahspeare.

SINKING FUND. The term sinking fund is applied to a fund appropriated by a government to the purchase or extinguishment of its own debts. Where a government merely directs its treasurer to apply monies, accruing from permanent sources of revenue, to the payment of the public debt, the term sinking fund can only sign'fy the excess of the current revenues over the current expenditures. But the term is not ordinarily applied in such a case. In England, as early as 1716, Sir Robert Walpole projected the sinking fund system, which 'was partially applied at that time, but brought into operation more fully in 1786, by Mr. Pitt. New taxes were imposed to such an amount as, upon estimation, would leave a surplus revenue of £900,000 beyond the current annual expenditure, and the payment of interest on the public debt. Assuming that, for a given number of years, the expenditure of the government would not exceed the estimated amount, and that the resources would yield this surplus, it followed, of course, that the public debt would eventually be extinguished by the application of this surplus to this purpose. Ar.d if the revenues and expenditures for other purposes than the payment of the interest and principal of the public debt were kept at the same amount, it would follow that a greater amount could annually be applied to the payment of the principal of the debt, since a smaller amount would be requisite for the payment of the interest, in consequence of the constant reduction of the debt. All this is quite plain, and it would be equally true whether the payments were the extinguishment of a certain portion of the debt, or the purchase of it by the commissioners, or by trustees, who should hold the amount redeemed, and receive

interest upon it, like any other creditors of the government, applying the interest so receiver to the further purchase of stock. This latter .system was adopted in Great Britain, so that, in 1813, when this system of the sinking fund had been in operation twenty-seven years, a little more than £210,000,000 sterling had been redeemed, leaving the net amount of the public debt about £575,000,000, Chough the nominal amount was then above £812,000,000. In 1786, the debt was about £238,000,000. When this system was adopted, it was represented that, by some mysterious operation, it would infallibly result in the extinguishment of the debt; and the system was celebrated as a grand economical discovery. But after infinite arguments and calculations, and some ridicule on the part of unbelievers, it was found that there was no advantage obtained by buying up a part of the debt, and at the same time contracting an equal or greater amount at an equivalent rate of interest. A sinking fund, in the plain and intelligible sense of being a system of provisions and guarantees for the payment of the interest and redemption of the principal of the public debt, is undoubtedly of great importance, and necessary to sustain the public credit. When no part of the debt is made redeemable, such a system can be carried into operation only by buying up the public securities. But the still continuing to call the part so bought up a portion of the public debt, and receiving interest upon it, and keeping accounts respecting it, are a mere idle ceremony. A sinking fund was early established under the government of the United States. From 1803 down to 1817, the sum of 8,000,000 dollars annually was appropriated to that fund, and the stock bought up or paid off by the commissioners, was registered in the treasury office, to the credit of the commissioners of that fund ; and the interest accruing on such stock constituted a part of the fund for the payment of the interest and redemption of the principal of the unredeemed part of the debt; and in 1814, a little more than 33,000,000 dollars was entered in the books of the treasury to the credit of those commissioners. Certain revenues were appropriated to this fund, it being intended, like any other similar one, as a sort of pledge of the public faith and resources to the public creditors. But before the close of that war, the fund had, from time to time, been charged with the payment of amounts to which it was inadequate, so that it no longer held out sufficient security to the public creditors. Accordingly, in 1817, a larger amount of appropriations was made to the fund, and by the act

of congress of the -third of March of that year, it was provided that the certificates of the stock redeemed snould be cancelled ; that is, the commissioners of this fund did not any longer appear as the creditors of the government on the treasury books. The ordinary and plain mode of proceeding was adopted : when any part of the debt was paid, the securities were cancelled, and did not afterwards appear in the public accounts.

SINKING SPRING VALLEY, an extensive valley of Pennsylvania, 200 miles northwest of Phila-

delphia, abounding with stones, lead ore, &c. It is named from several of the largest streams in it sinking, and, after a subterraneous passage of several miles, rising again. Of these, the principal is called the Arch Spring, which is thirty feet broad, and has a natural arch of stone over it.

SIN-NOO/ or SIN-NUM, in the history of China, the second emperor of the Chinese, between whom and Fo-hi, the first emperor, there is an interval, or chronological chasm, of 18,000 years! Yet Voltaire and other modern philosophers, who question the truth of the Scripture history, give full credit to these fables, and ap-peal to them as proofs that our world is much older than the Mosaic history makes it. Fo-hi, according to the Chinese, having founded their empire 21,000 years before the Cnristian era, Sin-Noo, if a real character, must have lived 3000 years before that period. By F. Du llalde he is called Chin-Nong, and ranked the next monarch after Fo-hi. He is said to have taught mankind agriculture and other useful arts. He was succeeded by his son Hoam, or, as Du Halde calls him, Hoang Ti. From all these circumstances the learned Bryant concludes that Sin-Noo is the same with Noah, and Hoam the same with Ham. And, in farther proof of this, he quotes the ancient history of Japan, which mentions Syn-Mu as the founder of their monarchy.

SINON, in ancient history, a son of Sisyphus, who accompanied the Greeks to the Trojan war, where he distinguished himself more by his frauds and villanies than by his merits. By such means, however, the Greeks became victors, after their ten years' siege of Troy. The Greeks having completed their famous wooden horse, as a sacred present to the gods of Troy, Sinon fled to the Trojans, with his hands bound behind his back, pretending to have just escaped from being sacrificed by them ; assured Priam that they had just sailed for Asia, and advised him to admit their farewell present of the wooden horse Priam, giving

him full credit, admitted the horse, and at night Sinon completed his perfidy, by opening that machine and letting out the armed Greeks, who admitted their fellow soldiers, massacred the people, and burnt the city. See TROY. Famous as the Trojan war has been, chiefly through the merit of Homer's poem on it, the capture and destruction of that unfortunate city, by-such complicated treachery and hypocrisy, redound nothing to the honor of the Grecian heroes.

SI NON OMNES, in English law, a writ on association of justices, by which, if all in commission cannot meet at the day assigned, it is allowed that two or more of them may finish the business. Reg. Orig. 202 : F.N. B. 185. And, after the writ of association, it is usual to make out a writ of si non omnes, directed to the first justices, and also to those who are so associated with them ; which reciting the purport of the twc former commissions, commands the justices that, if all of them cannot conveniently be present, such a number of them may proceed, &c. F. N.B. 111.

SINOPE, in fabulous history, a daughter of the river god Asopus, who was beloved by Apollo, who carried her off to the coast of

Asia Minor, where she bore a son to him, named Syrus, and gave her name to the town.

SINOPE, in ancient geography, a sea-port town of Asia Minor, in Pontus, founded by a colony of Milesians. It was long independent, and be-came famous as the birth place of Diogenes, the Cynic philosopher. It was afterwards seized by Pharnaces, king of Pontus, and Mithridates the Great made it hisvcapital. — Strabo 2 ; Mela *I.e.* 19; Diod. 4. It is now called Sinob.

SINOPE, the ancient name of Sinuessa.

SINOPICA TERRA, in ancient mineralogy, a red earth of the ochre kind, called also rubrica sinopica, and by some authors sinopis. It is very close, compact, and weighty, of a fine glowing purple color It is of a pure texture, but not very hard, and of an even but dusty surface. It adheres firmly to the tongue ; is perfectly fine and smooth to the touch ; does not crumble easily between the fingers ; stains the hands ; melts slowly in the mouth ; is perfectly pure and fine, of an austere astringent taste, and ferments violently with aquafortis. It was dug in Cappadocia, and carried for sale to Sinope, whence its name. It is now found in plenty in New Jersey, in America, and is called by the people there bloodstone. Its fine texture and body, with its high florid color, must make it very valuable to painters ; and, from its astringency, it will probably be a powerful medicine.

SINOPLE, in heraldry, denotes vert, or green color, in armories. Sinople is used to signify love, youth, beauty, rejoicing, and liberty ; whence it is that letters of grace, ambition, legitimation, &c., are always sealed with green wax.

SINOVIA, or SYNOVIA, a mucilaginous fluid in the joints of animals, intended to facilitate motion by lubricating the parts. See ANATOMY, Index. ‘ The only analysis of sinovia,’ says Dr. Thomson, in his System of Chemistry, vol. iv. p. 423 — 425, ‘ which has hitherto appeared, is that by Mr. Margueron, which was published in the 14th vol. of the Annales de Chimie. He made use of sinovia obtained from the joints of the lower extremities of oxen. The sinovia of the ox, when it has just flowed from the joint, is a viscid semitransparent fluid, of a greenish-white color, and a smell not unlike frog spawn. It very sooq acquires the consistence of jelly, whether it be kept in a cold or a hot temperature, whether exposed to the air or excluded from it. This consistence does not continue long; the sinovia soon recovers its fluidity, and deposits a thready-like matter. Sinovia mixes readily with water, and imparts to it a great deal of viscidity. The mixture froths when agitated ; becomes milky when boiled, and deposits some pellicles on the sides of the dish ; but its viscidity is not diminished. When alcohol is poured into sinovia, a white substance precipitates, which has all the properties of albumen ; 100 pans of sinovia contain 4‘52 of albumen. The liquid still continues as viscid as ever ; but, if acetous acid be poured into it, the viscidity disappears altogether, the liquid becomes transparent, and deposits a quantity of matter in white threads, which possesses the following properties : 1 . It has the color, smell, taste, and elasticity, of vegetable gluten. 8. It is soluble in concentrated acids and pure

alkalies. 3. It is soluble in cold water; the ao-lution froths ; acids and alcohol precipitate the fibrous matter in flakes ; 100 parts of sinovia contain 11‘86 of this matter. When the liquid, after these substances have been separated from it, is concentrated by evaporation, it deposits crystals of acetite of soda. Sinoria, therefore, contains soda. Margueron found that 100 parts of sinovia contained about 0-71 of soda. When strong sulphuric, muriatic, nitric, acetic, or sulphurous acid, is poured into sinovia, a number of white flakes precipitate at first, but they are soon redissolved, and the viscidity of the liquid continued. When these acids are diluted with five times their weight of water, they diminish the transparency of sinovia, but not its viscidity ; but, when they are so much diluted that their acid taste is just perceptible, they precipitate the peculiar thready matter, and’ the viscidity disappears. When sinovia is exposed to a dry atmosphere, it gradually evaporates, and a scaly residuum remains, in which cubic crystals; and a white saline efflorescence, are apparent. The cubic crystals are muriate of soda; 100 parts of sinovia contain about 1-75 of this salt. The sa-line efflorescence is carbonate of soda. Sinovia soon putrefies in a moist atmosphere, and, during the putrefaction, ammonia is exhaled. When distilled in a retort, there come over, first, water, which soon putrefies ; then water containing ammonia; then empyreumatic oil and carbonate of ammonia. From the residuum, muriate and carbonate of soda may be extracted by lixiviation. The coal contains some phosphate of lime.’ From the analysis of M. Margueron, sinovia is composed of 1T86 fibrous matter, 4‘52 albumen, 1-75 muriate of soda, ‘71 soda, -70 phosphate of lime, and 80-57 water.

SINTOO, the ancient religion of the Japanese, so called from Sin, one of their chief deities. How far it differed from their present system we know not. See JAPAN.

SIN’UATE, v. n. } Lat. sinuo. To bena

SINUA’TION, «. s. >in and out : the noun sub—

SIN’UUUS, adj. j stantive and adjective corresponding.

Try with what disadvantage the voice will be carried in an horn, which is a line arched ; or in a trumpet, which is a line retorted ; or in some pipe that were sinuous. Bacon.

These as a line, their long dimension drew, Streaking the ground with sinuous trace.

Milton’s Paradise Lost.

The human brain is, in proportion to the body, much larger than the brains of brutes in proportion to their bodies, and fuller of anfractus, or sinuations. Hale’s Origin of Mankind.

In the dissections of horses, in the concave or sinuous part of the liver, whereat the gall is usually seated in quadrupeds, I discover an hollow, long, membranous substance. Browne.

Another was very perfect, somewhat less with the margin, and more sinuated. Woodward on Fossils.

SINUOSITY is a series of bends and turns in arches or other irregular figures, sometimes jutting out, and sometimes falling in.

SI’NUS, n. s. Lat. sinus. A bay of the sea ; an opening of the land.

Plato supposeth his Atlantis to have sunk all into the sea whether that be true or no, I do not think

it impossible that some arms of the sea, or sinuses, might have had such an original.

Burnei’s Theory of the Earth.

SINUS, in anatomy, denotes a cavity in certain bones and other parts, the entrance whereof is very narrow, and the bottom wider and more spacious. See ANATOMY, Index.

SINUS, in surgery, a little cavity or succulus, frequently formed by a wound or ulcer, wherein pus is collected.

SIGN, a famous hill in Judea. See ZION. SIOUX, or Sious, a late powerful nation of North American Indians, who inhabit the banks of the head waters of the Missisippi and Mis-souri ; and the islands of Lake Superior.

SIP, v.a., v. «., & n. s. Sax. ppan ; Belij. sippen. To drink by small draughts ; to take no more than the mouth will contain : to drink a small quantity : a small draught.

Her face o' fire

With labour, and the thing she took to quench it She would to each one sip.

Shakspeare. Winter's Tale. Find out the peaceful hermitage ; The hairy gown and mossy cell, Where I may sit and rightly spell Of every star that heaven doth shew, And every herb that tips the dew. Milton.

One sip of this

Will bathe the drooping spirits in delight, Beyond the bliss of dreams. Id.

The winged nation o'er the forest hies : Then stooping on the meads and leafy bowers, They skim the floods and sip the purple flowers.

Dry den.

She raised it to her mouth with sober grace ; Then, sipping, offered to the next. Id. sEneid.

Soft yielding minds to water glide away, And nip with nymphs their elemental tea. Pope. She should imbue the tongue with what she tips, And shed the balmy blessing on the lips, That good diffused may more abundant grow, \nd speech may praise the power that bids it flow.

Cowper.

SIPIIANTO, or SIPHNO, an island of Greece, in the Archipelago, situated to the west of Paros. It is nearly thirty miles in length, and about seven in breadth. It has not a good harbour, out its atmosphere is healthy, and its soil, where not covered with marble and granite, is of considerable fertility in maize, wheat, mulberries, olives, vines, figs, and cotton. Its gold and silver mines are no longer known; but mines of iron and lead have been traced. Here are several .juarries of beautiful marble. The population, about 4000, are all Greeks. The chief place, a village called Siphanto, stands on a high rock.

SIPHNOS, in ancient geography, one of the Cyclades, lying west of Paros, famous for its fruits, mines, and the licentiousness of the people. They behaved with spirit in the Persian war. It is now called

Sifanto.

SI'PHON, n.s. FT. siphon} Gr. mfov; Lat. sipho. A pipe through which liquors are conveyed. See HYDROSTATICS.

Beneath the incessant weeping of these drains I see the rocky siphont stretched immense, The mighty reservoirs of hardened chalk, Of stiff compacted clay. Thomson's Autumn.

SIPHONANTHUS, in botany, a genus of plants belonging to the class of tetrandria, and

order of monogynia. The corolla is monopetalous, funnel-shaped; the tube is very narrow, and much longer than the calyx. There are four berries, each containing one seed. There is only one species, *viz.* S. Indica, a native of the East Indies.

SIPONTUM, SEPUNTUM, or SIPUS, in ancient geography, a town of Apulia, so denominated from the great quantity of sepiae, or cuttle-fish, that are thrown upon the coast. Diomed was the founder, after his return from Troy. — Strabo. It became afterwards a Roman colony. In the early ages of Christian hierarchy, a bishop was fixed in this church ; but, under the Lombards, his see was united to that of Beneventum. Being again separated, Sipontum became an archiepiscopal diocese in 1094, when it was so ravaged by the Barbarians that it never recovered its splendor, but sunk into such misery that in 1260 it was a mere desert. Manfred therefore began in 1261 to build a new city on the sea-shore, to which he removed the few remaining Sipontines. Sipontum lay a mile from the shore. Excepting a part of its Gothic cathedral, scarcely one stone of the ancient city now remains upon another.

SIPPORHJE. See SEPHARVAIM.

SIPUNCULUS, in zoology, a genus of the intestina class of worms in the Linnaean system. Its characters are these : —The body is round and elongated ; the mouth attenuated and cylindrical ; and the lateral aperture of the body rugged. There are two species; one found under stones in the European seas, and the other in the Indian ocean.

SIPUS. See SIPONTUM.

SIPYLUM, or SIPYLUS, an ancient town of Lydia, on a mountain so named, near the Meander, anciently called Ceraunius, from its

frequent thunder storms. This town, with twelve others near it, was destroyed by an earthquake in the reign of Tiberius. Strabo 1 and 12, Paus. i. c. 20.

SIR, n.s. Fr. sire; Ital. seignior; Span.se-nor ; Lat. senior. A respectful compellation ; title of a ‘ night or baronet : used for man ; also in composition as a title of the loin of beef, once knigb’ed by one of our kings.

Speak on, sir,

I dare your worst objections : if I blush, It is to see a nobleman want manners.

Shakspeare. Henry VIII. But, sin, be sudden in the execution ; Withal obdurate ; do not let him plead.

Id. Richard III. Sir king, This man is better than the man he slew.

Shatupeare.

I have adventured

To try your taking of a false report, which hath Honoured with confirmation your great judgment, In the election of a tir so rare. . Id. Cymbeline.

Sir Horace Vere, his brother, was the principal in the active part. Bacon’s War with Spain.

He lost his roast-beef stomach, not being able tc touch a air-loin which was served up. Addison.

The court forsakes him, and sir Balaam hangs. , Pope.

It would be ridiculous, indeed, if a spit, which is strong enough to turn a sir-loin of beef, should not be able to turn a lark. Swift.

And the strong table groans Heneatb the smoking sir-loin, stretched immense From side to side. Thomson s Autumn.

SIRANI (John Andrew), an eminent historical painter, bora at Bologna in 1610. He was a disciple of Guido. His Last Supper at Rome is much admired. He died in 1670.

SIRANI (Elizabeth), daughter and disciple of the preceding, was born at Bologna in 1638. Before she reached her fifteenth year, she was reckoned “a prodigy in painting. She painted in the manner of her father and equalled him. She died in 1664.

SIRBO, in ancient geography, a lake between Egypt and Palestine, now called Sebaket Bar-doil. Plin. iv. c. 13.

SIRCAR, any office under the government in Hindostan. It is sometimes used for the state of government itself, also for a province or any number of pergunnahs placed under one head in the government books, for conveniency in keeping accounts. In Bengal the under ban-yans of European gentlemen are called Sircars. See CIRCAR.

SIRE, n. $. & v. a. Fr. sire ; Lat. senior. A father. Used in poetry. Shakspeare uses the verb for to beget ; produce.

He, but a duke, would have his son a king, And raise his issue like a loving sire.

Shakspeare. Henry VI.

Cowards father cowards, and base things tire the base. Shakspeare.

A virgin is his mother, but his sire The power of the Most High. Milton’s Paradise Lost.

And now I leave the true and just supports, Of legal princes and of honest courts, \Vhose tirei, great partners in my father’s cares, Saluted their young king at Hebron crowned. Prior.

Whether his hoary sire he spies, While thousand grateful thoughts arise, Or meets his spouse’s fonder eye.

Pope’s Chorus to Brutus.

SIRE was a title of honor formerly given to the king of France as a mark of sovereignty.

SIRE was likewise anciently used in the same sense with sieur and seigneur, and applied to barons, gentlemen, and citizens.

SI'REN, n. *. Lat. siren. A goddess who enticed men by her singing, and devoured them ; any mischievous enticer.

Oh train me not, sweet mermaid, with thy note, To drown me in thy sister's flood of tears : Sing, siren, to thyself, and I will dote ; Spread o'er the silver waves thy golden hair, And as a bed I'll take thee, and there lie.

Sliukspeare.

The SIRENS, or SIRENES, in fabulous history, were celebrated songstresses, who were ranked among the demigods of antiquity. Hyginus places their birth among the consequences of the rape of Proserpine. Ovid makes them daughters of the river god Acheloiis by the Muse Calliope, or Melpomene. Their number was three, and their names were Parthenope (who gave its ancient name to Naples), Lygeia, and Leucosia ; or, as others say, Molpe, Aglaophonos, and Thelxiope. Some make them half women and half -fish ; others half women and half birds. There are antique representations of them still subsisting under both these forms. Pausanias

tells us, that the Sirens, by the persuasion of Juno challenged the Muses to a trial of skill tn singing ; and these having vanquished thera, plucked the golden feathers from the wings of the Sirens, and formed them into crowns, with which they adorned their own heads. The Argonauts were diverted from the enchantment of their songs by the superior strains of Orpheus. Ulysses, however, had great difficulty in securing himself from their seduction. See Odys. lib. xii. Some say that the Sirens were queens of the islands named Sirenusae, and chiefly inhabited the promontory of Minerva, upon the top of which that goddess had a temple, built by Ulysses. Here there was a renowned academy, famous for eloquence and the liberal sciences ; but at last they abused their knowledge to the corruption of manners, and enticed passengers, who there consumed their patrimonies in riot and effeminacy. The place is now called Massa. Some writers tell us of a certain bay, contracted within winding straits and broken cliffs, which, by the singing of the winds and beating of the waters, returns a

delightful harmony that allures the passenger to approach, who is immediately thrown against the rocks, and swallowed up by the violent eddies. Horace calls idleness a siren. But the fable may be applied to pleasures in general, which, if too eagerly pursued, betray the incautious into ruin. Mr. Bryant says that the Sirens were Cuthite and Canaanitish priests, who had founded temples in Sicily, which were rendered infamous on account of the women who officiated. They were much addicted to cruel rites, so that the shores upon which they resided were covered with the bones of men destroyed by their artifices. Virg. l£r. lib. v. 864. All ancient authors agree that the Sirens inhabited the coast of Sicily. The name, says Bochart, in the Phoenician language, implies a songstress. Hence it is probable, says Dr. Burney, that they were excellent singers, but of corrupt morals.

SIREN, in zoology, a genus of animals, arranged by Linnaeus in the class of amphibia and the order of meantes. But Gmelin has since corrected the arrangement of that eminent zoolo-gist, and ranked it under the genus Muraena. See MURˆNA.

SIRENUSjE, in ancient geography, five small islands near Caprtea, on the coast of Italy, said to have been anciently inhabited by the Sirens. They are now called Galli. See GALLI.

SIREX, in zoology, a genus of animals belonging to the class of insects, and to the order of hymenopterae. The mouth has two strong jaws ; there are two truncated palpi or feelers, filiform antenna?, an exserted, stiff, serrated sting, a sessile mucronated abdomen, and anceolated wings. There are seven species.

SIRHIND, or SERHIND, a large district in the north-western quarter of Delhi, situated between 30° and 31° N. lat.

The portion of this district which borders on Hansy Hissar and Carnaul is extremely barren, being covered with low wood, and in many places almost destitute of water. The city of Sirhind was formerly the capital of this territory, but it is now a scene of desolation, and has probably never recovered the dreadful ravages

of the seik Bairaggee Banda about 1707, who is stated to navp levelled its palaces and public buildings to tne ground. Patiala is now the largest and most flourishing town in this province, and next to it is Tahnesir (Thanesur), which is still held in high religious veneration by the Hindoos, as is also the. river Sereswati, which flows through the country.

The greatest part of the district is possessed by the Malawa Singh class of seiks. In March, 1 809, rajah Ranjeet Singh, the seik chief of Lahore, gave up the forts he had occupied on the left bank of the Sutuleje to the British, who restored them to their former owners.

SIRHIND, a town in the province of Delhi, the capital of the district of this name, 155 miles N. N.W. from Delhi. Lat. 30° 40’ N, long. 75° 55’ E. This place was flourishing in the time of Abul Fazel, who describes it as a famous city, containing the delightful gardens of Hafez Rehneh, but it now exhibits only a shapeless mass of ruins. In the neighbourhood are numerous mango groves, and some excellent tanks.

SIRICIUS, pope of Rome, who succeeded pope Damasus I., A. D. 384, to the exclusion of Ursicinus. His Epistles are preserved in Constant’s collection. He died A. D. 398.

SIRIES (Violante Beatrice), a celebrated Italian paintress, born at Florence in 1710. She became the disciple of Fratellini, then in high esteem, and made great progress under him, in crayons and water colors. She afterwards went to France, where she acquired the art of painting in oil, and executed several portraits of the nobility. On her return to Florence she was highly patronised by the grand duke. One of her chief performances is a picture of the whole imperial family.

SIRIUM, in botany, a genus of plants belonging to the class of tetrandria and order of monogynia. The calyx is quadrifid ; there is no corolla; the nectarium is quadriphyllous and crowning the throat of the calyx ; the germen is below the corolla ; the stigma is trifid, and the berry trilocular. There is only one species. S. myrtifolium, the myrtle-leaved sirium.

SIRIUS [Lat.J, the dogstar, a bright star in the constellation of Canis.

See CANICULA.

SIRLET (Flavius), an eminent Roman engraver on precious stones. His Laocoon and representations in miniature of antique statues at Rome are very valuable and scarce. He died in 1737.

SIRMIUM, or SIRMICH, an ancient and celebrated town of Sclavonia, capital of a county so named. The emperor Probus was born and killed in it. See PROBUS and ROME. In 270 the emperor Claudius II died in it of the plague. In 1668 the Imperialists drove the Turks out of it. It is now ruinous, though a bishop's see, founded so early as the reign of Trajan. It is seated on the Bosweth, near the Save, forty-two miles southeast of Esseck, and twenty-seven northwest of Belgrade. Long. 20° 19' E', lat. 45° 13' N.

SIRMOND (James), a learned French Jesuit, the son of a magistrate, born at Riom in 1559. After studying at the college of Billom, he joined the society in 1576. In 1588 he began to trans-

late the works of the Greek fathers, and to write notes upon Apollinaris Sidonius. In 1590 his general Aquaviva sent for him to Rome to be his secretary ; which office he executed successfully for sixteen years; visiting libraries, studying antiquities, and consulting MSS. He also assisted cardinal Baronius in his Ecclesiastical Annals. He returned to Paris in 1606, where he published many works. Louis XIII. appointed him his confessor in 1637. In 1645 he returned to assist at the election of a new general. He spent much of his time in collecting the works of the writers of the middle age, which he published with notes. His whole works amounted to fifteen volumes folio, of which five are entirely his own. He died at Rome 7th of October, 1651, aged ninety-two.

SIROC'CO, n. s. Ital. sirocco ; Lat. syrus ventut. The southeast or Syrian wind.

Forth rush the levant and the ponent winds, Eurus and Zephyr, with their laternal noise, Sirocco and Libecchio. Milton.

The SIROCCO, or SCIROCHO, is a periodical wind which generally blows in Italy and Dalma-tia every year about Easter. It blows from the southeast by east ; it is attended with heat but not rain; its ordinary period is twenty days, and it usually ceases at sun-set. When the sirocco does not blow in this manner, the sum-mer is almost free from westerly winds, whirlwinds, and storms. This wind is prejudicial

to plants, drying and burning up the buds; though it hurts not men any otherwise than by causing an extraordinary weakness and lassitude; inconveniences that are fully compensated by a plentiful fishing, and a good crop of corn on the mountains. In summer, when the westerly wind ceases for a day, it is a sign that the sirocco will blow the day following, which usually begins with a sort of whirlwind.

SIROPUM, an ancient town of Egypt, mentioned by Pliny, supposed to be modern Siwa.

SIR'RAH, n.s. Sir, ha! — Minshew. Acom-pellation of reproach and insult.

Sirrah, there's no room for faith, troth, or honesty, in this bosom of thine. Shakspeare. Henry IV.

It runs in the blood of your whole race, sirrah, to hate our family. L'Estrange.

Guess how the goddess greets her son, Come hither, sirrah; no, begone. Prior.

SIR'OP, n. s.) Arab, strop or shrob ; Teut.

SIR'UP, > syrup ; barb. Lat. syrupus. The

SIR'UPED, adj. J juice of vegetables boiled with sugar : sweet like syrup.

Shall I, whose ears her mournful words did seize, Her words in sirup laid of sweetest breath, Relent 1 Sidney.

Not poppy, nor mandragora, Nor all the drowsy sirups of the world, Shall ever med'cine thee to that sweet sleep, Which thou owedest yesterday. Sliakspeare. Othello.

Yet when there haps a honey fall, We'll lick the syrup leaves : And tell the bees that theirs is gall. Drayton.

And first, behold this cordial julap here, That flames and dances in his crystal bounds, With spirits of balm, and fragrant syropt mixt.

MittOH.

A pples are of a ryrupy tenacious nature. Mortimer. Those expressed juices contain the true essential

salt of the plant ; for if they be boiled into the consistence of a lirnp, and set in a cool place, the essential salt of the plant will shoot upon the sides of the vessels. ArbutJinot.

SISACHTHIA, in attic antiquity; 1. A law instituted by Solon, for the remittance of all debts. 2. A solemn sacrifice instituted in commemoration of that law.

SISE, n. s. Contracted from assize.

You said, if I returned next size in Lent, I should be in remitter of your grace. Dome.

SISERA, a general of the Canaanites, under king Jabin II., who was defeated by the Israelites under Deborah and Barak, with great slaughter of his troops, and obliged to fly for refuge to Jael, the wife of Heber, the Kenite, •who was at peace with Jabin, but who treacherously murdered him, while sleeping in the confidence of her protection. It is impossible to vindicate this action of Jael's, unless upon the general principle that it is lawful to rid the world of oppressors by any means. Deborah, indeed, praises and pronounces a blessing upon her for it, in the popular song she composed after the victory (Jud. v. 24) ; but, though she •was undoubtedly an inspired prophetess, we are not certain if in this composition she was inspired by any thing but her patriotic zeal for her countrymen, now restored to their liberty, after a tedious oppression of twenty years. That this act of Jael's, whereby the victory of the Israelites over their oppressors was completed, •was ordained by the Almighty is evident from the context (ch. iv. 9), where it was foretold by Deborah ; but this does not justify the action any more than the treachery of Judas, which was also foretold many centuries before it happened, but is no where vindicated on that account.

SISINNIUS, pope of Rome, was a native of Syria, who rose through various gradations in the clerical line, till at last, on the death of John VII. in 708, he was elected pope, but did not enjoy the triple crown three weeks, dying on the twentieth day after his election.

SISON, bastard stone parsley, in botany, a genus of plants belonging to the class of pentandria, and to the order of digynia; and in the natural system arranged under the forty-fifth order, umbellate. The fruit is egg-shaped and streaked ; the involucra are subtetraphyllous. There are seven species. 1. S. ammi. 2. S. amomum, common bastard parsley, or field stone-wort, is a biennial plant about three feet high, growing wild in many places of Britain. Its seeds are small, striated, of an oval figure and brown color. Their taste is warm and aromatic. Their whole flavor is extracted by spirit of wine, which elevates very little of it in distillation; and hence the spirituous extract has the flavor in great perfection, while the watery extract has very little. A tincture drawn with pure spirit is of a green color. The seeds have been esteemed aperient, diuretic, and carmina-tive ; but are now little regarded. 3. S. Cana-dense, the Canada bastard parsley, is common in Canada. 4. S. falsum, the false bastard parsley. 5. S. inundatum, least water parsley. The stem is about eight or ten inches high, branched and creeping ; the leaves below the

water are capillary; above it are pinnated; the umbels are bifid. It grows wild in our ditches and ponds. 6. S. segetum, corn parsley or honeywort. The stems are numerous, slender, striated, branched, and leaning ; the leaves are pinnated; the pinnae are oval, pointed, and serrated, six or eight pair, and one at the end ; the umbels small and drooping; the flowers minute and white. It grows in out corn-fields and hedges. 7. S. verticillatum, verticillate. sison, has small leaves in whirls, and capillary ; thp stem is two feet with few leaves; the common umbel is composed of eight or ten rays, the partial of eighteen or twenty ; both involucra are composed of five or six oval acute foliola; the flowers are all hermaphrodite, and the petals white. It grows wild in Britain.

SISSOPOLI, or SIZEBOLI, a town of European Turkey, the ancient Apollonia, situated on a point of land which projects into the Black Sea. It has the best roadstead in the gulf, where men of war may anchor in perfect safety. The inhabitants are Greeks, and the chief articles of trade are wine and wood. 115 miles N.N.W. of Constantinople.

SISTER, 7i. s. } Sax. r-peor-teri ; Belg. zus-SIS'TERHOOD, >ter. A female child of thu SIS'TERLY, adv. J same parents; the correllative of brother ; a female of the same kind or nature ; hence a woman of the same Christian faith : sisterhood is, the state or duty of a sister ; a number of women of the same order : sisterly, like a sister. Thy sister in law is gone back unto her people : re-turn thou after thy sister in law. Ruth i. 15.

If a brother or sister be naked, and destitute of food, and you say unto them, Depart in peace, be you warmed and filled ; notwithstanding, you give them not those things which are needful to the body what doth it profit ? James ii. 15.

He chid the sisters, And bade them speak to him. Shakspeare. Macbeth.

I speak,

Wishing a more strict restraint Upon the sisterhood, the votarists of Saint Clare.

Shakspeare.

After much debatement, My sisterly remorse confutes mine honour, And I did yield to him. Id

She abhorred

Her proper blood, and left to do the part Of sisterhood, to do that of a wife.

Daniel's Civil War.

The women, who would rather wrest the laws Than let a sister-plaintiff lose the cause, As judges on the bench more gracious are, And more attent to brothers of the bar, Cried, one and all, the suppliant should have right ; And to the grandame hag adjudged the knight.

Dry den.

A woman who flourishes in her innocence, amidst that spite and rancour which prevails among her exasperated sisterhood, appears more amiable.

Addison's Freeholder

There grew too olives closest of the grove, With roots entwined, and

branches interwove : Alike their leaves, but not alike they smiled With sister-fruits one fertile, one was wild. Pope.

SISTOVA, SZISTOW, or SCHISTAB, a large town of Bulgaria, on the right bank of the Da-nube. It has a citadel, and its trade, promoted by thu navigation of the Danube, consists chiefly

in leather and cotton. A number of the traders are Armenians and Greeks. In history it is remarkable for the conference held here, in 1791, between the Turks and Austrian s. Inhabitants 20,000. Twenty-five miles east of Nicopoli.

SISTRUM, or CISTRUM, an ancient musical instrument used by the priests of Isis and Osiris. It is described by Spon as of an oval form, in manner of a racket, with three sticks traversing it breadthwise; which playing freely, by the agitation of the whole instrument, yielded a kind of sound which to them seemed melodious. Mr. Malcolm takes it to be no better than a kind of rattle. Oiselius observes that the sistrum is found represented on several medals, and on talismans.

SISYMBRIUM, water cresses, in botany, a genus of plants belonging to the class of tetradynamia, and to the order of siliquosa ; and in the natural system ranged under the thirty-ninth order, siliquosae. The siliqua, or pod, opens with valves somewhat straight. The calyx and corolla are expanded. There are twenty-nine species, of which eight are natives of Britain : *viz.*

1. S, amphibium, water radish. The stein is firm, erect, and two or three feet high; the leaves are pinnatifid and serrated; the flowers are yel-low and in spikes; the pods are somewhat oval and short. It grows in water.

2. S. irio, broad leaved rocket or hedge -mustard ; the stem is smooth, and about two feet high ; the leaves are broad, naked, pinnated, and halberd shaped at the end ; the flowers are yel-low and the pods erect. It grows on waste ground:

3. S. monense, yellow rocket. The stem is smooth, and about six or eight inches high; the leaves are pinnatifid ; the pinnae remote, generally seven pair; the flower is yellow; the petals entire ; the calyx is closed. It grows in the Isle of Man.

4. S. murale, or wall rocket. The stems are rough, and about eight inches high ; the leaves grow on footstalks, lance-shaped, smooth, sinuated, and serrated ; the flowers are yellow ; the pods a little compressed, and slightly carinated. It grows on sandy ground in the North, Anglesey, &c.

5. S. nasturium, common water cress, grows on the brinks of rivulets and water-ditches. The leaves have from six to eight pair of smooth, succulent, and sessile pinnae; the flowers are small and white, and grow in short spikes or tufts. The leaves have a moderately pungent taste, emit a quick penetrating smell, like that of mustard seed, but much weaker. Their pungent matter is taken up both by watery and spirituous menstrua, and accompanies the aqueous juice, which issues copiously upon expression. It is very volatile, so as to arise in great part in distillation with rectified spirit, as well as with water, and almost totally to exhale in drying the leaves, or inspissating by the gentlest heat to the consistence of an extract, either the expressed juice, or the watery or spirituous tinctures. Both the inspissated juice, and the watery extract, discover to the taste a saline impregnation, and, ..i keeping, throw up crystalline efflorescences to ihe surface. On distilling considerable quantities of the herb with water, j small proportion of a subtile, volatile, very pungent oil is obtained. Water cresses obtain a place in the materia medica for their antiscorbutic qualities, which have been long very generally acknowledged by physicians. They are also supposed to purify the blood and humors, and to open visceral obstructions. They are nearly allied to scurvy grass, but are more mild and pleasant, and for this reason are frequently eaten as salad. In the pharmacopoeias the juice of this plant is directed with that of scurvy-grass and Seville oranges ; and Dr. Cullen has remarked that tlie addition of acids renders the juices of the plants siliquosa? more certainly effectual, by determining them more powerfully to an acescent fermentation.

6. S. silvestre, water-rocket. The stem is weak, branched, and above a foot high. The leaves are pinnated; the pinnae lance-shaped and

serrated ; the flowers small and yellow; and grow frequently in shallow water.

7. S. sophia, flixweed. The stem is firm, branched, and two or three feet high ; the leaves are multifid ; the segments are narrow ; the flowers are yellow ; the petals much less than the calyx; the pods are long, stiff', curved, without style, and erect; the seeds are minute and yellow. It grows on walls, waste ground, &c.

8. S. terrestre, land rocket, or annual water radish. The leaves are pinnatifid ; the pods are filled with seed ; the root is annual, and white ; the stem is angular, red-green, and smooth.

SISYPHUS, in fabulous history, the son of .ZEolus and Enarete, and brother of Athamas and Salmoneus. He married Merope, one of the Pleiades, who bore him Glaucus. He built Ephyra in Peloponnesus, called afterwards Corinth, and was a very crafty man. Others say that he was a Trojan secretary, who was punished for discovering secrets of state; and others again that he was a notorious robber, killed by Theseus. He debauched his niece Tyro, who killed the two sons she had by him. All the poets agree that he was punished in Tartarus for his crimes, by rolling a great stone to the top of a hill, which constantly recoiled, and rolling down incessantly, renewed his labor, without end.

SISYRINCHIUM, in botany, a genus of plants belonging to the class of gynandria, .and order of triandria; natural order sixth, en-sate. The spatha is diphyllous; there are six plane petals : CAPS, trilocular and inferior. There are two species: 1. S. Bermudiana, a native of Bermuda; and 2. S. palmifolium, with leaves resembling those of the palm tree.

SIT, v.n. & w.a.-) Fret. I sat. Sax. ptran ;

SIT'TER, n. s. > Swed. setta ; Goth, sita, si—

SIT'TING. } tan. To rest on the buttocks ; be in any state of rest or quiet; rest as a weight ; brood ; settle ; abide ; be adjusted ; ordered ; settled ; convened ; placed at table ; be in any solemn assembly as a member; taking down, out, and up, after it : as a verb active, to keep a seat upon ; place on a seat : the noun substantives corresponding.

Shall your brethren 'go to war, and shall ye tit here ? Number*.

Asses are ye that sit in judgment. Judge* v. 10. Thou knowest my down-s»U»ig and mine uprising.

Psalms.

As the partridge titteth on eggs, and hatcheth them not, so lie that getteth riches not by right, shall leave them in the midst of his days.

Jer. xvii. 11.

The judgment shall sit, and take away his dominion. Daniel. He that was dead tat up, and began to speak.

Luke vii.

Whether is greater, he that titteth at meat, or he that serveth. Id. xxii. 27.

Three hundred and twenty men sat in council daily. 1 Mac.

From besides Tanais, the Goths, Huns, and Getes sat down. Spenser.

This new and gorgeous garment, majesty, Sits not so easy on me as you think. Sliakspeare.

Heaven knows

By what by-paths and indirect crooked ways I met this crown : and I myself know well How troublesome it sate upon my head ; To thee it shall descend with better quiet. Id.

I should be still

Plucking the grass to know where sit» the wind : Peering in maps for ports. Id. Merchant of Venice. Your brother’s death sits at your heart.

Sliakspeare.

The happiest youth viewing his progress through What perils past, what crosses to ensue, Would shut the book, and sit him down and die.

Id.

I'll write you down ;

The which shall point you forth at every sitting, What you must say. Id.

The egg laid, and severed from the body of the hen, hath no more nourishment from the hen ; but only a quickening heat when she sitteth.

Bacon's Natural History.

As a farmer cannot husband his ground so well, if he tit at a great rent ; so the merchant cannot drive his trade so well, if he sit at great usury. Bacon.

He came to visit us, and, calling for a chair, sat him down, and we sat down with him. Id.

The Turks are great sitters, and seldom walk, whereby they sweat less, and need bathing more.

Id.

I wish it may be at that sitting concluded, unless the necessity of the time press it. Id.

Be courtly,

And entertain, and feast, sit up, and revel ; Call all the great, the fair, and spirited dames Of Rome about thee, and begin a fashion Of freedom. Ben Jonson.

Their wives do sit beside them, carding wool.

Mays Virgil.

Some sit up late at winter-fires, and fit Their sharp-edged tools. May.

When we sit down to our meal, we need not suspect the intrusion of

armed uninvited guests.

Decay of Piety.

They are glad, rather than sit out, to play very small game, and to make use of arguments, such as will not prove a bare inexpediency.

Bishop Sanderson's Judgment. When God lets loose upon us a sickness, if we fear to die, then the calamity sits heavy on us.

Taylor.

Nor would the enemy have sate down before it, till they had done their business in all other places.

Clarendon.

That this new corner, shame, There tit and not reproach us. Milton.

Down to the golden Chersonese, or where The Persian in Kcbatan sate. IJ,

Why sit we here each other viewing idly? Id.

Thus fenced,

But not at rest or ease of mind,, They sat them down to weep. Id.

The toss and fling, and to be restless, only gall» our sores, and makes the burden that is upon us si* more uneasy. TMotson.

Aloft, in awful state, The godlike hero sat

On his imperial throne. Dryden.

When Thetis blushed in purple not her own. And from her face the breathing winds were b'.own ; A sudden silence sate upon the sea, And sweeping oars with struggling urged their way.

Id.

Few good pictures have been finished at one sitting ; neither can a good play be produced at a heat.

Id.

Your preferring that to all other considerations, does, in the eyes of all men, sit well upon you.

Locke.

Most children shorten that time by sitting up with the company at night. Id.

For the understanding of any one of St. Paul's epistles, I read it all through at one sitting. Id.

The oldest hens are reckoned the best sitters ; and the youngest the best layers. Mortimer's Husbandry.

Assert, ye fair ones, who in judgment *it, Your ancient empire over love and wit. Roire.

One is under no more obligation to extol every thing he finds in the author he translates, than a painter is to make every face that sits to him handsome. Garth.

She mistakes a piece of chalk for an egg, and sits upon it in the same manner. Addison.

One council sits upon life and death, the other is for taxes, and a third for the distributions of justice.

Id.

The court was sat before Sir Roger came, but the justices made room for the old knight at the head of them. jdf

Whilst the hen is covering her eggs, the male bird takes his stand upon a neighbouring bough, and amuses her with his songs during the whole time of her sitting. <.

Hardly the muse can sit the head-strong horse, Nor would she, if she could, check his impetuous force. Prior.

Here we cannot sit down, but still proceed in our search, and look higher for a support. Rogers.

Suppose all the church-lands were thrown up to the laity ; would the tenants «it easier in their rents than nowl Swift.

The ships are ready and the wind sit* fair.

A. Philips.

SITA, in Hindoo mythology, is a celebrated incarnation of the goddess Lakshmi, consort of Vishnu, in his avatara, or descent in the form of Rama. In the language of the fable, she was his sakti, or energy; and ‘numberless poems have been written in honor of her beauty and merits. She is one of the most popular goddesses of the Hindoo Pantheon, and is indeed one of the most virtuous and interesting characters in tlieir legends. Her history and that of her lord forms the subject of the RAMAYANA, an epic poem, grounded, like the Iliad, on a rape. As noticed in that article, and RAVENA, the carrying off, by the treachery of the tyrant of that name, the virtuous spouse of Rarna, roused that hero ta the mighty deeds necessary for her rescue from the

hands of her powerful persecutor, and celebrated in the fine poem of Valmiki ; and, as noticed above, in numberless others of secondary and minor fame. The outline of Sita’s history is : the childless rajah Janaka, having duly propitiated the gods, was led to the benevolent adoption of a female child about five years old, found enclosed in a box by a Brahmin in a field. She was called Sita, from sit or set, meaning a furrow or field ; and Janeki, after her adoptive father. Sita, however, means also fair, and may be thence derived, and is in this sense, of denoting beauty, given also to Parvati and Saraswati, consorts of the other two divine persons of the Hindoo triad. She proved to be an incarnation of Lakshmi, as before noticed : and on attaining maturity was won by Rama, in a contest of archery with many sovereigns, ambitious of obtaining a prize of such incomparable beauty. This story, as it is related in the Ramayana, reminds us of the unyielding bow of Ulysses ; as none but Rama had power to accomplish the required and ordained feat; which was piercing the eye of a fish whirling on a pin fixed on a high pole ; and not looking at the mark, but at its reflection in a vessel of oil placed on the

ground. The ten-headed twenty-handed tyrant Ravena had previously failed. Burning with the rage of disappointed desire, the tyrant carried her off; and, having been in his power, her purity might be possibly suspected; she therefore plunged into the flames, where, defended by Pavaka, the regent of fire, her incombustibility attested her innocency. She was of course triumphantly restored to her over-joyed husband. In the Ramayana she is described as ‘ endued with youth, beauty, goodness, sweetness, and prudence; an inseparable attendant on her lord, as the light on the moon : the beloved spouse of Rama, dear as his own soul ; formed by divine illusion, amiable, and adorned with every charm;’ and always held forth as an example of conjugal faith and affection.

While confined on the island of Lanka, or Ceylon, and persecuted by the addresses of its tyrannical sovereign, the anguish and lamentation of Sita are copious subjects of hyperbole for Hindoo poets. Travellers are still shown a lake or pool, called Sita-koonda, said to have originated in the floods of tears shed by the captive beauty. This extravaganza was not lost on our early missionaries and travellers. Ceylon being with them the garden of Eden, they find Adam’s Peak, Adam’s Bridge, &c., called Rama’s by the natives. Eve personates Sita in respect to this pool. Sir John Mandeville notices it in his quaint way. Describing Ceylon, he has fair scope for his poetical exuberance. ‘ In that isle is a gret mountayne, and in mydd place of the mount is a gret lake in a full fayre pleyne, and there is gret plentie of watre. And thei of the contrie seyn that Adam and Eve wepten upon that mount 100 zeer, when thei weren dryven out of Paradys. And that watre thei seyn is of here teres ; for so much watre they wepten that made the foresede lake.’ Sir John died in 1372.

A beautiful tree, called asoka by Sanscrit botanists, bears a mythological reference to Sita. She was confined in a grove of those trees, whose

name is derived from grief, 01 lamentation. It is hence, perhaps, also sacred to the god of tears, or the avenging Siva. Asoka, indeed, rather from its privative initial, denotes the absence of grief, equivalent to grief-dispeller ; thus named possibly from its beauty, so greatly admired by a poetical and tasteful people. A numerous sect of Hindoos adore Sita as Lakshmi herself. It is a branch of the sect of Raman uj. She is said to have borne Rama two sons, Kushi and Lava, who were great orators and minstrels ; but they are seldom heard of, except in legends immediately relating to their families.

SITANG, a large river of the Birman empire, in Pegu. It rises in mountains about 20° N. lat., passes the ancient city of Pegu, and falls into the gulf of Martaban : on account of shoals, and very strong tides, it is excessively unsafe.

SITANTA, a fabulous mountain, in which is described the terrestrial abode of the god Indra, the Hindoo regent of the firmament. In the Hindoo Pantheon, the wonderful mountain Mem is described from the Puranas. On one of its three peaks is Kailasa, the Olympus of Siva; and on another is the Swerga, or paradise of Indra. But his terrestrial abode is on Sitanta, a part probably of Meru ; and it may be amusing to see in what the delights of Hindoo gods are supposed, by their sacred writers, to consist. Sitanta is ‘ skirted by a most delightful country, well watered, and enlivened by the harmonious noise of the black bee and frogs. There, among immense caves, is the Kridavana, or place of dalliance of Mahendra; where knowledge and the completion of our wishes are fully acknowledged. There is the great forest of the Pariya-teka tree of the king of the gods, known through the three worlds ; and the whole world sings his praise from the Veda. Such is the place of dalliance of him with a thousand eyes, or Indra. In this charming grove of Sakra, or Indra, the gods, the danavas, the snakes, yakshas, rakshas, guh-yas or kuveras, gandharvas, live happy ; as well as numerous tribes of Upsara, fond of sport.’ — P. 270.

SITE, n. s. Lat. situs. Situation; local position; posture.

Manifold streams of goodly navigable rivers, as so many chains environed the same site and temple.

Bacon.

The city self he strongly fortifies, Three sides by site it well defenced has. Fairfax.

If we consider the heart in its constituent parts, we shall find nothing singular, but what is in any muscle. Tis only the site and posture of their several parts that give it the form and functions of a heart.

Before my view appeared a structure fair ; Its site uncertain, if on earth or air. Pope.

And leaves the semblance of a lover fixed Io melancholy site, with head declined, And love-dejected eyes. Tliomson’i Spring.

SITH, adv. Sax. r»*e-Since ; seeing that. Obsolete.

What ceremony of odours used about the bodies of the dead ! after which custom, notwithstanding, rith it was their custom, our Lord was contented that hi« own most precious blood should be intombed.

Hooker

The foolish man thereat woxe wondrous blith, And humbly thanked him a thousand sitlie.

Spenser.

This over-running and wasting of the realm was the beginning of all the other evils which sithence have afflicted that land. Id. State of Ireland.

I thank you for this profit, and from hence I'll love no friend, sith love breeds such offence.

Shakspeare.

*SITIIE, w. s. Sax. p*e. This word, says Dr. Johnson, is very variously written ; I have chosen the orthography which is at once most simple and most agreeable to etymology. The instrument of mowing ; a crooked blade joined at right angles to a long pole.

Let fame, that all hunt after in their lives, Live registered upon our brazen tombs ; And then grace us in the disgrace of death : When, spite of cormorant devouring time, The endeavour of this present breath may buy That honour which shall 'bate his scytlie's keen edge, And make us heirs of all eternity. Shakspeare.

Time is commonly drawn upon tombs, in gardens, and other places, an old man, bald, winged, with a sithe and an hourglass. Peacham on

Drawing.

There rude impetuous rage does storm and fret ; And there, as master of this murdering brood, Swinging a huge tithe, stands impartial death, With endless business almost out of breath.

Cratltaw.

While the milk-maid singeth blithe, And the mower whets his scitlie. Milton.

The brazen trumpets kindle rage no more ; But useless lances into si/ thes shall bend, And the broad faulchion in a ploughshare end.

Pope.

But, Stella, say what evil tongue Reports you are no longer young ? That Time sits with his sythe to mow Where erst sat Cupid with his bow 1 Swift.

I drew my tcythe in sic a fury,

I near-hand cowpit wi' my hurry, Tut yet the bauld Apothecary

Withstood the shock ;

I might as well hae tried a quarry

O' hard whin rock. Burnt.

The glass that bids man mark the fleeting hour, And Death's own sithe would better speak his power.

Coioper.

What should be, and what was an hourglass once, Becomes a dicebox, and a billiard mace Well does the work of his destructive iithe. Id.

SITONES, an ancient people of Germany, or as others say of Norway. Ta'cit. de Germ. 45.

•SITOPHYLAX [Gr. 2iro0»Aa£, from <r«-oc, corn, and <pv\a£, keeper], in antiquity, an Athenian magistrate, who had the superintendance of the corn, and was to take care that nobody bought more than was necessary for the provision of his family. By the Attic laws, particular persons were prohibited from buying more than fifty measures of wheat a man ; and, that such persons might not purchase

more, the sitopby-lax was appointed to see the laws properly executed. It was a capital crime to prevaricate in it. There were fifteen of these sitophylaces, ten for the city, and five for the Pireaeus.

SITTA, the nuthatch, in ornithology, a genus belonging to the class of aves, and order of picae. It is thus characterised by Dr. Latham. The bill is for the most part straight ; on the lower mandible there is a small angle; nostrils small, co-

vered with bristles reflected over them ; tongue short, horny at the end, and jagged ; toes placed three forward and one backward: the middle toe joined closely at the base to both the out-most: back toe as large as the middle one. — There are eleven species, *viz.* — 1 . S. Cafra ; 2. Canadensis ; 3. Carolinensis ; 4. Chloris; 5. Europaea ; 6. Jamaicensis ; 7. Longirostra ; 8. Ma-jor; 9. Naevia; 10. Pusilla; 11. Surinamensis. Of these the following are the most remarkable : x

1. S. Europaea, the European nuthatch, is in length nearly five inches and three-quarters, in breadth nine ; the bill is strong and straight, about three-fourths of an inch long; the upper mandible black, the lower white ; the irides are hazel; the crown of the head, back, and coverts of wings, of a fine bluish gray; a black stroke passes over the eye from the mouth : the cheeks and chin are white ; the breast and belly of a dull orange color; the quill-feathers dusky ; the wings underneath are marked with two spots,

‘one white at the root of the exterior quills, the other black at the joint of the bastard wing ; the tail consists of twelve feathers; the two middle are gray, the two exterior feathers tipt with gray ; then succeeds a transverse white spot ; beneath that the rest is black : the legs are of a pale yellow ; the back toe very strong, and the claws large. The female is like the male, but less in size, and weighs commonly five, or at most six drachms. The eggs are six or seven, of a dirty white, dotted with rufous; these are deposited in some hole of a tree, frequently one which has been deserted by a woodpecker, on the rotten wood mixed with a little moss, &,c. If the entrance be too large, the bird nicely stops up part of it with clay, leaving only a small hole for itself to pass in and out by. \ hile the hen is sitting, if any one puts a bit of stick into the hole, she hisses like a snake, and is so attached to her eggs that she will sooner suffer any one to pluck off her feathers than fly away. During the time of incubation, the male supplies her with sustenance, with all the tenderness of an affectionate mate. These birds run up and down the bodies of trees, like the woodpecker tribe ;

and feed not only on insects, but nuts, of which they lay up a considerable provision in the hollows of trees, ‘It is a pretty sight,’ says Mr. Willoughby, ‘ to see her fetch a nut out of her hoard, place it fast in a chink, and then, standing above it with its head downwards, striking it with all its force, break the shell, and catch up the kernel. It is supposed not to sleep perched on a twig like other birds ; for, when confined in a cage, it prefers sleeping in a hole or corner. When at rest it keeps the head down. In autumn it begins to make a chattering noise, being silent for the greatest part of the year.’ Dr. Plott tells us that thi« bird, by putting its bill into a crack in the bough of a tree, can make such a violent sound as if it was rending asunder, so that the noise may be heard at least 240 yards.

2. S. longirostra, the great hook-billed nuthatch, is the largest of the known nutfiatches : its bill, though pretty straight, is inflated at tht middle, -and a little hooked at the end ; the nos trils are round ; the quills of the tail and of tht

wings edged with orange on a brown ground ; the throat white ; the head and back gray ; the under side of the body whitish. It was observed by Sloane in Jamaica. Its total length is about seven inches and a half; the bill is eight lines and one-third ; the upper mandible a little protuberant near the middle ; the mid toe eight lines and one-third ; the alar extent eleven inches and a quarter ; the tail about twenty-three lines.

3. S. Surinamensis, the spotted or Surinam nuthatch, is another American nuthatch, with a hooked bill ; but differs from the preceding in size, plumage, and climate : it inhabits Dutch Guiana. The upper side of the head and of the body is of a dull ash-color; the superior coverts of the wings of the same color ; but terminated with white ; the throat white ; the breast and all the under side of the body

cinereous, and more dilute than the upper side, with white streaks scattered on the breast and sides, which forms a sort of speckling; the bill and legs brown. Total length about six inches ; the bill an inch ; the tarsus seven lines and a half; the mid toe eight or nine lines, and longer than the hind toe, whose nail is the strongest; the tail about eighteen lines; consisting of twelve nearly equal quills, and exceeds the wings thirteen or fourteen lines. — Buffon.

SITTACE, a town of Assyria.— Plin. vi. c. 27.

SITTINGBOURNE, a parish in Milton hundred and lathe of Scray, Kent, one mile from Milton, and forty east by south from London ; consisting of one long and wide street. This is a place of great antiquity, and was formerly a markef town. It is now principally supported by travellers proceeding to and from Dover. Fairs, Whit-Monday, and October 10th. The church is a large, handsome building ; and is a vicarage, value £10. Patron, the archbishop of Canterbury.

SIT' U ATE, part. adj. f From Latin situs.

SITDA'TION, n. s. $ Placed with respect

to any thing else : the noun substantive corresponding.

He was resolved to chuse a war, rather than to have Bretagne carried by France, being so great and opulent a duchy, and situate so opportunely to annoy England. Bacon.

Earth hath this variety from heaven, Of pleasure situate in hill and dale. Milton.

1 he eye is a part so artificially composed, and eommodiously situate, as nothing can be contrived better for use, ornament, or security.

Bay on the Creation.

Prince Cesarini has a palace in a pleasant situation, and set off with many beautiful walks.

Addison on Italy.

Though this is a situation of the greatest ease and tranquillity in human life, yet this is by no means fit to be the subject of all men's petitions to God.

Roger's Sermons.

SITUS, in algebra and geometry, denotes the situation of lines, surfaces, &c. Wolfius delivers some things in geometry which are not deduced from the common analysis, particularly matters depending on the situs of lines and figures. Leibnitz has even founded a particular kind of analysis upon it, called calculus situs.

SIVA, or SHEEVAH, a name given lay the Hindoos to the Supreme Being, considered as the VOL. XX.

avenger or destroyer. Sir William Jones into shown that in several respects the character ot' Jupiter and Siva are the same. As Jupiter overthrew the Titans and giants, so did Siva overthrow the Daityas or children of Diti, who frequently rebelled against heaven ; and as during the contest the god of Olympus was furnished with lightning and thunderbolts by an eagle, so Brahma, who is sometimes represented riding on the garuda, or eagle, presented the god of destruction with fiery shafts. Siva also corresponds with Pluto ; for in a Persian translation of the Bhagavat, the sovereign of Patala, or the infernal regions, is the king of serpents, named Seshana-ga, who is exhibited in painting and sculpture with a diadem and sceptre, in the same manner as Pluto. There is yet another attribute of Siva or Maladeva, by which he is visibly distinguished in the drawings and temples of Bengal. To destroy, according to the Vedantis of India, the Susis of Persia, and many philosophers of our European schools, is only to generate and reproduce in another form. Hence the god of destruction is holden in this country to preside over generation, as a symbol of which he rides on a white bull.

SIVAN, in Jewish chronology, the third month of the Jewish sacred year, and ninth of their civil ; answering to part of our May and June. On the sixth was the feast of Pentecost ; and on the fifteenth and sixteenth a festival for a victory of the Maccabees.

SIVANA SAMUDRA, a remarkable island in the river Cavery, province of Coimbetoor, Hindostan. It is nine miles in length, and contains a cataract, 150 feet perpendicular. This island was formerly connected to the opposite shore, by a stone bridge, which is now in ruins. There are also the remains of many Hindoo temples, and much sculpture; in one apartment there is an image of Vishnu, seven feet high, executed in the best style of Indian carving. The island is in general rocky.

SIV AS, or SIWAS, a considerable city of Asia Minor, the capital of a pachalic. It retains the name of Roum, or Rumiyah, which formerly

applied to the whole Turkish empire. Its general character is mountainous and woody, interspersed with fine valleys; and it contains the fine cities of Amasia, Tocat, and Trebisond. The town is situated on the river Kizil Irmak, not far from its source. It is dirty and ill built, and the strong castle by which it was formerly defended is in ruins. The inhabitants are described as coarse and rude ; but travellers vary much as to their number. Not far from the town is a celebrated Armenian monastery. This place was originally called Cabira, and afterwards Sebaste, in honor of Augustus. It is celebrated as being the theatre of the great contest between Bajazet and Timur, in which the former was finally defeated.

SIUM, water parsnep, in botany, a genus of plants belonging to the class of pentandria, and order digynia ; natural order forty-fifth, umbellate. The fruit is a little ovated, and streaked. The involucrum is polyphyllous, and the petals are heart-shaped. There are twelve species, *viz.* 1. S. Ansjustifolium ; 2. Decumbens; 3. Falea-

rica; 4. Grsecum; 5. Japonicum; 6. Latifo-lium ; 7. Ninsi ; 8. Nodiflorum ; 9. Repens; 10. liigidus; 11. Siculus ; 12. Sisarum. Of these the first three following are natives of Britain :

1. S. angustifolium, the narrow leaved water parsnep, has pinnated leaves; the axillary um-bels are pedunculated, and the general involu-erum is pinnatirid. It grows in ditches and rivulets, but is not common.

2. S. latifoliura, tlie great water parsnep, grows spontaneously in many places both of England and Scotland on the sides of lakes, ponds, and rivulets. The stalk is erect and furrowed, three feet high or more. The leaves are pinnated, with three or four pair of large elliptic pinna, with an odd one at the end, all serrated on the edges. The stalk and branches are terminated with erect umbels, which is the chief characteristic of the species. Cattle are said to have run mad by feeding upon this plant.

3. S. nodiflorum, reclining water parsnep, has pinnated leaves, but the axillary umbels are sessile. It grows on the sides of rivulets.

4. S. sisarum, the skirret, is a native of China, hut has been long cultivated in Europe, particularly in Germany. The root is a bunch of tieshy fibres, each of which is about as thick as a finger, but very uneven, covered with a whitish rough bark, and has a hard core or pith running through the centre. From the crown of this bunch come several winged leaves, consisting of two or three pair of oblong dentated lobes each, and terminated by an odd one. The stalk rises to about two feet, is set with leaves at the joints, and breaks into branches towards the top, each terminating with an umbel of small

white flowers, which are succeeded by striated seeds like those of parsley. Skirrets come nearest to parsneps of any of the esculent roots, both for flavor and nutritive qualities. They are rather sweeter than the parsnep, and therefore to some palates are not altogether so agreeable. Mr. Margraaf extracted from half a pound of skirret root one ounce and a half of pure sugar.

SIUT, a considerable town of Upper Egypt, on the western bank of the Nile. The country round is exceedingly fertile : a great quantity of hemp is also cultivated, not for manufacture, but for the intoxicating quality which the smoked seed possesses. The inhabitants are chiefly Copts. They are employed in an extensive manufacture of blue cloth, and Siut is the rendezvous of the caravans which proceed from Egypt southwards into the interior of Africa, to Sennaar and Darfur. Siut is the see of a Coptic bishop, and supposed to he the ancient Lyco-polis.

SIX, adj. SIX'PESCE, n.f. SIX'SCORE, adj. SIX'TEEN, SIX'TEENTH, SIXTH,

SIXTH'LY, adv. SIXTIETH, adj. SIX'TY.

Fr. six. .Twice three ; one more than five : to be at six and seven is to be in a state of discord or fluctuation : the other compounds and derivatives seem obvious in the meaning.

J

The first lot came forth to Jehoiarib, the tixteenth to Immer. 1 Citron, xxiv. 14.

Sixscore ar.U five miles it containeth in circuit.

Sandy*.

All is uneven, And every thing is left at tix and t'ven. S'lakspctire.

Where have you left the money that I gave you 1 Oh ! — sixpence that 1 had. Id.

You are more clement than vile men, Who of their broken debtors take A sixth, letting them thrive again. Id.

In 1588 there sat in the see of Rome a fierce thundering friar, that would set all at six and seven, or at six and five, if you allude to his name.

Bacon.

The crown of Spain hath enlarged the bounds thereof within this last sincere years, much more than the Ottomans. LI.

• It returned the voice thirteen tinvss ; and I have heard of others that it would return fifteen times.

Id.

Sixthly, living creatures have more diversity of or-gans than plants. Id.

When the boats were come within sixty yards of the pillar, they found themselves all bound, and could go no farther. Id.

If men lived hut twenty yean*, we should be satisfied if they died about shteen or eighteen.

Taylor.

Let the appearing circle of the fire be three feet diameter, and the time of one entire circulation of it the sixtieth part of a minute, in a whole day there will be but 86,400 such parts. Digby on Bodiei.

What blinder bargain ere was driven, Or wager laid at six and seven. Hudibrai.

That of six hath many respects in it, not only for the days of the creation, but its natural consideration, as being a perfect number.

Browne's Vulgar Errours.

No incident in the piece or play but must carry on the main design ; all things else are like fir fingers to the hand, when nature can do her work with five.

Dryden.

John once turned his mother out of doors, to his great sorrow ; for his affairs went on at sixes and sevens. Arbuthnot.

Only the other half would have been a tolerable seat for rational creatures, and five sixths of the whole globe would have been rendered useless.

Cheyne's Philosophical Principles The wisest man might blush, If D — loved sixpence more than he. Pope.

The goddess would no longer wait ; But, rising from her chair of state, Left all below at sir and seven, Harnessed her doves, and flew to heaven. Strift.

Six CLERKS. The office of " six clerks" h;is lately been abolished. The business of this office was to enrol commissions, pardons, patents, warrants, &c., which pass the great seal, and to transact and file all proceedings by bill, answer, &c. The clerks were anciently clerici, and forfeited their places if they married ; but, when the constitution of the court began to alter, a law was made to permit them to marry. Slat. 14 and 15 Hen. VIII. cap. 8. They were also solicitors for parties in suits depending "in the court of chancery. Under them were six deputies and sixty clerks, who, with the under clerks, did the business of the office. 418

Six NATIONS, Indians who live on the banks of the Niagara. Each nation was, at one time, divided into three tribes, of which the principal were called the turtle tribe, the wolf tribe, and the bear tribe. Each tribe has two or mo. i

chiefs, called Kachems; and this distinction is hereditary in the family, but descends along the female line : for instance, if a chief dies, one of his sister's sons, or one of his own brothers, will be appointed to succeed him. Among these no preference is given to proximity or primogeniture ; but the sachem, during his life time, pitches upon one whom he supposes to have more abilities than the rest; and in this choice he frequently consults the principal men of the tribe. If the successor happens to be a child, the offices of the post are performed by some of his friends until he is of sufficient age to act himself. Each

of these posts of sachem has a name peculiar to it. and which never changes, as it is always adopted by the successor ; nor does the order of precedency of each of these names or titles ever vary. Nevertheless, any sachem, by abilities and activity, may acquire greater power and influence in the nation than those who rank before him in point of precedency ; but this is merely temporary, and dies with him. Each tribe has one or two chief warriors ; which dignity is also hereditary, and has a peculiar name attached to it. * These are the only titles of distinction which are permanent in the nation ; for although any Indian may, by superior talents, either as a counsellor or as a warrior, acquire influence in the nation, yet it is not in his power to transmit this to his family. The Indians have also their great women as well as their great men, to whose opinions they pay great deference; and this distinction is also hereditary in families. They do not sit in council with the sachems, but have separate ones of their own. When war is declared, the sachems and great women generally give up the management of public affairs into the hands of the warriors. But a sachem may at the same time be also a chief warrior.

SIXTUS I., bishop of Rome, according to Dr. Watkins, succeeded Alexander I., A. D. 119, suffered martyrdom for Christianity, A. D. 127, and was afterwards canonised as a saint. But Alstedius and Marcel place his accession in 131-2, and his martyrdom in 142.

SIXTUS II., a native of Athens, succeeded Stephen I. as bishop of Rome, A. D. 257. He suffered martyrdom during the persecution under Valerian, three days before his disciple St. Lawrence, A. D. 258.

SIXTUS III. was a priest in the Roman church, and was elected pope in 432. He was an author, and his Epistles are extant. He suppressed the heresies of Pelagius and Nestorins in the west ; and died in 440.

SIXTUS IV. was the son of a fisherman, born in 1412, and, entering among the Cordeliers, became very learned. He was eminent as a professor of theology, in several universities in Italy, and was raised to the cardinalship by Paul II., whom he succeeded in 1471. He attempted to stir up a new crusude, but without success; but obtained some signal advantages aver the Turks by his own galleys. He wrote several Treatises on Theology ; but gave offence even to Catholics, by publishing a bull ordain-ing an annual festival in honor of the immaculate conception. He died in 1484, aged seventy -two.

SIXTUS V., pope, was born the 13th of De-

cember, 1.521, in La Marca, a village in the seigniory of Montalto. His father, Francis Pe-retti, was a gardener, and his mother a servant maid. He was their eldest child, and was called Felix. At the age of nine he was hired out to an inhabitant of the village to keep sheep; but, disobliging his master, he was degraded to be keeper of the hogs. He was engaged in this employment when F. Michael Angelo Selleri, c Franciscan friar, asked the road to Ascoli, where he was going to preach. Young Felix conducted him thither, and struck the father so much will: his eagerness for knowledge, that he recommended him to the fraternity to which he had come. Accordingly he was invested with the habit of a lay brother, and placed under the sacristan, to assist in sweeping the church, lighting the candles, and the like; for which he was to be taught the responses and the rudiments of grammar. His progress in learning was so surprising that at the age of fourteen he was qualified to begin his noviciate, and was' admitted at fifteen to make his profession. He pursued his studies with unwearied assiduity; and was ordained priest in 1545, when he assumed the name of father Montalto ; soon after he took his doctor's degree, and was appointed professor of theology at Sienna, where he so effectually recommended himself to cardinal di Carpi, and his secretary Bossius, that they ever remained his steady friends. Meanwhile the severity and obstinacy of his temper incessantly engaged him in disputes with his monastic brethren. His reputation for eloquence, which was now spread over Italy, about this time gained him some new friends. Among these were the Colonna family, and F. Ghisilieri, by whose recommendation he was appointed inquisitor-general at Venice; but he exercised that office with so much severity that he was obliged to flee precipitately from that city. Upon this he went to Rome, where he was made procurator-general of his order, and soon after accompanied cardinal Buon Compagnon into Spain, as a chaplain and consultor to the inquisition ; where he was treated with great respect. Pius IV. dying, father Ghisilieri, or cardinal Alexandrine, succeeded him under the name of Pius V.; and Montalto was immediately invested by the pontiff with new dignities. He was made general of his order, bishop of St-Agatha, raised to the dignity of cardinal, and received a pension. About this time he was employed by the pope to draw up the bill of excommunication against queen Elizabeth. He began now to look towards the papacy ; and, to obtain it, formed and executed a plan of hypocrisy with unparalleled constancy and success. He became humble, patient, and affable. He changed his dress, his air, his words, and his actions, so completely, that his most intimate friends declared him a new man. Never wa» there such an absolute victory gained over tht passions ; never was a fictitious character so wel1 maintained, nor the foibles of human nature so artfully concealed. He had formerly

treated his relations with the greatest tenderness, but he now changed his behaviour to them entirely. When Pius V. died in 1572, he entered the conclave with the other cardinals, but seemed

altogether indifferent about the election, and never left his apartment except to his devotion. When cardinal Buon Compagnon, or Gregory XIII., was elected, Montalto flattered him, but the new pope treated him with the greatest contempt, and deprived him of his pension. He now assumed all the infirmities of old age; his head hung down upon his shoulders ; he tottered as he walked, aud supported himself on a staff. His Voice became feeble, and was often interrupted by a cough so exceedingly severe that it seemed every moment to threaten his dissolution. He interfered in no public transactions, but spent his whole time in acts of devotion and benevo- 'lence. Mean time he constantly employed the ablest spies, who brought him intelligence of every particular. When Gregory XIII. died, in 1585, he entered the conclave with reluctance, and appeared perfectly indifferent about the event of the election. He joined no party, yet flattered all. He knew that there would be divisions in the conclave, and that when the leaders of the different parties were disappointed in their own views, they often agreed in the election of some old and infirm cardinal, the brevity of whose life would soon occasion, a new vacancy. Three cardinals, the leaders of opposite factions, being unable-to procure the election which each of them wished, unanimously agreed to make choice of Montalto. When they came to acquaint him with their intention, he fell into a violent fit of coughing, and told them that his reign would last but a few days. He conjured them to take the whole weight of affairs upon their own shoulders. The cardinals swallowed the bait, and Montalto was elected. He now pulled off the mask which he had worn for fourteen years. No sooner was his election secured, than he started from his seat, and appeared almost a foot taller than he had done for several years. His former complaisance and humility disappeared, together with his infirmities, and he now treated all around him with reserve and haughtiness. The first care of Sixtus V. was to correct the abuses, and put a stop to the enormities, daily committed in the ecclesiastical state. The lenity of Gregory's government had introduced a general licentiousness of manners. It

had been usual with former popes to release delinquents on the day of their coronation, who therefore surrendered themselves voluntarily prisoners after the election of the pope. When the governor of Rome and the keeper of St. Angelo waited on-his holiness, to know his intention in this particular, he replied, ‘ We have too long seen the prodigious degree of wickedness that reigns in the state to think of granting pardons. Let the prisoners be brought to a speedy trial, and punished as they deserve, to show the world that Divine Providence has called us to the chair of St. Peter, to reward the good and chastise the wicked; tliat we bear not the sword in vain, but are the minister of God, and a revenger to execute wrath on them that do evil.’ Accordingly he ap|K)inted commissioners to inspect the conduct of the judges, displaced, those who were inclined to lenity, and put others of severe dispositions in their room. He offered rewards to sny person who could convict them of corruption

or partiality. He ordered the syndics of all th? towns and signiories to make out a complete list of the disorderly persons within their districts. The syndic of Albano was scourged in the mar-ket-place because he had left his nephew, an incorrigible libertine, out of his list. He made laws equally severe and just against robbers and assassins. Adulterers, when discovered, suffered death ; and they who willingly submitted to the prostitution of their wives, a custom then com-mon in Rome, received the same punishment. He was particularly careful of the purity of the female sex ; and his execution of justice was as promp’t as his edicts were rigorous. A Swiss, happening to give a Spanish gentleman a blow with his halberd, was struck, by him so rudely with a pilgrim’s staff that he expired on the spot. Sixtus informed the governor of Rome that he was to dine early, and that justice must be executed on the criminal before he sat down to table. The Spanish ambassador and four cardinals entreated him not to disgrace the gentleman by suffering him to die on a gibbet, but to order him to be beheaded. ‘ He shall be hanged (replied Sixtus), but I will alleviate his disgrace by doing him the honour to assist personally at his death.’ He ordered a gibbet to be erected before his own windows, where he continued sitting during the whole execution. When Sixtus ascended the throne, the whole ecclesiastical state was infested with bands of robberˆ, who from their numbers and outrages were exceedingly formidable ; but by his vigorous conduct he soon extirpated the whole of these banditti. Nor was the vigor of his conduct less conspicuous in his transactions with foreign nations. Before he had been pope two months, he quarrelled with Philip II. of Spain, Henry III. of France, and Henry king of Navarre. His intrigues,

indeed, in some measure influenced all the councils of Europe. After his accession to the pontificate, he sent for his family to Rome, with orders that they should appear in a decent and modest manner. Accordingly his sister Camilla came thither, accompanied by her daughter and two grandchildren. Some cardinals, to pay court to the pope, went out to meet her, and introduced her in a veiy magnificent dress. Sixtus pretended not to know her, and asked two or three times who she was. Her conductors at last found it necessary to carry her to an inn, and strip her of her finery. When Camilla was again introduced, Sixtus embraced her tenderly, and said, ‘ Now we know indeed that it is our sister ; nobody shall make a princess of you but ourselves.’ He stipulated with his sister that she should neither ask any favour in matters of government, nor intercede for criminals, nor interfere in the administration of justice; declaring that such requests would meet with a certain refusal. These terms being agreed to, and punctually observed, he made the most ample provision not only for Camilla but for his whole relations. This great man was also an encourager of learning. He caused an Italian translation of the Bible to be published, which raised a good deal of discontent among the Catholics. When some cardinals reproached him for his conduct in this respert, he replied, ‘ It was

published for the benefit of you card nals who cannot read Latin.’ He died 27ih of August, 1590, after a reign of little more than five years. To the indulgence of a disposition naturally severe, all the defects of this wonderful man nre to be ascribed. Clemency was a stranger to his bosom ; his punishments were often too cruel, and seemed sometimes to border on revenge. But, though the conduct of Sixtus seldom excites love, it generally commands our esteem and sometimes our admiration. He strenuously defended the cause of the poor, the widow, and the orphan; hte never refused audience to the injured, however wretched or forlorn. He never forgave those magistrates who

were convicted of partiality or corruption; nor suffered crimes to pass unpunished, whether committed by the rich or the poor. He was frugal, temperate, sober, and never neglected to reward the smallest favor which had been conferred on him before his exaltation. When he mounted the throne, the treasury was not only exhausted, but in debt ; at his death it contained 5,000,000 of gold. Rome was indebted to him for several of her greatest embellishments, particularly the Vatican library ; it was by him, too, that t:ade was first introduced into the ecclesiastical state ; and he •illotted 3000 crowns a year for the redemption cf Christian slaves from the Turks.

SIYA-GausH, the caracal of Buffon, a species cf Lynx.

SIZAR, or SIZER, in Latin sizator, an appellation by which the lowest order of students in the universities of Cambridge and Dublin are distinguished, is derived from the word To size, which in Cambridge, in the language of the university, signifies to get any sort of victuals from the kitchens which the students may want in .heir own rooms, or in addition to their commons in the hall, and for which they pay the cooks or butchers at the end of each quarter. A size of any thing is the smallest quantity of the Aing which can be thus bought ; two sizes or a part of beef being nearly equal to what a young person will eat of that dish to his dinner ; and a size of ale or beer being equal to half an English pint. The sizars are divided into two classes ; *viz.* subsizatores, or sizars, and sizatores, or pro-per sizars. The former are supplied with commons from the table of the fellows and fellow-commoners ; and in former times,' when these were more scanty than they are now, they were obliged to supply the deficiency by sizing, as is sometimes the case still. The proper sizars had formerly no commons at all. In St. John's college they have now some commons allowed them for dinner, from a benefaction; but they are still obliged to size their suppers. In the other colleges they are allowed a part of the fellows' commons, but must size the rest; and, from be-ing thus obliged to size the whole or part of their victuals, the whole order derived the name of sizars. In Oxford, the order similar to that of sizar is denominated servitor, a name evidently derived from the menial duties which they perform. In both universities these orders were formerly distinguished by round caps and gowns of different materials from those of the pensioners or commoners, the order immediately above them.

But about forty years ago the round cap was entirely abolished in both seminaries. There is still, however, in Oxford, we believe, a distinction in the gowns, and there is also a trifling difference in some of the

small colleges in Cambridge ; but in the large colleges the dress of the pensioners and sizars is entirely the same. In Oxford the servitors are still obliged to wait at table on the fellows and gentlemen commoners; but, much to the credit of the university of Cambridge, this most degrading custom was entirely abolished about forty years ago, and, of course the sizars of Cambridge are now on a much more respectable footing than the servitors of Oxford. The sizars are not upon the foundation, and therefore while they continue sizars are not capable of being elected fellows ; but they may at any time if they choose become pensioners : and they generally sit for scholarships immediately before they take their first degree. If successful, they are then on the foundation, and are entitled to become candidates for fellowships when they have got that degree. In the mean time, while they continue sizars, besides the free-commons they enjoy many benefactions, which have been made at different times, under the name of sizars, praetor, exhibitions, &c., and the rate of tuition, the rent of rooms, and other things of that sort within their respective colleges, is less than to4he other orders. But, though their education is thus obtained at a less expense, they are not now considered as a menial order; for sizars, pensioner-scholars, and even sometimes fellow-commoners, mix together with the utmost cordiality. It is worthy of remark that at every period this order has supplied the university with its most distinguished officers ; and that many of the most illustrious members of the church, many of the most distinguished men in the other liberal professions, have, when under-graduates, been sizars, when that order was on a less respectable footing than it is now.

SIZATORES. See the last article.

SIZE, n. s. & v. a. ~\ Perhaps, says Johnson,

SIZED, adj. /• rather cise, from Lat. inSI'ZEABLE. J c isa, or from Fr. assise.

Bulk ; quantity ; comparative magnitude ; settled quantity ; condition ; to adjust according to size ; fix ; settle : sized is having a particula magnitude : sizeable, reasonably bulky.

I ever verified my friends, With all the size that verity Would without lapsing suffer.

Shakspeare. Coriolanus. Tis not in thee

To cut off my train, to scant my sizes, And, in conclusion, to oppose

the bolt • Against my coming in. Id. King Lear.

What my love is, proof hath made you know, And as my love is sized, my fear is so. Shakspeare.

If any decayed ship be new made, it is more fit to make her a size less than bigger. Raleigh.

There was a statute for dispersing the standard of the exchequer throughout England ; thereby to tize weights and measures. Bacon's Henry VII.

The foxes weigh the geese they carry, And, ere they venture on a stream, Know how to size themselves and them. Hudibrax.

The distance judged for shot of every size, The linstocks touch, the ponderous ball expires.

Two troops so matched were never to be found, Such bodies built for strength, of equal age, In stature sized. Id. Knight's Tale.

Objects near our view are thought greater than those of a larger she, that are more remote. Locke.

That will be a great horse to a Welshman which is but a small one to a Fleming ; having, from the different breed of their countries, taken several sized ideas, to which they compare their great and their little. Locke.

He should be purged, sweated, vomited, and starved, till he come to a sizeable bulk. Arbuthnot.

The martial goddess, Like thee, Telemachus, in voice and size, With

speed divine, from street to street she flies.

Pope,

They do not consider the difference between elaborate discourses, delivered to princes or parliaments, and a plain sermon, for the middling or lower size of people. Swift,

SIZE, n.s. “) Ital. sisa. Any viscous or

SI’ZIN ESS, n.s. > glutinous substance: gluti—

Si’zv,adj.) nousness : viscous; glutino-is.

In rheumatisms, the sixiness passes off thick con-teats in the jirine, or glutinous sweats.

Floiier on the Humours.

Cold is capable of producing a siziness and viscosity in the blood. Arbuthnot,

The blood is si:y, the alkalescent salts in the serum producing coriaceous concretions.

Id. On Diet.

SIZE is also a sort of paint, varnish, or blue, used by painters, &c. The shreds and parings of leather, parchment, or vellum, being boiled in water and strained, make size. This substance is much used in many trades. The man-ner of using size is to melt some of it over a gentle fire; and, scraping as much whiting into it as will just color it, let them be well incorporated together ; after which you may whiten frames, &c.,with it. After it dries, melt the size again, and put more whiting, and whiten the frames, &c., seven or eight times, letting it dry between each time; but before it is quite dry, between each washing with size, you must smooth and wet it over with a clean brush pencil in fair water.

SIZE, GOLD. To make gold size, take gum animi and asphaltum, of each one ounce ; mi-nium, litharge of gold, and amber, of each half an ounce : reduce all into a very fine powder, and add to them four ounces of linseed oil, and eight ounces of drying oil : digest them over a gentle fire that does not flame, so that the mixture may only simmer, but not boil, lest it should run over and set the house on fire; stir it constantly with a stick till all the ingredients are dissolved and

incorporated, and do not leave off stirring till it becomes thick and ropy ; after being sufficiently boiled, let it stand till it is almost cold, and then strain it through a coarse linen cloth, and keep it for use. To prepare it for working, put what quantity you please in a horse-mussel shell, adding as much oil of turpentine as will dissolve it ; and making it as thin as the bottom of your seed lac varnish, hold it over a candle, and then strain it through a linen-rag into another shell ; add to these as much vermilion as will make it of a darkish red : if it is too thick for drawing, you may thin it

with some oil of turpentine. The chief use of this size is for laying on metals.

SIZE, SILVER. To make silver size, take tobacco pipe clay in fine powder, into which scrape some black lead and a little Genoa soap, and mix them all together with parchment size as already directed.

SIZE, the name of an instrument used for finding the bigness of fine round pearls. It consists of thin pieces or leaves, about two inches long, and half an inch broad, fastened together at one end by a rivet. In each of these are round holes drilled of different diameters. Those in the first leaf serve for measuring pearls from half a grain to seven grains ; those of the second for pearls from eight grains, or two carats, to five carats, &c.; and those of the third for pearls from six carats and a half to eight and a half.

SI’ZER, or SER’VITOR, n. s. From the noun substantive above. A certain rank of students in the universities.

They make a scramble for degree : Masters of all sorts and of all ages, Keepers, sub-swers, lackeys, pages. Bp. Corbett.

SKAGGIE, a small river of Scotland, in Perth-shire, which rises in the parish of Monzie, and falls into the Erne near CrierF.

SKAINS’MATE, n.s. (I suppose from skain, or skean a knife, and mate). A messmate. It is remarkable that Dutch mes is a knife.— Dr. Johnson.

Scurvy knave, I am none of his flirt gills ; I am none of his ska i inmate.

Shakspeare. Romeo and Juliet.

SKATE, n. s. Sax. rceaVea. A flat sea-fish ; a flat kind of shoe armed

with iron, for sliding on the ice.

They sweep

On sounding ihatei a thousand different ways, In circling poise swift as the winds. Thomson.

SKATING, an exercise on ice, both graceful and healthy. Although the ancients were remarkable for their dexterity in most of the ath-letic sports, yet skating seems to have been unknown to them. It may therefore be considered as a modern invention ; and probably it derived its origin in Holland, where it was practised, not only as a graceful and elegant amusement, but as an expeditious mode of travelling when the lakes and canals were frozen up during win-ter. In Holland long journeys are made upon skates with ease and expedition ; but in general less attention is there paid to graceful and elegant movements than to the expedition and celerity of what is called journey skating. It is only in those countries where it is considered as an amusement that its graceful attitudes and movements can be studied ; and there is no exercise whatever better calculated to set off the human figure to advantage. The acquirement of most exercises may be attained at an advanced period of life; but, to become an expert skater, it is necessary to begin the practice of the art at a very early age. It is difficult to reduce the art of skating to a system. It is principally by the imitation of a good skater that a young practitioner can form his own practice. The English, though often remarkable for feats of agility upon skates, are very deficient in gracefulness'

which is partly owing to the construction of the skates. They are too much curved in the surface which embraces the ice, consequently they involuntarily bring the users of them round on the outside upon a quick and small circle; whereas the skater, by using skates of a

different construction, less curved, has the command of his stroke, and can enlarge or diminish the circle according to his own wish. ‘ Edinburgh,’ says a Scottish writer, ‘ has produced more instances of elegant skaters than perhaps any other city or country; and the institution of a Skating CLub, about fifty years ago, has contributed much to the improvement of this elegant amusement.’ A gentleman of that club, who has made the practice and improvement of skating his particular study, gives the following instructions to beginners : — ‘Those who wish to be proficients should begin at an early period of life, and endeavour to throw off the fear which always attends the commencement of an apparently hazardous amusement. They will soon acquire a facility of moving on the inside : when they have done this, they must endeavour to acquire the movement on the outside of the skates ; which is nothing more than throwing themselves upon the outer edge of the skate, and making the balance of their body tend towards that side, which will necessarily enable them to form a semicircle. In this, much assistance may be derived from placing a bag of lead shot in the pocket next to the foot employed in making the outside stroke, which will produce an artificial poise of the body, which afterwards will become natural by practice. At the commencement of the outsioe stroke, the knee of the employed limb should be a little bended, and gradually brought to a rec-tilinear position when the stroke is completed. When the practitioner becomes expert in forming the semicircle with both feet, he is then to join them together, and proceed progressively and alternately with both feet, which will carry him forward with a graceful movement. Care should be taken to use very little muscular exertion, for the impelling motion should proceed from the mechanical impulse of the body thrown into such a position as to regulate the stroke. At taking the outside stroke, the body ought to be thrown forward easily, the unemployed limb kept in a direct line with the body, and the face and the eyes directly looking forward : the unemployed foot ought to be stretched towards the ice, with the toes in a direct line with the leg. In the time of making the curve, the body must be gradually and almost imperceptibly raised, and the unemployed limb brought in the same manner forward ; so that, at finishing the curve, the body will bend a small degree backward, and the unemployed foot will be about two inches before the other, ready to embrace the ice and form a corresponds ; curve. The muscular movement of the whole body must correspond with the movement of the skate, and should be regulated so as to be almost imperceptible to the spectators. Particular attention should be paid in carrying round the head and eyes with a regular and imperceptible motion ; for nothing so much diminishes the grace and elegance of skating as sudden jerks and exertions, which are too

frequently used by the generality of skaters-. The management of the arms likewise deserves attention. There is no mode of disposing of them more gracefully in skating outside, than folding the hands into each other, or using a muff. There aie various feats of activity and manoeuvres used upon skates; but they are so various that we cannot detail them. Moving on the outside is the primary object for a skater tc attain; and, when he becomes an adept in that, he will easily acquire a facility in executing other branches of the art. There are few exercises but will afford him hints of elegant and graceful attitudes. For example, nothing can be more beautiful than the attitude of drawing the bow and arrow whilst the skater is making a large circle on the outside: the manual exercise and military salutes have likewise a pretty effect when used by an expert skater.'

SKEAN, n. s. Sax. paˆene ; Irish and Erse scian ; Arab, siccan. A short sword ; a knife.

Any disposed to do mischief may under his mantle privily carry his head piece, skean, or pistol, to be always ready. Spenser.

The Irish did not fail in courage or fierceness, but, being only armed with darts and skeines, it was rather an execution than a fight upon them.

Bacon's Henry VII.

SKEG, n. s. \ Goth, skog, is a wood. A SKEG'GER. ji wild wood plum ; a small, short kind of salmon. See below.

Little salmons, called skeggers, are bred of such sick salmon that might not go to the sea ; and, though they abound, yet never thrive to any bigness.

Walton's Angler,

SKEIN, n. s. Fr. escaigne ; Germ, schien. A knot or hank of thread.

Why art thou then exasperate, thou idle immaterial skein of sleyed silk, thou tassel of a prodigal's purse 1 Shukspeare.

Our stile should he like a skein of silk, to be found by the right thread, not ravelled or perplexed. Then all is a knot, a heap. Ben Jonson.

Besides, so lazy a brain as mine is, grows soon weary when it has so

entangled a skein as this to un-wind. Digby.

SKEL'ETON, n. s. Lat. sceleton ; Gr. <r«\t-roc. The bones of an animal body ; such bones preserved together as much as can be in their natural situation ; a collection of the principal parts of any thing.

The great structure itself, and its great integrals, the heavenly and elementary bodies, are framed in such a position and situation, the great skeleton of the world. Hale.

When rattling bones together fly, From the four corners of the sky ; When sinews o'er the skeletons are spread, Those cloath'd with flesh, and life inspires the dead.

Dryden.

Though the patient may from other causes be exceedingly emaciated, and appear as a ghastly skeleton. covered only with a dry skin, yet nothing but the ruin and destruction of the lungs denominates a consumption. Blachmore.

The schemes of any of the arts or sciences may be analyzed in a sort of skeleton, and represented upon tables, with the various dependencies of their several

parts.

Watts.

I thought to meet, as late as heaven might grant, A skeleton, ferocious, talj "nd gaunt,

SKE

Whose loose teeth in their naked sockets shook, .And grinned terrific a Sardonian look. Harte.

SKELETON in anatomy, the dried bones of any animal joined together by wires, or by the natural ligament dried, so as to show their position when the creature was alive. See ANATOMY. There is in the Philosophical Transactions an account of a human skeleton, all the bones of which were so united as to make but one articulation from the back to the os sacrum and downwards a little way. On sawing some of them, where they were unnaturally joined, they were found not to cohere throughout their whole substance, but only about a sixth of an inch deep all round. The figure of the trunk was crooked, the spins making the convex, and the inside of the vertebra the concave part of the segment. The whole had been found in a charnel-house, and was of the size of a full grown person.

SKELTON (John), an English poet of the fifteenth century, usually styled poet laureat, having been laureatus, or invested with the laurel, at Oxford, a poetical degree then conferred. He entered into orders, and was made rector of Diss, in Norfolk ; but, as Wood says, he was fitter for the stage than the pulpit ; for he was suspended by his bishop for some loose compositions. After this he satirised cardinal Wolsey, who persecuted him with such violence that he took refuge in Westminster Abbey. He died in 1529. He left many works. The chief are his Poemata et Satirae.

SKEP, n. s. Lower Sax. r-cephen, to draw. A sort of corn basket, narrow at the bottom, and wide at the top.

A pitchforke, a dooujforke, ueeve, &/«ej>, and a bin—

Tamer.

SKEPTICR, n. s.} Fr. sceptique ; Greek

SKEP’TICAL, adj. > <r«jrrucdc. ˆne who

SKEP’TICISM, n. s. 3 doubts, or pretends to doubt, of every thing’; generally written SCEPTIC. The adjective and noun substantive following correspond.

Bring the cause unto the bar ; whose authority none must disclaim,

and least of all those sceptick* in religion. Decay of Piety.

I laid by my natural diffidence and scepticism for a while, to take up that dogmatic way. Dryden.

Survey

Nature's extended face, then, sceptick* say, In this wide field of wonders can you find No art 1 Blackmore.

With too much knowledge for the sceptick's side, With too much weakness for the stoick's pride, Man hangs between. Pope's Essay cm Man.

May the Father of mercies confirm the sceptical and wavering minds, and so prevent us, that stand fast, in all our doings, and further us with his continual help. Bentley.

The dogmatist is sure of every thing, and the sceptick believes nothing. Watts'* Logick.

SKERRIES, a name applied to certain low rocky islands, among the northern and western isles of Scotland and Ireland: as, 1. Three small islands of Ireland, on the coast of the county of Dublin, Leinster; remarkable for producing great quantities of sea-ware, from which kelp is manufactured. On one of these islands there ia a light house, which is seen at twenty-four

miles distance. Large flocks of puffins visit it. They arrive in one night and depart all together in another. 2. A village of Ireland, on the coast of Dublin, so named from the above islands, seventeen miles from Dublin. 3. Three islands of Scotland, among the Shetland islands, twenty-five miles northeast of Whalsay, and twenty from Mainland. In 1792 they contained eleven families, consisting of seventy inhabitants.

SKETCH, n. s & v. n, Lat. schedule, or Belg. schets, of Goth, skyta, to throw out. An outline ; rough draught ; first plan : to draw in outline ; to plan.

The reader I'll leave in the midst of silence, to contemplate those ideas which I have only sketched and which every man must finish for himself.

Dryden's Dufresnoy.

I shall not attempt a character of his present majesty, having already given an imperfect sketch of it.

Addison.

As the lightest sketch, if justly traced, Is by ill colouring but the more disgraced, So by false learning is good sense defaced. Pope:

If a picture is daubed with many glaring colours, the vulgar eye admires it ; whereas he judges very contemptuously of some admirable design, sketched out only with a black pencil, though by the hand of Raphael. Watts s Logick.

SKEWER, n. s. & v. a. Dan. there; Goth, and Swed.s/ce/". A wooden or iron pin, used to keep meat in form : to fasten with skewers.

Sweetbreads and collops were with tkewers prick'd About the sides. Dryden's Iliad.

I once may overlook A skewer sent to table by my cook. King

From his rug the skewer he takes, And on the stick ten equal notches makes. Swift.

Send up meat well stuck with skewers, to make it look round ; and an iron skewer, when rightly employed, will make it look handsomer.

Id. Directions to the Cook.

SKIDDAW, a mountain of Cumberland, England, and one of the greatest eminences of the island. It is distinguished for its romantic and grand scenery, as well as for the lakes in its hollows, and near its base.

According to colonel Mudge's trigonometrica. survey, the highest point of Skiddaw is 3022 feet above the level of the sea : Sea-fell, in the same county, is 31 60 feet in height. Its surface also presents a variety of substances, colors, and forms : in some places are vast masses of bare rock ; in other parts a soft short grass presents itself; and in others are heath, furze, and brambles. Wildness and grandeur are the general features. Mrs. Radcliffe gives an interesting description of different parts of this mountain, in her Journey through Holland, &c., 2 vols. 8vo., 1795. See also West's Guide to the Lakes, 8vo., 1802 ; and Gilpm's Observations on Picturesque Beauty, and on the Mountains and Lakes of Cumberland and Westmoreland, 2 vols. 8vo., 1786.

SKIFF, n. s. Fr. esquife ; Span, esquif; Lat scapha. A small light boat.

If in two skiffs of cork a loadstone and steel be placed within the orb of their activities, the one doth not move, the other standing stilJ ; but both steer into each other. lirounie.

In a poor skijfhe passed the bloody main, Choaked with the slaughtered bodies of his train.

Dry den.

OnGarraway cliffs A savage race, by shipwreck fed, Lie waiting for the founder'd skiffs,

And strip the bodies of the dead. Swift.

SKILL, w.s.&v.n.^. Isl. skill; Swed. skel, SKIL'FUL, adj. j skiel, of Goth, skil ; ski—

SKIL'FULLY, adv. ilia, is to discriminate ; SKI I/FULNESS, n. s. | distinguish. Knowledge SKILL'ED, adj. or aptitude in any prac—

SKIL'LESS. j tice or art; dexterity;

artfulness : used by Hooker for the art itself : to skill is, according to its primitive sense, to distinguish ; make difference ; to be knowing in, be dexterous at ; but this verb is obsolete : skilful and skilled mean knowing, dexterous; able; taking of, at, and in, before the object ; the adjective and noun substantive correspond : skilless is destitute of skill.

His father was a man of Tyre, skilful to work in gold and silver. 2 Chron. ii. 14.

The overseers were all that could skill of instruments of musick. Id. xxxiv. 12.

He fed them according to the integrity of his heart, and guided them by the ikilfulness of his hands.

Psalm Ixxviii. 72.

They shall call the husbandman to mourning, and such as are skilful of lamentation, to wailing.

Amos v. 16.

They that skill not of so heavenly matter, All that they know not, envy or admire. Spenser.

As soon as he came near me, in fit distance, with much fury, but with fury tkUfully guided, he ran upon me. Sidney.

Whether the commandments of God in scripture be general or special, it thilleth not. Hooker.

Learned in one skill, and in another kind of learning unskilful. Id.

One man of wisdom, experience, learning, and lirection, may judge better in those things that he •an skill of, than ten thousand others that be igno-ant. Whitgifte.

Skill in the weapon is nothing without sack.

Shakspeare. You have

As little skill to fear, as I have purpose To put you to't. Id.

Nor have I seen

More that I may call men than you : How features are abroad I'm skillesi of. Id.

Thy wit, that ornament to shape and love, Mishapen in the conduct of them both, Like powder in a skilless soldier's flask, Is set on fire. Id. Romeo and Juliet.

He intending not to make a summer business of it, but a resolute war, without term prefixed, until he had recovered France, it skilled noi much when he began the war, especially having Calais at his back, where he might winter. Bacon.

What skills it, if a bag of stones or gold About thy neck do drown thee ; raise thy head,

Take stars for money ; stars not to be told By any art, yet to be purchased, K one is so wasteful as the scraping dame ; She loseth three for one ; her soul, rest, fame.

Herbert.

Moses in all the Egyptian arts was skilled, When heavenly power that chosen vessel filled.

Denham. 0/these nor skilled nor studious. Milton.

Oft nothing profits more Than self-esteem, grounded on just and right, Well managed ; of that skill the more thou know'st. The more she will acknowledge thee her head. Id.

I will from wond'rous principles ordain A race unlike the first, and try my skill again.

Dry den.

He must be very little tkilled in the world, who thinks that a voluble tongue shall accompany only a good understanding. Locke.

Will Vafer is skilful at finding out the ridiculous side of a thing, and placing it in a new light

Taller.

Ulysses builds a ship with his own hands, as skilfully as a shipwright. Broome.

Say, Stella, feel you no content, Reflecting on a life well spent ? Your skilful hand employed to save Despairing wretches from the grave : And then supporting with your store Those whom you dragged from death before. Swift.

Phocion, the Athenian general, then ambassador from the state, by his great wisdom and skill at negociations, diverted Alexander from the conquest of Athens, and restored the Athenians to his favour.

Id.

Instructors should not only be skilful in those sciences which they teach ; but have skill in the me-thod of teaching, and patience in the practice.

Watts on the Mind.

SKIL'LET, n. s. Fr. escuellette ; Lat. scutula. A small kettle or boiler.

When light winged toys Of feathered Cupid foil with wanton dullness My speculative and oflked instruments, Let house-wives make a skillet of my helm, And all indign and base adversities Make head against my estimation.

Shakspeare. Othello.

Break all the wax, and in a kettle or skillet set it over a soft fire. Mortimer's Husbandry.

SKIM, v. a. & v. n. ˆ Properly to scum,

SKIM'MER, n. s. > from Fr. scum, escunie.

SKIM'MILK. J — Johnson. But there

is a Gothic skyma, and Islandic skima, meaning to glide along. To take the scum clear off from the upper part, by passing a vessel a little below the surface ; take by skimming ; glide over the surface ; cover superficially (improper) : as a verb neuter, to pass lightly ; glide along : a skimmer is a vessel used in skimming : skimmilk, that from which the cream has been taken.

She boils in kettles must of wine, and skims With leaves the dregs that overflow the brims.

Dry den.

His principal studies were after the works of Ti-tian, whose cream he had skimmed. Id. Dufresnoy. The swallow skims the river's wat'ry face. Dryden.

Dangerous flats in secret ambush lay, Where the false tides skim o'er the covered land, And seamen with dissembled depths betray. Id.

Wash your wheat in three or four waters, stirring it round, and with a skimmer, each time, take oft" the light. Mortimer.

Then cheese was brought ; says Slouch, this e'en

shall roll ; This is skimmilk, and therefore it shall go. King.

Thin airy shapes o'er the furrows rise, A dreadful scene ! and skim before his eyes.'

Addisoii.

The surface of the sea is covered with its bubbles, while it rises, which they skim off into their boats, and afterwards separate in pots. Id.

My co*. Torn, or his coz Mary, \Vho hold the plough or skim the dairy, My fav'rite books and pictures sell. Prior.

A wing'd eastern blast just skimming o'er The ocean's brow, and sinking on the shore. Id.

VVhilome I've seen her ikim the clouted" cream, And press from spongy curds the milky stream.

Gay. When Ajax strives some rock's vast weight to

throw.

The line too labours, and the words move slow ; Not so when swift Camilla scours the plain, Flies o'er the* unbending corn, and skims along the

main. Pope.

Such as have active spirits, who are ever ikimming over the surface of things with a volatile spirit, will fix nothing in their memory. Watts on the Mind.

But Peggy dear, the ev'ning's clear. Thick flies the skimming swallow ;
•

The sky is blue, the fields in view, All fading-green and yellow. Burns.

Thou polish'd and high finish'd foe to truth, Gray beard corrupter of our listening youth, To purge and ikim away the filth of vice, That so refined it might the more entice, Then pour it on the morals of thy son ; To taint his heart was worthy of thine own !

Cawper.

SKIM'BLESKAMBLE. adj. A cant word ; a reduplication of scamble. Wandering ; wild.

A couching lion and a ramping cat, And such a deal of skimbleskambie stuff, As puts me from my faith. Shakspeare.

SKIM-COULTER, in rural economy, a coulter invented by Mr. Ducket, for paring off the surface of coarse grass or other, lands, and placing it in the bottom of the furrow. It has been used in different districts with great advantage, and is stated in the agricultural report of Hertfordshire to be of excellent effect in clover-lays, and wherever any rubbish is on the land that wants burying, as well as in breaking up old saintfoin lays.

The SKIM-COULTER PLOUGH has a skim-coulter of some kind or other attached to it. See PLOUGH.

SKIMMILK, in rural economy, the milk left after the cream has been taken away or skimmed off. This process is performed by means of a thin skimming-dish, after the milk has been set by for some time in shallow vessels, and when it has undergone, in some cases, the operation of scalding. Where the latter practice is followed, though it might be supposed that all the oily unctuous patter of the milk would be brought to the surface, it is found by experience in Devonshire that that is not the case ; but that, on the contrary, the scalded skimmed-milk is much richer, and better even for the purpose of suckling calves, as well as capable of making far better cheese than raw skimmed-milk. A num-ber of trials have shown that in forming skimmilk, about ten ounces of butter is taken from twelve pints of milk, under the scalding practice. See DAIRY.

SKIMMILK CHEESE, is cheese made from skimmed-milk. It is mostly an inferior sort of cheese, though much of it is made in different districts. It is, however, frequently a practice to take away the cream

froic only a certain portion of the milk that is intended for cheese, as that

of the night meal, &c. In Devonshire, when cheese is to be made, much care is taken that the milk be not heated so far as to produce bubbles under the cream.

SKIN, n. s. & v. a. ~\ Sax. f cm ; Dan. skind ;

SKINNED, adj. ˆGoth. and Swed. skin, of

SKIN'NY. J Goth, skya, to cover. The

outward covering of the flesh : to flay ; strip of

skin ; cover with skin, or superficially : skinned

and skinny mean, having or abounding in skin ;

lean ; thin.

It will but skin and film the ulcerous place, Whilst rank corruption, mining all within, Infects unseen. Shakspeare.

Authority, though it err like others, Has yet a kind of medicine in itself, That skins the vice o' the' top.

Id. Measure fvr Meature. Her choppy finger laying Upon her skinny lips. LI. Macbeth.

On whose top he strowed A wilde goat's shaggy akin ; and then bestowed His own couch on it. Chapman.

The body is consumed to nothing, the skin feeling rough and dry like leather. Harvey on Consumption.

The beavers run to the door to make their escape, are there entangled in the nets, seized by the Indians, and immediately skinned. Ellin's Voyage.

The priest on tkins of offerings takes his ease, And nightly visions in his slumber sees.

Druden's AEneid.

The wound was skinned ; but the strength of his thigh was not restored. Druden.

We meet with many of these dangerous civilities, wherein ‘tis hard for a man to save both his shin and his credit. L’ Estrange.

It only patches up and skins it over, but reaches not to the bottom of the sore. Locke.

Lest the asperity of these cartilages of the -windpipe should hurt the gullet, which is tender, and of a skinny substance, tkese annulary gristles are not made round ; but, where the gullet touches the windpipe, there, to fill up the circle, is only a soft membrane, which may easily give way. liaii vn the C /cation.

What I took for solid earth was only heaps of rubbish, skinned over with a covering of vegetables.

Addison. His fingers meet In skinny films, and shape his oary feet. Id. Oritl.

The last stage of healing, or skinning over, is cal-led cicatrization. Sharp’s Surgery.

When the ulcer becomes foul, and discharges a nasty ichor, the edges in process of time tuck in, and, growing skinned and hard, give it the name of callous. Id.

SKIN, in anatomy, the general covering of the body of any animal. See ANATOMY, Index, and MEDICINE.

SKIN, in commerce, is particularly used for the membrane stripped off the animal, to be prepared by the tanner, skinner, parchment-maker, &c., and converted into leather, &c. See TANNING.

SKINK, n. s.) Sax. j-cenc. Drink; any

SKINK’ER. S thing potable : one that serves drink. Obsolete.

I give thee this pennyworth of*sugar, clapt even now into my hand by an under skinker ; one that never spake other English in his life, than eight shillings and sixpence, and you are welcome, sir.

Shakspeare. Henry IV.

Scotch skink, which is a pottage of strong nouiish-

meut, is mad« with the knees and sinews of beef, but long boiled : jelly also of knuckles of veal.

Bacon's Natural History. Hang up all the poor hop-drinkers, Cries old Sym, the king of skinkers. Ben Jonson.

His mother took the cup the clown had filled : The reconciler bowl went round the board, Which, emptied, the rude sk'mker still restored.

Dry den.

SKINNER (Stephen), an English antiquarian, born in 1622. He travelled and stuaied in several foreign universities during the civil wars ; and in 1654 returned and settled at Lincoln, where he practised physic with success until 1667, when he died of a malignant fever. His works were collected in folio in 1671, by Mr. Henshaw, under the title of Etymologicon Linguae Anglicanae, &c.

SKINNER (Rev. John), the son of a country schoolmaster in Aberdeenshire, of the same name, born the 3d of October, 1721, was educated at Marischal College, Aberdeen, and intended by his father (a man of very considerable talents, and of great respectability) for the ministry of the established church. Mr. Skinner displayed in very early life uncommon talents, and his father was flattering himself that he would rise to distinction in his native church ; when he chose to attach himself to the episcopal communion, was ordained in the year 1742, and in November that year became minister of the episcopal congregation in Longside, near Peter-head, of which he continued pastor for sixty-five years. The bishops and clergy of the Scottish Episcopal communion were, for the greater part of that time, nonjurors, and subjected, by the penal laws of 1746 and 1748, to very great inconveniences. To these Mr. Skinner was equally subjected with

his brethren, though there is no reason to suppose that, by becoming an episcopalian, he became a Jacobite ; indeed, the contrary is well known ; yet he bore his afflictions with great equanimity, and discharged the duty of his office with great courage and assiduity ; for which, in the year 1753, he suffered six months imprisonment. Mr. Skinner's talents as a man of genius, and acquirements as a man of learning, considering his narrow circumstances, confined society, and numerous disadvantages, were very remarkable. He published at various times, anonymously, several controversial tracts, adapted to the circumstances of his adopted church; and, in the year 1757, A Dissertation on Jacob's Prophecy, humbly offered as a Supplement to the bishop (Sherlock) of Londonls admirable Dissertation on the same Text ; which was highly approved by the learned bishop, and by other eminent biblical critics. In the year 1788 ' he published an Ecclesiastical History of Scotland, in 2 volS. 8vo., in a series of letters, which has obtained the approbation of very eminent men. His leisure hours and retired life Mr. Skinner amused by poetical composition. He possessed more than ordinary proficiency in the composition of Latin verse; and some of his Scotch songs and ludicrous compositions, both Latin and Scotch, have attained the highest celebrity. This talent he exercised as a mere pastime. After his pieces had amused his little

circle, he was so careless of them, that many, of which the effect is yet recollected, have been totally lost. His chief occupation, during his long life, was biblical criticism; he was a good Hebrew scholar, and an ardent supporter of the Hutchinsonian system of interpretation. Hei died on the 16th of June, 1807, aged eighty six, in the house of the bishop his son, near Aberdeen : and his posthumous works were published, with a memoir of his life, in 3 vols. Hvo., in 1809. They consist of 1. Letters addressed to Candidates for Holy Orders in the Episcopal Church of Scotland ; 2. A Dissertation on the Shechinah, or Divine Presence with the Church or People of God; 3. An Essay towards a literal or true radical Exposition of the Song of Songs, which is Solomon's ; and, 4. Of Specimens of his Latin, English, and Scotch Poetry, serious and ludicrous. The opinions of Mr. Skinner will be variously estimated by various men : they were so in his own time, and among the members of his own communion. But all men will acknowledge that he was an ornament to that communion, and that his talents, his acquirements, and his virtues, might, in different circumstances, have raised him to the highest distinction. He was the. object of great and just veneration among the people of his own charge, by far the greater part of whom he had baptised in infancy. It is remarkable, that, for upwards of fifty years, he preached extempore

; employing little more than an hour, previous to the time of public worship, to select his subject, and arrange his matter and mode of treating if.

SKIP, v. n., v. a., &-\ Ital. squittire ; Fr.

SKIPJACK, n.s. [n. s. ‘ esquirer. I know not

SKIP’PEK, i whether itmaynotcome

SKIP’PET. J as a diminutive from

scape. — Johnson. Swed. skempa. — Thomson. To fetch quick bounds ; pass by quick leaps ; bound lightly or joyfully : as a verb active, to miss ; pass : a skip is a light bound or leap : a skipjack, an upstart : a skipper (Belg. schippery, the master or assistant of a skip or skiff: skippet, a small boat.

Was not Israel a derision unto thee ? Wai he found among thieves? For, since thou spakest of him, thou shippedst for joy. Jer. xlviii. 27.

He looked very curiously upon himself, sometimes fetching a little skip, as if he had said his strength had not yet forsaken him. Sidney.

Upon the bank they sitting did espy A dainty damsel, dressing of her hair, By whom a little skippet floating did appear.

Fuerie Queene.

Let not thy sword skip one : Pity not honoured age for his white beard ; He is an usurer. Shakspeare. Timon of Atheii*.

Pope Pius II. was wont to say that the former popes did wisely to set the lawyer* a-work to debate, whether the donation of Constantine the Great to Sylvester of St. Peter’s patrimony were good or valid in law or no : the better to skip over the matter in fact, whether there was ever any such thing at all or no. Bacon’s Apophthegms.

The queen, bound with love’s powerfulest charm, Sat with Pigwiggen arm in arm : Her merry maids, that thought no harm, About the room were skipping. Drayton.

At spur or switch no more he skipt, Or mended pace, than Spaniard whipl. Ifudibrai.

SKI

You will make so large a tkip as to cast yourself from the land into the water.

More's Antidote against Atheism.

Although to engage very far in such a metaphysical speculation were unfit, when I only endeavour to explicate fluidity, yet we dare not quite skip it over, lest we be accused of overseeing it. Boyle.

The want of shame or brains does not presently entitle every little skipjack to the board's end in the cabinet. L' Estrange.

Are not you afraid of being drowned too? No, not I, says the ikipper. Id.

They who have a mind to see the issue, may ship inese two chapters, and proceed to the following.

Bur net.

The earthborn race

O'er ev'ry hill and verdant pasture stray, Skip o'er the lawns, and by the rivers play.

Biackmore.

No doubt you will return very much improved. — Yes, refined like a Dutch ikipper from a whale fishing. Congreve.

John ikipped from room to room, ran up stairs and down stairs, peeping into every cranny.

Arbvthnot's HUtory of John Vull.

The lamb thy riot dooms to bleed to day ; Had he thy reason, would he skip and play! Pope.

A gentleman made it a rule, in reading, to skip mer all sentences where he spied a note of admiration at the end. Swift.

SKIPTON, a market-town of the West-Riding of Yorkshire, commonly called Skipton-in-Cra-ven, from its situation in the midst of the mountainous district of Craven, on the banks of the river Aire, fifteen miles N. N. W. from Otley, ten from Keighley, and 216 north by west of London. The town is composed chiefly of one wide long street, built of stone, at the extremity of which is the church, a spacious structure, rebuilt in 1655. In 1823 an act was passed for the better supplying this place with water. Here the quarter sessions for the West Riding of York are held, in a new town-house. It had an ancient castle, situate upon a high rock, now the mansion of the earl of Thanet, and has a free chapel ; but little of the old building remains. Skipton has a good grammar-school. The trade of this place has much increased of late years, from the advantage of having the Leeds and Liverpool canal running near it. It has a considerable trade in grain, a paper mill, a glazing mill, a mill for silk twist, and a cotton manufactory. Market on Saturday.

SKIR'MISH, n. s. & v. n. Fr. escarmouche. From Welsh ys and carm, the shout of war : whence ysgarm, and ysgarmes, old British words. Maes a naw 'sgarmes a wnan, says an ancient writer. — Johnson. All the northern tongues have a similar word. A slight fight ; less than a set battle : to fight loosely or irregularly.

He sat down to perform service, not by the hazard of one set battle, but by dallying off the time with often skirmishes. Knoltes.

There is a kind of merry war betwixt signior Bene-dick and her : they never meet but there's a tkirmith of wit. Shakspeare.

Ready to charge, and to retire at will ; Though broken, scattered, fled, they skirmith still.

Fairfax.

These skirmithet expire not with the first propugners of the opinions : they perhaps began as single duel-lers ; but then they soon have their partisans and

abettors, who not only enhance, but entail the feud to posterity. Decay of Pieti/.

One battle, yes, a skirmish more there was With adverse fortune fought by Cartismand ; Her subjects most revolt. Philipis Britain.

I'll pass by the little skirmishings on either side.

Atterburij.

A gentleman volunteer, skirmishing with the enemy before Worcester, was run through his arm in the middle of the biceps with a sword, and shot with a musket-bullet in the same shoulder.

Wiseman's Surgery.

SKIRMISH BAY, the name given by lieutenant Broughton to a bay in an island which was discovered by him, in lat. 43° 48' S., and long. 183° E. The Chatham armed tender, which Mr. Broughton commanded, under captain Vancouver in his voyage of discovery, worked up into the bay, and came to anchor about a mile from the shore. The lieutenant, the master, and one of the mates, landed, and found the people so extremely inhospitable, that they were obliged to fire upon them in their own defence. The land, whether island or continent, is of considerable magnitude ; the part which they saw extended nearly forty miles from east to west, and the appearance of the country, according to the description given, is very promising. In many respects the natives resemble those of New Zealand ; from which country they are distant about 100 leagues; but their skins were destitute of any marks, and they had the appearance of being cleanly in their persons. Their dresses were of seal or sea bear skin, and some had fine woven mats fastened round the waist. * They seemed a cheerful race, our conversation,' says Mr. Broughton, ' frequently exciting violent bursts of laughter amongst them. On our first landing, their surprise and exclamations can hardly be imagined ; they pointed to the sun and then to us, as if to ask, whether we had come from thence ? ' Their arms were spears, clubs, and a small weapon resembling the New Zealand patoo.

SKIRRE, v. a. & v. n. Sax. j-cin, pure, clean. To scour : ramble over in order to clear : send ; run away in haste. Obsolete : but quere its connexion with the above; or whether it be not the root of SKIRMISH? which see.

Send out more horses, skirre the country round ; Hang those that talk of fear. Shakspeare. Macbeth.

We’ll make them skirre away as swift as stones Enforced from the old Assyrian slings.

Id. Henry V.

SKIR’RET, n.s. Lat. sisarum. A plant. Skirrets are a sort of roots propagated by seed.

Mortimer.

SKIRT, n. ». & v. a. Swed. skiorte ; Goth skaut. The loose edge ©f a garment; that part which hangs loose below the waist; edge; mar-gin : to border ; run along the edge.

As Samuel turned about to go away, he laid hold upon the skirt of his mantle and it rent.

1 Samuel xv. 27.

He should seat himself at Athie, upon the tkirt of that unquiet country. Spenser on Ireland.

It’s but a night gown in respect of yours ; cloth of gold and cuts, side sleeves and skirts, round under-borne with a bluish tinsel.

Shaktpeare. Much ado about Nothing

Of all these bounds,

With shadowy forests, and with champaigns richcd, With plenteous rivers, and wide skirted meads, We make thee lady. Shakspeare.

SKITTISH, adj. } Belg. and Dan. skye, SKIT’TISHLY, adv. > schew.

Shy; easily SKIT'TISHNESS, n. s. J frighted: in fact, shy as

anciently written, *i.e.* sky: the adverb and noun

substantive corresponding.

Some men sleep in skittish fortune's hall,

While others play the ideots in her eyes.

Shakspeo.re.

SKONCE, n. s. . See SCONCE.

SKORODITE, a rare mineral substance, found in Saxony, Carinthia, and Cornwall. It presents itself in small crystals, derived from a right rhombic prism of 120°, but which are terminated at each extremity by four-sided pyramids. It is also found massive, and in Botryoi-dal masses composed of crystals, diverging from a common centre. Its colours are various shades of green : lustre, vitreous : streak, white : rather brittle : hardness, about that of flour. Before the blowpipe it emits an arsenical odour, and melts itself into a reddish brown scoria, which acts upon the magnetic needle. It consists of

Arsenious acid 31.40

Sulphuric acid i.54

Water 18.00

Protoxide of iron, with magnesia, lime, and manganese . 47.80

SKREEN, n. s. Fr. escran, escrein, which Minshieu derives from Lat. secerniculum. Nimis violenter, ut solet, says Skinner ; which may be true as to one of the senses ; but, if the first sense of skreen be a kind of coarse sieve or rid-dle, it may perhaps come, if not from cribrum, from some of the descendants of cerno. — Johnson. A riddle or coarse sieve ; any shelter, protection, or concealment : to sift ; riddle ; conceal; protect. A skuttle or skreen to rid soil fro' the corn. Tvsser.

The curtains closely drawn, the light to skreen • Thus covered with an artificial light, Sleep did his office. Dryden.

Fenced from day by night's eternal skreen ; Unknown to heaven, and to myself "unseen. Id:

He that travels with them is to skreen them, and get them out when

they have run themselves into the briars. Locke.

Ajax interposed

His sevenfold shield, and skreened Laertes' son, When the insulting Trojans urged him sore.

Philips.

SKUE, adj. Goi\.ska. Oblique ; sidelong. It is most used in the adverb askue or askew.

SKULK, v. n. Qu. SKUNK, which see. To hide ; lurk in fear or malice.

While publick good aloft in pomp they wield, And private interest skulks behind the shield.

Young.

SKULL, n. s. Island skiola. The bone that encloses the head.

With redoubled strokes he plies his head ; But drives the battered skull within the brains.

Dryden.

SKULL, n. s. Sax. j-ceole. See SCULL.

SKUNK (mephitis putorius), a carnivorous quadruped, allied to tlie weasel and badger, inhabiting most parts of North America, and celebrated for the intolerable stifling stench which it discharges when threatened with danger, and which is its defence aga'inst its enemies. At other times, the animal is not at all unpleasant, and, if killed while unsuspicious of dan-ger, the offending glands being carefully removed, the flesh may be eaten, and is said to be well flavoured ; in fact, it is frequently made use of, and is much relished by the Indians and hunters. The skunk is about as large as a cat. The dentition differs but slightly from that of the weasels. The upper lip is furnished with long whiskers ; the fur is long and thick, composed of silky and woolly hairs intermixed ; the color is white and blackish-brown, in large masses, but the respective distribution of these tints varies so greatly that no two individuals are to be found precisely alike. A second species inhabits South America, and perhaps there are others. The genus is exclusively American. The skunk is a nocturnal animal, and

leaves its burrow in the twilight in search of small quadrupeds, and the young and eggs of birds, on which it feeds. When it gains access to the poultry-yard, it often does much mischief. The skunk seems to be perfectly aware of its powers of defence, and takes no pains to avoid man or other animals ; it seems so unsuspicious of danger as to invite attack, and strangers often pay the price of experience. Shouldˆ dog attempt to seize him, he is utterly discomfited, and runs away howling, and endeavouring to thrust his nose in the ground. The offensive fluid is ejected to a considerable distance, and is very acrimonious ; the smallest drop is sufficient to render clothes detestable to the wearer and his companions for a great length of time, and without any percepli* ble diminution in intensity. Washing, smoking, baking, burying, in short, every process seems to be ineffectual for its removal.

SKUNK - CABBAGE (symplocarpus fcelida). Among the earliest of American flowers, often, indeed, before them all, appear the large, thick, purplish and spotted spathes of this plant. The leaves are later in making their appearance, are very large, and bear no inconsiderable resemblance to those of the cabbage. The whole plant has a very strong odor, singularly like that of the skunk, but not comparable to it in intensity. The skunk-cabbage is unknown in the Southern States. It belongs to the natural family aroidete.

Saxon, reupa; Gothic, Swed., and Dan. sky. The region which surrounds the earth beyond the atmosphere : the atmos- ‘ phere : hence the weather, climate: the three compounds following explain themselves : skyed is enveloped by the slues ;

skyey and skyish, ethereal, colored by the ether:

the other compounds are also obvious in their

meaning.

The mountains their broad backs upheave

Into the clouds, their tops ascend the sky. Milton

SKY, n;s. SKY’COLOR, n. g. SKY’COLORED, adj. SKY’DIED, SKY’ED, SKY’EY, SKY’ISH, SKY’LARK, n.g. SKY’LIGHT, SKY’ ROCKET.

S K Y E.

A solution as clear as water, with only a light touch of shy-colour, but nothing near so high as the ceruleous tincture of silver. Boyle.

Raise all thy winds, with night inrolve the tkies.

Dry den.

Wide is the fronting gate, and raised on high, With adamantine columns threats the sky. Id.

He next proceeded to the skylark, mounting up by a proper scale of notes, and afterwards falling to the ground with a very easy descent. Spectator.

We envy not the warmer clime, that lies In ten degrees of more indulgent skies ; Nor at the coarseness of our heav'n repine, Though o'er our heads the frozen Pleiades shine.

Addison.

This your Ovid himself has hinted, when he tells us that the blue water-nymphs are dressed in sky-colored garments. Id.

I considered a comet, or, in the language of the vulgar, a blazing star, as a skyrocket discharged by an hand that is almighty. Id.

Their figs, skydyed, a purple hue disclose. Pope.

The pale deluge floats O'er the $kyed mountain to the shadowy vale.

Thomson .

A monstrous fowl dropped through the sky-light, near his wife's apartment. Arbuthnot and Pope.

SKY, the blue expanse of air or atmosphere. For the reason of its blue color and concave figure, see OPTICS, Index.

SKYE, in geography, one of the largest of the western islands of Scotland, so called from Skia-nach, which in Erse signifies winged, because the two promontories of Valernessand Troternish, by which it is bounded on the northwest and northeast, are supposed to resemble wings. It lies between the shire of Ross and the west part of Lewis. According to the computation of Mr. Pennant, Dr. Johnson, and Dr. Campbell, it is sixty miles in length, and nearly the same in width where broadest ; according to others it is fifty miles long and in some places thirty broad. The island was long divided between two proprietors ; the south part belonging to the laird of Macleod, said to be lineally descended from Leod son of the black prince of Man ; and the northern district, or barony of Troternish, being the pro-porty of lord Macdonald, whose ancestor was Donald, king or lord of the isles, and chief of the numerous clan of Macdonalds, once counted the most warlike of all the Highlanders. But there are now many other proprietors.

Skye is included in the county of Inverness, and formerly belonged to the diocese of the isles : on the south it is parted from the main land by a channel nine miles in breadth ; though, at the ferry of Glenelly, it is so narrow that a man may be heard calling for the boat from one side to the other. Skye is well provided with a variety of excellent bays and harbours.. The surface is mountainous ; some mountains are so high as to be covered with snow at the top in midsummer ; in general their sides are clothed with heath and grass, which afford good pasturage for sheep and black cattle. Between the mountains there are some fertile valleys, and the greater part of the land toward the seacoast is plain and arable. The island is watered with a great number of rivers, above thirty of which afford salmon ; and some of them produce black mussels in which pearls are bred, particutarty the rivers Kilmartin

and Ord : Martin was assured by tne proprietor of the former that a pearl had been found in it valued at £20 sterling.. Here is also a considerable number of fresh-water lakes well stored with trouts and eels. The largest of these lakes takes its name from St. Columba, to whom is dedicated a chapel that stands upon a small isle in the middle of the lake. Skye likewise affords several cataracts that roar down the rocks with great impetuosity.

That the island has been formerly covered with woods appears from the large trunks of fir and other trees daily dug out of the bogs and peat-marshes in every part of it. From the height of the hills, and

proximity of the sea, the air seldom continues long of the same temperature ; sometimes it is dry, ottener moist, and in the end of winter and beginning of spring cold and piercing ; at an average three days in twelve throughout the year are scarcely free from rain, far less from clouds. These, attracted by the hills, sometimes break in useful and refreshing showers ; at other times suddenly bursting pour down their contents with tremendous noise, in impetuous torrents that deluge the plains below, and render the smallest rivulet impassable ; which, together with the stormy winds so com-mon in the country in August and September, frequently blast the hopes of the husbandman. Snow has been often known to lie on the ground from three to seven weeks ; and on the highest hills, even in the middle of June, some spots of it are to be seen. To this various temperature of the air, and uncertainty of weather, the fevers and agues, headache, rheumatisms, colds, and dysenteries, which are the prevailing distempers, may be ascribed. That it is far, however, from being unwholesome, is evinced by experience ; for the inhabitants are, in general, as strong and healthy, and arrive at as advanced an age, as those who live in milder climates, and under a serener sky. The gout is scarcely known in this island. The soil is generally black, though it likewise affords white, red, and blue clay, and in some places fuller's earth. It is, however, much less adapted for agriculture than for pasture, and seldom, unless in very good years, supplies itself with a sufficiency of provisions. Yet, though the soil is not very fertile or rich, it might with pro-per management be made to produce more plentiful crops. But the generality of the farmers are so prejudiced in favor of old customs that they will not change them for better. With respect tb improvements in agriculture, therefore, they are still much in the same state as they were thirty or forty years ago. The cascroim, a crooked kind of spade, is still a favorite instrument for laboring the ground used among the ordinary-class of tenants. The average crops of corn are from 8000 to 9000 bolls. 500 tons of kelp are annually manufactured, and 1000 head of cattle exported. It is divided into seven parishes, in each of which there is a school, besides three charity-schools in different places. The chief minerals are lead and iron ore, which, however, have never been wrought to any advantage. Near the village of Sartle the natives find black and white marcasites, and variegated pebbles. Ap-plesglen, in the neighbourhood of Loch-fallarU

produces beautiful agates of different sizes and colors : stones of a purple hue are, after great rains, found in the rivulets : crystal of different colors and forms abounds in several parts of the island, as well as black and white marble, freestone, limestone, and talc : small red and white coral is found on the southern and western coasts in great abundance. The fuel consists chiefly of peat and turf, which are impregnated with iron ore and saltpetre ; and coal has been discovered in several districts. The wild birds are solan geese, gulls, cormorants, cranes, wild geese, wild ducks ; eagles, crows, ravens, rooks, cuckoos, rails, woodcocks, moor-fowls, partridges, plovers, wild pigeons, and blackbirds, owls, hawks, snipes, and a variety of small birds. In mild seasons the cuckoo and rail appear in the end of April ; the former disappears always before the end of June ; the latter sometimes not till September. The woodcock comes in October, and frequently remains till March. The tame sorts of fowls are geese, ducks, turkeys, cocks, pullets, and pigeons. The black cattle are here exposed to all the rigors of the severe winter, without any other provender than the tops of the heath and the alga marina ; so that they appear like mere skeletons in the spring ; though, as the grass grows up, they soon become plump and juicy, the beef being sweet, tender, and finely interlarded. The amphibious animals are seals and otters. Among the reptiles are vipers, asps, frogs, toads, and three different kinds of serpents; the first spotted black and white, and very poisonous ; the second yellow, with brown spots ; and the third of a brown color, the smallest and least poisonous. Weasels are also numerous. Wales and cairbans, or sun-fish, come in sometimes to the sounds after their prey, but are rarely pursued with any success. The fishes commonly caught on the coast are herrings, ling, cod, scate, haddock, mackerel, lythe, sye, and dog-fish. The kyle of Scalpe teems with oysters in such a manner that, after some spring-tides, twenty horse loads of them are left upon the sands. Near the village of Bernstill the beech yields mussels sufficient to maintain sixty persons per day ; this providential supply helps to support many poor families in times of scarcity.

The people are strong, robust, healthy, and prolific. They generally profess the Protestant religion ; are honest, brave, innocent, and

hospitable. They speak the language, wear the habit, and observe the customs, that are common to all the Hebrides. The meconium in new-born infants is prffged away with fresh butter : the children are bathed every morning and evening in water, and grow up so strong that a child of ten months is able to walk alone : they never weaf shoes or stockings before the age of eight or ten, and night-caps are hardly known ; they keep their feet always wet ; they lie on beds of straw or heath, which last is an excellent restorative : they are quick of apprehension, ingenious, and very much addicted to music and poetry. They eat heartily of fish ; but seldom regale themselves with flesh: their ordinary food consists of butter, cheese, milk, potatoes, calewort, brochan, and a dish called oon, which is the froth of boiled milk or whey raised with a stick, like that used in

making chocolate. A sort of coarse woollen cloth called cloa, or cadoes, the manufacture of their wives, made into short jackets and trousers, is the common dress of the men. The philibeg is rarely worn, except in summer and on Sundays ; on which days, and some other occasions, those in better circumstances appear in tartans, a bonnet, and short hose, and some in a hat, short coat, waistcoat, and breeches, of Scottish or English manufacture. The women are in general very cleanly, and so excessively fond of dress, that many maid-servants are often known to lay out their whole wages that way. There are two fairs held annually at Portree, to which almost everypart of Skye sends cattle. The first is held in the end of May, and the second in the end of July. The fair commonly continues from Wednesday till Saturday. The commodities are horses, cows, sheep, goats, hides, butter, cheese, fish, and woo!. The cattle swim over to the main land through ;i mile or half a mile of sea. Thousands of these are yearly exported at from £2 to £3 each: Many of them, are driven to England, where they are fatted for the market, and counted delicious. Irt Skye appear many ruins of Danish forts, watcli towers, beacons, temples, and sepulchral monuments. All the forts are termed Duns; as Dun-Skudborg, Dun-Derig, Dun-Skeriness Dun-David, &c.

SKY-COLOR, in the arts. To give this color to glass, set in the furnace a pot of pure metal of fritt from rochetta or barilla, but the rochetta fritt does best ; as soon as the metal is well purified, take for a pot of twenty pounds of metal six ounces of brass calcined by itself; put it by degrees at two or three times into the metal, stirring and mixing it well every time, and skimming the metal with a ladle ; at the end of two hours the whole will be well mixed, and a proof may be taken ; if the color be found right, let the whole stand twenty-four hours longer

in the furnace and it will then be fit to work, and will prove of a most beautiful sky-color. See Neri's Art of Glass, p. 40.

SKYRO, or SKYROS, an island of the Greek Archipelago, east of Negroponte, about sixty miles in circumference, and chiefly covered by steep, naked rocks : there are however some valleys fruitful in wheat, barley, and tolerable wine. A Greek bishop resides on it, in a small town of this name.

SLAB, adj. & n. s. ") Belgic slabbern;

SLAB'BER, v. n. & v. a. >Teut.scA/oWe. Thick;

SLAB'BY, adj. J viscous ; glutinous : a

thick and flat stone or slice of wood. See SLIVE. To slabber is to let spittle fall, or smear with spittle : slabby, thick, viscous.

The milk-pan and cream-pot so slabbered and tost That butter is wanting, and cheese is half lost.

Tuiser.

Nose of Turk, and Tartar's lips ; Finger of birth -strangled babe, Ditch-delivered by a drab ; Make the gruel thick and slab.

SJiaktpeare. Macbeth.

When waggish boys the stunted besom ply, To rid the tlubby pavements, pass not by. Gay.

He slabbered me all ove/, from cheek to cheek, with his great tongue.

Arbuthnot'i History nf John Bull.

In the cure of an ulcer, with a moist intemperies, ttabhij and greasy mendicaments are to be forborn, and drying to be used. Wiseman's Surgery.

SLAB-LINE, in sea language, a small cord passing up behind a ship's mainsail or foresail ; and, being reeved through a block attached to the lower part of the yard, is thence transmitted in two branches to the foot of the sail, to which it is fastened. It is used to truss up the sail as occasion requires, and more particularly for the convenience of the pilot or steersman, that he may look forward beneath it as the ship advances.

SLACK, adj., v.n. Sav.a.} Sax. j-leac ; Is.

SLACK'EN, t;. n. & v. a. ' slaken ; Swedish

SLACK'LY, adv. t slak ; Belg. slaak ;

SLACK'NESS, n.s. J Welsh yslack.

Loose ; not tense ; not hard drawn ; relaxed ; remiss : to slack or slacken is to abate ; lose cohesion ; be remiss or to neglect ; loosen ; relax ; remit; ease; withhold; repress: the adverb and noun substantive corresponding.

, When thou shalt vow a vow unto the Lord, slack not to pay it. Deuteronomy xxiu. 21.

JMen, having been brought up at home under a strict rule of duty, always restrained by sharp penalties from lewd behaviour, so soon as they come thither, where they see laws more slackly tended, and the hard restraint which they were used unto now slacked, they grow more loose. Spenser.

Thus much help and furtherance is more yielded, in that, if so be our zeal and devotion to God-ward be stuck, the alacrity and fervour of others serveth as a present spur. Hooker.

It concerneth the duty of the church by law to provide, that the looseness and slackness of men may not cause the commandments of God to be unex-ecuted. Hooker.

Seeing his soldiers slack and timorous, he reproved them of cowardice and treason. Knolles.

Through the slackness of motion , or long banishment from the air, it might gather some aptness to putrefy. Brerewood.

He that so generally is good, must of necessity hold his virtue to you, whose worthiness would stir it up where it wanted, rather than slack it where there is such abundance. Shahspeare.

That a king's children should be so conveyed, So slachlti guarded, and the search so slow That could not trace them. Id. Cymbeline.

These thy offices, So rarely kind, are as interpreters Of my behind-hand slackness. Id. Winter's Tale.

You may sooner by imagination quicken or slack a motion, than raise or cease it ; as it is easier to make a dog go slower than make him stand still.

Bacon.

This makes the pulses beat, and lungs respire ; This holds the sinews like a bridle's reins ;

And makes the body to advance, retire, To turn, or stop, as she them slacks or strains.

Davia. My guards

Are you, great powers, and the unbated strength Of a firm conscience ; which shall arm each step Ta'en for the state, and teach me stack no pace.

Zfeii Jonson.

This good chance, that thus much favoured) , He slacks not. Daniel's Civil War.

This doctrine must supersede and slacken all industry and endeavour, which is the lowest degree of that which hath been promised to be accepted by

Chiist ; and leave nothing to us to deliberate or attempt, but only to obey our fate. Hammond.

Here have I seen the king, when great affairs Gave leave to slacken and unbend his cares, Attended to the chase by all the flower Of

youth, whose hopes a nobler prey deroui.

Denham.

From his slack hand the garland wreathed for Eve Down dropped, and all the faded roses shed.

Miltm.

Whence these raging fires Will slacken, if his breath stir not their flames. Id.

With such delay well pleased, they slack their course. <.

Extol riot riches then, the toil of fools, The wise man's cumbrance, if not snare ; more apt To slacken virtue, and abate her edge, Than prompt her to do aught may merit praise. Id.

From man's effeminate slackness it begins, Who should better hold his place By wisdom, and superior gifts received.

Id. Paradise Lost.

Rebellion now began, for lack Of zeal and plunder, to grow slack. Hudibras.

Nor were it just, would he resume that shape, That slack devotion should his thunder 'scape.

Waller.

Balls of this metal slacked Atlanta's pace, And oil the aro'rous youth bestowed the race. Id.

Their pace was formal, grave, and slack ; His nimble wit outran the heavy pack. Dryden.

Had Ajax been employed, our slackened sails Had still at Aulis waited happy gales. Id.

Slack not the good presage, while heaven inspires Our minds to dare, and gives the ready fires. Id.

A handful of slack dried hops spoil many pounds, by taking away their pleasant smell.

Mortimer's Husbandry.

Some unslacked lime cover with ashes, and let it stand till rain comes to slack the lirne ; then spread them together. j</t

The fire, in lime burnt, lies hid, so that it appears to be cojd ; but water excites it again, whereby it slacks and crumbles into fine powder.

Moxon's Mechanical Exercises.

I should be grieved, young prince, to think my

presence

Unbent your thoughts, and slackened 'em to arms.

Addison.

The vein in the arm is that which Aretaeus commonly opens ; and he gives a particular caution, in this case, to make a slack compression, for fear of exciting a convulsion. Arbuthnot.

When they have no disposition to shoot out above their lips, there is a slackness to heal, and a cure is very difficultly effected. Sharp's Surgery.

Taught power's due use to people and to kings, Taught nor to slack nor strain its tender strings.

PttM.

On our account has Jove, Indulgent, to all moons some succulent plant Allowed, that poor helpless man might slack His present thirst and matter find for toil. Philips.

SLACKEN, in metallurgy, a term used by the miners to express a spongy and semivitrified substance which they used to mix with the ores of metals to prevent their fusion. It is the scoria or scum separated from the surface of the former fusions of metals. To this they frequently add limestone, and sometimes a kind of coarse iron-ore, in the running of the poorer gold ores.

SLACK-WATER, in sea language, denotes the interval between the flux and reflux of the tide or between the last of the ebb and the first of th

flood, during which the current is interrupted, and the water apparently remains in a state of rest.

SLAG, n. s. Swed. slagge. The dross or recrement of metal.

Not only the calces but the glasses of metal may be of differing colours from the natural colour of the metal, as I have observed about the glass or slag of copper. Boi/le.

SLAINS, a parish of Scotland, in Aberdeenshire, on the coast of Buchan, about five miles long, and three broad, of a triangular form. The seacoast extends six miles, four of which are rocky and two sandy. The rocks are high, indented with immense chasms, and abounding with capacious caves. One of these is above 200 feet long, and another, called the Dropping Cave, or White Cave, is covered on the inside with beautiful white stalactites. The surface is level; the soil fertile; and as gravel, shells, sand, marl, and limestone, abound, agriculture is much improved. The ruins of the ancient castle of Slains, which was demolished in 1594 by James VI., on Huntly's rebellion, are still to be seen upon a peninsulated rock. There are also relics of a chapel built in the seventh century, and dedicated to St. Adamnan, the disciple of St. Columba.

SLAKE, v. a. & v. n. From slack. — Skinner ; from Island, slock, to quench. — Mr. Lye; Goth. lecka. — Thomson. To quench ; extinguish ; go out ; to grow less loose or relaxed : confounded with SLACK.

He did always strive

Himself with salves to health for to restore, And slake the heavenly fire that raged evermore.

Spenser.

If I digged up thy forefathers' graves, And hung their rotten coffins up in chains, It could not slake mine ire, nor ease mine heart.

Shakspeare. Henry VI.

If she the body's nature did partake, Her strength would with the body's strength decay ;

But when the body's strongest sinews slake, Then is the soul most active, quick, and gay.

Daviei.

She with her cold hand slakes His spirits, the sparks of life, and chills his heart.

Craihaw.

She perceiving that his flame did slake And loved her only for his trophy's sake. Browne.

From lulus' head

A lambent flame arose, which gently spread Around his brow, and on his temples fed : Amazed, with running water we prepare, To quench the sacred fire, and slake his hair.

Dry den.

Coarse are his meals, the fortune of the chace ; Amidst the running stream he slakes his thirst.

Addison's Cato.

That which he saw happened to be fresh lime, and gathered before any rain had fallen to slake it.

Woodward.

The fragrant fruij from bending branches shake, A nd with the crystal stream their thirst at pleasure slake. Blackmore't Creation.

SLAN'DER, v.a. & n. s.~\ Fr. eslaundrie ; SLAN'DERER, n. s. f Lat. scandalum. To

SLAK'DEROUS, adj. t censure falsely ; be—

SLAN'DEROUSLY, adv. 'lie: a false invention ; reproach ; disgrace : a slanderer is a VOL. XX.

calumniator : the adjective and adverb corresponding.

He hath slandered thy servant unto the king.

2 Sam. xix. 27.

I was never able till now to choke the mouth of such detractors with the certain knowledge of their slanderous untruths. Spenser on Ireland.

I may the better satisfy them who object these doubts, and slanderously bark at the courses which are held against that traiterous earl and his adherents. jOf

Give me leave to speak as earnestly in truly commending it, as you have done in untruly, and unkindly defacing and slandering it. Whitgifte.

Slander Valentine With falsehood, cowardice, and poor descent.

Sfiaktpeare

When slanders do not live in tongues ; When cut-purses come not to throngs.

Id. King Leu~

Thou slander of thy mother's heavy womb ! Thou loathed issue of thy father's loins.

Id. Richard III, What king so strong Can tie the gall up in the slanderous tongue ?

Shakspeare. Since that, we hear he is in arms,

We think not so ; Yet charge the consul with our harms,

That let him go : So in our censure of the state

We still do wander, And make the careful magistrate

The mark of slander. Ben Jonson't Catilint They did slanderously object, How that they durst not hazard to present In person their defences. Daniel's Civil War.

In your servants suffer any offence against yourself rather than against God ; endure not that they should be railers, slanderers, telltales, or sowers of dissension. Taylor.

There are not only slanderous throats, but slanderous ears also ; not only wicked inventions, which engender and brood lies, but wicked .assents, whirS hatch and foster them. Barrow,

Thou shall answer for this, thou slanderer !

Thou dost with lies the throne invadeˆ By practice hardened in thy slandering traae ; Obtending heaven for whate'er ills befall,

And sputt'ring under specious names thy gall. Id.

We are not to be dejected by the slanders and calumnies of bad men, because our integrity shall then be cleared by Him who cannot err in judgment.

Nelson

As by flattery a man opens his bosom to his mor-tal enemy, so by detraction and a slanderous misreport he shuts the same to his best friends. South.

Of all her dears she never slandered one, But cares not if a thousand are undone. Pope

To me belongs

The care to shun the blast of slanderous tongues ; Let malice, prone the virtuous to defame, Thus with vile censure taint my spotless name.

SLANT, adj. } From Dutch slanghe, a ser-SLANT'ING, Spent.— Skinner. Swed. slanke, SLANTWISE, j is to slide off. Oblique ; not direct ; not perpendicular.

Some maketh a hollowness half a foot deep, With fower sets in it; set slantwise asleep. Tusser.

Late the clouds

Justlin", or pushed with winds, rule in their shock,

Tine the slant lightning ; whose thwart flame driven

down Kindles the gummy bark of fir and pine. Stilton.

The sun

Around the globe describes the' equator line ; By which wise means he can the whole survey, With a direct or with a slanting ray, In the succession of a night and day. Blackmore.

The night was winter in its roughest mood ; The morning sharp and clear. But now at noon Upon the southern side of the slant hills, And where the woods fence off the northern blast, The season smiles, resigning all its rage, And has the warmth of May. Cowper.

SLAP, n. s., adv., & v. a. > Teut. schlap ;

SLAPDASH', intetj. } Goth. slap. A

blow. Properly with the hand open, or with something rather broad than sharp.

Dick, who thus long had passive sat, Here stroak'd his chin, and cocked his hat ; Then slap't his hand upon the board, And thus the youth put in his word. Prior.

. And yet, slapdash, is all again

In every sinew, nerve, and vein. Id.

Peg's servants complained ; and, if they offered to come into the warehouse, then straight went the yard slap over their noddle.

Arbuthnot's History of John Bull.

The laugh, the slap th* jocund curse go round.

Thomson.

SLASH, v.a. v. n & n. s. Island, slasa, to strike. To cut ; cut with long cuts : lash ; to strike at random : a cut or wound.

The knights with their bright burning blades Broke their rude troops, and orcfer did confound, Hewing and slashing at their idle shades.

Faerie Qiteem. What! this a sleeve?

Here's snip and nip, and cut, and slish and slash, Like to a censor in a barber s shop. Shakspeare.

Some few received some cuts and slashes that had drawn blood. Clarendon.

Daniel, a sprightly swain, that used to sloth The vig'rous steeds that drew his lord's calash, To Peggy's side inclined. King.

Distinguished slashes deck the great :

As each excels in birth or state,

His oylet-holes are more and ampler :

The king's own body was a sampler. Prior.

Not that I'd lop the beauties from his book, Like slashing Bentley with his desp'rate hook.

Pope.

SLATE, 7i. s. & v.a. From slit: slate is in some counties a 'crack ; or from Fr. esclate, a tile — Johnson. But Sax. j-lixh is, flat ; even ; smooth ; and a more probable derivation. A gray stone, easily broken iuto thin plates, used to co-ver houses, or write upon. See below. To co-ver with slates.

A square cannot be so truly drawn upon a date as it is conceived in the mind. Crew's Cosmologia.

A small piece of a flat slate the ants laid over the hole of their nest, when they foresaw it would rain. Addiscm's Spectator.

All the stone that is slaty, with a texture long, and parallel to the sight of the stratum, will split only lengthways or horizontally ; and, if placed in any other position, 'tis apt to give way, start, and burst,

when any considerable weight is laid upon it.

Woodward on Fotsils. Sonnets and elegies to Chloris Would raise a house about two stories, A lyrick ode would slate. Swift.

SLATE (stegania), a stone of a compact texture and laminated structure, splitting into fine plates. See MINERALOGY. Dr. Hill distinguishes four species of stegania. 1. The whitish steganium, being a soft, friable, slaty stone, of a tolerably fine and close texture, considerably heavy, perfectly dull and destitute of brightness, variegated with a pale brown or brownish-yellow. This species is common in many counties of England, lying near the suiface of the ground. It is generally very full of perpendicular, as well as horizontal, cavities, many of which are filled up with a spar a little purer and more crystalline than the rest ; and is commonly used for covering houses. 2. The red steganium is a very fine and elegant slate, of a smooth surface, firm and compact texture, considerably heavy, and of a very beautiful pale purple, glittering all over with small glossy spangles : it is composed of a multitude of very thin plates or flakes, laid closely and evenly over one another, an<l cohering pretty firmly: this is very common in the northern parts of England, and is much valued as a strong and beautiful covering for houses. 3. The common blue steganium is very well known as a useful and valuable stone, of a fine smooth texture and glossy surface, moderately heavy, and of a pale grayish-blue; composed of a multitude of even plates, laid close upon one another, and easily splitting at the commissures of them ; this i$ also very common in the north parts of England, and is used in most places for the covering of houses. There are other species of this slate, *viz.* the brownish-blue friable steganium, usually called coal-slate ; the grayish-black friable steoa-nium, commonly called shiver; and the grayisli-blue sparkling steganium. 4. The friable, aluminous, black steganium, being the Irish slate of the shops : this is composed of a multitude of thin flakes, laid very evenly and regularly over one another, and splits very regularly at the commissures of them. It is common in many parts of Ireland, and is found in some places in England, always lying near the surface in very thick strata. In medicine it is used in hemorr-hages of all kinds with success, and is taken often as a good medicine in fevers. The island of Eusdale, one of the Hebrides, on the west coast of Scotland, is entirely composed of slate.

The localities of common slate are so numerous that it is to attempt almost an endless task to point them out. Roof-slate is found on the

western side of our island in the counties of Cornwall and Devon, in various parts of North Wales and Anglesey, on the northwest parts of Yorkshire, near Ingleton, and in Swaleclale, also in the counties of Cumberland and Westmoreland. It occurs in a low range of mountains at Chamwood forest, in Leicestershire, near the centre of England. Slate abounds in various parts of Scotland, and in Wicklow, and other mountainous parts of Ireland.

France possesses many valuable beds of roof-slate, near Laferriere in Normandy, and in the neighbourhood of Angers. The last is the most important, as furnishing slate of the most perfect quality, and its extent makes it regarded as inexhaustible. It is further remarkable on account of the very singular and interesting organic re-

jnams that occur between some of the lamina:. The bed extends for a space of tvro leagues, passing under the town of Angers, which is built as well as covered with it ; those blocks being employed in masonry which are the least divisible. The quarries which are actually explored are all in the same line from west to east, as well as the ancient pits, the bed of the best roof-slate rising to the surface in this direction. Immediately under the vegetable earth is found a brittle kind of slate, which, for four or five feet deep, splits into rhomboidal fragments. A little lower is what is called the building-stpne, which is a firm slate, but scarcely divisible. This is employed in the construction of houses, after it has been sufficiently hardened by exposure to the air. At fourteen or fifteen feet from the surface is found the good slate, which has been quarried to the perpendicular depth of about 300 feet; the remaining thickness being unknown. The interior of this great mass is divided by many veins or seams of calcareous spar and quartz, about two feet thick, by fifteen or sixteen in height ; these veins are parallel, and proceed regularly from west to east, in a position rising 70° S. ; they are intersected by other veins at intervals of a similar kind, but whose rise is 70° N. ; so that, when they meet the former, they either form rhombs, or half rhombs, which have been compared to the letter V, some being upright, and others reversed. All the layers, or laminae,

of the slate, have a direction similar to those of the veins of quartz, which rise 70° S. ; and, when intersected by veins that have an opposite inclination, the direction of the slaty lamina is not changed. The whole mass is thus divided into immense rhomboids, composed of plates all parallel among themselves, and with two of the faces of the rhomboid. The slate is extracted in blocks of a fixed size, which are divided into leaves for roofing-slate. It is betwixt these leaves that there are frequently found vestiges of marine animals, and particularly pyritous impressions of pous de mur (the sea-louse, a small univalve shell), also of small cheviettes (shrimps or prawns), and a species of crab, of which the body is about afoot in breadth and fourteen or fifteen inches in length, the tail having nine or ten rings. The shrimps are sometimes so numerous that forty have been counted on a slate of a foot square. None of the animals resemble any known existing species. But the most remarkable circumstance in these impressions, particularly in the large crabs, is, that though there be no sign of the body hav-ing been crushed, yet it can scarcely be said to have any thickness whatever. They lather resemble engravings than figures in relievo. A series of these leaves may be compared to a set of books placed upon shelves ; and the impressions of crabs, and other marine animals, to engraved plates in the volumes ; they do not, in fact, occupy more thickness. It is equally difficult to conceive how the bodies of these animals, though perfectly defined, could be reduced to a simple surface, without thickness.

These slates also present beautiful dendritical pyrites, more than a foot in extent. The pyrites ire sometimes in small grains, disseminated,

like dust, upon the surface of the slates, where may also be observed many little stars of selenite. When the blocks of slate have been dravtn from the quarry, if they are left exposed to the sun, or the open air, for some days, they lose what is called the quarry water, and then become hard and untractable, and can only be employed as building stone. Frost produces a singular effect on these blocks : while frozen they may be broken with more ease than before ; but, if thaw-ed rather quickly, they are no longer divisible : yet this quality may be restored by exposing them once more to the frost; but, if the operation be often repeated, it becomes impossible to re-duce them to leaves.

Only one slate quarry is said to be opened in Italy ; i. e. at Lavagna, in Genoa ; it furnishes slate of an excellent quality, and so impervious that it serves to line the cisterns in which olive oil is preserved. The canton of Claris, in Switzerland, is the only one in which roof-slate is

procured. Roof-slate occurs in Saxony, and in various mountainous districts in the north of Europe; it is found also on the continent of North America; and as it is only a modification of clay-slate, which is an abundant rock, it is probable that its localities are much more numerous than are at present known in alpine districts in every part of the globe.

We believe all the roof-slate quarries at present worked are those which accident has discovered. This neglect is the more remarkable, when we consider the great expense frequently incurred in searching for coal, a substance of much less value in proportion to its weight. The best beds of roof-slate improve as they sink deeper into the earth ; and few, if any, are of a good quality near the surface. There cannot be a doubt that many beds of slate, which appear shattered and unfit for architectural use, would be found of a good quality a few yards under the surface ; for the best, in many quarries, loses its property of splitting into thin laminae by exposure to the air.

In Great Britain we have heard of but two places where slate is worked as a mine under ground : one is worked in this way by penetrating the interior of the mountain at Place Fell, on the head of the lake of Ullswater, in Cumberland ; and another on the western side of Yorkshire, adjoining Westmoreland ; in many other situations it is probable that slate might be worked to advantage, in subterranean galferies, similar to those at Charleville ; for as this mineral is generally of a better quality at « considerable depth, the expense of procuring it by mining would be much less than that of removing the load of upper rocks, and working it in open quarries.

The mouth of the mine at Charleville is near the summit of a hill: the bed inclines 40° to the horizon : it is about sixty feet in thickness, but its extent and depth are unknown. It has been pursued, by a principal gallery, to the depth of 400 feet ; and they have driven many lateral galleries, which extend about 200 feet on the side of the main gallery, where twenty-six ladders are placed in succession, for the passage of the workmen and the carriage of the slate.

In this bed, which is sixty feet in thickness, there are only forty feet of good slate, the other being mixed with quartz. They cut the slate into blocks of about 200 Ibs., which they call faix: every workman, in his turn, carries them on his back to the very mouth of the pit, mounting the twenty-six ladders, or a part of them, according to the depth of the bed where he is working. When brought to day, these blocks are first split into thick tables, which are called repartons. The workman holds the block between his legs, puts a chisel on the side, and divides it with a blow of a mallet. The repartons are divided in a similar manner into roof-slates. These operations must be performed soon after the blocks are drawn from the quarry ; for, if the stone has time to dry, it would no longer be possible to split it. Some of the slate galleries pass under the river Meuse.

A reddish-purple slate from North Wales contained, according to Kirwan, -38 silex, ‘26 alumine, ‘8 magnesia, -4 lime, and -14 parts iron ; but, as there is in this analysis a loss of ten per cent., it cannot be considered as very accurate. As the hardness of slate arises principally from the silex it contains, which is of all the earths the least favorable to vegetation, those slates which are the hardest when first taken from the quarry, and which have the least specific gravity, are to be preferred ; for the increase of weight in slates is owing to the presence of iron, either in pyrites, or a state of oxide. To the presence of iron, many kinds of stone and slate also owe their tendency to decomposition. The pyrites being decomposed by moisture, and the iron admitting a still higher degree of oxygenation, the surface of the stone swells and peels off, o« falls into an ochrey powder.

Dr. Watson, the late bishop of Landaff, says, the specific gravity of the Westmoreland slate varies in different quarries, from 2797 to 2732 ounces the cubic foot. The effect of frost is very sensible on tiled houses, but is scarcely felt on slated houses; for good slate imbibes very little water. According to an experiment made by him on Westmoreland slate, compared with tile, in which two pieces of each,

about thirty inches square, were immersed in water ten minutes, and then taken out and weighed, as soon as they ceased to drop ; the tile had imbibed about one-seventh of its weight of water, and the slate, had not absorbed the ˆth part of its weight: indeed the wetting of the slate was merely superficial. When placed before the fire, in a quartet of an hour the slate was of the same weight as it had been before it was put into the water; but the tile had only lost about twelve grains of its moisture, which was as near as could be expected to the quantity which had been spread over its surface; for it was the amount gained by the slate, the surface of which was equal to that of the tile. The tile was left to dry six days, in a room heated to 60°, but did not lose all the water it had imbibed till the end of that time. The slate in Westmoreland is blasted from the quarry in large masses, and split with proper tools by the workmen. Though the specific gravity of Westmoreland slate from different quarries is nearly the same, yet all the

sorts are not capable of being split into an eqnal degree of thinness. Here also the quality varies with the depth of the quarry, that being the best which is raised from the greatest depth. The gray-blue slate from Donyball, in Cornwall, weighs only 2512 ounces to the cubic foot, which is considerably lighter than that of Westmoreland. This slate is generally preferred to any other for its lightness, and enduring the weather; but Dr. Watson is of opinion that in durability it does not excel that of Westmoreland. The Donyball slate is split into laminae about one eighth of an inch thick, when it is applied to the covering of a roof; it then weighs rather more than twenty-six ounces to the square foot. The pale blue slate from Ambleside, in Westmoreland, weighs about two ounces more in the square foot than the former. In many instances, we believe, slate of a thinner kind is used in several modern buildings, to save the expense of timber in the roof, where cheapness rather than durability is a principal object with the architect. According to an estimate of Dr. Watson, the weights of a covering of the following different materials, for forty-two square yards of roof, are as under : —

Copper . Fine slate Lead

Coarse slate Tile

Cwt.

4 26 27 36 54

A ton of fine slate will cover a larger surface than a ton of lead; and, where there is water carriage, does not cost one-fourth of the price. Slate might, therefore, be used generally instead of lead, with great advantage. — Watson's Chemical Essays, vol. iv.

The most extensive slate quarries in Great Britain are near Bangor, in Caernarvonshire. There is a rail road formed from the quarries to the sea : but perhaps the most remarkable situation in the world where slate is procured is in Cumberland, at Hourston cragg, a lofty mountain near the lake of Buttermere, about 2000 feet above the level of the lake, and nearly perpendicular. On account of the difficulty of access, the workmen take their provisions for the week, and sleep in temporary huts on the sum-mit. During the winter they are generally involved in clouds, and not unfrequently blocked up by the snow. The slate is conveyed down a zigzag path cut in the rock on sledges, one man attending to prevent the acceleration of the descent. When the slate is emptied at the bot-tom, the sledge is carried back on his shoulders to the summit.

Whitby alum slate has a very dark gray color, a slaty structure, and rather a silky lustre; it splits, by exposure to the atmosphere, into very thin lamina- ; it varies in hardness, but is all softer than roof slate. The particular advantage which the country near Whitby possesses for the manufacture of alum is derived from the alum slate rising in precipitous cliffs, which aflord facilities for working and burning the stone. Though many of the coal shales might yifld an equal quantity of alum, the difficulty of raising

them to the surface would in most situations be too great to repay the expense. The alum slate is piled in vast heaps and set fire to; a slow combustion is continued for several months, by the inflammable matter combined with the stone. The saline contents are extracted by

solution, a small quantity of potash is added, and the alum is crystallised by evaporation. — Bakewell's Introduction to Geology.

From this alum rock of Yorkshire nearly all the alum of commerce in England is produced. According to Klaproth, alum slate contains : —

Sulphur 0-28

tarbon 1-96

Alumine …… 1-60

Silex 4-00

Black oxide of iron … 0-64

Sulphate of iron, lime, and potash, each 0-15

Water ; 0-70

This writer remarks that the sulphur, in the alum slate which he analysed, was not united to the iron, but to the carbon, in a manner at present unknown. In the alum slate of VVhilby the sulphur seems combined both with the iron and carbon.

Drawing slate, which frequently accompanies alum slate, is much softer than common slate, and contains, like alum slate, a considerable portion of carbon : its color is a grayish-black : it is known by the property which it possesses of leaving a dark line when rubbed on paper. It is soft, and sometimes rather unctuous: some varieties have a small degree of lustre. The fracture, in small fragments, is scarcely slaty, and sometimes approaches the conchoidal. Drawing s ate is easily cut with the knife. Un-der the blowpipe it turns white or yellow. It sometimes effloresces like alum slate. According to Wiegleb, it contains

Silex 64

Alumine . . , . 21-25

Carbon … . %11

Oxide of iron … . ‘ 2-75

Water 7-50

This slate is employed by masons, carpenters, &c., to mark with. When

fine and pure, it is used by artists for designs. In France it is called pierre d' Italie; in England, French chalk. It is found in France, near Seer, in the department of 1'Orne, and in the environs of Cher-bourgh. It is found also in Spain and Italy.

Hone whet-slate (noTaculite of Kirwan) oc-curs imbedded in clay slate : and is of a greenish-gray color, inclining to yellow ; it is much harder than common slate; its texture fine grained, nearly compact, and the fracture of the small pieces splintery or conchoidal, resembling flinty slate. Its specific gravity about 2-72. Translucent on the edges, it does not effervesce with acids, and it melts into a brown enamel under the blowpipe. From its green color, and rather greasy feel, it may be considered as intermediate between hard talcous slate and clay slate. Though if yields to the point of a knife, or even of a copper tool, it acts upon the flattened or round surfacfs of rnetals, and is used for sharpening and polishing the finer kinds of cutlery. It is

of considerable value on account of this property. The common kind is procured from Saxony ; and a finer quality in the promontory of Howth, near Dublin.

SLATING is employed, in architecture, in sun-dry ways, the principal of which refers to the covering of the roofs of build ings, but such has been lately the perfection of working in slate, that it is now wrought and fitted into many useful utensils, as well as made up into balconies, chimney-pieces, casings to walls, skirtings, staircases, &c. &c. The slate principally in use in London is brought from Wales, taken from out of quarries, which are worked on the lord Penhryn's estate at Bangor, in Caernarvonshire, and it is thence forwarded to all parts of the united kingdom. There are also in use some other kinds of slate, the best sort of which is brought from Kendal, in Westmoreland, and is called Westmoreland slate. These slates are of a fine pale bluish-green color, and are most esteemed of any by the architects. They are not of a large size, but they arc of good substance, and well calculated to give a neat appearance to the roof on which they may be placed. The slate brought from Scotland is nearly similar in both size and quality to a slate from Wales, called Ladies, from which circumstance they are very little sought after.

The French slates were very much in use in ' this country about seventy years since. They are small in size, most commonly not larger than the Welsh doubles, excessively thin, and consequently light; but thin composition has been found not to be well adapted to this

climate, where there is an atmosphere containing an ex-cess of moisture. By analysis, this slate is ascertained to contain one-thirtieth of manganese, besides other matters, such as iron, 8cc., the excessive affinity of which for oxygen soon shivers the stony portion of the slate into atoms, when employed as a covering to buildings in thb country. The writer of this article has seen slates of this kind on a roof reduced to the statt of powder, having become so by exposure, and appeared to be completely decomposed.

Of the pitch of a roof. — This, in as far as the elevation of the rafters is to be considered, is found to vary in different climates. In Itaiy. and all the southern parts of Europe, it i? made generally less than one-fourth of the span or breadth. In England it was formerly three-fourths, but it is now made to approach much nearer to the Italian proportion. In northern climates a steep roof is required, on account ot the great falls of snow to which they are liable, and which greatly increase the lateral thrust of the rafters. For the horizontal force exerted by a roof, if it be considered with reference to th-walls which sustain it, is in proportion to thr length of a line perpendicular to the rafter de scending from its extremity till it meets another similar line drawn from the opposite rafter, and this perpendicular is obviously increased when the roof is made very flat. But a flat pitched roof is stronger than a high one for resisting all transverse strains which tend to break the rafters. Slaters class the Welsh slates after the following order and designations, *viz.*

Ft. Inch. Ft. Inch.

Doubles, average size .1 1 by 0 6

Ladies i 3 by 0 8

Countesses 1 8 by 0 10

Duchesses 2 0 by 0 12

Welsh Rags 3 0 by 2 0

Queens 3 0 by 2 6

Imperials 2 6 by 2 0

Patent Slate …. 2 6 by 2 0

The slates called doubles are so called from the smallness of their size, and are made from the fragments of the larger qualities as they are sorted respectively.

The ladies are similarly obtained, being in pieces that will square up to the size of such a description of slate.

Countesses are still a gradation in dimension above ladies; and duchesses still larger. The slate is extracted from the quarries as other stony substances usually are, that is, by making perforations between its -beds, into which gunpowder is placed and fused. This opens and divides the beds of the slate, which the quarry men re-move in blocks of very considerable size. These blocks are afterwards split by having wedges of iron driven between their layers, which separate the blocks into scantling, of from four to nine inches in thickness, and as long and wide as may be required. Some of the scantling, which is intended to be exported as such, is sawn to the sizes ordered, that is, the edges only of such pieces ; for it is not necessary to use the saw to the horizontal stratum of the slate, as that can be divided nearly as correct by the above means, without having recourse to such a tedious process as the sawing of it would be.

For the purpose of sawing the slate, the works in Wales are provided with abundance of beautiful machinery, some of which is put in motion by steam, and others by water, which keep in action a vast number of saws, all sawing the scantlings of slate into pieces adapted to their several purposes

The imperial slating for roofs is uncommonly neat; it is known by having its lower edge sawn, whereas all the other slates used for covering are chipped square on their edges only.

The patent slate is so called among the slaters from the mode adopted to lay it on roofs, as no patent was ever obtained for such a mode of slating. It was first brought into use by Mr. Wyatt, the architect. It allows of being laid on a rafter of much less elevation than any other kind of slate, and is considerably lighter by rea-son of the laps being so much more inconsiderable than is found to be necessary for the

com-mon sort of slating. This slating was originally made from that description of slates known as Welsh Rags. The slaters now frequently make it of Imperials, which gives to it still less weight, and renders it somewhat more neat in its appearance than by the former mode.

Of the Westmoreland slate. — Experiments have been instituted on this description of covering, as we have seen, by the late bishop of Landaff. 'That sort of slate,' says' he, ' other circumstances being the same, is esteemed the best

which imbibes the least water; for the imbibed water not only increases the weight of the covering, but in frosty weather, being converted into ice, it swells and shivers the slate. This effect of the frost is very sensible in tiled houses, but it is scarcely felt in slated ones, for good slate imbibes but little water ; and when tiles are well glazed they are rendered in some measure, with respect to this point, similar to slate.' He adds, ' I took a piece of Westmoreland slate and a piece of common tile, and weighed each of them carefully ; the surface of each was about thirty square inches ; both the pieces were immersed in water for ten minutes, and then taken out and weighed as soon as they had ceased to drip, and it was found that the tile had imbibed about one-seventh part of its weight of water, and the slate had not imbibed ˆ part of its weight. In-deed the wetting of the slate was merely superficial, while the tile in some measure be-came saturated with the water. I now placed both the wet pieces before the fire ; in a quarter of an hour's time the slate was become quite dry, and of the same weight it had before it was put into the water ; but the tile had lost only about twelve grains of the water it had imbibed, which was, as near as could be expected, the same quantity which had been spread on its surface, for it was this quantity only which had been imbibed by the slate, the surface of which was equal to that of the tile. The tile was left to dry in a room heated to 60° of Fahrenheit, and it did not lose all the water it had imbibed in less than six days.' He adds further, ' that the finest sort of Westmoreland slate is sold at Kendal at 3s. 6d. per load, which will amount to £l 15s. per ton, the load weighing 2 cwt. The coarser sort may be had at 2s. 4d. a load, or £l 3s. 4d. per ton. Thirteen loads of the finest sort will cover forty-two square yards of roofing, and eighteen loads of the coarsest will cover the same quantity ; so that there is half a ton less weight put upon forty-two square yards of roof, when the finest sort of slate is used, than if it was covered with the coarsest kind, and the difference of expense only 3s. 6d.' It must be remarked that it owes its lightness not so much to any diversity in the component parts of the stone from

which it is split, as to the thinness to which the workmen reduce it, and it is not so well calculated to resist violent winds as that which is heavier.

A common plain tile weighs thirty-seven ounces, and there are used, at a medium, 700 to cover a single square of roof of 100 superficial feet. A pan-tile weighs seventy-six ounces, or four pounds and three-quarters; and 180 are required to lay on a single square. Both the plain and pan-tiles are commonly bedded in mortar ; indeed the former cannot be well laid on a roof without it. The mortar for the bedding of either will be equivalent to one-fourth of the weight of the tiles. When a roof is to be covered with copper, or lead, it will depend upon what number of ounces of the metal it is determined to assign to each superficial foot of such covering. But for common lead or copper covering, supposing seven pounds of the formei to the foot, and sixteen ounces of the latter, the

following comparisons will suffice ; taking a square of 100 feet superficial to be covered of each of the several materials, as all rooting is generally considered in -such quantities, then it will be

	Cwt.	qrs.	Ibs.
For Copper, per square …	0	3	16
Lead	61	0	
Fine slate	60	21	
Coarser do	81	8	
Plain-tiles	18	0	0
Pan-tile’s	92	0	

Hence may be seen what each square of a roof sustains, and a careful builder may select such a covering as his building may be best

calculated to support. It will be noticed, too, how much the tiles exceed in the:r weight that of the other coverings. The pan-tile herein weighed was at the time perfectly dry, and is of the common sort made in and about Londjn. The plain tile is taken at the weight assigned it in the learned prelate's paper before referred to. The pan-tile is equally adapted to imbibe water with the plain tile, hence a somewhat greater weight than is here taken may be supposed to be generally operating upon the roof, when loaded with such a covering.

All the several kinds before named partake of a similar mode, in as far as refers to the bonding or lap of one portion of the slate over another. The lap of each joint is generally equal to one-third of the length of the slate, and the slater selects all the largest in size, of the description about to be used, to be put on nearest the eaves of the roof. When the slates are brought from the quarry, they are not found in so square a shape as to be immediately fit to be put on a roof, but are prepared for that purpose by cutting and sorting. The slater, to effect this, picks and examines the slate, observing which is its strongest and squarest end. He then, by holding the slate a little slanting upon and projecting about an inch over the edge of a small block of wood, seating himself at the same time on something which is equal to it in height, begins and cuts away straight one of its edges. He then, with a slip of wood, gauges the other edge parallel to the same, and cuts off that also ; after which he turns it round and squares the end. The slate is so far prepared, excepting it be the turning of his tool round and pecking through it, on its opposite end, two small holes, which are made for the nails to enter when he lays it on the roof. All the quarry slates require this preparation from the workman known as the slater. All slates are put on with nails or screws, and tww are assigned to each slate at least. The copper and zinc nails are esteemed the best, by reason of their not being so susceptible of oxidation as the iron ones. The slaters, however, to prevent the destruction of their iron nails, have recourse to painting them ; this they do by putting them in a tub containing white lead, rendered very fluid by excess of saturation with oil, and stirring them up and about till they are completely covered over, after which they are removed and spread out upon boards and left to dry. Since the general developements of chemistry, some of the

slaters have succeeded in plating over their iron nails with tin ; but great address is necessary to succeed well at it ; however, tinned nails are becoming more common, and will be found greatly cheaper than copper ones. The previous preparation necessary for laying slates on roofs, consists in forming a base or floor for the slates to lie compactly

and safely upon. For the doubles and ladies, boarding is essential, if it be expected to have a good water-proof covering to the roof. All that is required in the boardin”- for such slates is, that it be laid very even and the joints close, securing the boards by properly nailing them down on the rafters. When the boarding is ready, the slater examines it, and provides himself with several slips of wood, called tilting fillets. A tilting fillet is made about two inches and a half wide, three-quarters of an inch thick on one edge, and champerecl away loan arris on the other edge. These fillets he carefully lays and nails down all round the extreme edges of the roof to be slated, beginning with the hips if there be any, and, if not, with the sides, euves, and ridge. When these are all done, he prepares for laying the slates, and begins the eaves first. For these he picks out all the largest slates, which he places regularly throughout, setting their lower edges to a line, and, when so placed, he secures them by nailing them down to the boarding. He then selects such slates as will form the bond to the under sides of the eaves. This part of the work consists in placing another row of slates under those which he has previously laid, so as to cross and cover all their joints; such slates are pushed up lightly under those which are above them, and are seldom nailed, but left dependent for their support on the weight of those above them, and their own weight on the boarding. The countesses, and all the other description of slates, when intended to be laid in a good manner, are also laid on boards. When the slater has finished the eaves, he strains a line on the face of its upper slates parallel to its outer edge, and as far from it as he deems sufficient for the lap of those slates which he intends to go on to form the next course ; this course of slates being laid and nailed even with the line, and crossing the joints of the upper slates of the eaves. This lining and laying of the slates is continued till the slater gets up close to the ridge of the roof, he observing throughout to cross the different joints by the slates he lays on one above another. This is the method uniformly followed in laying all the different kinds of slates, excepting it be those which are called the patent slates, which will henceforth be explained. All the larger kinds of slate are found to lie firmly on what are called battens, in consequence of which they are frequently made use of, from their promoting a saving in the expense, which will on an average amount to about 20s. per square. A batten consists of a narrow portion of deal-wood about two and a half, or three inches wide : there are commonly three taken out flat-wise of a deal. When countesses are to be laid on, battens three quarters of an inch in thickness will be an adequate substance for them ; but, for the largef and heavier kind of slates, inch battens will be

necessary. When a roof is to be battened for slates, the slater himself is the best person to fix them, as they are not placed at a uniform distance from each other, but so as to suit the length of the slates, and, as these vary as they approach the apex or ridge of the roof, it follows that the slater himself becomes the best judge where to fix the batten to best support the slates intended to lie on it. When they have been fixed by the carpenters he almost always finds it necessary to take them up and re-lay them. The nails used by slaters, as before observed, are of iron, copper, and zinc. They are of the description called clout-nails. A clout-nail consists in being made round on its shank, or driving part, with a large round and flat head. Clout-nails are made of several qualities, but those used by the slater are about an inch and a quarter long in the bhank, and are termed eight-penny nails. The copper nails are considerably dearer than those of iron, or zinc, hence slating done by them is charged somewhat more per square.

The patent slating, as it is called, consists in selecting the largest slates, and those also of uniformity in their thickness.— The slates called imperials are those now taken for it. A roof, to be covered with this kind of slete, requires that its common rafters be left loose upon their purlins, as they must be placed so as to suit the widths of the slates, it being necessary to have a rafter under every one of their meeting joints. — Neither battening nor boarding is required for these slates, and the quantity of rafters will depend on the widths of the slates ; hence if they are of a large size very few will be required, and of course agreatsaving in the timber will take place, besides giving a much less weight in the roof. The work of covering by this kind of slate is commenced as before at the eaves, but no crossing or bonding is wanted, the slates being uniformly laid, with the end of each reaching to the centres of each of the rafiers, and are all butted up to one another throughout the length of the roof; the rafters being so placed as to come regularly under the ends of two of the slates. When the eave’s course is laid, the slates composing it are all screwed down by two or three strong inch-and-a-half screws at each of their ends

into the rafters under them. A line is afterwards strained about two inches from their upper edge, this being allowed as a lap for the course of slates which goes on above> the edges of which course being fixed straight with the line, and this lining laying with a lap and screwing down is continued till the roof is finally covered all over. — After which the filleting is to commence ; this consists in covering all the meeting joints of the slates which come on the rafters with fillets of slate bedded in glazier's putty, and screwing them down through the whole into the rafters under them. — The fillets, to cover these kind of joints, are usually made about three inches wide, and as long as the slate they are intended to cover. They are solidly bedded in the putty, their joints lapped as are those of the slates ; one screw is put in each lap, and one in the middle of the fillet ; these fillets, are after being so laid, bedded and screwed down, pointed neatly up all

round their edges with more pu.iy, and are painted over with a paint resembling the color of the slate, and hence the work is deemed to be finished. — The hips and ridges of such slating are frequently covered by fillets in a similar way, and have a very neat effect. But lead is the best covering for all hips and ridges of roofs, and it is not greatly dearer than covering them by this mode. Slating is done also in several other ways, but the principles before explained embrace the most of them ; some workmen have shaped and laid their slates in a lozenge form. This kind of work consists in getting all the slates to a uniform size, and into the shape of a geometrical square ; they are, when laying on the roof (which it is always necessary to have boarded for this work), bonded and lapped as the common slating is ; observing only to exactly let the elbow or half of the square appear above each slate which is under it, and to be regular in the courses all over the roof. One nail or screw only can be used for such slating, hence it soon becomes dilapidated. It is commonly employed in places near to the eye, or where particular neatness is required — The patent slating may be laid so as to be perfectly water-tight, with an elevation of the rafter considerably less than any other slate or tile covering; a rise of two inches in each foot to the length of the rafter is deemed an adequate rise for this covering, and this, for a rafter of fifteen feet, would be only two feet six inches, a rise in the pitch of a roof which at any height from the ground would be hardly to be perceived.

Of slater's tools. — They consist of a few only, and these are sometimes found by the master and sometimes by the men. The tool called the saixe is composed of tempered iron, about sixteen inches in length and two inches in width, somewhat bent at one end, and

prepared for, and handled with beechen wood at the other. — This instrument is not unlike a large knife, except its having on its back a piece of iron, projecting about three inches from out of it, and drawn sharp to a point. With this tool, when ground sharp, the slater chips or cuts all his slates to the sizes he requires them for all the various purposes of his business. He has also a ripper, as he calls it ; this tool is formed of iron about the same length as the saixe; it is very thin in its blade part, which is one inch and three-quarters wide, tapered somewhat towards its top, where it has a round head projecting over the blade on each side about half an inch, and having also two little round notches in the twd internal angles at the intersection of the one with the other. There is a shoulder formed at the handle end of this tool, which raises it up above the blade, and which enables the workman to hold it firmly in his hand when in use. The use of this tool is in repairs of old slating, as, by forcing its blade up under the slates, the projecting head catches the nail of the slate, which enters into the little notch at its intersection, and which enables the workman to pull it out, and which also at the same time loosens thy slate, and allows him to take it away and insert another'in its place, this is the principal use of the ripper, *viz.* the repairing of the old slating

The hammer of the slater is somewhat different in shape from the common tool of that description; it is on the hammer, or driving part, about five inches in height, bent on the top a little back, and ground to a tolerable sharp point, its lower or flat end being about three-quarters of an inch in diameter, and quite round. On the side of the driving part is a small projection, made with a notch in its centre, and which is used as a claw to draw or extract the nails, when nailing down the slates which do not drive satisfactorily. This kind of hammer is of great utility to the slater, and enables him to get through his new work with the greatest address. The tool called the shaving-tool is used for the purpose of getting the slates to a smooth face when so wanted, for skirtings, floors of balconies, or any other purpose to which slate may be required with a smooth face. It consists of a blade

of iron, sharpened at one of its ends like a chisel, and is mortised through the centre of two round wooden handles, one of which is fixed at one end, and the other about the middle of the blade. The blade is about eleven inches long, and two inches wide, the handles to which are about ten inches long, so that they project four inches over on each side of the blade. The workman, in using this tool, takes it in both his hands, placing one hand to each side of the handle which is in the middle of the blade, allowing the other to come up and press against the wrists of both his arms, and in this way he works away all the uneven parts from off the surface of the slate, and gets it to a smooth face. This tool is well calculated for what it has to do, but it is a very uneasy kind of instrument to the workman, its whole purchase in its operation upon the slate being against his wrists, and which is sometimes attended with so much pain that he is obliged to give over his work. To avoid this inconvenience, he often puts flannel and other things over the handle which lies against his wrists ; still a day or two's work, with this tool, will lame an inexperienced workman. The slater's other working tools consist of numerous chisels and gouges, together with files of all sizes, with which he finishes his slates for the better parts of his work into mouldings, and other forms, required for the different uses to which slate is applied.

The strength of slate is very great in .comparison of any kind of freestone, as it is ascertained that a slate of one inch in thickness will support in an horizontal position as much in weight as five inches of Portland similarly suspended. Hence slates are now wrought and used for galleries and other purposes where strength and lightness combined are essential.

Slates are also fashioned into chimney-pieces, partaking of the different varieties of labor applied to marble ; but it is incapable like it of receiving a polish, in consequence of which it will not get greatly into use for that purpose. It makes excellent skirtings of all descriptions, as well as casings to walls where dilapidations or great wear and tear is to be anticipated. It is capable of being fixed for (hese purposes with joints equally neat with wood, and may be

painted over if required, to appear like it. Staircases may be executed in slate, and will have an effect not unlike to black marble. The writer of this article has had a double gallery staircase leading to a suite of baths constructed of it, the effect of which was so good as by strangers to be generally taken and considered to be made of marble. Messrs. Warmsley and Milton, of Lambeth, are among the best slaters in

London when slaters' work is required to be done on a large scale, or when any of the better departments of the working of slates are required, as they keep people competent to work it up into almost every shape, and with a neatness equalling works in marble.

Slaters' work is measured by the surveyor's as most artificers' work now usually is, and is afterwards reduced into squares, each square containing 100 feet superficial.

Slaters are allowed, in addition to the nett dimensions of their work (when taking the measure of roofs) six inches for all the eaves and four inches for the hips ; this allowance is made in consequence of the slates being used double in the former case, and for the waste in cutting away the sides of the slates to fit into the latter. Some of these eaves, for instance, when rags or imperial slates are used, require an addition of nine inches to be allowed for the eaves, such . kind of slates being so much larger than the size of most of the other kinds of slate now in use. All faced work in slate skirtings, staircases, galleries, &c., is charged by the foot superficial, admeasuring it without any kind of addition. The chimney pieces are made up and sold at per piece, as is done by the masons. Slating by the square to roofing varies as the size or quality of the slate made use of, beginning, for instance, with the doubles at about two guineas, countesses, &c., two guineas and a half, Welsh rags and imperials at three guineas and a half, and Westmoreland, the dearest of all, at four guineas and a half per square. The present prices of slaters' work, done in a good and workmanlike manner, will be found to be equal to the above charges. Galleries and other slates worked up for such kind of purposes, and fixed complete, will vary as the mouldings about them do from 4s. 6d. to 5s. 6d. per foot superficial. Skirtings and linings of slate with one face only worked, but squared and fixed up, from Is. 6d. to 2s. per foot superficial. From these data, a tolerably correct idea may be formed of the value of any kind of slating which may be wanting, and a comparison may be made of its value with the several other coverings, &c., employed in buildings.

SLAT'TERN, n. s. Swedish slaetti. See SLUT. A woman negligent or dirty ; not elegant or nice.

Without the raising of which sum, You dare not be so troublesome To pinch the slattern* black and blue, For leaving you their work to do. Hudibrat

The sallow skin is for the swarthy put,

And love can make a. slattern of a slut. Dryden. We may always observe that a gossip in politicks

is a slattern in her family. Adianwt Freeholder.

Beneath the lamp her tawdry ribbands glare, The new-scoured manteau, and the slattern hair.

Gay.

SLAVE, n. «. & v. n. SLA'VERY, n. $. SLA'VISH, adj.

SLA'VISH N ESS, n. s.

Fr. esclave; Teut. Sclav ; Belgic sluaf. . Said to have its origi- , nal from the Slavi or

, J Sclavonians, subdued

and sold by the Venetians. One mancipated to a master ; not a freeman ; a dependant : the state of a slave : the derivatives corresponding.

Thou elvish markt, abortive, rooting hog ! Thou that wast sealed in thy nativity The slave of nature, and the son of hell.

Shakspeare. Kichard III.

You have among you many a purchased slave, Which, like your asses, and your dogs and mules, You use in abject and in slavish part, Because you bought them. Id. Merchant of Venice.

If my dissentings were out of errour, weakness, or obstinacy, yet no

man can think it other than the badge of slavery, by savage rudeness and importunate obtrusions of violence to have the mist of his errour dispelled. King Charles.

Those are the labour'd births of slavish brains ; Not the effect of poetry, but pains. Denham.

When once men are immersed in sensual things, and are become stares to their passions and lusts, then are they most disposed to doubt of the existence of G°d-Wilkint.

Of guests we make them slaves

Inhospitably. Milton.

Ihe supreme God, t' whom all things ill Are but as slavish officers of vengeance, Would send a glist'ring guardian, if need were, To keep my life and honour unassailed. Milton.

Slaves to our passions we become, and then It grows impossible to govern men. Waller.

Perspective a painter must not want ; yet without subjecting ourselves so wholly to it as to become tlaves of it. Dryden.

Power shall not exempt the kings of the earth, and the great men, neither shall meanness excuse the poorest slave. Nelson.

The condition of servants was different from what it is now, they being generally slaves, and such as were bought and sold for money. South.

To-morrow, should we thus express our friendship, Each might receive a slave into his arms : This sun perhaps, this morning sun, 's the last That e'er shall rise on Roman liberty.

Addison's Cato.

Slavish bards our mutual loves rehearse In lying strains and ignominious verse. Prior.

Had women been the makers of our laws, The men should slave at cards from morn to night.

Swift. Husband, husband, cease your strife,

Nor longer idly rave, sir ; Though I am your wedded wife,

Yet I am not your slave, sir. Burns.

SLAVE COAST, a country of Africa adjoining to the Gold Coast and Ivory Coast, and situated between these and Benin. In politics, religion, customs, and manners, the natives greatly resemble those of the Gold Coast. In this country Europeans long had the greatest number of forts and factories for carrying on the disgraceful and inhuman traffic whence the country is named. By means of the negro factors this trade was carried on above 700 miles back in the inland country, whereby great numbers of slaves were

procured, as well as by means of wars amongst the negroes, fomented by Europeans.

SLAVE LAKE, a very extensive lake in the northwest part of North America, above 200 miles long, and about twelve broad. Its north bay is forty leagues broad, and six fathoms deep. The Dog-ribbed Indians inhabit the country on its north coast. It has an outlet called Mackenzie's River, which runs into the Frozen Ocean. The centre of tin's lake lies in about long. 115° 0' \v lat. 61° 26' N.

SLAVE RIVER, ariverof North America, which rises from Lake Athapesco, runs a course northwest by west, and falls into Mackenzie's River by a mouth one mile broad.

SLAVE TRADE. The history of this enormous iniquity is happily now no longer connected with that of our own country : but that iniquity extensively exists, and it is said that our withdrawment from the trade has very little diminished its extent, and rather increased than lessened its horrors. A sketch of its history will therefore still be appropriate, and may be useful ; we shall close with that of its abolition in this country.

The Portuguese were the first Europeans that settled on the coast of Western Africa. The unfortunate Africans fled, and sought in the interior a retreat from the persecution of their invaders ; but the Portuguese pursued them ; entered their rivers, sailed up into the heart of the country, surprised the natives in their recesses, and carried them into slavery. The next step, which the Europeans found it necessary to take, was that of securing themselves fortified posts; of changing their system of force into that of pretended liberality; and of opening, by bribery and corruption, a communication with the native authorities. In the year 1481 the Portuguese erected their first fort at

D'Elmina, about forty years after Alonzo Gonzales had pointed out the southern Africans as articles of commerce. The scheme succeeded: a permanent intercourse took place between the Europeans and Africans ; and at length treaties of peace and commerce were concluded; in which it was agreed that the kings, on their part, should, from this period, sentence prisoners of war and convicts to European servitude ; and that the Europeans should supply them, in re-turn, with their luxuries. This laid the foundation of that commerce of which we are now to give a brief history.

One ostensible reason that was alleged for introducing Africans, in particular, as laborers into America and the West Indies, and placing them under European masters, was the hypocritical one of converting the heathen. It was very soon found, however, that usage utterly different from that which Christianity would have dictated was necessary, where people were transported by thousands, and made to labor against their will. A system, therefore, of cruel severity sprung up ; so that when in after times the situation of master and slave came to be viewed, as it existed in practice between the two, the masters seemed to have attained the rank of deities or demons, and the slaves to have gone down to that of brutes. Hence, very early after the comTience-

ment of the slave trade, the objects of it began to be considered as an inferior species, and their color as a mark of it: under this latter notion they continued to be transported for years, till different persons, taking an interest in their sufferings, produced such a union of public sentiment in their favor, in England, that the parliament was obliged, as it were, to consider their case, by hearing evidence upon it. From this evidence may be gleaned the best account of the trade upon which we are writing.

The agreements to which we have referred, as stipulating to supply Europeans with African captives and convicts, were not sufficient for the demand. Wars were made, therefore, not as formerly, from motives of retaliation and defence, but for the sake of obtaining prisoners alone. When a European ship came in sight, it was considered as a motive for war, and a signal for hostilities : the despotic sovereigns, influenced by venal motives alone, first made war

upon the neighbouring tribes, in the violation of every principle of justice ; and. if they did not thus succeed in their main object, they turned their arms against their own subjects. The first villages at which they arrived were surrounded and set on fire ; and the wretched inhabitants seized as they were escaping. These, consisting of whole families, fathers, brothers, husbands, wives, and children, were instantly driven in chains to the merchants. Many other persons were kidnapped, in order to glut the avarice of their own countrymen, who lay in wait for them ; and they were afterwards sold to the Europeans, while the seamen of the ships, by every possible artifice, enticed others on board, and transported them into slavery.

Collectors of slaves were at length distributed into several classes. The first consisted of such black traders as preserved a regular chain of traffic, and a regular communication with each other, from the interior parts of the country to the sea-shore. Many of the slaves, thus driven down, are reported to have travelled at least 1200 miles from the place where they were first purchased. A pistol or a sword may have been the full value of one of these slaves, at the first cost ; but his price advances as he travels towards the sea-shore. The second class of slave traders is composed of such as travel inland, but have no chain of commerce or communication with the shore. At a certain distance they strike off in a line parallel to the shore, and, visiting the fairs and villages in their way, drop down occasionally to the coast, as they have procured slaves. The third class consists of such as travel by water up the great rivers, in their canoes, which are very long, well-armed, and carry from fifty to seventy hands. These often proceed to the distance of 1000 miles, and bring downfromsixtytol20slavesatatime. The fourth class includes those who, living near the banks of the rivers or the sea-shore, scarcely travel at all, but coming by some means or other into the possession of slaves, either drive them, or send them immediately to the ships and factories. Most of the traders now described traffic on their own account ; but there are some of the poorer sort who travel for the ships. The different sorts of goods with which the traders deal for slaves, in the inland country, may be divided into three sorts, *viz.* East Indian, home-made or colonial, and Venetian. The first consists of cowries, or small shells, which pass for money on some parts of the coast; blue and white baffs, romals, bandanoes, and other cloths and productions of the East. The second consists of bar-iron, muskets, powder, swords, pans, and other hardware ; cottons, linen, spirits in great abundance, with other articles of less note. The third consists totally of beads. Almost every ship carries the three sorts of articles now stated, but more or less of one than of the other, according to the

place of her destination ; every different part of the coast requiring a different assortment, and the Africans, like the Europeans, repeatedly changing their taste. This is particularly the case with respect to beads. The same kind of beads which finds a market one year in one part of the coast, will probably not be saleable there the next. At one time the green are preferred to the yellow, at another the opaque to the\ transparent, and at another the oval to the round.

The slave trade may be said to have begun at the great river Senegal, and to have extended to the farther limits of Angola, a distance of many thousand miles. On the Senegal and Gambia, Europeans proceeded in their ships till they came to a proper station, and then sent out their boats armed to different villages; on their approach they fired a musket, or beat a drum, to apprise the inhabitants that they were in want of slaves, when country people supplied them in part, and they also procured them from the large canoes abovementioned.

Captains Hills and Wilson, and Mr. Wadstrom, and lieutenant Dalrymple, inform us that the kings in this part of the country do not hesitate to make war upon their own subjects, when in want of money. They send out their soldiers in the night, who lying before, or attacking or burning a village, seize such as come out of it, and return with them as slaves. On the river Sierra Leona there were several private factories, belonging to the merchants of Europe, in which their agents, being white people, resided. These agents kept a number of boats, which were sent up the river for slaves ; and thus they procured for the factories a regular supply.

On the Windward Coast, the natives, when they have any slaves to sell, generally signify it by fires. Practices similar to those already recited prevail from the river Gambia to the end of the Windward Coast. Lieutenant Storey says that public robbery is here called war. Mr. Bowman, another evidence, says that when parties of robbers were setting fire to villages war was said to be carrying on. This account is confirmed by Mr. Town and Sir George Young, and all of them concur in stating that these parties go out at night, break up villages, and carry off the inhabitants as slaves. Messrs. Town, Bowman, and Story, have seen them set out upon such expeditions; and the latter, to satisfy himself, accompanied them on one occasion. These came to a town in the dead of the night. Set fire to it and took away manv of the inha-444

bitants. The above practice is so common that both up the river Scassus, Sierra Leona, and Junk, and at Cape Mount and Bassau, the re- ‘ mains of burnt and deserted villages are to be seen, on which such attacks have been made, and that the natives are found to be constantly armed. In one of the towns two or three houses only are described to have been left standing, and two plantations of rice, which were ready for cutting down, but which the inhabitants, by being carried off, had been deprived of enjoying. Lieutenant Simpson, of the royal marines, another evidence, understood that the villages on the Windward Coast were always at war ; and the reason given was that the kings were in want of slaves. Mr. Morley, another evidence, speaks in the same language. Slaves, he says, are generally made by robbers going from village to village in the night.

The Gold Coast, which is next to the Windward Coast, long presented the same melancholy scene. The Rev. Mr. Quakoo, who had resided as chaplain to one of the factories there for many years, informed lieutenant Simpson that wars were often made for the sole purpose of making slaves. Dr. Trotter says, by prisoners of war, the traders mean such as are carried off by robbers, who ravage the country for that purpose; the Bush-men making war to make trade, being a common way of speaking among them ; and, in a large cargo of slaves, he could only recollect three who had not been so obtained. Surgeon Falconbridge defines the term war, when used by the slave-dealers on this part of the coast, to mean a piratical expedition for making slaves. Mr. Morley says, what they call war is putting the villages in confusion, and catching the inhabitants, whom they carry down to the coast and sell, where, it is well known, no questions are asked how they had been obtained. Indeed a slave-captain, when examined by the house of commons, acknowledged that he believed a captain would be reckoned a fool by any trading man to whom he should put such a juestion. And Mr. Marsh, the resident at Cape ‘^oast castle, told Mr. How that he did not care how the slaves he purchased had been obtained ; and showed him instruments which were put into the slaves’ mouths, to prevent their crying out for assistance, while the robbers were conveying them through the country. From the end of the Gold Coast to the extremity of An-gola, which is the boundary of the slave trade, and which vast district comprehends many navigable rivers, a repetition of the same atrocious practices has been traced. Here, as before, going to towns in the night, setting them on fire, and seizing the people, or putting the villages in confusion, and catching the inhabitants, are called war. These piratical expeditions are frequently made by water in these parts. Mr. Douglas says, when a

slave ship arrives, the king sends his war-canoes up the river, where they surprise and seize all they can. Surgeon Falconbridge, Mr. Morley, and Mr. Isaac Parker, confirm the account. Up the great rivers Bonny and Calabar the king sends fleets of canoes, with armed men, which return with slaves. Mr. I. Parker was twice up the river Calabar in one of these

fleets, and perhaps the only white person who was ever permitted to go with them. In the day time, he says, when they approached a village, they lay under the bushes; but at night flew up to it, and seized every one they could catch. In this way they proceeded up the river, till they had gotten forty-five persons, which they brought back to New Town, and sold to the European ships. About a fortnight afterwards he was allowed to accompany them on another expedition. Here, he says, they plundered other villages higher up the river than before, taking men, women, and children, as they could catch them in their huts. They seized on much the same number, and brought them to New Town, as be-fore.

A vessel seeking slaves, on the Gold Coast, generally anchors at Annamaboe. A certain quantity of gold must be included in the articles designed for purchasing slaves, or else none can be obtained. At Whidah, Bonny, Calabar, Be-nin, and Angola, gold is not demanded in exchange ; and boats are unnecessary, except for reaching the shore, wooding and watering, and services of a similar kind. This is particularly the case at Calabar and Bonny, which have been the greatest markets for slaves. The traders of the first class, after an absence of about nine days, have returned frequently with 1500 or 2000 slaves at a time. The number of slaves that have been annually transported from this part of Africa has fluctuated according to circumstances. In the year 1768 104,000 natives of* Africa are supposed to have been taken from their own continent; and it continued much the same for the next five years. During the American, war it was diminished. In the year 1786 the numbers may be stated at 100,000, and the ships that conveyed them to the colonies at 350. The trade, before the abolition, was confined to the English, Dutch, Danes, Portuguese, and French. England, in 1786, employed 130 ships, and carried off' about 42,000 slaves. These were fitted out from the ports of London, Bristol, and Liverpool ; the latter of which alone sent out ninety vessels.

When the number of slaves was completed, the ships weighed anchor, and began what is termed the Middle passage, to carry them to their

respective colonies. The vessels in which they were transported were of different dimensions, from 1 1 to 800 tons, and they carried from 30 to 1500 slaves. The height of the apartments was different, according to the size of the vessel, but may be stated to be from six feet to less than three; so that it was impossible to stand erect in most of the vessels, and in some scarcely to sit down in the same posture.

When the vessel was full, their situation was truly pitiable. A grown-up person was allowed, in the best regulated ships, but sixteen English inches each in width, two (English) feet eight inches in height, and fire feet eleven inches in length ; or, as surgeon Falconbridge expresses himself, not so much room as a man has in his coffin. Surgeon Wilson describes the slaves as much crowded below. He generally took off his shoes before he went down among them, and •was obliged to be very cautious how he walked.

lest he should tread upon them. Captain Knox admits that they had not room to lie on their backs. It also appears that, if they are the least dilatory or reluctant in packing themselves, they were quickened by the application of the whip. Dr. Trotter says they were so crowded below that it was impossible to walk through them without treading on them; and also that it was the first mate's duty to see them stowed or packed together. Those who did not get quickly into their places were compelled by a cat-o'- nine-tails. But now their situation became too •>v retched to be described. No language has \ords to explain it properly. Captain Hall has often heard them cry out from below for want of air. The space between decks Was so hot that often, after he has been there but a few minutes among them, he found his shirt so wetted by perspiration that he could have wrung it. Mr. Ellison says that the steam from their confined bodies below came up through the gratings like a furnace. Surgeon Wilson has often heard them complain of heat. The bad effects, which resulted from this and their confinement, were weakness and fainting. He has seen some die a few minutes after being brought up, which proceeded from corrupted air and heat jointly. He lias seen others go down apparently well at night,

and found them dead in the morning. He had a hospital on board ; but the sick slaves were obliged to lie on the bare boards, so that the motion of the vessel often occasioned excoriations from the prominent parts of their bodies. Surgeon Falconbridge declares that he has known slaves go down apparently in health, and brought up dead in the morning. He once opened one1 of them surgically, to discover with certainty what was the cause of his death ; and found, from the appearance of the thorax and abdomen, that it was suffocation. He says that once, on going below, he found that twenty of the slaves had fainted. He got them instantly hauled up on deck ; but, notwithstanding the quickness of his movements on this occasion, two or three of them died. And once, though he was only fifteen minutes in their room below, he became so ill himself that he could not get up again to the deck without help ; and he never was below many minutes together but his shirt was as wet as if it had been dipped in water. He says also, that as the slaves, whether well or ill, always lie on the bare planks, the motion of the ship rubs the flesh from the prominent parts of their body, and leaves the bones almost bare. And when the slaves have the flux, which is frequently the case, the whole place becomes covered with blood and mucus, like a slaughterhouse ; and, as they are fettered and wedged close together, the ut-most disorder arises from endeavours to get to three or four tubs, which are placed among them for necessary purposes : this disorder is still farther increased, by the healthy being not unfrequently chained to the diseased, the dying, and the dead. Dr. Trotter, speaking on the same subject, gives us an equally melancholy account. When the scuttles, says he, in the ship's sides, are obliged to be shut in bad weather, the gratings are not sufficient for airing the rooms. He never himself could breathe freely below,

unless immediately under the hatchway. He has seen the slaves drawing their breath with all that laborious and anxious effort for life which is observed in expiring animals, subjected by experiment to foul air, or in the exhausted receiver of an air-pump. He has also seen them, when the tarpaulings have been thrown over the gratings, attempting to heave them up, crying out, in their own language, kickeraboo, kickeraboo, that is, ' We are dying.' Most of them have been recovered by being brought upon deck; but some have perished, and this entirely by suffocation, as they had no previous signs of indisposition. The slaves, after having been stowed, soon began to experience the effects that might be naturally expected from their situation. The pestilential breath of many in so confined a state rendered them sickly, and the vicissitude of heat and cold generated a

flux. Several would die, and others were induced to destroy themselves, or to revenge themselves on their oppressors.

The ships, having completed the middle passage, anchored in their destined ports ; and the unhappy Africans, now on board, were prepared for sale. Some were consigned to brokers; with this view they were examined by laborers, who wanted them for their farms; and, in the selection of them, friends and relations were parted without any consideration ; when they parted with mutua. embraces, they were often severed by a lash. Another mode of sale was by vendue ; in which case they were carried to a tavern., or other pub-lic place, where, being put up to sale, they be-came the property of the highest bidder. Such as were in a sick and emaciated state were generally sold for a few dollars. The third mode of selling them was by the ‘ scramble.’ In this case the main and quarter-decks of the ship were darkened by sails : the slaves were brought out of the hold and made to stand in the darkened area : when the purchasers, furnished with long ropes, rushed, as soon as the signal was given, within the awning, and endeavoured to encircle as many of them as they could. These scrambles were also frequently made on the shore : these unhappy objects being shut up in an apartment, or court-yard, the doors of which were thrown open, when the purchasers rushed in, with their ropes in their hands, as before described.

We come now to the far more agreeable part of our subject, the histoi-y of the abolition of this cruel traffic in this country and its dependencies. Mr. Thomas Clarkson, a gentleman still living, has published an account of the different measures pursued to promote this great object. These were registered at the time, either by himself, or the estimable committee which acted in concert with him ; and his history, in two volumes octavo has been several years before the public ; we cannot therefore, we conceive, hand down information on this topic better than by a concise abridgment of his valuable testimony.

From the beginning of this infamous traffic, to the time when our author became a public actor in the scene of its suppression, in the year 1787, there had not been wanting good men to lift up their voices against it : and as the sentiments of these, who were most of them authors, had been given to the public for a long succession of years.

hundreds of persons had been taught in England to condemn it. These, that is, the good men just alluded to, Mr. Clarkson considers as so many necessary forerunners (indeed he gives them that title) ; and considers them also, though most of them lived before his own time, as so many coadjutors in the work.

Having spoken first of the men in power, Mr. Clarkson divides the forerunners who walked in humbler life into four classes. The first consists of persons in England, poets and others, who bore their testimony against the trade in their successive writings up to the year 1787. Among the poets were Pope, Thomson, Shenstone, and Cowper; among the divines, bishop Warburton, Richard Baxter, Beattie, Wesley, Whitfield, Wakefield, and Paley; among the others were Montesquieu, Hutchinson, Wallis, Burke, Postlethwaite, Day, Hartley, Millar, and Granville Sharp. The lat-ter, however, is to be particularly distinguished from the rest ; for, whereas the others had only handed down the traffic in question as infamous, by the mention made of it in their respective works, this good man spent whole years in bringing the cruelty and wickedness of it into public notice. He tried, at his own expense, the famous case of Somerset, and several others, in our courts of law. He was, in fact, the first laborer in the cause. He began to be the public advocate of the oppressed Africans in 1765, and was waiting for opportunities for farther exertion in 1787, the particular epoch before mentioned. See our article SHARP, GRANVILLE.

The second class consists of the Quakers in England. This estimable society passed a pub-lic censure upon the traffic at their yearly meeting in London, in 1727. This they followed up by other resolutions as a body, in 1758, 1761,1763, and 1772, when they had become principalled against it as against a crime of the deepest dye. In 1783 they petitioned parliament against its continuance. In this year certain members of the society thought it their duty to make their fellow countrymen at large acquainted with the horrible nature of it : these were Thomas Knowles, George Harrison, Samuel Hoare, John Lloyd, Joseph Woods, and William Dillwyn. They formed themselves into a committee in London for this purpose; they wrote and circulated books ; they conveyed also information on the subject through the London and country newspapers. It was not known, however, from whom the information came, as their names were

concealed from the public.. In this manner they continued to work their way from 1783 to 1787.

The third class of Mr. Clarkson is formed of the Quakers and others in North America. The Quakers there entertained the same opinion as their brethren in England on this subject. In 1696 and in 1711 they condemned, as a religious body, this cruel traffic; and in 1754, 1755, 1774, 1776, and 1778, they not only passed resolutions against it, as far as their own members were concerned, but also against slavery itself. In process of time, however, individuals rose up out of this benevolent body, and became public laborers in the cause of the unhappy Africans. The two principal of these were John Wooiman and Anthony Benezet. The former travelled many

hundred miles on foot, to converse with planters and others, on the iniquity of holding their fel-low creatures in bondage ; and the latter labored for years in collecting information concerning Africa and the slave trade, and in handing it to the world. At this time other people, of other religious denominations, came forward in North America, and contributed to increase the odium which the Quakers had been the first to excite there against the traffic ; when, in 1774, James Pemberton, a pious Quaker in Pennsylvania, and Dr. Rush, an eminent physician, and a man of weight among the PresByterians in the same province, formed a committee, in which persons of different religious sects joined for the purpose of abolishing both the slave trade and slavery on their own continent. This committee was obliged to suspend its operations during the war with Great Britain, but afterwards resumed its functions. In 1787 it added considerably to its numbers, and took in, among others, the celebrated Dr. Franklin, who was its first president in its renovated state.

It will be proper here to stop and interrupt the thread of the history. It has appeared, from what has been said above, first, that Mr. Granville Sharp, the most conspicuous member of the first of the classes now mentioned, was alive in 1787, and then waiting for an opportunity of exerting himself farther in behalf of the injured Africans ; secondly, that of the second class William Dillwyn was one of the committee for the same object in the same year ; and, thirdly, that James Pemberton was also alive in the same year, and a very conspicuous member of the third. It happened that William Dillwyn, who had been born and long resident in America, had been in habits of intimate friendship with Pemberton ; and that in consequence of his acquaintance also with the venerable Anthony Benezet, he had been introduced, by

means of a letter from him, upon coming to England, to Mr. Granville Sharp. Here then we find that a member of the second class was accidentally known to a member of the first, and also to a member of the third : and thus we see how easily Dillwyn became a medium through whom the members of all the classes might be easily united.

We come now to the fourth class of forerunners. The first in this class was Dr. Peckard, master of Magdalen College, in the University of Cambridge. This gentleman had not only censured the slave trade in the severest manner, in a sermon preached before the university itself; but when he became vice-chancellor of it, in 1785, he gave out the following subject for one of the bachelors' prizes, 'Anne liceat invitos in servitutem dare ?' or, ' Is it right to make slaves of others against their will ?' At this time Mr. Clarkson had obtained the bachelor's prize of the former year, and determined to become a candidate fo'r that of the present. He took prodigious pains to make himself master of the subject, as far as the time would allow, both by procuring proper books, and by seeing as many persons as he could of those who had been in Africa, and who had become in any degree acquainted with the nature of the slave trade.

Having thus gained a considerable stock of information, he wrote his Latin Essay, and, having sent it in to the vice-chancellor, soon found himself honored with the first prize. After this, being then in London, he went down to Cambridge at the time of the commencement, in order to read it publicly, as is usual, in the senate-house. The next day he returned towards London : he was then on horseback ; but while upon the road the subject of the essay entirely engrossed his thoughts ; he became at times seriously affected as he travelled on. He once stopped his horse, and dismounted and sat down on a bank by the roadside. Here he tried to persuade himself, that the contents of the essay which he had read in the senate-house the day before were not true. The more, however, he reflected upon the authorities on which he knew them to be founded, the more he gave them cre-dit; and the more he gave them credit, the more he was convinced that it was an

imperious duty in some one to endeavour to see the sufferings of the unhappy Africans put to an end. Agitated in this manner, he reached London. This was in the summer of 1785. In the autumn of the same year he found himself often similarly exercised ; till at length he began to have serious thoughts of devoting his life to the cause of injured Africa. Being then but twenty -four years of age, he considered his youth and his want of knowledge of the world as a great obstacle. Marry other circumstances occurred to discourage him. He thought, however, that there was one way, in which he might begin to be useful to the cause ; namely, by translating his Latin essay, and publishing it in English. Accordingly he began the work, and, having finished it, he was looking out for a publisher, when he accidently met an old friend of his family, who belonged to the religious society of the Quakers. This gentleman, of his own accord, asked him why he had not published his prize essay in English. Many of his brethren (the Quakers), he said, were anxiously expecting it. Upon farther conversation, this gentleman introduced Mr. Clarkson to Mr. Phillips, a bookseller in George Yard, Lombard Street, and who was also of the religious society before mentioned ; at which interview it was agreed that the latter should immediately publish the work. In a short time after this Mr. Phillips introduced Mr. Clarkson to Mr. Dillwyn of Walthamstow, one of the second class of coadjutors before-mentioned, with whom he spent the day. Here it was that he heard for the first time of the la-bors of Mr. Granville Sharp : and surprised he was to learn that Mr. Dillwyn had two years be-fore associated himself with five others (as has been already mentioned), for the purpose of enlightening the public mind in England on this great subject, as also that a society had been formed in North America for the same purpose, with some of the principal of which Mr. Dillwyn was himself acquainted. He was almost overwhelmed with the thoughts, he says, which darted upon him on this occasion. He could not but consider that he had been providentially led to Mr. Dillwyn's house ; that the day-star of African liberty was rising; and that probably he

himself might be now permitted to have the ho-nor of becoming a humble instrument m promoting it.

Soon after this he was introduced to the venerable Mr. Sharp, the last and most eminent of the second class of coadjutors, and soon after this his work came out under the title of An Kssay on the Slavery and Commerce of the Hu-man Species, particularly the African, which was honored with the first prize in the University of Cambridge, for the year 1785. The work hav-ing been now ushered into the world (this

was in June 1786), Mr. Clarkson resolved upon the distribution of it in the most select mariner he could, in order that the case of the unhappy Africans might be known by those who had in some degree the power of relieving them. Accordingly, at his request, Dr. Baker, a clergyman in London, lord and lady Scarsdale, Sir Charles and lady Middleton, and Mr. Bennet Langton, the intimate friend of Dr. Johnson, of Jonas Hanway, of Sir Joshua Reynolds, of Ed-mund Burke, and of other celebrated persons, undertook to distribute copies of it personally among their own friends, in the higher rauks of life, and to use their interest in procuring a perusal of them. Under their auspices the book was first introduced into the polite world. The mind, however, of the author became daily more and more agitated on the subject of it. He was not satisfied that what he was then doing was all that was necessary to be done ; or that it was all that was required of him. To make the case of the unhappy Africans known was desirable as a first step ; but would this of itself put a stop to the horrors of the trade ? He believed not : he believed there would be no hope of success, unless some one would resolve to make it the business of his life. The question then was, was he himself called upon to do it? His owa peace of mind required that he should give a final an-swer to this question. To do this he retired frequently into solitude. The result was, after the most mature deliberation, and the most painful struggle, that he determined to devote his whole life, should it be necessary, to the cause. This determination was made about the latter end of December, 1786 ; in the beginning of 1787 the distribution of the essay went on, but by addi- • tional hands. Mr. Sheldon, Sir Herbert Mack-worth, lord Balgonie (now lord Leven), each took a part on the occasion. The Quakers joined in the distribution also, among whom Mr. Richard Phillips (still also living we believe) is to be particularly noticed. This arrangement having been made, Mr. Clarkson was now able to devote all his time to qualify himself for the arduous situation to which he had devoted himself. He gained introductions to persons who had been in Africa and the West Indies, and obtained still farther information on the subject in its different branches. He visited slave ships lying in the Thames, either as they came in or sailed out of port, that he might know their construction and other particulars. He went frequently to the custom-house in Londpn, where he learnt the nature of the articles which constituted the traffic, the loss of seamen employed in it, and other matters which he found it essential

to know. lie kept up a correspondence with persons in Liverpool for the same purpose. lie visited also members of parliament, and this almost daily, to interest them in his cause ; to give them information ; to answer questions ; and to explain doubts, if they had any, on any part of the subject.

Among those who appeared most affected by his visits, and most anxious to co-operate with him, was Mr. Wilberforce, the member for the county of York. This gentleman not only read the evidence which Mr. Clarkson sent him on the subject, as he collected it fresh from day to day, but actually sent for, and took the pains to examine, at his own house, those persons who had given it, that he might judge for himself, from their own mouths, of the truth or falsehood of the enormities which had been charged upon the slave trade. The same gentleman appointed also a meeting once a week, at his own house, of a few select friends, to deliberate on the propriety, and, if this were resolved upon, on the proper method of taking up the cause. These meetings continued for some time, when at length, at a dinner at the house of Mr. Bennet Langton, who has been before-mentioned, where several persons of consequence were invited for the purpose of talking over the matter, and of coming to a final determination upon it, Mr. Wilberforce pledged himself to bring forward the great question of the abolition of the slave trade in parliament, as soon as ever he should feel himself prepared for so tremendous a task. Here then the matter began to assume a shape. A parliamentary leader had been secured, and one whose virtuous life corresponded with the sacredness of the cause which he was to advocate. Mr. Clarkson, who was present at this dinner, carried directly the news of what had taken place to several of his friends, but particularly to Mr. Granville Sharp, Mr. Dillwyn,and three or four others of the religious society of the Quakers, all of whom he had previously taught to expect such a result. The consequence was, that the following persons met the next day, and without loss of time formed themselves into a committee, ‘ for procuring such information and evidence, and publishing the same, as may tend to the abolition of the slave trade, and for directing the application of such monies as may be collected for the above purpose,’ *viz.* Granville Sharp, Samuel Hoare, George Harrison, John Lloyd, Joseph Woods, Willian Dillwyn, Thomas Clarkson, Richard Phillips, James Phillips, Philip Sansom, John Barton, and Joseph Hooper. Mr. Granville Sharp, the first mentioned, may be considered, from what has been before said, as representing the first of the classes which

have been described. The four next were the real representatives of the second. The third class, or that of the Quakers in America, may be considered as represented in the person of William Dillwyn, by whom, indeed, it was afterwards united to the committee now formed; and Mr. Clarkson and Mr.R. Phillips as representing the fourth, most of the members of which they had been the means of raising. ‘ Thus,’ says the historian, ‘ *n the 22d of May, 1 787, the repre-sentativts of all the four classes, of which I

have been giving a history from the year 1516, met together, and were united in that committee to which I have been all along directing the attention of the reader ; a committee, which, laboring afterwards with Mr. Wilberforce as a parliamentary head, did, under Providence, in the space of twenty years, contribute to put an end to a trade, which, measuring its magnitudeby its crimes and sufferings, was the greatest practical evil that ever afflicted the human race. After the formation of the committee, notice was sent to Mr. Wilberforce of the event; and a friendship began, which has continued uninterruptedly between them from that to the present day.’ In the following month, that is, in June 1787, the committee simplified its former title, and was ushered into the world. It professed to have nothing to do with the emancipa-tion of slaves already in bondage. Its only object was the abolition of the African slave trade. From this period we shall trace the history of its proceedings annually.

When the committee was formed, Mr. Clarkson drew up ‘ A Summary View of the Slave-Trade, and of the probable Consequences of its Abolition.’ It consisted only of about a dozen pages. It detailed the different methods of making slaves in Africa, their treatment, sufferings, and mortality in the passage ; and also the treatment of the survivors in the colonies to which they were carried ; and it promised the publication of an Essay on the Impolicy of the Slave-Trade. This Summary the committee determined to print, and to circulate all over the kingdom. In the mean time Mr. Clarkson was to take a journey to the different slave-ports, to increase his own knowledge of the subject. The first place he visited was Bristol, where he resided for some weeks. Here he obtained a knowledge of several articles of African produce, such as rice, indigo, cotton, spices, and woods, and collected specimens of them. He obtained specimens also of the different manufactures of the natives of Africa, both in wood, cotton, leather, iron, and gold. He examined the construction of slave-ships, and took the dimensions of several. He obtained histories of their former voyages. He collected chains, hand-cuffs, thumb-screws, and other

horrid instruments used in this execrable traffic. He discovered the scandalous modes of procuring and paying those seamen who were employed in it, the sad ratio of their mortality on the voyage, and the prodigious difference between the mortality of these and of those employed in other trades, of which he was enabled to take a comprehensive view, from procuring the muster-rolls of almost every ship belonging to the port. But that which hurt his feelings the most, and which kept him indeed in a state of constant misery while in Bristol, was the barbarous usage, and this almost without an exception, of the seamen employed in this traffic. He took many out of the slave-vessels there. He took up the cause of some of these, and obtained damages for them in the courts of law. He sent a chief mate to prison for the murder of one of the crew acting under him. While at Bristol he formed a committee to act in union with that of London, and obtained pro-SLAVE TRADE.

tnises of petitions to parliament against the continuance of the inhuman traffic from that city, and from Bath, Monmouth, and Bridgewater. On his journey from Bristol to Liverpool he procured the promise of similar petitions from Gloucester, Worcester, and Chester, and secured the provincial newspapers as he travelled on in behalf of his cause. On his arrival at Liverpool he followed the same line of enquiry as at Bristol, for six weeks, after which period (so incensed were merchants, captains of ships, and others connected with the trade, against him) it would have been dangerous to stay. From thence he visited Lancaster, the last of the slave-ports, and at length returned to London, after an absence of five months, in the December of 1787. The committee, in the mean while, that is, during his absence, had been equally well employed, and had been equally indefatigable. The first thing they did was to make known, by public advertisement, their existence as a committee, and the great object they had in view. They ordered a seal to be engraved for their correspondence. The device upon it was a negro in chains, kneeling, and in a supplicating man-ner lifting up his hands to heaven. The motto round the device consisted of these words, ‘ Am I not a man and a brother ?’ They then added to their committee to increase their laborers ; and, having done so, they directly opened a correspondence throughout England, Wales, and Scotland, which they extended afterwards to America. This gave them an opportunity of making their cause known in the most extensive

manner. Accordingly, when things had been thus prepared, they circulated many thousands of the Summary Views before-mentioned, and, at the same time, addressed by letter all the corporate bodies in the kingdom. These efforts soon convinced them that there were thousands of kindred souls in their own country, who felt with them on the great subject of their institution. The Quakers were the first, as a body, to acknowledge and approve it ; the general Baptists the next : then followed letters of approbation, and promises of support, from people of all religious denominations. Among these were the famous Dr. Price and John Wesley ; Mr. Ros-coe, the historian and poet ; Dr. Porteus, bishop of Chester; Dr. Woodward, bishop of Cloyne; Dr. Hinchliffe, bishop of Peterborough ; Dr. Home, afterwards bishop of Norwich ; Dr. Bathurst, now bishop of the same ; archdeacons 1 Paley and Plymley (now Corbett) ; the celebrated marquis de la Fayette, who was soon afterwards conspicuous in the French revolution; and Brissot and Claviere, afterwards two distinguished members of the national convention in France, and who suffered under the tyranny of Robespierre. This good feeling continued to spread, when, in the month of February, 1788, there appeared to be among the people of England a general feeling in behalf of the injured Africans. By this time thirty-five petitions had been presented to parliament from different places, praying for the abolition of the slave-trade, and several others had been resolved upon. These proceedings produced such an effect upon the government that the king was advised to

order a committee of privy-council to enquire into the nature of the slave-trade. This order was dated February 11. An enquiry was of course immediately set on foot. The first witnesses examined were persons sent expressly as delegates from Liverpool, who had not only been themselves in the trade, but who were then interested in its continuance. These endeavoured to show that none of the enormities with which it had been charged belonged to it ; and that it was even attended with circumstances favorable to the unhappy victims of it. A great prejudice therefore was excited, in the very beginning of the enquiry, in the minds of some of the privy-council against the abolitionists, whom they considered as misinforming the public mind with respect to a traffic which appeared to be so vitally connected with the manufacturing and commercial interests of the country, that it would be almost national ruin to abolish it. Happy was it for the cause, at this moment, that Mr. Clarkson had taken his journey to Bristol and other places, as before-mentioned ; for he had become acquainted, in the course of it, with persons who had witnessed the horrors of the trade ; but who, having then quitted it, had no interest

in concealing the truth. These, though few, were highly respectable ; and their evidence, when called before the council, contributed to counteract that of the Liverpool delegates, and others, and to turn the tide, which' had run so strong against the abolitionists, in their favor. The enquiry, which had been thus set on foot, continued through February, March, April, and a part of May. During this time the petitions from the people to parliament had increased to 103. The committee also had circulated many new books throughout the kingdom, written by eye-witnesses of the several facts they contained; and all contributing to give new information, and to add new horror to the trade. Mr. Wilberforce also had been preparing .to introduce the subject into parliament; but, at the time when his motion was expected, he was too ill to make it. Indeed his life was despaired of. Under these circumstances, his friend, Mr. Pitt, then chancellor of the exchequer and prime minister, undertook to supply his place. On the 9th of May he opened the business in the house of commons, and concluded by a motion, ' that this house will, early in the next session of parliament, proceed to take into consideration the circumstances of the slave-trade complained of in the petitions, and what may be fit to be done thereupon.' A discussion took place in consequence, during which there was an apparent enthusiasm in the house in behalf of the injured Africans. The members for Liverpool, however, denied the existence of any of the cruelties complained of; but they did not oppose the motion, and therefore it was unanimously agreed to. This pledge having been given by parliament, the public seemed satisfied with it, and of course nothing more was expected in that session; when, on the 21st of Maj-, Sir William Dolben suddenly rose up in the house of commons, and moved for leave to bring in a bill on the subject of the slave-trade. As the trade, he said, was evidently allowed to go on till the next session,

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he thought it was the duty of the house to take care that it should be carried on with as much humanity as possible in the interim. His great ob-ject, therefore, was to alleviate the sufferings of the poor Africans in their transportation, by allowing them more room, which might be done liy regulating the number to be carried by the tonnage of the vessel. Leave was accordingly given ; but the merchants of Liverpool determined to oppose the bill in every stage. They despatched immediately to London those very persons to be examined before the house whom they had before sent for examination to the privy-council. When counsel had closed their case, a debate ensued, in which the statements of these witnesses were exposed, greatly to their mortification, and the bill passed by a majority of fifty-five to five. It was then carried to the lords. Here a still more determined opposition was begun, and carried on in such a manner, and with so much apparent success (the house being very thin at that season), as to alarm the abolitionists, not only for the fate of the bill it-self, but for that of their great question the ensuing year. At length it passed the upper house, as through an ordeal of fire, and received the king's assent, on July IK During all this time the privy-council continued their examinations. Mr. Clarkson underwent an examination among others. It was at this time that he brought out his powerful essay on the impolicy of the slave-trade. This was circulated in great numbers by the committee, upon whom too much praise can-not be bestowed for their labors. From July 1787 to July 1788, the time we are now come to, they had held fifty-one long committees: they had held as many more sub-committees : they had distributed (besides 26,526 reports, debates in parliament, and other matters) 51,432 pamphlets or books. They had roused the feelings C'f the whole English nation, and had attracted the notice of some of the most distinguished persons in France and Germany.

The session of 1788 was no sooner over than , Mr. Clarkson undertook a journey to all the sea-ports between Kent and Cornwall. His object was to find out, if possible, new witnesses to strengthen the good cause. He met with considerable success in his journey, and he formed committees, auxiliary to that of London, as he went along. On his return to London he was again examined by the privy-council, to whom he showed, by way of evidence, his collection of African curiosities, consisting of produce and manufactures, which he had now completed. He introduced also to their lordships, for examination, all the new witnesses he had discovered, and whose

testimony was of the highest value. The committee, in the mean time, had been indefatigable. They had directed their correspondence to new parts of the kingdom, as well as of North America. They had addressed the rulers of Spain, Portugal, and Sweden, in behalf of their institution, and had opened a communication with Germany on the same subject. They had printed and circulated no less than five new works to promote their cause, and, besides, that famous engraving of the section of the slave-ship '•.vhere the bodies of the negroes were seen

packed in the different parts of it), which afterwards excited such universal sympathy in the country, and which caused such a universal abhorrence of the trade. About this time, that is, on the 19th of March, 1789, Mr. Wilberforcei who was then but just recovered from his long and severe illness, moved, in the commons, that the house should on Thursday, the 29th of April, take into consideration its own resolution of the last session. This motion was agreed to; but it became immediately the signal to all those who supposed themselves interested in the continuance of the trade, such as .planters, mortgagees, merchants, manufacturers, and others, to begin a tremendous opposition. Meetings were called, and frightful 'resolutions entered into. The pub-lic papers tfere filled with them. Here, as well as in pamphlets, the most bitter invectives were poured forth against the abolitionists. Emancipation was industriously confounded, with abolition. Compensation was demanded to a most monstrous degree. The cry, indeed, was such that many began to be staggered about the propriety of the total abolition of the trade. At this time Mr. Pitt, his majesty's chancellor of the exchequer, laid the privy-council report, consisting of the examinations before-mentioned, which came out in the shape of a large folio volume in print, upon the table of the house of commons, and moved, in order that members might have time to become acquainted with the evidence it contained, that the consideration of the slave-trade, which stood, by Mr. Wiiber-force's motion, for the ?.9th of April, should be postponed to the 12th of May. This was agreed to. On the day appointed Mr. Wilberforce rose, and, in a speech of three hours and a half, introduced the great question into parliament. lie reasoned entirely from the evidence contained in the report just mentioned, and deduced from it twelve grand propositions, which he read, and then laid them upon the table. These propositions contained the whole question. He wished them to be argued at a future day. Upon this, great opposition was manifested

by the members for Liverpool and others, and a warm debate took place, when it was agreed that they should be taken into consideration on the 21st of May. When the day arrived, several petitions were presented to the house, by persons interested in the traffic, against its abolition. Mr. Wilberforce rose up and addressed the house. After this, an altercation took place rather than a debate, in which much heat and animosity were manifested. Those members who espoused the cause of the interested persons, seeing that it would be ovei-thrown, if they judged of the merits of it by the privy-council report, would not now abide by the latter, but rejected it as an imperfect sort of evidence, and demanded that witnesses should be heard at the bar of the house of commons in explanation of many of the mis-statements which that book contained. By these means they endeavoured to get rid of the propositions altogether. Their demand, however, after a good deal of contentionˆ was complied with, and on the 26th of May counsel were heard, and one witness, a slave-captain, was examined. Their ob-ject now was to interpose every legal species of

delay, and in this they succeeded so well that from the 26th of May to the 9th of June only iwo of their witnesses had been examined. In this slow way they went on till the 23d of the same month, when it was seen that it would be • tterly impossible to bring the question to a final decision in that session; for they declared that ‘.hey had many evidences yet to produce, and that they must and would be heard. Accordingly they moved, and Mr. Wilberforce agreed, that the farther consideration of the subject should be postponed to the next sessions.

Those who were interested in the continuance of the trade, having now got rid of the privy-council report, and introduced new evidences to the commons in behalf of their case, it became the committee to collect as respectable a body of witnesses as possible on their own side of the question. Mr. Clarkson had undertaken to traverse the kingdom again for this purpose, and had set out, when, hearing that the French revolution had broken out, and that a committee for the abolition of the slave-trade had been formed in Paris, he returned, and

immediately hastened to the latter city, where he arrived at the latter end of July. He soon became acquainted with the marquis de la Fayette, mon-sieur Necker, the duke de la Rochefoucauld, the marquis de Condorcet, and Messrs. Mirabeau, Petion, Brissot, Claviere, and other distinguished persons. He spent his time, while in Pans, in attending the committee there, in visiting members of the National Assembly, and in the personal distribution of books among them, but particularly his Essay on the Impolicy of the Slave-Trade, which he had caused to be translated into French for that purpose. Returning to London, in January 1790, he found that Mr. Wilberforce had carried a motion in the commons, that witnesses should not be examined in future at the bar of that house, but -in a committee-room, which should be open to all members. This was necessary for the sake of despatch, as the examinations otherwise might have taken up ten years. Mr. Clarkson now resumed the journey which he had begun in the preceding sum-mer, in search of new and respectable witnesses. He made a tour of 1200 miles in three weeks, during which he found out sixteen persons capable of giving good testimony on the subject, but could only prevail upon three to be examined. On his return to London, he found that the examinations of witnesses in behalf of those interested were going on in tnp committee of the house of commons, and witK so much rapidity that it was expected their case would be soon closed. This alarmed him exceedingly; for out of seventeen persons who stood upon his list as having promised to give their testimony in be-half of the abolition, one had lately died, and no less than eight, being seafaring persons, were then out of the kingdom. He determined, therefore, upon another journey; and, on turning the subject over in his mind, he thought he should obtain the greatest number of disinterested-wit- nesses, in the shortest possible time, if he could go on board all the ships of war lying in ordinary at the king's ports in different parts of the kingdom. Impressed with this idea, he went to

Deptford, and first boarded all the men of war that were lying there. He then proceeded to Woolwich, and afterwards to Chatham, Sheerness, Portsmouth, and Plymouth, where he boarded others in like manner, to the number altogether of 400, in which he picked up several very excellent and important witnesses. On the 20th of April, the persons interested .had just closed their case. Accordingly Mr. Wilberforce moved, on the 23d of the same month, in the house of commons, that witnesses should be heard in behalf of the abolition. Upon this much clamor ensued. The members who acted in union with the persons interested in the continuance of the slave-trade

wished to have the case directly argued, that is, upon their own evidence, and without hearing any on the ottier side, and resisted accordingly. Their opposition, however, proved ineffectual against the eloquence of Mr. Wilberforce, supported powerfully as he was by that of Mr. Pitt and Mr. Fox. At length the witnesses in behalf of the abolition took possession of the ground which the others had left, and no less than twenty-four, some of whom had been found out since the last tour, were examined before the close of the session. At this time it is very curious to re-mark that the feelings of parliament, and those of the people, were very different on this great, question. The tide certainly ran against the abolitionists in the house of commons. The old hue and cry had been revived of intended emancipation under the pretence of abolition; of monstrous indemnification to the planters ; and of the certain massacre of the whites by the negroes, if the trade were to be abolished, but in more furious language, and to a greater extent than before. The feeling, on the other hand, in the country, was warmly on the side of the abolition. It had been kept up and increased by various circumstances. The committee had been daily employed in answering, through the me-dium of the public papers, every objection which had been started as hostile to their cause. They had also by this time distributed all over England, Scotland, and Wales, the horrible and affecting engraving of the section of the slave ship before mentioned. Individuals, too, had kept alive the popular feeling in various ways. Wedgewood, the celebrated manufacturer, had taken the committee's seal, as before explained, for a model, and had struck off and distributed many thousand small cameos in plaster. The ground of each of these cameos was white, but the negro, who was seen imploring compassion on his knees in the middle of it, was of his own native color. Cowper also, and other poets, had written beautiful and affecting songs on the subject. These were circulated very copiously through the kingdom, and some of them were sung in the very streets.

Not more than half the evidence, which was deemed necessary, having been heard on the side of the abolition in the session just passed, it be-came a duty in the committee to use every possible exertion to complete it, and this in the best possible manner, before the next.. Mr. Clarkson was, therefore, again solicited to traverse the kingdom, and Mr. Wilberforce prepared an in-

genious list of questions to assist him in his examinations and enquiries. With this he departed, and travelled from August 1790 to February 1791, during which time he went over the greatest part of the island, and had the good fortune to add a considerable number of new and important witnesses to his list. At length the examinations were resumed in the committee of the house of commons, and closed finally on the 4th of April. No less than sixty-nine persons had given their testimony, in this and the preceding session, in behalf of the abolition of the slave-trade. The evidence having been printed on both sides for the use of the members, as the basis upon which to argue the case, the 18th of April was fixed upon as the day for deciding it. By this time every effort had been made by the persons interested to render the question unpopular in the commons. Emancipation, indemnification, massacre, ruin, had been vociferated over and over again in the ears of the members there. At this time, unhappily, the most sanguinary scenes were taking place in St. Domingo, in consequence of the revolution which had been effected there, and an insurrection had broken out in the British island of Dominica. All these had been industriously detailed in print, but with great exaggeration, and added to the cries just mentioned. This union of reports and cries had produced such a terrific-effect upon many members, that they considered the abolitionists, by persevering in their question, as ferocious monsters ; and in this unfavorable frame of mind they went into the house on the day fixed for the discussion, to discharge their duty with respect to this great question. On' this day, namely, the 18th of April, 1791, Mr. Wilberfbrce made a most luminous and affecting speech, in which he took a most masterly view of the whole question in all its different departments, as it related both to Africa and the West Indies. He argued the inhumanity of the traffic ; he argued its impolicy ; he appealed to feeling ; he appealed to reason ; he tried to dis-arm his opponents by candor ; he exhorted them to attend to their own interest; and concluded by moving for leave to bring in a bill to prevent the farther importation of slaves into

the British colonies in the West Indies. After this, a most serious discussion ensued, which lasted till three in the morning, when, several members being yet desirous of speaking, the business was adjourned to the next day. It was then argued again till half past three in the morning, when the house divided on the original motion. There were for it but eighty-eight votes, and against it 163 ; so that this great cause of humanity, justice, and religion, which had cost so many years of labor, was lost by a majority of seventy-five votes. Upon the news of this signal defeat, the committee for the abolition of the slave-trade held a meeting, which was conducted with the most solemn dignity. They voted thanks to the illustrious minority which had lately stood forth the assertors of British justice and humanity, and the enemies of a . traffic in the blood of man ; and entered into several resolutions, the substance of one of which was, that they considered the late decision of the house rather as a

delay than a defeat ; that they did not despair of final success ; and that they would never desist from appealing to their countrymen, till the commercial intercourse with Africa should cease to be polluted with the blood of its inhabitants. These resolutions were followed up by a suitable report, and sent to all the country committees throughout the kingdom. At length the session ended, and a cruel one it had proved to those who had interested themselves in the abolition of this cruel traffic. The defeat, however, which they had experienced, .had been rendered more tolerable, because, in consequence of the unjust clamors by which the minds of many members of parliament had been affected, it had been expected. It had been rendered more tolerable again, by knowing that several of the most distinguished characters in the kingdom, and all of splendid talents in the house of commons, such as Pitt, Fox, Burke, Grey, Sheridan, Wyndham, Whitbread,Courtnay, Francis, Rider, W. Smith, and H. Thornton, had supported the sacred cause ; and because a bill had been carried through both houses of parliament in this »ery session for the establishment of the Sivrra Leona Company.

The people of England, soon after this defeat, began to be sensibly affected by this question ; and many, in order to wash their hands of the blood of Africa, left off the use of sugar. Mr. Clarkson, after a consultation with Mr. Wilberforce and the committee, undertook to abridge the evidence which had been offered to the hous j of commons on the side of the abolition, with ;i view of circulating its horrible contents through the kingdom, and of thus making the public > impression still deeper. This abridgment wa; begun in June 1791,

and was written, printed, and in the hands of all the committee's correspondents in England, Wales, and Scotland, by the latter end of September. Mr. Clarkson now undertook to follow the book, and to see, if possible, that it was actually read. Accordingly he left London in the beginning of November. It was his intention to wait personally upon' every person in every county in the kingdom, to whom the book had been sent, to get others of the town or neighbourhood to meet him there, to converse with them on the subject, to entreat their individual perusal of the abridgment, ani their united efforts in lending it out judiciously, and in seeing that it was read. This he attempted to realise, but the process was very tedious. He had travelled 6000 miles in tlit: execution of his plan, when he found that he had yet 4000 to go. To perform this was impossible, so as to answer the purpose. He therefore made his situation known to the committee. The consequence was, that Dr. Dickson, a gentleman who had greatly assisted the cause by nis writings, set off from London, and took the whole of Scotland off his hands. The result of the two journeys was soon visible. The people could not bear the facts which the abridgment had disclosed to them. Great numbers left off immediately the use both of sugar and rum. The great bulk of the nation, however, vented their^ feelings in public meetings to address the legislature on the subject, ut.a tins

they did with so much earnestness and activity, that by the latter end of the month of March, 1792, no less than 517 petitions, including several from whole counties, were laid on the table of the house of commons, praying for the total abolition of the slave-trade. Emboldened and supported in this manner by the voice of the people, Mr. Wilberforce introduced the question again into the commons. This was on the 2d of April. After a speech of four hours, during which he added a profusion of new light to the subject, and duringwhichhe endeavoured, in the most mild and persuasive manner, to do away objections and prejudices, he moved, ' that it is the opinion of this honse that the African slave-trade ought to be abolished.' This led to a very long and uncommonly interesting debate. Never, certainly, in the

house of commons, and never probably in any other place, was so much splendid oratory displayed, as on that night, on the side of the abolition of the slave-trade. It appeared, in the course of the debate, to be the sense of the house that some sort of abolition should take place. Two divisions took place. In the first there were 193 votes for gradual abolition, and 125 for immediate; and, in the second, there were 230 for gradual, and eighty-five for no abolition at all. In this state the question was left till the 23d of April, when Mr. Dundas (afterwards lord Melville) came forward and proposed a plan conformable with the resolutions of the house just mentioned. The outlines of it, however, were opposed by Messrs. Pitt, Fox, and Wilberforce, not only as being very defective, but as built upon false data. The business was accordingly adjourned to the 25th. On that day Mr. Dundas brought forward the subject again. He considered that eight years ought to be allowed the planters to stock themselves with negroes, and therefore moved that the year 1800 should be the epoch, after which no more slaves should be imported from Africa in British vessels to the West Indies. Lord Mornington (now marquis Wellesley), in a most brilliant speech, moved an amendment, which was, that the year 1793 should be substituted for that of 1 800. There appeared on a division to be 158 for Mr. Dun-das's motion, and 109 for the amendment. On the 27th of April the subject was resumed in the house. Mr. Dundas proposed the year 1800, as before, and lord Mornington the year

1795. His lordship's motion was again lost, but by a less majority than on the former occasion, *viz.* by 161 to 121, when Sir Edward Knatchbull struck out a middle line, by proposing the year

1796, which motion was carried by a majority of 151 to 132. The gradual abolition having been thus agreed upon for 1796, a committee of the commons carried the resolution to the lords. On the 8th of May the lords met to consider it, when, cruel to relate, a motion was made by lord Stormont, on the part of the planters, merchants, and other interested persons, to hear new evidence. This, after some little opposition, was acceded to. On the 15th of May the first witness on this side of the question was introduced ; and on the 5th of June, when only seven witnesses had been examined on the same

side, all further examination was postponed to the next session.

Nothing could be more distressing to the abolitionists than this determination of the lords; first, because there was no saying how many, even years, the hearing of evidence there might take ; and,

secondly, because they (the abolitionists) had the laborious work to do over again, of finding out and keeping up a respectable body of witnesses on their own side of the question. This latter work was essentially necessary ; for it was impossible to allow the persons interested to throw in a weight of testimony for the furtherance of their own cause, and not to take means to counteract it. Mr. Clarkson, therefore, set out again in the month of July, on his old errand. Dr. Dickson, the gentleman before-mentioned, left London about the same time, in order to assist him. He was to take a different route, which had been before settled. They were very successful in their respective journeys, and both returned in the month of February, 1793. The house of commons was then sitting. The only step to be taken there (but1 this was essentially necessary) was to bring before it, in some part or other of the session, its own vote of the former year, by which the slave-trade was to be abolished in 1796, in order that this vote might be reconsidered and renewed. Accordingly Mr. Wilberforce moved the house upon the subject. It is only necessary to state that his motion was most furiously opposed, and actually lost by a majority of sixty-one to fifty-three. By this determination the commons actually refused to sanction their own vote. In this distressing situation Mr. Wilberforce scarcely knew what to do. He was not, however, to be dismayed by one unexpected defeat. He resolved, therefore, that he would not allow the session to pass without try-ing the question in some other shape. Accordingly, in the month of May, he moved for leave to bring in a bill to abolish that part of the trade, by which the British merchants supplied foreigners with slaves. His motion was carried, but only by a majority of seven ; and, alas ! on the third reading, it was lost4 by a majority of thirty-one to twenty-nine ! During all this time the examination of witnesses had been going on in the house of Lords. Only seven witnesses, however, had been heard there in the course of the whole session. After this session the abolitionists were at a loss how to act for the advantage, of their cause. One measure, however, was obviously necessary, *viz.* to endeavour to keep up a respectable body of evidence to op-pose that which should be heard against the abolition in the lords.

For this purpose Mr. Clarkson, at the request of the committee, once more traversed the kingdom. He began his journey in September, and returned in February, 1794. Mr. Wilberforce, in the interim, moved in the commons for leave to renew his former bill for the abolition of the foreign slave trade, as carried on by British subjects. He carried it, though with great difficulty, in all its stages, through the house of commons ; but it was almost directly lost in the house of lords In thi? latter house only two evidences

had been examined in the course of the session. At this time Mr. Clarkson was in such a wretched slate of health as to be unable to lend any farther assistance to the committee. The incessant labor of body and mind for so many years, ag-gravattd by anxiety and disappointments, had made a very serious inroad upon his constitution. His nervous system had been literally shattered to pieces ; his hearing, memory, and voice, were nearly gone. . lie was, in short, utterly incapable of any farther exertion ; and he was therefore obliged, though very reluctantly, to be borne out of the field, where he had placed the grea* honor and glory of his life. The question was now in a very desperate state ; for if the house of commons would not renew its own resolution, and if the lords would not abolish even the foreign part of the slave-tradeˆ what hope was there 01 success ? But neither, however, were Mr. Wilberforce nor the committee to be deterred by the prospect. They determined never to abandon the cause. Accordingly Mr. Wilberforce moved in the commons, in the session ot 1 795, for lˆave to bring in a bill for the abolition of the slave-trade. This motion was •now necessary, and justifiable on that account, if the trade, according to a former resolution of that house, was to cease in 1796 ; but it was lost by a small majority.

In the session of 1796 Mr. Wilberforce resolved upon trying the question again, but in a'n entirely new form. He moved that the slave-trade be abolished in a limited time, but without assigning to its duration any specific date. He wished the house to agree to this as a general principle. After much opposition the principle was acknowledged; but when, in consequence of this acknowledgment of it, he brought in a bill, and attempted to introduce into one of the clauses the year 1797, as the period when the trade should cease, he lost it by a majority of seventy-four to seventy. He judged it prudent, after mature consideration, to let the session of 1797 pass without - any parliamentary notice of the subject ; but in that of 1798 he renewed his motion for abolition in a limited time. This, however, met with the same fate as the former.

In 1799 he tried the same motion again, when there appeared for it seventy-four, and against it eighty-two votes. He determined, however, that the remainder of the session should not pass without an effort to obtain something, if it were only a small part, of what

belonged to the cause. Accordingly his estimable friend, Mr. Henry Thornton, lately deceased, brought in a bill, at his request, to abolish a very small part of the slave-trade. It may be remembered that a colony had been established at Sierra Leona, to promote agriculture and a new species of commerce in its neighbourhood. Now, while the slave-trade was carried on all around it, it was found that these objects could be but little advanced. The bill, therefore, of Mr. Thornton, went only so far as to say that the slave-trade should not be carried on within a certain distance of that colony. This bill was carried through the commons, but though it only asked that an infant establishment, founded on the principles of liberty, and this by parliamentary

sanction, should be protected from the ravages of the slave-trade, it was lost in the house of lords. This latter circumstance was indeed truly disheartening; yet, amidst the clouds which darkened the horizon, one gleam of hope appeared ; for the question had been so argued, so sifted, and put into such various lights, that it began now to be understood. The consequence was that conviction flashed upon many, among whom were three planters, Mr. Ellis, Mr. Bar-ham, and Mr. Vaughan. These gentlemen had the candor to rise up in the house of commons, and express themselves in favor of the abolition in one of the last debates.

The question had»been now tried and lost in almost every possible shape; Mr. Wilberforce and the committee seemed to have but two alternatives of choice left them, either to persevere against all hope, or to hold themselves in readiness to seize the first favorable opportunity which should present itself for furthering the cause. It was determined to adopt the latter, and by no means to let the question degenerate into a mere annual motion of form. It was thought proper also, as several members of the house of commons were changing their opinions on the subject, to give others time to digest the powerful eloquence which had been expended upon it. Mr. Wilberforce, therefore, suffered the years, 1800, 1801, 1802, and 1803, to pass over without noticing it. In 1804, however, he resolved to renew his exertions. The committee resolved to second them, and immediately increased its number, that it might act with extraordinary vigor. The circumstance which marked this year in particular as favorable for another trial was the union with Ireland, in consequence of which a great number of Irish members, generous, and opetf-hearted, and in general friends to, the poor negroes, were added to the British parliament. Mr. Wilberforce, therefore, under these circumstances,

asked leave to renew his bill for the abolition of the slave trade within a limited time. This motion was as violently opposed as any of the former, but was carried at length in a very handsome manner: no less than 124 divided in favor of it, and but forty-nine against it. The bill was opposed in its second reading, for which however there were 100, and against it but forty-two. When a motion was made for going into a committee it was opposed, but carried by seventy-nine to twenty. The bill also was opposed in its last stage, but carried by a majority of sixty-nine to thirty-six. It was taken up to the lords, but on a motion by lord Hawkesbury (afterwards lord Liverpool) the discussion there was put off till the next session.

In 1805 Mr. Wilberforce renewed his former motion. Leave was at length given him to bring in the bill, but not till after a most furious opposition. On the second reading of it the opposition increased, and an amendment was proposed, *viz.* to put it off to that day six months. This amendment was actually carried by a majority of seventy-seven to seventy. This defeat occasioned the abolitionists the severest disappointment. The committee instantly met, when sorrow was seen in the countenances of all present. Their first object was to endeavour to de»

velope the causes of the miscarriage now mentioned. It appeared clearly, “after the most minute examination, that these were accidental. The committee, therefore, resolved upon renew-ing the contest with redoubled vigor the ensuing year. Just at this moment who should join them but Mr. Clarkson ! Eight years’ retirement Lad nearly restored him, and the first moment lie found himself able to embark again in the cause, he returned to his post. As it then seemed probable that the question would be carried the next year through the commons, and, if so, that it would go to the lords, and that the lords would probably require farther evidence, it was judged proper that evidence should be prepared. But, alas ! the noble band of witnesses which had been last collected, had been broken by death and dispersion, and a new one was to bi formed. Herculean task !

Tremendous, however, as it was, Mr. Clarkson undertook it. He left London in two or three days afterwards, and returned in January 1806, after having travelled in pursuit of his object above 5000 miles. In this month died Mr. Pitt, who was then prime minister, and who had been one of the great supporters of the cause.

This great question was once more ushered into parliament on the 31st of March, 1806, under new auspices, namely, under the administration of lord Grenville and Mr. Fox. It was thought proper that Mr. Wilberforce should be as it were in the back-ground on this occasion, and that the attorney-general should introduce it. The latter accordingly brought in a bill, one of the objects of which was to prohibit British merchants and British capital from being employed in the foreign slave trade. This bill passed both houses of parliament, and was therefore the first that dismembered this cruel traffic. In the debate which ensued upon it, it was declared in substance, both by lord Grenville and Mr. Fox, in their respective houses, that they would do every thing to effect the abolition, and, should they succeed in such a noble work, they would regard their success as entailing more true glory on their administration, and more honor and advantage on the country, than any other measure in which they could be engaged. Conformably with this sentiment, Mr. Fox himself, on the 10th of June, in a speech most luminous and pathetic, followed up the victory which had been just gained, by moving a resolution, ‘ that this house, considering the African slave trade to be contrary to the principles of humanity, justice, and policy, will, with all practical expedition, take effectual measures for the abolition of it, in such manner and at such a period as may be deemed most advisable.’ This motion produced an opposition as before, and an interesting debate. It was supported by Sir Ralph Milbank, Mr. Francis, Sir Samuel Romiilly, Mr. Wilberforce, lord Henry Petty (now marquis of Lansdown), Sir John Newport, Mr. Canning, and Mr. William Smith. It was carried by a majority of 114 to fifteen. Mr. Wilberforce directly moved an address to his majesty, ‘ praying him to direct a negociation to be entered into, by which foreign powers should be invited to co-operate with his majesty, in measures to be adopted for the abolition of the African slave trade.’ This was also earned, but without a division. On the 24th of June, the lords met to consider both the resolution and address. A proposition was directly made in ‘that house (in order to create delay), that counsel and evidence should be heard. This, however, was happily over-ruled. Lord Grenville then rose up and introduced the subject. His speech was among the master-pieces of eloquence. He was supported in the debate, which followed, by the lord chancellor (Erskine),’ the bishop of London (Dr. Porteus), the bishop of St. Asaph

(Dr. Horsley), earl Grosvenor, earl ‘ Stanhope, earl Spencer, earl of Suffolk, and the lords Holland and Ellenborough. The resolution and address were at length both carried, by a majority of forty-one to twenty.’ After this a belief was generally prevalent that the slave trade would fall in the next session. This occasioned a fear in the abolitionists, lest it should be carried on in the interim, being as it were the last harvest of the merchants, to a tenfold extent, and therefore with tenfold murder and desolation to Africa. It was therefore thought necessary, as the session was about to close, to introduce another bill into parliament, and this as quickly as possible, that no new vessel should be permitted to go to the coast of Africa for slaves. Accordingly a bill to that effect was prepared, and it passed both houses. In the month of October following, after these great and decisive victories, died the right honorable Charles James Fox, one of the noblest champions of this noble cause. He had lived just to put it into a train for final triumph. This triumph, however, he enjoyed in anticipation. The prospect of it soothed his pains, and cheered his spirit in the hours of his sickness. At this melancholy season it became with him a frequent topic of conversation, and the hope of it was perceived to quiver on his lips, in one of the last moments of his life.

The session of 1807 had scarcely commenced when the contest was renewed. Lord Grenville judged it expedient, at this crisis, to reverse what had been hitherto the order of proceeding, that is, to agitate the question first in the house of lords. On the 2d of January he presented a bill there, which he called an act for the abolition of the African slave-trade. It was very short ; he proposed that it should be printed, and that it should then lie on the table for a while, that it might be maturely considered before it was discussed. On the 4th no less than four counsel were heard against it. On the 5th the debate commenced. Lord Grenville took a brilliant part in it. He was supported by his highness the duke of Gloucester, the bishop of Durham (Dr. Barrington), the earls Moira, Selkirk, and Rosslyn, and the lords Holland, King, and Hood. The bill was at length carried, at four in the morning, by a majority of 100 to 36. On the 10th of February it went to the commons. On the 20th counsel were heard against it there. On the 23rd a debate ensued upon it, on the motion of lord viscount Howick (formerly Mr. Grey, and now lord Grey), who urged the commons to confirm it. The other speakers in favor of it were Mr. Roscoe, Mr. Fawkes, Mr. Lushington, the lords Mahon and Milton, Sir

Samuel Romilly, Sir John Doyle, Mr. Wilber-ibrce, and earl Percy ; and it was carried by the vast majority of 283 to 16. On the 6th of March the blanks were filled up. It was proposed first that no vessel should clear out for slaves from any port within the British dominions after the 1st of May following, that is, 1807, and that no slave should be landed in the British colonies after the 1st of March 1808. This and almost every other proposition were opposed, but happily without effect. Suffice it to say, that on the 18th, the bill, with the blanks filled up, was carried back to the lords ; that in consequence of various amendments, it passed and repassed from one house to the other, but always with opposition; that on the 24th it passed both houses; and that on the 25th, at half past eleven in the morning, it received the royal asseut, and the joy it occasioned to the friends of humanity throughout the kingdom was farther heightened by the intelligence that the government of the United States had passed a similar bill. In 1833, slavery may be said tc have been wholly abolished: at this date £20,000,000 were granted by parliament to compensate the existing slave proprietors.

In France the Bourbons proposed to abolish the slave-trade at a distant period. Upon the re-turn of Buonaparte from Elba, however, an ordei was issued for its immediate abolition ; and a decree to the same purpose passed after the expulsion of Napoleon.

SLAVER, n. s., v. n., & v. a. Isl. slafa ; Lat. saliva. Spittle running from the mouth ; drivel : to be smeared with or emit spittle : to smear with spittle.

Should I

Slaver with lips as common as the stairs That mount the capitol ; join gripes with hands Made hard with hourly falsehood as with labour.

Shaktpeare.

Mathiolus hath a passage, that a toad communicates its venom not only by urine, but by the humidity and slaver of its moral h which will not consist with truth.

Browne.

Miso came w'th scowling eyes to deliver a flavering good-morrow to the two ladies. Sidney,

Twitched by the slave, he mouths it more and more, Till with white froth his gown is ilavered o'er.

Dryden.

Of all mad creatures, if the learn'd are right, It is the slaver kills, and not the bite. Pope.

Why must he sputter, spawl, and slaver it, In vain, against the people's favourite? Swift.

SLAVERY is a word of which, though generally understood, it is not easy to give a proper definition. An excellent moral writer has defined it to be ' an obligation {o labor for the benefit of the master, without the contract or consent of the servant.' But, may not he be properly called a slave who has given up his freedom to discharge a debt which he could not otherwise pay, or who has thrown it away at a game at hazard ? In many nations debts have been legally discharged in this manner; and, among the ancient Germans, such was the universal ardor for gaming, that it was no uncommon thing for a man, after having lost at play all his other property, to stake, on a single throw of dice, himself, his wife, and his children.— Tac. de Mor. Germ. That persons

who have thus lost their liberty are slaves, will hardly be denied ; and surely the infatuated gamester is a slave by his own contract. The debtor, too, if he was aware of the law, and contracted debts larger than he could reasonably ex-pect to be able to pay, may justly be considered as having come under an obligation to labor for the benefit of a master with his own consent ; for every man is answerable for all the known consequences of his voluntary actions. This definition of slavery seems to be defective as well as inaccurate. A man may be under an obligation to labor through life for the benefit of a master, and yet that master have no right to dispose of him by sale, or in any other way to make him the property of a third person ; but the word slave, as used among us, always denotes a per-son who may be bought and sold like a beast in the market. Cicero defines slavery to be ' the obedience of a degraded and abject mind, which has no will of its own.' In its original sense, indeed, the word slave was of the same import witli noble, illustrious ; but vast numbers of the people called

Slavi, among whom it had that signification, being, in the decline of the Roman empire, sold by their countrymen to the Venetians, and by them dispersed over all Europe, the word slave came to denote a person in the lowest state of servitude, who was considered as the absolute property of his master.

As nothing can be more evident than that all men have, by the law of nature, an equal right to life, liberty, the produce of their own labor, and the property of their own persons, it is not easy to conceive what can have first led one part of them to imagine that they had a right to enslave another. Inequalities of rank are indeed inevitable in civil society ; and from them results that servitude which is founded in contract, and is of temporary duration. He who has much property has many things to attend to, and must be disposed to hire persons to assist and serve him; while those who have little or no property must be equally willing to be hired for that purpose. And, if the master be kind, and the servant faithful, they will both be happier in this connexion than they could have been out of it. But, from a state of servitude, where the slave is at the absolute disposal of his master in all things, and may be transferred without his own consent from one proprietor to another, like an ox or an ass, happiness must be for ever banished. How then came a traffic so unnatural and unjust as that of slaves to be originally introduced into the world ? The common answer to this question is, that it took its rise among savages, who, in their frequent wars with each other, either massacred their captives in cold blood, or condemned them to perpetual slavery. In support of this opinion it is urged that the Latin word servus, which signifies not a hired servant, but a slave, is derived from servare, to preserve ; and that such men were called servi, because they were captives whose lives were preserved on the condition of their becoming the property of the victor. That slavery had its origin from war we think extremely probable ; nor are we inclined to controvert this etymology of the word servus ; but the traffic in men prevailed almost universally long

before the Latin language or Roman name was heard of: and there is

no good evidence that it began among savages. The word 13JJ in the Old Testament, which in our version is rendered servant, signifies literally a slave, either born in the family or bought with money, in contradistinction to “V3tt?, which denotes a hired servant : and, as Noah makes use of the word 13J7 in the curse which he denounces upon Ham and Canaan immediately after *hf deluge, it would appear that slavery had it2 origin before that event. If so, there can be l.ttle doubt but that it began among those violent persons whom our translators have called giants, though the original word C3ll?S3 literally signifies assaulters of others. Those wretches seem first to have seized upon women, whom they forcibly compelled to minister to their pleasures ; and from this kind of violence the progress was natural to that by which they enslaved their weaker brethren among the men, obliging them to labor for their benefit without allowing them wages. After the deluge the first dealer in slaves seems to have been Nimrod. ‘ He began,’ we are told, ‘ to be a mighty one in the earth, and was a mighty hunter before the Lord.’ He could not, however, be the first hunter of wild beasts ; for that species of hunting must have been practised from the beginning; nor is it probable that his dexterity in the chase, which was then the universal employment, could have been so far superior to that of all his contemporaries as to entitle him to the appellation of the ‘ mighty hunter before the Lord.’ Hence most commentators have concluded that he was a hunter of men; an opinion which they found upon the import of his name, the word Nimrod signifying a rebel. Whatever be in this, there can be little doubt but that he became a mighty one by violence ; for, being the sixth son of his father, and apparently much younger than the other five, it is not likely that his inheritance exceeded theirs either in extent or in population. He enlarged it, however, by conquest ; for it appears from Scripture that he invaded the territories of Ashur the son of Shem, who had settled in Shinar ; and, obliging him to remove into Assyria, he seized upon Babylon, and made it the capital of the first kingdom in the world. As he had great projects in view, it seems to be in a high degree probable that he made bond-servants of the captives whom he took in his wars, and employed them in building or repairing the metropolis of his kingdom ; and hence we think is to be dated the origin of post-deluvian slavery. That it began thus early can hardly be questioned; for we know that it prevailed universally in the age of Abraham, who was born within seventy years after the death of Nimrod. That patriarch had 318 servants or slaves, born in his own house, and trained to arms, with whom he pursued and conquered the four kings who had taken captive his brother’s son. And it appears, from the conversation which took place between him and the king of Sodom after the battle, that both believed the

is indeed evident, from numberless passages of Scripture, that the domestics whom our translators call servants were in those days universally considered as the most valuable part of their master's property, and classed with his flocks and herds. Thus, when the sacred historian describes the wealth of Abraham, he says that ' he had sheep and oxen, and he-asses, and men-servants and maid-servants, and she-asses and camels.' And when Abimelech wished to make some reparation to the patriarch, for the unintended injury he had done him, ' he took sheep and oxen, and men-servants, and women-servants, and gave them unto Abraham, and restored to him Sarah his wife.' The riches and power of Isaac and Jacob are estimated in the very same manner.

Slavery among the ancient Jews. — That the practice of buying and selling servants, thus early begun among the patriarchs, descended to their posterity, is known to every attentive reader of the Bible. It was expressly authorised by the Jewish law, in which are many directions how such servants were to be treated. They were to be bought only of the heathen ; for if an Israelite grew poor and sold himself either to discharge a debt, or to procure the means of subsistence, he was to be treated not as a slave "I3P, but as a hired servant V3<P, and restored to freedom at the year of Jubilee. ' Both thy bondmen and bond-maids,' says Moses, ' shall be of the heathen that are round about you : ot them shall ye buy bondmen and bond-maids. And ye shall take them as an inheritance for your children after you, to inherit them for a possession ; they shall be your bondmen for ever.' Lev. xxv. 39 — 46. Unlimited as the power thus given to the Hebrews over their bond-servants of heathen extraction appears to have been, they were strictly prohibited from acquiring such property by any other means than fair purchase ; ' he that stealeth a man and selleth him,' said their great lawgiver, ' shall be surely put to death.' Lev. xxi. 16.

Slavery among the Germans. — It has been noticed above, that among the ancient Germans it was not uncommon for an ardent gamester to lose his personal liberty by a throw of the dice. This was indeed a strong proof of savage manners ; but the general condition of slaves among these savages seems to have been much better than among the polished Greeks and Romans. In Germany, the slaves were generally attached to the soil, and only employed in tending cattle, and carrying on the business of agriculture ; for the menial offices of every great man's house were performed by his wife and children. Such slaves are seldom beaten, chained, or imprisoned. Sometimes indeed they were killed by their masters in a fit of sudden passion ; but none were

considered as materials of commerce, except those who had originally been freemen, and lost their freedom by play. These, indeed, the successful gamester was very ready to sell, both because he felt them a useless burden, and because their presence continually put him in mind of that state to which a throw of the dice migh^ one day reduce himself. Such is the account which Tacitus gives (De Mor. Germ. 24, 25) of slavery among the ancient Germans.

SLAVERY.

Slavery among the Greeks. — Whilst slavery, in society and the virtue of another, are the effect* a mild form, was permitted among the people of of slavery.' It has been said that in Athens and

God, a much worse kind of it prevailed among the heathen nations of antiquity. With other abominable customs, the traffic in men quickly spread from Chaldea into Egypt, Arabia, and over all the east, and by degrees found its way into every known region under heaven. Of this hateful commerce we shall not attempt to trace the progress through every age and country, but

Rome slaves were better treated than in Sparta: but in the former city their treatment cannot have been good, nor their lives comfortable, where the Athenians relished that tragedy of Euripides in which queen Hecuba is introduced as lamenting that she was chained like a dog at Agamemnon's gale.

Slavery among the Romans — Of tho estima-

shall only take a transient view of it among the tion in which slaves were held at Rome we may Greeks and Romans, and a few other nations. One caa hardly read a book of the Iliad or

form a tolerable notion from the well known fact that one of those unhappy beings was often

Odyssey, without perceiving that, in the age of chained to the gate of a great man's house, to

Homer, all prisoners of war were treated as slaves, and compelled, without regard to rank, sex, or years, to labor for their masters in offices of the vilest drudgery. So universally was their cruel treatment of captives admitted to be the right of the victor, " that the poet introduces

give admittance to the guests invited to the feast. In the early periods of the commonwealth it was customary, in certain sacred shows exhibited on solemn occasions, to drag through the circus a slave, who had been scourged to death holding in his hand a fork in the form of a gibbet. But we

I lector, when taking a tender and perhaps last need not multiply proofs of the cruelty of the

farewell of his wife, telling her, as a thing of course, that, on the conquest of Troy, she would be compelled

To bear the victor's hard commands, or bring The weight of water from Hyperia's spring.

At an early period the Phoenicians had such an established commerce in slaves, that, not satisfied with reducing to bondage their prisoners of war,

Romans to their slaves. If the inhuman combats of the gladiators (see GLADIATORS) admit of any apology, on account of the martial spirit

with which they were thought to inspire the spectators, the conduct of Vedius Pollio must have proceeded from the most wanton and brutal cruelty. See POLLIO. This man threw such slaves as gave him the slightest offence into his fish ponds to fatten his lampreys ; and yet he was

they kidnapped persons who had never offended suffered to die in peace! The emperor, indeed, them, to supply their foreign markets. In the ordered his lampreys to be destroyed, and his Odyssey, b. 14, Ulysses represents himself as ponds to be filled up; but we hear of no other

punishment inflicted on the savage master. Till the reign of Augustus, the depositions of slaves were never admitted into the courts of judica-

having narrowly escaped a snare of this kind laid for him by a false Phoenician. Such were the manners of the Greeks in the heroic age ;

nor were they much improved at the periods of ture ; and even then they were received only when

greater refinement. Philip IT. of Macedon, persons were accused of treasonable practices.

having conquered the Thebans, not only sold his The origin of slavery in Rome was the same as

captives, but even took money for permitting the in other countries. Prisoners of war were re—

dead to be buried ; and Alexander, who had duced to that state, as if they had been criminals.

more generosity than Philip, afterwards razed The dictator Camillus, one of the most accom—

Thebes, and sold the inhabitants, men, women, plished generals of the republic, sold his Etru—

and children, for slaves. See MACEDON. This rian captives to pay the

Roman ladies for the

cruel treatment of a brave people may indeed jewels which they had presented to Apollo.

have proceeded from the avarice of the conqueror, but more from the momentary resentment of a man who was savage and generous by turns, and who had no command of his passions. But, from the manner in which the Spartans behaved to their slaves, there is little reason to

Fabius, whose cautious conduct saved his country when Hannibal was victorious in Italy, having subdued Tarentum, reduced 30,000 of the citizens to slavery, and sold them to the highest bidder. Coriolanus, when driven from Rome, and fighting for the Volsci, scrupled not to make slaves of

imagine, that, had they received from the The-his own countrymen ; and Julius Caesar, amon

bans the same provocation with Alexander, they would have treated their captives with greater lenity. ‘ At Sparta,’ says the late hu-mane and elegant Dr. Beattie, ‘ slaves were treated with a degree of rigor that is hardly conceivable; although to them, as their husbandmen and artificers, their proud and idle masters were indebted for all the necessaries of life. The Lacedemonian youth, trained up in the practice of deceiving and butchering those poor men, were from time to time let loose upon them, to show their proficiency in stratagem and massacre. And once, without any provocation, and merely ror their own amusement, we are told that they murdered 3000 in one night, not only with the connivance of law, but by its avowed permission.

whose faults wanton cruelty has never been reckoned, sold at one time 53,000 captives for slaves. Nor did the slaves in Rome consist only of foreigners taken in war. By one of the laws of the XII tables, creditors were empowered to seize their insolvent debtors, and keep

them in their houses, till, by their services or labor, they had discharged the sum they owed : and in the beginning of the commonwealth they were authorised to sell such debtors, and even to put them to death. The children of slaves were the property not of the commonwealth, or of their own parents, but of their masters; and thus was slavery perpetuated in the families of such uri happy men as fell into that state, whether through the chance of war or the cruelty of a sordid cre-

Such, iu promoting the happiness of one part of ditor. The consequence was, that the number of

riaves belonging to the rich patricians was almost incredible. Cams Caecilius Isidorus, who died about seven years before the Christian era, left to his heir 4116 slaves; and if any of those wretched creatures made an unsuccessful attempt to regain his liberty, or was even suspected of such a design, he was marked on the forehead with a red hot iron. In Sicily, during the most flourishing periods of the commonwealth, it seems to have been customary for masters to mark their slaves in this manner; at least such was the practice of Damophilus, who, not satisfied with this security, shut up his slaves every night in close prisons, and led them out like beasts in the morning to their daily labor in the field. Hence arose the servile war in Sicily. Though many laws were enacted by Augustus and other philanthropic emperors to diminish the power of creditors over their insolvent debtors ; though the influence of the mild spirit of Christianity tended much to meliorate the condition of slaves, even under Pagan masters; and though the emperor Adrian made it capital to kill a slave without a just reason ; yet this infamous commerce prevailed universally in the empire for many ages after the conversion of Constantine to the Christian religion. It was not completely abolished even in the reign of Justinian ; and inlnany countries, which had once been provinces of the empire, it continued long after the empire itself had fallen to pieces.

Slavery, ancient and modern, in Britain. — The Anglo-Saxons, after they were settled in this island, seem not to have carried on that

traffic so honorably as the Germans. By a statute of Alfred the Great, the purchase of a man, a horse, or an ox, without a voucher to warrant the sale, was strictly forbidden. That law was, doubtless, enacted to prevent the stealing of men and cattle; but it shows us that, so late as the ninth or tenth century, a man, when fairly purchased, was, in England, as much the property of the buyer as the horse on which he rode, or the ox which dragged his plough. In the same country, now so nobly tenacious of freedom and the rights of man, a species of slavery similar to that which prevailed among the ancient Germans subsisted even to the end of the sixteenth century. This appears from a commission issued by queen Elizabeth in 1574, for enquiring into the lands and goods of all her bondmen and bond-women in the counties of Cornwall, Devon, Somerset, and Gloucester, in order to compound with them for their manumission, that they might enjoy their lands and goods as freemen. In Scotland there certainly existed an order of slaves, or bondmen, who tilled the ground, were attached to the soil, and with it were transferrable from one proprietor to another, at a period so late as the thirteenth century ; but when or how those villains, as they were called, obtained their freedom, seems to be unknown to every lawyer and antiquary of the present day. Colliers and sailers were, in the same country, slaves till within these forty years, that they were manumitted by an act of the British legislature, and restored to the rights of freemen and citizens. See DEWAR. Before ;hat period the sons of cottiers could follow no

business but that of their fathers ; nor were they at liberty to seek employment in any other mines than those to which, they were attached by birth, without the consent of the lord of the manor, who, if he had no use for their services himself, tranferred them by a written deed to some neighbouring proprietor.

Slavery of the ancient Africans. — That the savage nations of Africa were at any period of history exempted from this opprobrium of our nature, which spread over all the rest of the world, the enlightened reader will not suppose. It is indeed in that vast country that slavery has in every age appeared in its ugliest form. About the era of the Trojan war, a commerce in slaves was carried on between Phoenicia and Lybia : and the Carthaginians, who were a colony of Phoenicians, and followed the customs, manners, and religion of their parent state, undoubtedly continued the Tyrian traffic in human flesh with the interior tribe* of Africa. Of this we might rest assured, although we had no other evidence of the fact than what results from the practice of human sacrifices, so prevalent in the republic of Carthage. The

genuine instincts of nature are often subdued by dire superstition,' but they cannot be wholly eradicated ; and the rich Carthaginian, when a human victim was demanded from him to the gods, would be ready to supply the place of his own child by the son of a poor stranger, perfidiously purchased at whatever price. That this was, indeed, a very common practice among them, we learn from the testimony of various hsitorians, who assure us that when Agathocles the tyrant of Syracuse had overthrown their generals, Hanno and Bomilcar, and threatened Carthage itself with a siege, the people attributed their misfortunes to the just anger of Saturn for having been worshipped for some years, by the sacrifices of children meanly born, and secretly bought, instead of those of noble extraction. These substitutions of one offering for another were considered as a profane deviation from the religion of their forefathers; and, therefore, to expiate the guilt of so horrid an impiety, a sacrifice of 200 children of the first rank was on that occasion made to the bloody god. As the Carthaginians were a commercial people we cannot suppose that they purchased slaves only for sacrifices. They undoubtedly condemned many of their prisoners of war to the state of servitude, and either sold them to foreigners, or distributed them among their senators and the leaders of their armies. Hanno, who endeavoured to usurp the supreme power in Carthage whilst that republic was engaged in war with Timoleon in Sicily, armed 20,000 of his slaves to carry his nefarious purpose into execution ; and Hannibal, after his decisive victory at Cannae, sold to the Greeks many of his prisoners whom the Roman senate refused to redeem. That illustrious commander was indeed more humane, as well as more politic, than the generality of his countrymen. Before his days it was customary with the Carthaginians either to massacre their captives in cold blood, that they might never again bear arms against them, or to offer them in sacrifice as a grateful acknowledgment to the gods; but

this was not always done even by their most superstitious or most unprincipled leaders. Among other rich spoils which Agathocles, after his victory, found in the camp of Hanno and Bomilcar, were 20,000 pairs of fetters and manacles, which those generals had provided for such of the Sicilian prisoners as they intended to preserve alive and reduce to a state of slavery. With the ancient state of the other African nations we are but very little acquainted. All the African states were in

alliance with one or other of those rival republics ; and, as the people of those states appear to have been less enlightened than either the Romans or the Carthaginians, we cannot suppose that they had purer morals, or a greater regard for the sacred rights of man, than the powerful nations by whom they were either protected or oppressed. They would, indeed, .insensibly adopt their customs ; and the ready market which Marius found for the prisoners taken in Capsa shows that slavery was then no strange thing to the Numidians. It seems indeed to have prevailed through all Africa, from the very first peopling of that unexplored country ; and we doubt if in any age of the world the unhappy negro was absolutely secure of his personal freedom, or even of not being sold to a foreign trader.

Slavery of the Negroes, and modern Africa. — It is the common opinion that the practice of making slaves of the negroes is of a very modern date ; that it owes its origin to the incursions of the Portuguese on the western coast of Africa; and that, but for the cunning or cruelty of Europeans, it would not now exist, and would never have existed. But all this is said by some writers to be a complication of mistakes. Mr. Whitaker, particularly, in his Review of Gibbon's Roman History, is thought to have proved, with a force of evidence which admits of no reply, that from the coast of Guinea a great trade in slaves was carried on by the Arabs some hundreds of years before the Portuguese embarked in that traffic, or had even seen a woolly-headed negro. Even the wandering Arabs of the desert, who never had any friendly correspondence with the Christians of Europe, have from time immemorial been served by negro slaves. ' The Arab must be poor indeed,' says M. Saugnier, ' not to have at least one negro slave. Their wives, who are captive negresses, do all the domestic work, and are roughly treated by the Arabs. Their children are slaves like them, and put to all kinds of drudgery.' Surely no man, who is not completely prejudiced, will pretend that those roving tribes of Arabs, so remarkable for their independent spirit and attachment to ancient customs, learned to enslave the negroes from the Europeans ! They seem to have, without interruption, continued the practice of slavery from the days of their great ancestor Ishmael; and it seems evident that none of the European nations had ever seen a woolly-headed negro till the year 1100, when the crusaders fell in with a small party of them near the town of Hebron in Judea, and were so struck with the novelty of their appearance, that the army burst into a general fit of laughter. Long before the crusades, however, the natives of Guinea had been sold in foreign countries. In 651 the Mahometan Arabs

in Egypt so harassed the king of Nubia or Ethiopia, who was a Christian, that he agreed to send them annually, by way of tribute, a vast number of Nubian or Ethiopian slaves into Egypt Such a tribute, at that time, was more agreeable to the caliph than any other, ‘ as the Arabs then made no small account of those slaves.’ This shows that a commerce in bond-servants could not then be a new branch of trade either to the Arabs or the Ethiopians ; but the vast number which the Ethiopian monarch was now compelled to furnish every year induced him to feed this great drain upon his subjects from the natives of the neighbouring countries. He therefore brought the blacks of Guinea, for the first time, into the service and families of the east; and the biaves which he paid in tribute to the Arabs, whether derived from Ethiopia, the Mediterranean regions, or the shores of the Atlantic, were all called Ethiopians, from the country by which they were conveyed into Egypt. ‘ At this time, therefore,’ according to Mr. Whitaker, ‘ began that kind of traffic in human flesh,

‘ Which spoils unhappy Guinea of its sons.’

But, as a female Ethiopian slave is mentioned in the Eunuch of Terence, we suspect that Guinea was occasionally ‘ spoiled of its sons’ at a much earlier period. At any rate, from the observations made by the European travellers who first penetrated into that continent, it appears undeniable that slavery must have prevailed from time immemorial among such of the tribes as had never carried on any commerce with foreign nations. In fact, this kind of commerce prevailed in Africa so early as in the reign of Jugurtha. That it was not introduced among the negroes either by the Arabs or by the Portuguese appears still more evident from the behaviour of the Dahomans at the conquest of Whidah, and from the manner in which the people of Angola, at the earliest stage of their foreign trade, procured a supply of slaves for the Portuguese market. The greater part of the slaves, whom the Ango-lans exported from St. Paulo de Loanda, were brought from interior countries, some hundreds of leagues distant, where they could not have been regularly purchased, had that commerce been till then unknown. The Dahomans, till 1727, had never seen awhile man; and when their prince and his army first met with some Europeans, in the town of Sabi, they were so shocked at their complexion and their dress that they were afraid to approach them, and could not be persuaded that they were* men till they heard them speak, and were assured by the Whidanese that these were the merchants who purchased all the slaves that were sold in Guinea. We are assured by Snelgrave, who was then in the army, that those people treated their captives with such horrid cruelty as was shocking to the natives of the sea coast. A great part of their prisoners were sacrificed

to their gods, or eaten by the soldiers ; and when our author expressed to a colonel of the guard some surprise that a prince so enlightened as the sovereign of Dahomy should sacrifice so many men whom he might have sold to great advantage, he was told that it had been the custom of their nation, from time immemorial, to offer, after victory, a certain

number of prisoners to the gods ; and that they selected the old men for victims, because they were of less value at market, and more dangerous from their experience than the young men. One of the kings of Dahomy slaughtered at once not only all the captives taken in war, but also 127 prisoners of different kinds, that he might have a sufficiency of skulls to adorn the walls of his palace ; though at the very time of that massacre he knew that there were six slave ships in the road of Whidah, from which he could have got for every prime slave a price little short of £30 sterling. — Dalzel's History of Dahomy. These *acts, and others which the reader will find deailed in the Modern Universal History, vol. xiii., by writers who were at the greatest oains to procure authentic information — who were neither biassed by interest nor blinded by enthusiasm, and who held the infamous traffic in utter abhorrence, are alleged as proving, beyond the possibility of doubt, that slavery must have prevailed among all the negro nations before they were visited either by the Portuguese or by the Arabs. These two nations may indeed have been the first who dragged the unhappy negro from his native continent, and made his slavery doubly severe, by compelling him to labor, without his own consent, for masters whom he hardly considered as human beings. On this commerce, and the dreadful cruelty with which it has been carried on to the present day, it is impossible to reflect without horror: see our article SLAVE-TRADE: and there may be some consolation, however small, in'believing that its original authors were not Europeans. The purchase of Guinea blacks for slaves, by foreign

nations, does seem to have commenced ages before the Portuguese had laid that country open to the inter-coui'se of Europe. Even after they had made many incursions into it, the inhabitants were as regularly purchased for slaves by some of the adjoining states as they are now by the maritime Europeans. In the French West India islands, before the late revolution in the mother country, the condition of the negro slaves was better than that of the bond men among the ancient Germans.— See Ramsay's Essay, sect. V. SLAUGHTER, re. s. & v. a. ~\ Saxon, on-SLAUGH'TERHOUSE, n. s. (flaunt, from

SLAUGH'TERMAN, ˆflaejan, j-le—

SLAUGHTEROUS, adj. J jan, to strike

or ki'l. Massacre; destruction by the sword: to massacre, slay : a slaughterhouse is applied particularly to the building in which beasts are slain by a butcher.

Sinful Macduff, They were all struck for thee ! Not for their own demerits, but for mine, Fell slaughter on their souls. Shakspeare. Macbeth.

Your castle is surprised, your wife and babes Savagely tlaughtered. Id.

Away with me, all you whose souls abhor The' uncleanly savour of a slaughterhouse ; For I am stifled with the smell of sin. Shakspeare.

The mad mothers with their howls confused Do break the clouds ; as did the wives of Jewry, At Herod's bloody hunting slaughterman. Id.

I have supt full with horrours : Direness familiar to my slaughterous thoughts Cannot once start me. Id. Macbeth.

On each hand slaughter and gigantick deeds.

Mitiou

Of warlike engines he was author, Devised for quick dispatch of slaughter. Hudibrat,

The pair you see,

Now friends below, in close embraces join ; But, when they leave the shady realms of night, With mortal hate each other shall pursue : What wars, what wounds, what slaughter shall en-sue ! Dryden. SLA

VI (from slab, Sclavonic, *i.e.* illustrious), the ancient inhabitants of Sclavonia.

SLAY, v. a. I Preterite slew ; part. pass. SLAY'ER, n. s. j slain. Sax. j-lean ; Goth, sla-han ; Swed. sla. To kill ; butcher ; put to death : a killer; destroyer; murderer.

Slay and make ready. Gen. xliii. 16.

Wrath killeth the foolish man and envy slayeth the silly one. Job v. 2.

The slain of the Lord shall be many.

haiah Ixvi. 16.

I saw under the altar the souls of them that were slain for the word of God. Kev. vi. 2.

Witness the guiltless blood poured oft on ground ; The crowned often slain, the slayer crowned.

Faerie Queene. Her father's brother

Wo aid be her lord ; or shall I say her uncle 1 Or he that slew her brothers and her uncle ?

Shakspeare. Richard III. Tyrant, shew thy face :

If thou be'st slain, and with no stroke of mine, My wife and children's ghosts will haunt me still.

Shakspeare.

They slew those that were slayers of their country* men. Abbot.

The king grew vain, Fought all his battles o'er again ; And thrice he routed all his foes, and thrice he slew

the slain. Dryden.

The slayer of himself yet saw I there ; The gore congealed was clotted in his hair : With eyes half closed and gaping mouth he lay, And grim as when he breathed his sullen soul away.

He must by blood and battle's power maintain, And slay the'monarchs ere he rule the plain. Prior.

SLEAFORD, NEW, a flourishing market town of Lincolnshire, pleasantly situated on the Slea, which rises in the vicinity, and soon joins the Witham. The church is a handsome, spacious, Gothic structure. It appears to have been built in the year 1271 by Roger Blunt and Roger Brickham of Sleaford, merchants. It consists of a chancel, nave, transept, and two aisles, with a tower crowned by a spire, which rises to the height of 144 feet. In the chancel are several monuments to the family of Carr, by one of whom a free school was erected and endowed in 1603, and also' an hospital for twelve poor men. Opposite the west front is the market-place. There was once a castle at Sleaford, built in the year 1112 by Alexander, bishop of Lincoln. This castle was standing in Leland's time, and is described by him ; it is now levelled with the ground. Many Roman coins have been found here of the family of Onstantine; and from this and other circumstances Dr. Stukely

SLEAVE, n. s. Of this word I know not well the meaning : sleave silk is explained by Gould-man, floccus sericus, a lock of silk ; and women still say sleave the silk, for untwist it. Ainsworth calls a weaver's shuttle or reed a slay. To slay is to part a twist into single fibres. — Dr. Johnson. The doctor's idea is correct : the Goth, and Swed. sla has been both applied to the weaver's reed, and to beat the woof.

I on a fountain light, Whose brim with pinks was platted ;

The banks with daffodillies dight With grass like sleave was matted.

Drayton. Cynthia.

SLED, n. ». i Saxon, fleeS ; Goth, and

SLED’DED, adj. * Swed. sited; Belg. sledde ,

SLEDGE, n. s. j Goth, and Isl. sleggia. A low carnage without wheels : a large heavy hammer • the two noun substantives have been confounded

The painful smith, with force of fervent heat, The hardest iron soon deth mollify,

That with his heavy sledge he qan it beat, And fashion to what he it list apply. Spenser.

So frowned he once when in an angry parle, He smote the sledded Polack on the ice. Shakspeare

The tkd, the tumbril, hurdles, and the slail, These all must be prepared. Dryden

It would follow that the quick stroke of a light hammer should be of greater efficacy than any softer and more gentle striking of a great sledge.

., Willdns’s Mathematical Magiclt.

In Lancashire they use a sort of sledge, made with thick wheels, to bring their marl out, drawn with one horse. Mortimer’s Husbandry.

The uphand sledge is used by under workmen, when the work is not of the largest, yet requires help to batter and draw it out : they use it with both th<sir hands before them, and seldom lift their hammers higher than their head. Moxon.

SLEDGE ISLAND, a small island in the North Pacific Ocean, on the north-western shore of America. It is about four leagues in circuit. Captain Cook says, ‘ The surface of the ground is composed chiefly of large loose stones, that are in many places covered with moss and other vegetables, of which there were above twenty or thirty different sorts, and most of them in flower. But I saw neither shrub nor tree, either upon the island, or on the continent. On a small low spot, near the beach where we landed, was a good deal of wild purslain, pease, long-wort, &c. ; some of which we took on board for the pot. We saw one fox ; a few plovers, and some other small birds; and we met with some decayed huts that were partly built below ground. People had lately been on the island : and it is pretty clear that they frequently

visit it for some purpose or other, as there was a beaten path from the one end to the other. We found, a little way from the shore where we landed, a sledge, which occasioned this name being given to the island. It seemed to be such a one as the Russians in Kamtschatka make use of to convey goods from place to place, over the ice or snow. It was ten feet long, twenty inches broad, and had a kind of rail-work on each side, and was shod with bone. The construction of it was admirable, and all the parts neatly put together; some with wooden pins, but mostly with thongs or lashings of whalebone, which made me think

it was entirely the workmanship of the natives Long. 193° 57' E. lat. 64° 30' N.

The SLEDGE is to be used with both hands ; of this there are two sorts, the up hand sledge, described by Moxon; and the about sledge, which is used for battering or drawing out the largest work, and is held by the handle with both hands, and swung round over their heads, at their arms' end, to strike as hard a blow as possible.

The SLEDGE is used for the conveyance of very weighty things, as huge stones, bells, &c. The sledge for carrying criminals, condemned for high treason, to execution, is called hurdle. The Dutch have a kind of sledge on which they can carry a vessel of any burden by land. It consists of a plank of the length of the keel of a moderate ship, raised a little behind, and hollow in the middle; so that the sides go a little aslope, and are furnished with holes to receive pins, &c. The rest is quite even.

SLEEK, n. s. & v. a. ~\ Goth, and Swed.

SLEEK'LY, adv. ˆslek; Belgic, sleych.

SLEEK'STONE, n. s. j Smooth; glossy ; soft; to make so : the adverb corresponding .- sleek-3tone means a stone used for this purpose.

How eagerly ye follow my disgrace, As if it fed ye ; and how sleek and wanton Y' appear in ev'ry thing may brinp; my ruin.

Shakspeare.

Gentle, my lord, sleek o'er your rugged looks ; Be bright and jovial 'mong your guests to-night. Id.

Let their heads be sleekly combed, and their blue coats brushed. Id. Taming of the Shrew.

What time the groves were clad in green, The fields all drest in flowers,

And that the s/eefc-haired nymphs were seen To seek them summer bowers. Drayton.

Yet are the men more loose than they, More kembed, and bathed, and rubbed, and trimmed, More sleeked, more soft, and slacker limbed.

Ben Jonson. She does sleek

With crumbs of bread and milk, and lies a-nights In her neat gloves. Id. Catiline.

The purest paste-board with a sleekstone rub smooth, and as even as you can. Peacham.

As in gaze admiring, oft he bowed His turret crest, and sleek enamelled neck, Fawning. Milton's Paradise Lost.

By dead Parthenope's dear tomb, And fair Ligea's golden comb, Wherewith she sits on diamond rocks Sleeking her soft alluring locks. Id.

The persuasive rhetorick

That sleeked his tongue, and won so much on Eve So little here, nay lost. Id.

A sheet of well sleeked marble paper did not cast any of its distinct colors upon the wall. Boyle.

So sleek her skin, so faultless was her make, Ev'n Juno did unwilling pleasure take To see so fair a rival. Dryden.

A cruise of fragrance formed of burnished gold, Odour divine ! whose soft refreshing streams Sleek the smooth skin, and scent the snowy limbs.

Pope.

SLEEP, v. n. & n. s.~) Sax. j-leepan ; Goth.

SLEEP'ER, n. s. I slepan ; Belg. slaepen.

SLEEP’ILY, adv. 1 To take rest, by sus—

SLEEP’INESS, n. s. {“‘pension of many of

SLEF.P’LESS, adj. | the mental and corpo

SLEEP’Y, adj. ‘) ral powers : hence to

SLEEP.

rest in any way ; be idle ; inattentive ; live .thoughtlessly ; be dead : the noun substantive and all the derivatives follow these senses.

If the man be poor, thou shall not sleep with his pledge. Deuteronomy.

If we believe that Jesus died and rose again, even so them also which sleep in Jesus will God bring with him. 1 Thess.

Methou’ght I heard a voice’cry , Sleep no more ! Macbeth doth murder sleep ; the innocent skep ; Sleep, that knits up the ravelled sleeve of care ; The birth of each day’s life, sore labour’s bath, Balm of hurt minds, great nature’s .second course, .Chief nourisher in life’s feast.

Shaftspeare. Macbeth.

Steel, if thou turn thine edge, or cut not out the burley-boned clown in chines of beef ere thou sleep in thy sheath, I beseech Jove on my knees thou mayest be turned into hobnails. Id. Henry VI. • How sweet the moonlight sleeps upon this bank ! Here will we sit, and let the sounds of musick Creep in our ears. Id. Merchant of Venice.

Heaven will one day open The king’s eyes, that so long have slept upon This noble bad man. Id. Henry VIII.

You ever

Hare wished the sleeping of this business, never Desired it to be stirred. Id.

Sound, musick ; come, my queen, take hand with

me, And rock the ground whereon these sleepers be.

Shakspeare. What's the business,

That such an hideous trumpet calls to parley The ileepers of the house 1 Id. Macbeth.

Why did you bring these daggers from the place 1 They must lie there. Go, carry them, and smear The sleepy grooms with blood. Id.

I rather chuse to endure the wounds of those darts which envy casteth at novelty, than to go on safely and sleepily in the easy ways of ancient mistakings.

Raleigh.

Cold calleth the spirits to succour, and therefore they cannot so well close and go together in the head, which is ever requisite to sleep. And, for the same cause, pain and noise hinder sleep ; and darkness furthereth sleep. Bacon.

Let penal laws, if they have been sleepers of long, or if grown unfit - for the present time, be by wise judges confined in the execution. Id.

That sleeps might sweetly seale His restfull eyes, he entered, and in his bed In silence took. Chapman.

Peace, good reader ! do not weep ; Peace, the lovers are asleep : •They, sweet turtles ! folded lie In the last knot that love could tie. Let them sleep, let them sleep on, 'Till this stormy night be gone, ;And the eternal morrow dawn ; Then the curtains will be drawn, And they waken with that light Whose day shall never sleep in night. Crashaw.*

Let such bethink them, if the sleepy drench Of that forgetful lake benumb not still. Millcn.

The field

To labour calls us, now with sweat imposed," Though after sleepless night. Id. Paradise Lost.

The giddy ship, betwixt the winds and tides Forced back and forwards, in a circle rides, Stunned with the different blows ; then shoots

amain, Till co.unterbuffed she stops, and sleeps again.

Dryden.

She waked her sleepy crew, And rising hasty, took a short adieu. Id.

Hermes o'er his head in air appeared, His hat adorned with wings disclosed the god, And in his hand the deep compelling rod. Id.

Night is indeed the province of his reign , Yet all his dark exploits no more contain Than a spy taken, and a sleeper slain. Id.

Infants spend the greatest part of their time in sleep, and are seldom awake but when hunger calls for the teat, or some pain forces the mind to perceive it. Locke.

Those who at any time sleep without dreaming, can never be convinced that their thoughts are for four hours busy without their knowing it. Id.

He must be no great eater, drinker, nor sleeper, that will discipline his senses, and exert his mind ; every worthy undertaking requires both. Grew.

A person is said to be dead to us, because we can-not raise from the grave ; though he only sleeps unto God, who can raise from the chamber of death.

Ayliffe's Parergon.

We sleep over our happiness, and want to be roused into a quick thankful sense of it. Atterbury.

He would make us believe that Luther in these actions pretended to authority, forgetting what he had sleepily owned before. Id.

Watchfulness precedes too great sleepiness, and is> the most ill-boding symptoms of a fever.

Arbuthnut.

While pensive poets painful vigils keep, Sleepless themselves to give their readers sleep.

Pope.

Silence ; coeval with eternity, Thou wert ere nature first began to be, 'Twas one vast nothing all, and all slept fast in thee.

Id.

I sleeped about eight hours, and no wonder, for the physicians had mingled a skepy potion in the wine. Gulliver.

SLEEP, in physiology, is that state of the body in which, though the vital functions continue, the senses are not affected by the ordinary impressions of external objects. See DREAMS, MEDICINE, Index, and PHYSIOLOGY.

‘ General sleep,’ says Bichat, ‘ is the assemblage of particular sleeps. It is derived from that law of the animal life which causes in its functions a constant succession of periods of activity, and times of intermission ; a law which pointedly distinguishes it from the organic life. Hence sleep influences the latter only in an indirect way, while it exerts its full operation on the former.’ There is something very just and original, as it seems to us, in this notion, we therefore continue our extract.

‘ Numerous varieties may be remarked in this periodic state, to which all animals are exposed. The most complete sleep is that in which the whole external life, that is, the senses, perception, imagination, memory, judgment, locomotion, and the voice, are suspended; the least perfect affects only a single organ. We see numerous gradations between these two extremes ; sometimes the senses, perception, locomotion, and the voice, are suspended ; imagination, me-mory, and judgment remaining active; sometimes locomotion and the voice are added to the latter. Such is the sleep which is agitated by dreams. A portion of the animal life still continues active, having escaped the torpidity in which the rest is plunged. Three or four senses

only may have passed into the state of repose, and ceased to be influenced by external objects ; then that kind of somnambulism occurs in which to the action of the brain, the muscles, and the larynx, are added those of hearing and touch, often in a very distinct form.

‘ Let us then no longer regard sleep as a constant state, invariable in its phenomena. Scarcely do we sleep twice together in the same way ;

a multitude of causes modifies this condition of our being, by applying to a greater or smaller portion of the animal life the general law of intermittent action. The various modifications must be characterised by the functions, which are affected in different ˆinstances. The principle is the same throughout, from the simple relaxation, which follows the contraction of a voluntary muscle, to the entire suspension of the animal life. Sleep is in all cases a consequence of that general law of intermission which exclusively characterises this life, but the application of which to the various external functions varies infinitely. This explanation of sleep is undoubtedly very different from those narrow systems which place its cause in the brain, the heart, the large vessels, the stomach, &c., and thus present an insulated phenomenon, often illusory, as the basis of one of the great modifications of life.

‘ Why do light and darkness, in the natural order of things, correspond respectively to the activity and repose of the external functions ? Because, during the day, the animal is surrounded with a multitude of exciting causes ; a thousand things exhaust the powers of the sentient and locomotive organs, fatigue them, and thus prepare a relaxation, which is favored at night by the absence of all stimuli. Thus, in the modern way of life, in which this order is partly inverted, we assemble round us, during the night, various stimuli, which prolong the state of watchfulness, and make the intermission of the animal life coincide with the first hours of the dawn, favoring it by removing all circumstances that might produce sensations. By multiplying around them causes of excitation, we can, for a certain time, prevent the organs of the animal life from obeying the law of intermission; but they yield at last, and nothing, after a certain time, can suspend its influence. Exhausted, by continued exertion, the soldier sleeps at the side of the cannon, and the criminal even amid the tortures of the question.

‘ Let us, however, distinguish natural sleep, the consequence of fatigue of the organs, from that which is caused by affections of the brain, as apoplexy, or concussion. In the latter case the senses are awake, they receive impression?, and are affected by them as usual ; but these impressions cannot be perceived by the disordered brain, and we, consequently, are not conscious of them. , In sleep, on the contrary, the intermission of action affects the senses as much, and even more than the brain.’ — Recherches Physiol. sur la Vie et la Mort, p. 34 — 37.

Sound sleep is much less common than that which is interrupted by dreams, in which a series of sensations, perceptions, and reflections, passes

through the mind, as in the waking state.' We are conscious of the same kind of transactions as occupy our waking hours ; we see, hear, walk, talk, and perform all the customary offices of life. The mind reasons, judges, performs volition, and experiences the various affections, as love, ha-tred, indignation, anxiety, fear, joy, even in a much more lively degree, than when they are excited by their real causes. In dreaming, as in the soundest sleep, the action of the external senses is suspended ; but the internal faculties are active in greater or less number. Volition takes place, but the muscles do not obey the will. That dreaming is a less sound species of sleep appears from the familiar fact, which has probably been observed by every individual ; *viz.* that the first sleep is much freer from it than the second. We retire to rest, fatigued by the exertions of the day, and sleep soundly for five or six hours ; we wake, and then fall asleep again towards the morning, and dream the whole time of this second sleep. Mailer, who mentions that he had attended much to his dreams, observes, that in perfect health he remembered only the sensation of flying through the air, conceiving himself susoended above the earth and carried to a distance.

The order of the images and reflections, which pass through our minds in sleep, and the laws of their succession and connexions, are the same as when we are awake. We must observe, however, that these internal processes now go on by themselves, and are not corrected by that reference to external objects, and that exercise of »he external senses, which takes place in the waking state. Thus we see a friend long dead, without being aware that he is not alive ; and gross inconsistencies and absurdities take plact. without being remarked. The great activity of the imagination and judgment, in the act of dreaming, is evident from the nature of many dreams. ' Of-ten,' says Haller, ' in my dreams, I seem to read books, printed poems, histories of travels, &c. ; and I even see the plants of distant regions, suited to their climates.' Others solve problems, write, make verses, &c. The reasonings which are carried on in sleep, the speeches whivih are made, &c., are often more quickly and easily performed than when we are awake. See DREAMS.

Some horses sleep standing; and the lowe. jaw is maintained elevated in us during sleep. The hand is often raised when any stimulus is applied to the body, although it may not be strong enough to interrupt sleep. The fact of children expelling their urine, when the pot is brought to them, has been already noticed. Many persons laugh, weep, sigh, and talk in their sleep : the words are indeed generally indistinctly pronounced, and the sentences incomplete.

Somnambulism differs from these only in de-gree. The sleep-walker executes the voluntary motions, which arise out of the mental processes carried on in sleep. It would be endless to recount the particular cases belonging to thid subject. It is sufficient to mention that individuals rise from bed asleep, and with their eyes

closed, and not only walk about the room or house, going up or down stairs, finding their way readily, and avoiding obstacles, but pass safely through very dangerous places, as windows, or on the roofs of houses. They execute, too, still more difficult feats. They dress themselves, go out of doors, light a fire, undress and bathe, saddle and bridle a horse, ride, write, make verses, and execute all the actions of life correctly, and even sometimes acutely. Daring this time they are asleep ; the eyes are shut, or do not see if open ; the iris is not irritable. When awakened, which is sometimes not easily effected, they do not remember what they have done.

The proportion of time passed in sleep differs in different individuals, and at different ages. From six to nine hours may be reckoned about the average proportion. Men of active minds, whose attention is engaged in “a series of interesting employments, sleep much less than the listless and indolent ; and the same individual will spend fewer hours in this way, when strongly interested in any pursuit, than when the stream of life is gentle and undisturbed. The great Frederic of Prussia, and John Hunter, who devoted every moment of their time to the most active employments of body and mind, generally took only four or five hours sleep. A rich and lazy citizen, whose life is merely a chronicle of ‘ breakfasts, dinners, suppers, and sleep, will slumber away ten or twelve hours daily. When any subject strongly occupies us, it keeps us awake in spite of ourselves. These phenomena are consistent with what we have already said ; the animal organs, when the period of their intermission and repose has arrived, are kept in activity by new and unusual causes of excitation, and thus the ordinary period of sleep may be passed over, and its ordinary quantity much diminished. When a person, who has thus been kept long awake

by the occupation of his mind with important and urgent subjects, at last falls asleep, the slightest irritation calls up in the fancy all the trains of thought which have just occupied us, and sets at work again all the internal machinery which has hardly yet become quiet; the sleep, under such circumstances, is imperfect, and much disturbed by dreaming.

The ordinary period of sleep may be protracted by unusual excitation ; but the effect is lost after a certain time, and sleep comes on under circumstances which appear at first most unfavorable to it. An eye-witness -reports, that some boys, completely exhausted by exertion, fell asleep amid all the tumult of the battle of the Nile ; and other instances are known of soldiers sleeping amid discharges of artillery, and all the tumult of war. Couriers are known to sleep on horseback, and coachmen on their coaches. A gentleman, who saw the fact, reported to the writer of this article that many soldiers, in the retreat of Sir John Moore, fell asleep on the march, and continued walking on. Even stripes and tortures cannot keep off sleep beyond a certain time; but it then indicates the greatest exhaustion, and consequently affords an unfavorable prognosis. Noises at first prevent us from sleeping, but their influence soon -ceases, and VOL. XX.

persons rest soundly in the most noisy situations. The proprietor of some vast iron-works, who slept close to them, through the incessant din of hammers, forges, and blast-furnaces, would awake if there was any interruption during tne night : and a miller, being very ill and unable to sleep, when his mill was stopped on this account, rested well and recovered quickly when the mill was set a going again.

Hunger will prevent sleep ; and cold affecting a part of the body has the same effect. These causes operated on the unfortunate women who lived thirty-four days in a small room overwhelmed by snow, and with the slightest sustenance : they hardly slept the whole time. (Somis Ragionamento sopra un fatto avvenuto in Ber-gemoletto, &c., p. 74.) Indigestion also, and various bodily affections, produce sleeplessness.

One of the latest theories that has appeared upon this subject has been offered to the world by the late Dr. Mason Good in a note appended to his translation of Lucretius, b. iv". v. 936, and on this occasion, as well as on account of what we believe to be its perfectly satisfactory result, we are glad in having an opportunity of presenting it to onr readers : the more especially as it undertakes to unfold the very obscure and hitherto perplexing doctrine of dreaming. It is offered to us for the

sake of conciseness under the following lemmata: —

‘ I. All the fibrils of the nervous system be-come futigued, exhausted, and torpid, in proportion to the len»th and violence of their exertion, and recover their power alone by rest. The weariness and debility of the muscles pf the arms and legs, after extreme exercise, or exercise to which they have not been accustomed, may be adduced as a sufficient proof of this position. The nervous fibrils of the external organs of sense are necessarily subject to the same effect ; we neither hear, nor see, nor taste, nor feel, with the same accuracy, after any or all these various organs have been long upon the full stretch of action, with which we do on their first exer, lion in the morning. Increase or prolongate their action, and their power will be still farther ob-tunded, till at length, like an over-wearied limb, they become perfectly lethargic, and give no account of whatever is occurring around us ; and it is this uniform lethargy, torpidity, or inaction of all the external senses, which we denominate sleep. By the exercise of the will, or any other strong stimulus, this sleep, or sensorial torpidity, may be postponed : and vice versa, by the consent of the will, it may be expedited.

‘ II. The vital organs are far less subject to the influence of stimulants of every kind than the organs of external sense : their actions are hence far more equable and permanent ; they are sel-dom wearied or exhausted, and, of course, sel-dom sleep or become torpid. From the application of very strong stimulants, however, whether external as those of severe pain or labor, or internal, as those of disease or excessive grief, such fatigue or exhaustion actually takes place ; and when the exhaustion is complete, they also, like the organs of ex ernal sense, sleep or become torpid: in other words, death ensues, and the snirit seoarates from the body. The resemblance

spirit separates!

between death and sleep, therefore, is not less •correct, upon the principles of physiology, than it is beautiful among the images of poetry. Sleep is the death or torpidity of the organs of •external sense, while the vital functions continue their accustomed actions : death is the sleep or torpidity of the whole.

‘ III. Every organ of the animal frame recovers from its fatigue or torpidity by rest, provided the principle of life, that is to say, the action of the vital organs, continues. Hence the organs of external sense, in a definite period of time, and a period generally proportioned to the degree of their exhaustion, re-acquire their accustomed vigor, are alive to the influence of their appropriate stimulants, and the smallest excitement applied to any one of them, throws the whole once more into action : in other words the man awakes from sleep, he rouses himself from the temporary death of the organs of external sense. Were it possible for life to continue dur-ing a total rest or torpidity of the vital organs, as it does during that of the organs of external sense, there is no doubt that these also would, in time, recover from their exhaustion, and that the man would, in like manner, awake from the total torpidity, the sleep or death of the entire frame : but this is impossible ; the soul has now deserted the body : a change in every organ en-sues, and the whole system, instead of reviving, becomes a prey to corruption and ruin.

‘ IV. When the organs of external sense have recruited themselves by repose, the stimulus that rouses the one, rouses, at the same time, the rest, from the habit of association. From the same habit the torpidity produced by exhaustion, in any single organ, is propagated through every other, and the sleep becomes common to the whole : although it is also unquestionable that the whole are.alho fatigued, or partially exhausted, from the fact that the general stock of sensorifil power has been borrowed, in a considerable degree, from the rest, and expended at a single outlet.

‘ V. The nervous fibrils, or rather tubules of (he external organs of sense, are equally affected, and of course become equally exhausted, whether the stimulus be applied at either end ; to wit, the end terminating externally, or that connected with the brain; and hence, internal excitements, as those of severe study, intense grief, undue eating and drinking, or febrile diseases, produce the same effect as causes operating from without.

‘ VI. Ift either case the sleep or torpidity produced is sound or healthy, under a certain de-gree of exhaustion alone : hence mankind sleep most refreshingly after moderate or accustomed fatigue, moderate or

accustomed study, moderate or accustomed meals.

‘ VII. If the stimulus be a little increased be-yond this medium, the vital organs themselves become affected, an undue and morbid proportion of sensorial power is secreted, which postpones the torpidity or sleep for the present, but at the expense of the general strength of the whole sys-tem, which, m consequence, becomes gradually more exhausted and debilitated : whence a far deeper torpidity, or sleep, must necessarily ensue at length, than would have occurred in the first

instance. If such torpidity take place before the vital organs are totally exhausted, it is confined to the external organs of’ sense alone, which hereby progressively recover their accustomed activity and vigor : if the vital organs be themselves altogether exhausted before the torpidity ensues, it ‘is propagated to themselves, and the consequent sleep is the sleep of death. Violent and long continued labor, as an external stimulus, violent and long continued study, violent and continued fevers, violent and continued grief, a very inordinate debauch, as internal stimuli, are equally liable to produce effects here specified : and the one or the other will take place in proportion to their excess and extremity.

‘ VIII. If the stimulus affecting the external organs of sense, at which end soever it be applied, be intolerably pungent or forcible, the sensorial power is exhausted immediately, and the organ directly affected beomes instantly torpid. Hence sounds, insufferably loud, make us deaf; excessive light makes us blind ; acrimonious smells, or savors, render us incapable of smelling or tasting ; and hence an abrupt shock of joy or grief, a sudden and intense paroxysm of fever, large quantities of wine or spirits, as internal causes, produce coma, palsy, apoplexy, which are only so many modifications of the sleep or torpidity of the nervous tubules of the external organs of sense. If the same abrupt and violent cause be sufficiently powerful to act upon the vital organs as well as those of external sensation, the torpidity becomes universal, and the sleep induced is once more the sleep of death.

‘ IX. As violent stimulants produce sudden and irrecoverable torpidity, either general or lo cal, according to the mode and place of application, stimulants less violent induce a tendency to the same effect. Hence the nostrils, not accustomed to snuff, are more forcibly agitated by its application than those that are so ; the eyes of persons

accustomed to sleep in the glare of the sun find no inconvenience from exposure to the light of the morning; while those who always sleep in total darkness are awoke by the return of day-light. And so of the rest.

‘ X. On this account a very small portion of light, of sound, or of exercise, even the breath of the air alone, are each of them powerful stimulants upon infants, because unaccustomed to them : hence they sleep much and soundly ; so soundly, indeed, that no common stimulus is able, for a long time, to arouse them from their torpidity. In other words, it requires a period of many hours for the external organs to recover from their exhaustion. The smallest undulatory motion in the uterus, and the very action of the vital organs themselves, are, perhaps, sufficient to wear out, from time to time, the sensorial power of the foetus on its first formation : and hence the foetus sleeps, with few intermissions, through the whole period of parturition.

‘ XI. For the same reason persons in an advanced age are far less impressed by common stimulants than in any former period of their lives : from a long series of exposure to their operation their organs are become more torpid, and hence they require less sleep, and, at the same time, less food. The vital organs, as well

as those of external sense, partake of the same disposition. They are, in consequence, less lia-ble to all violent or inflammatory disorders : but, the general torpidity increasing, the heart is stimulated with great difficulty ; a smaller portion of sensorial power is secreted from the gases of the atmosphere ; a smaller portion of food is thrown into the system from the stomach ; the pulse, and every other power, gradually declines, till, at length, if ever man were to die of old age alone, he would die from a total torpidity, or paralysis of the heart. But debilitated or tor pi-ned as every organ is become, long before such a period can arrive, the frame at large is incapable of resisting the smallest of those trivial shocks to which man is daily exposed, either internal or external ; or, in other words, there is no accumulation of

sensorial power to supply the temporary demand, and the man dies from sudden exhaustion rather than from progressive paralysis.

‘ Upon this theory I might easily and obviously solve a variety of problems which have hitherto eluded all satisfactory explanation. I shall only add to this outline of the theory of sleep a few observations upon that of dreaming, which is so intimately connected with it, as well in nature as in the poem before us.

* I. A certain but a very small degree of stimulus applied, perhaps, to any nerve whatever of the human body, instead of exhausting it seems to afford it pleasure ; or, at least, the nerve is able to endure it without becoming torpid, or, which is the same thing, requiring sleep or rest. The orbicular motion of the lips, to an infant accustomed to suck, is a source of so much comfort, and attended with so little exhaustion, that, whether sleeping or waking, it will generally be found mimicking the act of sucking, when at a distance from its nurse, and perhaps not thinking of such action itself. A person who, from habit, has acquired a particular motion of any one of his limbs, a twirl of the fingers, or a swinging one leg over the other, perseveres in such motion from habit alone, and feels no torpidity or exhaustion in the nerves that are excited, although it might be intolerably fatiguing to another who has never acquired the same custom.

‘ II. It is probable that both thought and the action of the vital organs are stimulants of this precise character, if not in their commencement, at least very shortly afterwards : that nearly, if not altogether, from the first they are equally pleasing and gentle in their degree of action; and that hence they equally, also, continue without exhausting us, except when unduly roused ; and form a habit too pertinacious and invincible to be broken through by any exertions whatever.

1 Thought is, then, to the brain, that which the muscular habits I have just spoken of are to the muscles which are the subjects of them. Both continue alike, whether we be reflecting upon the action, or whether we be not : but the habit of thinking is so much older, and, consequently, so much deeper rooted than that of any kind of gesticulation, that, as I have just observed, it is impossible for us to break through it by the utmost efforts of the will: whence it accompanies us, excepting when the brain is totally exhausted, and consequently thrown into a profound tor-

pidity or sleep, not only at all times when awake, but almost at all

times during sk-ep, and is the immediate and necessary cause of our dreaming.

‘ III. Thought can only be exercised upon objects introduced into the brain, or general sensorium, by the organs of external sensation ; and hence the bent or chief direction of our thoughts, whether sleeping or waking, must be derited from those objects which principally impress us, be the causes of such impression what they may. The train of thoughts, then, which recurs from habit alone, as in sleep or total retirement from the world, must generally be of this description ; in the former case, however, by no means correctly or perfectly, because there are others, also, which have a tendency to recur, and neither the will nor the senses are in action to repress them ; whence proceeds a combination of thoughts or ideas, sometimes in a small de-gree incongruous, and at other times most wild and heterogeneous; occasionally, indeed, so fearful and extravagant as to stimulate the senses themselves into a sudden renewal of their functions; and, consequently, to break off abruptly the sleep into which they were thrown.

‘ IV. If the action of the nervous tubules of the brain, thus continued from habit, and producing our dreams, be less powerful during sleep than is sufficient to rouse the senses generally, it may, nevertheless, at times be powerful enough to excite into their accustomed exercise the muscles of those organs or members which are more immediately connected with the train of our dreams, or incoherent thoughts, while, neverthe^ss, every other organ or member still remains torpid. Hence some persons talk, and others walk in their sleep, without being apprised, on their waking, of any such occurrence.

‘ V. Whatever be the set of nerves that have chiefly become exhausted from labor or stimulus of the day, the rest, as I hare already noticed, partake of the same torpidity from long habit ot association; exhausted in some degree, also, themselves by the portion of sensorial power which, as from a common stock, they have contributed towards the support of the debilitated organ. But it sometimes happens, either from disease or peculiarity of constitution, that all the external organs of sense do not associate in their actions, or yield alike to the general torpidity of the frame ; and that the auditory, the optical, or some other set of nerves, are in vigor, while all the other nerves of the external senses remain torpid ; as it may do also, that an entire organ of external sense, like the muscles of an individual member, as observed in the last paragraph, may be awoke or restimulated into action by the peculiar force and bent of the dream, while all the rest continue lethargic.

‘ VI. If the organ of external sense thus affected be that of hearing, a phenomenon will occur, which is specifically noted by our poet in book V., v. 11 82, but which, I believe, has never hitherto been satisfactorily explained; the dreamer must necessarily hear a bye-stander who speaks to him ; and if, from the cause specified above, he should happen to have talked in his sleep, so as to give the bye-stander some rlue into the train of thoughts of which his

dream is composed, a conversation may be maintained, and the bye-stander by dexterous management, and the assumption of a character which he finds introduced into the dream, be able to draw from the dreamer the profoundest secrets of his bosom : the other senses of the latter, instead of rousing hereby to detect the imposition, being plunged into a still deeper lethargy, from the demand of an increased quantity of sensorial power to support the exhaustion which the ˆwakeful or {.stive organ is in consequence sustaining.

‘ VII. If the wakeful nerves be the optical alone, the somnambulist or dreamer, who is accustomed to walk in his sleep, will be able to make his way towards any place to which the course of his dream directs him with the most perfect ease, and without the smallest degree of danger ; he will see as clearly, and perhaps more so, as if generally awake; yet, from the very exhaustion, and, of course, increased torpidity of the organs, in consequence of an increased demand of sensorial power from the common stock to support the action of the sense and muscles immediately engaged, every other sense must necessarily be thrown into a deeper sleep or torpidity than on any other occasion. Hence the ears will not be roused even by a sound that might otherwise awake him ; he will be insensible, not only to a simple touch, but a severe shaking of his limbs, and may even cough violently without being recalled from his dream. Having accomplished the object of his pursuit, lie may safely return, even over the most dangerous precipices, for he sees them distinctly, to his bed ; and the optical nerves themselves being now quite exhaustedˆ and the system at large incapable of affording any addition of sensorial power, the torpidity must necessarily be rendered general and profound ; so profound, perhaps, as to destroy the habitual action of the nervous tubules of the brain itself, and produce sleep without thought or dreaming.

‘ VIII. This phenomenon of somnambulism has never, that I know of, to the present day, been satisfactorily or even plausibly accounted for.

It follows necessarily, in conjunction with that of speaking and conversing in sleep, from the theory of which I have now, for the first time, presented the outlines : and, I trust, will appear plain and intelligible to the reader.'

SLEEP (Somnus), with the ancient poets, was the son of Erebus and of Night, according to Homer and Hesiod, and the brother of Mors or Death. Virgil (/En. vi. v. 278) assigns to this deity an abode with Death, in the subterraneous or invisible world. Statius and Ovid place his chief residence, or great palace of Somnus, on our earth, in the country of the Cimmerians ; no country agreeing better with sleep than that which is overspread with eternal darkness. Theb. x. v. 84 to 117. Met. xi.v. 592 to 645. Dreams were the children of sleep ; Ovid names three of them, *viz.* Morpheus, Phobetor, and Phantasia.

By artists this deity is commonly represented as a soft youth, stretched at his ease on a couch, resting his head on a lion's skin, and sometimes on a lion ; with one arm either a little over or under his head, and the other dropping negli-

gently by the side of the couch, and either holding poppies, or a horn with the juice of poppies in it. He is often winged, and much resembles a little Cupid, from whom he is distinguished by the lizard (an animal supposed to sleep half the year) placed at his feet. There is scarcely any one of the deities that is more fully and particularly described by the poets than this deity of sleep. — Spence's Polymetis.

SLEEP, in the new System of Medicine. See PHYSIOLOGY.

SLEEP, in the mythology. See MORPHECS-and SOMNPS.

SLEEP OF PLANTS, somnus plantarum, is a term used by Linnaeus, to express a peculiar state in. the constitution of many plants during the night, evinced by a change of position, a drooping, or a folding together, of their leaves or leaflets. Such a change, being occasioned by the withdrawing of the stimulus of light, is probably a state of rest to their vital functions, and therefore the above term is not so hyperbolical as at first appears. Linnaeus has given a curious treatise on this subject, in the Amaenitates Aca-demicae, v. 4, 333. The phenomenon had been noticed long before, by Acosta and Prosper Alpinus in the tamarind tree ; and the latter points out several parallel instances in other leguminous plants with pinnated leaves, natives of Egypt., It is indeed most remarkable in such plants. But Linnaeus has

elaborately described the various positions which the leaves of different plants assume in their sleep. In general, it may be remarked that they cover or fold together the upper surfaces of their leaves, exposing the under, which latter is almost uniformly impatient of light. This is so much the case, that we cannot but suspect the effect of the returning light upon the backs of such leaves, may be the immediate cause of their withdrawing from it, and thus the upper surface becomes necessarily presented to its rays. A similar effect of light is seen in many flowers, particularly of the compound tribe. See BOTANY, PHYSIOLOGY, and SENSITIVE.

SLEEP OF THE SOUL, in theology, denotes a supposed insensible, and inactive state, into which some have thought that mankind are removed at death, and in which they remain till the period of their resurrection : the term has been used by way of contradistinction to that which has been commonly called the intermediate or separate state. Of the advocates of this opinion, some have allowed the essential distinction between body and spirit, and the natural immortality of the human soul ; so that, being ;i substance and not a mode, it will go on to exist, till by some positive act of the Creator it is annihilated. They cannot admit the supposition that the whole man becomes extinct at death, or that death destroys or annihilates the thinking substance; because they say, the resurrection on this hypothesis will not be a resurrection, but a creation of a new set of beings: if deatli annihilates us in this sense, there can be no future state ; because a being who has lost Ins existence cannot be recovered. Accordingly, they maintain that what happens to the soul at death can be no more than a suspension of thu

exercise of its faculties, or an incapacitation, from which it will by the power of Christ be delivered at the resurrection : and they allege, that there is an infinite difference between the annihilation of the soul at death, and its incapacitation ; because, one who believes the for-mer could not possibly entertain the hope of a future state ; but one who believes the latter might reasonably entertain such a hope. Death, they

say, is a distress in which our species has been involved by extraordinary causes, and from which we have obtained the hope of being saved by the most extraordinary means, *viz.* by the interposition of Jesus Christ, who, taking upon him our nature, and humbling himself to death, has acquired the power of destroying death, and is on this account styled the Saviour of the world. However, most of those who deny the notion of an intermediate state of conscious perception between death and the general resurrection, reject the supposition of two distinct natures in man, and consider that principle, which is called the soul, not as a spiritual substance, but as a quality, or property, either superadded to matter by the Creator of our frame, or resulting from the organisation of the human body, and particularly of the brain. They accordingly allege that when the organised system to which the power of thinking, &c., is annexed, on which it depends, and from the organisation of which, as some maintain, it necessarily results, is dissolved by death ; all the percipient and thinking powers of man, all his capacities of action, and of suffering, or of enjoyment, must be extinguished, and cease of course. And if the property of thinking necessarily attends the property of life, as some apprehend, nothing can be requisite to the restoration of all the powers of the man, but the restoration of the body (no particle of which can be lost) to a state of life. Whatever is decomposed, it is said, may certainly be recomposed by the same Almighty power that first composed it, with whatever change in its constitution, advantageous or disadvantageous, he shall think proper; and then the powers of thinking, and whatever depended upon them, will return of course, and the man will be, in the most proper sense, the same being that he was before. Those who hold this opinion maintain that, according to the Scriptures, life and immortality were brought to light by the gospel of Christ, in a sense exclusive of all other teachers, and all other revelations, at least from the birth of Moses downwards ; exclusive, likewise, of all information from the light of nature, or the result of philosophical disquisition on the substance or qualities of the human soul. They hold, moreover, that the sentence pronounced upon our first parents imported a total deprivation of life, without any reserve, or saving to the life of the soul ; and, consequently, that eternal life, or a restoration and redemption from the consequences of this sentence, was effected for, revealed, consigned, and insured to man, in and through Christ, and will be accomplished in no other way than that spoken of by Christ and his apostles, who, they say, have left no room to conclude that there is a separate or intermediate life for the soul, when disunited from the body.

The late learned Dr. Law, bishop of Carlisle, having, with a particular view to the controversy concerning the intermediate state, enumerated the several passages both in the Old and New Testament, in which the words that are translated soul or spirit in our version occur, maintains that none of them ever stand for a purely immaterial principle in man, or a substance wholly separable from, and independent of, the body; and, after examining the account which the Scriptures give of that state to which death reduces us, he observes that it is represented by sleep, by a negation of all life, thought, or action ; by rest, resting-place, or home, silence,, oblivion, darkness, destruction, or corruption. He adds that the Scripture, in speaking of the connexion between our present and future be-ing, doth not take into account our intermediate state in death ; no more than we, in describing the course of any man's actions, take in the time he sleeps : and that, therefore, the Scrip tures, in order to be consistent with themselves, must affirm an immediate connexion between death and judgment. As for those texts that are usually alleged on the other side of the question, which he has cited and endeavoured to accommodate to his own opinion, he thinks that they are quite foreign to the point, or purely figurative, or capable of a clear and easy solution on the principle which he adopts, *viz.* that the times of our death and resurrection are coincident; and that they cannot be fairly opposed to the constant obvious tenor of the sacred writings. With respect to philosophical arguments, deduced from our notions of matter, and urged against the possibility of life, thought, and agency, being so connected with some portions of it as to constitute a compound being or per-son, he imagines that they are merely grounded on our ignorance, and that they will equally prove against known fact and observation, in the production of various animals, as against the union of two such heterogeneous principles as those of the soul and body are supposed to be. With respect to the consequences of either opinion, he says, that on the one side, there is nothing more than a temporary cessation of thought, which can hurt nobody, except the self-interested papist, or the self-sufficient deist; but, on the other side, there is a manifest derogation from, if not a total subversion of, that positive covenant, which professes to entitle us to everlasting life. He adds that all proper and consistent notions of death, resurrection, and a fu-ture judgment, are confounded, and, in fine, all the great sanctions of the gospel rendered unintelligible or useless.

Another advocate of this soul-sleeping system contends that man shall become immortal, by the way of a resurrection of the dead, or a restoration of the whole man to life ; and that the New Testament is so far from acknowledging any intermediate consciousness in man,

between death and the resurrection, that it always speaks of that interval as a sleep, which implies a suspension of the thinking faculty, a rest from those labors which require thought, memory, consciousness

&c., during which those faculties are useless. Besides, the scriptural system of immortality supposes that man had forfeited his original title to immortality, and would never have received it, but for the interposition of a Redeemer. The consequence of this doctrine is, that, between the time of the forfeiture and the actual appearance of the Redeemer, the dead could have life in no sense at all ; and that neither be-fore nor after the appearance of the Redeemer, dead men were, or would be restored to life, otherwise than in the way revealed by him, namely, a resurrection of the dead.

On the other hand, the advocates of a separate state insist that the soul being an active, simple, uncompounded, immaterial substance, is immortal in its own nature, and capable of an active and conscious existence, in a state of disunion and separation from the body ; that this natural capacity of the soul was not impaired, or at all affected by any thing that happened upon the transgression of our first parents ; that the death, to which they were condemned was only the death of the body : hence they infer that there is, and would have been, a future immortal state of being beyond the present life, and (the moral attributes of God presupposed) a just retribution therein, independent of the doctrine of a resurrection of the dead ; and that, in the interval between death and the general resurrection, there is an intermediate state, in which the departed souls of good men are supposed to have an imperfect re-ward, and the souls of the wicked an imperfect punishment ; but that every one, at the period of the reunion of the soul and body, and of final judgment, will receive a full and complete recompense for the deeds done in the body. In proof of this opinion they allege a variety of passages both from the Old and New Testament, the principal of which we shall here enumerate; Gen. ii. 7, xv. 15, xxxvii. 35 ; Exod. iii. 6 ; 1 Sam. xxviii. 11 — 19; 1 Kings, xvii.

21, 22; Ps. xxxi. 5 ; Eccles. iii. <2l, xii. 7 ; Matt. x. 28. xvii. 3; Luke xvi. 19, xx. 38, xxiii. 43, xxiv. 39; Acts i. 25, vii. 59; 2 Cor. v. 8, xii. 2; Phil, i 21—24; 1 Pet. iii. 19, iv. 6; Heb. xi. 40, xii. 23; Rev. vi. 9, 10, xiv. 13. The fathers who lived in or near the time of the apostles are said to be unanimous in this opinion, and persuaded that the soul of every man upon the dissolution of the body died not, but had a proper place to go to, and accordingly this doctrine is to be found in the most ancient Christian liturgies.

The bishop of Carlisle observes that the word death, in its original and obvious sense, implies a cessation of all natural life, or a real dissolution and destruction of the whole man. Mr. Farmer also, a well-known writer, in the introduction to his General Prevalence of the Worship of Human Spirits, &c., 1783, has taken some pains to ascertain the meaning of the word death, in the threatening denounced against Adam. He says, that if human spirits were worshipped in the age of Moses, particularly in Egypt and Phoenicia, the word death could not at that time, and in those countries, denote more than the destruction of bodily life ; for, if this

term had farther included in it the insensibility or extinction of the soul ; the dead would not have been honored as gods. And if Moses had used it in this extensive sense, he would have been misunderstood by the Egyptians, who asserted the immortality of the soul, and by the Hebrews, who dwelt among them, and had adopted their system of religion. This writer, in confirmation of his interpretation of death, observes that although one great design of Moses, in giving an account of the introduction of death into the world, was to guard against the worship of departed spirits, and though nothing could have answered this design more effectually than representing the soul of Adam as a mere quality, or as the result of the peculiar structure and organisation of his body, yet, so far is he from supposing this to be the case, that, according to him, after the body of the first man was perfectly organised by the immediate hand of the Almighty, he did not become a living soul or person, till God breathed into his nostrils the breath of life ; a principle distinct from the dust out of which his body was form-ed, and, therefore, capable of subsisting in a state of separation from it. Nor does Moses use the same language in relating the formation of any other living creatures; which proves that the principle of life in man is of a superior kind to that in brutes. Besides, the ancient patriarchs did not believe that the soul of man perished with his body. Agreeably to the most ancient opinion concerning departed spirits, the sacred writers supposed the souls of the dead to

exist in sheol, or hades, a place invisible to human sight, and that, in the distribution of them, regard was had to the former relation in which they stood to one another. Moreover, Moses himself believed the separate subsistence of the soul, and has even given it a divine sanction. Gen. xv. 15. Nor do any of the sacred writers ever describe death in terms different from those used by persons, who certainly acknowledged the continuance of the soul after it. Sleep, by which it is described, is not a state of non-existence, but of rest ; and it is well known that this soft image of death was commonly used to express the thing itself, by those who asserted the existence of/souls in hades. Silence, oblivion, darkness, and corruption, by which the state of the dead is described, refer only to the body, or to the supposed state of the soul, while it was in sheol, and are not peculiar to the sacred writers, but were common in all countries, where both the popular belief, and the established worship, were inconsistent with the notion of the soul's perishing with the body. And' many of the terms, by which death was described in all countries, clearly imply, and are built upon, a belief of the distinction between soul and body, and of their being separated at death.

Campbell in his Preliminary Dissertations (Part ii.) has introduced some remarks that deserve the greatest attention, in this, controversy. He observes, I. That the arguments, on which the deniers of that state chiefly build, arise, in his opinion, from a misapprehension of the import of some scriptural expressions. TLaStvdtiv, Koipav, to sleep, are often applied to the dead ;

but this application is no more than a metaphorical euphonism, derived from the resemblance which a dead body bears to the body of a person asleep. Traces of this idiom may be found in all languages, whatever be the popular belief about the state of the dead. They often occur in the Old Testament ; yet it has been shown that the common doctrine of the Orientals favored the separate existence of the souls of the deceased. But if it did not, and if, as some suppose, the ancient Jews were, on all articles relating to another life, no better than

Sadducees, tttis shows the more strongly that such metaphors, so frequent in their writings, could be derived solely from bodily likeness, and, having no reference to a resurrection, could be employed solely for the sake of avoiding a disagreeable or ominous word. It is acknowledged, at the same time, that Christians have been the more ready to adopt such expressions, as their doctrine of the resurrection of the body presented to their minds an additional analogy between the bodies of the deceased and the bodies of those asleep, that of being one day awaked. But our author sees no reason to imagine that, in this use, they carried their thoughts further than to the corporeal and visible resemblance now mentioned. Another mistake about the import of scriptural terms is in the sense which has been given to the word avaˆaaig. They confine it, by a use derived merely from modern European tongues, to that renovation which we call the reunion of the soul and the body, and which is to take place at the last day. But this is not al-ways the sense of the term in the New Testament.

II. Dr. Campbell remarks that many expressions of Scripture, in the natural and obvious sense, imply that an intermediate and separate state of the soul is actually to succeed death. Such are the words of our Lord to the penitent thief upon the cross (Luke, xxiii. 43) ; Stephen's dying petition (Acts, vii. 59) ; the comparisons which the apostle Paul makes in different places (2 Cor. v. 6, &c. ; Philip, i. 21) between the enjoyment which true Christians can obtain by their continuance in this world, and that on which they enter at their departure out of it, and several other passages. Let the words referred to be read by any judicious person-, either in the original, or in the common translation, which is sufficiently exact for this purpose, and let him, setting aside all theory or system, say candidly whether they would not be understood, by the gross of mankind, as presupposing that the soul may and will exist separately from the body, and be susceptible of happiness or misery in that state. If any thing could add to the native evidence of the expressions, it would be the unnatural meaning that is put upon them, in order to disguise that evidence. The apostle Paul, they are sensible, speaks of the saints as admitted to enjoyment in the presence of God, immediately after death. Nevertheless, in order to palliate the direct contradiction this bears to their doctrine, that the vital principle, which is all they mean by the soul, remains extinguished between death and the resurrection, they remind us of the difference between absolute or real, and relative or apparent, time. They admit that, if the apostle be understood as speaking of real time, what is said flatly contradicts their system; but they say his words must be interpreted as spoken only of apparent

time. He talks indeed of entering on a state of enjoyment immediately after death, though there may be many thousands of years between the one and the other : for he means only, that when that state shall commence, however distant in reality the time may be, the person entering on it will not be sensible of that distance, and consequently there will be to him an apparent coincidence with the moment of his death. But, says Campbell, does the apostle any where give a hint that this is his meaning ? or is it what any man would naturally discover from his words ? Did the sacred penman, then, as our author proceeds, mean to put a cheat upon the world, and, by the help of an equivocal expression, to flatter men with the hope of entering, the instant they expire, on a state of felicity ; when, in fact, they knew that it would be many ages before it would take place ? But, were the hypothesis about the extinction of the mind between death and the resurrection well founded, the apparent coincidence they speak of is not so clear as they seem to think it.

III. This able writer remarks that even the various equivocations (or, perhaps, more properly, mental reservation), that has been devised for them, will not, in every case, save the credit of apostolical veracity. The words of Paul to the Corinthians are, ‘ Knowing, that whilst we are at home in the body, we are absent from the Lord.’ Again, ‘We are willing rather to be ab-sent from the body, and present with the Lord.’ Could such expressions have been used by himr if he had held it impossible to be with the Lord, or indeed any where, without the body ; and that, whatever the change was which was made by death, he could not be in the presence of the Lord, till he returned to the body ? Absence from the body, and presence with the Lord, were never, therefore, more unfortunately combined, than in this illustration. Things are combined here as coincident, which, in the hypothesis of those gentlemen, are incompatible. If recourse be had to the original, the expressions in Greek are, if possible, still stronger. They are, 8« tvStipevTtG fv TU> ffiafjiari, those who dwell in the body, who are ttcdiiiiuvrte euro rs Kvpw, at a distance from the Lord ; as, on the contrary, they are 01 ucdtjuevTec; IK r<t ffupuTOf, those who have travelled out of the body, who are 01 tvdijusvTi c irpoc rov TLvpiov, those who reside, or are present with the Lord. In the passage to the Philippians, also, the commencement of his presence with the Lord is represented as coincident, not with his return to the body, but with his leaving it, with the dissolution, not with the restoration of the union. We may here subjoin an enquiry, how the apostle could be in a strait betwixt two (Philip, i. 23), that of living in the flesh, and being with Christ, which he pronounces to be far better, if the exercise of his powers of service and capacity of enjoyment ceased at death. A mind

like his could not hesitate between living in the flesh, and thus serving the Christian cause, and sinking at death into a state

of total inaction, and of thus continuing for a long but indefinite period.

IV. The fourth remark of Dr. Campbell on this subject is that, from the turn of the New Testament, the sacred writers appear to proceed on the supposition that the soul and the body are naturally distinct and separable, and that the soul is susceptible of pain or pleasure in a state of separation. It were endless to enumerate all the places which evince this. The story of the rich man and Lazarus (Luke, xvi. 22, 23); the last words of our Lord upon the cross (Luke, xxiii. 46), and of Stephen when dying ; Paul's doubts, whether he was in the body or out of the body, when he was translated to the third heaven and paradise (2 Cor. xii. 2, 3, 4) ; our Lord's words to Thomas, to satisfy him that he was not a spirit (Luke, xxiv. 39) ; and the express mention of the denial of spirits, as one of the errors of the Sadducees (Acts, xxiii. 8) : these are irrefragable evidences of the general opinion on this subject, both of Jews and Christians. By spirit it is observed, as distinguished from angel, is evidently meant the departed spirit of a human being; for that man is here, before his natural death, possessed of a vital and intelligent principle, which is commonly called his soul or spirit, it was never pretended that they denied. It has been said that this manner of expressing themselves lias been adopted by the apostles and evangelists, merely in conformity to vulgar notions. . Tome, says Dr. Campbell, it appears a conformity, which (if the sacred writers entertained the sentiments of our au-tagonists in this article) is hardly reconcileable to the known simplicity and integrity of their character.

SLEEPERS, in natural history, a name given to those animals which sleep all winter; such as bears, marmots, dormice, bats, hedgehogs,

swallows, &c. These do not feed in winter, have no sensible evacuations, breathe little or none at all, and most of the viscera cease from their functions. Some of these creatures seem to be dead, and others return to a state like that of the foetus before birth: in this state they continue, till by tiew heat the fluids are attenuated, the animal is restored to life, and the functions begin where they left off.

SLEEPERS, in a ship, timbers lying before and aft in the bottom of the ship, as the rungheads do : the lowermost of them is bolted to the rungheads, and the uppermost to the fwttocks and rungs.

SLEEPNER, in the Saxon mythology, the horse of Odin. See MYTHOLOGY.

SLEEP-WALKER (from sleep and walker), one who walks in his sleep. See MEDICINE. Many instances might be related of persons who were addicted to this practice. A remarkable instance was published from a report made to the Physical Society of Lausanne, by a committee of gentlemen appointed to examine a young man who was accustomed to walk in his sleep. ‘ The disposition to sleep-walking seems, in the opinion of this committee, to depend on a particular affection of the nerves, which both seizes and quits the patient d«rins sleep. Under the influence of this affection, the imagination repre-

sents to him th« objects that struck him while awake, with as much force as if they really affected his senses; but does not make him perceive any of those that are actually presented to his senses, except in so far as they are connected with the dreams which engross him at the time. If, during this state, the imagination has no determined purpose, he receives the impression of objects as if he were awake ; only, however, when the imagination is excited to bend its attention towards them. The perceptions obtained in this state are very accurate, and, when once received, the imagination renews them occasionally with as much force as if they were again acquired by means of the senses. Lastly, these academicians suppose that the impressions received during this state of the senses disappear entirely when the person awakes, and do not return till the return of the same disposition in the nervous system. Their remarks were made on the Sieur Devand, a lad thirteen years and a half old, who lived in the town of V’evey, and who was subject to that singular affection or disease called somnambulism, or sleep-walking. The particulars, however, are not worth quoting ; as many of the facts seem disputable, and some totally incredible; and the reasoning of the

committee on those that are admissible is far from being conclusive. See SLEEP.

SLEEP-WALKING, or SOMNAMBULISM. See MEDICINE, Index.

SLEEPY TERTIAN. See MEDICINE, Index.

SLEET, n. s. Dan. stud, slet ; Swed. slagg. A kind of smooth small hail.

Perpetual sleet and driving snow Obscure the skies, and hang on herds below : Huge oxen stand inclosed in wintry walls Of snow congealed. Dryden.

Rains would havs been poured down, as the vapours became cooler ; next deet, then snow and ice.

Cheyne.

SLEET. See SNOW.

SLEEVE, n. s. i Or SLEAVE, which see.

SLEEVE'LESS, adj. J Sax. j-lip. The part of a garment that covers the arms : ' to hang on a sleeve' is, to make dependent : the adjective corresponding.

Once my well-waiting eyes espied my treasure, With sleeves turned up, loose hair, and breast enlarged,

Her father's corn moving her fair limbs, measure.

Sidney.

They put on sleeveless coats of home-spun cotton.

Sandys.

The deep smock sleeve, which the Irish women use, they say, was old Spanish ; and yet that should seem rather to be an old English fashion : for in ar-mory, the fashion of the manche, which is given in arms, being nothing else but a sleeve, is fashioned much like to that sleeve : and knights, in ancient times, used to wear their mistress's or love's sleeve upon their arms. Sir Launcelot wore the sleeve of the fair maid of Asteloth in a tourney.

Spenser's Ireland.

It is not for a man which doth know, or should know, what orders, and what peaceable government required, to ask why we should hang our judgment upon the church's sleeve, and why in matters of orders more than in matters of doctrine. Hooke*.

Your hose should be ungartered, your sleeve un-

buttoned, your shoe untied, demonstrating a careless desolation. Shakspeare.

The innocent sleep ; Sleep that knits up the ravelled sleeve of care. Id.

He was cloathed in cloth, with wide sleeves and a capa. Bacon.

His clothes were strange though coarse, and black

though bare ;

Sleeveless his jerkin was, and it had been Velvet ; but 'twas now, so much ground was seen, Become tufftaffaty. Donne.

This sleeveless tale of transubstantiation was brought into the world by that other fable of the multipre-sence. Hall.

In velvet white as snow the troop was gown'd, Their hoods and sleeves the same. Dryden.

A brace of sharpers laugh at the whole roguery in their sleeves. L'Estrange.

My landlady quarrelled with him for sending every one of her children on a sleeveless errand, as she calls it. Spectator.

Men know themselves utterly void of those qualities which the impudent sycophant ascribes to them, and in his sleeve laughs at them for believing.

South' s Sermons.

John laughed heartily in his sleeve at the pride of the esquire. Arbuthnot's History of John Bull.

Behold yon isle by palmers, pilgrims trod, Grave mummers ! sleeveless some, and shirtless others. 1 Pope.

SLEIDAN (John), an eminent German historian, born in 1506, at Sleidan, where he was educated along with the learned John Sturmius, his fellow citizen. He afterwards went to Paris ; then to Orleans, where he studied the law three years, and took a licentiate's degree in it, though he never practised as a lawyer. Returning to Paris, in 1535, Sturmius recommended him to cardinal Du Bellay, who gave him a pension, and entrusted him with matters of importance. lie accompanied the ambassador of France to the diet at Haguenau, and returned to Paris, where he remained till 1542 ; when, being suspected of indulging the opinions of Luther, he fled to Strasburg, where he was much patronised, particularly by the learned James Sturmius, by whose advice he wrote his celebrated History of his Own Times. He was afterwards employed in various negociations to France and England ; and in one of these journeys, in 1546, married a lady whom he loved to distraction. In 1551 he went, as a delegate from the republic, to the Council of Trent. He was still usefully employed in public affairs till 1555, when the death of his beloved wife threw him into so deep a melancholy that he totally lost his me-mory, so as not even to know his own children. He died at Strasburg in 1556. He was much admired as a learned writer. His chief work is entitled De Statu Religionis et Reipublicae, Carolo V. Caesare, Commentarii: 1555, folio; containing the History of Europe from 1517 to 1555. He wrote many other works, particularly a small tract, De Quatuor Monarchiis, vel sum-mis imperiis, libri tres ; wherein he applies the prophecies of Daniel and St. John as most other Protestant commentators do.

SLEIGHT, n. s. Island, slag'd is cunning. Johnson. Swedish slogd (as if of sly-hood). Thomson. Artful trick ; cunning artifice or

practice: as, sleight of hand, thf> tricks of a juggler. Often written, but less properly, slight.

Fair Una to the red cross knight Betrothed is with joy ;

Though False Duessa, it to bar,

Her false sleights do employ. Faerie Qveme.

He that exhorted to beware of an enemy's policy, doth not give council to be impolite ; but rather to be all prudent foresight, lest our simplicity be over-reached by cunning sleights. Hooker.

Upon the corner of the moon There hangs a vap'rous drop profound ; I'll catch it ere it come to ground ; And that, distilled by magick sleights, Shall raise such artificial sprights, As, by the strength of their illusion, Shall draw him on to his confusion.

Shakspeare. Macbeth. Out slept the ample size Of mighty Ajax, huge in strength ; to him, Laerte's

son, The crafty one as huge in sleight. Chapman.

She could not so convey The massy substance of that idol great ;

What sleight had she the wardens to betray ? What strength to heave the goddess from her seat ?

Fairfax.

In the wily snake

Whatever sleights, none would suspicious mark, As from his wit and native subtilty Proceeding. Milton.

Doubtless the pleasure is as great Of being cheated, as to cheat ; As lookers on feel most delight, That least perceive the juggler's sleight. Hudibras.

When we hear death related, we are all willing to favour the sleight, when the poet does not too grossly impose upon us. Dryden.

Good humour is but a sleight of hand, or a faculty making truths look like appearances, or appearances like tiuths. L' Estrange.

While innocent he, scorns ignoble flight, His honest friends preserve him by a sleight. Swift.

SLEN'DER, adj. ~* Belg. slinder. Thin ;

SLEN’DERLY, adv. > small in circumference

SLEN’DERNESS, n. s. J or bulk compared with the length; weak; inconsiderable; sparing; not well supplied : the adverb and noun substantive corresponding.

If I have done well, it is that which I desired ; but if slenderly and meanly, it is that which I could at-tain to. 2 Maccabees.

Yet they, who claim the general assent of the whole world unto that which they teach, and do not fear to give very hard and heavy sentence upon as many as refuse to embrace the same, must have special regard that their first foundations and grounds be more than slender probabilities. Hooker.

The slenderness of your reasons against the book, together with the inconveniences that must of necessity follow, have procured a great credit upon it.

Whitgifte. At my lodging.

The worst is this, that at so slender warning, You’re like to have a thin and slender pittance.

Shakspeare.

Small whistles give a sound because of their extreme slenderness, the air is more pent than in a wider pipe. Bacon.

If the debt be not just we know not what may be deemed just, neither is it a sum to be slenderly regarded. flayward.

So thick the roses bushing round About her glowed ; half stooping to

support Each flower of slender stalk. Milton.

Positively to define that season, there is no slender difficulty. Browne's Vulgar Errourt.

It is a very tlender comfort that relies upon this nice distinction, between things being troublesome, and being evils ; when all the evil of affliction lies in the trouble it creates to us. Tillotton.

Beauteous Helen shines among the rest, Tall, Blender, straight, with all the graces blest.

Dryden.

The good Ostorius often deigned To grace my tlender table with his presence.

Philips.

Their colours arise from the thinness of the transparent parts of the feathers ; that is, from the sltnder-ness of the very fine hairs or capillamenta, which grow out of the sides of the grosser lateral branches or fibres of those feathers. Newton.

In obstructions inflammatory, the aliment ought to be cool, tlender, thin, diluting. Arbuthnot.

It is preceded by a spitting of blood, occasioned by its acrimony and too great a projectile motion with tenderness and weakness of the vessels. Id. on Diet.

Love in these labyrinths his slaves detains, And mighty hearts are held in slender chains. Pope.

SLESVVICK, or SCHLESSWIG, a duchy of the Danish dominions, which has Jutland to the north, and Holstein to the south, while on the east and west it is bounded by the sea. Its form is oblong ; its length is about seventy-two miles ; its breadth, without including the islands to the east or west, varies from thirty to fifty-six miles. It has no mountains, and not many elevations entitled to the name of hills. In most parts it is fit fcV tillage, and the products are barley, oats, and rye, with comparatively little wheat, hemp, or flax. Sleswick corresponds in latitude to the northern counties of England ; as also in humidity of climate, rain being produced there frequently by easterly, and still more frequently by westerly winds. The weather is very variable. Unfortunately great part of the interior is dry and sandy, so

that the population (300,000 on the mainland, and 40,000 on the islands) is not large for a surface of 3600 square miles. On the superior soils, the freshness of the pasture is such as, with little skill on the part of an ignorant peasantry, to give a size and strength to the horses and horned cattle, which render them of value to foreigners, and lead to a regular, if not a large export. Butter and cheese are likewise abundant, and form articles of export. Sheep have not been improved with equal success, their wool being short and coarse. The inhabitants are of mixed descent, particularly of Danish, Saxon, and Friesland origin, each speaking their own dialect; but the prevalent languages are German and Danish. The principal river is the Eyder, which, joined to the canal of Kiel, affords a direct navigation from the North Sea to the Baltic. The chief towns are —

	Population.
Flensborg	. 15,000
Kiel	. 7,100
SleswicK	. 7,000 ‘
Tondern	. 2,600
Tonningen	. 2,000

Kiel and Tonningen have a trade carried on by the canal and the Eyder; Flensborg is an improving place ; but the rest of the country exhibits little activity. The manufactures of woollen and linen are carried on, not in collective establishments, but in the cottages of the manufacturer : and the lace manufactures at Tondern and other places, as well as those of stockings, have suffered by the introduction of machinery in England. Fishing forms a considerable occupation on all the coasts.

Sleswick, like Holstein, preserves its ancient institutions : and the state of the peasantry is somewhat less backward than in Jutland ; but it was only in 1805 that feudal vassalage was definitively abolished.

Sleswick has for many centuries been in close connexion with Denmark, and governed sometimes directly by the king, at other times by a brother of the reigning sovereign— a separation attended at last with such pretensions to independency as to determine the Danish government to unite it, in 1720, completely and definitively to the crown. See DEN-MARK.

SLESWICK, the capital of the foregoing duchy, is pleasantly situated on the Sley. It is a long irregular but neat town, containing about 7000 inhabitants. The objects of interest are the cathedral, its altar and the monuments of the princes ; the town-house, orphan-house, workhouse, and the nunnery of St. John ; the houses are generally of brick. Here are manufactures of sugar, earthenware, leather and sail-cloth. Its commerce has been considerably improved since the Sley has been made navigable by a canal. In the ninth century Sleswick was a town of some note ; in the tenth it was destroyed and rebuilt ; in the fifteenth it shared the like fate. In its vicinity stands the castle of Gottorp. Eight miles north of Kiel, and 126 southwest of Copenhagen.

SLICE, v. a. & n.s. Saxon, fl’^an; Teut. schlitz, of schlitzen, to slit. To cut into flat pieces, or into parts; cut off a broad piece : the piece cut off.

Their cooks make no more ado, but, slicing it into little gobbets, prick it on a prong of iron, and hang it in a furnace. Sandy’s Journey.

The pelican hath a beak broad and flat, much like the slice of apothecaries, with which they spread plaisters. Hakeuill.

Hacking of trees in their bark, both downright and across, so as you may make them rather in slices than in continued hacks, doth great good to trees. Bacon.

The residue were’ on foot, well furnished with jack and skull, pikes and slicing swords, broad, thin, and of an excellent temper. Hayicard,

Nature Jost one by thee, and therefore must Slice one in two to keep her number just.

Cleaveland.

When burning with the iron in it, with the slioe clap the coals upon the outside close together, to keep the heat in. Moxun.

Princes and tyrants slice the earth among them.

Bumet.

When hungry thou stood’st staring like an oaf, I sliced the luncheon from the barley loaf. Oay.

Then clap four Meet of pilaster on’t ; That, laced with bits of rustick, makes a front. Pope .

You need not wipe your knife to cut bread ; because in cutting a slice or two it will wipe itself.

Swift

He from out the chimney took A. flitch of bacon off the hook, And freely, from the fattest side, Cut out large slices to be fried. Id.

SLICH, in metallurgy, the ore of any metal, particularly of gold, when it has been pounded, and prepared for farther working. The manner of preparing the slich at Chremnitz in Hungary is : they lay a foundation of wood three yards deep ; upon this they place the ore, and over this there are twenty-four beams, armed at their bottoms with iron ; these, by a continual motion, beat and grind the ore, till it is reduced to pow-der: during this operation the ore is covered with water. Four wheels move these beams, each wheel moving six ; and the water, as it runs off, carrying some of the metalline particles with it, is received into several basins, one placed be-hind another ; and after having passed through them all, and deposited some sediment in each, it is let off into u large pit, half an acre in extent, in which it is suffered to stand so long as to deposit all its sediment, and after this it is let out. This work is carried on day and night, and the ore taken away and replaced by more as often as occasion requires. That ore which lies next the beams by which it was pounded is always the cleanest and

richest. When the slich is washed as well as possible, 100 weight of it usually contains about an ounce or half an ounce of metal, which is a mixture of gold and silver ; but the gold is in the largest quantity, and usually constitutes two-thirds of the mixture : they then put the slich into a furnace with some limestone, and slacken, and run them together. The first melting produces a substance called lech; this lech they burn with charcoal, to make it lighter, to open its body, and render it porous, after which it is called rost; to this rost they add sand in such quantity as they find necessary, and then melt it over again. At Chremnitz they have many other ways of reducing gold out of its ore, but particularly one, in which they employ no lead during the whole operation ; whereas, in general, lead is always necessary after the before-mentioned processes. See METALLURGY. SLICK, adj. Belg. s'ickt. See SLEEK. Whom silver-bowed Apollo bred, in the Pierian

mead, Both slicke and daintie, yet were both in warre of

wondrous dread. Chapman.

Glass attracts but weakly ; some slick stones and thick glasses indifferently. Browne's Vulgar Errowt.

SLICKENSIDES, in mineralogy, a specular variety of galena, found in Derbyshire. It expresses the smoothness of its surface. It occurs lining the walls of very narrow rents. It has a most remarkable property, that when the rock in which it is contained is struck with a hammer, a crackling noise is heard, which is generally followed by an explosion of the rock, in the direction and neighbourhood of the vein. The cause of this singular effect has not been satisfactorily explained.

SLIDE, v. n., v. a. & } Preterite slid ; par-SLI'DER, n. s. [n. s. $ ticiple pass, slidden. Sax. flrtan, j-li>een>t>e, sliding; Belg. slijden; Welsh, ys-lithe ; Teut. schliffen. See SLICE and SLIT. To pass along smoothly ; slip ; glide : pass inadvertantly or unnoticed : to pass imper-

ceptibly : a smooth and easy passage or course flow.

Why is this people bidden back by a perpetual back—

ding? Jer.v.n.5.

Make a door and a bar for thy mouth : beware thou slide not by it. Ecclus. xxviii. 26.

Oh, Ladon ! happy Ladon ! rather ilide thin run by her, lest thou shouldst make her legs slip fro-n her.

Sidilry.

In the princess I could find no apprehensio of what I said or did, but a calm carelessness, letting every thing slide justly, as we do by their speeches who neither in matter nor person do any way belong unto us. <.

Thou shalt

Hate all, shew charity to none; But let the famished flesh slide from the bone, Ere thou relieve the beggar. Shakspeare.

Sounds do not only slide upon the surface of a smooth body, but communicate with the spirits in the pores. Bacon.

The discovering and reprehension of these colours cannot be done but out of a very universal knowledge of things, which so cleareth man's judgment, as it is the less apt to slide into any errour. Id.

There be whose fortunes are like Homer's verses, that have a slide and easiness more than the verses of other poets. Id.

We have some slides or relishes of the voice or strings, continued without notes, from one to another, rising or falling, which are delightful.

Id. Natural History.

From the tops of heaven's steep hill she slid And straight the Greeks swift ships she reacht

Ulysses, Stheneleus, Tisander, slide Down by a rope, Machaon was their guide.

DenJuun.

Smooth sliding without step. Milton.

The gallants dancing by the river's side, They bathe in summer, and in winter slide. Waller.

Go thou from me to fate,

Now die : with that he dragged the trembling sire Sliddering through

clotted blood. Drydmi.

He that once sins, like him that slides on ice, Goes swiftly down the slippery ways of vice : Though conscience checks him, yet, those rubs gone

o'er, He slides on smoothly, and looks back no more. Id.

At first the silent venom slid with ease, And seized her cooler senses by degrees. Id. Mneid.

Then no day void of bliss, of pleasure, leaving, Ages shall slide away without perceiving. Dryden. Nor could they have slid into those brutish immoralities of life, had they duly manured those first practical notions and dictates of right reason. South.

Such of them should be retained as slide easily of themselves into English compounds, without violence to the ear. Pope.

Begin with sense, of every art the soul, Parts answering parts shall slide into a whole ; • Nature shall join you, time shall make it grow A work to wonder at. Id.

Their eye slides over the pages, or the words slide over their eyes, and vanish like a rhapsody of evening tales. Watts.

Little tricks of sophistry, by sliding in or leaving out such words as entirely change the question, should be abandoned by all fair disputants Id.

Ye fair ! Be greatly cautious of your sliding hearts. Thomson.

The tempter saw the danger in a trice ; For the man sliddered upon fortune's ice. Harte. SLIDING RULE, a mathematical instrument, serving to perform computations in gauging, measuring, &c-> without the use of compasses ;

merely oy the sliding of the parts of the instrument one by another, the lines and divisions of which give the answer or amount by inspection. This instrument is variously contrived and applied by different authors, particularly Gunter, Partridge, Hunt, Leadbeater, Symons, Everard, and Coggeshall ; but the most usual and useful ones are those of the two latter.

Everard's sliding rule is chiefly used in cask gauging. It is commonly made of box, twelve inches long, one inch broad, and six-tenths of an inch thick. It consists of three parts ; *viz.* the stock just mentioned, and two thin slips of the same length, sliding in small grooves in two opposite sides of the stock : consequently, when bom these pieces are drawn out to their full ex-tent the instrument is three feet long.

On the first broad face of the instrument are four logarithmic lines of numbers. The first, marked A, consisting of two radii numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 1 ; and then 2, 3, 4, 5, &c., to 10. On this line are four brass centre-pins, two in each radius ; one in each of them being marked MB, for malt-bushel, is set at 2150-42, the number of cubic inches in a malt-bushel ; the other two are marked with A, for ale gallon, at 282, the number of cubic inches in an ale gal-lon. The second and third lines of numbers are on the sliding pieces, and are exactly the same with the first ; but they are distinguished by the letter B. In the first radius is a dot, marked Si, at -707, the side of a square inscribed in a circle whose diameter is 1. Another dot, marked Se, stands at -886, the side of a square equal to the area of the same circle. ""A third dot, marked W, is at 231, the cubic inches in a wine gallon. And a fourth, marked C, at' 3-14, the circumference of the same circle, whose diameter is 1 . The fourth line of numbers, marked MD, to signify malt-depth, is a broken line of two radii, numbered 2, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 9, 8, 7, &c. ; the number 1 being set directly against MB on the first radius.

On the second broad face, marked cd, are several lines : as 1st, a line marked D, and numbered 1, 2, 3, &c., to 10. On this line are four centre-pins : the first, marked WG, for wine-gauge, is at 17-15, the gauge-point for wine gallons, being the diameter of a cylinder whose height is one inch, and content 231 cubic inches, or a wine gallon : the second centre-pin, marked AG, for ale-gauge, is at 18-95, the like diameter for an ale gallon : the third, marked MS, for malt square, is at 46-3, the square root of 2150-42, or the side of a square whose

content is equal to the number of inches in a solid bushel : and the fourth, marked MR, for malt-round, is at 52-32, the diameter of a cylinder, or bushel, the area of whose base is the same 2150-42, the inches in a bushel. 2dly, Two lines of numbers on the sliding piece, on the other side, marked C. On these are two dots ; the one marked c, at -0795, the area of a circle whose circumference is 1 ; and the other, marked d, at -785, the area of the circle whose diameter is 1. 3dly, Two lines of segments, each numbered 1, 2, 3, to 100; ttie first for finding the ullage of a cask, taken as the middle frustrum of a spheroid, lying with its axis parallel to the

horizon ; and the other for finding the ullage of a cask standing. Again, on one of the narrow sides, noted c, are, 1st, a line of inches, numbered 1, 2, 3, &c., to 12, each subdivided into ten equal parts. 2dly, A line by which, with that of inches, we find a mean diameter for a cask, in the figure of the middle frustrum of a spheroid : it is marked spheroid, and numbered 1, 2, 3, &c., to 7. 3dly, A line for finding the mean diameter of a cask, in the form of the middle frustrum of a parabolic spindle, which gaugers call the second variety of casks ; it is therefore marked second variety, and is numbered 1, 2, 3, &c. 4th ly, A line by which is found the mean diameter of a cask of the third variety, consisting of the frustrums of two parabolic conoids, abutting on a common base ; it is therefore marked third variety, and is numbered 1, 2, 3, &c.

On the narrow face, marked f, are, 1st, a line of a foot divided into 100 equal parts, marked FM. 2dly, A line of inches, like that before-mentioned, marked IM. 3dly, A line for finding the mean diameter of the fourth variety of casks, which is formed of the frustrums of two cones, abutting on a common base. It is numbered 1, 2, 3, &c.; and marked FC, for frustrum of a cone. On the backside of the two sliding pieces is a line of inches, from twelve to thirty-six, for the whole extent of the three feet, when the pieces are put endwise; and against that the correspondent gallons and 100th parts, that any small tub, or the like open vessel, will contain at one inch deep. For the various uses of this instrument, see the authors mentioned above, and most other writers on gauging.

Coggeshall's sliding rule is chiefly used in measuring the superficies and solidity of timber, masonry, brick-work, &c. This consists of two rulers, each a foot long, which are united together in various ways. Sometimes they are made to slide by one another, like glaziers' rules : sometimes a groove is made in the side of a common two-foot joint

rule, and a thin sliding piece in one side, and Coggeshall's lines added on that side ; thus forming the common or carpenters' rule : and sometimes one of the two rulers is made to slide in a groove made in the side of the other. There are several other varieties in the construction of the sliding rule, which need not here be described.

SLIGHT, adj., n. s., & v. a.-\ Belg. slic fit ;

SLI'GHTINGLY, adv. f Teutonic shcht,

SLIGHT' LY, (of licht, light;

SLIGHT'S ESS, U.S. ./trivial. Small;

worthless ; inconsiderable ; weak ; foolish : slight, noun substantive, is neglect ; contempt ; scorn ; also artifice, cunning practice, confounded with SLEIGHT, which see. The verb active means to disregard ; treat with neglect : the adverbs and noun substantive corresponding.

Words, both because they are common, and do not so strongly move the fancy of man, are for the most part slightly heard. Hooker.

Is Caesar with Antonius prized so slight ?

Shak»peare.

The rogues flighted me into the river with as little remorse as they would have drowned puppies. Id.

Leave nothing fitting for the purpose Untouched, or slightly handled in discourse. Id.

Where gentry, title, wisdom, Cannot conclude but by the yea and no

Of general ignorance, it must omit Real necessities, and give way the while T' unstable slightness. Id. Coriolanus.

The shaking of the head is a gesture of slight refusal. Bacon.

These men, when they have promised great matters, and failed most shamefully, if they have the perfection of boldness, will but slight it over, and no more ado. li. Essays.

What strong cries must they be that snail drown so loud a clamour of impieties ! and how does it reproach the slightness of our sleepy heartless addresses !

Decay of Piety. Beware

Lest thev transgress and slight that sole command.

Milton.

He in contempt At one slight bound hierh o'erleaned all bound. Id.

Scorn not The facile gates of hell too slightly barred. Id.

No beast ever was so slight For man, as for his God, to fight. Hudibras.

If my sceptick speaks slightingly of the opinions he opposes, I have done no more than became the part.

Boyle.

Their arms, their arts, their manners, I disclose ; Slight is the subject, but the praise not small, If heaven assist, and Phcebus hear my call.

Dry den.

His death and your deliverance Were themes that ought not to be slighted over. Id.

As boisterous a thing as force is it rarely achieves any thing but under the conduct of fraud. Slight of hand has done that, which force of hand could never do. South.

Some firmly embrace doctrines upon slight grounds, some upon no grounds, and some contrary to appearance. Locke.

You cannot expect your son should have any re-gard for one whom he sees you slight. Id.

The letter-writer dissembles his knowledge of this restriction, and contents himself slightly to mention it towards the close of his pamphlet. Atterbum.

After Nic had bambouzled John awhile, what with slight of hand, and taking from his own score and adding to John's, Nic brought the balance to his own side. Arbuthnot.

Slight is the subject, but not so the praise, If she inspire, and he approve my lays. Pope.

Long had the Gallick monarch, uncontrouled, Enlarged his borders, and of human force Opponent slightly thought. Philips.

People in misfortune construe unavoidable accidents into slights or neglects. Clarissa.

Could I believe that winds, for ages pent In Earth's dark womb, have found at last a vent, And from their prison-house below arise, With all these hideous bowlings to the skies, I could be much composed, nor should appear, For such a cause to feel the slightest fear, Yourselves have seen what time the thunders rolled All night, me resting quiet in the fold. Cowper.

SLIGO, a county of Ireland, situated in the province of Connaught. It is bounded on' the north by Donegal Bay, on the east by part of Leitrim county, on the south and west by Mayo. It supports, on a superficial area of about 247,000 acres, a population of 150,000 inhabitants, who are lodged in 27,000 dwellings. The greatest length of this shire is about forty

English miles, and its maximum breadth is about thirty-seven. The baronies are Carbury Lower, Carbury Upper, Coolavin, Corran, Leney, Ti-raghrill, Tyreragh, which are subdivided into thirty-nine parishes. The only towns of consequence are Sligo, Ballymote, Colooney, ?..id Ardnaree, but there are upwards of twenty villages. The principal rivers are the Garrow, the Bonnet, the Arrow, the Esky, the Uncion, the Moy, and the Owenmore. The chief lakes are the Arrow, the Garrow, and the Talt, the sum of whose superficial areas amounts to 20,000 acres, besides Temple House and Lough Gill. The last of these is famous for its picturesque scenery, and on its banks are the demesne and beautiful residence of Mr. Wynne, called Hazel-wood, objects of much attraction to the lovers of the picturesque. Sligo abounds in monastic remains (forty of which are still traceable), some extremely

beautiful, possessing the advantages of romantic situation and great elegance of architecture. Sligo abbey, the ruins of Ballysadare, and the stone-roofed chapel on Inismurry, are probably the most interesting.

The surface of this county is of a mountainous character; the chief range, crossing from Foxford to Ballysadare, passes south of Lough Gill to Manor Hamilton. This great assemblage is of primary formation, the upper strata generally consisting of mica slate, on which massive and slaty hornblende repose, while limestone (of secondary formation) crosses out at the base, in the channels and banks of all the rivers. The basin of Lough Gill is limestone, and, in general, this valuable stone prevails through the low-lands of the county. The districts at a medium height, which are also tolerably fertile, appear to be formed of disintegrated mica slate, combined with calcareous matter. Few mines are yet worked here. The lead mine at Ballysadare contains a large portion of silver, and, if freed from water, would be found highly productive Iron stone is extensively diffused over the county ; and sufficient proof remains of the existence of smelting houses in ancient times, when the woods supplied fuel in abundance. At the base of Benbo Mountain, where limestone is found reposing upon granite, rich veins of copper are known to exist. While this retired and remote district continues unnoticed by public speculators in mineral and other wealth, some few private individuals, possessing waste lands there, are exerting themselves, with spirit and judgment, for their improvement and reclamation. Amongst these lord Palmerston's extensive plans, now executing at Mullaghmore, should not pass unobserved. Here a safety harbour is erected for the fishing craft, a new village just arising, and 10,000 acres of land divided, enclosed, and furnished with excellent roads, at the sole expense of the noble proprietor. Piers have also been erected at and near to Sligo town by the fishery board, so that this bold coast will henceforth be less terrific to the boatman and the mariner. There is a good deal of export trade carried on along the coast of the county, and much direct communication with the ports in the wes of England. Of late years the linen trade has also greatly advanced through, this district. Sligo

county returns two members to the imperial parliament.

SLIGO, a town in the county of the same name, situated in the province of Connaught and kingdom of Ireland ; in lat. 54° 12’ N., Ion, 8° 40’ VV. It is a borough, port, and fair town, and is 134 English miles from the city of Dublin. Sligo is said to have been founded about the year 1 242, by Maurice Fitzgerald, lord justice of Ireland, to whom also is due the merit of erecting there the beautiful monastery for Dominicans, part of which is still extant, but united to structures of more recent erection. The cloisters of Sligo abbey are still beautiful and in tolerable preservation, but for the partial restitution and preservation of the rest of this interesting ruin the public are indebted to its present noble proprietor, lord Palmerston. Sligo town is built upon the river Garrow, which rises in Lough Gill, but which, unfortunately, is not navigable the whole length from the bay to the town. The distanceˆ however, of the pier is sufficiently convenient for commercial purposes, and accordingly we find that the trade of this port is considerable. There are 275 vessels belonging to this bay, the carrying measure of which amounts to 19,666 tons. The fishery, also, between Raughley Point and Augheis is very productive in turbot, rock-cod, and ling ; and, if the pier were carried into deep water, would be much more so. The population of Sligo amounts to about 16,000 souls, who are chiefly engaged in the exportation of oats, butter, yarn, and linen. The chief imports are coal, iron, and pottery-ware. Sligo ranks above Galway as a place of commerce, holds little immediate communication with the city of Dublin, but much direct trade with Liverpool and the west of England. If the pier of Sligo Bay were extended, the iron and coal country of Leitrim, opened by means of a rail-way, or water carriage, from Lough Allen to Lough Gill, the town of Sligo would rise much higher in commercial importance. The chief buildings in this town are two churches, one of them ornamented with a handsome steeple and spire; two Roman Catholic chapels, one Independent and one Methodist chapel; a barrack, jail, court-house, and infirmary. Here is also a charter-school for forty-eight boys, and a charity-school for 100, besides two schools supported by the Hibernian Society, the one having 120 boys, the other an equal number of girls. In the parish of Colny, in part belonging to the town, lady Sarah Wynne supports a school of sixteen boys and twenty-six girls, and the charter-school derives part of its endowments from her ladyship’s predecessors. Sligo returns one member to the imperial parliament.

SLIM, adv. Island, slam. A cant word. Slender; thin of shape.

A thin s/im-gutted fox made a hard shift to wrig-gle his body into a henroost ; and, when he had stuft his guts well, squeezed hard to get out again ; but the hole was too little. L'Ettrange.

I was jogged on the elbow by a ilim young girl of seventeen. Addison.

sliminess is viscosity : the adjective corresponding.

brick for stone, and slime for mortar. Genesis,

The higher Nilus swells

The more it promises : as it ebbs, the seedsman, Upon the dim* and ooze, scatters his grain.

Shakspeare.

Some lay in dead men's skulls, and in those holes, Where eyes did once inhabit, there were crept, As 'twere in scorn of eyes, reflecting gems, That woo'd the slimy bottom of the deep, And mocked the dead bones that lay scattered by.

Id.

God, out of his goodness, caused the wind to blow to dry up the abundant slime and mud of the earth, and make the land more firm, and to cleanse the air of thick vapours and unwholesome mists. Raleigh.

Some plants grow upon the top of the sea, from some concretion of slime where the sun beateth hot, and the sea stirreth little. Bacon's Natural History.

They have cobwebs about them, which is a sign of a slimy dryness. Bacon.

And with asphaltick slime, broad as\he gate, Deep to the roots of hell, the gathered beach They fastened. Milton's Paradise Lost.

O foul descent ! I'm now constrained Into a beast, to mix with bestial slime, This essence to incarnate and imbrute. Milton.

Then both from out hell gates, into the waste Wide anarchy of Chaos,

damp and dark, Hovering upon the waters, what they met Solid or slimy, as in raging sea, Tost up and down, together crowded drove. Id.

The rest are all by bad example led, And in their father's slimy track they tread. Dry den.

By a weak fermentation a pendulous slimineis is produced, which answers a pituitous state. Flayer.

Eels, for want of exercise, are fat and slimy.

Artmthnot.

The astrological undertakers would raise men like vegetables out of some fat and slimy soil, well digested by the kindly heat of the sun, and impregnated with the influence of the stars. Bentley.

The swallow sweeps The ilimy pool to build his hanging house.

Thomson.

Shoals of slow house -bearing snails do creep O'er the ripe fruitage, paring slimy tracks In the sleek rind. Philips.

SLING, n.s. & v. a. } Sax. j-lmjan; Belg.

SLING'ER, n. s. } slingcn ; Dan. slynge. A

missive weapon made of a strap and strings ; a throw or stroke: to throw; cast; to hang or move by a sling.

The tlingers went about it, and smote it.

2 Kingt in. 25.

The arrow cannot make him flee ; sling stones are / turned with him into stubble. Job xli. 28.

Dreads he the twanging of the archer's string ? Or singing stones fu>m the Phoenician sling ? Sandys.

Slings have so much greater swiftness than a stone thrown from the hand, by how much the end of the sling is farther off from the shoulder-joint, the center of motion. Wilkins.

At one sling

Of thy victorious arm, well-pleasing son, Both sin and death, and yawning grave at last Through chaos hurled, obstruct the mouth of hell.

Milton.

The Tuscan king

Laid by the lance, and took him to the sling, Thrice whirl'd the thong around his head, and threw The heated lead, half melted as it flew.

Ljry den's JEne'ul.

SLl 9 479

From rivers drive the kids, and sling your hook, Anon I'll wash them in the shallow brook.

Dry den.

ˆEtna's entrails fraught with fire, That now casts out dark fumes and pitchy clouds, Incensed, or tears up mountains by the roots, Or slings a broken rock aloft in air. Addison.

They slung up one of their largest hogsheads, then rolled it towards my hand, and beat out the top.

Gulliver's Travels.

A SLING is an instrument for casting stones with great violence. The inhabitants of the Ba-learic Islands were famous in antiquity for the dexterous management of the sling : it is said they used three kinds of slings, some longer, others shorter, which they used according as their enemies were either nearer or more remote. It is added that the first served them for a head-band, the second for a girdle, and that the third they constantly carried in their hand.

SLINGELAND (John Peter Van), a Flemish painter, born at Leyden, in 1640. He was a disciple of Gerard Douw, and excelled him in neatness of manner ; but was so slow that he look up three years in painting one family picture. He died in 1691.

SLtNGING is used variously at sea; but chiefly for hoisting up casks or other heavy things with slings, i. e. contrivances of ropes spliced into themselves at either end, with one eye big enough to receive the cask

or whatever >s to be slung. There are other slings, which are made longer, and with a small eye at each end ;

fche slunk into a corner, where sho lay trembling till the company went their way. L'Estrange.

To prevent a mare slinking her foal, in snowy weather, keep her where she may have good spring water to drink-Mortimer.

He would pinch the children in the dark, and then slink into a corner, as if nobody had done it.

Arbuihnot's History of John Bull. A weasel once made shift to stink In at a corn-loft through a chink ; But, having amply stuff 'd his skin, Could not get out as he got in. Pope.

We have a suspicious, fearful, and constrained countenance in turning back, and slinking through narrow lanes. ftaiift

SLIP, v. n., v. «., & n. s. ˆ Saxon j-lipan ;

SLIP'BOARD, n. s. Belg-ic slippen ;

SLIP'KNOT, Dan.s%7e;Swed.

SLIP'PER, n. s. & adj. slippa. To slide ;

SUP'PERY, adj.)>glide ; move out

SLIP PERILY, adv. of place ; creep ;

SLIP'PERINESS, n. s. sneak ; fall into

SLIP'PY, adj. | fault or censure;

SLIP'SHOD. J escape : as a verb

active, to convey secretly or imperceptibly ; cut offor let loose, by small degrees ; pass over negligently : as a noun substantive, the act of slipping ; false step ; error ; mistake ; an escape ; desertion ; a chip or piece taken from a main stock: a slipboard is a board slid ing in

grooves : slipknot, a knot easily slipped or untied : slipper, a shoe, into which the foot easily slips : Spenser uses it as an adjective for slippery, which means

one of which is put over the breech of a piece of glib J smooth ; not affording firm footing or hold : ordnance, and the other eye comes over the end and hence uncertain ; changeable ; the adverb and of an iron crow, which is put into the mouth of noun substantive following corresponding :

slippy is a provincial barbarism for slippery :

the piece, to weigh and hoise the gun as they please. There are also slings by which the yards are bound fast to the cross-tree aloft, and to the head of the mast, with a strong rope or chain, that if the tie should happen to break, or to be shot to pieces in fight, the yard, nevertheless, may not fall upon the hatches.

SLINGING A MAN OVERBOARD, to stop a leak in a ship, is done thus : — The man is trussed up about the middle in a piece of canvas, and a rope to keep him from sinking, with his arms at liberty, a mallet in one hand, and a plug, wrapped in oakum and well tarred in a tarpauling clout, in the other, which he is to beat with all dispatch into the hole or leak.

SLINK, v. n. & v. a., pret. slunk Sax. j-lin- san, to creep; Swed. simka. To sneak; steal out of the way : and, in a low sense, to cast : miscarry.

We will slink away in supper time, disguise us at my lodging, and return all in an hour.

Shakspeare. Merchant of Venice.

As we do turn our backs From our companion, thrown into his grave, So his familiars from his buried fortunes Slink away. Id. Timon of Athens.

He, after Eve seduced, unminded stunk Into the wood fast by. Milton’s Paradise Lost.

Not far from hence doth dwell

A cunning man, hight Sidrophel,

To whom all people far and near

On deep importances repair ;

When brass and pewter hap to stray,

And linen stinks out of the way. Hudibras.

a slipshod, having the shoes barely slipped on.

Their ways shall be as slippery ways in the darkness. Jcr. xxiii.

When Judas saw that his host slipt away, he was sore troubled. 1 Mac. ix. 7.

An eloquent man is known far and near ; but a man of understanding knoweth when he slippeth.

Ecclus. xxi. 7.

His promise to trust to as slippery as ice. Tusser.

Oh Ladon, happv Ladon ! rather slide than run by her, lest thou shouldst make her legs slip from her. Sidney.

.From her most beastly company I ‘gan refrain, in mind to slip away, Soon as appeared safe opportunity. Spenser.

A trustless state of earthly things, and slipper hope Of mortal men, that swinke and sweat for nought.

Id.

By the hearer it is still presumed, that if they be let slip for the present, what good soever they contain is lost, and that without all hope of recovery.

Hooker.

In truth, they are fewer, when they come to be discussed by reason, than otherwise they seem, when by heat of contention they are divided into many slips, and of every branch an heap is made. Id.

If he had been as you,

And you as he, you would have dipt like him ; But he, like you, would not have been so stern.

Shakspeare.

This bird you aimed at, though you hit it not. — Oh, sir, Lucentio slipped me like his greyhound, Which runs himself, and catches for his master.

SLI

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SLI

There put on him

What forgeries vou please : marry, none so rank As may dishonour him ; But, Sir, such wanton, wild, and usual ilipt, As are most known to youth and liberty. Id

Adoption strives with nature, and choice breeds A native slip to us from foreign seeds. Id.

I see you stand like greyhounds in the slips, Straining upon the start. Id. Henry V.

In large wounds a single knot first ; over this a little linen compress, on which is another single knot : and then a slipknot, which may be loosened upon inflammation. Shakspeare.

When they fall, as being slippery slanders, The love that leaned on them, as tlippery too, Doth one pluck down another, and together Die in the fast. Id. Troilus and Cressida.

Oh world, thy ilippery turns'. Friends now fast

sworn,

Whose double bosoms seem to wear one heart, Whose hours, whose bed, whose meal and exercise Are still together ; who twine, as ‘twere, in love Unseparable, shall within this hour, On a dissension of a doit, break out To bitterest enmity. Shakspeare.

My wife is slippery. Id. Winter’s Tale.

A gown made of the finest wool,

Which from our pretty lambs we pull ;

Fair lined slippers for the cold,

With buckles of the purest gold. Ealeigh.

Trees are apparelled with flowers or herbs by boring holes in their bodies, and putting into them earth holpen with muck, and setting seeds or slips of violets in the earth. Bacon.

You are not now to think what’s best to do,

As in beginnings ; but what must be done,

Being thus entered ; and slip no advantage

That may secure you. Ben Jonson’s Catiline.

Of the promise there made, our master hath failed as, by slip of memory, or injury of time.

Walton’s Architecture.

The ilipt of their vines have been brought into Spain. Abbot.

God is said to harden the heart permissively, but not operatively, nor effectively ; as he who onry lets loose a greyhound out of the slip, is said to hound him at the hare. Bramhall.

The ilippery tops of human state, The gilded pinnacles of fate. Con-lev.

The blessing of the Lord shall slip from thee, without doing thee any good, if thou hast not ceased from doing evil. Taylor.

The highest hill is the most slippery place, And fortune mocks us with

a smiling face.

Denham.

Slipping from thy mother's eye, thou went'st Alone into the temple ; there was found Among the gravest rabbles disputant, On points and questions fitting Moses' chair.

Milton.

Let us not slip the' occasion, whether scorn Or satiate fury yield it from our foe. Id.

So have I seen some tender slip, Saved with care from winter's nip, The pride of her carnation train, Plucked up by some unheedy swain. Id. The more shame for her goodyship,

To give so near a friend the slip. Hudibrat.

This religious affection, which nature has implanted in man, would be the most enormous stip she could commit. More.

A skilful dancer on the ropes slips willingly, and makes a seeming stumble, that you may think him in great hazard, while he is only giving you a proof of his dexterity. Dry den.

Thrice around his neck his arms he threw, And thrice the flitting shadow slipped away, Like winds or empty dreams that fly the day. Id*

The' impatient greyhound, ilipt from far, Bounds o'er the glebe to course the fearful hare.

Id.

Alonzo, mark the characters ; And if the" impostor's pen have made a tlip That shews it counterfeit, mark that and save me.

Id.

Beauty, like ice, our footing does betray ; Who can tread sure on the smooth slippery way?»

Id.

I’ll tlip down out of my lodging.

Id. Don Sebastian.

One ill man may not think of the mischief he could do, or tlip the occasion. L’Estrange.

One casual tlip is enough to weigh down the faithful service of a long life. Id.

One sure trick is better than a hundred slippery ones. Id.

The daw did not like his companion, and gave him the flip, and away into the woods. Id.

For watching occasions to correct others in their discourse, and not to tlip any opportunity of shewing their talents, scholars are most blamed. Locke.

Lighting upon a very easy slip I have made, in putting one seemingly indifferent word for another, that discovery opened to me this present view. Id.

Their explications are not yours, and will give you the slip. Id.

They are propagated not only by the seed, but many also by the root, and some by stipt or cuttings. Ran on the Creation.

They trim their feathers, which makes them oily and slippery, that the water may slip off them.

Mortimer.

The runners spiead from the master-roots, and have littk sprouts or roots to them, which, being cut four or five inches long, make excellent sets : the branches also may be slipped and planted.

Id. Husbandry.

They draw off so much line as is necessary, and fasten the rest upon the line-rowl witht^ tlipknat, that no more line turn off.

Morons Mechanicul Exercises.

If he went abroad too much, she’d use To give him slippers, and lock up his shoes. King.

When a corn slips out of their paws, they take hold of it again. Additon's Spectator.

The mathematician proceeds upon propositions he has once demonstrated ; and, though the demonstration may have slipt out of his memory, he builds upon the truth. Addison.

Any little slip is more conspicuous and observable in a good man's conduct than in another's, as it is not of a piece with his character. Id. Spectator.

Between these eastern and western mountains lies a slip of lower ground, which runs across the island.

Addison.

If a man walks over a narrow bridge when he is drunk, it is no wonder that he forgets his caution vhile he overlooks his danger ; but he who is sober, and views that nice separation between himself and the devouring deep, so that, if he should slip, he sees his grave gaping under him, surely must needs take every step with horror and the utmost caution.

South. If after some distinguished leap

He drops his pole, and seems to slip,

Straight gathering all his active strength,

He rises higher half his length. Prior.

We do not only fall by the slipperiness of our tongues, but we deliberately discipline them to mischief. Government of the Tongut

Wise men watch every opportunity, and retrieve every mispent hour which has slipped from them.

Rogers.

To slip the market, when thus fairly offered, is great imprudence. Collier.

Thus tar my author has slipt his first design ; not a letter of what has been yet said promoting any ways the trial. Atterbury.

If our author gives us a list of doctrines, with what reason can that about indulgences be slipped over 1 id.

In his officious attendance upon his mistress he tried to ilip a powder into her drink.

Arbuthnot's History of John Bull. Oily substances only lubricate and make the bowels slippery. Arbuthnot.

The white of an egg is ropy, tlippy, and nutritious. Floyer.

Sometimes the ancle-bone is apt to turn out on either side, by reason of relaxation, which though you reduce, yet, upon the least walking on it, the bone slips out again. Wiseman.

The schirrus may be distinguished by its want of inflammation in the skin, its smoothness, and slipperiness deep in the breast. Sharp's Suryery.

Some mistakes may have slipt into it ; but others will be prevented. Pope.

Thrice rung the bell, the slipper knocked the

ground, And the pressed watch returned a silver sound. Id.

I will impute no defect to those two years which have slipped by since. Swift to Pope.

Forced to alight, my horse slipped his bridle, and ran away. Swift.

The slipshod 'prentice from his master's door Had pared the dirt, and sprinkled round the floor.

Id.

I ventured to draw back the slipboard on the roof, contrived on purpose to let in air.

Gulliver's Travels.

Use the most proper methods to retain the ideas you have acquired ; for the mind is ready to let many of them slip, unless some pains be taken to fix them upon the memory. Watts.

So stood the brittle prodigy ; though smooth And slippery the materials, yet frost-bound Firm as a rock. Cowper.

To rise at noon, sit slipshod and undressed, To read the news, or fiddle, as seems best, Till half the world comes rattling at his door, To fill the dull vacuity till four ; And, just when evening turns the blue vault gray, To spend two hours in dressing for the day. Id.

SLIP, in ship-building, is a place lying with a gradual descent on the banks of a river, convenient for SHIP-BUILDING ; which see.

SLIPS, in horticulture, such portions of plants as are slipped off from the sterns or branches for the purpose of being planted out as sets. A great number of plants, both of the woody and herbaceous kinds, is propagated by slips, which is effected in the woody kinds by slipping off small young shoots from the sides of the branches, &c., with the thumb and finger, instead of cutting them off with a knife ; but there is no material difference, in the success or future growth, between slips and cuttings, only the former in small young shoots is more' proper to be slipped off by the hand, which, in numerous small shrubby plants, will grow; but it is more commonly practised in the lower ligneous plants, such as sage, winter-savory, hyssop, thyme, southern-wood, rosemary, rue, lavender, and others of VOL. XX.

slow shrubby growths. The best season of the year for effecting the work is generally the sprin* and beginning of summer, though many sorts will grow if planted at almost, any time, from the spring to the latter end of the summer as shown in speaking of their culture. In performing the work of slipping, in these sorts, the young shoots of but one year's growth, and in many sorts the shoots of the year, should be chosen as growing the most readily, even when to plant the same summer they are produced especially the hard-wooded kinds : but, in the more soft-wooded plants, the slips of one year's growth will also often readily grow ; being careful always to choose the moderately-growing side-shoots situated on the outward part of the

plants, from three to six or eight inches long, slipping them off close to the branches, and clearing off the lower leaves ; then planting them in a shady border, if in summer, and watered, or so as they can be occasionally shaded in hot sunny weather, especially small slips, inserting the whole two parts of three into the ground, giving occasional water in dry warm weather, till properly rooted ; and then towards autumn, or in the spring following, transplanting them where they are to re-main : but, in planting slips of the shoots of tender shrubby exotics of the greenhouse and stove, many sorts require the aid of a hot-bed or bark-bed, to promote their emitting roots more effectually, as shown in their respective culture ; but some others of the shrubby kinds, such as geraniums, will root freely in the natural earth in summer ; and many of the herbaceous tribe, producing bottom-rooted offsets for slips, as aloes, &c., also readily grow, either with or without a hot-bed ; but, where there is the convenience of hot-beds in which to plunge the pots of slips of tender plants, it runs them off more expeditiously ; and most hot-house plants in particular require that assistance. But many shrubby plants, growing into large bunches from the root of the small under-shrubby kinds, as thyme, savory, hyssop, sage, &c., as well as those of larger growth, as roses, spiraeas, raspberries, and numerous other sorts, may be slipped quite to the bottom into separate plants, each furnished with roots, and planted either in nursery rows, or at once where they are to remain.

As to the slipping of herbaceous plants, various sorts multiply by the roots, &c., into large bunches, which may be slipped into many separate plants, by slipping off the increased suckers or offsets of the root, and in some sorts by the offsets from the sides of the head of the plants, and in a few sorts by slips of their bottom shoots as well as of the stalks and branches in plants ot bushy growth j but the greater part by slipping the roots, as in many of the bulbous-rooted tribe, and numerous fibrous-rooted kinds of plants The slipping of the bulbous plants is performed in summer when their leaves decay, the roots being then taken up, slipping off all the smail offsets from the main bulb, which are generally soon planted again in nursery-beds for a year or two. In the fibrous-rooted sorts, the slipping should generally be performed in the spring or early part of autumn, which may be effected either by slipping the outside offsets with roots, as the

plants stand in the ground ; or more effectually, by taking the whole bunch of plants up, and slipping them into several separate parts, each slip being furnished al-o with roots, planting them, if small, in nursery-rows for a year, to gain strength ; or such as are strong may be planted at once where they are to remain. See the culture of the different sorts under their respective heads.

SLIPPING, in rural economy, is a term used among animals to denote abortion in them. Thus mares are said to slip their colts, ewes their lambs, and cows their calves. And it has been suggested that cows in calf, by smelling to any flesh, particularly in a putrescent state, are affected by sucli a nausea as to stimulate the womb to action, and to eject the fcstus : this is well known in the north of Scotland, where it is particularly guarded against. It is observed by Mr. Ross, in the twenty-fifth volume of the Annals of Agriculture, that, through the inattention of a game-keeper, there was always horse-flesh lying about his yards, and he had many cows which slipped calves. It is supposed, in the Essex Agricultural Report, that bleeding, when one-third or half gone, is a preventative. When it happens, the abortion should be immediately buried, and the cow kept as widely apart as possible from the herd, and not receive the hull that goes with them. It is considered as certainly infectious. In Sussex it has been supposed by some that the slipping of lambs has been caused by too free a use of rape, as one large sheep-farmer, some years since, lost eighty or ninety in this way; which was supposed to arise from feeding the ewes upon it about the end of the year, though it had been made use of before without any bad effect of this kind. The ewes in this instance had been hard kept. Ewes are, from some cause or other, very subject to slip their lambs, and of course require much care and attention in this respect.

SLIT, v. a., pret. and part, slit and slitted. Saxon j-litan ; Goth, and Swed. slita. To cut longwise ; a long cut or opening.

To make plants medicinable, slit the root, and in-fuse into it the

medicine, as hellebore, opium, scam-mony, and then bind it up. Bacon's Natural History. In St. James's fields is a conduit of brick, unto which joineth a low vault, and at the end of that a round house of stone ; and in the brick conduit there is a window, and in the round house a slit or rift of some little breadth : if you cry out in the rift, it will make a fearful roaring at the window. Bacon.

The deers of Arginusa had their ears divided, occasioned at first by slitting the ears.

Browne's Vulgar Ei TOUTS. Had it hit

The upper part of him, the blow Had slit as sure as that below. Hudibrat.

A liberty might be left to the judges to inflict death, or some notorious mark, by slitting the nose, or brands upon the cheeks. Temple.

Where the tender rinds of trees disclose Their shooting gems, a swelling knot there grows : Jiiit in that place a narrow tlit we make, Then other buds from bearing trees we take ; Incited thus, the wounded rind we close.

Dry den.

! found, by looking through :i flit or oblong facie, which was narrower than tlie pupil <;t' tin > il

held close to it parallel to the prisms, I could see the circles much tiistincter, and visible to a far greater number than otherwise. A'e ! <•/< >«.

If a tinned or plated body, which, being of an even thickness, appears all over of an uniform colour, should be xlit into threads, or broken into fragments of the same thickness with the plate, 1 see no reason why every thread or fragment should not keep its color. Id. Opticks.

\enlit the preternatural body open.

Woman' i Surgery. He took a freak To */it my tongue, and make me speak. Swift.

SLIVE, or SLI'VER, v. a. Sax. j-lipan. To split ; divide, or tear off longwise. Obsolete

Liver of blaspheming Jew ; Gall of ˆoat and slips of yew, Slivered in the moon's eclipse. Shakspeare. Macbeth.

There on the pendent boughs her coronet weed Clambering to hang, an envious sliver broke, When down her weedy coronet and herself Fell in the weeping brook. Id. Hamlet.

SLOANE (Sir Hans), bart., an eminent physician and naturalist, was of Scottish extraction, his father Alexander Sloane being at the head of that colony of Scots which king James VI. settled in the north of Ireland, where our author was born, at Killieagh, on the 16th of April 1660. At a very early period he displayed a strong inclination for natural history ; and, this propensity being encouraged by a suitable education, he employed those hours which young people generally lose in trifling amusements in appropriate studies. When about sixteen he was attacked by a spitting of blood, which threatened danger, and interrupted the regular course of his studies for three years. Upon this he laid down for himself a regimen of temperance ; by strictly observing which he was enabled to prolong his life beyond the ordinary bounds. On his recovery he resolved to perfect himself in the different branches of medicine, and with this view went to London. On his arrival he became a pupil to the great Slafforth, an excellent chemist, bred under the illustrious Stahl ; and soon gained a perfect knowledge of the composition and preparation of the various medicines then in use. lie also studied botany at Chelsea, and attended the public lectures on anatomy and physic. His chief merit, however, was his knowledge of natural history ; and this introduced him early to the acquaintance of Mr. Boyle and Mr. Ray, two of the most eminent naturalists of that age. His intimacy with these distinguished characters continued as long as they lived ; and, as he communicated to them every object of curiosity that attracted his attention, his observations often excited their admiration. After studying four years in London Mr. Sloane determined to visit foreign countries for improvement. With this view he set out for France in the company of two other students, and, having crossed to Dieppe, proceeded to Paris. In the way thither they were elegantly entertained by the famous M. Lemery the elder; and in return Mr. Sloane presented that eminent chemist with a specimen of four different kinds of phosphorus, o. which, upon the credit of other writers, M. Le-mery had treated in his book of chemistry, though lie imd never ?eci, any of thorn. See LE-MI:I;Y. At Par;— M: S! < MTI«- attemlud the hi);-

pitals, heard the lectures of Tournefort, De Ver-ney, and other eminent masters ; and visited all the literati, who received him with particular marks of esteem. From Paris he went to Montpelier; and, being furnished with letters from M. Tournefort to M. Chirac, then chancellor of that university, he found easy access to all the learned men of the province, particularly to M. Magnol, whom he accompanied in his botanical excursions in the environs of that city. Having here found an ample field for contemplation suited to his taste, he took leave of his two companions, who went into Italy. After spending a year in collecting plants he travelled through Languedoc with the same design ; and, passing through Thoulouse and Bourdeaux, returned to Paris, where he made a short stay. In 1684 he returned to England. On his arrival in London he called for his two illustrious friends, Mr. Ray and Mr. Boyle, to communicate to them the discoveries he had made. The latter he found at home, but the former had retired to Essex, to which place Mr. Sloane transmitted a great variety of plants and seeds, which Mr. Ray has described in his History of Plants, and for which he makes a pro-per acknowledgment. Not long after this he was proposed by Dr. Martin Lister as a candidate to be admitted a member of the Royal Society, and was elected on the 21st January 1685. He soon after communicated some curiosities to the society. On the 12th April 1687 he was chosen a fellow of the college of physicians in London. On the 12th September he embarked at Portsmouth for Jamaica with the duke of Albemarle, who had been appointed governor of that island, in quality of his physician, and arrived on the 19th December. Here a new field was opened for discoveries in natural productions ; but the duke of Albemarle died soon after he landed, and the duchess determined to return to England as soon as possible. As Dr. Sloane could not leave her grace in her distress, whilst the rest of her retinue were preparing for their departure, he improved the interval in making collections of natural curiosities ; so that, though his whole stay at Jamaica was not above fifteen months, he brought together such a prodigious number of plants, that, on his return to England, Mr. Ray was astonished that one man could procure, in so short a space, so vast a variety. On his arrival in London he applied himself to the practice of his profession ; and soon became so vminent that he was chosen physician to Christ's Hospital on the 17th October J.694; and this office he held till 1730, when, on account of his great age, he resigned it. He constantly

applied the money he received for his trouble to the re-lief of those who were the greatest objects of compassion in the hospital. He had been elected secretary to the Royal Society on the 30th of November 1693 ; and upon this occasion he revived the publication of the Philosophical Transactions, which nad been omitted for some time. He continued to be the editor of this work till 1712; and the volumes which appeared during that period are monuments of his industry and ingenuity, many of the pieces in them being written by himself. In the mean time he published Catalogus l lantarum quse in Insula Jamaica soon** orove-niunt, &c., seu Prodromi Historic Naturalis pars prima, which he dedicated to the Hoyal Society and College of Physicians. In the statistical part of this book are some remarks relative to the management of the slaves of the island which we cannot pass over, especially as the question of the slave trade still calls for all the vigilance of the Christian moralist. The following, amongst others, are Sloane's words : — 'The punishments for crimes of slaves are usually for rebellions, burning them, by nailing them down on the ground with crooked sticks on every limb, and then applying the fire by degrees from the (eet and hands, burning them gradually up to the head, whereby their pains are extravagant. For crimes of a lesser nature, gelding, or chopping off half of the foot with an axe. These punishments are suffered by them with great constancy.' The author proceeds as coolly to describe ' usual ' whipping and other punishments, and concludes thus : — 'After they are whipped till they are raw, some put on their skins pepper and salt to make them smart ; at other times their masters will drop melted wax on their skins, and use several veiy exquisite torments. These punishments are sometimes merited by the blacks, who are a very perverse generation of people ; and, though they ap-pear harsh, yet are scarcely equal to some of their crimes, and inferior to what punishments other European nations inflict on their slaves in the East Indies, as may be seen by Moquet and other travellers.' We put these words on record chiefly to show what a savage man may become to man ; and how a benevolent mind, like Sir Hans Sloane's, could be inured to the sight of such enormities and the reasoning of the planters until it approved of them. About the same time he formed the plan of a public dispensary, where the poor might be furnished at prime cost with medicines, which he afterwards carried into execution with the assistance of the College of Physicians. He was continually enriching and enlarging his cabinet of curiosities ; and the fame which, in the course of a few years, it had acquired, brought every thing that was curious in art or nature to be first offered to him for purchase. In 1701 it was greatly augmented upon the death of William Courten, esq., who had employed much of his time and fortune in collecting rarities, and who bequeathed the whole

to Dr. Sloane on condition of his paying certain debts and legacies with which he had charged it. These terms our author accepted, and he executed the will of the donor with the most scrupulous exactness. About 1706 he became acquainted with the celebrated Sydenham ; who contracted so warm an affection for him that he took him into his house, and recommended him to hi< patients. In 1707 the first volume of his Natural History of Jamaica appeared in folio, though the publication of the second was delayed till 1725. By this very useful and magnificent work the materia medica was enriched with a great number of excellent drugs not before known. In 1708 the doctor was .elected a foreign member of the Royal Academy of Sciences at Paris ; an honoi so much the greater as we were then at \;ir \ith France, ;md the queen's consent \ as nccc^.iy before he could accept it. In proportion as his

credit rose among the learned his practice increased among the people of rank : queen Anne herself frequently consulted him, and in her last illness was blooded by him. On the accession of George I., that prince, on the 3d of April 1716, created the doctor a baronet, and made him physician general to the army, in which station he continued till 1727, when he was appointed physician in ordinary to George II. He attended the royal family till his death, and was particularly favored by queen Caroline. In the mean time he had been unanimously chosen one of the elects of the College of Physicians, June 1st, 1716; and he was elected president on September 30th, 1719, an office which he held for sixteen years. During that period he not only gave the highest proofs of his zeal and assiduity in the discharge of his duty, but in 1721 made a present to that society of £100; and so far remitted a very considerable debt which the corporation owed him as to accept it in such small sums as were least inconvenient to the stale of their affairs. Sir Hans was no less liberal to other learned bodies. He had no sooner purchased the manor of Chelsea than he gave the company of apothecaries the entire freehold of their botanical garden there, upon condition only that they should present yearly to the Royal Society fifty new plants, till the number should amount to 2000, which was completed in 1761. He gave, besides, several other considerable donations for the improvement of tiiis garden ; the situation of which, so near the capital, was such as to render it very useful as an excellent school for young botanists. On the death of Sir Isaac Newton, in 1727, Sir Hans was raised to the presidency of the Royal Society. He made the Society a present of 100 guineas; caused a bust of king Charles II., its founder, to be erected in the great hall where it met ; and procured Sir Godfrey Copley's benefaction of a medal, of the value of five guineas, to be annually given as an honorary mark of distinction to the person who communicates the best experiments to the Society. In

these and similar exertions for the benefit of that Society he employed his time from 1727 to 1740, when, at the age of eighty, he resigned the presidency, much against the inclination of that respectable body, who, in a public assembly, thanked him for the eminent services he had rendered them. In January 1741 be began to remove his library and his cabinet of rarities from his house in Bloomsbury to that at Chelsea ; and on the 12th March following, having settled all his affairs, he retired thither himself, to enjoy in tranquillity the remains of a well-spent life. He did not, however, bury himself in solitude ; but, during his retreat, presented to the public such useful remedies as success had warranted, during the course of a long practice. Among these is the efficacious receipt for distempers in the eyes, and his remedy for the bite of a mad dog. During the' whole course of his life, Sir Hans had lived with so much temperance as had preserved him from feeling the infirmities of old age ; but in his ninetieth year he began to complain of pains, and to DC sensible of a universal decay. He ofteu said that the approach of death brought no terrors along

with it; that he had long expected the stroke and that he was prepared to receive it whenever the great author of his being should think fit. After an illness of three days he died on the 1 1th January 1752, and was interred on the 18th at Chelsea, in the same vault with his lady ; the solemnity being attended with the greatest concourse of people, of all ranks and conditions, that had ever been seen on such an occasion. Sir Hans, being extremely solicitous lest his cabinet of curiosities, which he had taken so much pains to collect, should be again dissipated at his death, and being at the same time unwilling that so large a portion of his fortune should be lost to his children, he bequeathed it to the public, on condition that £20,000 should be made good by parliament to his family. This sum, though large in appearance, was scarcely more than the intrinsic value of the gold and silver medals, the ores and precious stones, that were found in it ; for in his last will he declares that the first cost of the whole amounted at least to £50,000. Besides his library, consisting of more than 50,000 volumes, 347 of which were illustrated with cuts finely engraven and colored from nature, there were 3560 MSS., and a vast number of rare and curious works of every kind. The parliament accepted the legacy, and fulfilled the conditions.

SLOANEA, in botany, the sappodillo tree, a genus of the monogynia order, and polyandria class of plants ; natural order fiftieth, amentaceae : COR. pentapetalous : CAL. pentaphyllous and deciduous ; the stigma is perforated ; the berry is corticose, echinated,

polyspermous, and gaping. There are two species: — 1. S. dentata, the sappodillo tree; and 2. S. emarginata, the apeiba of Brasil.

To SLOCKEN is the verb universally used in the Scottish dialect. To SLOCK would hardly be understood.

SLOE, n. s. Sax. j-la ; Belgic slaae ; Swed. sla. The fruit of the blackthorn; a small wild plum.

When you fell your underwoods, sow haws and sloes in them, and they will furnish you, without do-ing of your woods any hurt. Mortimer's Hittbandry.

The fair pomegranate might adorn the pine, The grape the bramble, and the sloe the vine.

BLackmore.

SLOE. See PRUNUS.

A SLOOP is furnished with only one mast, the mainsail of which is attached to a gaff above, 01 to the mast on its foremast edge, and to a long boom below, by which it is occasionally shifted to either quarter.

SLOOP OF WAR is a name given to the smallest vessels of war except cutters. They are either rigged as ships or snows.

SLOP, v. a. & n. s. Belg. slob, sleb, mire. To make a puddle; drink grossly or greedily : mean and vile liquor of any kind.

But thou, whatever *lops she will have bought, Be thankful. Dryden's Juvenal.

The sick husband here wanted for neither slopi nor doctors. L'Estrange.

SLOP, n. s. Sax. flop ; Belg, sloove, a covering. Trowsers; open breeches.

What said Mr. Dombledon about the sattin tor ray short cloak and slops 1 Shahspeare . Henry IV.

SLOPE, adj., n. s., v. a. &~\ ‘This word,’ J>LOPE’NESS, n. s. [v. n. (says Dr. John-SLOPE’WISE, adj,. I son, ‘ is not de—

SLO’PINGLY, adv. J rived from any

satisfactory original.’ . Junius omits it : Skinner derives it from Dutch slap, lax ; and derives it from the curve of a loose rope. Perhaps its original may be latent in Dutch loopen, to run ; slope being easy to the runner. Thomson refers it to SLIP. Oblique ; not perpendicular. Generally used of acclivity or declivity, forming an angle greater or less with the plane of the horizon : the derivatives all corresponding.

Though ‘bladed corn be lodged, and trees blown

down,

Though palaces and pyramids do slope Their heads to their foundations. Id. Macbeth.

Where there is greater quantity of water, and space enough, the water moveth with a sloper rise and fall.

Bacon.

Growing upon slopes is caused for that moss, as it cometh of moisture, so the water must but slide, not be in a pool. Id.

The Italians give the cover a graceful pendence of slopeness, dividing the whole breadth into nine parts, whereof two shall serve for the elevation of the highest ridge. Wotton’s Architecture.

The Wear is a frith, reaching slopewise through the Ose from the land to low-water mark, and having in it a bent or cod with an’eye-hook ; where the fish entering, upon their coming back with the ebb, are stopped from issuing out again, forsaken by the wa-ter, and left dry on the ose. Carew.

These atoms do not descend always perpendicularly, but sometimes slopingly. Digby on the Soul.

Murmuring waters fall Down the slope hills, dispersed, or in a lake, That to the fringed bank with myrtle crowned Her crystal mirrour holds, unite their streams.

Milton. Uriel Returned on tha* bright beam, whose point now

raised Bore him slope downward to the sun, now fallen.

Id.

On each hand the flames, Driven backward, slope their pointed spires, and

roll'd In billows, leave i' the' midst a horrid vale. Id.

There is a handsome work of piles made sloping athwart the river, to stop the trees which are cut down and cast into the river. Browne's Travels.

Betwixt the midst and these the gods assigned Two habitable seats for human kind ; And cross their limits cut a sloping way, Which the twelve signs in beauteous order sway.

Dryden.

There is a straight hole in every ant's nest half an inch deep, and then it goes down sloping into a place where they have their magazine.

Addison's Spectator.

My lord advances with majestick mien, And when up ten steep slopes you've dragg'd your

thighs, Just at his study door he'll bless your eyes. Pope.

All night I slept, oblivious of my pain ; Aurora dawned, and Phoebus shined in vain : Nor, till oblique he sloped his evening ray, Had Somnirs dried the balmy dews away.

Id. Odyssey.

On the fourtli aspect of a sloping hill, Whose skirts meandering-Peneus washes still,

Our pious lab’rer passed his youthful days

In peace and charity, in prayer and praise, llarte.

SLOTH, n.s. ˆ Sax. j-tep*. rl«P* J

SLOTH/FUL,at/;. vSwed. slott. . It might SLOTH’FULNESS,M.S. j not improperly be written sloath, but that it seems better to regard the orthography of the primitive slow. Slowness; tardiness ; laziness : the adjective and noun substantive following corresponding.

He that is slothful in his work, is brother to him that is a great waster. Prov. xviii. 9.

The desire of the slothful killeth him ; for his hands refuse to labour. Id. xxi. 25.

To trust to labour without prayer, argueth impiety and prophaneness ; it maketh light of the providence of God : and, although it be not the intent of a religious mind, yet it is the fault of those men whose religion wanteth light of a mature judgment to direct it, when we join with our prayer slothf nines*, and neglect of convenient labour. Hooker.

These cardinals trifle with me : I abhor This dilatory sloth and tricks of Rome.

Shakspeare. Henry VIII. False of heart, light of ear, bloody of hand, Hog in sloth, fox in stealth. Id. King Lear.

They change their course to pleasure, ease, and

sloth. . Milton.

To vice industrious ; but to nobler deeds Timorous and slothful. Id.

Flora commands those nymphs and knights, Who lived in slothful ease and loose delights, Who never acts of honour durst pursue, The men inglorious knights, the ladies all untrue.

Dryden.

The very soul of the slothful does effectually but lie drowsing in his body, and the whole man is totally given up to his senses. L’ Estrange.

The sloth is an animal of so slow a motion that he will be three or four days at least in climbing up and coming down a tree ; and to go the

length of fifty paces on plain ground requires a whole day. Grew.

Industry approached, And roused him from his miserable sloth.

Thomson's Autumn.

Another is deaf to all the motives to piety, by indulging an idle slothful temper. Law.

SLOT, in the sportsman's language, is used to express the mark of the foot of a stag or other animal proper for the chase in the clay or earth, by which they are able to guess when the animal passed, and which way he went. If the slot be large, deep printed in the ground, and with an open cleft, and if, added to these marks, there is a large space between mark and mark, it is certain that the stag is an old one. If there be the slots or tread ings of two, the one long and the other round, and both of one size, the long slot is always that of the large animal. ' There is also another way of knowing the old ones from the voung ones by the treading ; which is, that the hinder feet of the old ones never reach to their fore feet, whereas those of the young ones do.

SLOUCH, n. s. Dan.s/o/; Swed. slutt, stupid. A downcast look ; depression of the head. Scotland, an ungainly gait, as also the per whose gait it is.

Begin thy carols then, thou vaunting slouch • Be thine the oaken staff, or mine the pouch. Gay.

Our doctor has every quality that can make a man useful ; but alas ! he hath a sort of slouch in «•«•

SLOVEN, n. s. } Bdg. sloef; Welsh yslyvn,

SLOV’ENLY, adv. > nasty, shabby. A man neg—

SLOV’ENRY, n. s. r ligent of cleanliness ; a man

dirtily dressed : the adverb corresponding : slo—

venry is dirtiness; negligence of appearance.

The ministers came to church in handsome holiday apparel, and that himself did not think them bound by the law of God to go like slovens. Hooker.

” Our gayness and our guilt are all besmirched With rainy marching in the painful field : There’s not a piece of feather in our host, And time hath worn us into slnvenry.

Shahspeare. Henry V.

Slovenliness is the worst sign of a hard student, and civility the best exercise of the remiss ; yet not to be exact in the phrase of compliment, or gestures of courtesy. Wotton.

Affect in things about thee cleanliness, That all may gladly board thee as a flower : Slovens take up their stock of noisomeness Beforehand, and anticipate their last hour. Herbert. j£sop at last found out a slovenly lazy fellow, lolling at his ease, as if he had nothing to do.

L’ Estrange.

As I hang my clothes on somewhat tlovenly, I no sooner went in but he frowned upon me. Pope.

You laugh, half beau, half sloven, if I stand ; My wig half powder, and all snuff my band. Id.

Their methods various, but alike their aim ; The sloven and the fopling are the same. Young. SLOUGH, n.s. > Sax. rlo5. A deep miry SLobcn’V, adj.) place ; slimy hole; slimy skin or covering ; the part that separates from a foul sore : sloughy is bogsy ; miry.

Thy fates open their hands, let thy blood and spirit embrace them ; and, to inure thyself to what thou art like to be, cast thy humble slough, and appear fresh.

Shakspeart. Twel/ih Night. When the mind is quickened, The organs, though defunct and dead before, lireak up their drowsy grave, and newly move, With casted sluugh, and fresh legerity. Shakspeare.

The Scots were in a fallow field, whereinto the English could not enter, but over a cross ditch and a :-i< >in/h ; in passing whereof many of the English horse were plunged, and some mired. Hayward.

The ways being foul, twenty to one He's here stuck in a slough, and overthrown. Wilton.

Oh let not sleep my closing eyes invade In open plains, or in the secret shade, 'Vlien he, renewed in all the speckled pride OF pompous youth, has cast his slough aside ; And in his summer livery rolls along Erect, and brandishing his forky tongue. Dryden. A carter had laid his waggon fast in a slough.

L'Estrange.

The »hitgh of an English viper, that is, the cuti-cula, they cast off twice every year, at spring and fall : the separation begins at the head, and is finished in twenty-four hours. Grew.

The body, which we leave behind in this visible world, is as the womb or tlough from whence we issue and are born into the other.

Crete's Cosmologia.

That cust6m should not be allowed of cutting scraws in low grounds sloughy underneath, which turn into bog. Swift.

At the next dressing I found a dough come away with the dressings, which was the sordes.

Wiseman on Ulcers.

SLOW,ffrfu.,t?.a.&fld/'.^ Sax. flap, rleaP ;

SLOW'LY, adv. £ Swed.s/o ; Goth. xlia.

Si o\v'xr>s n. s. 3 Not swift ; not quick

of motion ; not liavine velocity ; late ; dull ;

sluggish : the verb (obsolete) means to delay, procrastinate : the adverb and noun substantive corresponding.

I am slow of speech, and a slow tongue.

f.‘jrfxf. iv. 10.

He that is slow to wrath is of great understanding.

Prov.

The Lord is merciful, and slow to anger.

Common Prayer.

Tyrants use what art they can to increase the slowness of death. Hooker.

Now do you know the reason of this haste 1 — I would 1 knew not why it should be slowed.

Shakspeare.

The poor remnant of human seed peopled their country again slowly, by little and little. Bacon.

This s/aw-paced soul, which late did cleave T’ a body, and went but by the body’s leave, Twenty perchance or thirty miles a day, Dispatches in a minute all the way T’wixt hea\en and earth. Donne.

Providence hath confined these human hearts, that what any invention hath in the strength of its motion, is abated in the slowness of it : and what it hath in the extraordinary quickness of its motion, must be allowed for in the great strength that is required unto it, n’f/ Ains’s Mathematical Magirk.

Me thou thinkest not tlow,

Who since the morning hour set out from heaven, Where God resides, and on mid-day arrived In Eden, distance inexpressible ! Milton.

This day’s death denounced, if aught I see, Will prove no sudden but a rfmt’-paced evil, A long day’s dying to augment our pain. Id.

Though we have found formed snakes in the belly of the caˆcilia, or slow-worm, yet may the viper emphatically bear the name. Brown*’* Vulgar Errours.

Fixed on defence, the Trojans are not tlow To guard their shore from an expected foe. Dryden.

Our fathers bent their painful industry To check a monarchy that

slowly grew ;

But did not France or Holland's fate foresee, Whose rising power to swift dominion flew. Id.

Where the motion is so slow as not to supply a constant train of fresh ideas to the senses, the sense of motion is lost. Locke.

The chapel of St. Laurence advances so very slmi-ly that 'tis not impossible but the family of Medicis may be extinct before their burial place is finished.

Addison on Italy.

The slow of speech make in dreams unpremeditated harangues, or converse readily in languages that they are but little acquainted with. Addiion.

Christ would not heal their infirmities, because o/ the hardness and tlowness of their hearts, in that thev believed him not. Bentley't Sermons.

The gnome rejoicing bears her gift away, Spreads his black wings, and slowly mounts to day.

Po]X.

The politick and wise Are sly slow things with circumspective eyes. Id.

For eight stoic-circling years by tempests tost. Id.

Motion is the absolute mode of a body, but swiftness or slowness are relative ideas. Watts.

SLUB'BER,u.fl. I From lubber,

SLUBBERDEGUL'LION, n. s. S or Belgic slobbe-ren or slabben. Bedaub ; sully ; to do any thin.; lazily, or with idle hurry : slubberdegullion v: a Hudibrastic word for a sorry dirty wretch.

Nature shewed she doth not like men who ilubbei up matters of mean account. Sidney.

You must be content to slubber the gloss of your new fortunes with this more stubborn and boisterous expedition. S/i/ifcjieore

Bassanio told him he would make some speed Of his return ; he answered, do not so, Slubber not business for my sake.

Shakspeare. Merchant of Venice.

A man of secret ambitious ends, and proportionate counsels, smothered under the habit of a scholar, and slubbered over with a certain rude and clownish fashion, that had the semblance of integrity.

Wotton.

. Quoth she, although thou hast deserved, Base slubber degullion, to be served As thou didst vow to deal with me, If thou hadst got the victory. Hudibras.

As they are slubbered over, the malignity that remains will show itself in some chr,onic disease.

Wiseman's Surgery.

SLUDGE, n. s. Sax. rlo3, slough. Mire ; dirt mixed with water.

The earth I made a mere soft sludge or mud.

Mortimer.

SLUG, n. s. Dan. slug ; Belg. sluk, slock, a glutton, and thence one that has the sloth of a glutton. An idler ; drone ; a slow, heavy, lazy wretch; a kind of snail ; a hindrance; obstruction.

All he did was to deceive good knights, And draw them from pursuit of praise and fame,

To slug in sloth and sensual delights, And end their days with

irrenowned shame.

Faerie Queene.

Sluggish idleness, the nurse of sin, Upon a slothful ass he chose to ride. Id.

He lay not all night slugging in a cabin under his mantle, but used commonly to keep others waking to defend their lives. Spenser.

The dull billows, thick as troubled mire, Whom neither wind out of their seat could force, Nor tides did drive out of their sluggish source. Id. Fie ! what a slug is Hastings, that he comes not !

Shakspeare.

Cry mercy, lords, and watchful gentlemen, That you have taken a tardy sluggard here.

Id. Richard III.

Rather see the wonders of the world abroad, Than, living dully sluggardized at home, Wear out thy youth with shapeless idleness.

Shakspeare.

Usury dulls arid damps all improvements, wherein money would be stirring, if it were not for this slug. . Bacon.

The most of mankind are inclined by her thither, if they would take the pains ; no less than birds to fly and horses to run : which if they lose, it is through their own. sluggishness, and by that means become her prodigies, not her children. Ben Jonson. This mightier sound shall make The dead to rise, And open tombs and open eyes, To the long sluggards of five thousand years.

Cowley.

One, bolder than the rest, With his broad sword provoked the sluggish beast.

Waller. .

Up, up, says Avarice ; thou snor’st again, Stretchest thy limbs, and yawn’st, but all in vain : The tyrant Lucre no denial takes ; At his command the’ unwilling sluggard wakes.

Dry den.

Sprightly May commands our youth to keep The vigils of her night, and breaks their sluggard

sleep. •’<*•

One went slugging on with a thousand cares.

L’~Estrange. ‘ It is of great momeflt to teach the mind to shake

off its sltigy Mines*, and vigoiously employ itself about what reason shall direct. Luc he

Matter, being impotent, sluggish, and inactive, hath no power to stir or move itself. Woodward. ‘

SLUG, M.S. Sax. pleos, a hammsr-head. A particular kind of metal shot.

When fractures are made with bullets or slues, there the scalp and cranium are driven in together. ‘ Wiseman’s Surgery.

As, forc’d from wind-guns, lead itself can fly, And pond’rous slugs cut swiftly through the sky.

rope.

SLUICE, n. s. & v. a. I Fr. cscluse ; Italian

SLUI’CY adj. Ssclusa; fjelgic sluyse.

A watergate ; floodgate; or vent for water: to emit by floodgates : sluicy, is falling in streams.

Like a traitor coward,

Sluic’d out his innocent soul through streams of blood. Sliaksjteare .

Divine Alpheus, who, by secret sluice, Stole under seas to meet his Arethuse. Milton.

Veins of liquid ore tluiced from the lake. Id.

If we receive them all, they were more than seven ; If only the natural

sluices, they were fewer.

Browne's Vulgar Errours.

You wrong me, if you think I'll sell one drop, Within these veins for pageants ; but let honour Call for my blood, I'll sluice it into streams ; Turn fortune loose again to my pursuit, And let me hunt her through her embattled foes, In dusty plains ; there will I be the first.

Dryden's Spanish Fryar.

And oft whole sheets descend of sluicy rain, Sucked by the spungy clouds from off the main : The lofty skies at once come pouring down, The promised crop and golden labours drown.

Dryden.

As waters from her sluices, flowed Unbounded sorrow from her eyes. Prior.

Each sluice of affluent fortune opened soon, And wealth flow'd in at morning, night, and noon.

Harte.

A SLUICE is a frame of timber, stone, or other matter, serving to retain and raise the water of * river, Jcc., and on occasion to let it pass. Suci. is the sluice of a mill, which stops and collects the water of a rivulet, &c., to let it fall at length in the greater plenty upon the mill wheel ; such also are those used as vents or drains to discharge water off land. And such are the sluices of Flanders, &c., which serve to prevent the waters of the s'ea from overflowing the lower lauds. Sometimes there is a kind of canal enclosed between two gates or sluices, in artificial naviga-tions, to save the water, and render the passage of boats equally easy and safe, upwards and downwards, as in the sluices of Briare in France, which are a kind of massive walls, built parallel to each other, at the distance of twenty or twenty-four feet, closed with strong gates at each end, between which is a kind of canal or chamber, considerably longer than broad ; wherein a ves-sel being enclosed, the water is let out at the first gate, by which the vessel is raised fifteen or sixteen feet, and passed out of this canal into another much higher. By such means a boat is conveyed out of the Loire into the Seine, though the ground between them rise above 150 feet nigher than either of those rivers. See CANAL. Sluices are made different - ways, according to the use for which they are intended ; when they

serve for navigation, they are shut with two gates presenting an angle towards the stream ; when they are made near the sea, two pairs of gates are made, the one to keep the water out and the other in, as occasion requires. In this case the gates towards the sea present an angle that way, and the others the contrary ; and the space enclosed by those gates is called the chamber. When sluices are made in the ditches of a fortress, to keep up the water in some parts, instead of gates, shutters are made so as to slide up and down in grooves ; and, when they are made to raise an inundation, they are then shut by means of square timbers let down in cullises, so as to lie close and firm.

An engineer ought always to have in his view that the faults committed in the construction of sluices are/ almost always irreparable. We shall therefore lay down some rules, from Belidor, for avoiding any oversights of this kind: — 1. In order to adjust the level of the sluice-work with the utmost exactness, the engineer ought to determine how much deeper it must be than a fixed point; and this he should mark down in his draught, in the most precise terms possible. 2. When the proper depth is settled, the foundation is next to be examined ; and here the engineer cannot be too cautious, lest the apparent goodness of the soil deceive him ; if the foundation is judged bad, or insufficient to bear the superstructure, it must be secured by driving piles, or a grate-work of carpentry. 3. There should be engines enough provided for draining the water; and these should be entirely under the direction of the engineer, who is to take care that they are so placed as not to be an obstacle to the work ; and also cause proper trenches to be cut, to convey the water clear off from the foundation. 4. When the sluice is to be built in a place where the workmen will be unavoidably incommoded by the waters of the sea, &c., all the stones for the mason-work, as well as the timbers for that of carpentry, should be prepared beforehand ;' so that, when a proper season offers

for beginning the work, there remains nothing to be done but to fix every thing in its place.

SLUM’BER, v. n., v. a., ˆ Sax. j-lumenan ;

SLUM’BEROUS,ˆ’. [& n. t. > Belg. sluymeren ;

SLTJM’BERY. J Swed. slumra. To

sleep lightly ; to be not awake, nor in profound sleep : be in a state of supineness or lethargy : to lay to sleep ; stupify ; stun : as a noun substantive, light sleep ; repose : the adjectives corresponding.

God speaketh, yet man perceiveth it not : in a dream, in a vision of the night, when deep sleep falleth upon men, in slumberings upon the bed.

Job xxxiii. 15.

He that keepeth Israel shall neither slumber nor

eep. Psalms.

Then up he took the slumbered senseless corse, .And, ere ne could out of his swoon awake, Him to his castle brought. Faerie Queene.

And for his dreams, I wonder he’s so fond To trust the mock’ry of unquiet slumbers.

Shakspeare. Richard III.

Boy ! Lucius ! fait asleep ? It is no matter ; knjoy the honey-heavy dew of slumber.

Id. Julius Ctesar.

A great perturbation in nature ! to receive at once

the benefit of sleep, and do the effects of watching. In this plumbery agitation, what have you heard her say? Id. Macbeth.

To honest a deed after it was done, or to slumber his conscience in the doing, he studied other incentives. Wotton.

Conscience wakes despair that slumbered. Milton.

The timely dew of sleep,

Now falling with soft slumb'rous weight, inclines Our eyelids. Id.

Even lust and envy sleep, but love denies Rest to my soul, and slumber to my eyes : Three days I promised to attend my doom, And two long days and nights are yet to come.

Dry den.

From carelessness it shall fall into slumber, and from a slumber it shall settle into a deep and long-sleep ; till at last, perhaps, it shall sleep itself intc a lethargy, and that such an one that nothing bu« hell and j udgment shall awaken it. ' South.

Labour and rest, that equal periods keep ; Obedient slumbers that can wake and sleep. Pope.

While pensive in the silent slumberous shade, Sleep's gentle powers her drooping eyes invade ; Minerva, life-like, on embodied air Impressed the form of Iphthema. Id. Odyssey.

Why slumbers Pope, who leads the tuneful train, Nor hears that virtue which he loves complain 1

Young.

SLUR, v. a. & n. s. Belg. sloore, a slut ; Dan. slor. To sully ; soil ; bedaub ; slight ; balk ; cheat : used as a noun substantive (metaphorically) for a slight reproach or slander.

What was the publick faith found out for ? But to slur men of what they fought for 1 Hudibras.

The atheists laugh in their sleeves, and not a little triumph, to see the cause of theism thus betrayed by its professed friends, and the grand argument slurred by them, and so their work done to their hands.

Cudwe'rth.

Studious to please the genius of the times, With periods, points, and tropes, he slurs his crimes. He robbed not, but he borrowed from the poor, And took but with intention to restore. Dryden.

Here is an ape made a king for shewing tricks ; and the fox is then to put a slur upon him, in exposing him for sport to the scorn of the people.

L’Estrange.

No one can rely upon such an one, either with safety to his affairs, or without a slur to his reputation ; since he that trusts a knave has no other recompence but to be accounted a fool for his pains.

South’s Sermont. Come, seven’s the main, Cries Ganymede : the usual trick : Seven, slur a six ; eleven, a nick. Prior.

SLUR, in music, a mark like the arch of a cir-cle, drawn from one note to another, comprehending two or more notes in the same or different degrees. If the notes are in different degrees, it signifies that they are all to be sung to one syllable ; for wind instruments, that they are to be made in one continued breath ; and for stringed instruments that are struck with a bow, as a vio-lin, 8cc., that they are made with one stroke. If the notes are in the same degree, it signifies that it is all one note, to be made as long as the whole notes so connected ; and this happens most frequently betwixt the last note of one line and the first of the next ; which is particularly called syncopation.

SLUT, n. s. -\ Belg. slodde. A dirty

SLUT’TERY, n.s. f woman : the practice of

SLUT’TISH, adj. i a slut : the adjective

SLUT’TISHNESS, n. s. J and noun substantive following corresponding.

All preparations both for food and lodging, such as would make one detest niggardness, it is so sluttish a vice. Sidney.

That is only suitable in laying a foul complexion upon a filthy favour, setting forth both in sluttishness.

Id.

Cricket, to Windsor chirnnies shall thou leap ; Where fires thou findest unraked, and hearths un-swept,

There pinch the maids as blue as bilberry ; Our radiant queen hates sluts and sluttery.

SJutkspeare.

Sluttery to such neat excellence opposed, Should make desire vomit emptiness.

Id. Cymbeline.

Albeit the mariners do covet store of cabins, yet indeed they are but sluttish dens that breed sickness in peace, serving to cover stealths, and in sight are dangerous to tear men with their splinters.

Raleigh's Essays. These make our girls their sluttery rue,

By pinching them both black and blue ;

And put a penny in their shoe,

The house for cleanly sweeping. Drayton.

She got a legacy by sluttish tricks. Holiday.

The nastiness of that nation, and sluttish course of life, hath much promoted the opinion, occasioned by their servile condition at first, and inferior ways of parsimony ever since. Browne.

A man gave money for a black, upon an opinion that his swarthy colour was rather sluttery than na-ture, and the fault of his master that kept him no cleaner. L'JSstrange.

The frogs were ready to leap out of their skins for joy, till one crafty old slut in the company advised them to consider a little better on't. Id.

I look on the instinct of this noisome and troublesome creature, the louse, of searching out foul and nasty clothes to harbour and breed in, as an effect of divine providence, designed to deter men and women from sluttishness and sordidness, and to provoke them to cleanliness and neatness.

Ray on the Creation.

The veal's all rags, the butter's turn'd to oil : And thus I buy good meat for sluts to spoil. King.

Slothful disorder filled his stable, And sluttish plenty decked her table. Prior.

SLY, adj.) Sax. fliS. slippery; Goth.

SLY'LY, adv.] slag, artful ; Isl.stegwr. Meanly artful ; insidious ; cunning : the adverb corresponding.

And for I doubt the Greekish monarch sly, Will use with him some of his wonted craft.

Fairfax.

He, closely false and slily wise, Cast how he might annoy them most from far. Id.

For my sly wiles and subtile craftiness, The title of the kingdom I possess. Hubberd'i Tale.

His proud step he scornful turned, And with sty circumspection.

Milton's Paradise Lost.

Were there a serpent seen with forked tongue, That slily glided towards your majesty, It were but necessary you were waked. Shakspeare'.

Satan, like a cunning pick-lock, slily robs us of our grand treasure. Decay of Piety.

With this he did a herd of goats controul, Which by the way he met, and slily stole ; Clad like a country swain. Dryden.

May hypocrites,

That slily speak one thing, another think, Hateful as hell, pleased with the relish weak Drink on unwarned, till, by inchanting cups Infatuate, they their wily thoughts disclose, And through intemperance grow a while sincere.

Philips.

By an excellent faculty in mimickry, my correspondent can assume my air, and give my taciturnity a slyness which diverts more than any thing 1 could say-Addiimi.

Envy is a cursed plant; some fibres of it are rooted almost in every man's nature, and it works in a sly and imperceptible manner. Watts.

It is odious in a man to look sly and leering at a woman. Clarissa.

SMACK, v. n., v. a., & n. s. Sax. j-maeckan : Belg. smaecken; Goth. smak. To have a taste; be tinctured with any particular taste ; make a particular noise in kissing: to kiss; le emit a smart quick noise : taste ; flavor ; tincture : a loud kiss.

Stack pease upon hovel ; To cover it quickly let owner regard, Lest dove and the cadow, there finding a smack, With ill stormy weather do perish thy stack.

Tusser

The child, that sucketh the milk of the nurse, learns his first speech of her ; the which, being the first inured to his tongue, is ever after most pleasing unto him ; insomuch that, though he afterwards be taught English, yet the smack of the first will always abide with him. Spenser.

All sects, all ages, smack of this vice, and he To die for it ! Shakspeare. Measure for Measure.

He is but a bastard to the time, That doth not smack of observation. Id. Kins; John.

Your lordship, though not clean past your youth, hath yet some smack of age in you, some relish of the saltness of time, and have a care of your health.

Id. Henry IV. He took

The bride about the neck, and kissed her lips With such a clamorous smack, that at the parting All the church echoed. Id. Taming of the Shrew. So careless flowers, strewed on the water's face, The curled whirlpools suck, muck, and embrace, Yet drown them. Donne.

I saw the lecherous citizen turn back His head, and on his wife's lip steal a smack. Id.

It caused the neighbours to rue, that a petty smack only of popery opened a gap to the oppression of the whole. Carets.

As the Pythagorean soul Runs through all beasts, and fish, and fowl, And has a smack of every one, So love does, and has ever done. Hudibras.

Trembling to approach The little barrel, which he fears to broach, He' essays the wimble, often draws it back, And deals to thirsty servants but a smack.

Dryden's Ptrteut.

She kissed with smacking lips the snoring lout ; For such a kiss demands a pair of gloves. Gay. He gives a smacking buss. Pope.

More than one steed must Delia's empire feel, Who sits triumphan. o'er the flying wheel ; And. as she guides it through the' admiring throng, With what an air she smacks the silken thong !

Young.

SMACK, n. s. Sax. j-macca. A small ship. SMALAND, a province of South Sweden, lying between the Baltic and the province of

Halland. It now forms the governments of Jonkioping and Cronoberg, and part of Calinar, liaving a superficial extent of 7750 square miles, with a population of 315,000. Smaland is well watered by rivers and lakes ; of the former, the chief are the Nissa, the Laga, and the Aem ; of the latter, the Wetter, the Som, the Vidoester, and the Moekel. There is much picturesque scenery in the neighbourhood of Jonkioping and some other places; but the greater part consists of barren rocks, forests, marshes, and heaths. Wheat and honey are the

chief articles of produce ; but the chief object is the breeding of cattle in the extensive pastures. The forests and mines furnish materials for a considerable export trade in wood, tar, pitch, iron, and copper, and some silver and lead are occasionally found.

SMALCALDEN, a district in the west of Germany, belonging to Hesse-Cassel, but lying considerably to the east of the rest of the electorate. Its territorial extent is 115 square miles ; its population 22,000, almost all Lutherans. It is very mountainous, and contains mines of iron and coal, and several brine springs.- The exports consist of hardware, potash, and white lead. SMALCALDEN, the chief town of the above district, is situated on a river of the same name, not far from the Werra. It contains a castle, three suburbs, 4700 inhabitants : four miles from the town is a hill called the Stahlberg, with mines of iron. In the neighbourhood also are several salt-works. In the sixteenth century the Protestant princes of the empire held several meetings here, in which they adopted resolutions of great importance ; and in 1531 they formed here the famous league to defend the liberties of the empire against the encroachments of Charles V. The well known geographer, Cellarius, was a na-tive of t! . place. Fifty-six miles southwest of Cassei, and nine north of Meinungen.

SMALL, adj.Sa n. s.ˆ) Sax. mall;Belg.Swed.

SMALL’ AGE, n.s. I and Goth. smal. Little

SMALL’COAL, | in quantity or size ; slen—

SMALLˆCRAFT, Vder; minute: hence pet—

SMALLNESS, ty; unimportant; weak:

SMALLPOX’, I as a noun substantive, a

SMAL’LY, adj. } barbarism for the small

or narrow part of a thing : smallage is a plant, a

species of parsley : the other substantives seem to

explain themselves : smally is in a little or low

degree.

But whoso sclaundrith oon of these imale that bi-leven in me, it spedith to him that a mylnestone of assis be hanged in his necke and

he drenchid in the depnesse of the see. Wiclif. Matt. 18.

Is it a small matter that thou hast taken my husband ? Genesis.

if our sin and calf I burnt, and ground it very tmatt, till it was as tmall as dust. Deut. ix. 21.

After the earthquake a fire, and after the fire a still tmall voice. 1 Kings xix. 12.

For a small moment have I forsaken thee, but with great mercies will I gather thee. Isa. liv. 7.

For, -lo, 1 will make thee small among the heathen, and despised among men. Jer. xlix. 15.

There arose no small stir about that way.

Acts xix. 23.

A child that is still, and somewhat hard of wit, is never chosen by the father to be made a scholar ; or

else, when he cometh to the school, is smally regarded.

.he ham.

Her garment was cut after such a fashion, that, though the length of it reached to the ancles, yet in her going one might sometimes discern the s-mull ot her leg. Sidney.

The parts in glass are evenly spread, but are not so close as in gold ; as we see by the easy admission of light, and by the smalness of the weight.

Bacon' t Natural History.

Some men's behaviour is like a verse, \vlierein every syllable is measured : how can a man comprehend great matters that breaketh his mind too much to small observations? . Bacon.

Narrow man being filled with little shares. Courts, city, church, are all shops of small wares ; All having blown to sparks their noble fire, And drawn their sound gold ingot into wire.

Donne. Into her legs I'd have love's issues fall,

And all her calf into a gouty small. Suckli > ig.

Those waved their limber fans For wings, and smallest lineaments exact. Milton.

Death only this mysterious truth unfolds, , The mighty soul how small a body holds.

Dry den' '» Juvenal.

Shall he before me sign, whom t'other day A smallcraft vessel hither did convey ; Where stained with prunes and rotten figs he lay T

Dryden.

All numeration is but still the adding of one unit more, and giving to the whole together a distinct name, whereby to distinguish it from every tmalltr or greater multitude of units. Loclie.

The ordinary smallest measure we have is looked on as an unit in number. Id.

SmoW-grained sand is esteemed the best for the tenant, and the large for the landlord and land.

Mortimer's Husbandry.

Smallage is raised by slips or seed, which is reddish, and pretty big, of a roundish oval figure ; a little more full and rising on one side than the other, and streaked from one end to the other. Id.

A smalleoal man, by waking one of these distressed gentlemen, saved him from ten years imprisonment.

Spectator.

The smalness of the rays of light may contribute very much to the power of the agent by which they are refracted. Newton's Optickt.

When smalleoal murmurs in the hoarser throat, From smutty dangers guard thy threatened coat.

Ga.y.

The danger is less when the quantity of the fluids is too small, than

when it is too great ; for a smaller quantity will pass where a larger cannot, but not contrariwise. Arbuthnot.

He fell sick of the smallpox. Wiseman.

Small is the subject, but not so the praise. Pope.

Go down to the cellar to draw ale or small beer.

Swift.

Good cooks cannot abide fiddling work : such is the dressing of tmall birds, requiring a world of cookery. Id.

Knowing, by fame, small poets, small musicians, Small painters, and still smaller politicians. Harte.

His excellency having mounted on the small of my leg, advanced forwards. Gulliver's Travels.

SMALLHOLM, a parish of Scotland, in Roxburghshire, in the form of an irregular triangle, about four miles long from east to west, and three broad from north to south. The surface exhibits a pleasing variety of high and low grounds. The soil is equally various, but in genferal has a mixture of clay susceptible of cul

tivation, and pretty fertile. Of late a great part has been enclosed. The population, in 1791, was 421 ; the decrease 130 since 1755.

SMALLHOLM, a village in the above parish, four miles from Kelso, on the turnpike road to Edinburgh.

SMALLHOLM TOWER, or SANDY KNOW, an ancient square tower in the above parish, seated on a hilly ground, belonging to Mr. Scott of Harden, which forms a considerable landmark for the Berwick ships at sea.

SMALRIDGE (George), D. D., bishop of Bristol, an eminent English prelate, born of a respectable family at Litchfield in 1666, and educated at Westminster ; whence he was elected, in May 1682, to Christ Church, Oxford, where he graduated. In 1687 he published Animadversions on a Piece upon Church Government ; and in 1689 a Latin poem, entitled Auctio Davisiana Oxonii habita per Gul. Cooper et Ed. Millington Bibliopolas Londinenses. In 1693 he was appointed prebendary of Litchfield; soon after lecturer of St. Dunstan's London, and minister of the new chapel, Tothill Fields; then canon of Christ Church, Oxford ; next dean of Carlisle ; and lastly, in 1713, bishop of Bristol : on the accession of George I. he was made lord almoner, but was removed for refusing to sign the declaration of the bishops against the rebellion in 1715. He died September 27th, 1719. He published twelve sermons, and many more were published after his death.

SMALT, n.s. l{a.smalto. A blue substance, produced from two parts of zaft're being fused with three parts common salt, and one part potash.

To make a light purple, mingle ceruse with logwood water ; and moreover turnsoil with lac mingled with smalt of bice. Peacham.

SMALT is a kind of metallic glass of a dark blue color, which when levigated appears of a most beautiful color * and if it could be made sufficiently fine, would be an excellent succeda-neum for ultramarine, as not only resisting all kinds of weather, but even the most violent fires. See CHEMISTRY, Index.

SMART, n. s., v. n. &adj.) Sax. fmeojita ;

SM ART'LY, adv. > Swed. smarta; Dan.

SMART'NESS, n. s. 3 smerte. Quick;

pungent pain ; intellectual pain or suffering : to feel such pain : pungent ; vigorous ; active ; brisk ; acute ; witty : the adverb and noun substantive follow these senses.

He that is surety for a stranger shall smart for it.

Proverbs,

Then her mind, though too late, by the smart, was brought to think of the disease. Sidney.

Mishaps are mastered by advice discreet, And counsel mitigates the greatest smart.

Faerie Queene.

How smart a lash that speech doth give my conscience ! Shakspeare. That day was spent in smart skirmishes, in which many fell. Clarendon.

The art, order, and gravity of those proceedings, where short, severe, constant rules were set, and smartly pursued, made them less taken notice of.

Id. This sound proceeded from the nimble und smart

percussions of the ambient air, made by* the swift and irregular motions of the particles of the liquors.

Boyle.

What interest such a smartness in striking the air hath in the production of sound, may in some measure appear by the motion of a bullet, and that of a switch or other wand, which produce no sound, if they do but slowly pass through the air ; whereas, if-the one do smartly strike the air, and the other be shot out of a gun, the celerity of their percussions on the air puts it into an undulating motion, which, reaching the ear, produces an audible noise. Boyle.

It was a smart reply that Augustus made to one that ministred this comfort of the fatality of things : this was so far from giving any ease to his mind, that it was the very thing that troubled him.

TiUoiton. After showers

The stars shine smarter, and the moon adorns, As with unborrowed beams, her sharpened horns.

Dry den.

When a man’s wounds cease to smart, only because he has lost his feeling, they are nevertheless mortal.

South.

You may see a smart rhetorician turning his hat in his hands during the whole course of his harangue. A deaf man would think he was cheapening a beaver.

Addison.

It increased the smart of his present sufferings to compare them with his former happiness. Atterbury.

Human blood, when first let, is mild, and will not make the eye, or a fresh wound, smart. Arbuthnot.

To the fair he fain would quarter show, His tender heart recoils at every blow ; If unawares he gives too smart a stroke, He means but to correct, and not provoke.

Granvilte.

No creature smarts so little as a fool, Let peals of laughter, Codrus ! round thee break, Thou unconcerned can’st hear the mighty crack.

Pope.

I defy all the clubs to invent a new phrase, equal in wit, humour, smartness, or politeness, to my set.

Stvift.

Who, for the poor renown of being tmart, Would leave a sting within a brother’s heart ?

Young.

SMART (Christopher), M. A., a celebrated poet, born at Shipburn, in Kent, in 1722. He was educated at Pembroke Hall, Cambridge, where he was so distinguished for his Latin poetry that he gained the Seatonian prize for five years, four of which were in succession. In 1747 he took his degree, and, in 1753, went to London, where he became acquainted with the most eminent literary characters ; but neglecting both his fortune and constitution be fell into indigence, which was succeeded by insanity; in which melancholy state he died in 1771. A complete edition of his poems was published ir. 1791, 2 vols. 12mo.

SMATCH, n. s. Corrupted from smack. Taste; tincture; twang.

Thou art a fellow of a good respect ; Thy life hath had some smutch of honour in’t.

Shak*j>eare.

Some nations have a peculiar guttural or nasal smatch in their language.

Holder’s Elements of Speech.

These salts have somewhat of a nitrous taste, but mixt with a smateh of a vitriolickw Grew.

SMATTElt, v. n. & n. ,s. J Supposed to be

SMATIEKKB, n. s. t corrupted from

smack or taste. To have a slight taste ; have a slight, superficial, and imperfect knowledge : talk superficially : the noun substantive following corresponding.

In proper terms, such as men smatter, When they throw out and miss the matter.

Hudibras.

All other sciences were extinguished during this empire, excepting only a smatter of judicial astrology.

Temple.

Since, by a little smattering in learning, and great conceit of himself, he has lost his religion, may he find it again by harder study and an humbler mind.

Bentley.

Of state affairs you cannot smatter, Are aukward when you try to flatter. Swift.

These few who preserve any rudiments of learning, are, except one or two smatterers, the clergy’s friends.

Id.

Such a practice gives a slight smattering of several sciences, without any solid knowledge. Watts.

SMEAR, v. a. t Saxon pmerian ; Belgic SMEAR'Y, adj. J smeeren. To overspread with something viscous and adhesive; besmear: the adjective corresponding.

If any such be here, that love this painting, Wherein you see me smeared, If any think brave death outweighs bad life, Let him wave thus. Shakspeare. Othello.

Then from the mountain hewing timber tall, Began to build a vessel of huge bulk, Smeared round with pitch. Milton.

Smeared as she was with black Gorgonean blood, The fury sprang above the Stygian flood. Dryden.

A smeary foam works o'er my grinding jaws, And utmost anguish shakes my lab'ring frame.

Rowe.

SMEATON (John), F.R.S., an eminent civil engineer, born on the 28th of May, 1724, O. S., at Austerhorpe, near Leeds, in a house built by his grandfather, and where his family have resided ever since. The strength of his understanding, and the originality of his genius, appeared at an early age : his playthings were not the playthings of children, but the tools of men; and he had greater entertainment in seeing the men work, and asking them questions, than in any thing else. One day he was seen on the top of his father's barn, fixing up something like a windmill ; another time he attended some men fixing a pump at a neighbouring village, and, observing them cut off a piece of bored pipe, he procured it, and actually made with it a working pump that raised water. These circumstances happened before he had attained his sixth year. About his fourteenth he had made an engine for turning, and made presents to his friends of boxes in ivory and wood very neatly turned. He forged his iron and steel, and melted his metals ; he made tools of every sort for working in wood, ivory, and metals. He had made a lathe, by which he had cut a perpetual screw in brass, a thing little known at that day, which was the invention of Mr. Henry Hindley of York ; with whom Mr. Smeaton soon became acquainted, and they spent many a night at Mr. Hindley's house on those subjects. Thus had Mr. Smeaton, by the strength of his genius and industry, acquired, at the age of eighteen, an extensive set of

tools, and the art of working in most of the mechanical trades, without the assistance of any master. Mr. Smeaton's fatlicr was an attorney, and intended to bring him up to the same profession. Mr. Smeaton therefore came up to London in 1742, and attended in Westminster Hall ; but, finding that the law did not suit his genius, he wrote to his father, whose good sense from that moment left Mr. Smeaton to pursue the bent of his genius. In 1751 he began to try a machine of his invention to measure a ship's way at sea, and also made two voyages in company with Dr. Knight to try it, and a compass of, his own invention, which was made magnetical by Dr. Knight's artificial magnets. In 1753 he was elected F. R. S. ; his papers published in their 'Transactions show the universality of his genius. In 1759 he was honored with their gold medal for his Experimental Enquiry concerning the natural powers of Water and Wind to turn Mills and other Machines depending on a Circular Motion. This paper was the result of experiments made on working models in 1752 and 1753, but not communicated to the Society till 1759; before which time he had put these experiments into practice, so that he could assure the Society he had found them to answer. In December, 1755, the Eddystone lighthouse was burnt down. Mr. Weston, the chief proprietor, and the others, being desirous of rebuilding it in the most substantial manner, by advice of the earl of Macclesfield (then president of the Royal Society) employed Mr. Smeaton, who undertook the wo k, and completed it in the summer of 1759. Of this he gives an ample description in the volume pu dished in 1791, and since republished under the revisal of his friend Mr. Aubert, F. R. S. On the 31st of December, 1764, he was appointed at a full board of Greenwich hospital, in a manner highly flattering to himself, one of the receivers of the Derwentwater estate. In this appointment he was very happy by the assistance and abilities of his partner Mr. Walton, who, taking upon himself the management and accounts, left Mr. Smeaton leisure to exert his abilities on public works, and to make improvements in the mills and in the estates of Greenwich hospital. By the year 1775 he had so much business as a civil engineer, that he wished to resign this appointment ; but his friends, the late Mr. Stuart the surveyor, and Mr. Ibbotson their secretary, prevailed upon him to continue about two years longer. Mr. Smeaton now performed many works of general utility. He made the river Calder navigable; a work that required great skill and judgment, owing to the very impetuous floods in that river. He planned and attended the execution of the great canal in Scotland (see CANAL and FORTH) ; and, having brought it to the place originally intended, he declined a handsome yearly salary, that he might attend to the multiplicity of his other business. On the opening of the great arch at London Bridge, the

excavation around and under the sterlings was so considerable that the bridge was thought to be in great danger of falling. He was then in Yorkshire, and was sent for by express. He immediately examined it, and the committee being called together, adopted his advice, which was, to repurchase the stones that had been taken

ftom the middle pier, then lying in Moorfields, and throw them into the river to guard the sterlings. The apprehensions concerning the falling of the bridge were great ; his advice was pursued with alacrity ; the stones were repurchased that day ; horses, carts, and barges were got ready ; and they began the work on Sunday morning. Thus Mr. Smeaton saved London Bridge from falling, and secured it till more effectual methods could be taken. The vast variety of mills which Mr. Smeaton constructed show the great use he made of his experiments in 1752 and 1753 ; for he never trusted to theory in any case where he could investigate it by experiment. He built a steam-engine at Austhorpe, and made experiments thereon, to ascertain the power of Newcomen's steam-engine, which he improved and brought to a far greater degree of perfection, both in its construction and powers, than it had before. Mr. Smeaton was a frequent attendant on parliament, his opinions being often called for ; and, by the clearness of his description and the integrity of his heart, he seldom failed to obtain the act wished for. No one had ever more confidence placed in his testimony. In the courts of law he had several compliments paid him from the bench by lord Mansfield and others, for the light which he threw on difficult subjects. About 1785 Mr. Smeaton's health began to decline ; and he then took the resolution to avoid all the business he could, that he might have leisure to publish an account of his inventions, which was certainly the first wish of his heart. But he got only his account of the Eddystone Lighthouse completed (see EDDYSTONE) ; and some preparations to his intended Treatise on Mills; for he could not resist the solicitations of his friends in various works ; and Mr. Aubert, whom he greatly loved and respected, being chosen chairman of Rams-gate harbour, prevailed upon him to accept the place of engineer to that harbour ; and to their joint efforts the public are chiefly indebted for the improvements that have been made there (see RAMSGATE), which appears in a report that Mr. Smeaton pave into the board of trustees in 1791, which they published. Mr. Smeaton being at Austhorpe walking in his garden, on the 16th of September, 1792, was struck with the palsy, and died the 18th of October, aged sixty-eight, greatly resigned to the Divine will. Mr.

Smeaton had a warmth of temper and expression that appeared to those who did not know him well to border on harshness; but it arose from the intense application of his mind, which was always in the pursuit of truth, and investigating difficult subjects. In all the social duties of life he was exemplary ; he was a most affectionate husband, a good father, a warm, zealous, and sincere friend, and an encourager of merit whererer he found it.

SMELL, v. a., v. n., & (Belg. smoel, warm.

SMEL'LER, n. s. [n. s. J Skinner, < because smells are increased by heat.' But Mr. Thomson says, more probably, of Belg. smeulen, to smoke or reek, which in all the Gothic dialects signifies to smell. To perceive by the nose ; by the odor ; or (metaphorically) by mental sagacity : to strike the nostrils ; have a particular scent or tincture ;

practise smelling or a marked sagacity : the power or faculty of smelling ; scent : a smeller is the person who smells, or an organ of smell.

Whosoever shall make like unto that, to imell thereto, shall be cut off. Exod. xxx. 38.

The king is but a man as I am : the violet smells to him as it doth to me ; all his senses have but human conditions. Shakspeare.

Down with the nose, take the bridge quite away, Of him that, his particular to forefena, Smells from the general weal. Jd.

The daintiest imelli of flowers are out of those plants whose leaves smell not.

Bacon's Natural History.

Honey in Spain smelleth apparently of the rosemary or orange, from whence the bee gathereth it. Bacon.

The sweetest smell in the air is the white double violet, which comes twice a-year. Id.

Next, in the nostrils she doth use the smell, As God the breath of life in them did give :

So makes he now this power in them to dwell, To judge all airs whereby we breathe and live.

Davits.

Now God, that was before annoyed with the ill-savour of sin, tmells a sweet savour of rest.

Bp. Hall.

A. work of this nature is not to be performed upon one leg, and should smelt of oil if duly handled.

Broume*

Pleasant smells are not confined unto vegetables, but are found in divers animals.

Id. Vulgar Erroun.

A man so smelling of the people's lee, The court received him first for charity. Dryden.

The horse smelt him out, and presently a crochet came in his head how to countermine him.

L'Estrange.

The ant lives upon her own, honestly gotten, whereas the fly is an intruder, and a common tmel-feast, that spunges upon other people's trenchers.

Id.

There is a great variety of smells, though we have but a few names for them ; the smell of a violet and of musk, both sweet, are as distinct as any two smells. Locke.

A cudgel he had felt, And far enough on this occasion smelt. King.

I had a mind to know whether they would find out the treasure, and whether tmelling enabled them to know what is good for tbe'r nourishment.

Addiiun's Spectator.

Their neighbours hear the same musick, or smell the same perfumes,

with themselves ; for here is enough. Collier.

If you have a silver saucepan, and the butter smell* of smoak, lay the fault upon the coals. Sicift.

SMELL, odour, with regard to the organ, is an impression made on the nose by little particles continually exhaling from odorous bodies. With regard to the object, it is the figure and disposition of odorous effluvia, which, sticking on the organ, excite the sense of smelling; and, with regard to the soul, it is the perception of the im • pression of the object on the organ, or the affection in the soul resulting therefrom. See AHA TOMY, Index.

SMELLIE (William), an eminent surgeon and man-midwife, born in Scotland. He resided many years in London, where he had great practice, and was universally celebrated as a public lecturer. He was the first who treated of the form and size of the female pelvis, as adapted to the head of the foetus. He published a Ccm-

plete System of Midwifery, and a set of Anatomical Tables, with explanations. Being one of the first who wrote in English on the obstetrical art, he threw much light upon it, and paved the way for the numerous improvements that have since been made upon that most important branch of medical science by the Hamiltons and others, which before his time had been too much left to the random skill and practice of ignorant midwives. Dr. Smellie, in the course of his professional career, was engaged in a controversy with Dr. Burton of York, and with Dr. William Douglas physician extraordinary to the prince of Wales ; but though some oi the critical animad-versions of those gentlemen %vere not destitute of foundation, they by no means detracted from the reputation of their antagonist. After a long and successful practice at London, he returned to Scotland, and died at Lanark (probably his birth-place), at a very advanced age, in 1763.

SMELLIE (William), F. R. S. E., a late eminent and learned Scottish printer. After he had commenced business, in Edinburgh, he was much

patronised by the late learned lord Kames (see HOME), who not only introduced him to his literary friends in general, but recommended him to the university of Edinburgh as their printer. In 1780, when the earl of Buchan founded the Royal Society of Scottish Antiquaries, he associated Mr. Smellie as a member, and appointed him printer of its journals and transactions ; and a few years afterwards, on the death of James Cummyng, esq., secretary to that society, Mr. Smellie was unanimously elected secretary, and keeper of its museum of natural history, antiquities, &c. Of his admission as a member of the Royal Society of Edinburgh, a society instituted nearly about the same time with the antiquarian, we neither know the date nor indeed the certainty of the fact, which we mention only upon the authority of Dr. John Watkins, who, in his Biographical and Historical Dictionary, styles him ‘ fellow’ of it. Mr. Smellie published several learned works, particularly the Philosophy of Natural History, in one vol. 4to., and translated count Buffon’s Natural History. As a member of society Mr. Smellie was a kind father, a warm-hearted friend, and a social companion. As to opinions in religion and philosophy, his sentiments were tinctured with the scepticism of the age, as appears from his writings ; and some of his philosophical opinions, particularly his theory respecting instinct and the passions, have been severely and justly censured by the reverend and learned Dr.Gleig. He died at Edinburgh, June 24th, 1795.

SMELLING, the act whereby we perceive smells, or whereby we become sensible of odorous bodies, by means of certain effluvia thereof, which, striking on the olfactory organ briskly enough to have their impulse propagated to the brain, excite a sensation in the soul. The principal organs of smelling are the nostrils and the olfactory nerves ; the minute ramifications of which last are distributed throughout the whole concave of the former. See ANATOMY, Index. Smelling is performed by drawmg into the nostrils the odorous effluvia floating in the air in inspiration, which strike with such force against

the fibrillae of the olfactory nerves, which the figure of the nose and the situation of the lillle bones, render opposite thereto, as to shake them, and give them a vibratory motion ; vrhich action, being communicated hence to the common cen-sory, occasions an idea of a sweet, or fetid, or sour, or an aromatic, or a putrefied object, &c The matter in animals, vegetables, fossils, &c , which chiefly affects the sense of smelling, Boerhaave observes, is that subtile substance, inherent in their oily parts, called spirits ; because, when this is taken

away from the most fragrant bodies, what remains has scarcely any smell at all; and this, poured on the most inodorous bodies, gives them a fragrancy. Willis observes that brutes have generally the sense of smelling in much greater perfection than man. By this alone they distinguish the qualities of1 bodies, which could not otherwise be known; hunt out their food at a great distance, as hounds and birds of prey ; or hid among other substances, as ducks, 8cc. Man, having other means of judging of his food, &c., did not need so much sagacity in his nose ; yet there are instances even in man. In the llistoire des Antilles, negroes are mentioned, who, by the smell alone, can distinguish between the footsteps of a Frenchman and a negro. The sense of smelling may be diminished or destroyed by diseases; as by the moisture, dryness, inflammation, or suppuration of the olfactory membrane, the compression of the nerves which supply it, or some fault in the brain itself at their origin. It may also be injured by immoderate use of snuff. When the nose abounds with moisture, such things as tend to take off irritation and coagulate the thin sharp serum may be applied; as the oil of anise mixed with fine flour, camphor dissolved in the oil of almonds, &c. For moistening the mucus, when it is too dry, some recommend snuff made of the leaves of marjoram, mixed with the oil of amber, marjoram, and aniseed ; or a sternutatory of calcined white vitriol, twelve grains of which may be mixed with two ounces of marjoram water and filtrated. If there be an ulcer in the nose, it ought to be dressed with some emollient ointment, to which, if the pain be very great, a little laudanum may be added. If it be a venereal ulcer, twelve grains of corrosive sublimate may be dissolved in a pint and a half of brandy, a table spoonful of which may be taken twice a day. The ulcer ought likewise to be washed with it, and the fumes of cinnabar may be received up the nostrils. If there be reason to suspect that the nerves which supply the organs of smelling are inert, or want stimulating, volatile salts, or strong snuffs, and other things which occasion sneezing, may be applied to the nose ; the forehead may likewise be anointed with balsam of Peru, to which may be added a little oil of amber.

‘There escapes’ says Magendie ‘ from almost every body in nature certain particles of an extreme tenuity, which are carried by the air often to a great distance. These particles constitute odors. There is one sense destined to perceive and appreciate them. Thus an important relation between animals and bodies is established. All bodies of which the atoms ;m. fixed are called inodorous.

SMELLING.

‘ The difference of bodies is very great relative to the manner in which odors are developed. Some permit them to escape only when they are heated ; others only when rubbed. Some again produce very weak odors, whilst others produce only those which are highly powerful. Such is the extreme tenuity of odoriferous particles, that a body may produce them for a very long time without loosing weight in any sensible degree. Every odoriferous body has an odor peculiar to itself. As these bodies are very numerous, there have been attempts made to class them, which have nevertheless all failed.

‘ Odors, can be distinguished only into weak and strong, agreeable and disagreeable. We can recognise odors which are musky, aromatic, foetid, rancid, spermatic, pungent, muriatic, &c. Some are fugitive, others tenacious. In most cases an odor cannot be distinguished but by comparing it with some known body. There have been attributed to odors properties which are nourishing, medical, and even venomous; but, in the cases which have given rise to these opinions, might not the influence of odors have been confounded with the effects of absorption ? A man who pounds jalap for some time will be purged in the same manner as if he had actually swallowed part of it. This ought not to be attributed to the effects of odors, but rather to the particles which, being spread around, float in the air, and are introduced either with the saliva or with the breath. We ought to attribute to the same cause the drunkenness of persons who are exposed for some time to the vapors of spirituous liquors. The air is the only vehicle of odors ; it transports them to a distance ; they are also produced, however, in vacua, and there are bodies which project odoriferous particles with a certain force. This matter has not yet been carefully studied ; it is not known if, in the propagation of odors, there be any thing analogous to the divergence, the convergence, to the reflection, or the refraction of the rays of light. Odors mix or combine with many liquids, as well as solids. This is the means employed to fix or preserve them. Liquids, gases, vapours, as well as many solid bodies reduced to powder, possess the property of acting on the organs of smell.

‘ Apparatus for smelling. — The olfactory apparatus ought to be represented as a sort of sieve, placed in the passage of the air, as it is introduced into the chest, and intended to stop every foreign body that may be mixed with the air, particularly the odors. This apparatus

is extremely simple ; it differs essentially from that of the sight and the hearing ; since it presents no part anterior to the nerve, destined-for the physical modification of the external impulse, the nerve is to a certain degree exposed. The apparatus is composed of the pituitary membrane, which covers the nasal cavities, of the membrane which covers the sinuses, and of the olfactory nerve

‘ The pituitary membrane covers the whole extent of the nostrils, increases the thickness of the spongy bones very much, is continued beyond their edges and their extremities, so that the air cannot traverse the nostrils but in a long narrow

direction. This membrane is thick, and adhere* strongly to the bones and cartilages that it covers. Its surface presents an infinity of small projections, which have been considered by some as nervous papillae, by others as mucous follicles, but which, according to all appearance, arc vascular. These small projections give to the membrane an appearance of velvet. The pituitary is agreeable and soft to the touch, and it receives a great number of vessels and nerves. The passages through which the air proceeds to arrive at the fauces deserve attention. These are three in number. They are distinguished in anatomy by the names of inferior, middle, and superior meatus. The inferior is the broide«t and the longest, the least oblique and least crooked; the middle one is the narrowest, almost as long, but of greater extent from top to bottom. The superior is much shorter, more oblique, and narrower. It is necessary to add to these the interval, which is very narrow, and which separates the partition of the external side of the nostrils in its whole extent. These canals are so narrow that the least swelling of the pituitary renders the passage of the air in the nostrils difficult, and sometimes impossible.

‘ The two superior meatus communicate with certain cavities, of dimensions more or less considerable, which are hollowed out of the bones of the head, and are called sinuses. These sinuses are the maxillary, the palatine, the sphenoidal, the frontal ; and those which are hollowed out of the ethmoid bone, better known by the name of ethmeidal cells.

‘The sinuses communicate only with the two superior meatus.

‘ The frontal, the maxillary sinus, the anterior cells of the ethmoid bone, open into the middle meatus ; the sphenoidal, the palatine sinus, the posterior cells of the ethmoid, open into the superior

meatus. The sinuses are covered by other soft membranes, very little adherent to the sides, and which appear to be of the mucous kind. It secretes more or less abundantly a matter called nasal mucus, which is continually spread over the pituitary, and seems very useful in smelling. A more considerable extent of the sinus appears to coincide with a greater perfection of the smell. This is at least one of the most positive results or comparative physiology.

‘The olfactory nerve springs, by three distinct roots, from the posterior, inferior, and internal parts of the anterior lobe of the brain. Prismatic at first, it proceeds towards the perforated plate of the ethmoid bone. It swells all at once, and then divides itself into a great number of small threads, which spread themselves upon the pituitary membrane, principally on the superior part of it. It is important to remark that the filaments of the olfactory nerves have never been traced upon the inferior spongy bones, upon the internal surface of the middle meatus, nor in any of the sinuses. The pituitary membrane receives not only the nerves of the first pair, but also a great number of threads, which spring from the internal aspect of the spheno-palatine ganglion. These threads are distributed in the meatus, and in the inferior part of the membrane. It covers also, for a considerable length, the etluuoMal

Inread of the ‘.asal nerve, and receives from it a considerable number of filaments. The membrane which covers the sinus receives also a number of nervous ramifications

‘The nasal fossae communicate outwardly by means of the nostrils, the form and size of which are very variable. The nostrils are covered with hair on the inside, and are capable of being increased in size by muscular action. The na-sal fossa open into the pharynx by the posterior nostrils.

‘ Mechanism of smelling.— Smell is exerted essentially at the moment when the air traverses the nasal fossae in proceeding towards the lungs. We very rarely perceive any odor when the air proceeds from the lungs ; it happens sometimes, however, particularly in organic diseases of the lungs.

‘The mechanism of smell is extremely simple. It is only necessary that

the odoriferous particles should be stopped upon the pituitary membrane, particularly in the places where it receives the threads of the olfactory nerves. As it is exactly in the superior part of the nasal fossae, where the extremes are so narrow that they are covered with mucus, it is also natural that the particles should stop there.

‘ We may conceive the utility of mucus. Its physical properties are such that it appears to nave a much greater affinity with the odoriferous particles than with air; it is also extremely important to the olfactory sense that the nasal mucus should always preserve the same physical properties. Whenever they are changed, as it is observed in different degrees of coryza, the smell is either not exerted at all, or in a very imperfect manner.

‘ After what has been said of the distribution of the olfactory nerves, it is evident that the odors that reach the upper part of the nasal cavities will be perceived with greater facility and acuteness : for this reason, when we wish to feel more acutely, and with greater exactness, the odor of any body, we modify the air in such a manner that it may be directed towards this point. For the same reason, those who take snuff endeavour also to make it reach the upper part of the nasal fossae. The internal face of the ossa spongiosa appears well disposed to stop the odors at the instant the a.ir passes. And, as there is an extreme sensibility in this point, we are inclined to believe that here the smell is exerted, though the filaments of the first pair have not been traced so far. Physiologists have not yet determined the use of the external nose in smelling ; it appears intended to direct the air charged with odors towards the superior part of the nasal cavities.

‘ Those persons who have their noses deformed, particularly if broken ; those who have small nostrils, directed forward, have in general almost no smell. The loss of the nose, either by sickness or accident, causes almost entirely the loss of smell. Such people recover the benefit of this sense by the use of an artificial nose. The only use of the sinuses which is generally admitted is that of furnishing the greater part of the nasal mucus. The other uses which are attributed to them are, to serve as a depot to the

air charged with odoriferous particles, to augment the extent of the surface which is sensible to odors, and to receive a portion of the air that we inspire for the purpose of putting the power of smell in action, &c. These are far from being certain. Vapors and gases appear to act in the same manner upon the pituitary membrane as odors. The

mechanism of it ought, however, to be a little different. Bodies reduced to a coarse powder have a very strong action on this membrane ; even their first contact is painful ; but habit changes the pain into pleasure, as is seen in the case of taking snuff In medicine this property of the pituitary membrane is employed for the purpose of exciting a sharp instantaneous pain.

‘In the history of smell, the use of those hairs with which the nostrils and the nasal fossae are provided, must not be forgotten. Perhaps they are intended to prevent the entrance of foreign bodies along with the air into the nasal fossae. In this case, they would bear a strong analogy to the eye-lashes, and the hairs with which the ear is provided. It is generally agreed that the olfactory nerve is especially employed in transmitting to the brain the impressions produced by odoriferous bodies ; but there is nothing to prove that the other nerves, winch are placed upon the pituitary, as well as those near it, may not concur in the same function.’ — Magendie’s Physiology.

SMELT, ns. Sax. r-melr. A small spa fish.

Of round fish there are brit, sprat, barn, smelts.

Carew.

SMELT, v. a. 3 Island, smulta ; Belgic

SMELT’ER, n. s. $smelten. To melt ore, so as to extract the metal: the noun substantive corresponding.

A sort of earth, of a dusky red colour, found chiefly in iron mines. Some of this earth contains as much iron as to render it worth smelling.

Woodward.

The smelters come up to the assayers.

Id. On Fossils.

SMERK, v. n. Sax. j-men.cian. To smile wantonly.

Seest how bragg yon bullock bears, So smirk, so smooth, his pricked ears ? His horns been as brade as rainbow bent, His dew-lap as lith as lass of Kent. Spenser.

Certain gentlemen of the gown, whose aukward, spruce, prim,

sneering, and smirking couptenance have got good preferment by force of cringing.

Swift.

To SMIGHT, for smite. Used only by Spenser.

As when a griffon, seized of his prey, A dragon fierce encountreth in his flight, Through widest air making his idle way ; That would his rightful ravin rend away : With hideous horror both together smight, And souce so sore that they the heavens affray.

Faerie Queene.

SMILAX, rough bindweed, in botany, a genus of plants belonging to the class of dicecia, and order of hexandria ; and in the natural system ranking under the eleventh order, surmentaceie. The male calyx is hexaphyllous, and there is no corolla; the ‘female calyx is also hexaphyllous

without any corolla ; there are three styles, a trilocular berry and two seeds. There are fourteen species, viz.: — 1. S. aspera; 2. bona nox; 3. caduca; 4. Chinensis; 5-excelsa; 6. herbacea; 7. lanceolata ; 8. laurifolia; 9. Pseudo-Chinen- sis; 10. rotundifolia; 11. sarsaparilla; 12. tam-noides ; 13. tetragona ; and 14. Zeilanica.

1. S. Chinensis, the China, or oriental china root, has roundish prickly stalks and red berries, and is a native of China and Japan.

2. S. Pseudo-Chinensis, the Pseudo-China, or occidental China root, has rounder smooth stalks and black berries, grows wild in Jamaica and Virginia, and bears the cold of our own climate. These roots have scarcely any smell or taste ; when fresh they are said to be somewhat

acrid, but as brought to us they discover, even when long chewed, only a slight unctuosity In the mouth. Boiled in water they impart a reddish color, and a kind of vapid softness ; the decoction, when inspissated, yields an unctuous, farinaceous, almost insipid mass. They give a gold yellow tincture to rectified spirit, but make no sensible alteration in its taste. On drawing off the spirit from the filtered liquor there remains an orange-colored extract, nearly as insipid as that obtained by water, but scarcely in half its quantity. China root is said to promote perspiration and urine, and by its soft unctuous quality to blunt acrimonious humors. It was first introduced into Europe about 1535 as a specific against venereal disorders ; the patient was kept warm, and a weak decoction of China root taken twice a day in bed to promote a sweat. But, •whatever may be its effects in the warmer climates, it is in this of itself greatly insufficient. At present it is very rarely used, sarsaparilla being supposed more effectual. Prosper Alpinus says that this root is in great esteem among the Egyptian women for procuring plumpness.

3. S. sarsaparilla affords the sarsaparilla root, is the most valuable, and is well described in the London Medical Journal by the ingenious Dr. Wright of Edinburgh, who, during a long residence in Jamaica, made botany his peculiar study :— ‘ This species,” says he, ‘ has stems of the thickness of a man’s finger ; they are jointed, triangular, and beset with crooked spines. The leaves are alternate, smooth and shining on the upper side ; on the other side are three nerves or costae, with sundry small crooked spines. The flower is yellow, mixed with red. The fruit is a black berry, containing several brown seeds. Sarsaparilla delights in low moist grounds and near the banks of rivers. The roots run superficially under the surface of the ground. The gatherers have only to loosen the soil a little, and to draw out the long fibres with a wooden hook. In this manner they proceed till the whole root is got out. It is then cleared of the mud, dried, and made into bundles. The sensible qualities of sarsaparilla are mucilaginous and farinaceous, with a slight degree of acrimony. The latter, however, is so slight as not to be perceived by many ; and I am apt to believe that its medicinal powers may fairly be ascribed to its demulcent and farinaceous qualities. Since the publication of Sir William Fordice’s paper on sarsaparilla in the Medical Observations and Enquiries,

vol. I., sarsaparilla has been in more general use than formerly. Sir William seems to think sarsaparilla a specific ip all stages of lues ; but

from an attentive and careful observation of its effects, in some thousands of cases, I must declare that I could place no dependence on sarsaparilla alone. But, if mercury had been or was used with sarsaparilla, a cure was soon effected. Where the patients had been reduced by pain, disorder, and mercury, I prescribed a decoction of sarsaparilla and a table-spoonful of the powder of it twice a day, with the greatest success, in the most deplorable cases of lues, ill-cured yaws, and ill-disposed sores or cancers.' See PHARMACY, Index. SMILE, v. n. & n. s. \ Belg. smuylen. To SMI'LINGLY, adv. $ contract the face with pleasure ; express kindness, love, or gladness, by the countenance; look gay, or joyous; express slight contempt: the action or look itself: the adverb corresponding.

Let their heirs enrich their time With smiling plenty and fair prosperous days.

Shakspeare.

I frown upon him, yet he loves me still. — Oh that your frowns would teach my smiles such skill. Id. Midsummer Right's Dream.

His flawed heart,

'Twixt two extremes of passion, joy and grief, Burst smiling tu. Id. King Lear.

Our king replied, which some will smile at now, but according to the learning of that time. Camdtn.

For see the morn,

Unconcerned with our unrest, begins Her rosy progress smiling. Milton.

The river of bliss through midst of heaven Rolls o'er Elysian flowers her amber stream ; With these, that never fade, the spirits elect Bind their resplendent locks inwreathed with beams; Now in loose garlands thick thrown off, the bright Pavement, that like a sea of jasper shone, Impurpled with celestial roses smiled. Id.

Sweet intercourse

Of looks and smiles : for smiles from reason flow, To brute denied, and are of love the food. Id.

Carneades, stopping him smilingly, told him, we are not so forward to

Jose good company. lioyle.

The goddess of the mountain smiled upon her votaries, and cheared them in their passage to her pa-lace. Tatler.

Yet what avail her unexhausted stores, Her blooming mountains, and her sunny shores. With all the gifts that heaven and earth impart, The smiles of nature, and the charms of art ?

Adduon.

But, when her anxious lord returned, Raised is her head ; her eyes are dried :

She smites as William ne'er had mourned, She looks as Mary ne'er had died. Prior.

The smiling infant in his hand shall take The crested basilisk and speckled snake. Pope.

The desert smiled,

And paradise was opened in the wild. W—

Should some more sober criticks come abroad, If wrong, I smile ; if right, I kiss the rod. «•

I kept him for his humour's sake,

For he would oft beguile My heart of thoughts that made it ache.

And force me to a smile.

SMILT, v. n. Corrupted from smelt or melt. Having too much water, many corns will smilt.oT have their pulp turned into a substance like thick cream.

. IN

SMINTHEUS, a surname of Apollo, given him in Phrygia, for delivering the country from an innumerable swarm of rats ; from

rats.

SMIRCH, v.a. From muik or murcky. To cloud ; to dusk ; to soil.

I'll put myself in poor and mean attire, And with a kind of umber smirch my face.

Shakspenre.

Like the shaven Hercules in the smirch worm-eaten tapestry. Id.

SMIRK, v. a. See SMERK. To look affect-edly soft or kind.

Her grizzled locks assume a smirking grace, And art has levelled her deep furrowed face.

Young,

SMITE, v. a. & v. n. J Pret . smote ; part.

SMI'TER n. s. S pass, smit, smitten.

Sax. j-mitan ; Belg. smijten; Goth, srnida. To strike ; reach with a blow ; wound ; slay ; strike ; collide : one who strikes.

And the flax and the barley was smitten, but the wheat and the rye not. Exodus.

The servants of David had smitten of Benjamin's men, so that three hundred and threescore died.

2 Samuel ii. 31.

God mote him for his errour, and he died.

2 Samuel vi. 7.

I gave my back to the smiters, and my cheeks to them that plucked off the hair. Isaiah 1. 6.

The heart melteth, and the knees smite together.

Nahum.

So sweet a kiss the golden sun gives not To those fresh morning drops upon the rose,

As thy eye beams, when their fresh rays have

smote The night of dew that on my cheeks down, flows.

Shakrpeare.

The sword of Satan, with steep force to smite, Descending. Milton.

1 wander where the Muses haunt, Clear spring, or shady grove, or sunny hill, Smit with the love of sacred song. Id.

Tempt not the Lord thy God, he said, and stood ; But Satan smitten with amazement fell. Id.

Death with a trident smote. Id.

By the advantages of a good person, and a pleasing conversation, he made such an impression in her heart as could not be effaced : and he was himself no less smitten with Constantia. Additon.

Let us not mistake God's goodness, nor imagine, because he tmitet us, that we are forsaken by him.

Wake.

Fired with the views this glittering scene displays, And smit with passion for my country's praise, My artless reed attempts this lofty theme, Where sacred Isis rolls her ancient stream. Tickel.

See what the charms that smite the simple heart, Not touched by nature, and not reached by art.

Pope.

Smit with the love of sister arts we came, And met congenial, mingling flame with flame. Id.

SMITH, n. s.-\ Sax. j-mrS, of rrniran, to

SMITH'CRAFT, (beat; Belg. Dan. Swed. Germ. SMITH ERY, {and Goth. smid. One who

SMITH'V. J forges metal; hence he who makes or effects any thing ; often used in composition : smithery and smithy are both names of the smith's shop : and, says a very old English couplet, —

Whence comes SMITH, albe he knight or squire, But from the smith that smiteth at the fire ? lie doth nothing but talk of his horse, and can

shoe him. I am afraid his mother played false with

a smith. Shakspeare.

Inventors of pastorage, smithcraft, and musick.

Raleigh,

The doves repented, though too late, Become the smiths of their own foolish fate.

Dry den.

His blazing locks sent forth a crackling sound, And hissed like red hot iron within the smithy

drowned. <.

The ordinary qualities observable in iron, or a diamond, that make their true complex idea, a smith or a jeweller commonly knows belter than a philosopher.

Loc/ie.

Lawless man the anvil dares profane, And forge that steel by which a man is slain ; Which earth at first for ploughshares did afford, Nor yet the smith had learned to form a sword.

Tale.

SMITH (Adam), LL. D., the celebrated author of the Enquiry into the Nature and Causes of the Health of Nations, was the only son of Adam Smith, comptroller of the customs at Kirkaldy, and of Margaret Douglas, daughter of Mr. Douglas of Strathenry. He was born at Kirkaldy on the 5th June 1723, soon after the death of his father. His constitution during 'his infancy was sickly, and required all the care of his surviving parent. When only three years old he was carried by his mother to Strathenry on a visit to his uncle Mr. Douglas ; and,

happening one day to be amusing himself alone at the door of the house, he was stolen by a party of those vagrants who in Scotland are called tinkers, or gypsies. Luckily he was missed immediately, and the vagrants pursued and overtaken in Leslie wood ; and thus Dr. Smith was preserved to reform the commercial policy of Europe. He received the rudiments of his education in the school of Kirkaldy under David Miller, a teacher of eminence, whose name deserves to be recorded on account of the great number of eminent men which that seminary produced under his direction. Dr. Smith, even while at school, attracted notice by his attachment to books, and by his extraordinary memory; while his friendly and generous disposition secured the affection of his school-fellows. He was sent in 1737 to the university of Glasgow, where he remained till 1740, when he went to Baliol College, Oxford, on Snell's foundation. His favorite pursuits at the university were mathematics and natural philosophy. After his removal to England he employed himself in translating, particularly from the French, to improve his style. He also studied the languages, ot which, both ancient and modern, his knowledge was extensive. After seven years residence at Oxford, he returned to Kirkaldy, and lived two years with his mother. He had been designed for the church of England ; but, disliking the ecclesiastical profession, he resolved to limit his ambition to some of those preferments to which literary attainments lead in Scotland. In 1748 he fixed his residence in Edinburgh, and for three years read a course of lectures on rhetoric and belles lettres under the patronage of Lord Kames. In 1751 he was elected professor of logic in the university of Glasgow, and in 1752 was removed to the professorship of moral philosophy. In this situation he remained thirteen years, a period

he considered as the most useful part of his life. His lectures on moral philosophy were divided into four parts : the first contained natural the-oiogy ; in which he considered the proofs of the being and attributes of God, and those truths on which religion is founded ; the second comprehended ethics, strictly so called, and consisted chiefly of those doctrines which he afterwards published in his Theory of Moral Sentiments ; in the third part he treated more at length of justice; and in the last part he examined those political regulations which are founded upon expediency, and are calculated to increase the riches, "power, and prosperity of a state. In delivering his lectures

he trusted almost entirely to extemporary elocution ; his manner was plain and unaffected, and he never failed to interest his hearers. His reputation soon rose very high, and many students resorted to the university merely upon his account. When his acquaintance with Mr. Hume first commenced is uncertain; but it had ripened into friendship before 1752. In 1759 he published his Theory of Moral Sentiments ; a work which deservedly extended his reputation ; for, though several of its conclusions are ill-founded, it must l)e allowed to be a singular effort of invention, ingenuity, and subtilty. It abounds every where with the purest and most elevated maxims on the practical conduct of life ; and, when the subject leads him to address the imagination, the variety and felicity of his illustrations, the richness and fluency of his eloquence, and the skill with which he wins the attention and commands the passions of his readers, leave him among our British moralists without a rival. Towards the end of 1763 Dr. Smith received an invitation from Mr. Charles Townsend to accompany the duke of Buccleugh on his travels ; and the liberal terms on which this proposal was made induced him to resign his office at Glasgow, when he generously returned to his pupils the fees he had received from them. He joined the duke of Buccleugh at London early in 1764, and set out with him for the continent in March. After a stay of ten days at Paris they proceeded to Thoulouse, where they fixed their residence for eighteen months ; whence they went by a pretty extensive route through the south of France to Geneva, where they passed two months. About Christmas 1765 they returned to Paris, and remained there till October 1766. The society in which Dr. Smith passed these ten months, by the recommendation of Mr. Hume, were chiefly Turgot, Quesnai, Necker, D'Alembert, Helvetius, Marmontel, and Madame Riccoboni ; and some of them he continued ever after to reckon among his friends. In October 1766 the duke of Buccleugh and the doctor returned to England. Dr. Smith spent the next ten years of his -life with his mother at Kirkaldy, occupied habitually in intense study, but unbending his mind at times in the company of some of his old school-fellows who still resided near the place of their birth. In 1776 he published his Enquiry into the Nature and Causes of the Wealth of Nations ; a book universally known, and esteemed the most perfect work which has yet appeared on the general principles of legislation. He spent the next two years in London, where he enjoyed the society of some of the most

eminent men of the age; but he removed to Edinburgh in 1778, in consequence of havino been appointed, at the request of the duke o\ Buccleugh, one of the commissioners of the customs in Scotland. Here

he spent the last twelve years of his life in an affluence which was more than equal to all his wants. But his studies seemed entirely suspended till the infirmities of old age reminded him that it was now too late. The principal materials of the works which he had announced had long been collected, and little probably was wanting but a few years of health and retirement to complete them. The death of his mother, who had accompanied him to Edinburgh in 1784, together with that of his cousin Miss Douglas in 1788, contributed to frustrate these projects. They had been the objects of his affection for more than sixty years, and in their society he had enjoyed from his infancy all that he ever knew of the endearments of a farnily. He was now alone and helpless ; and though he bore his loss with equanimity, and regained apparently his former cheerfulness, yet his health and strength gradually declined till July 1790, when he died. He left a few essays, which have since been published, but burnt all the rest of his MSS. before he died.

SMITH (Sir James Edward), may justly be considered as one of the most distinguished English botanists since the time of Sloane. He was born in the city of Norwich, December 2d, 1759, and was educated at the University of Edinburgh. Sir James continued in the undivided pursuit of botany till the day of his death, which occurred March 15th, 1828 His works are exceedingly voluminous, and, besides those which bear his name, he contributed largely to the Encyclopaedia edited by Dr. Rees.

SMITH (Edmund), a distinguished English poet, the only son of Mr. Neale, an eminent merchant, by a daughter of baron Lechmere, was born in 1668. By his father's death he was left young to the care of Mr. Smith, who had married his father's sister, and who treated him with so much tenderness that at his death he took his name. His writings are scattered in miscellanies and collections : his celebrated tragedy of Phaedra and Hippolitus was acted in 1707 ; and, being introduced at a time when the Italian opera so much engrossed the polite world, gave Mr. Addison, who wrote the prologue, an opportunity to rally the vitiated taste of the pub-lic. However, it is perhaps rather a fine poem than a good play. This tragedy, with a poem to the memory of Mr. John Philips, three or four odes, with a Latin oration spoken at Oxford in laudem Thomae Bodleii, were published as his works by his friend Mr. Oldisworth. Mr. Smith died in 1710, sunk into indolence and intemperance by poverty and disappointments; the hard fate of many a man of genius.

SMITH (Hugh), M. D., a celebrated English physician, son of Mr. Smith, an eminent surgeon at Hemel-Hempstead. After serving an

apprenticeship with his father, he went to Edinburgh, attended the university there, and graduated with much reputation. He then went to London, where, in 1759, he published An Essay on the Blood, with Reflections on Venesection. In

1760 he began a course of lectures on the theory and practice of physic, which were attended by great numbers of physicians, surgeons, apothecaries, and students of medicine. Within three years his lectures acquired him such fame that the pupils of St. George's hospital, &c , invited him to deliver his lectures at the west end of the city; which he did, and was numerously attended for many years. He also published his text book, which met with a very extensive sale. About 1765 Dr. Smith was unanimously chosen physician to the Middlesex Hospital, in which office he continued several years, highly esteemed by his colleagues. In 1770 he was elected alderman of Tower Ward, London ; but his numerous professional engagements obliged him to resign that honorable office two years after. In 1780 he purchased an elegant house at Streatham, where he hoped to enjoy retirement; but this was a vain hope for a man of his abilities among the nobility and gentry of Surry. At length the death of his son, affecting his spirits, made him retire to Stratford, where he died, 26th December 1790.

SMITH (John), M. A., a learned English divine, bora at Abchurch, in Northamptonshire, and educated at Cambridge, where he graduated in 1640. He published his Select Discourses, in 4to., in 1660, and died in 1672, aged fifty-four.

SMITH (John), D.D., an eminent English di-vine, born at Lowther, in Westmoreland, in 1659, where his father was rector, and gave him the rudiments of his education. His father must have been a man of liberal sentiments; for he put young John first under the tuition of Christopher Nessie, a Presbyterian dissenter, and next under that of Thomas Lawson, a Quaker, who was an excellent teacher of the dead languages. In 1674 he was admitted of St. John's College, Cambridge; and in 1686 attended lord Lansdown as chaplain in his embassy to Spain. On his return, about 1692, he became chaplain to bishop Crew of Durham; who, in 1695, made him rector ,of Gateshead, and a prebendary of Durham. In 1696 he graduated D.D. He was next made rector of Bishop's Wearmouth. ' He was deeply versed in northern literature and antiquities ; and the admirers of the venerable Bede are indebted to him for an elegant edition of that ancient historian whose

works he was engaged in preparing for the press when he died at Cambridge, in 1715 : but the work was finished, according to his directions, by his son George Smith, esq., of the Inner Temple, in 1722, to whom he left a large fortune, which he had obtained by his wife : four of the doctor's Sermons were also published.

SMITH (John), an excellent mezzotinto engraver, who nourished about 1700. He united softness with strength, and finisher! with freedom. He served with one Tillet, a painter in Moorfields ; and learned from Becket the secret of mezzotinto ; and, being farther instructed by Van der Vaart, was taken to work in Sir Godfrey Kneller's house. 'To posterity, perhaps, his prints,' says Mr. Walpole, 'will carry an idea of something burlesque; perukes of an enormous length, flowing over suits of armor, compose wonderful habits. Smith exhibited both, as he found them in the portraits of Knelle-In the

Kit-cat club he has poured full bottoms chiefly over night-gowns. Smith composed two large volumes, with proofs of his own plates, for which he asked £50. His finest works are duke Schom-berg on horseback ; that duke's son Maynhard ; the earls of Pembroke, Dorset, and Albemarle ; three plates of children ; William Cowper ; Gibbons and his wife ; queen Anne ; the duke of Gloucester, a whole length ; queen Mary, in ;i high head, fan, and gloves ; the earl of Godolphin ; the duchess of Ormond, a whole length, with a black ; Sir George Rooke, &c. There is a print by him of James II. with an anchor, but no inscription ; which, not being finished when the king went away, is so scarce that it is sometimes sold for above a guinea. Smith also performed many historic pieces; as.the loves of the gods, from Titian, at Blenheim, in ten plates ; the holy family with angels, after C. Maratti, &c.

SMITH (Sir Thomas) was born at Walden, in Essex, in 1512. At fourteen he was sent to Queen's College, Cambridge, where he distinguished himself so much that he was made Henry VIII's scholar together with John Cheke. He was chosen a fellow of his college in 1531 ; and, in 1533, appointed to read the public Greek lecture. The common mode of reading Greek at that time was very faulty ; the same sound being given to the letters and dipthongs i, TJ, v, tt, 01, vt. He and Cheke were sensible that this, pronunciation was wrong: and, after a good deal of consultation, they agreed to introduce that mode of reading which prevails at present. Mr. Smith was lecturing on Aristotle de Republicain Greek. At first he dropped a word or two at intervals in the new pronunciation. No notice was taken of this for

some days ; but, as he continued, his audience began to wonder at the unusual sounds, and at last some of his friends spoke of them to him. He discovered his project, and great numbers soon resorted to him for information. The new pronunciation was adopted with enthusiasm, and soon became universal at Cambridge. It was opposed by bishop Gardiner the chancellor; but its superiority was so evident that in a few years it spread over all England. In 1539 he travelled and studied in France and Italy. On his return he was made regius professor of civil law at Cambridge. About this time he published a treatise on the mode of pronouncing English. He also promoted the Reformation. Having gone into the family of the duke of Somerset, the protector during the minority of Edward VI., he was employed in public affairs; and, in 1548, was made secretary of state, and knighted. He was then sent ambassador to Brussels and France. Upon Mary's accession he lost all his places ; but, having preserved the friendship of Gardiner and Bonner, he was not jnly exempted from persecution, but allowed a pension of £100. During Elizabeth's reign he was employed in public affairs, and was sent thrice as her ambassador to France. He died at Mounthall, in Essex, in 1577. His abilities were excellent, and his attainments uncommonly great. He was a philosopher, physician, chemist, mathematician, linguist, historian, and architect. lie wrote, 1. The English Commonwealth. 2. A letter I>- Iˆ-cm et Emendata Linguae Giaecie

S A! 1 T If.

50J

Pronuiiciatione. 3. De Morihus Turcarum. 4. De Druidum Moribus.

SMITH (Thomas), D.D., an eminently learned English divine, born in London in 1638, and admitted of Queen's College, Oxford, in 1657. In 1663 he was made master of a free-school near Magdalen College; and, in 1666, was elected a fellow, being now famed for his skill in the oriental languages. In June 1668 he went as chaplain to Sir Daniel Harvey, ambassador to Constantinople, and returned thence in 1671. In 1676 he travelled into France; and, on his return, became chaplain to Sir Joseph William-son, secretary of state. In 1679 it was proposed that he should collate and translate the Alexandrian Manuscript of the

Bible(see SEPTUAGINT), and Charles II. promised him a benefice for it; but this excellent design was never executed. His reputation was high among the learned. In 1683 he graduated. In 1687 he was made prebendary of Heyghbury, Wilts. In August 1688 he was deprived of his fellowship by Dr. Giffard, the popish president, but restored in October; yet afterwards he lost it, upon refusing to take the oaths to William and Mary. He died at London, May llth, 1710. He published four letters in Latin, which he translated afterwards, entitled, 1. Remarks on the Manners, Religion, and Government of the Turks, 8vo., 1678. 2. Au Account of the Greek Church, English and Latin, 8vo., 1680. 3. A Life of Camden, Latin, 4to., 1691 - 4. Vitae quorundam Eruditissimorum et illustrium Virorum, 4to., 1707 ; with many other learned tracts.

SMITH (William), D. D., son of the Rev. Richard Smith, minister of St. Andrew's Worcester, a learned English divine, born in Worcester, May 30th, 1711, where he was educated. He was matriculated at New College, Oxford, in 1728, where he became A. B. in 1732, and A. M. in 1737. After this he was patronised by James, earl of Derby, with whom he spent some years, and who, in 1735, appointed him rector of Trinity Church, Chester. He published a translation of Longinus on the Sublime, with notes, and a life of the author ; by which he acquired great reputation. On June 8th, 1753, he was appointed a minister of St. George's church, Liverpool. This year he published a translation of Thucydides's History of the Peloponnesian War; 2 vols. 4to., dedicated to the prince of Wales. On the 28th July, 1758, king George II. appointed him dean of Chester; and on the 30th April, 1766, he was elected rector of Hand-ley. In 1782 he published Nine Discourses on the Beatitudes. He died 12th January 1787.

SMITH (William, George, and John), of Chichester, three eminent English painters, brothers. William was bora in 1707: painted portraits and landscapes well, and especially fruits and flowers. He died in 1764, aged fifty-seven. George was born in 1714, proved the most eminent of the three, and excelled in landscape painting. He died in 1776, aged sixty-two. John was born in 1717, and was thought by some superior to George in landscape painting. He died in 1764, aged forty-seven.

SMITH (Thoma«\ another. landscape painter, who, to distinsriu-'h I. fin fom the preceding, is

usually called Smith of Derby, of which town he was a native. He vas

wholly self-taught, and yet attained distinction in the line which he followed. Several pr.nts have been engraved by Vivares from his pictures. He died in 17601, leaving a son, John Raphael Smith, who became an eminent engraver in mezzotinto, and died i;:

1811.

SMITH (John Raphael), was the son of Thomas Smith, the landscape painter of Derby, from whom he received instruction in drawing ; but, losing him at an early age, he had no other teacher. He practised portrait painting in crayons, and rose to pre-eminence in that line, as appeared in his whole lengths of Charles Fox and earl Stanhope. He also became distinguished as a mezzotinto engraver, and scraped a great number of fine prints from the works of Sir Joshua Reynolds. Among his scholars were the two Wards, Hilton, and De Wint. Mr. Smith was the first who brought into public notice that eccentric genius, George Morland. He died in 1812.

SMITH (William), a traveller, born about the end of the seventeenth century, was sent in 1726 by a commercial company to Guinea, to make plans and views of the forts, and to survey tin-country from the mouth of the river Gambia to Juidah. He returned to England in September, 1727, after having visited Barbadoes; and he subsequently published the result of his labors, under the title of A New Voyage to Guinea, containing an exact Description of the country and of the Manners and Customs of the inhabitants, London,' 1744, 8vo., which work was translated into French ; and Draughts of Forts on thj coast of Guinea, 4to. — Another WILLIAM SMITH was the author of The History of the Province of New York, North America, to the year 173-2, London 1757, 4to. ; reprinted 1765, 8vo., and published in French, Paris, 1767, 12mo.

SMITH (William), an eminent performer, born about 1730 in the city of London, where his father carried on business as. a wholesale grocer and tea-dealer. He was educated at Eton and St. John's College, Cambridge, with a view to the clerical profession ; but, having subjected himself to the danger of censure by some youthful irregularities, he left the university, and, returning to London, directed his attention to the stage. In January 1753 he made his first appearance *t Covent Garden, in the character of Theodosius, in the tragedy of The Force of Love. He was successful ; and continued to fill some of the principal parts in a variety of plays for twenty-two vears. In 1774 he removed to Drury Lane, and c -ntinued to belong to the

company there till IV 68, when he retired in consequence of having married a lady of fortune, the widow of Kelland Courtenay, esq., and daughter of viscount Hinchinbrooke. He then devoted his time to the cultivation of polite literature and the enjoyment of rural pleasures, especially fox-hunt- ing. His death took place September 13th, 1819, at Bury St. Edmunds, in Suffolk, where he had long resided.

SMITH (Mrs. Charlotte) was the eldest daughter of Nicholas Turner, esq., a gentleman of fortune, who inherited considerable estates in theoounties

of Surry and Sussex, and was born in 1749. Mr. Turner early discovered such indications of genius in her infant mind that he determined no expense should be spared in the cultivation of those talents which she seemed to have inherited from both parents ; and therefore bestowed on her what was thought the best education. She was placed in one of the most distinguished seminaries in the neighbourhood of London ; and, on quitting school, was attended by various masters ; and, if expense constituted a good education, she may be said to have received the best that could have been given : but Mrs. Smith frequently regretted that in the conduct of it so lit-tle judgment was shown, and that the time lost in the attainment of superficial accomplishments was not employed in more useful studies. After having been accustomed to the most boundless indulgence from her own family, she was suddenly involved in household cares, transplanted into a soil totally ungenial to her habits and repugnant to her taste, and became subject to the will of a man who, far from possessing the power of regulating the conduct of a wife scarcely emerged from childhood, knew not how to govern himself. From this fatal marriage, which had been brought about by the officiousness of friends, and which was by no means the effect of attachment on either side, all the future misfortunes of this ingenious lady originated. It was in consequence of her husband's embarrassments, that Mrs. Smith thought of collecting such poems as she had originally written for her amusement; they were first offered to Dodsley and refused ; they were

afterwards shown to Dilly in the Poultry, who also declined having any thing to do with them. It has been seen with what degree of judgment these decisions were made ; through the interest of Mr. Hayley they were at length printed by Dodsley on Mrs. Smith's account, and the rapid sale, and almost immediate demand for a second edition, sufficiently justified the author's confidence in her own powers, and encouraged her to proceed in a line, which, as it might render her in a great degree independent of the persons who had now the management of her family's affairs, contributed to divert her thoughts, and to render the sad realities she was suffering in some measure less poignant. The still increasing derangement of Mr. Smith's affairs soon after obliged him to leave England, and, in the autumn of 1784, he established his family in a gloomy and inconvenient house in Normandy, nine miles from any town. His wife's sufferings in this comfortless situation, where she gave birth to her youngest child, were such that few women could have borne with fortitude ; but her admirable mind and persevering spirit still supported her; and again literary pursuits served to lighten her cares during the very severe winter which happened that year; and, when her health would not admit of her going out, she translated into English the novel of Manon 1'Escaut, by the abbe Prevost. It was afterwards published and censured as being immoral; but the fact was, it fell accidentally in her way when she had not much opportunity of selection, and at a time when she eagerly sought for any resource to mitigate her anxieties. In the spring of 1785 the family

returned to England. Domestic calamities again overtook her soon afterwards ; and circumstances, which delicacy forbids us to detail, determined her to quit her husband's house, and withdraw with most of her children to a small cottage near Chichester. The charming novel of Emmelinewas written at this place in the course of a few months ; the novelty of the descriptive scenery which Mrs. Smith first introduced, and the elegance of the style, obtained for it the most unbounded success, and increased the ardor and persevering application of the author, which brought forward several other works of the same kind, almost all equally pleasing, and which followed with a rapidity and variety truly astonishing. In 1803 Mrs. Smith again changed her habitation, and removed from the neighbourhood of Tunbridge Wells to a village in Surry, regarding it as her native soil, having passed her infancy at her father's place at Stoke, and there she had long expressed a desire that all her sorrows might repose. Death closed her long sufferings in her fifty-seventh year, on the 28th of October 1806, after a most tedious and painful illness, which had

totally exhausted her frame ; but the powers of her extraordinary mind lost neither their strength nor their brilliancy. Mrs. Smith's poetical works are well known, and the number of editions through which they passed sufficiently establishes the public opinion of their merit. Those which have been published since her decease offer great proof of the energy of her genius ; for they were all written while she was undergoing much bodily suffering, and while her mind was harassed with many cares.

SMITH (Elizabeth), a young lady of very uncommon talents and acquirements, was bom in the county of Durham in the year 1776, and died in the summer of 1806, at the age of thirty. Miss Bowdler, the author of Sermons on the Doctrines and Duties of Christianity, published, in 1809, Fragments in Prose and Verse, by this young lady, with some account of her life and character. At a very early age Miss Smith discovered that love of reading, and that close application to whatever she engaged in, which marked her character through life. She acquired a wonderful knowledge of languages both ancient-and modern, while she displayed an acuteness and accuracy of thinking, combined with the most unassuming modesty, which have probably never been surpassed. Besides the fragments above mentioned, we have from her pen an excellent Translation of Letters and Memoirs, relating to Mr. and Mrs. Klopstock, from the original German ; and a Translation of the Book of Job, from the original Hebrew ; which while it remained in MS. was considered by more than one eminent divine a work too valuable to be withheld from the lovers of Biblical literature. In the volume of Fragments we find several pieces of poetry, original and translated, of great beauty ; some metaphysical and moral discussions of great acuteness and accuracy ; with a display of religious principle, and proofs of religious practice, equally salutary and unaffected. Her life and death were equally Christian, the recollection of which added sanctity, while it furnished consolation to the sorrow of her surviving friends and family.

SMO

SMITHERY signifies also the art of a smith, by which iron is wrought into any shape by means of fire, hammering, filing, &c.

SMITH IA, in botany, a genus of the decandria order, and diadelphia class of plants ; natural order thirty-second, papilionaceae : CAL. mono-phyllous and bilabiated : COR. winged ; the legumen enclosed in the calyx with three or four joints, and containing as many seeds, which are smooth, compressed, and kidney-shaped. There is only one species, *viz.* — S. thonina.

SMITING LINE, in a ship, is a small rope fastened to the mizen-yard-arm, below at the deck, and is always furled up with the mi/en-sail, even to the upper end of the yard, and thence it comes down to the poop. Its use is to loose the mizen-sail without striking down the yard, which is easily done, because the mizen-sail is furled up only with rope-yarns ; and therefore when this rope is pulled hard it breaks all the rope-yarns, and so the sail falls down of itself. The sailor's phrase is, smite the mizen (whence this rope takes its name), that is, hale by this rope that the sail may fall down.

SMITS (Lodowick), a Dutch painter, born at Dort in 1635. He painted historical subjects and fruit pieces, for which he got high prices ; yet from some defect in his coloring their beauty soon decayed. He died in 1675, aged forty.

SMITS (Diederic), a poet of Holland, a native of Rotterdam. He united with a poetical genius a taste for music, and M. de Vries, in his History of Dutch poetry, prefers the heroic poem of Smits, On the delivery of the Children of Israel from the Idolatress Worship of Baal-peor, to Abraham the Patriarch of Nicholas Hoogvliet. Smits wrote a poem on the river Rotte, which gives name to the city of Rotterdam ; and he translated Pope's Epistle from Heloise to Abelard and other pieces.

SMITZ (Caspar), who, from painting a great number of Magdalens, was called Magdalen Smith, was a Dutch painter, who came to England soon after the restoration. For these portraits sat a woman whom he kept and called his wife. A lady whom he had taught to draw took him with her to Ireland, where he painted small portraits in oil, had great business, and high prices. His flowers and fruits were so much admired that one bunch of grapes sold there for £40. In his Magdalens he generally introduced a thistle on the fore ground. He had several scholars, particularly Maubert, and one Gawdy of Exetsr.

Yet, notwithstanding his success, he died poor in Ireland in 1707.

SMOCK, n. s. I Sax. r-rnoc. The under

SMOCK'FACED, adj. S garment of a woman; a shift : used in contempt for any thing feminine ; as in smockfaced for pale; maidenly; smock-treason, &c.

Their apparel was linen breeches, and over that a smock close girt unto them with a towel. Sandys.

Her body covered with a light taffeta garment, so cut, as the wrought smock came through it in many places. Sidney,

How dost*thou look now ? oh ill-starred wench, Pale as thy smock ! when we shall meet at compt, Tiiis look of thine will hurl my soul from heaven.

Shakspeare.

At amoc/t-treason, matron, I believe you, And if I were your husband ; but, when 1 Trust to your cobweb bosoms any other, Let me there die a fly, and feast yon spider.

Btn Joiuon.

Plague on his smocA-loyalty ! I hale to see a brave bold fellow" sotted, Made sour and senseless, turned lo whey by lo\e.

Drydeu.

Old chiefs, reflecting on their forme: deeds, Disdain to rust with battered invalids ; But active in the foremost ranks appear, And leave young smockfaced beaux to guard the rear.

Ftnton.

Though Artemisia talks by fits Of councils, classicks, fathers, wits ; Heads Malbranche, Boyle, and Locke

Yet in some things, methinks, she fails ; Twere well if she would pare her nails,

And wear a cleaner smock.

Swift.

SMOK.E,w.s.,v.rz.&u.a.-\ Saxon j-moec ; SMOKEDRY, v. a. f Belg. smoick. The

sooty exhalation of * thin

SMOKE’LESS, adj.

SMO’KY. things burning: to

emit such exhalation ; burn ; be kindled ; raise a dust like smoke ; hunt out ; to scent by smoke ; dry in smoke ; smell or find out ; ridicule : to smoke-dry is to dry by smoke : the two adjectives corresponding.

When the sun went down, a tmoking furnace and a burning lamp passed between those pieces.

Gen. xv. 17. The anger of the Lord shall smoke against that man.

Deut.

She might utter out some smoke of those flames wherewith else she was not only burned, but smothered. Sidney.

His brandished steel, Which smoked with bloody execution. Shakspeare.

Maugre all the world will I keep safe, Or some of you shall smoke for it in Rome. Id. He was first smoked by the old lord ; when his disguise and he is parted, what a sprat you shall find him ! Id.

O he ‘s as tedious

As a tired horse, or as a railing wife; Worse than a smoky house. Id.

London appears in a morning drowned in a black cloud, and all the day after smothered with smoky fog, the consequence whereof proves very offensive to the lungs. Harvey.

Stand off, and let me take the air ; Why should the smoke pursue the fair? Cleaveland.

Morpheus, the humble god that dwells In cottages and smoky cells, Hates gilded roofs and beds of down ; And, though he fears no prince's frown, Flies from the circle of a crown. Denham.

All involved with stench and smoke. Milton. To him no temple stood nor altar smoked. Id.

Courtesy

Is sooner found in lowly sheds, With smoky rafters, than in tapestry halls And courts of princes. Id.

He hither came t' observe and smoke What courses other riskers took. Hwiibrat.

Aventinus drives his chariot round ; Proud of his steeds he smokes along the field ; His father's hydra fills the ample shield.

Drydent JEneid. Victorious to the top aspires, Involving all the wood in smoky fires. Drtide>,. Smoke-dry the fruit, but not if you plant them.

I began to ntmlie that tlicy were a parcel of mummers, and wondered that none of the Middlesex justices took care to lay some of them by

the heels.

Addison’s Freeholder.

If blast septentrional with brushing wings Sweep up the smoky mists, and vapours damp, Then woe to mortals ! Philips.

As smoke that rises from the kindling fires Is seen this moment, and the next expires. Prior.

Smoke passing through flame cannot but grow red hot, and red hot smoke can appear no other than flame. Newton.

Smoke the fellow there. Congreve.

Frictions of the backbone with flannel, smoked with penetrating aromatical substances, have proved effectual . A rbuthnot .

For Venus, Cytherea was invoked,

Altars for Pallas to Athena smoked. Granville.

Tenants with sighs the smokeless towers survey, And turn the’ unwilling steed another way. Pope.

With hasty hand the ruling reins he drew, He lashed the coursers, and the coursers flew ; Beneath the bending yoke alike they held Their equal pace, and tmolted along the field. Id.

SMOKE is a dense elastic vapor arising from burning bodies. As this vapor is extremely disagreeable to the senses, and often prejudicial to the health, mankind have fallen upon several contrivances to enjoy the benefit of fire without being annoyed by smoke. The most universal of these contrivances is a tube leading from the chamber in which the fire is kindled to the top of the’building, through which the smoke ascends and is dispersed into the atmosphere. These tubes are called chimneys; which, when constructed in a proper manner, carry off the smoke entirely ; but, when improperly constructed, they carry off the smoke imperfectly, to the great annoyance of the inhabitants. Although we could naturally imagine that the causes which occasion smoke in rooms are exceedingly various, yet, upon examination, it will be found that they may all be reduced to one of these three general heads, each of which will admit of several varieties. 1. To a fault in the form of the tube or chimney it-self. 2. To some fault in the other parts of the building, and a wrong position of the chimney with respect to these. Or, 3. To an improper situation of the house with

respect to external objects. It is of the utmost consequence, in attempting a cure, accurately to distinguish from which of these defects the smoke proceeds, otherwise the means used will be very uncertain. The celebrated Dr. Franklin's Treatise on Smoky Chimneys is well known ; but, able as his writings on the subject have been, they are now in a great measure superseded by the late improvements in constructing fire places, suggested by count llumford. Chimneys whose funnels go up in the north wall of a house, and are exposed to the north winds, are not so apt to draw well as those in a south wall ; because, when rendered cold by those winds, they draw downwards. Chimneys enclosed in the body of a house are better than those whose funnels are exposed in cold walls. Chimneys in stacks are apt to draw better than separate funnels, because the funnels that have constant fires in them warm the others in some degree that have none.

SMOKE F»UTHINOS. The ponterostals or cus-

tomary oblations offered by the dispersed inhabitants within a diocese when they made their procession to the mother or cathedral church, came by degrees into a standing annual rent, called smoke farthings.

SMOKE-SILVER. Lands were bolden in some places by the payment of the sum of 6d. yearly to the sheriff, called smoke-silver (Par. 4. Edw. VI.) Smoke-silver and smoke-penny are to be paid to the ministers of divers parishes as a modus in lieu of tithe-wood ; and in some manors, formerly belonging to religious houses, there is still paid, as appendant to the said manors, the ancient peterpence, by the name of smoke-money. — Twisd. Hist. Vindicat. 77. The bishop of London, anno 1444, issued out his commission, Ad levandum le smoke farthings, &c.

SMOLENSKO, a government of the Russian empire, to the west of Moscow, between long. 30° 50' and 35° 30' E., lat. 53° 30' and 56° 25' N. Its territorial extent is 21,400 square miles; its inhabitants 1,050,000, mostly Russians, with some Poles, Germans, and Jews. The surface is generally level; for, though it contains some heights, these are not of great size or extent. The principal rivers are the Duna, the Dnieper, the Desna, the Sosha, the Kasplia, the Uga, and the Viasma. The lakes are also numerous, being reckoned at more than 100, great and small. The climate is cold but healthy. The soil consists of a mixture of clay or sand, with black mould, and is on the whole tolerably fertile. Corn, hemp, and flax, are cultivated, and horses, black cattle, ami sheep, are numerous. A great part of the uncultivated

land is covered by forests. The manufactures are quite insignificant, but the distilling of spirituous liquors is carried on on a large scale. This government corresponds to White Russia properly so called. It was ceded by Poland in 1667, and the cession confirmed in

1686.

SMOLENSKO, a large town of European Russia, the capital of the above government, is built partly on two hills, and in a valley between them. Here the Dnieper is a navigable stream flowing from east to west. The part to the south of that river is surrounded with a massy wall thirty feet in height, fifteen thick, and a mile and three-quarters in circuit. The lower part of the wall is of stone, the upper of brick. The whole is surrounded with a ditch and a sort of covered way; and some modern redoubts have been erected as outworks. Smolensko is thus a place of some strength, and, standing on the great road to Moscow, the Russians made here their first determined stand to the advance of the French in 1812. An obstinate contest took place on the 16th and 17th of August, in which the town was bombarded : the' Russians were compelled to fall back, and the French extinguished the flames; but on quitting it in their retreat, in November following, they blew up part of the works ; ami, as most of the houses were of wood, about the half of them were destroyed.

Smolensko contains within its circumference several large gardens ; the houses are generally of one story, and the population is supposed not to exceed 12,600. One-large street divides it into two. paved with stone ; the others are nave;!.

or rather floored, with planks. The part rebuilt since 1812 is of a good construction, and the public edifices are respectable. Here are nearly twenty churches and chapels, besides two cathedrals, and places of worship for Lutherans and Catholics. Smolensko is a bishop's see, has a seminary for priests, and gymnasium or high school. It has also a

military and trade's school, a foundling hospital, and a consistory. The manufactures are linen, leather, soap, and hats ; and there is a pretty active trade in corn, hemp, wood, honey, wax, and furs. Prince Potemkin, the favorite and general of Catharine II., was a native of this town. 235 miles W. S. W. of Moscow, and 350 south by east of St. Petersburg.

SMOLLET (Tobias), M. D., an eminent Scottish author, was born in 1720, at a village within two miles of Cameron, on the banks of the Leven. He received a classical education, and was bred to the practice of physic and surgery ; and in the early part of his life served as a surgeon's mate in the navy. The incidents that befel him, during his acting in this capacity, served as a foundation for his Roderic Random, one of the most entertaining novels in the English tongue. He was present at the siege of Carthagena, and in that novel has given a faithful, though not very pleasing account, of the management of that ill-conducted expedition, which he censures in the warmest terms, from circumstances which fell under his own particular observation. His connexion with the sea seems not to have been of long continuance. The first piece he published, that we know of with certainty, is a Satire, in two parts, printed first in the years 1746 and 1747, and reprinted in a Collection of his Plays and Poems in 1777. About this period, or some time before, he wrote for Mr. Rich an opera, entitled Alceste, which has never been either performed or printed. At the fcge of eighteen he wrote a tragedy entitled The Regicide, founded on the assassination of king James I. at Perth. In the preface to this piece, published by subscription in 1749, he bitterly exclaimed against false patrons, and the duplicity of theatrical managers. The warmth and impetuosity of his temper hurried him, on this occasion, into unjust reflections against the excellent George lord Lyttleton (see LYTTLETON) and Mr. Garrick ; the former he characterised in the novel of Peregrine Pickle, and he added a burlesque on the beautiful Monody written by that nobleman on the death of his lady. Against Mr. Garrick he made illiberal ill-founded criticisms ; and, in his novel of Roderic Random, gave a very unfair representation of his treatment of him respecting this tragedy. Of this conduct he afterwards repented, and acknowledged his errors ; though, in the subsequent editions of the novel, the passages which were the hasty effusions of disappointment have not been omitted. However, in giving a sketch of the liberal arts in his History of England, he afterwards remarked that, ' the exhibitions of the stage were improved to the most exquisite entertainment by the talents and management of Mr. Garrick, who greatly surpassed all his predecessors of this and perhaps every other nation, in his genius for

acting, in the sweetness and

variety of his tones, the irresistible magic of hig eye, the fire and vivacity of his actions, the eloquence of attitude, and the whole pathos of expression. Candidates for literary fame appeared, even in the higher sphere of life, embellished by the nervous sense and extensive erudition of a Corke; by the delicate taste, the polished muse, and the tender feelings of a Lyttleton.' Not satisfied with this public declaration, he wrote an apology to Mr. Garrick in still stronger terms. With these ample concessions Mr. Garrick was completely satisfied; so that in 1 757, when Smollet's comedy of the Reprisals, an after-piece of two acts, was performed at Drury Lane theatre, the latter acknowledged himself highly obliged for the friendly care of Mr. Garrick exerted in preparing it for the stage ; and still more for his acting the part of Lusignan in Zara for his benefit, on the sixth instead of the ninth night, to which he was only entitled by the custom of the theatre. The Ad-yentures of Roderic Random, published in 1748, 2 vols. 12mo., a book which still continues to have a most extensive sale, first established the doctor's reputation. All the first volume and the beginning of the second, appears to consist of real incidents and characters, though certainly a good deal heightened and disguised. The judge his grandfather, Crab and Potion the two apothecaries, and 'Squire Gawky, were characters well known in that part of the kingdom where the scene was laid. Captains Oakhum and Whiffle, Drs. Mackshane and Morgan, were also said to be real personages ; but their names we have either never learned or have now forgotten. A bookbinder and barber long eagerly contended for being shadowed under the name of Strap. The doctor seems to have enjoyed a peculiar felicity in describing sea characters, particularly the officers and sailors of the navy. His Trunnion, Hatchway, and Pipes, are highly finished originals; but what exceeds them all, and perhaps equals any character that has yet been painted by the happiest genius of ancient or modern times, is his Lieutenant Bowling. This is indeed nature itself; original, unique, and sui generis. By the publication of this work the doctor had acquired so great a reputation, that henceforth a certain degree of success was insured to every tiling known to proceed from his hand. In the course of a few years, the Adveˆ- tures of Pereurine Pickle appeared ; a work of great ingenuity and contrivance in the composition, and in which an uncommon degree of erudition is displayed, particularly in the description of the entertainment given by the Republican doctor, after the manner of the ancients. Under this personage the late Dr. Akenside, author of The Pleasures of Imagination, is supposed to be characterised ; and it would be difficult

to determine whether profound learning or genuine humor predominate most in this episode. Another episode of the Adventures of a Lady of Quality, likewise inserted in this work, contributed greatly to its success, and is indeed admirably executed ; the materials, it is said, the lady herself (the celebrated lady Vane) furnished. These were not the only original compositions of this stamp with which the doctor has favored

the public. Ferdinand count Fathom and Sir Launcelot Greaves are still in the list of what may be called reading novels, and have gone through several editions ; but there is no injustice in placing them in a rank far below the former. No doubt invention, character, composition, and contrivance, are to be found in both; but then situations are described which are hardly possible, and characters are painted which, if not altogether unexampled, are at least incompatible with modern manners; and which ought not to be, as the scenes are laid in modern times. The doctor's last work was of much the same species, but cast into a different form — The Expedition of Humphry Clinker. It consists of a series of letters, written by different persons to their respective correspondents. He has here carefully avoided the faults which may be justly charged to his two former productions. Here are no extravagant characters nor unnatural situations. On the contrary, an admirable knowledge of life and manners is displayed; and most useful lessons are given applicable to interesting but to very common situations. We know not whether the remark has been made, butthere is certainly a very obvious similitude between the characters of the three heroes of the doctor's chief productions. Roderic Random, Peregrine Pickle, and Matthew Bramble, are all brothers of the same family. The same satirical, cynical, disposition, the same generosity and benevolence, are the distinguishing and characteristical features of all three ; but they are far from being servile copies or imitations of each other. They differ as much as the Ajax, Diomed, and Achilles of Homer. This was undoubtedly a great effort of genius ; and the doctor seems to have described his own character at the different stages and situations of his life. Before he took a house at Chelsea, he attempted

to settle as practitioner of physic at Bath ; and with that view wrote A. Treatise on the Bath Waters; but was unsuccessful, chiefly because he could not render himself agreeable to the women. This was doubtless extraordinary ; for those who knew Smollet at that time acknowledge that he was as graceful and handsome a man as any of the age he lived in ; and there was a certain dignity in his air and manner which could not but inspire respect wherever he appeared. Perhaps he was too soon discouraged. Abandoning physic as a profession, he fixed his residence at Chelsea, and turned his thoughts entirely to writing. Yet, as an author, he was not nearly so successful as his genius and merit certainly deserved. He never acquired a patron among the great, who by his favor or beneficence relieved him from the necessity of writing for a subsistence. The truth is, Dr. Smollet possessed a loftiness and elevation of sentiment and character which appears to have disqualified him for paying court to those who were capable of conferring favors. It would be wrong to call this disposition haughtiness ; for to his equals and inferiors he was ever polite, friendly, and generous. Booksellers may therefore be said to have been his only patrons ; and from them he had constant employment in translating, compiling, and reviewing. He translated Gil Bias and Don Quixote, both so happily, that

all the former translations of those excellent productions of genius have been almost superseded by his. His name likewise appears at a translation of Voltaire's Prose Works ; but little of it was done by his own hand ; he only revised it, and added a few notes. He was concerned in a great variety of compilations. His History of England was the principal work of that kind. It had a most extensive sale; and the doctor is said to have received £2000 for writing it and the continuation. In 1755 he set on foot the Critical Review, and continued the principal manager of it till he went abroad for the first time in 1763. He was, perhaps, too acrimonious sometimes in the conduct of that work ; and at the same time displayed too much sensibility when any of the unfortunate authors attempted to retaliate, whose works he had perhaps justly censured. Among other controversies, in which his engagements in this publication involved him, the most material in its consequences was that occasioned by his remarks on a pamphlet published by admiral Knowles. That gentleman, in his defence of his conduct on the expedition to Rochefort, published a vindication of himself; which, falling under the doctor's examination, produced some very severe strictures both on the performance and on the character of the writer. The admiral immediately commenced a prosecution against the printer ; declaring,

at the same time, that he desired only to be informed who the writer was, that if he proved to be a gentleman he might obtain the satisfaction of one from him. In this affair the doctor behaved both with prudence and with spirit. Desirous of compromising the dispute with the admiral, in an amicable man-ner, he applied to his friend Mr. Wilkes to interpose his good offices with his opponent. The admiral, however, was inflexible; and, just as sentence was going to be pronounced against the printer, the doctor came into court, avowed himself the author of the strictures, and declared himself ready to give Mr. Knowles :uiy satisfaction he chose. The admiral immediately commenced a fresh action against the doctor, who was found guilty, fined £100, and condemned to three months imprisonment in the King's Bench. It is there he is said to have written the Adventures of Sir Launcelot Greaves, in which he has described some remarkable characters, then his fellow-prisoners. When lord Bute was called to the chief administration of affairs, he was prevailed upon to write in defence of that nobleman's measures ; which he did in a weekly paper called the Briton. This gave rise to the famous North Briton ; wherein, according to the opinion of the public, he was rather baffled. The truth is the doctor did not seem to possess the talents necessary for political altercation. He wanted temper and coolness; and his friends accused his patron of having denied him the necessary information, and even neglected the fulfilling of some of his other engagements with him. Be that as it will, the doctor is said not to have forgotten him in his subsequent performances. Besides the Briton, Dr. Smollet is supposed to have written other pieces in support of the cause he espoused. The Adventures of an Atom, in two volumes, are known to be his prod action. His conS M O L L E T.

slitution being at last greatly impaired by a sedentary life and assiduous application to study, ne went abroad for his health in June 1763, and continued in France and Italy two years. He wrote an account of his travels in a series of letters to some friends, which were afterwards published in two volumes 8vo., 1766. During all that time he appears to have labored under a constant fit of chagrin. A very slight perusal of these letters will sufficiently evince that this observation is founded on fact, and is indeed a melancholy instance of the influence of bodily distemper over the best disposition. His relation of his travels is actually cynical ; for which Sterne, in his

Sentimental Journey, has animad-verted on him under the character of Smel fungus. The doctor lived to return to his native country; out his health continuing to decline, and meetIng with fresh mortifications and disappointments, he went back to Italy, where he died, October 21, 1771. He was employed, during the last years of his life, in abridging the Modern Universal History, great part of which he had originally written himself, particularly the histories of France, Italyˆ and Germany. He certainly met with many mortifications and disappointments, which, in a letter to Garrick,he thus feelingly expresses : — ‘ I am old enough to have seen and observed that we are all playthings of fortune ; and that it depends upon something, as insignificant and precarious as the tossing up of a halfpenny, whether a man rises to affluence and honors, or continues to his dying day struggling with the difficulties and disgraces of life.’ It would be needless to expatiate on the character of a man so well known as Smollet, who has, besides, given so many strictures of his own character and manner of living in his writings, particularly in Humphry Clinker; where he appears under the appellation of Mr. Serle, ‘ and has an interview with Mr. Bramble ; and his manner of living is described in another let-ter, where young Melford is supposed to dine with him at his house in Chelsea. No doubt he made money by his connexions with the booksellers ; and had he been a rigid economist, or endued with the gift of retention (an expression of his own), he might have lived and died very independent. However, to do justice to his memory, his difficulties, whatever they were, proceeded not from extravagance or want of economy. He was hospitable, but not ostentatiously so ; and his table was plentiful, but not extravagant. No doubt he had his failings; but it would, perhaps, be difficult to name a man who was more respectable for the qualities of his head, or more amiable for the virtues of his heart. Since his death a monument has been erected to his memory near Leghorn, on which is inscribed an epitaph written in Latin by his friend Dr. Armstrong, author of the Art of Preserving Health, and many other excellent pieces. • An inscription written in Latin was likewise inscribed on a pillai erected to his memory on the banks of the Leven, by one of his relations. Yet so late as 1785 the widow of Dr. Smollet was residing in indigent circumstances at Leghorn. On this account the tragedy of Venice Preserved was acted for her berfefit at Edinburgh on the

5th of March, an excellent prologue spoken on that occasion, and a considerable sum raised and remitted to her. The pieces inserted in the posthumous collection of Dr. Smollet’s plays and poems are, The Regicide, a tragedy ; The Reprisal, a comedy; Advice and Reproof, two

satires; The Tears of Scotland; Verses on a Young Lady; a Love Elegy, in imitation of Tibullus ; two Songs ; a Burlesque Ode ; Odes to Mirth, to Sleep, to Leven Water, to Blue-eyed Ann, and to Independence. The late lord Gardenstone gives the following character of Smollet as an author : — ‘ For the talent of drawing a natural and original character, Dr. Smollet, of all English writers, approaches nearest to a resemblance of our inimitable Shakspeare. What can be more chaste, amusing, or interesting, than Random, Trunnion, Hatchway, Lismahago, Pal-let, the Pindaric physician, Tom Clarke, farmer Prickle, Strap, Clinker, Pipes, the duke of Newcastle, and Timothy Crabtree ? In the character of hpnest Bowling, Smollet, if any where, excels himself.’ After a review of several other of Smollet’s characters, his lordship adds, ‘ With so much merit, Dr. Smollet had likewise his imperfections. His oaths and imprecations are indecent and unnecessary ; and the adventures of lady Vane ought to be expunged from the pages of a classical author. Smollet’s talents reflect honor on his country : next to Buchanan he is by far the greatest literary genius of whom North Britain has to boast.’ — Miscel. p. 194, 195.

SMOOTH, adj . & v. a. \ Sax. pme*, pmoeS SMOOTH’EN, v. a. I of mySisian, to soften ; SMOOTH’FACED, adj. ,- Welsh mwyth. Even; SMOOTH’ LY, adv. I level ; not rough ; hav-SMOOTH’NESS, n.s. J ing no asperities ; equal in pace; flowing: hence mild; gentle; bland : to smooth and smoothen are both used for to make smooth in any way ; to ease ; flatter : smoothfaced is mild-looking ; of soft or gentle air : and the adverb and noun substantive correspond with the adjective.

Behold Esau my brother is a hairy man, and I am a smooth man. tfen. xxvii. 11.

The carpenter encouraged the goldsmith, and he that smootheth with the hammer him that smote the anvi|. Isaiah xli. 7.

Had Joshua been mindful, the fraud of the Gibeomtes could not so smoothly have past unespied till there was no help. Hooker.

Had it been a stranger, not my child, To smooth his fault, 1 would have been more mild.

Shakspeare.

Now, breathe we, lords ; good fortune bids us pause And smooth the frowns of war with peaceful looks.

Id.

This man ‘s a flatterer? if one be, So are they all ; for every greeze of fortune Is smoothed by that below. *••

O, shall I say I thank you, gentle wife! — Not so, my lord, a twelvemonth and a day ; I’ll mark no words that smoothfaced wooers say. Id

She is too subtle for thee ; and her imoothnest, Her very silence, and her patience. Speak to the people, and they pity her.

The subtle fiend, Though inly stung with anger and disdain, dissembled, and this answer smooth returned.

Hilton’s Paradiie Regained.

Id,

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SMU

By the hand he took me raised. And over fields and waters, as in air, Smoo//i-sliding without step Milton.

Smooth Adonis from his rock Ran purple to the sea. Id.

In their motions harmony divine So smooths her charming tones. Id.

As French has more fineness and smoothness at this time, so it had more compass, spirit, and force in Montaigne’s age. Temple.

The outlines must be mooth, imperceptible to the touch, and even without eminences or cavities.

Dryden.

Nor box nor limes, without their use ; Smoot h -grained, and proper for the turner's trade, Which curious hands may carve, an4 stetj with ease

invade. Id.

Smiling she seemed, and full of pleasing thought ; From ocean as she first began to rise, And smoothed the ruffled seas, and cleared the skies.

Id.

Restored it soon will be ; the means prepared, The difficulty smoothed, the danger shared : Be but yourself. Id.

The nymph is all into a laurel gone, The smoothness of her skin remains alone. Id. Virgil, though smooth, where smoothness is required, is so far from affecting it, that he rather disdains it ; frequently using synalephas, and concluding his sense in the middle of his verse. Id.

A countryman feeding his flock by the seaside, it was so delicate a fine day, that the smoothness of the water tempted him to set up for a merchant.

1^' Estrange.

It brings up again into the mouth that which it had swallowed, and, chewing it, grinds and smooths it, and afterwards swallows it into another stomach.

Ray on the Creation.

With edged grooving tools they cut down and smoothen the extuberances left.

Moron's Mechanical Exercise*. Fallacious drink! ye honest men, beware, Nor trust its smoothness ; the third circling glass Suffices virtue. Philips.

So, Dick adept, tuck back thy hair ; And I will pour into thy ear Remarks which none did e'er disclose In wnoofft-paced verse or hobbling prose. Prior.

When sage Minerva rose,

From her sweet lips smooth elocution flows. Gay. He was mootA-

tongued, gave good words, and seldom lost his temper.

Arbuthnot. History of John Bull. The madding monarchs to compose, The Pylian prince, the smootJi-speeched Nestor', rose.

Tickel.

He for the promised journey bids prepare The wnoof/i-haired horses and the rapid car. Pope. Now on the wings of winds our course we keep ; The God hath smoothed the waters of the deep.

Id. Odytsey.

All your muse's softer art display ; Let Carolina month the tuneful lay ; Lull with Amelia's liquid name the Nine, And sweetly flow through all the royal line. Pope.

The musick of that murmuring spring Is not so mournful as the strains you sing , Nor rivers winding through the vales below So sweetly warble, or so smoothly flow. Id.

SMOTH'ER, v. a., v. n. & n. s. Sax. rmonan ; Belg. smooren. To suffocate with smoke, or by exclusion of the air ; suppress : to smoke without vent ; be suppressed : a smoke ; thick dust ; state of suppression.

She might give passage to her thoughts, and so a* it were utter out some smoke of those flames, wherewith else she was not only burned but tmnthered.

6'.W;l II.

Lewd and wicked custom, beginning perhaps at the first amongst few, afterwards spreading into greater multitudes, and so continuing, from time may be of force, even in plain things, to smother the light of natural understanding. J/ouAir.

We smothered

The most replenished sweet work of nature, That from the prime creation e'er she framed.

ShakffKare.

Thus must I from the smoke into the smother, From tyrant duke into a

tyrant brother. Id.

This unfortunate prince, after a long smother of discontent, and hatred of many of his nobility and people, breaking forth at times into seditions, was at last distressed by them. Rucon.

Nothing makes a man suspect much, more than to know little ; and therefore men should procure to know more, and not to keep their suspicions in smother. Id. fasays.

Hay and straw have a very low degree of heat ; but yet close and smothering, and which drieth not. Id. Natural History.

She was warmed with the graceful appearance of the hero : she smothered those sparkles out of decency but conversation blew them up into a flame.

Dryden s JEnf.id,, Dedication. Where yon disordered heap of ruin lies, Stones rent from stones, where clouds of dust arise Arnid that smother Neptune holds his place.

Id. JEmid.

The helpless traveller, with wild surprise, Sees the dry desart all around him rise. And smothered in the dusty whirlwind dies.

Addison'i Cato.

The greater part enter only like mutes to fill the stage, and spend their taper in smoke and smother.

Collier on Fame.

SMOUL'DERING, { A participle; but I

SMOUL'DRY. i know not whether the

verb smoulder be in use, says Dr. Johnson. We seem to recollect having seen it frequently in modern authors. Sax. j-mojan, to smother ; Belg. smoel, hot. Burning and smoking without vent.

None can breathe, nor see, nor hear at will. Through smouldry cloud of duskish stinking smoke, That the' only breath him daunts who hath escaped the stroke. Faerie Queene.

In some close pent room it crept along, And, smouldering as it went, in silence fed ;

Till the' infant monster, with devouring strong, Walked boldly upright with exalted head. Dryden.

SMUG, adj. Belg. smucken, to dress. Nice; spruce; dressed with affectation of niceness.

There I have a bankrupt for a prodigal, who dares scarce shew his head on the Rialto ; a beggar, that used to come so smug upon the mart.

Shukspeare. Merchant of Venice. My men,

In Circe's house, were all, in severall baine Studiously sweetened, tmuged with oile, and decked With in and out weeds. Chapman.

He who can make your visage less horrid, and your person more smug, is worthy some good reception. Spectator. Lilies and roses will quickly appear,

And her face will look wonderous smugly. Gay.

SMUG'GLE, v. a. > Belg. smockelen. To SMVG'GLER, n. s. J import or export good?

without paying the customs. Soe below. The smuggler is the nefarious actor in these exploits SMUGGLING. The duties of customs were originally instituted in order to enable the king to afford protection to trade against pirates ; they have since been continued as a branch of the public revenue. As duties imposed upon the importation of goods necessarily raise their price above what they might otherwise have been sold for, a temptation is presented to import the commodity clandestinely and to evade the duty. Many persons, prompted by the hopes of gain, and considering the violation of a positive law of this nature as in no respect criminal (an idea in which they have been encouraged by a great part of the community, who make no scruple to purchase smuggled goods), have engaged in this illicit trade. It was impossible that government could permit this practice, which is highly injurious to the fair trader, as the smuggler is enabled to undersell him, while at the same time he impairs the national revenue, and thus evades the end for which these duties were appointed. Such penalties

are therefore inflicted as it was thought would prevent smuggling. Many laws have been made with this view. When we consider the nature, and still more the history, of mankind, we must allow that the enacting of severe laws is not always the way to prevent crimes. It were indeed much to be wished that there were no such thing as a political crime ; for the generality of men, but especially the lower orders, not discerning the propriety or utility of such laws, consider them as oppressive and ty-rannicalyand never hesitate to violate them when they can do it with impunity. Instead therefore of punishing smugglers, it would be much better to remove the temptation. But the high duties which have been imposed upon the importation of many different sorts of foreign goods, to discourage their consumption in Great Britain, have in many cases served only to encourage smuggling ; and in all cases have reduced the revenue of the customs below what more moderate duties would have afforded. The saying of Swift, that in the arithmetic of the customs two and two, instead of making four, make sometimes only one, holds perfectly true with regard to such heavy duties, which never could nave been imposed, had not the mercantile system taught us, in many cases, to employ taxation as an instrument, not of revenue, but of monopoly. The bounties which are sometimes given upon the exportation of home produce and manufactures, and the drawbacks which are paid upon the re-exportation of the greater part of foreign goods, have given occasion to many frauds, and to a species of smuggling more destructive of the public revenue than any other. To obtain the bounty or drawback, the goods, it is well known, are sometimes shipped and sent to sea, but soon afterwards clandestinely relanded in some other part of the country. Heavy duties being imposed upon almost all goods imported, our merchant importers smuggle as much, and. make entry of as little as they can. Our merchant exporters, on the contrary, make entry of more than they export; sometimes out of vanity, and to pass for great dealers in goods which pay no duty ;

and sometimes to gain a bounty or a drawback Our exports, in consequence of these different frauds, appear upon the custom-house books greatly to overbalance our imports; to the un-speakable comfort of those politicians who measure the national prosperity by what they call the balance of trade.

The smuggling bill of 1826 contains the principal provisions now in force ii Great Britain and its dependencies.

OF SMUGGLING GENERALLY From and after the 5th of January,

1826, this act, and all the provisions therein contained, shall have effect and come into and be and continue in full force and operation, for the prevention of smuggling, and shall extend to any law in force, or hereafter to be made, relating to the revenue or management of the customs.

If any vessel or boat belonging in the whole or in part to his majesty's subjects, or whereof one-half of the persons on board or discovered to have been on board the vessel or boat be subjects of his majesty, be found within four leagues of the coast of that part of the united kingdom which is between the North Foreland on the coast of Kent and Beachy Head on the coast of Sussex, or within eight leagues of the coast of any other part of the united kingdom, or shall be discovered to have been within the said distances, not proceeding on her voyage, wind and weather permitting, having on board or in any manner attached or affixed thereto, or having had on board or in any manner attached or affixed thereto, or conveying or having conveyed in any manner any goods whatsoever liable to forfeiture by this or any other act relating to the revenue of customs upon being imported into the united kingdom, then not only all such goods, together with their packages, and all goods contained therein, but also the vessel or boat, together with all her guns, furniture, ammunition, tackle, and apparel, shall be forfeited : provided that such distance of eight leagues shall be measured in any direction between the southward and eastward of Beachy Head ; and the provisions of this act shall extend to such distance of eight leagues in every direction from Beachy Head, although any part of such limits may exceed the distance of four leagues from any part of the coast of Great Britain to the eastward of Beachy Head aforesaid. — § 2.

If any vessel or boat, not being square-rigged, belonging in the whole or in part to his majesty's subjects, or whereof one-half of the persons on board or discovered to have been on board the vessel or boat be subjects of his majesty, be found in any part of the 'British or Irish channels, or elsewhere on the high seas, within 100 leagues of any part of the coasts of the united kingdom, or be discovered to have been within the said limits or distances, having on board or in any manner attached or affixed thereto, or having had on board or in any manner attached or affixed thereto, or conveying or having conveyed in any manner, any brandy or other spirits in any cask or package of less size or content than four gallons (excepting only for the use of the seamen then belonging to and on board sucii vessel or

boat, not exceeding two gallons for each seaman,) or any tea exceeding six pounds in the whole, or any tobacco or snuff in any cask or package whatever, containing less than 450 Ibs. or packed separately in any manner within any such cask or package (except loose tobacco for the use of the seamen, not exceeding five pounds for each seaman), or any cordage or other article adapted and prepared for slinging small casks, or any casks or other vessels whatsoever capable of containing liquids, of less size or content than forty gallons, of the sort or description used or intended to be used or fit or adapted for the smuggling of spirits, or any materials for the forming, mak-ing, or constructing such casks or vessels, or any syphon, tube, hose, or implements whatsoever, for the broaching or drawing any fluid, or any articles or implements or materials adapted for the repacking tobacco or snuff (unless the cordage or other articles as aforesaid are feally necessary for the use of the vessel or boat, or are a part of the cargo of the vessel or boat, and included in the regular official documents of the vessel or boat), in such case the spirits, tea, tobacco, or snuff, together with the casks or packages containing the same, and the cordage or other articles, and also the vessel or boat, with all her guns, furniture, ammunition, tackle, and apparel therein, shall be forfeited. — § 3.

If any foreign vessel or boat (not being square-rigged), in which there shall be one or more subjects of his majesty, be found within four leagues of that part of the United Kingdom which is between the north Foreland on the coast of Kent and Beachy Head on the coast of Sussex, or within eight leagues of any other part of the coast of the United Kingdom, to be measured as aforesaid, or shall be discovered to have been within the said distances, not proceeding OB her voyage, wind and weather permitting, having on board or in any manner attached or affixed thereto, or having had on board or in any man-ner attached or affixed thereto, or conveying or having conveyed in any manner, any brandy or other spirits, in any cask or package of less size or content than forty gallons (except only for the use of the seamen belonging to and on board such vessel, not exceeding two gallons for each sea-man), or any tea, exceeding six pounds in the whole, or any tobacco or snuff in any cask or package whatsoever containing less

than 450 Ibs. or packed separately in any manner within such cask or package (except loose tobacco for the use of the seamen, not exceeding; five pounds for each seaman on board such vessel), then such vessel or boat, with all her guns, furniture, ammunition, tackle, and apparel, shall be forfeited. And if any foreign vessel whatsoever be found within one league of the coast of the United Kingdom, not proceeding on her voyage, wind and weather permitting, having on board or in any manner attached or affixed thereto, or hav-ing had on board or in any manner attached or affixed thereto, or conveying or having conveyed in any manner, within such distance, any goods whatsoever, liable to forfeiture by this or any other act relating to the revenue of customs, upon being imported into the United Kingdom, in such case the vessel, together with her guns,

furniture, ammunition, tackle, and apparel, and all sucli goods laden therein, shall be forfeited — §5.

When any vessel or boat belonging in the whole or in part to his majesty's subjects, or whereof one .half of the persons on board are subjects of his majesty, shall be found within four or eight leagues of the coast of the United Kingdom as aforesaid, or be found as aforesaid in the British or Irish channels, or elsewhere within 100 leagues of the coast of this kingdom, and chase shall be given, or signal made by any vessel in his majesty's service or in the service of the revenue, hoisting the proper pendant and ensign as hereinafter mentioned, in or-der to bring such vessel, or boat to, if any per-son on board such vessel or boat shall, during the chase, or before such vessel or boat shall bring to, throw overboard the cargo or any part of the same (unless through unavoidable necessity or for the preservation of such vessel or boat, the vessel or boat having a legal cargo on board), or shall stave or destroy any part of the cargo to prevent seizure thereof, in such case the vessel or boat, with all her guns, furniture, ammunition, tackle, and apparel, shall be forfeited. — § 6.

If any vessel (not being square-rigged, nor a galliott of not less than fifty tons burden) or any boat coming from Brest on the coast of France, or from any place between Brest on the coast of France and Cape Finisterre on the coast of Spain, including all islands on the coast of France and Spain between those places, or coming from any place between the Helder Point on the coast of Holland and North Bergen on the coast of Norway, or from any place as far up the Catte-gat as Gottenburgh, including all the islands on the coasts between those places, shall arrive in any of the ports of the United Kingdom, or shall

be found at anchor or hovering within the limits of any of the ports thereof, and not proceeding on her voyage, wind and weather permitting, having on board, for the use of the seamen then belonging to and on board such vessel or boat, any spirits exceeding one half gallon for each seaman, or having on board any tea, exceeding four pounds in the whole, or having on board any tobacco (excepting loose tobacco, not exceeding two pounds for each seaman), then not only all such goods, but also trie vessel or boat, with all her materials, shall be forfeited. — § 7.

If any vessel (not being square-rigged, nor a galliott of not less than fifty tons burden), or any boat coming from any place between Brest on the coast of France and the Helder Point on the coast of Holland, including the Texel Isle, and all places on the Zuyder Zee, and all islands on the coasts of France, the Netherlands, and Holland, between Brest and the Texel, shall arrive in any of the ports of the United Kingdom, or be found at anchor or hovering within the limits of any of the ports thereof, and not proceeding on her voyage, wind and weather permitting, having on board, for the use of the seamen then belonging to and on board such vessel or boat, any spirits exceeding one-half gallon for each seaman, or having on board any tea exceeding two pounds in the whole, or having on board any tobacco, except loose tobacco, not excoeJ

mg one pound for each seaman, then not only all such goods, but aiso the vessel or boat, with all her materials, shall be forfeited. — § 8.

Vessels within certain distances of Guernsey, &.C., having on board contraband goods, or sailing thence with an improper number of men ; or taking on board implements for smuggling, or without a clearance, are to be forfeited.

If any vessel or boat whatever be found within the limits of any port of the United Kingdom with a cargo on board, and such vessel shall afterwards be found light or in ballast, and the master is unable to give a due account of the place within the United Kingdom where

such vessel shall have legally discharged her cargo, such vessel or boat, with her guns, furniture, ammunition, tackle, and apparel, shall be forfeited.-^ 13.

When vessels not bringing to during chase may be fired at, — In case any vessel or boat, liable to seizure or examination under any act or law for the prevention of smuggling, shall not bring to on being required so to do, on being chased by any vessel in his majesty's navy, having the proper pendant ensign of his majesty's ships hoisted, or by any vessel employed for the prevention of smuggling under the authority of the lords commissioners of the admiralty, or the commissioners of customs, having a pendant and ensign hoisted, of such description as his majesty, by any order in council, or by his royal proclamation under the great seal of the United Kingdom, shall have directed, or shall from time to time in that behalf direct, it shall be lawful for the captain, master, or other person having the command of such vessel in his majesty's navy, or employed as aforesaid (first causing a gun to be fired as a signal), to fire at or into such vessel or boat; and such captain, &c., is hereby indemnified and discharged from any indictment, penalty, or action for damages for so doing ; and in case any person be wounded, maimed, or killed by any such firing, and the captain, &c., be sued, molested, or prosecuted, or be brought before any of his majesty's justices of the peace or other justices, or persons having competent authority, for such firing, wounding, maiming or killing, every such justice, or person, is hereby authorised and required, to admit every such captain &c., to bail.

Hoisting flags in imitation of those of the navy. — If any person shall, from 5th July 1825, wear, carry, or hoist in or on board any ship or boat whatever belonging to any of his majesty's subjects, whether the same be merchant or otherwise, without particular warrant for so doing from his snajesty or his high admiral of Great Britain, or the commissioners for executing the office of high admiral of Great Britain, his majesty's jack commonly called the union jack,or any pendant,ensign, or colors usually worn by his majesty's ships, or any flag, jack, pendant, ensign, or colors, resembling those of his majesty, or those used on board his majesty's ships, or any other ensign or colors than the ensign or colors by any proclamation of his majesty now in force or hereafter to be issued prescribed to be worn, in every such case the master or the owners being on-board the same, and every other person so offending shall forfeit £50, which

shall and maybe recovered with costs of suit, and it shall be lawful for

any officer of his majesty's navy, customs, or excise, to enter on board anv such ship or boat, and to seize and take away any such prohibited flag, jack, pendant, ensign, or colors, and the same shall thereupon become forfeited to his majesty's use.— § 15.

Shipped prohibited goods, or those brought to quay.— If any goods, which are or may be prohibited to be exported, be put on board any ves-sel or boat with intent to be laden or shipped for exportation, or shall be brought to any quay, wharf, or other place in the United Kingdom, in order to be put on board any vessel or boat, for the purpose of being exported ; or if any goods, which are prohibited to be exported, be found in any package produced to the officers of the customs, as containing goods not so prohibited, then not only all such prohibited goods, but also all other goods packed therewith" shall be forfeited. — § 33.

OF SEIZURES.

All vessels and boats, and all goods whatsoever liable to forfeiture, under this or any other act relating to the revenue of customs, shall and may be seized in any place either upon land or water, by any officer of his majesty's army, navy, or marines, duly authorised and on full pay, or officer of customs or excise, or any person having authority to seize from the commissioners of customs or excise ; and all vessels, boats, and goods so seized shall, as soon as conveniently may be, be delivered into the care of the proper officer appointed to receive the same. — § 34. And it shall be lawful for any officer of the army, navy, or marines, duly authorised and on full pay, or for any officer of customs, producing his warrant or deputation (if required) to go on board any ves-sel which shall be within the limits of any of the ports of this kingdom, and to rummage and to search the cabin and all other parts of such ves-sel for prohibited and uncustomed goods, and to remain on board such vessel during the whole time that the same shall continue within the limits of such port ; and also to search any per-son either on board, or who shall have landed from any vessel ; provided such officer shall have good reason to suppose that such person hath any uncustomed or prohibited goods secreted about his person ; and if any person obstruct, oppose, or molest any such officer in going or remaining on board, or in entering or searching such vessel or person, every such person shall forfeit £100. — § 36.

Of searching persons. — Before any person shal1 be searched, by any such officer as aforesaid, i shall be lawful for such person to require such officer to take him or her before any justice of the peace, or

before the collector, controller, or other superior officer of customs, who shall determine whether there is reasonable ground to suppose that such person has any uncustomed or prohi bited goods about his or her person ; and if i appear to such justice, or superior officer of customs, that there is reasonable ground to suppose that such person has any uncustomed or prohi-bibited goods about his or her person, then such justice or officer shall direct such person to be

searched in such manner as he shall think fit; but, if it appear to such justice or officer that there is not reasonable ground to suppose that such person has any uncustomed or prohibited goods about his or her person, then such justice or officer shall forthwith discharge such person, who shall not in such case be liable to be searched ; and every such officer is hereby authorised and required to take such person, upon de-mand, before any such justice or officer, detaining him or her in the meantime: provided that no person, being a. female, so directed to be searched, shall be searched by any other person than a fe-male, duly authorised for that purpose by the commissioners of customs. — § 37.

If any passenger or other person on board any vessel or boat shall, upon being questioned by any officer of customs, whether he has any foreign goods upon his person, or in his possession, deny the same, and any such goods shall, after such denial, be discovered upon his person, or in his possession, such goods shall be forfeited, and such person shall forfeit treble the value of such goods. — § 39. And it shall be lawful for any officer of customs, or person acting under the direction of the commissioners of customs, authorised by writ of assistance under the seal of his majesty's court of exchequer, to take a constable, headborough, or other public officer inhabiting near the place, and in the day time to enter into any house, shop, cellar, warehouse, room, or other place, and in case of resistance to break open doors, chests, trunks, and other packages, there to seize and thence to bring any uncustomed or prohibited goods, and to put and secure the same in the custom-house warehouse in the port next to the

place whence such goods shall be so taken : provided that for the purposes of this act any such constable, headborough, or other public officer duly sworn as such, may act as well without the limits of any parish, ville, or other place for which he shall be so sworn, as within such limits. — § 40. All writs of assistance so issued from the court of exchequer shall continue in force during the whole of the reign in which such writs shall have been granted, and for six months from the conclusion of such reign. —§41.

Police officers seizing goods. — If any goods liable to forfeiture under this or any other act relating to the revenue of customs, be stopped or taken by any police officer, or other person acting by virtue of any act of parliament, or otherwise duly authorised, such goods shall be carried to the custom-house warehouse next to the place where the goods were stopped or taken, and there delivered to the proper officer appointed to receive the same, within forty-eight hours after the said goods were stopped and taken.— § 42. If any such goods be stopped or taken by such po-lice-officer, on suspicion that the same have been feloniously stolen, it shall be lawful for the said officer to carry the same to the police-office to which the offender is taken, there to remain in order to be produced at the trial of the offender; and in such case the officer is required to give notice in writing to the commissioners of customs of his having so detained the goods, with the particulars of the same, and immediately alt' r the trial .n.!! s.-cb "^ods are to be conveyed

and deposited in the custom-house warehouse as aforesaid, to be proceeded against according tc law ; and in case any police-officer, making detention of any such goods, neglect to convey the same to such warehouse, or to give the notice of having stopped the same as before described, such officer shall forfeit £20. — § 43.

Of harbouring prohibited or uncustomed goods. — Every person not arrested and detained, as hereinafter mentioned, who shall, either in the United Kingdom or the Isle of Man, assist or be otherwise concerned in the unshipping of any goods which are prohibited, or the duties for which have not been paid or secured, or who shall knowingly harbour, keep, or conceal, or shall knowingly permit or suffer to be harboured, kept, or concealed, any goods which have been illegally unshipped without payment of duties, or which have been illegally removed without payment of the same, from any warehouse or place of security in which they may have been originally deposited, or shall knowingly harbour, keep, or conceal, or permit or suffer to be

harboured, kept, or concealed, any goods prohibited to be imported, or to be used or consumed in the United Kingdom, or in the Isle of Man : and every person, either in the United Kingdom or the Isle of Man, to whose hands and possession any such uncustomed or prohibited goods shall knowingly come, shall forfeit either the treble value thereof, or the penalty of £100, at the election of the commissioners of his majesty's customs.— § 45. If any goods, upon which there is a drawback or bounty, be shipped to be exported into parts beyond the seas, and afterwards be unshipped with intention to be relanded in the United Kingdom (unless in case of distress, to save the goods from perishing), then the goods shall be forfeited, and the master of the vessel from which they shall be unshipped, and every person concerned in the unshipping, and the per-son to whose hands the same shall knowingly come, or who shall knowingly harbour, keep, or conceal, or suffer to be harboured, kept, or concealed, such goods, shall for every such offence forfeit the treble value of the goods, or £100, at the election of the commissioners of customs. — § 46. And every person who, by way of insurance or otherwise, shall undertake or agree to deliver any goods to be imported from beyond the seas, at any place in the United Kingdom, without paying the duties due on such importation, or any prohibited goods ; or in pursuance of such insurance, or otherwise, shall deliver or cause to be delivered any uncustomed or prohibited goods, every such person, and every aider or abettor thereof, shall for such offence forfeit £500, over and above any other penalty to which by law he may be liable ; and every person who shall agree to pay any money for the insurance or conveyance of such goods, or shall receive or take such goods into his custody or possession, or suffer the same to be so received or taken, shall also forfeit £500, over and above any penalty to which by law he may be liable on account of such goods. — § 47.

Every person, being a subject of his majesty who shall be found or discovered to have been on board any vessel or boat liable to forfeiture, under this or any other act relrtim* to the revenue

of customs, for being found within four or eight leagues of the coast of the United Kingdom as aforesaid, or for being found or discovered to have been within any of the distances or places in this act mentioned, from or in the United Kingdom, or from or in the Isle of Man, having on board or in any manner attached or affixed thereto, or having had on board or in any manner attached or affixed thereto, or conveying or having conveyed in any manner, such goods or other things as subject such vessel or boat to forfeiture, or who shall be found or discovered to have been on board any vessel or boat, from which any part of the cargo shall have been thrown overboard during chase, or staved or destroyed, shall forfeit £100 ; and every person, not being a subject of his majesty, who shall be found or discovered to have been on board any vessel or boat, liable to forfeiture for any of the causes aforesaid, within one league of the coast of the United Kingdom or of the Isle of Man, or within any bay, harbour, river, or creek of the said island, shall forfeit for such offence the sum of £100; and it shall be lawful for any officer of the army, navy, or marines, being duly authorised and on full pay, or any officer of customs or excise, or other person acting in his aid, or duly employed for the prevention of smuggling, and they are hereby authorised and required to stop, arrest, and detain every such person, and to convey such person before two or more justices of the peace in the United Kingdom, or a governor, deputy governor, or deemster in the Isle of Man, to be dealt with as hereinafter directed : provided always that any such person proving, to the satisfaction of such justices, governor, deputy governor, or deemster, that he was only a passenger in such vessel or boat, and had no interest whatever either in the vessel or boat, or in the cargo on board the same, shall be forthwith discharged by such justices. — § 49.

Signals to Smugglers. — No person shall, after sunset and before sunrise, between the 21st of September and the 1st of April, or after the hour of eight in the evening and before the hour of six in the morning at any other time in the year, make, or assist in making, or be present for the purpose of assisting in the making of any light, fire, flash, or blaze, or any signal by smoke, or by any rocket, fireworks, flags, firing of any gun or other fire-arms, or any other contrivance or device, or any other signal in or on board, or from any vessel or boat, or on or from any part of the coast or shore of the United Kingdom, or within six miles of any part of such coasts o «hores, for the purpose of making or giving any signal to any person on board any smuggling vessel or boat, whether any person so on board of such vessel or boat be or be not within distance to see or hear any such light, fire, flash, blaze, or signal ; and if any person, contrary to the true intent and

meaning of this act, make, or cause to be made, or assist in making any such light, fire, flash, blaze, or sig-nal, sueh person so offending shall be guilty of a misdemeanor ; and it shall be lawful for any person to stop, arrest, and detain the persons who shall so make, or assist in the making, or who shall be present for the purpose of assisting in making, any such light, ‘fire, flash, blaze, orsig-Vou XX.

rial, and to convey such persons before any two r.r more of his majesty’s justices of the peace residing near the place where such offence shall be committed, who, if they see cause, shall commit the ofl’ender to the next county gaol, there to remain until the next court of oyer or terminer, great session, or gaol delivery, or until such persons shall be delivered by due course of law, and it shall not be necessary to prove, on any indictment or information, that any vessel or boat was actually on the coast ; and the offenders being duly convicted thereof shall, by order of the court before whom such offenders shall be convicted, either forfeit the penalty of £100, or, at the discretion of such court, be sentenced or committed to the common gaol or house of correction, there to be kept to hard labor for any term not exceeding one year. — § 52. In case any person be charged with or indicted f6”r having made or caused to be made, or been assisting in making, or beeri present for the purpose of making or assisting in making any such fire, light, flash, blaze, or other signal, the burthen of proof that such fire, light, flash, blaze, noise, or other thing, so charged as having been made with intent and for the purpose of giving such signal, was not made with such intent and for such purpose, shall be upon the defendant against whom such charge is made, or such indictment is found. — § 53. It shall be lawful for any person whatsoever to put out or prevent any such light, fire, flash, or blaze, or any smoke, signal, rocket, firework, noise, or other device or contrivance made or being made as aforesaid, and to enter and go upon any lands for that purpose, without being liable to any indictment, suit, or action for the same. — § 54.

Resisting officers. — If any person whatsoever, hinder, oppose, molest, or obstruct any officer of the army, navy, or marines, being duly authorised and on full pay, or any officer of customs or excise, in the execution of his duty, or in the due seizing of any goods liable to forfeiture by this or any other act relating to the revenue of customs, or any person acting in his aid, or duly employed for the prevention of smuggling, or rescue or cause to be rescued any goods which have been seized, or shall attempt or endeavour to do so, or shall before, or at, or after any seizure, stave, break, or otherwise destroy any goods

to prevent the seizure thereof, or the securing the same, then the parties offending shall forfeit for every such offence £200.— § 55. If any persons to the number of three or more, armea with fire-arms or other offensive weapons, shall, within the United Kingdom, or within the limits of any port, harbour, or creek thereof, be assembled in order to be aiding and assisting in the illegal expertation of any goods prohibited to be exported, or in the carrying of such goods in order to such exportation, or in the illegal landing, running, or carrying away of prohibited or uncustomed goods, or goods liable to pay any duties which have not been paid or secured, or in the illegal carrying of any goods from any warenouse or other place, as shall have been deposited therein, for the security of the home consumption duties thereon, or for preventing the use or consumption, thereof in the United

Kingdom, or in the illegal relanding of any goods which shall have been exported upon de-benture or certificate, or in rescuing or taking away any such goods after seizure, from the officer of customs, or other officer authorised to seize the same, or any person employed by them or assisting them, or from the place where the same shall have been lodged by them, or in rescuing any person who shall have been apprehended for any of the offences made felony by this or any act relating to ‘the revenue of customs, or in the preventing the apprehension of any person who shall have been guilty of such offence; or in case any persons to the number of three or more, so armed, shall, within this kingdom, or within the limits of any port, harbour, or creek thereof, be so adding; every person so offending, and every person aiding, abetting, or assisting therein, shall, being thereof convicted, be adjudged guilty of felony, and suffer death as a felon, without benefit of clergy. — § 56.

If any person maliciously shoot at or upon any vessel or boat belonging to his majesty’s navy, or in the service of the revenue in any part of the British or Irish channels, or elsewhere on the high seas,

within 100 leagues of any part of the coast of the United Kingdom, or maliciously shoot at, maim, or dangerously wound any officer of the army, navy, or marines, being duly authorised and on full pay, or any officer of customs or excise, or any person acting in his aid, or duly employed for the prevention of smuggling, in the due execution of his office or duty, every person so offending, and every person aiding or abetting therein, shall, being lawfully convicted, be adjudged guilty of felony, and suffer death as a felon, without benefit of clergy. — § 57. And if any person, being in company with more than four other persons, be found with any goods liable to forfeiture under this or any other act relating to the revenue of customs or excise, or in company with one other person within five miles of any navigable river, carrying offensive arms or weapons, or disguised in any way, every such person shall be adjudged guilty of felony, and shall, on conviction of such offence, be transported as a felon for the space of seven years; and, if such offender shall return into the United Kingdom before the expiration of the seven years, he shall suffer as a felon, and have execution awarded against him as a person attainted of felony, without benefit of clergy. — §58.

Spirits floating on the sea. — No person whatsoever, being a subject of his majesty, other than an officer of the navy, customs, or excise, or some person authorised in that behalf, shall in-termeddle with or take up any spirits, being in casks of less content than forty gallons, which may be found floating upon or sunk in the sea; and if any spirits be taken up, and be found or discovered on board any vessel or boat belonging as aforesaid, within the limits of any port of the United Kingdom or Isle of Man, or within the distances in this act before-mentioned, the vessel ur boat on which the same shall be found or dis-. covered, together with such spirits, shall be forfeited, and the persons in whose custody the same .•vhall he found shall forfeit the penalty of treble the value of such spirits, or £50, at the election

of the commissioners of customs. — § 70. All suits, indictments, or informations exhibited for any offence against this or any other act relating to the revenue of customs, in any of his majesty's courts of record at Westminster, or in the courts of exchequer in Scotland, or in Dublin, or in the royal courts of Guernsey, Jersey, Alder-ney, Sark, or Man, shall and may be had, brought, sued, or exhibited, within three years next after the date of the offence committed ; and shall and may be exhibited before any two or more justices of the peace, or governor, deputy-governor, or deemster in the Isle of Man, within six months next after, the date of the offence committed.- -§ 78.

Of persons detained for smuggling offences. — It shall be lawful for any two or more justices of the peace, or governor, deputy -governor, or deemster as aforesaid, before whom any person liable to be arrested and detained, and who shall have been arrested and detained, for being found or discovered to have been on board any vessel or boat liable to forfeiture under this or any other act relating to the revenue of customs, or for unshipping, carrying, conveying, or concealing, or aiding, or being concerned in unshipping, conveying or concealing any spirits or tobacco liable to forfeiture under this or any such act, shall be carried, on the confession of such person of such offence, or on proof thereof upon the oaths of one or more credible witness, or witnesses, to convict such person of any such offence ; and every such person so convicted shall immediately upon such conviction pay into the hands of such justices, &c., for the use of his majesty, the penalty of £100, without any mitigation whatever, for any such offence of which he shall be so convicted ; or in default thereof the justices, &,c., shall by warrant commit such person to any gaol or prison, there to remain until such penalty be paid : provided that if the person convicted of any such offence be a seaman or seafaring man, and fit and able to serve his majesty in his naval service, and shall not prove that he is not a subject of his majesty, it shall be lawful for any such justices, &c., and they are hereby required, in lieu of such penalty, by warrant to order any officer of the army, navy, or marines, being duly authorised and on full pay, or officer of customs or excise, to convey, or cause to be conveyed, such person on board of any of his majesty's ships, in order to his serving his majesty in his naval service for the term of five years ; and if such person shall at any time within that period by any means escape or desert from such custody or service he shall be liable at any time afterwards to be again arrested and detained by any officer of customs, or any other person, and delivered over as aforesaid to complete his service of five years ; provided also, that if it be made to appear to any such justices, &c., that convenient arrangement cannot be made at the time of the conviction of the party, for immediately conveying such seaman or seafaring man, so convicted, on board any of his majesty's ships in order to serve his majesty, it shall be lawful for any such justices, &c., to commit any such sea-man or seafearing man so convicted to any prison or gaol, there to remain in safe custody for any period not exceeding one month, in

order that time may be given to make arrange-prieiors, whether condemnation shall have taken

ments for so conveying such seaman or seafaring place or not, upon such terms as they may dee,

man on board any ot his majesty s ships as afore-J' — " J " ' • •• •

said ; provided, also, that the commissioners of

the treasury shall have full power to remit or

expedient, and which shall be mentioned in the order; and it shall be also lawful for the commissioners of the treasury, and the commissioners

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mitigate any such penalty, punishment, or ser-of customs, to mitigate or remit any penalty or

vice, whether the parties be seafaring men or fine which shall have been incurred, or any part

otherwise.— § 80. If any person so convicted as of such penalty or fine incurred under any law

a seaman or a seafaring man, and carried on relating to the customs, or to the trade and navi—

board any of his majesty's ships of war, shall, on gation of this kingdom : provided, always that

examination by any surgeon of his majesty's no person shall be entitled to the benefit of any

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navy, within one week after being so carried on board, be deemed to be unfit, and be refused on that account to be received into his majesty's service, such person shall, as soon as convenient, be conveyed before any two or more justices oˆ the peace, or any governor, deputy-governor, or deemster as aforesaid ; and, upon proof that he

order for delivery or mitigation, unless the terms expressed in the order are fully and effectually complied with. — 6 Geo. IV. c. 108. § 44.

By whom seizures may be made. — What forfeitures to include. — All goods, and all ships, vessels and boats, which by this act or any act at any time in force relating to the customs shall be

has been refused to be received on board any of declared to be forfeited, shall and may be seized

by any officer of customs ; and such forfeiture of any ship, vessel, or boat, shall be deemed to include the guns, tackle, apparel, and furniture of the same; and such forfeiture of any

default of immediate payment of the same into goods shall be deemed to include the proper pack-

his majesty's ships as fit for his majesty's service, such justices, &c., shall call upon the person to pay the penalty of £100, without hearing any evidence other than such proof; and in

the hands of the justices, Sec., for the use of his majesty, to commit the person to any gaol or prison, there to remain until such penalty be paid ; provided, always, that no person so convicted, and ordered to serve on board any of his majesty's ships, shall be sent away from the United Kingdom on board of any such ship in a less time thati one

month from the date of such conviction. — § 81.

Row persons arrested for certain offences may be detained. — Where any person shall have been arrested and detained by any officer of the army, navy, or marines, being duly authorised and on full pay, or any officer of customs or ex-cise, or any person acting in his aid, or duly employed for the prevention of smuggling, for any offence under this or any other act relating to the revenue of customs, and shall hate been taken and carried before any two j ustices of the peace, to be dealt with according to law, if it appear to such justices that there is reasonable cause to detain such person, such justices may order such person to be detained a reasonable time, as well before as after any information has been exhibited against such party ; and, at the expiration of such time, such justices may proceed finally to hear and determine the matter. — § 83. If any goods be seized for non-payment of duties or any other cause of forfeiture, and any dispute shall arise whether the customs, excise, or inland du-ties have been paid for the same, or the same have been lawfully imported, or concerning the place whence such goods were brought, then the proof thereof shall lie on the owner or claimer of such goods, and not on the officer who shall seize and stop the same. — § 102.

The treasury and board of customs may restore seizures and mitigate penalties. — It shall be lawful

age in which the same are contained : provided always, that all goods, the importation of which is restricted, either on account of the packages or the place whence the same shall be brought, or otherwise, shall be deemed to be prohibited goods ; and, if any such goods be imported into the United Kingdom other than to be legally deposited or warehoused for exportation, the same shall be forfeited.— 6 Geo. IV. c. 107. § 128. In case any goods, ships, vessels, or boats, be seizev. as forfeited, or detained as undervalued, by virtue of any act of parliament relating to the customs, it shall be lawful for the commissioners of customs to order the same to be restored, in such manner and on such terms and conditions as they shall think fit to direct ; and, if the proprietor of the same accept the terms and conditions prescribed by the commissioners, he shall not have or maintain any action for recompense or damage on account of such seizure or detention, and the person making such seizure shall not proceed in any manner for condemnation. — § 129.

Remission of forfeitures and penalties. — If any ship shall become

liable to forfeiture on account of any goods laden therein or unladen therefrom, or if the master of any ship shall have become liable to any penalty on account of any goods laden in such ship or unladen therefrom, and such goods shall be small in quantity or of trifling value, and it shall be made appear, to the satisfaction of the commissioners of customs, that such goods had been laden or unladen contrary to the intention of the owners of such ship, or without the privity of the master thereof, as the case may be, it shall be lawful for the commissioners to remit such forfeiture, and also to remit or mitigate such penalty, as they shall see reason to acquit such master of all blame in re-

for the commissioners of his majesty's treasury of spect of such offence, or more or less to attribute

the United Kingdom of Great Britain and Ireland, or the commissioners of his majesty's customs, by any order made for that purpose under their hands, to direct any vessel, boat, or goods whatever, seized under any^act relating to the re-

the commission of such offence to neglect ot duty on his part as master of such ship ; and every forfeiture and every penalty or part thereof so remitted shall be null and void, and no suit or action shall be brought or maintained by any

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venue of customs, to be delivered to the pro-person whatever on account thereof.

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5lo

SMUGGLING

horses or olher animals, or any carriage seized as forfeited by any act relating to the revenue of customs, wherein a verdict shall be found for the claimant thereof, and it shall appear to the

case any information or suit shall be commenced and all prohibited goods shall be put up for sale or brought to trial on account of the seizure of for exportation to the best bidder, and, in case any vessel, boat, or goods whatsoever, or any they do not sell, then shall be destroyed ; all

vessels or boats calculated for the fair and mercantile trade of this kingdom shall be put up to sale to the best bidder ; and all vessels or boats calculated for smuggling shall be broken up and

judge or court before whom the same shall have destroyed, and the materials shall be put up to been tried that there was a probable cause of sale to the best bidder : provided that, if the seizure, such judge or court shall certify on the commissioners of customs shall deem any of the record that there was such probable cause, and vessels or boats necessary for the public service, in such case the claimant shall not be entitled to it shall be lawful for them to cause the same to any costs of suit whatsoever, nor shall the person be used for the said purpose. — § 62. who made such seizure be liable to any action, indictment, or other suit or prosecution on account of such seizure ; and in case any action, indictment, or other suit or prosecution shall be

OF REWARDS.

The commissioners of customs are hereby authorised and empowered to award to any officer

commenced and brought to trial against any or other person detaining any person liable to person whatsoever, on account of any such detention, under any act relating to the revenue seizure, wherein a verdict shall be given against of customs, to be paid upon the conviction of the defendant, if the court or judge before whom such person, any reward they may think fit to such action, indictment, or prosecution shall be direct, not exceeding £20 for each person. —

tried, shall have certified on the record that there 6 Geo. IV. c. 108. § 63. And the commission-was a probable cause for such seizure, then the ers of customs are authorised and empowered to plaintiff, besides the things seized, or the value pay the following reward to any officer or per-thereof, shall not be entitled to above Id. sons, as aforesaid, by whose means any pecuniary damages, nor to any costs of suit, nor shall the de-penalty or composition is recovered: *viz.* one-fendant in such prosecution be fined above Is. — third of the penalty or sum recovered. — § 64. § 92. If any action or suit shall be brought, as For actual seizures there shall be paid and al-aforesaid, such action or suit shall be brought lowed for a seizure by any officer of the army, within six months next after the cause of action nary, or marines, duly authorised and on full shall have arisen, and not afterwards. — § 97. pay, or any officer of the customs or excise, or

Of collusive seizures and bribes. — If any officer other person deputed or employed by the coni-of customs, or any officer of the army, navy, or missioners of customs or excise, under any act marines, duly authorised and on full pay, and relating to the revenue of customs, the following any other person whatsoever, employed under rewards : *viz.* the direction of the commissioners of the cus- . .

toms, shall make any collusive seizure, or deliver Seizures of Spirits

up, or make any agreement to deliver up, or not If all the parties be detained, and carried be-to seize, any vessel or boat, or any goods liable fore two justices of the peace, the whole. to forfeiture, or shall take any bribe, gratuity, If two or more, not being the whole, be de-recompense, or reward for the neglect or non-tained and convicted, seven-eighths, performance of his duty, every such officer or If One, being a seafaring man and convicted, other person shall forfeit for every such offence three-fourths.

£500, and be rendered incapable of serving his If one be detained with the vessel, or means of majesty iu any office whatever, either civil or conveyance, three-fourths.

military; and every person who shall give, or If one person be detained and convicted, not a offer, or promise to give any bribe, recompense, seafaring man, five-eighths, or reward, or make any collusive agreement with If vessel or carriage with its lading be seized, any such officer, to induce him in any way to without any person being detained, one-third, neglect his duty, or to do, conceal, or connive at If goods found sunk and concealed, and the any act, whereby any of the provisions of any smuggler afterwards convicted

in consequence act of parliament may be evaded, every such thereof, and by the exertions of the individuals person shall, whether the offer be accepted or so finding them, one-half, performed or not, forfeit £500. — 6 Geo. IV. c. If goods found, and no person subsequently

108. § 35. All vessels and boats, and all goods whatsoever, which shall have been seized and condemned for breach of any law relating to the revenue of customs, shall be disposed of as soon as conveniently may be after the condemnation

convicted, one-eighth.

If goods seized, and parties subsequently convicted in consequence of such seizure, and by the exertion of the seizors, one-half.

If goods seized only, one-eighth, or such other

thereof, in the following manner : *viz.* all goods part as the commissioners of customs shall think of a description admissible to duty shall be sold proper, not exceeding one-fourth, by public auction to the best bidder, at a price not less than the duty upon the importation of the like sort of goods ; and, in case such goods

Seizures of Goods Prohibited to be Imported.

If vessel after importation or other means o.

will not fetch the duty, shall be put up to sale conveyance seized, or any person prosecuted to for exportation; and, in case they do not sell for conviction on account of same, two-thirds, exportation, then the goods shall be destroyed ; If goods only, one-half.

S M U T.

Seizures of Goods not before enumerated.

If vessel, or other means of conveyance, seized, or any person prosecuted to conviction on account of the same, one-half.

If goods only, one-fourth.

Goods Destroyed.

If vessel, or other means of conveyance, seized, or any person prosecuted to conviction on account of the same, a moiety of the appraised value or amount of duty.

If goods only, one-fourth of appraised value or amount of duty.

Seizures of Vessels and Boats. If sold, a moiety of the produce. If taken into the public service, or broken up, a moiety of appraised value.

Seizures of Cattle and Carriages.

In all cases three-fourths of the produce of the sale.

All the aforesaid rewards being subject to a deduction of £10 per cent., on account of law charges and other expenses. — § 66.

Rewards may be apportioned in special cases. — The commissioners of customs or excise are hereby authorised, in case of any seizure of vessels, boats, or goods, or the apprehension of any parties under any act relating to the revenue of customs, to direct the distribution of the seizor's share of such vessels, boats, or goods, or of any penalties or rewards, so as to enable any officers, or persons acting under the authority of the commissioners respectively, or through whose information or means such seizure shall have been made, or penalty recovered, or party apprehended, who shall not have been actually present at the making of the same, to participate in such proportions as the commissioners shall respectively deem expedient. — § 68. And upon proof being made, to the satisfaction of the commissioners of customs or excise, that any officer or person, as aforesaid, shall have acted collusively or negligently in the making of any seizure, it shall be lawful for the commissioners to direct that the whole, or any part of the proportion of such seizure, be applied to the use of his majesty. — § 69.

If any person shall discover any spirits, being in casks of less content than forty gallons, which may be found floating upon or sunk in the sea, and shall give information to any officer of customs or other person duly authorised to make seizure of such spirits, so that seizure be made of the same, the person giving such information shall also be

entitled to and shall receive such reward as the commissioners of customs may deem it expedient to direct. — § 71. For the necessary subsistence of any poor person confined in the United Kingdom, or in the Isle of Man, under any exchequer or other process for the recovery of any duties or penalties, either upon bond or otherwise, under any act relating to the revenue of customs or excise, sued for by virtue of any order of the commissioners of customs or excise, it shall be lawful for the commissioners of customs or excise to cause an allowance, not exceeding the sum of 7%d., and not less than 4£</., a day, to be made to any such

person, out of any money in their hands arising from the duties of customs or excise, as the case may require.

SMUM, one of ths many names given to the pestilential wind of Arabia and Egypt. See ARABIA, SAMIEL, and SIMOOM ; of which last Srnum is evidently a contraction.

SMUT,n.s.,v.o.&7;.n.‘N Sax.j-mitta; Belg SMUTCH, v.a. tsmette. A spot mad’

SMUT’TINESS, n. s. t with soot or coal ; a

SMUT’TY, adj. J sooty must or black—

ness gathered on corn ; mildew : to stain or mark with smut ; mildew : to gather must : smutch is to black with smoke : smuttiness and smutty correspond with smut, noun substantive.

Mildew falleth upon corn and smulteth it. Bacon. Have you seen but a bright lily grow, Before rude hands have touched it ? Ha’ you marked but the fall o’ the snow, Before the soil hath smutched it”

Ben Jomon’s Uuderwoodi. The smutty grain, With sudden blaze diffused, inflames the air.

Milton.

He is far from being smutted with the soil of atheism. More.

My vines and peaches, upon my best south walls. were apt to a soot or

smuttiness upon their leaves and upon their fruits, which were good for nothing.

Temple.

A fuller had invitation from a collier to live with him : he gave him a thousand thanks ; but, say's he, as fast as I make any thing clean, you'll be smutting it again. L' Estrange.

Smutty corn will sell dearer at one time than the clean at another. Locke.

Farmers have suffered by smutty wheat, when such will not sell for above five shillings a bushel ; whereas that which is free from smut will sell for ten.

Mortimer's Husbandry.

White red-eared wheat is good for clays, and bears a very good crop, and seldom smuts. Mortimer.

The inside is so smutted with dust and smoke that neither the marble, silver, nor brass works shew themselves. Addison.

The place is a censure of a profane and smutty passage in the Old Bachelor. Collier.

He was a smutty dog yesterday, and cost me near two hours to wash the ink off his face. Pope.

The smutty wainscot full of cracks. Swift.

SMUT, IN WHEAT. A variety of facts and reflections have been offered on this subject by Mr. R. Somerville, in the second volume of Communications to the Board of Agriculture ; who begins by remarking that, some years ago, he collected a quantity of smutted ears from one field of wheat, in which they were very numerous, and a number of healthy well-filled ears from another field, in which there was no smut. The grains were rubbed out of both, intimately mixed, and kept in a box for two months, at the end of which time they were rubbed between the hands in such a manner as to break the whole of the smut-ball. The parcel was then divided into two equal parts, one of which was three or four times washed with pure water, and well rubbed between the hands at each washing, and afterwards sown in a drill in his garden ; the other half was sown in another drill without any washing or preparation whatever, the soil and every other

circumstance being equal. Both

parcels vegetated at the same time, and for about two months thereafter there was no visible difference in their appearance ; about that period, however, he observed that many of the plants in the drill that had been sown without being washed were of a darker color than the others ; these, when narrowly examined, were of a dirty-green. The plants in the drill that had been washed were all of one color, and seemingly healthy ; as the season advanced, the difference in color became more striking, and continued to increase till the grain was fairly out of the blade : about this time many of the dirty-green ears began to exhibit symptoms of decay. As soon as the ear was fairly shot out, the whole of those in the unwashed drill, that had the dirty-green appearance above described, were found to contain nothing but smut ; and these smutted ears were in the proportion of more than six to one of the healthy ones ; while, on the contrary, the drill in which the washed grains had been sown, and which consisted of several hundred grains, had hardly a smutted or unhealthy ear in it. The same experiment was repeated the following season, and with nearly the same result. Satis-fled with knowing that complete washing would be found a remedy for the disease, he made no farther enquiry upon the subject till last autumn, when he was employed in making observations upon the blight, in the course of which he met with a good deal of smut in many fields ; and, being at the time possessed of some excellent glasses, he carefully examined some of the smutted plants. This at first was done more as a matter of amusement than from any expectation of discovering any thing that might contribute to throw light upon the subject. Upon a near inspection with the glass,' he found that the dirty-green color of the blades of the smutted ears was owing to a number of spots infinitely small, and bearing a near resemblance to those upon blighted ears : his observations were continued throughout the whole period of the ripening, in the course of which he made no additional discovery, except observing that the leaves and stalks of the smutted ears decayed sooner than such as were healthy. About the end of autumn, however, having one day

brought home some smutted ears of rather an unusual appearance, he examined them very narrowly, and observed that the balls were perforated in many places with small round holes, a thing he had not be-fore observed in any that he had met with : this he ascribed to vermin ; and upon sticking one of the grains upon a pin, and placing it under the glass in a very bright sun, he could distinctly observe several small transparent specks upon the beard, or downy part of it. He examined several more, and met with exactly the same appearance ; but, upon being called hastily away upon business, he was under the necessity of leaving them upon the table, without being able to ascertain whether the objects he had seen were eggs or insects. In the evening, when he came home, he resumed the investigation by candlelight ; in the course of which, as he was under the necessity of holding them very near the candle, the heat soon relieved him from his embarrassment, by putting them in motion, and he

then discovered that the specks abovementioned were real insects, resembling wood-lice in shape. Next day he repeated the same trials by sun-light with new smut-balls, and discovered the same appearances, but without being able to make any of the insects stir. Disappointed and vexed at not being able to see them in motion with the sun-light, and recollecting the heat of the candle, he threw the concentrated rays of the sun upon them with a burning-glass, which completely answered his purpose of putting them in motion, and showing them in every different point of view. To describe minutely an insect so small as not to be distinguishable by the naked eye, would, he thinks, be no easy matter ; it is sufficient to say that its general appearance is very similar to the wood-louse, though infinitely smaller. As soon as he had clearly ascertained the existence of this insect, his mind was perfectly at ease with regard to the cause of the distemper; but though he could very readily conceive that vermin, in the early stages of the growth of a plant, might so injure the stamina as to render it unfit to produce any thing but smut, he could not so well understand how it was possible for the mere touch of the black earth contained in the smut-balls to produce the same effect. It is well known that, in the animal body, certain infections are communicated merely by the contact of the sound and unsound parts ; but that in every instance where this happens the injury can be distinctly traced to an absorption of the virulent matter, by the vessels of the healthy subject.

We are now, he thinks, so well acquainted with vegetation as to know that plants have a circulating system as well as animals ; and that,

while they are in a growing state, poison as well as nourishment may enter their vessels, and do infinite mischief. If this reasoning is sanctioned by experience, and there can be no doubt of it, and if there is the slightest analogy between animal and vegetable life, it will at once appear, that no bad effect could possibly arise from smutted and healthy ears coming in contact, either in the stack or the barn, as at that time they are in a state of rest, and no circulation going on. It may be argued, in answer to this, that while the plants are green, the shaking of the wind may bring the smutted and the healthy ears into contact, and that the acrimony of the smut may corrode and destroy the healthy wheat, so as to produce the disease. This idea he knows is entertained by many very good farmers : it is, however, clearly disproved by the experiment above recited, by which it appears that a simple washing in water, provided it is properly performed, is a very effectual cure for the distemper : common sense will inform us that had the stamina, or germ of the grains so washed, been injured by any thing of a corrosive nature, even in the slightest degree, no ablution whatever could possibly have repaired the mischief. And the same reasoning, he supposes, applies with equal justice to the other causes assigned, with the single exception of insects ; for, if either the grain was naturally weak, or had been sprung in harvest, or was deficient in ii» male organs, as is ridiculously supposed, nothing

but the highest degree of weakness and credulity could make any person believe that either the washing with water, or indeed any other preparation, could cure such defects.

It is, therefore, his opinion, that the smut is occasioned by the small insect above described, as seen by the glass in the downy part of the grain ; and that when the balls are either broken in the operation of thrashing, or come in contact with clean healthy grains, the insects leave the smutted grains, and, adhering to such as are healthy, are sown with them, and wound the tender stem in such a manner as to render the plant incapable of producing any thing but smut. It is not an easy matter to account for the man-ner in which this takes place ; but a little attention to the circumstances he is now to mention will perhaps throw some light upon it. It is known that plants of very opposite natures and qualities will grow and produce abundantly upon the same soil, where the nourishment is seemingly the same. This

effect is also known to be owing to the structure of their vessels, by the action of which the juices that circulate through them are differently prepared in every different plant. From this striking difference, owing confessedly to organisation, is it not, ie asks, presumeable that the smut in wheat is produced by the insects wounding the vessels of the plant in such a manner as to render them incapable of taking up any other principle from the soil, but the smut contained in the balls, which, upon examination, seems to have no quality different from the finest vegetable earth ? This opinion, he thinks, is strongly supported from the circumstance of certain pickles being found a cure for the malady. The effect of these pickles is, however, completely misunderstood; for in place of supposing, as is erroneously done, that they operate by strengthening the grain, and thereby removing that debility which has been long considered the cause of smut, their benefit

depends upon the powers they possess of destroying the insects above described : but to show the absurdity of the commonly received opinion in a more striking point of view, it is only necessary, ha adds, to state, that many of these preparations, which are supposed to be so friendly to vegetation, are in fact inimical to it, unless they are used with the utmost caution ; even stale urine, which has long been considered as a safe and innocent remedy, is, under certain circumstances, highly pernicious. After he had discovered the insect, he made trial of all the substances commonly used, “and found all of them, when properly applied, destructive to it. Is it not, therefore, he contends, more agreeable to plain common sensf to suppose that the vir-tue of these preparations consists more in the power they have of destroying vermin, than in any strengthening quality they possess ?

The general practice of farmers has been that of preparing their seed by the means of some sort of washing or brining. The following is a table view of the results of trials made with different steeps, in order to ascertain their utility as well as in promoting the growth of the grain, as given by Mr. Bevan, in the ninth volume of the Agricultural Magazine. It contains twelve samples of smutty wheat, and the same number of sound good wheat, steeped in twelve different solutions of the most common acids and alkalies, and salts, most readily procured. The wheat was sown at Leighton, Bedfordshire, on a sandy soil. The

solutions were all made cold, and the samples continued about twenty-four hours in steep. The columns marked A art: the results from the good wheat, and those marked B are from the smutty samples. It may be observed that neither of the samples steeped in the solutions of nitric acid came up, excepting a single corn in the good sample, and which produced above 1 200 corns from it.

Kinds of substances used.

Specific gravity of the solution.

Number of smutty ears in three sheaves.

Bushels of good wheat, per acre.

Cwts. of straw, per acre.

1-357 1-097 1-080 1-056 1-089 1-047 1-026 1-025 1-003 1-016 1-011 1-050

A.

1 3 7 9

12

1

B.

81

2: «

115 159 290 241 150 123 * 2

116

323 107

A.

21-6 20-2 23-8 20-2 24-0 21-6 19-8 20-8 21-9

20-7 20-4 20-3

B.

13-6 10-1 14-3 11-7 14-5 12-3 17-6 11-4 12-4

16-1 17-8 14-7 18-3

A.

36-6 36-0 36-9 35-6 41-5 38-5 35-4 34-8 38-7

35-7 35-4 35-7

B.

29-1 21-1 31-9 2,6-7 33-3 27-8 30-2 25-3 25-9

34-1 37-1 31-1 35-8

10. of nitric acid …. 11. of muriatic acid …

—

13. Dry in its natural state . . 14. Washed in common water . .

None I sown i

But M de Lienerolle contends that the surest to be very careful that the seed-corn be well dried

means of avoiding smut, and that which he has and thoroughly ripe, and that it be not smutty

lone practised with success on upwards of 300 nor have any smutty powder st.ckmg to .t. He

SsPonand,istochnngetheseed every year, then pours boiling water on quick-hme, in a

large tub ; and, after the ebullition is over, as much cold water as there was hot, and stirs it all strongly together, in order to dissolve and thoroughly mix the lime. The quantity of wheat intended to be sowed is sprinkled with this ley, and then well stirred with a shovel, and laid in as high a heap as possible. It is best, he supposes, to keep the grain for a week after this preparation, turning it every day ; for otherwise it would heat so as to destroy the germ. By these means he has not had any smut, when the Helds around him have been infected with that distemper. And Mr. Donat, near Rochelle, has used the following with success : take quicklime and pigeons'-dung, of each twenty-five pounds, forty pounds of wood-ashes, and twenty-five pounds of sea-salt, or salt-petfe. Put all these into a tub, large enough to hold half a hogshead of common water, which should be added to them. Stir them all well with a stick, till the lime is quite dissolved. This ley will keep some time without spoiling. It must be stirred just before the corn is steeped in it. The gr*in is then put into a basket, and plunged into the ley, where it remains till it has thoroughly imbibed it ; after which it is taken out, md laid in a heap till it is quite drained of all its moisture : or, which is a still better way, take a mashing-tub, fill it with grain to within four inches of the brim, and then pour in the ley well stirred beforehand. When the tub is 'nil, let the ley run out at the bottom into some other vessel, in order to use it

again for more corn. Let the grain be then taken out and laid in a heap to drain ; and continue in this manner to steep all the seed-corn. The wheat, thus prepared, may be sowed the next day, and must not be kept above five or six days, for fear of its heating. This quantity of ley will .serve to prepare more than twenty bushels of wheat. Mr. Tull has also long since observed that brining and changing the seed are the general remedies for smut.

An intelligent writer, in the eleventh volume of the Agricultural Magazine, says that he can truly state that, in the course of long and extensive practice, he has never discovered the produce of any good and properly prepared seed-wheat smutted, while that of his unprepared escaped. On the contrary, whenever he has ;.own any in the latter state, he has always observed much smut in the crops raised from it ; and refers his readers to the following account of an accurate comparative statement. On the 1.5th of March last he sowed two contiguous ridges (in the middle of a very large field), equal m soil, condition, and exposure, with wheat of ihe same variety, raised on the same kind of soil, in precisely the same mode of management, and thoroughly mixed. The seed contained a very small quantity of smut, perhaps one black ball to a quart; but the other grains were not at all discolored. The ridges were set out in an east and west direction, each eighty yards long and nine broad. On the west half of the northern ridge he sowed the seed without any preparation whatever; and on the east, after being well washed in clean river water. On the west half of the other ridge the wheat was sown after

having been wet with old chamber-ley ; and on the east half, after being prepared (provincially pickled) in the usual manner, with old chamber-ley and lime in fine powder. All the land was ploughed and sown broad-cast on the same day, without any variation of weather, and equally well harrowed. We had a calm, dry, and tolerably warm blooming season. Some time after the ears were out he examined the crop very minutely. That after the unprepared seed, the washed seed, and the wheat wet with chamber-ley, contained a great, and that from the seed which received the chamber-ley and lime, a very small quantity of smut. , The straw of this appeared as good as that of the sound wheat. Upon every piece of ground he found ears partly smutted and partly sound. In part of these ears he found some rows of grain containing sound wheat near the middle of the row, and smut both above and below it. With a view of finding the proportion (at harvest) with some degree of precision, he took four sheaves from the middle of the crop raised from the pickled seed, mixed them

thoroughly, reduced them to an equal size, *viz.* to the circumference of twenty-four, inches, and then carefully picked out and counted the number of smutted ears they contained. He pursued precisely the same mode with the crops upon the other pieces of ground, and the results were as under :

Smutted Ears.

The four sheaves after the pickled seed contained 165

The four sheaves from the seed which was washed in clean water …. 1212

The four sheaves from the seed wet with chamber-ley … … 723

The four sheaves from the seed which received no washing or preparation . . 1270

It is supposed that it is stated, in some of our agricultural publications, that one of the strong acids, much diluted with water, has been successfully used in preparing seed-wheat, with a view of preventing smut ; a disease which has been improperly confounded with blight or mil-dew. The latter remedy he never tried ; he has, however, on several occasions, used sea-water (so strongly impregnated with salt that an egg would swim on it) and lime, and also the drain-ings of fold-yards and lime, and is of opinion that these mixtures are not nearly so efficacious as the latter article and strong chamber-ley. The best mode of preparation is, he thinks, to immerse the wheat in the chamber-ley, stirring it well (about five or ten minutes), and skimming off the light grains, &c. The chamber-ley should be let out by a tap, and the wheat spread on a floor, and so well mixed with the lime that every grain may receive a part of it. If this mode be carefully practised, with seed free from smut, he can, from experience, assure the husbandman that he will never suffer, in any considerable degree, from that disease. As the lime and chamber-ley will soon destroy the vegetative principle of the grain, if it be suffered to remain in a heap, or in bags, it should be committed to the ground within six or eight hours after it has been thus prepared. He has sometimes known

it considerably injured after being kept twenty-four hours thinly

spread out upon a well aired floor. And as, when the seed is in a very moist state, it will not pass regularly through the drill-trdchine, it is necessary on thai account to have it drier in the drill than the broad-cast husbandry. When the wheat used in the foregoing experiment was preparedj a proper vessel was not at hand, and therefore the chamber-ley was sprinkled upon it. This, however, is not a good method, for we lose the chamber-ley, and the advantage of skimming off the light grains, black balls, &c. ; and, notwithstanding frequent turnings, it sometimes happens that all the grains do not receive a sufficient quantity of the liquid. A proper vessel should therefore be constantly had recourse to for this purpose.

On the supposition of this diseased state of grain being produced by an insect, the following method of kiln-drying has been proposed in the third volume of the Farmer's Magazine. Let the wheat be laid upon the kiln about three or four inches thick, the kiln being heated middlingly strong with blind coal ; the wheat to continue on the kiln for twenty-four hours, but turned frequently. After taking it off the kiln, it must be allowed twenty-four hours to cool, during which time it must be frequently turned, and then put through the fanners once or twice. After the wheat has lain a few hours on the kiln, and the fire begins to have effect, a great number of very small worms, formerly undiscovered by the eye, appear on the top of the grain, and are soon destroyed by the heat. These come from blacked wheat or other corns that could not be suspected to be indifferent ; or may lie in, or on good wheat, which worms continuing (when not thus killed) might consume the corn after it is thrown into the earth, thereby checking the growth entirely, or preventing it from having the strength it otherwise would have, to bring forth a strong productive stalk. It is added that the first farmer in Clackmannanshire who tried the kiln-drying of wheat, instead of pickling it, learnt it about twenty-five years ago (and he has continued the practice ever since) from an Irishman, who had been appointed by the Board of Trustees to stamp the linens, &c., manufactured in the village of Alva, who asserted that it was practised in his part of Ireland ; but, at this distance of time, the farmer has forgotten what part of Ireland the man said he came from.

With the view of cleaning smutty grain, various methods have been proposed ; as by agitating it with different substances, as sand, and lime made from stone, or white or gray chalk, which, when used, should be finely sifted, and then well blended with the wheat in proportion to the state of the smut, as from one to two bushels for a load of five quarters, which should then be passed through a machine one or more times, according to the purpose for which the wheat is intended. And, for common purposes, it is supposed that the smut in

wheat may be removed by a machine with brushes, invented for the purpose ; but that, if it be for seed, it should be put in a trough, or wicker receiver, under the spout of a pump, or the fall of a stream, and be briskly stirred about, until the injurious

substance floats away, or can be skimmed oft' from the surface. When intended for flour, after this washing, it must be dried on a malt-kiln for the space of eighteen hours, but heated so as not to exceed 85° of Fahrenheit's thermometer. There is a representation of a machine contrived for this use in the Corrected Agricultural Report of Berkshire.

SMUT, or Blacks, in oats, is a vegetable disease that often occurs or takes place in crops of this kind, in much the same manner as that of smut in wheat. It sometimes affects tbe whole of the ear of the grain, being met with in different stages of its progress in the standing crops, as well as at the time of thrashing out the corn, as in those of a soft unctuous state, in the state of a ball, and in a powdery state, or that of a fine dust, which disperses itself in thrashing, and fixes upon different parts of the faces of the men who thrash, rendering them quite black. Others, probably without sufficient observation or knowledge of the fact, suppose it to be a plant growing separately among the oats. It is an affection of this sort which happens frequently on the eastern side of the county of Lancaster and in the Isle of Man.

No effectual method of preventing it has yet been discovered, butitis found to be much lessened by the good cultivation and management of the land on which this crop is grown. The oat crops, where it exists to any considerable extent, are much less productive than in other circumstances ; but the diseased substance is generally light in its nature, so that it is readily blown away in dressing or cleaning.

SMYRNA, a large commercial city of Asia Minor, situated at the head of a long and winding gulf of the Grecian archipelago. Smyrna claims, on pretty strong grounds, to be the birth-place of Homer, and is said originally to have been a colony from Ephesus, that soon attained to such a degree of prosperity as to be received as the thirteenth city of Ionia. The original city, however, was destroyed by the Lydians ; and the population were dispersed in the neighbouring villages, till Antigonus and Lysimachus rebuilt it on a different spot. The streets were now beautifully laid out, paved, and adorned with porticos; and the city contained a gymnasium, a •library, and a structure called the Homerium, consisting of a temple, statue, and portico, dedicated to

Homer.

Smyrna has ever since continued a flourishing place, and in modern times has been considered the emporium of the Levant. The town is at present about four miles in circuit, extending about a mile along the water, in approaching from which it makes a fine appearance. The bay is land-locked, so that nothing is seen from the town but the projecting points. The streets, however, are narrow, dirty, and ill paved ; and the bazaars, though well provided with goods, are by no means respectable structures. There are two very fine caravanseras enclosing square courts, and covered with cupolas; the besesteins, or shops, also are here arched over and very fine At the east end of the city is a large hill, about three-quarters of a nvle in circumference, on which was the castle constructed by the Genoese.

Along its circuit may be traced the remains of a very thick and strong wall, and corresponding in its dimensions with another, which appears to have surrounded the city. Of the sumptuous ancient edifices scarcely any remains can be traced. Only the foundations can be seen of the splendid theatre built on the slope of the hill, the site of which is now covered with houses ; and on a gateway belonging to the castle is a colossal statue of very fine workmanship, though much mutilated, which has been supposed to be that of the Amazon Smyrna. Marks of a very extensive aqueduct may also be traced, though a late traveller doubts if it be of high antiquity. Behind the city is an extensive and most luxuriant plain, watered by the river Meles, which is here from fifty to 100 yards broad, but contains little water. The chief inconvenience of Smyrna is its being extremely liable to earthquakes, which from time to time cause great alarm. A heavier calamity is the plague, which, in 1814, carried off from 50,000 to 60,000 souls. The inhabitants are usually reckoned at 100,000, of whom Mr. Turner supposes the Turks to amount to between 50,000

and 60,000, the Greeks to 30,000, the Armenians to 8000, and the Franks, or Europeans, to 2000 or 3000. The export trade consists of Turkey carpets, raw silk, unwrought cotton, and the beautiful goats' hair, or mohair, of Angora. It sends out also a considerable quantity of raisins, muscadine wine, and a variety of drugs, as rhubarb, amber, musk, lapis lazuli, and gums ; also a number of pearls, diamonds, and other precious stones. The imports are lead, tin, glass, woollen cloths, and wrought silks.

SMYRNIUM, Alexanders, a genus of the digynia order, and pentandria class of plants ; natural order forty-fifth, umbellatae. The fruit is oblong and striated ; the petals have a sharp point, and are keel-shaped. There are five species : — 1. S. ./Egyptiacum, the Egyptian Alexanders, a native of Egypt. 2. S. aureurn, the golden Alexanders, a native of North America. 3. S. integerrimum, the complete Alexanders. 4. S. olusatrum, common Alexanders, a native of Britain ; the leaves of which are cauline, ternate, petiolated, and serrated. It grows on the sea coast at Dunglas on the borders of Berwickshire, North Britain. Since the introduction of celery into the garden the Alexanders is almost forgotten. It \vas formerly cultivated for salading, and the young shoots or stalks blanched were eaten either raw or stewed. The leaves too were boiled in broths and soups. It is a warm comfortable plant to a cold weak stomach, and was in much esteem among the monks, as may be inferred by its still being found in great plenty by old abbey walls. 5. S. perfoliatum, the perfoliate Alexanders, a native of Candia in Italy.

SMYTH (Robert), an indefatigable English antiquary, educated at St. John's College, Cambridge, under Dr. Newcombe the master of it. He made large collections for a History of the Sheriffs of England ; but when ready for the press it was unfortunately lost. He assisted Mr. Carter, schoolmaster at Cambridge, in his History of that city and university.

SNACK, n.s. From snatch. A share; a part taken by compact.

If the master gets the better on't, they come in for their snack. L' Estrange.

For four times talking, if one piece thou take, That must be cant led, and the judge go snack.

Dry Jen.

All my demurs but double his attacks ; At last he whispers, ‘ Do, and we go macks.’ Pojie.

SNAF’FLE, 71. s. & v. a. Belg. snare/, the nose. A bridle which crosses the nose : to bri-die ; hold in a bridle ; manage.

The third o* the’ world is yours, which with a

snaffie You may pace easy ; but not such a wife.

Shakspeare.

Sooth him with praise ;

This, from his weaning, let him well be taught, And then betimes in a soft snaffle wrought.

Dry den’s Georgickt.

SNAG, n. s.) From Dan. knag, a knot, SNAG’GED adj. > probably. A jag, or sharp SNAG’GY adj. j protuberance : the adjectives corresponding.

The one her other leg had lame, Which with a staff, all full of little snag*, She did disport ; and Impotence her name.

Faerie Queene. His stalking steps are stayed Upon a snaggy oak, which he had torn Out of his mother’s bowels, and it made His mortal mace, wherewith his foeraen he dismayed. Spenser. Naked men belabouring one another with snagyi’d sticks, or dully falling together by the ears at fisty-cuffs. More.

The coat of arms,

Now on a naked snag in triumph borne, Was hung on high. Dryden’s JEneid.

In China none hold women sweet, Except their snags are black as jet. Prior.

SNAIL, n. s. Sax. 1ˆ023! ; Belg. snegel ; Goth. snigill. A slimy animal which creeps on plants ; the emblem of slowness.

I can tell why a snail has a house. — VV hy 1 — Why, to put’s head in ; not to give it away to his daughters, and leave his horns without a case.

Shakspeare. King Lear. Fearful commenting Is leaden servitor to dull delay ; Delay leads impotent and snaii-paced beggary.

Shakspeare.

Why pratest thou to thyself, and answerest not 1 Dromio, thou drone, thou snail, thou slug, thou sot ‘

Id

Seeing the snail, which every where doth roam, Carrying his own house still, still is at home, Follow, for he is easy-paced, this snail ; Be thine own palace, or the world’s thy gaol.

Donne.

There may be as many ranks of beings in the invisible world superior to us, as we ourselves are superior to all the ranks of beings beneath us in this visible world, even though we descend below the snail and the oyster. Watts.

SNAIL. We find this word twice in our translation of the Bible. The first is the rendering of the Hebrew word BDPI, chomet, Levit. xi. 30, where a kind of lizard is spoken of; the other is Psal. Iviii. 8, ˆiSatfj sabelul. which the Sep-

tuagmt and Vulgate render wax ; but which no idea of the generation of these insects but Bochart has amply demonstrated, from the most supposed them produced spontaneously •’ the ancient Jewish writers, to be the snail. Park-Romans however show, by many passages iti hurst is of opinion that the name may be deduced their writings, that they got over this error ; and

even seem, by the preference they gave to the neck of this animal to have understood its hermaphrodite structure.

from the peculiar manner in which snails thrust themselves forward in moving, and from the force with which they adhere to any substance on which they light. The wise Author of nature, not having furnished them with feet and claws to creep and climb, has compensated them in a way

SNAKE, n. s. \ Saxon j-naca; Belg. make ; SNA'KY, adj. t Sansc. snug. A serpent of

more commodious for their state of life, by the the oviParous kind ; "» P°etry it is a general

broad thin skin along each side of the belly, and the undulating motion observable there : by the latter they creep ; by the former, assisted by the glutinous slime emitted from their body, they adhere firmly and securely to all kinds of superficies, partly by the tenacity of their slime and partly by the pressure of the atmosphere. Thus the snail appears to waste itself by its own mo-tion, every undulation leaving something of its moisture behind ; and in the same manner the actions of wicked men prove their destruction. They may, like the snail, carry their defence along with them, and retire into it on every appearance of danger; they may confidently trust their own resources, and banish away the fear of evil ; but the principles of ruin are at work within them, and, although the progress may be slow, the result is certain-The dissection of this animal is curious; for by this means the microscope not only discovers the heart beating just against the round hole near the neck, which seems the place of respiration, but also the liver, spleen, stomach, and intestines, with the veins, arteries, mouth, and teeth, are plainly observable ; the guts of this creature are green, from its eating of herbs, and are branched all over with fine capillary white veins ; the. mouth is like a hare's or rabbit's, with four or six needle-teeth, resembling those of leeches, and of a substance like horn. Snails

name for a serpent : snaky is resembling or having the qualities of a snake.

Venomous tongue, tipt with vile adder's sting, Of that self kind with which the furies fell Their snaky beads do comb. Spenser.

In his hand He took caduceus, his snaky wand.

Hubberd's Tale. Glos'ter's shew beguiles him ; As the snake, rolled in a flowery bank, With shining checkered slough, doth sting a child, That for the beauty thinks it excellent.

Shakspeare. Henry VI. We have scotched the snake, not killed it : She'll close, and be herself ; whilst our poor malice Remains in danger of her former teeth.

Id. Macbeth. The crooked arms Meander bowed with his so

snaky flood,

Resigned for conduct the choice youth of all their mortal brood. Chapman.

Look, look unto this snaky rod, And stop your ears against the charming god.

Ben Jonson.

So to the coast of Jordan he directs His easy steps, girded with snaky wiles.

Milton's Paradise Regained.

The true lover's knot had its original from nodus Herculaneus, or Hercules's knot, resembling the snaky complication in the caduceus, or rod of Hermes.

Browne's Vulgar Errours. The parts must have their outlines in waves, re-

VI 1CCIJUCO, CIULI Ui a OUUSLCUH-G llivt IIWHI. kjnc*nˆ * . 1t „ , .

are said to couple three times at the distance of Ambling the gliding of a snake upon the ground . ahn,,t fiftp«m A»™ frnm «,,* othpr. natnve nro-they mUSt be Sm°°th 3nd even~

about fifteen days from each other, nature pro ducing a new spear for each time of copulation, which lasts ten or twelve hours; at the end of about eighteen days they bring forth their eggs, by the aperture of their neck.

Even this small animal is not free from the plague of supporting other smaller ones on its body ; and as in other animals we find these secondary ones either living only on the surface, as lice, &c., or only in the intestines, as worms ; it is very remarkable that this creature infests the snail in both these manners, being found some—

dmes on the surface of its body ; and sometimes

in its intestines. On the collar of the common washed clean, and freed from aUJilth !£«£

Dryden's Dufresnoy. Nor chalk, nor crumbling stones, the food of

snakes, That work in hollow earth their winding tracks.

Dry den.

His flying hat was fastened on his head ; Wings on his heels were hung, and in his hand He holds the virtue of the snaky wand. Id.

We have snakes in our cups, and in our dishes ; and whoever dips too deep will find death in the pot.

L'Estrange.

SNAKE, in zoology. See ANGUIS, and SER-When the snake is killed it must first be

in ita iiiLcaiiiica. vˆn n*v W*MM v» • if «_ ,C«yx *»»rt

garden snail, or the only part that is visible is to be put into a glass of a P~PJr "M.> *e

when the animal is retired into its shell, the tail first, and afterwards the rest of th > body

insects, which infest it, are usually seen in con-winding it in spiral asc
—

siderable numbers, marching about very nimbly, posing the back, which i

Snails are great destroyers of fruit, especially tiful outwardly. A tni

.e better sorts of wall-fruit. Lime and ashes, small glass bead, ,s, by the help of a needle, to

have bitten, but this should never be done, for the head will be they will eat no other till they have wholly eaten

up this, if it be left.

Aristotle and the older Greek philosophers had

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the teeth, &c., will be discovered : the glass is then to be filled with rum, ar.d the cork sealed

down to prevent its exhalation. A label, containing the name and properties of the snake, is then to be affixed to the wax over the cork ; and in this manner the snake will make a beautiful appearance, and may be preserved a great num-ber of years ; nor will the spirits impair or change the lustre of its colors.

SNAKEROOT, serpentaria. The ancients were acquainted with but two kinds of serpentaria, the great and the small. The serpentaria Virgiuiana and that of Candia and Brasil, have been added since the discovery of America. The herb dra-gon is also called, by some writers, the great serpentaria; by the ancients, dracunculus major. It has its stem very straight, smooth, and marked •with red spots, like the skin of*a serpent ; whence, probably, as much as from its virtues, it is that it takes its name. Its root is big, round, and •white, covered with a thin skin. The smaller serpentaria, of this kind, has its stalk much like that of the larger, only its leaves are like those of ivy, whereas those of the larger are digitated, after the manner' of bastard hellebore. Its root is round and bulbous.

The serpentaria Virginiana, colubrina Virginiana, asarum Virginianum, serpentaria nigra, or contrayerva of Virginia, has its leaves green and large, almost in figure of a heart ; its fruit round, and its root, which is of a very strong aromatic smell, has, at bottom, an infinite number of long small filaments, representing a kind of beard, of a brownish color on the outside, and paler or yellowish within. It was first brought into Europe by the English ; and is by the Americans esteemed a sovereign antidote against the bite of the rattlesnake.

We are told by travellers that this root not only cures the bite of a rattlesnake, but that that animal flies the very smell of it ; for which rea-son the Indians, and other travellers, always carry it with them on the end of a staff. The dried root is imported into this country in bales, each containing from two to five hundred weight. The dried root has an aromatic odor, not unlike that of valerian ; and a sharpj warm, bitter, taste, resembling in some degree that of camphor. Water extracts all the sensible qualities of the root, affording; a yellowish brown infusion, which is not altered by sulphate of iron or zinc, the nitrate of silver, oxymuriate of mercury, tartarised antimony, the mineral acids, and the alkalies ; nor is it precipitated by gelatine or tannin. The su-peracetate of lead throws down a flocculent precipitate, which is not soluble in acetic acid, showing the presence of mucus. With alcohol it affords a bright greenish tincture, which is rendered turbid by the addition of water. The active principles of serpentaria, therefore, appear to reside in a bitter resin; and perhaps camphor and essential oil.

The snake-root is reckoned a stimulating diaphoretic and tonic. It is beneficially employed in typhoid and putrid fevers, whether idiopathic, or accompanying the exanthemata, to excite dia-phoresis, and support the powers of the system ; and is found frequently to increase the efficacy of cinchona in removing protracted intermittents.

It is also an excellent remedy in dyspepsia, particularly when the skin is dry and parched ; and

is sometimes used as a gargle in putrid sore-throat. On account of its stimulant properties, it is contra-indicated when the inflammatory diathesis is present ; and previous to its exhibition, the bowels should be well evacuated. It may be given in substance, or in infusion made by macerating 3iv of the bruised root in f. Jxij of boiling water, in a covered vessel for two hours and straining. Decoction is a, bad form of giving serpentaria, as the boiling dissipates the essential oil on which the virtues of the remedy chiefly depend. The dose of the powdered root is grs. x. or grs. xx. increased to 3ft ; that of the infusion f. 3jft to f. ;§ij, every fourth hour. SeeAnis—

TOLOCHIA.

SNAKESHEAD IRIS, in botany. See COL-CHICUM, and HERMODACTYL.

SNAKESTONES, or aramonitae, in the old mineralogy, a large genus of fossil shells, very few if any of which are yet known in their recent state, or living either on our own or any other shores ; so that it seems wonderful whence so vast a number and variety of them should be brought into our subterranean regions. They seem indeed dispersed in great plenty throughout the world, but nowhere are found in greater numbers, beauty, and variety, than in our own island. Mr. Harenberg found prodigious numbers of them on the banks of a river in Germany. He traced thL river through its several windings for many miles, and among a great variety of belem-nitae, cornua ammonis, and cochilitae, of various kinds ; he found also great quantities of wood of re-cent petrifaction, which still preserved plain marks of the axe by which it had been cut from the trees then growing on the shore. The water of this river he found in dry seasons, when its natural springs were not diluted with rains, to be considerably heavier than common water ; and many experiments showed him that it contained ferruginous, as well as stony particles, in great quantity, whence the petrifactions in it appeared the less wonderful, though many of them of recent date. Of the cornna ammonis, or serpent-stones, he there observed more than thirty different species. They lie immersed in a bluish fossil stone, of a soft texture and fatty appearance in prodigious numbers, and of a great variety of sizes, from the larger known sorts down to such as could not be seen without very accurate inspection, or the assistance of a microscope. Such as lie in the softest of these

stones are soft like their matrix, and easily crumble to pieces ; others are harder. In a piece of this stone of the bigness of a finger it is common to find thirty or more of these fossils ; and often they are seen only in form of white specks, so minute that their figure cannot be distinguished till examined by the microscope. They all consist of several volutae, which are different in the different species, and their striae also are extremely various; some very deep with very high ridges between them, others very slight ; some straight, others crooked ; others undulated, and some terminating in dots, tubercles, or cavities towards the back, and others having tubercles in two or three places. They are composed of a great number of chambers or cells, in the manner of the nautilus Graecorum, each having a communication with the others by

means of a pipe or siphunculus. There is a small white shell-fish of Barbadoes, which seems truly a recent animal of this genus ; and in the East Indies there is another also, small and grayish ; but the large and beautifully marked ones are found only fossil. They are composed of various fossil bodies, often of quarry stone, sometimes of the matter of the common pyrites, and of a great variety of other substances ; and though they ap-pear usually mere stones, yet in some the pearly part of the original shell is preserved in all its beauty. Sometimes also, while the outer substance is of the matter of the pyrites, or other coarse, stony, or mineral matter, the inner cavity is filled with a pure white spar of the common plated texture. This gives a great beauty to the specimen. The cornua ammonis, or snake-stones, are found in many parts of England, particularly in Yorkshire, where they are very plentiful in the alum rocks, of several sizes.

SKAKEWEED, in botany. See POLYGONUM.

SNAP, v. a. & v. n. ˆ Belg. snappen. The NAP’PER, n. s. >same with

knap. To

SNAP'PISH, adj.) break at once ; break short; strike with a sharp sound; catch suddenly ; treat with sharp language : as a verb neuter, to break short ; bite or attempt to bite with eagerness : a snap or snapper is, a greedy fellow; a quick eager bite: snappish corresponds.

If the young dace be a bait for the old pike, I see no reason but I may snap at him.

Shakspeare. Henry IV.

My father named me Autolicus, being lettered under Mercury ; who, as I am, was likewise a snapper up of unconsidered trifles.

Id. Winter's Tale.

Note the" ship's sicknesses ; the mast Shaked with an ague, and the hold and waist With a salt dropsy clogged ; and our tacklings Snapping, like to too high stretched treble strings.

Donne.

Sir Richard Graham tells the marquis he would tnap one of the kids, and make some shift to carry him close to their lodgings. Wotton.

With their bills, thwarted crosswise at the end, they would cut an apple in two at one snap.

Carew.

If the chain of necessity be no stronger, but that it may be snapped so easily in sunder ; if his will was no otherwise determined from without himself, but only by the signification of your desire, and my modest intreaty, then we may conclude, human affairs are not always governed by absolute necessity. Bramhalt against Hobbes.

Light is broken like a body, as when 'tis snapped in pieces by a tougher body. Digby—

Some with a noise and greasy light Are snapt, as men catch larks at night. Butler.

Capoched your rabbins of the synod, And snapped their canons with a why not.

Hudibras.

Did I not see you, rascal, did 1 not, When you lay snug to snap young Damon's goat"?

Dry den.

You should have thought of this before you was taken ; for now you are in no danger to be snapt singing again. L'Estrange.

We tnap at the bait without ever dreaming ot the hook that goes along with' it. Id.

He had no sooner said out his say, but up rises a cunning snap, then at the board, '<'•

The backbone is divided into so many vertebres for commodious bending, and not one intire rigid bone, which, being of that length, would have been often in danger of snapping in sunder.

Ray on the Creation.

They lived in the temple ; but were such snappish curs, that they frighted away most of the votaries.

Spectator.

A notion, generally received, that a lion is dangerous to all women who are not virgins, may have given occasion to a foolish report, that my lion's jaws are so contrived as to tnap the hands of any of the female sex who are not thus qualified.

Addison't Spectator. Dauntless as death, away he walks ; Breaks the doors open, snaps the locks ; Searches the parlour, chamber, study, Nor stops till he has culprit's body. Prior.

He snaps deceitful air with empty jaws, The subtle hare darts swift beneath his paws. Gay.

A gentleman passing by a coach, one of the horses snapt off the end of his finger.

Wiseman's Surgery.

If your steel be too hard, that is, too brittle, if it be a spring, it will not bow ; but with the least bending it will snap asunder.

Muxon’s Mechanical Exercises. The makers of these needles should give them a due temper : for, if they are too soft, they will bend ; and, if they are too brittle, they snap.

Sharp’ > Surgery. A surly ill-bred lord, That chides and snaps her up at every word.

Granule.

The snappish cur, the passengers annoy, Close at my heel with yelping treble flies. Pope.

Towzer *nap» At people’s heels with frothy chaps. Swifl.

The bowzy sire

First shook from out his pipe the seeds of fire, Then snapt his box. Dunciad.

SNARE, 7i.’ s. & v. a.) S wed. Isl. and Dan. SNA’RY, adj. } snare ; Belg. snoor. Any

thing set to catch an animal ; a gin; net; noose: to ensnare or entangle: the adjective corresponding, but inelegant.

The wicked is snored in the work of his own hands.

Psalm is. 16.

A fool’s mouth is his destruction, and his lips are the snare of his soul. Proverbs xviii. 7.

This I speak for your own profit, not that I may cast a snare upon you. 1 &”• v»- 35.

Glo’ster’s shew

Beguiles him as the mournful crocodile With sorrow snares relenting passengers.

Shakspeare. Henry VI.

Propound to thyself a constant rule of living, which, though it may not be fit to observe scrupulously, lest it become a snare to thy conscience, or endanger thy health, yet let not thy rule be broken.

Taylor’s Rule of Holy Living. O poor hapless nightingale, thought I,

How sweet thou singest, how near the deadly snare.

juHiOn.

Warn all creatures from thee Henceforth, lest that too heavenly form pretendec To hellish falsehood, snare thern.ˆ pmˆ ˆ

Beauty, wealth, and wit, And prowess, to the power of love submit ; The spreading snare for all mankind is laid, And lovers all betray, or are betrayed. Spiders in tho vault their inary webs have spreaa.

SNARL, y. u. & t>. a.) Belg. snarren. To

SNARL'ER, n. s. $ growl as an angry animal ; to gnar ; speak roughly ; embarrass or confound : the noun substantive corresponding.

What ! were you snarling all before I came, Ready to catch each other by the throat, And turn you all your hatred now on me 1

Shakspeare. Richard III. He is born with teeth ! And so I was ; which plainly signified That I should snarl, and bite, and play the dog.

Shakspeare.

Now, for the bare-picked bone of majesty, Doth dogged war bristle his angry crest, And snarleth in the gentle eyes of peace.

Id. King John.

Confused snarled consciences render it difficult to pull out thread by thread. Decay of Piety.

The shes even of the savage herd are safe ; All, when they marl and

bite, have no return But courtship from the male.

Dryden's Don Sebastian.

'Tis malicious and unmanly to snarl at the little lapses of a pen, from which Virgil himself stands not exempted. Dryden.

The honest farmer and his wife, Two years declined from prime of life, Had struggled with the marriage noose, As almost every couple does : Sometimes, my plague ! sometimes, my darling ! Kissing to day, to-morrow snarling. Prior.

Where hast thou been snarling odious truths, and entertaining company with discourse of their diseases ?

Congreve.

Should stupid libels grieve your mind, You soon a remedy may find ; Lie down obscure, like other folks, Below the law of snarlers jokes. Swift.

SNAST, n. s. Teut. schnamt. The snuff of a candle.

It first burned fair, till some part of the candle was consumed, and the sawdust gathered about the mast ; but then it made the snast big and long, and burn duskishly, and the candle wasted in half the time of the wax pure. Bacon.

SNATCH, v. a., v. n., & } Dutch snacken.

SNATCH'ER, n. s. [n. s. $ To seize or carry off any thing hastily : bite or catch at something suddenly : a hasty catch ; a small part of a thing ; short fit : the noun substantive following corresponding.

He shall match on the right hand, and be hungry.

Isa. ix. 20.

After a shower to weeding a snatch ; More easily weed with the root to dispatch. T utter.

A virtuous mind should rather wish to depart this world with a kind of treatable dissolution, than to be suddenly cut off inx a moment ; rather to be taken than snatched away from the face of the earth.

Hooker.

Lords will not let me ; If I had a monopoly of fool, they would have part on't ; nay, the ladies too will be matching. Shakspeare. King Lear.

She chaunted snatches of old tunes, As one incapable of her own distress. Id. Hamlet.

Come, leave your snatches, yield me a direct an-swer. Shakspeare.

They of those marches Shall be a wall sufficient to defend Our inland from the pilfering borderers. — We do not mean the coursing snatchers only, But fear the main intendraent of the Scot.

Id. Henry V.

He had scarce performed any part of the office of a bishop in the diocese of London, when he was snatelted from thence, and promoted to Canterbury.

Clarendon.

They move by fits and snatches ; so that it is not conceivable how they conduce unto a motion, which, by reason of its perpetuity, must be regular and equal. Wilkins's Daedalus.

Death. So snatched, will not exempt, us from the pain.

Milton.

In this work attempts will exceed performances, it being composed by snatches of time, as medical vaca tions would permit. Browne's Vulgar Errourn.

Lycus, swifter of his feet,

Runs, doubles, winds and turns, amidst the war ; Springs to the walls and leave his foes behind, And matches at the beam he first can find.

Dryden's JEneid.

We have often little snatches of sunshine and fair weather in the most uncomfortable parts of the year.

Spectator.

Life's stream hurries all too fast : In vain sedate reflections we would

make, When half bur knowledge we must snatch, not take.

Pope.

She snatched a sheet of Thule from her bed : Sudden she flies, and whelms it o'er the pyre ; Down sink the flames. Id. Dunciad.

They, sailing down the stream, Are snatched immediate by the quick-eyed trout, Or darting salmon. Thomson's Summer.

O nature !

Inrich me with a knowledge of thy works, Snatch me to heaven. Id. Autumn.

SNEAK, v. n. -^ Sax. r-mcan ; Dan.

SNEA'KER, n.s. i snige To creep slily ;

SNEA'KING, part, adj.^ skulk; come or go as

SNEA'KINGLY, adv. i if afraid to be seen;

SNEA'KUP, n. s. J hence to behave with

meanness or servility; the derivatives corresponding.

Once the eagle, England, being in prey, To her unguarded nest the weazel Scot Comes sneaking, and so sucks her princely eggs.

Shakspeare.

Sneak not away, sir ; for the friar and you Must have a word anon ; lay hold on him. Id.

The prince is a jack, a sneakup ; and, if he were here, I would cudgel him like a dog, if he would say so. Id. Henry IV.

Do all things like a man, not sneakingly ; Think the king sees thee still. Herbert.

Are you all ready ? Here's your musick here : Author, sneak off; we'll tickle you, my dear. More.

While you sneakingly submit, And beg our pardon at our feet, Discouraged by your guilty fears To hope for quarter for your ears. Hudibraa.

Discovered, and defeated of your prey, You skulked behind the fence, and sneaked away.

Dryden.

I have just left the right worshipful and his myr-midons about a sneaker of five gallons. Spectator.

Nothing can support minds drooping and sneaking, and inwardly reproaching them, from a sense of their own guilt, but to see others as bad.

South'* Sermons.

When the smart dialogue grows rich, With sneaking dog and ugly bitch. Rowe.

He sneaked into the grave, A monarch's half, and half a harlot's slave.

Dunciad.

When interest calls off all her sneaking train, When all the obliged desert, and all the vain, She waits, or to the scaffold, or the cell, When the last lingering friend has bid farewell.

Pope.

I ought not to turn my back, and to tneak off in silence, and leave the truth to lie baffled, bleeding, and slain. Watti.

SNEAP, v. a. & n. s. This word seems, says Dr. Johnson, a corruption of snib, or of snap, to reprimand. But see SNUB. To check ; reprimand : the reprimand given.

Men shulde him inibbe bitterly. Chaucer.

Which made this foolish briar wax so bold, That on a time he cast him to scold And snebbe the good oak, for he was old. Spenser.

Asked for their pass by every squib, That list at will them to revile or snib.

HubberJ's Tale. What may

Breed upon our absence, may there blow No sneaping winds at home. Shakspeare.

My lord, I will not undergo this tneap without re-ply : you call honourable boldness impudent sauci-ness : if a man will court'sy and say nothing, he is virtuous. Shakspeare. Henry IV.

SNEER, v. n. & n. s. Of the same family with snore and snort. — Johnson. Goth, snerra from nera, nef, the nose. — Thomson. To show contempt by looks ; naso suspendere adunco : look scornfully ; to insinuate contempt by covert expressions : a look or expression of this kind.

The wolf was by, and the fox in a sneering way advised him not to irritate a prince against his subjects. L'Estrange.

I had no power over one muscle of their faces, though they sneered at every word spoken by each other. Toiler.

I have not been sneering fulsome lies, and nauseous flattery at a little tawdry whore. Congreve.

I could be content to be a little sneered at in a line, for the sake of the pleasure I should have in reading the rest. Pope.

Did not the sneer of more impartial men, At sense and virtue, balance all agen. Id.

If there has been any thing expressed with too much severity, it will fall upon those sneering or daring writers of the age against religion, who have left reason and decency. Watts.

Socrates or Caesar might have a fool's coat clapt upon them, and in this disguise neither the wisdom of the one, nor the majesty of the other, could secure them from a sneer. Id.

SNEEZE, v. n. & n. s. Sax. mepan ; Belg. niesen ; Goth. mesa. To emit

wind audibly by the nose : the act of doing so.

If one be about to sneeze, rubbing the eyes till tears run will prevent it ; for that the humour descending to the nostrils is diverted to the eyes.

Bacon.

I heard the rack,

As earth and sky would mingle ; but These flaws, though mortals fear them, As dangerous to the pillared frame of heaven, Are to the main as wholesome as a sneeze To man's less universe, and soon are gone.

Milton's Paradise Regained.

We read in Godignus, that upon a sneeze of the emperor of Monomotapa there passed acclamations successively through the city.

Browne's Vulgar Errovrs.

If any thing oppress the head, it hath a power to free itself by sneexing. Ray on the Creation.

To thee Cupid sneezed aloud ; And every lucky omen sent before, To meet thee landing on the Spartan shore.

Dryden.

Violent sneezing produceth convulsions in all the muscles of respiration : so great an alteration can be produced only by the tickling of a feather ; and if the action of sneezing should be continued by some very acrid substance, it will produce headach, universal convulsions, fever, and death. Arbuthnot.

If the pain be more intense and deeper within, amongst the membranes, there will be an itching in the palate and nostrils, with frequent sneezing.

Wiseman's Surgery.

An officer put the sharp end of his half-pike a good way up into my nostrils, which tickled my nose like a straw, and made me sneeze violently.

Swift.

SNEEZING, a convulsive motion of the muscles of the breast, whereby the air is expelled from the nose with much vehemence and noise. It is caused by the irritation of the up-per membrane of the nose, occasioned by acrid substances floating in the air, or by medicines called sternutatory. See' MEDICINE, Index. This irritation is caused either externally, by strong smells, as marjoram, roses, &c., or by dust floating in the air, and taken in by inspiration ; or by sharp pungent medicines, as cresses and other sternutatories, which vellicate the membrane of the nose ; or internally, by the acrimony of the lympha or mucus, which naturally moistens that membrane. The matters cast forth in sneezing come primarily from the nose and throat, the pituitary membrane continually exuding a mucus thither ; and, secondarily, from the breast, the trachea, and the bronchia of the lungs. The practice of saluting the person who sneezed existed in Africa among nations unknown to the Greeks and Romans. Strada, in his account of Monomotapa, informs us (Prol. Acad.), that when the prince sneezes all his subjects in the capital are advertised of it, that they may offer up prayers for his safety. The author of the Conquest of Peru assures us that the cacique of Gua-choia having sneezed in presence of the Spaniards, the Indians of his train fell prostrate before him, stretched forth their hands, and displayed to him the accustomed marks of respect, while they invoked the sun to enlighten him, to defend him, and to be his constant guard. The ancient Ro-mans saluted each other on these occasions: and Pliny relates that Tiberius exacted these signs of homage when drawn in his chariot. Superstition, whose influence debases every thing, had degraded this custom for several ages by attaching favorable or unfavorable omens to sneezing, according to the hour of the day or night, according to the signs of the zodiac, according as a work was more or less advanced, or according as one had sneezed to the right or to the left. If a man sneezed at rising from table, or from his bed, it was necessary for him to sit or lie down again. « You are struck with astonishment,' said Timotheus to the Athenians, who wished to return into the harbour with their fleet, because he had sneezed ; ' you are struck with astonishment, because among 10,000 there is one man whose brain is moist.' Poly dore Virgil pretends that, in the time of Gregory the Great, there reiˆne*

in Italy an epidemic distemper, which carried off by sneezing all those who were seized by it ; and that this pontiff ordered prayers to be made against it, accompanied by certain signs of the cross. But this is

not credible, as there are very few cases in which sneezing is dangerous, and it is frequently a favorable symptom. Yet the compiler of this work knew an instance of a man, apparently in health, dying almost instantaneously after a fit of sneezing in a barber's shop at Mon-trose, into which he had come to be dressed, on Saturday the 16th September, 1786. Nor was the fit either violent or tedious. He had only sneezed the third time. But as no inspection was made of his body, to see whether his death was occasioned by the rupture of a blood-vessel or any other cause, no decisive inference can be drawn from this solitary fact. Avicenna and Garden say it is a sort of convulsion, which gives occasion to dread an epilepsy. Clement of Alexandria inveighs bitterly against those who endeavour to procure sneezing by external aid. It is singular enough that so many ridiculous, contradictory, and superstitious opinions, have not abolished those customary civilities which are still preserved equally among high and low. The reason is obvious. They are preserved because they are esteemed civilities, and because they cost nothing. Among the Greeks sneezing was almost always a good omen. It excited marks of tenderness, of respect, and attachment. The young Parthenis, hurried on by her passion, resolved to write to Sarpedon an avowal of her love ; she sneezes in the most tender and impassioned part of her letter : this is sufficient for her ; this incident supplies the place of an answer, and persuades her that Sarpedon is her lover. Penelope, harassed by the vexatious courtship of her suitors, begins to curse them ah, and to pour forth vows for the return of Ulysses. Her son Telemachus interrupts her by a loud sneeze. She instantly exults with joy, and regards this sign as an. assurance of the approaching return of her husband. — Horn. Odys. lib. xvii. Xenophon was haranguing his troops ; a soldier sneezed in the moment when he was exhorting them to embrace a dangerous but necessary resolution. The whole army, moved by this presage, determined to pur-sue the project of their general ; and Xenophon orders sacrifices to Jupiter the preserver. This superstitious reverence for sneezing, so ancient and so universal even in the times of Homer, excited the curiosity of the Greek philosophers and of the rabbins. These last have a most absurd tradition respecting it. Aristotle remounts likewise to the sources of natural religion, because the brain is the origin of the nerves, of our sentiments, sensations, &c. Such were the opinions of the most ancient and sagacious philosophers of Greece ; and mythologists affirmed that the first sign of life Prometheus's artificial man gave was by sternutation. See PROMETHEUS.

SNELL (Rodolph), an eminent Dutch philosopher, born at Oude-Water in 1546. He was rnany years professor of Hebrew and mathematics in

the university of Leyden. He published . several works on Geometry, and other branches of science. He died at Leyden in 1613.

SSELL (Willebrord;, styhd Sriellius in his

Latin works, the son of Rodolph, succeeded his father in the mathematical chair at Leyden in 16 1 3, and excelled him in his discoveries. He was the first who discovered the *rue law of refraction of the rays of light ; and Des-Cartes, who saw his papers, borrowed his discovery, without acknowledging the obligation. See OPTICS, Index. His works are numerous and respectable. The chief of them is his Cyclometricus de Circuli Dimen-sione, &c., 4to., 1621. In this treatise he gives several approximations to the measure of the circle, both arithmetical and geometrical. He died in 1626.

SNETWSHAM, PORT, a harbour on the northwest coast of America, in Stephens's Passage ; it extends a league from its entrance in a northeast direction, where, on each side, the shores form an extensive cover, and terminate in a sandy beach, with a fine stream of water. The shores are high and steep. Long, of its northwest point, 226° 22' E., lat. 57° 53' N.

SNEUWBERG, or SNOW MOUNTAIN, an extensive range in the district of Graaf Reynet, Cape of Good Hope. It forms one of the divisions into which this district is divided ; the pasture is excellent, and the district is the grand repository of sheep and cattle from the colony.

SNELLING (Thomas), an English writer on coins, who died in 1773. He published a treatise on the Silver Coin and Coinage of England, 1762, 4to. ; The Gold Coin and Coinage of England, 1763, 4to. ; and, after his death appeared Thirty-three Plates of English Medals, 1 776, 4to. ; and A View of the Origin, Nature, and Use of Jet-tons or Counters, especially those commonly known by the name of Black Money and Abbey Pieces, 1779, 4to.

SNICK AND SNEE, or SNICKER-SNEE, n. s. Belg. sniker-snee. A combat with knives.

Among the Dunkirkers, where snick and snee was in fashion, a boatswain, with some of our men drinking together, became quarrelsome : one of our men beat him down ; then, kneeling upon his breast, he drew out a knife sticking in his sash, and cut him from the

ear towards the mouth .

Wiseman's Surgery.

SNIFF, v. n. Swed. sniffa. To draw breath audibly up the nose.

So then you looked scornful, and snift at the dean As who should say, Now am I skinny and lean ?

Swift.

SNIG'GLE, v. n. Perhaps of Belg. snicker, to cut.

Sniggling is thus performed : in a warm day, when the water is lowest, take a strong small hook, tied to a string about a yard long ; and then into one of the holes where an eel may hide herself, with the help of a short stick, put in your bait leisurely, and as far as you may conveniently : if within the sight of it the eel will bite instantly, and as certainly gorge it : pull him out by degrees. Walton's Angler.

SNIP, v. a. Belg. snippen ; Swed. snopa. To clip ; cut at once with scissars : a cut of this kind ; a small shred or share.

What ! this a sleeve 1

Here's snip and snip, and cut, and slish and slash, Like to a censor in a barber's shop. Shakspeare.

He found his friend upon the mending hand, which he was glad to hear, because of the snip that he himself expected upon the dividend. L'Eftrange.

When tradesmen brought extravagant bills, Sir Roger used to bargain

to cut off a quarter of a yard : he wore a pair of scissars for this purpose, and would .nip it off nicely. Arbuthnot.

The sinus should be laid open, which was snipt up about two inches with a pair of probe-scissars, and the incised lips dressed. Wiseman i Surgery.

The ulcer would not cure farther than it was laid open ; therefore with one snip more I laid it open to the very end. Id.

Those we keep within compass by small snip* of emplast, hoping to defend the parts about ; but, in spite of all, they will spread farther. Id.

Putting one blade of the scissars up the gut, and the other up the wound, snip the whole length of the fistula. Sharp.

SNIPE, n. $. Sax. j-nite ; Dan. sneppe. A small fen fowl with a long bill ; a fool ; a blockhead.

Thus do I ever make my fool my purse ; For I mine own gained knowledge should profane, If I should time expend with such a snipe, But for my sport and profit. Shakspeare. Othello.

The external evident causes of the atra bills are a high fermenting diet ; as old cheese, birds feeding in fens, as geese, ducks, woodcocks, snipes, and swans.

Flayer.

SNIPE. See SCOLOPAX and SHOOTING. SNIP’PET, n. *. From snip. A small part ; a share.

Witches simpling, and on gibbets Cutting from malefactors snippets ; Or from the pillory tips of ears. Hudibras. SNIP’SNAP, n. s. A cant word formed by reduplication of snap. Tart dialogue, with quick replies.

Dennis and dissonance, and captious art, And snipsnap short, and interruption smart.

Pope’s Dunciad.

SNITE, n. s. Sax. fmta. A snipe. This is perhaps the true name; but snipe prevails.— Johnson.

Of tame birds Cornwall hath doves, geese, and ducks : of wild, quail,

rail, mite, and wood-dove.

Careiu.

Nor would any one be able to snite his nose, or to sneeze; in both which the passage of the breath through the mouth, being intercepted by the tongue, is forced to go through the nose. Crew's Cosmologia.

SNIVEL, n. s. & v. n. f Germ, snavel, sne—

SNIV'ELLER, n. s. $ vel. The mucus of the nose : to run at the nose ; to cry as children : the noun substantive following corresponding.

Funeral tears are hired out as mourning cloaks ; and whether we go to our graves snivelling or singing, 'tis all mere form. L' Estrange. He'd more lament when I was dead,

Than all the snivellers round my bed. Swift.

Ye writers of what none with safety reads, Footing it in the dance that fancy leads : Ye novelists, who mar what ye would mend, Sniveling and driveling folly without end. Cowper.

SNORE, v. n. Belg. snorcken } Dan. snore ; Goth, snerra. See SNEER. To breathe hard through the nose, as men in sleep.

The surfeited grooms

Do mock their charge with snores : I've drugged their possets. Shakspeare. Macbeth.

I did unreverently blame the gods, Who wake for thee, though thou snore for thyself.

Ben Jonson.

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Whose railing heroes, and whose wounded gods Makes some suspect he snores as well as nods.

Roscommon.

He may lie in his shades, and snore on to dooms-day for me ; unless I see farther reason of disturbing his repose. StUlingfleet.

Is not yonder Proteus' cave ? It is, and in it lies the god asleep ; And snoring by We may descry

The monsters of the deep. Dryden's Albion.

The giant, gorged with flesh, and wine, and blood, Lay stretched at length, and snoring in his den, Belching raw gobbets from his maw, o'ercharged, With purple wine and cruddled gore confused.

Additon.

SNORING, in medicine, otherwise called stertor, is a sound like that of the cerchnon, but greater and more manifest. Many confound those affections, and make them to differ only in place and magnitude, calling by the name of stertor that sound or noise which is heard or supposed to he made in the passage between the palate and the nostrils as in those who sleep ; that boiling or bubbling noise, which in respiration proceeds from the larynx, or head, or orifice of the aspera arteria, they call cerchnon ; but, if the sound comes from the aspera arteria itself, they will have it called cerchnos, that is, as some say, a rattling, or, as others, a stridulous or wheezing roughness of the aspera arteria. In dying persons, this affection is called by the Greeks P£XX°C» rhenchos*, which is a snoring or rattling kind of noise, proceeding as it were from a conflict between the breath and the humours in the aspera arteria. This and such like affections are owing to a weakness of nature, as when the lungs are full of pus or humors. Expectoration is suppressed either by the viscidity of the humor, which requires to be discharged, and which adhering to the aspera arteria, and being there agitated by the breath, excites that bubbling noise or stertor; or by an obstruction of the bronchia ; or, lastly, by a compression of the aspera arteria, and throat, whence the passage is straightened, in which the humors, being agitated, excite such a kind of noise as before described. Hence Galen calls those who art straight-breasted, stertorous. He assigns two causes of this symptom, which are either the straightness of the passage of respiration, or redundance of humors, or both ; but we may add a -third, to wit, the weakness of the faculty, which is the cause of the rhenclios in dying persons, where nature is too weak to make discharges. Hence we may conclude that this symptom, or this sort of fervor or ebullition in the throat, is not mortal, unless when nature is oppressed with the redundance of humor in such a manner that the lungs cannot discharge themselves by spitting ; or the passage appointed for the breath (the aspera arteria) is very much obstructed, upon which account many dying persons labor under a stertor with their mouths

SNORRO (Sturlesonius), a native of Iceland, in the thirteenth century, who was minister of state to a king of Sweden and to three kings of Norway. He was forced, by an insurrection, to leave Norway, and take refuge in Iceland, where he lived till 1241, when he was discovered,

carried off, and put to death. He wrote, 1. Chronicum Regum Norvigorum ; and 2. Edda Island ica, or a History of Island ic Philosophy.

SNORT, v.n. Belg. smn-cken. See SMORE. To blow through the nose like a horse.

The snorting of his horses was heard.

Jeremiah viii. 16.

The fiery war-horse paws the ground, And snorts and trembles at the trumpet’s sound.

Atldison.

From their full racks the generous steeds retire, Dropping ambrosial foams, and snorting fire.

Id. Ovid.

He with wide nostrils, snorting, skims the wave.

Thomson .

The bounding fawn, that darts across the glade When none pursues, through mere delight of heart, And spirits buoyant with excess of glee ; The horse, as wanton and almost as fleet, That skims the spacious meadow at full speed. Then stops and snort*, and, throwing high his heels, Starts to the voluntary race again. Cowper.

SNOT, n. s.). Saxon pnote ; Belg. snot .

SNOT’TY, adj. I The mucus of the nose : the adjective corresponding.

This squire South kmy husband took in a dirty tnotty-nosed boy. Arbuthnot.

Thus, when a greedy sloven once has thrown His snot into the mess, ‘tis all his own. Swift.

SNOUT, n. s. > Belg. snuyt ; Swed. snude ; SNOLI’ED, udj. > Dan. snyte. The nose of a beast; applied the human nose in contempt; a nozzle ; having a snout.

His nose in the air, his snout in the skies.

Tusser.

Their dogs snouted like foxes, but deprived of that property which the logicians call proprium quarto modo, for they could not bark. Heylyn.

Her subtle snout Did quickly wind his meaning out. Hudibras.

But when the date of Nock was out, Off dropt the sympathetick mout. Id.

In shape a beagle’s whelp throughout, With broader forehead, and a sharper tnout.

Dry den.

What /Etlriop lips he has, How foul a snout, and what a hanging face !

Id. Juvenal.

Snouted and tailed like a boar, and footed like a goat. Grew.

Charmed with his eyes, and chin, and snout, Her pocket-glass drew slily out ; And grew enamoured with her phiz, As just the counterpart of his. Swift.

SNOW, n. s., v. n., &ˆ\ Sax. fnap ; Belg. and SNOW’BALL, [v. a. Dan. snee. The small SNOW’BJIOTH, [particles of water frozen

SNOW’DROP, (before they unite into

SNOW’WHITE, adj. \ drops : see below : to SNOW’Y. J fall in snow; scatter

like snow : the snowball is well known : snowbroth is used by Shakspeare for very cold liquor : snowdrop is an early flower : the

adjectives follows the noun substantive snow in meaning. Drought and heat consume snow waters.

Job xxiv. 19.

Angelo, a man whose blood l» very snowbroth, one who never feels The wanton stings and motions of the sense.

Shabspeare.

So shews a s unify dove trooping with crows, as yonder lady o'er her fellow shews. Id

They passed to the east-riding of Yorkshire, their company daily increasing, like a snowball in rolling. . i Hayioard.

If thou be'st born to see strange sights, Ride ten thousand days and nights, Till age snow white hairs on thee. Donne.

These first in Crete

And Ida known ; thence on the snowy top Of cold Olympus ruled the middle air.

Milton's Paradise Lost.

The hills being high about them, it snows at the tops of them oftener than it rains. Browne'* Travels.

When we tried the experiment with the leaves of those purely white flowers that appear about the end of winter, called snowdrops, the event was not much unlike that newly mentioned. Boyle on Colours.

His bulky folly gathers as it goes, And, rolling o'er you, like a snowball grows.

Dry den.

A mow-white bull shall on your shore be slain, His offered entrails cast into the main. Id. sEneid.

A snowball having the power to produce in us the ideas of white, cold, and round, the powers, as they are in the snowball, I call qualities ; and, as they Hre sensations in our understandings, ideas. Locke.

Now I see thy jolly train : Snowy headed winter leads, Spring and summer next succeeds ; Yellow autumn brings the rear ; Thou art father of the year. Route.

The blushing ruby on her snowy breast Rendered its panting whiteness more confest. Prior.

The -little shape, by magick power, Grew less and less, contracted to a flower; A flower that first in this sweet garden smiled, To virgins sacred, and the snowdrop styled. Ticket.

He gives the winter's snow her airy birth, And bids her virgin fleeces clothe the earth. Sandys. Soft as the fleeces of descending snows. Pope. But now your brow is beld, John,

Your locks are like the snaw ; But blessings on your frosty pow,

John Anderson my jo. Burns.

Sends Nature forth, the daughter of the skies, To dance on earth, and charm all human eyes ; To teach the canvass innocent deceit, Or lay the landscape on the snowy sheet— These, these are arts pursued without a crime, That leave no stain upon the wing of time. Cowper.

Her anchor parts : but still her snowy sail Attracts our eye amidst the rudest gale : Though every wave she climbs divides us more, The heart still follows from the loneliest shore.

Byron.

SNOW is a well known meteor, formed by the freezing of the vapors in the atmosphere. It differs from hail and hoar frost, in being as it were crystallised, which they are not. This appears on examining a flake of snow by a magnifying glass ; when the whole of it will appear to be composed of fine shining spicula diverging like rays from a centre. As the flakes fall down through the atmosphere, they are continually joined by more of -these radiated spicula, and thus increase in bulk like the drops of rain or hailstones. Dr. Grew, in a discourse on the nature of snow, observes that many parts thereo. are of a regular figure, for the most part stars of six points, and are as perfect and transparent ice as any we see on a pond, &c. Upon each o. these points are other collateral points, set at the same angles as tbe main points themselves ; among which there are divers other irregular

broken points, and fragments of the regular ones. A cloud of vapors, being gathered into drops, descend ; meeting with a freezing air as they pass through a colder region, each drop is immediately frozen, shooting itself forth into several points ; but these still continuing their descent, and meeting with some intermitting gales of warmer air, or in their continual waftage to and fro touching upon each other, some of them are a little thawed, blunted, and again frozen into clusters, or intangled so as to fall down in what we call flakes. The lightness of snow is owing to the excess of its surface, in proportion to the matter contained under it. The whiteness of snow is owing to the small particles into which it is divided ; for ice, when pounded, will be-come equally white. Beccaria says, clouds of snow differ in nothing from clouds of rain, but in the circumstance of cold that freezes them. Both the regular diffusion of the snow, and the regularity of the structure of its parts (particularly some figures of snow or hail which fall about Turin, and which he calls rosette), show that clouds of snow are acted upon by some uniform cause like electricity ; and he endeavours to show how electricity is capable of forming these figures. He was confirmed in his conjectures by observing that his apparatus for observing the electricity of the atmosphere never failed to be electrified by snow as well as rain. Professor Winthrop sometimes found his apparatus electrified by snow when driven about by the wind, though it had not been affected by it when the snow itself was falling. A more intense electricity, according to Beccaria, unites the particles of hail more closely than the more moderate electricity does those of snow. But we are not to consider snow merely as a curious and beautiful phenomenon. The Great Dispenser of universal bounty has so ordered it that it is eminently subservient, as well as all his works of creation, to his benevolent designs. Snow, particularly in those northern regions where the ground is covered with it for several months, fructifies the earth, by guarding the corn or other vegetables from the intense cold of the air, and especially from the cold piercing winds. It has been a vulgar opinion, very generally received, that snow fertilises the lands on which it falls more than rain, in consequence of the nitrous salts which it is supposed to acquire by freezing. But by Margraaf's experiments, in 1751, the chemical difference between snow and rain, is found to be exceedingly small.

The peculiar agency of snow as a fertilizer, in preference to rain may admit of a very rational explanation, without recurring to the supposition of its containing nitrous salts. It may be ascribed to its furnishing a covering to the roots of vegetables, by which they are guarded from the influence of the atmospherical cold, and the internal heat of the earth is prevented from escaping. The internal parts of the earth, by some principle (whether it be the electric fluid, or the principle called caloric by modern chemists, is not yet discovered), is heated uniformly to 48° of Fahrenheit's thermometer. This degree of heat is greater than that in which the watery juices of vegetables freeze, and it is propagated from the inward parts of the earth to

the surface, on which the vegetables grow. The atmosphere being variably heated by the action of the sun in different climates, and in the same climate at different seasons, communicates to the surface of the earth, and to some distance below it, the degree of heat or cold which prevails in itself. Different vegetables are able to preserve life under different degrees of cold, but all of them perish when the cold which reaches their roots is extreme. Providence has, therefore, in the coldest climates, provided a covering of snow for the roots of vegetables, by which they are protected from the influence of the atmospherical cold. The snow keeps in the internal heat of the earth which surrounds the roots of vegetables, and defends them from the cold of the atmosphere. (But some say it does more.) Snow or ice water is always deprived of its fixed air, which escapes during the process of congelation. Some have supposed this to be the cause why some of the inhabitants of the Alps, who use it for their constant drink, have enormous wens upon their throats. But this is refuted by the fact that in Greenland, where snow water is commonly used, the inhabitants are not affected with such swellings ; whereas they are common in Sumatra, where snow is never seen.

Notwithstanding Margraaf s experiment above mentioned discovered little difference between snow and rain in their fertilizing qualities, the enquiry has been renewed and prosecuted farther, by some of the most eminent French chemists of the present age. Citizen Morveau, alias citizen Guyton, employed J. H. Hassenfratz to inquire into the cause of the difference of the effects of snow and rain water on various substances. Hassenfratz found that these differences are occasioned hy the oxygenation of the snow ; and that these effects are to be ascribed to a particular combination of oxygen in this congealed water. He put 1000 grammes of snow in a jar, and 1 000 grammes of distilled water in another. See MEASURE. He poured into each of the

jars an equal quantity of the same solution of turnsole. He placed both the jars in a warm temperature ; and, after the snow melted, he remarked that the dye was redder in the snow water than in the distilled water. He repeated this experiment, and with the same result. He put into a jar 1000 grammes of distilled water, and into another 1000 grammes of snow. Into each of the jars he put 6‘5 grammes of very pure and clean sulphate of iron. In the first there was precipitated 0-150 grammes of the oxide of iron, and 0-010 grammes in the other. As the oxide of iron was precipitated from a solution of the sulphate by oxygen, it thence follows that the snow contained more oxygen than the distilled water; and it follows, from the first experiment, that tliis quantity of oxygen was considerable enough to redden the tincture of turnsole. It is fully demonstrated, by these two experiments, that snow is oxygenated water, and that it must consequently have on vegetation an action different from that of common ice. The experiments of Dr. Ingenhousz on the germination of seeds have taught us that the presence and contact of oxygen are absolutely necessaiy for the plant to expand. They have shown, also, that the more

abundant the oxygen is, the more rapidly will the seeds grow. Most plants suffered to attain to their perfect maturity sited on the earth a part of their seed. These seeds thus abandoned, and exposed to the action of cold, are preserved by the snow which covers them, at the same time that they find in the water it produces by melting a portion of oxygen that has a powerful ac-tion on the principle of germination, and determines the seeds that would have perished, to grow, to expand, and to augment the number of the plants that cover the surface of the earth. A very considerable number of the plants which are employed in Europe for the nourishment of men are sown in September, October, and November. The seeds of several of these germinate before the cold commences its action upon them, and changes the principle of their life. The snow which covers the rest, acting on the germ by its oxygenation, obliges them to expand, and to increase the number of useful plants which the fanr.er and gardener commit to the earth, and consequently to multiply their productions. Here, then, we have three effects of snow upon vegetation, all very different, which contribute each separately to increase, every year, the number of our plants ; to give them more vigor, and consequently to multiply our crops. These effects are: — 1. To prevent the plants from being attacked by the cold, and from being changed or perishing by its force. 2. To furnish vegetables with continual moisture, which helps them to procure those substances necessary for their nutri-tion, and to preserve them in a strong healthy state. 3. To cause a greater number of seeds to germinate, and consequently to increase the num-ber of our plants.

To determine the quantity of water a given quantity of snow is equal to, we have an ingenious article in the Philosophical Transactions, from the pen of Mr. Alexander Brice, of Kirk-newtou, dated May 13, 1766; in which he observes that, from the end of March 1765 to the end of September of the same year, they had very little rain in that part of Scotland, and less snow in proportion : the rivers were as low,

through the winter, as they used to be in the middle of summer; springs failed in most places, and brewers and malsters were obliged, even in winter, to carry their water from a considerable distance. In the end of March they had a fall of snow ; and, as he did not remember to have ever read an account of such an experiment, he wished to be able to determine to what quantity of rain this fall of snow was equal. The snow had been falling from five o'clock the former evening till ten o'clock next day : about eleven o'clock he measured the depth of snow, and found it to be 6-2 inches ; he then took a stone jug, holding about three English pints, and turned the mouth of it downwards on the snow measured, and where the ground below was smooth and hard ; and by this means he took up all the snow from top to bottom in the jug ; this snow he melted by the side of a fire, and the 6'2 inches of sno»v yielded six-tenths of an inch deep of water in the same jug. After emptying the jug, he dried, and weighed it in a balance, and took up the same quantity of snow in it as before,

weighed it again, and found the weight of the snow taken up, <*nd from vhis weight computed what quantity ot water it should have produced, and found that it should have produced six-tenths of an inch, and one-twentieth of an inch more; he then dissolved the snow, and found that it yielded a quantity of water in the bottom of the jug six-tenths of an inch deep, as in the former experiment. The difference of one-twen- tieth of an inch in the depth of the water, between the weight and the melting of the snow, was probably owing to an exhalation from the jug, while the snow was melting by the fire, for he observed a steam sometimes rising from it. A greater or less degree of cold, or of wind, while the snow falls, and its lying a longer or shorter time on the ground, will occasion a difference in the weight, and in the quantity of water produced, from a certain number of cubic feet, or inches, of snow ; but if he may trust to the above trials, which he endeavoured to perform with care, snow, newly fallen, with a moderate gale of wind, freezing cold, which was the case of the snow he made the trials on, the 27th of March, will produce a quantity of water equal to one-tenth part of its bulk ; or the earth, when covered with snow, ten inches deep, will be moistened by it when melted, or rivers and springs recruited, as much as if a quantity of rain had fallen that had covered the surface of the earth to the depth of one inch.

Mode of the formation of snow.—*-' The frequent changes of the weather that have taken splace during the last winter (1804),' says a writer in Nicholson's Philosophical Journal, ' having induced me to

direct my attention to meteorology, I confess that the manner in which philosophers account fot some of the phenomena that occur, is not, to me, altogether satisfactory.

‘ It is not surprising that electricity (with the immediate agency of which we are so little acquainted) should be resorted to, as the grand agent in all meteorological phenomena. Accordingly we find that snow, and indeed every variety of weather we experience, is considered to be more or less affected by the electric fluid.

‘ Snow is generally supposed to be the vapors of the atmosphere, disengaged by the electric fluid, and frozen. But it appears to me that, before we receive so vague an explanation, the following questions might be asked : — What are the vapors of the atmosphere composed of? By what laws, and in what manner does the electric fluid act, either in the formation of snow, or as a component part of it?

‘ I shall now offer a few remarks to strengthen a supposition that the electric fluid is not engaged in, or in the least essential to the production or existence of snow. By an attentive observation of all the circumstances that have attended the fall of snow, during the last winter, I have, in almost every instance, found that it is accompanied with, or rather preceded by a change of the wind ; and that the wind, previous to the fall of snow, blew from some point between the south and the west ; and afterward from some point between the east and the northwestˆ. If it is observed that we have sormfcmes snow without the wind changing to any of the

points abovementioned, or even without a visible change to us, yet it does not militate against the following remarks ; for it has been observed by aeronauts, that different strata of air blow from opposite points at the same time. Therefore, notwithstanding a south wind may prevail at the surface of the earth, a superior stratum may blow from the north.

‘ Such being the facts, is it not probable that a change of the wind is

the cause of snow ?

1 Now let us examine whether such a cause will produce such an effect : — The winds that blow from any of the points between the south and the west, by coming from warm climates, and passing over, perhaps, a very large tract of water, where there is a powerful evaporation going on, must possess a very great degree of humidity, and are most commonly of a temperature between 45° and 60° of Fahrenheit. The winds which blow from any of the points between the east and the northwest, by coming mostly from such high latitudes, and passing over immense fields of ice, where evaporation is undoubtedly greatly impeded, cannot be supposed to contain much water in solution, but must bring with them very great degrees of cold.

‘ Now let us suppose that a north wind of any temperature between 32° and 0° (which it generally is in superior strata of the atmosphere) meets a southwest wind, as before-mentioned, the consequence will be that the intense cold which accompanies the former will convert the water with which the latter is impregnated into ice ; and the instantaneous application of cold is probably the reason why snow is produced in what we call flakes ; for before the vapor can concentrate itself into large particles, or drops, it is arrested by the intense cold.

‘ In this view, the formation of snow appears to be a beautiful chemical phenomenon ; for, the warmer air having a greater affinity for the colder air than it has for the water which is held in solution, the water is disengaged, crystallised by the cold, and precipitated in the form of snow. It is generally observed that it is unusually cold for half an hour or an hour before the fall of snow, and warmer afterwards. Might not this be accounted for by considering that the adverse wind must meet with consistence, in effecting either a union with, or a passage through a stratum of air surcharged with water, and consequently must be in a great degree reflected back again, not in the perpendicular, but as radii from a centre, in an oblique direction, part of which must descend to the earth. And it will undoubtedly be warmer, after the stratum of north wind has either forced a passage through or effected a union with the southwest wind. Though I have not, in the preceding observations, considered the electric fluid as at all essential to the production of snow, yet I do not deny the presence of it. That snow contains the electric fluid cannot be doubted ; but it does not follow that the latter is necessary to the existence of the former. We know of no substance in nature that is impervious to that subtile fluid ; it seems to pervade all bodies with nearly the same facility as caloric. Therefore, though snow indicates electricity, it is

probably no more than it has

acquired in its passage through an electrified atmosphere.'

Luminous and inflammable exhalation on snow. — We may perhaps ascribe the greater number of luminous exhalations that float over the surface of the earth to the extrication and inflammation of hydrogen gas, similar to that which is so frequently elicited in coal mines, under the name of fire-damp. In the midst of the snows on the summit of the Appennines was traced, in the middle of last century, a luminous and burning exhalation, which evidently proceeded from this cause. It is clearly and accurately described by Robert More, esq., in a letter published in the Philosophical Transactions, vol. xlvii. ; in which, among other facts of natural history, he observes that the fire among the snows on the summit of the Appennines is of the same sort with that about a little well at Brosely, in Shropshire, of which the Society has had an account; the same a» of the foul air sent them from Sir James Lowther's coal pits ; and the like made by a gentleman with tilings of iron and oil of vitriol. The flame, when he saw it, was extremely bright, covered a surface of about three yards by two, and rose about four feet high. After great rains and snows, it is said, the whole bare patch, of about nine yards diameter, flames. The gravel, out of which it rises, at a very little depth, is quite cold. There are three of these fires in that neighbourhood ; and there was one they call extinct. He went to the place to light it up again, and left it flaming. The middle of the last place is a little hollowed, and had in it a puddle of water; there were strong ebullitions of air through the water ; but the air would not take fire ; yet what rose through the wet and cold gravel flamed brightly. Near either of these flames, removing the surface of the gravel, that below would take fire from lighted matches.

SNOW, in sea affairs, is generally the largest of all two-masted vessels employed by Europeans, and the most convenient for navigation. The sails and rigging on the mainmast and foremast of a snow are exactly similar to those on the same masts in a ship ; only that there is a smaller mast behind the mainmast of the former, which carries a sail nearly resembling the mizen of a ship. The foot of this mast is fixed on a block of wood on the quarter-deck abaft the mainmast ; and the head of it is attached to the aftertop of the maintop. The sail, which is called the trysail, is extended from its mast towards the stern of the vessel. When the sloops of war are rigged as snows, they are furnished with a horse, which answers the purpose of the trysail-mast ; the fore

part of the sail being attached by rings to the said horse, in different places of its height.

The SNOW-PLOUGH, in rural economy, is a contrivance made use of in Sweden, and other northern countries, for the purpose of clearing roads from snow. It consists of a shaft, to which the horses are yoked, usually two abreast, and one before. The sides are constructed of three or four deals, well jointed and nailed together, having more or less height, ac cordino-as the snow is more or loss deep, as from three to four feet. The length is usually ahou»

fifteen feet, and two iron bars are nailed to the bottom, to-make it slide with greater facility. It has also a box for the purpose of being loaded, to keep it down. It may have any breadth, from fifteen to twenty feet, according as the snow may want clearing. There is a representation of ;in implement of this kind, in the first volume of Communications to the Board of Agriculture.

SNOW-STONE, in mineralogy, a name given to a very beautiful stone found in America, of which the Spaniards are very fond, making it into tables and other ornaments in their houses. Alonso Barba, who had seen much of it, tells us that it is found in the province of Atacama, usually in pieces of four feet long, and four or five inches broad, so that they are forced to join them in the working. Its general thickness is about two inches. It has a great variety of colors, which form clouds and variegations of a very beautiful kind. The principal colors are red, yellow, green, black, and white. The white is generally formed into spots on the very blackest parts of the mass, and is so beautifully disposed that it represents snow falling in all its whiteness upon a jetty surface.

SNOWDON, a celebrated mountain of the county of Caernarvon,

Wales, remarkable for the extent of the ridge of hills with which it is connected and forms the summit. The whole of these mountains take the name of Snowdon, and extend to the confines of Merionethshire. By the Welsh they are called the mountains of Eryri, and, according to an ancient proverb, were considered to be so extensive and productive as to be capable of yielding sufficient pasture for all the herds in Wales, if collected together. Camden says that — ‘ they may be properly termed the British Alps ; for, besides their great height, they are also no less inaccessible, by reason of the steepness of their rocks, than the Alps themselves ; and they all encompass one hill, which, far exceeding the rest in height, does so tower its head aloft, that it seems, I shall not say to threaten the sky, but to thrust its summit into it. It harbours snow continually, being throughout the year covered with it, or rather with a hardened crust of snow ; and hence the British name of Craig Eryri, and the English one of Snowdon.’ The highest peak of Snowdon is elevated, according to the trigonometrical survey, 3571 feet above the level of the sea. But this is still nearly 2000 feet below the line of perpetual snow. The snow, however, begins to fall in November, and is seldom melted till the middle of June. Snowdon, though the highest mountain in Wales, is far from being the most picturesque in its form. Cader Iris, Molwyn, and Arran, in North Wales, and Cader Arthur, near Brecknock, present a much bolder outline. The usual mode of ascent is by Llyn Cawellyn, about midway between Beddgellert and Caernarvon. The view from the summit is beyond measure grand and extensive ; and in a clear day, and when the mountain is free of clouds, which, however, is but seldom the case, the eye can trace the lulls of Scotland, with part of the coast, the high mountains of Westmoreland and Cumberland, and some of the hills of Lancashire ; even the county of Wicklovv is on some occasions partly visible,

and the whole of the Isle of Man. This mountain was held sacred by the ancient Britons*.

SNUB, M. s. & v. a. Rather snib. See SNEAP, SNEB, SNIB. A jag; a knot in wood j to check ; reprimand; nip.

Lifting up his dreadful club on high, All armed with ragged snubs, and knotty grain, Him thought at first encounter to have slain.

Faerie (Jueene.

Near the sea-shores, the heads and boughs of trees run out far to

landward ; but toward the sea are so snubbed by the winds, as if their boughs had been pared or shaven off. Ilay on Ihe Creation.

SNUDGE, v. n. Dan. sniger. To lie idle, close, or snug.

Now he will fight it out, and to the wars; Now eat his bread in peace, And snudge in quiet ; now he scorns increase ; Now all day spares. Herbert.

SNUFF,i'.a.,v.n.&n. s. \ Belg. snuffen SNUFF'BOX, n. s. f (which is also used

SNUF'FERS, £ metaphorically for -a

SNUF'FLE, v. n. J sneer); Swed. snttf—

wa. To draw in with the breath; scent; take off the consumed part of a candle : to snort ; sniff in contempt ; sneer : the mucus of the nose (obsolete) : hence the powdered tobacco taken into the nose ; the excrescence or refuse of a candle ; a contemptuous sneer : the snuffbox and snuffers are sufficiently known : to snuffle (Belg. snuffelen) is to speak through the nose.

Ye said, what a weariness is it, and ye have snuffed at it. Mai. ii. 13.

A water-spaniel came down the river, shewing that he hunted for a duck ; and, with a smijjUiig grace, disdaining that his smelling force could not as well prevail through the water as through the air, waited with his eye to see whether he could espy the duck's getting up again. Sidney.

To hide me from the radiant sun, and solace I' the' dungeon by a snujf'. Shakspeare. Cymbeline.

The late queen's gentlewoman ! To be her mistress' mistress . This candle burns not clear : 'tis I must snuˆit, And out it goes. Id. Henry VIII.

What hath been seen Either in snuffs or packings of the duke's, Or the hard rain which both of them have borne Against the old kind king. Id. King Lear.

My snuff and loathed part of nature should Burn itself out. Id.

A heifer will put up her nose, and snuff in the air, against rain. Bacon.

But dearest heart, and dearer image, stay ! Alas ! true joys at best are

dreams enough :

Though you stay here, you pass too fast away ; For even at first life's taper is a snuff. Donne.

If the liquor be of a close and glutinous consistency, it may burn without any snuff, as we see in camphire, and some other bituminous substances ; and most of the ancient lamps were of this kind, because none have been found with such wicks.

Wilhins.

Against a communion-day our lamps should be dressed, our lights snuffed, and our religion more ac tive. Taylor.

With delight he snuffed the smell Of mortal change on earth. Milton's Paradise Lost.

Bagpipes of the loudest drones, With snuffling broken-winded tones, Whose blasts of air, in pockets shut, Sound filthier tlˆan from the gut. Hudibrat.

SNU

He snuff, the wind, his heels the sand excite But, when he stands collected in his miaht ie roars, and promises a more successful fight.

For thee the bulls rebellow through the erov?"' And tempt the stream, and snuff their abse°nt loves.

One clad in purple

Eats, and recites some lamentable rhyme Some senseless Phillis in a broken note Snuffling at nose, and croaking in his throat. Id

Jupiter took snuff at the contempt, and punished him : he sent him home again. L' Estrange

It came to the ape to deliver his opinion, who smelt, and snuffled, and considered on't. Id

Says Humpus, Sir, my master bad me pray Your company to dine with him to-day : He snuffs, then follows, up the stairs he goes • Never pulls off his hat, nor cleans his shoes. King

My troops are mounte-J ; their Numidian steeds bnuff up the wind, and long to scour the desert.

. Addison.

A torch .muff, and all, goes out in a moment, when dipped into the vapour. Id. on Italy.

O er all the blood-hound boasts superior skill, To scent, to view, to turn, and boldly kill ! His fellows vain alarms rejects with scorn, True to the master's voice, and learned horn : His nostrils oft, if ancient fame sing true, Trace the sly felon through the tainted dew : Once snuffed, he follows with unaltered aim, Nor odours lure him from the chosen game • Deep-mouthed he thunders, and inflamed he views, Springs on relentless, and to death pursues. TicheL

Just where the breath of life his nostrils drew, A charge of snuff the wily virgin threw ; The gnomes direct, to every atom just, The pungent grains of titillating dust. Pope.

Sir Plume, of amber muff box justly vain, And the nice conduct of a clouded cane. Id. When you have snuffed the candle, leave the snuffers open. Swift's Directions to the Butler.

My nag's greatest fault was snuffing up the air about Brackdenstown, whereby he became such a lover of liberty that I could scarce hold him in.

Swift.

You have got

An office for your talents fit, To snuff the lights, and stir the fire, And get a dinner for your hire. Id.

If a gentleman leaves a snuffbox on the table, and goeth away, lock it up as part of your vails. Id.

SNUFF is chiefly made of tobacco, other matters being only added to give it a more agreeable scent, &c. The kinds of snuff, and theif several names are innumerable, and new ones are daily invented ; so that it would be difficult to give a detail of them. We shall only say that there are three principal sorts ; the first granulated ; the second an impalpable powder ; and the third the bran, or coarse part remaining after sifting the second sort. ' Every professed, inveterate, and incurable snuff-taker,' says lord Stanhope, ' at a moderate

computation, takes one pinch in ten minutes. Every pinch, with the agreeable ceremony of blowing and wiping the nose, &c., consumes a minute and a half. One minute and a half out of every ten, allowing sixteen hours to a snuff-taking day, amounts to two hours and twenty-four minutes a day, or one day out of every ten. This amounts to thirty-six days and a halfinayear. Hence, if the practice be persisted in forty yfar?, two entire years of the

SNY

snuff-taker's life will be dedicated to tickling hi, nose, and two more to blowing it. On "5 "„ lating the expense of snuff, snuffboxes amJ handkerchiefs, ,t will appear ;hat SSy"d-Breaches as much on the income of the ff as it does on his time; and that, by a r application of the time and money thus

S*!! ˆ Pubhc'aLfund mi?ht be constituted tor the discharge of the national debt ' See Ni

COTIAJ.A.

SNUG, v.n. Scadj. or j Dan. snoe: Belcr SNUG OLE ssniger To fie close £

unnoticed : the adjective corresponding.

There mugging well, he well appeared content, bo to have done amiss, so to be shent. Sidney

Did I not see you, rascal ! did I not, W hen you lay snug, to snap young Damon's goat?

. ., , . Driiden.

As the loving couple lay mugging together, Venus, to try if the cat had changed her manners with hei shape, turned a mouse loose into the chamber.

L'Eitrange.

1 hey spied a country farm, Where all was mug, and clean, and warm ; For woods before, and hills behind, Secured it both from rain and wind. Prior.

At Will's

Lie snug, and hear what criticks say. Swift. SNYDERS, or SNEYDERS (Francis). A celebrated painter, was born in 1579 at Antwerp, where he became a disciple of Henry Van Ba-len. His first subjects were fruits and still life ; but afterwards his genius prompted him to paint animals, in which line he surpassed all his contemporaries. He studied nature accurately, and his objects were copied with equal exactness and judgment. It has been said that he went to Italy, and improved himself there by the works of Castiglione, which is palpably erroneous ; for Snyders was an old man when that artist began to be known. The probability is, that Snyders never was out of his own country, being constantly employed at Antwerp and Brussels, in the numerous commissions which he received. His I'sp.al subjects were huntings, and combats of wild beasts; also kitchens, with fruit and vegetables, and dead game. Every animal had an expression suitable to the species or situation ; the landscape was always designed in a fine taste, and the whole composition was admirable. When his designs required figures of a larger size they were generally inserted by Rubens or Jordaens, which gave an additional value to his works. His touch is light, yet firm ; his style of composition rich,and full of variety ; his coloring remarkable for truth, nature, warmth, and force; his animals are designed in a grand taste, their actions, attitudes, and all their motions, having life, spirit, and expression ; and he was so exact that he gave the appearance of reality to the skin and'hair. The archduke Albert, governor of the Netherlands, appointed Snyders his principal painter; the king of Spain adorned his palaces with several of his hunting pieces, and so did the elector palatine. Rubens, though he painted animals and landscapes so well himself, employed Snyders frequently to paint the back-grounds of his pictures, as also did Jordaens. This artist etched sixteen plates of animals in a

so

masterly style; but they are, like bis pictures, very rare. He died at Antwerp in 1 657.

SO, adv. Sax. rse, rPa? Bel?, soo; Teut. and Goth. so. There is also a Hindoo so, and Pers. sa. In like manner; in such a manner; thus. It answers to as, either preceding or following ; noting comparison ; provided that ; often a mere expletive : at other times so returns the sense of a word or sentence going; before, and is used to avoid repetition : as, ‘ the two brothers were valiant, but the eldest was more so;’ that is, ‘ more valiant.’ The French article le is often used in the same manner. Johnson truly says, this mode of expression is not to be used but in familiar language, nor even in that to be commended.

Why is his chariot so long in coming?

Judges v. 28.

The god, though loth, yet was constrained t’ obey : For longer time than that no living wight

Below the earth might suffered be to stay ; So back again him brought to living light.

Faerie Queens.

Ready are the’ appellant and defendant, The armourer and his man, to enter the lists; So please your highness to behold the fight.

Shakspeare.

There is Percy ; if your father will do me any honour, so ; if not, let him kill the next Percy himself. Id.

I would not have thee linger in thy pain : So M. Id. Othello.

So then the Volscians stand but as at first, Ready, when time shall prompt them, to make road Upon ‘s again. Id, Coriolamts.

When With wild wood-leaves and weeds I ha’ strewed his

grave,

And on it said a century of prayers, Such as I can, twice o’er, I’ll weep and sigh ; And, leaving so his service, follow you. Shakspeare.

To a war are required a just quarrel, sufficient forces, and a prudent choice of the designs : $o, then, I will first justify the quarrel, balance the forces, and propound designs. Bacon.

Trafficke, or rove ye, and like theeves oppresse Poor strange

adventurers ; exposing so Your soules to danger, and your lives to wo.

Chapman.

O, 10, and had you a council Of ladies too 1 Who was your speaker, Madam?

Ben Jonson's Catiline. Can nothing great, and at the height, Remain to long, but its own weight Will ruin it ? Or is 't blind chance That still desires new states t' advance ? Id. There's no such thing as that we beauty call, It is meer cosenage all ; For though some long ago Liked certain colours mingled so and so, That doth not tie me now from chusing new.

Suckling.

If he set industriously and sincerely to perform the commands of Christ, he can have no ground of doubting but it shall prove successful to him ; and so all that he hath to do is to endeavour by prayer, and use of the means, to qualify himself for this blessed condition. Hammond's Fundamentals.

It leaves instruction, and so instructors, to the sobriety of the settled articles and rule of the church.

Hall/day .

The fat with plenty fills my heart, Tiie lean with love makes me too to. Can-ley.

Who thinks his wife is virtuous, though not so, Is pleased and patient till the truth he know.

Denham.

Not to admire is all the art I know To make men happy, and to keep them so.

Creech's Horace.

At whom the fables feign of monstrous size, Titanian or earthborn, that warred on Jove, So stretched out huge in length the arch fiend lay.

Milton.

So frowned the mighty combatants, that hell Grew darker at their frown. Id.

Of such examples add me to the roll ; Me easily indeed mine may neglect, But God's proposed deliverance not so. Id.

Be not sad :

Evil into the mind of God or man May come and go, so unapproved, and leave No spot or blame behind. Id. Paradise Lost.

Amoret, my lovely foe, Tell me where thy strength does lie,

Where the power that charms us so, In thy soul, or in thy eye? Waller.

It concerns every man, with the greatest seriousness, to enquire into those matters, whether they be so or not. Tillotsnn.

There is something equivalent in France and Scotland ; so as 'tis a very hard calumny upon our soil to affirm that so excellent a fruit will not grow here.

Temple.

Since tnen our Arcite is with honour dead, Why should we mourn that he so soon is freed.

Dry den.

O goddess ! tell what I would say, Thou know'st it, and I feel too much to pray ; So grant my suit, as I enforce my might, In love to be thy champion.

Dryden't Knight't Tale. He was great ere fortune made him so. Dryden.

How sorrow shakes him ! So, now the tempest tears him up by the roots, And on the ground extends the noble ruin. Id. So so ; it works : now, mistress, sit you fast. Id. We may be certain that man is not a creature that hath wings ; because this only concerns the manner of his existence ; and we, seeing what he is, may certainly know that he is not so or so. Locke.

I shall minutely tell him the steps by which I was brought into this way, that he may judge whether I proceeded rationally, if so be any thing in my example is worth his notice. Id.

Whether this be from an habitual motion of the animal spirits, or from

the alteration of the constitution by some more unaccountable way, this is certain, thit to it is. Id.

According to the multifariousness of this immuta-bility, so are the possibilities of being. AVris.

I viewed in my mind, so far as I was able, the beginning and progress of a rising world.

Bvrnet's Theory of the Earth. One may as well say that the conflagration shall be only national, as to say that the deluge was so.

Burnet.

Here then exchange we mutually forgiveness : So may the guilt of all my broken vows, My perjuries to thee, be all forgotten ; As here my soul acquits thee of my death, As here 1 part without an angry thought. Rowe. Too much of love thy hapless friend has proved, Too many giddy foolish hours are gone ; May the remaining few know only friendship : So thou, my dearest, truest, best Alicia, Vouchsafe to lodge me in thy gentle heart, A partner there ; I will give up mankind. Id.

Upon our first going into a company of strangers,

SOAP.

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rur benevolence or aversion rises towards several particular persons, before we have heard them speak, or so much as know who they are.

A-Jdiian's Spectator.

I laugh at every one, said an old c/nick, who laughs at me. Do you so ? replied cbe philosopher ; then you live the merriest life of any man in Athens.

Addisun.

They are beautiful in themselves, and much more so in the noble

language peculiar to that great poet.

Id.

So the doctrine be but wholesome and edifying, though there should be a want of exactness in the manner of speaking or reasoning, it may be overlooked. Atterbury.

An astringent is not quite so proper, where relaxing the urinary passages is necessary. Arbuthnot.

Deliver us from the nauseous repetition of at and so, which some so so writers, I may call them so, are continually sounding in our ears.

Felton on the Classicks.

No nation ever complained they had too broad, too deep, or too many nvers ; they understand better than so how to value those inestimable gifts of nature.

Bentley.

Fired at first sight with what the muse imparts, In fearless youth we tempt the heights of arts ; So pleased at first the towering Alps we try, Mount o'er the vales, and seem to tread the sky.

Pope.

As into air the purer spirits flow, And separate from their kindred dregs below, So flew her soul to its congenial place. Id.

So much as you admire the beauty of his verse, his prose is full as good. Id.

The blest to-day is as completely so, As who began a thousand years ago. Id.

At a war should be undertaken upon a just motive, so a prince ought to consider the condition he is in when he enters on it. Stcift.

Common-place books have been long used by industrious young divines, and still continue so. Id.

DOGE. You shall be so ;

Thus much they cannot well deny. Byron.

SOAK, v. n. & v. a. Sax. j-ocian. To lie steeped in moisture ; macerate by moisture ; drain ; exhaust.

Theirland shall be soaked with blood.

Isa. xxxiv. 7.

For thy conceit in soaking will draw in More than the common blocks. Shakspeare.

Many of our princes

Lie drowned and soaked in mercenary blood : So do our vulgar drench their peasant limbs In blood of princes. Id. Henry V.

Lay a heap of earth in great frosts upon a Irollow vessel, putting a canvass between, and pour water upon it, so as to soak through : it will make a harder ice in the vessel, and less apt to dissolve than ordinarily. Bacon.

Plants that draw much nourishment from the earth, and soak and exhaust it, hurt all things that grow by them. W.

So deep did it (sin) stick in the very grain of the earth, that God saw it meet to let it soak long under the waters. Bp. Hall.

A greater sparer than a saver ; for, though he had such means to accumulate, yet his forts, and his garrisons, and his feastings, wherein he was only sumptuous, could not but soak his exchequer.

Wotton.

There deep Galesus scakt the yellow sands.

Dryden.

Thou, v/hose life's a dream of lazy pleasure, Tis all thy business, business how to shun ; To bask thy naked body in the sun, Suppling thy stiffened joints with fragrant oil ; Then in thy spacious garden walk a while, To suck the moisture up and soak it in. H.

Let a drunkard see that his health decays, his es-tate wastes, yet the habitual thirst after his cups drives him to the tavern, though he has in his »iew the loss of health and plenty ; the least of which h« confesses is far greater than the tickling of his palate with a glass of

wine, or the idle chat of a soaking club. Locke.”

Wormwood, put into the brine you soak your corn in, prevents the birds eating it. Mortimer.

Rain, soaking into the strata which lie near the surface, bears with it all such moveable matter as occurs. Woodward.

SOAP, n. s. 1 Sax. j*ape; Lat. supo. A

SOAP’BOILER. $ substance used in washing, made commonly of a lixivium of vegetable alkaline ashes and some unctuous substance. See below. The soapboiler is the manufacturer of this useful article.

He is like a refiner’s fire, and like fullers’ soap.

Malaehi.

Sodp-ashes are much commended, after the soapboilers have done with them, for cold or sour lands.

Mortimfr.

As rain-water diminishes their salt, so the moistening of them with chamber-lee or *ou/>-suds adds thereto. Id.

A soapboiler condoles with me on the duties on castle-soap. Addition s Spectator.

A bubble blown with water, first made tenacious by dissolving a little soap in it, after a while will ap-pear tinged with a great variety of colors.

Newton’s Ofiticks.

Soap-earth is found in great quantity on the land near the banks of the river Hermus, seven miles from Smyrna. Waodtrard.

Soap is a mixture of a fixed alkaline salt and oil ; its virtues are cleansing, penetrating, attenuating, and resolving ; and any mixture of any oily substance with salt may be called a soap.

Arbuthnot on Aliments.

SOAP is a composition of caustic fixed alkaline salt, and oil, sometimes hard and dry, sometimes soft and liquid ; much used in washing and whitening linens, and by dyers and full’ers. Soap may be

made by several methods, which, however, all depend upon the same principle. The soap which is used in medicine is made without heat. See CHEMISTRY, index.

Jn manufactures, where large quantities of it are prepared, soap is made with heat. A lixivium of quicklime and soda is made, but it is less concentrated than that above referred to, and only so much that it can sustain a fresh egg. A part of this lixivium is even to be diluted and mixed with an equal weight of oil of olives. The mixture is to be put on a gentle fire, and agitated, that the union may be accelerated. \ lien the mixture begins to unite well, the rest of the lixivium is to be added to it; and the whole is to be digested with a very gentle heat, till the soap be completely made. A trial is to be made of it, to examine whether the just proportion 01 oil and alkali has been observed. Cjood soap of this kind ought to be firm, and very white when cold ; not subject to become moist by exposure to air, and entirely miscible with pure water, 10

which it communicates a milky appearance, but without any drops of oil floating on the surface. When the soap has not these qualities, the combination has not been well made, or the quantity of salt or of oil is too great, which faults must be corrected. In soft or liquid soaps, green or black soaps, cheaper oils are employed, as oil of nuts, of hemp, of fish, &c. These soaps, excepting in consistence, are not essentially different from white soap. Fixed alkalies are much disposed to unite with oils that are not volatile, both vegetable and animal, for this union can be made even without heat. The compound resulting from it partakes at the same time of the properties of oil and of alkali ; but these properties are modified and tempered by each other, according to the general rule of combinations. Alkali formed into soap has not nearly the same acrimony as when pure ; it is even deprived of almost all its causticity, and its other saline alkaline properties are almost entirely abolished. The oil contained in soap is less combustible than when pure, from its union with the alkali, which is an uninflammable body. It is miscible, or even soluble in water to a considerable degree,

by means of the alkali. Soap is entirely soluble in spirit of wine ; and still better in aqua-vitae sharpened by a little alkaline salt, according to Mr. Geoffrey. The manufacture of soap in Lon-don first began in 1524 ; before which time the city was served with white soap from foreign countries, and with gray soap speckled with white from Bristol, which was sold for a penny a pound ; and also with black soap ; which sold for a halfpenny the pound. The principal soaps of our own manufacture are the soft, the hard, and the ball soap. The soft soap is either white or green. When oil unites with alkali, in the formation of soap, it is little altered in the connexion of its principles ; for it may be separated from the alkali by decomposing soap with any acid, and may be obtained nearly in its original state.

An acid soap is formed by the addition of concentrated acids to the expressed oils. Thus the oil is rendered partially soluble in water ; but the union is not sufficiently complete to answer any valuable purpose.

The ball soap, commonly used in the north, is made with leys from ashes and tallow. The leys are put into the copper, and boiled till the watery part is quite gone, and there remains nothing in the copper but a sort of saline matter (the very strength or essence of the ley) ; to this the tallow is put, and the copper is kept boiling and stirring for above half an hour, in which time the soap is made ; and then it is put out of the copper into tubs or baskets with sheets in them, and immediately (whilst soft) made into balls. It requires nearly twenty-four hours in this process to boil away the watery part of the ley.

The chief ingredients in green soft soap used in making this are leys drawn from potash and lime, boiled with tallow and oil. First, the ley of a proper degree of strength (which must be estimated by the weight of the liquor) and tallow, are put into the copper together, and as soon as they boil up, the oil is added ; the fire is then damped or stopped up, while the ingredients re-

main in the copper to unite ; when they are united, the copper is again made to boil, being filled with leys as it boils, till there be a sufficient quantity put into it ; then it is boiled off and put into casks. When the soap is first made it appears uniform ; but in about a week the tallow separates from the oil into those white grains which we see in the common soap. Soap thus made would appear yellow, but by a mixture of indigo, added at the end of the boiling, it is rendered green.

Hard soap is made with leys from ashes and tallow, and is most

commonly boiled twice ; the first, called the half-boil, has the same operation as the first half-boil of soft white soap. Then the copper is charged with fresh leys again, and the first half-boil put into it, where it is kept boiling, and fed with leys as it boils, till it grains or is boiled enough; then the ley is discharged from it, and the soap put into a frame to cool and harden. Common salt is made use of for the purpose of graining the soap ; for when the oil or tallow has been united with the ley, after a little boiling, a quantity of salt is thrown into the mass, which dissolving readily in water, but not in the oil or tallow, draws out the water in a considerable degree, so that the oil or tallow united with the salt of the ley swims on the top. When the ley is of a proper strength, less salt is necessary to raise the curd when it is too weak. There is no certain time for bringing off a boiling of any of these sorts of soap; it frequently takes up part of two days.

Alkaline soaps are very useful in many arts and trades, and also in chemistry and medicine. Their principal utility consists in a detersive quality that they receive from their alkali, which is capable of acting upon oily matters, and of rendering them saponaceous and miscible with wa-ter. Hence soap is very useful to cleanse any substances from all fat matters with which they are soiled. Soap is therefore daily used for washing linen and woollen cloths from oil, and for whitening silk, and freeing it from the resinous varnish with which it is covered. Pure alkaline lixiviums might be employed for the same purposes ; but when their activity is not mitigated by the oil, as it is in soap, they are capable of altering, and even of destroying entirely by their causticity, most substances, especially animal matters, as silk, wool, &c., whereas soap cleanses from oil almost as effectually as pure alkali, without altering or destroying the stuff.

Soap was imperfectly known to the ancients. It is mentioned by Pliny as made of fat and ashes, and as an invention of the Gauls. Aretaeus says that the Greeks obtained their knowledge of its medical use from the Romans. Its virtues, according to Bergius, are detergent, resolvent, and aperient, and its use recommended in jaundice, gout, calculous complaints, and in obstructions of the viscera. The efficacy of soap in jaundice was experienced by Sylvius, and recommended by various authors ; and it was thought of use in supplying the place of bile in the primae viae. But it has lost much of its reputation in jauntlice, since it is now known that gall stones have been found in many after death, who had been daily taking soap for months and

even years. Of its good effects, in urinary calculous affections, we have the testimony of several, •especially when dissolved in lime water, by •vhich its efficacy is considerably increased : for it thus becomes a powerful solvent of mucus, which an iv;|,vnious modern author supposes to be the chief agent in the formation of calculi ; it is, however, only in the incipient state of the disease that these remedies promise effectual benefit ; though they generally abate the more violent symptoms where they cannot remove the cause. With Boerhaave soap was a general medicine; for, as he attributed most complaints to viscidity of the fluids, he, and most of tie Boerhaavian school, prescribed it, in conjunction with different resinous and other substances, in gout, rheumatism, and various visceral complaints. Soap is also externally employed as a resolvent, and gives name to several officinal preparations. From its properties soap must be a very effectual and convenient anti-acid. It absorbs acids as powerfully as pure alkalies and absorbent earths, without naving the causticity of the for-mer, and without oppressing the stomach by its weight like the latter. Soap must also be one of the best of all antidotes to stop quickly, and with the least inconvenience, the bad effects of acid corrosive poisons, as aquafortis, corrosive sublimate, &c.

Concerning the chemical constitution of soaps and saponification, no exact ideas were entertained prior to M. Chevi eul's researches.

Fats are compounds of a solid and a liquid substance ; the former called stearine, the latter resembling vegetable oil, and therefore called ela'ine. When fat is treated with a hot ley of potash, or soda, the constituents react on one another, so as to generate the solid pearly matter margaric acid, and the fluid matter oleic acid, both of which enter into a species of saline combination with the alkali ; while the third matter that is produced, the sweet principle, remains free. We must therefore regard our common soap as a mixture of an alkaline margarate and oleate, in proportions determined by the relative proportions of the two acids producible from the pecu- .iar species of fat. It is probable, on the other nand, that the soap formed from vegetable oil is chiefly an oleate. No chemical researches have hitherto been made known, on the compounds of resin with alkalies, though these constitute the brown soaps so extensively manufactured in this country. All oils or fats do not possess in an equal degree the

property of saponification. Those which saponify best, according to D'Arcet senior, Lelievre, and Pelletier, are, 1. Oil of olives, and of sweet almonds. 2. Animal oils ; as hog's-lard, tallow, butter, and horse-oil. 3. Oil of colza, or rapeseed oil. 4. Oil of beech-mast and poppy-seed, when mixed with olive-oil or tallow. 5. The several fish-oils, mingled like the preceding. 6. Hempseed-oil. 7. Nut-oil and linseed-oil. 8. Palm-oil. 9. Resin. In general, the only soaps employed in commerce are those of olive-oil, tallow, lard, palm-oil, and resin. A species of soap can also be formed by the union of bees'-wax with alkali ; but this has no detergent application, being used only for painting in encausto.

I shall first describe, says Dr. Ure in his valuable Chemical Dictionary, the fabrication of olive-oil soap : ' To this oil there is usually added one-fifth of that of rapeseed ; without which addition the section of the soap would not be sufficiently smooth and uniform, but clotty, and unprofitable to the retailer. 100 parts of olive-oil con>ist, according to Chevreul, of seventy-two parts of ela'ine, and twenty-eight of stearine; while 100 parts of rapeseed oil consist of fifty-four ela'ine, and forty-six of stearine. Since, however, the prime equivalents of the margaric and oleic acids, which result from the above two principles, are nearly the same, that of the former being about thirty-four and of the latter thirty-six, it does not seem necessary to consider, in a chemical point of view, the proportions of the two oils. Besides the oils, the matters employed in the manufacture of this soap are, first, the sodi (barilla) of commerce, of good quality, that is, containing from thirty to thirty-six per cent, of dry carbonate; secondly, quicklime; thirdly, water. 100 parts of oil require about fifty-four parts of the best barilla for saponification ; and three parts of the barilla require one of quicklime. After bruising the soda, and slaking the lime, they are mingled, and a certain quantity of cold water is poured upon the mixture. At the end of twelve hours, the liquor is allowed to run off. It is called the first ley, and marks from 20° to 25° on the hydrometer of Baume (specific gravity 1-16 to 1-21). On treating the residuum twice with fresh water, to exhaust it, two other leys are obtained : the one from 10° to 15° (specific gravity 1-072 to 1-114); the other from 4° to 5° (specific gravity 1-027 to 1-036). When the manufacturer has laid in a stock of leys, of different densities, he engages in the soapboil- ing. For this purpose he employs boilers (caldrons) which vary much in their construction, and which may contain from 5000 Ibs. to 2500 Ibs. of .soap. In all cases, they have at their bottom a pipe two inches and two-thirds in diameter, called the thorn (epine).

‘They begin by putting weak ley into the boiler; they then pour in gradually the oil, and boil the mixture. The combination is soon effected, forming a species of emulsion : they tem-per the fire, and add successively weak ley and oil, taking care to maintain the mass in a homogeneous pasty state, without ley at the bottom or oil on the surface, in order to accelerate the combination. When they have thus put into the boiler all the oil which they wish to saponify, they add to it slowly some strong ley, which completes the saturation of the oil, converting the emulsion, with an oily excess, into a perfect soap, which separates from the ley, and which collects upon the surface.

« Whenever this phenomenon occurs, the ley. although very abundant, is no longer fit for saponification; there is now present in it only some neutral salts, carbonate of soda, and a little caustic soda, unabsorbed. For this reason, when the fire has been allowed to fall, they with draw the ley by the pipe, so as to leave the soap nearly dry. Fresh leys are now added, which are caustic and concentrated ; and the fire is rekindled. Thus there is poured into the boilei

more caustic ley than is required to saturate the oil; the mixture is then boiled, to leave no doubt of the saturation of the oil with alkali ; and the ebullition is stopped when the ley has attained a specific gravity of 1-15 or 1-2. This ley, over which the soap floats, is next withdrawn, like the preceding, and the soap is left dry at the bottom of the boiler. In this state, the soap is of a deep blue color, bordering on black, and contains only sixteen per cent, of water. This color proceeds from a combination of the oil, alumina, and hydrosulphuret of iron, which is fdrmed during the pasty process, and which dissolves in the soap. The alumina is derived from the furnaces in which the soda is fabricated, and gets dissolved in it during the lixiviation. The sulphureted hydrogen comes from the hydrosulphuret of soda contained in the ley, and is set at liberty the moment that the paste or glue is made. As to the oxide of iron, it proceeds from the materials employed, or from the hearth of the furnace, or from the plant itself, when na-tive barilla is employed. This oxide of iron is held in solution

by the hydrosulphuret of soda. When the leys do not contain enough of oxide of iron to color the aluminous soap into a fine blue, they add to the boiling a sufficient quantity of iron, which is done by sprinkling in a solution of copperas, after the pasty operation. At any rate, it appears that the oil unites almost immediately with the alumina and the oxide of iron ; that there thence results a yellowish alumino-ferruginous soap, and that it is only by the heat of ebullition that this soap acquires the blue color. The soap made by the above process may be converted either into white or marbled soap. To convert it into white soap, we must mingle it gradually with dilute leys, with a gentle heat, and allow deposition to take place, with a covered boiler. The blackish alumino-ferru- ginous soap, not being soluble in the soda-soap at this temperature, separates from it, and falls to the bottom of the boiler. The soap-paste, which has become perfectly white, is now taken out, and run into the wooden frames, where it becomes hard on cooling. From these it is finally removed, and cut into bars.

‘ This soap is known in France under the name of soap in tables (savon en table). According to M. Thenard, it consists of,

Soda … .4-6 Fat matter … 50-2 Water . 45-2

100-0

‘According to M. D’Arcet’s analysis, as reported to me by M. Clement, Marseilles white soap e composed of,

Soda …. 6 Oil … .60 Water …34

100

‘ By my experiments on that soap, the quantity of soda in it is from 6 to 6-5 per cent. This soap is preferred for delicate purposes ; as the washing of lace, and for dyeing ; because, having been

edulcorated with very weak leys, and purified by subsidence and

decantation, it contains no excess of alkali, nor any foreign body. It is hence much smoother and milder than the marbled soap, of which we are now to treat.

‘When the soapboiling is finished, and whea the ley over which it swims has acquired a specific gravity of from 1-15 to 1-20, the soap is of a blackish-blue color, as we have said above. In this state, if, instead of wishing to make table-soap, we desire to make the marbled kind, we pursue the following plan :—

* We have seen that the soap contains then but sixteen per cent, of water, and that the entire mass has a dark color. We must add water to supply the deficiency, in order that the coloring matters be separated from the white paste, and that it may unite into veins of greater or less size, so as to form a species of blue marbling, in a white basis. The separation of this body may be compared to a species of crystallisation. For its proper production, the soap must be suitably diluted, and it must not be allowed to cool either too slowly or too quickly. If it be too much diluted, and if it cool too slowly, we ob-tain only a white soap, the whole marbling falling to the bottom. In the opposite case, it is entirely in little grains, like a mass of granite.

‘This process is founded, we perceive, on the smaller solubility of the alumino-ferruginous soap at a low temperature ; and on the property which the solution possesses of not being able to retain it, and of separating from it at a certain density.

‘At all events, whenever there is added to the boiling a suitable quantity of weak ley, to bring it to the desired point, this soap is run into the frames in the same way as the white soap, and is taken out after cooling to be cut into bars. The frames or boxes, for cooling the soap, are either wooden boxes with moveable sides fixed by wedges, or are stone troughs jointed with ce-ment. The platform on which they rest must be so constructed, as to allow the ley to run off into a reservoir. This mottled soap is always harder and more uniform in its proportions than the white table-soap. In fact, the production of the marbling does not permit the manufacturer to vary the quantity of the water ; for this depends on the marbling. White table soap, on the contrary, may receive as much water as the manufacturer shall desire, and it is even the whiter the more water it contains. It thence appears that the marbled soap deserves a preference.

‘ Some years ago, continues our author, I analyzed the foreign Castile soap, as also an imitation of it made in London. The first had a specific gravity of 1-0705. It consisted of,

Soda 9-0

Well dried oily matter . . 76‘5 Water with a little coloring matter 14-5

100-0

‘ The specific gravity of the second was only 0-9669; for it remained at rest in any part of a dilute alcohol of that density. Its compositicn was.

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Soda 10-5

Pasty consistence and fat . . 75-2 Water with the coloring matter . 14-3

100-0

‘The difference of density probably arose partly from a higher specific gravity of the oil, and partly from the greater chemical condensation of the soapy particles in the foreign marbled soap, usually called Castile soap by the apothecaries. Both of the above soaps were very dry. Berry’s white soap yielded me,

Soda …. 8 Fatty matter . . 75 Water …17

100

Glasgow best white soap,

Soda 6-4

Tallow 60-0

Water with a little muriate of soda . 33-6

100-0

Brown or resin-soap (Glasgow),

Soda …6-5

Resin and fat . .70-0 Water . . 23-5

100-0

‘ I have since examined several of the common white soaps. The average of soda per cent, is about five, from which their detergent quality may be inferred to be considerably inferior to the preceding soaps, which were all carefully manufactured. The soap lately imported from sndia, when freed from the soda powder on its urface, yields less than five per cent, of combined soda, and is hence not so powerful a detergent as many of the common soaps of this country. It is, moreover, highly charged with muriate of soda. The composition of a good soft, or potash soap, made by a respectable manufacturer in Glasgow, was as follows : — Potash … 9 Fat … . 43-7 Water . . -.. 47-3

100-0

Here the equivalent proportions are no longer observed. As we rnay estimate the mean atomic weight of the oleic and margaric acids at 35, or ten times that of lime (oxygen being 1), we see that 9 of potash should take 52-5 of fat, instead of 43-7: 6 of soda (equivalent to nine of potash) in a hard soap, will indicate in like manner 52‘5 of fat. I consider this proportion to be that of good soap, such as the best Marseilles; but we shall generally find, I believe, somewhat less than 5 in 100 parts of our soaps of commerce, sometimes only 4-5 ; and

hence such soaps may be estimated at —

Soda 5-00 or 4-5

Fat • 43-75 39‘4

Water .and muriate of soda . .51-25 56-1

100-00 100-0

There are debased soaps, however, of which the pretended snow-soap is the most remarkable,

that contain fui tess of tha real saponified compound than the above. It is the practice of some persons to keep the soap in strong brine, after it has been charged with a large dose of com-mon salt. Such adulterations should be detected, and their authors exposed. My alkalimeter, noticed in the introduction, will enable any per-son, however little skilled in chemistry, to ascertain in a few minutes the detergent or washing quality of any soap.’

The specific gravity of soap is in general greater than that of water. Its taste is faintly alkaline. When subjected to heat, it speedily fuses, swells up, and is then decomposed. Exposed to the air, in thin slices, it soon becomes dry ; but the whole combined water does not leave it, even by careful desiccation on a sand bath. Thus 100 parts of Berry’s cake soap, analyzed above, loses only twelve per cent.; and 100 of the best Glasgow white soap, only twenty-one. If we suppose good hard soap to consist of 1 prime soda, 1 prime saponified fat, and 20 primes water, we shall have its theoretic composition to be—

Soda Fat . Water

61-5 100-0

This is probably the true constitution, whicn may be occasionally modified by the formation of a little suboleate or submargarate, and a

slight variation in the quantity of water, either from evaporation, or the presence of a little in excess, not chemically combined. When such soap is desiccated, if it still retains ten atoms, of intimately combined water, the proportion of this per cent, will be twenty-two, nearly coinciding with the last of the above results.

Soap is much more soluble in hot than in cold water. This solution is instantly disturbed by the greater number of acids, which, seizing the alkali, either separate the fatty principles, or unite with them into an acido-soapy emulsion. The solution is likewise decomposed by almost all the earthy and metal lie salts, which give birth to insoluble compounds of the oleic and margaric acids with the salifiable bases.

Soap is soluble in alcohol ; and in large quantity by the aid of heat. When boiling alcohol is saturated with soap, the liquid, on cooling, forms a consistent transparent mass of a yellow color. When this mass is dried, it still retains its transparency, provided the soap be a compound of tallow, and soda ; and in this state it is sold by the perfumers in this country.

Good soap possesses the property of removing from linen and cloth the greater part of fatty substances which may have been applied to them.

With regard to marbled soaps, Chaptal, in his . Chimie Applique”e, says, that it is not till after two days’ boiling, that the process of variegation is begun. With this view ˆth part of the sulphate of iron, relatively to the oil intended for saponification, is diluted, and decomposed with a weak lixivium. This solution (mixtHre) is then poured,irito the caldron, which is kept in a state of ebullition till the paste becomes black ;

after which the fire is extinguished, and the lixivium which remains unincorporated as drawn off. When this is done, they rekindle the fire, and supply the paste with ley during twenty-four hours; after which, the fire being put out, the matter is left to settle, and the lixivium drawn off as before. This process is repeated for eight or nine days, at the end of which the fire is removed, and the lixivium evacuated. As soon as the mass has settled, about twelve pounds avoirdupois of Spanish-brown diffused through water are added to it. When this is

done, two workmen, stationed on boards set over the caldron, and furnished with long poles, to the extremity of each of which is attached a board about ten inches square, raise up the paste, and agitate it in different directions, while others pour lixivium in at intervals, till the paste be rendered fluid. After this operation the soap is removed into the moulds. The description of the marbling process previously given is taken from Thenard, and seems the more correct, though the above manipulations are no doubt worthy of attention. We ascertain that soap has attained a due de-gree of consistence, 1. By allowing a small portion of it to fall and coagulate on a $late. 2. If on shaking a spatula, which has been dipped into the paste, briskly in the air, the soap be detached in the form of ribands, without adhering to the wood. 3. By the peculiar odor of soap, and by handling it between the fingers. At the stage of saponification, when the paste is becoming stiff, and beginning to separate from the aqueous liquor, Messrs. Pelletier, D'Arcet, and Lelievre, advise us, at this period, to throw into the caldron a few pounds of sea-salt, in order to produce a more complete separation ; the paste then assumes a grained form, somewhat resembling spoiled cream ; the ebullition is maintained during two hours, after which the fire is withdrawn, and the agitation discontinued. When a few hours have elapsed, the liquor which has subsided to the bottom of the caldron, is drawn off by means of the pipe ; the fire is rekindled, the soap is dissolved by the aid of a little water poured into the caldron, the mixture is agitated, and when it is completely liquefied, and in a boiling state, the remainder of the first ley (about 1-14 specific gravity) is gradually added to it. In some manufactures, says M. Chaptal, the strongest lixivium (the first) is employed at the commencement of the ebullition ; by which me-thod the paste becomes quickly thickened to a considerable degree, and requires to be managed by persons skilled in such operations. It is judged necessary to pour in fresh ley when the paste sinks down, and remains at rest., They continue to employ the strong ley till it be near-ly exhausted. Then the boiling subsides, that is, it sinks down, and appears as if stationary. It boils in this quiet manner during three or four hours ; after which it is moistened by pouring into it the second lixivium (1-072 to T089 specific gravity), while care is at. the same time taken progressively to augment the heat. It very rarely happens, when the strongest lixivium has been used at the beginning, that the third ley (1-027 to 1'04 specific gravity) is necessary. This is employed only when the paste does not

boil, because then the object is to dilute it. As soon as the boiling is finished, the fire is withdrawn; the lixivium is then drawn off; after

which the paste is left to.cool, and taken rip be-fore it be fully coagulated, by means of copper or wooden buckets, to be transferred into moulds, into the bottoms of which a portion of pulverised lime has been previously introduced, to prevent the soap from adhering to them. At the end of two or three days, when the soap has become sufficiently hard, they remove it from the mould, and divide it into wedges of different sizes by-means of a brass wire. They place these wedges on a floor edgeways, where they are allowed to remain till they become perfectly firm and dry.

The fair trader, adds M. Chaptal, lays his account with procuring five pounds of soap from three pounds of oil. The soap is not marketable till it ceases to receive any impression from the fingers.

It must not be supposed that the lixivium employed at the commencement of the process should be constantly continued. The great art of soap-making consists in knowing to determine, from the appearance of the paste and other circumstances, what kind of lixivium should be employed during each step of the operation. The overseers regulate their conduct in this respect by observation and experience. The form and size of the bubbles, the color of the pa>u •, the volume of that which is thrown out on the edges of the vessel, the consistence of the matter and its disposition to swell, as well as the appearance of the steam, all furnish them witli criteria by which to regulate their conduct. Jt sometimes happens that the paste, though apparently very firm, yet when set in the cold air to concrete, throws out much water, and is resolvtd into small grains possessing little consistency. In this case it is evident that the ley is in excess, and must be dissipated by heat, or precipitated (separated) by means of marine salt. Frequently, also, the paste becomes greasy, and the oil appears to separate from the soda. As this m general proceeds from the paste not being im-bued with sufficient water to keep it in combination, it is necessary to add to it a portion of water, or very weak lixivium, to remedy this defect.

The adulterations most commonly practised on soap are the following : — When the soap is made, they add to it much water, which renders it white. Frequently pulverised lime, gypsum , or pipeclay, are incorporated with it. The for-mer of these frauds is readily discovered by the rapid loss of weight which the soap suffers on exposure to a dry air; the second can be easily detected by solution in alcohol, when the earthy matters fall down.

Hard soap is made in Scotland chiefly with kelp and tallow. That crude alkali rarely contains more than from one to live per cent, of

fro-o soda, mixed with some sulphate and hydrosul-phite, and nearly thirty-three per cent, of muriate of soda. To every ton of kelp, broken into small fragments, about one-sixth of new slaked lime is added. The whole, after mixture, are put into a large tub called a cave, having a perforation at the bottom, shut with a wooden plug.

Upon the materials water is very slowly poured. The liquid, at'ter digestion, is suffered to run slowly off into a reservoir sunk in the ground. The first portion, or ley No. 1, is of course the strongest, and is reserved for the last operation in soapboiling. Dr. Ure found that a gallon of that of average strength contains 1000 grains of real soda, so that one pound of the alkali is present in seven gallons of the ley. The second portion run off contains 800 grains in one gallon, equivalent to a pound in eight gallons and three-quarters. The third contains 600 grains per gallon, or one pound in eleven gallons and two-thirds ; and the fourth 200 grains, or one pound in thirty-five gallons. The last is not employed directly, but is thrown on a fresh mixture in the cave, to acquire more alkaline strength.

Six days are required to make one boiling of soap, in which two tons or upwards of tallow may be employed. The leys 2 and 3, mixed, are used at the beginning, diluted with water, on account of the excess of sea-salt in the kelp. A quantity of ley, not well denned, is poured on the melted tallow, and the mixture is boiled, a workman agitating the materials to facilitate the combination. The fire being withdrawn, and the aqueous liquid having subsided, it is pumped off, and a new portion is thrown in. A second boil is given, and so on in succession. Two or three boils are performed every twelve hours for six days, constituting twelve or eighteen operations in the whole. Towards the last the stronger ley is brought into play. Whenever the workman perceives the saponification perfect the process is stopped ; and the soap is lifted out and put into the moulds.

When the price of American potash is such as to admit of its economical employment, a ley of that alkali, rendered caustic by lime, is used in the saponification, and the soft potash soap which results is

converted into a hard soda soap, by double decomposition. This is effected either by the addition of common salt, or rather of a kelp ley, which supplies abundance of muriate of soda. The muriatic acid goes to the potash, to constitute muriate of potash, which dissolves in the water, and is drawn off in the spent ley ; while the soda enters into combination with the fat (or rather the margaric and oleic acids, now evolved), and forms a soap, which becomes solid on cooling. A weak potash ley is used at first, and subsequently one of greater strength. Dr. Ure found the potash ley of a respectable manufacturer to contain 3000 grains of real potash per gallon ; which is equivalent to one pound of real alkali in two gallons and one-third. But this proportion is not any standard; for practical soapboiling is, in regard to the alkaline strength of the leys, in a deplorable state of darkness and imperfection. To this cause chiefly we may ascribe the perpetual disappointments which occur in the soap manufactories.

Two tons of tallow, properly saponified, should yield fully three tons of marketable white soap. But a manufacturer has been known to produce only two tons and a half, by some mismanagement of his leys. The sulphureted hydrogen present in the crude alkalies gives a blue stain to the soap. This may be removed, in a great

measure, 1 > y contact of air. But the proper plan would be to employ an alkali previously deprived as much as possible of its sulphur. Those who decompose sulphate of soda, with the view of using the alkali in saponification, are liable to many accidents from the above cause. Much balsam of sulphur is formed at the expense of the soap ; and the manufactured article is generally inferior in detergent powers to the krlp soap, which, however, is by no means so free from sulphur as it might be made, previous ‘: < > its employment, by simple methods, which would at the same time double its alkaline powers.

For brown or yellow soup, a mixture of tal-low and resin, with a little palm oil to improve the color, is used. Soap of the coarser quality is made with equal parts of resin and tallow. But that of better quality requires three parts of tallow to one of rcsn ; and for every ton of that mixture, half a hundred weight of palm oil. The resin soaps consume less alkaline ley than those with fat alone.

Soft soups. — The compounds of fats or oils with potash remain soft, or at least pasty. Three kinds of these are known in commerce; the soaps from rapeseed, and other oleaginous seeds, called green soaps ; toilette soaps, made with hog’s - lard ; and common soft soaps, made

with fish oils. Manufacturers of green soap prepare their potash leys as those of hard soap do their soda leys, and conduct their operations in the same manner till the whole oils be added. In this slate the soap resembles an unguent. It con tains excess of oil, is white, and hardly transparent. After tempering the fire, they keep stimii‘4 continually the bottom of the caldron with large spatulas; they then add, by degrees, new leys perfectly caustic, and somewhat stronger than the first. The saturation of the oil is thus effected, and the soap becomes transparent. The fire is now continued to give the soap a suitable consistency, after which it is run off into barrels to be offered for sale.

We perceive that this species of soap differs considerably from the soap manufactured with olive oil and soda. Here, from the commencement of the operation to its end, the art of the soapboiler consists in effecting the combination of the oil with the potash, without the soap ceasing to be dissolved in the ley : whilst in the fabrication of hard soap it is necessary, on the contrary, as we have seen, to separate the soap from the ley, even before the saturation of the oil is accomplished.

Green soap contains, in general, more alkali than is absolutely necessary for the saturation of the oil. It is, in fact, a perfect soap, dissolved in an alkaline ley. It should be transparent, o. a fine green color; a shade sometimes produced by means of indigo. According to M. Thenard it is usually composed of

Potash •••’.’ Fatty matter • • • • 44-0 Water 46-5

100-0

This soft soap may be readily converted into hard soap, as we have stated above, by the addition of muriate of soda.

Toilette swips, made with hos:‘s-Uird and pol-ish, should have as small an alkaline excess as possible. The finer soaps for the toilette are made with oil of sweet almonds, with nut oil, palm oil, suet, or butter. They are either pot-ash or soda soaps, as they may be preferred in the pasty or solid state.

The following facts from Chaptal, on soft soaps, are worthy of insertion. After introducing into the caldron the half of the oil intended for one coction, the fire is kindled, and, when the oil begins to grow hot, we add to it a portion of the potash lixivium. The remainder of the oil and lixivium must afterwards be gradually poured in during the ebullition. If too much of the lixivium be employed at the commencement, no combination takes place ; if the lixivium be too strong, the mixture separates into clots; and, if it be too weak,the union is incomplete. The quantity of the ley employed in one coction ought to be in the proportion of four parts to three of oil. 200 parts of oil, and 125 of potash, yield 325 of soap. When the union is fully accomplished, and the liquor rendered transparent, nothing remains but to employ the necessary degree of coction. The soapboilers judge of the degree of coction by the consistency, by the color, and from the time which the soap takes to coagulate. In order to make the froth subside, and render the mass fit for barrelling, one ton of soap (ready made?) is emptied into the caldron. The soap held in the greatest request is of a brown color, inclining to black. The manufacturers in Flanders dye the soap, by throwing into the caldron, half an hour before the termination of the boiling or coction, a composition of one pound of the sulphate of iron, half a pound of galls, and an equal quantity of red wood ; and boiling it with the lixivium.

When the soap is prepared with a great portion of warm or yellow oil, a green color may be imparted to it, by pouring into the ley a solution of indigo. This soap is reckoned of the best quality : it remains always in the state of a soft paste, on which account it is placed in casks as expeditiously as possible.

Dr. Ure learned the following particulars on the manufacture of soft soap, from an eminent soapboiler, near Glasgow : — 273*gallons of whale or cod oil, and four hundred weight of tallow, are but into the boiler, with 252 gallons of potash ley, whose alkaline strength I find to be such, that one gallon contains 6600 grains of real potash. Heat is applied, when the mixture froths up very much, but is prevented from boiling over by the wooden crib, which surmounts the iron caldron. If it now subside into a doughy magma, the ley has been too concentrated. It should have a thin gluey aspect. There are next poured in two measures of a stronger ley, holding each twenty-one

gallons (containing per gallon 8700 grains real potash), and after a little interval other two measures, and so on progressively, till fourteen measures have been added in the whole. After suitable boiling, without agitation, the soap is formed, amounting in all to 100 firkins of sixty-four pounds each, from the above quantity of materials. The manufacture of soft soap is reckoned more difficult and delicate than that of hard

soap. Rape oil forms a hard &oap, neither so consistent nor so white as that from olive-oil. Hempseed oil produces a green-colored soap, reducible to a paste by a small portion of waiter. The soaps prepared with oils procured from beech-mast and clove July-flowers, are of a clammy glutinous consistence, and generally of a grayish color. Nut-oil forms a soap not pro-per for the hands f it is of a yellowish-white co-lor, of a moderate degree of consistence, unctuous, gluey, and continues so on exposure to the air. The soap of which linseed oil forms a constituent part is at first white, but changes to yel-low in a short' time on exposure to the air. It possesses a strong odor, is unctuous, clammy, glutinous, does not dry in the air, and softens with a very small quantity of water. From what has been said we may conclude that the soaps prepared with desiccative oils are of a very indifferent quality, that they remain always glutinous, and readily change their color on exposure to the atmosphere. Some of the volatile oils are not less susceptible of entering into combinations with the alkalies ; but, as such soaps are not employed in the arts, we shall not enter into any description of these saponaceous compounds.

Metallic soaps. — These soaps. have been examined by M. Berthollet, who has proposed some of them as paints, and others as varnishes ; but it does not appear that any of them has been hitherto applied to these purposes.

1. Soap of mercury may be formed by mixing together a solution of common soap and of corrosive muriate of mercury. The liquor becomes milky, and the soap of mercury is gradually precipitated. This soap is viscid, not easily dried, loses its white color when exposed to the air, and acquires a slate-color, which gradually becomes deeper, especially if exposed to the sun or to heat. It dissolves very well in oil, but sparingly in alcohol. It readily becomes soft and fluid when heated.

2. Soap of zinc may be formed by mixing together a solution of sulphat of zinc and of soap. It is of a white color, inclining to yellow.

It dries speedily and becomes friable.

3. Soap of cobalt, made by mixing nitrate of cobalt and common soap, is of a dull leaden color, and dries with difficulty, though its parts are not conducted. Berthollet observed that, towards the end of the precipitation, there fell down some green coagula, much more consistent than soap of cobalt. These he supposed to he a soap of nickel, which is generally mixed with cobalt.

4. Soap of tin may be formed by mixing com-mon soap with a solution of tin in nitre-muriatic- acid. It is white. Heat does not fuse it like other metallic soaps, but decomposes it.

5. Soap of iron may be formed by means of sulphate of iron. It is of a reddish-brown color, tenacious, and easily fusible. When spread upon wool it sinks in and dries. It is easily soluble in oil, especially of turpentine. Berthollet proposes it as a varnish.

6. Soap of copper may be formed by means of sulphate of copper. It is of a green color, has the feel of a resin, and becomes dry and brittle. Hot alcohol renders its color deeper, but scarcely

dissolves it. Ether dissolves it, liquifies it, and renders its color deeper and more beautiful. It is very soluble in oils, and gives them a pleasant green color.

7. Soap of lead may be formed by means of acetite of lead. It is white, tenacious, and very adhesive when heated. When fused it is transparent, and becomes somewhat yellow if the heat is increased.

8. Soap of silver may be formed by means of nitrate of silver. It is at first white, but becomes reddish by exposure to the air. When fused, its surface becomes covered with a brilliant iris ; beneath the surface it is black.

9. Soap of gold is formed by means of muriate of gold. It is at first white and of the consistence of cream. It gradually assumes a dirty purple color and adheres to the skin.

10. Soap of manganese is formed of sulphate of manganese. It is at

first white, and then, by absorbing oxygen, it becomes red.

There is no doubt that the ancients, as early at least as the age of Pliny, were in possession of a substance which they denominated soap ; but as the word sapo, so far as we are able to trace it, was first employed by Pliny, we have no reason to suppose that the material which it designates was known, at least among the Ro-mans, much earlier than his time ; and the mode of making it, as well as the name, appears to have been introduced into Rome from the ancient Germans, whose term for it was sepe, and who certainly employed and manufactured it in an earlier period than the Romans. In effect it was ascribed by the Romans themselves to the Germans and Gauls, as has been observed by the late Dr. Good in his note to his translation of Lucretius, b. iv. 1046, ‘ There is no doubt,’ he says, ‘ that the ancients were in possession of a substance which they denominated soap ; and it is equally unquestionable that such soap was formed in a manner not very different from our own. This soap, moreover, was of two sorts, hard and soft ; but it does not appear that soap was ever employed among the Greeks, nor very early among the Romans, as an article of trade, by their fullers or scourers , and, notwithstanding the similarity of manufacture which seems to have prevailed, these soaps, whether hard or soft, were rather unguents for the head, than articles made use of for the purpose of blanching. ‘ Prodest est sapo,’ says Pliny, xxviii. 1 2. ‘ Gal-liarum hoc inventum mutandis capillis. Fit ex sebo et cinere, optimus fagino et capirno. Duobus modis, spissus ac liquidus. Uterque apud Ger-manos majore in usa viris quatn faeminis.’ ‘ Soap is also useful, which is an invention of the Gauls, for deepening the color of the hair. It is made of suet and ashes, the best soap being from the suet of the goat and the ashes of the beech-tree. There are two sorts of soap, a solid and a liquid. Among the Germans the men employ both kinds more freely than the women.’ That it was applied to the hair, for the purpose here specified, we learn also from Martial, who, in one of his epigrams, advises an old coquette who raved at her gray locks to procure soap balls from Germany to change their color. By degrees, how-VOL. XX.

ever, and probably, first of all, about the time of Galen, these soaps began to be employed in the scouring of woollen stuffs, as well as for th> purpose of general cleanliness : for, after having stated the

different repute of the soaps of different countries, he thus expresses himself, as though he were relating a truth not generally known: ‘Verum omnis sapo potest omnem sordem de corpore abstergere, vel de pannis.’ ‘ But every kind of soap is capable of removing filth, of whatever description, whether from the body or from clothes.’

Dr. Good farther observes that, antecedently to the use of soap, the detersive materials commonly employed were urine, which for this purpose was collected at Rome in large reservoirs, lixivium or lye, and various plants, of which the chief appears to have been what the Hebrews called borith (n”O), the Greeks struthos or struthion (ffrpovQoc or arpovQiov), and the Romans herba lanaria, or radix lanaria, probably the sa-ponaria of Linneus. The fullers of Rome employed also absorbent earths in conjunction with lyes and detersive plants. These were of various kinds, and from various countries: the most esteemed was that denominated Cimolian earth, from the Isle of Cimolis, which was one of the Cyclades, and where it was found in abundance. It was known at least as early as the time of Aristophanes, who mentions it in his comedy of The Frogs; and it is still in use, according to Bomare, among the inhabitants of the Archipelago, and applied to the same purpose of bleaching stuffs and linens. They also employed another kind of absorbent earth, which was procured in the island of Sardinia; which, however, was principally made use of in cleaning white dresses, and did not equally succeed when applied to colored ; whence it is styled, by Nonius Marcellus, inutilis versicoloribus.

‘ These earths or boles were, for the most part, pressed into the stuffs or cloths by the hands or feet ; hence the phrase in Nonius : ‘ pedibus cretam dum compescis ;’ and these various operations produce an amazing change in their texture by driving the web of the woof more closely to that of the chain, and hence blending them more intimately together. When cloths and serges first proceed from the hands of the weaver, they are loose and coarse, and in this state would be but of little value 01 duration. But, by intermingling and amalgamating the web of the chain with that of the woof, the artist renders both finer and stronger. This operation of fulling, as just observed, was chiefly produced by the action of the hands or feet ; by rubbing with the former or trampling with the latter, and is significantly expressed by the Greek terms iraTiiv ffvfiiraTtffdai, and by Nonius, argutari pedibus. Rollers were, nevertheless, occasionally employed in this branch of the business, as well for beating as for pressing the cloth ; and Cato, among other utensils with which a farm-house ought to be stocked, enumerates, in consequence, the pilae fullonicas, or fuller’s beams or rollers, which, he expressly tells us, were formed of wood.’

The present duties imposed on soap are : —

2N

SOB

546

SOB

Duty. £ *. d.

Soap, hard, the cwt 4 10 0

soft, the cwt… . . 3 11 3

the produce of any British

possession in the East In-dies, *viz.* bard, the cwt .1 80 soft, the cwt .1 30

SOAP-BERRY (tapmdut). These trees somewhat resemble the hickories or walnuts in their foliage, but are widely different in their fruit and botanical characters. The fruit is globular, as large as a cherry, enclosing a nut of a shining black color when ripe. The pulp serves as a substitute for soap in washing linen, but is very apt to bum and destroy it, if used too frequently. The nuts are very bard, black, and finely polished, and are used for beads. Formerly, they were imported into Europe for waistcoat buttons, and were sometimes tipped with silver or other metals. They were very durable, as they do not wear, and seldom break. The whole plant, especially the seed-vessel, being pounded and steeped in ponds, rivulets, or creeks, is observed to intoxicate and kill the fish. The wood is white, and full of gum, in odour and taste resembling copal. The flowers are disposed in terminal and branching panicles, and the berries are pendulous. A species of tapindiu (.V. marginatui) grows wild in North America. The other species of uipindtu are exclusively tropical.

SOAP STONE. A species of steatite. It derives its name from its colour,

and the peculiar unctuous sensation which it imparts to the feeling.

SOAPWORT. See SAPOHARIA.

SOAR, v. *., v. a., & n. i. Ital. ware. To fly aloft; tower; mount; properly to fly without any risible action of the wings : to rise intellectually : Milton uses it actively : as a noun substantive, towering flight

SOB, v. n. & n. /. Sax. j-eob, complaining. To heave audibly with convulsive sorrow ; sigh with convulsion : a sigh of this kind.

When thy warlike father, like a child, Told the sad story of my father's death, He twenty times made pause to tab and weep,

Sfiakfpeare.

SOBER, adj. & v. a.-\ Fr. tobre; Lat. to—

SOBER'LY, adv. f briut. Temperate, par—

SoBEft'vess, n. t. iticularly in liquors;

SOBRIETY, * not drunken ; hence

regular ; calm in mind or character ; serious ; grave: to make sober: the adverb and noun substantive corresponding.

SOBIESKI, or JOHS HI., king of Poland, one of the greatest warriors of the 1 7th century, was bora 1629. His father, James Sobieski, equally distinguished for his virtues in peace and his courage in war, took great care to nourish the same qualities in bis sons, Mark and John. The Poles had just been defeated at Pilawiecz, when these youths returned from their travels. This misfortune only served to excite their courage. Mark fell in a second engagement with the Cossacks, on the banks of the Bog; but John, more fortunate than his brother, became successively grand marshal and general of the

kingdom. Full of courage, he exposed himself? like the meanest soldier, to the greatest dangers* and, when urged to take care of his person* replied, " If I follow your advice, you will despise me." He became the terror of the Tar- .ars and Cossacks, over whom he was perpetually gaining new victories. November 1 1 , 1673, he won the celebrated battle at Ch czim against the Turks, who lost there 28,000

mf-n. The following year, he was elected king of Po-land. When the Turks laid siege to Vienna, in 1683, he hastened thither with a Polish army, an4 rescued the imperial city. His cavalry was splendid, but his infantry was poorly equipped. To conceal the condition of the latter, lie was advised to send one of the worst clothed regiments of infantry over the river by night, to save them from the gaze of spectators. Sobieski was of a different opinion. When the regiment was on the bridge, he said to those who surrounded him, u Behold them — they are invincible ; they have sworn never to wear any dress but that of enemies : in the last war, they were all clothed in the garb of Turks." On his arrival, he chose the most advantageous position, ascended an elevation to observe the disposition of the grand vizier, and remarked — " He has selected a bad position. I understand him ; he is ignorant, and persuaded of his own genius. We shall gain no honour from this victory." Sobieski was not deceived. The next day the Turks were driven from their camp in terror, leaving behind the holy standard of Mohammed, which the conqueror sent to the pope with the following letter : " I came, 1 saw, and God has conquered." On his entrance into Vienna, at the head of bis victorious Poles, the inhabitants received him with indescribable enthusiasm. They pressed around to embrace his feet, or touch Ins garments or his horse, and proclaimed him their saviour and deliverer. He was moved even to tears, and under the strong impulse of his feelings, called this the happiest day of his life. In 1693, he was attacked by a dangerous sickness, and was doomed to witness that dissension which usually attends the election of a king in Poland. Foreign enemies united with domestic factions. Sobieski was no longer in a condition to quiet the disturbances, and the moment was fast approaching which was to deprive him at once of his life and his throne. The queen wished him to make a will, and communicated her wishes through one of the bishops. He refused, asserting that, in a nation like his, party rage would prevail over all his influence. He died 1696, in the twenty-third year of his reign. Scarcely liad he closed his eyes, when jealousy and <-nvy united to stain his memory. Some reproached him with having purchased lands contrary to the laws, which forbade the king to hold any private property. Others maintained that the Christian league which he had joined against the Turks, had cost his country more than 200,000 men. Others still asserted that he was too fond of money and expensive journeys. Certainly no court was ever less stationary ('inn his. He performed the tour of Poland eˆ-ry year with his queen, and visited all his estates, like a nobleman. This fault, however, if it may

be called a fault, should not cast a veil over the virtues of Soon-ski. Ht was fond of the sciences, spoke several languages, and deserved to be loved for his gentleness and affability. His three sons died without leaving any male descendants. The character of Sobieski is displayed in the Lettres du Roi de Pologne Jean Sobieski a la Reine Marie Casimire, pend. la Camp, de Vienne, trad, par le Comte Plater, et publ. par N. A. de Salrandy (Paris. 1826V

SOC (Sax.) signifies power or liberty to minister justice or execute laws : also the circuit or territory wherein such power is exercised. Whence the law Latin word socca is used for ceignory or lordship enfranchised by the king, with the liberty of holding or keeping a court of his sockmen : and this kind of liberty continues in divers parts of England to this day, and is known by the name of soke and soken.

SOCCAGE, . *«. Fr. we, a ploughshare; barb* Tˆt soccagiitm. In law, a tenure of lands for certain inferior or husbandly services to be performed to the lord of die fee: so that whatever is not knight's serrice is soccage.

Tbe lands are M* IraUe* at aU of her majesty, ot not holdea in chief, bat by a mam. town in ««=•£*, or by knight's service. Ben*.

SOCCAGE, in law, is a tenure of lands, for CTTfr'i* inferior or husbandly services to be performed to the lord of uSe fee. All services due for land being knight's service, or soccage; so that whatever is not knight's service is soccage. This soccage is of three kinds ; a soccage of free tenure, where a man holdeth by free service of twelve pence a year for all manner of services. Soccage of ancient tenure is of land of ancient demesne, where no writ original shall be sued, but the writ secundum coosuetudinem manerii. Soccage of base tenure is where those that hold it may have none other writ but the monstrave-runt, and such sockmen hold not by certain service.— Cowel. The lands are not holden in chief but by a mean tenure in soccage.— Bacon.

SOCCAGE or Soc AGE (says the learned Black-atone, in his Comm. voL

ii.), in its most general and extensive.sigmncation, denotes a tenure by any determinate service. In this sense it is by ancient writers constantly put in opposition to chivalry or knight-service, where the render was precarious and uncertain. The service must therefore be certain, to denominate it soccage ; as to hold by fealty and 20* rent ; or by homage, fealty, and 20* rent ; or by homage and fealty without rent; or by fealty and certain corporal services, as ploughing the lord's land for three days; or by fealty only, without any other service; for all these are tenures in socage. Socage is of two sorts ; free socage, where the services are not only certain but honorable ; and villein socage, where the services, though certain, are of a baser nature. See YILLEXAGE-Such as-bold by the former tenure are called, in Glanvfl and other subsequent authors, by the name of liberi sokesuanni, or tenants in free socage. The word is derived from the Saxon appellation soc, which signifies liberty or privilege ; and, being joined

to a usual termination, is called socage, in La-tin socajpum ; signifying thereby a free or privileged tenure. It seems probable that the so-cage tenures were the relics of Saxon liberty; retained by such persons as bad neither forfeited them to the king, nor been obliged to <*"»ˆ*gp* *their tenure for the more honorable, as it was called, but at the same time more burdensome, tenure of knight-service. This is peculiarly remarkable in the tenure which prevails in Kent, called gavelkind, which is generally acknowledged to be a species of socage tenure ; the preservation whereof inviolate from the innovations of the Norman conqueror is a fact universally known. And those* ho thus preserved their liberties were said to bold in free and common socage. As therefore the grand criterion, and distinguishing mark of this species of tenure, are the having its renders or services ascertained, it will include under it all other methods of holding free lands by certain and invariable rents and duties ; and in particular, petit sergeantry, tenure in burgaˆe, and gavelkind.

SOLUBLE, adj. ˆ Fr. sodabk; LaL *>-

So'c i ABLTS ESS, n. j. ˆ dobilis. Fit or ready to

SOCIABLY, ode. i be conjoined or united ;

So'ci AL, adj. J friendly ; familiar : social is in many respects synonymous ; it means also easy ; relating to society : the noun substantive and adverb follow the senses of sociable.

Another law toocheth them, as they are suntHt parts united into one body ; a law which bimiedi them each to serre onto other's good, and all to pre-fer the good of the whole before whatsoever their owm particular. H*»l*r.

In children much solitude and silence I like not, nor any thing born before his time, as this mast needs be in that soemUt and exposed age* ITWrt*.

Such as would call her friendship love, and feign To sacmUtmtss a name profane Dimme.

He always used courtesy and modesty, disliked of none; sometimes &e*tUt*ea and fellowship, well liked by many. Hfymtrd.

Them thus employed beheld With pity heaven's high King, and to him called Raphael, the sacimUe spirit that deigned To travel with Tobias. JHltm.

Yet not terrible.

That I should fear : nor *«tafc> mild. As Raphael, that 1 should modi confide, Bat solemn and sublime. U.

Thou in Ay secrecy although alone. Best with thyself accompanied, •Btoji noc

C_^_l WJ

The two main properties of man are contemphlMi and WMMoMtt, or love of converse. Mtre.

To love ow neighbour as onrsdves is sach a fundamental truth, for imhtiajr, haman society, that by that aloce one might determine all the cases in ami morality. £**-

To make man mild and MewMc to man ;

To cultivate the wild lieentioms savage

With wisdom, discipline. Mti»m't Cmtm.

Troe self-love and MM* are the same. P«pe.

Th«s abandoned of aim or view in life, with a strong appetite for sKiMKty. as well from native hilarity as from a pride of observation and remark, a constitutional mrfanrhnry or hypocaondnacm that

made me flv solitude.

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SOCIETY.

SOCI'ETY, n.s. Fi tociete; Lat. societas. Union of many in one general interest ; company ; converse : partnership.

To make society

The sweeter welcome, we will keep ourself Till supper-time alone. Shakspeare. Macbeth.

Whilst I was big in clamour, there came a man, Who, having seen me in my worser state. Shunned my abhorred »ociety. ' Id. King Lear.

As there is no society free from some corruption, so it is hard, if, in a community of men, there be not some faithfulness. Bp. Hall. Contemplations.

Solitude sometimes is best society, And short retirement urges sweet return. Milton.

As the practice of piety and virtue is agreeable to our reason, so is it for the interest of private persons and publick societies. Tillotson.

Heaven's greatness no society can bear ; Servants he made, and those thou wantest not here.

Druden.

If the power of one society extend likewise to the making of laws for another society, as if the church could make laws for the state in temporals, or the state make laws binding the church relating to spirituals, then is that society entirely subject to the other.

Lesley.

SOCIETY. It may seem somewhat eccentric to insert the article SOCIETY, as an article in a dictionary of science. But if it be considered how closely all the arts and sciences are connected with society, that they are all studied, discovered, cultivated, and improved, only in consequence of the association of mankind, and that in a solitary or savage state they can hardly have any existence, the propriety of inserting this important article in a scientific form will appear self-evident.

The subject falls naturally to be divided into two parts ; I. Concerning the rise, progress, advantages, and declension of civilised society : II. Giving a short account of various public societies for the promotion,

improvement, and general diffusion of arts, sciences, religion, morals, and humanity.

PART I.

OF THE ORIGIN, PROGRESS, PERFECTION. AND DECLENSION OF CIVILISED SOCIETY.

SECT. I. — OF THE ADVANTAGES OF CIVILISED SOCIETY AND ITS ORIGIN.

So great are the advantages which each individual evidently derives from living in a social state, and so helpless does any human being appear in a solitary state, that we naturally conclude, that if there ever was a period at which mankind were solitary beings, that period could not be of long duration ; for their aversion to solitude and love of society would soon induce them to enter into social union. Such is the opinion which we conceive when we compare our own condition as members of civilised and enlightened society with that of the brutes, or with that of savaees in the earlier and ruder periods of social life. When we hear of Indians

wandering naked through the woods, destitute of arts, unskilled in agriculture, scarcely capable of moral distinctions, void of all religious sent; ments, or possessed with the most absurd notions concerning superior powers, and procuring means of subsistence in a manner equally precarious with that of the beast of prey — we look down with pity on their condition, or turn from it with horror. When we view the order of cultivated society, and consider our institutions, arts, and manners — we rejoice over our superior wisdom and happiness.

Man in a civilised state appears a being of a superior order; yet some philosophers tell us that it is only he who, having been educated in society, has been taught to depend upon others, that can be helpless or miserable when placed in a solitary state. They view the savage who exerts himself with intrepidity to supply his wants, or bears them with fortitude, as the greater hero, and possessing the greatest happiness.

Whatever be the supposed advantages of a solitary state, certain it is that mankind, at the earliest period, were united in society. Various theories have been formed concerning the circumstances and principles which gave rise to this union: but we have elsewhere shown

that the greater part of them are founded in error; that they suppose the original state of man to have been that of savages ; and that such a supposition is contradicted by the most authentic records of antiquity. For though the records of the earlier ages are generally obscure, fabulous, and imperfect, yet happily there is one narrative free from the imperfections of the rest, and of undoubted authenticity, to which we may safely have recourse. This is found in the Pentateuch of Moses, which presents us with a genuine account of the origin of man and of society.

According to Moses the first society was that of a husband and wife united in the bonds of marriage; the first government that of a father and husband, the master of his family. Men lived together under the patriarchal form of government, while they employed themselves chiefly in tending flocks and herds. Children in such circumstances cannot soon rise to an equality with their parents, where a man's importance depends on his property, not on his abilities. When flocks and herds are the chief articles of property, the son can only obtain these from his father : in general, therefore, the son must be dependent on the father for the means of subsistence. If the parent, during his life, bestow on his children any part of his property, he may do it on such conditions as shall make their dependence upon him continue till the period of his death. When the community are by this event deprived of their head, instead of continuing in a state of union, and selecting so.-ne one from among themselves whom they may invest with the authority of a parent, they separate into so many distinct tribes, each subjected to the authority of a different lord, the master of the family,

and the proprietor of all the flocks and herds belonging to it. Such was the state of the first societies which the narrative of Moses exhibits to our attention.

SECT. II. — OF THE HYPOTHESES OF PHILOSOPHERS RESPECTING AN ORIGINAL STATE OF

SAVAGISM.

Those philosophers who have made society, in its various stages between rudeness and refinement, the subject of their speculations,

have generally considered mankind, in whatever region or climate of the globe, as proceeding uniformly through certain regular gradations from one extreme to the other. They regard them, first, as gaining a precarious subsistence by gathering the spontaneous fruits of the earth, or by fishing or hunting. Next, they say, man rises to the shepherd state, and next, to that of husbandmen, when they turn their attention from the management of flocks to the cultivation of the ground. Next, these husbandmen improve their powers, and better their condition, by becoming artizans and merchants ; and the beginning of this period is the boundary between barbarity and civilisation. These are the stages through which they •who have written on the natural history of society have generally conducted mankind from rudeness to refinement : but they have overlooked the manner in which mankind were at first established on this earth ; the circumstances in which the parents of the human race were originally placed; the degree of knowledge communicated to them; and the instruction which they must have been capable of communicating to their posterity. They rather appear to consider the inhabitants of every different region of the globe as aborigines, springing at first from the ground, or dropped on the spot which they inhabit ; no less ignorant than infants of the na-ture and relations of the objects around them, and of the purposes which they may accomplish by the exercise of their organs and faculties.

The absurdity of this theory has been fully demonstrated elsewhere. See SAVAGISM. And, if we receive the Mosaic account of the original establishment of mankind, we shall view the phenomena of social life in a light very different.. Though many of the rudest tribes are found in the “state of hunters or fishers, yet the hunting or fishing state cannot have been invariably the primary form of society. Notwithstanding the powers with which we are endowed, we are in a great measure the creatures of circumstances. Physical causes exert, though indirectly, a great influence in forming the character and directing the exertions of the human race. Moses informs us that the first societies of men lived under the patriarchal form of government, and employed themselves in the cultivation of the ground and management of flocks. And as we know that mankind, being subjected to the influence both of physical and moral causes, are no less liable to degeneracy than capable of improvement, we may easily conceive that, though descending all from the same original pair, and though enlightened with much traditionary knowledge relative to the arts ̂of life, the order of society, moral distinctions, and religious obligations;

yet as they were gradually, and by various accidents, dispersed over the earth, being removed to situations in which the arts with which they were acquainted could but little avail them, where industry was overpowered, or indolence encouraged, by the severity or the profusion of nature, thev might degenerate and fall into a condition almost as humble and pvecarious as that of . the bruta! tribes.

If, then, laying aside the spirit of theory and system, we set ourselves to trace facts, and to listen to evidence ; though, our supposed discoveries may be fewer, yet the knowledge we thus acquire will be more useful and our speculations more consistent with true philosophy.

y, then, we are further desirous of surveying society in its rudest form, we must look, not to the earliest period of its existence, but to those districts of the globe where external circumstances concur to drive men into a state of stupidity and wretchedness. Thus, in many places of the happy clime of Asia, which a variety of ancient records concur with the sacred writings in representing as the first peopled quarter of the globe, we cannot trace the form of society backwards beyond the shepherd state. In that state, indeed, the bonds which connect society extend not to a wide range of individuals, and men re-main for a long period in distinct families ; but yet that state is highly favorable to knowledge, to happiness, and to virtue. Again, the torrid and the frozen regions of the earth, though probably peopled at a later period, and by tribes sprung from the same stock with the shepherds of Asia, have yet exhibited mankind in a much lower state. It is in the parched deserts of Africa and the wilds of America that human beings have been found in a condition approaching the nearest to that of the brutes.

We may therefore take a view of the different stages through which philosophers have considered mankind as advancing, beginning with that of rudenesss, though we have shown that it cannot have been the first in the progress.

SECT. III. — OF THE RUDE STATE, OR. SUPPOSED FIRST STAGE OF SOCIETY.

Where the human species are in the lowest and rudest state, their rational and moral powers are very faintly displayed; but their external senses are acute, and their bodily organs active and vigorous. Hunting and fishing are then their chief employments and only support. Dur-ing that time which is not spent in these pursuits, they are sunk in listless indolence. They are roused to active exertion only

by the pressure of necessity or the urgent calls of appetite. Accustomed to endure the severity of the elements, and but scantily provided with the means of subsistence, they acquire habits of fortitude, which are beheld with astonishment by those who enjoy the plenty of cultivated life. But in this state of want and depression, when the powers and possessions of every individual are scarcely sufficient for his own support, when even the calls of appetite are repressed because they cannot always be gratified, and the more refined passions, which either originate from such as are merely animal, or are intimately con-550

nected with them, have not yet been felt — in this state all the milder affections are unknown; or if the breast is at all sensible to their impulse, it is extremely feeble. Husband and wife, parent and child, brother and sister, are united by the weakest ties. If we listen to the relations of respectable travellers, human beings have sometimes been found in that abject state where no proper ideas of subordination, government, or distinction of ranks, could be formed. No distinct notions of deity can be here entertained. Of arts they must be almost totally destitute. They may use some instruments for fishing or the chase : but these must be rude and simple. To shelter them from the inclemency of the elements, both their houses and clothing will be aukward and inconvenient.

SECT. IV. — OF THE PROGRESS OF SOCIETY IN THE SECOND STAGE.

But human beings have been seldom found in so rude a state as this. Even those tribes which we denominate savage are for the most part farther removed from mere animal life. They generally appear united under some species of government, exercising the powers of reason, capable of morality, though very little refined ; displaying some degree of social virtues, and act-ing under the influence of religious sentiments. These are to be found still in the hunting and fishing state ; but they are farther advanced towards social life, and are more sensible to the impulse of social affection. By intercourse in their employments a few hunters or fishers contract a fondness for each other’s company, and take some part in each other’s joys and sorrows ; and, when the social affections thus generated begin to exert

themselves, all the other powers of the mind are called forth, and the circumstances of society are improved. Huts are now built, more commodious clothes are made, instruments for the annoyance of wild beasts, and even of enemies, are contrived; in short, arts and sciences, and social order, and religious sentiments and ceremonies, now make their appearance in the rising society. But, though social order is no longer unknown nor unobserved, yet the form of government is still extremely simple, and its ties are but loose and feeble. It may bear some resemblance to the patriarchal ; only all its members are on a more equal footing, and at the same time less closely connected than in the shepherd state, to which that form of government seems almost peculiar. The old men are treated with veneration ; but the young are not entirely subject to them. They may listen respectfully to their advice ; but they do not submit to their arbitrary commands. Where mankind are hunters and fishers, where the means of subsistence are precariously acquired, and prudent foresight does not prompt to accumulate much provision for the future, no individual can acquire Comparative wealth. As soon as the son is grown up, he ceases to be dependent on his father, as well as on the society. Difference of experience, therefore, constitutes the only distinction between the young and the old ; and, if the old have experience, the young have, strength and activity.

Here, then, neither age nor property can give rise to any striking distinction of ranks. All who have attained to manhood, and are not disabled by deficiency of strength or agility, or by the infirmities of old age, are on an equal footing.; or, if any one possess a pre-eminence over the rest, he owes it to superior address or fortitude. The whole tribe deliberate; the old give their advice; each individual of the assembly receives or rejects it at his pleasure ; and the warrior who is most distinguished for strength, address, and valor, leads out the youth of the tribe to the chase or against the enemy. War, which in the former state did not prevail, now first begins to depopulate the thinly inhabited regions where these hunters and fishers pursue their prey. They are scattered in scanty and separate tribes, over an immense tract of country ; but they know no medium between the affection which brethren of the same tribe bear to each other and the hatred of enemies. Though thinly scattered over the earth, yet the hunting parties of different tribes will sometimes meet as they range the forests; and, when they meet, they will view each other with a jealous eye : for the success of the one party in the chase may cause the other to be unsuccessful ; and while the one snatches the prey the other must return home to all the pangs of famine. Inveterate hostility

will therefore prevail among the neighbouring tribes in the hunting state. They have at this period some ideas of superior beings. They also practise certain ceremonies to recommend them to those beings ; but both their sentiments and ceremonies are superstitious and absurd.

We have elsewhere shown (see POLYTHEISM) how savage tribes have probably degenerated from the pure worship of the one true God to the adoration of a multitude of imaginary divinities. We have traced this idolatrous worship from that of the heavenly bodies, through all the gradations of daemon-worship, hero-worship, and statue-worship, to that wonderful instance of absurd superstition, the worship of the vilest reptiles. But we pretend not that the progress of polytheism has been every where in the same order. The characters and circumstances of nations are scarcely less various and anomalous than those of individuals. Among many of the American tribes, however, among the ancient inhabitants of the forests of Germany, whose manners are so accurately delineated by Tacitus, and in some of the islands scattered over the southern ocean, religion, arts, and government have been found in that state which we have described as the second stage of social life.

SECT. V. — OF THE PROGRESS OF IMPROVEMENT

IN THE THIRD STAGE OF SOCIETY. We may now survey human life as approach ing somewhat nearer to a civilised and enlightened state. As property is acquired, inequality and subordination of ranks necessarily follow ; and, when men are no longer equal, the many are soon subjected to the will of the few. But what gives rise to these new phenomena is that, after having often suffered from the precariousness of the hunting and fishing state, men begin to extend their cares beyond the pˆ«r.» moment,

and to think of providing some supply for future wants. When they are enabled to provide sucli a supply, either by pursuing the chase with new eagerness and perseverance, by gathering the spontaneous fruits

of the earth, or by breeding tame animals, these acquisitions are at first the property of the whole society, and distributed from a common store to each individual. But as, by this mode of distribution, industry and activity are treated with injustice, while negligence and indolence receive more than their due, each individual will soon become his own steward, and a community of goods will be abolished. As soon as distinct ideas of property are formed, it must be unequally distributed ; and, as soon as property is unequally distributed, there arises an inequality of ranks. Here we have the origin of the depression of the female sex in rude ages, of the tyrannical authority exercised by parents over their children, and of slavery. The women cannot display the same perseverance, activity, or address, as the men in pursuing the chase. They are therefore left at home, and from that moment are no longer equals, but slaves, who must subsist by the bounty of the males, and must therefore submit with implicit obedience to all their capricious commands. Even before the era of property, the female sex were viewed as inferiors ; but till that period they were not reduced to a state of slavery.

In this period of society new notions are formed of the relative duties. Men now become citizens, masters, and servants ; husbands, parents, &c. It is impossible to enumerate all the various modes of government which take place among the tribes who have advanced to this staˆe ; but one thing certain is, the authority of the few over the many is now first established, and that the rise of property first introduces inequality of ranks. In one place the community is subjected to the will of a single person; in another, power may be lodged in the hands of a number of chiefs ; and, in a third, every individual may have a voice in creating public officers, and in enacting laws for the support of public order. But as no code of laws is formed during this period, justice is not very impartially administered, nor are the rights of individuals very faithfully guarded.

This is the age of hero-worship, and of tutelary gods ; for it is in this stage of society that the invention of arts, which gave rise to that worship, contributes most conspicuously to the public good. War, too, which we considered as beginning first to ravage the earth during the former *eriod, and which is another cause of the deifi-cation of dead men, will still prevail in this age, and be carried on with no less ferocity than before, though in a more systematic form. The prevalence of war, and the means by which subsistence is procured, must have considerable influence on the character and sentiments of societies and individuals. The hunter and the warrior are characters quite different from the shepherd and the husbandman. Such in point of government, arts, and manners, religious and moral sentiments,

were several of the German tribes described by Tacitus, and the Britons whose character has been sketched by the pen of

Caesar.: such, too, were the Romans in the early period of their history; such, too, the Greeks, whom Homer celebrates as the destroyers of the Trojan state ; the northern tribes also, who poured through Asia, Africa, and Europe, and overthrew the Roman empire, appear to have been of a nearly similar character.

In this period of society the state of the arts merits attention. The shepherds and the hunters are in that respect pretty equal. Whether we examine the records of ancient history, or view the islands scattered through the South Sea, or range the wilds of America, or survey the snowy wastes of Lapland and the frozen coast of Greenland — still we find the useful arts in this period, though known and cultivated, in a very rude state; and the fine arts, or such as are cultivated merely to please the fancy or to gratify caprice, displaying an odd and fantastic, not a true or natural, taste ; yet this is the period in which eloquence shines with lustre ; all is metaphor or glowing sentiment. Languages are not yet copious ; and therefore speech is figurative., expressive, and forcible.

But let us advance a little farther, and contemplate our species in a new light, where they will appear with greater dignity and amiableness of character. Let us view them as husbandmen, artizans, and legislators.

SECT. VI. — OF THE RAPID PROGRESS OF IMPROVEMENT IN THE FOURTH STAGE OF SOCIETY.

Whatever circumstances might turn the attention of any people from hunting to agriculture, or cause the herdsman to yoke his oxen for the cultivation of the ground, certain it is that this change in the occupation would produce a happy change on the character and circumstances of men ; it would oblige them to exert a more regular and persevering industry. The hunter is like one of those birds that are described as passing the winter in a tonpid state ; the shepherd’s life is extremely indolent: neither of these is very favorable to refinement. But different is the condition of the husbandman. His labors succeed each other in regular rotation through the whole year ; each season has its proper employments ; he therefore must exert active persevering industry; and in this state we often find the virtues of rude and polished nations united. This is the period where barbarism ends

and civilisation begins. Nations have existed for ages in the hunting or the shepherd state, fixed as by a kind of stagnation, without advancing farther. But scarcely any instances occur in the history of mankind of those who once reached the state of husbandmen remaining long in that condition without rising to a more civilised and polished state. Where a people turn their attention in any considerable degree to the objects of agriculture, a distinction of -occupations naturally arises among them. The husbandman is so closely em ployed through the several seasons of the year in the labors of the field, that he has no longer leisure to exercise all the rude arts known among his countrymen. He has not time to fashion the instruments of husbandry, to prepare his clothes, to build his house, to manufacture household utensils, or to tend those tame animals which br

continues to rear. Those different departments therefore now begin to employ different persons, each of whom dedicates his whole time and attention to his own occupation. The manufacture of cloth is for a considerable time managed exclusively by the women; but smiths and joiners arise from among the men, and metals begin to be considered as valuable materials. The intercourse of mankind is now placed on a icw footing. Before, every individual practised ill the arts that were known, as far as was necessary for supplying himself with the conveniences of life ; now he confines himself to one or to a few of them ; and, to obtain a necessary supply nf the productions of those arts which he does not cultivate himself, he gives in exchange a part of the productions of his own labors. Here we have the origin of commerce. After continuing for some time in this state, as arts and distinctions multiply in society, the exchange of one commodity for another is found inconvenient. It is contrived to adopt a medium of commerce, to render the exchange of property easy and expeditious. Wherever metals have been known, they have been adopted as the medium of commerce almost as soon as such a medium began to be used ; and this is one important purpose for which they serve ; but they have still more important uses. Almost all the necessary arts depend on them. Where the metals are known, agriculture practised,

and the necessary arts distributed among different orders of artisans, civilisation and refinement advance with a rapid progress. As soon as ornament and amusement are thought of, the fine arts begin to be cultivated. In their origin therefore they are not long posterior to the necessary and useful arts. They appear long before men reach the comfortable and respectable condition of husbandmen ; but rude is their character at their first origin. But, in the period of society which we are now considering, they aspire to a higher character.

One of the noblest changes, which the introduction of the arts by agriculture produces on the form ind circumstances of society, is the introduction of regular government and laws. In tracing the history of ancient nations, we scarcely ever find laws introduced at an earlier period. Minos, Solon, and Lycurgus, do not appear to have formed codes of wisdom and justice for regulating the manners of their countrymen, till after the Cretans, Athenians, and Lacedemonians, had made some progress in agriculture and the useful arts.

Religion, under all its various forms, has in every stage of society a mighty influence on the sentiments and conduct of men ; and the arts cultivated in society have on the other hand some influence on the system of religious belief. The female sex in this period generally find the yoke of their slavery somewhat lightened. Men now become easier in their circumstances ; the social affections assume stronger influenceˆ over the mind ; plenty, and security, and ease, at once communicate both delicacy and keenness to the sensual desires. All these circumstances concur to make men relax that tyrannical sway by which they before depressed the softer sex. The foundation of that empire, where beauty

triumphs over both wisdom and strength, now begins to be laid. Such are the effects which history warrants us to attribute to agriculture and the arts; and such the outlines of the character of that which we reckon the fourth stage in the progress of society from rudeness to refinement.

SECT. VII. — OF THE FIFTH STAGE, OR HIGHEST STATE OF IMPROVEMENT IN SOCIETY.

We have not yet surveyed mankind in their most polished and cultivated state. Society is rude at the period when the arts first begin to show themselves, in comparison of that state to which it is raised by the industrious cultivation of them. Athens and Lacedemon afford

us a happy opportunity of comparing this with the former stage in the progress of society. The chief effect produced by the institutions of Lycurgus seems to have been to fix the manners of his countrymen for a considerable period in that state to which they had attained in his days. Spartan virtue has been admired and extolled in the language of enthusiasm ; but even the character and the condition of the savage inhabitants of the wilds of America have been preferred by some philosophers to the virtues and the enjoyments of social life in the most polished and enlightened state. The Spartans in the days of Lycurgus had begun to cultivate the ground, and were not unacquainted with the useful arts. They must soon have advanced farther, had not Lycurgus arisen, and, by effecting the establishment of a code of. laws, the tendency of which appears to have been in many particulars directly opposite to the designs of nature, retarded their progress towards complete civilisation and refinement. See SPARTA. The history of the Lacedemonians, therefore, while the laws of Lycurgus continued in force, exhibits the manners and character of a people in that which we have denominated the fourth stage in the progress of society. But in the history of their neighbours, the Athenians, we behold the natural progress of opinions, arts, and manners. The useful arts are first cultivated with such steady industry as to raise the community to opulence, by commerce with foreign nations. The useful arts, raised to this height of improvement, lead men to the pursuit of science. Commerce, skill in the useful arts, and a taste for science, mutually aid each other, and promote farther improvements. Hence magnificent buildings, noble statues, paintings expressive of life, action, and passion ; and poems in which imagination adds new grace to nature, and gives social life more irresistible power over the affections. Hence are moral distinctions more carefully studied, and the rights of every individual and every order in society more accurately defined. Moral science is generaay ihe first scientific pursuit which strongly attract" the attention of men ; with the exception of Egypt and Chaldea. In Egypt, the overflowing of the Nile caused geometry to be early cultivated. Causes no less favorable to the study of astronomy recommended that science to the Chaldeans long be-fore they had attained the height of refinement. But in general the ':iws of morality are under-SOCIETY.

stood, and the principles of morals enquired into, before men make

any considerable progress in physical science. Accordingly, in this period, poetry, history, and morals, are the branches chiefly cultivated. Arts are generally casual inventions, and long practised before the rules and principles on which they are founded as-sume the form of science. But morality is that art which men have most constantly occasion to practise. Besides, we are so constituted that human actions, and the events which befal hu-man beings, have more powerful influence than any other object to engage our attention. Though poetry, history, and morals, be pursued with no small eagerness and success in that period of society which we now consider, natural philosophy is neither very generally nor very successfully cultivated. This' is the period when human virtue and human abilities shine with most splendor. Rudeness, ferocity, and barbarism are banished. Luxury has made her appearance ; but as yet she is the friend and the benefactress of society. Commerce has stimulated and rewarded industry, but has not yet contracted the heart and debased the character. Wealth is not yet become the sole object of pursuit. The charms of social intercourse are known and relished ; but domestic duties are not yet deserted for public amusements. The female sex acquire new influence, and contribute much to refine and polish the manners of their lords. Religion now assumes a milder and , more pleasing form ; splendid rites, magnificent temples, pompous sacrifices, and gay festivals, give even superstition an influence favorable to the happiness of mankind. The gloomy notions and barbarous rites of former periods fall into disuse. The system of theology produced in former ages still remains : but only the mild and amiable qualities of the deities are celebrated ; and none but the gay, humane, and laughing divinities, are worshipped. Philosophy also teaches men to discard such parts of their religion as are unfriendly to good morals, and have any tendency to call forth or cherish unsocial sentiments in the heart. War (for in this period of society enough of causes will arise to arm one nation against another) — war, however, no longer retains its former ferocity; nations no longer strive to extirpate one another; to procure redress for real or imaginary injuries: to humble, not to destroy, is now its object. Prisoners are now no longer murdered in cold blood, subjected to horrid and excruciating tortures, or condemned to hopeless slavery. They are ransomed or exchanged ; they return to their country and again fight under its banners. In this period the arts of government are likewise bet-ter understood, and practised so as to contribute most to the interests of society. Whether monarchy, or democracy, or aristocracy, be the established form, the rights of individuals and of society are in general respected. The interests of society are so well understood that the few, to preserve their influence over the many,

find it necessary to act rather as the faithful servants than the imperious lords of the public. Though the liberties of a nation in this state be not accurately defined by law, nor their property guaranteed to them by any legal institutions, yet their governors dare not violate their liberties, nor deprive them wantonly of their properties. This is truly the golden age of society; every trace ot barbarism is entirely effaced; and vicious luxury has not yet begun to sap the virtue and the happiness of the community. Men live not in listless indolence; but the industry in which they are engaged is of such a nature as not to overpower their strength or exhaust their spirits. The social affections have now the strongest influence on men's sentiments and conduct.

SECT. VIII. — OF THE DEGENERACY AND DECLINE OF SOCIETY.

Human affairs are never stationary. The circumstances of mankind are almost always changing, either growing better or worse. Their manners are ever in a fluctuating state. They either advance towards perfection or degenerate. Scarcely have they attained that happy period in which we hare just contemplated them, when they begin to decline till they perhaps fall back into a state nearly as low as that from which we suppose them to have emerged. Instances of this unhappy degeneracy often occur in the history of mankind ; and we may finish this short sketch of the history of society by mentioning in what manner this degeneracy takes place. Strictly speak ing-, every thing but the simple necessaries of life may be denominated luxury; but the welfare of society is best promoted, while its members aspire after something more than the mere necessaries of life. As long as these superfluities are to be obtained only by active and honest exertion ; as long as they only engage the leisure hours, without becoming the chief objects of pursuit — the employment which they give to the faculties is favorable both to the virtue and the happiness of the human race.

But the period arrives when luxury is'no longer serviceable to the interests of nations; when she is no longer a graceful, elegant, active form, but a languid, overgrown, and bloated carcase. The love of luxury, which contributed so much to the civilisation of society, now brings on its decline. Arts are cultivated and improved, and commerce extended, till enormous opulence be acquired ; the effect of enormous opulence is to awaken the fancy to conceive ideas of new and capricious wants, and to enflame the breast with new desires. Here we have the origin of that selfishness which, operating in conjunction with caprice, and the violence of unbridled passions, contributes so much to the corruption of virtuous manners. Selfishness, caprice, indolence, effeminacy, all join to loosen the bonds of society, to brinij

on the degeneracy both of the useful and the fine arts, to banish at once the austere and the mild virtues, to destroy civil order and subordination, and to introduce in their room anarchy or despotism.

Scarcely could we have found in history an example of the beautiful form of society which we last attempted to describe. Never, at least, has any nation continued long to enjoy such happy circumstances, or to display so amiable and respectable a character. But, when we speak of the declining state of society, we have no difficulty

in finding instances. History tells us of the Assyrians, the Egyptians, and the Persians, all once flourishing nations, but brought low by luxury and corruption of manners. The Greeks, the Romans, and the Arabians, owed their fall to the same causes ; and we know not if a similar fa!? does not now threaten many of those nations who have long made a distinguished figure in the sys-tem of Europe. The Portuguese, the Venetians, and the Spaniards, have already fallen. The French also had long been a people destitute of religion, corrupted in morals, unsteady in conduct, and slaves to pleasure and public amusements. Among them luxury had arrived at its highest pitch before the revolution ; and the consequence was, that, after gloriously shaking off the yoke of despotism, they set up a republican government, which, in the course of a few years, exhibited scenes of tyranny, oppression, and bloodshed, to which the annals of the world furnished scarcely a parallel ; and after which the massacre of the greatest men, and the best friends of liberty in the republic, ended in the establishment of an imperial despotism, more enormous, and more destitute of every spark of freedom than that which was overthrown' in 1789 — 91. See FRANCE.

PART II.

AN ACCOUNT OF VARIOUS PUBLIC SOCIETIES FOR THE PROMOTION OF RELIGION AND MORALS. THE ARTS, SCIENCES, &c.

The societies under consideration are associations voluntarily formed

hy a number of individuals for promoting knowledge, industry, or virtue. They may, therefore, be divided into three classes : societies for promoting science and literature, societies for encouraging and promoting arts and manufactures, and societies for diffus- >ng religion and morality, and relieving distress. Societies belonging to the first class extend their attention to all the sciences and literature in general, or devote it to one particular science. The same observation may be applied to those which are instituted for improving arts and manufactures. Those of the third class are established either with a view to prevent crimes, as the Philanthropic Society; for the diffusion of the Christian religion among unenlightened nations, as the Society for the Propagation of the Gospel in Foreign Parts, and the various Missionary Societies ; or for introducing arts and civilisation, along with a knowledge of the Christian religion, as the late Sierra Leona Company, &c.

The honor of planning and instituting societies for these valuable purposes is due to modern times. A literary association is said to have been formed in the reign of Charlemagne (See ACADEMY) ; but the plan seems to have been rude and defective. Several others were instituted in Italy in the sixteenth century ; but they seem to have been far inferior to those which are nourishing at present. The most enlarged idea of literary societies seems to have originated with the great Bacon, lord Verulam, the father of modern philosophy, who recommended to the reigning prince to institute societies of learned men, who ihonld give to the world a regular account of their researches and discoveries. Jt was the idea

of this great philosopher, that the learned world should be united into one immense republic ; which, though consisting of many detached states, should preserve a mutual intelligence with each other, in every thing that regards the com-mon interest. The want of this union and intelligence he laments as one of the chief obstacles to the advancement of science; and, justly considering the institution of public societies to be the best remedy for that defect, he has given, in his fanciful work, the New Atlantis, the delineation of a philosophical society on the most extended plan, for the improvement of all arts and sciences ; a work which, though written in the form of a romance, is full of the noblest philosophical views. The plan of lord Verulam, which met with little attention from the age in which he lived, was destined to produce its effect in a pe-riod not very distant. The scheme of a philosophical college by Cowley had a powerful influence in procuring the establishment of the Royal Society of London by charter

from Charles II. ; and Cowley ‘s plan is manifestly copied in almost all its parts from that in the New Atlantis. The institution of the Royal Society of London was soon followed by the establishment of the Royal Academy of Sciences at Paris ; and these two served as models to the philosophical academies of the highest reputation in the other kingdoms of Europe.

Men united together, and frequently meeting for the purpose of advancing the sciences, arts, agri culture, manufactures, and commerce, oftentimes suggest such hints to one another as may be improved to important ends ; and such societies, by being the repositories of the observations and discoveries of the learned and ingenious, from time to time furnish the world with useful publications which might otherwise be lost : for men of ingenuity and modesty may not choose to risk their reputation, by sending abroad unpatronised what a learned society might judge richly worthy the public eye ; or, their circumstances being straitened, they may not be able to defray the expense of publication. Societies instituted for promoting knowledge are also of eminent service, by exciting a spirit of emulation, and by enkind-ling those sparks of genius wh/ch otherwise might for ever have been concealed ; and by rewarding the exertions of the industrious and enterprising with pecuniary premiums or honorary medals. Eminent instances of the beneficial effects of such institutions we have in the Academy of Sciences in Paris, the Royal Society, and the Society instituted for the Encouragement of Arts, Manufactures, and Commerce, in London, and many others of a similar kind. Hereby a spirit of discovery and improvement has been excited among the ingenious in almost every nation ; knowledge of various kinds, and greatly useful to mankind, has superseded the dry and uninteresting speculations of schoolmen ; and bold and erroneous hypothesis has been obliged to give way to demonstrative experiment. In short, since the establishment of these societies, solid learning and philosophy have more increased than they nad done for many centuries before. As to those societies established for promoting industry, religion, and morality, and relieving

distress, they present a beautiful picture of the philanthropy of modern times.

In our selection of a few of the principal associations of this kind we begin with—

SECT. I. — RELIGIOUS AND HUMANE SOCIETIES >

In the article BIBLE SOCIETIES, which contains an account of one of the most important modern institutions of this character, we have promised to treat distinctly of the Society for Promoting Christian Knowledge, the Society for Propagating the Gospel in Foreign Parts, and the Naval and Military Bible Society. We can-not better redeem the pledge than by treating of them first in this place.

The Society for Promoting Christian Knowledge was founded in 1699. Its original design was to propagate religion in the plantations, to secure the pious education of the poor at home, and to reclaim those that err in the fundamentals of Christianity. In the year 1701 it had procured considerable donations, and had transmitted the same to the plantations in libraries, bibles, catechisms, &c., with a voluntary maintenance for the several ministers to be employed in the plantations. But, the Society for Propagating the Gospel in Foreign Parts being then instituted, they were incorporated, by charter, into the same : and thus discharged, as a particular society, from the farther pursuit of that branch of their original design which comprehended the appointment and payment of missionaries, as well as the distribution of books ; whereupon they wholly turned themselves to the other, and became very considerable by great accessions from among the clergy and laity.

The members of the existing society meet weekly at the society's office in Bartlett's Buildings, Holborn, to concert measures for raising charity for the education of poor children, and setting up schools for that purpose ; as also for the more regular disposal of pious books and catechisms, for instruction of the ignorant, erroneous, &c. They have procured subscriptions for the education of many thousand children, who are placed out in schools about London, and taught reading, writing, psalmody, &c. They have dispersed great numbers of books among the poor, in the fleet, army, &c., and have procured several to be translated into Welsh, and other foreign languages, and dispersed accordingly. This society is supported exclusively by members of the church of England, and it was for some time considered that the Bible Society of modern times would materially injure its operations : but none of the predictions of modern prophets have been found more wild ; since that institution has arisen, the funds of this have been most decidedly improved, and its prosperity manifestly increased. They have three treasurers, a secretary, assistant, clerk, and collector,

with two assistants.

The object of this institution is expressed in its name ; and the general designs in which it is now engaged, are, —

First, The superintendence and support of charity schools in and about the metropolis. In this department a very important channel for extending still farther its benefits was opened

by the institution of the National Society for the Education of the Poor in the Principles of the Established Church, in 1811. About 1790 schools are already in union with this institution; and it is computed that the whole number of children who benefit by the national system of education must exceed 300,000.

Secondly, The dispersion of bibles, prayer-books, and other religious publications, of which it has circulated an incredible number, and in different languages.

Thirdly, The establishment and support of missions and schools, which have been attended with considerable success in different parts of the East Indies, both among the Europeans and the natives. The public is further indebted to this truly venerable society for its late exertions in printing and circulating, at a low price, many anti-infidel publications, with a view to counteract the baneful effects of those poisonous productions which ai”e still disseminated, with shameless impudence and unwearied diligence, through the remoteˆ districts of the land.

The Report, 1822, states that the number of subscribing members now amounts to 14,650, and that the number of books and tracts issued during the year was not less than 1,222,382. See A Summary Account of the Society for Promoting Christian Knowledge, with Catalogues of the Books, 1821 ; or the society’s Annual Reports, to which are prefixed the Anniversary Sermons.

The Society for Propagating the Gospel in foreign Parts was instituted by king William III. in 1701, to secure a maintenance for an orthodox clergy, and making other provisions for the propagation of the gospel in the plantations, colonies, factories, Sec. : to this end he incorporated the archbishops, several bishops, and others of the nobility, gentry, and clergy, to the number of ninety, into a body, with privilege to purchase £2000 a year inheritance, and estates for lives or years, with other goods, to any value. The society is directed by its charter to meet yearly, on the third Friday in February, to choose a

president, vice-president, and other officers ; and the third Friday in every month to transact business, depute fit persons to take subscriptions for the said uses, and of all monies so received to give account to the lord chancellor, &c. Of this society there is a standing committee at St. Paul's Chapter-house, who prepare matters for the monthly meeting, which is held at St. Martin's library. They are trustees of Codrington College, in Barbadoes, supported by plantations in that island.

The Naval and Military Bible Society was instituted in 1780, for the purpose of distributing bibles among the soldiers and sailors of the army and navy. One guinea constitutes a governor, and ten guineas a governor for life. It has also flourished much more decidedly since the institution of the British and Foreign Bible Society. See the article BIBLE SOCIETIES.

The Society of the Sons of the Clergy was incorporated by king Charles II. in 1678 by the name of The Governors of the Charity for Re-lief of the Poor Widows and Children of Clergymen. This society is under the direction and

management of a president and vice-president, three treasurers, and a court of assistants composed of forty members. Several hundreds of •widows and children of the clergy have annually received considerable relief from this useful charity. It is sometimes called the Corporation of the Sons of the Clergy.

The annual feast of the sons of the clergy appears to be prior to their incorporation ; for in the London Gazette of November 22, 1677, the annual feast of the sons of the clergy was advertised to be held at Merchant Taylors' Hall, on Thursday the 29th of November following. Since the year 1697 there has been constantly an annual sermon, and aiso a grand musical service at the cathedral church of St. Paul, for promoting the ends of this charity. The most eminent divines of the church have preached on these occasions, and the musical performance has acquired celebrity from the concurrence of eminent

persons of the profession. For many years past it has been the practice of the stewards of the corporation to have at St. Paul's, on the Tuesday preceding the day of the sermon, what is called a rehearsal of the performance, and also a collection for the charity. The corporation is generally under the management of the archbishop of Canterbury as president

The Society of the Sons of the Clergy of the Established Church of Scotland was instituted at Edinburgh in February 1790, and was constituted a body corporate by royal charter in 1792. The society is of opinion that the period in which the families of clergymen feel most urgently the need, both of friends and of pecuniary aid, is that which commences with the introduction of the sons either to a university or to business, and terminates with their establishment in their respective professions ; that many of the ministers of this church, living at great distances from the seats either of universities or of business, possess incomes which, in the present state of the country, are inadequate to the purposes of procuring for their sons either the literary or professional education, which might enable them to come forward with credit and success in the wdrld ; that the sons of clergymen, from domestic tuition and example, have in general very advantageous means of receiving in their early years the impressions of virtue and honor, together with the rudiments of liberal knowledge; and that of course the public interest may be promoted by enabling this class of young men to obtain their share in the respectable situations of life. The views of the society have therefore been limited to the sons only of clergymen ; as they are of opinion that, within the limits which they have fixed, the field of beneficence will be still very extensive, and the claims for aid as many and as great as their funds can be supposed able to answer.

The Royal Humane Society was instituted in London in 1774, for the recovery of persons drowned or otherwise suffocated. We have therefore only to state that this society is founded on the most disinterested principles. The medical practitioners accept no pecuniary recompense for the time which they devote to a difficult and tedious process ; for the anxiety which

they feel while the event is doubtful ; for the mortification which they too often undergo, when death, in spite of all their efforts, at last carries off his prey ; nor for the insults to which they willingly expose themselves from vulgar incredulity. Their sole reward is in the holy joy of doing good. Of an institution thus free in its origin from all

interested views, and in its plan renouncing self-interest in every shape, philanthropy must be the only basis. The good intention therefore of the society is proved by its constitution ; the wisdom and utility of the undertaking are proved by its success : not less than 3000 fellow-creatures having, from its commencement till 1794, been restored to the community by its timely and indefatigable exertions. Nor is the benefit of this society confined to the cases of drowning and suspension. Its timely succors have roused the lethargy of opium taken in immoderate and repeated doses ; rescued the wretched victims of intoxication ; rekindled the life extinguished by the sudden stroke of lighting; recovered the apoplectic; restored life to the infant that had lost it in the' birth ; they have proved efficacious in cases of accidental smothering and of suffocation by noxious damps, in instances in which the tenderness of the in-fant body or the debility of old age greatly lessened the previous probability of success ; insomuch that no species of death seems to be placed beyond the reach of this society's assistance, where the mischief has gone no farther than an obstruction of the movements of the animal machine without any damage of the or-gans. In consequence of every necessary assistance afforded by this society, similar institutions have been established at Algiers, Lisbon, Philadelphia, Boston, Jamaica, Dublin, Leith, Glasgow, Aberdeen, Birmingham, Gloucester, Shropshire, Northamptonshire, Lancaster, Bristol, Whitehaven, Norwich, Exeter, Kent, and Newcastle. The society has published an 8vo. volume with plates, consisting of cases, correspondence, and a variety of interesting matter relating to the objects of this benevolent institution.

The Philanthropic Society was instituted in September 1788. It aims at the prevention of crimes, by removing out of the way of evil council, and evil company, those children who are, in the present state of things, destined to ruin. It proposes to educate and instruct in some useful trade or occupation the children of convicts, or other infant poor, who are engaged in vagrant or criminal courses ; thus to break th<? chain of those pernicious confederacies, deprive the wicked of successors, the gaols of inhabitants, justice of its victims, and by all these means add citizens to society. This institution is not only calculated to decrease vice and in-famy, but to increase useful industry ; so that those children who would otherwise succeed to their parents' hereditary crimes, and be-come the next race of beggars and thieves, will now be taught to supply by honest means their own wants and the wants of others. To carry into effect these desirable purposes, it is the first business of the society to select from prisons, and from the haunts of vice, profligacy, and beggary, such objects as appear most likely t

become obnoxious to the laws, or prejudicial to the comraunily ; and, m the execution of this duty, the assistance of the magistrates, the clergy, and all who are interested in the promotion of good morals and good government, is most earnestly requested. For the employment of the children, several houses are supported, at Cambridge Heath, near Hackney, in each of which a master-workman is placed for the purpose of teaching the children some useful trade. The trades already established are those of a printer, carpenter, shoemaker, and taylor. The girls are at present educated as menial servants. In 1791 no fewer than seventy children were under the protection of this society, among whom were many who had been guilty of various felonies, burglaries, and other crimes. Yet, singular as it may appear, in less than two years those very children became no less remarkable for industry, activity, decency, and obedience, than they formerly were for their contrary vices. Such are the grounds on - which the Philanthropic Society now claims the attention and solicits the patronage of the public. If we regard humanity and religion, this institution opens an asylum to the most forlorn and abject of the human race ; it befriends the most friendless ; it saves from the certain and fatal consequences of infamy and vicious courses orphans and deserted children. If we regara national prosperity, and the public welfare, it is calculated to increase industry ; and it directs that industry into the most useful and necessary channels. If we regard self-interest, its immediate object is to protect our persons from assault and murder, our property from depredation, and our peaceful habitations from the desperate fury of midnight incendiaries. One guinea per annum constitutes a member of the society ; and £10 at one payment a member for life. A life subscription, or an annual payment of at least two guineas, is a necessary qualification for being elected into the committee.

Objects are admitted by the committee at its weekly meetings ; and they are seldom taken younger than eight or nine, or older than twelve. After admission boys that have been delinquents are sent in the first instance to the ‘ Reform,’ a house at Bermondsey so called ;

where the sys-tem is framed with a view to the amendment of the moral character by instruction : out of school-hours they are.set to pick oakum, that by remaining unemployed they may not acquire habits of idleness. When any of them appear, by the reports of the chaplain, to be sufficiently reformed, they are transferred to the manufactory in St. George's Fields, now the principal establishment of the Society, and placed on the same footing with the rest of the boys in that situation. The sons of convicts, not having been themselves criminal, are sent at once to the manufactory, which contains, besides accommodations for lodging about 100 boys, workshops for carrying on the following trades, *viz.* printing, copper-plate printing, bookbinding, shoemaking, tailor's work, rope-making, and twine-spinning. The profits of the trades are carried to the account of the society, a portion being appropriated, by way of reward, to such of the boys as are industrious, partly 'paid to, them immediately, and partly reserved for their use when they cease to

belong to the society. The girls are placed in a building contiguous to the manufactory ; but all intercourse between them and the boys is effectually prevented by a wall of considerable height. The girls are brought up for menial servants : they make their own clothing, and shirts for the boys, and wash and mend for the manufactory : besides which their earnings in plain work are considerable. When of proper age they are placed out, at low wages, in reputable families, and receive rewards for good behaviour at the end of the first and third years of their service, *viz.* one guinea at each period. A chapel has been erected for the convenience of their attending public worship.

Every general court must consist of seven members at least ; and the committee, which consists of twenty-four members, together with the principal officers, visitors, and auditors, meet once a week, and three of them are competent to proceed to business. They appoint sub-committees. A number of boys having served a regular apprenticeship in the society's manufactory, and received certificates of their honesty and industry during the latter part of their service, are now employed in town as journeymen to respectable, masters ; and many of the girls are in service, and have received the pecuniary rewards assigned them. The present officers are a president, twelve vice presidents, a treasurer, four visitors, three auditors, a chaplain, chapel-reader, and seretary, two preachers, a physician, surgeon, apothecary, superintendent, and steward.

The Church Missionary Society. — This institution, which was

established in 1801, and whose original object was to diffuse the knowledge of Christianity in Africa and the East, is conducted by members of the Church of England, under the patronage of various peers spiritual and other distinguished clergymen. After twenty years of patient labor in this good work, it has been blessed with a measure of success which calls for unfeigned gratitude, and animates its conductors to further exertions. In support of these exertions there have been formed, within the last few years, upwards of 400 different associations, the simple design of all which has been to offer to such persons, in each neighbourhood, as might feel inclined to subscribe, the opportunity of do-ing it with the least inconvenience. The exciting also of a spirit of prayer for the blessing of God on the society, and the stimulating of pro-per persons to offer themselves as missionaries, were among the objects in view. Its funds arise chiefly from annual subscriptions, benefactions, weekly and monthly contributions, and congregational collections. And the result of these efforts has been, that, in the year ending March 31st, 1822, about £32,000 was received, and nearly the same sum expended.

The foreign proceedings of the Society may be arranged under nine missions, which, are here mentioned, in the order wherein the society entered upon them. 1. The West African; 2. The Calcutta and North Indian ; 3. The Austra-lasia; 4. The Madras and South India; 5. The Mediterranean; 6. The West Indies; 7. The Ceylon ; 8. The Bombay and Western India and 9. The Northwest America.

In these Missions there were in January 1823 tbout forty stations, with a number of schools dependent on them. These stations are occupied by about ninety Europeans, who have been sent forth from this country to the different missions. Of these thirty-two are ordained missionaries ; twenty-four are wives of missionaries, and the rest are lay teachers and settlers, male and female. Of native laborers there are about 160 ; two of whom are ordained missionaries, and the others readers, catechists, teachers, and assistants. The number of scholars, adults and children, cannot be exactly ascertained ; but it appears,

from the last returns, to be about 10,500. In several places churches have been built, and many converts have been added to the church.

It may in truth be said that the blessing of God has rested on these and other missions, very much in proportion to the length of time since they were established, the number of laborers, and the concurrence of providential openings and other favorable circumstances. The success, however, has been most remarkable in the first mission, that to West Africa ; while its trials and difficulties also have been the most severe.

It enters into the plan of the society to employ the press very widely in the diffusion of missionary information. It has opened a communication with various foreign institutions, and distributed its reports, and copies of the Missionary Register, with other publications, very extensively, both at home and abroad. Translations and editions of the Scriptures claim attention from every missionary society ; and, from the institutions connected with the united church, the translation of its primitive liturgy will obtain especial re-gard. In various languages of Mahometans and heathens, this society has accordingly rendered, in different ways, every assistance to these objects. Tracts also in various languages are prepared and widely circulated, more particularly in the Mediterranean and Indian Missions.

The Proceedings of the Society, which are published annually, contain twenty-two sermons and reports, and form ten volumes, 8vo.

The Society in Scotland for Propagating Christian Knowledge. — This institution, which is connected with the established Kirk, has been highly useful in promoting religion, morality, and industry, among the lower order of the natives in the highlands and islands, many of whom reside at a very great distance from any kirk or parish school.

It derived its origin from the benevolence and public spirit of a few private gentlemen, who, early in the last century, formed themselves into a society for the reformation of manners, by diffusing the knowledge of divine truth. ‘ Directing their attention to the mountainous regions of their own country and the islands connected with it, in which the inhabitants were in a state of deplorable ignorance, and cut off from all access to religious instruction, a society was founded in 1709 under the title of ‘ the Society far Propagating Christian Knowledge in the Highlands and Islands ‘ The object of the society, which received from queen Anne a royal charter, and which was warmly supported by the general asse.mbjy of the Scottish Church, has been, ever

since its institution, to establish schools in which the elements of education are taught, to circulate the Scriptures, and to appoint missionary teachers in parishes which, from their immense extent, or their inaccessible situation, could not enjoy the advantage of the religious establishment under which they were placed. This admirable society has most deservedly obtained cordial support. A donation from the sovereign is annually made to it, which is under the control of a committee of the General Assembly; a sermon is yearly preached, and many pious and benevolent individuals have contributed to enlarge the funds of which it is possessed. Its labors have been attended with much success ; ignorance has been banished from many districts in which it would else have remained, and the humanising influence of religion has corrected the previous habits which had for ages been acquiring strength.'

This society supports about 300 schools, in which nearly 20,000 disciples of both sexes are trained up in the knowledge of religion and good morals, writing, and arithmetic, and various useful arts, and in habits of industry. The schoolmasters teach the old, as well as the young, from house to house, on week days, when not employed in the schools ; and on Sundays they read the Scriptures, and other pious books, to the inhabitants of the district assembled, sometimes in the open air — catechise the children in the presence of their parents and friends, and preside among them in the duties of prayer and praise.

The funds of the society now amount to upwards of £90,000 ; but the restrictions of its charter do not permit any encroachment on the capital.

An institution, entitled The Society for the Support of Gaelic Schools in the Highlands and Islands of Scotland, and chiefly supported, we believe, by dissenters, has lately been formed, for carrying more extensively into effect the instruction of the people in the highlands. Its schools are chiefly formed on the ambulatory plan, as considered to be best adapted to the nature of the country ; and much good is daily effected by its active cooperation with the venerable society. No language can do justice to the beneficial and active exertions of numerous other societies, established and supported by various religious communities for diffusing the knowledge and benefits of Christianity throughout the world. Among these we may specify, the African Institution, for the Civilisation of Africa, the Education of Native Youth, &c., founded in 1806. The London Society for the Conversion of the Jews, established in 1809, and now wholly

conducted by the members of the United Church. The Prayer book and Homily Society, 1811. The Protestant Episcopal Missionary Society in the United States, for Foreign and Domestic Missions, 1820. Each of the other four principal denominations of Christians in the United States, *viz.* the Congregationalists, the Presbyterians, the Baptists, and the Methodists, has now a missionary society in connexion with it, which directs its attention to foreign objects, as well as to the Indians within t :e union. And see Dr. \V. Brown's Ilistor, of the IVyu-SOCIETY.

gation of Christianity among the Heathen since the Reformation, 3 vols. 8vo. 1814; and the Missionary Register, a periodical work replete with new and valuable information respecting the labors and success of the societies.

The Society for Promoting Christianity among the Jews, London, merits, perhaps, more distinct notice. It was instituted in August 1808, and was at first conducted under the management of a committee consisting of eighteen members, churchmen and dissenters, besides the treasurer and secretary, five of whom were a quorum ; and ra'et on the first Friday in every month at the Jews' Chapel in Spitalfields. The object of this society was at first to relieve the temporal distresses of the Jews, as well as to promote their spiritual welfare ; the committee, therefore, was empowered, from time to time, to adopt such measures for any such purposes as the majority of the members present should approve. General meetings were held twice in the year for receiving the reports of the committee ; and two collection sermons preached at each of the half-yearly meetings, for the benefit of the society, one in the established church, and the other among the dissenters. Of late years the society has passed, we believe, wholly into the hands of the churchmen, and temporal relief is rarely or never granted by it to the Jews ; but the Scriptures and tracts advocating Christianity are largely distributed by it both at home and abroad.

The Philo-Judeun Society of London is of a very similar description with the above, only that it is supported both by churchmen and dissenters; that it distributes according to the original plan of the Jews' society temporal relief, and invites to the debate and investigation of prophecy, on which its directors entertain some peculiar opinions.

The Sunday School Society was established in 1796 for promoting free and Sunday schools in Wales, under the patronage of the prince of

Wales. Its officers area president,vice-president, treasurer and vice-treasurer, and secretary. A society for promoting Sunday schools throughout the British dominions was instituted in 1785. See EDUCATION.

- The Society for the Suppression of Vice was established in Essex Street in the Strand in 1602. Its officers are a president, twelve vice-presidents, a treasurer, a secretary, and collector.

The National Society, for promoting the education of the poor in the principles of the established church, in England and Wales, was instituted in 181 1. The prince of Wrales was patron, and the archbishop of Canterbury president : it has a great number of vice-presidents, including all the bishops, a treasurer, and secretary, and has done great good.

A very meritorious society, for the Discharge and Relief of Persons Imprisoned for Small Debts must not be omitted here. It was instituted in February 1772. The debts, or composition for them, of the persons that are relieved must not exceed £10 ; and the aged and infirm are preferred, as well as those that have the largest families, and others who have lost their liberty by unavoidable misfortunes, and not by fraud, vice, or extravagance. No debtor can be relieved a second tim,e. The annual subscrip-

tions are two guineas, and those for life are twenty guineas. Similar in its object is the Philanthropic Society at Mile-End ; the annual subscription being only twelve shillings, and five guineas constituting a life-governor.

The Society for the Establishment of a Literari' Fund was instituted A. D. 1790, for the relief of authors in distress, whose claims, stated in writing to the committee, are duly considered by them, and admitted, if proper, at their discretion, whilst the names of the applicants are not disclosed. The annual subscription is one guinea, and that for life is ten guineas. The society's' house is in Gerard-street, Soho.

SECT. II. — OF SOCIETIES FOR PROMOTING SCIENCE AND LITERATURE.

The Royal Society of London is an academy or body of persons of eminent learning, instituted by Charles II. for the promoting of natural knowledge. The origin of this society is traced by Dr. Sprat, its earliest historian, no farther back than to ' some space after the end of the

civil wars',' in the seventeenth century. The scene of the first meetings of the learned men who laid the foundation of it is fixed by him in the University of Oxford, at the lodgings of Dr. Wilkins, warden of Wadham College. But Dr. Birch, on the authprity of Dr. Wallis, one of its earliest and most considerable members, assigns it an earlier origin. According to him certain worthy persons, residing in London about J645, being ' inquisitive into natural and the new and experimental philosophy, agreed to meet weekly on a certain day, to discourse upon such subjects, and were known by the title of The Invisible or Philosophical College.' In 1648 and 1649 the company who formed these meetings were divided, part retiring to Oxford and part remaining in London; but they continued the same pursuits as when united, corresponding with each other, and giving a mutual account of their respective discoveries. About 1659 the greater part of Oxford Society returned to London ; and, again uniting with their fellow-laˆorers, met once, if not twice, a-week, at Gresham College, during term time, till they were scattered by the public distractions of tha* year, and the place of their meeting made a quarter for soldiers. On the Restoration, in 1660, their meetings were revived, and attended by a greater concourse of men eminent for their rank and learning. They were at last taken no-tice of by the king, who, having himself a considerable taste for physical science, gave them an ample charter, dated the 15th of July, 1662, and afterwards a second, dated the 1 5th of April, 1663, by which they were erected into a corporation, consisting of a president, council, and fellows, for -promoting natural knowledge: and to give their investigations, against which strange prejudices were entertained, every possible support, he sometimes honored their meetings with his presence.

Their manner of electing fellows is by ballot-ing. Their council are in number twenty-one, including the president, vice-president, treasurer, and two secretaries ; eleven of whom are continued for the next year, and ten more added to

Each

.hem; all chosen on St. Andrew's d;iy. member at his admission subscribes an ment that he will endeavour to promote the good of the society ; from which he may be freed at any time, by signifying to the president that he desires to withdraw. The charges are five guineas paid to the treasurer at admission, and 13s. per quarter so long as the person continues a member : or, in lieu of the annual subscription, a composition of twenty-three guineas in one payment. Their design is to ' make faithful records of all the works of nature or art which come within their reach; so that the present as well as future ages may be enabled to put a mark on errors which have been strengthened by long prescription ; to restore truths that have been neglected ; to push those already known to more various uses; to make the way more passable what remains unrevealed,' Sec. To this purpose they have made a great number of experiments and observations on most of the works of nature ; and also numbers of short histories of nature, arts, manufactures, useful engines, contrivances, &c. The services which they have rendered to the public are very great. They have improved naval, civil, and military architecture ; advanced the security and perfection of navigation ; improved agriculture ; and put not only this kingdom, but also Ireland, the plantations, &c., upon planting. They have registered experiments, historif.s, relations, observations, &c., and reduced them into one common stock ; and have, from time to time, published those which they reckoned most useful, under the title o*" Philosophical Transactions, &c., and laid the rest up in public registers, to be transmitted to posterity as a solid ground-work for future systems.

Th?y have a library adapted to their institution ; towards which Mr. Henry Howard, afterwards duke of Norfolk, contributed the Norfolcian library, which is now greatly increased by a continual series of benefactions. The museum of natural and artificial rarities, given them by Daniel Colwal, esq., and since enriched by many others, is now removed to the British Mu-seum, and makes a part of that great repository. Their motto is Nullius in verba ; and their place of assembling is Somerset House, in the Strand. Sir Godfrey Copley, bart., left five guineas to be given annually to the person who should write the best paper in the year, under the head of experimental philosophy. This reward, which is now changed to a gold medal, is the highest honor the society can bestow. It is conferred on St. Andrew's day.

The Royal Society of Edinburgh was incorporated by royal charter on the 29th of March, 1783, and has for its object the cultivation of every branch of science, erudition, and taste. Its rise and progress towards

its present state was as follows: in 1718 a literary society was established in Edinburgh by the learned Ruddiman and others, which in 1731 was succeeded by a society instituted for the improvement of medical knowledge. In 1739 the celebrated Maclaurin conceived the idea of enlarging the plan of this society, by extending it to subjects of philosophy and literature. The institution was accordingly new-modelled by a printed set of

laws and regulations, the number of aembers was increased, and they were distinguished from that time by the title of The Society for Improving Arts and Sciences, or more generally by the title of The Philosophical Society of Edinburgh. Its meetings, however, were soon interrupted by the disorders of the country during the rebellion in 1745; and they were not renewed till 1752. Soon after this period the first volume of the Transactions of the Philosophical Society of Edinburgh was published, under the Title of Essays and Observations, Physical and Literary, and was followed by other volumes of acknowledged merit. About the end of 1782, in a meeting of the professors of the university of Edinburgh, many of whom were likewise members of the society, a scheme was proposed by the Rev. Dr. Robertson, principal of the university, for the establishment of a new society on a more extended plan, and after the model of some of the foreign academies. It appeared an expedient measure to solicit the royal patronage to an institution of this nature, which promised to be of national importance, and to request an establishment by charter from the crown. The plan was approved and adopted ; and the Philosophical Society, joining its influence as a body in seconding the application from the university, his majesty was most graciously pleased to incorporate the Royal Society of Edinburgh by charter. This society consists of ordinary and honorary members ; and the honorary places are restricted to persons residing out of Great Britain and Ireland. The election of new members is appointed to be made at two stated general meetings, which are to be held on the fourth Monday of January, and the fourth Monday of June. A candidate for the place of an ordinary member must signify by a letter, addressed to one of the members, his wish to be received into the society. He must then be publicly proposed at least a month before the day of election. If the proposal be seconded by two of the members present, his name is to be inserted in the list of candidates, and hung up in the ordinary place of meeting. The election is made by bal-lot, and is determined in favor of a candidate, if he shall have the votes of two-thirds of those present, in a meeting consisting of at least twen-ty-one members. The general business of the society is managed by a president, two vice-

pre- sidents, with a council of twelve, a general secretary, and a treasurer. These officers are chosen by ballot annually on the last Monday. of November, All public deeds, whether of a civil or of a literary nature, are transacted by this board, and proceed in the name. of the president or rice -president.

The society is divided into two classes, which meet and deliberate separately. The physical class has for its department the sciences of mathematics, natural philosophy, chemistry, medicine, natural history, and whatever, relates to the improvement of arts and manufactures. The li-teˆary class has for its department, literature, philology, history, antiquities, and speculative philosophy. Every member is desired at his admission to intimate which of those classes he wishes to be more particularly associated with ;

but he is at the same time entitled to attend the meetings of the other class, and to take part in all its proceedings. Each class has four presidents and two secretaries, who officiate by turns.

At these meetings the written essays and observations of the members of the society, or their correspondents, are read publicly, and become the subjects of conversation, after having been announced at a previous meeting. The author of each dissertation is desired to furnish the society with an abstract of it, to be read at the Hext meeting, when the conversation is renewed with increased advantage, from the knowledge previously acquired of the subject. At the same meetings are exhibited such specirnens of natural or artificial curiosities, such remains of antiquity, and such experiments as are thought wor-thy of the attention of the society. All objects of natural history presented to-the society are ordered by the charter of the institution to be deposited, on receipt, in the museum of the university of Edinburgh ; and all remains of antiquity, public records, or ancient MSS., in the library belonging to the faculty of advocates at Edinburgh.

Several volumes of the Transactions of the Society have been published, which bear ample testimony to the learning and acuteness

of their various authors.

The Society of Scottish Antiquaries is another respectable literary and philosophical society, instituted at Edinburgh in 1782, and established by royal charter at the same time with the preceding. The earl of Buchan was the founder of it, and indeed may claim the merit of having given birth to both societies ; for the Royal Society of Edinburgh above described, although it certainly did exist as a private philosophical society from the period above mentioned, would never, in all probability, have existed in any other form than that of a private society, if his lordship had not applied to his majesty for a royal charter to the Society of Scottish Antiquaries. An opposition unexpected, and not altogether liberal, was made to his lordship's application, by some of the old members of the Philosophical Society, but all opposition was happily quashed by his majesty's graciously granting two royal charters, and thus instituting both societies at the same time. The consequence is, that many of the most respectable literary cnaracters in the kingdom are members of both societies. And as the objects of both are also much the same, as well as their general routine of business, it is unnecessary to enlarge farther.

The Medical Society of London was instituted in 1752, on the plan recommended by lord Ba-con (De Augm Scient. lib. iv., cap. 2), to revive the Ilippocratic method of composing narratives of particular cases, in which the nature of the disease, the manner of treating it, and the consequences, are to be specified ; to attempt the cure of those diseases which, in his opinion, have been too boldly pronounced incurable; and, lastly, to extend their enquiries after the powers of particular medicines in the cure of particular cases. The collections of this society have been published, under the title of Medical Observations and Enquiries, in several volumes. VOL. XX.

Tlw Medical Society of Edinburgh was incorporated by royal charter in 1778; but there appears to have been in that city a voluntary association of the same name from the first establishment of a regular school of physic in the university. To the voluntary society the public is indebted for six volumes of curious and useful essays, collected principally by the late Dr. Monro from June 1731 to June 1736; but in 1739 that society was united to another. The ordinary members are elected by ballot, and three dissentients exclude a candidate. The meetings of this society are held every Saturday evening in their own hall, during the winter sea-son, when papers on medical subjects are delivered by the several members in rotation ; and four of these are

annually elected to fill the chair in rotation, with the title of annual presidents.

The Royal Physical Society of Edinburgh is another society, instituted about 1786, upon the same principles with the Medical, and conducted upon the same plan. It is also established by royal charter. This society has an elegant hall, built on purpose for its meetings, in Nicholson street, near the public dispensary, and has also an excellent library.

There is also an Experimental Society at Dub-lin, for promoting natural knowledge, which was instituted in 1 777 ; the members meet once every week, and distribute three honorary gold medals annually for the most approved discovery, invention, or essay, on any mathematical or philosophical subject. The society is under the direction of a president, two vice-presidents, and a secretary.

The Royal Medical Society of Paris was instituted in 1776. It was afterwards included in the National Institute.

The Asiatic Society, an institution planned by the late illustrious Sir William Jones, and actually formed at Calcutta on the 15th of January, 1784, for the purpose of tracing the history, antiquities, arts, sciences, and literature, of the immense continent of Asia. As it was resolved to follow as* nearly as possible the plan of the Royal Society of London, of which the king is patron, the patronage of the Asiatic Society was offered to the governor-general and council, as the executive power in the territories of the company. By their acceptance of this offer, Mr. Hastings, as governor-general, appeared among the patrons of the new society ; ‘ but he seemed in his private station, as the first liberal promoter of useful knowledge in Bengal, and especially as the great encourager of Persian and Shanscrit literature, to deserve a particular mark of distinction : ‘ he was requested, therefore, to accept the honorary title of president. This was handsomely declined in a letter from Mr. Hastings, in which he requested ‘ to yield his pretensions to the gentleman whose genius planned the institution, and was most capable of conducting it, to the attainment of the great and splendid purposes of its formation.’ On the receipt of this letter, Sir William Jones was nominated president of the society ; and, in his first discourse from the chair, pointed out its objects as follows : — ‘ It is your design, I conceive,’ said he, ‘ to take an ample space for your learned investigations, bounding

them only by the geographical limits of Asia ; so that, considering Hindustan as a centre, and turning your eyes in idea to the north, you have on your right many important kingdoms in the eastern peninsula, the ancient empire of China with all her Tartarian dependencies, and that of Japan, with the cluster of precious islands in which many singular curiosities have loo long been concealed ; before you lies that prodigious chain of mountains which formerly, perhaps, were a harrier against the violence of the sea ; and beyond them the very interesting country of Ti-bet, and the vast regions of Tartary, from which, us from the Trojan horse of the poets, have is-sued so many consummate warriors, whose domain has extended at least from the banks of the Ilyssus to the mouths of the Ganges ; on your left are the beautiful and celebrated provinces of Iran or Persia, the unmeasured, and perhaps unmeasurable, deserts of Arabia, and the once flourishing kingdom of Yemen, with the pleasant isles that the Arabs have subdued or colonised ; and, farther westward, the Asiatic dominions of the Turkish sultans, whose moon seems approaching rapidly to its wane. By this great circumference the field of your usual researches will be enclosed ; but since Egypt had unquestionably an old connexion with this country, since the language and literature of the Abyssiniars bear a manifest affinity to those of Asia, since the Arabian arms prevailed along the African coast of the Mediterranean, and even erected a powerfal dynasty on the continent of Europe, you may not be displeased occasionally to follow the stream of Asiatic learning a little beyond its natural boundary ; and, if it be necessary that a short name be given to our society, that of Asiatic appears both classical and proper, whether we consider the«place or the object of the institution, and preferable to Oriental, which is a word merely relative, and conveys no very distinct idea.

• ‘ If now it be asked, What are the intended objects of our enquiries within these spacious limits? we answer, MAN and NATURE; whatever is performed by the one or produced by the other. Human knowledge, has been elegantly analysed according to the three great faculties of the mind, memory, reason, and imagination ; which we constantly find employed in arranging and retaining, comparing and distinguishing, combining and diversifying, the ideas which we receive through our senses or acquire by reflection : hence the three main branches of learning are, history, science, and art ; the first

compre' hends either an account of natural productions, or the genuine records of empires and states ; the second embraces the whole circle of pure and mixed mathematics, together with ethics and law, as far as they depend on the reasoning faculty ; and the third includes all the beauties of imagery and the charms of invention displayed in modulated language, or represented by color, figure, or sound. Agreeably to this analysis you will investigate whatever is rare in the stupen-dous fabric of nature, will correct the geography of Asia by new observations and discoveries ; will trace the annals and even tradition of those nations who from time to time have peopled or

desolated it ; and will bring to light their various forms of government, with their institutions civil and religious ; you will examine their improvements and methods in arithmetic and geometry ; in trigonometry, mensuration, mechanics, optics, astronomy, and general physics ; their systems of morality, grammar, rhetoric, and dialectic ; their skill in chirurgery and medicine; and their advancement, whatever it may be, in anatomy and chemistry. To this you will add researches into their agriculture, manufactures, trade ; and whilst you enquire with pleasure into their music, architecture, painting, and poetry, will not neglect those inferior arts by which the comforts and even elegancies of social life are supplied or improved. You may observe that I have omitted their languages, the diversity and difficulty of which are a sad obstacle to the progress of use-ful knowledge ; but I have ever considered languages as the mere instruments of real learning, and think them improperly confounded with learning itself: the attainment of them is, however, indispensably necessary; and if, to the Persian, Armenian, Turkish, and Arabic, could be added not only the Shanscrit, the treasures of which we may now hope to see unlocked, but even the Chinese, Tartarian, Japanese, and the various insular dialects, an immense mine would then be open, in which we might labor with equal delight and advantage.'

Of this society many volumes of Transactions have been published, which are replete with information in a high degree curious and important; and we hope that the European world will soon be favored with another. The death of the accomplished president may indeed damp the spirit of investigation among the members ; for, to conquer difficulties so great as they must meet with, a portion seems to be necessary of that enthusiasm which accompanied all the pursuits of Sir William Jones ; but his successor is a man of great worth and learning, and we trust will use his utmost endeavours to have the plan completed of which Sir William gave the outlines.

The American Philosophical Society, held at Philadelphia, was formed in January, 1769, by the union of two societies which had formerly subsisted in that city. This society extends its attention to geography, mathematics, natural philosophy, and astronomy; medicine and anatomy; natural history and chemistry ; trade and commerce ; mechanics and architecture ; husbandry and American improvements. Its officers are a patron, president, three vice-presidents, one treasurer, four secretaries, and three curators, who are annually chosen by ballot. The duty of the president, vice-presidents, treasurer, and secretaries, is tlie same as in the other society. The business of the curators is to take the charge of all specimens of natural productions, whether of the animal, vegetable, or fossil kingdom; all models of machines and instruments ; and all other matters belonging to the society which will be entrusted to them. The ordinary meetings are held on the first and third Fridays of every month from October to May inclusive. This society was incorporated by charter the 15th of March, 1 780 ; and has published three volume*

t»f its Transactions, containing many ingenious papers on general literature and the sciences, as well as respecting those subjects peculiar to America. It is a delightful prospect to the philosopher to consider that Asia, Europe, and America, though far separated, and divided into a variety of political states, are all three combined to promote the cause of knowledge and truth.

A Literary and Philosophical Society, of considerable reputation, has long been established at Manchester, under the direction of two presidents, four vice-presidents, and two secretaries. The number of members is limited to fifty ; besides whom there are several honorary members, all of whom are elected by ballot ; and the officers are chosen annually in April. Numerous volumes of valuable essays have been already published by this society, and often quoted in our work.

The Society of Antiquaries of London was founded about the year 1572 by archbishop Parker, a munificent patron qf learned men. For the space of twenty years it assembled in the house of Sir Robert

Cotton; in 1589 they resolved to apply to queen Elizabeth for a charter and a public building where they might hold their meetings ; but it is uncertain whether any such application was ever made. In the mean time the reputation of the society gradually increased, and at length it excited the jealousy of James I., who was afraid lest it should presume to canvas the secret transactions of his government. He accordingly dissolved it. But in 1717" the Antiquarian Society began to revive; and a number of gentlemen, eminent for their attachment to this science, had weekly meetings, in which they examined the antiquities and history of Great Britain preceding the reign of James I., but without excluding any other remarkable antiquities that might be offered to them. From this time the society grew in importance; and in 1750 they unanimously resolved to petition the king for a charter of incorporation. This they obtained, in 1751, by the influence of the celebrated earl of Hardwicke, then lord chancellor, and Martin Folkes, esq., who was then their president. The king declared himself their founder and patron, and empowered them to have a body of statutes, and a common seal, and to hold in perpetuity lands, &c., to the yearly value of £1000.

The chief object of the enquiries and researches of this society are British antiquities and history ; not, however, wholly excluding those of other countries. The study of antiquity offers to the curious and inquisitive a large field for research and amusement. The enquirer in this branch furnishes the historian with his best materials, while he distinguishes from truth the fictions of a bold invention, and ascertains the credibility of facts ; and to the philosopher he presents a fruitful source of ingenious speculation, while he points out to him the way of thinking, and the manners of men, under all the varieties of aspect in which they have appeared.

The Horticultural Society of London was instituted in 1804, under a president, a council, three treasurers, and secretary. It has of late

greatly extended its operations, and engaged and planted handsome grounds at Chiswick.

Besides these literary societies here mentioned, there are a great number more in different part of Europe, some of which are noticed in our article ACADEMY. Those which are omitted are not omitted on account of any idea of their inferior importance; but either because we have had no access to authentic information, or because they resemble the societies, already described, so closely, that we could have given

nothing but their names.

SECT. III. — SOCIETIES FOR ENCOURAGING ANI> PROMOTING ARTS, MANUFACTURES, &c.

The London Society for the Encouragement of Arts, Manufactures, and Commerce, was instituted, in 1754, by lord Folkstone, lord llomney, Dr. Stephen Hales, and a few private gentlemen ; but the merit of this institution chiefly belonged to Mr. William Shipley, an ingenious mechanic ; who, though deriving no advantages from learning, by unwearied personal attendance found means to engage a few persons of rank and fortune to meet at Peel's coffee-house in Fleet Street, and to adopt a plan for promoting arts and manufactures.

The office-bearers of this society are a president, twelve vice-presidents, a secretary, and re-gistrar. Their proceedings are regulated by rules and orders established by the whole society, and printed for the use of the members. All questions are determined by show of hands, or by ballot ; and no matter can be confirmed without the assent of a majority at two meetings They invite all the world to propose subjects for en - couragement ; and whatever is deemed deserving-attention is referred to a committee, who, aftei due enquiry and deliberation, make their report to the whole society, where it is approved, rejected, or altered. A list is published every year of the matters for which they propose to give premiums ; which are either sums of money, and those sometimes very considerable, or the society's medal in gold or silver, which they consider as the greatest honor they can bestow. AH possible care is taken to prevent partiality in the distribution of their premiums, by appointing committees (who when they find occasion call to their assistance the most skilful artists) for the strict examination of the real merit of all matters brought before them.

The chief objects of the attention of this society in the application of their rewards are ingenuity in the arts, useful discoveries and improvements in agriculture, manufactures, mechanics, and chemistry, or the laying open of any such to the public; and, in general, all such useful inventions, discoveries, or improvements, as may tend to the advantage of trade and commerce.

It is required that the matters for which premiums are offered be delivered in without names, or any intimation to whom they belong; that each particular thing be marked in what manner each claimant thinks fit, such claimant sending with it a paper sealed up, having on the outside a corresponding mark, and on the inside the claimant s

name and address. No papers shall

be opened but such as shall gain premiums ; all the rest shall be returned unopened, with the matters to which they belong, it' enquired after by the marks within two years; after which time, if not demanded, they shall be publicly burnt, unopened, at some meeting 01' the society. All the premiums of this society are designed for that part of Great Britain called England, Wales, and Berwick upon Tweed. No person shall receive any premium, bounty, or encouragement, from the society for any matter for which he has obtained or proposes to obtain a patent. No member of this society shall be a candidate for, or entitled to receive, any premium, bounty, or reward whatsoever, except the honorary medal.

The respectability of the members who compose it may be seen by perusing the list which accompanies their Transactions. In vol. xii. it occupies no less than forty-three pages. Some idea may be formed of the wealth of this society, by observing that the list of their premiums fills ninety -six pages, and amounts to 250 in number. These consist of gold medals worth from thirty to fifty, and in a few instances to 100 guineas ; and silver medals valued at ten guineas.

This society is one of the most important in Great Britain. Much money has been expended by it, and many are the valuable effects of which it has been productive. Among these we reckon not only the discoveries which it has excited, but the institution of other societies on the same principles to which it has given birth ; and future ages will consider the founding of this society as one of the most remarkable epochs in the history of the arts.

The Society at Bath for the encouragement of Agriculture, Arts, Manufactures, and Commerce, was founded in 1777 by several

gentlemen who met at the city of Bath. This scheme met with a very favorable reception both from the wealthy and learned. The wealthy subscribed very liberally, and the learned communicated many important papers. Oh application to the Lon-don and provincial societies, instituted for the like purposes, they very politely offered their assistance. Seven volumes of their Transactions have already been published, containing very valuable experiments and observations, particularly respecting agriculture, which well deserves the attention of all farmers in the kingdom. We have frequently referred to them in the course of this work.

Society for Working Mines is an association formed not many years ago on the continent of Europe. This institution arose from the accidental meeting of several mineralogists at Skleno near Schemnitz, in Hungary, who met to examine a new method of amalgamation. Struck with the shackles imposed on mineralogy by monopolizers of new and useful processes, they thought no method so effectual to break them, as forming a society, whose common labors should oe directed to fix mining on its surest principles ; and whose memoirs, spread over all Eu-rope, might offer to every adventurer the result < >f the researches of which they are the object. I»y these means there would be a mass of information collected : the interests of individuals

would be lost in the general interest; and the one would materially assist the other.

The object of the society is physical geography; mineralogy founded on chemistry ; the management of ores ; subterraneous geometry ; the history of mining ; foundries, and the processes for the extraction of metals from the ores, either by fusion or amalgamation, in every instance applied to practice. The end of this institution is to collect every thing than can assist the operations of the miner, and to communicate it to the different members, that they may employ it for the public good, in their respective countries. Each member pays annually two ducats (about 18s. 6d.) to the direction every Easter. The society is bound to publish every novelty that shall be communicated to it ; to communicate to each member the memoirs, designs, models, productions, and every thing connected with the institution ; to answer all the necessary demands made, relating in any respect to mining ; and to give its opinion on every plan or project communicated through the medium of an honorary member. The great centre of intelligence is at Zellerfield in Hartz, Brunswick ; but

the society is not fixed to any one spot ; for in every particular state some practical mineralogist is nominated as director. Among these have appeared the names of baron Born, M. Pallas, M. Carpentier, M. Prebra, and M. Hen-kel. Their office is to propose the members ; to take care that the views of the society are followed out ; to answer the requests of the members ; in case of the death of a director, to choose another ; and to determine where the archives and the strong box is to be placed. Most of the eminent mineralogists in Europe have been members of this society. It is erected on the most liberal and extensive plan.

The Society for the Improvement of Naval Architecture was founded in 1791. The object of it is to encourage every useful invention and discovery relating to naval architecture, both by honorary and pecuniary rewards. To improve the theory of floating bodies and of the resistance of fluids ; to procure draughts and models of differei t vessels, with calculations of their capacity, centre of gravity, tonnage, &c. ; to make observations and experiments, and to point out such as appear best calculated to further their designs ; in a word to cultivate whatever may tend to render navigation more safe, salutary, and even pleasant.

This institution owes its existence to the patriotic disposition and extraordinary attention of Mr. Sewel a citizen of London, who has been led to take such particular notice of the state of naval architecture in this country. His attention was the more seriously excited, by finding that it was the opinion of some private ship-builders, who, in a debate on the failure of one of our naval engagements, pronounced that, such ‘ would ever be the case, while the construction of our ships of war was not studied as a science, but carried on merely by precedent ; that there h;ul not been one improvement in our navy that <iid not originate with the French, who had naval schools, and seminaries for the study of it; and that our ships were not a match for those of that

nation either singly or in a fleet,’ &c. In a short time the society were

enabled to offer very considerable premiums for particular improvements in the construction of our shipping, &c., and also to encourage our philosophers, mathematicians, and mechanics, to make satisfactory experiments, tending to ascertain the laws of resistance of water to solids of different forms, in all varieties of circumstances. Their highest re-ward is £100 or a gold medal. Other premiums of fifty, thirty, and twenty guineas, according to the importance or difficulty of the particular subject or point of investigation, are likewise offered, for different discoveries, inventions, or improvements. The terms of admission into the society are a subscription of two guineas annually, or twenty guineas for life.

The Society of Artists of Great Britain, which consists of directors and fellows, was incorporated by charter in 1765, and empowered to purchase and hold lands, not exceeding £1000 a year. The directors of this society, annually elected, consist of twenty -four persons, including the president, vice-president, treasurer and secretary ; and it is required that they be either painters, sculptors, architects, or engravers by profession.

The British Society for extending the Fisheries and Improving the Sea Coasts of this Kingdom, was instituted in 1786. The design of this society will best appear from their charter, of which we subjoin an abstract. The preamble states, ‘ the great want of improvement in fisheries, agriculture, and manufactures, in the Highlands and Islands of North Britain ; the prevalence of emigration from the want of employment in those parts ; the prospect of a new nursery of seamen, by the establishment of fishing towns and villages in that quarter. The act therefore declares that the persons therein named, and all other persons who shall thereafter become proprietors of the joint stock mentioned therein, shall be a distinct and separate body politic and corporate, by the name above quoted. That the said society may raise a capital joint stock not exceeding £150,000 to be applied to purchasing lands and tenements to perpetuity, for the building thereon free towns, villages, and fishing stations ; that the joint stock shall be divided into shares of £50 each : that no one person shall in his or her name possess more than ten shares, or £500 : That the society shall not borrow money : That the sums to be advanced, and the profits arising therefrom, shall be divided proportionably to the sum subscribed : and that no person shall be liable for a larger sum than he or she shall have respectively subscribed : That one or two shares shall entitle to one vote and no more, in person or by proxy, at all meetings of proprietors ; three or four shares to two votes ; five, six, or seven shares to three votes ; eight or nine shares to four votes ; and ten shares to five votes and no more : That more persons than one

inclining to hold in their joint names one or more shares shall be entitled to vote, by one of such persons, according to the priority of their names, or by proxy : That bo-dies corporate shall vote by proxy under their seal : That ˆall persons holding proxies shall be proprietors, and that no person shall hold more than five votes by proxy : *hat the affairs of the

society shall be managed by a governor, deputy-governor, and thirteen other directors, to be elected annually on the 25th of March, from the proprietors, holding at least one full share, by signed lists of their names to be transmitted to the secretary : That five proprietors, not being governor, director, or other officer, shall be in like manner annually elected to audit the accounts of the society : That there shall be one general meeting of the proprietors annually on the 25th of March : That occasional general meetings shall be called on the request of nine or more proprietors : That the general meetings of the proprietors shall make all bye-laws and constitutions for the government of the society, and for the orderly carrying on of its business : That the cash of the society shall be lodged in the bank of England, bank of Scotland, or the royal bank of Scotland : That no director, proprietor, agent, or officer of the society, shall retain any sum or sums of money in his hands beyond the space of thirty days : That all payments shall be made by draughts on the said banks, under the hands of the governor or deputy-governor, countersigned by the secretary or his deputy, and two or more directors : And that the books in which the accounts of the society shall be kept shall be open to all the proprietors.7 The institution of this public spirited society was in a great measure owing to the exertions of the patriotic John Knox ; who, in the course of twenty-three years, traversed and explored the Highlands of Scotland no less than sixteen times, and spent several thousand pounds of his own fortune in pursuing his patriotic designs.

The Society of Civil Engineers of London. — This society took its rise from the following circumstances : — Before or about the year 1760 a new era in all the arts and sciences commenced in this country. Every thing which contributes to the comfort, the beauty, and the prosperity of a country, moved forward in improvement, so rapidly and so obviously, as to mark that period with particular distinction. It was about this time that manufactures were extended on a new plan, by the enterprize, the capital, and, above all, by the science of the men of deep knowledge and persevering industry engaged in them. It was seen that it would be better for establishments to be placed in new

situations, adapted to the obtaining raw materials, and the labor of patient and retired industry, than to endure the vexations that perpetually occur in corporate towns, and the wages of their extravagant workmen. This produced a new demand, not thought of till that period, in this country, — internal navigation. To make communications from factory to factory, and from warehouses to harbours, as well as to carry raw materials to and from such establishments, became absolutely necessary. Hence arose those works of real utility which have been carried on to a degree of extent and magnitude to which as yet. there is no appearance of limitation. The ancient harbours of this island, it may be said, have ever been an example in the history of mankind. The sea-ports were such as nature had formed, and were but little better, notwithstanding some jettees and piers of defence, which had been

made and altered, without knowledge or judgment, at municipal expense. This general situation of things gave rise to a new profession and order of men, denominated ‘ civil engineers.’

The celebrated Mr. Smeaton first proposed this society for the advancement of the science of civil engineering, and in March 1 771 it was established, and the members met on Friday evenings, at the Queen’s Head Tavern, Holborn. It did not increase rapidly ; for in twenty years the numbers were less than seventy, and of these, there were only about fifteen who were real engineers, employed in public works, or private undertakings of great magnitude. The other members were either amateurs, or ingenious workmen and artificers connected with, and employed in, works of engineering. A register was kept of the names of its members ; and a communication of ideas and knowledge, in the particular walks of each member, were, at the same time, the amusement and the business of the meetings. In this manner the society proceeded till 1792, when it ceased to exist, by mutual consent of the principal members. Its dissolution was occasioned by the ill treatment which Mr. Smeaton experienced from one of the members.

In April, 1793, a new society was, however, formed under the denomination of ‘ The Society of Civil Engineers.’ It consisted of three classes : — 1. Of ordinary members, to consist of real engineers, actually employed as such in

public or in private service, 2. Honorary mem bers, to consist of men of science and gentlemen of rank and fortune, who had applied themselves to subjects of civil engineering ; and who might, for knowledge, have been real engineers, had it not been their good fortune to have it in their power to employ others in this profession ; and also of those who are employed in other public service, where such and similar kinds of knowledge, are necessary. 3. Honorary members, consisting of various artists, whose professions and employments are necessary, or extremely useful, as well as connected with civil engineering.

The Geological Society was instituted in 1811, under a president, four vice-presidents, treasurer, two secretaries, and a foreign secretary.

The Mineralogical Society was instituted in 1799 ; but it is now incorporated with the former.

The Entomological Society of London, instituted in 1806, has a president, vice-president, treasurer, and secretary, several fellows, and a printer.

The Linnaan Society was founded in 1788, and incorporated in 1802. Its late president was Sir James Edward Smith ; it has a council, a treasurer, secretary, and librarian. Its house is in Gerard Street, Soho. It has published upwards of twenty volumes of Transactions.

The Astronomical Society of London is a rising society of the metropolis of great promise. It was instituted in 1823, and enrols many distinguished names.

SOCIETY ISLANDS. A group of islands in the Pacific, to which Captain Cook gave the name of Society Islands, consists of six only, *viz.* Marua, Bolabola, Tubia, Otaha, Ulietea, and Huaheine ; but to these we may add Otaheite, Eimeo, Sir Charles Saundes’s, Tethuroa, and Miatea. See OTAHEITE. &c.

PART I. GENERAL DESCRIPTION.

This group, as Mr. Pinkerton justly observes, has attracted more attention than any other in Polynesia, and our admiration of Otaheite has excited some degree of ridicule on the continent. The unfortunate La Perouse remarks, in one of his letters, ‘ I flatter myself you will see with pleasure that in the course of so long a voyage I shall have no occasion to put in at those everlasting Society Islands, about which more has been written than concerning several kingdoms of Europe ; and I confess to you that I congratulate myself on having nothing to say about Otaheite and queen Oberea.’ But it may be said that this accomplished seaman shows some little jealousy of the English discoverers, and is led to prefer the French group called the Islands of Navigators, which perhaps in size and population exceed the Society Islands. The opportunity of fishing has been assigned as a reason why the inhabitants of all the Polynesian islands fix their abodes near the sea ; but where fruits are the staple commodities, and the bread-fruit the staff of life, .as in the Society Islands, the pre-eminent fertility of the level which like a margin embraces certain portions of the island, affording a plane for the rearing of huts and villages, and in this way the means of enjoying the social benefits of a pleasant neighbourhood, a traveller feels to be a-much more general mo-tive for the Indian’s preference. Besides, the refreshing coolness of shade, fanned by the alternating sea and land breezes, makes these withdrawing vales very grateful retreats during the sunny hours of noontide, when compared with the barren acclivities of the mountains, which in the morning perhaps are parched by an un-clouded sun, and in the afternoon drenched with inclement rains. This sudden vicissitude from heat to cold is very keenly felt by a wayfaring man, as the writer has often experienced, one hour panting with heat, the next shivering with cold, unless haply by timely warning he fore-stalls the impending shower and repairs with hasty steps to the sea side. Whence the reader will observe that, passing over the difficulty and sultry toil of ascending and descending steeps, the interior of an island is, from the seemingly attracting influence of the mountains upon the vapory contents of the atmosphere, much more exposed to the inclemency of heavy showers than its sea-girt borders, where their low roofed dottages thatched with dried palm leaves are not so often wetted by rain.

Forster says that the Society I&les are encircled with a reef of coral, the lower hills are

of a red ochreous earth, the higher of a kind of argillaceous rock, with coarse granite or the sax-tim of Linnaeus. Black and gray basalt are also found, and it is said crystals of native sulphur.

la order to give the reader some perception of that remarkable change which the civil and religious phenomena have undergone, we will extract a few remarks from that excellent account of the Society Islands collected by the compiler of the missionary voyage, and place them in counterview with some observations made by the writer who visited this group, as well as that of the Sandwich Islands, in 1826, as naturalist to tlie Blossom.

* The government of Otaheite is monarchica. and hereditary in one of the family ; of this two branches subsist, Temarre the son of Oberea, and Oammo.' The government now, during the regency of the present queen, is managed by contending chiefs, since her majesty by acts of plunder, injustice, and swinish debauchery, has rendered her authority despicable. Her son, the heir apparent, was a boy of a hopeful disposition, and nursed in moral and religious knowledge in the school of the missionaries. We are sorry to add that this youth, who raised high expectations of his future worth, has since the departure of the Blossom paid the debt of nature. The palace of the queen, which was visited for the special purpose of seeing the best of the choral amusements, might by comparison deserve the name of dwelling-house, because it was tenanted by human creatures. The floor was formed by nature, and its hardness meliorated by a copious strewment of dirty grass. Upon a wide mat, rolled in elegant disorder, the graced persons of the queen-regent, the queen dowager, the princess, and half a dozen female attendants. To give the reader at a single view an idea of the decorum and decency of this assembly ; as the house was not divided into a convenient number of apartments, a sanctuary was formed at one corner of the room, by hanging up a piece of cloth, in order to screen certain impatient lovers from the unbought glances of profaner eyes.

‘ The famous, or rather infamous, Arreoy Society, consisting of noble persons in general, have also different ranks among themselves, like our freemasons, known by the manner of their tattooing.' This cursed club, which maintained a community of wives and the practice of murdering their offsprings, has, by the assiduous and benevolent exertions of the missionaries, been since abolished. We may frame

some idea of the lamentable condition of the softer part of human nature, when we remember that a mother deemed it the duty of maternal kindness to give her female child an early quietus, and thus remove it from the sufferance of that hard bondage which she had from the morning of her days unceasingly groaned under. When we sojourn among the Indians of Polynesia, we are apt in contemplating their lewdness, falsehood, and ingratitude, to be severe in our comments, and to express our disapprobation in terms of zealous indignation ; but when we re-turn to Erigland, and are again made to feel the

smart of being overreaciied by the knavish part of our own countrymen, we begin to correct the harshness of our judgment, and to think that iniquity sometimes goes better clad than in a bare maro or scanty apron of a South Sea islander.

There has been a school established for the exclusive education of the children of missionaries, who were in 1826 between seventy and eighty in number, but didactic institution is un-able to root out the connate love of one's native soil, which was the theme of all who commented upon the Odyssey, and is strikingly exemplified in that rising generation. An infant, as soon as he has learnt to distinguish one object from another, prefers a native nurse to its mother, and its first attempts at articulation are made in the Tahitian dialect. In youth they generally evince the greatest awkwardness of behaviour, when a European is present, and speak their mother tongue with great hesitation. The writer remeaibers a girl of about thirteen years of age whom he often saw at a house of a certain friend, who could never be bribed by any kindness to reply to his attentions otherwise than with a smile of extreme satisfaction; this arose from that sort of diffidence we feel in our first attempts to express ourselves in a foreign language before those with whom it is vernacular. A married lady of the mission family with whom he was well acquainted never ventured to return an answer to any question or remark, till one day the conversation of her father and his visitor happening to turn upon the subject of the native dancing, the mention of a pastime so fondly remembered set her tongue at a happy liberty, and she began with great freedom and complacency to descant upon their peculiar qualities till her father who from the love of conversing with a stranger interrupted the strain of description and proceeded to tell the story himself.

Mr. Armitage, a respectable weaver, about five or six years ago set out

from England for the Society Islands, with an intention and means of establishing a manufactory of cotton, which grows abundantly there ; and after a great deal of patient labor succeeded in erecting a mill, and a house for the reception of his numerous looms, spinning wheels, &c. ; but, when the women began to reflect that besides paying the half of their toil in weaving, in return for the materials and its dressing, their husbands would be copartners with them in the enjoyment of the produce, they gave up working; this worthy man complained to the writer that he despaired of ever being able to stir these sottish islanders up either by example or reward to any habits of industry.

That the people have degenerated since the time of Cook is unquestionable, who, wherever we had a fair opportunity of judging, was found to be very correct in his statements ; which has arisen from this cause, that the natives, being ambitious of obtaining European articles, have left off making anv of their own fashion, and altogether ceased to busy themselves in contriving any artificial curiosity, either for ornament or their own particular amusement.

He who has been accustomed to look at dis-

•ant countries through the prospective of drawings and descriptions, will feel himself disappointed on landing at Tahiti, for he will miss the green grassy plot, which is so essential for the ground work of a finished landscape. There is a plain, the scene of the wakes and merriments in the time of Cook, which is now overgrown with a sarmentous or matted grass, (cynodon dactylon), but for want of dressing, parched and dried like a field of stubble. Instead of neat built cottages, he will with very few exceptions meet with miserable hovels, which from the nature of their constructions give access to the elements of light and air through a thousand crannies. The missionaries and a few of the chiefs inhabit houses, which at the cost of a great deal of labor are made tolerably commodious, and are plastered and white-washed after the manner of English cottages. The features of the women are agreeable, and sometimes handsome, heightened by a kindling smile

of good nature ; but they want that softness and clearness of complexion which are the result of a delicate nurture, to bestow that witchery and fascination which story has given them.

Few offerings are generally made in warm climates at the shrines of industry, and still fewer by the dames of Tahiti, whose beauties receive but little aid from the curious labors of the needle and the loom, except on Sundays; when putting on their best apparel and native straw bonnets, they hasten with an air of gaiety in their countenances to the chapels of their religious teachers, where they form a pleasing spectacle to a stranger, and fill the heart of the indus-Irious missionary with a certain sense of joy and satisfaction : he naturally reflects that but for his labors they might never have known the nature of a sabbath, nor of that rest.that remaineth tor Ihe people of God. His eye pursues them not into the recesses of their homes, to see that piety is often worn as an ornament on a Lord's day, and laid up during the Vest of the week, lest it should be soiled by the commerce of the world ; nor does he always know that their maiden inno- »ence is but too often like the potter's vessel.

A present made to a chief woman, qjuickly losing the lustre of newness, is given to the first attendant that begs it of her, who in her turn bestows it upon one of her companions, and thus a jewel or valuable article of dress is soon spoiled by the casualties it meets in these successive transfers, and never lasts to be an old one. And a gentleman who has treasured up a precious ornament for the queen of the Society Islands, will have the mortification to see it the next day, after the gift is accepted adorning the ill-favored person of one of her slatternly attendants. Some might be inclined to ascribe this facility of humor to a native goodness of heart; but I fear it ought rather to be attributed to an habitual nonchalance, which renders them indifferent to matters of greater importance. The Tahitian females love to pray and sing, and seem willing to interpret the words of the apostle literally, when he says, that bodily exercise profiteth nothing. The missionary ladies with whom the writer conversed complained that, notwithstanding the seeming pliancy of their dispositions, it is impossible to mould them into any habits of domestic economy and becoming deportment, much less impart to them any portion of that spirit which tends to keep unity at home, and to draw blessings down from heaven upon members of a peaceful and well ordered family. Ilowevei lovely the Tahitian fair ones may have appeared in description, the well-beseeming study of household good is without example among them, and their extreme idleness and want of reflection, which renders them forgetful of benefits, were the constant subjects of lamentation by the missionaries, who from a pater-nal

affection were inclined to cast a veil of kindness over the unsightly parts of their behaviour. They have a small code of written laws, which has in description been made to wear a giant's suit of armour; but is as might be expected for the present swaddled in the bands of infancy. The sanctions are generally fines and hard labor, which in the spirit of Draco's legislation are not accommodated to the nature and degree of the offence, and so enormous as to make the act of wearing a wreath of flowers, because it savours of the old super-stitution, as heinous in the sight of the Haava, or judge, as theft and robbery.

There was a time, since the commencement of the missionary administration and dynasty, when the man or woman who presumed to variegate the complexion with those curious delineations called tattooing (tatu, to grave or etch) had the skin, by the same operation, converted into an indelible blot. It is to be hoped that, when time shall have ripened the minds of the Junior missionaries to the same degree of moderation that is exercised by the venerable elders of that brotherhood, such severities will not only begin to be laid aside, as they are already, but be entirely forgotten. The accounts which have been given of the issues of the missionary labors have been either too highly colored by men who were rapt with the idea of the sud-den diffusion of the Gospel, or rated a great deal too low by others whose hearts, being unseasoned by the grace of God, dream that nothing is worthy of pursuit but what either pampers their appetite or fills their purse. The representations which have of late appeared to their disparagement labor under this radical defect, that the reporters were neither competent, from an ignorance of the na-ture of revelation, nor willing, by making proper researches, to arrive at a fair statement. The intelligent reader, who lias observed what a vein of pleasantry runs through some remarks on Bow Island, which appeared some time ago in one of the periodical publications, must be admonished that the fruit of the pandanus odoratissimus, which is there said to be about the size of a hazel-nut, is often larger than a walnut ; and, after the men have eaten a portion of the mealy pulp surrounding the base of the drupe, it is customary for the women to pound it with a stone in order to come at the kernels of the nuts which are found within it.

We have made this remark to show how well those who censure missionaries are calculated to edify the world by their observations and dis* coverie.s.

SOCIETY ISLANDS.

Pastimes. — The dances, so much admired in the visits of captain Cook, have interdicted by the missionaries, not only because many wanton and lascivious attitudes were mixed with those light fantastic trippings, in which a merry heart exhibits its sprightly movement in a child of nature, but also because these amusements formed, as among eastern nations, a part of their religious rites, and therefore had a tendency to awaken pleasing reminiscences of their pagan idolatry. They have, since the period alluded to, been debased into what the poet calls icopˆa?, and which the scholiast, in terms exactly to our purpose, describes as a certain kind of ludicrous dance, in which the performer moves his loins in a shameful manner.

As the eagerness for accumulating the information of an eye-witness is apt sometimes to make a traveller willing to gratify the warmth of his curiosity at the expense of decorum, an exhibition of this kind was, with a good deal of pains and bribery, set on foot for the entertainment and instruction of the officers of his majesty's ship Blossom. At a set hour in the evening these gentlemen repaired to a dwelling, which was assigned for their nocturnal diversions, but these sports had scarcely begun when the magistrates and beadles appeared with their swords to enforce obedience and put an end to them ; and we must do them the justice to add that the sparkling charms of spirituous liquors, which had won the dancers, had no effect upon these stern officers of government. But the reader's estimation will be somewhat lowered to hear that, on the writer's return to the residence of the British consul, he met the very person who had received the bribes acting as constable of the night ; took his sword from him, and, by way of expressing his resentment, made as if he would run him through for his treachery, which the dis-honest fellow, confounded with this unlooked-for rencounter, bore without attempting to defend himself or escape.

Part of the following portion of Tahitian theo-gony was communicated to Mr. Collie by Taati, a chief of the district of Papara, who had been educated for the high-priesthood to minister at the Morai in the same province. This sacred pile was reared by Taati's great great grandfather in honor of the god Oru, whom he had introduced, it is said, in the following manner : — This predecessor of Taati's, in lineage and government, was often in a state of warfare with the king

and the other chieftains of the island. In a certain engagement, he and his followers being discomfited, he began to grow out of conceit with his former patron, and therefore, directing his course towards the island Ulietea, he made his suit to Oru, a divinity of that place, who, won at last by prayers and sacrifices, consented to accompany Taati's ancestor in his return to Tahiti. Encouraged by the presence of Oru he rallied his scattered followers, who had during his absence taken shelter in the mountains, and, having strengthened his numbers by deserters from his adversary, he set forth to battle, overthrew his enemies, and recovered his hereditary possessions. Timmahero, the tutelar god of Ta-niti xvas not able to stand before Oru and his

victorious worshippers, who by bribes secretlv obtained license to perform religious rites in honor of their new protector. And the king, seeing the success of his enemies, began to offer propitiatory sacrifices to Oru till he obtained leave to go to war under his auspices ; when, venturing once more to engage with the fortunate chief of Papara, he was victorious, penetrated as far as the Morai, and there, out of gratitude to his benefactor, he proclaimed Oru god of all the island.

Oru was the son of, and derived his powers from, the supreme god Taroa, the father of light and author of might. He married Heuheu, a goddess of no great note, who came from the island of Bolabola, by whom he had a daughter named Toimutto, a powerful divinity of a martial and sanguinary temper, and could be only won by costly sacrifices at the moment of engaging with an enemy. Tu, the god of kings and nobles, who, when rightly invoked, sent a healing power to the afflicted. Tone, the god of war, sprang from the island of Huaheine. Tarai was related to Tubut inferior to him. Taroa, Tone, and Ra, came not into the world by the ordinary course of generation ; the two last obtained their powerfrom Oru by each one sending him seven human victims. Grata, a descendant of Taroa, who presided over valleys, and1 was worshipped by those who frequented these recesses. Ruhatu, derived from the island of Tuhaururi, and god of Eimeo. He inhabited a shark, in which he came to Tahiti ; a cave below the Morai was consecrated to him, and became the repository of his image. He is represented as the patron of fishermen, who addressed their prayers to him for assistance and loaded his altars with wave-offerings from their draughts in grateful acknowledgments for their success. Puna, god of Matovia. Heu inhabited a sun-fish ; he had a morai erected to his honor in Ulietea ; but, being offended at some part of the edifice, ran up to it with such fury that he made a large opening in one side, and left it as a lasting mark of his displeasure. Tuma was chiefly invoked

by the wounded in battle. Tipa, a god of Tetirou and potentate of suffocation. Ti-tahutahu, god of prohibitions, who forbad the eat-ing of pork, fish, cocoa-nuts, &c. ; he is described as the enemy of pleasures, and, like the furies, the author of vengeance. The superstitious labored, by earnest prayers and large offerings, to appease the wrath of this implacable divinity. Mr. Collie represents his image as the rudest piece of sculpture he had met with ; so that his fearful worshippers seemed not to have thought it proper to make his semblance beautiful who was to them the mar-plot of all gratification. Oruataitahai was the giver of all good things and the author of all the sensual pleasures, and the inventor of music and dancing. He is said to have visited the island in a canoe. Uralaita-hai, a deity of a very benign disposition, who not only bestowed many blessings upon mortals, while in this tenement of clay, but kindly conducted the erring ghost to the abodes of light.

They never addressed their prayers to any god without supposing that he was near, by a shechi-nah, or divine presence, but the form of thfc mercy-seat was various ; a piece of the aito, or t*

manu, surmounted ly a portion of the internal bony parts of the skull of some chief, wrapped in a quantity of cloth, and garnished with the tail-feathers of the tropic bird, generally answered this purpose in the morais. When at a distance from these sacred enclosures a suppliant deemed it sufficient to direct his petitions to a piece of stick, adorned with a tuft of red feathers, as the fancied residence of his peculiar god.

The ministry of many priests was assigned to each morai, who had the privilege of choosing an unlimited number of wives. They, like the oriental interpreters of the counsels of fate, lived upon the offerings presented at the altars. When a chief fell sick all the natives of that quarter hastened with their votive offerings to the nearest morai, and, if their means allowed them to afford a pig, they pinched his nose and right ear, that the vengeful deity might be diverted by its plaintive squeals and be inclined to restore health to the afflicted chief.

The account of Taroa, communicated to this gentleman, differs from that given in the Missionary Voyage in making this deity masculine. The missionaries were most probably in the right ; for, though the writer's partial information represents the divinity as corresponding to the o iov and 6 At)/uouf>yo$ of ancient philosophers, yet the Tahitian priests, who had given themselves up to the contemplation, might consider the generating cause of all things as possessed of a feminine nature in perfect consonance with the old notion which made its essential attribute to be that of producing, and which they plainly derived from the study of the creative power and energies of the earth exerted in giving existence to the various tribe« of the animal and vegetable kingdoms that people its surface.

Unde alma liquentes

Humorum guttas Mater cum' Terra recepit, Foeta parit uitidas fruges, arbustaque laeta ; Et genus humanum, et parit omnia saecla ferarum Pabula cum praebet, quibus omnes corpora pascunt, Et dulcem clucunt vitam, proletnque propagant Quapropter raerito maternum nomen adepta est.

Lucret. lib. ii. 991.

Tit was not only the common appellation for their teraphim, penates, or household gods, but was also the name of a particular deity who held the patronage of animated and vegetable nature. Oino, his wife, had the government of the moon and stars, especially the former, which, by its waxing and waning, did sympathetically indicate the sickening hours and happy revival of its fair patroness. It is said that Oino was wont to ask her husband Tii why, as she caused the moon to set only to rise again, he could not, after her example, make his dead cocoa-nut trees sprout forth again. Tii, by way of reply, might have pointed out the embryo lodged within the shell and the ample provision of albuminous matter, the transformed milky juice of the nut which had been made for the propagation of the species and the nourishment of the future offspring.

The Pythagorean philosopher, Nicomachus, when speaking of the eight-stringed lyre as an improvement of the more ancient heptachord made by his great master, from observing the most satisfactory consonance, icarnicoptffrdrijv

a>via;-, which the extreme sounds of an oc-tave produced, plainly

intimates as he proceeds to treat of the nature of its invention that he considered the diatessaron, or system of four sounds, as anterior in the order of discovery to that of eight. To show how well instructed the great man was in the nature and origin of music, we may allege an obvious proof derived from the practice of the Society Islanders, who, in all the airs which the writer heard, never exceeded the compass of four sounds, and whose melodious voices and perfect intonation lent a peculiar grace and sweetness to the Phrygian mood, which had its half tone between the first and second degrees or strings of the tetrachord. The car was often delighted with hearing the children sing a short air and accompany each other at the intervals of major and minor thirds. The remaining part of their old instrumental music was confined to reeds, which were tuned as shepherds were wont to tune an oaten pipe ; but, when these were played to the dance, two uniformly were made to accompany each other at the intervals above mentioned. This tuning took up some time before the performers were ready to commence playing, and was often repeated during the performance, since from the frail texture of a reed it is subject to accidental variations.

The scepticism which has been shown towards the assertion that the Society Islanders sing in parts is built upon a very silly objection, that because certain writers who would make it ap-pear that the sense of hearing was not gratified in a Greek as it is in a European, assert that it is doubtful whether the ancients had any knowledge of what we call harmony or thorough-base ; and hence a fortiori that a traveller, when he tells us that his ear was charmed with the concord of sweet sounds in Tahiti, only heard the execrable monotony of consecutive filths and octaves. Were the writings of the ancients more frequently and more extensively consulted, than they are in this age of discovery, men wouhi find that the ancients, who in point of acuteness far surpassed us, had very clear and precise ideas of classification ; not only of abstract truths, but of the various objects of animated and vegetable nature, though they wanted that experience, which from the mass of accumulated particulars we have had the opportunity of gaining by a widely extended research.

The author of the first Tahitian grammar, which was printed in 1823, observes that the ‘ resemblance’ of this dialect of the Polynesian language ‘ to the Hebrew in the conjugation of the verb, and in many of its primitive words, could easily be shown : many words seem to have truly Hebrew roots, such as mate, death’ no ‘ mara, or mara-mara bitter,’ -|Q ‘ rapaau, to heal ;’ Kin ‘ pae side ;’ HK£3, &c. : by similitude in the conjugations the writer alludes to the causative particle haa, corresponding in use and power to ho of the Hawaiian

dialect, as te ma-tau nei au, I fear. Te haa matau nei au, I make afraid, or cause to fear, so in Hebrew rV3B?, he was glad; rvntPfl, he rejoiced another; and what the missionary in modesty calls a resemblance, may, without presumption, be affirm-

ea to be a derivation ; for, by comparing ho and haa of kindred dialects together, we gather that the vowel sound is not essential to express causation ; but the aspirate n> which seems to be an onomatopoeia for exertion or contentio of Tully. The O which has been prefixed to Ta-hiti (this word in reforming their orthography was overlooked, as it pught, according to the design of following the Italian sounds, to have been written Tahaiti) is merely emphatic, as n is sometimes in Hebrew, ¥lKn, the earth. The author of the grammar speaks of the precision secured by some of its pronouns, and its being in this respect superior to other languages. This advantage which the writer has often heard illustrated by the American missionaries at Oahu, and felt the importance of in speaking the Hawaiian dialect, consists in having a pronoun away., ye, excluding myself, and TO.TOV, ye, including myself. Taua, thou and I ; maua I and another.

PART II. NATURAL HISTORY OF THESE ISLANDS.

Marara, inocarpus edulis. — This stately tree, which nature has supported by large buttresses formed out of the trunk, bears a large flattened fibrous nut as its generic name implies, which, after it has undergone the process of roasting, is by its farinaceous properties become a very nutritive and agreeable food. It flourishes in the valleys as well as in the mountains, but in the former situations in the island of Eimeo, the supporters alluded to are very remarkable for their number and magnitude. This effort of nature to enable the tree to stand up against a storm is analagous to that which is observed in the pandanus odoratissimus, wherein the trunk does, from time to time, send down auxiliary stems, which, fixing themselves in the soil, serve at the same time as props to the tree, and furnish new sets of tubes for absorbing the elementary moisture of the earth.

Spondias dulcis, or vi, a handsome ,tree with a deep green foliage of winged leaves, bearing a juicy fruit, about the size of a golden pippin and of a bright green color. The rind bespeaks the relationship of this genus to the natural order of terebintaceae, embracing such genera as rhus, mangifera, pistacia (terebinthus Tournf. and Juss.), &c., by a strong savor of turpentine which it imparts to the tongue, may be kindly meant by nature to act as a corrective for any bad effect that the acid pulp might have upon the eater. It must not, however, be dissembled that the frequent examples of dysentery which occur in these islands are with good reason ascribed to the immoderate eating of this fruit. When the islanders some years ago had learnt the art of distilling from some of their European visitors, they made use principally of this fruit for that purpose, to which the spirituous flavor of the over-ripened fruit seemed plainly to in-Tite them by indicating that it possessed a large proportion of alcohol.

Angivpteris evecta. — The nerves or secondary vessels of each leaflet are forked, and bear upon the top of each fork a dovble series of bival-

vular Capsules. This elegant fern, which in Pitcairn's Island rises to the consideration of a handsome tree, grows in the island of Eimeo in the form of a large stump, which is produced by each frond or fern leaf dying in its turn, and bequeathing a certain portion of the stipe and sheath to the parent stock. The indolence of the natives preventing any attention to the culture of the taro, no provision is made against the season in which the bread-fruit fails, which continues only two months in the year : they are obliged to sate their hunger with the roasted interior of this fern, which from the mixture of woody matter contains very little aliment, but it serves to abate the keenness of appetite by replenishing the stomach without nourishing the lapsed powers of health.

Erythrina, or red coral tree, adorns_ the woody dells in many parts of the islands.

The mamee, or as it is now written mami, is the ficus tinctoria of systematic botanists, bearing a small fig which yields the brown dye mentioned in the article OTAHEITE of this work.

Various species of the gardenia grow plentifully, and from their grateful odor and beautiful foliage are often wreathed into chaplets to screen the brows from the scorching power of the sun's rays. The variation in the structure of the berry in this genus, which is highly

characteristic in many others, is apt to puzzle a beginner ; but the flattened embryo lodged in a horny albumen, a great peculiarity in the natural order rubiaceae, the flexure of the corolla, and the sweetness of its scent will guide his judgment in deciding what plants from their general habit belong to this very natural genus.

Sckizaa, forsteri, a fern found in the mountains of Eimeo ; the frond is at first simple, but afterwards expands by frequent dichotomies into a fern-shaped leaf, like some species of fucus or sea-weed. Each final division is surmounted at the tip with a .compound spike of seed vessels, ranged in lines upon the rachis.

The woods are ornamented by some of the melastonuE, which are readily distinguished by the three-nerved leaves and refracted anthers. The large deep blue flowers garnishing the boughs of a wide spreading tree present a very lovely sight to the eye of a contemplative observer.

Thespesia populnea, a beautiful tree of the order of malvaceee. Its large yellow blossoms, of that essential form typified in the mallow, and the broad, deep-green, heart-shaped, leaves, make it very easily recognised.

There are several species of hibiscus, or porau, rising to large and very sightly trees. The timber being soft is unfit for many purposes ; but from the size of the ligneous fibres is very elastic, and would be suitable for the construction of several kinds of musical instruments, as it appeared from its use among the inhabitants of Pitcairn, who produce a very pleasing tone from a piece of this wood laid across a couple of battens and struck with a stick.

The tamanu, or callophyllum inophyllum. — The leaves of this tree are peculiarly elegant from the parallel arrangement of the secondary veins. The flowers are white and sweet-scented, au~

appear in numerous clusters. The wood, for its compactness and density, scarcely inferior to oak ; and, from the curious variegations of its grain, is, when wrought into furniture, comparable to most of the ornamental woods brought from abroad.

There is a kind of grass related to the cen-chrus, called by the aboriginals pirepire, which adheres to the clothes of the passenger by means of a ruff or involucre of sharp prickles. • Lucretius was disposed to ascribe the invention of many arts to the teaching of nature; and we may offer two additional testimonies in favor of this opinion by alluding to what has already been said about the fruit of the spondias dulcis. The juices of this and many other kinds of fruits, when deeply concocted by a tropical sun, change their acid to vinous flavor, as the author has often observed; and hence, to a reflecting mind, might have first suggested the idea of distillation, or separating the spirit from the pulp by the action of heat. The grateful relish imparted to some fluids when in a state of fermentation might have been learnt from experiencing that the juice of the cocoa-nut, when agitated by the principle of heat, acquires a certain keenness that makes it very refreshing to a way-worn traveller, who cannot fail to notice how vapid the liquor is at other times in comparison with it when in that state.

The Society Islands have afforded the botanical world several new ferns. Among these cryptogamous productions the trichomanes, from the delicate transparent nature of its foliage, and the elegance of the urn-shaped fructifications, wins the admiration of the most incurious beholder.

The vittaria, a grass-like fern, parasitic upon trees ; it has the capsules disposed in an uninterrupted line on the margin of the frond. It is distinguished from the pteris, with which it coincides in having linear and marginal series of capsules, by having a double involucre, the one opening towards the edge, the other towards the midrib of the frond. There are found some species of adiantum, presenting the characteristic of having their seed-vessels concealed by a doubling of the margin of the frond. At a certain season of the year the under surface of a species of this fern is powdered with a yellow oust, whence among the people of Chili it has gained the denomination of doradilla, or golden fern.

Clathrus. — A singularly shaped fungus of this kind was brought to the naturalist while at Ta-hiti ; it had a stipe or stem of spongy

texture, while hollow and reflected at the summit into a hemispherical pileus or cap of a brown color, which presented a surface chequered with numerous cells like the reticulum of ruminating animals. From the margin of this cap was suspended a veil of network, which might be looked upon as a prolongation of its external surface. It exhaled a very powerful odor. The veil in question had so much the appearance of the result of art that its natural origin was at first doubted.

Winawina is the name by which the abrus precatorius is distinguished, known in this country by the seeds being strung into necklaces. The hardness, lovely redness, and black scar or

hilum, of tnese seeds, which are contained jr. pods, constitute the chief mark of distinction in this genus. Species of the genera dodonaa, greura, daphne metrosideros, &c. &c., are also found here.

SOCINIANS, in church-history, a sect so called from their founder Faustus Socinus. See SOCINUS. They maintain, ‘ That Jesus Christ was a mere man, who had no existence before he was conceived by the Virgin Mary ; that the Holy Ghost is no distinct person, but that the Father is truly and properly God. They own, that the name of God is given in the Holy Scriptures to Jesus Christ ; but contend that it is only a deputed title, which, however, invests him with an absolute sovereignty over all created beings, and renders him an object of worship to men and angels. They deny the doctrines of satisfaction and imputed righteousness ; and say that Christ only preached the truth to mankind, set before them in himself as an example of heroic vir-tue, and sealed his doctrines with his blood. Original sin and absolute predestination they es-teem scholastic chimeras. They likewise maintain the sleep of the soul, which they say becomes insensible at death, and is raised again with the body at the resurrection, when the good shall !«• established in the possession of eternal felicity, while the wicked shall be consigned to a fire that will not torment them eternally, but for a certain duration proportioned to their demerits. This term is often used in mere reproach : the Anti-trinitarians or Unitarians, to whom it is more commonly applied, disclaim the name, and every human leader, and profess to be guided solely by the word of God and the deductions of rea-son. Modern Unitarianism, as taught by Dr. Priestley, is certainly a very different thing from Socinianism, as we find it in the llacovian catechism and other standard works of this sect. This far-famed philosopher has discovered what escaped the sagacity of all the fratres poloni, that Jesus Christ was the son of Joseph as well as Mary; that the

evangelists mistook the meaning of Isaiah's prophecy, that ' a virgin should conceive and bear a son ; ' that the applying of this prophecy to the birth of our Saviour, led them to conclude that his conception was miraculous ; and that we are not to wonder at this mistake, as the apostles were not always inspired, and were in general inconclusive reasoners. The modesty ol the writer in claiming the merit of such discoveries will appear in its proper colors to all our readers ; the truth of his doctrine shall be considered under THEOLOGY. In the mean time we may refer to the article ANTITRINITARIANS, for an impartial survey of the modern arguments in this controversy.

SOCINIOS, an emperor of Abyssinia, who sent an embassy to pope Paul V., and for some time established the Roman Catholic religion in Abyssinia. See ETHIOPIA.

SOCINUS (Laelius), one of the founders of the sect of Socinians, was born at Sienna in Tuscany, in 1525. Being designed by his father for the law, he began very early to search for the foundation of that science in the word of God ; and by that study discovered that the Romish religion taught many things contrary to revelation

when, being desirous of penetrating farther into the true sense of the Scriptures, he studied Greek, Hebrew, and even Arabic. In 1547 he left Italy to converse with the Protestants ; and spent four years in travelling through France, England, the Netherlands, Germany, and Poland, and at length settled at Zurich. He thus became acquainted with the most learned men of his time, who testified by their letters the esteem they had for him ; but, as he discovered to them his doubts, he was greatly suspected -of heresy. He, however, conducted himself with such prudence, that he lived among the capital enemies of his opinions, without receiving any injury, and he met with some disciples, who heard his instructions with respect: these were Italians who left their native country on account of religion, and wandered about in Germany and Poland. He communicated likewise his sentiments to his relations by his writings, which he caused to be conveyed to them at Sienna. He died at Zurich in 1562. Those who

were of sentiments opposite to his, and were personally acquainted with him, confess that his outward behaviour was blameless. He wrote a Paraphrase on the first chapter of St. John ; and other works are ascribed to him.

SOCINUS (Faustus), nephew of the preceding, and principal founder of the Socinian sect, was born at Sienna in 1 539. The letters which his uncle Laelius wrote to his relations, and which infused into them many seeds of heresy, made an impression upon him ; so that he fled as well as the rest, when the inquisition began to persecute that family. He was at Lyons when he heard of his uncle's death, and departed immediately to take possession of his writings. He returned to Tuscany, and made himself so agreeable to the grand duke, that the charms which he found in that court, and the honorable posts he filled there, hindered him for twelve years from putting the last hand to the system of divinity of which his uncle Lselius had made a rough draught. At last he went into Germany, in 1574, and paid no regard to the grand duke's advices to return. He staid three years at Basil, and studied divinity there; and, having adopted a set of principles very different from that of Protestants, he resolved to maintain and propagate them ; for which purpose he wrote a treatise De lesu Christo Servatore. In 1579 Socinus retired into Poland, and desired to be admitted into the communion of the Unitarians ; but, as he differed from them in some points, he met with a repulse. However, he did not cease to write in defence of their churches against those who attacked them. At length his book against James Paleologus furnished his enemies with a pretence to exasperate the king of Poland against him ; but, though the mere reading of it was sufficient to refute his accusers, Socinus left Cracow, after having resided there four years. He then lived under the protection of several Polish lords, and married a lady of a good family; but her death, which happened in 1587, so deeply afflicted him as to in-jure his health ; and, to complete his sorrow, he was deprived of his patrimony by the death of Francis de Medicis grand duke of Florence. The consolation he found in seeing his sentiments at last approved by several ministers, was greatly

interrupted in 1598; for he met with a thousand insults at Cracow, and was with great difficulty saved from the hands of the rabble. His house was plundered, and he lost his goods ; but this loss was not so uneasy to him as that of some MSS., which he extremely regretted. To deliver himself from such dangers, he retired to a village about nine miles from Cracow, where he spent the remainder of his days at the house of Abraham Blonski, a Polish gentleman, and died there in

1604. The following epitaph was inscribed on his tomb : —

Tola licet Babylon destruxit tecta Lutherus, Muros Calvinus, sed fundamenta Socinus :

i. e. Luther destroyed the houses of Babylon, Calvin the walls, but Socinus subverted the foundations. The sentiments of Socinus, with regard to the principal theological subjects controverted among Christians, appear in the following abstract of his writings ; and the collection of them, in two volumes, folio, forms par* of the Bibliotheca Fratrum Polonorum. Socinus maintained that Jesus Christ was a man, conceived and formed in the womb of the Vir-gin, without the intervention of a man, by the power of the divine Spirit; on this account he was, in a peculiar sense, God's own and only begotten son, as no other person ever was the son of God in the same way, by the immediate origin of his being. Moreover, he was constituted the son of God by his resurrection from the dead, and was then begotten by God, when God raised him from the dead. As to those passages which have been supposed to assert Christ's existence in the heavenly world, previous to his birth and appearance among men, he explains them, by alleging that Christ himself, after he was born, and before he entered on the office assigned him by his Father, was, in consequence of the divine counsel and agency, in heaven, and remained there for some time ; that he might hear from God, and being with him, as the Scripture says, might see those things which he was to announce to the world, in the name of God himself; though he explains John iii. 13, as figurative language. In explaining the first words of St. John's gospel, In the beginning was the word, &c., he observes, that the terms, in the beginning, do not relate to eternity, but to the order of those things whicli John was about to write concerning Jesus Christ; imitating Moses, who, in writing his history, opens his introduction with this word beginning, in reference to the transactions which he was about to record. And Jesus is called the Word, he supposes, not on account of his nature or substance, but because of the ofBce he discharged when he revealed to us the word of the gospel from the Father. The word was with God, i. e. Jesus, as the word of God, before he was pointed out by the preaching of the Baptist, was known to God alone. And the word was God : the term God, says this commentator, does not de-note substance, but authority, power, and beneficence, which were derived from the Father, and vwhich entitled Christ, according to the opinion \of this writer, to adoration and worship. His ideas of the efficacy of our Lord's death and

mediation are utterly repugnant to those that have been generally entertained by persons called Calvinists. Nothing, he says, can be more incompatible with each other, than a%free pardon and satisfaction. He adds no man of judgment and piety ought to entertain the idea of a satisfaction for sin ; since it plainly does very much derogate from the power and authority, or goodness and mercy of God ; and, though a propitiation be not the same thing as a satisfaction, and though God never refrained from the punishment of sin on account of any real satisfaction given him, yet it is certain that in remitting the punishment of our sins by Jesus Christ no propitiation intervened • but God has, from his free will, exhibited himself so propitious to us in Christ, as not 'to exact the punishment of our sins, though he might justly have done it. However, he allows not only that the death of Christ, and the pouring out of his blood for us, was an offering and sacrifice to God, but that this sacrifice may be said to have been offered up for our sins in order to their being forgiven ; yet he apprehended that this sacrifice, as far as it was expiatory, was offered by Christ, not on the cross, but in heaven itself, after his resurrection. To which purpose he observes that Christ did not obtain eternal redemption for us before he entered into the holy place, and there assumed the priesthood ; and without a priesthood no expiatory offering could be made. Socinus does also expressly deny the distinct personality of the Holy Ghost

Socinus thought that the progenitor of our race was mortal, i. e. liable to death, by reason of his frame, and incapable of exemption, without an exertion of the divine favor and influence, which was not granted to him at creation ; and, therefore, when the apostle asserts that by sin death entered into the world, he meant not natural mortality, but the necessity of dying, or eternal death. To this purpose he explains himself: Adam, if he had not sinned, might have been preserved from death by the kindness of God, though naturally mortal ; or, if he had died, have been restored to life, and made immortal. By his sin he did, as it were, refuse to give himself and his posterity this blessing; and, therefore, unless the favor of God be renewed to us, we must all die, and remain in the state of the dead. As to the nature of the human soul, it seems to have been the opinion of Socinus, that, after this life,

it doth not so subsist of itself, without the body, as to be capable of any reward or punishment, or any sensations at all. To the question, whether the first man had any original righteousness before he sinned ? Socinus replies, that if by original righteousness be meant such a condition that he could not sin, this certainly was not the state of Adam, as it is clear he did sin. But if original righteousness consisted in this, that his reason had the absolute rule ever his appetites and senses, and invariably directed them, then the opinion of those who ascribe it to Adam is supported by no argument : hence it should seem from Adam's I9.li that there was no perfect harmony between tnem ; and that his appetites and senses had rne dominion over his reason. If it be asked,

says Socinus, whether there is original sin ? he answers, this is the same as the enquiry, whether men, when they are born, because they de rive their origin from Adam, have, on account of his fall, contracted any guilt or punishment, or are obnoxious to either ? Therefore, since the consent of the will must constitute guilt, and there can be no punishment without antecedent guilt, it seems not at all possible that either of these should pertain to a man when he is born, as he neither has, nor could have before, any use of his own will. If by original sin be understood certain innate desires, or evil concupiscence in man, and a proneness to sin, this opinion Socinus denies, and labors to refute; concluding, upon the whole, that there is no such thing as original sin, i. e. a taint or pravity in consequence of the sin of the first man, necessarily produced, or by any means inflicted on the human race ; and that no other evil necessarily flows to all his posterity from that first transgression, than by some means or other the necessity of dying ; not indeed through the influence of that transgression, but because man, being naturally mortal, was on that account left by God to his own natural mortality, and what was natural became necessary as a punishment on the offender; consequently they who were born of him must be born in the same circumstances, for he was deprived of nothing he naturally had or could have. From reasoning on this subject, Socinus concludes that there is a freedom of will in man, and that the powers of man are not so few and feeble, but that he may, with the assistance of God, obey the divine law by the right use and application of his powers. Divine assistance he considers as external and internal ; and the latter, he says, is twofold : the one, when God by some means impresseth on the heart what he has promised to them that obey him ; and the other, when he instructs and illuminates the mind rightly to discern his will, in those instances which cannot be expressly contained in his written

word : however, this internal assistance belongs only to those who have made good use of the external. The doctrine of predestination Socinus absolutely de-nies, and he endeavours to account for the pre-science of the Deity, without admitting that notion of his decrees which some divines have adopted. On the head of justification, Socinus observes that God out of his mere mercy justifies us, i. e. pronounces us righteous, and grants us forgiveness of sins, and eternal life ; but he requireth from us, before this be done, that we believe in Christ, i. e. confide in and obey him ; and our good works, or the obedience we render to Christ, though not the efficient or meritorious cause, are the sine qua non, or indispensable pre-requisite, of our justification before God, and eternal salvation. But if any should deviate from this obedience, by falling into sin, and continuing therein, they cease to be justified ; nevertheless, by repentance and amendment of life, they may be justified again : but this second repentance, he says, is not in our power, God granting an ability for it to whom he pleaseth. Finally, Socinus denied the perpetuity of baptism, as an ordinance, alleging

that it was not prescribed for those who in any other way have publicly given their names to Christ, or from their earliest years have been educated in the Christian discipline ; or, if it is to be retained in these days, he apprehends it should be retained principally on account of those who have been converted from other religions to the Christian. He farther thought, that, in order to the right administration of baptism, it is previously necessary that the baptised per-son should be a believer, and he, therefore, reckoned the practice of infant baptism unscriptural and erroneous. • All Faustus Socinus's •works are contained in the two first volumes of the Bibliotheca Fratrum Polonomm.

SOCINUS (Marianus), LL. D., an eminent Italian lawyer, descended from an ancient family which had produced several civilians. He was born at Sienna, in Tuscany, in 1482 ; and took his degree of L. L. D. in 1503. He taught civil law as professor at Sienna several years ; he

afterwards went to Padua, and last to Bologna in 1543, where he died in 1556.

SOCK, n.s. Sax. j-occ; Belg. socke ; Lat. soccus. Something put between the foot and shoe.

Ere I lead this life long, I'll sow nether socks and mend them, and foot them too.

Shaktpeare. Henry IV.

A physician, that would be mystical, prescribed! for the rheum to walk continually upon a camomile alley ; meaning he should put camomile withia his tocka. Bacon.

Then to the well-trod stage anon.

If Jonson's learned sock be on,

Or sweetest Shakespeare, fancy's child,

Warble his native wood-notes wild. Milton.

Great Fletcher never treads in buskins here, Nor greater Jonson dares in socks appear ; But gentle Simpkin just reception finds Amidst the monument of vanished minds. Dryden.

On two figures of actors in the villa Mathei at Rome we see the fashion of the old sock and larva.

Addison.

SOC'KET, n. s. Fr. souchette. Any hollow pipe ; the hollow of a candlestick ; hollow of the eye, &c.

Two goodly beacons, set in watches stead, Therein gave light, and flamed continually ; For they of living fire most subtilly Were made, and set in silver sockets bright.

Faerie Queene.

The sockets and supporters of flowers are figured ; as in the five brethren of the rose, and sockets of gilly-flowers. Bacon.

She at your flames would soon take fire, And like a candle in the socket Dissolve. Hudtbrai.

As the weight leans wholly upon the axis, the grating and rubbing of these axes against the sockets wherein they are placed, will cause some inaptitude and reeistency to mat rotation of the cylinder which would otherwise ensue. Wilkins.

The nightly virgin sees

- When sparkling lamps their spluttering light advance, And in the sockets only bubbles dance. Dryden.

The stars amazed ran backward from the sight, And, shrunk within their sockets, lost their light.

Id.

On either side the head produce an ear, And sink a socket for the-shining -share. Id.

His eye-balls in their hollow socketi sink. Id. Carpenters, for their rougher work, use a stronger sort of chisels, and distinguish them by the name of socketchisels ; their shank made with a hollow socket at-top, to receive a strong wooden sprig made to fit into the socket. Moron.

To nurse up the vital name as long as the matter will last, is not always good husbandry ; it is much better to cover it with an extinguisher of honour than let it consume till it burns blue, and lies agonizing within the socket, and at length goes out in no perfume. Collier.

Gomphosis is the connection of a tooth to its socket. Witeman.

SOCKNA, a town in the northern part of Fez-zan, Africa, situated on an immense gravel plain, bounded on the south by the Soudeck mountains. It is surrounded by a wall with seven gates, only one of which can admit a loaded camel. The streets are narrow, and the houses built of mud, having no windows, the light being admitted only by doors. The town is surrounded by extensive plantations of fine dates, but there is no food for camels. The population is estimated by captain Lyon at 2000.

SOCONUSCO, a province of Guatimala, North America, bounded on the norlh by Vera Paz, Chiapa, Guaxaca, and Honduras, on the south by the Pacific, on the east by Nicaragua, and on the west by Guaxaca

and the Pacific Ocean. Guatimala or St. Jago de Guatimala is its capital. It is subdivided into the districts, from the north to the south, along the coast of the Pacific, of Soconusco, Suchitepec, Sansonate, St. Salva-dor, St. Miguel, Tiguesgalpa, and Choluteca or Xeres. It is thirty-five leagues long from north to south, and as many more from east to west. The air is exceedingly hot, and the general state of the climate either rainy or sultry. The soil is not so fertile in corn as some other parts of Guatimala ; but, to compensate this, it produces pimento, indigo, and cacao, in great quantities.

SOCONUSCO, the capital of the above province, is situated on a small river which runs into the Pacific Ocean, long. 120° 40' W., lat. 18° 30'. N. 460 miles southeast of Mexico.

SOCORRO, the largest of the Revillagigedo islands in the north Pacific Ocean, about 200 miles from the west coast of Mexico. It is uninhabited and barren, about fifteen or twenty miles broad, and as many long, and about 3657 feet above the level of the sea. Long. 110° 9' W., lat. 18° 48' N. It was visited in 1793 by captain Collnett.

SOCOTARA, an. island of the Indian Ocean, about forty leagues to the eastward of cape Guar-dafui, twenty-seven leagues long and seven broad It is high and mountainous, with a bold shore, which affords, however, excellent harbours. It has been purchased by Great Britain for a packet station. The chief commodity for which the island is resorted to is aloes. Dragon's blood may also be met with in small quantity ; and bullocks, goats, fish, and dates, are to be procured reasonably.

SOCRATES, the greatest and wisest, perhaps, of the ancient philosophers, was born at Alopece, a village near Athens, in the fourth year of the seventy-seventh olympiad. His parents were of low rank ; his father Sophroniscus being

•a statuary, and his mother Phaenarete a midwife. Sophroniscus brought up his son, contrary to his inclination, in his own manual

employment; in which Socrates, though his mind was continually aspiring after higher objects, was not unsuccessful ; for he formed statues of the Graces, which were allowed a place in the citadel of Athens. Upon the death of his father he was left in such straitened circumstances as laid him under the necessity of exercising that art to procure the means of. subsistence, though he devoted, at the same time, all the leisure which he could command to the study of philosophy. His distress, however, was soon relieved by Crito, a wealthy Athenian ; who, remarking his strong propensity to study, and admiring his ingenuous disposition and distinguished abilities, generously took him under his patronage, and entrusted him with the instruction of his children. The opportunities which Socrates thus enjoyed of attending the public lectures of the most eminent philosophers, so far increased his thirst after wisdom that he determined to relinquish his occupation, and every prospect of emolument which that might afford, to devote himself entirely to his favorite pursuits. Under Anaxagoras and Archelaus he prosecuted the study of nature in the usual manner of the philosophers of the age, and became well acquainted with their doctrines. Prodicus the sophist was his preceptor in eloquence, Evenus in poetry, Theodorus in geometry, and Damo in music. Aspasia, a woman no less celebrated for^her intellectual than her personal accomplishments, whose house was frequented by the most celebrated characters, had also some share in the education of Socrates. Under such preceptors he became master of every kind of learning which the age could af-ford ; and, being blessed wkh very uncommon talents, he appeared under the respectable characters of-a good citizen and a true philosopher. Being called upon by his country to take arms, in the long and severe struggle between Athens and Sparta, he signalised himself at the siege of Potidaea, both by his valor and by the hardiness with which he endured fatigue. During the severity of a Thracian winter, whilst others were clad in furs, he wore only his usual clothing, and walked barefoot upon the ice. In an engagement in which he saw Alcibiades falling down wounded, he advanced to defend him, and saved both him and his arms ; aud, though the prize of valor was on this occasion unquestionably due to Socrates, he generously gave his vote that it might be bestowed upon Alcibiades, to encourage his rising merit. He served in other campaigns with distinguished bravery, and on one occasion saved the life of Xenophon by bearing him, when covered with wounds, out of the reach of the enemy. It was not till Socrates was upwards of sixty years of age that he undertook to serve his country in any civil office, when he was chosen to represent his own district, in the senate of 500. In this office, though he at first exposed himself to some ridicule from the want of experience in the forms of

business, he soon convinced his colleagues that he was superior to them all in wisdom and integrity. Whilst they, intimidated by the clamors of the populace.

passed an unjust sentence of condemnation upon the commanders who, after the engagement at the Arginusian Islands, had been prevented by a storm from paying funeral honors to the dead, Socrates stood forth singly in their defence, and to the last refused to give his suffrage against them, declaring that no force should compel him to act contrary to justice and the laws. Under the subsequent tyranny he never ceased to condemn the oppressive and cruel proceedings of the thirty tyrants; and when his boldness provoked their resentment, so that his life was in hazard, fearing neither treachery nor violence, he still continued to support, with undaunted firmness, the rights of his fellow-citizens. Having given these proofs of public virtue, both in a military and civil capacity, he wished to do still more for his country. Observing with regret how much the opinions of the Athenian youth were misled, and their principles and taste corrupted by philosophers, who spent all their time in refined speculations upon nature and the ori-gin of things, and by sophists who taught in their schools the arts of false eloquence and deceitful reasoning ; Socrates formed the wise and generous design of instituting a new and more useful method of instruction. He justly conceived the true end of philosophy to be, not to make an ostentatious display of superior learning and ability in subtle disputations or ingenious conjectures, but to free mankind from the dominion of pernicious prejudices; to correct their vices; to inspire them with the love of virtue ; and thus conduct them in the path of wisdom to true felicity. He therefore assumed the character of a moral philosopher; and, looking upon the whole city <;f Athens as his school, and all who were disposed to lend him their attention as his pupils, he seized every occasion of communicating moral wisdom to his fellow-citizens. He passed the greater part of his time in public ; and the me-thod of instruction of which he chiefly made use was to propose a series of questions to the per-son with whom he conversed to lead him to some unforeseen conclusion. He first gained the consent of his respondent to some obvious truths, and then obliged him to admit others from their relation or resemblance to those to which he had already assented. Without making use of any direct argument, or persuasion, he chose to lead the person he meant to instruct, to deduce the truths of which he wished to convince him, as a necessary consequence from his own concessions. He commonly conducted these conferences with such address as to conceal his design till the respondent had advanced too far to recede. On some occasions he

made use of ironical language, that vain men might be caught in their own replies and be obliged to confess their ignorance. He never assumed the air of a morose and rigid preceptor, but communicated useful instruction with all the ease and pleasantry of polite conversation. Though eminently furnished with every kind of learning, he preferred moral to speculative wisdom. Convinced that philosophy is valuable, not as it furnishes questions for the schools, but as it provides men with a law of life, he censured his predecessors for spending all their time in abstruse researches

into nature, and taking no pains to render themselves useful to mankind. His favorite maxim was, ‘ Whatever is above us doth not concern us.’ He estimated the value of knowledge by its utility, and recommended the study of geometry, astronomy, and other sciences, only so far as they admit of a practical application to the purposes of human life. His great object was to lead men into an acquaintance with themselves, to convince them of their follies and vices, to inspire them with the love of virtue, and to furnish them with useful moral instructions. Through his whole life this good man discovered a mind superior to the attractions of wealth and power. Contrary to the general practice of the preceptors of his time, he instructed his pupils without receiving from them any gratuity. He frequently refused rich presents, which were offered him by Alcibiades and others, though importunately urged to accept them by his wife. The chief men of Athens were his stewards : they sent him in provisions, as they apprehended he wanted them j he took what his present wants required and returned the rest. Observing the numerous articles of luxury which were exposed to sale in Athens, he exclaimed, * How many things are there which I do not want!’ With Socrates moderation supplied the place of wealth. In his clothing and food he consulted only the demands of nature. He commonly appeared in a neat but plain cloak, with his feet uncovered. Though his table was only supplied with simple fare he did not scruple to invite men of superior rank to partake of his meals ; and when his wife, upon some such occasion, expressed her dissatisfaction on being no better provided, he

desired her to give herself no concern : for if his guests were wise men they would be contented with whatever they found at his table ; if otherwise, they were unworthy of notice. Though Socrates was exceedingly unfortunate in his domestic connexion, he converted this infelicity into an occasion of exercising his virtues. Xantippe, concerning whose ill humor ancient writers relate many amusing tales, was certainly a woman of a high and unmanageable spirit. But Socrates, while he endeavoured to curb the violence of her temper, improved his own. When Alcibiades expressed his surprise that his friend could bear to live in the same house with so perverse and quarrelsome a companion, Socrates replied that, being daily inured to ill humor at home, he was the better prepared to encounter perverseness and injury abroad. In the midst of domestic vexations and public disorders Socrates retained such an unruffled serenity, that he was never seen either to leave his own house or to return home with a disturbed countenance. In acquiring this entire dominion over his passions and appetites he had the greater merit, as it was not effected without a violent struggle against his natural propensities. Zopyrus, an eminent physiognomist, declared that he discovered in the features of the philosopher evident traces of many vicious inclinations. The friends of Socrates who were present ridiculed his ignorance ; but Socrates acknowledged his penetration, and confessed that he was in his natural disposition prone to vice, but that he had subdued his inclinations by reason and philoso-VOL. XX.

phy. Through the whole of his life Socrates gave himself up to the guidance of unbiassed reason, which is supposed by some to be all that he meant by the genius or daemon from whom he professed to receive instruction. But this opinion is inconsistent with the accounts given by his followers of that daemon, and even with the language in which he spoke of it himself. Plato sometimes calls it his guardian, and Apuleius his god ; and, as Xenophon attests that it was the belief of his master that the gods occasionally communicate to men the knowledge of future events, it is probable that Socrates admitted, with the generality of his countrymen, the existence of those intermediate beings called daemons, of one of which lie might fancy himself the peculiar care. (See D.EMON.) Convinced of the weakness of the human understanding, and perceiving that the pride of philosophy had led his predecessors into futile speculations on the na-ture and origin of things, he judged it most consistent with true wisdom to speak with caution and reverence concerning the divine nature. The wisdom and the virtues of this great man, whilst they procured him many followers, created him also many enemies. The sophists (see

SOPHISTS), whose knavery and ignorance he took every opportunity of exposing to public contempt, be-came inveterate in their enmity against so bold a reformer, and devised an expedient by which they hoped to check the current of his popularity. They engaged Aristophanes, the first buffoon of the age, to write a comedy in which Socrates should be the principal character. Aristophanes, pleased with so promising an occasion of displaying his low and malignant wit, undertook the' task, and produced the comedy of the Clouds, still extant in his works. In this piece Socrates is introduced hanging in a basket in the air, and thence pouring forth absurdity and prophaneness. But the philosopher showing, in a crowded theatre, that he was wholly unmoved by this ribaldry, the satire failed of its effect; and when Aristophanes attempted the year following to renew the piece, with alterations and additions, the representation was so much discouraged that he was obliged to discontinue it. From this time Socrates continued for many years to pursue without interruption his laudable design of instructing and reforming his fellow-citizens. At length, however, when the inflexible integrity with which he had discharged the duty of a senator, and the firmness with which he had opposed every kind of political corruption and oppression, had greatly increased the number of his enemies, clandestine arts were employed to raise a general prejudice against him. The people were industriously reminded that Critias, who had been one of the most cruel of the thirty tyrants, and Alcibiades, who had insulted religion, by defacing the public statues of Mercury, and performing a mock representation of the Eleusinian mysteries, had in their youth been disciples of Socrates; and, the minds of the populace being thus prepared, a direct accusation was preferred against him before the supreme court of judicature. His accusers were Anytus a leather-dresser, who had long entertained a personal enmity against Socrates, for reprehend-2 P

jig his avarice, in depriving his sons of the Benefits of learning, that they might pursue the gains of trade ; Melitus, a young rhetorician, who was capable of undertaking any thing for the sake of gain; and

Lycon, who was glad of any opportunity of displaying his talents. The ac- • cusation, which was delivered to the senate under the name of Melitus, was this : ‘ Melitus, son of Melitus, of the tribe of Pythos, accuseth Socrates, son of Sophroniscus, of the tribe of Alopece. Socrates violates the laws, in not acknowledging the gods which the state acknowledges, and by introducing new divinities. He also violates the laws by corrupting the youth. Be his punishment DEATH.’ This charge was delivered upon oath to the senate; and Crito, a friend of Socrates, became surety for his appearance on the day of his trial. Anytus soon afterwards sent a private message to Socrates, assuring him, that if he would desist from censuring his conduct, he would withdraw his accusation. But Socrates refused to comply with so degrading a condition ; and with his usual spirit replied, ‘Whilst I live I will never disguise the truth, nor speak otherwise than my duty requires.’ The interval between the accusation and the trial he spent in philosophical conversations with his friends, choosing to discourse upon any other subject rather than his own situation. When the day of trial arrived, his accusers appeared in the senate, and attempted to support their charge in three distinct speeches, which strongly marked their respective characters. Plato, who was a young man, and a zealous follower of Socrates, then rose up to address the judges in defence of bis master ; but, whilst he was attempting to apologize for his youth, he was abruptly commanded by the court to sit down. Socrates, however, needed no advocate. Ascending the chair with all the serenity of conscious innocence, and with all the dignity of superior merit, he delivered, in a firm and manly tone, an unpremeditated defence of himself, which silenced his opponents, and ought to have convinced his judges. After tracing the progress of the conspiracy which had been raised against him to its true source, the jealousy and resentment of men whose ignorance he had exposed, and whose vices he had ridiculed and reproved, he distinctly replied to the several charges brought against him by Melitus. To prove that he had not been guilty of impiety towards the gods of his country, he appealed to his frequent practice of attending the public religious festivals. The crime of introducing new divinities, with which he was charged, chiefly, as it seems, on the ground of the admonitions winch he professed to have received from an invisible power, he disclaimed, by pleading that it was no new thing for men to consult the gods and receive instructions from them. To refute the charge of his having been a corrupter of youth, he urged the example which he had uniformly exhibited of justice, moderation, and temperance ; the moral spirit and tendency of his discourses ; and the effect which had actually been produced by his doctrine upon the manners of the youn?. Then, disdaining to solicit the mercy of his judges, he called

upon them for that justice which thejr

office and their oath obliged them to administer; and, professing his faith and confidence in God, resigned himself to tneu pleasure. The judges, whose prejudices would not suffer them to pay due attention to this apology, or to examine with impartiality the merits of the cause, immediately declared him guilty of the crimes of which he stood accused. Socrates, in this stage of the trial, had a right to enter his plea against the punishment which the accusers demanded, and, instead of the sentence of death, to propose some pecuniary amercement. Bui he at first peremptorily refused to make any proposal of this kind, imagining that it might be construed into an acknowledgment of guilt ; and asserted that his conduct merited from the state reward rather than punishment. At length, however, he was prevailed upon by his friends to offer upon their credit a fine of thirty minae. The judges, notwithstanding, still remained inexorable ; they proceeded, without farther delay, to pronounce sentence upon him ; and he was condemned to be put to death by the poison of hemlock. The sentence being passed, he was sent to prison ; which, says Seneca, he entered with the same resolution and firmness with which he had opposed the thirty tyrants : and took away all ignominy from the place. He lay in fetters thirty days ; and was constantly visited by Crito, Plato, and other friends, with whom he passed the time in dispute, after his usual manner. Anxious to save so valuable a life, they urged him to attempt his escape, or at least to permit them to convey him away ; and Crito went so far as to assure him that, by his interest with the jailor, it might be easily accomplished, and to offer him a retreat in Thessaly ; but Socrates rejected the proposal, as a criminal violation of the laws, and askˆed them whether there was any place out of Attica which death could not reach ? At length the day arrived, when the officers to whose care he was committed delivered to Socrates, early in the morning, the final order for his execution, and immediately, according to the law, ‘set him at liberty from his bonds. His friends, who came thus early to the prison that they might have an opportunity of conversing with their master through the day, found his wife sitting by him with a child in her arms. Socrates, that the tranquillity of his last moments might not be disturbed by her unavailing lamentations, requested that she might be conducted home. With the most frantic expressions of grief she left the prison. An interesting conversation then passed between Socrates and his friends, which chiefly turned upon the immortality of the soul. In the course of this conversation, lie expressed his disapprobation of the practice of suicide, and assured his friends that his chief support in his present

situation was an expectation, though not unmixed with doubts, of a happy existence after death. ‘ It would be in-excusable in me,’ said he, ‘to despise death, if I were not persuaded that it will conduct me into the presence of the gods, who are the most righteous governors, and into the society of just and good men ; but I derive confidence from the hope that something of man remains after death, and that the condition of good men will

then be much better than that of the bad.’ Crito afterwards asking him, in what manner he wished to be buried? Socrates replied, with a smile, ‘ as you please, provided I do not escape out of your hands.’ Then, turning to the rest of his friends, he said, ‘ is it not strange, after all that I have said to convince you that I am going to the society of the happy, that Crito still thinks that this body, which will soon be a lifeless corpse, is Socrates ? Let him dispose of my body as he pleases, but let him not at its interment mourn over it as if it were Socrates.’ Towards the close of the day he retired into an adjoining apartment to bathe ; his children, in the mean time, expressing to one another their grief at the prospect of losing so excellent a father, and being left to pass the rest of their days in the solitary state of orphans. After a short interval, during which he gave some necessary instructions to his domestics, and took his last leave of his children, the attendant of the prison informed him that the time of drinking the poison was come. The executioner, though accustomed to such scenes, shed tears as he presented the fatal cup. Socrates received it without change of countenance, or the least appearance of perturbation : then , offering up a prayer to the gods that they would grant him a prosperous passage into the invisible world, with perfect composure he swallowed the poisonous draught. His friends around him burst into tears. Socrates alone remained unmoved. He blamed their pusillanimity, and entreated them to exercise a manly constancy worthy of the friends of virtue. He continued walking till the chilling operation of the hemlock obliged him to lie down upon his bed. After remaining for a short time silent, he requested Cnto (probably to refute a calumny which might prove injurious to his friends after his decease) not to neglect the

offering of a cock which he had vowed to .ZEsculapius : then, covering himself with his cloak, he expired. Such was the fate of the virtuous Socrates ! A story, says Cicero, which I never read without tears. The friends and disciples of this illustrious teacher of wisdom were deeply afflicted by his death, and attended his funeral with every expression of grief. Apprehensive, however, for their own safety, they soon afterwards privately withdrew from the city, and took up their residence in distant places. Several of them visited the philosopher Euclid of Megara, by whom they were kindly received. No sooner was the unjust condemnation of Socrates known through Greece, than a general indignation was kindled in the minds of good men, who universally regretted that so distinguished an advocate for virtue should have fallen a sacrifice to jealonsy and envy. The Athenians themselves, so remarkable for their caprice, who never knew the value of their great men till after their death, soon became sensible of the folly as well as criminality of putting to death the man who had been the chief ornament of their city and of the age, and turned their indignation against his accusers. Melitus was condemned to death ; and Anytus, to escape a similar fate, went into voluntary exile. To give a farther proof of the sincerity of their regret, the Athenians for a while' interrupted public

business; decreed a general mourning; recalled the exiled friends of Socrates ; and erected a statue to his memory in one of the most frequented parts of the city. His death happened in the first year of the ninety-sixth Olympiad, and in the seventieth year of his age. Socrates left behind him nothing in writing ; at least nothing that has reached us, though he wrote a great deal ; but his illustrious pupils Xenophon and Plato have in some measure supplied this defect. The Memoirs of Socrates, written by Xenophon, afford, however, a much more accurate idea of the opinions of Socrates, and of his manner of teaching, than the Dialogues of Plato, who every where mixes his own concep tions and diction with the ideas and language of his master. It is related that, when Socrates heard Plato recite his Lysis, he said, 'how much does this young man make me say which I never conceived !' His distinguishing character was that of a moral philosopher ; and his doctrine concerning God and religion was rather practical than speculative. But he did not neglect to build the structure of religious faith upon the firm foundation of an appeal to natural appearances. He taught that the Supreme Being, though invisible, is clearly seen in his works ; which at once demonstrate his existence and his wise and benevolent providence. He admitted, besides the one Supreme Deity, the existence of beings who possess a middle station

between God and man, to whose immediate agency he ascribed the ordinary phenomena of nature, and whom he supposed to be particularly concerned in the management of human affairs. Hence he declared it to be the duty of every one, in the performance of religious rites, to follow the customs of his country. At the same time, he taught that the merit of all religious offerings depends upon the character of the worshipper, and that the gods take pleasure in the sacrifices of none but the truly pious. Concerning the human soul, the opinion of Socrates, according to Xenophon, was, that it is allied to the Divine Being, not by a participation of essence, but by a similarity of nature ; that man excels all other animals in the faculty of reason ; and that the existence of good men will be continued after death in a state in which they will receive the reward of their virtue. Although it appears that on this latter topic he was not wholly free from uncertainty, the consolation which he professed to derive from this source in the immediate prospect of death leaves little room to doubt that he entertained a real expectation of immortality : and there is reason to believe that he was the only philosopher of ancient Greece whose principles admitted of such an expectation. Of his moral system, which was in a high degree pure, and founded on the surest basis, the reader will find a short view in our article MORAL PHILOSOPHY.

SOCRATES, an ecclesiastical historian of the fifth century, born at Constantinople in the beginning of the reign of Theodosius. He professed the kw, and pleaded at the bar, whence he obtained the name of Scholasticus. He wrote an ecclesiastical history, from the year 309, where Eusebius «nded, down to 440 ; and

wrote with great exactness and judgment. An edition of Eusebius and Socrates, in Greek and Latin, with notes by Reading, was published at London in 1720.

SOCRATIC (from Socrates) of, or belonging to, or in the manner of Socrates : as,

SOCRATIC REASONING, reasoning by questions which the respondent cannot but answer in the affirmative, and thus admit the consequences.

SOD, n. s. Belg. soed. A turf; clod.

The sexton shall green sods on thee bestow ; Alas ! the sexton is thy banker now. Swift.

Here fame shall dress a sweeter sod Than fancy’s feet have ever trod. Collint.

SOD. The preterite of seethe.

Jacob sod pottage. Gen. xxv. 29.

Can sodden water, their barley broth, Decoct their cold blood to such valiant heat ?

Shakspeare.

Sodden business ! there’s a stewed phrase indeed !

Id.

Thou sodden-witted lord, thou hast no more brain toan I have in my elbows.

Id. Troilus and Cressida. Never caldron tod

With so much fervour, fed with all the store That could enrage it. Chapman.

Try it with milk sodden, and with cream. Bacon.

Mix it with sodden wines and raisins. Dryden.

SODA, in chemistry, the mineral alkali of the old system, because under the name of natron it is found native in mineral seams or crusts. The impure commercial substance called barilla is the incinerated salsola soda. Kelp, the incinerated sea-weed, is a still coarser article, containing seldom above from two to five per cent, of real soda, while barilla occasionally contains twenty per cent. The crystallised carbonate of soda of commerce is procured from the decomposition of sulphate of soda, or muriate of soda. The former is effected by calcination with charcoal and chalk in a reverberatory furnace ; the latter is accomplished by the addition of carbonate of potash. To procure pure soda we must boil a solution of the pure carbonate with half its weight of quicklime, and after subsidence decant the clear ley, and evaporate in a clean iron or silver vessel till the liquid flows quietly like oil. It must then be poured out on a polished iron plate. It concretes into a hard white cake, which is to be immediately broken in pieces, and put up, while still hot, in a phial, which must be well corked. If the carbonate of soda be someˆ what impure, then, after the action of lime, and subsequent concentration of the ley, alcohol must be digested on it, which will dissolve only the caustic pure soda, and leave the heterogeneous salts. By distilling of the alcohol in a silver alembic the alkali may then be obtained pure. This white solid substance is, however, not absolute soda, but a hydrate, consisting of about 100 soda -f 28 water; or of nearly 77 -f 23, in 100. If a piece of this soda be exposed to the air it softens and becomes pasty ; but it never deliquesces into an oily-looking liquid as potash does. The soda in fact soon becomes drier, be-> cause, by absorption of carbonic acid from the air, it passes into an efflorescent carbonate. Soda is distinguishable from potash by sulphuric acid, which forms a very soluble salt with the former,

and a sparingly soluble one with the latter; by muriate of platina and tarlaric acid, which occasion precipitates with potash salts, but not with those of soda.

The basis of soda is a peculiar metal called sodium, discovered by Sir H. Davy in 1807, a few days after he discovered potassium. It may be procured in exactly the same manner as potassium, by electrical or chemical decomposition of the pure hydrate. A rather higher degree of heat, and greater voltaic power, are required to decompose soda than potash. Sodium resembles potassium in many of its characters. It is as white as silver, possesses great lustre, and is a good conductor of electricity. It enters into fusion at about 200° Fahrenheit, and rises in vapor at a strong red heat. Its specific gravity is, according to MM. Gay Lussac and Thenard, 0-972, at the temperature of 59° Fahrenheit. In the cold it exercises scarcely any action on dry air or oxygen. But when heated strongly in oxygen or chlorine it burns with great brilliancy. When thrown upon water it effervesces violently, but does not inflame, swims on the surface, gradually diminishes with great agitation, and renders the water a solution of soda. It acts upon most substances in a manner similar to potassium, but with less energy. It tarnishes in the air, but more slowly ; and, like potassium, it is best preserved under -naphtha. Sodium forms two distinct combinations with oxygen ; one is pure soda, whose hydrate is above described; the other is the orange oxide of sodium, observed, like the preceding oxide, first by Sir H. Davy in 1807,*but of which the true nature was pointed out, in 1810, by MM. Gay Lussac and Thenard.

Pure soda may be formed by burning sodium in a quantity of air, containing no more oxygen than is sufficient for its conversion into this alkali ; i. e. the metal must be in excess : a strong degree of heat must be employed. Pure soda is of a e;ray color, it is a non-conductor of electricity, of a vitreous fracture, and requires a strong red heat for its fusion. When a little water is added to it there is a violent action between the two bodies; the soda becomes white, crystalline in its appearance, and much more fusible and volatile. It is then the substance commonly called pure or caustic soda ; but oroperly styled the hydrate.

The other oxide or peroxide of sodium may be formed by burning sodium in oxygen in excess. It is of a deep orange color, very fusible, and a non-conductor of electricity. When acted on by water it gives off oxygen, and the water becomes a solution of soda. It deflagrates when strongly heated with combustible bodies.

The proportions of oxygen in soda, and in the orange peroxide of sodium, are easily learned by the action of sodium on water and on oxygen. If a given weight of sodium, in a little glass tube, be thrown by means of the finger under a graduated inverted jar filled with water, the quantity of hydrogen evolved will indicate the quantity of

oxygen combined with the metal to form soda ; and when sodium is slowly burned in a tray of platina (lined with dry common salt), in oxygen in great excess, from the quantity of oxygen absorbed the composition of the peroxide may be

learned. From Sir H. Davy's experiments compared with those of MM. Gay Lussac and Thenard, it appears that the prime equivalent of sodium is 3-0, and that of dry soda, or protoxide of sodium, 4-0 ; while the orange oxide or deut-oxide is 5-0. The numbers given by M.Thenard are, for the first 100 metal -+- 33-995 oxygen; and for the second, 100 metal + 67-990 oxygen. Another oxide is described containing less oxy-gen than soda ; it is therefore a suboxide. When sodium is kept for some time in a small quantity of moist air, or when 'sodium in excess is heated with hydrate of soda, a dark grayish substance is formed, more inflammable than sodium, and which affords hydrogen by its action upon water.

Only one combination of sodium and chlorine is known. This is the important substance com-mon salt. It may be formed directly by combustion, or by decomposing any compound of chlorine by sodium. Its properties are well known, and are already described under ACID (MURIATIC). It is a non-conductor of electricity, is fusible at a strong red heat, is volatile at a white heat, and crystallises in cubes. Sodium has a much stronger attraction for chlorine than for oxygen ; and soda, or its hydrate, is decomposed by chlorine, oxygen being expelled from the first, and oxygen and water from the second. Potassium has a stronger attraction for chlorine than sodium has; and one mode of procuring sodium easily is by heating together to redness common salt and potassium. This chloride of sodium, improperly called the muriate, consists of 4-5 chlorine + 3'0 sodium. There is no known action between sodium and hydrogen or azote.

Sodium combines readily with sulphur and with phosphorus, presenting similar phenomena to those presented by potassium. The sulphurets and phosphurets of sodium agree in their general properties with those of potassium, except that they are rather less inflammable. They form, by burning, acidulous compounds of sulphuric and phosphoric acid and soda.

Potassium and sodium combine with great facility, and form peculiar compounds, which differ in their properties according to the proportions of the constituents. By a small quantity of sodium potassium is rendered fluid at com-mon temperatures, and its specific gravity is considerably diminished. Eight parts of potassium and one of sodium form a compound that swims in naphtha, and that is fluid at the common temperature of the air. Three parts of sodium and one of potassium make a compound fluid at common temperatures. A little potassium destroys the ductility of sodium, and renders it very brittle and soft. Since the prime of potassium is to that of sodium as 5 to 3, it will require the former quantity of potassium to eliminate the latter quantity of sodium from the chloride. The attractions of potassium, for all substances that have been examined, are stronger than those of sodium. Soda is the basis of common salt, of plate and crown glass, and of all hard soaps. .

SODALITE. Color green. Massive and crystallised in rhomboidal dodecahedrons, and shining. Cleavage double. Fracture small conchoidal. Translucent. As hard as felspar. Brittle.

Specific gravity 2-378. It is infusible; becoming only dark gray before the blowpipe. Its constituents are, silica 38-5 or 36, alumina 27‘48 or 32, lime 2-7 or 0, oxide of iron 1 or 0-25, soda 25‘5 or 25, muriatic acid 3 or 6-75 ; volatile matter 2-10 or 0, loss 1-7 or 0. — Thomson and Ekeberg. It was discovered in West Greenland by Sir Charles Gieseke, in a bed in mica slate.

SODALITY, n. s. Lat. «cx/«/ttas. A fellowship ; a fraternity.

A new confraternity was instituted in Spain, of the slaves of the blessed Virgin, and this sodality established with large indulgencies. Stillingfleet.

SOD’ER, v. a. & n. s. Fr. souder ; Dut.

souderen. It is generally written solder, from

Ital. soldare ; Lat. solidare. To cement with some metallic matter : a metallic cement.

He that smootheth with the hammer encourageth him that smote the anvil, saying, It is ready for todcring. haiah xli.

Still the difficulty returns, how these hooks were made : what is it that fastens this toder, and links these first principles of bodies into a chain t

Collier on Pride.

SODOM, an ancient city of Palestine, in Asia, infamous in Scripture for the wickedness of its inhabitants, and their destruction by fire from heaven on that account, along with the adjacent cities of Gomorrah, Admah, and Zeboim, whose inhabitants had been equally wicked. Zoar was preserved at the intreaty of Lot. These cities had met with a glorious deliverance from captivity by the bravery of Abraham about sixteen years before. The place where these cities stood is now covered by the waters of the Dead Sea, or the lake Asphaltites. See ASPHALTITES.

SODOMY, an unnatural crime, so called from the city of Sodom, which was destroyed by fire for it. The delicacy of our English law treats it, in its very indictments, as a crime not fit to be named ; peccatum illud horribile, inter Christi-anos non nominandum. The edict of Constantius and Constantine observes a similar taciturnity ; ubi scelus est id, quod non proficit scire, jubemus insurgere leges, armari jura gladio ultore, ut exquisitis pcenis subdentur infames, qui sunt, vel qui futuri sunt rei. The Levitical law adjudged those guilty of this execrable evil to death, Lev. xviii. 22, 23; xx. 15, 16; and the civil law assigns the same punishment to it. Our ancient law commanded such miscreants to be burnt to death (Brit. c. 9), though Fleta says (1. i. c. 37) they should be buried alive ; either of which punishments was indifferently used for this crime among the ancient Goths. At present our laws make it felony: 25 Hen. VIII. c. 6; 5 Eliz. c. 17. And the rule of the law is, that if both are arrived at years of discretion, agentes et consentientes pari poena plectantur. 3 Inst. 50. There is no statute in Scotland against sodomy ; the libel of the crime is therefore founded on the divine law, and practice makes its punishment to be burning alive.

SOE, n. i. Scott, sue. A large wooden vessel with hoops, for holding water; a cowl.

A pump grown dry will yield no water ; but pouring a little into it first, for one bason-full you may fetch up as many soe-fulls. More.

SOEVER, adv. So and ever. A word properly joined with a pronoun, or adverb, as who-soever, whatsoever, howsoever.

What great thing soever a man proposed to do in his life, he should think of achieving it by fifty.

Temple.

What love soever by an heir is shown, Or you could ne'er suspect my loyal love. Drydeti.

SO'FA, n. s. Fr. sofa, of Pers. sofat. A seat covered at one time with carpets.

The king leaped off from the sofa on which he sat, and cried out, 'Tis my Abdallah. Guardian.

I sing the sofa. I who lately sang Truth, Hope, and Charity, and touched with awe The solemn chords, and with a trembling hand, Escaped with pain from that adventurous flight, Now seek repose upon an humbler theme ; The theme, though humble, yet august and proud The' occasion — for the Fair commands the song.

Cowper.

A SOFA, in the east, is a kind of alcove raised half a foot above the floor of a chamber or other apartment ; and used as the place ot state, where visitors of distinction are received. Among the Turks the whole floor of their state rooms is covered with a kind of tapestry, and on the win-dow side is raised a sofa or sopha, laid with a kind of mattress covered with a carpet much richer than the other. On this carpet the Turks are seated, both men and women, like the tailors in England, cross-legged, leaning against the wall, which is bolstered with velvet, satin, or other stuff suitable to the season. Here they eat their meals ;

only laying a skin over the carpet to serve as a table cloth, and a round wooden board over all covered with plates, &c.

SOFALA, a country and town of Eastern Africa, at the mouth of a river of the same name. At the time of the arrival of the Portuguese it was a place of great importance for the gold and ivory brought in large quantities from the interior; but, since Mosambique became the capital of the Portuguese settlements, the fort of Quili-mane has been the channel by which this trade is conducted. The Portuguese, however, still maintain a fort here, which holds the supremacy over those of Inhambane and Corrientes, and an an-nual vessel comes from Mosambique, bringing coarse cottons and other articles suited to the taste of the natives; receiving in return gold, ivory, and slaves.

The great bank of Sofala extends for two days sail, and appears to have been thrown up by the violence of the south-easterly winds, which generally prevail in direct opposition to the currents of many rapid rivers, which here flow into the sea. Ships, however, by carefully tracing their course, may find a channel of twelve fathoms, and should never go into a smaller depth. Whales are found here in vast multitudes.

The town is situated up a river, navigable only for* small vessels, and having a bar at its entrance only twelve or fourteen feetdeep allow water. The anchorage is about four miles from the fort ; but ships ought not to enter without a pilot. Opposite to the mouth of the river is a small island, called also Sofala. The surrounding country is wild, and thinly inhabited, traversed by vast herds of elephants, the ivory from which affords a staple article of commerce. The people, in

their stature, color, habits, and language, appear nearly allied to the Kaffres. They are well armed, brave, and apparently quite independent. The villages consist of huts, interspersed with large trees like the Indian fig. On the upper part of the river is Zimboas, capital of the dominions of the Quiteue. According to Vincent and other learned enquirers Sofala is the Ophir of Solomon, whither the fleets of that monarch made regular voyages in search of gold. The town is in~long. 34° 45’ E., lat. 20° 15’ S.

SOFFIT, or SOFFITA, in architecture, any timber ceiling formed of cross beams of flying cornices, the square compartments or pannels of which are enriched with sculpture, painting, or gilding ; such are those in the palaces of Italy, and in the apartments of Luxembourg at

Paris.

SOFFITA, c - SOFFIT, is also used for the under-side or face of an “architrave ; and more particularly for that of the corona or larmier, which the ancients called lacunar, the French plafond, and we usually the drip. It is enriched with compartments of roses ; and in the Doric order has eighteen drops, disposed in three ranks, six in each, placed to the right of the gutta, at the bot-tom of the triglyphs.

SOFIA, or SOPHIA, the capital of Bulgaria, European Turkey, is pleasantly situated in a plain at the foot of the mountains of Argentaro, on the Bogana. It carries on, though an inland place, a very extensive trade, which is for the most part in the hands of Greeks and Armenians, and contains a number of handsome baths and mosques, but the streets are narrow, uneven, and dirty, and the air unhealthy. Sophia was built by the emperor Justinian on the ruins of the ancient Sardica. It is the see of a Greek metropolitan and of a Catholic bishop. It stands on the liigh road leading from Constantinople to Belgrade. Inhabitants 50,000. It is 280 miles W. N. W. of Constantinople, and 160 W. N. W. of Adrianople.

Sax. ropt J Belg* soft ; Teut. saafte. • Tender; smooth; ductile ; flexible : hence mild ; gentle ; simple ; meek ; timorous ; placid ; weak : as an interjec-* tion, it means hold, stop ! to soften is to mollify ; make less havd ; intenerate ; make easy : as a verb neuter to grow less hard ; to relax : the ad-verb and noun substantives follow the sense of soft, adjective. *

Ahab rent his clothes, and went softly.

1 Kings xxi. 27.

What went ye out for to see 1 a man clothed in ioft raiment? behold, they that wear soft raiment are in kings’ houses. Matthew.

Such was the ancient simplicity and softness of spirit, which sometimes prevailed in the world, that they, whose words were even as oracles amongst men, seemed evermore loth to give sentence against any thing publickly received in the church of God.

Hooker.

•What he hath done famously, he did it to that end ; though soft conscienced men can be content to say, it was for his country. Shakspeare. Coriolamts.

Thou art their soldier, and, being bred in broils, I last not the soft way, which, tbou dost confess

SOFT, adj. & interj. SOF'TEN, v. a. & v. n. j SOFT'LY, adv. SOF'TNER, n. s. ' SOFT'S ESS.

Were fit for tliee to use, as they to claim, Tn asking their good loves. Id.

Would my heart were flint, like Edward's ; Or Edward's soft, and pitiful like mine. Shakspeare.

Her voice was ever soft, Gentle, and low ; an excellent thing in women. Id.

Oh ! come in, Emilia ; Soft, by and by, let me the curtains draw. Id.

He may soften at the sight of the child ; The silence often of pure innocence Persuades, when speaking fails. Id.

Some bodies are hard, and some soft : the hardness is caused by the jejuneness of the spirits, which, if in a greater degree, makes them not only hard, but fragil. Bacon.

Bodies, into which the water will enter, long seething will rather soften than indurate.

Id. Natural History.

Softness cometh by the greater quantity of spirits, which ever induce yielding and cession ; and by the more equal spreading of the tangible

parts, which thereby are more sliding and following ; as in gold.

Id.

Solid bodies, if very softly percussed give no sound ; as when a man treadeth very softly upon boards.

Bacon.

This virtue could not proceed out of fear or softness; for he was valiant and active.

Id. Henry VII.

Softness of sounds is distinct from the exhility of sounds. Bacon.

This sense is also mistress of an art Which to soft people sweet perfumes doth sell ; Though this dear art doth little good impart, Since they smell best that do of nothing smell.

Dames.

But soft, my muse ; the world is wide, And all at once was not descried. Suckling.

A few divines of so soft and servile tempers as disposed them to so sudden acting and compliance.

King CJiarlei.

They turn the softness of the tongue into the hardness of the teeth. Holy day.

So long as idleness is quite shut out from our lives, • all the sins of wantonness, softness, and effiminacy, are prevented ; and there is but little room for temptation. Taylor.

He was not delighted with the softnesses of the court. Clarendon.

Spirits can either sex assume ; so soft God uncompounded is their essence pure. Milton. Our torments may become as soft as now severe.

Id.

The solemn nightingale tuned her soft lays. Id. Sleep falls with soft slumberous weight. Id.

I will soften stony hearts. Id.

For contemplation he and valour formed, For softness she and sweet attractive grace. Id.

On her soft axis while she paces even, She bears thee soft with the smooth air along. Id. Less winning soft, less amiably mild. Id.

The deceiver soon found this soft place of Adam's, and innocency itself did not secure him. Glanville.

The sun shining upon the upper part of the clouds made them appear like fine down or wool, and made the softest sweetest lights imaginable.

Browne's Travels. Her stubborn look This softness from thy finger took. Waller.

Hot and cold were in one body Sxt, And soft with hard, and light with heavy mixt.

Dry den.

However soft within themselves they are, To you they will be valiant by despair. Id.

When some great and glorious monarch dies, Soft whispers first, and mournful murmurs, rise, Among the sad attendants ; then the sound Soon gathers voice. Id.

He bore his great commission in his look, But sweetly tempered awe, and softened all he

spoke. Id.

In this dark silence softly leave the town, And to the general's tent direct your steps. Id.

The king must die ;

Though pity softly plead within my soul, Yet he must die that I may make you great. Id.

Improve these virtues with a softness of manners, and a sweetness of conversation. Id.

One king is too soft and easy ; another too fiery.

L'Estrange.

Hard and soft are names we give things, only in relation to the constitutions of our own bodies ; that being called hard, which will put us to pain sooner than change figure, by the pressure of any part of our bodies ; and that soft, which changes the situation of its parts upon an easy touch. Locke.

Saving a man's self, or suffering, if with reason, is virtue ; if without it, is softness or obstinacy.

Grew.

Our friends see not our faults, or conceal them, or soften them by their representation. Addison.

Their arrow's point they soften in the flame, And sounding hammers break its barbed frame.

Gay.

Curst be the verse, how well so'er it flow, That tends to make one worthy man my foe Give virtue scandal, innocence a fear, Or from the soft-eyed virgin steal a tear. Pope.

Yet soft his nature, though severe his lay ; His anger moral, and his wisdom gay. Id.

Soft were my numbers ; who could take offence, When smooth description held the place of sense 1

Id

Musick the fiercest griefs can charm ; Musick can soften pain to ease. And make despair and madness please. Id.

Those softnera and expedient-mongers shake their heads so strongly that we can hear their pockets jingle. Swift .ˆ

An idle and soft course of life is the source of criminal pleasures. Broome.

A wise man, when there is a necessity of expressing any evil actions, should do it by a word that has a secondary idea of kindness or softness ; or a word that carries in it rebuke and severity.

Watts' s Logick.

I would correct the harsh expressions of one party, by softening and reconciling methods.

Watti.

Who but thyself the mind and ear can please With strength aud softness, energy and ease?

Jfarte.

SOGDI, in ancient geography, a people of India, on this side of the Ganges. Quintus Cur-tius places them on the left bank of the Indus. The same historian says that Alexander built a city in the country of these people, and called it Alexandria. He also relates that when some of these people, who resided not far from the country of Odin's Goths, were condemned to death by Alexander on account of a revolt, they rejoiced greatly, and testified their joy by singing verses and dancing. When the king enquired the reason of their joy, they answered, that ' being soon to be restored to their ancestors by so great a conqueror, they could not help celebrating so honorable a death, which was the wish of all brave men.

in their own accustomed songs.' This correspondence of manners and principles between the Scandinavians and the Sogdians seems to furnish a striking proof of Odin's migration from the east to the north.

SOGDIANA, in ancient geography, a country of Asia, bounded on the north by Scythia, east by the Sacae, south by Bactriana, and west by Margiana, now called Usbec, or Zagatay. Mara-canda, now Samarcand, was the capital.

SOGDIANUS, a shortlived usurper of the Persian throne, who murdered his brother Xerxes II., and was deservedly killed by his third brother Ochus, after a reign of seven months. See PERSIA.

SOHAM , or MONK-SOHAM, a market town and parish in Staploe hundred, Cambridge, five miles southeast of Ely, and seventy-one from London, on the borders of Suffolk, on the east side of the Cam, The town is large and irregularly built. In the time of the Anglo-Saxons it was a place of some importance, and appears to have been the seat of the East-Anglian bishops. It has a spacious chapel, alms-houses, and a large charity-school. The chief produce of the place is cheese, in quality like that of Stilton. Market >n Saturday. Fair, April 20th.

SOHL, or ZOLYOM VARMEGYE, a palatinate of northwest Hungary, having a superficial ex-tent of about 1060 square miles. It lies almost wholly among the Carpathians, and is abundant in pasturage and minerals. The chief town New Sohl.

SOIL, v. a. & n. s.~l Sax. rihan ; Fr. souil—

SOIL'INESS, n. s. S/er. To foul ; dirt; pol—

SOIL'URE. 3 lute; stain; dung; manure ; purge (applied to cattle) : the noun substantive means dirt ; foulness ; gravel ; vegetative earth; land ; dung: soiliness and soilure, stain; dirt; foulness.

If I soil Myself with sin, I then but vainly toil. Sandy*.

A silly man in simple weeds forlorn, And soiled with dust of the long dried way.

Faerie Queene.

The soiled horse. Shahspeare.

By indirect way*

I met this crown ; and I myself know well

How troublesome it sate upon ray head :

To thee it shall descend with better quiet :

For all the soti of the achievement goes

With me into the earth. Id. Henry IV.

That would be a great soil in the new gloss of your marriage. Shakspeare.

Dorset, that with fearful soul

Leads discontented steps in foreign toil,

This fair alliance shall call home

To high promotions. Id.

He merits well to have her, .

Not making any scruple of her soilure. Id.

Although some hereticks have' abused this earth, yet the sun is not soiled in passage.

Bacon's Holy War.

Judgment may be made of waters by the soil whereupon they run. Id. Natural History.

Make proof of the incorporation of silver and tin, whether it yield no soiliness more than silver. Bacon .

I would not soil these pure ambrosial weeds With the rank vapours of this sin-worn mould.

Millon.

Her spots thou «ee'st

As clouds, and clouds may rain, and rain produce Fruits in her softened soil. Id. Paradise Lott.

O unexpected stroke, worse than of death . Must I thus leave thee, Paradise ! Thut leave Thee, native soil ! these happy walks and shades, Fit haunts of gods 1 Milton.

A lady's honour must be touched, Which, nice as ermines, will not bear a soil.

Dry den.

Improve land by dung, and other sort of soils.

Mortimer.

One, who could not for a taste o' th' flesh come in, Licks the soiled

earth,

While reeking with a mangled Ombit'« blood.

Tate.

Men now present, just as they soil their ground ; not that they love the dirt, but that they expect a crop. South.

The haven has been stopped up by the great heaps of dirt that the sea has thrown into it ; for all the si > il on that side of Ravenna has been left there insensibly by the sea. Additon.

If the eye-glass be tincted faintly with the smoke of a lamp or torch, to obscure the light of the star, the fainter light in the circumference of the star ceases to be visible ; and the star, if the glass be sufficiently soiled with smoke, appears something more like a mathematical point. Newton.

An absent hero's bed they sought to soil, An absent hero's wealth they made their spoil.

Pope.

The first cause of a kingdom's thriving is the fruitfulness of the soil, to produce the necessaries and conveniencies of life ; not only for the inhabitants, but for exportation. Swift.

No dews give freshness to this blasted tott.

Maturin.

SOILS. On this subject we have entered pretty fully in the article AGRICULTURE. Here, however, we shall follow the condensed view of the chemistry of soils, as given by Sir H. Davy.

' In cases,' says this writer, ' where a barren soil is examined with a view to its improvement, it ought in all cases, if possible, to be compared with an extremely fertile soil in the same neighbourhood, and in a similar situation : the difference given by their analyses would indicate the methods of cultivation, and thus the plan of improvement would be founded upon accurate scientific principles.

* If the fertile soil contained a large quantity of sand, in proportion to the barren soil, the process of melioration would depend simply upon a supply of this substance ; and the method would be equally simple

with regard to soils deficient in clay or calcareous matter. In the application of clay, sand, loam, marie, or chalk, to lands, there are no particular chemical principles to be observed ; but, when quicklime is used, great care must be taken that it is not obtained from the magnesian limestone; for in this case, as has been shown by Mr. Tcnnant, it is exceedingly injurious to land. The magnesian limestone may be distinguished from the com-mon limestone by its greater hardness, and by the length of time that it requires for its solution in acids ; and it may be analysed by the process for carbonate of lime and magnesia.

When the analytical comparison indicates an excess of vegetable matter as the cause of sterility, it may be destroyed by much pulverization,

and exposure to air, by paring and burning, or the agency of lately made quicklime. And the defect of animal and vegetable matter must be supplied by animal or vegetable manure. The general indications of fertility and barrenness, as found by chemical experiments, must necessarily differ in different climates, and under different circumstances. The power of soils to absorb moisture, a principle essential to their productiveness, ought to be much greater in warm and dry countries, than in cold and moist ones ; and the quantity of fine aluminous earth they contain should be larger. Soils likewise that are situate on declivities ought to be more absorbent than those in the same climate on plains or in valleys.

‘ The productiveness of soils must likewise be influenced by the nature of th« sub-soil, or the earthy or stony strata on which they rest ; and this circumstance ought to be particularly attended to, in considering their chemical nature, and the system of improvement. Thus a sandy soil may owe its fertility to the power of the sub-soil to retain water; and an absorbent clayey soil may occasionally be prevented from being barren, in a moist climate, by the influence of a sub-stratum of sand or gravel. Those soils that are most productive of corn contain always certain proportions of aluminous or calcareous earth in a finely

divided state, and a certain quantity of vegetable or animal matter.

‘ The quantity of calcareous earth is however very various, and in some cases exceedingly small. A very fertile corn soil from Ormiston in East Lothian afforded in 100 parts only eleven parts of mild calcareous earth ; the finely divided clay amounted to forty-five parts. It lost nine in decomposed animal and vegetable matter, and four in water, and exhibited indications of a small quantity of phosphate of lime. This soil was of a very fine texture, and contained very few stones or vegetable fibres. It is not unlikely that its fertility was in some measure connected with the phosphate ; for this substance is found in wheat, oats, and barley, and may be a part of their food.

‘ A soil from the low lands of Somersetshire, celebrated for producing excellent crops of wheat and beans without manure, I found to consist of one-ninth of sand, chiefly siliceous, and eight-ninths of calcareous marie tinged with iron, and containing about five parts in 100 of vegetable matter. I could not detect in it any phosphate or sulphate of lime, so that its fertility must have depended principally upon its power of attracting principles of vegetable nourishment from water and the atmosphere.

‘ Mr. Tillet, in some experiments made on the composition of soils at Paris, found that a soil composed of three-eighths of clay, two-eighths of river sand, and three-eighths of the parings of limestone, was very proper for wheat. In general, bulbous roots require a soil much more sandy, and less absorbent, than the grasses. A very good potatoe soil, from Varsel in Cornwall, afforded seven-eighths of siliceous sand ; and its absorbent power was so small that 100 parts lost only two by drying at 400° Fahrenheit. Plants and trees, the roots of which are

fibrous and hard, and capable of penetrating deep into the earth, will vegetate to advantage in almost all common soils that are moderately dry, and do not contain a very great excess of vegetable matter.

‘ The soil taken from a field at Sheffield-place in Sussex, remarkable for producing flourishing oaks, was found to consist of six parts of sand, and one part of clay and finely divided matter. And 100 parts of the entire soil, submitted to analysis, produced water 3, silex 54, alumina 28, carbonate of lime 3, oxide of iron 5, decomposing vegetable matter 4, loss 3.

From the great difference of the causes that influence the

productiveness ot lands, it is obvious that in the present state of science, no certain system can be devised for their improvement, independent of experiment ; but there are few cases in which the labor of analytical trials will not be amply repaid by the certainty with which they denote the best methods of melioration ; and this will particularly happen when the defect of composition is found in the proportions of the primitive earths. In supplying animal or vegetable manure, a temporary food only is provided for plants, which is in all cases exhausted by means of a certain number of crops ; but when a soil is rendered of the best possible constitution and texture with regard to its earthy parts, its fertility may be considered as permanently established. It becomes capable of attracting a very large portion of vegetable nourishment from the atmosphere, and of producing its crops with comparatively little labor and expense.

SOILING is a term used, in agriculture, for the practice of supporting animals of different kinds, in the summer season, with green food of various sorts, cut daily. A vast number of different plants and grasses may be had recourse to in this intention, as almost all those which have a quick and luxuriant growth ; as lucern, tares, clover, saintfoin, chicory, 8cc. By having recourse to soiling, a greater variety of plants may be consumed, and consequently prevented from running to waste. This is a practice, which is further recommended by the food being consumed with much less waste than when fed upon the land ; by the great increase of good manure that is produced ; and by that of the stock feed ing with less interruption and inconvenience, from their being more effectually shaded from the excessive heat of the sun, and better protected from the attacks of flies and other insects. In all these respects it would seem to have a great superiority over that of letting the animals range over the pastures or other grass lands. One great and principal objection that has been opposed to this plan of feeding, is that of the expense of conducting the business being too considerable. But the extensive trials of Mr. Mure and Young, and other cultivators and promoters of the practice, fully show that it may be executed at an expense that can never form any real objection. It has likewise been contended, in opposition to this practice, that such parts of the live stock as are in milk do not afford it so abundantly as when fed in t'he pastures, but which is probably a mere

supposition, as it has been almost invariably though this may be employed, if there should be found that most of the green crops that arejcut occasion. The proper foddering of the animals in

this practice is a matter of great consequence. It is observed in the Annals of Agriculture that one great object is never to suffer them to have too

and employed in this manner have greater effect in exciting that secretion than the common pasture-grass. But as particular sorts of vegetables, as weH as other substances, act more powerfully

much at once ; as, when this is the case, from the

on some of the glandular organs than others,it is heat of the season, it quickly takes on a degree

probable that some kinds of plants may have a of fermentation, and is rejected or only picked

greater tendency to promote this kind of secre-among by the cattle, in consequence of which

tion than others, and, on this account, cows fed much waste may be committed, which would

on one sort of food in this practice may afford oiherwise be avoided; and, in addition, it is not

less milk than on others. improbable but that the stock may thrive better

Mr. Close found it advantageous to soil horses by having their food more frequently, and of

in cheap thatched sheds, in which they have course in a more fresh state. But it should never

room to walk and roll ; and with bullocks and cows in stalls seven feet wide, each stall .holding two fastened by the necks to the sides, by which

on any account be left packed in the carts for any length of time. The best mode seems to be that of adapting the size of the cart to the exact

they are prevented from inconveniencing each consumption of the stock ; as in this way the

other while feeding. In this method of manage-whole may be conveniently distributed in the

ment, it is not unlikely that great benefit might cribs or racks at once the moment it is wanted

be produced by having low sheds fixed up round before it becomes unpalatable by fermentation,

the yards, or other places, with suitable contriv-and the least possible loss may be incurred. It

ances for the cattle receiving the food from, so as is constantly necessary to watch the conduct of

to cause the least possible loss ; and by having laborers in this particular, as they are in general

much disposed to over-feed. And there is another matter which should not be disregarded, which is that of not suffering the crops that are

the stock in all cases properly sorted, in regard

to size, kind, and strength. Such sheds might,

in some instances too, be provided, with very

great utility and convenience, near to the grounds used in soiling to advance to too great a head ;

whence the food is raised and procured. In this as, by attention in this respect, the food may be

way a great saving of labor and expense would more cleanly eaten up and consumed.

necessarily be made in different situations.

However, it must be observed,' says a late

In all cases where low sheds are made use of writer, ' that in this system litter becomes an

in this intention, there ought to be proper drains object of the greatest importance, as the large

formed for conveying the urine and other fluid quantity of urine that is made by cattle, when

matters into the littered yards, and other places soiled on these luxuriant sorts of green food, is

designed for forming manure, so that they may capable, by its moistening property, of adding in

have a constant operation in the preparation of the hot season, the more quick fermentation of

it. It may also be necessary and beneficial in such materials, and of reducing a very large pro—

this practice, sometimes to have different sets and portion into the state of manure. In this view,

sorts of animals, in order that the refuse of the the attentive farmer should, therefore, make an

food left by one set may be eaten by another, abundant provision in

the winter time of other

and no kind of loss sustained. sorts of materials, where a proper supply of

But, in order that this business may be con-straw cannot be reserved for the purpose. There

ducted in the most beneficial manner, it is neces-are various matters that may be made use of in

sary the farmer should carefully attend to the this intention, such as stubble, fern, rushes, and

culture of such green crops as have been men-other aquatic plants, which may be cut and

tioned above, and which can be best applied in raked together in the places in which they are

this way, on a scale fully sufficient for this pur-most abundantly produced, in order to be stacked

full

pose. In the view of early application, a proportion of lucern should be raised on the most deep and fertile soils ; and on the better sorts of land that may be in the condition of fallow, clover, and tare crops may be grown. These

up for future use. Leaves might also, in woody situations, be useful for the same purpose. And, in addition to these vegetable matters, there are other substances that are capable of being employed with utility, such as peat or bog-earth,

must be sown so as to come into use at different fresh vegetable mould, sand, and th'e scrapings times ; the first crop of winter tares succeeding to of roads ; as, during the decomposition of the va-the early cut lucern ; the later put in winter tares rious vegetable materials made use of in this following, after which the clover will most pro-practice, not only much hydrogen and carbonic bably be

ready, to which the third crop of tares gas are set at liberty, but ammonia is formed in and the second cut of lucern may succeed ; at a large quantities, in the manner that has already still later period the spring tares may be em-been explained, which, from its action upon such ployed ; and, in succession to this, the third cut-earthy materials, is highly useful in bringing ting of lucern will in general be ready. But them into the state of manure for the improve-there are many other plants that may perhaps be ment of lands. Some other sorts of matters made use of in this way, as chicory, which may might likewise, in different situations, be em-be had recourse to with advantage in this ma-ployed in this manner with considerable benefit ; nagement, as, in soils that are tolerably fertile, it such as sawdust, when to be procured in large will admit of repeated cutting. With these dif-quantities ; and the refuse materials of different ferent crops there will probably be seldom any manufactories, as the weld of the calico-printer, necessity for the use of common cut grass ; the bark of the tanner, &c. Many of these kinds

of substances are excellent for the purpose of manure.'

It is remarked by Ihe Rev. Mr. Duncan, in the fourth volume of Communications, that he always keeps his work-horses on red clover through the summer ; and they are as healthy and fit for labor as any of his neighbours' that are turned out into the pasture. Last year he cut the clover three times, and thirty falls or perches yielded as much as one horse was able to consume. He has frequently intended to try a crop of goose-grass for hay, upon some piece of ground which was not to remain in pasture ; but he has always met with some avocation at the time when the seed of this grass could be procured. He is surprised that goose-grass should be so long neglected, nay despised. It is considered as a weed among rye-grass, though he observed that the horses are not of the same opinion. Its hay is most substantial, and, were it allowed to come to maturity, its seed would, he supposes, be little inferior in weight to oats, and would probably be an excellent substitute for them in the food of horses. And it is added, that he who

can procure 200 carts of dung from the same extent of ground where 100 only were formerly produced, certainly possesses a double power of improving ‘t. A great reserve of straw is necessary for lit-ter to horses, when living on red clover. When the straw fails, some bed their horses with dried rushes ; but rushes contribute very little to the manufacture of dung. When fern, or, as it is sometimes called, the ‘ braken,’ can be gotten, he would recommend it as next to straw for littering horses or black cattle, and as the best of all land vegetables for the dunghill. Mr. Rawson in the same work also highly approves of, and has long practised, the feeding of horses and spring cattle in summer upon clover ; he has found that an acre of clover, cut and carried to the cattle and horses in their hovels and stalls, will maintain double the quantity of stock to an acre pastured ; besides the very great quantity of manure produced by this mode of feeding, which secures almost to a certainty the turnip crop. In a trial made by Mr. Mure in soiling bullocks with winter tares, as stated in the Annals of Agriculture, the advantages of this practice over that of feeding in the pastures is very fully shown. The same system of soiling has been practised with advantage by many others, as Mr. J. Wright, &c.

Sir Humphrey Davy agrees with these practical men, in thinking that, in feeding cattle with green food, there are many advantages in the practice of soiling, or supplying them with food, where their manure is preserved out of the field ; the plants it is conceived are less injured when cut, than when torn or jagged by the teeth of the cattle, and no food is wasted by being trodden down. The cattle are likewise obliged to feed without making any selection; and in consequence the whole food is consumed : the attachment or dislike to a particular kind of food exhibited by animals, affords, it is supposed, no proof of its nutritive properties or powers, as cattle at first refuse linseed cake, one of the most nutritive substances upon which they can be fed.

The writer of the account of the state of agri-

culture in the county of Middlesex has however observed, in opposition to this system, that though ‘ it has lately been suggested by several writers, that carrying grass into the yards, and giving it to cattle there, is more adviseabie than permitting them to collect their own food ; where the party can manure half his land annually, or the whole every second year, it may, it is supposed, be expected to support such a high degree of exhaustion ; but in other cases the pasture would soon be so much impoverished, as to produce nothing for the owner of it to mow. Meadows which can be flooded by art at

any period of summer, would probably, too, it is thought, ad-mit of having their produce continually carried off; in all other cases such-a system would, in the opinion of the writer, in a short time ruin the land ‘

‘The increased labor and expense of such a practice would also, it is said, render it unprofitable; one man employed in that manner, with a horse and cart, could not attend the cattle, and bring in the produce of many acres, though it would cost a grazier in this county annually, it is supposed, £113 ; to which ought to be added, that the manure would be wasted in such a man-ner as to lose a large moiety of it ; in all which ways £120 would be ‘expended, which is a greater sum than this practice is calculated to repay.

‘The only advantage which it promises is, it is said, to avoid the damage done by the treading of cattle ; it must be admitted that in wet seasons and deep grass this is considerable ; but a few additional acres would, it is believed, supply a similar quantity of herbage at a less expense ; where that cannot be obtained, reducing the number of cattle would, it is said, have the sama effect, and might be done without incurring so great a diminution of profit as the foregoing £120 would certainly be.

‘ It is obvious,’ the writer says (after stating other objections), ‘ thsrt this is one of the closet systems of supporting cattle, which cannot be reduced to practice beyond the extent -of a very few acres, and only then when it can be done without any additional men or horses. If the expense of the men and teams is to be brought into the account, it will, it is said, be altogether unprofitable. Such an expense would, in this county, amount, it is supposed, in fifteen weeks, to £34 10s. ; which, divided by the number of acres (ten), proves the charge to be cfn each acre £3 9s. ; or, divided by the number of oxen (six), it would be on each £5 15s. : add this extra expense, it is said, to a long list of usual and unavoidable charges, and it will swell the account to such a sum, as would exceed the value of the improvement of any cattle whatever.’ We leave the decision on these arguments to the practical reader.

SO’JOURN, v. n. & n. s. \ Fr. sejoumer ; Ital.

SO’JOURNER, n. s. i seggiornare. To

dwell any where for a time; live as not at home: the noun substantives both corresponding.

The sojourning of Israel, who dwelt in Egypt, was four hundred and thirty years. Exodus xii. 40.

We are strangers and sojourners, as were all our fathers : our days on earth are as a shadow.

1 Chron. xxix. 16.

If, till the expiration of your month, You will return and sojourn with my sister, Dismissing half your train, come then to roe.

Shakspeare.

The princes, France and Burgundy, Lone in our court have made their amorous tojourn.

Id.

The soldiers first assembled at Newcastle, and there sojourned three days. Hayicard.

Here dwells he ; though he sojourn every where In progress, yet his standing house is here. Donne.

To tojourn in that land He comes invited. Milton’s Paradise Lost.

Thee I revisit now,

Escaped the Stygian pool, though long detained In that obscure sojourn. Id.

Waves o’erthrew

Busiris, and his Memphian chivalry, While with perfidious hatred they

pursued The snjourners of Goshen. Id.

Not for a night, or quick revolving year ; Welcome an owner, not a sojourner. Dryden. He who $ojourns in a foreign country refers what he sees abroad to the state of things at home.

Atterbury.

SOISSONNOIS, a ci-devant province of France, bounded on the north by Laonnois, east by Champagne, south by Brie, and west by

Valois. It was inhabited by the ancient Sues-thi°f At™ tormentors.

since augmented by three deniers, and struck with a puncheon of a fleur-de-lis, to make it current for fifteen deniers. Soon after the old sols were coined over again, and both old and new were indifferently made current for fifteen deniers. In 1709 the value of the same sols was raised to eighteen deniers. Towards the end of the reign of Louis XIV. the sol of eighteen deniers was again lowered to fifteen ; and by Louis XVI. it was reduced to the original value of twelve.

SOL, in Dutch currency. The Dutch liave two kinds of sols; the one of silver, called sols de gros, and likewise schelling; the other of copper, called also the stuy ver.

SOL’ ACE, v. a.,v. «., &w.s. Old Yr.solacier; Ital. solazzare ; Lat. solatium. To comfort ; cheer; amuse: to take comfort ; be recreated: the comfort or amusement yielded.

Therein sat a lady fresh and fair, Making sweet solace to herself alone ;

Sometimes she sung as loud as lark in air, Sometimes she laughed, that nigh her breath was gone. Spenter’s Faerie Queeite.

If we have that which is meet and right, although they be glad, we are not to envy them this their solace : we do not think it a duty of ours to be in every such

Hooker.

siones, a brave nation of Gaul, in the time of Caesar. It is fertile, and abounds in corn, wood, and pasture. It now forms, along with the ci-devant province of Vermandois, the department of Aisue.

SOISSONS, an ancient and large town of France, in the department of Aisne, and late province of Soissonnois. In the time of Julius Caesar it was called Noviodunum, and was the capital of the Suessiones ; whence the modern name. It was then the capital of a kingdom of the same name, under the first race of the French monarchs. It contains now about 7500 inhabitants, and is a bishop's see. The environs are charming, but the streets are narrow, and the houses ill built. The fine cathedral has one of the most considerable chapters in the kingdom. St. Louis, Philip III., and Louis XIV., were crowned in it. The castle, though ancient, is not that in which the kings of the first race resided. Soissons is seated in a very pleasant and fertile valley, on the Aisne, and has a good trade in corn, and its manufactures of coarse linen, ropes, thread, leather, and stockings.

SOL, the sun, in astronomy, astrology, &c. See ASTRONOMY, Index.

SOL, in chemistry, is gold ; thus called from an opinion that this metal is in a particular man-ner under the influence of the sun.

SOL, in heraldry, denotes Or, the golden color in the arms of sovereign princes.

SOL, in music, the fifth note of the gamut, ut, re, mi, fa, sol, la. See GAMUT.

SOL, or Sou, in the French currency, a coin made up of copper mixed with a little silver, and worth upwards of an English halfpenny, or the twenty-third part of an English shilling. The sol, when first struck, was equal in value to twelve deniers Tournois, whence it was also called douzain, a name it still retains, though its ancient value be changed ; the sol having been

We will with some strange pastime solace them.

Shakfpeare.

Were they to be ruled, and not to rule, This sickly land might solace as before. / .

One poor and loving child, But one thing to rejoice and solace in, And cruel death hath catched it from my sight. Id.

The birds with song Solaced the woods. M Ittn.

Though sight be lost, Life yet hath many solaces, enjoyed Where other senses want not their delights, At home in leisure and domestick ease, Exempt from many a care and chance, to which Eye-sight exposes daily men abroad. Id.

If I would delight my private hours With musick or with poem, where so soon As in our native language can I find That solace ? Id. Paradise Regained.

Through waters and through flames I'll go, Sufferer and solace of thy woe. Prior.

Bad thoughts are as infectious as bad company ; and good thoughts solace, instruct, and entertain the mind, like good company. Mason.

SOL./EUS, or SOLEUS, in anatomy, one of the extensor muscles of the foot, rising from the up-per and hinder parts of the tibia and sibula.

SOLAN, a country of Central Africa, between Tombuctoo and Cassina. It was described to Horneman as one of those composing the extensive country of Haoussa or Houssa, on the north bank of the Niger; but few particulars are known respecting it.

SOLANDER (Daniel Charles), M. D., an eminent Swedish naturalist, born in the province of Nordland, in Sweden, in 1736. He studied at Upsal, and was a pupil of the great Linnaeus. He took his degree at Upsal, and in 1760 visited England, where he continued some years, and was prevailed on by his friend Sir Joseph Banks, to accompany captain Cook in his first voyage of discovery round the world in 1768. In 1773 he was appointed one of the librarians of the

British Museum. He died of an apoplectic fit in 1782.

SOLANDER'S ISLAND, an island in the South Pacific Ocean, on the south coast of New Zealand, discovered by captain Cook. It is nothing but a barren rock, about a mile in circuit, remarkably high, and lies full five leagues distant from the main. The shore of the main lies nearest east by south and west by north, and forms a large open bay, in which there is no appearance of any harbour, or shelter for shipping. The surface of the country is broken into craggy hills, of a great height, on the summits of which are patches of snow. Wood was seen not only in the valleys, but upon the highest ground, yet no appearance of its being inhabited. Long. 192° 49' W., lat. 46° 31' S.

SOLANDRA, in botany, a genus of plants, ranked by some botanists under the class mona-delphia, and the order polyandria ; but by Mr. Lee, of Hammersmith, it is arranged under the class polygamia, and in the order monoecia. It is ranked in the natural system under the thirty-eighth order, tricocceae. The calyx is simple ; the capsule oblong, wreathed, and five-celled ; the seeds are many, disposed in cells in a double order. The valves, after maturity, are divaricated even to the base, and winged inwards by the partition. The only species is S. lobata. This genus was first named Solandra, in honor of Dr. Solander, by Murray, in the fourteenth edition of the Systema Vegetabilium.

SOLAN UM, in botany, a genus of the monogynia order, belonging to the pentandria class of plants ; natural order twenty-eighth, luridae : CAL. inferior : COR. rotate, and generally mono-phyllous : the fruit a berry, bilocular, and containing- many small and flat seeds. Of this genus there are sixty-six species, most of them natives of the East and West Indies. The most remarkable are the following: — 1. S. dulcamara, a native of Britain and of Africa, is a slender climbing plant, rising to six or more feet in height. The leaves are generally oval, pointed, and of a deep green color ; the flowers hang in loose clusters, of a purple color, and divided into five pointed segments. The calyx is purple, persistent, and divided into five. The five filaments are short, black, and inserted into the tube of the corolla. The anthene yellow, erect, and united in a point as usual in this genus. The style is long, and terminates in an obtuse stigma. The berry, when ripe, is red, and contains many flat yellowish seeds. It grows in hedges well supplied with water, and flowers about the end of June. On chewing the roots we first feel a bitter, then a sweet taste; hence the name. The berries are poisonous, and may easily be mistaken by children for

currants. The stipites or younger branches are directed for use, and may be employed either fresh or dried : they should be gathered in the autumn. They are given in decoction or infusion. Razou directs the following: — Take dried dulcamara twigs half a dram, and pour upon it sixteen ounces of spring water, which must be boiled down to eight ounces; then strain it : three or four tea-spoonfuls to be taken every four hours, diluted with milk to prevent its exciting a nausea. Several authors say

that the dulcamara partakes of the milder powers of the nightshade, joined to a resolvent and saponaceous quality; hence it promotes the secretions of urine, sweat, the menses, and lochia. It is recommended in a variety of disorders ; but particularly in rheumatisms, obstructed menses, and lochia; also in some obstinate cutaneous diseases.

2. S. longum. This plant is herbaceous, but grows rank. The flowers are blue; and the fruit is six or eight inches long, and proportionally thick. It is boiled and eaten as the egg-plant.

3. S. lycopersicon, the love apple, or tomato, cultivated in gardens in the warmer parts of Eu-rope and in all tropical countries. The stalk is herbaceous, the leaves pinnated, oval, pointed, and deeply divided. The flowers are on simple racemi : they are small and yellow. The berry is of the size of a plum : they are smooth, shining, soft; and are either of a yellow or reddish color. The tomato is in daily use; being either boiled in soups or broths, or served up as garnishes to flesh meats.

4. S. melongena, the egg plant, or vegetable egg. This is also cultivated in gardens, particularly in Jamaica. It seldom rises above a foot in height. The stalk is herbaceous and smooth ; the leaves oval and downy ; the flowers are large and blue ; the fruit is as big as, and very like, the egg of a goose. It is often used boiled as a vegetable along with animal food or butter, and supposed to be aphrodisiac, and to cure sterility.

5. S. nigrum, nightshade, common in many places in Britain about dunghills and waste places. It rises to about two feet in height. The stalk herbaceous ; the leaves alternate, irregularly oval, indented, and clothed with soft hairs. The flowers are white; the berries black and shining. It appears to possess the deleterious qualities of the other nightshades in a very high degree ; and even the smell of the plant is sajd to cause sleep. The berries are equally poisonous with the leaves ;

causing cardialgia, and delirium, and violent distortions of the limbs in children. Mr. Gataker in 1757 recommended its internal use in old sores, in scrofulous and cancerous ulcers, cutaneous eruptions, and in dropsies. He says that one grain infused in an ounce of water sometimes produced a considerable effect ; that in the dose of two or three grains it seldom failed to evacuate the first passages, to increase very sensibly the discharges by the skin and kidneys, and sometimes to occasion headach, drowsiness, giddiness, and dimness of sight. Mr. Broomfield says, that in cases in which he tried this solanum, they were much aggravated by it ; and that in one case, in the dose of one grain, it proved mor-tal to one of his patients ; therefore he thinks its use is prejudicial. It is now never given internally. It was anciently employed externally as a discutient and anodyne in some cutaneous affections, tumefactions of the glands, ulcers, and disorders of the eyes.

6. S. nigrum rubrum, a native of the West Indies, is called guma by the negroes. It is so far from having any deleterious quality, that it is daily served up at table as greens or spinnage. It has an agreeable bitter taste. .

7. S. tuberosum, the common potato. See POTATO, and RURAL ECONOMY.

SO’LAR, adj. > Fr. solaire ; Lat. solari$.

SO’LARY. \ Being of the sun; belonging to, born under the influence of, or measured by the sun.

They denominate some herbs solar, and some lunar.

Baccm.

Scripture hath been punctual in other respects, concerning salary miracles.

Browne’s Vulgar Errovrs.

The corpuscles that make up the beams of light be salary effluviums, or minute particles of some ethereal substance, thrusting on one another from the ucid body. Boyle.

The rule to find the moon’s age, or any day of any solar month, cannot show precisely an exact accoynt of the moon. Holder on Time.

The cock was pleased to hear him speak so fair, And proud beside, as solar people are. Dryden.

Instead of golden fruits, By genial showers and solar heat supplied, Unsufferable winter had defaced Earth’s blooming charms, and made a barren waste.

Btackmirre.

SOLD, n. s. Old Fr. souldee. Military pay. Obsolete.

But were your will her sold to entertain, And numbered be amongst knights of maidenhead,

Great guerdon, well 1 wot, should you remain, And in her favour high be reckoned. Faerie Queene.

SOL’DAN, n.s. Corrupted from sultan. The emperor of the Turks.

They at the soldan’t chair defied the best.

Milton.

SOLDANEL, SOLDANELLA, or rindweed, in botany, a genus of plants belonging to the class of pentandria, and order of monogynia ; natural order twenty-first, precise : COR. campanulated ; the border being very finely exit into a great many segments : CAPS, unilocular, and its apex polydentate.

SOL’DER, v.a.b n.s. Fr. souder; Ital. soldare, of Lat. solidare. See SODER. To unite or fasten with any kind of metallic cement : the cement used.

It booteth them not thus to solder up a broken cause, whereof their first and last discourses will fall asunder. Hooker.

Wars ‘twixt you twain would be As if the world should cleave, and that slain men hhould solder up the rift. t

Shakspeare. Antony and Cleopatra.

Thou visible god, That tolderest close impossibilities, And mak'st them kiss 1 Id. Timon.

Learned he was in medicinal lore ; For by his side a pouch he wore Replete with strange hermetick powder, That wounds nine miles point-blank would solder.

Hudibrat.

The naked cynick's jar ne'er flames ; if broken, 'Tis quickly soldered, or a new bespoken.

Dryden't Juvenal.

A concave sphere of gold, filled with water, and toldered up, has, upon pressing the sphere with great force, let the water squeeze through it, and stand all over its outside in multitudes of small drops like dew, without bursting or cracking the body of the gold. Xewton's Opticks.

At the restoration the presbyterians, and other sects, did all unite and tolder up their several schemes, to join against the church. Swift.

Goldsmiths say, the coarsest stuff Will serve for solder well enough. Id.

One's hip he slashed, and split the other's shoulder*

And drove them with their brutal yells to seek If there might be chirurgeons who could solder

The wounds they richly merited, and shriek Their baffled rage and pain ; while waxing colder

As he turned o'er each pale and gory cheek, Don Juan raised his little captive from The heap a moment more had made her tomb.

Byron.

SOLDER, SODDER, or SODER, a metallic or mineral composition used in soldering or joining together other metals. Solders are made of gold, silver, copper, tin, bismuth, and lead. In the composition there must always be some of the metal that is to be soldered mixed with

some higher and finer metals. Goldsmiths formerly made four kinds of solder, *viz.* solder of eight, where to seven parts of silver there is one of brass or copper ; solder of six, where only a sixth part is copper ; solder of four, and solder of three : but one kind, or two at most, is now used. As mixtures of gold with a little copper melt with less heat than pure gold itself, these mixtures serve as solders for gold : two pieces of fine gold are soldered by gold that has a small admixture of copper; and gold alloyed with copper is soldered by such as is alloyed with more copper. A mixture of gold and copper is also a solder for fine copper as well as for fine gold. Gold, being particularly disposed to unite with iron, proves an excellent solder for the finer kinds of iron and steel instruments. The solder used by plumbers is made of two pounds of lead to one of block-tin. Its goodness is tried by melting it, and pouring the bigness of a crown-piece on a table ; for, if good, there will arise little bright shining stars therein. The solder for copper is made like that of the plumbers; only with copper and tin; and for very nice works, instead of tin, they sometimes use a quantity of silver. Solder for tin is made of two-thirds of tin and one of lead, or of equal parts of each ; but, where the work is any thing delicate, as in organ-pipes, where the juncture is scarcely discernible, it is made of one part of bismuth and three parts of pewter. The pew-terers use a kind of solder made with two parts of tin and one of bismuth ; this composition melts with the least heat of any solder. Silver solder is that which is made of two parts of sil-ver and one of brass, and used in soldering those metals. Spelter solder is made of one part of brass and two of spelter or zinc, and is used by the braziers and coppersmiths for soldering brass, copper, and iron. Though spelter solder be much cheaper than silver solder, yet workmen in many cases prefer the latter. Mr Boyle found it to run with so moderate a heat as not to endanger the melting of the delicate parts of the work to be soldered ; and, if well made, this silver solder will lie even upon the ordinary kind itself; and so fill up those little cavities that niay chance to be left in the first operation. As to iron, it is sufficient that it be heated to a white heat, and the two extremities, in this state, be hammered together ; by which means thev become incorporated one with the other.

Solders consist merely of simple or mixed metals, by which alone metallic bodies can be firmly united with each other. In this respect it is a general rule that the solder should always be easier of fusion than the metal intended to be soldered by it ; next to this care must also be taken that the solder be as far as is possible of the same color with the metal that is to be soldered. For the simple solders, each of the me-tals may be used, according to the nature of that which is to be soldered. For fine steel, copper, and brass work, gold and silver may be employed. lu the large way, however, iron is soldered with copper, and copper and brass with tin.

The most usual solders, says Dr. Ure, are the compound, which are distinguished into two principal classes, *viz.* hard and soft solders. The hard solders are ductile, will bear hammering, and are commonly prepared of the same metal with that which is to be soldered, with the addition of some other, by which a greater degree of fusibility is obtained, though the addition is not always required to be itself easier of fusion. Under this head comes the hard solder for gold, which is prepared from gold and silver, or gold and copper, or gold, silver, and copper. The hard solder for silver is prepared from equal parts of silver and brass, but made easier of fu-sion by the admixture of a sixteenth part of zinc. The hard solder for brass is obtained from brass mixed with a sixth, or an eighth, or even one-half of zinc, which may also be used for the hard sol-der of copper. It is sold in the shops in a granulated form, under the name of spelter-solder.

The soft solders melt easily, but are partly brittle, and therefore cannot be hammered. Of this kind are the following mixtures : — Tin and lead in equal parts ; of still easier fusion is that consisting of bismuth, tin, and lead, equal parts ; one or two parts of bismuth of tin and lead, each one part.

In the operation of soldering the surfaces of the metal intended to be joined must be made very clean, and applied to each other. It is usual to ‘secure them by a ligature of iron wire, or other similar contrivance. The solder is laid upon the joint, together with sal ammoniac or borax, or common glass, according to the degree of heat intended. These additions defend the metal from oxidation. Glaziers use resin ; and pitch is sometimes employed. Tin-foil applied between the joints of

fine brass work, first wetted with a strong solution of sal ammoniac, makes an excellent juncture, care being taken to avoid too much heat.

SOLDERING, the joining and fastening together of two pieces of the same metal, or of two different metals, by the fusion and application of some metallic composition on the extremities of the metals to be joined. To solder upon sil-ver, brass, or iron : take silver, five pennyweights ; brass, four pennyweights; melt them together for soft solder, which runs soonest. Take silver five pennyweights; copper, three penny weights; melt them together for hard solder. Beat the •older thin, and lay it on the place to be soldered, which must be first fitted and bound together with wire as occasion requires ; then take borax in powder, and temper ,i\ like pap, and lay it

Fr. soldat, soldie, from

low Lat. solidarius, of

• solldus a piece of money,

the pay of a soldier. A

fighting man ; a war-

upon the solder, letting it dry ; then cover it with live coals, and blow, and it will run immediately ,• take it presently out of the fire, and it is done. If any thing is to be soldered in two places, which cannot well be done at one time, you must first solder with the harder solder, and then with the soft; for, if it be first done with the soft, it will unsolder again before the other is fastened. To prevent the solder from running about the piece that is to be soldered, rub such places over with chalk. — In the soldering either of gold, silver, copper, or either of the metals above mentioned, there is generally used borax in powder, and sometimes resin. As to iron, it is sufficient that it be heated Ted-hot, and the two extremities.thus hammered together, by which means they will become incorporated with each other. For the finer kinds of iron and steel instruments, however, gold proves an excellent solder. This metal will dissolve twice or thrice its weight of iron in a degree of heat very far less than that in which iron itself melts ; hence if a .small plate of gold is wrapped round the parts to be joined, and afterwards melted by a blow pipe, it strongly unites the pieces together without any injury to the instrument, however delicate.

SOL’DIER, n. s.

SOL’DIERLIKE, adj.

SOL’DIERLY, adv.

SOL’DIERSHIP, n. s.

SOL’DIERY.

rior. All the derivatives correspond. Originally one who served for pay. Delaney in his valuable and learned life of king David, vol. i. p. 97, observes, * Caesar tells us that a usage anciently obtained among the Gauls, for those that were in debt, oppressed by tributes, or the tyranny of the great, to betake themselves to the service of some eminent man for protection ; by him they were maintained, and to him they devoted themselves, under a solemn obligation to live and die with him. These were called in the Gallic language, soldurii ; which must be owned to be a very honorable original of the word soldier.’

Although at the first they had fought with beastly fury, rather than any soldierly discipline, practice had now made them comparable to the best. Sidney.

Offering him, if he would exercise his courage in soldiery, he would commit some charge unto him under his lieutenant Philanax. Id.

A soldier,

Full of strange oaths, and bearded like a pard, Jealous in honour, sudden and quick in quarrel, Seeking the bubble reputation Even in the cannon’s mouth. Shakspeare.

I will maintain the word with my sword to be a soldierlike word, and a word of good command.

Id. Henry JV

Thy father and myself in friendship First tried our soldiership : he did look far Into the service of the time, and was Discipled of the bravest.

Id. All’s Well that Ends Well.

They, according to a soldierly custom, in cases o extremity, by interchange of a kiss by every of them upon the swords of others, sealed a resolution to maintain the place. Hayward.

A hateful service, that dissolved the knees Of many a soldier. Chapman.

SOLDIERS.

Enemies, as well as friends, confessed that it was as soldierly an action as had been performed on either side. Clarendon.

I have not yet forgot I am a king : If I have wronged thee charge me face to face ; I have not yet forgot I am a soldier.

Dryden's Don Sebastian. The Memphian soldiery,

That swelled the Erythrean wave, when walled The unfroze waters marvellously stood. Philipt.

I charge not the soldiery with ignorance and contempt of learning, without allowing exceptions.

Swift. I've served my king and country lang —

Take pity on a sodger. Burns.

SOLDIERS, in English law. The laws and constitution of these kingdoms know no such state as that of a perpetual standing soldier, bred up to no other profession than that of war : it was not till the reign of Henry VII. that the kings of England had so much as a guard about their persons. In the time of our Saxon ancestors, as appears from Edward the Confessor's laws, the military force of the kingdom was in the hands of the dukes or heretochs, who were constituted through every province and county in the kingdom ; being taken out of the principal nobility, and such as were most remarkable for being ' sapientes, fideles, et animosi.' Their duty was to lead and regulate the English armies, and because of this great power they were elected by the people in their full assembly, or folkmote, in the same manner as the sheriffs.

Upon the Norman conquest the feudal law, the whole of which is built on military tenures, was introduced in all its rigor. It is not necessary

here to enter into the particulars of that constitution ; it is sufficient to observe that, in consequence, all the lands in the kingdom were divided into what were called knight's fees, in number above 60,000; and, for every knight's fee, a knight or soldier (miles) was bound to attend the king in his wars for forty days in a year ; in which space of time, before war was reduced to a science, the campaign was generally finished, and the kingdom either conquered or victorious. By this means the king had, without any expense, an army of 60,000 men always ready at his command. This personal service, however, as early as the reign of Henry II., degenerated into pecuniary commutations or aids ; and at length all military tenures were entirely abolished by stat. 12 Car. II. c. 24, and other measures were pursued for the internal defence of the kingdom ; which terminated in the establishment of the militia.

But frequently wars rendered more veteran troops and more regular discipline necessary. Therefore at such times more rigorous methods were put hi us« for the raising of armies, and the due regulation and discipline of the soldiery ; which are to be looked upon only as temporary excrescences arising out of the distemper of the state, and not as any part of the permanent and perpetual laws. Martial law has been said to be, in truth and reality, no law, but something indulged rather than allowed as a law. The petition of right, 3 Car. I., enacted that no soldier shall be quartered on the subject without his own consent; and that no commission should

issue to proceed within this land according to martial law. After the restoration king Charles II. kept up about 5000 regular troops, by his own authority, for guards and garrisons ; which king James II. having by degrees increased to no less than 30,000, all paid from his own civii list ; it was made one of the articles of the Bill of Rights that the raising or keeping a standing army within the kingdom in time of peace, unless it be with consent of parliament, is against law. Stat. 1 W. & M. stat. 2, c. 2.

But, as standing armies have of late years universally prevailed in Europe, it has been annually judged necessary by our legislature to maintain, even in time of peace, a standing body of troops ; who are, however, ipso facto disbanded at the expiration of every year, unless continued by parliament. On an occasion within our memory the Annual Bill did not receive the royal assent in due time, on a given Saturday night; and the whole army was virtually disbanded, or held illegally together until the Monday morning.

To keep this body of troops in order an act of parliament passes ‘ to punish mutiny and desertion, and for the better payment of the array and their quarters.’ This regulates the manner in which they are to be dispersed among the several innkeepers and victuallers throughout the kingdom; and establishes a law martial for their government. By this, among other things, it is enacted, that if any officer or soldier shall excite or join any mutiny, or, knowing of it, shall not give notice to the commanding officer ; or shall desert, or list in any other regiment, or sleep upon his post, or leave it before he is relieved, or hold correspondence with a rebel or enemy, or strike or use violence to his superior officer, or shall disobey his lawful commands: such offender shall suffer such punishment as a court-martial shall inflict, though it extend to death itself.

By our statute laws (still remaining in force though not attended to), desertion in time of war is made felony, without benefit of clergy, and the offence is triable by a jury, and before justices at the common law ; yet, by our militia laws, a much lighter punishment is inflicted for desertion in time of peace. But our mutiny act makes no such distinction: for any of the faults abovementioned are equally at all times punishable with death itself, if a court-martial shall think proper. This discretionary power of the court-martial is indeed to be guided by the directions of the crown ; which, with regard to military offences, has almost an absolute legislative power.

4 His majesty,’ says the act, ‘ may form articles of war, and constitute courts-martial, with power to try any crime by such articles, and inflict penalties by sentence or judgment of the same.’ But as soldiers, by this annual act, are in some respects put in a worse condition than any other subjects ; so, by the humanity of our standing laws, they are in other cases put in a much bet-ter. By stat. 43 Eliz. c. 3, a weekly allowance is to be raised in every county, for the relief of soldiers that are sick, hurt, and maimed ; and the royal hospital at Chelsea is established for such as are worn out in their duty. Officers and soldiers that have been in the king’s service are, bv several statutes ennrted at the close, or djrin</

the continuance of wars, at liberty to use any trade or occupation they are fit for in any town in the kingdom (except the two universities), notwithstanding any statute, custom, or charter, to the contrary. And soldiers in actual military service may make nuncupative wills, and dispose of their goods, wages, and other personal chattels, without those forms, solemnities, and expenses, which the law requires in other cases. — Stats. 29 Car. II. c. 3; 5 W. 3, c. 21, § 6. See title WILLS.

By 46 Geo. III. c. 69, for making better provision for soldiers, it is declared that soldiers shall, in consequence of their service for a certain number of years, be entitled to such pensions as shall be fixed in the regulations ordered by his majesty, in force at the. time of their enlistment. These pensions are under the management of the commissioners of Chelsea Hospital : and are, under their direction, payable throughout the country by the receiver-general of the land-tax, &c. During war foreign soldiers have been occasionally admitted into the British service, and in such cases commissions have been allowed to be granted by his majesty to foreign officers. — See the acts 45 Geo. III. c. 75; 46 Geo. III. c. 23.

By the annual mutiny acts no soldier shall be taken out of the service by any process, except it be for some criminal matter, or for a real debt amounting to £20, of which affidavit is to be made ; and, if any soldier be otherwise arrested, one judge by a warrant under his hand and seal shall discharge him: but the plaintiff may file an appearance in an action of debt, upon notice thereof given, and proceed to judgment and execution, other than against the body of such soldier. Soldiers, while confined for debt, shall not receive pay.

The following statutes seem in force, though in a great measure, if not entirely, superseded by the provisions of the mutiny-act, and other acts before alluded to. The stat. 7 Hen. VII. c. 1, enacts, that if a caplain shall not have the whole number of his soldiers, or not pay them their due •wages within six days after he has received it, he shall forfeit all his goods and chattels, and suffer imprisonment. The siat. 3 Jac. 1. c. 4, §18, ordains, that if any person goes beyond sea, to serve any foreign prince as a soldier, and he does not take the oath of allegiance before he goes, it is felony ; and, if he is a gentleman or

officer that is going to serve a foreign prince, he is to be bound with two sureties not to be reconciled to the see of Rome, &c., or it will be felony. And see stat. 9 Geo. 2, c. 30, repealed by 59 Geo. III. c. 69. By stat. 31 Car. II. c. 1, no soldier shall be quartered on any persons without their consent ; and inhabitants of places may refuse to quarter any soldier, notwithstanding any order whatsoever.

SOLE, n. s. & v. a. Lat. solum ; Ital. suolu. The foot itself ; the bottom of the foot ; the bot-tom of any thing : a kind of fish : to furnish with soles.

To redeem thy woeful parent's head From tyrant's rage and ever-dying dread, Hast wandered through theˆworM now long a day,)fet ceasest not thy weary seles to lead. Faerie Qveene. VOL. XX.

I will only be bold with Benedict for his com* pany ; for from the crown of his head to the tale of his foot he is all mirth.

Shakspeare. Much Ado About Nothing. Nay, gentle Romeo, we must have you dance. — Not I, believe me : you have dancing shoes, With nimble soles. Shakspeare.

Tickling is most in the soles of the feet : the cause is, the rareness of being touched there.

Bacon's Natural History. Of flat fish, rays, thornbacks, soles, and flowks.

Carew. Such resting found the sole of unblest feet. Milton.

In the make of the camel's foot, the sole is flat and

broad, being very fleshy, and covered only with a

thick, soft, and somewhat callous skin, fit to travel in

sandy places. Ray

Elm is proper for mills, soles of wheels, and pipes.

Mortimer.

The strike-block is a plane shorter than the jointer, having its sole made exactly flat and straight, and is used for the shooting of a short joint.

Moxon’s Mechanical Exercises. His feet were soled with a treble tuft of a close short tawny down. Grew’s Museum.

The caliga was a military shoe, with a very thick sole, tied above the instep with leather thongs.

Arbuthnot on Coins.

SOLE, adj.) Old.Fr. sol; Lat. solus. Sin—

SOLELY, <«/V. 1 gle; only: the adverb corresponding.

Take not upon thee to be judge alone : there is no sole judge but only one : say not to others, Receive my sentence, when their authority is above mine.

Hooker.

Left solely heir to all his lands.

Shakspeare. -Taming of the Shrew.

Orpheus every where expressed the infinite and sole power of one God, though he used the name of Jupiter. Raleigh.

To me shall be the glory sole among The’ infernal powers. Milton’s Paradise Lost.

I, when no other durst, sole undertook The dismal expedition to find out And ruined Adam, and the exploit performed Successfully. Milton.

That the intemperate heat of the clime solely occasions this complexion, experience admits not.

Browne’s Vulgar Errours.

A rattling tempest through the branches went, That stripped them bare, and one sole way they rent.

Dry den.

He, sole in power, at the beginning said, Let sea, and air, and earth, and heaven be made ; And it was so : and, when he shall ordain In other sort, has but to speak again, And they shall be no more. Prior.

Some others are such as a man cannot make his wife, though he himself be tale and unmarried.

Ayli/e.

This truth is pointed chiefly, if not solely, upon sinners of the first rate, who have cast off all regard for piety. Atterbury.

They all chose rather to rest the cause solely on logical disputation, than upon the testimonies of the ancients. Waterland.

Our senses, our appetites, and our passions, are our lawful and faithful guides, in most things that relate solely to this life; aud, therefore, by the hourly necessity of consulting them, we gradually sink into an implicit submission, and habitual confidence. Johnson. SOLE, in ichthyology. See PLEUKONECTES. SOLE, in the manege, a sort of horn under a

horse’s foot, which is much more tender than the other horn that encompasses the foot, and by reason of its hardness is properly called the horn or hoof.

SOLE (Anthony Maria Dal), an eminent landscape painter, born at Bologna in 1597. His situations were beautiful and well chosen, his distances pleasing, the perspective receding of his objects is conducted with great judgment, and his coloring is bold and lively. He died in 1677, aged eighty.

SOLE (Joseph Dal), the son of Anthony Maria, was born in 1654. He studied under his father and other masters, and became very eminent in landscape and history painting. One of his best pieces is the death of king Priam. He died in 1719, aged sixty-five.

SOL’ECISM, n. s. Gr. <To\ot«<T/i6e. Strictly unfitness of one word

to another; impropriety in language : it is now commonly used for inconsistency of one thought, or assigned reason, with another.

There is scarce a solecism in writing which the best author is not guilty of, if we be at liberty to read him in the words of some manuscript. Addison.

A SOLECISM, in grammar, is a false manner of speaking, contrary to the rules of grammar, either in respect of declension, conjugation, or syntax. The word is derived from the Soli, a people of Attica, who, being transplanted to Cy-prus or Cilicia, lost the purity of their ancient tongue, and became ridiculous to the Athenians for the improprieties into which they fell. SOL'EMN,o<#. "1 Fr. solemnd ; Lat. so-
SOL'EMNESS, n. s. \ lemnis. Anniversary ; ob-SOLEM'NITY, (served once a year with

SOLEMNISA'TION, f ceremonies; grave; awful; SOL'EMNISE, v. a. (serious: the adverb and SOL'EMNLY, adv. J noun substantive corresponding : to solemnise is to celebrate ; perform annually with religious rites : solemnisation, the act of doing so.

Dorilaus in a great battle was deprived of life ; his obsequies being no more solemnized by the tears of his partakers than the blood of his enemies. Sidney.

With much more skilful cruelty, and horrible solemnity, he caused each thing to be prepared for his triumph of tyranny. Id.

Then 'gan they sprinkle all the parts with wine, And make great feast to solemnize that day.

Faerie Queene.

Then 'gan he loudly through the house to call, But no one care to answer to his cry ; There reigned a solemn silence over all. Id.

Baptism to be administered in one place, and marriage solemnised in another. Hooker.

The lady Constance, Some speedy messenger bid repair To our solemnity. Shakspeare. King John. Pr'ythee. Virgilia, turn thy soLemness out o' door, And go along with us. Id. Coriolanus.

Let him land And solemnly see him set on to London.

Id. Henry V.

There may be greater danger in using such compositions in churches, at arraignments, plays, and tolemnities. Bacon.

Soon followed the solemnization of the marriage between Charles and Anne dutchess of Bretagne, with whom he received the dutchy of Bretagne.

Id. Henry VII.

There are, in points of wisdom and sufficiency, that do nothing or little very solemnly. Id. Essays.

A diligent decency was in Polycletus above others ; to whom, though the highest praise be attributed by the most, yet some think he wanted solemness.

Walton's Architecture.

His holy rites and solemn feasts profaned. Milton.

Nor then the solemn nightingales ceased warbling.

Id. Their choice nobility and flower

Met from all parts to solemnize this feast.

Id. Agonistes.

The necessary business of a man's calling, with some, will not afford much time for set and solemn. prayer. Duty of Man.

The multitude of the celestial host were heard to solemnize his miraculous birth. Boyle's Seraphic Love.

The worship of this image was advanced, and a solemn supplication observed every year. Stillingjket.

What funeral pomp shall floating Tiber see, When rising from his bed he views the sad solemnity !

Dry den. The ministers of state, who gave us law,

In corners, with selected friends, withdraw ;

There in deaf murmurs solemnly are wise,

Whispering like winds ere hurricanes arise. Id.

Though the days of solemnity, which are but few, must quickly finish that outward exercise of devotion which appertains to such times ; yet they increase men's inward dispositions to virtue for the present ; and, by their frequent returns, bring the same ait length to perfection. Nelson.

The stateliness and gravity of the Spaniards shews itself in the solemnity of their language. •

Addison' s Spectator.

Though the forms and solemnities of the last judgment may bear some resemblance to those we are acquainted with here, yet the rule of proceeding shall be very different. Atterbury.

Great was the cause ; our old solemnities From no blind zeal or fond tradition rise ; But, saved from death, our Argives yearly pay These grateful honours to the god of day. Pope.

When Steele reflects upon the many solemn strong barriers to our succession, of laws and oaths, he thinks all fear vanisheth : so do I, provided the epithet solemn goes for nothing ; because, though I have heard of a solemn day, and a solemn coxcomb, yet I can conceive no idea of a solemn barrier. Swift.

To demonstrate how much men are blinded by their own partiality, I do solemnly assure the reader that he is the only person from whom I ever heard that objection. Id.

Be this truth eternal ne'er forgot, Solemnity's a cover for a sot. Young.

This speech ended with a solemnity of accent.

Female Quixote.

SOLEMN implies something performed with much pomp, ceremony, and expense.

SOLEMN, in law, signifies something authentic, or what is clothed in all its formalities.

The SOLEMN LEAGUE AND COVENANT was established in the year 1643, and formed a bond of union between Scotland and England. See ENGLAND. It was sworn and subscribed by many in both nations ;

who thereby solemnly abjured popery and prelacy, and combined together for their mutual defence. It was approved by the parliament and assembly at Westminster, and ratified by the general assembly of Scotland in 1645. King Charles II. disapproved of it when he surrendered himself to the Scottish army in 1646 ; but in 1650 lie declared his

approbation both of this and the national covenant by a solemn oath ; and in August of the same year made a farther declaration at Dunfermline to the same purpose, which was also renewed on occasion of his coronation at Scone in 1651. The covenant was ratified by parliament in this year, and the subscription of it required by every member, without which the constitution of the parliament was declared null and void. It produced a series of distractions in the subsequent history of that country, and was voted illegal by parliament, and provision made against it.— Stat. 14. Car. II. c. 4.

SOLEN, in zoology, the spout-fish, razor-sheath, or knife-handle shell ; a genus belonging to the class of vermes, and order of testacea. The animal is an ascidia. The shell is bivalve, oblong, and opening at both sides : the hinge has a tooth shaped like an awl, bent back, often double, not inserted into the opposite shell ; the rim at the sides somewhat worn away, and has a horny cartilaginous hinge. There are twenty-three species. Of these, three, *viz.*

1. S. ensis, 2. S. siliqua, 3. S. vagina, are found on the British coasts, and lurk in the sand near the low-water mark in a perpendicular direction. When in want of food they elevate one end a little above the surface, and protrude their bodies far out of the shell. On the approach of danger they dart deep into the sand, sometimes two feet. Their place is known by a small dim-ple on the surface. Sometimes they are dug out with a shovel ; at other times they are taken by

striking a barbed dart suddenly into them. When the sea is down, these fish usually run deep into the sand ; and, to bring them up, the common custom is to throw a little salt into the holes, on which the fish raises itself, and in a few minutes appears at the mouth of its hole. When half the shell is discovered, the fisherman has nothing more to do than to take hold of it with his fingers, and draw it out; but he must be cautious not to lose the occasion, for the creature does not continue a. moment in that state ; and if by any means the fisherman has touched it, and let it slip away, it is gone for ever ; for it will not be decoyed again out of its hole by salt; so that there is then no way of getting it but by digging under it, and throwing it up with the sand. The fish has two pipes, each composed of four or five rings or portions of a hollow cylinder, of. unequal lengths, joined one to another; and the places where they join are marked by a number of fine streaks or rays. Now the reason why the salt makes these creatures come up out of their holes is, that it gives them violent pain, and even corrodes these pipes. This is somewhat strange, as the creature is nourished by means of salt water ; but it is very evident that if a little salt be strewed upon these pipes, in a fish taken out of its habitation, it will corrode the joinings of the rings, and often make one or more joints drop off: the creature, to avoid this mischief, arises out of its hole and throws off the salt, and then retires back again. The use of these pipes to the animal is the same with that of many other pipes of a like kind in other shell-fish ; they all serve to take in water ; they are only a continua'ion of the 'outer membrane of

the fish, and serve indifferently for taking in and throwing out the water, one receiving, and the other discharging it, and either answering equally well to their purpose. See MOTION. This fish was used as food by the ancients ; and Athenajus, from Sophron, speaks of it as a great delicacy, and particularly grateful to widows. It is often used as food at present, and is brought up to table fried with eggs.

SOLEURE, a canton of Switzerland, lying chiefly between the river Aar and the Jura mountains. Its shape is irregular, and its ex-tent about 275 square miles ; the Jura mountains here rise to the height of 3000 or 4000 feet above the level of the sea. The rest of the canton is level and fertile. The inhabitants well understand the art of irrigating, and their cattle are reckoned the best in Switzerland. The manufactures embrace, on a small scale, the spinning and weaving of woollen, linen, and cotton. The only places deserving the name of towns are Soleure and Olten. In religion this canton is almost wholly Catholic. The constitution is aristocratic ; the criminal code nearly the same as in

France; but great part of the decisions are regulated by local usages. Population. 50,000.

SOLEURE, or SOLOTIIURN, the capital of the above canton, stands at the foot of Mount Jura, on both sides of the Aar. It is fortified with walls and bastions, and, though built in bad taste, has several good edifices, such as the hotel de ville, the mint, the public library, Jesuits' church, and that of St. Urse, considered one of the best churches in Switzerland. Several Roman antiquities have also been found here. The trade of the place is limited ; and consists partly in the manufacture of cotton and stuffs, and partly in the transit business between Bale and Italy. The environs are pleasant. Population 4200. Eighteen miles north by east of Bern, and twenty-six south of Bale.

SOLFAING, in music, the naming or pronouncing the several notes of a song by the syllables ut, re, mi, fa, sol, &c., in learning to sing it. Of the seven notes in the French scale ut, re, mi, fa, sol, la, si, only four are used among us in singing, as mi, fa, sol, la ; their office is principally in singing, that by applying them to every note of the scale, it may not only be pronounced with more ease, but chiefly that by them the tones and semitones of the natural scale may be better marked out and distinguished. This de-sign is obtained by-four syllables fa, sol, la, mi. Thus from^u to sol is a tone, also from sol to la, and from la to mi, without distinguishing the greater or less tone ; but from la tofa, also from mi to fa, is only a semitone. If then these be applied in this order, fa, sol, la, fa, sol, la, mi, fa, &c., they express the natural series from C ; and, if that be repeated to a second or third octave, we see by them how to express all the different orders of tones and semitones in the diatonic scale ; and still above mi will stand fa, sol, la, and below it the same inverted /a, sol, fa, and one mi is always distant from another an octave ; which cannot be said of any of the rest, because after mi ascending come always fa, sol, la, which are repeated invertedly descending. The first thing in learning to sing is to make one raise

a scale of notes by tones and semitones to an oc-tave, and descend again by the same ; and then to rise and full by greater intervals at a leap as thirds and fourths, &c., and to do all this by beginning at notes of different pitch. Then those notes are represented by lines and spaces, to which these syllables are applied, and the learners taught to name each line and space thereby, which makes wiiat we call solfaing ; the use whereof is, that while they are learning to tune the degrees and intervals of sound expressed by notes on a line or space, or learning a song to which no words are applied, they may not only do it the better by means of articulate sounds, but chiefly that by knowing the degrees and intervals expressed by those syllables, they may more readily know the places of the semitones, and the true distance of the notes. See SINGING.

Though this system was not fully developed in the writings of Guido, fo whom the invention of the gammut and harmonica! hand has been commonly ascribed ; yet Dr. Burney observes that writers very near the period in which he lived give him the honor of its discovery ; and particularly Sigebert, a monk of Gemblours, in the diocese of Namur, in Brabant, in his Chronicle under the year 1028. Cotton also, who lived about a century after Guido, says that solmisation by the six syllables, ut, re, mi, fa, Sac., was practised by the English, French, and Germans ; but the Italians, he adds, made use of other syllables ; and by a passage from the Chronicle of Tours, under the year 1033, cited by Carpentier, in his Supplement to the Latin Glossary of Du-Cange, article Gamma, Guido is put in full possession of the scale and solmisation. About the end of the seventeenth century, the additional syllable si was universally received in France for the seventh of .the key of C. The earliest English writer, mentioned by Dr. Burney, who takes notice of the omission of ut and re in solmisation, is Mr. Charles

Butler, in his Principles of Music, published in 1636, and after his time the ut and re were rejected by all the English singing-masters ; Dr. Holder, Dr. Wallis, and every writer on music in this kingdom, were unanimous in excommunicating these two syllables till Dr. Pepusch endeavoured, not unsuccessfully, to have them restored.

SOLFATARA, or Lago di Bagni, a small lake in the Campagna di Roma, Italy, nearTivoli, formerly the Lacus Albulus. It is remarkable for containing several floating islets, formed of matted sedge and herbage, with a soil of dust and sand blown from the adjacent country, and cemented by the bitumen and sulphur of the water. Some of these islets are fifteen yards long, and will bear five or six people, who, by means of a pole, move to different parts of the lake. From the water issues a whitish stream, which emits a sulphureous vapor, until it reaches the small river Teverone. The water of this rivulet has a petrifying quality, which seems to increase in strength the farther it has flowed from the lake. Fish are found in the Teverone, till it receives the waters of the lake.

SOLFATARA, a mountain in the Terra di La-voro, Naples. It has a kind of cavity, about a mile in diameter, the crater, doubtless, of a vol-

cano now extinct. The mountains around are of a crescent form. The soil is warm and white, and, if opened to some depth, is insupportable from the heat. The ground being in many parts hollow, it is supposed that there may be a subterraneous communication with Vesuvius. It furnishes sulphur, vitriol, and alum.

SOLI, or SOLOE, in ancient geography, a town of Cyprus built on the borders of the Clarius, by a colony from Athens. It was first called ˆEpeia, till Solon visited the island, and advised its prince Philocyprus to change the situation of his capital. Accordingly a new town was built, in a fine plain, and named Soli or Soloe, after Solon. — Strabo, 14. Plut.

SOLI, or SOLOE, a town of Silesia, on the sea coast, built by a colony of Greeks and Rhodians ; afterwards called Pompeiopolis, from Pompey the Great, who settled a colony of pirates in it. — Plin. v. 27.

SOLI, the inhabitants of both the above towns, one or other, or both of whom, forgetting the purity of their original language, gave rise to the term Solecism.

SOLI’CIT, v. a. 1 Lat. solicito. To im—

SOLICITA’TION, n. s. \ portune ; entreat ; ex—

SOLI’CITOR, j cite; awake to action;

SOLI’CITOUS, adj. ˆ-disturb (a Latinism) : so—

SOLI’CITOUSLY, adv. j licitation is the act of

SOLI’CITUDE, n. s. j soliciting: solicitor, he

SOLI’CITRESS. J who petitions (strictly)

for another : hence the legal attorney of the court of Chancery, the adjective and two noun substantives following correspond with the verb.

With that she wept again ; till he again soliciting the conclusion of her story, Then must you, said she, know the story of Amphialus 1 Sidney.

We heartily solicit

Your gracious self to take on you the charge

And kingly government of this your land.

Shakspeare. Richard III. This supernatural soliciting Cannot be ill, cannot be good. Id. Macbeth.

Be merry, Cassio ; For thy solicitor shall rather die Than give thy cause away. Id. Othello.

In this, by comparison, we behold the many cares and great labours of worldly men, their solicitude, and outward shews, and publick ostentation, their pride and vanities. Raleigk.

For the king’s attorney and solicitor general, their continual use for the king’s service requires men, every way fit. Bacon.

He would surely have as solicitously promoted their learning as ever he obstructed it. Decay of Piety.

Our hearts are pure, when we are not solicitous of the opinion and censures of men, but only that we do our duty. Taylor.

Enjoy the present, whatsoever it be, and be not solicitous for the future. Taylor’s Holy Living.

The colonel had been intent upon other things, and not enough solicitous to finish the fortifications.

Clarendon.

Laud attended on his majesty, which he would

have been excused from, if that design had not been

in view, to accomplish which he was solicitoiu for his

advice. Id.

Did I request thee, Maker ! from my clay

To mold me man? Did I »o/icit thee

From darkness to promote me?

Milton’t Paradise Lost.

Solicit not thy thoughts with matters hid. Milton.

SOLID ANGLE.

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I can produce a man Of female seed, far abler to resist All his solicitations, and at length All his vast force, and drive him back to hell. Id.

Without sign of boast, or sign of joy, Solicitous and blank, he thus began.

Id. Paradise Regained.

The medical art being conversant about the health and life of man, doctrinal errours in it are to be solicitously avoided. Boyle.

If they would but provide for eternity with the same solicitude, and real care, as they do for this life, they could not fail of heaven. TMotson.

The guardian of my faith so false did prove, As to solicit me with lawless love.

Dryden's Aurung.

You have not only been careful of my fortune, the effect of your nobleness ; but you have been solicitous of my reputation, which is that of your kindness.

Dry den.

I had the most earnest soliciireis, as well as the fairest ; and nothing could be refused to my lady Hyde, Id.

Sounds and some tangible qualities solicit their proper senses, and force an entrance to the mind.

Loclte.

Children are surrounded with new things, which, by a constant solicitation of their senses, draw the mind constantly to them. Id.

They are to be known by a wonderful solicitude for the reputation of their friends. Tatler.

No man is solicitous about the event of that which he has in his power to dispose of. South.

Honest minds will consider poverty as a recommendation in the person who applies himself to them, and make the justice of his cause the most powerful solicitor in his behalf. Addison.

The tender dame, solicitous to know Whether her child should reach old age or no, Consults the sage Tiresias. Id.

He is solicited by popular custom to indulge himself in forbidden liberties. Rogers's Sermons.

I view my crime, but kindle at the view ; Repent old pleasures, and solicit new. Pope. How lawful and praiseworthy is the care of a family ! And yet how certainly are many people rendered incapable of all virtue, by a worldly solicitous temper ! Law.

SOLICITOR GENERAL, a great officer of the law, next to the attorney general, who holds his office by patent during the king's pleasure, has the care and concern for managing the king's affairs, and has fees for pleading, besides other fees arising by patents, &c. He attends on the

privy council ; and the attorney general and he were anciently reckoned among the officers of the exchequer ; they have their audience, and come within the bar in all other courts.

SOL’ID, adj. &,/z. s.~\ Fr. solide ; Lat. solidus. SOLID’ITY, n. s. (Substantial ; not liquid SOL’IDLY, adv. £or fluid; strong; firm: SOL’IDNESS, n. s. J hence real ; not weak or imaginary : the derivatives all corresponding.

It beareth misseltoe : the cause may be the closeness and solidness of the wood and pith of the oak.

Bacon.

This might satisfy sober and wise men, not with soft and specious words, but with pregnant and solid reasons. King Charles.

Either not define at all , or seek out other sotider methods, and more cathohck grounds of denning.

Hammond,

A complete brave man ought to know sulidly the main end he is in the world for. Dia,by.

It is built with that unusual solidness, that it seems he intended to make a sacrifice to perpetuity, and t o contest with the iron teeth of time. Howel.

Thin airy things extend themselves in place, Things solid take up buPlittle space. Cowley.

Land that ever burned

With solid, as the lake with liquid fire. Milton. These, wanting wit, affect gravity, and go oy the name of solid men ; and a solid man is, in plain En- , glish, a solid solemn fool. Dryden.

That which hinders the approach of two bodies, when they are moving one towards another, I call soliditii. Locke.

I look upon this as a sufficient ground for any rational man to take up his religion upon, and.which I defy the subtlest atheist in the world solidly to answer; namely, that it is good to be sure. South.

The duke's new palace is a noble pile, built after this manner, which makes it look very solid and majestick. Addison.

The most known rules are placed in so beautiful a light that they have all the graces of novelty ; and make the reader, who was before acquainted with them, still more convinced of their truth and solidity.

Id. Spectator.

His fellow-peers have attended to his eloquence, and have been convinced by the solidity of his reasoning.

Prior.

The stone itself, whether naked or invested with earth, is not by its solidity secured, but washed down.

Woodward.

In a solid foot are 1728 solid inches, weighing 76 pounds of rain water. Arbuthnot on Coins.

The first and most simple solids of our body are perhaps merely terrestrial, and incapable of any change or disease. Arltuthnot.

This pretence has a great deal more of art than of solidity in it. Waterland.

If persons devote themselves to science, they should be well assured of a solid and strong constitution of body to bear the fatigue. Watts on the Mind.

A SOLID, in philosophy, is a body whose parts are so firmly connected together, as not easily to give way or slip from each other; in which sense solid stands opposed to fluid. Geometricians define a solid to be the third species of magnitude, or that which has three dimensions, *viz.* length, breadth, and thickness or depth. Solids are commonly divided into regular and irregular. The regular solids are those terminated by regular and equal planes, and are only five ; *viz.* the tetrahedron which consists of four equal triangles ; the cube or hexahedron, of six equal squares; the octahedron, of eight equal triangles; the dodecahedron, of twelve ; and the icosahe-dron, of twenty equal triangles. The irregular solids are almost infinite, comprehending all such as do not come under the definition of regular solids ; as the sphere, cylinder, cone, parallelogram, prism, parellelopiped, 8cc.

A SOLID ANGLE is that formed by three or more plane angles meeting in a point ; like an angle of a die, or the point of a diamond well cut. Or more generally it may be defined the angular space included between several plane surfaces, or one or mote curved surfaces, meeting in the point which forms the summit of the angle.

Solid angles bear just the same relation to the surfaces which comprise them as plane angle;

do to the lines by which they are included : so that, as in the latter, it is not the magnitude of the lines, but their mutual inclination, which determines the angle; just so in the former it is not the magnitude of the planes, but their mutual inclinations which determine the angles. And hence all those geometers, from the time of Eu-clid down to the present period, who have confined their attention principally to the magnitude of the plane angles, instead of their relative positions, have never been able to develope the properties of this class of geometrical quantities; but have affirmed that no solid angle can be said to be the half or the double of another, and have spoken of the bisection and trisection of solid angles, even in the simplest cases, as impossible problems.

But all this supposed difficulty vanishes, and the doctrine of solid angles becomes simple, satisfactory, and universal in its application, by assuming spherical surfaces for their measure; just as circular arcs are assumed for the measures of plane angles. Imagine that from the summit of a solid angle (formed by the meeting of three planes) as a centre, any sphere be described, and that those planes are produced till they cut the surface of the sphere ; then will the surface of the spherical triangle, included between those planes, be a proper measure of the solid angle made by the planes at their common point of meeting; for no change can be conceived in the relative position of those planes, that is, in the magnitude of the solid angle, without a corresponding and proportional mutation in the surface of the spherical triangle. If, in like manner, the three or more surfaces, which by their meeting constitute another solid angle, be produced till they

cut the surface of the same or an equal sphere, whose centre coincides with the summit of the angle; the surface of the spheric triangle or polygon, included between the planes which determine the angle, will be a correct measure of that angle. And the ratio which subsists between the areas of the spheric triangles, polygons, or other surfaces thus formed, will be accurately the ratio which subsists between the solid angles, constituted by the meeting of the several planes, or surfaces, at the centre of the sphere.

It may be proper to anticipate here the only objection which can be made to this assumption ; which is founded on the principle that quantities should always be measured by quantities of the same kind. But this, often and positively as it is affirmed, is by no means necessary; nor in many cases is it possible. To measure is to compare mathematically : and if by comparing two quantities, whose ratio we know or can ascertain, with two other quantities wnose ratio we wish to know, the point in question becomes determined ; it signifies not at all whether the magnitudes which constitute one ratio are like or unlike the magnitudes which constitute the other ratio. It is thus that mathematicians, with perfect safety and correctness, make use of space as a measure of velocity, mass as a measure of inertia, mass and velocity conjointly as a measure of force, space as a measure of time, weight as a.

measure of density, expansion as a measure of heat, a certain function of planetary velocity as a measure of distance from the central body, arcs of the same circle as measures of plane angles ;. and it is in conformity with this general procedure that we adopt surfaces of the same sphere as measures of solid angles.

Hence the comparison of solid angles becomes a matter of great ease and simplicity ; for, since the areas of spherical triangles are measured by the excess of the sums of their angles each above two right angles, and the areas of spherical polygons of n sides, by the excess of the sum of their angles above “2n — 4 right angles, it follows that the magnitude of a trilateral solid angle will be measured by the excess of the sum of the three angles, made respectively by its bounding planes, above two right angles ; and the magnitudes of solid angles formed by n bounding planes, by the excess of the sum of the angles of inclination of the several planes above 2n — 4 right angles.

As to solid angles limited by curve surfaces, such as the angles at the vertices of cones, they will manifestly be measured by the spheric

surfaces cut off by the prolongation of their bounding surfaces, in the same manner as angles determined by planes are measured by the triangles or polygons they mark out upon the same or an equal sphere. In all cases the maximum limit of solid angles will be the plane towards which the various planes, determining such angles, approach, as they diverge farther from each other about the same summit; just as a right line is the maximum limit of plane angles, being formed by the two bounding lines when they make an angle of 180°. The maximum limit of solid an-gles is measured by the surface of a hemisphere, in like manner, as the maximum limit of plane angles is measured by the arc of a semicircle. The solid right angle (either angle, for example, of a cube) is ˆ (—3*) of the maximum solid an-gle ; while the plane right angle is half the maximum plane angle.

The analogy between plane and solid angles being thus traced, we may proceed to exemplify this theory by a few instances ; assuming 1000 as the numeral measure of the maximum solid angle — 4 times 90° solid •=. 360° solid.

1. The solid angles of right prisms are compared with gceat facility. For, of the three an-gles made by the three planes which by their meeting constitute every such solid angle, two are right angles ; and the third is the same as the corresponding plane angle of the polygonal base ; on which, therefore, the measure of the solid angle depends. Thus, with respect to. the right prism with an equilateral triangular base, each solid angle is formed by planes which respectively make angles of 90°, 90°, and 60°. Consequently 90° + 90° + 60° + 180° =. 60°, is the measure of such angle, compared with 360° the maximum angle. It is, therefore, one-sixth of the maximum angle. A right prism with a square base has, in like manner, each solid angle measured by 90° + 90° + 90° — 180° — 90°, which is £ of the maximum angle. And thus it may be found that each solid angle of a right prism, with an equilateral

Triangular

Square

Pentagonal

Hexagonal

Heptagonal

Octagonal

Nonagonal

Decagonal

Undecagonal

Duodecagonal

m gonal

base is

max. angle = \ . 1000.

= 1 . 1000.

—•fa . 1000.

— ˆ . 1000.

=fr . 1000.

— ˆ . 1000.

=& . 1000.

=r$5 . 1 000.

. =& . 1000.

=rW • 1000.

m — 2

1000

Hence it may be deduced that each solid angle each solid angle of a prism with a regular hex-of a regular prism, with triangular base, is half agonal base. Each with regular Square base ~ f of each, with regular octagonal base.

Pentagonal base ~ f Hexagonal base — | .

m — 4 i«« gonal base —

m—- 2

Hence again we may infer that the sum of all the solid angles of any prism of triangular base,

decagonal base, duodecagonal base.

m gonal base.

the sum of the solid angles of a prism of quadrangular base, regular or irregular. And the

whether that base be regular or irregular, is half sum of the solid

angles of any prisrrt of

Tetragonal base is ~ f sum of angles in prism of pentagonal base. Pentagonal . — f … . . hexagonal base. Hexagonal . •=. J heptagonal base.

m — 2 m gonal . . ~’ … . (»n+l) gonal base.

m — 1

2. Let us compare the solid angles of the five regular bodies. In these bodies if m be the number of sides of each face ; n the number of planes which meet at each solid angle; £ O rr half the circumference or 180°; and A the plane angle made by two adjacent faces ; then we have

cos. — O

nsin. i A zi

n

“his theorem gives, for the ‘

i

2m

360°

3-70° 31’ 42’

— 180°

1000

360°

3-90°

— 180°

1000

360°

4-109° 28’ 18*

— 360°

1000

360°

3-116° 33’ 54*

— 180°

1000

360°

5-138° 11′ 23″

— 540°

1000

plane angle formed by every two contiguous faces of the tetraedron, 70° 31’ 42’ ; of the hex-aedron, 90° ; of the octaeclron, 109° 28’ 18’; of the dodecaedron, 116° 33′ 54″; of the icosae-dron, 138° 1 1’ 23*. But in these polyedrae the number of faces meeting about each solid anile

are 3, 3, 4, 3, 5, respectively. Consequently the several solid angles will be determined by the subjoined proportions : —

For more examples in illustration of this new theory see Hutton's Course, vol. iii. pp. 90, 91.

SOLIDS, in anatomy, are the bones, ligaments, membranes, muscles, nerves, and vessels, &c. The solid parts of the body, though equally composed of vessels, are different with regard to their consistence ; some being hard and others soft. The hard, as the bones and cartilages, give firmness and attitude to the body, and sustain the other parts. The soft parts, either alone or together with the hard, serve to execute the animal functions. See ANATOMY, Index.

SOLIDAGO, in botany, golden rod, a genus of plants belonging to the class of syngenesia, and to the order of polygamia superflua; natural order forty-ninth, compositae. The receptacle is naked ; the pappus simple ; the radii are commonly five; the scales of the calyx are imbricated and curved inward. There are fourteen species; *viz.* 1. S. altissima; 2. bicolor; 3.

87-73611 Tetraedron. 250. Hexaedron.

216-35185 Octaedron. 471-395 Dodecaedron. 419-30169 Icosaedron.

Canadensis ; 4. coesia ; 5. flexicaulis ; 6. lanceolata; 7. lateriflora ; 8. latieqlia; 9. Mexi-cana; 10. minuta ; 11. noveboracesis ; 12. ri-gida; 13. sempervirens ; and 14. S. virgaurea, or golden rod, which grows frequently in rough mountainous pastures and woods; and is the only species which is a native of Britain. The stems are branched, and vary from six inches to five feet high, but their common height is about a yard. The leaves are a little hard and rough to the touch ; the lower ones oval lanceolate, generally a little serrated and supported on footstalks ; those on the stalks are elliptical ; the flowers are yellow and grow in spikes from the alse of the leaves ; the scales of the calyx are lanceolate, of unequal length, and of a pale green color ; the female florets in the rays are from five to eight ; the hermaphrodite flowers in the disc from ten to twelve. There is a variety of this species called S. virgaurea cam brica,

a native of Wales, which is found on rocks from six inches to a foot high.

SOLIDATUM, used in the neuter gender, is taken for that absolute right or property which a man has in any thing. — Malmsb. lib. 1.

SOLIDITY, in philosophy, is that property of matter, or body, by which it excludes all other bodies from the place which itself possesses; and, as it would be absurd to suppose that two

culed, it appears to be founded both on Scripture and reason ; and, as sin and misery entered by the want of faith in the first threatening, so the only remedy is sola fide, by faith alone in the great work performed by our Saviour.

SOLIFIDIANISM (from sola and fides). The doctrine of salvation by faith alone. See last article.

SOLIGNAC (Peter Joseph De La Pimpie,

bodies could possess one and the same place at chevalier of), a learned and amiable French histhe same time, it follows that the softest bodies torian, born at Montpelier in 1687. He was

are equally solid with the hardest. See META-employed by the French court in a respectable

PHYSICS. Among geometricians the solidity of situation in Poland, where he became acquainted

a body denotes the quantity or space contained with king Stanislaus,

who made him his secre—

in it, and is called also its solid content. The tary. He wrote a History of Poland, and other

solidity of a cube, prism, cylinder, or parallelo-works; and died in 1773, aged eighty-six, piped, is had by multiplying its basis into its SOLIL'OQUY. n. s. Fr. soliloque ; Lat. solus

height. The-solidity of a pyramid or cone is and loquor. A discourse made to one's self, had by .multiplying either the whole base into a if i should own myself in love, you know lovers

third part of the height, or the whole height into are always allowed the comfort of soliloquy.

a third part of the base.

SOLIDUN'GULOUS, adj. Lat. solidus and ungula. Whole-hoofed.

It is set down by Aristotle and Pliny that an horse, and all solidungvlous or whole-hoofed animals, have no gall ; which we find repugnant unto reason. Browne's Vulgar Errours.

SOLIFID'IAN, n. s. Lat. solus and fdes. One who supposes only faith, not works, necessary to justification.

It may be justly feared that the title of fundamen-

Spectator.

He finds no respite from his anxious grief, Then seeks from his soliloquy relief.

Garth's Disp.

The whole poem is a tnliloquy: Solomon is the person that speaks : he is at once the hero and the author ; but he tells us very often what others say to hind. Prior.

A SOLILOQUY, according to Papia, is a discourse by way of answer to a question that a man proposes to himself. Soliloquies are be-

tals, being ordinarily confined to the doctrines of come to° common on the modern stage; yet can

nothing be more inartificial, or more unnatural, than an actor's making long speeches to himself, to convey his intentions, &c., to the audience. Where such discoveries are necessary to be made, the poet should rather take care to give

faith, hath occasioned that great scandal in the church of God, at which so many myriads of soli-fidians have stumbled, and fallen irreversibly, by conceiving heaven a reward of true opinions. Hammond.

SOLIFIDIANS. Without entering into this

controversy, as a point of religion, which has the dramatic persons such confidants as may more or less divided Protestants ever since the necessarily share their inmost thoughts; by which reformation, we would beg leave to consider the means they will be more naturally conveyed to subject, for a moment, in a philosophical point the audience. Yet is even this a shift an accu-of view. The whole argument seems to resolve rate poet would notˆ be found to have occasion itself into this simple question of philosophy, Can a created being merit any thing at the hand of its creator? The candid philosopher will certainly answer this question in the negative. If then, even upon the supposition of the creature having never sinned, it can merit nothing, how much less can a sinful creature, by any ex-

ertions of its own, atone for its past offences ?

for. The duke of Buckingham has well said, ' Soliloquies had need be very few, Extremely short, and spoke in passion too. Our lovers talking to themselves, for want Of others, make the pit their confidant: Nor is the matter mended yet, if thus They trust a friend, only to tell it us.'

Soliloquies are not, however, quite so unna-

Obvious as this truth seems to be, yet the oppo-tural as some think. Let a man be alone, and

site doctrine, that something can and must be done by the sinner, to atone for his past sins and merit forgiveness, has formed a constituent part of all religions, in all ages and countries, from the most dark and bloody superstitions, which placed merit in human sacrifices, and even sacrificed children to pacify the offended deities, down through the whole system of popery till the reformation. Nor have even the reformed churches got entirely rid of it, as appears from the above quotation from Dr. Hammond, as well as from the whole of the Arminian. system. But the church of Rome certainly carried the doctrine to the most extravagant height, when they taught that a man could not only, by his good works, merit forgiveness for his own sins, but accumulate such a stock of works of superero-

his thoughts anxiously bent on some object, and he will involuntarily speak out to himself.

SOLIMAN I., emperor of the Turks, succeeded his father Bajazet I. in 1403. He was a brave and enterprising prince, but very much devoted to his pleasures. He was dethroned by his brother Moses or Musa in 1410, and soon after murdered.

SOLIMAN II., emperor of the Turks, surnamed the Magnificent, was the only son of Selim I., whom he succeeded in 1520. He was educated in a manner very different from the Ottoman princes in general ; for he was instructed in the maxims of politics and the secrets of government, lie began his reign by restoring those persons their possessions whom his father had unjustly plundered. He re-established the au-

gatron as to atone for the sins of his neighbours! thority of the tribunals, and bestowed the govern - In a word, however Solifidianism maybe ridi-ment of provinces upon i one but persons of

wealth tnd probity : ‘ I would have my viceroys (he sail) resemble those rivers that fertilise the fields through which they pass, not those torrents which sweep every thing before them.’ After concluding a truce with Ismael, sophy of Persia, and subduing Gozeli Bey, who had raised a rebellion in Syria, he turned his arms against Europe. Belgrade was taken in 1521, and Rhodes surrendered in 1522, after an obstinate and enthusiastic defence. See RHODES. In 1526 he defeated and slew the king of Hungary in the famous battle of Mohatz. Three years after he conquered Buda, and immediately laid siege to Vienna itself. But after continuing twenty days before that city, and assaulting it twenty times, he was obliged to retreat with the loss of 80,000 men. Some time after he was defeated by the Persians, and disappointed in his hopes of taking Malta. He succeeded, however, in dispossessing the Genoese of Chio, an island which had belonged to that republic for above 200 years. He died while he was besieging Sigeth, in Hungary, on the 30th of August 1566, aged seventy-six. He was a prince of the strictest probity, a lover of justice, and vigorous in the execution of it ; but he tarnished all his glory by cruelty. After the battle of Mohatz he ordered 1500 prisoners, most of them gentlemen, to be ranged in a circle, and beheaded in presence of his whole army. Soliman thought nothing impossible which he commanded: A general having received orders to throw a bridge over the Drave, wrote him that it was impossible. The sultan sent him a long band of linen with a renewed order written on it ; concluding that ‘ irthe bridge were not finished upon his arrival, he would hang him with the very linen which informed him of his will.’

SOLIMAN III., the son of Ibrahim I., was taken from prison and made emperor by the Janizaries, in 1687, on the deposition of Mahomet IV. his brother, whom he sent to the same jail. He was an indolent prince, wholly governed by his ministers; and died in 1691.

SOLIMENE (Sir Franciscan eminent painter, bom at Nocera near Naples in 1657. He studied first under his father Angelo, who was a good painter, and next under Francis Maria at Naples in 1 674, who, envying his rising merit, wished to discourage him. He soon became eminent, however, in chiaro obscuro ; and painted the Jesuit's chapel of St. Anne in a style so superior that he astonished painters of established reputation. Philip V. employed him and invited him to Madrid, as also did Louis XIV. to Paris, but he declined. The emperor Charles VI. was so pleased with his paintings that he knighted him. In 1701 he went to Rome, where he was much patronised by the pope and cardinals. He was also a poet, and his Sonnets are esteemed. He died in 1747, aged ninety.

SOLINUS (Caius Julius), a Latin grammarian and historian, born at Rome in the end of the first century, according to Lempriere, but according to Dr. Watkins in the middle of the third. His PolyMstor is a collection of historical and geographical remarks on the most celebrated places of antiquity. Pliny is often quoted in it, and it is written se much in Pliny's style,

that he has been called Pliny's ape. The best edition is that of Salmasius, November, 1777.

SOL'IPEDE, n. s. Lat. solus and pedes. An animal whose feet are not cloven.

Solipedes, or firm footed animals, as horses, asses, and mules, are in mighty number.

Browne't Vulgar Erroun.

SOLIPUGA, or SOLIFUGA, in entomology, the name given by the Romans to a small venomous insect of the genus aranea, or spider kind, called by the Greeks heliocentros, or olocentros ; both words signifying an animal which stings most in the country and seasons where the sun is hottest. Solinus makes this creature peculiar to Sardinia; but this is contrary to all the accounts given us by the ancients. It is common in Africa and some parts of Europe. Almost all the hot countries produce this venomous little creature. It lies under the sand to seize other insects as they go by ; and, if it meet with any uncovered part of a man, produces a wound which proves very painful; some say the bite is absolutely mortal, but this seems not true. Solinus and others write the word solifuga, erroneously deriving the

name from the notion that this animal flies from the sun's rays, and buries itself in the sand.

SOLIS (Antony de), an ingenious Spanish writer, of an ancient and illustrious family, bora at Placenza in Old Castile, in 1 610. He was intended for the law ; but his inclination to poetry prevailed. Philip IV. made him his secretary ; and after his death the queen-regent appointed him historiographer of the Indies, a place of great profit and honor : his History of the Conquest of Mexico shows that she could not have named a fitter person. He is better known by this history than by his poetry and dramatic writings. He turned priest at fifty-seven years of age, and died in 1686, aged seventy-six.

SOLIS (John Dias de), a Spanish navigator, the first who sailed up the river Plata, in 1515.

SOLITARIES, an order of nuns of St. Peter of Alcantara, instituted in 1676, the design of which was to imitate the severe penitent life of that saint. Thus they are to keep a continual silence, never to open their mouths to a stranger; to employ their time wholly in spiritual exercises, and leave their temporal concerns to a number of maids, who have a particular superior in a separate part of the monastery : they always go barefooted, without sandals; gird themselves with a thick cord, and wear no linen.

SOLITARY, adj. & n. s.-v Fr. solitaire ;

SOLITAIRE', n.s. /Latin solitaries.

SOL'ITARILY, adv. \Retired; living

SOLI'TAUINESS, n. s. I alone ; single ;

SOL'ITUDE. J lonely ; dismal : a

solitary or solitaire is, one who lives alone ; a hermit : the adverb corresponding with the adjective : and solitude and solitariness both mean, lonely life or place ; state of being solitary.

Let that night be solitary , let no joyful voice come therein. . J"?'

Feed thy people with thy rod, the flock of thine heritage which dwell tolitarily in the wood.

Micah vii. 14.

You subject yourself to tolitariness, the sly enemy that doth most separate a man from well-doing.

Sidney.

SOL

602

SOL

How should that subsist lolitarily by itself which hath no substance, but individually the very same whereby others subsist with it 1 Hooker.

In respect that it is solitary, I like it very well ; but, in respect that it is private, it is a very vile life.

Shakspeare.

It had been hard to have put more truth and untruth together, in few words, than in that speech, Whosoever is delighted with tolitude is either a wild beast or a god. « Bacon.

At home, in wholesome tolitariness,

My piteous soul began the wretchedness

Of suitors at the court to mourn. Donne.

Nor did a solitary vengeance serve ; the cutting off one head is not enough ; the eldest son must be involved. King Charles.

Those rare and solitary, these in flocks. Milton.

What callest thou solitude 1 Is not the earth \Vith various living creatures, and the air, Replenished, and all these at thy command, To come and play before thee 1 Id. Paradise Loit.

Relations alternately relieve each other, their mu-tual concurrences supporting their tolitary instabilities. Browne.

Him fair Lavinia Shall breed in groves to lead a solitary life.

Dryden's JEneid.

Such only can enjoy the country, who are capable of thinking when they are there : then they are prepared for solitude, and in that solitude is prepared for them. Drydtn.

Often have I been going to take possession of tranquillity, when your conversation has spoiled me for a tolitaire. Pope.

You describe so well your hermetical state of life, that none of the ancient anchorites could go beyond you, for a cave with a spring, or any of the accommodations.that befit a solitary. Id. Letters.

In these deep solitudes, and awful cells, Where heavenly pensive contemplation dwells.

Pope.

To be exempt from the passions with which others are tormented is the only pleasing solitude. I can very justly say, with the ancient sage, ' I am never less alone than when alone.' Steele.

The tolitude of his little parish is become matter of great comfort to him, because he hopes that God bas placed him and his flock there, to make it their way to heaven. Law.

The man to solitude accustomed long Perceives in every thing that lives a tongue ; Not animals alone, but shrubs and trees Have speech for him, and understood with ease.

Cowper.

SOL'LAR, n. s. Low Lat. solarium. A garret.

Some skilfully drieth their hops on a kel, And some on a sollar, oft turning them wel. Timer.

SOLO, or SAURA-CORTA, an inland town and district of Java, the residence of an emperor. The town is populous, intersected with broad and shaded avenues or streets, running at right angles. The Crattan, where the emperor resides, is very spacious, and comprises several palaces : the other chiefs and nobility live in villas, surrounded by

hign walls. The European town and fort here are very neat. The latter, not above 800 yards from the Crattan, contained a British garrison, when the island of Java was in possession of this country. A fine river flows near this town, and, passing through the dominions of the sultan and emperor, falls into the harbour of Gressie.

SOLO, in the Italian music, is frequently used

in pieces consisting of several parts, to mark t'nose that are to perform alone; as fiauto solo, violino solo. It is also used for sonatas composed for one violin, one German flute, or other instrument, and a bass ; thus we say, Corelli's solos, Geminiani's solos, &c. When two or three parts play or sing separately from the grand chorus, they are called a doi solo, a tre solo, &c. Solo is sometimes denoted by S.

In the concertos of Corelli, Geminiani, and Handel, chiefly composed a due cori, or two orchestras, the principal parts are said to belong to the concertirii, or solo parts ; as violino primo concertino, violino secondo del concertino, &c. : and the inferior parts, that only play in the full chorus, are called ripieni ; as violino primo ripieno, violino secondo, ripieno, or del concerto grosso, or the great and full concert. Solos, which used to afford the most exquisite delight to persons of refined taste, when composed and performed by great masters, are now wholly laid aside ; and whoever attempts to perform one is subjected to a penalty instead of a reward; a law instituted at the concert of ancient music, where a composition was never thought complete by the late earl of Sandwich, without a kettle-drum, nor with, unless he beat it himself And at the commemoration of Handel, the dou-ble drums, double cartels, tromboni, &c., augmented his lordship's pleasure, in proportion to the din and stenterophonic screams of these truly savage instruments ; which, in so wide a building as Westminster Abbey, and softened by so powerful a chorus of voices and instruments as were assembled at the commemoration, had, occasionally a fine effect ; but, in a more confined space, the almost incessant use of the tromboni, and perpetual roll of the double drums, annihilate all the pleasing effects of mellifluous tones.

SOLOEIS, SOLOENTIA, or SOLUS, a promontory of Lybia, at the extremity of Mount Atlas ; now called Cape Cantin.

SOLOENTIA, or SOLOEIS, an ancient town of Sicily, between Panormus and Chimera, now called Solanto.

SOLOFRA, a town in the Principatro Ultra, Naples, with 6100 inhabitants. It has manufactures of leather, parchment, and gold and sil-ver plate.

SOLOMON, Heb. frktf, i. e. peaceable, the son and successor of David, king of Israel, by Bathsheba ; who seems to have been so named by his father in the spirit of prophecy, as he had the most peaceable and flourishing reign of any monarch in Israel or Judah. He was born about A. M. 2971. His judicious government in the early -part of his reign; his repeated divine communications, and wise choice ; his extensive and successful commerce with Egypt, Ophir, Tyre, &c. ; his immense riches in consequence; his fame for wisdom, which reached the most re-mote corners of the civilised world (see SHEBA) ; his superb building and solemn dedication of the temple, with his excellent prayer on that occasion, and his costly sacrifices, miraculously consumed ; with his feast of seven days given to the whole people, and many other interesting particulars of his reign, are recorded in 1 Kings

i — ix, and 2 Chron. i — ix. But, while the sa-cred historians have done all justice to his uncommon wisdom, they have not concealed his unparalleled folly and debauchery, in not only taking 1000 wives and concubines, but in departing from the true God, and, to please his heathen wives, sacrificing to idols. In this defection, his lawful wife, the daughter of Pharaoh and sister of Shishak, seems to have had no concern, as the idols of Egypt are not mentioned. Some commentators rather think that princess became a Jewish proselyte. Dr. Watkins says it was through his marriage with the princess of Egypt that he fell into idolatry ; but the doctor has no authority to say so, from history, sacred)r profane. Ashtoreth, Milcom, Chem.osh, and Moloch, were not Egyptian idols. Solomon began to build the temple in the fourth year of his reign, A. M. 2993, and completed it in his eleventh year, A.

M. 3000. His kingdom extended from the northeast border of Egypt to the Euphrates. His trade with Ophir alone has been estimated at £2,000,000 sterling. As an author, his Proverbs, Ecclesiastes, and Song of Songs, constitute a valuable part of the canon of Scripture. See SCRIPTURE. He is also recorded (1 Kings iv. 33) to have written upon botany, zoology, ornithology, entomology, and ichthyology ; but his works on these subjects are lost. After reigning forty years, he died A. M. 3011, and A. A. C. 975, aged fifty-eight.

SOLOMON (Ben Job Jalla), an African prince, born at Bonda, a town founded by his father Ibrahim, in the kingdom of Seregal, or Futa. Being sent by his father, in 1731, to the seacoast to sell some slaves, he was taken prisoner by the Mandingoes, and sold for a slave to captain Pyke, an Englishman, who carried him to Annapolis, in Maryland, where he was purchased by Mr. Tolsey, merchant. He was at last ransomed by general Oglethorpe, for the African Company, and brought to England in 1733. After continuing in England about fourteen months, during which he translated several Arabian MSS. for Sir Hans Sloane, he returned laden with valuable presents to the amount of £500 to his own country, which he found depopulated by war, and his father dead. He was a man of good natural parts, and had the Koran by heart.

SOLOMON (Ben Virga), a Jewish rabbi and physician, born in Spain in the sixteenth century. He wrote a curious book, entitled Schebet Judah, or a History of the Jews, from the destruction of the temple to his own time. A Latii* version of it was published by Gentius, at Amsterdam, in 1651, in 4to.

SOLOMON, THE SONG OF, a canonical book of the Old Testament, justly ranked by the Jews among the Hagiographa, or holy writings. See SCRIPTURE.

SOLOMON'S ISLANDS, a group of large islands, in the South Pacific, lying chiefly between Long. 155° 160' E., and lat. 5° 12' S. Alvaro de Mendana discovered these islands in 1567, at which time it is affirmed the natives .were cannibals. They were computed at eighteen in number, and some of them of large size. The names of those best known are, Ysabel, Guadalcanar, San Cris-

toval, and New Georgia. Scarcely any remem branceof them was preserved, until de Surville's voyage in 1767, who had an unfortunate encounter here, which terminated in his entrapping a young islander

into his possession, and carrying him off. They were called by him the Land of Arsacides. They have been seen, but not completely surveyed, by later navigators. Great variety of vegetables grow here : and the wild boar is common. Prodigious numbers of birds are also seen. Snakes are among the animals of the Solomon Islands : ants of great size, and many uncommon insects. The inhabitants, apparently of different races, are some perfectly black, others copper colored. The former have woolly hair, soft to the touch : the nose not so flat.r nor are the lips so thick as in negroes. Those who are copper colored have black hair ; and most of them cut it short around the crown, powdering both it and the eyebrows with lime. The men tattoo their bodies, or paint a white line over the eyebrows, and it appears that this latter ornament is used by the women also. The ears are pierced, and rings of different kinds inserted, so as to dilate them to a great size; an ornament is likewise worn in the septum of the nose. Both sexes go entirely naked, except a scanty girdle around the waist. Their arms are the bow and arrow, spears, clubs, and shields of wicker ; the arrows are pointed with fish bone ; and their canoes are skilfully and neatly constructed : the head and stern very high, and in general ornamented with pieces of mother-of- pearl. It is affirmed that voyages of ten or twelve days duration are made in these vessels.

SOLOMON’S SEAL. ‘See CONVALLARIA.

SOLOMON’S SEAL, PENNSYLVAMAN. See UVULARIA.

SOLON, one of the seven wise men of Greece, was born at Salamis, and descended from the truly patriotic king, Codrus. He had recourse to merchandise for his subsistence. He had, however, a greater thirst after knowledge and fame than after riches, and made his mercantile voyages subservient to the increase of his intellectual treasures. He very early cultivated poetry, and applied himself to the study of wis-dom. The device by which he prevailed on the Athenians to repeal the law which made it death to propose the renewal of their claim to his na-tive island, with the success that followed, is related under ATTICA. His popularity was extended through Greece in consequence of a successful alliance which he formed among the states in defence of the temple at Delphos against the Cirrhaeans. When dissensions had arisen at Athens between the rich creditors and the poor debtors, Solon was created archon, with the united powers of supreme legislator and magistrate. He soon restored harmony between the rich and poor : he cancelled the debts which had proved the occasion of so much oppression, and ordained that in future no creditor should be allowed to seize the body of the debtor for his security : he made a new distribution of the peo-ple, instituted new courts of judicature,

and framed a judicious code of laws, which afterwards became the basis of the laws of the XII tables in Rome. Among his criminal laws are

rrany wise and excellent regulations ; but two of them were very exceptionable ; the permission of a voluntary exile to persons that had been guilty of premeditated murder, and the appointment of a less severe punishment for a rape than for seduction. Those who wish to see the comparative excellence of the laws of Moses, of Lycurgus, and Solon, may consult Prize Dissertations relative to Natural and Revealed Religion, by Teyler's Theological Society, vol. ix. For the interview which Solon had with Croesus, king of Lydia, see CRCESUS. Solon died in Cyprus, in his eightieth year. Statues were erected to his memory both at Athens and Salamis. Among the precepts which have been ascribed to Solon are the following : ' Laws are like cobwebs, that entangle the weak, but are broken through by the strong. He who has learned to obey, will know how to command. In every thing you do, consider the end.'

SOLONA, a town of Gallia Cisalpina, seated on the Utens.

SOLON IUM, an ancient town of Latium, on the borders of Etruria.

SOL'STICE, n. s.) Fr. solstice ; Lat. sol—

SOLSTI'TIAL, adj. S stitium. The point be-yond which the sun does not go ; the tropical point : relating or belonging to the solstice.

Let the plowmen's prayer Be for moist solstices, and winters fair. May'i Virgil,

From the north to call Decrepit winter ; from the south to bring Solstitial summer's heat. Milton'* Paradite Lost.

The sun, ascending unto the northern signs, be-getteth first a temperate heat in the air which by his approach unto the solstice he intendeth, and by continuation increaseth the same even upon declination. Browne's Vulgar Errourt.

Observing the dog-days ten days before and after the equinoctial and solstitial points, by this observation alone are exempted a hundred days. Id.

The fields

Laboured with thirst ; Aquarius had not shed His wonted showers, and Sirius parched with heat Solstitial the green herbs. Philips.

SOLSTICE, in astronomy, that time when the sun is in one of the solstitial points; that is, when he is at his greatest distance from the equator ; thus called because he then appears to stand still, and not to change his distance from the equator for some time ; an appearance owing to the obliquity of our sphere, and which those living under the equator .are strangers to. The solstices are two in each year; the aestival, or summer solstice, and the hyemal or winter solstice. The summer solstice is when the sun seems to describe the tropic of cancer, which is on June 22d, when he makes the longest day ; the winter solstice is when the sun enters the first degree, or seems to describe the tropic of Capricorn, which is on December 22d, when he makes the shortest day. This is to be understood as in our northern hemisphere ; for in the southern the sun's entrance into Capricorn makes the summer solstice, and that into cancer the winter solstice. The two points of the ecliptic wherein the sun's greatest ascent above the equator, and his descent below it, are terminated, are called the solstitial points ; and a circle, supposed to pass through the poles cf the world and

these points, is called the solstitial colure. The summer solstitial point is in the beginning of the first degree of cancer, and is called aestival or summer point ; and the winter solstitial point is in the beginning of the first degree of Capricorn, and is called the winter point. These two points are diametrically opposite to each other.

SOL'UBLE, adj. 1 Lat. solubilis. Capable

SOLUBIL'ITY, n. s. 1 of dissolution or separation of parts : the noun substantive corresponding.

This cannot account for the indissolvable coherence of some bodies, and the fragility and tvlubility of others. Glanville.

Sugar is a sal oleosum, being soluble in water, and fusible in fire. Arbuthnnt.

SOLVE, v. a. ~\ Lat. solvo. To clear; ex—

SOL'VIELE, adj. (^ plain ; untie an intellectual

SOLU'TION, n. s. i knot : the adjective corre—

SOL'UTIVE, adj. 3 spending : solution is, dis-junction ; matter dissolved, or that which contains or consists of dissolved matter ; resolution of a doubt or mental difficulty : solutive, laxative ; causing solution.

In all bodies there is an appetite of union, and evitation of solution of continuity.

Bacon't Natural History.

Though it would not be so abstersive, opening, and solutive as mead, yet it will be more lenitive in sharp diseases. Bacon.

He would solve high dispute With conjugal caresses. Milton.

Something yet of doubt remains, Which only thy solution can resolve.

Id. Paradise Lost.

Intellective memory I call an act of the intellective faculty, because it is wrought by it, though I do not inquire how or where, because it is not solvible.

Hale's Origin of Mankind. With hope and fear The woman did the new solution hear ; The man diffides in his own augury, And doubts. . Dryden.

The limiting of the regale only to Christian princes did rather involve and perplex the cause, than any way solve it. Lelley.

When salt of tartar per deliquium, poured into the solution of any metal, precipitates the metal, and makes it fall, down to the bottom of the liquor in the form of mud, does not this argue that the acid particles are attracted more strongly by the salt of tartar than by the metal, and by the stronger attraction go from the metal to the salt of

tartar?

Newton's Opticks.

Aretaeus, to procure sleep, recommends a solution of opium in water to foment the forehead.

Arbuthnot.

Do thou, my soul, the destined period wait, When God shall solve the dark decrees of fate ; His now unequal dispensations clear, And make all wise and beautiful appear. Ticket.

It is mere trifling to raise objections, merely for the sake of answering and solving them. Watts.

This will instruct you to give a plainer solution of any difficulties that may attend the theme, and refute objections. Id.

SOL'VENT, adj. Lat. solvent. Having the power to cause dissolution ; hence power to discharge a debt or debts.

When dissolved in water, it is not by the eye distinguishable from the solvent body, and appears as fluid. ' Ery'e.

SO'LUND-GoosE, n. *. A fowl. I know not whether sohind or soland. — Johnson. Perhaps from' Goth, sula, to foul, because its smell is fetid. — Thomson.

A toland-goose is in bigness and feather very like a tame goose, but his bill longer, and somewhat pointed, his wings also much longer, being two yards over.

Grew.

A Scot, when from the gallow-tree let loose, Drops into Styx, and turns a soland-goose.

Cleaveland.

SoLUND-GoosE, or SoLAN-Goosi, in ornithology. See PELICANUS. Cleaveland by writing, and Johnson by quoting, such nonsense as the above, show themselves to be a couple of illiberal English geese.

SOLVYNS (Francis Balthazar), an oriental traveller, born at Antwerp, in 1760, displayed his abilities at an early age, as a painter and engraver. His first works were sea-views. He went to Germany with the archduchess Maria Christina, and after the death of that princess accompanied Sir Home Popham to the Red Sea and the East Indies. On his arrival at Hindostan he studied the languages of the East, and their manners and customs, that he might be able accurately to illustrate them by the pen and pencil. Having after fifteen years' absence returned to Europe, he settled at Paris, and commenced a work entitled Les Hindous, ou Description pittoresque des Moeurs, Costumes, et Ceremonies religieuses de ce Peuple, in 4 vols. large folio. After the restoration of the prince of Orange, Solvyns returned to his native country, and was made captain of the port of Ant-yerp, where he died October 10th, 1824.

SOLWAY FRITH, or Booness Watli, a navigable arm of the sea, which extends east from the Irish Sea, and forms the boundary between Scotland and England for upwards of fifty miles. The shore on the Scottish coast is flat and sandy, with a few sunk rocks, but most parts afford safe landing places for small vessels. The frith is navigable for vessels of 100 tons within six miles of its extremity ; but the sea is gradually retiring from the land, so that several places are now covered with grass, over which, in the memory of persons still living, the tide used to flow. The tides are regular, ten or twelve feet above low water mark ; at spring tides twenty feet. Many rivers run into this frith. Those on the Scottish side are chiefly the Nith, Annan, Urr, South Dee, and Kirtle ; and the Sark, the Esk, and the Liddle, which three last unite and form its eastern extremity. This frith abounds with fish, particularly excellent salmon; and the coasts on the Scottish side abound with those wonderful productions of nature, the sea polypi, or animal flowers.

SOLWAY Moss, a large black morass of England, in Cumberland, on the ground formerly called the Debateable Land, consisting of about

1600 acres; a considerable quantity of which moved off in 1771. This place is memorable too for the shameful surrender of the Scottish army to the English, on account of king James V. having changed their general ; which disgrace broke the king's heart. See SCOTLAND. Gilpin, in his Observations on the Mountains and Lakes

of Cumberland, &c., two vols., 1781, thus describes the particulars of this memorable inundation : — ' Solvvay Moss is a flat area, about seven miles in circumference. The substance of it is a gross fluid, composed of mud, and the putrid fibres of heath, diluted by internal springs, which arise in every part. The surface is a dry crust, covered with moss and rushes ; offering a fair appearance over an unsound bottom, shaking with the least pressure. Cattle, by instinct, know and avoid it. Where rushes grow the bottom is soundest : the adventurous passenger, therefore, who sometimes in dry seasons traverses this perilous waste to save a few miles, picks his cautious way over the rushy tussocks as they ap-pear before him. If his foot slips, or if he ventures to desert this mark of security, it is possible he may never more be heard of. On the south Solway Moss is bounded by a cultivated plain, which declines gently through the space of a mile to the river Esk. This plain is lower than the moss, being separated from it by a breast-work formed by digging peat, which makes an irregular though perpendicular line of low black boundary. It was the bursting of the moss through this peat breast-work, over the plain between it and the Esk, that occasioned the dreadful inundation which destroyed so large a district. The more remarkable circumstances relating to this calamitous event were these : — On the 13th of November, 1771, in a dark tempestuous night, the inhabitants of the plain were alarmed with a dreadful crash, which they could no way account for ; many of them were then in the fields watching their cattle, lest flie Esk, which was then rising violently in the storm, should carry them off. In the mean time the enormous mass of fluid substance, which had burst from the moss, moved slowly on, spreading itself more and more, as it got possession of the plain. Some of the inhabitants, through the terror of the night, could plainly discover it advancing like a moving hill. This was in fact the case ; for the gush of mud carried before it through the first 200 or 300 yards of its course a part of the breast-work ; which, though low, was yet several feet in perpendicular height ; but it soon deposited this solid mass, and be-came a heavy fluid. One house after another it spread round, filled and crushed into ruin, just giving time to the terrified inhabitants to escape. Scarcely any thing was saved except their lives; nothing of their furniture, few of their cattle. Some people were even surprised in their beds, and had the

additional distress of flying naked from the ruin. The morning light explained the cause of this amazing scene of terror, and showed the calamity in its full extent ; and yet, among all the conjectures of that dreadful night, the mischief which really happened had never been supposed. Lands, which in the evening would have let for twenty shillings an acre, in the morning were not worth sixpence. On this well-cultivated plain twenty-eight families had their dwellings and little farms : every one of which, except perhaps a few who lived near the skirts of it, had the world totally to begin again. Who could have imagined that a breast-work, which had stood for ages, should at length give

way ? or that those subterranean floods which had been bedded in darkness since the memory of man, should have ever burst from their black abode ? This dreadful inundation, though the first shock of it was most tremendous, continued still spreading for many weeks, till it covered the whole plain, an area of 500 acres ; and, like molten'lead poured into a mould, filled all the hollows of it, lying in some parts thirty or forty feet deep, reducing the whole to one level surface.' The plain that was covered with this Stygian torrent, has however since been restored to fertility by the exertions of a Yorkshireman named Wilson, whose self-taught genius at once conceived a novel plan, and directed its execution.

SOLYHUL. See SOLIHULL. SOLYMA, or HIEROSOLYMA, an ancient name of Jerusalem. Mr. Pope, in his beautiful poem of the Messiah, invokes the nymphs of Solyma. SOLYMA, or SOLYM*, an ancient town of Lycia. Sarpedon settled in it. — Horn. Iliad 6. Plin. v. 27.

SOLYMI, the inhabitants of Solyma ; called also Milyades and Termili.

SOMBRERO, a small island in the West Indies, about three miles

square, entirely desert. On this island an unfortunate seaman, Jeffrey, was inhumanly left by order of his captain, for the offence of having tapped a barrel of beer when the water of his Brittannic majesty's brig ran short, and the crew were on short allowance. After eight days' suffering, supporting life only by a few limpets that he picked up on the shore, and a little rain water found in the crevices of the rocks, he was providentially delivered from his desperate situation by the schooner of Mar-ble Head, John Dennis, which touched at the isle, took him off, and landed him in the county of Essex. Sombrero is in long. 63° 28′ 30″ W., lat. 18° 3r 40' N.

SOMBRERO, WONDERFUL PLANT OF, is a strange kind of sensitive plant growing in the East Indies, in sandy bays and in shallow water. It appears like a slender straight stick; but, when you attempt to touch it, immediately withdraws itself into the sand. Miller gives an account of it in his description of Sumatra. He says, the Malays call it lalan lout, that is, sea grass. He never could observe any tentacula : but, after many unsuccessful attempts, drew out a broken piece about a foot long. It was perfectly straight and uniform, and resembled a worm drawn over a knitting needle. When dry it appears like a coral.

SOMBREUIL (Charles Verot de), a French royalist, who distinguished himself by his courage in the opening of the revolution. Dur-ing the tumults of the Palais royal he saved from the fury of the mob one of the Messrs, de Polig-nac, and at length emigrated. In the campaign of 1792 he served in the Prussian army, and in 1793 entered into that of the prince of Conde ; in the winter of 1794 he commanded a corps of emi-grants in Holland. Subsequently he became one of the victims of the ill-concerted English expedition to Quiberon. Our government placed under his command seven regiments, with which he arrived on the coasts of Brittany, July 7th,

1794, was taken prisoner, tried before a military commission, and shot at Vannes.

SOME, adj. ~) Sax. rom> Pum >

SOM'EBODY, n. s. j Isl., Swed., Dan.

SOM'EDEAL, adv. I and Bel. som ; Goth.

SOM'EHOW, and Teutonic sum.

SOM'ETHING,TJ. s. & adv. {ˆMore or less ; part : SOM'ETIME, adv. (

used also to express

SOM'ETIMES, uncertainty or inde—

SOM' EWHAT, n. s. & adv. finiteness of num-SOM'EWHERE, adv. ber : somebody is

SOM'EWHILE, n. s. J any one; any body :

also a person of some consideration or distinction: somedeal is, in some degree (obsolete): somehow, any how : something, any thing ; any quantity ; part : and as an adverb in some de-gree : sometime is once ; formerly : sometimes, now and then ; at one time or other : somewhat, something; more or less: and as an adverb in some degree : somewhere, any where : some-while, once ; one while (obsolete).

Let me leave some of the folk that are with me.

Gen. xxxiii.

Jesus said, Somebody hath touched me ; for I perceive that virtue is gone out of me. Luke viii. 46. Theudas rose up, boasting himself to be somebody.

Acts.

It may be that the queen's treasure, in so great occasions of disbursements, is not always so ready ; but being paid as it is, now some, and then some, it is no great impoverishment to her coffers.

Spenser on Ireland.

Siker now I see thou speak'st of spite, AH for thou lackest somedele their delight. Spenser. Though under colour of the shepherds somewhiLe, There crept in wolves full of fraud and guile, That often devoured their own sheep, And often the shepherd that did 'em keep.

Id. Pastorals.

Concerning every of these, somewhat Christ hath commanded, which must be kept till the world's end : on the contrary side, in every of them somewhat there may be added, as the church judges it expedient.

Hooker.

0 that Sir John were come, he would make this a bloody day to

somebody. Shakspeare. Henry IV.

1 will acquaint you with the perfect spy of the time ; for't must be done to-night, and something from the palace. Shakspeare.

Good sometime queen, prepare thee hence for France. Id.

Yet well I remember

The favours of these men : were they not mine ? Did they not sometime cry, all hail ! to me ? Id.

We landed some hundred men, where we found some fresh water. Raleigh.

Being encountered with a strong storm some eight leagues to the westward of Scilly, I held it the office of a commander to make a port. Id.

First go with me, some few of you, and see the place, and see how it can be made convenient for you ; and then send for your sick. Bacon.

Old men's spirits visual, contrary to those of purblind men, unite not but when the object is at some good distance. Id.

The number slain on the rebels' part were some two thousand. Id.

The body passive is better wrought upon at sometimes than at others. Id. Natural History.

Holding of the breath doth help somewhat to cease the hiccough. Id.

If there be a tacit league, it is against somewhat or somebody : who should they be ? Is it against wild

beasts ? No ; it is against such routs and shoals of people as have utterly degenerated from the laws of nature. Bacon.

The flowre of armes, Lycymnius, that somewhat aged grew. Chapman.

At the higher end of a creek Milbrook lurketh between two hills, a village of some eighty houses.

Carets.

Some to the shores do fly, Some to the woods, or whither fear advised ; But running from, all to destraction hye. Daniel.

They have no black men amongst them, except some few which dwell on the seacoast. Heylin.

If he had not done it when he did, somebody else might have done it for him. Id.

‘ It is good that we sometimes be contradicted, and that we always bear it well ; for perfect peace cannot be had in this world. Taylor.

We must draw in somebody, that may stand ‘Twixt us and danger. Denham’s Sophy.

Hopeless and forlorn They are returned, and somewhere live obscurely.

Denham. Not in the neighbouring moon, as some have

dreamed. Milton.

The pilot of some small night-foundered skiff. Id. Something yet of doubt remains. Id.

The pain went away upon it ; but he was something discouraged by a new pain falling some days after upon his elbow on the other side. Temple.

Your edicts some reclaim from sins, But most your life and blest example wins.

Dry den.

He writes not always of a piece, but sometimes mixes trivial things

with those of greater moment : sometimes also, though not often, he runs riot, and knows not when he has said enough.

Id. Fables, Preface.

Somewhat of his good sense will suffer in this transfusion, and much of the beauty of his thoughts will be lost. Dryden.

These are intrinsic difficulties arising from the text itself, as the uncertainty sometimes who are the persons he speaks to, or the opinions or practices which he has in his eye. Locke.

These salts have somewhat of a nitrous taste, but mixt with a smatch of vitriolick. Grew.

Sometimes the one, and sometimes the other, may be glanced upon in these scripture descriptions.

Burnet.

He bore away the prize, to the admiration of some hundreds. Addison.

The hopes that what he has must come to somebody, and that he has no heirs, have that effect, that he has every day three or four invitations.

Id. Spectator.

Your good-natured gods they say, Descend some twice or thrice a day. Prior.

When fierce Bavar

Did from afar the British chief behold, Betwixt despair and rage, and hope and pain, Something within his warring bosom rolled. Id.

Does something still, and somewhere yet remain, Reward or punishment ? Id.

Compressing two prisms hard together, that their sides, which by chance were a very little convex, might somewhere touch one another, I found the place in which they touched to become absolutely transparent, as if they had there been one continued piece of glass. Newton’s Opticks.

He that shuts his eyes against a small light, on purpose to avoid the sight of somewhat that displeases him, would, for the same reason,

shut them against the sun. Atterbury.

The force of the air upon the pulmonary artery is but small, in respect of that of the heart ; but it is Still something. Arbuthnot on Aliments.

The vesicular cells may be for receiving the arterial and nervous juices, that, by their action upon one another, they may be swelled somehow, so as to shorten the length of every fibril. Cheyne.

You'll say the whole world has something to do, something to talk of, something to wish for, and something to be employed about ; but pray put all these somethings together, and what is the sum total but just nothing ! Pope's Letters.

Of the dead we must speak gently ; and therefore, as Mr. Dryden says somewhere, peace be to its manes.

Pope.

Something of it arises from our infant state.

Watts.

Still from his little he could something spare, To feed the hungry and to clothe the bare. Harte.

SOMERS (John), lord high chancellor of England, was born at Worcester in 1652. He was educated at Oxford, and afterwards entered at the Middle Temple, where he studied the law. In 1688 he was one of the counsel for the seven bishops at their trial, and argued with great learning and eloquence against the dispensing power. In the convention which met by the prince of Orange's summons, January 22d, 1689, he represented Worcester ; and was one of the managers for the House of Commons, at a conference with the House of Lords upon the word abdicated. Soon after the accession of W7illiam and Mary he was appointed solicitor-general and was knighted. In 1692 he was made attorney-gene- ral, and in 1693 lord keeper of the great seal. In 1695 he proposed an expedient to prevent the clipping of the coin. In 1697 he was created lord Somers, baron of Evesham, and made lord high chancellor. In 1700 he was removed from his post of lord chancellor, and in 1701 was impeached of high crimes and misdemeanors by the House of Commons, of which he was acquitted upon trial by the House of Lords. He then retired to a studious course of life, and was chosen president of the Royal Society.

In 1706 he proposed a bill for the regulation of the law; and was one of the principal managers for the union between England and Scotland. In 1708 he was made lord president of the council ; from which he was removed in 1710. In the end of queen Anne's reign he became very infirm ; and therefore held no other post than a seat in council, after the accession of king George I. He died of an apoplectic fit in 1716. Mr. Addison has drawn his character very beautifully in his Freeholder.

SOMERSET, a county of the United States, in Maiue, bounded east by Penobscot county, south by Kennebeck county, and west by Oxford. Chief town Norridgewock. 2. A county of the United States, in New Jersey, bounded north by Morris county, east by Essex and Middlesex counties, southeast by Middlesex county, and west by Hunterdon county. Chief towns, Boundbrook and Somerset. 3. A county of the United States, in Pennsylvania, bounded north by Cambria county, east by Bedford county, south by Maryland, and west by Fayette and Westmoreland counties. 4. A county of the United States, in Maryland, bounded north by

Delaware, east by Worcester county, south by Pocornoke Bay, west by the Chesapeake, and northwest by Dorchester county. Chief town, Princess Anne.

SOMERSET is also the name of a borough and post-town of the United States, capital of Somerset county, Pennsylvania, and remarkable as being the most eastern town of any consequence in West Pennsylvania, and, except Hamilton, in the Ohio valley. It is the seat of justice for Somerset county, and stands near the head streams of both the Youghiogheny and Conemaugh, on the south road from Pittsburg to Bedford. The mountain valley in which this town is situated is the abode of health, and having pure though often keen air. Thirty-five miles west of Bedford, and sixty-one E. S. E. of Pittsburg. There are a great number of small townships of this name in the United States.

SOMERSETSHIRE, a maritime county of England, bounded on the north by Gloucestershire and the Bristol Channel, on the east by Wiltshire and Dorsetshire, on the south by Dorsetshire, and on the west and southwest by Devon ; being sixty-eight miles in length and forty-seven in breadth, containing 1642 square statute miles, or 1,050,88 statute acres of land, and having 400,000 acres arable, and 534,500 in pasturage. It is divided into the forty hundreds of Abdick and Bulstone,Andersfield, Bathforum, Bempstone, Brent and Wrington, Bruton, Can-nington, Carhampton, Catash, Chew and Chew-ton, Crewkerne, Curry-north, Ferris-Norton, Frome, Glaston, Hampton and Claverton, Hart-cliffeand Bedminster, Horethorne, Hounborough, Huntspill and Puriton, Keynsham, Kilmersden, Kingsbury, Martock, Mells and Leigh, Milver-ton, Petherton-north and Petherton-south, Pit-ney, Portbury, Somerton, Stone, Taunton, Tin-tinhull, Wellow, Wells-forum, Whitestone, Whitley, Willerton and Freemanners, and Win-terstoke ; the whole containing seven liberties ; two cities, Bath and Wells (exclusive of the greater part of the city of Bristol) ; five boroughs, Bridgewater, Ilchester, Milbourne Port, Mine-head, and Taunton ; and twenty-seven market-towns, Axbridge, Bruton, Castle-Cary, Chard, Crewkerne, Dulverton, Dunster, Frome-Sel- wood, Glastonbury, Ilminster, Keynsham, Langport, Melverton, North-Curry, Pensford, Petherton-south, Porlock, Stogumber, Shepton-Mallet, Somerton, Stowey, Watchet, Wellington, Win-canton, Wivelscombe, Rington, and Yeovil; and 482 parishes. The amount of the assessment under the property tax in 1815 was £1,900,651, and the amount of the poor's rates in 1815 was £233,387 ; being at the rate gf 2s. 5ˆd. in the pound. The average scale of mortality for ten years appears to have been as one to sixty-three of the population. It sends sixteen members to parliament ; is included in the western circuit, the province of Canterbury, and in the diocese of Bath and Wells.

The rivers are numerous but not large, their course being chiefly within the county. The principal is the Parret, which rising on the southern parts, flows northward, and is joined by the Ivel from the east, then by the Tone from the west, and afterwards emptying itself into the

Bristol Channel at Bridgewater Bay ; the small river Ax, from the north, passes Axbridge, and falls into the Bristol Channel ; the Bruce rises near Bruton, and falls into the Bristol channel. The Parret, the Tone, and the Bruce, are each navigable for limited distances. The only navigable canal that has been completed is the Ken-net and Avon, which unites together the two great rivers Thames and Severn.

It commences near Bath, and soon enters Wiltshire. Other canals have been projected in different directions, but none of them have been prosecuted to completion ; though on several of them large sums have been expended.

The most valuable branch of rural economy here is the fattening of cattle and the management of the dairy. The cheese of Cheddar has obtained great celebrity, but that made in many other parts, and frequently sold as Gloucester, is equal to any in the world. The butter in the southern division of the county is excellent, and much of it is sent to London under the denomination of Dorsetshire butter. Its next agricultural produce is cider, the universal beverage of the working classes. It is a purer and stronger liquor than the cider either of Herefordshire or Devonshire, and the consumption of it within the country is very large : some is also sent to distant parts. The abundance of natural grass is such that the farmers do not find it necessary to grow a crop of clover, or artificial grass, uniformly between two corn crops ; nor is the practice of fallowing, or of introducing a rotation beginning with turnips, necessary. Without this they grow good crops of corn, and in the hundred of Taunton Dean the wheat is of the best quality. The bear and barley crops are also very good. Oats are extensively cultivated, but scarcely equal the demands of the county, and Ireland readily supplies the deficiency. A large proportion of the flax used in the manufactures is raised within the county. It is not unusual to rent land for half a year whilst a crop of flax is grown ; after which it is taken again by the regular occupant, who finds the flax to be an excellent preparative for wheat. The rich loamy soils bring to maturity fine elm timber.

Of the mineral products the hills of Mendip supply coals; lead, of a quality superior to that of Derbyshire, is also found in Mendip and on the Cheddar hills; and calamine is extensively produced, and supplies the brass manufactures of Bristol. Copper is found near Stowey : manganese, bole, and red ochre, are also among the products of Mendip. Cloths of Spanish and Saxon wool are made at Frome, Shepton Mallet, and their vicinity : some common woollen goods at Ilminster, Chard, Taunton, and Wellington ; and some of a coarser kind at Wivelscombe, Milvarton, Watchel, and other places. The linen goods are tickens, dowlas, and sail-cloth ; these are mostly made at Yeovil, Crewkerne, Monta-cute, and Martock. Silk-ioills are found at Bruton and Taunton, and gloves are extensively made at Yeovil. Near Wells are establishments for making fine paper ; and in the vicinity of Bristol are some excellent glass-houses.

The commerce of Somersetshire passes chiefly through Bristol, but

some of the woollen gooJs

manufactured at Taunton and Wellington are snipped from Exeter. The linen and woollen goods are also distributed through the western and Welsh counties.

The county returns four members to the House of Commons, and two from each of the following places : Bath, Wells, Taunton, Bridgewater ; one for the borough of Frome; besides two for the city of Bristol, which is partly in this county, and partly in Gloucestershire, but retains an independent county jurisdiction. Ilchester, from the elections being held there, and the gaol and county-court, is usually considered the county-town, but the assizes in the spring are held at Taunton, and in the Summer at Wells and Bridgewater alternately.

SOMERTON, a market-town and parish in Somerton hundred, Somersetshire, four miles east by north from Langport, and 133£ west by south from London. The town is pleasantly situate by a branch of the Parrel, on a rising ground, but the houses are mostly low, though of stone, and the streets are paved. It is of great antiquity, and was formerly the county town, giving, in fact, name to the county. It was often the residence of the West Saxon kings, •who built a strong castle here, which was many years after used as a state prison. In it John, king of France, was confined, after he was made prisoner by Edward the Black Prince. The church is an ancient edifice, and near it is an excellent free-school, and a well-endowed alms-house for eight poor women. The hall in which the meetings of the justices is held is in the middle of the town. One of the county gaols is in this town, the other being at Ilchester. It is governed by a bailiff and constables, chosen annually from the inhabitants. Market on Tuesday.

SOMERVILLE (William), an English poet, the son of Robert Somerville

of Edston, esq., descended of an ancient and opulent family in Warwickshire, born at Edston in 1692. He was educated at Winchester, and afterwards became fellow of New College, Oxford ; as was also his brother, Dr. Somerville, afterwards rector of Ad-derbury in Oxfordshire. Dr. Johnson celebrates him as a poet, a country gentleman, and a useful justice of peace. He translated Voltaire's Al-zira ; but his work which is chiefly admired is his Chase, which is a lively and classical performance. Shenstone pays a very mixed compliment to his character in his Letters (1742 — 3). * Our old friend Somerville is dead ! I did not imagine I could have been so sorry as I find my-self on this occasion. I can excuse all his foibles, impute them to age and to distress of circumstances ; the last of these considerations wrings my very soul to think on. For a man of high spirit, conscious of having, at least in one production, generally pleased the world, to be plagued and threatened by wretches that are low in every senses to be forced to drink himself into pains of body, in order to get rid of pains of the mind, is a misery.' He died in 1743.

SOMME, a Norman department of France,

comprising the western part of Picardy, and

bounded on the west by the.English Channel, on

the north by the department of the Pas de Calais.

Its area is about 2380 square miles. Population 495,000. This is, on the whole, one of the finest and most fertile of the French departments. The coast is low and sandy, but the interior consists of a level fertile loam, except towards the east, where the prolongation of a part of the Ardennes produces considerable elevations, and the corn culture gives place to plantations and pasture. Tillage and the breeding of cattle are followed here on the plan adopted in Flanders ; and stall feeding is practised on a large scale. The raising of green crops is also favored by the climate. Besides corn, pasturage, fruit, and vegetables, a large quantity of coleseed, rapeseed, flax, hemp, and oleaginous grains, are raised. The manufactures comprise woollens, coarse and fine linens, lawns, cambrics, soap, leather, and hardware.

SOMNAMBULISM, sleep-walking. See MEDICINE, Index ; and SLEEP. We have touched upon this subject in the article SLEEP. There is but little more of an authentic description that can be added. The case of

Devaud, accurately observed by the Physical Society of Lausanne, is the most singular one.

‘ Once, we are told, he was observed dressing himself in perfect darkness. His clothes were on a large table, mixed with those of some other persons; he immediately perceived this, and complained of it much : at last a small light was brought, and then he dressed himself with sufficient precision. While his imagination was employed on various subjects, he heard a clock strike, which repeated at every stroke the note of the cuckoo. ‘ There are cuckoos here,’ sai < J he ; and, upon being desired, he imitated the song of that bird immediately.’ Again, the reporters say, ‘if he is teazed, or gently pinched, he is x always sensible of it (unless he is at “the time strongly impressed with some other thing), and wishes to strike the offender : however, he never attacks the person who has done the ill, but an ideal being, whom his imagination presents to him, and whom he pursues through the chamber without running against the furniture, nor can the persons whom he meets in his way divert him from the pursuit.’ Other facts impressed the observers with a belief that the sleep-walker was capable of receiving certain impressions through the medium of the senses, when they accorded with the images which his imagination was occupied in forming ; but that this faculty was predominant, and only admitted those peiceptions which, on the principles of association, mingled with the reverie. They inferred, too, that he was obliged to open his eyes, in order to recognize objects ; but that the impression, once made, although rapidly, was vivid enough to supersede the necessity of opening them again ; that is, the same objects appeared to be afterwards represented by the conceptions of his imagination, with as much force and precision as if he actually saw them. In the effort to open his eyes, however, when he wished to see an object, he could scarcely raise them a line or two, by drawing up his brows ; and the iris appeared fixed, and the eye dim. He made this effort whenever any thing was presented to him, and he was told of it, always half opening his eyes with great difficulty, and then shutting them after he had taken what was of-2 R

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ipred. ‘ Having engaged him to write a theme,’ the committee of the Physical Society say, ‘ we saw him light a candle, take pen, ink, and paper from the drawer of his table, and begin to write, while his master dictated. As he was writing, we put a thick paper before his eyes, notwithstanding which he continued to write, and to form his letters very distinctly ; showing signs, however, that something incommoded him, which apparently proceeded from the obstruction which the paper gave to his respiration, being held too near his nose. An experiment was made by changing the place of the ink-standish, while he was writing. He had a light beside him, and had certified himself of the place where his ink-holder was standing by means of sight. From that time he continued to take ink with precision, without being obliged to open his eyes again : but, the ink-standish being removed, his hand returned as usual to the place where he thought it was. It must be observed that the motion of his hand was rapid, till it reached the height of the standish, and then he moved it slowly, till the pen gently touched the table, as he was seeking for the ink. He then perceived that a tricV had been put upon him, and complained of it : he went in search of his ink-standish, and put it in its place.’ This experiment, they affirm, was several times repeated, and was always attended with the same circumstances. And they put the following questions respecting the inferences to be drawn from it : — ‘ Does not what we have here stated prove that the standish, the paper, the table, &c., are painted on his imagination in as lively a manner as if he really saw them ; since he sought the real standish in the place where his imagination told him it ought to have been ? Does it not prove that the same lively imagination is the cause of the most singular actions of this sleep-walker? And, lastly, does it not prove that a mere glance of his eye is sufficient to make his impressions as lively as durable ?’

The following example of the somnambulistic reverie is from the life of Dr. Blacklock in Anderson’s poets,’ vol. xi.

‘ Dr. Blacklock, one day, harassed by the censures of the populace, whereby not only his reputation but his very subsistence, was endangered, and fatigued with mental exertion, fell asleep after dinner. Some hours after, he was visited by a friend, answered his salutation, rose, and went with him into the dining-room, where some of his companions were met. “He joined with two of them in a concert, singing, as usual, with taste and elegance, without missing a note, or forgetting a word. He then went to supper, and drank a glass

or two of wine. His friends, however, observed him to be a little absent and inattentive : by and by he began to speak to himself, but in so slow and confused a manner as to be unintelligible. At last, being more forcibly roused, he awoke with a certain start, un-conscious of all that had happened, as till then he had continued fast asleep.' Those who wish fully to investigate this curious subject may consult Cleghorn de Somno, &c. ; Hoffmann's Dissertatio de Somnabulisme, in the third volume of the supplement to his works ; the French Encyclopedic, article Sornnambulisme ; Darwin's Zoonomia, vol. i. sect. xix.

SOMNER (William), an eminent English antiquary, born at Canterbury in 1606. His first treatise was the Antiquities of Canterbury, which he dedicated to archbishop Laud. He then made himself master of the Saxon language, by which he discovered that the old glossary prefixed to Sir Roger Twisden's edition of the laws of king Henry I., printed in 1644, was erroneous in many places ; he therefore added to that edition notes and observations valuable for their learning, with a very useful glossary. His Treatise of Gavelkind was finished about 1648, though not published till 1660. He was zealously attached to king Charles I., and in 1648 he published a poem on his sufferings and death. His skill in the Saxon tongue led him to enquire into most of the European languages ancient and modern. He assisted Dugdale and Dodsworth in compiling the Monasticon Angji-canum. His Saxon Dictionary was printed at Oxford in 1650. He died in 1669.

SOMNIFEROUS, adj. Fr. somnifere; Lat. somifer. Causing sleep; procuring sleep ; soporifer'ous; dormitive.

I wish for some somniftrous potion, that might force me to sleep away the intermediate time, as it does with men in sorrow. Walton's Angler.

SOMNUS (Lat.), in the ancient mythology, the god of sleep, was »he son of Erebus and Nox, or Hell and Night (the hell of the virtuous, see EREBUS), and the brother of Light and Day. He was one of the infernal deities, and his palace a dark cave, where the sun never penetrated . At the entrance grew poppies and ail other somniferous herbs. The god was represented as asleep on a bed of feathers, with / black curtains. The Dreams stand by him; and Morpheus, as his chief minister, watches, lest any should disturb him. Hesiod. Theog. Horn. II. 14. &c.

SON, n. s. } Sax: puna; Gothic sunus ;

SON-IN-LAW. > Swed. son ; Belg. sone. A

SON'SHIP.) male child ; male descendant; native, of a cout.hy ; pi oduct ; a Hebraism, denoting the predominance of some particular quality ; as the sons of pride, &c. See below. A son-in-law is a man married to one's daughter : sonship, filiation ; state or character of a son.

Cast out this bondwoman and her ton.

Gen. xxi. 10.

I am the son of the wise, the eon of ancient kings.

Isaiah xix.

If thou be the ton of God, come down.

Matt, xxvii. 40.

And he schal go bifore in the spiryte and vertu of Helye : and he schal turne the hertis of the fadris to the sonis, and men out of heleeve to the prudence of just men : to make redy a perfyt puple to the Lord.

Wiclif. Luk. 1.

The fadir jugith ony man, bu£ hˆlh govun erh doom to the sone. Id. JJH. 5

Be plain, good son, and homely in thy drift ; Riddling confession finds but riddling shrift.

Shnkspeare.

She had a ton for her cradle, ere she had a husband for her bed. Id. King Lear.

If virtue no benighted beauty lack, i our son-in-law is far more fair than black.

Id. Othello.

The apostle to the Hebrews makes afflictions not oily incident but necessary to christia'nity, the badge and cognizance of sntsliip. Dec iy aj Piety. ,

Thie new fav’rite

Of heaven, this man of clay, son of despite. Mi/ton. Our imperfections prompt our corruption, and loudly tell us we are sons of earth.

Browne’s Vulgar Errourt. A foreign son-in-law shall come from far, Whose race shall bear aloft the Latin name.

Dryden’s rfSneid.

He compares the affection of the Divine Being to the indulgence of a wise father, who would have his sons exercised with labour and pain, that they may gather strength. Addlson.

Earth’s tall sons, the cedar, oak, and pine, Their parent’s undecaying strength declare.

Blackmore, Britain then Sees arts her savage tms controul. Pope.

SONA’TA, n. s. Ital. sonata. A tune.

He whistled a Scotch tune, and an Italian sonata.

Addiion.

Could Pedro, think you, make no trial Of a sonata on his viol, Unless he had the total gut Whence every string at first was cut ? Prior.

SONATA, in music, is a piece of composition intended to be. performed by instruments only ; in which sense it stands opposed to cantata, or a piece designed for the voice. See CANTATA. The sonata, then, is properly a grand, a free, humorous composition, diversified with a great variety of motions and expressions, extraordinary and bold strokes, figures, &c. And all this purely according to the fancy of the composer ; who, without confining himself to any general rules of counterpoint, or to any fixed number or measure, gives a loose to his genius, and runs from one mode, measure, &c., to another, as he thinks fit. This species of composition had its rise about the middle of the seventeenth century; those who have most excelled in it were

Bassani and Correlli. See Music.

SONCHIS, an Egyptian priest, contemporary with Solon, whom he instructed in the traditions, mysteries, and learning, of Egypt.

SONCHUS, sow-thistle,, in botany, a genus of plants belonging to the class of syngenesia, and to the order of polygamia aequalis; and in the natural system ranged under the forty-ninth order, composite. The receptacle is naked ; the calyx is imbricated, bellying, and conical ; the down of the seed is simple, sessile, and very soft; the seed is oval and pointed. There are thirteen species ; *viz.*

1. S. alpinus; 2. ardensis; 3. Canadensis ; 4. Floridanus ; 5. fruticosus ; 6. maritimus ; 7. oleraceus ; 8. palustris; 9. plumieri; 10. Sibiricus;

,11. Tartaricus ; 12. tenerrimus ; 13. tuberosus. Of these the following are natives of Britain : — 1. S. alpinus, blue-flowered sow-thistle. The stem is erect, purplish, branched, or simple, from three to six feet high : the leaves are large, smooth, and sinuated ; the extreme segment large and triangular : the flowers are blue, and grow on hairy viscid pedicles, in long spikes : the calyx is brown. This species is found in Northumberland.

2. S. ardensis, corn sow-thistle. The leaves are alternate, runcinate, and heart-shaped at the base ; the root creeps under ground ; the stem »s three or four feet high, and branched at the

top. It grows in corn-fields, and flowers in August.

3. S. oleraceus, common sow-thistle. The stalk is succulent, pistular, and a cubit high or more ; the leaves are broad, embracing the stem, generally deeply sinuated, smooth or prickly at the edges ; the flowers are of a pale yellow, numerous in a kind of umbel, and terminal ; the calyx is smooth. It is frequent in waste places and cultivated grounds.

4. S. palustris, marsh sow-thistle. The stem is erect, from six to ten feet high, branched and hairy towards the top ; the leaves are firm, broad, half pinnated, serrated, and sharp pointed ; the lower ones sagittate at the base ; the flowers are of a deep yellow, large and dispersed on the tops of the branches : the calyx is rough. It is frequent in marshes, and flowers in July or August.

SONG, n. s. ~\ Sax. refunjen. Any

SONG’ISH, adj. f thing modulated in theut—

SONG’STER, n. s. iterance; a poem; lay;

SONG’STRESS. 3 strain : an old song is a

trifle : songish, containing or consisting of song,

a foolish coinage of Dryden’s : a songster and

songstress, respectively, a male and female

singer.

Pardon, goddess of the night Those that slew thy virgin knight ; For the which, with songs of woe, Round about his tomb they go ! Shakspeare.

There we awhile will rest ;

Our next ensuing song to wondrous things addrest.

Dray ton.

The pretty songsters of the spring, with their various notes, did seem to welcome him as he passed

Howel. Noise other than the sound of dance and long.

Milton.

Still govern thou my song,

Urania, and fit audience find, though few. Id.

I do not intend to be thus put off with an old song.

More.

He first thinks fit no sonnetter advance His censure farther than the song or dance. Dryden.

The lark, the messenger of day, Saluted in her song the morning grey. Id.

The songish part must abound in the softness and variety of numbers, its intention being to please the hearing. Id

Either songster holding out their throats, And folding up their wings, renewed their notes.

Id.

Some songsters can no more sing in any chamber but their own, than some clerks lead in any book but their own. L' Estrange.

A hopeful youth, newly advanced to great honour, was forced by a cobler to renounce all for an old

song.

Addison.

Names memorable long, If there be force in virtue or in song. Pope.

Through the soft silence of the listening night The sober-suited songstress trills her lay.

Thomson's Summer.

SONG, in music is applied in general to a single piece of music, whether contrived for the voice or an instrument. In poetry it is considered as a short composition, consisting of easy and natural verses, set to a tune in order to be sung.

Le Brun defines a modern song, to be either

a soft and amorous, or a brisk and Bacchic thought, expressed in few

words. But this is to restrain it to too narrow bounds ; for we have devout songs, satyrical songs, and panegyrical songs. But, be the song what it will, the verses are to be easy, natural, and flowing ; and are to contain a certain harmony, which neither shocks the reason nor the ear ; and which unites poetry and music agreeably together.

Anciently, the only way of preserving the memory of great and noble actions was by recording them in songs ; and, in America, there are tribes who still keep their whole history in songs. At all times, and iu all places, songs have afforded amusement and consolation-to mankind : every passion of the human breast has been vented in song ; and the most savage as well as civilised inhabitants of the earth have encouraged these effusions. The natives of New Zealand, who seem to live as nearly in a state of nature as any animals that are merely gregarious, have their songs, and their improvisatori ; and the ancient Greeks, during every period of their history and refinement, had their scolia for almost every circumstance and occasion incident to society.

Among the ancient Romans singing was so common as to become proverbial. Phaedria, in the Phonnio of Terence, begs Dorio to hear him, he has but one word to offer ; when Dorio tells him he is always singing the same song. Horace speaks-of (he affectation among the singers of his time, never to sing when they are iutreated, or to desist if no one wishes to hear them. And some idea of the cultivated slate of music ia Gaul, so early as the fifth century, may be acquired from a passage in one of the epistles of Sidonius Apollinaris, who, in his character of king Theodoric the Goth, says that ‘this prince was more delighted with the sweet and soothing sounds of a single instrument, which calmed his mind, and flattered his ear by its softness, than with hydraulic organs, or the noise and clangor of many voices and instruments in concert.’

The origin of songs and the formation of the language of every country are nearly coeval.

In the frequent revolutions and struggles for empire, during the dark ages, the Roman language becoming debased and corrupted, while new tongues were forming, the art of rhyming, or unisonous terminations of verses, stole into poetical composition, and Leonine verses, supposed to have been so called from a pope or monk Leo, their author, in the seventh century, are by some thought the first attempt at rhyme : while others imagine the hymn to St. John the Baptist, by Paul Diaconus, written about the latter end of the eighth century, to be not only rendered memorable by Guido’s scale, but by having been the model of all other monkish rhymes in Latin.

Gravina thinks it as absurd to ascribe the invention of rhyme to any one writer, as to attribute to an individual the propagation of the plague, which is caused by the universal contagion of the air. The Arabs had rhyme,ˆiccording to Calmet, before the time of Mahomet, who died 632, and in the second century used a kind of poetry in measures similar to the Greek, and set to music. See RHYME.

While the new languages were unsettled, and but partially known, even in the single kingdom or province where they were forming, it was not uncommon to write half a poem in Latin and half in a vulgar tongue. Lidead Dante has left a poem in three languages, Latin, Provencal, and Italian ; and Rambaud de Vachieras, a Proven jal poet, in five.

In the eleventh century the Troubadours, honored by the patronage and encouragement of the count of Poitou, and many other powerful princes and barons, had successfully cultivated poetry and music. At the courts of these munificent patrons they were treated with the greatest consideration and respect. The ladies, whose charms they celebrated, gave them the most flattering reception ; and sometimes disdained not even to listen with compassion to tales of tenderness, and descriptions of the havoc which the irresistible charms of these sublunary divinities of chivalry had made in their hearts. The success of a few inspired the rest with hope, and excited exeitions in the exercise of their art, which impelled them towards perfection with a rapidity that nothing but the united force of emulation and emolument could occasion.

These founders of modern versification constructed their poems upon plans of their own invention ; and as all classical authority was laid aside, either through ignorance or design, each individual gave unlimited indulgence to fancy in the subject, form, and species of his composition. It does not appear, during the cultivation and favor of Provencal literature that any one Troubadour so far outstript his brethren in the approaches he made towards perfection as to be considered as a model for his successors : we find, though military prowess, hospitality, Gothic gallantry, and a rage for feasts and revelry prevailed, that taste, refinement, and elegance, were never attained during this period, either in public or private amusements. The want of originality of composition is frequently lamented when license is repressed by laws, and the wild effusions of an ardent imagination are bounded by authority ; but the productions that have been preserved of the Provenfal bards, which may be called the

offspring of witters in a state of nature, seem to prove the necessity of rule, order, and example, even in the liberal arts as well as the government of a free state. For the progress of taste must ever be impeded by the ignorance and caprice of those who cultivate an art without science or principles.

For nearly two centuries after Guido's arrangement of the scale, no remnants or records of secular music can be found except those of the Troubadours, or Provenpal poets : and though in the simple tunes which have been preserved of these bards no time is marked, and ba little variety of notation appears, yet it is no. difficult to discover in them germs of the future melodies, as well as poetry, of France and Italy. Unluckily the poetry and music of the Troubadours of Provence were not for a long time called into notice by writers possessed of those blandishments of style or manner which fascinate, and render whatever subject they treat interest

ing to the generality of readers. Indeed the period of Provencal poetry is most interesting to literature, and the melody to which it was sung is a subject of curious enquiry ; for it is generally allowed that the Troubadours, by singing and writing in a new tongue, occasioned a revolution not only in literature but the human mind. And, as almost every species of Italian poetry is derived from the Provencals, so air, the most captivating part of secular vocal melody, seems to have had the same origin. At least the most ancient strains that have been spared by time, were such as are set to the songs of the Troubadours.

Songs seem to belong by universal consent to the language of Italy. The ancient Romans were no great songsters ; and by what degrees the Latin language became Italian would be a tedious and difficult enquiry. But that it was most importantly smoothed and polished by Dante, Petrarca, and Boccaccio is clear : the Italian language has been allowed to be more musical in itself when merely spoken with purity, than any ether in Europe.

Maffei allows the Provencal, French, Spanish, and Italian languages, to

be descendants from the Latin, but denies that the ancient inhabitants of Italy adopted any words from the Goths or Huns. The genius of the German, Francic, or Teutonic language, which was spoken by the Lombards, was so diametrically opposite to that of the Italians, that it seems incredible there should have been any exchange or union of dialects, he thinks, between them : the one being as remarkable for its numerous consonants and harsh terminations, as the other for its open vowels and mellifluous endings. As it is the opinion of this critic that the Romans had always a vulgar dialect, less grammatical and elegant than that of the senate and of books, he supposes the French, Spanish, and Italian languages to have been different modifications of this rustic, plebeian dialect. But it is as difficult to assign a reason for all these daughters of one common mother being so dissimilar, as it is to account for the little resemblance that is frequently found between other children of the same parents. And why the French language should have so many nasal endings, the Spanish so many sibillating, and the Italian alone have none but vocal terminations, can only have been occasioned by some particular and radical tendency in the vulgar and plebeian language of each country from very high antiquity.

While the modern language was forming, no music seems to have been cultivated in Italy, except the canto firmo of the church ; and, unluckily, no written melody can be found to the Canzoni of Dante, the sonnets of Petrarca, or the songs of Boccaccio, the three great founders of the Italian tongue. Yet these, we are told, were all set to some kind of music or other, and sung even in the streets. See the biogra-phical articles of these lyric poets, particularly that of Boccaccio ; whose Decamerone has always been regarded as a natural and faithful delineation of the manners and customs of Italy, at the time when it was written.

Boccaccio says, at the end of his prima giornata,

or first day, that ‘after supper the instruments were called in, when the queen for the day ordained that there should be a dance ; and, after one had been led off by Lauretta, Emilia sung a song, in which she was accompanied by Dion, a gentleman of the party, on the lute.’ There is nothing new or extraordinary in this quotation. But in Italy, whence all the liberal arts have travelled to the rest of Europe, it is curious to know in what rank music was held at this early period. And here a writer, justly celebrated for the exactness with which he has described the customs of his contemporaries in all situations, tells us, that in an assembly of persons of birth and education, who passed ten

days together during summer in a constant succession of innocent amusements, each evening was closed by dance and song ; in which the whole company, consisting of seven ladies and three gentlemen of different characters and acquirements, were able to perform their parts. When we are told that the lady who sang was accompanied by the lute, we know not of what this accompaniment consisted, whether it only fortified the voice-part by playing the same melody, or more elaborately furnished a base and a different treble, arising out of its harmony.

On the second day we find that, one of the company leading off a carol, a song was sung by another, which was answered in a kind of chorus by the rest. At the close of the second day Boccaccio says, that after the song, of which he gives the words, had been performed, many others were sung, and many dances danced to different tunes, by which we may gather that besides carols and ballads, the singing of which marked the steps of a dance, there were at this , time songs without dances, and tunes without songs.

Whoever reads the history of the Cambro-Britons will find innumerable instances of the reverence which they paid to their poet-musicians, the bards both of Pagan and Christian times ; and songs of very high antiquity have been preserved in the Welsh language, though not all the tunes to which they were sung.

We are told (Miscel. Antiq. vot. ii. p. 8) that sir Thomas Wyatt was the first who introduced Italian numbers into English versification. This may have contributed to improve our lyric poe-try; but to confess the truth, from the few parts of the first class throughout Europe, who, at the beginning of the sixteenth century, condescended to write madrigals and songs for music, it seems that the rage for canon, fugue, multiplied parts, and dissimilar melodies, moving at the same time, had so much employed the composers, and weaned the attention of the hearers of these learned, or, as some call them, Gothic contrivances, from poetry, that the words of a song seem to have been only a pretence for singing; and, as the poets of the two or three last centuries were in little want of music, musicians, in their turn, manifested as little respect for poetry ; for, in these elaborate compositions, the words are rendered utterly unintelligible by repetitions oi particular members of a verse ; by each part singing different words at the same time; and by an utter inattention to accent. In the Essays

on Song-writing, published with a collection of English songs, there are many judicious and excellent reflections ; and the songs are admirably selected, and form the best collection in our language.

The SONG OF BIRDS is defined by the honorable Daines Barrington to be a succession of three or more different notes, which are continued without interruption, during the same interval, with a musical bar of four crotchets in an adagio movement, or whilst a pendulum swings four seconds. It is affirmed that the notes of birds are no more innate than language in man, and that they depend upon imitation, as far as their organs will enable them to imitate the sounds which they have frequent opportunities of hearing : and their adhering so steadily, even in a wild state, to the same song, is owing to the nestling attending only to the instruction of the parent bird, whilst they disregard the notes of all others that may be singing round them. Birds in a wild state do not commonly sing above ten weeks in the year, whereas birds that have plenty of food in a cage sing the greatest part of the year: the female of no species of birds ever sings. This is a wise provision, because her song would discover her nest. In the same manner we may account for her inferiority in plumage. The faculty of singing is confined to the cock birds ; and accordingly Mr. Hunter, in dissecting birds of several species, found the muscles of the larynx to be stronger in the nightingale than in any other bird of the same size; and, in all those instances where he dissected both cock and hen, the same muscles were stronger in the cock. It is an observation as ancient as the time of Pliny that a capon does not crow. Some ascribe the singing of fhe cock in the spring solely to the motive of pleasing his mate during incubation ; others, who allow that it is partly for this end, believe it is partly owing to another cause, *viz.* the great abundance of plants and insects in spring, which are the pro-per food of singing birds at that time of the year, as well as seeds. Mr. Barrington remarks that there is no instance of any singing bird which exceeds our blackbird in size ; and this, he supposes, may arise from

the difficulty of its concealing itself, if it called the attention of its enemies, not only by its bulk, but by the proportionable loudness of its notes. He farther observes that some passages of the song in a few kinds of birds correspond with the intervals of our musical scale, of which the cuckoo is a striking and known instance ; but the greater part of their song cannot be reduced to a musical scale ; partly, because the rapidity is often so great, and it is also so uncertain when they may stop, that we cannot reduce the passages to form a musical bar in any time whatsoever; partly also, because the pitch of most birds is considerably higher than the most shrill notes of those instruments which have the greatest compass; and principally because the intervals used by birds are commonly so minute that we cannot judge of them from the more gross intervals into which we divide our musical octave. This writer apprehends that all birds sing in the same key ; and found by a nightingale, as well as a robin

which was educated under him, that the notes reducible to our intervals of the octave were always precisely the same. Most people, who have not attended to the notes of birds, suppose that every species sing exactly the same notes and passages : but this is not true, though there is a general resemblance. Thus the London bird-catchers prefer the song of the Kentish gold-finches and Essex chaffinches; and some of the nightingale fanciers prefer a Surry bird to those of Middlesex. Of all singing birds the song of the nighlirigale has been most universally admired : and its superiority consists in the following particulars : its tone is much more mel-low than that of any other bird, though at the same time, by a proper exertion of its musical powers, it can be very brilliant. Another superiority is its continuance of song without a pause, which is sometimes twenty secands ; and when respiration becomes necessary it takes it with as much judgment as an opera singer. The skylark in this particular, as well as in compass and variety, is only second to the nightingale. The nightingale also sings with judgment and taste. Mr. Barrington says that his nightingale began softly like the ancient orators,. reserving its breath to swell certain notes, which thus had a most astonishing effect. He adds that the notes of birds, which are annually imported from Asia, Africa, and America, both singly and in concert, are not to be compared to those of Eu ropean birds. He also constructed the following table to exhibit the comparative merits of the British singing birds, wherein twenty is the point of perfection.

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Nightingale . .

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Skylark …

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Wood-lark . .

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Tit-lark …

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Linnet ….

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Goldfinch… .

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Chaffinch …

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Greenfinch . .

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Hedge-sparrow .

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Aberdavine or

siskin …

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Red-poll …

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Thrush ….

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Blackbird …

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Robin ….

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Wren ….

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Reed-sparrow

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Black-cap or Norfolk mock nightingale

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SONG OF SOLOMON. See SCRIPTURE. It is surprising that some, who pretend to be Christians, consider this poem as merely an epithalamium, composed for Solomon's marriage with the princess of Egypt. Had not the ancient Jews, as well as modern Christians, considered it as a

divine allegory, representing the union of the Messiah with his church, it would never have found a place in the sacred canon ; and our Saviour himself, when on earth, would have exclaimed against it, and denounced it as he did the corrupt traditions of the Pharisees. His frequent censures of these traditions, and his general approbation of the Old Testament Scriptures, by frequently quoting them without any censure, afford us the most decisive authority and security of trusting to them as genuine, and holding them «acred.

SONIF'EROUS, adj. * Lat. sonus and/ero. SONORIF'IC, / Giving or bringing

SONO'ROUS, * > sound: producing

SONOROUSLY, adv. i sound : sonorous is SONO'ROUSNESS. n. s. } loud sounding : the adverb and noun substantive corresponding.

All the while

Sonorous metal blowing martial sounds ; At which the universal host up sent A shout that tore hell's concave.

Milton's Paradise Lost.

Enquiring of a maker of viols and lutes of what age he thought lutes ought to be, to attain their full and best seasoning for sonorousness, he replied, That in some twenty years would be requisite, and in others forty. Boyle.

The Italian opera, amidst all the meanness and familiarity of tne thoughts, has something beautiful and sonorous in the expression. Addison on Italy.

The vowels are sonorous. Dryden.

This will appear, let the subject matter of sounds be what it will ; either the atmosphere or the etherial part thereof, or soniferous particles of bodies.

Derham.

If he should ask me why a clock strikes, and points to the hour ; and I should say, it is by an indicating form and tonorific quality, this would be un-satisfactory. Watts's Logick.

SONNA, a book of the Mahometan traditions, which the orthodox of the mussulmans are required to believe.

SONNERATIA, in botany, a genus of plants belonging to the class of 'icosandria, and to the order of monogynia : CAL. is cut into six segments ; the petals are six : CAPS, multilocular and succulent; and the cells contain many seeds. The only species is, S. acida.

SON'NET, n. s.) Fr. sonnet; Ital. sonnetto.

SONNETTEER'. \ A short poem, of which the rhymes are adjusted by a particular rule. It has not been used by any man of eminence since Milton, according to Dr. Johnson; but this wilJ be doubted at the present day : a sonnetteev'is a writer of sonnets.

Let us into the city presently, To sort some gentlemen well skilled1 in musick; I have a sonnet that will serve the turn. Shakspenre.

Assist me, some extemporal god of rhime ; for I am sure I shall turn

sonnetteer.

Id. Love'* Labour Loit.

There are as many kinds of gardening as of poetry : your makers of parterres and flower-gardens are epigrammatists and sonnetteers in this art.

Spectator.

What woful stuff this madrigal would be, In some starv'd hackney sonnetteer or me ! But let a lord once own the happy lines, How the witbrightensH how the style refines !

Pope.

The SONNET, in poetry, must contain fourteen verses, *viz.* two stanzas or measures of four verses each, and two of three, the first eight verses be-ing all in three rhymes.

SONNINI DE MANOXCOURT (Charles Nicholas Sigisbert), a modern French traveller and naturalist, was born at Luneville, February 1st, 1751. He was the son of a gentleman of Roman descent, who was counsellor and treasurer to Stanislaus I. of Poland, and studied under the Jesuits at Pont-a-Mousson. Before he was sixteen he received the degree of doctor in philosophy ; but, being designed for the magistracy, he went to Strasbourg as a student of law. In 1768 he was admitted an advocate of the court of Nanci. Being of an active disposition, he afterwards relinquished the law for the army, and was in 1772 sent to Cayenne. Previously to this he had been acquainted with Buffon. He now travelled over various parts of Guiana, and, after a voyage made to the western coast of Africa, returned to France in 1775, with a collection of birds for the cabinet of natural history. He passed part of the years 1776 and 1777 at Montbard, where he drew up for Buffon that part of his Natural History which relates to foreign birds. In 1779 he went to Greece and Egypt, and returning home the following year, employed himself in the cultivation of science till the commencement of the Revolution. For some time he was administrator of the department of La Meurthe ; but was imprisoned dur-ing the reign of terror. After this he went to Paris, and published an account of his travels in Greece and Egypt; and occupied himself in other literary undertakings. Under the consular and imperial governments he was unable to obtain any office notwithstanding the patronage of Lucien Buonaparte, who in vain endeavoured to

overcome the prepossessions of Napoleon against Sonnini, on account of his remarks on the Egyptian expedition. In 1805 he was director of the college of Vienne, which however he was soon after forced to resign. He had subsequently a prospect of an establishment in Moldavia ; but was again destined to meet with disappointment ; and, after travelling thither, returned to Paris in December 1811. His death took place there May 29th, 1812. His chief works are Voyage dans la Haute et Basse Egypt, 1799, 6 vols 8vo. ; Voyage en Grece et en Turquie, 1801, 2 vols. 8vo. ; besides which he published the seventh edition of the Natural History of Buffon in 127 vols. 8vo. ; assisted in the Dic-tionnaire d'Histoire Naturelle, in 24 vols. 8vo. ; and was conductor of the Bibliotheque Physico-f conomique. The Egyptian travels of Sonnini were translated into English by Dr. Henry Hun-ter, 1799, 3 vols. 8vo. ; and his Travels in Greece appeared in an English dress, 1801, 2 vols. 8vo.

SONNITES, among the Mahometans, an appellation given to the orthodox mussulmans or true believers; in opposition to the several heretical sects, particularly the Shiites or followers of Aii. See SHIITES.

SONORA, an intendancy or province of Mexico, very thinly peopled, and extending along the gulf of California, for more than 280 leagues or

from the bay of Bayona, or the Rio del Rosaria, to the mouth of the Rio Colorado. The breadth is by no means uniform. From the tropic of Cancer to 27°, it scarcely exceeds fifty leagues ; but farther north, towards the Rio Gila, it increases so considerably that on the parallel of Arispe it is more than 128 leagues.

This intendency of Sonora comprehends the three provinces of

Cinaloa, Ostimury, and Sonora Proper. The first extends from the Rio del Rosaria to the Rio del Fuerto ; the second from the Rio del Fuerto to the Rio del Mayo ; and the province of Sonora indudes all the northern extremity of the intendancy. The intendancy is bounded on the west by the sea, on the south by the intendancy of Guadalaxara, and on the east by a very uncultivated part of New Biscay. Its northern limits are very uncertain. The villages de la Pimeria Alta are separated from the banks of the Rio Gila, by a region inhabited by independent Indians, of which neither the soldiers stationed on the military fort in that quarter, nor the monks of the neighbouring missions, have been hitherto able to make any conquest.

The three most considerable rivers are the Mayo, Culiacun, and Yaqui or Sonora ; chief town Arispe.

SOODERA, or SOODERS, in Indian mythology and polity, the fourth caste, or the lowest class of the people. See GENTOOS and HINDOOS. The Farias are the lowest class of the Sooders : but there is still a more degraded class of the Parias, called Seriperes, who are miserably despised. See PARIAS. What monstrous distinctions human pride has invented in all countries !

SOOLOO ISLES, a group of islands which ex-tend in a northeast and southwest direction, from the north-eastern extremity of Borneo to the western extremity of Magindano, and are comprehended between 4° and 7° N. lat. There are several good harbours among them, particularly at Bewabewa, Tavitave, Tappool, Secassee, between Boobooan, and Tappeantana, south of Basselan. The harbour before Bewan, the Sooloo capital, is not good, except during the southwest monsoon. The island of Sooloo, from which the rest are named, is situated in long. 119° E. from Greenwich, and lat. 6° N. It is thirty miles long, twelve broad, and is said to contain 60,000 inhabitants.

Lying mid way between Borneo and Magindano, this island affords a fine prospect from the sea, on every side, and the hills on it not being very high, nor consequently the clouds stopped by them, it has no certain rainy season. It enjoys a perpetual summer. Up the country it is cool, especially under the shade of the teak trees, which are numerous. There is no such difference in the wetness of the seasons, or monsoons, as on continents or very large islands ; but the southwest monsoon brings most rain. Much falls at the change of the monsoons, especially the autumnal. The capital-of the island, Bewan, or as others call it Sooloo or Soong, is on the northwest coast. It is of considerable size ; the houses are built after the manner of the Malays, elevated about four feet from the ground with bamboos, of which the floors are

also made. It contains

about 6000 inhabitants. The island being small, for its number of inhabitants, they study agricultyrc more than do those of the adjacent islands. The Sooloos plant rice ; but the crop cannot be depended on, as they are not sure of rain. They therefore cultivate many roots, the Spanish or sweet potato, the clody or St. Hil-lano yam, the China yam, both red and white ; sending to Mindano for what rice they consume. They have great variety of fine tropical fruits ; their oranges are full as good as those of China. They have also a variety of the fruit called jack or nanka, durians, a kind of large custard apple named madang, mangoes, mangustines, rambus-tines, and a fruit called bolona, like a large plum or mango, white inside. They enjoy also, in great abundance, an innocent and delicious fruit, called lancey. The Sooloos having great connexion with China, they have learned the art of ingrafting and improving their fruits, while the fruits at Magindano have remained indifferent. They have a very good breed of horses, which they train to trot fast, seldom suffering them to gallop, and abundance of diminutive cocatoes and small green parrots. There is no spice tree but the cinnamon. Here are wild elephants, which seem to avoid meeting with horned cattle ; though not shy of horses. Sooloo has spotted deer, abundance of goats and black cattle (but the people seldom milk their cows), and of wild hogs. After harvest the Sooloos hunt the elephants and hogs. Sooloo formerly was visited by vessels from Japan, Java, Sumatra, Ceylon, and the coast of Coromandel, with valuable cargoes. At present two Chinese junks arrive annually from Annoy. Their cargoes consist of iron articles, of brass salvers, sugar candy,, silk, black nankeen, white linen of a strong fa-bric, kangans, quallis, a thin iron pan three feet in diameter, chinaware, flowered silks, besides tea, cutlery, and other hardware, brass wire, gongs, beads of all colors, little swan shot, fireworks, &c. &c. In return they bring back to China bichede mer, black and white, wax, pearl, oyster-shells, birds' nests, and tortoise-shell ; also agal, a sea weed used as gum or glue, and many other articles, such as Carooang oil, clove bark, black wood, ratans, sago, various barks for dye-ing, cassia, pepper, native camphire, sandal-wood, curious shells for grottoes, pearls, and spices. Country ships from India occasionally visit these islands, import cutlery, brasiery, cloth, gunpowder, glass-ware, guns of various sizes, hardware, iron in bars, ironmongery, looking-glasses, opium, piece goods, saltpetre, shot of all sorts, swords, tin-ware, tobacco, sugar, vermilion, and watches. From the northeast coast of Borneo, the inhabitants import sago, biche de mer, cowries, and tortoise-shell. From Magindano they receive rice, for which they

usually pay with Chinese goods. The Buggesses also trade with these islands.

At the Sooloo islands is a famous pearl fishery, a source both of weaith and of maritime power. The dredges for the oyster are generally made of bamboo, very slight, and sunk with a stone. The large pearls are the property of the nobility on whose estates they are found ; they also extend their claim to the pearls found on the banks, as well as on the drv land. The Chinese mer-

chants, however, contrive, by their underhand dealing, to purchase from the fishermen pearls of great value.

The sovereignty of the island descends to the eldest son of the sultan ; but the government is partly monarchical and partly aristocratical. The legislative power resides in an assembly composed of fifteen datoos or nobles, and of the sultan, who has two votes. The heir apparent has also two votes, if he sides with the sultan ; but, if he takes part against him, he has only one. There are two representatives of the people, called Manteries, like the military tribunes of the Romans. The common people, it is said, enjoy great freedom ; but the vassals are often used in a tyrannical manner. The manners of the nobles are remarkably dissolute. The Sooloos seldom go in their own vessels to foreign parts, except on predatory excursions to make slaves among the Philippines. They depend chiefly on the ranee, sword, and dagger, at the use of which they are very dexterous ; and, be-ing of a martial disposition, at an early period they had subdued not only all the adjacent small isles, but a great part of Borneo. The men generally go dressed in white waistcoats buttoned down to the waist, and white breeches. The ladies wear a fine white waistcoat fitted close, and a petticoat over drawers. The Sooloos as-sert that their island once formed part of an ancient Bornean empire, founded by the Chinese.

On the other hand, the inhabitants of the island of Magindano assert, that the Sooloos were formerly subject to them. They have been accustomed to carry on an unceasing warfare with the Spanish colonies planted in the Philippines. Prior to the year 1746 the Spaniards attacked them with a fleet of thirty ships, and obtained possession of Bewan, the capital. In 1775 they attacked a settlement belonging to the East In-dia Company, on the island of Balambangan, and drove the settlers on board their vessels. They are in the practice of attacking and plundering the vessels which visit them.

SOON, adv.) Sax. j-ona ; Goth. sun. Early;

SOON'LY. j before longtime be past; shortly after any assigned or supposed time ; readily ; willingly : used as an adjective by Sidney and others : hence the adverb soonly ; speedily.

How is it that you are come so scare to-day 1

Ex. ii. 18.

As soon as he came nigh unto the camp, he saw the calf and the dance. Ex. xxxii: 19.

Do this, that I may be restored to you the sooner.

Heb. xiii.

He hath preserved Argaius alive, under pretence of having him publicly executed after these wars, of which they hope for a soon and prosperous issue.

Sidney.

O boy ! thy father gave thee life too soon, And hath bereft thee of thy life too late.

Shakfpeare. Henry VI.

The earlier stayeth for the later, and not the later Cometh sooner. Bacon's Natural History.

A mason meets with a stone that wants no cutting, and, soonly approving it, places it in his work.

More.

Nor did they not perceive their evil plight, Yet to their general's voice

they toon obeyed.

Milton.

You must obey me, soon or late ; Why should you vainly struggle with your fate ?

Nor was his virtue poisoned, won as born, With the too early thoughts of being king. Id.

I would as SOOT? see a river winding through wood* and meadows, as when it is tossed up in so many whimsical figures at Versailles.

Addison's Guardian.

Feasts and business, and pleasures, and enjoyments. seem great things to us, whilst we think of nothing else ; but, as soon as we add death to them, they all sink into an equal littleness. Law.

SOONDA, a district and town of Hindostan, in the province of North Canara, situated between 14° and 15° N. lat. Formerly the country was well cultivated, and produced fine tim-ber and pepper : but it was laid waste by Hyder Aly in 1763; on which occasion the rajah made over to the Portuguese all the country between the sea and the mountains, for a stipulated pension. In 1799 the Soonda district became the property of the British.

SOONTABURDAR, in the East Indies, an attendant who carries a silver bludgeon in his hand about two or three feet long, and runs. be-fore the palanquin. He is inferior to the chubdar ; the propriety of an Indian newaury requiring two soontaburdars for every chubdar in the train. The chubdar proclaims the approach of visitors, &c. He generally carries a large silver staff, about five feet long, in his hands ; and among the nabobs he proclaims their praises aloud as he runs before their palanquins !

SOOSOOHOONAN, a district of Java, on the south side of the island, formerly extending to the north coast, and including the territories of Cheribon, and the greatest part of the island, under the title of the empire of Java ; but it is much fallen from its ancient grandeur.

SOOT, n. s. } Sax. j-ot ; Island, soot .

SOOT’ED, adj. > Condensed or embodied

SOO’TY, adj. &v. n. J smoke: the adjectives both signify covered with or abounding in soot : and Chapman uses sooty for to make black with soot.

Soot, though thin spread in a field, is a very good compost. Bacon.

Then (for his own weeds) shirt and coat all rent, Tanned and all lootied with noisome smoke She put him on ; and over all a cloke. Chapman.

There may be some chemical way so to defecate this oil, that it shall not spend into a sooty matter.

WiUdni.

If the fire be not kept within the tunnel of the chimney, and some appointed to sweep down the toot, the house will be in danger of burning.

Hovel.

Oft they assayed,

Hunger and thirst constraining ; drugged as oft With hatefullest disrelish, writhed their jaws, With toot and cinders filled.

Milton’s Paradise Lost. All the grisly legions that troop Under the *oo<v flag of Acheron ; Harpies and Hydras, and all monstrous forms.

Milton.

Our household gods, that droop upon our hearths, Each from his venerable face shall brush The Macedonian soot, and shine again.

Dryden’t Cleomenet

The land was tooted before. Mortimer.

Swift on his sooty pinions flits the gnome, And in a vapour reached the gloomy dome. Pope.

SOOT is a volatile matter arising from wood and other fuel along with the smoke ; or rather it is the smoke itself condensed and gathered to the sides of the chimney. Though once volatile, however, soot cannot he again resolved into va-por ; but, if distilled by a strong fire, yields a volatile alkali and empyreumatic oil, a considerable quantity of fixed matter remaining at the bottom of the distilling vessel. If burnt, in an open fire, it flames with a thick smoke, whence other soot is produced. It is used as a material for making sal ammoniac, and as a manure. See CHEMISTRY, Index.

Mr. Donaldson observes that this useful ma-nure can be obtained in considerable quantities only from great cities, or large manufacturing towns. The price in London, whence great quantities are carried to the adjacent districts, is Bd. the bushel. The ordinary allowance is from twenty-five to thirty-five bushels an acre. Soot is used in many parts of England, as Middlesex, Buckingham, Gloucester, Wilts, Lancashire, Yorkshire, &c. The mode of application is chiefly as top-dressings for young clover, sain-foin, and old worn-out meadows. The best sea-son for laying it on is in February or March. It is carefully spread over the field with the hand, and always succeeds best, if rain immediately ensues.

Mr. Marshall recommends its being sown be-fore rain, when a shower washes it in, and will be of obvious service ; but that if it lie on the surface long, without rain, there will be no benefit derived from it. A rich soil wants no scot, but a soil much out of heart wants forty or fifty bushels. In bis Rural Economy of Norfolk, he says, that the time of sowing it over the land is considered as very material. If it be sown early, and the frost catch it, its strength is thereby lowered ; if late, and no rain falls to wash it in, it is thought to be rather injurious than beneficial to the crop of wheat. And it is not, in any case, found of much, if any, service to the succeeding crop of barley. The method of sowing it is extremely simple ; and, in the only instance he saw, the sowing of soot practised there was very complete. A favorable opportunity being embraced, when the wind blew gently, and in the direction, or nearly in the same direction, as the lands or ridges lie ; the same waggon which brought it from Norwich, and which, until the opportunity offered, had stood safe under cover, was drawn in a furrow against the wind ; while a man, standing on the outside of the waggon, spread the soot, with a shovel, several yards wide on either

side of him ; the height of his situation at once enabling him to spread it wide and even. As he reached the windward end of the lands, the team wheeled round under the hedges, and took a fresh width. The quantity set on was forty bushels an acre in this case.

Mr. Young remarks that, in general, thirty bushels are used for a complete dressing; that is, when dung or some other manure has not been previously applied to the same crop, which is very frequently the practice, and the quantity of top-dressing is then diminished to about

one-half of a complete dressing. Of soot * complete dressing, as above, costs from 30*. to 36s. per acre. Soot is found to answer best on wheat in April. It likewise succeeds on pease or clover in the same month, and has a good effect sown with barley, in the beginning of April, and harrowed in. A slight dressing of soot is used at any time in the spring, when grubs or worms appear to injure the young corn. The worms frequently make great havoc, by drawing the ‘ blades of young corn after them into their holes : this soot prevents best : soot thinly distributed on newly sown turnips, just before they come up prevents the fly or grub from injuring them, provided no rain falls to wash it into the soil. Soot answers best on light, dry, chalky soils, and in moderately wet seasons. It does little good on strong or wet land, or in very dry seasons, unless sown earlier than usual. The London soot from coals is rarely bought unmixed with cork-dust, coal-ashes, or sweepings of the streets ; yet, even in this adulterated state, it is found to answer much better than real country soot from wood.

It is remarked, in the Agricultural Survey of Hertfordshire, that about Stevenage they spread from twenty to forty bushels an acre, bringing it from London ; it costs Qd., and the carriage 3d., in all 1 Id. per bushel. And Mr. Clarke, of San-dridgebury, spreads from thirty-five to forty bushels an acre on wheat. But about Beach-wood they sow from thirty to forty bushels on wheat, in February or March, bought at Is. a bushel at London, and bring 160 bushels in a waggon with four horses. Around Hitchin, forty bushels are sown on wheat. And a good deal is used at Watford, at the rate of forty bushels an acre. Also about Barkway they have a very high opinion of it ; fifty bushels an acre, brought thirty miles from London, are seen on wheat to an inch. And it is stated, in addition, that the practice is universal through this country ; insomuch that the question is, whether there is a parish in it in which some men are not in the habit of using this manure from London. On cabbage crops, that have been sown, it has been found that if, as soon as the plants appear distinctly above the ground, a

surge of soot be drilled upon them, to the amount of from ten to twelve bushels the acre, it affords much security against the fly. And it has been suggested that this business may be cheaply and conveniently executed by a hopper and round of cups, similar to Cook's, but larger, fixed to a frame similar to that of the Northumberland drill. When employed for preventing the fly, in drilled turnips, it should be sprinkled along the rows, from a scuttle, by the hand, or some such mean, in the proportion of about twenty bushels the acre.

But, in respect to the application of this sort of substance to land, it is remarked by Mr. Kid-dle, in the fourth volume of Communications to the Board of Agriculture, that all manures tfcat are laid on the surface of land cannot be laid on too early in the season. Soot, for instance, is always recommended to be sown on wheats or clovers, and grass-lands, in the month of February, from a notion that if sown sooner they would exhaust themselves too soon. This he

thinks absurd reasoning. No manure can be of any service to the crop, which it is meant to advantage, until it reaches the roots : and what contributes more to save it than the winter rains, and the dissolving of the snow ? He has, in consequence, always sown the soot for wheat and clover, when he has been able to procure it, in the month of November or December, and al-ways with satisfaction to himself. He last year sowed with soot an enclosure of wheat of eight acres, part of which was sown in the beginning of December, before the frost set in, and a heavy rain succeeded the sowing ; on the remaining parts, owing to his not being able to procure more soot at that time, the sowing was postponed until after the frost was gone, in the month of February. The quantity sown on an acre, in both instances, was equal ; but the superiority of the crop of wheat, where it was sown early, might be discerned by the eye. He had the curiosity to have it

thrashed separately, and found its increase beyond the other considerable. If he could procure soot at the time of sowing wheat, he should be under no apprehension of its answering then, if the land was worked for the wheat. Some years since, having bought a small quantity of soot immediately after harvest, he had the desire to try its effects on the crop at that early season, and having a pea stubble which had been ploughed twice, and was designed for wheat, after sowing as much of the land as he had soot for with wheat, he then had the soot sown, and ploughed both in together. He owns he was anxious to see the success of his experiment, as it was a novel one, as were his neighbours also who had seen it done. The remainder of the land was sown with soot, as he was able to procure it. The wheat, where the soot was soon with it, kept the lead during the first months : this he did not wonder at, but expected it from its forcing quality ;. but he was very much pleased to see it continue to do so during the remainder of the season, and at harvest the superiority in favor of it was easily to be seen.

Some have thought that twenty bushels of soot to the acre are nearly equal to fifty of the ashes of either coals, wood, or peat. And the writer of the Middlesex corrected Agricultural Report remarks that the smoke, consisting of the lightest particles of soot and coal, raised by the force of the ascending current of rarefied air arising from 300,000 fires in the metropolis and its vicinity, is daily deposited on the surrounding country ; where tˆe next rain washes it into the soil, and it promotes vegetation and the fertility of the land to a considerable degree. The dyers make a considerable use of soot, for a kind of dun-color.

SOOTERKIN, n.s. From soot. A kind of false birth, fabled to be produced by the Dutch women from sitting over their stoves.

When Jove was, from his teeming lead, Of wit's fair goddess brought to bed, There followed at his lying-in, For after-birth a sooterkin. Swift.

SOOTH, n.s., adj., &-v Sax. j-ofc, j-oofcian, SOOTH'ERˆ [v. a. f to flatter. Truth ;

SOOTH'SAY, v. n. ˆrea'ity, (obsolete);

SOOTH'SAYER, n. s. ,3 pleasing; delightful :

hence to please with flattery or blandishment » to console; calm:

soother corresponding: from the above root is also derived to soothsay, i. e. to predict ; foretel (supposed truth) : and soothsayer he who predicts.

A damsel, possessed with a spirit of divination, met us, which brought her masters much gain by soothsaying. Acts xvi.

Scarce was Musidorus made partaker of this oft-blinding light when there were found numbers of soothsayers, who affirmed strange and incredible things should be performed by that child. Sidney.

Sir, understand you this of me in sooth, The youngest daughter, whom you hearken for, Her father keeps from all access of suitors, Until the eldest sister first be wed. Shakspeare.

He looks like sooth : he says he loves ray daughter; I think so too ; for never gazed the moon Upon the water, as he'll stand and read My daughter's eyes. Id. Winter's Tale.

That e'er this tongue of mine, That laid the sentence of dread banishment On ypnd proud man, should take it off again With words of sooth ! Id. Richard II

In soothing them, we nourish 'gainst our senate The cockle of rebellion, insolence, sedition.

Shakspeare.

I cannot flatter : I defy The tongues of soothers. Id. Henry IV.

A soothsayer bids you beware the ides of March.

Shakspeare.

If I have any skill in soothsaying, as in sooth I have none, it doth prognosticate that 1 shall change caps.

Camden's Remains. The beldame

Sooths her with blandishments, and frights with threats. Dry den.

The very sooth of it is, that an ill habit has the force of an ill fate. L'Estrange.

I did not mean to chide you ; For, sooth to say, I hold it noble in you To cherish the distressed. Rome.

Thinks he that Memnon, soldier as he is, Thoughtless and dull, will listen to his soothing?

Id.

I've tried the force of every reason on him, Soothed and caressed, been angry, soothed again; Laid safety, life, and interest in his sight ; But all are vain, he scorns them all for Cato.

Addison's Cato

By his fair daughter is the chief confined, Who socths to dear delight his anxious mind ; Successless all her soft caresses prove, To banish from his breast his country's love.

Pope's Odyssey

Thus soothed and reconciled each seeks The fairest British fair :

The seat of empire is her cheeks,

They reign united there. Cowper.

SOP, n. s. Sax. pop ; Span, sopa ; Belgie soppe. Any thing eatable-steeped in liquoˆ

The bounded waters

Would lift their bosoms higher than the shores, And make a sop of all this solid globe. Shakspeare.

Draw, you rogue ! for, though it be night, yet the moon shines : I'll make a sop o' the moonshine of

you

Id.

Sops in wine, quantity for quantity, inebriate more than wine of itself. Bacon's Natural History.

The prudent Sibyl had before prepared A sop, in honey steeped, to charm the guard ; Which, mixed with powerful drugs, she cast before His greedy rinning jaws, just oped to roar.

Dryden

111 nature is not cured with a top ; quarrelsome men, as well as quarrelsome curs, are worse for fair usage. V Estrange.

SOPH, n.s. Lat. aophlsta. A young man who has been two years at the university.

Three Cambridge sophs and three peit templars

came,

The same their talents, and their taste the same ; Each prompt to query, answer, and debate, And smit with love of poesy and prate.

Pope’s Dunciad.

SOPHI, n.s. Persian soufi. The emperor of Persia.

By this scimitar That slew the sophi and a Persian prince.

Shakspeare. A fig for the sultan and tophi. Congreve.

Sovmfor Son, a title given to the emperor of Persia, importing wise, sage, or philosopher. The title is by some said to have taken its rise from a young shepherd named Sophi, who attained to the crown of Persia in 1 370 ; others derive it from the sophi or sages anciently called magi. Vossius gives a different account of the word - sophi in Arabic, he says, signifies wool ; and he adds that it was applied by the

Turks out of derision to the kings of Persia ever since Ishmael's time ; because, according to their scheme of religion, he is to wear no other covering on his head but an ordinary red woollen stuff ; whence the Persians are also called hezel-baschs, q. d. red-heads. But Bochart assures us that sophi, in the original Persian language, signifies one that is pure in his religion, and who prefers the service of God in all things ; and derives it from an order of religious called by the same name. The sophis value themselves on their illustrious extraction. They are descended in a right line from Houssein, second son of Ali, Mahomet's cousin, and Fatima, Mahomet's daughter.

SOPHIS, or SOFEES, a kind of order of religious among the Mahometans in Persia, answering to what are otherwise called dervises, and among the Arabs and Indians faquirs. Some will have them called sophis from a kind of coarse camblet which they wear, called souf, from the city of Souf in Syria, where it is principally manufactured. The more eminent of these so-phis are complimented with the title of schiek, that is, reverend, much as in Romish countries the religious are called reverend fathers. Schiek Sophi, who laid the foundation of the grandeur of the royal house of Persia, was the founder, or rather the restorer of this order : Ishmael, who conquered Persia, was himself a sophi, and greatly valued himself on his being so. He chose all the guards of his person from among the religious of this order ; and would have all the great lords of his court sophis. The king of Persia is still grand master of the order ; and the lords continue to enter into it, though it has now fallen under some contempt.

SOPH'ISM, n. s. "1 Lat. sophisma.

SOPH'IST, A fallacious ar—

SOPH'JSTER, gument ; a fal—

SOPHIS'TICAL, adj. (Jacy : sophist

SOPHIS'TICALLY, adv. ' and sophister

SOPHISTICATE, v. a., part., &

mean, one skil-

SOPHISTICA’TION, n.s. [adj. led in. or a pro-SOPH’ISTRY. J fessor of sophis-

try : sophistical is fallacious ; ambiguous ; logo machical : the adverb corresponding: to sophisticate is to perplex ; adulterate ; corrupt with something spurious : the two noun substantives corresponding.

His sophistry prevailed ; his father believed.

Sidney .

Alcidimus the sophister hath arguments to-prove that voluntary and extemporal far excelleth premeditated speech. Hooker.

If the passions of the mind be strong they easily sophisticate the understanding ; they make it apt to believe upon every slender warrant, and to imagine infallible truth where scarce any probable shew appeareth. Id.

A subtle traitor needs no sophister.

Shakspeare. Henry VI.

Here’s three of us are sophisticated. Shakspeare.

Neither know I whether I should prefer for madness, and sophistical cozenage, that the same body of Christ should be in a thousand places at once of this sublunary world. Hall.

Wine sparkles brighter far than she, ‘Tis pure and right, without deceit,

And that no woman e’er will be ; No, they are all sophisticate. Cowley.

If a heathen philosopher brings arguments from reason, which none of our atheistical sophisters can confute, for the immortality of the soul, I hope they will so weigh the consequences as neither to talk nor live as if there was no such thing. Denham.

Besides easy submission to sophistications of sense, we have inability to prevent the miscarriages of our junior reasons. Glanville.

Srnce then a great part of our scientifical treasure is most likely to be

adulterate, though all bears the image and superscription of truth ; the only way to know what is sophisticate and what is not so is to bring all to the examen of the touchstone. Id.

That may seem a demonstration for the present, which to posterity will appear a mere sophistical knot.

More.

Divers experiments succeeded not because they were at one time tried with genuine materials, and at another time with sophisticated ones. Boyle.

The drugs and simples sold in shops generally are adulterated by the fraudulent avarice of the sellers, especially if the preciousness may make their sophistication very beneficial. Id.

When the state of the controversy is well understood, the difficulty will not be great in giving answers to all his sophistical cavils. Stillingfleet.

The court of Croesus is said to have been much resorted to by the sophists of Greece in the happy beginning of his reign. Temple.

Yet the rich cullies may their boasting spare ; They purchase but sophisticated ware ; ‘Tis prodigality that buys deceit, Where both the giver and the taker cheat. Dryden.

So truth, when only one supplied the state, Grew scarce and dear, and yet sophisticate. Id.

The only persons amongst the heathens who sophisticated nature and philosophy, were the Stoicks ; who affirmed a fatal, unchangeable, concatenation of causes, reaching eren to the elicite acts of man’s will.

South’s Sermons.

These men have obscured and confounded the natures of things by their false principles and wretched sophistry ; though an act be never so sinful they will strip it of its guilt. South.

Sophistication is the act of counterfeiting or adulterating any thing with what is not so good, for the sake of unlawful gain. Quincii.

Not all the subtle objections of sophisters and ral>- bies, against the gospel, so much prejudiced the ic-

cepfion of it, as the reproach of those crimes with which they aspersed the assemblies of Christians.

Rogert.

The more youthful exercises of sophistry, themes, and declamations. Fetton.

The eye hath its coats and humours transparent and colorless, lest it should tinge and xrphisticate the light that it lets in by a natural jaundice. Bent ley.

Bolingbroke argues most sophistically. Swift.

When a false argument puts on the appearance of a true one, then it is properly called a sophism or fallacy. Wattt.

I, who as yet was never known to show False pity or premeditated woe, Will graciously explain great nature's laws, And hear thy sophisms in so plain a cause. Harte.

A SOPHISM, in logic, is a specious argument, having the appearance of truth, but leading to falsehood. Sophisms are reduced by Aristotle into eight classes, an arrangement so just and comprehensive that it is equally proper now as in former times. 1. Ignoratio elenchi, in which the sophist seems to determine the question, while he only does it in appearance. Thus the question, ' Whether excess of wine be hurtful ? ' seems to be determined by proving that wine revives the spirits and gives a man courage : but the principal point is here kept out of sight ; for still it may be hurtful to health, to fortune, and reputation. 2. Petitio principii, a begging of the question, or taking for granted that which remains to be proved ; as if any one should undertake to prove that the soul is extended through all the parts of the body because it resides in every member. This is affirming the same thing in different words. 3. Reasoning in a circle ; as when the Roman Catholics prove the Scriptures to be the word of God by the authority of the church,

and the authority of the church from the Scriptures. 4. Non causa pro causa, or the assigning of a false cause to any effect. Thus the supposed principle that nature abhors a vacuum was applied to explain the rising of water m a pump, before Galileo discovered that it was owing to the pressure of the atmosphere. In this way the vulgar ascribe accidents to divine vengeance, and the heresies and infidelity of modern times to learning. 5. Fallacia accidentis, in which the sophist represents what is merely accidental as essential to the nature of the subject. This is nearly allied to the former, and is committed by the Mahometans and Roman Catholics. The Mahometans forbid wine, because it is sometimes the occasion of drunkenness and quarrels ; and the Roman Catholics prohibit the reading of the Bible because it has sometimes promoted heresies. ,6. By deducing a universal assertion from what is true only in particular circumstances, and the reverse ; thus some men argue, ‘ Transcribers have committed many errors in copying the Scriptures, therefore they are not to be depended on. 7. By asserting any thing in a compound sense which is only true in a divided sense : so when the Scriptures assure us that the worst of sinners may be saved, it does ‘ not mean that they shall be saved while they re-main sinners, but that if they repent they may be saved. 8. By an abuse of the ambiguity of words. Thus Mr. Hume reasons in his Essay on Miracles : — ‘ Experience is our only guide in

reasoning concerning matters of fact ; now wt know from experience that the laws of nature are fixed and invariable. On the other hand, testimony is variable, and often false ; therefore, since our evidence for the reality of miracles rests solely on testimony, which is variable, and onr evidence for the uniformity of the laws of nature is invariable, miracles are not to be believed.’ The sophistry of this reasoning depends on the ambiguity of the word experience, which in the first proposition signifies the maxims which we form from our own observation and reflection ; in the second, it is confounded with testimony ; for it is by the testimony of others, as well as our own observation, that we learn whether the laws of nature are variable or invariable. The Essay on Miracles may be recommended to those who wish to see more examples of sophistry, as we believe most of these eight species of sophisms are well illustrated by examples in that essay.

SOPHIST, in ancient Grecian history, from Soˆoc, wise, was an appellation assumed by those who devoted their time to the study of science. This appellation appearing too arrogant to Pythagoras, he declined it, and wished to be called a philosopher ; declaring that,

though he could not consider himself as a wise man, he was in-deed a lover of wisdom. True wisdom and modesty are generally united. The example of Pythagoras was followed by every man of eminence ; while the name sophist was retained only by those who with a pomp of words made a magnificent display of wisdom upon a very slight foundation of knowledge. Those men taught an artificial structure of language, and a false method of reasoning, by which, in argument, the worst might be made to appear the better rea-son. See ORATORY, and SOPHISM. In Athens they were long held in high repute, and supported, nof only by contributions from their pupils, but by a regular salary from the state. They were among the bitterest enemies of the illustrious Socrates, because he embraced every opportunity of exposing to contempt and ridicule their vain pretensions to superior knowledge, and the pernicious influence of their doctrines upon the taste and morals of the Athenian youth.

SOPHISTICATION, in trade, is the mixing of any thing with what is not genuine ; a practice too common in the making up of medicines for sale ; as also among vintners, distillers, and others, who are accused of sophisticating their wines, spirits, oils, &c., by mixing with them cheaper and coarser materials ; and in many cases the cheat is carried on so artfully as to deceive the best judges.

SOPHOCLES, a celebrated Greek tragic poet, the son of Sophilus an Athenian, born at Colonos, in Attica, near Athens. Superior vigor and address in the exercises of the palestra, and skill in music, were the great accomplishments of young men in the states of Greece. In these Sophocles excelled ; nor was he less distinguished by the beauty of his person. He was, like most of the Athenians, zealously attached to his country, which he served in some embassies, and in high military command with Pericles. He was also remarkable for the inviolable integrity of his life, but his studies were early devoted to toe

tragic muse ; the spirit of ˆEschylus lent a fire to his genius, and excited that noble eradiation which led him to contend with and sometimes to bear away the prize from his great master. He' wrote forty-three tragedies, of which only seven are extant. Having testified his love of his country by refusing to leave it, though invited by many kings ; and having enjoyed the uninterrupted esteem of his fellow-citizens, which few of their great men could boast, he died in the ninety-first year of his age, about A. A. C. 406. The burial place of his ancestors was at Decelia, which the Lacedemonians had seized ; but Lysander, their general, permitted the Athenians to inter their deceased poet ; and the Spartans joined in paying him all the honors due to his patriotism, integrity, and high poetic excellence. ./Eschylus had attained the highest pitch in poe-try, the true sublime ; but Sophocles had an elevation of mind, tempered with so fine a taste, that he never passed the bounds of propriety. Under his conduct the tragic muse appeared with dignity, harmony, and grace. From him the theatre received additional embellishments, and the drama the advantage of a third speaker ; but his distinguished excellence is in the judicious disposition of the fable, and so nice a connexion and dependence of the parts on each other that they all agree to make the event not only probable, but even necessary. This is peculiarly admirable in his (Ed i pus, King of Thebes ; and in this important point he is far superior to every other ancient dramatic writer. While other eminent Athenians suffered by the ingratitude of their countrymen, Sophocles was vexed by that of his own children. They wished to become immediate masters of their father's possessions ; and therefore, tired of his long life, they accused him before the Areopagus of insanity. The only defence the poet made was to read his tragedy of (Edipus at Colonos, and then he asked his judges whether the author of such a performance could be taxed with insanity ? Upon this he was acquitted, and the children were dismissed with merited disgrace. The. seven tragedies which remain are Ajax, Electra, (Edipus king of Thehes, Antigone, The Trachi-niae, Philoctetes, and (Edipus at Colonos. These, together with the Greek Scholia which accompany them, have been translated into Latin by Johnson, and into English by Dr. Franklin and Mr. Potter. SOPHONISBA, the daughter of Asdrubal, the celebrated Carthaginian general,- a lady of uncommon beauty and other accomplishments. She was married to Syphax, a Numidian prince, who was at first very successful against his rival Masinissa, but was afterwards totally defeated, and his kingdom reduced by the combined forces of Masinissa and the Romans. See NUMIDIA. On this occasion Sophonisba fell into the hands of Masinissa, and by her beauty soon captivated her conqueror. Her husband, Syphax, dying soon after at Rome, Masinissa married her. But this act displeased the

Romans, because she was a Carthaginian princess, and the king, though the firm ally of Rome, had not forsooth asked the consent of these proud republicans. Scipio Africanus Senior, in other respects a great and virtuous character, disgraced his name to eternity

on this occasion, by ordering the timid Numidian monarch to dismiss Sophonisba. The mean-spirited monster, instead of resenting such an imperious insult as he ought to have done, by breaking with the Romans, and joining the Carthaginians (in which case probably Carthage might have vied with Rome for ages), went to his wife, and advised her to die like the daughter of Asdrubal. She accordingly drank the cup of poison sent her by her husband with uncommon resolution and serenity, about A. A. C. 203 ; and upon this melancnoly scene our countryman Thomson composed his admired tragedy of Sophonisba. B'ut, by this act of infernal tyranny, Scipio and 'the Romans disgraced their name as much as it was afterwards honored by the opposite generous and virtuous conduct of Scipio the Younger.

SOPHORA, in botany, a genus of the monogynia order, and decandria class of plants ; natural order thirty-second, papilionaceae : CAL. quinquedentate and gibbous above : COR. papilionaceous; the wings being of the same length with the vexillum : the seed is contained in a legumen. There are sixteen species, *viz.* 1. S. alba ; 2. alopecuroides ; 3. aurea ; 4. australis ; 5. biflora ; 6. Capensis ; 7. flavescens ; 8. genistoides ; 9. hirsuta; 10. japonica; 11. lupinoides; 12. macrophylla; 13. occidentalis ; 14. tetrap-tera; 15. tinctoria; and 16. tomentosa.

SOPORIF'EROUS, adj. \ Latin, sopor and

SOPORIF'IC.)fero,or jacio. Causing sleep ; narcotic.

The particular ingredients of those magical ointments are opiate and soporiferom ; for anointing of the forehead, neck, feet, and backbone, procures dead sleeps. Bacon.

The color and taste of opium are, as well as its soporific or anodyne virtues, mere powers depending on its primary qualities. Locke.

\Vhile the whole operation was performing 1 lay in a profound sleep, by the force of that soporijfrous medicine infused into my liquor. Suift.

SOPHRON, a comic poet of Syracuse, the son of Agathocles and Damasellus. His poems were universally admired, and even Plato read

them with rapture. But none of them are extant.

SOPHRONISCUS, the father of Socrates.

SOPORIFICS, or hypnotics, are medicines that produce sleep ; such as opium, laudanum, the seed or extract of poppies, &,c. But it is now generally admitted among physicians that they produce this effect, not by any direct sedative power or quality, as the great Cullen erroneously supposed, but, as Brown first observed, first by stimulating and exciting the whole system to a high pitch of vigor, and afterwards by inducing indirect debility, which, in proportion to the quantity taken of these high stimuli, and the previous state of the excitement, either ends in sleep and recovery, or death.

SORACTES, a mountain of ancient Etruria, near the Tiber.

SOR ANI, the people of the ancient Sora.

SORANUS, an ancient physician of Ephesus, who flourished under Trajan and Adrian. He practised first at Alexandria, and afterwards at Rome. He was of the sect called Methodists and a follower of Thessalus, Trallian, &c., an

was the last and greatest of that sect. See MEDICINE, Index. Some of his works are extant, and have been published ; particularly 1 . In Artem Medendi Isagoge Saluberrima; Basil, 1528. 2. De Utero et Muliebri Pudendo. Graece. Paris, 1554. 3. The Life of Hippocrates, in Greek, which has been repeatedly printed, in almost all the editions of Hippocrates's works.

SORANUS, another physician, also of Ephesus, who flourished somewhat later than the preceding, and who also wrote a work, on the Diseases of Women.

SORANUS, in ancient mineralogy. See GRANITE.

SORBAIT (Paul), an eminent physician of the seventeenth century, born in Austrian Hainault. He became professor of medicine at Vienna, and his abilities and learning raised him to be appointed physician to the imperial court. He published, 1. Commentaries on the Aphorisms of Hippocrates ; 4to., 1680. 2. Medicina Universalis, Theoretica et Practica, folio, 1701 ; and several other works. He died in 1691.

SORBIERE (Samuel), a French writer, born of Protestant parents about 1612. His father was a tradesman ; his mother Louisa was sister of the learned Samuel Petit, minister of Nismes. See PETIT. His parents dying, his uncle took care of his education, and sent him to Paris to study divinity ; but he soon tired of it, and turned to physic ; wherein he made such quick progress that he published an abridged system of medicine. He went to Holland in 1642, where he married in 1646 ; but returned to France, and was made principal of the college of Orange in 1650, and historiographer of France. In 1653, to recommend himself to the court, he abjured the Protestant religion, and turned Catholic ; and in 1654 went to Paris, and published his Reasons, dedicated to cardinal Mazarine. He next went to Rome, and introduced himself to pope Alexander VII. by a Latin letter, in which he inveighed against the Protestants ; but all his servile versatility procured him no patronage from either of these great prelates. He then went to England, and in t644 published an account of his voyage thither, but so much stuffed with illiberal falsehoods against the English, that the French court deprived him of his office of historiographer, and banished him. His book was also refuted both in Paris, and at London by Sprat, bishop of Rochester. Sorbiere had learning and abilities, but lost himself for want of integrity. He translated More's Utopia, part of Camden's Britannia, and some of Hobbes's works, into French. He died of a dropsy, April 9th, 1670.

SORBONNE (Robeit de), a native of the village of the same name, in France, born in 1201, who, having got education and entered into orders, became so famous for his preaching that Louis IX. appointed him his chaplain, confessor, and almoner ; afterwards made him canon of Cambray, and at last of the church of Paris. Robert was not only a very learned man for the age he lived in, and wrote several works on theology, but gave birth to that seminary of learning which continued to bear his name till the revolution. He died in 1274.-

SORBONNE, or SORBON, the house or college

of the faculty of theology anciently established in the university of Paris. It was founded in 1252 by St. Louis, or rather by Robert de Sorbonne,. who gave his own name to it. The foundation was laid in 1250; queen Blanche, in the absence of her husbaad, furnishing Robert with a house, which had formerly been the palace of Julian the apostate, of which some remains are still visible. Afterwards the king gave him all the houses he had in the same place in exchange for some others. The college was afterwards magnificently rebuilt by the cardinal de Riche-lieu. The design of this institution was to assist poor students in divinity. There were lodgings in it for thirty-six doctors, who were said to be of the society of the Sorbonne ; those admitted into it without being doctors were said to be of the hospitality of the Sorbonne. Six regent doctors formerly held lectures every day for an hour and a half each ; three in the morning, and three in the afternoon.

SORBONNE is also used in general for the whole faculty of theology at Paris ; as the assemblies of the whole body were held in the house of the Sorbonne ; and the bachelors of the other houses of the faculty, as the house of Navarre, &c., came thither to hold their sorbonnique, or act for being admitted D. D.

SORBONNIQUE. See last article.

SORBUS, service-tree, in botany, a genus of the trigynia order, and icosandria class of plants : CAL. quinquefid ; the petals are five ; the berry is below the flower, soft, and containing three seeds. There are three species, *viz.*

1. S. aucuparia, mountain ash, quicken-tree, quick-beam, or roan tree, rises with a straight upright stem and regular branching head, twenty or thirty feet high or more, covered with a smooth grayish brown bark ; pinnated leaves of eight or ten pair of long, narrow, serrated folioles, and an odd one, smooth on both sides ; and large umbellate clusters of white flowers at the sides and ends of the branches, succeeded by clusters of fine red berries, ripe in autumn and winter. There is a variety with yellow-striped leaves. This species grows wild in many parts of this island in mountainous places, woods, and hedge-rows, often growing to the size of timber ; and is admitted into most ornamental plantations for the beauty of its growth, foliage, flowers, and fruit; the latter in particular, being produced in numerous red large bunches all over the tree, exhibit a fine appearance in autumn and winter, till devoured by the birds, especially the blackbird and

thrush, which are so allured by this fruit as to flock from all parts and feed on it voraciously. In the island of Jura the juice of the berries is employed as an acid for punch. It is probable that this tree was in high esteem with the Druids; for it is more abundant than any other tree in the neighbourhood of those Druidical circles of stones so common in North Britain.. It is still believed by superstitious persons that a branch of this tree can defend them and their cattle from all danger !

2. S. domestica, or cultivated' service-tree, with eatable fruit, grows with an upright stem, branching thirty or forty feet high or more, having a brownish bark, and the young shoots in sum-

mer covered with a mealy down ; pinnated leaves of eight or ten pair of broadish deeply serrated obes and an odd one, downy underneath, and large umbellate clusters of white flowers at the sides and ends of the branches, succeeded by bunches of large, fleshy, edible red fruits, of various shapes and sizes. This tree is a native of the southern warm parts of Europe, where its fruit is used at table as a dessert, and it is cultivated here in many of our gardens, both as a fruit tree and as an ornament to diversify hardy plantations.

3. S. hybrida, or mongrel service tree of Goth-land, grows twenty or thirty feet high ; it has half-pinnated leaves, very downy underneath ; and clusters of white flowers, succeeded by bunches of round reddish berries in autumn. SOR'CERER, n.s.-\ Fr. sorcier ; low Lat. SOR'CERESS, tsortiarius. A conjuror;

SOR'CEROUS, adj. i enchanter : sorceress, SOR'CERY, n. s. J the feminine : sorcerous, magical, partaking of the nature of sorcery wnich signifies enchantment ; magic ; infatuating art or effects.

They say this town is full of cozenage, As nimble jugglers that deceive

the eye, Drug-working sm-cerert that change the mind, Soul-killing witches that deform the body, And many such like libertines of sin. Shakspeare.

This witch Sycorax,

For mischiefs manifold, and sorceries terrible, Was banished. Id.

The weakness of the power of witches upon kings and magistrates may be ascribed to the weakness of imagination ; for it is hard for a witch or a torcerer to put on a belief that they can hurt such.

Bacon's Natural History.

Divers witches and sorceresses have fed upon hu-man flesh, to aid their imaginations with high and thin vapours. Bacon.

Th' art ent'ring Circe's house, Where by her med'cines, black and sorcerous, Thy soldiers all are shut in well-armed sties, And turned to swine. Chapman,

The snaky sorceress that sat, Just by hell-gate, and kept the fatal key, Risen, and with hideous outcry rushed between.

Milton.

Adders' wisdom I have learned, To fence my ears against thy sorceries. Id.

Act;ron has long tracts of rich soil ; but had the misfortune in his youth to fall under the power of sorcery. Tatler.

He saw a sable sorcerer arise, All sudden gorgons hiss, and dragons glare, And ten horsed fiends. Pope.

The Egyptian sorcerers contended with Moses ; but the wonders which Moses wrought did so far tran-scend the power of magicians, as made them confess : t was the finger of God. Watts's Logic.

SORCERY, or magic, is the power which some persons were formerly supposed to possess of commanding the devil and the infernal spirits by •kill in charms and invocations, and of soothing them by fumigation. Sorcery is therefore to be distinguished from witchcraft; an art which was supposed to be practised, not by commanding evil spirits, but by compact with the devil. As an instance of the power of bad smells over daemons or evil spirits, we may mention the flight of

the evil spirit mentioned in Tobit into the temote parts of Egypt, produced, it is said, by

the smell of the burnt liver of a fish, Lilly informs us that one Evans, having raised a spirit at the request of lord Bothwell and Sir Kenelm Digby, and forgetting a fumigation, the spirit, vexed at the disappointment, pulled him without the circle, and carried him from his house in the Minories into a field near Battersea Causeway. King James, in his Daemonologia, has given a very full account of the art of sorcery : — ‘ Two principal things,’ says he, ‘ cannot well in that errand be wanted : holy water (whereby the de-vill mockes the Papists), and some present of a living thing unto him. These things being all prepared, circles are made, triangular, quadrangular, round, double, or single, according to the forme of the apparition they crave. When the conjured spirit appears, which will not be while after many circumstances, long prayers, and much muttering and murmurings of the conjurors, if they have missed one jote of all their rites ; or • if any of their feete once slyd over the circle, through terror of his fearful apparition, he paies himself at that time of that due debt which they ought him, and otherwise would have delaied longer to have paied him : I mean, he carries them with him, body and soule.’ How the conjurers made triangular or quadrangular circles his majesty has not informed us, nor does he seem to imagine there was any difficulty in the matter. We therefore suppose that he learned his mathematics from the same system as Dr. Sacheverell, who, in one of his sermons, made use of the following simile : ‘ They concur like parallel lines, meeting in one common centre.’ Another mode of consulting spirits was by the beryl, by means of a speculator or seer ; who, to have a complete sight, ought to be a pure virgin, a youth who had not known woman, or at least a person of irreproachable life and purity of manners. The method of such consultation is this : The conjurer, having repeated the necessary charms and adjurations, with the litany or. invocation peculiar to the spirits or angels he wishes to call (for every one has his particular form), the seer looks into a crystal or beryl, wherein he will see the answer, represented either by types or figures ; and sometimes, though very rarely, will hear the angels or spirits speak articulately. Their pronunciation is, as Lilly says, like the Irish, much in the throat. Lilly describes one of these beryls or crystals. It was, he says, as large as an orange, set in silver, with a cross at the top, and round about engraved the names of the angels Raphael, Gabriel, and Uriel. A delineation of another is engraved in the fron-tispiece to Aubery’s Miscellanies. The sorcerers or magicians do not always employ their art to do mischief; but, on the contrary,

frequently exert it to cure diseases inflicted by witches ; to discover thieves ; recover stolen goods ; to foretel future events, and the state of absent friends. On this account they are frequently called white witches.

Our ancestors had great faith in these fables, when they enacted, by stat. 33 Hen. VIII. c. 8, all witchcraft and sorcery to be felony without benefit of clergy; and again, by stat. 1 Jac. I. c. 12, that all persons invoking an evil spirit, or consulting, covenanting with, entertaining, em-

ploying, feeding, or rewarding any evil spirit; or taking up dead bodies from their graves to be used in any witchcraft, sorcery, charm, or enchantment ; or killing or otherwise hurting any person by such infernal arts ; should be guilty of felony without benefit of clergy, and suffer death. And if any person should attempt by sorcery to discover hidden treasure, or to restore stolen goods, or to provoke unlawful love, or to hurt any man or beast, though the same were not effected, he or she should suffer imprisonment and pillory for the first offence, and death for the second. These acts continued long in force, to the terror of all ancient females in the kingdom ; and many poor wretches were sacrificed thereby to the prejudice of their neighbours and their own illusions, not a few having by some means or other confessed the incredible facts at the gallows. But all executions for this dubious crime are now abolished. It is enacted, by stat. 9 Geo. II. c. 5, that no prosecution shall for the future be carried on against any person for conjuration, witchcraft, sorcery, or enchantment : — But the misdemeanor of persons pretending to use witchcraft, tell fortunes, or discover stolen goods, by skill in the occult sciences, is still deservedly punished with a year's imprisonment.

SORD, n. s. Corrupted from sward Turf; grassy ground.

This is the prettiest low-born lass that ever ran on the green sard. Shakspeare. Winter's Tale.

An altar of grassy sord. Milton.

SORDES, TI. s. Latin sordes. Foulness ; dregs.

The sea washes off the soil and sordet, wherein mineral mosses were involved and concealed, and thereby renders them more conspicuous.

Woodward.

SOR'DID, adj. ~\ Lat. sordidiis. Foul ; gross ;

SOR'DIDLY, adv. > filthy; dirty: literally or

SOR'DIDNESS, n.s. j mentally,hence covetous:

the adverb and noun substantive corresponding.

I omit the madnesses of Caligula's delights, and the

execrable sordidness of those of Tiberius. Cowley.

Thou canst not those exceptions make, Which vulgar sordid mortals take. Id.

He may be old, And yet not sordid, who refuses gold. Denham.

There Charon -stands, A sordid god ; down from his hoary chin A length of beard descends, uncombed, unclean.

Dry den.

If one should cease to be generous and charitable, because another is sordid and ungrateful, it would be much in the power of vice to extinguish Christian virtues. L'Estrange.

Providence deters people from sluttishness and ;ordidness, and provokes them to cleanliness. Ray.

It is strange, since the priest's office heretofore was always splendid, that it is now looked upon as a piece of religion, to make it low and sordid.

South's Sermon*.

SORE, 7i. s., adj.,) Sax. rari; Belgic and

SORE'LY, [& adv. > Danish sour. A place

SORE'NESS, n. s. j tender and painful ; place

excoriated ; an ulcer. 'To be a sore, there must

be an excoriation,' says Johnson ; ' a tumor or

bruise is not called a sore before some disruption

happen : ' sore, adjective, is tender to the touch :

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hence mentally tender or soon provoked ; violent with pain: the adverb and noun substantive corresponding.

My loins are filled with a sore disease ; and there is no whole part in my body. Common Prayer.

Thine arrows stick fast in me, and thy hand presseth me sore. jd.

The knight then lightly leaping to the prey, With mortal steel him smote again so tore, That headless his unwieldy body lay. •

Faerie Queene. Let us hence provide A salve for any sore that may betide.

Sltakspeare. Henry VI. Threescore and ten I can remember well, Within the volume of which time I've seen Hours dreadful, and things strange ; but this sore

night

Hath trifled former knowings. Shakspeare.

I will persevere in my course of loyalty, though the conflict be sore between that and my blood.

Id. King Lear. To lapse in fulness

Is sorer than to lye for need ; and falsehood Is worse in kings than beggars. Id. Ci/mbeline. The buck is called the first year a fawn ; the

se-cond, a pricket ; the third, a sorel ; and the fourth year, a sore. Shakspeare.

Here's the smell of the blood still ; all the perfumes of Arabia will not sweeten this little hand. Oh ! oh ! oh ! — What a sigh is there ! the heart is sorely overcharged. Id.

He that, whilst the sorenest of his late pangs of conscience remains, finds himself a little indisposed for sin, presently concludes repentance hath had its perfect work. Decay of Piety.

He this and that, and each man's blow Doth eye, defend, and shift, being laid to tore.

Daniel.

Sore hath been their fight, As likeliest was, when two such foes met armed.

Milton.

Gentle lady, may thy grave Peace and quiet ever have ; After tjris day's travel sore ; Sweet rest seize thee evermore. Id,

Distrust shook sure their minds. Id.

Though iron hew and mangle sore, Would wounds and bruises honour more.

Hudibras.

Malice and hatred are very fretting and vexatious, and apt to make our minds tore and uueasy : but he that can moderate these affections will find ease in his mind. Tillotson.

My foot began to swell, and the pain asswaged, though it left such a soreness that I could hardly suffer the clothes of my bed. Temple.

By these all festering tores her councils heal, Which time or has disclosed or shall reveal.

Dryden.

While tore of battle, while our wounds are green, Why should we tempt the doubtful die again ? Id.

So that if Palamon were wounded sore, Arcite was hurt as much. Id.

Knight’t Tale.

Sore sighed the knight, who this long sermon

heard : At length, considering all, his heart he cheared.

Dry den.

Of the warrior train,

Though most were sorely wounded, none were slain.

Id.

It was a right answer of the physician to his patient, that had syre eyes : if you have moie pleasure in the taste of wine than in the us« of your sight,

wine is good ; but if the pleasure of seeing be greater to you than that of drinking, wine is naught.

Locke.

They are determined to live up to the holy rule, though tore evils and great temporal inconveniencies should attend the discharge of their duty.

Atterbury.

Lice and flies, which have a most wonderful instinct to find out convenient places for the hatching and nourishment of their young, lay their eggs upon , < w«». Bentley.

Laugh at your friends ; and, if your friends are

sore, So much the better, you may laugh the more.

Pope.

How, Didus, shall a Roman, sore repulsed1, Greet your arrival to this distant isle ? How bid you welcome to these shattered legions ?

A. Philips.

My father blessed me fervently, Yet did not much complain ; But sorely will my mother sigh Till I come back again. Byron.

SOREL, or William Henry, a town of Lower Canada, at xhe confluence of the Rich- .ieu, Chambly, or Sorel River, with the St. Lawrence. It

stands on the site of a French fort, built as a defence against the incursions of the Indians, and which received its name from Sorel, a captain of engineers, who superintended its construction. The plan of it covers about 120 acres of ground, although at present the number of houses does not much exceed 150, exclusive of stores, barracks, and government buildings. The houses are of wood, substantially and well constructed, but the Protestant and *he Catholic churches are both of stone. There are eight principal streets, named, like the town itself, after different branches of the royal family. Before the town, the bank of the Richlieu is from ten to twelve feet high, having near the point two small wharfs. The river is here 250 yards broad, with from two and a half to five and a half fathoms of water. On the opposite shore are convenient places for building vessels. A small distance from a little rivulet, to the southward of the place, is a blockhouse and hospital ; and a little further on a good wooden building, with outhouses, gardens, &c., called the government house, serving as a residence for the commanding officer of the troops. The present town was begun about the year 1785, when some loyal-ists and disbanded soldiers settled at it ; and it still continues to be the residence of many old military servants of the crown. Some trade is carried on, but not so much as might be supposed from its situation at the junction of two nnvigable rivers. Long. 72° 55’ W., lat. 46° 5’N.

SOREX, the shrew, in zoology, a genus of animals belonging to the class of mammalia, and order of ferae. Tt has two long fore teeth in the upper jaw, which are divided into two points ; in the lower jaw are two or four fore teeth, the two middle ones, in the latter case, being shorter than the others : — On each side in both.jaws are two or more tusks : the grinders are knobbed. Theˆ animals of this genus have in general thick clumsy bodies, and five toes on each of their f et ; the head resembles that of the mole, being thick at the forehead, much elongated, and end-

ing in a conical snout, and having very small eyes ; in other circumstances of general figure they resemble the murine tribe of quadrupeds. They burrow in the ground, some species living mostly about the sides of waters ; and most of them feeding on worms and insects. There are sixteen species, *viz.*

1. S. albipes, the white footed shrew of Pennant. The tail is slender and hairy ; the heac and upper parts of the body are of a dusky ash color ; the feet, belly, and teeth, white.

2. S. araneus, the field shrew mouse, or the foetid shrew, with short rounded ears ; eyes small, and almost hid in the fur ; nose long and slender, upper part the longest ; head and upper part of the body of a brownish red ; belly of a dirty white ; length, from nose to tail, two inches and a half; tail one and a half. Inhabits Europe : lives in old walls and heaps of stones, or hole* in the earth ; is frequently near hay-ricks, dunghills, and necessary houses ; lives on corn, insects, &c. ; is often observed rooting in ordure like a hog : from its food, or the places it frequents, has a disagreeable smell ; cats will kill, but not eat it : it brings four or five young at a time. The ancients believed, it was injurious to cattle ; an error now detected. There seems to be an annual mortality of these animals in August, numbers being then found dead in the paths.

3. i. S. arcticus, the Labradore shrew of Pennant, has the head and upper parts of the body dusky, and the sides of a brownish rust. They inhabit Labradore and Hudson's Bay. The nose is very long and slender, the upper jaw extending far beyond the lower; the eyes are small, and almost hid in the fur ; the ears are short.

3. ii. S. arcticus cinereus, the gray Labradore shrew, a variety of a dusky gray color on the up-per parts of the body, and yellowish white below.

4. S. Brasiliensis, the Brasilian shrew, is of a dark color, with three broad stripes along the back ; is about five inches long ; the tail not quite two; the scrotum is pendulous; the muz-zle pointed, and the teeth are very sharp. Tlrey inhabit Brasil, and are not afraid of cats : they will even play with them.

5. S. caeruleus, the blue shrew, has a tail of a middle length ; the upper parts of a pale blue ; the belly lighter, with white legs and feet. It is nearly eight inches long; the tail three and a half; the nose long and slender ; the upper jaw longest; the upper fore teeth short; the under long, slender, and crooked inwards ; white whiskers; small eyes ; ears broad, round, naked, and transparent ; the fur short. It has so strong a scent of musk, that it perfumes every thing it runs over. Cats will not attack them. They inhabit Java and other East Indian islands.

6. S. exilis, the pigmy shrew, is a singular curiosity. It is the smallest quadruped hitherto known. It scarcely exceeds half a drachm, or the sixteenth part of an ounce in weight. The tail is long and very slender, then suddenly grows remarkably thick and round, and again tapers to the end. The general shape and cole; resemble the araneus, but paler. These pigmies inhabit Siberia, between the Oby and the Jenf-sei,

notwithstanding the extreme cold, and their diminutive size.

7. S. fodiens, the water shrew, has a long blender nose; very minute ears; very small eyes, hid in the fur ; color of the head and upper part of the body black; throat, breast, and belly, of a light ash -color; beneath the tail a triangular dusky spot; much larger than the last; length, from nose to tail, three inches and three-quarters ; tail, two inches. Inhabits Europe ; long since known in England ; but lost till May 1768, when it was discovered in the fens near Revesley Abbey, Lincolnshire ; burrows in the banks near the water ; is called by the fenmen the blindmouse.

8. S. liricaudatus, the carinated shrew, has a tail taper, slender, and ridged underneath ; the head and upper parts of a dusky ash-color, with a white spot behind each eye ; the belly is whitish, and the fore teeth are brown. Penn.

9. S. Mexicanus, the tucan, or Mexican sˆrew, has a sharp nose ; small round ears ; without sight ; two long fore teeth above and below ; thick, fat, and fleshy body ; short legs, so that the belly almost touches the ground ; long crooked claws; tawny hair; short tail; length, from nose to tail, nine inches. Inhabits Mexico; burrows, and makes such a number of cavities Jiat travellers can scarcely tread with safety; if it gets out of its hole, does not know how to return, but begins to dig another ; grows very fat, and is eatable ; feeds on roots, kidney beans, and other seeds. M. de Buffon thinks it a mole ; but it seems more properly to belong to the genus of sorex.

10. S. minutus, the minute shrew, has a head nearly as big as the body ; very slender nose ; broad short naked ears ; whiskers reaching to the eyes ; eyes small, and capable of being drawn in; hair very fine and shining; gray above, white beneath ; no tail ; the least of quadrupeds,

according to Linnaeus. Inhabits Siberia; lives in a nest made of lichens, in some moist place beneath the roots of trees ; feeds on seeds, digs, runs swiftly, and has the voice of a bat.

U.S. moschatus, the musky shrew of Pallas, Schreber, Pena-int, and Kerr ; the Muscovy or musk rat of Kay and Buffon (see Smellie's edit, v. 260) ; the water rat of Clusius, Aldrovandus, and Gmelin ; is the Castor moschatus, or musky beaver, of Linnaeus, already described under CASTOR.

12. S. murinus, the Javan shrew, or murine shrew of Pennant, has a tail of a middle length, shorter than the body ; the body dusky ; the legs, feet, and tail, ash-colored. It is about the size of a common mouse, has a long slender nose, channelled underneath, with long ash-colored whiskers ; ears ˆ.unded and almost naked ; two sharp paialle) fore teeth in each jaw ; and five toes armed with claws on each foot. They inhabit the Isle of Java.

13. S. pusillus, the timid shrew, inhabits the deserts of Periia. The tail is short, and has the hair partly shed towards the sides ; the ears are rounded;" the body is three inches and a half long; of a dark gray above, and ash-color below. The teeth are like those of the araneus (No. 2); in ether respects it resembles the Surinam species (No. 15), but is much larger. They live in holes under ground.

14. S. quadricaudatus, square-tailed shrew of Pennant, has a tail inclined to a square form; the head and upper parts of a dusky ash-color; the belly paler, and the fore teeth brown.

15. S. Surinamensis, the Surinam shrew, has a tail scarcely half the length of the body ; is chestnut-colored above, and of a pale yellowish ash-color below. In size, shape of the head and snout, teeth, eyes, and feet, it resembles the water shrew (No. 7) ; the ears are like those of the araneus (No. 2); the tail has very short smooth, close set hair, cinereous above, and whitish below ; the muzzle is white. They inhabit Surinam

16. S. unicolor, the uniform shrew of Pennant, has a tail narrowed or compressed at the base, and the whole body of a uniform dusky ash-color. Mr. Kerr suspects this species, with the albipes (No. 1), the liricaudatus (No. 8), and the quadricaudatus, (No. 14), to be only varieties of the araneus (No. 2), though he has adopted Mr. Pennant's arrangement, in making them as distinct species. All the four was

discovered by professor Herman, near Strasburg.

SORIA, a province of Spain, in Old Castile, lying to the west of Navarre and Arragon, Ito area is 4300 square miles, hilly almost throughout, being intersected by the Sierras or chains called respectively Ministra, Moncayo, and Paredes. Even its plains are elevated, narrow, and by no means fertile. The climate is mild in the vallies,but bleak on the hills. The products are sheep, wool and lambs, wine and fruit, and a small quantity of hemp and flax. There are also a few manufactures of woollen, linen, paper, and leather for home consumption. The Ebro flows through the northeast corner, and the Douro has its source in this high district, in which it is joined by the Tajuna and Ucero. The other rivers of the province are the Jalon, the Cidacos, and the Alamo. Population 200,000 It has several small lakes.

SORIA, the chief town of the above district, is situated on the Douro, not far from its source having fifteen churches and chapels, eleven monasteries, and four hospitals. It has also a few manufactures of silk stockings, leather, soap, and woollens, with some trade in wool. It is, however, a dull and gloomy place. Near this was the site of the ancient Numantia. Inhabitants 6000. 110 miles northeast of Madrid, and forty-nine W. N. W. of Calatavud.

SORITES, n. s. Gr. wpcHW, a hcaP-AR argument where one proposition is accumulated on another.

Chrysippus, the stoick, invented a kind of argument consisting of more than three propositions, which is called sorites or a heap. Driiden.

The most notable way of managing a controversy, is that which we may call arguing by torture. ‘J best disputants convince their adversaries with a write*, commonly called a pile of faggots. Addisan.

Simtei is when several middle terms are chosen to connect one another successively in several propositions till the last proposition connects its predicate with the first subject. Thus, All men of revenge have thtir souls often uneasy ; uneasy souls are a plague to themselves; now to be one’s own plague is folly iii the extreme. Watts’i Logick.

SORITES, in logic, is a species of reasoning in which a great number of propositions are so linked together, that the predicate of the one becomes continually the subject of the next, till at last a conclusion is formed by bringing together the subject of the first proposition and the predicate of the last. Such was that merry argument of Themistocles, to prore that his little son under ten years old governed the wholenvorld. Thus : my son governs his mother ; his mother me; I the Athenians; the Athenians the Greeks; Greece commands Europe ; Europe the whole world : therefore my son commands the whole world. See LOGIC.

SORITIA, an ancient town of Spain.

SORN, n. s.) Irish and Scotch, sore—

SORE'HOX. \ horn ; Ital. soiorne. A

kind of arbitrary exaction or servile tenure, formerly prevalent in Scotland and Ireland, by which a chieftain came down among the tenants with his followers, and lived on free quarters.

They exact upon them all kind of services ; yea, and the very wild exactions, coignie, livery, andsore-hon : by which they poll and utterly undo the poor tenants and freeholders under them.

Spenser's Ireland.

To SORN, Scottish and Irish, is used also generally for to live at another's expense, by obtrusion, or without invitation.

SOR'REL, n. s. Sax. r-ujie ; Fr. sore/. A plant agreeing with dock in its

general character; only differing in having an acid taste.

Of all roots of herbs the root of sorrel goeth the farthest into the earth. It is a cold and acid herb, that loveth the earth, and is not much drawn by the sun. Bacon.

Acid austere vegetables contract and strengthen the fibres, as all kinds of sorrel, the virtues of which lie in acid astringent salt, a sovereign antidote against the putrescent bilious alkali.

Arbuthnot on Aliments.

SORREL, in botany, a species of the rume.x, which grows in pastures and meadows, and is well known. The natives of Lapland boil large quantities of the leaves in water, and mix the juice when cold with the milk of their rein-deers, which they esteem an agreeable and wholesome food. The Dutch cultivate this plant for its usefulness in the dyeing of woollen cloths black ; and we know that by means of the common broad-leaved sorrel an excellent black color is, in many places in Scotland, given to woollen stuffs without the aid of copperas. As this mode of dyeing dees not in the smallest degree injure the texture of the cloth, which continues to the last soft and silky, without that hardness to the touch which it acquires when dyed black by means of copperas ; our readers will probably thank us for ‘he following receipt, with which we have been favored by a learned physician: — Let the stuff to be dyed be well washed with soap and water, and afterwards completely dried. Then of the common broad-leaved sorrel, boil as much as shall make an acid decoction of sufficient quantity to let the stuff to be dyed lie in it open and easy to be stirred. The greater quantity of sorrel that is used the better will the color be; and therefore if the pot or caldron will not hold enough at once, when part has been sufficiently boiled, it must be taken out and wrung, and a

fresh quantity be boiled in the same juice or decoction. When the liquor is made sufficiently acid, strain it from the sorrel through a sieve, put the cloth or yarn into it, and let it boil for two hours, stirring it frequently. If stockings be among the stuff to be dyed, it will be expedient, after they have been an hour in the boiling liquor, to turn them inside out, e.nd at the end of the second hour let the whole be poured into a tub or any other vessel. The pot or caldron must then be washed, and water put into it, with half a pound of logwood chips for every pound of dry yarn or cloth. The logwoqd and water should

boil slowly for four hours ; and then the cloth or yarn being wrung from the sour liquor, and put into the logwood decoction, the whole must be suffered to boil slowly for four hours, stockings, if there be any, being turned inside out at the end of two hours. Of this last decoction there must, as of the former, be enough to let the cloth lie open and easy to be stirred while boiling. At the end of the four hours the cloth must be taken out, and among the boiling liquor, first removed from the fire, must be poured a Scots pint or English gallon of stale urine for every pound of dry cloth or other stuff to be dyed. When this compound liquor has been stirred and become cold, the cloth must be put into it and suffered to remain well covered for twelve hours, and then dried in the shade ; after which, to divest it of smell or any other impurity, it may be washed in cold water, and dried for use.

SORREL, INDIAN RED, } Two species of

SORREL, INDIAN WHITE, $ hibiscus.

SORREL, TREE. See ANDROMEDA

SORREL, WOOD, in botany. See OXALIS.

SORRENTO, a town of Italy, on a peninsula, on the south side of the gulf of Naples, between the mountains of Vicoand Massa. » Its situation is delightful, being surrounded with gardens. At present it contains only 4200 inhabitants, but the number of ancient marbles, and of the ruins of edifices, shew it to have been formerly more extensive. Of its temples, those of Juno, Diana, and Hercules, were the most magnificent. Its wines were in former ages accounted little inferior to the most renowned of Italy. At present they are raised in large quantities ; also olives, oranges, and silk. Part of the latter is manufactured in the town. Sorrento is the see of an archbishop, and gave birth to Tasso, the celebrated poet. Fifteen miles S.S.E. of Naples.

SORRI (Peter), an Italian painter, born at Sienna, in 1556 He wa* the disciple of Salim-bini ; and excelled in history, portrait, and landscape. He died in 1622.

SOR’ROW, v. n. & n. s.) Saxon j-onjian ;

SOP’HOWED adj. > Swed. sorja ; Goth.

SOR’ROWFUL. } suurgian. To grieve ;

mourn; be sad or dejected: grief; pain for something past; sadness;

mourning. ‘Sorrow is not the effect of present evil, but of lost good,’ says Dr. Johnson : sorrowed means accompanied with sorrow: sorrowful, mournful; grievous; deeply serious.

Hannah said, No my lord, 1 am a woman of a sorroirful spirit : I have poured out my soul before the Lord. 1 Samuel.

The things that my soul refused to touch are as my sorrowful meat. Job vi. 7.

Now I rejoice, not that ye were made sorry, but that ye sorrowed to repentance. 2 Cor. vii. 9.

Blessed are they which have been sorrowful for all thy scourges ; for they shall rejoice for thee, when they have seen all thy glory. Tab. xiii. 14.

Sorrow on thee, on all the pack of you ; That triumph thus upon my misery ! Shakspeare.

The miserable change, now at my end, Lament nor sorrow at. Id. Antony and Cltopatra.

Now the publick body, which doth seldom Play the recanter, feeling in itself A lack of Titnon’s aid, hath sense withal Of its own fall, restraining aid to Timon, And sends forth us to make their torrowed tender.

Shakspeare.

Fading flowers in every field, To winter floods their treasures yield ; A honey’d tongue, a heart of gall, Is fancy’s spring, but sorrow’s fall. Raleigh. I neither fear to die, nor desire to live ; and, hav-ing mastered

all grief in myself, I desire no man to furrow for me. Hayward.

But peace was theirs, and harmony within, They knew no sorrow, for they knew no sin.

Whyte's Poenu.

A world of woe and sorrow. Milton.

Send them forth, though torrowing, yet in peace.

Id.

Some other hour I will to tears allow ; But, having you, can shew no sorrow now.

Dry den.

Sorrow is uneasiness in the mind, upon the thought of a good lost, which might have been enjoyed longer ; or the sense of a present evil. Locke.

Sad the prince explores

The neighb'ring main, and sorrowing treads the shores. Pope.

SOR'RY, adj. ~\ Sax. raruj ; Dan. sorrig ;

SOR'RILV, adv. >Swed. sorg (sorrow); Isl.

SOR'RINESS, n. s. r saur, vile. Grieved for something past. Generally used of slight or casual miscarriages or vexations : vexatious ; pitiful ; worthless : it is in these .latter senses only that the adverb and noun substantive are used.

The king was torry: nevertheless, for the oath's sake, he commanded the Baptist's head to be given her. Matthew xiv. 9.

Thy pipe, 0 Pan, shall help, though I sing sorrily.

Sidney.

How now, why do you keep alone 1 Of sorriest fancies your companions making, Using those thoughts which should indeed have died With them they think on. Shakspeare. Macbeth.

I'm sorry for thee, friend ; 'tis the duke's pleasure.

Shaktpeare.

If the union of the parts consists only in rest, it would seem that a bag of dust would be of as firm a consistence as that of marble ; and Bajazet's cage had been but a sorry prison. Glanvilte.

Course complexions,

And cheeks of torry grain, will serve to ply The sampler, and to teize the housewife's wool.

Milton.

If this innocent had any relation to his Thebais, the poet might have found some sorry excuse for detaining the reader. Dryden.

How vain were all the ensigns of his power, that could not support him against one slighting look of a torry slave ! L'Ettrange.

If such a slight and syry business as that could produce one organical body, one might reasonably

expect, that now and then a dead lump of dough might be leavened into an animal.

Rentiers Sermons.

We are sorry for the satire interspersed in some of these pieces, upon a few people, from whom the highest provocations have been received. Swift.

SORT, n. s., v. a., 8c v. n. * Fr. and Ital.

SOR'TAL, adj. > sorte ; Span, suarte

SOR'TANCE, n. s. j of Latin sort.

Kind; species; lot; portion; rank; condition; manner; superior condition : to separate into lots or classes ; arrange ; conjoin; cull; choose: to be joined ; suited ; arranged ; &c. : also (Fr. sortir) to come out or issue in a particular man-ner: sortal is an adjective introduced and explained below by Locke : sortance, suitableness ; agreement.

I have written the more boldly unto you in some sort, as putting you in mind. Roin. xv. 15.

That I may laugh at her in equal sort As she doth laugh at me, and makes my pain her sport. Spenser's Sonnets.

Flowers, in such »ort worn, can neither be smelt nor seen well by those that wear them. Hooker.

The one being a thing that belongeth generally unto all ; the other, such as none but the wiser and more judicious sort can perform. Id.

I have bought Golden opinions from all sort* of people.

Shakspeare.

Mine eyes are full of tears : I cannot see ; And yet salt water blinds them not so much, But they can see a sort of traitors here. Id.

Is signior Montanto returned from the wars ? — I know none of that name, lady ; there was none such in the army of any sort. Id.

Make a lottery,

And by decree let blockish Ajax Draw the sort to fight with Hector. Id.

I come to thee for charitable licence, To sort our nobles from our common men. Id.

Here doth he wish his person, with such power As might hold sortance with his quality. The which he could not levy. Id. Henry IV.

And so far am I glad it did so sort, As this their jangling I esteem a sport Shaks<t>ea>e

The illiberality of parents towards their children, makes them base, and sort with any company.

Bacon.

A man cannot speak to a son but as a father ; whereas a friend may speak as the case requires, and not as it sorteth with the person. Id.

Princes cannot gather this fruit, except they raise some persons to be companions ; which many times sorteth to inconvenience. Id.

For, when she sorts things present with things

past, And thereby things to come doth oft foresee ;

When she doth doubt at first, and choose at last, These acts her own, without her body, be. Davits.

Send his mother to his father's house, That he may sort ner out a worthy spouse.

Chapman.

The slips of their vines hare been brought into Spain, but they have not sorted to the same purpose as in their native country.

Abbot's Description of tJie World.

To Adam in what sort shall I appear? Milton.

The first sˆrt by their own suggestion fell. Id.

Among unequals, what society Can sort, what harmony, or true delight? Which must be mutual, in proportion due Given and received. Id. Paradise Litft

The Creator calling forth by name His mighty angels, gave them several charge, As sorted best with present things. Id.

The swain perceiving, by her words ill sorted, That she was wholly from herself transported.

Browne.

A sort of lusty shepherds strive. Walter.

A piece of cloth made of white and black threads, though the whole appear neither white nor black, but gray, yet each remains what it

was before, if the threads were pulled asunder, and torted each color by itself. Boyle.

A substantial and unaffected piety not only gives a man a credit amongst the sober and virtuous, but even among the vicious sort of men. Tiltotion.

I shall not be wholly without praise, if in some tort \ have copied his stile. Dryden.

Endeavouring to make the signification of specific names clear, they make their specifick ideas of the torts of substances of a few of those simple ideas found in them. Locke.

The number of simple ideas, that make the nominal essence of the lowest species, or first sorting of individuals, depends on the mind of man. Id.

As things are ranked under names, into sorts or species, only as they agree to certain abstract ideas, the essence of each sort comes to be nothing but that idea which the sortal, if I may so call it from sort, as I do general from genus, name stands for. Id.

These three sorts of poems should differ in their numbers, designs, and every thought. « Walsh.

Nor do metals only sort and herd with metals in the earth, and minerals with minerals ; but both in common together. Woodward.

Hospitality to the better tort, and charity to the poor ; two virtues that are never exercised so well as when they accompany each other.

Atterbury's Sermons.

For different stiles with different subjects tort, As several garbs with country, tow n, and court.

Pope.

SORTILEGE, was an ancient species of divination performed by sortes or lots. The sortes prenestinae, famous in antiquity, consisted in putting a number of letters, or even whole words, into an urn ; and then, after shaking them together, they were thrown on the ground ; and whatever sentences could be made out from them constituted the answer of the oracle. To this method of divination succeeded that which has been called sortes Homerianae and sortes Virgilianae, a

mode of enquiring into futurity which undoubtedly took its rise from a general custom of the oracular priests of delivering their answers in verse; it subsisted a long time among the Greeks and Romans ; and being from them adopted by the Christians, it was not till after a long succession of centuries that it became exploded. Among the Romans it consisted in opening some celebrated poet at ran-dom, and among the Christians the Scriptures, and drawing, from the first passage that presented itself to the eye, a prognostic of what would be-fal one's self or others, or direction for conduct when under any exigency. There is good evidence that this was not confined to the vulgar ; the greatest persons, philosophers of the best re-pute, admitted this superstition. Socrates himself was not free of it ; for when in prison, hearing this line of Homer,

Within three days I Phthia's shore shall see, he immediately said, within three days I shall be

out "of the world ; gathering it from the double mean in 'j; of the word Phthia, which in Greek is both the name of a country and signifies corruption or death. This prediction, addressed to /Eschinus, was not easily forgotten, as it was verified. When this superstition passed from paganism into Christianity, the Christians had two methods of consulting the divine will fron. the Scriptures ; the one casually to open the di-vine writings, and take their direction,, as above mentioned ; the other, to go to church with a purpose of receiving, as a declaration of the will of heaven, the words of the Scripture which were singing at the instant of entrance. This unwarrantable practice of enquiring into futurity prevailed very generally in England till the beginning of the eighteenth century; and sometimes the books of Scripture, and sometimes the poems of Virgil, were consulted for oracular responses. One remarkable instance, or rather two, happened to king Charles I. and lord viscount Falkland. See CARY. Several, whose devotion has not always been regulated by judgment, have pursued this method of divination ; and have generally observed that the consequence has been despair or presumption. To such we beg leave to recommend one passage in Scripture, ' thou shall not tempt the Lord thy God.'

SORY, in natural history, a fossil substance much spoken of by the ancients, and sometimes, but erroneously, supposed to be now lost. It is firm and not brittle, though of a spongy and cavernous structure, and is considerably heavy. It is found in masses of no regular shape or size, some being roundish, others angular or flatted, and some of the

size of a walnut, others of many pounds weight. It feels very harsh and rough to the touch, and is covered with no investment coat or crust, but shows its natural surface, which is always corrugated or wrinkled, and usually full of small protuberances and cavities; and, when broken, is found to be of a rugged and spongy structure within. Its natural color is a rusty black ; but it is sometimes reddish and sometimes bluish : and is commonly stained, in different places, with spots of a bluish or rust color, when black, and of a greenish hue when it is of a reddish color : in the places where it is free from these, it is usually somewhat bright and sparkling. It is of an acrid and disagreeable taste, and of a strong and nauseous smell ; put into the fire it burns to a deep purple ; and, if boiled in water, a great part of it becomes dissolved in it ; and this may again be separated from the water by evaporation and crystallisation, and then appears in the form of pure blue vitriol, forming regular rhomboidal crystals, and tinging iron to a copper-color, on being first wetted and then rubbed upon it.

It is still found in many parts of the Turkish dominions, particularly in Gallo-Graecia ; as also in some parts of Germany. In this country it is boiled for the blue vitriol it contains. In Turkey it is mixed with lime, and made into a paste with water, which is laid on such parts of the body as they would eradicate the hair from, and effects that purpose in a very few minutes. In the eastern nations, where it is thus used, it is • known by the name of rusma. The ancients

‘i&ed tt to take off pimples, and put a piece of it into a hollow tooth, as a remedy for the tooth-ache. There can be no doubt of their sory being the same substance -with this ; since Dioscorides has described it to be blackish in color, full of small cavities, moist on the surface (as ours always is in moist weather), and of a disagreeable taste and smell. This substance, as also the chalcitis, misy, and mebnteria, are all properly ores of vitriol, the particles of those salts b?ing so

perfectly blended iu them as not to be at all distinguishable to the naked eye, yet being al-ways regularly separable from them by water, which is to the saline ores what fire is to those of the metalline kind. — Hill's History of Fossils, p. 606.

SOSIGENES, a celebrated mathematician of Egypt, who flourished in the time of Julius Cae-sar, and was employed by him in reforming the Roman Kalendar, which it stood very much in need of. Without detracting therefore from Cae-sar's merit in forming the plan of that chronological reform, the merit of the execution belongs to Sosigenes, who nourished about A. A. C. 45, when the Julian year or period commenced. His works on astronomy and mathematics are lost.

SOSILUS, a learned Spartan writer who flourished in the time of Hannibal, with whom he was very intimate, taught him Greek, and wrote the history of that great man's life, which is lost. — Corn. Nepos.

SOSI PATER, a grammarian, who flourished in the reign of Honorius. He published five books of observations on grammar, but they are not extant.

SOSS, v. n. Fr. secousse. A cant word. To sit lazily on a chair; to fall at once into a chair.

The winter sky began to frown ; Poor Stella must pack off to town ; From wholesome exercise and air To ioislng in an easy chair. Swift.

SOSTHENES, the chief ruler of the Jewish synagogue at Corinth, who, upon Gallio's dismissing the accusation of the Jews against Paul, as groundless, was seized by the Greeks and severely beaten, in presence of the deputy. Some think that he was conveited, and that he is the person whose name is joined with Paul's in the salutation of the 1st Epistle to the Corinthians, and whom he honors with the title of a brother.

SOSTI, a town of Naples, in Calabria Ultra, ten miles south of Squillace.

SOSTRATUS, the son of Dexiphanes, a celebrated architect, born at Cnidos, who flourished in the reign of Ptolemy Philadelphus, and was employed by that monarch to erect the Pharos of Alexandria. This he did to great perfection, and was well paid for it ; yet he endeavoured, by a trick, to defraud Ptolemy of the honor, and as-sume it to himself: but this measure had only served to perpetuate the memory of his own vil-lany.

SOSVA, the name of two considerable rivers of Tobolsk, in Asiatic Russia. The first rises in the Ourals, about 65° N. lat., and, running almost due east, falls into the Obi, near Beresof, after a course of about 160 miles. It receives a smaller river of the same name, called the Little

ut xauuu.

)T, n. s. v. n. & v. «.-\ Sax. pot ; Fr. sot ; T'TISH, adj. f Belg. sot; Teut. soti.

T'TISHLY, adv. ? A blockhead ; a dull,

T'TISHNESS, n.s. J ignorant, stupid, fel-

Sosva. The other rises in the same chain or mountains, but somewhat farther to the south ; and, after running southwards about 200 miles, joins the Sosva, and the united stream takes the name of Tauda.

SOT, n. s. v. n. & v. «.^ Sax. pot ; Fr. sot ;

SOT'TISH,

SOT'TISHLY,

SOT'TISHNESS,

low ; a drunkard : to stupify ; infatuate ; cause to tipple : tipple : the adjective, adverb, and noun substantive, that follow, corresponding.

Either our braggs

Were crackt of kitchen trulls, or his description Proved us unspeaking sots. Shakspeare.

All's but naught :

Patience is sottish, and impatience does Become a dog that's mad.

Id. Antony and Cleopatra.

Upon the report of his approach more than hah fell away and dispersed ; the residue, being more desperaie or more sottish, did

abide in the field, o whom many were slain. Hayward.

Northumberland, sottishly mad with over great fortune, procured the king, by his letters patent under the great seal, to appoint the lady Jane to succeed him in the inheritance of the crown. Hayward.

Soul-blinded sots, that creep In dirt, and never saw the wonders of the deep.

Sometimes phlegm putrifies into sottishness, sottish ness into an ignorance or neglect of all religion.

Holidav.

The inhabitants of Soldania in Africk are so sottish and grossly ignorant, that they differ very little from brutes. Wilkins.

He gained a king, Ahaz his sottish conqueror. Milton.

Atheism is impudent in pretending to philosophy ; and superstition sottishly ignorant, in fancying that the knowledge of nature tends to irreligion.

Glaniilie. Every sign That calls the staring sots to nasty wine.

Roscommon. The potion

Turns his brain and stupifies his mind ; The sotted moon-calf gapes. Dryden

Tis sottish to offer at things that cannot be brought about. L'Estrange.

Tell him that no history or antiquity can match his conduct ; and presently the sot, because he knows neither history nor antiquity, shall begin to measure himself by himself, which is the only sure way for him not to fall short. South.

Few consider what a degree of sottishness and confirmed ignorance men may sin themselves into. Id.

A surly ill-bred lord,

That chides and snaps her up at every word ; A brutal sot, who, while she holds his head, With drunken filth L>edaubs the nuptial bed.

Granville.

So sottishly to lose the purest pleasures and com • forts of this world, and forego the expectation of immortality in another ; and so desperately to run the risk of dwelling with everlasting burnings, plainly discovers itself to be the most pernicious folly and deplorable madness in the world. Bentley.

The first part of the text, the folly and sottishness ol atheism, will come home to their case since they make such a noisy pretence to wit and sagacity. Id. How ignorant are sottish pretenders to astrology !

Sin/!.

SOTADEA CARMINA, a name yiven to serpentine verses, which can be read either way (see SERPENTINE VERSES); such as the following: —

Roma tibi subito motibus ibit amor.

Si bene te tua laus taxat, sua laute tenebis. It was also a name given to all obscene poems; from

SOTADES, a Greek poet of Thrace, who delighted in that sort of poetry. He even wrote a poem in praise of an unnatural crime to which he was addicted. At last he got what he merited ; for, writing a satirical poem against Ptolemy Philadelphus, he was put into a cage of lead, and thrown into the Red Sea.

SOTER, Gr. 2 wr»jp, Saviour, a name assumed by the first Ptolemy of Egypt, and the first Antiochus of Syria. See EGYPT.

SOTERIA, in antiquity, sacrifices offered to the gods, the saviours, for delivering a person from danger ; as also poetical pieces composed for the same purpose.

SOTERICUS, a poet and historian who flourished in the reign of Dioclesian. He wrote a panegyric on that emperor, and a Life of Apol-loniusTyranieus. His works were much esteemed, but are now lost, except a few fragments, preserved by the scholiast of Lycophron.

SOTERUS (St.), bishop of Rome, who sue-ceeded Anicetus, A. D. 168, and suffered martyrdom in 177, during the persecution under Marcus Aurelius. according to Dr. Watkins. But. Mr. Marcel places his accession to the bishopric in 175, and his martyrdom in 179 ; in which dates Alstedius agrees with him. Such differences among chronologists, in modern history, are unaccountable.

SOTIATES, an ancient people of Gaul, conquered by Caesar. — Caes. de Bel. Gal. iii. c. 20, 21 .

SOTO (Dominic), a learned Soanish Dominican, born at Segovia in 1494. Ill distinguished himself as a theologian, and was one of the most active and esteemed members of the council of Trent. He was appointed confessor to Charles V. ; and died in 1560, aged sixty-six. His works are numerous.

SOU BIS E (John de Parthenay), lord of. He was a distinguished hero among the Protestants. In 1562 he was appointed by the prince of Conde to command in the city of Lyons, which he defended most effectually, and performed many great actions there.

SOUBISE (Benjamin de Rohan), duke of, grandson of the preceding, by his celebrated daughter Catherine de Parthenay. He vigorously supported the Protestants, and assisted his brother the duke of Rohan in all his enterprises for that purpose, particularly during the siege of Rochelle. In 1621 he held out the siese of St. Jean d'Anyeli, against an army commanded by Louis XIII., and when obliged to surrender received a pardon. Yet soon after he took Royan ; and in 1622 took Oleron, and reduced the whole country of Lower Poitou ; but, the fortune of war afterwards changing, he took refuge in England, where he procured a powerful supply to the Protestants in Rochelle ; and where he continued till Vie died.

SOUCHAI (John Baptist), a learned French writer, born at St. Amand, near Yendome, ir

K87. In 1720 he was elected a membei of tne Academy of Inscriptions, and furnished several learned dissertations, which are preserved in their Memoirs. He was also canon of Rodez, counsellor to the king, and professor of eloquence in the Royal College. He died in 1780.

SOUDAN, a werd in the language of Negro-land, signifying the country of the Negroes. See CASHNA and NEGROLAND.

SOUDAN, a country of Interior Africa, described as lying between Upper Egypt and Sennaar. Browne places it between lat. 11° and 16° N., and between long. 26° and 30° E. On the north it is bounded by a desert, which separates it from Egypt ; on the east by Kordofan, which is now subject to Soudan, and lies between it and Sennaar ; and on the south and east by countries of which the names are hardly known. Mr. Browne visited Soudan in hopes of being able to trace the Bahr el Abad, or true Nile, to its source, but was disappointed ; the sultan, a cruel and capricious tyrant, detained him a prisoner at large about three years. Soudan, or Dai-fur, abounds with towns or villages, ill built of clay, and none of them very large. The perennial rains, which fall in Darfur from the middle of June till the middle of September, generally both frequent and violent, suddenly invest the face of the country, till then dry and sterile, with a delightful verdure. Except where the rocky nature of the soil absolutely impedes vegetation, wood is found in great quantity ; nor are the natives assiduous to clear the ground, even where it is designed for the cultivation of grain. As soon as the rains begin, the ‘proprietor, and all the assistants he can collect, go out to the field, and having made holes, at about two feet distant with a kind of hoe, over all the ground he occupies, the dokn, a kind ot millet, is thrown into them, and covered with the foot. The time for sowing the wheat is nearly the same. The dokn remains scarcely two months before it is ripe, the wheat about three. The animals are the same as in other parts of Africa in the same latitude. Though the Furians breed horses, and purchase very fine ones in Dongola, and from the Arabs east of the Nile, the ass is more used for riding ; and an Egyptian ass (for the asses of Darfur are diminutive and indocile like those of Britain) fetches from the value of one to that of three slaves. The villages are infested with hyenas ; and in the unfrequented parts of the country are elephants, rhinoceroses, lions, leopards, and all the other quadrupeds of Africa. The Arabs often eat the flesh of lions and leopards, and sometimes they so completely tame those animals as to carry them loose into the market place. Our author tamed two lions, of which one acquired most of the habits of a dog. He satiated himself twice a-week with the offal of the butchers, and then commonly slept for several hours successively. When food was given them, they both grew ferocious towards each other, and towards any one who approached them. Except at that time, though both were males, he never saw them disagree, nor show any sign of ferocity towards the human race. Even lambs passed them unmolested. Among the birds, the vultur perenopterus, or white-headed vulture, is most worthy of no-SOUDAN.

tice. It is of surprising strength, and is said by the natives to be very Ions; lived. ‘ I have lodged,’ says Mr. Browne, ‘ a complete charge of large shot, at about fifty yards distance, in the body of this bird : it seemed to have no effect on him, as he flew to a considerable distance, and continued walking aftenvards. I then discharged the second barrel, which was loaded with ball ; this broke his wing; butr on my advancing to seize him, he fought with great fury with the other. There are many thousands of them in the inhabited district. They divide the field with the hyena : what carrion the latter leaves at night, the former come in crowds to feed on in the day. Near the extremity of each wing is a horny substance, like the spur of an old cock. It is strong and sharp, and a formidable instrument of attack. Some fluid exudes from this bird that smells like musk, but from what part I am uncertain.’ The serpents found in Soudan are the same as in Egypt ; but the natives have not the art of charming them, like the Egyptians. The locust of Arabia is very common, and is frequently roasted and eaten, particularly by the slaves.

In Darfur there seems to be a scarcity of me-tals ; but in its neighbourhood all kinds are to be found. The copper brought by the merchants from the territories of certain idolatrous tribes bordering on Fur is of the finest quality, in color resembling that of China, and appears to contain a portion of zinc, being of the same pale hue. Iron is found in abundance. Silver, lead, and tin, they receive from Egypt ; but of gold, in the countries to the east and west, the supply is abundant. Alabaster, and various kinds of mar-ble, are found within the limits of Fur, as is fossil salt within a certain district ; and there is a sufficient supply of nitre. Of our European trees, very few exist in Darfur. The characteristic marks of those species which most abound there, are their sharp thorns, and the solid and unperishable quality of their substance. They seem to be much the same as those of Abyssinia. There is a small tree called enneb, to the fruit of which they have given the name of grapes. It bears leaves of a light green hue; and the fruit, which is of a purple color, is attached, not in bunches but singly, to the smaller branches, and interspersed among the leaves. The internal structure of the fruit is not very unlike the ‘ grape, which it also resembles in size ; but the pulp is of a red hue, and the taste is strongly astringent. The water-melon (cucurbita citrullus) grows wild over almost all the cultivable lands, and ripens as the dorn is removed. In this state it does not attain a large size. As it ripens the camels, asses, &c.. are turned to feed on it. The seeds, as they grow blackish,

are collected to make a kind of tar, kutran. Those plants of the melon which receive artificial culture grow to a large size, and are of exquisite flavor. Tobacco is produced in abundance ; and cochineal is fo»md in Darfur, or its neighbourhood. The '•.arvest is conducted very simply. The women and slaves break off the ears with their hands, leaving the straw standing, which is afterwards applied to buildings, Sac. They then put them in baskets, and carry them away. When threshed, they expose the grain to the sun till it become

quite dry ; after this a hole in the earth is prepared, the bottom and sides of which are covered with chaff to exclude the vermin. This cavity or magazine is filled with grain, which is then covered with chaff, and afterwards with earth, whereby it is preserved tolerably well. In using it for food, they grind it, boil it, and eat it with milk, or with a sauce made of dried meat boiled with onions, &c. The Furians use little butter. The monarch can do nothing contrary to the koran, but he may do more than the laws will authorise ; and, as there is no council to control or assist him, his power is despotic. He speaks in public of the soil and its productions as his personal property, and of the people "as little else than his slaves. His power in the provinces is delegated to officers, called meleks, who possess an authority equally arbitrary. At the beginning of the harif, or wet season, which is the moment for sowing the corn, the king goes out with his meleks and the rest of his train ; and while the people turn up the ground and sow the seed, he also makes several holes with his own hand. This custom calls to the mind a practice of the Egyptian kings mentioned by Herodotus. The population is not large. An army of 2000 men was spoken of, when Mr. Browne was in the country, as a great one ; and he does not think that the number of souls within the empire exceeds 200,000. The troops are not famed for skill, courage, or perseverance. In their campaigns much reliance is placed on the Arabs who accompany them, and who are properly tributaries rather than subjects of the sultan. One energy of barbarism they possess, in common with other savages, that of being able to endure hunger and thirst. In their persons the Furians are not remarkable for cleanliness. Though observing as Mahometans all the superstitious formalities of prayer, their hair is rarely combed, or their bodies completely washed. The hair of the pubes and axillae it is usual to exterminate. They have no soap, but a kind of farinaceous paste is prepared, which being applied with but-ter to the skin, and rubbed continually till it becomes dry, not only improves its appearance, but removes from it accidental sores, and the effect of continued transpiration. The female slaves are dexterous in the application of it; and to undergo this operation is one

of the refine-ments of African sensuality. Nothing resembling current coin is found in Soudan, unless it be small tin rings, the value of which is in some de-gree arbitrary. The Austrian dollars, and other silver coins brought from Egypt, are all sold as ornaments for the women. The disposition of the Furians is cheerful ; and that gravity and reserve which the precepts of Mahometanism inspire seems by no means to sit easy on them. A government perfectly despotic, and not ill administered, yet forms no adequate restraint to their violent passions. Prone to inebriation, but unprovided with materials or ingenuity to prepare any other fermented liquor than buza, with this alone their convivial excesses are committed. But though the sultan published an ordinance (March 1795), forbidding the use of that liquor under pain of death, the plurality, though less publicly than before, still indulge themselves in

it. A company often sits from sunrise to sun-set, drinking and conversing, till a single man sometimes carries off nearly two gallons of that liquor. The buza has, however, a diuretic and diaphoretic tendency, which precludes any dan-ger from these excesses. In this country dancing is practised by the men as well as the women, and they often dance promiscuously. The vices of thieving, lying, and cheating in bargains, are here almost universal. No property, whether considerable or trifling, is safe out of the sight of the owner, nor indeed scarcely in it, unless he be stronger than the thief. In buying and selling, the parent glories in deceiving the son, and the son the parent; and God and the prophet are hourly invoked, to confirm the most palpable frauds and falsehoods. The privilege of polygamy the people of Soudan push to the extreme. By their law, they are allowed four free women, and as many slaves as they can maintain ; but the Furians take both free women and slaves without limitation. The sultan has more than 100 free women, and many of the meleks have from twenty to thirty. In their indulgence with women they pay little

regard to restraint or decency. The form of the houses secures no great secrecy to what is carried on within them; yet the concealment which is thus offered is not always sought. The shade of a tree or long grass is the sole temple required for the sacrifices to the Cyprian goddess. In the course of licentious indulgence, father and daughter, son and mother, are sometimes mingled ; and the relations of brother and sister are exchanged for closer intercourse. About 150 years ago, previously to the establishment of Islamism, the people of Fur seem to have formed wandering tribes ; in which state they probably contracted lliese monstrous habits of immorality. In their persons they differ from the negroes of the coast of Guinea. Their hair is generally short and woolly, though some have it of the length of eight or ten inches, which they esteem a beauty. Their complexion is for the most part perfectly black. The Arabs, who are numerous within the empire, retain their distinction of feature, color, and language. They most commonly intermarry with each other. The slaves, which are brought from the country they call Fertit (land of idolaters), perfectly resemble those of Guinea, and their language is peculiar to themselves. The revenues of the crown consist of a duty on all merchandise imported, which, in many instances, amounts to nearly a tenth ; of a tax on all slaves exported ; of all forfeitures for misdemeanors ; of a tenth on all merchandise, especially slaves ; of a tribute paid by the Arabs, who breed oxen, horses, camels, sheep ; of a quantity of corn paid annually by every village ; besides many valuable presents. The king is chief merchant in the country ; and not only despatches with every caravan to Egypt a great quantity of his own merchandise, but also employs his slaves to trade with the goods of Egypt on his own account, in the countries adjacent. The commodities brought by the caravans from Egypt are : — 1 . Amber beads. 2. Tin. 3. Coral beads. 4. Cornelian beads. 5. False cornelians. 6. Beads of Venice. 7. Agate. 8. Kings, silver

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and brass, for the ancles and wrists. 9. Carpets 10. Blue cotton cloths. 11. White cotton ditto. 12. Indian muslins and cottons. 13. Blue and white cloths of Egypt, called melays. 14. Sword-blades from Cairo. 15. Small looking-glasses. 16. Copper face-pieces, OP defensive armour for the horses' heads. 17. Fire arms. 18. Kclihe1 for the eyes. 19. Rhea, a kind of moss from European Turkey, for food and a scent. 20. She, a species of absynthium, for its odor, and as a remedy; both the last sell to advantage. 21. Coffee. 22. Nutmegs. 23. Dufr, the shell of a fish in the Red Sea, used for perfume. 24. Silk unwrought. 25. Wire, brass and iron. 26. Coarse glass beads, made at Jerusalem. 27. Copper culinary utensils, for which the demand is small. 28. Old copper for reworking. 29. Small red caps of Barbary. 30. Thread linens of Egypt.

31. Light French cloths. 32. Silks of Scio. 33. Silk and cotton pieces of Aleppo, Damascus, &c. 34. Shoes of red leather. 35 Black pepper. 36. Writing paper, a considerable article. 37. Soap of Syria. The goods transported into Egypt are — 1. Slaves, male and female. 2. Camels. 3. Ivory. 4. Horns of the rhinoceros. 5. Teeth of the hippopotamus. 6 Ostrich feathers. 7. Whips of the hippopotamus's hide. 8. Gum. 9. Pimento. 10. Tamarinds, made into round cakes. 11. Leather sacks for water and dry articles. 12. Peroquets in abundance, and some monkeys and Guinea fowls. 13. Copper, white, in small quantity.

SOVEREIGN, adj. & n. s. j Fr. souverain ;

SOVEREIGNLY, adv. > Ital. sovrano ;

SOVEREIGNTY, n.s. j Span, sobraro.

All of Lat. supernus. Supreme in power or influence; having no superior: hence efficacious ; predominant : a sovereign is a supreme lord : the adverb and noun substantive following cor—

spond.

As teaching bringeth us to know that God is our supreme truth ; so prayer testifieth that we acknowledge him our sovereign good. Hooker.

You my sovereign lady, Causeless have laid disgraces on my head.

Slut k. < peare . Henry IV.

The most soverelyn prescription in Galen is but empirick ; and, to this preservative, of no better re-port than a horse-drench. LI. Curiolanus.

O, let my sovereign turn away his face, And bid his ears a little while be deaf. Shakspeure.

Give me pardon,

That I, your vassal, have employed and pained Your unknown sovreignty. Id.

A water we call water of paradise, by that we do to it, is made very sovereign for health. Bacon.

To give laws unto at people to institute magistrates and officers over them ; to punish and pardon malefactors ; to have the sole authority of making war and peace, are the true marks of tovereignty. Daoies.

Like the scum starved men did draw From parboiled shoes and boots, and all the rest Which were with any sovereign fatness blest. Donne.

A mighty hunter thence he shall be stiled Before the Lord ; as in despite of heaven, Or from heaven claiming second sovereignty. Milton.

None of us who now thy grace implore, But held the rank of sovereign queen before ; Till giddy chance, whose malice never bears That mortal bliss should last for length of years, Cast us down headlong from our high estate.

Dry den.

Be cool, my friend, and hear my muse dispense Some torereign comforts drawn from common sense.

Id.

By my sovereign, and his fate, I swear, Renowned for faith in peace, for force in war, Oft our alliance other lands desired. Id.

Jove's own tree,

That holds the woods in zfwful sovereignty, Requires a depth of lodging in the ground ; High as his topmast boughs to heaven ascend, So low his roots to hell's dominion tend. Id.

I will foresee, whene'er thy suit I grant, That I my much-loved sovereignty shall want, And her new beauty may thy heart invade. Id.

Whether Esau, then, were a vassal to Jacob, and Jacob his sovereign prince by birthright, I leave the reader to judge. Locke.

Nothing does so gratify a haughty humour as this piece of usurped sovereignty over our brethren.

Government of the Tongue.

Let us above all things possess our souls with aw-ful apprehensions of the -majesty and sovereignty of God. Rogers.

Alexander's Grecian colonies in the Indies were almost exterminated by Sandrocottus ; Seleucus recovered the tuvereignty in some degree, but was forced to abandon to him the country along the Indus.

Arbuthnot on Coins.

SOVEREIGN, in matters of government, is applied to the supreme magistrate or magistrates of an independent government or state ; because their authority is only bounded by the laws of God and the laws of the state ; such are kings, princes, &c. See KING, MONARCH, PREROGATIVE, &c.

SOVEREIGN, the name of a modern as well as an ancient gold coin of Great Britain. In Henry I.'s reign a coin of this denomination was issued of 22s. value, and one twenty-fourth part of the weight of a pound of gold. In 34 Henry VIII. sovereigns were coined of 20s. value ; but, anno 4 & 6 Edw. VI., they passed first for 24s. and then for 30s. By stat. 56 Geo. III. c. 68, sec. 11, declaring the gold coin to be the only legal ten-der, and that the same should be of the weight and fineness of the mint indenture, as 'to the denominations then in use, it was provided that gold coins of any new denomination should be of like standard in fineness, and proportionate weight. Sovereigns to pass for 20s., and half sovereigns to pass for 10s., were accordingly coined, weighing ˆ parts of a guinea and half guinea respectively.

SOVEREIGN POWER, or SOVEREIGNTY, is the power of making laws ; for, wherever that power resides, all others must conform to it, and be directed by it, whatever appearance the outward form and administration of the government may put on. • For it is at any time in the option of the legislature to alter that form and administration by a new edict or rule, and to put the execution of the laws into whatever hands it pleases ; and all the other powers of the state must obey the legislative power in the execution of their several functions, or else the constitution is at an end. In our constitution the law ascribes to the king the attribute of sovereignty; but that is to be understood in a qualified sense, i. e. as supreme magistrate, not as sole legislator ; as the legislative power is veste'd in the king, lords,

and commons, not in any of the three estates alone.

SOUFFEL, a river of France, which runs into the Rhine, four miles below Strasburg.

SOUFFLOT (James Germain), a celebrated French' architect, born in 1713. He improved himself in Italy, and, on his return to France, was appointed superintendant of the royal buildings, and those of Marly, the Thuilleries, &c. His greatest work vras the church of St. Gene-vieve in Paris. He died in 1780.

SOUFFRIER, the most northerly of the lofty chain of mountains running through the centre of the island St. Vincent, and the highest of the whole, as computed by the most accurate survey that has as yet been taken. For some time previous to April 1812, this memorable mountain had indicated much disquietude ; and, from the extraordinary frequency and violence of earthquakes (which are calculated to have exceeded 200 within the preceding year), had portended some great movement or eruption. ' On Monday 27th April, just as the plantation bells rung twelve at noon, an abrupt and dreadful crash from the mountain, with a severe concussion of the earth, and tremulous noise in the air, alarmed all around it. The resurrection of this fiery furnace was proclaimed in a moment by a vast column of thick, black, ropy smoke, like that of an immense glass-house, bursting forth at once, and mounting to the sky; showering down sand, with gritty calcined particles of earth and favilla mixed, on all below. This, driven before the wind towards Wallibon and Morne Ronde, darkened the air like a cataraet of rain, and covered the ridges, woods, and cane pieces, with light gray-colored ashes, resembling snow when slightly covered by dust. As the eruption increased, this continual shower expanded, destroy ing every appearance of vegetation. At night a very considerable degree of ignition was observed on the lips of the crater ; but it is not asserted that there was as yet any visible ascension of flame. The same awful scene presented itself on Tuesday; the fall of favilla and calcined pebbles still increasing, and the compact pitchy column from the crater rising perpendicularly to an immense height, with a noise at intervals like the muttering of distant thunder. On Wednesday the 29th, all these menacing symptoms of horror and combustion still gathered more thick and terrific for miles around the dismal and half obscured mountain. The prodigious column shot up with quicker motion, dilating as it rose like a balloon. The sun appeared in total eclipse, and shed a meridian twilight over the island that aggravated

the gloom of the scene, now completely powdered over with falling particles. It was evident that the crisis was as yet to come; that the burning fluid was struggling for a vent, and laboring to throw off the superincumbent strata and obstructions, which suppressed the ignivomous torrent. At night it was manifest that it had greatly disengaged itself from its burden, by the appearance of fire flashing now and then, flaking above the mouth of the crater On Thursday 30th of April, the noise from the mountain had increased, and at times was incessant. About four o'clock it became still more

alarming, and, just before sun-set, the clouds reflected a bright copper color, suffused with fire. Scarcely had the day closed, when the flame burst at length pyramidically from the crater, through the mass of smoke; the rolling of the thunder became more awful and deafening; electric flashes quickly succeeded, attended with loud claps ; and now, indeed, the hurly-burly began. Those only who have witnessed such a sight can form any idea of the magnificence and variety of the lightning and electric flashes; some forked zig-zag, playing across the perpendicular column from the crater ; others shooting upwards from the mouth, like rockets of the most dazzling lustre ; others like shells with their trailing fuses, flying in different parabolas, with the most vivid scintillations from the dark sanguine column, which now seemed inflexible and immovable by the wind. Shortly after seven P.M. the mighty caldron was seen to simmer, and the ebullition of lava to break out on the northwest side. This, immediately after boiling over the orifice, and flowing a short way, was opposed by the acclivity of a higher point of land, over which it was impelled by the immense tide of liquified fire that dreve it on, forming the figure V in grand illumination, Sometimes, when the ebullition slackened, or was insufficient to urge it over the obstructing hill, it recoiled back, like a refluent billow from the rock, and then again rushed forward, impelled by fresh supplies, and scaling every obstacle, carrying rocks

and woods together in its course down the slope of the mountain, until it precipitated itself down some vast ravine, concealed from the view by the intervening ridges of Morne Ronde. Vast globular bodies of fire were seen projected from the fiery furnace, and bursting, fell back into it, or over it, on the surrounding bushes, which were instantly set in flames. About four hours from the lava boiling over the crater it reached the sea, as could be observed from the reflection of the fire and the electric flashes attending it. About half-past one another stream of lava was seen descending to the east, towards Rabacca. At this time the first earthquake was felt ; this was followed by showers of cinders, that fell with the hissing noise of hail during two hours. At three o'clock a rolling on the roofs of the houses indicated a fall of stones, which soon thickened, and at length descended in a rain of intermingled fire, that threatened at once the fate of Pompeii or Herculaneum. The Crackling and coruscations from the crater at this period exceeded all that had yet passed. The eyes were struck with, momentary blindness, and the ears stunned with the glomeration of sounds. People sought shelter in cellars, under rocks, or any where, for every where was nearly the same ; and the miserable negroes, flying from their huts, were knocked down or wounded, and many milled in the open air. Several houses were set on fire. The estates situate in the immediate vicinity seemed doomed to destruction. Had the stones that fell been heavy in proportion to their size, not a living creature could have escaped. This dreadful rain of stones and fire lasted upwards of an hour, and was again succeeded by cinders from three till six o'clock in

the morning. Earthquake followed earthquah almost momentarily, or rather the whole of thi part of the island was in a state of continued oscillation ; not agitated by shocks, vertical or horizontal; but undulated, like water shaken in a bowl. The break of day, if such it could be called, was truly terrific. Darkness enveloped the mountain, and an impenetrable haze hung over the sea, with black sluggish clouds of a sulphureous cast. The whole island was covered with favilla, cinders, scoria, and broken masses of volcanic matter. It was not until the afternoon that the muttering noise of the mountain sunk gradually into a solemn yet suspicious silence.' Such are the particulars of this sublime and tremendous scene, from commencement to catastrophe, as detailed in the Edinburgh Gazetteer.

SOUGH, n. $. Fr. sous. A subterraneous drain.

Yet could not such mines, without great pains ami charges, if at all, be

wrought; the delfs would be sn flown with waters, it being impossible to make any addits or soughs to drain them, thai no gins or machines could suffice to lay and keep them dry.

Ray on the Creation. Another was found in sinking a sough-pit.

Woodward.

SOUL, n.s. ~\ Saxon r3?*!; Dan. siel SOUL'ED, adj. f Isl. sual ; Goth. sal. The SOUL'LESS, £ intellectual principle or spi-SOUL'SHOT, n. s. J rit of man : hence the vital principle or power ; power ; active or actuating power; human being; intelligent being: souled is furnished with mind : soulless, wanting it ; low ; mean : soulshot is explained below.

When death was overcome, he opened heaven as well to the believing Gentiles as Jews : heaven till then was no receptacle to the souls of either.

Hooker.

Thou almost makest roe waver in my faith, To hold opinion with Pythagoras, That sou/4-of animals infuse themselves Into the trunks of men.

Shukspemre. Merchant of Venice There is some soul of goodness in things evil, Would men observingly distil it out. Shahtpeare.

Three wenches where 1 stood, cried, ' Alas, good sold!' Id. Julius Ceemr.

The poor soul sat singing by a sycamore tree, Sing all a green willow : Her hand on her bosom, her head on her knee.

Sfuikspeare.

Slave, soulless villain, dog, O rarely base ! Id. Perhaps, for want of food, the snul may pine ; But that were strange, since all things bad and good,

Since all God's creatures mortal and divine, Since God himself, is her eternal food. Varies.

He remembered them of the promises, seals, and oaths, which by publick authority had passed for concluding this marriage ; that these, being religions bonds betwixt God and their souls, could not by any

politick act of state be dissolved. Howard.

So natural is the knowledge of the soul's immortality, and of some ubi for the future reception ot it, that we find some tract or other of it in most barbarous nations. Heulyn. Thou sun, of this great world both eye and smil.

Miltmi.

Eloquence the soul, song charms the sense. Id. Charity, the soul of all the rest. Id.

Every soul in heaven shall bend the knee. Id.

SOUL.

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Join \oices. all ye living with, ye birds, That singing up to heaven-gate ascend, 13car, on your wings, and in your notes, his praise.

Id.

Keep the poor soul no longer in suspense. Your charge is such as does not need defence.

Dryden

Eartn, air, and seas, through empty space would

rowl. And heaven would fly before the driving tout. Id.

Griping, and still tenacious of thy hold, Wouldst thou the Grecian chiefs, though largely

smiled, Should give the prizes they had gained before ? Id.

The moral is the case of every soul of us.

L' Estrange.

In the Saxon times there was a funeral duty to be paid, called pecunia

sepulchralis et symbolum animse, and in Saxon soulshot. Ayliffe's Parergtm.

It is a republick ; there are in it a hundred bour-geois, and about a thousand wills. Addison's Italy.

My state of health none care to learn ; My 1 ife is here no tout's concern. Swift.

In common discourse and writing we leave out the words vegetative, sensitive, and rational ; and make the word soul serve for all these principles.

Watts.

The eyes of our souls only then begin to see, when our bodily eyes are closing. Law.

That he wants caution, he must needs confess ; But not a soul to give our arms success. Young.

The SOUL is the principle of perception, memory, intelligence, and volition in man ; which, since the earliest era of philosophy, has furnished questions of difficult investigation, and materials of keen and important controversy. See METAPHYSICS. In the fourth volume of the Memoirs of the Literary and Philosophical Society of Manchester, the reader will find a very valuable paper by Dr. Farrier, proving, by evidence apparently complete, that every part of the brain has been injured without affecting the act of thought. An abridgment of that me-moir would weaken its reasoning ; which, built on matters of fact and experience, appears to us to have shaken the modern theory of the mate-rialists from its very foundation.

As a sketch of their opinions we may observe that Dr. Priestley, rejecting the commonly received notion of majtter, as an absolutely impenetrable, inert substance, and premising, that the powers of sensation or perception and thought, as belonging to man, have never been found but in conjunction with a certain organised system of matter, maintains that those powers necessarily exist in, and depend upon, such a system. In proof of this doctrine, it is alleged that, perception and thought are not incompatible with the properties of matter, considered as a substance extended and endued with the powers of attraction and repulsion ; and, therefore, if one kind of substance be capable of supporting all the known properties of man, true philosophy, which will not authorize us to multiply causes or kinds of substance, without necessity, will forbid us to admit of any

substance in the constitution of human nature essentially different from matter. The proper seat of the powers of perception and thought, according to this writer, is the brain ; because, as far as we can judge, the faculty of thinking, and" a certain state of the

brain, always accompany and correspond to one another ; and there is no instance of any man retaining this faculty when his brain was destroyed ; and, whenever that faculty is impeded or injured, there is sufficient reason to believe that the brain is disorded in proportion. Dr. Priestley apprehends that sensation and thought necessarily result from the organization of the brain, when the powers of mere life are given to the system, and that they follow of course, as much as the circulation of the blood fallows respiration ; but he professes to have no idea at all of the manner in which the power of perception results from organization and life.

To this it has been replied that Dr. Priestley's account does not answer to the common ideas of matter, or that it is not solid extension, or an impenetrable and inert substance, which is the only matter that is the object of natural philosophy ; but something not solid, that exists in space, and so far agreeing with spirit ; and consequently, if such matter is, as he asserts, the only matter possible, it will follow, not that we have no souls distinct from our bodies, but that we have no bodies distinct from our souls, and that all in nature is spirit. Besides, it has been farther urged, that a connexion and dependence by no means prove sameness.

It has been objected also by an able writer in the Edinb. Rev., that it is unphilosophical to class perception among the qualities of matter, when it is obvious that it is by means of perception alone that we get any notion of matter or its qualities; and that it is possible, with perfect consistency, to maintain the existence of our perceptions, and to deny that of matter altogether. The other qualities of matter are perceived by us ; but perception cannot be perceived ; all we know about it is, that it is that by which we perceive every thing else. It sounds somewhat absurd and unintelligible, to say that perception is that quality of matter by which it becomes conscious of its own existence, and acquainted with its other qualities. It is plain that this is not a quality, but a knowledge of qualities ; and that the percipient must necessarily be distinct from that which is perceived by it. We muft always begin with perception ; and the followers of Berkeley will tell us that we must end there also. At all events, it certainly never entered into the head of any plain man to conceive that the faculty of

perception itself was one of the qualities with which that faculty made him acquainted ; or that it could possibly belong to a substance, which his earliest intimations and most indestructible impressions taught him to regard as something external and separate.

It is further alleged that to call perception a quality at all is a gross and unwarrantable abuse of language. Perception is an act or an event, a fact or a phenomenon, of which the percipient is conscious ; but it cannot be intelligibly conceived as a quality ; and, least of all, as a quality of that substance which is known to us as solid and extended. First, All the qualities of matter are perceived by the senses ; but the sensation itself cannot be so perceived : nor is it possible to call it an object of sense, without the grossest

perversion of expression. Secondly, All the qualities of matter have a direct reference to space or extension, and are conceived in some measure as attributes or qualities of the space within which they exist. \v hen we say that a particular body is solid, we mean merely that a certain portion of space is impenetrable ; when we say that it is colored, .we mean that the same portion of space appears of one hue, — and so of the other qualities; bat sensation or thought is never conceived to occupy space, or to characterise it ; nor can these faculties be at all conceived as definite portions of space, endued with perceptible properties. In the third place, all the primary qualities of matter are inseparable from it, and enter necessarily into its conception and definition. All matter must necessarily be conceived so extended, solid, and figured. It is obvious, however, that thought or sensation is not an inseparable attribute of matter, as by far the greater part of matter is entirely destitute of it ; and it is found in connexion with those parts which we term organized, only while they are in a certain state, which we call alive. If it be said, however, that thought may resemble those accidental qualities of matter, such as heat or color, which are not inseparable or permanent ; ihen we reply that none of these things can properly be termed matter, more than thought or sensation ; they are themselves substances, or matter

possessed of inseparable and peculiar qualities, as well as those which address themselves to the other senses. Light is a material substance, from which the quality of color is inseparable ; and heat is a material substance, which has universally the quality of exciting the sensation of warmth. If thought be allowed to be a substance, in this sense, it will remain to show that it is material, by being referrible to space, and liable to attraction, repulsion, condensation or reflection, like heat or light.

The notions of the ancients were various with regard to the seat of the soul, and the mode of its action on the body. Some have maintained that it is equally diffused through every part of it ; and others say that, whilst it influences and acts upon every part of the body, it has its principal residence in some particular part. Since it has been discovered, by the improvements in anatomy, that the nerves are the instruments of perception, and of the sensations accompanying it, and that the nerves ultimately terminate in the brain, it has been the general opinion of philosophers that the brain is the seat of the soul ; and that it perceives the images that are brought there, and external things, only by means of them. Des Cartes, observing that the pineal gland (see ANATOMY) is the only part of the brain that is single, all the other parts being double, and thinking that the soul must have one seat, was thus determined to make that gland the soul's habitation ; to which, by means of the animal spirits, intelligence is brought of all objects that affect the senses. Others have not thought pro-per to confine the habitation of the soul to the pineal gland, but to the brain in general or to , some part of it, which they call the sensorium. Even the jrreat Newton favored this oˆi-iion, though he proposes it only as a query, witS that

modesty which distinguished him no less than his great genius. ' Is not,' he says, ' the sensorium of animals the place where the sentien* substance is present, and to which the sensible species of things are brought through the nerves and brain, that there they may be perceived by the mind present in that place ? And is there not an incorporeal, living, intelligent, and omnipresent Being, who, in infinite space, as if it were in his sensorium, intimately perceives things themselves and comprehends them perfectly, as being present to them ; of which things, that principle in us which perceives and thinks, discerns only in its little sensorium, the images brought to it through the organs of the senses ? His great friend Dr. Clarke adopted the same sentiments with more confidence. In his papers to Leibnitz, we find the following passages. ' Without being present to the images of the

things perceived, the soul could not possibly perceive them. A living substance can only there perceive when it is present, either to the things themselves (as the omnipresent God is to the whole universe), or to the images of things (as the soul of man is in its proper sensory). Nothing can any more act, or be acted upon, where it is not present, than it can be where it is not. We are sure the soul cannot perceive what it is not present to, because nothing can act, 01 be acted upon, where it is not.'

Locke expresses himself in such a manner, that, for the most part, one would imagine that he thought the ideas, or images, of things, which he believed to be the immediate objects of perception, are impressions upon the mind itself; yet in some passages he rather places them in the brain, and makes them to be perceived by the mind there present. From such passages, cited by Dr. Reid (ubi infra), it may be inferred that he thought there are images of external objects conveyed to the brain. But whether he thought, with Des Cartes and Newton, that the images in the brain are perceived by the mind there present, or that they are imprinted on the mind itself, is not obvious. This hypothesis is founded on three assumptions ; and, if any one of them fail, it must fall to the ground. 1. That the soul has its seat, or, as Mr. Locke calls it, its presence-room, in the brain : 2. That images are formed in the brain of all the objects of sense : 3. That the mind or soul perceives those images in the brain ; and that it perceives not external objects immediately, bnt only perceives them by means of those images. The first assumption is not sufficiently established tc warrant our founding other principles upon it Of the second there is no proof or probability with regard to any of the objects of sense. The brain has been dissected times innumerable, by the nicest anatomists ; every part of it has been examined by the naked eye, and with the help of microscopes ; but no vestige of any external object was ever found. The brain seems to be the most improper substance that can be imagined for receiving or retaining images, being a soft, moist, medullary substance. The third assumption is as improbable, as that there are linages of external objects in the brain to be per ceived. If our powers of perception, says Dr.

Reid, be not altogether fallacious, the objects we perceive are not in our brain, but without us. — Reid's Essays on the Intellectual Powers of Man. Ess. ii. ch. 4.

SOUND, adj.Sx.udv. ~i Saxon rouV&; Swed. SOUND'LY, adv. £and ,Dan. simd ; Goth.

SOUND'NESS, n. s. J and Swed. sann ; Lat. sunns ? Hearty ; healthy ; stout ; right ; true ; fast ; solid : used also adverbially, as in the extract from Spenser : soundly and soundness fol-low these senses.

Let my heart be sound in thy statutes.

Psalm cxix. 80. He hath received him safe and sound.

Luke xv. 27.

They reserved their titles, tenures, and signiories whole and sound to themselves.

Spenser's Ireland.

The messenger approaching to him spake, But his waste words returned to him in vain ; So sound he slept that nought might him awake.

Faerie Queene.

Now when that idle dream was to him brought, Unto that elfen knight he bad him fly, Where he slept soundly, void of evil thought. Id.

Whom although to know be life, and joy to make mention of his name ; yet our soundest knowledge is to know that we know him not as indeed he is, nei-her can know him ; and our safest eloquence concerning him is silence. Hooker.

The wisest are always the readiest to acknowledge, that soundly to judge of law is the weigh-tiest thing which any man can take upon him. Id.

This presupposed, it may stand then very well with strength and

soundness of reason, even thus to answer. Id.

I am fallen out with my more headier will, To take the indisposed and sickly fit For the sound man. Shakspeare. King Lear.

He hath a heart as sound as a bell, and his tongue is the clapper -, for what his heart thinks his tongue speaks. Shakspeare.

When Duncan is asleep,

Whereto the rather shall this hard day's journey Soundly invite him. Id. Macbeth.

The doctrine of the church of England, expressed in the thirty-nine articles, is so soundly and orthodoxly settled, as cannot be questioned without extreme danger to our religion. Bacon.

They did ply

My feet and hands with cords, and to the mast With other halsers made me soundly fast.

CJtapman's Odyssey.

The men are very strong and able of body ; and therefore either give sound strokes with their clubs wherewith they fight, or else shoot strong shots with their bows. Abbot.

We can preserve Unhurt our minds, and understanding sound.

Milton.

New waked from toundest sleep, Soft on the flowery herb I found me laid In balmy sweat. Id. Paradise Lost.

Who had so often in your aid So many ways been soundly paid. Hudibras.

The king visits all around, Comforts the sick, congratulates the sound; Honours the princely chiefs. Dryden.

But Capys, and the rest of sounder mind, The fatal present to the flames designed, Or to the deep. Id.

When the succession of ideas ceases, our perception of duration ceases with it, which every one experiences whilst he sleeps soundly. Locke.

The rules are twnd and useful, and may serve your devotion. Wake.

Sound, ana yet not trivial, catechetick institution.

Felten.

Their nobility and gentry are one half ruined, banished, or converted : they all soundly feel the smart of the last Irish war. Swift.

Lesly is misled in his p'oliticks ; but he hath given proof of his soundness in religion. Id.

When a word, which originally signifies any particular object, is attributed to several other objects, on account of some evident reference or relation to the original idea, this is peculiarly called an analogical word ; so a sound or healthy pulse, a sound digestion, sound sleep, are all so called, with reference to a sound and healthy constitution ; but if you speak of sound doctrine, or sound speech, this is by way of resemblance to health, and the words are metaphorical. Watts's Logich.

As the health and strength, or weakness of our bodies, is very much owing to their methods ot treating us when we were young ; so the soundness or folly of our minds are not less owing to those first tempers and ways of thinking, which! we eagerly received from the love, tenderness, authority, and constant conversation of our mothers. Laic.

SOUND, v. a., v. n., & n. s. l?r. sonder, of Lat. sub undo, (thus the Spanish have sondear). To search with a plummet; try depth, as of a wound ; try or examine generally : as a verb neuter, to try with a sounding-line : a sound is a shallow sea, such as may be sounded.

In this secret there is a gulf, which while we live we shall never sound. Hooker.

You are, Hastings, much too shallow To sound the bottom of the after-times.

Sliakspeare. Henry IV. Has he never before sounded you in this business 1

Shakspeare. The sound of Denmark, where ships pay toll.

Camden. Wake,

Behold I come, sent from the Stygian sound, As a dire vapour that had cleft the ground, T' ingender with the night, and blast the day.

Ben Jonson.

Invites these lords, and those he meant to sound.

Daniel.

Beyond this we have no more a positive distinct notion of infinite space than a mariner has of the depth of the sea, where having let down a large portion of his sounding line, he reaches no bottom.

Locke.

I've sounded my Numidians, man by man, And find 'em ripe for a revolt. Addison's Cato. The patient being laid on a table, pass the sound Till it meet with some resistance. Sharp's Surgery.

Him young Thoosa bore, the bright increase Of Phorcys, dreaded in the sounds and seas. Pope. SOUND, n. s., v. n., &u. a.~) Fr. son; Span. SOUND'BOARD, n. s. ssonido; Lat. sonus.

SOUND'ING, adj. j A noise ; any thing

audible or perceived by the ear ; mere noise : to make a noise, or exhibit by way of sound : to cause to make a noise, or celebrate by sound : the soundboard is the part of an organ that diffuses the sound : sounding, sonorous

From you sounded out the word of the Lord.

1 Thess. i. 8.

And many nymphs about them flocking round And manv tritons which their horns did round.

Bpenter.

SOUND.

Heaps of huge words uphoarded hideously With horrid nsund, though having little sense,. And thereby wanting due intelligence, Have marred the face of goodly poesy, And made a monster of their fantasy. Id.

Why do you start, and seem to fear Things that do sound so fair? Shakspeare.

Come, sisters, cheer we up his sprights, And shew the best of our delights ; I'll charm the air to give a miund, While you perform your antick round.

Id. Macbeth.

Dash a stone against a stone in the bottom of the water, and it maketh a sound : so a long pole struck -jpon gravel, in the bottom of the water, maketh a suiiiul. Bacon's Natural History.

Try it without any soundboard along, only harp-wise at one end of the string. Id.

They being told there was small hope of ease To be expected to their evils from hence, Were willing at the first to give an ear To any thing that sounded liberty.

fen Jonson's Catiline.

This relation sounds rather like a chemical dream than a philosophical truth. Wilkin's Mat. Mag.

Trumpet once more to sound at general doom.

Milton.

The warlike sound of trumpets loud. Id.

Sun, sound his praise. Id.

As an organ, from one blast of wind, To many a row of pipes the soundboard breathes.

Once Jove from Ida did both hosts survey, And, when he pleased to thunder, part the fray ; Here heaven in vain that kind retreat should sound, The louder cannon have the thunder drowned.

Waller. That with one blast through the whole house does

bound,

And first taught speaking trumpets how to found.

Dry den.

Whene'er he spoke, his voice was heard around, Loud as a trumpet with a silver sound. Id.

Obsolete words may then be revived, when more sounding or more significant than those in practice.

Id.

He contented himself with doubtful and general terms, which might make no ill sound in men's ears.

Locke.

Let us consider this proposition as to its meaning ; for it is the sense not sound that must be the principle. Id.

That which is conveyed into the brain by the ear is called tound ; though, till it affect the perceptive part, it he nothing but motion. Locke.

Thither the silver founding lyres Shall call the smiling loves and young desires.

Pope.

O lavish land ! for sound at such expence ? But then, she saves it in her bills for sense. Young.

SOUND, in physics, is a term of which it would be preposterous to offer any definition, as it may almost be said to express a simple idea ; but when we consider it as a sensation, and still more when we consider it as a perception, it is

we obtain of external things by means of the sense of hearing. This, however, does not explain it ; for were we in like manner to describe our sense of hearing, we should find ourselves obliged to say that it is the faculty by which we perceive sound. Languages are not the invention of philosophers ; and we must not expect precision, even in the simplest cases. Our methods of expressing the information given us by our different senses are not similar, as a philosopher cautiously contriving language would make them. We have no word to express the primary or generic object of our sense of seeing ; for we believe that even the vulgar consider light as the medium, but not the object. This is certainly the case with the philosopher. On the other hand, the words smell, sound, and perhaps taste, are conceived by most persons as expressing the immediate objects of the senses of smelling, hearing, and tasting. Smell and sound are nastily conceived as separate existences, and as mediums of information and of intercourse with the odoriferous and sounding bodies ; and it is only the very cautious philosopher who distinguishes, between the smell which he feels and the perfume which fills the room. It has required the long, patient, and sagacious consideration of the most penetrating geniuses, from Zeno to Sir Isaac Newton, to discover that what we call sound, the immediate external object of the sense of hearing, is nothing but a particular agitation of the parts of surrounding bodies acting by mechanical impulse on our organs ; and that it is not any separate being, nor even a specific quality inherent in any particular thing, by which it can affect the organ, as we suppose with respect to a perfume, but merely a mode of existence competent to every atom of matter. And thus the description which we propose to give of sound must be a description of that state of external contiguous matter which is the cause of sound.

To discover this state of external body by which, without any farther intermedium of substance or of operation, it affects our sensitive faculties, must be considered as a great step in science. It will show us at least one way by which mind and body may be connected. It is supposed that we have attained this knowledge with respect to sound. Our success, therefore, is a very pleasing gratification to the philosophic mind. It is still more important in another view: it has encouraged us to make similar attempts in other cases, and has supplied us with a fact to which an ingenious mind can easily fancy something analogous in many abstruse operations of nature, and thus it enables us to give some sort of explanation of them. Accordingly this use has been most liberally made of the mechanical theory of sound ; and there is now scarcely any phenomenon, either of matter or mind, that has not been explained in a man-proper to give a

description of it ; because this ner somewhat similar. But these explanations must involve certain relations of external things, have done no credit to philosophy. They are foi and certain trains of events in the material world, which make it a proper object of philosophical

discussion.

Sound then is that primary information which

the most part strongly marked with that precipitate and self-conceited impatience which has always characterised the investigations conducted solely by ingenious fancy. The consequences of

this procedure have been no less fatal to the progress of true knowledge in modern times than in the schools of ancient Greece ; and the ethereal philosophers of modern times, like the followers of Aristotle, have filled ponderous volumes with nonsense and error. It is strange, however, that this should be the effect of a great and a successful step in philosophy : but the fault is in the philosophers, not in the science. Nothing can he more certain than the account which Newton has given of the propagation of a certain class of undulations in an elastic fluid. But this procedure of nature cannot he seen with distinctness and precision by any but well-in- formed mathematicians. They alone can rest with unshaken confidence on the conclusions legitimately deduced from the Newtonian theorems ; and even they can insure success only by treading with the most scrupulous caution the steps of this patient philosopher. But few have done this ; and we may venture to say that not one in ten of those who employ the Newtonian doctrines of elastic undulations for the explanation of other phenomena have taken the trouble, or indeed were able, to go through the steps of the fundamental proposition. But the general results are so plain, and admit of such impressive illustration, that

they draw the assent of the most careless reader ; and all imagine that they understand the explanation, and perceive the whole procedure of nature. Emboldened therefore by this successful step in philosophy, they, without hesitation, fancy similar intermediums in other cases ; and, as air has been found to be a vehicle for sound, they have supposed that something which they call ether, somehow resembling air, is the vehicle of vision. Others have proceeded farther, and have held that ether, or another something like air, is the vehicle of sensation in general, from the organ to the brain.

It is of considerable importance to understand thoroughly this doctrine of sound, that we may see clearly and precisely in what it consists,and what is the precise mechanical fact in which it terminates. For this, or a fact perfectly similar, must terminate every explanation which we derive from this by analogy, however perfect the analogy may be. This previous knowledge must be completely possessed by every person who pretends to explain other phenomena in a similar manner. Then, and not till then, he is able to say what classes of phenomena will admit of the explanation : and, when all this is done, his explanation is still an hypothesis, till he is able to prove, from other indisputable sources, the existence and agency of the same thing analogous to the elastic fluid, from which all is borrowed. Such considerations would justify us for considering with great attention the nature of sound. But a work like this will not give room for a full discussion ; and we must refer our readers to the writers who treat it more at large. Much information may be got from the authors of the two last centuries , such as lord Verulam, Kircher, Mersennus, Cafferius in his great work De Voce et Auditu ; Perrault, in his Dissertation du Bruit, Murshenbroeck, in his great System of Natural Philosophy, in 3 vols. 4to., and in his Essays de Physique; and the writings ‘of the physiologists Vor. XX.

of the present age. We also refer to what has been said in the article ACOUSTICS. At present, therefore, we must content ourselves with giving a short history of the speculations of philosophers on this subject, tracing out the steps by which we have arrived at the knowledge which we have of it. We apprehend this to be of great importance, because it shows us what kind of evidence we have for its truth, and the paths which we must shun if we wish to proceed farther : and we trust that the progress which we have made will appear to be so real, and the object to be attained so alluring to a truly philosophical mind, that men of genius will be incited to exert their utmost efforts to pass the present boundaries of our real progress.

In the infancy of philosophy, sound was held to be a separate existence, something which would exist, although no hearing animal existed. This was conceived as wafted through the air to our organ of hearing, which it was supposed to affect in a manner resembling that in which our nostrils are affected when they give us the sensation of smell. It was one of the Platonic species, fitted for exciting the intellectual species, which is the immediate object of the soul's contemplation. Yet, even in those early years of science, there were some, and, in particular, the celebrated founder of the Stoic school, who held that sound, that is, the cause of sound, was only the particular motion of external gross matter, propagated to the ear, and there producing that agitation of the organ by which the soul is immediately affected with the sensation of sound. Zeno, as quoted by Diogenes Laertius (lib. vii. § 1 58), says, ' Hearing is produced by the air which intervenes between the thing sounding and the ear. The air is agitated in a spherical form, and moves off in waves, and falls on the ear, in the same manner as the water in a cistern undulates in circles when a stone has been thrown into it.' The ancients were not remarkable for precision, either of conception or argument, in their discussions ; and they were contented with a general and vague view of things. Some followed the Platonic notions, and many the opinion of Zeno, but without any farther attempts to give a distinct conception of the explanation, or to compare it with experiment. But in later times, during the ardent researches in the seventeenth century into the phenomena of nature, this became an interesting subject of enquiry. The invention of the air-pump gave the first opportunity of deciding by experiment whether the elastic undulations of air were the causes of sound • and the trial fully established this point; for a bell rung in vacuo gave no sound, and one rung in condensed air gave a very loud one. It was therefore received as a doctrine in general physics that air was the vehicle of sound. The celebrated Galileo, the parent of mathematical philosophy, discovered the nature of that connexion between the lengths of musical chords and the notes which they produced, which had been observed by Pythagoras, or learned by him in his travels in the east, and which he made the foundation of a refined and beautiful science, the theory of music. Galileo showed that the real connexion subsisted between the tones and the

vibrations of these cords, and that their different degrees of acuteness corresponded to the different frequency of their vibrations. The very elementary and familiar demonstration which he gave of this connexion did not satisfy the curious mathematicians of that inquisitive age, and the mechanical theory of musical chords was prosecuted to a great degree of refinement. In the course of this investigation, it appeared that the chord vibrated in a manner precisely similar to a pendulum vibrating into a cycloid. It must therefore agitate the air contiguous to it in the same manner; and thus there is a particular kind of agitation which the air can receive and maintain which is very interesting. Sir Isaac Newton took up this question as worthy of his notice ; and endeavoured to ascertain with mathematical precision the mechanism of this particular class of undulations, and gave us the fundamental theorems concerning the undulations of elastic fluids, which make the forty-seven, &c., propositions of Book II. of his Principles of Natural Philosophy. They have been (perhaps hastily) considered as giving the fundamental doctrines concerning the propagation of sound. They are therefore given in this work in the article ACOUSTICS ; aad a variety of facts are related, in the article PNEUMATICS, to show that such undulations actually obtain in the air of our atmosphere, and are accompanied by a set of phenomena of sound, which precisely tally or correspond to all the mechanical circumstances of these undulations. In the mean time, the anatomists and physiologists were busily employed in examining the structure of our organs of hearing. Impressed with the validity of this doctrine of aerial undulations being the causes of sound, their researches were always directed with a view to discover those circumstances in the structure of the ear which rendered it an or-gan susceptible of agitations from this cause ; and they discovered many which appeared as contrivances for making it a drum, on which the aerial undulations from without must make forcible impulses, so as to produce very sonorous undulations in the air contained in it. These therefore they considered as the immediate objects of sensation, or the immediate causes of sound. But some anatomists saw that this would not afford a full account of the matter ; for, after a drum is agitated, it has done all that it can do ; it has produced a noise. But a farther process goes on in our ear : There is behind the membrane, which is the head of this drum, a curious mechanism, which communicates the agitations of the membrane (the only thing acted on by the undulating air) to another chamber of most singular construction, where the auditory nerve is greatly expanded. They

conceive, therefore, that the organ called the drum does not act as a drum, but in some other way. Indeed, it seems bad logic to suppose that it acts as a drum merely by producing a noise. This is in no respect different from the noise produced out of the ear ; and, if it is to be heard as a noise, we must have another ear by which it may be heard, and this ear must be another such drum ; and this must have another, and so ou for ever. It is like the inaccurate notion that vision is the

contemplation of the picture on the retina. See ANATOMY, Index. These anatomists attended therefore to the structure. Here they observed a prodigious unfolding of the auditory nerve of the ear, which is curiously distributed through every part of this cavity, lining its sides, hung across it like a curtain, and sending off fibres in every direction, so as to leave hardly a point of it unoccupied. They thought th° machinery contained in the drum peculiarly fitted tor producing undulations of the air contained in this labyrinth, and that by these agitations of the air the contiguous fibres of the auditory nerve are impelled, and thus we get the sensation of sound. The cavity intervening between the external air and this inner chamber appeared to these anatomists to have no other use than to allow a very free motion to the stapes or little piston that is employed to agitate the air in the labyrinth. This piston condenses on a very small surface the impulse which it receives from a much larger surface, strained by the malleus on the entry of the tympanum, on purpose to receive the gentle agitations of the external air in the outer canal. This membraneous surface could not be agitated un-less completely detached from every thing around it ; therefore all animals which have this mechanism have it in a cavity containing only air. But they held that nature had even taken precaution to prevent this cavity from acting as a drum, by making it of such an irregular rambling form ; for it is by no means a cavity of a symmetrical shape, like a vessel, but rather resembles the rambling holes and blebs which are often seen in a piece of bread, scattered through the substance of the cranium, and communicating with each other by small passages. The whole of these cavernulse are lined with a softish membrane, which still farther unfits this cavity for producing sound. This reasoning is specious, but not very conclusive. We might even assert that this anfractuous form, with nar-row passages, is well fitted for producing noise. If we place the ear close to the small hole ia the side of a military drum, we shall hear the smallest tap of the drumstick like a violent blow. The lining of the cavernulae is nervous, and may therefore be strongly affected in the numerous narrow passages between the cells.

While these speculations were going on, with respect to the ear of the breathing animals, observations were occasionally made on other animals, such as reptiles, serpents, and fishes, which give undoubted indications of hearing; and many very similar facts were observed or recollected, where sounds are communicated through or by means of solid bodies, or by water : therefore, without enquiring how or by what kind of mechanism it is brought about, it became a very general belief among physiologists that all fishes, and perhaps all animals hear, and that water in particular is a vehicle of sound. In 1767 or 1768 an ingenious gentleman, at the suggestion of the late professor of astronomy in the university of Glasgow, made an experiment in a lake in that neighbourhood, by striking a large hand bell under water, and heard it very distinctly and strongly when his head was plunged in the water at the distance of more than 1200 feet

Many experiments are mentioned by Kircher and others on the communication of sound through solid bodies, such as masts, yards, and other long beams of dry fir, with similar results. Dr. Monro has published a particular account of very curious experiments on the propagation of sound through water, in his Dissertation on the Physiology of Fishes ; so that it now appears that air is by no means the only vehicle of sound. In 1760 Cotunni published his important discovery that the labyrinth or inmost cavity of the ear in animals is completely filled with water. This, after some contest, has been completely demonstrated (see Meckle Junior de Labyrinthi Auris Contentis, Argentor, 1777), and it seems now to be admitted by all. This being the case, our notions of the immediate cause of sound must undergo a great revolution, and a new research must be made into the way in which the nerve is affected ; for it is not enough that we substitute the undulations of wa-ter for those of air in the labyrinth. The well informed mechanician will see at once, that the vivacity of the agitations of the nerve will be greatly increased by this substitution ; for if wa-ter be perfectly elastic, through the whole extent of the undulatory agitation which it receives, its effect will be greater in proportion to its specific gravity : and this is confirmed by

an experiment very easily made. Immerse a table bell in water contained in a large thin glass vessel. Strike it with a hammer. The sound will be heard as if the bell had been immediately struck on the sides of the vessel. The filling of the labyrinth of the ear with water is therefore an additional mark of the wisdom of the Great Artist, But this is not enough for informing us concerning the ultimate mechanical event in the process of hearing. The manner in which the nerve is exposed to these undulations must be totally different from what was formerly imagined. The filaments and membranes which have been described by former anatomists must have been found by them in a state quite unlike to their situation and condition in the living animal. Accordingly the most eminent anatomists of Europe seem at present in great uncertainty as to the state of the nerve, and are keenly occupied in observations to this purpose. The descriptions given by Monro, Scarpa, Camper, Comparetti, and others, are full of most curious discoveries, which make almost a total change in our notions of this subject, and will, we hope, be productive of most valuable information. Scarpa has discovered that the solid cavity called ,the labyrinth, contains a threefold expansion of the auditory nerve. One part of it, the cochlea, contains it in a fibrillous state, ramified in a most symmetrical manner through the whole of the zona molis of the lamina spiralis, where it anastomoses with another production of it diffused over the general lining of that cavity. Another department of the nerve, also in a fibrous state, is spread over the external surface of a membranaceous bag, which nearly fills that part of the vestibule into which the semicircular ca-nals open, and also that orifice which receives the impressions of the stapes. This bag sends off tubular merabranaceous ducts, which, in like

manner, nearly fill these semicircular canals. A third department of the nerve is spread over the external surface of another membranaceous bag, which lies between the one just now mentioned and the cochlea, but, having no communication with either, almost completely filling the remainder of the vestibule. Thus the vestibule and canals seem only a case for protecting this sensitive membranaceous vessel, which is almost but not altogether in contact with the osseous case, being separated by a delicate and almost fluid cellular substance. The fibrillous expansion of the nerve is not indiscriminately diffused over the surface of these sacculi, but evidently directed to certain foci, where the fibres are con-stipated. And this is the last appearance of the fibrous state of the nerve ; for, when the inside of these sacculi is inspected, no fibres appear, but a pulp (judged to be nervous from its similarity to other pulpy

productions of the brain) adhering to the membranaceous coat, and not separable from it by gently washing it. It is more abundant, that is of greater thickness, opposite to the external fibrous foci. No organical structure could be discovered in this pulp, but it probably is organised ; for, besides this adhering pulp, the water in the sacculi was observed to be clammy or mucous; so that in all probability the vascular or fibrous state of the nerve is succeeded by an uninterrupted production (perhaps columnar like basalt, though not cohering) ; and this at last ends in simple dissemination, symmetrical, however, where water and nerve are alternate in every direction. To these observations of Scarpa, Comparetti adds the curious circumstances of another and regular tympanum in the foramen rotundum, the cylindric cavity of which is enclosed at both ends by a fine membrane. The membrane which separates it from the cochlea appears to be in a state of variable tension, being drawn up to an umbo by a cartilaginous speck in its middle, which he thinks adheres to the lamina spiralis, and thus serves to strain the drumhead as the malleus strains the great membrane known to all. These are most important observations, and must greatly excite the curiosity of a truly philosophical mind, and deserve the most careful enquiry into their justness. If these are accurate descriptions of the organ, they seem to conduct us farther into the secrets of nature than any thing yet known. They promise to give us the greatest step yet made in physiology, *viz.* to show us the last mechanical fact which occurs in the long train interposed between the external body and the incitement of our sensitive system. But there are, as yet, great and essential differences in the description given by those celebrated naturalists. There seems to be no abatement of ardor in the researches of the physiologists ; and they will not remain long ignorant of the truth or mistake in the accounts given by Scarpa and Comparetti.

To illustrate the cause of sound, it may be observed, 1st, That a motion is necessary in the sonorous body for the production of sound. 2dly, That this motion exists first in the small and insensible parts of the sonorous bodies, and is excited in them by the mutual collision against

f=ach other, which produces the tremulous mo-tion so observable in bodies that have a clear sound, as bells, musical chords, See. 3dly, That this motion is communicated to, or produces a like motion in the air, or such parts of it as are fit to receive and propagate it. Lastly, That this motion must be communicated to those parts that are the proper and immediate instruments of hearing. Now that motion of a sonorous body which is the immediate cause of sound may be owing to two different causes ; either the percussion between it and other hard bodies, as in drums, bells, chords, &c. ; or the beating and dashing of the sonorous body and the air immediately against each other, as in flutes, trumpets, &c. But in both these cases the motion, which is the consequence of the mutual action, as well as the immediate cause of the sonorous motion which the air conveys to the ear, is supposed to be an invisible, tremulous, or undulating motion in the small and insensible parts of the body. Perrault adds that the visible motion of the grosser parts contributes no otherwise to sound than as it causes the invisible motion of the smaller parts, which he calls particles, to distinguish them from the sensible ones, which he calls parts, and from the smallest of all, which are called corpuscles.

The sonorous body having made its impression on the contiguous air, that impression is propagated from one particle to another, according to the laws of pneumatics. A few particles, for instance, driven from the surface of the body, push or press their adjacent particles into a less space ; and the medium, as it is thus rarefied in one place, becomes condensed in the other ; but the air thus compressed in the second place is, by its elasticity, returned back again, both to its former place and its former state; and the air contiguous to that is compressed ; and the like obtains when the air less compressed, expanding itself, a new compression is generated. Therefore from each agitation of the air there arises a motion in it analogous to the motion of a wave on the surface of the water ; which is called a wave or undulation of air. In each wave the particles go and return back again through very short equal spaces ; the motion of each particle being analogous to the motion of a vibrating petfdulum while it performs two oscillations ; and most of the laws of the pendulum, with very Httle alteration, being applicable to the former.

Sounds are as various as are the means that concur in producing them. The chief varieties result from the figure, constitution, quantity, &c., of the sonorous body ; the manner of percussion, with the velocity,

&c., of the consequent vibration; the state and constitution of the medium; the disposition, distance, &c., of the organ ; the obstacles between the organ and the sonorous object and the adjacent bodies. The most notable distinction of sounds, arising from the various decrees and combinations of the conditions abovementioned, are into loud and low (or strong and weak) ; into grave and acute (or sharp and flat, or high and low) ; and into long and short. The management of which is the office of music. Ruler is of opinion that no sound making fewer vibrations than thirty in a second,

or more than 7520, is distinguishable by the human ear. According to this doctrine, the limit of our hearing, as to acute and grave, is an interval of eight octaves. — Tentam. Nov. Theor. ISIus. cap. 1. sect. 13.

Tl»€ velocity of sound is the same with that of .the aerial waves, and does not vary much, whether it go with the wind or against it. By the wind indeed a certain quantity of air is carried from one place to another ; and the sound is accelerated while its waves move through that part of the air, if their direction be the same as that of the wind. But, as sound moves vastly swifter than the wind, the acceleration it will hereby receive is but inconsiderable ; and the chief effect we can perceive from the wind is that it increases and diminishes the space of the waves., so that by the help of it the sound may be heard to a greater distance than otherwise it would.

That the air is the usual medium of sound appears from various experiments in rarefied and condensed air. In an unexhausted receiver a small bell may be heard to some distance; but when exhausted it can scarcely be heard at the smallest distance. When the air is condensed, the sound is louder in proportion to the condensation, or quantity of air crowded in ; of which there are many instances in Hauksbee's experiments, in Dr. Priestley's, and others. Besides, sounding bodies communicate tremors to distant bodies; for example, the vibrating motion of a musical string puts others in motion, whose tension and quantity of matter dispose their vibrations to keep time with the pulses of air propagated from the string that was struck. Galileo explains this phenomenon by observing that a heavy pendulum may be put in motion by the least breath of the mouth, provided the blasts be often repeated, and keep time exactly with the vibrations of the pendulum; and also by the like art in raising a large bell.

It is not air alone that is capable of the impressions of sound, but

water also ; as is manifest by striking a bell under water, the sound of which may plainly enough be heard, only not so loud, and also a fourth deeper, according to good judges in musical notes. And Mersenne says, a sound made under water is of the same tone or note as if made in air and heard under the water.

The velocity of sound, or the space through which it is propagated in a given time, has been very differently estimated by authors who have written concerning this subject. Roberval states it at the rate of 560 feet in a second ; Gassendus at 1473; Mersenne at 1474; Duhamel, in the History of the Academy of Sciences at Paris, at 1338; Newton at 968; Derham, in whose measure Flamsteed and Halley acquiesce, at 1142. The reason of this variety is ascribed by Derham partly to some of those gentlemen using strings and plummets instead of regular pendulums; and partly to the too small distance between the sonorous body and the place of observation ; and partly to no regard being had to the winds. But by the accounts since published by M. Cassini de Thury, in the Memoirs of the Royal Academy of Science-; at Paris, 1738, where cannon were fired at various as well as great distance:*,

under many varieties of weather, wind, and other circumstances, and where the measures of the different places had been settled with the utmost exactness, it was found that sound was propagated, on a medium, at the rate of 1038 French feet in a second of time. But the French foot is in proportion to the English as fifteen to sixteen ; and consequently 1038 French feet are equal to J407 English feet. Therefore the difference of the measures of Derham and Cassini is thirty-five English feet, or thirty-three French feet, in a second. The medium velocity of sound therefore is nearly at the rate of a mile, or 5280 feet, in four seconds and two-thirds, or a league in fourteen seconds, or thirteen miles in a minute. But sea miles are to land nearly as seven to six; and therefore sound moves over a sea mile in five seconds and one-third nearly, or a sea league in sixteen seconds. Farther, it is a common observation, that persons in good health have about seventy-five pulsations, or beats of the artery at the wrist, in a

minute; consequently in seventy-five pulsations sound flies about thirteen land miles, or eleven sea miles arid one-seventh, which is about one land mile in six pulses, or one sea mile in seven pulses, or a league in twenty pulses. Hence the distance of objects may be found by knowing the time employed by sound in moving from those objects to an observer. For example, on seeing the flash of a gun at sea, if fifty-four beats of the pulse at the wrist were counted before the report was heard ; the distance of the gun will easily be found by dividing fifty-four by twenty, which gives 2-7 leagues, or about eight miles.

In an ingenious treatise, published 1790, by Mr. G. Saunders, on theatres, he relates many experiments made by himself on the nature and propagation of sound ; and shows the great effect of water, and some other bodies, in conducting of sound, probably by rendering the air more dense near them. Some of his conclusions and observations are as follow : — Earth may be supposed to have a twofold property with respect to sound. Being very porous it absorbs sound, which is counteracted by its property of conducting sound, and occasions it to pass on a plane, in an equal proportion to its progress in air, unencumbered by any body. If a sound be sufficiently intense to impress the earth in its tremulous quality, it will be carried to a considerable distance, as when the earth is struck with any thing hard, as by the motion of a carriage, horses' feet, &c. Plaster is proportionally better than loose earth for conducting sound as it is more compact. Clothes of every kind, particularly woollen cloths, are very prejudicial to sound : their absorption of sound may be compared to that of water, which they greedily im-bibe.

A number of people seated before others, as in the pit or gallery of a theatre, do considerably prevent the voice reaching those behind ; and hence it is that we hear so much better in the front of the galleries, or of any situation, than behind others, though we may be nearer to the speaker. Our seats, rising so little above each other, occasion this defect, which would be remedied tou'd we have the seats to rise their

whole height above each other as in the ancient theatres. Paint has generally been thought unfavorable to sound, from its being so to musical instruments, whose effects it quite destroys. Musical instruments mostly depend on the vibrative or tremulous property of the material, which a body of color hardened in oil must very much alter; but we should distinguish that this regards the formation of sound, which may not altogether be the case in the progress of it.

Water has been little noticed with respect to its conducting sound; but it will be found to be of the greatest consequence. ‘ I had often,’ says our author, ‘ perceived in newly-finished houses that, while they were yet damp, they produced echoes ; but that the echoing abated as they dried. When I made the following experiment there was a gentle wind ; consequently the water was proportionally agitated. I chose a quiet part of the river Thames, near Chelsea Hospital, and with two boats tried the distance the voice would reach. On the water we could distinctly hear a person read at the distance of 140 feet, on land at that of seventy-six. It should be observed that on land no noise intervened; but on the river some noise was occasioned by the flowing of the water against the boats : so that the difference on land and on water must be much more.’

‘ Watermen observe that when the water is still, and the weather quite calm, if no noise intervene, a whisper maybe heard across the river; and that with the current it will be carried to a much greater distance, and viceversft against the current. Mariners well know the difference of sound on sea and land.

‘ When a canal of water was laid under the pit floor of the theatre of Argentino,at Rome, a surprising difference was observed; the voice has • since been heard at the end very distinctly, where it was before scarcely distinguishable. It is observable that, in this part, the canal is covered with a brick arch, over which there is a quantity of earth, and the timber floor over all. The villa Simonetta near Milan, so remarkable for its echoes, is entirely over arcades of water. Another villa near Rouen, remarkable for its echo, is built over subterraneous cavities of water. A reservoir of water domed over, near Stanmore, has a strong echo.

‘ I do not remember ever being under the arches of a stone bridge that did not echo; which is not always the case with similar structures on land. A house in Lambeth Marsh, inhabited by Mr. Turtle, is very damp during winter, when it yields an echo which abates as the house becomes dry in summer.’ Kircher observes that echoes repeat more by night than during the day; he makes the difference to be double. Dr. Plott says the echo in Woodstock park repeated seventeen times by day, and twenty by night. And Addison’s experiment at the villa Simonetta was in a fog, when it produced fifty-six repetitions.

‘ After all these instances I think little doubt can remain of the influence water has on sound; and I conclude that it conducts sound more than any other body whatever. After water, stone may be reckoned the best conductor of sound. To what cause it may be

attributed I leave to

*\iture enquiries : I have confined myself to speak of facts only as they appear. Stone is sonorous, but gives a harsh disagreeable tone, unfavorable to music.

‘ Brick, in respect to sound, has nearly the same properties as stone. Part of the garden wall of the late W. Pitt, esq., of Kingston in Dorsetshire, conveys a whisper to the distance of nearly 200 feet.

‘ Wood is sonorous, conductive, and vibrative ; of all materials it produces a tone the most agreeable and melodious ; and it is therefore the fittest for musical instruments, and for lining of rooms and theatres. The common notion that whispering at one end of a long piece of timber would be heard at the other end, I found by experiment to be erroneous. A stick of timber sixty-five feet long being slightly struck at one end, a sound was heard at the other, and the tremor very perceptible: which is easily accounted for when we consider the number or length of the fibres that compose it, each of which may be compared to a string of catcut.’

SOUNDS are distinguished, with regard to music, into simple and compound, and that two ways. In the first, a sound is said to be compound, when a number of successive vibrations of the sonorous body, and the air, come so fast upon the ear that we judge them the same continued sound; as in the phenomenon of the circle of fire, caused by putting the fire-end of a stick in a quick circular motion ; where, supposing the end of the stick in any point of the circle, the idea we receive of it there continues till the impression is renewed by a sudden re-turn. A simple sound, with regard to this composition, should be the effect of a single vibration, or of so many vibrations as are necessary to raise in us the idea of sound. In the second sense of composition, a simple sound is the product of one voice, or one instrument, &c. A compound sound consists of the sounds of several distinct voices or instruments, all united in the same individual time and measure of duration, that is, all striking the ear together,

whatever their other differences may be. But in this sense, again, there is a twofold composition ; a natural and an artificial one.

Natural composition is that proceeding from the manifold reflections of the first sound from adjacent bodies, where the reflections are not so sudden as to occasion echoes, but are all in the same tune with the first note. Artificial composition, which alone comes under the musician's province, is that mixture of several sounds which, being made by art, the ingredient sounds are separable and distinguishable from one another. In this sense the distinct sounds of several voices or instruments, or several notes of the same instrument,' are called simple sounds, in contradistinction to the compound ones, in which, to answer the end of music, the simples must have such an agreement in all relations, chiefly as to acuteness and gravity, as that the ear may receive the mixture with pleasure.

Another distinction of sounds with regard to music is that by which they are said to be smooth and even, or rough and harsh, also clear and hoarse : the cause of which differences de-

pends on the disposition and state of the sonorous body, or the circumstances of the place ; but the ideas of the differences must be sought from observation.

Smooth and rough sounds depend principally on the sounding body; of these we have a notable instance in strings that are uneven, and not of the same dimension or constitution throughout. Perrault, to account for roughness and smoothness, maintains, there is no such thing as a simple sound ; but that the sound of the same chord or bell is a compound of the sounds of the several parts of it ; so that where the parts are homogeneous, and the dimensions or figure uniform, there is always such a perfect mixture and union of all the sounds aˆ makes one uniform and smooth sound : contrary conditions produce harshness. In effect, a likeness of parts and figure make a uniformity of vibrations, by which a great number of similar and coincident motions conspire to fortify and improve each other, and unite, for the more effectual producing of the same effect. This account he confirms from the phenomenon of a bell which differs in tone according to the part it is struck in ; and yet, strike it any where, there is a motion over all the parts. Hence he considers the bells as composed of an infinite number of rings, which, according to their different dimensions, have different tones, as chords or strings of different lengths have ; and, when struck, the vibrations of the parts immediately struck specify the

tone, being supported by a sufficient number of consonant tones in other parts. This must be allowed, that every note of a stringed instrument is the effect of several simple sounds; for there is not only the sound resulting from the motion of the string, but that from the mo-tion of the parts of the instrument, which has a considerable effect in the total sound, as is evident from hence that the same string on different violins sounds very differently.

But Perrault affirms the same of every string without considering the instrument. Every part of the string, he says, has its particular vibrations, different from the gross and sensible vibrations of the whole ; and these are the causes of different motions and sounds in the particles, which uniting compose the whole sound of the string, and make a uniform composition, in which the tone of the particular part struck prevails, and all the others mix under a due subordination with it, so as to make the composition smooth and agreeable. If the parts be unevenly or irregularly constituted, the sound is harsh ; which is the case in what we call false strings, and various other bodies, which, for this reason, have no certain and distinct tone, but a composition of several tones, which do not unite and mix, so as to have one predominant to specify the total tone. As to clear and hoarse sounds, they depend on circumstances .that are accidental to the sonorous body ; thus, a voice and instrument will be hollow and hoarse, if raised within an empty hogshead, that yet is clear and bright out of it : the effect is owing to the mixture of other and different sounds, raised by reflections, which corrupt and change the species of the primitive sounds. For sounds to be fit to obtain

the end of music, they ought to be smooth and clear, possessing especially the first quality : since, without this, they cannot have one certain and discernible tone. Dr. Burney remarks that enquiries concerning the absolute production and modification of sound belong

to physics ; whereas a musician only examines sounds comparatively one with the other, and considers their proportions and relation as divided into concords and discords.

The SOUNDBOARD is the principal part of an organ. This soundboard, or summer, is a reservoir into which the wind, drawn in by the bellows, is conducted by a port vent, and thence distributed into the pipes placed over the holes of its upper part. This wind enters them by valves, which open by pressing upon the stops or keys, after drawing tne registers, which prevent the air from going into any of the other pipes beside those it is required in.

SOUNDBOARD, or SOUNDIMG-BOARD, denotes also a thin broad board placed over the head of a public speaker, to enlarge and extend or strengthen his voice. Soundboards, in theatres, are found by experience tb be of no service ; their distance from the speaker being too great to be impressed with sufficient force. But soundboards immediately over a pulpit have often a good effect, when made of a just thickness, and according to certain principles.

SOUNDING, the operation of trying the depth of the sea, and the nature of the bottom, by means of a plummet sunk from a ship to the bot-tom. There are two plummets used for this purpose in navigation, one of which is called the hand-lead, weighing about eight or nine pounds, and the other the deep sea-lead, which weighs from twenty-five to thirty pounds. Both are shaped like the frustum of a cone or pyramid. The former is used in shallow waters, and the latter at a great distance from the shore ; particularly on approaching the land after a sea voy-age. Accordingly the lines employed for this purpose are called the deep-sea lead-line, and the hand lead-line. The hand lead-line, which is usually twenty fathoms in length, is marked at every two or three fathoms ; so that the depth of the water may be ascertained either in the day or night. At the depth of two and three fathoms there are marks of black leather ; at five fathoms there is a white rag ; at seven a red rag ; at ten black leather ; at thirteen black leather ; at fifteen a white rag ; and at seventeen a red ditto. Sounding with the hand-lead, which is called heaving the lead by seamen, is generally performed by a man who stands in the main chains to windward. Having the line quite ready to run out without interruption, he holds it nearly at the distance of a fathom from the plummet ; and having swung the latter backwards and forwards three or four times in order to acquire the greater velocity, he swings it round his head, and thence as far forward as is necessary ; so that, by the lead’s sinking whilst the ship advances, the line may be almost perpendicular when it reaches the bottom. The person sounding then

proclaims *he depth of the water in a kind of song resembling the crie? of hawkers in a city. Thus if the mark of five fathoms is clbse to the surface of the

water, he calls, ‘ By the mark five !’ and as there is no mark at four, six, eight, &c., he estimate? those numbers, and calls, ‘ By the dip four,’ &c. If he judges it to be a quarter or a half more than any particular number, he calls, ‘ And a quarter five !’ ‘ And a half four !’ &c. If he conceives the depth to be three-quarters more than a particular number, he calls it a quarter less than the next : thus, at four fathoms and three-fourths he calls, ‘ A quarter less five !’ and so on. The deep sea-lead is marked with two knots at twenty fathoms, three at thirty, four at forty, and so on to the end. It is also marked with a single knot in the middle of each interval, as at twenty-five, thirty-five, forty-five fathoms, &c. To use this lead more effectually at sea, or in deep water on the seacoast, it is usual previously to brins; to the ship, in ord.er to retard her course ; the Ifiad is then thrown as far as possible from the ship on the line of her drift, so that, as it sinks, the ship drives more perpendicularly over it. The pilot, feeling the lead strike the bottom, rea’dily discovers the depth of the water by the mark on the line nearest its surface. The bottom of the lead being also well rubbed over with tallow retains the distinguishing marks of the bottom, as shells, ooze, gravel, &c., which naturally adhere to it. The depth of the water, and the nature of the ground, which is called the soundings, are carefully marked in the log-book, as well to determine the distance of the place from the shore as to correct the observations of former pilots.

‘SouND POST, a post placed withinside of a violin, &c. as a prop between the back and the belly of the instrument, and nearly under the bridge.

SOUP, n. s. Sax. puppa; Fr. soupe ; Swed. soppa. Strong broth ; a decoction of flesh for the table.

Spongy morells in strong ragouts are found, And in the soup the slimy snail is drowned.

Guii’s Trivia

Let the cook daub the back of the footman’s new livery ; or, when he is going up with a dish of toup, let her follow him softly with a ladle full. Suift.

SOUP, PORTABLE, or DRY SOUP, is a kind of cake formed by boiling the gelatinous parts of animal substances till the watery parts are evaporated. This species of soup is chiefly used at sea, and has been found of great advantage. The following is a receipt to prepare it : of calves feet take four ; leg of beef twelve pounds ; knuckle of veal three pounds ; and leg of mutton ten pounds. These are to be boiled in a sufficient quantity of water, and the scum taken off a* usual ; after which the soup is to be separated from the meat by straining and pressure. The meat is then to be boiled a second time in other water ; and the two decoctions, being added together, must be left to cool, in order that the fat may be exactly separated. The soup must then be clarified with five or six whites of eggs, and a sufficient quantity of common salt added. The liquor is then strained through flannel, and evaporated on the water-bath to the consistence of a very thick paste ; after which it is spread rather thin upon a smooth stone, and cut into cakes, and lastly dried in a stove until'lt becomes

brittle ; these cakes are kept in well closed bottles. The same process may be used to make a portable soup of the flesh of poultry ; and aromatic herbs may be used as a seasoning if thought proper. These tablets or cakes may be kept four or five years. When intended to be used, the quantity of half an ounce is put into a large glass of boilina; water, which is to be covered, and set upon hot ashes for ;i quarter of an hour, or until the whole is entirely dissolved. It forms an excellent soup, and requires «o addition but .1 small quantity of salt.

SOUR, adj., n. s.,v. a., -\ Sax. fun, furtij ;

SOUR'ISH, adj. [&v. n. / Dan. suur ; Goth,

SOUR'LY, adv. ˆSwed. and We.si

SOUR’NESS, n. s. i sur. Adi ; austere;

SOUR’SOP. / pungent with astringency: hence har«v ; craobed; severe of temper;

afflictive; painful; sullen ; discontented : to sour

ii, to make or become acid, harsh, or crabbed :

the noun substantive means an acid substance :

sourish is slightly sour : the adverb and noun

substantive following correspond : soursop is a

custard apple.

Their drink is imir. Hosea iv. 18.

A thousand sour* to temper with one sweet, . o make it seem more dear and dainty. Spenser.

Pelagius carped at the curious neatness of men's apparel in those days, and, through the sourness of his disposition, spoke somewhat too hardly thereof.

Hooker.

He was a scholar, Lofty and sour to them that loved him not.

Shakspeare. Henry VIII. Hail, great king !

To sovr your happiness, I must report The queen is dead. Id. Cymbeline.

Not my own disgrace Hath ever made me sour my patient cheek, Or bend one wrinkle on my sovereign's face.

Sluikspeare. All sour things, as vinegar, provoke appetite.

Bacon.

Sourness consisteth in some grossness of the body ; and incorporation doth make the mixture of the body more equal, which induceth a milder taste.

Id. Natural History.

A man of pleasant and popular conversation, ra-ther free than sour and reserved.

Walton's Life of Buckingham. He was never thought to be of that

superstitious sourness, which some men pretend to in religion.

King Charles.

His angelick nature had none of that carnal leven which ferments the touring of ours.

Decay of Piety.

1’ th’ spring, like youth, it yields an acid taste; But summer doth, like age, the tonrntu waste.

Denham.

Tiberius, otherwise a very tour man, would punctually perform this rite unto others, and expect the same. Brown.

By distillation we obtain a sourish spirit, which will dissolve coral. Boyle.

But let the bounds of licences be fixed, Not things of disagreeing natures mixed, Not sweet with sour, nor birds with serpents joined.

Dry den.

Thus kneaded up with milk, the new made man His kingdom o’er his kindred world began ; Till knowledge misapplied, misunderstood, And pride of empire, soured his balmy blood. Id.

The stern Athenian prince Then sourly smiled. Id. Knight’s Tale.

He knew

For fruit the grafted pear-tree to dispose, And tame to plumbs the sourttets of the sloes.

Id. Virgil.

Tufts of grass tour land. Mortimer’s Husbandry. He said a sour thing to Laura the other day.

fatter.

If I turn my eyes from them, or seem displeased, they sour upon it. Spectator.

Her religion is eˆ lily free from the weakness of superstition and ihi? uurness of enthusiasm : it is no» of an %—:omfortable melancholy nature.

Addison’s Freeholder.

Take care that no sourness and moroseness mingle with our serious frame of mind. Nelson.

Asses’ milk, when it sours in the stomach, and whey turned sour, will purge strongly.

Arbuthnot on Diet.

Of acid or *our one has a notion from taste, sourness being one of those simple ideas which one cannot describe. Arbuthnot m

Sullen and *owr, with discontented mien ! Jocasta frowned. Pope.

Has life no sourness, drawn so near its end Id. The lord treasurer often looked on me with a sour countenance. Swift*

One passion, with a different turn, Makes wit inflame, or anger burn. So the sun’s heat, with different powers, Ripens the grape, the liquor «our*. Id.

It [the sour sop] grows in several parts of the Spanish West-Indies, where it is cultivated for its fruits. Miller.

Both ways deceitful is the wine of power ; When new ‘tis heady, and when old ‘tis sowr.

Harte.

SOUR, in chemistry, &c. See ACID, ACIDITT AcrDS, and CHEMISTRY, Index.

SOURABHAYA, a settlement on the north-eastern coast of Java, the capital of a Dutch establishment. The place is situated in lat. 7° 11’ S., on the banks of a river one mile and a half from the sea shore. It is navigable up to the town for vessels of 100 tons burden, and one side of the bank is made convenient for track-ing. The environs and banks of the river contain many villages, inhabited by two-thirds Javanese and Malays, and the remainder Chinese. The country around Sourabhaya is very fertile, and shaded by thickets of bamboos, bananas, and other shrubs. The land is flat, and the soil so light that it

can be ploughed -with a single buffaloe ; and there is here a breed of horses, which, though small, are strong and handsome. The Dutch garrison is quartered in a brick fort, containing a small arsenal on the right bank of the river, on which side dwell the governor and most of the officers. This place is the depot for the quotas of troops which the chiefs of Madura and Samanap are obliged to furnish to the Dutch East Company. Here are several building yards for vessels not drawing more than ten or twelve feet water, which are afterwards sold to the petty princes on Borneo and Bally, and for transporting the rice raised in the neighbourhood. The mountains in the vicinity contain a hard stone, in color and veins resembling box-wood, which ij > worked with a wheel by the natives very tastefully into candlesticks, plates, and goblets. They also manufacture many ether

little articles, such as combs and brushes of buffaloe's horns. A league and a half distant from Sourabhaya, upon a hill that extends along the river Bagieran, is a saltpetre house, the nitre being procured from the earth, much intermixed with the dung of bats, which are very numerous in the neighbourhood. Ships from Batavia going to China, or the Philippines, generally touch for refreshments at this place, especially during the season of the north westers. The adjacent country is remarkably populous, and the natives are governed by two Tomogons, one of whom is allied to the emperor of Java. Within a circumference of twelve miles, the Javanese and Malay villages are so numerous that they seem a part of the town.

SOURCE, 71. s. French source; Ital. sorge. Spring ; fountain ; head ; original ; first cause or producer.

This second source of men, while yet but few, With some regard to what is just and right Shall lead their lives. Milton's Paradise Lost.

Famous Greece,

That source of art and cultivated thought, Which they to Rome, and Romans hither, brought.

Waller.

Of himself is none ; But that eternal Infinite, and One, Who never did begin, who ne'er can end, On him all beings, as their source, depend.

Dryden.

This is the true tource and original of this mischief. South.

Kings that rule Behind the hidden sources of the Nile.

Addison's Cato.

The heads and tources of rivers flow upon a descent, or an inclining plane, without which they could not flow at all. Woodward't Natural History.

SOURING LIME, in rural economy. It is stated by the writer of an Essay on Quicklime as a Ce-ment, that, when lime is to be employed for making plaster, it is of great importance that every particle of the limestone be slaked before it is worked up ; for, as the smoothness of the surface is the cirumstance most wished for in plaster, if any particles of lime should be beaten np in it, and employed in work, before they have had sufficient time to fall, the water, still continuing to act upon them after the materials have been worked up, will infallibly slake such particles, which will then expand themselves in a forcible manner, and be productive of those excrescences upon the surface of the plaster which are commonly known by the name of blisters. Consequently, if it be intended to have a perfect kind of piaster, which is capable of remaining smooth on the surface and free from blisters, there is an absolute necessity for allowing the lime of which it is composed to lie for a considerable length of time in maceration with water before it is wrought up into plaster, which is a process or operation that is here termed souring. Where the limestone is .of a pure quality, and has been very perfectly calcined or burnt, there will seldom be any danger of the whole of the lime falling at first ; but, where it has been less perfectly burnt, there will be many particles, which will require to lie a long time before they will be completely reduced into powdw. This

maceiating process or operation is consequently more necessary with impure than pure lime ; but still it ought on no occasion to be omitted or neglected, as there is not the smallest probability but that some blisters would appear on the surface of plasters made with even the purest lime, when worked up and applied immediately after being slaked, without undergoing this souring process in some degree. The practice is also common of souring the lime when it is intended for being used in mortar.

It is not necessary that plaster should be endowed with stony hardness ; so that there is no loss sustained by allowing a great proportion of the lime which is designed for that purpose to absorb its air before it be used ; and the only circumstance which is necessary to be attended to in souring the lime is, that it be allowed to macerate long enough. It is indeed necessary on some occasions it should lie a very long time be-fore any certainty can be had that all the particles are thoroughly slaked, as pieces of limu shells have been known to lie upwards ot si; months exposed to all the changes of the wintei weather, and fall after that period. Another advantage of some consequence likewise, it is said, attends this practice ; as, if by such means a large proportion of the lime be allowed to absorb its air, and become in the mild or effete state, when it is wrought or beaten up for use, the water can have no sensible effect upon this mild lime. By this means, too, those crystalline exudations, which are so common on walls newly plastered will be the best and most effectually prevented.

As lime, from the moment of its being fully slaked, begins to absorb air, and continues to take up more and more every minute from tha; time until it becomes perfectly mild or effete, so as to be rendered gradually less and less proper for forming mortar of any kind, it necessarily follows that, where lime designed for thit purpose is permitted to lie long in the sour, a great part of it will be converted into chalky matter, or uncrystallised mild or effete lime, in which state it will not be capable of having so much sand added to it, or of forming so good a mortar as would have been the case if a larger proportion of the sandy material had been made use of in the first place, and been wrought up as speedily as possible, without so much souring, into mortar, and immediately made use of. The evil will also be increased where the lime has been but slightly burnt.

The doctrine of the nature and utility of this process receives additional proof and support from the practice which was followed by the ancients, who, according to Vitruvius and Pliny, recommend that the lime should be macerated or soured in water, for exactly the same reasons that we have given, as it is only by that means, he asserts, that

the plaster can be prevented from blistering. ‘ Tune de albariis operibus est expli-candum. Id autem erit recte, si glebae calcis optime, ante multo tempore quam opus fuerit, macerabuntur. Numque cum non penitus mace—

rata, sed recens sumitur habens latentes cru—

dos cuculos, pustulas omittit. Qui calculi

dissolvunt et dissipant tectorii politiones.’ — Vitruvius, lib. vii. c. 2.

‘Rurnarum urbis,’ says Pliny, ‘ea maxime causa, quod furto, calcis sine ferrumine suo cae-menta componuntwr. Intrita quoque quo vetu-sitor, eo melior. In antiquarum (antiquis) aedumligibus invenitur. ne recentiore trima ute-retur redemptor , idio nulla (nulls) tectoria eorura rimae faedavere.’ — Hist. lib. xxxvi. c. 23.

SOUSE, n. s. & v. a. Belg. soute, salt ; or rather Fr. sauce ; Ital. salsa. Pickle of salt ; any thing kept parboiled in salt pickle: and, in a ludicrous sense, to plunge ‘ head over ears’ into water.

And he that can rear up a pig in his house, Hath cheaper his bacon, and sweeter his touse.

Tusser.

They soused me into the Thames with as little remorse as they drown blind puppies. Shakspeare. Who those were that run away,

And yet gave out th’ had won the day ;

Although the rabble soused them for’t

O’er head and ears in mud and dirt. Butler.

They soused me over head and ears in water when a boy, so that I am now one of the most case-hard- ened of the Ironsides. Addison’s Guardian,

Oil, though it stink, they drop by drop impart ; But souse the cabbage with a bounteous heart.

Pope.

SOUSE, v. n. & adv. Of this word I know not the original : it must come from Fr. sous, or dessous, down. — Johnson. But see Soss, which seems synonymous. To fall as a bird on its prey : with sudden violence.

The gallant monarch is in arms ; And like an eagle o’er his airy tow’rs, To souse annoyance that comes near his nest.

Shakspeare.

Thus, on some silver swan, or timorous hare, Jove’s bird comes touting down from upper air ; Her crooked talons truss the fearful prey, Then out of sight she soars. Dryden’s JEneid.

Jove’s bird will soute upon the tim’rous hare, And tender kids with his sharp talons tear. Dryden.

Such make a private study of the street, And, looking full at every man they meet, Run sowe against his chaps, who stands amazed, To find they did not see, but only gazed. Young.

SOU-TCHEOU, a city of China, of the first rank, in Kiang-nan, on a river that falls into the lake Tai. It is one of the most beautiful cities in the whole empire. From the delightfulness of its situation, mildness of the air, temperature of the climate, fertility of the soil, plenty and cheapness of provisions, and the gentle manners of the people, it is styled the paradise of China. It has a great trade, particularly in embroideries and brocades, which are in demand through the whole empire; and it is much frequented by strangers. Its jurisdiction comprehends one town of the second class, and seven of the third. It is 562 miles S. S. E. of Peking.

SOUTERRAIN’, n. s. Fr. souterrain. A grotto or cavern in the ground.

Defences against extremities of heat, as shade, grottos, or souterrains,

are necessary preservatives of health. Arbuthnot.

‘ SOUTH (Dr. Robert), an eminent divine, the son of Mr. William South, merchant of London, born at Hackney in 1633. He studied at Westminster school, and afterwards in Christ Church College, Oxford. In 1654 he wrote a copy of Latin

verses to congratulate Cromwell upon the peace concluded with the Dutch; and in 1655 a Latin poem entitled Musica Incantans. In 1660 he was elected public orato of the university ; and in 1661 became domestic chaplain to Edward earl of Clarendon, lord high chancellor of England. In 1663 he was installed prebendary of Westminster, admitted D. D.,and had a sinecure bestowed on him in Wales by the earl of Clarendon; after whose retirement into France in 1667 he became chaplain to the duke of York. In 1670 he was installed canon of Christ Church, in Oxford; and in 1676 attended as chaplain to Laurence Hyde, esq., ambassador extraordinary to the king of Poland. In 1678 he was presented to the rectory of Islip in Oxfordshire ; and in 1680 rebuilt the chancel of that church, as he afterwards did the rectory house belonging to it. After the revolution he took the oath of allegiance to William and Mary. He died in 1716, and was interred at Westminster Abbey, where is his monument. He published, 1. Animadversions on Dr. Sherlock’s Vindication of tˆe Holy and Ever Blessed Trinity. 2. A Defence of his Ani madversions. 3. Sermons, 8 vols. 8vo. And after his decease were published his Opera Posthuma Latina, and his posthumous English works. Dr. South was remarkable for his wit, which abounds in all his writings, and even in his sermons ; but they equally abound in ill-humor, spleen, and satire. He was a remarkable time-server. During the life of Cromwell he was a staunch Presbyterian, and then railed against the Independents ; at the restoration he exerted his pulpit eloquence against the Presbyterians : and in the reign of queen Anne was a warm advocate for Sacheveral.

SOUTH, n. s., adj., & adv. \ Sax. j-u$; Fr. SOUTHEAST’, n. s. & adj. Swed. and Goth. SOUTH’ERLY, adv. I sud. The part

SOUTH’ETIN, adj. (where the sun is

SOUTHING, adj. & n. s. [to us at noon: SOUTH’MOST, adj. I opposed to north;

SOUTH’WARD, adv. & n. s. the southern re-SOUTHWEST’, n. s. J gions ; south

wind: as an adjective, southern; meridional: as an adverb, toward the south : southeast is a point between the south and east : southerly and southern, belonging to or lying toward the south : southing, going toward the south ; tendency to the south : southmost, farthest to the south : southward is, toward the south ; the southern regions : southwest, the point between the south and west.

The queen of the south. Bible.

How thy garments are warm, when he quitteth the earth by the south wind. Job xxxvii. 17.

Phenice is an haven of Crete, and lieth towards the smthwett. Actt xxvii. 12.

All the contagion of the south light on you, You shames of Rome you ! Shakspeare. Coriolanus.

His regiment lies half a mile South from the mighty power of the king.

Id. Richard III.

I am but mad north, northwest; when the wind is southerly, I know a hawk from a handsaw.

Id. Hamlet.

Why mourn I not for thee, And with the southern clouds contend in tears ?

Id. Henry I'.

Countries are more fruitful to the southward than iu tae northern

parts.

Raleigh's History of the World.

East and west have no certain points of heaven, but north and south are fixed ; and seldom the far southern people have invaded the northern, but contrariwise. Bacon.

The planting of trees warm upon a wall, against the south or southeast sun, doth hasten their ripening.

Id.

Men's bodies are heavier when southern winds blow than when northern. Id. Natural History.

From the north to call Decrepid wioter, from the south to bring Solstitial summer's heat. Milton.

Mean while the south wind rose, and, with black

wings Wide hovering, all the clouds together'drove. Id.

Next Chemos, the' obscene dread of Moab's sons, From Aroar to Nebo, and the wild Of southmost Abarim. Id.

Two other country bills give us a view of the most easterly, westerly, and southerly parts of England.

Graunt.

Unto such as live under the pole that is only north which is above them, that is only southerly which is below them. Browne.

Frowning Auster seeks the southern sphere, And rots with endless rain the' unwholesome year.

Dry den.

I will conduct thee on thy way, When next the southing sun inflames the day. Id.

Not far from hence, if I observed aright The southing of the stars and polar light, Sicilia lies. Id. JEneiti.

A prisoner in a room twenty foot square is at liberty to walk twenty foot southward, but not northward. Locke.

The three seas of Italy, the Inferiour towards the southeast, the Ionian towards the south, and the Adriatick on the northeast side, were commanded by ,hree different nations. Arbuthnot.

Every life from the dreary months Flies conscious southward. Thomson's-Winter—

Re spurned the wretch that slighted or withstood The tender argument of kindred blood, Nor would endure that any should control His freeborn brethren of the southern pole. Coioper.

SOUTH OF INDIA. — This has sometimes been treated as a distinct geographical division of Hindostan, having the figure of a triangle, of which the course of the river Krishna forms the base, and the coasts of Malabar and Coromandel the sides. Its extent from the Krishna to Cape Comorin, which forms the apex of the triangle, is about 600 British miles, and its breadth in the widest part is about 550, whence it tapers to a point at Cape Comorin. The great feature of this region is a central table land, elevated from 3000 to 5000 feet above the level of the sea, separated by wild, abrupt, declivities from the low flat countries to the east and west, which form a belt of small but unequal breadth between the hills and sea. The central range is usually termed Balaghaut (above the ghauts), and the lower belt the Payeenghaut (below the ghauts). The mass of the population consists of Hindoos; and the primitive Hindoo manners and customs are preserved in a state of great purity, particularly in Tinnevelly and the adjacent districts. The lapse of twenty centuries has here apparently made no change in the habits and peculiarities

of the Hindoo, either as to his civil condition or religion. His diet is frugal and simple; his hut formed of mud, the leaves of the cocoa-nut tree, and a few bamboos ; and a small strip of cloth is his garment. The country is subdivided chiefly into villages, comprehending some thousand acres of arable and waste land, the boundaries of which have scarcely ever been altered. The constitution of these villages resembles a permanent republic, or corporation, having its hereditary municipal officers, and some artizans.

Hyder was tne only Indian sovereign who ever subdued his petty feudatories, and really was, according to our ideas, master of his country. Since the intrusion of the Mahometans the South of India has much deteriorated, and its decline was accelerated at the commencement of the British influence, while the revenue was

gathered by its feudatory chiefs. The open violence of armies has probably done less injury than the fines, fees, exactions, and contributions, which have been imposed by the tyranny, or permitted by the weakness, of these governments. The buildings, tanks, channels, and even ridges, that separated former fields; the ruined villages, geneial tradition, books, accounts, sunnuds, and inscriptions, all combine to give a high idea of much greater former cultivation and opulence. Except Madras there are not now any great cities in this division of Hindostan. The earliest Mahometan army that crossed the Krishna was led in 1310 by Kafoor against Dhoor Summooder, the capital city of Belal Deo, the sovereign of Karnata. Other systems of religion, beside that of Brahma, had at certain periods an extensive sway here. 1. The Jains, who reject the authority of the Vedas and Purans, of which profession the sovereigns of Karnata appear to have been until the twelfth century of the Christian era. 2. The Bhauddha> who had temples. 3. The Mahometan religion, which was introduced through the medium of the commercial intercourse between Arabia and Malabar. 4. A numerous colony of Jews, settled at Cochin and in other parts of Malabar. 5. A knowledge of the true religion had made some progress at an early period, but the Nestorian doctrines were those professed.

The territories comprehended in this division, according to Mr. Hamilton, are a small portion of the Bejapoor province ; the Balaghaut ceded districts ; the Carnatic, northern, central, and southern ; Mysore, Canara, Malabar, Barramahal, Coimbetoor, Dindigul, Salem and Kistnagherry, Cochin and Travancor ; under which heads respectively further topographical details will be found.

SOUTH SEA, or PACIFIC OCEAN, are both names of that vast body of water interposed between Asia and America. It does not however, strictly speaking, reach quite to the continent of Asia, excepting to the northward of the peninsula of Malacca : for the sea interposed between the eastern coast of Africa and the peninsula just mentioned has the name of the Indian Ocean. The South Sea then is bounded on one side by the western coast of America, through its whole extent, from the unknown regions in the north to the Straits of Magellan and Terra del Fuego,

where it communicates with the southern part of the Atlantic. On the other side it is bounded by the coast of Asia, from the northern promontory of Tschuskotskoi Noss, to the peninsula of Malacca already mentioned. Thence it is bounded to the southward by the coasts of Borneo, Celebes, Macassar, New Guinea, New Holland, and the other islands in that quarter, which divide it from the Indian Ocean. Then, washing the east coast of the great island of New Holland, it communicates with that vast body of water encompassing the whole southern part of the globe, and which has the general name of the Southern Ocean. Thus does this vast ocean occupy al-most the semi-circumference of the globe, extending almost from one pole to the other, and about the equatorial parts extending almost 1 80° in long., or 12,500 English miles. The northern parts of the Pacific are almost destitute of land, from lat. 40° N. and upwards, excepting such islands as are near the coast either of Asia or America : in the southern part there are a great number. Till very lately the South Sea was in a great measure unknown. From the great extent of ice which covers the southern part of the globe, it was imagined that much more land existed there than in the northern regions. But the supposed southern continent, or Terra Australis, has hitherto eluded the search of the most expert navigators. See COOK, PACIFIC, and POLYNESIA.

SOUTHAM, a market town and parish of Warwickshire, thirteen miles northwest from Banbury, and eighty-two north from London, is indifferently built. But the church is handsome, and has a spire. Market on Monday, for cattle. Fairs, first Monday in Lent, Easter-Monday, Monday before Whitsuntide, and July 10th.

SOUTHAMPTON is a borough-town and county of itself, consisting of seven parishes, including Stoneham, situate at the junction of the Test and Itching, which forms the Southampton Water, twenty-two miles W. N.W. from Portsmouth, and seventy-seven W.N. W. from London. It contains many handsome streets ; and its ancient timber buildings are daily giving place to modern erections. The High Street, terminating at the quay, has a beautiful view both of the Water and the New Forest. The town is well paved, lighted, and watched ; and the streets are always clean and dry. Conduits are disposed at proper distances, and supply the town with excellent water. The new and superior buildings are chiefly occupied as lodging-houses for the numerous summer visitors, for the purpose of sea-bathing ; for whose accommodation here, and in the vicinity, are a vast number of warm

and cold baths, fitted up with suitable conveniences. The approach to the town from the London road is exceedingly striking ; and, on entering the town by one of its more fashionable streets, the view is farther heightened by that venerable relic of antiquity the Bar-gate ; the greater part of which is supposed to have been erected in the reign of Edward III. Over the arches of the foot and carriage-ways is a town-hall, fifty-two feet by twenty-one, with which a room for the grand jury communicates.

The old walls present, in some places, a vene-rallc ap.searance. Their circuit is computed at

one mile and a quarter, but the whole present town cannot be less than three miles round. The castle stands near the middle of the south part. The keep stood on a high artificial mount, and from its ruins a small round tower has been constructed, whence there is a delightful prospect. It is supposed to have been of Saxon origin. The six parishes (exclusive of Stoneham) have but five parish churches ; *viz.* Holy-Rood, St. Michael's, All-Saints, St. Mary's, and the united parish church of St. Lawrence and St. John. That of Holy-Rood is remarkable for its organ and monuments. It is a vicarage, in the patronage of Queen's College, Oxford. St. Michael's has a high slender octagonal tower, which serves as a mark for vessels entering the harbour. All-Saints' is an elegant modern structure, fronting the High Street. The whole length is ninety-five feet, breadth sixty-one, and height, to the ceiling, forty-seven. St. Lawrence's is a small church, situate in the High Street. St. Mary's is a rectory, in the gift of the bishop of Winchester, worth at least £1400 per annum. The various classes of dissenters have six meeting-houses in this town. Near the town is an asylum for soldiers' orphans, on the plan of the asylum at Chelsea. A grammar-school, founded here in the reign of Edward VI., is in high repute. Among the principal charities are Thorner's alms-houses, for the relief of poor widows ; and a charity-school, founded by Alderman Taunton, for educating and apprenticing poor boys, besides several of less consequence. At the bottom of Orchard Street, without the Bar-gate, is a spring of the nature of Tunbridge-Wells, used with effect for the same complaints.

The public rooms near the baths command a delightful prospect ; the ball-room is spacious and handsomely decorated ; the theatre capacious and commodious, and besides these, there are horse-races and other entertainments. The town has several well-furnished libraries, and three respectable banks. About half a mile from the Bar-

gate stands the barrack, enclosing an area of two acres. On an eminence, at a small distance, is the polygon, an elegant pile of buildings, commanding extensive sea and land views. The inhabitants carry on a considerable trad* with the northern parts of Europe, for timber, hemp, tallow, &c. ; with Portugal for wine and fruit ; and with Wales and Newcastle for iron, coals, lead, and glass. Southampton has likewise a good trade with Jersey and Guernsey, to which they send large quantities of wool, principally returned in knit hose. Ship building is carried on at the docks near the town.

According to its last charter of incorporation, granted by Charles I., Southampton is governed by a mayor, a recorder, nine justices, a sheriff, two bailiffs, twenty-four common councilmen, and as many burgesses. All who have passed the chair are aldermen. The town which was made a borough by Henry II., is as such independent of the lord lieutenant and sheriff of Hampshire. The mayor is admiral of the liberties from South-sea castle to Hurst castle, and halfsea over from Calshot to the Isle of Wight. Southampton sends two members to parliament. The first return was made in -the 23d of Edward I. The

number of voters is about 700, consisting of the burgesses, and such of the inhabitants as pay scot and lot. Several royal burgesses have been enrolled in this corporation, among whom are the late king and his present majesty. The ori-gin and name of Southampton have occasioned much discussion. The name is written Hanton or Hantune in the Doomsday book, and is supposed to be derived from the river Ant or An-tom. The Romans had a settlement at Bittern, about a mile and a half from Southampton, named Clausenham. The present town arose after that was abandoned. Hampton must have been a place of consequence under the Anglo-Saxons, as it gave name to the whole county. From the year 873 until the accession of Canute it was subject to frequent ravages by the Danes. This monarch appears to have occasionally resided at Southampton ; and it was here that the incident happened which is recorded of him, when he ordered his chair to be set on the sea shore, and attempted to control the waves.

During the thirteenth century a good trade was carried on between this port and France. In 1345 the army which afterwards fought at the battle of Cressy was embarked here, as was also the army which, in 1415, fought at Agincourt. The trade of the town appears again to have flourished in the reign of Henry VI., and Cam-den, who wrote in the reign of Elizabeth, says that in his time the town was famous for the number and beauty of its buildings, and the re-sort of numerous merchants. After this, however, it appears to have declined, as Gibson, in 1695, describes it as going fast to decay. Since that time, however, the trade and consequence of the town have again revived. In 1811 the town contained 1669 houses, and 9617 inhabitants Markets on Tuesday, Thursday, and Saturday, well supplied with excellent fish and other provisions. There are two annual fairs, the principal of which is Trinity. Twelve miles S. S. W. of Winchester, and seventy-five W. S. W. of London. Long. 1° 24' W., lat. 50° 54' N.

SOUTHAMPTON, a township of the United States, in Rockingham county, New Hampshire. — 2. A township of Hampshire county, Massa-chusetts, which contains a lead mine. Ninety-eight miles west of Boston. — 3. A post township of Suffolk county, New York, on the south side of Long Island. 100 miles east of New York. — -4. A township of Cumberland county, Pennsylvania.— 5. A township of Franklin county, Pennsylvania. — 6. A township of Bedford coun-ty, Pennsylvania. Population 932. — 7. A township of Somerset county, Pennsylvania. — 8. A township of Bucks county, Pennsylvania. — 9. A county of the United States, in the southeast part of Virginia, bounded northwest by Sussex and Surry counties, east by Isle of Wight and Nansemond counties, south by North Carolina, and southwest by Greensville county. Jerusalem is the chief town.

SOUTHCOTT (Joanna), a remarkable fanatic of recent times, who attracted by her pretensions numerous converts in London and its vicinity. They are said to have amounted at one period to upwards of 100,000. She-was born in the west of England, about 1750, of very humble parents,

and, being carried away by the fervor of a heated imagination, gave herself out as the woman spoken of in the book of Revelations. In this capacity, although altogether illiterate, she scribbled much mystic nonsense in the way of vision and prophecy, and for a while carried on a lucrative trade in the sale of seals, which were, un-der certain conditions, to secure salvation. A disorder of rather rare occurrence finally giving her the outward appearance of pregnancy, after she had

passed her grand climacteric, she announced herself as the mother of a promised Shiloh, whose speedy advent she confidently predicted. More than one clergyman of the established church was numbered among her votaries. A cradle of expensive materials, and highly decorated, was prepared at a fashionable upholsterer's, for the expectedbabe. Sofully persuaded were many of her attendants of the reality of her mission, that one of the ecclesiastics already alluded to, on receiving a remonstrance from his diocesan, offered to bind himself to re-sign a benefice he possessed into the bishop's hands, if the holy Joanna, as he styled her, should fail to appear on a specified day with the expected Shiloh. As a specimen of the extravagant delusion which may be popular in the neighbourhood of the most enlightened metropolis of the world, we subjoin a specimen or two of her reveries. ' I have this to inform the public,' says the holy woman in her Warning to the whole World, p. 123, 'that the prophecies of this book show the destruction of Satan, and the

coming of Christ's kingdom Here

my readers may ask me, what ground I have to affirm this belief? I answer, from the truth that is past I have ground to believe that other truths will follow. From the former I judge the latter. The war that I foretold in 1792 we should be engaged in followed in 1 793. The dearth, which came upon the land in 1794 and 1795, I foretold in 1792 ; and, if unbelief did abound, that a much greater scarcity would take place, and which too fatally followed. I foretold the bad harvest in 1797. I foretold, in letters sent to two ministers of Exeter, what would be the harvests of 1799 and 1800 ; that the former would be hurt by rain, and the latter by sun : — these followed as predicted. The rebellion which took place in Ireland, in 1798, 1 foretold in 1795, when the Irish soldiers rebelled in Exeter against

the English officers.. I foretold the

secret thoughts and conversation of people in Exeter, which took place in 1792.' 'The letter I sent to the Rev. Archdeacon Moore last spring foretold the harvest as it came. 1 was ordered to put it in my own hand writing, to prevent his reading it before the time was expired! You may marvel how a woman that professed to say she is called of God, to write such deep prophecies, and have the mysteries of the Bible explained to her, should write such a hand as no one can read. But this must be to fulfil the Bible. Every vision John saw in heaven must take place upon earth; and here is the sealed book that no one can read.' ' The following is a communication given to Joanna in 1794 concerning the vials in the Revelation, and taken from the sealed

\vritings opened January 12th, 1803.

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S O U T H C O T T.

• No man by learning can these truths find out :

It is of God, I say, let no man doubt !

Thy pen's put down, and thou no more can'st say,

Till 1 shall farther on direct thy way.

And now thy way I surely will direct.

'Tis on the sun the vial is pour'd out ;

And fervent heat it shall so strongly burn,

That all the earth shall feel it and shall mourn ;

Because the sun shall burn so very strong,

That all the corn it surely will consume.

Great peace in England after that shall be, Because the remnant will believe in me.'

In p. 37, we find the following prophecy, ' I write to you, Sir, as a friend, to judge for yourself. If unbelief do still abound, the next harvest will be worse than the last, and your repentance may come too late. I am ready to an-swer for myself in all I have said or done. I have written no cunningly devised fable to any man, but written to make known unto all men the second coming of the Lord Jesus Christ; and am, with the greatest respect, your humble servant, JOANNA SOUTHCOTT.

* Now, I must beg my readers to observe,' says the prophetess, ' this letter was written the 2d of March, in the year 1800 ; and the harvest that followed was worse, as foretold, than the former of 1799.' —

With regard to her last and most extraordinary attempt at delusion, more than one medical man who examined her, attested her pregnancy; and a numerous body of partizans were the dupes of her imposture to the moment of her death. Dr. Reece gives the following account of a visit, at which he was present a few weeks before she died. Five or six of her friends, who were waiting in the next room, were admitted into her bed-chamber. — 'She desired them,' says our author, ' to be seated round her bed ; when spending a few minutes in adjusting the bed clothes with seeming attention, and placing before her a white handkerchief, she thus addressed them, as nearly as I can recollect, in the following words. — ' My friends, some of you have known me nearly twenty -five years, and all of you not less than twenty. When you have heard me speak of prophecies, you have sometimes heard me say that I doubted my inspiration. But at the same time you would ne-ver let me despair. When I have been alone it has often appeared delusion ; but, when the communication was made to me, I did not in the least doubt. Feeling, as I now do feel, that my dissolution is drawing near, and that a day or two may terminate my life, it all appears delusion.'— She was by this exertion quite exhausted, and wept bitterly. On reviving, in a little time, she observed that it was very extraordinary, that after spending all her life in investigating the Bible, it should please the Lord to inflict that heavy burden on her. She concluded this discourse, by requesting that every thing on this occasion might be conducted with decency. She then wept ; and all her followers present seemed deeply, affected, and some of them shed tears. ' Mother,' said one (I believe Mr. Howe), ' we will commit your instructions to paper ; and rest assured they shall be conscientiously followed.' They were accordingly written down with

much solemnity, and signed by herself, with her hand placed on the Bible in the bed … This being finished, Mr. Howe again observed to her, ' Mother, your feelings are human. We know that you are a favored woman of God, and that you will produce the promised child ; and whatever you may say to the contrary will not diminish our faith.' This assurance revived her, and the scene of crying was changed with her to laughter. She died 27th of December 1814; four days after which event her body was inspected, but no child was found. The faith of her disciples, however, was not extinguished by her death. The dead body was kept warm for four days, according, as was said, to her own directions, in hopes of a revival, and the birth of the promised child ; and it was not consigned to the dissector, till putrefaction had rendered it extremely offensive. Hopes are even yet, we understand, cherished, that, although she has been withdrawn for

a season, she will one day return with her son, and fulfil the promises, whose accomplishment has been delayed on account of the wickedness of the world. In fact, as some of her disciples, and particularly Mr. Sharp, have suggested, that she is the woman described at the beginning of the twelfth chapter of the Revelation ; it is evident from the perusal of that chapter, that both the mother and the child were to disappear from the earth, but to return at the end of a period not easy to be defined. Mr. Sharp publicly asserted his conviction that she was only gone to heaven for a season, in order to legitimate the embryo child.' In this persuasion he, as well as many others, lived and died, nor is the sect yet extinct ; on the contrary, within a short period several families of her disciples were living together in the neighbourhood of Chatham remarkable for the patriarchal length of their beards and the general singularity of their appearance. After the body of Joanna had been submitted to anatomical investigation (when the extraordinary appearance of her shape was fully accounted for upon medical principles), her remains were conveyed for interment under a fictitious name to the burying ground attached to the chapel in St. John's Wood. A stone has been erected to her memory, which, after reciting her age, and other usual particulars, concludes with some lines, evidently the composition of a still unshaken believer.

SOUTH END, a hamlet, risen of late into great repute as a watering-place, in the parish of Prittlewell (with which the population is returned), hundred of Rochford, Essex, at the mouth of the Thames, opposite to Sheerness, three miles and a half east from Leigh, and forty-two from London, is pleasantly situate on the slope of a hill. The air is esteemed very salubrious, and the water, notwithstanding its mixture with the Thames, is clear and salt. The terrace is a row of houses handsomely finished with pilasters and cornices of stone, and, being on an eminence, has a noble prospect of the Nore, Medway, Sheerness, and the sea. The assembly-room is fitted up in a handsome style, and the theatre is neat : the library, situate on the brow of the hill, between the Old and New Town, is an elegant Gothic building. The accommodations are respectable.

S O U T H W A R K.

• SOUTHERN (Thomas), an eminent dramatic ˆ writer, born at Dublin in 1660, and educated in the university there. He came young to London to study law, but devoted himself to poetry and the drama. His Persian Prince, or Loyal Brother, was introduced in 1682, when the Tory interest was triumphant in England ; and the character of the loyal brother being intended to compliment James duke of York, he rewarded the author, when he came to the throne, with a commission in the army. On the revolution he retired to his studies, and wrote several plays, from which he derived a very Handsome subsistence, being the first who raised the profits of play-writing to a second and third night. The most finished of all his plays is Oroonoko, or the Royal slave, which is built on a true story, related in one of Mrs. Behn's novels. He died in 1746, aged eighty-six. The latter part of his days he spent in a peaceful serenity, having, by his commission as a soldier, and the profits of his dramatic works, acquired a handsome fortune ; and, being an exact economist, he improved what he had gained to the best advantage. He enjoyed the longest life of all our poets; and died one of the richest of them. His plays are printed in 2 vols. 12mo.

SOUTH'ERNWOOD, n. s. Sax. ru«erin-pudu. Abrotanum.

This plant agrees in most parts with the worm-wood, from which it is not easy to separate it.

Miller.

SOUTHGATE (Rev. Richard), F. S. A., a late eminent English antiquary. Having gone through the usual course of study, and taken orders, he was appointed rector of Warsop in Nottinghamshire and curate of St. Giles's in the Fields. He was an active parish priest, and was indefatigable in his attendance on the poor, whom he waited on in all places and at all hours, by day and night, in the garrets and cellars of St. Giles's, and made a surprising reformation upon many of them. As an antiquarian he was almost unrivalled in numismatic knowledge ; on which account he was made a fellow of the Society of Antiquaries, and assistant librarian to the British Musaeum. He died January 25th,

1795.

SOUTH'SAY, v.n. & n. s. Corrupted from SOOTHSAY, which see. To

predict ; prediction.

All those were idle thoughts and fantasies, Devices, dreams, opinions unsound, Shews, visions, southsays, and prophecies, And all that feigned is, as leasings, tales, and lies.

Faerie Queene.

Young men, hovering between hope and fear, might easily be carried into the superstition of south' saying by names. Camden.

SOUTHWARK, an ancient borough of England, adjacent to London, on the opposite bank of the Thames. It was called by the Saxons Suth, or the South work, in respect to some fort bearing that aspect from London. It was also called the Borough, or Burg, and was long independent of London ; but, in consideration of the inconveniences arising from the escape of malefactors into this place, it was in 1327 granted by Edward III. to the city on payment of £10 annually. It was then called the village of

Southwark, Afterwards the bailiwic, and the mayor and commonalty of London appointed the bailiff'. This power, however, not being sufficient to remedy the evil, in the reign of Edward VI. it was formed into a twenty-sixth ward by the title of Bridge-Ward Without. In consequence of this it was subjected to the lord mayor of Lon-don, with the steward and bailiff. But this was only the division called the Borough Liberty. For the city division the lord mayor by his steward holds a court of record every Monday at the sessions-house on St. Margaret's Hill in this borough, for all debts, damages, &c. The other division is called the Clink, or the Manor of Southwark, and is subdivided into the Great Liberty, the Guildhall, and the King's Manor ; for each of which subdivisions a court-leet is held. A court-house, called Union-hall, has been built in the new street called Union Street. The Clink liberty is under the jurisdiction of the bishop of Winchester. Court-leets are also kept at Lambeth, Bermondsey, and Rotherhithe, districts adjoining to the Borough. The Marshalsea prison is the county jail for felons, and the admiralty-jail for pirates. In this quarter is also the King's Bench prison, the rules of which are above two miles in circuit, and comprise the greatest part of St. George's Fields. Here was committed Henry, prince of Wales, by the spirited and honest judge Gascoigne. In this prison, the allowance being better than that of the common prisons, many debtors remove themselves hither by habeas corpus.

Southwark is first mentioned in history on occasion of earl Godwin's sailing up the river to attack the royal navy of fifty ships lying before the palace of Westminster, in 1052, when ' he went ad Suthweorce,' and stayed there till the return of the tide. Southwark consists of the parishes of St. Olave, St. Saviour, St. George, and St. Thomas. That of Christ Church is in Surry. The principal church in Southwark is that of St. Saviour, formerly a priory of regular canons. Being dedicated to the Virgin Mary, and situated near the Thames, it was called St. Mary Over Ree, or Overy. It is built like a cathedral, with three aisles from east to west, and a cross aisle. It is the largest parish church in England, the three aisles measuring 269 feet in length, and the cross aisle 109 feet. The height within is forty-seven feet, and it has a tower with four spires 150 feet high. It has lately been extensively repaired. Near St. George's church stood the magnificent palace of Charles Brandon, duke of Suffolk, the deserved favorite of Henry VIII. After his death in 1545 it camt into the king's hands, who established here a royal mint. It was then called Southwark place. Edward VI. once dined in it. The mint became a sanctuary for insolvent debtors, and at length the pest of the neighbourhood, by giving shelter to villains of every species ; till parliament, by the stats. 8 & 9 W. III., 9 Geo. I., and 11 Geo. L, abolished its abused privileges. In the parish of Christ Church, near the water on Bankside, stood Paris garden, one of the ancient playhouses. Ben Jonson performed the part of Zulman in it. It was much frequented on Sundays. This profanation, Mr. Pennant ob-656

serves, was at length fully punished by the dire accident which befel the spectators in 1582, when the scaffolding suddenly fell, and multitudes of people were killed or miserably maimed. The manor of Paris garden was then erected into a parish, and a church founded under the name of Christ's. Beyond this place of amusement were the beai-garden and place for baiting of bulls, the British circi, those disgraces of English taste. This was then an amusement for persons of the first rank. Elizabeth caused even the French ambassadors to be diverted with these bloody spectacles. Near these scenes of cruel pastime were the bordello or stews, licensed by government. They were farmed out. Even a lord mayor did not disdain to rent them to the froes, or bawds of Flanders. Among other regulations no stewholder was to admit married women ; nor were they to keep open their houses on Sundays ; nor were they to admit any women who had

on them the perilous infirmity of burning. These infamous houses were very properly suppressed by Henry VIII. Besides several alms-houses here are St. Thomas's and Guy's hospitals, two of the noblest endowments in England. The former was first erected in 1215 by Peter de Itupibus, bishop of Winchester, who endowed it with land to the amount of £343 a year. In 1 551 , after the citizens of London had purchased of Edward VI. the manor of Southwark and its appurtenances, of which this hospital was a part, they spent £1100 in repairing and enlarging the edifice, and admitted into it 260 patients ; upon which the king in 1553 incorporated this hospital with those of Christ Church and Bridewell in London. The building being much decayed, three beautiful squares adorned with colonnades were erected by voluntary subscription in 1693, to which in 1732 the governors added a magnificent building, consisting of several wards. Near St. Thomas's stands Guy's Hospital, the most extensive charitable foundation that ever was established by one man in private life. The founder was Thomas Guy, a bookseller in Lombard Street, who lived to see the edifice roofed in; and at his death, in 1724, left £238,292 16s., including the expense of the building, to finish and endow it. See GUY. It was incorporated by charter from parliament, and the first governors were appointed in 1725. In St. George's fields, west of the king's-bench prison, is the Magdalen, for the reception of penitent prostitutes; a little farther is situated the Asylum for orphan girls; and not far distant the Westminster Lying-in hospital. St. George's Fields are now covered with new buildings. At Lambeth the archbishops of Canterbury had a palace. According to Mr. Pennant it was in earlier times a manor royal; for the great Hardiknut died here in 1042, in the midst of the jollity of a wedding dinner; and here the usurper Harold II. snatched the crown and placed it on his own head. At that period it was part of the estate of Goda, wife to Walter earl of Mantes, and Eustace earl of Boulonge ; who presented it to the church of Rochester, but reserved to herself the patronage. It became, in 1197, the property of the see of Canterbury by exchange. The building was improved by Langton, but was afterwards neglected, and became ruinous. ' No pious *ea. (says Mr. Pennant) restored the place, but thp madness of priestly pride. Boniface, a wrathful and turbulent primate, elected in 1244, by way of expiation for a riot he had committed, rebuilt it with great magnificence. It was very highly improved by the munificent Henry Chichely, who was primate from 1414 to 1443. I lament to find so worthy a man the founder of a building so reproachful to his memory as the Lollard's Tower, at the expense of nearly £280. Neither Protestants nor Catholics should omit visiting this tower, the cruel prison of the unhappy followers of Wicklifie. The vast staples and rings to which they were chained, before they were

brought to the stake, ought to make Protestants bless the hour which freed them from so bloody a religion.' During the civil wars of the seventeenth century, this palace suffered greatly ; but at the restoration the whole was repaired by archbishop Juxton. The parish church of Lambeth, which is near the palace, has a plain tower; the architecture is Gothic. It has the figure of a pedlar and his dog painted in a window. The pedlar bequeathed the piece of ground called Pedlar's Acre to the parish. In the church-yard is the monument of the three great travellers named Tradescant.

The charitable institutions in Southwark are extremely numerous and. respectable; the principal are, the Magdalen Hospital, for Female Penitents ; the School for the Indigent Blind ; the Philanthropic Society, for the protection and reform of the orphans and children of convicted felons ; the New Bethlehem Hospital for lunatics ; the Surry Dispensary ; many alms-houses for infirm old people; two free grammar-schools; the Royal Lancasterian Free-School, and a great number of other charities of less importance. The county prison, in Horsemonger Lane, is a commodious building, erected on the late Mr. Howard's plan ; attached to which is a new and spacious sessions-house. The Dissenters also enjoy numerous commodious places of worship. In the Borough are also Union Hall, a public police-office, the Town-hall, and the Borough Compter, for the confinement of prisoners previous to their examination. The "Surry Theatre is a neat edifice, and a much frequented place of amusement. An elegant cast-iron bridge of three arches, called Southwark Bridge, has been erected over the Thames from Bankside to Queen Street, in the city, which has greatly contributed to the improvement of that part of the borough ; and the new London bridge, constructed in granite, from designs by Mr. Rennie, is one of the finest hydraulic edifices which bestride the Thames. Southwark sends two members to parliament, who are returned by about 3200 of the inhabitants, paying scot and lot. The Bridge House, near St. Olave's Church, was formerly used as a storehouse for keeping the materials for repairing the bridge, but is now converted into offices belonging to the Bridge House estate. Adjoining the Bridge House yard formerly stood the city residence of the abbot of St. Augustines, in Canterbury, the site of which is now converted into a wharf. On the east side of Bridge Yard also

stood the mansion of the abbot of Battle, in Sus-sex; the site whereof is now called Battle Bridge ; opposite to this on the south were its spacious gardens, wherein was a labyrinth, or maze, the name of which is also preserved, though the place is covered with buildings. Near St. Saviour's church is the Borough market, for all kinds of provisions, but principally vegetables. SOUTHWELL, a market-town, in the county of Nottingham, situated on an eminence, on the banks of the river Greet, in a well-wooded country, and enclosed by an amphitheatre of hills. The town was formerly much more considerable than at present ; but as the hamlets of East and West Thorpe, which are contiguous, appear to form part of it, and go under the name, Southwell has still the appearance of a pretty large place. It is divided into a civil and ecclesiastical portion. The former, called the Burgage or Burridge, comprehends all the space between the market-place and the river ; the latter, the Prebendage, includes the collegiate church and its property. This church forms the only interesting object in the town, and has been long celebrated for the antiquity, beauty, and variety, of its architecture. It consists of a nave, with two aisles, two towers at the west end, a transept, a choir with aisles, and a chapter-house. The length from east to west is 306 feet, the width of the transept from north to south is 121 feet, and the breadth of the nave fifty-nine feet. The foundation of it is ascribed to Paulinus, archbishop of York, who was sent by pope Gregory, in 627, by the advice of St. Augustine, to establish Christianity in Britain. During a succession of ages it was liberally patronised by monarchs and nobles, and distinguished by the decrees of popes and prelates, until it shared the fate of other collegiate establishments in the reign of Henry VIII. It was in that reign declared by act of parliament the mother church of Nottinghamshire. In Edward VI.'s reign the chapter was dissolved and granted to the duke of Northumberland, but was restored by queen Mary. It suffered much in the civil wars, and has not yet recovered the damage done by Cromwell's troops, who converted it into a stable. The architecture is Saxon and Norman; the great mass of the building has sustained little alteration, except in some of the windows, whose Saxon arches have given place to the Gothic pointed style of the fourteenth century. There is a tradition that the oldest part, which is pure Saxon, and where the pillars are large, plain, and singularly massive, was built in the short reign of Harold ; and, on the whole, there is lit-tle doubt that, excepting St. Augustine's at Canterbury, this is the oldest building now in existence in England. The entrance is by a Gothic gateway, from which there is a direct view of the west front.

The chapter-house is a beautiful structure, and the arch of entrance forms a most striking object. Of the tombs in this church is a large alabaster one to archbishop Sandys. In the church-yard was a college for the chantry priests. The chantry itself has lately been taken down, and an excellent school erected on the ground. The VOL. XX.

whole establishment of the college consists of sixteen prebendaries, six vicars-choral, one organist, and other officers. Two fellowships and two scholarships in St. John's College, Cambridge, are in the presentation of Southwell They were founded by Dr. Reton, canon of Salisbury, in the time of Henry VIII. The archbishop of York had formerly a palace here, situated on the south side of the church yard ; the ruins of it are still extensive, and, being overshadowed with ivy, form a great ornament to the place The archiepiscopal parks were foui in number^ but these have been divided and enclosed since the destruction of the palace in the civil wars during which Charles I. was often here. On the north side of the church-yard is a very convenient public walk, made in 1784. The county bridewell here is used as a prison for the various manors belonging to the archbishopric in the county. It was built in 1656 and 1787. This prison, called the Nottinghamshire house of correction, has also received considerable additions to its size during the last two or three years. It is under the immediate direction of county magistrates, who are appointed visiting justices, a resident governor, a surgeon, chaplain, and turn-keys. The adaptation of the structure, and the regulations and discipline, are highly and warmly spoken of. Southwell possesses no trade of any consequence. The government of the town is divided between the clergy and the laity, the former ruling over the prebendage, and the latter over the Burgage. Its civil jurisdiction extends over twenty towns or villages ; its ecclesiastical over twenty-eight. The civil administration is held at Southwell and Scroby, by the justices, who are nominated by the archbishop, but act under a commission from the crown. The chapter, in the person of the vicar-general, exercises all the episcopal functions except ordination and confirmation. Southwell is thought to have been a Roman station. 'Market on Saturday, and an annual fair on Whit-Monday. Fourteen miles northeast of Nottingham, and 132 N.N.W. of London.

SOUTHWOLD, a sea-port, market-town, and bathing-place of Suffolk,

is situated on the Ely th, and on a point of laud almost surrounded by the sea ; twenty miles south from Yarmouth, and 105 northeast from London. The church is a fine building, 143 feet long, and fifty-six wide ; and the town is governed by two bailiffs, a recorder, and twelve aldermen, who hold their meetings in the Guildhall. It is a member of the port of Yarmouth, and its creek spreads to Dunwich and Walderswick. Here is a considerable trade in the herring and sprat fishing, in salt and old beer ; and the town has risen to its present consequence from the decline of Dunwich. The harbour has been repaired and improved by the erection of two piers. The bay, called Solebay, is remarkable in history for an engagement in 1666, between the British and Dutch fleets, when the latter was defeated with the loss of nearly seventy ships, while the English lost only one. High water, at full and change, half past nine o'clock. This part of the coast is noted for the arrival and departure ofv

wallows from and to the continent. Market on Thursday. Fairs, Monday after Trinity-Sun- day, and the 24th of August.

SouTH-W EST ISLES, seven small islands dependent on the Bandas, of which Kissier is the chief, ly-ing to the southwest. They are low, and sur-ronded by shoals and rocks. The natives are represented as a ferocious and perfidious people, being an intermediate race between the Papuas or aborigines of that country, and the Caffres of Africa. Their number in 1796 is said to have amounted to 36,266, of whom 2322 had been converted to Christianity. The Dutch had an establishment for commercial purposes on these islands, which produce sandal-wood, some ve-nison, and slaves.

SOU'VENANCE, n. s. Fr souvenance. Re- ••nembrance ; memory. A French word happily disused, says Johnson.

If thou wilt renounce thy miscreance, Life will I grant thee for thy valiance, And all thy wrongs will wipe out of my souvenance.

Spenter.

Gave wondrous great countenance to the knight, That of his way he had no souvenance, Nor care of vowed revenge. Id.

SOW, n.s. Sax. ru5n; Belg. zeug, souwe ; Goth, soa; Teut. saw ; Lat. sus; Gr. ovf, Hind. $00. A female pig ; the female of a boar.

Boars have great fangs, sows much less.

Bacon's Natural History.

For which they scorn and hate them worse 'han dogs and cats do tow gelders. Hudibras.

A. sow beneath an oak shall lie along, AH white herself, and white her thirty young.

Dryden.

The sow gelder's horn has something musical in it, but this is seldom heard. Additon's Spectator.

Sow, v. a. For SEW. To join by needle-work.

Some tree, whose broad smooth leaves together

sowed, 9

And girded on, may cover round. Milton.

Sow, v. n. & v. a.) Saxon j-apan ; Goth.

SoVER, n. I. \ saian; Belg. sayen. To

scatter seed ; propagate by seed ; spread ; besprinkle : the sower is the scatterer of seed.

They that tow in tears shall reap in joy.

Psalm cxxvi. 5.

Frowardness is in his heart : he deviseth mischief continually, he soweth discord. Proverbs vi. 14.

He shall give the rain of thy seed, that thou shalt suw the ground

withal. Isaiah xxx. 23.

Sow to yourselves in righteousness, and reap in mercy. Hosea.

A sower went forth to tote. Matthew xiii. 3.

He that soweth to his flesh shall reap corruption ; but he that toweth to the spirit shall reap life ever-ksting. Galutians vi. 8.

Like was not to be found, Save in that soil where all good things did grow,

And freely sprung out of the fruitful ground \s incorrupted nature did them sow.

Faerie Queene.

The one belongeth unto them that seek, the other into them that have found happiness ; they that pray do but yet tow, they that give thanks declare they have reaped. Hooker.

From Ireland come I with my strength, And reap the harvest which that rascal towed.

Shakspeare.

Many plants which grow in the hotter countries, oemg set in the colder, will, being sown of seeds late in the spring, come up, and abide most part of the summer. Bacon.

They are sowers of suits, which make the court swell, and the country pine. Id.

Terming Paul and his doctrine a tower of words, a very babbler or trifler. HahewiLi on Providence.

A goodly country, naturally beautified with roses, sown with pease. Heylyn.

It is thrown round, as grain by a skilful suiter.

Dei-ham.

He sowed with stars the heaven, thick as a field.

Milton.

To sow a jangling noise of words unknown. Id.

The intellectual faculty is a goodly field, capable of great improvement ; and it is the worst husbandry in the world to sow it with trifles or impertinencies. Hate's Origin of Mankind. When to turn

The fruitful soil, and when to sow the corn, I sing, Maecenas. Dryden's Georgich.

The proud mother views her precious brood, And happier branches, which she never sowed.

Dryden.

Since then they stand secured by being joined, 'Twere worthy a king's head to sow division, And seeds of jealousy, to loose those bonds. Rowe.

Born to afflict my Marcia's family, And sow dissension in the hearts of brothers.

Addison's Cato.

An hundred and fifty of their beds, sown together, made up the breadth and length. Gulliver.

SOWING, in agriculture and gardening, the depositing any kind of seed in the earth for a future crop.

SOWING OF SEEDS, in horticulture. Different methods are made use of, according to the sorts ; as broad-cast sowing and raking-in, drill sowing, bedding-in sowing, &c. ; in each of which there are some advantages in different ways.

The first is the most common and expeditious way for many of the principal crops, and is performed by sowing the seed with a spreading cast evenly all over the surface of the ground, either in one continued plat, or when divided into beds, which is immediately raked with a large rake, to bury all the seeds a due depth in the earth ; some requiring to be raked in as light as possible, others half an inch, or an inch or more deep, according to their kinds and sizes, &c. In preparing for this method, the ground is previously dug over in the common way, or in such a manner as is necessary ; making the surface level with the spade, as the work proceeds ; and, according to the nature of

the seed, sow-ing it as soon as possible afterwards. And this sort of sowing should generally be performed in dry weather, particularly the early sowings in winter and spring ; but in hot weather, in sum-mer and autumn, it may often be eligible to take advantage of sowing immediately after a shower of moderate rain. The sowing itself is effected occasionally both with an open and locked hand. In the former case it is performed by delivering the seeds with an open hand, ,and broad-spread- ing cast, as practised in sowing corn in the open fields, previously stepping out the ground in breaks or certain widths, as a guide to sow with the greater regularity ; proceeding with the sow ing along each space with a regular step and cast,

giving the hand a proper sweeping cant forward, cases, be the most desirable and advantageous

fully expanded at the delivery of the seeds, mak-practice ; as where it is wet, and not capable 01

ing them spread abroad evenly in every part ; and bearing treading, the intervals can be stood in

thus proceeding up one space, and down another, not only to sow the seed, but perform the raking

vill finished ; which method is practised in large of it in, without injuring the beds by trampling

Kitchen grounds, in sowing any considerable upon them. Besides, when weeding, watering, space in one continued plat. But the latter

is

practised occasiohally, both in sowing large continued plats of ground, and narrow beds, &c. ; but more generally the latter, especially when intended sowing them bed and bed separately ; or on narrow borders,

and other small plats of ground, commonly sowing or delivering the seeds with a locked or close hand, discharging them from between the fore finger and thumb ; opening or pinching the thumb more or less, according to the size and nature of the seeds, and thickness they require to be sown; giving the hand a sort

or transplanting the crops become necessary, they are capable of being stood in for performing such work?, as well as for culling and gathering the produce of them. In kitchen-gardens, however, where there is a scarcity of ground, or where it is of consequence to make the most of every part of such ground, and to use the utmost expedition in sowing or putting in the seed, the •whole surface method, in one continued plat, may be the most eligible plan of seeding the land, especially in very large grounds, for the main crops of such kinds, as the carrot, the pars-

of jerking turn, or cant forward, at the delivery, ,nip, turnip, leek, onions, spinach, lettuce, radish,

to cause the seeds to spread regularly, and in an exact manner. As soon as the seeds are sown, they should be raked in.

But where the ground is loose, light, and dry, it is a good practice, after sowing, to tread them in evenly by treading the ground all over lightly and regularly. It is also sometimes proper to pare up the loose earth of the alleys an inch or two deep, and spread it thinly over the surface. The work of treading in the seeds is performed with the feet nearly close together, taking short regular steps, treading the surface all over, once in a place, with but small spaces between the steppings. And in extensive market kitchen-gardens, where large tracts of ground are sown at once, instead of raking in the seed, they for the sake of expedition and cheapness, have light short-tinned harrows to draw with men, with which they harrow in the seeds ; and sometimes in light dry ground, and a dry surface, they afterwards roll the ground with a light wooden roller, to close and smooth the surface over the seeds more effectually ; performing it when the surface is a little dried, so as not to adhere to the roller.

In large garden-farms in fields, where they commonly plough and harrow the ground for

and some others. In this mode great care is to be taken in raking and harrowing in the seed, not to draw the mould and seed into lumps or heaps, but to bury it regularly in the soil. Where the seed has been trodden in, but slight raking is necessary. This mode of sowing and covering in the seed may be had recourse to for most ot' the esculent crops, some flower plants, &c.

The second method of sowing is necessary for many sorts of seeds, esculent, flower, tree, and shrub kinds in the nursery, both for the plants to remain where sown, and for transplantation ; which is performed in drills, from a quarter or half an inch to two or three inches deep, according to the sizes and sorts of seeds ; which being sown evenly along the bottom of the drill, the earth is drawn evenly over them with a hoe or rake, the depth as above, and the surface lightly raked smooth. This mode is always proper for large seeds, such as pease, beans, kidney-beans, and many large kinds of tree and shrub seeds, nuts, and berries ; it being not only the most ready method of committing those large seeds t» the ground the proper depth, but, by being in rows at a distance, best suits the nature of the growth of these sorts of plants, and their methods

of culture. Many kinds of small seeds are also the y t . • *, i • i* n . _

the reception of the seeds, they practise only the most conveniently sown and cultivated in drills ; broad-cast sowing in continued tracts, for almost such as several of the kitchen-garden plants, as all their esculent seeds, except pease, beans, parsley, chervil, coriander, all the sorts of sma..

sallading, and sometimes spinach, beet, &c. ; also some of the aromatics, when designed as edgings ; and also occasionally in rows in beds, both to remain and for transplanting, such as thyme, savory, hyssop, &c. ; likewise many sorts of flower-seeds for transplantation, and sometimes to remain. It is performed by drawing the drills with a common drawing-hoe, larger or smaller in proportion to the sorts of seeds to be sown ; setting a line as a guide to draw the drills

and kidney-beans ; the ground being prepared by ploughing, and afterwards rough-harrowed, to smooth the surface moderately ; the seeds being then sown in the spreading open-handed manner, and

harrowed in either with a light short-toothed horse-harrow, or by men for particular crops ; when, if very dry weather, they roll the surface afterwards with a wooden roller, drawn by horses, &c., to smooth the surface. In these sowings, the land may either be formed

into small beds of four or five feet in width, straight by, which are drawn of different depths, sowing each in a separate manner; or the whole as the sorts and sizes of the seeds may require, may be rendered even, and then sown all over and at proportionable distances, from three or the surface, to be afterwards trodden into beds four inches to as many feet, according to the na-ture of the plants. Sometimes, when very small drills are required for fine or small seeds, to be sown in a bed, border, or hot-bed, it is done with the end of the finger, or with the end of a small

of suitable breadths, as already suggested. The intervals in both cases, when the sowing is finished, are to be thinly pared and cast over the beds, which are then raked over in a regular neat manner, the whole length of them. The forming the land into small beds may, in some

flat stick. The seeds should in general be sown and covered in directly, if the ground be dry

and ir. good order; but if the soil be wet, especially at an early season, it may be proper to suffer the drill sto lie or be open and exposed to

the sun and air an hour or two, or more, to dry a little, particularly for tender seeds in early sowings, in the full ground.

Drill sowing is performed for the most part with a locked or closed hand, discharging the seeds from between the fore-finger and thumb, scattering them evenly along the bottom of the drill, some sorts requiring to be sown thinly just along the middle, such as in the angular d-rills drawn corner ways of the hoe, for peas, .and many other larger seeds ; also sometimes for smaller seeds when intended for edgings ; but in the shallow flat-bottomed drills, it is generally intended for the seeds to be scattered evenly the whole width of the drill, thicker or thinner, according to the nature of the growth of their respective plants. The work of covering or turning" in the earth into the drills over the seeds, may be performed occasionally with the rake, hoe, and feet. This is a manner of sowing which has not only the advantage of putting in the seeds to the most equal, regular, and suitable depths, but of placing them in rows at such distances as may admit the sun, light, and air, in the most effectual man-ner for promoting the growth of the plants as crops. Besides, the moulding up, and necessary culture afterwards, can be better and more beneficially performed.

In the last method of sowing, the ground dug and formed into four or five feet wide beds, with alleys a spade's width or more between bed and bed, and the earth drawn off the top of the bed with a rake or spade half an inch, or an inch or more deep, into the alley, the seed is sown all over the surface of the bed ; which done, the earth in the alley is immediately, either with a rake, drawn spreadingly upon the bed again over the seeds'the same depth, or spread over with a spade, and the surface raked smooth and even in a similar manner. It is often practised in the nurseries, especially in sowing some large sorts of seeds, as well as others, but not very frequently in kitchen ga'rdens. It is not so expeditious as the broad-cast sowing, but is very proper for many sorts of small seeds, and many sorts of the tree and shrub kind, being a very regular method of sowing, so as to cover all the seeds an equal depth, and is performed two or three different ways ; such as by the rake, by the spade, and by sifting. It is also sometimes performed with the rake and spade together, particularly when intended to sow any large seeds a good depth, using the rake to shove or rake the earth from off the bed into the alleys ; or, if it cannot be conveniently performed with the rake a proper depth, it is effected with the spade, trimming or paring the earth evenly off the surface into the alleys ; then sowing the seeds all over the surface ; and if they are of the larger berry, nut, or stone kind, or any other large seed, previous to covering them, pressing or patting them all evenly down into the

earth witn the back of the spade ; and then, either with the rake or spade, spreading the earth out of the alley? evenly over them ; though if it is a deep toverin-, especially when taken off with Oie

spade, it is most eligible to use the same implement in returning it, being careful to spread it evenly, to cover the seeds all equally a proper depth, smoothing the surface with the rake in finishing the work.

SOW'INS, v. n. Sax. j-eon, to drain off. Flummery, made of oatmeal somewhat soured.

These lomins, that is, flummery, being blended together, produce good yeast.

, Mortimer's Husbandry.

See where Norah with the sowim comes. Sicift.

SOWL, v. a. From sow, as hogs are pulled by dogs, Skinner; from sole, a strap, a rein, Kennet ; From Sax. j-ol, a rope. — Thomson. To pull by the ears. .

He'll go and sowl the porter of Rome gates by the ears. Shahs-eare.

aOWTHISTLE, n. s. Latin sonchius. A weed.

Sotothistles though coneys eat, yet sheep and cattle will not touch ; the milk of which, rubbed on warts, weareth them away, which sheweth it is corrosive.

Bacon.

SOY, or SGOJU, a celebrated pickle, much used by the Japanese, made from the mame or beans of the dolichos soja. See DOLICHOS. To make it they take equal quantities of the beans boiled to a certain degree of softness ; of muggi, or corn, whether barley or wheat, roughly ground ; and of common salt. Having properly mixed the beans with the pounded corn they cover up the mixture, and keep it for a day and a night in a warm place to ferment ; then putting the mass into a pot they cover it with the salt, pouring over the whole two measures and a half of water. This compound substance they carefully stir at least once a day, for two or three months ; after which they filtrate and express the mass, preserving the liquor in wooden vessels. The older it

is, the better and the clearer; and if made of wheat, instead of barley, greatly blacker. The first liquor being removed, they again pour water upon the remaining, mass; which, after stirring for some days, as before, they express a second time, and thus obtain an inferior sort of soy.

SOZOMEN, or SOZOMENUS (Hermias), an ecclesiastical historian of the fifth century, was born in Bethulia, a town of Palestine. He was educated for the law, and became a pleader at Constantinople. He wrote an Abridgment of Ecclesiastical History, in two books, from the ascension of our Saviour to the year 323. This compendium is lost ; but a continuation of it in nine books, written at greatei length, down to 440, is still extant. He seems to have copied Socrates, who wrote a history of the same period. The style of Sozomenus is more elegant ; but in other respects he falls short of that writer, displaying throughout his whole book an amazing credulity and a superstitious attachment to monks and the monastic life. The best edition of Sozomenus is that of Robert Stevens in 1544. He has been translated and published by Valesius, and republished with additional notes by Reading at London, 1720, in 3 vols. folio.

SOZOMENUS (John), a learned civilian of Venice, who flourished in the seventeenth century. He published a new translation of Pla'o's ten books De Republica; which he altered from

their original form of dialogues into a connected dissertation.

SPA, a town of the Netherlands, in the province of Liege, is situated on the banks of a rivulet, at the end of a deep valley, having various high and steep mountains at a short distance, so that the country around forms a beautiful landscape. The town is small, and a number of its houses are of wood. Its four streets, however, are wide and regular, built in the form of a cross.

Spa can boast of little else than its far-famed medicinal springs. Of these, to the number in all of six or seven, the principal are the

Pouhon, Geronstere, Sauveniere, and Tonnelet. The Pouhon rises from the hill to the north, but is made to issue from a fountain in the middle of the town ; the others are at a distance of from one to two miles. The season commences with the warm weather, and lasts commonly during four months. The accommodations, both at private lodgings and hotels, are in general good. The habit of riding every morning to the more distant springs is very favorable to health. The rest of the day is passed either at a public breakfast in the Vauxhall, one of the finest buildings of this kind on the continent, on the public walks, or in the chase ; for the adjacent country is abundant in game. Spa contains a theatre and commodious ball-rooms. The public walks are pleasant : and the town has been allowed a neutrality in some of the latest modern wars. The resident inha-oitants are not above 3000.

Some have supposed that the medicinal waters of this place are those mentioned by Pliny in his Natural History ; but others apprehend that those were the waters of Tongres. These waters were at first the property of the community of Spa, but they were afterwards taken possession of by a bishop of Liege, until an appeal was made to the imperial chamber, which restored them to the original proprietors, who imposed a small duty on every flask exported. In 1794 Spa was taken by the French, and long remained attached to the empire.

The Pouhon spring is the strongest chalybeate, and is in its most perfect and natural state in cold dry weather ; but in warm moist weather it loses its transparence, appears turbid or wheyish, contains less fixed air or carbonic acid gas, and is partly decomposed. This water, which is colder by many degrees than the heat of the atmosphere, is supposed to contain the greatest quantity of fixed air of almost any acidulous water ; and in consequence it has a remarkable sprightliness and vinosity, and boils by mere warmth ; but this soon flies off if the water be left exposed, though it may, in a great measure, be preserved in well-corked bottles. It is capable of dissolving more iron than it naturally contains, and of thus becoming a stronger chalybeate, on account of the great quantity of fixed air which it contains : and for the same reason an ebullition is raised in it on the addition of acids, which disengage its fixed air. This water mixes smoothly with milk, whether it be cold or of a boiling heat. The Tonnelet and Geronstere springs are weaker chalybeates, but brisker and more spirituous ; the GroeslDeck, Sauvenie’re, and

Wartroz, still weaker, but highly impregnated with calcareous and selenitical earths, and contain also a greater proportion of the fossil

alkali. The Geromont is likewise a weak chalybeate, but contains a great deal of calcareous and selenitical earths, and about three times as much alkaline salt as any of the others. The last four waters, therefore, will be bettet in disorders arising from an acid cause, and as diuretics, particularly the Geromont. The Bru, or Churon, approaches to the nature of the Tonnelet.

A.11 the waters comprehended under this denomination abound with fixed air ; they also contain more or less iron, fossil alkali, and calcareous and selenitical earths, together with a small portion of sea-salt, and an oily matter common to all waters. These ingredients are kept suspended, and in a neutral state, by means of the fixed air, on which the virtues chiefly depend ; though they are probably rendered more active and penetrating, both in the first passages, and also when they enter the circulation, by means of that small portion of iron, earth, salt, &c., with which they are impregnated. These waters are diuretic and sometimes purgative ; and, like other chalybeate waters, they tinge the stools black. They exhilarate the spirits much better than wine or spirituous liquors, and their general operation is by strengthening the fibres. Thfy cool and quench thirst much better than commo.j water.

In cases of languor they are found excellent, particularly when it is connected with a relaxation of the stomach, and of the fibres in general, or where the constitution has been weakened by diseases, or by a too sedentary life ; in such asthmatic disorders and chronic coughs as proceed from too great a relaxation of the pulmonary vessels ; in gout and rheumatism ; in obstructions of the liver and spleen; in scorbutic and other putrid disorders ; in hysterical and hypochondriacal complaints ; in paralytic disorders ; in gleets ; in the fluor albus ; in fluxes of the belly ; in the gravel and stone ; in female obstructions ; in barrenness ; and in most other cases where a strengthening and brisk stimulating resolving chalybeate remedy is wanted : but they are hurtful in hot, bilious, and plethoric constitutions, when used before the body is cooled by proper evacuations ; they are also hurtful in cases of fever and heat, in hectic fevers, and ulcerations of the lungs, and of other internal parts, and in most confirmed obstructions attended with fever. The usual season for drinking them is in July and August, or from May to September. The quantity to be drunk is such as the stomach can bear without heaviness or uneasiness : but it is advisable to begin with drinking a glass or two several times in the day, and so increase the quantity daily, as the stomach can bear ; and during the course to continue that dose, and to diminish the quantity at the close in the same de-gree as it was augmented at the beginning. Moderate exercise is proper after

drinking. Previous to the use of the water, the first passages should be cleansed by gentle purges ; and during the course Rochelle salts or rhubarb may be usefully added to the first glass of water in the morning.

The Spa water is also used externally as an injection in the fluor albus, and in ulcers and cancers of the womb, and also in the gonorrhoea ; it is serviceable for washing venereal aphthae, and ulcers in the mouth, phagaedenic ulcers, by way of gargle for relaxed tonsils, and for fastening loose teeth, and in other cases of relaxation. It is also said to cure the itch, and similar complaints, by washing and bathing. — Elliott's Mineral Waters, p. 201, &c.

SPAAD, n. s. Lat. Stella terra. Probably • from SPADE, the instrument of digging. A kind of mineral. «

English talc, of which the coarser sort is called plaister ; the finer, spaad, earth-flax, or salamander's hair. Woodward.

SPACE, n. s. > Lat. sputium. Room ; local

SPACIOUS, adj.] extension ; the distance between any two bodies ; any quantity of space or time ; a small time : the adjective corresponding.

Sith for me ye fight, to me this grace Both yield, to stay your deadly strife a space.

Faerie Queene.

The former buildings, which were but mean, contented them not : spacious and ample churches they erected throughout every city. Hooker.

There was but two ways to escape ; the one through the woods, about ten miles space to Walpo.

Knollei.

I would not be the villain that thou thinkest For the whole space that's in the tyrant's grasp, And the rich east to boot. Shakspeare. Macbeth.

Oh undistinguished space of woman's wit !

Sliakspeare.

Convey your pleasures in a spacious plenty ; And yet seem cold. Id.

There is a competent time allowed every man, and, as it is certain death is the conclusion of it, 'tis possible some space before death. Hammond.

In a lever the motion can be continued only for so short a space, as may be answerable to that little distance betwixt the fulciment and the weight.

Wilkin's Mathematical Magick.

Nine times the space that measures day and night, To mortal men, he with his horrid crew Lay vanquished, rolling in the fiery gulph, Confounded, though immortal. Milton.

Compassion quelled

His best of man, and gave him up to tears A space, till firmer thoughts restrained excess. Id.

God may defer his judgments for a time, and give a people a longer space of repentance : he may stay till the iniquities of a nation be full ; but sooner or later they have reason to expect his vengeance.

Tillotson.

Measuring first with careful eyes The space his spear could reach, aloud he cries.

Dryden.

Like an English general will I die, And all the ocean make my spacious grave ;

Women and cowards on the land may lie : The sea ‘s a tomb that’s proper for the brave. Id.

Pure space is capable neither of resistance nor motion. Locke.

Space is the relation of distance between any two bodies or points. Id.

In such a great ruin, where the fragments are great and hard, it is not possible they should be so adjusted in their fall, but that they would lie hol-low, and numerous unfilled spaces would be intercepted amongst them. Bui-net.

The lives of great men cannot be writ with any to-

lerable degree of elegance or exactness, within short space after their decease. Addison’s Freeholder.

Space and motion can never be actually infinite : they have a power only and a capacity of being increased without end : so that no spare can be assigned so vast, but still a larger may be imagined ; no motion so swift or languid, but a greater velocity or slowness may still be conceived. Bentley.

SPACE, in geometry, denotes the area of any figure, or that which nils the interval or distance between the lines that terminate it.

SPADE, n. s. J Sax. rpab ; Belg. Teut. and

SPADE’BONE, > Island, spade; Gothic spad.

SPAD’DLE. j The instrument of digging : spadebone seems so called from its shape ; the shoulderblade : spaddle is a diminutive of spade.

Take the air of the earth new turned up, by digging with the spade, or standing by him that diggeth.

Bacon. By the shoulder of a ram from off the right side

pared, Which usually they boil, the spadebone being bared.

Dray ton.

Many learned men affirm that some isthmus have been eat through bv the sea, and others cut by the spade. Browne.

His next advance was to the soldier's trade, Where, if he did not nimbly ply the spade, His surly officer ne'er failed to crack His knotty cudgel on his tougher back. Dryden.

Others destroy moles with a spaddle, waiting in the mornings and evenings for them.

Mortimer's Husbandry. Here nature never difference made Between the sceptre and the spade. Swift.

SPADE, an important tool in rural economy, in the making of fences and embankments of different sorts, as well as in all operations of digging and draining. The most handy and convenient form for common work is probably that in which they are made strong in the back, and have a slight bend or curve in the handle or shaft, as by means of this the labor is performed with greater ease and facility.

The spade is also a garden implement. It is eligible for every garden to be furnished at least with three different kinds of spades, to suit every department of gardening the more commodiously ; such as the common large digging spade, for all common digging and spade-work ; a middling and a small spade for digging particular narrow compartments, and between small plants closely placed in beds and borders, &c. The first is usually from fourteen to fifteen inches long in the plate, and nine broad, narrowing gradually half an inch or an inch less at the bottom. The second sort should be about a foot long in the plate, and seven or eight inches broad. The small spade, which is about eight or nine inches long in the plate, and five wide, is convenient in pointing up or slight digging, and in fresh loosening the surface between close-placed small plants, in beds and borders, &c., where neither of the two former spades can be readily introduced : it is also useful in planting and potting many sorts of small plants, taking up small roots, and other light purposes.

Other sorts are in use for different purposes, as a very small narrow spade, having the plats.

<rn fcjr 3. -A s she t on.

SPAIN.

about seven inches long, by three and a half or four wide, which is very useful in small compartments of beds, borders, &c., containing some particular close-placed, small plants of flowers, and others, both in occasionally slightly digging, or loosening the earth between them with greater ease and effect, than a larger sized spade ; also sometimes in similar compartments, in occasionally trimming round the bottom part of some straggling fibrous-rooted plants ; and it is also often useful in taking up and transplanting small plants, and taking off root offsets and slips, in particular sorts, in which a larger spade would not be so convenient. And further, a semicircular or scooped spade is another sort of a smallish size, having the plate made hollow, like a scooped garden-trowel, which is very useful in taking up small plants with balls of earth, to preserve the ball more firmly about the roots. Pro-per garden spades have the plates wholly of iron, not above a quarter of an inch thick upward, growing gradually thinner from the middle downward ; the tree or handle being generally of ash, about two feet long, and an inch and a half thick, with a firm open handle at top, formed out of the solid wood, just big enough to admit of taking ready hold.

SPADI'CEOUS, adj. Lat. spadiceus.

Of these five Scaliger beheld, though one was spadiceous, or of a light red, and two inclining to red, yet was there not any of this complexion among them. Browne's Vulgar Errours.

SPADIX, in botany, anciently signified the receptacle of the palms. It is now used to express every flower-stalk that is protruded out of a spatha or sheath. The spadix of ths palms is

branched ; that of all other plants simple. This last case admits of some variety : in calla, dra-contium, and pothos, the florets cover it on all sides ; in arum, they are disposed on the lower part only ; and in zostera on one side. See BO-TANY, Index.

SPAGIRICK ART, a name given by authors to that species of chemistry which treats of metals, and is employed in the search of the philosopher's stone.

SPAGNOLETTO (Joseph Ribera), an eminent painter, born at Xativa,

in Spain, in 1589. He travelled into Italy, where he studied painting under the best masters. He then settled at Naples, where, being constantly employed, not only by the viceroy, but by the greatest monarchs in Europe, he accumulated a fortune. His fancy led him to describe subjects of horror, from history sacred and profane ; such as the massacre of the innocents at Bethlehem ; Ixion on the wheel ; Prometheus torn by vultures, and the like. The strength of his expression, and the force of his coloring, give extraordinary relief to his figures, and make his works still esteemed. He died in 1656, aged sixty-seven.

SPA'GYRIST, n. s. Barb. Lat. spagyricus. A chymist.

This change is so unexampled that though among the more curious spagyrists it be very well known, yet many naturalists cannot easily believe it.

Boyle.

SPAHIS, horsemen in the Ottoman army, chiefly raised in Asia. The great strength of the grand signior's army consists in the janisaries, who are the foot, and the spahis, who are the horse.

SPAIN.

SPAIN, a country of Europe, famous both in ancient and modern history, situated in thatlaige peninsula which forms the southwest part of Europe. It is bounded on the southeast and south by the Mediterranean Sea and straits of Gibraltar, on the west and north by the Bay of Biscay and Atlantic Ocean, on the southwest by Portugal, and on the northeast by the Pyrenees, which separate it from France. Its greatest ex-tent or breadth from .north to south is stated by Cruttwell at 460 miles ; its length from east to west, in the north part, 520 miles; towards the centre 300 ;- and near the southeast more than 900. Brookes makes it 700 miles long and 500 broad.

PART I. HISTORY OF SPAIN.

The most ancient name of Spain was Iberia, supposed by some to be derived from the Iberians, a people inhabiting Mount Caucasus, a colony of whom settled in this country. Others derive it from the Phrenician word Ebra or Ibra, signifying a passage or limit. By the

Romans it was called Spania or Hispania, from the Phenician name Sphanija ; and this again from Shaphan, a Phenician word signifying a rabbit,

because the western part of Spain abounded with those animals. See SAPHAN.

The constitution of Spain is an absolute hereditary monarchy, where the females inherit in default of the males. The king, in his title, enumerates most of the provinces he has been or is possessed of. He is called his Catholic majesty, or the Catholic king. The hereditary prince is styled prince of Asturias, and the other royal children infants. The kings of Spain are never crowned. For the administration of government and justice, there are several councils and tribunals ; as the cabinet council, the privy-council, the council of war, the council of Castile, the council of the inquisition, the council of finances, the council of the Indies, the seven courts of royal audiences, &c. The history of Spain proves how great an influence the Cortes had in former times in the most important affairs ; such as wa ror peace, taxes, &c. But often during along course of years they have not been assembled, except for the sake of form ; and the sovereigns, without formally rejecting their intervention, elude their authority. They promulgate from the throne certain ordinances under the name of pragmatics, the preambles of which give us to understand that they claim the same authority as if they had been published in the assembly of

the Cortes, who are never convoked but at the accession of a new monarch, to administer to him an oath in the name of the nation, and to swear fidelity to him. On such occasions letters of convocation are sent to all the Grandees ; to all persons bearing titles of Castile ; to all the prelates ; and to every city which has a right to send deputies to the Cortes. The first two classes represent the nobility; the priests sit in the name of the clergy : and one magistrate from each of the cities

represents the people. Except on such an occasion, the Cortes of the whole kingdom had been assembled before the late revolution but twice during the last century, and only once upon public buiness, in 1713, when Philip V. convoked them to give their approbation to the pragmatic sanction, which changed the order of succession They are still consulted, for the sake of form, in certain cases, but without assembling. At their breaking up, in 1713, it was regulated that they should be represented by a permanent committee, whose office it should be to watch over the administration of that part of the taxes called millones, which had been granted under Philip II. They retained the administration of these imposts until 1718, when cardinal Alberoni, whose imperious genius was irritated at such shackles, transferred it to the hands of the sovereign. From that time the assemblies of the deputies of the kingdom have received no more of the revenues of the state than is necessary to pay the salaries and expenses of the members. These are eight in number. All the provinces of Castile unite to nominate six; Catalonia and Majorca appoint one ; and the regencies of Valencia and Arragon elect the eighth. These deputies hold their places six years, at the end of which a new election takes place in the same manner. As a relict of their ancient rights, they still retain the privilege of being members of the council of finances, by which the sovereign communicates to the nation the necessity of levying any new tax ; and the approbation they are supposed to give to the royal resolution is a shadow of the consent of the Cortes, without which taxes could not formerly be levied. But it is easy to see • how feeble this rampart of liberty must be, which is only formed of a small number of citizens, who possess no real power, and are under the control of government, from which they expect preferments. The provinces of Biscay and Navarre, which have particular privileges, send also deputies to the throne ; but they do not make a part of the body of the deputies of the kingdom. The administration of Spain is divided into six principal departments. The minister for foreign affairs is the directing minister, and is styled secretary of state. The minister of war has but a circumscribed authority. He is president of the council of war, but the inspectors of the infantry, and those of the cavalry, dragoons, and provincial regiments, draw up a statement of whatever relates to the corps of which they have the direction ; and the minister at war has only to present the memorials they give in to the king. The marine minister has no associates. The chiefs of the three departments of Ferrol, Carthagena, and Cadiz, and inspectors of the marine, are named by the

king; but the marine ordinances, prepared by the minister alone,

require only the sanction of the king. The minister of the finances should be under the inspection of the superintendant-general of that department: but these two offices were some time since united ; the separation of them would multiply, without necessity, the springs of government ; and the interests of the state require that they should be simplified as much as permanent forms, those sacred bulwarks of justice and property, will admit.

Spain, as well as the rest of Europe, was probably peopled by the Celtesj but the Spanish historians derive the origin of their nation from Tubal, the fifth son of Japhet, asserting that Spain had been a monarchy for 2226 years be-fore the coming of the Celtes into it. Till the coming of the Carthaginians into Spain, however, nothing certain can be affirmed of the Spaniards ; and this happened not long before the commencement of the first Punic war. Their success in reducing the country, and their final expulsion by the Romans, have already been related under the articles ROME and CARTHAGE; we have here therefore only to take notice of the state of Spain under the Roman government, until the Romans were in their turn expelled by the northern barbarians.

At the time of the Roman conquest, Spain, though prodigious quantities of silver had been carried out of it by the Carthaginians and Ty-nans, was yet a very rich country. In the most ancient times, indeed, its riches are said to have exceeded what is related of the most wealthy country in America. Aristotle assures us that, when the Phoenicians first arrived in Spain, they exchanged their naval commodities for such immense quantities of silver that their ships could neither contain nor sustain its load, though they used it for ballast, and made their anchors and other implements of silver. When the Carthaginians first came to Spain, they found the quantity of silver nothing lessened, since the inhabitants at that time made all their utensils, and even mangers, of that precious metal. In the time of the Romans this amazing plenty was very much diminished ; however, their gleanings were by no means despicable, since in nine years they carried off 111,542 Ibs. of silver, and 4095 Ibs. of gold, besides an immense quantity of coin and other things of value. The history of Spain will be conveniently divided as follows : —

From the arrival of the Romans till the destruction of Numantia. — The Spaniards were always remarkable for their bravery, and some of Hannibal’s best troops were brought from thence. But, as the Romans penetrated farther into the country than the Carthaginians had done, they met with nations whose love of liberty was equal to their valor, and whom the whole strength of their empire was scarcely able to

subdue. Of these the most formidable were the Numantines, Cantabrians, and Asturians. In the time of the third Punic war, one Viriathus, a celebrated hunter, and afterwards the captain of a gang of banditti, took upon him the command of some nations who had been in alliance with Carthage, and ventured to oppose the Romaa

power in that part of Spain called Lusitania, now Portugal. The praetor, named Vetilius, who commanded in those parts, marched against him with 10,000 men ; but was defeated and killed, with the loss of 4000 of his troops. The Romans immediately despatched another praetor with 10,000 foot and 1300 horse : but Viriathus, having first cut off a detachment of 4000 of them, engaged the rest in a pitched battle ; and, having entirely defeated them, reduced great parts of the country. Another praetor, who was sent with a new army, met with the same fate; so that, after the destruction of Carthage, the Romans thought proper to send the consul, Quintus Fabius, who defeated the Lusitanians in several battles, and regained two important places which had long been in the hands of the rebels. After the expiration of Fabius's consulate, Viriathus continued the war with his usual success, till the senate sent against him the consul Q. Caecilius Metellus, an officer of great valor and experience. With him Viriathus did not choose to venture a pitched battle, but contented himself with acting on the defensive ; in consequence of which the Romans recovered many cities, and the whole of Tarraconian Spain. The other consul, Servilianus, did not meet with the same success ; his army was defeated and his camp was nearly taken by Viriathus. Notwithstanding the good fortune of Metellus, however, he was recalled by the intrigues of his countrymen, without being allowed to finish the war he had begun with so much success. In resentment for this he weakened the army under his command ; disbanded the flower of his troops, exhausted the magazines, let the elephants die, broke in pieces the arrows which had been provided for the Cretan archers, and threw them into a river. Yet, after all, the army which he gave up to his successor Q. Pompeius, consisting of 30,000 foot and 2000 horse, was sufficient to have crushed Viriathus if the general had

known how to use it. But, instead of opposing Viriathus with success, the imprudent consul procured nuch more formidable enemies. The Termantines and Numantines, who had hitherto kept themselves independent, offered very advantageous terms of peace and alliance with Rome ; but Pompeius insisted on their delivering up their arms. Upon this, war was immediately commenced. The consuf with great confidence invested Numantia ; but, being repulsed with considerable loss, he sat down before Termantia, where he was attended with still worse success. The very first day the Termantines killed 700 of his legionaries ; took a great convoy which was coming to the Roman camp: and, having defeated a considerable body of their horse, pushed them from post to post till they came to the edge of a precipice, where they all tumbled down, and were dashed to pieces. In the mean time Servilian, who had been continued in his command with the title of proconsul, managed .natters so ill, that Viriathus surrounded him on all sides, and obliged him to sue for peace. The terms offered to the Romans were very moderate ; being only that Viriathus should keep the country he at that time possessed, and the Ro-mans remain masters of all the rest. This peace

the proconsul was very glad to sign, and afterwards got it signed by the senate and people of Rome. The next year Q. Pompeius was continued in his command against the Numantines in Farther Spain, while Q. Servilius Caepio, the new consul, had for his province Hither Spain, where Viriathus had established his new state. Pompeius undertook to reduce Numantia by turning aside the stream of the Durius, now the Douro, by which it was supplied with water; but in attempting this such numbers of his men were cut off, that, finding himself unable to contend with the enemy, he was glad to make peace with them on much worse terms than they had offered of their own accord. The peace, however, was ratified at Rome; but in the mean time Csepio, desirous of showing his prowess against the renowned Viriathus, prevailed upon the Romans to declare war against him without any provocation. As Caepio commanded an army greatly superior to the Lusitanians, Viriathus thought proper to sue for peace ; but, finding that Caepio would be satisfied with nothing less than a surrender at discretion, he resolved to stand his ground. In the mean time, the latter having bribed some of the intimate companions of Viriathus to murder him in his sleep, he by that infamous method put an end to a war which had lasted fourteen years, very little to the honor of the republic.

After the death of Viriathus, the Romans with like treachery ordered

their new consul Popilius to break the treaty with the Numantines. His infamous conduct met with the reward it deserved ; the Numantines, sallying out, put the whole Roman army to flight with such slaughter that they were in no condition to act during the whole campaign. Mancinus, who succeeded Popilius, met with still worse success ; his great army, consisting of 30,000 men, was utterly defeated by 4000 Numantines, and 20,000 of theui killed in the pursuit. The remaining 10,000 with their general were pent up by the Numantines in such a manner that they could neither advance nor retreat, and would certainly have been all put to the sword or made prisoners, had not the Numantines, with a generosity which their enemies never possessed, offered to let them depart, upon condition that a treaty should be concluded with them upon very moderate terms. This the consul very willingly promised, but found himself unable to perform. On the contrary, the Romans, not satisfied with declaring his treaty null and void, ordered him to be delivered up to the Numantines. The lat-ter refused to accept him unless he had along with him the 10,000 men whom they had relieved as above related. At last, after the consul hail remained a whole day before the city, his successor Furius, thinking this a sufficient recompense to the Numantines for breaking the treaty, ordered him to be received again into the camp. However, Furius did not choose to engage with such a desperate and resolute enemy as the Numantines had shown themselves ; and the war V?ith them was discontinued till the year 133 B. C., when Scipio ˆmilianus, the destroyer of Carthage, was sent against them. Against this renowned commander the Numan-656

tines with all their valor were not able to cope. Scipio, having with the utmost care introduced strict discipline among his troops, and reformed the abuses which his predecessors had suffered in their armies, by degrees brought the Romans to face their enemies, which at his arrival they had absolutely refused to do. Having then ravaged all the country round about the town, it was soon blocked up on all sides, and the inhabitants began to feel the want of provisions. At last they resolved to make one desperate attempt for their liberty, and either to break through their enemies, or perish in the attempt. With this view they marched out in good order by two gates, and fell upon the works of the Romans with the utmost fury. The Romans, unable to stand this desperate shock, were on the point of yielding; but Scipio,

hastening to the place, attacked, with no fewer than 20,000 men, the unhappy Numantines, who were at last driven into the city, where they sustained for a little longer the miseries of famine. Finding at last, however, that it was altogether impossible to hold out, it was resolved by the majority to submit to the pleasure of the Roman commander. But this resolution was not universally approved. Many shut themselves up in their houses, and died of hunger, while even those who had agreed to surrender repented their offer, and, setting fire to their houses, perished in the flames, with their wives and children, so that not a single Numantine was left alive to grace the triumph of the conqueror of Carthage.

From the destruction of Numantia till the mur-der of Sertorius. — After the destruction of Numantia, the whole of Spain submitted to the Roman yoke; and nothing remarkable happened till the times of the Cimbri, when a praetorian army was cut off in Spain by the Lusitanians. From this time nothing remarkable occurs in the history of Spain till the civil war between Ma-rius and Sylla. The latter, having crushed the Marian faction (see ROME), proscribed all those that had sided against him whom he could not immediately destroy. Among these was Sertorius, a man of consummate valor and experience in war. He had by Marius been appointed praetor of Spain ; and, upon the overthrow of Marius, retired to that province. Sylla no sooner heard of his arrival in that country, than he sent thither one Caius Annius with a powerful army to drive him out. As Sertorius had but few troops along with him he despatched one Julius Salinator with a body of 6000 men to guard the passes of the Pyrenees, and to prevent Annius from entering the country. But Salinator having been treacherously murdered, by assassins hired by Annius for that purpose, he no longer met with any obstacle ; and Sertorius was obliged to embark for the coast of Africa with 3000 men, being all he had now remaining. With these he landed at Mauritania ; but, as his men were straggling carelessly about, great numbers of them were cut off by the barbarians. This new misfortune obliged Sertorius to re-embark for Spain; but, finding the whole coast lined with the troops of Anuius, he put to sea again, not knowing what course to steer. In this new voyage he met with a small fleet of Cilician

pirates ; and, having prevailed with them to join him, he made a descent on the coast of Yvica, overpowered the garrison left there by Annius, and gained a considerable booty. On the news of this victory Annius set sail for Yvica with a considerable squadron, having 5000 land forces on board. Sertorius, not intimidated by the superiority of

the enemy, prepared to give them battle. But, a violent storm arising, most of the ships were driven on shore and dashed to pieces. Sertorius himself with great difficulty escaping with the small remains of his fleet. For some time he continued in great danger, being prevented from putting to sea by the fury of the waves, and from landing by the enemy ; at last, the storm abating, he passed the straits of Gades, now Gibraltar, and landed near the mouth of the river Bceotis. Here he met with some seamen newly arrived from the Atlantic or Fortunate Islands ; and was so taken with the account which they gave him of those happy regions, that he resolved to retire thither to spend the rest of his life in quiet and happiness. But, having communicated this design to the Cilician pirates, they immediately abandoned him and set sail for Africa with an intention to assist one of the barbarous kings against his subjects who had rebelled. Upon this Sertorius sailed thither also, but took the opposite side; and, having defeated the king named Ascalis, obliged him to shut himself up in the city of Tidgis, now Tangier, which he closely besieged. But in the mean time Pacianus, who had been sent by Sylla to assist the king, advanced with a considerable army against Sertorius. Upon this the latter, leaving part of his forces before the city, marched with the rest to meet Pacianus, whose army, though greatly superior to his own in number, he entirely defeated ; killed the general, and took all his forces prisoners. The fame of this victory soon reached Spain ; and the Lusitanians, being threatened with a new war from Annius, invited Sertorius to head their armies. With this request he very readily complied, and soon became very formidable to the Romans. Titus Didius, governor of that part of Spain called Bcetica, first entered the lists with him ; hut, being defeated, Sylla next despatched Metellus, reckoned one of the best commanders in Rome, to stop the progress of this new enemy. But Metellus, notwithstanding all his experience, knew not how to act against Sertorius, who was continually changing his station, putting his army into new forms, and contriving new stratagems. On his first arrival he sent for L. Domitius, then praetor of Hither Spain, to his assistance ; but Sertorius, being informed of his march, detached Hirtuleius, or Herculeius, his quaestor, against him, who gave him a total overthrow. Metellus then despatched Lucius Lollius, praetor of Nar-bonne Gaul against Hirtuleius ; but he met with no better success, being utterly defeated, and his lieutenant-general killed. The fame of these victories brought to the camp of Sertorius such a number of illustrious Roman citizens, of the Marian faction, that he formed a design of erecting Lusitania into a republic in opposition to that of Rome. Sylla was continually sending fresh supplies to Metellus ; but Sertorius, with a

handful of men accustomed to range about the mountains, to endure hunger and thirst, and live exposed to the inclemencies of the weather, so harassed the Roman army, that Metellus himself began to be quite discouraged. At last Sertorius, hearing that Metellus had spoken disrespectfully of his courage, challenged his antagonist to end the war by single combat ; but Metellus very prudently declined the combat, as being advanced in years ; yet this refusal brought upon him the contempt of the unthinking multitude, upon which Metellus resolved to retrieve his reputation by some signal exploit, and therefore laid siege to Lacobriga, a considerable city in those parts. This he hoped to reduce in two days, as there was but one well in the place.; but Sertorius having previously removed all those who could be of no service during the siege, and conveyed 6000 skins full of water into the city, Metellus continued a long time before it without making any impression. At last, his provisions being almost spent, he sent out Aquinius at the head of 6000 men to procure a new supply; but Sertorius, falling unexpectedly upon them, cut in pieces or took the whole detachment ; the commander himself being the only man who escaped to carry the news of the disaster ; upon which Metellus was obliged to raise the siege with disgrace. And now Sertorius, having gained some intervals of ease in consequence of the many advantages he had obtained over the Romans, began to civilise his new subjects. Their savage and furious manner of fighting he changed for the regular order and discipline of a well formed army ; he bestowed liberally upon them gold and silver to adorn their arms, and, by conversing familiarly with them, prevailed upon them to lay aside their own dress for the Roman toga. He sent for all the children of the principal people, and placed them in the great city of Osca, now Heresca, in the kingdom of Arragon, where he appointed them masters to instruct them in the Roman and Greek learning, that they might, as he pretended, be capable of sharing with him the government of the republic. Thus he made them really hostages for the good behaviour of their parents; however the latter were greatly pleased with the care he took of their children, and all Lusitania were in the highest degree attached to their new sovereign. This attachment

he took care to heighten by the power of superstition ; for, having procured a young hind of a milk-white color, he made it so tame that it followed him wherever he went; and Sertorius gave out to the ignorant multitude that this hind was inspired by Diana, and revealed to him the designs of his enemies, of which he always took care to be well informed by tne great numbers of spies he employed. While Sertorius was employed in establishing nis authority, the republic of Rome, alarmed at his success, resolved to crush him at all events. Sylla was now dead, and all the eminent generals in Rome solicited this honorable though dangerous employment. After much debate a decree was passed in favor of Pompey the Great, but without recalling Metellus. In the mean time the troops of one Perpenna, or Perperna, had, in spite of all that their general could do, abandoned

him and taken the oath of allegiance to Sertorius. This was a most signal advantage to Sertorius ; for Perperna commanded an army of 33,000 men, and had come into Spain with a design to settle there as Sertorius had done ; hut, as he was descended from one of the first families in Rome, he thought it below his dignity to serve under any general, however eminent he might be. But the troops of Perperna were of a different opinion ; and therefore, declaring that they would serve none but a general who could defend himself, they to a man joined Sertorius ; upon which Perperna himself, finding he could do no better, consented to serve also as a subaltern. On the arrival of Pompey in Spain, several of the cities which had hitherto continued faithful to Sertorius began to waver ; upon which the latter resolved, by some signal exploit, to convince them that Pompey could no more screen them from his resentment than Metellus. With this view he laid siege to Lauron, now Lirias, a place of considerable strength. Pompey, not doubting but he should be able to raise the siege, marched quite up to the enemy's lines, and found means to inform the garrison that those who besieged them were themselves besieged, and would soon be obliged to retire with loss and disgrace. On hearing this message, ' I will teach Sylla's disciple,' said Sertorius, ' that it is the duty of a general to look behind as well as before him.' Having thus spoken, he sent orders to a detachment of 6000 men, who lay concealed among the mountains, to come down and fall upon his rear if he should offer to force the lines. Pom-pey, surprised at their sudden appearance, durst not stir out of his camp ; and in the mean time the besieged, despairing of relief, surrendered at discretion ; upon which Sertorius 'granted them their lives and liberty, but reduced their city to ashes.

While Sertorius was thus successfully con-tenaing with Pompey, his

quaestor Hirtuleius was entirely defeated by Metellus, with the loss of 20,000 men ; upon which Sertorius advanced with the utmost expedition to the banks of the Sucro in Tarraconian Spain, with a design to attack Pompey before he could be joined by Metellus. Pompey, on his part, did not decline the combat ; but, fearing that Metellus might share the glory of the victory, advanced with the greatest expedition. Sertorius put off the battle till towards the evening ; Pompey, though he knew that the night would prove disadvantageous to him, whether vanquished or victorious, because his troops were unacquainted with the country, resolved to venture an engagement, especially as he feared that Metellus might arrive in the mean time and rob him of part of the glory of conquering so great a commander. Pompey, who commanded his own right wing, soon obliged Perperna, who commanded Sertorius's left, to give way. Hereupon Sertorius himself, taking upon him the command of that wing, brought back the fugitives to the charge, and obliged Pompey to fly in his turn. In his flight he was overtaken by a gigantic African, who had already lifted up his hand to discharge a blow at him with his broad sword ; but Pom-pey prevented him by cutting off his right har,-!

at one blow. As he still continued his flight he was wounded and thrown from his horse ; so that lie would certainly have been taken prisoner had not the Africans who pursued him, quarrelled about the rich furniture of his horse. This gave an opportunity to the general to make his escape ; so that at length he reached his camp with much difficulty. But in the mean time Afranius, who commanded the left wing of the Roman army, had entirely defeated the wing which Sertorius had left, and even pursued them so closely that he entered the camp along with the,m. Sertorius, returning suddenly, found the Romans busy in plundering the tents ; when, taking advantage of their situation, he drove them out with great slaughter, and retook his camp. Next day he offered battle a second time to Pompey ; but, Metellus then coming up with all his forces, he thought proper to decline an engagement with both commanders. In a few days,

however, Pompey and Metellus agreed to attack the camp of Sertorius ; Metellus attacked Perperna, and Pompey fell upon Sertorius. The event was similar to that of the former battle; Metellus defeated Perperna, and Sertorius routed Pompey. Being then informed of Perperna's misfortune, he hastened to his relief, rallied the fugitives, and repulsed Metellus in his turn, wounded him with his lance, and would certainly have killed him, had not the Romans, ashamed to leave their general in distress, hastened to his assistance, and renewed the fight with great fury. At last Sertorius was obliged to quit the field and retire to the mountains. Pompey and Metellus hastened to besiege him ; but, while they were forming their camp, Sertorius broke through their lines, and escaped into Lusitania. Here he soon raised such a powerful army, that the Roman generals, with their united forces, did not think proper to venture an engagement with him. They could not, however, resist the perpetual attacks ef Sertorius, who now drove them from place to place, till he obliged them to separate : the one went into Gaul, and the other to the foot of the Pyrenees. Thus did this celebrated commander triumph over all the power of the Romans; and there is little doubt but he would have continued to make head against all the.other generals whom the republic could have sent, had he not been assassinated at an entertainment by the infamous treachery of Perperna, in 73 B. C., after he had made head against the Roman forces for almost ten years Pompey was no sooner informed of his death than, without waiting for any new succors, he marched against the traitor, whom he easily defeated and took prisoner; and, having caused him to be executed, thus put an end, with very little glory, to a most dangerous war.

From the murder of Sertorius till its conquest by the Moort. — Many of the Spanish nations, however, still continued to bear the Roman yoke with great impatience ; and as the civil wars which took place first between Julius Caesar and Pompey, and afterwards between Octavianus and Antony, diverted the attention of the republic from Spain, by the time that Augustus had become sole master of the Roman empire, they were again in a condition to assert their liberty.

The CANTABRIANS and ASTURIANS were the most powerful and valiant nations at that time in Spain ; but, after incredible efforts, they were obliged to lay down their arms, or rather were almost exterminated, by Agrippa, as is related under these articles. From this time the Spaniards continued in quiet subjection to the Romans ; but on the decline of the empire they were attacked by the northern nations, who put an end to the Roman name in the west. As the

inhabitants had by that time entirely lost their ancient valor, the barbarians met with no resistance but from one another. In the reign of the emperor Honorius, the Vandals, Alans, and Suevians, entered this country ; and, having made themselves masters of it, divided the provinces among themselves. In 444 the Romans made one ef-fort more to recover their power in this part of the world ; but, being utterly defeated by the Suevians, the latter established a kingdom there which lasted till the year 584, when it was utterly overthrown by the Goths under Leovigild.

The princes of the Goths, now called Visi-goths, or Western Goths, to distinguish them from the Easter or Ostro-Goths (see GOTHS), continued to reign over a considerable part of Spain till the beginning of the eighth century, when their empire was entirely overthrown by the Saracens. During this period they had totally expelled the' eastern emperors from what they possessed in Spain, and even made considerable conquests in Barbary ; but towards the end of the seventh century the Saracens overran all that part of the world with a rapidity which nothing could resist ; and, having soon possessed themselves of the Gothic dominions in Barbary, they made a descent upon Spain about the year 711 or 712. The king of the Goths at that time was called Roderic, and by his bad conduct had occasioned great disaffection among his subjects. He therefore determined to put all to the issue of a battle, knowing that he could not depend upon the fidelity of his own people if he allowed the enemy time to tamper with them. The two armies met in a plain near Xeres in Andalusia. The Goths began the attack with great fury ; but, though they fought like men in despair, they were at last defeated with excessive slaughter and their king himself perished in the battle, being never more heard of. By this battle the Moors in a short time rendered themselves masters of-almost all Spain. The poor remains of the Goths were obliged to retire into the mountainous parts of Asturias, Burgos, and Biscay : the inhabitants of Arragon, Catalonia, and Navarre, though they might have made a considerable stand against the enemy, chose for the most part to retire into France.

History of Spain to the erection of the kingdoms of Castile, Leon, &c— In 718, however, the power of the Goths began again to revive under Pelagio or Pelayo, a prince of the royal blood, who headed those that had retired to the mountains after the fatal battle of Xeres. The place where he first laid the foundation of his government was in the Asturias, in the province of Liebana, about twenty-seven miles in length and twelve in breadth. This is the most inland part of the country, full of mountains enormously high, and

«>o much fortified by nature that its inhabitants are capable of resisting almost any number of invaders. Alakor, the Saracen governor, was no sooner informed of this revival of the Gothic kingdom than he sent a powerful army, under the command of one Alhaman, to crush Pelagic before he had time to establish his power. The king, though his forces were sufficiently numerous (every one of his subjects arrived at man's estate being a soldier), did not think proper to venture a general engagement in the open field ; but, taking post with part of them himself in a cavern in a very high mountain, he concealed the rest among precipices, giving orders to them to fall upon the enemy as soon as they should perceive him attacked by them. These orders were punctually executed, though indeed PelaijK) himself had repulsed his enemies. The slaughter was dreadful; for the troops who lay in am-buscade joining the rest, and rolling down huge stones from the mountains upon the Moors Cthe name by which the Saracens were known in Spain), no fewer than 124,000 of these unhappy people perished in one day. The remainder fled till they were stopped by a river, and, beginning to coast it, part of a mountain suddenly fell down, stopped up the channel of the river, and either crushed or drowned, by the sudden rising of the water, almost every one of that vast army. The Moors were not so much disheartened by this disaster but that they made a second attempt against Pelagio. Their success was as bad as ever, the greatest part of their army being cut in pieces or taken ; in consequence of which they lost all the Asturias, and never dared to enter the lists with Pelagio afterwards. Indeed, their bad success had in a great measure taken from them the desire of conquering a country where little or nothing was to be got; and therefore they rather directed their force against France, where they hoped for more plunder. Into this country they poured in prodigious multitudes ; but were utterly defeated in 732,]>y Charles Martel, with the loss of 300,000 men, as the historians of those times affirm.

Pelagio died in 737, and soon after his death such intestine divisions broke out among the Moors as greatly favored the increase of the

Christian power. In 745 Alphonso the Catholic, son-in-law to Pelasfio, in conjunction with his brother Froila, passed the mountains, and fell upon the northern part of Galicia ; and, meeting with little resistance, he recovered almost the whole of that province in a single campaign. Next year he invaded the plains of Leon and Castile ; and, before the Moors could assemble any force to oppose him, he reduced Astorgas, Leon, Saldagna, Monies de Oca, Amaya, Alava, and all the country at the foot of the mountains. The year following he pushed his conquests as far as the borders of Portugal, and the next campaign ravaged the country as far as Castile. Being sensible, however, that he was yet unable to defend the flat country which he had conquered, he laid the whole of it waste, obliged the Christians to retire to the mountains, and carried off all the Moors for slaves. Thus secured, by a desert frontier, he met with no interruption for tome years ; during which. time, as his kingdom

advanced in strength, he allowed his subjects gradually to occupy part of the flat country, and to rebuild Leon and Astorgas, which he had demolished. He died in 757, and was succeeded by his son Froila. In his time Abdelrahman, the caliph's viceroy m Spain, threw off the yoke, and rendered himself independent, fixing the seat of his government at Cordova. See COR-DOVA. Thus the intestine divisions among the Moors were composed ; yet their success seems to have been little better than before ; for, soon after, Froila encountered the Moors with such success that 54,000 of them were killed on the spot, and their general taken prisoner. Soon after he built the city of Oviedo, which he made the capital of his dominions, to be in a better condition to defend the flat country, which he now determined to people. In the year 758 the power of the Saracens received another blow by the rise of the kingdom of Navarre. This kingdom took its origin from an accidental meeting of gentlemen, to the number of 600, at the tomb of a hermit named John, who had died among the Pyrenees. At this place, where they had met on account of the supposed sanctity of the deceased, they took occasion to converse on the cruelty of the Moors, the miseries to which the country was exposed, and the glory that would result from throwing off their yoke; which, they supposed, might easily be done, by reason of the strength of their country. On mature deliberation, the project was approved ; one Don Garcia Ximenes was appointed king, as being of illustrious birth, and looked upon as a per-son of great abilities. He recovered Ainsa, one of the principal towns of the country, out of the hands of the infidels ; and his successor Garcias Inigas extended his territories as far as Biscay ; however, the Moors still possessed Portugal, Mercia,

Andalusia, Valentia, Granada, Tortosa, and the interior part of the country as far as the mountains of Castile and Saragossa. Their internal dissensions, which revived after the death of Abdelrahman, contributed greatly to reduce the power of the infidels in general In 778 Charles the Great, being invited by some discontented Moorish governors, entered Spain with two great armies ; one passing through Catalonia, and the other through Navarre, where he pushed his conquests as far as the Ebro.

On his return he was attacked and defeatea by the Moors ; but this did not hinder him from keeping possession of all those places he had already reduced. At this time he seems to have been master of Navarre : however, in 831 count Azner, revolting from Pepin son to the emperor Louis, again revived the independency of Navarre ; but the sovereigns did not assume the title of kings till the time of king Garcia, who began to reign in 857. In the mean time the kingdom founded by Pelagio, now called the kingdom of Leon and Oviedo, continued to increase rapidly in strength : and altogether it had two enemies to contend with, many advantages were gained over the Moors,who lost ground every day. In 921, however, they gained a great victory over the united forces of Navarre and Leon, by which the whole force of the Christians in Spain must have been entirely broken, had not

the victors conducted their affairs so wretchedly that they suffered themselves to be almost entirely cut to pieces by the remains of the Christian army. In short, the Christians became at length so terrible to the Moors that it is probable they could not long have kept their footing in Spain, had not a great general, named Mohammed Ebn Amir Almanzor, appeared, in 979, to support their sinking cause. This man was vizier to the king of Cordova, and being exceedingly provoked against the Christians, on account of what his countrymen had suffered from them, made war with the most implacable fury. He took the city of Leon, murdered the inhabitants, and reduced the houses to ashes. Barcelona shared the same fate ; Castile was reduced

to a desert ; Galicia and Portugal ravaged ; and he is said to have overcome the Christians in fifty different engagements. At last, having taken and demolished the city of Compostella, and carried off in triumph the gates of the church of St. James, a flux happened to break out among his troops, which the superstitious Christians supposed to be a divine judgment on account of his sacrilege. Taking it for granted, therefore, that the Moors were now entirely destitute of all heavenly aid, they fell upon them with such fury in the next engagement that all the valor and conduct of Almanzor could not prevent a defeat. Overcome with shame and despair, at this misfortune, he desired his followers to shift for themselves, while he himself retired to Medina Cceli, and put an end to his life by abstinence in 998.

From the erection of the kingdoms of Leon, Castile, and Arragon, to the death of Peter the Cruel. — During this period a new Christian principality appeared in Spain, namely that of Castile, which is now divided into Old and New Castile. Old Castile was recovered long before that called the New. It was separated from the kingdom of Leon on one side by some little rivers; on the other it was bounded by the Asturias, Biscay, and the province of Rioja; on the south it had the mountains of Segovia and Avila ; thus lying in the middle between the Christian kingdom of Leon and Oviedo, and the Moorish kingdom of Cordova. Hence this district soon became an object of contention between the kings of Leon and those of Cordova ; and, as the former were generally victorious, some of the principal Castilian nobility retained their independency under the protection of the Christian kings, even when the power of the Moors was at its greatest height. In 884 we first hear of Rodriguez or Roderic assuming the title of count of Castile, though it does not ap-pear that either his territory or title were given him by the king of Leon. Nevertheless, this monarch having taken upon him to punish some of the Castilian lords as rebels, the inhabitants made a formal renunciation of their allegiance, and set up a new kind of -government. The supreme power was now vested in two persons of quality styled judges; however, this method did not long continue to give satisfaction, and the sovereignty was once more vested in a single person. By degrees Castile fell entirely under the power of the kings of Leon and Oviedo ; and, in 1033, Sanchez bestowed it on his eldest son Ferdinand,

with the title of king ; and thus the territories of Castile were first firmly united to those of Leon and Oviedo, and the sovereigns were thenceforth styled kings of Leon and Castile. Not long after this a third

Christian kingdom was set up in Spain, about the beginning of the eleventh century, *viz.* the kingdom of Arragon. The inhabitants were very brave, and lovers of liberty, so that it is probable they had in some degree maintained their independency, even when the power of the Moors was greatest. The history of Arragon, however, during its infancy, is much less known, than that of any of the others. We only know that, about the year 1035, Sanchez, surnamed the Great, king of Navarre, erected Arragon into a kingdom in favor of his son Ramirez, and afterwards it became very powerful. At this time, then, we may imagine the continent of Spain divided into two unequal parts by a straight line drawn from east to west from the coasts of Valentia to a little below the mouth of the Duro. The country north of this belonged to the Christians, who, as yet, had the smallest and least valuable share, and all the rest to the Moors. In point of wealth and real power, both by land and sea, the Moors were greatly superior ; but their continual dissensions greatly weakened them, and every day facilitated the progress of the Christians. Indeed, had either of the parties been united, the other must soon have yielded ; for, though the Christians did not make war upon each other constantly as the Moors did, their mutual feuds were yet sufficient to have ruined them, had their adversaries made the least use of the advantages thus afforded them. But among the Moors almost every city was a kingdom ; and, as these petty sovereignties supported one another very indifferently, they fell a prey one after another to their enemies.

In 1080 the king of Toledo was engaged in a war with the king of Seville, another Moorish potentate ; which being observed by Alphonso, king of Castile, he also invaded his territories; and in four years made himself master of the city of Toledo, with all the places of importance in its neighbourhood ; thenceforth making Toledo the capital of his dominions. In a short time the whole province of New Castile submitted ; and Madrid, now the capital of Spain, fell into the hands of the Christians, being then but a small place. The Moors were so much alarmed at these conquests that they not only entered into a general confederacy against the Christians, but invited to their assistance Mahomet Ben Joseph the sovereign of Barbary. He accordingly came, attended by an incredible multitude; but was utterly defeated by the Christians in the defiles of the Black Mountain, or Sierra Morena, on the borders of Andalusia. This victory happened on the 16th July 1212, and the anniversary is still celebrated at Toledo. Hut it was not improved ; the Christian army immediately dispersed themselves, while the Moors of Andalusia were strengthened by the remains of the African army ; yet, instead of being taught by their past misfortunes, to unite themselves, their dissensions became

worse than ever, and the cr .iquests of the Christians became < laily more

-apia. In 1236 Ferdinand of Castile and Leon took the celebrated city of Cordova, the residence of the first Moorish kings ; at the same time that James I. king of Arragon dispossessed them of the island of Majorca, and drove them out of Valentia. Two years after, Ferdinand Tiade himself master of Murcia, and took the city of Seville; and in 1303 Ferdinand IV. reduced Gibraltar.

In the time of Edward III. we find England, for the first time, interfering in the affairs of Spain on the following occasion. In 1284 the kingdom of Navarre had been united to that of France by the marriage of Joanna queen of Navarre with Philip the Fair of France. In 1328, however, the kingdoms were again separated, though the sovereigns of Navarre were still related to those of France. In 1350 Charles, surnamed the Wicked, ascended the throne of Navarre, and married the daughter of John king of France. Notwithstanding this alliance, and that he himself was related to the royal family of France, he secretly entered into a negociation with England against the French monarch, and even drew into his schemes the dauphin Charles, afterwards surnamed the Wise. The young prince, however, was soon after made fully sensible of the danger and folly of the connexions into which he had entered; and, by way of atonement, promised to sacrifice his associates. Accordingly he invited the king of Navarre, and some of the principal nobility of the same party, to a feast at Rouen, where he betrayed them to his father. The most obnoxious were executed, and the king of Navarre was thrown into prison. In this extremity, the party of the king of Navarre had recourse to England. The prince of Wales, surnamed the Black Prince, invaded France, defeated king John at Poictiers, and took him prisoner (See FRANCE), which unfortunate event produced the most violent disturbances in that kingdom. The dauphin, now about nineteen years of age, assumed the royal power during his father’s captivity : but possessed neither experience nor authority sufficient to remedy the prevailing evils. To

obtain supplies, he assembled the states of the kingdom : but that assembly, instead of supporting his administration, laid hold of the opportunity to demand limitations of the prince's power, the punishment of past malversations, and the liberty of the king of Navarre. Marcel, provost of the merchants at Paris, and first magistrate of that city, put himself at the head of the unruly populace, and pushed them to commit the most criminal outrages against the royal authority. They detained the dauphin in a kind of captivity, murdered in his presence Robert de Clermont and John de Conflans, mareschals of France ; threatened all the other mhiisters with the like fate ; and when Charles, who had been obliged to temporize and dissemble, made his escape from their hands, they levied war against him, and openly rebelled. The other cities of the kingdom, in imitation of the capital, shook off the dauphin's authority, took the government into their own hands, and spread the contagion into every province. Amidst these disorders the king of Navarre

made his escape from prison, and presented a dangerous leader to the furious malecontents. He revived his pretensions to the crown of France ; but in all his operations he actpd more like a leader of banditti than one who aspired to be the head of a regular government, and who was engaged by his station to endeavour the re-establishment of order in the community. All the French, therefore, who wished to restore peace to their country, turned their eyes towards the dauphin ; who, though not remarkable for his military talents, daily gained by his prurience and vigilance the ascendant over his enemies. Marcel, the seditious provost of Paris, was slain in attempting to deliver that city to the king of Navarre. The capital immediately returned to its duty : the most considerable bodies of the mutinous peasants were dispersed or put to the sword ; some bands of military robbers underwent the same fate ; and France began once more to assume the appearance of civil government. John died in England, and was succeeded in the throne of France bv his sor Charles V., a prince educated in the school of adversity, and well qualified, by his prudence and experience, to repair the losses which the kingdom had sustained from the errors of his predecessors. Contrary to the practice of all the great princes of those times, who held nothing in estimation but military courage, he seems to have laid it down as a maxim never to appear at the head of his armies ; and he was the first European monarch that showed the advantage of policy and foresight over a rash and precipitate valor. Before Charles could think of counterbalancing so great a power as England, it was necessary for him to remedy the many disorders to which his own kingdom was

exposed. He accordingly turned his arms against the king of Navarre, the great disturber of France during that age : and he defeated that prince, and reduced him to terms, by the valor and conduct of Bertrand du Guesclin, one of the most accomplished captains of those times, whom Charles had the discernment to choose as the instrument of his victories. He also settled the affairs of Brittany by acknowledging the title of Mountfort, and receiving homage for his dominions. On the conclusion of the peace of Bretigni, the many military adventurers who had followed the fortunes of Edward, being dispersed into the several provinces, and possessed of strong holds, refused to lay down their arms, or relinquish a course of life to which they were now accustomed, and by which alone they could earn a subsistence. They associated themselves with the banditti, who were already inured to the habits of rapine and violence ; and, under the name of companies and companions, became a terror to all the peaceable inhabitants. Some English and Gascon gentlemen of character were not ashamed to take the command of these ruffians, ˆvhose number amounted to nearly 40,000, and who bore the appearance of regular armies rather than bands of robbers. As Charles was not able by power to redress so enormous a grievance, he was led by necessity, as well as by the turn of his character, to correct it by policy ; to discover some method of discharging into

foreign countries this dangerous and intestine evil ; and an occasion now offered. Alphonso XI. king of Castile, who took the city of Algezira from the Moors, after a famous siege of two years, during which artillery are said first to have been used by the besieged, had been succeeded by his son Peter I. surnamed the Cruel ; a prince equally perfidious, debauched, and bloody. He began his reign with the murder of his father’s mistress Leonora de Gusman : his nobles fell every day the victims of his severity : he put to death his cousin and one of his natural brothers, from groundless jealousy ; and he caused his queen Blanche de Bourbon, of the blood of France, to be thrown into prison, and afterwards poisoned, that he might enjoy Mary de Padella, with whom he was violently enamoured. Henry count of

Trastamara, the king's natural brother, alarmed at the fate of his family, and dreading his own, took arms against the tyrant ; but, having failed in the attempt, he fled to France, where he found the minds of men much inflamed against Peter, on account of the murder of the French princess. He asked permission of Charles to enlist the companies in his service, and to lead them into Castile against his brother. The French king, charmed with the project, employed du Guesclin in negociating with the leaders of these banditti. The treaty was soon concluded ; and du Guesclin, having completed his levies, led the army first to Avignon, where the pope then resided, and demanded, sword in hand, absolution for his ruffian soldiers, who had been excommunicated, and the sum of 200,000 livres for their subsistence. The first was readily promised him; but, some difficulty being made with regard to the second, du Guesclin replied, ' My fellows may make a shift to do without your absolution, but the money is absolutely necessary.' His holiness then extorted from the inhabitants of the city and its neighbourhood the sum of 100,000 livres, and offered it to du Guesclin. * It is not my purpose,' cried that generous warrior, ' to oppress the innocent people. The pope and his cardinals can spare me double the sum from their own pockets. I therefore insist that this money be restored to the owners : and, if I hear they are defrauded of it, I will myself return from the other side of the Pyrenees, and oblige you to make them restitution.' The pope found the necessity of submitting, and paid from his own treasury the sum demanded. A body of experienced and hardy soldiers, conducted by so able a general, easily prevailed over the king of Castile, whose subjects were ready to join the enemy against their oppressor. Peter fled from his dominions, took shelter in Guienne, and craved the protection of the prince of Wales, whom his father had invested with the sovereignty of the ceded provinces, under the title of the principality of Aquitaine. The prince promised his assistance to the dethroned monarch ; and, having obtained his father's consent, he levied an army, and set out on his enterprise. The first loss which Henry of Trastamara suffered from the interposition of the prince of Wales, was the recalling of the companies from his service ; and so much reverence did they pay to

the name of Edward, that great numbers of them immediately withdrew from Spain, and enlisted under his standard. Henry, however, beloved by his new subjects, and supported by the king of Arragon, was able to meet the enemy with ?n army of 100,000 men, three times the number of those commanded by the Black Prince : yet du Guesclin, and all his experienced officers, advised him to delay a

decisive action ; so high was their opinion of the valor and conduct of the English hero. But Henry, trusting to his numbers, ventured to give Edward battle on the banks of the Ebro, between Najara and Navarette ; where the French and Spaniards were defeated, with the loss of above 20,000 men, and du Guesclin and other officers of distinction taken prisoners. All Castile submitted to the victor ; Peter was restored to the throne, and Edward returned to Guienne with his usual glory ; having not only overcome the greatest general of his age, but restrained a blood-thirsty tyrant from executing vengeance on his prisoners. This gallant warrior had soon reason to repent of his connexions with a man like Peter, lost to all sense of virtue and honor. The ungrateful monster refused the stipulated pay to the English forces. Edward abondoned him: he treated his subjects with the utmost barbarity ; their animosity was roused against him ; and du Guesclin, having obtained his ransom, returned to Castile with the count of Trastamara, and some forces levied anew in France. They were joined by the Spanish malecontents ; and, having no longer the Black Prince to encounter, they gained a complete victory over Peter in the neighbourhood of Toledo. The tyrant now took refuge in a castle, where he was soon after besieged by the victors, and taken prisoner in endeavouring to make his escape. He was conducted to his brother Henry ; against whom he is said to have rushed in a transport of rage, disarmed as he was. Henry slew him with his own hand, in resentment of his cruelties ; and, though a bastard, was himself placed on the throne of Castile, which he transmitted to his posterity.

From the death of Peter to that of Ferdinand V. and Isabella. — After the death of Peter the Cruel, nothing remarkable happened in Spain for almost a whole century ; but the debaucheries of Henry IV. of Castile roused the resentment of his nobles, and produced a most singular insurrection, which led to the aggrandisement of the Spanish monarchy. This prince, surnamed the Impotent, was continually surrounded with wo-men : he began his unhappy reign in 1454, totally enervated by his pleasures ; and every thing in his court conspired to set theCastiliansan example of the most abject flattery and abandoned licentiousness. The queen, a daughter of Portugal, lived as openly with her paramours and her gallants as the king did with his minions and his mistresses. Pleasure was the only object, and effeminacy the only recommendation to favor : the affairs of the state went every day into disorder; till the nobility, with the archbishop of Toledo at their head, combining against the weak and flagitious administration of Henry, arrogated to themselves, as one of the privileges

of their order, the right of trying and passing sentence on their sovereign, which they executed in a manner unprecedented in history. All the malecontent nobility were summoned to meet at Avila; a spacious theatre was erected in a plain without the walls of the town ; an image, representing the king, was seated on a throne, clad with royal robes, with a crown on its head, a sceptre in its hand, and the sword of justice by its side. The accusation against Henry was read, and the sentence of deposition pronounced in the presence of a numerous assembly. At the close of the first article of the charge, the archbishop of Toledo advanced and tore the crown from the head of the image ; at the close of the second, the count of Placentia - snatched the sword of justice from its side; at the close of the 'liird, the count of Benavente wrested the sceptre from its hand ; and at the close of the last Don Diego Lopez de Stuniga tumbled it headlong from the throne. At the same instant, Don Alphonso, Henry's brother, a boy of about twelve years of age, was proclaimed king of Castile and Leon in his stead. This extraordinary proceeding was followed by a civil war, which did not cease till some time after the death of the young prince, on whom the nobles had then bestowed the kingdom. The archbishop and his party then continued to carry on war in the name of Isabella, the king's sister, to whom they gave the title of Infanta ; and Henry could not extricate himself out of these troubles, nor remain quiet upon his throne, till he had signed one of the most humiliating treaties ever extorted from a sovereign. He acknowledged his sister Isabella the only lawful heiress of his kingdom, in prejudice to the rights of his reputed daughter Joan, whom the malecontents affirmed to be the offspring of an adulterous commerce between the queen and Don la Cueva. The grand object of the malecontent party now was the marriage of the princess Isabella, upon which, it was evident, the security of the crown and the happiness of the people must in a great measure depend. The arhance was sought by several princes : the king of Portugal offered her his hand ; the king of France demanded her for his brother, and the king of Arragon for his son Ferdinand. The malecontents very wisely preferred the Arragonian prince, and Isabella made the same choice ; articles were drawn up : and they were privately married by the archbishop of Toledo. Henry was enraged at this alliance, which he foresaw would utterly ruin his

authority, by furnishing his rebellious subjects with the support of a powerful neighbouring prince. He disinherited his sister and established the rights of his daughter. A furious civil war ensued. The names of Joan and Isabella resounded from every quarter, and were every where the summons to arms. But peace was at length brought about. Henry was reconciled to his sister and Ferdinand ; though it does not appear that he ever recognised Isabella's right to the succession; for he affirmed, to his last moments, that he believed Joan to be his own daughter. The queen swore to the same effect ; and Henry left a testamentary deed, transmitting the crown to this princess, who was proclaimed queen of Castile at Placentia. But VOL. XX.

the superior fortune and arms of Ferdinand and Isabella prevailed : the king of Portugal was obliged to abandon his niece and intended bride, after many ineffectual struggles and several years of war. Joan retired into a convent ; and the death of Ferdinand's father, which happened about this time, added the kingdoms of Arragoo and Sicily to those of Leon and Castile.

Ferdinand and Isabella conducted themselves with great prudence, and were, as sovereigns, highly worthy of imitation; but they do not seem to have merited all the praises bestowed upon them by the Spanish historians. They are said to have lived rather like two princes in close alliance than as man and wife ; they neither loved nor hated each other ; were seldom in each other's company ; had each a separate council, and were frequently jealous of one another in the administration. But they were inseparably united in their common interests ; acting upon the same principles, and forwarding the same ends. Their first object was the regulation of their government, which the civil wars had thrown into the greatest disorder. Rapine, outrage, and murder, were become so common, as not only to interrupt commerce, but in a great measure to suspend all intercourse between one place and another. These evils the joint sovereigns suppressed by their wise policy, at the same time that they extended the royal prerogative. About the mid-dle of the thirteenth century the cities in the kingdom of Arragon, and after their example those in Castile, had formed themselves into an association named the Holy Brotherhood. They exacted a certain contribution from each of the associated towns ; levied a considerable body of troops, to protect travellers and pursue criminals; and appointed judges, who opened courts in various parts of the kingdom. Whoever was guilty of murder, robbery, or any act that violated the public peace, and was seized by the troops of the

brotherhood, was carried before their judges; who, without paying any regard to the exclusive jurisdiction which the lord of the place might claim (generally the author or abettor of the injustice), tried and condemned the criminals. The nobles often murmured against this salutary institution ; they complained of it as an encroachment on one of their most valuable privileges, and endeavoured to get it abolished. But Ferdinand and Isabella, sensible of the beneficial effects of the brotherhood, not only in regard to the police of their kingdom, but in its tendency to abridge, and by degrees annihilate, the territorial jurisdiction of the nobility, countenanced the institution upon every occasion, and supported it with the whole force of royal authority ; by which means the prompt and impartial administration of justice was restored, and with it tranquillity and order. But, at the same time that their Catholic majesties (for such was the title they now bore) were giving vigor to their civil government, and securing their subjects from violence and oppression, an intemperate zeal led them to establish an ecclesiastical tribunal, equally contrary to the natural rights of humanity and the mild spirit of the gospel. This was the court of inquisition ; which decided upon the honor, fortune, and even the life, of the unhappy wretch

who happens to fall under the suspicion of he-resy, or a contempt of any thing prescribed by the church, without his being confronted with his accusers, or permitted either defence or appeal : 6000 persons were burnt by order of this sanguinary tribunal within four years after the appointment of Torquemada, the first inquisitor-general ; and upwards of 100,000 felt its fury. The same furious and blinded zeal which led to the depopulation of Spain led also to its aggrandisement. The kingdom of Granada now alone remained of all the Mahometan possessions in Spain. Princes equally zealous and ambitious were naturally disposed to turn their eyes to that fertile territory, and to think of increasing their hereditary dominions, by expelling the enemies of Christianity, and extending its doctrines. Every thing conspired to favor their project : the Moorish kingdom was a prey to civil wars ; when Ferdinand, having obtained the bull of Sixtus IV., authoris-ing a crusade, put himself at the head of his troops, and entered Granada. He continued the war with rapid success : Isabella attended him in several expeditions; and they were both in great danger at the siege of Malaga, an important city, which was defended with great courage and taken in 1487. Baza was reduced in 1489, after the loss of 20,000 men. Guadix and Almeria were delivered up to them by the Moorish king Alzagel, who had first dethroned his brother Alboa-cen, and afterwards been chased from his capital by his nephew Abdali. That prince engaged in the service of Ferdinand and Isabella; who, after reducing every other place of eminence, undertook the siege of Granada. Abdali made a gallant defence ; but all communication with the country being cut off, and all hopes of relief at an end, he capitulated, after a siege of eight months, on condition that he should enjoy the revenue of certain places in the fertile mountains of Alpujarros ; that the inhabitants should retain the undisturbed possession of their houses, goods, and inheritances, the use of their laws, and the free exercise of their religion. Thus ended the empire of the Arabs, Moors, or Saracens, in Spain, after it had continued about 800 years. They introduced the arts and sciences into

Europe at a time when it was lost in darkness ; they possessed many of the luxuries of life, when they were not even known among the neighbouring nations ; and they seem to have given birth to that romantic gallantry which so eminently prerailed in the ages of chivalry, and which, blending itself with the veneration of the northern nations for the softer sex, still particularly distinguishes modern from ancient manners. But the Moors, notwithstanding these advantages, and the eulogies bestowed upon them by some writers, appear always to have been destitute of the essential qualities of a polished people, humanity, generosity, and mutual sympathy.

Mr. Jacob, a writer of whose illustrations of Spanish history, in his Letters from Spain, we have before availed ourselves, gives an able summary of the rise, progress, and permanent efforts of the Moorish dominion in that country. He gives that luminous and interesting account, in particular, of the kingdom of Granada, and its subjugation by Ferdinand, which will justify a ˆconsiderable extract.

‘The family of Almanzor still continued to reign in Granada, in the year 1051, when Joseph Ben Taschphen, king of Morocco, invaded Granada with an irresistible army. The timid successor of Almanzor, though strengthened by auxiliaries from the Christian king of Castile, feared to meet him in battle; and, when his enemy advanced towards the city, he went forth to receive him, and, surrendering his power, followed, with his nobles, in the train of the African invader, who was thus quietly seated on the throne, which he afterwards filled with dignity and splendor. The death of Joseph occasioned a civil war in Granada, which was succeeded by a truce, in which the different pretenders to the sovereignty agreed to divide the kingdom, which, however, became again united in 1146, by the establishment of a prince of the family of the Almohades in the sole possession of the supreme power. This family continued on the throne till 1232, when Mahomet I., one of the greatest of the Moorish princes, laid the foundation of a new dynasty, the talents and virtues of which raised the kingdom to its highest degree of prosperity. Mahomet, though he always kept up a powerful army, was no less attentive to the arts of peace. He regulated the revenues, administered justice, cultivated science, endowed hospitals, and began the Alhambra, a fortress which was ever afterwards considered the glory of Mahometan Spain.

‘ The first part of his reign was undisturbed by war ; but, Ferdinand of Castile having succeeded in taking Cordova, he feared for the safety of his dominions, and endeavoured to strengthen himself by an alliance

with Benudiel king of Murcia, who, having declined his offered friendship, was under the necessity of ceding his dominions to the Christian king, to avoid their being conquered by this Mahometan prince. Ferdinand, having thus obtained possession of Murcia, turned his arms against the kingdom of Granada. Mahomet fought the battle of Martos with the commander of Calatrava ; but, though victorious, was threatened with such overwhelming forces, that he yielded to Ferdinand, paid tribute for his dominions, and assisted with his troops at the capture of Seville, in the character of a vassal to the Christian chief. The death of Ferdinand produced civil wars, in Castile, among the subjects of his son Alphonso, and Mahomet availed himself of the opportunity to throw off the yoke he had unwillingly borne, and, forming alliances with other Moorish chieftains, defeated the army of Alphonso at Alcala la Real. With the assistance of 10,000 horse from Morocco, he invested the cities of Guadix and Malaga, which were under the protection of the kingdom of Castile ; and, after a long siege, took the latter by storm, in 1273, when his reign and his life were terminated by the fatigues of war.

‘ Mahomet II. succeeded his father, and has left a higher character than any of the monarchs of his race. The commencement of his reign was disturbed by domestic factions, which, by Ins firmness and wisdom, he either subdued or conciliated. He was the patron of arls and of commerce, and the protector of science. His court was the resort of astronomers, physicians,

philosophers, orators, and poets; and his own compositions in verse are celebrated by the Arabs for their wit and epigrammatic humor. He renewed the alliance with the king of Castile; but, Alphonso having passed to Italy, he took advantage of his absence, and formed a treaty with the king of Morocco, who sent him an army of 17,000 men, by the aid of which he defeated the Christian forces, enlarged his domi-nvOns by the capture of Jaen, and finally concluded a treaty of peace, in which the Christians renounced their claim of vassalage, agreed to defray the expenses of the war, and surrendered to the Moors Tarifa

and Algeziras. His son, of the same name, succeeded to the throne in 1302, and resembled him in his love of literature, and his patronage of the fine arts ; but, being engaged in a war with the king of Arragon, discontents were fomented in the capital ; and, when he returned, an insurrection broke out, which transferred .the crown to Almasser his brother, who, though only twenty-five years of age, was celebrated for his progress in mathematics, his knowledge of astronomy, and his skill in making astronomical tables and instruments with the greatest accuracy : as he was, however, unfit for the turbulent period in which he lived, he yielded to the seditious disposition of his subjects, who were aided bylsmael prince of Malaga, and in 1314 withdrew from the throne to a life of literary retirement, while the more warlike Ismael succeeded to that dignity which the mild virtues of Almasser rendered him unfit to maintain.

‘ Were I to name the various kings who in succession ruled the kingdom of Granada, I should I fear exhaust your patience; and I have only been induced to mention these few because their reigns were marked by a love of science which gave a character to their territory materially different from that which it had before possessed.

‘ Granada, sometimes at variance, sometimes in alliance with Castile and with Arragon, sometimes receiving succors from, and sometimes sending invading armies to Barbary, was itself torn by those intestine commotions which are frequently the cause and are always the forerunners of the dissolution of states. The last war of Granada was begun in 1482 by Albohasen, who, instigated by the discontents in Castile, which the accession of Ferdinand and Isabella had created, marched an army of 40,000 men to attack their dominions. Ferdinand proposed a truce for three years, which was accepted. During this period, having quieted his rebellious subjects, he directed his forces against Albohasen. He commenced his operations by capturing Alhama, which gave a decisive blow to the Moorish power, since, by the fall of this place, the Christians became masters of an impregnable fortress in the heart of the enemy’s dominions, and were thence enabled to excite murmurs ana dissensions among the different parties in the capital. Amid various scenes of internal division, Albohasen, who had provoked the hostility of Castile, forfeited the respect of his subjects, by a blind attachment to a Christian captive, for whose’ sake he divorced his

wife, and caused her sons to be executed. He was, in consequence, deposed, and Abo Abdeli, his eldest son, who alone escaped from the

slaughter, was raised by the people to the throne of his father.

‘ Ferdinand in the mean time advanced towards the city, and Abo Abdeli, in a battle neai Lucina, was defeated, and made prisoner. During his captivity he entered into a treaty with his conqueror, which restored him to his liberty, but his people, being animated with fury at the disgraceful terms to which he had acceded, drove him from the throne, and Albohasen was again elevated to the sovereignty for a few months, when his brother, Muly el Zagal, was enabled, by the fickle populace, to dethrone him, and assume the sceptre. The policy of Ferdinand induced him to support the interests of the exiled Abo Abdeli, and to foment those divisions between the rival monarchs which favored and opened his way to the final reduction of Granada. A short alliance was, indeed, formed between the Moorish kings, by the preaching of a celebrated fakeer of the house of Abencerraxe, to whose warning the people listened as to the voice of inspiration : he proclaimed, in the name of God and his prophet, the approaching ruin of the Mahometan faith, unless the two competitors should unite in its support. His eloquence produced a transient effect, but the jealousy of the rivals soon revived. About this time Ferdinand captured Velez, and besieged Malaga ; which last city, after a desperate defence, submitted, in 1487, to his arms, while Muley, who was advancing to its relief, was defeated by Abo Abdeli. Indeed, such was the mutual animosity of these near relatives, that Muley agreed to a treaty with Ferdinand, by which he ceded his strong towns of Guadix and Almeria, and retired to privacy, in the mountains of Alpuxarras, solely with the view that the whole force of the Christians might be directed against his rival.

‘ Abo Abdeli, reduced to the city and the plain of Granada, was at the mercy of the Castilian conqueror ; but the extent and strength of the place promised a long and obstinate resistance, and Ferdinand, with an army of 70,000 men, was unable to invest it. Resolved, however, to conquer this last refuge of the Mahometans, he occupied the surrounding country with his troops, built the city of Santa-fee within two leagues of it, and drew thither the commerce and supplies, which had previously centered in Granada. At this period, while its inhabitants were sunk in indolence, one of those men, whose natural and impassioned eloquence has sometimes aroused a people to deeds of heroism, raised his voice, in the midst of the city, and awakened the inhabitants from their lethargy : 20,000 enthusiasts, ranged under his banners, were prepared to sally forth, with the fury of desperation, to attack the besiegers, when Abo Abdeli, more afraid of his subjects than of the enemy, resolved immediately to capitulate, and made terms with the Christians, by which it was agreed that the Moors

should be allowed the free exercise of their religion and laws; should be permitted, if they thought proper, to

depart, unmolested, with tlieir effects to Africa ; and that he himself, if lie remained in Spain, should retain an extensive estate, with houses and slaves, or be granted an equivalent in money, if he preferred retiring to Barbary.

‘ Thus, after eight centuries, the powei of the Mahometans was terminated in Spain. Abo Abdeli, the last of their chiefs, after bending the knee to the king of Castile, and kissing his hand as a token of submission, retired to his domain, loaded with the hatred and the curses of the people, and the execrations of his own family ; while the remnant of the nation, after submitting to the Christians, was, in defiance of every principle of good faith and enlightened policy, finally banished to the sterile and sultry regions of their ancestors. I refrain, with some difficulty, from narrating the wars which succeeded the conquest of Granada, and the heroism displayed by the Moors, who were scattered in the mountains ; the eloquence of their chiefs, their sufferings, and their constancy, would be a theme upon which the interesting scenes around me might lead me to dwell with enthusiasm, but which I fear you would not feel with equal interest. I shall therefore present to your view some account of that period when Christendom, sunk under papal dominion, destitute of science, and deprived of the knowledge of the Grecian and Roman authors, was in a state of mental barbarism, and the successors of the Arabian prophet preserved, within the narrow confines of the little kingdom of Granada, the only remaining portion of the light of knowledge.

‘ That contempt of knowledge which was the natural effect of the warlike pursuits of Mahomet and his immediate successors, and which produced the destruction of the treasures of antiquity in the library of Alexandria, continued till the accession of Almamon, the seventh caliph of the race of Abassides, who sent agents through Armenia,

Syria, and Egypt, to collect the scientific writings of Greece. These he caused to be translated into the Arabic language, ‘tnd recommended them to the study of his subjects. His successors were equally inclined to promote the advancement of knowledge, and were rivalled in this respect by the Fatimites of Africa, and the Omniades of Spain. Thus the love of literature became extended to Fez, Cordova, and Granada. The Arabic writers affirm that the Omniades collected 600,000 volumes, and mention seventy public libraries in the different Spanish cities under the dominion of the Arabs; in 1126 they enumerate 150 authors, natives of Cordova, fifty-two of Almeria, seventy-six of Murcia, and fifty-three of Malaga, besides those of Seville, Valencia, and Granada, whose successors, during nearly four centuries, kept alive the spirit of literature: it was however, principally in this last city that it flourished, in which there were at that time two universities, two royal colleges, and a public library, enriched with the productions of the best Greek and Arabic writers. Sx> general was the love of learning in Granada that it extended, notwithstanding the prohibitions of Mahomet, to the softer sex. Naschina acquired celebrity as a poetess; Mosada as an historian; and Leila as a mathematician and universal scholar.

‘ I shall not enter into the question how far th’.s display of knowledge, this taste for literature, tended to soften the harsh features of the Mahometan religion, or to mollify the despotism of its government. The moderns are at least indebted to them for having preserved the writings of eminent Greek authors, whose works, when learning revived in Christian Europe, became important auxiliaries in furthering the progress of human acquirement. Physic in particular was diligently studied ; and -the names of Mesna, Geber, and Avicena, may be classed with those of their Greek instructors. Such was the celebrity of the Mahometan physicians that the lives of the Catholic kings, in extreme sickness, wer? frequently entrusted to their care ; and Murator gives them the credit of having founded at Salerno that school for medicine which diffused the knowledge of the healing art through Italy and the rest of Europe. They were, however, but imperfectly acquainted with anatomy, as the dissection of the human frame was forbidden, and they could only judge of its organization from the inspection of monkeys and other animals. Botany was a favorite study, and the travellers of Granada brought from Africa, Persia, and India, plants which enriched their collections. In the study of chemistry also they had made some progress : they analysed substances, observed the affinity of acids and alkalies, and drew valuable medicines from the most poisonous minerals.

‘ The sciences in which the Arabs of Granada more especially excelled were the various branches of mathematics. Astronomy was early introduced, and eagerly cultivated; and the brilliancy of the atmosphere, the extent of the horizon, and the nature of their occupations, enabled them to make considerable proficiency in that science even at an early period. An astronomical clock, of very curious construction, was among the presents sent to Charlemagne, by an Arabian king in the year 807 ; and in a work published by Almamon, in 814, mention is made of two observations of the obliquity of the ecliptic, and the mode is described of measuring a degree of the meridian, the result of which very nearly corresponds with the more recent experiment made in Peru and Lapland. Alphonso, king of Castile, employed Arabian astronomers to instruct the professors in his dominions ; and it is probable that, from this circumstance, the terms nadir, zenith, azimuth, and many others, have been transferred from the Arabian language to all the dialects of Europe. Arithmetic, geometry, trigonometry, and optics, were sedulously studied. Although the system of numeration, which is the basis of our arithmetic, may perhaps be traced to more remote antiquity, it probably would not have been so extensively and so early adopted but for the labors of the Arabs of Granada. Algebra, though not indebted to them for its origin, was advanced very considerably by their exertions ; and a Spanish Arab, of the eleventh century, Geber Ben Aphla, is considered almost as the founder of trigonometry, by new theorems which he proposed. In those branches of mpthematics which are connected with physics, the Arabs made little or uo

progress, but contented themselves with servilely copying the ancients, or commenting on their errors. With all the knowledge, however, which the Arabs possessed, they were as unacquainted as their Christian contemporaries with those exquisite writings of Greece and of Rome whicn have handed down to us the heroic characters described in the pastes of Plutarch and Livy, and which have exhibited mankind in its most elevated point of view. But, to estimate justly the rank which the kingdom of Granada held among the nations, it ought

to be compared with the Christian kingdoms of the same age, and not with those which since the revival of learning, the reformation of religion, and the establishment of liberty, have so greatly increased in every species of knowledge and refinement.

‘ What the exact numbers of the population may have been it is now difficult to ascertain ; but in the year 1311 an ambassador, sent from Spain to Vienna, stated the inhabitants of the capital to amount to 200,000 Moors, besides 50,000 renegadoes, and 30,000 Christian captives. Agriculture in Granada, under the Saracens, formed the principal and most honorable occupation ; and though they had not, like the Romans, the deity Stercutus, the attention paid to manure was not less than with that people : it was carefully preserved in pits that none of the salts might be lost, and was liberally spread over their fields : irrigation was carefully attended to; and the transparent streams which descended from the mountains were diverted into thousands of channels to fertilise the soil. The bigotry of Mahometanism forbade them to sell their superfluous corn to the surrounding nations ; and the want of that stimulus, which the certainty of a vent produces, prevented them from carrying the cultivation of grain to any great extent. In years of abundance it was deposited in the caverns of rocks, lined with straw, the mouths of which were covered with the same material, where it was preserved for a Jong succession of years. On the birth of every child a cavern was filled with corn, which was destined to be his portion when arrived at maturity.

‘ That religious prejudice which induced the Moors to neglect, in some degree, the cultivation of grain, led them to cultivate, with sedulous attention, fruits of all kinds, which seem, indeed, to have formed their principal aliment. Spain owes to this people the introduction of the infinite variety of fruits which are now considered almost as indigenous. It is equally indebted to them for the sugar-cane, the cotton-tree, and all the best horticultural productions with which the country now abounds. Though wine was forbidden, vines were cultivated to such an extent that their annual value in the vega, or plain, is estimated by a writer in the year 1296 at 14,000 .golden crowns, or £8000 sterling — a prodigious sum at that day, when the fanega of wheat (nearly two bushels) sold for about one shilling. The commerce of Granada was very extensive at an early period, and the luxuries of India were brought to supply its voluptuous court from Alexandria to Malaga. The silks of India were, however, soon imitated by the Moors, and, after some practice, were even, excelled. Capmany,

in his Historical Memoirs of the Commerce of Barcelona, quotes a letter of Navagero, a Venetian ambassador, written from Granada, in which he says, ‘ They make here silks of all kinds, for which there is a great consumption in Spain ; their taffeties are as good, perhaps better, than tho»e of Italy; and their silk-serges, and velvets, are likewise of good quality.’ From the commerce with India the porcelains of China were introduced in Granada; and in this branch the Moors appear to have gone beyond their models, if we may be allowed to form a judgment from two exquisitely worked vases preserved in the palace of the Alhambra, and from the glazed tiles’ which form the most remarkable ornament of that magnificent edifice. It is probable that the manufacture of woollen cloths had advanced in proportion to that of silk, if we consider the quantity of fine wool which Spain produced ; and it is known that a present of cloth, sent to Charles the Bald, king of Francs, was highly esteemed by that monarch. Cloths of cotton and of flax were commonly made and used by the people of Granada; but the manufacture in which, above all others, they excelled, was that of curing and dying leather, which, though now lost in Spain by the banishment of the Moors, has been carried to Fez and to England, where the names of Morocco and Cordovan are still applied to leather prepared after their mode.

‘ The Moors of Granada made some progress in working mines of the various metals with which the mountains abound; and though no traces are left of any gold or silver mines, and their accounts of the former metal prove that it was produced by washing the sand of the river Darro; yet it is certain that iron and lead mines were worked to an extent that enabled them to export considerable quantities to the Christians of Barcelona and -the Moors of Africa. Their manufactories of iron and steel were considerable ; and the latter was so excellent that the swords of Granada were preferred to all others in Spain. The fine arts were very imperfectly known. The prohibition among the Mahometans to copy the human form had, no doubt, a considerable influence in preventing their attaining any excellence in either painting or sculpture ; and, though their joiners and inlayers of wood worked with nicety, there is an evident want of taste in their ornaments as well as in their architectural plans. They excelled in the stucco, with which they ornamented their apartments, and displayed great and singular skill in painting and gilding them ; abundant proofs of which still remain in the Alhambra.

‘ Music was an object of study with some of the most eminent Arabs; and Avicena, the most celebrated of their literati, illustrated it by some works which are in the Escurial. The gamut was brought to them from Persia, and consisted only of seven notes, indicated by the seven

words of their first numerals. No less than thirty-one musical instruments are enumerated in their writings ; but, as they paid little attention to time, it is not probable that they had made much progress in the science.

‘ The manners of the Moors in Spain were much softened by the acquirement of knowledge ;

and, without losing the warlike character which introduced them into the country, they acquired a degree of gallantry, and even devotion to the fair sex, very remote from the practice of other Mahometans, which probably laid the foundation of that chivalrous spirit that once universally prevailed, and the traces of which are still to be observed in the interior of Spain. Distinctions gained in war were considered the surest pass-ports to the affections of the fair; the gallant warrior was animated by the hopes of the an-plauses of his mistress; and, in their tilts and tournaments, the ladies were the judges, and distributed the prizes to the bold and to the dextrous. This devotion to the sex was not destroyed by polygamy, which, though permitted by the law, was seldom practised, nor by the right of divorce, which, being mutual, gave an equality to the sexes unknown in other Mahometan countries. The ornaments of the females were girdles embroidered with gold and silver ; the hair, which was long, was tied with strings of coral and amber ; while necklaces of topaz, cry-solite, amethyst, or emerald, encircled the bosom ; their indulgence also in the most expensive perfumes was carried to a degree of extravagance bordering on insanity.

‘ The government of the Arabs was a military despotism, ameliorated, however, by customs and manners which made it preferable to the uncontrolled tyranny of their eastern progenitors. The throne was elective; but the reigning monarch had usually the opportunity of transmitting it to his posterity, by associating in his power a favorite son, by conciliating the leading nobles, and attaching them to the interests of his intended successor. The first functions of a new monarch were performed with pomp and ceremony, and consisted in

exercising the sacred duty of administering justice in his hall of state, surrounded with his nobles, and in the presence of the people, whose acclamations of joy, or murmurs of discontent, presaged a reign of long or short duration. They had no hereditary nobility ; but certain families by their wealth, their connexions, and their talents, were so powerful, that, to all effective purposes, they enjoyed the privileges, and exercised the prerogatives, of a powerful aristocracy. The revenues of trie state consisted of a tenth of all the productions, and of the two taxes, which still retain the names by which they were designated under the Arabs, the Almoxarifazgo amounted to twelve and a half per cent., or one-eighth part of every commodity brought into or sent out of the kingdom, and the Alcavalii was one-tenth part of the value of every species of property when it was transferred by sale. Tl>ese were the ordinary sources of revenue ; hut in preparing for war, in erecting hospitals, colleges, or royal edifices, extraordinary contributions were levied, denominated Gabelas, which amounted to considerable sums. In Granada the only soldiers by profession were the royal Moorish guards, and a few others necessary to garrison the fortresses. On the apprehension of war the principal leaders convoked the people ; and by holding out the hopes of successful plunder, and the promi>es of eternal felicity, they speedily filled their ianks with voluntary soldiers, and rendered requisitions and force unnecessary. The army was classed in tribes or families, each led by its chief, who carried the standard, while the whole was commanded by a general of the family of the prophet, who carried before them the standard of their religion. Their heavy troops were armed with pikes, swords, and shields, and their light troops with darts and arro%vs ; but their most powerful force consisted of the numerous bodies of cavalry, with which, though apparently destitute of order, they made almost irresistible charges, and managed them with a skill and courage that rendered them dreadful to an enemy. Their shouts, when charging an enemy, were accompanied with those sounds, formerly so terrific to the Christians, ‘Allah Arbar,’ God the Omnipotent; upon uttering which words they would rush with the madness of enthusiasm to the charge, and bear before them every opponent. For defensive war, they erected fortresses on the heights of almost inaccessible mountains, to which they retired when repulsed, and whence, with recruited vigor, they sallied again, and became in their turn the assailants. The telegraph was used, if not with all the effect and improvements of recent date, yet with a dexterity that gave them great advantages over an enemy. Watch towers were constructed, from which signals of smoke by day and of torches by night communicated the movements of their opponents.’

The conquest of Granada was followed by the expulsion, or rather the pillage and banishment, of the Jews, who had engrossed all the wealth and commerce of Spain. The inquisition exhausted its rage against these unhappy people, many of whom pretended to embrace Christianity to preserve their property. About the same time their Catholic majesties concluded an alii' ance with the emperor Maximilian, and a treaty of marriage for their daughter Joan with his son Philip, archduke of Austria and sovereign of the Netherlands. About this time also the contract was concluded with Christopher Columbus fur the discovery of New countries ; and the counties of Roussillon and Cerdagne were agreed to be restored by Charles VIII. of France, before his expedition into Italy. The discovery of America was soon followed by extensive conquests in that quarter which tended to raise the Spanish monarchy above any other in Europe. On the death of Isabella, which happened in 1506, Philip, archduke of Austria, came to Castile to take possession of that kingdom as heir to his motherin-law ; but, he dying soon after, his son Charles I., afterwards Charles V., emperor of Germany, became heir to the crown of Spain. His father, at his death, left the kin.; of !•' ranee governor to the young prince, and t'erdinand, dying in 1516, left car linal Ximenes sole regent of Castile till the arrival of his grandson.

History of' Spain to the inauguration of Charles I', as emperor of (iirinany. — Ximenes, whose character is no less singular than illustrious, who united the abilities of a great statesman with the aliject devotion of a superstitious monk, and the magnificence of a prime minister with the severity of a mendicant, maintained order and tranqir lity in Spain, notwithstanding the discontents of

a turbulent and high-spirited nobility. When they disputed his right to the regency, he coolly showed them the testament of Ferdinand, and the ratification of that deed by Charles ; but these not satifying them, and arguments proving ineffectual, he led them insensibly towards a balcony, whence they had a view of a large body of troops under arms and a formidable train of artillery. ' Behold,' said the cardinal, ' the

powers which I have received from his Catholic majesty : by these I govern Castile, and will govern it, till the king, your master and mine, shall come to take possession of his kingdom.' A declaration so bold and determined silenced all opposition ; and Ximenes maintained his authority till the arrival of Charles in 1517. The young king was received with universal acclamations of joy ; but Ximenes found little cause to rejoice. He was seized with a violent disorder, supposed to be the effect of poison ; and, when he recovered, Charles, prejudiced against him by the Spanish grandees and his Flemish courtiers, slighted his advice, and allowed him every day to sink into neglect. The cardinal did not bear this treatment with his usual fortitude. He expected a more grateful return from a prince to whom he delivered a kingdom more flourishing than it had been in any former age, and authority more extensive and better established than the most illustrious of his ancestors had ever possessed. Conscious of his own integrity and merit, he could not therefore refrain from giving vent, at times, to indignation and complaint. He lamented the fate of his country, and foretold the calamities to which it would be exposed from the insolence, the rapaciousness, and the ignorance o.' strangers. But in the mean time he received a letter from the king, dismissing him from his councils under pretence of easing his age of that burden which he had so long and so ably sustained. This let-ter proved fatal to the minister ; for he expired in a few hours after reading it. While Charles was taking possession of the throne of Spain, in consequence of the death of one grandfather, another was endeavouring to obtain for him the imperial crown. With this view Maximilian assembled a diet at Augsburg, where he cultivated the favor of the electors by many acts of beneficence, to engage them to choose that young prince as his successor. But Maximilian himself never having been crowned by the pope, a ceremony deemed essential in that age, as well as in the preceding, he was considered only as king of the Romans or emperor elect; and, no example occurring in history of any person being chosen successor to a king of the Romans, the Germans, always tenacious of their forms, obstinately refused to confer upon Charles a dignity for which their constitution knew no name. But, though Maximilian could not prevail upon the German electors to choose his grandson of Spain king of the Romans, he had disposed their minds in favor of that prince ; and other circumstances, on the death of the emperor, conspired to the exaltation of Charles. The imperial crown had so long continued in the Austrian line that it began to be considered as hereditary in that family; and Germany, torn by religious disputes, stood in need of a powerful emperor, not only

to preserve its own internal tranquillity, but also to protect it against the victorious arms of the Turks, who, under Selim I., threatened the liberties of Europe. This fierce and rapid conqueror had already subdued the Mamelukes, and made himself master of Egypt and Syria. The power of Charles appeared necessary to oppose that of Selim. The extensive dominions of the house of Austria, which gave him an interest in the preservation of Germany ; the rich sovereignty of the Netherlands and Franche Compte; the entire possession of the great and warlike kingdom of Spain, together with that of Naples and Sicily; all united to hold him up to the first dignity among Christian pri nces ; and the new world seemed only to be call-ed into existence, that its treasures might enable him to defend Christendom against the infidels. Such was the language of his partisans. Francis I., however, no sooner received intelligence of the death of Maximilian, than he declared himself a candidate for the empire, and with no less confidence of success than Charles. He trusted to his superior years and experience ; his great reputation in arms ; and it was farther urged in his favor that the impetuosity of the French cavalry, added to the firmness of the German infantry, would prove irresistible, and not only be sufficient, under a warlike emperor, to set limits to the ambition of Selim, but to break entirely the Ottoman power, and prevent it from ever becoming dangerous again to Germany. Both claims were plausible. The dominions of Francis were less extensive, but more united than those of Charles. His subjects were numerous, active, brave, lovers of glory, and lovers of their king. These were strong arguments in favor of his power, so necessary at this juncture ; but he had no natural interest in the Germanic body ; and the electors, hearing so much of military force on each side, became more alarmed for their own privileges than the common safety. They determined to reject both candidates, and offered the imperial crown to Frederick, surnamed the Wise, duke of Saxony. But he, undazzled by the splendor of an object courted with so much eagerness by two mighty monarchs, rejected it with a magnanimity no less singular than great. ‘ In times of tranquillity,‘said Frederick, ‘ we wish for an emperor who has no power to invade our liberties ; times of danger demand one who is able to secure our safety. The Turkish armies, led by a warlike and victorious monarch, are now assembling : they are ready to pour in upon Germany with a violence unknown in former ages. New conjunctures call for new expedients. The imperial sceptre must be committed to some hand more powerful than mine or that of any other Ger-man prince. We possess neither dominions nor revenues, nor authority, which enable us to encounter such a formidable enemy. Recourse must be had, in this exigency, to one of the riyal monarchs. Each of them can bring into the field forces sufficient for our defence.

But as the king of Spain is of German extraction, as he is a member and prince of the empire by the territories which descend to him from his grandfather, and as his dominions stretch along that frontier which lies most exposed to the enemy, his claim, in my opinion, is preferable to that of a stranger

to our language, to our blood, and to our country.' Charles was elected in consequence of this speech in 1520.

The two candidates had hitherto conducted their rivalship with emulation, but without en-mity. They had even mingled in their competition many expressions of friendship and regard. Francis in particular declared, with his usual vivacity, that his brother Charles and he were fairly and openly suitors to the same mistress : ' The most assiduous and fortunate,' added he, ' will win her ; and the oilier must rest contented.' But the preference was no sooner given to his rival than Francis discovered all the passions natural to disappointed ambition. He could not suppress his chagrin and indignation at being baulked in his favorite pursuit, and rejected, in the face of all Europe, for a youth yet unknown to fame. The spirit of Charles resented such contempt ; and from this jealousy, as much as from opposition of interests, arose that emulation between those two great monarchs which involved them in almost perpetual hostilities, and kept their whole age in movement. Charles and Francis had many interfering claims in Italy ; and the latter thought himself bound in honor to restore the king of Navarre to his dominions, unjustly seized by the crown of Spain. They immediately began to negociate ; and, as Henry VIII. of England was the third prince of the age in power and dignity, his friendship was eagerly courted by each of the rivals. He was the natural guardian of the liberties of Europe. Sensible of the consequence which his situation gave him, and proud of his pre-eminence, Henry knew it to be his interest to keep the balance even between the contending powers, and to restrain both, by not joining entirely with either ; but he was seldom able to reduce his ideas to practice. Vanity and resentment were the great springs of all his

undertakings ; and his neighbours, by touching these, found an easy way to draw him into their measures, and force him upon many rash and inconsiderate enterprises. All the impolitic steps in Henry's government must not, however, be imputed to himself; many of them were occasioned by the ambition and avarice of nis prime minister and favorite, cardinal Wolsey. This man, who, by his talents and accomplishments, had risen from one of the lowest conditions in life to the highest employments, both in church and state, enjoyed a greater degree of power and dignity than any English subject ever possessed, and governed the haughty, presumptuous, and untractable spirit of Henry, with absolute authority. Francis was equally well acquainted with the character of Henry and of his minister. He had successfully flattered Wolsey's pride, by honoring him with particular marks of his confidence, and bestowing upon him the appellation of father, tutor, and governor ; and he had obtained the restitution of Tournay, by adding a pension to those respectful titles. He now solicited an interview with the king of England near Calais ; in hopes of being able, by familiar conversation, to attach him to his friendship and interest ; while he gratified the cardinal's vanity, by affording him an opportunity of displaying his magnificence in the presence of two

courts, and of discovering to the two nations his influence over their monarchs. Charles dreaded the effects of this projected interview between two gallant princes, whose hearts were no less susceptible of friendship than their manners were of inspiring it. Finding it impossible, however, to prevent a visit, in which the vanity of all parties was so much concerned, he endeavoured to defeat its purpose, and to pre-occupy the favor of the English monarch, and of his minister, by an act of complaisance still more flattering and moreuncommon. Rely ing wholly upon Henry's generosity for his safety, he landed at Dover, in his way from Spain to the Low Countries. The king of England, who was on his way to France, charmed with such an instance of confidence, hastened to receive his imperial guest ; and Charles, during his short stay had the address not only to give Henry favorable impressions of his character and intentions, but to detach Wolsey entirely from the interest of Francis. The tiara had attracted the eye of that ambitious prelate ; and as the emperor knew that the papacy was the sole point of elevation, beyond the greatness he then possessed, at which he could aspire, he made him an offer of his interest on the first vacancy. The day of Charles's departure, Henry went over to Calais with his whole court, to meet Francis. Their interview was in an open plain between Guisnes and Ardres ; where the two kings and their attendants displayed their

magnificence with such emulation and profuse expense, as procured it the name of the field of the cloth of gold. Here Henry erected a spacious house of wood and canvas, framed in London, on which, under the figure of an English archer, was the following motto : — ‘ He prevails whom I favor; ‘ alluding to his own political situation as holding in his hands the balance of power among the potentates of Europe. Feats of chivalry, however, parties of gallantry, and such exercises as were in that age reckoned manly or elegant, rather than serious business, occupied the two courts during the time that they continued together, which was eighteen days. After taking leave of this scene of dissipation, the king of England paid a visit to the emperor and Margaret of Savoy at Gravelines, and engaged them to go along with him to Calais ; where the artful and politic Charles completed the impression which he had begun to make on Henry and his favorite, and effaced all the friendship to which the frank and generous nature of Francis had given birth. He renewed his assurances of assisting Wolsey in obtaining the papacy ; and he put him in immediate possession of the revenues belonging to the sees of Badajoz and Palencia in Spam. He flattered Henry’s pride, by convincing him of his own importance, and of the justness of the motto which he had chosen ; offering to submit to his sole arbitration any difference that might arise between him and Francis. This important point be-ing secured, Charles repaired to Aix-la-Chapelle, where he was solemnly invested with the crown and sceptre of Charlemagne, in presence of a more splendid and numerous assembly than had appeared on any former inauguration. About the same time Soliman II., one of the most accom-SPAIN.

plishea, enterprising, and victorious of the Turkish princes, and a constant and formidable rival to the emperor, ascended the Ottoman throne.

Vrom the inauguration of Charles V. as emperor to his death. — The first act of Charles’s administration was to appoint a diet of the em-pire, to be held at Worms, to concert with the princes proper measures for checking the progress of ‘ those new and dangerous opinions which threatened to disturb the peace of Germany, and to overturn the religion of their ancestors.’ The opinions propagated by Luther and his followers were here meant. But all his efforts for that purpose were

insufficient, as is related under the articles LUTHER and REFORMATION. In 1521 the Spaniards, dissatisfied with the departure of their sovereign, whose election to the empire they foresaw would interfere with the administration of his own kingdom, and incensed at the avarice of the Flemings, to whom the direction of public affairs had been committed since the death of cardinal Ximenes, several grandees, to shake off this oppression, entered into an association, to which they gave the name of the sancta juncta ; and the sword was appealed to as the means of redress. This seemed to Francis a favorable juncture for reinstating the family of John d'Albret in the kingdom of Navarre. Charles was at a distance from that part of his dominions, and the troops usually stationed there had been called away to quell the commotions in Spain. A French army, under Andrew de Foix, speedily conquered Navarre ; but that young and inexperienced nobleman, pushed on by military ardor, ventured to enter Castile. The Spaniards, though divided among themselves, united against a foreign enemy, routed his forces, took him prisoner, and recovered Navarre in a shorter time than he had spent in subduing it. Hostilities thus begun in one quarter, between the rival monarchs, soon spread to another. The king of France encouraged the duke of Bouillon to make war against the emperor, and to invade Luxemburg!). Charles, after humbling the duke, attempted to enter France ; but was repelled and worsted before Mezieres by the fa-mous chevalier Bayard, distinguished among his contemporaries by the appellation of ' the knight without fear and without reproach ; ' and who united the talents of a great general to the punc-tilious honor and romantic gallantry of the heroes of chivalry. Francis broke into the Low Countries, where, by an excess of caution, an error not natural to him, he lost an opportunity of cutting off the whole of the imperial army ; and, what was of still more consequence, he disgusted the constable Bourbon, by giving the command of the van to the duke of Alen£on. During these operations in the field an unsuccessful congress was held at Calais, under the mediation of Henry VTII. It served only to exasperate the parties whom it was intended to reconcile. A league was soon after concluded by the intrigues of Wolsey, between the pope, Henry, and Charles, against France. Leo had already entered into a separate league with the emperor, and the French were fast losing ground in Italy. The insolence and exactions of marshal de Lautrec, governor of Milauv had totally alienated

the affections of the Milanese from France. They resolved to expel the troops of that nation, and put themselves under the government of Francis Sforza, brother to Maximilian their late duke. In this

resolution they were encouraged by the pope, who excommunicated Lautrec, and took into his pay a considerable body of Swiss. The papal army, commanded by Prosper Colonna, an experienced general, was joined by supplies from Germany and Naples ; while Lautrec, neglected by his court, and deserted by the Swiss in its pay, was unable to make head against the enemy. The city of Milan was betrayed by the inhabitants to the confederates ; Parma and Placentia were united to the ecclesiastical state ; and of their conquests in Lombardy only the town of Cremona, the castle of Milan, and a few inconsiderable forts, remained in the hands of the French. Leo X. received the accounts of his rapid success with such transports of joy as are said to have brought on a fever, which occasioned his death. The spirit of the confederacy was broken, and its operations suspended by this event. The Swiss were recalled ; some other mercenaries disbanded for want of pay; and only the Spaniards, and a few Germans in the emperor's service, remained to defend the duchy of Milan. But Lautrec, who with the remnant of his army had taken shelter in the Venetian territories, destitute both of men and money, was unable to improve this favorable opportunity as he wished. All his efforts were rendered ineffectual by the vigilance and ability of Colonna and his associates. Meantime much discord prevailed in the conclave. Wolsey's name, notwithstanding all the emperor's magnificent promises, was scarcely mentioned there. Julio de Medici, Leo's nephew, thought himself sur° of the election ; when, by an unexpected turn of fortune, cardinal Adrian of Utrecht, Charles's preceptor, who at that time governed Spain in the emperor's name, was unanimously raised to the papacy, to the astonishment of all Europe, and the greatest disgust of the Italians. Francis, roused by the rising consequence of his rival, resolved to exert himself with fresh vigor, to wrest from him his late conquests in Lombardy. Lautrec received a supply of money, and a reinforcement of 10,000 Swiss. With this reirforce-merft he was enabled once more to act offensively, and even to advance within a few miles of Mi-lan ; when money again failing him, and the Swiss growing mutinous, he was obliged to attack the imperialists in their camp at Bicocca, where he was repulsed with great slaughter, having lost his bravest officers and best troops. Such of the Swiss as survived set out immediately for their own country ; and Lautrec, despairing of being able to keep the field, retired into France. Genoa, which still remained subject to Francis and made it easy to execute any scheme for the recovery of 'Milan, was soon after taken by Colonna ; the authority of the emperor and his faction was every where established in Italy. The citadel of Cremona was the sole fortress which remained in the hands of the French. The affliction of Francis for such a succession of misfortunes was augmented by the

unexpected arrival of an English herald, who in th

name of his sovereign declared war against France. The courage of this excellent prince, however, did not forsake him ; though this treasury was exhausted by expensive pleasures, no less than by hostile enterprises, he assembled a considerable army, and put his kingdom in a state of defence for resisting this new enemy, without abandoning any of the schemes which lie was forming against the emperor. He was surprised, but not alarmed, at such a de-nunciation. Meanwhile Charles, willing to draw as much advantage as possible from so powerful an ally, paid a second visit to the court of England in his way to Spam, where his presence was become necessary. His success exceeded his most sanguine expectations. He not only gained the entire friendship of Henry, who publicly ratified the treaty of Burges ; but disarmed the resentment of Wolsey, by assuring him of the papacy on Adrian's death ; an event seemingly not distant, by reason of his age and infirmities. In consequence of these negociations an English army invaded France, under the earl of Surrey ; who, at the end of the campaign, was obliged to retire, with his forces greatly reduced, without being able to make himself mas-ter of one place within the French frontier. Charles was more fortunate in Spain ; he soon quelled the tumults which had arisen there in his absence. While the Christian princes were thus wasting each other's strength, Solyman entered Hungary, and made himself master of Belgrade, reckoned the chief barrier of that kingdom against the Turkish power. Encouraged by this success, he turned his victorious arms against the island of Rhodes, at that time the seat of the knights of St. John of Jerusalem; and, though every prince in that age acknowledged llhodes to be the great bulwark of Christendom in the east, so violent was their animosity against each other, that they suffered Soliman without disturbance to carry on his operations against that city and island. Lisle Adam, the grand master, made a gallant defence; but after incredible efforts of courage, patience, and military conduct, during a siege of six months, he was obliged to surrender the place, having obtained an honorable capitulation from the sultan, who admired and respected his heroic

qualities. See RHODES and MALTA. Charles and Francis were equally ashamed of having occasioned such a loss to Christendom by their contests ; and the emperor, by way of reparation, granted to the knights of St. John the island of Malta, where they fixed their residence, and continued long to retain their ancient spirit, though mucli diminished in power and splendor. Adrian VI. though the creature of the emperor, and devoted to his interest, endeavoured to assume the impartiality which became the common father of Christendom, and labored to reconcile the contending princes, that they might unite in a league against Soliman, whose conquest of llhodes rendered him more formidable than ever to Eu-rope. The Italian states were no less desirous of peace than the pope ; and so much regard was paid by the hostile powers to the exhorta-tions of his holiness, and to a bull which he is-sued, requiring all Christian princes to consent

to a truce for three years, that the imperial, the French, and the English ambassadors at Rome, were empowered to treat of that matter; but, while they wasted their time in fruitless negociations, their masters were continuing their preparations for war ; and negociations of another kind soon took place. The confederacy against France became more formidable than ever. The Venetians, who had hitherto adhered to the French interest, formed engagements with the emperor for securing Francis Sforza in the possession of the duchy of Milan ; and the pope, from a persuasion that the ambition of the French monarch was the only obstacle to peace, acceded to the same alliance. The Florentines, the dukes of Ferrara and Mantua, and all the Italian powers, followed this example. Francis was left without a single ally, to resist the efforts of a multitude of enemies, whose armies every where threatened, and whose territories encompassed his dominions. The emperor in person menaced France with an invasion on the side of Guienne; the forces of England and the Netherlands hovered over Picardy, and a numerous body of Germans was preparing to ravage Burgundy. The dread of so many and such powerful adversaries, it was thought, would have obliged Francis to keep wholly on the defensive, or at least have prevented him from entertaining any thoughts of marching into Italy. But, before his enemies were able to strike a blow, Francis had assembled a great army, with which he hoped to disconcert all the emperor’s schemes, by marching it in person into Italy ; and this bold measure, the more formidable because unexpected, could scarcely have failed of the desired effect, had it been immediately carried into execution. But the discovery of a domestic conspiracy, which threatened the destruction

of his kingdom, obliged Francis to stop short at Lyons. Charles duke of Bourbon, lord high constable of France, was a prince of the most shining merit ; his great talents equally fitted him for the council or the field, while his eminent services to the crown entitled him to its first favor. But unhappily, Louisa, duchess of Augouleme, the king smother, had contracted a violent aversion against the house of Bourbon, and had taught her son, over whom she had acquired an absolute ascendant, to view all the constable's actions with a jealous eye. After repeated affronts he retired from court, and began to listen to the advances of the emperor's ministers. Mean time the duchess of Bourbon died ; and, as the constable was no less amiable than accomplished, the duchess of Angouleme, still susceptible of the tender passions, formed the scheme of marrying him. But Bourbon, who might have expected every thing to which an ambitious mind can aspire, from the doating fondness of a woman who governed her son and the kingdom, incapable of imitating Louisa in her sudden transition from hate to love, or of meanly counterfeiting a passion for one who had so long pursued him with unprovoked malice, rejected the match with disdain, and turned the proposal into ridicule. At once despised and insulted, by the man whom love only could have made her cease to persecute, Louisa was filled with all the rage of disaj)-

pointed woman; she resolved to ruin, since she should not marry, Bourbon. For this purpose she commenced an iniquitous suit against him ; and, by the chicanery of chancellor du Prat, the constable was stripped of his whole family es-tate. Driven to despair by so many injuries, he entered into a secret correspondence with the emperor and the king of England ; and he proposed, as soon as Francis should have crossed the Alps, to raise an insurrection among his nurrier' ous vassals, and introduce foreign enemies into the heart of France. Happily Francis got intimation of this conspiracy before he left the kingdom; but, not being sufficiently convinced of the constable's guilt, he suffered so dangerous a foe to escape ; and, Bourbon entering into the emperor's service, employed all the force of his enterprising genius, and his great talents for war, to the prejudice of his prince and

his native country. In consequence of the discovery of this plot, and the escape of the powerful conspirator, Francis relinquished his intention of leading his army in person into Italy. He was ignorant how far the infection had spread among his subjects, and afraid that his absence might encourage them to make some desperate attempt in favor of a man so much beloved. He did not, however, abandon his design on the Milanese", but sent forward an army of 30,000 men, under the command of admiral Bonnivet. Colonna, who was entrusted with the defence of that duchy, was in no condition to resist such a force ; and the city of Milan, on which the whole territory depends, must have fallen into the hands of the French, had not Bonnivet, who possessed none of the talents of a general, wasted his time in frivolous enterprises, till the inhabitants recovered from their consternation. The imperial army was reinforced. Colonna died ; and Lannny, viceroy of Naples, succeeded him in the command ; but the chief direction of military operations was committed to Bourbon and the marquis de Pescara, the greatest generals of their age. Bonnivet, destitute of troops to oppose this new army, and still more of the talents which could render him a match for its leaders, after various movements and encounters, was reduced to the necessity of attempting a retreat into France. He was followed by the imperial generals, and routed at Biagrassa, where the fa-mous chevalier Bayard was killed. The emperor and his allies were less successful in their attempts upon France. They were baffled in every quarter; and Francis, though stripped of his Italian dominions, might still have enjoyed in safety the glory of having defended his native kingdom against one half of Europe, and have bid defiance to all his enemies : but understanding that the king of England, discouraged by his former fruitless enterprises, and disgusted with the emperor, was making no preparations for an attempt on Picardy, his ancient ardor seized him for the conquest of Milan, and lie determined, notwithstanding the advanced season, to march into Italy. The French army no sooner appeared in Piedmont, than the whole Milanese was thrown into consternation. The capital opened its gates. The forces of the emperor and Sforza retired to Lodi; and, Had Francis been so fortunate as to pursue them, they must have abandoned that post, and been totally dispersed ; but his evil genius led him to besiege Pavia, a town of considerable strength, well garrisoned, and defended by Antonio de Leyva, one of the bravest officers in the Spanish service; before which place he was defeated and taken prisoner on the 24th of February 1524.

The captivity of Francis filled all Europe with alarm. Almost the whole French army was cut off; Milan was immediately abandoned ; and in a

few weeks not a Frenchman was left in Italy. The power of the emperor, and still more his ambition, became an object of universal ter-ror ; and resolutions were every where taken to set bounds to it. Meanwhile Francis, deeply impressed with a sense of his misfortunes, wrote to his mother Louisa, whom he had left regent of the kingdom, the following short but expressive letter : — ‘ All, madam, is lost but honor.’ The same courier that carried this letter, carried also despatches to Charles ; who received the news of the signal and unexpected success which had orowned his arms with the most hypocritical moderation. He would not suffer any public rejoicings to be made on account of it ; and said, he only valued it as it would prove the occasion of restoring peace to Christendom. Louisa, however, did not trust to these appearances ; if she could not preserve what was yet left, she determined at least that nothing should be lost through her negligence or weakness. Instead of giving herself up to such lamentations as were natural to a woman so remarkable for maternal tenderness, she discovered all the foresight, and exerted all the activity of a consummate politician. She took every possible measure for putting the kingdom in a posture of defence, while she employed all her address to appease the resentment and to gain the friendship of England; and a ray of comfort from that quarter soon broke in upon the French affairs. Though Henry VIII. had not entered into the war against France from any concerted political views, he had always retained some imperfect idea of that balance of power which it was necessary to maintain between Charles and Francis ; and the preservation of which he boasted to be his peculiar office. By this alliance with the emperor he hoped to recover some part of those territories on the continent which had belonged to his ancestors ; and therefore willingly contributed to give him the ascendency above his rival ; but having ne-ver dreamt of any event so decisive and fatal as the victory of Pavia, which seemed not only to have broken, but to have annihilated the power of Francis, he now became sensible of his own danger, as well as that of all Europe, from the loss of a proper counterpoise to the power of Charles. Instead of taking advantage of the distressed condition at France, Henry therefore determined to assist her in her present calami • ties. Some disgusts had also taken place between him and Charles, and still more between Charles and Wolsey. The elevation of the cardinal of Medicis to St. Peter’s chair, on the death of Adrian, under the name of Clement VII., had made the English minister sensible of the insincerity of the emperor’s promises, while it extin

guished all his hopes of the papacy ; and he resolved on revenge. Charles, too, had so ill supported the appearance of moderation which he assumed, that he had already changed his usual style to Henry ; and, instead of writing to him with his own hand, he dictated his letters to a secretary, and simply subscribed 'Charles.' Influenced by all these motives, together with the glory of raising a fallen enemy, Henry listened to the flattering submissions of Louisa ; entered into a defensive alliance with her as regent of France, and engaged to use his best offices to procure the deliverance of her son from captivity. Meanwhile Francis was rigorously confined ; and severe conditions being proposed to him as the price of his liberty, he drew his dagger, and, pointing it at his breast, cried, < 'Twere better that a king should die thus !' His hand was withheld ; and flattering himself, when he grew cool, that such propositions could not come directly from Charles, he desired that he might be removed to Spain, where the emperor then resided. His request was complied with ; but he languished long before he obtained a sight of his conqueror. At last he was favored with a visit ; and the emperor, dreading a general combination against him, or that Francis, as he threatened, might in obstinacy resign his crown to the dauphin, agreed to abate somewhat of his former demands. A treaty was accordingly concluded at Madrid ; in consequence of which Francis obtained his liberty. The chief article was, that Burgundy should be restored to Charles as the rightful inheritance of his ancestors, and that Francis's two eldest sons should be immediately delivered up as hostages for the performance of the conditions stipulated. The exchange of' the captive monarch lor his children was made on the borders between France and Spain. The moment that Francis entered his own dominions, he mounted a Turkish horse, and, putting it to its speed, waved his hand and cried aloud several times, ' I am yet a king ! I am yet a king !'

Francis never meant to execute the treaty of Madrid : he had even left a protest in the hands of notaries before he signed it, that his consent should be considered as an involuntary deed, and be deemed null and void. Accordingly, as soon as he arrived in France, he assembled the states of Burgundy, who protested against the article relative to their province; and Francis coldly replied to the imperial ambassadors, who urged the immediate execution of the treaty, that he would religiously perform the articles relative to himself, but, in those affecting the

French monarchy, he must be directed by the sense of the nation. He made the highest acknowledgments to the king of England for his friendly interposition, and offered to be entirely guided by his counsels. Charles and his ministers saw that they were over-reached in those very arts of negociation in which they so much excelled, while the Italian states observed with pleasure that Francis was resolved not to execute a treaty which they considered as dangerous to the liberties of Europe. Clement absolved him from the oath which he had taken at Madrid; and the kings of France and England, the pope, the Swiss, the Venetians, the Florentines, and the

duke of Milan, entered into an alliance, to wliidi they gave the name of the Holy League, because his holiness was at the head of it, in order to oblige the emperor to deliver up Francis's two sons on the payment of a reasonable ransom, ami to re-establish Sforsa in the quiet possession of the Milanese. In consequence of this league the confederate army took the field, and Italy once more became the scene of war. But Francis, who it was thought would have infused spirit and vigor into the whole body, had gone through such a scene of distress that he was become diffident of himself, distrustful of his fortune, and desirous of tranquillity. He flattered himself that the dread alone of such a confederacy would induce Charles to listen to what was equitable, and therefore neglected to send due reinforcements to his allies in Italy. Meantime the duke of Bourbon, who commanded the imperialists, had made himself master of the whole Milanese, of which the emperor had promised him the investiture; and his troops beginning to mutiny, for want of pay, he led them to Rome, and promised to enrich them with the spoils of that city. He was as good as his word ; for, though ho himself was slain in planting a scaling ladder against the walls, his soldiers, rather enraged than discouraged by his death, mounted to the assault with the utmost ardor, animated by the greatness of the prize, and, entering the city sword in hand, plundered it for several days. Never did Rome in any age suffer so many calamities, not even from the Barbarians, by whom she was often subdued, the Huns, Vandals, or Goths, as now from the subjects of a Christian and Catholic monarch. Whatever was respectable in modesty, or sacred in religion, seemed only the more to provoke the rage of the soldiery. Virgins suffered violation in the arms of their parents, and upon those altars to which they had fled for safety ! Venerable prelates, after enduring every indignity and every torture, were thrown into dungeons, and menaced with the most cruel death, to make them reveal their secret treasures. Clement himself, who had neglected to make his escape in time, was taken prisoner,

and found that the sacredness of his character could neither procure him liberty nor respect. He was confined till he should pay an enormous ransom imposed by the victorious army, and surrender to the emperor all the places of strength belonging to the church. Charles received the news of this extraordinary event with equal surprise and pleasure ; but to conceal his joy from his Spanish subjects, who were filled with horror at the insult offered to the sovereign pontiff, and to lessen the indignation of the rest of Europe, he expressed the most profound sorrow for the success of his arms. He put himself and hi* court into mourning; stopped the rejoicings for the birth of hi.-. son Philip, and ordered prayers to be put up in all the churches of Spain for the recovery of the pope's liberty, which he could immediately have given him by a letter to his generals.

The concern expressed by Henry and FrancU for the calamity of their ally was more sincere. Alarmed at the progress of the imperial arms, they had, even before the taking of Rome, entered into a closer alliance, and agreed to inv;i>lr

the low countries with a powerful army ; but no sooner did they hear of the pope's captivity than they changed, by a new treaty, the scene of the projected war from the Netherlands to Italy, and resolved to take the most vigorous measures for restoring him to liberty. Henry, however, contributed only money. A French army entered Italy under the command of marshal Lautrec ; Clement obtained his freedom ; and war was for a time carried on by the confederates with success ; but the death of Lautrec, and the revolt of Andrew Doria, a famous Genoese admiral in the service of France, entirely changed the face of affairs. The French army was utterly ruined ; and Francis, discouraged and almost exhausted by so many unsuccessful enterprises, began to think of peace, and of obtaining the release of his sons by concessions, not by the terror of his arms. At the same time Charles, notwithstanding the advantages he had gained, had many reasons to wish for an accommodation. Sultan Soliman, having over-run Hungary, was ready to break in upon the Austrian territories with the

whole force of the east ; and the progress of the Reformation in Germany threatened the tranquillity of the empire. In consequence of this situation of affairs, though pride made both parties conceal or dissemble their real sentiments, two ladies were permitted to restore peace to Europe. Margaret of Austria, Charles's aunt, and Louisa, Francis's mother, met in 1529 at Cambray, and settled the terms of accommodation between the French king and the emperor. Francis agreed to pay 2,000,000 crowns as the ransom of his two sons, to resign the sovereignty of Flanders and Artois, and to forego all his Italian claims ; and Charles ceased to demand the restitution of Burgundy. All the steps of this negociation had been communicated to the king of EnglanJ ; and Henry was, on that occasion, so generous to his friend and ally Francis that he sent him an acquittal of nearly 600,000 crowns in order to en-able him to fulfil his agreement with Charles. But Francis's Italian confederates were less satisfied with the treaty of Cambray. They were almost wholly abandoned to the will of the emperor ; and seemed to have no other means of security left but his equity and moderation. Of these, from his past conduct, they had not formed the most advantageous idea. But Charles's circumstances, especially in regard to the Turks, obliged him to behave with a generosity inconsistent with his character. The Florentines alone, whom. he reduced under the dominion of the family of Medicis, had reason to complain of his severity. Sforza obtained the investiture of Mi-lan and his pardon ; and every other power experienced the lenity of the conqueror. After having received the imperial crown, from the hands of the pope at Bologna, Charles proceeded on his journey to Germany, where his presence was become highly necessary ; for although the conduct and valor of his brother Ferdinand, on whom he had conferred the hereditary dominions of the house of Austria, and who had been elected king of Hungary, had obliged Soliman to re-tire with infamy and loss, his return was to be feared, and the disorders of religion were daily increasing ; an account of which, and of the emperor's transactions with the Protestants, is given under the article REFORMATION. Charles, having exerted himself as much as he could against the reformers, undertook his first expedition against the piratical states of Africa. Barbary, or that part of the African continent lying along the coast of the Mediterranean Sea, was then nearly in the same condition which it is at present. Morocco, Algiers, and Tunis, were its principal states ; and the last two were nests of pirates. Barbarossa, a famous Corsair, had succeeded his brother in the kingdom of Algiers, which he had formerly assisted him to usurp. He regulated with much prudence the interior police of his kingdom, carried on his piracies with great vigor, and extended hjˆ conquests on the continent of Africa ; but perceiving that the natives submitted to

his government with impatience, and fearing that his continual depredations would one day draw upon him a general combination of the Christian powers, he put his dominions under the protection of the grand signior. Soliman, flattered by such an act of submission, and charmed with the boldness of the man, offered him the command of the Turkish fleet. Proud of this distinction, Barbarossa repaired to Constantinople, and made use of his influence with the sultan to extend his own dominion. Partly by force, partly by treachery, he usurped the kingdom of Tunis ; and, being now possessed of greater power, he carried on his depredations against the Christian states with more destructive violence than ever. Daily complaints of the piracies and ravages committed by the galleys of Barbarossa were brought to the emperor by his subjects, both in Spain and Italy ; and afl Christendom seemed to look up to him, as its greatest and most fortunate prince, for relief from this new and odious species of oppression. At the same time Muley Hassen, the exiled king of Tunis, finding none of the African princes able or willing to support him in recovering his throne, applied to Charles for assistance against the usurper. Equally desirous of delivering his dominions from the dangerous neighbourhood of Barbarossa, of appearing as the protector of an unfortunate prince, and of acquiring the glory annexed in that age to every expedition against the Mahometans, the emperor readily concluded a treaty with Muley Hassen, and set sail for Tunis with a formidable armament. The Goletta, a sea-port town fortified with 300 pieces of cannon, was taken, together with all Barbarossa's fleet : he was defeated in a pitched battle ; and, 10,000 Christian slaves having knocked off their fetters and made themselves masters of the citadel. Tunis was preparing to surrender. But, while Charles was deliberating on the conditions, his troops, fearing that they would be deprived of the booty which they had expected, broke suddenly into the town, and pillaged and massacred without distinction : 30,000 persons perished by the sword, and 10,000 were made prisoners. The sceptre was restored to Muley Hassen, on condition that he should acknowledge himself a vassal of the crown of Spain, put into the emperor's hands all the fortified sea-ports in ,the kingdom of Tunis, and pay annually 12,000 crowns for the subsistence

of the Spanish garrison in the Goletta. . These points being settled, and 20,000 Christian slaves freed from bondage either by arms or by treaty, Charles returned to Europe, where his presence was become necessary; while Barbarossa, who had retired to Bona, recovered new strength, and again became the tyrant of the ocean.

The king of France took advantage of the emperor's absence to revive his pretensions in Italy. The treaty of Cambray had covered up, but not extinguished the flames of discord. Francis, who waited only for a favorable opportunity of recovering the territories and reputation which he had lost, continued to negociate against his rival with different courts. But all his negociations were disconcerted by unforeseen accidents. The death of Clement VII. (whom he had gained by marrying his son the duke of Orleans, afterwards Henry II., to Catharine of Medicis, the niece of that pontiff), deprived him of all the support which he hoped to receive from the court of Rome. The king of England, occupied with domestic cares and projects, declined engaging in the affairs of the continent and the Protestant princes, associated by the league of Smalkald, to whom Francis had also applied, and who seemed disposed at first to listen to him, filled with indignation and resentment at the cruelty with which some of their reformed brethren had been treated in France, refused to have any connexion with the enemy of their religion. Francis was neither cruel nor bigoted ; he was too indolent to concern himself about religious disputes ; but his principles becoming suspected, at a time when the emperor was gaining immortal glory by his expeditions against the infidels, he found it necessary to vindicate himself by some extraordinary demonstration of reverence for the established faith. The indiscreet zeal of some Protestant converts furnished him with the occasion. They had affixed to the gates of the Louvre and other pub-lic places papers containing indecent reflections on the rites of the Romish church. Six of the persons concerned in this rash action were seized ; and the king, pretending to be struck with horror at their blasphemies, appointed a solemn procession, to avert the wrath of heaven. The holy sacrament was carried through the city of Paris in great pomp : Francis walked uncovered before it, bearing a torch in his hand ; the princes of the blood supported the canopy over it; the nobles walked behind. In presence of this numerous assembly, the king declared, that if one of his hands were infected with heresy, he would cut it off with the other ; ' and I would sacrifice,' added he, ' even my own children, if found guilty of that crime.' As an awful proof of his sincerity, the six unhappy persons who had been seized were publicly burnt before the procession was finished, and in the

most cruel manner. They were fixed upon a machine which descended into the flames and retired alternately, until they expired. No won-der that the Protestant princes were incensed at such barbarity ! But Francis, though unsupported by an ally, commanded his army to advance towards the frontiers of Italy, under oretence of chastising the duke of Milan for

a breach of the law of nations, in putting to death his ambassador. The operations of war, however, soon took a new direction. Instead of marching directly to the Milanese, Francis commenced hostilities against the duke of Savoy, with whom he had cause to be dissatisfied, and on whom he had some claims ; and, before the end of the campaign, that feeble prince saw himself stripped of all his dominions, except the province of Piedmont. To complete his misfortunes, the city of Geneva, the sovereignty of which he claimed, and where the reformed opinions had already got footing, threw off his yoke; and its rerolt drew along with it the loss of the adjacent territory. Geneva was then an imperial city, and ever since remained free, till, in the French revolution, it was forced to be-come a part of the French republic. In this extremity the duke of Savoy saw no resource but in the emperor's protection; and, as his misfortunes were chiefly occasioned by his attachment to the imperial interest, he had a title to immediate assistance. But Charles) who was just returned from his African expedition, was not able to lend him the necessary support. His treasury was entirely drained, and he was obliged to disband his army till he could raise new supplies. Mean time the death of Sforza duke of Milan entirely changed the nature of the war, and afforded the emperor full leisure to prepare for action. The French monarch's pretext for taking up arms was at once cut off: but, as the duke died without issue, all Francis's rights to the duchy of Milan, which he had yielded only to Sforza and his descendants, returned to him in full force. He instantly renewed his claim to it ; and, if he had ordered his army immediately to advance, he might have made himself master of it. But he unfortunately wasted his time in fruitless negociations, while his more politic rival took possession of the duchy as a vacant fief of the empire ; and, though Charles seemed still to admit the equity of Francis's claim, he delayed granting the investiture under various pretences, and was secretly taking every possible measure to prevent him from regaining a footing in Italy. During the time gained in this manner Charles had recruited his finances, and of course his armies ; and, finding himself in a condition for war, he at last threw off the mask under which he had so long concealed his designs from the court of France. Entering Rome with great pomp, he pronounced

before the pope and cardinals, assembled in full consistory, a violent invective against Francis, by way of reply to his propositions concerning the investiture of Milan. Yet Francis, by an unaccountable fatality, continued to negociate, as if it had been still possible to terminate their differences in an amicable manner ; and Charles, finding him so eager to run into the snare, favored the deception, and, by seeming to listen to his proposals, gained yet more time for the execution of his ambitious projects. If misfortunes had rendered Francis too diffident, success had made Charles too sanguine. Hepresumedonnothingless than the subversion of the French monarch ; nay, he considered it as an infallible event. Having chased the forces of his rival out of Piedmont and

Savoy, he pushed forward at the head of 50,000 men, contrary to the advice of his most experienced ministers and generals, to invade the southern provinces of France ; while other two armies were ordered to enter it, the one on the side of Picardy, the other on the side of Champagne. He thought it impossible that Francis could resist so many unexpected attacks on such different quarters ; but he found himself mistaken. The French monarch fixed upon the mast effectual plan for defeating the invasion of a powerful enemy ; and he prudently persevered in following it, though contrary to his own natural tem-per, and to the genius of his people. He determined to remain altogether upon the defensive, and to deprive the enemy of subsistence by laying waste the country before him. The execution of this plan was committed to the mareschal Montmorency its author, a man happily fitted for such a trust by the inflexible severity of his disposition. He made choice of a strong camp, under the walls of Avignon, at the confluence of the Rhone and Durance, where he assembled a considerable army ; while the king, with another body of troops, encamped at Valence, higher up the Rhone. Marseilles and Aries were the only towns he thought it necessary to defend ; and each of these he furnished with a numerous garrison of his best troops. The inhabitants of the other towns were compelled to abandon their habitations; the fortifications of such places as might have afforded

shelter to the enemy were thrown down ; corn, forage, and provisions of every kind, were carried off or destroyed ; the mills and ovens were ruined, and the wells filled up or rendered useless. This devastation ex-tendejd from the Alps to Marseilles, and from the sea to the confines of Dauphiny ; so that the emperor when he arrived with the van of his army on the confines of Provence, instead of that rich and populous country which he expected to enter, beheld nothing but one vast and desert solitude. He did not, however, despair of success, though he saw that he should have many oifficulties to encounter; and, as an encouragement to his officers, he made them liberal promises of lands and honors in France. But all the land which any of them obtained was a grave, and their master lost much honor by this rash and presumptuous enterprize. After unsuccessfully investing Marseilles and Aries, after attempting in vain to draw Montmorency from his camp at Avignon, and not daring to attack it, Charles having spent two inglorious months in Provence, and lost one-half of his troops by disease or by famine, was under the necessity of ordering a retreat ; and, though he was some time in motion before the enemy suspected his intenlion, it was conducted with so much precipitation and disorder as to deserve the name of a flight, since the light troops of France turned it into a perfect rout. The invasion of Picardy was not more successful ; the imperial forces were obliged to retire without effecting any conquest of importance.

Charles had no sooner conducted the shattered remains of his army to the frontiers of Milan, than he set out for Genoa ; and, unwilling to expose himself to the scorn of the Italians after

such a reverse of fortune, he embarked directly for Spain. Meanwhile Francis gave himself up to that vain resentment which had formerly disgraced the prosperity of his rival. They had frequently, in the course of their quarrels, given each other the lie, and mutual challenges had been sent ; which, though productive of no serious consequences between the parties, had a powerful tendency to encourage the pernicious practice of duelling. Charles, in his invective pronounced at Rome, had publicly accused Francis of perfidy and breach of faith ; Francis now exceeded Charles in the indecency of his accusations. The Dauphin dying suddenly, his death was imputed to poison; Montecuculi his cup-bearer was put to the rack ; and that unhappy nobleman, in the agonies of torture, accused the emperor's generals, Gonzaga and de Leyva, of instigating him to the detestable act. The emperor himself was suspected ; nay, this extorted confession, and some obscure hints, were considered as incontestable proofs of his

guilt : though it was evident to all mankind that neither Charles nor his generals could have any inducement to perpetrate such a crime, as Francis was still in the vigor of life himself, and had two sons besides the dauphin, grown up to a good age. But the incensed monarch's resentment did not stop here. Francis was not satisfied with endeavouring to blacken the character of his rival by an ambiguous testimony which led to the most injurious suspicions, and upon which the most cruel constructions had been put ; he was willing to add rebellion to murder. For this purpose he went to the parliament of Paris; where, being seated with the usual solemnities, the advocate-general appeared, and accused Charles of Austria (so he affected to call the emperor) of having violated the treaty of Cambray, by which he was freed from the homage due to the crown of France for the counties of Artois and Flanders; adding, that this treaty being now void, he was still to be considered as a vassal of France, and consequently had been guilty of rebellion in taking arms against his sovereign. The charge was sustained, and Charles was summoned to appear before the parliament of Paris at a day fixed. The term expired ; and, no person appearing in the emperor's name, the parliament gave judgment, that Charles of Austria had forfeited, by rebellion and contu-macy, the counties of Flanders and Artois, and declared these fiefs reunited to the crown of France. Francis, soon after this vain display of animosity, marched into the Low Countries, as if he had intended to execute the sentence pronounced by his parliament ; but a suspension of arms took place, through the interposition of the queens of France and Hungary, before any thing of consequence was effected ; and this cessation of hostilities was followed by a truce, concluded at Nice, through the mediation of the reigning pontiff, Paul III. of the family of Farnese, a man of a venerable character and pacific disposition. Each of these rival princes had strong reasons to incline them to a peace. The finances of both were exhausted ; and the emperor, the most powerful of the two, was deeply impressed with the dread of the Turkish arms, which

Francis had drawn upon him by a league with Soliman. In

consequence of this league, Barbarossa with a great fleet appeared on the coast of Naples; filled that kingdom with consternation ; landed without resistance near Taranto ; obliged Castro, a place of some strength, to surrender ; plundered the adjacent country ; and was taking measures for securing and extending his conquests, when the unexpected arrival of Doria, the famous Genoese admiral, together with the pope's galleys and a squadron of the Venetian fleet, made it prudent for him to retire. The sultan's forces also invaded Hungary, where Mahomet, the Turkish general, after gaining several inferior ad vantages, defeated the Germans in a great battle near Essek,on theDrave. Happily for Charles and Europe it was not in Francis's power, at this juncture, either to join the Turks or assemble an army strong enough to penetrate into the Milanese. The emperor, however, was sensible that he could not long resist the efforts of two such powerful confederates, nor expect that the same fortunate circumstances would concur a second time in his favor; he therefore thought it necessary, both for his safety and reputation, to give his consent to a truce : and Francis chose rather to run the risk of disobliging his new ally, the sultan, than to draw on his head the indignation, and perhaps the arms, of all Christendom, by obstinately obstructing the re-establishment of tranquillity, and contributing to the aggrandisement of the infidels. These considerations inclined the contending monarchs to listen to the arguments of the holy father ; but he found it impossible to bring about n final accommodation between them, each inflexibly persisting in asserting his own claims. Nor could he prevail on them to see one another, though both came to the place of rendezvous ; so ˆreat were the remains of distrust and rancor, or such the difficulty of adjusting the ceremonial ! Yet, improbable as it may seem, a few days after signing the truce, the emperor, in his passage to Barcelona, being driven on the coast of Provence, Francis invited him to come ashore, frankly visited him on board his galley, and was received and entertained with the warmest demonstrations of esteem and affection. Charles, with an equal degree of confidence, paid the king next day a visit at Aigues-mortes ; where these two hostile rivals and vindictive enemies, who had accused each other of every kind of baseness, conversing together with all the cordiality of brothers, seem-ed to vie with each other in expressions of respect and friendship.

Besides the glory of having restored tranquillity to Europe, the pope gained a point of much consequence to his family. He obtained, for his grandson, Margaret of Austria, the emperor's natural daughter, formerly wife of Alexander cie Medicis, whom Charles had raised to the supreme power in Florence. Lorenzo de Medicis, the kinsman and

intimate companion of Alexander, had assassinated him by one of the blackest treasons recorded in history. Under pretence of having secured him an assignation with a lady of the highest rank and great beauty, he drew him into a secret apartment of his house, and there stabbed him as he lay carelessly on a couch, ex-

pecting the embrace of the lovely fair, whom ne had often solicited in vain. Lorenzo, however, did not reap the fruits of his crime ; for though some of his countrymen extolled him as a third Brutus, and endeavoured to seize this occasion for recovering their liberties, the government of Florence passed into the hands of Cosmo II. another kinsman of Alexander. Cosmo was desirous of marrying the widow of his. predecessor; but the emperor chose rather to oblige the pope, by bestowing his daughter upon Octavio Farnese, son of the duke of Parma. Charles had soon farther cause to be sensible of his obligations to the holy father for bringing about the treaty of Nice. His troops every where mutinied for want of pay, and the ability of' his generals only could have prevented a total revolt. He had depended, as his chief resource for discharging the arrears due to his soldiers, upon the subsidies which he expected from his Castilian subjects. For this purpose he assembled the cortes of Castile at To-ledo ; and, having represented to them the great expense of his military operations, he proposed to levy such supplies as the exigency of affairs demanded, by a general excise on commodities ; but the Spaniards, who already felt themselves oppressed by a load of taxes unknown to their ancestors, and who had often complained that their country was drained of its wealth and inhabitants, to prosecute quarrels in which they had no interest, determined not to add voluntarily to their own burdens. The nobles, in particular, inveighed with great vehemence against the imposition proposed, as an encroachment on the valuable and distinguishing privilege of their order, that of being exempted from the payment of any tax. After employing arguments and promises in vain, Charles dismissed the assembly with indignation ; and from that period neither the nobles nor the prelates have been called to the Cortes, on pretence that such as pay no part of the public taxes should not claim a vote in laying them on. These assemblies have since consisted merely of the procurators or representatives of eighteen cities, two from each ; in all thirty-six members, who are absolutely at the devotion of the crown. The citizens of Ghent, still more bold, broke out not long after into open rebellion against the emperor's government, on account of a tax which they judged contrary to their ancient privileges, and a decision of the council of Mechlin in favor of the imperial authority. Enraged at an unjust imposition, and rendered

desperate on seeing their rights betrayed by that very court which was bound to protect them, they flew to arms, seized several of the emperor's officers, and drove such of the nobility as resided among them out of the city. Sensible, however, of their inability to support what their zeal had prompted them to undertake, and desirous of securing a protector against the formidable forces with which they might expect soon to be attacked, they offered to acknowledge the king of France as their sovereign, to put him into immediate possession of their city, and to assist him in recovering those provinces in the Netherlands which had anciently belonged to his crown. True policy should have directed Francis to comply

with this proposa . The counties of Flanders and Artois were more valuable than the duchy of Milan, for which he had so long contended ; and their situation in regard to France made it more easy to conquer or to defend them. But Francis overrated the Milanese. He hajd lived in friendship with the emperor ever since their interview at Aigues-mortes, and Charles had promised him the investiture of that duchy. Forgetting, therefore, all his past injuries, and the deceitful promises by which he had been so often duped, the credulous, generous Francis, not only rejected the propositions of the citizens of Ghent, but communicated to the emperor his whole negociation with the malcontents. Judging of Charles's heart by his own, Francis hoped by this seemingly disinterested proceeding to obtain at once the investiture of Milan ; and the emperor, well acquainted with the weakness of his rival, flattered him in this apprehension, for his own selfish purposes. His presence being necessary in the Netherlands, he demanded a passage through France. It was immediately granted him ; and Charles, to whom every moment was precious, set out, notwithstanding the remonstrances of his council and the fears of his Spanish subjects, with a small but splendid train of 100 persons. He was met on the frontiers of France by the dauphin and the duke of Orleans, who offered to go into Spain, and remain there as hostages, till he should reach his own dominions ; but Charles replied that the king's honor was sufficient for his safety, and prosecuted his journey

without any other security. The king entertained him with the utmost magnificence at Paris, and the two young princes did not take leave of him till he entered the Low Countries; yet he still found means to evade his promise, and Francis continued to believe him sincere. The citizens of Ghent, alarmed at the approach of the emperor, who was joined by three armies, sent ambassadors to implore his mercy, and offered to throw open their gates. Charles only condescended to reply, * That he would appear among them as a sovereign and a judge, with the sceptre and the sword.' He accordingly entered the place of his nativity on the anniversary of his birth ! and, instead of that lenity which might have been expected, exhibited an awful example of his severity. Twenty-six of the principal citizens were put to death ; a greater number were banished ; the city was declared to have forfeited its privileges ; a new system of laws and political administration was prescribed ; and a large fine was imposed on the inhabitants, to defray the expense of erecting a citadel, together with an annual tax for the support of a garrison. They were not only despoiled of their ancient immunities, but made to pay, like conquered people, for the means of perpetuating their own slavery. We need not wonder that the descendants of these illused people should have been the readiest and most zealous of all the German democrates in joining the French, in the last war, and throwing off the yoke of Austria. They could have hardly been worse used by Buonaparte. Having thus re-established his authority in the Low Countries, and being now under no necessity of continuing VOL. XX.

that s.cene of falsehood and dissimulation with which he had amused the French monarch, Charles began gradually to throw aside the veil under which he had concealed his intentions with respect to the Milanese, and at last peremptorily refused to give up a territory of such value, or voluntarily to make such a liberal addition to the strength of an enemy by diminishing his own power. He even denied that he had ever made any promise which could bind him to an action so foolish, and so contrary 10 his own interest. This transaction exposed the king of France to as much scorn as it did the emperor to censure. The credulous simplicity of Francis seemed to merit no other return, after experiencing so often the duplicity and artifices of his rival. He remonstrated, however, and exclaimed as if this had been the first circumstance in which the emperor had deceived him. The insult offered to his understanding affected him even more sensibly than the injury done to his interest ; and he discovered such resentment as made it obvious that he would seize on the first opportunity of revenge, and that a new war would soon desolate the European

continent. Meanwhile Charles was obliged to turn his attention towards the affairs of Germany. The Protestants, having in vain demanded a general council, pressed him earnestly to appoint a conference between a select number of divines of each party, to examine the points in dispute. For this purpose a diet was assembled at Ratisbon ; and such a conference, notwithstanding the opposition of the pope, was held with great solemnity in the presence of the emperor. But the divines chosen to manage the controversy, though men of learning and moderation, were only able to settle a few speculative opinions, all points relative to worship and jurisdiction serving to inflame the minds of the disputants. Charles, therefore, finding his endeavours to bring about an accommodation ineffectual, and being impatient to close the diet, prevailed on a majority of the members to approve of the following edict of recess ; *viz.* that the articles concerning which the divines had agreed should be held as points decided : that those about which they had differed should be referred to the determination of a general' council, or, if that could not be obtained, to a national synod ; and, should it prove impracticable also to assemble a synod of Germany, that a general diet of the empire should be called within eighteen months, to give final judgment on the whole controversy : that, in the mean time, no innovations should be attempted, nor any endeavours employed to gain proselytes. This diet gave great offence to the pope. The bare mention of allowing a diet, composed chiefly of laymen, to pass judgment in regard to articles of faith, appeared to him no less criminal and profane than the worst of those heresies which the emperor seemed so zealous to suppress. The Protestants also were dissatisfied with it as it considerably abridged the liberty which they at that time enjoyed. They murmured loudly against it ; and Charles, unwilling to leave any seeds of discontent in the empire, granted them a private declaration, exempting them from what-SPAIN.

ever they thought injurious or oppressive in the recess, and ascertaining to them the full possession of all their former privileges.

The situation of the emperor's affairs at this juncture made these extraordinary concessions necessary. He foresaw a rupture with France to be unavoidable, and he was alarmed at the rapid progress of the Turks in Hungary. A great revolution had happened in that kingdom. John Zapol Scaepus, by the assistance of Soliman, had wrested from the king of the Romans a considerable part of the country. John died, and left an infant son. Ferdinand attempted to take advantage of the minority, in order to repossess himself of the

whole kingdom ; but his ambition was disappointed by the activity and address of George Martinuzzi, bishop of Waradin, who shared the regency with the queen. Sensible that he was unable to oppose the king of the Romans in the field, Martinuzzi satisfied himself with holding out the fortified towns, all of which he provided with every thing necessary for defence ; and at the same time he sent ambassadors to Soliman, beseeching him to extend towards the ion that imperial protection which had so generously maintained the father on his throne. Ferdinand used his utmost endeavours to thwart this negociation, and even meanly offered to hold the Hungarian crown on the same ignominious condition by which John had held it, that of paying tribute to the Porte. But the sultan saw such advantages from espousing the interest of the young king, that he instantly marched into Hungary ; and the Germans, having formed the siege of Hiula, were defeated with great slaughter before that city. Soliman, however, instead of becoming the protector of the infant sovereign whom he had relieved, made use of this success to extend his own dominions ; he sent the queen and her son into Transylvania, which province he allotted them, and added Hungary to the Ottoman empire. Happily for the Protestants, Charles received intelligence of this, revolution soon after the diet at Ratisbon; and, by the concessions which he made them, he obtained such liberal supplies, both of men and money, as left him under little anxiety about the security of Germany. He therefore hastened to join his fleet and army in Italy, in order to carry into execution a great and favorite enterprise which he had concerted against Algiers ; though it would certainly have been more consistent with his dignity to have conducted the whole force of the empire against Soliman, the common enemy of Christendom, who was ready to enter his Austrian dominions. But many reasons induced Charles to pre-fer the African expedition ; he wanted strength, or at least money, to combat the Turks in so distant a country as Hungary ; and the glory which he had formerly acquired in Barbary led him to hope for the like success, while the cries of his Spanish subjects roused him to take vengeance on their ravagers. The loss which the emperor suffered in this calamitous expedition encouraged the king of France to begin hostilities, on which he had been for some time resolved ; and an ac-tion dishonorable tc civi. society furnished him with too good a pre<ext for taking arms. The marquis del Guaste, governor of the Milanese,

having got intelligence of the motions and des«ination of two ambassadors, Rincon and Fergosa, whom Francis had despatched, the one to the Ottoman Porte, the other to the republic of Ve-nice;

knowing how much his master wished to discover the intentions of the French monarch, and of what consequence it was to retard the execution of his measures, he employed some soldiers belonging to the garrison of Pavia to lie in wait for these ambassadors as they sailed down the Po, who murdered them and most of their attendants, and seized their papers. Francis immediately demanded reparation for this barbarous outrage ; and as Charles endeavoured to put him off with an evasive answer, he appealed to all the courts of Europe, setting forth the heinousness of the injury, the iniquity of the emperor in disregarding his just request, and the necessity of vengeance. But Charles, who was a more profound negociator, defeated in a great measure the effects of these representations ; he secured the fidelity of the Protestant princes in Germany, by granting them new concessions; and he engaged, the king of England to espouse his cause, under pretence of defending Europe against the infidels ; while Francis was only able to form an alliance with the kings of Denmark and Sweden (who for the first time interested themselves in the quarrels of the more potent monarchs of the south), and to renew his treaty with Soliman, which drew on him the indignation of all Christendom. But the activity of Francis supplied all the defects of his negociation. Five armies were soon ready to take the field, under different generals, and with different destinations. Nor was Charles wanting in his preparations. He and Henry a second time made an ideal division of the kingdom of«F ranee. But as the hostilities which followed terminated in nothing decisive, and were distinguished by no remarkable event, except the battles of Cerisoles (gained by count d'Enguien over the imperialists, and in which 10,000 of the emperor' best troops fell), at last Francis and Charles, mutually tired of harassing each other, concluded at Crespy a treaty of peace in which the king of England was not mentioned; and, from being implacable enemies, became once more, to appearance, cordial friends, and even allies by the ties of blood. The chief articles of this treaty were, that all the conquests which either party had made since the truce of Nice should be restored ; that the emperor should give in marriage to the duke of Orleans, either his eldest daughter, with the Low Countries, or the second daughter of his brother Ferdinand, with the investiture of the Milanese ; that Francis should renounce all pretensions to the kingdom of Naples, as well as to the sovereignty of Flanders and Artois, and Charles give up his claim to the duchy of Burgundy ; and that both should unite in making war against the Turks. The emperor was chiefly induced to grant conditions so advantageous to France, by a de-sire of humbling the Protestant princes in Germany. With the papal jurisdiction, he foresaw they would endeavour to throw* off the impe rial authority; and he determined to make his zeal for the former

a pretence for enforcing and extending the latter. However, the death of the duke of Orleans, before the consummation of his

marriage, disentangled the emperor from the most troublesome stipulation in the treaty of Crespy; and the French monarch, being still engaged in hostilities with England, was> unable to obtain any reparation for the loss which he suffered by this unforeseen event. These hostilities, like those between Charles and Francis, terminated in nothing decisive. Equally tired of a struggle attended with no glory or advantage to either, the contending princes concluded, at Campe, near Ardies, a treaty of peace ; in which it was stipulated that France should pay the arrears due by former treaties to England. But these arrears did not exceed one-third of the sums expended by Henry on his military operations; and, Francis being in no condition to discharge them, Boulogne (a chargeable pledge) was left in the hands of the English as a security for the debt. In consequence of the emperor's resolution to humble the Protestant princes, he concluded a dishonorable peace with the Porte, stipulating that his brother Ferdinand should pay tribute for that part of Hungary which he still possessed ; while the sultan enjoyed the imperial and undisturbed possession of all the rest. At the same time he entered into a league with pope Paul III. for the extirpation of heresy ; but in reality with a view to oppress the liberties of Germany. Here, however, his ambition met with a severe check ; for, though he was successful at first, he was obliged in 1555 to conclude a peace with the Protestants on their own terms. See REFORMATION.

By the peace concluded on this occasion, the emperor lost Metz, Toul, and Verdun, which had formed the barrier of the empire on that quarter ; and therefore soon after put himself at the head of an army, in order to recover these three bishoprics. In order to conceal the destination of his army, he gave out that he intended lo lead it into Hungary, to second Maurice in his operations against the Infidels ; and, as that pretext failed him, when he began to advance towards the Rhine, he propagated a report that he was marching first to chastise

Albert of Brandenburgh, who had refused to be included in the treaty of Passau, and whose cruel exactions in that part of Germany called loudly for redress. The French, however, were not deceived by these arts. Henry immediately guessed the true object of Charles's armament, and resolved to defend his conquests with vigor. The defence of Metz, against which it was foreseen the whole weight of the war would be turned, was committed to Francis of Lorraine, duke of Guise, who possessed in an eminent degree all the qualities that render men great in military command. He repaired with joy to the dangerous station ; and many of the French nobility, and even princes of the blood, eager to distinguish themselves under such a leader, entered Metz as volunteers. The city was of great extent ill, fortified, and«the suburbs large. For all these defects the duke endeavoured to provide a remedy. He repaired the old fortifications with all possible expedition, laboring with his own hands ; the officers imitated his example; and the soldiers, thus encouraged, cheerfully submitted to the most severe toils ; he erected new works, and he levelled the

suburbs with the ground. At the s;une time he filled the magazines with provisions and military stores, compelled all useless persons to leave the place, and laid waste the neighbouring country; yet such were his popular talents, as well as his arts of acquiring an ascendant over the minds of men, that the citizens not only refrained from murmuring, but seconded him with no less ardor than the soldiers in all his operations — in the ruin of their estates, and in the havoc of their public and private buildings. Meanwhile the emperor continued his march towards Lorraine, at the head of 60,000 men. On his approach, Albert of Brandenburgh, whose army did not exceed 20,000, withdrew into that principality, as if he intended to join the French king ; and Charles, notwithstanding the advanced season, it being towards the end of October, laid siege to Metz, contrary to the advice of the most experienced officers. The attention of both the besiegers and the besieged was turned for some time towards the motions of Albert, who still hovered in the neighbourhood, undetermined which side to take, though resolved to sell his service. Charles at last came up to his price, and he joined the imperial army. The emperor now flattered himself that nothing could resist his force ; but he found himself deceived. After a siege of almost sixty days, during which he had attempted all that was thought possible for art or valor to effect, and had lost upwards of 30,000 men by the inclemency of the weather, diseases, or the sword of the enemy, he was obliged to abandon the enterprise. When the French sallied out to attack the enemy's rear, the imperial camp was filled with the sick and wounded,

with the dead and the dying. All the roads by which the army retired were strewed with the same miserable objects; who, having made an effort beyond their strength to escape, and not being able to proceed, were left to perish without assistance. Happily that, and all the kind offices which their friends had not the power to perform, they received from their enemies. The duke of Guise ordered them all to be taken care of, and supplied with every necessary ; he appointed physicians to attend and direct what treatment was proper for the sick and wounded, and what refreshments for the feeble ; and such as recovered he sent home, under an escort of soldiers, and with money to bear their charges. By these acts of humanity, less common in that age, the duke of Guise completed that heroic character which he had justly acquired by his brave and successful defence of Metz. The emperor's misfortunes were not confined to Germany. During his residence at Villach, he had been obliged to borrow 200,000 crowns of Cosmo de Medicis, and so low was his credit that he was obliged to put Cosmo in possession of the principality of Piombino as a security for that inconsiderable sum;, by which means he lost the footing he had hitherto maintained in Tuscany. Much about the <ame time he lost Sienna. The citizens, who had long enjoyed a republican government, rose against the Spanish garrison, which they had admitted as a check upon the tyranny of the nobility, but which they found was meant to enslave them ; forgetting their do

mestic animosities, they recalled the exiled nobles ; they demolished the citadel, and put themselves under the protection of France. To these unfortunate events one still more fatal had almost succeeded. The severe administration of the viceroy of Naples had filled that kingdom with murmuring and dissatisfaction. The prince of Salerno, the head of the malcontents, fled to the court of France. The French monarch, after the example of his father, applied to the grand signior ; and Soliman, at that time highly incensed against the house of Austria, on account of the proceedings in Hungary, sent a powerful fleet into the Mediterranean, under the command of the corsair Dragut, an officer trained up under Barbarossa, and scarcely inferior to his master in courage, talents, or in good fortune. Dragut appeared on the coast of Calabria at the time appointed ; but not being joined by the French fleet, according to concert, he returned to Constantinople, after plundering and burning several places, and filling Naples with consternation. Highly mortified by so many disasters, Charles retired into the Low Countries, breathing vengeance against France: and here the war was carried on with considerable vigor. Impatient to efface the stain which his military reputation had received before Metz, Charles laid siege to Terouane ; and, the fortifications being in disrepair, that important place was carried by assault. Hesdin also was invested, and carried in the same manner. The king of France was too late in assembling his forces to afford relief to either of these places ; and the emperor afterwards cautiously avoided an engagement. The imperial arms were less successful in Italy. The viceroy of Naples failed in an attempt to recover Sienna; and the French not only established themselves more firmly in Tuscany, but conquered part of the island of Corsica. Nor did the affairs of the house of Austria go on better in Hungary during the course of this year. Isabella and her son appeared once more in Transylvania, at a time when the people were ready for revolt, in order to revenge the death of Martinuzzi, whose loss they had severely felt. Some noblemen of eminence declared in favor of the young king ; and the bashaw of Belgrade, by Soliman's

order, espousing his cause, in opposition to Ferdinand, Castaldo, ihe Austrian general, was obliged to abandon Transylvania to Isabella and the Turks. To counterbalance these and other losses, the emperor, in 1554, concerted a marriage between his son Philip and Mary of England, in hopes of adding that kingdom to his other dominions. Meanwhile the war between Henry and Charles was carried on with various success in the Low Countries, and in Italy much to the disadvantage of France. The French, under the command of Strozzi, were defeated in the battle of Merciano; Sienna was reduced by Medicine, the Florentine general, after a siege of ten months ; and the gallant Sienese were subjected to the Spanish yoke. Much about the same time a plot was formed by the Franciscans, but happily discovered before it could be carried into execution, to betray Metz to the imperialists. The father, guardian, and twenty other monks, received sentence of death on account of this conspiracy, but

the guardian, before the time appointed for his execution, was murdered by his incensed accomplices, whom he had seduced; and six of the youngest were pardoned. While war thus raˆed in Italy, and the Low Countries, Germany enjoyed such profound tranquillity as afforded the diet full leisure to confirm and perfect the plan of religious pacification agreed upon at Passau, and referred to the consideration of the next meeting of the Germanic body.

During the negociation of this treaty an event happened which astonished all Europe and confounded the reasonings of the wisest politicians. The emperor Charles V., though no more tlmn fifty-six, an age when objects of ambition operate with full force on the mind, and are generally pursued with the greatest ardor, had for some time formed the resolution of resigning his hereditary dominions to his son Philip. He now determined to put it in execution. Various have been the opinions of historians concerning a resolution so singular and unexpected; but the most probable seem to be the disappointments which Charles had met with in his ambitious hopes, and the daily decline of his health. He had early in life been attacked with the gout ; and the fits were now become so frequent and severe, that not only the vigor of his constitution was broken, but the faculties of his mind were sensibly impaired. He therefore judged it more de-cent to conceal his infirmities in some solitude, than to expose them any longer to the public eye ; and as he was unwilling to forfeit the fame, or lose the acquisitions of his better years, by attempting to guide the reins of government when he was no longer able to hold them with steadi ness, he determined to seek, in the tranquillity ef retirement,

that happiness which he had in vain pursued amidst the tumults of war and the intrigues of state. In consequence of this resolution Charles, who had already ceded to his son Philip the kingdom of Naples and the duchy of Milan, assembled the states of the Low Countries at Brussels ; and, seating himself for tl.-c last time ir. the chair of state, he explained to his subjects the reasons of his resignation, and solemnly devolved his authority upon Philip. He recounted with dignity, but without ostentation, all the great things which he had undertaken and performed since the commencement of his administration. A few weeks after he resigned to Philip the sovereignty of Spain and America; reserving nothing to himself out of all these vast possessions but an annual pension of 100,000 crowns. Charles was now impatient to embark for Spain, where he had fixed on a place of retreat; but by the advice of his physicians he put off his voyage for some months on account of the severity of the season ; and, by yielding to their judgment, he had the satisfaction, before he left the Low Countries, of taking a considerable step towards a peace with France. This he ardently longed for; not only on his son's account, whose administration he wished to commence in quiet-ness, but that he might have the glory, when quitting the world, of restoring to Europe that tranquillity which his ambition had banished out of it almost from the time that he assumed the reins of government. The great bar to such a

pacification, on the part of France, was the treaty which Henry had concluded with the pope ; and the emperor's claims were too numerous to hope for adjusting them suddenly.

A truce of five years was therefore proposed by Charles; during which term, without discussing their respective pretensions, each should retain what was in his possession ; and Henry, through the persuasion of the constable Montmorency, who represented the imprudence of sacrificing the true interests of his kingdom to the rash engagements that he had come under with Paul, authorised his ambassadors to sign at Vaucelles a treaty which would ensure to him, for so considerable a period, the important conquest which he had made on the German frontier, together with the greater part of the duke of Savoy's dominions. The pope, when informed of this transaction, was no less filled with terror and astonishment than rage and indignation. But he

took equal care to conceal his fear and his anger. He affected to approve highly of the truce ; and he offered his mediation, as the common father of Christendom, in order to bring about a definitive treaty of peace. Under this pretext he appointed cardinal Rebibo his nuncio to the court of Brussels, and his nephew, cardinal Caraffa, to that of Paris. The public instructions of both were the same; but Caraffa, besides these, received a private commission to spare neither entreaties, promises, nor bribes, to induce the French monarch to renounce the truce and renew his engagements with the holy see. He flattered Henry with the conquest of Naples ; he gained by his address the Guises, the queen, and even the famous Diana of Poictiers, duchess of Valentinois, the king's mistress ; and they easily swayed the king himself who already leaned to that side. All Montmorency's prudent remonstrances were disregarded ; the nuncio (by powers from Rome) absolved Henry from his oath of truce ; and that weak prince signed a new treaty with the pope ; which rekindled with fresh violence the flames of war both in Italy and the Low Countries. No sooner was Paul made acquainted with the success of this negociation than he proceeded to the most indecent extremities against Philip. He ordered the Spanish ambassador to be imprisoned ; he excommunicated the Colonnas because of their attachment to the imperial house; and he considered Philip as guilty of high treason, and to have forfeited his right to the kingdom of Naples, which he was supposed to hold of the holy see, fof afterward affording them a retreat in his dominions. Alarmed at a quarrel with the pope, whom he had been taught to regard with the most superstitious veneration, Philip tried every gentle method before he made use of force. He even consulted some Spanish divines on the lawfulness of taking arms against a person so sacred. They decided in his favor; and, Paul continuing inexorable, the duke of Alva, to whom the negociations as well as the war had been committed, entered the ecclesiastical state at the head of 10,000 veterans, and carried terror to the gates of Rome. The haughty pontiff, though still inflexible and undaunted in himself, was forced to give way to the fears of the cardinals, and a truce was concluded for

forty days. Mean time the duke of Guise arriving with a supply of 20,000 French troops Paul became more arrogant than ever, and banished all thoughts from his mind but those of war and revenge. The duke of Guise, however, who had precipitated his country into this war chiefly from a desire of gaining a field where he might display his own talents, was able to perform nothing in Italy worthy of his former fame. He was obliged to abandon the siege of Civitella ; he could not bring the duke of Alva to a general engagement; his army

perished by diseases; and the pope neglected to furnish the necessary reinforcements. He begged to be recalled ; and France stood in need of his talents. Philip, though willing to have avoided a rupture, was no sooner informed that Henry had violated the truce of Vaucelles than he determined to act with such vigor as should convince Europe that his father had not erred in resigning to him the reins of government. He immediately assembled in the Low Countries a body of 50,000 men, and •obtained a supply of 10,000 from England, whom he had engaged in his quarrel ; and as he was not ambitious of military fame he gave the command of his army to Emanuel Philibert, duke of Savoy, one of the greatest generals of tnat warlike age. The duke of Savoy kept the enemy for some time in suspense with regard to his destination; at last he seemed to threaten Champagne, towards which the French drew all their troops ; then turning suddenly to the right he advanced by rapid marches into Picardy and laid siege to St. Quintin. It was deemed in those times a town of considerable strength ; but the fortifications had been much neglected, and the garrison did not amount to a fifth part of the number requisite for its defence; it must therefore have surrendered in a few days if admiral Coligny had not taken the gallant resolution of throwing himself into it with such a body of men as could be collected on a sudden. . This he effected in spite of the enemy, breaking through their main body. The place, however, was closely invested ; and the constable Montmorency, anxious to extricate his nephew out of that perilous situation in which his zeal for the public had engaged him, as well as to-save a town of such importance, rashly advanced to its relief with forces one-half inferior to those of the enemy. His army was cut in pieces, and he himself made prisoner. The cautious temper of Philip on this occasion saved France from devastation, if not ruin. The duke of Savoy proposed to overlook all inferior objects and march speedily to Paris, which, in its consternation at that moment, he could not have failed to make himself master of; but Philip, afraid of the consequences of such a bold enterprise, desired him to continue the siege of St. Quintin, to secure a safe retreat in case of any disaster. The town, long and gallantly defended by Coligny, was at last taken by storm, but not till France was in a state of defence. Philip was now sensible that he had lost an opportunity which could never be recalled of distressing his enemy, and contented himself with reducing Horn and Gate-let ; which petty towns, together with St. Quintin, were the sole fruits of one of the most decU

sive victories gainea in the sixteenth century. The Catholic king, however, continued in high exultation on account of his success; and, as all his passions were tinged with superstition, he vowed to build a church, a monastery, and a palace, in honor of St. Laurence, on the day sacred to whose memory the battle of St. Quintin had been fought. He accordingly laid the foundation of an edifice in which all these were included, and which he continued to forward at vast expense for twenty-two years. The same principle which dictated the vow directed the building. It was so formed as to resemble a gridiron — on which culinary instrument, according to the legendary tale, St. Laurence had suffered martyrdom. Such is the origin of the famous Escurial near Madrid, the royal residence of the kings of Spain.

The first account of that fatal blow which France had received at St. Quintin was carried to Rome by the courier whom Henry had sent to recal the duke of Guise. Paul remonstrated warmly against the departure of the French army ; but Guise's orders were peremptory. The arrogant pontiff therefore found it necessary to accommodate his conduct to the exigency of his affairs, and to employ the mediation of the Venetians, and of Cosmo de Medici, to obtain peace. The first overtures of this nature were-eagerly listened to by the Catholic king, who still doubted the justice of his cause, and considered it as his greatest misfortune to be obliged to contend with the pope. Paul agreed to renounce his league with France ; and Philip stipulated on his part that the duke of Alva should repair in person to Rome, and after ask-ing pardon of the holy father in his own nam< > and in that of his master, for having invaded the patrimony of the church, should receive absolution from that crime. Thus Paul, through the superstitious timidity of Philip, not only finished an unpropitious war without any detriment to the apostolic see, but saw his conqueror humbled at his feet; and so excessive was the veneration of the Spaniards in that age for the papal character, that the duke of Alva, the proudest man perhaps of his time, and accustomed from his infancy to converse with princes, acknowledged that, when he approached Paul, he was so much overawed that his voice failed, and his presence of mind forsook him. But though this war, which at its commencement threatened mighty revolutions, was terminated without occasioning any alteration in those states which were its immediate object, it produced effects of « 'onsidtTable consequence in

other part* of Italy. In order to detach Octavia Farnese, duke of i'.irma, from the French interest, Philip restored to him the city of Placentia and its territory, \vhich 1'ad been seized by Charles V., and he granted to Cosmo de Medicis the investiture of Sienna, as an equivalent for the sums due to him. By these treaties, the balance of power among; the Italian states was poised with more equality, and rendered less variable than it had beon since it received tht first violent shock from the invasion of Charles VIII., and Italy henceforth ceased to he the theatre on which the monarchs of Spain, France, and Germany, contended for fame a:id dominion. Their hostilities, excited by new objects, stained other regions of Europe with blood, and made other states feei in their turn, the miseries of war. The duke of Guise, who left Rome the same day that his adversary the duke of Alva made his humiliating submission to the pope, was received in France as the guardian angel of the kingdom. He was appointed lieutenant-general in chief, with u jurisdiction almost unlimited; and, eager to justify the extraordinary confidence which the king had reposed in him, as well as to perform something suitable to the high expectations of his countrymen, he undertook in winter the siege of Calais. Having taken that place, he next invested Thionville in the duchy of Luxembourg, one of the strongest towns on the frontiers of the Netherlands; and forced it to capitulate after a siege of three weeks. But the advantages on this quarter were more than balanced by an event which happened in another part of the Netherlands. The mareschal de Termes, governor of Calais, who had penetrated into Flanders and taken Dunkirk, was totally routed near Gravelines, and taken prisoner by count Egmont. This disaster obliged the duke of Guise to relinquish all his other schemes, and hasten towards the frontiers of Picardy, that he might there oppose the progress of the enemy. The eyes of all France were now turned towards the duke of Guise, as the only general on whose arms victory always attended, and in whose conduct as well as good fortune they could confide in every dan-ger. His strength was nearly equal to the duke of Savoy's, each commanding about 40,000 men. They encamped at a distance of a few leagues from one another ; and, the French and Spanish monarchs having joined their respective armies, it was expected that, after the vicissitudes of war, a decisive battle would at last determine which of the rivals should take the ascendant for the future in the affairs of Europe. But both monarchs, as if by agreement, stood on the defensive; neither of them discovering any inclination, though each had it in his power, to rest the decision of a point of such importance on the issue of a single battle. During this state of inaction, peace began to be mentioned in each camp, and both Henry and Philip discovered an equal disposition to listen to any overture that tended to re-establish it. The private

inclinations-‘ of both kings concurred with their political interests and the wishes of their people. Philip languished to return to Spain, the place of his nativity; and peace-only could enable him, either with decency or safety, to quit the Netherlands. Henry was now desirous of being freed from the avocations of war, that he might have leisure to turn the whole force of his government towards suppressing the opinions of the reformers, which were spreading with such rapidity in Paris and the other great towns, that they began to grow formidable to the established church. Court intrigues conspired with these public and avowed motives to hasten the negociation, and the abbey of Cercamp was fixed on as the place of congress. While Philip and Henry were making these advances towards a treaty which restored tranquillity to Europe, Charles V., whose ambition had so long disturbed it, but who had been for some time dead to the world, ended

his days in the monastery of St Justus in Estremadura, which he had chosen as the place of his retreat. - .

History of Spain, unto the revolt of Portugal. — After the death of Charles, the kingdom of Spain soon lost great part of its consequence. Though Charles had used all his interest to get his son Philip elected emperor of Germany, he had been totally disappointed ; and thus the grandeur of Philip II. never equalled that of his father. His dominions were also considerably abridged by his tyrannical behaviour in the Netherlands. In consequence of this, the united provinces revolted ; and, after a long and bloody war, obtained their liberty. In this quarrel Elizabeth of England took part against Philip, which brought on a war with Spain. The great losses he sustained in these wars exhausted the kingdom both of men and money, notwithstanding the great sums imported from America. Indeed, the discovery and conquest of that country has rather impoverished than enriched Spain ; for the inhabitants have thus been rendered lazy and averse from every kind of manufacture or traffic. The ruin of the kingdom in this respect, however, was completed by his successor. The rest of the transactions

of Philip II. ‘s reign, with his general character, cruelties, and monstrous bigotry, are related under the article PHILIP II. He died September 13th, 1598, and was succeeded by his son Philip III., of whose general character and transactions we have also given a summary account under the article PHILIP III. This monarch, at the instigation of the inquisition, and by the advice of his prime minister the duke of Lerma, expelled from the kingdom all the Morescoes or Moors, descendants of the ancient conquerors of Spain. Thirty days only were allowed them to prepare for their departure, and it was death to remain beyond that time. The reason pretended for this barbarous decree was, that these people were still Mahometans in their hearts, though they conformed externally to the rites of Christianity, and thus might corrupt the true faith. The Morescoes, however, chose themselves a king, and attempted to oppose the royal mandate ; but, being almost entirely unprovided with arms, they were soon obliged to submit, and all banished the kingdom. By this violent and impcMtic measure, Spain lost almost a million of in *strious inhabitants ; and, as the kingdom was already depopulated by bloody wars, by repeated emigrations to America, and enervated by luxury, it now sunk into a state of languor from which it has never recovered. In consequence of this languor, and the maladminis-tration of the Spanish governors, Portugal, which had been reduced by Philip II., revolted (see PORTUGAL) : but this revolution did not happen till the reign of Philip IV., who succeeded his father Philip III., in 1621 ; and having rashly engaged in two unsuccessful wars, first with the Dutch, and afterwards with the French, the Portuguese, whose oppressions and grievances had increased after the death of Philip II., were encouraged to throw off the Spanish yoke in 1640, and elect John duke of Braganza their king, whose posterity still enjoy that throne.

History of Spain, during the remainder of the sixteenth and seventeenth centuries. — Philip IV. died in 1665, and was succeeded by his son Charles II. ; for the emperor Charles V., was the first of the name in Spain. Charles II. was, at his accession, an infant in every sense of the word, being only four years of age. He was twice married, but died without issue, in November 1700, aged thirty-nine. By his first will, in 1698, he had named for his successor the prince of Bavaria, nephew of his second queen ; but by another will, in 1700, he appointed prince Philip of France, duke of Anjou, his heir, which, after his death, occasioned a new war, wherein the British court took an active part. Queen Anne had but newly commenced her reign when this resolution was taken ; and a British army was sent into Spain to support prince Charles of Austria, in opposition to Phi-lip of Anjou,

second son of Louis duke of Anjou. and grandson of Louis XIV. The unsuccessful issue of that attempt is related amongst a mass of other glorious successes, under the article ENGLAND ; and thus the crown of Spain fell to a branch of the house of Bourbon. Phi-lip V. was confirmed king of Spain by the treaty of Utrecht, in 1713. In 1734 he invaded Na-ples, and wrested that kingdom from the house of Austria, in favor of his second son prince Charles. Philip V. married Mary Louisa, daughter of Victor Amadeus duke of Savoy, by whom he had prince Louis (whom he associated in the throne with him, but who died before him), and prince Ferdinand. His queen dying, in 1713, he married in September 1714 princess Elizabeth Farnese, heiress of Parma, by whom he had prince Charles, Philip duke of Parma, Louis, cardinal of Bourbon, Mary Vic-toria, queen of Portugal, and Mary Antonietta^ duchess of Savoy. He died July 9th, 1746, and was succeeded by his eldest son, Ferdinand VI., who married the infanta of Portugal, daughter of John V., but died without issue, 10th of August 1759, and was succeeded by his half brother Charles III. In consequence of the accession of the house of Bourbon to the Spanish throne, the courts of France and Spain generally acted in the closest concert, till the revolution, which, equally in its origin and issue still astonishes all Europe, put an end to monarchy for a time in the former country. The wars of these . two courts with Britain are related under ENGLAND and AMERICA ; and these, with an unsuccessful attempt on Algiers, and the threatened war respecting Nootka Sound, constitute the most important part of the Spanish history till the deposition and murder of Louis XVI. of France. On that event Spain joined her forces to those of the empire, Britain, and Prussia, to chastise the convention, and prevent those democratical principles which had ruined France from being spread through the other nations of Europe. But her exertions added nothing tc the strength of the alliance ; and, being unable to defend herself against the furious inroads of the republican troops, she was glad to make a separate peace with the convention. Shortly after (Feb. 14, 1797) took place the glorious victory obtained by the British fleet under admiral Jervis, now love*

St. Vincent, over the Spanish fleet, though more than double their number. King Charles III. died in 1789, and was succeeded by his son, Charles IV.

It was easy to foresee that the renewal of the war with France, after the peace of Amiens, would quickly involve Spain. It did so; but it was not possible to foresee the unheard of treachery of Buonaparte, to the royal family and people of Spain. Charles IV. and his queen were sent to reside at Rome, and Ferdinand VII. was long secluded by him from all public notice; until in the month of April, 1812, an artful proposal of peace was made by Buonaparte with England, guaranteeing the independence of Spain, in the present dynasty. It was mildly but firmly answered by the British government, by demanding what was meant by the insidious expression present dynasty ; to which no answer was returned. This proposal was in the usual style of his deceptions, previous to the attack upon Russia, which hastened his own downfal.

The history of the peninsular war has been admirably related by a contemporary writer, Dr. Southey : we regret that we cannot find room for an abstract of his luminous view of the state of the peninsula previous to its commencement; nor for several splendid passages which we had marked in his work. The reader, however, will remember that from Spain, in 1808 and 1809, arose the first national resistance to the power of Buonaparte on the continent; and that in the peninsula was fought the opening battles of the civilised world against that despot. It is, indeed, amongst the most wonderful passages of modern history that countries so degraded, as Spain and Portugal at this time were, should thus have aroused the whole of Europe to a successful struggle for liberty — and then again themselves retire into their ancient darkness and chains.

‘ The circumstances of the resistance,’ says Dr. Southey, ‘are not less extraordinary than those of the aggression, whether we consider the total disorganisation to which the kingdom of Spain was reduced ; the inveterate abuses which had been entailed upon it by the imbecility, misrule, and dotage, of its old despotism ; the inexperience, the weakness, and the errors, of the successive governments, which grew out of the necessities of the times ; or the unexampled patriotism and endurance cf the people, which bore them through these complicated disadvantages. There are few portions of history from which lessons of such political importance are to be deduced ; none which can more powerfully and permanently excite the sympathy of mankind, because of the mighty interests at stake. For this was no com-mon war, of which a breach of treaty, an extension of frontier, a distant colony, or

a disputed succession, serves as the cause or pretext : it was as direct a contest between the principles of good and evil as the elder Persians, or the Manicheans, imagined in their fables : it was for the life or death of national independence, national spirit, and of all those holy feelings which are comprehended in the love of our native land. Nor was it for the Peninsula alone that the war was i\;ig«d : it was for England ancj for Europe; for

literature and for liberty ; for domestic morals and domestic happiness ; for the vital welfare of the human race. Therefore I have thought that J could not better fulfil my duties to mankind, and especially to my own country, nor more fitlv employ the leisure wherewith God has blessed me, nor endeavour in any worthier manner to transmit my name to future ages, than by composing, with all diligence, the faithful history of this momentous struggle. To this resolution I have been incited, as an Englishman, by the noble part which England has borne in these events ; and, as an individual, by the previous course of my studies, which, during the greater part of my life, have been so directed that the annals and the literature of Spain and Portugal have become to me almost as familiar as oui own."

We can only further offer from this elegant author a passage respecting the opening scenes, and another describing the first actual efforts of the patriots, at this period.

' The history of Spain and Portugal, from the foundation of their respective monarchies to the middle of the sixteenth century, when both countries attained their highest point of greatness, is eminently heroic, for the persevering spirit with which they warred against the Moors, never ceasing, and scarcely breathing, from the contest till they had finally exterminated them ; and for the splendor, the extent, and the importance, of their foreign conquests. Both kingdoms had risen by the same virtues ; the same vices brought on the decline of both ; and the history of their decline is not less instructive than that of their rise. Their external relations have been widely different ; but, notwithstanding this difference, and notwithstanding a national enmity, kept alive rather by old remembrances and mutual pride than by the frequency of their wars with each other, the Spaniards and Portuguese have continued to be morally and intellectually one people. They spring from the same stock ; the same intermixture of races has taken place among them ; and their national character has been formed by similar circumstances of climate, language manners, and institutions.

The old governments are called free, like all those which the Teutonic tribes established ; but this freedom was little better than a scheme of graduated tyranny, and the laws upon which it was founded were only so many privileges which the conquerors reserved or arrogated to themselves. When the commixture of languages and nations was complete, and commerce had raised up a class of men who had no existence under the feudal system, a struggle for political liberty ensued throughout all the European kingdoms. It was soon terminated in Spain : a good cause was ruined by the rashness and mis-conduct of its adherents; and the scale, after it had been borne down by the sword of the sovereign, never recovered its equipoise : for the Romish church leagued itself with the njinarchi-cal authority, against whose abuse it had formerly been the only bulwark ; but, changing its policy now according to the times, it consecrated the despotism whereby it was upheld in its own

usurpations. The effects of this double tyranny were not immediately perceived ; but, in its inevitable consequences, it corrupted and degraded every thing to which it could extend — laws, morals, industry, literature, science, arts, and arms.

‘ In other countries where absolute monarchy has been established, and the Romish superstition has triumphed, both have been in some de-gree modified by the remains of old institutions, the vicinity of free states, and the influence of literature and manners. But in Spain and Portugal almost all traces of the ancient constitution had been effaced ; and, as there existed nothing to qualify the spirit of popery, a memorable example was given of its unmitigated effects. The experiment of intolerance was tried with as little compunction as in Japan, and upon a larger scale. Like the Japanese government, the in-•quisition went through with what it began ; and, though it could not in like manner secure its victory, by closing the ports and barring the passes of the peninsula, it cut off, as much as possible, all intellectual communication with the rest of the world.

‘The courts of Madrid and Lisbon were as despotic as those of

Constantinople and Ispahan. They did not, indeed, manifest their power by acts of blood, because the reigning families were not cruel, and cruelty had ceased to be a characteristic of the times : but with that cold, callous insensibility, o which men are liable in proportion as they are removed from the common sympathies of human kind, they permitted their ministers to dispense at pleasure exile and hopeless imprisonment, to the rigor and inhumanity of which death itself would have been mercy. The laws afforded no protection ; for the will of the minister was above the laws; and every man who possessed influence at court violated them with impunity, and procured impunity for all whom he chose to protect. Scarcely did there exist even an appearance of criminal justice. Quarrels among the populace were commonly decided by the knife : he who stabbed an antagonist or an enemy in the street wiped the instrument in his cloak, and passed on unmolested by the spectators, who never interfered farther than to call a priest to the dying man. When it happened that a criminal was thrown into prison, there he remained till it became necessary to make room for a new set of tenants : the former were then turned adrift ; or, if their crimes had been notorious and frequent, they were shipped off to some foreign settlement.

‘After the triumph of the monarchical power, the cortes had fallen first into insignificance, then into disuse. There was no legislative body ; the principle of the government being, that all laws and public measures of every kind were to proceed from the will and pleasure of the sovereign. Men of rank, therefore, if they were not in office, had no share in public business ; and their deplorable education rendered them little fit either to improve or enjoy a life of perfect leisure. It is said also to have been the system of both governments, while they yet retained some remains of perverted policy, to keep the cobles in attendance about the court, where they

might be led into habits c tmulous extravagance, which would render them hungry for emolu-ments, and thereby dependent upon the crown. The long-continued moral deterioration of the privileged classes had produced in many instances a visible physical degeneracy ; and this tendency was increased by those incestuous marriages, common in both countries, which pride and avarice had introduced, and for which the sanction of an immoral church was to be purchased.

‘ The armies partook of the general degradation. The forms of military power existed like the forms of justice : but they resembled the trunk of a tree, of which the termites have eaten out the timber, and only

the bark remains. There appeared in the yearly almanacs a respectable list of regiments, and a redundant establishment of officers : but, brave and capable of endurance as the Portuguese and Spaniards are, never were there sucli officers or such armies in any country which has ranked among civilised nations. Subalterns might be seen waiting behind a chair in their uniforms, or asking alms in the streets; and the men were what soldiers necessarily be-come, when, without acquiring any one virtue of their profession, its sense of character and of honor, its regularity, or ils habits of restraint, they possess all its license, and have free scope for the vices which spring up in idleness. Drawn by lot into a compulsory service, ill-disciplined, and ill-paid, they were burdensome to the people, without affording any security to the nation.

‘ The state of religion was something more hopeful, though it is scarcely possible to imagine any thing more gross than the idolatry, more impudent than the fables, more monstrous than the mythology of the Romish church, as it flourished in Spain and Portugal. Wherever this corrupt church is dominant, there, is no medium between blind credulity and blank, hopeless, utter unbelief: and this miserable effect tends to the stability of the system which has produced it, because men who have no religion, accommodate themselves to whatever it may be their interest to profess. The peasantry, and the great mass of the people, believed with implicit and intense faith whatever they weie taught. The parochial clergy, differing little from the people in their manner of life, and having received an education so nearly worthless that it can scarcely be said to have raised them above the common level, were for the most part as superstitious and as ill-informed as their fiock. The higher clergy, however, had undergone a gradual and important change, which had not been brought about by laws or literature, but by the silent and unperceived influence of the spirit of the times. While their principle of intolerance remained the same (being inherent in popery, and inseparable from it), the practice had been areatly abated ; and the autos-da-fe, the high festival days of this merciless idolatry, were at an end ; for it was felt, and secretly acknowledged, that these inhuman exhibitions were disgraceful in the eyes of Eu-rope, and had brought a slain upon the character of the peninsular nations in other catholic countries, and even in Rome itself. The persecution of the Jews therefore (which the founder of the

Braganzan Hue would never have permitted if he had been able to prevent it) ceased ; and the distinction between Old and New Christians had nearly disappeared. At the same time an increased intercourse with heretical states, the power and prosperity of Great Britain, and the estimation in which the British character is held wherever it is known, had insensibly diminished, if not the abhorrence in which heresy was held, certainly the hatred against heretics. Thus the habitual feelings of the clergy had been modified, and they were no longer made cruel by scenes of execrable barbarity, which in former times compelled them to harden their hearts. They became also ashamed of those impostures upon which so large a portion of their influence had been founded : though they did not purge their kalen-dar, they made no additions to it; miraculous images were no longer discovered : when a grave-digger, in the exercise of his office, happened to find a corpse in a state of preservation, no attempt was made to profit by the popular opinion of its sanctity : miracles became less frequent as they were more scrupulously examined ; and impostures, which, half a century ago, would have been encouraged and adopted, were detected, exposed, and punished. The higher clergy in both countries were decorous in their lives, and in some instances exemplary in the highest degree.

‘ Literature had revived in both kingdoms, and was flourishing, notwithstanding the restraints which the government and the inquisition continued to impose. Few similar institutions have equalled the Royal Academies of Madrid and Lisbon in the zeal and ability with which they have brought to light their ancient records, and elucidated the history and antiquities of their respective countries. There was one most important subject from which men of letters were compelled to refrain — the old free constitution : but it met them every where in their researches ; and its restoration was the object of their wishes, if not of their hopes.

‘The lower classes, who in great cities are every where too generally depraved, were perhaps peculiarly so in Spain, from the effect of what may be called their vulgar, rather than their popular, literature. This had assumed a curious and most pernicious character, arising partly from the disregard in which ill-executed laws must always be held, and partly from the faith of the people in the efficacy of absolution. The ruffian and the bravo were the personages of those ballads which were strung for sale along dead walls in frequented streets, and

vended by blind hawkers about the country. In these pieces, which, as they were written by men in low life for readers of their own level, represent accurately the state of vulgar feeling, the robberies and murders which the hero commits are described as so many brave exploits performed in his vocation ; and, at the conclusion, he is always delivered over safely to the priest, but seldom to the hangman. Fables of a like tendency were not unfrequently chosen by their dramatists for the sake of flattering some fashionable usage of superstition, such as the adoration of the cross, and the use of the rosary ; and the

villain who, in the course of the drama, has perpetrated every imaginable crime, is exhibited at the catastrophe as a saint by virtue of one of these redeeming practices. Such works were more widely injurious in their tendency than any of those which the inquisition suppressed. They infected the minds of the people ; and the surest course by which a coxcomb in low life could ex-cite admiration and envy among his compeers was by appearing habitually to set justice at defiance. It became a fashion among some of the higher classes in Spain to imitate these wretches ; and, by a stranger and more deplorable perversion of nature, women were found, among those of distinguished rank, who affected the dress and the manners of the vilest of their sex.'

The first general insurrection is thus described : —

4 The seizure of the fortresses, and the advance of the French troops, had roused the spirit of the Spaniards ; their hopes had been excited to the highest pitch by the downfal of Godoy and the elevation of Ferdinand ; and, in that state of public feeling, the slaughter at Madrid, and the transactions at Bayonne, were no sooner known, than the people, as if by an instantaneous impulse over the whole kingdom, manifested a determination to resist the insolent usurpation Abandoned as they were by one part of the royal family, deprived of the rest ; forsaken too by those nobles and statesmen whose names carried authority, and on whose talents and patriotism they had hitherto relied ; — betrayed by their government, and now exhorted to submission by all the constituted authorities, civil and religious, which they had been accustomed to revere and to obey ; — their strong places and frontier passes in possession of the enemy ; the flower of their own troops, some in Italy, others in the north of Europe ; and a numerous army of the French, accustomed to victory, and now flushed with Spanish slaughter, in their capital and in the heart of the

country ; under these complicated disadvantages and dangers, they rose in general and simultaneous insurrection against the mightiest military power which had ever till that time existed ; a force not more tremendous for its magnitude than for its perfect organisation, wielded always with consummate skill, and directed with consummate wickedness. A spirit of patriotism burst forth which astonished Europe, and equalled the warmest hopes of those who were best acquainted with the Spanish na-tion : for those persons who knew the character of that noble people, — who were familiar with their past history, and their present state ; who had heard the peasantry talk of their old heroes, of Hernan Cortes and of the Cid ; — who had witnessed the passionate transfiguration which a Spaniard underwent when recurring from the remembrance of those times to his own ; — his brave impatience, his generous sense of humiliation, and the feeling with which his soul seemed to shake off the yoke of these inglorious days, and take sanctuary among the tombs of his ancestors, — they knew that the spirit of Spain was still alive, and had looked on to this resurrection of the dry bones. As no foresight could have apprehended the kind of injury with which

the nation had been outraged, nor have provided against the magnitude of the danger, so by no possible concert could so wide and unanimous a movement have been effected. The holiest and deepest feelings of the Spanish heart were roused, and the impulse was felt throughout the peninsula like some convulsion of the earth or elements.

‘The firing on the 2d of May was heard at Mostoles, a little town about ten miles south of Madrid, and the Alcalde, who knew the situation of the capital, despatched a bulletin to the soutl), in these words : — ‘ The country is in dan-ger ; Madrid is perishing through the perfidy of the French. All Spaniards, come to deliver it !’ No other summons was sent abroad than this, which came from an obscure and unauthorized individual, in a state of mind that would have •nade him rush upon the French bayonets ; but this stirred up the people in the southern

provinces; and in truth no summons was needed, for the same feeling manifested itself every where as soon as the details of the massacre were known, and the whole extent of the outrage which had been offered to the nation. Buonaparte was totally ignorant of the Spanish character, and in that ignorance had pursued the only course which could have provoked a national resistance. If he had declared war against Spain, at the beginning, no enthusiasm could have been raised in favor of the government, and he might have dictated the terms of submission as a conqueror. The opinion of his magnanimity and greatness would have gone before him ; the Spaniards, prone to admire what is romantic and miracu- .fous, and taught by their own history to disregard the injustice and the inhumanity of wars which are waged for conquest, had been dazzled by the splendor of his portentous career ; and had he appeared to them as an open, honorable foe, the pretension that he was appointed to ful-fil the ways of Providence, might have found among them a submissive, and perhaps a willing, belief.

‘ Asturias was the first province in which the insurrection assumed a regular form. A junta of representatives was elected, who assembled at Oviedo, and declared that the entire sovereignty had devolved into their hands. Thecommander-in-chief in that principality, who attempted to suppress these movements, was in danger of losing his life; and the Conde del Pinar, and the poet D. Juan Melendez Valdes, who were sent by Murat from Madrid to appease the people, were glad to escape from the indignation which their mission provoked. The first act of the junta was to despatch two noblemen to solicit aid from England : they put off from Gijon in an open boat, and got on board an English privateer which happened to be cruizing off that port. Agents also were sent to Leon and to Coiunna, inviting the Leonese and the Galli-cians to unite with them against the common enemy. The Asturian who came to Corunna upon this mission was ordered by one of the magistrates to leave the town immediately, and not to make his errand known to any person, on pain of being arrested and treated as a criminal. On the way back he stopped at Mondonedo, where he learnt that ‘the Leonese were in

insurrection, and met as emissary from that kingdom one of those generous spirits who were then every where employed in rousing the nation, and preparing it for the struggle which must ensue. The people of Mondonedo entered with ardor into the common cause ; and a student from the seminary there accepted the office of deputy from that city to Corunna, notwithstanding the risk which the Asturian had

run. He went with the fair pretext of asking from the provincial government what course ought to be taken by the authorities at Mondonedo, in consequence of the events in Asturias and Leon. Corunna was in a state of great ferment when he arrived ; true and false reports were received with equal belief by the populace ; it was affirmed that the sale of church property which Ferdinand had suspended was to be resumed ; that Buonaparte would order off all the Spanish troops to the north of Europe, and that cart-loads of chains were on the way to manacle those soldiers who should refuse to march willingly. The captain-general of Gal-licia and governor of Corunna, D. Antonio Filangieri, believed that the only course which it behoved him to pursue, in the strange and perilous state of Spain, was to preserve order as far as possible ; but the very precaution which he took to prevent an insurrection became the sienal for it.

The festival of St. Ferdinand, king of Spain, which is commemorated on the 30th of May, had always been celebrated as the saint' s-day of Ferdinand since he was acknowledged as prince of Asturias ; and in all fortified towns the flag-should have been displayed and a salute fired. Filangieri forbade this to be done, lest it should occasion a dangerous movement among the peo-ple. The omission excited them more forcibly than the ceremony would have done : it was a silent but unequivocal act of assent to the iniquitous proceedings at Bayonne; and the people, understanding it as such, collected in great numbers about the governor's house, and insisted that the flag should be hoisted. Filangieri was a Neapolitan, who might have transferred his allegiance from a Bourbon king of Spain to a Buonaparte without any sacrifice of feeling, or violation of duty. His inclinations, however, were in favor of the country which had adopted him, and he obeyed the popular voice. They then required that a regiment which he had removed to Ferrol should be recalled; that the arms in the arsenal should be distributed among the inhabitants; that Ferdinand should be pio-claimed king; and that war should be immediately declared against France. The governor demurred at this last demand ; — they broke into his house and seized his papers, and his life would probably have been sacrificed if he had not escaped at a garden door, and found shelter in a convent. The multitude then hastened to the arsenal, and took possession of the arms ; the soldiers offered no resistance, and soon openly declared for the cause of their country. Some officers who attempted to restrain the people were hurt ; some houses were attacked ; a warehouse was broke open because it was said the fetters in which refractory conscripts were to be conveyed to France were deposited there ; and

the French consul vould have been murdered, jf some humaner persons had not conveyed him In time to Fort St. Antonio, upon an island in the sea. A portrait of Ferdinand was carried in procession through the streets ; and the vivas which accompanied that popular name were followed by a fearful cry of < Down with the French and the traitors!1 But order was soon restored, and in a great measure by the exertions of the clergy, who possessed at this time a double influence over the people, because no class of men displayed more fervor of patriotic loyalty. The heads of the monasteries, and the parochial priests, assembled with the constituted authorities of the town, the regent of the Royal Audience, and the governor, to whom obedience was now restored ; they formed a permanent junta of government; they sent officers to treat with the English squadron which was then blockading Ferrol, and they despatched advices to Santiago, Tuy, Orense, Lugo, Mondonedo, and Betanzos, requiring each of those cities to send a deputy to the junta, and make the news known throughout their respective jurisdictions. In the course of three days the whole of Galicia was in a state of insurrection, and a communication was immediately opened with England.

' At Badajoz and at Seville the first popular movements were repressed by the local authorities ; but they soon broke out again with renewed violence. The Count de la Torre del Fresno was governor at Badajoz ; the people collected before his palace, calling upon him to «nrol them, and give them arms for the defence of the country. A second time he endeavoured to control a spirit which was no longer to be restrained ; and the furious multitude, who perceived that to remain quiet was in fact to acknowledge the foreign king who was to be forced upon them, considered all attempts to abate their ardor as proceeding from a traitorous intention, forced their way into the house, dragged him forth, and murdered him. For, in the sudden dissolution of government, by which free scope was for the first time given to the hopes and expectations of enthusiastic patriotism, the evil passions also were let loose, and the unreasonable people were sometimes hurried into excesses by their own blind zeal, sometimes seduced into them by wretches who were actuated by the desire of plunder, or of private revenge. Men were sacrificed to the suspicions and fury of the

multitude, as accomplices and agents of the French, whose innocence in many cases was established when too late. Such crimes were committed at Valladolid, Cartagena, Granada, Jaen, San Lucar, Carolina, Ciudad Rodrigo, and many other places. But this dreadful anarchy was of short duration. The people had no desire to break loose from the laws and the habits of subordination ; the only desire which possessed them was to take vengeance for their murdered countrymen, and to deliver their country from the insolent usurpation which was attempted. If any obstruction was offered to ihis generous feeling, they became impatient and ungovernable: otherwise, having always been wont to look to their rulers, never to act for tnemselves, their very zeal displayed itself in the

form ofobedier.ee ; they were eager to obey any who would undertake to guide them, and no person thought of stepping beyond his rank to assume the direction. Because Ferdinand, when he set out upon his journey to Bayonne, had left a junta of government at Madrid, the people were familiar with that name, and juntas, in consequence, were formed every where ; those persons being every where appointed whom the inhabitants were accustomed to respect.'

The issue is well known. A final evacuation of the Spanish territory by the French took place in the western Pyrenees, after the battle of Vittoria, 21st of June 1813; and the eastern Pyrenees in the following spring. Ferdinand VII. was now restored. In the short struggle between Buonaparte and the allied powers, in 1815, Spain entered feebly into the views of the allies ; since that period she has been engaged in various unsuccessful expeditions against her insurgent colonies; in a partial civil war in which many political leaders have fallen, or been expelled the country : and finally, with the aid of France, in re-establishing the despotism of Ferdinand on the ruins of all the liberal manners and improvements of the Cortes.

PART II. STATISTICS OF SPAIN.

There is not a country in the world, perhaps, which unites more natural advantages in respect to climate, soil, and variety of productions, ex-tent of the seacoast, noble harbours, &c., than Spain. As these must ever be of leading interest in this country we begin with her maritime advantages, and shall conduct the reader first round her Atlantic, and then along her Mediterranean shores.

The north coast of Spain runs nearly east and west, with no other

indentations than a few insignificant bays and rivers. In general the mountains approach the sea, and the coast is of safe approach. The provinces which compose it are Biscay, divided into Biscay Proper, or Se-norio, and Guipuscoa, Asturias, and a part of Galicia. The chief headlands are Cape Machichaco, between St. Sebastian and Bilboa, a high steep point ; east of the cape three miles, and two miles from Cape Ogono, a remarkable hanging promontory, is Isaro Island. Cape de las Penas (Scythicum) is named from rocks and shoals lying off it a mile and a half, with, it is said, a safe passage within them ; the cape is broad, high, steep, and whitish, and the coast to the east is composed of perpendicular cliffs.

Cape Ortegal (Trileucum), supposed to derive its name from Ort, in the northern dialects a point of land, and Galicia, is nearly the north point of Spain. Point de la Estaca, east of Cape Ortegal, is the absolute north point, being one mile higher in latitude than the cape. Cape Ortegal is one of the extremities of the mountains of Galicia ; it is a lofty and steep promontory, off which is a cluster of rocks, called the Farelons of Ortegal, or Aguillones (needles), with a narrow channel in ten fathoms within them. Cape Prior, seven or eight leagues southwest of Cape Ortegal, is a .high promontory,

uith a low sandy beach at each side, which causes the cape to make like an island. The coast between it and Cape Ortegal has many rocks near the shore. Cape St. Adrian, the extremity of Mount Boa, has off it Cisarga Island, and several shoals with channels between them ; Cisarga Island is a mile and a half long and has fresh water Cape Villano, or Belem, is a high red mountain, the summit resembling a tower. Cape Toriana, is three leagues southwest of Cape Villano, and two leagues further is Cape Finisterre (Nerium), the west point of Spain, (not the west point of Europe, as it is stated in books of geography, this point being Cape Roxent in Portugal). It is a steep uneven promontory with low land to the north ; off it is the little island Sentolo, with a passage between. Mount Laura is an insulated mountain of a round form, and round which are several reefs and

shoals. Cape Corrobeda, the north point of the Rio de Roxo, is the last remarkable point on these coasts. The salient projection of Galicia, being exposed to the constant action of the Atlantic, is more broken than the coasts of Asturias or Biscay ; it is also to be observed that from Cape Finisterre along these coasts a constant current sets to the east, with the velocity of half a mile to a mile per hour, according as the winds are easterly or westerly. The tides on this coast rise fifteen feet in springs, and it is high water at three P. M. on full and change.

The south coast of Spain, without the strait of Gibraltar, is various. From the Guadiana to Palos, eleven leages, it is moderately elevated and even ; from Palos to the Guadalquivir, ten leagues, it is red downs. These coasts form a deep curve, bounded by Cape St. Mary in Portugal on the west, and on the east by Cape Trafalgar. This bend is sometimes called the Gulf of Cadiz, though this name is more generally confined to the Bay of Cadiz. Cape Trafalgar (the promontory of Juno), the outer point of the Strait of Gibraltar, is a little hill rising from a long low point. It is famous for the great naval victory gained by lord Nelson over the combined fleets of France and Spain, the 21st of October, 1805. On this point is a light house. TarifTa point is the south point of Spain. Between it and Cape Trafalgar are several towers to defend little rivers from the landing of the pirates; and off the point is the island TarifTa, small, round, and even, with a light tower on the northeast. There is no passage between it and the point.

The rivers of Spain, which empty themselves into the Atlantic, are in general insignificant, both as to length of course and volume, but most of them form small ports at their mouths for coasting vessels. The following list is supplied by captain Tuckey: —

Rivers. Bidassoa Urumea

Orio …

Urola . .

Deva . .

Andaro . .

Lequietio . Hea .

Empties at Fontarabia. St. Sebastian. Orio. Zumaya. Deva. Andaro. Lequietio. Hea.

Rivers .

Empties at

Mondaca .

. Mondaca.

Ybaychalval .

. Bilbao.

Ason

. Santona.

•

Miera …

. Bay of St. Andero.

Saja … .

. Suances.

Nansa …

. Barca.

Deva …

. St. Vincente de la Barquero

Tina del Esta .

~j

Tina Mayor .

St. Yusti . . La Balotta .

/ Between St. Vincent I Llanes.

and

Llanes …

. Llanes.

Niernbro . .

. Niembro.

Bedon …

. Bedon.

Riba de Sella .

. Junco.

Lastres .

. Lastres.

Linares …

. Villa Viciosa.

Pilas …

. near Gijon.

Abono …

. Abono.

Aviles …

. Aviles.

Pravia …

. Mures.

Canero …

. Canero.

Receida . .

. Luarca.

Navia …

. Navia.

Eo, or Miranda

. Ribadeo.

Masma …

. Foz.

Fasouro …

. Fasouro.

Junco …

. Junco.

Mondoneda

. Villa Velas.

Landrova . .

. Vivero.

Del Sor …

. Puerto Barquero.

St. Marta Carin

. Bay of Carin.

Esteiro . . •

. Bay of Cedeiro.

Jubia …

. Ferrol.

Mendeo …

. Betanzos.

Mero

. Bay of Corunna

Allones …

. Bay of Corme.

Rio de la Puenta . Camarina Bay. Lezaro …. Bay of Corcubion. Tambre …. Bay of Muros. Ulla … . } Arcobispo . . £ Ri° Roxo. Umia … j Vedra …. Ponta Vedra. Coldelas … Nigo Bay. Romalosa … Bay of Bayona. Minho …. Guarda. Guadiana … Ayamonte. Piedra …. Lepe. Odiel …. Huelva. Tinto …. Palos. Rio del Oro . . Guadalquivir . . St. Lucar. Ratonejo … Bay of Cadiz. Guadaletti … Strait Maria.

The Bidassoa, which separates France and Spain, must be considered as appertaining to the latter; for, though the breadth of its entrancfc between the two shores is two-thirds of a mile, a ledge of rocks runs off from the French shore, so as to leave but a very narrow channel for vessels of 200 tons, close to the Spanish side. In the river nearly at the crossing place from Fontarabia to Andaya on the French side, is a small, barren, and uninhabited island, formerly named the Isle of Pheasants ; but, being the place where the conference was held between

France and Spain, which produced the peace of the Pyrenees, it thence received the name of Isle de la Conference. The Riba de Sella is a great torrent, emptying itself between two mountains with such velocity during the freshes that it is impracticable. At other times small vessels enter it with the flood. The Miranda, which separates the provinces of Asturias and Galicia, has twenty-four leagues course. The Minho, which on the coast separates Spain and Portugal, has its source in the mountains of Galicia, and derives its name from the quantity of red lead (minium) found on its banks. It is navigable only twelve leagues,

and can only be ascended with the tide at flood, the ebb running out with such rapidity as to render it impracticable. Near the south bank is the islet Irfoa, with a Portuguese fort.

The Guadiana (Anas), which also separates Spain and Portugal, rises in the Sierra Morena (Black Mountains) ; its entrance is crossed by a bar, with eighteen feet at half tide and twenty-four feet at high water springs. This river disappears near Aliczar de St. Juan in la Mancha, and, after running under ground nearly eight leagues, again emerges at some lakes called the Eyes of the Guadiana. At the mouth of this river is Higuerota Island, with the little town of Canels on its west side. The Tinto (Urium) also rises in the Sierra Morena, and has its name from the color of its waters, which are quite yellow. It has also the property of hardening sand in a singular manner; it withers all the plants on its banks, nor will any fish live in it ; it is given to animals to kill worms, but no animal will drink of it voluntarily except goats. It loses all these properties when it receives the streams of other rivulets at Niebla, six leagues from its mouth. The Guadalquivir (Bcetis), one of the principal rivers of Spain, has its rise in the Sierra Morena, and a course of 100 leagues. Its mouth is one mile wide, but a sand-bank runs off from each shore, and there are also some rocks which narrow the ship channel to a quarter of a mile. On the west point of the entrance is the tower of San Jacintha, and on the east the castle of Espiritu Sancto Large Tessels ascend to Seville, sixteen leagues from the sea, below which it spreads into a small lake. The system of canals in Spain is merely in em-bryo ; two or three leagues have been completed of one intended to join the Mancanares with the Tagus, to open a communication between Madrid and the palace of Aranjuez. The canal of Castile has been abandoned.

Fontarabia, the first port town of Spain, in the bay of Biscay, is on the left bank of the Bidassoa, half a league from its mouth ; it is strongly fortified. Passages, five miles west of the Bidassoa, is the best harbour on the bay for large ships, being an extensive basin, three or four leagues in circuit, surrounded by mountains, and with an entrance only ninety-two fathoms wide, between two great rocky points, so that vessels are in contrary winds obliged to warp or be towed in. A considerable portion of the basin dries at low water, but there is space for a large fleet in six to eight fathoms. The town on the west shore consists only of a single street.

The entrance of the port is defended by the castle of St. Isabel.

St. Sebastian, the chief town of Guipuscoa, is situated on a point of land washed by the little river Urumea (Menoeseum) on the east, and by the sea, which forms a cove, on the west. On Mount Agudo, the west point of the cove, is a lighthouse. The river Urumea, which washes the walls of the town, receives vessels of fifty to sixty tons with the tide, and has a good salmon fishery. In the cove to the west is a haven formed by two moles, where twenty-five to thirty vessels find space, but lie dry at low water. Nearly in the middle of the entrance of the cove is the lofty island of St. Clara, with a hermitage dedicated to this Saint. The passage in is between this island and the peninsula, on which is the town, and which terminates on a lofty hill named Mount Orgullo (Orgueil), on which is the castle of La Mota. The town on the isthmus is surrounded by a rampart flanked by bastions and half moons, and is commanded by La Mota, the ascent to which is by a spiral pathway. The commerce of St. Sebastian is considerable, exporting iron, anchors, cables, leather, and wool.

Orio has a small tide haven for vessels of twelve feet : vessels of considerable size are built here, and the hulls sent to Passage to be equipped. Zarauz, a village, to the east of which is a little islet and shoals. Descargo and Guetaria are fishing towns; the latter has 300 inhabitants, and is on a cove, which, together with the lofty rock or islet of St. Antonio, joined to the main by a pier 400 feet long, forms a little dry tide haven. Zumaya, on the river Urola, that admits only small craft over a bar, has considerable iron foundries, the iron from which is sent to St. Sebastian. Deva, on a river which admits vessels of fifty to sixty tons at high watei over a bar. Motrico, a pier haven on a cove used by vessels of 100 tons. Andaro or Ondar-roa, on a little river that receives vessels of fifty tons. Lequietio, also on a river, receives vessels of 100 tons, which lie dry at low water. Before it is the island of St. Nicholas, left on the right in entering. The town and river of Hea is only frequented by fishing boats , it is two miles and a half east of Cape Ogono. Monfons is on a river that receives vessels of 100 tons. Mondaca River forms a dry tide haven within two piers. Bermeo, on the west shore of a large cove, has a pier tide haven, and before it is the isle of St. Francisco. Placentia, west of Cape Machichaco, is on the Durango, whose bar is practicable for vessels of fifty tons with the flowing tide. Por-tugalette, a small town on the left bank of the Ybaychalval, half a mile above the bar, which almost crosses the river, leaving only a narrow and shifting channel practicable with the flowing tide towards the west shore.

Bilboa, the chief town of Biscay, is on the right bank of the river, two miles above Portu-galette ; it is celebrated for its fine climate and agreeable situation. Its trade is considerable in the export of wool,

iron, chestnuts, and oil. The English chiefly take of the wool 50,000 bags, valued at 5,000,000 of piastres ; the iron is sent to Corunna, Ferrol, and Cadiz, for the use of the naval arsenals; the chestnuts to England and the north.

SPAIN.

ros

Here is a royal administration of marine, a school of coasting pilotage, and several building yards. To Bilboa succeed the small towns of Somorostro, Onton, Castro-Urdiales, and Orinon; the two first are on creeks, which only admit small craft at high water. Castro is on the west point of an open bay, the bottom of which ‘is foul, except near the shore, where three or four vessels may find clear ground. At the head of the bay is a pier dry tide haven for coasters. The harbour of Santona is one of the best of the north coast of Spain for middling sized vessels, but’is little frequented. On the east shore of the entrance is the town of Laredo, with a pier haven for small craft ; the village of Santona is on the opposite side, a mile up a small river. The entrance is defended by several batteries.

St. Andero is one of the most considerable towns in population and commerce of the north provinces of Spain. It is on a bay, bounded on the east oy the island of St. Marino ; and between this island and the head of the bay, where is the town, are the islands Moro and Letorre, and the great perforated rock Orodada ; besides the outer harbour there is a pier haven at the town, where small vessels lie at a quay. The channels in it are defended by two castles and several batteries. The town is built on an eminence. Before the war ‘it had forty-two national and eighteen French and English commercial houses, and it was the residence of the foreign agents, charged with the commercial relations of the ports of Bis-cay in general. Its exports are wool to England and France, iron, flour, and colonial produce, having the privilege of trading directly to the colonies, for which in 1803 forty-five vessels cleared out, and whence, in the same year, thirty-seven entered. St. Martin, four leagues west of St. Andero, is a small tide haven for fishing-boats. St. Vincente de la Barquero has a haven for vessels of twelve feet, with two channels in, formed by the little island

Callo.

Llanes a small dry tide-haven. Riba de Sella, already noticed, is only a tide-haven. Lastres River admits only vessels of forty tons. Villa Viciosa, on a point between two little rivers, and three miles from the sea : the entrance is crossed by a bar, admitting only vessels of twelve feet with the flood. Sanson, a little tide haven on the west side of the long point of Tassones, on which is a castle. On the east side of the point is an islet with anchorage under it.

Gijon, a trading town of about 3000 inhabitants and fourteen commercial houses, has a good road and a dry tide haven within a pier, at the mouth of a river, for vessels of twelve feet. It is protected by a castle. The exports are chestnuts, filberts, and walnuts, to England and the north ; millstones from some neighbouring quarries, and cyder to the Spanish colonies. Torres, a fishing village, a league west of Gijon. Candas and Luanco, are on small coves, where the fishing-boats lie dry at low water. Aviles, three leagues S. S. W. of Cape de las Penas, is on a point of land formed by the curve of a river ; it has 3,000 inhabitants, chiefly fishermen, and a dry tide haven for their barks. It is defended by Fort St. Juan. The river Pravia is dangerous, and only visited by small coasters Luarca,

on a river that admits vessels of ten feet. Four miles west of it is the island Ron-anilla de la Vega, before the harbour of vega, to which succeeds the tide haven of Navia, where is some trade. Via Veles, Porcia, a little tide-haven seldom visited. Castropol, on the right bank of the Miranda. Ribadeo, on the left bank of the Miranda, is built on an eminence ; vessels of seventeen feet enter the river, and make fast with a cable to the shore : the castle of St. Damien, on the west shore, defends the port. Santa Marta and Carin are in the bay between Point de la Estaca and Cape Ortegal. The river of the former receives vessels of ten feet ; the latter is practicable for larger vessels with the tide. Ce-deira, south of cape Ortegal, has a good, though small port, for vessels of burden. Corunna, or the Groyue, is a celebrated port formed by a semicircular basin, two miles wide at the entrance, and two leagues deep ; but has only a confined space of deep water, sheltered from the north and northwest winds. North of the town one mile is the tower of Hercules, an elevated building on a hill, which serves as a lighthouse, and may be seen twenty leagues. At each point of the harbour ‘is a castle, St. Martin and St. Clara. The town, containing 4000 inhabitants, is built on the south point of the entrance, and is composed of the old and new quarters ; the latter, on the declivity of a

hill, is surrounded by a wall and has a citadel. The haven, which has a handsome quay, alongside of which vessels lie, is commanded, as well as a part of the road, by the forts of St. Antonio and St. Arnaro ; the for-mer, on a steep rock, serves as a state prison. Opposite the town is an island with a castle. Here is a royal tribunal of commerce, fifty-eight commercial houses, and most of the trading nations have consuls here. The first of every month a packet sails for the Canaries, Porto Rio, Cuba, and Vera Cruz ; and the fifteenth of every second month one sails for the river De la Plata. Port Santa Cruz is only fit for fishing craft ; it is under the mountain of Pennaboa, one mile and a half from Hercules's tower. The har-hour of Cumilla is also only used by fishing barks : it is on the north side of cape Villano. Camarina Bay, on the south side of cape Villano, has good anchorage. The town of Camarina is on the north shore, and that of Mugia, or Monsia, on the south : the former has a fishing pier-haven, which dries at low water ; the bay is defended by a fortress on a point.

The fishing town and pier-haven of F.inisterre is half a league northeast of the cape. The town of Corcubion on a bay farther east, and that of Ce" on the same bay, are small places ; but the bay is fit for the largest ships, with the wind from the north, southerly winds throwing a great sea in and rendering it dangerous. Muros Bay has good anchorage. On the north shore is the town of Muros; and at the head of the bay, Noya on the Tambre. - Between Muros bay and the Rio de Roxa are the islands Besones. Rio de Roxa, or Arosa, is a deep inlet, two leagues wide at the entrance, but filled with rocks. The islands Presciras and Salvora lie before it ; the latter rises to a high hill. There are several fishing villages on this inlet, but no town.

Ponte Vedra Bay is separated from the Rio de Roxa by a peninsula, and before its entrance is the island Ons, three miles long, north and south, with a channel on either side for the largest ships ; it is uninhabited, but has two springs of good water, and the people on the main send some horses to graze on it. On the south shore of the bay is port St. Marino, and at the head is Ponte Vedra, an agreeable town of

2000 inhabitants, on a hillock, washed by the little river Vedra. It has a considerable fishery of sprats.

Vigo Bay is separated from Ponte Vedra by a tongue of land : it is two miles wide at the entrance, across which lie the two isles of Bayona, sometimes called Seyas de Bayona and Estellas (Insulae Dies). The northernmost and largest is three leagues long north and south ; the southern two miles. They have fresh water, and pasture some cattle : the channel between them is filled with rocks. The town of Vigo is on the south shore of the bay, built on a rock, surrounded by a wall flanked by four bastions and commanded by a castle. Its population is 2500 ; but though vessels of the largest size may lie secure in any part of the bay up to Redondela, a Itague above Vigo, it has little trade, exporting only some cured sprats and tunny-fish. The bay of Bayona, south of Vigo Bay, is nearly crossed by a bank, on which are two islets ; and off cape Fasalis, the south point of the bay, is Lobos (wolves) reef. Bayona is a fortified town and castle at the foot of a high mountain. South of the bay is the fortified monastery of Oya, intended to afford protection to vessels chased by the Barbary pirates. Guarda, on the Spanish bank of the Minho, two miles within its mouth, is a fortified town, with a pier-haven for small vessels. Gayon is three leagues above Guarda, and two leagues higher is Tuy (Tyde), a strong town within cannon-shot of the Portuguese fort of Va-lenˆa.

Now we arrive it thewestern coast of Portugal ; and do not resume the Spanish coast and ports until we come to Ayamonte, on the Spanish bank of the Guadiana, a considerable fishing town. Lepe, on the right bank of the Piedra, receives small vessels, but the access is difficult. Taran, Port St. Michael (Menestheus), Huelva (Onoba) on the Odiel, and Palos on the Tinto, are of little note, except the latter, which derives an historical celebrity from being the place of departure of Columbus on his first voyage, which produced the discovery of America. St. Lucar de Barromeda, on the left bank of the Guadalquivir, two or three miles from its mouth, is a small town and the port of Seville. Ships of fifteen feet lie afloat before it at all times. Seville (Hispalis et Julia Romula), sixteen leagues above St. Lucar, is built on a plain, surrounded by a high wall flanked with 166 towers, all built of a cement which has acquired the hardness of stone. The streets are narrow and crooked, but the houses in general well built. Though its commerce has been reduced, by the transfer of the colonial trade to Cadiz, it still exports to the value of 60,000,000 reals.

Cadiz (Gades, founded by the Phoenicians) is considered the first commercial city of Spain, and is situated at the end of a peninsula, forming

the north extremity of the isle of Leon. On the west and south it is defended by nature, the shore being so steep, lined with rocks, and furiously beaten by the waves, as to render a landing impossible. Towards the road, ou the north, the depth of water is not sufficient to allow its being attacked by heavy shipping, and on these sides it is surrounded by a wall flanked with bastions. Its only vulnerable point is, therefore, at the isthmus on the east, and this is crossed by regular fortifications, in which there is but one gate, and four towards the water. Cadiz is the chief place of one of the maritime divisions. The naval arsenal, called the Carracca, is situated on the south shore of the inner road six miles from the city. It has three large docks and twelve building places, and employs 5000 workmen. Previous to the latter wars with England, Cadiz had lately 720 mercantile houses, of which 100 were foreign, viz., English, Dutch, French, and German. In 1791 1010 vessels entered as follows : —

Spaniards . . 339* Swedes … 25

English . .180 Raeusans . . 24

French …116 Genoese … 6

Portuguese . 104 Venetians . . 2

American . . 90 Hamburgers . 1

Dutch … 80 Imperials . . 1

Danes … 41 Trieste … 1

The town of the isle of Leou, two leagues east of Cadiz, has 40,000 inhabitants ; and nearly adjoining it has been laid the foundation of the town of St. Carlos, the plan of which is perfectly regular, and it is intended to contain the marine hospital, barracks for the workmen, academy, &c. The Isle of Leon (thought to be Tarshish and Tartessus) is separated from the main by the channel of St. Pedro, three leagues in length, with twenty-four feet water, and crossed by a bridge. Puerto de Santa Maria, on the guada-lette, four miles and a half from Cadiz, is a well-built town of 12,000 inhabitants. Vessels of nine feet enter the river at low water. Cadiz, having no good water, is supplied from hence by vessels constructed on purpose, and the annual expense of which is said to be nearly 100,000 piastres. Puerto Real, on the north shore of the inner road of Cadiz, has 10,000 inhabitants. Near it are extensive salt-works, which afford 21,300,000 quintals of salt

annually. Conil, a fishing village two leagues northwest of Cape Trafalgar, has anchorage before it in ten to twelve fathom.

The Spanish coast of the Mediterranean, from Gibraltar to Malaga, presents a chain of lofty mountains, Sierra de Vermeja, &c., but has few points of note. Cape Sacratif, east of Motnl, is a high point. The gulf of Almeria is limited on the west by point Elena, on which is a castle, and on the east by Cape de Gatte (Charidemum) a high steep rocky promontory, with a light house. These points are seven leagues asunder

The bay of Carthagena (Virgitanus) is betweei Cape Tinosa on the west, on which is port Tri

* Of which 177 were from the colonies. In 1801 the number entered from the colonies was onl” twenty.

nidad and a lighthouse, and off it two large rocks, called the Osmigas and Cape Palos (Schombraria) on the north. From this latter cape a narrow neck of land runs nearly due north, which, though now joined to the cape, is called Isle Grossa, and within which the coast forms a bend, making a kind of lagoon, named Mar Menor, (little sea), twelve miles long, and five wide, with several islands, but so shoal as only to admit boats. Between Cape Palos and Al leant the land is high, and the water deep close to the shore. On this part of the coast is the lagoon of Mata, separated from the sea by a high narrow bank, and towards the land bounded immediately by high mountains. A great quantity of salt is formed in the lagoon by natural evaporation, 100,000 tons of which have been, in some years, exported to Holland, the Baltic, and England.

The bay of Alicant (Illicitanusˆ is limited on the south by Cape Santa Pola, and on the north by Cape de la Huertas. Southeast of the for-mer two miles is the little island Plana (low), or new Tabarca, which latter name it received in consequence of Charles III. having assigned it as an asylum for a number of Spanish galley slaves, whom he ransomed

from the Alge-rines, at the island of Tabarca, on the coast of Barbary, with the intention of forming a port within the Plana island ; but it being a barren sand, destitute not only of wood and water, but even of earth or stone, the project fell to the ground. The channel between the island and the main has depth for the largest ships ; but in it is a dangerous rock, and others off the island to the southwest and south. The ancient castle of the duke of Arcos is a little south of Cape Santa Pola. The island of Be-nidorme lies off a mountain cape of the same name, the southern limit of Altea Bay. West of the village of Altea is a hill, with a remarkable large gap, called Chuchillado de Roldan. The gulf of Valencia is limited on the south by a great projection of the coast opposite the island of Ivica, of which Cape Martin is the northernmost and most conspicuous point. It is the ancient Artemisium, Tenebrium, and Ferraria, the first of which names it received from a large town near it, on the site of which Denia now stands ; and the two latter from the iron mines in the vicinity. The name of Artemisium is still preserved in Artemus, given to the cape by the natives. That of Cape Martin has been given it by the French ; but it is generally known to English seamen by that of Emperor's Point. It is a high steep headland, with three lights or fire-beacons on it; and a high island, Pityusa, Isle of Pines, close to it. Between it and Cape de la Nao, on the south, is a deep bay, whose shores are composed of huge cliffs of limestone and alabaster, and where is seen a vast cavern, the retreat of innumerable wild pigeons. These capes terminate a sierra, one of whose summits, , named Manger, rises to a very elevated peak. The Albufeira of Valencia is a lake of fresh wa-ter, four leagues long and two broad, separated from the sea by a narrow sand-bank, through which a channel has been cut to let off the occasional superabundant waters. This bank, named VOL. XX

the Dehesa, is covered with pines and willows-. and abounds with rabbits. The lake has depth for small boats, is full of fish, and the resort of great numbers of sea-birds ; the catching and shooting of which is one of the winter's amusements of the inhabitants of Valencia. This lake is the property of the crown, and is farmed for 12,000 piastres per annum.

The Ebro has formed at its mouth two peninsulas, and several banks and islands. The southern peninsula bends round and encloses the port of Alfaques, whose entrance is from the south, and which has a depth of five to seven fathoms. As the stream of the Ebro, during a great part of the year, runs out with a velocity that precludes the ascent of any kind of vessel, it has been proposed to enlarge the canal, from the port

of Alfaques, at Saint Carlos, to Emposta, on the Ebro, so as to admit large vessels through the port of Alfaques to Tortosa. The northern peninsula, formed by the mud of the Ebro, encloses the port of Fangal. Between Tarragona and Barcelona, the coast rises in peaks, named the hills of Graff; and, farther north, the lofty and solitary mountain of Mont-serrat presents its sharp points, and is seen even from Magarca and Minorca, a distance of fifty leagues.

The Bay or Gulf of Roses is sheltered frorc all winds but southeast. Cape Creus, the last remarkable promontory of Spain, is a terminating point of the Pyrennees, whence its ancient name of Pyrennaeum ; it was also called Aphrodisium, from a temple of Venus, of which there remains no vestige. It is a high cape with a light. Nine miles farther northwest is Cape Cervera, the last point of Spain.

On the coasts of Spain, both within and without the Strait of Gibraltar, are a great number of towers (torre) and little fortresses (castella), to protect the coast against the depredations of the Barbary pirates. The towers have circular fronts towards the sea, with low parapets to work the guns (en barbet), with a curtain, and two flank-ing bastions in the rear ; the only entrance is by a door, near half way from the top, and through which the rope ladder that serves to ascend is drawn up.

The vicinity of the mountains to the Mediterranean coast of Spain cause most of the rivers to partake of the nature of torrents, which are much swollen in the winter and spring, and very low in the summer. They are in succession — Guadiaro (Barbasula), which empties itself east of Gibraltar. Guadalnarza and Rio Verte, between Estapona and Marbella, off the Rio Verte, are two small islands, with good anchorage within them. Gordo and Real Guadaisa, between Marbella and Malaga. Guadal-Medina, at Malaga. Frio empties itself east of Velez Malaga. Adra, at Adra. Aquas at Mujacar. Guadel-macer or ˆImanzora, whose entrance is defended by the castle of Montroy. Rio Segura, at Guardamar, Alcoy, at Gundia. Xucar, at Cullera. Gua-del-aviar, clear water (ancient Turia), at Valencia. Palancia, at Murviedro. Servol, at Vinaros. The Cenia separates Valencia and Catalonia. Ebro (Iberus), the greatest river of Spain, hav-ing a course of 380 miles, rises in the mountains of Asturias. Francoli, at Tarragon > ; its waters

ar«J famous for the lustre they give to the linen washed in them. Gaya, at Vendrell. Foix, at Cubellas. Lobregat and Besos, at Barcelona. Bellet, at Santa Pol. Tordero, at Pals. Ter (Sambroca): before the river’s mouth are the three islands Medos des Estardes, the largest of which is one mile and a half long, and has a fort. Lobregat (Rubricatus), and Fluvia, into the Bay of Roses.

Port-Towns. — Algeziras (Tingentera and Ju-lia Traducta), on the west shore of Gibraltar Bay, is a small fortified town at the mouth of the little brackish river La Miel. It receives its fresh water by an aqueduct of hewn stone from the distance of a quarter of a league. Its trade is confined to receiving a few cargoes of brandy and corn by Catalonian vessels, and to the ex-port of charcoal of the neighbouring mountains to Cadiz. A packet-boat sails twice a week hence to Ceuta. Off the town a mile is the little island Palomas, covered by a fort, whence the town derives its name, signifying in Arabic an island.

The celebrated rock of Gibraltar, the ancient Calpe, is a peninsular mass of mountain three miles long, north and south, and one mile broad. Its highest point is 1439 feet above the sea, and commands a view of forty leagues in every direction . SeeGlBRALTAR.

Estapona is a town on the beach, off which vessels anchor ; about sixty small vessels belong to it, employed chiefly in carrying fruit to Cadiz and Malaga. Marbella, at the foot of a hill, has 1100 inhabitants, and twenty small craft also employed in the coasting trade to Cadiz, Malaga, Ceuta, &c. Fiangerola, a fortification on the side of a hill, of Roman foundation, and of Moorish superstructure ; at its foot is a small town, whose inhabitants are employed in the sardine and anchovy fishery.

Malaga, ontheGuadalmedina, founded by the Phoenicians, by the name of Malochi, from the quantity of salt-fish sold here, is a large city, and built at the foot of a hill, surrounded by a double wall, flanked with high towers, and commanded by a Moorish castle on a rock. The cathedral is said to be as large as St. Paul’s, and it has besides fourteen parish churches and twenty-two monasteries and convents, a handsome custom-house, a royal marine arsenal, and

many Roman antiquities. It has only a pier-haven in the mouth of the river for vessels of nine or ten feet, larger ones being obliged to anchor in the road much exposed. It is the third commercial city of Spain, exporting chiefly the produce of its soil and fishery : *viz.* wines, dried fruits, oil, and anchovies. Its manufactures of any consequence are silk, thread, hats, soap, and paper. In 1789 100 English ships entered and ten French. It has about twenty merchant brigs and snows belonging to it, and in 1804 had sixty commercial houses.

Velez (old) Malaga, a handsome little town east of Malaga, though formerly on the beach, is now a league from it, the sea continually retiring from this part of the coast. It exports some fruits to Malaga, by a village on a deep cove before it. Almunecar (Manoba), an insignificant place on a cove, before winch is an

island with a fortified tower. Salobrena, a small town where coasting vessels load fruit ; off it is an island with a passage within it in fourteen fathoms. Motrill, a small town two miles from the sea, on the river Orgiva. Castel de Ferro, on a hill close to the ea, exports some wool coastwise. Adra (Abdera), on the river of the same name, is a small place.

Almeria (Murgis), at the head of a large bay, was anciently the most commercial city of Spain, but at present is insignificant both as to population and trade, its exports being confined to some barilla and lead. Mujacar is an insignificant town, and Almazaron, a village with an island before it, on which is a lighthouse, and a fortified town, on the west side of the cove.

Carthagena (Carthago Nova), founded by Asdrubal the Carthaginian general, is one of the three royal ports. Its harbour is one of the best of Spain, being a natural basin surrounded by hills ; the entrance is defended by two redoubts, and by a battery of twelve guns on a mole. The marine arsenal is spacious, and protected by forty guns towards the water. It employs 6500 men, and the population of the city is 28,000. The principal exports are wool and barilla. A great quantity of rope and cables is made here of the Esparto rush. Cervera is a small town, south of the cape of the same name. Guardamar, at the mouth of the Rio Segura, exports salt. La Mata, a small town, near the lagoon of the same name, defended by a castle, where a num-ber of small vessels load salt.

Alicant (Lucentum), the fourth commercial city of Spain, is situated in

the northern extremity of a bay, at the foot of a hill, on whose summit is a castle, commanding the town and communicating with it by a passage between two walls. It has only a pier haven for small craft, large vessels being obliged to anchor out in the bay, three miles from the town, in seven fathoms. Alicant is the entrepot of the commercial productions of Valencia and Murcia, consisting of soap, wine, wool, fruit, salt, barilla, kermes, anni-seed, antimony, alum, vermilion, &c., which are exported by 800 to 900 ships annually. Beni-dorme, a large and handsome fishing village, and Altea Nuova and Altea Vieza, on the left and right banks of a river, are villages which export coastwise some wines, silk, flax, and honey. Cabea or Xavea, on a large cove, with anchorage in twelve to fifteen fathoms. Denia (Artemisium and Dianium), founded by the Marseillais in honor of Diana, is a small town, north of cape Martin, and on a cove, in which large ships anchor in six and seven fathoms. It has also a pier-haven for vessels of eight or nine feet. Oliva, a town a mile from the shore. Gandia, a town on the Alcoy, whose mouth forms a port, called the Grao de Gandia. Cnllera, a small town or. the north bank of the Xucar, visited by small craft chiefly to load rice.

Valencia, surnamed the handsome, although, according to the description of it by travellers, it little deserves this name, the streets being narrow, crooked, not paved, and the houses ill built and dirty. It is surrounded by a rampart, and has a citadel of little strength. Its population is 105,000, of which, before the French in-

vasion, 2610 were priests, monks, and nuns. It is situated on the right bank of the Guadalaviar, three leagues from its mouth. Sailing vessels ;arnot ascend the river, but anchor on the road, called Graode Valencia, before the river's mouth, where they are entirely exposed, nor has it even a commodious landing place ; nevertheless it exports the productions of which Valencia is the depot, and which are the same as those exported from Alicant. The Grao village is also frequented for sea-bathing. The principal trading nations have resident consuls at Valencia. It has extensive manufactures of silk.

Murviedro is a town on the right bank of the river of the same name, or Palencio, a league from its mouth. It is surrounded by old Moorish walls, whence is derived its name (Muros Vielos), and stands on a part of the site of the ancient Sagunturn, a quarter of a mile from the sea ; the streets are narrow and dark, but the suburbs weli built. The citadel, which still retains the name of Sagonta, occupies the entire summit of a high rock : it is surrounded by modern walls, and has besides some Moorish fortifications and Roman antiquities ; in the centre is a covered cistern 200 feet long, twenty wide, and still eighteen deep, though half filled with rubbish. At the foot of the rock are the ruins of the Ro-man theatre worthy of particular notice. The Grao, or road of Murviedro, is entirely open, and the bottom foul. Its trade is confined to the export of some brandy coastwise. Peniscola is in an open bay in which ships anchor in ten fathoms. Benicarlo, a fishing town one league and a half west of Peniscola, is celebrated for its wines.

Vinaros, a-league from Benicarlo, on the Servol, has a considerable coasting trade, its chief export being brandy. Vessels of fifty tons enter the river, but no foreign vessels are permitted to load here. San Carlos, in the port of Alfaques, was founded in 1792 by the crown as a fishing station, and principally built at its expense. It consists of one wide but short street. the houses uniformly have only one story. Anjf posta is on the right bank of the Ebro, four leagues from the sea and two leagues from St. Carlos, with winch it communicates by a canal.

Tortosa (Dertosa), on a hill on the Ebro, two leagues above Amposta, has a handsome cathedral, anc1 an old castle a mile square. Its exports are confined to dried fish and barilla. Lorpagne, a neat Tittle town on a hill, with a haven formed by two piers : it exports some wine and brandy coastwise. Balaguer, a castle on a hill overlooking the sea, and defending a pass in the mountains, called the Col de Balaguer. Cambrils is a neighbouring town on a little river. Salo and Villa Seca, small towns which export some brandy coastwise.

Tarragona, on a rocky eminence, near the left bank of the Francoli, a quarter of a league from its mouth. It is surrounded by ancient Roman walls of immense strength, and defended by two castles. The cathedral is a magnificent structure. A new port was formed to receive large vessels in 1800, and it has an administration of marine. Tarragona is supposed to have been founded by the Phoenicians 2000 years before

the Christian era ; its Phoenician name of Tarcon was corrupted by the

Romans into Tarraco. Under the latter it was the capital of Hispania Giterior, and, according to some historians, contained 2,500,000 inhabitants. Between 467 and 1713 it sustained ten regular sieges, and was several times taken and the inhabitants put to the sword. In 1807 it was besieged by the French, and after an obstinate defence capitulated ; but the French soldiers commanded by Suchet, deservedly surnamed the Butcher of Tarragona, committed as great cruelties as if the place had been taken by assault, massacring the defenceless inhabitants without regard to age or sex. It exports a considerable quantity of grain, wines, and brandy. In 1805, 208 square rigged and 1506 lateen rigged vessels entered the port, of which number 1515 were Spanish. Taran, Vendrel at the mouth of the Gaya, Cubellas on the Foix, are insignificant. Villa Nuova, a small town on the beach, before which vessels anchor in seven to nine fathoms. It has no haven, and the small craft belonging to it are hauled on shore. Sitgas, a mile inland, has a cove before it. Barcelona, the second city of Spain in population and commerce, has 160,000 inhabitants, and is situated on a bend of the shore, between the Lobregat on the south and the Besos on the north. Its port is formed by a mole on the northeast ; on whose extremity is a lighthouse. Within the mole the depth is but eight feet, ami is daily diminishing by the sand thrown into it from the sea, the mole preventing any off-set. The mud of the Besos and Lobregat also form bank's before the entrance ; vessels of burden are therefore obliged to anchor in the roads one mile and a half from shore, and entirely exposed to the sea. The streets, though it has some good ones, are in general narrow and crooked, paved with large flat stones, and badly lighted. It is strongly fortified on the land side by ramparts and bastions supported by extensive outworks. Mount Jouy, a strong fort on a hill to the southwest, commands the port and town, a part of which latter is also commanded by a citadel surrounded by a ditch on the northeast. The usual garrison is from 5000 to 6000 men. Here is an administration of marine, and a large military arsenal called the Tersana, in which is a foundry of cannon. Barcelona had before the wars an active and passive commerce, to the amount of £1,500,000 sterling. The number of vessels that entered and sailed was nearly 1200, of which the common proportion was 500 Spaniards, 200 French, 150 English, sixty Danes, forty-five Dutch, and 300 of all other nations. The town possessed about 100 square-rigged vessels. The commercial nations have resident consuls'here. The chief exports are wine, brandy, wool, cork, fruits, and silk. The manufactures are more flourishing than in any other city of Spain : they are silks of all kinds, coarse woollens, cottons, window-glass, paper, hats, gauze ; all of which are exported to the colonies, as well as shoes, of which Barcelona supplied 700,000

pairs annually, valued at 2s. the pair. Barcelona is said to have been founded by the Carthaginians, who gave it the name of their general Hannibal Barcino. Between 802 and 1714 it sustained

eleven sieves, and was seven times taken. The new town of Barcelonette, on the southeast, may be considered a suburb of Barcelona : it is an exact square with twenty-four streets, each twenty-sive feet wide, and crossing at right angles. The houses are of brick, uniform, and with each twenty-five feet front. It is inhabited almost entirely by persons employed in marine affairs. From Barcelona to the north the shore presents a quick succession of small towns and villages, of which the principal are San Andria, Badelona, Mongat at the foot of a hill, on whose summit is a castle. Masnou, Premire de Baix, Velaier de Baix ; all these places have manufactures of iron and brandy, which they export coastwise. Mataro, a town four leagues and a half east of Barcelona, has a good trade, exporting chiefly its own manufactures of soap, brandy, silks, cottons, linens, sail-cloth, lace, &c. It has an administration of marine, and a constant garrison of two squadrons of cavalry.

From Mataro to the frontiers of France there is no town of any consideration. The principal places in succession are Arens de Mar, St. Ma-ria de Mar, Canet de Mar, St. Pol de Mar, on the little river Bellet ; all places which have manufactures of anchors, brandy, silk, and cot-ton stockings, which they export to the neighbouring ports and to Roussillon and Italy. Cal-lela is beautifully situated and neatly built ; Pineda, Malgrat, and Tordera, on the left bank of the little river of the same name. Blanes has some tanneries, Tosa a village built on a steep hill projecting into the sea, which shelters its cove from all winds but southwest. St. Feliu de Guixol. Palamos has a small pier-haven for craft on the south side of Cape St. Sebastian : Pals, at the mouth of the Tordero, Ampurias (Emporae) on the Fluvia. Roses (Rhodes), on the north side of the Bay of Roses, is a village of one street, defended by two forts. Puerto del Trinidad, Cadaques, a small town with a large

and safe port. Selva de Mar, or Selva Baxa, west of Cape Creus, is a town of considerable size. Villa Mana de Llansan, the last town in Spain, is situated on a small creek, which penetrates into a beautiful valley.

Few historical notices of the commerce of the northern part of Spain occur before the fourteenth century : then we learn that it exported wool northward. At present it only exports the productions of the mines and soil, *viz.* iron, wool, chestnuts of Biscay, and filberts of Asturias ; Galicia having nothing to export but a small quantity of anchovies, which are taken from Vigo, Ferrol, and Corunna. The iron goes from the ports of Biscay principally to England. The woo! is collected at Burgos, and thence transferred to the ports of Biscay, whence it is sent chiefly to England, Holland, and France, to the amount of 80,000 quintals. The value of the ch : * nuts and filberts sent to England and the nort \ is about 400,000 reals. The imports of these provinces (chiefly from England, Holland, and France) are fine woollens and linens, hardware, salt butter, salted cod, and fish oil. The ports that have a fiirect foreign trade are ST. Sebastian, St. Antlero, Laredo, and Bilbaˆ, Luarca and Cudil-i*ra, Corunna and Vigo.

Biscay Proper, with respect to its commercial privileges retained from ancient times, forms a kind of separate state from the rest of Spain, paying no duties on exports or imports, and consequently having neither custom-houses nor cus-tom-house officers. The frontiers are, however, strictly watched, to prevent the clandestine introduction of merchandize through this province into the others. In consequence of this exemption from duties, which the Biscayens are obstinate in preserving, they are prohibited the commerce with America.

Spain had formerly very considerable fisheries on the coasts of the ocean, 1 ,000,000 of persons, according to Spanish writers, being at one period employed in this branch of industry. They have, however, been long reduced to insignificance ; for, though the fish still continue to visit these coasts in such abundance that it is often sold by cart loads for a mere trifle, industry and capital are both wanting to elevate the fishery as an object of national ricnes. The import of salt cod from England is estimated (for the whole of Spain) at 3,000,000 of duros ; the Newfoundland cod being preferred to the Norwegian, and the attempts made to substitute the fish taken on the coasts of Biscay and Asturias have been without success. The rivers of these coasts are also so abundant in salmon, that in the Ururoea in particular it is sold for four quartos, or three farthings, the pound. Spain has long ceased

to have any foreign fisheries.

In the fourteenth century the Spanish marine, both with respect to war and navigation", held the first place in Europe, and the names of Columbus, Magellan, and Mendana, will live for ever in the page of history with that of our immortal Cook ; but the naval glory of Spain disappeared with her invincible armada, and, under the three first Philips and the second Charles, she had neither ships nor seamen. During the war of the succession a transient activity was observed in naval affairs ; and, in the two last reigns, considerable efforts have been made to revive the ˆmilitary marine. At the conclusion of the war of 176t the fleet consisted of thirty-seven ships of the line and thirty frigates. In 1770 fifty -one of the line from 112 to fifty-eight guns, twenty-two frigates, and twenty-nine lesser vessels. In 1774 sixty-four of the line, of which eight were three-deckers, twenty-six frigates, and twenty-seven smaller vessels. In 1778 sixty -seven of the line, thirty-two frigates, and sixty-two small vessels. At the end of 1793 the numbers were,

70 Ships of the line, from 1 1 2 to 54 guns.

46 Frigates 42 . . 18

3 Sloops 20 . . 18

16 Xebecs 36 . . 14

13 Bilanders … . 20 . . 10 28 Brigantines … . 24 . . 10 12 Ourques 40 . . 20

4 Galleys 3

4 Galliots 3

3 Bombs 10

8 Packets

7 Schooners 2 Fire-ships

216

SPAIN.

709

The number of sea officers, in the year 1798, was,

2 Captains-generals or admirals.

24 Lieutenants-generals or vice-admirals.

41 Commanders of divisions or rear-admirals.

52 Brigadiers or commodores. 118 Captains of ships of the line. 1 75 Captains of frigates. 251 Lieutenants of ships of the line. 233 Lieutenants of frigates. 231 Alferez (ensigns) of ships of the line. 304 Alferez of frigates. 308 Cadets or midshipmen.

1739

All the subordinate officers rise to the rank of captains of ships of the line by seniority, as well as merit and interest. There is also a corps of pilots having rank as officers. It is composed of four classes, chief pilots, second pilots, coasting and harbour pilots. The chief pilots are divided into two classes, and seem to answer to masters in the English navy, the second pilots to second-masters and masters' mates. This corps has a particular commandant at Cadiz. — Its number in 1798 was 464. Attached to the marine are also corps of engineers, artillery, and infantry. The corps of engineers consists of forty officers. Its chief has the rank of a flag officer, and the others rank with the sea officers according to their classes. The artillery is composed of sixteen brigades, *viz.* six at Cadiz, six at Ferrol, and four at Carthagena, at

each of which ports it has a resident staff. The strength of this corps in 1797 was 2611. The infantry or troops of the marine consists of twelve battalions, four at each royal port : its strength 12,384.

The seamen for the fleet are raised by inscription in classes. 55,000 to 60,000 are registered, but of which not above 40,000 could be levied.

The civil administration of the marine, answering to the English Navy Board, is stationary at Madrid. It consists of an inspector-general, usually a flag-officer, three indentants, *viz.* one for each royal port, always a flag-officer, a chief contador for each of the ports, who has the victualling department, and two treasurers or pay-masters at each port. The subordinate officers, clerks, &c., in this department, make the whole number amount to upwards of 500 persons. The principal civil officers of each port are a chief engineer, who superintends the works carrying on in the dockyards ; and a commandant, charged with their police. The total num-ber of persons employed in the three naval arsenals exceeds 20,000, including 4000 to 5000 galley slaves employed as laborers. Each arsenal has a naval hospital and a marine academy.

The materials for her navy which Spain possesses at home are oak timber, iron, and hemp ; the latter, which was formerly procured from the north, being now furnished by Granada, Arragon, and Navarre, and of it the cordage and sail-cloth are made. A great quantity of cordage is also made of the esparto rush; the cables of this substance, having the property of floating, are peculiarly adapted for anchoring over a rocky bottom. The copper of Mexico and Peru is used for sheathing the Spanish ships. A number of

ships are also built at the Havannah of the cedar of the country.

The interior of Spain is composed of a series of elevated tracks of great length, or of a number of mountain terraces, running principally from east to west, which constitutes its principal geographical feature. The Pyrenees, its northeast barrier, are, in a sense, continued through the north of Spain, in the great Cantabrian chain, running parallel to the Bay of Biscay. Near the middle of this range, in long. 4° 15’, W., breaks off a secondary chain, stretching southward to Cabo de Gata in Granada. This chain is often called the Iberian; from it four greater mountain ridges traverse the country to the shores of the Atlantic, the valleys between each watered by a great river which absorbs the lesser mountain streams. These rivers are from north to south the

Duero, the Tagus, the Guadiana, and the Guadalquivir. In a very different quarter (the northeast) the Ebro receives the waters flowing on one side from the Pyrenees, on the other side from the Iberian range. The interior of Spain (comprising part of Old and New Castile) is an elevated table land, containing several towns, at a height above the sea not usual in the rest of Europe. Thus Madrid is 2200 feet, and St. Ildefonso no less than 3800, above the level of the sea, being the most elevated royal residence in Europe.

Toward the sources of the Tagus the Iberian ridge sends off a branch which, stretching in al-most a southern direction, separates La Mancha from the province of Murcia, to the west of the town of Albacete, and rises into the lofty mountains of Alcaraz and Segura (the ancient Oros-peda), dividing the waters between the Guadalquivir and the Segura, the two main streams which severally and finally convey them to the ocean and the Mediterranean. One of the two great limbs which terminate the Iberian ridge runs into the sea at the Cape Cervera ; the other, bending to the south, skirts the kingdom of Granada, and disappears at the Cape Gata. To the latter belongs the mountain Cabezo de Maria, between Cartagena and Cape Gata, one league west of the town of Vera on the coast of Valencia. It rises 2287 yards above the sea, and has its summit covered with snow during one-half of the year. Smaller branches of this chain project between the Turia and the Gabriel, which loses itself in the Xucar at Cofrentes. A ridge runs between the last mentioned river and the Alcoy, another stream, which flows into the sea near Gandia. A minor chain separates the Alcoy and the mouth of the Segura. The province of Valencia is, in fact, divided by mountains into most fertile stripes, watered by numerous streams, and enjoying every blessing which nature grants to the most favored climates.

The mountains on the right of the Xucar, from Cofrentes to the sea, bear the appellations of Cortes de Pallas and Millares. To the left of the same river the mountains are known by the names of Torres and Dos Aguas, which they change for that of Monte Caballon when they penetrate into Valencia from the province of Cuenca. The rock on which the castle of Mon-serrat stands, near the sea-shore, five league*

west of the lake AUmfera, may be considered as belonging to this ridge. The castle is 313 yaiis above the sea. From the mountains of Millares to the right of the Xucar another ramification projects between the provinces of Murcia and Valencia. Before reaching Villena it bends towards the sea, on the left of the Alcoy, where it is known by the name of Sierra de Mariola. The number, purity, and copiousness of the streams, which are fed by these hills, render them a main source of wealth and comfort to the country. The highest summit of this ridge is called Moncabre"r. Another arm stretches from Villeua, in which we find the Sierra de Viar, the rock of Xixona, the mountain of Aytana, and the pyramidical mountain of Mongo, near the Capes San Antonio and Martin. The longer duration of snow on its top makes Cavanilles believe that it surpasses Moncabrer in height. The southern-most part of the chain, which strikes off at Villena, yields its waters to the stream of the Segura. The interior of Spain, hot in summer, is liable to piercing winds, and is unsuitable to the production of various fruits which thrive in Italy in more northern latitudes. In no country does the temperature vary more according to the wind ; for the lowlying districts in Andalusia, Murcia, and part of Valencia, are often visited by a scorching wind from Africa called the Solano, and very similar in its effects to the Sirocco of Italy and Greece. The elevation of a great part of Spain renders it difficult to make use of its rivers either for irrigation or navigation ; so that a soil which, when watered, is highly fertile, is often left in a dry and parched state. Of the various canals projecting from time to time, the only one hitherto turned to much account is that of Arragon. The canal of the river Manzanares is of use only for bringing provisions to the capital.

The roads in Spain are difficult by reason of the unevenness of the surface; they are good only between Madrid and a few large towns. The cross roads are in general so bad as to necessitate the carriage of most commodities or the backs of mules and horses. In the time of the Romans the Ebro is said to have been navigable up to Logrono, a distance of sixty-five leagues inland. The emperor Don Alonso, in the twelfth century, ordered galleys to be sunk near Zara-goza, as a defence against the Moorish navy. Zurita relates that, in the fifteenth century, king Don Juan sailed down the Ebro from Navarre into Arragon. We find, however, the Cortes of the latter kingdom, under Charles II. of Spain, towards the end of the seventeenth century, deliberating upon plans for expediting the navigation of this river near the sea. A survey was made for the purpose in 1738, but with no practical result. The grand canal of Arragon was at length begun under Charles III., the grandfather of the present king; and were it

completed it would be a splendid monument of the national spirit. The little that exists of the canal of Arragon might, if we believe Antillon, compete with the works of ancient Rome; but, iustead of reaching the sea through the Ebro, and terminating in an artificial harbor, as was intended, it has been carried on for the space of eighteen leagues only

and contributes but little to the internal navigation. Whether it is more favorable to agriculture, by the copious irrigation which it affords in its course, is, we find, a point in dispute. Jovella-nos, in his Informe sobre la Ley Agraria, mentions the farmers' complaints against the canals for irrigation ; all land owners, within a certain distance, being forced to pay a tax for irrigation, whether they have or not the means, or skill, to avail themselves of the benefit. The farms, for instance, near the canal of Arragon, from Zara-goza to Sastago, pay one-fifth of their corn, and one-seventh of all other produce for irrigation.

Spain, abundant in mountain ridges, is naturally rich in minerals ; and the iron works of Biscay, Arragon, and Asturias, have been of great note for centuries. In the other provinces the iron has not as yet been wrought to any extent ; and the gold mines of Spain are to be traced only in the writings of the ancients. Of silver there is only one modern mine at Guadalcanal in Estremadura. The basis of great part of the mountains is calcareous, and the rocks, composed chiefly of varieties of marble and limestone, abound, like those of similar compositions in other countries, in caverns. Precious stones are found on excavating particular spots ; and there are indications of coal mines in various parts, though they are wrought only in Asturias. Salt forms one of the chief products ; but it is procured only by evaporating sea-water, a process to which the climate of Spain is favorable.

As to its agriculture wheat is cultivated in all the provinces of Spain ; maize also is general ; rice is adapted to the low marshy tracts ; barley and oats to the dry and elevated. Speaking generally, the degree of productiveness depends on the extent of irrigation : when that is effectually performed, the crops, of whatever kind, seldom fail in so favorable a climate. In the lowlying grounds the harvest generally takes place in June : manure is applied, not to corn lands, but to gardens and melon grounds. The Spanish hemp and flax are both of the best quality, and might, were their culture extended, be made the basis of very extensive manufactures. The barley is in general good, and the inferiority of the wheat is owing only to a defective system. Oats arc raised in small quantities, and only for the food of horses and

mules ; barley mixed with straw is the more general food of these animals ; hay is not made in Spain. Grain is separated from the straw, not by thrashing, but by the old practice of treading out by cattle ; a method less exceptionable in a dry than in a moist climate. The necessity of importing corn at all arises clearly from the want of easy communication between the provinces, as we learn from official authority that the average crops amount to more thaii 70,000,000 of quintals by weigh* In the kingdom of Arragon there is an annual surplus of 388,000 cahices (2 910,000 bushels) of corn.

In Granada coffee, cotton, sugar, and cocoa, are raised to an extent limited only by the want of capital. Vines are cultivated in every province ; in the southwest, near Xeres, are made the well known sherry and tent ; in the south and east the Malaga and Alicant wines. The vintage in the south of Spain takes place a

month earlier than in France, *viz.* in September and October ; but the raisins or dried grapes are gathered in June. The other fruits are equally rich; olives, oranges, lemons, almonds, and -in the warmest provinces the pomegranate and the palm. The kitchen gardens are chiefly cultivated by irrigation, the water being raised by a wheel : the common products are onions, garlic, melons, pumpkins, and cucumbers. Instead of butter the Spaniards use olive oil, which, from mismanagement in the manufacture, is less pure than that of France or Italy, though the fruit from which it is made is superior.

Cultivation of every kind is as yet very backward. Catholic superstition maintains undivided sway, and the observance of an absurd number of holidays has perpetuated indolent habits, and made the inhabitants of many fertile districts confine their labor to the mere supply of their wants. Corn, from the badness of the roads and the want of canals, may be dear in one district and cheap in another. The purchase made for the granaries is seldom to an extent sufficient to meet the wants of a bad season. Catalonia, since increasing its manufactures and its population, has been supplied with provisions not from the back provinces so much as from other countries. Of the

domestic animals of Spain the cattle are less numerous than the wants of the country require, or the extent of pasture in the higher grounds would afford the means of rearing. Mules are in general use for travelling; and, as to horses, the famed breed of Andalusia is degenerating and very limited in number.

One cause of the backwardness of Spanish agriculture, and of the productive industry of Spain in general, is the loss of time in church holidays. A minor cause is the distance of part of the cultivated lands from the dwellings of the peasantry, the latter living not in detached houses, but in Tillages. There is also a general complaint of want of hands in Spain ; the church having absorbed in its monasteries, as well as in its less humble functions, many who might have been useful as cultivators or manufacturers. A further loss is sustained by the undue proportion of lawyers, students, and genteel professions; while of the lower classes, an extra number be-come men servants, and the lowest of all are not ashamed to go a begging. It is supposed that the agriculturists, who in France form two-thirds of the population, do not in Spain exceed one-third. Add to this, as further discouragements of agriculture, the prohibitions on the export of corn, the injudicious taxes, the difficulty of procuring water during the summer ; the vast hereditary properties, and the right vested in the church and certain large sheep owners. The latter have a right and deed, that of the Mesta, of driving large flocks at certain seasons c ver the entire soil. Bodies of about 10,000 sheep are conducted from province to province in the spring by about fifty shepherds, under the charge of a mayoral or officer of responsibility. The progress of such numerous flocks is necessarily slow, a journey of 400 or 500 miles requiring thirty or thirty-five days. It is usual to shear the sheep by the way, in the large buildings called Esquileios, erected for that purpose. In autumn a similar journey

is requisite, to bring the flocks from the high ground to the plains. Migrations of so frequent occurrence, and to so great an extent, necessarily required specific regulations, and gave rise to the Mesta, an association authorised by government to decide all questions between the shepherds and the farmers through whose lands the migrations take place. Such questions are decided by special courts, who perform a kind of circuit for the purpose. Of the propriety of law and regulation on such a head there can be no doubt ; but great exception is made to several of the existing enactments, such as, that no land that has been once in pasturage shall be cultivated until offered to the Mesta at a certain rate ; that a road of 240 feet in width

shall be left in the cultivated fields, &c. The number of migratory sheep is necessarily various : of late years it has been computed at 5,000,000. The quality of the Spanish wool has long been celebrated ; but it is not clear that that of the migratory sheep surpasses that of the others.

Trade and manufactures. — In a country abounding with fine wool, and not deficient in provisions, flourishing manufactures might be expected; but such are the effects of misgovern-ment that Spain is obliged to import part of her broad-cloth, flannel, and serges, from England and France. In like manner, notwithstanding the productive iron mines of Biscay, she imports great part of her hardware ; so that if we except Catalonia, where both silks and cottons are made, the only manufactures conducted with spirit in Spain are the twisting of silk, the tanning of leather, and the working of Sparto or Esparto grass (Spanish broom) into mats, baskets, and shoes.

In the middle ages the commerce of Spain with foreign countries was confined to a few towns of importance, as Venice, Genoa, Ghent, and Bruges. The discovery of America opened a prospect which would have been eagerly embraced by an active people : in the hands of the Spaniards, it was soon miserably cramped by the spirit of monopoly. Confined at first to Seville, transferred to Cadiz after 1720, and relieved from part of its absurd restrictions in 1739 and 1764, it was at last thrown open, after 1778, to a number of the chief sea-ports. This was productive of the best effects, and the mercantile shipping of Spain received a considerable increase ; but the trade in question never acquired an importance to be compared to that of England with the United States. The Spanish Americans were indolent, had few wants, and but limited means. Part of their imports were long supplied by the English from Jamaica and Trinidad, and a farther part from the United States ; and now, that the shackles of monopoly are definitively broken, there seems little doubt the chief supplies will be received direct from England.

The trade of Spain with England, France, and the Netherlands, comprises a variety of articles both of export and import : w;»h other countries it is less varied. From the Baltic the imports are corn and naval stores; from Greece, the coast of Africa, and the Euxine, they are in general confined to com. The exports consist chiefly of wool, wine, brandy, fruit, olive oil,

silk, salt, and barilla. All these, but in particular wool, salt, fruit, and wine, form exports to England. In return, the chief imports are woollen cloth, hardware, and cottons from England; linen from Germany and Ireland; woollens, jewellery, and paper, from France ; and salt fish from England and Newfoundland. The intercourse between Spain and Britain would have been much greater, had not the transfer of the crown of Spain to a branch of the Bourbons produced a political jealousy and consequent connexion between Britain and Portugal. The total value of exports from Spain in 1792 was computed at £7,000,000 sterling; and it probably has in no year exceeded £8,000,000 or £9,000,000, equal to about a third of those of France, or a sixth of those of Great Britain. The principal sea-ports are Cadiz, Barcelona, Carthagena, Malaga, Alicant, Corunna, Bilboa, and St. Sebastian. The proportion of foreign trade carried on in Spanish bottoms was altogether insignificant, until 1778, and since then it has not been large, the Catalans and Biscay-ans being almost their only navigators. Mercantile questions are in general decided oy special courts, like the tribunals of commerce in France.

‘ In 1802,’ says a Spanish history of the late war, published in 1808, ‘ the produce of our industry was calculated at 350,000,000 francs ; but it was soon reduced to much less in consequence of the maritime war (with England) aim the malversations of the prince of the peace. The effects of these checks were the more felt, as the remittances from the American colonies were inadequate to cover the deficit. Our industry in 1808, represented by the amount of its produce, was to that of France nearly as seven to forty. Our commerce in 1802, soon after the peace of Amiens, was to that of France as two to three — such, at least, is the result of the statistical documents published by the continental powers at that period. But according to the more accurate estimate presented to government by Mr. Canga Arguelles, in 1803, the proportion was that of twenty-eight to 182, which, in fact, differs but little from the preceding.

‘ When Great Britain declared against us, in the following year, our commerce, which was just beginning to recover from the losses of the past war, may be said to have received its death wound. Our mercantile companies, then the most powerful in Europe, were ruined by the general stagnation of trade, by the large and frequent loans

made to a government who never paid either interest or principal. The Philippine Islands Company, whose funds were immense, failed to the amount of 6,000,000 (of francs). The deputation of the five Gremios of Madrid, well known to all Europe for its credit and wealth, was ruined, partly by the inactive state of our industry, partly by the financial operations of our ministers. Neither the national bank of San Carlos, which opened with a capital of 75,000,000 (of reals, about £7,500,000 sterling), nor the Royal Maritime Company, created in 1789, could realise their objects, or even preserve their funds, which were soon drained, to fiH the strong chests of the favorite, or spent in

France for the support of armies which were, at no distant period, to be employed against us.

‘ The failure of remittances from Spanish America, the enormous subsidies which we paid to France, and the ruinous measures by which the annual deficits were met, exhausted the treasury, and put an end to public credit. No funds were safe from the hands of the favorite. The capital of the bank, that of the Monte de Piedad, the judiciary deposits, the pauper’s fund, — all was seized by servile ambition, that it might support injustice and prodigality. The plans of internal navigation were forgotten, the public works then in progress were suspended, and those that had been concluded were left to d«»cay for want of means to repair them. The government, wholly intent on guilty schemes of momentary advantage, not only neglected the country whose interests it was their duty to promote, but actually increased the obstacles which were opposed to her industry. Custom-houses were found in every direction, the roads were crowded with revenue officers, and tolls were levied it every step, upon travellers. The merchants were compelled to make declarations injurious to their interests ; and, when they had gon* through ten thousand vexatious forms, they could not yet feel secure, or beyond the reach of the fiscal vultures.’

The Roman Catholic, we need hardly add, is the only religion tolerated in Spain. The inquisition was introduced soon after 1492, to watch over and eventually to clear the kingdom of the Jews aiid Moors. In the sixteenth and seventeenth centuries it found means to extend its power over the Christian sectaries ; but in the eighteenth it became little else than an engine of police. It was abolished by Buonaparte, but restored by Ferdinand in 1814: in 1820 it was abolished, until, on the return of the blessed Ferdinand, it was re-established by acclamation ! Its judges in former ages were chiefly

Dominican monks ; they in modern times have consisted of regular clergy, with a certain proportion of lay-men. The property of the church was one ot the earliest objects of attack on the part of the Cortes in 1820, and with reason ; for, though the conduct of many of the clergy was exemplary, the division of income was so unequal, that while several prelates, such as the arcHbishop of Valencia, had an income of £20,000 sterling, and the archbishop of Toledo three times as much, the lower clergy lived in a state of poverty. They were besides far too numerous ; for, while the prelates of Spain consisted of eight archbishops and sixty-one bishops, the minor clergy were not short of 40,000, distributed throughout 18,871 parishes. In addition to these, 2000 monasteries contained nearly 50,000 monks ; and 1075 convents, about 20,000 nuns. Part of these monasteries and convents are now (1821) abolished, and the inmates allowed a small pension for life, government having appropriated their lands to the public treasury. The direct taxes paid by the clergy were insignificant; but the dues raised on church property, in the shape of first fruits (annates) and temporary vacancies, were inconsiderable. The clergy were amenable, not to civil courts, but to those of the bishops ;

and the appeals from the latter lay to a court at Madrid, in which the papal nuncio was president.

The universities of Spain, formerly twenty-four in number, have been progressively reduced to eleven, and of these, few are well conducted. The antiquated system of logic, and other parts of scholastic philosophy, continued to be taught until the middle of the eighteenth century, when the government, roused by ridicule at home, and the example of improvement abroad, at last prescribed alterations, which, however, still leave the Spanish universities greatly behind those of France, Germany, or Great Britain. In most of the monasteries are schools instituted for the education of the monks, but open to youth generally. The instruction given there is replete with superstitious notions. Of the various schools of the kingdom unconnected with monasteries, many are conducted on a plan less exceptionable, but

still far from corresponding to the general advancement of the age. Madrid has a public library of fully 100,000 volumes; and there are collections on a smaller scale in other cities ; but as yet, at least, they are greatly deficient in good modern publications. Spain appears to have had very little national literature until the reigns of Charles V. and Philip II., a period still cited as its golden age, but evidently overrated, its eminent writers having been few, and the succeeding centuries (the sixteenth and seventeenth) having been avowedly feeble, without any cause of decline. At last, in the middle of the eighteenth century, the government and a small but distinguished body of individuals, be-came conscious of the national inferiority, and began to labor for the diffusion of improvement. Still good books in the Spanish language are not many, but they date in general from that period. The basis of the Spanish language is the Latin, with a mixture of Celtic, and, in the southern provinces, of Arabic. It is sonorous and harmonious, pronounced almost literally as it is written, and is a fine language, when exhibited without that tendency to amplification, so common among Spanish writers. Of the fine arts, the Spaniards have been most successful in painting and architecture.

The judges of petty offences in Spain are the alcades, officers corresponding to the justices of peace in Britain, or more properly combining the functions of the French mayor and judge of the peace. Next come the corregidores and alcades mayores, a class whose jurisdiction is somewhat more comprehensive, but still limited to a district, and subject to revisal by the audiencias, or great courts, whose jurisdiction is extensive, and whose decisions can be reversed only in Madrid. These audiencias are established in a number of the principal towns, such as Seville, Granada, Valencia, Barcelona, Saragossa, Valladolid, Oviedo, Corunna, Caceres in Estremadura, and Palma in the island of Majorca ; to which are to be added, the council of Navarre, and the council of Castile at Madrid, the latter forming, like the court of cassation in France, the final judicature, or court of appeal for the kingdom. The alguazils, like the constables or bailiffs in Britain, are officers charged with arrests and the

pursuit of thieves. In general the administration of justice in Spain is defective, less from want of integrity or ability in the individuals, than from the retention of pernicious forms. A class of agents called escrivanos, or writers, were, until the late revolution, alone entitled to receive depositions, rejoinders, or other papers relating to a process ; and, by a singular usage, the defendant was obliged to employ the same agent as the plaintiff. This absurd practice, and the power of the

agents to choose their court, when there happens to be two courts in the district, was long the subject of complaint. Another peculiarity in the administration of justice in Spain was the number of special courts, such as those for church affairs, for military, naval, mercantile, or even medical questions, all founded on a proper principle, but suspected, from their imperfect constitution, of partiality to the particular class, at the expense of the public. A more substantial ground of complaint lies in the great distance to which, in this thinly peopled country, a person was often obliged to travel, before reaching a court.

Spain is divided into eleven military governments, *viz.* Madrid, Old Castile, Arragon, Catalonia, Valencia, Murcia, Navarre, Guipuzcoa, Andalusia, Galicia, and Estremadura. Each ot these had, before the late revolution, a governor or captain-general, and each is divided into several smaller governments. The army consists of cavalry, infantry, and artillery, and is at present (1821) about 50,000 in number. The guards or household troops have been, since the late revolution, assimilated to the rest of the army, while the Swiss regiments have been disbanded, and a number of the soldiers re-enlisted in Spanish regiments. There is also a national militia, liable to serve when called out by the executive power. The strength of the Spanish army has varied greatly of late years : its general character is courage in the lower ranks, and a want of professional knowledge in the higher. There are artillery schools in several towns, such as Segovia and Alcala de Henares ; but the instruction is antiquated, and in general the education of Spanish officers is so imperfect, that a great proportion of their superior officers for ages have been foreigners, Germans, Italians, and Irish. The war ended in 1814 left with them a num-ber of British officers. The young men of family in Spain, though by no means deficient in courage, seldom choose the army as a profession. They do so far less generally than those of Germany, France, or even England. The result is, that the far greater number of officers serving in the Spanish army have been raised from the ranks, thus forming a new obstacle to the admission of men of family, in a country where it is disreputable for the latter to associate with the unfilled class.

The revenue of Spain arises chiefly from taxes, but in some measure also from the royal domains, and from the crown and chancery dues. The latter include the fees payable by persons on their instalment into certain offices, or on the receipt of certain titles. The taxes consist, as in the other countries of Europe, of the customs, the excise, the post-offices, and the government mo-

nopolies, the chief of which are salt, tooacco, lead, gunpowder, and cards. Among the principal imports is a tax of two per cent, on Spanish, and three times as much on foreign articles, whenever they change hands ; a tax which, impolitic as it is, is levied without abatement on those commodities which go through several stages of preparation. Thus, tallow is taxed first when sold by the butcher, and afterwards when made into candles. The alcabala, or alca-vala, is that portion of this tax which falls on furniture. It is nominally fourteen per cent. ; and, though not collected at a rate of more than six or seven per cent., it is equally pernicious as the tax of five per cent, on the sale of land and houses in France. Among the farther taxes are the milliones, or impost on hearths and spirituous liquors, at first a free gift, but perpetuated by royal edict ; and the crusada, arising from the sale of indulgences to eat meat on certain fast days, a tax of no slender amount in so bigoted a country. These various collections are effected by a number of agents, far greater than we are accustomed to in England ; and, though the salaries of the individuals employed are low, the per-centage, or general rate of the collection, is very heavy. The revenue derived from the American mines, though far less than was vulgarly supposed, was not inconsiderable; but after 1810, or rather after 1814, Spanish America became a source of expenditure ; and at present the revenue from this quarter may be considered as definitively lost. All the finances of Spain have long been in a state of disorder, and the public funds at a great discount.

In 1817 the net amount of revenue was about £6,000,000. The expenditure was computed as follows : —

Army and ordnance

Navy .- .

Administration of justice, and other provincial charges . . ‘.. •*

Interest of the public debt and treasury charges . ; . .

Civil list . . :.•••«. ;:-.v

Foreign department . .. .

Bounties … . • »

AH other charges . . “• . ; .’

£3,500,000

1,000,000

1,250,000

1,150,000 550,000 150,000 100,000 300,000

£8,000,000

The actual expenses of the year proved, however, somewhat less, and the deficit did not ex-ceed £1,200,000.

Spain was long a limited monarchy, the people being represented by their cortes, an assembly which, though rude, and constituted on principles very different from those of true representation, performed the ddty of guarding the public purse, and of making known the public grievances. But after the Union in the fifteenth century oc *he different provinces into one kingdom, the concentration of power in the executive branch enabled the latter to dispense with the cortes, and to encroach on the privileges of the provinces ; so that, on the accession of the house of Bourbon, in 1700, there remained hardly any vestige of independence, except in Biscay. The title of the king of Spain is that of Catholic majesty ; the heir apparent is prince of the Astu-

nas ; the other princes of the royal family are cailed infants, the princesses infantas. It is a remarkable fact in the history of Spain that its rulers, since the earliest records, have been foreigners, or of foreign extraction. The chief council of state, prior to the revolution of 1820, was the chamber of Castile. It was vested with great powers, and in

several respects represented the regal office. The cabinet is composed, as in the other kingdoms of Europe, of a minister for each important department, *viz.* the treasury, the foreign affairs, the army, the navy, the administration of justice, and the home department. The body called council of state has been, since the beginning of last century, little more than honorary, the title of member of this council being granted, like that of minister of state in France, to persons of rank who have held a high office, such as that of intendant of a province, or viceroy in the colonies. The king was grand master of the four military orders of Caletrava, Alcantara, Santiago, and Montesa, and the affairs of these associations were administered, until the changes introduced by the late revolution, by a special council called the council of the orders. Colonial affairs were committed to the management of the council and chamber of the Indies, resident at Madrid.

Ceremonial is an object of great attention with the Spaniards : the right of standing covered in the presence of the king, enjoyed formerly by all who were above the common class, was confined, after the accession of Charles V. to the imperial crown, to the titulados.

In Spain, as in Germany, there prevails & great deal of aristocratic pride, and a scrupulous distinction of classes. The nobility, as in Britain, bear the titles of duke, marquis, or count, and are styled collectively, titulados. The gentry are called hidalgos. But these points of etiquette differ materially in different provinces In Estremadura they are little attended to, while in Biscay and the Asturias almost all the inhabitants lay claim to rank. A more substantial privilege, that of entailing their estates, possessed formerly by all persons of good family, was in a great measure abolished by the revolution ; the number of these entails (mayorazgos) being one of the chief causes of the backward state of the country.

The different provinces of Spain have as little connexion, and almost as little similarity of character, as those of the Austrian empire, as Bohemia, Hungary, and Carinthia. The characteristics most general are a degree of stateliness or gravity, and the more important quality of sobriety, both in eating and drinking. Their backwardness in military affairs arises from want, not of courage, but of activity, and a tard iness in adopting improvement. Indolence is the vice of the inland and southern provinces; it may in fact be termed the vice of the nation, though striking exceptions are found, above all, of Catalonia. Towards strangers the Spaniards are in general reserved ; in society they are much otherwise. Their dress, formerly national and peculiar, is now similar to the fashions of France and England : the men, however, still occasionally wear the cloak and slouched hat; the women dress

frequently in black, with white veils. The mode

of entertaining is not by dinners, but by evening parties, where the refreshments presented are very slight. The higher ranks keep a number of domestics, who, having little to do, are almost entirely lost to productive labor. In their dwellings the great object of the Spaniards is to exclude the heat; and, as few precautions are taken against cold, winter, though comparatively short, by no means passes with impunity. Religious processions in the true Catholic style are. still common in Spain, and are the object of devout attention. The well known national amusement of bull-fighting was discouraged by government in the end of the eighteenth century, but has since been revived : the national dances, the Bolero and Fandango, are still performed as in former ages.

The exaggerations in regard to the wealth and Copulation of Spain in former ages, are to be attributed partly to the Arabic, and partly to the

The Spanish population, in the year 1788, was thus exhibited : it may serve us to contrast to the more recent tables.

BISCAY.

Alava . Guipuzcoa Lordship of Biscay

71,399 . 120,716 . 116,042

308 157

Arragon . Catalonia

.

623,308 814,412 347,776

Galicia . Estremadura .

.

1,345,803 416,9‘22

ANDALUSIA.

Kingdom of Seville . 754,293 Kingdom of Cordova . 236,016 Kingdom of Granada . 661,661 Kingdom of Jaen . . 177,136 Sierra Morena . . 7,918

Kingdom of Murcia Kingdom of Valencia . Kingdom of Navarre

Mancha

NEW CASTILE.

Jurisdiction of Cuenca . 266,182 Jurisdiction of Guadalaxara 144,370 Jurisdiction of Toledo . 334,425 Province of Madrid . 58,943 City of Madrid . . 156,672 Arunjeuz, royal demesne 2,656

Le Pardo, royal demesne 611

OLD CASTILE.

Jurisdiction of Avila . 115,172 Jurisdiction of Burgos . 465,410 Jurisdiction of Old Castile 74,669 Jurisdiction of Segovia 167,525

Jurisdiction of Soria . 170,565 Jurisdiction of Valladolid 196,839 S. Ildefonsa, royal demesne 4,331 The Escurial, royal demesne 2,453

KINGDOM OF LEON.

Jurisdiction of Leon . 250,134

Jurisdiction of Palencia 112,514

Jurisdiction of Salamanca 210,380 Jurisdiction of Toro . 92,404

1,837,024 337,686 783,084 227,322 206,160

933,865

1,196,964

665,432

early Spanish writers. They remained uncontradicted until the latter part of the eighteenth century, when Capmany and a few othe writers began to open the eyes of the public. Successive wars in the interior, from the eighth to the fifteenth century, necessarily retarded the increase of both wealth and population, leaving the boasted Spain of the age of Charles V. and Philip II. far inferior to that of the present day. Her influence on the foreign politics of that age was owing entirely to the weakness of other states, as was sufficiently proved by the limited force which she employed in her war against the Netherlands, and even in thaUefFort of three years of preparation, the armada against England. As to the Spanish manufactures of that age, it appears that the higher classes wore the cloth of Ghent, Bruges, and Milan, and that the use of Spanish woollens was confined to the Ipwer orders.

The population and principal divisions of Spain, in 1803, will appear by the following official table.

Provinces.

Total of .nhabitants.

Surface in square leagues 20 to a degree.

Inhabitants to a square league.

Province of Madrid

228,520

110

2078

Guadalaxara

121,115

163

743

Cuenca …

294,290

945

311

Toledo …

370,641

734

505

Marietta .

205,548

631

326

A’vila …

128,061

215

549

Segovia …

164,007

290

566

Soria

198,107

341

581

Burgos …

470,588

642

734

Extremadura .

428,493

1,199

3.57

Kingdom of Cordoba

252,028

348

724

Jaen ….

206,807

268

772

Seville …

746,221

752

992

G ranada . .

692,924

805

861

Colonies of Sierra

Morena … .

6,196

108

57

Kingdom of Murcia

383,226

659

582

Arragon …

657,376

1,232J

534

Valencia . .

825,059

643

1283

Principality of Catalonia ….

858,818

1,003

856

Island of Majorca .

140,699

112

1256

Minorca …

30,990

20

1550

Ibiza and For—

mentera . .

15,290

15

1019

Kingdom of Navarre

221,728

205

1082

Province of Biscay .

111,436

106

1051

Guipuzcoa . .

104,491

52

2009

A’lava …

67,523

90j

746

Principality of Astu-

364,238

308ˆ

1180

Province of Leon .

239,812

493

486

Palencia . V

118,064

145

814

Salamanca . .

209,988

471

446

Valladolid . .

187,390

271

692

Zarnora , . .

71,401

133

537

Toro ….

91,370

165

590

Kingdom of Galicia .

1,142,630

1,330

859

10,355,075

15,005i

690

716

SPALLANZANI.

SPAITLA, a town of Africa, in Tunis, which, according to Dr. Shaw, is one of the most remarkable places in Barbary, from the extent and magnificence of its ruins. It has a most sumptuous triumphal arch, of the Corinthian order, consisting of one large arch, with a smaller one on each side. From this arch all along to the city, there is a pavement of large black stones, with a parapet wall raised breast high, on each side ; at the end of this pavement is a beautiful portico, built in the same style with the arch, which leads into a spacious court, where there are ruins of three temples, with many columns, tablatures, &c., perfectly entire. Spaitla is seated on a rising ground, shaded with juniper trees ; 110 miles southwest of Tunis. It was anciently called Suffetula.

SPAXATRO, a sea-port of Austrian Dalma-tia, on the gulf of Venice, the see of an archbishop, who is also metropolitan of Croatia. It stands on a peninsula in the form of a crescent, connected with the main land by a narrow isthmus. The harbour is spacious and deep, though not protected from all winds. The town is fortified both on the sea and land side, being commanded by several eminences. Population about 7500. Here are manufactures of woollen, silk, and leather. The fishery on the Adriatic is considerable, as well as the shipping business. The Turkish caravans, from Bosnia and Servia to Venice, usually deposit their goods in the Lazaretto in this place. Spalatro contains several Roman edifices. Dioclesian, on abdicating the imperial crown, retired to Illyria, built a palace in the neighbourhood of Salona; and two-thirds of the present city of Spalatro stand within the walls which

surrounded this retreat ; and which form a regular quadrangle, with a gate on each side. The whole of this part of the city is full of ancient arches and monuments. The cathedral is in fact an ancient temple in remarkable preservation : 110 miles northwest of Ragusa, and thirty southeast of Sebenico.

SPALDING (Charles), a late celebrated Scottish mechanician, a native (we think) of Edinburgh, who merits to be recorded in a dictionary of arts and sciences, for having made the most capital improvement that had then been, or probably has yet been made, upon the diving-bell. See DIVING-BELL. Of this useful improver of science we have met with no memoir ; which seems rather ungrateful, as he lost his life in the public service, trying farther experiments and improvements upon his diving-bell in the harbour of Dublin ; and, if report says true, he lost his life by the invidious and maliciously designed negligence of an Irishman, who was his competitor for fame in that art, and to whom he trusted to supply him with air, and to pull him up at the proper signals. This much of his history only is known to the writer of this article, from personal acquaintance, that, before he made his improvement on the diving bell, he was for several years in a respectable line of business, as a confectioner, in an elegant shop in the front of the Royal Exchange at Edinburgh ; and where for several years after he had made his improvements, his wife kept up the business while he was absent at London, Dublin, or elsewhere, forwarding his experiments.

SPALDING, a market-town and parish in the district of Holland, Lincolnshire, situate near the mouth of the river Welland, twenty miles N. N. E. from Peterborough, and ninety-seven north from London. The Welland being navigable, the town carries on a considerable traffic in coals and corn, and supplies Yorkshire with large quantities of wool. The houses are neat, and the streets very clean. Great quantities of hemp and flax are grown close by. The church is an extensive ancient building, and in the town are five chapels for dissenters, a theatre, prison, and town-hall, where the quarter sessions and assemblies are held ; a free-grammar school, charity-school, and some newly erected alms-houses. A literary society, of which Sir Isaac Newton was a member, was established by Mr. Maurice Johnson, a native of the town ; but since his death it has dwindled into insignificance, and is now merely a social club. For many centuries Spalding has been the principa’ seat of jurisdiction for the division of Holland In the Saxon times the courts of law were held here by the earls ; and, subsequent to the Nor-man conquest, the

priors were invested with the judicial authority. Spalding is a place of great antiquity. Its priory, which in succeeding times became a monastery of great consequence, was founded and endowed in 1051 by Thorold de Bukenhale. The market-place is very spacious ; and has a large cattle-market on Tuesday. Fairs April 27th for hemp, flax, cattle, and sheep ; June 29th for merchandise, cattle, and horses • August 28th for horses ; September 25th for all kinds of goods and cattle, and December 6th. The church is a curacy.

SPALL, n. s. Fr. espaule. Shoulder. Out of use.

Their mighty strokes their habergions dismay ‘d, And naked made each other’s manly tpalles.

Fairfax.

SPALLANZANI (Lazarus), a late eminent naturalist, born at Scandiano, in Modena, on the 10th January, 1729. He was son of John Nicholas Spallanzani, an esteemed lawyer, and of Lucia Zugliani. He studied in his own country, and at the age of fifteen went to Reggio to improve himself. The Jesuits instructed him in the belles lettres ; but his passion for knowledge led him to Bologna, where his relation, Laura Bassi, a woman justly celebrated for genius, eloquence, and skill in natural philosophy and mathematics, was one of the most illustrious professors of the Institute, and of Italy. He soon availed himself of that lady’s wise counsels. He studied his own language with care, and perfected himself in the Latin, but attached himself to the Greek and the French. Homer, Demos-henes, St. Basil, were his favorite authors. He applied himself to jurisprudence at the instance of a father whom he tenderly loved, and was upon the point of receiving the degree of L. Civ. D., when Anthony Vallisneri, professor of natural history at Padua, persuaded him to renounce his vocation, and obtained the consent of his father. Spallanzani was soon famed all over Italy. The university of Reggio, in 1754, chose him to be professor in logic, metaphysics, and Greek. He taught there for ten years ; but consecrated all the time he could spare to the obser-SPALLANZANI.

vation of nature. His observations upon the animalculse of infusions fixed the attention of Haller and Bonnet ; the latter assisted him in his glorious career. In 1760 Spallanzani was called to the University of

Modena, and had offers of those of Coimbra, of Parma, and of Cesena ; but his patriotism made him prefer his own country. He remained at Modena till 1768, and he saw raised by his care a generation of men constituting at this time the glory of Italy ; particularly Venturi, professor of natural philosophy at Modena ; Belloni, bishop of Carpi ; Luc-chesini, ambassadorof the late king of Prussia; and the poet Angelo Mazzo of Parma. At Mo-dena Spallanzani published, in 1765, Saggio di Osservazioni Microscopiche concernente il Systema di Needham e Buffon. He therein establishes the animality of what had been called, but not generally assented to, microscopic animalculae, by the most ingenious, and at the same time, solid experiments. He sent this work to Bonnet, who from that moment formed the most intimate acquaintance with him, and it lasted during their lives. In 1765 he also published a dissertation truly original : De Lapidibus ab Aqua resilientibus. In that work he proves, by satisfactory experiments, contrary to the commonly received opinion, that the ducks and drakes (as they are called) are not produced by the elasticity of the water, but by the natural effect of the change of direction which the stone experiences in its movement, after the water has been struck by it, and that it has been carried over the bend or hollow of the cup formed by the concussion. In 1768 he prepared the philosophers for the surprising discoveries he was about to offer them, by publishing his Prodrome di un Opera da Imprimersi sopra le Riprodu-zioni Animali. He therein laid down the plan of his work ; but this simple prospectus contained more real knowledge than all the former books on the subject, because it taught the method to be followed in this dark research, and contained many unexpected facts ; such as the pre-existence of tadpoles at the fecundation, in many species of toads and frogs; the reproduction of the head cut off from snails, which he had communicated to Bonnet in 1766, and which was disputed for some time, in spite of the repeated confirmation of this phenomenon by Herissant and Lavoisier. He demonstrated it again afterwards in the Memoire della Societa Italiana ; as also the renewal of the tail, the limbs, and even the jaws, taken from the aquatic salamander. These facts continue to astonish even at this day, though now familiar. The physiology of Haller, that Spallanzani studied, fixed his attention upon the circulation of the blood, in which he discovered several remarkable phenomena. He published, in 1768, a small tract, Dell' Azione del Cuore ne' Vasi Sanguigni nuovi Osservazioni ; and he reprinted it in 1773, with three new dissertations, De' Fenomeni della Circolazione osservata nel' Giro universali de' Vasi; De' Fenomeni della Circolazione Languente ; De' Moti del Sangue, independente del Azione del Cuore e del Pulsare delle Arterie. This work contains a series of observations and experiments of the most ingenious and

delicate nature, upon a subject of

which the surface only is known. It merits the attention of physiologists. When the, University of Padua was re-established upon a larger scale, the empress Maria Theresa directed the count de Firmian to invite him to fill the chair, as professor of natural history. He accepted, and his success was as great as his merits. Spallanzani united a vast extent of knowledge to a fine genius. His ardent love of truth made him discuss with care the theories which prevailed, to discover their weak sides. An eloquence, at once plain and lively, animated his discourses. At the university, Spallanzani took the Contemplation de la Nature of Bonnet for his text book ; he translated it into Italian, and enriched it with notes ; he prefixed a preface to it, wherein he pointed out the subjects of the vegetable and animal economy to the attention of his pupils, with the means of succeeding in their researches. He published the first volume of his translation in 1769, and the seco-id in 1770. He published, in 1776, the two first volumes of his Opuscoli di Fisica Animale e Vegetabile, in farther explanation of the microscopic observations which had already appeared. Needham, not satisfied-with the microscopic observations of Spallanzani, challenged the professor of Reggio to a reperusal of what he had written. Spallanzani has received much praise for the politeness with which he carried on this controversy, and for the severe logic with which he demonstrates to Needham the causes of his error, and proves that the animalcule of infusions are produced by germs; that there are some of them which defy, like certain eggs and seeds, the most excessive cold, as well as the heat of boiling water.

Spallanzani was placed at the head of the university's cabinet of natural history, but its treasure no longer existed. He laid the foundations, however, for its renewal, and by his care it is become one of the best in Italy. He enriched it through his repeated travels by land and sea, in Europe, in Asia, across the Appennines, the Alps, the Krapacks, at the bottom of mines, on the top of volcanoes, at the mouth of craters. In 1 779 Spallanzani ran over Switzerland and the Orisons ; he then went to Geneva, where he spent a month with his friends. He returned to Pavia and published, in 1780, two new volumes of his Disser-tazione di Fisica Animale e Vegetabile; wherein he illustrates two very obscure phenomena concerning the vegetable and animal economy. He made some experiments upon digestion ; he repeated Reaumur's experiments upon the galli-naceous birds ; and he observed that the trituration, which is in this case an aid to digestion, could not, however, be a very powerful means. He saw that the

gizzard of those birds which pulverise the stones of fruit to pieces did not digest the powder so formed; that it was necessary it should undergo a new operation in the stomach, before it could become fit chyle for affording the elements of the blood and other hu-mors. He proved that digestion is performed in the stomachs of numerous animals by the powerful action of a juice which dissolves the aliments ; and he even had the courage to make several experiments on himself, and completed ‘ his proofs by artificial digestions, made in glasses upon the

table, by mixing the chewed aliments witn the gastric juice of animals, which he extracted from their stomachs. This subject is one of the most difficult in physiology. Spallanzani, in this work, analysed the facts to discover their causes with certainty, and invented resources for sur-nounting obstacles. This work put John Hun-ter out of humor; and he published, in 1785, Some Observations upon Digestion, wherein he threw out some bitter sarcasms against Spallanzani, who took ample revenge by publishing this work in Italian, and addressing to Caldani, in 1788, Una Lettera Apologetica in Risposta alle Osservazione del Signer Giovanni Hunter. He exposes with moderation, but with an irresistible logic, the oversights of the Scottish physiologist, and points out his errors in a manner which left him no room to reply. The second volume treats of the generation of animals and plants. He shows the seed in the flowers before the emission of their farina; and by a subtle anatomy, of which one can hardly form an idea, exhibits to the eye in the flower of the spartium junceum, the siliqua, its seeds, with their lobes, and the embryo plant : he pursues them in their expansion before and after fecundation, and leaves not a doubt but that the seeds and the pericarpia existed long before the blossoming of the buds, and consequently a long time before they could have been fecundated. He has repeated these observations upon various species of plants, with the same results ; in short, he has raised the individuals of plants with female flowers which have borne fecundated seeds, although they were out of the reach even of suspicion of a communication with the farina of the male flowers. Such is the series of surprising phenomena Spallanzani adds to the history of nature. He availed himself of the academical vacation of 1781, to make a journey, the object of which was to add to the cabinet of Pavia. He set out in July for Marseilles, where he

commenced a new history of the sea, which had presented him with a crowd of curious facts upon numerous genera of the inhabitants of the ocean. He went likewise to Finale, to Genoa, to Massa, and to Carrara, to observe the quarries of marble so famous with the statuaries ; he returned to.Spezzia, and thence brought to Pavia an immense number of fishes, crustaceous and testaceous, which he deposited in that cabinet. He also visited the coasts of Istria in 1782 ; the Appennine mountains in 1783, where he noticed the terrible hurricanes, and the surprising vapors which rendered that year so famous in meteorology. The cabinet of Pavia thus became the object of a stranger's admiration, and particularly Spallanzani, who had collected every part of it. The emperor Joseph III. had a conversation with Spallanzani and presented him with his medal in gold. The university of Padua offered to Spallanzani, in 1785, the chair of natural history, vacated by the death of Anthony Vallisneri ; but the archduke doubled his pension, and sent him to accompany to Constantinople the chevalier Zuliani, ambassador from the republic of Venice. He left this city the 2lst of August; and during his voyage made observations upon the marine productions of those climates, as well as upon the meteorological events of every day ; among which he had the advantage of beholding a species of water-spout. He touched at several islands in the Archipelago; went ashore at Troy, to visit the places sung by Homer ; and made some geologi-cal observations and memoirs, which have appeared in the Memoire della Societa Italiana, upon the water-spouts at sea, the stroke of the torpedo, divers marine productions, and the island of Cytherea, where he discovered a mountain composed of various species of fossils. He arrived at Constantinople llth of October and remained there eleven months. The physical phenomena of this country fixed his attention ; he climbed up the neighbouring hills; visited the island of Chalki, where he made known to the Turks a mine of copper. He went to the Principi Island, a few miles from Constantinople, where he discovered an iron mine. He returned to Europe loaded with spoils from the east, hav-ing set out on his return for Italy the 16th of August 1786. When he arrived at Bucharest, he was detained there nine days by the celebrated Mauroceni, hodospar of Wallachia. This prince, the friend of Science, received him with distinction, presented him with many of the rarities of his country, furnished him with horses for travelling, and gave him an escort of thirty troopers throughout his dominions. Spallanzani passed by Hermanstadt in Transylvania and arrived at Vienna the 7th of December, after hav-ing viewed the numerous mines of Transylvania, Hungary, and Germany, which lay near his route. Spallanzani remained five days in Vienna, had two long audiences with the emperor Joseph II., was well received by the nobility, and visited by

the men of letters. At length, arrived at Pavia, he was received by the students with every demonstration of joy. He had .n the course of this year above 500 students. Spallanzani had acquired glory enough to merit the attacks of envy, which called in question his uprightness in the administration of the cabinet of Pavia, though the whole was the fruit of his own labors ; but the integrity of Spallanzani appeared even more pure after the juridical examination of the tribunals. Determined to investigate the nature of volcanic matters he set out for Naples in summer, 1788, and ascended Mount Vesuvius : he looked attentively into its crater, examined and took notes, and embarked for the Lipari islands. In this investigation he exhibited the intrepidity of a warrior defying the most imminent dangers. He had the boldness to walk over that sulphureous crust, cleft with chinks, trembling, smoking, and burning, with every risk of falling into the volcano. He passed into Sicily, where he climbed up to ˆttna, and coasted its immense crater. He examined the stones and the mountains of Sicily, and discovered many new marine animals ; he approached Scylla and Charybdis, and in a boat crossed the frothy billows of those deadly rocks, celebrated forsoman,y shipwrecks; but in the very midst of their frightful waves he discovered the cause of their fury. See SCYLLA. Thus, at the age of sixty, he picked up those valuable anecdotes which fill his voyages in the two Sicilies; and compared the description which Homer, Pindar, Virgil, Dioilorus Siculus, and

Strabo, have given of these famous places with that which he made himself, lie now gave, in his voyages, a new volcanology, and illustrates his theory by artificial pumice stones. He concludes with some interesting enquiries into the nature of swallows, their mild dispositions and rapid flight; suggesting that an advantage might be drawn from them in the way of aerial post; their migrations determined by the temperature of the air, and the birth of insects it occasions ; in short, he discusses the famous problem of their

remaining benumbed during winter ; and proves that artificial cold, much greater than that ever naturally felt in our climates, does not render these birds lethargic. He next speaks of a species of owl hitherto ill described; and, lastly, of eels and their generation, which is a problem still in some measure to be solved. Spallanzani early adopted the new sys-tem of chemistry. The solidity of its principles, and the accuracy of its conclusions, led him to anticipate with pleasure the triumph that it was about to obtain. In 1791 Spallanzani published a letter addressed to professor Fortis, upon the Pennet Hydroscope ; but confesses that he is not decided upon the reality of the phenomenon. In 1795 he made a discovery, which he published in his Lettere sopra il sospetto d'un nuovo senso nei Pipistrelli ; viz., that the bats, if blinded, act in every respect with the same precision as those which have their eyes ; that they in the same manner avoid the most trifling obstacles, and that they know where to fix themselves on ceasing their flight. These extraordinary experiments surprised him ; but the anatomical details of professor Jourine, upon the organ of hearing in this singular bird, made him conclude that the sense of hearing might in this case supply that of sight. Spallanzani concluded his literary career, by a letter addressed to the celebrated Giobert ; Sopra la piante chiuse ne' vasi dentro 1'aqua e 1'aria esposte a 1' immediata lume solare e a 1' ombra. These numerous works did not contain all Spallanzani's labors. He had been occupied a considerable time upon the phenomena of respiration in a great number of animals ; and he was busily employed in reducing to order his researches upon this subject. He has left a collection of experiments and observations upon animal productions, upon sponges, the nature of which he determines, and upon a thousand interesting phenomena which he knew how to draw out of obscurity. He had almost finished his Voyage to Constantinople, and had amassed considerable materials for a History of the Sea, when, on the 4th of February, 1799, he was seized with a retention of urine, and in the morning lost all powers of reason, which he never recovered but during short intervals. His intimate friends, Tourdes, a French physician, and the celebrated professor Scarpa, did every thing which could be expectedfrom genius, experience, and friendship, to save him ; but he died on the 17th, after having edified those around him by his piety, much regretted by his family, friends, and disciples. Spallanzani was undoubtedly a very great man. France, Germany, England, all were eager to avail themselves of his works by translations. He was admitted into *he academies and learned societies of London, Stockholm, Gottingen, Holland, Lyons, Bologna, Turin, Padua, Mantua, and Geneva. He was a correspondent of the academy of sciences of Paris and of Montpelier; and received from the great Frederick himself the diploma of member

of the academy of Berlin.

SPALMADORI, an island in the Grecian Archipelago, between Scio and tne continent of Asia.

SPAN, n. s. &». a. Sax. fPan> rp°nne 5 Ita'- spanna ; Goth. span. Perhaps originally the expansion of the hand. The space from the end of the thumb to the end of the little finger extended ; nine inches : to measure in this way, or generally.

Will you with counters sum The vast proportion of his infinite, And buckle in a waste most fathomless With spans and inches so diminutive As fears and reasons 1

Shakspeare. Troilus and CressitLi.

You have scarce time To steal from spiritual leisure a brief span, To keep your earthly audit. Id. Henry VIII.

My surveyor is false ; the o'er-great cardinal Hath shewed him gold ; my life is scanned already.

Shakspearr.

This soul doth span the world, and hang content From either pole unto the centre ;

Where in each room of the well-furnished tent He lies warm, and without adventure. Herbert

Harry, whose tuneful and well-measured song First taught our English musick how to span Words with just note and accent, not to scan With Midas' ears, counting short and long. Miliun.

When I. removed the one, although but at the distance of a span, the other would stand like Hercules's pillar. Browne.

The virgin's part, the mother, and the wife, So well she acted in this span of life. Waller.

A foot, the length of it, is a sixth part of the fa-thom ; a span, one-eighth ; a palm, or hand's breadth, one twenty-fourth; a thumb's breadth, or inch, one seventy-second ; and a fore-finger's breadth, one ninety-sixth. Holder on Time.

Then conscience, unrestrained by fears, began To stretch her limits, and extend the span. Dryden.

Life's but a span, I'll every inch eujoy.

Farquhar.

Oft on the well-known spot I fix my eyes, And span the distance that between us lies. Ticket.

The SPAN is estimated at three hand's breadths or nine inches.

SPANDAU, a fortified town in the Middle Mark of Brandenburg; Prussia, at the confluence of the Havel and Spree. The manufactures are inconsiderable, but the town contains a large workhouse, and a manufactory for government of arms. The citadel is a regular square outside of the town, with four ramparts forty feet high, and good casemates. It is chiefly used as a state prison. It was taken by the Swedes in the year 1631, but restored in 1634. In 1806 it was taken by the French. Inhabitants 5000, mostly Protestants. Eleven miles N.N.E. of Potsdam, and eight west of Berlin.

SPAN'COUNTER, n. s.) From span, coun—

SPAN'FARTHING. J ter, and farthing.

A play at which money is thrown within a span or mark.

Tell the king, that for his father's sake, Henry V., in whose time boys went to spancounter for French crowns, I am content he shall reign.

Sha/upeare. Henry VI. Boys shall not play

At tpancounter or blow-point, but shall pay Toll to some courtier. Donne.

His chief solace is to steal down, and play zl span-farthing with the page. Swift.

SPANDREL, the solid work on each haunch of an arch to keep it from spreading. Span-drels is u?ed also synonymously for haunches. See HAKCES.

SPANG, n.s. l Teut.j/wnge; Goth.

SPANG'LE, n.s. &v. a. \ spang, a buckle or locket. Any thing sparkling and shining : to adorn with spangles.

As hoary frost with spangles doth attire The mossy branches of an oak half dead.

Faerie Queene.

They never meet in grove or green, By fountain clear, or spangled starlight sheen.

Shaktpeare.

What stars do tpangle heaven with such beauty, As those two eyes become that heavenly face. Id.

The colors that shew best by candlelight are white, carnation, and a kind of sea-water green ; and ouches or spangs, as they are of no great cost, so they are of most glory. Bacon.

Unpin that spangled breastplate which you wear, That the' eyes of busy fools may be stopt there.

Donne.

He cuts out a silk mantle from the skies, Where the most sprightly azure pleased the eyes ; This he with starry vapours spangles all, Took in their prime, ere they grow, rise and fall.

Cowky.

Four faces each

Had, like a double Janus ; all their shape Spangled with eyes, more numerous than those Of Argus. Milton'* Paradise Lott.

The twinkling spangles, the ornaments of the up-per world, loose their beauty and magnificence ; vul-gar spectators see them but as a

confused huddle of petty illuminants. Glanville.

Thus in a starry night fond children cry For the rich spangle* that adorn the sky. Waller. That now the dew with rpangles decked the

ground, A sweeter spot of earth was never found. Dryden.

The spacious firmament on high, With all the blue etheieal sky, And spangled heavens, a shining frame, Their great Original proclaim. Additon.

SPANHEIM (Wigand), D. D., was a very learned man, of the sixteenth century, and be-came ecclesiastical counsellor to the elector Palatine. He was progenitor of a learned race. He died in 1620, after reading a letter from his son, whicli made him weep for joy, and die happy.

SPANHEIM (Frederick), D. D., the son of the doctor, was born at Amberg, in the Upper Palatinate, in 1600, and carefully educated by his father. He studied also in the college of Am-berg; went thence, in 1614, to the university of Heidelberg, where he made a rapid progress in philosophy and languages. In 1619 he went to Geneva to study divinity. From 1621 to 1624 he resided in Dauphine with the governor of Ambrun, as tutor. In 1625 he came over to Oxford, but in four months was obliged to fly to

avoid the plague He refused a professorship ot philosophy at Lausanne; but, in 1627, disputed for the same office at Geneva, and carried it. He then married a lady of Poitou, descended of the famous Budaeus. He was admitted minister soon after, and, in 1631, on the death of Turrctin, was appointed professor of divinity. In 1642 he left Geneva, and, taking his degree at Basil, went to Leyden, where his fame increased higher than ever. He published both on theology and history ; but his great exertions shortened his days, and he died in May, 1649.

SPANHEIM (Ezekiel), the eldest son of Frederick, was born at Geneva in 1629. In 1642 he went to Leyden, where he distinguished himself great.y; and, his reputation spreading, Charles Lewis, elector palatine, sent for him to be tutor to his only son. This task our author discharged to the entire satisfaction of the elector ; by whom he was also employed in divers negociations at foreign courts. He afterwards entered into the service of the elector of Brandenburg, who in 1680 sent him envoy extraordinary to the court of France, and soon after made him a minister of state. After the peace of Ryswic, he was again

sent on an embassy to France, where he continued from 1697 to 1702. The elector of Brandenburg, having during that interval assumed the title of king of Prussia, conferred on him the title and dignity of a baron. In 1702 he left France ; and went ambassador to England, where he had been several times. Here he died in 1710, aged eighty-one years. It is surprising that in discharging the duties of a public minister with so much exactness, and amidst so many different journeys, he could find time to write the several books published by him ; yet he acquitted himself in his negociations like a person who had nothing else in his thoughts ; and wrote like a man who had spent his whole time in his study. His chief works are, 1. De Prastantia et usu Numismatum Antiquorum ; the best edition of which is in 2 vols. folio. 2. Several Dissertations on Scarce and Curious Medals. 3. A Preface and Notes to the edition of the emperor Julian's works, printed at Leip-sicin 1696, folio.

SPANHEIM (Frederick), D. D., brother of Ezekiel, was born at Geneva in 1632 ; and in his tenth year was taken by his father to Leyden ; where he studied philosophy under Hereboord ; and was admitted doctor in that science in his nineteenth year. He studied Greek under Box-ton, and Arabic under Golius. In 1652 he began to preach, and soon acquired such great fame in Zealand and Utrecht, that in his twenty-third year the elector Palatine invited him to be professor of divinity at Heidelberg. He accepted, and became D. D. at Leyden in 1655 ; and soon acquired great fame at Heidelburg, where he received many favors from the elector ; but these did not prevent him from honestly and zealously opposing the elector, when he proposed to divorce his lady and marry another. He was frequently invited to other universities, but continued at Heidelburg till 1670, when he accepted of the professorship of divinity and church history at Leyden, where he was also made librarian, and was four times elected rector. His works

are chiefly theological, and were printed in 3 vols. ‘olio, in 1703. He was three times married, and had several children ; of whom only one son, Frederick, survived him. He died in 1701, aged sixty-nine.

SPANIARD’S BAY, on the east coast of Cape Breton Island, is round the point of the south entrance into Port Dauphin. Its mouth is narrow, but it is wider within, till it branches into two arms, both of which are navigable three leagues, and afford secure harbouring. Long. 58° 29’ W., lat. 46° 20’ N. Also a bay on the north coast of the island of Cape Breton. Long. 60° 10’ W., lat. 46° 15’ N.

SPANIEL, w. s. Fr. espagneul ; Lat. kispa-niolus. A dog used for sports in the field. See below.

Divers days I followed his steps till I found him, having newly met with an excellent spaniel belonging to his dead companion. Sidney.

I mean sweet words, Low crooked curtesies, and base spaniel fawning.

Shakspeare.

I am your spaniel ; and, Demetrius, The more you beat me I will fawn on you. Id.

There are arts to reclaim the wildest men, as there are to make spaniels fetch and carry ; chide ‘em often, and feed ‘em seldom.

Dryden’s Spanish Fryar.

The SPANIEL, hispaniolus (canis avicularius of Linnaeus), is a variety of the canis familiaris, much used in fowling. There are two varieties of this supposed Spanish breed ; the first formerly used in hawking, to spring the game, the same with our starters ; the others used only for the net, and formerly cMled index, or setter. This kingdom has been remarkable for producing dogs of this sort, particular care having been taken to preserve the breed. They are distinguished by the name of English spaniels; so that, notwithstanding the name, it is probable they are natives of Great Britain. The pointer, •which is a dog of foreign extraction, was unknown to our ancestors.

The spaniel is a most useful dog, but subject to many distempers ; among these the mange is a frequent and infectious one. As a remedy, some have recommended a decoction of a large quantity of brimstone, with some common salt and wood-ashes, in wdter and urine, of each equal quantities : this is to be used three or four times a day, washing the creature well with it before the fire, or in the warm sun. If this is

not strong enough, the same ingredients, with the addition of a considerable quantity of wood-soot, are to be boiled in strong vinegar, and the liquor used in the same manner ; but this must never be used in cold weather, as it would then endanger the creature's life. When this disease is not in a violent degree, it may be cured by the herb agrimony internally taken. The method is to pound the roots, leaves, and seeds, of this plant in a mortar, and mix them with a large quantity of wheaten-bran ; they are to be then made into dough in the common way, arid baked in an oven ; the dog is to have no other bread but this for some time, but he is to eat of this as often and as much as he will : this, without any farther care, has cured many. Another roublesome disorder in this creature is what is VOL. XX.

called the formica : this infests only the ears, and is caused by flies, and by the dog's scratching for them. The best medicine for these is this : take a quantity of pure and clean gum tˆagacanth, infuse it in white-wine vinegar ; let as much vinegar be used as will serve to soften it, and, when it has lain a week in it, let it be taken out and ground on a marble, as the painters grind their colors, adding to it rock-alum and galls, reduced to powder, of each two ounces ; all this is to be well mixed together, and the matter, it it grows too stiff in the grinding, is to be moistened with some of the vinegar in which the gum was soaked : when all is thoroughly mixed, and ground fine, it is to be put in a gallypot, and a small quantity of it applied to the creature's ear every night, till the complaint is removed. The swelling of the throat is another disease common to spaniels, but the cure of this is easy ; there needs only to bathe it well with oil of camomile, and afterwards wash it with a mixture of vinegar and salt ; this done night and morning, will, in a few days, wholly remove the complaint. Spaniels will sometimes, when they have much rest and good food, lose their sense of smelling, but this is recovered by a brisk purge and repeated airings ; a very common dose on this occasion is a drachm of jalap, and two drachms of sal gem, mixed up into a bolus with oxymel of squills : this is to be rubbed over with some butter, and will be got down in that manner pretty easily.

SPANISH COVE is a creek of Ireland, on the south coast of the county of Cork, a little to the northeast of Browhead.

SPANISH LAKE, a lake of North America, in Louisiana, connected with Red River, with whicl it rises and falls. It is fifty miles in circumference. Eighteen miles above Natchitoches.

SPANISH MAIN, that part of the Atlantic Ocean which washes the north part of South America, from the Leeward Islands to the isthmus of Darien. A term also applied to the coast.

SPANISH POINT, a cape on the northeast coast of the island of St. Vincent. Long. 61° 12 W., lat. 13° -24' N. •

SPANISH TOWN, or St. Jago de la Vega, a sea-port, the capital of Jamaica, and residence of a governor or commander-in-chief ; the seat of the legislative assembly, the court of chancery, and supreme court of judicature. It is situated on the Cobre, about six miles from the sea, and contains about 550 houses, and 5000 inhabitants. Long. 76° 44' W., lat. 18° 1 N. See JAMAICA.

SPANK'ER, n.s. Frorn spang, see above. A small coin.

Your cure too costs you but a spanker. Denham.

SPAN'NER, n. s. From span. The lock of a fusee or carabine.

My prince's court is now full of nothing but bufl coats, spanners, and musket-rests. Howel.

SPAR, n. s. i Sax. rpaen ; Rus. spar, SPAR'RY, adj. $ talc. Marcasite. See below : the adjective corresponding.

Some stones, as spar of lead, dissolved in proper menstruums, become salts. Newton's Opticks.

Spar is a mixed body, consisting of crystal, incorporated sometimes with lac lunae, and sometimes

with other mineral, stony, earthy, or metallic matter.

Woodward.

In which manner spar is usually found herein, and other minerals, or such as are of some observable figure ; of which sort are the sparry striae, or icicles, called stalactite. Id.

SPAR, v. a. Sax. j-paririan. To shut ; close ‘ bar. Obsolete.

And if he chance come when I am abroad, Sparre the yate fast for fear of fraud ; Me for all his worst, nor for his best, Open the door at his request. Spenser’s Pattnruls.

Yet for she yode thereat half aghast, And Kiddie the door sparred after her fast.

Spen er.

Six gates i’ th’ city, with massy staples, And corresponsive and fulfilling bolts, Spar up the sons of Troy. Shakspeare.

SPAR, in the old system of mineralogy, is a name given to those earths which break easily into rhornboidal, cubical, or laminated fragments with polished surfaces. As the term spar is thus applied to stones of different kinds, without any regard to the ingredients of which they are composed, some additional term must be used to express the constituent parts as well as the figure ; for instance, calcareous spar, gypseous spar, &c. The spars found in Britain and Ireland are of four different species ; opaque, refracting, diaphanous, and stalactitical. i. Diaphanous spar is rhornboidal, triangular, hexangular, pyramidal, or

columnai ; and is found in mines, quarries, and caverns, in many different places, ii. Opaque spar is rhomboidal, hexangular, and triangular, of various colors, and is found in mines in Wales, Derbyshire, &c., and at Ovens near Cork. iii. Refracting spar is rhomboidal, shows objects seen through it double, and sometimes eight, twelve, or sixteen images at once. It is frequent in the lead mines of Derbyshire, Yorkshire, &c. iv. Stalactitical spar, icicle, or drop-stone, is formed by the running or dropping of water, containing a large proportion of calcareous earth. It is opaque, generally laminated, but from accidental circumstances assumes various forms. It occurs at Knaresborough in Yorkshire, and at Ovens near Cork.

SPAR, ADAMANTINE, is a new species of spar, found in the East Indies. Dr. Thomson makes it the same with the corundum of Gmelin. There are two varieties of this spar ; one of them comes from China, and crystallises in hexagonal prisms without pyramids, the length of the sides varying from six to twelve lines ; their breadth being about nine, of a gray color with different shades. The other kind found in Ilindostan is of a whiter color, and of a more laminated texture than the former; the grains of iron contained in it are likewise of a smaller size than those of the former ; they are not diffused through its substance, but only adhere to its surface. This spar is exceedingly difficult to analize. To do so, M. Klaproth was obliged to melt it no less than twelve times with fifteen parts of soda or mineral alkali, in a silver crucible ; the heat being each time continued for five hours as strong as the crucible could bear. After each fusion the mass was softened by boiling distilled water, filtering and precipitating by acids the small quantity of earth which the alkali had dissolved ; and, lastly, that portion which had not been decomposed was digested at different times with concentrated and boiling acids. See the result under MINERALOGY, as above. From a letter of M. Morveau to Mr. Crell it appears that this stone is also found in France. A small bit of this was tried by him in presence of Mr. Wedgewood, and he found that its specific gravity is superior to that of China, being no less than 4-1803, and the true adamantine spar of China gave 3-8222.

SPAR, FELT, or FELT-SPAR, or FELSPAR, as Dr. Thomson spells it, is called by former mine ralogists rhombic quartz, and is the petuntse ol the Chinese. See QUARTZ and MINERALOGY.

SPAR, PONDEROUS, or terra ponderosa, is now called barytes. See CHEMISTRY, Index, and MINERALOGY.

SPAR'ADRAP, n. s. Span, espar, a drug. In pharmacy, a cerecloth.

With application of the common sparadrap for is-sues, this ulcer was by a fontanel kept open.

Wiseman's Surgery.

SPARE, v. a., v. n., adj.,~\ Saxon .r-pajian , SPAR'ER, n. s. [& n. s. f Goth, and Swedish SPA'RING, adj. Ispara ; Belg. spae—

SPA'RINGLY, adv. Jren; fr.epargner.

To use frugally ; not to waste or lavish ; to save ; omit ; forbear : hence to grant ; allow ; use with tenderness or kindness : as a verb neuter, to live frugally ; to forbear : as an adjective, scant ; mean ; lean : superfluous : the derivatives corresponding.

Who will set the discipline of wisdom over mine heart, that they spare me not for my ignorances ?

Ecclus. xxiii. 2.

Spare us, good Lord. Common Prayer.

All the time he could spare from the necessary cares of his weighty charge, he bestowed on prayer, and serving of God : he oftentimes spent the night alone in church, praying ; his headpiece, gorget, and gauntlet lying by him. Knolles.

Those wants, which they rather feared than felt, would well enough be -overcome by sparing and patience. Id.

His soldiers spared not to say that they should be unkindly dealt with, if they were defrauded of the spoil. Id.

If that no ipare clothes he had to give, His own coat he would cut, and it distribute glad.

Spenser.

I could have better spared a better man.

Shakspeare. Henry IV.

O give me your spare men, and spare me the great ones. Shakspeare.

H' has wherewithal : in him Sparing would show a worse sin than ill doctrine.

Id.

Give us leave

Freely to render what we have in charge ; Or shall we tpurhigly shew you far off The dauphin's meaning ? Id. Henrr, V.

Our victuals failed us, though we had made good spare of them. Bacon.

Their king, out of a princely feeling, was spariny and compassionate towards his subjects. Id.

Men ought to beware that they use not exercise and a spare diet both. Id. Natural History.

Of this there is with you sparing memory, or none ; but we have large knowledge thereof. Bacon

SPA

If much exercise, then use a plentiful diet ; and if sparing diet, then little exercise. Id.

The borders whereon you plant fruit-trees should be large, and set with fine flowers; but thin and sparingly, lest they deceive the trees. Id. Essays.

High titles of honour were in the king's minority spiiringly granted, because dignity then waited on desert. Huyward.

Since uncheckt they may,

They therefore will make still his goods their prey, Without all spare or end. Oiapman.

For his mind I do not care, That's a toy that I could spare ; Let his title be but great, His cloaths rich, and band sit neat. Ben Jonson.

By nature far from profusion, and yet a greater sparer than a saver; for, though he had such means to accumulate, yet his forts, garrisons, and his feastings, wherein he was only sumptuous, could not but soak his exchequer. Woitmi.

He was spare but discreet of speech, better conceiving than delivering ; equally stout and kind.

Careui's Survey of Cornwall.

Doth not each look a flash of lightning feel, Which spares the body's sheath, but melts the steel 1

Cleaveland.

Commend but sparingly whom thou dost love ; But less condemn whom thou dost not approve.

Denham.

Thou thy father's thunder didst not spare.

Milton.

Sense of pleasure we may well Spare out of life perhaps ; and not repine ; But pain is perfect misery. Id.

His visage drawn he felt so sharp and spare, His arms clung to his ribs. Id. Paradise Lost,

Join with thee calm peace and quiet ; Spare fast, that oft with gods doth diet. Milton.

In these relations, although he be more sparing, his predecessors were very numerous.

Browne's Vulgar Errours.

Set me in the remotest place That Neptune's frozen arms embrace ; Where angry Jove did never spare One breath of kind and temperate air. Roscommon.

Our labours late and early every morning, Midst winter frosts ; then clad and fed with sparing, Rise to our toils. Otway.

Less pleasure take brave minds in battles won Than in restoring such as are undone : Tygers have courage, and the rugged bear ; But man aloi e can whom he conquers spare.

Waller.

Only the foolish virgins entertained this foolish conceit, that there might be an overplus of grace sufficient to supply their want; but the wise knew not of any that they had to spare, but supposed all that they had little enough. Tillotson.

The fair blessing we vouchsafe to send ; Nor can we spare you long, tho' often we may lend.

Dry den.

O spare this great, this good, this aged king, And spare your soul the crime ! Id. Spanish Fryar.

Though sparing of his grace, to mischief bent, He seldom does a good with good intent. Dryden.

God has not been so sparing to men to make them barely two-legged creatures, and left it to Aristotle

T I.

to make them rational. ' Locke.

The masters of the world were bred up with spare diet ; and the young gentlemen of Rome felt no want of strength, because they ate but once a day.

Id.

In my spare hours you've had your part ; Ev'n now my servile hand your sovereign will obeys.

ATcr?'is.

Learning seems more adapted to the female world than to the male, because they have more spare time upon their hands, and lead a more sedentary life. Addison's Spectator.

When they discover the passionate desire of fame in the ambitious

man, they become sparing and saving in their commendations ; they envy him the satifaction of an applause. Addison.

Christians are obliged to taste even the innocent pleasures of life but sparingly. Atterbury.

Now a reservoir, to keep and spare ; The next a fountain spouting through his heir.

Pope.

Good air, solitary groves, and sparing diet, sufficient to make you fancy yourself one of the fathers of the desert. Id.

Let a pamphlet come in a proper juncture, and every one who can spare a shilling shall be a subscriber. Swift.

SPARGANIUM, bur reed, in botany, a genus of plants belonging to the class of monsecia, and to the order of triandria ; and in the natural system ranged under the third order, calamariae. The amentum of the male flower is roundish, the calyx is triphyllous, and there is no corolla. The amentum of the female flower resembles that of the male. The stigma is bifid ; the fruit is a dry berry containing one seed. There are two species, the erectum and natans, both of them natives of Great Britain and Ireland.

1. S. erectum, great bur reed, has a stem two or three feet high, erect, firm, and branched : the lower leaves are triangular, the upper ones plain. The male heads are much smaller than the fe-male. This species flowers in July, and is frequent on the banks of rivers and lakes, and stagnant waters.

2. S. natans, floating or little bur reed, has a stalk about two feet long. The leaves float, are about a foot long, one-fourth of an inch wide at the base, and one-eighth in the middle, and end in a point. The male sphaerules are generally three, and all sessile ; the female are commonly three, the two lower being supported on peduncles, the uppermost sessile. It flowers in July, and grows in pools and lakes, but is rare.

SPARK, n. s. & v. n. ˆ Saxon j-pearica ;

SPARK’FUL, adj. , j Teut. spark ; Belgic

SPARK’ISH, [sparke. A particle of

SPAR’KLE, n. s. & v. n. [fire, or kindled mat—

SPARK’LINGLY, adv. \ ter ; any thing vivid,

SPARK’LINGNESS, n.s. J shining, or showy : to

emit sparks. Obsolete. The adjectives both

mean brisk ; airy ; gay ; and are both uncommon :

a sparkle is a small spark : to sparkle, to emit

sparks ; shine ; glitter : the adverb and noun

substantive corresponding.

Fair is my love, .

When the rose in her cheek appears, Or in her eyes the fire of love doth sparA. Spenser.

If any marvel how a thing, in itself so weak, could import any great danger, they must consider not so much how small the spark is that flietb up, as how apt things about it are to take fire.

Hooker.

To detract from the dignity thereof, were to injure even God himself, who, being that light which none can approach unto, hath sent out these lights whereof we are capable, even as so many sparkles resembling the bright fountain from which they rise.

3 A 2

SPA 7

I am about to weep ; but thinking that We are a queen, my drops of tears I'll turn To sparks of fire. Shakspeare.

If any spark of life be yet remaining, Down, down to hell, and say 1 sent thue thither.

Id.

Hitherto will our sparkful youth laugh at their great grandfathers' English, who had more care to do well than to speak minion-like.

Camden's Remains.

When reason's lamp, which, like the sun in sky, Throughout man's little world her beams did spread,

Is now become a sparkle which doth lie Under the ashes, half extinct and dead. Dairies.

I am not forgetful of the sparks which some men's distempers formerly studied to kindle in parliaments.

Kiuy Charles. The bold design

Pleased highly those infernal states, and joy Sparkled in all their eyes. Milton.

Diamonds sometimes would look more sparklingly than they were wont, and sometimes far more dull ban ordinary. Boyle.

I have observed a manifestly greater clearness and sparklingness at some times than at others, though I could not refer it to the superficial clearness or foulness of the stone. Boyle.

In this deep quiet, from what source unknown Those seeds of fire that fatal birth disclose ;

And first few scattering sparks about were blown, Big with the flames that to our ruin rose. Dryden.

A spark like thee, of the mankilling trade, Fell sick. Id

He, with repeated strokes Of clashing flints, their hidden fires provokes ; Short flame succeeds ; a bed of withered leaves The dying sparkles in their fall receives : Caught into life, in fiery fumes they rise, And, fed with stronger food, invade the skies. IH.

How many huffing spares have we seen, that in the same day have been both the idols and the scorn of the same slaves. L'Estrange.

A daw, tc be sparkish, tricked himself up with all the gay feathers he could muster. Id.

We have, here and there, a little clear light, some sparks of bright knowledge. Locke.

A hair seen in a microscope loses its former color, and is in a great measure pellucid, with a mixture of some bright sparking colors, such as appear from the refraction of diamonds. Id.

Is any thing more sparkish and better humoured than Venus's accosting her son in the desarts of Lybia » Walsh.

The finest sparks, and cleanest beaux, Drip from the shoulders to the toes. Prior.

As for the disputes of sharpers, we don't read of any provisions made for the honours of such sparks.

Collier

I, who have been the poet's spark to-day, Will now become the champion of his play.

Granville.

Oh, may some spark of your celestial fire The last, the meanest, of your sons inspire ! Pope.

Ah ! then thy once-loved Eloisa see ! It will be then no crime to gaze'on me : See from my cheek the transient roses die. See the last sparkle languish in my eye. Id.

Politulus is a fine young gentleman, who sparkles in all the shining things of dress and equipage.

Watts.

Well spoken, advocate of sin and shame, Known by thy bleating,

Ignorance thy name. Is sparkling wit the world's exclusive right 1 The fixed fee-simple of the vain and light ?

Cowper.

A SPA

When flints are struck against other flints they have the property of giving sparks of light; but it seems to be an internal light, perhaps of electric origin, very different from the ignited sparks which are struck from flint and steel. Darwin.

There are ten thousand tones and signs We hear and see, but none defines — Involuntary sparks of thought, Which strike from out the heart o'erwrought, And form a strange intelligence, Alike mysterious and intense, Which link the burning chain that binds, Without their will, young hearts and minds.

Byron.

SPARLING, in ichthyology. See SALMO.

SPARMANNIA, in botany, a genus of plants of the monogynia order, and polyandria class of plants : COR. four petals, and is bent back ; the nectaria are numerous, and swell a little : CAL. quadriphyllous : CAPS, angulated, quinquelocu-lar, and echinated. There is only one species, *viz.* S. Africana.

SPARRMAN (Andrew), a late Swedish naturalist and traveller, born in Upland about 1747, studied medicine at Upsal, and attracted the notice of Linnaeus. In 1765 he made a voyage to China with his cousin captain Ekeberg : on his return he described, in an academical thesis, the previously unknown animals and vegetables which he had discovered ; and soon after accepted the office of tutor to the children of a Dutch inhabitant of the Cape of Good Hope, where he arrived in April 1772. Dr. Forster and his son, visiting the Cape with captain Cook, persuaded Sparrman to accompany them, as an assistant in their researches; and, accepting the proposal, he made the voyage round the world, returning in 1775 to Africa, where he engaged in the practice of medicine. As soon as the state of his funds permitted, he undertook a journey into the interior ; and, after penetrating to the distance of 350 leagues, returned to that settlement in April 1776, bringing a copious collection of African plants and animals. The same year he revisited his native country, and during his absence had been

honored with the degree of M. D. He was chosen a member of the Academy of Sciences at Stockholm ; and, on the death of baron de Geer, was nominated conservator of the museum left to the Academy by that naturalist. He was subsequently made president of the institution. In 1787 he engaged in an abortive attempt to explore the interior of Africa, and returned home in 1788. His death took place at Stockholm, July 20th, 1820. He was the author of an Account of his Voyage to the Cape of Good Hope, and Travels in Africa, written in Swedish, and published in German at Berlin ; and in an English dress in London, 1785, 2 vols. 4to.

SPAR'ROW, n. s. Sax. rpeanpa. A small bird.

Dismayed not this Macbeth and Banquo 1 — Yes, As sparrov-,! eagles, or the hare the lion. Shaltspeare.

There is great probability that a thousand sparroics will fly away at the sight of a hawk among them .

Watts.

The sparrows peep, and quit the sheltering eaves, To seize the fair occasion ; well they eye

SPAR T A.

The scattered grain, and thievishly resolved To' escape the' impending famine, often scared As oft return, a pert voracious kind. . Cowper.

SPARROW. See FRINGILLA.

SPAR'ROWGRASS, n. s. Corrupted from asparagus.

Your infant pease to sparrowgrass prefer, Which to the supper you may best defer. King.

SPARROW GRASS. See ASPARAGUS.

SPARROW HAWK. See FALCO.

SPARRY ANHYDRITE, or CUBESPAR, is a sub-species of prismatic gypsum. Color white, passing into blue or red. Massive, in distinct concretions, and crystallised. The primitive figure is an oblique prism,

in which the angles are 108° 8’ and 79° 56’. The secondary forms are, a rectangular four-sided prism, a broad six-sided prism, an eight-sided prism, and a broad rectangular four-sided prism, acuminated. Splendent, pearly. Cleavage threefold. Fragments cubical. Fracture conchoidal. Transparent. Refracts double. Scratches calcareous spar, but not fluor. Brittle. Specific gravity 2-7 to 3-0. It does not exfoliate before the blowpipe, and melt like gypsum, but becomes glazed over with a white friable enamel. Its constituents are, lime 41-75, sulphuric acid 55, muriate of soda 1. — Klaproth. It is sometimes met with in the gyp-sum of Nottinghamshire. It occurs in the salt-mines of Halle, &c.

SPARRY IRON, or carbonate of iron. The color a pale yellowish-gray. Massive, disseminated, and crystallised. The primitive form is a rhomboid of 107°. The following are some of the secondary forms. The primitive, perfect, or truncated ; a still flatter rhomboid ; the spherical lenticular form; the saddle-shaped lens, and the equiangular six-sided prism. Glistening, or splendent, or pearly. Cleavage threefold. Fracture foliated, or splintery. Translucent on the edges. Streak white or yellowish-brown. Harder than calcareous spar. Easily frangible. Specific gravity 3‘6 to 3-9. It blackens and becomes magnetic before the blowpipe, but does not melt; it effervesces with muriatic acid. Its constituents are, oxide of iron 57‘5, carbonic acid 36, oxide of manganese 3-5, lime 1-25. — Klaproth. It oc-curs in veins in granite, gneiss, &c., associated with ores of lead, cobalt, silver, copper, &c. But the most extensive formations of this mineral are in limestone. It is found in small quantities in England, Scotland, and Ireland ; in Saxony, Bohemia, &c. ; and in large quantities in Fich-telgebirge, and at Schmalkalden in Hessia. It affords an iron well suited for conversion into steel.

SPARTA, or Laced aemon, the capital of Laconia in Greece, an ancient and renowned state, the inhabitants of which have been in all ages celebrated for the singularity of their laws and character. See LACED.EMON.

The ancient history of Laconia, and of Sparta its capital, like that of most other ancient nations, is mingled with fable ; but, when stripped of the poetical trappings of mythology, it will be found to contain some facts at least more consistent and credible than the nonsense that is palmed upon us by some modern credulous philosophers for the ancient history of China. All

historians agree that Lelex was the first king of Laconia, and that from him the country was called Lelegia, and the people Leleges. Lelex was succeeded by his son Eurotas, who gave name to the river which runs near the city. Eurotas had a daughter named Sparta, who was married to Lacedsemon, a son of Jupiter, who succeeded him (see LACEDJEMON), and who, along with his wife, gave both their names, not only to the capital, but to the whole people. Hence we seldom hear of the Laconians in the ancient history of Greece, but always either of the Spartans or Lacedaemonians. Lacedsemon and Sparta had a son named Amyclas, who succeeded to the throne ; and a daughter named Eurydice, who was married to Acrisius, king of Argos, by whom she became the mother of Danae, and grandmother of Perseus. Amyclas I. built the city of Amyclae, married Diomedea, and was succeeded by his son Argalus, who left the kingdom to his son Amyclas II. ; who was succeeded by his son Cynortas, and the latter by his son (Ebalus. This (Ebalus was a famous monarch ; gave the new name of (Ebaliato the whole country, and married Gorgophone, the daughter of his cousin Perseus, by whom he had Hippocoon, Tyndarus, and Icarius, the father of Penelope. Hippocoon was one of the heroes who went to the hunting of the Calydonian boar : but, upon the death of CEba-lus and succession of Tyndarus, Hippocoon rebelled against his brother, and expelled him from the kingdom. Upon this Hercules took the part of the exiled monarch, killed Hippocoon, and restored Tyndarus. This monarch's domestic history was singular, and afforded a wide field for the fictions of the poets. He married Leda, the daughter of Thespius, who brought him four children, Castor, Pollux, Helena, and Cly-temnestra, two of whom were confessedly not by her husband, and all of them were born in a manner very miraculous. See the poetical fables under these articles. But whether Jupiter or his priest was the goose upon this occasion, the produce of Leda's eggs all became famous, and some of them infamous. Helena, whose uncommon beauty had attracted most of the princes of Greece to be her suitors, by the advice of Ulysses gave the preference to Menelaus; and all the Grecian princes took a solemn oath to defend her. With her Menelaus acquired the kingdom of Sparta ; and Ulysses for his services obtained Penelope. But afterwards, while Menelaus was absent at Crete, Helen eloped with Alexander or Paris, the Trojan prince ; and this gave rise to the famous war which ended in the destruction of Troy ; the subject by which Homer immortalized his name. Some historians say that Helen reconciled herself to Menelaus that night Troy was taken, by introducing him into the chamber of Deiphobus, whom she had married after Paris's death, and that she returned with him to Sparta, and survived him. Pausanias says that Menelaus's palace at Sparta was entire in his days.

After the death of Menelaus, his nephew Orestes succeeded to the kingdom in right of his cousin and wife Hermione. See HERMIONE, and ORESTES. His posterity, however, were soon after expelled by the Heraclidae both from Sparta and Argos. See HERACLIDX. The era of the

return of the Heraclidse is generally reckoned the period when fable ends, and the true history of Greece begins; and is computed to commence about eighty years after the Trojan war, and 1190 A. A. C., or, as Lempriere has it, 1104. The leaders of the Heraclidae, in the conquest of Peloponnesus, were Aristodemus, Temenus, and Chresophontes, the sons of Aristomachus, and grandsons of Cleodaeus, the son of Ilyllus, the son of Hercules. See HYLI.US. Sparta fell to the share of Aristodemus ; who, after reigning only two years, was killed by the sons of Py-lades, the friend of Orestes, in revenge for the expulsion of the Orestidae. He left two sons, Eurysthenes and Procles, who were born twins, and so nearly at the same moment that their mother either did not know which was first born, or pretended not to know it, that both might reign. Accordingly the oracle of Delphi, being consulted on the case, decided that both should reign ; and thus gave rise to that singular political phenomenon, a binarchy, which so peculiarly distinguished the constitution of Sparta from that of all other kingdoms ; for though two monarchs have often reigned at once in other countries, sometimes as colleagues, at other times by an agreed division of territory, there is not an instance in the history of mankind of a regular binarchy kept up in two branches of the same family, for several centuries, in any other country but Laconia. Procles and Eurysthenes began to reign conjunctly A. A. C. 1 102 ; Procles reigned forty-two years, and Eurysthenes forty-three. Their respective successors, called Proclidae and Eurysthenidce, and likewise Eury-pontidse and Agidae, succeeded in the following order and years B. C., and most of them succeeded his father or brother : —

Proclidae. A.

A.C.

Eurysthenidm. A.

A.C.

Sous ….

1060

Agis I. …

1059

Eurypon …

1028

Echestralus . .

1058

Prytanes …

1021

Labotas …

1023

Eunomus …

986

Doryssus …

986

Polydectes . .

907

Agesilaus I…

957

Lycurgus I…

898

Archelaus . .

913

Charilaus …

873

Teleclus …

853

Nicander …

809

Alcamenes . .

813

Theopompus

770

Polydorus . .

776

Zeuxidamus . .

723

Eurycrates I.

724

Anaxidamus . .

690

Anaxander , .

687

Archidamus I. .

651

Eurycrates II. .

644

Agasicles …

605

Leonidus I…

607

Ariston …

564

Anaxandrides

563

Demaratus . .

526

Cleomenes I.

530

Leotychides . .

491

Leonidas II…

491

Archidamus II. .

466

Cleombrotus I. .

485

Agis I… .

427

Plistarchus . .

480

Agesilaus II.

397

Plistonax …

466

Archidamus III.

361

Pausanias . .

408

Agis II… .

338

Agesipolis I.

397

Eudamidas I. .

330

Cleombrotus II.

380

Archidamus IV.

295

Agesipolis II. .

371

Eudamidas II. .

268

Cleomenes II. .

370

Agis III… .

244

Aretus I. …

309

Archidamus V. .

230

Acrotatus …

265

Euclidas …

225

Aretus II…

264

Lycurgus II.

219

Leonidas III. 257 & 241

Cleombrotus III.

243

Cleomenes III. .

235

! Agesipolis III. .

219

Of the majority of the kings in the above list little is recorded ; but the most remarkable of them for wisdom, virtue, and courage, have already been taken notice of, and memoirs of them inserted, in their order. Some of tlte other Spartan heroes will be mentioned afterwards. We therefore hasten to the most important part of the Spartan history. After the death of Lycurgus I., the great legislator of Sparta, in A. A. C. 873, the first important transaction was the Messenian war, which commenced in 752 B. C. and ended in the total reduction of the

Messenian territory, notwithstanding the astonishing exertions of Aristomenes. During this period a great change took place in the government of Sparta. This was the creation of the ephori, which is ascribed to king Theopompus ; who, perceiving that there was a necessity for leaving magistrates to execute the laws when the kings were obliged to be in the field, appointed the magistrates above mentioned, who afterwards made so great a figure in the state. See EPHORI. One great privilege of the ephori was that they did not rise up at the presence of the kings, as all other magistrates did : another was that, if the kings offended against the laws, the ephori took cognizance of the offence, and inflicted punishment. From the first election of the ephori the year was denominated, as at Athens from the first election of the archons.

The conquest of Messenia gave Sparta the superiority over the rest of the states, excepting only that of Athens, which for a long time continued to be a very troublesome rival ; but the contests between these two rival states have been so fully related, under the article ATTICA, that nothing more is requisite to be added. In the time of the Persian war Leonidas I., the Spartan king, distinguished himself in a most extraordinary manner. It being resolved in a general council to defend the straits of Thermopylae against the Persians, 7000 foot were put under the command of Leonidas, of whom, however, only 300 were Spartans. Leonidas did not think it practicable to defend the pass against such multitudes as the Persian king commanded ; and therefore privately told his friends that his design was to devote himself to death for his country. Xerxes, advancing near the straits, was strangely surprised to find that the Greeks were resolved to dispute his passage ; for he had always flattered himself that, on his approach, they would betake themselves to flight, and not attempt to oppose his innumerable forces. However Xerxes, still entertaining some hopes of their flight, waited four days without undertaking any thins, on purpose to give them time to retreat. During this interval he endeavoured to corrupt Leonidas, promising to make him master of all Greece it he would come over to his interest. His offers being rejected, with contempt and indignation, the king ordered him by a herald to deliver up his arms. Leonidas, m a styie truly laconical, answered, ‘ Come thyself and take them.’ Xerxes in a rage commanded the Medes and Cissians to march against them, take them alive, and bring them to him in fetters. The Medes, not able to stand the shock of the Greeks, soon be-took themselves to flight; and in their room

Hydarnes was ordered to advance with that body which was called immortal, and consisted of 10,000 chosen men ; but these succeeded no better than the former, being obliged to retire with great slaughter. The next day the Persians, reflecting on the small number of their enemies,

action fell the brave Leonidas ; which Abrocomes and Hyperanthes, two brothers of Xerxes, observing, advanced with great resolution to seize his body, and carry it in triumph to Xerxes. But the Lacedaemonians, more eager to defend it than their own Jives, repulsed the enemy four times,

and supposing so many of them to be wounded who, killed both the brothers of Xerxes,with many

that they could not possibly maintain a second fight, resolved to make another attempt : but, instead of making the Greeks give way, they were themselves put to a shameful flight. The valor of the Greeks on this occasion was exerted in a manner so extraordinary that Xerxes dreaded the entire destruction of his army. Xerxes, finding the Greeks determined to conquer or die, was extremely perplexed what measures he should adopt; when one Ephialtes discovered a secret passage to the top of the hill which overlooked and commanded the Spartan forces. The king immediately ordered Hydarnes thither with his select body of 10,000 Persians ; who, marching all night, arrived at break of day, and possessed themselves of that advantageous post. The Phocseans, who defended this pass, being overpowered by the enemy's numbers, retired with precipitation to the very top of the mountain, prepared to die gallantly. But Hydarnes,

other commanders of distinction, and rescued the body of their beloved general out of the enemy's hands. But in the mean time the

army that was led by the treacherous Ephialtes advancing to attack their rear, they retired to the narrowest place of the passage, and drawing altogether ex-cept the Thebans, posted themselves on a rising ground. In this place they made head against the Persians, who poured in upon them on all sides, till at length, not vanquished, but oppressed and overwhelmed by numbers, they all fell ex-cept one, who escaped to Sparta, where he was treated as a coward and traitor to his country ; but afterwards made a glorious reparation in the battle of Plataea, where he distinguished himself in an extraordinary manner. Some time after a magnificent monument was erected at Thermopylae in honor of those brave defenders of Greece, with two inscriptions ; the one general, and relating to all those who died on this occasion, importing,

neglecting to pursue them, marched down the that the Greeks of Peloponnesus, to the number mountain with all possible expedition to attack only of 4000, made head against the Persian army those who defended the straits in the rear. Leo-consisting of 3,000,000. The other related to nidas, being now apprised that it was impossible the Spartans in particular, and was composed to bear up against the enemy, obliged the rest of by the poet Simonides, to this purport : — ‘ Go, his allies to retire : but he staid himself with the passenger, and acquaint the Spartans that we Thespians, Thebans, and 300 Lacedaemonians, died here in obedience to their just commands.’ all resolved to die with their leader ; who, being At those tombs a funeral oration was yearly pro-told by the oracle that either Sparta should be nounced in honor of the dead heroes, and public destroyed or the king lose his life, determined, games performed with great solemnity, wherein without the least hesitation, to sacrifice himself none but the Lacedaemonians and Thespians

for his country. The Thebans indeed remained against their inclination, being detained by Leonidas as hostages ; for they were suspected to favor the Persians. The Thespians, with their leader Demophilus, could not by any means be prevailed upon to abandon Leonidas and the

had any share, to show that they alone were concerned in the glorious defence of Thermopylae.

At the end of the seventy-seventh Olympiad, a most dreadful earthquake happened at Sparta, in which, according to Diodorus, 20,000 persons lost their lives ; and Plutarch tells us that

Spartans. The augur Megistias, who had fore-only five houses were left standing in the whole told the event of this enterprise, being pressed city. On this occasion the Helotes or slaves, by Leonidas to retire, sent home his only son ; whom the Spartans had all along treated with the but remained himself and died by Leonidas. utmost cruelty, attempted to revenge themselves Those who staid did not feed themselves with by taking up arms, and marching directly to the any hopes of conquering or escaping, but looked ruins of the city, in hopes of cutting off at once upon Thermopylae as their graves ; and when those who had escaped from the earthquake. Leonidas, exhorted them to take some nourish-But in this they were prevented by the prudence ment, said that they should all sup together with of the Spartan king Archidamus ; for he, observ-Pluto, with one accord they set up a shout of ing that the citizens were more desirous of pre-]oy, as if they had been invited to a banquet, serving their effects than taking care of their own Xerxes began to move at sun rise with the whole lives, caused an alarm to be sounded, as if he body of his army, as he had been advised by had known that an enemy was at hand. On this Ephialtes. Upon their approach Leonidas ad-the citizens armed themselves with such weapons vanced to the broadest part of the passage, and as they could come at ; and, having marched a fell upon the enemy with such undaunted cou-little way from the city, met the Helotes, whom rage and resolution that the Persian officers were they soon compelled to retire. The latter, how-obliged to stand behind the divisions they com-ever, knowing that they had now no mercy to manded to prevent the flight oftheir men. Great expect from those who had already treated them numbers of the enemy, falling into the sea, were with such cruelty, resolved to defend themselves drowned ; others were trampled underfoot by to the last. Having therefore se.zed a sea-por their own men, and many killed by the Greeks ; town in Messenia, they thence made such mcur-knowinˆ they could not avoid death upon the sions into the Spartan territories that they com arrival of those who were advancing to fall upon pelled those imperious masters to ask assistance their rear, exerted their utmost efforts. In this from the Athenians. This was immediately

granted ; but, when the Spartans saw that the skill of the Athenians in besieging towns was much greater than their own, they became jealous, and dismissed their allies, telling them that they had now no farther occasion for their services. On this the Athenians left them in disgust ; and as the Helotes and the Messenians did not choose to engage with a Spartan army in the field, but took shelter in their fortified places, the war was protracted for ten years and upwards. At last the Helotes were reduced to their former misery ; and the Messenians were obliged to leave Peloponnesus, on pain of being made slaves also. These poor people were then received by the Athenians, who granted them Naupactus for their residence, and afterwards brought them back to a part of their own country, whence, in the course of the Peloponnesian war, they had driven the Spartans. In the year 431 B. C. the Peloponnesian war commenced. It ended most unfortunately for the Athenians ; their city being taken and dismantled. Thus were the Spartans raised to the highest pitch of glory; and in the reign of Agesilaus II. they seemed to be on the point of subverting the Persian empire. But here their good fortune and their views of empire were suddenly checked. Agesilaus had carried on the war in Asia with the greatest success ; and, as he would hearken to no terms of accommodation, a Persian governor named Tithrastes, having first attempted in vain to bribe the king, despatched Timocrates the Rhodian with fifty talents into Greece, in order to try whether he could there meet with any persons less incorruptible than the Spartan monarch. This agent found many who inclined to accept his offers; particularly in Thebes, Corinth, and Argos. By distributing the money properly he inflamed the inhabitants of these ci-ties against the Spartans ; and the Thebans came into his terms with the utmost readiness. But as they saw that their antagonists would not of their own accord break with any of the states of Greece, and did not choose to begin the war themselves, they persuaded the Locrians to in-vade a small district which lay in dispute betwixt the Phocians and themselves. On this the Phocians invaded Locris ; the Locrians applied to the Thebans, and the Phocians to the Spartans. The latter were glad of an opportunity of breaking with the Thebans, but met with a much warmer reception than they expected. Their old general Lysander, who had reduced Athens, was defeated and killed, with the loss of 1000 men : on which disaster Agesilaus was recalled, and obliged to relinquish all hopes of conquering the Persians. His return changed

the fortune of the war so much, that all the states began to grow weary of a contest from which nobody derived any advantage except the king of Persia. In a short time a treaty was concluded, known in history by the name of the peace of Antalcidas. The terms of this treaty were highly disadvantageous and dishonorable to the Greeks ; for even the Spartans, though successful in Greece, had lost a battle at sea with the Persian fleet under Conon ihe Athenian, which entirely broke their power in Asia. See PERSIA.

By the peace of Antalcidas, the government of

Boeotia was taken from the Thebans, which they had long enjoyed ; and by this they were so much provoked that at first they absolutely refused to accede to the treaty ; but, as Agesilaus made great preparations to invade them, they thought proper at last to comply. However, a new war soon commenced, which threatened the total subversion of the Spartan state. As, by the peace of Antalcidas, the kine of Persia had in a manner guaranteed the sovereignty of Greece to Sparta, this republic very soon began to exercise its power to the utmost extent. The Mantineans were the first who felt the weight of their resentment, although they had been their allies and confederates. To have a pretence for making war against them, they commanded them to quit their city, and to retire into five old villages which, they said, had served their forefathers, and where they would live in peace themselves, and give no umbrage to their neighbours. This being refused, an army was sent against them to besiege their city. The siege was continued through the summer with very little success on the part of the Spartans ; but, having during the winter clammed up the river on which the city stood, the water rose to such a height as either to overflow or throw down the houses ; which compelled the Mantineans to submit to the terms prescribed to them, and retire iiito the old villages. The Spartan vengeance fell next on the Philiasians and Olynthians, whom they forced to come into such measures as they thought proper. After this they fell on the Thebans ; and, by attempting to seize on Pirseum, drew the Athenians also into the quarrel. But here their career was stopped : the Thebans had been taught the art of war by Chabrias the Athenian ; so that even Agesilaus himself took the command of the Spartan army in vain. At sea they were defeated by Timotheus the son of Conon ; and by land the battle of Leuctra put an end to the superiority which Sparta had held over Greece for nearly 500 years. See LEUCTRA. After this dreadful defeat, the Spartans had occasion to exert all their courage and resolution. The women and nearest relations of those who were

killed in battle, instead of spending their time in lamentations, shook each other by the hand ; while the relations of those who had escaped from the battle hid themselves among the women ; or, if they were obliged to go abroad, they appeared in tattered clothes, with their arms folded, and their eyes fixed on the ground. It was a law among the Spartans that such. as fled from battle should be degraded from their ho-nors, should be constrained to appear in garments patched with divers colors, to wear their beards half shaved, and to suffer any to beat them who pleased, without resistance. On this occasion, however, this law was dispensed with ; and Agesilaus, by his prudent conduct, kept up the spirits of the people, at the same time that by his skill in military affairs he checked the pro gress of the enemy. Yet, during the lifetime of Epaminondas the Theban general, the war went on greatly to the disadvantage of the Spartans ; but he being killed, at the battle of Mantinea, all parties became quickly desirous of peace. Agesilaus did not long survive him ; and with him,

we may say, perished the glory of Sparta. Soon *fter this all the states of Greece fell under the power of Alexander the Great ; and the Spartans, as well as the rest, having become corrupt, and lost their martial spirit, became a prey to domestic tyrants, and to foreign invaders. They maintained their ground, however, with great resolution against the celebrated Pyrrhus king of Epirus; whom they repulsed for three days successively, though not without assistance from one of the captains of Antigonus. Soon after this, king Agis III., perceiving the universal degeneracy that had taken place, made an attempt to restore the laws and discipline of Lycurgus, by which he supposed the state would be restored to its former glory. But, though at first he met with some appearance of success, he was in a short time most iniquitously tried and condemned by the ephori as a traitor to his country. See AGIS III. Cleomenes III., however, accomplished the reformation which Agis had attempted in vain. He suppressed the ephori : cancelled all debts ; divided the lands equally, as they had been in the time of Lycurgus ; and put an end to the luxury which prevailed among the citizens. But at last he was overborne by the

number of enemies which surrounded him; and, being defeated in battle by Antigonus, he fled to Egypt, where he and his family were kindly entertained by Ptolemy Euergetes ; but upon his death Philopater put him in jail, on which the old king killed himself.

With Cleomenes fell every hope of retrieving the affairs of Sparta. The citizens indeed attempted a reform, by dethroning their two last kings, Lycurgus II. and Agesipolis III., abolishing the binarchy, and establishing a republic ; but their new republic was very shortlived ; the tyrant Machanidas seized the power and made it a monarchy once more, or rather an absolute despotism, about A.A. C. 210. Machanidas, like all tyrants, detesting every thing that favored of liberty, made war upon the Achaeans, who were then joined in a league for the freedom of Greece ; and led a body of Spartans unwillingly against them ; but Philopoemen, coming up with him at the memorable town of Mantinea, rendered that place once more famous for a second de-feat of the Spartans, and killed the tyrant Machanidas with his own hand in the battle, about A. A. C. 206. The death of this tyrant, however, did not give liberty to Sparta. Nabis, a tyrant who in barbarity exceeded all the monsters who had gone before him, assumed the despotism and held it for fourteen years. See NABIS. To strengthen himself, he formed an alliance with the Romans, and joined the forces of Flaminius against the Achaeans ; but, though he gained one naval victory over Philopoemen at sea, that general soon after gave him a total overthrow by land; Nabis fell in the battle, and Philopcemen demolished the walls of Sparta, A.A. C. 192. The Spartans, however, reckoned themselves so much indebted to Philopcemen, for delivering them from their tyrant, that they sold Nabis's palace and furniture, made a present of the value '120 talents) to the Achaean general, and soon after joined the league, which their tyrants had hitherto compelled them to oppose. See PHILO-POSMEN. With all their bravery, however, they fell under the Roman yoke, in common with the rest of Greece, after the destruction of Corinth, A. A. C. 147. And about A. C. 71 their country was reduced by Vespasian to the form of a Roman province. Upon the division of the em-pire, it naturally fell to the Greek emperors, under whom it was subjected to despots, honorably so called, who acknowledged the authority of the emperors, and often were their relations. The last of these was Thomas Paloeologus, who was dispossessed by Mahomet II. in 1453. Sparta or Laconia, now called Misitra, was afterwards conquered by the Venetians in 1686 ; but the Turks recovered it in 1715.

As the character, manners, and customs, of the Spartans, were founded on the laws of Lycurgus, they may best be learned from a view of these laws. The institutions of Lycurgus were divided into

twelve tables. These respected, I. Religion: II. The Division of Land : III. Citizens and their children : IV. Celibacy and Marriage: V. Education : VI. Diet, Clothing, &c. : VII. Obedience : VIII. Learning : IX. Exercises : X. Money : XI. Courts of Justice : XII. Military service. The laws respecting these we shall consider in our usual lexicographical order.

Celibacy in men was infamous, and punished in a most extraordinary manner ; for the old bachelor was constrained to walk naked, in the depth of winter, through the market-place : while he did this, he was obliged to sing a song in disparagement of himself; and he had none of the honors paid him which otherwise belonged to old age, it being held unreasonable that the youth should venerate him who was resolved to leave none of his progeny behind him, to re-vere them when they grew old in their turn. The time of marriage was also fixed ; and, if a man did not marry when he was of full age, he was liable to an action ; as were such also as married above or below themselves. Such as had three children had great immunities ; such as had four were free from all taxes whatsoever. Virgins were married without portions ; because neither want should hinder a man, nor riches induce him, to marry contrary to his inclinations When a marriage was agreed on, the husband committed a kind of rape upon his bride. Husbands went for a long time, secretly and by stealth, to the beds of their wives, that their love might not be quickly and easily extinguished. Husbands were allowed to lend their wives ; but the kings were forbidden to take this liberty. Some other laws of the like nature there were, which, as they were evidently against modesty, so they were far from producing the end for which Lycurgus designed them ; since, though the men of Sparta were generally remarkable for their virtue, the Spartan women were as generally decried for their boldness and contempt of decency.

The citizens were to be neither more nor less than the number of city lots; and, if at any time there happened to be more, they were to be led out in colonies. As to children, their laws were equally harsh and unreasonable ; for a fa-ther was directed to carry his new-born infant to a certain place, where the gravest men of hi»

tribe looked upon the infant; and, if they perceived its limbs straight, and thought it had a wholesome look, then they returned it to its parents to be educated ; otherwise it was thrown into a deep cavern at the foot of the mountain Taygetus. This law seems to have had one very good effect, *viz.* making women very careful, when they were with child, of either eating, drinking, or exercising, to excess : it made them also excellent nurses ; for which they were in mighty request throughout Greece. Strangers were not allowed to reside long in the city, that they might not corrupt the Spartans by teaching them new customs. Citizens were also forbidden to travel, for the same reason, unless the good of the state required it. Such as were not bred up in their youth according to the law, were not allowed the liberty of the city, because they held it unreasonable that one who had not submitted to the laws in his youth should receive the benefit of them when a man. They never preferred any stranger to a public office; but, if at any time they had occasioˆ for a person not born a Spartan, they first made him a citizen, and then preferred him.

Such of the laws of Sparta as related to courts of justice may be brought under the eleventh table. Thirty years must have passed over the head of him who had a right to concern himself in juridical proceedings. Young men were thought unfit for them; and it was even held indecent, and of ill report, for a man to have any fondness for law-suits, or to be busying himself at the tribunals, when he had no affairs there of his own. By these rules Lycurgus thought to shut out litigiousness, and to prevent that multiplicity of suits which is always scandalous in a state. As young people were not permitted to enquire about the laws of other countries, and as they were hindered from hearing judicial proceedings in their courts, so they were likewise forbidden to ask any questions about, or to endeavour to discover, the reasons of the laws by which themselves were governed. Obedience was their duty ; and to that alone they would have them kept. Men of abandoned characters, or who were notoriously of ill fame, lost all right of giving their votes in respect of public affairs, or of speaking in public assemblies; for they would not believe that an ill man in private life could mean his country better than he did his neighbour.

As the poor ate as well as the rich, so the rich could wear nothing better than the poor : they neither changed their fashion nor the materials of their garments ; they were made for warmth and strength, not for gallantry and show : and to this custom even their kings conformed, who wore nothing gaudy in right of their dignity, 1jut were contented that their virtue should distinguish them rather than

their clothes. The youths wore a tunic till they were twelve years old ; afterwards they had a cloak given them, which was to serve them a year : and their clothing was, in general, so thin, that a Lacedaemonian vest became proverbial. Boys were always used to go without shoes ; but, when they grew up, they were indulged with them, if the manner of life they led vequired it ; but they were always

inured to run without them, as also to climb up and slip down steep places with bare feet : nay* the very shoe they used was of a particular form, plain and strong. Boys were not permitted to wear their hair ; but, when they arrived at the age of twenty, they suffered their hair and beard to grow. Baths and anointing were not much in use among the Lacedaemonians ; the river Eurotas supplied the former, and exercise the latter. In the held, however, their sumptuary laws did not take place so strictly as in the city ; for, when they went to war, they wore purple habits; they put on crowns when they were about to engage the enemy ; they had also rings, but they were of iron ; which metal was most esteemed by this nation. Young women wore their vests or jerkins only to their knees, or, as some think, not quite so low ; a custom which both Greek and Roman authors censure as indecent. Gold, precious stones, and other costly ornaments, were permitted only to common wo-men ; which permission was the strongest prohibition to women of virtue, or who affected to be thought virtuous. Virgins went abroad without veils, with which married women, on the contrary, were always covered. In certain public exercises, in which girls were admitted as well as boys, they were both obliged to perform naked. Plutarch apologises for this custom, urging, that there could be no danger from nakedness to the morals of youth whose minds were fortified and habituated to virtue. One of Lycurgus's principal views in his institutions was to eradicate the very seeds of civil dissension in his republic. Hence proceeded the equal division of estates enjoined by him ; hence the contempt of wealth, and the neglect of other distinctions, as particularly birth, he considering the people of his whole state as one great family ; distinctions which, in other commonwealths, frequently produce tumults and confusions that shake their very foundation.

Lycurgus divided all the country of Laconia into 30,000 equal shares : the city of Sparta he divided into 9000 as some say, into 6000 as others say ; and, as a third party will have it, into 4500. The intent of the legislator was that property should be equally divided amongst his citizens, so that none might be powerful enough to oppress his fellows, or any be in such necessity, as to be therefrom in danger of

corruption. With the same view he forbade the buying or selling these possessions. In this his views coincided entirely with the divine law given to the Israelites. If a stranger acquired a right to any of these shares, he might quietly enjoy it, provided he submitted to the laws of its republic. The city of Sparta was unwalled ; Lycurgus trusting it rather to the virtue of its citizens than to the art of masons. As to the houses, they were very plain ; for their ceilings could only be wrought by the axe, and their gates and doors only by the saw ; and their utensils were to be of a like stamp, that luxury might have no instruments among them.

It was the care of Lycurgus that, from their very birth, the Lacedaemonians should be inured to conquer their appetites : for this reason he directed that nurses should accustom tlieir chil-

dren to spare meals, and now and then to fasting : that they should carry them, when twelve or thirteen years old, to those who should examine their education, and who should carefully observe whether they were able to be in the dark alone, and whether they had got over all other follies and weaknesses incident to children. He directed that children of all ranks should be brought up in the same way ; and that none should be more favored in food than another, that they might not, even in their infancy, perceive any difference between poverty and riches, but consider each other as equals, and even as brethren, to whom the same portions were assigned, aud who, through the course of their lives, were to fare alike ; the youths alone were allowed to eat flesh ; older men ate their black broth and pulse ; the lads slept together in chambers, and after a manner somewhat resembling • that still in use in Turkey for the Janizaries ; their beds, in the summer, were very hard, being com posed of the reeds plucked by the hand from the banks of the Eu rotas ; in winter their beds were softer, but by no means downy, or fit to indulge immoderate sleep. They ate all together in public; and in case any abstained from coming to the tables they were fined. It was likewise strictly forbidden ‘for any to eat or drink at home before they came to the common meal; even then

each had his proper portion, that every thing might be done there with gravity and decency. The black broth was the great rarity of the Spartans. It was composed of salt, vinegar, blood, &c., which, in our times, would be esteemed a very unsavory soup. If they were moderate in their eating, they were so in their drinking also ; thirst was the sole measure thereof; and no Lacedsemonian ever thought of drinking for pleasure : as for drunkenness, it was both infamous and severely punished ; and, that young men might perceive the reason, slaves were compelled to drink to excess, that the beastliness of the vice might appear. When they retired from the public meal, they were not allowed any torches or lights, because it was expected that men who were perfectly sober should be able to find their way in the dark : and, besides, it gave them a facility of marching without light; a thing wonderfully useful to them in time of war.

In these all the Greeks were extremely careful, but the Lacedaemonians in a degree beyond the rest : for if a youth, by his corpulence or any other means, became unfit for these exercises, he underwent public contempt at least, if not banishment. Hunting was the usual diversion of their children ; nay, it was made a part of their education, because it had a tendency to strengthen their limbs, and to render those who practised it supple and fleet : they likewise bred up dogs for hunting with great care. They had a kind of public dances, in which they exceedingly delighted, and which were common alike to virgins and young men : indeed, in all their sports, girls were allowed to divert themselves with the youths ; insomuch that, at darting, throwing the quoit, pitching the bar, and such like robust diversions, the women were as dexterous as the men. For the manifest oddity of this proceeding, Lycurgus assigned no other

reason than that he sought to render women, as well as men, strong and healthy, that the children they brought forth might be so too. Violent exercises, and a laborious kind of life, were only enjoined the youth ; for, when they were grown up to men's estate, that is, were upwards of thirty years old, they were exempted from all kinds of labor, and employed themselves wholly either in affairs of state or in war. They had a method of whipping, at a certain time, young men in the temple of Diana, and about her altar ; which, however palliated, was certainly unnatural and cruel. It was esteemed a great honor to sustain these flagellations without weeping, groaning, or showing any sense of pain ; and the thirst of slory was so strong in these young minds that they very frequently suffered death without shedding a tear or breathing a sigh. A desire of overcoming all the weaknesses of

hu-man nature, and thereby rendering his Spartans not only superior to their neighbours, but to their species, runs through many of the institutions of Lycurgus ; which principle, if well attended to, thoroughly explains them, and without attending to which, it is impossible to form any just idea of them.

The plainness of their manners, and their being so very much addicted to war, made the Lacedaemonians less fond of the sciences than the rest of the Greeks. A soldier was the only reputable profession in Sparta; a mechanic or husbandman was thought a low fellow. The reason of this was, that they imagined professions that required much labor, some constant posture, being continually in the house, or always about a fire, weakened the body and depressed the mind : whereas a man brought up hardily was equally fit to attend the service of the republic in time of peace, and to fight its battles when engaged in war. Such occupations as were necessary to be followed for the benefit of the whole, as husbandry, agriculture, and the like, were left to their slaves, the Helotes ; but for curious arts, and such as served only to luxury, they would not so much as suffer them to be introduced into their city ; in consequence of which, rhetoricians, augurs, bankers, and dealers in money, were shut out. The Spartans admitted not any of the theatrical diversions among them ; they would not bear the representation of evil, even to produce good ; but other kinds of poetry were admitted, provided the magistrates had the perusal of pieces before they were handed to the public. Above all things, they affected brevity of speech, and accustomed their children, from their very infancy, never to express themselves in more words than were strictly necessary ; whence a concise sentiment expressed in few words is to this day styled laconic. In writing they used the same conciseness ; of which we have a signal instance in a letter of Archidarnus to the Eleans, when he understood that they had some thoughts of assisting the Arcadians. It ran thus: ‘Archidamus to the Eleans : it is good to be quiet.’ And therefore Epaminondas thought that he had reason to glory in having forced the Spartans to abandon their monosyllables, and to lengthen their discourses. The greatest part of thei-732

education consisted in giving their youth right ideas of men and things : the iren or master proposed questions, and either commended the

answers that were made him, or reproved such as answered weakly. In these questions, all matters, either of a trivial or abstruse nature, were equally avoided ; and they were confined to such points as were of the highest importance in civil life; such as, Who was the best man in the city? Wherein lay the merit of such an action ? and, Whether this or that hero's fame was well founded ? Harmless raillery was greatly encouraged ; and this, joined to their short manner of speaking, rendered laconic replies universally admired. Music .was much encouraged ; but in this, as in other things, they adhered to that which had been in favor with their ancestors ; nay, they were so strict therein, that they would not permit their slaves to learn either the tune or the words of their most admired odes ; or, which is all one, they would not permit them to sing them if they had learned them. Though the youth of the male sex were much cherished and beloved, as those that were to build up and continue the future glory of the state, yet in Sparta it was a virtuous and modest affection, untinged with that sensuality which was so scandalous at Athens. The good effects of this part of Lycurgus's institutions were seen in the union that reigned among his citizens ; and which was so extraordinary, that, even in cases of competition, it was hardly known that rivals bore ill-will to each other; but, on the contrary, their love to the same per-son begat a secondary friendship among themselves, and united them in all things which might be for the benefit of the person beloved.

Till a man was thirty years old, he was not capable of serving in the army, as the best authors agree ; though some think that the military age is not well ascertained by ancient writers. They were forbidden to march at any time before the full moon ; the reason of which law is very hard to be discovered, if indeed it had any reasons at all, or was not rather founded on some superstitious opinion, that this was a more lucky conjuncture than any other. They were likewise forbidden to fight often against the same enemy ; which was one of the wisest max-ims in the political system of Lycurgus : and Agesilaus, by offending against it, destroyed the power of his country, and lost her that authority which for many ages she maintained over the rest of Greece ; for, by continually warring against the Thebans, to whom he had an inveterate hatied, he at last beat them into the knowledge of the art of war, and enabled them, under the command of Epaminondas, to maintain for a time the principality of Greece. Maritime affairs they were forbidden to meddle with, though the necessity of things compelled them, in process of time, to transgress this institution, and by degrees to transfer to themselves the dominion of the sea as well as of the land ; but, after the Peloponnesian war,

they again neglected naval affairs, from a persuasion that sailors and strangers corrupted those with whom they conversed. As they never fortified Sparta, they wpre not ready to undertake sieges ; fighting in

the field was their proper province, and, while they could overcome their enemies there, they rightly conceived that nothing could hurt them at home. In time of war, they relaxed somewhat of their strict manner of living, in which they were singular. The true reason for this was, in all probability, that war might be less burdensome to them ; for, as we have more than once observed, a strong desire to render them bold and warlike was the reigning passion of their legislator. They were forbidden to remain long encamped in the same place, as well to hinder their being surprised, as that they might be more troublesome to their enemies, by wasting every corner of their country. They slept all night in their armour ; but their outguards were not allowed their shields, that, being unprovided of defence, they might not dare to sleep. In all expeditions they were careful in the performance of religious rites ; and, after their evening meal was over, the soldiers sung together hymns to their gods. When they were about to engage, the king sacrificed to the Muses, that, by their assistance they might be enabled to perform deeds worthy of being recorded to latest times. Then the army advanced in order to the sound of flutes which played the hymn of Castor. The king himself sung the paean, which was the sig-nal to charge. This was done with all the solemnity imaginable; and the soldiers were sure either to die or conquer : indeed they had no other choice ; for if they fled they were infamous, and in danger of being slain, even by their own mothers, for disgracing their families". In this consisted all the excellency of the Spartan women, who, if possible, exceeded in bravery the men, never lamenting over husbands of sons, if they died honorably in the field ; but deploring the shame brought on their house, ir either the one or the other escaped by flight. The throwing away a shield also induced infamy : and, with respect to this, mothers, when they embraced their departing sons, were wont to caution them, that they should either return armed as they were, or be brought back so when they were dead ; for such as were slain in bat-tle were nevertheless buried in their own country. When they made their enemies fly, they pursued no longer than till victory was certain ; because they would seem to fight rather for the honor of conquering, than of putting their enemies to death. According to their excellent rules of war, they were bound not to spoil the dead bodies of their enemies ; but in process of time, this, and indeed many other of their most excellent regulations, fell into desuetude. He who overcame by

stratagem offered up an ox to Mars ; whereas he who conquered by force, offered up cnly a cock : the former being esteemed more manly that the latter. After forty years service, a man was, by law, no longer required to go into the field : and consequently, if the military age was thirty, the Spartans were not held invalids till they were seventy.

Gold and silver were, by the constitutions of Lycurgus, made of no value in Sparta. He was so well apprised of the danger of riches that he made the very possession of them venal ; but as there was no living without some sort of money.

that is, some common measure or standard of the worth of things, he directed an iron coinage, whereby the Spartans were supplied with the useful money, and at the same time nad no temptation to covetousness afforded them; for a very small sum was sufficient to load a couple of horses, and a great one must have been kept in a barn or warehouse. The coming in of all foreign money was also prohibited, that corruption might not enter under the name of commerce. The most ancient method of dealing, *viz.* by barter, or exchange of one commodity for another, was preserved by law in Sparta long after it had been out of date every where else. Interest was a thing forbidden in the Spartan commonwealth ; where they had also a law against alienation of lands, accepting presents from foreigners, even without the limits of their own country, and when their authority and character might well seem to excuse them.

Though the Spartans were always free, yet it was with this restriction, that they were subservient to their own laws, which bound them as strictly in the city as soldiers in other states were bound by the rules of war in the camp. In the first place, strict obedience to their superiors was the great thing required in Sparta. This they looked upon as the very basis of government, without which neither laws nor magistrates availed much. Old age was an indubitable title to honor in Sparta ; to the old men the youth rose up whenever they came into any public place; they gave way to them when they met them in the streets, and were silent whenever their elders spoke. As all children

were looked upon as the children of the state, so all the old men had the authority of parents ; they reprehended whatever they saw amiss, not only in their own, but in other people's children ; and by this method Lycurgus provided that, as> youth are every where apt to offend, they might be nowhere without a monitor. The laws went still further ; if an old man was present where a young one committed a fault, and did not reprove him, he was punished equally with the delinquent. Amongst the youths there was one of their own body, or at most two years older than the rest, who was styled iren ; he had authority to question all their actions, to look strictly to their behaviour, and to punish them if they did amiss ; neither were their punishments light, but, on the contrary, very severe, whereby the youth were made hardy, and accustomed to bear stripes and rough usage. Silence was a thing highly commended at Sparta, where modesty was held to be a most becoming virtue in young people; nor was it restrained only to their words and actions, but to their very looks and gestures : Lycurgus having particularly directed that they should look forward, or on the ground, and that they should always keep their hands within their robes. A stupid inconsiderate person, one who would not listen to instruction, but was careless of whatever the world might say of him, the Lacedemonians treated as a scandal to human nature ; with such a one they would not converse, but threw him off as a rotten branch and worthless member of society.

The statues of all the gods and goddesses were

represented in armour, even to Venus herself-the reason of which was that the people might conceive a military life the most noble and honorable, and not attribute, as other nations did, sloth and luxury to the gods. As to sacrifices they consisted of things of very small value; for which Lycurgus himself gave this reason, — That want might never hinder them from worshipping the gods. They were forbidden to make long or rash prayers to the heavenly powers, and were enjoined to ask no more than that they might live honestly and discharge their duty. Graves were permitted to be made within the bounds of the city, contrary to the custom of most of the Greek nations; nay, they buried close by their temples, that all degrees of people might be made familiar with death, and not conceive it such a dreadful thing as it was generally esteemed elsewhere; on the same account the touching of dead bodies, or assisting at funerals, made none unclean, but were held to be as innocent and honorable duties as any other. There was nothing thrown into the grave with the dead body ; magnificent sepulchres were forbidden ; neither was there so much as an

inscription, however plain or modest, permitted. Tears, sighs, outcries, were not allowed in public, because they were thought dishonorable in Spartans, whom their lawgiver would have to bear all things with equanimity. Mourning was limited to eleven days ; on the twelfth the mourner sacrificed to Ceres and threw aside his weeds. In favor of such as were slain in the wars, however, and of women who devoted themselves to a religious life, there was an exception allowed as to the rules before mentioned ; for such had a short and decent inscription on their tombs. When a number of Spartans fell in battle, at a distance from their country, many of them were buried together under one common tomb; but, if they fell on the frontiers of their own state, then their bodies were carefully carried back to Sparta and interred in their family sepulchres.

Many authors, both ancient and modern, have celebrated the constitution and government of Sparta as superior to those of all other nations. Upon this subject we need only quote the sentiments of the reverend and ingenious David Williams, who, in his Claims of Literature, p. 33, states the comparative merits of the constitution of Sparta and Athens in few words : — ‘ Flow different (says he) the state of society in Athens and Lacedemon ! branches of a common stock and inhabiting the same climate ! Jn the one, the admiration of genius and the lore of literature heightened into delirium ; in the other, all talents but those of war checked and extinguished. In Athens, the lives of men of genius were those of gods; in Lacedaemon, glory and fame could be obtained only in blood.’

SPARTA, the daughter of Eurotas and wife of Lacedaemon who gave their name to Sparta.

SPARTACUS,aThracian shepherd who commenced gladiator, and was one of those kept in the house of Lenlulus, at Capua, who it would seem had been slaves : for, having escaped with thirty of his associates, they soon increased to 10,000 men, and raised a formidable rebellion against the Romans. Emboldened by increasing

numbers they not only plundered the country of Campania, but attacked the Roman army under the two consuls and defeated them. At last Crassus was sent against them with dubious hopes, and after a very bloody battle defeated them ; Spartacus being killed in battle upon heaps of Romans whom he had slain, A. A. C. 31, with his own hand. See ROME. In this batile no fewer than 40,000 of the rebels were slain.

SPART./E, or SPARTI, in the mythology, the men who sprang from the dragon's teeth wh;ch Cadmus sowed. See CADMUS.

SPARTI. See SPARTA.

SPARTIANUS (;Elius), a Latin historian, who flourished about A. D. 290, and wrote the lives of all the Roman emperors from Julius Caesar to Dioclesian. He was a relation of Dioclesian, and dedicated his work to him. Of these lives only six are extant ; viz those of Adrian, Verus, D. Julianus, Septimius Severus, Caracalla, and Geta; which are published among the Scriptores Historiae Augusts.

SPARTIUM, broom, in botany, a genus of plants belonging to the class of diadelphia, and order of decandria ; and in the natural system arranged under the thirty-second order, papilionaceae. The stigma is longitudinal and woolly above; the filaments adhere to the germen. The calyx is produced downwards. There are sixteen species; *viz.* 1. S. angulatum ; 2. aphyl-lum; 3. complicatum ; 4. contaminatum. 5.cy-tisoides; 6. junceum; 7. monospermium; 8. patens; 9. purgans; 10. radiatum; 11. scoparium; 12. scorpius ; 13. sepiarium; 14. sphse-rocarpon; 15. spinosum ; and 16. supranulium. All these are exotics chiefly from Spain, Portugal, Italy, &c., except the scoparium.

1. S. junceum, Spanish broom, grows naturally in the southern provinces of France as well as other parts of the south of Europe. It grows on the poorest soils, on the steepest declivities of the hills, in a stony soil, where hardly any other plant could vegetate. In a few years it makes a vigorous shrub; insinuating its roots between the interstices of the stones, it binds the soil and retains the small portion of vegetable earth scattered over these hills which the autumnal rains would otherwise wash away. It is most easily raised from seed, which is usually sown in January, after the ground has received a slight dressing. This shrub serves two useful purposes. Its branches yield a thread of which linen is made, and in winter support sheep and goats. In manufacturing thread from broom the youngest plants are cut in August, or after harvest, and gathered together in bundles, which at first are laid in the sun to dry ; they are then beaten with a piece of

wood, washed in a river, and teft to steep in the water for four hours. The bundles thus prepared are taken to a little distance from the water and laid in a hollow place made for them, where they are covered with fern or straw, and remain thus to steep for eight or nine days; during which time all that is necessary is to throw a little water once a day on the heap without uncovering the broom. After this the bundles are well washed, the green rind of the plant in epidermis comes off, and the

fibrous part remains ; each bundle is then beaten with a wooden hammer upon a stone to detach all the threads, which are at the same time carefully drawn to the extremity of the branches After this operation the faggots are untied and spread upon stones till they are dry. The twigs must not be peeled till they are perfectly dry; they are then dressed with the comb, and the threads are separated according to their fineness and spun upon a wheel. The lines made of this thread serve various purposes in rural economy. The coarsest is employed in making sacks and other strong cloths for carrying grain or seeds. Of the finest is made bed, table, and body linen. The peasants in several places use no other; for they are unacquainted with the culture of hemp or flax, their soil being too dry and too barren for raising them. The cloth made with the thread of the broom is very useful , it is as soft as that made of hemp ; and it would perhaps look as well as that made of flax if it were more carefully spun. It becomes white in proportion as it is steeped. The price of the finest thread is generally about a shilling a pound. The other use of this broom is to feed sheep and goats in winter. In the mountains of the ci-devant Languedoc these animals have no other food from November to April, except the leaves of trees preserved. The branches of this broom, therefore, are a resource the more precious, that it is the only fresh nourishment which at that season the flocks can procure, and they prefer it at all times to every other plant. In fine weather the sheep are led out to feed on the broom where it grows; but in bad weather the shepherds cut the branches and bring them to the sheep folds. But the continued use of this food produces inflammation in the urinary passages. This is easily removed by cooling drink, or a change of food, or by mixing the broom with something else. It differs much from the broom that is common every where in the north of Europe, though this too, in many places, is used for food to cattle. Both produce flowers that are very much resorted to by bees, as they contain a great quantity of honey juice. This should be another inducement to cultivate the Spanish broom.

2. S. scoparium, the common broom, has ternate solitary leaves; the branches angular and without prickles. It is used for various purposes. It has been of great benefit in dropsical complaints. The manner in which Dr. Cullen administered it was this : — He ordered half an ounce of fresh broom tops to be boiled in a pound of water till one-half of the water was evaporated. He then gave two table spoonfulls of the decoction every hour till it operated both by stool and urine. By repeating those doses every day, or two days, he says some dropsies have been cured. Dr. Mead relates that a dropsical patient, who had taken the usual remedies and been tapped three times without effect, was cured by taking half a pint of the decoction of green broom tops with a spoonfull of whole mustard seed every morning and evening. ‘ An infusion of the seeds drunk freely (says Mr. Withering) has been known to produce similar happy effects ; but whoever expects these effects to follow in every dropsical case will be greatly

deceived. I knew them succeed in one case that was truly deplorable; but out of a great number of cases in which the medicine had a fair trial this proved a single instance.’ The flower buds are in some countries pickled and eaten as capers ; and the seeds have been used as a bad substitute for coffee. The branches are used for making besoms and tanning leather. They are also used instead of thatch to cover houses. The old wood furnishes the cabinet-maker with beautiful materials for veneering. The tender branches are in some places mixed with hops for brewing, and the macerated bark may be manufactured into cloth.

SPARUS, in ichthyology, gilthead ; a genus of animals belonging to the class of pisces and the order of thoracici. The fore-teeth and dog-teeth are very strong; the grinders are obtuse and thick set ; the lips are folded over ; there are five rays in the gill membrane; and the opercula are scaly; the body is compressed; the lateral line is crooked

behind ; and the pectoral fins are roundish. Gmelin enumerates thirty-nine species, of which only three are found in the British seas; *viz.* 1. S. auratus, the gilt-bream. The head and sides of it are gilt, and there is a golden

spontaneously disposed to alternate with relaxation, is properly termed spasm. When the contractions alternate with relaxation, and are frequently and preternaturally repeated, they are called convulsions. Spasms are distinguished by authors into clonic and tonic spasms. In clonic spasms, which are the true convulsions, the contractions and relaxations are alternate, as in epilepsy ; but in tonic spasms the member remains rigid, a*> in locked jaw.

SPASMUS CYXICUS, or sardonic laugh, is a convulsive affection of the muscles of the face and lips on both sides, which involuntarily forces the muscles of those parts into a species of grinning distortion. If one side only be affected, the disorder is nominated tortura oris. When the masseter, buccinator, temporal, nasal, and labial muscles, are involuntarily excited to action, or contorted by contraction or relaxation, they form a species of malignant sneer. It sometimes arises from eating hemlock or other acrid poisons, or succeeds to an apoplectic stroke.

SPAT, n, s. Sax. Vpatan. The young shell-fish.

A reticulated film found upon sea-shells, and usually supposed to be the remains of the vesicles of

spot between the eyes shaped like a haft moon ; the spat of some sort of shell-fish.

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Woodward on Fossils.

SPATHELIA, in botany, a genus of plants belonging to the class of pentandria, and order of trigynia : CAL. pentaphyllous ; the petals are five: CAPS, three-edged and trilocular: SEEDS solitary. There is only one species. S. simplex,

genus in particular being adapted for that pur-a native of Jamaica, introduced into the botanic pose • the grinders are flat and strong, like those gardens of this country in 1778 by the ingenious 1 ‘ -1 ‘”’ ‘L-Dr. Wright, late of Jamaica.

there is also a black purple spot on the gills ; and it weighs from eight pounds to ten pounds. It is one of the pisces saxatiles, or fish that haunt deep waters on bold rocky shores. They feed chiefly on shell-fish which they comminute with their teeth before they swallow, the teeth of this

of certain quadrupeds ; besides which there are certain bones in the lower part of the mouth that assist in grinding their food. They are coarse: they were known to the Romans who did not esteem them unless they were fed with Lucrine oysters, as Martial informs us, lib. xiii. ep. 90. In the account of captain Cook’s voyage, published by Mr. Foster, we are informed that the giltheads are sometimes poisonous, owing to their feeding on certain species of the raja which have an extremely acrid and stimulating property. 2. S. dentatus, toothed sea-bream, is black above and of a silvery appearance below. The eyes and gills are very large. There are nine rows of teeth in the lower jaw and one in the upper. 3. S. pagrus, the sea-bream, is of a reddish color. The skin forms a sinus at the roots of the dorsal and anal fins. The body is broad ; the back and belly ridged. There is only one dorsal fin.

SPASM, n. s. Fr. spasme; Gr. ffirdffpa. Convulsion ; violent and involuntary contraction of any part.

All the maladies

Of ghastly spasm, or racking torture, qualms Of heart-sick agony. Milton.

Wounds are suhject to pain, inflammation, spatm. Wiseman’s Surgery.

Carminative things dilute and relax ; because wind occasions a spasm or convulsion in some part.

Arbuthnot.

SPA’TIATE, v. n. Lat. spatior. To rove; range ; ramble at large. A word not used.

Wonder causeth astonishment, or an immoveable posture of the body, caused by the fixing of the mind upon one cogitation, whereby it doth not spatiate and transcur. Bacon.

Confined to a narrow chamber, he could spatiate at large through the whole universe. Bentley.

SPATTER, v. a. Sax. rpat, spit. To sprinkle with dirt, or any thing offensive.

His forward voice now is to speak well of his friend ; his backward voice is to tpatter foul speeches, and to detract. Shakspeare.

Thev, fondly thinking to allay Their appetite v ith gust, instead of fruit Chewed bitter ashes, which the’ offended taste With spattering noise rejected. Milton.

The pavement swam in blood, the walls around Were spattered o’er with brains. Addismi.

SFAT’ULA, n. s. Lat. spatha, spathula. A spattle or slice.

Spatula is an instrument used by apothecaries and surgeons in spreading plaisters or stirring medicines together. QIH’MCI/.

In raising up the hairy scalp smooth with my spatula, I could discover no fault in the bone.

Wueman’f Surgery.

SPAVIN, n. s. Fr. espavent ; Ital. spavano. A disease in horses in which a bony excrescence, or crust as hard as a bone, grows on the in«ide of the hough, not far from the elbow, and

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luntarv contraction of the muscular fibres, or that is generated of the same matter by which the

i •_! _-ˆ tones or ligaments are nourished.

SPASMUS, from Gr. trvau, to draw, in medicine, is cramp, spasm, or

convulsion ; an involuntary contraction of t state of the contraction of muscles which is not

They've all new legs and lame ones; one would

take it,

That never saw them pace before, the sjmvin And springhalt reigned among them. Shakspeare.

If it had been a spavin, and the ass had petitioned for another farrier, it might have been reasonable.

L'Estrange.

SPAWL, v.n. & n. s.) Saxon j-poethan, to

SPAWL'ING, n. t. J spit. To throw moisture out of the mouth : the noun substantive corresponding. Disused.

He who does on ivory tables dine, His marble floors with drunken spawtunys shine.

Dryden.

Of spittle she lustration makes ; Then in the spawl her middle finger dips, Anoints the temple, forehead, and the lips. Id.

What mischief can the dean have done him, That Traulus calls for vengeance on him ? Why must he sputter, spawl, and slaver it, In vain, against the people's fav'rite 1 Swift.

SPAWN, n. «., v. a., \ Sax. rpeonan ; Belg.

SPAWN'ER. [& v. n. } spene, spenne-The eggs of fish or frogs; any produce: to produce; generate : issue ; proceed : the spawner is the female fish.

Masters of the people, Your multiplying spawn how can he flatter That's thousand to one good one.

Shakspeare. Coriolanus.

Some report a sea-maid spawned him. Shahspeare.

God said, let the waters generate Reptile, with spawn abundant, living soul ! Milton.

The fish having spawned before, the fry that goes down hath had about three months growth under ground, when they are brought up again.

Browne's Travels.

The barbel, for the preservation of their seed, both the tpawner and the melter, cover their spawn with sand. Walton.

Carp and tench do best together, all other fish being devourers of their spawn. Mortimer.

, Twas not the spawn of such as these That dyed wiih Punick blood the conquered seas, And quashed the stern ˆEacides. Roscommon.

This atheistical humour was the spawn of the gross superstitions of the Romish church and court.

Tillotson.

It is so ill a quality, and the mother of so many ill ones that spawn from it, that a child should be brought up in the greatest abhorrence of it. Locke.

These ponds, in spawning time, abounded with frogs, and a great deal of tpawn.

Ray on the Creation.

What practices such principles as these may spawn, when they are laid out to the sun, you may determine. Swift,

The SPAWNING OF FISH is the act of depositing the raw or oviparous matter of the female and of its being impregnated with that of the male. Most sorts of river-fish, and many of those of the sea kind, produce their youne in this way. But the impregnation is accomplished in different manners as to the mode of its deposition,

according to the nature and habits of the fish. In those fishes which spawn in the more still and shallow waters during the spring and summer seasons, such as the pike, bream, carp, perch, and some other kinds, it would seem to be most commonly the habit to deposit their spawny material on the leaves and vegetables which lie just below the surface of the water :

while in those fishes which cast their spawn in the winter season, such as the salmon, trout, herring, and many other sorts, spots and places very near the sources or beginnings of rivers and streams, or the more rapid fresh-water currents, are mostly sought for and fixed upon in this intention, where there is a constant flow of fresh-water, where all stagnation is prevented, and where the water is the most fully aerated, either in its natural situation or during its fall in rain. A proper and suitable degree of warmth may also be necessary in this business. In all other cases the fishes probably deposit their spawny oviparous matters in such situations as are the most suitable to their particular economies, and where there is the necessary heat, as well as where the water is the most fully saturated and impregnated with air, as it is now well ascertained that their impregnated spawny oviparous matters do not produce young ones, any more than seeds vegetate, except where they are freely supplied with air.

The fish in the egg, or spawn, derives its oxy-gen from the air which is dissolved in the water that surrounds it, which, in the first of the above cases, is ˆmuch supplied by the leaves of the plants on which it is deposited : and in the latter case it is gained from the perpetual flowings of such fresh and fully aerated waters over it, after it has been the most conveniently and effectually impregnated in such shallow parts, currents, and streamlets. It is stated, in speaking of the herring, by the writer of a paper in the third volume of the Transactions of the Highland Society of Scotland, that a very singular notion had been held with regard to the impregnation of the ova or eggs of fish, and which is not by any means the doctrine or hypothesis of yesterday, but which has prevailed, in a greater or less degree, for upwards of 2000 years ; that is, from the days of Herodotus, who, in treating and speaking of the fish in the Nile, makes the following observation : — ‘ At the season of spawning they move in vast multitudes towards the sea, the males lead the way, and emit the engender-ing principle in their passage ; this the females absorb as they follow, and in consequence conceive, and when their ova are deposited they are consequently matured into fry.’ — Beloe’s Herod. And, absurd as this supposition and process spem to be, it is asserted,

it is said, to be the case by Linnseus, the most learned of all others in the science of animal history : he tenaciously affirms, it is maintained, that there can be no impregnation of the eggs of any animal out of the body, and that as fish have no organs of generation, that deficiency is made up by adopting the sys-tem or notion of Herodotus. This unfounded notion has likewise, it is added, been supported by Kalm, the friend and countryman of the above celebrated naturalist.

At one of the sittings of the National Institute in France, in the year 1799, a memoir was read by the member of instruction at Rouen, on the means and advantages of naturalising the herring, a salt-water fish, in the water of the Seine, near its mouth, &c.; in which, after noticing the various means by which this may be accomplished, it is observed that ‘ herrings having been found

tscending from the sea into one river of the American province, while a single individual was never seen in another, separated from the other by a narrow tongue of land, and which also communicated with the sea, a philosopher (Dr. Franklin), took the leaves off some plants on which the herrings had deposited their ova, already fecundated, and conveyed them to the river which was deprived of the annual visit of these fish. The success of. the experiment surpassed his expectation, the ova was completely productive, and the following year the river was peopled with a numerous shoal of herrings, which, since that time, continued to frequent it.’ Phil. Mag. vol. x. p. 163.

This theory is supposed, by the above writer, to be more rational and not entirely against established facts ; though it should be considered, he conceives, that the European herring is not a native of fresh water, and, as he thinks, never will be naturalised in such waters ; but that the spawn of fishes, being fecundated in their own waters, may be transported ; and when placed in the same homogeneal element upon leaves, sand, or other matters, where the sun and air, as we have seen above, can have free access, or a pro-per heat, with oxygen air, as has been shown already, received, such ova, raw, or eggs, will be animated and become fry in the same time they would have done in

their parent beds, cannot be doubted. This is a practice, it is said, which is well known in China ; the missionaries to which have noticed two or three things about it which are singular enough ; the first of which is, that in the great river Yangtsee Kyang, not far from the city Kyus-king-fu, in the province of Kyang-si, a prodigious number of barks meet every year to buy the spawn of fishes. About May the people of the country dam up the river for nine or ten leagues together, in several places, with mats and hurdles, leaving only room enough for barks to pass; in order to stop the spawn, which they know how to distinguish at first sight, though the water is scarcely altered ; with this water mixed with the spawn they fill several vessels to sell to the merchants, who, at this season, arrive in great numbers to buy and transport it into divers provinces, taking care to have it stirred up from time to time : this water is sold by measure to such as have fish-ponds and pools belonging to their houses. The manner of propagating the gold-fish from spawn is likewise deserving of attentive consideration.

It is supposed by the writer of the above paper that herrings, which cast their spawn in the win-ter months, without doubt deposit it on our shores; but whether upon gravel, sand, stones, fuci, or other plants, is not well ascertained ; but thus far we know, it is said, that it cannot be in deep water, unless we suppose it to have such a buoyancy as to be within reach of the sun's ge-nial influence, and, as has been since shown, that of the free action of the air. It is believed, and the same writer thinks with reason, that it is impregnated by the male after it is emitted by the spawner or spawning-fish. The raw spawn, or eggs, of these fish become animated, it is said, .n the month of April. It is noticed, that the fucus palmatus, and, indeed, all the numerous VOL. XX.

species of fuci which grow upon our coasts, it is hardly to be doubted, harbour the spawn of fishes ; but that the opinion may readily be either confirmed or confuted by the assistance of a glass of moderate magnifying power.

It is also suggested that the cause or reason of the herring's quitting the deep seas is unquestionably that of its casting its spawn in its na-tive water, as the banks and mouths of the rivers where it was produced. And the same is the case with the salmon, the shad, the pilchard, and some others; all of which prefer their natal waters for the purpose of spawning in ; and, though the herring and pilchard sometimes deviate from this course, the salmon and shad do it very

seldom, being more sober and steady in their attachment to their parent haunts. The heaviest salmon are met with in the large rivers, and the largest herrings in the deep waters, each coast and river producing fish which are different in taste, size, and appearance, as is remarkably seen in the shads and salmons of different rivers and the herrings of different situations. The fry of the herring, as well as of the salmon, when they have attained sufficient size and strength, quit the shallows and make for the deeps : when the shoals of the former enter the bays, and other similar places, the young ones are noticed to take their final departure from them.

The SPAWNING OR LAYING OF OYSTER-BEDS in the mouths of the breeding-rivers has been thus described : — The principal rivers in the county of Essex, where this sort of work, or that of breeding oysters, is carried on, according to the Corrected Agricultural Report of that district, are those of the Crouch, the Blackwater, and the Coin ; but the first is by far the most certainˆin produce of any of them. The beds, or layings, are made in the creeks, and other similar places, on the sides or parts which adjoin the mouths openings, or beginnings of these rivers. It is from these rivers that the oyster-layings, or beds, are usually stocked ; though some are constantly supplied from Portsmouth, or places in its neighbourhood, being brought in the largest sort of oyster-vessels, not only into this county, but Kent, where they are laid for the ensuing season, The Colchester oyster-beds are chiefly at Wiven hoe, being partly supplied by the Kentish oyster-smacks. The beds, or layings, in these different situations, are likewise, in all probability, supplied or furnished with oysters from several other places on the southern coast of this country; as well as the northern one of France. The breeding-rivers in the county of Essex are said to be very uncertain as to the quantity of oysters they produce ; as in some seasons they afford a great quantity, while, at other times, they only produce what is called a good sprinkling, and sometimes there is none at all. But they seldom all produce or fail, it is observed, in the same season.

The oyster-fisheries are of very great importance to the country as well as to particular counties and districts, especially that of Essex ; as they employ great numbers of small vessels, require the labor of many men, and afford considerable profit in the produce of food which they supply, as being principally an article of luxury. In the county just mentioned tiiere are

SPA

several of these oyster-fisheries. In the Blackwater river, and neighbouring parts, there is a considerable fishery of this nature ; and West Mersea is one of the principal stations of the dredgers : above thirty boats, it is said, belong to the island, and are almost constantly at work in this business. Vessels come from Kent to purchase the oysters, and they sell some to Wivenhoe, where what are called the Colchester beds are situated. They are sold by the tub of two bushels, and are generally from 4s. to 6s. a tub; but at present (1807) 6s. A dredging-boat is from fourteen to thirty or forty tons bur-den : all are decked and built at Wivenhoe, Brightlingsea, and places thereabouts. The price is £10 a ton for the hull of the vessel only; the fitting out of one of twenty tons requiring the amount of £150. From two to four men are required for each vessel, who are paid by shares ; and the master has a share for the vessel. In the spring season they go to dredge on the coasts of Hants and Dorset. Sometimes 130 vessels have been counted at work within sight of Mersea. This oyster-fishery is, it is said, an object of considerable consequence to the country, from the earnings being great, and some other circumstances : but when the men die, their families, it is said, come to the parish, greatly increased by the number of apprentices which they have taken. Nothing, however, the writer of the report thinks, can be so preposterous as a police of the poor, which permits the benefits of commerce and manufactures to load the land with rates to the amount of 8s. in the pound, when a very small contribution by a box-club, or benefit society, would readily prevent the evil.

The following account of the oyster-business in the same district is from Mr. Bennet Hawes of Mersea, given as from his own local knowledge of the places where it is carried on, in the above report. The number of vessels which are employed in it, of from eight to forty or fifty tons, is nearly 200, in which are employed from 400 to 500 men and boys. A vessel carrying three men has one share and a half of all the earnings, and the men Mie share each. Large vessels have

generally, it is said, two shares; but none, it is believed, more than this. It is said that the vessels which are built at East Dony-land, Wivenhoe, Brightlingsea, Burnham, and Mersea, for this business, will last from thirty to forty years, when proper care is taken of them. The writer was informed by a person then liv-ing at Wivenhoe, that he had, within the last twenty years, built 100 vessels for the oyster business alone. There has been an increase of boats, and of course of men, of more than one half within the last thirty years-At Burnham they have seven dredging smacks, belonging to the company that hire the river of Sir Henry Mildmay, besides four other private ones and some smaller vessels. The smacks are from eighteen to twenty tons. And there are only about 100 fishermen and sailors about the place, which are much too few, it is thought, for so fine a river. Most of the vessels of sixteen tons and upwards go, it is said, to Portsmouth, or places adjacent, in the month of March, to catch and carry oysters ; those under twenty-

five tons being employed in catching them, and the larger ones in carrying them into this county and Kent, to be used as noticed above; they generally return thence in the month of June, when the large ones go after mackarel, herrings, and sprats, during the latter part of the summer, and, in the ensuing winter, the smaller ones to the catching of oysters in the breeding rivers, as above. The oysters are sold to London, Hamburgh, Bremen, and, in time of peace, to Holland, France, and Flanders. The quantity consumed in a season is scarcely to be calculated ; but it is supposed that it cannot be less than 12,000 or 15,000 bushels. This fishery is so much blended with the others, that it is almost impossible to state the capital which is employed in it, but it is supposed to be from £60,000 to £80,000.

SPAY, v.a. Lat, spado. To castrate female animals.

Be dumb, you beggars of the ry throing trade ; Geld your loose wits, and let your mouse be spayed.

Cleavelund.

The males must be geit, and the sows spayed ; the spayed they esteem as the most profitable, because of the great quantity of fat upon the inwards.

Mortimer’s Husbandry.

SPAYING, or SPADING, in rural economy, the operation of castrating

the females of several kinds of animals, as sows, &c., to prevent any further conception, and promote their fattening. It is performed by cutting them in the mid-flank, on the left side, with a sharp knife or lancet, in order to extirpate or cut off the parts destined to conception, and then stitching up the wound, anointing the part with tar-salve, and keeping the animal warm for two or three days. The general way is to make the incision in a sloping manner, two inches and a half long, that the fore-finger may be put in towards the back, to feel for the ovaries, which are two kernels as big as acorns, one on each side of the uterus, one of which being drawn to the wound, the cord or string is cut, and thus both taken out.

In the Annals of Agriculture Mr. Foot has suggested the practice of spaying old cows and heifers ; as it is a method, he apprehends, that might be performed with safety, and prove of general use in grazing; as cows, when they grow old and fail in their milk, are often attended with difficulty, where the bull goes at large, to keep them from him, especially on commons, during the summer, which put him on trying the experiment on a cow of small value, whose pro-fit for the pail was so far over that she would not milk for about three months before she be-came dry. After she had calved about a month, he had her cut ; the operator was an ingenious person, and performed the business well, that with a little care of keeping her from the cold (being early in the spring) for about a fortnight he thought her out of danger ; and continued milking her as usual all the time. She soon be-gan to thrive, gaining flesh, and before the sui..- mer was over, by the time she was quite dry, was much improved, though kept no better than the other part of the dairy on very middling pasturage. At Michaelmas, had she been put to tur-r.ips, or good rouen, she would have been fat by

Christmas, or soon after. When killed, she sold at 3s. 6d. a stone, about half fat at that time, which he laid at Is. a stone more than she

would have done had she not been cut. And afterwards he had two others cut, that continued to be milked, and grazed well; one he had killed, the other he sold alive, which improved and paid beyond expectation. And, though little has yet been done in this way, he is persuaded it will be found of general utility if attended to. But, however, lately he accidentally met the person that performed the operation, who informed him that he had been sent for within twelve months, or thereabouts, to cut nearly forty in like manner, which having all done well, none failed; that there appears little or no danger in the case; and he believes it may be found of great advantage to the grazier and farmer, if they are inclined to practise it, as well as to the public at large. In confirmation of the above, the persons who have tried the experiment are, he is informed, William Colhoun, esq., Norfolk, who has cut eight ; Mr. Martin, Exning, Suffolk, who has cut six; Mr. Cayson, Chippenham, who has had the operation performed on twenty; and Mr. Robinson, Eriswell, who has performed it on four or six. We may further add that most of these were young heifers between two and three years old (some old cows), that had not taken bull; the young stock appears to thrive apace, and grow in size, as well as to be likely to answer for the butcher soon ; they may be fattened with turnips in the winter, or kept on another summer as the grazier pleases. And in Yorkshire it is very common to fatten their heifers at three years old, which answer as great a purpose for grazing, and are more profitable than older steers or heifers, &c., but those are kept from the bull.

SPEAK, v. n. & r. a. ~) Sax. j-pecan, rpn*- , SPEA'KABLE, adj > can ; Gothic spuca ;

SPEA'KER, n. s. j Teut. sprechan. To

utter articulate sounds ; discourse ; harangue ; make mention ; give sound : to pronounce ; address ; proclaim : speakable is possible to be spoken ; having the power of speech : speaker, he who speaks or celebrates.

Thei idel lernen to go aboute housis, not only idil tut ful of wordis and curious spekynge thingis that bihoueth not. Widif. 1 Tim. 5.

Lot went out, and spake unto his sons-in-law.

Gen. xix. 14.

Consider of it, take advice, and speak your minds.

Judges.

Hannah spake in her heart, only her lips moved, but her voice was not heard. 1 Sam. i. 13.

They sat down with him upon the ground, and none spake a word. Job ii. 13.

When divers were hardened, and believed not, but spake evil of that way before the multitude, he departed. Acts xix. 9.

You from my youth

Have known and tried me, speak I more than truth ?

Sandys.

Nicholas was by a herald sent for to come into the great bassa ; Solyman disdaining to speak with him himself. Knolles.

A knave should have some countenance at his friend's request. An honest man, Sir, is able to speak for himself, when a knave is not.

Shahspeare. Henry IV.

When he had no power, He was your enemy ; still spake against Your liberties and charters. Id. Cnriolanut.

Were such things here as we do speak about 1 Or have we eaten of the insane root, That takes the reason prisoner] Id. King Lear. Make all your trumpets speak, give them all

breath, Those clam'rous harbingers of blood and death.

Shaksjieare.

Inou can'st not fear us, Pompey, with thy sails, Wre'll speak with thee at sea.

Id. Antony and Cleopatra. After my death, I wish no other herald, No other speaker of my living actions, To keep mine honour from corruption. Stiakspeare.

It is my father's musick To speak your deeds, not little of his care To have them recompensed. Id. Winter's Tale.

These fames grew so general, as the authors were lost in the generality

of speakers.

Bacon's Henry VII The fire you speak of, If any flames of it approach my fortunes, I'll quench it not with water, but with ruin.

Ben Jonson.

The Scripture speaks only of those to whom it «*• Hammond.

Many of the nobility made themselves popular by speaking in parliament against those things which were most grateful to his majesty, and which still passed, notwithstanding their contradiction.

Clarendon . So spake the' archangel Michael, then paused.

Milton.

Let heaven's wide circuit speak The Maker's high magnificence. Id

Say,

How cam'st thou speakable of mute ? Id.

What you keep by you, you may change and

mend, But words once spoke can never be recalled. Waller.

They e/>uld never be lost but by an universal de-luge, which has been spoken to already. Tillotson.

Speaking is nothing else than a sensible expression of the notions of the mind, by several discriminations of utterance of voice, used as signs, having by consent several determinate significancies. Holder. Thersites, though the most presumptuous Greek, Yet durst not for Achilles' armour speak. Dryden.

I have disabled my«elf, like an elected speaker of the house. /^.

That with one blast through the whole house does

bound,

And first taught speaking trumpet how to sound. Id. He no where tpeaks it out, or in direct terms calls them substances. Locke.

Colours speak all languages, but words are understood only by such a people or nation. Spectator.

Lucan speaks of a part of Caesar's army, that came to him from the Leman-lake, in the beginning of the civil war. Addison.

Horace's phrase is, ' torret jecur ; ' And happy was that curious speaker. Prior.

Had Luther spoke up to this accusation, yet Chrysostom's example would have been his defence.

Alter bury.

Common speaker* have only one set of ideas, and one set of words to clothe them in ; and these are always ready at the mouth. Swift.

In conversation or reading, find out the true sense or idea which the speaker or writer affixes to his words. Watti'i Logick.

To me they tpeak of brighter days — But lull the chords ; for now, alas .'

I must not think, I may not gaze On what I am — on what 1 was. Byron.

SPEAKER OF THE HOUSE OF COMMONS, a member of the house elected by a majority of votes thereof to act as chairman or president in putting questions, reading briefs or bills, keeping order, reprimanding the refractory, adjourning the house, &c. See PARLIAMENT.

SPEAKING TRUMPET. See TRUMPET.

SPEAN. SeeSpiAN.

SPEAR, n. s. v. a., & v. n. \ Saxon rpejie ;

SPEAR'GRASS, n. s. > Gothic spior ;

SPEAR'MAN J Belg. spere ; old

Fr. spare ; low Lat. sparum ; Welsh ys-per. A long thrusting weapon ; a lance : to pierce with a spear ; to shoot or sprout : speargrass is long, stiff grass: spearman, the man who uses a spear.

Tickle our noses with speargrass to make them bleed ; and then beslubber our garments with it.

ShaJttpeare. Henry IV. Those brandishers of tpeares,

From many cities drawn, are they that are our hin-derers. , Chapman.

The borderers watching, until they be past up into some narrow creek, below them' cast a strong corded net athwart the stream, with which, and their loud shouting, they stop them from retiring, until the ebb have abandoned them to the hunter's mercy, who, by an old custom, shares them with such indifferency, as, if a woman with child be present, the bdbe in her womb is gratified with a portion ; a point also observed by the spear hunteis in taking of salmons.

Carew.

The Egyptian like a hill himself did rear ; Like some tall tree upon it seemed his spear.

Cowley.

Their heads as low

Bowed down in battle, sunk before the spears, Of despicable foes. Milton.

Let them not lie lest they should spear, and the air dry and spoil the shoot. Mortimer's Husbandry.

The spearman's arm, by thee, great God, directed, Sends forth a certain wound. Prior.

The flying spear Sung innocent, and spent its force in air.

The roused up lion, resolute and slow, Advances full on the protended spear.

SPEAR. See LANCE.

SPEARGRASS. See ASPARAGUS.

SPEAR-WORT is a species of ranunculus.

SPECHIA, an ancient name of Cyprus.

SPECIA, an island in the Grecian Archipelago. Long. 41° 12’ E. Ferro, lat. 37° 11’ N.

SPECIA. See SPEZZA.

Pope. Thornton.

SPE’CIAL, adj. SPE’CIALLY, adv. SPE’CIALTY, or SPECIALITY, n.s. SPE’CIES,

Fr. special ; Latin specialis, species. Not-ing a species or sort ; particular ; peculiar ; appropriate; extraor-

SPECIF’IC, adj. & n. s. ˆ dinary : the adverb

SPECIF’ICAL, adj. SPECIFICALLY, adv. SPECIF’ICATE, v. a. SPECIFICATION, n. s. SPE’CIFY, v. a.

and noun substantive following corresponding: species is a sort or subdivision of a) general term; a par-

ticular kind or thing : hence a representation to the mind ; show; circulating medium: specific and specifical mean constituting a species : specific is also an appropriate medicine; an occult medicine : the adverb agrees with the adjective :

to specificate is to mark by noting the distinguishing peculiarities : the noun substantive corre spending : to specify, to mention ; note particularly.

Specially the day that thou stoodest before the Lord. Deut.

A brother beloved, specially to me. Phil. xvi.

Most commonly with a certain special grace of he' own, wagging her lips, and grinning instead of smiling. Sidney.

The several books of scripture having had each some several occasion and particular purpose which caused them to be written, the contents thereof are according to the exigence of that special end whereunto they are intended. Id.

On these two general heads all other specialities aie dependent. Id.

As the change of such laws as have been specified is necessary, so the evidence that they are such must be great. Hooker.

Nought so vile that on the earth doth live, But to the earth some special good doth give.

Shakspeare. The king hath drawn The special head of all the land together.

Id. Henry IV. The packet is not come Where that and other specialties are bound.

Shakspeare.

An apparent diversity between the species visible and audible is, that the visible doth not mingle in the medium, but the audible doth. Bacon.

Shews and species serve best with the people. Id.

The operation of purging medicines has been referred to a hidden propriety, a specifical virtue, and the like shifts of ignorance. Id. Natural History.

O'Neal, upon his marriage with a daughter of Kildare, was made denizen by a special act of parliament. . Davies.

The fourth commandment, in respect of any one definite and special day of every week, was not sim ply and perpetually moral. Whim.

The other scheme takes special care to attribute ah the work of conversion to grace. Hammond.

The Phenix Pindar is a whole species alone.

Cowley.

That thou to truth the perfect way may'st know, To thee all her specijick forms I.'ll show. Denham.

Such things are evident by natural light, which men of a mature age, in the ordinary use of their faculties, with the common help.of mutual society, may know and be sufficiently assured of without the help of any special revelation. Wilkins.

If there be matter of law that carries any difficulty, the jury may, to deliver themselves from an attaint, find it specially. Hale.

Truth is the special ornament of our mind, deck-ing it with a graceful and pleasant lustre. Barrow.

When men were sure that, in case they rested upon a baie contract without speciality, the other party might wage his law, they would not rest upon such contracts without reducing the debt into a speciality, which accorded many suits. Hale.

Man, by the instituted law of his creation, and the common influence of the divine goodness, is enabled to act as a reasonable creature, without any particular, specificating, concurrent, new imperate act of the divine special providence. Id.

He bore

A paunch of the sauce bulk before ; Which still he had a special care To keep well crammed with thrifty fare. Hudibrat.

For we are animals no less, Although of different specie*. Td.

SPECIFIC GRAVITY.

Uy whose direction is the nutriment so regularly distributed into the respective parts, and how are they kept to their specifick uniformities 1 Glanville.

He intendeth the care of species or common natures, but letleth loose the guard of individuals or single existencies. Browne.

Thou nam'st a race which must proceed from me, Yet my whole species in myself I see. Dry den.

It is a most certain rule, how much any body hath of colour, so much hath it of opacity, and by so much the more unfit it is to transmit the speciei.

Ray on the Creation.

Human reason doth not only gradually, but specifically, differ from the fantastick reason of brutes, which have no conceit of truth, as an aggregate of divers simple conceits, nor of any other universal.

Grew.

As all things were formed according to these ipe-cifical platforms, so their truth must be measured from their conformity to them. Ntrrrii.

Though our charity should be universal, yet, as it cannot be actually exercised but on particular times, so it should be chiefly on special opportunities.

Sprat's Sermons.

St. Peter doth not specify what these waters were. i Burnet.

The understanding, as to the exercise of this power, is subject to the command of the will, though, as to the specifick nature of its acts, it is determined by the object. South.

His faith must be not only living, but lively too ; it must be put into a posture by a particular exercise of those several virtues that are specifically requisite to a due performance of this duty. Id. Sermons.

Milton's subject was still greater than Homer's or Virgil's ; it does not determine the fate of single persons or nations, but of a whole species.

Addison.

The constitution here speaks generally, without the specification of any place. Aylijfe's Parergon.

Specifick gravity is the appropriate and peculiar gravity or weight which any species of natural bo-dies have, and by which they are plainly distinguishable from all other bodies of different kinds.

Quincy.

The species of the letters illuminated with blue, were nearer to the lens than those illuminated with deep red, by about three inches, or three and a quarter ; but the species of the letters illuminated with indigo and violet appeared so confused and indistinct, that I could not read them. . Newton's Opticks.

These principles I consider not as occult qualities, supposed to result from the specifick forms of things, but as general laws of nature, by which the things themselves are formed ; their truth appearing to us by phznomena, though their causes be not yet discovered. Id.

He cannot but confess that it is a thing the most desirable to man, and most agreeable to the goodness of God, that he should send forth his light and his truth by a special revelation of his will. Rogers.

Our Saviour is represented every where in scripture as the special patron of the poor and the afflicted, and as laying their interest to heart more nearly than those of any other of his members. Atterbury.

As tkere was in the splendour of the Roman em-pire, a less quantity of current species in Europe than there is now, Rome possessed a much greater proportion of the circulating species of its time than any European city. Arbuthnot.

The specifick qualities of plants reside in their na-tive spirit, oil, and essential salt : for the water, fixt salt, and earth, appear to be the same in all plants.

A mind of superior or meaner capacities than hu-man, would conptttute a different species, though

united to a human body in the same laws of connexion : and a mind of human capacities would make another species, if united to a different

body in different laws of connexion. Bentley's Sermons.

He must allow that bodies were endowed with the same affections then as ever since ; and that, if an axe-head be supposed to float upon water, which is specifically lighter, it had been supernatural.

Bentley,

If she would drink a good decoction of sarsa, with the usual specificks, she might enjoy a good health.

Wiseman.

A special idea is called by the schools a species.

Watts.

Specifick difference is that primary attribute which distinguishes each species from one another, while they stand ranked under the same general nature or genus. Though wine differs from other liquids, in that it is the juice of a certain fruit, yet this is but a general or generick difference ? for it does not distinguish wine from cyder or perry : the specifick difference of wine therefore is its pressure from the grape ; as cyder is pressed from apples, and perry from pears. Id.

This specification or limitation of the question hinders the disputers from wandering away from the precise point of enquiry. Id.

He has there given us an exact geography of Greece, where the countries, and the uses of their soils are specified. Pope.

SPECIALTY, specialitas, in English law, a bond, bill, or such like instrument : a writing or deed, under the hand and seal of the parties. — Littleton. These are looked upon as the next class of debts after those of record ; being confirmed by special evidence under seal. 2 Comm.c. 30, p. 465.

SPECIES, in algebra, are the letters, symbols, marks, or characters, which represent the quantities in any operation or equation.

SPECIES, in commerce, the several pieces of gold, silver, copper, &c., which, having passed their full preparation and coinage, are current in public. See MONEY.

SPECIES, in logic, a relative term, expressing an idea which is comprised under some general one called a genus. See LOGIC.

SPECIES, in optics, the image painted on the retina by the rays of light reflected from the several points of the surface of an object, received in by the pupil, and collected in their passage through the crystalline, &c.

SPECIFIC, in philosophy, that which is peculiar to any thing, and distinguishes it from all others.

SPECIFIC DIFFERENCES OF PLANTS. See BO-TANY, Index.

SPECIFIC GRAVITY is a term much employed in the discussions of modem physics. It expresses the weight of any particular kind of matter, as compared with the weight of the same bulk of some other body of which the weight is supposed to be familiarly known, and is therefore taken for the standard of comparison. The body generally made use of for this purpose is pure water. See HYDROSTATICS.

The specific gravity of bodies is a vevy interesting question both to the philosopher and u the man of business. The philosopher consider! the weights of bodies as measures of the numbei of material atoms, or the quantity of matte*

which they contain. This he does on the supposition that every atom of matter is of the same weight, whatever may be its sensible form. This supposition, however, is made by him with caution, and he has recourse to specific gravity for ascertaining its truth in various ways. The man of business entertains no doubt of the matter, and proceeds on it as a sure guide in his most interesting transactions. We measure commodities of various kinds by tons, pounds, and ounces in the same manner as we measure them by yards, feet, and inches, or by bushels, gallons, and pints ; nay, we do this with much greater confidence, and prefer this measurement to all others whenever we are much interested to know the exact proportions of matter that bodies contain. The weight of a quantity of grain is allowed to inform us much more exactly of its real quantity of use-ful matter than the most accurate measure of its bulk. We see many circumstances which can

vary the bulk of a quantity of matter, and these are frequently such as we cannot regulate or prevent; but we know very few that can make any sensible change in this weight without the addition or abstraction of other matter. Even taking it to the summit of a high mountain, or from the equator to the polar region, will make no change in its weight as it is ascertained by the balance, because there is the same real diminution of weight in the pounds and ounces used in the examination. Notwithstanding the unavoidable change which heat and cold make in the bulk of bodies, and the permanent varieties of the same kind of matter which are caused by different circumstances of growth, texture, &c., most kinds of matter have a certain consistency in the density of their particles, and therefore in the weight of a given bulk. Thus the purity of gold, and its degree of adulteration, may be inferred from its weight, it being purer in proportion as it is more dense. The density, therefore, of different kinds of tangible matter becomes characteristic of the kind, and a test of its purity ; it marks a particular appearance in which matter exists, and may therefore be called, with propriety, specific. But this density cannot be directly observed. It is not by comparing the distances between the atoms of matter in gold and in water that we say the first is nineteen times denser than the last, and that an inch of gold contains nineteen times as many material atoms as an inch of water ; we reckon on the equal gravitation of every atom of matter, whether of gold or of water ; therefore the weight of any body becomes the indication of its material density, and the weight of a given bulk becomes specific of that kind of matter, marking its kind, and even ascertaining its purity in this form. To make this comparison of general use, the standard must be familiarly known, and must be very uniform in its density, and the comparison of bulk and density must be easy and accurate. The most obvious method would be to form, with all nicety, a piece of the standard matter of some convenient bulk, and to weigh it very exactly, and keep a note of its weight : then, to make the comparison of any other substance, it must be made into a mass of the same precise bulk, and weighed with equal care ; and the most convenient way of expressing the specific gravity would be to consider the

weight of the standard as unity, and then the number expressing the specific gravity is the number of times that the weight of the standard is contained in that of the other substance. This comparison is most easily and accurately made in fluids. We have only to make a vessel of known dimensions equal to that of the standard which we employ, and to weigh it when empty, and then when filled with the fluid. Nay, the most difficult part of the process, the making a vessel of the

precise dimensions of the standard, may be avoided, by using some fluid substance for a standard. Any vessel will then do ; and we may ensure very great accuracy by using a vessel with a slender neck, such as a phial or matrass ; for, when this is filled to a certain mark in the neck, any error in the estimation by the eye will bear a very small proportion to the whole. The weight of the standard fluid, which fills it to this mark being carefully ascertained, is kept in remembrance. The specific gravity of any other fluid is had by weighing the contents of this vessel when filled with it, and dividing the weight by the weight of the standard. The quotient is the specific gravity of the fluid. But in all other cases this is a very difficult problem : it requires very nice hands, and an accurate eye, to make two bodies of the same bulk. An error of ˆth part in the linear dimensions of a solid body makes an error of one-thirtieth part in its bulk; and bodies of irregular shapes and friable substance, such as the ores of metals, cannot be brought into convenient and exact dimensions for measurement. From all these inconveniences and difficulties we are freed by the celebrated Archimedes, who, from the principles of hydrostatics discovered or established by him, deduced the accurate and easy method which is now universally practised for discovering the specific gravity and density of bodies. See ARCHIMEDES. Instead of measuring the bulk of the body by that of the displaced fluid (which would have been impossible for Archimedes to do with any thing like the necessary precision), we have onty to observe the loss of weight sustained by the solid. This can be done with great ease and exactness. Whatever may be the bulk of the body, this loss of weight is the weight of an equal bulk of the fluid; and we obtain the specific gravity of the body by simply dividing its whole weight by the weight lost : the quotient is the specific gravity when this fluid is taken for the standard, even though we should not know the absolute weight of any given bulk of this standard. It also gives us an easy and accurate method of ascertaining even this fundamental point. \ e have only to form any solid body into an exact cube, sphere, or prism, or known dimensions, and observe what weight it loses when immersed in this standard fluid. This is the weight of the same bulk of the standard to be kept in remembrance; and thus we obtain, by the by, a most easy and accurate method for measuring the bulk or solid contents of any body, however irregular its shape may be. We have only to see how much weight it loses in the standard fluid ; we can compute what quantity of the standard fluid will have this weight. Thus should we find that a quantity of sand, or a furze bush, loses 250 ozsˆ

when immersed in pure water, we learn by this that the solid measure of every grain of the sand, or of every twig and prickle of the furze, when added into one sum, amounts to the fourth part of a cubic foot, or to 432 cubic inches.

To all these advantages of the Archimedean method of ascertaining the specific gravity of bodies, derived from his hydrostatical doctrines and discoveries, we may add, that the immediate standard of comparison, namely, water, is, of all the substances that we know, the fittest for the purpose of a universal standard of reference. In its ordinary natural state it is sufficiently constant and uniform in its weight for every examination where the utmost mathematical accuracy is not wanted ; all its variations arise from impurities, from which it may at all times be separated by the simple process of distillation : and we have every reason to think that, when pure, its density, when of the same temperature, is invariable. Water is therefore universally taken for the unit of that scale on which we measure the specific gravity of bodies, and its weight is called 1. The specific gravity of any other body is the real weight in pounds and ounces, when of the bulk of one pound or one ounce of water. It is, therefore, of the first importance, in all discussions respecting the specific gravity of bodies, to have the precise weight of some known bulk of pure water. For this purpose we shall reduce all to the English cubic foot and avoirdupois ounce of the exchequer standard, on account of a very convenient circumstance peculiar to this unit, *viz.* that a cubic foot contains almost precisely 1000 ozs. of pure water, so that the specific gravity of bodies expresses the number of such ounces contained in a cubic foot. We begin with a trial made before the house of commons in 1696 by Mr. Everard He weighed 2145-6 cubic inches of water by a balance, which turned sensibly with six grains, when there were thirty pounds in each scale. The weights employed were the troy weights, in the deposit of the court of exchequer, which are still preserved, and have been most scrupulously examined and compared with each other. The weightwasˆlSl ozs. fourteen pennyweights. This wants just eleven grains of 1000 avoirdupois ounces for 1728 cubic inches, or a cubic foot ; and it would have amounted to that weight had it been a degree or two colder. The temperature indeed is not mentioned ; but, as the trial was made in a comfortable room, we may presume the temperature to have been

about 55° of Fahrenheit's thermometer. The dimensions of the vessel were as accurate as the nice hand of Mr. Abraham Sharp, Mr. Flamsteed's assistant at Greenwich, could execute, and it was made by the exchequer standard of length. This is confided in by the naturalists of Europe, as a very accurate standard experiment, and is confirmed by many others, both private and public. The standards of weight and capacity employed in the experiment are still in existence, and publickly known, by the report of the Royal Society to parliament in 1742, and by the report of a committee of the house of commons in 1758. This gives it a superiority over all the measures which have come to our knowledge.

The first experiment, made with proper atten-

tion, that we meet with is by the celebrated Snellius about 1615, and lelated in his Eratos-thenes Batavus. He weighed a Rhinland cubic foot of distilled water, and found it 62'79 Amsterdam pounds. If this was the ordinary weight of the shops, containing 7626 English troy graitis, the English cubic foot must be sixty-two pounds nine ounces, only one ounce more than by Everard's experiment. If it was the mint pound the weight was sixty-two pounds six ounces. The only other trials which can come into compe-tion with Mr. Everard's are some made by the Academy of Sciences at Paris. Picart, in 1691, found the Paris cubic -foot of the water of the fountain d'Arcueil to weigh 69-588 Ibs. poids de Paris. Du Hamel obtained the very same result; but Mr. Monge, in 1783, says that filtered rain-water of the temperature of 12° (Reaumur) weighs 69-3792. Both these measures are considerably below Mr. Everard's, which is 62'5 ; the former giving 62-053, and the latter 61-868. M. Lavoisier states the Paris cubic-foot at seventy pounds, which makes the English foot 62'47. But there is an inconsistency among them which makes the comparison impossible. Some changes were made in 1688, by royal authority, in the national standards both of weight and length ; and the academicians are exceedingly puzzled to this day in reconciling the differences, and cannot even ascertain with perfect assurance the lineal measures which were employed in their most boasted geodetical operations. Such variations in the measurements made by persons of reputation for judgment and accuracy engaged the writer of this article some years ago to attempt another. A vessel was made of a cylindrical form, as being more easily executed with accuracy, whose height and diameter were six inches, taken from a most accurate copy of the exchequer standard. It was weighed in distilled water of the temperature of 55° several times without varying two grains, and it

lost 42895 grains. This gives for the cubic foot 998-74 ounces, deficient from Mr. Everard's an ounce and a quarter ; a difference which may be expected, since Mr. Everard used the New Rivet-water without distillation. These observations cannot be thought superfluous in a matter of such continual reference in the most interesting questions both to the philosopher and the man of business. Let us, therefore, take water for the standard, and suppose that, when of the ordinary temperature of summer and in its state of greatest natural purity, *viz.* in clean rain or snow, an English cubic foot of it weighs 1000 ounces avoirdupois, of 437-5 troy grains each. Divide the weight of any body by the weight of an equal bulk of water ; the quotient is the specific gravity of that body ; and, if the three first figures of the decimal be accounted integers, the quotient is the number of avoirdupois ounces in a cubic foot of the body. Thus the specific gravity of the very finest gold which the refiner can produce is 19-365, and a cubic foot of it weighs 19,365 ounces. But an important remark must be made here. All bodies of homogeneous or unorganised texture expand by heat and contract by cooling. The expansion and contraction by the same change of temperature is very different

in different bodies. Thus water, when heated from 60° to 100°, increases its volume nearly i&r of its bulk, and mercury only ˆ, and many substances much less. Hence it follows that an experiment determines the specific gravity only in that very temperature in which the bodies are examined. It will therefore be proper always to note this temperature ; and it will be convenient to adopt some very useful temperature for such trials in general ; perhaps about 60° of Fahrenheit's thermometer is as convenient as any. It may always be procured in these climates without inconvenience. A temperature near to freez-ng would have some advantages, because water changes its bulk verv little between the temperature 32° and 45°. But this temperature cannot always be obtained. It will much conduce to the facility of the comparison to know the variation which heat produces on pure water. The following table, taken from the observations of Dr. Blagen and Mr. Gilpin (Phil. Trans. 1792), will answer this purpose :

—

Temperature of Water.

Bulk of Water.

Specific Gravity.

30

35

99910

1 -00090

40

99070

1-00094

45

99914

1 -00086

50

99932

1-00068

55

99962

1-00038

60

1 00000

1 -00000

65

100050

0-99950

70

100106

0-99894

75

100171

0-99830

80

100242

0-99759

85

100320

0-99681

90

100404

0-99598

95

100501

0-99502

100

These gentlemen observed the expansion of wa-ter to be very anomalous between 32° and 45°. This is distinctly seen during the gradual cooling of water to the point of freezing. It contracts for a while and then suddenly expands. But we seldom have occasion to measure specific gravities in such temperature.

In examining either solids or fluids we must be careful to free their surface, or that of the vessel in which the fluid is to be weighed, from air, which frequently adheres to it in a peculiar manner, and, by forming a bubble, increases the apparent bulk of the solid, or diminishes the capacity of the vessel. The greatest part of what appears on those occasions seems to have existed in the fluid in a state of chemical union, and to be set at liberty by the superior attraction of the fluid for the contiguous solid body. These air bubbles must be carefully brushed off by hand. All greasy matters must be cleared off for the same reason; they prevent the fluid from coming into contact. We must be no less careful that no water is imbibed by the solid, which would increase its weight without increasing its bulk. In some cases, however, a very long maceration and imbibition is necessary. Thus, in examining the specific gravity of the fibrous part of vegetables, we should err exceedingly if we imagined It as small as it appears at first. We believe that in most plants it is at least as great as water, for after long maceration they sink in it.

The nicest and most sensible balances are necessary for this examination. Balances are even constructed on purpose, and fitted with several pieces of apparatus which make the examination easy and neat. We have described (see BALANCE) the most convenient. Mr. Gravesande's contrivance for observing the fractions of a grain is extremely ingenious and expeditious, especially for detecting the effect of viscidity. The hydrometer, or araeometer, is another instrument for ascertaining the specific gravity of fluids. This very pretty instrument is the invention of Hypa-tia, a lady of Alexandria, as eminent for intellectual accomplishments as she was admired for her beauty. She wrote commentaries on Appolonius and Diaphantus, and composed Astronomical Tables; all of which are lost. See HYPATIA. We have described some of the most approved of these instruments under the article HYDROMETER, and shall here make a few observations on the principles of their construction, not as they are

usually made accommodated to the examination of particular liquors, but as indicators of pure specific gravity. And we must say that this would, for many reasons, be the best way of constructing them. The very ingenious contrivances for accommodating them to particular purposes are unavoidably attended with many sources of error, both in their adjustment by the maker and in their use; and all that is gained by a very expensive instrument is the saving the trouble of inspecting a table. A simple scale of specific gravity would expose to no error in construction, because all the weights but one, or all the points of the scale but one, are to be obtained by calculation, which is incomparably more exact than any manual operation, and the table can always be more exact than any complex observation. But a still greater advantage is that the instruments would thus be fitted for examining all liquors whatever, whereas at present they are almost useless for any but the one for which they are constructed.

Unless the hydrometer is of a considerable size, it can hardly he made so as to extend from the lightest to the heaviest fluid which we may have occasion to examine, even though we ex-cept mercury. Some of the mineral acids are considerably more than twice the weight of ether. When there is such a load at top, the hydrometer is very apt to overset, and inclines with the smallest want of equilibrium. Great size is inconvenient even to the philosopher, because it is not always in his power to operate on a quantity of fluid sufficient to float the instrument. Therefore two, or perhaps three, are necessary for general examination. One may reach from etfier to water ; another may serve for all liquors of a specific gravity between 1 and 1 £ ; and the third, for the mineral acids, may reach from this to 2. If each of these be about two solid inches in capacity, we may easily and expeditiously determine the specific gravity within -[ˆatli part of the truth ; and this is precision enough for most purposes of science or business. The chief

questions are, 1 . To ascertain the specific gravity of an unknown fluid. This needs no farther explanation. 2. To ascertain the proportion of two fluids which are known to be in a mixture. This is done by

discovering the specific gravity of the mixture by means of the hydrometer, and then deducing the proportion from a comparison of this with the specific gravities of the ingredients. In this mode of examination the bulk is always the same; for the hydrometer is immerg-ed in the different fluids to the same depth. Now, if an inch, for example, of this bulk is made up of the heaviest fluid, there is an inch wanting of the lightest ; and the change made in the weight of the mixture is the difference be-twˆen the weight of an inch of the heaviest and of an inch of the lightest ingredients. The num-ber of inches therefore of the heaviest fluid is proportional to the addition made to the weight of the mixture. Therefore let B and 6 be the bulks of the heaviest and lightest fluids in the bulk *3 of the mixture ; and let D, d, and $ be the densities, or the weights, or the specific gravities (for they are in one ratio) of the heavy fluid, and the light fluid, and mixture (their bulk being that of the hydrometer). We have* 3 ~ B -f-6. The addition which would have been made to the bulk *3, if the lightest fluid were changed entirely for the heaviest, would be D d; and the change which is really made is S — d. — Therefore J3 : b — D — d : d — d. For similar reasons we should have* 3 : B = D — d : D — S; or, in words, ‘ the difference between the specific gravities of the two fluids, is to the difference between the specific gravities of the mixture and of the lightest fluid, as the bulk of the whole to the bulk of the heaviest contained in the mixture ;’ and ‘ the difference of the specific gravities of the two fluids, is to the difference of the specific gravities of the mixture and of the heaviest fluids, as the bulk of the whole to that of the lightest contained in the mixture.’ This is the form in which the ordinary business of life requires the answer to be expressed, because we generally reckon the quantity of liquors by bulk, in gallons, pints, quarts. But it would have been equally easy to have obtained the answer in pounds and ounces; or it may be had from their bulks, since we know their specific gravities.

To avoid the inconveniences of a hydrometer •with a very long and slender stem, or the necessity of having a series of them, a third sort has been contrived, in which the principle of both are combined. Suppose a hydrometer with a stem, whose bulk is one-tenth of that of the ball, and that it sinks in ether to the top of the stem ; it is evident that in a fluid which is one-te»th heavier the whole stem will emerge ; for the bulk of the displaced fluid is now one-tenth of the whole less, and the weight is the same as before, and therefore the specific gravity is one-tenth greater. Thus we have obtained a hydrometer which will indicate, by means of divisions mark-ed on the stem, all specific gravities from 0-73 to 0-803; for 0-803 is one-tenth greater than 0-78. These divisions must be made in harmonic progressions, as before

directed for an entire scale, placing 0‘73 at the top of the stem and 0-803 at the bottom. When it floats at the

lowest division, a weight may be put on the top of the stem, which will again sink it to the top. This weight must evidently be 0-073, or one-tenth of the weight of the fluid displaced by the unloaded instrument. The hydrometer, thus load-ed, indicates the same specific gravity, by the top of the stem, that the unloaded instrument indicates by the lowest division. Therefore, when loaded, it will indicate another series of specific gravities, from 0-803 to 0-833 (= 0-803 + 0-0803), and will rloat in a liquor of the specific gravity 0-8833 with the whole stem above the surface. In like manner, if we take off this weight and put on 1 — 0-0803, it will sink the hydrometer to the top of the stem ; and with this new weight it will indicate another series of specific gravities from 0-8833 to 0-97163 (—0-8833 + 0‘08633). And, in the same manner, a third weight — 0-8833 will again sink it to the top of the stem, and fit it for another series of specific gravities up to 1-068793. And thus, with three weights, we have procured a hydrometer fitted for all liquors, from ether to a wort for a malt liquor of two barrels per quarter. Another weight, in the same progression, will extend the instrument to the strongest wort that is brewed. This is a very commodious form of the instrument, and is now in very general use for examining spirituous liquors, worts, ales, brines, and many such articles of commerce. But the divisions of the scale are generally adapted to the questions which naturally occur in the ousiness. Thus, in the commerce of strong liquors, it is usual to estimate the article by the quantity of spirit of a certain strength which the liquor contains. — This we have been accustomed to call proof spirit, and it is such that a wine gallon weighs seven pounds twelve ounces ; and it is by this strength that the excise duties are levied. Therefore the divisions on the scale, and the weights which connect the successive repetitions of the scale, are made to express at once the number of gallons, or parts of a gallon, of proof spirits contained in a gallon of the liquor. Such instruments save all trouble of calculation to the exciseman or dealer; bui they limit the use of a very delicate and expensive instrument to a very narrow employment. It would be much better to adhere to the expression either of specific gravity or of bulk; and then a very small table, which could be comprised in the smallest case for the instrument, might render it applicable to every kind of fluid. The reader cannot but have observed that the successive weights, by which the short scale of the instrument is extended to a great range of specific gravities, do not increase by equal quantities. Each difference is the weight of the liquor displaced by the graduated stem of the

instrument when it is sunk to the top of the scale. It is a determined aliquot part of the whole weight of the instrument so loaded (in our example it is always one-eleventh of'it). It increases therefore in the same proportion with the preceding weight of the loaded instrument. In short, both the successive additions, and the whole weights of the loaded instrument, are quantities in geometrical progression ; and in like manner the divisions on the scale, if they correspond to equal differences of specific gravity, must also be uu-746

equal. This is not sufficiently attended to by the makers; and they commit an error here which is very considerable when the whole range of the instrument is great ; for the value of one division of the scale, when the largest weight is on, is as much greater than its value when the instrument is not loaded at all, as the full loaded instrument is heavier than the instrument unloaded. No manner whatever of dividing the scale will correspond to equal differences of specific gravity through the whole range with different weights ; but, if the divisions are made to indicate equal proportions of gravity when the instrument is used without a weight, they will indicate equal proportions throughout. This is evident from what we have been just now say-ing ; for the proportion of the specific gravities corresponding to any two immediately succeeding weights is always the same. The best way, therefore, of constructing the instrument, so that the same divisions of the scale may be accurate hi all its successive repetitions with the different weights, is to make these divisions in geometrical progression. The corresponding specific gravities will also be in geometric proportion. These being all inserted in a table, we obtain them with no more trouble than by inspecting the scale which usually accompanies the hydrometer. This table is of the most easy construction ; for, the ratio of the successive bulks and specific gravities being all equal, the differences of the logarithms are equal. This will be illustrated by applying it to the example already given of a hydrometer extending from 0-73 to 1 -068793 with three weights. This gives four repetitions of the scale on the stem. Suppose this scale divided into ten parts, we have forty specific gravities. Let these be indicated by the numbers 0, 1, 2, 3, &c., to 40. The mark 0 is affixed to the top of the stem, and the divisions downwards arc marked 1,2, 3, &c , the lowest be-ing lo. These divisions are easily determinnl. The stem, which we may suppose five inches long, was supposed to be

one-tenth of the capacity of the ball. It may therefore be considered as the extremity of a rod of eleven times its length, or fifty-five inches; and we must find nine mean proportionals between fifty and fifty-five inches. Subtract each of these from fifty-five inches, and the remainders are the distances of the points of division from 0, the top of the scale. The smallest weight is marked 10, the next 20, and the third 30. If the instrument loaded with the weight 20 sinks in some liquor to the mark 7, it indicates the specific gravity 27, that is, the twenty-seventh of forty mean proportiopals between 0-73 and 1-068793, or 0-944242. To obtain all these intermediate specific gravities, we have only to subtract 9-8633229, the logarithm of 0‘73, from that of 1-068793, *viz.* 0-0288937, and take 0-0041393, the fortieth part of the difference. Multiply this by 1,2, 3, &c., and add the logarithm of 0-73 to each of the products. The sums are the logarithms of the specific gravities required. These will be found to proceed so equably that they may be interpolated ten times by a simple table of proportional parts without the smallest sensible error. Therefore the stem may be divided

into 100 parts very sensible to the eye (each being nearly the twentieth of an inch), and 400 degrees of specific gravity obtained within the range, which is as near as we can examine this matter by any hydrometer. Thus the specific gravities corresponding to No. 26, 27, 28, 29, are as follow : —

26 0-93529

27’ 0-94424

28 0-95328

29 0-96241

1st Diff. 2d Diff.

Nay, the trouble of inspecting a table may be avoided, by forming on a scale the logarithms of the numbers between 7-300 and 1078-793, and placing along side of it a scale of the same length divided into 400 equal parts, numbered from 0 to 400. Then, looking for the mark shown by the hydrometer on this scale of equal parts, we see opposite to it the specific gravity. We have been thus particular in the illustration of this mode of construction, because it is really a beautiful and commodious instrument, which may be of great use both to the naturalist and to the man of business. A table may be comprised in twenty pages octavo, which will contain the specific gravities of every fluid which can interest either, and answer every question relative to their admixture, with as much precision as the observations can be made. We therefore recommend it to our readers, and we recommend the very example which we have given as one of the most convenient. The instrument need' not exceed eight inches in length, and may be contained in a pocket case of two inches broad and as many deep, which will also contain the scale, a thermometer, and even the table for applying it to all fluids which have been examined.

There is another method of examining the specific gravities of fluids, first proposed by Dr. Wilson, late professor of astronomy in the university of Glasgow. This is by a series of small glass bubbles, differing equally, or according to some rule, from each other in specific gravity, and each marked with its proper number. When these are thrown into a fluid which is to be examined, all those which are heavier than the fluid will fall to the bottom. Then holding the vessel in the hand, or near a fire or candle, the fluid expands, and one of the floating bubbles begins to sink. Its specific gravity therefore was either equal to, or a little less than, that of the fluid ; and the degree of the thermometer, when it began to sink, will inform us how much it was deficient, if we know the law of expansion of the liquor. Sets of these bubbles fitted for the examination of spirituous liquors, with a little treatise showing the manner of using them, and calculating by the thermometer, are made by Mr. Brown, an ingenious artist of Glasgow, and are often used by the dealers in spirits, being found both accurate and expeditious. Also, though a bubble or two should be broken, the strength of spirits may easily be had by means of the remainder, unless two or three in immediate succession be wanting ; for a liquor which answers to No 4 will sink Nc. 2 by heating it a

few degrees, and therefore No. 3 may be spared. This is a great advantage in ordinary business. A nice hydrometer is not only an expensive instrument, but exceedingly delicate, being so very thin. If broken, or even bruised, it is useless, and can hardly be repaired except by the very maker. As the only question here is, to determine how many gallons of excise proof spirits are contained in a quantity of liquor, the artist has constructed this series of bubbles in the simplest manner possible, by previously making forty or fifty mixtures of spirits and water, and then adjusting the bubbles to these mixtures. In some sets the number on each bubble is the number of gallons of proof spirits contained in 100 gallons of the liquor. In other sets the number on each bubble expresses the galldns of water which will make a liquor of this strength, if added to fourteen gallons of alcohol. Thus, if a liquor answers to No. 4, then four gallons of water added to fourteen gallons of alcohol will make a liquor of this strength. The first is the best method ; for we should be mistaken in supposing that eighteen gallons, which answer to No. 4, contain exactly fourteen gallons of alcohol : it contains more than fourteen. By examining the specific gravity of bodies, the philosopher has made some very curious discoveries. The most remarkable of these is the change which the density of bodies suffers by mixture. It is a most reasonable expectation that, when a cubic foot of one substance is mixed any how with a cubic foot of another, the bulk of the mixture will be two cubic feet ; and that eighteen gallons of water joined to eighteen gallons of oil will fill a vessel of thirty-six gallons. Accordingly this was never doubted; and even Archimedes, the most scrupulous of mathematicians, proceeded on this supposition in the solution of his famous problem, the discovery of the proportion of silver and gold in a mixture of both. He does not even mention it as a postulate that may be granted him, so much did he conceive it to be an axiom. Yet a little reflexion seems sufficient to make it doubtful, and to require examination. A box filled with musket balls will receive a considerable quantity of small shot, and after this a considerable quantity of fine sand, and after this a considerable quantity of water. Something like this might happen in the admixture of bodies of porous texture. But

such substances as metals, glass, and fluids, where no discontinuity of parts can be perceived, or was suspected, seem free from every chance of this kind of introsusception. Lord Verulam, however, without being a naturalist or mathematician ex professo, inferred from the mobility of fluids that they consisted of discrete particles, which must have pores interposed, whatever be their figure. And, if we ascribe the different densities or other sensible qualities to difference in size or figure of those particles, it must frequently happen -that the smaller particles will be lodged in the interstices between the larger, and thus contribute to the weight of the sensible mass without increasing its bulk. He therefore suspects that mixtures will be in general less bulky than the sum of their ingredients. Accordingly the examination of this question was one of the first employments of the Royal Society of London, and long before its institution had occupied the attention of the gentlemen who afterwards composed it The register of the Society s early meetings contains many experiments on this subject, with mixtures of gold and silver, of other metals, and of various fluids, examined by the hydrostatical balance of Mr. Boyle. Dr. Hooke made a prodigious number, chiefly on articles of commerce, which were unfortunately lost in the fire of London. It was soon found, however, that lord Verulam's conjecture had been well founded, and that bodies changed their density very sensibly in many cases. In general it was found that bodies which had a strong chemical affinity increased in density, and that their admixture was accompanied with heat. By this discovery it is manifest that Archimedes had not solved the problem of delecting the quantity of silver mixed with the gold in king Hiero's crown, and that the physical solution of it requires experiments made on all the kinds of matter that are mixed together. We do not find that this has been done to this day, although we may affirm that there are few questions of more importance. It is a very curious fact in chemistry, and it would be most desirable to be able to reduce it to some general laws; for instance, to ascertain what is the proportion of two ingredients which produces the greatest change of density. This is important in the science of physics, because it gives us considerable information as to the mode of action of those natural powers or forces by which the particles of tangible matter are united. If this introsusception, concentration, compenetration, or by whatever name it be called, were a mere reception of the particles of one substance into the interstices of those of another, it is evident that the greatest concentration would be observed when a small quantity of the recipiend is mixed with, or disseminated through, a great quantity of the other. It is thus that a small quantity of fine sand will be received into the interstices of a quantity of small shot, and will increase the weight of the bagfull without increasing its bulk. The case is nowise

different when a piece of freestone has grown heavier by imbibing or absorbing a quantity of water. If more than a certain quantity of sand has been added to the small shot, it is no longer concealed. In like manner, various quantities of water may combine with a mass of clay, and increase its size and weight alike. All this is very conceivable, occasioning no difficulty. But this is not the case in any of the mixtures we are now considering. In all these the first additions of either of the two substances produce but an inconsiderable change of general density; and it is in general most remarkable, whether it be condensation or rarefaction, when the two ingredients are nearly of equal bulks. We c?~ illustrate even this difference by reflecting on the imbibition of "water by vegetable solids, such as timber. Some kinds of wood have their weight much more increased than their bulks; other kinds of wood are more enlarged in bulk than in weight. The like happens in grains. This is curious, and shows' in the most unquestionable manner that the particles of bodies are not in contact, but are kept together bv forces which

act at a distance ; for this distance between the centres of the particles is most evidently susceptible of Tariation ; and this variation is occasioned by the introduction of another substance, which, by acting on the particles by attraction or repulsion, diminishes or increases their mutual actions and makes new distances necessary for bringing all things again into equilibrium. We refer the curious reader to the ingenious theory of the abbe Boscovich for an excellent illustration of this subject. — Theor. Phil. Nat. § de So-lutione Chemica. •

Specific gravity of Metals altered by mixture. — This question is no less important to the man of business. Till we know the condensation of those metals by mixture, we cannot tell the quantity of alloy in gold and silver by means of their specific gravity; nor can we tell the quantity of pure alcohol in any spirituous liquor, or that of the valuable salt in any solution of it. For want of this knowledge, the dealers in gold and silver are obliged to have recourse to the tedious and difficult test of the assay, which can-not be made in all places or

by all men. It is therefore much to be wished that some persons would institute a series of experiments in the most interesting cases : for it must be observed that this change of density is not always a small matter ; it is sometimes very considerable and paradoxical. A remarkable instance may be given of it in the mixture of brass and tin for bells, great guns, optical speculums, &c. The specific gravity of cast brass is nearly 8‘006, and that of tin is nearly 7-363. If two parts of brass be mixed with one of tin, the specific gravity is 8-931; whereas, if each had retained its former bulk, the specific gravity would

/ 2 X 8-006 + 7-363x have been only 7-793f = — V

•A mixture of equal parts should have the specific gravity 7-684; but it is 8-441. A mixture of two parts tin with one part brass, instead of being 7-577, is 8-027. In all these cases there is a great increase of specific gravity, and consequently a great condensation of parts or contraction of bulk. The first mixture of eight cubic inches of brass, for instance, with four cubic inches of tin, does not produce twelve cubic inches of bell-metal, but only ten and a half nearly, having shrunk one-fifth. It would appear that the distances of the brass particles are most affected, or perhaps it is the brass that receives the tin into its pores ; for we find that the condensations in these mixtures are nearly proportional to the quantities of the brass in the mixtures. It is remarkable that this mixture with the lightest of all metals has made a composition more heavy and dense than brass can be made by any hammering. The most remarkable instance occurs in mixing iron with platina If ten cubic inches of iron are mixed with one and a quarter of platina, the bulk of the com-

¥ound is only nine inches and three-quarters, he iron therefore has not simply received the platina into its pores: its own particles are • brought nearer together. There are similar results in the solution of turbith mineral, and of some other salts, in water. The water, instead of rising in the neck of the vessel, when a small quantity of the salt has been added to it, sinks considerably, and the two ingredients occupy less room than the water did alone.

The same thing happens in the mixture of water with other fluids, and different fluids with each other : — But we are not able to trace any general rule that is observed with absolute precision. In most cases of fluids the greatest condensation happens when the bulks of the ingredients are nearly equal. Thus, in the mixture of alcohol and water, we have the greatest condensation when sixteen ounces and a half of alcohol are mixed with twenty ounces of water, and the condensation is about one-thirty-sixth of the whole bulk of the

ingredients. It is extremely various in different substances, and no classification of them can be made in this respect. A dissertation has been published on this subject by Dr. Hahn of Vienna, entitled De Efficacia Mixtionis in Mutandis Corporum Vo-luminibus, in which all the remarkable instances of the variation of density have been collected. All we can do is to record such instances as are of chief importance, being articles of commerce. The most scrupulous examination of this, or perhaps of any mixture, has been lately made by Dr. Blagden (now Sir Charles Blagden) of the Royal. Society, on the requisition of the Board of Excise. He has published an account of the examination in the Philosophical Transactions of 1791 and 1792. The alcohol was almost the strongest that can be produced ; and its specific gravity, when of the temperature 60°, was 0/825. The whole mixtures were of the same temperature. Column 1 of the Table contains the Ib. oz. or other measures by weight, of alcohol in the mixture. Col. 2 contains the pounds or ounces of water. Col. 3 is the sum of the bulks of the ingredients, the bulk of a pound or ounce of water being accounted 1. Col. 4 is the observed specific gravity of the mixture. Col. 5 is the specific gravity which would have been observed if the ingredients had each retained its own specific gravity; calculated by dividing the sum of the two numbers of the first and second columns by the corresponding number of the third. Col. 6 is the difference of col. 4 and col. 5, and exhibits the condensation.

A.

W.

Volume.

Specific Gravity observed.

Sp. Gr.

calculated.

Conden sation.

20

1

24-2424

0-8250

0-8250

00

20

2

25-2424

0-8360

0-8320

40

20

3

26-2424

0-8457

0-8383

74

20

4

27-2424

0-8543

0-8443

100

20

5

28-2-124

0-8621

0-8498

123

20

6

29-2424

0-8692

0-8549

143

20

7

30-2424

0-8757

0-8597

160

20

8

31-2424

0-8817

0-8642

175

20

9

32-2424

0-8872

0-8684

188

20

10

33-2424

0-8923

0-8725

199

20

11

34-2424

0-8971

0-8762

216

20

12

35-2424

0-9014

0-8796

218

20

13

36-2424

0-9055

0-8829

226

20

14

37-2424

0-9093

0-8860

233

20

15

38-2424

0-9129

0-8891

238

20

16

39-2434

0-9162

0-8919

243

20

17

40-2424

0-9193

0-8946

247

20

18

41-2424

0-9223

0-8971

252

20

19

42-2424

0-9250

0-8996

254

20

20

43-2424

0-9276

0-9019

257

20

20

44-2424

0-9300

0-9041

259

19

20

43-0303

0-9325

0-9063

262

18

20

48-1182

0-9349

0-9087

262

17

20

40-6061

0-9375

0-9112

263

16

20

39-3939

0-9402

0-9139

263

15

20

38-1818

0-9430

0-9167

263

14

20

36-9697

0-9458

0-9197

261

13

20

35-7576

0-9488

0-9229

259

12

20

34-5455

0-9518

0-9263

255

11

20

33-3333

0-9549

0-9300

249

10

20

32-1212

0-9580

0-9340

240

9

20

30-9091

0-9612

0-9382

230

8

20

29-6970

0-9644

0-9429

215

7

20

28-4849

0-9675

0-9479

196

6

20

27-2727

0-9707

0-9533

174

5

20

26-0606

0-9741

09593

148

4

20

24-8485

0-9777

0-9659

118

3

20

23-6364

0-9818

0-9731

87

2

20

22-4242

0-9864

0-9811

54

1

20

21-2121

0-9924

0-9900

24

0

20

20-0000

1-0000

1-0000

The condensation is greatest when sixteen ounces and a half of alcohol have been added to twenty of water, and the condensation is 9ˆ, or nearly one-thirty-sixth of the computed density. Since the specific gravity of alcohol is 0-825, it is evident that sixteen ounces and a half of alcohol and twenty ounces of water have equal bulks. So that the condensation is greatest when the substances are mixed in equal volumes; and eighteen gallons of alcohol mixed with eighteen gallons of water will produce not thirty-six gallons of spirits, but thirty-five only. This is the mixture to which our revenue laws refer, declaring it to be one to s»x or one in seven under proof, and to weigh seven pounds thirteen ounces per gallon. This proportion was probably selected as the most easily composed, *viz.* by mix— ing equal measures of water and of the strongest spirit which the known processes of distillation could produce. Its specific gravity is 0-939 very nearly. This elaborate examination of the mixture of water and alcohol is a standard series of experiments to which appeal may always be made, whether for the purposes of science or of trade. The regularity of the progression is so great that in the column we examined, *viz.* that for temperature 60°, the greatest anomaly does not amount to one part in 6000. The form of the series is also very judiciously chosen for the purposes of science. It would perhaps have been more directly stereometrical had the proportions of the ingredients been stated in bulks which are more immediately connected with density. But the author has assigned a very co-gent reason for his choice, *viz.* that the temperature of bulks varies by a change of temperature, because the water and spirits follow different laws in their expansion by heat.

Mr. Lambert, one of the first mathematicians and philosophers of Europe, in a dissertation in the Berlin Memoirs (1762), gives a

narration of experiments on the brines of common salt, from which he deduces a very great condensation, which he attributes to an absorption in the weak brines of the salt, or a lodgment of Us particles in the interstices of the particles of water. Mr. Achard of the same academy, in 1785, gives a very great list of experiments on the bulks of various brines, made in a different way, which show no such introsusception ; and Dr. Watson, formerly regius professor of chemistry at Cambridge, thinks this confirmed by experiments which he narrates in his Chemical Essays. We cannot assent to either side, and do not think the experiments decisive. We incline to Mr. Lambert's opinion ; for this reason, that in the successive dilutions of sulphuric acid and nitric acid there is a most evident and remarkable condensation. Now what are these but brines, of which we have not been able to get the saline ingredient in a separate form ? The experiments of Mr. Achard and Dr. Watson were made in such a way that a single grain in the measurement bore too great a proportion to the whole change of specific gravity. At the same time, some of Dr. Watson's are so simple in their -na-ture that it is very difficult to withhold the as-sent. Experiments have also been made which seem sufficient for deciding the question. ' Whether the salt can be received into the pores of the water, so as to increase its weight without increasing its bulk ?' and we must grant that it may. We do not mean that it is simply lodged in the pores as sand is lodged in the interstices of small shot ; but the two together occupy less room than when separate. The experiments of Mr. Achard were insufficient for a decision, because made on so small a quantity as 600 grains of water. Dr. Watson's experiments have, for the most part, the same defect. Some of them, however, are of great value in this question, and are very fit for ascertaining the specific gravity of dissolved salts.

Specific gravity, says Dr. Ure, is the density of the matter of which any body is composed, compared to the density of another body, assumed as the standard. This standard is pure distilled water, at the temperature of 60° Fahrenheit. To determine the specific gravity of a solid we weigh it, first in air, and then in water. In the latter case it loses of its weight a quantity pre-

cisely equal to the weight of its own bulk of water; and hence, by comparing this weight with its total weight, we fiud its specific gravity. The rule therefore is, Divide the total weight by the loss of weight in water, the quotient is the specific gravity. If it be a liquid, or a gas, we weigh it in a glass or other vessel of known capacity ; and, dividing that weight by the weight of the same bulk of water, the quotient is, as before, the specific gravity.

To calculate the mean specific gravity of a compound from those of its components is a problem of perpetual recurrence in chemistry. It is only by a comparison of the result of that calculation, with the specific gravity of the compound experimentally ascertained, that we can discover whether the combination has been accompanied with expansion or condensation of volume. As several respectable experimental chemists (see ALLOY, and AMMONIA) seem deficient in this part of chemical computation, I shall here insert a short abstract of a paper which I published on this subject in the seventh number of the Journal of Science.

The specific gravity of one body is to that of another as the weight of the first, divided by its volume, is to the weight of the second, divided by its volume ; and the mean specific gravity of the two is found by dividing the sum of the weights by the sum of the volumes.

Let W, w, be the two weights ; V, v, the two volumes ; P, p, the two specific gravities ; and M the calculated mean specific gravity. Then

M — — — ; the formula by which I computed

the second column of Table II. . W w

Hence,

the specific gravities of the two components, we

U D W A ˆ U W

have r — — and p — *; whence V* — , «

In the condition when W — w;— 1, we have then V :z •— -, v — — , and consequently, therefore, v

i r

This value being constantly negative proves that the true value of the specific gravity of the

W + w mixture, represented by — ; , is always

1 /W w \

smaller than the false value, — (J- — V

2 \V T v / Example of the last formula : —

Gold and silver, — - — — 14-9 zz false

/¥1 V

or arithmetical mean specific gravity.

P + p

(19-3— 10-5)2 (8-8)2 77-44

— • !—.— ^ ‘ — — o.c ^_ 9 » .

29-8 ” 29-8 *29-8* ~

and A = 1‘3, which being subtracted from the arithmetical mean, 14-9, leaves 13-6 for the true mean specific gravity as directly obtained by the

formula

Pw + p\V ‘

Sulphuric acid TABLE, showing the erroneous results of the common method.

V + v

Pp

When the difference in density between the two substances is considerable, as it is with sulphuric acid and water, the errors produced by assuming the arithmetical mean for the true calculated mean are excessive. If we take copper and tin, however, then the arithmetical mean,

8-89 4-7-29

- — - = 8-09, differs very little from 8-01,

the accurate mean density.

By a similar error, I suppose, in calculating the mean density of liquid muriatic acid in its different stages of dilution, the celebrated Kirwan has long misled the chemical world. He asserted that the mean specific gravity of the components being also the experimental mean, there is no condensation of volume as with other acid dilutions. And the illustrious Berthollet has even assigned a cause for this suppositious fact. I find, on the contrary, that 50 of acid, specific gravity 1-1920, with 50 of water, give out heat, and have their volume diminished in the ratio of 100 to 99-28. The experimental specific gravity is 1-0954 ; that by the exact rule is only 1-0875.

The preceding formula may be presented under a still more convenient form. Pp being

Acid in

100.

Arithmetical mean density.

Experimental density.

Apparent volume.

100

1-8480

100

90

1-7632

1-8115

97-3

80

1-6784

1-7120

98-0

70

1-5936

1-5975

99-7

60

1-5088

1-4860

101-5

50

1-4240

1-3884

102-6

40

1-3392

1-2999

103-02

30

1-2544

1-2184

102-95

20

1-1696

1-1410

102-.JO

10

1-0848

1-0680

101-57

Mr. Robertson, in order to determine the specific gravity of men, prepared a cistern seventy-eight inches long, thirty inches wide, and thirty inches deep ; and, having procured ten men for his purpose, the height of each was taken, and his weight ; and afterwards they plunged successively into the cistern. A ruler, graduated to inches and decimal parts of an inch, was fixed to one end of the cistern, and the height of the water noted before each man went in, and to what height it rose when he immersed himself under its surface. The

following table contains the several results : —

SPE

751

SPE

Height of

Height of

No.

of men.

Height.

Weight.

water before im—

water when im—

Water raised.

Solidity.

Weight of water.

mersed.

mersed.

Ft. In.

Pounds.

Inches.

Inches.

Inches.

Pounds.

1

6 2

161

19-30

21-20

1-90

2-573

160-8

2

5 lOf

147

19-2,5

21-16

1-91

2-586

161-6

3

5 OJ

156

19-21

21-06

1-85

2-505

1 .56-6

4

5 6|

140

19-17

21-21

2-04

2-763

172-6

5

5 5f

158

19-13

21-21

2-08

2-817

176-0

6

5 5*

158

19-09

21-26

2-17

2-939

183-7

7

5 4f

140

19-05

21-06

2-01

2-722

170-1

8

5 3J

132

19-01

20-86

1-85

2-505

156-6

9

5 4*

121

18-97

20-76

1-79

2-424

151-5

10

5 3J

146

18-93

20-66

1-73

2-343

146-4

Ore of the reasons, Mr. Robertson says, that induced him to make these experiments was a desire of knowing what quantity of fir or oak tim-ber would be sufficient to keep a man afloat in river or sea-water, thinking that most men were specifically heavier than river or common fresh water ; but the contrary appears from the trials above recited : for, excepting the first and last, every man was lighter than his equal bulk of fresh water, and much more so than his equal bulk of sea-water : consequently, if persons who fall into water had presence of mind enough to avoid the fright usual on such accidents, many might be preserved from drowning ; and a piece of wood not larger than an oar would buoy a man partly above water as long as he had spirits to keep his hold. — Philosophical Transactions, vol. 1. art. 5.

SPECIFICATION. See PATENT.

SPECIFICATION, in Scotch law, signifies the making a new property from the materials belonging to another: as wine from grapes; or other instances in which the thing converted can l.y no means be reduced to its original state.

SPEC1FICK. See SPECIFIC and SPECIFICAL.

SPECIFICS, in medicine. By specifics is not meant such as infallibly, and in all patients, produce salutary effects. Such medicines are not to be expected, because the operations and effects of remedies are not formally inherent in them, but depend upon the mutual action and reaction of the body and medicine upon each other; hence the various effects of the same medicine in the same kind of disorders in different

patients, and in the same patient at different times. By specific medicines we understand such medicines as are more infallible than any other in any particular disease. See MEDICINE, Index.

SPE'CIMEN, n. s. Lat. specimen. A sam-ple ; a part of any thing exhibited, that the rest may be known.

Several persons have exhibited specimens of this art before multitudes of beholders.

Addison's Spectator.

SPE'CIOUS, adj.) Fr.specieux; Lat. spe-SPE'CIOUSLY, adv. \ ciosus. Showy ; pleasing to the view : the adverb corresponding.

Thus in the glebe the deadly nightshade grows, Flaunts in the sun and mingles with the rose, The specious bane the prowling urchin spies : Touch, touch it not ! — He gorges it, and dies.

Whyte'i Poems.

Piety is opposed to hypocrisy and insincerity ; especially to that personated devotion under which any kind of impiety is wont to be disguised, and put off more speciously. Hammond.

The rest, far greater part, Will deem in outward ntes and specious forms, Religion satisfied. Milton.

Bad men boast

Their specious deeds on earth, which glory excites, Or close ambition varnished o'er with zeal. Id.

Somewhat of specious they must have to recommend themselves to princes ; for folly will not easily go down in its natural form. Driiden.

Temptation is of greater danger, because it is covered with the specious names of good nature and good manners. Rogers.

This is the only specious objection which our Ro-mish adversaries urge against the doctrine of this church in the point of celibacy. Atterbury.

SPECK, n. s. & v. u. Sax. ppecec. A small discoloration; a spot

So dreadfully he towards him did pass, Forelifting up aloft \iisspeckled breast,

And often bounding on the bruised grass, As for great joy of his new comen guest.

Faerie Queene. Flower Carnation, purple, azure, or speck'd with gold.

MOtor..

Speckled vanity Will sicken soon and die, And leprous sin will melt from earthly mould. Id.

Then are they happy, when No speck is left of their habitual stains ; But the pure aether of the soul remains.

Dr yd en's Mneid.

Saw'st thou not late a speckled serpent rear His gilded sp'res to climb on yon fair tree ! Before thi happy minute I was he. Dryden.

Every speck does not blind a man.

Government of the Tongue. The smiling infant in his hand shall take The crested basilisk and speckled snake ; Pleased the green lustre of the scales survey, And with their forky tongue and pointless sting shall

play. Pope's Messiah.

The tortoise here and elephant unite, Transformed to combs, the speckled and the white.

Id.

SPECTACLE, n.s.) Fr. spectacle ; Latin

SPEC'TACLED, adj. \ spectaculum. A show ;

a gazing stock ; any thing exhibited to the view

as eminently remarkable : in the plural, glasses to

assist the sight : spectacled, furnished with such

We are made a spectacle unto angels and men.

1 Cor. iv. 9.

Forth riding underneath the castle wall, A dunghill of dead carcases he spied, The dreadful spectacle of that sad house of pride.

Faerie Queene.

In open place produced they me, To be a publick spectacle to all.

Shakspeare. Henry VI. The sixth age shifts Into the lean and slippered pantaloon, With spectacles on nose, and pouch on side.

Shakspeare.

All tongues speak of him, and the bleared sights Are spectacled to see him. Id. Coriolanus.

We have helps for sight above spectacles and glasses.

Bacon.

When pronouncing sentence, seem not glad ; Such spectacles, though they are just, are sad.

Denham.

Shakspeare was naturally learned : he needed not the spectacles of books to read nature ; he looked inwards and found her there.

Dryden on Dramatick Poesy.

The first spectacle-maker did not think that he was leading the way to the discovery of new planets.

Grew.

This is the reason of the decay of sight in old men, and shews why their sight is mended by spectacles. Newton.

This day then let us not be told, That you are sick, and I grown old ; Nor think on your approaching ills, And talk of spectacles and pills. Swift.

The world grown old, her deep discernment

shows,

Claps spectacles on her sagacious nose, Peruses closely the true Christian's face, And finds it a mere mask of sly grimace, Usurps God's office, lays his bosom bare, And finds hypocrisy close lurking there. Coviper.

SPECTACLES, in dioptrics, a machine consisting of two lenses set in silver, horn, 8cc., to assist the defects of the organ of sight. Old people, and others who have flat eyes, use convex spectacles, which cause the rays of light to converge so as to meet upon the retina : whereas myopes, or shortsighted people, use concave lenses for spectacles, which cause the rays to diverge, and prevent their meeting ere they reach the retina. See OPTICS, Index.

Spectacles are certainly the most valuable of all optical instruments, though there is not the same science and mechanical ingenuity displayed in the making of them as in the construction of microscopes and telescopes. A man, especially if accustomed to spend his time among books, would be much to be pitied, when his sight begins to fail, could he not in a great measure restore it by the aid of spectacles ; but there are some men whose sight cannot be aided by the use either of convex or concave glasses. The following method adopted by one of these to aid his sight is certainly worthy of notice : — When about sixty years of age, this man had almost entirely lost his sight, seeing nothing but a kind of thick mist, with little black specks, which appeared to float in the air. He knew not any of his friends ; he could not even distinguish a man from a woman ; nor could he walk in the streets without being led. Glasses were of no use to b.'m ; the best print, seen througli the best spectacles, seemed to him like a daubed paper. Wearied with this melancholy state, he thought of the following expedient. He procured some spectacles with very large rings ; and, taking out the glasses, substituted in each circle a conic tube of black Spanish copper. Looking through the large end of the cone, he could read the smallest print placed at its other extremity. These tubes were of different lengths, and the openings at the end

were also of different sizes ; the smaller the aperture the better could he distinguish the smallest letters ; the larger the aperture the more words or lines it commanded, and consequently the less occasion was there for moving the head and the hand in reading. Sometimes he used one eye, sometimes the other, alternately relieving each ; for the rays of the two eyes could not unite upon the same object when thus separated by -two opaque tubes. The thinner these tubes, the less troublesome are they. They must be totally blackened within so as to prevent all shining and they should be made to lengthen or contract, and enlarge or reduce the aperture a. pleasure. When he placed convex glasses in these tubes, the letters indeed appeared larger, but not so clear and distinct as through the empty tube ; he also found the tubes more convenient when not fixed in the spectacle rings; for, when they hung loosely, they could be raised or lowered with the hand, and one or both might be used as occasion required. It is almost needless to add that the material of the tubes is of no importance, and that they may be made of iron or tin as well as of copper, provided the insides of them be sufficiently blackened. See La Nouvelle Bigarure for February 1754, or Monthly Magazine for April 1799.

SPECTAT1ON, n.s. Lat. spectalio. Re-gard ; respect.

This simple gpeclation of the lungs is differenced from that which concomitates a pleurisy. Harvey.

SPECTATOR, n.s. Fr. spectateur : Latin spectator. A looker-on ; a beholder.

More

Than history can pattern, though devised And played to take spectators. Shakspeare.

If it proves a good repast to the spectators, the dish pays the shot. Id. Cymbeline.

Thou standest i’ the state of hanging, or of some death more long in spectatorthip, and crueller in suffering. Shakspeare.

An old gentleman mounting on horseback, got up heavily ; but desired the spectators that they would count fourscore and eight before they judged him.

Dryden.

What pleasure hath the owner more than the spectator ? Seed.

SPECTRA, OCULAR, images presented to the eye after removing them from a bright object, or closing them. When any one has long and attentively looked at a bright object, as at the setting sun, on closing his eyes, or removing them, an image, which resembles in form the object he was attending to, continues some time to be visible. This appearance in the eye we shall call the ocular spectrum of that object These ocular spectra are of four kinds : 1. Such as are owina to a less sensibility of a defined part of the retina or spectra from defect of sensi-

bility. 2. Such as are owing to a greater sensibility of a defined part of the retina or spectra from excess of sensibility. 3. Such as resemble their object in its color as well as form ; which may be termed direct ocular spectra. 4. Such as are of color contrary to that of their object, which may be termed reverse ocular spectra.

SPEC'TRE, n. s. Fr. spectre ; Lat. spectrum. Apparition ; supposed appearance of persons dead.

The very poetical use of the word for a spectre, doth imply an exact resemblance to some real being it represents. Siillingfleet,

The ghosts of traitors from the bridge descend, With bold fanatick spectres to rejoice. Dryden.

Those are nothing but spectres the understanding raises to itself, to flatter its own laziness. Locke.

This prism had some veins running along within the glass, from the one end to the other, which scattered some of the sun's light irregularly, but had no sensible effect in increasing the length of the coloured spectrum. Newton's Opticks.

SPECTRE OF THE BROKEN, a curious phenomenon observed on the Broken, one of the Harz mountains in Hanover. M. Haue gives the following account of it : — ' After having been here,' says he, ' for the

thirtieth time, and having procured information respecting the abovementioned atmospheric phenomenon, I was at length, on the 23d of May 1797, so fortunate as to have the pleasure of seeing it; and perhaps my description may afford satisfaction to others who visit the Broken through curiosity. The sun rose about four o'clock, and, the atmosphere being quite serene towards the east, his rays could pass without any obstruction over the Heinrichshbhe. In the southwest however, towards Achtermannshbhe, a brisk west wind carried before it thin transparent vapors, which were not yet condensed into thick heavy clouds. About a quarter past four I went towards the inn, and looked round to see whether the atmosphere would permit me to have a free prospect to the southwest ; when I observed, at a very great distance towards Achtermannshbhe, a human figure of a monstrous size. A violent gust of wind having almost carried away my hat, I clapped my hand to it by moving my arm towards my head, and the colossal figure did the same. The pleasure which I felt on this discovery can hardly be described ; for I had already walked many a weary step in the hopes of seeing this shadowy image, without being able to gratify my curiosity. I immediately made another movement by bending my body, and the colossal figure before me repeated it. I was desirous of doing the same thing once more — but my colossus had vanished. I remained in the same position, waiting to see whether it would return ; and in a few, minutes it again made its appearance on the Achtermannshbhe. I paid my respects to it a second time, and it did the same to me. I then called the landlord of the Broken, and, having both taken the same position which I had taken alone, we looked towards the Achtermannshbhe, but saw nothing. We had not, however, stood long, when two such colossal figures were formed over the above eminence, which repeated our compliments by bending their bodies as we did; after which they vanished. VOL. XX

We retained our position ; kept our eyes fixed on the same spot, and in a little the two figures again stood before us, and were joined by a third. Every movement that we made by bending our bodies these figures imitated ; but with this difference, that the phenomenon sometimes was weak and faint, sometimes strong and well defined. Having thus had an opportunity of discovering the whole secret of this phenomenon, I i can give the following information to such of my readers as may be desirous of seeing it themselves. When the rising sun, and according to analogy the case will be the same at the setting sun, throws his rays over the Broken upon the body of a man standing opposite to fine light clouds floating around or hovering past him, he needs only fix his eyes stedfastly upon them, and, in all probability, he

will see the singular spectacle of his own shadow, extending to the length of 500 or 600 feet, at the distance of about two miles before him.' In the Manchester Transactions is an account of a similar phenomenon observed by Dr. Ferrier, on a hill in England.

A belief that supernatural beings sometimes make themselves visible, and that the dead sometimes revisit the living, has prevailed among most nations, especially in the rudest stages of society. It was common among the Jews, among the Greeks, and among the Romans, as we find from the Scriptures and from the poems of Ho-mer and Virgil. Celestial appearances were in-deed so often exhibited to the Jews that the origin of their belief is not difficult to be explained. The divine being manifested himself to each of the patriarchs by some sensible sign, generally by a flame of fire, as he did to Moses. Under this semblance also did he appear to the Israelites during their abode in the desert and after they obtained a settlement in the land of Canaan. Nor did .they believe that heavenly beings alone assumed a sensible appearance : they believed that deceased men also sometimes revisited this world. When Saul went to consult the witch at Endor, he asked her to bring up the person whom he should name to her ; a proof that he considered his demand as possible to be performed, and therefore that he probably acted under the influence of popular opinion. The same opinions had been generally entertained at a much earlier period ; for necromancy and witchcraft, the arts by which the dead were supposed to be raised, had been prohibited while the Israelites were in the wilderness and yet untainted with the vices of the Canaanites. They must therefore have derived them from Egypt, the cradle of superstition, as well as of the arts and sciences. Among the Greeks and Romans the apparition of spectres was generally believed. On innumerable occasions the gods are said to have discovered themselves to the eyes of mortals, to have held conferences, and to have interposed their aid. The ghosts of the dead, too, are said to have appeared. When ./Eneas, amidst the distraction and confusion of his mind in flying from the destruction of Troy, had lost his wife by the way, he returned in search of her. Her shade appeared to him, we are told (for she herself had been slain), with the same aspect as before, but her figure was larger. She endeavoured to assuage the grief o

her unhappy husband by ascribing her death to the appointment of the gods, and by foretelling the illustrious honors which yet awaited him. But when ˆneas attempted to clasp her in his arms the phantom immediately vanished into air. From this story we may observe that the ancients believed that the umbrae, or shades, retained nearly the same appearance after death as be-fore ; that they had so far the resemblance of a body as to be visible ; that they could think and speak as formerly, but could not be touched. This description applies equally well to those shades which had passed the river Styx and taken up their residence in the infernal regions. Such were the shades of Dido, of Deiphobus, and of all those whom jEneas met with in his journey through the subterraneous world.

It appears from the writings of modern travellers who have visited rude and savage nations that the belief of spectres is no less common among them. Mr. Bruce tells us that the priest of the Nile affirmed that he had more than once seen the spirit of the river in the form of an old roan with a white beard. Among the Mahometans the doctrine of spectres seems to be reduced to a regular system by the accounts which they give of genii. Whoever has read the Arabian Nights' Entertainments must have furnished his memory with a thousand instances of this kind. Their opinions concerning genii seem to be a corrupted mixture of the doctrines of the Jews and ancient Persians. In Christian countries, too, notwithstanding the additional light which their religion has spread, and the great improvement in the sciences to which it has been subservient, the belief of ghosts and apparitions was until lately very genetal, especially among the lower ranks. Many still believe that evil spirits make their appearance in order to terrify wicked men, especially those who have committed mur-der. They suppose that the spirits of dead men assume a corporeal appearance, hover about church-yards and the houses of the deceased, or haunt the places where murders have been committed. In some places it is believed that beings hare been seen bearing a perfect resemblance to

men alive. These spectres, in Scotland, are called wreaths, and people are often to be found who affirm that they have seen such wreaths of their relations a longer or shorter time before their death.

In the Highlands of Scotland the second sight is still believed we know by many (see SECOND SIGHT); *viz.* that future events are foretold by certain individuals by means of spectral representation : and so general has the belief of spectres, been that this circumstance may be thought by some sufficient to prove that it must have its foundation in human nature, or must rest upon rational evidence. When any doctrine has been universally received by all nations, by generations living several thousand years from one another, and by people in all the different stages of society, there is certainly a strong presumption that such a doctrine has its foundation in reason and in truth. In this way we sometimes argue m favor of the existence of a God, concerning moral distinction, and the doctrine of a future state : and certainly so far we argue well. But,

if the same argument be applied to idolatry, to sacrifices, or to apparitions, we shall find that it is applied improperly. Idolatry was very general among ancient nations ; so was the offering of sacrifices ; so was polytheism ; but they were by no means universal. Should we allow, foi the sake of shortening the argument, that all ancient nations were polytheists and idolaters, and presented oblations to their imaginary deities, all that could be concluded from this concession is that they fell into. these mistakes from their ignorance and from the rude state of society, from which their imperfect knowledge of theology and moral philosophy was never able to rescue them. These erroneous notions fled before the brightness of the Christian system; while the doctrines of the existence of God, of moral distinction, and of a future state, have been more thoroughly confirmed and ascertained. The same thing may be said of the belief of spectres. However generally it has been adopted in the first stages of society, or by civilised nations who had made but little progress in the study of divine things, it has been rejected, we may say invariably, wherever theology and philosophy have gone hand in hand.

If we glance at the popular evidence in favor of spectres, it will be found very defective. They only appear to one person at a time ; they are seen only in the night ; they are visible only to ignorant, illiterate, and credulous persons, and never present themselves before men of education and learning. That spectres only appear to one person at a time, even though there are more in company, is also an objection

against the credibility of their appearance quite insurmountable. How is it possible that two men of eye-sight equally good, directing their eyes to the same spot, should not see so large an object as that of a man or woman at a small distance equally well ? Ghosts have seldom any secrets to disclose ; they might be proclaimed to a multitude with as much propriety as confined to one person. See Farmer on Miracles ; a book in which* this question is fully examined. Spectres again appear only in the night. But why should they shun the light of the sun ? Those mischievous ghosts that Glanville mentions might indeed have some reason to choose midnight for the execution of their pranks, as they would be more easily detected in open day. Spectres not only choose the most improper time, but the most improper persons. To render the testimony of any person credible, he must not only be a man of veracity, but he must have sufficient ability to judge of the subject to which he is to bear witness. It is not on the evidence of an ignorant illiterate person, who has more fancy and fear than judgment, that we are to rest our belief of what is supernatural. It is also worthy of remark that we have never* heard of a ghost appearing to any person who did not previously believe their existence. A man must be prejudiced in favor of this opinion, or he will never see a ghost. But sensible men know, that he who has been accustomed to hear frightful stories of apparitions gliding through a church yard, or haunting some particular place, can scarcely pass through a church-yard or naunted spot, without conjuring up in his imagi-SPECTRES.

nation the hideous phantoms which he has been accustomed to associate with such places. Is it strange, then, that an ignorant man, with a mind uncultivated and uninformed, with all the prejudices of the nursery about him, should imagine he sees ghosts in those places where he believes they hover, especially in the dead hour of midnight, when, with the slightest aid of the imagination, a cow may be turned into a monstrous phantom, and the reflection of the beams of the moon from a little water be converted into a ghost with a winding sheet? But why should apparitions shun men of understanding and learning ? Why should learning be formidable to them ? It was not so with the celestial messengers mentioned in the Scriptures : they appeared to the patriarchs and prophets; and the miracles there recorded were performed in the most public places, before the eyes of Rabbis, of Scribes, and Pharisees. Indeed this circumstance is sufficient

to destroy the evidence of spectres. They have never been seen by any but men of weak or distempered minds, ‘or by men who have previously believed in them.

To trace an opinion that has prevailed so generally in the world to its source, however, is a labor not unworthy of the philosopher, even though the opinion be false. It is always gratifying to detect the causes of error : it is no less useful ; for, to refute error, it is often sufficient to point out the sources from which it has sprung. To reach the origin of the belief of spectres is not more difficult than to account for idolatry or polytheism. In the infant state of the intellectual powers every thing is considered as possessing life and intelligence. The child beats the stool over which he has fallen, with the same passion that he would treat his companion : the young girl talks to her. doll as if it understood her : savages ascribe every change which they observe on the face of nature to the action of some animated being. As knowledge advances, they single out those beings which seem to produce the most striking effects, arrange them into some kind of order, and divide the government of the world among them. Unable, at the same time, to conceive any notion of a pure spirit, they imagine those divinities are corporeal beings. This is the foundation of idolatry. The belief of spectres is but another step. That these animated corporeal beings, to whom they address their prayers, and who preside over the world, should on particular occasions display themselves to the human eye, is what they must be previously disposed to expect. Hence the numberless appearances of the heathen gods, of the Persian and Mahometan genii. The belief of ghosts may be easily deduced from the opinions entertained respecting a future state. These opinions are founded on that essential doctrine of natural religion, that there is another world in which men shall exist when death has removed them hence. This doctrine has been universally received both by savage and civilised nations; but, as might be expected, men have formed very different sentiments concerning the nature of a future state, of the situation and employments of departed spirits, according to the degree of know-Sedge which they possessed. But the general

opinion in ancient and rude nations was, that departed spirits retained the same external appearance, the same passions and principles as before. Nothing therefore was more natural than the opinion that they might occasionally revisit this world, from an anxious desire to alleviate the sufferings of those beloved friends and relations whom they had left behind them, or to communicate from the unseen world what might be important to their welfare. Upon such an errand did

Creiisa appear to 7Eneas. The apparition of the ghosts of murderers is easily explained upon the same general principles. The remorse and horror of mind which the murderer feels are supposed to haunt him in the other world, and to render his situation there intolerable (especially if the murder was never detected and punished), till he return and give information against himself. In this way, then, we think it highly probable the belief of spectres has originated. But many other causes concur to confirm and propagate this belief. These are, imperfect vision united with fear, dreams, opium, diseases, drunkenness, and artifice. 1. Indistinct vision is one source of apparitions, especially when the mind is under the influence of fear. It is well known that the sense of seeing conveys no idea of distance till improved by experience and observation. In the day time we seldom commit mistakes, because we know the object at which we look ; but at night when we see objects obscurely, and know not what they are, we have no distinct idea, either of their distances or of their magnitude. We may mistake a bush that is near us for a tree at a distance; or, if the imagination be under the influence of fear, it will easily convert it into a gigantic figure. Objects are always magnified in a fog; so that when a fog happens in the night time, objects may be magnified to an enormous size. But, at any rate, whether there be fog in the night or not, there is such a great analogy between darkness and a fog, that, if the latter deceive us with respect to the size of objects, the former will also deceive us. 2. Dreams are another fertile source of apparitions. It is well known to every person that while the mind is under the influence of a dream it considers it as much a reality as it does any particular action while awake. Now if a person of a weak superstitious mind should have a very lively dream, which interests his passions, particularly the passion of fear, it may make so deep an impression, that he may be firmly convinced that he has actually seen with his eyes what has only passed before his imagination. 3. Spectres are sometimes also occasioned by opium. Gassendi the philosopher, found a number of people going to put a man to death for having intercourse with the devil ; a crime which the poor wretch readily acknowledged. Gassendi begged of the people that they would permit him first tc examine the wizard before putting him to deatn. They did so ; and Gassendi, upon examination, found that the man firmly believed himself guilty of tnis impossible crime. He even offered to Gassendi to introduce him to the devil. The philosopher agreed; and, when midnight came, the man gave him a pill, which he said it was necessary to swallow before setting off. Gassendi took

the pill but gave it to his dog. The man, having swallowed his, fell into a profound sleep : during which he seemed much agitated by dreams. The dog was affected in a similar manner. When the man awoke, he congratulated Gassendi on the favorable reception he had met with from his sable highness. It was with difficulty Gassendi convinced him that the whole was a dream, the effect of soporific medicines, and that he had never stirred from one spot during the whole night. 4. That diseases, especially the night-mare, the hypochondria, hysteric passion, and madness, are another source of spectres, we have the strongest reason to affirm. Persons subject to the night-mare often imagine that they see spectres. This is still more the case with hypochondriac and hysteric persons, and those who are in any de-gree deranged in their intellects. Instances in proof of this we need not quote, as every per-son connected with these unfortunate people must have met with proofs of it. 5. Drunkenness also has the power of creating spectres. Its natural effect in most cases is to derange the understanding, to throw it off its guard, and to give full scope to that passion which has a natural disposition to gain an ascendancy ; and sometimes it excites passions which scarcely seem to exist at any other time. It makes some men licentious, some furious, some all benevolence and kindness, some from being cowards it renders undaunted heroes. It seldom, if ever, excites fear ; and therefore it may be thought strange that men should imagine they see ghosts when intoxicated. But it must be remarked that the ghosts which the drunkard sees, he sees not with the same alarn and terror as men who are sober. He is not afraid of them. He has the courage to converse with them, and even to fight with them, if they give him provocation. A man returning home intoxicated affirmed that he had met with the devil ; and that after a severe encounter he had vanquished him and brought him to the ground, to which he had nailed him fast by driving his staff through his body. “Next morning the staff was found stuck

with great violence into a heap of turfs! 6. Many apparitions of spectres have no other origin than the artifices of the waggish or self-interested. Dr. Plot, in his Natural History of Oxfordshire, relates a marvellous story, to which the doctor gave full credit, but which after all turned out to be the invention of the memorable Joseph Collins of Oxford, otherwise called Funny Joe, who having hired himself as secretary to the commissioners under the name of Giles Sharp, by knowing the private traps belonging to the house, and by the help of pulvis fulmi-nans and other chemical preparations, and letting his fellow servants into the scheme, carried on the deceit without discovery to the very last ; insomuch that Dr. Plot, in his Natural History, relates the whole for fact, and concludes in this grave manner : ‘ That though tricks have been often played in affairs of this kind, many of the things above related are not reconcileable with juggling ; such as the loud noises, beyond the power of man to make without such instruments as were not there ; the tearing and breaking the beds ; and throwing about the fire ; the hoof treading out the candle ; and the striving for the

sword, and the blow the man received from the pummel of it.’

SPEC’ULAR, adj.) Lat. specularis. Hav-SPEC’ULUM, n.s. S ing the qualities of a mirror or looking-glass : a mirror.

It were but madness now t” impart The skill of specular stone. Donne.

Quicksilver may, by the fire alone, in glass vessels, be turned into a red body ; and from this red body may be obtained a mercury, bright and specular as before. Boyle.

A rough and coloured object may serve for a speculum to reflect the artificial rainbow.

Id. On Culour$. The hidden way

Of nature wouldst tliou know, how first she frames All things in miniature, thy specular orb Apply to well -dissected kernels ; lo ! In each observe the slender threads Of first beginning trees. Philip*.

A 3 ecutum of metal without glass, made some .years since for optical uses, and very well wrought, -produced none of those rings ; and thence I understood that these rings arise not from the specular surface alone, but depend upon the two surfaces of the plate of glass, whereof the speculum was made, and upon the thickness of the glass

between them.

Newton.

SPECULARIA, among the Romans, were a kind of window casements, used before glass was introduced for this purpose. They consisted of transparant stones, called lapides speculares. See below.

SPECULARIS LAPIS, in the old system of mineralogy, a genus of talcs, composed of large plates visibly separate and of extreme thinness ; and each fissile again separated into a number of plates still finer. See TALC. Of this genus there are three species : — 1. The white shining specularis with large and broad leaves, commonly called isinglass and Muscovy glass ; its lamellae, or leaves, are extremely thin, elastic, and trans-Darent; it makes not the least effervescence with .quafortis ; and is not easily calcined in the fire. It is imported in great quantities; the mi-liature-painters cover their pictures with it ; the antern-makers sometimes use it instead of horn ; and minute objects are usually preserved between two plates of it for examination by the microscope. 2. The bright brown specularis with broad leaves ; a very valuable species though inferior to the former. 3. The purple bright specularis with broad leaves, which is the most elegant of all the talcs, and not less beautifully transparent than the first kind.

The lapis specularis is found in many parts of the world. The island of Cyprus abounds with it. It is very common also in Russia, and has of late been discovered to abound in the Alps, the Appennines, and many of the mountains of Germany. The ancients used it, instead of glass, in their windows. — Hill's History of Fossils, p. 72.

Some consider the lapis specularis to have been a species of gypsum, and composed of the acid of vitriol and calcareous earth. It came into use at Rome in the age of Seneca (Ep. 90), and, soon after its introduction, was applied not only to give light to apartments, but to protect fruit-trees from the severity of the weather ; and it is recorded that the emperor Tiberius was enabled,

principally by its means, to have cucumbers at his table during almost every month in the year. Dr. Watson apprehends it is still used in some countries in the place of glass ; however, it is well known that it was so used in the time of Agricola, for he mentions (De Nat. Fos., lib. v., p. 257) two churches in Saxony which were lighted by it. Agricola esteemed it to have been a species of plaster-stone ; and in speaking of it he remarks that, though it could bear, without being injured, the heat of summer and the cold of win-ter, yet the largest masses of it were wasted by the rain. However, it differs from plaster-stone in this property, that it does not, after being calcined and wetted with water, swell and concrete into a hard stony substance. — Watson's Chemical Essays, vol. ii. p. 297, &c.

SPECULATE, v. n. & v. a. ˆ Fr. speculer ;

SPECULA'TION, n. s. I Lat. specular.

SPECULATIVE, adj. V To meditate ;

SPEC'ULATIVELY, adv. i contemplate ;

SPEC'U LATOR, n. s. } to take a view

of anything with the mind ; consider attentively : speculation is examination ; power of sight ; mental view or scheme : speculative is contemplative; theoretic; notional: the adverb corresponding : a speculator is an observer, or one who forms new theories.

This is a consideration not to be neglected, or thought an indifferent matter of mere speculation.

Lesley.

In all these things being fully persuaded, that what they did, it was obedience to the will of God, and that all men should do the like ; there remained, af-ter speculation, practice whereunto the whole world might be framed. Hooker.

If all other uses were utterly taken away, yet the mind of man being by nature speculative, and delighted with contemplation in itself, they were to be known even for mere knowledge sake. Id.

They who have, as who have not, whom their

great stars

Throne and set high 1 servants “Which are to France the spies and speculations, Intelligent of our state. Shakspeare. King Lear. ‘ Thy bones are marrowless ; thy blood is cold ; Thou hast no speculation in those eyes Thou star’st with. Shakspeare.

Some take it for a speculative platform, that reason and nature would that the best should govern, but nowise to create a right. Bacon’s Holy War.

Consider the quantity, and not speculate upon an intrinsical relation. Digby on Bodies.

Thenceforth to speculations high or deep I turned my thoughts ; and with capacious mind Considered all things visible. Milton.

Man was not meant to gape or look upward, but to have his thoughts sublime ; and not only behold but speculate their nature with the eye of the understanding. Browne.

Although lapidaries and questuary enquirers affirm it, yet the writers of minerals, and natural speculators, conceive that stones which bear this name to be a mineral concretion. Id—

lie is dexterous in puzzling others, if they be not thorough -paced speculators in those great theories.

More.

From him Socrates derived the principles of morality, and most part of his natural speculations.

Temple.

In things purely speculative, as these are, and no ingredients of our faith, it is free to differ from one another in our opinions and sentiments.

Burned Theory.

As news-writers record facts which afford great matter of speculation, their readers speculate accordingly, and by their variety of conjectures, become consummate statesmen. Addison.

It encourages speculative persons, who have no turn of mind to increase their fortunes. Id.

News-writers afford matter of speculation. Id.

All the boats had one speculator, to give notice when the fish approached. Broome on the Odyssey.

These are not speculative flights or imaginary notions, but are plain and undeniable laws, that are founded in the nature of rational beings. Law.

The SPECULUM for reflecting telescopes is made of a kind of white copper consisting of thirty-two parts fine red copper, one of brass, fifteen of grain tin, and three of white arsenic. The process given by the late J. Edwards, who was rewarded by the Board of Longitude for disclosing it to the public, is that generally followed still, and is thus given in the Nautical Almanac for 1787 : — Melt the copper in a large crucible, employing some black flux composed of two parts of tartar and one of nitre; when melted add it to the brass and silver. Let the pure be melted in another crucible. Stir the whole well with a dry spatula of birch, and pour off the fused metal immediately into a large quantity of cold water. The sudden chill of the water will cause the fluid metal to divide into an infinite number of small particles, which will cool instantly. 2. If the copper be completely saturated, the fracture of one piece of this mixed metal will appear bright and of a glossy look, resembling the face of pure quicksilver. But if it is of a brown reddish color it wants a little more tin. To ascertain the required proportion melt a small quantity, known by weight, of the mixed metal with a known very small part of tin ; and, if necessary, repeat the trial with different doses till the fracture of the new mixture looks as already described. Having now ascertained the necessary addition of tin that is required, proceed to the last melting of the whole metal, together with the additional proportional dose of tin ; fuse the whole, observing the same cautions as before, and you will find that the mixture will melt with a much less heat than that for the first fusion. Have ready as many ounces of white arsenic in coarse powder as there are pounds in the weight of the metal ; wrap up the arsenic in a small paper, and put it, with a pair of tongs, into the crucible; stir it well with the spatula, retaining the breath to avoid the arsenical fumes or vapors (which, however, are not found to “be hurtful to the lungs), till they disappear; take the crucible off the fire, clear away the dross from the top of the metal, pour in about one ounce of powdered resin, with as much nitre, to give the metal a clean surface, and pour out the metal into the moulded flasks. 3. The speculum should be moulded with the concave surface downwards, and many small holes should be made through the sand upwards to discharge the air. The moulding sand from Highgate near London,

used by the founders, is as good as any for casting these metallic mirrors. See TELESCOPE. The cast metal should be taken out from the sand of the flasks as soon as it has become solid, and while it is yet red-hot, and the face must be kep.

downwards to prevent it from sinking. Holding it in that position by the git, force out the sand from the hole in the middle of the mirror with a piece of wood or iron, and place the speculum in an iron pot with a large quantity of hot ashes or small coals, so as to bury the speculum in them a sufficient depth. If the sand is not forced out of the hole, in the manner above directed, the metal, by sinking as it cools, will embrace the sand in the middle of the speculum so tight as to crack before it becomes entirely cold. And if the metal is not taken out of the sand, and put in a pot with hot ashes or coals to anneal it, the moisture from the sand will always break the metal. Let the speculum remain in the ashes till the whole is become quite cold. The git may be easily taken off by marking it round with a common fine half-round file, and giving it then a gentle blow. The metal is then to be rough ground and figured.

Another composition. — Another has been employed with great success by llochon, director of the marine observatory at Brest. Of this composition the principal ingredient is platinum ; but we think it unnecessary to add any farther description of Rochon's process, as the high price of platinum will, in all probability, for ever prevent it from coming into general use for the speculums of telescopes. For the grinding of the speculum a very complicated process is recommended in Smith's Optics, and one not much more simple by Mr. Mudge, in the sixty-seventh volume of the Philosophical Transactions : but according to Mr. Edwards, whose speculums are the best, neither of these is necessary. Besides a common grindstone all the tools that he made use of were a rough grinder, which serves also as a polisher, and a bed of hones. When the speculum was cold he ground its surface bright on a common grindstone, previously brought to the form of the gage, and then took it to the rough grinder. This tool is composed of a

mixture of lead and tin, or of pewter, and is made of an elliptical form, of such dimensions that the shortest diameter of the ellipse is equal to the diameter of the speculum, and the longest diameter is to the shortest in the proportion of ten to nine. This rough grinder may be fixed upon a block of wood, in order to raise it higher from the bench ; and, as the metal is ground upon it with fine emery, a hole or pit must be made in the middle of it as a lodgement for the emery, and deep grooves be cut out across its surface with a graver for the same purpose. By means of a handle, fixed on the back of the metal with soft cement, the speculum can be whirled round upon this grinder so rapidly that a common laborer ha* been known to give a piece of metal, four inches in diameter, so good a face and figure as to fit it for the hones in the space of two hours. When the metal is brought to a true figure it must be taken to a convex tool, formed of stones from Edgedon in Shropshire, between Ludlow and Bishop's Castle. The common blue hones, used by many opticians for this purpose, will scarcely touch the metal of Mr. Edward's speculums; but where they must be employed, for want of the others, as little water should be used as possible when the metal is put upon

them ; because they cut better when but barely wet than when drenched with water. The stones, however, from Edgedon are greatly preferable ; for they cut the metal more easily, and, having a very fine grain, they bring it to a smooth, face. These stones are directed by Mr. Mudge to be cemented in small pieces upon a thick round piece of marble, or of metal made of tin and lead like the former composition, in such a man-ner that the lines between the stones may run straight from one side to the other; so that placing the teeth of a very fine saw in each of these divisions, they may be cleared from one end to the other of the cement which rises between the stones. As soon as the hones are cemented down, this tool must be fixed in the lathe, and turned as exactly true to the gage as possible. It should be of a circular figure, and but very little larger than the metal intended to be figured upon it. Mr. Edwards recommends it to be made about one-twentieth part longer in diameter than the speculum, because he has found that it does not then alter its focus; and he dissuades the use of much water on the hone pavement at the time of using it. When the metal is brought to a very fine face and figure by the bed of stones it is ready to receive a polish, which is given to it by the elliptical rough grinder covered with pitch. With respect to the consistency of this pitch Mr. Mudge and Mr. Edwards give very different directions. Whilst the former says that it should be neither too hard nor too soft, the latter affirms that the harder the pitch is the better figure it will give to the

metal. Pitch may be easily made of a sufficient hardness by adding a proper quantity of resin ; and, when it is hardened in this way, it is not so brittle as pitch alone, which is hardened by boiling. Mr. Edwards advises to make the mixture just so \ hard as to receive, when cold, an impression from a moderate pressure of the nail of one's finger. When the elliptical tool is to be covered with this mixture it must be made pretty warm, and every where of about the thickness of half-a- crown ; and to give it the proper form it must, when somewhat cool, be pressed upon the face of the mirror, which has first been dipped in cold water, or covered over with very fine writing paper. All the superfluous pitch is now to be taken away from the edge of the polisher with a penknife, and a hole to be made in the middle accurately round with a conical piece of wood. This hole should go quite through the tool, and should be made of the same size, or somewhat less than the hole in the middle of the speculum. Mr. Edwards says that he has always found that small mirrors, though without any hole in the middle, polish much better, and take a more correct figure, for the polisher's having a hole in the middle of it. The polisher being thus formed it must be very gently warmed at the fire, and divided into several squares by the edge of a knife. These, by receiving the small portion of metal that works off in polishing, will cause the figure of the speculum to be more correct than if no such squares had been made. Mr. Mudge directs the polisher to be strewed over with very fine putty ; but Mr. Edwards prefers colcothar of vitriol. Putty, says he, gives metals a white

lusfre, or, as workmen call it, a silver hue ; but good colcothar of vitriol will polish with a very fine and high black lustre, so as to give the metal finished with it the complexion of polished steel. The colcothar of vitriol should be levigated between two surfaces of polished steel, and wrought with a little water ; when it is worked dry add a little more water. When the colcothar has been wrought dry three or four times it will acquire a black color, and will be sufficiently fine to give an exquisite lustre. This levigated colcothar must be put into a small phial and kept with some water upon it.

When it is to be used, every part of the pitch-polisher must be first brushed over with a fine camel's hair brush, which has been dipped in pure water, and rubbed gently over a piece of dry clean soap. The washed colcothar of vitriol is then to be put upon the polisher, in a large quantity at once, so as to saturate the pitch and form a fine coating. With respect to the parabolic figure to be given to the mirror, Mr. Edwards assures us that a very little experience in these matters will enable any one to give it with certainty, by polishing the speculum in the common manner, only with cross strokes in every direction, upon an elliptical tool of the proper dimensions.

Mr. Edwards, in a letter to Dr. Maskelyne, published since his directions thus given, makes the following addition to his former directions, which, as it is short, we will here subjoin. ' Make the brilliant composition first of copper and tin. Melt the proportional quantity of silver and brass in a small crucible by itself. When you put the brilliant composition the second time into the crucible, add also the lump of brass and silver melted together before in a separate crucible ; and, when the whole is now fluid, add the proportional quantity of arsenic, and then pour it off into the flasksj after the scoria is taken off, and a little powdered resin is thrown into it.' The reason assigned is, that as copper requires more heat to melt it than either silver or brass does, if the brass were put into the high heat of melting copper, its lapis calaminaris would calcine, which will not be the case when the ingot is made liquid by the lower heat of the second melting. The best fuel that Edwards found for melting the metal was coal-coke, as prepared by the malsters, which casts no smoke, and is more lasting than charcoal : he also found that the blueish hue of crown-glass, used for the eye-piece, best corrects the yellowish color of objects, as shown by a speculum, and particularly when No. 47 is the composition chosen. In trying the figure of the great speculum, Mr. Edwards rejects the diaphragms of Mr. Mudge as unnecessary, and adopts a more simple method, thus : when the specula and eye-piece are in their places, he fixes a circle (of white paper probably) of half an inch, or an inch in diameter, at the distance of from fifty to 100 yards, and gives it a broad black annular margin, by way of contrast ; then, when the telescope is adjusted nicely to distinct vision thereby, the screw that moves the small mirror must be turned either way, until a dark haze surrounds the circle, or field of view, which will become broader and broader the farther the screw is turned : now, if

the haze is more distinct, and the edge of it better denned, when the screw turns to the right hand, or brings the small speculum nearer,

from the point of distinct vision, than when the motion is in a contrary direction, the figure of the great speculum is spherical ; but if, on the contrary, the edge of the haze is better defined by the opposite motion, then the figure is hyperbolical; and, lastly, if, at equal distances on each side of the true focal point, the appearance of the haze is the same, the figure is known to be properly parabolic, and fit for its office. The small speculum, in the Gregorian construction, being placed to receive converging rays from the large one, is required to be spherical, as we have before said; but in the Newtonian construction it is made plane, and of an oval shape, to reflect the rays to the eye, placed at an angle of 90°. Mr. Edwards says he received his instruction how to grind and polish one of these from his friend Dr. Herschel, when he lived at Bath. To grind one of the elliptical specula flat, a small tool of lead with emery is first used, and then two or more considerably larger ones are used ; both the tools and bed of hones should not be less than six inches in diameter. The figure of the tools is not considered to be completed till the speculum can be first highly finished upon one of them, and afterwards be applied to another, without receiving any change : the last half dozen strokes should be in the direction of the longer axis of the el-lipsis. When this is perfected, it must be polished upon the pitch-polisher, of a circular form, the diameter of which is greater than the transverse axis of the speculum by one-tenth. As Mr. Edwards speaks of Dr. Herschel as his friend, and as the doctor has not, that we know of, yet published the composition of his metal and mode of grinding, polishing, and figuring it, we may conclude that he practises Mr. Edwards's process, and particularly as Mr. Edwards gives us the following information in the postcript of his pamphlet : — ' Dr. Herschel chiefly makes use of a Newtonian reflector, the focal distance of whose great mirror is seven feet, its aperture 6'25 inches, and powers 227 ard 460 times, though sometimes he uses a power of 6450 for the fixed stars. Note, if the metals of a Newtonian telescope are worked as exquisitely as those in Dr. Herschel's seven-feet reflectors, the highest power that such a telescope should bear, with perfect distinctness, will be given by multiplying the diameter of the great speculum by 74 ; and the focal distance of the single eye-glass may be found by dividing the focal distance of the great mirror by the magnifying power: thus, 6-25 x 74 zr 462, the magnifying

7 X 12

power ; and — n 0-182 of an inch, wiil be

462

the focal length of the single eye-glass required.' See TELESCOPE.

Mr. Little recommends the following proportions : — 32 parts of the best bar copper, 4 parts of the brass of pin-wire, 16£ of tin, and 1 J of arsenic. Silver he rejects, as it has an extraordinary effect of softening the metal ; and he found that ths compound was not susceptible 01 the highest polish, unless it was extremely brittle. He first melts the brass, and adds to it about an

SPE

760

SPE

equal weight of tin. When this mixture is cold, he puts it into the copper, previously fused with black flux, adds next the remainder of the tin, and lastly the arsenic. This mixture he granu- »ates, by pouring into cold water, as Mr. Edwards did, and fuses it a second time for casting. SPECULUM, in surgery, an instrument for dilating a wound, or the like, to examine attentively. See SURGERY.

SPEECH, n. s. \ Sax. rpˆcan, to speak.

SpEECH'L£ss,arf/.] The power of articulate utterance, or of expressing thoughts by words ; language; talk; mention: the adjective corresponding.

There is neither speech nor language, but their voices are heard among them. Ps. Common Prayer.

A plague upon your epileptick visage ! Smile you my speeches as I were a fool.

Shakspeare. King Lear. The duke did of me demand What was thespeech among the Londoners, Concerning the French journey. Shakspeare.

He fell down, foamed at mouth, and was speech-leu. Id.

I kneeled before him ;

Twas very faintly he said rise ; dismissed me Thus, with his speechless hand. Id. Coriolanus.

The great god Pan hath broken his pipes, and Apollo's priests are become speechless. Raleigh.

Speech of a man's self ought to oe seldom.

Bacon't Essays.

The acts of God to human ears Cannot without process of speech be told. Milton.

There is none comparable to the variety of instructive expressions by speech, wherewith man alone is endowed, for the communication of his thoughts. Holder OH Speech.

He that never hears a word spoken, it is no wonder he remains speechless ; as any one must do, who from an infant should be bred up among mutes. Id.

A single vision transports them ; it finds them in the eagerness and height of their devotion ; they are speechless for the time that it continues, and prostrate when it departs. Dryden.

In speech be eight parts. Accidence.

Speechleti with wonder, and half dead with fear. k Addisim.

The constant design of these orators, in all their (peeches,v/as to drive some one particular point. Swift.

Though our ideas are first acquired by various sensations and

reflections, yet we convey them to each other by the means of certain sounds, or written marks, which we call words ; and a great part of our knowledge is both obtained and communicated by these means, which are called speech. Watts.

There is a prurience in the speech of some, Wrath stays him, or else God would strike them

dumb :

His wise forbearance has their end in view, They fill their measure, and receive their due.

Cmeper.

SPEED, v. n., v. a., &•) Pre/.and part. pass.

SPEED'ILY, adv. [n.t. >sped and speeded.

SPEED'Y, adj. j Sax. rpiˆian ', Belg.

spoeden. To make haste ; move with celerity ; succeed : to despatch in haste ; hasten ; assist : as a noun substantive, quickness ; celerity ; hurry; success: speedy is, quick; nimble; swiff. the adverb corresponding.

O Lord, I pray thee send me good speed.

Genesis xxiv. 12.

If any bring not this doctrine, receive him not into your house, neither bid him God speed. Peter.

So well they iped, that they be come at length Unto the place whereas the Paynim lay

Devoid of outward sense and native strength, Covered with charmed - cloud from view of day.

Faerie Queene.

The tyrant's self, a thing unused, began To feel his heart relent with meer compassion ,

But, not disposed to ruth or mercy then, He sped him thence home to his habitation.

Fairfax.

Macicaus shewed them what an offence it was rashly to depart out of the city, which might be unto them dangerous, although they should speed never so well. Knotles.

Barbarossa, sped of that he desired, staid not long at Constantinople, Kut shaped his course towards Italy. Id.

Do you think me a swallow, an arrow, or a bur-let? Have I, in my poor and cold motion, the expedition of thought ? 1 speeded hither with the very ex-tremest inch of possibility. Shakspeare.

Now if this suit lay in Bianca's power, How quickly should you speed. Id.

Make me not sighted like the basilisk : I've looked on thousands, who have sped the better By my regard, but killed none-so.

Id. Winter's Tale.

His horse full of windgalls, sped with the spavins, and rayed with the yellows. Shakspeare.

He that rides at high speed, and with a pistol kills a sparrow flying. Id. Henry IV.

The prince, your son, with meer conceit and fear Of the queen's speed, is gone. Shuhspea're-,

Post speedily to your husband, Shew him this letter. Id. King Lear.

How near's the other army ? — Near, and on speedy foot : the main descry Stands on the hourly thought. Id.

He was chosen, though he stood low upon the roll, by a very unusual concurrence of providential events, happened to be sped. Felt.

When they strain to their utmost speed, there is still the wonted distance between them and their aims : all their eager pursuits bring them no ac-quests. Decay of Piety.

If prayers

Could alter high decrees, I to that place Would speed before thee, and be louder heard.

Milton.

Satan, toward the coast of earth beneath, Down from the' ecliptick sped with hoped success, Throws his steep flight in many an airy wheel. Id.

Earth receives

As tribute such a sumless journey brought Of incorporeal speed, her warmth and light ; Speed ! to describe whose swiftness number fails.

Id.

Back with speediest sail Zophiel, of cherubim the swiftest wing, Came flying. Id. Paradise Lost.

We observe the horse's patient service at the plough, his speed unon the highway, his docible-ness, and desire of glory. More.

Ships heretofore in seas like fishes sped, The mightiest still upon the smallest fed. Waller.

With all his harness soon the god was sped; His flying hat, his wings upon his heels. Dry den.

With a speeding thrust his heart he found ; The lukewarm blood came rushing thro' the wound.

Id.

Lucina Reached her midwife hands to speed the throes. Id.

Send speedily to Bertran ; charge him strictly Not to proceed. Id. Spanish Fryar.

Let it be enough what thou hast done.

SPE

When spotted deaths ran armed through every

street, With poisoned darts, which not the good could

shun, The speedy could outfly, or valiant meet. Dryden.

These were violators of the first temple ; and those that profaned and abused the second, sped no better. South.

Judicial acts are all those writings and matters which relate to judicial proceedings, and are sped in open court at the instance of one or both of the parties. Ayliffe's Parergon.

A dire dilemma ! either way I'm sped ; If foes they write, if friends they read, me dead.

Pope.

Speed the soft intercourse from soul to soul, And waft a sigh from Indus to the pole. Id.

See where Idwall speeds ! a trusty soldier.

A. Philips.

The wind blew as 'twad blawn its last ; The rattling showers rose on the blast ; The speedy gleams the darkness swallowed ; Loud, deep, and lang, the thunder bellowed.

Burns.

SPEED (John), an eminent English historian, born at Farington, in Cheshire, in 1542. He was by profession a tailor, and freeman of the company of merchant-tailors in London. In 1606 he published his Theatre of Great Britain, which was afterwards reprinted in folio under the title of the Theatre of the Empire of Great Britaine. His Genealogies of Scripture were first bound up with the Bible in 1611, when the first edition of the present translation was printed. In 1614 appeared his History of Great Britaine, which has been translated into Latin : and in 1616 he published his Cloud of Witnesses, in 8vo. He lived in marriage fifty-seven years with his wife, by whom he had twelve sons and six daughters; and died in 1629. He was interred in the church of St. Giles's, Cripplegate, Lon-don, where a monument was erected to his memory.

SPEED'WELL, n. s. Lat. veronica. Fluel-lin. A plant.

In a scarcity in Silesia a rumour was spread of its raining millet seed ; but it was found to be only the seeds of the ivy-leaved speedwell or small henbit. Derham's Phy sice-Theology.

SPEEDWELL, in botany. See VERONICA.

SPEEDWELL, FEMALE, a species of antirrhinum.

SPEIGHT'S TOWN, a sea-port town of Barbadoes, on the northwest coast, formerly much frequented by the Bristol traders, and thence called Little Bristol. It contains a church, and four regular spacious streets, leading down to the shore. It has also two forts.

SPEISS, in metallurgy, an artificial metal compounded of cobalt, bismuth, and nickel. Sulphur and arsenic are sometimes added.

SPELL, v. a., v. n. & n. s. Sax. rPeU spellian, a word ; Mses. Goth. spMan, also means to di-vide, split : hence to spell is to divide and write a word with proper letters ; to charm ; form a word rightly ; read : a charm consisting of some words of occult power.

Start not ; her actions shall be holy : You hear my spell is lawful : do not shun her, Until you see her die again ; for then You kill her double. « Skakspeare. Winter's Tale.

I never yet saw man,

How wise, how noble, young, how rarely featured, But she would spell him backward ; if fair faced, She'd swear the gentleman should be her sister.

Shakspeare. I have you fast :

Unchain your spirits now with spelling charms, And try if they can gain your liberty.

Id. Henry VI.

Their toil is so extreme as they cannot endure it above four hours in a day, but are succeeded by spells : the residue of the time they wear out at coytes and kayles. Careie.

Thou durst not thus disparage glorious arms, Had not spells

And black enchantments, some magician's art, Armed thee or charmed thee strong.

Milton's Agonistei. Begin, begin ; the mystic spell prepare. Milton.

If I read aught in heaven,

Or heaven write aught of fate, by what the stars, Voluminous or single characters, In their conjunction met, give me to spell, Sorrows and labours, opposition, hate, Attend thee. Id. Paradise Lost.

When gowns, not arms, repelled The fierce Epirote, and the African bold, Whether to settle peace, or to unfold The drift of hollow states, hard to be spelled.

Milton.

Some have delivered the polity of spirts, that they stand in awe of charms, spells, and conjurations, letters, characters, notes, and dashes.

Browne's Vulgar Errourn. Yourself you so excel, When you vouchsafe to breathe my thought,

That, like a spirit, with this spell Of my own teaching I am caught. Waller.

Mild Lucina Then reached her midwife hands to speed the

throes, And spoke the powerful spells that babes to birth

disclose. Dryden.

In the criticism of spelling, the word satire ought to be with i, and not with y ; and if this be so, then it is false spelled throughout.

Id. Juvenal, Dedication. This, gathered in the planetary hour, With noxious weeds, and spelled with words c*

power, Dire stepdames in the magic bowl infuse. Dryden.

By pasting on the vowels and consonants on the sides of four dice, he has made this a play for his children, whereby his eldest son in coats has played himself into spelling. Locke.

The Latin being written of the same character with the mother tongue, by the assistance of a spelling book it is legible. Spectator.

As to his understandingˆ they bring him in void of all notion ; a rude unwritten blank, sent into the world only to read and spell out a God in the works of creation. South.

Another cause which hath maimed our language is a foolish opinion that we ought to spell exactly as we speak. Swift.

SPELLING, in grammar, that part of orthography vrhich teaches the true manner of resolving words into their syllables. All words are either simple or compound, as use, disuse ; done, undone; and the rules for dividing each must be such as are derived from the analogy of language in general, or from the established custom of speaking. See ORTHOGRAPHY and PRON u» UA-

SPELMAN (Sir Henry), an eminent English antiquarian, descended from an ancient family, and born at Cengham, near Lynn, in Norfolk, about 1561 . He was knighted by king James I. who esteemed him on account of his service in discovering the oppressions of exacted fees in the courts, civil and ecclesiastical, and he employed him three times in Ireland on public affairs. When he was about fifty years of age, he went to reside in London ; where, following the bent of his genius, he collected all books and MSS. on antiquities, foreign and domestic. In 1613 he published his book De non Temerandis Ecclesiis ; i. e. against the profanation of churches. In 1626 he published the first part of his well known Glossary, which he never carried beyond the letter L ; because, as some say, he had said things under Magna Charta,and Maximum con-siliura, that would have given offence. Upon his death all his papers came into the hands of his son Sir John Spelman, a gentleman who had abilities to have completed his father’s design, if death had not prevented him. The second part was afterwards published by Sir William Dugdale, but unfinished. The next work was an edition of the English Councils, of which he published the first

volume about two years be-fore his death, leaving the second to be published by Sir William Dugdale. Sir Henry wrote several other works on ancient laws and customs, and died in 1641. His posthumous works were published in folio, 1698, under the' care of Mr. Gibson, afterwards bishop of London.

SPELMAN (Sir John), eldest son of Sir Henry, was also a very learned man, and was knighted and appointed master of Sutton's Hospital, by Charles I., and during the civil war was a mem-ber of his privy council. He published, 1. The Life of king Alfred the Great; which was reprinted at Oxford, in 1709, 8vo. 2. The Saxon Psalter; in 1614, 4to. from an old MS. 3. A view of a pretended book, entitled Observations of his Majesty's late answers and Epistles ; Ox-ford, 1 642, 4to 4. The Case of our Affairs in Law, Religion, 8cc., briefly examined, 1643, 4to. He died 25th of July, 1643.

SPELMAN (Clement), youngest son of Sir John, was also very learned, became a counsellor at law, and was appointed Puisne Baron of Exchequer, upon the restoration. He published some tracts on Government ; and a large preface to his father's work De non Temerandis Ecclesiis. He died at London, in June 1679.

SPELT, v. «. Sax. j-pellian. To split; break. A bad or rather an obsolete word. See above.

Feed geese with oats, spelted beans, barley meal, or ground malt mixed with beer.

Mortimer's Husbandry.

SPELTER, n. s. Teut. speltre. A kind of semimetal.

Metals in fusion do not flame, for want of a copious fume ; except spelter, which fumes copiously, and thereby flames. Newton.

SPELTER, in metallurgy, the same with zinc.

SPENCE (Joseph), was fellow of New College, Oxford, where he took the degree of A. M. in 1727. About that time he became first known as an author, by an Essay on Pope's Odyssey, in

which some particular beauties and blemishes of that work are considered ; a work of great merit, and which, for sound criticism and candid disquisition, is almost without parallel. He was elected

professor of poetry by the university in 1728, and held that office ten years. His History of Stephen Duck was first published in 1731; but it was afterwards much altered, and prefixed to an edition of Duck's poems. About this time he travelled into Italy as tutor to the earl of Lincoln, afterwards duke of Newcastle. In 1736 he republished Gorboduc, at Mr. Pope's desire, with a preface giving an account of the author, the earl of Dorset. In 1742 he was presented by the Society of New College to the rectory of Great Harwood, in Buckinghamshire. He never resided in his living; but paid it an annual visit, distributing large sums of money among tne poor, and providing for many of their children. The same year he was made professor of modern history at Oxford. In 1747 he published Polymetis; or an enquiry concerning the agreement between the works of the Roman poets and the remains of ancient artists, being an attempt to illustrate them mutually from each other. This work was treated by Gray with a contempt which it did not deserve. He objects that the author did not illustrate his subject from Greek writers; that is, he failed to execute what he never undertook. He was installed prebendary of the seventh stall at Durham, the 24th May, 1754; when he published, An Account of the Life, Character, and Poems, of Mr. Blacklock, student of philosophy at Edinburgh ; which was afterwards prefixed to his poems. The prose pieces which he printed in the museum he collected and published, with some others, in a pamphlet .called Moralities, by Sir Harry Beaumont. Under the same name he published Crito, or a Dialogue on Beauty, and A particular Account of the Emperor of China's Gardens near Pekin, in a letter from F. Attiret, a French missionary now employed by that emperor to paint the apartments in those gardens, to his friend at Paris. Both these treatises are printed in Dodsley's fugitive pieces, as is also A Letter from a Swiss Officer to his friend at Rome ; which Mr. Spence first published in the Museum. In 1738 he published A Parallel, in the Manner of Plutarch, between a most celebrated man of Florence and one scarcely ever heard of in England. This was also inserted in the fugitive pieces. The same year-he made a journey into Scotland, which he described in an affectionate letter to Mr. Shenstone, published in Hall's Collection of Letters, 1778. In 1764 he was very well described by Mr. James Ridley, in his admirable Tales of the Genii, under the name o{ Phesoi Ecneps (his name spelt backwards), dervise of the groves. A letter from Mr. Spence to that ingenious moralist, under the same signature, is preserved in the third volume of Letters of Eminent Persons. In 1768 he published Remarks and Dissertations on Virgil, with SOI.'M other classical observations by the late AJ'I; Holdsworth. On the 20th of August the san : year he was unfortunately drowned in a cana' in his garden at Byfleet in Surry. He was ifoui.d flat upon his face at the edge of the canal, where

the water was so shallow as not even to cover his head. The accident, it was supposed, for he was quite alone, was owing to a fit. The duke of Newcastle possesses some MS. volumes of anecdotes collected hy Mr. Spence, from which Dr. Johnson was permitted to insert many extracts in his Lives of the Poets. In 1819 appeared Observations, Anecdotes and Characters of Books and Men, collected from the conversation of Mr. Pope, and of other eminent persons of his time, from a MS. of Mr. Spence, with his life, &c., by S. W. Singer, 8vo.

SPENCE (William), M. D., of Fairniehirst, in Fifeshire, a late eminent Scottish physician and surgeon ; who, after the usual course of study, and having been some years abroad, settled in Dumfermline, where he had great practice. But afterwards, taking a fancy to gardening, he spent great part of the money he had gained by his practice upon improvements, which turned out more ornamental than profitable. He is memorable as a physician, for having been the first to introduce the use of the Peruvian bark with success, in malignant fevers and putrid diseases. He published some medical tracts, and was a man of a benevolent disposition. He had been married, and left three daughters. He died at Edinburgh, January 3d, 1802, aged seventy-eight.

SPENCE, a river of Ireland, in Down.

SPENCER (Dr. John), an eminent divine, horn in Kent in 1630, and educated at Cambridge. He was chosen fellow of his college, and took his degree of D.D. in 1663. In 1667 he was chosen master of C. C. College, and preferred to the deanery of Ely in 1677. He died on the 20th of May 1695. His works are, 1. The Righteous Ruler ; a sermon on Proverbs xxix. 2, preached June 28th 1660. 2. A Discourse concerning Prodigies, wherein the vanity of presages by them is reprehended, and their true and proper ends asserted and vindicated. To this excellent work was afterwards added, A Discourse concerning

vulgar prophecies, wherein the vanity of receiving them as the certain indications of any future event is exposed ; and some marks of distinction between true and pretended prophets are laid down. 3. A Latin Dissertation concerning Urim and Thummim. 4. His famous treatise De Legibus Hebraeorum Ritualibus, Earum Rationibus. The intention of this book, as he informs us himself, was to vindicate the deity from the imputation of acting from arbitrary and fantastical motives. It' has been highly and justly esteemed both for the elegance of style and the uncommon erudition and sound sense which it displays.

SPENCER (William), a learned English writer, who was fellow of Trinity College, Cambridge. In 1658 he published, at the University's press, Origen's Philocalia, and his eight books against Cels-us ; with a corrected Latin translation and notes of his own, in 4to.

SPEND, v. a. & v. n. } Sax. j-penban ; Ital.

SPEND'ER, n.s. ˆspendere. To consume;

SPEND'THRIFT.) exhaust ; waste; effuse; make expense; prove by use: the noun substantive corresponding: a spendthrift is a lavish spender ; a prodigal.

They spend their days in wealth, and in a moment go down to the grave. Job xxi. 13.

There is oil in the dwelling of the wise, but a foolish man spendeth it up. Prm>. xxi. 20.

\heretbredoye spend money for that which is not bread ? Isaiah Iv. 2.

1 will very gladly spend and be spent for you.

2 Cor xii. 15.

He spends his life with his wife, and remembereth neither father nor mother. 1 Esdras, iv. 21.

In those pastoral pastimes a great many days were spent, to follow their flying predecessors.

Sidney.

Nothing but only the hope of spoil did relieve them, having scarce

clothes to cover their nakedness, and their bodies spent with long labour and thirst

Knulles's History of the Turks. Our cannons' malice vainly shall be sjient Against the invulnerable clouds. Shaftspeare.

When we can intreat an hour to serve, Would spend it in some words upon that business. If you would grant the same. Id. Macbeth.

The sound spendeth, and is dissipated in the open air ; bui. in such concaves it is conserved and contracted. Bacon.

On mouQtains, it may be, many dews fall, that spend before they come to the valleys. Id.

There have been cups and an image of Jupiter made of wild vines ; for the vines that they use for wine are so often cut, that their sap ipendeth into the grapes. Id.

Say, for you saw us, ye immortal lights ! How oft unwearied have we spent the nights, Till the Ledaean stars, so famed for love, Wondered at us from above. Cowley.

Let not your recreations be lavish spenders of your time; but healthful, short, and apt to refresh you.

Taylor.

We must exasperate The almighty Victor to spend all his rage. Milton.

Eleutherius, perceiving that he was unwilling to spend any more time upon the debate, thought not fit to make any mention to him of the proposed opposition. Buyle. Butter spent as if it came from the richer soil.

Temple. They bend their bows, they whirl their slings

around ; Heaps of spent arrows fall, and strew the ground.

Dry den.

Or come your shipping in your ports to lay, Spent and disabled in so long a way? Id. jEneid. Henceforth your tongue must spend at lesser rate, Than in its flames to wrap a nation's fate. Dryden.

Some fawning usurer does feed With present sums the unwary spendthrift's need.

Id.

Bitter cold weather starved both the bird and the spendthrift. L'Estrange.

Money is brought into England by nothing but spending here less of foreign commodities than what we carry to market can pay for. Locke.

Most men, like spendthrift heirs, judge a little in hand better than a great deal to come. Id.

The waves ascended and descended, till, their violence being spent by degrees, they settled at last.

Bnrnet's Theory of the Earth. He spends as a person who knows that he must come to a reckoning. South.

Thou oft hast seen me Wrestling with vice and faction ; now thou see'st

me Spent, overpowered, despairing of success.

Addit,' ti'j Cato.

The whole of our reflections terminate in this, what course we are to take to pass our time ; some to get, and others to spend, their estates. Wake.

When he was of riper years, for his farther accomplishments, he spent a considerable part of his time in travelling. Pope.

The son, bred in sloth, becomes a spendthrift, a profligate, and goes out of the world a beggar.

Swift.

A woman of fortune, being used to the handling of money, spends it judiciously : but a woman who gets the command o! money for the first time upon her marriage, has such a gust in spending it, that she throws it away with great profusion. Johnson.

SPENDIUS, a Campanian deserter, who rebelled against the Romans, raised tumults, and joined the Carthaginians ; and afterwards, deserting from the Carthaginians, carried on war for some time against llamilcar, in that desperate warfare, called from its horrors the inexpiable war. He was at last crucified by llamilcar, with nine of the other ringleaders. See CARTHAGE.

SPENER (Philip James), a celebrated Lutheran divine, born in Alsace, about 1635. Wishing to revive vital religion, in opposition to formality on the one hand and infidelity on the other, he became the founder of a new sect called Pietists. See PIETISTS. But though his intentions seem to have been upright, and his sentiments pure, he and his followers met with much opposition, and were both calumniated and persecuted. He published several tracts on practical theology, and died at Berlin in 1705.

SPENSER (Edmund), the poet, was born in London in 1553, and descended from an ancient family of the Spensers in Northamptonshire. He was admitted a sizar of Pembroke Hall in Cambridge, and matriculated in 1569. At this time began his intimacy with Mr. Gabriel Har-vey, a man of genius and a poet. In 1576, having completed his degrees in arts, he left the university, as it is said, for want of subsistence, and retired to the north of England. Here he had the misfortune to become enamoured of his Rosalind, who, after flattering his passion for a time, at length preferred his happier rival. Spenser continued in the country till 1578, when at the persuasion of his friend Mr. Harvey he removed to London, where that gentleman introduced him to Mr. Sidney, afterwards Sir Philip. Concerning his first introduction to Sir Philip, there is indeed a different story, which was first told by the writer of his life, prefixed to his works in 1679, and transcribed by Hughes, Gibber, and several others ; which, nevertheless, is doubted. It is, that Spenser, being unknown to this Mecanas of the age, went to Leicester House, and sent in the ninth canto of the first book of the Fairy Queen ; that, on reading part of it, Sir Philip ordered his steward to give the bearer £50 ; on reading a little farther £50 more ; then £200, bidding him to make haste and pay the money, lest he should give the poet his whole estate. The story tells prettily enough; but the Fairy Queen was begun long after

his acquaintance with Sir Philip. By this universal patron of genius, however, he was presented to queen Elizabeth, who honored him with the place of poet laureat. About this time be finished his

Shepherd's Calendar, which was first printed in 1579; and in 1580, being recommended by his patron to the earl of Leicester, he went to Ireland as secretary to the lord Grey of Wilton, then appointed lord-lieutenant of that kingdom. Lord Grey was recalled in 1582, and with him Spenser returned to London, where he continued till after the death of Sir Philip Sidney in 1586; a loss which he bewaileˆT to the end of his life. In 1587, having obtained a royal grant of 3000 acres of forfeited lands in the county of Cork in Ireland, he set out fgr that kingdom, took possession of his estate, and fixed his residence in the castle of Rilcolman, which had belonged to the earl of Desmond. In this retirement h*> resumed his great work of the Fairy Queen; and continued in Ireland till, being visited by his old friend Sir Walter Raleigh in 1589, he came over with him to England, but returned to Ireland in 1590; where he fell in love with a country girl, and married her. Soon after his marriage, he paid another visit to his native country, where we also find him in 1596. In 1597 he returned once more to Kilcolman ; but on the rebellion of lord Tyrone, who ravaged the whole county of Cork, he was obliged to fly for safety with his family to England, where, in 1559, he died in extreme poverty, according to Camden ; but Mr. Malone has discovered from the patent roll, 33 Eliz. p. 3, that in February 1590-1, Spenser obtained from Elizabeth an annuity of £50 during life ; which was then equal to the value of £200 at present. He was buried in Westminster Abbey, according to his request, near Chaucer. A monument was erected to his memory by Ann countess of Dorset. We know but little of his character as a man ; as a poet, considering the age in which he lived, he deserves our utmost veneration. He wrote various pieces besides those abovementioned. His whole works, with his life by Hughes, were published in six volumes, 12mo., in 1715 and

1750.

SPENSER, or SPENCER, in dress, a kind of half modern coat, that covers the body and arms, but reaches no farther down than the middle: so named from earl Spenser, who first introduced the fashion, it is said, in consequence of a wager, that he should start the most ridiculous piece of dress, that had yet been invented, and that in three

months it should be generally followed by people of rank. He did so and gained his bet.

SPENSER, MARINE, a recent invention for preserving lives at sea, in cases of shipwreck, so named from the above piece of dress. It consists of 800 bottle corks, strung together upon a strong wire, and covered with a piece of canvas six inches broad, and oiled to exclude the water. It is made to fit the body, round the back and breast ; and, when used, is brought up over the feet and legs, up to the arm pits, and fastened over the shoulders with straps or baudages. A person thus equipped cannot possibly sink; and by the motion of his arms and legs may easily make his way to the nearest shore.

SPER'ABLE, adj. Lat. sperabilis. Such as may be hoped. Not in use.

We may cast it away, if it be found but a bladder,

and discharge it of so much as is vain and not spe- "able. Bacon.

SPERGULA, spurrey, in botany, a genus ot t>lants belonging to the class of decandria, and the order of pentagynia; natural order twenty-second, caryophylleae : CAL. pentaphyllous ; the petals five, and undivided : CAPS, oval, unilo-cuiar, and containing five valves. There are five species, all of which are British; *viz.* 1. S. arvensis, corn-spurrey, has linear furrowed leaves, from eight to twenty in a whirl. The flowers are small, white, and terminal. It is frequent in corn fields. In Holland it is cultivated as food for cattle, and has the advantage of growing on the very poorest soils ; but does not afford a great deal of food. Poultry are fond of the seeds ; and the inhabitants of Finland and Nor-way make bread of them when their crops of corn fail. Horses, sheep, goats, and swine, eat it. Cows refuse it.

2. S. laricina, larch-leaved spurrey. Several stalks arise from one root, from an inch to an inch and a half high ; the leaves are linear, subulate, and acuminated, somewhat hairy on the edges, and their points turned to one side of the stalk. The petals are white, and about the length of the calyx. Lightfoot found this species on a hill in the Isle of Bute. He is doubtful whether the sagina procumbens, var. /3 of Linnaeus, be not the same plant with this. It flowers in July.

3. S. nodosa, knotted spnrrey. Several stalks arise from one root, sometimes reclining and sometimes erect, and from three to five inches high. The leaves are smooth, of a fine green, narrow, pointed, and opposite. The flowers are white, terminal, and yellow antherae.

4. S. pentandra, small spurrey. The leaves are very narrow, and grow in whirls at the joints. The seeds are black-, with a white circle. It flowers in July.

5. S. saginoides, pearl wort spurrey, has smooth, linear, opposite leaves ; the peduncles are solitary and very long. Aiton says it is a native of England, and flowers from June to August.

SPERLING (Otto), a German physician, born at Hamburg, in 1602. He studied physic in Italy, and afterwards settled at Bergen in Norway. In 1638 he was appointed physician to Christian IV., king of Denmark ; but, being afterwards concerned in count Ulfeld's conspiracy, he was put in prison, where he died i.n 1681, aged seyenty-nine. He published A Catalogue of the Plants in Denmark, and some works on Medals and Antiquities.

SPER"M, n. s. "\ Fr. sperme ; Lat. sper—

SPERMAT'IC, adj. tma. Seed; that by

SPERMAT'ICAL, £ which a species is conti—

SPEH'MATIZE, v. n. -' nued : spermatic or spermatical js seminal, consisting of seed : to sper—

matise, to yield seed.

Some creatures bring forth many young ones at a burthen, and some but one : this may be caused by the quantity of sperm required, or by the partitions of the womb which may sever the sperm. Bacon.

The moisture of the body, which did before irrigate the parts, is drawn down to the spermatical vessels. Id. Aristotle affirming that women do

and confer a receptacle, rather than essential pnnci pies of generation, deductively includes both sexes m mankind. Browne.

The primord;als of the world are not mechanical, but spermatical or vital. More's Dialogues.

Metals and sundry meteors rude shapes have no need of any particular principle of life, or spermatical fo -m, distinct from the rest or motion of the particles of the matter. More.

There is required to the preparation of the sperm of animals a great apparatus of vessels, many secretions, concoctions, reflections, and circulations.

Ray.

Two different sexes must concur to their generation ; there is both a great apparatus of spermatick vessels, wherein the more spirituous part of the blood is by many digestions and circulations exalted into sperm. Id. on Creation.

SPERMA'CETI, n. s. Lat. Often pronounced corruptedly parmasitty. Denned in the extract.

A pa-ticular sort of whale affords the oil whence this is made ; and that is very improperly called sperma, because it is only the oil which comes from the head of which it can be made. It is changed from what it is naturally, the oil itself being very brown and rank. The peculiar property of it is, to shoot into flakes, not much unlike the crystallization of salts ; but in this state 'tis yellow, and has a certain rankness, from which it is freed by squeezing it between warm metalline plates : at length it becomes perfectly pure, inodorous, flaky, smooth, white, and in some measure transparent. Quincy.

SPERMACETI, a whitish, unctuous, flaky substance, prepared from oil, but chiefly from the brains of a species of whale called physete ma-crocephalus. The method of preparing spermaceti is kept a secret ; but the process is said to be this : — The brains, being taken out of the ani-mal, are then, as some say, melted over a gentle fire, poured into moulds, and when cold melted again ; and this process is continued till they are purified. Others say that, after being pressed and drained, they are more thoroughly purified by steeping them in a ley of alkaline salt and quicklime. The brains are then washed, and.cut into thin flakes or slices with wooden-knives. One fish is said to afford

some tons of brains. Good spermaceti is glossy and semitransparent, in fine white flakes ; soft and unctuous to the touch, yet dry and friable.; in taste somewhat like butter, and of a faint smell like that of tallow. Some adulterate it with wax ; but the deceit is discovered, either by the smell of the wax or by the dulness of* the color. Some also sell a preparation of oil taken from (he tail of the whale instead of that from the brain ; but this kind turns yellow as soon as exposed to the air. Indeed it is apt in general to grow yellowish, and to contract a rancid fishy smell if not carefully secured from the air. The more perfectly it has been purified at first the less susceptible it is of these alterations ; and, after it has been changed, it may be rendered, white and sweet again by steeping it afresh in ley of alkaline salt, and congeals again as it cools. Spermaceti is of use in medicine. Quincy says it is a noble remedy in the asthma, &c., though chiefly used in bruises, inward hurts, and after delivery. For internal use it may be dissolved in aqueous liquors into the form of an emulsion, by trituration with at-

monds, the yolk or white of an egg, and more elegantly by mucilages ; or made into a lohoch by mixing two drachms of it with a suitable quantity of yolk of egg, then adding half an ounce of fresh drawn oil of almonds, and an ounce of balsamic syrup. Spermaceti is not capable of being dissolved by caustic alkalis, and of forming soaps like other oily matters ; but it is altogether soluble in oils, and unites by liquefaction with wax and resins ; and in these forms is applied externally. But it is certain its greatest property, and that which makes it so much in vogue in many places, is its softening the skin. Whence it comes to be used by the ladies in pastes, washes, &c. A method has been invented by Mr. Smith Gibbes of Magdalen College, Ox-ford, to convert animal muscle into a substance much resembling spermaceti. The process is simple : nothing more is necessary than to take a dead carcase and expose it to a stream of running water ; it will in a short time be changed to a mass of fatty matter. To remove the offensive smell a quantity of nitrous acid may then be poured upon it, which, uniting with the fetid matter, the fat is separated in a pure state. This

acid indeed turns it yellow, but it may be rendered white and pure by the action of the oxygenated muriatic acid. Mr. Gibbes brought about the same change in a much shorter time. He took three lean pieces of mutton, and poured on them the three mineral acids, and he perceived that at the end of three days each was much altered ; that in the nitrous acid was much softened, and on separating the acid from it he found it to be exactly the same with that which he had before got from the water ; that in the muriatic acid was not in that time so much altered ; the vitriolic acid had turned the other black.

SPERMACETI CANDLES are of modern manufacture : they are made smooth, with a fine gloss, free from rings and scars, superior to the finest wax candles in color and lustre, and, when genuine, leave no spot or stain on the finest silk, cloth, or linen.

SPERMACOCE, button wood, in botany, a genus of the monogynia order, and tetrandria class of plants ; natural order forty-seventh, stellatae : COR. monopetalous and funnel-shaped, and there are two bidentate seeds. The species are eight, *viz.* 1. S. articularis; 2. hirta ; 3. his-pida ; 4. procumbens ; 5. spinosa ; 6. stricta ; 7. tenuior ; and 8, verticillata.

SPERONE (Speron), an ingenious Italian writer, born of a noble family at Padua in 1500. He made so rapid a progress in his studies that, at twenty, he was chosen first professor of logic in the university of Padua, and in 1528 was raised to that of philosophy. He was knighted by pope Pius IV. He was one of the greatest orators of his age ; was well skilled in law, theology, history, &c., and was much employed in public affairs at France, Spain, Rome, and Venice. His works are all in Italian, and consist of orations, dissertations, dialogues, letters, and a tragedy. He died at Padua, in 1588, aged eighty-eight.

SPERSE, v. a. Lat. spersus. To disperse ; scatter. Disused.

The wrathful wind, Which blows cold storms, burst out of Scythian mew,

That spersi those clouds, and iu so short as thought This dreadful shape was vanished to nought.

Spenser.

He making speedy way through tpersed air, And through the world of waters wide and deep, To Morpheus' house doth hastily repair.

. i Faerie Queene.

SPET, v. a. Goth, spatan, to SPEW, which see. Spet, in Scotland, is a superabundance of water : to bring or pour abundantly.

Mysterious dame,

That ne'er art called but when the dragon womb Of Stygian darkness spets her thickest gloom, And makes one blot of all the air, Stop thy cloudy ebon chair. Milton.

SPEUSIPPUS, an Athenian philosopher, the son of Eurymedon and Potone, the nephew and successor of Plato. Contrary to the practice of Plato Speusippus required from his pupils a stated gratuity. He placed statues of the graces in the school which Plato had built. On account of his infirm state of health he was commonly carried to and from the academy in a vehicle. On his way thither he one day met Diogenes, and saluted him ; the surly philosopher refused to return the salute, and told him that such a feeble wretch ought to be ashamed to live ; to which Speusippus replied that he lived not in his limbs but in his mind. At length, being wholly incapacitated by a paralytic stroke for the duties of the civ Jr, he resigned it to Xenocrates. He is said to have been of a violent temper, fond of pleasure, and exceedingly avaricious. Speusippus wrote many philosophical works, which are now lost, but which Aristotle thought sufficiently valuable to purchase at the expense of three talents. From the' few fragments which remain of his philosophy, it appears that he adhered very strictly to the doctrine of his master. SPEW, v. a. & v.n. > Sax. j-pepan ; Belgic SPEW'Y, adj. $ speuwen ; Uoth. spatan.

To vomit ; eject from the stomach ; ease the stomach by vomiting : spewy is a provincialism for wet, foggy.

Keep my statutes, and commit not any of these abominations, that the land spew not you out.

Lev. xviii. 28.

A swordfish small him from the rest did sunder, That in his throat him pricking softly under,

His wide abyss, him forced him forth to spew, That all the sea did roar like heaven's thunder, And all the waves were stained with filthy hue.

Spenser.

Contentious suits ought to be spewed out, as the surfeit of courts. Bacon's Essays.

He could have hauled in The drunkards, and the noises of the inn : But better 'twas that they should sleep or spew, Than in the scene to offend or him or you.

Ben Jonson.

•When earth with slime and mud is covered o'er Or hollow places spew their watery store.

Dryden'i Georgicks.

When yellow sands are sifted from below, The glittering billows give a golden show ; And, when the fouler bottom spews the black. The Stygian dye *)<e tainted waters take. Dryden. The lower vallies in wet winters are so spewy thai they know not how to feed them.

Mortimer's Husbandry.

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SPH

SPEY, a large and rapid river of Scotland, in Inverness-shire, which rises above the lake so named, in Badenoch, and after a serpentine course of seventy Scots, or 120 English miles, passes by Rothes Castle, and falls into the Ger-man Sea at Garmouth, near Elgin. Upon this-river floats of fir and birch wood are carried down to the Frith ; the float is guided by a man sitting on a courach. This vessel is of an oval shape, about four feet long and three broad; a small* keel from head to stern; a few ribs cross the keel, and a ring of pliable wood round the lip of it ; the whole covered with the rough hide of an ox or horse. The rower sits on a transverse seat in the middle, and holds in his hand a rope, the end of which is tied to the float, and with his other hand he manages a paddle, keeps the float in deep water, and brings

to shore when he pleases. The Spey, says Mr. Pennant, is a dangerous neighbour to Castle Gordon, overflowing frequently in a dreadful manner, as appears by its ravages far beyond its banks. The bed is wide and full of gravel, and the channel very shifting. In 1746 the duke of Cumberland passed this river at Belly Church, near Castle Gordon, when the channel was so deep as to take an officer, from whom Mr. Pennant had the account, and who was six feet four inches high, up to the breast. The banks are very high and steep; so that, had not the rebels been infatuated in such a manner as to neglect opposition, the passage must have been attended with considerable loss. On this river there is a salmon-fishery, in which about 2000 barrels are caught in the season.'

SPEY, LOCH, a large lake of Inverness-snire, in the district of Badenoch, which is, properly speaking, only a part of the above river, swelled out to the size of a large lake, a few miles below its source. It is therefore absurd to represent the river (as most geographers do) as arising out of this lake, for the river rises several miles above it, swells and fills it, and then runs on its course, as above described.

SPEZIA, GULF OF, the ancient Portus Lunse, a bay of the Mediterranean, in the Genoese territory. Its length, from Porto Venere to the town of Spezia, is about five miles, and its breadth at the mouth nearly the same : it is defended from the agitation of the sea by several small islands, and sheltered, on the land side, by mountains. To the naturalist it presents a very curious phenomenon. In the middle of the bay there rises, from the depth of thirty-eight feet, a spring of fresh water, which, having a strong current, occupies at the surface a space of several yards square.

SPEZIA, or SPECCIA, a town of the Sardinian states, in the Genoese territory, standing on an eminence at the bottom of the gulf of Spezia. Since the advantages of its situation have been appreciated, this town has been rapidly increasing in population, and contains at present upwards of 4000 inhabitants. It is tolerably regular, and well built : the number of villas with plantations of olives and fruit trees, joined to its naturally picturesque situation, render the environs delightful. Eight miles W.N.W ofSarzana, and forty southeast of Genoa.

SPIIA'CELAT E, v. a. & v. n. I FT. sphacele ;

SPHA'CELUS, n. s. \ Gr. aˆdiceXoc.

To affect with or suffer gangrene: gangrene; mortification.

It is the ground of inflammation, gangrene, spha-cet™- Wiseman.

The long retention of matter sphacelates the brain.

Sharp.

The skin, by the great distention, having been rendered very thin, will, if not taken away, sphacelate, and the rest degenerate into a cancerous ulcer.

Id. Surgery.

SPHACELUS, in surgery and medicine, is an absolute and perfect corruption or death of the parts.

SPHAGHIA, a mountainous district of Can-dia, which is covered with snow during a great part of the year. It is inhabited by a tribe called Sphachiotes, said to be descended from the ancient Cretans, and who have been all along independent. They are an active and spirited race, deriving their chief subsistence from their herds and flocks, but engaging occasionally in piratical excursions. Their government is a kind of republic. They have a small town called Sphachia or Sfachia.

SPHACTERLE, SPHAGIJE, or SPHAG.E, in ancient geography, three islands arid a cape of the Mediterranean, on the coast of Messenia, opposite Pylos, now called Sapienza. See SAPI-ENZA. The largest was famous for a victory obtained by the Athenians over the Spartans. They are now all included in the new republic of the Seven islands; in which, by the treaty of Amiens, in 1802, all the three rank but as one. Sec SEVEN ISLANDS.

SPHˆERANTIIUS, in botany, the globe-flower, or globe-daisy, a genus of plants belonging to the class of syngenesia, and to the order of polygamia segregata ; natural order forty-ninth, composite. Each partial calyx contains eight florets ; the florets are tubulated, the female being scarcely distinguishable. The receptacle is scaly, and there is no pappus. The* species are three, vix., 1. S. Africanus, 2. S. Chinensis, and 3. S. Indicus ; which, as their trivial names import, are respectively natives of Africa, China, and the East Indies.

SPHAGNUM, bog-moss, in botany, a genus of plants belonging to the class of cryptogamia and order of musci. The antherse are globose ; the mouth entire and closed by an operculum ; the calyptra is wanting. There are three species, viz., 1 . S. alpinum, green bog-moss.

Its branches are subulate and erect ; the antherae are oval. It grows in mountain bogs in South Britain. 2. S. arboreum, creeping bog-moss, is branched ; the antherae are numerous, sessile, hairy, and grow along the branches chiefly on one side. It is found on the trunks of trees. 3. S. palustre, common bog-moss, grows on our bogs in wide patches, so as often to cover a large portion of their surface. The stalks are from two inches to two feet long, irregularly surrounded with numerous conical pendant branches, and terminated with a rosaceous cluster of erect short ones. The roots and decayed stalks of this moss constitute a principal part of that useful bituminous substance called peat, which is the chief fuel of

the northern regions. See PEAT. The Lapland matrons are well acquainted with this moss. They dry and lay it in their cradle, to supply the place of bed, bolster, and every covering; and, being changed night and morning, it keeps the infant remarkably clean, dry, and warm. It is sufficiently soft of itself, but the tender mother, not satisfied with this, frequently covers the moss with the downy hairs of the rein-deer, and thus makes a most delicate nest for the young babe.

SPHENOIDES Os, the seventh bone of the cranium or skull. See ANATOMY, Index.

Fr. sphere ; Lat.

sphtera. A globe;

orb ; orbicular body ;

orbit ; province : to

f form into, or place in,

Ja sphere : the adjectives and noun substantives followinsr

SPHERE. n.s. &cv.a.~

SPHER'IC,

SPHER'ICAL, adj.

SPHER'ICALNESS, n. s.

SPHERI'CITY,

SPHEROID',

SPHE'ROIDICAL, adj.

SPHER'ULE, n. s.

corresponding : a spheroid is a flattened globe or sphere : the adjective corresponding : spherule, a diminutive of sphere.

What if within the moon's fair shining sphere, What if in every other star unseen, Of other worlds he happily should hear.

Faerie Queene.

To be called into a huge sphere, and not to be seen to move in't. Shakspeare. Antony and Cleopatra.

The glorious planet Sol, In noble eminence enthroned and sphered Amidst the rest, whose med'cinable eye Corrects the ill aspects of planets' evil. Shakspeare.

We make guilty of our disasters the sun, the moon, and stars, as if we were villains by spherical predominance, id.

What descent of waters could there be in a spherical and round body, wherein there is nor high nor low ? Raleigh.

Though sounds spread round, so that there is an orb or spherical area of the sound, yet they go farthest in the forelines from the first local impulsion of the *lr-Bacon.

Of enemies he could not but contract good store, •while moving in so high a sphere, arid with so vigorous a lustre. King Charles.

Such bodies receive their figure and limits from such lets as hinder them from attaining to that sphe-ricalneis they aim at. First the sun, a mighty sphere he trained.

Half unsung, but narrower bound Within the visible diurnal sphere.

Light from her native east To journey through the airy gloom began, Sphered in a radiant cloud ; for yet the sun Was not. Jd. Paradise Lost.

By discernment of the moisture drawn up in vapours, we must know the reason of the spherical figures of the drops. Glanville.

And then mortal ears Had heard the musick of the sphere*. Dryden.

Milton. Id.

Two figures on the sides embossed appear ; ˆl Conon, and what's his name who made the sphere, } And shewed the seasons of the sliding year. Id. Every man, versed in any particular business, fi-.ds fault with these authors, so far as they treat of matters within his sphere. Addison's Freeholder.

A fluid mass necessarily falls into a spherical surface. Keil.

Where the central nodule was globular, the inner surface of the first crust would be spherick ; and, if the crust was in al-1 parts of the same thickness, that whole crust would be spherical. . Woodward.

Water consists of small, smooth, spherical particles : their smoothness' makes 'em slip easily upon one another ; the sphericity keeps 'em from touching-one another in more points than one.

Chei/ne's Philosophical Principles They are not solid particles, by the necessity they are under to change their figures into oblong spheroids, in the capillary vessels. Id.

Mercury is a collection of exceeding small, vastly heavy spherules. Id.

If these corpuscles be spheroidical, or oval, their shortest diameters must not be much greater than those of light. Cheyne.

Ye know the spheres and various tasks assigned By laws eternal to the aetherial kind. Pope.

The hermit's prayer permitted, not approved. Soon in an higher sphere Eulogius moved. Harte.

The wisdom of the ignorant somewhat resembles the instinct of animals ; it is diffused but in a very nar-row sphere, bent within the circle it acts with vigour, uniformity, and success. Goldsmith.

SPHERE is a solid contained under one uni ‘ form round surface, every point of which Is equally distant from a certain point in the mid-dle, called its centre ; and is formed by the revolution of a semicircle about its diameier. See GEOMETRY.

SPHERE, in astronomy, that concave orb or expanse which invests our globe, and in which the heavenly bodies appear to be fixed, and at an equal distance from the eye. The better to determine the places of the heavenly bodies in the sphere, several circles are supposed to be described on the surface thereof, hence called the circles of the sphere : of these some are called great circles, as the equinoctial, ecliptic, meridian, &c., and others small circles,,as the tropics, parallels, &c. See ASTRONOMY, Index, and GEOGRAPHY.

SPHERE, ARMILLARY. See GEOGRAPHY.

SPHERE OF ACTIVITY OF A BODY is that determinate space or extent to which, and no. farther, the effluvia continually emitted from that body reach ; and where they operate according to their nature.

SPHERE, PROJECTION OF THE. See PROJECTION.

SPHERES, in optics, the same with metalline mirrors for telescopes or other purposes. Set OPTICS.

END OF VOL, XX

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THE

LONDON ENCYCLOPEDIA

VOL. XXI.

SPHEROID TO TEWKESBURY.

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THE

UNIVERSAL DICTIONARY

SCIENCE, ART, LITERATURE, AND PRACTICAL MECHANICS,

COMPRISING A

POPULAR VIEW OF THE PRESENT STATE OF KNOWLEDGE.

ILLUSTRATED BY

NUMEROUS ENGRAVINGS, A GENERAL ATLAS,

AND APPROPRIATE DIAGRAMS.

Sic oportet ad librum, presertim miscellanei generis, Icgendum accedere lectorem, tit solrt ad convlvium conviva cirilis. Convivator annititur omnibus >ati»facere ; et tamen si quid apponitur, quod hujus ant illius palato 11011 reipondeat, et hie et illc urbane dissimulant, et alia fercula probant, ne quid contristent convivatorem.

ErajniMj,

A reader should sit down to a book, especially of the miscellaneous kind, as a well-behaved visitor does to a banquet. The master of the feast exerts himself to satisfy his guests ; but if, after all his care and pains, something should appear on the table that does not suit this or that person's taste, they politely pass it over without notice, and commend other dishes, that they may not distress a kind host. Translniinn.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPEDIA METROPOLITAN,

ASSISTED BY EMINENT PROFESSIONAL AND OTHER GENTLEMEN.

IN TWENTY-TWO VOLUMES. VOL XXI.

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THE

LONDON ENCYCLOPAEDIA.

The SPHEROID, in geometry, is generated by the entire revolution of a semi-ellipsis about its axis. When the revolution is made round the largest axis, the spheroid is called prolate ; and when round the shortest, oblate. This last is the figure of the earth, and probably of all the planets.

To obtain the solid dimensions of a spheroid, multiply continually together the fixed axis, the square of the revolving axis, and the number 52359877, or £ of 3’ 14159, and the last product will be the solidity; i. e. \p ttc — the oblate, and fcp i c c ~ the oblong spheroid, where p r= 3-14159, t — the transverse, and c =. the conjugate axis of the generating ellipsis. Or, multiply the area of the generating ellipse by § of the revolving axis, and the product will be the content of the spheroid; *i.e.* § £A~ the oblate, and | c A — the oblong spheroid ; where A is the area of the ellipse. E. g. Required the content of an oblate, and of an oblong spheroid, the axes being 50 and 30. Thus, 50 x 30 x •78539816 = 1178-09724 — the area of the ellipse. And 1178-09724 X jj X 30 — 23561-9448 :- the oblong spheroid; and 1178-09724 X § X 50 =z 39269-908 — the oblate one.

Dr. Hutton has demonstrated the rule above given in the following manner. Put j — B I the fixed semi-axis, r = I M the revolving

M C

for z its value -~, — p b s r x x substituting for y y its value b b X

a a a a — xx

. , by putting for a b s its

semi-axis of the spheroid, a = S I any semi-diameter of the section N B M, 6 — I K its semi-conjugate, y — AE an ordinate to the diameter S I, or a semi-axis of the elliptic section AFC parallel to K L, and z — E F its other semi-axis, also x zr E I, s n the sine of the angle A E S, or of the angle K I S, to the radius 1, and p — 3-14159.

Then, by the property of the ellipse KSL, a a — x x

a a ‘ b b ” a a — x x I bb X — • • = .yy,

a a

and b ‘ r ‘ ‘ 11 ‘ T~ •=. z. But the fluxion of the ‘ ‘ J ‘ l>

psryy x solid KACL \spsy zx~- — ˆ—, by writing

pfrrx

value rf; and hence the fluent pfrrx x

a a — £ xx 3 a a — x x … ,

— , or 1 pfrr X » will be

aaa aaa

the value of the frustum KACL; which, when E I or x becomes SI or a, gives § pfrr for the value of the semi-spheroid KSL; or the whole spheroid — £ p F R R, putting F and R for the whole fixed and revolving axes. Q. E. D.

Cor. 1. — From the foregoing demonstration it appears that the value of the general frustum KAECL is expressed by J pfrrx x 3 a a — xx

aaa

And if for fr be substituted its value abs, the same frustum will also be expressed by $ pbrs x

3 aa — xx

a a

b b x x

Also, if for a a be put its value rr , the

bo — yy

last expression will become $ p r s x x r- — -•

or $psx x (/2br + I^M ; which, by writing

T y z instead of its value y., gives \psx x (2 br

+ y z) for the value of the frustum, *viz.* the sum of the area of the less end, and twice that of the greater, drawn into one-third of the altitude or distance of the ends.

And out of this last expression may be expunged any one of the four quantities b, r, y, z, by means of the proportion b : r ‘. ‘. y : z.

When the ends of the frustum are perpendicular to the fixed axis, then a is — /, and the value of the frustum becomes $ p r r x x 3 ff—xx

ff

for the value of the frustum whose

ends are perpendicular to the fixed axis, its altitude being x.

And, when the ends of the frustum are parallel to the fixed axis, a is rz r, and the expression for

3 r r — x x such a frustum becomes \ pfx X- — .

Cor. 2.— If to or from § pfr r, the value of the semi-spheroid be added or subtracted,

lpfrr ,r x iˆJZˆ; the value of the ge- ‘ ‘ J aaa

neral frustum K A C L, there will result $ pfr rhh

tj

SPH

X 3 g.~ for the value of a general segment,

tiaa

either greater or less than the semi-spheroid, whose height, taken upon the diameter passing through its vertex and centre of its base, is A =: a + x.

When a coincides with f, the above expres—

3 f — A , ˆ .for the va-

sion becomes $ p r r h A x

lue of a segment whose base is perpendicular to the fixed axis. And here if we put R for the radius of the segment's base, and for r r its value

— — — •—-; , the said segment will become 2 f h — ft A

And when a coincides with r, the general expression will become $ pf h h x - f°r

the value of the segment whose base is parallel to the fixed axis. And if we put F, R, for the two semi-axes 'of the elliptic base of this segment, respectively corresponding or parallel to f, r, the semi-axes of the generating ellipse, when parallel to the base of the segment, and for

f F , RR + AA,

• - and r substitute their values fr-and — — -. — r R 2 A

the said frustum will be expressed by g p F A X

3 RR -f A/t . ,.,.,r - e .. ,,

- - - , in which the dimensions of Hselr

only-are concerned.

Cor. 3. — A semi-spheroid is equal to | of a cylinder, or to double a

cone of the same base and height ; or they are in proportion as the numbers 3, 2, 1. For the cylinder iszz 47ifrr *a2 nfrrt tne semi-spheroid* f nfrr, and the cone ~ J nfr r.

Cor. 4. — Wheny = r, the spheroid becomes a sphere, and the expression § f n r r for the semi-spheroid becomes § «r3 for the semi-sphere. And, in like manner, f and r being supposed equal to each other in the values of the frustums and segments of a spheroid, in the preceding corollaries, will give the values of the like parts of a sphere.

Cor. 5. — All spheres and spheroids are to each other as the fixed axes drawn into the squares of the revolving axes.

Cor. 6. — Any spheroids and spheres, of the same revolving axis, as also their like or corresponding parts cut off by planes perpendicular to the said common axis, are to one another as their other or fixed axes. This follows from the foregoing corollaries.

Cor. 7. — But if their fixed axes be equal, and their revolving axes unequal, the spheroids and spheres, with their like parts terminated by planes perpendicular to the common fixed axis, will be to each other as the squares of their revolving axes.

Cor. 8. — An oblate spheroid is, to an oblong spheroid generated from the same ellipse, as the longer axis of the ellipse is to the shorter. For if T be the transverse axis, and C the conjugate ; the oblate spheroid will be — f n T8 C, and tne oblong — f raCa T; and these quantities are in the ratio of T to C.

Cor. 9. — And if about the two axes of an ellipse be generated two spheres and two spheroids, the four solids will be continual proportionals, and the common ratio will be that of the two axes of the ellipse ; that is, as the greater sphere, or the sphere upon the greater axis, is to the oblate spheroid, so is the oblate spheroid to the oblong spheroid, so is the oblong spheroid to the less sphere, and so is the transverse axis to the conjugate. For these four bodies will be as T3, T2 C, T C2, C3, where each term is to ihe consequent one as T to C.

To find the content of a universal spheroid, or a solid conceived to be generated by the revolution of a semi-ellipse about its diameter, whether that diameter be one of the axes of the ellipse or not. 1. Divide the square of the product of the axes of the ellipse by the axis of the solid, or the diameter about which the semi-ellipse is conceived to revolve ; multiply the quotient by -5236, and the product will be the

content required. That is, — — x -5236 —

the content , T and C being the transverse and conjugate axes of the ellipse, and d the axis of the solid.

Or, 2. The continual product of -5236, the diameter about which the revolution is made, the square of its conjugate diameter, and the square of the sine of the angle made by those diameters, the radius being 1, will be the content. That is, d c c s s x ‘5236 ~ the content; c being the conjugate diameter to d, and s the sine of the angle made by the diameters. For the demonstration of this rule see Hutton, ubi infra. Hence, if d *T, the rule becomes £ p T C* for the oblong spheroid : and, if rf* C, it will be }.p C T2 for the oblate spheroid : and if T, C, and d, be all equal, the rule will be *pd? for the sphere. See Mutton’s Mensuration.

Dr. Halley has shown, that in a sphere, Merca-tor’s nautical meridian line is a scale of logarithmic tangents of the half complements of the latitudes. But, as the earth has been found to be a spheroid, this figure will make some alteration in the numbers resulting from Dr. Halley’s theorem. Mr. Maclaurin has therefore given us a rule, by which the meridional parts to any spheroid may be found with the same exactness as in a sphere.

SPHERUS, a Greek philosopher, a disciple of Zeno of Cyprus, who flourished about A. A. C. 243. He came to Sparta in the reign of Agis III. and Cleomenes III., and opened a school for philosophy. — Plut. Diod.

SPHEX, ichneumon wasp, or savage, a genus of insects belonging to the order of hymenoptera. See ENTOMOLOGY. The mouth is armed with entire jaws, but contains no tongue ; the mandibles are horny, crooked, dentated ; the lip horny, the apex membranaceous. The palpi or feelers are four. The antennae have from ten to sixteen joints. The wings of both sexes are extended without folds, and laid horizontally on the back. The sting is sharp, and concealed within the abdomen. There are ninety-seven species. The manner of living is different in the various species, and so is the general form of the body and their haunts ; but though the

method of life be utterly different, yet the same manners appear innate and inherent in all. They agree in being the fiercest of all flies : they will attack insects much larger than themselves, and this whether they be defenceless or armed, as they are provided with a sting. The strength in all this savage kind is great ; their jaws are hard and sharp, and in their sting lies a poison suddenly fatal to the creatures with whom they engage. The savage seizes hardily on the animal he attacks, and gives a stroke of amazing force ; after which he falls down as if himself were killed, but it is to rest from his fatigue, and enjoy his victory. He keeps a steady eye on the creature he has struck till it dies, which happens in a few minutes, and then drags it to the nest to feed the young. The number of other insects they destroy is scarcely to be conceived ; .the mouth of their cave is like that of a giant in the days of yore, strewed with the remains of prey. The eyes, the filament that serves as a brain, and a small part of the contents of the body, are all the savage eats, and he will kill fifty for a meal. Of this numerous genus only two are natives of Britain and Ireland, *viz.* 1. S. cribraria is black, with yellow ringlets on the abdomen ; the antenna are short, and turned backwards; the fore legs are broad, with an appendix like a shield. 2. S. viatica is black; the antennae are short and thick ; the first three segments of the abdomen red brown; the pedicle is short ; the length half an inch.

SPHINCTER, in anatomy, a term applied to a kind of circular muscles, or muscles in form of rings, which serve to close and draw up several orifices of the body, and prevent the excretion of the contents. See ANATOMY.

SPHINX, n. s. Gr. oˆiy?. Defined below.

The sphinx was a famous monster in Egypt, that remained by conjoined Nilus, having the face of a virgin, and the body of a lion.

Peacham on Drawing.

SPHINX, or SPHYNX, in the mythology, a monster which had the head and breasts of a woman, the body of a dog, the tail of a serpent, the wings of a bird, the paws of a lion, and a hu-man voice. It sprang from the union of Orthos with the Chimaera, or of Typhon with Echidna. The sphinx had been sent into the neighbourhood of Thebes by Juno, who wished to punish the family of Cadmus, which she persecuted with immortal hatred ; and it laid this part of Bceotia under continual alarms, by proposing enigmas, and devouring the inhabitants if unable to explain them. In the midst of their consternation, the Thebans were told by the oracle that the sphinx would destroy herself as soon as one

of the enigmas she proposed was explained. In this enigma she wished to know what animal walked on four legs in the morning, two at noon, and three in the evening. Upon this Creon king of Thebes promised his crown and his sister Jocasta, the widow of king Laius, in marriage to him who could deliver his country from the monster by a successful explanation of the enigma. It was at last explained by (Edipus, who observed that man walked on his hands and feet in the morning of life, at the noon of life he walked erect, and in the evening of his days he supported his infir-SPH

miiies upon a stick. See JOCASTA and OEDIPUS. The sphinx, upon this explanation, dashed her head against a rock, and expired. Among the Egyptians the sphinx was the symbol of religion, by reason of the obscurity of its mysteries ; and on the same account the Romans placed a sphinx in the pronaos or porch of their temples. Sphinxes were used by the Egyptians to show the beginning of the water's rising in the Nile; with this view, as it had the head of a woman and body of a lion, it signified that the Nile began to swell in July and August, when the sun passes through the signs of Leo and Virgo. There are several of these still to be seen ; one in particular, near the pyramids, much spoken of by the ancients, being of a prodigious size, and cut out of the rock; the head and neck appear only at present, the rest of the body being hid in the sand. This, according to Thevenot, is twenty-six feet high, and fifteen feet from the ear to the chin; but Pliny assures us, the head was no less that 102 feet in circumference, and sixty-two feet high from the belly, and that the body was 143 feet long, and was thought to be the sepulchre of king Arnasis. See PYRAMIDS. The learned Mr. Bryant (in his Ancient Mythol. vol. iii. p. 532), observes that the sphinx seems to have been originally a vast rock of different strata; which, from a shapeless mass, the Egyptians fashioned into an object of beauty and veneration. The Egyptians used this figure in their buildings; from them the Greeks derived it, and afterwards improved it into an elegant ornament. It is also frequently used in modern architecture. The sphinx of the Egyptians is said in the Asiatic Researches, vol. ii. p. 334, to have been found in India. Colonei Pearce was told by Murari Pandit, a man of learning among the Hindoos, that the sphinx, there called singh, is to appear at the end of the world, and as soon as he is born will prey on an elephant : he is therefore figured seizing an elephant in his claws ; and the elephant is made small, to show that the singh, even a moment after his birth, will be very large in proportion to it. But in opposition to this account, given by Murari Pandit, the late Sir William Jones, the learned and illustrious president of the Asiatic Society, was assured by several Brahmins that the figure taken for a sphinx was a representation of a

lion seizing a young elephant.

SPHINX, in entomology, hawk-moth; a genus of insects belonging to the order of lepidopterse. The antennae are shaped somewhat like a prism, and are more slender at each end than at the middle. The tongue is generally thrust out : the two palpi are bent back, and the wings de-flexed. The name sphinx is given to this genus on account of the singular attitudes of their caterpillars, who apply the hinder part of their body to a branch of a tree, holding the rest of it erect, like the fabulous sphinx. Most of them spin their cod under ground, making them up with small parcels of earth and grains of corn interwoven with threads. The sphinxes fly either early in the morning or after sunset in the evening. They fly heavily and sluggishly, otten emitting a kind of sound. There are about 165 species already discovered, of which ten are found in Great Britain and Ireland : *viz.* —

1. S. atropos, jessamine hawk-moth. The wings are entire ; the trunk long;, spiral. Above, first wings brown, clouded with gray and yellow, and a yellowish spot in the centre ; second, yellow, with two waved transverse stripes. The abdomen is yellow, with seven black brown belts. The thorax marked like a Death's head, whence the name, from Atropos, the third and last of the Fatal Sisters, who cuts the thread of life. The length is two inches. Caterpillar very large, yel-low, with six green and orange oblique belts, and a posterior horn.

2. S. convolvuli, unicorn, or bindweed hawk-moth. The antennae are long and thick ; the trunk very long and spiral. Above, body marked with black and red belts ; wings entire, brown-gray, with black zig zag transverse lines. The lireadth three inches. Caterpillar smooth, green, with a posterior horn.

3. S. elpenor, elephant moth. The wings are angular, entire. Above, first wings striped transversely with red and green : second, black at the base, and red outwards. The body red and green. Caterpijlar smooth, brown and yel-low, with a posterior horn, and a snout like a hog. It lives on vines, convolvulus, &c.

4. S. filipendulae, burnet moth. The antenna?, legs, and body, are black. Second wings red, with a greenish border. First wings bluish-green, with six red spots, in pairs. Length eight lines. Caterpillar yellow, with black spots. .It lives on grass.

5. S. ligustri, privet hawk-moth. The antenna are long, thick, and brown. Trunk long, spiral. First wings two inches long, narrow, entire, brown ; second, short, red, with black bars. The abdomen is red, with black rings. Caterpillar smooth, yellow-green, with a posterior horn.

6. S. ocellata, eyed willow hawk-moth. There is no trunk ; the wings are indented. Above, first wings dark and light brown, marbled ; second, red, with a large yellow black eye. Beneath, a large red triangle from the base of the first wings. The breadth one inch and a half. Caterpillar smooth, green, with oblique white lines on the sides, and a posterior horn. The eggs are green; it lives on willows.

7. S. populi, poplar hawk-moth. The wings are scalloped, bluish-gray, and waved with dark lines. On the first wings a long white spot, and the base of the second red brown. Wings reversed. Length one inch. A long spiral trunk caterpillar, green, smooth, with oblique white spots,

and a posterior horn. It lives on poplars and willows.

8. S. stellatarum, large bee-moth. The antenna are thick, towards the ends brown. The trunk is spiral ; the wings are short and entire ; the body is thick, brown, and hairy. First wings are brown, waved ; second, red brown. It resembles a large bee. Caterpillar smooth, with a posterior blue horn, tipt with red. It lives on gallium.

9. S. tiliae, lime hawk-moth. No trunk; the wings are scalloped ; the antenna are white on the upper side, yellow on the under. Above, first wings gray-brown, with two irregular large green spots; second wings orange. Beneath, greenish-

gray. Caterpillar green, shagreened, with a posterior horn.

10. S. tipuliformis, small bee-moth. The thorax is yellow beneath ; the wings are short, with black veins. The abdomen black, bearded, yellow at the extremity. Caterpillar on the loni-cera.

SPHINX, in zoology. See SIMIA.

SPHCERULITE,m mineralogy. Colorsbrown and gray. In imbedded roundish balls and grains. Glimmering. Fracture even, splintery. Opaque. Scratches quartz witli difficulty. Brittle. Specific gravity 2‘4 to 2‘5. Nearly infusible. It occurs in pearlstone and pitchstone porphyries, in the vicinity of Glasshiitte near Schemnitz; and in the pitchstone of Meissen.

SPHONDYLIUM, in anatomy, one of the vertebra of the back.

SPHRAGIDIUM, a famous cave of Boeotia, in Mount Citheron. — Paus. ix. c. 3.

SPI’AL, n. s. Fr. espial. A spy ; scout ; a watcher. Obsolete.

His ears be as ipials, alarum to crie.

Timer’s Husbandry. Up p. ivy tpials placed in all his way, To weel what course he takes, and how he fares.

Spenser.

Their trust towards them hath rather been as to good spinls and good whisperers, than good magistrates and officers. Bacon.

For he by faithful spial was assured That Egypt’s king was forward on his way.

Fairfax.

SPICA, in botany. See BOTANY SPICE, n. s. & v. a. ~\ Fr. espices ; Italian SPI’CER, n. s. >specei, of Lat. sped.

SPI’CERY. j A vegetable production, fragrant to the smell, and of pungent taste; an aromatic substance used in sauces : to season with spice : a spicer is a dealer in spice : spicery is the commodity or depository of spices.

Dangerous rocks,

Which, touching but by gentle vessel's side, Would scatter all the spices on the stream.

Sluik'peare.

Is not manhood, learning, gentleness, and virtue, the tpice and salt that seasons a man ?

Id. Troihis and Cretsida.

His mother was a vot'ress of my order, And in the spiced Indian air by night Full often she hath gossip'd by my side.

Shakspeure.

Their camels were loaden with spicery, and balm, and myrrh. Raleigh's History of the World.

Names have been derived from occupations, as Salter and Spicer. Canuten.

She in whose body The western treasure, eastern spicery, Europe and Africk, and the unknown rest, Were easily found. Donne.

These hymns may work on future wits, and so May great-grandchildren of thy praises grow , And so, though not revive, embalm and spice The world, which else wouJd putrify with vice. Id

With a festivall

She'll first receive thee ; but will spice thy bread W ith flowrie poysons. Chapman.

So in the wicked there 's no vice, Of which the saints have not a tp'.ce. Hudibras.

What though some have a fraught Of cloves and nutmegs, and in cinnamon sail,

SPI' j

If thou hast wherewitlial to spice a draught, When griefs prevail 1 Herbert.

Off at sea north-east winds blow Sabseaa odour, from the spicy shore Of Araby the blest ; with such delay Well pleased they slaci their course ; and many a

league, Cheered with the grateful smell, old ocean smiles.

Milton.

Tfijˆh sauces and rich sp-ces are fetched from the Indies. Baker.

It containeth singular relations, not without some tpice or sprinkling of all learning.

Browne's Vulyar Errours.

Garlick, the northern spice, is 'in mighty request among the Indians. Temple.

For them the Idumaean Dalm did sweat, And in hot Ceilon spicy forests grew. Dryden.

The spicery, the cellar and its furniture, are too well known to be here insisted upon.

Addis'in on Italy.

The regimen in this disease ought to be of spicy and cephalick vegetables, to dispel the viscosity.

Arbuthnot on Diet.

Under southern skies exalt their sails, Led by new stars, and borne by spicy gales ! Pope.

SPICK AND SPAN. Span-new is used by Chaucer, and is supposed to come from Saxon ppannan to stretch ; Lat. expanders : whence span. There is also a Swedish sping span, meaning every bit. Span-new is therefore originally used of cloth new extended or dressed at the clothiers, and spick and span is newly extended on the spikes or tenters ; it is, however, a low word. Quite new; now first used.

While the honour thou hast got Is spick and span new, piping hot, Strike her up bravely. Butler.

They would have these reduced to nothing, and then others created spick and span new out of nothing.

Burnet.

I keep no antiquated stuff; But spick and span I haveHinough. Swift.

SPICKNEL, or SPIGNEL. See ATHAMANTA.

SPICULA. See BOTANY.

SPI'DER, n. s. Skinner thinks this word softened from spinder, or spinner, from spin. Junius, with his usual felicity, dreams that it comes from Gr. oiri%tiv, to extend ; for the spider extends his web. Perhaps it comes from Dutch spieden, Dan. spcyden, to spy, to lie upon the catch. Sax. "oori, *coria, is a beetle, or properly an humble bee, or stingless bee. May not spi-der be spy dor, the insect that watches the dor ? Johnson. Sax. j-pin atteri. — Thomson. From spin, and alter, venom. The animal that spins a web for flies.

More direful hap betide that hated wretch, Than I can wish to adders, spiders, toads.

,4/ Shakspeure.

The tpider's web to watch we'll stand,

And, when it takes the bee, We'll help out of the tyrant's hand

The innocent to free. Drayton.

Insidious, restless, watchful spider, Fear no officious damsel's broom ;

Extend thy artful fabrick wider, And spread thy banners round my room :

While I thy curious fabrick st&re at, And think on hapless poet's fate,

Like thee confined to noisome garret, And rudely banished rooms of state. Lit'Lettm.

> SPI

The spider's touch how exquisitely fine ! Feels at each thread, and lives along the line.

Pope.

SPIDER, in entomology. See ARANEA and ENTOMOLOGY.

SPIDER, SHEPHERD. See PJIALAXGIUM.

SPIDERWORT, GREAT SAVOY, a species o. HEMEROCALLIS.

SP.IERINGS (II.), an eminent landscape painter, born at Antwerp, about 1633. His man-ner of designing was agreeable, his touch delicate, and his coloring natural.

SPIERS (Albert Van), an historical painter, born at Amsterdam in 1666. Arter studying in Italy he returned to his native city, where he acquired great fame. He died in 1718.

SPIGELIA, worm grass, in botany, a genus of plants belonging to the class of pentandria. and order of monogynia; natural order forty-seventh, stellatae : COR. funnel-shaped : CAPS, didymous, bilocular, and polyspermous. There are two species; 1. S. anthelmia, has a herbaceous stem, and its highest leaves are fourfold. ' The effects of this medicine,' says Dr. Browne, ' are these : — It first procures sleep, almost as certainly, and in an equal degree, with opium : the eyes seem to be distended, and sparkle as it were before the eruption of the small-pox or measles, which may be easily observed after the sleep is over; the pulse grows regular and rises, the fever cools, the symptoms appear more favorable, and the worms are generally discharged by the use of the subsequent purgative (if not before) in great quantities, often above 100 at a time; but when a few only come away, which is seldom, and these alive, the same doses are again repeated, which seldom or never fail. I never saw this medicine fail when there was the

least probability of success; nay, often prove successful when there was not the least reason to expect it. I have been, however, cautious in ordering it for children ; for though I never knew it at all hurtful, its effect upon the eyes has often deterred me from ordering it to children, whose fibres are weak and relaxed, and in whom the fevers from this source are seldom so vehement as to hinder the administration of other medicines, likely as effectual in other cases of this nature. This plant is generally had in low dry lands, after they have been turned up some months, and after great rains ; its taste is herbaceous, and somewhat clammy ; its growth is .soft and sudden ; its stalk hollow, smooth, and roundish. Its herbaceous taste and sudden growth would alone make me think it capable of little or no action, had not hundreds of careful observations satisfied me to the contrary.'

2. S. Marilandica, perennial worm-grass, or Indian pink. The best description of this plant which we have seen is given by Dr. Woodville in his Medical Botany ; a work which exhibits a complete systematic view of the medicinal effects of vegetables. Its stem is four cornered ; all the leaves opposite Dr. Garden, in a letter to the late Dr. Hope, professor of botany in the university of Edinburgh, dated 1703, gives the following account of the virtues of this plant : — ' About forty years ago the anthelmintic virtues of the root of this plant were discovered by the Indians ;

since which time it has been much used here by physicians, practitioners, and planters ; vet its true dose is not generally ascertained. I have given it in hundreds of cases, and have been very attentive to its effects. I never found it do much service, except when it proved gently purgative. Its purgative quality naturally led me to give it in febrile diseases which seemed to arise from viscidity in the primae vise ; and, in these cases, it succeeded to admiration, even when the sick did not void worms. I have of late, previous to the use of the Indian pink, given a vomit, when the circumstances of the case permitted it ; and I have found this method to answer so well that I think a vomit should never be omitted. I have known half a drachm of this root purge as briskly as the same quantity of rhubarb ; at other times I have known it, though given in large quantities, produce no effect upon the belly : in such cases it becomes necessary to add a grain or two of sweet mercury, or some grains of rhubarb; but the same happy effects did not follow its use in this way, as when it was purgative without ad-dftion. The addition, however, of the purgative renders its use safe, and removes all danger of convulsions of the eyes, although neither ol. rutae sabinse, nor any other nervous substance, is given along with it. It is, in general, safer to give it in large doses than in small ; for from the" latter more frequently the giddiness, dimness of the sight, and convulsions, &c., follow : whereas from large doses I have not known any other ef-fect than its proving emetic or violently cathartic. To a child of two years of age, who had been taking ten grains of the root twice a-day, without having any other effect than making her dull and giddy, I prescribed twenty-two grains morning and evening, which purged her briskly and brought away five large worms. After some months an increased dose had the same good ef-fect. I prefer the root to the other parts of the plant; of which, when properly dried, I gave from twelve to sixty or seventy grains in substance. In fusion it may be given to the quantity of two, three, or four drachms, twice a day. I have found that, by keeping, the plant loses its virtue in part ; for forty grains of the root which has not been gathered about two months will operate as strongly as sixty which has been kept for fifteen months.' In Dr. Garden's subsequent letters, addressed to Dr. Hope, in 1764 and 1766, the efficacy of this root in worm cases is further confirmed ; and he observes that the root keeps better than he at first thought (having lately used it several years old with great success). In what he calls continued or remitting low worm fevers, he found its efficacy promoted by the addition of rad. sepentar. virg.

SPIGELIUS (Adrian), an eminent anatomist, surgeon, and botanist, born at Brussels in 1578. He became j rofessor of anatomy and surgery at Padua. The senate of Venice honored him with the order of St. Mark. He died 1625. His works on these branches of science were printed at Amsterdam, in 3 vols. folio, 1645.

SPIGNA, or SPIGNO, a town and castle, and ci-devant marquisate of Italy, in the late duchy of Montferrat; now annexed to France, and included in the department of Marengo ; seated

on the Belbo, between the Aqua and the Savona; forty miles south-east of Turin. Long. 8° 26’ E., lat. 44°45’N.

SPIGNEL, WILD, a species of seseli.

SPI’GOT, n. s. Dut. spijcker. A pin or peg put into the faucet to keep in the liquor.

Base Hungarian wight, wilt thou the spigot wield ?

Shakspeare.

Take out the spigot, and clap the point in your mouth-Swift.

SPIKE, n. s. & v.a. Lat. spicu. An ear of corn : hence a long nail ; a species of lavender : to fasten with nails.

For the body of the ships, no nation equals England for the oaken timber ; and we need not borrow of any other iron for spikes or nails to fasten them.

Bacon.

Drawn up m ranks and files, the bearded spikes Guard it from birds, as with a stand of pikes.

Denham.

Suffering not the yellow beards to rear, He tramples down the spikes, and intercepts the year.

Dry den.

Lay long planks upon them, spiking or pinning them down fast. Mortimer's Husbandry.

Lay long planks upon them, pinned or spiked down to the pieces of oak on which they lie. •

Moxon's Mechanical Exercises.

He wears on his head the corona radiata, another type of his divinity : the spikes that shoot out represent the rays of the sun. Addison.

A youth, leaping over the spiked pales, was suddenly frighted down, and in his falling he was catched by those spikes. Wiseman.

The gleaners, Spike after spike, their sparing harvest pick.

. Thomson

i he oil of spike is much used by our artificers in their varnishes , but it is generally adulterated

Hill's Materia Medico.

SPIKE, OIL OF, an essential oil distilled from lavender, and much used by the varnish makers and the painters in enamel.

SPIKE'NARD, n. s. Lat. spica nardi. A plant, and the oil or balsam produced from the plant.

A woman, having an alabaster box of ointment of spikenard, brake and poured it on his head.

Mark xiv. 3.

He cast into the pile bundles of myrrh, and sheaves of spikenard, enriching "it with every spicy shrTub-Spectator.

It grows plentifully in Java. It has been known to the medical writers of all ages.

Hill's Materia Medica.

SPIKENARD. See NARDUS.

SPIKENARD, CELTIC, a species of valeriana.

SPIKENARD, FALSE, a species of lavandula.

SPIKENARD, INDIAN, or TRUE. See NARDUS. The Indian or True Spikenard was discovered m 1786, and announced in the Philosophical Transactions for 1790 : yet Mr. Lee, in his Introduction to Botany, p. 330, published in 1794, says it is still ‘ unknown.’

SPIKENARD, PLOUGHMAN’S. See BACCHARIS. It is also the name of a species of Conyza.

ˆIKE£ARD, WILD, a species of Asarum.

IKL-ROLLER, in agriculture, a useful implement of the roller kind, introduced by Mr. Randall of York. It has been found of much advantage in bringing stiff cloddy lands into a

state of suitable pulverization and fineness of mould for being sown. It is likewise employed in a beneficial manner on sward-land that is worn out and mossy, by preparing it for the application of earthy composts and grass-seeds. But it is remarked by the inventor that in this business the roller must go up and down till the swarth and ground are perfectly well broken up : this being done, the seeds of clover, trefoil, and rye-grass, or any other mixed with them, must be sown in the usual way and quantity ; then the compost must be spread over the seeds so as to cover them ; and a common barley-roller, with a thorn-bush fastened to it, must follow, and the ground be shut up, lest the cattle should do harm by treading. In respect to this sort of roller the dimensions in length were seven feet, the diameters at the ends eighteen inches, and the whole cylinder made of the heart of oak; and when the irons were burnt in, and the man seated on the box designed for that purpose, the weight of the whole was about a ton. But the blunt ends of the irons were opposed to the clods, and run more taper, till they came to the surface of the cylinder, into which the irons were burnt, and inserted about three inches, which was their length above the surface of the roller, and which he always found very sufficient to crush the hardest clod that ever came in their way. Had he, indeed, attempted to go on the ground when the soil was not perfectly dry, this position of the irons would have carried the clods round with the roller ; for it is not its province to squeeze, but crush. Nor indeed can a man do more harm to his ground than going upon it, when it is not quite dry, with a roller constructed in this way. He had

the irons fixed in four inches asunder, in the first row, from end to end. The second row began just between the first and second irons of . the first row. The third row was like the first ; and the fourth like the second. Then alternately for the whole surface of the cylinder, as nearly as possible, the irons were four inches asunder in each individual row; and four inches from row to row, as nearly as the superficies of the cylinder would permit. He does not know how to con-vey a juster idea of the shape of the irons than to call them ox-harrow teeth, or those of a very large harrow ; for when he sent for the workman he desired him to make so many of this denomination six inches in length, and burn the small end three inches into the wood. This is a roller that requires a strong team in performing its work.

In addition to these uses it has been suggested that it may likewise be very useful in preparing clay for the making of canals, or pieces of water : for where, as sometimes happens, the clay grows dry, and will not admit of being duly tempered for use, without great pains in breaking it, a very large quantity may very soon be reduced to the requisite fineness, by spreading it on hard ground IK a due thickness, and passing this roller a few times over it. In extensive works much trouble and labor may sometimes be saved by this means, and the clay prepared in a manner that will an-swer the purpose much more effectually. It may also be noticed that this is a sort of tool which no farm, where the land is a stiff clay, or in the

least liable to clot, should want c for besides the constant advantage of saving labor, and bringing land to a better condition for any kind of sowing than the plough and harrow, with any assistance of the work of hands, can make it ; in favorable seasons, and under certain circumstances, the loss of the whole crop, by an otherwise unavoidable delay beyond the seed-time, may be with certainty prevented.

This implement may likewise be employed to assist in reducing the half-burnt turf of burn-baked land, which requires much labor as commonly done by hand ; but by going over the land several times with the spike-roller, and liar— rowing it with heavy harrows alternately, to pull up the turfs, or ploughing them up, they may be reduced fine in a much shorter time, and at a much less expense, than by beating or breaking them by hand. The mode of constructing the tool, in the common manner, has been already shown.

As an improvement in this implement it has been suggested, in order to prevent its tearing up the ground, and the great stress that is upon the frame in turning, to have it divided into two parts. Let the ends of each part be bound with narrow, but strong, bands of iron, and let the spikes at the ends be placed close to them ; let each part have a separate frame; but let tlie cheeks, in which the inward gudgeons turn, be made of iron plates, about two inches wide above and four where the gudgeons enter; the thickness, a common flat bar of iron ; and these fixed in any firm manner to two cheeks of uood, reaching down just to the bands, and of such ;i thickness at bottom as not to interrupt the spikes. Let the inward gudgeons be made with quite flat heads to prevent their slipping out in working, and bring the two ends of the toller nearer together, which is of consequence, as the fewer clots will be missed in working. Let the frames be joined together by four eyes, like those of a small gate, two at one end, about five or six inches apart ; the two at the end of the other to tak ; place just within them, an iron pin being put through all four and keyed. Let the thills be placed just on the middle of each frame, and a bar of wood just behind the horse to strengthen them; the bar sawed through in the middle, and joined by a strong flat hinge ; one side made to hasp upon a staple kept down with a wooden clet. This gives the whole proper play in working.

The spikes are about four inches without and three within the wood : the thickness of the roller and number of spikes may be determined, in some measure, by the nature of the soil it is to work upon. Thus formed it will be found, it is said, next to the plough, the most useful instrument in tillage, not only in reducing a stiff soil, but, with a bush at its tail, to cover the seed, when sown, much more effectually, and in a better manner, than a harrow, as it turns up the; earth light and fine behind it; and, though seemingly unwieldy, will turn with ease, and may be worked with one, two, or three horses at most, upon any land that is of a proper dryness to work upon.

SPILANTIIUS, in botany, a genus of r/lrtnts,

belonging to the class of syngenesia, and to the order of polygamia aequalis. The common calyx is erect; the leaflets numerous, sub-equal, and oblong, the two exterior being longer than the rest. The compound corolla is “uniform and tubular; the florets are hermaphrodite and equal; the proper corolla is funnel-shaped. The filaments are five in number, and short. The antherae cylindrical and tubular. The seeds are vertical, oblong, flat, and covered with chaff. The receptacle is paleaceous and conical. There are seven species, *viz.* 1. S. acmella; 2. atripli-cifolia; 3. insipida; 4. oloracea; 5. pseudo-acmella; 6. salivaria; and, 7. urens.

SPILBERG (John), an historical and portrait painter, born at Dusseldorp in 1619. He was painter to the prince Palatine, and died in

1691.

SPILBERG, (Adriana), daughter of John, was born at Amsterdam, in 1646, and learned painting under her father. She excelled in drawing portraits with crayons. The celebrated painter, Eglon Vander Neer, married her.

SPILL, v. a. &v. n.) Sax.j-pillan ; Goth, and

SPILTH, n. s. } Teut. spilla ; Belg. spijlen.

To shed ; throw away ; lose ; destroy ; waste ; be lavish ; be shed : spilth, that which is spilt.

Thus is our thought with pain of thistle tilled, Thus be our noblest parts dried up with sorrow ; Thus is our mind with too much minding spilled.

Sidney.

Thy father bids thee spare, and chides for tpilling.

Id.

Why are you so fierce and cruel ? Is it because your eyes have power to kill ?

Then know that mercy is the Mighty's jewel, And greater glory think to save than spill. Id.

Friend or brother, He forfeits his own blood that spills another.

Shakspeare. Timon. Our vaults have wept with drunken spilth of wine.

Shakspeare.

All bodies are with other bodies filled ; But she receives both heaven and earth together : Nor are their forms by rash encounters spilled; For there they stand, and neither toucheth either.

Dames.

Be not angry with these fires ; For then their threats will kill me : Nor look too kind on my desires ;

For then my hopes will spill me. Ben Jonson.

Themselves exact their cruelty, And I constrained am this blood to spill.

Daniel's Civil War. They having spilled much blood, and done much

waste,

Subduing nations ; and achieved thereby Fame in the.world, high titles, and rich prey ; Shall change their course to pleasure, ease, and

sloth. Milton,

Medea must not draw her murth'ring knife, And spill her children's blood upon the stage.

Roscommon. Orbellan did disgrace

With treach'rous deeds our mighty mother's race ; And to revenge his blood, so justly spilt, "What is it less than to partake his guilt ? Dryden.

Nor the Centaur's tale Be here repeated ; how, with lust and wine

Inflamed, they fought and spilt their drunken souls At feasting hour.
Philips.

This sight shall clamp the raging ruffian's breast, " The poison spill, and half-drawn sword arrest.

Tickell.

lie was so topful of himself, that he let it spill on all the company : he spoke well indeed, but he spoke too long. Watts.

SPILL, n. s. Teut. spille; Belg. spil. A shiver or small bar of wood or iron ; small quantity of money.

The oysters, besides gathering by hand, have a peculiar dredge, which is a thick strong net, fastened to three spills of iron, and drawn at the boat's stern.

Carew.

Have near the bunghole a little venthole, stopped with a spill. Mortimer.

The bishops, who consecrated this ground, were wont to have a spill or sportule from the credulous laity. Ayliffe.

SPILLER (John), a young sculptor of great promise, was born December, 1763, in London, and after a liberal education became a pupil of Bacon. His talents becoming known, he was chosen to execute a statue of Charles II. for the centre of the Royal Exchange ; and while engaged in this work the pulmonary disease, to which he had a tendency, became so much aggravated that soon after his much-admired production was placed on its pedestal he expired, in May 1794. The author of the Curiosities of Literature makes the following observations illustrative of the enthusiasm of genius : — ' The young and classical sculptor who raised the statue of Charles II., placed in the centre of the Royal Exchange, was, in the midst of his work, advised by his medical friends to desist from working in marble ; for the energy of his labor, with the strong excitement of his feelings, already had >made fatal inroads on his constitution. But he •was willing, he said, to die at the foot of his sta-tue. The statue was raised, and the young sculptor, with the shining eyes and hectic blush of consumption, beheld it there,, returned home and shortly was no more.' He married in 1792, and his accomplished wife died a few months after him of a similar disease. They left behind them, at the tender age of a few months, an only daughter.

SPILSBY, a market-town in the county of Lincoln, situated on an eminence overlooking the extensive level of the marshes and the German Ocean. It is the chief town in the southern part of Lindsey division, and consists mainly of four streets, uniting at the market-place. A spacious square, with the market cross at the east end, and the town-hall at the west. The cross consists of a plain octagonal shaft, with a quadrangular base, elevated on five steps. The town-hall is a plain brick building, built in 1764, standing on arches on the site of an old hall. The general quarter sessions of the peace have been holden here for upwards of 100 years. The parish church, situated in the west end of the town, is an irregular building, consisting of north and south aisles, the latter being much larger than the rest of the building; and here is a chapel, in which are some ancient monuments belonging to the families of Beke, Willoughby, and Bertie. At the west end of the church is an embattled tower of more modern date. Spilsby contains a free-school and Sunday school. Market on Mon-SPI !

day, and three annual fairs. Thirty-one miles

east of Lincoln, and 134 north of London.

SPIN, v. a. & v. n. -\ Prefer, spun or

SPIN’DLE, n. s. &u. n. /span; part. spun.

SPIN’DLESHANKED, adj. >Sax. j-pinnan ; Belg.

SPIN’NY, i sptJinen. To draw

SPIN’STER, n. s. J out into, or form,

threads: hence to protract ; draw out; form by

degrees ; to exercise the art of spinning ; stream

out in threads or filaments : a spindle is a pin

on which the spinning of thread is performed :

spindleshanked, having thin or spindle-like

legs : spinster, a woman who spins ; the legal

term for an unmarried woman not of noble

birth : spinny is their loom.

The women spun goats' hair. Exodtts xxxv. 26.

Weaving spiders corne not here : Hence, you long-legged spinners, hence !

Shakspeare.

The spinsters and the knitters in the sun, And the free maids that weave their thread with

bones, Do use to chaunt it. Id. Twefth Night.

You would be another Penelope ; yet all the yarn she spun, in Ulysses's absence, did but fill Ithaca full of moths. Shakspeare.

Bodies fibrous by moisture incorporate with other thread, especially if there be a little wreathing ; as appearelh by the twisting of thread, and twirling about of spindles. Bacon.

Another ill accident in drought is the spindling of the corn, which with us is rare, but in hotter countries common ; insomuch as the word calamity was first derived from calamus, when the corn could not get out of the stalk. Id.

Together furiously they ran, That to the ground came horse and man ; The blood out of their helmets span, So sharp were their encounters.

Draytnn's Nymphiad.

If a gentlewoman be termed spinster, she may abate the writ. Lord Coke.

I passed lightly over many particulars, on which learned and witty men might svin out large volumes.

Digby.

Whether the sun, predominant in heaven, Txise on the earth, or earth rise on the sun ; He from the east his fl lining road begin, Or she from west her silent course advance With inoffensive pace, that spinning sleeps On her soft axle, while she paces even And bears thee soft with the smooth air along, Solicit not thy thoughts. Milton s Paradise Lost.

Sing to those that hold the vital sheers, And turn the adamantine spindle round On which the fate of gods and men is wound.

Milton.

A practised spinner shall spin a pound of wool worth two shillings for sixpence. Graunt.

We can fling our legs and arms upwards and downwards, backwards, forwards, and round, as they that spin. More.

The fates but only spin the coarser clue; The finest of the wool is left for you. Dryden.

Repose yourself, if those spindle legs of yours will carry you to the next chair. Id. Spanish Fryar.

By one delay after another, they spin out their whole lives, till there ‘s no more future left before ‘era. L’ Estrange.

Men of large thoughts and quick apprehensions are not to expect any thing here, but what, being ijmn out of my own coarse thou. hts, is fitted to men «f my own size. Locke.

) SPI

So Pallas from the dusty field withdrew, And, when imperial Jove appeared in view, Kesumed her female arts, the *pmdle and the clew, Forgot the sceptre she so well iiad swayed, And, with trial mildness she had ruled, obeyed.

titepney,

The spindles must be tied up, and, as they grow in height, rods set by them, lest by their bending they should break. Mortimer.

When the flowers begin to spindle, all but one or two of the biggest at each root, should be nipped off. Id.

They plow it early in the year, and then there will come some spinny grass that will keep it from scalding. Id.

The marriage of one of our heiresses with an eminent courtier gave us spindle shanks and cramps.

Tatter.

Upon a true repentance, God is not so fatally tied to the spindle of absolute reprobation, as not to keep his promise, and seal merciful pardons.

Jasper Maine.

Why should Rome fall a moment ere her time 1 Xo, let us draw her term of freedom out In its full length, and spin it to the last.

Addison's Cato.

Her lawyer is a little rivelled, spindleshauked gentleman. Addison.

Ten thousand stalks their various blossoms spread ; Peaceful and lowly in their native soil, They neither know to spin, nor care to toil. Prior.

If his cure lies among the lawyers, let nothing be said against intangling property, spinning out causes, and squeezing clients. Cottier.

My spinning wheel and rake Let Susan keep for her dear sister's sake. (raj/.

The lines are weak, another 's pleased to say ; Lord, Fanny spin* a thousand such a day. Pope.

I desire that a yearly annuity of twenty pounds shall be paid to Rebecca Dingley, of the city of Dublin, spinster, during her life. Swift.

Do thou take me for a Roman matron, Bred tamely to the spindle and the loom 1

A. Philips.

That hour arrived, his work begins ; He spins and weaves, and weaves and spim; Till circle upon circle wound Careless around him and around, Conceals him with a veil, though slight, Impervious to the keenest sight. C'owper.

SPINA BIFIPA. See SURGERY.

SPIKA CEUVIKA, the same as the rhamnus catharticus. See UHAMXUS.

SPIKA VEXTOSA, in surgery, that species of corruption of the bones which takes its rise in the internal parts, and by degrees enlarges llio bone, and raises it into a tumor. See SURGERY.

SPIN'ACII, n. s. I Latin spinac/tia. A

SPTK’AGE. $ plant.

It hath an npetalous flower, consisting of many stamina included in the flower-cup, which are produced in spikes upon the male plants, which are barren ; but the embryos are produced from the wings of the leaves on the female plants, which afterwards become roundish or angular seeds, which in some sorts have thorns adhering to them.

Miller.

Spinaye is an excellent herb crude or boiled.

Mortimer.

SPINACIA, spinage, in botany, a genus of plants belonging to the class of dioecia, and to the order of pentandria ; and in the natural sys-tem arranged under the twelfth order,

SPI

10

The male calyx is quinquepartite ; there is no corolla : the female calyx is quadrifid : no corolla ; there are four styles, and one seed within the indurated calyx. There are only two species : 1. S. fera, wild spinage, produces its fruit on footstalks. 2. S. oleracea, common spinage, has sessile fruits and sagitated leaves. It has been cultivated in Britain since 1568, but it is not known from what country it was originally brought. When intended for winter use, it should be sown on an open spot of ground in the end of July ; and if possible when the weather is rainy. When the young plants are come up, the weeds must be destroyed, and the plants left at about five inches asunder. The ground being kept clear of weeds, the spinage will be fit for use in October. The way of gathering it to advantage is only to take off the longest leaves, leaving those in the centre to grow bigger ; and at this rate a bed of spinage will furnish the table for a whole winter, till the spinage sown in spring is become fit for use, which is commonly in April.

SPIN.‘E, in botany, thorns, rigid prickles: a species of arma, growing on various parts of certain plants for their defence ; spinse ramorum arcent pecora. On the branches we find examples in the pyrus, prunus, citrus, hippophaes, gmelina, rhamnus, lycium, Sec. ; on the leaves in the aloe, agave, yucca, ilex, hippomane, theo-phrasta, carlina, &c. ; on the calyx, in the carduus, cnicus, centauria, molucella, galeopsis, &c. ; on the fruit, in the trapa, tribulus, murex, spinacia, agremonia, datura, &c.

SPINAGE. See SPINACH and SPINACIA.

SPI’NAL, adj.) Lat. sp’ma. Belonging to

SPINE, n. s. J the backbone : the backbone.

All spinal, or such as have no ribs, but only a backbone, are somewhat analogous thereto.

Browne’s Vulgar Errours.

There are who think the marrow of a man, Which in the spine, while he was living ran ; When dead, the pith corrupted will become A snake, and hiss within the hollow tomb. Dryden.

Descending careless from his couch, the fall Luxed his joint neck, and spinal marrow bruised.

Philips.

Those solids are entirely nervous, and proceed from the brain and spinal marrow, which, by their bulk, appear sufficient to furnish all the stamina or threads of the solid parts. Arbuthnot.

The rapier entered his right side, reaching within a finger's breadth of the spine. Wiseman's Surgery.

SPINAL MARROW, SPINAL NERVES. See ANATOMY, Index.

SPINALIS, in anatomy, several muscles, &c. of the spine. See ANATOMY.

SPINCKES (Nathanael), an eminent non-jurant divine, born in 1654, at Castor n Northamptonshire, where his father Edmund, a native of New England, and a man of letters, was rector. He was educated at Trinity College, Cambridge, in 1669-70. In 1671 he fell heir, by his father's death, to a large fortune and a fine library. Af-ter taking his degrees of B. and M. A., &c., he was admitted priest, December 22d, 1678. He then became chaplain to Sir R. Edgcomb ; and in 1681 the same to the duke of Lauderdale. In 1685 he was made rector of Peakirk in Nor-

thamptonshire, where he married Miss Rutland of London. In 1687 he was made a prebendary of Salisbury, rector of St. Mary, and preacher at Stratford at £80 a year. But in 1690 he lost all his preferments, by refusing to take the oaths to William and Mary. On the 3d of June 1713 he was made a bishop. He died 28th of July, 1727. His publications were numerous. The most celebrated is his Sick Man Visited.

SPINDLE, in geometry, a solid body generated by the revolution of some curve line about its base or double ordinate ; in opposition to a co-noid, which is generated by the rotation of the curve about its axis or absciss, perpendicular to its ordinate. The spindle is denominated circular, elliptic, hyperbolic, or parabolic, &c., according to the figure of its generating curve.

SPINDLE, in mechanics, sometimes denotes the axis of a wheel, or roller, &c., and its ends are the pivots.

SPINE. See ANATOMY, Index.

SPINE, in botany. See SPIN.E.

SPINEL, in mineralogy, a sub-species of octohedral corundum. Color red. Occurs in grains, more frequently crystallised; in a perfect octohedron, which is the fundamental figure ; in a tetrahedron, perfect or modified ; a thick equiangular six-sided table; a very oblique four-sided table ; a rhomboidal dodecahedron ; a rectangular four-sided prism. Splendent and vitreous. Cleavage fourfold. Fracture flat conchoidal. Translucent to transparent. Refracts single. Scratches topaz, but is scratched by sapphire. Brittle. Specific gravity 3-5 to 3-8. Fusible with borax. Its constituents are, alumina 82-47, magnesia 8‘78, chromic acid 6-18, loss 2-57. — Vauquelin. It is found in the gneiss district of Acker in Sudermannland, in a primitive limestone ; in the kingdom of Pegu ; and in Ceylon. It is used as a precious stone. When it weighs four carats (about sixteen grains) it is considered of equal value with a diamond of half the weight. — Jameson.

SPINEL, in the linen manufactory, four hanks.

SPINELLANE. Color plum-blue. It occurs crystallised in rhomboids of 117° 23’, and 62° 37’; and in six-sided prisms acuminated with three planes. It scratches glass. It is found on the shores of the lake of Laach, in a rock composed of glassy felspar, quartz, hornblende, &c. It is said to be a variety of Haiiyne.

SPINELLO (Aretino), a Tuscan painter, of great repute in his time. He was born in 1328, and studied under James di Casentino, whom at twenty he excelled. He painted history and portraits admirably, and finished the pieces exquisitely at last. But he painted a picture of the fallen angels, in which he drew so horrid a picture of Lucifer that it frightened him so much as to affect his senses ever after. He died in 1420.

SPINELLO (Paris), the son and disciple of Aretino, was also an eminent painter. His style greatly resembled that of his father, whom he did not long survive, dying in 1422.

SPINESCENT, sharp and pricking.

SPIN’ET, n. s. fr.espinette. A small harp-sichord ; an instrument with keys.

When miss delights in her spinnet, A fiddler may his fortune get. Suift.

SPINET, or SPINNET, a musical instrument ranked in the second or third place among harmonious instruments. It consists of a chest or belly made of the most porous and resinous wood to be found, and a table of fir glued on slips of wood called summers, which bear on the sides. On the table is raised two little prominences or bridges, wherein are placed so many pins as there are chords or strings to the instrument. It is played on by two ranges of continued keys, the former range being the order of the diatonic scale, and that behind the order of the artificial notes or semifones. The keys are so many flat pieces of wood, which, touched and pressed down at the end, make the other raise a jack which strike and sound the strings by means of the end of a crow's quill, wherewith it is armed. The first thirty strings are of brass, the other more delicate cnes of steel or iron wire ; they are all stretched over the two bridges already mentioned. The figure of the spinet is a long square or parallelogram : some call it a harp couched, and the harp an inverted spinet. See HARP. This instrument is generally tuned by the ear; which method of the practical musicians is founded on a supposition that the ear is a perfect judge of an octave and a fifth. The general rule is to begin at a certain note, as C, taken towards the middle of the instrument, and turning all the octaves up and down, and also the fifths, reckoning seven semitones to each fifth, by which means the whole is tuned. Sometimes to the common or fundamental play of the spinet is added another similar one in unison, and a third in octave to the first, to make the harmony the fuller ; they are either played separately or together by means of a stop ; these are called double or triple spinets ; sometimes a play of violins is added, by means of a bow, or a few wheels parallel to the keys, which press the strings and make the sound last as long as the musician pleases, and heighten and soften them more or less, as they are more or less pressed. The harp-sichord is a kind of spinet, only with another disposition of the keys. See HARPSICHORD. The instrument takes its name from the small quill ends which touch the strings, resembling spins} or thorns.

SPINIFEX, in botany, a genus of plants belonging to the class of

polygamia and order of monoecia. The hermaphrodite flowers have a calyx with bivalved biflorus glumes, the valvelets being parallel to the rachis ; the corolla is bivalved and awnless ; there are three stamina and iwo styles. In the male flowers the calyx is common with the hermaphrodite; the corolla and stamina are similar. There is only one species; *viz.* S. squarrosus.

SPINK, n. s. Scot, spink. A finch; a bird.

Want sharpens poesy, and grief adorns ; The rpink chaunts sweetest in a hedge of thorns.

Hurte.

SPINNING (from spin), in commerce, the act or art of reducing silk, flax, hemp, wool, hair, or other matters, into thread. Spinning is either performed on the wheel, or with a distaff and jpindle, or with other machines proper for the several kinds of working. Hemp, flax, nettle-

thread, and other like vegetable matters, are to be wetted in spinning; silks, wools, &c , are spun dry, and do not need water ; yet there is a way of spinning or reeling silk as it comes off the cases or balls where hot and even boiling water is to be used. See SILK. The vast variety and the importance of those branches of our manufactures which are produced from cotton, wool, and flax, spun into yarn, together with the cheapness of provisions and the low price of labor in foreign countries, which are our rivals in trade, have occasioned many attempts at home to ren-der spinning more easy, cheap, and expeditious. For which see COTTON. These contrivances have in some, parts of Scotland been applied to the spinning of flax.

The ancient Greeks entertained so high an opinion of the utility and benefits of spinning and making cloth, that they ascribed the invention to Minerva, the goddess of wisdom. But we, who profess to be Christians, ought to trace the origin of the arts to persons who really existed, and not to the imaginary gods and goddesses of the Greeks. Moses, while he informs us that music and metallurgy were invented bv the descendants of Cain before the flood, mentions also that Jabel was the father or instructor of such as dwell in tents. Hence it is evident that spinning, weaving, and cloth-making, must have been invented about or before the same period, and probably by the same person. But to descend to our own times we do not know, except perhaps the steam-engine, any mechanical invention that has made

such amazing addition to the activity, industry, and opulence of this island, as the invention of Sir Richard Arkwright for spinning by water, where dead matter is made to perform all that the nicest fingers can do when directed by the never ceasing attention of the intelligent eye. We know not to what benefactor we owe the fly-wheel. Sir Richard has the honor of combining this with the spindle and distaff'. To give an intelligible and accurate de-description of a cotton mill would require a vo-lume. But in our article Co i TON will be found a complete account of the modern furniture of this most important manufactory.

Worsted is spun in a frame resembling the water-frame of Arkwright, from whicn it only differs in the relative distances of the rollers, i >, which the drawing out or extending of the fibres is effected.

In 1806 Messrs. Clarke and Bugby obtained a patent for improvements in a machine for spinning hemp and flax, which is intended to be worked by hand labor, and to be at such a small expense as to bring it within the reach of small manufacturers. The inventors state it to be constructed upon such safe and easy principles, that no length of expedience is necessary to en-able children to work it; arid that it occupies so little space that the machines may be placed in small rooms, out-buildings, or other cheap places. To effect the above purposes it was necessary to get rid of the flyer fixed upon the spindle used in the old machinery for spinning hemp or flax, which additions require a power in proportion of five to one ; and also to surmount the difficulty which arises from the want of elasticity in these

substances, and which prevents them from being spun by stretching out at the same time that the thread is twisted, in the manner of the mule or ionny. These patentees recommend a machine which is in fact a mule with certain modifications ; and, to give the effect of elasticity in the fibres, they have two methods. The most simple, and that which they particularly recommend, is to provide a holder of large wire for every spindle, which holders are several inches in length, fixed in an arbor or shaft that extends from one end of the carriage to the other.

This arbor or shaft, with the holders, may be considered as an enlarged and improved substitute for what is called the faller in the mules or jennies for spinning cotton, and the wire-holders fixed therein have elliptical eyes at their extremities, through each of which a thread is conducted in its passage from the rollers which draw out the thread to its spindle. The wire of which the bolder is made, after forming the elliptical eye, is left or extended beyond the uppermost part something in the manner of a cork-screw, so that the yarn may be conveniently slipped in when occasion may require it. These holders for each thread are for the purpose of keeping the yam in a state nearly vertical over the tops of the spindle, when the carriage which contains them is coming out ; and, as they will readily yield or spring from the vertical position, they have the same effect as elasticity in the fi-bres of the substance which is to be stretched out ; but the wires being removed from the vertical situation at the beginning of the return of the carriage and thrown into nearly an horizontal position, by inclining the shaft into which they are all fixed, they bring the yarn below the tops of the bobbins or quills which are fixed upon the spindles, which will then wind up the threads upon them when the spindles are turned round, and then the wire-eyes being regularly curved, and raised up again by the motion of an elliptic wheel which is turned round by the machine, they distribute the yarn regularly upon the bobbins or quills, and prevent it from hinkling and improperly doubling or twisting together. Another method of compensating for the want of elasticity in hemp and flax is to fix a round bar of wood, about an inch and a half in diameter, the whole length of the carriage, about three or four inches above the tops of the spindles, so that the outer surface, or that next the person who works the machine, may be perpendicular, or nearly so, over the tops of the spindles, the inner side having pieces of wood or metal fixed or nailed thereto, leaving only small spaces or notches between each for the yarn to pass through. The use of these pieces is to prevent the threads from getting together and entangling. Every thing relating to the wire holders before _men-tioned, and the arbor to which they are affixed, must be applied in concert with these pieces of metal, which form a separation between the threads. See COTTON AND WEAVING.

M. Reaumur has shown, by a series of curious experiments, that the common mussel, and some other shell-fish of the sea, possess the art of spinning in a great degree of perfection. But he observes that, though the workmanship is the

same, the manner of producing it is very different. Spiders,

caterpillars, and the like, make threads of any length that they please by making the viscous liquor, of which they are formed, pass through a fine perforation in the organ appointed for this spinning : but the way in which the mussels form their threads is very different, as the former resembles the work of the wire-drawer, so does this that of the founder, who casts metals in a mould. The canal of the organ destined for the mussel's spinning, which < from its shape, is commonly called its tongue, is the mould in which its thread is cast, and gives it its determinate length. — Mem. Acad. Par. 1711.

The SPINNING-WHEEL, in rope-making, for twelve spinners, is about five feet in diameter, and is hung between two posts fixed in the ground : on its top is fixed a semicircular frame called the head, which contains twelve whirls that turn on iron spindles, with hooks to their front ends to hang the hemp on, and are worked by means of a leather band encircling the wheel and whirls. The whirls are made to run with a truer motion when the head on the rising side of the band has a larger segment of a circle than the falling side ; or, in other words, let the base part of the head be longer from the middle than the opposite or falling side, by which means the band will be kept equally tight over the whirls, and consequently the motion be alike to all. N. B. Heads made in this manner have always the wheel turned the same way.

SPINOS'ITY, n. s. Lat. spinosus. Crabbed-ness ; thorny or briary perplexity.

The first attempts are always imperfect ; much more in so difficult and spiny aa affair as so nice a subject. Digby.

Philosophy consisted of nought but dry spinosities, lean notions and endless altercations about things of nothing. Glanville.

SPINOSUM FOLIUM, a spinous leaf, indicates the margin running out into rigid points or prickles, quod margine exit in acumina duriora, rigida, pungentia.

SPINOSUS CAULIS. See BOTANY, Glossary.

SPINOUS, in botany. See SPINOSUS.

SPINOUS FISHES, such as have some of the rays of the back fins running out into thorns or prickles, as the perch, &c.

SPJNOZA (Benedict), was born at Amsterdam the 24th of November 1632. His father was a Jew of Portugal, by profession a merchant.

After being taught Latin, by a physician, he studied theology, and afterwards devoted himself to philosophy. He began very early to be dissatisfied with the Jewish religion; and, as his temper was open, he did not conceal his doubts from the synagogue. The Jews, it is said, offered to to-lerate “his infidelity, and even promised him a pension of 1000 dollars a year, if he would re-main in their society, and continue outwardly to practise their ceremonies. But, if this offer was really made, he rejected it, from his aversion to hypocrisy,, or because he could not endure the restraint which it would have imposed. He also refused the legacy of a very considerable fortune, to the prejudice of the natural heirs ; and he learned the art of polishing glass for spectacles, that he might subsist independently of every one. An

accident hastened his leaving the synagogue. As he was returning home one evanirig from the theatre, he was stabbed by a Jew ; the wound was slight ; but the attempt led Spinoza to conclude that the Jews had formed the design of assassinating him. He then became a Christian, and frequented the churches of the Lutherans and Calvinists. lie now devoted himself more than ever to his philosophical speculations; and, being often interrupted by his friends, he left Amsterdam, and settled at the Hague, where he sometimes continued for months together without ever stirring from his lodging. His Tractatus Theolosico Politicus was published about this time, a book containing all those doctrines in em-bryo, which were afterwards unfolded in his Opera Posthuraa, and which are generally considered as a system of atheism. His fame, which had now spread far and wide, obliged him sometimes to interrupt his philosophical reveries. Learned men visited him from all quarters. While the prince of Concle commanded the French army, in Utrecht, he entreated Spinoza to visit him ; and, though he was absent when the philosopher arrived, he returned immediately, and spent a considerable time with him. The elector Palatine offered to make Spinoza professor of philosophy at Heidelberg ; but this he declined. He died of a consumption at the Hague on the 21st of February 1677, aged forty-five. His life was a perpetual contradiction to his opinions. He was temperate, liberal, and

remarkably disinterested ; he was sociable, affable, and friendly. His conversation was agreeable and instructive, and never deviated from the strictest propriety. In the Tractatus Theologico Politicus, he treats of prophecy and prophets ; and of the call of the Hebrews, whom he-affirms to have been distinguished from other nations only by the admirable form of their government. He is likewise of opinion, or pretends to be so, that God may, in a supernatural way, have given political institutes to other nations as well as to the Hebrews. For, according to him, every na-tion was blessed with the light of prophecy. That light indeed, if his notions of it be just, was of very little value. He labors to prove that the prophets were distinguished from other men only by their piety and virtue ; and that their writings are valuable to us only for the excellent rules they contain respecting piety and virtue. He then endeavours to prove that no miracle, in the proper sense of the word, can have been at any time performed ; because every thing happens by a necessity of nature, the result of the divine decrees, which are from all eternity necessary themselves. He acknowledges that in the Scriptures, which he professes to admit as true history, miracles are often mentioned ; but he says that they were only singular events which the sacred historians imagined to be miraculous. He affirms, in contradiction to the clearest internal evidence, that the Pentateuch and all the other historical books must have been written by one man ; and that man, he thinks, was Ezra. The grounds of this opinion are unwortny of the talents of Spinoza. His principal objection to the authenticity of the Pentateuch is, that Moses is made to sp2iik of himself in the third

person; the very same childish objection since repeated by Thomas Paine, whose ignorance may somewhat excuse him, but Spinoza surely could read the Commentaries of Csesar, in the original, who speaks of himself modestly in the third person throughout all his writings. He also objects to the expression of the Canaanites being then in the land. These senseless cavils, worthy only of one of those modern freethinkers whose learning, in the opinion of bishop Warburton, is not sufficient to carry them even to the confines of rational doubt, we have sufficiently obviated in another place. See SCRIPTURE. In the midst of this dogmatical scepticism, he bears such a testimony to the last chapters of the book of Daniel as we should not, have looked for in the writings either of u Jew or a Deist. Af-ter detailing the various hypotheses respecting the author and the intention of the book of Job, in which, he says, Momus is called Satan, he proceeds in these words: — ‘Transeo ad Danielis librum ; hie sine dubio ex cap. 8. ipsius Danielis scripta continet. Undenam autem priora sep-tem capita

descripta fuerint, nescio,' thus admitting the famous prophecy of the seventy weeks. That so paradoxical a writer, who had been originally a Jew, and was now almost a Deist, should have treated the New Testament with as little ceremony as the Old, will not surprize the intelligent reader. He begins his remarks, Jiowever, with affirming that no m&ii can peruse the Christian Scriptures and not acknowledge the apostles to have been prophets; but he thinks that their mode of prophecying was altogether different from that which prevailed under the Mosaic dispensation ; and that the gift, whatever it was, forsook them the instant that they left off preaching, as their writings have to him every appearance of human compositions. This distinction between Christian and Jewish prophecy is the more wonderful, that he founds it principally on the dissimilarity of style visible in the writings of the Old and New Testaments. Taking our leave of his Tractatus Theologico Politicus, we shall now give our readers a short account of his Opera Posthuma. These consist of. 1. Ethica, more geometrico de-monstrata; 2. Politica; 3. De Emendatione Intellectus; 4. Epistolae, et ad eas Ilesponsiones ; 5. Compendium Grammatices Linguae Hebrceae. The Ethica are divided into five parts, which treat in order, de Deo ; de natura et origine men-tis; de origine et natura effectuum ; de servitute humana, seu de affectuum viribus ; de potentia intellectus, seu de libertate humana. As the au thor professes to tread in the footsteps of the geometers, and to deduce all his conclusions by rigid demonstration from a few self-evident truths, he introduces his work, after the manner of Euclid, with a collection of definitions and axioms. These are couched in terms generally ambiguous. His definition of substance, for instance, is c-o expressed as to admit of two senses ; in one of which it is just, whilst in the other it is the parent of the most impious absurdity. 'Per substantial!) intelligo id, quod in se est, et per se concipitur : hoc est id, cujus conceptus non indiget conce; tu alterius rei, a quo formar debeat.' .1} by tins he meant that a substance

is that which we can conceive by itself without attending to any thing else, or thinking of its formation, the definition, we helieve, will be

admitted by every reflecting mind, as sufficiently distinguishing the thing denned from an attribute, which, he says, is that which we perceive of a substance, and which we certainly cannot conceive as existing by itself. Thus the writer of this article can shut his eyes and contemplate in idea the small quarto volume now before him, without attending to any thing else, or thinking of its paradoxical author, or even of the Great Being who created the matter both of him and of it ; but he cannot for an instant contemplate the yellow color of its vellum boards without thinking of triple extension, or, in other words, of body. The book therefore is a substance, because conceivable by itself; the color is an attribute or quality, because it cannot be conceived by itself, but necessarily leads to the conception of something else. But if Spinoza's meaning be, that nothing is a substance but what is conceived as existing from eternity, independent of every thing as a cause, his definition can-not be admitted: for every man conceives that which in himself thinks, and wills, and is conscious, as a substance ; at the same time that he has the best evidence possible that he existed not as a conscious thinking, and active being, from eternity. His fourth axiom is thus expressed : — 'Effectus cognitio a cognitione causse dependet, et eandem involvit ;' and his fifth, ' Quae nihil commune cum se invicem habent, etiam per se invicern intelligi non possunt, sive conceptus, unius alterius concepturn non involvit.' The former of these propositions, so far from being self-evident, is not even true ; and the latter is capable of two senses very different from each other. That every effect proceeds from a cause is indeed an axiom ; but surely we may know the effect accurately, though we be ignorant of the particular cause from which it proceeds (see PHILOSOPHY and PHYSICS); nor does the knowledge of the one by any means involve the knowledge of the other. If different things have nothing in common, it is indeed true that the knowledge of one of them will not give us an adequate conception of the other ; but it will in many cases compel us to believe that the other exists or has existed. A parcel of gunpowder lying at rest has nothing in common with the velocity of a cannon-ball ; yet, when we know that a ball has been driven with velocity from a cannon, we infer with certainty that there has been a parcel of powder at rest in the chamber of that cannon, before it was fired. It is upon such ambiguous definitions and axioms as these that Spinoza has raised his pretended demonstrations, that one substance cannot produce another ; that every substance must necessarily be infinite ; that no substance exists or can be conceived besides God; and that extended substance or body is one of the infinite attributes of God. We shall not waste time with a formal confuta-tion of these absurdities. They are sufficiently confuted in other articles of this work ; and whoever wishes for a more particular examination of the

author's principles, may find it in Dr. Clarke's Demonstration of the Being and

Attributes of God. According to Spinoza bodies are either attributes or affections of Goa ; and, as he says there is but one extended substance, he affirms that substance to be indivisible. He attempts to prove that God is an extended as well as a thinking substance ; that as a thinking substance he is the cause of the idea of a circle, and as an extended substance of the circle itself; that the minds of men are not substances, but certain modifications of the divine attributes. And that thinking and extended substances are in reality but one and the same substance, which is sometimes comprehended under one attribute of the Deity, and sometimes under another. If this impious jargon be not Atheism, or as it has been sometimes called Pantheism, we know not what it is. According to Spinoza, there is but one substance, which is extended, infinite, and indivisible. That substance indeed he calls God ; but he labors to prove that it is corporeal ; that there is no difference between mind and matter ; that both are attributes of the Deity variously considered ; that the human soul is a part of the intellect of God ; that the same soul is nothing but the idea of the human body ; that this idea of the body, and the body itself, are one and the same thing; that God could not exist, or be conceived, were the visible universe annihilated ; and therefore that the visible universe is either the one substance, or at least an essential attribute or modification of that substance. According to him, nothing but the prejudices of education could have led men to fancy that there is any real distinction between good and evil, merit and demerit, praise and reproach, order and confusion; that eyes were given that the owners might see ; that the sun was formed to give light, &c. If this be true, it is impossible to discover wisdom in the operations of his one substance ; since it is the very characteristic of folly to act without any end in view. His Compendium Grammatices Linguae Hebrxae, though left imperfect, appears to have so much merit, that it is to be wished he had fulfilled his intention of writing a philosophical grammar of that language, instead of wasting his time on abstruse speculations, which, though they seem not to have been injurious to his own virtue, are certainly not calculated to promote the virtue of others, or to increase the sum of human happiness.

SPINOZISM, the opinions and doctrines of Spinoza. See the last article.

SPINTHERE. Color greenish-gray. In small oblique double four-sided pyramids. It does not scratch glass. It occurs in the department of Isere

in France, incrusting calcareous spar crystals. It is believed to be a variety of sphene.

SPINTURNIX, in fabulous history, a bird, or rather a quadruped with wings, which was said sometimes to attend the sacrifices, and carry away a live coal from the altar ; which was reckoned an omen of ill luck. — Pliny. It would have been more natural for such a monster to have carried off the sacrifice.

SPIRA (Francis), an eminent Italian lawyer, who nourished with great reputation in the beginning of the sixteenth century, at Citadella in the Venetian States. He had imbibed the prin-

ciples of the lleformation, and was accused of heresy, before John De La Casa, archbishop of Benevento, the pope's nuncio at Venice. He made some concessions, and asked pardon for his errors; but the nuncio insisted on a public recantation. Spira was exceedingly averse to this measure, but, at the pressing entreaties of his wife and his friends, he at last complied. But he would have suffered much less torture 'at the stake, had he had the courage to have avowed his faith and died a martyr, than he did afterwards by the remorse he felt, and the dreadful state of melancholy he fell into. By the advice of physicians and divines, he was removed to Padua; but. no change of place, medicine, regimen, or consolatory advice, could afford any relief to his wounded conscience. He thought himself certain of eternal damnation, and refused all the consolation that could be suggested. He sometimes even imagined that he already felt the torments of the damned. His melancholy case, in which he long lingered, and to which at last he fell a victim in 1548, made a great noise throughout Europe. The celebrated Henry Scrimzeor is said to have written an account of it with his life. We have seen a small work giving an account of his case in English, probably an extract or translation from Scrimzeor ; but, of all the books that ever were printed, it would be the most dangerous to be put into the hands of a person inclined to melancholy. SPIR'ACLE, n. s. ˆ Lat. spiraculum. A SPIRAC'ULA. I breathing nole ; vent ;

small aperture. .

Most of these spiracles perpetually send forth fire, more or less. Woodward.

As these volcanos are supposed to be spiracula or breathing holes to the great subterraneous fires, it is probable that the 'escape of elastic vapours from them is the cause, that the earthquakes of modern days are of such small extent compared to those of ancient times, of which vestiges remain in every part of tne world, and on this account may be said not only to be innocuous, but useful. Darwin.

SPIR.EA, the spiraa frutex, in botany, a ge-nus of plants belonging to the class of icosandria, and to the order of pentagynia ; natural order twenty-sixth, pomacefe : CAL. quinquefid ; there are five petals ; CAPS, polyspermous. There are eighteen species ; of which two only

are British, the filipendula and ulmaria. 1. S. filipendula, dropwort, has pinnated leaves : the leaflets are serrated ; the stalk is herbaceous, about a foot and a half high, terminated with a loose umbel of white flowers, often tinged with red. The petals are generally six, and the segments of the calyx are reflexed ; the stamina are thirty or more ; the germina twelve or upwards. It grows in mountainous pastures. 2. S. ulmaria, mea-dow-sweet. The leaves have only two or three pair of pinnae, with a few smaller ones intermixed ; the extreme one being larger than the rest, and divided into three lobes. The calyx is reddish ; the petals white, and the number of capsules from six to ten twisted in a spiral. The tuberous pea, like roots of the filipendula dried and reduced to a powder, have been used instead of bread in times of scarcity. Hogs are very fond of these roots. Cows, goats, sheep, and

swine, eat the plant; but horses refuse it. The flowers of the ulmaria have a fragrant scent, which rises in distillation. The whole plant in deed is extremely fragrant, so that the common people of Sweden strew their floors with it on holidays. It has also an astringent quality, and has been found useful in dysenteries, ruptures, and in tanning of leather.

SPIRAGO, a town of the new Italian kingdom, in the department of the Olona, district and late principality of Pavia, seated on the Olona, in a fertile country.

SPI’RAL, adj. \ FT. spirulc ; Lat. spira.

SPI’RALLY, adv. £ Curve; winding-; inSPIRE, n. s, Scv.n.) volved, like a screw : the adverb corresponding : a spire is a curvature ; any thing wreathed or hoisted to a point; any thing taper : to shoot up in the way.

‘Twere no less than a traducevnent to silence, that Which to the spire and top of praises vouched, Would seem but modest. Shukspeare.

His head

Crested aloft, and carbuncle his eyes ; With burnished neck of verdant gold, erect Amidst his circling spires, that on the grass Floated redundant. Miltor.,

With glistering spires and pinnacles adorned. Id.

He cannot make one spire of grass more or less than he hath made. Hate's Origin if M-mkind.

A dragon's fiery form belied the god, Sublime on radiant spires he rode. Dryden,

The process of the fibres in the ventricles, running in spiral lines from the tip to the base of the heart, shews that the systole of the heart is a muscular constriction, as a purse is shut by drawing the strings contrary ways. Ray.

The sides are composed of two orders of fibres, running circularly or spirally from base to tip.

Id. on the Creation.

It is not so apt to spire up as the other sorts, be-ing more inclined to branch into arms. Mortimer.

These pointed spires that wound the ambient sky, In glorious change ! shall in destruction lie. Prior.

Why earth or sun diurnal stages keep, In spiral tracts why through the zodiack creep.

Blackmore.

The intestinal tube affects a straight, instead of a spiral, cylinder. Arbuthnot on Aliments.

Air seems to consist of spires contorted into small spheres, through the interstices of which the particles of light may freely pass ; it is light, the solid substance of the spires being very small in proportion to the spaces they take up. Cheyne.

As woodbine weds the plant within her reach, Rough elm, or smooth-grained ash, or glossy beech, In spiral rings ascends the trunk, and lays Her golden tassels on the leafy sprays, But does a mischief while

she lends a grace, Straitening its growth by such a strict embrace.

Cowper.

Well spake the prophet, Let the desert sing, Where sprang the thorn, the spirii fir shall spring, And where unsightly and rank thistles grew, Shall grow the myrtle and luxuriant yew. Id.

SPIRAL LINE, in geometry, acurve line of the circular kind, which in its progress recedes from its centre.

SPIRE, in architecture, was used by the ancients for the base of a column, and sometimes for the astragal or tore ; but among the moderns it denotes a steeple that continually diminishes as it ascends, whether conically or pyramid ically.

SPIRE, cr SPEYER, an ancient town in the vest of Germany, situated at the confluence of the Spirebach and the Rhine, fourteen miles south of Manheim, and sixteen north-east of Landau. It long gave name to a bishopric ; and the only interesting building is the old cathedral, now falling into decay. Spire was frequently the seat of the German diet; and it was in one of these assemblies, in 1 529, that a protest, entered by the reformers against certain proceedings of the emperor, procured them the name of Protestants. From 1795 to 1814 it belonged to the French ; at present it is the capital of the Bavarian province of the Rhine, and has a lyceum established by government. Population about 4000. The bishopric of Spire was not of great extent. It contained 55,000 inhabitants, and yielded a revenue of £30,000 sterling. It was secularised in 1802, and at present belongs partly to Bavaria, partly to Baden. The episcopal residence was Bruchsal.

SPIR'IT, n. s. &u.aO Fr. esprit. Lat.

SPIR'ITALLY, adv. SPIR'ITED, adj. SPIR'ITEDNESS, n. s. SPIR'ITFULNESS, SPIRITLESS, adj. SPIR'ITOUS,

spiritus ; Breath; air; wind ; an immaterial substance or being ; intellectual being ; the soul ; temper or disposition; genius; ar-

SPIR'ITOUSNESS, n. s. [dor ; courage ; an ap-

SPIR'ITUAI., adj. SPIRITUAL'ITY, n. s. SPIRITUALIZE, v. a. SPIRITUALLY, adv. SPIR'ITUALTY, n. s. SPIR'ITUOUS, adj. SPIRITUOS'ITY, n. s. SPIRITUOUS'NESS.

j parition or spectre : to spirit is to animate or actuate as a spirit; encourage ; entice : spiritally is by means of the breath : spirited, lively ; vivacious : the J noun substantive cor-

responding : spiritfulness is sprightliness ; liveliness : spiritless, vapid ; dejected ; low ; depressed : spiritous, defecated ; refined ; advanced near to spirit : spiritousness corresponds : spiritual, immaterial, mental, or intellectual ; not gross ; not temporal : the adverb (spiritually) and noun substantive corresponding: the spiritualty is used for the clerical body: to spiritualize is to refine; purify from the pollutions of the world : spirituous is having the quality of spirit ; lively ; gay : both the noun substantives following corresponding.

The spirit shall return unto God that gave it.

Bible.

They were terrified, and supposed that they had seen a tpirit. Luke xxiv. 37.

More ample spirit than hitherto was wont Here needs me, whiles the famous ancestors Of my most dreaded sovereign I recount, By which all earthly princes she doth far surmount.

Faerie Queene.

Place man in some publick society, civil or spiritual. Hooker.

Look, who comes here ? a grave unto a soul, Holding the' eternal tpirit against her will In the vile prison of afflicted death.

Shukspeare. King John. Farewel the big war, The spirit stirring drum, the ear piercing fife.

S/takspeare. You were used

To say extremity was the trier of spirit.,. That common chances common men could bear. Id,

You are too great to be by me gainsaid 'Your spirit is too trus, your fears too certain. Id.

The watry kingdom is no bar To stop the foreign spirits, but they come. Id.

When I sit and tell

The warlike feats I've done, his fpiriti fly out Into my story. Id. Cymbeline.

A man so faint, so spiritless, So dull, so dead in look, so woe-begone. Drew Priam's curtain. Shakspeare. Henry IV

Nor doth the eye itself, That most pure spirit of sense, behold itself. Id.

Thou art reverend Touching thy spiritual function, not thy life. Id.

We of the spiritualty

Will raise your highness such a mighty sum, As never did the clergy at one time. Id.

If this light be not spiritual, yet it approacheth nearest unto spirituality ; and if it have any corporality, then of all other the-most subtile and pure.

Raleigh.

All purges have in them a raw spirit or wind, which is the principal cause of tension in the stomach. Bacon.

All bodies have spirits and pneumatical parts within them ; but the main difference between animate and inanimate are, that the spirits of things animate are all continued within themselves, and branched in veins as blood is ; and the spirits have also certain seats where the principal do reside and whereunto the rest do resort : but the spirits in things inanimate are shut in and cut off by the tangible parts, as air in snow.

Ii!. Natural History.

Perhaps you might see the image, and not the glass ; the former appearing like a spirit in the air.

Bacon.

Both visibles and audibles in their working emit no corporeal substance into their mediums, but only carry certain spiritual species. Id. ‘

She is a spirit ; yet not like air or wind, Nor like the spirits about the heart or brain ;

Nor like those spirits which alchymists do find, When they in every thing seek gold in vain : For she all natures under heaven doth pass. Being like those spirits which God’s bright face do

see;

Or like himself, whose image once she was, Though now, alas ! she scarce his shadow be. For of all forms she holds the first degree, That are to gross material bodies knit ; Yet she herself is bodyless and free, And though confined is almost infinite. Davies.

Italian pieces will appear best in a room where the windows are high, because they are commonly made to a descending light, which of all other doth set off men's faces in their truest spirit. Wotton.

It may appear airy and spirituous, and fit for the welcome of chearful guests. Id. Architect.

Romish adversaries, from the rising up of some schismatical spirits amongst us, conclude that the main body of our church is schismatical, because some branches of members thereof were such.

White.

As to the future glory in which the body is to par • take, that load of earth which now engages to corruption, must be calcined and spiritualised, and thus be cloathed upon with glory. Decay of Piety.

To a mighty work thou goest, O king, That equal spirits and equal powers shall bring.

Daniel.

A cock's crowing is a tone that corresponds to singing, attesting his mirth and spiritfulness.

Harvey.

This would take it much out of the care of the soul, to spiritualize and replenish it with good works.

Hammond.

I ask but half thy mighty spirit for me. Cowley.

Oft pitying Goo,' did well-formed spirits raise, Fit for the toilsome bus'ness of their days, To free the groaning nation, and to give Peace first, and theo the rules in peace to live. Id.

By means of the curious inosculation of the audi-tory nerves, the orgas'ns of the spirits should be allayed. Dei-ham.

In the same degree that virgins live more spiritually than other persons, in the same degree is their virginity a more excellent state.

Taylor's Rule of Holij Living.

These discourses made so deep impression upon the mind and spirit of the prince, whose nature was inclined to adventures, that he was transported with the thought of it. Clarendon.

He sits

Upon their tongues a various spirit, to rase Quite out their native language. Milton.

In spirit perhaps he also saw Rich Mexico, the seat of Montezume. Id.

So talked the spirited sly snake.

Id. Paradise Lost.

Of their wonted vigour left them drained, Exhausted, spiritless, afflicted, fallen. Id.

More refined, more spirituus and pure, As nearer to him placed, or nearer tending.

Milton.

Spiritual armour, able to resist Satan s assaults. Id.

More refined, more spirituous and pure, As to him nearer tending. Id.

A wild Tartar, when he spies A man that's handsome, valiant, wise, If he can kill him, thinks t' inherit His wit, his beauty, and his spirit. Butler.

We begin our survey from the lowest dregs of sense, and so ascend to our more spiritualized selves.

Glanville.

In the southern coast of America, the southern point of the needle varieth toward the land, as being disposed and spirited that way by the meridional and proper hemisphere. Browne.

What the chymists call spirit, they apply the name to so many different things that they seem to have no settled notion of the thing. In general, they give the name of spirit to any distilled volatile liquor. Boyle.

They, notwithstanding the great thinness and spi-ritouiiness of the liquor, did lift up the upper surface, and for a moment form a thin film like a small hemisphere. Id.

Conceive one of each pronounced spiritally, the Other vocally.

Holder’s Elements of Speech.

That peculiar law of Christianity, which forbids revenge, no man can think grievous, who considers the restless torment of a malicious and revengeful spirit. Tillotson.

The noblest .spirit or genius cannot deserve enough of mankind, to pretend to the esteem of heroick virtue. Temple.

He will be faint in any execution of such a counsel, unless spirited by the unanimous decrees of a general diet. Id.

Such spirits as he desired to please, such would I chuse for my judges. Dryden.

To sing thy praise, would heaven my breath prolong,

Infusing spirits worthy such a song, Not Thracian Orpheus should transcend my lays.

Id. VOL. XXI.

Nor did all Rome, grown spiritless, supply A man that for bold truth durst bravely die. Id.

These servants, who have believing masters, are forbid to withdraw any thing of their worldly respect, as presuming upon their spiritual kindred ; or to honour them less, because they are become their brethren in being believers. KeMeworth.

Spirit is a substance wherein thinking, knowing doubting, and a power of moving, do subsist.

Locke.

Whilst young, preserve his tender mind from al\ impressions of spirits and goblins in the dark. Id.

God has changed men’s tempers with the times, and made a spirit of building succeed a spirit of pulling down. _ South.

There is in wine a mighty spirit, that will not Le congealed. <.

The same disaster has invaded his spirituals ; the passions rebel ; and there are so many governours that there can be no government. Id.

A pleasure made for the soul, suitable to its spirituality, and equal to all its capacities. Id.

Many secret indispositions and aversions to duty will steal upon the soul, and it will require both time and close application of mind to recover it to such a frame as shall dispose it for the spiritualities of religion. Id,

Art thou so base, so spiritless a slave ? Not so he bore the fate to which you doomed him.

Smith,

Of common right, the dean and chapter are guardians of the spiritualities, during the vacancy of a bishoprick. Ayliffe.

He showed the narrow spiritedness, pride, and ignorance of pedants. Addison.

Nor once disturb their heavenly spirits With Scapin's cheats, or Caesar's merits. Prior.

If man will act rationally, he cannot admit any competition between a momentary satisfaction, and an everlasting happiness, as great as God can give and our spiritualised capacities receive. Holers.

All men by experience find the necessity and aid of the spirits in the business of concoction.

Elackmore.

Some, who pretend to be of a more spiritual and .efined religion, spend their time in contemplation, and talk much of communion with God.

Calamy's Sermons.

All spirits, by frequent use, destroy, and at last extinguish, the natural heat of the stomach.

Temple.

In distillations, what trickles down the sides of the receiver, if it will not mix with water, is oil ; it' it will, it is spirit. Arbuthnot on Aliments.

The ministry had him spirited away, and carried abroad, as a

dangerous person.

Arbuthnot and Pope.

The most spirituous and most fragrant part of the plant exhales by the action of the sun. Arbuthnot.

All creatures, as well spiritual as corporeal, declare their absolute dependence upon the first Au-thor of all beings, the only self-existent God.

Bent let/.

I shall depend upon your constant friendship ; like the trust we have in benevolent spirits, who, though we never see or hear them, we think are constantly praying for us. Pope..

In some fair body thus the secret soul With spirits feeds, with vigour fills the whole : Each motion guides, and every nerve sustains, Itself unseen, but in the' effects remains. Id.

Dryden's translation of Virgil is noble and spirited. Id.

The king's party, called the cavaliers, beˆan ti> recover their spirits. Kwif't.

SPI 1

Many officers and private men spirit up and assist those obstinate people to continue in their rebellion.

Id.

The clergy's business lies among the laity ; nor is there a more effectual way to forward the salvation of men's souls, than for spiritual persons to make themselves as agreeable as they can in the conversations of the world. Id.

If we seclude space, there will remain in the world but matter and mind, or body and spirit.

Watts' '* Logick.

You are all of you pure spirits. I don't mean that you have not bodies that want meat and drink, and sleep and clothing ; but that all that deserves to be callea you is nothing else but spirit. Law.

Every thing that you call yours, besides this tpirit, is but like your cloathing : sometimes that is only to be used for a while, and then to end, and die, and wear away. Id.

He is the devout man, who lives no longer on his own will, or the way and spirit of the world, but to the sole will of God. Id.

He is always forced to drink a hearty glass, to drive thoughts of business out of his head, and make his spirits drowsy enough for sleep. Id.

She loves them as her spiritual children, and they

reverence her as their spiritual mother, with an affection far above that of the fondest friends. Id.

SPIRIT, in metaphysics, an incorporeal being or intelligence ; in which

sense God is said to be a spirit, as are angels and the human soul. See ANGEL, METAPHYSICS, and THEOLOGY.

SPIRIT, in chemistry and pharmacy, a name applied to every volatile liquid which is not insipid like phlegm or water ; and hence the distinction into acid, alkaline, and vinous spirits. See PHARMACY, Index.

SPIRIT, PYRO-ACETIC. Some dry acetatej exposed to heat in a retort yield a quantity of a light volatile spirit, to which the above name is given. When the acetate is easily decomposed by the fire it affords much acid and little spirit ; and, on the contrary, it yields much spirit and little acid when a strong heat is required for its decomposition. The acetates of nickel, copper, &c., are in the first condition ; those of barytes, potash, soda, strontian, lime, manganese, and zinc, are in the second. The following table of M. Chenevix exhibits the products of the distillation of various acetates : —

TABLE of Pyro-acetic Spirit.

Loss by the fire

Acetate of Silver.

Acetate of Nickel.

Acetate of Copper.

Acetate of Lead.

Peracetate of iron.

Acetate of Zinc.

Acetate of Manganese.

0-36

0-61

0-64

0-37

0-49

0-555

, • f State of the base

‘3 1 ‘

metallic.

metallic.

metallic.

metallic.

bl. oxide.

wh. oxide.

br. oxide.

*-“3 C. Residue Carbon.

0-05

0-14

0-055

0-04

0-02

0-05

0-035

r2 o i Specific gravity §•_§ < Ratio of acid 3 1C Pyro-acetic spirit

1-0656 107-309 0

1-0398 44-731

almost 0

1-0556 84-863 0-17

0-9407 3-045 0-555 .

1-011

27-236 0-24

0-8452 2-258 0-695

0-8264 1-285 0-94

f t! C Carbonic acid 3 ˆ •? Carbonate hydro. J jˆt Total gas

8 12 20

35 60 95

10 34 44

20 8 28

18 34 52

16 28 44

20 32 52

We see that, of all the acetates, that of silver gives the most concentrated and purest acetic acid, since it contains no pyro-acetic spirit. This spirit is limpid and colorless. Its taste is at first acrid and burning, then cooling, and in some measure urinous. Its odor approaches that of peppermint mingled with bitter almonds. Its specific gravity is 0-7864. It burns with a flame interiorly blue, but white on the outside. It boils at 138-2 Fahrenheit, and does not congeal at 5° Fahrenheit. With water it combines in every proportion, as well as with alcohol, and most of the essential oils. It dissolves but a little of sulphur and phosphorus, but camphor in very large quantity.

Caustic potash has very little action on the pyro-ocetic spirit. Sulphuric and nitrous acids decompose it ; but muriatic acid forms with this body a compound, which is not acid, and in which we can demonstrate the presence of the muriatic acid only by igneous decomposition. Hence we perceive that pyro-acetic spirit is a peculiar substance, which resembles the ethers, alcohol, and volatile oils. To obtain it cheaply we may employ the acetate of lead of commerce.

After having distilled this salt in an earthen re-tort, and collected the liquid products in a globe, communicating by a tube with a flask surrounded with ice, we saturate these products with a solution of potash or soda, and then separate the spirit by means of a second

distillation, taking care to use a regulated heat. As it usually carries over with it a little water, it is proper to rectify it from dry muriate of lime. — Ann. de Chimie, torn. 69.

SPIRITUOUS LIQUORS. Moralists, philosophers, and divines, in all ages, and in almost all countries (for all countries abound in some kind of spirituous liquors), have exclaimed against the abuse of spirituous liquors, and with justice; for no human invention has ever tended more to corrupt the morals, and ruin the character, constitution, and circumstances, of numberless individuals, than habitual and excessive indulgence in spirituous liquors. But, while these abuses of them are to be regretted, their proper use and importance should not be overlooked. The learned Dr. Rush of Philadelphia has written much upon this subject ; and, in his zeal for the health and morals of the people, proposes a total

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abolition of the manufacture. In this we differ from that learned physician. Spirituous liquors are not only useful in social life, as a means of conviviality, but in many cases highly beneficial as a medicine. In cases of sudden faintings, apoplectic fits, extreme debility, and, above all, in cases of excessive perspiration, there is no remedy or antidote so speedy and certain in affording effectual relief, except to such as have ruined their constitutions by excessive indulgence in them, as a glass of good spirits. These have another advantage, that, in cases of sudden emergency, they are always at hand ; whereas few persons in health keep an assortment of medicines in their possession ; and the surgeon, physician, and laboratory, are often at a great distance.

Spirituous liquors have in all nations been considered as a proper subject of heavy taxation for the support of the state-. This has naturally occasioned a nice examination of their strength. It having been at last found that this was intimately connected with the specific gravity, this lias been examined with the most scrupulous attention to every circumstance which could affect it, so that the duties might be exactly proportioned to the quantity of spirit in any strong liquor, independent of every other circumstance of flavor or taste, or other valued quality. The chemist at last found that the basis of all strong liquors is the same, produced by the vinous fermentation of pure saccharine matter dissolved in water. He also found that whether this vegetable salt be taken as it is spontaneously formed in the juices of plants and fruits, or as It may be formed or extricated from farinaceous fruits and roots by a certain part of the process of vegetation, it produces the same ardent spirit, which has always the same density in every mixture with water. The minute portions of aromatic oils, which are in some degree inseparable from it, and give it a different flavor, according to the substance from which it was obtained, are not found to have any sensible effect on its density or specific gravity. This seems very completely established in consequence of the unwearied attempts of the manufacturers to lessen the duties payable on their goods by mixtures of other substances, which would increase their density without making them less palatable. The vigilance of the revenue officers was no less employed to detect every such contrivance. In short, it is now an acknowledged point that the specific gravity is an accurate test of the strength. But it was soon found, by those who were appointed guardians of the

revenue, that a mixture which appeared to contain thirty-five gallons of alcohol did really contain thirty-five and a half. This they found by actually making such a mixture : eighteen gallons of alcohol mixed with eighteen of water produced only thirty-five gallons of spirits. The revenue officers, finding that this condensation was most remarkable in mixtures of equal parts of water and the strongest spirits which could then be procured, determined to levy the duties by this mixture ; because, whether the spirituous liquor was stronger or weaker than this, it would appear, by its specific gravity, rather stronger than it really was. This

sagacious observation, and the simplicity of the composition, which could at all times be made for comparison, seem to be the reasons for our excise officers selecting this mode of estimating the strength and levying the duties. A mixture of nearly equal measures of water and alcohol is called proof spirit, and pays a certain duty per gallon ; and the strength of a spirituous liquor is estimated by the gallons, not of alcohol, but of proof spirit which the cask contains. But, because it might be difficult to procure at all times this proof spirit for comparison, such a mixture was made by order of the board of ex-cise ; and it was found that, when six gallons of it was mixed with one gallon of water, a wine gallon of the mixture weighed seven pounds thirteen ounces avoirdupois. The board therefore declared that the spirituous liquor of which the gallon weighed seven pounds thirteen ounces should be reckoned one to six, or one in seven, under proof. This is but an awkward and complex formula : it was in order to suit matters to a mode of examination which had by time obtained the sanction of the board. Mr. Clarke, an ingenious artist of that time, had made a hy-drometer incomparably more exact than any other, and constructed on mathematical principles, fit for computation. This had a set of weights corresponding to the additions of water or proof spirit, and the mixture one to six or one in seven was the only one which weighed an exact number of ounces per gallon without a fraction

SPIRT, v.n.,v. a. Sera. s.) Belg. spruytcn, to SPIR’TLE, v. a. J shoot up (Skinner);

Swed. spritta, to fly out (Lye) ; Goth, sprita. See SPRIT. To spring out in a sudden stream : stream out by intervals; throw out in a jet: sud-den ejection or effort : to spirtle is a corruption of spirt.

Bottling of beer, while new and full of spirit, so that it spirteth when

the stopple is taken forth, maketh the drink more quick and windy.

Bacon's Natural History.

The brains and mingled blood Were spirited on 'tlie wall. Drayton.

When weary Proteus Retired for shelter to his wonted caves, His finny flocks about their shepherd play, And, rowling round him, spirt the bitter sea.

Dry den.

When rains the passage hide, Oft the loose stones spirt up a muddy tide Beneath thy careless foot. GUI/

The terraqueous globe would, by the centrifugal force of that motion, be soon dissipated and spirtled into the circumambient space, was it not kept together by this noble contrivance of the Creator.

Derham's Physicu-Tlieology. Thus the small jett, which hasty hands unlock, Spirts in the gardener's eyes who turns the cock.

Pope.

SPI'RY, adj. From SPIR.E. Pyramidal ; wreathed ; curled.

Hid in the spiry volumes of the snake, I lurked within the covert of a brake. Drijden. In these lone walls, their days eternal bound, These moss-grown domes with spirit turrets-crowned. Where awful arches make a noon-day night, And the dim windows shed a solemn light,

Thy eyes diffused a leconciling ray, And gleams of glory brightened all the day. Pope. SPISS, adj. > Lat.s/)isst«. Close; firm; Spis'siruDE,n. s. \ thick: the noun substantive corresponding. Not in use.

From his modest and humble charity, virtues which rarely cohabit with the swelling windiness of much knowledge, issued this spiss and dense yet polished, this copious yet concise, treatise of the variety of languages. ‘ Brerewood.

Drawing wine or beer from the lees, called racking, it will clarify the sooner ; for, though the lees keep the drink in heart, and make it lasting, yet they cast up some spissitude. Bacon.

Spissitude is subdued by acrid things, and acrimony by inspissating. Arbuthnot on Aliments.

SPIT, n. s. & v. a. » Sax. rpitan ; Belg. spit ; SPIT’TED, adj. \ Ital. spedo. A Ions prong on which meat is driven, to be turned before the fire : the depth of a spade in digging : to put on a spit; thrust through: spitted is shot out into length.

A goodly city is this Antium ; Tis I that made thy widows : then know me not, Lest that thy wives with spits, and boys with stones, In puny battle slay me. Shakspeare. Coriolamts.

I see my cousin’s ghost Seeking out Romeo, that did spit his body Upon a rapier’s point. Stiakspeare.

Whether the head of a deer, that by age is more tpitted, may be brought again to be more branched.

Bacon.

They may be contrived to the moving of sails in a chimney corner, the motion of which may be applied to the turning of a spit.

Wilkins’s Mathematical Magick. Where the earth is washed from the quick, face it with the first spit of earth dug out of the ditch.

Mortimer. I spitted frogs, I crushed a heap of emmets.

Dry den.

With Peggy Dixon thoughtful sit, Contriving for the pot and spit. Swift.

SPIT, v. a., i’. w. &n.s. > Sax. ppoetan; Dan.

SPIT’TLE, n. s. } spytter ; Swed. sputa;

Lat. sputo. To eject from the mouth : throw out spittle: the saliva of

the mouth.

He spat on the ground, made clay of the spittle, and anointed the eyes of the blind man. John ix. 6.

And when he had spat on the ground, he anointed his eyes. Gospel.

A large mouth, indeed,

That spits forth death and mountains. Shakspeare. Very good orators, when they are here, will spit.

Id.

The watery kingdom, whose ambitious head Spits in the face of heaven, is no bar To stop the foreign spirits, but they come. Id.

The sea thrusts up her waves, One after other, thicke and high, upon the groaning

shores ; First in herself loud, but opposed with banks and

rocks, she rores, And all her backe, in bristles set, spits every way her

fome. Chapman.

Maenas and Atys in the mouth were bred, And never hatched within the lab'ring head ; No blood from bitten nails those poems drew, But churned, like spitttg, from the lips they flew.

Dryden .

The saliva or spittle is an humour of eminent use.

Roy.

?E, n. s. & v. a. -\ Fr. despit ; Belg. spijt ; E'FUL, adj. (ital. spetto. Malice; E'FULLY, adv. i rancor ; malignity ; ma-E'FULNESS, n. s. 3 levolence: 'in spite of

A drunkard men abhor, and would even spit at him, were it not for fear he should something mere than fpit at them. Snuth.

The spittle is an active liquor, immediately derived from the arterial blood : it is saponaceous.

Arbuthnot.

A genius for all stations fit, Whose meanest talent is his wit : His heart too great, though fortune little, To lick a rascal statesman's spittle. Swift.

Spit on your finger and thumb, and pinch the snuff till the candle goes out. Id. Rules for Servants.

SPITCH'COCK, v. a. To cut an eel in pieces and roast him ; or rather the eel so roasted : of Teut. spelts kochen; *i.e.* that which is cooked on a spit.

No man lards salt pork with orange peel, Or garnishes his lamb with spitcltcockt eel. King. SPITE, n. s. & v. a. ˆ _ Fr. despit ; Belg. spijt ; SPITE'FUL, SPITE'FTJLLY, SPITE'FUL?

is in defiance of: to spite is to vex; treat with malice ; offend : the adjective and adverb correspond.

This breeding rather spite than shame in her, or, if it were a shame, a shame not of the fault but of the repulse, she did thirst for a revenge. Sidney.

So with play did he a good while fight against the fight of Zelmane, who, more spited with that courtesy, that one that did nothing should be able to resist hei. burned away with choler any motions which might grow out of her own sweet disposition. Id.

The Jews were the deadliest and spilefallest enemies of Christianity that were in the world, and in this respect their orders to be shunned. Hooker.

Beguiled, divorced, wronged, spighted, slain, Most detestable death, by thee. Shakspeare.

All you have done Hath been but for a wayward son, Spiteful and wrathful. Id. Macbeth.

I'll guard thee free,

And save thee in her spite. Chapman.

Our publick form of divine service and worship is in every part,

thereof religious and holy, maugre die nialice of spiteful wretches who have depraved it.

White.

Bewray they did their inward boiling spite, Each stirring others to revenge their cause. Daniel.

Done all to spile

The great Creator ; but their spite still serves His glory to augment. Milton's Paradise Lost. Twice false Evadne, spitefully forsworn ! That fatal beast like this I would have torn.

Waller.

Darius, spited at the magi, endeavoured to abolish not only their learning but their language. Temple.

In spite of me I love, and see too late My mother's pride must find my mother's fate.

Dry den.

The spiteful stars have shed their venom down, And now the peaceful planets take their turn. Id.

In fireworks give him leave to vent his spite ; Those are the only serpents he can write. Id.

Blessed be such a preacher, whom God made use of to speak a word in season, and saved me in spit* of the world, the devil, and myself. South.

Contempt is a thing made up of an undervaluing of a man, upon a belief of his utter uselessness, and a spiteful endeavour to engage the rest of the world in the same slight esteem of him. Id.

For thy loved sake, spite of my boding fears. I'll meet the danger which ambition brings. Rove.

SPITZBERGEN.

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My father's fate,

In spite of all the fortitude that shines Before my face in Cato s great

example, Subdues my soul, and fills my eyes with tears.

Addison.

It looks more like spitefulness and ill-nature than a diligent search after truth. Keil against But-net.

In spite oj all applications, the patient grew worse every day. Arbulhnot.

Begone, ye criticks, and restrain your spite; Codrus writes on, and will for ever write. Pope.

Vanessa sat,

Scarce listening to their idle chat, Further than sometimes by a frown, When they grew pert, to pull them down : At last she spitefully was bent To try their wisdom's full extent. Swift.

.The cause is plain, and not to be denied, The proud are always most provoked by pride ; Few competitions but engender spile, And those the most, where neither has a right.

Cmpper,

SPITHEAD, aroaa between Portsmouth and tne Isle of Wight, where the royal navy of Great Britain frequently rendezvous.

SPITTLE, n. s. Corrupted from hospital, and therefore better written spital. Hospital. It is still retained in Scotland.

To the spittle go,

And from the powdering tub of infamy Fetch forth the lazar kite of Cressid's kind.

Shakspeare. Henry V. This is it

That makes the waned widow wed again, She whom the tpittle house, and ulcerous sores, Would cast the gorge at. Id. Timon.

Cure the spittle world of maladies. Cleaveland.

SPITTLE, in physiology. See SALIVA.

SPITZBERGEN, or East Greenland, a name that has been given to a group of islands in the Northern Ocean, formerly supposed to make

part of the continent. They are situated between 76° 30’ and 80° 30’ N. lat., and between 9° and 20° E. long. The land was first discovered by Sir Hugh Willoughby in the year 1553, who called it Greenland. In 1595 it was again visited by Barentz and Cornelius, two Dutchmen, who pretended to be the original discoverers, and called the country Spitzbergen, or Sharp Mountains, from the many sharp-pointed and rocky mountains with which it abounds. They alleged that the coast discovered by Sir Hugh Willoughby was some other country ; which accordingly the Hollanders delineated on their maps and charts by the name of Willoughby Land ; whereas in fact no such land ever existed ; and, long before the voyage of these Dutchmen, Barrows, an English shipmaster, had coasted along a desolate country from lat. 78° to 80° 11’ N., which was undoubtedly Spitzbergen. The sea in the neighbourhood abounding in whales, this country has been long the common resort of the fishing ships from different countries. But, till the voyage of captain Phipps in 1773, the situation of the country was erroneously laid down.

This group extends further north than any other country yet discovered, and approaches within ten degrees of the pole. Spitzbergen is encompassed by the Arctic Ocean, and, though annually visited by vessels engaged in the whale-

fishery, it does not ever appear to have been permanently inhabited. The mainland stretches about 300 miles, nearly in the direction of the meridian, as South Cape is in lat. 76° 30’, and the opposite extremity in 80° 7’ of latitude ; and even one of the islands reaches 80° 40’.

The climate of these dreary regions is almost always intensely cold-, and even in the three warmest months in the year, when the sun constantly shines, and the air is usually clear, the mean temperature is only about 34° 30’ of Fahrenheit’s scale ; while, during this period, the thermometer is often below the freezing point. The sun shines without setting for about four months in the year, and which has, therefore, been called their longest day. But, after he has passed the equinox, the approach of winter becomes very rapid. The sun sinks wholly below the horizon, and the temperature diminishes till the cold becomes intense. The birds of passage take their flight to milder regions, and the beasts that remain retire to their winter abodes. At this season the bear alone roams abroad. But man, as if determined to contes” the sovereignty of desolation with this arctic monster, has even dared to winter on these bleak shores. Actuated by the prospect of gain to be derived from the opportunities of hunting and fishing during the

winter, several adventurers annually proceed from Archangel and other ports on the White Sea, in small ves.sv.-ls fitted out for the purpose, and supplied with provisions and stores of all kinds that may be requisite for their support. Fuel, and huts ready constructed, are also taken out. These vessels either winter m some of the most obscure coves along the coast, or return with the members of the small colony, and the produce of their labors, that had been left the preceding year. As soon as they arrive at the place of their destination, the huts are erected, and the sailors remain on shore during the winter. Being accustomed to so severe a climate in their own country, they are seldom prevented from going abroad, unless when buried beneath the snow, which sometimes happens. In such cases they are obliged to make their way through the chimney to get out. The object of the adventurers is to kill whales, seals, sea-horses, bears, rein-deer, and arctic foxes. Instead of receivinr wages from their employers, they are supplied with provisions and other stores, and are entitled to a certain portion of the produce of their labors when they return. Some of them are even hardy enough to prolong their stay for two or three years ; but in that case they often fall victims to the fatal effects of the scurvy, which is the great bane of those regions. Though the sun remains below the horizon for about four months in the year, it is seldom very dark during that season ; for the brightness of the moon, which sometimes shines for nearly fourteen days together, the resplendent brilliancy of the stars, and the reflection of the aurora boreal is, which often resembles a blaze of fire, afford sufficient light to read by. The surface of Spitzbergen presents a scene or rugged nakedness and desolation, which is, perhaps, unparalleled. Buried beneath almost perpetual snow, its vegetable productions are

nearly all of the incumbent classes. A few mos-ses, lichens, and other arctic plants, make up *he scanty catalogue. The only semblance of a shrub is the dwarf willow, which, in comparison, towers above all the other tribes, though seldom rising to more than two inches in height. The scenery of Spitzbergen is strikingly sublime and awfully grand ; but it is a brilliancy of desolation, which rather astonishes than

pleases — a chaotic confusion that chills while it delights, and rather overwhelms than elevates the mind.

Mr. Scoresby, in his late very interesting and valuable work on these regions, to which he had previously made seventeen voyages, thus describes the general appearance of Spitzbergen. * The principal objects which strike the eye are innumerable mountainous peaks, ridges, precipices, or needles, rising immediately out of the sea, to an elevation of 3000 or 4000 feet, the color of which, at a moderate distance, appears to be blackish shades of brown, green, gray, and purple, snow or ice, in striae or patches, occupying the various clefts and hollows in the sides of the hills, capping some of the mountain summits, and filling with extended beds the most considerable valleys; and ice of the glacier form, occurring at intervals, all along the coast, in particular situations, as already described, in prodigious accumulations. The glistening, or vitreous appearance of the iceberg precipices ; the purity, whiteness, and beauty of the sloping expanse, formed by their snowy surfaces; the gloomy shade presented by the adjoining or intermixed mountains and rocks, perpetually covered with a mourning veil of black lichens, with the sudden transition into a robe of purest white where, patches or beds of snow occur, presents a variety and extent of contrast altogether peculiar ; which, when enlightened by the occasional ethereal brilliancy of the polar sky, and harmonised in its serenity with the calmness of the ocean, constitute a picture both novel and magnificent. There is indeed a kind of majesty, not to be conveyed in words, in these extraordinary accumulations of snow and ice in the valleys, and in the rocks above rocks, and peaks above peaks, in the mountain groups, seen rising above the ordinary1 elevation of the clouds, and terminating occasionally in crests of everlasting snow, especially when you approach the shore under the impenetrable density of a sum-mer fog ; in which the fog sometimes disperses like the drawing of a curtain, when the strong contrast of light and shade, heightened by a cloudless atmosphere, and powerful sun, burst on the senses in a brilliant exhibition, resembling the productions of magic.'— The highest summit that was determined by Captain Phipps was 4500 feet, and Captain Scoresby ascertained the elevation of one of these peaks, in 1815, that rose to the height of 4395 feet above the level of the sea.

The most remarkable circumstance attendant on these regions is the deception they present in reference to the distance of objects. \Vhen a person most accustomed to judge of distances in other places appioaches Spitzbergen, his experience seems to vanish, and his estimate of the

distance seldom exceeds a small portion of the reality. In clear weather the high land of this island is well defined, and every thing appears distinct at the distance of forty miles. When twenty miles from the shore, it is no uncommon circumstance for seamen to conceive themselves within a league of the land ; and Mr. Scoresby says he has known experienced mariners who have ‘ imagined they could not stand an hour towards the land without running aground ; and yet the ship has sailed three or four hours directly in shore and still been re-note from danger. If after coming in sight of Spitzbergen in clear weather, and sailing for four or five hours directly towards the shore, the atmosphere becomes a little hazy, or even dark and cloudy, the vessel may appear to be further distant than when the land was first seen.’ This Mr. Scoresby thinks satisfactorily accounts for the conduct of the Danish Captain, Hogens Heinson, who was a renowned seaman of that time, and was sent in search of the lost colony in Greenland. After surmounting many difficulties, he perceived the coast of Greenland, and with a clear sea, a favorable wind, and a fresh gale, he sailed for several hours towards it ; but, not appearing to be any nearer the land, he became alarmed, tacked about, and returned to Denmark, saying that his ship had been stopped in her course by ‘some loadstone rocks hidden in the sea.’

Mr. Scoresby, in the description of one of his excursions on shore, thus delineates the appearance of that part of the country, as seen from the summit of one of the mountains. ‘ The prospect was most extensive and grand, A fine sheltered bay was seen on the east of us, an arm of the same on the north-east, and the sea, whose glassy surface was unruffled by a breeze, formed an immense expanse on the west ; the icebergs, rearing their proud crests almost to the tops of the mountains, between which they were lodged, and defying the power of the solar beams, were scattered in various directions about the sea coast and in the adjoining bays. Beds of snow and ice filling extensive hollows, and giving an enamelled coat to adjoining valleys, one of which, commencing at the foot of the mountain where we stood, extended in a continued line towards the north as far as the eye could reach ; mountain rising above mountain, until by distance they dwindled into insignificancy ; the whole contrasted by a cloudless canopy of deepest azure, and enlightened by the rays of a blazing sun, and the effect aided by a feeling of danger seated as we were on the pinnacle of a rock, almost surrounded by tremendous precipices ; all united to constitute a picture singularly sublime. Here we seemed elevated into the very heavens, and, though in a hazardous situation, I was sensible only of pleasing emo-tions, heightened by the persuasion

that, from experience in these kind of adventures, I was superior to the dangers with which I was surrounded. The effect of the elevation, and the brightness of the picture, were such that the sea, which was at least a league from us, appeared within reach of a musket-shot; mountains a dozen miles off seemed scarcely a league from us, and our vessel, which we knew was at the

distance of a league from the shore, appeared in danger of rocks.'

The atmosphere has a remarkable antiseptical effect. Animal and vegetable substances, exposed to the influence of the air, remain for a long period unchanged. Martens, in the account of his voyage to Spitzbergen, says, ' That a man buried ten years before, still retained his perfect shape and dress.' M. Bleau also remarks, in his Atlas Historique, that the bodies of the seven Dutchmen who perished in Spitzbergen, in 1635, were found twenty years afterwards, without having suffered the least putrefaction. Wood and other vegetable substances are preserved in a similar manner. Mr. Scoresby says that when he attempted to explore the shores of Spitzbergen, in 1818, he saw several huts, and some coffins made entirely of wood. ' One of the latter,' he says, ' appeared, by an adjoining inscription, to contain the body of a native of Britain who had died in the year 1788 ; and though the coffin had lain completely exposed, except when covered with snow, during a period of thirty years, the wood of which it was composed not only was undecayed, but appeared quite fresh and new. It was painted red ; and the color even seemed to be but little faded. Things of a similar kind have been met with in Spitzbergen, which have resisted all injury from the weather during the lapse of a century.' One of the most interesting appearances on these coasts is the iceberg. It irequently extends several miles in length, and rises perpendicularly above the sea to the height of 400 or 500 feet, exhibiting various shades, from an emerald green to an appearance of cliffs of white marble.

Islands in the adjacent seas are Moffen Island, situated in lat. 80° 1', and long. 12° 43' east. It is a small island, and of comparatively low land. Low Island is nearly in the same latitude, but about 5° more to the east. Hope Island, on the south-east coast of Spitzbergen, is in lat, 76° 20', and long. 20° east. Cherie Island is in the same longitude, but is situated about 2° further south than Hope Island. — Jan Mayen Island is in lat. 71° and long, about 8° west. It is ten leagues in length,

but not more than three leagues broad ; and derives its name from the Dutch captain by whom it was discovered, in the early part of the seventeenth century The highest point of this island is the peak of Beeren-berg, which rears its icy summit far above the clouds. The height Scoresby determined in 1817 to be 6870 feet. Besides the islands already described, the Russians possess various others on the east of Asia, situated between the coasts of Asia and America, and some near the shores of the latter continent. These islands have rnany excellent bays and anchorages.

SPIXWORTH, a town of England, near Norwich.

SPLACHNUM, in botany, a genus of plants belonging to the class of cryptogamia, and order of musci. The antherse are cylindrical, and grow on a large colored apophysis or umbraculum. The calyptra is caducous. The female star grows on a separate stem. There are six species ; *viz.* 1. Splachnum ampullaceum; 2. Angustatum; 3. Lu'.eum ; 4, Rubrum ; 5. Spha?ricum ; and,

6. Vasculosum. Two of these are natives of Britain; *viz.* 1. S. ampullaceum, the crevvet splachnum, is found in bogs and marshes, and often upon cowdung. It grows in thick tufts. and is about two inches high. The leaves are oval lanceolate, terminated with a long point or beard. The top of the filament or peduncle swells into the form of an inverted cone, which Linnaeus terms an apophysis or umbraculum ; upon the top of which is placed a cylindrical antherse, like the neck of a crewet. The calyptra is conical, and resembles a small extinguisher. 2. S. vasculosum, the acorn-shaped spJachnum, is found upon bogs and cowdung, and upon the points of rocks on the top of the Highland mountains, as on Ben-Lomond, and in the Isle of Sky, and elsewhere. This differs little from the preceding, and perhaps is no more than a variety. The filaments are about an inch high. The leaves oval acute, not so lanceolate and bearded as the other. The apophysis, and the anthera at the top of it, form together nearly an oval figure, not unlike an acorn in its cup, the apophysis being transversely semi-oval, and of a blood-red color, the anthera short and conical. The calyptra is the same as that of the other. The operculum is short and obtuse, and the rim of the anthera has eight large horizontal cilia. The anthera of the other is also ciliated, but not so distinctly. It is an elegant moss, and very distinguishable on account of its orange-colored filaments and dark-red capsules.

SPLAYTO01, adj. J Splay, or display,

SPLAY’MOUTH, n. s.] and foot. Having the foot turned inward : an unnaturally wide mouth.

All authors to their own defects are blind : Hadst thou but, Janus-like, a face behind, To see the people when splaymouths they make, To mark their fingers pointed at thy back, Their tongues lolled out a foot. Dryden.

Though still some traces of our rustic vein, And splayfoot verse remained, and will remain.

Pope.

SPLEEN, n. s. SPLEEN’ED, adj. SPLEEN FUL, SPLEEN’LESS,

Lat splen. The milt; one of the viscera, of which the use is not known : supposed to be

SPLEEN’WORT, n. s. [the seat of anger, me-SPLEEN’Y, adj. f larieholy, and mirth :

SPLEN’ETIC, hence anger, ill-humor ;

SPLEN’IC, a fit of anger or melan—

SPLEN’ISH, choly : spleened is de—

SPLEN’JTIVE. J prived of the spleen :

spleenful, angry ; petulant ; melancholy . as also

spleeny and the last four adjectives, signify.

spleenless; kind ; mild (obsolete) : spleenwort is

a plant.

If she must teem,

Create her child of’ spleen, that it may Jive

And be a thwart disnatured torment to her.

Shakspeare. Charge not in your spleen a noble person,

And spoil your nobler soul. Id.

Brief as the lightning in the collied night,

That in a spleen unfold? both heaven and earth,

And, ere a man hath power to say, behold !

The jaws of darkness do devour it(up. Id.

They that desire the spleen, and would die with

laughing. Id.

Take thy fingers from my throat ; For though 1 am not sptenetive and rash, Yet I have in me something dangerous.

Id. Hamlet.

The commons, like an angry hive of bees That want their leader, scatter up and down : Myself have calm'd their spleenful mutiny.

Id. Henry VI.

What though I know her virtuous, An4 well deserving ; yet I know her for A spleenp Lutheran, and not wholesome to Our cause. Id. Henit, VIII.

Yourselves you must engage Somewhat to cool your spleenith rage, Your grievous thirst ; and to asswage That first, you drink this liquor. Draytm.

Kind pity checks my spleen ; brave scorn forbids Those tears to issue, which swell my eyelids.

Donne.

His solemne queen, whose spleene he was dispos'd To tempt yet further, knowing well what anger it

inclosed, And how wives anger should be used. Chapman.

Mean time flew our ships, and straight we fetcht The syren's isle ; a spleenlets wind so stretcht Her wings to waft us, and so urged our keel. Id.

Suppose the spleen obstructed in its lower parts and sptenick branch, a potent heat causeth the or-gasm us to boil. Haney.

All envied ; but the Thestyan brethren show'd The least respect, and thus they vent their spleen

aloud : Lay down those honoured spoils. Dryden.

The cnearful soldiers, with new stores supplied, Now long to execute their spleenful will. Id.

Horace purged himself from these splenetick reflections in odes and epodes, before he undertook his satires. Id.

The splenick vein hath divers cells.opening into it near its extremities in human bodies ; but in quadrupeds the cells open into the trunks of the splenick veins. Ray on the Creation.

This daughter silently lowers, t'other steals a kind look at you, a third is exactly well-behaved, and a fourth a tplenetick. Tatler.

The spleen with sullen vapours clouds the brain, And binds the spirits in its heavy chain ; Howe'er the cause fantastick may appear, Th' effect is real, and the pain sincere. Blackmore.

Animals tpleened grow salacious. Arbuthnot.

If the wound be on the left hypochondrium, under the short ribs, you may conclude the spleen wounded.

Wiseman.

In noble minds some dregs remain, Not vet purged off", of spleen and sour disdain.

Pope.

If you drink tea upon a promontory that overhangs the sea, the whistling of the wind is better musick to contented minds than the opera to the spleenful.

Id.

Safe passed the gnome through this fantastick band, A branch of healing spleenwort in his hand. Id.

Spleen, vapours, and small-pox above them all.

Id. You humour me when I am sick ;

Why not when I am splenetick? Swift.

For not on beds of gaudy flowers Thine ancestors reclined, \S here sloth dissolves, and spleen devours All energy of mind. Beattie.

Mine be the friend less frequent in his prayers, Who" makes no bustle with his soul's affairs, Whose wit can brighten up a wintry day, And chase the splenetic dull hours away' Ccu-per.

SPLEEN. The use of the spleen remains a problem, towards the elucidation of which the investigations of so many anatomists and physiologists have hitherto afforded very imperfect data. Haller admonishes his reader that ' he is plunging into the region of mere conjecture,' darker than in the case of any other viscus. We might have hoped to derive some light from the diseases under which it frequently suffers, and from the experiments in which it has been removed in animals. The inferences, however, to which we arrive in this way, are only of the negative kind ; they enable us to destroy or refute, but not to build up or establish. The spleen may be found considerably altered in texture where the individual has enjoyed good health betore death, or has died of other complaints. It is often enormously enlarged, without materially affecting the health ; and, on the other hand, where ill-effects are produced, they have no peculiar character, affording illustration of the use of the organ. The experiment of removing the spleen seems to have been performed very anciently.

Pliny says that animals will live after this part has been torn out (lib. xi. c. 30); and the same fact is noticed in the Talmud (Ginz-burger, Medic. Talmud, p. 11). Haller cites various instances in which the spleen has been lost in the human subject ; particularly Leon.

Fioravanti, tesoro della vita humana, 1. ii c. 8. Phil. Trans. No. 451. The removal of it from the dog is an experiment repeated over and over again. See Haller, t. vi. p. 421. We find that animals, and even human subjects, have lived without a spleen, and enjoyed tolerable health. Sometimes the experiment has been fatal, but not from the loss or interruption of any function that could be ascribed to the spleen. We find that dogs have been lively, fat, and even plethoric ; that they have had good appetites ; that bitches have produced young. Some thought they were more salacious ; others that they made water more frequently. In some cases appearances were noticed that might be referred to imperfection in the digestive process, as borborygmi. The liver is said to have suffered in a few instances; in most, however, there seems to have been good bile made ; and generally no particular ill effect was experienced. The inference, then, to be collected from these sources, is that the function of the spleen is of so little importance, that the alteration of its texture by disease is not marked by any unequivocal symptom, and even that its entire removal is hardly followed by any sensible effect.

It has been a generally rece-ved notion that the office of the spleen is related to that of the liver; that the blood, either by its retarded motion through the serpentine splenic vessels, its stagnation in the splenic cells, or other changes wrought in it by the actions of the spleen, acquires peculiar properties, rendering it fit for the secretion of bile in the liver. It is supposed that the splenic blood is loaded with carbon, which the action of-the liver separates from it. We do not usually meet with such arrangements as these in the animal economy ; indeed no instance couid be adduced of the like

nature; one organ to carbonize the blood, that it may be decarbonized by another ; or a part to produce changes in the blood, fitting it for the secretion which is to be performed by another. The tissue of each gland has the power of extracting its peculiar secretion from the common mass. That the spleen produces changes in the properties of the blood is not yet clearly proved ; still less is it proved that such changes, if produced, are in any way concerned with the biliary secretion. Further, bile is secreted where the spleen has been removed ; and it was secreted in the case recorded by Mr. Abernethy, where the vena portarum emptied its blood into the inferior vena cava. We observe no constant relation between the spleen and liver ; the former is extremely small in many birds, reptiles, and fishes, where the

liver is large. The close neighbourhood of this organ to the stomach, and the connexion of their blood-vessels, have led to the conjecture that they are connected in function. It has been imagined that when the stomach is empty, the spleen, like a sponge, swells with blood, and affords a reservoir for the quantity of that fluid, which the blood-vessels of the stomach do not require in the inactive state of the organ ; while, on the contrary, when this bag is distended with food, and the process of digestion demands a more copious afflux of fluids into the stomachic vessels, the pressure of its great extremity empties the splenic sponge, and thus causes a greater ‘flow in the other parts of the cceliac system. This again is all imaginary; not a single point of it founded in observation. It is quite inapplicable to the three lower classes of vertebral animals, where the position of the spleen in many instances, and its firmness in several, are quite incompatible with .the explanation.

Sir Everard Home, in two papers published in the Philosophical Transactions for 1808 on the structure and use of the spleen, attempted to prove that fluids are conveyed from the cardiac end of the stomach into the spleen, and thus arrive in the general circulation, without the intervention of the general absorbing system and thoracic duct. Having tied the pylorus, he injected colored fluids into the stomach ; they were partly absorbed, aud manifested their presence in the circulating system by changes produced in the urine. When rhubarb was used, the cut surface of the spleen produced a decided yellow tint on paper, and the serum of the splenic blood manifested the presence of rhubarb, on the addition of potash ; when no such phenomena were exhibited by the cut surface of the liver, or in the serum of blood from the vena cava. There was a corresponding difference between the effects of potash on fluids, in which the substance of the liver and that of the spleen were broken up. The author abandons this notion in a subsequent communication to the same society, on the passage of fluids from the stomach into the general circulation ; having found that corresponding phenomena were exhibited, after the spleen had been removed.— Philosophical Transactions, 1812. Of numerous other fancies about this mysterious organ, such as that it forms the red globules of

> SPL

me blood, that it is the seat of laughter, or of the sentient soul, that it is designed to balance the liver, Sec., &c., we can say no more than that those who are interested in such speculations will find ample

amusement in Haller's Elem. Phisiol. lib. xxi. sec. 2; or in Soem.nerring de Corp. Hum. Fabrica, t. vi. p. 1.58, et seq. SPLEEN, in anatomy. See ANATOMY. SPLEENWORT, in botany, is a species of asplenium, a genus of the cryptogamia class of plants, and ranked in the order of filices. The parts of fructification are situated in the small sparse line under the disk of the leaves. There are twenty-four species : two are natives of Britain, and grow upon old walls and moist rocks: *viz.* 1 . Asplenium ceteracum, ceterach, or spleenwort ; 2 Asplenium scolopendrium, or hart's tongue. Spleenwort has an herbaceous, mucilaginous, and roughish taste ; it is recommended as a pectoral, and as a nephritic for promoting urine. It was anciently esteemed good against the spleen.

SPLEENWORT, ROUGH, a species of polypo-dium.

SPLEN'DID, adj. y Fr. spienaide ; Latin SPLEN'DIDLY, adv. > splendidns. Showy ; mag-SPLEN'DOUR, n.s. j nificent ; sumptuous : the adverb and noun substantive corresponding.

The dignity of gold above silver is not much ; the splendour is alike, and more pleasing to some eyes, as in cloth of silver. Bacon's Physical Remain;

They assigned them names from some remarkabio qualities, that are very observable in their red and splendent planets. Browne's Vulgar l.rrours.

Their condition, though it look splendidly, yet, when you handle it on all sides, it will prick your fingers. T,ni!nr.

You will not admit you live splendidly, yet it cannot be denied but that you live neatly and elegantly. More.

Unacceptable, though in heaven, our state Of splendid vassalage. Milton.

How he lives and eats, How largely gives, how splendidly he treats.

Dry den.

He, of the royal store Splendidly frugal, sits whole nights devoid Of sweet repose. Philips.

Romulus, being to give laws to his new Romans, found no better way to procure an esteem and reverence to them, than by first procuring it to himself by splendour of habit and retinue. South.

Metallick substances may, by reason of their great density, reflect all the light incident upon them, and so be as opake and splendent as it is possible for any body to be. Newton.

The first symptoms area chilness, a certain splendour or shining in the eyes, with a little moisture.

Arbuthnot.

Deep in a rich alcove the prince was laid, And slept beneath a pompous colonnade : Fast by his side Pisistratus lay spread, In age his equal, on a splendid bed. Pope's Odyssey.

'Tis use alone that sanctifies expense, And splendour borrows all her rays from sense.

Pope,

Upon that night, when fairies light On L'assilis Downans dance,

Or owre the lays, in splendid blaze, On sprightly coursers prance. Bums.

SPLENIUS. See ANATOMY

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SPLENT, n. s. Or perhaps splint. Italian ipine lla ; Belg. soimt. See SPLINTER. Defined in extract

Splents s a callous hard substance, or an insensible swelling, which breeds on or adheres to the shank-bone of a horse, and, when it grows big, spoils the shape of the leg. When there is bu. ~*ie, it is called a single splent ; but when there » .mother opposite to it, on the outside of the shank-bone, it is called a pegged or pinned *plent.

Farrier's Dictionary.

SPLICING, in the sea language, is the untwisting the ends of two cables or ropes, and working the several strands into one another by afidd, so that they become as strong as if they were but jne rope.

SPLINT, or SPLINT'ER, n. s., v. a., &u. n. Belg. splinter ; Dan. splint. A fragment of any thing broken with violence: to break into splints or fragments ; to secure by means of them : to be broken in this way.

This broken joint intreat her to splinter, and this crack of your love shall grow stronger than it was before. Shakspeare. Othello.

He was slain upon a course at tilt, one of the tplinters of Montgomery's staff going in at his bever.

Bacon.

Amidst whole heaps of spices lights a ball, And now their odours armed against them fly ;

Some preciously by shattered porcelain fall, 4nd some by aromatic splinters die. Dryden.

A plain Indian fan used by the meaner sort, made of the small stringy parts of roots, spread out in a round fiat form, and so bound together with a splinter linup. and strengthened with small bars on both sides. Grew't Musceum.

The ancients after the seventh day used tplints which not only kept the members steady, but straight , and of these some are made of tin, others of scabbard and wood, sewed up in linen cloths.

Wiseman's Surgery.

SPLIT, v. a. & v. n.) Pret. and part. pass. SPLIT'TER, n. s. \ split. Belg. spletten, splitten. To cleave ; rive; to divide longitudinally ; dash to pieces ; break : to burst asunder ; part ; be broken against a hard substance : the noun substantive corresponds.

Do 't, and thou hast the one-half of my heart ; Do 't not, thou splittest thine own.

Shakspeare. Winter's Tale. After our ship did split,

When you, and the poor number saved with you, Hung on our driving boat. Shakspeare.

God's desertion, as a full and violent wind, drives him in an instant, not to the harbour, but on the rock where he will be irrecoverably split.

Decay of Piety.

Wert thou served up two in one dish, the rather To split thy sire into a double father ! Cleaveland.

A huge vessel of exceeding hard marble split asunder by congealed water. Boyle.

Cold winter split the rocks in twain. Dryden.

Those who live by shores with joy behold Some wealthy vessel split or stranded nigh ; And from the rocks leap down for shipwrecked gold, And seek the tempests which the others fly. Id.

A skull so hard that it is almost as easy to split a helmet of iron as to make a fracture in it.

Ray on the Creation.

_ In states notoriously irreligious, a secret and irresistible power splits their counsels, and smites their most refined policies with frustration and a curse.

&,;,///

These are the rocks on which the sanguine tribe Oi lovers daily split, and on which the politician, the alchymist, and projector are cast away.

Addison'i Sptt.'atar.

One and the same ray is by refraction disturbed, shattered, dilated, and split, and spread into many diverging rays. Newton.

This effort is in some earthquakes so vehement that it splits and tears the earth, making cracks or chasms in it some miles. Woodward.

The road that to the lungs this store transmits, Into unnumbered narrow channels splits. Rlackmore.

He instances Luther's sensuality and disobedience, two crimes which he has dealt with ; and, to make the more solemn shew, he split 'em into twenty.

Atterbury.

Each had a gravity would make you split, And shook his head at M y as a wit. Pope.

Oh ! would it please the gods to split Thy beauty, size, and years, and wit, No age could furnish out a pair Of nymphs so graceful, wise, and fair ; With half the lustre of your eyes, With half your wit, your years, and size. Su-ift.

The seamen spied a rock, and the wind was so strong that we were driven directly upon it, and immediately split. Id.

How should we rejoice, if, like Judas the first, Those splitters of parsons in sunder should burst.

Id.

Their logick has appeared the mere art of wrangling, and their metaphysicks the skill of splitting an hair, of distinguishing without a difference.

Watts on the Mind.

SPODUMENE, in mineralogy, prismatic, tripbane spar. — Mohs. Color between greenish-white and mountain-gray. Massive, disseminated, and in large granular concretions. Glistening, pearly. Cleavage, threefold. Fracture fine grained uneven. Translucent As hard as,

felspar. Most easily frangible. Specific gravity 3-0 to 3-l . Before the blowpipe it first separates into small gold yellow colored folia; and, if the heat is continued, they melt into a greenish-white colored glass. Its constituents are, silica 64-4, alumina 24-4, lime 3, potash 5, oxide of iron 2-2. Vauquelin. It was first discovered in the island of t'ton in Sudermannland, where it is associated with red felspar and quartz. It has been lately found in the vicinity of Dublin by Di Taylor. It contains the new alkali lithia, by some recent analyses.

SPOHN (Frederic Augustus William), ar eminent German physiologist, was born at Dort-mund in 1792, and studied at the university of ˆ ittemberg. His house and part of his library having been destroyed at the bombardment of that place, in 1813, he removed to Leipsic, where he was nominated in 1817 extraordinary professor of philosophy, and in 1819 professor of ancient literature. He died January 16th, 1824, in consequence of disease brought on by his excessive application to study. His literary labors were numerous and important. In 1815 he published a dissertation De Agro Trojano ir« Carminibus Homeri Descrapto. 8vo., and Cora-mentariub de extrema Parte Odyssiae inde a Raphsod. •*•. v. 297, JEvo recentiori orta quam Ilomerica; and in the last year of his life he printed three pieces under the title of Lectiones i heocriteae. He le't a large quantity of MSS.

SPOIL, v. «., v. n. & 71. s.) Fr. spoiler ; Lat. . SPOIL'ER, 72. .v. £s/w/ io. To seize

SPOIL'FUL, adj.) by robbery; take

away by force : plunder ; corrupt ; mar : to practise robbery ; grow corrupt or useless : as a noun substantive booty ; prey ; corruption ; slough : a spoiler is a robber ; plunderer : spellful, rapaciously wasteful.

They which hate us spoil for themselves.

Psalm xliv. 14.

Beware lest any man spall you, through philosophy and vain deceit. Col. ii. 8.

Ye took joyfully the spoiling of your goods, knowing in yourselves that ye have in heaven an enduring substance. Hebrews.

England was infested with robbers and outlaws, which, lurking in woods, used to break forth to rob and spoil. Spenser.

Yielding themselves upon the Turks' faith, for the safeguard of their liberty and goods, they were most, injuriously spoiled of all that they had.

Knolles's History nf the Turks. Having oft in battle vanquished Those spoilful Picts, and swarming Easterlings, Long time in peace his realm established.

Faerie Qiteene,

The cry of Talbot serves me for a sword ; For I have loaden me with many spoils, Using no other weapon but his name.

Sha/ispeare. Henry VI.

Company, villanous company, hath been the spoil of me. Shakspeare.

Snakes, the rather for the casting of their spoil, live till they be old. Bacon.

Too late, alas ! we find The softness of thy sword, continued through thy

soil, To be the only pause of unrecovered spoils. Drayton.

Such ruin of her manners Rome Doth suffer now, as she's become Both her cwn spoiler and own prey.

Ben Jonson's Catiline. Spiritual pride spoils many graces. Taylor.

This mount, With all his verdure spoiled, and trees adrift.

Milton. Gentle gales,

Fanning their odoriferous wings, dispense Native perfumes, and whisper whence they stole Those balmy spoils. Id.

Go and speed ! Havock, and spoil, and ruin are my gain. Id.

He that gathered a hundred bushels of acorns or apples had thereby a property in them : he was only to look that he used them before they spoiled, else he robbed others. Locke.

Providence, where it loves a nation, concerns it-self to own and assert

the interest of religion, by blasting the spoilers of religious persons and places.

South.

Thou shall not gain what I deny to y-sld, Nor reap the harvest, though thou spoiler: the field.

Prior.

But grant our hero’s hopes long toil And comprehensive genius crown,

Each science and each art his spoil, Yet what reward, or what renown ? Bentuy,

My sons their old unhappy sire despise, Spoiled of his kingdom, and deprived of eyes.

Pope.

Women are not only spoiled by tnis education, but we tpoil that part of the world which would^ other-

wise furnish most instances of an eminent and exalted piety. Law.

Came you then here, thus far, through waves, to

conquer,

To waste, to plunder, out of mere compassion 1 Is it humanity that prompts you on? Happy for us, and happy for you spoilers, Had your humanity ne'er reached our world !

A. Philips.

The SPOIL, among the ancient Greeks, was divided among the whole army ; only the general's share was largest ; but among the Romans, the spoils belonged to the republic.

SPOKE, 7i. s. Sax. j-paca; Teut. speiclte ; Belg. spaak. The bar of a wheel that passes from the nave to the felly.

All you gods,

In general synod take away her power ; Break all the spokes and fellies of her wheel, And bowl the round knave down the hill of heaven.

Shakspeare.

No heir e'er drove so fine a coach ; The spokes, we are by Ovid told, Were silver, and the axle gold. Swift.

SPOLETANI, the ancient inhabitants of Spo-letium.

SPOLETIUM, in ancient geography, a city of Italy, in Umbria. which bravely withstood Hannibal, when in Italy. An inscription over the gates still commemorates this defeat of the great Carthaginian. Water was conveyed into the city from an adjacent mountain, by an aqueduct 230 yards above the foundation, relics of which still exist. It is now called Spoleto. See SPOLETO.

SPOLETO, a town of the ecclesiastical state, the capital of a duchy of the same name, situated on a hill near the Mareggia. The st-cets are extremely steep ; and, though the houses are in general well built,

there is no edifice either public or private that has any claim to distinction. The cathedral, occupying a comman ling situation, presents a front of five Gothic arc'ics, supported by Grecian pillars; but the decorations of the interior display little taste. The castle, situated on a high hill which overlooks the town, is a vast stone building, surrounded with a rampart, and connected with the town by a bridge and aqueduct, thrown over a deep dell, and supported by arches of surprising height ; the boldness of their construction has made them be attributed to the Romans. Spoleto is a place of great antiquity, and was in vain attacke 1 by the Carthaginians, after their victory at the lake Thrasymene. Its antiquities are two of the town gates, the ruins of a theatre, and those of a temple. The only manufacture is of ha's. Fifteen miles S. S. E. of Foligno, and fifty-five N. N. E. of Rome.

SPOLIA OPIMA, Lat., in Roman antiquity, the richest and best of the spoils, which Romulus first set the example of dedicating to Jupiter. See ROME.

SPOLIATION, in ecclesiastical law, is an in-jury done by one clerk or incumbent to another, in taking the fruits of his benefice under a pretended title. It is remedied by a decree to account for the profits so taken. This injury, when the jus-

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patronatus, or right of advowson, doth not come in debate, is cognizable in the spiritual court; as if a patron first presents A to a benefice, who is instituted and inducted thereto; and then, upon pretence of a vacancy, the same pa-tron presents B to the same living, and he also obtains institution and induction. Now, if A disputes the fact of the vacancy, then that clerk who is kept out of the profits of the living, •whichever it be, may sue the other in the spiritual court for spoliation or taking the profits of his benefice. And it shall there be tried, whether the living were or were not vacant ; upon which the validity of the second clerk's pretensions must depend. But if the right of patronage comes at all into dispute, as if one patron presented A, and another patron presented B, there the ecclesiastical court has no cognizance, provided the tithes sued for amount to a fourth part of the value of the living, but may be prohibited at the instance of the patron by the king's writ of indicavit. So also if a clerk, without any color of title, ejects another from his parsonage, this injury must be redressed in the temporal courts ; for it depends upon no question determinable by the spiritual law (as plurality of benefices or no plurality, vacancy or no vacancy), but is merely a civil injury.

SPOLTORO, a town of Naples, in Abruzzo Ultra; twelve miles south-east of Teramo.

SPON (Charles), M. D , a learned French physician, son of a merchant, and born at Lyons, in 1609. He showed a peculiar genius for Latin poetry, so early as his fourteenth year. He studied at Ulm ; graduated at Montpelier in 1632; and became a member of the college of physicians at Lyons, where he practised with great success. He was made honorary physician to Louis XIV. in 1645. He published the Prognostics of Hippocrates, under the title of Sibylla Medica, in hexameter verse; and some Latin iambics. He maintained a learned correspondence with professor Guy Patin, and their letters were published after his death. He died 21st of February, 1684.

SPON (James), M. D., son of the doctor, was born at Lyons, in 1647. After a liberal education, he graduated at Montpelier in 1667, and joined the Faculty at Lyons in 1669. In 1675 and 1676 he made a voyage to Dalmatia, Greece, and the Levant, of which he wrote a fine account. He published many valuable works ; as, 1. Recherches des Antiquites de Lyon, 1674, 8vo 2. Ignotorum atque obscurorum

Deorum Arse, 1677, 8vo. 3. Voyage de la Grece, et du Levant, 1677, 3 vols. 12mo. 4. Histoire de la ville, et del'etat de Geneve, 1680, 2 vols. 12mo. &c. Being a Protestant, he was obliged to leave France, in 1685, on the repeal of the edict of Nantes, and set out for Zurich ; but died at Vevay in 1686. He was a member of the academy of the Ricovrati, at Padua.

SPOND^LUS. See SPONDEE

SPONDANUS (Joannes), or John De Spon-de, a learned Spaniard, born at Maulcon, ir Biscay, in 1557. In 'his twentieth year he began a Commentary on Homer's Iliad and Odyssey, which was printed at Basil, in 1583, in folio, and dedicated to Henry king of Navarre, afterwards

Henry IV. and the Great of France. He also published Aristotle's Logic, Greek and Latin with notes, at Basil, 1583. In 1593 he followed the bad example of the Great Henry, by turning Papist, and published his Reasons ; but they surely could not be half so weighty as those of Henry, as the peace of a kingdom did not depend on his abjuration of Protestant principles. He died in Biscay, in 1595.

SPONDANUS, or SPONDE (Henry), younger brother of John, was born in 1568, and educated at the College of the Reformers at Ortez, where he made a rapid progress in the languages and the canon and civil law. Henry IV. made him master of requests at Navarre. He also turned Catholic, in 1595. In 1600 he went to Rome, where he took orders, and was promoted by Paul V.; but in 1626 he was recalled to France by Louis XIII. and made bishop of Pamiers. He abridged and continued Baronius's Ecclesiastical Annals, from 1197 to 1640. and published in folio Annales Sacri aMundiCreatione, ad ejusdem Redemptionem; with some other works. He died at Thoulouse in 1643.

SPON'DEE, n. s. Fr. spondee; Lat. spon-dceus. A foot of two long syllables.

We see in the choice of the words the weight of the stone, and the striving to heave it up the mountain : Homer clogs the verse with tpondees, and leaves the vowels open. ^ Broome.

SPONDIAS, Brasilian, or Jamaica plum, in botany, a genus of plants belonging to the class of decandria, and order of pentagynia. The calyx is quinquedentate. The corolla pentapetalous. The fruit contains a quinquelocular kernel. There are only two species ; *viz.* S. mombia,

and myrobalanus. But they are so much confounded in the description of different botanists that we cannot venture to describe them.

SPON'DYLE, n. s. Fr. spondile ; Lat. spon-dylus; Gr. ffirov£v\oc. A vertebra; a joint of the spine.

It hath for the spine or back -bone a cartilaginous substance, without any spondyles, processes, or protuberances. Browne.

SPONGE, n. s.,v. a. & v. n.-\ Lat. spongia.

SPON'GER, n. s. I A soft porous

SPON'GINESS, . substance, sup—

SPON'GIOUS, adj. I posed by some

SPONG'Y. J the nidus of

animals. It is remarkable for sucking up water.

Too often written spunge : as a verb active to

blot ; wipe away : as a verb neuter suck in like

a sponge : a sponger is a sucker of this kind :

spongy and spongious, full of cavities like a

sponge.

They opened and washed part of their sponges.

Sandys.

Except between the words of translation and the mind of Scripture itself there be contradiction, very little difference should not seem an intolerable blemish necessarily to be spunyed out. Hooker.

When their drenched natures lie as in a death, What cannot you and I perform upon The unguarded Duncan ". What not put upon His spungy officers, who shall bear the guilt ?

Shakspeare.

Sponges are gathered from the sides of rocks, being as a large but tough n.oss. Baam.

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The lungs are the most spungy part of the body, and therefore ablest to contract and dilate itself.

Id. Natural History.

The lungs are exposed to receive all the droppings from the brain ; a very fit cistern, because of their ipiinginess. Harvey.

Into earth's spungy veins the ocean sinks, Those rivers to replenish which he drinks.

Denham.

The body of the tree being very spongy within, though hard without, they easily contrive into ca-noes. More. \

Return, unhappy swain ! The spungy clouds are filled with gathering rain.

Dryden,

Great officers are like sponges: they suck till they are full, and, when they come once to be squeezed, their very heart's blood comes away. L' Estrange.

The ant lives upon her own, honestly gotten ; whereas the fly is an intruder, and a common smell-feast, that spunges upon other people's trenchers.

Id.

A generous rich man, that kept a splendid and open table, would try which were friends, and which only trencher-flies and spungers. Id.

Her bones are all very spongy, and more remarkably those of a wild bird, which flies much, and long together. Grew.

All thick bones are hollow or sponyeous, and contain an oleaginous substance in little vesicles, which by the heat of the body is exhaled thiough these bones to supply their fibres. Cheyne.

Here wont the dean, when he 's to seek, To spunge a breakfast once a

week. Swift.

SPONGES may be bleached by soaking and squeezing them first in cold water for several days, and then in warm water. If they be now washed with cold water, slightly acidulated with sulphuric acid, starch will detect iodine in the liquid which contains hydriodate of potash. The calcareous matter of sponge is best removed by a dilute muriatic acid. After washing in water they are to be put into aqueous sulphuric acid, specific gravity 1-034, and left for eight days, being occasionally squeezed.

SPONGE, in zoology. See SPONGIA.

SPONGIA, sponge, in zoology, a genus of animals belonging to the class of vermes, and order of zoophyta. It is fixed, flexible, and very torpid, growing in a variety of forms, composed either of reticulated fibres, or masses of small spines interwoven together, and clothed with a living gelatinous flesh, full of small mouths or holes on its surface, by which it sucks in and throws out the water. So early as the days of Aristotle sponges were supposed to possess ani-mal life; the persons employed in collecting them having observed them shrink when torn from tiie rocks, thus exhibiting symptoms of sensation. The same opinion prevailed in the time of Pliny. But no attention was paid to the subject till count Marsigli examined them, and declared them vegetables. Dr. Peysonell, in a paper which he sent to the Royal Society in 1752, and in a second in 1757, affirmed they were not vegetables, but the production of animals ; and accordingly described the animals, and the process which they performed in making the sponges. Mr. Ellis, in 1 762, was at great pains to discover these animals. For this purpose he dissected the spongia urcns, and was surprised to

find a great number of small worms of the genus of nereis or sea-scolopendra, which had pierced their way through the soft substance of the sponge in quest of a safe retreat. That this was really the case, he was fully assured, by inspecting 3 number of specimens of the same sort of sponge, just fresh from the sea. He put them in a class filled with sea water; and then, instead of seeing any of the little animals which Dr. Peysonell described, he observed the papillae, or small holes with which the papillae are surrounded, contract and dilate themselves. He examined another variety of the same species of sponge, and plainly perceived the small tubes inspire and expire the water. He therefore concluded that the sponge is an animal, and that

the ends or openings ot' the branched tubes are the mouths by which it receives its nourishment, and discharges its excrements. Fifty species have already been discovered, of which ten belong to the British coasts.

1. S. botryoides, grape sponge, is very tender and branched, as if in bunches ; the bunches are hollow, and are made up of oblong oval figures having the appearance of grapes ; and eacli bunch is open at top. The species is of a bright, shining color. The openings at the top are evidently the mouths by which the animal imbibes and discharges moisture. When the surface is very much magnified, it appears covered with little masses of triple, equidistant, shining spines.

2. S. coronata, coronet sponge, is very small, consisting of a single tube surrounded at top by

a crown of little spines. The tube is open at the 4 top. The rays that compose the little crown are of a bright, shining, pearl color ; the body is of a pale yellow. It has been found in the harbour of Emsworth, between Sussex and Hampshire.

3. S. cristata, or cock's-comb sponge, is fiat, erect and soft, growing in the shape of cocks'- combs, with rows of little holes along the tops, which project a little. It abounds on the rocks to the eastward of Hastings in Sussex, where it may be seen at low-water. It is commonly about three inches long, and two inches high, and of a pale yellowish color. When put into a glass vessel of sea water, it has been observed to suck in and squirt out the water through little mouths along the tops, giving evident signs of life.

4. S. dichotoma, dichotomous or forked sponge, is stiff, branched, with round, upright, elastic branches, covered with minute hairs. It is found on the coast of Norway, and also, according to Berkehhout, on the Cornish and Yorkshire coasts. It is of a pale yellow color, and full of very minute pores, guarded by minute spines.

5. S. fluviatilis, river sponge, is green, erect, brittle, and irr.egularly disposed in numerous branches. It abounds in many parts of Europe, in the fresh rivers of Russia and England, particularly in the river Thames. It scarcely exhibits any symptoms of life ; is of a filthy smell : its pores or mouths are sometimes filled with green gelatinous globules. It differs very little from the lacustris.

6. S. lacustris, creeping sponge, has erect, cylindrical, and obtuse brandies. It is found in lakes in Sweden -i! > d England.

SPONTANEOUS INFLAMMATION.

7. S. oculata, or branched sponge, is delicately soft and very much branched ; the branches are a little compressed, grow erect, and often united together. They have rows of cells on each mar-gin that project a little. This species is of a pale yellow color, from five to ten inches high. The fibres are reticulated, and the flesh or gelatinous part is so tender that when it is taken out of the water it soon dries away. It is very common round the sea coast of Britain and Ireland. Along the edges and on the surface of the branches are rows of small papillary holes, through which the animal receives its nourishment.

8. S. palmata, palmated sponge, is like a hand with fingers a little divided at the top. The mouths are a little prominent, and irregularly disposed on the surface. It is found on the bead) at Brighthelmstone. It is of a reddish color, inclining to yellow, and of the same soft woolly texture with the spongia oculata.

9. S. stuposa, tow sponge or downy branched sponge, is soft like tow, with round branches, and covered with fine pointed hair. It is of a pale yellow color, and about three inches high. It is frequently thrown on the shore at Hastings in Sussex. It is so closely covered with a fine down that the numerous small holes in its surface are not discernible.

10. S. tomentosa, or S. urens, stinging sponge, or crumb of bread sponge, is of many forms, full of pores, very brittle and soft, and interwoven with very minute spines. It is full of small

* protuberances, with a hole in each, by which it sucks in and throws out the water. It is very com-mon on the British coast ; and is frequently seen surrounding fucuses. It is found also on the shores of North America, Africa, and in the East Indies. When newly taken out of the sea it is of a bright orange color, and full of gelatinous flesh ; but when dry it becomes whitish, and when broken has the appearance of crum of bread. If rubbed on the hand it will raise blisters ; and if dried in an oven its power of stinging is much increased, especially that variety of it which is found on the sea coast of North America.

SPONSOR, n. s. Lat. sponsor. A surety; one who makes a promise or gives security for another.

In the baptism of a male there ought to be two males and erne woman, and in the baptism of a fe-male child two women and one roan ; and these are called sponsors or sureties for their education in the true Christian faith. Ayliffe's Parergon.

The sponsor ought to be of the same station with the person to whom he becomes surety. Broome.

The rash hermit, who with impious pray'r Kad been the sponsor of another's caie. Harie.

SPONTANEOUS, adj.-) French spontanie ; SPONTANEOUSLY, adv. tial.sponte. Volun-SPONTANE'ITY, n.s. ttary; not compel- SPONTA'NEOUSNESS. Jled; acting without

compulsion or restraint : the adverb and noun

substantives corresponding.

Necessity and tpontaneity may sometimes meet together, so may spontaneity and liberty ; but real necessity and true liberty can never.

Bramhall against Holies.

They now came forth Spontaneous; for within them spirit moved Attendant on their lord. Milton.

Many analogal motions in animals, though I cannot call them voluntary, yet I see them sponta- , neons : I have reason to conclude that these are sim-ply mechanical. Hale.

The sagacities and instinct of brutes, the sponia-neoiisness of many of their animal motions, are not explicable, without supposing some active determinate power connexed to and inherent in their spirits, of a higher extraction than the bare natural modification of matter. Hate's Origin of Mankind.

Strict necessity they simple call ; It so binds the will, that things foreknown By spontaneity, not choice, are done. Dryden.

While John for nine-pins does declare, And Roger loves to pitch the bar, Both legs and arms spontaneous move, Which was the thing I

meant to prove. Prior.

This would be as impossible as that the lead of an edifice should naturally and spoiitanettuslii mount up to the root, while lighter materials employ themselves beneath it. Bentley.

Begin with sense, of every art the soul, Parts answering parts shall slide into a whole ; Spontaneous beauties all around advance, Start even from difficulty, strike from chance; Nature shall join you, time shall make it grow.

Pope.

Whey turns spontaneously acid, and the curd into cheese as hard as a stone. Arbuthnot on Aliments.

SPONTANEOUS INFLAMMATION, heat and conflagration produced in combustible bodies, from adventitious causes, without the application of fire. A paper on this subject which appeared in the Repertory of Arts, vol. ii. p. 425, induced the Rev. W. Tooke to publish some remarks in vol. iii. p. 95 of that work, from which, as tb6 paper is long, we shall only give an extract, respecting the spontaneous inflammations of animal and vegetable substances. ‘ One Rude,’ says he, ‘ an apothecary at Bautzen, had prepared a pyrophorus from rye-bran and alum. Not long after he had made the discovery there broke out in the next village of Nauslitz a great fire, which did much mischief, and was said to have been occasioned by the treating of a sick cow in the cow-house. Mr. Rude knew that the countrymen were used to lay an application of parched rye-bran to their cattle for curing the thick neck ; he knew also that alum and rye-bran, by a proper process, yielded a pyrophorus ; and now to try whether parched rye-bran alone would have the same effect he roasted a quantity of rye-bran by the fire till it had acquired the color of roasted coffee. This roasted bran he wrapped up in a linen cloth ; in a few minutes there arose a strong smoke with a smell of burning. Soon after the rag grew as black as tinder, and the bran, now become hot, fell through it on the ground in little balls. Mr. Riide repeated the experiment, and always with the same result. Who now will doubt that the frequency of fires in cow-houses, which in those parts are mostly wooden buildings, is occasioned by this practice, of binding roasted bran about the necks of the cattle ? Montet relates, in the Memoires de 1’ Academie de Paris, 1748, that animal substances kindle into flame; and that he himself has been witness to the spontaneous accension of dunghills.

;l

The woollen stuff prepared at Sevennes, named emperor's stuff, has kindled of itself, and burnt to a coal. It is not unusual for this to happen to woollen stuffs, when in hot summers they are * 1 laid in a heap, in a room but little aired. In June 1781 this happened at a wool-comber's in Germany, where a heap of wool-combingˆ piled up in a close warehouse seldom aired, too > fire of itself. This wool burnt from within outwards, and became quite a coal; though neither fire nor light had been used at the packing. In like manner cloth-workers have certified that, after they have bought wool that was become wet, and packed it close in their warehouse, this wool has burnt of itself. The spontaneous accension of various matters from the vegetable kingdom, as wet hay, corn, and madder, and at times wet meal and mall, are well known. Hemp, flax, and hemp-oil, have also often given rise to dreadful conflagrations. In spring 1780 a fire was discovered on board a frigate lying in the road off Cronstadt, which endangered the whole fleet. After the severest scrutiny, no cause of the fire was to be found ; and the matter remained without explanation, but with strong surmises of some wicked incendiary. In August 1780 a fire broke out at the hemp-magazine at St. Petersburgh, by which several hundred thousand poods (about thirty-six pounds English) of hemp and flax were consumed. The walls of the magazine are of brick, the floors of stone, and the rafters and covering of iron ; it stands alone on an island in the Neva, on which, as well as on board the ships lying in the Neva, no fire is permitted. In St. Petersburg!), in the same year, a fire was discovered in the vaulted shop of a furrier. In these shops, which are all vaults, neither fire nor candle is allowed, and the doors of them are all of iron. At length the probable cause was found to be that the furrier, the evening before the fire, had got a roll of new cere-cloth, and had left it in his vault, where it was found almost consumed. In the night between the 20th and 21st of April, 1781, afire was seen on board the frigate Maria, at anchor, with several other ships, in the roads off the island of Cronstadt; the fire was however soon extinguished ; and, by the severest examination, nothing could be extorted concerning the manner in which it had arisen. The garrison was threatened with a scrutiny that should cost them dear ; and, while

they were in this cruel suspense, the wisdom of the sovereign gave a turn to the affair, which quieted the minds of all, by pointing out the proper method to be pursued by the commissioners of enquiry, in the following order to Czernichef: — When we perceived, by the report you have delivered in of the examination into the accident that happened on board the frigate Maria, that, in the cabin where the fire broke out, there were found parcels of matting tied together with packthread, in which the soot of burnt fir-wood had been mixed with oil, for the purpose of painting the ship's bottom, it came into our mind, that at the fire which happened last year at the hemp-ware-houses, the following cause was assigned, that the fire might have proceeded from the hemp being bound up in greasy mats, or even from such mats having lain near the hemp : therefore neglect not

to guide your further enquiries by this remark. As, upon juridical examination, as well as private enquiry, it was found that, in the ship's cabin, where the smoke appeared, there lay a bundle of matting containing Russian lamp-black, prepared from fir-soot, moistened with hemp-oil varnisn, which was perceived to have sparks of fire in it at the time of the extinction, the Russian admiralty gave orders to make various experiments, to see whether a mixture of hemp-oil varnish and the forementioned Russian black, folded up in a mat and bound together, would kindle of itself. They shook forty pounds of fir-wood soot into :\ tub, and poured about thirty-five pounds of hemp-oil-varnish upon it ; this they let stand for an hour, after which they poured off the oil. The remaining mixture they now wrapped up in a mat, and the bundle was laid close to the cabin where the midship-men had their birth. Two officers sealed both the mat and the door with their own seals, and stationed a watch of four officers to take notice of all that passed the whole night through ; and, as soon as any smoke should appear, immediately to give information to the commandant of the port. The experiment was made the 26th of April, about 11 o'clock A. M., in presence of all the officers. Early on the 27th, about 6 o'clock A. M., a smoke appeared, of which the.1 chief commandant was immediately informed : he came with speed, and through a small hole ir the door saw the mat smoking. He despatched a messenger to the members of the commission ; but as the smoke became stronger, and fire began to appear, he found it necessary to break the seals and open the door. No sooner was the air thus admitted than the mat began to burn with greater force, and presently it burst into a flame. The Russian admiralty, being now fully convinced of the self-enkindling property of this composition, transmitted their experiment to the Imperial Academy of Sciences ;

who appointed Mr. Georgi, a very learned adjunct of the academy, to make farther experiments on the subject. Three pounds of Russian fir-black were slowly impregnated with five pounds of hemp-oil varnish ; and, when the mixture stood open rive hours, it was bound up in linen. By this process it became clotted ; but some of the black remained dry. When the bundle had lain sixteen hours in a chest it was observed to emit a very nauseous, and rather putrid smell, not unlike that of boiling oil. Some parts of it became warm, and steamed much ; eighteen hours after the mixture was wrapped up, one place became brown, emitted smoke, and directly afterwards glowing fire appeared. The same thing happened in a second and third place ; though other places were scarcely warm. The fire crept slowly around, and gave a thick, gray, stinking smoke. Mr. Georgi took the bundle out of the chest, and laid it on a stone pavement; when, on being exposed to the free air, there arose a slow burning flame a span high, with a strong body of smoke. Not long afterwards there appeared, here and there, several chaps or ciefts, as from a little volcano, the vapor issuing from which burst into flames. On his breaking the lump it burst into a very violent flame full three feet high, which soon grew less, and then went out. The smoking

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and glowing fire lasted six hours ; and the remainder continued to glow without smoke for \wo hours longer. The gray earthy ashes, when (old, weighed five ounces and a half.' Mr. Tooke concludes with a case of self-accension, noticed by Mr. Hageman, an apothecary at Bremen. He prepared a boiled oil of hyoscyamus, or hen-bane, in the usual way with common oil. The humidity of the herb was nearly evaporated, when he was called away by other affairs, and was obliged to leave the oil on the fire. ,• The evaporation of the humidity was hereby carried so far that the herb could easily be rubbed to powder. The oil had lost its green color, and had become brownish. In this state it was laid on the straining cloth, and placed in the garden, behind the house, in the open air. In half an hour, on coming again to this place, he perceived a strong smoke there, though he thought the oil must have long been cooled : on closer inspect;on he found that the smoke did not proceed from the oil, but from the herb on the straining cloth; at the same time the smell betrayed a concealed fire. He stirred the herb about, and blew into it with a bellows, whereupon it broke out into a bright flame.

SPOOM, v. n. Probably from spume, or foam, as a ship driven with violence spumes, or raises a foam. To go on swiftly. A sea term.

When virtue sponma before a. prosperous gale, My heaving wishes help to fill the sail. Dryden.

SPOON, n. s. -\ Belg. spaen ; Dan. sponc ;

SPOON'BILL, f Isl. and Goth, spoonn. A

SEOON'FUL, (concave vessel with a han—

SPOON'MEAT. * die, used in eating liquids : spoonbill is a bird with a bill of this shape : a spoonful is the quantity a spoon will hold : spoonmeat, food taken with a spoon.

Wouldst thou-drown thyself, Put but a little water in a spoon, And it shall be as all the ocean, Enough to stifle such a villain up.

Shakspeare. King John.

Prescribe him, before he do use the receipt, that he take such a pill, or

a spoonful of liquor. Bacon.

Diet most upon spoonmeats, as veal or cock broths.

Harvey.

The shoveller, or spoonbill ; the former name the more proper, the end of the bill being broad like a shovel, but not concave like a spoon, but perfectly flat. Crew's Museum.

Wretched

Are mortals born to sleep their lives away ! Go back to what thy infancy began, Eat pap and spoonmeat ; for thy gugaws cry, Be sullen, and refuse the lullaby. Druden's Persius.

Surely the choice and measure of the materials of which the whole body is composed, and what we take daily by pounds, is at least of as much importance as of what we take seldom, and only by grains and spoonfuls. Arbuthnot.

We prescribed a slender diet, allowing only spoonmeats. Wiseman.

Ducks and geese have such long broad bills to quaffer in water and mud ; to which we may reckon the bill of the spoonbill. Derham't Physico-Theology. Or o'er cold coffee trifle with the spoon,

Count the slow clock, and dine exact at noon.

Pope.

SPOONING, in the sea-language, is said of a ship, which being under sail in a storm at sea

is unable to bear it, and consequently forced to go right before the wind.

SPOONWORT. See CocHLEAttfA.

SPORADES, among ancient philosophers, a name given to such stars as were not included in any constellation.

SPORADES ; the general name for nineteen islands in the Archipelago, lying to the east of the Cyclades. The principal are Scio, or Chios, Samos, Rhodes, and Lesbos. Patmos, or Pathmos, a small rocky island of the Sporades, is celebra ted as the place of St. John's exile. The grotto in which he is said to have written the Apocalypse is still shown, and a monastery, called the monastery of the Apocalypse, has been erected in commemoration of the event. The name Sporades is derived from the Greek oirtipuv, to sow, indicating the scattered position of the islands : hence the medical phrase sporadic diseases, in opposition to epidemic, signifying those which seize a few persons at any time or season.

SPORAD'ICAL, adj. Fr. sporadiqut ; Gr. TiropaSiKos. Defined in the extract.

SPORADICAL DISEASES, among physicians, are such as seize particular persons at any time or reason, and in any place ; in which sense they are distinguished from epidemical and endemical diseases.

SPORT, 7i. s., v. a., v. n."\ Ital. sporto ; Isl.

SPORT'FUL, adj. J spotto, of barb. Lat.

SPORT'FULSESS, n. s. {desporlo, to relax.

SPOR'TIVE, adj. TPlay; frolic; that

SPOR'TIVENESS, n. s. V with which one

SPORTS'MAN. _/ plays ; diversion of

the field in particular: to sport is, divert; make merry ; to game ; frolic ; wanton ; trifle ; use field diversions : sportful, merry ; wanton ; artful : the noun substantive corresponding: sportive, gay ; playful ; light-hearted : the noun substantive corresponding : a sportsman, one who pursues field-sports.

SPORTS. The national amusements and pastimes of a people form an important feature in the national character. Taking their tone from the manners, habits, and condition of the age or country in which they prevail, they lead us behind the scene on which the great drama of public life is exhibited, to the daily and familiar customs and events of popular life. The sports of a nation are of a religious or martial spirit, gay and mild, or dark and fierce, rude or refined, bodily or intellectual, as they are tinged by its habits and character, on which they reciprocally exercise a powerful influence. Besides numerous local holidays and sports, such as the harvest-home, in honour of Ceres and Bacchus, the panthensea, celebrated in honour of Minerva, by all the people of At-tica, &c., there were four great national festivals among the Greeks, open to all people of the Grecian name. The Olympic, Pythian, Nemaean, and Isthmian games (see the articles), were great public festivals, which inspired that polished people with a love of the arts, and imbued them with the spirit of social life. In these games, which were at ouce religious festivals and commercial fairs, the gymnastic and musical contests were exhibited in union ; and

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the productions of genius, poems, and histories, were rehearsed before all that was choice and learned of Greece, surrounded by the master-pieces of statuary, painting, and architecture. The public amusements of the Romans were of a fierce and sanguinary, or of a course and rude character. Their triumphs, their gladi-atorial fights, their combats of wild beasts, their religious festivities, which were scenes of boisterous revelry, showed how much behind the Greeks they were in refinement and taste. In the middle ages, religion and war were the chief elements of the social life, and the amusements were chiefly of a religious or military character. Many of the modern popular sports originated from religious festivals : such are morris-dances, theatrical shows (see Mysteries, and Moralities), &c. Bull-fights continue to form the national amusement of the Spaniards, though the baiting of beasts has nearly gone out of use in England. Cock-fighting, horse-racing, and boxing, national dances, and the field sports of hunting, hawking, or archery, are the favourite amusements of some people. But, in some countries, the progress of industry, the habits of domestic life, and the general diffusion of books, have, in a great measure, superseded the pastimes which were formerly so universal. Among the amusements of most nations, games of chance hold an important place, and are, undoubtedly, of very ancient origin. Those, in which the fingers are the instruments, as in the Italian mora, are probably the oldest. The invention of dice is attributed to the Greek Palamedes ; that of chess, to the people of India. Both games were known to the Greeks and Romans. The games of mixed chance and skill are also of early origin. These were known to the Ro-mans ; but they were principally attached to games of chance (alete), although they were prohibited by law, and the players reputed infamous. The ancient Germans, according to the description of Tacitus, were passionately devoted to gaming. “They addict themselves,” says he, ” to dice when sober, and as a serious employment, with such a mad desire of winning or losme, that, when stript of every thing else, they will at last stake their liberty and tlieir very selves. The loser suffers himself to be bound and sold ” Cards are of modern invention ; and the games at cards are, some of them, purely games of chance, others of chance and skill combined. The laws of some countries, as of England, and many of the U. States, prohibit gaming : those of France, and some other countries of Europe, license gaming houses. Henry VIII. of England issued a proclamation against unlawful gomes, in consequence of which, dice, cards, taoles, and bowls, were seized and destroyed in many places, though he

himself was a gn.at gambler; and we read of his losing much of the plunder of the suppressed abbeys at games of chance. Suspeeted gamesters, in England, may be brought before magistrates, and required to find sureties not to play or bet during twelve months, to the amount of twenty shillings, and, in default of sureties, may be imprisoned.

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SPOT, n. $. & v. a. \ D,m. sprite ; Flemish

SPOT'LESS, adj. Ispotte. A Mot ; a mum

SPOT'TY.) made by discoloration ,

a taint; disgrace : hence a marked or particular

place : 'upon the spot' is immediately ; without

changing place: to spot, to stain; discolour;

corrupt : spotless, free from spot or stain : spotty,

abounding in spots.

This vow receive, this vow of God maintain, My virgin life no spotted thoughts shall stain.

Sidney.

Let him take thee,

And hoist thee up to the shouting plebeians ; Follow his chariot, like the greatest spot Of all thy sex. Shakspeare. Antony and Cleopatra.

Have you not seen a handkerchief, Shotted with strawberries, in your wife's hand ?

Shakspeare. So much fairer

And spotless shall mine innocence arise, When the king knows my truth. Id.

That spot lo which I point is Paradise, Adam's abode ; those lofty shades, his bower.

Milton.

This three years day, these eyes, though clear To outward view of blemish or of spot, Bereft of sight, their seeing have forgot. Id.

The moon, whose orb

Through optick glass the Tuscan artist views In Valombrosa to descry new lands, Rivers, or mountains, on her spotty globe. Id.

I would be busy in the world, and learn ; 1S”ot, like a coarse and useless dunghill weed, Fixed to one spot, and rot just as I grow. Otway.

As in this grove I took my last farewell, As on this very spot of earth I feli, So she my prey becomes even hero. Dryden.

He who, with Plato, shall place beatitude in the knowledge of God, will have his thoughts raised to other contemplations than those who looked not be-yond this spot of earth, and those perishing things in it. Locke.

I counted the patches on both sides, and found, tho lory patches to be about twenty stronger than the whig : but next morning the whole puppet show was filled with faces spotted after the wl.ig^ish manner.

Addison’s Spectator.

Yet Chloe sure was formed without a spot ; Tis true, but something in her was forgot. Pope.

Here Adrian fell : upon that fatal spot Our In-other died. Granville,

You graced the several parts of life, A spotLess virgin, and a faultless wife. Waller.

But serpents now more amity maintain ; From spotted skins the leopard does refrain ; No weaker lions by a stronger slain.

Tale’s Jttvenal.

Eternal sunshine of the spotless mind, Each prayer accepted, and each wish resigned.

Pope.

It was determined upon the spot, according a; the oratory on either

side prevailed. Swift.

The Dutch landscapes are, I think, always a representation of an individual spot, and each in its kind a very faithful, but very confined portrait.

Reynolds .

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SPOTS, in astronomy, certain places of the sun's or moon's disk, observed to be either more bright or dark than the rest, and accordingly called feculae et maculae. See ASTRONOMY, Index.

SPOTS WOOD (John), archbishop of St. An-drew's in Scotland, was descended from the lairds of Spotswood in the Merse, and was born in 1565. He was educated in the university of Glasgow, and succeeded his father in the parsonage of Calder when but eighteen years of age. In 1601 he attended Lodowick, duke of Lennox, as chaplain, in an embassy to the court of France for confirming the ancient amity between the two nations, and returned in his retinue through England. When he entered into the archbishopric of Glasgow, there was not £100 sterling of yearly revenue left ; but by economy he greatly improved it. In 1616 he was made archbishop, primate, and metropolitan of Scotland. He presided in several assemblies for restoring the ancient discipline, and bringing the church of Scotland to uniformity with that of England. He continued in high esteem with king James I. and Charles I. who was crowned by him in 1633 at Holyroodhouse. In 1635, upon the death of the earl of Kinnoul, chancellor of Scotland, he was advanced to that post; but had scarcely held it four years, when the confusions beginning in Scotland, he was obliged to retire into England; and died at London in 1639, and was interred in Westminster Abbey. He wrote a history of the Church of Scotland from 203 to the reign of king James VI. in folio.

SPOU'SAL, adj.&n.s.ˆ Fr. epouse ; Lat.

SPOUSE, n.s. fsponsa, sponsws.Nup—

SPOUSED, adj. j tial ; matrimonial :

marriage ; nuptials ; one joined in marriage : a husband or wife : wedded ; joined in matrimony.

As man and wife, being two, are one in love, So be there 'twixt your kingdoms such a spousal, That never may ill office, or feU jealousy, Thrust in between the paction of these kingdoms, To make divorce of their incorporate league.

Shakspeare.

She is of good esteem ; Beside, so qualified as may beseem The spouse of any noble gentleman. Id.

There shall we consummate our spousal rites. Id.

They led the vine

To wed her elm ; she spoused about, him twines Her marriageable arms. Milton.

This other, in her prime of love, Spousal embraces vitiated with gold. Id.

The amorous bird of night Sung spousal, and bid haste the evening star, On his hill top to light the bridal lamp. Id.

The spouials of Hippolita the queen, What tilts and tourneys at the feasts were seen !

Dry den.

At once, Farewel, 0 faithful spouse! they said; At once the encroaching rinds their closing lips in-vade. Id. To tempt the spouseleis queen with am'rous wiles, Resort the nobles from the neighb'ring isles. Pope.

Sleepest thou, careless of the nuptial day ? Thy spmu,al ornament neglected lies ; Arise, prepare the bridal train, arise.

Pope't Odyssey.

One of two must still obey,

Nancy, Nancy ; Is it man or woman, say,

My spouse, Nancy ? Burns.

SPOUT, n. s., v. a. &, v. n.) Bel;? spuyt. A SPOUT'ER, n. s. \ pipe, or mouth of

a pipe or vessel, out of which any thing is poured; water falling as from a spout; to pour or issue with violence : a spouter is an everlasting or vehement speaker.

They laid them down hard by the murmuring musick of certain waters, which spouted out of the side of the hills. Sidney.

Not the dreadful spout, Which shipmen do the hurricano call, Constringed in mass by the almighty sun, Shall dizzy with more clamour Neptune's ear In his descent, than shall my prompted sword

Falling on Diomede.

Shaltspeare. Troilus and Cressida.

She gasping to begin some speech, her eyes Became two spouts. Id. Winter't Tale.

We will bear home that lusty blood again, Which here we came to spout-against your town.

In Gaza they couch vessels of eaith in their walls, to gather the wind from the top, and to pass it down in spouts into rooms. Bacon.

I intend two fountains, the one that sprinkleth or spouteth water, the other a fair receipt of water.

Id.

As waters did in storms, now pitch runs out, As lead, when a fired church becomes one spout.

Donne.

If you chance it to lack, Be it claret 01; sack, I'll make this snout To deal it about, Or this to run out,

As it were from a spout. Ben Joiison.

Next on his belly floats the mighty whale ; He twists his back, and rears his threatening tail : He spouts the tide. Creech.

In whales that breathe, lest the water should get unto the lungs, an ejection thereof is contrived by a fistula or spout at the head. Browne.

She swimc in blood, and blood does spouting

throw

To heaven, that heaven men’s cruelties might know.

Waller.

No hands could force it thence, so fixt it stood, Till out it rushed, expelled by streams of spouting

blood. Dry den.

The force of these motions pressing more in some places than in others, there would fall not showers, but great spouts or cascades of water.

Burnet’s Theory of the Earth. In this single cathedral, the very spouts are loaded with ornaments. Addison on Itnly.

It spout* up out of deep wells, and flies forth at the tops of them, upon the face of the ground.

Woodward

From silver spouts the grateful liquors glide, And China's earth receives the smoking tide. Pope.

All the glittering hill Is bright with spouti7ig rills. Thomson's Autumn.

Elihu Palmer, the deistical spouter, was, in the small circle of his church, more priestly, more fulmi-nating, and looked for more reverence and adoration from his disciples, than the Lauds and Gardiners of England. Without the means, he affected all the haughtiness of Wolsey. Professing to adore reason, he was in a rage if any body reasoned with him. Cheetham's Life ~f 1'aine

SFRAG, adj. Swed. spraeg. Vigorous ; sprightly. A provincial word.

A good sprag memory. Sliakspeare. Merry Wives.

SPRAIN, v.a. & n.s. Corrupted from strain To stretch the ligaments of a joint without dislocation of the bone : the injury that ensues.

I was in pain, and thought it was with some sprain at tennis. Temple.

• Should the big last extend the shoe too wide, The sudden turn may stretch the swelling vein, Thy cracking joint unhinge, or ancle sprain. Gay.

SPRANGHER (Bartholomew), a celebrated painter, born at Antwerp in 1546. He went to Rome, where cardinal Farnese patronised him, and introduced him to pope Pius V., for whom he painted many pictures. On his return he became chief painter to Maximilian II., whose successor Rodolphus was so pleased with him, that he gave him a gold chain and medal, ennobled him and his family, lodged him in his palace, and gave him a pension. He made the tour of the Netherlands, returned to Prague, and died in 1623.

SPRAT, n. s. But. sprot ; Lat. sarda. A small sea fish.

All-saints do lay for porke and sowse, For sprats and spurlings for their house. Tamer.

So oft, in feasts with costly changes clad, To crammed maws a sprat new stomach brings.

Sidney.

Of round fish there are brit, sprat, barn, smelts.

Carew.

SPRAT (Dr. Thomas), bishop of Rochester, was born in 1636. He had his education at Ox-ford, and became F. R. S., chaplain to George, duke of Buckingham, and chaplain in ordinary to king Charles II. In 1667 he published the History of the Royal Society, and a Life of Mr. Cowley ; who, by his last will, left to his care his printed works and MSS., which were accordingly published by him. In 1668 he was appointed prebendary of Westminster, in 1680 canon of Windsor, in 1683 dean of Westminster, and in 1684 bishop of Rochester. He was clerk of the closet to king James II.; in 1685 was made dean of the chapel royal; and in 1686 was appointed one of the commissioners for ecclesiastical affairs. In 1692 his lordship, with several other persons, was charged with treason by two men, who drew up an association, in which the subscribers declared their resolution to restore king James, to seize the princess of Orange, and to be ready with 30,000 men to meet king James when he should land. To this they put the names of Sancrofr, Sprat, Marlborough, Salisbury, and others. The bishop was arrested, and kept at a messenger's, under a strict guard, for eleven days. His house was searched and his papers seized, among which nothing was found of a treasonable appearance, except one memorandum in the following words : — Thorough-paced doctrine. This, he said, was only a memorandum of an absurd expression of Daniel Burgess, a preacher. His innocence being proved he was set at liberty, when he published An Account of his Examination and Deliverance ; which he commemorated through life by an an-nual thanksgiving. He died May 20th, 1713, aged seventy-nine. His works, besides the above

and a few poems, are The Answer to Sorbierp ; The History of the Rye-house Plot; and a volume of Sermons. Dr. Johnson says that each work ' has its distinct and characteristical excellence.'

SPRATT, in agriculture, a name given in some places to a plant, which is found to rise in great abundance, in a spontaneous manner, in most watery situations of the more sound boggy kind. It is stated, in a paper in the third volume of the Transactions of the Highland Society of

Scotland, that, though it abounds much in that part of the kingdom, the proper culture of it is by no means well understood. It should, it is said, be suitably manured for with compost manure, once in three years ; or watering sometimes answers the same intention very well, in cases where it is grown for hay ; the land being preserved from cattle, or other sorts of stock, from the month of March ; and the plants cut for hay in July at the latest. The seeding stalks are also stated to have been mown, after the cattle in pasturage, to benefit. Spring frosts occasionally, however, destroy some inches of the tops.

Sheep may eat it safely without danger of rotting; and it raises young cattle, it is said, to a great size of bone. But that, when suffered to run up to seed, it is not palatable ; though cattle not unfrequently get it for hay in that state. Where manure is used, and it is cut in the sap, it constitutes, it is observed, a most excellent and abundant kind of hay for black cattle. In thic, management it has been seen ready for the scythe as soon as rye-grass ; and one of the best samples of meadow hay seen in the above part of the country was cut in the year 1804, and consisted of spratt and common poa. Others, however, do not think so highly of it, as it has been noticed in situations in the Highlands where cattle were often stinted or straitened for food, and generally remained untouched by them. The same has likewise been the case in other places of the above districts.

Its strong root is also thought an objection to its being cultivated as a grass crop, even if it were capable of it, as being difficult of extirpation. It has been farther used for making cushions, to be put under the yokes used by oxen in ploughing ; for which purpose it seems, it is said, well suited on account of its toughness:

SPRAWL, v. n. Dan. sprille. To struggle, as in convulsions ; with arms and legs spread.

Hang the child, that he may see it sprawl ; A sight to vex the father’s soul. Shakspeare.

Some lie sprawling on the ground, With many a gash and bloody wound. Hudibras.

Telamon hap’d to meet A rising root that held his fastened feet ; So down he fell, whom sprawling on the ground His brother from the wooden gyves unbound.

Dry den.

The birds were not fledged ; but, upon sprawling and struggling to get

clear of the flame, down they tumbled. L'Ettrattge,

Hence, long before the child can crawl, He learns to kick, and wince, and sprawl. Prior.

Did the stars do this feat once only, which gave beginning to human race ? who were there then in the world, to observe the births of those first men, and calculate their nativities, as they sprawled out of ditches ? Bentley

He ran, he leapt into a flood, There sprawled awhile, and scarce got out, All covered over with slime. Swift.

SPRAY, n.s. Of the same race with SPRIT and SPROUT, which see. The extremity of a branch ; foam of the sea.

At sight whereof each bird that sits on spray, And every beast that to his den was fled,

Come forth afresh out of their late dismay, And to the light lift up their drooping head.

Hubberd's Tale.

Thus droops this lofty pine, and hangs his sprays, Thus Eleanor's pride dies in her younger days.

Shakspeare. The wind that whistles through the sprays

Maintains the concert of the song ; And hidden birds with native lays,

The golden sleep prolong. Dry den.

Winds raise some of the salt with the spray.

ArbuthiiDl.

SPRAY, the sprinkling of the sea, which is driven from the top of a wave in stormy weather. It differs from spoon-drift, as being only blown occasionally from the broken surface of a high wave; whereas the latter continues to fly horizontally along the sea, without intermission, during the excess of a tempest or hurricane.

SPREAD, v. a., v. n., &) Saxon rprie&an ; SPREAD'ER, n. s. [n. a. j

Belg. spreyden. To extend; expand; stretch : expand itself: extent; compass : spreader, one who spreads.

He bought a field where he had spread his tent.

Genesis xxxiii. Rizpah spread sackcloth for her upon the rock.

2 Samuel xxi.

He arose from kneeling, with his hands spread up to heaven, and he blessed the congregation.

1 Kings viii. 54.

Can any understand the spreadings of the clouds, or the noise of his tabernacle 1 Job xxxvi. 29.

The workman melteth a graven image, and the goldsmith spreadeth it over with gold. Isaiah xl. 19. Silver spread into plates is brought from Tarshish.

Jeremiah x.

They, when departed spread abroad his fame in all that country. Matthew ix. 31.

By conforming ourselves we should be spreaders of a worse infection than any we are likely to draw from papists, by our conformity with them in ceremonies. Hooker. Spread o'er the silver waves thy golden hair.

Shakspeare.

Make the trees more tall, more spread, and more hasty than they use to be.

Bacon's Natural History. Plants, if they spread much, are seldom tall.

Bacon. No flower hath that spread of the woodbind. Id.

Faire attendants then

The sheets and bedding of the man of men, Within a cabin of the hollow keele Spred and made soft Chapman.

The stately trees fast spread their branches.

Milton.

Great Pan, who wont to chase the fair, And loved the spreading oak, was there.

Addison’s Cato.

I have got a fine spread of improveable lands, and am already ploughing up some, fencing others.

Addison.

Hei cheeks their freshness lose and wonted grace, And an unusual paleness spreads her face.

Gramntte.

Deep in a rich alcove the prince was laid, Fast by his side Pisistiatus lay spread, In age his equal, on a splendid bed. Pope.

If it be a mistake, I desire I may not be accusej for a spreader of false news. Swift.

Shall funeral eloquence her colours spread, And scatter roses on the wealthy dead ? Young.

SPRENT, part. Sax. rpnenjan, pprienan; Belg. sprenge?i. The old English word for sprinkle is sprene. Sprinkled. Obsolete.

O lips, that kissed that hand with my tears sprent.

Sidney

SPRETZA, a river of Bosnia. SPRIG, n. s. Saxon j-priec ; Welsh ysbrig ; so Davies : but it is probably of the same rac« with spring. — Johnson. A small branch; a spray.

The substance is true ivy ; after it is taken down, the friends of the family are desirous to have some *prig to keep. Bacon.

Our chilling climate hardly bears A sprig of bays in fifty years ; While every fool his claim alleges, As if it grew in common hedges. Swift.

SPRIG, in botany. See BOTAKY, Index, BRANCH, Ciox, GRAFTING, and PLANT.

SPRIGHT, n. s. & v.a.~] Sax. fpjieot. A SPRIGHT'FCJL, adj. \ contraction of Lat.

SPRIGHT'FULLY, adv. [spiritus, spirit. It SPRIGHT'LESS, adj. \ was anciently writ—

SPRIGHT LI NESS, n. s. j ten sprete or spryte. SPRIGHT'LY, adv.) Spint; shade; soul;

incorporeal agent: hence power; animation; courage; an arrow (obsolete) : to spright is to haunt as a spright : sprightful is, lively ; animated ; brisk : the adverb corresponding : sprightless, the opposite adjective, with the noun substantive corresponding : sprightly is also brisk ; lively ; vigorous.

0 chastity ! the chief of heavenly lights, Which makest us most immortal shape to wear,

Hold thou my heart, establish thou my sprights ; To only thee my constant course I bear, Till spotless soul unto my bosom fly ; Such life to lead, such death I vow to die. Sidney.

She doth display The gate with pearls and rubies richly dight.

Through which her words so wise do make their

way, To bear the message of her sprigJit. Spenser.

The Grecians spritefully drew from the darts the

corse, And hearst it, bearing it to fleet. Chapman's Iliad.

You have not seene young heiffers, highly kept, Filled full of daisies at the field, and driven Home to their hovels ; all so spritely given, That no roome can containe them. Chapman

1 am sprighted with a fool. Shakspeare. Cymbeline The spirit of the time shall teach me speed.

— Spoke like a sprightful noble gentleman.

Shakspeare.

Norfolk, sprightfully and bold, Stays but the summons of the appellant's trumpet.

Id.

We had in use for sea fight short arrows called sprights, without any other heads save wood sharpened ; which were discharged out of muskets, and would pierce through the sides of ships where a bullet would not. Bacon's Natural History.

Are you grown Benumbed with fear, or virtue's sprighileis cold ?

SPR 37

Steeds sprightful as the light. Id.

Happy my eyes when they behold thy face : My heavy heirt will leave its doleful beating At sight of thee, and bound with sprigntful joys.

Otway.

While with heavenly charity she spoke, A streaming blaze the silent shadows broke ; The birds obscene to forests winged their flight, And gaping graves received the guilty sprighl.

Dryden.

Produce the wine that makes us bold, And sprightly wit and love inspires. Id.

The ideas of goblins and spriyhts have no more to do with darkness than light ; yet let but a foolish maid inculcate these often on the mind of a child, possibly he shall never be able to separate them again. 1 ocke.

The soul is clogged when she acts in conjunction with a companion so heavy ; but, in dreams, observe with what a spriyhtliness and alacrity does she exert herself. Addittm,

Each morn they waked me with a sprightly lay : Of opening heaven they sung, and gladsome day.

Prior.

Of these am I who thy protection claim ; A watchful sprite, and Ariel is my name. Pope.

The sprightly Sylvia trips along the green ; She runs, but hopes she does not run unseen. Id.

The sprites of fiery termagants in flame Mount up, and take a salamander’s name. Id.

Youth has a spnghtlmess and fire to boast, That in the valley of

decline are lost, And Virtue with peculiar charms appears, Crowned with the garland of life's blooming years.

Cowper.

If there be sprites,

They would have walked there in their spriteliest trim,

By way of change from their sepulchral rites, And show themselves as ghosts of better taste Than hunting some old Ruin or wild Waste.

Byron .

SPRING?, v.n.,v. a. &n.s ˆ Sax. r-prunjan ; SPRING E, n. s. Teut. springe;

SPRING'HALT, j Belg. and Swed.

SPRING'INESS, ˆspringen ; Goth.

SPRING'LE, andSwed.s/)n?jga.

SPRING'TIDE, j To shoot ; grow ;

SPRIN'GY, adj. J arise out of the

ground; begin to grow; proceed; arise; appear; issue ; bound ; leap ; fiy with elastic power : as a verb active, to start; rouse game; produce unexpectedly; discharge; leap or pass by leaping: as a noun substantive, the season of growth ; or when the plants rise from winter; an elastic body ; elastic force ; active power ; a leap ; bound ; issue of water from the earth ; fountain ; source ; rise ; and (obsolete) a youth : springe is agin; noose: springhalt, a twitching lameness of the horse: springle, a noose: springtide, high tide; tide at the full moon: springy, elastic ; full of springs.

By the infinitness of the mersy of cure God, in the which he springyng up fro on high hath vic'fed us.

Wiclif. Luk. 1.

Israel's servants digged in the valley, and found a well of springing water. Genesis xxvi. 19.

When the day began to spring, they let her go.

Judges.

About the ipring of the day, Samuel called Saul to the top of the house. 1 Samuel ix. 26.

Ye shall eat this year such things as grow of

themselves ; and in the second year that which springeth of the same. 2 Kings.

To satisfy the desolate ground, and cause the bud of the tender herb to spring forth. Job xxxviii. 27.

To them which sat in the region and shadow of death, light is sprung up. Matthew iv. 16.

Other fell on good ground, and did yield fruit that sprang up and increased. Mark iv. 8.

He called for a light, and sprang in, and fell before Paul. Acts.

Our Lord sprang out of Juda. Hebrews vii. 14.

Before the bull she pictured winged love, With his young brother sport, light fluttering Upon the waves, as each had been a dove ; The one his bow and shafts, the other spring A burning tead about his head did move, As in their sire's new love both triumphing.

Spenser.

Not mistrusting, till these new curiosities sprung up, that ever any man would think our labour herein mispent, or the time wastefully consumed. Hooker.

All blest secrets,

All you unpublished virtues of the earth, Spring with my tears ; be aidant and remediate In the good man's distress. Skakspeare.

How youngly he began to serve his country, How long continued ; and what stock he springs of ; The noble house of Maruius. Id. Corwlanus.

I sprang not more in joy at first hearing he was a man child, than now in first seeing he had proved himself a man. Shakspeare.

Orpheus with his lute made trees, And the mountain-tops that freeze,

Bow themselves when he did sing : To his musick plants and flowers Ever sprung, as sun and showers There had made a lasting spring.

Id. Henry I'll I.

Now stop thy springs ; my sea shall suck them dry, And swell so much the higher by their ebb.

Id. Henry VI.

As a woodcock to my own springe, Osrick, I'm justly killed with mine own treachery.

Shakspeare. They've all new legs, and lame ones ; one would

take it,

That never saw them pace before, the spavin And springhalt reigned among them.

Id. Henry VIII.

Springs on the tops of hills pass through a great deal of pure earth, with less mixture of other waters.

Bacon's Natural History. Thus I reclaimed my buzzard love to rly At what, and when, and how, and where I chose ; Now negligent of sport I lie ; And now, as other fawkners use, I spring a mistress, swear, write, sigh, and die ; And the game killed, or lost, go talk or lie. Donne.

Each petty hand

Can steer a ship becalmed; but he that will Govern, and carry her to her ends, must know His tides, his currents ; how to shift his sails : Where her springs are, her leaks, and how to stop ‘em

Ben Jonson s Catiline All these

Shall, like the brethren sprung of dragon’s teeth, Ruin each other, and he fal» amongst ‘em.

Ben Jot/son.

The spring visiteth not these quarters so timely :iu the eastern parts. Careu—

Fly, fly, prophane fogs! far hence fly away. Taint not the pure streams of the springing day With your dull influence : it is tor you To sit and scoule upon night’s heavy brow.

Crashnit .

To that great tpr’uig which doth great kingdoms

move, The sacred spring whence right and honour streams ;

Distilling virtue, shedding peace and love In every place, as Cynthia sheds her beams. Davies.

This may be performed by the strength of some such spring as is used in watches : this tpring may be applied to one wheel, which shall give an equal mo-tion to both the wings. Wilkins.

They found new hope to spring Out of despair. Milton.

That sprung the game you were to set, Before you’d time to draw the net. Hudibras.

Let the wide world his praises sing, Where Tagus and Euphrates spring ; And fiom’the Danube’s frosty banks to those Where from an unknown head great Nilus flows.

Rotcommon.

My doors are hateful to my eyes, Filled and dammed up with gaping creditors, Watchful as fowlers when their game will spring.

Otway.

Where there is a continued endeavour of the parts of a body to put themselves into another state, the progress may be much more slow ; since it was a great while before the texture of the corpuscles of the steel were so altered as to make them lose their for-mer springiness. Boyle.

Mankind sprang from one common original ; whence this tradition. would be universally diffused.

Tillotson.

What makes all this but Jupiter the king, At whose command we perish and we spring 1

Then ‘tis our best, since thus ordained to die, To make a virtue of necessity.

Dryden's Knight's Tale. When heaven was named, they loosed their hold

again; Then sprung she forth, they followed her amain.

Dryden.

'Tis true from force the noblest title springs, I therefore hold from that which first made kings.

Id. Thus man by his own strength to heaven would

soar,

And would not be obliged to God for more: Vain, wretched creature, how art thou misled, To think thy wit these godlike notions bred ! These truths are not the product of thy mind, But dropt from heaven, and of a nobler kind : Revealed religion first informed thy sight, And reason saw not, till faith sprung the light. Id.

The prisoner with a spring from prison broke ; Then stretched his feathered fans with all his might, And to the neighbouring maple winged his flight.

Id.

The nurse, surprised with fright, Starts up and leaves her bed, and springs a light. Id.

Love, like springtides, full and high, Swells in every youthful vein ;

But each tide does less supply, Till they quite shrink in again : If a flow in age appear, Tis but rain, and runs not clear.

Id. Tyrannick Love.

Let goats for food their loaded udders lend ; But neither springing nets nor snares employ.

Dryden.

Whether she sprung a leak, I cannot find, Or whether she was overset with wind, But down at once vrith all her crew she went. Id,

Tall Norway fir their masts in battle spent, And English oaks sprung leaks and planks restore.

Id.

My heart sinks in me while 1 hear him speak, And every slackened fibre drops its hold,

8 &PR

Like nature letting down the springs of life ; So much the name of father awes me still. Id.

He adds the running springs and standing lakes, And bounding banks for winding rive's makes. Id.

i move, I see, I speak, discourse aud know ; Though now I am, 1 was not always so : Then that from which I was must be before, W horn, as my spring of being, 1 adore. Id.

Heavens, what a spring was in his arm, to throw ! How high he held his shield, and rose at every blow !

Id.

People discharge themselves of burdensome reflections, as of the cargo of a ship that has sprung a leak.

L' Estrange.

Some have been deceived into an opinion that the inheritance of rule over men, and property in things, sprang from the same original, and descend by the same rules. Locke.

He that was sharp-sighted enough to see the configuration of the minute particles of the spring of a clock, and upon what peculiar impulse its elastick motion depends, would no doubt discover something very admirable. Id.

He bathed himself in cold spring water in the midst of winter. Id.

Nature is the same, and man is the same, has the same affections and passions, and the. same springs that give them motion. Rymer.

Our author shuns by vulgar springs to move.

Pope.

Where the sandy or gravelly lands are upringy or wet, rather marl them for grass than corn.

Mortimer's Husbandry.

A link of horsehair, that will easily slip, fasten to the end of the stick that springs. Id.

The mountain stag that springs From height to height, and bounds along the plains, Nor has a master to restrain his course, That mountain stag would Vanoe rather be Than be a slave. Philip's Briton.

The spring must be made of good steel, well tempered ; and the wider the two ends of the spring stand asunder, the wider it throws the chape of the vice open. Moxon's Mechanical Exercises.

Most people die when the moon chiefly reigns ; that is, in the night, or upon or near a springtide. Grew's CosmoLogia.

Our miners discovered several of the enemies' mines, who have sprung divers others which did little execution. Taller.

Do not blast my springing hopes, W7hich thy kind hand has planted in my soul.

Rowe.

I sˆnng a mine, whereby the whole nest was overthrown. Addison's Spectator.

A covey of partridges springing in our front, pui our infantry in disorder. Addison.

A large cock pheasant he sprung in one of the neighbouring woods. Id. Spectator.

Here I use a great deal of diligence before I can spring any thing ; whereas in town, whilst I am following one character, I am crossed by another, that they puzzle the chase. Addison.

The soul is gathered within herself, and recovers that spring, which is weakened when she operates more in concert with the body. Id.

He that has such a burning zeal, and springs such mighty discoveries, must needs be an admirable patriot. Collier.

This vast contraction and expansion seems unin-telligible, by feigning

the particles of air to be sprinyif and ramous, or rolled up like hoops, or by any other means than a repulsive power. Newtnn.

Bodies which are absolutely hard, or so soft as to be void of elasticity, will not rebound from one another; impenetrability makes them only stop. If two

equal bodies meet directly in vacuo, they will by the laws of motion stop where they meet, lose their mo-tion, and remain in rest ; unless they be elastick, and receive new motion from their spring. Newton.

See, awed by heaven, the blooming Hebrew flies Her artful tongue, and more persuasive eyes ; And, springing from her disappointed arms, Prefers a dungeon to forbidden charms. Blackmore.

Had not the Maker wrought the springy frame, Such as it is, to fan the vital flame, The blood, defrauded of its nitrous food, Had cooled and languished in the' arterial road ; While the tired heart had strove, with fruitless pain, To push the lazy tide along the vein.

Id. Creation.

The reason of the quicker or slower termination of this distemper, arises from these three springs.

Bluckmore.

See how the well-taught pointer leads the way ! The scent grows warm ; he stops, he springs the prey. Gay.

In adult persons, when the fibres cannot any more yield, they must break, or lose their spring.

Arbuthnot.

Though the bundle of fibres which constitute the muscles may be small, the fibres may be strong and springy. Id.

Heroes of old, by rapine and by spoil, In search of fame did all the world embroil ; Thus to their gods each then allied his name, This sprang from Jove, and that from Titan came.

Granville.

The air is a thin fluid body, endowed with elasticity and springiness, capable of condensation and rarefaction. Bentley.

If our air had not been a springy body, no animal could have exercised the very function of respiration ; and yet the ends of respiration are not served by that springiness, but by some other unknown quality.

Id. Sermons.

Now from beneath Maleas' airy height Aloft she sprung, and steered to Thebes her flight.

Pope.

Who sprung from kings shall know less joy than I.

Id.

Swift fly the years, and rise the' expected morn ! Oh spring to light, auspicious babe, be born ! Id.

Tell me, in what happy fields The thistle springs, to which the lily yields ? Id.

Even thought meets thought, ere from the lips it

part,

And each warm wish springs mutual from the heart.

Id.

The friendly gods a springing gale enlarged ; The fleet swift tilting o'er the surges flew, "'ill Grecian cliffs appeared. Id.

VY ith hairy springes we the birds betray, Slight lines of hair surprise the finny prey. Id.

Our author shuns by vulgar springs to move. Id.

The friends to the cause sprang a new project ; and it was advertised that the Crisis could not ap-pear, till the ladies had shown their zeal against the Pretender. Swift.

The first springs of great events, like those of great rivers, are often

mean and little. Id.

Come, gentle spring, ethereal mildness, come, And from the bosom of yon dropping cloud Upon our plains descend. Thomson's Spring.

Unbeseeming skill To spring the fence, to rein the prancing steed.

Thomson.

The haunt o' spring's the primrose brae, The simmer joys the flocks to follow ,

How cheery through her shortening day

I§ a-itumn, in her weeds o' yellcw ! Burns.

SPUING, in cosmography, denotes one of the seasons of the year; commencing, in the northern parts of the world, on the day the sun enters the first degree of Aries, which is about the tenth day of March, and ending when the sun leaves Ge-mini ; or, more strictly and generally, the spring begins on the day when the distance of the sun's meridian altitude from the zenith, being on the increase, is at a medium between the greatest and least. The end of the spring coincides with the beginning of summer. See SUMMER.

SPRING, in mechanics, denotes a thin piece of tempered steel, or other elastic substance, which, being wound up, serves to put machines in mo-tion by its elasticity, or endeavours to unbend itself; such is the spring of a watch, clock, or the like.

SPRING, ELATER, in physics, denotes a natural faculty, or endeavour, of certain bodies to re-turn to their first state, after having been violently put out of the same by compressing, or bending them, or the like. This faculty is usually called by philosophers elastic force or elasticity.

SPRINGS. Many have been the conjectures of philosophers concerning the origin of fountains, and great pains have been taken by the members of the Royal Society, and those of the Academy of Sciences at Paris, to ascertain the true cause of it. It was Aristotle's opinion, and held by most of the ancient philosophers after him, that the air contained in the caverns of the earth, being condensed by cold near its surface, was thereby changed into water ; and that it made its way through where it could find a passage. And this transmutation of air

into water strictly accords with the recent discoveries that water in fact is compounded of nothing else but two kinds of air, though it is hardly to be supposed that Aristotle had the most distant idea of'this fact. Those who imagine, that fountains owe their origin to waters brought from the sea by subterraneous ducts, give a tolerable account how they lose their saltness by percolation as they pass through the earth ; but they cannot explain by what power the water rises above the level of the sea to near the tops of mountains, where springs generally abound ; it being contrary to the laws of hydrostatics that a fluid should rise in a tube above the level of its source. It was a generally received opinion, and much espoused by Mariotte, that the rise of springs is owing to the rains and melted snow. The rain water, he says, which falls upon the hills and mountains, penetrating the surface, meets with clay or rocks contiguous to each other; along which it runs, without being able to penetrate them, till, being got to the, bot-tom of the mountain or to a considerable distance from the top, it breaks out of the ground, and forms springs. To examine this opinion Mr. Perrault, De la Hire, and D.Sideleau, endeavoured to make an estimate of tbe quantity of rain and snow that falls in a year, to see whether it would be sufficient to afford a quantity of water equal to tbat which is annually discharged into the sea by the rivers. The result of their enquiries was, that the quantity of rain and snow which fell in a year into a cylindrical vessel would fill it (if secured from evaporating) to the height of about nineteen inches; which quantity, D,

showed, was not sufficient to supply the rivers ; for that those of England, Ireland, and Spain, discharge a greater quantity of water annually than the >ain, according to that experiment, is able to supply. Another observation was made by them, that the quantity of water raised in vapor, one year with another, amounted to about thirty-two inches, which is thirteen more than falls in rain : a plain indication that the water of fountains is not supplied by rain and melted snow. Thus the true cause of the origin of fountains remained undiscovered till Dr. Halley, in making his celestial observations upon

the tops of the mountains at St. Helena, about 800 yards above the level of the sea, found that the quantity of vapor which fell there (even when the sky was clear) was so great that it very much impeded his observations, by covering his glasses with water every half quarter of an hour ; and upon that he attempted to determine by experiment the quantity of vapor exhaled from the surface of the sea. as far as it rises from heat, to try whether that might be a sufficient supply for the water continually discharged by fountains. His experiment was as follows : — He took a vessel of water salted to the same degree with that of sea-water, in which he placed a thermometer; and, by means of a pan of coals, brought the water to the same degree of heat, which is observed to be that of the air in our hottest summer ; this done he fixed the vessel of water, with the thermometer in it, to one end of a pair of scales, and exactly counterpoised it with weights on the other : then, at the end of two hours, he found, by the alteration made in the weight of the ves-sel, that about a sixtieth part of an inch of the deptli of the water was gone off in vapor; and therefore, in twelve hours, one-tenth of an inch would have gone off. Now this accurate observer allows the Mediterranean Sea to be 40° long, and 4° broad, so that its whole surface is 160 square degrees; which must yield at least 5,280,000,000 tons of water : in which account no regard is had to the wind and the agitation of the surface of the sea, both which undoubtedly promote the evaporation. It remained now to compare this quantity of water with that which is daily conveyed into the same sea by the rivers. The only way to do which was to compare them with some known river; and accordingly he takes his computation from the river Thames ; and, to avoid all objections, makes allowances, probably greater than were necessary. The Mediterranean receives «1 > e rivers Iberus, Rhone, Tiber, Po, Danube, Niester, Borysthenes, Tanais, and Nile. Each of these he supposes to bring down ten times as much water as the Thames, whereby he allows for smaller rivers which fall into the same sea. The Thames, then, he finds by mensuration to dischnrse about 20,300,000 tons of water a-day. If therefore the above nine rivers yield ten times as much water as the Thames doth, it follows, that all of them together yield but 1,827,000,000 of tons in a day, which is little more than one-third of what is proved to be raised in vapor out of the Mediterranean in the same time. We have therefore a source abundantly sufficient for the supply of fountains. The doctor considers next the manner in which thev

are raised, and how they are condensed into water again, and conveyed to the sources of springs. He considers that if an atom of

watei was expanded into a shell or bubble, so as to be ten times as big in diameter as when it was water, that atom would become specifica'ly lighter than air, and therefore would rise so long as the warmth which first separated it from the surface of the water should continue to distend it to the same degree ; and, consequently, that vapors may be raised from the surface of the sea in that manner, till they arrive at a certain height in the atmosphere, at which they find air of equal specific gravity with themselves. Here they will float till, being condensed by cold, they become specifically heavier than the air, and fall down in dew ; or being driven by the winds against the sides of mountains (many of which far surpass the usual height to which the vapors would of themselves ascend), are compelled by the stream 01 the air to mount up with it to the tops of them ; where, being condensed into water, they presently precipitate, and gleeting down by the crannies of the stones, part of them enters into the caverns of the hills ; which being once filled, all the over-plus of water that comes thither runs over by the lowest place, and breaking out by the sides of the hills forms single springs. Many of these running down by the valleys between the ridges of the hills, and coming to unite, form little rivulets or brooks ; many of these again meeting in one common valley, and gaining the plain ground, being grown less rapid, become a river; and many of these, being united in one common channel, make such streams as the Rhine and the Danube; which last is the sum of all thosˆ springs which break out on the south side of the Carpathian mountains, and on the north side of the immense ridge of the Alps. Thus one part of the vapors which are blown on the land is returned by the rivers into the sea whence it came. Another part falls into the sea before it reaches the land ; and this is the reason why the rivers do not return so much water into the Mediterranean as is raised in vapor. A third part falls on the low lands, where it affords nourishment to plants ; yet it does not rest there, but is again exhaled in vapor by the action of the sun. and is either carried by the winds to the sea to fall in rain or dew there, or else to the mountains to become the sources of springs. Besides these causes some streams arise from rain and melted snow, which, subsiding through the surface of the earth, makes its way into certain cavities, and thence issues out in the form of springs ; because the waters of several increase and diminish in proportion to the rain which falls : others again, especially such as are salt, and spring near the sea-shore, owe their origin to sea-water percolated through the earth ; and some to both these causes. The above reasoning of Dr. Halley is confirmed by more recent discoveries. It is now found that, though water is a tolerable conductor of the electric fluid, dry earth is an electric per se, consequently the dry lands must always be in an electrified state compared with the ocean,

un-less in such particular cases as are mentione 1 under the article EARTHQUAKE. It is also well Known that such bodies as are in an electrified

state, whether pus or minus, attract vapor, or other light substances. Hence the vapors that are raised from the ocean must necessarily have a tendency to approach the land in great quantity, even without the assistance of the wind, though this last undoubtedly contributes much to the same purpose. The higher grounds are al-ways in a more electrified state than the lower ones ; and hence the vapors, having once left the ocean and approached the shore, are attracted by the high mountains ; of which Mr. Pennant gives an instance in Snowdon. See SNOWDON. Hence we may see the reason why springs are so com-mon in the neighbourhood of mountains, they being so advantageously formed in every respect for collecting and condensing the vapors into water. But now that the nature and composition of water have been so decisively proved, we need have no hesitation to ascribe the origin of all springs and fountains to this general cause, the meeting of oxygen and hydrogen, and the consequent conversion of these airs into water. This also is probably the cause of rain.

The heat of springs is generally the same with the mean temperature of the atmosphere. The mean temperature of the south of England is 48°; in Scotland, near Edinburgh, it is 45° ; in the north of Ireland it is 48°, and on the south coast about 51°. Dr. Hutton makes the mean heat of springs near Edinburgh 47°, and that of London 51°. At Upsal, in Sweden, it is 43°, and in Paris 53°. According to accurate experiments made by eminent philosophers, the heat of the springs in these different countries corresponds with the medium temperature. Though this coincidence of the heat of springs with the mean temperature of the climate where they flow seems to be a general fact, yet it admits of many exceptions. In many parts of the world there are springs which not only exceed the mean temperature, but even the strongest meridian heat ever known in the torrid regions. The following table shows the degrees of heat which different springs possess according to the experiments of philosophers : —

Places. Springs.	Highest deg. of heat.	Lowest deg. of heat.
Bristol, St. Vincent's,	84	76
Buxton, Gentleman's bath,	82	
Matlock,	69	
Bath, • King's bath,	119	113
Aix-la-Chapelle,	146	136
Barege,	122	
Pisa,	104	
Caroline baths Prudel, in Bohemia,	165	
Iceland, Geyzer,	212	

In cold countries, where congelation takes place, the heat of the earth is considerably above the freezing point, and continues so through the whole year. From experiments made in mines and deep pits this heat is uniform and stationary at a certain depth. The heat of these springs far exceeds the common heat of the internal parts of the earth ; but the causes are not easy to determine. The subterranean heat has been ascribed to the electrical fluid, and to a great body of fire in the centre of the earth. The electrical fluid seems at least a probable cause, but as to the

supposition that the heat of springs is owing to a central fire, it is too hypothetical to require any refutation. Hot springs are always found among combustible substances. It is well known that when water is mixed with the sulphuric acid, a degree of heat is produced superior to that of boiling water ; and when water meets with pyrites a violent inflammation takes place. If, therefore, we could prove that these materials exist in the strata from which hot springs are derived, we should be enabled to give a satisfactory account of this curious

phenomenon. As some ground for this supposition we may add, that most of the hot springs mentioned above have been found by analysis to be impregnated with sulphur, and some of them with iron. It must, however, be acknowledged that the hot springs of Iceland, which are 112°, the heat of boiling water, according to an accurate analysis of their contents by the ingenious Dr. Black, were neither found to contain iron nor sulphur. We must therefore continue to collect facts till the sciences of chemistry and mineralogy shall be so far advanced as to enable us to form a permanent theory on this subject.

Springs are of different kinds. Some are perennial, or continue to flow during the whole year; others flow only during the rainy season ; some ebb and flow. At Torbay there is one of this kind which ebbs and flows five or six inches every hour. There is another near Coriso in Italy which ebbed and flowed three times a day in the time of Pliny, and continues to do so still. A spring near Henly sometimes flows for two years together, and then dries up for an equal period. The cause of this is explained under HYDROSTATICS.

SPRING BOCK. See CAPRA.

SPRINGER, in zoology. See CAPRA.

SPRINGFIELD, a post town and capital of Hampden county, Massachusetts, on the east side of the Connecticut; eighteen miles south of Northampton, twenty-eight north of Hartford, forty-eight W. S. W. of Worcester, and eighty-eight west by south of Boston; is a pleasant and flourishing town, and contains a court house, a jail, a bank, a woollen manufactory, a rope walk, a furnace, two paper mills, two congregational churches, two public libraries, which toaether contain about 1000 volumes, and a printing office, from which is issued a weekly newspaper. Here is a large, pleasant, and handsome village, which has considerable trade, and contains a number of elegant houses. An excellent covered bridge, connecting this town with West Springfield, was carried away by the rise of the river in 1818.

There is in this town, belonging to the United States, a very extensive establishment for the manufacture of arms. The arsenal is delightfully situated on an elevated plain about half a mile east of the village. The buildings are finely arranged around a level square of twenty acres, and make an elegant appearance. One building is 204 feet by thirty-two, of two stories, with a cupola, which affords an extensive and interesting view of Connecticut River and the surrounding country ; another is 100 by forty ; a third sixty by thirty-two; all of brick, two

stories high. The second story of the last, forming a spacious hail, is consecrated as a place of public worship. There are also other buildings for workshops, store houses, &c., and seventeen dwelling houses.

The water-works are situated about a mile south of the arsenal, in three divisions, denomi-lated Upper, Middle, and Lower, water shops, on Mill River, a fine stream which falls into the Connecticut. They form the greatest collection of mills and other water-works in the state. The whole comprises five work shops, twenty-eight forges, ten trip hammers, eighteen water-wheels, nine coa! houses, three stores, and five dwelling houses.

This establishment employs from 240 to 250 workmen, who complete on an average about forty-five muskets daily. It is estimated that the cost of muskets at Springfield is 1356 dollars each ; at Harper's Ferry 1425 dollars.

SPRINGFIELD, WEST, a post-town of Hampden county, Massachusetts, on the west side of the Connecticut, opposite Springfield. This is a pleasant and valuable agricultural town, and contains four parishes, in each of which is a meeting-house, and three post-offices, West Springfield, Agawam, and Feeding Hills. This is also the name of numerous smaller townships of the United States.

SPRINGTIDE. See ASTRONOMY, Index, and TIDE.

SPRIN'KLE, v. a. & v. n Sax. rpp&njan ; Belg. sprinkele n ; Swed. sprenga. To scatter; disperse in small masses or drops ; bedew ; christen : to perform the act of scattering in this way : sometimes written SPRINGLE.

Take handfuls of ashes of the furnace, and let Moses sprinkle it towards the heaven. Exodus ix. 8.

The priest shall sprinkle of the oil with his finger.

Leviticus xiv.

Sprinkle water of purifying upon them.

Numbers viii. 7.

Let us draw near with a true heart, in full assurance of faith, having our hearts sprinkled from an evil conscience. Hebrews.

This is Timon's last,

Who, stuck and spangled with your flatteries, Washes it off, and springles in your faces Your reeking villany. Sttakspeare. Tinwn of Athens.

Woodcocks arrive first on the north coast, where every plash-shoot serveth for springles to take them.

Ca*ew.

Wings he wore Of many a coloured plume sprinJtled with gold.

Milton.

The prince with living water sprinkled o'er His limbs and body ; then approached the door, Possessed the porch. Drvden's JEneid.

To content and fill the eye of the understanding, the best authors sprinkle their works with pleasing digressions, with which they recreate the minds of their readers. Dryden.

Baptism may well enough be performed by sprinkling, or effusion of water. Aylijfe's Parergon.

\ hen dext'rous damsels twirl the sprinkling mop, And cleanse the spattered t ash, and scrub the stairs, Know Saturday appears. Gay's Trivia.

SPRIT, v. a. v. n. & n. s. Sax. j-ppyrran ; Belg. spruyten ; Swed. spruta ; Goth, sprida, sprit a. To throw out; eject with force: shoot; germinate : a shoot or sprout : commonly written spirt.

Toads sometimes exclude or sprit out a dark and liquid matter behind, and a venomous condition there may be perhaps therein ; but it cannot be called their urine. Browne.

The barley, after it has been couched four days, will sweat a little, and shew the chit or sprit at the root-end of the corn. Mortimer's Husbandry.

The SPRIT, in botany, consists of two parts ; *viz.* the radical and plume; the latter among malsters is called the acrospire.

SPRIT, in boat-building, a small boom or pole which crosses the sail of a boat diagonally from the mast to the upper hindmost corner of the sail, which it is used to extend and elevate; the lower end of the sprit rests in a sort of wreath or collar called the smotter, which encircles the mast in that place.

SPRIT'SAIL, n. s. Sprit and sail. The sail which belongs to the boltsprit mast.

Our men quitted themselves of the fireship, by cutting the spritsail tackle off with their short hatchets. Wiseman.

SPRITSAIL. See SAIL and SHIP.

SPRITSAIL-TOPSAIL. See SAIL and SHIP.

SPROUT, v. n. & n. s. Sax. j-ppyttan ; Belg. tpruyten. Sprout, sprit, and by a very frequent transposition spirt or spurt, are all radically, as Dr. Johnson says, the same word. To shoot by vegetation ; germinate ; ramify : a vegetable shoot.

Try whether these things in the sprouting do increase weight, by weighing them before 'they are hanged up ; and afterwards again, when they are sprouted. Bacon.

Stumps of trees, lying out of the ground, will put forth sprouts for a time. Id.

Vitriol is apt to sprout with moisture. Id.

The sprouting leaves that saw you here, And called their fellows to the sight. Cowley.

Early, ere the odorous breath of morn Awakes the slumbering leaves, or tassel'd horn Shakes the high thicket, haste I all about, Number my ranks, and visit every sprout. Milton.

We find no security to prevent germination, having made trial of grains, whose ends, cut off, have notwitstanding sprouted.

Browne's Vulgar Erroun.

Old Baucis is by old Philemon seen Sprouting with sudden leaves of sprightly green

Dryden.

To this kid, taken out of the womb, were brought in the tender sprouts of shrubs ; and, after it had tasted, it began to eat of such as are the usual food of goats. Ray on the Creation.

Rub malt between your hands to get the come or sprouting clean away. Mortimer's Husbandry.

Envied Britannia, sturdy as the oak Which on her mountain top she proudly bears,

Eludes the ax, and sprouts against the stroke, Strong from her wounds, and greater by her wars.

Prior.

Hence sprouting plants enrich the plain and vvood ; For physick some, and some designed for food.

Tilackmore.

The' enlivening dust its head begins to rear, And on the ashes sprouting plumes appear. Tickel.

SPROUT, in botany. See PLANT and SPRIT.

SPRUCE, adj. Skinner hesitatingly derives this word from Fr. preux. Junius from sprout. I know not whence to deduce it, except from pruce, says Dr. Johnson, a thing costly and elegant, and thence probably came spruce. Mr. Thompson refers to the Teut. sprcisse, spre'issen ;

Swed. spruka, spritta, to glitter, be lively. Nice ; trim ; neat without elegance. It was anciently used of tilings with a serious meaning; it is now used only, with levity, of persons.

The tree

That wraps that crystal in a wooden tomb, Shall be took up spruce, filled with diamond.

Donne.

Thou wilt not leave me in the middle street, Though some more spruce companion thou dost meet.

Id.

Along the crisped shades and bowers Revels the spruce and jocund spring ;

The graces, and the rosy-bosomed hours, Thither all their bounties bring. Milton.

He put his band and beard in order, The sprucer to accost and board her. Hudibras.

I must not slip into too spruce a style for serious matters ; and yet I approve not that dull insipid way of writing practised by many chymists. Boyle.

He is so spruce, that he can never be genteel.

Tatter.

This Tim makes a strange figure with that ragged coat under his livery : can't he go spruce and clean 1

Arbuthnot.

SPRUCE FIR. See PINUS.

SPRUCEBEER', n.s. From spruce, Germ. preussin, a kind of fir. Beer tinctured with branches of fir.

In ulcers of the kidneys, sprucebeer is a good bal-samick. Arbuthnot.

SPRUCE BEER, a cheap and wholesome liquor thus made : — Take of water sixteen gallons and boil the half of it. Put the water thus boiled, while in full heat, to the reserved cold part, which should be previously put into a barrel or other vessel ; then add sixteen pounds of treacle or molasses, with a few table spoonfuls of the essence of

spruce, stirring the whole well together; add half a pint of yeast, and keep it in a temperate situation, with the bung hole open, for two days, till the fermentation be abated. Then close it up or bottle it off, and it will be fit for being drunk in a few days afterwards. In North America and perhaps in other countries where the black and white spruce firs abound, instead of adding the essence of the spruce at the same time with the molasses, they make a decoction of the leaves and small branches of these trees, and find the liquor equally good. It is a powerful antiscorbutic, and may prove very useful in long sea voyages-SPRUCELEATH'ER, n. s. Corrupted from Prussian leather.

The leather was of Pruce. Dryden's Fables.

SPUD, n.s. Irish spud; Welsh yspod. A short knife used for weeding ; a small spade ; any short thick thing, in contempt.

My love to Sheelah is more firmly fixt Than strongest weeds that grow these stones betwix* ;

My spud these nettles from the stones can part, No knife so keen to weed thee from my heart.

Swift.

SPUME, fi.«.-j Lat a Foam; froth:

SPU'MY '5the adJe'tive corresP°ndin?-

Materials dark and crude, Of spirituous and fiery spume, till touched With heaven's ray, and tempered, they shoot forth So beauteous, opening to the ambient light. Milttm.

Waters frozen m pans, after their dissolution, leave a froth and spume upon them, which are caused by the airy parts diffused by the congealable mixture. Browne's Vulgar Errours.

The cause is the putrefaction of the body by unnatural heat : the putrifying parts suffer a turgescence, and, becoming airy and spumous, ascend unto the surface of the water. Browne.

Not with more madness rolling from afar, The spumy waves proclaim the watery war ; And, mounting upwards with a mighty roar, March onwards, and insult the rocky shore. Dryden.

The spumous and florid state of the blood, in passing through the lungs, arises from its own elasticity, and its violent motion, the aerial particles expanding themselves. Arbuthnot.

SPUN YARN, among sailors, a small line or cord formed of two or three rope-yarns twisted together by a winch ; the yarns, of which it is usually made at sea, are drawn out of the strands of old cables, or other ropes, and are knotted together and tarred. It is employed for several purposes, particularly to fasten one rope to another, to seize block-strops to the shrouds, and to serve ropes which are liable to be chafed, &c.

SPUNGE, n. s.& v.n. } Lat. spongia. A

SPUN'GINGHOUSE,TI.S. >sponge. See SPONGE.

SPUN'GY, adj. j To hang on others

for maintenance: a spunging-house is a house to which bailiffs take debtors and sponge them : spungy, of the nature of sponge ; having the quality of imbibing wet.

When he needs what you have gleaned, it is but squeezing you, and, spunge, you shall be dry again. Shakspeare. Hamlet.

I saw Jove's bird, the Roman eagle, winged From the spungy south to this part of the west, There vanished in the sunbeams. Id. Cymbeline

There is no lady of more softer bowels, More spungy to suck in the sense of fear.

Sliahspeare.

Some English wool, vexed in a Belgian loom, And into cloth of spungy softness made,

Did into France or colder Denmark roam, To ruin with worse air our staple trade. Dniden.

Considering the motion that was impressed by the painter's hand upon the spunge, compounded with the specifick gravity of the spunge and the resistance ot the air, the spunge did mechanically and unavoidably move in that particular line of motion.

Bentley's Sermons.

This will maintain you, with the perquisite of spunging while you are young. Swift to (jay.

A bailiff kept you the whole evening in a spiinijinij-house. Swift.

SPUNGE, or SPONGE. See SFONCIA.

SPUNGE is used, in gunnery, for a cylinder of wood, from ten to twelve inches long, of the same diameter with the rammer, with a piece of sheep or lamb-skin wound about its end, to serve for scouring great guns when discharged, before they be charged with fresh powder; hence called spunging. In small guns it is commonly fixed to the other end of the handle of the rammer ; but has a separate one in those of a larger calibre.

SPUNGING, in gunnery, the cleaning of the inside of a gun with a spunge, in order to prevent any sparks of fire from remaining in it, which would endanger the life of him that should load it again.

SPUNK, n. s. See SPONK. Rotten wood ; touchwood.

To make white powder, the best way is by the powder of rotten willows : spunk, or touchwood prepared, might perhaps make it russet.

Browne's Vulgar Errours.

SPUNK, a term used indifferently for half-rotten wood, match for guns, and a substance growing on the sides of trees.

SPUNK, in botany. See BOLETUS.

SPUR,n.s.,v.rt.&v.n. ˆ Sax. ppuna; Dan.

SPUR'GALLED, adj. S spore: Isl. Dut. and Goth. spor. A sharp point fixed in the rider's heel, with which he pricks his horse forward ; a point on the cock's leg; any prick or stimulus : to prick with a spur; instigate; excite; drive forward : to press forward ; travel expeditiously : spurgalled is hurt with the spur.

He borrowing that homely armour for want of a better, had come upon the spur to redeem Philoclea's picture. Sidney.

Seeing then that nothing can move, unless there be some end, the desire whereof provoketh unto motion, how should that divine power of the soul, that spirit of our mind, ever stir itself into action, unless it have also the like spur? Hooker.

He presently set spurs to his horse, and departed with the rest of the company.

Knolles's History of the Turks. Whether the body politick be A horse whereon the governour doth ride. Who, newly in the seat, that it may know He can command it, lets it straight feel the spur.

Shakspeare.

Grief and patience, rooted in him both, Mingle their tpurs together. Id. Cymbeline.

The strong-based promontory Have I made shake, and pluckt up by the spurs The pine and cedar. Shakspeare.

I was not made a horse, And yet I bear a burthen like an ass, Spurgultfd and tired by jaunting Bolingbroke. Id.

His laws are deep, and not vulgar ; not made upon the spur of a particular occasion, but out of providence of the future, to make his people more and more happy. Bacon.

Of birds the bill is of like matter with the teeth ; as for their spur, it is but a nail. Id.

Was I for this intitled Sir, And girt with rusty sword and spur, Por fame and honour to wage battle ? Hudibrai. Reward is the *pwr of virtue in all good arts, all laudable attempts ; and emulation, which is the other rpur, will never be wanting when particular rewards are proposed. Dryden.

Your father, when he mounted, Reined ‘em in strongly, and he spurred them hard.

Id.

Ascanius took the’ alarm, while yet he led, And, spurring on, his equals soon o’erpassed.

Id. JEueid.

The chief, if not only spur, to human industry and action, is uneasiness. Locke.

Let the awe he has got upon their minds be so tempered with the marks of good will, that affection may spur them to their duty. Id.

Animals have natural weapons to defend and of-fend; some talons, some claws, some spurs and beaks.

Ray.

Some bold men, though they begin with infinite ignorance and errour, yet, by spurring on, refine themselves. Grew.

My friend, who always takes care to cure his horse

of starting fits, spurred him up to the very side of the coach. Addison.

Who would be at the trouble of learning when he finds his ignorance is caressed? But, when you brow-beat and maul them, you make them men ; for, though they have no natural mettle, yet, if they are tpurred and kicked, they will mend their pace.

Collier on Pride.

The former may be a spur to the latter, till age makes him in love with the study, without any childish bait. Cheyne.

What ! shall each spurgalled hackney of the day, Or each new-pensioned sycophant, pretend To break my windows, if I treat a friend 1 Pope. Thus reputation is a spur to wit,

And some wits flag through fear of losing it.

Ou'per.

A SPUR is a piece of metal consisting of two branches encompassing a horseman's heel, and a rowel in form of a star advancing out behind. Louis le Debonnair forbade ecclesiastics the wearing of spurs. Anciently the difference between the knight and esquire was that the knight wore gilt spurs, whence the appellation of eques auratus, and the squire silvered ones. Two sorts of spurs seem to have been in use about the time of the Conquest, one called a pryck, having only a single point like the gaffle of a fighting-cock ; the other consisting of a number of points of considerable length, radiating from and revolving upon a centre, thence named the rouelle or wheel-spur. Delineations of the first occur in the seals of most of our kings and great barons prior to the reign of Edward III., and also on the engraved and sculptured figures of cross legged knights. The rouelle is sometimes found on figures of equal antiquity; instances occurring of the same person being delineated with the pryck-spur on one seal and the rouelle on another. Some specimens of the pryck-spur are still to be found in the cabinets of the curious.

SPUR, jingling, a curious spur which was worn in the seventeenth century. Mr. Harte, in his ingenious translation of the Life of Gustavus Adolphus, king of Sweden, has furnished the following particulars respecting it. His words are — ' 1 have seen one of these jingling spurs which was found in the Star Park, on the famous White Mountain,

near Prague, where the battle was fought between the imperialists and troops of the union ; by the event of which the elector palatine lost the crown of Bohemia. The spur was large and strong ; it was made of brass, and had a short curved neck. The box (from whose centre the rowels came) was as broad as a half-crown piece ; hollow, and something more than a quarter of an inch. It was of bell-metal gilt, and contained three or four metal balls about the size of a small field pea. The rowels, which were generally four or six, passed through the sides of the box, and measured nearly three inches from opposite point to point.' In the text it is observed (Essay, vol. i. p. 43) that it is thought these spurs •were' made to jingle in order to animate the horses, and keep them up to their duty, without goring their flanks unmercifully.

SPUR, in agriculture, is the name of a disease which frequently attacks rye, and sometimes wheat. It is found that the grains which liave

the spur are thicker and longer than the sound ones, and generally project beyond their husks, appearing sometimes straight, and sometimes more or less crooked ; and that their outsides are brown or black ; their surface is rough, and three furrows may frequently be perceived in them which run from end to end. Their outward end is always thicker than that which sticks to the chaff, and the most swollen end is sometimes split into two or three parts. It is not unusual to find on their surfaces cavities which seem to have been made by insects.

SPUR was anciently a piece of the armour of a cavalier fastened to the talary, that is, the hind part of that piece of a complete armour which covers the legs and feet. At present the spur is a piece of iron or other metal.

SPUR, ORDER OF THE GOLDEN, in Rome, supposed by several writers to have been instituted by pope Pius IV., in 1559. The badge is a star of eight points urgent, and between the two bot-tom points a spur or.

SPURS, in old fortifications, are walls that cross a part of the rampart and join to the town wall.

SPURS, in the construction of a wooden bridge, are braces which prop the two pillars that support it. The French use the word eperon.

SPURGE, n. s. Fr. espurye ; Belg. spuryie; Lat. purgo. A plant violently purgative : a general name in English for various milky purgative plants.

SPURGE, in botany. See EUPHORBIA.

SPURGE LAUREL. See DAPHNE.

SPURGE OLIVE. See DAPHNE.

SPURGE WORT is a species of iris.

SPU’RIOUS, adj.) Lat.spurius. Notge—

SPU’RIOUSNESS, n. s. J nuine;counterfeit; adul-terine ; bastard : the noun substantive corresponding.

SPUR’LING, ra. *. Fr. esperlan. A small sea-fish.

SPURLING, or SPARLING. See SALMO.

SPURN, v. a. v. n. & n. s. Sax. p pojinan, from rpori, the foot. To kick ; strike or drive with the foot : hence to reject; scorn : a kick ; contemptuous treatment.

SPURT, v. n. See To SPIRT. To fly out with a quick stream.

SPURZHEIM (Dr. G.), a celebrated phren-ologist, born at Tonqueits, near Treves, on the Moselle, and, being destined by his father for the clerical profession, educated at the university of Treves. On the invasion of Germany by the French, in 1799, he removed to Vienna, where he became acquainted with Dr. Gall, and from a hearer, was soon converted into an associate in his labours. Having completed his medical studies, he quitted Vienna, in company with Gall, whose doctrines he fully adopted in 1805, and visited Berlin, delivering lectures on the structure of the brain in that city, and elsewhere on the continent. After this period, until 1810, he was engaged, in conjunction with Gall, in preparing for publication in Paris, their great work, entitled ” Anatomie et Physiologic du Systeme Nervieuz en general, et du Garveau en particulier,” in four vols. folio, with a hundred atlas jJates, price £40, each copy. After this,

Spurzheim published, unassisted, his Observations sur Phrenologie, and treatises on Education. In 1813 he again revisited Vienna, where he took the degree of M. D., and in 1814 came to England ; here he published two editions of his “Physiognomical System,” his Outlines, and a Dissertation on Insanity. In Great Britain he delivered lectures, which were heard with attention in London, Dublin, Edinburgh, Liverpool, Cork, Bristol, and Bath. On his return to Paris, he contributed to the advancement of Phrenology, by many important discoveries, by a more philosophic arrangement, and by pointing out i’s application to many useful purposes. In 182ˆ, he revisited London, and delivered lectures at several public rooms, besides several courses on the dissection and anatomy of the brain at St. Thomas’s and St. Bartholomew’s Hospitals. In England he published his ” Phrenology, or the Doctrine of the Mind,” &c., and ” A View of the Philosophical Principles of Phrenology.” He continued to lecture in the various provincial towns of Great Britain and Ireland, for some years longer, and received much applause, in addition to a high de-gree of esteem which he obtained as a gentleman and scholar. During his latter visit to England he published “The Anatomy of the Brain,” and a “A General View of the Nervous System ;” ” Phrenology in Connection with the Study of Physiognomy;” “A Sketch of the Natural Laws of Man ;” besides many pamphlets and letters, defensive of his system. The death of his wife, in 1829, who had made the drawings and litho-graphic engravings for all his works, induced him to seek alleviation of sorrow in travelling; and in 1832 he sailed for America, where he met a most gratifying reception, and delivered lectures in Boston, to crowded auditories. The climate of America made sudden inroads upon his hitherto sound frame and constitution; and after suffering an attack of the lungs, he caught a violent fever, of which he died on Nov. 10, 1832, in the fifty-sixth year of his age. His body was embalmed, his toeart and lungs preserved, and a cast taken from his head and brain. Dr. Troller, German Professor at the University of Havard, delivered a feeling oration over his grave.

SPUTATION, n. s. Lat. sputam. The act of spitting.

A moist consumption receives its nomenclature from a moist iputation, or expectoration : a dry one is known by its dry cough. Harvey on Consumption.

SPUTTER, v. n. Swed. sputa; Lat. spitto. To emit moisture in small flying drops ; fly out in small particles : hence to speak hastily and

obscurely.

If a manly drop or two fall down, It scalds along my cheeks, like the green wood, That, sputtering in the flame, works outwards into tears. Dryden.

Thou dost with lies the throne invade ; Obtendirig heaven for whate'er ills befall, And sputtering under specious names thy gall. Id.

A pinking owl sat sputtering at the sun, and asked him what he meant, to stand staring her in ihe eyes'?

L' Estrange.

They could neither of them speak their rage , and so fell a sputtering at one another, like two roasting apples. Congreve.

Though he sputter through a session, It never makes the least impression ; Whatever he speaks for madness goes. Swift. In the midst of caresses, and without the least pretended incitement, to sputter out the basest accusations. Id. SPY, n. s., v. a. & v. n. Welsh yspio ; FT. espion ; Belg. spie ; Lat. speculator. It is observed by a German that spy has been in all ages a word by which the eye, or office of the eye, has been expressed : thus the Arimaspians of old, fabled to have but one eye, were so called from tiri, which among the nations of Caucasus still signifies one, and spi, which has been received from the old Asiatic languages for an eye, sight, or one that sees. — Johnson. One who watches the conduct of others : one sent to gain intelligence of an enemy's movements ; an informer : to search ; discover ; search narrowly ; pry. Moses sent to spy out Jaazar, and took the villages.

Numbers.

We'll hear poor rogues

Talk of court news, and we'll talk with them too, And take upon's the mystery of things, As if we were God's spies. Shakspeare. King Lear.

It is my nature's plague To spy into abuse ; and oft my jealousy Shapes faults that are not. Id. Othello.

Light hath no tongue, but is all eye ; If it could speak as well as spy, This were the worst that it could say, That being well 1 fain would stay. Donne. Let a lawyer tell he has spied some defect in an en-tail, how solicitous are they to repair that errour !

Decay of Piety.

Every corner was possessed by diligent spies upon their master and mistress. Clarendon.

As tyger spied two gentle fawns. Milton.

I come no spy,

With purpose to explore, or to disturb, The secrets of your realm. Id. Paradise Lost.

Such command we had, To see that none thence issued forth a spy, Or enemy, while God was in his work. Milton.

Nothing lies hid from radiant eyes ; All they subdue become their spies: Secrets, as chosen jewels, are Presented to oblige the fair. Waller.

Over my men I'll set my careful spies, To watch rebellion in their very eyes. Dryden.

My brother Guyomar, me thinks, I spy ; Haste in his steps, and wonder in his eye. Id. A countryman spied a snake under a hedge, half frozen to death. L'Estrange.

Those who attend on their state are so many spies placed upon them by the publick to observe them nearly. _ Atterbimj.

One in reading skipped over all sentences where he spied a note of admiration. Swift.

SQUAB, adj. \ Lat. ex cubito. Unfeathered ; SQUAB'BISH. J newly hatched : squabbish is, thick; heavy.

Diet renders them of a squabbish or lardy habit of body. Harvey.

The eagle took the tortoise up into the air, and dropt him down, tqitab, upon a rock, that dashed him to pieces. L'Estrange.

Why must old pigeons, and they stale, be drest," When there's so many squab one's in the nest?

King.

The nappy ale goes round ; Nor the squab daughter nor the wife were nice, Each health the youths began, Sim pledged it twice

Betteiton.

SQUAB, ?j. s. Lat. se cubere. Akin! cf :cfa or couch ; a stuffed cushion.

On her large squah you find her spread, Like a fat corpse upon a bed. Pcpe.

SQUABPIE', ». s. Squab and pie. A pis made of many ingredients.

Cornwal squabpie, and Devon whitepot brings ; And Leister beans and bacon, food of kings. King.

SQUAB'BLE, v. n. Swed. kiabla ; Teut. kab-belen, of Goth, keappa. To quarrel ; to debate peevishly ; to wrangle ; to fight. A low word.

Drunk? and speak parrot? and squabblel swagger? oh, thou invincible spirit of wine

Shakspeare. Othelln.

I thought it not improper, in a squabbling and contentious age, to detect the vanity of confidin–- ignorance. Blmmlle.

In popular factions, pragmatick fools commonly begin the squabble, and crafty knaves reap the benefit.

L' Estrange.

If there must be disputes, is not squabbling less inconvenient than murder ? Collier on Duelling.

A man whose personal courage is suspected, is not to drive squadrons before him ; but may be allowed the merit of some squabble, or throwing a bottle at his neighbour's head. Arbuthiwt.

The sense of these propositions is very plain, though logicians might squabble a whole day, whether they should rank them under negative or affirmative. Watts's Logick.

SQUAD (Fr. escuoade), a diminutive of squadron, is used in military matters to express any small number of men, horse or foot, that are collected together for tne purposes of drill, &c.

To SQUAD, to divide a troop or company into certain parts, ir order to drill the men separately or in small bodies, or to put them under the direction and care of some steady corporal or lance corporal. In every well regulated troop, or company, the men are squadded in such a manner that the most minute concern, with respect to the interior economy, can be instantly accounted for.

Aukward SQUAD. The aukward squad consists not only of recruits at drill, but of formed soldiers that are ordered to exercise with them, in consequence of some irregularity under arms. This term has likewise been used, partly in ridicule and partly in reproach, to mark out those officers who are negligent of their duty. An industrious tactician, in the British army, frequently uses the expression in the latter sense.

SQUA'DRON, n. s. > Fr. escadron ; Ital.

SQUA'DRONED, adj. J squadrone ; Lat. quudru-tus. A bodv of men drawn up square : hence any considerable part of an army or fleet : the adjective corresponding.

Nothing the Moors were more afraid of, than in a set battle to fight with squadrons coming orderly on… Knolles.

Lurimidon then reined his horse, that trotted

TU , . neighrin& by ;

1 he king a foot-man, and so scowres the squadron overly. Chapman.

Those half-rounding guards Just met, and closing stood in squadron joined.

Milton.

They gladly thither haste ; and by a choir Of squadroned angels hear his carol sung. Id.

Then beauteous Atys, with lulus bred, Of equal age, the second squadron led. Dryden.

Rome could not maintain its dominion over so many provinces, without squadrons ready equipt.

Arbuthnot.

SQUADRON (Fr. escadron), a body of cavalry composed of two troops. The number is not fixed, but is generally from eighty to 19,0 men. The oldest troop always takes the right of the squadron, the second the left. The most scientific and the most experienced officers have always held the cavalry in high estimation. The services which have been rendered by this body of men ; their innumerable successes, of which so many records are preserved both in ancient and modern history, together with the unanimous approbation of those authors who are considered as masters in the art of war; all these circumstances sufficiently evince that cavalry is not only useful but indispensably necessary in war. Marshal Turenne was known to say — Avec une bonne cavalerie, on travaille Jarmee de son en-nemie par detail; with a body of good cavalry one works, or harasses, the army of one's enemy by detail ; meaning thereby, that the desultory and rapid movements of dragoons, if properly managed, are of a nature to destroy the best concerted plans of an adversary, by hanging upon his flanks, driving in his outposts> intercepting his convoys, and by taking advantage of every opening during the heat of engagement. The Austrians had a memorable instance of the latter, when the French general Desaix, at the head of a body of horse, decided the fate of the battle of Marengo. In pursuits the superiority of the cavalry is unquestionable.

SQUADRON OF SHIPS either implies a detachment of ships employed on any particular expedition, or the third part of a naval armament.

SQUAL'ID, adj. Lat. sqwlidus. Foul ; nasty ; filthy.

A doleful case desires a doleful song, Without vain art or curious compliments ;

And squalid fortune into baseness flowing Doth scorn the pride of wonted ornaments.

Spenser.

Uncombed his locks, and squalid his attire, Unlike the trim of love and gay desire.

Dryden's Knight's Tale.

SQUALL, v. n. & n. s. Swed. squala. To scream out as a child or woman frightened ; a gust of wind or rain.

In my neighbourhood, a very pretty prattling shoulder of veal squalls out at the sight oif a knife.

Spectator.

I put five into my coat-pocket ; and, as to the sixth, I made a countenance as if I would eat him alive. The poor man squalled terribly. Swift.

Cornelius sunk back on a chair ; the guests stood astonished ; the infant squalled.

Arbuthnot and Pope.

There oft are heard the notes of infant woe, The short thick sob, loud scream, and shriller squall.

Pope.

A SQUALL iz a violent blast of wind usually occasioned by the interruption and reverberation

of the wind from high mountains. These are very frequent in the Mediterranean, particularly that part of it called the Levant, as produced by the repulsion and new direction which the wind meets with in its passage between the various islands of the Archipelago.

SQUAL'OR, n. s. Lat. squalor. Coarseness; nastiness; want of cleanliness and neatness.

Take heed that their new flowers and sweetness do not as much corrupt as the others dryness and squalor. Ben Jnnson .

What can filthy poverty give else, but beggary, fulsome nastiness, squalor, ugliness, hunger, and thirst 1 Burton.

SQUALUS, the shark, in ichthyology, a genus arranged by Linnaeus

under the class of amphibia, and the order of nantes; but by Gmelin more properly referred to the class of pisces, and order of chondropterygii. The head is obtuse ; on the sides of the neck there are from four to seven semilunar spiracles. The eyes are oblone;, vertical, half covered, and before the foramen temporale. The mouth is situated in the interior and lower part of the head, and is armed with several rows of teeth, which are serrated, acute, partly moveable and partly fixed, and unequal in form. The body is oblong, tapering, and rough, with very tender prickles. The ventral fins are much less than the pectoral, and are situated round the anus and genitals. Sharks are seldom destructive in the temperate regions : it is in the torrid zone that their ravages are most frequent. In the West Indies accidents happen from them daily. During the American war, in 1780, while the Pallas frigate was lying in Kingston Harbour, a young north American jumped overboard one evening to make his escape, and perished by a shark in a shocking manner. He had been captured in a small vessel, lost all his property, and was detained by compulsion in the English navy to serve in a depredatory war against his country. But he, animated with that spirit which pervaded every bosom in America, resolved, as soon as he arrived at some port, to release himself from the mortifying state of employing his life against his country, which, as he said when dying, he was happy to lay down as he could not employ it against her enemies. He plunged into the water; the Pallas was a quarter of a mile from the shore. A shark perceived him, and followed him very quietly till he came near the shore; where, as he was hanging by a rope that moored a vessel to a wharf, scarcely out of his depth, the shark seized his right leg, stripped the flesh entirely from the bones, and took the foot off at the ancle. He still kept his hold, and called to the people in the vessel near him, who were standing on the deck and saw the affair. The shark then seized his other leg, which the man by his. struggling disengaged from his teeth, but with the flesh cut through down to the bone into a multitude of narrow slips. The people in the vessel threw billets of wood into the water and frightened the shark away. The young man was brought on shore. Dr. Moseley was called to him ; but he had lost so much blood before any assistance could be given him that he expired before the mangled limbs could be taken off. A few weeks before this a shark, of twelve feet in length, was

caught in the harbour; and on being opened the entire head of a man was found in his stomach. The scalp and flesh of the face were macerated to a soft pulpy substance, which, on being touched, separated entirely from the bones. The bones were somewhat softened and the sutures loosened. — Moseley on Tropical Diseases. A very extraordinary instance of intrepidity and friendship is eiven by Mr. Hughes in his Natural History of Barbadoes. It happened about the end of queen Anne's wars at Barbadoes. The sailors of the York Merchant having ventured into the sea to wash themselves, a large shark made toward them; upon which they swam hack, and all reached the boat except one, whom the monster overtook, and griping him by the small of his back, soon cut him asunder, and swallowed the lower part of his body ; the remaining part was taken up and carried on board, where a comrade of his was, whose friendship with the deceased had been long and reciprocal. When he saw the severed trunk of his friend, with a horror and emotion too great for words to paint, he vowed that he would make the devourer disgorge or be swallowed himself in the same grave, and plunged into the deep armed with a sharp-pointed knife. The shark no sooner saw him but he made furiously toward him ; both equally eager, the one for his prey the other for revenge. The moment the shark opened his rapacious jaws, his adversary dexterously diving, and grasping him with his left hand somewhat below the upper fins, successfully employed his knife in his right hand, giving him repeated stabs in the belly ; the enraged shark, after many unavailing efforts, finding himself overmatched in his own element, endeavouring to disengage himself, sometimes plunging to the bottom, then mad with pain rearing his uncouth form, now stained with his own streaming blood, above the foaming waves. The crews of the surrounding vessels saw the unequal combat, uncertain from which of the combatants the streams of blood issued ; till at length the shark, much weakened by the loss of blood, made toward the shore, and with him his conqueror, who, now assured of victory, pushed his foe with redoubled ardor, and, by the help of an ebbing tide, dragged him on shore, ripped up his bowels, and united and buried the severed carcase of his friend. It is evident (says Dr. Moseley) that digestion in these animals is not performed by trituration, nor by the muscular action of the stomach ; though na-ture lias furnished them with a stomach of wonderful force and thickness, and far exceeding that of any other creature. Whatever their force of digestion is it has no effect upon their young ones, which always retreat into their stomachs in time of danger. That digestion is

not performed by heat m fish is equally evident. The coolness of the stomach of these fishes is far greater than the temperature of the water out of which they are taken ; or of any other part of the fish, or of any other substance of animated nature I ever felt. On wrapping one of them round my hand, immediately on being taken out of the fish, it cpused so much aching and numbness that I could not endure it long. Of these voracious sea-monsters there are thirty-three species; of which

the following is an exact list, with descripuonk of the most remarkable : —

1. S. acanthias, the picked dog-fish. Tnere H another species which has the same English name, and probably the same characters.

2. S. Africanus, the African shark, or galonne, abounds on the coasts of Africa.

3. S. Americanus, the American shark, or liehe, swarms on the coasts of America.

4. S. barbatus, the barbu, or bearded shark.

5. S. canicula, the greater dog-fish, or spotted shark, is distinguished by large nostrils, which are covered by a lobe and worm-shaped flap, or by the position of the anal fin, which is at an equal distance from the anus and tail. The body is spotted ; the head is small, with a short snout; the eyes are oblong; the iris whitish; the mouth is large and oblong, armed with three rows of teeth ; the tongue is cartilaginous ; the anus is before the middle of the body ; the first dorsal fin is behind the ventral fins; the other, which is less, is almost opposite the anal fin ; the caudal fin is narrow and marginated. This species is found in almost every sea, is about four feet long, extremely voracious, generally feeding on fishes, and is long lived. The skin, which is spotted like a leopard, is used when dried for various purposes.

6. S. carcharias, the requiu, or white shark, is often thirty feet long, and, according to Gil-lius, weighs 4000 Ibs. The mouth is sometimes furnished with a six-fold row of teeth, flat, triangular, and exceedingly sharp at their edges, and finely serrated. Mr. Pennant had one rather more than an inch and a half long. Grew says that those in the jaws of a shark two yards in length are not half an inch ; so that the fish to which this tooth belonged must have been six yards long, provided the teeth and body kept pace in their growth. This dreadful apparatus,

when the fish is in a state of repose, lies quite flat in the mouth ; but when he seizes his prey he has power of erecting them by the help of a set of muscles that join them to the jaw. The mouth is placed far beneath ; for which reason these, as well as the rest of the kind, are obliged to turn on their backs to seize their prey ; which is an observation as ancient as the days of Pliny. The eyes are large; the back broad, flat, and shorter than that of other sharks. The tail is of a semilunar form, but the upper part is larger than the lower. It has vast stiength in the tai and can strike with great force ; so that the sailors instantly cut it off with an axe as soon as they draw one on board. The pectoral fins are very large, which enables it to swim with great swiftness. The color of the whole body and fins is a light ash. The ancients were acquainted with this fish ; and Oppian gives a long and entertaining account of its capture. Their flesh is sometimes eaten, but is esteemed coarse. They are the dread of the sailors in all hot climates, where they constantly attend the ships in expectation of what may drop overboard : a man that has that misfortune perishes without redemption. A master of a Guinea ship informed Mr. Pennant that a rage of suicide prevailed among his new-bought slaves, from a notion the unhappy creatures had, that after death they should be re-S Q U A L U S.

stored again to their families, friends, and country. To convince them at least that they should not reanimate their bodies he ordered one of their corpses to be tied by the heels to a rope and lowered into the sea; and, though it was drawn up again as fast as the united force of the crew could be exerted, yet in that short space the sharks had devoured every part but the feet, which were secured at the end of the cord. Swimmers very often perish by them ; sometimes they lose an arm or a leg, and sometimes are bit quite asunder, serving but for two morsels for this ravenous animal : a melancholy tale of this kind is related in a West India ballad, preserved in Dr. Percy's Relics of ancient English poetry. This species inhabits the abyss of the ocean, and only appears on the surface when allured by its prey. It is the most voracious of all animals, not even, it is said, sparing its own offspring, and often swallowing its prey entire. This is probably the species offish that swallowed the prophet Jonah ; for a whale it could not be without an additional miracle.

7. S. catulus, the smaller dog-fish, has a large head ; the pupil of the eye is black ; the iris white ; the snout is of a bright hue ; the mouth, which is large, is situated between the nostrils, and is armed with four rows of teeth, serrated with three points bent inwards; those in the middle between the two mandibles are longer than the rest. The tongue is broad and smooth ; the spiracles are five ; the back is tapering and yellowish; the sides are somewhat compressed; the tail longer than the body, and the caudal fin is narrow and marginated ; the anterior anal and dorsal fins are behind the ventral ; the posterior dorsal fin is opposite to the anal. They inhabit the Mediterranean, Northern, and Indian Ocean, and are two or three feet long.

8. S. centrina, the humantin.

9. S. cinereus, or the perlon.

10. S. cirratus, the curled shark.

11. S. cornubius, the por-beagle, or Beau-maris shark.

12. S. Fernandinus, the Fernandine shark. This species swarms near Juan Fernandez.

13. S. Galeus, the tope.

14. S. Glaucus, the blue shark, is about seven feet long. The color of the back is a fine blue ; the belly a silvery white; the head is flat; the eyes small and roundish ; the teeth are almost triangular, elongated, and pointed, but not serrated. The anus is very near the tail; the anterior dorsal fin is situated before the ventral fins, about the middle of the body, and is almost triangular ; the posterior dorsal fin is equal to the anal fin, and is placed nearer the tail ; the pectoral fins are large, long, and marginated ; and the ventral are blue above and white below; the caudal is blue, divided into two lobes, of which the superior is much longer than the inferior lobe. This species is frequent in every sea, and is fierce ; but not very destructive in our seas.

15. S. griseus, the griset.

16. S. Indicus, the Indian shark, abounds in the Indian Ocean.

17. S. Isabella has a wrinkled spotted skin, and the anterior dorsal fin is perpendicular to

the abdominal fins. The body is somewhat flat; the head short, large, and obtuse. The teeth are disposed in six rows, compressed short, and triangular, having a notch on each side of their bases. The eyes are sunk ; the iris is of a copper color, and the pupil is black and oblong. The fins of the back are almost square ; the caudal fin is divided into two lobes, and the lateral line is parallel to the back. The upper part of the body is of a reddish ash-color, with blackish spots disposed irregularly. The under part is of a dirty white hue. This species is found near New Zealand, and is about two feet and a half long.

18. S. kumalis, the kumal.

1 9. S. longicaudus, the long-tailed shark.

20. S. massasa, the massasa.

21. S. maximus, the basking shark, or the sun-fish of the Irish. This species has been long known to the inhabitants of the south and west of Ireland and Scotland, and those of Caernarvonshire and Anglesey; but is described by no English writer except Mr. Pennant; and has been mistaken for, and confounded with, the luna of Rondeletius, which English writers call the sun-fish. The Irish and Welsh give it the same name, from its lying as if to sun itself on the surface of the water; and for the same reason Mr. Pennant calls it the basking shark. Jt was long taken for a species of whale, till Mr. Pennant pointed out the bronchial orifices on the sides, and the perpendicular site of the tail. These are migratory fish; in a certain number of years they are seen in multitudes on the Welsh seas, though in most summers a single strayed fish appears. They inhabit the northern seas, even as high as the arctic circle. They visited the bays of Caernarvonshire and Anglesey in vast shoals in the summers of 1756 and a few succeeding years, continuing there only the hot months; for they quitted the coast about Michaelmas. These fish visited these seas in vast numbers about fifty years ago. They appear in the Frith of Clyde and among the Hebrides in June, in small droves of seven or eight, but oftener in pairs. They continue in those seas till the end of July. They have nothing of the fierce and voracious nature of the shark's kind, and are so tame as to suffer themselves to be stroked ; they generally lie motionless on the surface, commonly on their bellies, but sometimes on their backs. Their food seems to consist entirely of sea plants, no remains of fish being ever discovered in the stomachs of numbers that were cut up, except some green stuff, the half digested parts of algse, and the like. Linnaeus says they feed on medusae. At certain times

they are seen sporting on the waves, and leaping with vast agility several feet out of the water. They swim very deliberately, with the dorsal fins above water. Their length is from three to twelve yards, and sometimes longer. Their form is rather slender. The upper jaw is much larger than the lower, and blunt at the end. The tail is very large, and the upper part remarkably longer than the lower. The upper part of the body is of a deep leaden color ; the belly white. The skin is rough like shagreen, but less so on the belly. In the mouth, towards the throat, is a

very short sort of whalebone. The liver is of a great size, but that of the female is the largest ; some weigh above 1000 Ibs., and yield a great quantity of pure and sweet oil, fit for lamps, and also much used to cure bruises, burns, and rheumatic complaints. A large fish has afforded to the captors a profit of £20. They are viviparous; a young one about a foot in length being found in the belly of a fish of this kind. One found dead on the shore of Loch Ranza in the Isle of Arran measured as follows : — The whole length twenty-seven feet four inches; first dorsal fin three feet; second one foot; pectoral fin four feet ; ventral two feet ; the upper lobe of the tail five feet; the lower three. They will permit a boat to follow them without accelerating their motion till it comes almost within contact, when a harpooner strikes his weapon into them us near to the gills as possible. But they are often so insensible as not to move till the united strength of two men have forced in the harpoon deeper. As soon as they perceive themselves wounded they fling up their tail and plunge headlong into the bottom; and frequently coil the rope round them in their agonies, attempting to disengage the harpoon by rolling on the ground, for it is often found greatly bent. As soon as they discover that their efforts are in vain they swim away with amazing rapidity, and with such violence that there has been an instance of a vessel of seventy tons having been towed away against a fresh gale. They sometimes run off with 200 fathoms of line, and with two harpoons in them ; and will employ the fishers for twelve and sometimes for twenty-four hours before they are subdued. When killed they are either hauled on shore, or, if at a distance from land, to the vessel's side. The liver (the only useful part) is taken out and melted into oil in kettles. A large fish will yield eight barrels of oil, and two of sediment.

22. S. mustelus, the smooth hound shark.

23. S. ocellatus, the oeille.

24. S. pristis, the sole, or saw-fish, is sometimes fifteen feet long, smooth, black on the up-per parts, ash-colored on the sides, and white underneath. The head is flat and conical ; the beak or snout projecting from the nose is about five feet long, covered with a coriaceous skin, and armed on each side, generally with twenty-four long, strong and sharp-pointed teeth ; but the number varies with age. The teeth are granulated ; the eyes large, the iris of a 2olden co-lor, and the spiracles five. The anterior dorsal fin corresponds to those of the belly ; the posterior is situated in the middle, between the for-mer and apex of the tail ; the pectoral fins are broad and long , the caudal is shorter than in the other species. It inhabits all the seas from Greenland to Brasil : and is found also in the Indian Ocean. It is harmless.

25. S. spinax, the sagre, or picked dog-fish, takes its name from a strong and sharp spine placed just before each of the back fins, distinguishing it at once from the rest of the British sharks. The nose is long, and extends greatly beyond the mouth, but is blunt at the end. The teeth are disposed in two rows, are small and sharp, and bend from the middle of each jaw to-

wards the corners of the mouth. The back is of a brownish ash-color; the belly white. It grows to the weight of about twenty pounds This species swarms on the coasts of Scotland, where it is taken, split, and dried; and is a food among the common people. It forms a sort of inland commerce, being carried on women's backs fourteen or sixteen miles up the country, and sold or exchanged for necessaries.

26. S. spinosus, the bouele, or spinous shark.

27. S. squamosus, the ecailleux, or scaly shark.

28. S. squatina, the angel-fish, or rather devil-fish, is from six to eight feet long, has a large head, teeth broad at their base, but slender and very sharp above, and disposed in five rows all round the jaws. Like those, of all sharks, they are capable of being raised or depressed by means of muscles uniting them to the jaws, not being lodged in sockets as the teeth of cetaceous fish are. The back is of a pale ash-color, and very rough ; along the middle is a prickly tuberculated line ; the belly is white and smooth. The pectoral fins are very large, and extend horizontally from the body to a great distance: they have some resemblance to wings, whence its name. The ventral fins are placed in the same manner, and the double penis is placed in them ; which forms another character of the males in this ge-nus. This species

connects the genus of rays and sharks, partaking somewhat of the character of both ; yet it is an exception to each in the situation of the mouth, which is placed at the extremity of the head. It is pretty frequent on most of our coasts, where it prowls about for prey. It is extremely voracious; and feeds on flounders and flat fish, which keep at the bottom of the water. It is exceedingly fierce, and dangerous to be approached. Mr. Pennant mentions a fisherman whose leg was terribly torn by a large one of this species, which lay within his nets in shallow water, and which he went to lay hold of incautiously. The aspect of these, as well as the rest of the genus, have much malignity in them ; their eyes are oblong, and placed lengthwise in their head, sunk in it, and over-hung by the skin, and seem fuller of malevolence than fire. Their skin is very rough ; the ancients made use of it to polish wood and ivory, as we do at present that of the greater dog-fish. The flesh is now but little esteemed on account of its coarseness and rankness ; yet Archestratus (as quoted by Athenaeus, p. 319) speaking of the fish of Miletus, gives this the first place, in respect to delicacy, of the whole cartilaginous tribe. They grow to a great size ; being sometimes nearly a hundred weight.

29. S. stellaris, the greater cat-fish. The head is marked with points ; the abdominal fins are united and sharp at the apex ; the dorsal fins extend almost to the tail ; the skin is reddish, marked with black spots of different sizes, and is of .a dirty ash-color below. It is from two to six feet long; resembles the canicula, but is distinguished by larger and fewer spots, by a snout somewhat longer, a tail somewhat shorter, and nostrils almost shut. The female brings forti-nineteen or twenty young at a time. They inhabit the European seas, living chiefly on shell

fish, molluscae, and other small fishes. The dor-sal fins are equal; the anterior one being behind the middle of the body, and the posterior one being a little behind the anal.

30. S. tiburo, the pantouflier of Broussonet.

31. S. tigrinus is about fifteen feet long; the body is long, of unequal thickness, black, interspersed with white stripes and spots, irregularly and transversely. The head is large ; the rnouth low and transverse, the upper jaw having two curls ; the upper lip is thick and prominent ; there are five spiracles on each side, the last two being united so as to give the appearance only of four ; the mandibles are armed with very small pointed teeth; the tongue is short and thick; the eyes small and oblong ; the pupil azure colored ; the iris black. The abdomen is broad ; the pectoral fins are broad, and rounded at the extremity. The anterior dorsal fin is opposite to the ventral fins, and the posterior dorsal fin to the anal. The tail is compressed on both sides, and the fin which terminates it is hollow. They are found in the Indian Ocean, and live chiefly on shell fish.

32. S. vulpes, the sea-fox, is most remarkable for the great length of its tail, the body being about seven feet long, and the tail six feet. The head is short and conical ; the eyes are large ; the jaws are armed in a dreadful manner with three rows of triangular, compressed, and pointed teeth ; the tongue is blunt; the lateral line is straight, the anterior dorsal fin is placed about the middle of the back ; the posterior, which consists of two pointed lobes, is opposite to the anal fin ; the ventral fins are very near one another; the anal is acuminated ; the inferior lobe of the tail is about a foot long ; the upper, which is shaped like a scythe, is five times longer. This species inhabits the Mediterranean, the coast of Scotland and England. It is covered with small scales; its back is ash-colored, belly whitish. It is extremely voracious. The ancients styled this fish a\wm)Z, and vulpes, from its supposed cunning. They believed that when it had the misfortune to have taken a bait, it swallowed the hook till it got at the cord, which it bit off and so escaped.

33. S. zygaena, the marteau, or balance-fish, is frequently six feet long, and weighs 500 Ibs. The head is elongated on each side; the fore part is bent back, and convex both above and below. At the extremities of the elongated part are the eyes, which are large, prominent and directed downwards; the iris is of a golden co-lor; the

mouth is arched, and near the beginning of the trunk. It has a horrible appearance from the teeth, which are arranged in three or tour rows, and are broad pointed, and serrated on both sides. The tongue is thick, broad, and like a man's. The trunk is long and tapering; the fins are semicircular on the margin, and black at the basis; the ventral fins are separate; the anal and posterior dorsal fins are small ; the anterior dorsal fin is large, and neai the head ; the caudal is long. This species inhabits the Mediterranean Sea and the Indian Ocean, It is one of the most voracious of the whole tribe.

SQUAMARIA, in botany. See LATHR*A. SQUAMOSA RADIX. See BOTANY.

SQUA’MOUS, adj. Lat. squameus. Scaly ; covered with scales.

The sea was replenished with fish of the cartilaginous and squamose, as of the testaceous and crustaceous kinds. Woodward.

Those galls and balls are produced in the gems of oak, which may be called squamuus oak cones.

Derham’s Physico-T/ieo ogy.

SQUAMOUS, in anatomy, an epithet applied to the spurious or false futures of the skull, because composed of squamae, or scales like those of fishes.

SQUAN’DER, v. a. i Saxon rcenˆan ;

SQUAJ/DERER, n. s.) Teut. scliwendcn. To scatter lavishly; to spend profusely ; to throw away in idle prodigality ; scatter : a spendthrift ; prodigal ; lavisher.

He hath an argosie bound to Tripolis, another to the Indies, and other ventures he hath squandered abroad. Shakspeare.

The troops we squandered first again appear From several quaiters, and inclose the rear.

Drydeit

Plenty in their own keeping teaches them frow the beginning to be squanderers and wasters. Locke.

They often squandered, but they never gave.

Saville.

We squander away some part of our fortune at Play-Atterbury.

How uncertain it is, whether the years we propose to ourselves shall be indulged to us ; uncertain whether we shall have power, or even inclination, to improve them better than those we now squundei away. Ji,lgers.

True friends would rather see such thoughts as they communicate only to one another, than what they squander about to all the world. Pope.

Never take a favourite waiting-maid, to insinuate how great a fortune you brought, and how little you are allowed to squander. Swifi.

SQUARCIONE (Francis), an eminent Italiru painter, born in 1394. He formed his taste on the finest antiques. For that purpose he travelled into Greece, where he copied the relics of pntiquity. On his return to Italy he obtained the highest reputation, insomuch that he was styled the father of painting. He died in 1474.

SQUARE, adj., n. s., v.a.,) Welsh ysgwdr ;

SQUARENESS, n.s. |~& v. n. \ Italian squadra ; Span, esquadra, of Lat. quadratus. Rectangular ; cornered ; parallel ; suitable; strong; compact: a figure of this kind ; the area of the figure ; content of an angle; rule; regularity ; for a square number, see below; quaternion ; the number four; the astrological situation of planets distant 90° : to square is, to form into a square or into right angles : hence to adjust; measure ; fit : as a verb neuter, suitor fit with; also to oppose; go to opposite sides (obsolete) : squareness is the state of being square.

All the doors and posts were square, with the windows. Kings,

Catching up in haste his three square shield, And shining helmet, soon him buckled to the field.

Spenser.

Then did a sharped spire of diamond bright ; Ten feet eacli way, in square appear to me,

Justly proportioned up into his height, So far as archer might his level see. Id.

The whole ordinance of that government was at first evil plotted, and through other oversights came

SQU

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more out of square, to that disorder which it is now come unto. Id. Ireland.

In St. Paul's time the integrity of Rome was fa-mous ; Corinth many ways reproved ; they of Galatia much more out of square. Hooker.

She 's a most triumphant lady, if report be square to her. Shaktpeare.

All have not offended ; For those that were, it is not square to take On those that are, revenge ; crimes like to lands Are not inherited. Id. Timon of A thens.

He alone

Dealt on lieutenantry, and no practice had In the brave squares of war. Shahspeare.

I profess

Myself an enemy to all other joys Which the most precious square of sense possesses, And find Lam alone felicitate In your dear love. Id.

Stubborn criticks, apt, without a theme For depravation, to square all the sex By Cressid's rule. Id.

How frantickly I square my talk ! Id.

Are you such fools

To square for this 1 would it offend you then That both should speed 1 Id. Titus Andronicus.

Nothing so much setteth this art of influence out of square and rule as education. Raleigh.

God has designed us a measure of our undertak-ings ; his word aud law, by the proportions whereof we are to square our actions. Decay of Piety.

The oracle was enforced to proclaim Socrates to be the wisest man in the world ; because he applied his studies to the moral part, the squaring men's lives.

Hammond.

O'er Libra's sign a crowd of foes prevails, The icy goat and crab that square the scales.

Creech.

Raised of grassy turf their table was ; And on her ample square from side to side All autumn piled. Milton.

To the' other five

Their planetary motions and aspects, In sextile, tquare, and trine, and opposite, Of noxious efficacy. Id. Paradise Lost.

Eye me, blest providence, and square my trial To my proportioned strength. Milton.

In rectangle triangles the square which is made of the side that subtendeth the right angle is equal to the squares which are made of the sides containing the right angle. Browne.

He employs not on us the hammer and the chizzel, with an intent to wound or mangle us, but only to ' tquare and fashion our hard and stubborn hearts.

Boyle's Seraphick Love.

We live not on the square with such as these, Such are our betters who can better please.

Dryden .

His preaching much, but more iiis practice

wrought ;

A living sermon of the truths he taught : For this by rules severe his life he squared, That all might see the doctrine which they heard.

Id.

Men should sort themselves with their equals ; for a rich man that converses upon the square with a poor man, shall certainly undo him. L' Estrange.

I shall break no squares whether it be so or not.

Id.

This instrument is for striking lines square to other lines or straight sides, and try the squareness of their work. Moxon.

Some professions can equally tquare themselves to, and thri-ve under, all revolutions of government.

South.

The statue of Alexander VII. stands in the large square of the town. Additoii on Italy.

Water and air the varied form confound ; The straight looks crooked, and the square grow» round. Prior.

Circles to square, and cubes to double, Would give a man excessive trouble. Id.

His description squares exactly to lime.

Woodward.

These marine bodies do not square with those opinions, but exhibit phenomena that thwart them.

Id.

Advance thy golden mountains to the skies, On the broad base of fifty thousand rise : Add one round hundred ; and, if that's not fair, Add fifty more, and bring it to a square. Pope.

This must convince all such who have, upon a wrong interpretation, presumed to square opinions by theirs, and have in loud exclamations shewn their abhorrence of university education. Su-ift.

Motion, squareness, or any particular shape, are the accidents of body. Watts's Logic*.

SQUARE, in geometry, a quadrilateral figure both equilateral and equiangular. See GEOMETRY.

SQUARE, among mechanics, an instrument consisting of two rules or branches, fastened perpendicularly at one end of their extremities, so as to form a right angle. It is of great use in the description and mensuration of right angles, and laying down perpendiculars.

SQUARE, HOLLOW, in the military art, body of foot drawn up with an empty space in the middle, for the colors, drums, and baggage, faced and covered by the pikes every way, to keep off the horse.

SQUARE NUMBER is the product arising from a number multiplied by itself. Thus 4 is the square of 2, and 16 the square of 4 The series of square in-tegers is 1, 4, 9, 16, 25, 36, &c.

which are the squares of 1, 2, 3, 4, 5, 6, &c. Or the square fractions J, 3, fs, & $, $, &c. which are the squares of £, §, 3, 3» |> ?> &c

Square numbers have remarkable properties, of which the following are some of the most interesting, *viz.* — 1. Every square number is of one of the forms 4 n or 4 n + 1 ; that is, every square, when divided by 4, will leave either 0 or 1 for a remainder; and, understanding this expression still in the same sense, the following table will express the torms of square numbers to the moduli or divisors. 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12.

| Moduli.

Possible Forms of Squares.

3n

3n + l

4

471

471 + 1

5

$5n$

$5n \pm 1$

6

$6n$

$6n + 1$

$6n + 3$

$6n + 4$

7

7n

7n + 1

7n + 2

7n + 4

8

871

871 + 1

871 + 4

9

9ra

9n + 1

971 + 4

9n + 7

10

1071

107Z ± 1

10n ± 4

10n ± 5

11

1171

lln + 1

11 71 + 3

ll7i + 5 11 n + 9

12

1271

$12n + 1$

$1271 + 4$

$1271 + 9$

- 2. Hence, by exclusion, we may derive the following table of impossible forms, *viz.*

Impossible Forms for Squares.

3« + 2

4« + 2 4w + 3

5« + 2

7n + 5 7« + 6 8« ± 2 8ra ± 3

9« ± 3 9«-|-5 9n + 8 10n ± 2 10» ± 3

llw + 2 llw + 6 lln + 711n + 8 lbt + 10

12« ± 2 12w-j-3 12n ± 5 12W + 6 12n + 8 12/z-r-lO

These formulae, as they involve no higher power of the indeterminate n than the first, are called linear forms ; but, by means of them, we easily arrive at a variety of quadratic formulae, which it is extremely useful to be acquainted with, in practising the diophantine or indeterminate analysis. A person unacquainted with these exclusions, required to find two such numbers, that double the square of one, added to triple the square of the other, should be a square, would see nothing impossible in the proposition, and might therefore lose many useless hours in the research ; whereas, by a little attention to the impossible and possible forms, he would find the problem absolutely impossible, and hence spare himself much useless labor.

3. The method of deducing impossible quadratic forms from the linear ones above given will be seen immediately from a single example. Let it be required to ascertain whether the equaton 2 x* + 3 y3 ~ w' be

possible or impossible. First, we may assume x. y, and w, prime to each other ; for, if x and y h?ve a com-mon divisor, w must have the same, and the whole equation may be divided by it ; whereby it will be reduced to another equation 2 x‘2 -j-3 y 2 — w‘2, in which these quantities have no longer a common divisor, or in other words they are prime to each other.

Since, then, x and y are prime to each other, they cannot be both of the form 3 n ; for, in this case, they would have a common divisor 3. Let then, first, ˆ be of the form 3 n, and y3 of the form 3 n + 1 ; then 2 x3 is of the form 3 n, and 3 y1 of the form 3 n’ + 3, and consequently their sum will have the form 3 n, which is impossible, because, in this case, w and x would nave a common divisor 3; and, if we suppose a? of the form 3n -f-1, and v2 of the form 3 n, then 2 x* + 3y2 is of the form 3 n + 2, which is an impossible form : and, lastly, if we assume both of the form 3n -f-1, then 2 x3 + 3 ya would have again the same impossible form 3 ra -)- 2 ; therefore, in no case can 2 x” -f 3y3 — tv3 be possible in integral numbers.

In the same manner a variety of other impossible forms may be deduced, of which the following aie those which most commonly occur.

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5. Modulus 3.

2 t°- + 3 u3 = w» 5 t3 + 3 u3 = to* 8 *2 + 3 MS = w* (3 p + 2) t3 + 3 w2 = w*

6. Modulus 5.

2 / ± 5 M2 — w3 3p3 ± 5u3 = w3

7 2 ± 5 u3 r = w2 (5 p ± 2) 2 ± 5 w2 = «;*

Or the two latte-general forms may be rendered more comprehensive, by the introduction of atiother indeterminate </ ; observing only that in this case, the quantity must always be prime to the modulus. With this condition the two latter may be written thus : —

(3 p + 2) <* + 3 q u3 := w2, and (5 p ± 2) t3 ± 5 q u3 — w3.

7. Modulus 7.

(7 p + 3) t3 ± 7 q u3 := w3 (7 /> + 5) *2 ± 7 q M2 = ws (7p + 6)t2±7 qu3—w3

8. Modulus 11.

(11 p + 2) *2 ± 11 q M2 — w» (lip -f-6) *2± 11 qu' — w* (lip + 7)*2± 11 ?wjzz w*

9. Modulus 13.

(13 p± 2)t3± 13 q w2 — w2 (13 f ± 5)fz± 13 9 u3 — w- (13 p ± 6) <s ± 13 9 «2 =. u-3 (13 p ± 7) <s ± 13 9 w2 = u;3

10. Modulus 17. (17 p ± 3) P ± 17 9 wa := w5 (17 p ± 5) <2 ± 17 9 u2 zr w)s (17 p ± 6) t* ± 17 q u- — w> (17 p ± 7) t* ± 17 q u* =. w3

A great variety of impossible forms might have been given to other moduli ; but the above are sufficient for our present purpose.

There are also many formulae, which, though possible singly, become impossible in pairs; such are the following : —

J 2 3? + y3 - a3

lO.\n .1 *o . ,

I 2 or — y3 — w*

14.

15.

x2 + 2 ya = 22

These might also be carried to a much greater extent and many collateral properties drawn from them relative to the impossibility of

some higher powers; we must not, however, carry the subject farther in this place. The reader who is desirous of more detailed information may consult Barlow's Elementary Investigation of the Theory of Numbers, where this part of the doctrine of Numbers is carried to a considerable extent. We shall merely select a few other distinct properties of squares, as they are given by the same author in his Mathematical Dictionary.

17. The sum of two odd squares cannot be a square.

18. An odd square, taken from an even square, cannot leave a square remainder.

19. If the sum of two squares be itself a square, one of the three squares is divisible by 5.

20. Square numbers must terminate in one of the digits 0, 1, 4, 5, 6, or 9.

21. No number of repetend digits can be a square.

22. The area of a rational right-angled triangle cannot be equal to a square.

23. The two following series are remarkable for being such as, when reduced to improper fractions, the sum of the squares of each numerator and denominator is a complete square ; or, which is the same, they are the sides of rational right-angled triangles. These series are as fol-low, *viz.* : —

1|, 2?, 32, 4$, 5fi, &c. &c. 1 i, 2& 3fe 4& 5&&C.&C.

24. The second differences of consecutive square numbers are equal to each other, thus : — Squares 1, 4, 9, 16, 25, &c. First difference 3, 5, 7, 9, &c. Second difference 2, 2, 2, Sac.

To these we may also add the following; which are more particularly applicable to the indeterminate and diophantine analysis.

25. If a number be the sum of two squares, its double is also the sum of two squares ; for

n Hence also the sum of two squares, multiplied by any power of 2, is the sum of two squares.

2b'. The product of two numbers, each being the sum of two squares, is itself the sum of two squares ; for

C (x x' + y y)2 + (xy — x'y)*, or I (x x — yyj + (x y + x'yf Thus, 5 — 22 + I2 13 — 32 + 2J

Product 65 = 8s + I2 or 7* + 41

27. The product of the sum of four squares, by the sum of four other squares, is itself the sum of four squares ; thus : —

u;2 + x* + y*+ z*) X («>" + " + / + **) = (ww' + xx' + yy' + z z')* + (w if — x w'

+y*-y*'? +

(y'w — xz" — y w' + zx')* + (wz1 + xy

— y x' — z w'}2

as will appear by the development of these formulae.

28. Every integral number is either a square, or the sum of two, three, or four squares. The latter is one of the celebrated numerical theorems of Fermat, first demonstrated by Lagrange.

SQUAP.E MEASURES, the squares of the lineal measures ; as in the following table of square measures : —

Square Inches.

Square Feet.

Sq. Yards.

Sq. Poles.

S. Chs.

Acres.

S. Miles

1

1296

9

1

39204

272$

30£

1

627264

4356

484

16

1

6272640

43560

4840

160

10

1

4014489600

27878400

3097600

102400

6400

640

1

SQUARE ROOT. See ALGEBRA.

SQUARE-RIGGED, an epithet applied to a ship whose yards are very long. It is also used in contradistinction to all vessels whose sails are extended by stays or lateen-yards, or by booms and gaffs ; the usual situation of which is nearly in the plane of the keel ; and hence,

SQUARE-SAIL, is a sail extended to a yard which hangs parallel to the horizon, as distinguished from the other sails which are extended by booms and stays placed obliquely. 1 his sail is only used in fair winds, or to scud under in a tempest. In the former case, it is furnished with a large additional part called the bonnet, which is then attached to its bottom, and removed when it is necessary to scud. See SCUDDING.

SQUARING THE CIRCLE is the making or finding a square whose area shall be equal to that of any proposed circle. See QUADRATURE. This problem has never yet been solved so as to be precisely exact ; but mathematicians, it is said, can come so near it as not to err so much in the area as a grain of sand would cover in a circle, whose diameter is equal to the diameter of Sa-

turn's orbit. The following proportions are near enough to the truth for any real use that can arise from this problem. As 100000000 is to the diameter of the given circle, so is 88622692 to the side of the square required. Therefore,

If the Diameter of the Circle be

The Side of the Square will be

100000000

88622692—

10000000

88622692

1000000

88622692

100000

88622692

10000

88622692

1000

88622692

100

88622692

10

88622692

1

0-88622692

And as 100000000 is to the side of a given square, so is 112837917 to the diameter of a circle very nearly equal to ihe square. Therefore,

SQU

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SQU

1

If the Side of the Square be

The Diameter of the Circle will be

100000000

112837917—

10000000

112837917

1000000

112837917

100000

112837917

10000

112837917

1000

112837917

100

112837917

10

112837917

1

112837917

SQUASH, n. s. From quash. Any thing soft and easily crushed : hence perhaps the plant of this name : any thing unripe ; a sudden fall or shook.

Not yet old enough for a man, nor young enough for a boy ; as a squash is before it is a peascod, or a codling when it is .almost an apple.

Shakspeare. Twelfth Night* How like I then was to this kernel, This squash, this gentleman. Id. Winter's Tale.

Since they will overload my shoulders, I shall *hrow down the burden with a squath among them.

Arbuthnot.

My fall was stopped by a terrible squash, that sounded louder than the cataract of Niagara.

Swift,

Squash is an Indian kind of pumpion that grows apace. Boyle.

SQUAT, v. n. & adj. Ital. quattare. To sit cowering; sit close to the giound : cowering; close to the ground.

Bruises, squats, and falls, which often kill others, can bring little hurt to those that are temperate.

Herbert.

Him there they found,

Squat like a toad close at the ear of Eve. Milton. A stitch-fallen cheek that hangs below the jaw ; Such wrinkles as a skilful hand would draw For an old grandam ape, when with a grace She sits at squat, and scrubs her leathern face.

Dry den.

The squill-insect is so called from some similitude to the squillfish : the head is broad and squat.

Grew.

Alma in verse, in prose the mind, Throughout the body, squat or tall, Is bona fide all in all. Prior.

Her dearest comrades never caught her Squat on her hams. Swift.

SQUAT, n. s. From the adjective probably. A sort of mineral ; a flat thin bed of ore.

1’be squat consists of tin ore and spar incorporated.

Woodward.

SQUATINA. See SQUAWS. SQUEAK, v.n.&tn.s. Sv/ed.sywaka. To set up a sudden dolorous cry ; to cry out with pain ; to cry with a shrill acute tone : a shrill cry ; a cry of pain.

The sheeted dead Did squeak and gibber in the Roman streets.

Shakspeare. Cart wheels squeak not when they are liquored.

Bacon.

I see the new Arion sail, The lute still trembling underneath thy nail : At thy well sharpened thumb from shore to shore, The trebles squeak for fear, the bases roar. Dry den.

Blunderbusses, planted in every loop-hole, go off at the squeaking of a fiddle, and the thrumming ot 2 guitar. la

Ran cow and calf, and family of hogs, In panick horrour of pursuing dogs : With many a deadly grunt and doleful squeak, Poor swine ! as if their pretty hearts would break.

Id.

Who can endure to hear one of the rough old Ko-mans squeaking through the mouth of an eunuch ?

Addison.

How like brutes organs are to ours ; They grant, if higher powers think fit, A bear might soon be made a wit ; And that, for any thing in nature, Pigs might squeak love-odes, dogs bark satire.

Prior.

In florid impotence he speaks, And, as the prompter breathes, the puppet squeaks,.

Pope

Zoilus calls the companions of Ulysses the squeak-iny pigs of Homer. Id. Odyssey.

SQUEA'MISH, adj.) For quawmish, or

SQUEA MISHLY, adv. > qualmish, from qualm.

SQUEA'MJSHNESS, n. ST) Nice; fastidious; easi-ly disgusted ; apt to take offence. It is used always in dislike either real or ironical : the ad-verb and noun substantive correspond.

Yet, for countenance sake, he seemed very squamhh in respect of the charge he had of the princess Pa-mela. Sidney.

Quoth he, that honour's very squeamish, That takes a basting for a blemish ; For what 's more honourable than scars, Or skin to tatters rent in wars ? Hudibras.

Upon their principles they may revive the worship of the host of heaven ; it is but conquering a little sqeamishness of stomach. Stilling fleet,

There is no occasion to oppose the ancients and the moderns, or to be squeamish on either side. He that wisely conducts his mind in the pursuit of knowledge, will gather what lights he can from either. Locke.

It is rare to see a man at once squeamish and voracious. South.

The thorough-paced politician must laugh at the squeamishness of his conscience, and read it another lecture. Id.

To administer this dose, fifty thousand operator*, considering the squeamishness of some stomachs, aa<i the peevishness of young children, is but reasonable.

Swift.

His muse is rustick, and perhaps too plain The men of squeamish taste to entertain. Southern.

SQUEEZE, v. a., v. n. & n. s. Sax. cpipan ; Tent, quetschen ; Welsh ysgwasgu. To press , crush between two bodies: to act in consequence of compression ; force a way : compression ; pressure.

It is applied to the squeezing or pressing of things downwards, as in the presses for printing. Wilhins,

He reaped the product of his laboured ground, And squeezed the combs with golden liquor crowned

Dryden.

In a civil war people must expect to be crushed and squeezed toward the burden. L' Estrange.

Many a public minister comes empty in ; but, when he has crammed his guts, he is fain to squeeze hard before he can get off. Id.

A subtle artist stands with wonderous bag. That bears imprisoned winds, of gentler sort Than those that erst Laertes' son enclosed : Peaceful they sleep ; but let the tuneful squeeze

Of labouring elbow rouze them, out they rly Melodious, and with spritely accents charm.

Philipt.

The sinking of the earth would make a convulsion of the air, and that crack must so shake or squeeze the atmosphere as to bring down all the remaining vapours. Burnet.

A concave sphere of gold filled with water and soldered up, upon pressing the sphere with great force, let the water squeeze through it, and stand all over its outside in multitudes of small drops, like dew, without bursting or cracking the body of the gold.

Newt oil's Opiicks.

What crowds of these, impenitently bold, In sounds and jingling syllables grown old, Still run on poets, in a raging vein, Even to the dregs and squeezing* of the brain.

Pope.

SQUELCH, n.s. From QUASH. Heavy fall. A low ludicrous word.

He tore the earth which he had saved From squelch of knight, and stormed and raved.

Hudibras.

So soon as the poor devil had recovered the squelch, away he scampers, bawling like mad. L'Estrauge.

SQUIB, n. s. Ital. schioppo. A small pipe of paper filled with wild fire : any petty fellow.

Asked for their pass by every squib, That list at will them to revile or snib. Spenser. The armada at Calais, Sir Walter Raleigh was wont prettily to say, were suddenly driven away with squibs ; for it was no more than a stratagem of fire-boats manless, and sent upon them.

Bacon's War with Spain.

The forest of the south compareth the French valour to a squib, or fire of flax, which burns and crackles for a time, but suddenly extinguishes.

Howel's Vocal Forest.

Lampoons, like squibs, may make a present blaze ; But time, and thunder, pay respect to bays.

Waller.

The squibs, in the common phrase, are called libellers. Tatler.

Furious he begins his march, Drives rattling o'er a brazen arch : With squibs and crackers armed, to throw Among the trembling crowd below. Swift.

SQUILL, n. s. Fr. squille ; Lat. squilla, scilla. A plant ; a fish ; an insect.

Seed or kernels of apples and pears, put into a tquill, which is like a great onion, will come up earlier than in the earth itself.

Bacon's Natural History.

'Twill down like oxymel of squills. Roscommon.

The self-same atoms Can, in the truffle, furnish out a feast ; And nauseate, in the scaly squill, the taste. Garth.

It hath a large acrid bulbous root, like an onion ; the leaves are broad ; the flowers are like those of ornithogalum, or the starry hyacinth : they grow in a long spike, and come out before the leaves.

Miller.

The squill insect is so called from some similitude to the squill fish, in having a long body covered with a crust, composed of several rings ; the head broad and squat. Grew.

SQUILL, in botany. See SCILLA.

SQUILLA, the name of a species of cancer. See CANCER.

SQUl'NANCY, n. s. Fr. squinance, squinancie ; Ital. squinantia. An inflammation in the throat ; a quinsey.

Used for tquinancies ana inflammations of the throat, it seemeth to have a mollifying and lenifying virtue. Bacon.

In a squinancy there is danger of suffocation.

Wiseman.

lj.,v.n. &cv.a.~\ Belg. squinte, SQUINT'EYED, adj. f oblique, trans—

SQUINTIFE'GO, f verse. Looking

SQUIN'V, v. n. J obliquely; looking

not directly ; looking suspiciously : to look obliquely ; to form or turn the eye obliquely : the two adjectives both mean having the sight oblique : to squiny is to look askant or obliquely.

He was so squinteyed that he seemed spitefully to look upon them whom he beheld.

Kitolles's History of the Turks. I remember thine eyes well enough : Dost thou squiny at me 1 Shakspeare. King I*ar. This is the foul Flibertigibbet ; he gives the web and the pin, squints the eye, and makes the hairlip.

Shakspeare.

Some can squitit when they will ; and children set upon a table, with a candle behind them, both eyes will move outwards, to seek the light, and so induce squinting. Bacon.

Perkin began already to squint one eye upon the crown, and another upon the sanctuary.

Id. Henry VII.

This is such a false and squinte yed praise, Which, seeming to look upwards on his glories, Looks down upon my fears. Denham.

Where an equal poise of hope and fear Does arbitrate the event, my nature is That I incline to hope rather than fear, And gladly banish squint suspicion. Milton.

The timbrel and the squintijego maid Of Isis awe thee ; lest the gods, for sin, Should with a swelling dropsy stuff thy skin.

Dry den.

Not a period of this epistle but squints towards another over against it. Pope.

SQUINTING, or Strabismus, an affection of the eyes, occasioned by the optic axis not converging; in consequence of which the organs of sight appear distorted. Improper habits frequently induce this defect, while the eye and its muscles are perfect ; for instance, in children, who accustom themselves to view different things at one time ; or who are placed obliquely towards any object that may attract their attention. Another cause is malconformation of the retina, or such parts as serve to convey impressions to the point of vision ; so that persons thus situated are obliged to turn the eye from the object to be investigated, in order that they may be enabled to behold it more distinctly. — Farther, it often proceeds from weakness or defect of either eye, so that both cannot be mutually employed. Besides, it may be consequent on affections of the brain, epilepsy, terror, and defluxioris of rheumatic humors.

The method of cure to be adopted in this unpleasant distortion varies according to the cause. Thus, in children, and in cases of weakness of the eyes, it may be remedied by mechanical contrivances. Hence, when there is no organic de-fect in either eye, which is frequently the case with persons who squint from a depraved habit of moving their eyes, the disease may often he cured.

Dr. Darwin remarks (Philosophical Transae •

tions, vol. Ixviii.), that in all the squinting people he had occasion to attend, one eye was less perfect than the other; these patients are, in his opinion, certainly curable, by covering the best »ye many hours in the day ; as, by a more frequent use of the weak eye, it not only acquires a Labit of turning to the objects which the patient tvishes to see, but gains at the same time a more distinct vision : in both these respects, the better eye is under some disadvantage, which also facilitates the cure. This ingenious physician relates, in the same paper, a remarkable case of a boy, then five years old (now or lately a reputable English clergyman at Edinburgh), who had the misfortune of viewing every object with one eye only at a time. Dr. Darwin directed a paper gnomon to be made, and affixed to a cap ; and when this

artificial nose was placed over the patient's real nose, so as to project an inch between his eyes, the child, rather than turn his head so far to look at oblique objects, immediately began to exert the eye which was nearest to them. But, having the misfortune to lose his father, soon after this method was begun to be followed, the child was neglected for six years, during which time the liabit was confirmed in such a manner as seemed to leave little room to iiope for a cure. Dr. Darwin, however, being again called, attempted a second time to remove the deformity, by a similar contrivance. A gnomon of thin brass was made, to stand over his nose, with a half-circle of the same metal to go round his temples : these were covered with black silk ; and, by means of a buckle behind his head, and a cross-piece over the crown of his head, this gnomon was worn without any inconvenience, and projected before his nose about two inches and a half. By the use of this machine, he soon found it less inconvenient to view all oblique objects with the eye next to them, instead of the eye opposite to them. After this habit was weakened, by a week's use of the gnomon, two bits of wood, about the size of a goose-quill, were blackened all but a quarter of an inch at their summits; these were frequently presented to him to look at ; one being held on one side the extremity of his black gnomon, and the other on the opposite. In viewing these, they were gradually brought forward beyond the gnomon, and then one was concealed behind the other : by such means, in another week, he could bend both his eyes on the same object for half a minute together ; and, by continuing the use of the same machine, he was in a fair way of being cured.

Lastly, if squinting arise from any adventitious circumstance, such as terror, defluxions of humors, &c., the removal of those causes will also cure the disorder ; but, where it originates from malconformation of the organs of vision, or has been so long neglected as to become confirmed, it is not in the power of art to afford any relief. See MEDICINE.

SQUIRE, n. s. Contraction of esquiie. Fr. escuyer. See ESQUIRE. A gentleman next in rank to a knight.

He will maintain you like a gentlewoman. — Ay, that I wilt, come cut and long tail under the degree of a "luire. Shuhsncure.

The rest are princes, barons, knights, squtret, And gentlemen of blood.

Id. Heiiru V.

Return with her ! — 1 could as well be brought To knee his throne, and sjuire-like pension beg, To keep base life a-foot. Id. King Lear.

Old Butes' form he took, Anchises' squire, Now left to rule Ascanius. Dryden's JEneid.

Knights, squires, and steeds, must enter on tlie stage. Pope.

SQUIRE (Samuel), D.D. and F. R.S. &c., a late eminent English prelate, born at Warmin-ster, in Wilts, in 1714, and educated at St. John's College, Cambridge, of which he became a fellow. His father was an apothecary. In 1749 he graduated, and was made rector of Tops-field ; in 1750 rector of St. Anne, Westminster; in 1760 dean of Bristol; and in 1761 bishop of St. David's. He died May 7th, 1766. He was a fellow of the Royal and Antiquarian Societies, and a constant attendant. His chief works are, 1. An Enquiry into the Nature of the English Constitution, or an Historical Essay on the Anglo-Saxon Government. 2. The Ancient History of the Hebrews vindicated ; Cambridge, 1741. 3. Two Essays: i. A Defence of the Ancient Greek Chronology : ii. An Enquiry into the Origin of the Greek Language ; Cambridge, 1741. 4. An Essay on the Balance of Civil Power in England, 1742. 5. Plutarchi de Iside et Osiride liber, 1744.

SQUIR'REL, 7i. s. Fr. escurueit ; Lat. sciitrus. A small animal that lives in woods, remarkable for leaping from tree to tree.

One chanced to find a nut,

In the' end of which a hole was cut,

Which lay upon a hazel-root, There scattered by a squirrel,

Which out the kernel gotten had ; When quoth this fay, Dear queen, be glad,

Let Oberon be ne'er so mad,

I'll set you safe from peril. Drayton.

SQUIRREL, in zoology. See SCIURUS.

SQUIRT, v. a., v. n. & n. s. Of uncertain etymology. To throw out in a quick stream : let fly : an instrument for either purpose.

Water those with squirts of an infusion of the medicine in dunged

water. Bacon's Natural History.

He with his squirt-fire could disperse Whole troops. Hudibras.

You are so given to squirting up and down, and chattering, that the world would say 1 had chosen a jack-pudding for a prime minister. L'Estrange.

Sir Roger she mortally hated, and used to hire fellows to squirt kennel water upon him as he passed along. Arbuthnot.

The squirters were at it with their kennel water ; for they were mad for the loss of their bubble. Id.

His weapons are, a pin to scratch, and a squirt to bespatter. P°PC—

SRADIIA, a ceremony among the Hindoos in honor of departed ancestors. The 'Hindoo Pantheon ' furnishes some particulars explanatory of this interesting and affecting ceremony, which, the author tells us, is an oblation of daily recurrence with Brahmans and rigid Hindoos who can afloid it. It is offered not only in honor of deceased ancestors, but for their comfort ; as the manes, as well as the gods connected with them, enjoy, like the gods of the Greeks, the incense of such offerings ; which are farther of an expiatory

nature, similar, it may be presumed, in their efficacy, as well as in the motives that induce them, to the masses of the Romish church. Over these ceremonies of Sradha, Yama presides, in his character of Sradhddeva, or lord of the obsequies.

Mr. Colebrooke says (As. Res. vol. vii.) tnat the priests, in the performance of the Sradha, meditate the gayatri, and thrice repeat, ' Salutation to the gods, to the manes of ancestors, and to mighty saints ; to Swaha (goddess of fire) ; to Swadha (the food of the manes) ; salutation to them for ever and ever.'

In the third chapter of the Institutes of Menu, the rules for the performance of the Sradha are detailed with prolixity. Among other particulars of the most important of those ceremonies, we learn that Brahmans only ought to be invited to the feast, which forms one

important rite; and such Brahmans should be of holy and learned habits. A Sudra, that is, one of the fourth or servile class, is urgently prohibited as a guest. Let the housekeeper, it is said, who knows his duty, perform each day a Sradha with boiled rice, and the like, or with water, or with milk, roots, and fruit : for thus he obtains favor from departed progenitors, &c., &c., &c.

The following extract is from Colebrooke's Dissertation on the Religious Ceremonies of the Hindoos, in the seventh volume of the Asiatic Researches ; which article contains much valuable matter, and many curious particulars of the Sradha, or feast attending funeral obsequies. " A dying man, when no hopes of his surviving re-main, should be laid on a bed of Kusa grass (see KUSA), in the open air, his head sprinkled with water drawn from the Ganges, and smeared with clay brought from the same river. A salagrama stone (see SALAGRAMA) should be placed near him, holy strains from the Veda (see VEDA) should be chaunted aloud, and leaves of holy basil scattered over his head. When he expires, the corpse must be washed, perfumed, and decked with wreaths of flowers, and carried by the nearest relations to some spot in the forest, or near water: the funeral pile is lighted from the consecrated fire maintained by the deceased. See of this under our articles SAGNIKA and SAMI. The nearest relation applies the flaming brand to the pile, hung round with flowers; and the attendant priests recite the appropriate invocations : 'Firel'thou wast lighted by him; may he, therefore, be reproduced from thee, that he may attain the regions of celestial bliss. May this offering be auspicious '.' All who followed the corpse walk round the pile, but may not view the fire. They then proceed to the river, and, after bathing, present oblations of water to the manes of the deceased, saying, ' May this oblation reach thee !' Elegiac verses, such as the following, are then recited.

' Foolish is he who seeks for permanence in the human state ; insolid, like the stem of the plantain-tree; transient, like the foam of the ocean.'

* When a body, formed of five elements, to receive the reward of deeds done in its own for-mer person, reverts to its own five original principles, what room is there for regret?'

' The earth is perishable ; the ocean, the gods themselves pass away : how should not that bubble, mortal man, meet destruction ?'

‘ All that is low must finally perish ; all that is elevated must ultimately fall ; all compounded bodies must end in dissolution ; and life be con-c.uded by death.”

Exclusive of the daily sradhas, or feasts, given by wealthy individuals, formal obsequies are performed‘1 ninety-six hours in every year, on particular days. ‘ It should be observed,’ Mr. Colebrooke says, ‘ respecting the practice of giving food at these obsequies, that Brahmans generally give it to one or more of their own relations. A stranger, unless indigent, would be very unwilling to accept the food, or attend at a sradha, for the purpose of eating it. The use of flesh meat is positively enjoined to Hindoos at certain obsequies, and recommended at all.’ See Inst. of Menu, c. iii. v. 124, 268, &c. But the precepts of their lawgivers are, by some, deemed obsolete in the present age ; and are evaded by others, who acknowledge the cogency of these laws. These commonly make a vow of abstain-ing from flesh meat, and consider that vow as more binding than the precepts here alluded to. Others, again, not only eat meat at obsequies and solemn sacrifices, but make it their common diet, in direct breach of their religion.’ It hence appears clear that the idea so common in Europe, of the universal abstinence of Hindoos from flesh meat, is as erroneous as general. Some pages of the Hindoo Pantheon are devoted to prove this fact ; and it is fully proved that not only all Hindoos may, but that a great majority of those who can obtain it, including Brahmans themselves, actually do eat meat. The feast attendant on the ceremonies of the Sradha can be given only by the son, the grandson, or male issue of the defunct; and as the greatest importance is attached by Brahmans and others to the due performance of these ceremonies, default of male issue is deprecated as among the heaviest of misfortunes. The Hindoo books, therefore, abound in instances of the efficacy of prayers, sacrifices, alms to Brahmans, pilgrimages, austerities, &c., in obtaining this grand object of comfort to departed souls. Appeasing the manes, by the Sradha, is as common in the mind of a Hindoo, as relieving the pains of purgatory by masses is in that of a Papist. Though the ceremonies differ, the principle is strikingly similar. Being childless is felt as an angry visitation of the gods inflicted partly for sins in a former state of existence: they are, therefore, propitiated by alms, pilgrimages, &c. One mode of removing sterility is by circumambulating an image, or tree, sacred to some deity. Of this see under PRADAKSHNA, the name of this ceremony. If every thing fail, there is, however, still a remedy by adoption, accompanied by certain ceiemonies, expensive, according to the means of the party. Another is by giving daughters in marriage with like ceremonies ; all of which are minutely detailed in the ritual.

For all these proceedings divine authority can be quoted. Holy men, of even divinities, in the times of their terrestrial sojourntnents, are related to have done the like ‘ He,’ says Menu, ‘ who has no son, may appoint

a. daughter to raise up a son for him, saying, ‘ The male child who shall be born from her in wedlock shall be mine, for the purpose of performing my obsequies.’ In this manner Daksha himself, lord of created beings, anciently appointed all his fifty daughters to raise up sons to him, for the sake of multiplying his race.’

SRADHADEVA, in Hindoo mythology, a name of the Pluto of their infernal regions. It means lord of the sradha, a feast often, by many daily, offered in commemoration of deceased ancestors. The more common name for the lord of the obsequies is YAMA, which see.

SRAVAKA, the name of the laity of the Jainas, a sect of schismatic Hindoos. Their priests are called Yati. A name also of the god Bud ha, or Boodh. See Moor on Hindoo Infan-ticide, p. 174. Among the Mahrattas, the sra-vakas are called shevari.

SRI, in the Hindoo mythology, is a name given to several goddesses ; oftenest perhaps to Lakshmi, the goddess of prosperity and abundance. This name is in the first case Sris, which Sir William Jones remarked as resembling, both in name and character, the goddess of abundance of the. Latins ; and he says, that in very ancient temples near Gaya there are images of Lakshmi, with full breasts, and a cord twisted under her arm, like a horn of plenty, which looks very much like the old Grecian and Roman figures of Ceres. See LAKSHMI. The word Sri, however, although given as a name or epithet to the Ceres of India, and to the other great goddesses Par-fati and Saraswati, is not confined to them : it means fortunate, happy, &c., as well as blessed or divine; and is sometimes prefixed to the names both of gods and men.

SRI BHAGAV ATA, the title of a work in the Sanscrit language, of great celebrity among the Hindoos. It is usually ascribed to Vyasa, the reputed compiler or author of the Vedas, Puranas, Mahaba-rat, and other works. But the real author of the Sri Bhagavata is Vopadeva, who, in attempting to revive the leading doctrines of Vyasa, opened a door to the reconciliation of the various sects of Hindoos, numerously divided and subdivided as they are, and, as far as historical evidence can be traced, ever have been.

The main subject of the Bhagavat is the life and actions of Krishna ; including the extravagant and mystical details of his incarnation, miracles, debaucheries, and various fooleries; intermixed, however,

with sublime effusions of pure theology and morals. See MYSTICAL POETRY. Like most of the other respected writings of the Hindoos, it contains much to applaud and ad-mire ; but more, whether viewed philosophically or morally, to reprehend. It is comprised in twelve books, and, like the other poems bearing the common denomination of Purana, contains, besides the general thread of sectarial theology interwoven throughout, five subjects, *viz.* primary creation, or creation of matter in the abstract ; secondary creation, or the production of subordinate beings, both spiritual and material ; chronological account of their grand periods of time called Manwantara; genealogical rise of families, particularly of those who have reigned in India ; and lastly a history of the lives of particular families. This work is in general cstirna tion, and is found in most of the vulgar dialects of India, and in the Persian language. It has also appeared in a very imperfect and abridged form, in French, under the title of Bagavadam, translated from the Tamul version. Its title is derivable from Bhagavan, one of the names of Krishna and Vishnu ; and Bhagavan from Bhaga, meaning, it is said, the author of existence, or lord of nature. See SIVA. Sri is a prefixtureof respect, extensively applied. See ‘SRI. The modern sect, who adhere to the liberal doctrine expounded in this work, are called Bhagavatas,

But we must again refer to our article SECTS OF HINDOOS, for an explanation of the nature of the Hindoo sectarial distinctions. See also KRISHNA, for an account of the hero of the Bhagavat.

SRIPADA (Hind, a divine footstep). On the top of the mountain, in the island of Ceylon, which European geographers call Adam’s Peak, the Hindoos fancy there is a sripad ; and accordingly pilgrimages are made to it from distant parts of India. Vishnu, it is said, alighted on this spot, and left the holy and indelible impression. In the neighbourhood of temples, or at their threshold, it is not unusual to see a flat stone embossed or engraved with the impression of two feet, joined from heel to toe ; such being the attitude of adoration ; and it is said that such stones are the last terrene substance pressed by the feet of the unhappy victims of superstition, who burn themselves alive on the pile of their husbands. They step from these flat stones upon the pile, and then appertain more to the next world than to this. The next step is into the presence of the gods; or, in the case. of temples, to their holy place. The Hindoos are not the only people who have a veneration for the mystical impressions of feet. The sripad above mentioned on Ceylon was said by our early zealous missionaries to have been left by Adam ; they endeavouring to establish the fact of that chosen island having been the Eden of our first parents. In the holy land miraculous sripada, or footsteps, are still shown and

reverenced, as left by the last pressure of our Saviour on the earth. On this subject the reader will find some interesting remarks in Dr. Clarke's Travels, vol. ii. p. 584.

STAAL (Madam de), a celebrated French lady of the eighteenth century, who wrote her own Memoirs, but without mentioning the year of her birth. She was the daughter of M. De Launai, a painter, and was educated in a convent, by the favor of the abbess; but, her patroness dy-ing, she became waiting maid to the duchess of Maine. A letter which she wrote to the celebrated Fontenelle raised her literary fame, and attracted the attention of the wits of Paris. She married lieutenant De Staal of the Swiss guards, afterwards Mareschal. She died in 1750; arid her Memoirs, in 4 vols. 12mo., with two of her comedies, were published soon after.

STAB, v. a., v. n., & n. s. Teut. stab, a stick ; old Dutch stuven. To pierce with a pointed weapon ; wound mortally or mischievously : to give a wound with a pointed weapon ; offer to wound : the wound given ; a stroke ; blow

Hear the lamentations of poor Anne, Wife to thy Edward, to thy slaughtered son ;

Stabbed by the eelf-same hand tliat made these wounds. Shakspeare.

Thou hid'st a thousand daggers in thy thoughts, Which them hast whetted on thy stony heart, To stab at my frail life. Id. Henry IV.

He speaks poinards, and every word stabs.

Shakspeare. None shall dare

With shortened sword to stab in closer war, But in fair combat fight. Dryden's Knight's Tale.

Killing a man with a sword or a hatchet are looked on as no distinct species of action ; but, if the point of the sword first enter the body, it passes for a distinct species where it has a distinct name ; as in England, where it is called stabbing. Locke.

He had a scripture ready to repel them all ; every pertinent text urged home being a direct stab to a temptation. South.

Oleander,

Unworthy was thy fate thou first of warriours, To tall beneath a base assassin's stab. Rowe.

Porcius, think thou seest thy dying brother Stabbed at his heart, and all besmeared with blood, Storming at thee ! Addison's Cato.

What tears will then be shed ! Then, to complete her woes, will I espouse Hermione : 'twill stab her to the heart! A. Philips.

STABBING, in law. The offence of mortally stabbing another, though done upon sudden provocation, is punished as murder; the benefit of clergy being taken away from it by statute. For, by James I. c. 8, when one thrusts or stabs another, not then having a weapon drawn, or who hath not then first stricken the party stabbing, so that he dies thereof within six months after, the offender shall not have the benefit of clergy, though he did it not of malice aforethought. This statute was made on account of tne frequent quarrels and stabbings with short daggers between the Scotch and the English, at the accession of James I. ; and, being therefore of a temporary nature, ought to have expired with the mischief which it meant to remedy. For, in point of solid and substantial justice, it cannot be said that the mode of killing, whether by stabbing, strangling, or shooting, can either extenuate or enhance the guilt ; unless where, as in the case ot poisoning, it carries with it internal evidence of cool and deliberate malice. But the benignity of the law hath construed the statute so favorably in behalf of the subject, and so strictly when against him, that the offence of stabbing now stands almost upon the same footing as it did at the common law. Thus (not to repeat the cases mentioned undei MANSLAUGHTER, of stabbing an adulteress, &c., which are barely manslaughter, as at common law), in the construction of this statute it hath been doubted, whether, if the deceased had struck at all before the mortal blow given, this does not take it out of the statute, though in the preceding quarrel the slabber had given the first blow ; and it seems to be the better opinion that this is not within the statute. Also it hath been resolved that «he killing a man, by throwing a hammer or other weapon, is not within the statute ; and whether a shot with a pistol be -so or not is doubted. But if the party slain had a cudgel in hie hand, or had thrown a pot or a bottle, or discharged a pistol at the party stabbing, this is a

sufficient reason for having a weapon drawn on his side within the words of the statute.

STA BEN (Henry), an eminent painter, bom in Flanders in 1578. He was a disciple of Tin-toretto, was capital in history and perspective, and died in 1658.

STABIL'IMENT, or -\ Lat. ttabilis. Sup

STABIL'ITY, n. s. (port; firmness; act of

STA'BLE, adj. £ making firm ; fixed—

STA'BLENESS, n. s. Jness: stability is the more usual word: stable is fixed, steady, constant: stableness is, the power to stand ; steadiness.

The king becoming graces, As justice, verity, temp'rance, stableness, Bounty, persev'rance, I have no relish of them.

Shakspea'e.

If man would be invariable, He must be like a rock, or stone, or tree ;

For even the perfect angels were not stable, But had a fall more desperate than we. Daries.

He began to try This and that hanging stone's stability. Cotton.

Since fluidness and stability are contrary qualities, we may conceive that the firmness or stability of a body consists in this, that the particles which compose it do so rest, or are intangled, that there is among them a mutual cohesion. Boyle.

By the same degrees that either of these happen, the stability of the figure is by the same lessened.

Temple.

He perfect, stable; but imperfect we, Subject to change. Dryden's Knight's Tale.

This region of chance and vanity, where nothing is stable, nothing

equal ; nothing could be offered to-day but what to-morrow might deprive us of Rogers.

These mighty girders which the fabrick bind, These ribs robust and vast in order joined, Such strength and such stability impart, That storms above, and earthquakes under ground, Break not the pillars. Blackmore.

They serve foistabiliment, propagation, and shade.

Derham.

STA'BLE, n. s., v. n., & v. a. ˆ Lat. stabulum. A

STA'BLEBOY, n. s. > house for beasts ,

STA'BLEMAN. 3 to kennel; dwel'.

as beasts • the compounds corresponding.

I will make Rabbah a stable for camels. Ezra

I would with jockeys from Newmarket dine, And to rough riders give my choicest wine ; I would caress some stableman of note, And imitate his language and his coat. Bramstone.

In their palaces.

Where luxury late reigned, sea-monsters whelped And stabled. Milton.

Slothful disorder filled his stable, And sluttish plenty decked her table. Prior.

As soon as you alight at the inn deliver your horses to the stablebcy. Swift.

If the gentleman hath lain a night get the stable-men and the scullion to stand in his way.

Id. Directions to the Butler.

STABLE, in rural economy, a building or house constructed for horses and other animals, being furnished with stalls and proper contrivances to contain their food and other matter. See RURAL ARCHITECTURE.

STABLESTAND, n. s. In law. One of the four evidences or presumptions, whereby a man is convinced to intend the stealing of

the king's deer in the forest : ' and this is when a man is found at his standing in the forest, with a cross-bow bent, ready to shoot at any deer; or with v

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long bow; or else standing close by a tree with greyhounds in a leash ready to slip.1 — Cowell. I'll keep my stablestand where I lodge my wife ; I'll go in couples with her. Shakspeare.

STAB'LISH, v. a. Lat. stabilio ; Fr. estab-lir. To establish ; fix ; settle.

Comfort your hearts, and stablisn you in every good work. 2 Thess. ii. 17.

Then she began a treaty to procure, And stablish terms betwixt both their requests.

Spenser,

Stop effusion of our Christian blood, And stablish quietness on every side.

Shahspearg. Henry VI.

Poor hereticks in love there be, Which think to stabtish dangerous constancy; But I have told them, since you will be true, You shall be true to them who're false to you.

Donne.

His covenant sworn To David, stablished as the days of heaven. Milton.

STABLO. See STAVELO.

STACHYS, in botany, a genus of plants belonging to the class of didynamia, and order of gymnospermia; natural order forty -second, ver- »ticillatae. The npper lip of the corolla is arched ; the lower lip is reflexed, and the larger intermediate lacina is marginated. The stamina, af-ter shedding the farina, are bent towards the sides. There aie sixteen species, *viz.* 1. S. aethiops; 2. alpina; 3. annua; 4. arvensis; 5. Canariensis ; 6. cretica ; 7. Germani :a ; 8. glu-tinosa; 9. hirta; 10. lanata; 11. maritima; 12. orientalis ; 13. Palaestina ; 14. palustris; 15. recta; and, 16. sylvatica. Of these only-four are natives of Britain ; *viz.* 1 . S. arvensis, corn stachys, petty ironwort, or allheal. The stalk is ten or twelve inches high, square, branched, and hairy. The leaves are heart-shaped, ob-tuse, bhmtly serrated, and less' hairy. The calyx is

hairy and sessile, and deeply divided into five acute dents of equal length. The flowers are flesh-colored, and gf%w from three to six in a whirl. The lower lip is trifid ; the middle segment spotted with red, but not emarginated according to the character of the genus. It is frequent in cornfields, and grows from June to August. 2. S. Germanica, base horehound. The stem is downy, and about two feet high. The leaves are white, downy, wrinkled, and indented. The flowers are white, purplish within, and grow in multiflorous whirls. It grows in England. 3. S. palustris, clown's allheal. The roots are white and tuberous. The stalk is branched at the bottom, and two or three feet high. The flowers are red or purple, from six to ten in a whirl, ending in a long spike. The leaves are sessile, narrow, pointed, and in part surrounding the stem. This plant has a fetid smell and bitter taste, and is reckoned a good vulnerary.' It grows on the sides of rivers and lakes, in low moist grounds, and sometimes in cornfields. 4. S. sylvatica, hedge nettle. The plant is hairy all over, erect, a yard high, and branched; the hairs are jointed. The flowers aie of a deep red color, six or eight in a whirl, which terminates in a long spike destitute of leaves. The leaves are heart-shaped, and grow on footstalks. The whole plant has a strong

fetid smell. It grows commonly in woods and shady places, and Mowers in July or August.

STACK, n.s. & v.a. Ital. stacca; Goth, ana Swed. stack. A large quantity of hay, corn, or wood, heaped up; a number of chimneys built together : to pile up.

So likewise a hovel will serve for a room, To stack on the pease. Tusser.

Against every pillar was a stack of billets above a man's height, which the watermen that bring wood down the Seine laid there. Bacon's Natural History.

While the marquis and his servant on foot were chasing the kid about the stack, the prince from horseback killed him with a pistol.

Walton's Buckingham. While the cock To the stack or the barn-door Stoutly struts h:.s dame before. Milton.

The prices of stacking up of wood I shall give you.

Mortimer.

Stacks of moist corn grow hot by fermentation.

Newton.

A mason making a stack of chimneys the foundation of the house sunk. Wiseman's Surgery.

An inundation, says the fable, O'erflowed a farmer's barn and stable ; Whole ricks of hay and stacks of corn Were down the sudden current borne. Swift.

STACKHOUSE (Thomas), a learned and pious English divine, who was many years curate of Finchley, and afterwards vicar of Beenham, in Berkshire. lie first attracted the public attention by his treatise On the Miseries of the Inferior Clergy, 1722. He acquired still greater fame by his New History of the Bible, in 2 vols. folio; which has been often reprinted, in 6 or 8 vols. 8vo. He also wrote several other works ; and died in 1752.

STADIUM, an ancient Greek long measure containing 125 geometrical paces, or 625 Ro-man feet, corresponding to our furlong. The word is said to be formed from the Greek word •raffle;, a station, or i?q/u, to stand, because it is reported that Hercules, having run a stadium at one breath, stood still at the end of it. The Greeks usually measured distances by stadia, which they called <rt<£a<Jia<r/ioc. Stadium also signified the course on which their races were run.

STADIUS (John), a learned mathematician, born at Loenhout, near Antwerp, in 1527. lie became professor of history at Louvain, and afterwards of mathematics and history at Paris ; where he died in 1579. He published. 1. Ephe-merides : Cologne, 1556 and 1570. 2. Tabula jHquabilis et apparentis motus cadestium cor-porum: 3. Commenta rius in Lucium Florum.

STAD'LE, n. s. & v. a. Sax. j-raˆel, a foundation. Any thing which serves for support ; staff; crutch : to furnish with stadles. Obsolete.

Leave growing for stadilles the likeliest and best, Though seller and buyer dispatched the rest. Tusser.

First see it well fenced, ere hewers begin ; Then see it well staddled without and within. Id.

He cometh on, his weak steps governing And aged limbs on cypress studte stout, And with an ivy twine his waist is girt about.

Spenser.

Coppice-woods, if you leave in them siuddles too thick, will run to bushes and briars, and have little clean underwood. Bacon.

STADTHOLDEll. This office was abolished by the French and Dutch republicans, in 1795. For

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its institution, in favor of William I., see UNITED PROVINCES.

STADTHOLDERATE, the office and dignity of stadtholder.

STJEHELINA, in botany, a genus of plants belonging to the class of syngenesia, and order of polygamia aequalis ; natural order forty-ninth, compositae. The receptacle is paleaceous, the chaff being very short; the pappus is branchy, and the antherae caudated. There are eight species; *viz.* 1. S. arborescens ; 2. chamaepeuce; 3. corymbosa; 4. dubia ; 5. fruticosa; 6. gna-phaloides; 7. ilicifolia; and, 8. imbricata.

STAEL HOLSTEIN (Anne Louise Germaine Necker, baroness de), a late celebrated female writer, was the daughter of M. Necker, the French financier, and born at Paris, April 22d, 1766. She soon displayed signs of genius ; and at the age of fifteen was capable of discussing with her father the most serious and important subjects. Theatrical compositions at this time also particularly interested her ; and before she was twenty she wrote a comedy in three acts, entitled Sophie, ou les Sentiments secrets ; and the year following she produced a tragedy on the story of Lady Jane Gray. In 1786 she was married to the baron de Stael Holstein, the Swedish ambassador, through the patronage of the queen of France ; and was consequently introduced at court. Her Lettres sur J. J. Rousseau, soon after published, attracted great notice. In Au-gust, 1788, she had the pleasure of announcing to her father his appointment to the ministry ; but this triumph was not of long duration, for M. Necker was dismissed from office, and he left France accompanied by his daughter. He had scarcely reached Basil, when he was recalled, only, however, to experience the inconstancy of popular favor, as he was soon obliged again to resign. Mad. de Stael followed him in his retreat to Coppet; but she revisited France in 1792, when she endeavoured to save some of the victims of revolutionary fury. Her own life was endangered, however, and she only escaped through the care of Manuel, attorney of the commune of Paris. She returned to Switzerland, and subsequently went to England, where she heard of the execution of Louis XVI. She immediately rejoined her father, and published an elegant Defense de la Reine. After the fall of Robespierre she produced two anonymous pamphlets, Reflections sur la Paix, addressees a M. Pitt et aux Francais ; and Reflections sur la Paix Interieure. Under the Directory she again returned to France, where she, through her influence with Barras, was the means of procuring

the elevation of Talleyrand to the post of minister of foreign affairs. In December, 1797, she for the first time saw Buonaparte at Paris, preparing for his expedition to Egypt ; and the admiration with which she had regarded the conqueror of Italy was succeeded by a sentiment bordering on aversion, which seems to have become mutual. She continued in France after the return of Buonaparte, and her influence was frequently employed in opposition to his views. She at length left France, and went to reside with ner father. She remained about twelve months at this time in her retreat, and

composed the romance of Delphine, which was not published till 1803. She returned to Paris; but this work, and a tract entitled Les Dernieres Vues de Politique et de Finance, published by M. Necker, had given so much offence that Napoleon, at the close of the year 1803, banished madame de Stael. She was consequently obliged to leave her father, whom she never afterwards saw. After visiting Germany and Italy, she was permitted to return to Coppet in 1805 ; and subsequently resided at Auxerre and at Rouen. In 1807 appeared her Corinne, a novel, the sentiments of which revived the anger of the French ruler, and she was again exiled to Coppet. In this retirement she was visited by a young French officer, M.. de Rocca, whom she afterwards married, and by whom she had a son ; but the union was kept a secret till after her death. In 1812 she took a journey into Austria; thence she went to Russia, and afterwards visited Swe-den and England. She was in London at the period of the taking of Paris ; and, on the restoration of Louis XVIII., she returned to France. On the escape of Buonaparte from Elba, she retired to Coppet ; and after the battle of Waterloo, and the decree of the 5th of September, 1815, made her appearance at Paris, with her daughter, then married to the duke de Broglio. She was favorably received by Louis XVIII. ; and obtained an order on the royal treasury for the payment of £2,000,000, which had been deposited there by M. Necker. In 1816 she went to Italy, and resided at Pisa. Returning to France, her death took place July 14th, 1817. Her works, beside those already mentioned, are, Considerations sur les principaux Evenemens de la Revolution Francaise ; De la Litterature consi-deree dans ses Rapports avec les Institutions Sociales ; and, L'Allemagne, or Observations on Germany, &c., have been published since het death.

STAFF, n. s. } Plur. staves. Sax. rˆF STAFF'ISH, adj. S Dan. staff; Belg. staf; Goth. stafa, is to command. A stick with which a man supports himself in walking; a club; an ensign of office: staffish is stiff; harsh.

A wit in youth not over dull, heavy, knotty, and lumpish, but hard, tough, and though somewhat stajfish, both for learning and whole course of living, proveth always best. Ascham.

It much would please him, That of his fortunes you would make a staff To lean upon. Shakspeare. Antony and Cleopatra.

The boy was the very staff of my age, my very prop

Shaktpeure.

I cannot strike at wretched kernes, whose arms Are hired to bear their staves. Id. Macbeth.

Methought this staff, mine office badge in court, Was broke in twain. Id. Henry VI.

All his officers brake their staves ; but at their re-turn new staves were delivered unto them.

Hayward on Edward VI.

Grant me and my people the benefit of thy chastisements, that thy rod as well as thy staff may comfort us. . King Charles.

If a subject be a son, then ought he to be a staff unto his father, wherewith not to strike, but to sustain him. Holiday.

He forthwith from the glittaring staff unfurled The imperial ensign.

S T A F F A.

Descending and ascending by ladders, I ascended at one of six hundred and thirty-nine staves, or eighty nine fathoms. Browne? i Travels.

With forks and stares the felon they pursue.

Dr\,den.

He that bought the skin ran greater risque than t'other that sold it, and had the worse end of the staff'. L'Estraiige.

To his single eye that in his forehead glared, Like a full moon or a broad burnished shield, A forky staff we dexterously applied, Which, in the spacious socket turning round, Scoopt out the big round gelly from its orb.

A ddison.

Is it probable that he, who had met whole armies in battle, should now throw away his stuff out of tear of a dog 1 Bromxe.

The author of Davideis is commended by Dryden for having written it in couplets, because he discovered that any staff was too lyrical for an heroic poem. Johnson.

STAFF, n. s. Isl. stef. A stanza ; a series of verses regularly disposed, so as that, when the series is concluded, the same order begins again. See STAVE.

Cowley found out that no kind of staff is proper for an heroick poem, as being all too lyrical ; yet though he wrote in couplets, where rhyme is freer from constraint, he affects half verses. Dryden.

When Crito once a panegyric showed, He beat him with a staff of his own ode. Harte.

STAFF, in music, five lines, on which, with the intermediate spaces, the notes of a song or piece of music are marked.

STAFF, in naval affairs, is a light pole erected in different parts of a ship, whereon to hoist and display the colors. The principal of these is reared immediately over the stern, to display the ensign ; another is fixed on the bowsprit, to extend the jack ; three more are erected at the i three mast heads, or formed by their upper ends, to show the flag or pendant of the respective squadron or division to which the ship is appropriated. See ENSIGN, JACK, MAST, and PENDANT.

STAFF, in military matters, consists of a quarter-master-general, adjutant-general, and majors of brigade. The staff properly exists only in time of war. See QUARTER-MASTER GENERAL, &c.

STAFF, REGIMENTAL, consists of the adjutant, quarter-master, chaplain, surgeon, &c.

STAFFA, one of the Western Islands of Scotland, remarkable for its basaltic pillars. It was visited by Sir Joseph Banks, who communicated the following account of it to Mr. Pennant. Staffa lies fifteen miles west of Mull, and nine north-east of Icolumbkill ; ‘ Its greatest length is about an English mile, and its breadth about half a one. On the west side of the island is a small bay, where boats generally land ; a little to the south of which the first appearance of pillars is to be observed : they are small ; and, instead of being placed upright, lie down on their sides, each forming a segment of a circle. Thence you pass a small cave, above which the pillars, now larger, incline in all directions ; in one place, in particular, a small mass of them very much resembles the ribs of a ship. Hence having passed the cave, which, if it is not low-water you must do in a boat, you come to the first ranges of pillars, which are still not above half as large as those a little beyond. Over against this place is a small island, called in Erse Boo-sha-la, separated from the main by a channel not many fathoms wide This whole island is composed of pillars, without any stratum above them ; they are still small, but by much the neatest formed, of any about the place The first division of the island (for at high wa-ter, it is divided into two) makes a kind of cone, the pillars converging together towards the cen-tre ; on the other they are in general laid clown flat : and in the front next to the main you see how beautifully they are packed together, their ends coming out square with the bank which they form. All these have their transverse sections exact, and their surface smooth ; which is by no means the case with the large ones, which are cracked in all directions. I much question, however, if any part of this whole island of Boo-sha-la is two feet in diameter. The main island opposite to Boo-sha-la, and farther towards the north-west, is supported by ranges of pillars pretty erect, and, though not tall (as they are not uncovered to the base), of large diameters ; and at their feet is an irregular pavement, made by the upper sides of such as have been broken off, which extends as far under water as the eye can reach. Here the forms of the pillars are apparent : these are of three, four, five, six, and seven sides ; but the number of five and six are by much the most prevalent. The largest I measured was of seven : it was four feet five inches in diameter. The surfaces of these large pillars, in general, are rough and uneven, full of cracks in all directions ; the transverse figures in the upright ones never fail to run in their true directions. The surfaces upon which we walked were often flat, having neither concavity nor convexity ; the larger number, however, were concave, though some were very evidently convex. In some places, the interstices within the perpendicular figures were filled up with a yellow spar; in one place a vein passed in among the mass of pillars, carrying here and there small threads of spar. Though they were

broken and cracked through, in all directions, yet their perpendicular figures might easily be traced ; whence it is easy to infer that, whatever the accident might have been that caused the dislocation, it happened after the formation of the pillars. — Hence, proceed ing along shore, you arrive at Fingal's cave. Its dimensions 1 have given in the form of a table : —

Feet. In.

Length of the -cave from the rock without 37 1 6 From the pilch of the arch … 2.50 0 Breadth of ditto at the mouth . .537

At the farther end 20 0

Height of the arch at the mouth . .1176

At the end 70 0

Height of an outside pillar . . 39 6

Of one at the north-west corner . . 54 0 Depth of water at the mouth . . 13 0 At the bottom 90

The cave runs into the rock at the direction of north-east by east, by the compass. Proceeding

farther to the north-west, you meet with the highest ranges of pillars ; the magnificent appearance of which is past all description. Here they are hare to their very basis, and the stratum below them is also visible : in a short time, it rises many feet above the water, and gives an opportunity of examining its quality. Its surface is rough, and has often large lumps of stone sticking in it as if half immersed ; itself, when broken, is composed of a thousand heterogeneous parts, which together have very much the appearance of a lava ; and the more so, as many of the lumps appear to be of the very same stone of which the pillars are formed. This whole stratum lies in an inclined position, dipping gradually towards the south-east. As hereabouts is the

situation of the highest pillars, I shall mention my measurements of them, and the different strata in this place, premising that the measurements were made with a line, held in the hand of a person who stood at the top of the cliff, and reaching to the bottom ; to the lower end of which was tied a white mark, which was observed by one who staid below for the purpose : when this mark was set off from the water, the person below noted it down, and made a signal to him above, who made then a mark in his rope : whenever this mark passed a notable place, the same signal was made, and the name of the place noted down as before : the line being all hauled up, and the distances between the marks measured and noted down, gave, when compared with the book kept below, the distances ; as, for instance, in the cave, No. 1 in the book below, was called from the water to the foot of the first pillar in the book above ; No. 1 gave thirty-six feet eight inches, the highest of that ascent which was composed of broken pillars.

Feet. In. No. 1. Pillar at the west corner of Fingal's cave.

1 From the water to the foot of the pillar 1210

2 Height of the pillar … . 37 3

3 Stratum above the pillar … 66 9

No. 2. Fingal's cave.

1 From the water to the foot of the pillar 36 8

2 Height of the pillar … . 39 6

3 From the top of the pillar to the top

of the arch … . .314

4 Thickness of the stratum above . . 34 4 By adding together the three first measurements, we got the height of the

arch from the water … . 117 6

No. 3. Corner pillar west of Fingal's cave.

Stratum below the pillarofla"a-likematter 11 0

Length of the pillar … . 54 0

Stratum above the pillar … 61 6

No. 4. Another pillar to the west. Stratum below the pillar …171

Height of the pillar … . 50 0 Stratum above … .511

No. 5. Another pillar farther to the west.

Stratum below the pillar … 19 8

Height of the pillar • . . • 55 1

Stratum above 54 7

The stratum above the pillars, which is liere mentioned, is uniformly the same, consisting of numberless small pillars, bending and inclining

in all directions, sometimes so irregularly that the stones can only be said to have an inclination to assume a columnar form j in others more regular, but never breaking into or disturbing the stratum of large pillars, whose tops every-where keep a uniform and regular line. Proceeding now along the shore, round the north end of the island, you arrive at Oua na scarve, or the Corvorant's cave. Here the stratum under the pillars is lifted up very high ; the pillars above it are considerably less than those at the north-west end of the island, but still very considerable. Beyond is a bay, which cuts deep into the island, rendering it in that place not more than a quarter of a mile over. On the sides of this bay, especially beyond a little valley, which almost cuts the island into two, are two stages of pillars, but small ; however, having a stratum between them exactly the same as that above them, formed of innumerable little pillars, shaken out of their places, and leaning in all directions. Having passed this bay, the pillars totally cease ; the rock is of a dark brown stone, and no signs of regularity occur till you have passed round the south-east end of the island (a space almost as large as that occupied by the pillars), which you meet again on the west side, beginning to form themselves irregularly, as if the stratum had an inclination to that form, and soon arrive at the bending pillars where I began. The stone of which the pillars are formed is a coarse kind of basaltes, very much resembling the Giant's Causeway in Ireland, though none of them are near so neat as the specimens of the latter which I have seen at the British Museum ; owing chiefly to the color, which in ours is a dirty brown, in the Irish a fine black; indeed the whole production seems very much to resemble the Giant's Causeway.' i

STAFFORD, the county town of Staffordshire, in the Pirehill hundred

of the county, twelve miles north-west from Litchfipld,and 135 from London. It is a borough, consisting of two parishes united, situated on the banks of the Sow ; the houses are well built, and covered with slate, and the streets are well paved. Formerly it was surrounded by a strong wall, and had four gates. The church of St. Mary has an octagonal tower, and a very antique font. St. Chad's is an old decayed building. Here are several dissenting chapels : the town-hall is a neat new building. Stafford has also a good hospital, free-school, twelve alms-houses, and a spacious market-place, with two banks. In the suburbs, and on the green, were formerly several free-chapels and hospitals. It was an exempt jurisdiction, under a dean and thirteen prebendaries, but the dean's house is now converted into a school. The assizes for the county are held here in the county-hall, a large handsome building; and near the town is the new infirmary, nearly opposite to which is the county-gaol. A lunatic asylum has lately been erected near. This is a very ancient borough, being first incorporated by king John; it sends two members to parliament. It is governed by a mayor, recorder, ten aldermen, ten common-councilmen, &c. The town has a considerable traffic, by

means of its canal, communicating with all the neighbouring counties. Its chief manufactures are cloth and shoes. Market on Saturday. Fairs, February 10, May 14, June 27, September 16, October 2, and December 4.

STAFFORDSHIRE. Stafford, the county town, gives name to this shire. This county belonged to the ancient Connavii, the division of Flavia Caesariensis of the Romans, and the kingdom of Mercia during the Saxon Hep-tarchy. Bede calls the inhabitants Angli Me-diterranei, the Midland English. Some have derived the name of Stafford from the river Sow, which skirts the western and southern sides of that town. It is probable that the Sow had at one time the letter t in its orthography ; and if so there will be very little difficulty in discovering a rational etymology for Stafford and Staffordshire. In support of this opinion it is certain that the passage through the fords of the river into Stafford

is in the recollection of many of the inhabitants of that borough.

Staffordshire is an inland county, lying nearly in the centre of the kingdom. It is a long and narrow tract, something in the form of a rhombus ; bounded on the north by Cheshire and Derbyshire, on the east by Leicestershire, on the west by Shropshire, and on the south by War-wickshire and Worcestershire. Its greatest length from N. N. E. to S. S. W. is about sixty miles ; and its greatest breadth, from Newton Salney to the western point of Terbey Heath, near Market Drayton in Shropshire, is thirty-eight miles. It contains about 780,800 acres of land. It is divided into five hundreds, one city, six boroughs, and sixteen market-towns. There are 181 parishes, reckoning, according to Mr. Pitt's Agricultural Survey, every tract of land to be a parish which has a place of worship, and united in some degree by a common or mutual interest. It is in the diocese of Litchfield and Coventry, except two parishes. • It is included in the Oxford circuit.

The climate of this county is rather inclining to wet. The air is generally good ; but in the northern parts extremely sharp, impressing the nerves with a greater degree of cold than in most other counties of England. The annual rains are calculated, supposing them to stagnate without waste or evaporation, at upwards of thirty-six inches, an excess of nearly sixteen inches above the computed rains in the metropolis. The quantity of snow which falls in the Moorlands during winter is very great ; a circumstance which no doubt contributes much to the piercing coldness of this district.

This county exhibits as great a variety of soils as any other in England of proportionate extent. Mr. Pitt says the arable soils may in general be divided into, first, the stiff and strong clayey (argillaceous) ; secondly, the loose and light (arenaceous) ; thirdly, although the county have no chalk, yet, in the limestone district, lime earth (calcareous) ; fourthly, the mixed or compound soil or loam composed of the above, with the addition of stones and other matters (terra composita) The argillaceous soil is most prevalent in the hundred of Cuttlestone, and in those portions of the hundred of Offlow to the

south of the Trent and east of tlie Tame, together with the southern parishes in the hundreds ot Pyrehill and Totmanslow. The arenaceous soil predominates chiefly in the hundred of Offlow to the south of the Trent, arid in the lands adjoining to Pattin< >ham Womfum, liimley, and King's Swinford in the hundred of Leisdon. The calcareous district

is of small extent, and situated chiefly eastward of a semicircular line which may be supposed to be drawn from Farley by Kingsale and Ipstones to Warton, in the hundred of Totmanslow. The other districts of that hundred, and all the central portions of the county, or on the south side of the river Trent, are composed of the mixed compound soil. The meadow grounds, which for the most part lie in the vicinity of the canals and rivers, usually partake ot the arable soils in their neighbourhood, with the addition of the sediment of water, when within reach of the streams. In some particular spots peat earth forms the soil in the meadow ground reaching different degrees of thickness in different places. This species of earth consists principally of the decayed roots of aquatic vegetables. Sometimes it contains trunks of trees, of which many curious specimens have been found near Stonehall in the parish of Shenstone. When properly drained, consolidated, and meliorated, this kind of soil becomes valuable pasture and mea-dow land.

Staffordshire is plentifully watered by rivers, but none of them are navigable within its boundaries. The principal are the Trent, the Dove, the Tame, and the Sow. The first is esteemed the third river in England. Its proper rise is in the hills beyond Newcastle-under-Line, at New-pool near Biddulph. During its passage through Staffordshire its banks are covered with rich and luxuriant ,‘meadows, between which the water glides along in silver beauty. As it approaches Derbyshire it forms a number of small islands ; and, upon reaching the confines of that county, sweeps rapidly to the north, and becomes the boundary between it and Staffordshire till its junction with the river Dove. This latter river takes its rise among the hills in the Moorlands, near the points where the three counties of Stafford, Derby, and Chester meet. Having been increased by the union of the Manifold near Thorp Cloud Hill, the Hamps at Ham, and the Charnet near Leek, it finally falls into the Treat not far from Tutbury. The Tame springs from several sources in the vicinity of Walsall and Coleshill, and forms a junction with the Trent at the point where that river reaches the borders of Derbyshire. The Blythe, which falls into the Trent near King’s Bromley, may also be reckoned among the considerable rivers of this county. It rises in the neighbourhood of Wet-ley Moor in the northern district. Its line of direction is nearly parallel to the Trent. The Sow from Eccleshall, and the Penk from the vicinity of Somerford near Pcnkridge, forming a junction below Stafford, proceed together to Great Haywood, where they likewise precipitate themselves into the Trent. The Stour and the Dove also in part belong to this county. Though the rivers in this county are not navigable, the deficiency is amply compensated by the many

conveniences which it enjoys arising from canals. The Grand Trunk Canal unites the three ports of Bristol, Liverpool, and Hull. It enters this county near Lavvton. It has numerous branches in almost every convenient direction, and in its passage through Staffordshire generally follows a course parallel to the Trent, which it intersects at different points, and falls into it at Wilden in Derbyshire. The Staffordshire and Worcestershire canal, the Wirley and Essington canal, the Birmingham canal, and Sir Nigel Gresley's canal, all contribute to the facilities of trade, &c., in this county. There are not many lakes or springs in Staffordshire. The principal one is that of Aquelate, which measures 1848 yards in length, and 672 yards in breadth. Ladford Pool has been drained for some years. Salt springs, however, are found in various parts; the most important of which are at Shirlywich, in the parish of Weston. Here also are a few sulphureous springs. The other productions of this county are chiefly of a mineral kind, and these both numerous and valuable. Upwards of 50,000 acres have been ascertained to contain an almost inexhaustible store of coal, near enough the surface of the ground to be easily raised. Limestone is still more abundant than coal. Iron ore is also plentiful. Very excellent freestone is found in several quarries. Alabaster, marble, and above all pot-ter's clay, are dug here. The agricultural products have nothing very remarkable in them.

This county sends seventeen members to Parliament ; viz., four for the shire, two for the city of Lichfield, two for Stafford, two for Newcastle-under-line, and two for Tamworth. The additions by the Reform Bill are, two for Wolverhampton, two for Stoke-upon-Trent, and one for Wai sail.

3taffordshire is not very copious in its biogra-phy ; but among the natives of eminence from thence we find some of distinguished character and celebrity. We may notice the following : — Thomas Allen, a mathematician. Born at Uttoxeter in 1542. Died 1632. Alexander Gard-ner, a distinguished naval commander. Born at Uttoxeter, 1742. Died 1810.— Lord George Anson, the

circumnavigator. Born at Hugbo-rough, 1697. Died 1762.— Elias Ashmole, philosopher and antiquary. Born at Litchfield, 1617. Died 1692. — Thomas Astle, the antiquary. Born at Yoxall, 1735. Died 1803.— Lord James Aud-ley, a distinguished warrior. Born at Heleigh, 1314. Died 1386.— Simeon Ashmole, a Non-conformist divine. Died 1662. — Isaac Hawkins Browne, poet. Born at Burton-upon-1 rent, 1705. Died 1760.— Charles Cotton, the poet. Born at Beresford. Died about 1687. — Dr. Richard Hurd, bishop of Worcester. Born at Cotgreve. Died 1808, in the eighty-ninth year of his age. — Elijah Fenton, the poet. Born at Shelton. Died 1730. — Dr. R. James, inventor of the fever powders bearing his name. Born at Kinver-ston, 1703. Died 1716.— Dr. Samuel Johnson, the great lexicographer. Born at Litchfield in 1709. Died 1784.— Dr. J. Lightfoot. Born at Stafford, 1602. Died 1675.— The learned bishop Newton, author of the Dissertations on the Prophecies. Born at Litchfield, 1703. Died 1782. — Rev. Stebbing Shaw, topographer. Born

at Stone, 1762. Died 1802.— Dr. G. Smallridsje, bishop of Bristol. Born at Litchfield, 1666. Died 1719. — The amiable Isaac Walton, the

angler. Born at Stafford, 1593. Died 1683.

William Wollaston, a distinguished philosophical writer. Born at Coton Clomford, in 1659. — Josiah Wedgwood, the ingenious potter. Born 1731. Died 1795.— John Goodwin, the celebrated Arminian, was born in this county, at Newcastle, about 1593. Died 1665.— Nor should we by any means omit to mention the name of Sampson Erdeswicke, the genealogist and antiquary, who was born at Sandon. Died 1603. — William Mountfort, the actor, was born in this county in 1659. Died 1692.— Rev. R. Meadow-croft, critic and annotator on Milton. Born 1697. Died 1769.

This is a very important manufacturing county. The manufactures of hardware, glass, toys, japanned goods, potters' ware, cotton, silk, leather, woollen, linen, the making of brass from copper with lapis calaminaris, the dipping of iron plates to make what is called tin, &c. &c., are very extensive. The hardware manufacture is carried on to a very great extent ; and Wolverhampton and its neighbourhood produce locks of every kind, and of the very best quality ; buckles are also manufactured there. The steel toys, watch-chains, edge-tools, files, augers, and japanned goods of this town are unrivalled in their quality; shoe-buckles and chapes, sadlers' iron-mongery, &c., are manufactured in great quantities at Walsall and the neighbourhood.

The manufacture of nails in Staffordshire is exceedingly extensive, particularly at Ledgely, Rowley, Westbromwich, Smethwich, Wombourne, Pel-sail, the Foreign of Walsall, and many other places. Plated, lackered, japanned, and even enamelled goods are made at Bilston. Wednes-bury does something in the gun trade. Tobacco and snuff-boxes of iron or steel, and finished in various ways, are got up at Darlaston, Willen-hull, and in their neighbourhood. Shoes, boots, and cutlery, both for homp consumption and exportation; and the tanmnj, and other different branches of the leather trade, and also the manufacture of hats, are carried on upon a very large scale in Stafford and other towns in the county. Leek does a great deaf of business in the silk and mohair way , the manufactured goods from which are sewing silks, twist, buttons, ribands, silk ferrets, shawls, and handkerchiefs. There are also some cotton mills in the neighbourhood, where weft is spun for the Manchester market. Cheadle and Jean, have a considerable manufacture of tape. But neither the woollen nor linen manufactures are very large : cotton is spun in large quantities at Rocceter, Fazeley, and Tarn-worth, as also at Burton and Tutbury ; the ale of the former place has been long celebrated. But the pottery manufac ure is that for which, beside hardware, this county is most celebrated. This manufacture is chiefly carried on in the north of the county; and the name of Wedgwood is renowned throughout Europe for his inventions and discoveries in this business. The potteries consist of a number of scattered villages, occupying an extent of about ten miles . and may contain about 22,000 inhabitants, inSTA

eluding those who depend on them for employment and subsistence. The war had a lamentable effect on this trade, especially the war with America ; but the prospects of the manufacturers have since brightened, and the population increased.

STAFFTREE. See CELASTRUS.

STAG, n. s. Goth, stek ; the male hind when his horns are grown. Thus Dan. sta'g, is the point of a horn. The male red deer ; the male of the hind.

To the place a poor sequestered stag, That from the hunter's aim had ta'en a hurt, Did come to languish. Shakspeare. As You Like it.

The swift stag from under ground Bore up his branching head. Milton.

The inhabitants of seas and skies shall change ; And fish on shore, and stags in air shall range.

Dry den. The stag

Hears his own feet, and thinks they sound like more, And fears his hind legs will o’ertake his fore. Pope.

STAG, in zoology. See CERVUS.

STAG BEETLE. See LUCANUS.

STAGE, n. s. & v. a.-v Fr. estage, of Lat.

STAGECOACH, n. s. / static. A floor raised

STAGEPLAY, Mo view, on which any

STAGEPLAYER, I thing is exhibited ; the

STAGER. J theatre ; a place of

scenic entertainments ; a station of rest or pause on a journey : hence a single step of progress : to stage is to exhibit publicly (obsolete) : a stager, a player ; an old practitioner : the other compounds seem to need no explanation.

Those two Mytelene brethren, basely born, crept out of a small galliot unto the majesty of great kings. Herein admire the wonderful changes and chances of these worldly things, now up, now down, as if the life of man were not of much more certainty than a stage play. Knolles’s History.

When we are born, we cry that we are come To this great stage of fools. Shakspeare. King Lear.

I love the people ;

But do not like to stage me to their eyes : Though it do well, I do not relish well Their loud applause. Id. Measure for Measure.

The quick comedians Extemp’rally will stage us, and present Our Alexandrian revels. Id. Antony and Cleopatra.

The changes and vicissitudes in wars are many ; but chiefly in the feats or stages of the war, the weapons, and the manner of the conduct.

Bacon’s Essays.

And much good do't you then, Brave plush and velvet men : Can feed on ort ; and, safe in your stage clothes, Dare quit, upon your oaths, The stagers and the stage wrights too. Ben Jonson.

I've heard old cunning stagers Say, fools for argument use wagers. Hudibras.

I shall put you in mind where it was you promiseo to set out, or begin your first stage ; and beseech you to go before me as my guide.

Hammond's Practical Catechism.

This rough -cast unhewn poetry was instead of utageplays for one hundred and twenty years.

Dryden' s Juvenal, Dedication.

One Livius Andronicus was the first stage-player in Rome. Id.

I maintain, against the enemies of the stage, that patterns of piety, decently represented, may second the precepts. Dryden.

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Some stagers of the wiser sort Made all these idle wonderments their sport : But he, who heard what every fool could stay, Would never fix his thought but trim his time away.

Dryden.

One experienced stager, that had baffled twenty traps and tricks before, discovered the plot.

L' Estrange.

Our next stage brought us to the mouth of the Tiber. Addison.

The story was told me by a priest, as we travelled in a stage-coach. Id.

From thence compelled by craft and age, She makes the head or latest stage. Prior.

To prepare the soul to be a fit inhabitant of that holy place to which we aspire, is to be brought to perfection by gradual advances through several hard and laborious stages of discipline. Rngers.

When late their miry sides stage-coaches show, And their stiff horses through the town move slow, Then let the prudent walker shoes provide. Guy.

We must not expect that our journey through the several stages of this life should be all smooth and even. Atterbury.

The first stage of healing, or the discharge of mat-ter, is by surgeons called digestion. Sharp's Surgery.

This is by some called the first stage of a consumption, but I had rather call it an ill habit preparatory to that distemper. Blackmore.

By opening a passage from Muscovy to China, and marking the several stages, it was a journey of so many days. ISaker.

Men drop so fast, ere life's mid stage we tread, Few know so many friends alive as dead. Young.

Knights, squires, and steeds must enter on the

stage. Pope.

Be by a parson cheated ! Had you been cunning stagers,

You might yourselves be treated By captains and by majors. Su'it'1—

The STAGE, in the modern drama, is the place of action and representation included between the pit and the scenes, and answering to the pro-scenium or pulpitum of the ancients. See AMPHITHEATRE, and THEATRE.

STAG'GER, v. n., v. a.,& n. s. Belg. stagger-en, of Goth, staka, to stumble. To reel or stumble in walking ; not to stand or walk steadily : hence to hesitate ; fall in doubt ; give way : to make to stagger; to revolt; shock; alarm: a disease of the horse (used in the plural) ; applied also by Shakspeare to human madness.

He staggered not at the promise of God through unbelief; but was strong in faith. Ramans iv. 20.

A man may, if he were fearful, stagger in this attempt. Shakspeare.

That hand shall burn in never quenching fire, That staggers thus my person. Id. Richard If.

The question did at first so stagger me, Bearing a state of mighty

moment in’t.

Id. Henry VIII.

His horse past cure of the fives, stark spoiled with the staggers. Shakspeare.

I will throw thee from my care for ever Into the staggers, and the careless lapse Of youth and ignorance. Id.

Three means to fortify belief are experience, rea-son, and authority : of these the most potent is authority ; for belief upon reason, or experience, will stagger. Bacon

No hereticks desire to spread Their light opinions like these Epicures ;

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For so their staggering thoughts are comforted, And other men's assent their doubt assures.

Dames.

If thou confidently depend on the truth of this, •vithout any doubting or ttagyeriny, this will be accepted by God. Hammond.

Whosoever will read the story of this war, will find himself much staggered, and put to a kind of /iddle. Howel.

He began to appear sick and giddy, and to stag-qer ; after which he fell down as dead. Buyle.

But let it inward sink and drown my mind : Falsehood shall want its triumph : I begin To stagger ; but I'll prop myself within. Drydeii.

When a prince fails in honour and justice, 'tis enough to stagger his people in their allegiance.

L'Eitrange.

Them revelling the Tentyrites invade, By giddy heads and staggering legs betrayed. Tale.

The enemy staggers : if you follow your blow, he falls at your feet ; but, if you allow him respite, he will recover his strength. Addison.

The immediate forerunners of an apoplexy are a vertigo, staggering, and loss of memory. Arbuthnot.

The shells being lodged with the belemnites, selenites, and other like natural fossils, it was enough to stagger a spectator, and make him ready to entertain a belief that these were so too. Woodward.

STAGGERS. See VETERINARY ART.

STAGIRA, in ancient geography, a town on the borders of Macedonia, near the bay of Contessa, into which the Strymon runs, at the south of Amphipolis ; founded A. A.C. 665. It is famous for being the birth place of Aristotle. It is now called Lyba Nova, and lies sixteen miles fmm Contessa.

STAGIRITE, a native of Stagira; an epithet very generally given to Aristotle, by both ancient and modern authors.

STAG'NANT, adj. ˆ Latin stagnans. Mo—

STAG'NATE, v. n. >tionless; still; not agi—

STAGNA'TION, n.s. j tated ; not flowing: to lie or be motionless : the state of being so.

As the Alps surround Geneva on all sides, they form a vast bason, where there would be a constan stagnation of vapours, did not the north wind scattei them from time to time. Addison.

What does the flood from putrefaction keep ! Should it be stagnant in its ample seat, The sun would through it spread destructive heat.

Blackmore.

To what great ends subservient is the wind ! Behold, where'er this active vapour flies, It drives the clouds, and agitates the skies : This from stagnation and corruption saves The' aerial ocean's ever-rolling waves. Id.

The aliment moving through the capillary tubes stagnates, and unites itself to the .vessel through which it flows. Arbuthnot.

Twas owing to this hurry and action of the water that the sand now was cast into layers, and not to a regular settlement, from a water quiet and stagnant.

Woodward.

The water which now arises must have all stagnated at the surface, and could never possibly have been refunded forth upon the earth, had not the strata been thus raised up. Id.

Where creeping waters ooze, Where marshes stagnate. Tliomson.

Immured and buried in perpetual sloth, That gloomy slumber of the stagnant soul. Irene.

STAHL (George Ernest), an eminent German chemist, born in Franconia in 1660, and chosen

professor of medicine at Hall, when a university was founded in that city in 1694. The excellency of his lectures while he filled that chair, the importance of his various publications, and his extensive practice, soon raised his reputation very high. He received an invitation to Berlin in 1716, which having accepted, he was made counsellor of state and physician to the king. He died in 1734, in the seventy-fifth year of his age. Stahl is without doubt one of the greatest men of which the annals of medicine can boast; his name marks the commencement of a new era in chemistry. He was the author of the doctrine of phlogiston, which, though now completely overturned by the discoveries of Lavoisier and others (see CHEMISTRY, Index), was not without its use ; as it served to combine the scattered fragments of former chemists into a systerc, and as it gave rise to more accurate experiments and a more scientific view of the subject, to which many of the subsequent discoveries were owing. This theory maintained its ground for more than half a century, and was received and supported by some of the most eminent men which Europe has produced ; a sufficient proof of the ingenuity and the abilities of its author. He was the author also of A Theory of Medicine, founded upon the notions, ‘yhich he entertained, of the absolute dominion of mind over body ; in consequence of which he affirmed that every muscular action is a voluntary action of the mind, whether attended with consciousness or not. This theory he and his followers carried a great deal too far, but the advices which he gives to attend to the state of the mind of the patient are worthy of the attention of physicians. His principal works are, 1. Experimenta et Ooservationes Chemicae et Physicse, Berlin, 1731, 8vo. ; 2. Dissertationes Medicse, Hall, 2 vols. 4to. This is a collection of theses. 3. Theoria Medica vera, 1737, 4to. ; 4. Opusculum Chymico-physico Medicum, 1740, 4to. ; 5. A Treatise on Sulphur, both Inflammable and Fixed, written in German. 6. Nego-tium Otiosum, Hall, 1720, 4to. It is in this treatise chiefly that he establishes his system concerning the action of the soul upon the body. 7. Fundamenta Chymicse Dogmatics et Expe-rimentalis, Nuremberg, 1747,3 vols. 4to. ; 8. A Treatise on Salts written in German. 9. Com-mentarium in Metallurgium Beccheri, 1723.

STAHREMBERG (Conrad Balthasar), count of, a brave German general, who was governor of Vienna, when it was besieged by the Turks, in 1683. He acquired great glory by the brave defence he made of that city. He died at Vienna in 1687.

STAHREMBERG (Guido Balde), count of, another brave German general, born in 1657. He displayed his military talents on various occasions, particularly at the battle of Zenta, where he commanded under prince Eugene. In 1710 he pained the battle of Saragossa ; and

distinguished himself greatly in Spain, in favor of the archduke Charles. At the end of that war he retired to Vienna, where he died in 1737.

STAIN, v. a. & n. s. 1 Isl. stena; Swed.

STAIN'I.ESS, adj. \stana; Goth, steina , Welsh ystaenio. To blot; spot; maculate*

hence to brand character; disgrace: the adjective corresponding.

Hereby I will lead her that is the praise, and yet the stain, of all womankind. Sidney.

The phenix wings are not so rare For faultless length and stainless hue. Id.

Our opinion, concerning the force and virtue which such places have, is, 1 trust, without any blemish or stain of heresy. Hooker.

Lend me a looking-glass ; If that her breath will mist or stain the stone, Why then she lives. Shahspeare. King Lear.

I cannot love him ;

Yet I suppose him virtuous, know him noble, Of great estate, of fresh and stainless youth.

Shakspeare.

Of honour void, of innocence, of faith,- of purity, Our wonted ornaments now soiled and stained.

Milton.

Then heaven and earth, renewed, shall be made

pure To sanctity, that shall receive no stain. Id.

• Embrace again, my sons ; be foes no more, Nor stain your country with your children's gore.

Dry den.

Nor death itself can wholly wash their stains, But long contracted filth even in the soul remains, The reliques of inveterate vice they wear, And spots of sin. Id. JEnela.

We nowhere meet with a more pleasing show than what appears in the heavens at the rising and setting of the sun, which is wholly made up of those different stains of light that shew themselves in clouds of a different situation. Addison.

Swift trouts, diversified with crimson stains : And pikes, the tyrants of the watery plains. Pope.

Ulysses bids his friends to cast lots ; for, if he had made the choice himself, they whom he had rejected might have judged it a stain upon them for want of merit. Bronme.

STAIN ES, a market town and parish in Spelthorne hundred, Middlesex, situate on the banks of the Thames, sixteen miles and a half west of London. The town is neat, and much improved of late years, and the market house, which stood in the centre of the street, has been removed. An iron bridge was erected across the river in 1803. The church is situate at some distance from the main part of the town. Here are chapels for quakers, and other dissenters, and also a Lancasterian school. The name is supposed to be derived from the Saxon word Stana, a stone, from the London markstone, which stands above the bridge at Coin Ditch, denoting the boundary of the jurisdiction of the city of London on the river ; this stone bears the date of 1280. Staines is a lordship of the crown, and is governed by two constables, with four headboroughs, chosen annually by the king's stewards. Market on Friday. Fairs, May 1 1 th, and September 10th. It is a vicarage, with Lale-ham and Ashford chapels annexed.

STAIR, n. s.) Sax. j-taejeri ; Belg. steghe ;

STAIR'CASE. \ Teut. steige ; Goth.stigr. Steps by which we rise from the lower part of a building to the upper. Stair was anciently used for the whole order of steps ; but stair now, if it be used at all, signifies, as in Milton, only one flight of steps : staircase is that part of a building which contains the stairs.

A good builder to a high tower will not make his

stair upright, but winding almost the full compass about, that the steepness be the more insensible.

Sidney.

Slaver with lips as common as the stairs That mount the capitol. Shakspeare.

I would have one only goodly room above stairs, of some-forty foot high. Bacon's Essays,

Sir James Tirrel repairing to the Tower by night attended by two servants, stood at the stair-foot, and sent these two villains to execute the murder.

Bacon.

To make a complete staircase is a curious piece of architecture. Wotton.

The stairs were such as whereon Jacob saw Angels ascending and descending.

Milton's Paradise Lost Satan now on the lower stair, That scaled by steps of gold to heaven gate, Looks down with wonder at the sudden view Of all this world. id.

Trembling he springs,

As terror had increased his feet with wings ; Nor staid for stairs, but down the depth he threw His body ; on his back the door he drew. Dryri?,, .

I cannot forbear mentioning a staircase, where 1 1 *• easiness of the ascent, the disposition of the light and the convenient landing, are admirably contrived.

Addison on Italy.

STAIRCASE, in architecture, is an ascent en closed between walls, or a balustrade consisting} of stairs or steps, with landing places and rails, serving to make a communication between the several stories of a

house. See AKCHITECTUKI , Index.

Vitruvius, in his description of the houses of the ancients, makes no mention of stairs ; yet even in the supposition that these dwellings had only a ground floor, still means would be requisite to mount to the roof. Those staircases conducting to the upper stories of the lesser houses of Rome often ran up the outside of the building, and were secured by a separate door. From this it should seem that there was no interior communication between the several floors. The staircase was not, however, altogether a-, extraneous erection, but excavated, as it were, in the main wall of the building, and might have been intended to render the different stories more independent of each other — a desirable thing when each was occupied by a separate tenant. In their more recent constructions, however, as well as in houses of a higher order, the staircase was no doubt disposed much in the same manner as at the present day. The building called the country house, at Pompeii, and several others, have staircases of modern appearance, saving that they are narrow and incommodious : the steps are sometimes a foot high. We find occasionally, likewise, private staircases, as in Pliny's Tuscan villa, where it was situated by the side of the dining-room, and destined for the use of the slaves who served the repast. There were also staircases in many of the ancient temples for the purpose of reach ing the roof, &c.

In modern architecture, great skill is often displayed in the disposition of the staircase, in order that it may possess convenience of acce.ss without interfering with the handsome size and distribution of the various apartments. In houses of the middling size and character, it is

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generally of wood ; but in the residences of the nobility, as well as in public edifices, it is commonly constructed in stone or marble. In fact, this should always be done, where possible ; since a double purpose is answered thereby: namely, solidity and freedom from prompt ignition in case of fire. One most desirable point is, to afford to all the several divisions of a staircase the strongest possible proportion of light. The balustrade should be light, and at the same time ornamental ; and the wall on the other side, as well as the ceiling above, produces a fine effect if adorned with paintings, as in the mansions of many of our nobles. With regard to form, all kinds of varieties have been in use at different periods. The commonest shape is that in which right lines are employed. Circular staircases have often a very pleasant and handsome effect ; but the artist must be a good deal regulated by his space, and the peculiar nature of the ground.

STAKE, n. s. & v. a. Saxon j-taca ; Belg. stuec k ; Swed. stake; Ital. stuc ; Span, estuca. A post or strong stick fixed in the ground ; something deposited or made fast : hence a pledge; wager: to fasten; support; pledge; wager; hazard.

The more I shaked the stake which he had planted in the ground of my heart, the deeper still it sunk int< > it-Sidney.

His credit in the world might stand the poor town in great stead, as hitherto their ministers foreign estimation hath been the best stake in their hedge.

Hooker.

He wanted pikes to set before his archers ; Instead whereof sharp stakes, plucked out of hedges, They pitched in the ground.

Shaktpeare. Henry VI. We are at the ttake, And bayed about with many enemies.

Id. Julius CcBsar.

In France the giapes that make the wine grow upon low vines bound to small stakes, and the raised vines in arbors make but verjuice.

Bacon’* Natural History.

When he heard that the lady Margaret was declared for it, he saw plainly that his kingdom must again be put to the stake, and that he must fight for it. Id. Henry VII.

That hollow I should know : what are you ? speak : Come not too near, you fall on iron slakes else.

Milton.

Are not our liberties, our lives, The laws, religion, and our wives, Enough at once to lie at stake, For covenant and the cause's sake Hudibras.

Tis time short pleasure now to take, Of little life the best to make, And manage wisely the last stake. Con-ley.

O then, what interest shall I make To save my last important stake, When the most just have cause to quake?

Roscommon.

He ventures little for so gieat a stake. More.

Or sharpen stakes, or head the forks, or twine The sallow twigs to tie the straggling vine.

Dryden.

Of my crown thou too much care dost take ; That which I value more, my love, 's at stake. Id.

The' increasing sound is borne to either shore, And for their stakes the throwing nations fear. Id.

Stake and bind up your weakest plants and flowers

against the winds, before they in a moment prostrate a whole year's labour. Evelyn's Kalendar.

The honour of the nation being in a manner at stake to make good several deficiencies. Daoenant.

Is a man betrayed in his nearest concerns ? The cause is, he relied upon the services of a pack of villains, who designed nothing but their own game, and to stake him while they played for themselves.

South.

They durst not stake their present and future happiness on their own chimerical imaginations.

Addison.

Every moment Cato's life's at stake. Id.

I'll stake yon' lamb that near the fountain plays, And from the brink his dancing shade surveys. Pope.

Hath any of you a great interest at stake in a distant part of the world 1 Hath he ventured a good share of his fortune 1 Atterburij.

The game was so contrived that one particular cast took up the whole stake ; and, when some others came up, you laid down. Arbuthnot.

STALACTICAL, adj. i Of Gr. oraXtfu.

STALACTI'TES, n. s. $ Resembling an icicle : spars in the shape of an icicle.

A cave was lined with those stalactical stones on the top and sides. Derham's Phwco-Theology.

Stalactites is only spar in the shape of an icicle, accidentally formed in the perpendicular fissures of the stone. Woodward.

STALACTITE. See next article.

STALACTITES, in mineralogy, are crystalline spars formed into oblong, conical, round, or irregular bodies, composed of various crusts, and usually found hanging in form of icicles from the roofs of grottoes, &c.

STALACTITICAL. See STALACTICAL; but Stalactitical, by all the rules of analogy and derivation, ought to be preferred.

STALAGMITIS, in botany, a genus of the moncecia order, belonging to the polygamia class of plants ; and in the natural method ranking under the thirty-eighth order, tricoccae. The calyx is either quadriphyllous or hexaphyllous ; the corolla consists of four or six petals : the receptacle is fleshy, and somewhat square-shaped ; the filaments about thirty. In the hermaphrodite flower the stylus is short, thick, and erect ; the fruit is a berry of a globular shape, unilocular, and crowned with the stylus and stigma : they contain three oblong

jointed triangular seeds. Of this there is only one species, *viz.* S. cambo-gioides, a native of the East Indies, and of the warmer parts of America. From this plant is obtained the gutta cambogia, or gum gamboge of the shops. See GAMBOGE. Till very lately botanists were at a loss for the true nature of the plant which yields this gum. Koenig, a native of Ireland, and an excellent botanist, travelled over a great part of India, and collected a great number of new plants, and among the rest the stalagmitis. These he bequeathed to Sir Joseph Banks, president of the Royal Society.

STALBEMT (Adrian), a landscape painter of Antwerp, born in 1580. His scenes are well chosen, and often solemn ; his figures properly introduced ; and his trees extremely natural He died in 1660.

STALE, adj. & v. a. Sax. j-tealhan (of Goth. sta, to stand); Belg. stelle. Old ; long kept; altered by time : to make old ; wear out. Stale, says Johnson, is not used of persons otherwise

tnan in contempt : except when it is applied to beer, it commonly means worse for age.

Age cannot wither her, nor custom state Her infinite variety.

Shakspeare. Antony and Cleopatra. Were I a common laughter, or uid use To stale with ordinary oaths my love To every new protestor. Id. Julius Caesar.

The beer and wine, as well within water as above, have not been palled ; but somewhat better than bottles of the same drinks and staleness kept in a cellar.

Bacon’s Natural History.

The duke regarded not the muttering multitude, knowing that rumours grow stale, and vanish with time. Hayward.

All your promised mountains And seas I am so stalely acquainted with.

Ben Jonson.

About her neck a pacquet mail, Fraught with advice, some fresh, some

ttale.

Hudibras.

Many things beget opinion ; so doth novelty ; wit itself, if stale, is less taking. Grew's Cosmologia.

A stale virgin sets up a shop in a place where she is not known. Spectator.

Provided our landlord's principles were sound, we did not take any notice of the staleness of his provisions. Addison.

This, Richard, is a curious case : Suppose your eyes sent equal rays Upon two distant pots of ale, Not knowing which was mild or stale; In this sad state your doubtful choice Would never have the casting voice. Prior. They reason and conclude by precedent. And own itale nonsense which they ne'er invent.

Pope.

Pompey was a perfect favourite of the people ; but his pretensions grew stale, for want of a timely opportunity of introducing them upon the stage.

Swift.

STALE, n. s. From Sax. pˆelan, to steal. — Johnson. But Mr. Thomson, from the verb to stale, i. e. deposit, place. Something exhibited or offered as an allurement to draw others to any place or purpose : a prostitute. Obsolete.

His heart being wholly delighted in deceiving us, we could never be warned ; but rather one bird caught, served for a stale to bring in more. Sidney.

Still as he went he crafty stales did lay, With cunning trains him to entrap unwares ;

And privy spials placed in all his way, To weet what couise he takes and how he fares.

Spenser.

The trumpery in my house bring hither, For stale to catch these thieves.

Shakspeare. Tempest.

I stand dishonoured, that have gone about To link ray dear friend to a common stale.

Shakspeare.

It may be a vizor for the hypocrite, and a stale for the ambitious. Decay of Piety.

This easy fool must be my stale, set up To catch the people's eyes : he's tame and merciful ; Him I can manage. Dryden's Don Sebastian.

A pretence of kindness is the universal stale to all base projects ; by this men are robbed of their fortunes, and women of their honour.

Government of the Tongue. STALE, n. s. Belg. stele, a stick. A handle. But, seeing the' arrow's stale without, and that the

head did goe

No further than it might be seene, he called his spirits again. Chapman.

It hath a long stale or handle, with a button at the end for one's hand. Mortimer's Husbandry .

STALE, v.n. From the noun, or rather from the verb to STALE, deposit. To make water.

Having tied his beast t' a pale, And taken time for both to stale. Hudibras. STALE, among sportsmen, a living fowl put in a place to allure and bring others where they may be taken. For want of these, a bird shot, his entrails taken out, and dried in an oven in his feathers, with a stick thrust through to keep it in a convenient posture, may serve as well as a live one.

STALIMENE, an island in the Grecian Archipelago, anciently called Lemnos ; fifteen miles long and eleven broad. It abounds with mountains and fertile valleys, which produce much fruit. Two of its mountains were anciently voK canoes, whence the poets faliled it to be the place where Vulcan kept his forges. See LEMNOS. It is a Greek bishop's see. Cochino, the ancient Hephestias, and Lemno, the ancient Myron, are the two chief towns.

STALK, n. s. kv.n. ~\ Sax. praelj, j-tealcan ; STALK'INGHORSE,K. s. >Swed. stalk. The stem STALK'Y, adj. J of a plant ; a stay ; handle; support: to walk with high and stately steps. It is used commonly in a sense of dislike : a stalkinghorse is a real or fictitious horse behind which a fowler conceals himself; a pretence : stalky, stiff; like a stalk.

Behind it forth there leapt An ugly fiend, more foul than dismal day ; The which with monstrous stalk behind him slept, And ever as he went due watch upon him kept.

Spenser.

His monstrous enemy With sturdy steps came stalking in his sight. Id.

Shall your city call us lord, In that behalf by which we challenged it ? Or shall we give the signal to our rage, And stalk in blood to our possession?

Shakspeare. King John.

The king asked how far it was to a certain town : they said six miles. Half an hour after he asked again : one said six miles and a half. The king alighted out of his coach, and crept under the shoulder of his led horse : and when some asked his majesty what he meant, I must stalk, said he ; for yonder town is shy, and flies me.

Bacon's Apophthegms.

A stock-gillyflower, gently tied on a stick, put into a steep glass full of quicksilver, so that the quicksilver cover it ; after five days you will find the flower fresh, and the stalk harder and less flexible than it was.

Bacon.

Let the counsellor give counsel not for faction but for conscience, forbearing to make the good of the state the stalkinyhorse of his private ends.

Hahewill on Providence. Small store will serve, where store, All seasons, ripe for use, hangs on the ttalk.

Milton.

That amber attracts not basil, is wholly repugnant unto truth ; for, if the leaves thereof, or dried stalks, be stripped unto small straws, they arise unto amber, wax, and other electricks, no otherways than those ot wheat and rye. Brouiic.

Unfold the' eternal door : You see before the gate what stalking ghost Commands the guard, what sentries keep the post.

Dryden,

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Hoses unhid, and every fragrant flower, Flew from their stalk* to strew thy nuptial bower.

Id.

They pass their precious hours in plays and sports, ‘Till death behind came stalkmg on unseen. Id.

Hypocrisy is the devil’s stalkinghttrse , under an af-iectation of simplicity and religion. L’ Estrange.

It grows upon a round stalk, and at the top bears a great stalky head. Mortimer.

Viewed with a glass, they appear made up of little bladders, like those in the plume or stalk of a quill.

Grew. Then stalking through the deep

He fords the ocean, while the topmast wave

Scarce reaches up his middle side. Additcm.

Great Milton next, with high and haughty stalks, Unfettered in majestick numbers walks. Id.

Vexatious thought still found my flying mind, Nor bound by limits, nor to place confined •, Haunted my nights, and terrified my days, Stalked through my gardens, and pursued my ways, Nor shut from artful bower, nor lost in winding maze.

Prior.

Scornful turning from the shore My haughty step, I stalked the valley o’er.

Id. Odyssey.

STALK, ANIMATED. This remarkable animal was found by Mr. Ives at Cuddalore; and he mentions several kinds of it : some appearing like dry straws tied together, others like grass ; •«ome have bodies much larger than others, with the addition of two scaly imperfect wings;

their neck is no bigger than a pin, but twice as long as their bodies ; their heads are like those of a hare, and their eyes vertical and very brisk. They live upon flies, and catch these insects very dexterously with the two fore feet, which they keep doubled up in three “parts close to their head, and dart out very quick on the approach of their prey ; and, when they have caught it, they eat it very voraciously, holding it in the same manner as a squirrel does its food. On the outer joints of the fore feet are several very sharp hooks for the easier catching and holding of their prey ; while, with the other feet, which are four in number, they take hold of trees or any other thing, the better to surprise whatever they lie in wait for. They drink like a horse, putting their mouths into the water. Their excrements, which are very white, are almost as large as the body of the animal, and, as the natives say, dangerous to the eyes.

STALL, n. s. & v. a.) Sax. r-teai ; Belsj.

STALL’FED, adj. \stal; Teut. stall; I tail.

stulla. Strictly, a fixed station, or abiding place: hence a crib in which an ox or horse is fed or kept; a shed, shop, or depot for goods; the seat of a clergyman in a choir : to keep in a stall or stable ; to instal ; invest : stallfed is fed ir a. stall or with dry food.

Solomon had forty thousand stalls of horses.

1 hings iv.

All these together in one heap were thrown, Like carcases of beasts in butcher’s stall ;

And in another corner wide were strown The antique ruins of the Romans fall. Spenser.

For such encheason, if you go nie, Few chimneys reeking you will espy ; The fat ox, that won’t lig in the stall, Is now fast stalled in his crumenal. Id. Pastorals.

Stalls, bulks, windows, Are smothered up, leads filled, and ridges horsed

With variable complexions ; all agreeing

In earnestness to see him. Shahspeare. Coriolanui.

For my part he keeps me rustically at home ; or, to speak more properly, sMes me here at home un-kept : for call you that keeping, for a gentleman of my birth, that differs not from the stalling of an ox ?

Shakspeare.

Long mayst thou live to wail thy children's loss ; And see another, as I see thee now, Decked in thy rights as thou art stalled in mine. Id.

We could not stall together in the world. Id.

A herd of oxen then he carved, with high raised

heads, forged all Of gold and tin, for color mixt, and, bellowing from

their stall, Rushed to their pastures. Chapman's Iliad.

Every one must every day sustaine The load of one beast, the most fat and best Of all the staU-feil, to the woer's feast. Chapman.

They are nature's coarser wares that lie on the stall, exposed to the transient view of every common eye. Glanville.

His fellow sought what lodging he could find ; At last he found a stall where oxen stood. Dryden.

Nisus the forest passed,

And Alban plains, from Alba's name so called, Where king Latinus then his oxen stalled. Id.

Bess Hoy first found it troublesome to bawl, And therefore placed her cherries on a stall. Kin*.

The pope creates a canon beyond the number limited, and commands the chapter to assign unto such canon a stall in the choir and place in the chapter- Aytiff'e's Pa i ergon.

Stallfed oxen, and crammed fowls, are often diseased in their livers. Arbuthnot on Aliments.

How pedlars stalls with glittering toys are laid, The various fairings of the country maid. Gay.

Harley, the nation's great support, Returning home one day from court, Observed a parson near Whitehall Cheapening old authors on a

stall. Swift.

The dignified clergy, out of mere humility, have called their thrones by the names of stalls.

Warburtmi.

STAL'LION, n. s. Welsh ysdalwyn. <• The one is derived from the other; but which from which I cannot certainly tell.' — VVotton. Fr. estallion; Ital. Stallone; Belg. stallhengst. Junius thinks it derived from jtaelan, to leap. A horse kept for mares.

The present defects are breeding without choice of stallions in shape or size. Temple.

If fleet Dragon's progeny at last Prove jaded, and in frequent matches cast, No favor for the stallion we retain, And no respect for the degenerate strain. Dryden.

STALLION, or STONEHORSE, in the manege, is designed for the covering of mares, to propagate the species. He ought to be sound, well made, vigorous, and of a good breed. For fine saddle horses, foreign stallions, as Arabians, Turks, Barbs, and Andalusians, are preferable to all others. Next to these, British stallions are the best ; because they originally sprang from those above-mentioned, and are very little degenerated . The stallions of Italy, and especially the Neapolitan, are very good. The best stallions for draught or carriage horsts are those of Na-ples, Denmark, Holstein, and Freezeland. The stallions for saddle horses should be from fourteen to fifteen hands high, and for draught horses at least fifteen hands." Neither ought the color of stallions to be overlooked : as a fine black,

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gray, bay, sorrel, &c. Besides these external qualities, a stallion ought to have courage, tract-ability, spirit, agility, a sensible mouth, sure limbs, zc. These precautions in the choice of a stallion are the more necessary, because he has been found by experience to communicate to his offspring almost all his good or bad qualities, whether natural or acquired. The mare contributes no less to the beauty of her offspring than the stallion ; but she contributes perhaps more to-their constitution and stature ; for these reasons it is necessary that the mares for breed be perfectly sound, and make good nurses. For elegant horses, the Spanish and Italian mares are best; but, for draught horses, those of Britain and Normandy are preferable. However, when the stallions are good, the mares of any country will produce fine horses, provided they be well made and of a good breed. See HORSE.

STALL'WORN, adj. Stall and worn. Long kept in the stable. Probably a mistake for stal-worth. Sax. j-t:apelj:ejvJ$, stout.

His stallworn steed the champion stout bestrode.

Shakspeare.

STAMEN, in botany, the male genital organ of plants, found generally within the corolla, near the pistil. Stamens were formerly called chives. They are various in number in different flowers, from one to some hundreds. This organ is essential to a plant, no one having yet been discovered, after the most careful research, that is destitute of it, either in the same flower with the pistils, or a separate one of the same species.

A stamen consists of three parts. 1. The filamentum, or filament, the part which supports the anther. 2. The anthera, placed on the filament, and the most essential part of all. 3. The pollen, or powder adhering to the anther.

STAMFORD, a borough and market town, consisting of five parishes, in Ness hundred, parts of Kesteven, Lincolnshire, eighty-six miles and a half north from London. It is situate on the river Welland, on the borders of Northamptonshire, and Rutlandshire. The houses are well built, and chiefly of freestone, covered with slate. The out-parish of St. Martin's, Stamford Bridge, which is situate in Northamptonshire, on the opposite side of the Welland, is reckoned a part of the town, and

rated with it in the taxes. Some of the churches are well built, and adorned with lofty spires ; two of them are so near together as to resemble one building ; St. Martin's church contains some noble monuments. This town was anciently much more considerable, and had fourteen parish churches, but nearly half that number were destroyed during the wars of the houses of York and Lancaster. There were many friaries and hospitals in the neighbourhood ; one of them, at the south end of Stamford Bridge, is now converted into an alms house, for a warden and twelve poor men, and there is another for the same kind, within the town; besides a school for girls on Dr. Bell's system, and numerous other charitable foundations. In early times this was a strong garrison town, and had a castle on the south s'de of the river ; there was also another castle erected within the town, but no remains are to be seen of either. In the reign of Edward III. a

quarrel having arisen at the university of Ox-ford, among the students, many of them retired hither, and formed various literary establishments; but they were of short duration. The town is governed by a mayor, twelve aldermen, and twenty-four burgesses. It returns two members to parliament, the number of voters being about 500, and the returning officer the mayor. Here the custom of borough-English prevails, by which the younger son inherits from a father dying intestate. Over the Welland is a fine stone bridge of five arches. The town hall, at the end of the bridge, is a handsome building, and contains in it a guildhall, and a gaol. It has also a neat theatre, an assembly room, and near the town is a course for horse races. The chief trade of this town is in malt, coal, and freestone, which is chiefly promoted by the navigation of the Welland. Here is a commercial bank. Near this town is the elegant residence of the marquis of Exeter. Markets on Monday and Friday. Fairs,. Tuesday before February 13th, Monday befere Midlent, Mon-day before May 12lh, and after Corpus-Christi, August 5th, and November 8th.

STAM'INA, n. s. Lat. stamina. The first principles of any thing; the solids of a human body ; in botany, those little fine threads or capillaments which grow up within the flowers of plants, encompassing round the style, and on which the apices grow at their extremities.

STAMINA, in the animal body, are those simple original parts which existed first in the embryo or the seed ; and by whose distinction, augmentation, and accretion by additional juices, the animal body at its utmost bulk is supposed to be formed.

STAMINA, in botany, are those upright filaments which, on opening a flower, we find withir. the corolla surrounding the pistillum. They are the male organs of generation, and prepare the pollen. Each stamen consists of two parts, *viz.* the filamentum and the anthera. See BOTANY, Index.

STAM'MEL, n. s. From darnel, doc-colored. A species of red color.

Reedhood, the first that doth appear In stummel : scarlet is too dear. Ben Jonsun.

STAM'MER, v. n. (Sax. rtamen. Belg.

STAM'MERER, n. s. S stamelen, stameren. To speak with unnatural hesitation ; to utter words with difficulty : the noun substantive corresponding.

Sometimes to her news ot myself to tell I go about ; but then is all my best Wry words, and stammering, or else doltish dumb Say then, can this but of enchantment come ?

Sidney.

I would thou couldest stammer, that thou mightest pour out of thy mouth, as wine comes out of a nar-row-mouthed bottle, either too much at once or none at all. Shakspeare.

A stammerer cannot with moderation hope for the. gift of tongues, or a peasant to become learned as Origen. Taylor.

She stammers ; oh, what grace in lisping lies ; If she says nothing, to be sure she's wise. Drydeii.

Legean juice,

Which stammering tongues and staggering feet produce, ia.

Cornelius hoped he would come to stammer like Demosthenes. Arbuthnot's Martinus Scriblerut.

Your hearers would rather you should be less correct, than perpetually stammering, which is one of the worst solecisms in rhetorick. Swift.

STAMMERING, in physiology, that hesitation or interruption of speech which seems generally to arise from fear, eagerness, or some viclcnt passion, that prevents a child's articulating rightly, by the confusion which it occasions in the vibrations that descend into the muscular system. It does not therefore begin, in general, till children are of an age to distinguish right from wrong in respect of pronunciation, and to articulate with some kind of propriety. A nervous disorder of the muscles of speech may have i like effect.

When stammering has once begun to take place in a few words, it will extend itself to more and more from very slight resemblances, and particularly to 'all the first words of sentences, because ihen the organs pass in an instant from inactivity to action, whereas the subsequent parts of words and sentences may follow the foregoing from association ; just as in repeating, memoriter, one is most apt to hesitate at the first word in each sentence. A defect of memory from passion, natural weakness, &c., so that the prpper word does not occur readily, also occasions stammering, and, like all other modes of speaking, it is caught, in some cases, by imitation. Sometimes stammering takes place only in the utterance of such words as begin with certain letters, which are generally some of the labial or guttural consonants, as 6, p, m, c, g, &c. Some persons, on the contrary, stammer in the utterance of all words indiscriminately, with whatever letter they begin, whether they be vowel or consonant, at certain times only; as e. g. when the speaker is placed in any situation that occasions hurry or embarrassment. Agreeably to the observations already made,1 we find that persons of great nervous irritability, and lively consciousness, are most liable to stammering. This sort of impediment is a bad habit, founded upon this constitutional susceptibility: and in attempting to remove stammering, while every attention should be paid to such means as physical and medical science will point out for the strengthening of the corporeal sys-tem, it is of the utmost importance to induce the persons affected with it to reason on the subject. Let them practise the formation of the component parts of words (that is, simple vocal sounds and the powers of the consonants), singly, and in combination, alternately, till

a facility and habit of subjecting the muscles concerned in speech to the will be acquired or regained. They should be accustomed to consider that which is true in fact, that the organs of speech are moved by muscles which, from the laws of animal economy, are the instruments of the will ; though we are conscious of an act of the will only at the commencement of such actions.

To counteract stammering, therefore, we are told, we must appeal to the understanding, and endeavour to arouse the will into vigilant and vigorous control of the muscles.' When a hesitation happens, let a volition or direct act of

this power take place: first to ceaie muscular motion altogether, and then to commence a now series. The greatest deliberation and recollection should be used in ordinary conversation ; and the act of speaking, as such, should be constantly present to the mind, till the wrong habit be overcome, and the right so confirmed as to leave no room to apprehend a relapse. The voice should be carefully pitched at that tone which nature in the individual points out as easiest to the organs, and most agreeable to the ear ; and by no means should a hurried pronunciation, or fictitious voice, be resorted to. It should be studiously remembered that we are accountable to no one for the innocent and decorous exercise of our muscular powers — that over them we ourselves alone ought to have control— that speech, on proper occasions, is not only an innocent and a decorous, but, in the eyes of others, a necessary and an agreeable exercise of our muscles. Why then be thrown into perturbation and confusion, when we are to perform an action confessedly in our power; and which others have not only no right to prevent, but are desirous that we should perform ? If this train of reasoning be fairly entered upon, many other arguments will suggest themselves, and must inevitably produce good.

The following directions, with variations according to circumstances, will be found to be attended with advantage. In order to raise a voice, or that material of which speech is form ed, let the vowels be practised in a natural key, but with firmness and strength, for ten minutes or a quarter of an hour, at least, every morning. Then let the powers of the consonants be form-ed, in their order, singly, and variously combined with the vowels. After a little rest, if imagination supply a subject, by all means let an imaginary conversation take place for twenty minutes, half an hour, or even an hour, in a firm and

natural tone of voice, using every effort of fancy, to suppose it directed to persons indiscriminately ; that is, sometimes to servants, sometimes to equals iu age and rank, and sometimes to elders, or those considered as superior in consequence and rank in society, from whatever cause. But, if imagination do not furnish a topic, then let the time be spent in reading, in a tone as nearly approaching to the ease of familiar conversation as possible, taking care to manage the fancy as above. This will furnish the lesson: and, after an interval of a few hours, the same sort of conversation or reading should be repeated, two or three times more in the course of a day. And, on mixing with real auditors, every exertion should be made to associate the ideas of their imaginary, with their actual presence.

These directions, it will be perceived, are founded upon the principle of the association of ideas; than which a more powerf'.'i principle, in the formation of human habits, cannot be conceived. An ingenious writer, whose observations we are now citing, is of opinion that it may be laid down as an incontrovertible position, that persons possessing an ordinary mental capacity, with an adequate share of industry and strength, may certainly overcome the habit

»>f stammering, by means such as here pointed out. See Instruction of the Deaf and Dumb, &c., by Joseph Watson, LL. D., 2 vols. 8vo.,

1809.

STAMP, v. a., v. n., & n. s.) Belg. stampen ;

STAMP'ER, n. s. > Dan. stamper;

Goth, and Swed. stampe. To strike by pressing the foot hastily downwards ; strike with the foot ; pound ; impress ; fix a mark by pressure ; mint; form ; coin ; give a character to : as a verb neuter to strike the foot downwards : a stamp is an instrument for stamping; the thing marked or stamped ; the impression or mark made ; make ; form ; cast; currency: a stamper is a pounding instrument.

I took the calf you had made, burnt it with fire, and stamped and

ground it very small. Deut. ix. 21.

The men shall howl at the noise of the stamping of the hoofs of his strong horses. Jer. xlvii. 3.

Out of mere ambition, you have made Your holy hat be stampt on the king's coin.

Shakspeare. What a fool art thou,

A ramping fool, to brag, to stamp, and swear, Upon my party ! Thou cold-blooded slave, Hast thou not spoke like thunder on my side 1 Id.

If speaking truth

In this fine age were not thought flattery, Such attribution should this Douglas have As not a soldier of this season's stamp Should go so general current through the world. Id.

Some apothecaries, upon stamping of coloquintida, have been put into a great scouring by the vapour only. Bacon.

But to the pure refined ore The stamp of kings imparts no more Worth, than the metal held before. Carew.

From the stamping mill it passeth through the crazing-mill ; but of late times they mostly use wet stampers. Id.

These prodigious conceits in nature spring out of framing abstracted conceptions, instead of those easy and primary notions which nature stamps in all men of common sense. Digty.

Of the same stamp is that which is obtruded upon us, that an adamant suspends the attraction of the loadstone. Browne's Vulgar Errours.

Some other nymphs, with colours faint And pencil slow, may Cupid paint, And a weak heart in time destroy : She has a stamp, and prints the boy. Waller.

No constant reason of this can be given, but from the nature of man's mind, which hath this notion of a deity born with it, and stampt upon it ; or is of such a frame that in the free use of itself it will find out God. Tillotson.

If Arcite thus deplore His sufferings, Palemon yet suffers more : He frets, he fumes, he stares, he stamps the ground ; The hollow tower with clamours rings around.

Dryden .

'Tis gold so pure, It cannot bear the *tomp without allay. Id.

When one man of an exemplary improbity charges another of the same stamp in a court of justice, he lies under the disadvantage of a strong suspicion.

L' Estrange.

Though God has given us no innate ideas of himself ; though he has

stumpt no original characters on our minds, wherein we may read his being; yet, hav-ing furnished us with those faculties our minds are endowed with, he hath not left himself without witness. Locke.

If two pennyweight of silver, marked with a cerr tain impression, shall here in England be equivalent to three-pennyweight marked with another impression, they will not fail to stamp pieces of that fashion, and quickly carry away your silver. Id.

Where reason or scripture is expressed for any opinion, we may receive it as of divine authority ; but it is not the strength of our own persuasions which can give it that stamp. Id.

There needs no positive law or sanction of God to stamp an obliquity upon such a disobedience. South.

The persons here reflected upon are of such a peculiar stamp of impiety that they seem formed into a kind of diabolical society for the finding out new experiments in vice. Id.

What titles had they had, if nature had not Strove hard to thrust the worst deserving first, And stamped the noble mark of eldership Upon their baser metal 1

Rowe's Ambitious Stepmother.

There is such an echo among the old ruins and vaults, that, if you stamp but a little louder than ordinary, you hear the sound repeated. Addison.

At Venice they put out very curious stamps of the several edifices which are most famous for their beauty and magnificence. Id. on Italy.

Let a friend to the government relate to him a matter of fact, he gives him the lye in every look ; but, if one of his own stamp should tell him that the king of Sweden would be suddenly at Perth, he hugs himself at the good news. Addison.

Here swells the shelf with Ogilby the great ; There, stamped with arms, Newcastle shines complete.

Pope.

They got to the top, which was flat and even, and, stamping upon it,

they found it was hollow. Swift.

Indeed the paper stamp Did very much his genius cramp ; And, since he could not spend his fire, He now intended to retire. Id.

W hat an unspeakable happiness would it be, to a man engaged in the pursuit of knowledge, if he had but a power of stamping his best sentiments upon his memory in indelible characters. Watls.

A king of heaven's own stamp, not vulgar make ; Blessed in giving, and averse to take. Hurte.

He. cannot bear the astonishing delight, But starts, exclaims, and stamps, and raves, and dies. Dennis.

STAM P-DUTIES, in English law, are a branch of the perpetual revenue of this kingdom. They are a tax imposed upon all parchment and paper whereon any legal proceedings, or private instruments of almost any nature whatever are written : and also upon licenses for retailing wines, letting horses to hire, and numerous other purposes. And upon all almanacs, newspapers, advertise-ments, cards, dice, and pamphlets containing less than six sheets of paper. These imposts are very various, according to the nature of the thing stamped or taxed, rising gradually from one penny to ten pounds ; and, indeed, in many cases, as legacies, administrations, conveyances, &c., to an amount proportioned to the property conveyed. The first institution of the Stamp-duties was by stat. 5 and 6 W. & M. c. 21 ; and they have since been increased to an amount which nothing but the absolute necessity of their being imposed could prevent us from styling enormous. These duties are managed by commissioners appointed for the purpose. They now extend to such an astonishing variety of articles, and deSTA

pend on euch a multiplicity of statutes, which are continually varying (by increasing) the amount, that no table or compendium which could be framed, would probably be of any service to the reader after one session of parliament ; nor would it be consistent with the general nature of a work like the present to enter into any further elucidation of the subject.

STANCH, v, a., v. n., & adj. ˆ Fr. estancher ;

STANCH'LESS, adj. } Ital. stagnare.

To stop blood; hinder from running: to stop: as an adjective firm ; sound ; trusty : stanthless is, not to be stopped.

A woman touched the hem of his garment and immediately her issue stanched. Luke viii. 44.

If I knew

What hoop would hold us stanch from edge to edge O’ th’ world, I would pursue it.

Shakspeare. Antony and Cleopatra. There grows,

In my most ill-composed affection, such A stanchless avarice, that, were I king, I should cut off the nobles for their lands.

Id. Macbeth.

Iron or a stone, laid to the neck, doth stanch the bleeding of the nose. Bacon’s Natural History.

She unto Scythia sent, for hunger him to gnaw, And thrust her down his throat, into his stanchless maw. Dray ton.

Leeches, inwardly taken, fasten upon the veins, and occasion an effusion of blood, which cannot be easily stanched. Browne’s Vulgar Errours.

What we endeavoured in vain may be performed by some virtuoso that shall have siancher vessels, and more sunny days. Boyle.

He fought to hinder fighting, and assayed To stanch the blood by breathing of the vein.

Dry den .

You will lose their love ; this is to be kept stanch, and carefully watched. Locke.

The standing absurdity, without the belief of which no man is reckoned a stanch churchman, is, that there is a calfs-head club. Adaiˆon.

In politicks, I hear, you’re stanch, Directly bent against the French. Prior.

They mean to convince, not the grovelling herd, or giddy populace, but the grave and stanch men, i.‘ien of sobriety and firmness. Wuterlund.

Each stanch polemick stubborn as a rock, Each fierce logician still expelling lx > cke, Came whip and spur. Pope.

STANCHIONS are small pillars of wood or iron, used for various purposes in a ship; as to support the decks, the quarter-rails, the nettings, the awnings, &c. The first of these are two ranges of small columns fixed under the beams, throughout the ship's length between decks ; one range being on the starboard and the other on the larboard side of the hatcnways. They are chiefly intended to support the weight of the artillery.

STAND, v. n., v. a., & n. s. \ Sax. j-tanˆan STANDEE, n. s. $ Goth. and Swed.

standa ; Teut. standen. To be on the feet ; be erect ; stop ; stay ; halt : hence to support ; persist ; hold good ; remain in force or consistent ; abide by : taking by, for, off, out, to, under, up, vpon, &c., as prepositions, whose use is exemplified below : to stand, as a verb active, is to endure; resist without flinching; await; abide: as a noun substantive, a station ; post ; stop ; difficulty; perplexity; mark; acme; support: a

slander is one who stands ; a tree that has long stood : a stander-by is one present ; a mere spectator.

I stood between the Lord and you, to shew you the Lord's word. Deut. v. 5.

The king granted the Jews to gather themselves together, and stand for their life. Esth. viii. 11.

My mercy will I keep for him, and my covenant shall stand fast with him. Psalm Ixxxiv. 28.

Stand in awe and sin not ; commune with your own heart upon your bed, and be still. Id. iv. 4.

Their eyes stand out with fatness. Id. Ixxiii. 7.

He turned the wilderness into a standing water.

Id. cvii.

I will pumsn you, that ye may know that my words shall surely stand against you for evil.

Jer. xliv. 29.

When the accusers stood up, they brought none accusation of such things as I supposed. Acts xxv. 18.

Jf meat make my brother offend, 1 will eat no flesh while the world standeth. 1 Cor. viii. 13.

Watch ye, stand fast in the faith, quit you like men, be strong. Id. xvi. 13.

Put on the whole armour of God, that ye may be able to stand against the wiles of the devil.

Eph. vi. 11.

That could not make him that did the service perfect, as pertaining to the conscience, which stood only in meats and drinks. Heb. ix. 10.

The young spring was pitifully nipt and overtrod-den by very beasts ; and also the fairest slanders of all were rooted up and cast into the fire.

Ascham's Schoolmaster.

God was not ignorant that the judges, whose sentence in matters of controversy he ordained should stand, oftentimes would be deceived. Hooker.

The cause must be presumed as good on our part as on theirs, 'till it be decided who have stood for the truth, and who for error. Id.

His faithful people, whatsoever they rightly ask, the same shall they receive, so far as may stand with the glory of God and their own everlasting good ; unto either of which it is no virtuous man's purpose to seek any thing prejudicial. Id.

Explain some statute of the land to the slanders 6y.

Id.

This reply standeth all by conjectures. Whitgifte.

If he would presently yield, Barbarossa promised to let him go free ; but, if he should stand upon his defence, he threatened to make him repent his foolish hardiness. Knotles.

Such ordnance as he brought with him, because it was fitter for service infield than for battery, did only beat down the battlements,

and such little standings.

Id. History.

Thou slialt see me at Tullus' face : What, art thou stiff? stdnd'st out ? Shakspeare.

If you unite in your complaints, And force them with a constancy, the cardinal Cannot stand under them. Id. Henry VIII.

Does it not stand me now vpon 1 Id. Hamlet.

A rascally, yea-forsooth knave, to bear a gentleman in hand, and then stand upon security. Shukspeare.

None durst stand him ; Here, there, and every where, enraged he flew. Id.

I have found you out a stand most fit, Where you may have such 'vantage on the duke, He shall not pass you. Id. Measure for Measure.

We are come off

Like Romans ; neither foolish in our stands, Nor cowardly in retire. Shakspeare.

The leaders, having charge from you to stand ; Will not go off until they hear you speak. JJ.

Seeing how lothly opposite 1 stood To his unnatural purpose, in fell motion

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With his prepared sword he charges home My unprovided body. Id. King Lear.

From enemies heaven keep your majesty ; And, when they stand against you, may they fall.

Sliakspeare.

A. thing within my bosom tells me, That no conditions of our peace can stand.

Id. Henri, VI. My very enemy's dog,

Though he had bit me, should have stood that night Against my fire. Id. King Leur.

So it stands : and this I fear at last, Hume's knavery will be the duchess' wreck.

Id. Henry VI.

The broil doubtful long ttuod, As two spent swimmers that do cling together And choke their art. Skakspeare.

It remains,

To gratify his noble service, that Hath thus stood for his country. Id. Coriolanus.

The fool hath planted in his memory An army of good words ; and I do know A many fools that stand in better place, Garnished like him, that for a tricksy word Defy the matter. Id. Merchant of Venice.

Yourself, renowned prince, then stood as fair As any comer I have looked on, For my affection. Id.

I'll tell you who time ambles withal, who time gallops withal. — Whom stands it still withal ?• — With lawyers in the vacation ; for they sleep between term and term, and then they perceive not how time moves.

Shakspeare.

Have I lived to stand in the taunt of one that makes fritters of English 1 Id. Merry Wives.

Stand no more off, But give thyself unto my sick desires. Shakspeare.

There's his chamber,

His standing bed and truckle bed. Id.

The king knowing well that it stood him upon, by how much the more he had hitherto protracted the time, by so much the sooner to dispatch with the rebels. Bacon.

The greatest part of trade is driven by young merchants, upon borrowing at interest ; so as, if the usurer either call in or keep back his money, there will ensue presently a great stand of trade. Id.

This nation of Spain runs a race still of empire, when all other states of Christendom stand at a stay.

Id.

Their lives and fortunes were put in safety, whether they stood to it or ran away. Id. Henry VII.

Our company assembled, I said, My dear friends, let us know ourselves, and how it standeth with us.

Bacon.

A philosopher disputed with Adrian the emperor, and did it but weakly : one of his friends, that stood by, said, Methinks you were not like yourself last day in argument with the emperor ; I could have answered better myself. Why, said the philosopher, would you have me contend with him that commands thirty legions T Id.

It is so plain that it needeth not to be stood upon.

Id.

His coming is in state ; I will provide you a good standing to see his entry. Id.

It was by the sword they should die, if they stood upon defence ; and by the halter, if they should yield. Hayward.

All which grace

I now will amplify, and tell what case Thy household stands in. Chapman.

Then the lightning-loving Deity cast A foule flight on my soldiers : nor stood fast One man of all. lit

Freedom we all stand for. Ben Jonsm.

Pontinius knows n.ot you, While you stand out upon these traiterous terms.

Id.

Picture is best when it standeth off as if it were carved ; and sculpture is best when it appeareth so tender as if it were painted, when there is such a softness in the limbs as if not a chissel had hewed them out of stone, but a pencil had drawn and streaked them in oil. Wotton's Architecture.

1 he hirelings stand at a certain wages. Carew.

He that will pass his land, As I have mine, may set his hand And heart unto this deed, when he hath read ; And make the purchase spread To both our goods, if he to it will stand. Herbert. We make all our addresses to the promises, hu<ˆ and caress them, and in the interim let the commands stand by neglected. Decay of Piety.

Despair would stand to the sword, To try what friends would do, or fate afford.

Daniel.

Father, since your fortune did attain So high a stand, I mean not to descend. Id. Some instances of fortune cannot stand with some others ; but if you desire this you must lose that.

Taylor.

Never stand in a lye when thou art accused ; but ask pardon and make amends.

Id. Rule of Living Holy. The slanders by see clearly this event, All

parties say they're sure, yet all dissent.

Denltam.

At the soldierly word stand, the flyers halted a little. Clarendon.

The earl of Northampton followed the horse so closely that they made a stand, when he furiously charged and routed them. Id.

This excellent man, who stood not upon the advantage ground before, provoked men of all qualities.

Id.

The presbyterians of the kirk, less forward to declare their opinion in the former point, stand upon the latter only. Sanderson.

He stood to be elected one of the proctors for the university. Id. Life.

Then from his lofty stand on that high tree Down he alights among the sportful herds. Milton.

To stand or fall,

Free in thine own arbitrement it lies. Id

Chariot and charioteer lay overturned, And fiery foaming steeds : what stood, recoiled O'erwearied through the faint Satanick host, Defensive scarce ; or, with pale fear surprised, Fled ignominious. Id. Paradise Lost.

The sea,

Awed by the rod of Moses so to stand, Divided. Milton.

Chariots winged

From the armoury of God, where stand of old Myriads. Id.

I in thy persevering shall rejoice, And all the blest stand fast. Id.

Why r.tand we longer shivering under fears 1 Id.

This made their flowing shrink From standing lake to tripping ebb. Id.

It stands me much upon

T' enervate this objection. Hudibras.

We are often constrained to stand alone against the strength of opinion.

Browne's Preface to Vulgar Errou's. Men stand very much upon the reputation of their understandings, and of all things hate to be accounted fools ; the best way to avoid this imputation is to be religious. T*llotson.

The wand did not really stand to the metals, when placed under it, or the metalline veins. Boyle.

I will stand to it that this is his sense, as will ap-pear from the design of his words. Stillingjleet .

Standing armies have the place of subjects, and fhe government depends upon the contented and discontented humours of the soldiers. Temple.

If the ladies will stand out, let them remember that the jury is not all agreed. Dryden.

Palinurus cried aloud,

What gusts of weather from that gathering cloud My thoughts presage ! ere that the tempest roars Stand to your tackles, mates, and stretch your oars.

Id.

Turning at the length, he stood his ground, And missed his friend. Id.

After supper a stand was brought in, with a brass vessel full of wine, of which he that pleased might drink ; but no liquor was forced.

Id. Life of Cleomenes. At every turn she made a little stand, And thrust among the thorns her lily hand To draw the rose. Dryden.

Mute, and amazed, my hair with horror stood; Fear shrunk my senses, and congealed my blood.

Id.

Her hair stood up ; convulsive rage possessed Her trembling limbs. Id. JEneid.

My mind on its own centre ttandt unmoved, And, stable as the fabrick of the world, Propt on itself. Dryden.

That sots and knaves should be so vain To wish their vile resemblance may remain ; And s(and recorded, at their own request, To future days a libel or a jest ! Id.

Where Ufens glides along the lowly lands, Or the black water of Pomptina stands. Id.

If we meet with a repulse, we must throw off the fox's skin, and put on the lion's : come, gentlemen, you'll stand by me. Id. Spanish Fryar.

Stand of, and lot me take my fill of death.

Dryden.

Laughed all the powers who favour tyranny, And all the standing army of the sky. Id.

A fool may so far imitate the mien of a wise man, as at first to put a body to a «rand what to make of him. L'Estrange.

The ass hoped the dog would stand by him, if set upon by the wolf. Id.

He that will know, must by the connexion of the proofs see the truth and the ground it stands on.

Locke.

I will not trouble myself, whether these names stand for the same thing, or really include one another. Id.

They will suspect they shall make but small progress, if, in the books they read, they must stand to examine and unravel every argument. Id.

Money being looked upon as the standing measure of other commodities, men consider it as a standing measure ; though, when it has varied its quantity, it is not so. Id.

We highly esteem and stand much upon our birth, though we derive

nothing from our ancestors but our bodies ; and it is useful to improve this advantage, to imitate their good examples.

Ray on the Creation. Oh ! had bounteous heaven Bestowed Hippolitus on Phaedra's arms, So had I stood the shock of angry fate. Smith.

Let not men flatter themselves, that though they find it difficult at present to combat and stand1 out against an ill practice, yet that old age will do that for them, which they in their youth could never find in their hearts to do for themselves. South.

An utter unsuitableness disobedience has to the relation which man necessarily stands in towards his Maker. Id.

When just as by her stand Arsaces past, The window by design or chance fell down, And to his view exposed her blushing beauties.

He was a gentleman of considerable practice at the bar, and stood fair for the first vacancy on thˆ bench. Id.

Bid him disband the legions, Submit his actions to the publick censure, And stand the judgment of a Roman senate.

Addison's Cato.

The male bird, whilst the hen is covering her eggs, generally takes his stand upon a neighbouring bough, and diverts her with his songs during her sitting.

Id. Spectator.

Three persons entered into a conspiracy to assassinate Timoleon, as he was offering up his devo-tions in a certain temple : in order to it they look their several stands in the most convenient places.

Addison.

The slanders by suspected her to be a duchess.

Id.

This poet's tomb stood on the other side of Naples, which looks towards Vesuvio. Id. On Italy.

Readers, by whose judgment I would stand or fall, would not be such as are acquainted only with the French and Italian criticks. Id. Spectator.

He struck the snakes, and stood again New sexed, and straight recovered into man.

Addison.

Each thinks he stands fairest for the great lot, and that he is possessed of the golden number.

Id. Spectator.

Such a one, by pretending to distinguish himself from the herd, becomes a standing object of raillery.

Addison.

When famed Varelst this little wonder drew Flora vouchsafed the growing work to view, Finding the painter's science at a stand, The goddess snatched the pencil from his hand ; And, finishing the piece, she smiling said, Behold one work of mine that ne'er shall fade.

Prior.

Such behaviour frights away friendship, and makes it stand off" in dislike and aversion.

Collier of Friendship.

Should this circulation cease, the formation of bodies would be at an end, and nature at a perfect stand. Woodward.

Although the ancients were of opinion that Egypt was formerly sea ; yet this tract of land is as old, and of as long a standing, as any upon the continent of Africa. Id.

Scarce can a good-natured man refuse a compliance with the solicitations of his company, and stand out against the raillery of his familiars. Rogers.

Thus doth he advise them to erect among themselves standing courts by consent. Kettleworth.

They expect to be favoured, who stand not possessed of any one of those qualifications that belonged to him. Atterbury.

Though nothing can be more honourable than an acquaintance with God, we stand off from it, and will not be tempted to embrace it. Id.

The common standing rules of the gospel are a more powerful means of conviction than any miracle.

Id.

Sprightly youth and close application will hardly stand together. Felton.

Amongst liquids endued with this quality of relaxing, warm water stands first.

Arbuthnot on Aliments.

Some middle prices shew us in what proportion the value of their lands stood, in regard to those of our own country. Arbuthnot.

The sea, since the memory of all ages, hath continued at a stand, without considerable variation.

Bentley.

That not for fame, but virtue's better end, He stood the furious foe, the timid friend, The damning critick. Pope.

Immense the power, immense were the demand, Say, at what part of nature will they stand ? fd.

Persians and Greeks like turns of nature found, And the world's victor stood subdued by sound. Id.

Full for the port the Ithacensians stand, And furl their sails, and issue on the land.

fd. Odyssey.

The world is inclined to stand 6v the Arundelian marble. Id. Essay on Homer.

Great standing miracle that heaven assigned ; 'Tis only thinking gives this turn of mind. Pope.

The urchin from his private stand Took aim and shot with all his strength. Swift. Stand by when he is going. Id.

I wish your fortune had enabled you to have continued longer in the university, till you were of ten years standing. id.

The emperors standing upon the advantage he had got by the seizure of their fleet, obliged them to deliver. Gulliver's Travels.

Theology would truly enlarge tbe mind, were it studied with that freedom and that sacred charity which it teaches : let this therefore stand always chief. Watts.

God, who sees all things intuitively, does not want these helps ; he

neither stands in need of logick, nor uses it. Baker.

STAND, in commerce, a weight from two hundred-weight and a half to three hundred-weight of pitch.

STAN'DARD, n. s.) Fr. estandurt ; Swed.

STAN'DARDBEAREH.] standu; Belg. standaert ; Ital. standardo. An ensign in war, particularly the ensign of the horse. This word is originally derived from stand : hence it also signifies a test ; that which is of standing or undoubted authority ; a settled rate ; that which has been tested ; a standing stem or tree : the standardbearer is he who carries a military standard.

Thev shall be as when a. standardbearer faintetn.

Isa. x. 18.

The device of king Henry VII. was profound, in making farms of a standard, that is, maintained with such a proportion of lands as may breed a subject to live in plenty. Bacon.

A standard of a damask rose, with the root on, was set upright in an earthen pan, full of fair water, half a foot undai the water, the standard being more than two foot above it. Id. Natural History.

His armies, in the following day, On those fair plains their standards proud display.

Fairfax.

Erect the standard there of ancient night, Yours be the advantage all, mine the revenge.

Milton.

The dogmatist gives the lye to all dissenting ap-prehenders, and proclaims his judgment the fittest intellectual standard. Glanville.

Our measures of length I cannot call standards, for standard measures must be certain and fixed.

Holder.

A standard might be made, under which no horse should be used for draught ; this would enlarge the breed of horses. Temple.

In France, part of their gardens is laid out foi flowers, others for fruits ; some standards, some against walls. Temple.

Behold Camillus loaded home

With standards well redeemed, and foreign foes o'er-come. Dryden.

When people have brought right and wrong to a false standard, there follows an envious malevolence.

L' Estrange.

That precise weight and fineness, by law appropriated to the pieces of each denomination, is called the standard. Locke.

Plant fruit of all sorts and standard, mural, or shrubs which lose their leaf. Evelyn's Kalendar.

The Komans made those times the standard of their wit, when they subdued the world. Sprat.

These are the standardbearers in our contending armies, the dwarfs and squires who carry the impresses of the giants or knights. Spectator.

In comely rank call every merit forth ; Imprint on every act its standard worth. Prior.

When I shall propose the standard whereby I give judgment, any may easily inform himself of the quantity and measure of it. Woodward.

By the present standard of the coinage, sixty-two shillings is coined out of one pound weight of silver.

Arbul/inot.

From these ancient standards I descend to our own historians. Feltoit.

First follow nature, and your judgment frame By her just standard, which is still the same. Pope.

The English tongue, if refined to a certain standard, perhaps might be fixed for ever. Swift.

STANDARD, in commerce, the original of a weight, measure, or coin, committed to the keeping of a magistrate, or deposited in some public place, to regulate, adjust, and try the weights used by particular persons in traffic. See MONEY.

STANDARD, is used among goldsmiths synonymously with sterling; thus standard or sterling gold or silver means gold or silver of equal pu-rity with the gold or silver coin of Great Britain.

STANDARD (from the Fr. estandart, &c., sig- •num vexillurn), in the general signification, is an ensign in war. And it is used for the standing measure of the king, to the scantling whereof all the measures in the land are, or ought to be, framed, by the clerks of markets, aulnagers, or other officers, according to Magna Charla and divers statutes. This is not without good reason called a standard, because it standeth constant and immoveable, having all measures coming towards it for their conformity ; even soldiers in the field have their standard or colors, for their direction in their march, &c., to repair to. Britton, c. 30. There is a standard of money, directing what quantity of fine silver and gold, and how much allay, are to be contained in coin of old sterling, &c. And standard of plate and silver manufactures. Stat. 6 Geo. I., c. 11. See COINS. WEIGHTS, and MEASURES.

STANDARD, in war, is a sort of banner or flag, carried as a signal for joining together the several troops belonging to the same body.

The military standard is usually a piece of silk one foot and a half square, on which are embroidered the arms, device, or cypher, of the prince or colonel of a regiment. It is fixed on a lance, eight or nine feet long, and carried in the centre of the first rank of a squadron of horse, by the cornet.

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STANDARDS BELONGING TO THE CAVALRY. Standards are posted in the following manner : — The king's with the right squadron. The second with the left; and the third with the centre. In advancing to the front on foot, the advanced standards and their Serjeants must not slacken their pace, or deviate from right to left, as the lieutenant-colonel, or leading-officer, may happen to do ; but if he be in their way they must call to him, because they alone reeulate the march. The standards must always be brought to the parade by the troop, viz., by that which has its private parade nearest to head-quarters. They must be accompanied by as many trumpeters as can conveniently assemble with that troop. Swords must be drawn and the march sounded. The cornets parade, of course, with that troop to receive the standards. The standards are received by the regiment, or squadron, at open ranks, with swords drawn, officers saluting, and the -march sounding by the remaining trumpeters. They must march off from head-quarters, and be lodged with the same form.

STANDARD-HILL, the Durolerum of the Romans, a hill of England, in Kent, south of Newington, by Sittingbourne, on which it is said Julius Caesar encamped. Also a hill in Sussex, near Battel, now called Beacon-hill, where William the Conqueror raised his standard the day before the battle of Hastings.

STANDARDUS, true standard, or legal weight or measure. — Cartular S. Edmund, MS.

STAN'DEL, n. s. From stand. A tree of long standing.

The Druinians were nettled to see the princely ttandel of their royal oak return with a branch of willows. Howel.

STAND'ISH, n s.. Stand and dish. A case for pen and ink.

A Grubstreet patriot does not write to secure, but get something : should the government be overturned, he has nothing to lose but an old standish.

Addison.

I bequest to Dean Swift, esquire, my large silver standish, consisting of a large silver plate, an ink-pot, and a sand-box. Swift.

STANDON, a market-town and parish in Braugin hundred, Herts, situate on the river Rib, eight miles north-east from Hertford, and twenty-seven from London. The church has nothing remarkable, except that the chancel floor is elevated seven steps above the level of the church, and the altar three steps above the chancel. Market on Friday. Fair, October 13th. It is a vicarage.

STANEMORE, a barren district of Westmoreland, in the east corner of the county. It has relics of Rerecross, an ancient boundary between Scotland and England, set up when Cumberland belonged to the former.

STANG, n. s. Sax. r«en5' A perch.

These fields were intermingled with woods of half a ttang, and the tallest tree appeared to be seven feet high. Swift.

STANHOPE (George), D. D., an eminent divine, born at Hertishorn in Derbyshire, in 1660. His father was rector of that place, vicar of St. Margaret's church in Leicester, and chap-

lain to the earls of Chesterfield and Clare. His grandfather, also Dr. George ' Stanhope, was chaplain to James I. and Charles I. ; chancellor, canon, residentiary, and a prebend of York, and was rector of Weldrake. He was for his loyalty driven from his home with eleven children; and died in 1644. Our author was sent to school, first at Uppingham in Rutland, then at Leicester ; afterwards removed to Eaton ; and thence chosen to Ring's College in Cambridge. He took the degree of B. A. in 1681 ; A. M. 1658; was elected minister of Qoi near Cambridge, and vice proctor 1688; and rector of Tring in Hertfordshire. He was in 1689 appointed vicar of Lewisham in Kent, by lord Dartmouth, to whom he had been chaplain. He was also appointed chaplain to William and Mary, and continued under queen Anne. He commenced D. D. July 5th, 1697 ; and was made vicar of Deptford, and dean of Canterbury in 1 703 ; thrice chosen prolocutor of the lower house of convocation. He was endowed with excellent parts, and acquired a large stock of learning, with the purest diction, and a just elocution. The character of the Christian and the gentleman in him were happily united. He died March 18th, 1728, aged sixty-

eight. The dean was twice married : 1 . to Olivia Cotton, by whom he had one son and four daughters; 2. To a sister of Sir Charles Wager, who survived him till October 1st, 1730, aged fifty-four. One of his daughters was married to a son of bishop Burnet. His writings are, A Paraphrase and Comment upon the Epistles and Gospels, 4 vols., 1705, 8vo. ; Sermons at Boyle's Lectures, 1706, 4to. ; Fifteen Sermons, 1700, 8vo. ; Twelve Sermons, 1727, 8vo. ; Parson's Christian Directory, 1716, 8vo. ; A Funeral Sermon on Mr. Richard Stare, bookseller, 1724, 4to: Twenty Sermons, between 1692 and 1724 ; Private Prayers, translated from the Greek of bishop Andrews, with Additions, 1730. He also published editions of Epictetus, Thomas a Kempis, and Rochefou-cault.

STANHOPE (Philip Dormer), earl of Chesterfield, was born in 1695, and educated in Trinity-Hall, Cambridge; which place he left in 1714, when, by his own account, he was an absolute pedant ; in this character he went abroad, where a familiarity "with good company soon convinced him he was totally mistaken in almost all his notions ; and an attentive study of the air, man-ner, and address of the people of fashion, soon polished a man whose predominant desire was to please ; and who, as it afterwards appeared, valued exterior accomplishments beyond any other human acquirement. While lord Stanhope, he got an early seat in parliament ; and in 1722 succeeded to his father's estate and titles. In 1728, and in 1745, he was appointed ambassador extraordinary and plenipotentiary to Holland ; which high character he supported with the greatest dignity ; serving his own country, and gaining the esteem of the states general. Upon his return from Holland, he was sent lord lieutenant of Ireland ; and, during his administration there, gave general satisfaction to al1 parties. He left Dublin in 1746, and in October succeeded the earl of Harrington as secretary of

state, in which post he officiated until February 6th, 1748. Being seized with a deafness in 1752 that incapacitated him for the pleasures of society, he from that time led a private and retired life, amusing himself with books and his pen; in particular, he engaged largely as a volunteer in a periodical miscellaneous paper called The World, in which his contributions have a distinguished degree of excellence. He died in 1773, leaving a character for wit and abilities that had few equals. He distinguished himself by his eloquence in parliament on many important occasions. He was an active promoter of the bill for altering the style; on which occasion, as he writes in one of his letters to his son, he made so eloquent a speech in the house that every one was pleased. Lord Macclesfield, one of the greatest mathematicians in Europe, and who had a principal hand in framing the bill, spoke afterwards, with all the clearness that a thorough knowledge of the subject could dictate ; but, not having a flow of words equal to lord Chesterfield, the latter gained the applause from the former. The high character lord Chesterfield supported during life received no small injury soon after his death, from a fuller display of it by his own hand. He left no issue by his lady, but had a natural son, Philip Stanhope, esq., whose education was for many years a close object of his attention, and who was afterwards en-voy extraordinary at the court of Dresden, but died before him. When lord Chesterfield died, Mr. Stanhope's widow published a course of letters written by the father to the son, filled with instructions suitable to the different gradations of the young man's life to whom they were addressed. These letters contain many fine observations on mankind, and rules of conduct; but it is observable that he lays a greater stress on exterior accomplishments and address than on intellectual qualifications and sincerity; and allows greater latitude to fashionable pleasures than good morals will justify, especially in paternal instructions. Hence the celebrated Dr. Samuel Johnson observed of these letters, that they inculcate only the morals of a loose woman, with the manners of a dancing master.

STANHOPE (Charles), the third earl of Stanhope, was born August 3d, 1753. He received his education at Eton, and Geneva, where his genius led him to pay a close attention to the mathematics ; and such was his progress that he obtained a prize from the society of Stockholm for a memoir on the pendulum. In 1774 he stood candidate for Westminster without success; but was introduced by the earl of

Shelburne into parliament as member for the borough of Wy-combe, which he represented until 1 786, when the death of his father called him to the house of Peers. He regarded with pleasure the dawn of the French Revolution ; openly avowed republican sentiments, and went so far as to lay aside the external ornaments of the peerage. He was also a frequent speaker against the war. As a man of science he ranked high both as an inventor and patron ; and among other things was the author of a method for securing buildings from fire, an arithmetical machine, a new printing-press, a monochoid for tuning musical instru-

ments, and a vessel to sail against wind and tide. He was twice married, first to lady Hester Pitt, daughter of the first earl of Chatham, by whom he had three daughters; and secondly to Miss Grenville, by whom he had three sons. This scientific but eccentric nobleman published several philosophical and a few political tracts. He died 14th of December 1816.

STANISLAUS (Leczinski), king of Poland, was born at Leopold the 20th of October, 1677. His father was a Polish nobleman, distinguished by his rank and the important offices which he held, but still more by his firmness and courage. Stanislaus was sent ambassador in 1704, by the assembly of Warsaw, to Charles XII. of Sweden, who had conquered Poland. He was at that time twenty-seven years old, was general of Great Poland, and had been ambassador extraordinary to the grand seignior in 1699. Charles was so delighted with the frankness and sincerity of'his deportment, and with the firmness and sweetness which appeared in his countenance, that he gave him the crown of Poland, and ordered him to be crowned at Warsaw in 1705. He -accompanied Charles XII. into Saxony, where a treaty was concluded with king Augustus in 1705, by which that prince resigned the crown, and acknowledged Stanislaus king of Poland. See POLAND. The new monarch remained in Saxony with Charles till 1707, when they returned into Poland and attacked the Russians, whom they obliged to evacuate that kingdom in 1708. But Charles, being defeated by Peter the Great in 1709, Augustus returned into Poland, and, being assisted by a Russian army, obliged Stanislaus to retire first into Sweden, and afterwards into Turkey. Soon after he took up his residence at Weissenburg in Alsace. Augustus despatched Sum his envoy to France, to complain of this; but the duke of Orleans, then regent, returned this answer : — ' Tell your king, that France has

always been the asylum of unhappy princes.' Stanislaus lived in obscurity till 1725, when Louis XV. espoused the princess Mary his daughter. Upon the death of Augustus, in 1733, he returned to Poland in hopes of re-mounting the throne. A large party declared for him ; but his competitor, the young elector of Saxony, being supported by the emperor Charles VI. and the empress of Russia, was chosen king, though the majority was against him. Dantzic, to which Stanislaus had retired, was quickly taken, and the unfortunate prince made his escape in disguise with great difficulty, after hearing that a price was set upon his head by the Russians. When peace was concluded in 1736 between the emperor and France, it was agreed that Stanislaus should abdicate the throne, but that he should be acknowledged king of Poland and grand duke of Lithuania, and continue to bear these titles during life ; that all his effects and those of the queen his spouse should be restored ; that an amnesty should be declared in Poland for all that was past, and that every per-son should be restored to his possessions, rights, and privileges ; that the elector of Saxony should be acknowledged king of Poland by all the powers who acceded to the treaty ; that Stanislaus should be put in possession of the duchies

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of Lprrain and Bar ; but that immediately after his death these duchies should be united for ever to the crown of France. Stanislaus succeeded a race of princes in Lorrain who were beloved and regretted ; and his subjects found their ancient sovereigns revived in him. He tasted then the pleasure which he had so long desired, the pleasure of making men happy. He assisted his new subjects ; he embellished Nancy and Lune-ville; he made useful establishments ; he founded colleges and built hospitals. He was engaged in these noble employments, when an accident occasioned his death. His night-gown caught fire and burnt him so severely, before it could be extinguished, that he was seized with a fever, and died February 23d, 1766. His death occasioned a public mourning ; the grief of his subjects was genuine. In his youth he had accustomed himself to fatigue, and had strengthened his mind and constitution. He was temperate, liberal, adored by his vassals, gentle, affable, compassionate, treating his subjects like equals, and alleviating their misfortunes. His revenues were small, but were we to judge of them by what he did, we might reckon him the richest potentate in Europe. He gave 18,000 crowns to the magistrates of Bar to be employed in purchasing grain, when at a low price, to be sold out again to the poor at a moderate rate, when the price should rise above a certain sum. He was a protector of the arts and sciences ; he wrote several works of philosophy, politics, and morality, which were collected and published in France in 1765, in 4 vols. 8vo, under the title of Oeuvres du Philo-Bophe Bienfaisant, ‘ the Works of the Benevolent Philosopher.’

STANISLAUS AUGUSTUS (Poniatowski), the last king of Poland, was the son of count Poniatowski, a Polish nobleman, by a lady of royal descent, and born in 1732. After receiving a very liberal education, he went abroad and resided for a considerable time in England ; where he became intimate with Sir Charles Hanbury Williams, whom he accompanied in his embassy to Petersburgh. Being uncommonly handsome, he soon attracted the attention of the grand duchess, afterwards Catharine II. To increase his importance, he was appointed ambassador from Augustus king of Poland, and invested with the insignia of the white eagle ; but his intrigue with the grand duchess being discovered, the empress Elizabeth was so much offended that she expressed her displeasure to the king of Poland who immediately recalled him. Upon the immorality of this amour we need make no comment. Moral principles are seldom regarded by the great -vhen

they interfere with their pursuits of pleasure or of power. But it will be seen how she rewarded him. When Catharine ascended the throne, on the mur-der of her husband, Poniatowski, thinking he would be a welcome visitant, set out for Pslersburgh ; but, to his surprise and mortification, he received a message from his old mistress, when on the frontiers, advising him to return to Warsaw. However, on the death of king Augustus, in 1763, Catharine announced her intention of placing her favorite on the throne of Poland ; a measure which, though disagreeable to many of the Polish nobles, she

effected in 1764. See POLAND. The disturb-; ances which soon after commenced between the Roman Catholics and the Dissidents ; the interference of Russia and the other partitioning powers ; the seizure of the king's person by conspirators, with his astonishing escape ; the beautiful but short lived revolution, and new constitution ; the first and second partitions of Poland by the surrounding powers; with the bloody operations of the Russians under Suwar-row, the massacre of Prague, and the capture of Warsaw, are fully recorded under POLAND. The unfortunate monarch was obliged to resign his crown in November 1795, and retire to Petersburgh ; where he died April llth, 1798. He was one of the most accomplished men of his age ; had read the best authors ancient and modern ; and could converse in various Ian- . guages. Under the last constitution he would have made an excellent monarch, and a happy people, if the other powers of Europe had assisted him and the brave Poles against their oppressors..

STANISLAWOW, a circle of Austrian Galicia, situated in the south-east of the province, adjacent to Hungary and the circles of Stryi and Tarnopol. It has a territorial extent of 1955 square miles.

STANISLAWOW, a trading town of Austrian Poland, the capital of the preceding circle. It is surrounded by a wall, and is well fortified, has a Catholic and an Arminian church, a gymnasium, and a central school. It has also a government depot of tobacco and snuff. Inhabitants 6200. Eighty miles south by east of Lemberg, and 172 north-west of Jassy.

STANK, adj. Ital. stance. Weak; worn out. Obsolete.

Diggon, I am so stiff and so stank, That unneth I may stand any more, And how the western wind bloweth sore, Beating the withered leaf from the tree. Spenser.

STANLEY (Sir Thomas), knt., of Cumberlow Green, in Herefordshire, a

learned writer of the seventeenth century, who published two volumes of Poems; the one in 1649, and the other in 1651.

STANLEY (Thomas), son of Sir Thomas, be-came still more famous for his learning. He was born at Cumberlow about 1644, and educated in his father's house, whence he removed to the university of Cambridge. He afterwards travelled through France, Italy, and Spain, and, upon his return to England, prosecuted his studies in the Middle Temple. He married Doro-thy, the eldest daughter of Sir James Engan of Flower in Northamptonshire. He wrote, 1. A Volume of Poems. 2. A Translation of *Elian's Various History. 3. History of Philosophy and Lives of the Philosophers. 4. A Translation of* .Eschylus, with a Commentary ; and several other works. He died in 1678.

STANLEY (John), an eminent composer and performer of music, born in 1713. He was blind from his infancy, but acquired so profound a knowledge of music that he became master of his majesty's band of musicians, and organist to the society of the temple and of St. Andrew's, Holborn. He died in 1786.

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STAN'NARY, adj. Lat. stannum. Relating to the tin-works.

A steward keepeth his court once every three weeks : they are termed stannary courts, of the Latin ttannum, and hold plea of action of debt or tresspass about white or black tin. Curew.

STANNARY is also used for the mines and works wherein tin is dug and purified ; as in Cornwall, Devonshire, &c. See CORNWALL and TIN.

STANNARY COURTS, in Devonshire and Cornwall, courts held for the administration of justice among the tinners therein. They are held before the lord warden and his substitutes, in virtue of a privilege granted to the workers in the tin mines there, to sue and be sued only in their own courts, that they may not be drawn from their business, which is highly profitable to the public, by attending their law suits in other courts. The privileges of the tinners are confirmed by a charter 33 Edw. I., and fully expounded by a private statute, 50 Edw. III., which has since been explained by a public act, 16 Car. I. c. 15. What relates to our present purpose is only this : that all tinners and laborers in and about the stannaries shall, during the tirrie of their working therein, bona fide, be privileged from suits of other courts, and be only pleaded in the stannary court in all matters, excepting pleas of land, life, and member. No writ of error lies hence to any court in Westminster-hall ; as was agreed by all the judges, in 4 Jac. I. But an appeal lies from the steward of the court to the under warden ; and from him to the lord warden ; and thence to the privy council of the prince of Wales, as duke of Cornwall, when he has had livery or investiture of the same. And thence the appeal lies to the king himself, in the last resort.

STANNI PULVIS. Tin finely divided is exhibited internally as a vermifuge. It acts mechanically, and the fine filings are more effectual than the powder.

STANOVOY, a chain of mountains in Asiatic Russia, forming part of the great northern chain which here crosses the breadth of the continent. It receives this name after turning to the north, near the source of the Aldane, whence it runs parallel to the gulf of Okhotsh, leaving only a narrow plain intervening. It opposes serious difficulty to travellers proceeding to this extremity of the Russian empire, and is

supposed to continue uninterrupted, though with some diminution of magnitude, to Cape Tchoutchi, at the north-eastern extremity of Asia ; the Aleutian and Fox Isles may probably be considered in some degree as a continuation of it. An important and lofty branch passes into Kamtschatka and the Kurile Islands; This chain consists chiefly of granite and porphyry, though there are whole mountains composed of green jasper.

STANYHURST (Richard), an Irish historian, poet, and divine, born at Dublin about 1545, and educated at University College, Oxford. He afterwards studied the law at Fnrnival's and Lincoln's Inns ; but, turning Roman Catholic, he went to the Continent, where he entered into orders ; and at Brussels was made chaplain to Albert, archduke of Austria, then governor of

the Spanish Netherlands. lie published several learned works; particularly, 1. Ilarmonia, sen catena dialectica in Porphyrium ; folio 1570. 2. De Rebus in Hibernia gestis ; 4to. 1584. 3. De Vita S. Patricii ; 12mo. 1587. 4. The first four books of Virgil's 7Eneid, in English hexameters ; 12mo. 1583. He died in 1618.

STAN'ZA, n. s. Ital. stanza; Fr. stance. A number of lines regularly adjusted to each other ; so much of a poem as contains every variation of measure or relation of rhyme. Stanza is originally a room of a house, and came to signify a subdivision of a poem ; a staff. So bold as yet no verse of mine has been,

To wear that gem on any line j Nor, till the happy nuptial house be seen,

Shall any stanza with it shine. Coiclei/.

Horace confines himself strictly to one sort of verse or itanza in every ode. Dnjdeu.

Before his sacred name flies every fault, And each exalted stanza teems with thought. Pope.

STAPELIA, a genus of plants belonging to the class pentandria, and the order digynia. The generic characters are these : CAL. monophyllous, quinquefid, acute, small, and permanent: con. monopetalous, flat, large, and divided, deeper than the middle, into five parts, with broad, flat pointed laciniae. The nectarium is small, star-shaped, flat, quinquefid, with linear laciniae ; and embracing with its ragged points

the seed-form- ing parts. Another small star, which is also flat and quinquefid, covers the seminiferous parts with its entire acute lacim'se. The stamina are five in number; the filaments are erect, flat, and broad ; and the antherae are linear, on each side united to the side of the filament. The pistillum has two germina, which are oval and flat on the inside. There are no styles ; and the stigmata are obsolete. The seed-vessel consists of two oblong, awl-shaped, unilocular and univalved follicles. The seeds are numerous, imbricated, compressed, and crowned with a pappus or down. This singular tribe of plants is peculiar to the sandy deserts of Africa and Arabia. They are extremely succulent. From this peculiarity of structure, the power of retaining water to support and nourish them, they are enabled to live during the prevalent droughts of those arid regions. On this account the stapelia has been denominated the camel of the vegetable kingdom. The peculiar economy in the stapelia and other succulent plants seems to exist in the absorbent and exhalant systems. The power of absorption is as much increased as the power of the exhalant or perspiratory vessels is diminished. In these plants a small quantity of nourishment is required. There is no solid part to be formed, no large fruit to be produced. They generally have very small leaves, often are entirely naked ; so that, taking the whole plant, a small surface only is exposed to the action of light and heat, and consequently a much smaller proportion of water is decomposed than in plants which are much branched and furnished with leaves. Twc species of stapelia only were known at the beginning of the eighteenth century. The unfortunate Forskal, the companion of Niebhur, who was sent out by the king of Denmark to explore the interior of Arabia, and who fell a

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sacrifice to the pestilential diseases of those inhospitable regions, discovered two new species. Thunberg, in his Prodromus, has mentioned five more. Forty new species have been discovered by Mr. Masson of New Gardens, who was sent out by his majesty George III. for the purpose of collecting plants round the Cape of Good Hope. Descriptions of these, with elegant and highly finished colored engravings, have lately been published. They are chiefly natives of the extensive deserts called Karro, on the western side of the Cape.

STAPES OF THE EAR. See ANATOMY, In-dex, and SOUND.

STAPHIS, Gr. oraQic, strictly a grape, or a bunch of grapes; whence, from their likeness thereunto, it is applied to many other things, especially the glands of the body, whether natural or diseased.

STAPHISAGRIA, Gr. <rro0ic ayput, wild vine ; from its resemblanee of its leaves to those of the vine.

STAPHYLˆA, bladder-nut, in botany, a genus of plants belonging to the class of pentandria and order of trigynia; natural order twenty-third, trihilatse : CAT., quinquepartite. There are five petals. The capsules are three, inflated and joined together by a longitudinal suture. The seeds are two, and are globose with a scar. There are two species, the pinnata and trifolia.

1. S. pinnata, or bladder-nut-tree, is a tall tree. The leaves are pinnated ; the pinna are generally five, oblong, pointed, and notched round the edges. The flowers are white, and grow in whirls on long pendulous footstalks. This plant flowers in June, and is frequent in hedges about Pontefract and in Kent.

2. S. trifolia, or three-leaved bladder-nut, is a native of Virginia.

STAPHYLE, Gr. ora<j>v\ri, a grape or rai-sin : so called from its resemblance. The uvula.

STAPHYLINUS, a genus of animals belonging to the class of insects, and order of coleoptera. The antennae are moniliform ; the feelers four in number ; the elytra are not above half the length of the abdomen ; the wings are folded up and concealed under the elytra; the tail or extremity .of the abdomen is single, is provided with two long

vesicles which the insect can shoot out or draw back at pleasure. Gmelin enumerates 117 species, of which five only are natives of Great Britain, *viz.*

1. S. chrysomelinus is black; the thorax, ely-tra, and feet, being testaceous. It is found in the north of Europe.

2. S. maxillosus is black, with ash-colored stripes, and jaws as long as the head. It inhabits the woods.

3. S. murinus. The head is depressed. The color is gray, clouded with black. The length is six lines. It lives among horse dung.

4. S. riparius is of a reddish-brown color; but the elytra are azure-colored ; and the head, antennae, and two last rings of the abdomen, are black. It is frequent on the banks of rivers in Europe.

5. S. rufus is of an orange-color ; but the posterior part of the elytra and abdomen is black,

as are also the thighs at their base. These insects have a peculiarity to be met with in almost every species of this genus, which is, that they frequently turn up their tail, or extremity of the abdomen, especially if you chance to touch them ; in which case the tail is seen to rise immediately, as if the insect meant to defend itself by stinging. Yet that is not the place where the insect's offensive weapons are situated. Its tail has no sting, but it bites and pinches strongly with its jaws ; and care must be taken, especially in laying hold of the larger species. Their jaws are strong, shoot out beyond the head, and are subservient to the animal in seizing and destroying its prey. They feed on all other insects they can catch ; even frequently two staphylini of the same species bite and tear each other. Though this insect has very small elytra, yet its wings are large; but they are curiously folded up, and concealed under the elytra. The insect unfolds and expands them when he chooses to fly, which he does very lightly. Among the small species of this genus, there are several whose colors are lively and singularly intermingled. Some of them are found upon flowers, -but they chiefly inhabit the dung of cows. Their larvae, which resemble them so much as to be scarcely distinguishable, live in damp places under ground. They are by some called Rove beetles.

STAPHYLOMA. See SURGERY.

STAPLE, n. s. & adj. Fr. estape ; Belg. stapel, perhaps from Lat. stabilis.

A settled mart ; an established emporium; the original material of a manufacture : settled, established in commerce.

At Leister, for her wool whose staple doth excel, And seems to overmatch the golden Phrygian fell.

Draytnn,

Some English wool, vexed in a Belgian loom, And into cloth of spongy softness made,

Did into France or colder Denmark roam, To ruin with worse ware our staple trade. Dryden.

A staple of romance and lyes, False tears, and real perjuries. Prior.

The customs of Alexandria were very great, it having been the staple of the Indian trade.

Arbuthnot on Coin*.

What needy writers would not solicit to work under such masters, who will take off their ware at their own rates, and trouble not themselves to examine whether it be staple or no ? Swift.

STAPLE, n. s. Sax. j-tapul, a prop. A loop of iron ; a bar bent and driven in at both ends.

I have seen staples of doors and nails born.

Peacham.

The silver ring she pulled, the door reclosed : The bolt, obedient to the silken cord, To the strong staple's inmost depth restored, Secured the valves. Pope's Odyssey.

STAPLE signifies a public market, whither merchants, &c., are obliged to bring their goods for sale ; as the Greve, or the places along the Seine, for sale of wines and corn at Paris, whither the merchants of other parts are obliged to bring those commodities. Formerly the merchants of England were obliged to carry their wool, cloth, lead, and other staple commodities of this realm, to expose them by wholesale; and these staples were appointed to be constantly kept at York, Lincoln, Newcastle-upon-Tyne, Norwich, Westminster, Canterbury,

Chichester, Winchester, Exeter, and Bristol ; in each of which a public mart was appointed to be kept, and each of them had a court of the mayor of the staple, for deciding differences, held according to the law merchant, in a summary way.

STAPLE COMMODITIES, such wares and merchandises as are commonly and readily sold in a market, or exported abroad ; being for the most part the proper produce or manufacture of the country.

STAPLETON (Thomas), a celebrated Roman Catholic divine, born in Sussex in 1535. He was educated at Canterbury and Winchester, and then sent to New College, Oxford, where he became a fellow. On the accession of queen Elizabeth he went to Louvain, where he was appointed regius professor in divinity, canon of St. Peter's, and dean of Hillerbeck. He died in 1598. His works were published at Paris in 1620, in 4 vols. folio.

STAPYLTON (Sir Robert), the third son of Richard Stapylton, of Carleton, Yorkshire, was born in Yorkshire, and educated in the Roman faith, in the college of English Benedictines, at Douay, in France. On his return to England he turned Protestant, and was appointed gentleman usher to the prince of Wales, afterwards Charles II. When king Charles I. was obliged to fly from London, he went with him, and was knighted in 1642. After the battle of Edgehill he attended the king to Oxford, and was created LL. D. During the Commonwealth, and Cromwell's usurpation, he spent his time in retirement and study ; but, after the Restoration, he was promoted to some offices by Charles II. He published several dramatic works, and died in 1669.

Saxon j-teonna ; Teut. sterre ; Belg. star ; Latin astrum ; Gr. aˆpov. One of the luminous bo-dies that appear in the nocturnal sky ; particular configurations of the stars ; the pole star; a

STAR, n. s.

STAR’GAZER,

STAR’LESS, adj.

STAR’LIGHT, n. s. & adj.

STAR’LIKE, adj.

STAR’PAVED,

STAR’PROOF,

STAR’RED,

STAR’RY,

STAR’SHOOT, n. s.

mark of reference : a stargazer is a familiar name of an astrologer or astronomer : starless, devoid of stars ; dark : starlight, the lustre of, or lighted by the stars: starlike, stellated; resembling the stars in lustre : starpaved, studded with stars : starproof, impervious to starlight : starred, influenced by or decorated with stars . starry, abounding with stars : starshodt is an emission from a star.

Let the Astrologers, the stargazers, and the monthly prognosticates, stand up and save thee.

ha. xlvii. 13.

Such is his will, that paints The earth with colors fresh, The darkest skies with store Of starry lights. Spenser.

Then let the pebbles on the hungry beech, Fillop the tturs ;

Murdering impossibility, to make What cannot be, sligh twork. Shakspeare. Coriolamu.

Well, if you be not turned Turk, there is no more sailing by the star. Id. Much Ado About Nothing.

From forth the fatal loins of these two foes A pair of star-crost lovers take their life. Shakspeare.

My third comfort

Starred most unluckily, is from my breast Hal'd out to murder. Id. Winter's Tale.

Now they never meet in grove or green, By fountain clear or spangled starlight sheen.

Shakspeare. Tears had dimmed the lustre of her starry eyes.

Id. Illust.

Hither the Syracusan's art translates Heaven's form, the course of things, and human

fates ;

The included spirit, serving the star-decked signs, The living work in constant motions winds.

Hakewill.

Such his fell glances as the fatal light Of starring comets that look kingdoms dead.

Crashaw.

As from a cloud his fulgent head, And shape star bright, appeared. Milton.

In progress through the road of heaven starpaved.

Id.

Under the shady roof

Of branching elm starproof. Id.

That starred Ethiop queen, that strove To set her beauty's praise above The sea-nymphs. Id.

A boundless continent,

Dark, waste, and wild, under the frown of night Starless exposed. Id. Paradise Lost.

Nor walk by moon, Or glittering starlight, without thee is sweet, Milton.

The having turned many to righteousness shall con-fer a starlike and immortal brightness.

Boyle's Seraphick Love.

I have seen a good quantity of that jelly, by the vulgar called a starshoot, as if it remained upon the extinction of a falling star. Boyle.

These reasons moved her starlike husband's heart ; But still he held his purpose to depart. Dryden.

Heaven and earth's compacted name, And flowing waters, and the starry flame, And both the radiant lights, one common soul Inspires and feeds, and animates the whole. Id.

Cato might give them furlos for another world ; But we, like sentries, are obliged to stand In starless nights, and wait the appointed hour. /«*. They danced by starlight and the friendly moon.

Id.

Owls, that mark the setting sun, declare A starlight evening and a morning fair. Id. Virgil.

We are apt to do amiss, and lay the blame upon our stars or fortune. L' Estrange.

A stargazer, in the height of his celestial observations, stumbled into a ditch. Id.

Nightshade tree rises with a wooden stem, green-leaved, and has

starlike flowers.

Mortimer's Husbandry. He furious hurled against the ground His sceptre starred with golden studs around. Pope.

Daphne wondering mounts on high, Above the clouds, above the starry sky ! Id.

Remarks worthy of riper observation, note with a marginal star. Watts.

When an astronomer uses the word slur in its strict sense, it is applied only to the fixl slurs: but in a large sense it includes the planets. Id

STAR, in astronomy, is a general name for all the heavenly bodies, which, like so many brilliant studs, are dispersed throughout the whole heavens. The stars are distinguished from the phenomena of their motion &,c., into fixed, and erratic or wandering stars ; these last are again

distinguished into the greater luminaries, *viz.* the sun and moon ; the planets, or wandering stars, properly so called ; and the comets. See ASTRONOMY. As to the fixed stars, they are so called, because they seem to be fixed, or perfectly at rest, and consequently appear always at the same distance from each other.

STAR is also a badge of honor, worn by the knights of the garter, bath, and thistle. See GARTER.

STAR, in fortification, denotes a small fort, having five or more points, or salient and re-entering angles, flanking one another, and their faces ninety or 100 feet long.

STARAJA RUSSA, a town of European Rus-sia, in the government of Novgorod, on the river Polista, not far from the lake Ilmen. It has a considerable trade in hemp and flax; but the most important establishment is a salt work belonging to the government. Inhabitants

5300. Thirty-four miles south of Novgorod and 137 south by east of Petersburg.

The STAR APPLE is a species of chrysophyl-lum.

STAR HYACINTH, a species of scilla.

STAR OF ALEXANDRIA, a species of ornithogalum.

STAR OF BETHLEHEM. See ORNITHOGALUM.

STAR OF CONSTANTINOPLE, STAR OF NAPLES, other two species of ornithogalum.

STARS, FALLING. See JGNIS FATUUS, METEOR, and METEOROLOGY.

STAR THISTLE, in botany. See CENTAUREA.

STAR'BOARD, n. s. Sax. r*eoribori'». Is the right hand side of the ship, as larboard is the left. Sax. ?t&Q]\, signifies high, particularly in authority, and would be applied to those officers who had a right to walk on the right side of the ship.

On shipboard the mariners will not leave their starboard and larboard, because some one accounts it gibrish. Bramhall.

STARBOARD is the right side of the ship when the eye of the spectator is directed forward.

STAR'CH, n. s. & v. a.) Teut. stare. A vis—

STARCHED, adj. J cous matter used in

stiffening linen : to apply starch : stiffened with starch ; stiff.

Has he

Disliked your yellow starch, or said your doublet “Was not exactly Frenchified ?

Fletcher’s Queen of Cor.

With starch thin laid on, and the skin well stretched, prepare your ground.

Peacham en Drawing. Her goodly countenance I’ve seen Set off with kerchief starched and pinners clean.

Gay.

Does the Gospel any where prescribe a starched squeezed countenance, a stiff formal gait, or a singularity of manners 1 Swift.

STARCH is a fecula or sediment found at the bottom of vessels wherein wheat has been steeped in water; of which fecula, after separating the bran from it by passing it through sieves, they form a kind of loaves, which, being dried in the sun or an oven, are afterwards cut into little pieces, and so sold. The best starch is white, soft, and friable, and easily broken into powder.

Such as require fine starch do not content themselves, like the starchmen, with refuse wheat, but use the finest grain. The process is as follows : — The grain, being well cleaned, is put to ferment in vessels full of water, which they expose to the sun while in its greatest heat ; changing the water twice a day, for the space of eight or twelve days according to the season. When the grain bursts easily under the finger, they judge it sufficiently fermented. The fermentation perfected, and the grain thus softened, it is put, handful by handful, into a canvas bag, to separate the flour from the husks ; which is done by rubbing and beating it on a plank laid across the mouth of an empty vessel that is to receive the flour. As the vessels are filled with this liquid flour, there is seen swimming at top a reddish water, which is to be carefully scummed off from time to time, and clean water is to be put in its place, which, after stirring the whole together, is also to be strained through a cloth or sieve, and what is left behind put into the ves-sel with new water, and exposed to the sun for some time. As the sediment thickens at the bottom, they drain off the water four or five times, by inclining the vessel, but without passing it through the

sieve. What remains at bottom is the starch, which they cut in pieces to get out, and leave it to dry in the sun. When dry it is laid up for use.

STARCH is commonly made of wheat, and the very best starch can perhaps be made of nothing else. Wheat, however, is too valuable an article of food to be employed as the material of starch, if any thing else will answer the purpose ; and it has long been known that an inferior kind of starch may be made of potatoes. Potatoes, however, are themselves a valuable article of food ; and it is therefore an object of importance to try if starch may not be made of something still less useful. On the 8th of March, 1796, a patent was granted to lord William Murray for his discovery of a method by which starch may be extracted from horse chestnuts. But the description of the method is too tedious for our ad-milting it.

Chemically starch may be described as a white, insipid, comoustible substance, insoluble in cold water, but forming a jelly with boiling water. It exists chiefly in the white and brittle parts of vegetables, particularly in tuberose roots, and the seeds of gramineous plants. It may be extracted by pounding these parts, and agitating them in cold water; when the paren-chyma, or fibrous parts, will first subside ; and, these being removed, a fine white powder, diffused through the water, will gradually subside, which is the starch. Or the pounded or grated substance, as the roots of arum, potatoes, acorns, or horse chestnuts, for instance, may be put into a hair-sieve, and the starch washed through with cold water, leaving the grosser matters behind. Farinaceous seeds may be ground and treated in a similar manner. Oily seeds require to have the oil expressed from them before the farina is extracted. If starch be subjected to distillation, it gives out water impregnated with empyreu-inatic acetous acid, a little red or brown oil, a

great deal of carbonic acid, and carburetted hydrogen gas. Its coal is bulky, easily burned, and leaves a very small quantity of potash and phosphate of lime. If when diffused in water it be exposecl to a heat of

60° Fahrenheit, or up-ward, it will ferment and turn sour; but much more so, if it be not freed from the gluten, extract, and coloring matter. Thus, in starch-making, the farina ferments and becomes sour, but the starch that does not undergo fermentation is rendered the more pure by this process. Some water, already soured, is mixed with the flour ind water, which regulates the fermentation, and prevents the mixture from becoming putrid ; and in this state it is left about ten days in summer, and fifteen in winter, before the scum is removed, and the water poured off. The starch is then washed out from the bran, and dried, first in the open air, and finally in an oven.

With boiling water starch forms a nearly transparent mucilage, emitting a peculiar smell, neither disagreeable nor very powerful. This mucilage may be dried, and will then be semitransparent and much resembling gum, all the products of which it affords. When dissolved it is much more easily digested and nutritious than before it has undergone this operation. Both acids and alkalis combined with water dissolve it. It separates the oxides of several metals from their solutions, and takes oxygen from many of them. It is found naturally combined with all the immediate principles of vegetables, and may easily be united with most of them by art. When starch is triturated with iodine, it forms combinations of various colors. When the proportion of iodine is small, these compounds are violet; when somewhat greater, blue ; and when still greater, black.

We can always obtain the finest blue color, by treating starch with an excess of iodine, dissolving the compound in liquid potash, and precipitating by a vegetable acid. The color is manifested even at the instant of pouring water of iodine into a liquid which contains starch diffused through it. Hence iodine becomes an excellent test for detecting starch ; and starch for detecting iodine. Besides these combinations, it appears that there is another of a white color, in which the iodine exists in very small quantity. All of them possess peculiar properties,which have been described by MM. Colin and Gauthier Claubry (Annal. de Chimie, xc..92), and M. Pelletier (Bulletin de Pharmacie, vi. 289).

Starch is not affected in the cold, by water, alcohol, or ether. But it dissolves readily when triturated with potash water. When to the solution of starch in hot water, we pour in a boiling hot solution of sub-nitrate of lead, and leave the mixture for a considerable time at rest, a precipitate falls, which is found after washing and drying to consist of 100 starch and 38-89 protoxide of lead. — Berzelius, Ann. de Chimie, xcv. 82. Starch is convertible into sugar by dilute sulphuric acid. To produce this change we must take 2000 parts of sturch,

diffuse them in 8000 parts of water, containing forty parts of strong oil of vitriol ; and boil the mixture for thirty-six hours in a basin of silver or lead, talking care to stir the

materials with a wooden rod during the first hour of ebullition. At the end of this time the mass having become liquid, does not require to be stirred, except at intervals. In proportion as the water evaporates, it ought to be replaced. When the liquor has been sufficiently boiled, we must add to it chalk and animal charcoal ; then clarify with white of egg, filter the mixture through a flock of wool, and then concentrate the liquid till it has acquired a syrupy consistence. After this the basin must be removed from the fire, in order that, by cooling, the greater part of the sulphate of lime may fall down. The pure syrup is now to be decanted off, and evaporated to the proper dryness. The greater the quantity of acid employed, the less ebullition is required to convert the .starch into the saccharine matter. — Vogel, Ann. de Chimie, Ixxxii. 148.

The discovery of the preceding process is due to M. Kirchoff of St. Petersburgh. M. Th. de Saussure lias ascertained that no gas is given off during the operation; that the access of air is not essential to it; that the sulphuric acid is not decomposed ; and that 100 parts of starch produce 110-14 of sugar.

The presence of sulphuric acid is not indispensable for obtaining sugar from starch. Jt may also be obtained by leaving the starch to it-self, either with or without contact of air, or !>y mixing it with dried gluten. At the same time, indeed, several other products are formed. M. Th. de Saussure's interesting observations on this subject are published in the Anna'.cs de Chimie etde Physique, xi. 379. The starch, brought to the state of a pulpy mass, must be left to spontaneous decomposition. The products are, 1st, a sugar, like the sugar of grapes; 2d, gum, like that from roasted starch; 3d, amidine, a body whose properties are intermediate between those of starch and gum; and, 4th, an insoluble substance like ligneous matter. In these experiments, the mass on which he operated was made by pouring twelve parts of boiling water on om> of starch. When it was fermented by dry gluten, he obtained —

Without contact With contact

of air. of uir.

Sugar . . 47-4 49‘7

Gum . . 23-0 9-7

Amadine . . 8-9 5-2

Amilaceous lignin 10-3 9-2

Lignin with charcoal, A trace . 0-3

Undecomposed starch 4-0 3-8

Potatoe starch differs perceptibly from that of wheat; it is more friable; is composed of ovoid grains about twice the size of the other ; it requires a lower temperature to reduce it into a jelly witli water; it is soluble in. more dilute alkaline leys, and is less readily decomposed by spontaneous fermentation. It also contains more hygrometric water; for 100 parts of it dried at the temperature of boiling water lost 16-41 parts of water; whilst wheat starcli lost by the same process only 13-66. They had both been previously exposed for some time to a dry atmosphere, at the heat of 72‘5° Fahrenheit. Starch is composed of —

STA

Gay Lussac & Thenard. Carbon . 43-55 Oxygen . 49-68 Hydrogen 6-77

100-00

Berzehus.

43-481

49-455

7-064

100-000

Azote

Saturate.

45-39

48-31

5-90

99-60 0-4

1 00-00

When starch is roasted at a moderate heat in an oven, it is converted into a species of gum, employed by the calico printers. Potatoe starch answers best for this purpose.

M. Caventou considers starch paste made with hot water as containing the same thing as the amidine of M. de Saussure. Salop, according to him, is composed of a little gum, very little starch, and much bassorine. Sago is a uniform substance, soluble in cold water, more so in hot, precipitated blue by iodine, and differing from common starch in the first property. Tapioca seems to be identical in composition with sago. Arrow-root is nearly pure starch, agreeing in all respects with the starch of the potatoe, which may be converted by heat into something similar to sago and tapioca. — Annales de Chimie et Physique, xxxi. 337.

Starch is the principal alimentary substance contained in our bread. In a medical point of view it is to be considered as a demulcent ; and accordingly, it forms the principal ingredient of an officinal lozenge in catarrhs, and a mucilage prepared from it often produces excellent effects, both taken by the mouth and in the form of clyster, in dysenteries and diarrhoea, from irritation of the intestines. Milk and starch, with the addition of suet finely shred, and incorporated by boiling, was the soup employed by Sir John Pringle in dysenteries, where the mucous membrane of the intestines had been abraded.

Externally, surgeons apply it as an absorbent in erysipelas.

STAR CHAMBER, COURT OF, (camera stellata), a famous, or rather infamous, English tribunal, said to have been so called either from a Saxon word signifying to steer or govern; or from its punishing the crimen stellionatus, or cosenage ; or because the room wherein it sat, the old council-chamber of the palace of Westminster (Lamb. 148) which was afterwards converted into the lottery-office, and forms the east side of New Palace Yard, was full of windows; or (to which Sir Edw-ard Coke, 4 Inst. 66, accedes), because haply the roof thereof was at the first garnished with gilded stars. All these are merely conjectures (for no stars are now in the roof, nor are any said to have remained there so late as the reign of queen Elizabeth) ; and another conjectural etymology, as far-fetched as any of them, has been derived from starra or Starrs, a corruption of the Hebrew word shetar, a covenant; •which Jewish covenants, it is alleged, were lodged in this chamber by Richard I. before the Jews were banished. (See Tovey's Angl. Judaic, 32. Selden. Tit. of Hon. ii. 34. Uxor Ebraic. i. 14.) But, whatever was the origin of the name, this court was of very ancient original ; but new-modelled by stats. 3 Hen. VII. c. l,and 21 Hen. VIII. c. 20, consisting of divers lords spiritual

and temporal, being privy-counsellors, together with two judges of the courts of common-law, without the intervention of any jury. Their jurisdiction extended legally over riots, perjury, misbehaviour of sheriffs, and other notorious misdemeanors, contrary to the laws of the land. ' Yet this was afterwards,' says lord Clarendon, * stretched to the asserting of all proclamations and orders of state ; to the vindicating of illegal commissions and grants of monopolies ; holding for honorable that which pleased, and for just that which profited ; and becoming both a court of law to determine civil rights, and a court of revenue to enrich the treasury ; the council-table by proclamations enjoining to the people that which was not enjoined by the laws, and prohibiting that which was not prohibited; and the star-chamber, which consisted of the same persons in different rooms, censuring the breach and disobedience to those proclamations by very great fines, imprisonments, and corporal severities : so that any disrespect to any acts of state, or to the persons of statesmen, was in no time more penal, and the foundations of right never more in danger to be destroyed.' For which reasons it was finally abolished by stat. 16 Car. I. c. 10, to the general joy of the whole nation. See

KING’S BENCH. There is in the British Museum (Harl. MSS. vol. I. No. 126) a very full account of the constitution and course of this court, compiled by William Hudson of Gray’s Inn, an eminent practitioner therein. A short account of the same, with copies of all its process, may also be found in 18 Rym. Foed. 192, &c. STA’RE, v. n. } Sax. pcariian ; Belg. and STA’RER, n. s. $ Teut. sterren. To look wiir. fixed eyes ; expressing wonder, impudence, confidence, stupidity, or horror : to stare in the face is to be undeniable : a stare is a fixed look : starer corresponds.

Their staring eyes sparkling with fervent fire, And ugly shapes, did nigh the man dismay, That, were it not for shame, he would retire.

Spenser.

Look not big, nor stare nor fret : I will be master of what is mine own. Shakspeare.

They were never satisfied with staring upon their masts, sails, cables, ropes, and tacklings. Abbot.

I hear

The tread of many feet steering this way ; Perhaps my enemies, who come to stare At my affliction, and perhaps to insult.

Milton's Agonistei.

A satyr, that comes staring from the woods, Must not at first speak like an orator. Waller.

And, while he stares around with stupid eyes, His brows with berries and his temples dyes.

Dryden.

What dost thou make a shipboard? Art thou of Bethlem's noble college free, Stark staring mad, that thou shouldst tempt the sea 1

Id.

Break out in crackling flames to shun thy snare, Or hiss a dragon, or a tyger stare. Id. Virgil.

Why dost thou not Try the virtue of that gorgon face, To stare me into statue ? Dryden.

Is it possible for people without scruple to offend against the law which they carry about them in indelible characters, and that stares them in the face whilst they are breaking it 1 Locke.

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Take off all the staring straws and jaggs in the hive, and make them smooth.

Mortimer's Husbandry,

The wit at his elbow gave him a touch upon the shoulder, and stared him in the face with so bewitch-ing a grin that the whistler relaxed his fibres.

Add'aon. She paid a tradesman once, to make him stare.

Pope.

One self-approving hour whole years outweighs Of stupid stare'-s, and of loud huzzas. Id.

Through nature and through art she ranged, And gracefully hei subject changed : In vain ; her hearers had no share In all she spoke, except to stare. Swift.

STARFISH, n. s. Star and fish. A fish branching out into several points. SeeAsTERiAS. This has a ray of one species of English starfish.

Woodward.

STARGARD, an inland town of Pomerania, in a pleasant and fertile district on the river Ihna, which falls, at the distance of twenty miles, into the Oder. It is surrounded with a wall, has three small suburbs. It contains manufactures of woollens, soap, and tobacco; also breweries and distilleries ; and exports the corn of the neighbouring country by the Ihna, which is navigable without interruption to the Oder, and the Baltic. Here are several schools for education on the usual plan : also one for teaching mechanical arts, on a more scientific plan than is generally done by masters to their workmen. Stargard suffered severely from war in the sixteenth and seventeenth centuries. In 1758 it was taken by the Russians. Inhabitants about 8600. Twenty-one miles east by south of Stettin.

STARGARD, a lordship of Germany, in the grand duchy of Mecklenburg-Strelitz, which forms a considerable part of that principality. Its superficial extent is 6350 square miles; its population about 60,000. The chief 'town is Stargard or Old Stargard, a small place with 900 inhabitants. Five miles S. S. E. of New Brandenburg.

STAR-HAWK, or GOS-HAWK. See FALCO.

STARK, adj. & adv.) Sax. r-renc, frnac;

STARK'LY, adv. S Teutonic stark ; Belg.

sterck. Stiff; strong; rugged: in the highest de-gree ; stiffly; strongly.

Then are the best but stark naught ; for open suspecting others, comes of secret condemning themselves. SUney.

His heavy head devoid of careful cark, Whose senses all were straight benumbed and stark.

Spenser.

The fruitful headed beast, amaz'd At flashing beams of that sun-shiny shield, Became stark blind, and all his senses doz'd, That down he tumbled. Id.

The north is not so stark and cold. Ben Jonson.

Many a nobleman lies stark and stiff Under the hoofs of vaunting enemies.

Stlakspeure. Henri/ IV.

As fast locked up in sleep as guiltless labour, When it lies«far&/i/ in the traveller's bones.

Shakspeare.

Those seditious, that seemed moderate before, be-came desperate, and those who were desperate seemed ftark mad ; whence tumults, confused hallooing and howlings. Hayward.

He is stark mad, whoever says That he hath been in love an hour. Donne.

Men and women go stark naked. Abbot.

They both dance much ; and, for more nimbleness, sometimes stark naked. Heylin.

To turn stark fools, and subjects fit For sport of boys, and rabble wit. Hudibras.

Who, by the most cogent arguments, will disrobe himself at once of all his old opinions, and turn himself out stark naked in quest of new notions ?

Locke. He pronounces the citation stark nonsense.

Collier.

In came squire South, all dressed up in feathers and ribbons, stark staring mad, brandishing his sword.

Arbuthnot.

So soon as this spring is become star* enough, it breaks the case in two, and slings the seed.

Denham's Physico-Theology.

STARK (John), of Killermont, of an ancient and respectable Scottish family, was a covenanter ; and having appeared in arms against his sovereign at the battle of Bothwell bridge, in 1679, became obnoxious to the government, and, to conceal himself, withdrew into Ireland. After residing a few years in the country which he had chosen for the scene of his banishment, he married Elizabeth, daughter of Thomas Stewart, Esq., of Balydrene, in the north of Ireland, decended of the noble family of Galloway. By this lady Mr. Stark had several children ; particularly —

STARK 'Thomas), his second son, who settled at Manchester as a wholesale linen-draper, and married Margaret Stirling, daughter of William Stirling, Esq., of Northwood side, in the neighbourhood of Glasgow, by whom he had the doctor.

STARK (the Rev. John), another son of the covenanter, was minister of Lecropt, in Perthshire ; and, under his care, the doctor, his ne-phew, upon whcrm we are chiefly to enlarge, received the rudiments of that education which, from the character of the master, and the relation between him and his pupil, was well calculated to store the mind of Dr. Stark with those virtuous principles which influenced his conduct through life.

STARK (William), M. D., the son of Thomas, grandson of the covenanter, and nephew of the parson, was born at Manchester in July 1740, and educated by his uncle John above mentioned.— From Lecropt young Stark was sent to the university of Glasgow, where, under the tuition of Drs. Smith and Black, he learned the rudiments of science, and acquired that mathematical accuracy and contempt of hypotheses with which he prosecuted all his studies. Hav-ing chosen physic for his profession, he removed from the university of Glasgow to that of Edinburgh, where he was soon distinguished, and honored with the friendship of the late Dr. Cul-len. Mr. Stark, in 1765, went to London, and devoted himself to the study of physic and surgery; and, looking upon anatomy as the principal pillar of both these arts, he endeavoured to complete with Dr. Hunter what he had begun with Dr. Monro ; and under these two eminent professors he appears to have acquired a high de-gree of anatomical knowledge. He likewise enSTA

tered about this time a pupil at St. George's hospital ; for, being disgusted with the inaccuracy of the most of practical writers, he determined to have, from his own experience, a standard, by which he might judge of the experience.of others. With what success he prosecuted this plan, may be seen in a series of Clinical and Anatomical Observations made by him during his attendance at the hospital, and published after his death by his friend Dr. Carmichael Smyth. Whilst attending the hospital, he likewise employed himself in making experiments on the blood, and other animal fluids ; and also in a course of experiments in chemical pharmacy ; but these experiments have not yet been published. In 1767 Mr. Stark went to Leyden, and took the degree of M. D., publishing an inaugural dissertation on the dysentery. On his return to London he re-commenced his studies at the hospital. In 1769 he commenced a series of Experiments on Diet, which he was encouraged to undertake by Sir John Pringle and Dr. Franklin, from whom he received many hints respecting the plan and its execution. But the imprudent zeal with which he prosecuted these, proved, in the opinion of his friends, fatal to himself; for he began them on the 12th of July 1769, in perfect health and vigor, and from that day, though his health varied, it was seldom if ever good, till the 23d of February 1770, when he died, after suffering much uneasiness. His biographer Dr. Srnyth thinks that other causes, particularly chagrin and disappointment, had no small share in hastening his death ; but his opinion seems not well-founded ; for the pernicious effects of the experiments are visible in Dr. Stark's own journal. When he entered upon them, his body weighed twelve stone three pounds avoirdupois, which in a very few days was reduced to eleven stone ten pounds eight ounces : and it continued on the whole to decrease till the day of his death. This can excite no wonder. Though the professed object of his experiments was to prove that a pleasant and varied diet is equally conducive to health with a more strict and simple one, most of the dishes which he ate during these experiments were neither pleasant nor simple, but compounds, such as every stomach must nauseate. He began with bread anˆ water; from which he proceeded to bread, water, and sugar ; then to bread, water, and oil of olives ; then to bread and water with milk ; afterwards he tried bread and water with roasted goose ; bread and water with boiled beef; stewed lean of beef with the gravy and water without bread ; stewed lean of beef with the gravy, oil of fat, or suet and water ; flour, oil of suet, water, and salt ; flour, water, and salt ; and a

number of others infinitely more disagreeable to the stomach ; such as bread, fat of bacon ham, and bread or flour with honey and the infusion of rosemary. Dr. Stark's experiments certainly indicate eccentricity of genius; but had the doctor calculated the effects of starvation upon the ani-mal system, with the accuracy of the celebrated Napier the inventor of the logarithms, who was his ancestor, by both parents, he would have put a stop to them in time. But these experiments, of which a full account is given along with his

clinical and anatomical observations, display an uncommon degree of fortitude, perseverance, self-denial, and zeal for the promoting of useful knowledge in their author; and, with respect tc his moral character, Dr. Smyth with great justice compared him to Cato, by applying to him what was said of that virtuous Roman by Sallust : — ' Non divitiis cum divite, neque factione cum factioso; sed cum strenuo virtute, cum tnodesto pudore, cum innocente abstinentia, certabat ; esse quam videri bonus malebat.' — Sallust. Bell. Cat.

STARK, a county of the east part, of Ohio, United States, which has Harrison and Tusca-rawa counties on the south, Columbiana and Wayne counties on the east, and Portage on the north. The first settlement of this county commenced in 1806 : since which time the emigration has equalled, if not surpassed, any tlwng ever witnessed in any part of the state. In 1815 the population was estimated at 9450.

STARK ENBURG, one of the three large provinces of the grand duchy of Hesse-Darm- stadt. It lies between the Rhine and the Maine, the one forming the west, the other the north boundary. Its extent is about 1060 square miles ; population nearly 200,000. It forms the southern part of the grand duchy, contains the Bergstrass and one of the most picturesque parts of Germany. The vegetables consist of wheat, barley, oats, and flax ; also of the fruits of the kind usual in this latitude, among which, in favorable situations, are vines. Offenbach is the only manufacturing place in the province. The chief town is Darmstadt, the capital of the principality ; but the province takes its name from a castle situated on an eminence in the Bergstrass, near the town of Heppenheim. See HESSE-DARMSTADT.

STAR'LING, n. s. Sax. rˆaeriltns; Lat stur-nus. A small singing bird.

I will have a starting taught to speak Nothing but Mortimer, and give it him, To keep his anger still in motion.

Shakspeare. Henry IV.

STARLING. See STURNUS.

STARLINGS, or STERLINGS, the name given to the strong pieces of timber which wtre driven into the bed of the river to protect the piles, on the top of which were laid the flat beams upon which were built the bases of the stone-piers that support the arches of London bridge. In general, starlings are large piles placed on the outside of the foundation of the piers of bridges, to break the force of the water, and to protect the stonework from injury by floating ice. They are otherwise called jettes, and their place is often supplied by large stones thrown at random round the piers of bridges, as may be seen at Stirling bridge when the river is low ; and as was done by Mr. Smeaton's direction round the piers of the centre arch of London bridge, when it was thought in danger of being undermined by the current. See SMEATON.

STARNINA (Gerard), an historical painter, born at Florence in 1354. He was a disciple of Venetiano, and was much employed and patronized by Alphonso XI. king of Castile. He died in 1403.

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STAROSITY The government of a castle ; jhe same with capitaneate.

STAR/RING, adj. Lat. stellans, from star. Shining with stellar light; blazing with sparkling light.

STARSHOOT, or STAR-SHOT, a gelatinous substance often found in fields, and supposed by the vulgar to have been produced from the me-teor called a falling-star : but, in reality, the half -digested food of herons, sea-mews, and the like birds ; which have been found, when shot, to disgorge a substance of the same kind.

STAR-§TONES, in the old mineralogy, fossH stones, resembling radiated stars, with a greater or smaller number of rays in the different species : they are usually found about an inch in length, and of the thickness of a goose-quill. Some have five angles or rays, others only four; in some the angles are equidistant, in others irregularly so : in some they are short and blunt, in others long, narrow, and pointed ; and some have their angles very short and obtuse. The several joints in the same specimen are usually all of the same thickness ; but in some they are larger at one end, and in others at the middle, than in any other part of the body ; and some species have one of the rays bifid, so as to emulate the appearance of a six-rayed kind. See ASTERIA.

START, v. n., v. a., & n. s.~\ Teut. startzen;

START'ER, n. s. I Belgic, sterten.

START'INGI.Y, adv. N To feel a sudden

STAR'TLE, v.n.,v.a., & n. s.Vand involuntary

STAKT'UP, n. s. j twitch of the animal frame ; hence to rise or move suddenly ; to wince; shrink; deviate; set out on a race or pursuit: as a verb active to alarm ; make to fly ; rouse; hence to discover; put suddenly out of place : a start is a sudden motion or twitch, fit or sally ; act of starting : ' to get the start' is, to get off before another : a starter either one who suddenly shrinks from his purpose or, by a singular mutation of language, one who first moves a question or objection : the adverb corresponds with start and startle : to startle is, to shrink : to affright ; shock ; deter ; cause to deviate : a startle, a

sudden shock or alarm : a startup, one who comes suddenly into notice.

The present occasion has started the dispute amongst us. Lesley.

The lords and gentlemen take all the meaner sort upon themselves ; for they are best able to bring them in, whensoever any of them starteth out.

Spenser on Ireland.

There started up, in queen Elizabeth's reign, a new presbyterian sect, which tendered a form of discipline to the queen and to the state. Whiigifte.

A shape appeared

Bending to look on me : I started back, It started back. Shukspeare.

What trick, what starting hole, can’st thou find out, to hide thee from this open shame?

Id. Henry IV.

Direness familiar to my slaught’rous thoughts, Cannot once start me. Shakspeare.

The blood more stirs, To rouse a lion than to start a hare. Id.

These flaws and starts would well become A woman’s story at a winter’s fiie, Authorized by her grand am. Shakspeare.

How much had 1 to do to calm his rage ! Now fear I this will give it start again. Id. Hamlet.

Thou art like enough through vassal fear, Base inclination, and the start of spleen, To fight against me under Percy’s pay. Shakspeare.

Methought her eyes had crossed her tongue ; for she did speak in starts distractedly. Id.

You stand like greyhounds in the slips, Straining upon the start. Id. Henry V.

Get the start of the majestick world.

Id. Julius Caesar.

Why do you speak so startingly and rash ?

Id. Othello.

That young start np hath all the glory of my overthrow. Shakspeare.

Starting is an apprehension of the thing feared, and in that kind it is a motion of shrinking ; and likewise an inquisition, in the beginning, what the matter should be, and in that kind it is a motion of erection ; and, therefore, when a man would liste . suddenly to any thing, he starteth; for the startii.-.- is an erection of the spirits to attend.

Bacon’s Natural History.

If a man deal with another upon conditions, the start of first performance is all. Bacon.

All pretorian courts, if any of the parties be laid asleep, under pretence of arbitrement, and the other party during that time doth cautelously get the stun and advantage at common law, yet the pretorian court will set back all things in statu quo prius.

Bacon’s War with Spain.

Both cause the string to give a quicker start.

Bacon.

All leapt to chariot,

And every man then for the start cast in his proper lot. Chapman.

Thy forms are studied arts, Thy subtile ways be narrow straits,

Thy curtesy but sudden starts, And what thou call’st thy gifts are baits.

Ben Jonson.

An open enemy to flattery, especially from a friend, from whom he started to meet the slightest appearance of that servile kindness. Fell.

Doubtless some other heart Will get the start ; And, stepping in before, Will take possession of the sacred store Of hidden sweets. Crashatc.

The flowers, called out of their beds, Start and raise up their drowsy heads. Cledvelantl.

What exception can possibly be started against this stating? Hammond

TV old drudging sun from his long-beaten way Shall at thy voice start and misguide the day ; The jocund orbs shall break their measured pace, And stubborn poles change their allotted place.

Cow lei/,

Should some god tell me, that I should be born And cry again, his offer I should scorn ; Ashamed, when I have ended well my race, To be led back to my first starting place. Denham.

I rank him with the prodigies of fame, With things which start from nature's common rules, With bearded infants, and with teeming mules.

Creech.

They would find occasions enough, upon the account of his known affections to the king's service, from which it was not possible to remove or startle him. Clarendon.

Such whispering waked her, but with startled eye On Adam. Milton.

To hear the lark begin his flight, And singing startle the dull night From his watch-tower in the skies, Till the dappled dawn doth rise. Id,

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Stand to it boldly, and take quarter, To let thee see I am no starter. Hudibrat.

Ere the night could do his part, The squire had got so much the start, H' had to the lady done his errand, And told her all his tricks aforehand. Id.

The reason why the mathematicks and mechanick arts have so much got the ttart in growth of other sciences, may be resolved into this, that their progress hath not been retarded by that reverential awe of former discoveries. Glanville.

Charmed by these strings, trees starting from the

ground, Have followed with delight the powerful sound.

Roxommon.

Fair course of passion, where two lovers start, And run together, heart still yoked with heart.

Waller.

It seems to be rather a terminus a quo than a true principle, as the starting post is none of the horse's legs. Boyle.

The sensual men agree in pursuit of every pleasure they can start. Temple.

As his doubts decline, He dreads just vengeance and he itarts at sin.

.Dryden.

They starting up beheld the heavy sight. Id.

A spirit fit to start into an empire, And look the world to law. Id. Cleomene.

The fright awakened Arcite with a start ; Against his bosom bounced his heaving heart.

Dryden.

She might have forsaken him if he had not got the start of her. Id. JEneid. Dedication.

The startling steed was seized with sudden fright, And, bounding, o'er the pomel cast the knight.

Dryden.

People, when they have made themselves weary, set up their rest upon the very spot where they started. L' Estrange.

Nature does nothing by starts and leaps, or in a hurry ; but all her motions are gradual. Id.

The very print of a fox-foot would have started ye.

Id.

The mind often works in search of some hidden idea, though sometimes they start up in our minds of their own accord. Locke.

The supposition that angels assume bodies needs not startle us, since some of the most ancient and most learned fathers seemed to believe that they had bodies. Id.

Incest ! Oh name it not ! The very mention shakes my inmost soul : The gods are startled in their peaceful mansions, And nature sickens at the shocking sound. Smith.

How could water make those visible itarts upon freezing, but by some subtile freezing principle which as suddenly shoots into it 1 Crew's Cosmologia Sacra.

It was unadvisedly done, when I was enforcing a weightier design, to start and follow anothei of less moment. Sprat.

After having recovered from my first startle, I was very well pleased at the accident. Spectator.

The French year has got the start of ours more in the works of nature than in the new style. Addison.

Why shrinks the soul Back ou herself, and startles at destruction?

Id. Cato.

Are they not only to disguise our passions, To set our looks at variance

with our thoughts, To check the starts and sallies of the soul 1 Id.

Insignificant cavils may be started against every thing that is not capable of mathematical demonstration. Addison.

An ambiguous expression, a little chagrin, or a ttart of passion, is not enough to take leave upon.

Collier.

His books had been solemnly burnt at Rome as heretical : some people, he found, were startled at it ; so he was forced boldly to make reprisals, to buoy up their courage. Atterbury.

One, by a fall in wrestling, started the end of the clavicle from the sternon. Wiseman's Surgery.

I started from its vernal bower The rising game, and chaced from flower to flower.

Pope.

Might Dryden bless once more our eyes, New Blackmores and new Milbourns must arise Nay, should great Homer lift his awful head, Zoilus again would start up from the dead. Id.

She at the summons rolled her eyes around, And snatched the starting serpents from the ground.

Id.

Keep your soul to the work when ready to start aside, unless you will be a slave to every wild imagination. Watts.

Now the leaf

Incessant rustles, from the mournful grove Oft startling such as studious walk below, And slowly circles through the waving air.

Thomson.

If Sheridan was not the staunches! hound in the pack he was at least the best starter. Delany.

STARVE, v. n. & v. a. > Sax. rtanpan ;

STARVE'LING, adj. & n. s. } Belg. sterven ; Goth, starva. To perish; be destroyed: particularly to perish with hunger or cold ; be killed with cold ; suffer extreme destitution : as a verb active to kill with hunger, or cold ; deprive of force or vigor : starveling is hungry ; lean ; a thin or lean animal; a pining wretch.

Have I seen the naked starve for cold, While avarice my charity controlled 1 Sandys.

Thy desires Are wolfish, bloody, starved, and ravenous.

Shakspeare.

If I hang, I'll make a fat pair of gallows ; for old sir John hangs with me, and he's no starveling.

Id.

Now thy alms is given, the letter's read ; The body risen again, the which was dead ; And thy poor starveling bountifully fed. Donne.

To her came message of the murderment, Wherein her guiltless friends should hopeless stai-ve.

Fairfax.

From beds of raging fire to starve in ice Their soft ethereal warmth, and there to pine Immoveable, infixed, and frozen round. Milton.

He would have worn her out by slow degrees, As men by fasting starve the untamed disease.

Drijden,

The fat ones would be xiakiug sport with the lean, and calling them starvelings. L' Estrange.

Were the pains of honest industry, and of starving with hunger and cold, set before us, no body would doubt which to chuse. Locke

The powers of their minds are starved by disuse, and have lost that reach and strength which nature fitted them to receive. Id.

The thronging clusters thin By kind avulsion ; else the starveling brood, Void of sufficient sustenance, will yield A slender autumn. Philips.

Hunger and thirst, or guns and swords, Give the same death in different words • To push this argument no further, To starve a man in law is murther. Prior.

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An animal that starves of hunger, dies feverish and delirious. Arbuthnot.

Had the seeds of the pepper-plant been borne from Java to these northern countries, they must have starved for want of sun.

Woodward's Natural History.

Sometimes virtue starves while vice is fed : What then] is the reward of virtue bread 1 Pope.

If they had died through fasting, when meat was at hand, they would have been guilty of starving themselves. Id.

Poor starveling bard, how small thy gains ! How unproportioned to thy pains ! Swift.

All Europe must agree Ten starveling hermits suffer less than he. Cowper.

STATE, n. s. & v. a. "\ Fr. etate ; Lat. sta-STATE'LV, adj. & adv. | tvx. Condition ; cir-STATE'LINESS, n. s. [cumstances of nature STATES'MAN, j or fortune ; crisis ;

STATES'WOMAN, J height: hence national

STA’TIST. J dignity or rank; sig—

niory ; estate ; possession : dignity : a commonwealth ; civil power ; to regulate or settle condition or terms : to represent circumstantially : stately is august ; grand ; magnificent : used by Milton as an adverb : the noun substantive following corresponding : a statesman is one versed in arts of government; a politician: a stateswoman, a politician in petticoats : a statist is a statesman.

The same criminal may be absolved by the church and condemned by the state ; absolved or pardoned by the state, yet censured by the church.

Lesley.

If such actions may have passage free, Bond-slaves and pagans shall our statesmen be.

Shakspeare. Othello.

This chair shall be my state, this dagger my sceptre, and this cushion my crown.

Id. Henry IV.

Fair dame, I am not to you known, Though in your state of honour I am perfect.

Shakspeare.

My thought, whose murther yet is but fantastical, Shakes so mv single stuteof man, that function Is smothered in surmise. Id. Macbeth.

I do believe,

Statist though I am none or like to be, That this shall prove a war. Id. Cymbeline.

A statelier pyramid to her I’ll rear, Than Rhodope’s or Memphis’ ever was.

Id. Henry VI.

These regions have abundance of high .cedars, apd other stately trees casting a shade.

Raleigh’s History.

I am no courtier, nor versed in state affairs : my life hath rather been contemplative than active.

Bacon.

Over the chair is a state made round of ivy, somewhat whiter than ours; and the state is curiously wrought with silver and silk. Id.

She instructed him how he should keep state-, and yet with a modest sense of his misfortunes.

Id. Henry VII.

The state hath given you licence to stay on land for the space of six weeks. Bacim.

It is better the kingdom should be in good estate, with particular loss to many of the people, than that all the people should be well, and the state of the kingdom altogether lost. Hayward.

High state the bed is where misfortune lies.

.Fairfax.

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It looks grave enough To seem a statesman. Ben Jonicnt.

A state's anger

Should not take knowledge either of fools or women.

Id.

How she was in debt, and where she meant To raise fresh sums : she's a great stateswoman ! Id.

It is a bad exchange to wound a man's own conscience, thereby to state sores. King Charles.

Were our case stated to any sober heathen, he would never guess why they who acknowledge the necessity of prayer, and confess the same God. may not ask in the same form. Decay of Piety.

This is so stated a rule that all casuists press it in all cases of damage.

Id.

Strong was their plot, Their states far off, and they of wary wit. Daniel.

What he got by ‘fortune, It was the state that now must make his right. Id.

No stale can be named wherein any part of the body of those imperial laws hath the just force o a law, otherwise than as custom hath particularly induced it. Seldnn.

Their sins have the aggravation of being sins against grace, and forsaking and departing from God ; which respect makes the state of apostates, as the most inexcuseable, so the most desperately dangerous state. Hammond.

Many other inconveniences are consequent to this stating of this question ; and particularly that, by those which thus state it, there hath never yet been assigned any definite number of fundamentals.

Id. On Fundamentals.

The swan rows her state with oary feet. Milton.

He many a walk traversed Of stateliest covert, cedar, pine, or palm. Id.

Ye that stately tread or lowly creep. Id.

I do not

Infer as if I thought my sister's state Secure. Id.

The bold design Pleased highly those infernal states. Id.

Their orators thou then extollest, as those The top of eloquence, statists indeed, And lovers of their country.

<. Paradise Regained.

Since they all live by begging, it were better for the state to keep them. Graunt,

Its present slate stateth it to be what it now is.

Hale.

He was staid, and in his gait Preserved a grave majestick state. Butler.

The deer, that endureth the womb but eight months, and is complete at six years, cannot live much more than thirty, as having passed two general motions, that is, its beginning and increase ; and having but two more to run through, that is its state and declination. Browne's Vulgar Erraurs.

I found the whole city highly concerned for the hazardous state of Candia, which was lost soon after. Dominico Cantarini, the present duke, was sedulous in that affair. Browne's Travels.

When in triumphant state the British muse, True to herself, shall bab'rous aid refuse.

Roscommon.

For stateliness and majesty what is comparable to a horse 1 More's Antidote against A theism.

For you we staid, as did the Grecian state Till Alexander came. Waller.

Such cheerful modesty, such humble state, Moves certain love. Id.

Keep the state of the question in your eye.

Boyle.

They feared nothing from a stale so narrow in compass of land, and so weak, that the strength of

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tneir armies has ever been made up of foreign troops.

Temple.

Agenor, glad such punctual ready bliss Did on his own design itself obtrude, Swelled his vast looks to bigger staielhies*.

Beaumont's Psyche.

Council! What's that? a pack of bearded slaves, The scavengers that sweep state nuisances, And are themselves the greatest.

Druden's Cleomenes.

These are the realms of unrelenting fate ; And awful Rhadamanthus rules tlie stats; lie hears and judges. Id. JEneid.

Relate what Latium was ; Peclare the past and present state of things. Id.

He maintains majesty in the midst of plainness, and is stately without ambition, which is the vice of Lucan. Id.

Let my attendants wait ; I'll be alone : Where least of state, there most of love is shown.

Id.

To state it fairly, imitation is the most advantageous way for a translator to shew himself, but the greatest wrong which can be done to the memory of the dead. Id.

She hated stateliness ; but wisely knew What just regard was to her title due. Betterton.

Absolute power is not a plant that will grow in this soil ; and statesmen, who have attempted to cultivate it here, have pulled on their own and their master's ruin. Davenant.

It is a weakness which attends high and low ; the statesman who holds the helm, as well as the peasant who holds the plough. South.

Truth, like a stately dome, will not show herself at ‘.he first visit. Id.

We may collect the excellency of the understanding then by the glorious remainders of it now, and guess at the itatetiness of the building by the magnificence of its ruins. Id.

Several objects may innocently be ridiculed, as the passions of our stateswomen. Addison.

A British minister must expect to see many friends fall off, whom he cannot gratify ; since, to use the phrase of a late statesman, the pasture is not lange enough. Id.

He is capable of corruption who receives more than what is the stated and unquestioned fee of his office. Id.

At home surrounded by a servile cro.-d, Prompt to abuse, and. in detraction loud , Abroad begirt with men, and swords, and spears, His very ttate acknowledging his fears. Prior.

To appear in their robes would be a troublesome piece of state. Collier.

This is to ttate accounts, and looks more like merchandize than friendship. Id. On Friendship.

I pretended not fully to state, much less demonstrate, the truth contained in the text. Aiterburtj.

The brain was her study, the heart her state room.

A rbuthnot.

Tumaurs have their several degrees and times ; as beginning, augment, state, and declination.

Wiseman.

The corruption of a poet is the generation of a statesman. Pope.

Can this imperious lord forget to reign, Quit all his state, descend, and serve again ?

Id. Stating.

Like the papist’s is your poet’s state, Poor and disarmed. Pope.

Here Britain's statesmen oft the fall foredoom Of foreign tyrants, and of nymphs at home* Id.

1 am accused of reflecting upon great states-folks.

Swift.

Thus have his prayers for others altered and amended the state of his own heart. Late.

Though I don't pretend to state the exact degree of mischief that is done by it, yet its plain and natural tendency to do harm is sufficient to justify the most absolute condemnation of it. Id.

He will consider, not what arts, or methods, or application will soonest make him richer and greater than his brethren, or remove him from a shop to a life of state and pleasure ; but will consider what arts, what methods, what application can make worldly business most acceptable to God, and make a life of trade a life of holiness, devotion, and piety.

Id.

STATES, or ESTATES, a term applied to several orders or classes of people assembled to consult of matters for the public good.

STATES GENERAL was the name of the ci-de- Vant assembly consisting of the deputies of the seven United Provinces. These were usually thirty in number, some provinces sending two, others more; and, whatever resolution the states general took, must be confirmed by every province, and by every city and republic in that province, before it had the force of a law. The deputies of each province had only but one voice, and were esteemed as but one person, the votes being given by provinces : each province presided in the assembly in its turn, according to the order settled among them ; Guelderland first, then Holland, &c.

STATES OF HOLLAND were the deputies of eighteen cities, and one representative of the nobility, constituting the states of the province of Holland : the other provinces have likewise their states, representing their sovereignty ; deputies from which make what they call the states-general. In an assembly of the states of a particular province one dissenting voice prevents their coming to any resolution.

STATES, UNITED See AMERICA.

STAT1CE. thrift, or sea pink, in botany, a genus ot plants belonging to the class pentandria, order pentagynia ; natural order forty-eighth, aggregatse : CAL. monophyllous, entire, folded, and scariose. There are five petals with one superior seed. There are twenty-two species, *viz.* 1. S. armeria ; 2. aurea ; 3. cordata; 4. eschinus : 5. echioides ; 6. ferulacea ; 7. flexu-osa; 8. incana ; 9. limonium; 10. linifolia; 11. lobata; 12. minuta; 13. monopetala; 14. mucronata; 15. pruinosa; 16. pseud-armeria; 17. purpurata; 18. reticulata; 19. sinuata ; 20. speciosa ; 21. suffruticosa ; and, 22. Tartarica. Of these, three species are natives of Britain, viz : —

1 . S. armeria, thrift or sea gillyflower. has a simple naked stem, about six inches high. The radical leaves are like grass. The flowers are terminal, pale red, with a round head, and :iot very large. This plant flowers in July or Au-gust, and grows in meadows near the sea.

2. S. limonium, sea-lavender. The stem is naked, brancried, and about a foot high. The radical leaves are long, pointed, and grow on footstalks. The flowers are blue, and grow on long spikes on the tops of the branches. It grows on the sea-coast in South Britain.

3. S. reticulata, matted sea-lavender. The stem is prostrate, and terminated by a panicle of

flowers. The branches are naked, barren, and bent back. The leaves are wedge-shaped. This species are also found on the sea-coast of South Britain.

STATICS, n. s. \ Gr. <rar.icjj ; Fr. sta—

STA’TICAL, adj. S tique. The science which considers the weight of bodies: the adjective corresponding.

A man weigheth some pounds less in the height of winter, according to experience, and the sfatick apho-risms of Sanctorius. Browne’s Vulgar Errours.

If one by a statical engine could regulate his insensible perspiration,

he might often, by restoring of that, foresee, prevent, or shorten a fit of the gout. Arbuthnot on Diet.

This is a Catholick rule of staticks, that if any body be bulk for bulk heavier than a fluid it will sink to the bottom ; and if lighter it will float upon it, having part extant, and part immersed, as that so much of the fluid as is equal in bulk to the immersed part be equal in gravity to the whole.

Bentley.

STATICS is a term which the modern improvements in the arts have made necessary to introduce into physico-mathematic:il science. It was found convenient to distribute the doctrines of universal mechanics into two classes, which required both a different mode of consideration and different principles of reasoning. Till the time of Archimedes little science of this kind was possessed by the ancients, from whom we have received the first rudiments. His investigation of the centre of gravity, and the theory of the lever, are the foundations of our knowledge of common mechanics ; and his theo-y of the equilibrium of floating bodies contains the greatest part of our hydrostatical knowledge. But it was as yet limited to the simplest cases; and there were some in which Archimedes was ignorant, or was mistaken. The marquis Guido Ubuldi, in 1578, published his Theory of Mechanics, in which the doctrines of Archimedes were well explained and considerably augmented. Stevinus, the celebrated Dutcli engineer, published about twenty years after an excellent System of Mechanics, containing the chief principles which now form the science of equilibrium among solid bodies. In particular, lie gave the theory of inclined planes, which was unknown to the ancients, though it is of the very first importance in almost every machine. He even states in the most express terms the principle, afterwards made the foundation of the whole of mechanics, and published as a valuable discovery by Varignon, *viz.* that three forces, whose directions and intestines are as the sides of a triangle, balance each other. His theory of the pressure of fluids, or hydrostatics, is no less estima'ble, including every thing that is now received as a leading principle in the science. When we consider the ignorance, even of the most learned of that age, in mechanical or physico-mathematical knowledge, we must consider those performances as the works of a great genius, and we regret that they are so little known, being lost in a crowd of good writings on those subjects which appeared soon after. Hitherto the attention had been turned entirely to equilibrium, and the circumstances necessary for producing it. Mechanicians indeed saw that the energy of a machine

might be somehow measured by the force which could be opposed or overcome by its intervention ; but they did not remark that the force which prevented its motion, but did no more thun prevent it, was an exact measure of its energy, because it was in immediate equilibria with the pressure exerted by that part of the machine with which it was connected. If this opposed force was less, or the force acting at the other extremity of the machine was greater, the mechanicians knew that the machine would move, and that work would be performed ; but what would be the rate of its motion, or its performance, they hardly pretended to conjecture. They had not studied the action of moving forces, nor conceived what was done when motion was communicated. The great Galileo opened a new field of speculation, in his work on Local Motion. He there considers a change of motion as the indication and exact and adequate measure of a moving force ; and he considers every kind of pressure as competent to the production of such changes. — He contented himself with the application of this principle to the motion of bodies by the action of gravity, and gave the theory of projectiles, which remains to this day without change, and only improved by considering the changes which are produced in it by the resistance of the air. See PROJECTILES.

Sir Isaac Newton took up this subject nearly as Galileo had left it. For, if we except the theory of the centrifugal forces arising from rotation, and the theory of pendulums published by lluy-gens, hardly any thing had been added to the science of motion. Newton c.onsidered the subject in its utmost extent; and in his mathematical principles of natural philosophy he considers every conceivable variation of moving force, and determines the motion resulting from its action. His first application of these doctrines was to explain the celestial motions: and the magnificence of this subject caused it to occupy tor a while the whole attention of the mathematicians. But the same work contained propositions equally conducive to the improvement of common mechanics, and to the complete understanding of the mechanical actions of bodies. Philosophers began to make these applications also. They saw that every kind of work which is to be performed by a machine may be considered abstract-edly as a retarding force ; that the impulse of water or wind, which are employed as moving powers, act by means of pressures which they exert on the impelled point of the machine ; and that the machine itself may be considered as an • assemblage of bodies moveable in certain limited circumstances, with determined directions and proportions of velocity. From all these considerations resulted a general abstract condition of a body acted on by known powers. And they found that, after all conditions of

equilibrium were satisfied, there remains a surplus of moving force. They could now state the motion which will ensue, the new resistance which this will excite, the additional power whicn this will ab-sorb ; and they at last determined a new kind of equilibrium, not thought of by the ancient mechanicians, between the esistance to the machine performing work and the moving power, which

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exactly balance each other, and is indicated, not by the rest, but by the uniform motion of the machine. In like manner, the mathematician was enabled to calculate that precise motion of water which would completely absorb, or, in the new language, balance the superiority of pressure by which water is forced through a sluice, a pipe, or canal, with a constant velocity. Thus the general doctrines of motion came to be considered in two points of view, according as they balanced each other in a state of rest or of uni form motion. These two ways of considering the same subject required both different principles and a different manner of reasoning. The first has been named statics, as expressing that rest which is the test of this kind of equilibrium. The second has been called dynamics, or universal mechanics, because the different kinds of motion are characteristic of the powers or forces which produce them. A knowledge of both is indispensably necessary for acquiring any useful practical knowledge of machines ; and it was ignorance of the doctrines of accelerated and retarded motions which made the progress of practical mechanical knowledge so very slow and imperfect. The mechanics, even of the moderns, before Galileo, went no further than to state the proportion of the power and resistance which would be balanced by the intervention of a gi-ven machine, or the proportion of the parts of a machine by which two known forces may balance each other. This view of the matter introduced a principle which even Galileo considered as a mechanical axiom, *viz.* that what is gained in force by means of a machine is exactly compensated by the additional time which it obliges us to employ. This is false in every instance, and not only prevents improvement in the construction of machines, but leads us into erroneous maxims of construction. The true principles of dynamics teach us that there is a certain proportion of the machine, dependent on the kind and proportion of the power and resistance, which enables the machine to perform the greatest possible work. It is highly proper therefore to keep separate these two ways of considering machines, that both may be improved to the utmost, and then to blend them together in every practical discussion. Statics therefore is preparatory to the proper study of mechanics ; but it does not hence derive all its importance. It is the sole foundation of many useful parts of knowledge. This will be best seen by a brief enumeration. 1. It comprehends all the doctrines of the excitement and propagation of pressure through the parts of solid bodies, by which the energies of machines are produced. A pressure is exerted on

the impelled point of a machine, such as the float-boards or buckets of a mill-wheel. This excites a pressure at the pivots of its axle, which act on the points of support. This must be understood, both as to direction and intensity, that it may be effectually resisted. A pressure is also excited at the acting tooth of the cog-wheel on the same axle, by which it urges round another wheel, exciting similar pressures on its pivots and on the acting tooth perhaps of a third wheel. Thus a pressure is ultimately excited in the working part of the machine,

perhaps a wiper, which lifts a heavy stamper, to let it fall again on some matter to be pounded. Now statics teaches us the intensities and direction of all those pressures, and therefore how much remains at the working point of the machine unbalanced by resistance. 2. It comprehends every circumstance which influences trie stability of heavy bodies; the investigation and properties of the centre of gravity ; the theory of the construction of arches, vaults, and domes ; the attitudes of animals. 3. The strength of materials, and the principles of construction, so as to make the proper adjustment of strength and strain in every part of a machine, edifice, or structure of any kind. Statics therefore furnishes us with what may be called a theory of carpentry, and gives us proper instructions for framing floors, roofs, centres, &c. 4. Statics comprehends the whole doctrine of the pressure of fluids, whether liquid or aeriform, whether arising from their weight or from any external action. Hence therefore we derive our knowledge of the stability of ships, or their power of maintaining themselves in a position nearly upright, in opposition to the action of the wind on their sails. We learn on what circumstances of figure and stowage this quality depends, and what will augment or diminish it. See HYDRAULICS,

STATION, n. s. } Fr. station ; Lat. statlo. STATIONARY, adj. £The act of standing; state STA'TIONER, n. s. r of rest ; position ; employment ; office ; rank : to fix in a certain rank, or position: the adjective corresponding: a stationer, originally one who had a fixed place for selling paper or books.

Their manner was to stand at prayer, whereupon their meetings unto that purpose on those days had the names of station* given them. Hooker.

In station, like the herald, Mercury, New lighted on a heaven-kissing hill.

Shakspeare. Timon.

The seditious remained within their station, which, by reason of the nastiness of the beastly multitude, might more fitly be termed a kennel than a camp.

Hay ward.

To single stations now what years belong, With planets joined, they claim another song.

Creech. The planets m their station listening stood. ‘ Milton.

Michael in either hand leads them out of Paradise, the fiery serpent waving behind them, and the che-rubiins taking their stations to guard the place. Id.

All progression is performed by drawing on or impelling forward some part which was before in station or at quiet, where there are no joints.

Browne’s Vulgar Errmtrs.

The same harmony and stationary constitution, as it happened in many species, so doth it fall out in individuals. Browne.

I can be contented with an humbler station, in the temple of virtue, than to be set on the pinnacle.

Drijden.

Some modern tragedies are beautiful on the stage, and yet Tryphon the stationer complains they are seldom asked for in his shop. Id.

No member of a political body so mean, but it may be used in some station or other. L’Estrange.

By spending this day in religious exercises, we acquire new strength and resolution to perform God’s will in our several stations the week following.

Nelson.

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The fig and date, why love they to remain In middle station, and an

even plain ; While in the lower marsh the gourd is found, And while the hill with olive-shade is crowned ?

Prim:

Between the descent and ascent, where the image seemed stationary, I stopped the prism, and fixed it ia that posture that it should be moved no more.

Newton's Opticks.

With authors, stationers obeyed the call ; Glory and gain the industrious tribe provoke, And gentle Dulness ever loves a joke

Pope's Dunciad.

They believe that common size of the human understanding is fitted to some station or other.

Swift.

STATIONARY, in astronomy, the state of a planet when, to an observer on the earth, it appears for some time to stand still, or remain immoveable in the same place in the heavens. For as the planets, to such an observer, have sometimes a progressive motion, and sometimes a retrograde one, there must be some point between the two where they must appear stationary.

STATIONES [Latin], post-offices, in Roman antiquity. See POST.

STATIRA, the daughter of Darius Codoman-nus, who was taken prisoner, and afterwards married by Alexander ; and her sister Drypetis to his friend Hephaestion. After Alexander's death she was barbarously murdered by Roxana, another of Alexander's Persian queens. See MACEDON.

STATISTICAL PHILOSOPHY, a term applied by Sir John Sinclair to that new and important branch of science, statistics : a branch of science, or philosophy, the most useful and comprehensive of all others, as it comprehends indeed every thing interesting and important to mankind here and hereafter. Men of letters, in all ages and nations, have spent much time and labor in investigating the antiquities of their respective countries. The knowledge of these is useful in its place, nor does the science of statistics exclude antiquities; but it is only by a thorough knowledge of the present state of a country and its inhabitants, with their present customs, habits,

morals, grievances, and manner of living (which are the chief objects of statistical philosophy), that a country can be improved, or the condition and circumstances of the people ameliorated. See the next article.

STATISTICS [from status, Latin, state, condition, &c.], a new and important branch of science lately introduced. The definition and illustration of the term, and its adjective, we shall give in the words of Sir John Sinclair : — ‘ Many people,’ says he, Stat. Ace. vol. XX. p. xiii., ‘ were at first surprised at my using the new words statistics and statistical, as it was supposed that some term in our own language might have expressed the same meaning. But, in the course of a very extensive tour through the northern parts of Europe, which I happened to take in 1786, I found that in Germany they were engaged in a species of political enquiry to which they had given the name of statistics ; and though I apply a different idea to that word, for by statistical is meant, in Germany, an enquiry for the purpose of ascertaining the political VOL. XXI.

strength of a country, or questions respecting matters of state ; whereas the idea I annex to the term is an enquiry into the state of a country, for the purpose of ascertaining the quantum of happiness enjoyed by its inhabitants, and the means of its future improvement ; yet, as I thought that a new word might attract more public attention, I resolved on adopting it, and I hope that it is now completely naturalised and incorporated with our language.’ Impressed with these ideas, Sir John Sinclair commenced, carried on, and completed, the Statistical Account of Scotland, a work perhaps of the greatest magnitude, importance, and public utility, ever attempted by any individual. We shall here only add a few interesting particulars respecting the history and nature of this system of statistical philosophy. On the 25th May, 1790, Sir John circulated among the clergymen of the established church a series of 166 queries, accompanied by a proper circular letter, respecting the following and many other important particulars, in their respective parishes :— ‘ The ancient and modern names of the parish ; its situation and extent ; number of acres; the soil and surface; nature and extent of the sea-coast ; lakes, rivers, islands, hills, rocks, caves, woods, orchards, &c. ; climate and diseases ; instances of longevity ; state of property; number of proprietors, resident and non-resident; mode of cultivation; implements of husbandry ; manures ; seed-time and harvest ;

remarkable good and bad seasons ; quantity and value of crops ; total value of the whole annual produce ; total real and valued rent ; prices of grain and provisions; quantity of grain and other articles consumed ; wages and prices of labor ; services exacted or abolished; commerce; manufactures ; kelp, its amount, and the number employed in it; fisheries ; towns and villages ; police ; inns and alehouses ; roads and bridges ; harbours; ferries, and their state ; number of ships, vessels, and seamen ; state of the church ; stipend, manse, glebe, and patron; number of poor; parochial funds, and management ; schools, and number of scholars; ancient and present state of population; causes of its increase or decrease; number of families; division of the inhabitants, by their birth places, ages, religious persuasions, occupations, and situation in life ; residence, in town, village, or country ; number of houses, inhabited or uninhabited ; number of dove-cots, and to what extent they are destructive to the crops; number of horses, cattle, sheep, and swine, with their nature and value; minerals ; mineral springs ; fuel ; eminent men ; antiquities ; parochial records ; miscellaneous observations ; character of the people ; manners, customs, stature, &c.; advantages and disadvantages ; means by which their situation could be meliorated.' Sir John, having received a num-ber of returns to these queries in 1790, commenced the work, in January 1791, by printing statistical accounts of the first four parishes he had received, and dispersing 1000 extra copies of them with a second circular letter among the clergy. By such great and continued exertions, the first volume was published on the 25th May, 1791, and gave very general satisfaction. It is unnecessary to detail the history of every volume

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of this important work. After writing many thousand letters, urging the clergy to transmit their accounts, Sir John found that on the 1st of June, 1792, no less than 413 accounts were still wanting. From the beginning of the publication the public-spirited baronet had devoted the profits of the work to the Society for the Benefit of the Sons of the Clergy. He had also, by the recommendation of Mr. Secretary Dundas, procured his majesty's royal grant of £2000 to that society. Still, however, a great number of the clergy continued dilatory in giving in their satistical reports, though the measure was publicly •approved and recommended by the. general assembly ; as well as by the duke of Argyle, the earl of Leven, the earl of Fife, and other great men and patrons in the church. Sir John, however, being determined to complete the work, sent statistical missionaries to those parts of the kingdom from which he had received no returns ; and thus, 'at last,' says he, ' on the 1st day of January 1798, or seven years, seven months, and seven days, from the commencement of the attempt, an account of every parish in Scotland was either given in, or might be relied on in a few days.' Sir John adds, in a note (p. xix.) ' only four accounts were wanting on that day.' The important work, unparalleled in the annals of literature, — the work of an individual who had the courage and perseverance to procure the assistant exertions of above 900 of the most learned men in the nation, — was completed by the publication of the twenty-first volume on the 20th May 1799. ' If similar surveys,' says the founder of British statistics — we say British, because the Parliamentary survey of England and Wales, in 1801, was also a suggestion of Sir John Sinclair's — ' were instituted in the other kingdoms of Europe', it might be the means of establishing, on sure foundations, the principles of that most importanUof all sciences, *viz.* political or statistical philosophy ; that is, the science which, in preference to every other, ought to be held in reverence. No science can furnish, to any mind capable of receiving useful information, so much real, entertainment ; none can yield such important hints for the improvement of agriculture, for the extension of commercial industry, for regulating the conduct of individuals, or for extending the prosperity of the state ; none can tend so much to promote the general happiness of the species.' We have only to add that Sir John, in his twenty-first volume, announces that it is his ' intention, as soon as leisure from other pursuits will admit of it, to draw up the result of the whole enquiry in a publication, to be entitled Analysis of the Political State of Scotland, with a view of the Principles of Statistical

Philosophy.'

STATIVA CASTRA, in archaiology, standing camps. The ancient Romans accustomed their troops to remain occasionally under canvass, both in winter and summer ; but these encamp-ments were of short duration. At first they were only for a single night, and they were then named lodgments : but if they lasted several nights they were called stativa. The winter camps were always better supplied with provisions and warlike stores than the summer ones.

Whilst Rome was governed by emperors their armies were constantly in the field, or encamped upon the frontiers of the empire, both in peace and war. They were certainly less considerable in the first than in the latter instance, and they always remained in the camp during the winter as well as the summer months. Particular care was taken to have these camps well fortified, and abundantly provided with stores and provisions.

STATIUS (Csecilius), a comic poet who flourished in the age of Ennius. He was a native of Gaul, and originally a slave. Of course his Latinity was bad, yet he acquired great reputation by his comedies. He died about A. A. C. 160, a few years after Ennius.

STATIUS (Publius Papinius), a celebrated Latin poet of the first century, born at Naples. He was the son of Statius, a native of Epirus, who went to Rome to teach poetry and eloquence, and had Domitian for his scholar. Statius the poet also obtained the favor and friendship of that prince ; and dedicated to him his Thebais in twelve books, and Achilles in two. He died at Naples about the year 100. Besides the above poems there are also still extant his Sylvae, in five books ; the style of which is purer, more agreeable, and more natural, than that of his Thebais and Achilles.

STATOR, a surname of Jupiter, among the Romans, given him by Romulus, because he stopped their flight in a battle with the Sabines. Romulus built a temple to Jupiter Stator. — Liv. i. c. 12.

STATORES, in Roman antiquity, posts. See POST.

STATUARY (statuaire, Fr. vide statue). A sculptor. Although this latter word applies to the most elevated practisers of the art, which in-deed derives its name therefrom, yet it seems desirable, even in common usage, to distinguish the sculptor who makes statues from him whose skill is chiefly displayed in architectural or other ornaments. The

Latins used the word statuarius to designate the artist who made figures in bronze In this sense it is employed by Pliny, who denominates the artist working in marble sculptor or marmorum sculptor. This distinction appears to be just. The author of a bronze statue is not a sculptor, but a modeller. Statuary, in its general sense, is the art of casting or carving statues. Phidias was the greatest statuary among the ancients, and Michael Angelo among the moderns.

STATUARY, a branch of sculpture, employed in the making of statues. See SCULPTURE, and STATUE. Statuary is one of those arts wherein the ancients surpassed the moderns ; and indeed it was much more popular, and more cultivated, among the former than the latter. It is disputed between statuary and painting which of the two is the more difficult and the more artful.

STATUE, n. s. & v. a. i Fr. statue ; Lat.

STA'TUARY, n. s. S stutua. An image;

solid representation 'of any living being : to place as a statue: a statuary is one who makes statues ; also the art of making them.

The princess heard of her mother's statue, a piece many years in doing, and now newly performed by that rare Italian master. Shakspeure. }Vinte—'s 'I'uie,

Thou shall be worshipped, kissed, loved, and

adored ;

And, were there sense in his idolatry, My substance should be statued in thy stead.

Shakspeare.

Architects propounded unto Alexander to cut the mountain Athos into the form of a statue, which in his right hand should hold a town

capable of containing ten thousand men, and in his left a vessel to receive all the water that flowed from the mountain. IVilkin's Mathematical Magick. The northern nations, that overwhelmed it by their numbers, were too barbarous to preserve the remains of learning more carefully than they did those of architecture and statuary. Temple.

A statue of Polycletus, called the rule, deserves that name for having so perfect an agreement in all its parts, that it is not possible to find a fault in it.

Dryden's Dufresnoy.

On other occasions the statuaries took their subjects from the poets. Addison.

How shall any man, who hath a genius for history, undertake such a work with spiiit and chearfulness, when he considers that he will be read with pleasure but a very few years ? This is like employing an excellent statuary to work upon mouldering stone. Swift.

A STATUE is defined to be a piece of sculpture in full relievo, representing a human figure. Daviler more scientifically defines statue a representation, in high relievo and insulate, of some person distinguished by his birth, merit, or great actions, placed as an ornament in a fine building, or exposed in a public place, to preserve the memory of his worth. In Greece, one of the highest honors to which a citizen could aspire was to obtain a statue. Statues are formed with the chisel, of several matters, as stone, marble, plaster, &c. They are also cast of various kinds of metal, particularly gold, silver, brass, and lead. For the method of casting statues, see FOUNDRY. Statues are usually distinguished into four kinds : 1. Those less than the life; of whicli kind we have several statues of great men, of kings, and of gods themselves. 2. Those equal to the life ; in which manner the ancients, at the public expense, used to make statues of persons eminent for virtue, learning, or the services they had done. 3. Those that exceed the life ; among which those that surpassed the life once and a half were for kings and emperors ; and those double the life for heroes. 4. Those that exceeded the life twice, thrice, and even more, and were called colossuses. See COLOSSUS. Every statue resembling the person whom it is intended to represent is called statua iconica. Statues acquire various other denominations. 1. Thus the allegorical statue is that which, under a human figure or other symbol, represents something of another kind ; as a part of the earth, a season, age, element, temperament, hour, &c. 2. Curule statues are those which are

represented in chariots drawn by bigae or quadrigae, that is, by two or four horses ; of which kind there are several in the circuses, hippodromes, &c., or in cars, as we see some, with triumphal arches, on antique medals. 3. Equestrian statue, that which represents some illustrious person on horseback, as that famous one of Marcus Aurelius at Rome ; that of king Charles I. at Charing-Cross ; king George II. in Leicester Square, &c. 4. Greek

statue denotes a figure that is naked and antique ; it being in this manner the Greeks represented their deities, athletic of the Olympic games, and hero.es ; the statues of heroes were particularly called Achillean statues, by reason of the great number of figures of Achilles in most of the cities of Greece. 5. Hydraulic statue is any figure placed as an ornament of a fountain or grotto, or that does the office of a jet d'eau, a cock, spout, or the like, by any of its parts, or by any attribute it holds : the like is to be understood of any animal serving for the same use. 6. Pedestrian statue, a statue standing on foot; as that of king Charles II. in the Royal Exchange, and of king James II. in the Privy gardens. 7. Roman statue is an appellation given to such as are clothed, and which receive various names from their various dresses. Those of emperors with long gowns over their armour were called stature paladutae ; those of captains and cavaliers with coats of arms thoracatag ; those of soldiers with cuirasses loricatae ; those of senators and augurs trabeatae ; those of magistrates with long robes togatse ; those of the people with a plain tunica tuni-catffi ; and lastly, those of women with long trains stolatse. In repairing a statue cast in a mould they touch it up with a chisel, graver, or other instrument, to finish the places which have not come well off: they also clear off the barb, and what is redundant in the joints and projectures.

STATUE, in sculpture and statuary, a work of sculpture or modelling which represents the figure of a man or woman in full relief. The word is sometimes applied likewise to figures of animals executed in the same manner. In the most remote ages we find indications that several eastern nations possessed the art as well as practice of making and of erecting statues, but the Grecians were the first people who executed them skilfully. In the first place, the several heathen deities were represented by human figures, and after awhile the heroes of antiquity were also sculptured forth, and subsequently living characters of eminence, or such as had recently expired. These statues were erected in the public places to which the citizens generally resorted, to the end that the memory of the great men might be perpetuated. In the sequel, this particular taste became so widely spread that there was no

other branch of the fine arts to which equal attention was paid.

In the early times of the republic, Rome possessed but a small number of statues of gods and distinguished men. After having, however, accomplished the conquest of Greece, and at different epochs transported from that country to Rome a great number of Grecian statues, the taste for this kind of performance became by degrees so ardent and general that, according to the expression of an ancient author, they were able to count at one particular period more statues in the imperial city than inhabitants ! They did not content themselves with raising statues to deceased worthies, but awarded that honor to sundry living characters of merit. It was very customary among them to erect statues upon the tombs of their deceased patriots or chiefs ; and such veneration was felt for the statues of their princes that the law prohibited a master from

punishing an offending slave who had sought refuge near the statue of an emperor. In the age of Tiberias it was a kind of crime to have merely changed a garment before his statues. The erection of statues of public men is by no means equally common in our days : but it is not the less important.

A statue, when it is intended to perpetuate the recollection of a man estimable for his patriotism or merit, should be placed in some conspicuous spot, where it would be most likely to attract the observation of the people. Mere resemblance of feature is by no means the only, or even the principal desideratum in a statue ; it should display in a striking manner the elevation of soul, the grandeur of character, which might have rendered the object worthy of calling forth the exercise of the sculptor's chisel. Whether he might have been distinguished by probity and benevolence, or by intrepidity in the midst of dangers, or by any other elevated virtue, the expression of this should be preserved in the statue. Many of the statues of antiquity, which express the ideal of great characters, or of divinities, prove that the art of the sculptor is fully equal to this task. Indeed a considerable number of them are merely allegorical representations of various abstract qualities and properties. It is thus that Jupiter is the image of severe majesty joined to goodness ; and Pallas that of the most consummate wisdom, &c. The general character of a man may be more justly gathered when he is in a state of repose than when agitated by any particular and transitory passion ; and according to

this theory it is fair to presume that a tranquil attitude is best adapted to express the prevailing character of the personage represented by a statue. This opinion, however, is to be received with some reservation, although the ancients will be found to have generally adopted it.

It will not, we suspect, be deemed a questionable affirmation that a fine statue is one of the most beautiful productions of genius and of art. The Greeks admired Phidias even more than any other of their illustrious men. The critical examination of a statue requires no inconsiderable portion of knowledge, taste, and skill. The first point to which the attention of the critic should be directed is the marble, from a careful scrutiny of which, the period when the statue was made may often be ascertained. For instance, the certainty that any given statue is of marble of Luna renders it evident that its age cannot be anterior to that of Augustus, since it was under that prince's reign the" Luna quarries were discovered. The critic should proceed to take the exact measure of the statue ; to describe its attitude ; to indicate what restorations it might have undergone ; to decide whether it is the representation of a divinity or hero, or simply of some distinguished ancient, &.c. &c. It is also desirable that he should be acquainted with its history, traditional or otherwise, the authors who have mentioned it, the period of its discovery, the different prints engraved of it, &c.

The principal works in which the student will find representations of the most celebrated statues are the following: — J. B. Carollerii, Antiquae Status, Rome, 1585, fol. J. J. De Rubeis, In-

signiores Statuarum urbis Romae Icones, Rome, 1645, 4to. Maffei, Raccolta di Statue Antiche e Moderne, Rome, 1707, fol. La Galeria Gius-tianea. — Vetera Monumenta quae in hortis coeli-montanis et in cedibus Matthoeorum adservantur, 3 vols. fol. Rome, 1770—9. Zanetti, Delle an-tiche Statue Greche e Romane che nell' Antisala della Libreria di San Marco, e in altri luoght publici di Venezia si Trovano, Venice, 1740, 2 Yols. fol. Les Marbres de Dresde, by Le Plat, Dresden, 1733, fol. The first three vols. of Museo Pio Clementine, by Visconti. The third vol. of Museum Capitolinum. Le Musee Napoleon, by Piroli. La Villa Pinciana, and Monu-menti Gabini. The Augusteum of M. Becker, &c. &c.

STATU Quo, or STATU Quo PKIUS, i. e. in the same state as before ; an expression much used respecting treaties of peace, when all captures are restored, and every thing is put, or agreed to be put, on the same footing as before the war. This would answer extremely well if the lives of all the men murdered on both sides were also restored, without which there can be no real status quo.

STATURE, n. s. Fr. stature ; Lat. statura. The height of any animal.

A creature who might erect His stature, and upright with front serene Govern the rest. Milton.

What stature we attain at seven years we sometimes double, most times come short of at one and twenty. Browne.

Foreign men of mighty stature came. Dryden.

Thyself but dust, thy stature but a span ; A moment thy duration, foolish man ! Prinr.

We have certain demonstration from Egyptian mummies, and Roman urns and rings, and measures and edifices, and many other antiquities, that human stature has not diminished for above two thousand years. Bentley's Sermnns.

STATUTE, 7i. s.) Fr. statut ; Lat. statu—

STAT'UTABLE, adj. J turn. A law; edict of the legislature : statutable is according to statute.

Not only the common law, but also the statutes, and acts of

parliament, were specially intended for its benefit. Spenser.

Blood hath been shed, Ere human statute purged the general weal

Shakspeare.

There was a siatute against vagabonds; wherein note the dislike the parliament had of gaoling them as chargeable and pesterous. Bacon.

Know the statutes of heaven and laws of eternity, those immutable rules of justice. TilloUon.

0 queen ! indulged by favour of the gods To build a town, with statutes to restrain. The wild inhabitants beneath thy reign.

Dryden's JEneid.

1 met with one who was three inches above five feet, the statutable measure of that club.

Addison's Guardian.

STATUTE more immediately signifies an act of parliament made by the three estates of the realm ; and such statutes are either general, of vhich the courts at Westminster must take no-tice without pleading them ; or they are special and private, which last must be pleaded.

STATUTE, STATUTUM, in English law, has di-vers significations : First, it signifies an act of parliament ; and, secondly, it is a short writing

called a STATUTE-MERCHANT, or STATUTE-STA- BLE (see those articles), which are in the nature of bonds, &c., and called statutes, as they are made according to the form expressly provided in certain statutes.

The acts of par.iament, statutes, or edicts, made by the king's majesty,

by and with the advice and consent of the lords spiritual and temporal and commons in parliament assembled, compose the leges scriptae, the written laws of the kingdom. The earliest statute of which any record exists is the statute of Gloster, 6. Edw. I., which is entered on a statute roll at the tower. There are six of these rolls, the latest containing the statutes of 12 Edw. IV. The previous statutes of Merton, 20 Hen. III. : Marleberge, 52 Hen. III., and Westminster the first, 3 Edw. I., are found in all printed collections, and in numerous ancient MSS. of the statutes. The general printed collections of the statutes are preceded by Magna Charta, 9 Hen. III., as confirmed and entered on the statute roll of 25 Edw. I., or the charter roll, 28 Edw. I., and that charter has now the force of a statute, and had such force, if not at the time of its being granted, certainly very soon after. The mode of making these statutes is stated under the title ‘ BILL BROUGHT INTO PARLIAMENT.’ To what is there said we may here only add, that the royal assent, when given, is written upon the several acts. That to the end of the third year of Henry VII. the statutes were entered of record in French or Latin : though the bills brought into parliament began to be in English in the time of Henry VI. By 33 Geo. III. c. 13, it is enacted that, when the operation of an act of parliament is not directed to commence from any time specified •within it, the clerk of the parliaments shall indorse upon it the day upon which it receives the royal assent (and which, since this act, is added in the printed statutes immediately after the title) : and that day shall be the date of its commencement.— This statute has obviated much inconvenience (not to say injustice) which arose from the former maxim, that an act of parliament operated from the first day of the session ; the whole session, like the whole term, being considered as one day ; and thus many statutes had the force of ex post facto laws.

By 48 Geo. III. c. 106, when bills for continuing temporary acts shall not pass before such acts expire, such acts shall be continued from the time of their expiration, except as to penalties, &c.

The method of citing these acts of parliament is various. Many of our ancient statutes are called after the name of the place where the parliament was held that made them ; as the statutes of Merton and Marleberge (Marlborough), of Westminster, Gloucester, and Winchester. Others are denominated entirely from their subject ; as the statutes of Wales and Ireland, the Articula Cleri, and the Praerogativa Regis. Some are distinguished by their initial words, a method of citing very ancient: as the statute of Quia Emptores, and that of Circumspectˆ Agatis. But the most usual method of citing them, especially since the time of Edward II., is by naming the year of the king’s reign in which

the statute was made, together with the chapter or particular act, according to the numeral order. All the acts of one session of parliament taken together make properly but one statute : and therefore, when two sessions have been held in one year, we usually mention stat. 1, or stat. 2. Thus the bill of rights is cited, as 1 W. & M. stat. 2, c. 2; signifying that it is the second chapter or act, of the second statute (or the laws made in the second session of parliament), in the first year of king William and queen Mary.

These statutes, or acts of parliament, were anciently promulgated by means of exemplifica-tions thereof under the great seal : which were sent to the sheriffs of the several counties, with writs requiring them to be published in such places of the county as the sheriffs thought fit. Writs of this nature appear annexed to the statutes on the statute rolls in the Tower from 6 Edward I. down to the reign of Henry V. Not very long after that time printing came into use, and then the statutes of each session were printed at the end of the session, and thus made known to the public ; though proclamations were not entirely superseded in particular instances til a much later date. See the stat. 25 Hen. VIII. c. 22. The earliest sessional publications of statutes was that of the acts passed in the first and only parliament of Richard III. From that time until the year 1796 these sessional publications were the only mode of promulgation adopted ; and these were not generally obtainable, except by private purchase, the delivery of them being confined to about 1100 copies (issued at the public cost) to the members of each house of parliament, the privy council, and some great officers of state. In consequence of several reports made by committees of the house of commons specially appointed to consider of the promulgation of the statutes, 5500 copies are now distributed throughout the United Kingdom of Great Britain and Ireland, to the houses of parliament, great officers and departments of state, public libraries, courts of justice, sheriffs, municipal magistrates, and clerks of the peace. By stat. 41 Geo. III. c. 90, it is enacted that the statutes printed by the king's printer, in Great Britain and Ireland respectively, shall be evidence of all such statutes prior to the union in 1801.

An edition of the Statutes of the Realm, from original records and authentic MSS., was undertaken in the year 1801, under the authority of the commissioners on the public records in Great Britain. The first volume, containing the statutes from 20 Henry III. to the end of the reign of Edward III., preceded by a complete collection of the Charters of Liberties, from Henry I. to Edward III., was published in 1811. The se-cond volume, including the statutes from Richard II. to the end of

Henry VII., appeared in 1816. These two volumes contain the whole of what may be termed the ancient part of the statute law. — A long Introduction with an appendix thereto, prefixed to the first volume, and the notes throughout that and the second volume, af-ford information, on the subject of statute law, not much known even to the best lawyers of the present day. r.rhe preface to the quarto edition of the statutes, published by the king's printer,

subsequi.it to the Union, and two prefaces prefixed to the first volume of the Collection of Statutes, in 10 vols. 4to., from Magna Charta to 1801, also published by the king's printer, will be found useful, with reference to the history of former printed editions of the statutes. — The authentic collection has been continued by the commissioners on the records, by subsequent volumes, to the reign of William III. ; from which time the sessional collections printed by the king's printers are sufficiently accessible. Two volumes ot the acts of parliament of Scotland have also been printed by the same commissioners. The commissioners on the records of Ireland are about in like manner to publish an authentic collection of the acts of the parliaments of Ireland.

STATUTE-MERCHANT, in law, is a bond of record acknowledged before the clerk of the Statutes-merchant, and lord mayor of the city of London, or two merchants assigned for that purpose ; and before the mayors of other cities and towns, or the bailiff of any borough, &c. ; sealed with the seal of the debtor and the king ; upon condition that, if the obligor pays not the debt at the day, execution may be awarded against his body, lands, and goods ; and the obligee shall hold the lands to him, his heirs and assigns, till the debt is levied. — Terms de la Ley.

Estates by statute-merchant and statute-staple are classed by Blackstone among the species of estates defeasible on condition subsequent; and are said to be very nearly related to the vivum vadium, or estate held till the profits thereof shall discharge a debt liquidated or ascertained. For both the statute-merchant and statute-

staple are securities for money ; the one entered into before the chief magistrate of some trading town, pursuant to the stat. 13 Edw. I. stat. 3, de mer-catoribus, and thence called a statute-merchant ; the other pursuant to the stat. 27 Edw. III. c. 9. before the mayor of the staple, that is to say, the grand mart for the principal commodities or manufactures of the kingdom, formerly held by act of parliament in certain trading towns : whence this security is called a statute-staple. They are both securities for debts acknowledged to be due ; and originally permitted only among traders, for the benefit of commerce ; whereby not only the body of the debtor may be imprisoned, and his goods seized in satisfaction of the debt, but also his lands may be delivered to the creditor, till out of the rents and profits of them the debt may be satisfied. And, during such time as the creditor so holds the lands, he is tenant by statute-merchant or statute-staple. There is also a similar security, the recognizance, in the nature of a statute-staple acknowledged before either of the chief Justices, or (out of term) before their substitutes, the mayor of the staple at Westminster, and the recorder of Lon-don ; whereby the benefit of this mercantile transaction is extended to all the king's subjects in general, by virtue of the stat. 23 Hen. VIII. c. 6 amended by stat. 8, Geo. I. c. 25 ; which direct such recognizances to be enrolled and certified into chancery. But these, by the statute of frauds, 29 Car. II. c. 3, are only binding upon the lands, in the hands of bona fide

purchasers, from the day of their enrolment, which is ordered to be marked on the record. —2 Comm. c. 10, p. 160.

These estates, though sometimes referred to in argument, seem now nearly unknown in practice; but as the law relating to them is in force, and as it may serve to elucidate other subjects by analogy, the following information on the subject has been preserved, as useful to the student, if not to the practitioner. The statute of Acton Burnel, 11 Ed. I. and stat. de merca-toribus, 13 Ed. I. stat. 3, enact, that the merchant shall cause his debtor to appear before the mayor of the city of London, or other city or town, and there acknowledge the debt, &c., by recognizance, which is to be enrolled ; the roll whereof must be double, one part to remain with the mayor, and the other with the clerk appointed by the king ; and then one of the clerks is to write the obligation, which shall be sealed with the debtor's seal, and that of the king, &c.

By these statutes, if the debt be not paid at the day upon the merchant's account, the mayor is to cause the debtor to be

imprisoned, if to be found, and in prison to remain until he hath agreed the debt; and, if the debtor cannot be found, the “mayor shall send the recognizance into the Chancery, whence a writ shall issue to the sheriff of the county where the debtor is, to arrest his body, and keep him in prison till he agree the debt ; and, within a quarter of a year, his lands and goods shall be delivered to him to pay the debt ; but, if the debtor do not satisfy the debt within that time, all his lands and goods shall be delivered to the merchant by a reasonable extent, to hold until the debt is levied thereby ; arid in the mean time he shall remair. in prison ; but, when the debt is satisfied, the body of the debtor is to be delivered together with his lands. If the sheriff return a non est inventus, &c., the merchant may have writs to all the sheriffs where he hath any land ; and they shall deliver all the goods and lands of the debtor by extent ; and the merchant shall be allowed his damage, and all reasonable costs, &c. All the lands in the hands of the debtor, at the time of the recognizance acknowledged, are chargeable (but see stat. 29 Car. II. c. 3, before referred to) ; though, after the debt is paid, they shall return to grantees, if they are granted away, as shall the rest to the debtor : the debtor or his sureties dying, the merchant shall not take the body of the heir, &c., but shall have his lands until the debt is levied. If the debtor have sureties, they shall be proceeded against in like manner as the debtor ; but, so long as the debt may be levied of the goods of the debtor, the sureties are to be without damage. Also the merchant shall, besides the payment of his debt, be satisfied for his stay and detainer from his business. In London, out of the commonalty, two merchants are to be chosen and sworn by this statute, and the seal shall be opened before them, whereof one piece is to be delivered to the said merchants, and the other remain with the clerk ; and before these merchants, &c., recognizances may be taken. A fee of [d. per pound is allowed to the clerk for fixing the

king’s seal ; and a seal is to be provided that shall serve for fairs, 8cc. ; but the statute extends not to Jews. — Cro. Car. 440, 457.

Statutes-merchant were contrived for the security of merchants only, to provide a speedy remedy to recover their debts ; but at this day they are used by others who follow not merchandize, and are become one of the common assurances of the kingdom. — Bridg. 21 : Owen 82. And all obligations made to the king are of the nature of these statutes-merchant. — 12 Rep. 2,3.

STATUTE-STAPLE is a bond of record, acknowledged before the mayor of the staple, in the presence of all or one of the constables ; to this end, says the statute, there shall be a seal ordained, which shall be affixed to all obligations made on such recognizance acknowledged in the staple : this seal of the staple is the only seal the statute requires to attest this contract ; but it is no more under the power or disposal of the mayor, than that appointed by the statute-merchant ; for, though the statute appoints him the custody of it, yet it is in such a manner, that he cannot affix it to any obligation without their consent, it being to remain in the mayor's hands under the security of their own seals. — 2 Roll, Abr. 466 : stat. 27 Ed. III. c. 9.

To understand a little of the original and constitution of the staple, and the advantage the nation had by this establishment, we must observe that the place of residence, whither the merchants resorted with their staple commodities, was anciently called estaple, which signifies no more than mart or market : and this was formerly appointed out of the realm, as at Calais, Antwerp, &c., and other ports on the continent, which were nearest to us, and whither the merchants might with safety coast it. 4 Inst. 238. But, besides these staple ports appointed abroad, there were others appointed at home : whither all the staple commodities were carried in order to their exportation, such as London, Westminster, Hull, &c. This was found to be of great use and consequence to the prince in particular, and to the interest and credit of the nation in general ; for at these staple ports were the king's customs easily collected, and were by the officers of the staple, at two several payments, returned into the exchequer ; besides, at these staples, all merchants' goods were carefully viewed and marked by the proper officers of the staple ; and this necessarily avoided the exportation of decayed goods, or ill-wrought manufactures, and consequently fixed a stamp of credit on the merchandizes exported, which, upon the view, al-ways answered the expectation of the buyer. — Maline's Lex Merc. 337, 338.

The staple merchandizes, according to lord Coke, are only wool, woolfells, leather, lead, and tin ; others, butter, cheese, and cloths : but whatever they were, the mayor and constables had not only conusance of all contracts and debts relating to them, but 'they had

likewise jurisdiction over the people, and all manner of things touching the staple. This power was given them, lest the merchants should be diverted and drawn from their business and trade, by applying to the common law, and running through the tedious forms of it, for a determina-

tion of their differences ; and for the greater encouragement of merchants, that they might have all imaginable security in their contracts and dealings, and the most expeditious method of recovering their debts, withgut going out of the bounds of the staple. — 4 Inst. 238 , Maline's Lex. Mer. 337. By this it appears that this security was only designed for the merchants of the staple, and for debts only on the sale of merchandises brought thither ; yet in time others began to apply it to their own ends, and the mayor and constable would take recognizances from strangers, surmising it was made for the payment of money for merchandises brought to the staple. To prevent this mischief, the parliament, in 23 Hen. VIII. , reduced the statute-staple to its former channel, and laid a penalty of £40 on the mayor and constables who should extend the benefit of the statute to any but those of the staple. But though the stat. 23 Hen. VIII. c. 6 deprived them of this benefit, yet it framed the new sort of security known by the name of a recognizance, in the nature of a statute-staple ; so called because this act limits and appoints the same process, execution, and advantage, in every particular, as is set down in the statute-staple.— Co. Lilt. 290.

A recognizance, therefore, in nature of a statute-staple, as the words of the act declare, is the same with the former, only acknowledged under other persons ; for, as the statute runs, the chief justice of the king's bench and common pleas, or, in their absence, out of term, the mayor of the staple, at Westminster, and the recorder of London, jointly together, shall have power to take recognizances for payment of debt in the form set down in the statute, la this, as in the former cases, the king appoints a seal to attest the contract. — Co. Litt. 290, a : 4 Inst. 238: 2 Roll. Abr. 466: Co. Ent. 12. Debt lies as well upon a statute-staple as upon a bond : and a statute acknowledged on lands is a present duty, and ought to be satisfied before an obligation; a debt due on an obligation being but a chose in action, and recoverable by law, and not a present duty by law, as a debt upon u statute, judgment, or recognizance is, upon which present execution is to be taken without farther suit.— Cro. Eliz. 355. 461. 494: 2 Lill. Abr. 536.

But a judgment in a court of record shall be preferred, in case of

execution, before a statute : though if one acknowledge a statute, and afterwards confess judgment, if the land be extended thereon, the cognisee shall have a scire facias to avoid the extent upon the judgment. It is otherwise as to goods : for there, he that comes first shall be first served. — 6 Rep. 45 : 1 Brownl. 37. The cognisor of a statute grants his estate to the cognisee ; by this the execution of the statute will be suspended. — 2 Cro. 424. But if the cognisee, before execution of a statute, release to the cognisor all his right to the land, it will not be a discharge of the whole execution ; for, notwithstanding, he may sue execution of his body and goods. — 3 Shep. Abr. 326. Upon a statute-staple, a capias and extent of lands, goods, and chattels, are contained in one writ ; but it is not so on a statute-merchant. — Jenk

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Cent. 163. In chancery, the proceedings on a statute-staple are in the petty-bag office; and statutes-staple are suable in the king's bench or common pleas, as well as in chancery. — Cro. Eliz. 208. Chancery will give relief against an infant in case of a statute-staple, though it is not extendible against him at law. — 1 Lev. 198. On a statute's being satisfied, it is to be vacated by entering satisfaction, 8cc. Statutes-staple and statutes-merchant are to be entered within six months, or shall not be good against purchasers. — Stat. 27 Eliz. c. 4.— See stat. 16 & 17 Car. II. c. 5, for preventing delays and extending statutes.

He that is in possession of lands on a statute-merchant, or staple, is called tenant by statute-merchant, or statute-staple, during the time of his possession : and creditors shall have freehold in the lands of debtors, and recovery by novel disseisin, if put out ; but if tenant by statute-merchant or statute-staple hold over his term, he that hath right may sue out a venire facias ad computand, or enter, as upon an elegit. — Stat. 27 Edw. III. c. 9.

STAUBBACH, a celebrated cataract of Switzerland, in the canton of Bern, near Lauterbrun-nen, which rushes down a precipice 930 feet high with the most tremendous impetuosity and noise, dispersing the water in a grand spray, and occasioning a kind of tempest by the agitation of the air. The brook from which this torrent rises is named Kupfer Bachlein, or Rivulet of copper.

STAVE, v. a. & v. n. From staff, in the plu-ral staves. To break in pieces : used originally of barrels made of small parts or staves : to push off; to furnish with staves: as a verb neuter (obsolete) to fight with staves.

The seared disorders that might ensue thereof have been an occasion that divers times all the wine in the city hath been staved. Sandys's Travels.

This was the shameful end of Aloysus Grittus, Solyman's deputy in Hungary ; who, climbing too fast up the evil staved ladder of ambition, suddenly fell, and never rose more. Knollet.

How can they escape the contagion of the writings, whom the virulency of the calumnies have not slaved. off from reading ? Ben Joiuon.

Equal shame and envy stirred I' the enemy, that one should beard So many warriours, and so stout, As he had done, and staved it out. Httdibras.

If an irreverent expression, or a thought too wan-ton, are crept into my verses, let them be staved or forfeited like contrabanded goods. Dryden.

The condition of a servant staves him off to a distance ; but the gospel speaks nothing but allurement, attraction, and invitation. South.

STAVELEY (Thomas), esq., a learned English writer, born at Cussington, in Leicestershire, and educated at Cambridge. He entered councillor in 1654. In 1664 he published the Romish Horse Leech, and the History of Churches. He died in 1683.

STAVEREN, a town of Holland, and the most ancient of Friesland, supposed to have been built one year before the commencement of the Christian era, and to have taken its name from an ancient idol, worshipped by the inhabitants called Stavon. Great part of the ancient town having been destroyed by the sea, the inhabitants rebuilt it in the place where it now

stands, as being less exposed. It was anciently a very rich, powerful, and populous city, with the best harbour in that country. The ancient kings of Friesland made it their ordinary residence, in a palace built by Richolde, the first king, about the year 400. Radbode VI., after he had conquered all the country as far as Utrecht, called his conquests the kingdom of Staveren, which shows the flourishing state of the town at that time, and was the occasion of its being included in the league of the German Hanse towns. It was surrounded with walls and ditches, about the year 339, by Obidalde VI., duke of Friesland. It is since reduced very much from its ancient grandeur, the harbour being choaked up; however there remains enough of its former splendor to make it a considerable town ; and they still carry on some trade, especially in fishing, and in passage boats over the pools and lakes of the neighbourhood. In 1799 the town was taken by a British fleet; forty miles north of Amsterdam. Lat. 52° 56' N., long. 5° 16' E.

STAUNTON (sir George Leonard), bart., a modern traveller, was a native of the county of Galway in Ireland. He was destined for the medical profession, with a view to which he studied at Montpelier, and took the degree of M.D. About 1762 he established himself in

practice in the island of Grenada in the West Indies, where he obtained the patronage of lord Macartney, who made him his secretary ; and he likewise held the office of attorney-gene- ral, till the taking of that island by the French. His lordship, being appointed governor of Ma-dras, took Mr. Staunton with him to the East Indies, where he was employed in the arrest of general Stuart, who had opposed the authority of the governor. He also induced the French admiral Suffren to suspend hostilities before Gondelour ; and negociated a treaty withTippoo Saib. Returning to England, the East India Company repaid his services with a pension of £500. a-year, the king created him a baronet, and the university of Oxford bestowed on him the diploma of LL.D. When lord Macartney went as ambassador to China, sir George accompanied him as secretary, with the provisional title of envoy extraordinary and minister plenipotentiary. Of that mission and of the empire and people of China he published an account in 1797, 2 vols. 4to., which was translated into French and German. He died in London January 1801.

STAUNTON, a principal branch of the Roanoke, Virginia, rises on the west side of the Blue Ridge, and has the name of Roanoke, but after its passage through the Blue Ridge it takes that of Staunton, which it retains to its junction with the Dan, on the west border of Mecklenburg county. After the junction it resumes the name of Roanoke.

STAUROLITE, in mineralogy, grenatite, or prismatic garnet.

STAUROTIDE, grenatite, prismatic garnet, or staurolite. Color dark reddish-brown. Only crystallised in forms which may be reduced to a prism of 129° 30’. The following are secondary forms : — a very oblique four-sided prism,

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truncated on the acuter lateral edges, forming an unequiangular six-sided prism ; the same acutely bevelled on the extremities ; and a twin crystal, formed by two perfect six-sided prisms. Splendent, resino-vitreous. Cleavage in the smaller diagonal. Fracture small-grained uneven. Opaque, or translucent. Scratches quartz feebly. Brittle. Specific gravity 3-3 to 3-8. Infusible. Its constituents are, alumina 44, silica 33, lime 3-84, oxide of iron 13, oxide of manganese 1, loss 5-16. — Vauquelin. The geognostic relations of this mineral are nearly the same with those of precious garnet. It occurs in clay-slate near Ardonald, between Keith and Huntly, in Aber-deenshire ; and in a micaceous rock at the Glen-malur lead-mines in the county of Wicklow, Ireland.

STAY, v. n., v. a., &c n. s. ~] Belg. staen ;

STAY'ED, adj. Dan. stae. To

STAY'EDLY, adv. continue in a

STAYˆEDNESS, n. s. Vplace or state;

STAY'ER, forbear departure,

STAY LACE, or motion; stop;

STAYS, plu. J dwell ; belong : as

a verb active to repress ; withhold ; obstruct ; delay ; hold in place ; hold up : as a noun substantive, stand ; continuance ; obstruction ; restraint ; a fixed state ; prop ; support : stayed means settled ; fixed ; sedate : the adverb and noun substantive following corresponding: a stayer is one who stops, holds, or supports : staylace, the lace of the female stays, a kind of boddice, or waistcoat.

Aaron and Hur stayed up his hands, the one on the one side, and the other on the other.

Eiod. xvii. 12.

Would ye tarry for them 'till they were grown? would ye stay for them from having husbands 1

Ruth i. 13.

Because ye trust in oppression, and stay thereon, this shall be as a breach ready to fall. ha. xxx. 12.

They call themselves of the holy city, and stay themselves upon God. Id. xlviii. 2.

They were come upon the stays, when one of the sailors descried a galley. Sidney.

When she list pour out her larger spright, She would command the hasty sun to stay, Or backward turn his course. Spenser.

For her son,

In her own hand the crown she kept in store, Till riper years he raught, and stronger stay. Id.

The joyous Time will not be stayed Unless she do him by the forelock take. Id.

Obedience of creatures unto the law of nature is the ttay of the whole world. Hooker.

All that may stay their minds from thinking that true which they heartily wish were false, but cannot think it so without some scruple. Id.

On this determination we might stay ourselves without further proceeding herein. Id.

If she do bid me pack, I'll give her thanks, As though she bid me stay by her a week.

Shakspeai e. Put thyself

Into a 'haviour of less fear, ere wildness Vanish my staider senses. Id. Cymbeline.

Your ships are stayed at Venice. Shakspeare.

What surety of the world, what hope, what stay, When this was once a king, and now is clay 1 Id.

Determine Or for her stay or going ; the affair cries haste. Id,

111 tell thee my whole device When I am in my coach which stays for us. Id.

The Syrens sang to allure them into danger ; but Orpheus sang so well that he staid them.

Ruteiyh's History of the World. When substantialness combineth with delightfulness, and currantness with stayedness, how can the language sound other than most full of sweetness 1 Camden's Remains.

He did ordain that as many might depart as would ; but as many as would stay should have very good means to live from the state. Bacon.

Whatsoever is above these proceedeth of shortness of memory, or of want of a stayed and equal attention, id.

Many just and temperate provisos well showed and foretokened the wisdom, stay, and moderation of the king. id.

Perkin Warbcck, finding that when matters once go down the the hill they stay not without a new force, resolved to try some exploit upon England. Id.

Bones, after full growth, continue at a stay ; teeth stand at a stay, except their wearing. Id.

Should judges make a longer stay in a place than they usually do, a day in a county would be a very good addition. Id.

Affairs of state seemed rather to stand at a stay than to advance or decline. Hayward.

They flocked in such multitudes that they not only stayed for their resort, but discharged divers.

Id.

Who have before, or shall write after thee, Their works, though toughly laboured, will be Like infancy or age to man's firm stay, Or early and late twilights to mid-day. Donne.

His fell heart thought long that little way, Grieved with each step, tormented with each stay.

Fairfax.

Our ships lay anchor'd close : nor needed we Fear harme on any states. Chapman

Unto the shore, with tears, with sighs, with moan, They him conduct ; cursing the bounds that stay Their willing fleet, that would have further gone.

Daniel.

So long a stay will make The jealous king suspect we have been plotting.

DenJiam.

My only strength, and stay ! forlorn of thee, Whither shall I betake me? where subsist ? Milton.

I will bring thee where no shadow stays Thy coming, and thy soft embraces. Id.

Not after resurrection shall he stay Longer on earth than certain times t' appear. Id.

Satan

Throws his steep flight in many an airy wheel, Nor stayed, till on Niphates' top he lights. Id.

This seems to our weaker view O'erlaid with black, staid wisdom's hue. Id.

I should not be a persuader to them of studying much in the spring, after three years that they have well laid their grounds ; but to ride out, with prudent and staid guides, to all the quarters of the land.

Milton on Education. Made of sphere-metal never to decay, Until his revolution was at stay. Milton.

Her long with ardent look his eye pursued, Delighted ! but desired more her stay. Id.

He was well stayed, and in his gait Preserved a grave majestick state. Hudibras.

The boiling blood of youth, fiercely agitating the fluid air, hinders that serenity and fixed staidness which is necessary to so severe an intenseness.

Glanville's Scepsis.

The injured sea, which from her wonted place, To gain some acres, avarice did force, If the new banks neglected once decay, No longer will from her old channel stay. Waller

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The Thracian youth invades Orpheus returning from the' Elysian shades, Embrace the hero, and his stay implore. Id.

Almighty crowd ! thou shorten'st all dispute ; Nor faith nor icason make thee at a stay, Thou leap'st o'er all. Dryden' s Medal.

If as a prisoner I were here, you might Have then insisted on a conqueror's right, And stayed me here. Dryden.

Alas ! what stay is there in human state ? And who can shun inevitable fate 1 Id.

Nor will I stay On Amphix, or what deaths he dealt that day. Id.

I must stay a little on one action which preferred the relief of others to the consideration of yourself.

Id.

If sometimes he appears too gay, yet a secret gracefulness of youth accompanies his writings, though the ttaidness and sobriety of age be wanting. Id. Preface to Ovid.

What pleasure hop'st though in my stay, When I'm constrained and wish myself away 1

Dryden.

When the wine sparkles,

Make haste, and leave thy business and thy care, No mortal interest can be worth thy stay. Id.

Weavers, stretch your stays upon the weft. Id.

Stay, I command you, stay and hear me first. Id.

Sallows and reeds, for vineyards useful found, To stay thy vines. Id.

The flames augment, and stay At their full height ; then languish to decay. Id.

We for his royal presence only stay To end the rites. Id.

I stay for Turnus, whose devoted head Is owing to the living and the dead ; My son and I expect it from his hand. Id.

I was willing to stay my reader on an argument that appears to me new. Locke.

He took nothing but a bit of bread to stay his stomach. /^.

Nor must he stay at home, because he must be back again by one-and-twenty. Id.

The father cannot stay any longer for the fortune, nor the mother for a new set of babies to play with.

Id.

With prudent stay he long deferred The rough contention. Philips.

To stay these sudden gusts of passion That hurry you from reason, rest assured The secret of your love lies with me only. Rowe.

I am the more at ease in Sir Roger's family because it consists of sober and staid persons. Addtson.

Trees serve as so many stays for their vines, which hang like garlands from tree to tree. Id. on Italy.

No stubborn stays her yielding shape embrace.

Gay.

Every plant has its atmosphere, which hath various effects on those who stay near them.

Arbuthnot on Aliments.

Stay her stomach with these half hundred plays, till I can procure her a romance big enough to satisfy her great soul with adventures. Pope.

Why cease we then the wrath of heaven to stay? Be humbled all. fd,

With stays and cordage last he rigged a ship, And, rolled on leavers, launched her in the deep.

Id.

A ijiyed man and wife are seldom so indolent as not to rind consolation in each other. Id.

Servants sent on messages stay out longer than the message requires. Swift.

A staylnce from England should become a topick for censure at visits. Id.

May Jove, the guardian of the capitol, He, the greater stayer of our troops in rout, Fulfil your hopes, and animate the cohorts.

A. Philips.

STAY, a large strong rope employed to support the mast on the fore part, by extending from its upper end towards the fore part of the ship, as the shrouds are extended to the right and left, and behind it. See MAST, RIGGING, and SHROUD. The stay of the fore-mast is called the fore-stay, and reaches from the mast-head toward the bowsprit end : the main stay extends over the forecastle to the ship's stem ; and the mizen-stay is stretched down to that part of the main-mast which lies immediately above the quarter-deck : the fore-top-mast stay comes also to the end of the bowsprit, a little beyond the fore-stay : tbe main-top-mast is attached to the head or hounds of the fore-mast : and the mizen-top- mast stay comes also to the hounds of the main mast ; the fore-top-gallant stay comes to the outer end of the jib-boom ; and the main-top- gallant stay is extended to the head of the fore-top mast.

STAY SAIL, a sort of triangular sail extended upon a stay. See SAIL.

STAYNER (sir Richard), was the gallant commander of a ship of war during the protec-torate ; and, in conjunction with captain Smith, took a Dutch East India ship of 800 tons bur-den, having on board four chests of silver. In 1656 he was appointed to the command of three frigates, and with this squadron fell in with the Spanish flotilla, consisting of eight sail, of which he captured two, burnt one, sunk another, and drove two on shore. The treasure captured on this occasion amounted to £600,000 sterling, so that Stayner returned to England crowned with glory, and laden with wealth. In the following year he sailed with the fleet, under the command of Blake, for the purpose of intercepting the Spanish West India fleet, which had taken shelter in the bay of Santa Cruz. On reconnoitering the position of the enemy, the English admiral found it impossible to bring off his ships, though he thought they might be destroyed. Stayner was immediately

detached to begin the attack, and, being supported by Blake with the remainder of the fleet, the Spaniards were, in a very few hours, driven out of their ships and breast-works. The former were instantly taken possession of by the English, and, as they could not be brought off, they were all set on fire, and burnt to the water's edge. ' The whole action,' says Clarendon, ' was so miraculous, that all men, who knew the place wondered that any sober men, with whatever courage endowed, would evei have undertaken it; and they could hardly persuade themselves to believe what they had done ! while the Spaniards comforted themselves with the belief that they were devils, and not men, who had destroyed them in such a manner.' Cromwell thought so highly of the conduct of captain Stayner, that he immediately conferred on him the honor of knighthood. On the restoration, sir Richard Stayner had a command under Montague, afterwards the earl of Sandwich, was again knighted, and was constituted rear-admi- ral of the fleet. He first hoisted his flag in the

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Swiftsure, and afterwards in the Mary. After this, the nation being at peace, no opportunity was offered to this brave man of adding to those services which he had already rendered his country ; and it is thought he died very soon after. — Campbell's Lives of tbe Admirals, vol. iv. STEAD, n. s. & v. a. ~\ Sax. rtet> ; Goth. STEAD'FAST, adj. stod. Place ; room ;

STEAD'FASTLY, adv. position; support; STEAD'FASTNESS, n. s. Whence the wooden STEAD'ILY, adv. frame that supports a

STEAD'INESS, n. s. bed;) aid: to fill the

STEAD'Y, adj. J place of another; aid;

help; support: steadfast is firm; fixed fast in place: hence firm of character; constant; resolute: steady is also firm; fixetl ; regular; constant: the respective adverbs and noun substantives corresponding.

There fell down many slain, and they dwelt in their steads until the captivity. 1 Citron, v. 22,

Be faithful to thy neighbour in his poverty ; abide stedfast unto him in the time of his trouble.

Ecclus. xxii. 23.

Him resist, stedfast in the faith. 1 Peter v. 9.

Their feet steady, their hands diligent, their eyes watchful, and their hearts resolute. Sidney.

We are neither in skill, nor ability of power, greatly to stead you. Id.

Such was this giant's fall, that seemed to shake This stedfast globe of earth, as it for fear did quake.

Spenser.

So hard these heavenly beauties be enfired, As things divine, least passions do impress,

The more of stedfnst minds to be admired, The more they stayed be

on stedfastness. Id.

I hope her stubborn heart to bend, And that it .hen more stedfast would endure. Id.

Fly, therefore, fly this fearful stead anon, Lest thy fool hardize work thee sad confusion. Id.

The term of life is limited, Ne may a man prolong nor shorten it ; The soldier may not move from watchful stead, Nor leave his stand until his captain bed. Id.

They nigh approached to the stead Where as those maremaids dwelt. Id. Faerie Qiteene.

Laws ought to be like stony tables, plain, steadfast, and immoveabl.e. Id. State of Ireland.

If we had taken them clean away, or else removed them, so as to place in their stead others, we had done worse. Hooker.

A complete man hath some parts whereof the want could not deprive him of his essence ; yet to have them standeth him in singular stead in respect of special uses. Id.

It nothing steads us To chide him from our eyes. Id.

Rich garments, linens, stuffs, and necessaries, Which since have steaded. Id. Tempest.

Can you so stead me As bring me to the sight of Isabella ? Shakspeare.

We shall advise this wronged maid to stead up your appointment, and go in your place. Id.

He sails ‘tween worlds and worlds with steady wing. Milton.

Now clear I understand

What oft my steadiest thoughts have searched in vain. Id.

Nor do the boldest attempts bring forth Events still equal to their worth ; But sometimes fail, and in their stead Fortune and cowardice succeed. Butler.

Jealo isy then fired his soul, And his face kindled like a burning ccal ; Now cold despair succeeding in her stead, To livid paleness turns the glowing red. Druden.

The genial bed, Sallow the feet, the borders, and the sted. Id.

What form of death could him affright, Who, unconcerned, with stedfast sight Could view the surges mounting steep, And monsters rolling in the deep? Id.

Steady to my principles and not dispirited with my afflictions, I have, by the blessing of God, overcome all difficulties. Id. JEneid.

Steadiness is a point of prudence as well as of courage. L'Estrange.

A clear sight keeps the understanding steady.

Locke.

He makes his understanding the warehouse of lumber rather than a repository of truth, which will stand him in stead when he has occasion for it. Id.

Sin has a tendency to bring men under evils, un-less hindered by some accident, which no man can steadily build upon. Smith's Sermons.

God's omniscience steadfastly grasps the greatest and most slippery uncertainties. *(.*

Your friendly aid and counsel much may stead me.

Howe.

A friend is useful to form an undertaking, and se-cure steadiness of conduct. Collier of Friendship.

How reverend is the face of this tall pile, Whose massy pillars rear their aged heads To bear aloft its arched and ponderous roof, By its own weight made steadfast and immoveable, Looking tranquillity ! it strikes an awe And terrour on my aking sight. Congreve.

So steadily does fickle fortune steer The' obedient orb that it should never err.

Blackmore.

The smallest act of charity shall stand us iu great stead. Atterbury's Sermons.

John got the better of his choleric temper, and wrought himself up to a great steadiness of mind, to pursue his interest through all impediments.

Arbuthnot.

In general, stedfastly believe that whatever God hath revealed is infallibly true.

Wake's Preparation for Death.

Steer the bounding bark with steady toil, When the storm thickens and the billows boil.

' Pope.

STEAK, n. s. Isl. and Erse, styck, a piece ; Swed. steka, to boil. A slice of flesh broiled or fried ; a collop.

The surgeon protested he had cured him very well, and offered to eat the first stake of him. Taller.

Fair ladies who contrive To feast on ale and stakes. Swift.

STEAL, v. a. & v. n. "% Pret. I stole; part.

STEA'LEE. n. s. {pass, stolen; Saxoti

STEA'LINGLY, adv. (prelan ; Belg. stclcn ,

STEALTH. * Goth, stc/n. To take

by theft; take clandestinely, slily, or without right : the derivatives corresponding.

How should we steal silver or gold 1 Gen. xlv. 8.

Stolen waters are sweet, and bread eaten in secret is pleasant. Prw. ix. 17.

Fixt of mind to avoid further entreaty, and lo fly all company, one night she stole, away-Sidney,

They were divers motions, they did so steulinghi slip one into another, as the latter part was ever in hand before the eye could discern the former was ended. Id.

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On his back a heavy load he bare Of nightly stealths, and pillage several.

Faerie Queene.

In the secret dark that none reproves, Their pretty stealths shall work, and snares shall spread. Spenser.

The law of England never was properly applied to the Irish, by a purposed plot of government, but as they could insinuate and steal themselves under the same by their humble carriage and submission.

Id.

The owner proveth the stealth to have been committed upon him by such an outlaw, and to have been found in the possession of the prisoner.

Id. State of Ireland.

The wisdom of the same spirit borrowed from melody that pleasure, which, mingled with heavenly mysteries, causeth the smoothness and softness of that, which toucheth the ear, to convey, as it were by stealth, the pleasure of good things into man's mind. Hooker.

Young Lorenzo

Stole her soul with many vows of faith, And ne'er a true one. Shakspeare.

Were it not that my fellow schoolmaster Doth watch Bianca's steps so narrowly, 'Twere good to steal our marriage. Id.

Let's shift away ; there's warrant in that theft, Which steals itself when there's no mercy left. Id.

The transgression is in the stealer. Id.

A schoolboy, finding a bird's nest, shews it his companion, and he steals it. Id.

Now withered murder, with his stealthy pace, Moves like a ghost. Id. Macbeth.

Thou ran'st a tilt in honour of my love, And stol'st away the ladies' hearts of France.

Shakspeare.

There are some shrewd contents in yon same

paper,

7"hat steal the color from Bassanio's cheek ; Some dear friend dead. Id. Merchant of Venice.

My lord of Amiens and myself Did steal behind him as he lay along Under an oak. Shakspeare.

I cannot think it,

That he would steat away so guilty like, Seeing you coming. Id. Othello.

The most peaceable way, if you take a thief, is to let him shew what he is, and steal out of your company. Shakspeare.

At time that lovers' flights doth still conceal, Through Athen's gate have we devised to steal. Id.

In my conduct shall your ladies come, From whom you now must steal

and take no leave.

Id.

The good humour is to steal at a minute's rest. — Convey, the wise it call; steal! a fico for the phrase ! Id.

I feel this youth's perfections, With an invisible and subtile stealth, To creep in at mine eyes. Id. Twelfth Night.

The stealth of mutual entertainment With character too gross is written on Juliet.

Shakspeare.

Others, weary of the long journey, lingering be-hind were stolen away ; and they which were left, moiled with dirt and mire. Knolles.

The vapour of charcoal hath killed many ; and it is the more dangerous, because it cometh without any ill smell, and stealeth on by little and little.

Bacon s Natural History.

The. gods persuaded Mercury, Their good observer, to this stealth.

Chapman's Iliad.

Store of cabins are but sluttish dens, that breed sickness in peace, serving to cover stealths, and in fight are dangerous to tear tien with splinters.

Raleigh. A bride

Should vanish from her clothes into her bed, As souls from bodies steal, and are not spied.

Donne.

A soft and solemn breathing sound Rose like a stream of rich distilled perfumes And stole upon the air, that even silence Was took ere she was ware. Milton.

The monarch blinded with desire of wealth, With steel invades his brother's life by stealth Before the sacred altar. Dryden.

As wise artists mix their colours so. That by degrees they from each other go ; Black steals unheeded from the neighbouring white, So on us stole our blessed change. Id.

Stealing is the taking from another what is his, without his knowledge or allowance. Locke.

They hate being alone, for fear some affrighting apprehensions should steal-or force their way in.

Calamy.

Xow his fierce eyes with sparkling fury glow ; Now sighs steal out, and tears begin to flow. Pope.

Let humble Allen, with an awkward shame, Do good by stealth, and blush to find it fame. Id.

A factor stole a gem away. Id.

At a time when he had no steward, he stole away.

Swift.

Variety of objects has a tendency to steal away the mind from its steady pursuit of any subject.

Watts.

STEAM, n. s. Sax. j-teme. The smoke or vapor of any thing moist and hot. See below.

Scarcely had Phoebus in the gloomy east

Got harnessed his fiery-footed team, Ne reared above the earth his flaming crest When the last deadly smoke aloft did steam.

Spenser.

Sweet odours are, in such company as there is steam and heat, things of great refreshment. Bacon.

His offering soon propitious fire from heaven Consumed, with nimble glance and grateful steam.

Milton.

Ye mists that rise from steaming lake. Id.

The dissolved amber plainly swam like a thin film upon the liquor, whence it steamed away into the air.

Boyle.

Let the crude humours dance In heated brass, steaming with fire intense. Philips.

While the temple smoked with hallowed steam, They wash the virgin. Dryden.

See ! see ! my brother's ghost hangs hovering

there O'er his warm blood, that steams into the air. Id.

O wretched we! Why were we hurried down This lubrick and adulterate age ; Nay, added fat pollutions of our own, To increase the steaming odours of the stage 1 Id.

Such the figure of a feast, Which, were it not for plenty and for*team, Might be resembled to a sick man's dream. King.

Some it bears in steams up into the air, in such a quantity as to be manifest to the smell, especially the sulphur. Woodward.

These minerals not only issue out at these larger exits, but steam forth through the pores of the earth, occasioning sulphureous and other offensive stenches,

Id

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STEAM ENGINE.

1. STEAM ENGINE. Steam may justly be considered as the most important prime mover that the ingenuity of man has yet devised, and its utility to a commercial country like Great Britain must be sufficiently obvious. It has enabled us to support a proud superiority both in arts and manufactures, and, from the commercial advantages that have resulted, it has enabled us to fight the battles of freedom in every quarter of the globe.

2. Prior to entering into a detailed history of the steam engine, it may be advisable to furnish our readers with a brief view of the various prime movers that have been employed prior to the invention of this stupendous machine, and we shall thus be the belter enabled to form an accurate estimate of its importance. We cannot better do this than by a reference to the introductory portion of Partington's Treatise on the Steam Engine.

3. From the most accurate observations it appears that the physical powers of the human race differ very widely, not only in various individuals, but also in different climates ; the value of a *: an therefore, as a working machine, will not be so great beneath the torrid zone as in the more temperate climate of Europe. This will serve to illustrate the great advantage which our colonists, particularly in the West Indies, would derive from the more general employment of inanimate force; the day labor of a negro in the sugar countries amounting to little more than one-third of that performed by a European mechanic.

4. A laborer, working ten hours per day, can raise in one minute a weight equivalent to 3750 pounds one foot high, or about sixty cubic feet of water in the same time ; while the power of a horse, working eight hours per day, may be correctly averaged at 20,000 Ibs. Smeaton states that this animal, by means of pumps, can raise 250 hogsheads of water ten feet high in an hour. It is a well known fact also that men, when trained to running, are able on the average of several days being taken, to outstrip the fleetest horse ; and yet it will be seen from the above statement that his force,if properly applied, is at least six times that of the most powerful man.

5. The use of water as an impelling power, both for the turning of machinery and other purposes connected with the useful arts, appears to have been known at a very early period. Vitruvius describes a variety of machines for this purpose, the earliest of which were employed merely to raise a portion of the fluid by which they were impelled. The most simple method of applying this element as a mechanical agent evidently consisted in the construction of a wheel, the periphery of which was composed of a number of float-boards. This, on being exposed to the action of a running stream, was afterwards employed to give motion to a variety of mills, and is at the present time employed in almost every species of machinery.

6. Among the most celebrated hydraulic ma-

chines we may enumerate the machine of Marly. This, when first constructed, appears to have produced one-eighth of the power expended, so that seven-eighths of its power were usually lost. This misapplied power has been injurious to the engine ; and the wear it has occasioned has reduced the mechanical effect very materially. But this may be considered as an extreme case, and we select it merely as an instance of that total ignorance of the first principles of mechanics which characterised some foreign engineers of the last century.

7. It may, however, be advisable to examine the ratio of power expended in comparison with that of the effect produced in some of the most simple hydraulic machines; and, by this calculation, the amount of friction, &c., may be accurately ascertained.

Power. Effect.

Undershot water wheel . . 9 — 3

Overshot do… .10—8

Hydraulic ram. (This machine will make from twenty to 100 strokes per minute) 10 — G

Large machine at Chremnitz (each stroke occupying about three minutes)… . 9 — 3

8. But the water-mill, which is the usual machine employed, even in its most improved form, is far from being beneficial either to the agricul-turist or the manufacturer. The former is injured by the laws which prohibit the draining of mill-streams for the purposes of

irrigation, by which much improvement is kept back that would otherwise take place ; while the health of the latter, in the immediate neighbourhood of manufacturing districts, is much injured by the stagnant condition of the water which is thus unnecessarily dammed up.

9. Wind, which we may consider as the next substitute for animal power, appears to have been first employed to give motion to machinery in the beginning of-the sixth century. The use of Jhis species of mechanical force is, however, principally limited to the grinding of corn, the pressing of seed, and other simple manipulations; the great irregularity of this element precluding its application to those processes which require a continued motion.

10. A windmill with four sails, measuring seventy feet from the extremity of one sail to that of the opposite one, each being six feet and a half in width, is capable of raising 926 pounds 232 feet in a minute ; and of working on an average eight hours per day. This is equivalent to the work of thirty -four men ; twenty-five square feet of canvas performing the average work of a day laborer. A mill of this magnitude seldom requires the attention of more than two men ; and it will thus be seen that, making allowance for its irregularity, wind possesses a decided superiority over every species of animal labor.

11. To show, however, the great advantage which the steam engine, even in its rudest state, possesses over mere pneumatic or hydraulic ma-

chinery, we will n jw examine its effective force when employed iu the working of pumps. It has been already stated that the machine of Marly, formerly considered the most powerful engine in the world, when first erected lost seven-eighths of its power from friction, and other causes ; while the over-shot water-wheel, which can act only in favorable situations, produces nearly eight-tenths of the force employed. Now it is stated by Dr. Desaguliers that the atmospheric engine working at Griff-mine, nearly a century back, produced full two-thirds of effective force for the power employed ; and this too at a comparatively moderate expense. We find, farther, that a hundred weight of coals burned in an engine on the old construction would raise at least 20,000 cubic feet of water twenty-four feet high ; an engine with a twenty-four inch cylinder doing the work of seventy-four horses. From this it will be seen that a bushel of coals is equal to two horses, and that every inch of the cylinder performs nearly the work of a man.

12. An engine upon captain Savery's plan, constructed by Mr. Keir, has been found to raise nearly 3,000,000 Ibs. of water one foot high with a single bushel of coals; while the best engine on Newcomen's principle will raise 10,000,000, and Mr. Watt's engine upwards of 30,000,000 Ibs., the same height. If we add to the advantage gained by the employment of so cheap a prime mover, the vast concentration of force thus brought into immediate action, its value may easily be appreciated.

13. One of the largest engines yet constructed is now in action at the united mine in Cornwall ; it raises 80,000 Ibs. 100 feet high per minute ; and to effect this enormous labor it only requires about thirty pounds of coal for the same period of time.

14. To the mining interests this valuable present of science to the arts has been peculiarly acceptable ; as a large portion of our now most productive mineral districts must long ere this have been abandoned had not the steam engine been employed as an active auxiliary in those stupendous works. In the draining of fens and marsh lands this machine is in the highest degree valuable ; and, in England

particularly, it might be rendered still more generally useful. In practice it has been ascertained that an engine of six horse power will drain more than 8000 acres, raising the water six feet in height ; while the cost of erection for an engine for this species of work, including the pumps, will not exceed £700. This is more than ten windmills can perform, at an annual expenditure of several hundred pounds ; while, in the former case, the outgoings will not exceed £150 per annum.

15. To the mariner, also, the steam engine offers advantages of a no less important and novel nature than those we have already described. By its use he is enabled to traverse the waters, both against wind and tide, with nearly as much certainty, and, as the machinery is now constructed, with much less danger, than by the most eligible road conveyance.

16. The generation of steam forms a most important part of the subject under consideration. Indeed the whole power of the steam engine depends on the formation of elastic vapor produced

from water varying in temperature from 212° of Fahrenheit's thermometer to about 300° of the same scale. This matter has been admirably discussed in the unfinished work by Dr. Birk-beck and Mr. Adcock, to whose pages we must now direct our readers' attention, as it contains a most masterly dissertation on the formation of steam.

17. Aqueous vapor, in its perfect state, is transparent and colorless, consequently invisible. We are chiefly accustomed to attend to it, when hav-ing partially mingled with the air, or having touched substances cooler than itself, it has be-come vesicular, and consequently visible. The moist white vapor, therefore, composed of an infinite number of vesicles or small globules, is not, as generally supposed, perfect steam, but steam which has been robbed of a portion of caloric. The consequence of this abstraction of caloric is the loss of the gaseous or elastic form, and is quickly followed by a complete restitution of the state of inelastic fluidity. The facility and suddenness, indeed, with which condensation, as this change is denominated, may be effected by different refrigerating means, is a property not less remarkable or important than elasticity, the energetic property which we have already mentioned.

18. WTater exposed in an open vessel to the action of fire cannot, however great the heat applied, be made to indicate a higher temperature than that which first produces ebullition. Steam will be

evolved in greater or less abundance, according to the heat applied, but throughout the process its temperature will continue the same as that of the water. Dr. Hooke directed public attention to this fact; but to Dr. Black is due the honor of having first minutely investigated' the whole phenomenon. He discovered that, during the conversion of ice into water, a greater quantity of caloric disappeared than was indicated by the thermometer ; therefore, reasoning from analogy, he was led to conclude that, as the difference between a liquid and a solid is ascribable to the fixation of caloric, so, most probably, an elastic fluid, such as steam, differs from a liquid, such as water, in consequence of the operation of the same cause. In endeavouring to ascertain this point, he compared the time of raising the temperature of a liquid a certa/n number of degrees with the time of evaporating it by the same influx of external heat, and found that the caloric existing in a latent state in steam which balances the pressure of the atmosphere was not less than 800°. Subsequent experiments performed by other philosophers seem to prove that the heat which disappears is here stated too low : but it must be confessed that the results of the experiments on this interesting subject exhibit great discrepancies.

Latent Heat of Aqueous Vapor.

Fahrenheit.

Black 800°

Ure 888

Southern 945

Watt 950

Clement 990

Lavoisier ….. 1000 Thompson …. 1016 Rumford …1021

STEAM ENGINE.

19. Considering that the caloric producing these important changes was not immediately discoverable by the thermometer or the senses, Dr. Black gave it the name of latent heat. Subsequently it has been termed by Professor Pictet, with more propriety, caloric of fluidity, and caloric of vaporisation.

20. From the well-known ability and long experience of the late James Watt, we ought to conclude that the result of his experiments approaches very near the truth ; more especially as it coincides with that of Southern, who in practical dexterity was very little, if at all, inferior to his highly ingenious and scientific friend.

21. It was in the course of the year 1781 that Mr. Watt tried experimentally to ascertain this point. He obtained a pipe of copper, one-fiftieth of an inch thick, five feet long, and five-eighths of an inch diameter in the bore, and, having bent the extremities in contrary directions, fixed one end steam-tight on the spout of a tea-kettle, from which the pipe inclined upwards, so that the other end was about two feet higher than the spout. In the upper end was fitted a piece of cork, having a hole about two-tenths of an inch diameter, and a small piece of quill introduced to keep the perforation open. The kettle \as filled with water halfway up the spout, and the lid, being made tight with a pro-per lute, was securely held down by a piece of wood, reaching from the top of the centre of the lid to the under side of the handle. It was placed over a fire and made to boil, and care was taken to allow the steam to escape, until such portion of it as condensed, no longer dropped from the end of the tube but returned by the inclined part into the kettle. A tin pan, four inches deep and six inches in diameter, was supplied with two pounds and a half avoirdupois of water, then weighed with great accuracy, and placed on several folds of flannel on a stand. This stand was made of sufficient height to al-low the extremity of the cork in the upper end of the tube to be immersed in the water in the pan. The water was nearly two inches and a half deep. A disk of strong pa«per, coated with linseed oil and dried, was fitted to the inside of the pan ; and it was again accurately weighed.

22. When the end of the tube was immersed in the cold water of the pan, the steam issuing

from it was condensed with a crackling noise, and the water became heated. The water was constantly stirred, that the heat might be equally distributed, and the experiment was continued until the water had acquired from 70° to 90° of heat, which was generally in from four to six minutes. Afterwards the pan was corered with a disk of oiled paper, to prevent evaporation, which would have lessened the weight during the operation of weighing. • The heat of the room, during the experiments, was generally about 50°.

23. Having so far completed the preparation, it became necessary, in order to obtain the greatest possible accuracy, to learn what quantity of heat had been absorbed by the pan. It was therefore made quite dry, and placed in a room of the temperature 40°; and in about half an hour, when it was supposed to have acquired the heat of the place, two pounds of water, of the temperature 76°, were poured into it. The re-sult was 75° 30'. Then for every 35° 30' witli two pounds of water, or every 44° with two pounds and a half of water, half a degree must be allowed for the heat absorbed by the pan.

24. Eleven experiments were made by Mr. Watt, from which the latent heat of steam has been calculated according to the following example. The heat of the water in the pan at the beginning of the experiment was 43-5, at the conclusion 89'5 ; so that, by the condensation of the steam, the water in the pan gained 40° of heat. The quantity of water in the pan at the beginning of the experiment was 17, 500 grains, at the end 18,260; therefore the effect was produced by the condensation of a quantity of vapor equal to 760 grains. By multiplying the quantity of water in the pan, at the beginning of the experiment, by the increase of temperature from the condensed steam, and by the heat absorbed by the pan, we have 17500 X 46° X 0-5 = 81375 ; and by dividing this product by the weight of condensed steam, and adding to the quotient the heat of the mixture, we have 81375 -=- 760 + 89-5 — 1159-5, the sum of the sensible and latent heats. The sensible heat 212° being deducted, leaves 947-5 as the latent heat of steam.

25. In a similar manner, Mr. Watt determined the particulars of the other experiments, the results of which are exhibited in the following table : —

Number of the

Quantity of cold Water

Temperature of

Weight of condensed

Temperature of the

Increase

Total sensible and

Latent

experiment.

in Pan in Grains.

the cold Water.

Steam in Grains.

heated Water.

of Heat.

latent Heat.

Heat.

1

2

3

4

5

6

7

8

1

17500

o

43-5

760-

89°-5

46°5

1159-5

947°-5

2

17500

44-5

708—

86-5

42-5

1136-9

924-9

3

17500

44-5

899—

98-

54—

1149-1

937-1

4

17500

44-5

46^-5

73-5

29-5

1175-6

963-6

5

17500

44-5

369—

67-25

23—

1158-

946—

6

17500

47-5

642—

87-

40—

1177-3

965-3

7

17500

49-

.588-5

84-5

36—

1155-

943—

8

17500

47—

675-

87-5

41—

1150-5

938-5

9

17500

45—

680-5

86-5

42—

1166-5

954-5

10

17500

45—

664-25

85-5

41—

1165-66

953-66

11

17500

45—

975-

102—

57-5

1134—

922-

112

26. The sum of the quantities in the eighth column divided by the number of experiments gives 945-03° as the average ; but if the second and eleventh experiments, which yield results much smaller than the others, and which Mr. Watt therefore considered objectionable, be omitted, the average will be 949-9°. As several circumstances however affect these experiments, tending for the most part to make the latent heat appear rather less than it actually is, Mr. Watt considers that we shall not err in excess by calling it 960°.

27. One of the circumstances productive of the error above alluded to is the progressive increase or diminution of caloric by radiation, and by the contact of the surrounding atmosphere. This interference with his conclusions, neglected by Mr. Watt, was avoided in a very ingenious and satisfactory manner by count Rumford. At the commencement of his experiment, he rendered the temperature of his apparatus 10° or 12° lower than that of the surrounding air; and the vapor was then allowed to pass into the tube of the refrigeratory. Whilst the temperature of the water around the tube continued below that

of the air and adjacent bodies, caloric flowed into it, and it was consequently warmed by them. But the contrary effect occurred, ot course, when the circumstances as to temperature were reversed ; the surrounding bodies being warmed by the apparatus. Conducting his experiment therefore in such manner that the same time was occupied in each case, a compensation was obtained, the same quantity of caloric being retained by the whole apparatus as if no portion had been either absorbed or emitted. It is to this ingenious precaution, chiefly, that Biot is disposed to ascribe the superior accuracy of Rumford's experiments ; and the agreement of their results with those of the profound investigator, Gay Lussac.

28. We have already intimated that the experimental results of Watt and Southern very nearly coincide. Mr. Southern's experiments were performed in 1803 with the intention of ascertaining the latent heat of steam under 3° of elasticity, *viz.* equal to the support of forty, eighty, and 120 inches of mercury. The following are the results brought into a tabular form : —

No. of Experiment.

Duration of the Experiment.

Weight of cold water in pounds.

Temperature of cold water.

Temperature at the end of Experiment.

Temperature gained.

Weight of water gained.

Temperature of Steam.

Elasticity of Steam in inches.

1

2

3

4

5

6

7

8

9

Ibs.

o

o

o

Ib.

Inches.

1

12 45

28}

48

80

32

•878

229

40

2

5 50

28}

48

81*

33J

•857

270

80

3

4 00

28}

47J

81

33i

•826

295

120

29. From the above experiments may be calculated the latent heat of the steam formed in each. For, if the weight of the water which received the heat be multiplied by the number of degrees of temperature communicated to it, and the product be divided by the accession of weight to the water, the quotient will give the caloric which the steam lost. By adding to this the temperature of the water in the vessel at the conclusion of the experiment, a number will be obtained showing the whole heat, or the sum of the sensible and

latent heat of the steam. Hence, by subtracting the sensible heat of the steam from this sum, the latent heat will be found. Thus

col. 3 x col. 6

r-col. 5 — the sum of the sen-col. 7

sible and latent heat ; or if

W n: weight of cold water, T := its temperature,

w — accession of water by the condensed steam,

t — temperature of warm water, and

x — sum of the sensible and latent heat of the steam condensed.

W + wt — WT_ w

30. If in either of the above equations the quantities found in the preceding table be properly employed, the sums of the sensible and

latent heat will be 1119°, 1190°, and 1228° and the latent heat 890°, 920°, and 933°. It was distinctly observed, however, that the tin vessel in which the steam was generated imparted heat to the surrounding air: and an experiment was made to determine the amount of this loss. It was found that, when the contained water was at 80°, 1° was lost in five minutes ; and, when at 60°, 1° was lost in ten minutes and a-half ; it would therefore, probably, lose 1° in eight minutes during the time of performing an experiment— the mean temperature being about 65°. As the excesss of temperature at the beginning and end of each experiment above that of the air was nearly the same in all, the loss would be nearly proportional to the duration of each : hence, to the acquired heat should be added, in the first experiment, 1|°; in the second f°, and in the third £° ; being severally proportional to the said duration. These being respectively added to the temperatures, in cols. 5 and 6, give in the former 81|°, 82°, and 8JJ0; and in the latter 33|°, 34°, and 33f°; and if either of these sets of numbers be used in the calculation, according as one or the other of the equations is adopted todevelope the results, they will be found to be 1171°, 1212°, and 1245°, for the sums of the sensible and latent heat ; and consequently the latent heat in each experiment will b.e 942°, 942°., and 9,ˆ0°.

31. From all the experiments to determine the quantity of heat latent in steam, notwithstanding their partial disagreement, it is evident that though steam produced under the ordinary pressure of the atmosphere does not indicate a nigher temperature than boiling water, or about 212°, it does actually contain nearly 1200 ther-raometric degrees of heat. Steam, therefore, when mixed with six times its weight of water at 32°, will raise its temperature to 212°; and it is on this account employed in several brew-houses, dyeing works, and manufactories where large quantities of hot water are required. Many large buildings are also warmed by steam ; and it is very advantageously employed in several drying processes where great heat is required,

and where the substances to be heated are liable to combustion.

32. To the latent heat thus existing in water when converted into steam, or to the caloric of vaporization, its elasticity is ascribable. Speculation has been active in endeavouring to show how this property is conferred by caloric, but hitherto without effect. Experiment has been more successful in ascertaining the extent of this elasticity ; a subject ot great practical importance. Many scientific individuals, 3s before stated, have directed their attention to this enquiry, and the results of their investigations will be found in the following copious synopsis, commencing at 212°

33. SYNOPSIS of experimental and calculated results on the elasticity of vapor.

Temperature.

Force in inches of mercury.

Fahren-reit.

Reaumur.

Centi-grade.

Robison, by experiment.

Dalton, by calcula- tion.

Ure.

Creigh-ton, by calculation.

Watt, by ex-peri- ment.

Southern.

Taylor, by experiment.

By expe riment.

By f-alcu lation.

By expe riment.

By calcu lation

o

212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251

80°00

80:44 80-88 81-33 81-77 82-22 82-66 83-11 83-55 84-00 84-44 84-88 85-33 85-77 86-22 86-66 87-11 87-55 88-00 88-44 88-88 89-33 89-77 90-22 90-66 91-11 91-55 92-00 92-44 92-88 93-33 93-77 94-22 94-66 95-11 95-55 96-00 96-44 96-88 97-33

100°00

100-55 101-11 101-66 102-22 102-77 103-33 103-88 104-44 105-00 105-55 106-11 106-66 107-22 107-77 108-33 108-88 109-44 110-00 110-55 111-11 111-66 119-22 112-77 113-33 113;88 114-44 115-00 115-55 116-11 116-66 117-22 117-77 118-33 118-88 119-44 120-00 120‘55 121-11 121-66

35-80 44-50 54-90 66-80

30-00 30-60 31-21 31-83 32-46 33-09 33-72 34-35 34-99 35-63 36-25 36-88 37-53 38-20 38-89 39-59 40-30 41-02 41-75 42-49 43-24 44-00 44-78 45-58 46-39 47-20 48-02 48-8-1 49-67 50-50 51-34 52-18 53-03 53-88 54-68 55-64 56-42 57-31 58-21 59-12

30-00

3000

30-00

30-00

30-00

30-00

31-00

32-30 33-00 33-70 34-20 35-00 35-50 36-20 37-00 37-50 38-00 38-80 39-50 40-20 40-85 41-55 42-25 43-00 43-75 44-60 45-50 46-40 47-30 48-20 49-10 50-00 50-90 51-75 52-62 53-50 54-40 55-30 56-25 57-20 58-20 59-12 60-10

35-54

35-54

35-17

31-00 32-00 33-00

35-00

39-11

37-00

39-00

43-10

43-36

42-66

41-00

47-22

43-00 44-00

51-70

52-46

51-44

49-00

53-60

56-34

54-00

61-90

62-95

61-68

60-00

60-11

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SYNOPSIS, &cc. — Continued.

Temoerature.

Forces in inches of mercury.

|

i’ahrenheit.

Reaumur.

Centi-grade.

Robi-on, by experiment.

Dalton, >y calculation.

Ure.

Creigh-ton, by calculation.

Watt, by ex-peri- ment.

Southern.

Taylor, by experiment.

Jy ex-peri- ment.

3y calcula- tion.

By ex-peri- ment.

By calcula- tion.

252” 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 28.5 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305

30C

307

97-77 98-22 98-66 99-11 99-55

100-00

100-44 100-88 101-33 1 01-77 102-22 102-66 103-11 103-55 10400 104-44 104-88 105-33 105-77 106-22 106-66 107-11 107-55 108-00

IOS‘44

108-88 109-33 109-77 110-22 110-66 111-11 111-55 112-00 112-44 112-88 113-33 113-77 114-22 114-66 115-11 115-55 116-00 116.44 116-88 117-33 117-77 118-22 118-66 119-11 119-55 120-00 120-44 120-88 121-33 12177 1122-22

122°22

122-77 123-33 123-88 124-44 125-00 125-55 126-11 126-66 127-22 127-77 128-33 128-88 129-44 130-00 130-55 131-11 131-66 132-22 132-77 133-33 133-88 134-44 135-00 135-55 136-11 136-66 137-22 137-77 138-33 138-88 139-44 140-00 140-55 141-11 141-66 142-22 142-77 143-33 143-88 144-44 145-00 145-55 146-11 146-66 147-22 147-77 148-33 148-88 149-44 150-00 150-55 151-11 151-66 152-22 152-77

80-30 94-10 105-9

60-05 61-00 61-92 62-85 63-76 64-82 65-78 66-75 67-73 68-72 69-72 70-73 71-74 72-76 73-77 74-79 75-80 76-82 77-85 78-89 79-94 80-98 82-10 83-13 84-35 85-47 86-50 87-63 88-75 89-87 90-99 92-11 93-23 94-35 95-48 96-64 97-80 98-96 100-12 101-28 102-45 103-03 104-80 105-97 107-14 108-31 109-48 110-64 111-81 112-98 114-15 115-32 116-50 117-68 114-86 120-03

61-12 62-15 63-20 64-40 65-50 66-60 67-75 69-00 70-12 71-25 72-45 73-52 74-80 76-00 77-25 78-50 79-80 81-14 82-50 83-90 85-45 86-95 88-50 90-00 91-55 93-15 94-70 96-26 97-7.1 99-25 100-70 102-20 103-80 105-60 107-30 109-00 110-80 112-65 114-50 116-40 118-30 120-25 122-20 124-15 126-05 128-00 129-80 131-62 133-75 135-60 137-55 139-75 141-90

144-05 i

146-15 148-30

67-25

62-00

64-00

72-30

74-91

73-57

66-00 6800

” *

• • 1

78-04

81-90

84-90 86-30

88-39

87-31

76-00 80-00

93-48

101-90

103-41

103-13

112-00

118-20 120-15

119-95

121-27

126-70 1 2 9-00

120-00

119-17

139-70

137-94

142-01

144-30

150-56

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STEAM ENGINE.

SYNOPSIS, &c — Continued.

Temperature.

Force in inches of mercury.

Fahrenheit.

Reaumur.

Centi-grade.

Robison, by experiment.

Dalton, by calculation.

lire.

Creigh-ton, by calculation.

Watt, by ex-peri- ment.

Southern.

Taylor, by experiment.

By ex-peri- ment.

By calcula- tion.

By ex-peri- ment.

By calcula- tion.

308°

309 310 311 31.2 313 314 315 316 317 318 319 320 321 322 323 324 325 343-6

122°66

123-11 123-55 124-00 124-44 124-88 125-33 125-77 126-22 126-66 127-11 127-55 128-00 128-44 128-88 129-33 129-77 130-22 138-49

152°33

153-88 154-44 155-00 155-55 156-11 156-66 157-22 157-77 158‘33
158-88 159-44 160-00 160-55 161-11 161-66 162-22 162-77 173-11

121-20 122-37 123-53 124-69 125:85 127-00 128-15 129-29 130-43
131-57 132-72 133-86 135-00 136-14 137-28 138-42 139-56 140-70

157-70 161-30

157-25

165-61

150-65 157-70 155-00 157-20 159-45 161-75 164-20 166-70 169-15
171-70 174-30 176-80 179-40

166-00

177-70

240-00

239-28

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34. Having, in the preceding paragraphs, furnished our readers with a series of practical illustrations relative to the formation of elastic vapor, it may now be advisable to proceed with a detailed history of the progress of the steam engine.

35. Among the numerous competitors for the honor of having first suggested steam, as a moving power in mechanics, we must certainly place Hero of Alexandria, Brancas, and the marquis of Worcester in the foremost rank.

36. The simple apparatus suggested by Hero about 2000 years ago may be readily understood by reference to the annexed figure. F represents a caldron in which

steam is generated by the application of a concealed furnace beneath. The tube E and bent arm B are intended to convey the elastic vapor, thus produced, to a revolving ball G, which is connected by a steam-tight joint at B. Two tubes bent to a right angle at A and D are the only parts open to the air ; and as the steam rushes out from these minute apertures the reaction produces a rotatory motion.

37. A more simple apparatus, acting on the

same principles, and employed by Mr. Partington in his lectures at the London Institution, may here be adverted to. A circular base D, and

upright pillar furnished with a point at C, support a moveable hollow ring. This is in the first instance filled with water, and the flame of burning alcohol beneath converts it into steam. The bent tube E performs the same office as that at A in the previous diagram, and the steam entering the air in the direction E A leaves an excess of force tending to make the ring revolve in the opposite direction.

38. The second of these candidates was an Italian philosopher of considerable eminence, and who, in 1629, published a treatise entitled Le Machine, &c., which contained a description of ‘an apparatus for the same purpose.

39. Brancas’s revolving apparatus, as will be seen by reference to the following diagram, was nill more simple than that contrived by Hero.

12

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STEAM ENGINE.

117

iation of that part which relates to the steam engine. It occurs in the

Transactions of the Royal Society for 1697. After alluding to the inconvenience of forming a vacuum by means of gunpowder, which was one of his early propositions, he recommends ‘ the alternately turning a small surface of water into vapor, by fire applied to the bottom of the cylinder that contains it, which vapor forces up the plug in the cylinder to a considerable height, and which (as the vapor condenses, as the water cools when taken from the fire) descends again by the air’s pressure, and is applied to raise the water out of the mine.’

49. In 1698 Captain Savery obtained a pa-tent for a new mode of raising water, and communicating motion to a variety of machines by the force of steam ; and in the following year a working model of the above engine was submitted to the Royal Society, who then held their sittings in Arundel House. Savery’s engine was employed to raise water to a given height by the pressure of the atmosphere, and then to force the fluid up the remaining elevation, by the power of steam acting on the surface.

50. The steam apparatus of captain Savery was usefully employed in the mines for many years, and as it forms the ground-work of both Kier’s and Pontifex’s vacuum engines of the present day, it may be advisable to furnish a detailed account of its construction : —

51. Plate I., fig. 1, STEAM ENGINE, represents a general view of the apparatus as employed for raising water. Two copper boilers are employed; they are set in furnaces of brickwork, so constructed that the flame and heated air can circulate around them to the greatest advantage.

52. In the upper part of each boiler is a small cock, a and t>, called gauge-cocks. These, by means of screws, may be removed, in order that two-thirds of the quantity of water which it can contain may be introduced into the large boiler, and that the small boiler may be quite filled. The cocks are then replaced, and a fire is made beneath the great boiler, as represented in the engraving.

53. Two steam-pipes, c and d, proceed from the top of the boiler to the receivers e and f. These communications may be effectually closed, or opened and shut alternately, by an ingenious contrivance, represented on an enlarged scale, in

%. 2.

.54. At the extremity of the lever connected with the bent handle g there is a square hole to which a pin is adapted. The upper part of this pin forms a pivot, and works in a cross bar x, which is supported by two screws, y and z, and the lower part passes through the lid of the boiler, having fixed to its extremity a brass plate, called the double slide valve, or regulator. This plate, being ground and fitted with great accuracy to the under surface of the lid of the boiler, prevents the escape of steam through either of the steam orifices, which it may cover ; and the attendant, by moving the handle g, is enabled to open and shut alternately the steam passages ; or, by stopping the regulator between the utmost limits of its movement, the orifices of both pipes may at the same time be effectually closed.

55. F'-om the lower part of the receivers, e and f, proceed two pipes, h, t, resting on the standards 1 and 2 : and to these are screwed two other pipes, 3 and 4, branching off to the chambers k, /, m, 11, in which are valves, as exhibited in the engraving. Two other pipes 5 and 6, connect the chambers k, I, m, n, with the pipes o and p. The pipe o, which is called the suction-pipe, has its lower end immersed in a well or reservoir of water ; and the -pipe p is denominated the force-pipe.

56. The action of this engine is very simple. The steam generated in the large boiler is allowed to accumulate in the upper part, until the attendant conceives that a sufficient quantity is collected to supply the engine. He then, by means of the handle g, removes the regulator from beneath the orifice of the steam-pipe d ; this allows the steam to rush from the boiler into the receiver e, whence, driving before it the whole of the air contained in the pipes and the receiver, it passes along the pipe h 3, through the valve k, into the force pipe p, where it communicates with the atmosphere.

57. The air being thus expelled from the receiver, and its place occupied by steam, the attendant closes the communication with the boiler, and places the orifice of the cock r, in such position, that a stream of cold water can be discharged from the cistern s upon the external surface of the receiver. This abstracts from the steam that portion of caloric which is necessary to maintain its elastic state ; and as water, on its conversion into steam, is found to occupy a space about 1800 times greater than its former bulk, the condensation of the vapor must necessarily produce within the receiver a vacuum. Nothing, therefore, is left to counterbalance the atmospheric pressure on the surface of the water in which the bulb of the suction-pipe o is immersed; and as this pressure, when the va-cuum is perfect, can raise

a column of water to the height of thirty-three feet, the water ascends into the receiver, and fills it.

58. The receiver being thus filled, the lower clack-valve / closes. If the double slide valve be now removed from the orifice of the steam-pipe d, the steam will rush from the boiler, and drive the water from the receiver into the force-pipe p, from which it cannot escape on account of'the clack-valve k.

59. That steam should press upon a liquid in the same manner as upon a solid piston may to many appear surprising ; but it should be recollected that the specific gravity of steam, air, or any of the gases, is less than the specific gravity of liquids, otherwise they could not be maintained in a vaporous or gaseous state; and further, that, as no fluid can descend through one which is much heavier than itself, steam cannot descend through water ; the steam, entering into the receiver, must continue ou the surface of the water, pressing upon every portion of it until the water is removed, and the receiver again filled with steam. Therefore, the attendant has onlv occasion to allow cold water' to flow from the cock r upon its outer surface, to produce, as before, a vacuum, and to fill again the vacant space with water from the well.

60. Having thus exhibited the action of the en-gine, as far as regards one receiver, it is very easy to conceive that, by means of the two steam-pipes and two receivers, an alternate effect may be maintained, and a constant discharge of water kept up at the top of the force-pipe p.

61. The quantity of steam consumed in maintaining the alternate actions of the engine quickly reduces the water in the boiler; and, as danger might occur from allowing the water to descend too low, the gauge-cocks, a and b, have been judiciously introduced. The gauge-cock a descends within the great boiler to about one-half of its depth; and the cock 6, in the small boiler, to within eight inches of the bottom. When the attendant conceives that the great boiler requires to

be replenished, he turns the handle of the cock a : if steam issues, the water is below that level, and the boiler must be supplied; but, if otherwise, •water alone is discharged.

62. When this trial indicates that a supply is required for the great boiler, the attendant kindles a fire beneath the small, or, as it is called, the subsidiary boiler. By placing this at the side of the large boiler the water within is raised by the waste heat nearly to ebullition; consequently it requires but a small addition of caloric to convert a sufficient quantity into steam to expel the water into the large boiler. The steam which is thus generated, having no opportunity to escape, depresses the water and causes it to ascend up the pipe t, through the clack-valve 3, and along the bent pipe u, into the large boiler ; and this discharge continues so long as the surface of the water is above the lower orifice of the pipe t, which is within eight inches of the bottom of the boiler. When it is below that point, the steam, in passing through the clack-valve 3, makes a rattling noise, dnd indicates that the small boiler requires to be replenished. To effect this the attendant turns the cock v, which, being connected with the inclined pipe w, admits water from the force-pipe.

63. The comparative simplicity of this engine affords a strong inducement for its adoption ; but its application is, unfortunately, attended by a great waste of steam, and consequent useless expenditure of fuel. In order to drive the water from the receivers, e and/, into the force-pipe p, we have stated that steam must be admitted upon its surface. Trjis steam possesses a sensible temperature, from 150° to 200°, higher than that of the water; consequently, by contact with it, a considerable portion is condensed, and thereby raises the surface of the water nearly to the temperature of ebullition. The extreme slowness with which caloric descends in fluids allows the water to form a heated stratum between the steam and body of cold water. Then, rapidly accumulating in quantity, the steam, by compression, acquires sufficient force to expel the water into the force-pipe p, and, overcoming the weight of the column contained in the pipe, discharges an equal portion at the top. As the water descends in the receivers a new source of condensation occurs ; the steam comes in contact with successive portions of the cold surface of the metal, and, according to professor Robison, not less than eleven-twelfths of that which is

generated in the boiler are thus uselessly expended.

64. Another imperfection, which operated against the introduction of this engine into mines, is the limited height to which, by suction, as it is improperly termed, and by the pressure of the steam, water can be raised. By suction, or, in other words, by the pressure of the atmosphere, water can be raised from twenty-three to thirty feet ; and, from the nature and strength of the materials of which it is composed, steam should not be applied to force the fluid to a greater height than sixty or seventy, — an elevation amounting to about sixteen fathoms. How inadequate this engine must be for the purposes of mining is easily perceived. In Savery's time some of the mines were, perhaps, not less than 100 fathoms deep ; and, at the present time, several exceed 200 fathoms, or 400 yards.

65. To render the engine effectual for these depths captain Savery proposed that one should be erected at every fourteen or fifteen fathoms : but the expense of attendants, and the consumption of fuel, added to the annual expenditure for wear and tear, would, in this arrangement, ex-ceed the expense incurred by the employment of horses. Besides, there is a liability that one en-gine should become deranged; in which case the works must cease, as all the other engines would be rendered ineffectual.

66. In the engines constructed under the authority of Savery's patent it was necessary for a laborer to be in constant attendance for the purpose of turning the cocks, which alternately admitted the steam and condensing water. M. de Moura however effected a considerable improvement in this part of the engine, by constructing a self-acting apparatus for this purpose.

67. M. De Moura's apparatus was made self-acting by a very simple contrivance. It consisted of a float within the receiver, composed of a light ball of copper, which is not loose therein, but fastened to the end of an arm or lever, which is made to rise and fall by the float, while the other end of the arm is fixed to an axis; and consequently, as the float moves up and down, the axis is turned round one way or the other. This axis is made conical, and passes through a conical socket, which i.« soldered to the side of the receiver, and upon that end of the axis which pro-, jeds beyond the socket ; and therefore, at the outside of the receiver, is fitted a second arm, which is also moved backwards and forwards by the axis as the float rises and falls. By these means the rising and falling of the surface of the water within the receiver communicates a correspondent motion to the outside, in order to actuate the rest of the gear, which regulates the opening and shutting of the steam and injection-cocks.

68. A small cistern is soldered to the outside receiver ; and, being kept full of water, surrounds the joint, or conical socket through which the axis of the float passes : this keeps the axis and socket air-tight. The cistern is constantly kept full of water by means of a small leakage from the force-pipe, through a wooden peg, and the drops are conducted by a packthread down to the cistern. A small weight is applied to the

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arm on the outside of the receiver, to counterpoise the float within ; also upon the same arm 13 a slider, which, being set nearer to, or farther from the axis, will rise or fall a greater or less space, as may be required; when the float within rises or falls and the slider can be fastened by a screw at any part. A chain is attached to the slider, and gives motion by means of a shorter chain to a balance, or tumbler, which moves on an axis, and opens and shuts the cocks. The first-mentioned chain passes over two pulleys, supported by two arms, that are fastened to the side of the receiver, which give a chain a proper horizontal direction : in order to move the balance to the end of the chain a weight is fastened sufficient to raise the balance to a perpendicular position, and also to overcome the friction of the float and its axis with the pullies and chain.

69. The balance moves upon an axis, which is supported in pieces projecting from the receiver; and it has three arms, one of which applies with a roller to the handle of the steam-cock, a second acts upon the lever of the injection-cock, and a third short arm has a piece of chain, to link it to the chain beforementioned, at the part where the same extended horizontally between the two pulleys. The arms, which act upon the cocks, are so placed as to shut the steam cock the moment before the injection is opened, and vice versa.

70. To put the engine in motion press down the arm of the, axis, which raises the float within the receiver, and the counter-weight of

the chain will bring the balance over to the right side, and in its motion will open the steam-cock, and shut the injection-cock : also open a small gauge-cock in the top of the receiver, that the air may be discharged by the entrance of the steam into the receiver. This being done, shut the air-cock .ind let go the arm of the balance : the weight at ihe end of the chain will bring over the balance to the left, and in its motion will shut the steam cock and open the injection-cock, to admit a small jet of cold water into the receiver, which, presently condensing the steam into water, in a great measure leaves a vacuum in the receiver. In this situation the pressure of the atmosphere will cause the water to mount through the suction-pipe into the receiver, where, as its surface rises, it makes the float ascend, and, depressing the arm on the outside of the receiver, draws the chain and raises the balance, till it has passed the perpendicular, when it will fall over suddenly by its own gravity : in falling, the roller of one of its arms takes hold of the handle of the steam-cock, and opens it, whilst the other one shuts the injection-cock. This fall of the balance takes place when the receiver is almost filled with water, and the balance cannot return till the surface of the water therein subsides and suffers the float to descend. This takes place as soon as the steam ceases to be condensed by the cold receiver, and acquires sufficient elastic force from its heat to fill the receiver and drive out the water from the forcing pipe. When the surface of the water descends the float sinks, and suffers the counter-weight to draw up the chain. By the short chain it draws the balance beyond the perpendicular towards the left, when it falls of its own accord, and, in falling, the one arm takes

stroke produced by artifi-

hold of the handle and shuts the steam-cock, whilst the other opens the injection-cock as be-fore.

71. The atmospheric piston engine, will come-next in order, and its claim to practical utility is much greater than either of those already described.

72. A very simple and at the same time ingenious mode of illustrating the operations of an atmospheric steam en-gine, will be found

in the annexed apparatus, suggested by professorBrande, and employed in his lectures at the London Institution.

73. The glass tube and bulb B is shown with its piston A; the rod being hol-low and closed by a screw C. If steam be generated by the spirit lamp D, the air will speedily be expelled ; and after this is effected the screw C may be closed, and a workiru cial condensation.

74. Having thus furnished our readers with a practical illustration of the principle of Newcomen's engine, we may now proceed with a detailed account of its various parts. In Plate II., STEAM ENGINE, the boiler A is set in a furnace of brickwork, so contrived that the flame and heated air can pass beneath it, and circulate through the side-flues, a, b, into the chimney.

75. Between this boiler and the cylinder C there is a pipe, or communication, c/, which can be opened and closed at pleasure by the regulator/.

76. The cylinder C has a piston accurately fitted to it, so that when moving it is steam-tight. On the external surface of the cylinder are projections or lugs, e, e, which support the cylinder on the beams g, g, only one of which is shown, the other being removed to exhibit the parts in section.

77. The piston H, which is adapted to the cylinder, is formed of different materials to make it steam-tight. The lowest piece represents a strong circular plate of iron, the diameti r of which is very nearly equal to the internal diameter of the cylinder. Above this, and projecting from it, there is a circular ring, and between it and the cylinder a stuffing of oakum or gas-kett, lubricated with tallow, to lessen the friction.

78. D a lever or beam, strongly framed and braced, and having concentric arcs, similar to those already described, to maintain the rods which are suspended from them in a vertical direction.

79. The pump E is called the jaquette or jack-head, and is employed to fcrce water along the pipe h, through the valve t, into t'ie air-vessel

fc, whence it is conveyed by the pipe I into the injection cistern F. From this cistern proceeds a pipe, m, and, at about half its length, is placed the stopcock n, and a little above, a branch-pipe, p, the orifice of which projects over the side of the cylinder. The water from p falls upon the piston, and is intended to assist in keeping it air-tight. ‘

80. A circular chamber, 3, surrounds the up-per part of the cylinder, to receive the water which may flow over during the ascent of the piston. It is furnished with two pipes, « and v : the former is called the feed-pipe, supplying the boiler with a portion of the water which has been heated by being in contact with the piston and sides of the cylinder ; and the latter allowing the surplus water to flow into the hot-well G.

81. From the lower part of the cylinder proceeds a small-pipe t, furnished with a cup and Talve, called the snifting valve ; and from the feed-pipe a small branch descends nearly to the cup, for the purpose of supplying it with water. From the top of the boiler proceeds a horizontal pipe, having a loaded valve 21, connected with a small cord passing over a pulley. By means of this cord, the attendant raises the varve, to al-low the steam to escape when the engine ceases working.

82. The movement of the regulator, instead of being effected by the hand, as in the original en-gine of Newcomen, is, in the improved apparatus by Beighton, produced by a series of ingenious contrivances. The valve is connected with a vertical spindle x, and a horizontal lever y, and the rod z, instead of being moved by the hand of the attendant, is impelled so as alternately to cover and uncover the extremity of the steam pipe. To effect this, the upright post, I, supports one end of a horizontal iron axis, marked 1 ; the other end of it, being supported by another post, can only be seen at K, fig. 2. From this axis is freely suspended, by two rings, 2 and 3, a kind of stirrup, formed of two parallel bars of iron, 4 and 5, and a cross-bar, 6, together somewhat resembling the letter H. Above this is another cross piece or spindle, 7, which, passing through the eyes of the fork 8, connects the rod z, of the lever y z, with the stirrup. As this stir-nip is freely suspended, the horizontal axis, 1, may be made to revolve in either direction, without communicating its motion to the stirrup, •which will remain suspended vertically beneath it, unless force be applied to remove it either to the right or left.

83. On the same horizontal axis, 1, is fixed a piece of iron 9, having at one end a fork 10, and at the other a lump of iron or lead. This piece is called the Y, from its resemblance to that letter inverted ; and is so

placed on the axis 1 that one of the prongs is situate on each side of the stirrup. The space or distance between the prongs is rather more than sufficient to allow the tail of the Y to be placed upright, without removing the stirrup 6, fig. 1, when it inclines

either to the right or left. In the present position of the engine, the stirrup 6 is represented to the left of the upright post I, and the regulator covers the orifice of the steam-pipe d. Let, therefore, the Y be raised from its inclined position, and placed on the opposite side of the post with a sufficient inclination for the weight, or, as it is termed, the logger-head or tumbling bob, at the end of the Y, to descend by its gravity ; then, releasing it from the hand, it will descend with considerable force, and, with a smart jerk, place the stirrup 6 to the right of the post. This jerk is very efficacious, as it instantly overcomes the cohesion and friction of the regulator with the orifice of the steam-pipe d. The Y is prevented falling too far by a cord or strap o o, which is fastened to the logger-head and to the cylinder-beam g. By lengthening or shortening this strap, the fall of the logger-head can be regulated to any required distance.

84. Having thus exhibited the manner in which the Y influences the regulator, it only remains for us to observe that by the reciprocation of the beam D an alternating motion is given to the plug-tree L. This plug-tree is formed of two parallel pieces to admit two bent handles, called spanners, which are fastened on the same horizontal axis as the Y, to move between them. In the alternating motion of the plug-tree, the spanners 19 and 20 are struck by pins, which are placed horizontally, as may be seen by reference to the plan. By means, therefore, of these contrivances, the logger-head is jerked alternately to the right and left of the upright post, and the steam-valve is opened and closed at the proper intervals.

85. In a similar manner the movement of the cock which regulates the injection is effected. To the beam g g is fastened a bar o, from which is suspended the piece 13, 14, 15, called the hammer, or more commonly the F, from its resemblance to that letter. It consists of a lump of metal 13, a fork 14, and a long tail or spanner 15. By the movement of the plug-tree, a pin raises the horizontal bar 16, 17, and releases the head of the F from the catch by which it is supported ; it therefore descends with considerable force, and causes the fork 14, between the prongs of which is the arm w, to open the injection-cock. On the descent of the plug-tree, another pin depresses the tail 15 of the F, and replaces the head in the catch 16. By this movement the

injection-cock is gradually closed, which is necessary, as otherwise the warmth of the cylinder would be apt to impair the vacuum by reconverting a portion of the water into steam .

86. In order to determine the best proportions of the parts of Newcomen's engine, Mr. Smeaton made numerous experiments, and the results furnished him with data for the construction of engines of any required power. This important information is contained in the following ta-ble:—

STEAM ENGINE.

TABLE by Mr. SMEATON, for proportioning the parts of Newcomen's Engine.

Cylinder.

Boiler.

Steam-pipe.

Injection.

Stroke.

Diameter in inches.

Area in inches.

No.

Centre Diameter in feet and inches.

Diameter in inches.

Sq. hole in inches.

Length in feet and inches.

Number per minute.

20

314

1

8

3*

i

4 8

15£

22

380

1

8 6

4

ft

4 10

15i

24

452

1

9

4*

1

5

15

26

531

1

9 6

4i

§

5 2

14 J |

28

616

1

10

5

11

TB

5 4

14J

30

706

1

10 6

54

i

5 6

14*

32

804

1

11

5i

t

5 8

14

3^

908

1

11 6

5*

u

5 10

13 f

36

1018

1

12

64

1

6

13}

38

1134

1

12 6

6J

H

6 2

134

40

1256

1

13

61

iS

6 4

13

42

1385

1

13 6

7

i

6 6

12f

44

1520

1

14

7i

i

6 8

12*

46

1662

1

14 6

7|

1^

6 10

12*

48

1809

1

15

8

H

7

12

50

1963

2

11

8*

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7 2

HI

52

2124

2

11 6

8f

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7 4

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54

2290

2

12

9

H

7 6

Hi

56

2463

2

12 6

li

7 8

11

58

2642

2

13

9J

H

7 10

IOJ

60

2827

2

13 6

10

H

8

K)J

62

3019

2

14

10J

Ifl

8 2

104

64

3216

2

14 6

10|

i -

8 4

10

66

3421

2

15

11

ifi

8 6

9|

68

3632

2

15 6

11*

Ws

8 8

9J

70

3848

2

16

11J

i

8 10

94

72

4071

o

17

12

i

9

9

i

«5 «O >O Hi

j3«5h-eOO> <N«500.—

The surface in the flues is taken at half.

These have two boilers.

— ooo < oo«oooooo«oo < oooo < oooooooooooooo

co«oo eoooooocooococoojcococoooooocococo

oe»^-i»oci’ < rt^oo^roioO!Noncooco(Nt^ciO’-i’—eo

88. The different columns of this table explain themselves, except the great product per minute. This is the effect of the engine expressed in a convenient manner, to separate it from all considerations of the diameter or lift of the pumps, or of the number of strokes which *he engine makes in a minute, being the multiple of all these, and is thus obtained: — Mul- • iply the square of the diameter of the cylinder in inches, by the pressure on each square inch of the piston, not expressed in pounds weight, but in the height of a column of water in feet ; and this again is multiplied by the velocity of the motion of the piston per minute. For example, a twenty-six inch cylinder square of diameter (676) X 18 feet, the pressure per square inch in feet of water, — 12168 x 76-21 feet, the journey per minute, ~ 927323, the great product per minute, as per table. The table is calculated upon the supposition that the pressure upon each square inch of the piston is eight pounds avoirdupois, or eighteen feet column of water.

89. The last column, or effect per minute of one bushel of coals per hour, is a comparative view of the effect of different sized engines, showing the advantages of large engines in respect to small, in the quantity of work they will effect in proportion to the coals they consume.

90. To find the number of bushels of coals which any of the engines will consume per hour, calculate the internal surface of the cylinder in square inches, and add to it three times the square of the diameter to allow for the piston bottom, cylinder bottom, and the surface of the pipes which are within the cylinder. Next calculate the solid content of the cylinder in cubic inches, and find the proportion between the superficial and the solid measure of the cylinder : according to the number of fhis proportion, find a number in the following table for a division.

Proportion of the

surface of the cylinder to its capacity in square and cubic

Effect of one bushel per hour.

inches.

1

98 = 90

2

188 — 85

3

273 = 76

4

349 = ,65

5

414 =i 54

6

468 = 44

7

512 = 33

8

545 — 22

9

567 — 11

16

578 = 0

11

578 = 8

12

572

91. Lastly, cut off three places of figures from the great product per minute, and, dividing by the divisor, the quotient will be the effect of one bushel per minute.

92. For example, a seventy-two inch cylinder : its circumference will be 226-3, which, multiplied by 135 inches, the length, gives

30,550 square inches; and adding thereto 15,552, which is three times the square of the diameter, we have 46,102 superficial inches ; and the content of the cylinder is 549,652 cubic inches. By seeking in the last table far 11, 9, or 12, we find the number 572 for the divisor of the great product, after cutting off its three last figures, *viz.* 7558 -;- 572 — thirteen bushels per hour.

93. By this way of finding the proportion between the surface and the content of the cylinder, an allowance is made for the loss of steam which takes place from condensation, when it enters into the cylinder

at every stroke, after it has been cooled by the injection thrown into it.

94. We now come to a. most important period in the history of this gigantic machine : a period indeed when the towering genius of a self-educated mechanic converted the irregular and almost unmanageable drudge we have hitherto been considering into an engine, second only to the vital frame in the perfection and accuracy of its movements. The history of Mr. Watt's first connexion with the steam engine is thus detailed : — In 1763 he was employed to repair a working model of the atmospheric engine belonging to the university of Glasgow, und during this employment observed the great loss of steam from the condensation of the cold surface of the cylinder. He found that a great quantity of heat is contained in a very minute quantity of water, in the form of elastic steam ; for, when a quantity of water is heated several degrees above the boiling point in a close digester, if a hole be opened the steam rushes out with great violence, and in three or four seconds the heat of the remaining water is reduced lo boiling heat. If the steam be condensed the whole of it will afford only a few drops of water, yet this small quantity in the state of steam carried off "with it all the excess of heat from the water of the digester. Mr. Watt reasoned thus : that, if so great a quantity of heat is contained in a certain quantity of steam, the economical use of the steam was a matter of great importance in the improvement of the engine, more than the construction of the furnace, which had been the chief object of former efforts to improve the en-gine. The cylinder of the little model was heated when the steam was in it, so that it could not be touched by the hand ; but, before a va-cuum could be made, it required to be cooled by the injection and was then to be heated.

95. All Mr. Watt's early improvements were secured to him by right of patent; and, as they form a new era in the ste-am engine, they well deserve particular notice.

96. Patent, 25th of October, 1781. 'For certain new methods of applying the vibratory or reciprocatory motion of steam or fire-engines, to produce a continued rotative or circular motion round an axis or centre, and thereby to give motion to the wheels of mills, or other machines.'

97. The specification, dated 13th of February, 1782, contains a description of five different contrivances of rotative motion.

98. Patent, 12th of March, 1782.—' For certain new improvements upon steam or fire-engines for raising water, and other mechanical

purposes, and certain new pieces of mechanism applicable to the same.'

99. The specification, dated 3rd of July, 1782, contains, first the expansive steam engine, with six different contrivances for equalising the power; second, the double power steam engine, in which the steam is alternately applied to press on each side of the piston, while a vacuum is formed on the other; third, a new compound engine, or method of connecting together the cylinders and condensers of two or more distinct engines, so as to make the steam which has been employed to press on the piston of the first, act expansively upon the piston of the second, &c., and thus derive an additional power to act either alternately or conjointly with that of the first cylinder ; fourth, the application of toothed racks and sectors to the ends of the piston or pump-rods, and to the arches of the working-beams, instead of chains ; fifth, a new reciprocating semi-rotative engine, and a new rotative engine or steam-wheel.

100. Patent, 28th of April, 1784. — « For certain new improvements upon fire and steam-engines, and upon machines worked or moved by the same.'

101. The specification, dated 24th of August, 1784, describes, first, a new rotative engine, in which the steam vessel turns upon a pivot, and is placed in a dense fluid, the resistance of which to the action of the steam causes the rotative motion ; second, methods of causing the piston-rods, pump-rods, and other parts of engines, to move in perpendicular or other straight lines, and to enable the engine to act upon the working-beams both in pushing and pulling; this is now called the parallel motion, and three varieties are described ; third, im-provld methods of applying the steam engine to work pumps, or other alternating machinery, by making the rods balance each other ; fourth, a new method of applying the power of steam engines to move mills which have many wheels required to move round in concert; fifth, a simplified method of applying the power of steam engines to the working of heavy hammers or stampers ; sixth, a new construction

and mode of opening the valves, and an improved working gear ; seventh, a portable steam engine and machinery for moving wheel-carriages.

102. Patent, in 1785. — ‘ For certain newly improved methods of constructing furnaces or fireplaces for heating, boiling, or evaporating of water and other liquids which are applicable to steam engines and other purposes ; and also for heating, melting, and smelting of metals and their ores, whereby greater effects are produced from the fuel, and the smoke is in a great measure prevented or consumed.’

103. The specification is dated 14th of June,

1785.

104. The act of parliament, extending Mr. Watt’s exclusive privilege for the improvements secured to him by his first patent, expired in 1800, at which period he retired from business, having, for some years before, ceased to take an active part.

105. Mr. Watt’s first great improvement in t’-a engine of Newcomen may be best under-

stood by reference to the annexed diagram,

which A represents the cylinder, and B its plug or piston, made to fit air-tight. The pipe C is furnished with a stopcock D, by means of which the elastic va-por is occasionally admitted ; a similar pipe, furnished with a stopcock at F, passes from the other side of the cylinder, and enters the vessel G; E is a reservoir to contain water. If we now suppose the piston at the bottom of the cylinder, and steam admitted by the pipe C, its expansive force will elevate the piston, and the whole Ii-‘ernal cavity of the tube will be filled with condensable vapor. On closing the steam-cock, and opening that connected with the vessel G, a portion of the vapor will immediately expand itself, and, coming in contact with the cold sides of the vessel, a portion of its heat must be absorbed by the water at E. A new supply of steam then descends, and is also condensed ; and indeed the same process continues till the whole of the steam is drawn from the tube. A vacuum being thus formed, the pressure of the atmosphere will preponderate, and the piston-rod be depressed to the bottom of the tube. On closing the stopcock F a new portion of steam may be

admitted by the other pipe, and, after raising the piston, the process of condensation may be readily repeated.

106. The advantages that arise from this mode of forming a vacuum are very considerable, not the least important of which is a saving of nearly half the fuel. In the old engine the condensing water must reduce the temperature of the internal surface of the cylinder to that of the atmosphere, before a vacuum could be produced ~f and, when the condensing-water was applied more sparingly, the elastic vapor remaining in the cylinder was found to materially reduce the pressure of the air operating above. The great advantage, then, of Mr. Watt's apparatus consists in performing the condensation in a separate vessel, so that the cylinder is always preserved at the temperature of boiling water.

107. Having thus produced a vacuum, without the intervention of condensing-water beneath the piston, Mr. Watt's next improvement consisted in closing the top of the cylinder, so that the piston-rod worked through an air-tight hole in the centre of the cap ; and, to ensure the necessary pressure within the cylinder, steam with an elastic force greater than that of the atmosphere was admitted above the piston. The atmospheric engine of Newcomen was thus

converted into a steam engine, and its power was easily regulated.

108. The double acting engine requires nearly Cwicethe quantity of steam that would be necessary for a single engine of the same size ; but this is compensated for by its doing twice the quantity of work. And, after what has been said upon the principle of the single engine, little need be added in explanation of the double one ; for, its principles being the same, a mere change of mechanism is all that is required to produce the machine.

109. In order to a due comprehension of the action of the double engine, some of the contrivances that have been adopted to produce a pro-per distribution of the steam, and an alternate vacuum, must next

be noticed, and although the four-way cock, and sliding regulator are not considered as the most perfect of these, yet they are very frequently applied to small steam engines, and their simplicity gives them a preference. Let Y Z represent a section of a steam engine cylin-

der with its piston, and the piston rod moving through a stuffing-box, so as to be quite air-tight; g is the sleam-pipe for bringing steam from a boiler, and this terminates in a four-way cock h i , which together with the pipes m, n, and o, are drawn much too large for the cylinder Y Z, in order that their parts may be distinctly seen : p is the end of a lever or handle for the purpose of turning the cock when required. This cock is constructed precisely in the same manner as other cocks for fluids, and consists of a conical plug or pin ground very truly into the body of the cock itself; but instead of having a single straight passage through the plug, as is commonly the case, there are two curved ones h and i, which give the plug the appearance of having four openings, each appearing in the same plane, and at one quarter of the circumference apart, so that, as the cock stands in the figure, steam coming from g would pass through the opening i in the plug,' and would be delivered into the pipe n at right angles to its first direction, instead of passing directly onwards to o, as would be the case in a common cock. , From the pipe n the steam would pass immediately into the lower part Z of the cylinder, and consequently would drive the piston upwards. At the same time it

will be seen that there is an immediate connexion between the upper part Y of the cylinder through the pipe m, and opening h of the cock to the pipe o o, leading down to the condenser ; consequently, so long as the stearn is acting against the under side of the piston, there will be a vacuum at Y to permit it to rise. So soon as the piston has arrived near the top of the cylinder, the cock must be turned one quarter round by depressing its handle p from its present position to that shown by the dotted lines at q, by which all the openings in the plug of the cock will be changed : steam, therefore, which now enters at g, will be turned upwards by the passage h, and by entering the pipe m will be conveyed above instead of below the piston, while the passage i forms a connexion between the pipe n, leading to the lower part of the cylinder, and the pipe o leading to the condenser; consequently, in this position, a vacuum will be formed below the piston, while the steam is operating above it. The piston will therefore descend, and, on coming near the bottom, the cock must be again turned into its first

position, when the piston will ascend, and so on; thus producing an equality of force, both in the up and down strokes, by simply turning a small cock. t

110. Having in the preceding pages strictly adhered to a chronological arrangement of the improvements in the steam engine, it may now be advisable to furnish our readers with a sketch of its earliest application to the purposes of navigation : —

111. The possibility of employing steam as a moving power in the navigation of vessels was known early in the last century; its practical application, however, on a large scale, has not been fully established above twenty years.

112. In 1698 Savery recommended the use of paddle-wheels, similar to those now so generally employed in steam vessels, though without in the remotest degree alluding to his engine as a prime mover ; and it is probable that he intended to employ the force of men or -animals working at a winch for that purpose. About forty years after the publication of this mode of propelling vessels, Mr. Jonathan Hulls obtained a patent for a vessel in which the paddle wheels were to be driven by an atmospheric engine of considerable power.

113. In describing his mode of producing a force sufficient for towing of vessels, and other purposes, the ingenious patentee says, ‘ In some convenient part of the tow-boat there is placed a vessel about two-thirds full of water, with the top close shut; this vessel, being kept boiling, rarefies the water into steam; this steam being conveyed through a large pipe into a cylindrical vessel, and there condensed, makes a vacuum, which causes the weight of the atmosphere to press on this vessel, and so presses down a piston that is fitted into this cylindrical vessel, in the same manner as in Mr. Newcomen’s engine, with which he raises water by fire.

114. ‘It has been already demonstrated that when the air is driven out of a vessel of thirty inches diameter (which is but two feet and a half) the atmosphere will press on it to the weight of four tons 16 cwt. and upwards: when

proper instruments for this work are applied to it, it must drive a vessel with great force.'

115. Mr. Hulls's patent is dated 1736, and he suggested the use of a crank to produce the rotatory motion of his paddle-wheels ; this ingenious mode of converting a reciprocating into a rotatory motion was afterwards recommended by the abbe Arnal, canon of Alais in Languedoc, who, in 1781, proposed the crank for the purpose of turning paddle-wheels in the navigation of lighters.

116. It is probable that Mr. Hulls anticipated some objection to his new mode of propelling vessels; and it appears from captain Savery's statement, to which we have already alluded, that a strong prejudice had been raised against the use of propelling wheels in vessels. Mr. Secretary Trenchard, who was at that time at the head of the admiralty, had also given a decided negative to the proposition. In answer therefore to the objections which might have been anticipated, Mr. Hulls proposed'the following queries, which he afterwards solved in the most satisfactory way.

117. ' Query 1. — Is it possible to fix instruments of sufficient strength to move so prodigious a weight as may be contained in a very large vessel ?

118. ' Answer. — All mechanics will allow it is possible to make a machine to move an immense weight, if there is force enough to drive the same ; for every member must be made in a proportionable strength to the intended work, and properly braced with laces of iron, so that no part can give way, or break.

119. ' Query 2. — Will not the force of the waves break any instrument to pieces that is placed to move in the water ?

120. ' Answer. — First, It cannot be supposed that this machine will be used in a storm or tempest at sea, when the waves are very raging ; for if a merchant lieth in a harbour, &c., he would not choose to put out to sea in a storm, if it were possible to get out, but rather stay until it were abated. Secondly, when the wind comes a-head of the tow-boat, the fans will be protected by it from the violence of the waves, and, when the wind comes sideways, the waves will come edge-ways of the fans, and therefore strike them with the less force. Thirdly, there may be pieces of timber laid to swim on the surface of the water on each side of the fans, and so contrived as they shall not

touch them, which will protect them from the force of the waves.

121. ‘ Up inland rivers, where the bottom can possibly be reached, the fans may be taken out, aud cranks placed at the hindmost axis to strike a shaft to the bottom of the river, which will drive the vessel forward with the greater force.

122. ‘ Query 3. — it being a continual expense to keep this machine at work, will the expense be answered?

123. ‘Answer. — The work to be done by this machine will be upon particular occasions, when all other means yet found out are wholly insufficient. How often does a merchant wish that his ship were on the ocean, when, if he were there, the wind would serve tolerably well to carry him on his intended voyage; but does

not serve at the same time to carry him out of the river, &c., he happens to be in, which a few hours’ work at this machine would do. Besides, I know engines that are driven by the same power as this is, where materials for the purpose are dearer than in any navigable river in England. Experience, therefore, demonstrates that the expense will be but a trifle to the value of the work performed by those sort of machines which any person who knows the nature of those things may easily calculate.’

124. M. Duquet appears to have tried revolving oars as early as the year 1699, and experiments were made with them on a large scale both at Marseilles and at Havre : this mode, however, of impelling vessels was soon given up as impracticable ; and after our countryman, Hulls, the marquis de Jouffroy unquestionably holds the most distinguished rank in the list of practical engineers, who have added to the value of this invention.

125. It is evident, from an article published in the Journal des Debats, that in 1781 the marquis constructed a steam boat at Lyons, of 140 feet in length. With this he made several successful experiments on the Saone, near that city. The events of the revolution, which broke out a few years afterwards, prevented M. de Jouffroy from prosecuting this undertaking, or reaping any advantage from it. On his return to France after a long exile, in 1796, he learned from the newspapers that M. de Blanc, an artist of Trevoux, had obtained a patent for the construction of a steam boat, built probably from such information as he could procure relative to the experiments of the mavquis. The latter

appealed to the government, which was then too much occupied with public affairs to attend to those of individuals. Meanwhile Fulton, who had gained the same information, and was making similar experiments near the Isle des Cygnes, alarmed M. de Blanc, who knew that he had much more to fear from the influence and mechanical skill of an Anglo-American than from that of an emigrant. He accordingly alleged his patent right and requested the stoppage of Mr. Fulton's works, who returned for answer that his essays could not affect France, as he had no intention to set up a practical competition upon the rivers of that country, but should soon return to America, which he actually did, and commenced the erection of those engines to which he has since laid claim as exclusive inventor.

126. Shortly after the first experiments were made, by the marquis de Jouffroy, a gentleman of the name of Miller, who resided at Dalswinton, published a work, in which he described the application of wheels to the working of triple vessels on canals ; and in 1794 he completed a model of a boat on this construction, impelled by a steam engine.

127. From this period till 1801, but little progress appears to have been made in this species of navigation : in that year Mr. Symington, who had been employed in the construction of Mil-ler's vessel, tried a boat propelled by steam on the lorth-and-Clyde inland navigation; this, however, was shortly laid aside, on account of the injury with which it threatened the banks of

the canal, from the violent agitation produced by the paddle-wheels.

128. Mr. Symington's mode of connecting the piston and paddle-wheel was by placing the cylinder nearly in a horizontal position, so that by this means the necessity of employing a working beam was avoided. The piston was also supported in its position by friction-wheels, and communicated, by means of a rod, with a crank connected with the wheel, which imparts a mo-tion to a paddle somewhat slower than its own. The paddle wheel was placed in the middle of the boat towards the stern, and on this account it became necessary to have a double

rudder, connected by rods, which were moved by a winch placed at the head of the boat.

129. Mr. Symington also employed stampers placed at the head of the boat, for the purpose of breaking the ice on canals ; and this plan, we believe, was also adopted in the original construction of the vessels intended for the Arctic expedition.

130. In 1795 a very ingenious apparatus was invented by lord Stanhope, and tried by that nobleman in Greenland Dock. In this experiment the paddles were made to resemble the feet of a duck, and were placed under the quarters of the vessel. This plan was also tried in America, but it does not appear in either case to have answered the expectations of its projector.

131. A plan has also been tried which in some measure resembles the endless chain of a pump. This was, we believe, first employed in the duke of Bridgewater's canal, and consists in the use of a chain, with a number of paddles attached to it, going over two wheels placed level with the water line. A steam engine, acting on the foremost roller, gave motion to the chain, and a continuous parallel motion was thus effected.

132. Having already described the general arrangement of a steam engine, as improved by Mr. Watt, it may now be advisable more particularly to point out the arrangement of its mechanism in detail. For this purpose we may select the single acting engine as employed for pumping.

133. Plate VIH.ABC represents the beam, which is made of cast-iron instead of wood, and is composed of two large plates, of the shape represented in the figure, put together at twelve inches distance from each other, leaving a space between them, the centre or axis B passing through the middle of both plates. The axis lies on the floor D, which is sustained by the wall E, built beneath the centre. Q is the cylinder, contained within a steam jacket, composed of segments screwed together. F F is the steam-pipe coming from the boiler G. ab is the piston-rod,.connected with the end C of the beam, by links C, 6 ; and whilst the upper ends of these links move in the arc of a circle, with the end of the beam, the lower ends, b, are made to accommodate themselves to the vertical motion of the piston-rod a, by means of the rods c, extending to the smaller links, d, which form a parallelogram. The motion of the parallelogram is governed by the bridle-rods, which move about a fixed centre m ; the lower ends b, of the links 6, C, will ascend and descend in a perpendicular right line. A similar motion,

but of half the quantity, is given to the rod R, which works the air-pump, N, of the engine at the lower end, and the middle part of the rod has the plug-beam, R, attached to it, which has pins, or chocks, screwed on it to actuate the handles, x, y, and z, of the mechanism for the valves, which mechanism is very different from that employed in the old engines, and even from that of the first engines of Mr. Watt.

134. The pump-rod p is suspended at the end A of the beam by another parallel motion, and the upper part S of the rod is made of cast-iron, and very massive, to have a sufficient weight in itself to draw up the piston, and make the returning stroke. The real pump-rod p is jointed to the heavy counter-weight S, and is polished, like the piston-rod a, that it may slide through a collar of leathers in the head of the pump Y, because the pump is of that kind called lifting force-pumps ; its bucket raises the water in ascending, but it forces it through the air-vessel T, and pipe X, which leads to a reservoir two miles distant, in Hyde Park, and elevated 150 feet above the level of the water'in the well where the pump draws from. This well has a communication with the river.

135. The cylinder Q is kept down by the weight of a pier of masonry, on which it is placed, and large iron bolts, n, descend from the lower stanch to the groundsills, upon which the masonry is built. Immediately before the pier is the condensing cistern M, which contains the air-pump N, the condenser L, partly concealed, and hot-well g, and is kept supplied with cold water by the cold-water pump I, worked by the beam at the outer end, and the waste runs off again into the well, so as to keep the water in the cistern always cold.

136. The valves, which must be opened and shut to produce the action of the engine, are four in number; *viz.* the upper steam-valve at F, the lower steam-valve O, and the exhaustion-valve K, fig. 2, and a small valve I, beneath the water in the cistern M, to admit the injection into the condenser : but these parts are better explained in fig. 2, which is a section of the cylinder, air-pump, and condenser on a double scale.

137. A, the section of the cylinder, in which the piston X moves ; F, the steam-pipe coming from the boiler ; L, the condensei ; N, the air or discharging;-pump ; m, a passage or pipe from the pump L to the condenser N, in which passage is an occasional communication by a hanging-valve at m, which shuts towards the condenser ; I is the injection-valve, to be lifted by the engine at every stroke, for the purpose of condensing the steam in the condenser L ; w is the snifting or blowing-valve, placed outside the condensing cistern (of which M M is a section, on purpose to show the contents) ; the snifting-valve w

communicates with the condenser by a pipe passing through the side of the cistern M, and is inserted at the side of the condenser ; K is the exhaustion-valve, to be lifted by the en-gine, and open a, communication between the cylinder A and the condenser L ; O is the steam-valve, to be lifted by the engine, and open a communication between the lower part of the

cylinder, and upper part thereof, through the steam-pipe r ; and F is the upper steam valve of the same kind, opening a passage from the boiler to the top of the cylinder ; and thence by the pipe r, and valves O, K, to all parts of the engine.

138. We must now attend to the mechanism by which the engine is made to feed itself, and perform its reciprocations. The valves are lifted by means of a lever applied to each, within the iron box in which it is contained, entering into an opening in the stem of the valve ; and a second lever is fixed on the axis of the lever, on the outside of the box, to be connected with the levers and handles x, y, z, which open and shut the valves. There are three separate axles, or spindles, placed parallel and above one another, and each has a handle or spanner x, y, z, by which it is moved, either by the hand, to start the engine, or by the chocks on the plug-beam R, when the engine is in action. The two upper spindles, x and y, have short levers projecting from them towards the cylinder ; and from each of these levers a rod is suspended, with a sufficient weight, o, at the lower end to turn round the spindle, each upon its axis, in that direction which will cause the handles, x and y, to fly upwards. Also the lower spindle has a lever projecting from it, away from the cylinder, with a heavy weight, n, fixed at the end ; but this being applied, on the opposite side, to the weights of the two upper handles x, y, the weight, n, causes the handle, z, to descend. Both the axles of the lower handles, y, z, have small levers, or catches, 1 and 2, which act in the hooks of a double latch, or de-tent, t v, which is moveable upon a centre-pin situated between the two axles. The hooks of this detent are to detain the catches of the spindles, and prevent the handles y z from moving

by the action of their respective weights, until the detent is moved on its centre, so as to relieve the catches of the levers from its hooks t, v. But it is evident, from fig. A, that when only one catch, as 2, is hooked by the lower hook v of the detent, and consequently the weight of its spindle is held up, if the other catch, 1, is moved by depressing its handle y, so as to raise its weight in the act of entering the hook t of the detent, it will press the end t of the detent forwards upon its centre, and this at the same time pressing back the hook v, at the opposite end of the detent, releases the catch, z, of the lower handle, z, therefrom, and the weight n on that spindle immediately falls.

1 39. The spindle of the upper handle, x, is devoted to opening and shutting the upper steam-valve F, having a lever which communicates by a rod, 2, with the lever, 3, of that valve ; so that by pressing down the handle x, it will shut the valve F. The weight o, which is applied to the upper spindle, tends to lift up the handle x, and open the valve F ; and, when the upper handle x is depressed, the valve will be shut; or, when the handle is suffered to fly up by the action of its weight, it will open the valve.

140. The second spindle, y, has a lever communicating with the lever of the exhausting-valve K, by a rod 4. The weight o, applied to this like the former, tends to lift up the handle y, and draw open the valve ; but, when the handle

y is depressed, the valve is shut, and in this position the catch I is held down by the hook t of the detent, before explained, and retains the valve shut.

141. Lastly, the lower spindle, z, is for the lower steam-valve O, which is opened by the rod 14, when the handle z is suffered to fall down, and shut when the same is up, being held by the catch 2, and hook v. In all these the weight tends to open the valve ; but, when the valve is to be kept shut, the detent holds the weight up. Now, by removing the detent, the weight falls and opens the valve in an instant.

142. The upper spindle has no detent to de-tain it ; but what is equivalent is a rod, 5, jointed to that lever of the middle axis which has its weight and rod, o, suspended from it. The up-per end of the rod, 5, is made with a loop, or long slit, in which works a pin at the end of a lever, 6, projecting from the upper axis towards the cylinder. The consequence of this is, that while the middle axis is detained by its catch, and detent t, to keep the exhausting-valve K shut, the lever 6

of the upper spindle will be borne up by its pin resting in the bottom of the loop of the rod 5, so as to keep the weight from opening the upper steam-valve F, as long as the exhausting-valve is kept shut ; but when the catch, 1 1, of the middle axis is discharged, and its weight has opened the exhausting-valve, the looped rod, 5, will no longer support the lever, 6, of the upper axis, but allows its weight to descend and open the upper steam-valve ; but at the same time the upper steam-valve, F, is not confined to be always open when the exhausting-valve, K, is open ; for the upper steam-valve may be shut by depressing the upper handle x, without affecting the exhausting-valve at all, because the slit, or loop, in the top of the rod 5, allows that motion. This property must be attended to, because the action of the engine, by expansion, depends upon it. We have not be-fore noticed the injection-valve, from which a long wire ascends, and is attached to a strap, 9, which winds upon the middle axis ; therefore, when the middle handle, y, flies up-by its weight, it winds the strap, and opens the injection-valve at the same instant that the exhausting-valve is opened.

143. The injection-valve, I, is placed to close the orifice at the end of a short curved pipe, which enters into the condenser and turns up; and the pipe has a cock in it, between the valve and the condenser, to cut off the communication, or to regulate the supply of injection when the valve is opened. This cock must be always shut when the engine is not at work, to prevent the condenser filling with water.

144. Suppose the fire lighted beneath the boiler G ; all the valves are kept shut by pressing down the two upper handles x and y, and lifting up the lower one, their respective catches detaining them in those positions, until the steam is sufficiently heated, and the engine is ready to work. In the quiescent position of the engine, when it is at rest, the counter-weight always draws the piston fully at the top of its cylinder, as in the figure ; the air-pump bucket will also be at the top of its barrel.

STEAM ENGINE.

145. In order to prepare for setting the engine to work, all the three valves must be opened at nice. This is done by relieving the spindles from their several catches, when the weights immediately open the valves. The steam enters .hrough the valve F into the top of the

cylinder, and by the pipe r through the lower steam-valve O, into the bottom of the cylinder ; also through the exhausting valve K into the condenser L, driving before it some air which passes out at the snifting-valve w. At first the coldness of the parts condenses all the steam which enters ; and it is not until all the iron with which the steam comes in contact is heated to the temperature of boiling water, that the steam ceases to flow from the boiler in a stream, and be condensed as it arrives at the cylinder and condenser ; but after this the steam acquires the same force in the cylinder and pipes that it has in the boiler; it then occupies every cavity and crevice of the engine, and in a little while displaces all the air in the cylinder, condenser, and pipes, which passes out, and is discharged at the snifting-valve w. This valve is always covered with water in a small cistern attached to the side of the large one to ensure its tightness. Through this valve the air is discharged by the steam, not at every stroke, as in Newcomen's engine, but only at first setting the engine to work, and this operation is called the blowing through. It is well known when the cylinder and other vessels are properly heated, and the air discharged, by a very smart crackling noise at that valve like a violent decrepitation of salt in the fire; this noise being occasioned by the water in the small cistern producing a sudden and rapid condensation of the issuing steam when the air is all gone.

146. It being known by this sign that all parts of the engine are cleared of air, all the three valves are to be shut by pressing and holding down the two upper handles x,y, and lifting up the lower handle 2, in which situation its catch, 2, will retain it. This cuts off the farther supply of steam from the boiler, and also intercepts the passage of the steam from the cylinder to the condenser ; and, as the cold surface of the condenser still continues to condense a considerable portion of steam, there will soon be none left, and a vacuum will be formed in the condenser, while the cylinder both above and below the piston is full of steam. The vacuum in the condenser will soon become perfect from the external cold alone, though more slowly than when an injection is made.

147. In this state the engine is prepared for starting at a moment's notice, by the engine-man letting the two upper handles, x and y, rise up, by their respective weights: this opens the upper steam-valve, and the exhausting and injection-valves ; the former admits the steam into the top of the cylinder to press upon the piston ; while the latter allows the steam, already in the lower part of the cylinder, to flow into the vacuous condenser ; and at the same instant that he opens the injection-cock the valve is lifted at the same time with the exhausting-valve : this admits a jet of cold water into the condenser, and

condenses the steam as fast as It arrives from the cylinder, *o that in an instant all the steam in the lower

part of the cylinder will be drawn off and condensed. The pressure of the steam on the piston, being now unbalanced by any thing beneath the piston, it descends and draws up the pump-buckets and columns of water in the pumps, with a velocity proportioned to the pressure of the steam and the diameter of the piston, compared with the height of the column of water in the pumps, and the diameter of the bucket : but, the piston having descended about one-third of its stroke, a chock of the plug-frame R meets the upper handle x, and, pressing it down, shuts oft the steam from the boiler. That part of the handle on which the chock acts becomes perpendicular when the valve is shut, the handle being bent for that purpose; and the chock can there fore descend farther, and slide against the perpendicular part of the handle, which is straight, without producing any farther depression of the handle, at the same time that it keeps it down to the same point, so as to hold the valve shut. The piston, therefore, continues its descent by the farther expansion of the quantity of steam at first let into the cylinder; but, having arrived at the bottom of its stroke, a chock on the opposite side of the plug-beam 11 seizes the middle "handle y, and presses it down, which pushes the rod 4, until it shuts the exhausting-valve K, and also the injection-valve by the strap and rod 9. When the catch 1, of this handle y, presses on the up-per hook t, of the detent t v, it relieves the catch 2, of the lower axle s, and then the weight n causes the handle s to fall, and, pulling the rod 14, opens the lower steam-valve O. Let us now consider the position of the engine ; the middle handle y will be held down, by its catch 1 holding in the upper hook t of the detent so as to keep the exhausting-valve K shut ; and the upper steam-valve F is also kept shut, by the same means which kept it shut during the latter two-thirds of the descent of the piston.

148. Under these circumstances the piston is at liberty to vise by the action of the counter-weight S, because the opening of the lower steam-valve O has established a free communication between the top and bottom of the cylinder, and the steam in the top of the cylinder can flow through the pipe r, and enter the bottom of the cylinder, as fast as the piston rises, by the action of the counter-weight.

149. When the piston has returned to within one-third of the top of

the cylinder, the chock of the plug-frame quits the upper handle x; but this handle cannot yet be thrown up by its weight to open the upper valve, because the rod 5 from the lever of the middle axis bears up the short lever 6 of the upper axis x ; and thus the motion continues till the piston arrives very nearly at the top of the cylinder : a chock on the plug-frame then seizes the lower handle z, and, lifting it up, shuts the lower steam-valve ; and the catch 2 of the lower axis, passing the lower hook v of the detent, moves it on its centre so as to release the catch 1 of the middle axis from the upper hook t of the detent. This being the case, the weight of the middle axis causes its handle y to fly up, and by the rod 4 it opens the exhausting-valve; and, by drawing the strap and rod 9, it opens the injection-valve ; at the same time the

upper axis T, losing tne support of the rod 5 which kept it up, its weignt carries up the upper handle r, and, by pulling the rod 2, it opens the jpper steam-valve F.

150. The steam from the boiler is now admitted to press uporUhe upper surface of the piston, while the steam from the lower part of the cylinder beneath the piston rushes into the condenser, where, being met by the cold injection, it is condensed, and makes a vacuum in the lower part of the cylinder, which brings down the piston to make another stroke.

151. At one-third of the descent the plug-frame, as before, presses and holds down the upper handle x to keep the upper steam-valve shut ; and, when the piston has arrived at the bottom, the plug-frame presses down the middle handle y to shut tne injection and the exhausting-valves ; and in catching, this discharges the lower axis, and the weight thereof opens the lower steam-valve. The piston then rises by the counter weight, and when at the top of its stroke the plug-frame lifts the lower handle z, and shuts the lower steam-valve ; and, in catching, discharges the two other handles, which open the upper steam-valve, the exhausting-valve, and the injection-valve, and this produces the descent of the piston as before.

152. If the air has been fully discharged from all parts of the engine by blowing through, the action of the air-pump does not begin until the injection-water and the air, which are extricated from the water in the boiling, have accumulated in some quantity in the condenser ; then at every descent of the bucket d of the air-pump it dips into the water contained in the bottom of the barrel N, and the water passes through the valves in the bucket : these valves shutwhen the bucket isdrawn up, lifting all that water which is above them up to the top of the barrel, and there it is forced out through the hanging-valve g into the hot-well g. The drawing up of the bucket at the same time makes a

vacuum in the pump-barrel beneath it ; and if this vacuum is more perfect than that in the condenser, which it will be if the condenser contains either air or steam, it will press by its elasticity upon the surface of the water in the lower part of the condenser, and force it through the hanging-valve at m into the lower part of the barrel N of the air-pump ; and, when all the water is gone from the condenser, the air r > r elastic vapor which is in the condenser will follow and enter into the pump until the space of the barrel beneath the bucket is filled equally with the condenser.

153. This takes place while the pump-bucket is at the top of its barrel ; and on the descent of the bucket the space beneath it is diminished until it compresses this rarefied vapor so much, that its elasticity will be sufficient to close the hanging-valve m, and to lift the valves in the bucket d, and pass through them into the space of the barrel above the bucket : and, when the bucket has descended to the very lowest, the water contained in the bottom of the barrel, not being able to escape through m, must pass up through the valves, and rest upon the bucket d. When the bucket ascends it carries before it this water and air, and as it rises the space of the

barrel above the bucket diminishes, and the rare vapor or air in it condenses by being crowded into less space, until at last it becomes equally dense with the atmospheric air, and then the water following it drives it through the valve g into the open air.

154. The ascent of the bucket d left a vacuum-beneath it as before, and this drew a poriion of the air or vapor from the condenser into it ready to be extracted by the next stroke. As soon as the bucket begins to return the discharge-valve g shuts, and prevents the atmospheric air from entering into the pump. By this we see that, if the vapor in the condenser is so rare that the whole contents of the barrel of the pump will only make a few cubic inches, when reduced to become equal to the pressure of the atmosphere, this small quantity will be effectually evacuated through the discharge-valve g, because the water resting upon the bucket follows the air, and will chase every particle of it from the top of the pump, and then follow itself.

155. An effective and economical steam en-gine, imparting a primary rotatory motion, has long been a grand desideratum in the arts. The importance of such an invention will be apparent, when it is considered that, although the reciprocating steam engine (whether we look to the admirable expedients for adapting it to the end proposed,

or to the skill displayed in the workmanship) appears to have reached its ut-ˆ most degree of perfection, yet it absorbs half the power of the steam.

156. This fact may be proved by calculating what pressure on the pistons of reciprocating condensing engines is required to produce the declared powers. The results will prove generally to be only from six pounds to six pounds and a half per square inch, on the pistons of small power engines ; seven pounds as to engines of from ten to thirty horse powers; and from seven pounds and a half to eight pounds as te engines of larger powers; when the actual pressure of the steam is at least seventeen pounds per square inch above a vacuum. When the engine is in the best possible working state, these results will be a little more; but this state is seldom long maintained ; therefore they may be taken as a fair average. This serious loss of power is occasioned principally by friction, and in alternating the movements of the parts. Now to obviate these defects, a variety of rotatory steam engines have been suggested. These may be examined nearly in the order of their invention, commencing with that invented by Mr. Masterman : —

157. Plate XII., fig. 1, represents a vertical and central section of the troke (being that part of the engine which revolves). Fig. 2 is a trans verse section of it, and of the two masks alter mentioned. The troke is composed of the axis , of the nucleus (being the central part, and through which the axis passes) ; of the annulus (being a hollow ring, in which are placed valves) , and of the radii (being the steam passages between the nucleus and the annulus). Fig. 3 is a plan of the nucleus. That part of it which is included between the two concentric circles is called the face. The surface of the face is a

perfect plane. The axis passes through the hole 1 at right angles with the plane of the face. Six holes 2, of similar figure and dimensions with each other, are sunk in the face at equal distances, in a direction parallel to the axis, for three or four inches ; then, curving into a direction at right angles with the axis, they open in the periphery of

the nucleus.

158. The annulus A consists of six equal segments. At each of their joints is fixed a valve, which, by being ground on its seat, is rendered steam-tight when closed.

159. The radii 1, 2, 3, 4, 5, 6, are connected with the nucleus arid annulus, so as to form steam-tight communications between each hole in the face, and the inside of the annulus.

160. Fig. 4 is a plan of the inner mask, being a circular plate of metal, of equal diameter with the face, about two inches thick, and having each side perfect planes, parallel to each other.

161. There are four holes 1, 2, 3, 4, through : 1 is of sufficient size to admit the axis ; 2, 3, 4,

are each one-sixth of the space that would be included by completing the two concentric circles, segments ofwhicn form the sides of those holes; and those circles are described with the same radii as the segments of those which bound the holes in the face. Thus, each of those holes would extend over one of the holes in the face, and one of the adjoining spaces. The space between 2 and 3 is of such dimensions as just to cover completely one of the holes in the face ; 4 is situated so as to leave equal spaces between it and 2 and 3.

162. The periphery of this mask is clasped by an iron hoop, from which projects a lever, extending nearly to the annulus, and having a small inclined bar placed across its end. The two projections from fig. 4 represent the beginning of the lever; and the whole of it, with the hoop, is represented by the dotted lines m in fig. 1 .

163. Fig. 5 is a plan of the inner side of the outer mask. Fig. 6 is a plan of its outer side. This mask is a circular piece of metal of the same diameter, and about the same thickness, as the inner mask. The inner side, fig. 5, is a perfect plane ; 1 is a hole sufficiently large to admit the axis ; 2, 3, 4 (see fig. 6), are pipes which en-ter the outer side of this mask, and open in its inner side. The apertures are represented by the three smaller circles in fig. 5. 2 is the pipe through which the steam passes from the boiler to the engine. 3 is the eduction pipe, through which, the steam is discharged from the engine into the condenser, or (where one is not used) into the air. 4 is a pipe through which any waste or excess of water in the annulus may be supplied or withdrawn; it is kept .closed by a stopcock while the engine is at work. The axis passes through 1 in both masks ; the inner mask is

placed next the face, the other next the inner mask, and both are kept closely pressed towards the face (by means of screws acting on. the back of the outer, mask) so as to be steam-tight with each other, and with the face ; a * rifling pressure suffices to make them so, the opposed surfaces having been ground on each other. The outer mask is placed in such a position, with respect to fig. 1, as that the pipes 2 and 3 may

be horizontal, and point towards radius 2 (it appears in this relative position in fig. 6), and it always remains stationary. The inner mask is placed in such a position, with respect to the outer mask, as that pipes 2, 3, 4, in the latter may communicate with the holes of corresponding numbers in the former, and thus form a communication between the pipes in the outer mask and the face. It appears in this relative position in fig. 4.

164. Thus the holes in the inner mask are for the same relative purposes as the pipes in the outer mask marked with corresponding numbers.

165. The inner mask is moveable by means of m, but so far only as not to interrupt the communication between 2 and 3 in the outer mask and the face.

166. The transverse sections of both masks, placed in their relative positions, are represented in fig. 2.

1 67. The corresponding letters in figs. 1 and 2 refer to the corresponding parts in each figure; p p is the axis ; q, g, are its bearings ; r is a crank attached to the end of the axis, for working the feeding pump, and (where a condenser is used) the air-pump. As the valves, and the gear for regulating them, are precisely the same in each segment of the annulus, only two of them (one showing their position closed, the other open) are lettered for reference.

168. Each valve /is similar to the other, and opens in the same direction ; its gudgeons mov-ing freely in sockets fixed to the sides of the annulus nearest the axis.

169. Their working gear is as follows: — a is a small hollow protuberance, or bonnet, screwed on the annulus and communicating with the inside of it; on one of its inner sides is a socket, on the opposide side a stuffing box ; one end of a spindle works in the socket, the other passes through the stuffing box to the outside of the bonnet ;

to this end is attached the lever b, and to the centre is attached the lever c, both levers being at right angles with the spindle and in the opposite direction to each other. To the extremity of c is attached, by a moveable joint, the rod d, and to the extremity of b is fixed the weight e, being more than sufficient to counterpoise f, which is connected with it by means of a moveable joint at the other end of d and attached to the centre of/. The levers are sc placed as to cause/ to be lial open when they point to the axis. Thus it is evident that during the revolutions of the aoke, two of the valves /' on its ascending side, denoted by the arrow, will by the mere preponderance of e be shut, and the whole of the others will be open, as represented in fig. 1.

170. For more easily comprehending the ac-tion of these valves, let it be considered that their movements are regulated by the mere gravity of e. It will be afterwards shown that they are regulated with more precision by means of the catch h and lever m. Let it also for the present be considered that there are no valves i, nor lever k, their use will afterwards be detailed. The machinery to which motion is to be imparted is attached to that end of the axis next fig. 1.

STEAM E N G I N E.

171. The steam is generated and condensed in the usual manner.

172. The principle on which the engine acts is by a liquid body, water or mercury for instance, placed in the annulus being pressed on one side of the troke by the steam, until that side gain such a preponderance over the other as to overcome the resistance of the machinery attached to the axis ; and by being then sustained there, so as to maintain the preponderance during the revolutions of the troke.

173. The engine represented by the plate is one in which water is the liquid made use of in the annulus.

174. The manner in which it is worked is as follows : — The annulus is nearly half filled with water, which need never be withdrawn. The

troke is placed so as to have two of its radii in a vertical position : m is then depressed so as to cause 2 in the inner mask to communicate with the lowest hole in the face. The steam cock is now turned, consequently the steam rushes through the pipe and hole 2 in the outer and inner masks, and through the lowest hole in the face, into the lowest radius ; and, after imparting to the surface of the water in that radius its own temperature, it presses such water downwards, and flows into the annulus, condensing in the water therein, until it has imparted to it also its own temperature, which will be rapidly accomplished. On the temperatures becoming alike, the steam will rise through the water on both sides of the troke; and meeting with a closed valve on one side will press the water, which is beneath it, downwards, and consequently cause the water on the other side to rise proportionably, until the preponderance thus given to that side be sufficient to overcome the resistance of the machinery attached to the axis. Immediately whereupon the troke will begin to revolve, — m must now be returned to its working position ; that is, such a position as will elevate the hole 2 so high as to cause the steam to flow into the annulus, just above the depressed Mirface of the water (ascertained by the pressure of steam).

175. The load or resistance of the machinery remaining the same, and the supply of steam being equable, the water will remain nearly stationary during the revolutions of the troke : its surfaces are denoted by the dotted lines at n and o.

176. As the troke revolves, each of the holes in the face communicates in succession with 2 in the inner mask. It should be borne in mind that, as has before been observed, the position of the inner mask is never so far changed as to prevent 2 and 3 therein communicating with the corresponding pipes in the outer mask, when the engine is at work.

177. By the construction one entire hole in the face, or parts of two equal to one, is or are always in communication with 2 in the inner and outer masks ; so that there is always an equable flow of steam into the annulus, preventing the depressed surface of the water rising with the ascending closed valve.

178. The holes in the face, as they pass in s accession from 2 to 3 in the inner mask, are

entirely closed by the space between them ; and, immediately on

communicating with 3, the steam confined between the two closed valves rushes from the annulus, through 3, into the air; or into the condenser, if one be used. And, until the same hole in the face has passed 3, a communication with the air, or the condenser, remains for the discharge of the steam.

179. The pressure of the steam being thus femoved from each valve f, as it arrives at this point, it will, by the gravity of e, open as it begins to descend (see the valve/ partly open in fig. 1), and thus allow the column of water to remain on that side of the troke.

180. The water will fill the radii as their ends descend beneath the elevated surface o, and will remain there until the steam presses it out at about n ; but cannot escape if before it enters them the hole in the face has passed the hole 3 : otherwise, however, the water would escape through that hole into the air or condenser.

181. A uniform rotatory motion is thus produced and maintained, as long as the steam flows equably into the annulus, acting with a force proportionate to the preponderance of the water on one side of the troke over the other. This force is easily estimated ; being equal to the weight of a perpendicular column of water, having the difference of the two levels for its altitude, and the area of a transverse section of the annulus for its base, pressing against the closed valve.

182. Having thus described the action of the engine without the catches h, or the valves i, it is now necessary to describe them. The projection g is cast with a ; A is attached to one side of this projection by a pin, which is the fulcrum on which it moves : it is prevented swinging to an angle of more than about 20° by the shoulders pn it, near its round end ; this end is much thicker than the other end, and more than sufficiently heavy to counterpoise it. Near the extremity of its thin end is fixed a pin of about four inches long. Another pin of about the same length is fixed on b within e ; those two pins project from h and b at right angles, as seen in the figure, and point, the first towards the eye, the second in the opposite direction. The pin on b rests in the notch at the thin end of h when just below OT, and thus prevents e acting on f; but as the catch passes m the pin on h comes in contact with the bottom of the inclined bar on m, and before it has passed the top of it, is pressed so far towards the annulus as to release the pin on b from the notch, when e immediately falls and

/closes. The superior gravity of the round end of h keeps the notch back, or towards the annulus, while that part of the troke is descending, and brings it forward so as to support the pin on b, when

it begins to ascend.

183. When the engine is working with its heaviest load, the depressed surface of the water will be as near the bottom of the annulus as it can be, without affording a passage for the steam to the other side of the troke ; and the lighter the load the farther from the bottom will it be. Now it is most beneficial, both for / to close and the steam to enter into the annuius, above such depressed surface; as otherwise the speed

of the engine would be impeded, and the surface through the centre of k, and through the notched

of the water agitated; but were the valves / to end of the small projection appearin-fixed to

close, and the steam to enter the annulus always the annulus, which consequently forms \ fulcrum

at one spot, either this disadvantage would occur for it. As the valve/ (represented partly ooenˆ

when the engine should be working with a light begins to open, the extremity of k Dresses

load, or the column of water must be limited, against the back of i until its gravity causes it to

:>r part of the water must be withdrawn from the shut. Its gravity keeps it shut until it has de—

annulus. scended below the horizontal line; when the

184. It is evident that any alteration in the pressure of the water prevents its openin°- until position off?* changes the closing point of /; by Hie steam, entering through its radius presses varying the point of contact of the pin on h with it open.

the inclined bar on m. It is also evident that 190. I is a bonnet screwed to the annulus by any alteration in the position of the inner mask, which access is procured to the valves for re-in like manner, varies the point at which the pairing them. The troke is constructed of cast steam is admitted into the annulus. metal, except the valves and inner mask

(which

185. Before the clasp round the inner mask is are of brass, where mercury is not used), and screwed up, the following adjustment must be the valve gear inside the annulus, which ‘is of made: — Let a hole in the face (that communi-wrought iron.

eating with radius 2 for instance) be covered 191. The troke is enclosed in a case of stone

by the space between 2 and 3 in the inner mask, or brick, for the purpose of preventing conden—

The situation of /immediately below that radius sation when at work, and the cooling of the

will be the most beneficial point relatively to the water when at rest, by confining the heated air

then position of this mask, where the valves / next its surface. And, further to delay the latter,

ought to be closed-Because the covered hole evaporation is prevented by closing valves in the

immediately afterwards communicates with the steam and eduction pipes. With these precau—

eduction hole 3, and consequently, were they not

then closed, the steam entering radius 1 would,

until they closed, be lost by passing out through

radius 2, without having exerted its force ; and,

were they closed lower than at the arrow, that is,

when any considerable portion of steam should

be entering through radius 2, they would be

pressed open again; m ought therefore to be

placed in such a direction as to cause/ to close

at this point. And this direction will be nearly

that in which m appears in the plate. The clasp

is then screwed so tight, by means of the screws

and nuts represented in fig. 4, as to cause the

position of the inner mask to be altered by any

movement of m.

186. After this adjustment, one simple movement of m will not only cause the steam to enter the annulus above the depressed surface of the water, but will also cause the valves / to close at the most beneficial point relatively to such entrance of the steam. There could be no difficulty in causing the steam to regulate this move-eighteen inches, on account of the advantage of ment by its pressure on a small piston connected limiting their action.

with lever 772. 195. Where mercury is used, instead of water,

187. Where the load is constant, the inner the engine differs not in construction or pnnci-mask, the lever m, and the catch apparatus, pie; but the diameter of the troke need not might be dispensed with, by making the aper-exceed six feet for any power; the great specific tures in the outer mask of the same form and gravity of the mercury giving the requisite pre: size as those represented in the inner mask, and sure to the steam by a column of about t urty by leaving the action of the valves /‘to be regu-inches : and the transverse section of the annulated by the gravity of e ; and, where fuel is lus ought always to be an oblong, that form re cheap, the valves i might also be dispensed with ; quiring less mercury. Several parts may, he thus diminishing the expense of the construction ever, be omitted ; for instance the valves i ; and repairs of the engine, and simplifying it. because, with a column of thirty inches, tn«

188. The only use of valves i is to prevent radii descend to the horizontal line before thei the water entering the radii at o. Their con-ends reach the surface of the mercury, ana lu struction and action are as follows :— That end temperature would be throughout alike. Ai of each radius which enters the annulus has a the inner mask (the outer mask b

flanch of about an inch broad ; against this i assume its form as before mentioned), b,

closes. The gudgeons of i work freely in sockets the closing point of

the va ves :

screwed to the flanch altered, so short - -<”™ ‘comparatively ™th

tions the water would remain until the next day at a very few degrees below the boiling point, and consequently the engine in an immediate working state. Where a condenser is not used, fuel is saved, by causing the steam from the eduction pipe to impart its heat to the water from which the boiler is supplied.

193. The diameter of the troke ought never to be less than twenty-eight feet, as the engine could not be worked economically with steam of a less pressure than about ten pounds per square inch ; but this diameter need never be increased, as the power required may be gained by enlarging the annulus. In large powers, however, it would be found advantageous to increase the diameter of the troke.

194. In the plate the annulus is circular, but in larger powers it would assume the form of a square, and in still larger powers that of an oblong ; so that the breadth of the valves from their gudgeons should never exceed about

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189. Lever k is attached to lever c by the the diameter of the troke allow.nt

-od appearing to connect them in the plate, which to enter the annulus nearly as t

h as a moveable joint at each end. A pin passes zontal line of the radii, without causing a n

to descend into the mercury before its communication be cut off from hole 3. And for the same reason the radii may be reduced in number to five or even four. The pipe 4 may also be omitted, there being no waste of the mercury.

196. Instead of the case before mentioned, the troke, with its mask, may be enclosed in a steam-tight cast iron case, and the steam being admitted into it in the first instance, all condensation of steam within the annulus is prevented. This it is advisable to effect, on account of the difficulty of getting rid of the water, which would accumulate on the depressed surface of the mercury. This water, however, may, when necessary, be blown out by the steam into the air through a pipe of about a foot long, inserted into that side of the annulus next the axis, and having a slop-cock iu it ; and a common case may then be made use of.

197. It will be perceived that where mercury is used, the engine is exceedingly compact ; but, where space is very limited, the troke may be made to revolve in the boiler itself, by having a projection on its top ; and this is the more economical mode.

198. A patent has been taken out for another rotatory engine that possesses considerable me-rit. It may be thus described : — A piston is made to revolve in an annular channel, or hollow ring, formed between two concentric horizontal cylinders ; into which channel two sliders pass from opposite sides of its diameter alternately, so as to form in it steam-tight partitions that constitute abutments, to resist the steam at the end of the portion of the channel, in which it is forcing round the piston, and which are by the external machinery drawn out of the track of the piston, whenever it approaches them.

199. To communicate the motion of the pis-ton to the mill work on which the engine is intended to act, the internal cylinder is divided transversely in the centre into two equal parts, between which a circular vertical disk is placed, to the edge of which the middle of the side of the piston next to it is united ; and an axle pas-ing through the centre of this disk, and through the entire of the internal cylinder in the line of its axis, being made fast to it, the circular mo-tion of the piston is by it communicated to this axle, which in its turn acts on the mill work. The end plates of the outer cylinder form each one piece with one of the halves of the internal cylinder, and, by being ground into rebates in the ends of the cylinder, make with it steam-tight junctures, which are closely pressed together by means of flanches formed in the end plates, and in the cylinder, connected by screws and nuts.

200. The circular disk to which the piston is attached is made steam-tight at its sides, by rings that iie in grooves formed in them, which are pressed against the adjoining divisions of the internal cylinder by hemp packing placed between them and the disk; and the piston it-self, which is of a rectangular form, is made steam-tight at its edges by a metallic packing, behind which hemp packing is also placed, whicli metallic packing consists of four pieces

in the form of the letter L, the longer portions of which lie along the two principal edges of the piston, while the shorter portions meet in the middle of its ends; the longer pieces at the outer edge of the piston meet in the middle, but those at its inner edge, next the centre, are separated by the disk with which they are made to form secure junctures, by portions of them being bent round into its direction, and entering into cavities made for them in its substance. Where the ends of these pieces of metallic packing meet, part of their external surface is cut away, to admit plates to be placed across their lines of juncture to prevent the steam from passing between them ; and spiral springs being fixed in several places between these pieces and a piece in the centre of the piston force them out against the sides and ends of the two concentric cylinders ; while flat plates at each side of them, that are nearly equal in size to the transverse diameter of the channel, and which are united by screws to the central piece of the piston, keep them in their places, and along with them and the central piece constitute the piston.

201. The packing pieces and the side plates being ground, where, they come in contact, the former easily slide between the latter on being pressed by the springs, and at the same time maintain their joinings steam-tight ; and the screws which unite the plates to the central piece, being made of the same metal with them, expand or contract equally with them on alterations of temperature, which prevents any of that contraction that might be occasioned from difference of expansion, were the parts made of different metals.

20a. The sliders move vertically in grooves made for them in the end plates, and enter into other grooves cut lengthways for them on the face of the internal cylinder; they of course pass through the sides of the external cylinder, and are there received into steam-tight cases ; through the ends of which that are farthest from the centre, rods, like piston rods, pass from their middles through stuffing boxes; the outei ends of these rods are fastened to the centre of horizontal bars that extend a little beyond the ends of the main cylinder, and are there

jointed to vertical pieces that terminate in forks ; between which are placed vertical rollers, against which the edges of cam wheels act that are attached to the main axle, by which they are moved up and down so as to close or open the channel in whiJi the piston moves, as required ; while two other rollers, placed at the sides of the forks externally, serve to guide them between upright bars, placed for that purpose, and keep them from being made to deviate to either side by the pressure of the cam. The upper slide is moved upwards by the cam wheel, and descends by its own weight ; but the lower one, which lies directly under it at the other side of the main cylinder, is pressed downwards by the cam, and rises up again by the action of a balance lever placed beneath it, to the farther end of which a weight is appended. The rod by which each slider is worked is fastened to it by the intervention of a narrow bar that is dove-tailed to the outer edge of the slider, to the centre of whicli bar the rod

is rivetted or screwed. The longest radius of the cam wheel by which the sliders are worked is nearly equal in length to the radius of the outer cylinder, and its shortest radius is, by the depth of the annular channel in which the pis-ton moves, so much less in length than this. The sliders themselves are made steam-tight in the grooves by grinding ; and in the part of the edge of the central disk, against which they press when closed, sloped notches are made, which, as the disk revolves, gently elevate them to its edge, and thus, in the opinion of the patentee, prevent sudden percussion.

203. For the admission of the steam into the annular channel an aperture is made through each of the end plates near the entrance of the sliders; and diametrically opposite to them two other apertures are made in the same plates, for the eduction of the steam from the portion of the annular channel which is being emptied, either into a condenser or into the open air. These apertures are covered with circular valves, ground on their beds to make them steam-tight, and which turn round on their centres ; in these circular valves perforations are made of the same size of the other apertures

mentioned, which, when turned round over them, permit the steam to pass ; but, when turned in the opposite position, totally close the passages, by the solid parts of their plates being then brought round over the apertures so as to cover them completely. These circular valves are placed in bonnets, or boxes, which are screwed to the end plates over the apertures ; and axles pass from their centres through stuffing boxes, in the covers of these boxes, by which they are turned round by arms that project from them at right angles, and which are jointed to a frame that connects the two of them together, which are on each end plate at opposite sides of its diameter; through the middle of which frame the axle passes, carrying on it a pointed cam wheel, which acts against friction rollers, attached to the joints that connect the arms with the frame ; by which arrangement the circular valves are made to turn in opposite directions ; so that when one is opened to let the steam enter at the tipper part of the annular channel, that which lets it pass to the lower part of this channel is closed ; and, in like manner, when the circular valve is closed, through which the steam passes out at the other end plate of the cylinder, that at the opposite extremity of this plate is opened, to afford a free passage to the steam from the other side of the channel, either to the condenser or to the open air.

204. Supposing then the piston to be near the upper aperture for the admission of steam, the slider behind it being then let down by the cam which moves it, the steam will press ‘. forward, while that which remained at the other side of the piston in the channel, passes out at the aperture at the lower part of the other end plate, until the piston approaches near to it; when it is immediately closed by the action of the cam on its valve, and at the same time the lower slider is pressed downwards, out of the way of the piston by its cam; the piston directly after passes by this lower aperture, and

the lower slider, and also by the second lower aperture, close to the other side of the lower slider, by which the steam is admitted to the lower portion of the channel ; immediately after which the lower slider is closed, and the lower steam valve and the upper eduction valve are opened ; when the steain presses the piston round upwards, until it comes nearly to the upper slider, and to the steam valve, and eduction valves at its opposite sides, which are managed in the same manner as the lower valves and lower slider just described ; by which means the piston passes them in a similar man-ner, and is again urged forwards by the steam as at first.

205. In front of the engine, on a level with the axle, a box is fixed to the frame-work, by which the whole engine is supported, into which box the steam enters by a pipe from the boiler, and passes from it horizontally through tubes concealed in the frame-work, round into passages made in one of the end plates which con-vey it to the valves; while similar passages in the other end plate convey the steam off from before the piston through the eduction valves, and round through similar tubes into another division of the same box, whence a pipe passes either to the condenser or to the open air ; and a common"sliding valve is so placed in the box that by shifting its position, by an external han-dle, the steam will pass into those tubes which before served for the eduction ; and, on the c.ontrary, those tubes through which the steam be-fore passed will then convey it away to the division of the box whence the pipe proceeds to the condenser or to the open air. The precise mode of arranging the sliding valve, and the divisions in this box is not detailed in the specification, but may be easily conceived by those conversant with the subject ; by the means however mentioned, the direction of the progress of the piston will be reversed, and the engine be made to turn in a course contrary to its former movement : which contrivance would be particularly useful in working gins for raising coals from the pits, and other similar purposes ; and would also be occasionally of use when the rotary engine was employed in steam vessels.

206. The patentee explains the term, ‘ improved rotary steam engine,’ in the title, to mean improvement in rotary steam engines, and enumerates the following particulars in the engine described as coming under that head, and accordingly claims tl.em as his sole property by authority of his patent. 1st, the annular grooves in the faces of the divisions of the internal cylinder next the central revolving disk, which receive the packing rings that make that juncture steam-tight : 2d, the notches in the edge of the disk, which receive the ends of the sliders, and cause them to be gently elevated to its circumference : 3d, the combined packing of metallis pieces and hemp used with the piston and the central disk, which the patentee calls ‘ compensating packing:’ 4th, the circular valves for closing the apertures through which the steam passes into and from the annular channel in which the piston moves : and, 5th, the friction rollers at the ends of the rods of the apparatus

for moving the sliders, against which rollers the cam wheels act.

207. The next rotary engine which it may be necessary to describe was invented by Mr. Eve. It formed the subject of a patent, and the specification will scarcely admit of abbreviation. The patentee says, ‘ I, the said Joseph Eve, do here-by declare that the nature of my said improved steam-engine consists of five particulars. 1st, In the application of revolving cones to rotary engines, in the manner hereinafter described, for the purpose of compensating any loss by friction ; and in the general arrangement of the various parts of the rotary engine hereinafter described. 2d, In a steam-generator, so constructed of tubes that the heat of the furnace shall cause the water to circulate constantly through the tubes, thereby preventing the steam from driving the water out of them, by which means the said tubes are less liable to burn out or become oxidated. 3d, In an arrangement of one or more revolving cock or cocks, for the purpose of supplying the generator with water in lieu of the ordinary forcing pump. 4th, In a new safety apparatus, by which the elasticity of steam in boilers is ascertained by weight directly applied instead of indirectly, as in the ordinary steelyard valve. And, 5th, In such an arrangement of cog wheels with a compound engine, in such manner that the steam, after having acted as high pressure, may be used as low pressure with greater effect than in any engine now in use. And, in further compliance with the said proviso, I, the said Joseph Eve, do hereby describe the manner in which my said invention is to be performed by the following mechanical description of the various improvements constituting the same, reference being had to the drawings annexed, and to the figures and letters marked thereon (that is to say) : — Sheet first contains three modes of constructing my rotary steam-engine. Fig. 1, plate V., STEAM-ENGINE, presents an end section. Fig. 2, a longitudinal section of the same engine, on the simplest man-ner of construction. The same letters refer to similar parts in all the figures. In sheet the first, a, a. are the cylinder and cone revolving in contact in opposite directions, the cone having one groove, and being one-third of the diameter of the cylinder, which latter has three wings or pistons, c, c, c, the ends of which, as they revolve, touch the outer case E, and do not admit any steam to pass. The steam is admitted through the pipe F, and, acting on the wing c, causes the cylinder to revolve until the said wing passes the pipe G, where the stratum of steam lodged between each two wings is allowed to escape ; the wing which has thus passed falls into the groove d of

the cone, the bottom of which groove it touches in passing, thus allowing no steam to escape between. The said wing c then passes again by the steam-pipe F, and is acted upon as before described, and so on in rotation. The cylinder a, which is firmly fixed to its axis b, rests on one side, on the outer case E, through which the axis projects; but as there is some friction produced by the revolution of the said cylinder at its two ends, touching the outer case, I have placed a false end, h h, under the Oj'| osite end of the cylinder, which false end slides on the axis b freely, and has a thread out at the end ; by means of which, and the adjusting nut i, the cylinder, if worn at the two ends, can be easily tightened and adjusted. The adjusting nut is confined by the collar K, which collar is screwed to the outer case. The conical shape of the small runner, which can likewise be moved upwards or downwards in the outer case, serves to keep the two convex surfaces of the cylinder and cone in contact, so that no steam can escape between them. It is obvious, from the conical shape of the runner, that the longer the engine will be in use the better it will work, and the more steam-tight it will become. By referring1 to fig. 3, which presents a longitudinal view of the conical runner, it will be seen that the groove d is cut into a separate piece of metal, which slides by an adjusting screw up and down in the empty space x, so that when the engine is adjusted, the groove, or the piece of metal into which the said groove is cut, can be moved up and down so as to fit the wings of the cylinder by means of the adjusting screw o, as exhibited in this and in fig. 4, which latter figure presents aii end view of the before described cone. The dotted lines in the said fig. 4 show the appearance of the sliding piece containing the groove. Letters n, n, in fig. 11, present two cog wheels, running into each other, attached on the outside of the engine to the axis of the cylinder and cone, placed there for the purpose of producing a corresponding revolution of the said cylinder and cone, causing the groove of the cone to present itself regularly to the wings of the cylinder, o is a pinion, fixed to the other end of the axis, by means of which any machinery can be put into motion. Another variety of constituting a steam-engine on my principle is shown by an end section view in fig. 5, and an external view in fig. 6. This engine has a cylinder with three rings and two small conical runners on each side ; said conical runners being of the same construction as in fig. 3, represented with one groove cut into each, and of one-third of the diameter of the cylinder. There are two induction and two eduction steam-pipes ; and although the engine may be, with the exception of the addition of one of the conical runners, exactly of the same size as the one first described, a double quantity of steam is requisite, and twice the power of the former engine is gained. The steam enters through pipe F a, and acts on the

wing c, which, after having passed pipe G a, where the steam escapes, falls into the groove d of the lower cone, and appearing at the induction steam-pipe r, b, is loaded again with steam pressure, which it discharges at the second eduction pipe G b, and then enters the groove of the upper cone ; after having passed which it is loaded again at the first mentioned induction pipe. Letters m, m, mt in fig. 6, are bridges by which the spindles, b, b, U, of the cylinders and cones are supported. I have represented six bridges in the drawing, but two bridges on each end, and supporting the three spindles or axes, will answer as well, or any other contrivance to support them properly. This engine has three cog wheels, n, n, n, attached to the three spindles so as to cause the

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cylinder and cones to revolve in unison, and, like the first described engine, a pinion o, on the opposite end of the axis of the cylinder. Fig. 7 shows an end section view, and fig. 8 a longitudinal section. Figs. 12 and 13 two external views of an engine which I have constructed upon a different plan, without altering any of the leading principles of the two engines heretofore described. The same letters already explained apply likewise to the last mentioned figures. The two conical runners in this engine are of an equal length and diameter ; each has two wings or pistons attached, and two grooves cut into it, and in revolving in opposite directions, the wing of one runner falls alternately into the groove of the other. The steam enters by pipe F, and as the cylinders are running in contact, it cannot escape between them, but acts upon the two wings in an opposite direction, and escapes at the eduction pipe G, after the said wings have passed the same. By reference to fig. 8, which represents the longitudinal section,

it will be seen that the two cones have each two false ends, h, h, h, h, sliding freely on their spindles; the two outer cases, E, E, fit over the runners and their wings exactly. Each of the four false ends has an adjusting nut, by which the engine is tightened if steam escape, or slackened if it run too tight. Each pair of the false ends, where they join, have a plate that connects them and breaks their joint so as to prevent escape of steam. This plate p slides into the groove r, cut out of the false ends, as exhibited by figs. 10 and 11, the former showing an end view of the false ends, with the connecting plate in the middle; the latter figure, 11, exhibiting a longitudinal view of the said false ends or bottoms. On these false ends packing rings, Q, Q, Q, which are confined to the sliding plate, as exhibited in fig. 9, are placed ; these rings press against the hollow outer case, and prevent any steam escaping by them. These packing rings are shown in section, in fig. 8. It will be evident that the false ends need not be made true if the connecting plates and packing rings, as above-described, are adopted ; and that the engine, if provided with moveable false ‘ends, conical runners, and the afore-described connecting plates and packing rings attached, as shown in fig. 8, can always be kept steam-tight ; and by use the various parts on which there is any friction will fit better. Sheet second, figs. 5’, 6”, 7’, and 8’, exhibit various views of my said second particular, and which I call my circulatory tubular steam-genˆ-rator ; as also of my said third particular, being an arrangement of two revolving cocks to supply the waste of water in lieu of the forcing pump. Fig. 5’ is a side view, fig. 6’ a front view, fig. 8’ a back view of the said generator. The same .etters apply to all the figures. A is the lower conduit pipe: B the steam receiver: c, c, are two pipes in which the water descends from the steam receiver to the lower or conduit pipe : d is the dome connected with the steam receiver, from which dome the steam enters into the steam-pipe F, and into pipe E, which latter leads to the safety apparatus : g, g, g, g, g, g, g, g, g, g, are ten pipes which communicate with the lower conduit pipe and the upper pipe or steam receiver. Fig. 7’ presents one of these ten sections in front, and the manner in which they are formed, and bent, and connected, with the two horizontal pipes, which latter are shown in section in this figure : h and i are two valves, the former kept open by its own weight, and the latter floating ; with these two valves every section of pipes is provided at its two orifices, where they communicate, with the lower conduit and steam receiving pipe : p is the grate and fireplace, over the middle of which the smaller combination of pipes are placed : o, o, is the ash-pit : Q is an end which screws into the lower conduit pipe, by means of which the same may be cleaned out when necessary ; the number of sections, number of pipes composing each section, and the manner in which the

pipes are bent, is arbitrary. The generator or boiler is fed with water through the orifice o. In fig. 5' each of the two horizontal tubes or pipes is shown as composed of two pieces in my drawings, and united bv means of their flanges and bolts and screws ; they may, however, be cast in one piece of metal. The heat of the furnace will cause the water to circulate constantly through the tubes, thereby preventing the steam from driving the water out of them, and by which means they are in a great degree prevented from burning out or oxidating. My tubes, in the sections, are from one-eighth io one-fourth of an inch thick, and one and two inches diameter; they may be of copper, iron, or any other metal which is sufficiently strong to bear the pressure. This pressure will be comparatively small on account of the small size of the pipes, although steam of the highest pressure be used. My horizontal pipes are an inch and a quarter thick, and nine inches and a half diameter; the vertical pipes three-fourths of an inch thick, and four inches and a half diameter. The valves h and i, attached to the orifices of ench of the section pipes where they enter into the horizontal tubes, are placed there in case of a rupture in one of the sections to which they be-long, in which case the unbalanced pressure of steam would force the water so rapidly into the particular section that was ruptured, as to cause the valves to close, thereby preventing any waste of steam, and detaching the ruptured section from the rest of the generator, whereby the en-gine need not be stopped, but would only lose so much of its power as the proportion of one section to the remaining sound ones would be. The two large vertical, as well as the two large horizontal tubes, are imbedded in brickwork, and the sections only are exposed to the heat of the fire; therefore no steam will be found or generated in the former, while the action of the fire will cause the steam and water to ascend rapidly through the small pipes into the steam receiver, while the water in the steam receiver, being heavier than the water combined with steam in the smaller pipes, will descend through the vertical tubes into the lower conduit tube, thereby causing a continual circulation through all the tubes, great and small. The steam will of course accumulate at the top, and through the dome find its way to the steam-pipe and safety-apparatus. In case the circulation should be too rapid, and to prevent the possibility of the water

beiti^ forced into the steam-pipe before it descends again through the vertical pipes, I have placed a piece of sheet iron, perforated with small holes, similar to a strainer, in the middle of the steam receiver, all across from end to end, shown by a line across in the drawing, in fig. 7'. I have given to the small pipes in the sections the peculiar serpentine form, in order to enable the steam to rise to the top more rapidly than the water. My generators or boilers are supplied with water by means of one or more revolving cocks, to serve in lieu of the forcing pump, as shown in sheet second, fig. 8', where two cocks are represented, and which number I prefer: n is a vessel, filled with water, of any convenient shape, one side of which vessel is near the furnace, so as to keep the water warm. This vessel is connected with the generator through a tube enloring at o, which is shown in section in the drawing. This tube has two revolving cocks, K and L, with a chamber between them as is shown by letter m. The cocks are made to revolve equally by cog wheels gearing into each other ; so if cock K is open towards the water reservoir, cock L will be closed towards the tube leading to the generator, the chamber between the cocks will therefore be filled with water through cock K. By that time cock K closes and L opens towards the generator; the water in the chamber will then descend through o into the generator, by its own gravity, and its place be occupied in the chamber by steam from the generator. Cock K opens again towards the chamber, and L is closed towards the generator; the steam in the chamber will be condensed by the water now entering, or escapes into the water reservoir n. This revolution goes on continually. If water be presented by cock L to the generator, and the said generator should be sufficiently full, the water being up to the dotted lines, in such a case the water will not be received, but remains in the chamber until part or the whole is wanted, the cocks constantly revolving. By this arrangement the water can be kept constantly at the desired height. Figs. 1', 2', 3', and 4', elucidate my improvements in the safety apparatus, as applicable to my tubular circulatory steam-gene- rator, or to any other boiler where high or low pressure steam is generated. Fig. 1' shows a longitudinal section of the compound tube : a is the piston rod screwed into the piston 6, which piston fits into the cylindrical tube e, screwed or otherwise fixed at its base into the pipe that connects it with the steam receiver or boiler, o is a hole perforated through b to allow the steam to ascend into the hollow space n, above the pis-ton, so that the pressure is equal on both sides with the exception of the piston rod, the diameter of which alone is unbalanced. The piece h, screwed into the upper part of tube e, prevents the steam from ascending higher; another piece, g g,

having a hollow space on the top, is screwed into h. Both these pieces Lave a hole bored in their centre, lengthways/of a diameter equal to the piston rod a, and to allow it to work up and down. The hollow space i i, in the middle of the two pieces g and //, is filled with packing so as to prevent any escape of steam along the pis-ton. The hollow space p, at top, is filled with

oil : K is a basin, with water up to the dotted line to keep the upper part cool; the weights with which the safety apparatus are intended to be loaded are placed on the collar m. The hol-low tube e has longitudinal openings, as will be perceived by fig. 3', which presents an outside front view of the apparatus, and through these openings the steam escapes whenever the piston b rises. These holes may be of an indefinite length and breadth; a jacket F, represented by fig. 2', which fits over the tube e, and has likewise the same number of longitudinal holes cut through it, slides over the said tube, and, by adjusting this jacket at x, the channel for the escape steam can be made narrower accordingly, as it may be desirable to have the piston rod raised more or less. The hollow vessel L, or a vessel of any other form, slides or is otherwise fixed over the lower part of the apparatus, so as to intercept the steam from incommoding the upper part of it where the rod is loaded. The pipe q leads from this hollow vessel L to the steam condenser, or serves for the escape of steam. Fig. 4' presents an outside view of the piston : a is the rod already described : c, c, are packing rings, two on the upper side and two on the lower side. These rings press against the tube e, in order to keep it steam-tight, so that no steam can escape through the longitudinal openings : d, d, are two pieces of metal screwed on at the top and base of the piston to confine the packing rings. Sheet third, fig. 5*, exhibits an elevation of my said compound steam-engine, with the aforesaid arrangement of cog-wheels, constituting my said fifth particular. A is the furnace containing the steam generator or boiler : B is the dome on the top of the steam receiver, with the steam-pipe c, and safety apparatus M. D is a cock upon pipe c, through which steam is admitted to the high-pressure engine E. After having acted upon it the said steam passes into the low-pressure engine F, constructed on my principle on a larger scale, so as to allow the steam to expand, and then act upon it as low-pressure: E and F have pinion wheels, of an equal pitch, gearing into a spur wheel G : these wheels determine the power given to each engine by. regulating their motion with reference to the power required from each. The steam finds its escape at z into the condenser H : the condensed steam or water runs through pipe i by its own gravity towards the two revolving cocks, K, whence it is conveyed

back to the feeding pipe in the steam generator, v is an engine constructed upon the plan elucidated by figs. 5 and 6 on sheet first, having two induction and two eduction pipes, which engine serves as a pump in this particular situation. Pipe w sucks the wa-ter from the well or river, and carries it into the refrigerator: x receives the water in the refrigerator and carries it downwards : v is the bellows, fanning the fire by means of a band round the axle Q, connected with two pulleys, R and s, or by any other contrivance-: o is the valve and lever of the bellows, connected by rod x with the safety apparatus : T and u are pulleys connected by a band to give rotary motion to pump v; but many other contrivances may be used: L is a cock which is only opened before :he

engine is set to work, in order that the air may be driven out of the pipes and condenser by the steam; the cock may then be shut and the engine set to work : Y is a pipe leading from the safety apparatus to the condenser.'

208. The principle of the high-pressure steam engine, which must next be examined, depends on the power of steam to expand itself very considerably beyond its original bulk, by the addition of a given portion of caloric, thus acquiring a considerable elastic force, which, in this case, is employed to give motion to a piston. One of the greatest advantages attendant on employing the repellent force of steam, as in this form of the engine, consists in an evident saving of the water usually employed in condensation ; and this, in locomotive engines, for propelling carriages, is an object of considerable importance.

209. Leupold has furnished a description of a high-pressure engine, in a very valuable work on machines, published in 1724. He ascribes the invention to Papin, and his apparatus consists of two single cylinders placed at some distance from each other, each of which is provided with a piston made to fit air-tight, and connected with a forcing pump.

210. When high-pressure steam is admitted at the bottom of the first cylinder, it is forced upwards, carrying with it the lever of the pump; at the same time that (he steam or air is expelled from the other. On this operation being repeated, or rather reversed, the steam is allowed to enter the second cylinder, which is also connected with the boiler, while the steam in the first cylinder is allowed to escape into the air. From this it will be evident that the process of condensation forms no part of the principle of the high-pressure engine ; and that the expansion of gunpowder might be made to produce a precisely similar effect.

211. The amazing force to be produced by the expansion of highly elastic vapor did not escape the penetrating notice of that towering genius, which was now directing all its energies towards its improvement. Accordingly, we find, in Mr. Watt's first patent, the following clause, which expressly describes this engine: 'I intend, in many cases, to employ the expansive force of steam to press on the pistons, or whatever may be used instead of them, in the same manner as the pressure of the atmosphere is now employed in common fire engines. In cases where cold water cannot be had in plenty, the engines may be wrought by the force of steam only, by discharging the steam into the open air after it has done its office.'

212. Messrs. Trevithick and Vivian were the first to employ the high-pressure engine to ad- • vantage, as they found it admirably adapted for the purpose of propelling carriages. In this case the steam, after having performed its office, was thrown off into the air; and the condenser, together with the necessary supply of cold water which must have accompanied it, was by this means dispensed with. For the purpose of motion, the high-pressure engine certainly possesses considerable advantages, not the least of which are its cheapness and portability; the

danger, however, attendant on the use of steam acting with a force equal to from forty to eighty pounds on the square inch, must inevitably form an insuperable bar to its general introduction to our manufactures.

213. Mr. Woolf's improvements, which we shall presently more fully examine, are of considerable importance, and are founded on the same principle as those of Mr. Watt, namely the power of steam to expand itself, or increase its volume in a very considerable degree, after its passage from the boiler. From a variety of experiments made

on this subject, he ascertained that a quantity of steam having the force of five, six, seven, or more pounds on every square inch of the boiler, may be allowed to expand itself to an equal number of times of its own volume, when it would still be equal to the weight of the atmosphere, provided that the cylinder in which the expansion takes place have the same temperature as the steam possessed before it began to increase.

214. The most economical mode of employing this principle consists in the application of two steam cylinders and pistons of unequal size to a high-pressure boiler; the smaller of whicli should have a communication, both at its top and bottom, ivith the steam vessel. A communication being also formed between the top of the smaller cylinder and the bottom of the larger cylinder, and vice versa. When the engine is set to work, steam of a high temperature is admitted from the boiler to act by its elastic force on one side of the smaller piston, while the steam which had last moved it has a communication with the larger or condensing cylinder. If both pistons be placed at the top of their respective cylinders, and steam of a pressure equal to forty pounds on the square inch be admitted, the smaller piston will be pressed down; while the steam below it, instead of being allowed to escape into the atmosphere, or pass into the condensing vessel, as in the common engine, is made to enter the larger cylinder above its piston, which will make its downward stroke at the same time as that in the smaller cylinder; and, during this process, the steam which last filled the larger cylinder, will be passing into the condenser to form a vacuum during the downward stroke.

215. To perform the upward stroke it is merely necessary to reverse the action of the respective cylinders; and it will be effected by the pressure of the steam in the top of the small cylinder acting beneath the piston in the great cylinder; thus alternately admitting the steam to the different sides of the smaller piston, while the steam last admitted into the smaller cylinder passes regularly to the different sides of the larger piston, the communication between the condenser and steam boiler being reversed at each stroke.

216. The economical application of this en-gine may however be best understood by an examination of its effective force when applied to the raising of water. It appears that a double cylinder expansion engine was constructed for Wheal Yor mine in 1815. Tim has a great cvlmde-of fifty-three inches in diameter, and

nine feet stroke, the small cylinder being about one-fifth of the contents of the great one. The engine works six pumps, which at every stroke raise a load of water of 37,982 pounds weight, seven feet and a half high. This produces a pressure of 14‘1 pounds per square inch on the surface of the great piston, while its average performance may be estimated at 46,000,000 pounds, raised one foot high with each bushel of fuel.

217. The steam or vapor, which is produced by the expansion or ignition of any inflammable body, has frequently been suggested for producing a vacuum, and even furnishing motive force to impel mechanism. Several contrivances of this kind might be noticed, but in the present case our limits will only permit of one exemplification. It is shown in the accompanying figures.

218. The above apparatus was suggested by an ingenious American, and the first part of the machine consists of a metallic or other vessel, or tubes, so constructed that a stream or current of atmospheric air may pass, together with the inflammable vapor, through a considerable space, interrupted by short turns or other impediments, the object of which is to mix and blend the air and the vapor thoroughly with each other, by which union they are rendered highly explosive.

219. Fig. 1, plate VI., consists of an oblong box of tin or other metallic plates, divided horizontally into four compartments, by the partitions a, a, a, which extend alternately from one end of the box to within a short distance of the other end, so that air, entering the lower compartment at b, would be compelled by the partitions to travel the whole length of the box through each compartment, in its ascent to the top. These compartments are divided by the vertical partitions c, c, running the whole length of the box, into half inch spaces, which produces the two-fold advantage of increasing the friction of the particles of vapor and air with each other, and also of preventing violence in the event of any explosion, should such an accident take place within the box. There is a tube d, for the admission of air and the other materials into the lower compartment at 6, and another tube

e, for the outlet of the explosive mixture from the upper compartment, each covered with a wire-gauze to prevent explosion, which completes the preparing vessel.

220. Fig. 2 is a front view of the apparatus ; fig. 3, a section taken transversely ; A is a cylinder of brass, copper, or other material, fitted with a plunger or piston B, connected with a crank shaft C, as in a steam-engine. The lower end of the cylinder has a valve D, of at least half its diameter, opening outwards. This valve D may be made very simply by a rim of leather, or other flexible substance, of the same diameter as the opening into the cylinder. This rim of leather is to be tied round the lower end of the cylinder, so as to form a continuation of it. The bottom part of the leather is to be flattened so as to bring its sides together, for four or five inches of its length, and to be kept in tlttt position by slight springs, attached to the edges of the flat part, something like a bow and

bow-string. This valve is supported or prevented from being pushed into the cylinder by a plate of metal, of sufficient thickness to bear the pressure of the atmosphere, arched or curved outward, and perforated with as many holes, of one-eighth or one-quarter of an inch diameter, as can conveniently be made in it. The end ot the cylinder forms the abutment to the arched plate.

221. A valve E, opening outwards, is fixed in the side of the cylinder at the bottom, for the purpose of admitting air to the interior. The inflammable vapor is passed from the preparing box F (shown detached at fig. 1), through a pipe e e, which extends entirely round the cylinder, at the depth of about one-sixth of the stroke of the piston from the top. The cylinder is perforated with small holes, in that part embraced by the pipe e, for the passage of the inflammable vapor to the interior. The neck of this pipe e should be as .short as possible, to prevent the vapor condensing before it reaches the cylinder, and should be furnished with a valve f, next the preparing vessel, to cut off the communication between it and the cylinder, while the explosion takes place. A small valve g, next the cylinder, opening outwards, permits the inflammable vapor to be ignited by the flame of a lamp h ; these valves being worked by cams i, k, on the revolving crank-shaft, or by any other convenient method.

222. A perforated plate of thin metal *is introduced into the cylinder below the piston B, supported and guided by small rods m, m, working sufficiently tight in a stuffing-box in the piston B. This plate I ascends and*

descends with the piston, and is prevented from rising higher than the vapor pipe e, by the upper ends of its rods m, m, striking a stationary part above. In this situation it forms a partition between the explosive mixture and the air in the lower part of the cylinder. A wire gauze should also be placed between the vapor valve, and inflaming valve g, to prevent explosion, should the former not close in time. It will be seen at fig. 2 that there are two cylinders fitted up in this way. and communicating with the same preparing ves-sel and crank-shaft.

223. To prepare the explosive mixture, there must be a small quantity of alcohol, either alone or mixed with spirit of turpentine, or any other inflammable material, capable of evaporation, introduced into the lower compartment of the ves-sel F. A lamp n, or other heat if necessary, is now to be placed under the preparing vessel, for the purpose of raising the temperature, and keeping the materials about blood heat. The flame of a lamp h is also to be stationed at the inflaming valve g. If too much vapor is raised in proportion to the quantity of air, the mixture ceases to be explosive.

224. The piston B, in its ascent, would cause a partial vacuum in the cylinder, but this is prevented by raising the valve E, which supplies the cylinder with air till B reaches the pipe e here the perforated plate *, stops, while the piston B continues its motion to the top of the cylinder: the air-valve E is now closed, and the remainder of the cylinder above* is supplied

«s I

with explosive mixture through the pipe e, from the preparing box. Just before the piston B reaches the end of its stroke, the inflaming valve g opens, and the flame of the lamp communicating to the vapor causes an explosion which instantly drives out the contents of the cylinder through the perforated arched plate /, and flexible leathern valve D, which leather valve immediately collapses again to prevent

the return of the air.

225. The steam formed by the explosion is condensed by keeping the cylinder below the pipe E cool, by surrounding it with water in the jacket O O, and by injecting a jet of water through the cock p, (which is also worked by a cam q, on the crank-shaft).

226. The vacuum being formed under the piston B, it descends by the pressure of the atmosphere, and its connecting rods communicate motion to the crank-shaft, in the same way as in

ˆ ordinary steam engines ; and, a similar operation being carried on in the second cylinder, the power is taken from the crank-shaft, and employed as a moving power.

227. The patent apparatus for generating steam, suggested by Mr. Gurney, promises to be of considerable importance as an adjunct to the high-pressure engine. The specification of his patent contains a description of two sorts of boilers. The first is a tubular vessel consisting of a series of portions, each formed like the figure 8, and these being arranged together, one behind the other successively, will form two cylindrical compartments, in the lower one of which the fire is made, on bars placed across the lower portion of the curved tubes, while the upper one serves as a funnel to convey the smoke to the chimney. Besides the curved tubes, which thus constitute the boiler, two straight tubes, of considerably larger size, are used to connect the others together and form the communication between them, one of which runs across beneath them at bot-tom and conveys the water to them, and the other passes across them at top, and carries off the steam from them to the working cylinder, apertures being made through them and the bent tubes at their points of contact to form passages for the water and the steam. To make the fire act more powerfully on the upper part of the lower cylindrical compartment, and also to prevent it from passing up between the tubes into the upper compartment, a plate of iron is laid along over the whole of the bottom of this latter, which compels the flame and heated vapor to pass on to its end before it can enter the upper compartment, along which latter they afterwards pass on their way to the chimney, heating in their passage the upper portions of the bent tubes. To confine the heat a double case of iron encloses the whole apparatus, between the two constituent parts of which a space is left, which being filled up with pumice-stone, or some other bad conductor of heat, makes the heat act more powerfully in the direction required. This sort of boiler may be varied by having a greater number of cylindrical compartments formed by additional flexures of the bent

tubes on the principle above-mentioned.

228. The second species of boiler is composed

of two horizontal cylinders, one of which beinc; somewhat smaller than the other is placed within it, and united to it at the edges, leaving sufficient space between the two for the reception of water. Above this double cylinder two double semi-cylinders, formed in a similar manner, are placed one over the other with the hollow part downwards, and the communication between them is effected by bent tubes, which pass from the upper part of the double cylinder to the lower parts of the double semi-cylinder next it at each side, and also from the upper part of this latter to the lower edges at each side of the upper double semi-cylinder. The fire is made within the double cylinder on bars placed on bearers about a third of the height from the bottom, and the flame and smoke pass from its farther end into the space between it and the first semi-cylinder, beneath which they return towards the front and pass round beneath the upper double semi-cy- linder, whence they enter the chimney at its further end. The double cylinder, and the double semi-cylinders, are divided into a num-ber of small vertical parallel compartments by bent bars of iron placed within them at regular distances, and fastened by rivets which pass through them and the parts of the cylinders and semi-cylinders with which the bars are in contact. These bent bars are somewhat shorter than the parts within which they lie, so as to leave a free space beneath them for the passage of wa-ter, or of water and steam, according to their positions; and a similar space may be left by the same means along the upper ridges of the cylinder and semi-cylinders for the passage of the steam, which may be also conveyed by separate tubes from each of the small compartments A large straight tube runs beneath the bottom of the cylinder to convey water to it, and another proceeds along the top of the upper semi-cylin- der to carry off the steam from it to the working cylinder. The whole of this boiler is to be also enclosed in a case Similar to that of the first described boiler.

229. An account is next given of an apparatus for separating the steam from the water when they are forced out intermixed from tubular boilers, which consists of an upright cylinder, into the upper part of which a tube enters from the top of the boiler, and then bends round and descends to near its bottom, whence another tube returns again to the boiler at its lowest projection. Near the bottom of the cylinder a wooden valve is placed, which permits the water separated from the steam to return into the boiler; but, in case of any sudden expansion

of the steam in the boiler, it rises up and prevents water from the boiler being forced by this expansion into the cylinder. From the top of this cylinder the steam proceeds to the engine through another tube, after having left behind the water with which it was first intermixed.

230. Another apparatus is after this described, whose office is to convey water to the boiler. This is also an upright cylindrical vessel, from the top of which a pipe goes to the reservoir, and from its bottom another pipe descends to near the bottom of the vessel last described, while a third tube passes down from its upper

part to about the middle of the former vessel. In the pipe that goes to the reservoir is a stopcock near the top of the vessel, and two more in the two descending pipes, which latter may be placed so as to be closed by one plug traversing the two ; to these cocks are fixed cranks connected together by a bar worked by the steam engine, and the passages of the cocks are so arranged that when the two lower ones in the descending pipes are closed, that in the upper one leading to the reservoir will be open, and vice versa. By this arrangement of the pipes the end of the one that passes from the top of the upper vessel to the middle of the lower one will be sometimes above the water and sometimes beneath it, according as its level varies in this vessel; when the first happens the patentee states that the steam will rise up through it into the upper vessel, and will force the water which this contains through the other descending pipe into the lower vessel ; and when the latter case occurs, and its lower end is immersed, then the passage of the water will be interrupted. It is mentioned that this latter apparatus may be used with any other sort of steam-boiler as well as those described.

231. Finally, a method is recited for freeing the tubes of the boilers from the sediment and incrustations that are more or less formed in all boilers, which method consists in filling them, if formed of iron, with a mixture of one part of muriatic acid to 100 parts of water, or with a mixture of vinegar and water, in the proportion of a pint of the former

to three gallons of the latter ; and if the tubes are made of copper, then sulphuric acid is directed to be added to marine salt, in the proportion of half an ounce to a pound, and with a proper quantity of water to be put into them. These mixtures are to be used cold, and a little while after one of them is poured in, a small fire of chips is to be made under the boiler, to make the fluid circulate and bring fresh portions of it in contact with the concretions; and, when these are observed to be sufficiently dissolved, the liquor is to be run off through a cock in the bottom of the boiler along with the undissolved siliceous matter.

232. Mr. M'Curdy's apparatus has excited too much attention to be passed without particular notice. It consists of eleven cylinders, twelve feet long and twelve inches in diameter, placed horizontally in two rows, like gas retorts, in a furnace, six being in the lowest row and five in the upper one over the intervals of these, and a fireplace being made under each three of the cylinders in the lower row. Each cylinder contains another cylinder within it, so much smaller as to leave a space between them of about an inch in extent, whioh space is to be maintained by bands, or pins, reaching so much beyond the inner cylinders, and placed on them at regular distances asunder.

233. Above the eleven double cylinders, or steam-generators, in the same furnace, a twelfth cylinder of the same length, but somewhat more than thirty inches in diameter, is placed, which Mr. M'Curdy calls a steamometer, and which will hold ten times the contents of all the spaces h'i'.weeu the inner and outer cylinders; the eleven

outer cylinders are connected by tubes, which run from one to the other sideways near their tops in each row, and from the lower to the upper row ; a tube also passes from the upper row of cylinders to the steamometer, and another goes from the latter to the working cylinder of a steam engine. The supply of water is given by a forcing pump, which draws it from the reservoir and impels it into the space between the inner and outer cylinders, which are placed at the outside of the lowest row, and thence through the tubes and the spaces between all the other inner and outer cylinders up to the steamometer ; at the bottom of which latter a cock is placed, by > which the ascent of the water to that point may be known ; while by another cock, fixed between the forcing pump and the reservoir, the degree of the supply of water is regulated. A safety valve on the steam tube, close to where it passes from the steamometer on its way to the steam engine, completes the apparatus.

234. In pursuing the history of the steam engine, we have already examined the most perfect form of the single-acting apparatus ; but an engine of double powers was soon produced by the comprehensive mind of Mr. Watt. He haa introduced steam acting against a piston to press it downwards ; he now formed a communication between both sides of the piston and the boiler, and also with the condenser, and made the steam act to press the piston upwards as well as downwards.

235. The mechanism was now, as far as the principle went, perfect ; and it was freed, for the first time, from the enormous dead weight of counterpoises, which had hung on it from the first attempts of Newcomen ; and the equally enormous load which was used in the construction of the various parts, for the purpose of equalising the motion.

236. The cylinder a, plate VII., is enclosed in a jacket creasing like the single engine, having a similar interval, which may be filled with steam or air. The piston b is attached to the lever-beam by the rod x. 1, 2, 3, 4, are the valves which admit steam to the cylinder, or open a communication between the upper and under sides of the pislon and the condenser, g is the pipe leading from the valves to the condenser, m, in, the levers or spanners, which are elevated or depressed by the tappx-ts or pins n, z, in the plug-frame, and open or shut the valves to which they may be connected, h is the condenser ; L, a pipe connecting it with air-pump i, and a second air-pump E. c, the piston-rod of this second pump, attached like the other, i. to the levgr-beam. r, a pipe from the cold water-pump q, to supply the reservoir in which the condenser and its pumps are placed, k, a trough or reservoir into which the water heated by the condensation of steam in the condenser, which is raised by the air-pump is pumped back by M into the boilei . G, a pulley ; and H, an endless chain moving over it, also going round a pulley fixed on the upright axis of the conical pendulum or governor z. n, the handle of the lever which regulates the quantity of injection water admitted, p, p, the masonry or wall on which the cylinder, and other parts of

the machine are placed, d, a pipe conveying steam from the boiler to the cylinder. B, a cock or valve, called the throttle-valve or regulator, placed on the pipe conveying the steam from the boiler, and which is moved by the levers shown as supported at D, and connected with the conical pendulum, x, Q, Q, Q,W, are a system of levers, called the parallel motion, z is the axis of the lever-beam y.

237. The motion at first is produced in this machine in the same manner as in the single en-gine,— by filling the condenser and cylinder with steam, and then opening the injection-cock.

238. This process may be considered to have been gone through, and that the piston has arrived at the top of the cylinder. At this moment the tappets n, n, and levers m, m, open the valves 1 and 4, and shut 3 and 2. The steam from the boiler now acts on the upper side of the piston, while a vacuum is formed under it by valve 4 opening a communication between that part of the cylinder beneath it and the condenser. The piston is therefore pressed by the elasticity of the steam to the bottom ; when it has arrived at the lowest point, the tappets on the plug frame, which also descend with the piston-rod, shut the valves 1 and 4, and open 3 and 2. The steam from the boiler, instead of flowing in at the top •if the cylinder, is admitted at the bottom, and a communication is opened between the upper end of the cylinder and the condenser : a vacuum is then produced above the piston, and the elasticity of the steam (instead of the counterpoise in our last figure) forces it upwards. When it is elevated to the required height, the tappets again act on the spanners, and prevent the further flow of steam beneath the piston, and admits it at its upper end, opening at the same moment a communication between the lower end and condensing apparatus. The motion of the piston is then reversed, and this alternation may be continued indefinitely.

239. The mode of pumping out the water from the condenser, being the same as that in the single engine, will be easily understood from an inspection of our figure. In order to show the four valves in section, a pipe placed in the same direction, and opposite to o, has been omitted in the engraving ; it connects the top of the cylinder and the condenser together.

240. The power of the condensing engine is easily known by ascertaining the temperature of the steam, which moves the piston, the area of the piston, and the temperature of the vapor which remains in the condenser. We know from experiment that steam of the temperature of 212° will balance the pressure of the atmosphere, or, what is the same thing, will force a piston into a vacuum with a force

equal to about fourteen pounds and three quarters weight for every square inch of the area of the piston. The difference between the elasticity of the steam in the condenser, and that issuing from the boiler, will be the measure of the power of the engine. It is however found most expedient to raise the steam to a somewhat higher temperature than 212°, so as to produce a pressure between seventeen and eighteen pounds on each square inch of the piston ; yet, in practice, from

the imperfect vacuum which is made in the condenser, and after making allowance for the friction of the piston on the sides of the cylinder, and for the .friction of the various parts of the intermediate machinery, this pressure of eighteen pounds on each square inch of the piston, cannot raise more water per inch than would weigh about eight pounds and a half, so that somewhat more than a half of the whole power of the steam is absorbed to give motion to the intermediate mechanism. The height to which this weight can be elevated depends on the length of the cylinder, and to raise the same weight to twice the height by the same piston requires double the quantity of steam. The double condensing en-gine will also perform double the work of a single engine in about half the time, but it requires double the quantity of steam. . So that in all cases, under the same circumstances, the work performed will be as the quantity of steam used.

241. When the impulse of the steam impelled the piston only in one direction (downwards) its motion could be imparted to the beam by means of chains; but, when the impulse was to be communicated upwards as well as downwards, some other contrivance for connecting the benm and piston became necessary ; and one of the conditions of this contrivance must be, to convert the motion in a curved path of the end of the lever-beam, into a rectilineal motion of the cylinder piston-rod. Mr. Watt, in his earlier engines, used to form the end of the beam as a sector with teeth, which worked into a rack fixed on the end of the piston-rod ; this allowed the rod to move perpendicularly upwards or downwards, but it was very inelegant in appearance, worked with a great noise, and was easily deranged, especially at the instant when the direction of the motion was changed.

242. Even after the motion of the piston was equalised, by shutting off the steam sooner or later from the cylinder, another source of irregularity was found to arise from the varying quantity of steam which in different states of the fire under the boiler, was admitted into

the cylinder. Several modes of adjustment occurred to Mr. Watt. The one most generally employed, and probably as accurate as any, was, by placing a valve in the pipe connecting the boiler and the cylinder, which could be made to increase or diminish the steam-way. The next improvement was to make this valve, called a throttle-valve, a self-acting one, and to admit of its being so adjusted that, when the piston was moving with too great a velocity, it would admit less steam into the cylinder, aud so diminish its speed, and on the contrary admit a greater quantity when it was moving too slow.

243. A similar irregularity in the motion of corn-mills, from the varying quantity of water or resistance, had early exercised the ingenuity of millers, to obtain some means by which its injurious effects could be obviated. One of the most usual modes was by means of a couple of heavy balls, attached by a jointed rod, which were made to revolve by being connected with the spindle or axis of the mill-stones. When the stones were moving at a great speed, the meal, by the rise of the stones, was too coarse ;

and, on the contrary, when the motion was too slow, the meal produced was small in quantity, and too fine. The attached balls, which were called a lift-tenter, by their centrifugal force either raised or lowered a stage in which the arbor of the spindle revolved, and brought the mill-stones nearer, or removed them farther from each other, asthey might be adjusted. This most ingenious regulator was adopted by Mr. Watt, and was applied to regulate the opening and shutting of the throttle-valve of his improved engine.

244. Mr. Hornblower's engine combined the high pressure principle, and the condensing apparatus, in one engine. We are not to consider tins engine as being on a different principle from Mr. Watt's, but as applying his principles of condensation and expansion in a different manner from what Mr. Watt does. Mr. Hornblower obtained a patent in 1781 for a machine or engine for raising water by means of fire, and the specification of the patent was as follows : — First : ' I use two vessels, in which the steam is to act, and which in other engines are

called cylinders. Secondly : I employ the steam after it has acted in the first vessel to operate a second time in the other, by permitting it to expand itself, which I do by connecting the vessels together, and forming proper channels and apertures, whereby the steam shall occasionally go in and out of the said vessels. Thirdly : I condense the steam, by causing it to pass in contact with metalline surfaces, while water is applied to the opposite side. Fourthly : To discharge the engine of the water used to condense the steam, I suspend a column of water in a tube or vessel constructed for that purpose, on the principles of the barometer, the upper end having open communication with the steam vessels, and the lower end being immersed in a vessel of water. Fifthly : To discharge the air which enters the steam-vessels with the condensing water, or otherwise, I introduce it into a separate vessel, whence it is protruded by the admission of steam. Sixthly : That the condensed vapor shall not remain in the steam-vessel in which the steam is condensed, I collect it into another vessel, which has open communication with the steam-vessels, and the water in the mine, reservoir, or river. Lastly, in cases where the atmosphere is to be employed to act on the piston, I use a piston so constructed as to admit steam round its periphery, and in contact with the sides of the steam-vessel, thereby to prevent the external air from passing in between the piston and the sides of the steam-vessel.'

245. The following is a description of this en-gine by the inventor, as it was published in the Encyclopaedia Britannica. Let A and B (plate III. fig. 1) represent two cylinders, of which A is the largest ; a piston moves in each, having their rods, C and D, moving through collars at E and F. These cylinders may be supplied with steam from the boiler by means of the square pipe G, which has a flanch to connect it with the rest of the steam-pipe. This square part is represented as branching off to both cylinders : r and d are two cocks, which have handles and tumblers as usual, worked by the plug-beam W. On the fore-side of the cylinders, that is, the side next the eye, is represented another communicating pipe, whose section is also square, or rectangular,

having also two cocks «, b. The pipe Y, immediately under the cock b, establishes a communication between the upper and lower paits of the small cylinder B, by opening the cock b. There is a similar pipe on the other side of the cylinder A, immediately under the cock d.

246. When the cocks c and a are open, and the cocks b and d are shut, the steam from the boiler has free admission into the upper part of the

small cylinder B, and the steam from the lower part of B has free admission into the up-per part of the great cylinder A ; but the upper part of each cylinder has no communication with its lower part.

247. From the bottom of the great cylinder proceeds the eduction-pipe K, having a valve at its opening into the cylinder; it then bends downward, and is connected with the conical condenser L. The condenser is fixed on a hol-low box M, on which stand the pumps N and O, for extracting the air and water, which last runs along the trough T, into a cistern U, from which it is raised by the pump V, for recruiting the boiler, being already nearly boiling hot. Immediately under the condenser there is a spigot-valve, at S, over which is a small jet-pipe, reaching to the bend of the eduction-pipe K. The whole of the condensing apparatus is contained in a cistern, R,, of cold water ; a small pipe, P, comes from the side of the condenser, and terminates on the bottom of the trough T, and is there covered with a valve, Q, which is kept tight by the water that is always running over it.

248. Lastly, the pump-rods, X, cause the outer end of the beam to preponderate, so that the quiescent position of the beam is that represented in the figure, the pistons being at the top of the cylinders.

249. Suppose all the cocks open, and steam coming in copiously from the boiler, and no condensation going on in L, the steam must drive out all the air, and at last follow it through the valve Q. Now shut the cocks b and rf, and open the valve S of the condenser; the condensation will immediately commence, and draw off the steam from the lower part of the great cylinder. There is now no pressure on the under side of the piston of the great cylinder A, and it immediately descends. The communication Y, between the lower part of the small cylinder B and the upper part of the great cylinder A, being open, the steam will go from the lower part of B, into the space left by the descent of the piston of A. It must therefore expand, and its elasticity must diminish, and will no longer balance the pressure of the steam coming from the boiler, and pressing above the piston of B.

250. This piston, therefore, if not withheld by the beam, would descend till it came in equilibrio, from having steam of equal density above and below it. But it cannot descend so fast • for the cylinder A is larger than B, and the arch of the beam, at which the great piston is suspended, is no longer than the arm which supports the piston of B ; therefore, when the piston of B has descended as far as the beam will per-mit it, the steam between the two pistons occupies a larger space than it did when both pistons were at the top of their cylinders, and its density diminishes as its bulk increases. The steam beneath

the small piston is, therefore, hot a balance for the steam on the upper side of the same, and the piston B will act to depress the beam with all the difference of these pressures.

251. The slightest view of the subject must show the reader that, as the pistons descend, the steam that is between them will grow continually rarer and less elastic, and that both pistons will draw the beam downwards. Suppose, now, that each one had reached the bottom of its cylinder, shut the cock a, and the eduction-valve at the bottom of A, and open the cocks’ b and d. The communication being now established between the upper and lower part of each cylinder, their pistons will be pressed equally on the upper and lower surfaces; in this situation nothing, therefore, hinders the counter-weight from raising the pistons to the top,

252. Suppose them arrived at the top : the cylinder Bis at this time filled with steam of the ordinary density ; and the cylinder A with an equal absolute quantity of steam, but expanded into a larger space. Shut the cocks b and d, and open the cock a, and the eduction-valve at the bottom of A ; the condensation will again operate, and cause the pistons to descend ; and thus the operation may be repeated as long as steam is supplied ; and once full of the cylinder B, of ordinary steam, is expended during each working stroke.

253. The cocks of this engine are composed of two flat circular plates, ground very true to each other, and one of them turns round on a pin through their centres : each is pierced with three sectorial apertures, exactly corresponding with each other, and occupying a little less than

one-half of their surfaces. By turning the moveable plate so that the apertures coincide, a large passage is opened for the steam ; and, by turning it so that the solid part of the one covers the aperture of the other, the cock is shut. Such regulators are now very common in the cast-iron stoves for warming rooms. Mr. Hornblower's contrivance for making the collars for the piston-rods air-tight is thus : the collar is in fact two, placed at a small distance from each other ; and a small pipe, branching off from the steam-pipe, communicates with the space between the collars. This steam, being a little stronger than the pressure of the atmosphere, effectually prevents the air from penetrating through the upper collar; and, though a little steam should get through the lower collar into the cylinder A, it can do no harm. The manner of making this stuffing-box is as follows : on the top of the cylinder is a box to contain something soft, yet pretty close, to embrace the piston-rod in its motion up and down ; and this is usually a sort of plaited rope of white yarn, nicely laid in, and rammed down gently, occupying about a third of its depth ; upon that is placed a sort of tripod, having a flat ring of brass for its upper, and another for its lower part ; and these rings are in breadth equal to the space between the piston-rod and the side of the box. This compound ring being put on over the end of the piston-rod, another quantity of this rope is to be put upon it, and gently rammed as before ; then there is a hollow space left between these two pickings, and that space

is to be supplied with strong steam from the boiler. Thus is the packing about the piston-rod kept in such a state as to prevent the air from entering the cylinder when at any time there may be a partial vacuum above the piston.

_ 254. Mr. Hornblower's description of this en-gine was followed by a mathematical investigation of the-principles of its action, by the ingenious professor Robison, which demonstrates that it is the same thing in effect as Mr. Watt's expansion - engine ; but, though this is true, there is a considerable difference in the steps by which the effect is attained, which gives an important advantage when it is reduced to practice. We shall give an investigation in a more popular form, using only common arithmetic. Mr. llornblower assumed that the power or pressure of steam is inversely as the space into which the steam is expanded : this is the case with air, anrl, for the present, we will grant it to be so with steam, and reason from the same data as the ingenious inventor gives us.

255. To explain clearly what passes in the two cylinders, we must deviate from the precise form of the engine, and divest ourselves of one complication of ideas, by reducing botli cylinders to the same stroke; therefore, suppose the ensrine to be made like fig. 2, which represents the two cylinders placed one upon the other, the lower one being double the capacity of the upper one, and both pistons being attached to the same roil, which may be applied to the end of the beam, so that the descent of the pistons must draw up the load at the opposite end of the beam.

256. Then, if we suppose the small piston to be ten inches in diameter, the great piston must be 14-14 inches; and to avoid all difficulties of the ratio of the expansion, and the pressure of steam, we will suppose the engine to be worked by the pressure of atmospheric air instead of steam; and, for the convenience of round numbers in our calculation, we will consider the pressure at only ten pounds per circular inch on the surface of the piston.

257. The area of the small piston will be 100 circular inches, and, being assumed to move without friction, the pressure upon it will be 10 X 100 = 1000 Ibs. The area of the °reat piston is twice as much, or 200 circular inches, and the pressure 2000 Ibs.

258. Suppose both pistons to be at the top of their respective cylinders ; let the atmospheric air be admitted to press freely upon the upper surface of the small piston ; and suppose the space between the two pistons filled with air of the same density, while there is a perfect vacuum made in the lower part of the great cylinder, beneath its piston.

259. Under these circumstances, the two pistons will begin to descend with something less than 2000 Ibs. of load upon the outer end of the beam, because there are 2000 Ibs. of pressure on the great piston by the air contained in the space between the two pistons, bearing on the 200 inches of surface with a weight of ten pounds per inch; and beneath this piston there is nothing to counteract the pressure. At the same lime the small piston, having air of equal density above and below it, is m equilibrio.

Descending Power of the Great Piston.

Descending Power of the Small Piston.

Combined Power of both Pistons.

Ibs.

At first the power will be . 2000 In consequence of the pressure of 10 Ibs. per circular inch upon its upper surface, and no pressure beneath.

At one-fourth of the descent -\ the power will have di-f minished, by regular de-f crements, to Because the air between the two pistons must occupy three-fourths of the small cylinder, and one-fourth of the great cylinder, which is a space equal to one and one-fourth of the original space which it filled ; therefore the spaces will be as five to four ; and, if the density of air is as the inverse proportion of the space which it occupies, the pressure on the great piston must be as four to five, or four-fifths of 2000 = 1600. At one-half of the descent } the power will have di- > 1333| minified to J

Because at this position the air between the pistons occupies one-half of the small cylinder and one-half of the great one, which is a space equal to one and one-half of the space it filled originally. The spaces will therefore be as six to four, and the pressure on the great piston as four to six, or two-thirds of 2000 = 1333£.

At three-fourths of the de-} scent the power will be > 11 42$ only r

Because the air must now oc-cupy one-fourth of the small cylinder, and three-fourths of the large cylinder, which is a space equal to one and three-fourths of the original space. Thus the spaces will be as seven to four, and the pressure on the great piston four-sevenths of 2000 = 1142f.

At the bottom of the cylinder the power will be Because the air must occupy the whole of the large cylinder, a space equal to twice the small cylinder which it at first filled. The pressure will therefore be

one-half of 2000.

Sum of the powers exerted }

by the great piston in its > 7076 descent J

Ibs.

At first the power will be 0 Because the piston is in equilibrio, having 1000 Ibs. pressing upwards, and 1000 Ibs. downwards.

< At one-fourth the power) onn i will be 5

Because the equilibrium does not continue, and at one-fourth of the descent the pressure beneath the small piston is reduced by the expansion of the air between the two pistons to four-fifths of 1000 = 800 Ibs., while the pressure above the pis-ton continues to be 1000. The power is, therefore, 1000 — 800

= 200.

f At one-half of the descent ~\ the power will have > 333$

t. increased to j

Because the pressure beneath is diminished by the increased rarity of the air to two-thirds of 1000 = 666|, while the downward pressure continues to be 1000. The power is therefore 1000 — 6661 = 331$.

•At three-fourths of the} descent the power > 428$

. will be 3

Because the pressure beneath is reduced by the rarity of the air to four-sevenths of 1000 = 5712 ; therefore the power is 1000 — 571$

= 428$.

C At the bottom the power > ,„,.

I will be)

Because the air beneath the piston is reduced to one-half of its pressure, or 500, which, deducted from 1000, leaves 500.

Sum of the powers of the) ~ small piston \ ˆ

At first

Ibs.

2000

At one-fourth 1800

At one-half

At three-fourths 1571$

At the bottom 1500

Sum of the com-1 Q);.,Q , . , > oooo

bined powers S _

STEAM ENGINE.

147

261. Now let us consider how Mr. Watt's principle of expansion would operate in the same circumstances ; that is, in a cylinder of 14-14 inches diameter ; which is to be supplied with air of ten pounds pressure per circular inch, until it has completed one-half of its descent, and leaving the remainder of the descent to be accomplished by the expansion of the air already contained in the upper half of the cylinder.

At the beginning the power of descent

will be

At one-fourth the power will still be At one-half the power will be At three-fourths of the descent the power will be diminished to …

Because the air must occupy one-fourth of the length of the cylinder, in addition to that half of the cylinder which it occupied before the expansion began ; therefore the space is one and a half times the former, or as three to two, and the pressure will be two-thirds of 2000. At the bottom the pressure will be

Because the air is expanded to occupy twice the space it filled before.

Ibs.

2000 2000 2000

1333$

1000

8333|

262. The sum total is very nearly the same as the former, but both are greater than they should be, from the imperfect manner in which we have been obliged to make our calculation, so as to express it in common arithmetic, without having recourse to fluxions, which is the only method of treating quantities that are constantly increasing or decreasing by any given law.

263. The source of the inaccuracy is easily explained : at first we set out with the pressure at 2000 Ibs. in Mr. Hornblower's engine, and did not take into the account that it decreases at all, until the piston has descended to one-fourth, but reasoned as though it diminished all at once at that place; whereas it began to diminish fro/n the very first starting. Here then we have taken a small quantity too much. In the same manner, our process takes no notice of the diminution which happens between one-fourth and one-half of the descent, or between

the other points at which we have chosen to examine it ; the re-sult is, as if the diminution took place suddenly at each of those points. The remedy for this would have been to have taken the account at a greater number of places, as it is by fluxions alone that we can take an infinite number, so as to obtain a true result. Now in the second calculation of Mr. Watt's expansion-engine we have taken a still less number of steps for the consideration of the expansion, because, although there are four steps in the process, two of them are before the expansion begins.

264. This is the reason of the apparent difference ; for in reality there is none in the sum total of the varying powers exerted through the whole stroke, as will appear to any person who will take the trouble to read professor Robison's investigation. But, if we consider the difference of the manner in which the whole power is expended during the stroke, we shall see great

reason to prefer Mr. Hornblower's method, from the much greater uniformity of the action ; it begins at 2000, and ends at 1500; whilst Mr. Watt's begins at 2000, and ends at 1000 : hence the necessity of those ingenious contrivances for equalising the action in Mr. Watt's patent of 1782. Mr. Hornblower's is not uniform, but approaches uniformity more nearly, so that he could have carried the effect of the expansive principle much farther, in employing stronger steam, than we believe he ever proposed to do.

265. We have been thus fiill upon this subject, because the gaining more power by the expansion of air or steam acting in double cylinders, has been a favorite idea with many, and there are no less than five different patents for it, but several of these have been upon mistaken notions ; neither Mr. Watt's nor Mr. llornblower's can have any advantage from .shutting off the air, or from a double cylinder, when air is used to press the piston ; nor could they derive any advantage from the expansion of steam in their engines, if the pressure of it was inversely as the space it occupies.

266. The advantage of the expansive principle arises wholly from a peculiar property or.' steam, by which, when suffered to expand itself to fill a greater space, it decreases in pressure or elastic force by a certain law, which is not fully laid down ; that is, the relation between its expansive force and the space which it occupies is not clearly decided : but Mr. Woolf lias founu that, by applying these properties in tlieir fullest extent to the double cylinder engine, he can make most

important improvements in tho effects which can be obtained from any given quantity of fuel. Steam is a fluid so different from air as to have no one property in common with it, except elasticity. This elasticity is wholly derived from the quantity of heat which it contains, and its force increases and diminishes with the quantity of heat; but by what law it increases or diminishes we are uncertain, because we have no measure of the actual quantity of heat which is contained in steam of any given elastic force. All we know with certainty is what is stated in our table of expansion, *viz.* that water, being converted into steam, and confined in a close vessel, when heated until the thermometer indicates a certain temperature, will have a certain pressure or elastic force. But here we must observe that the thermometer indicates only the intensity of the heat, without affording a direct measure of its quantity. When steam is"suffered to expand itself into any given space, the quantity of rarefied water which will be found to be contained in any given bulk or steam, in its expanded state, must be undoubtedly proportioned to the quantity of water contained in the same bulk of the steam, before the expansion took place, in the inverse ratio of the space which it originally occupied, and that space which it fills when expanded; but we cannot say that this is the case with heat ; and it is the quantity of heat alone which determines the elastic force.

267. We believe that in practice Mr. Hornblower was not able to obtain any greater effect from the application of the expansive action in

two cylinders, tlian Mr. Watt did in one cylinder. In 1791-2 he erected an engine in Cornwall, at Tin Croft mine, of which the large cylinder was twenty-seven inches diameter, and worked with a stroke of eight feet long, and the small cylinder twenty-one inches diameter, working with a six-feet stroke. The only account we have been able to obtain of the performance of this engine is from a pamphlet published by Thomas Wilson, an agent of Messrs. Boulton and Watt, professedly

with a view to prevent the introduction of Mr. Hornblower's engines into that country, in which he makes it appear that it raised only 14,222,120 Ibs. of water one foot high with each bushel of coals.

268. In Mr. Hornblower's own account of his engine, in Gregory's Mechanics, he informs us that ' an engine was erected in the vicinity of Bath, some years since, on this principle, and under very disadvantageous circumstances. The engine had its cylinders nineteen inches and twenty-four inches diameter, with lengths of stroke in each suitable to the occasion, *viz.* six feet and eight feet respectively. The condensing apparatus was very bad, through a fear of infringement on Mr. Watt's patent ; and the greatest degree of vacuum which could be obtained was no more than twenty-seven inches of mercury The engine worked four lifts of pumps to the depth of 576 feet, 4500 Ibs. fourteen strokes in a minute, six feet each, with a cylinder six feet long, and nineteen inches diameter, with a great deal of inertia and friction in the rods and buckets ; some of the latter of which were not more than three inches and a half diameter: and this it did, under all these disadvantageous circumstances, with seventy pounds of coal (light coal) per hour.'

269. To reduce this to the standard of one foot high we must put the load 4500 Ibs. x 6-feet stroke — 27,000 Ibs. which the engine raised one foot high at every stroke ; 27,000 Ibs. X 14 strokes per minute — 378,000 Ibs. raised one foot high each minute ; 378,000 x 60 — 22,680,000 Ibs. raised one foot high per hour, or with 70 Ibs. of coals. As the coals are stated to be light, we will take them at only 84 Ibs. per bushel, instead of 88 Ibs., as Mr. Smeaton did, and say as 70 Ibs. : 22,680,000 Ibs. ; : 84 Ibs. ; 27,216,000 Ibs. of water raised one foot high with a bushel of coals, which is a very good performance, but not greater than Mr. Watt's.

270. In this engine Mr. Hornblower says that two remarkable circumstances presented themselves to show the advantages of this application of the principle : the one was, that the man who attended the engine would sometimes detach the smaller cylinder from the beam, and work only with the large one, and then the boiler would scarcely raise steam enough to keep the engine going; but no sooner was the small cylinder-rod attached to the beam, than the engine resumed its wonted activity, and the steam would blow up the safety-valve.

271. The next circumstance is, that when the detent, which kept the exhausting-valve shut, happened to miss its action, the piston would be checked, as it were, not being permitted to rise through the whole

of the returning stroke ;

and it would, as by an instinctive nature, COTYIH down again and again, until the detent performed its office, which is a practical argument for the power of the engine at the termination of its stroke.

272. In 1792 Mr. Hornblower made application to parliament for an extension of the term of his patent, but it was not granted : and he was prosecuted by Messrs. Boulton and Walt for infringement on their patent in using the condenser and air pump. We believe none of these engines have been erected since the expiration of Mr. Watt's patent in 1800, until Mr. Woolf took up the subject of double-cylinder engines.

273. So early as the year 1759 steam appears to have been thought of as a motive power to w/teel-ccnriages. In a note to the last edition of Robison's Mechanical Philosophy, Mr. Watt states, 'My attention was first directed, in the year 1759, to the subject of steam engines, by the late Dr. Robison, then a student in the university of Glasgow, and nearly of my own age. He, at that time, threw out an idea of applying the power of the steam engine to the moving of wheel-carriages, and to other purposes ; but the scheme was soon abandoned, on his going abroad.' Mr. Watt, it appears, soon after made an experiment with steam acting by its expansive force, but relinquished the idea of constructing an engine upon this principle : ' I, however,' says he, ' described this engine, in the fourth article of my patent, in 1769; and, again, in the specification of another patent, in the year 1784, together with a mode of applying it to the moving of wheel-carriages.'

274. For many years subsequent to this, the improvement of the steam engine, acting by condensation, seems to have wholly occupied the scientific world ; and the use of steam, acting by its elastic force, entirely abandoned or neglected. Mr. Hornblower had a patent, for the application of steam, acting both by its expansive force, and by condensation; but it is to Messrs. Trevithick and Vivian that we owe the introduction of the steam engine, acting solely by the expansive force of the steam. In March, 1802, they obtained a patent for the application of that species of power to propel carriages upon rail-roads.

275. Mr. Woolf, a short time after, made a series of experiments, to develope the law of ac-tion of steam, at different degrees of elasticity, which he explained, in his patent of June 7th, 1804, and, since that time, high-pressure steam engines have been much used, in many

parts, to economise the fuel.

276. Messrs. Trevithick and Vivian, in the specification of their patent, give a drawing of their engine, applied to move a carriage upon the common roads. The carriage there delineated resembles in form the common stage coaches, used for the conveyance of passengers ; a square iron case, containing the boiler and cylinder, is placed behind the large, or hinder, wheels of the carriage, and is attached to a frame, supported from the axles of those wheels. The cylinder was in a horizontal position ; and the piston-rod was projected backwards and forwards, in the

I’LJTE IX .

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line of the road towards the front of the carriage. Across the square frame, supported by the wheel of the carriage, an axle was extended, reaching a little beyond the frame on each side : this axle was cranked in the middle, in a line with the centre of the cylinder, and a connecting rod, passing from the end of the piston, turned this axle round, and produced a continued rotatory motion of it when the piston was moved backwards and forwards in the cylinder. Upon both ends of this axle cog-wheels were fixed, which worked into similar cog-wheels upon the axle of the wheels of the carriages, so that, when a rotatory motion was produced in the cranked axle by the piston-rod, the rotatory motion was communicated to the axle of the larger or hinder wheels of the carriage ; and these wheels being fixed upon, and turning round with the axle, gave a progressive motion to the carriage. Upon one end of this axle was fixed a fly-wheel, to secure a rotatory motion in the axle at the termination of each stroke.

277. The four wheels of the carriage were of the usual form, which, turning to different angles with the body of the carriage, directed its motion upon the road ; and, in cases where abrupt turns of the road required sudden changes in the direction of the carriage, the toothed or cog-wheels, on either side, could be thrown out of geer, and the opposite wheel made to drive the carriage into the proper obliquity of

the road.

278. Upon the periphery of the fly-wheel, a brake was attached, to regulate the descent of the carriage down steep hills. The contrivances, to effect the requisite motions of the various parts of this machine, are extremely ingenious and, considering it as the first which directed public attention to the subject, is entitled to great commendation.

279. The many objections to its application, upon public turnpike roads, may, I presume, have operated in preventing the patentees from carrying it into practice in the manner described in their specification ; they, therefore, very properly directed their attention to its use upon rail-roads.

280. Two years after the date of this patent, we find that Mr. Trevithick made an engine in South Wales, which was tried upon the Mer-thyn Tydvil rail-road. The engine is stated to have had an eight-inch cylinder, with a four feet six-inches stroke, and ‘ drew after it upon the rail-road as many carriages as carried ten tons of bar-iron, from a distance of nine miles, which it performed without any supply of water to that contained in the boiler at the time of setting out; travelling at the rate of five miles an hour.’

281. As there is no account given of the inclination of the road, we cannot judge of the real performance of the engine. It had, it appears, only one cylinder, and, from what I can learn, did not materially differ, in construction, from that previously described, except in the form of the carriage.

282. The great obstacle to their introduction, at that time, v«ts the supposed want of hold or adhesion of the wheels upon the rails to effect the locomotion of the engine. Messrs. Trevi-tliickaiid Vivian, in their patent, recommended

making the external periphery of the wheels rough or uneven, by using projecting heads of nails, bolts, or cross-grooves ; or, in case of a hard pull, to cause a lever, bolt, or claw to project through the rim of one or both of the said wheels, to take hold of the ground. But it will appear obvious to any one that this mode of remedying one defect would be the means of producing another; for any projections would not only cause considerable resistance to the progressive motion of the engine, but would also tend to injure the rails of the road.

283. To obviate these defects, Mr. Blenkinsop, of Middleton colliery, near Leeds, in 1811, obtained a patent for the application of a rack, or toothed rail, stretched along the whole distance to be travelled, into which wheels, turned by the engine, worked, arid thus produced a progressive motion in the carriage.

284. Fig. 1, plate IX., will convey a pretty correct idea of the mode of action of this kind of engine. R R is a piece of iron of the rails constituting the rail-road, on the side of which are cast the semicircular protuberances or projections 1, 11, &c. : these semicircular teeth project from the side of the rail two or three inches, thus forming a longitudinal toothed rack, which is extended the whole length of the road, a, a, are the cylinders, placed within the boiler. The action is communicated by the pistons to the connecting rods b, b, which transfer the motion to the cranks c, c, turning upon axles attached to the frame of the carriage. Upon the axles on which these cranks are fixed are also fixed the pinion-wheels d, d, which are turned round by the cranks; these two pinion-wheels communicate with a larger cog-wheel e, in such a manner that both contribute in producing a rotatory mo-tion in it. The axle of this cog-wheel e extends to the outside of the frame of the engine, and upon the end of it is affixed the larger toothed wheel /, which is thus turned round by the large cog-wheel, and consequently by the action of the engine; and the teeth of this cog-wheel, being made to correspond, will lay hold of the toothed projections on the side of the rail, and a progressive motion of the carriage is thereby effected. The steam, after performing its office in the cylinder, is allowed to escape into the atmosphere, through the pipe e. The boiler is cylindrical, and is heated by a circular tube passing through it, terminated at one end by the chimney. The toothed or rack-rail is only laid on one side of the road, the other being common rails. The cog-wheels can be varied in size according to the different velocity with which it is required to travel.

285. By the use of this rack-rail the engine i enabled to ascend acclivities which Mr. Trevithick's engine, from the want of adhesion, could not surmount ; accordingly its use is extended.

286. Mr. Blenkinsop, soon after the date his patent, erected some of his engines, and employed them upon the Middleton colliery rail-road, in sending coals to Leeds, where they haw ever since been used.

087 The engine erected by Mr. Trevithick I one cylinder only, and a fly-wheel, to secure rotatory motion in the crunk at the eim «l *

stroke. An engine of this kind was sent to the north, for Mr. Blackett, of Wylarn, but was, for some cause or other, never used upon his rail-road, but applied to blow a cupola at an iron-foundry in Newcastle. Mr. Blackett However had, in 1813, an engine of this kind made, and set upon his rail-road, which worked by the adhesion of its wheels upon the rails. Still the supposed want of adhesion formed the great obstacle to their introduction, and the attention of engineers was directed to obtain a substitute for this supposed defect.

288. In December, 1812, Messrs. William and Edward Chapman obtained a patent for a mode of effecting the locomotion of the engine, by means of a chain stretched along the middle of the rail-road, the whole length, properly secured at each end, and at proper intervals. This chain was made to wind partly round, or to pass over a grooved wheel, turned by the engine, of such a form that the wheel could not turn round without causing the chain to pass along with it. When this wheel was turned round by the en-gine, as the chain was fastened firmly at the end, it could not be drawn forwards by the wheel, the carriage was therefore moved forwards in the line of the chain. The carriages containing the goods were attached to the engine carriage, and thus conveyed along the rail-road.

289. At intervals of every eight or ten yards, the chain was secured by means of upright forks, into which it fell when left at liberty ; this was for the purpose of taking off the strain from part of the chain, when more than one engine was travelling by it. The chain was prevented slipping, when the grooved wheel was turned round, by friction-rollers pressing it into the groove.

290. Mr. Chapman had one of his engines tried upon the Hetton rail-road, near Newcastle, but it was soon abandoned ; the great friction, by the use of the chain, would operate considerably against it, and also its liability to get out of order.

291. In 1813 Mr. Brunton, of Butterley iron-works, also obtained a patent for a mode of accomplishing the locomotion of the engine without the aid of the adhesion of the wheels upon the rail.

292. Plate IX. fig. 2, is a side view of the en-gine. The boiler was nearly similar to that of Mr. Blenkinsop — semicircular; there was a tube passing through it, to contain the fuel. The cylinder A was placed on one side of the boiler; the piston-rod is projected out behind horizontally, and is attached to the leg a b at a, and to the reciprocating lever a c, which is fixed at c ; at the lower extremity of the leg a b feet are attached, by a joint at 6 ; these feet lay a firmer hold upon the ground, being furnished with short prongs, which prevent them from slipping, and are sufficiently broad to prevent their injuring the road.

293. On inspecting the engraving it will be seen that, when the piston-rod is projected out from the cylinder, it will tend to push the end of the lever, or leg a, from it in a direction parallel to the line of the cylinder ; but as the leg a b is prevented from moving backwards, by

the end b being firmly fixed upon the ground, the reaction is thrown upon the carriage, and a progressive motion given to it, aud this will be continued to the end of the stroke. Upon the reciprocating linp a c is fixed at 1 a rod, 1, 2, 3, sliding horizontally backwards and forwards upon the top of the boiler ; from 2 to 3 it is furnished with teeth, which work into a cog-wheel, lying horizontally: on the opposite side of this cog-wheel a slidingrack is fixed, similar to 1, 2, 3, which, as the cog-wheel is turned round by the sliding rack 2, 3, is also moved backwards and forwards. The end of this sliding rod is fixed upon the reciprocating lever dc of the leg d e, at 4. When, therefore, the sliding rack is moved forwards in the direction 3, 2, 1, by the progressive motion of the engine, the opposite rod 4 is moved in the contrary direction, and the leg de is thereby drawn towards the engine; and, when the piston-rod is at the farthest extremity of the stroke, the leg de will be brought close to the engine ; the piston is then made to return in the opposite direction, moving with it the leg a b, and also the slidingrack 1, 2, 3 ; the sliding rack, acting on the toothed wheel, causes the other sliding rod to move in the contrary direction, and with it the leg d e. Whenever, therefore, the piston is at the extremity of the stroke, and one of the legs is no longer of use to propel the engine forward, the other, immediately on the motion of the piston being changed, is ready, in its turn, to act as a fulciura or abutment for the action of the moving power, to se-cure the continual progressive motion of the engine.

294. The feet are raised from the ground dur-ing the return of the legs toward the engine, by straps of leather or rope fastened to the legs at

ff, and passing over friction sheeves, moveable in one direction only, by a ratchet and catch worked by the motion of the engine. The feet are described of various forms in the specification, the great object being to prevent them from injuring the road, and to obtain a firm footing, that no jerks should take place at the return of the stroke, when the action of the engine came upon them ; for this purpose they were made broad, with short spikes to lay hold of the ground.

295. In a communication to the editor of the Repertory of Arts, vol. 24, the patentee gives an account of an experiment made with one of those engines, which he termed his mechanical traveller; the boiler was of wrought-iron, five feet six inches long, three feet diameter ; the step was twenty-six inches long, the piston-rod having a stroke of twenty-four inches ; the weight of the whole 45 cwt. ‘ The machine being placed on a railway, I first ascertained the power necessary to move it at the rate of two miles and a half in an hour, which I found to be eighty-four pounds. I then applied a chain to the binder part of the machine, by which, as the machine moved forward, a weight was raised at the same time and rate, and found that, with steam equal to forty or forty-five pounds pressure on the square inch, the machine was propelled at the rate of two miles and a half per hour, and raised perpendicularly 812 Ibs. at the same speed, thus making the whole power equal to 896 Ibs. at two

miles and a half per hour, equal to six horses nearly.’

296. About this time Mr. Blackett had considerably improved his engines, and by experiments had ascertained the quantity of adhesion of the wheels upon the rails, and proved that it was sufficient to effect the locomotion of the engine upon rail-roads approaching nearly to a level, or with a moderate inclination. His rail-road was a plate rail, and would consequently present more friction or resistance to the wheels than an edge-rail ; and, on that account, the amount of adhesion would be greater than upon the latter rail ; still the credit is due to Mr. Blackett, for proving that the locomotion could be applied by that means alone.

297. The first attempt of Messrs. Trevithick and Vivian failed ; and, though this was no doubt owing to the imperfect construction of the en-gine, yet it appears that the cause was partly, if not wholly, attributed to the want of adhesion to obtain locomotion ; and hence we find the engineers attempting to produce other means of locomotion. Mr. Blenkinsop, by means of a cog-rail ; Mr. Chapman, by the chain ; and Mr. Brunton, by means of moveable legs.

298. It was, however, a question of the ut-most importance to ascertain if the adhesion of the wheels of the engine upon the rails were sufficient to produce a progressive motion in the engine, when loaded with a train of carriages, without the aid of any other contrivance ; and it was, by the introduction and continued use of them upon the Wylam rail-road, that this question was decided : and it was proved that upon rail-roads nearly level, or with very moderate inclination, the adhesion of the wheels alone was sufficient, in all the different kinds of weather, when the surface of the rails was not covered with snow.

299. Mr. Hedley states that they first tried, by manual labor, how much weight the wheels of a common carriage would overcome without sloping, or slipping ground, upon the rail ; and, having found the proportion it bore to the weight, they thence ascertained that the weight of the engine would produce sufficient adhesion to drag after it, upon their rail-road, a requisite number of waggons.

300. The first engine applied upon the Wylam rail-road had only one cylinder, with a fly-wheel to regulate the action of the crank; but they were found to be very troublesome, and their action very uncertain. When the engine was stopped, and the crank and connecting rod in the same line, the power of the cylinder had then no effect in turning the crank round, and the engine had to be moved by levers applied to the spokes of the fly-wheel, until the crank formed such an angle with the connecting rod that the engine got sufficient power to produce a rotatory motion and urge itself forward. This occasioned frequent delays, and the irregular action of the single cylindei produced jerks in the machinery, and had a tendency to shake the machine in pieces ; for some time, however, the whole of the coals was taken down the rail-road by the use of this kind of engine.

301_, In a preceding page we took occasion to tui nisli)ur readers with the earliest attempts at

steam-navigation in this country; the construction of a modern stearr-boat, as well as the attempts at improvement from the commencement of the present century, properly find a place after our description of the perfect steam engine.

302. The first American steam-boat which completely succeeded was launched at New York on the 3d of October, 1807 (five years before the construction of the Comet at Port-Glasgow), and soon after plyed between that city and Albany, a distance of 160 miles.

303. In Britain steam-vessels were first brought into use in 1812 upon the Clyde. They were built at Port-Glasgow, Greenock, and Dumbarton, where the art of ship-building had for many years been conducted by carpenters eminent in their profession. When launched they were towed at a very trifling expense up the Clyde to Glasgow, situated in the midst of inexhaustible mines of coal and iron, and where the number of skHful practical engineers and artificers rendered the construction of the engines and machinery easy and the prices moderate.

304. The early experiments were, of course, made upon a small scale. The first steam-boat actually put to use there was the Comet (forty feet keel, ten feet and a-half beam, four wheels, four shovel-shaped paddles on each, with a cistern of fresh water to feed the boiler), built, as already mentioned, by Mr. Henry Bell. She had an engine of only three horses' power, being intended merely for passengers, who, till then, had no other means of conveyance on the river than small row-boats, either quite open or supplied with only an awning to secure them from the weather. Small as this engine was, it rendered the passage certain in one tide; the vessel being able to make head-way even against the wind and in rough weather.

305. The success of the first experiment soon excited competition ; and a larger vessel, the Elizabeth (fifty-eight feet on deck, eleven feet beam, with an engine of eight horses' power), was completed in March 1813, and for a time proved very profitable to the proprietors. The third boat,' the Clyde, which began plying in July of the same year, was still larger in her dimensions; being seventy feet keel, seventy-five feet on deck, thirteen feet beam, with an engine of fourteen horses' power.

306. At present there are about forty steam-vessels on the Frith of Clyde, some of which sail from Glasgow almost every hour, or half hour, during daylight, to the various ports on the river and the lochs communicating; with it; as Dumbarton, Helensburgh, Loch-Long,

Rothsay, Loch-Fine, and Campbellton, on the right bank ; and Port-Glasgow, Greenock, Gourock, Innerkip, Largs, Milport, Ardrossan, Ayr, Irvine, Girvan, Stranraer, &c., on the left bank. Many of them occasionally visit Islay, Mull, Staffa, Icolmkill, and adjacent islands, during the summer months; and also Londonderry, Coleraine, and other ports of Ireland. Several vessels of lareer dimensions are employed as regular packets to Belfast, the Isle of Man, Liverpool, &c., and thus a constant communication between the united kingdoms is maintained. Since 1821 two steam-vessels have regularly sailed from Leilh to Aberdeen, calling at several

of the intermediate ports. Five or six steam luggage-boats are constantly employed as lighters and draggers of other boats for the speedy conveyance of goods from Glasgow to the ports of exportation, and occasionally towing large vessels in or out of harbour. The annual voyages of each of these thirty-five vessels may be averaged at 10,000 English miles ; consequently the whole sail 350,000 miles yearly, or nearly fourteen times the circumference of our globe.

307. The success oi' steam-vessels at Glasgow soon excited attention in other quarters, and several of the Clyde vessels were purchased as models. It is worthy of mention that shortly after the time of their appearance on the Clyde, Mr. Lawrence of Bristol established a steam-boat on the Severn, and having carried her to ply on the Thames, the Company of Watermen made such opposition to this innovation that he was obliged to take her back. Now, however, not only are all the chief navigable rivers in Britain thus navigated, but steam -vessels ply regularly from London to Aberdeen, sometimes passing the Pentland Frith.

308. On the Holyhead station, to carry mails between England and Ireland, there are three steam-vessels employed ; *viz.* the Royal Sovereign, 210 tons, two forty-horse engines; the Meteor, 190 tons, two thirty-horse engines; and the Ivanhoe, 165 tons, one fifty-six-horse engine. They have answered the purpose much better than sailing vessels; as a proof of which, during the last year the latter were employed, exactly 100 Irish mails arrived in London late; while, during the nine months after the steam-boats were first established, only twenty-two arrived late ; and that winter happened to be extremely boisterous. These boats use sails occasionally, and go to sea when sailing vessels dare not leave port. The average passage of the Royal Sovereign from Houth to Holyhead is six hours fifty-seven minutes; from Holyhead to Houth seven hours thirty-six minutes. Of the Meteor, from Houth to Holyhead, seven hours four minutes, and back, eight hours thirteen minutes. The average passage is half the time in which the average passage of sailing vessels used to perform the voyage. The shortest passage was, from Houth to Holyhead, five hours thirty minutes; which, the distance being about seventy-three miles, is nearly twelve miles an hour.

309. It is difficult to say what is the maximum speed of steam-vessels.

Several of those between London and Margate make the voyage in seven houss and a half, a distance of eighty-four miles. The Hero made the voyage, wind and tide in her favor, in six hours sixteen minutes. The Eclipse, from Belfast to Greenock, 120 or 130 miles, has been known to come in nine hours ; and, on one occasion, having about 3000 square feet of canvas set, besides the engine at work, she came from Ailsa to Greenock at the rate of nine miles. The Henry Bell, a new steam-trader between Glasgow and Liverpool, has delivered goods at various warehouses in Glasgow several hours before the invoices, or advice of the shipment, had arrived in course of post. The New York steam-vessels run up to Albany, 160 miles, iu twenty-one hours, and down in nineteen ; never in less than nineteen. They go from Nevvhaven to New York, ninety miles, in six hours and a half without sail; being nearly fourteen miles per hour.

310. At present steam-boats frequently ply between London and Dieppe, Rouen, Havre de Grace, Cadiz, Corunna, Alicant, Vigo, Lisbon, and other ports of France, Spain, and Portugal. One was lately established between Naples and Leghorn and Genoa, but soon abandoned, owing to the oppression of the quarantine laws and the rapacity of the government of the Two Sicilies. Another steam-vessel was launched by an American gentleman on the Lake of Geneva, but, being a very bad sailer, it is about to be replaced by another. Every season they are becoming more numerous, and adventurous in sailing to greater distances and through heavier seas ; such as the Bay of Biscay, the Mediterranean, the Baltic, the Gulfs of Finland, Bothnia, &c. A steam-packet, carrying the mail, now sails between Kiel, in Holstein, and Copenhagen. In the Adriatic, the Carolina goes every second day from Venice to Trieste, and the Eridano to Pavia; the latter voyage being usually accomplished in thirty-seven hours. The Royal George steam-packet makes her passage from Portsmouth to Corunna in from sixty to sixty-four hours; a distance of between 400 and 500 miles.

311. Having thus endeavoured to give a sketch of the origin and progress of steam-navigation, we shall now proceed to describe the form and parts of a steam-boat (suppose of 100 tons), and to some other details calculated to furnish a more particular view of the present state of steam-navigation in Britain and other countries.

312. Fig. 1, plate X., is an elevation; fig. 2, a longitudinal section ; fig. 3, a ground plan. The same letters refer alike to the respective parts of each figure: A the two boilers with their two manhole doors, one to each; B the chimney; C the steam pipes; D,D, the cylinders of the two engines ; E, E, the two air pumps ; F the side lever ; one on each side

of each engine ; G,G, the crank of the paddle-wheel shaft ; H the rod that works the steam valves or hand gear, moved backward and forward by an eccentric wheel on the shaft ; I the nozzles ; K pillars of the framing; L L the area where the fireman stands to put coals into the furnace ; M M place where the coals are stowed away ; N,N, the paddle-wheels and covers; O ladies' parlour; P principal cabin; Q second cabin, having each a raised lantern or sky-light besides the lateral windows of P and Q ; II steward's room ; S breakfasting room ; T,T, refreshment rooms for the second cabin passengers ; U small boat ready to be let down on an emergency ; V rudder ; W,W, seamen's beds ; X X space for lumber or spare fuel. The fireman stands in the space LL; an iron trap-ladder leads down to it from the deck, flush with which are two horizontal gratings for the admission of fresh air to himself and the fire ; his coals are built up behind him, and he brings down only a few lumps at a time, which he breaks into small pieces as required. The chimney B is a series of sheet-iron cylinders riveted at the joints and slipped the one over the other. Each boiler has a flue within making various convolutions under

the surface of the water ; through which the smoke and flame pass until they enter the chimney.

313. These wheels being ponderous, acquire sufficient momentum to turn the crank and supersede the necessity of a fly. The air-pump, feed-pump, and occasional cold water pump, are wrought by rods from F, F, the side horizontal levers. To prevent the waste steam of the boilers from annoying the passengers a pipe conveys it into the chimney. Besides this a waste steam valve is within reach of the engine-man, who loads and unloads it as he finds necessary. It is a curious fact that a great flow of steam into the chimney prevents black smoke from issuing from it, which otherwise would. The paddle-wheels are firmly wedged on their shaft, and whatever pressure they exert against the water causes an equal reaction on the vessel, which is thus impelled either forwards or backwards according to the direction of circumvolution.

314. The principal cabin is painted and otherwise tastefully fitted up, and furnished with a stove, the chimney of which rises up through the deck. The second cabin occupies the fore-end of the vessel, and is also completely furnished, less elegantly. Small steam-boats from thirty tons upwards are generally laid out much in the same way, only varying according to the nature of their employment. When intended for sea voyages a great part of the internal space is allotted for sleeping births.

315. The following is an alphabetical list of steam-vessels built in Britain from 1813 to 1823:—

When built.

Names of Vessels.

Tonnage.

Engines.

Horse Powr.

1822

Aaron Manby

140

1

28

1821

Abbey …

1819

Active

83

1

10

1816

/Etna (double

vessel) . .

75

1

20

1820

Aire and Calder

110

1

35

1816

Albion …

92

1

22

1818

Albion …

75

1

24

1822

Albion …

160

2

60

1815

Argyle …

88

2

32

1821

Arrow …

130

2

40

1820

Belfast …

190

2

70

1821

Brilliant …

160

2

40

1822

Bristol Cambria

100

1

30

1818

British Queen

75

1

20

1817

Britannia . .

70

1

15

1820

Britannia . .

100

2

40

1821

Britannia . .

80

1

20

1815

Caledonia . .

102

2

32

1816

Caledonia . .

80

1

12

1820

Caledonia

80

2

30

1821

Caledonia . .

84

1

30

1821

Cambria . .

130

2

50

1813

Clyde …

69

1

14

1821

City of Edinburgh …

400

2

80

1822

City of Glasgow

300

2

100

1818

Cobourg

75

1

24

1812

Comet …

25

1

3

1821

Comet lengthened …

70

1

30

When built.

Names of Vessels.

Tonnage.

Engines.

Horse Powr.

1816

Congo

100

1

20

1819

Countess of

Scarborough

50

1

10

1821

Dasher …

130

2

40

1817

Defiance .

50

1

14

1820

Diana …

60

2

20

1818

Dispatch . .

83

1

10

1820

Duchess of Northumberland

40

1

10

1822

Duke of Lancaster .

141

a

50

18i8

Dunbarton .

100

i

16

1814

Eagle (double

vessel) . .

40

i

6

1816

Eagle

70

i

20

1821

Eagle …

170

2

40

1819

Eclipse …

190

2

GO

1821

Eclipse . .

140

2

GO

1821

Edinburgh Cas-

1

tle ….

148

2

40

1813

Elizabeth . .

40

1

10

1823

Emerald Isle .

450

2

65

1818

Engineer

315

2

70

1817

Enterprise .

30

1

5

1820

Earl of Egre—

mont …

50

2

24

1818

Favorite …

160

2

40

1819

Favorite …

117

1

2G

1817

Fingal …

67

1

16

1813

Glasgow, now

the Thames .

74

1

16

1.820

Glasgow .

90

1

24 .

1819

Gourock …

65

1

14

1817

Greenock

52

1

10

1823

Henry Bell . .

200

2

60

1822

Hercules .

130

2

60

1821|Hero ….

233

2

90

1823

Hibernia …

280

2

40

1821

Highlander .

67

1

24

1822

Highland Chieftain …

65

1

16

1820

Highland Lad .

51

1

12

1815

Hope ….

45

2

6

1819

Hope ….

30

1

6

1817

Humber …

80

1

12

1820

Indefatigable .

30

1

8

. 1

1818

[ndustry .

79

1

10 [

1820

[nverary Castle

114

2

40 i

1820

[vanhoe .

165

2

56 ‘

1821

James Watt

448

2

100 !

1817

John Bull . .

75

1

15

1822

King of the Ne-

, i

therlands . .

140

2

RO {

1814

Lady of the Lake

76

1

•20 ‘

1818

Lady of the

i

Shannon . .

90

1

20 i

1821

Lady Stanley .

87

1

20

1819

Largs ….

96

1

35 !

1820

Leeds . . •

125

1

30

1822

Lemington

Packet . .

30

1

7

1817

London .

70

1 14

1822

Lord Melville .

220

2 . 80

Lord Nelson, see

Sir William

STEAM ENGINE.

When built

Names of Vessels.

Ion nage

Engines.

Horse Powr.

1816

Majestic …

9C

1

24

1821

Majestic …

350

2

100

1819

Maria Tug . .

80

1

24

1817

Marion …

70

1

14

1813

Margery …

70

1

14

1818

Marquis of Bute

60

1

14

1822

Medina …

100

1

36

1822

Medusa …

90

2

20

1819

Mersey …

80

1

24

1819

Mersey …

60

1

20

1821

Meteor …

190

2

60

1814

Morning Star .

100

1

26

1814

Morning Star .

20

High pres

3

1821

Mountaineer

190

2

70

1821

Navigator . .

40

1

18

1816

Neptune …

88

2

40

1813

Orwell …

60

2 Horiz.

12

1813

Orwell …

20

ligh pres.

3

1815

Oscar ….

70

1

12

1814

Perseverance

60

1

14

1814

Phoenix …

25

ligh pres.

4

1821

Postboy .

80

1

20

1819

Port Glasgow .

70

1

16

1821

Portuguese . .

80

2

20

1813

Prince of Orange

40

2

8

1822

PrinceLlewellyn

170

2

70

1821

3ueen Margaret

60

1

20

1823

Quentin Dur—

ward …

96

2

40

1821

lapid …

140

2

56

1822

lapid …

140

2

60

1816

legent …

112

2

24

1814

Richmond .

60

1

10

1818

iising Star . .

400

2

70

1819

Robert Bruce .

155

2

60

1819

iobert Burns .

73

1

24

1818

iob Roy . .

100

1

30

1820

lothesay Castle

90

1

24

1823

loyal George

Ship …

2

1821

loyal Sovereign

George IV. .

210

2

80

1822

loyal Sovereign

220

2

80

1821

Safety …

36

1

14

1821

Sampson . .

100

2

40

1818

Selby ….

80

1

24

1822 1816

Sir Joseph Yorke SirWilliam Wal-

100

1

30

lace, formerly

Lord Nelson .

95

2

32

1823

Soho ….

510

2

120

1818

Speedwell . .

40

1

10

1814

Stirling Castle .

60

1

12

1817

Sons of Commerce .

80

1

20

1822

Sovereign . .

95

2

32

1822

Sovereign . .

95

2

32

1822

St. George . .

312

2

110

1822

St. Patrick . .

298

2

110

1821

Star … .

90

1820

Superb …

246

2

70

1821

Surprise …

120

2

30

1815

Swift ….

12

1

3

1819

Swift ….

g

1

3

1821

Swift ….

250

2

80

1821

Swiftsure

104

2

30

»Vhen bunt

Names of Vessels.

Ton nage

Engines.

Horse Powr.

1819

Talbot …

156

2

60

1821

Tartar …

180

2 Horiz.

580

1821

Thames, see the

1 Vertical

Glasgow

1821

Thane of Fife .

148

2

40

1822

Tourist, now

Royal George

200

2

80

1822

Towart Castle .

120

2

50

1818

Trusty …

88

1

10

1817

Tug ….

95

2

32

1820

Two Brothers .

35

1

9

1820

Tyne ….

40

1

10

1821

Jnion

20

1

4

1822

Jnion …

53

2

16

1822

Jnion, double

ferry-boat . .

100

2

30

1821

Venus …

265

2

60

1821

Velocity …

150

2

40

1818

Victory …

160

2

40

1820

Waterloo . .

90

1

20

1819

Waterloo . .

210

2

60

1822

Yorkshireman .

200

2

80

316. The Atlas is the largest vessel ever built, and is impelled by three engines of 100 horse power each. This gigantic steam vessel was built at Rotterdam, and launched in the summer of 1828. Her decks ate about thirty-fivp fort longer than a first-rate man of war, and is furnished with four masts. Her engines were constructed at Leige.

317. The vessel Soho is of somewhat smaller dimensions than the American steam-boat, the Chancellor Livingston, plying on the Hudson River between New York and Albany, constructed by Mr. Fulton. The following are some particulars respecting this vessel: — Her keel is 154 feet long; deck 165; thirty-two broad ; burden 520 tons ; draft of water about seven feet three inches ; principal cabin fifty-four feet long, seven high; ladies' cabin, above the other, thirty-six feet long, with closets ; forward cabin thirty long, seven high. Permanent sleeping births, in principal cabin, thirty-eight; in ladies' cabin, twenty-four; in fore cabin, fifty-six ; in captain's cabin on deck, two ; engineers' and pilots', three ; forecastle, six ; firemen, cooks, &c.,

six; total 135. Her engine is of seventy-five-horse power ; diameter of cylinder forty inches, length five feet; piston rod eight feet and a half; stroke five feet; boiler twenty-eight feet long, twelve broad, with two funnels; pad-dle-wheels seventeen feet diameter ; paddle-boards, five feet ten inches long, with two fly-wheels, each fourteen feet diameter, connected by pinions to the crank wheel. The machinery rises four feet and a half above the deck. Average rate of sailing, eight miles and one-half to eight arid three-fourths an hour. \Vith a strong wind and tide in her favor she has made twelve ; but with a strong wind and tide against her not more than six miles per hour. The hands employed on board are — thirteen mariners, eleven cooks, waiters, stewards, &c.; in all twenty-four.

318. This vessel, however, is still much surpassed in size by the Lady Sherbrooke, of 787 tons,

and sixty horse power ; being the largest of eight which ply on the river St. Lawrence. This gives thirteen tons for each horse power, whereas in the Soho the same burden has three times as much action applied to it. The American steam-vessels, though fast sailers, are thus impelled by comparatively smaller engines than those built in this country.

319. It appears from the Report of the Select Committee of the House of Representatives, for session 1817, that there were then seventeen large steam-boats in constant employment on the American rivers, besides ferry-boats. But since that time they have increased so rapidly that there was in 1823 about 300.

320. The following are the names of thirty-five vessels, and their tonnage, plying on the Mississipi and its tributary rivers alone ; *viz.* Alabama, 200 tons; Buffalo, 300; Cedar Branch, 250; Cincinnati, 120; Constitution, seventy-five ; Eagle, seventy; Etna, 390; Exchange, 200; Experiment, forty; Frankfort, 320; General Jackson, 200; General Pike, 250; Governor Shelby, 120; Harnot, forty; Hecla, seventy; Henderson, eighty-five; Independence, 300;. James Monroe, ninety ; James Ross,

320 ; Johnston, eighty ; Kentucky, eighty; Louisiana, fifty-four; Madison, 200; Maysville, 150; Napoleon, 332; Ohio, 443 ; Paragon, 400; Rifleman, 250; Rising States, 150 ; St. Louis, 220 ; Tamerlane, 320 ; Vesta, 100 ; Vesuvius, 390; Volcano, 250; Washington, 400 ; in all 7259 tons.

321. Belonging to some of the States there are steam frigates and ships of war carrying guns, some of them 100 pounders. These vessels are thirteen feet thick in the sides, of alternate layers of oak and cork; are so constructed that they can eject boiling water on their enemies; and there are cases of cutlasses and pikes which project from their sides and draw back again every fifteen seconds.

322. The Savannah, of 350 tons, was the first steam-vessel that crossed the Atlantic. She arrived at Liverpool on the 20th of June, 1819, in twenty-one days from land to land, eighteen of which her engine was going; her daily consumption of coal was about ten tons, so that she must have had at least 200 on board, leaving 150 for the weight of engine and cargo. Her paddles were occasionally taken off when she sailed by wind ; and the whole of the paddle-wheels were capable of being taken to pieces and shipped in case of bad weather. As the distance is not much short of 4000 miles, she must have averaged nearly 200 per day.

323. By far the greatest number of steam-vessels use low pressure engines. A larger proportion of American vessels have high pressure engines than in this country. High pressure engines are wrought with steam of a great variety of strengths, from thirty to 160 Ibs. per square inch. Some engineers assert that it is capable of being used at 1000 Ibs. The steam is not condensed, but, after having acted on the piston, is allowed to blow off into the air. The diameter of their steam cylinders may be made of any size proportioned” to the strength of the steam used. Thus, when it is 160 Ibs., the area of the

cylinder may be only a sixteenth part of the area of one using steam of ten pounds; consequently, a five-inch cylinder wrought with such strong steam will be equal in power to a twenty incli cylinder wrought with such weak steam. High pressure engines require neither air-pump, conductor, nor the parts therewith connected ; and, as the volume of steam used is in proportion, their boilers may consequently be much smaller. Hence these engines occupy less room and tonnage, and require somewhat less fuel; but the risk of explosion is considerable. Were it otherwise they would be very valuable at sea,

because their power can be increased on emergencies by merely increasing the fire, whereas the power of condensing engines is much more circumscribed and confined to their original construction. The. free effective power of large low pressure engines is about eight or nine pounds per square inch of their steam pistons, and of small ones, under thirty horses, only seven or eight.

324. It is remarkable that, after the first successful trial, very little improvement has been made in the construction of steam-vessels. Experience has only fixed the suitable proportions of the several parts. Much, however, still remains to be done. The great objects wanted are to increase the power of the engine ; to avoid the waste of force in the play of the paddles ; and to render their action more equable. Notwithstanding the number and variety of steam engines which have been erected in this island, it is truly surprising that some of the most important points of theory should be left uncertain and subject to dispute. We have neither ascertained exactly the density of steam formed under different pressures, nor the quantity of heat absorbed in its formation. Most of the conclusions of engineers are drawn rather from analogy than from facts; and a new set of experiments or; steam, conducted with scrupulous attention, and on a comprehensive plan, are much wanted at present to guide all our practical operations. It seems probable, that the most economical engines, on the whole, are those which work under a high steam pressure, though the statements given by different authors cannot be easily reconciled. The vapor of other fluids has sometimes been proposed instead of the steam from water. It would be an important object gained if the same elastic force could be created with less expense of heat. The prodigious consumption of coals by the boilers proves a great hindrance to the extension of steam-navigation. The store of this ponderous species of fuel required for the supply of the engine in a distant voyage, would occupy the whole tonnage even of a large vessel. The Rapid,of 130 tons burden, and sixtv-horse power, required nearly a ton of coals every two hours, and could not therefore continue at sea above eleven days; and we have seen that the Savannah, which crossed the Atlantic, consumed ten tons of coals every day, or 210 tons during the passage of twenty-one days, leaving only 140 of surplus tonnage.” Unless some great discovery, indeed, be made on the concentration of heat, we shall never despatch steam-packets directly to the East or West Indies.

325. The first objection which occurs to the •use of wheels for propelling the vessel, is, that there is a great waste of power. The wheel, at every point of its circumference but one, is either ascending or descending. Each of the arms has to be immersed at a considerable expense of power, and the effect of its application to the water, in this direction, would be, iO lift the vessel out of the water, as much as to push it forward upon the surface, were it not that the force necessary to lift another of the arms out of the water is equal to that which is required to immerse the former. In other words, the tendency which the descending arm has to elevate the vessel is counteracted by the operation of the ascending arm, which tends to depress it. In short, the space in which the revolution of the wheel is of any use in forwarding the vessel, is very small. One-fourth of the power, steadily applied in a horizontal direction, would produce greater effects.

326. The next disadvantage attending the use of wheels is, that the whole force is applied to the water too close to the sides of the vessel. It is true that this is an objection common to all the different methods yet put in practice ; but in the case of wheels, especially as they are generally placed nearly as forward as the bow of the vessel, the effect is to bring a current against the head of the vessel, which impedes its progress, and occasions great waste of power.

327. The form and number of paddles attached to each wheel, as well as their velocity, has been so fully discussed by Mr. Tredgold, as to put the whole matter in the clearest light.

328. In still water, it may be assumed that the resistance of the same vessel is sensibly proportional to the square of the velocity ; the difference from this law being too small to produce a sensible effect within the range to which the velocity is limited in practice. Therefore, if a be the force that will keep the boat in a uniform motion at the velocity u, the force that will keep it in motion at the velocity v will be found by this analogy.

«* ‘. v1 ‘ ‘ a : -— — the resistance at the ve-u1

locity v.

Now this force acts with the velocity v ; hence the mechanical power required to keep the boat

in motion, at the Telocity v, will be °- — .

u1

329. Whence it appears that the mechanical power, or the power of a steam engine to impel a boat in still water, must be as the cube of its velocity. Therefore, if an engine of twelve horses' power will impel a boat at the rate of seven miles an hour in still water, and it be required to know what power will move the same boat at ten miles per hour, it will be 73 : 10s '.*.

1 03 x 12

12 : — —35; or an engine of thirty-five horses' power.

330. This immense increase of power, to ob-tain so small an increase of velocity, ought to have its influence in fixing upon the speed of a boat for a long voyage, and its proportions ought to be adapted for that speed, with a proper ex-

cess of power for emergencies. A low velocity should be chosen, where goods as well as passengers are to be conveyed. Our example places this in a striking point of view; for, to increase the velocity of the same boat from seven to ten miles per hour, requires very nearly three times the power, and, of course, three times the quantity of fuel, and three times the space for stowing it, besides the additional space occupied by a larger engine; consequently, if seven miles per hour will answer the purposes of the trade the vessel is to conduct, the advantages of the lesser speed must be evident.

331. According to the principles we have calculated upon, the power required to give a boat different velocities in still water will be as follows : —

Miks per hour.

3 4 5 6 7 8 9 10

Horses' power.

5*

13

25

43

69 102 146 200

332. In short voyages the extra quantity of engine room, and tonnage for fuel, is not so objectionable ; but, in a long voyage, it reduces the useful tonnage to so small a proportion as to render it doubtful whether such vessels will answer or not. The consumption of fuel to produce a given effect is much greater than in engines on land; and, perhaps, much in conse quence of the imperfection of the draught of the chimney, and the limited space for the boiler. The former might be easily remedied by an artificial blast, directed so as to force the flame to expend its heat on the boiler. And, while on this subject, it well deserves the attention of those who wish to improve steam-boats, to adopt some more effective methods of confining the heat to its proper object, and particularly where the engineer and firemen are exposed to it.

333. When the paddles of a steam-boat are in action there is a point in each paddle wherein, if the whole reaction of the fluid was concentrated, the effect would not be altered ; this point may be called the centre of reaction. It has not been determined for the case under consideration, but may perhaps form a subsequent object of research.

334. We suppose the fluid to be at rest, and the velocity of the centre of reaction to be V, and the velocity of the boat to be v ; then V — v is the velocity with which the paddles strike the water. Or the difference between the velocity of the paddles and the velocity of the boat is equal to the velocity with which the paddies act on the water ; hence, when these velocities are equal, the paddles have no force to impel the boat ; and, if the paddles were to move at a slower rate, they would retard it. Now, as (V — v) is the velocity, the force of the reaction will be as (V — v1) ; for this quantity is proportional to the pressure which would produce the velocity V — v. But, during the action of the paddle, the water yields with a velo-STEAM ENGINE.

city V — v ; and since the velocity of the boat is u, the effective power is as V — v : v : : (V — vf : v (V — v}. And the effect of this power in a given time is a maximum when v2 (V — v) is a maximum, that is, when 2V — 3 v, or when the velocity of the centre of reaction of the paddles is one and a half times the velocity of the boat.

335. It is desirable that the action of the paddles should be as equable and continuous as possible, unless they be arranged so that the variation of the power of the engine may coincide with the variation in the action of the paddles. • But, in attempting to render the action of the paddles equable, their number ought not to be increased more than can be avoided, because there is not then time for the water to flow between them, so as to afford a proper quantity of reaction, neither do they clear themselves so well in quitting the water. If we suppose W L, plate VI. fig. 4, to be the line the water would assume when at rest, the most favorable arrangement with the smallest number of paddles appears to be to make the paddle A of the wheel A just entering, when the preceding one B is in a vertical position, and the one C quitting the water. This arrangement allows time for the water to flow between, and for it to escape from the retiring paddles. If a smaller number be employed, there will be a short interval during which none of the paddles will be in full action. The utmost variation will be between the positions of the wheels A and B, fig. 5, and an intermediate position is shown by the wheel C. I have not attempted to represent the actual state of the surface of the water during the motion of the paddles, for, unless it were done with accuracy, according to nature, it is better undone ; but the form of the surface will not materially affect the conclusions.

336. To determine the radius of the wheel, or the depth of the paddles, when the number of the paddles is given, becomes an easy problem, when the preceding conditions are to be adhered to. For, put A O, fig. 6, the radius — r, and x n the depth A a of the paddles, and

360° n their number. Then •— the angle A O B

contained between two paddles, and r cos. the angle being the

depth from the centre of the wheel to the surface of the water ; and

n (J a ; the cosine of

n

360

tained between the two paddles. .From unity subtract the natural cosine of the angle, and tlif depth of the paddles divided by the remainder will give the radius of the wheel.

337. Thus, if the number of paddles be eight, and their depth one foot and a half, ihen

360

— — 45°, and its cosine is -7071, therefore

1-5

j ,7‘07ˆ = 5-12 feet, the radius of the wheel.

Again, if the number of paddles be seven, and their depth 1-5 feet as before, then

360

• = r — x, or,

and its cosine is -6234, consequently ‘•

H J 1 — -6‘23-i — four feet.

338. Both divisions are represented in the previous fig. and it may be remarked that, when the depth of the paddles is fixed upon, the greater number of paddles should have the preference, because the

first impression on the water is then less vertical. The difference is easily seen by comparing the angles at which the paddles A and a, strike the water. It will also be observed that the larger wheel must have less tendency to throw the water up behind at C.

339. It is obvious that, by enlarging the wheel, the obliquity of the action on entering the water may be reduced ; but it also may be done by lessening the depth of the paddles, as will be evident from the other figs., where the angles are the same in both wheels ; hence it is useful to be able to find the depth, and. if the number of the paddles and the radius of the wheel be given, the depth may be found by the following rule : —

340. Multiply the radius of the wheel by the difference between unity and the natural cosine of the angle contained between two paddles, and the product is the depth required. Suppose the radius is to be 4-5 feet, and that there are to be eight paddles ; then 4-5 (1 — -7071) = 1-318 feet for the depth of the paddles.

341. Eight paddles is as small a number as ought to be adopted, and, where large wheels can be admitted, nine or ten might be used with advantage ; but, where many paddles are employed, the wheels must necessarily be of large diameter, to keep them narrow. The advantages of wheels of large diameter consist in the favorable direction they strike the water, and also quit it; the paddles are also more distant from one another, and, while they have more reaction on the water, they splash it about much less ; the weight of the wheel also renders it more effective as a regulator of the forces acting upon it. On the contrary, there are some strong practica-

— cos. — J = x = A a, the depth of hie objections to very large wheels for sea-vessels ;

the paddles.

Also

360

= r =A o, the radius of the

1 — cos,

n

wheel.

From these equations we have the following rules, *viz.* To find the radius of the wheel, when the number and depth ot the paddles are given. Divide 360 by the number of paddles, which will give the degrees in the angle con-

they give the force of the waves a greater hold on the machinery; they are cumbersome and unsightly ; and they raise the point of action too hi?h above the water line ; so that the choice requires both experience and judgment.

342. The best position for the paddles appears to be in a plane passing through the axis, as represented in the figures ; if they be in a plane which does not coincide with the axis, they must either strike more obliquely on the fluid in entering, or lift up a considerable quan-

tity in quitting it. With respect to the shape of the paddle, it is clear that it should be such that the resistance to its motion should be the greatest possible. These conditions appear to be fulfilled in a high degree by the simplest of all forms, the plane rectangle ; but we might learn much from a judicious set of experiments on this subject.

343. As there is some variation in the force of reaction against the paddles, it may in some measure be compensated by making its periods coincide with the variation in the force of the engine. To effect this, the stroke of the engine should be made in the same time as is occupied by that part of the revolution of the paddle-wheel which is expressed by a fraction having the same number of paddles for its denominator, and the piston should be at the termination of its stroke, when one of the paddles is in a vertical position. For, when one of the

paddles is in a vertical position, as in the wheel A, the reaction is the least ; and it is greatest when two paddles are equally immersed, as in the wheel B, at which time the force would be acting at right angles to the crank.

344. Having shown the power that is necessary to keep a boat in motion in still water, it will be some advantage to resume the enquiry in the case where it moves in a stream or current ; and, for that purpose, let v be the velocity of the boat, and c the velocity of the current ; a being the resistance, when the boat is in motion with the velocity a.

345. When the resistance to be overcome, to give the boat the velocity v, is, when the motion

n /*« - £\l

is with the stream, u* :(v — c}3 ”. a : ˆ

And, when the boat moves against the stream as

o (v + c)1 «* : (v -f-c)a ; I a : — - — ˆ — -. Hence the power

and its effect in a given time is a maximum when v* (V + c — t;) is as a maximum ; that is

3 v -4-2 c whenV = — , or when V=l‘5»-|-c

in either case is expressed by

a v (+ c)8

The

upper sign to be attended to when the motion is with the current, and the lower sign when it is against it. When c, the velocity of the current, is nothing, the result is the same as before. But the resistance in still water is not the mean between the resistances in the direction of the current and against the current ; consequently, the mean rate of a boat, which alternately goes with and against a current, must be less than the mean rate in still water. The mean resistance is

ˆ , — -‘ while the resistance in still water is

v?

only , and the difference between these is

u*

— — ; a quantity depending on the velocity of the

current ; and, for any particular case, should be calculated from the mean motion of the current. 346. When a boat advances with a current, the velocity with which the paddles act on the water will be V -f-c — v ; and when the boat moves against the current it will be V — c — v ; consequently, in either direction, it is V ± c — v ; and the force of reaction (V ± c — vf. — But the effective resistance of the boat is as

A, 2(v + < 0 Also, — • — - = v.

O

347. When c = o, or the boat moves in still

2 V

water, - = v, the same as before, and the mean

o between moving against and with the current is

2 V

- = v also ; therefore, where the velocity cano

not be changed to suit the circumstances, this will be the best proportion for all cases. Where the force of a current is considerable, it would be extremely desirable to have the power of altering the velocity' of the wheels ; and it is not proper that it should be done by any change in the velocity of the steam-piston ; because, whatever change is made in its velocity, must affect the power of the engine. There is no difficulty in adopting such a train of mechanism as would produce the alteration of velocity required, and yet be as strong and durable as the ordinary combination, and not at all expensive, compared with the object to be gained by mtrbducing it. It will only be necessary to provide for an increase of velocity ; for, when the boat goes with the stream, the rate of the paddles is already too great; whereas, when a boat moves against the current, both an increase of velocity of the wheel and an increase of surface of paddle is necessary, to maintain the mean rate.

348. We will close this part of our subject with a view of the velocity a boat may be expected to acquire, when the power is the same : — Let P be

the power of the engine, then — — - — ~ = P

349. Put the ratio of the velocity of the current to the velocity of boat as 1 : n ; that is, 1 : n '. '. v : c = n v ; whence we have

=P

350. If the boat moves in a current of which the velocity is n times the

velocity of the boa:, then we shall have

With the stream

Still water Against the stream

This table shows that a power capable of moving a boat at the rate of five miles per hour in still water, will only move it at the rate of a little more than three miles per hour against a current of the same velocity as the boat ; and that the speed of the same boat would be eight miles per hour when moving with a current of which the velocity is four miles per houi. It should he remarked that these calculations suppose the

Miles

Miles

per hour.

.4

per hour.

8

2-2

6-6

1-53

6-12

o-oo

5-00

a 1-08

4-34

1-38

4-16

1-92

3-85

2-38

3-58

3-17

3-17

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area of the paddles and their velocity to be adjusted to the maximum proportions in each case ; were it otherwise, the velocity with the current would be increased, and the velocity against the current diminished.

351. There are two or three detached parts of the engine that require a more particular notice than we have yet given. The governor, as it is called, furnishes a beautiful illustration of the application of the centrifugal force as a means of regulating the velocity of the engine. Indeed the same law that governs the motions of the planetary bodies is here made subservient to producing the most perfect equilibrium between the various parts of the machine.

352. It is represented in the accompanying diagram, and a ._

rotatory motion is communicated by a gut band passing round a rigger, or pulley fixed upon the fly-wheel shaft, or some other revolving part of the engine, and also round the pulley C ; and the relative velocities of the governor and the engine must be adjusted by such wheel-work, or the respective diameters of the two pulleys. Towards the upB;r part of the rod or spindle A B two bent levers E F and G E H are fixed, so that they can both turn or open on the common centre E which is fixed to the spindle ; a heavy iron ball I, I, is fixed to the end of each bent lever, and the upper ends D and G of these levers are attached by connecting links K, K, with joints to the sliding piece M, which slides freely on the square spindle. It follows therefore that while the two balls I, I, lie in contact with the spindle A B, the slider M will be pushed to its greatest possible height upon the rod ; but whenever the balls I, I, are opened out the slider M must be depressed. The weight of the balls keeps them in contact with the spindle, so long as it remains stationary or moves slowly ; but whenever their revolving motion increases, their centrifugal force will drive them to a greater or less distance from the centre : L N is an iron lever turning on the fixed pivot N> while its opposite end enters a groove formed in the sliding piece M ; this is merely for multiplying or increasing the motion produced in M, when necessary ; for, by prolong-ing the distance between N and L, the end L may be made to move in any required degree. To apply the governor to the regulation of the velocity of the engine, it therefore only becomes necessary to connect the end L of the lever by means of strong wires with the lever

of the throttle valve, taking care that that valve shall be quite open when the two balls of the governor are lying close to their spindle ; for then the en-gine will move at its full speed. By so doing, the balls will instantly separate and raise the end

L of the governor-lever, which, by drawing upon the lever or the throttle valve will partly close it and diminish the speed.

353. The safety-valve being an object of considerable importance, both as regards the utility of the engine, and the preservation of those connected with its management, much attention has been given to its construction ; and to this highly useful appendage we would particularly call the reader's attention.

354. The first engine that was made by Saverv was furnished with a steelyard safety-valve The accompanying figure will furnish an idea ot its arrangement. A

the top of the boiler ; B, the safety-valve or plug, made to fit air-tight in the tube or valve-seat beneath. C, the lever working on an axis T), and furnished with a moveable weight E, adjusted to balance the weight of the steam in the boiler.

355. The lever and balance-ball safety-valve employed in all the early boilers appear but little calculated for those engines in which high pressure steam is employed, as the engine-man, in an over anxious zeal for the full performance of the machinery confided to his care, has been frequently known to increase the internal pressure of a large boiler many thousand pounds be-yond the resistance to which it was originally proved. To prevent a recurrence of those accidents which first drew the attention of the legislature to this important part of the engine, it appears advisable to enclose the safety-valve in an iron case, of which a section is annexed. The valve B in this case

rests upon a conical seat in the boiler A, and is furnished with a series of

small moveable plates lettered c, which are employed to increase or diminish the entire

weight of the safety-valve, the whole being covered by the box D ; and, as this is pierced with a number of small holes, the steam readily escapes when the expansive force exceeds the resistance offered by the loaded valve.

356. The cylinders of steam engines are frequently surrounded with cases containing steam of the same elasticity as that in the boiler. The water proceeding from the condensation which takes place in the case was for a considerable time allowed to pass off without further use ; but it has subsequently been the practice to return it to the boiler.

357. The object of the case was to prevent condensation taking place within the cylinder. But we shall see that the application of heat in this manner is by no means advantageous. As far as experiments hitherto published afford us a clue we will endeavour, says an ingenious author, to investigate it in the case of the engine at Huel Towan.

357*. M. W. De la Roche and Berard found that the capacities of equal volumes of air under the pressures of 29-2 and 41-7 incites of mercury were nearly as 1 : T2396 differing from the ratio of the pressures of densities which is 1 : 1-358.

358. If we suppose the densities and capacities to be in this ratio to each other ; then under a pressure of 24-9 inches of mercury 8-983.

29-2 … 1-000

39-6 … 1-215

71-15 … 1-91

359. As air and steam, out of contact with its generating water, follow the same ratio of expansion; in the absence of experiments on the subject, it seems reasonable to suppose that their capacities vary as one another, and consequently that the capacity of the steam in the case — 1-910 whilst that of the steam contained in the cylinder at the termination of the working stroke — -8983 for equal volumes ; and for

equal weights that of the former — -02684 whilst that of the latter — -03607. It consequently requires that 3607 parts by weight of steam, of a pressure equal to that of 71-15 inches of mercury, be cooled, in order to heat 2684 parts of the pressure of 24-9 inches, the same interval of temperature. From the law of Mariotte it follows that the elastic force of a given weight of any elastic fluid, x the sphere of its action, will give the same quantity, whatever may be the temperature, pressure, or density ; provided the whole quantity of heat in the mass suffer no increase or diminution ; and hence, friction and capacity disregarded, we ob-tain the same result, whether a given quantity of water and caloric, in the form of a vapor, act on a surface of eight or eighty inches in diameter.

360. In the use of a steam case it appears that a portion of steam is destroyed in order to communicate to another portion a force so considerably less than what would have been obtained by adding volumes together as the difference between 2684 and 3607. The former representing the effect produced on the steam in the cylinder by the abstraction of heat from the case; and the latter what would have been the effect of the steam condensed in the case had it been employed in the cylinder.

361. But the quantity of injection water will be augmented by the steam within the cylinder acquiring an increased quantity of heat after its admission there ; the load of the air-pump being of course proportionally greater ; the surface exposed to the cooling influence being enlarged by the application of a case. Mr. Woolf and Mr. Grose usually employ steam cases, which with the upper parts of the boilers, the steam pipes, cylinder, cover, nozzles, &c., are surrounded and covered with from ten to fourteen inches in thickness of ashes, sawdust, or powdered charcoal.

362. Before the application of this contrivance Mr. Hocking, engineer at the Consolidated mines, states, that the quantity of steam condensed in the case of a ninety inch cylinder, and working with steam of a pressure of about seventy inches of mercury, gave 8T6 cubic feet of water in twenty-four hours.

363. Mr. Sims has recently adopted a plan, which, if it can be so carefully managed by the engine-men as to avoid charring the packing of

the piston, seems preferable to a steam case. It is making the flue,

from the boiler to the chimney, around the cylinder. But it is doubtful whether the advantage obtained in the cylinder be not counterbalanced by the increased burden of the air pump.

364. The sudden descent of a weight sufficiently heavy to open the valves of a powerful engine, would be attended with serious inconvenience, was not some expedient resorted to for diminishing its force. To do this, each plunger weight moves in a strong box or case which very nearly fits it ; and as this, together with the weight itself, is placed in the cold water cistern, of course this box is always filled with water, which is admitted by a valve opening inwards; when the plunger weight descends, it is therefore resisted by the water, which only permits it to move slowly ; but, in its ascent, the valve opens and admits of the most rapid mo-tion, and at the same time prevents any unnecessary load being thrown upon the plug tree. In engines of great power, the weight of the plunger would necessarily be so great as to be very inconvenient, and Messrs Watt and Boulton have therefore most ingeniously applied a small separate steam cylinder and piston for the express purpose of removing the pressure from the valves. The piston rod of this small cylinder, which is usually nx*d immediately below the side pipes, is a continuation of the rod by which the valves are connected, and is made steam tight by working through stuffing-boxes. The piston is of the same diameter as the valves to which it is connected, and the steam passages are so continued from the slide-pipes that, when steam is made to press on the upper side of any. valve, it is at the same* time admitted below the piston, and thus tends to raise that valve upwards with a force exactly equal to that which presses it downwards, consequently the valve moves with the same facility as if it were in the open air. The plunger weights do not therefore require to be of greater weight than what is necessary to overcome the friction of the piston, and the stuffing-boxes of the valve-spindles. In those engines that work with a four-way cock, or sliding regulator, plungers are unnecessary, and indeed cannot well be applied, though the motion they produce is always desirable, because the steam cannot be cut off too suddenly, but should be admitted gradually; for, if its power is too suddenly thrown upon the piston, it may do mischief by its exertions before the vis inertia of the piston and beam are overcome.

365. In 1805 Mr. Job Rider obtained a patent for improvements in the steam engine. These improvements consist, first, in lining the steam cylinder with soft metal, of a sufficient thickness to admit of finishing the inside of the cylinder of such metal, by drawing or boring; secondly, in applying a hollow piston-rod, answering the purpose of an eduction pipe ; thirdly, in the order of opening; and shutting the

valves ; and, fourthly, in regulating the speed of the engine by a pendulum. The nature of this latter contrivance is very ingenious, and may be understood from the following description. Upon an horizontal arbor, which we may denominate the

mam arbor, are placed three wheels, a drum or barrel, and a pinion : one of these wheels, that is to say, the main wheel, is fitted by means of a socket upon the main arbor, so as to turn round upon it, and has teeth both upon the exterior and interior periphery of its rim. Within the circle of the interior cogs of this wheel, a pinion is fixed to the arbor, its diameter being one-third of the interior diameter of the main wheel ; and this pinion has teeth surrounding its convex surface. The moveable barrel turns freely upon the main arbor; its diameter is rather less than the exterior diameter of the main wheel, and it carries a cord, with a weight hanging at its end, acting like a clock-weight. Besides this, the ends of the barrel are pierced with two orifices, each at about half the exterior radius of the main wheel from the arbor, these holes serving is bushes or pivot-holes, wherein an arbor turns, carrying a wheel of which the diameter and number of teeth are equal to those of the pinion : the latter wheel may be called the barrel pinion ; its teeth work in the teeth of the pinion, and also in the interior teeth of the main wheel. By these means the barrel may be turned round upon the main arbor, while the arbor itself is turned by the pi-nion, which is acted upon by the barrel-pinion, at the same time that this pinion acts upon the interior teeth of the main wheel. The external teeth of the main wheel turn the pinion of a scapement wheel and pallets, nearly similar to those in Graham's dead-beat. Near one end of the main arbor there is a ratchet-wheel, and wheel and click ; and near the other end a wheel, which is acted upon by an endless screw upon a horizontal shaft, worked by the general operation of the steam engine.

366. This arrangement serves to regulate the rate of the engine's motion ; for the turning of the worm wheel, by the general motion of the engine, causes the weight to be raised which hangs to the cord that wind? upon the barrel ; and this weight is connected to one end of a lever, the other end of which is attached to the steam-valve in such a manner that the degree of opening of that valve depends upon the altitude to which the weight is raised. The aperture of this valve is

formed like an inverted cone; and, while this valve shuts and opens twice at every stroke, the lever does not prevent such opening and shutting, but merely limits the ex-tent of the opening by the springing up of a rod connected with it. By this contrivance it happens that when the weight is highest the valve is least opened ; and when the weight is lowest the valve is most opened. Hence it is evident that should the engine wind up the weight, by turning the worm faster than the pendulum permits it to descend by the turning of the barrel, the aperture of the valve will be contracted ; and vice versa. Little power is lost by these means, and the speed of the engine can be accurately regulated by properly adjusting the length of the pendulum, and the numbers of teeth in the wheels and pinions. As to the ratchet-wheel and click, their sole use is to prevent the weight from drawing the line off the barrel, when the worm-wheel is thrown out of gear. VOL. XXI.

367. The air-pump and condenser of the com-mon engine are usually of the same size ; if of one-eighth, the capacity of the working cylinder, it will be found sufficient to keep the condenser empty in Mr. Watt's single engine. The best proportion for a double action engine is about two-thirds the diameter of the cylinder and half the length of stroke, the condenser, as in the single engine, being of similar capacity.

368. In Mr. Maudslay's portable engine the condenser is a hollow cylinder, and ths air-pump is placed within it, so that there is no necessity for a pipe of communication from the air-pump to the condenser: and in this case a small cistern is fixed over the pump to contain the hot water, the discharge valves being placed in the lid, which thus forms the bottom of the cistern or hot well.

369. In the early engines, on Messrs. Boulton and Watt's construction, the air-pump and condensing-cistern were placed at the outer end of the beam ; in which case, the pump-bucket being drawn up by the descent of the piston, the en-gine required less counter-weight than in the present form, in which the air-pump must be wholly worked by the counter-weight. It was necessary, also, that the parts appropriated to the condensation of steam should be kept as cold a« possible ; on which account the air-pump and condenser were placed in a cistern of

cold wa-tei, which, being continually on the overflow, carried off the excess of heat.

370. The mode of condensing by outward cold was not however found sufficient ; arid Mr. Watt afterwards introduced a small jet of water, the dimensions of the air-pump being so far increased as to extract the injection-water as well as the air.

371. To shovv the degree of vacuum in the condenser, and consequently the amount of pressure on the piston, a barometer-gauge has been employed. This is justly considered as a most important instrument, though unfortunately for the profit of steam engine proprietors, but little attended to. This gauge is in fact a common barometer tube, of thirty inches in length, with a graduated scale, and connected with the condenser by a small tube furnished with a stopcock. When the air is expelled from the cylinder this must be closed, otherwise the steam entering the tube would blow the mercury from the cup. On the cock being turned, and the communication opened with the condenser, the exact degree of vacuum will be shown by the height of the mercurial column, which, if the condensation be not complete, or air be admitted, will descend, and on the contrary, if perfect, it will ascend, as in the Torricellian tube.

372. The steam-gauge employed by Mr. Watt consists of an inverted syphon or bent tube of glass or iron, one leg of which is jointed to the steam-pipe, while the other is open to the atmosphere. A quantity of mercury being poured into the tube, it will occupy the lower or bent part, and the surface of the fluid metal in one leg being exposed to the pressure of the steam, while the external air acts upon the other, it is evident that the difference of level of the two surfaces will express the pressure of the steam in

the height of the mercurial column passing up the graduated tube.

373. This gauge is just the reverse of the preceding; the barometer showing the pressure of the atmosphere on a given space of the piston, while the steam-gauge indicates the force of elastic vapor entering from the boiler. It is the duty of the fireman frequently to look at his gauge, that he may know when to increase the fire in the furnace, and thus a sufficient supply of steam will always be secured to the engine.

374. In the early atmospheric engines, the working-beam was composed of a large and al-most unhewn tree ; but Mr. Smeaton employed a framing of wood for this purpose, which was afterwards much simplified and improved by Mr. Hornblower.

375 In double-acting engines it is usual to have the beam cast in one piece, the extremities being turned in a lathe to form cylindrical pins, upon which are fitted sockets or pieces, having other pins projecting from them to form the points of the parallel-motion and connecting-rod. Thus, there is one pin on each side of the socket, the two links of the parallel-motion being fitted to the two projecting pins at one end, while the double joint of the connecting-rod is fitted on the two pins at the other end of the beam. The advantage of this construction is, that the joints at the ends of the beam become universal joints, having liberty of motion in all directions ; and, in some of Mr. Murray's best engines, the same contrivance is applied to the crank-pin and connecting-rod.

376. The following table exhibits the proportions of the parallel-motion and as such is important.

Length of Stroke.

Beam AB.

Coupling Rod DECB.

Link CE BD.

Bridle-Lever EF.

No. 1

96

147

69

42

78

2

72

120

50

28

96

3

72

110

55

31J

55

4

48

60

•n

20

60

5

48

84

38

19

60

6

48

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377. The two great links of the parallel mo-tion are each composed of a strap or loop of iron, bent so as to form a double link, in the up-per bend of which are two sockets for the pivots at the end of the beam, and at the lower end are two others, for the pivots which project on each side of the piston-rod socket. The brasses of this joint are held in by wedges, put through the two links at the lower end, which, on being driven inwards, tighten the fittings at pleasure.

378. The proper length of the stroke for different engines is not at all settled ; Mr. Watt's first engines were made much longer than this table, but of late years they have been made

shorter, and without any adequate reason which we can perceive ; for it must be an advantage to a machine to make as few reciprocations as is consistent with a practicable length of cylinders. These differences in the length of stroke do not affect the calculation of powers, because, if the length of the stroke is altered, the number per minute is also changed, and the velocity of the piston is the same ; at least it will be always nearly the same as the table for those engines that work a crank and fly-wheel. But it must be observed that these engines move with a greater celerity than the engines for pumping water, because it is necessary to accumulate a considerable velocity in the fly-wheel, or it must be immensely heavy if the piston was to move so slowly as the pumping-engine generally does.

379. The cylinder and piston being those parts of the engine in which the effective force is more immediately produced, may now claim attention : —

380. The piston of the atmospheric engine is generally made of cast iron nearly fitting the in-side of the cylinder, a circular ledge or rim being formed round it to receive the packing, without which the steam would find a passage through the interstices in the cylinder. Mr. Smeaton, who greatly improved the atmospheric engine, coated the under side of the piston with elm or beech planks about two inches and a quarter thick ; the wooden bottom being screwed to the iron with a double thickness of flannel and tar, to exclude the air between the iron and the wood. By the adoption of this improvement its property of conducting heat was diminished, and the wood, having

been previously jointed with the gram radiating in all directions from the centre, was not liable to expand very materially by the heated steam. This piston was kept air-tight by a small stream of water continually falling on its upper surface ; but in Mr. Watt's engine he was compelled to effect this by improving the fitting of the piston, the old mode being inadmissible.

381. It is now cast with a projecting rim at bottom, which is fitted as accurately to the cylinder as it can be, to leave it at full liberty to rise and fall through the whole length. The part of the piston above the rim is a little less all round than the cylinder, to Irave a circular groove for the hemp which forms the packing. To keep this in its place, a lid or cover is put over the top of the piston, with a ring or pio-jecting part which enters into the circular groove for the packing

b b, and pressing upon it the plate is forced down by screws a, a, which work into the body of the piston at c c. By this means the packing is made to fill the diameter of

the cylinder with tolerable accuracy, and to prevent for a time any steam passing between the piston and the cylinder. The connexion with the piston-rod is seen at ne. When, however, by continued working the piston became too easy, and so occasioned a waste of steam, it was found

necessary to take off the top of the cylinder to get at the screws, even when fresh hemp or packing was not wanted, and this operation beino-attended with considerable labor was seldom resorted to by the engine-man till a great waste of steam had taken place. By an improvement on this piston, introduced by Mr. Woolf,this is now effected without taking off the cylinder-cover, except, indeed, when new packing is required.

382. To accomplish this,Mr.\Voolf fastens on the head of each of the screws a small cog-wheel or nut, c, c, c, c, c, and these are all connected together by means of a central wheel d, working loose upon

the piston-rod in such a manner, that if

any one of the screws be turned, a similar mo-tion is given to the remainder, a cap being provided in the upper end of the cylinder screwed down by bolts to make it steam-tight. In a piston thus constructed, there is little difficulty in drawing down the packing, by applying a key to the square head of the projecting screw employed to communicate with the rest. Another method contrived by Mr. Woolf for the smaller pistons differs but little from the preceding in construction. Instead of having several screws, all worked down by one motion, there is in this but one screw, and that One cut upon the piston-rod itself; on this is placed a wheel, the centre of which is furnished with a female screw, which is forced down by means of a pinion furnished with a square projecting head turned in a similar manner to the preceding.

383. For high-pressure engines, however, the metallic piston invented by Mr. Cartwright has the most decided preference. This not only saves the trouble and expense of packing, which must be frequently renewed in all other engines, but also a great deal of steam, on account of the more accurate manner in which it is made to fit the cylinder. This is effected in the following manner : — Two metal rings are accurately ground into the cylinder, so that no steam can pass between their exterior surface and the inside of the cylinder, their upper and under sides are also ground perfectly flat, and applied one upon the other. On the upper ring is placed a plate of metal, rather smaller in diameter than the cylinder, while a similar flat plate is placed below the under ring, both of which, with the rings between, are attached firmly to each other by means of the piston-rod passing through them.

384. A shell being thus formed, the rings are each of them cut into three pieces, and in cutting them such a portion of the metal is taken away as to leave room to introduce between two of the pieces, a spring in form of the letter V, the open end of which is placed outwards, almost close to the circumference ; by which means the two pieces, against which the two sides of the spring act, are pressed in the direction of the Circumference, against the ends of the third

piece, so that the three pieces are thus kept so uniformly in contact with the cylinder, that the longer the machine is worked the better the rings must fit. To prevent steam passing through the cuts in the lower rings, the solid parts in those upon ihe upper side are made to fill

upon the divisions and springs of the under ones, thus interrupting the communication that would otherwise remain open, and forming a. perfect break-joint.

385. A diagram of an improved piston is annexed : and it will he seen that the flexible springs *, , /*, rest on the rod S, and operate on the wedges o, o, u, and as such must expand the remaining portions ft, h, h, so as to ensure

the accurate fitting of the piston r m. The interior surface of the cylinder in which the piston works requires to be bored with the greatest exactness, though this was but little attended to in the early atmospheric engines, some of them being composed of timber hooped together in the same manner as barrels are constructed. Mr. Watt, in his first attempts at improving tde steam engine, employed this material in the construction of his cylinders, though he afterwards abandoned it for those of bored metal ; the operation of boring being performed with the greatest precision, by an apparatus invented by Mr. Wilkin-son.

386. Mr. Murray has also effected considerable improvements in this part of the engine, and the boring machines employed in his manufactory are of considerable value. They are worked by a separate steam engine, which is never stopped during the operation, as in that case a shoulder or ring would be formed, rurming completely round the cylinder.

387. In small engines, it is common to place the cylinder within the boiler, in which case no artificial mode of retaining the heat is required ; but to this arrangement in those of larger dimensions there are several objections, not the least of which is the frequent repairs that are necessary in the boiler ; and a similar effect has been produced by the use of a double cylinder. This was first adopted by Messrs. Boulton and \Vatt, the outer cylinder or steam-jacket keeping the inner cylinder at the temperature of boiling wa-ter, by the action of a partition of steam made to pass between the jacket and the working Cylinder, as we have already stated.

388. Before the boiler of a high-pressure engine is set to work, it should be proved effectually, first, by drilling small holes through it at different places, to actually measure the thickness of the metal, and ascertain that it is equal throughout, and then it should be proved by injecting water into it, until the pressure lifts the safety-valve, when loaded considerably more than is intended to be when the engine is set to work , but this proof should not be too severe, because the

metal may be weakened, although it is not burst, by the proof; and in consequence may afterwards burst with a much less pressure of steam. At

the same time the engineer, who undertakes to make these engines, should fully inform himself of the real strength of metal boilers of determinate thicknesses, which could be easily done without danger by injecting water into the boilers until they actually burst. We do not know that such experiments have ever been made ; and, in those boilers which have been burst by the explosion of steam, the pressure at the moment of the accident has not been known.

389. Mr. Bramah has made several steam engines, in which he employed a four-passaged cock, on a construction somewhat different from the one usually resorted to ; the steam from the boiler is made to enter into a hollow at the large end of the cone of the cock, and to pass away to the condenser by a passage at the small end of the cone of the cock, which by this means is always pressed into its seat by the force of the steam acting upon a surface equal to the small end of the cock, from which the pressure is relieved. This keeps the cock always tight ; and, to prevent the moveable part from being fixed fast by the pressure, the cone is made much more obtuse than usual.

390. In joining thejlanches of iron cylinders, and other parts of hydraulic and steam engines, a strong and durable cement is required. The following are receipts for cements proper for such purposes : — Mix boiled linseed oil, litharge, red and white lead together, to a proper consistence; this cement is to be applied on each side of a piece of flannel, previously shaped to fit the joint. The quantities of the ingredients may be varied without inconvenience, only taking care not to make the mass too thin with the oil. It is difficult, in some cases, to make a good fitting of large pieces of iron-work at once, and this renders it necessary sometimes to join and separate the pieces repeatedly before a proper adjustment is obtained. When this is

expected, the white lead ought to predominate in the mixture, as it dries much slower than the red. A workman, knowing this fact, can exercise his own discretion in regulating the quantities ; but it is safest to have too much rather than too little white lead, as the ‘ durability of the cement is no way injured thereby, only a longer time is required for it to dry and harden. When the fitting will not ad-mit of so thick a substance as flannel being interposed, linen may be substituted, or even paper, or thin pasteboard, the only reason for employing any thing of the kind being the convenience of handling. This cement answers well also for joining broken stones, however large. Cisterns built of square stones put together with this cementwill never leak or want any repairs ; in this case the stones need not be entirely bedded in it; for an inch or even less of the edges that are to lie next the water need only be so treated, and the rest of the joints may be filled with good lime.

391. Another cement, which is preferable to the former for withstanding the action of the steam, is compounded as follows : — Take two ounces of sarammoniac, one ounce of flour of sulphur, and sixteen ounces of cast iron filings or borings ; mix all well together by rubbing them in a mortar, and keep the powder dry. When

the cement is wanted for use, take one part ot the above powder, and twenty parts of clean iron borings or filings, and blend them intimately by grinding them in a mortar; wet the compound with water, and, when brought to a convenient consistence, apply it to the joints with a wooden or blunt iron spatula. By considering the affinities of these ingredients, those who are at all acquainted with chemistry, will be at no loss to comprehend that a degree of action and reaction takes place among the ingredients, and between them and the iron surfaces, which at last causes the whole to unite as one mass ; in fact, after a time, the mixture and the surfaces of flanches become a species of pyrites, holding a very large portion of iron, all the parts of which strongly cohere together.

. 392. Another cement of the same kind is made by mixing together two parts of flour of sulphur and one part of sal ammoniac, and making them into a stiff paste with a little water. When the cement is wanted for use, dissolve a portion of the above paste in urine, or in water’ rendered slightly acidulous ; and to this solution add a quantity of turnings or borings sifted, to get rid of the grosser particles. This mixture spread upon or between the flanches of iron pipes, or put into the interstices of other parts of iron work, will in a little time become

as hard as stone.

393. Mr. Malam has proposed some important improvements in the construction of rotatory steam engines. Tho first of these consists in the use of a hollow cylinder or drum, in which the pressure of steam is contrived to drive a leaden piston (as the patentee terms it) round the cylinder ; but which piston, by its gravity, always remaining near the lowest part, the steam is impelled upwards against the partition of the cylinder, and consequently forces it round upon its axis.

394. Two standards support the arms or axles of the revolving cylinder or drum, one of which arms is hollow, having two passages, the one communicating through the leg of the standard to the steam boiler, the other through the other leg to the condenser.

395. There are three valves in the hollow cylinder or drum, for the purpose of shutting off the steam and forming three distinct compartments ; there are also three hollow arms, each leading from the hollow axle into one of these compartments. *There is a heavy block of lead formed exactly to fit the curvature of the drum or hollow cylinder, which block or piston slides completely round the cylinder, the valves falling back into recesses as it passes by them. This block is so well fitted as to prevent the passage of steam between it and the cylinder.

396. The steam admitted through the hollow axle and through the hollow arm which leads to the lower compartment, where the block or piston lies, not being able to drive the block far from its place forces against the valve, which divides the chambers, and lifts that side of the revolving cylinder, carrying it round until the next valve has passed the block or piston, by which time the arm that supplied the steam has passed on so as to open a communication with the con

denser or vacuum channel, by which the steam of the chamber becomes condensed. At the same time, the second valve having closed the communication with the next chamber, the steam through the

hollow arm pours into that chamber, and exerts its expansive force against the block as before, and pressing upward against the valve raises the revolving cylinder. By these means the cylinder is kept in action, which action, by means of the extended axle of the cylinder, may be communicated as a first mover to other machinery.

397. The second description of engine has three cylinders or drums, one within the other ; the outer drum is called a jacket or case, which is fixed. Between this and the second drum is a passage or flue which passes round the second drum in order to keep it heated, this second drum is also fixed. The third or inner drum only revolves upon its axles, poles, or arms, which pass through metallic stuffings. One of these axles is hollow for the passage of steam, and the other is intended to communicate the motion as a first mover of machinery. The steam enters the chamber from a boiler, and thence passes by curved channels into compartments formed by oblique partitions in the revolving cylinder or drum, and passes out through small apertures in the periphery of the revolving cylinder into the passage between that and the se-cond drum, which is the condensing passage.

398. The lower part of the revolving drum, and also of the condensing passage, are charged with a quantity of mercury, or of water, or of fusible metal, such as lead or bismuth, &c., which is kept in a fluid state by the heat communicated to the inner cylinder through the flue which surrounds the second drum enclosed within the jackets. The steam passing through the entrance pipe, as before expressed, in one of the axles, occupies the central circular chamber, and thence flows into one of the compartments above described, formed by curved partitions, where the steam, acting against the fluid metal in the lower part, raises that side of the drum, causing it to revolve upon its axis ; this brings the entrance to a second chamber from out of the fluid metal in which it was immersed (and which acted as a valve to the passage), when the steam, acting upon the fluid metal in this chamber, raises that side of the drum still more, that is, continues the revolution. By this time the exit passage of the chamber first mentioned is raised above the level of the fluid metal in the condensing or vacuum passage (which passage communicates with a condenser), by which the steam in the chamber is condensed ; by this time a third chamber begins to fill with steam, the expansion of which, acting against the partitions upwards and the fluid metal below, raises the revolving cylinder still more, while the exit passage of the second mentioned chamber, rising above the level of the fluid metal, liberates and condenses the steam which it. contained ; the first mentioned chamber, having descended as the drum revolved, becomes immersed in arid filled with the fluid metal which flowed in as soon as

the vacuum fras produced. Thus the continued revolution Of the inner cylinder or drum is effected, and the

rotatory motion of the steam engine communicated by the extended arm or axle to the machinery for which it is designed to be a first mover. The advantages obtained by these arrangements, the patentee informs us, are in the absence of a fly wheel, by which much room and expense are saved, and also that of a heavy beam ; and as the steam is always acting uniformly in this engine, which is not the case in a beam engine, where both steam and time are lost during the change of stroke, he conceives that the most economical and powerful appropriation of steam to the working of machinery may, by these improved engines, be effected.

399. Mr. Hague's patent steam engine must now be examined. The apparatus, which is called a rotatory engine, in appearance,very much resembles a chain pump, particularly that construction described in the specification of G. Tyer's patent, July, 1818; the parts are as follows: there is an endless chain, carrying buckets or pistons, which is distended over two cog-wheels, having recesses in their periphery for the buckets or pistons to fall into, and the cogs of the wheels take into the links of the chains for the purpose of carrying it round.

400. The cases of the apparatus consist of two boxes, placed one above, the other below, connected together by two pipes or cylinders standing vertically. One of the above-mentioned cog-wheels is placed in the upper box, the other in the lower, and the endless chain and buckets or pistons pass down the pipes or cylinders and over the wheels. The lower box is to be filled with a quantity of mercury, or other non-elastic fluid, up to the eduction or condensing pipe, which is at the bottom of the working cylinder. *viz.* one of the vertical cylinders or pipes beforementioned.

401. The action of the engine will be seen by the following description : let steam of the low pressure be admitted at the upper part of the working cylinder from a boiler in the ordinary way, and it will entirely fill this case of the machinery, excepting that part of the working cylinder which is between the bucket or piston at that time in the upper part of the cylinder and the mercury below. The steam, by its expansive force, will then drive the bucket down the cylinder until it reaches the eduction or condensing pipe ; before which time another bucket has entered the top of the working cylinder above. The columns of steam between the buckets then become condensed by the

opening of the eduction passage ; and a partial vacuum is produced, while the steam above presses down the second bucket or piston until a third lias-entered the working cylinder, and the steam, occupying the space between the second and third, becomes condensed as before, and so on ; the buckets sinking through the mercury and up the other pipe, by which a continued rotatory action is obtained and communicated from the axle of the cog-wheel, and regulated by a fly-wheel. When this engine is worked by high pressure, the steam must be admitted at the lower part of the working cylinder, and the machinery will act the reverse way or upward. The steam's expansive force, r listed by the mercury below raises the

pistons or buckets, and is then condensed or discharged into the atmosphere at the top of the working cylinder.

402. Sir John Paul has a patent for a mode of generating steam. This invention is a mode ot generating steam of high pressure, by passing water through a long contorted pipe enclosed within a furnace ; by which contrivance a greatly extended surface is exposed to the action of heat, and steam of very high pressure produced with great rapidity. It is proposed to place a long metal pipe of small diameter round the furnace, and to force or inject water into one end of it, by means of a pump : which water is to be allowed to escape at the other end of the pipe, in the form of high pressure steam. The requisite length, capacity, and strength of the pipe, of which the boiler is to be formed, will depend upon the engine it is intended to work. For an engine of two-horse power the pipe should be 150 feet long, having its internal diameter at least three-sixteenths of an inch, and, if of cop-per, about one-sixteenth of an inch thick. This pipe is to be heated throughout its whole length nearly to redness, when the water injected at one end will escape at the other end in the state of steam, equal in pressure to about 150 Ibs. upon the inch.

403. In constructing a boiler upon this principle, it is proposed to make a conical vessel of sheet iron, as an external casing, the broad end of the frustum downwards ; round the inside of this vessel, the

pipe above described is to be coiled, and supported upon flanges. A portion of the pipe, at the lower part of the vessel, is to be bent, so as to form the grate bars, upon which the fuel for heating the boiler is to be deposited, and the fuel may be introduced from the chimney at top, or otherwise, as may be found most convenient. A reservoir of water must be placed contiguous, and a forcing pump for injecting it into the pipe ; and it is proposed to coat or cover the outer case with brick dust or coal ashes in order to prevent the radiation of heat.

404. The fuel being ignited, as in ordinary furnaces, the forcing pump is put in operation, which injects the water at the lower extremity of the pipe, so that as it rises through the conical worm, or contorted pipe, the water may become more and more heated, until it expands into steam, and this steam as it passes through the upper part of the coil, continuing to receive additional heat, ultimately escapes at the end of the pipe with great elastic force, in which state it proceeds to the engine.

405. For constructing the boiler of a steam carriage, where a chimney cannot be conveniently employed, another disposition of the worm pipe is proposed. In this boiler, the pipe is to be coiled in the form of two frustums of cones, of different dimensions, placed concentric ; the larger or outer cone having its wider part at top, and the smaller, or inner one, its wider part at bottom. The continuous coil of pipe, thus form-ed into two cones, is to be fixed firmly upon suitable supports within the casing, which must be double, and the space between filled with coal ashes, or brick dust, or any other imperfect conductor of heat, as in the former instance.

The fire is made at the lower part in contact with the pipes, and the bottom of the casing is to be formed into a funnel shape, for the purpose of receiving the cinders and dust which fall from the fire, and conducting them to an ash pit below. In this funnel an aperture is made, and a pipe inserted, which conducts a gentle current of air to the furnace, in order to keep up the fire, and consume the smoke ; the current of air may be produced by bellows or by a wind hole, as may be found most desirable: and the fuel may be supplied from an air-tight box above, or by any other suitable means. The injecting pump is tˆ be applied to one end of the pipe as before described, and the high pressure steam allowed to escape at the other end, for the purpose of working the engine. The carbonic acid, or other vapor, which is not destroyed by passing through the fire, is allowed to descend through the passage to the ash pit and to escape into the open air.

406. The specification concludes by saying that, for supplying engines of greater power than those above contemplated, more than one pipe boiler may be employed, and these may be heat-ed either in the same way as above described, or in separate furnaces ; they may be heated either by immediate contact with the ignited fuel, by the radiant heat from it, by the flame emitted, by the burning of gas, by heated air, or by any other fit and convenient means. The size, shape, or construction of the furnace, may also be va-ried considerably, according to circumstances, as may likewise be the arrangement of the coils of pipe, provided that the boiler consists of one en-tire cr continuous pipe, or several pipes united together, so as to form one continuous passage from the end where the water is injected to that where the high pressure steam rushes out. The pipes may be made of any other suitable material besides copper, but their substance must be varied accordingly. The exterior surface of the pipe may be coated with a layer of fire clay, or any other fit material, to guard the pipe against the effects of the fire, and to prevent oxidation.

407. An apparatus for changing the water has been suggested by Messrs. Maudslay and Field, which is particularly adapted for the boilers of steam vessels, where salt water is used for the production of steam, as in the ordinary mode, the deposition of salt and other earthy matters, on the bottom and sides of the boilers, render them extremely liable to injury from the action of the fire. The second part of the invention is a mode of arresting the heat contained in the boiling water withdrawn from the boiler, and of conveying it into the water about to be introduced.

408. When sea water is employed in the boilers of steam engines, the evaporation quickly produces a supersaturation of salt in the remaining water, and this, rapidly increasing, causes a concentration of the salt, and a deposition of earthy matters on the internal surface of the boiler, which renders it necessary to change the water almost every fifty or sixty hours. It appears from the experiments of the patentees, that ‘ from twenty to thirty per cent, of the quantity evaporated taken out will keep the water within

% degree of saltness from which no practical evils can result, however long the boiling be continued.' The proposition, therefore, is to effect a continued changing and refreshing of the water in the boiler, by constantly drawing out a quantity of the supersaturated water or brine, and introducing other water to supply the place of that so withdrawn, as well as that which had been evaporated, by which means the water in the boiler can never exceed a certain degree of saturation, proportionate to the quantity so withdrawn .

409. The method proposed to effect this object is by the employment of meters, of any kind, that will regulate and adjust the quantity withdrawn to the quantity evaporated or driven offin the form of steam. No drawings are exhibited in the specification, it being considered that a general description of the method and kind of apparatus to be employed will be sufficient to enable any person to construct the necessary machinery. The meter recommended to be used is ' a small pump with a loaded discharge valve, worked by the engine, and so proportioned as to draw from the lowest part of the boiler the quantity determined upon.'

410. ' If, for instance, twenty-five per cent., or one quarter of the total evaporation, be the quantity withdrawn, it will be equal to one-fifth the quantity of common salt water driven into the boiler to keep up the supply. Thus, as sea water contains about 0-32 parts of salt, the water of the boiler will slowly but ultimately attain a degree of saltness equal to 5-32 or 4-32 parts more than sea water. After this every stroke of the engine will take as much salt out of the boiler by the pump as is left in the boiler "by the steam used in the cylinder for that stroke.'

411. 'The engine working quick or slow, the quantity withdrawn bears the same proportion to the quantity left in ; and, however long the engine may be worked, the water can never be more salt ; thus avoiding the evils and inconveniences to which steam vessels have been hitherto subject on long voyages, in being obliged to stop to empty and refill the boilers every fifty or sixty hours, or incur the risk of severe injury to the boilers, from the deposition of salt within them, and a very great sacrifice of fuel the latter part of the fifty or sixty hours, when the water, from the quantity of salt it contains, is very unfit for raising steam.'

412. The second part of the invention is the means to be employed for arresting the heat contained in the rejected water, and returning that

heat into the boilers. This is to be effected by running the hot brine into a vessel, and passing the supply water through a system of pipes or tubes of extended surfaces, immersed in the ves-sel containing the hot brine, and surrounded by it, in the same way as refrigerators are made to act upon worts. By these means the heat contained in the water or brine, expelled from the boiler, will be principally absorbed by the sup-ply water, as it proceeds into the boiler, thus compensating in a great degree for the loss of heat which would otherwise be sustained, by re-irovinjr a portion of the hot water, and introducing other which is cold.

413. Mr. Taylor's improvements have for their

object the prevention of unequal friction in tua working of pistons that move in steam cylinders, either in horizontal or inclined positions. This object is proposed to be effected by passing the piston-rod through both ends of the cylinder, and by keeping the rod in a state of tension, by means of weights acting at each end of the rod.

414. In order to render this more evident, let it be supposed that the working cylinder of a steam engine is fixed in a horizontal position upon brick work, and that the rod of the piston is extended in a straight line, and passed throuuh both ends of the cylinder, the apertures beinˆ properly packed, and the rods running upon anti-friction rollers in frames, for the purpose of keeping its action parallel ; and that at the extremities of the piston-rod, bridles or sweep rods are attached, which are connected to double or right angled levers, these levers being for the purpose of giving the up and down motion to pump rods below the base of the engine.

415. It will now be perceived that in an engine so constructed, if the piston be made to recipro-cate in the cylinder by the alternate expansion and exhaustion of the steam, that the long rod will move to and from, and work both the right angle double levers, raising the pump-rod at one end and depressing it at the other, and vice versa. It will also be seen that under these circumstances the piston-rod will be supported in all parts of its movement, and prevented from rubbing unequally ; and this will be further aided, and the rod prevented from binding, by the tension produced by the weight of the levers and pump rods at the extremities.

416. In this way several cylinders may be connected together, and their powers made to act simultaneously upon one point, their rods

being in the manner above described connected by bridles or sweep rods to the right angle levers below. This contrivance is applicable to engines that are worked either by expansive steam alone, or by exhaustion, or by the principles of expansion and exhaustion combined. The force of the engine, or -jombined engines, constructed as above, may be directed to one end of the piston-rod, by placing a weight upon one of the levers, ‘ equal to half the power of the engine and weight of the pump rod; this weight \i\ be raised by half the power of the engine in one direction, and its gravity, added to the power of the engine in the other direction, will concentrate the total power on the rod.’

417. The patentee states his claim for novelty of invention to consist in ‘ the mode above described, of preventing the unequal friction of pistons working in cylinders either in a horizontal or inclined position, by passing the piston-rods through both ends of the cylinders, and by keeping such rods in a slate of tension by means of weights or loads acting on each end of such piston-rod; and the modes, above described, of combining engines with cylinders placed in * horizontal or inclined position, so that they will work simultaneously, by which means the power of several such engines may he concentratec upon one point.’

418 Sir William Congreve obtained two patents for improvements in the rotatory cnsim:

The first of these consisted principally in the employment of bucket wheels, or endless chains with inverted buckets, against which the expansive force of the steam exerted itself, in an up-ward direction ; and, by raising the buckets, in a manner exactly the reverse of their descent in a water-wheel, the motive force was given to the engine and other machinery.

419. The second specification states, ‘ I work all the various constructions of rotary steam engines, as well as those on the reciprocating principle embraced in my patent of 19th October, 1818,

in a medium of fluid (or melted) metal, or alloy, in lieu of water.' By this substitution of fluid metal instead of water, an additional power is said to be obtained in engines of any given dimension, and that in proportion to the increased density of the medium so employed ; hence the magnitude of an engine of any required power will be reduced, which will render it more compact, and less expensive in constructing.

420. It is further proposed to increase the power of any engine of given dimensions, by causing the temperature of the surrounding medium, of melted metal or alloy, to be kept at a higher temperature than that of boiling water ; 'by which means the energy of the steam may be made equal to that of a hiˆh pressure engine, though the surface of the medium be open to the air : while, on the other hand, by working with the medium in a close vessel, and applying a condenser to exhaust the steam as it rises to the surface of the medium, a still further expansion of the steam, and consequent increase of power, may be obtained with a given temperature and given means, by thus removing the incumbent pressure of the atmosphere.'

421. ' The importance of these new principles will at once be understood by those who are versed in these matters, as they will perceive (taking one instance only, by way of example; that, by working the simple rotatory engine of my invention, formed by the immersion of a com-mon hydraulic wheel (as described in the first case in the specification of my above-mentioned patent) in a medium, the specific gravity of which to water shall be as ten to one, a small wheel of two feet in diameter in such a medium will be impelled by steam of the same pressure as a wheel of twenty feet in diameter working in boiling water : and, consequently, that whereas, to obtain the same pressure as that of the steam of a common condensing engine, from steam working on this principle, in a medium of boiling water, would require a machine of very large dimensions, this same effect may be produced in a heavier medium by a machine of very moderate dimensions indeed.'

422. By working the steam in a medium of high temperature, the size of the boiler may be reduced, and a considerable saving of fuel effected ; for the volume of steam from a small boiler will be very rapidly increased by these means to the extent of three or fourfold, without the medium being raised to any very high temperature ; and a still more rapid evolution of uteam would take place by raising the temperature of the metallic medium to such a height as

it is readily susceptible of; nor would there be found any difficulty in keeping the temperature of the fluid metal so raised to perform its operations.

423. ‘ Indeed, by carrying these principles to a greater extent, the necessity of a boiler may altogether be obviated ; and the steam produced at once, by the injection of small quantities of boiling water, from time to time, into a small inverted receiver, in the heated medium; whence it would be carried to the proper part of the revolving wheel, or bucket, or other receiver in which it is to act, according to the particular construction of the engine : and in which inverted receiver the steam, from the rapidity of its generation, must be created at a much less expense of fuel than in any of the ordinary processes of the boiler; wherein, as the generation is comparatively so much slower, there is consequently so much more time even for the loss of heat by radiation. In fact, whether this heated medium operates by increasing the volume of steam ready formed in a separate boiler, or in the immediate generation of it without a separate boiler, the increased volume in one case, and the entire generation in the other, are effected in the very same moment that the steam produced is brought into action ; and consequently without allowing any interval of time for the loss of heat.’

424. ‘ In the present state of this novel and rapid mode of producing and applying the force of steam, it is indeed impossible to say to what extent of power the effect may be carried, in proportion to the fuel consumed. It is evident, however, that so far from any possible condensation taking place in the steam, from the time of its generation to that of its action, the tendency of this mode of applying it is that of a continued accession of temperature.’

425. It is further stated that these modes of generating steam, or of increasing its volume when generated in a common boiler, is applicable to every description of steam engine. In the first case, the substitute of the boiler should be a moderately sized strong vessel, partly filled with the melted metal, into which small quantities of boiling water are to be injected at certain intervals of time; and, in the last case, the steam is merely passed through such a vessel, surrounded by the melted metal, in its way from the boiler to the engine.

426. In order to regulate the temperature of the fluid metal employed, the iron vessel in which it is heated should be surrounded by another

iron vessel or jacket, filled, (when a very high temperature is desired), with oil or other such substance ; by which arrangement the maximum temperature of the metallic medium will be limited to the boiling point of the surrounding fluid ; and, in this case, an alloy of tin and lead, in equal parts, is proposed as a convenient me-dium for the above purposes; as it is not expensive, and becomes fluid at about 300° of Fahrenheit. When only a low temperature may be required, the medium should oe formed by that alloy of lead and bismuth commonly called fusible metal, which becomes fluid at about 200a of Fphrenheit, the vessel in which it is confaine I

oemg immersed in boiling water. ‘ All the provisions of this patent apply also to the hydraulic wheel engines, whether the steam be made to enter into the buckets at their circumference, or through the hollow axis, and whether these buckets be open or closed ones.’

427. In Messrs. Boulton and Watt’s bell-crank engine, the cylinder is supported by brackets proceeding from a cast-iron condensing cistern, and is placed over one end ot it. The beam, which is formed like a right-angled triangle, has its centre of motion at the right angle, and the axis of it is supported by bearings screwed to the cistern ; and, at the opposite end to that upon which the cylinder is placed, the horizontal arm of the triangle forms the working arm of the beam, to the extremity of which the power of the cylinder is applied. The connecting rod is jointed at the upper end of the perpendicular arm, and extends to the crank, which is supported in bearings screwed to the cistern at the same end at which the cylinder is placed, the centre of motion being at the same level with the top of the cistern ; and, beneath the cylinder, the hypothenuse of the triangle of the beam forms a brace to strengthen it. Two of these beams are used, and are applied on opposite sides of the cistern, upon the same axis of motion, and are united together by cross rods, thus forming two connecting rods and cranks upon one axis of motion, the fly-wheel being placed at one extremity of the axis. To connect the piston-rod with the ends of the arms of the beam, or the base of the triangle, a rod is fixed

across the top of the piston-rod ; and, to the two ends of this, two other rods are linked, which descend to the beam, and are pointed to it at the ends. By this means the ascent and descent of the piston-rod produce a corresponding action of the beam upon its centre of motion ; the upper end of the perpendicular arm moving backwards and forwards, thus by means of the connecting rods turning the cranks. The rods which descend from the bar, which is fixed across the top of the piston-rod to the ends of the beams, are so constructed as to preclude the necessity of employing the parallel motion. This engine is very compact ; it requires no fixing, and the air-pump, which is placed in the middle of the cistern, is worked by two rods jointed to the horizontal arms of the beams.

428. Mr. Woolfs double cylinder-engine nearly resembles that by Mr. Hornblower, but in another apparatus, by the same ingenious individual, he proposes to apply fire to the cylinder itself, to heat the steam after it is thrown into the working cylinder ; and this was to be done by a fire being placed beneath the case containing the cylinder: the space between the case and the cylinder was to be filled with oil, wax, fusible metal, or mercury. He also proposes a method of preventing the passage of any of the steam from that side of the piston which is acted upon by the s'eam, to the other side, which is open to the condenser. In those steam engines which act as double engines, he effects this by employing upon, or about the piston, a column of mercury, of an altitude equal to the pressure of the steam. The efficacy of this arrangement

will, he says, appear obvious, from attending tc what takes place in the working of such a piston.. When the piston is ascending, that is, when the steam is admitted below it, the space on it; upper side being open to the condenser, the steam, endeavouring to pass up by the side of the piston, is met, and effectually prevented by the column of metal, equal or superior to it in pressure; and during the down stroke no steam can possibly pass without first forcing all the metal through.

429. In working what is called a single en-gine, a less considerable altitude of metal is required, because the steam always acts on the upper side of the piston; and, in this case, oil or wax will answer the purpose. But care must be taken, either in the double or single engine, when working with this piston, that the outlet which conveys the steam to the condenser shall be so situated, and of such a size, that the steam may pass freely, without forcing before it, or carrying with it, any of the metal or other substance employed, that may have passed

by the piston : and at the same time providing another exit for the metal, or other substance collected at the bottom of the cylinder, to convey the same into a reservoir kept at a proper heat, whence it is to be returned to the upper side of the pis-ton by a small pump, worked by the engine, or by some other contrivance. In order that the fluid metal used with the piston may not be oxydated, some oil or other fluid substance is always to be kept on its surface, to prevent its coming in contact with the steam : and to prevent the necessity of employing a large quantity of fluid metal, although the piston must be as thick as the depth of the column required, the diameter need be only a little less than the steam-vessel, or working cylinder, so that, in fact, the column of fluid metal forms only a thin body round the piston.

430. Having described the nature of Mr. Woolfs engine, it may now be advisable to examine the boiler by which he proposed to generate steam of sufficient elasticity for the use of the small cylinder, which requires vapor of great expansive force.

431. The boiler represented by the diagram beneath consists of a series of tubes of cast iron,

«, </, a, connected by screw bolts with the under side of a larger vessel A, or magazine of the same material. This is furnished with four, and in some cases with five apertures; the first of which is intended for the admission of water to supply the waste which continually arises from evaporation, which is effected by means of a

small forcing-pump, as it will be evident that the column must be carried to a considerable height before its weight can so far overcome the resistance of the steam within the tube to allow of its entering by the ordinary method.

432. The plan of the boiler will better be understood by a section of

the tubes represented from 1 to 8. This is furnished in the engraving beneath, and the direction of the smoke proceeding from the grate B to the flue 0 is shown oy the bent arrows.

433. Passing from the boiler we arrive at the steam pipes, which should be sufficiently capacious, and as short as possible, to prevent too much exposure of surface to the atmosphere. They should pass from the upper part of the boiler to the steam cylinder, in a direction greatly inclining upwards, so that any condensed •water that forms in them may run back to the boiler instead of getting into the cylinder : consequently every boiler should, if possible, be set or fixed lower than its steam cylinder; and, in order the more effectually to prevent condensation, the steam pipes should be coated with hay-bands, or sawdust and sacking, or some bad conductor of heat, particularly if they are long and much exposed to the air.

434. In collieries, where the common steam-engine is applied for drawing water from (he mines, it frequently happens that, after a continuance of wet weather, the water accumulates so much as to require the engine to be worked night and day. If the boiler is supplied with water from the mines, it contains in this case a great quantity of earthy matter brought immediately from the surface, which renders the water within the boiler very muddy ; and there being little time for cleaning the boiler, owing to the accumulated water in the mines, six or eight weeks elapse before this can be done. Towards the end of this period the water in the boiler is mixed with sediment to such a degree that the ordinary supply of steam cannot be raised, although the fire is increased in the furnace ; the consequence of which is that the common working speed of the engine is greatly reduced. In this case it has been the constant practice of the engine-keepers in Scotland to apply a very simple remedy for increasing the quantity of steam. The substance employed is known by the name of comings, being the radicles of barley produced in the process of malting, which are separated before the malt is sent to market. About a bushel of these is thrown into the boiler; and, when the steam is again raised, an immediate effect is visible ; for there is not only

a plentiful supply of steam to produce the full working speed of the engine, but an excess of it going waste at the safety-valve.

435. Mr. William Deverell has two working cylinders placed near to

one another, each having a pipe of communication, with a large vessel, in which the steam, after passing from the small cylinder, is suffered to expand itself before entering the large cylinder. The pistons in the two cylinders work alternately up and down by means of valves or cocks, opening and shutting as in the common engine. Suppose the small piston has just made a stroke, and a passage is opened to the steam vessel at the- ‘end of the stroke; at first beginning to work the engine, the vessel will be full of steam of about eighteen pounds pressure, admitted from the boiler, but afterwards will only be supplied by the steam thrown into it from the small cylinder. The vessel should be about twenty times larger in capacity than the smallest working cylinder-, and the larger it is the more regular will be the pressure on the great piston, which is worked by the steam coming from the steam vessel. If the steam in the boiler be of fifty-four pounds pressure per square inch, the ratio of the two working cylinders may be as 1 to 3; for then the smaller one will supply the larger with steam of about eighteen pounds pressure; the proportion, however, may be varied, though these are thought best by the patentee. The improvements here are represented to consist in the steam going from the smaller working cylinder to the steam-vessel, and then from the steam-vessel to the larger working cylinder, from which it is afterwards drawn off and condensed. By these means, the engine will be very regular in its operations. Suppose the steam in the boiler is at fifty-four pounds, the small cylinder will, at the end of the stroke, be full of steam of the same or nearly the same force ; and the steam-vessel being full of the steam delivered to it by the former stroke of the small cylinder, at about eighteen pounds pressure, the communication is opened between this vessel and the smaller cylinder, and the steam in each of these will be brought to nearly twenty pounds pressure, which steam will be used in the great cylinder at the next stroke. But at the end of each stroke of the pistons, before the opening is made between the smaller cylinder and the steam-vessel, the steam in the smaller cylinder will be, as before stated, at about fifty-four pounds ; in the steam-vessel it will be at about eighteen pounds, and in the larger working cylinder at about eighteen pounds also. Hence the medium pressure on the piston of the smaller cylinder will be about thirty-five pounds on the inch, while the medium pressure of the steam on the piston of the great cylinder will be about nineteen pounds on the inch ; for it will be about twenty pounds at the beginning and about eighteen pounds at the end of the stroke. If the steam-vessel be made larger, the difference at each end of the stroke will not be so great. If the steam was let out at fifty-four pounds from the smaller cylinder to tht-open air, there would be but thirty-nine pounds upon each inch of the piston in consequence of the

reaction of the atmosphere, equivalent »o about fifteen pounds per inch:

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STEAM K N G I N E.

171

Thus, by letting the steam pass from the smaller cylinder to the steam-vessel, instead of letting it out to the open air, it loses about four pounds on the inch of the small piston, but it gains about twelve pounds on the inch of a piston three times as large; and, there being but half the steam required in the common way to condense, there must of necessity be a considerable gain. If the friction and loss of force be equal to nine pounds on the inch, on the piston of the smaller cylinder, there will be but about thirty pounds on the inch neat power, when the larger one will work about twelve pounds on the inch. Here, too, if the large cylinder, or piston, or air-pump, or condenser, should be out of order, the small piston may still be worked, by disengaging the large piston from the beam : on the other hand, if the smaller piston be out of order, the large one may still be worked, while the other is disengaged. The steam-vessel is to be made of wood, that it may transmit the heat slowly, and the cylinders may be placed within it if found convenient.

436. Mr. James has taken out a patent for a boiler, which, with some modifications, promises to be of great importance. It is formed by a number of annular tubes, arranged close together sideways, so as to

exhibit a cylindrical shape externally ; these tubes have apertures communicating into each other at opposite extremities of their diameters, arranged in two lines, one of which is at the bottom, when the boiler is fixed horizontally in its place, and the other line at its upper part. It is stated, at the end of the specification, that the shape of these rings may be elliptical or circular, and that round or other shaped tubes may be used for them, if preferred to those represented in the drawings, which are square, and such as might, be produced by annular partitions soldered in between two hollow concentric cylindrical vessels.

437. The fireplace or furnace for this boiler is placed within it, and consists principally of a grate, arched upwards in the middle, supported by a bearing bar at each side, which passes through the boiler, and is sustained by the iron frames which support the doors of the furnace, and are put in front and the termination of the fireplace.

438. This compound boiler is moreover enclosed by a double cylindrical case, so as to leave some space between it and the case, in which the flame or hot vapors from the fire may circulate ; while the internal part of this double case, being filled with charcoal dust, confines the heat more effectually. A flue rises from the top of the farther end of the case to convey away the smoke, which, however, is made to descend near the bottom of the boiler before it enters the case, by a partition at the farther extremity of this latter, whose only aperture is at its bottom.

439. A tube enters into the boiler in front, a little above its horizontal diameter, for the conveyance of water, and a pipe passes out from it at top, also in front, through which the steam is to pass to the engine ; the water pipe is furnished with a peculiar cock at the level mentioned, which revolves by the motion of the engine, and is intended to prevent the. water from rising

any higher in the boiler, when it ascends to that line, though it admits its entrance whenever this is lower ; but the mode in which the cock is to produce this effect is not fully explained.

440. The boiler being thus prepared is to be filled with water a little above its horizontal diameter, as above mentioned ; and, the fire being then kindled, the patentee states that the flame or hot vapor from it will descend between the case and the boiler, and make the water in the latter boil ; the steam from which, in passing through the upper

parts of the tubes above the fire, will be farther heated, so as to produce an increased effect.

441. To facilitate the cleansing of this boiler from the sediment of the water, it is to be supported in front by four rollers, placed at equal intervals about it, in the iron frame which sustains the case and furnace, and at the back by a pivot in the centre of the partition at its end, which pivot passes through the case, and rests on the frame just mentioned; a winch is to be fixed on this pivot, and a handle at the same time is to be attached to the boiler in front, at a similar distance from its centre, by which two gripes it can be turned round, or made to vibrate backwards and forwards when required. When this operation is to be performed, the patentee directs that the furnace is to be taken out from the boiler, and all impediments to its circular motion to be removed; it is then to be nearly filled with water, and, shot or ‘ marbles’ being previously put into each of its annular tubes, the whole is to be turned or made to vibrate as mentioned, which he states will be sufficient to detach the sediment from the parts to which it may adhere, and cause the whole to run oft along with the water when this is discharged.

442. The gas-fire or water-burner is the name given to a new method of producing light and heat, invented by Mr. Morey, by which he conceives that all carbonaceous fluids may be conveniently burnt, and derive great force from their combination with the oxygen and hydrogen or water or steam at the moment of ignition. In the first form of this experiment a tight cylindrical vessel, containing resin, was connected with a small boiler by a pipe, which entered near the bottom and extended nearly its length, having small apertures over which were two inverted gutters, inclining or sloping upwards over each other; the upper one, which was longer than the other, being intended to detain the steam in the resin in its way to the surface. When the resin was heated, carburetted hydrogen gas issued from the outlet or pipe, inserted near the top of the vessel, and, being ignited, afforded a small blaze about as large as that of a candle ; hut, when the steam was allowed to flow, this blaze instantly shot out many hundred times its former bulk, to the distance of two or three feet. Tar succeeds better than resin, and has therefore been used in the steam-boilers.

443. We have, on several occasions, been obliged to refer to the ‘ horse-power’ as it is called, of various engines, and it will benecessa ry in a future page to examine this mode of estimating force somewhat more in detail ; at present a few facts connected with the single any double acting engine may not be misplaced.

STEAM ENGINE.

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264,000

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16,896

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19,008

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1,716,000

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28,512

1,782,000

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7-79

8,800

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1,848,000

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9,114

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30,624

1,914,000

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39-2

1206

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7-8

9,428

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31,680

1,980,000

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39-8

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32,736

2,046,000

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33,792

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102

44,880

2,805,000

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STEAM ENGINE.

173

444. A table may now be referred to, which shows the force which the connecting-rod of a steam engine has to turn round the cranic at different parts of the motion. The parts of the en-gine are supposed to have the following proportions: — length of the stioke 1 ; length of the beam, 2 ; length of the crank 5 ; length of the connecting-rod 3 : —

Decimal portions of the descent of the piston, the whole descent be-ing 1.

Angle between the connecting - rod and crank.

Effective length of the lever, upon which the connecting - rod acts, the whole crank being 1.

Decimal portion, half a revolution of the fly-wheel.

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117*

•892

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110|

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•976

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97J

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85*

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62J

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57*

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The third column of this table also shows the force which is communicated to the fly-wheel, expressed in decimals, the force of the piston being 1.

445. The above table explains itself by the titles of its different columns; and it is only necessary to remark that the variations of force are not to be considered as an absolute loss of power, because, when the crank has but slight power, or arriving towards the top or bottom of the stroke, the piston descends proportionally slow ; and in consequence the steam has more time to flow into the cylinder, and press upon the piston with a greater power ; therefore, what the piston loses in force upon the crank, it makes up in some degree by an increase of its force ; and, from movi-ng slower, it consumes less steam than when moving with its whole velocity, and acting with full force upon the crank. Hence both the power and the velocity of the piston in the cylinder are to be considered as varying continually; and, if the fly is sufficiently heavy, it will be found that the rotative motion is very nearly regular, while the ascent and descent of the piston are accelerated from nothing at the top of the cylinder, to its greatest velocity at the middle, or near the middle, and from that point it is retarded, till it comes to nothing at the bottom

of the motion. The table shows the exact incre ments and decrements.

446. Mr. Taylor has made considerable improvements in the steam engine. His last patent consists of an arrangement of the piston rods of cylinders of steam engines, when in an horizontal or inclined position, to prevent the pistons from pressing unequally on the cylinders, and a method of combining two or more cylinders so as to direct their joint powers to one operation.

447. The patentee directs, for attaining the first object, that the piston rod shall pass through the piston, and out through the opposite end of the horizontal or inclined cylinder, being provided with fit stuffing boxes at both of its extremities, and that each end of this long piston rod shall be furnished with a vertical wheel, grooved at its rim, and moving between two metal guides, parallel to each other, and to the sides of the cylinder. These guides, being of course one above and the other below the wheels, would prevent the weight of the piston from making it press too much at the lower side of the cylinder, if the rod were perfectly inflexible ; but, as this cannot be, the patentee supposes

that he will effect his purpose by causing considerable weights to act on each end of the rod in opposite directions, by appending them to the horizontal arms of ‘ bell cranks,’ or bent levers, so as to tend to keep ‘the rods straight by their being in a state of tension. These weights may either consist of pump rods at each extremity when the engine is employed ir« pumping the water from deep mines, or a pump rod may be at one extremity and the weight at the other, in which latter case the power of the engine exerted in lifting the weight would not be lost, as the weight would react on the piston rod in its descent, and assist the engine in lifting the pump rod and water at its opposite extremity.

448. It is obvious that these engines may be employed in producing rotary movements for mill work, as well as those of a reciprocating nature mentioned ; but with the rotary movement the tension of the piston rod would not be effected, without weights being appended for this purpose to the bent levers at each of its extremities.

449. The action of two cylinders managed in this manner may be combined by placing them parallel to each other, and uniting their piston rods at each end to strong cross pieces, from the middle of which rods are to proceed to the bent levers, weighted as before. In the specification two cylinders are represented, lying on the same horizontal plane, and having the wheels and guides at each end of the cross pieces, instead of being in the same line with the piston rod ; but it is evident they may be placed one over the other also on the same principle, and that any number of them may be combined in thij manner by properly disposing the cross pieces and wheels, which latter, however, need not be multiplied as the number of cylinders are increased, as the same number of wheels that will serve for the piston rods of two cylinders may also be made to support those ot several more.

450. A method of binding these cylinders down firmly to their supports, whether the latter

are constructed of stone or of cast-iron, is described by the patentee ; as is also the mode of disposing the tubes that convey the steam to the several cylinders, and from them to the condenser, or to the open air (according to the nature of the engines), so as to make one set of valves or slides serve for them all. But as there is nothing particular in the arrangement of these tubes, or in the method of fastening down the cylinders, being such as may be easily conceived, they do not require further explanation.

451. The steam carriages described in Mr. James's specification are intended solely for common roads. Instead of the former method, of using one steam cylinder, or at most two, for each steam-carriage, the patentee directs that a steam cylinder shall be used for each wheel, and in his draft, in fact, two cylinders are represented at each extremity of the two axles, so that eight steam cylinders will be required altogether for this plan.

452. These cylinders the patentee states are to be very small, but does not mention their precise dimensions ; and, as the pistons of each pair of them are arranged to operate so on the cranks with which they are connected, that when one is vertical the other will be at right angles to it, to save the use of fly wheels, every pair may be considered as one engine acting on the wheel which it is intended to move. These cylinders are placed beneath the axles of the carriage, and the cranks are fixed above them, and each of these cranks is furnished with a spur wheel, which, by another wheel of the same sort, acts on a toothed ring, attached to the nave of the carriage wheel, which nave turns freely on its axle. From these cylinders, pipes run to the steam boiler, on which cocks are so placed that, by turning them in certain directions, the steam may be let on or shut off from each pair of cylinders as required, and also may be admitted partially sometimes; by which means each wheel can have Hs degree of velocity regulated in respect to that of the others, as may be best suited for making the carriage turn round a corner, or move in any curve desired.

453. The steam boiler is placed beneath the perch, near the hind wheels, and the chimney still further back, together with the seat of the engine-man, who not only keeps up the fire, but, by handles placed near him, which communicate with the cocks before mentioned, can stop either of the hind wheels or diminish their motion, as may be most suitable to the slope of the hills, in descending which locking of the wheels might be necessary. The engines used with these carriages are to be of the high pressure species, so that the steam might be discharged from the cylinders at once after being used ; but to obviate the inconveniences which this

would cause, pipes pass from them to the chimney, to carry off the waste steam along with the smoke.

454. The front axletree is made to turn on its centre as usual, and the steam pipes on it have joints at the centre of motion, similar to those of cocks, to admit of their being turned along with it ; a segment of a horizontal toothed wheel

is attached to this axle, in which a pinion works, from which a vertical shaft ascends to the scat of the director, which is placed directly above it, and is constructed like a coach-box. On the top of this shaft a horizontal wheel, furnished with handles like the steering wheel of a ship, is fixed, by which the director can turn the front axletree as the curvature of the road may require. Horizontal rods are also so arranged, between this axle and the cocks, that in proportion as it is turned the steam may be shut off from the cylinders at the side next the centre or centres of the curvature of the road, by which means the wheels at that side move more slowly than the others. Besides the steering wheel, there are two levers with handles, placed near the seat of the conductor, which communicate by cranks with the rods just mentioned, by which the cocks are turned, and by moving which he can either diminish the motion of the wheels at one side, as he pleases, or stop off the steam from all the cylinders at once, when it is required to stop the progress of the carriage.

455. Mr. Vaughan's steam engine is of a very peculiar kind. An idea of its arrangement may be formed by supposing the cylinder of a single steam engine to be placed with its bottom upwards, and another similar cylinder to be fixed in the usual position directly upon it, so that the piston rods of both may be in the same vertical line. Each of these cylinders has its separate piston, and the two piston rods are connected together by two bars, which pass outside the cylinders, from the ends of a cross-piece on the extremity of one of the piston rods, to the ends of a similar cross-piece on the extremity of the other piston rod ; the two pistons being previously so placed that one of them shall be near the open end of its cylinder, when the other is near the closed end of that in which it moves. A case is directed to be put over the two cylinders, to confine the heat, arrd the openings between this case and them at each end are to be closed, so as to exclude the air. A pipe, furnished with a cock, is to pass from the steam-pipe, near where it enters the valve box, to the inside of this case, to convey steam into the space between it and the cylinders when the cock is opened, to keep the cylinders hot; and from the lowest part of the case

another pipe passes out, furnished also with a cock, to let off the water formed within the case by the condensation of the steam. The bars which connect the two piston rods pass through tubes of copper or other metal, placed vertically between the case and the cylinders, and fastened at each extremity to the ends of the case so as to be air-tight.

456. The valve box is fixed at the junction of the two cylinders, and in it a sliding valve is used, having a cavity within it. which, as it is moved up and down, alternately forms a communication between the passages that lead to the two cylinders and those which go to the steam-pipe and to the condenser, the rod which works this valve passing through a stuffing box at the top of the valve box. The beam of the engine is to be connected with the piston rods by the links of the parallel gear being joined to

aer rails of the frame E E. L a sma.l brass socket, which may be fixed at any height upon the piston-rod, by the tightening screw M. It carries in the other end a short pencil, with a

cuum and the pressure of the steam, and the curve Q R be more acute in proportion to the rapidity with which the vacuum is formed. If this distance be measured in eight or ten places,

weak spring to push it forward against the sur-and an average taken, then a simple proportion

face of the sliding-board. N a weight attached by a cord to the sliding-board K. O any con-

gives the pressure upon each square inch of the piston. Let a — area of indicator piston, — b,

venient part of the parallel motion, traversing a any weight applied experimentally to that piston,

— d, the distance to which it falls with that weight, — and let e be the average distance taken from a diagram, andˆthe average pressure in pounds upon the steam engine piston during the

formation of that diagram. Then, as d to — so

s b’e s

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And as, for every indivi-

space of about four inches and a half during each half stroke of the engine.

462. From this description the principle on which the instrument acts will be evident. By opening the stopcock B a direct communication is made between the-interior of the large and small cylinders, and the density of the steam in the indicator becomes the same as in the steam engine cylinder above the piston. When this density is less than that under the atmospheric pressure, the indicator piston will sink, when it is greater the piston will rise ; but the spiral spring, which, if carefully made, stretches through equal dis-multiply the average distance obtained from a tances with equal weights, restrains the motion of

diagram, for the average pressure in pounds upon the piston; and, by the distance to which it al-each square inch of the steam piston.

463. A table of the amount of work really effected by the principal engines in Cornwall in one month may here be furnished. The whole number of engines reported in the month was,

dual instrument, a b d are constant quantities,

then — — x, a constant number by which to da

lows it to move from its state of rest, indicates the pressure it is undergoing. During each stroke of the engine, therefore, the indicator pis-ton will rise at the instant the upper steam

gines, three stamping engines. Of the pumping engines fifty are single and three double power, and three of the single power engines have combined cylinders ; the diameters of the cylinders as under : — Engines. Inch. Bushels.

valve opens, and during the descent of the large fifty-three pumping engines, fourteen whim en-piston will maintain a height proportioned to the ffinoc th”°° «»»«•«!«« * •>”<””*« density of the steam in the cylinder. When the eduction valve opens it will sink, and by the rapidity of its descent, and the distance to which it falls, denote the quality of the vacuum. If, dur-ing this perpendicularly alternating motion of the small piston, the sliding-board be made to perform its reciprocating and horizontal course, the pencil, in the socket L, will trace upon the board, or upon a piece of paper applied to its surface, a figure, something like P Q R S ; of which figure, the part P Q is drawn during the descent of the large piston. At Q, the condensation taking place, the atmospheric pressure acts upon the piston indicator, and makes it descend until the tension of the spring counteracts the force of the pressure. Meanwhile the engine begins to perform the up-stroke, and, as the board traverses, produces the line R S. When the en-gine piston arrives at the top, the admission of the steam destroys the vacuum that existed be-low the indicator piston, and allows the spring to raise the latter until the equilibrium is restored. It

consequently follows that the distance between the line P Q, and the line R S, will be greater in proportion to the difference between the pressure — in the cylinder during the existence of the va-53

ˆ64. Relative duty of the pumping engines expressed by the number of millions of pounds of water lifted one foot by each bushel of coal.

Greatest dutv 47 millions nearly by 1 engine 60 inch cylinder. 41 do. by 1 do. 80 do.

40 do. by 1 do. 90 do.

39 do. by 1 do. 76 do.

38 do. by 2 engines 63 and 70 do.

36 do. by 3 do. 2 of 80 and 1 of 63 do.

36 to 34 do. by 4 do.

34 to 30 do. by 5 do.

under 30 do. by 28 do.

duty not reported 7

4 4 1 10 1 3 7 3 3 2 1 3 1 2 4 2 1 1

90 c

80 76 70 64 63 60 58 53 50 48 45 42 40 36 30 28 27

if coals consumed in the month . . do… do. - … do… do… . . do… do… . . do, . . do…

i 11864

10332 2660 16078 1368 9507 11798 5899 5111 1044 1083 4498 1010 630 2619 1310 1080 1080

. . do… do.

. . do… . . do…

. . do… do.

. . do… . . do…

. . do.

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. . do… do… do.

. . do… do… do… do… do.

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STEAM ENGINE.

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and Engineers’ Names.

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rawing perpendicularly 135 thorns, and on the underlay fathoms. Main beam over cylinder. Two balance-bobs der ground. — Sims and Richan

rawing perpendicularly with in beam over the cylinder. One lance-bob at surface. — Woolf.

rawing perpendicularly 179 thorns, and on the underlay fathoms. Main beam over cylinder. Four balance-bobs der ground, and one at the s face. 60 fathoms of dry rods the shaft. — Jeffries.

“awing perpendicularly with m beam under the cylinder and fathoms of horizontal rods’ un< ground. — Sims and Suns.

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466. It may be remarked that the time of the year is the most unfavorable to the work of the engines ; as, from the abundance of water in the mines, many are pushed beyond their most advantageous rate.

467. Duty of the best whim engines, rotatory, double, 6,000,000 drawn one foot high, by each bushel of coals, or thirty kibbles, drawn from the depth of 100 fathoms by ditto. Duty of the best stamping engines, rotatory, double, 15,000,000 lifted one foot high, by each bushel of coals.

468. The monthly report of the duty of steam engines in Cornwall is taken and computed by Messrs. John and Thomas Lean, who are specially appointed and paid for that purpose by the adventurers in the mines, whose object is to ob-tain a correct comparative statement, by which they may ascertain the merits of the respective engines, and may judge of the skill and care of the engineers they employ.

469. Messrs. Leans have the custody of the keys of the counters on the engines, they themselves measure the capacity and lengths of the pumps, and they receive the returns of the quantity of coals consumed from the persons who measure it, and make oath of the consumption at the custom-houses for the debenture which is allowed.

470. The engineers whose names are given are not manufacturers of engines, nor are they allowed to participate in any business of that kind; they plan the construction and superintend the execution and erection of engines, for which they are paid according to the power of each ; and they have the care of them after being erected, and direct repairs, &c., for which they receive regular salaries from the mines.

471. The Royal Academy of Paris has been called upon by the government, to report on the means proper to be adopted for the prevention of accidents and injury from the explosion of steam engine boilers. The means proposed had the double object of preventing the rupture of the boilers, or, in case of their destruction, preventing injury to neighbouring buildings. They directed that the boiler should be proved by the hydraulic press, with a force five times that which they would have to bear during the working of the engines : that a safety valve should be attaclied to the boiler and locked up, the valve being so loaded as to open at a pressure just above that by which the boilers have been tried : that the boiler should be surrounded by a wall of masonry one metre (39-371 inches) in thickness ; an interval of a metre being left between the boiler and the wall, and again between the wall and the neighbouring buildings. Another precaution has been added by M. Dupin, and adopted by the academy ; namely, the introduction of a metallic plug into the upper surface of the boilers, formed of such an alloy as should melt at a temperature a few degrees above that at which the engine is intended to •work.

472. In consequence of this application, it became necessary to form a table of the pressure and temperature of vapor. The academy ap-pear very doubtful of the estimates as yet pub-

lished, but give the following table up to eight atmospheres, as nearly correct : above that they say it was impossible to go without farther experiments.

Elasticity in Height of atmos-mercury, pheres. 1 29-22 in

Temperature of Fahrenheit. 212-0°

Pressure on a square inch. 14-61 Ibs. avoir.

1J 44-88

234-0

21-92

2 59-84

251-6

29-23

2 A 74-80

3 89-76

264-2 275-0

36-44 43-84

3£ 94-73

285-3

51-15

4 119-69

293-4

58-46

4ˆ 134-65

302-0

65-76

5 14961

309-2

73-07

5J 164-57

6 179-53

316-4 322-7

80-37 87-69

6i 194-49

328-5

94-99

7 209-45

334-4

102-30

7J 224-41

8 239-37

339-3 343-4

109-60 116-92

It is advised that no direction should be given for the composition of the fusible plugs or plates, but their preparation entrusted to some competent person who should be responsible for the accuracy of their fusing points. The fittest place for them, all things being considered, is the upper surface of the boiler. Their proper diameter and thickness have not yet been ascertained ; they should be such as to bear the force of the vapor without risk of breaking ; and, when the plate is fused, to leave an aperture sufficient for the ready escape of the vapor.

473. Mr. Prideaux has furnished a series of ingenious arguments, illustrative of the use of high pressure steam, that may be here quoted.

He states,

i. That the caloric of steam, in contact with water, is a constant quantity at all temperatures.

ii. That every elastic fluid, at a given density, has its expansive force in proportion to its temperature, increasing ˆ for each ascending degree of Fahrenheit.

iii. That every elastic fluid, at a given temperature, has its expansive force directly as its density.

474. From these premises it follows that the force of steam is directly as its density multiplied by $fg for each degree of increased temperature, the caloric corresponding with the density alone. For instance : steam at 212° has an elastic force = 30 inches of mercury ; and at 300° = nearly 140 inches, neglecting fractions.

475. By the second law, steam of the density due to 212° raised 88° with a geometrical increase of 3|$ for each degree, shall gain about 5-6 inches ; or possess at 300° a force = 35-6 inches of mercury.

476. And by the third the density due to 300° shall be as 35-6 inches to the force found = 140 inches, or about 3-9 times greater than at 212°. But the caloric being constant is in simple proportion to this density ; and the fuel consumed must be expected to correspond with the caloric. Then 30 inches X 39 = 117 inches, the force due to the density at 300°, deducted from 140

inches, the force found by experiment, gives 23 inches, the profit by working at 300°.

477. If this example be just, the weight of steam employed having its caloric constant, shall be a measure of the fuel consumed ; and there is a direct profit in the ratio of |j|J for each ascending degree of Fahrenheit, as above stated.

478. It is plain, from the nature of geometrical progression, that this profit will increase as the temperature is more elevated : if we work at 600° the force of each pound of steam will be double of that at 212°; and if we go up to 960° or 980°, it will be quadruple ; the caloric, and consequently the fuel, remaining a constant quantity. It is easy to illustrate this from the reports of working engines; but the effects in these cases are dependent on such mixed causes that no uniform conclusion can be drawn from them. In taking the caloric contained in the steam as a measure of the fuel consumed, there is not exact precision : radiation will of course increase with temperature; but I thought this might probably be more than compensated by the diminished surface of the vessels ; and that, in the rapid action of a steam engine, it could hardly make an appreciable difference.

479. A collateral advantage of not less importance, well known to engineers, and which did not escape the sagacity of Mr. Watt, is gained in allowing high pressure steam to expand in the cylinder. Mr. Watt has given a formula for calculating the profit on this proceeding ; but for a much more perspicuous demonstration we are indebted to Mr. Perkins.

480. Suppose we have to work at a pressure of ten pounds on the inch. Let the steam be raised to a force of eighty pounds on the inch, and let in one-eighth of the stroke ; then stop the communication, the piston being at I. We have thus one-eighth at eighty pounds. When the steam has expanded to II the vo-lume is doubled, and the force reduced to forty pounds (supposing the cylinder to keep the temperature constant), the mean from I to II being sixty pounds. Hence we have one-eighth at sixty pounds. When the piston reaches IV the vo-lume is again doubled,, and the force reduced to twenty pounds, the mean from II to IV being thirty pounds. This gives one-fourth stroke at

thirty pounds. On reaching VIII the volume will again double itself, and the force will be reduced to one-half; thus becoming ten pounds on the inch as proposed ; but the mean, from IV to the bottom, is fifteen pounds. Which makes half a stroke at fifteen pounds. Adding these quantities together, we have

I. i at 80 Ibs. = lOlbs. I to II. £ at 60 Ibs. = 7-5 II to IV. £ at 30 Ibs. = 7-5 IV to VIII. i at 15 Ibs. = 7-5

32-5 Ibs. on the inch. for the mean impetus communicated to the

I II

fly-wheel by each stroke of the piston : and, as the cylinder full of steam is at a density of only ten pounds on the inch, the power thus gained appears at first view enormous. But against this must be set the irregularity of the impulse communicated to the fly, and of the temperature supplied to the cylinder; beside the additional weight and friction of the machinery, and other considerations, involving too many theoretical principles to allow of a satisfactory estimate from calculation without direct and repeated experiment.

481. The comparative advantages of high and low pressure steam have however been most fully discussed by a Committee of the French Institute, and an analysis of their labors is well worth perusal.

482. Amongst the advantages of high pressure engines, that of occupying the least possible space must be enumerated, and will be the more important as the space for their erection is more confined, or the ground more valuable : where manufactories, and private houses, are so crowded together that each establishment can obtain but u very limited space, and great power is at the same time necessary, this advantage is particularly felt ; and it is no less important in the interior of mines, for the same reason.

483. A second advantage of high pressure engines, and one that is even greater than the former, is the economy of fuel which results from the effects of a high temperature. This will be readily granted, when it is stated that the repairs and expenses of the steam engines employed in draining a single large coal-mine in England amount annually to the sum of £25,500.

484. On this account several large proprietors of copper and tin mines, in Cornwall, adapted machinery to their engines, in 1811, by which an account is regularly kept of the work which they perform ; and, from the results of these experiments, conducted on the largest scale, the comparative effect of the different kinds of engines has been ascertained for more than ten years.

485. In the month of August, 1818, the Cornish steam engines raised 15,760,000 Ibs. one foot high, for each bushel of coals consumed. From December, of the same year, the improvements were so material, either in the management of the engines, or in some of their parts, that the mean total product was increased to 17,075.000 Ibs.

486. By a series of similar improvements, and by the construction of new and more perfect engines, the product was,

In December, 1812, 18,200,000 Ibs.

1814, 19,784,000

— 1815, 20,766,000

and, since 1815, the product is even still larger, in consequence of the improvements that have been made in the construction of the fire places and boilers, and, in short, in every part of the machinery. At the present day, it is calculated that Watt's improved steam engines raise more than 30,000,000 Ibs. of water one foot high, by the consumption of one bushel of coals.

487 By the side of this augmentation wr

must place that which results from the employment of Woolfs steam engines, which, as is well known, are condensing engines, and work with a pressure intermediate between that of the high and the low pressure engines.

488. Such a machine, with a double cylinder, has been constructed for the mine Whealvor, in Cornwall ; the diameter of the large cylinder is fifty-three inches, and that of the small one 5-3 inches. This engine has raised 49,980,822 Ihs. one foot high, by one bushel of coals, whilst the mean product of the other engines was only 20,479,350 Ibs. raised to the same height. In 1815 the mean product of two of Woolfs engines was 46,255,250 Ibs.

489. One of the inconveniences attending engines of mean and high pressure, is loss of power by the wear of the more delicate parts of their structure, and the consequent loss of steam ; at the same time it must be admitted that the improvements in the construction of the steam vessels have materially lessened this serious evil.

490. Experiments made in France support the truth of these reports. MM. Girard and Prony have made separate comparative experiments on the power of low pressure engines, and the condensing engines of mean pressure on Woolfs system, as improved by Edwards. They find that the latter deserves the preference, as to economy of fuel, though their results do not exactly agree as to the extent of the saving in this respect ; their conclusions, however, tend to the same end, and their discrepancies are referrible to particular circumstances.

491. Instead of estimating the power of a steam engine by assuming the vague and ill-defined power of a horse as unity, it would be better to assume a given weight, raised to a given height in a given time, as one hundred-weight raised one yard in a second, which might be called a power. The working force of the engine would thus be indicated by the number of powers it is equal to, which may easily be ascertained by loading the piston with a sufficient determinate weight, and marking the space it passes through, so loaded, in one second -of time. The tension of the vapor being measured by its relation to the pressure of the atmosphere, taken as unity, it must always be referred to the standard barometrical pressure of thirty inches, and the temperature of 32°.

492. According to the preceding details, it may be assumed as incontestable that it is most economical to employ steam at such a temperature that its tension shall be equal to that of several atmospheres ; but it is not so easy to decide to what exact tension it should be raised ; or wh.at is the mathematical law which expresses the product of steam engines' powers in the function of the temperature, and the tension resulting from it.

493. We have hitherto, says the report, compared low pressure engines only with those of mean pressure ; we now proceed to compare them with high pressure engines, which, as is well known, act without condensation of the vapor. Mr. Trevithick in England, and Mr. Oliver Evans in America, are the persons who first made high pressure engines.

494. In 1814 Mr. Trevithick exported to

Peru nine of these engines, for the purpose of clearing the mines of water, from the accumulation of which many of the richest had been abandoned : so effectual were the engines that the treasurer of the province proposed to erect a silver statue to Mr. Trevithick, as a memorial of the gratitude of the new world, for the services he had rendered it.

495. In Philadelphia the saving in fuel, by the substitution of one of Evans's high pressure engines, for the low pressure one previously employed, amounted to about £1250 per annum. This engine raises 20,000 tons (tonneaux) of water, about ninety-eight feet in height, every twenty-four hours, and consumes about 1535 cubic feet of wood per diem. The prime cost of the machine was rather more than £5000; whereas, according to M. Marestier, a low pressure engine, of equal power, would cost considerably more than £8000.

496. Evans's engines work with a pressure of from eight to ten atmospheres ; several of them have been constructed in America ; and, in 1814, the congress of the United States extended Mr, Evans's patent ten years beyond the usual period, as an acknowledgment, on the part of the republic, of the benefit his invention has conferred on his country. A similar extension was granted in England to Messrs. Boulton and Watt, for their condensing engines.

497. More lately Mr. Perkins, an American, well known by his ingenious processes for employing steel plates, instead of copper, in engraving, has surpassed all his predecessors by the boldness of his conceptions. He employs, for his moving powers, steam under a pressure of more than thirty atmospheres, and apparently with great advantage.

498. With respect to economy of fuel, we must, therefore, consider the high pressure engines, hitherto constructed, as not having attained the maximum. The use of condensed steam is yet in its infancy; and, notwithstanding the services it has already rendered us, we must consider them as far below what may still be expected, when we shall be more capable of availing ourselves of the full benefit of its effects.

499. Habit reconciles us to danger. Hundreds of sailors perish annually, by the power of the wind on the sails of our ships, and we think nothing of it, because we are become familiar to that mode of navigation. But if a steam-boat be blown up, or burnt, the accident is reported in the public prints to every corner of the world ; the alarm is

given, and that is looked upon as the most dangerous of all mechanical powers which perhaps is the least so in the common course of navigation, and especially on nearing the land.

500. But destruction in some shapes is more appalling to the imagination than in others. Death from explosions, accompanied with noise and confusion, seems more horrible than when it comes in a more tranquil form ; and, in all our discussions on the relative dangers of different machines, we should divest them of those accessary circumstances, which frequently produce the greatest effect on the minds of the vulgar and ill-

informed. Whenever man accumulates natural powers, to effect certain purposes, they may. by mischance, be diverted from their proper courses, and become the cause of serious accidents ; and no machine, by which those powers are concentrated, was ever constructed that has not its peculiar dangers.

501. To wish to employ only such machines as might be secure from the consequences of want of skill, imprudence, and rashness, were to wish to deprive ourselves of the happiest fruits of human skill and industry ; at the same time it were a culpable neglect to suffer any man, for the sake of attaining an end of secondary importance, to employ means which might obviously endanger the lives and property of his neighbours. In such a case public authority has a right to interfere, and exercise a beneficial and protecting influence.

502. Does this observation apply to steam engines in general, or only to a particular class ? Should the use of high and mean pressure engines be restricted to certain situations ?

503. The British parliament has lately taken this subject into serious consideration, and has adopted most of the precautions recommended by a committee of the House of Commons appointed to enquire minutely into it, particularly with the view of obviating the dangers to which steam passage-boats are liable from ill-con- structed machinery,

carelessness, or mismanagement. The committee particularly recommended that the boilers of the steam engines shall be made of wrought iron or copper, and furnished with safety valves, of proper size and form, one of which shall be so secured as to be inaccessible to the workman who has charge of the engine : it also recommends that this valve shall be loaded only with such a weight that the pressure shall never exceed one-third of that which the boiler has been found, by actual trial, to be capable of supporting without bursting, or one-sixth of its calculated strength ; and that any person overloading the valve shall be liable to punishment.

504. Although the British legislature has not forbidden the use of high pressure steam engines, either in passage-boats or manufactories, the preference has been given, especially for boats, to low pressure engines ; and much prejudice has been excited against the former from deplorable accidents which have occurred in America, in England, and France. Mr. Evans, however, according to Mr. Marestier, has defied his opponents to produce a single instance of the explosion of one of his engines, although they work with a pressure of ten atmospheres. But serious accidents are not confined to high pressure engines — they hare happened with those of low pressure, both in England and America; and more than once explosions occasioned by the latter have been attributed to the former.

505. An account is given by Mr. Stevenson, in the Edinburgh Philosophical Journal, of a dreadful explosion which occurred near Edinburgh, of a high pressure steam-boiler ; and, in France, accidents have happened both with low, mean, and high pressure engines, which require our particular attention. Explosions, which have cost many persons their lives, hav? happened

with what are called low pressure engines, bu which in reality cease to be such whenever tht fire is strongly urged, and the escape of the condensed steam prevented, either by the accidental derangement of the safety valves,' or by its being purposely overloaded. Amongst others, we may mention the deplorable accident which happened at Creusot, by which many individuals were killed by the bursting of the boiler of a low pressure engine. Let us turn to the other engines. At Peronne the balance beam of an English high pressure engine having broken, the steam in the cylinder drove up the piston and its rod through the planks and roof of the building in which it was placed ; but no person was killed or hurt.

506. At Paris, the lower part of the boiler of a mean pressure engine having split, the water flowed into the fireplace, and put out the fire ; the walls of the furnace were not even shaken, and no noise was heard except that of the rupture of the boiler. A similar accident occurred about three years since in another establishment, unattended by any more serious consequences. But at Essonne a more serious accident happened lately with a mean pressure engine, the boiler of which had been cast at a foundry not calculated for such work; and it has been satisfactorily proved that the mischief was occasioned solely by the clumsy construction of the boiler, and the faulty manner in which its parts were put together. It results, from all the details which we have collected, that no mean or high pressure steam-boiler, constructed in any regular establishment in France, has ever met with an explosion; although they are more numerous than those imported from foreign countries. During the last year thirty-six of these engines have been made in one manufactory at Paris, and a still greater number are making in the present year ; and the more they are used the more they are approved of. Since 1815 more than 120 mean and high pressure engines have been made in the French manufactories.

507. Since 1815 thirty-two mean pressure engines have been sent to St. Quentin from one manufactory at Paris; and the purchasers are universally'well satisfied with the service they perform.

508. It became important to ascertain if the safety of the French engines, from their introduction to the present time, be merely owing to chance, or if it be the necessary consequence of multiplied precautions in their manufacture, and the previous trials to which the boilers are submitted. On this point the following information has been obtained respecting the cast iron boilers, which are considered as the most unsafe.

509. The mean-pressure condensing engines, on Woolf's construction, are those which are made in the principal manufactory in France. With these engines the pressure may be varied from that of one atmosphere to two and a half, or three atmospheres, and is indicated by a mercurial gauge. The true boiler and boiling pipes in Woolf's engines (which must not be co founded) are made of the purest cast iron, form of the boiler is cylindrical, its axis .>en horizontal. The thickness of the boilers ai boilir.g pipes of large and small steam engin

varies from about an inch and a quarter to an inch and three-quarters. The diameter of the boiling pipes is much less than that of the boiler; for small engines it is less than half, for large engines less than one-third, of the diameter of the boiler. The axes of the boiling pipes are parallel to the axis of the boiler ; they are placed below it, and immediately over the fireplace, in such a way that the flame is in contact with the pipes only. As the boiler is less exposed to the fire than the pipes, it is less subject to injury from its action ; and, if any part give way from that cause, it is the lower part of the pipes, and not the boiler ; the consequence of which is the inundation of the fireplace, and extinction of the fire, as happened in one of the accidents mentioned above.

510. The parts of the engine are united with every possible attention to strength, and to closeness at the joints, so that there may be no loss of power from the escape of steam. Before the pipes and boiler are used they are separately submitted, by a hydraulic press, to five times the pressure that they will have to support when the engine is at work. Before any conclusions are drawn from the preceding facts and observations; it may be well briefly to recapitulate them.

511. High-pressure steam engines are employed with most advantage. 1st. Because the greater the compression of the steam the less is the space the engine occupies. 2d. Because it produces an equal power to that of a low pies-sure engine, with a smaller quantity of fael. But they are considered as more dangerous than low pressure engines. Nevertheless engines may be constructed with which explosions, if not absolutely impossible, are at least extremely rare; and with which not a single instance of an explosion has occurred in France since they have been used in that country.

512. Such are the mean-pressure engines, of three or four atmospheres, made in France, on WoolPs construction, as improved by Edwards, with boilers four or five times strongei than can be burst by the force of the steam which they have to resist. Such also are the high-pressure engines of ten atmospheres, constructed on the plan of Oliver Evans, of the United States of America. With these engines the boiler is capable of resisting ten times the force it is daily subjected to. But engines constructed with less care, or managed with less prudence, have occasioned dreadful accidents, especially in Great Britain.

513. In France only one accident has ever happened by which any

lives were lost, which were those of two individuals engaged in the service of the engine ; and not one single instance has occurred in that country in which any da-mage has been sustained by any individuals, from the explosion of a steam engine, on the adjoining premises.

514. Although it appears, from the preceding statement, that no one in the neighbourhood of a steam engine, in France, has ever suffered either in his person or property from any explosion, yet the impossibility of such consequences has not been proved ; and the bare apprehension of the danger is a real evil, attendant on the erec-

tion of a mean or high-pressure steam engine in the neighbourhood of a dwelling house. To re-duce that apprehension as much as possible the following precautions should be adopted : —

515. (1.) Every steam engine boiler should be furnished with two safely valves, one of them inaccessible to the workman who attends the en-gine, the other under his command, in order that he may be able to diminish the pressure on it, as occasion may require. If he attempt to overload this valve, it will have no effect, since the steam will find vent through the other, which is out of his reach. The reporter, M. Dupin, suggests in this place, that if any apprehension of danger be entertained, from the possibility of the inaccessible valve becoming fixed by rust, or negligence, it may be obviated, by fixing in the upper part of the boiler two plugs of fusible me-tal, formed of such an alloy as to melt at a few degrees above the working temperature of the steam. One of these plugs is to be considerably larger than the other, and to be made of a rather less fusible alloy, so that if the steam does not escape with sufficient rapidity on the fusion of the smaller, it may have ample room to fly off, as soon as the larger has given way. The temperature, at which the least fusible alloy melts, must of course be considerably below that at which the increased elasticity of the steam would endanger the safety of the boiler.

516. (2.) All the boilers should be proved by being submitted, by means of the hydraulic press, to four or five times the working pressure, for engines that work with a pressure of from two to four atmospheres. Beyond that term the proof pressure should as much exceed the working pressure as the latter exceeds the sim-ple pressure of the atmosphere.

517. (3). Every steam engine maker should be obliged to make known his method of proving the boilers, as well as whatever may guarantee

the solidity and safety of his engines, especially as regards the boiler and its appendages. He should also declare this working pressure, estimated by the number of atmospheres, or in pounds, on each square inch of surface exposed to the action of the steam.

518. (4.) For further security, the boilers of very powerful engines, when near a dwelling-house, may be surrounded by a thick wall, at the distance of between three and four feet from the boiler, and at least as far from the party wall of the adjoining house.

519. Lastly, if an exact account were taken, and published by the proper authorities, of all accidents that happen to steam engines of every kind, minutely detailing both the causes and effects of such accidents, with the names of the proprietors, and the makers of the engines, it would mainly tend to render unfrequent, though it cannot wholly obviate, the evils that may arise from the use of mean and high-pressure engines.

520. While on the subject of high pressure steam, and the best form of the boiler, we cannot do better than furnish our readers with the substance of a most important paper by Mr. Taylor, the mining engineer. He observes that ‘ it has been remarked by some practical men who have had most opportunity of examining the circum-

is:

stances under which the bursting of boilers has taken place, that the causes have sometimes appeared to be not of that simple character which is commonly assigned to them ; and that some such accidents have occurred where neither excessive expansive force of steam, neglect of the usual precaution, weakness of material or bad construction, existed to a degree equal to the effect. Mr. Woolf, in a conversation upon this subjeci some time since, expressed to me his opinion of some case where, as he thought, there was ground to suspect the operation of an explosion of gas in the flues, or at least outside the boiler. Any enquiry or discussion into the causes of circumstances which continue to. be a reproach to our mode of using steam, must, I conceive, be useful ; and my principal object will rather

be to provoke it, and to encourage a record of facts, than to propound any particular theory of my own, though I admit that some recent cases appear to countenance Mr. Woolf's idea. In the mines of Cornwall, and in those of North Wales, the use of high-pressure steam has become general : in the former district it is, I believe, universal, and is applied to condensing engines not differing very much from Boulton and Watt's construction, among which engines are many of enormous power, and the largest in the world. The steam is commonly so as to balance from fifteen to forty pounds on each inch of the safety-valve; and some difference of opinion exists among the engineers as to the importance of using it at a higher or lower degree of pressure.

52 1. 'It will be necessary to describe the boilers which have been employed, in order to understand the subject, and to notice those which have been subject to accidents ; which indeed, as far as I know, have been confined to one sort of boiler, — or at least such accidents as have been attended with any fatal or distressing consequences.

522. < This description of boiler, though appearing therefore to be the most hazardous, is yet most generally adopted ; and, as it is believed to have some advantages over others in other respects and under certain circumstances, it will probably continue to be generally preferred, or at least until some construction that shall unite these advantages with more perfect security may be brought into use : this, indeed, it will not be very easy to do, as the experiments on boilers have been multiplied to a great extent in Cornwall, and the expense incurred by many of the mines in this way has been so great that but few of the managers will probably be inclined to enter upon them again without some very clear prospect of success.

523. ' The steam boilers which I mean to describe as the most common are those which are constructed by fixing one tube within another : the interior one containing the fireplace, and the space between it and the exterior containing water, and in the upper part steam. This kind of boiler, was, I believe, first introduced by Trevithic for his simple high-pressure engines : he made the outer tube of cast iron, and the inner one, which was often recurved so as to make a double circuit within, of wrought iron. At

present both the tubes are made of wrought iron or rolled plates : the form is simply that of one straight tube passing through the other; the ends of the boiler fix the tubes together, so that the interior tube is

open at both ends; at one of which is placed the fire-grate, and at the other the smoke and flame pass out, and are conveyed to the stack or chimney most commonly by flues passing under and along the sides of the outer case. The boilers are commonly from twenty to thirty-five feet in length, the diameter of the inner tube from three to four feet, and of the outer one from five and a half to six and a half or seven feet. The former are usually half an inch thick, and the outer case three-eighths.

524. ‘ The weakest parts of this construction have generally been supposed to be the outer tube, by having too great a diameter for the strength of iron used, and the ends of the boiler, which, by being square and rivetted to angle iron, are more likely to break than if a spherical form were adopted. It does not appear, however, in practice, that these have been the first parts to give away.

525. ‘ The advantages which this boiler seems to possess over others may be shortly stated. It has been found, by comparing the duty of the engines by means of the monthly reports, and checking this by the observations of the agents, that the fuel goes further in them than in any others yet tried. Circumstances, at first sight apparently trivial, may perhaps conduce to this result. I suspect that the peculiarities of coal of different districts influence more the success of different kinds of boilers than has been generally supposed. In Cornwall all the coal is from South Wales, and is brought from the neighbourhood of Swansea ; it is less bituminous than most other coal, is not easy to inflame, but gives a strong and durable fire : it is subject to the objection of producing a great deal of clinker, and this unites with and adheres strongly to any brickwork which the fire may come in contact with, so as to require frequent cleansing of the fireplace. In the boilers I have been describing there is no brickwork near the fire, the clinker does not adhere to the iron sides, and the process of cleansing is easy and rapid ; the ac-tion of the fire is therefore regular and uninterrupted.

526. ‘The second kind of boiler used is a single tube made of wrought iron plates of considerable length but of small diameter, with ends of the same material generally of a hemispherical form; it is placed horizontally, the water occupying by far the larger portion of the space within, and the fire is applied under the bottom part.

527. ‘ In our mines in North Wales I have used them with great advantage, and our agents and engineers prefer them to any other, and find that they generate steam rapidly, and apparently with economy ; but, as there is no monthly report there as in Cornwall, this point cannot be ascertained precisely.

528 ‘ I expected the same advantage by using them in Cornwall, with the further one of increased security. In this I have been disappointed : the difference in the quality ot Me coal

appears to be the reason ; — in North Wales it is a free burning and bituminous coal, and makes little or no clinker, and therefore essentially different from what I have described the coal used in Cornwall to be. With the latter these boilers do not appear to afford steam freely ; whilst the brick sides of the fireplace are so rapidly encrusted with clinker, and the door so frequently kept open to cleanse them, that much of the ef-fect of the fire is destroyed.

529. ‘Thethird class of boilers which have been used in the mines is that which includes Mr. Woolfs invention of a series of tubes filled with water and exposed to the fire. These boilers were the subject of one of his patents, and various descriptions of them are to be found in works which treat on these subjects. If one objection to them could be surmounted, they would probably be the best description of boilers we know of, but this has caused the use of them to be discontinued ; — the tubes by expanding and contracting not only injure the joints, which must necessarily be numerous, but by sudden influences of the fire the water is displaced in some of them, and the tubes are injured and burst. No other inconvenience has occurred from this than what is occasioned by the frequent repairs thus called for ; but it amounts of itself to a serious evil.

530. ‘ Of four accidents by the bursting of steam boilers which have come more under my notice as having occurred in mines where I am interested, and in the last two or three years, I would remark that the boilers were all of the first description. In other respects the circumstances differed very much. They were erected under the superintendence of different engineers, — were made by different manufacturers, in parts of the country distant from each other, of materials from various sources ; they were mostly nearly new or not apparently the worse for wear, and were each furnished with a safety-valve and gauge cocks ; though I admit that there is not so much

attention to the care of these matters in the boiler-houses of mines as could be wished.

531 . ‘ The first accident was at Wheal Fortune, to one of six boilers which are employed to work the large engine there of ninety inch cylinder. I do not recollect that any thing remarkable occurred to observe upon with regard to this ; the injury was limited to the boiler itself, and it occasioned no particular discussion. The engineer was Mr. Woolf.

532. ‘The next was extraordinary, from the circumstance of two boilers blowing up at the same moment or nearly so. This happened at Polgooth tin mine, where three were employed in the same house to work the engine (eighty inch cylinder). The engine had been stopped a short time for some repairs to the pump-work in the shaft ; but it seemed clear after the accident, by the most accurate investigation that could be made, that the steam had not acquired any formidable degree of pressure, nor was the water ?r low as to endanger the tube being improperly neated. The engineer \vas Mr. Sims, and the boilers as well as the engine were nearly new. One man, unfortunately, was killed, and the stack of the engine-house was much .mattered, as

well as the building itself. The interior tubes of the boilers were much contorted and rent. Captain Reed, who was near the spot, remarked that the one explosion was heard a little before the other, but the noise had hardly ceased when the second took place.

533. ‘Some time after, one of the boilers of the sixty-four inch cylinder engine at East Crennis Mine blew up. This engine was also under the care of Mr. Sims, but had been much longer at work than that at Polgooth. The inner tube was compressed as if the fire had softened the part above it, though there did not appear to be any other reason to think that the water was too low. The ends were torn to pieces, and the tube was projected out of the case and out of the house, while the case itself remained in its place, and scarcely injured. No person was materially hurt.

534. ‘ The last accident, which has led more particularly to these remarks, happened at the Mold Mines in Flintshire, to a boiler of a similar construction; one of three working the Pen-y-Fron engine sixty-six inch cylinder erected by Captain Francis the principal agent, but of late under the care of Mr. Bawden, engineer. The outer case remained in its seat uninjured, as at East Crennis, and even the weight

on the lever of the safety-valve was not disturbed ; the inner tube was not moved out of its place, although it was rery much flattened or compressed for a great part of its length, but in a contrary direction to that at East Crennis ; the sides as it were having come together, and not the top and bottom, they approached so close to each other as to hold a brick, which it is not easy to account for being there. The part which contained the fireplace, and for some length near it, remained in the original form. The ends both here and at East Crennis presented an appearance as if they had broken the angle iron rather by the contraction of the tubes than by being pressed outwards.

535. ‘ Circumstances rendered it possible to get better evidence of the state of the steam and water, &c., than happens in most such instances; and it seemed certain that the former did not exceed a pressure of -thirty pounds an inch, and that the other was quite at its proper height. There was a lead plug indeed above the fire which would have been destroyed if it were not so.

536. ‘The engine had been stopped a few minutes ; the engine-man had opened the fire-doors of the three boilers, and had closed the dampers of the other two : he was on this boiler, putting down the damper in the flue, which was no sooner done than he observed a gust of flame rushing from the fireplace, and almost immediately after an explosion, which made him jump from a door-way considerably above the level of the gronnd below, as the engine stands on the side of a steep hill : this door was used to discharge the cinders from the ash-pits. He alighted on the heap, and escaped out of the way just be-fore the hot water gushed out. Two other men, who were in the boiler-house, were not so fortunate, and they were killed instantly by the boiling water, no mark of any other injury being to be found on their bodies. In this case, had the rush

of flame fiomthe fireplace any thing to do with the subsequent explosion? And admitting that the steam was so far within the pressure that could by mere expansive force regularly exerted injure such a boiler — might not the rupture be occasioned by the aid that a

vacuum suddenly created might produce?

537. ‘ Does not the bursting of the one boiler after another, as at Polgooth, seem to indicate that exterior causes operated ? Is it possible to conceive, supposing the pressure equal in two boilers, as was the case at Polgooth, both being connected to the same steam-pipe, that the relative strength of the two should be so exactly the same as that whatwould by mere expansive force burst the one should have the same effect upon the other ?

538. ‘ Have not all calculation and reasoning with respect to the strength of boilers hitherto had regard merely to such expansive force uniformly exerted ; and if we suspect or admit the action of concussion, or the effects that anything like a blow would exert, ought we not to make a very different estimate in their construction ? My intention was rather to state the facts than to attempt an explanation of what is certainly at present very obscure ; but, that I may do all in my power to direct attention to the subject, I will venture on a supposition. At the Pen-y-Fron engine we see that the fire-door is thrown open, and then the current of air up the flue is stopped by closing the damper; the interior is filled with atmospheric air mixed to a certain extent with coal gas ; the latter is increased by the distillatory action of the fire until the proportion is attained which is explosive ; it takes fire, producing the rush of flame which would be followed by a sudden vacuum in the tube ; while the other side, pressed by the steam, gives way to this sudden impulse, and is destroyed by a force very much smaller than would be required if uniformly exerted. By some it has been suggested that hydrogen may have been generated by the decomposition of water from leaks in the boiler.

539. ‘ That sudden inflammations of gas in the chimneys of these engines do take place is, I believe, sufficiently obvious. By night it is observable that bursts of flame, suddenly illuminat-ing the surrounding scene, and rising to a considerable height above the summit of the stack, are seen to emerge, and after a blaze of some minutes diminish and retire into the flue, leaving all once more in perfect darkness. This effect I certainly do not recollect to have noticed where the coal is less bituminous. The fact is not, perhaps, of much importance ; but it has been remarked upon by some who have witnessed the accident I have described, and has been discussed by them in reference to it, and therefore it is right to mention it.

540. ‘ Though I have been led to describe the bursting of boilers where what is called high-pressure steam has been used, I by no

means think that boilers are safer because the steam in them is supposed to be limited to a lower degree of expansive force. High-pressure boilers are or ought to be very strong, and can only give way by a great increase of force beyond what they are calculated to resist, which should hap-

pen but seldom. Low-pressure boilers are from their construction very weak, and a little carelessness raises the power of the steam within them to the bursting point, and when they give way the consequences are often very fatal. Not to mention other instances, I may remark, that about twelve months since one of the old spherical construction, which is still much used in some parts of the kingdom, burst at a mine in Flintshire, about seven miles from the Mold Mines, and occasioned the death of sixteen persons ; it was replaced by two smaller boilers of the second kind I have described, and high-pressure steam applied with good effect to the engine, and with perfect security.'

541. The patent American engine by Mr. M'Curdy is adapted for steam of great expansive force. Instead of boilers, for producing steam, the patentee proposes to use tubular chambers, which being brought to a due degree of heat, by any of the usual methods, water is to be injected into them by a forcing pump, through a pipe an inch in diameter, that passes along the centre of each, and has small perforations on every side, through which it is emitted in * sprees,' or small streams, against the inside of the chambers. The water being then converted instantly into steam, by the heat of the chamber, the steam passes off by a tube at its other end, to work the piston of a steam cylinder in the common manner. From the bottom of each chamber a pipe descends, furnished with a cock, by which may be known whether the whole of the water injected each time by the pump be converted into steam ; the quantity of which, to equal a four or five-horse power, should be about ' half a gill.'

542. To add to the power of the engine the number of tubular chambers may be increased, together with the heat applied to them, and the portion of water injected. To cut off the communication between each separate chamber and the rest, in case of accidents, cocks are added to the pipes where the water enters them, and where the steam goes forth.

543. In using these tubular chambers, at first the forcing pump is to be worked by hand, till the pressure of the steam is found to be what is required, after which the engine is set to work, and moves the forcing

pump or pumps with the rest of the machinery.

544. The patentee divides his claims relative to this patent into three heads ; the first of which comprises the tubular chambers ; the second the mode of distributing the water evenly in them by the perforated tube ; and the third the me-thod of getting a 'head' or pressure of steam before the engine begins to work. We understand that the general size of the tubular chambers which the patentee has tried is eleven or twelve feet in length, and about six inches m diameter inside, and that they are made wrought iron.

545. There are several contrivances for r suming smoke in steam engine furnaces that are especially worthy of consideration. Indeed parliamentary enquiry has been instituted into the subject. In this there are two inventions lor the destruction of smoke, which appear pnnci-

pally to have occupied the attention of the committee, and which also profess to accomplish that desirable object with a very considerable saving of fuel.

546. Mr. Brunton is the patentee of one of these inventions ; he applies to the engine-boiler a newly constructed fireplace, containing a circular grate, which is made slowly to revolve upon its axis ; the fire upon this grate is fed in front by a kind of hopper, continually delivering small coal, which, from the rotatory motion of the grate itself, becomes equally spread upon its surface, so as to maintain a thin fire and a sharp draught ; the coal is thus rapidly and perfectly decomposed and burned, the smoke at first produced having to pass across the grate and over the red-hot and already coked fuel. The great advantages of this plan consist in the uniformity of heat, and its proportionate production to the work which the engine has to perform, or to the quantity of steam consumed ; the fire bricks are not injured ; the clinkers or scoriae are produced in thin layers ; and the bars are so little heated that, while three bushels of coal per hour are consuming, they are seldom hot enough to singe paper ; the boilers

are less injured than by a common fire ; and there is a considerable saving in the consumption of fuel. The disadvantages of Mr. Brunton's plan are, the expense of the apparatus ; the requisite alteration of the boiler, or rather the addition of a supplementary boiler ; the necessity of a moving power to effect the rotation of the grate ; and the labor of breaking the coals into small pieces before they are put into the hopper. Upon the last point Mr. Brunton, when questioned by the committee, replies as follows : — ' No coals should be put on a steam engine fire until they are small enough to pass a three-inch mesh; therefore the necessity of breaking the coal to that size is advantageous ; but we have lately burned a species of small coal in our own furnace, and also in the town of Birmingham, which has till now been regarded as perfectly useless, and as such there are thousands of tons encumbering the ground in the Staffordshire collieries, incapable of being used with effect in any other furnace, and we have produced with this hitherto supposed rubbish seventy per cent, of the effect of saleable coal.'

547. How far Mr. Brunton's invention bears upon the main point of our enquiry, namely, the consumption of smoke, will appear from the following evidence : Mr. James Scott Smith, of the Whitechapel Distillery, says, ' We can consume the smoke to a very great extent, and, although it is not completely invisible, yet it is never offensive ; we never have any of those dark volumes of smoke which are the cause of so much complaint.' Mr. Brancker, of Liverpool (a sugar refiner), also gives evidence as to the great diminution of smoke effected by Mr. Brunton's 'fire-regulator ; ' and both these gentlemen speak in terms the most unequivocal respecting the saving of fuel, amounting, according to their joint evidence, to from thirty to thirty-eight per cent. Upon this subject, however, we greatly apprehend that such evidence is open to unavoidable fallacy. When any new thing is going on in a manufactory, the heads of the concern are generally themselves on the alert, and more than ordinary care and attention are bestowed upon all its details ; we are pretty well convinced, and it is indeed obvious, that in any great establishment a monstrous saving of all materials, but of coals more especially, would be effected by the personal superintendence of the master, and of scientific persons well versed in the minutiae of the concern ; yet we are willing to allow that one great merit of Mr. Brunton's contrivance consists in its being almost independent of the stokers and laborers ; there is none of that eternal pitching of coals into the furnace which goes on with such lavish waste in all ordinary engine fires ; * the grand principle in this machine,' says Mr. Smith, ' is, that it makes all stokers alike good, and they always use the same quantity of coals when doing the same

work.' This is indeed a great point carried. We think it but justice to Mr. Brunton to add that private information, derived from various quarters, confirms, to a considerable extent, the extracts we have made from the Minutes of Evidence ; we are inclined to consider the saving of fuel quite as important as the consumption of smoke, and in that respect his pretensions seem indisputa-ble ; there is also much original ingenuity in his contrivance ; indeed we are not aware that a rotatory grate was ever before either devised or constructed.

548. Another very effectual, and in some respects preferable method of consuming smoke, is the invention of Messrs. Parkes, of Warwick. These gentlemen, who are the proprietors of an extensive worsted manufactory, were greatly annoyed by the smoke of their engine-boilers, especially in their bleaching and drying ground ; they have now so far effected its consumption that, for about twelve hours of the day, the smoke is nearly invisible, and there is no soot ; moreover these desirable objects are accompanied, they say, by a considerable saving in the article of coals.

549. In the plan adopted by Messrs. Parkes the boilers remain in statu quo ; the fireplace is somewhat altered in shape and dimensions, but the principal agent, as far as regards the destruction of the smoke, is a current of air which is admitted just beyond the end of the fireplace, by means of an aperture which may be increased or closed at pleasure, and which they call an air-valve. A small fire is first made to burn brightly at the back of the grate ; coals are then filled in towards the front, in which direction the fire gradually spreads ; their smoke necessarily passes over the clear fire, where it becomes sufficiently heated to constitute flame, as soon as it meets with the current of air entering at the valve ; and a striking experiment with this apparatus consists in alternately shutting and opening the air-valve, which is accompanied by the alternate appearance and disappearance of the smoke.

550. Even from this brief and incomplete view of Messrs. Parkes' contrivance, it is obviously preferable, in some respects, to that of Mr. Brunton ; it is much less complex and expensive, and, when properly and assiduously attended to, it effects a more complete destruction of smoke ; but, on the other hand, its —success is infinitely

more dependent upon the persons who manage the fire, and whose dispositions are generally a mixture of ignorance and prejudice, duly tempered with the warmth of the element over which they preside ; we also doubt whether the same unequivocal testimony can be adduced in respect to the saving of fuel, for this again is more in the stoker's power. In point of originality, too, Mr. Parkes must undoubtedly yield the palm to Mr. Brunton ; he is anticipated in every part of his invention by the words of Mr. Watt's patent • and we rather think that Mr. Gregson has also touched upon some of the most important parts of his contrivance. We, however, by no means state this opinion with a view to detract from Mr. Parkes's merit ; on the contrary, if he has attained that in which Mr. Watt failed, the nearer his means approach to those unavailingly employed by his eminent predecessor, the more substantial is the service which he has rendered the public, and the more praiseworthy the perseverance by which he has accomplished his ob-ject. We believe that Mr. Watt never affected to combine diminution in the consumption of fuel with the, destruction of smoke, and that, on the contrary, with additional expense and trouble, there were more coals burned ; at least this is the only cause to which we can refer the non-consumption of smoke, and the non-application of his patent, in the greater number, if not in all, the large engines of his erection which we have had occasion to visit.

551. One subject seems to us to have been overlooked by the majority of smoke-reformers, namely, the construction, ana more especially the height, of the furnace chimneys. By conveying black smoke, and other pernicious fumes, into a capacious and very lofty chimney, much of the noxious matters that otherwise escape into the atmosphere are decomposed and precipitated, or condensed within ; we were much struck some years ago with the effect of a long flue and lofty chimney attached to the steam engine of the Dartford Powder-mills ; scarcely any smoke issued, from its funnel, the fuliginous particles being almost entirely deposited in the chambers of the flue. The chimneys of

the grand junction engine at Paddington, and of the West Middlesex water-works at Hammersmith, are more illustrative instances ; when these machines are at work the former produces little smoke; the latter inundates the neighbouring gardens with perpetual showers of the solid soot, and is the greatest of all conceivable nuisances ; yet the only difference is in the height of. the two chimneys, the boilers being in all respects set and constructed alike. Besides, if a high chimney does void smoke, it is generally wafted away and dissipated, except under particular circumstances of wind and weather.

552. As to the requisite height of a chimney for the diminution of nuisance from smoke we are not

prepared to give an opinion; it will depend very much on the circumstances of the case ; from 150 to 200 feet would, we presume, in most instances, prove effectual ; the expense of such a structure may certainly be urged against the proposal, but we are to recollect that one shaft might receive all the tributary fumes of many flues, and that a great saving would be effected in reducing the number of chimneys of medium height. The intolerable nuisance of brewers' chimneys, to whose coppers we fear neither Parkes's nor Brunton's inventions are applicable, would in this way be greatly diminished, if not altogether remedied.

553. Among other probable causes of the diminution of srnoke, we look to the employment of steam as a substitute for fires ; in Whitbread's brewery high-pressure steam is thus very extensively employed, and, although they make quite smoke enough, it certainly has lately sustained a very perceptible diminution.

554. Lastly, we come to the most absurd portion of the speculations of theoretical smoke-burners, namely, the improvement of the atmosphere of the metropolis. Though some are sceptical upon the subject, we will admit that, if no smoke were made in London for a twelvemonth, or if wood-fuel were substituted for coals, there might be some amelioration of the atmosphere, although our locality and climate always render it turbid and misty, independent of adventitious effluvia ; it is, however, folly to ascribe any sensible influence upon the great mass of London smoke to some few steam engine chimneys, while every house is busy in the work of contamination, and every street yielding a proportion of filth far exceeding that of any single furnace, though less observed, because administered by separate vents, and in divided doses.

555. A portable high-pressure engine is n desideratum of considerable importance in the erection of buildings and other temporary works. We propose therefore concluding our present article with an account of one which is exceedingly simple in the arrangement of its parts. Fig. 1 plate IV. is an external elevation, and fig. 2 a section of the apparatus. The same letters of reference are employed in both. The cylindrical boiler is represented at A, the cylinder and piston entering at the top of one extremity, and the chimney passing from the other. A four-way cock i f k serves to limit and regulate the passage of the steam above and beneath the piston. The steam after its escape parses by the pipe a r F into the chimney T. E, E, a-e the flanches of the chimney, the clearing hole being placed at Y. The steelyard safety-valve is seen at p n v. The piston-rod is kept in its proper situation by the guides H, I, K, L, and the fly-whael M is driven by a connecting-rod and crank attached to the wheel N.

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STEATITE, or soapstone, in mineralogy, a sub-species of rhomboidal mica. Color grayish, or greenish-white. Massive, disseminated, imitative, and in the following suppositious figures : an equiangular six-sided prism ; an acute double six-sided pyramid; and a rhomboid. The first

two are on rock crystal, the last on calcareous spar. Dull. Fracture coarse splintery. Translucent on the edges. Streak shining. Writes but feebly. Soft. Very sectile. Rather difficultly frangible. Does not adhere to the tongue. Feels very greasy. Specific gravity 2-4 to 2-6.

Infusible. Its constituents are, silica 44, magnesia 44, alumina 2, iron 7-3, manganese 1-5, chrome 2. Trace of lime and muriatic acid. It occurs frequently in small contemporaneous veins that traverse serpentine in all directions ; at Portsoy and Shetland ; in the limestone of Icolmkill ; in the serpentine of Cornwall ; and in Anglesey. It is used in the manufacture of porcelain, and for taking greasy spots out of silk and woollen stuffs. It is also employed in polishing gypsum, serpentine, and marble. When pounded, and slightly burned, it forms the basis of certain cosmetics. It writes readily on glass. Humboldt assures us that the Otomacks, a savage race on the banks of the Orinoco, live far nearly three months of the year principally on a kind of potters' clay ; and many other savages eat great quantities of steatite, which contains absolutely no nourishment.

STEATO'M A, n. s. Gr. ˆarˆa. A fat wen.

If the matter in a wen resembles milk-curds, the tumour is called

atheroma ; if like honey, meliceris; and if composed of fat, steatoma. Sharp's Surgery.

STEA.TOMA is a kind of encysted tumor, consisting of a matter like suet or lard, soft, without pain, and without discoloring the skin.

STEBBING (Dr. Henry), a learned English divine and controversialist. He attacked the bishop of Bangor, Dr. Sykes, and bishop Warburton ; and published many tracts and sermons. He died in 1763.

STEED, n, s. Sax. ptefca, A horse for state or war.

My noble steed I give him, With all his trim belonging. Shakspeare. Macbeth.

Impresses quaint, caparisons and steeds. Milton.

Stout are our men, and warlike are our steeds.

Waller.

She thought herself the trembling dame that fled, And him the grisly ghost that spurred the infernal steed. Dryden.

Who like our active African instructs The fiery steed, and trains him to his hand ? Addison.

See the bold youth strain up the threatening

steep ;

Hang o'er their coarsers' heads with eager speed, And earth rolls back beneath the flying steed. Pope.

Some nymphs affect a more heroic breed, And vault from hunters to the managed eteed.

Young.

STEEDMAN (captain John Gabriel), a Scottish navigator, born in 1745. He wrote an interesting Narrative of an Expedition against the revolted Negroes of Surinam, in 2 vols. 4to., with eighty engravings from his own drawings. He himself was much concerned in the military transactions related in it. He died at Tiverton in Devonshire, in 1797.

STEEL, n. s., adj., & v. a.) Saxon ftal ;

STEE’LY, adj. \ Belg.stae£;Goth.

ttul. A kind of iron refined and purified by fire with other ingredients. See below. Made of steel: to point or edge with steel; to harden: steely is made of steel ; or hard, firm.

That she would unarm her noble heart of that steely resistance against the sweet blows of love.

Sidney.

At her back a bow and quiver gay, Stuffed with steel-headed darts, wherewith she

quelled The savage beasts in her victorious play. Spenser.

Brave Macbeth with his brandished iteel, Which smoked with bloody execution, Carved out his passage till he had faced the slave.

Shakspeare.

Add proof unto mine armour with thy prayers, And with thy blessings steel my lance’s point.

Id. Ricliard II. Lies well steeled with weighty arguments.

Shakspeare.

From his metal was his party steeled ; Which, once in him rebated, all the rest Turned on themselves, like dull and heavy lead.

Id.

O God of battles ! steel my soldier’s hearts, Possess them not with fear. Id. Henry V.

Thy brother’s blood the thirsty earth hath drunk, Broached with the steely point of Clifford’s lance.

Shakspeare.

A looking-glass, with the steel behind, looketh whiter than glass simple. Bacon’s Natural History.

With mighty bars of long enduring brass The steel-bo\ind doors, and

iron gates he ties.

Fail-far. They are not charmed against your points, of steel

nor iron framed. Chapman.

A lance then took he, with a keene steele head, To be his keepe off both ‘gainst men and dogges.

Id.

Diamonds, though hard bodies, will not readily strike fire with steel, much less with one another ; nor a flint easily with a steel, if they both be wet ; the sparks being then quenched in their eruption.

Browne’s Vulgar Errows.

Both were of shining steel, and wrought so pure, As might the strokes of tw> such arms endure.

Dryiai,

He, sudden as the word,

In proud Plexippus’ bosom plunged the sword ; Toxeus amazed, and with amazement slow, Stood doubting ; and, while doubting thus he stood, Received the steel bathed in his brother’s blood. Id.

Why will you fight against so sweet a passion, And steel your heart to such a world of charms 1

Addison.

Man, foolish man !

Scarce know’st thou how thyself began ; Yet, steeled with studied boldness, thou dar’st try To send thy doubted reason’s dazzled eye Through the mysterious gulf of vast immensity.

Prior.

Here smokes his forge, he bares his sinewy arm, And early strokes the sounding anvil warm ; Around his shop the steely sparkles flew, As for the steed he shaped the bending shoe. Gay.

After relaxing, steel strengthens the solids, and is likewise an anti-acid. Arbuthnot.

Let the steeled Turk be deaf to matron's cries, See virgins ravished with relentless eyes. Ticket.

So perish all whose breasts the furies steeled, And cursed with hearts unknowing how to yield.

I 'ope.

Steel is made from the purest and softest iron, by keeping it red-hot, stratified with coal-dust and wood-ashes, or other substances that abound in the phlogiston, for several hours in a close furnace.

Hill's Materia Medico.

STEEL, in modern chemistry and metallurgy, has been defined to be iron united with carbon. See IRON. Steel has properties distinct from those of iron, which render it of superior value. From its higher degree of hardness it admits a finer polish and assumes a brighter color. \ hen tempered, it possesses a higher degree of elasticity and is more sonorous. It is more weakly

attracted by the loadstone, it receives more slowly the magnetic power, but it preserves it longer. When exposed to a moist air, it does not contract rust so easily as iron. It is also heavier, increasing in weight, according to Chaptal, 170th part. M. Rinman has given, as the result of several accurate experiments on different kinds of steel, the following specific gravity 7-795, while he makes ductile iron 7*700, and crude iron 7-251. All iron is convertible into steel, by exposing it to a certain degree of heat for a certain time, along with a quantity of charcoal. Chemists differ in opinion concerning the nature and effects of this process. Some say that steel is produced by absorbing a quantity of caloric. Lavoisier seems to have ascribed the qualities of steel to a slight degree of oxidation; others to a combination with plumbago, and others to a union with carbon. In agreeing with those who say the formation of steel is owing to carbon, we do not differ essentially from those who attribute it to plumbago ; for the art of chemistry has now found that these substances are very nearly allied. See CHEMISTRY. There are two ways of making steel ; by fusion and by cementation. The first is used to convert iron into steel immediately from the ore, or froa. crude or cast iron. By the second

way, bar iron is exposed to a long continued heat surrounded by charcoal. Each of these ways has advantages peculiar to itself; but the same causes in fact predominate in both, for both kinds of steel are produced by heat and charcoal. The only difference between the two methods is this: in making steel by fusion the charcoal is not so equally defended from the access of air as in the other way. See IRON. The method of converting iron into steel by cementation is a very simple process. It consists solely in exposing it for a certain time to a strong degree of heat, while closely covered with charcoal and defended from the external air. The furnaces employed for converting iron into steel (says a manufacturer of this metal) are of different sizes; some capable of converting only three or four tons weight, while others are capacious enough to contain from seven to eight or ten tons. The outsides of these furnaces rise up in the form of a cone or sugar-loaf, to the height of a very considerable number of feet. In the inside, opposite to each other, are placed two very long chests, made either of stone, or of bricks capable of bearing the strongest fire; which is placed between the two chests. The bars of iron, after the bottom is furnished with a necessary quantity of charcoal dust, are laid in stratum super stratum, with intermediate beds of the charcoal dust, to such a height of the chests as only to admit of a good bed at top ; which is then all covered over, to prevent the admission of the common air; which, could it procure an entrance, would greatly injure the operation. The iron being thus situated, the fire is lighted, which is some time before it can be raised to a sufficient degree of heat to produce any considerable effect ; after which it is continued for so many days as the operator may judge proper ; only now and then drawing out what they call a proof-bar. This is done by openings fit for the purpose at the ends

of the chest, which are easily, and with expedi tion stopped up again, without occasioning any injury to the contents left behind. When the operator apprehends the conversion is sufficiently completed, the fire is suffered to go out, and the furnace, with its contents, is left gradually to cool. This may take up several days ; after which the furnace is discharged, by taking out the bars of steel and the remainder of the charcoal dust. There is a manufactory established in the parish of Cramond, about five miles from Edinburgh, in which this method is practised with great success. Great quantities of steel are made there which is said to be of as excellent a quality as any that can be procured from other countries. When the charcoal is taken out, it is found as black as before it was introduced into the furnace, unless by accident the external air has got admittance. The bars preserve their

exterior form only ; the surface frequently exhibits a great number of tumors or blisters, whence they are called blistered steel. The hardness of steel is much increased by tempering. This consists in heating it to a red heat, and then plunging it suddenly into cold water. If it be allowed to cool slowly it still preserves its ductility ; or, if it be heated again after being tempered, it loses its hardness, and again becomes ductile. In heating steel for tempering it, the most remarkable circumstance is the different colors it assumes, according to the degree of heat it has received. As it is gradually heated, it becomes white, then yellow, orange, purple, violet, and at last of a deep blue color. According to Reaumur, the steel which is most heated in tempering is generally the hardest. Hence it is believed that the more violent the heat to which steel is exposed, and the more suddenly it is plunged into cold water, the harder the steel will be. Rinman, again, has deduced a conclusion directly opposite, that the steel which is naturally hardest demands the least degree of heat to tem-per it. Different methods have been proposed to determine what degree of heat is most proper ; but the easiest method is to take a bar of steel, so long that while one end is exposed to a violent heat the other may be kept cold. By examining the intermediate portions, it may be found what degree of heat has produced the greatest hardness. By tempering, steel is said to increase both in bulk and in weight. Reaumur says that a small bar six inches long, six lines broad, and half an inch thick, was increased at least a line in length after being tempered to a reddish white color; that is, supposing the dilatation proportional in all dimensions increasing at the rate of 48 to 49. Iron also expands when heated ; but, when the heat passes off, it returns to its for-mer dimensions. That the weight of steel is also augmented by tempering has been found by experiment. Rinman having weighed exactly in an hydrostatic balance two kinds of fine steel made by cemenjtation, and not tempered, found their density to be to that of water as 7-991 to 1 ; after be'ing tempered the density of the one was 7-553, and that of the other 7'708. M. de Morveau took three bars just of a size to enter a certain calibre twenty-eight lines long, and each side two lines broad ; one of the bars was

»oit iron, and the two owners were tasen from the same piece of fine steel. In order to communicate an equal degree of heat to each, in an earthen vessel in the midst of a wind furnace, the bar of soft iron and one of the bars of steel were thrown into cold water ; the other bar of steel was cooled slowly over some pieces of charcoal at a distance from the furnace. The bar of iron, and the one of steel that was aljowed to cool slowly, passed easily into the calibre again ; but the bar of tempered steel was lengthened almost one-ninth of a line. Tempering changes the grain, or at least the appearance of the texture of a piece of steel when broken. Thisis the mark,which is usually observed in judging of the quality of steel, or of the tempering which suits it best. The tempered bar is broken in several places after having received different degrees of heat in several places. What proves completely the effect of heat upon the grain, at least in some kinds of steel, is that a bar of steel exposed to all the intermediate degrees of heat, from the smallest sensible heat to a red heat, is found to increase in fineness of grain from the slightly heated to the strongly heated end. The celebrated Rinman has made many experiments on the qualities of steel exposed to different degrees of heat in tempering, but particularly to three kinds, *viz.* steel heated to an obscure red, to a bright red, and to a red white. Hard brittle steel, made by cementation, and heated to an obscure red, and tempered, exhibited a fine grain, somewhat shining, and was of a yellow white color. When tempered at a bright red heat, the grain was coarser and more shining ; when tempered at a red white heat, the grain was also coarse and shining. To determine how far steel might be improved in its grain by tempering it in different ways, M. de Morveau took a bar of blistered steel, and broke it into four parts nearly of the same weight. They were all heated to a red heat in the same furnace, and withdrawn from the fire at the same instant. One of the pieces was left at the side of the furnace to cool in the air, the second was plunged into cold water, the third into oil, and the fourth into mercury. The piece of steel that was cooled in the air resisted the hammer a long time before it was broken ; it was necessary to notch it with the file, and even then it was broken with difficulty. It showed in its fracture a grain sensibly more fine and more shining than it was before. The second piece, which had been plunged into water, broke easily : its grain was rather finer than the first, and almost , of the same white color. The third piece, which was tempered in oil, appeared very hard when tried by the fire; it was scarcely possible to break it. Its grain was as fine, but not quite so bright, as that which was tempered in water. The fourth piece, which was dipped into mercury, was evidently superior to all the rest in the fineness and color of the grain. It broke into many fragments with the first stroke of the ham-mer, the fractures being

generally transverse. M. de Morveau repeated these experiments with finer steel, and with similar results. From these experiments, it appears that steel may be hardened by tempering it with any liquid which is capable of accelerating its cooling. Steel may be unmade, or reduced to the state of iron, by a management

similar to that by which it is made, that is, by cementation. But the cement used for this purpose must be composed of substances entirely free from inflammable matter, and rather capable of absorbing it, as calcareous earth or quicklime. By a cementation with calcareous earth, continued during eight or ten hours, steel is reduced to the state of iron. After it has been tempered, it may be again untempered and softened to any degree that we think proper ; for which purpose we have only to heat it more or less, and to let it cool slowly. By this method we may soften the hardest tempered steel.

For the following important facts respecting the manufacture of steel Dr. Ure was indebted to the proprietor of the Monkland manufactory, where bar and cast steel of superior quality are made.

The chests or troughs in which the iron bars are stratified are nine feet long, and composed of an open-grained siliceous freestone, unalterable by the fire. The Dannemora or Oregrounds iron is alone employed for conversion into steel at Monkland. The increase of weight is from four to twelve ounces per cwt. The average is therefore 1 in 224 parts. The first proportion constitutes mild, and the second very hard steel. Should the process be pushed much farther, the steel would then melt, and in the act of fusion would take a dose of charcoal sufficient to bring it to the state of No. 1, cast iron. The charcoal used in stratifying with the bar iron is bruised so as to pass through a quarter-inch riddle. Whenever the interior of the troughs arrives at 70° Wedgewood, the carbon begins to be absorbed by the iron. There is no further diminution of the weight of the charcoal than what is due to this combination. What remains is employed at another charge. Great differences are found between the different kinds of bar iron imported at the same time ; which occasion unexpected differences in the resulting steel. The following letter contains important information, from a gentleman possessing great experience in the manufacture of steel.

< Monkland steel-works,

‘9th November, 1820.

< Sir,— Mr. William Murray has written me, that you wished I should communicate to you the reason why bar iron should run into the state of soft cast iron, by the operation being carried too far in the blister steel furnace, and how it does not make cast steel, as cast steel is said to be formed by the fusion of the blister steel in the crucible with charcoal.

‘The usual practice of making cast steel is to fuse common steel in a crucible, without any charcoal being mixed. The degree of hardness required in the cast steel is regulated by selecting blister steel of the proper degree of hard ness for what is wanted.

‘This statement is made with the view to correct a common mistake, that to make cast s it is necessary, and that it is the practice to mix with the steel to be melted a quantity of charcoal.

‘ Pursuing this mistake, it naturally leads tc others. Dr. Thomson says, when spcakmg ; on this subject, that cast steel is more fusible than

common steel, and for that reason it cannot be welded to iron. It melts before it can be heated high enough ; and that the quantity of carbon is greater than in common steel ; and that this seems to constitute the difference between the two substances.

‘ The statement of a simple fact will show that this conclusion is erroneous. Suppose a piece of blister steel, pretty hard, yet fit to stand the operation of welding to iron without any difficulty : let this steel be made into cast steel in the ordinary way. It will not then stand the process of welding. It will not melt before reaching the welding heat ; but when brought to that heat, and submitted to the blows of the hammer, it will fall like a piece of sand, and the parts being once separated, they refuse to become again united. This difficulty of working the steel can-not arise from the steel containing more carbon ; for the fact is it contains less, part of it being burnt out in the operation of melting it. And, if the same steel was to be melted a second time, more of the carbon would be burnt out ; of course the steel would be softer, but at the same time the difficulty of working it would be increased ; or, in other words, the red-short property it had acquired in the first melting would be doubly increased in the second, although a person who has not had the experience would very

naturally conclude that, as the metal kept retrograding to the state of malleable iron, in the same proportion it would acquire all the properties of the metal in that state. When taking this view of the subject, it would appear that the difference between these two kinds of steel must arise from some other cause than that pointed out by Dr. Thomson.

‘ When the iron has absorbed a quantity of carbon in the blister steel furnace sufficient to constitute steel of a proper degree of hardness, and the heat after this is continued to be kept up, the steel will keep absorbing more and more carbon. The fusibility of it will continue to increase just in the same proportion, till at last it becomes so fusible that even the limited heat of a blister steel furnace brings it down ; and, just at the time it is passing to the fluid state, it takes so great a quantity of charcoal as changes it from the state of steel to that of cast-iron. It appears to me that the charcoal is combined in rich cast-iron, in the mechanical state, and not in the chemical, as in steel.

‘ With this you will receive a specimen from the blister steel furnace. The fracture of the bar will show you steel in the highest state of combination with carbon in which it can exist ; and another part of the same fracture presents the transition from the state of steel to that of cast-iron. Should you require it, I will send you a specimen of cast-steel in the ingot, and, from the same ingot, one in the’ hammered state. I am, See.

‘ JOHN BUTTERY.’

A new memoir on the alloys of steel has been lately published by Messrs. Stodart and Faraday, of which the following is an abstract. The first curious fact that occurs relates to the compound with silver, of which steel will only retain jˆth

part in union; when more was used, it either evaporated, or separated as the button cooled, or was forced out in forging. The alloy was excellent, and the trifling addition of price furnishes no obstacle to its general employment.

Steel, alloyed with 100th part of platinum, though not so hard as the silver alloy, has more toughness ; hence its value where tenacity as well as hardness are required : the extra cost is more than repaid by its excellence. The alloy with rhodium exceeds the former in its valuable qualities, but the scarcity of the metal precludes its general

use. To the compounds with iridium and osmium the same remarks apply. The action of acids on these alloys is curious, and especially in respect to that of platinum, which is acted upon by dilute sulphuric acid with infinitely greater rapidity than the unalloyed steel ; indeed an acid that scarcely touches the pure steel dissolves the alloy with energetic effervescence. This is no doubt referrible to electrical excitation ; and we should apprehend that it would be fatal to the employment of this particular alloy, in any case where chemical action is likely to ensue.

The alloys of steel with gold, tin, copper, and chromium, we have not attempted in the large way. In the laboratory, steel and gold were combined in various proportions ; none of the results were so promising as the alloys already named, nor did either tin or copper, as far as we could judge, at all improve steel. With titanium we failed, owing to the imperfection of crucibles. In one instance, in which the fused button gave a fine damask surface, we were disposed to attribute the appearance to the presence ot titanium ; but in this we were mistaken. The fact was, we had unintentionally made wootz. The button., by analysis, gave a little silex and alumina, but not an atom of titanium. Menachanite, in a particular state of preparation, was used ; this might possibly contain the earths or their basis, or they may have formed a part of the crucible.

Our authors advert to the probable importance of certain triple alloys, only one of which is noticed in their paper, namely, that of steel, iridium, and osmium. ‘ Some attempts to form other combinations of this description proved encouraging, but we were prevented at the time from bestowing on them that attention and labor they seemed so well to deserve.’

The following is an important and curious paragraph of this paper : —

When pure iron is substituted for steel, the alloys so formed are much less subject to oxidation. Three per cent, of iridium and osmium, fused with some pure iron, gave a button, which, when forged and polished, was exposed with many other pieces of iron, steel, and alloys to a moist atmosphere ; it was the last of all in showing any rust. The color of this compound was distinctly blue; it had the property of becoming harder when heated to redness, and quenched in a cold fluid. On observing this steel-like character, we suspected the presence of carbon ; none, however, was found, although carefully looked for. It is not improbable that there may be other bodies, besides charcoal, capable of giving to iron the properties of steel ;

and though we cannot agree with M. Boussin-gault, Annales de Chimie, xvi. 1, when he would replace carbon in steel by silica, or its base, we think his experiments very interesting on this point, which is worthy of farther examination. In conclusion, our authors observe, that, to succeed in making these compounds, much attention is requisite on the part of the operators ; that the purity of the metals is essential ; that the perfect and complete fusion of both must be ensured; that they must be kept a considerable time in a state of thin fusion ; that, after casting, the forging is with equal care to be attended to ; that the metal must on no account be overheated ; and that the hardening and tempering must be most carefully performed.

Upon the whole, though we consider these researches upon the alloys of steel as very interesting, we are not sanguine as to their important influence upon the improvement of the manufacture of cutlery, and suspect that a bar of the best ordinary steel, selected with precaution, and most carefully forged, wrought, and tempered, under the immediate inspection of the master, would afford cutting instruments as perfect and excellent as those composed of wootz, or of the alloys. — Phil. Trans. 1822.

STEELE (Sir Richard), was born about 1676, in Dublin, in Ireland. One branch of the family was possessed of a considerable estate in the county ofWexford. His father, a barrister at law in Dublin, but of English descent, was private secretary to James duke of Ormond ; and his son, while young, being carried to London, he put him to school at the Charter House, whence he was removed to Merton College, Oxford. Our author left the university, without taking any degree, and resolved to enter into the army. This step displeased his friends ; but his passion for a military life rendered him deaf to any other proposal. He entered as a private gentleman in the horse guards, and thereby lost the succession to his Irish estate. But as he had a flow of good nature, a generous openness of spirit, and a sparkling vivacity of wit, he became the delight of the soldiery, and obtained an en-sign's commission in the guards. In the mean time, as he had chosen a

profession which set him free from all ordinary restraints, he indulged in the wildest excesses. Yet his gaieties and revels did not pass without some cool hours of reflection ; in these he drew up his treatise entitled The Christian Hero, printed in 1701, with a dedication to lord Cutts, who had appointed him his private secretary, and procured for him a company in lord Lucas's regiment of fusileers. The same year he brought out his comedy called The Funeral, or Grief a la Mode. This play procured him the regard of king William, who resolved to give him some essential marks of his favor; and though, by that prince's death, his hopes were disappointed, yet, in the beginning of queen Anne's reign, he was appointed gazet-teer, by the friendship of lord Halifax and the earl of Sunderland, to whom he had been recommended by his schoolfellow Mr. Addison. That gentleman also assisted him in promoting the comedy called The Tender Husband, which was acted in 1704 with great success. But his next Voi. XXI,

play, The Lying Lover, had a very ditfe rent .fate. Upon this rebuff from the stage, he turned his humorous current into another channel; and, early in 1709, began to publish The Taller, in concert with Dr. Swift. His reputation was perfectly established by this work; and, during the course of it, he was made a commissioner of thy stamp duties in 1710. Upon the change of the ministry he joined the duke of Marlborough, who had entertained a friendship for him ; and, upon his dismission from all employments in 1711, Mr. Steele addressed a letter of thanks to him for his public services. However, as he still held his place in the stamp office under the new administration, he forbore entering with his pen upon political subjects; but, adhering more closely to Mr. Addison, he dropt the Taller, and afterwards, by the assistance chiefly of that steady friend, he carried on the same plan much improved, under the title of The Spectator. The success of this paper was equal to that of the former; which encouraged him, before the close of it, to proceed upon the same design in tin; character of the Guardian. This was opened in the beginning of the year 1713, and was laid down in October the same year. But in the course of it his thoughts took a stronger turn to politics : he engaged with great warmth against the ministry; and, being determined to prosecute his views that way by procuring a seat in the house of commons, he resigned his post in the stamp office; and at the same time gave up a pension, which had been till this time paid him by the queen as a servant to ihe late prince George of Denmark. He then wrote the famous Guardian, upon the demolition of Dunkirk, which was published August 7th, 1713; and, the parliament being dissolved next day, the Guardian was soon followed by several other warm political

tracts against administration. Upon the meeting of the new parliament, Mr. Steele, having been returned a member for the borough of Stockbridge in Dorsetshire, took his seat accordingly in the house of commons ; but was expelled in a few days after, for writing the close of the paper called The Englishman, and one of his political pieces entitled The Crisis. Presently after his expulsion, he published proposals for writing the history of the duke of Marlborough: he also wrote the Spinster; and, in opposition to the Examiner, he set up a paper called The Reader, and continued publishing in favor of the Whigs till the death of the queen. Immediately after which, as a reward of these services, he was taken into favor by kin£ George 1 . He was appointed surveyor of the royal stables at Hampton Court, governor of the royal company of comedians, a justice of the peace for Middlesex, and, in 1715, was knighted. In the first parliament of king George he was chosen member for Boroughbridge, in Yorkshire; and, after the suppression of the rebellion in 1715 was appointed one of the commissioners of the forfeited estates.in Scotland. In 1718 be buried his second wife, who had brought him a handsome fortune and a good estate in Wales; but neither that, nor the ample additions made to his income, were sufficient to answer Ins demands. The thoughtless vivacity of his Fjunt

often reduced him to little shifts for its support; and the project of the fish-pool this year owed its birth chiefly to Sir Richard's necessities. This vessel was intended to carry fish alive from Ireland, and without wasting, to any part of the kingdom ; but the scheme proved very ruinous, for after he had been at an immense expense in building his vessel, besides the charge of the patent, the fish, though supplied with a continual stream of water while at sea, yet, uneasy at their confinement, shattered themselves to pieces against the sides of the pool ; so that when they were brought to market they were worth very little. In 1719 he opposed the remarkable peerage bill in the house of commons ; and for this opposition his license for acting plays was revoked, and his patent rendered ineffectual. On this, finding every direct avenue to his royal master barred against him by the lord

chamberlain, he had recourse to the public, in hopes that his complaints would reach the ear of his sovereign by that channel. In this spirit he formed the plan of a periodical paper, to be

far from arrogating any praise to himself from his conjunction with Mr. Addison, that he was the first who desired him to distinguish his papers. His greatest error was want of economy.

The STEELYARD is one of the most ancient presents which science made to society ; and, though in comparative desuetude in this country, is in most nations of the world the only instrument for ascertaining the weight of bodies. What is translated balance in the Pentateuch was in fact “a steelyard, being the word used by the Arabs to this day for that instrument. It is in common use in all the Asiatic nations. It was the statera of the Greeks and Romans, and seems to have been more c*onfided in by them than the balance ; for which reason it was used by the goldsmiths, while the balance was the instrument of the people. — Non aurificis statera sed populari trutina examinare. — Cic. de Or. 238. The steelyard is a lever of unequal arms, and, in its most perfect form, is constructed much like a common balance. It hangs in sheers resting on a nail, and the scale for holding

published twice a-week, under the title of The the goods hangs on the short arm. The counter

Theatre ; the first number of which came out on the 2d of January, 1719-20. During the course of this paper, in which he had assumed the name of Sir John Edgar, he was outrageously attacked by Mr. Dennis, the noted critic, in a very abusive

weight hangs by a ring of tempered steel, made sharp inside that it may bear by an edge on the long arm of the steelyard. The under edge of the centre nail, and the upper edge of that by which the parts hang, are in the straight line

pamphlet, entitled The Character and Conduct formed by the upper edge of the long arm. of Sir John Edgar. To this insult our author Thus the three points of suspension are in one made a proper reply in the Theatre. While he straight line. The needle or index of the steel-was struggling to save himself from ruin, he yard is perpendicular to the line of the arms, turned his pen against the mischievous South and plays between the sheers. The short arm

Sea scheme, which had nearly brought the na-tion to ruin in 1720; and in 1721 he was restored to his office in Drury Lane theatre. Of this it was not long before he made an additional advantage, by bringing his celebrated comedy called The Conscious Lovers upon that stage, where it was acted with prodigious success ; Ihe receipts must have been very considerable, besides the profits accruing by the sale of the copy, and a purse of £500 given to him by the king, to whom he dedicated it. Yet, notwithstanding these ample supplies, in 1722, being reduced to the utmost extremity, he sold his share in the theatre; and soon after commenced a lawsuit with the managers, which in 1726 was

may be made so massive that, together with the scale, it will balance the long arm unloaded. When no goods are in the scale, and the counter weight with its hook are removed, the steelyard acquires a horizontal position, in consequence of its centre of gravity being below the axis of suspension. The rules for its accurate construction are the same as for a common balance.

The weight in the scale will always be indicated by the division at which it is balanced by the counterpoise. This fundamental property of the lever was discovered by the renowned Archimedes, or at least first demonstrated by him ; and his demonstration, besides the defect of being

decided against him. Having now again brought applicable only to commensurable lengths of the his fortune, by the most heedless profusion, into arms, has been thought by metaphysicians of the a desperate condition, he was rendered altoge-first note to proceed on a postulate which seems ther incapable of retrieving the loss, by being equally to need a demonstration. It has accord-seized with a paralytic

disorder, which greatly ingly employed the utmost refinement of the first

impaired his understanding. In these unhappy circumstances, he retired to his seat at Langua-nor near Caermarthen, in Wales, where he died the 21st of September, 1729, and was interred in the church of Caermarthen. Among his papers were found the MSS. of two plays, *viz.* The Gentlemen, founded upon the Eunuch of Terence, and The School of Action, both r.early finished. Sir Richard was a man of undissembled and extensive benevolence, a friend to the friendless, and, as far as his circumstances would permit, the father of every orphan. His works are chaste and manly. He was a stranger to the most distant appearance of envy or malevolence; never jealous of any man's growing reputation ; and so

mathematicians of Europe to furnish a demonstration free from objection. M. D'Alembert has given two, remarkable for their ingenuity and subtlety ; Foncenex has done the same ; and professor Hamilton of Trinity College, Dublin, has given one which is thought the least exceptionable. But critics have even objected to this, as depending on a postulate which should have been demonstrated. In the Philosophical Transactions, 1794, there is a demonstration by Mr. Vince, which we think unexceptionable, and of great simplicity. Let AE (fig. 1. plate STEELYARD, &.c.) be a mathematical lever, or inflexible straight line, resting on the prop A, and supported at E by a force acting upwards. Let

S T E E L-Y A R D.

two equal weights b and d be hung on at B and D, equidistant from A and E. Pressures are now exerted at A and E ; and, because every circumstance of weight and distance is the same, the pressure at E, arising from the action of the weight b on the point B, must be the same with the pressure at A, arising from the action of the weight d on the point D ; and the pressure at E, occasioned by the weight d, must be the same with the pressure at A, occasioned by the weight b. This must be the case wherever the weights are hung, provided that the distance A B and D E are equal. Moreover, the sum of the pressures at

A and E is unquestionably equal to the sum «f the weights, because the weights are supported solely at A and E. Let the two weights be hung on at C the middle point ; the pressure at E is still the same. Therefore, in general, the pressure excited at the point E, by two equal weights hanging at any points B and D, is the same as if they were hung on at the middle point between them; but the pressure excited at E is a just measure of the effort or energy of the weight b and d to urge the lever round the point A. It is, at least, a measure of the opposite force which must be applied at E to sustain or balance this pressure. A very fastidious metaphysician may still say that the demonstration is limited to a point E, whose distance from A is twice AC, or — AB + AD. But it extends to any other point, on the authority of a postulate which cannot be refused, *viz.* that in whatever proportion the pressure at E is augmented or diminished, the pressure at this other point must augment or diminish in the same proportion. This being proved, the general theorem may be demonstrated in all proportions of distance, in the manner of Archimedes, at once the most simple, perspicuous, and elegant of all. All this difficulty (and it is a real one to the philosopher who aims at rendering mechanics a demonstrative science) has arisen from an improper search after simplicity. Had Archimedes taken a lever as it really exists in nature, and considered it as material, consisting of atoms united by cohesion ; and had he traced the intermediate pressures by whose means the two external weights are put in opposition to each other, or rather to the support given to the fulcrum ; all difficulty would have vanished. The quantity of goods which may be weighed by this instrument depends on the weight of the counterpoise, and on the distance C D from the fulcrum at which the goods are suspended. A double counterpoise hanging at the same division will balance or indicate a double quantity of goods hanging at D ; and any counterpoise will balance and indicate a double quantity of goods, if the distance C D be reduced to one -half.

Many steelyards have two or more points of suspension D, to which the scale may be occasionally attached. See BALANCE. It is evident that in this case the valve or indication of the divisions of the long arm will be different, according to the point from which the scale is suspended. The same division which would indicate twenty pounds when C D is three inches, will indicate thirty pounds when it is two inches. As it would expose to chance of mistakes, and

be otherwise troublesome to make as many divided scales on the long arm as there are points of suspension, D, on the short arm ; and each scale having its own numbers ; all trouble and all chance of mistake is avoided. But the range of this instrument is not altogether at the pleasure of the maker. Besides the inability of a slender beam to carry a great load, the divisions of the scale answering to pounds or half pounds become very minute when the distance CD is very short: and the balance becomes less delicate, that is, less sensibly affected by small differences of weight. This is because in such cases the thickness which it is necessary to give the edges of the nails does then bear a sensible proportion to the distance C D between them ; so that when the balance inclines to one side, that arm is sensibly shortened, and therefore the energy of the preponderating weight is lessened. We have hitherto supposed the steelyard to be in equilibrio when not loaded. But this is not necessary, nor is it usual in those which are commonly made. The long arm preponderates considerably. This makes no difference except in the beginning of the scale. The preponderancy of the long arm is equivalent to some goods already in the scale, suppose four pounds. Therefore, when there are really ten pounds in the scale, the counterpoise will balance it when hanging at the division 6. This division is therefore reckoned ten, and the rest of the divisions are numbered accordingly. A scientific examination of the steelyard will convince us that it is inferior to the balance of equal arms in point of sensibility ; but it is extremely compendious and convenient; and, when accurately made and attentively used, it is abundantly exact for most commercial purposes. There is one at Leipsic which has been in use since the year 1718, which is very sensible to a difference of one pound, when loaded with nearly three tons on the short arm ; and we saw a waggon loaded with more than two tons weighed by it in about six minutes. The steelyard in common use in the different countries of Europe is of a construction still simpler than the one above described. It consists of a batten of hard wood, having a heavy lump A (fig. 2) at one end, and a swivel hook B at the other. The goods to be weighed are suspended on t,ie hook, and the whole is carried in a loop of whip-cord C, in which it is slid backward and forward till the goods are balanced by the weight of the other end. The weight of the poods is estimated by the place of the loop on a scale of divisions in harmonic progression. They are marked j>r presume) by trial with known weights. The chief use that is now made of the steelyard in these kingdoms is for the weighing of loaded waggons and carts. For this it. is extremely convenient, and sufficiently exact for the purpose in view.

STEELYARD OF LEIPSIC : this is represented in fig. 3 as run out, and just about to be hooked for lifting up the load. The steelyard itself is O P Q, and is about twelve feet long. The short arm P Q has two points of suspension, c and 6 ; and the stirrup which carries the chains for holding the load is made with a double hook,

instead of a double eye, that it may be easily removed from the one pin to the other. For this purpose the two hooks are connected above by a hasp or staple, which goes over the arm of the steelyard like an arch. This is represented in the little figure above the steelyard. The suspension is shifted when the steelyard is run iu under cover, by hooking to this staple the running block of a small tackle which hangs in the door through which the steelyard is run out and in. This operation is easy, but necessary, because the stirrup, chains, and the stage on which the load is placed, weigh some hundreds. The outer pin b is fourteen inches, and the inner one c is seven inches, distant from the great nail which rests in the sheers. The other arm is about ten feet and a half long, formed with an obtuse edge above. On the inclined plane on each side of the ridge is drawn the scale of weights adapted to the inner pin c. The scales corresponding to the outer pin b are drawn on the upright sides. The counterpoise slides along this arm, hanging from a saddle-piece made of brass, that it may not contract rust. The motion is made easy by means of rollers. This is necessary, because the counterpoise is greatly above a hundred weight. This saddle-piece has like two laps on each side, on which are engraved vernier scales, which divide their respective scales on the arm to quarters of a pound. Above the saddle is an arch, from the summit of which hangs a little plummet, which shows the equilibrium of the steelyard to the weigher, because the sheers are four feet out of the house, and he cannot see their coincidence with the needle of the steelyard. Lastly, near the end of the long arm are two pins, d and e, for suspending occasionally two eke-weights for continuing the scale. These are kept hanging on adjoining hooks, ready to be lifted on by a little tackle, which is also hooked immediately above the pins d and e. The scales of weights are laid down on the arm as follows : — Let the

eke-weights appropriated to the pins d and e be called D and E, and call the counterpoise C. Although the stirrup with its chains and stage weigh some hundreds, yet the length and size of the arm O P gives it a preponderancy of 300 pounds. Here, then, the scale of weights must commence. The counterpoise weighs about 125 pounds. Therefore, 1. When the load hangs by the pin b, fourteen inches from the centre, the distance from one hundred to another on the scale is about eleven inches, and the first scale (on the side of the arm) reaches from 300 to 1200. In order to repeat or continue this, the t ke-weight E is hung on the pin e, and the counterpoise C is brought back to the mark 300 ; and the two together balance 1100 pounds hanging at b. Therefore a second scale is begun on the side of the arm, and continued as far out as the first, and therefore its extremity marks 2000; that is, the counterpoise C at 2000, and the eke-weight E at e balance 2000 hanging at b. 2. To continue the scale beyond 2000, the load must be hung on the inner pin c. The eke-weight E is taken off, and the eke-weight D is hung on its pin d. The general counterpoise being now brought close to the sheers, it, together with the

weight D at d, balances 2000 pounds hanging at c. A scale is therefore begun on one of the inclined planes a-top, and continued out to 4000, which falls very near to the pin d, each hundred pounds occupying about five inches on the arm. To complete the scale hang the eke-weight E on its pin e, and bring back the counterpoise to the sheers, and the three together balace 3800 hanging at c. Therefore, when the counterpoise is now slid out to 4000, it must complete the balance with 5800 hanging at c. It required a little consideration to find out what proportion of the three weights C, D, and E, would make the repetitions of the scale extend as far as possible, having very little of it expressed twice, or upon two scales, as is the case here. We see that the space corresponding to a single pound is a very sensible quantity on both scales, being one-ninth of an inch on the first two scales, and one-twentieth on the last two. This very ponderous machine, with its massy weights, cannot be easily managed with- •ut some assistance from mechanics. It is extremely proper to have it susceptible of motion out and in, that it may be protected from the weather, which would soon destroy it by rust. The contrivance here is very effectual, and abundantly simple. When the steelyard is not in use, it is» supported at one end by the iron rod F, into which the upper end of the sheers is hooked. The upper end of this rod has a strong hook E, and a little below at a it is pierced with a hole, in which is a very strong bolt or pin of tempered steel, having a roller on each end close to the rod on each side. These rollers rest on two joists, one of which is represented

by M N, which traverse the building, with just room enough between them to allow the rod F to hang freely down. The other end O of the steelyard rests in the bight of a large flat hook at the end of a chain W, which hangs down between the joists, and is supported on them by a frame with rollers H. This is connected with the rollers at G, which carry the sheers by means of two iron rods, of which one only can be seen. These connect the two sets of rollers in such a manner that they must always move together, and keep their distance invariable. This motion is produced by means of an endless rope H I Z L K V H passing over the pulleys I and K, which turn between the joists, and hanging down in a bight between them. It is evident that by pulling on the part L Z we pull the frame of rollers in the direction G H, and thus bring the whole into the house in the position marked by the dotted figure. It is also plain that by pulling on the part L K we force the roller frame and the whole apparatus out again. It remains to show how the load is raised from the ground and weighed. When the steelyard is run out for use, the upper hook E just enters into the ring D, which hangs from the end of the great oaken lever B C A about twenty-two feet long, turning on gudgeons at C about five feet from this end. From the other end A descends a long iron rod S R, which has one side formed into a toothed rack that is acted on by a frame of wheel work turned by an endless screw and winch Q. Therefore, whetj the hook E is well engaged in the ring D, a man

turns the winch, and thus brings down the end A of the great lever, and raises the load two or three inches from the ground. Every thing is now at liberty, and the weigher now manages his weights on the arm of the steelyard till he has made an equilibrium. The operation of letting down the load, disengaging the steelyard from the great lever, and bringing it under cover, is performed by two men, and may be done in succession by one, and is over in five or six minutes.

The most compendious and economical machine of this kind is one, first used (we have heard) for weighing the riders of race horses, and afterwards applied to the more reputable service of weighing loaded carriages. Fig. 4 is a plan of the machine ; K L M N is the plan of a rectangular box, which has a platform lid or cover, of size sufficient for placing the wheels of a cart or waggon. The box is about a foot deep, and is sunk into the ground till the platform cover is even with

the surface. In the middle of the box is an iron lever supported on the fulcrum pin > k, formed like the nail of balance, which rests with its edge on arches of hardened steel, firmly fastened to the bottom of the box. This lever goes through one side of the box, and is furnished at its extremity with a hard steel pin I m, also formed to an edge below. In the very middle of the box it is crossed by a third nail of hardened steel g h, also formed to an edge, but on the upper side. These three edges are in one horizontal plane, as in a well made balance. In the four corners A, A', E', E, of the box are firmly fixed four blocks of tempered steel, having their upper surfaces formed into spherical cavities, well polished and hard tempered. ABCDE represents the upper edge of an iron bar of considerable strength, which rests on the cavities of the steel blocks in A and E, by means of two hard steel studs projecting from its under edge, and formed into obtuse angled points or cones. These points are in a straight line parallel to the side K N of the box. The middle part C of this crooked bar is faced with hard tempered steel below, and is there fomed into an edge parallel to A E and K N, by which it rests on the upper edge of the steel pin g h which is in the lever. In a line parallel to A E, and on the upper side of the crooked bar ACE, are fixed two studs or points of hardened steel B and D, projecting upwards above half an inch. The platform cover has four short feet like a stool, terminated by hard steel studs, which are shaped into spherical cavities and well polished. With these it rests on the four steel points B, B', U', D. The bar A C E is kneed in such a manner vertically, that the points A, B, D, E, and the edge C, are all in a horizontal plane.

These particulars will be better understood by looking at the elevation in fig. 5. What has been said of the bar ACE, must be understood as also said of the bar A'C'E. Draw through the centre of the box the line a b c perpendicular to the line AE, BD. It is evident that the bar ACE is equivalent to a lever a 6 c, having the fulcrum or axis AE resting with its extremity C on the pin h e, and loaded at 6. It is also evi-

dent that a C is to a b as the load on this lever to the pressure which it exerts on the pin g h, and that the same proportion subsists between the whole load on the platform and the pressure which it exerts on the pin g h. It will also ap-pear, on an attentive consideration, that this proportion is no-wise deranged in whatever manner the load is placed

on the platform. If very un-equably, the two ends of the pin g h may be un-equably pressed, and the lever wrenched and strained a little ; but the total pressure is not changed. If there be now placed a balance or steelyard at the side L K, in such a manner that one end of it may be directly above the pin / m in the end of the lever EOF, they may be connected by a wire or slender rod, and a weight on the other arm of the balance or steelyard may be put in equilibrio with any load that can be laid on the platform. A small counterpoise being first hung on, to balance the apparatus when unloaded, any additional weight will measure the load really laid on the platform. If a b be to a c as one to eight, and E O to E F also as one to eight, and if a common balance be used above, sixty-four pounds on the platform will be balanced by one pound in the scale, and every pound will be balanced by a quarter of an ounce. This would be a very convenient partition for most purposes, as it would enable us to use a common balance and common weights to complete the machine ; or it may be made with a balance of unequal arms, or with a steelyard. Some have thought to improve this instrument by using edges like those of the nails of a balance, instead of points. But, unless made with uncommon accuracy, they will render the balance very dull. The small deviation of the two edges A and E, or of B and D, from perfect parallelism to K N, is equivalent to a broad surface eˆual to the whole deviation. Without extraordinary care, the machine may be made to weigh within jˆjth part of the truth, which is exact enough for any purpose in commerce. It is necessary that the points be attached to the bars. Some have put the points at A and E in the blocks of steel fastened to the bottom, because the cavity there lodged water or dirt, which soon destroyed the instrument with rust. But this occasions a change of proportion in the first lever by any shifting of the crooked bars ; and this will frequently happen when the wheels of a loaded cart are pushed on the platform. The cavity in the steel stud should have a little rim round it, and it should be kept full of oil. In a nice machine a quarter of an inch of quicksilver would effectually prevent all these inconveniences. The simplest and most economical form of tin's machine is to have no balance or second steelyard ; but to make the first steelyard EOF a lever of the first kind, *viz.* having the fulcrum between O and F, and allow it to project far be-yond the box. The long or outward arm of this lever is then divided into a scale of weights, commencing at the side of the box. A counterpoise must be chosen, such as will, when at the beginning of the scale, balance the smallest load that will probably be examined. It will be convenient to carry on this scale by means of eke-weights hung on at the extremity of the levrr.

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aivl to use but one moveable weight. By this method the divisions of the scale will have al-ways one value. The best arrangement is as follows : Place the mark O at the beginning of the scale, and let it extend only to 100, if for pounds ; or to 112, if for cwts. ; or to ten, if for stones ; and let the eke-weights be numbered one, two, three, &c. Let the lowest weight be marked on the beam. This is always to be added to the weight shown by the operation. Let the eke-weights stand at the end of the beam, and let the general counterpoise always hang at O. When the cart is put on the platform, the end of the beam tilts up. Hang on the heaviest eke-weight that is not sufficient to press it down. Now, complete the balance by sliding out the counterpoise. Suppose the constant load to be 312 Ibs., and that the counterpoise stands at eighty-six, and that the eke-weight is nine ; we have the load zi 986 + 312 — 1298 Ibs.

STEEN (John), an eminent Dutch painter, born at Ley den in 1636. He was the disciple of Brower and Van Goyen. He painted conversations and droll subjects with admirable humour; and died in 1689.

STEEP, adj. &n. s.} Sax. fteap. Rising

STEEP'NESS, n. s. >or descending with a

STEEP'V, adj. J great inclination ; precipitous : a precipice : steepness is precipitous declivity: steepy, having much declivity.

The mountains shall be thrown down, and the steep places shall fall. Exekiel.

The craggedness or steepness of that mountain maketh many parts of it inaccessible.

Brerewood on Language.

Lord Lovel swam over Trent on horseback, but could not recover the farther side, by reason of the steepness of the bank, and so was drowned.

Bacon's Henry VII.

Who hath disposed, but thou the winding way, Where springs down

from the sleepy crags do beat 1

Wotton.

As that Thebean monster that proposed Her riddle, and him, who solved it not, devoured ; That once found out and solved, for grief and spight Cast herself headlong from the Ismenian sleep. Milton.

A prophet some, and some a poet cry, From steepy Othrys' top to Pylus drove His herd ! and for his pains enjoyed his love.

Druden.

No more, my goats, shall I behold you climb The steepy cliffs, or crop the flowery thyme. Id.

As high turrets for their airy steep llequire foundations in proportion deep : And lofty cedars as far upward shoot As to the nether heavens they drive the root ; So low did her secure foundation lie, She was not humble, but humility. Id.

He now had conquered Anxur's steep ascent.

Addisim.

We had on each side naked rocks and mountains, broken into a thousand irregular steeps and precipices. Id.

Vineyards, meadows, and cornfields lie on the borders, and run up all the sides of the Alps, where the barrenness of the rocks, or the steepness of the ascent, will suffer them. Id.

Leaning o'er the rails, he musing stood, And viewed below the black canal of mud, Wrhere common shores a lulling murmur keep, Whose torrents rush from Holborn's fatal steep.

Gay.

STEEP, v. a.. Belg. steppen. To soak; macerate ; imbue ; dip.

When his brother saw the red blood trail Adown so fast, and all his armour steep, For very fellness loud he 'gan to weep. Spenter.

He, like an adder lurking in the weeds, His wandering thought in deep desire does steep ; And his frail eye with spoil of beauty feeds. Id.

A napkin steeped in the harmless blood Of sweet young Rutland. Shakspeare. Henry VI.

The conquering wine hath steeped our sense In soft and delicate Lethe. Shakspeare.

Most of the steepingt are cheap things, and the goodness of the crop is a great matter of gain.

Bacon.

Whole droves of minds are by the driving god Compelled to drink the deep Lethean flood ; In large forgetful draughts to steep the cares Of their past labours and their irksome years.

Dryden.

Wheat steeped in brine twelve hours prevents the smuttiness. Mortimer's Husbandry.

STEEPHOLMES, a rocky islet of England, in the Bristol Channel, under Quantock hills, which divides the counties of Somerset, Gloucester, and Bristol. It is a rock, about a mile and a half in circumference, in many parts overhanging the water, and inaccessible except by two very steep passages. A few rabbits find subsistence upon it ; and it is the resort of vast numbers of sea-fowl.

STEEPLE, n. s. Sax. j-teopel, rtvPel> °f Sax. r*eap. A turret of a church ; a spire.

Blow, winds, and crack your cheeks ; rage blow * You cataracts and hurricanoes, spout ! Til) you have drenched our steeples, drowned the cocks. Shakspeare.

What was found in many places, and preached for wheat fallen on the ground from the clouds, was but the seed of ivy berries ; and though found in steeples or high places, might be conveyed thither or muted by birds. Browne's Vulgar Errottrs.

They, far from steeplel and their sacred sound, In fields their sullen conventicles found. Dryden.

A raven I saw steeple-high, just over your house.

L' Estrange.

STEER, n. s. Sax. r^yf1*? Bclg. stier. A young bullock.

They think themselves half exempted from law and obedience ; and, having once tasted freedom, do, like a steer that hath been long out of his yoke, grudge and repine ever after to come under rule again.

Spenser's Ireland. Lacaon, Neptune's priest, With solemn pomp then sacrificed a steer. Dryden.

Nor has the steer,

At whose strong chest the deadly tiger hangs, E'er plowed for him. Thomson.

STEER, v. a. & v. n.~\ Sax. j-reopan/rtyrian ;

STEER'AGE, n. s. f Belg. stieren. To direct ;

STEERS'MATE, i guide in a passage; ori—

STEERS'MAN. J ginally used of a ship,

but applied to other things : the noun substantives corresponding.

A comely palmer, clad in black attire, Of ripest years, and hairs all hoary gray, That with a staff his feebie steps did steer, Lest his long way his aged limbs should tire.

Speiiser.

He that hath the steerage of my course, Direct my suit. Shakspeare. Romeo and Juliet.

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If a pilot cannot see the pole star, it can be no fault in him to steer his course by such stars as do best appear to him. King Charles.

As when a ship, by skilful steersman wrought, Nigh river's mouth, or foreland, where the wind Veers oft, as oft so steers, and shifts her sail.

Milton.

What pilot so expert but needs must wreck, Embarked with such a steersmate at the helm 1 Id.

His costly frame

Inscribed to Phosbus, here he hung on high, The steerage of his wings and cut the sky. Dryden.

Through it the joyful steersman clears his way, And comes to anchor in his inmost bay. Id.

In a storm, though the vessel be pressed never so hard, a skilful steersman will yet bear up against it.

L' Estrange.

In a creature, whose thoughts are more than the sands and wider than the ocean, fancy and passion must needs run him into strange courses, if reason, which is his only star and compass, be not that he steer* by. Locke.

Having got his vessel launched and set afloat, he committed the steerage of it to such as he thought capable of conducting it. Spectator.

You raise the honour of the peerage, Proud to attend you at the steerage. Swift.

STEERAGE, on board a ship is that part of the ship next below the quarter-deck, before the bulk head of the great cabin where the steersman stands in most ships of war. See STEERING.

STEERING, in navigation, the art of directing the ship's way by the movements of the helm ; or of applying its efforts to regulate her course when she advances. The perfection of steering consists in a vigilant attention to the motion of the ship's head, so as to check every deviation from the line of her course in the first instant of its motion, and in applying as little of the power of the helm as possible. By this she will run more uniformly in a straight path, as declining less to the right and left ; whereas, if a greater effort of the helm is employed, it will produce a greater declination from the course, and not only increase the difficulty of steering, but also make a crooked and irregular tract through the water. See HELM. The helmsman should diligently watch the movements of the head by the land, clouds, moon, or stars ; because, although the course is in general regulated by the compass, yet the vibrations of the needle are net so quickly perceived as the sallies of the ship's head to the right or left; which, if not immediately restrained, will acquire additional velocity

in every instant of their motion, and demand a more powerful impulse of the helm to reduce them ; the application of which will operate to turn her head as far on the contrary side of her course. The phrases used in steering a ship vary according to the relation of the •wind to her course. Thus, if the wind is fair or large, the phrases used by the pilot or officer who superintends the steerage are, port, starboard, and steady. The first is intended to di-rect the ship's course farther to the right; the second is to guide her farther to the left; and the last is designed to keep her exactly in the line whereon she advances according to the course prescribed. The excess of the first and second movement is called hard a-port, and hard-a-starboard ; the former of which gives her the greatest

possible inclination to the right, and the latter an equal tendency to the left. If, on the other hand, the wind is foul or scant, the phrases are luff, thus, and no nearer : the first of which is the order to keep her close to the wind; the second, to retain her in her present situation; and the third, to keep her sails full. In a ship of war, the exercise of steering the ship is usually diviaed among a number of the most expert sailors, who attend the helm in their turns; and are accordingly called timoneers, from the French timonier, which signifies helmsman. The steerage is constantly supervised by the quarter-masters, who also attend the helm by rotation. In merchant ships every seaman takes his turn in this service, being directed therein by the mate of the watch, or some other officer.— As the safety of a ship, and all contained therein, depends in a great measure on the steerage or effects of the helm, the apparatus by which it is managed should often be diligently examined by the proper officers. Indeed, a negligence in this important duty appears almost unpardonable, when the fatal effects which may result from it are duly considered.

STEEVENS (George), one of the most successful of the editors and commentators of Shakspeare, was born in 1735. His parents were in affluent circumstances. George received the rudiments of his education at Kingston-upon- Thames, xmder the tuition of Dr. Woodeson and his assistants ; and had for a companion at that school Gibbon the historian. From Kingston he went to Eton, whence, after some years, he was admitted a fellow-commoner of King's College, Cambridge. After he left the university, he accepted a commission in the Essex militia on its first establishment ; and he spent the latter years of his life at Hampstead in almost total seclusion from the world ; seldom mixing with society but in the shops of booksellers, in the

Shakspeare Gallery, or in the morning conversations of Sir Joseph Banks. He died January 1800. Mr. Steevens was a classical scholar of the first order. He was equally acquainted with the belles lettres of Europe. He had studied history, ancient and modern, but particularly that of his own country. He possessed a strong original genius, and an abundant wit; his imagination wa» of every color, and his sentiments were enlivened with the most brilliant expressions. Mr. Steevens also had a very handsome fortune; and his generosity was equal to it.

STEFANESCHI (John Baptist), an historical painter, born at Florence in 1582. He was much esteemed and patronised by Ferdinand II. duke of Tuscany, for whom he painted several sacred subjects in miniature. He died in 1659.

STEFANO (J.), an eminent Italian painter, born at Florence in 1301, and hence called Flo-rentino. He was the disciple of Giotto, and became superior to all his contemporaries except his master. One of his best pictures is of Christ delivering the demoniac. He died in 1650, aged forty-nine.

STELLA (Lat. i. e. a star), a name given by dean Swift to Mrs. Johnson, an amiable lady, whom he lone loved, and at last married ; but, as he never publicly acknowledged her to be his

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wife, nor cohabited with her as such, the disappointment broke her heart. The most plausible reason ever assigned for his strange conduct in this affair, is that he had discovered that she was his sister. But this is no longer believed. See SWIFT.

STELLA (James), a celebrated French painter, born at Lyons in 1596. He studied painting early, and at twenty went to Rome. In passing through Florence, Cosmo de Medicis, the great duke, employed him, gare him lodgings, and a pension. He afterwards went to Paris, where he was patronised by Lcuis XIII., who gave him a good pension, lodgings in the Louvre, and honored him vf ith the order of St. Michael. He died in 1647.

STELLA (Francis), brother and disciple of James, was born at Lyons in 1601, and travelled with his brother into Italy ; but, though a good painter, he never equalled James. He died in

1661.

STEL'LAR, adj. } Lat. stelk. Relating to

STEL'LATE, > the stars : pointed in the

STEL'LED. j manner of a star.

And quenched the stelled fires.

Shakspeare. King Lear. In part shed down

Their stellar virtue, on all things that grow On earth ; made hereby apter to receive Perfection from the sun's more potent ray. Milton.

Salt dissolved, upon fixation, returns to its affected cubes, and regular figures of minerals ; as the hexagonal of chrystal, and stellar figure of the stone asteria. Glanville.

One making a regulus of antimony, without iron, found his regulus adorned with a more conspicuous star than I have seen in several stellate reguluses of antimony and mars. Boyle.

STELLARIA, stitchwort, or great duckweed, in botany, a genus of plants belonging to the class decandria, and order trigynia ; natural order twenty-second, caryophylleae : CAL.pentaphyllous and spreading. There are five petals, each divided into two segments : CAPS, oval, unilocular, and polyspermous. There are nine species, *viz.* 1. S. arenaria; 2. Biflora; 3. Cerastoides ; 4. Dichotoma; 5. Graminea; 6. Holostea ; 7. Nemorum ; 8. Radians ; and, 9. Undulata. Of these three are natives of Britain : *viz.* 1. S. gra-minea, less stitchwort. The stem is nearly a foot high. The leaves are linear and entire; and the flowers grow in loose panicles. It is frequent in dry pastures. There is a variety of this species called bog stitchwort, with smooth, oval, sessile leaves, and few leaves, which grows often in wet marshy places. The stalk is quadrangular; the petals scarcely longer than the calyx, and bi-nd to the base.

2. S. holostea, greater stitchwort. The stalks are about two feet long ; the petals are nearly twice the length of the calyx, and divided halfway to the base. It is common in woods and hedges.

3. S. nemorum, broad-leaved stitchwort. The stalks are about twelve or eighteen inches high, and branched in a panicle at the top. The leaves are heart-shaped, and of a paler green on the under than on the upper side; the lower ones being supported by footstalks which are hairy and channelled; the upper ones are sessile. The

calyx is erect, somewhat hairy, and white on the margins. The petals are bifid almost to the base. There is a small nectarium between the lower stamina and the calyx.

STELLATE, among botanists, expresses leaves which grow not less than six at a joint, and are arranged like the rays of a star.

STELLENBOSCH AND.DRAKENSTEIN, an extensive district of the settlement of the Cape of Good Hope. They include from Cape Agulhas, the southernmost .point of Africa, to the river Koussie, the northern boundary of the colony. The district is 380 miles long, about 150 broad, and may contain an area of 55,000 square railes. The greater part consists of mountains, sandy hills, and Karroo plains, but the remainder is the finest land in the colony. About 39,146 English acres are under cultivation. See CAPE OF GOOD HOPE.

STELLENBOSCH, a town delightfully situated twenty-six miles to the east of Cape Town, Cape of Good Hope, at the foot of a range of lofty

mountains, near the Cape.

STELLERA, German groundsel, in botany a genus of the monogynia order, and octandria class of plants ; natural order thirty -first, vepreculas : CAL. none : COR. quadrifid ; the stamina are very short. There is only one seed, which is black. The species are only two :— 1. S. chamffijasme, and 2. S. passerina.

STEL'LIONATE, n. s. Fr. stdlwnat ; Lat. stellionatus. A kind of crime which is committed (in law) by a deceitful selling ef a thing otherwise than it really is : as, if a man should sell that for his own estate which is actually another man's.

It discerneth of crimes of stellionate, and the inchoations towards crimes capital, not actually committed. . Bacon.

STEM, n. s. Latin stemma. Stalk ; twig : hence family ; race ; pedigree ; progeny : alsc the fore part of a ship.

Two lovely berries molded on one stem, So with two seeming bodies, but one heart.

Shakspeare. This is a stem

Of that victorious stock, and let us fear His native mightiness. Id. Henry V.

After they are first shot up thirty foot in length, they spread a very large top, having no bough nor twig in the trunk or stem. Raleigh's History.

Set them aslope a reasonable depth, and then they will put forth many roots, and so carry more shoots upon a stem. Bacon.

Whosoever will undertake the imperial diadem, must have of his own wherewith to support it ; which is one of the reasons that it hath continued these two ages and more in that stem, now so much spoken of.

Howel's Vocal Forett. This, ere it was in th' earth, God made, and ev'ry herb before it grew On the green stem. Milton*

I will assay her worth to celebrate ; And so attend ye toward her glittering state, Where ye may all, that are of noble stem, Approach. Id.

The stem thus threatened and the sap in thee, Drops all the branches of that noble tree. Waller.

Farewell you flowers, whose buds with early care 1 watched, and to the cheerful sun did rear .

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Who now shall bind your stems? or, when you fall, With fountain streams your fainting souls recall ?

Id.

The lowering spring with lavish rain Beats down the slender stem and bearded grain. Id.

Orante's barque, ev'n in the hero's view, From stem to stern by waves was overborn. Id.

Dost thou in hounds aspire to deathless fame ? Learn well their lineage and their ancient stem.

Tickell.

STEM, v. a. Isl. slamma. To oppose a current ; pass cross or forward notwithstanding the stream.

Above the deep they laisc their scaly crests, And stem the flood with their erected breasts.

Denham.

They on the trading flood, Through the wide Ethiopian to the cape, Ply, stemming nightly toward the pole. Milton.

In shipping such as this, the Irish kern And untaught Indian on the stream did glide,

Ere sharp-keeled boats to stem the flood did learn, Or fin-like oars did spread from either side.

Drijden.

At length Erasmus, that great injured name, Stemmed the wild torrent of a barb'rous age, And drove those holy Vandals off the stage. Pope.

STEM, in botany, is that part of a plant arising out of the root, and which sustains the leaves, flowers, fruits, &c. By washing and rubbing the stems of trees their annual increase is promoted ; for the method of doing which see TREE.

STEM OF A SHIP, a circular piece of timber into which the two sides of a ship are united at the fore-end ; the lower end of it is scarfed to the keel, and the bowsprit rests upon its upper end. The stem is formed of one or two pieces, according to the size of the vessel ; and, as it terminates the ship forward, the ends of the wales and plank of the sides and bottom are let into a groove or channel, in the midst of its surface, from the top to the bottom; which operation is called rabbeting. The outside of the stem is usually marked with a scale or division of feet, according to its perpendicular heigh" from the keel. The intention of this is to ascertain the draught of water at the fore part when the ship is in preparation for a sea-voyage, &c. The stem at its lower end is of equal breadth and thickness with the keel, but it grows proportionally broader and thicker towards its upper extremity. See SHIP BUILDING.

STEMMATA, in entomology, are three smooth hemispheric dots placed generally on the top of the head, as in most of the hymenoptera and other classes. The name was first introduced by Linnaeus.

STEMODIA, in botany, a genus of the angi-ospermia order, and didynamia class of plants ; natural order fortieth, personatae : CAL. quinquepartite : COR. bilabiated ; there are four stamina ; each of the filaments are bifid, and have two antherse : CAPS, bilocular. There is only one species, S. maritima.

STEMPHYLA, a word used by the ancients to express the husks of grapes, or the remains of the pressings of wine. The same word is also used by some to express the remaining mass of the olives after the oil is pressed out.

STEMPHYLITES, a name given by the

ancients to a sort of wine pressed hard from the husks.

STEMPLES, in mining, cross bars of wood in the shafts which are sunk to mines. In many places the method is to sink a perpendicular hole or shaft, the sides of which they strengthen from top to bottom with wood-work, to prevent. the earth from falling in : the transverse pieces of wood used for this purpose are called stemples, and by means of these the miners in some places descend without using any rope, catching hold of these with their hands and feet.

STEMSON, in a ship, an arching piece of timber fixed within the apron, to reinforce the scarf thereof, in the same manner as the scarf supports the scarf of the stern. In large ships it is usually formed of two pieces.

STENCH, n. s. & v.a. Sax. j-tencan, a stink. A stink or bad smell : to make to stink. Not proper. Used corruptly, for to staunch ; stop.

So bee's with smoke, and doves with noisome

stench, Are from their hives and houses driven away.

Shakfpeare.

Physicians, by the stench of feathers, cure the ris-ing of the mother. Bacon's Natural Hutoni.

Black bulls and bearded goats on altars lie, And clouds of savory stench involve the sky. Dryden.

The ministry will be found the salt of the earth, the thing that keeps societies of men from stench and corruption. South.

The foulness of the ponds only stencheth the water.

Mortimer. The hoary Nar

Corrupted with the stench of sulphur flows, And into Tiber's streams th' infected current throws.

Addism.

They had better skirl to let blood than stench it. King Charles.

Restringents to stench and incrussatives to thicken the blood. Harvey on Contumptiont.

STENDAL, or STENBEL, a town of the Prussian states, the former capital of the Old Mark of Brandenburg, but now included in the government of Magdeburg. It is situated in a plain on the Ucht, and is of considerable size. Here is a colony of French Calvinists, who carry on woollen and other manufactures, established by their ancestors. The town is old, and suffered greatly from fire in 1575, 1680, and 1687. Winckelmanr was a native of this place. Inhabitants 5000. Thirty-one miles N. N. W. of Brandenburg, and sixty-two west of Berlin.

STENNET (Samuel), D.D.,a Baptist clergyman, pastor of a congregation in Little \V ild Street, London, was born in 1727, and died Au-gust 22d, 1795, at his residence at Muswell-hill near Highgate. He was a man much respected among the Protestant dissenters, both for the excellence of his character and for his learning and ability. Besides some single sermons, he was the author of Discourses on Personal Religion, 2 vols. 12mo. ; Discourses on Domestic Duties, 8vo. ; Sermons on the Divine Authority and various Use of the Holy Scriptures, 1790, 8vo. He also carried on a controversy on the subject of baptism with Dr. Stephen Addington.

STENO (Nicolas), a celebrated Danish ana tomist, born in 1638. He studied under Bar tholin, with whom he was a favorite. He then

travelled through France, Germany, Holland, and Italy ; and obtained a pension from Ferdinand II., grand duke of Tuscany. In 1669 he renounced the Protestant religion, became a popish priest, and was appointed by the pope his apostolical vicar for the north. He published several tracts on anatomy and medical subjects.

He died in 1603.

STENO STURY, a celebrated Swedish patriot See SWEDEN.

STENOGRAPHIC, or STENOGRAPHICAI., (from stenography). Of or belonging to stenography, or writing in short-hand.

STENOGRAPHIST, a short-hand writer.

STENOGRAPHY.

STENOG'RAPHY, n.s. Gr. < r£rocand ypaˆw. Short-hand. See below.

O the accurst itenography of state ! The princely eagle shrunk into a bat. Cteaveland. SECT. I. — BRIEF HISTORY AKD GENERAL SKETCH

OF THE ART.

STENOGRAPHY. The art of stenography, or short-hand writing, was known and practised oy several ancient nations. The Egyptians, who were distinguished for learning at an early period, at first expressed their words by a delineation of figures called hieroglyphics: a more concise mode of writing seems to have been afterwards introduced, in which only a part of the symbol or picture was drawn. This answered, in some degree, the purpose of a short-hand. After them the Hebrews, Greeks, and Romans, adopted different methods of abbreviating their words and sentences, suited to their respective languages. The initials, the finals, or radicals, often served for whole words ; and various combinations of these sometimes formed a sentence. Arbitrary marks were likewise employed to determine the meaning, and to assist legibility ; and it seems probable that every writer, and every author of antiquity, had some peculiar method of abbreviation, calculated to facilitate the expression of his own sentiments, intelligible only to himself. It is also probable that some might by these means take down the heads of a discourse or oration : but few, very few, it is presumed, could have followed a speaker through all the meanders of rhetoric, and noted with precision every syllable, as it dropt from his mouth. To arrive at such a degree of excellence in this art was reserved for modern times, and is still an acquisition by no means general.

Some writers have ascribed to the Roman poet Ennius the merit of having first invented a method of writing, by which the notarii were

enabled to follow the most rapid of their orators. This, however, is extremely hypothetical. It is added, that Ennius's method was much improved upon by Tyro, Cicero's freedman ; and still more by the learned Seneca. Ennius, it appears, began at first to write with 1100 marks of his own contrivance, to which he might add, as circumstances and necessity demanded. In what the subsequent improvements consisted we have no account ; probably only in the invention of new symbols or characters, and not in any attempt to write in a short manner, by the combination of new and more simple letters. The Romans certainly held this art in great estimation ; for Suetonius, speaking of Caligula, expresses his surprise, that an emperor, who, notwithstanding his numerous vices, was not

deficient in capacity and parts, should remain ignorant of the art of stenographic writing. Titus Vespasian, in almost every respect a very different character from Caligula, is mentioned as being remarkably attached to short hand, and himself practised it with great facility, and often made it both his business and his amusement. He seemed to have great pleasure in calling his amanuenses together, and witnessing which of them wrote the fastest.

The art after this was much neglected, as is evident from two books of short-hand, mentioned by Trithemius. The first was a Short-Hand Dictionary, which he bought of an abbot, a doctor of law, for a few pence, to the great satisfaction of the community to which he belonged, who had desired the short-hand marks to be erased, for the sake of the parchment on which they were written. The other was a short-hand copy of the Book of Psalms, which he met with in another monastery, where the monks has inscribed upon it, by way of title, A Psalter in the Armenian Language. Several copies, however, of a Dictionary and Psalter, in Roman short-hand, are mentioned as extant in different libraries ; but they are in general the same me-thod, as may be conjectured from those who mention them, and also from the Appearance of an old short-hand Psalter in the library of St. Germains, at Paris, carefully preserved as a stenographical curiosity. The late Mr. Byrom had a few pages of this transcribed for his inspection. Plutarch, in his Life of Cato, informs us, that the celebrated speech of that patriot, relating to the Catilinian conspiracy, was taken and preserved in short-hand; and there are numerous epigrams of Ausonius, Martial, and Manillas, commendatory of the art. But we must pass other ancient allusions and conjectures, only observing, that, probably, the oldest method of short-writing at present extant or known is a Latin MS., entitled Ars Scribendi Characteris, or The Art of Writing in

Characters. The author of this is unknown ; but it was printed about the year 1412.

In every language of Europe, till about the close of the sixteenth century, the Roman plan of abbreviating (viz. substituting the initials or radicals, with the help of arbitraries, for words) appears to have been employed. Till then no regular alphabet had been invented expressly for stenography, when an English gentleman of the name of Willis invented and published one. His plan was soon altered and improved, or at least pretended to be so. One alteration succeeded another ; and at intervals, for a great number of years, men of ingenuity and application have

composed and published systems of stenography, and doubtless have themselves reaped all the advantages that attend it. But among the various methods that have been proposed, and the different plans that have been adopted by individuals, none has yet appeared fortunate enough to gain universal approbation ; or proved sufficiently simple, clear, and concise, to be generally studied and practised. This would seem, indeed, to be an art so largely depending on practical and manipular skill, that no theory, however simple or scientific, can without extensive practice be of much importance to the student : while a comparatively imperfect system, in which the writer is well and habitually exercised, will be found of importance to many professions and stations in life.

English writers on stenography, are Addy, Aldridge, Angell, Annet, Blandemore, Blosset, Botley, Bridges, Byrom, Coles, Cross, Dix, Everardt, Ewen, Facey, Farthing, Gibbs, Graeme, Gurney, Heath, Holdsworth, Hopkins, Jeake, Labourer, Lane, Lyle, Macauley, Mason, Mavor, Metcalfe, Nicholas, Palmer, Rich, Rid path, Sheldon, Steele, Tanner, Taylor, Thicknesse, Tiffen, Webster, Weston, Williamson, Willis, B. D., and Willis, &c. Of all these Dr. Mavor has been thought to give the most complete work in his Universal Stenography, now used as a class book in many schools : others, however, prefer Rich's system as improved by Dr. Doddridge. Mr. Gurney's, perhaps, has been most extensively and respectably practised in this country.

Some systems are replete with unmeaning symbols, perplexing

arbitraries, and ill judged contractions ; which render them so difficult to be attained by a common capacity, or ordinary application, that it is not to be wondered at if they have sunk into neglect, and are now no longer known. Other schemes, by being too prolix, by containing a multiplicity of characters, and those characters not simple or easily remembered, be-come ineffectual to the purpose of expedition, and are only superior in obscurity to a common hand. Some, again, not only reject all arbitrary characters and contractions, but even prepositions and terminations; which last, if not too lavishly employed and badly devised, highly contribute to promote both expedition and legibility; and, though they reduce the characters to fewer than can possibly express the various modifications of sound, yet they make nearly one-half of them complex. In the disposition of the vowels, there is the greatest perplexity in most systems. A dot is sometimes substituted for all the vowels indiscriminately, and the judgment is left to determine which letter out of six any dot is intended to express ; or a minute space is allotted them ; so that, unless they be arranged with mathematical precision, they cannot be distinguished from one another ; but such a minute attention is inconsistent with the nature of short hand, which should teach us to write down in a short time, as well as in small bounds, what we wish to preserve of what we hear. Nor is the plan of lifting the pen and putting the next consonant in the vowel's place, in the middle of words, less liable to objections ; or that of representing a.l the vowels by distinct characters,

being obviously ill calculated for facility and despatch, and consequently inadmissible into any useful system. The person who first proposed the omission of vowels in the middle of words, which it is obvious are not wanted, and invented letters, which could be connected as in a runnin^ hand without lifting the pen in the middle of the word, made a real improvement on the works of his predecessors. But most systems labor under the capital defect of being too complicated, and so defeat the end of their invention ; for they can neither be learned with ease, nor remembered with accuracy, nor be practised with the expedition which is requisite.

The method first subjoined will be found superior to most yet published, in the disposition of the vowels and the facility of arranging them, the confusion in placing which seems to detract from

the merit of the best performances : and it may be affirmed, without ostentation, that characters, simpler in their form, and more perfect in their union, have not been applied to the art of stenography. As well as it could be determined, the simplest characters are appropriated to the letters most usually employed: indeed, as far as possible, those which are complex have been rejected ; but as it was an object always kept in view that the writing should be on a line, a few were admitted into the alphabet for that reason.

In forming the characters for the double and triple consonants, care has been taken to provide against all obscurity which might arise by adopting letters too similar in their formation ; and, with respect to the prepositions and terminations, those which occur most frequently are expressed by the simplest characters. The arbitraries are few in number, and the abbreviations, as they are entirely from the letters of the alphabet, and chosen from some thousands of words in com-mon use, will well repay the learner for an hour's trouble in committing them to memory.

In the last section is laid down a scheme of abbreviation, comprised in a few rules, perfectly easy to be understood and practised by proficients in this art. The learner is, however, advised by no means to adopt any of them, till experience has convinced him that they may be used without error or injury to legibility. All abbreviating rules are suited to those only who have made some progress in the stenographic art; for although they certainly promote expedition, and afford the greatest ease to a proficient, yat a learner, as expedition is not his first, though his ultimate view, should admit of nothing that in the least renders the reading difficult.

SECT. II. — OF THE PRINCIPLESOF STENOGRAPHY.

The English alphabet consists of twenty-six letters ; six of which are vowels, as every schoolboy knows. This alphabet, as is observed by the best grammarians who have written on the language, is both defective and redundant in expressing the various modifications of sound. But all modern alphabets are equally, and some more anomalous in these respects. But as it is not our intention to propose a mode of spelling different from that in common use, when applied to printing or long-hand writing, we shall only

observe that in stenography, where the most expeditious and concise method is the best, if consistent with perspicuity, the following simple rules are studiously to be practised.

RULE I. — All quiescent consonants in words are to be dropped, and the orthography to be directed only by the pronunciation ; which, being known to all, will render this art attainable by those who cannot spell with precision in long-hand .

RULE II. — When the absence of consonants, not entirely dormant, can be easily known, they may often be omitted without the least obscurity.

RULE III. — TwOj or sometimes more, consonants may, to promote greater expedition, be exchanged for a single one of nearly similar sound; and no ambiguity as to the meaning ensue.

RULE IV. — When two consonants of the same kind or same sound come together, without any vowel between them, only one is to be expressed ; but, if a vowel or vowels intervene, both are to be written : but if they are perpendicular, horizontal, or oblique lines, they must only be drawn a size longer than usual ; and characters with loops must have the size of their heads doubled. See plate STENOGRAPHY.

Might is to be written mit, fight jit, machine, mashin, enough enuf, laugh lajf, prophet profet, physics faiks, through thro1, foreign jforen, sovereign soveren, psalm sum, receipt reset, write rite, wright rit, island Hand, knavery navcry, temptation temtation, knife nife, stick stik, thigh thi, honor onor, indictment inditement, acquaint uquaint, chaos kaos, &c. Strength strenth, length, lenth, friendship frenship, connect conek, commandment comanment, conjunct conjunt, hum-ble humlc, lumber lumer, slumber slumer, num-ber numcr, exemplary exemlary, &c. Rocks mr, acts aks or ax, facts faks or fax, districts dis-triks or distrix, affects afeks or afex, afflicts aftiks or qflix, conquer konkr, &c. Letter leter, little litle, command comand, error eror, terror teror, &c. But in remember, moment, sister, and such like words, where two consonants of the same name have an intervening vowel, both of them must be written.

These four rules, with their examples, being carefully considered by the learner, will leave him in no doubt concerning the disposition and management of the consonants in this scheme of short-writing ; we shall therefore proceed to lay down rules for the application of the

vowels with ease and expedition.

RULE I. — Vowels, being only simple articuljfte sounds, though they are the connectives cf consonants, and employed in every word and every syllable, are not necessary to be inserted in the middle of words ; because the consonants, if fully pronounced, with the assistance of connexion, will always discover the meaning of a word, and make the writing perfectly legible.

RULE II. — If a vowel is not strongly accented in the incipient syllable of a word, or if it is mute in the final, it is likewise to be omitted ; because the sound of the incipient vowel is often implied in that of the first consonant, which will consequently supply its place.

RULE III. — But if the vowel constitutes the first or last syllable of a word, or is strongly ac-

cented at its beginning or end, that vowel is continually to be written.

RULE IV. — If a word begins or ends with two or more vowels though separated, or when there is a coalition of vowels, as in diphthongs and tripthongs, only one of them is to be expressed, which must be that which agrees best with the pronunciation.

RULE V. — In monosyllables, if they begin or end with a vowel, it is always to be inserted, un-less the vowel be e mute at the end of a word.

Such are the general principles of this art ; in vindication and support of which it will be needless to offer any arguments, when it is considered that brevity and expedition are the chief objects, if consistent with legibility ; and the subsequent specimens in the orthography recommended will, we hope, be sufficient to show that there is no real deficiency in the last mentioned particular.

He who md us mst be etrnl, grt, nd mnptnt. It is ur dty, as rsnl bngs, to srv, Iv, nd oby hm. A mn tht wd avd blm shd be srkmspk in al his axns, nd ndvr wth al hs mt to pis evry bdy. — I wd nt frm any knxns wth a mn who hd no rgrd fr hmslf ; nthr wd I blv a mn who hd ons tld me a li. — Onr is of al thngs the mst df kit to prsrv ntrnshd ; nd whn ons mpchd, Ik the chstty of a wmn, nvr shns wth its wntd Istr. — Wth gd mnrs, kmplsns, nd an esy pit adrs, mny ink a fgr in the wrl, whs mntl ablts wd skrsly hv rsd thm abv the rnk of a ftmn. — Idlns is the prnt of a thsnd msfitns, wch ar nvr fit by the ndstrs : it is a pn nd a

pnshmnt of itslf, nd brngs wnt nd bgry in its trn. — Vrtu is the frst thng tht shd be rgrdd ; it is a rwrd of tslf : mks a mn rspktbl hr, nd wl nˆ. hm etrnly hpy hrftr. — Prd is a mst prnss psn, wch yt ws plnted by hvn in ur ntr, to rs ur emisn to imtt grt nd wrthy krktrs or axns, to xt in us a si fr wht is rt nd gist, nd a Idbl ndgnsn gnst oprsrs nd wrkrs of any knd of nkty ; in shrt, to mk us st a prpr vlu upn urslvs, nd dsps a wrthls flo, hu evr xltd. Ths fr prd is a vrtu, nd my gstly be kid a grtns of si. Bt prd, Ik othr psns, gnrly fxs upn rng obgks, or is apld in rng prprsns. Hu kmn is it to se a rich whm evry vs hs rndrd msrbl, nd evry fly kntmtbl, ving hmslf on hs hi brth, nd bstng hs ilstrs nsstrs, of whm he nhrts nthng bt the nm or ttl ! nsstrs who, if thy nu hm, wd dsn thr dscndnt wth kntmt. But al prd of ths srt is fly, nd evr to be avdd.

SECT. III. — OF THE STENOGRAPHIC ALPHABET.

As the whole of this art depends upon a regular method, and a simple alphabet, we have not only endeavoured to establish the former on satisfactory principles, but have been careful to appropriate, according to the comparative frequency of their occurrence, such characters for the letters, as, after repeated trials and alterations, were conceived to be the best adapted for despatch.

The stenographic alphabet consists of eighteen distinct characters (viz., two for the vowels and the rest for the consonants), taken from lines and semicircular curves ; the formation and application of which we shall now explain, beginning with the vowels. For the first three vowels, a, e, and $, a comma is appropriated in different positions ; and for the other three, o, u, and y, a point. The comma and point, when applied to a and o, is to be placed, as in the plate at the top of the next character ; when for e and «, oppo-

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site to the middle ; and, when for i and y, at the bottom. This arrangement of the vowels we take to be the most simple and distinct that can easily be imagined. Places at the top, the mid-dle, and the bottom of characters, which make three different positions, are as easily distinguished from one another as any three separate characters could be ; and a comma is made with the same facility as a point.

Simple lines may be drawn four different ways ; perpendicular, horizontal, and with an angle of about 45° to the right and left. An ascending oblique line to the right, which will be perfectly distinct from the rest when joined to any other character, may likewise be admitted. These characters, being the simplest in nature, are assigned to those five consonants which most frequently occur, viz., /, r, t, c hard or k, and c soft or s. Every circle may be divided with a perpendicular and horizontal line, so as to form likewise four distinct characters. These being the next to lines, in the simplicity of their formation, we have appropriated them for b, d, n, and m.

The characters expressing nine of the consonants are all perfectly distinct from one another ; eight only remain which are needful, viz.y, g or j, h, p, q, v, w, and x ; to find characters for which we must have recourse to mixed curves and lines. The characters which we have adopted are the simplest in nature after those already applied, admit of the easiest joining, and tend to preserve lineality and beauty in the writing. It must be observed that we have no character for c when it

has a hard sound, as in castle; or soft, as in city; for it always has the sound of A; or s, which in all cfcses will be sufficient to supply its place ; or c, being easier written, might be used in all cases for the hard sound. R likewise is represented by the same character as /; only with this difference, r is written with an ascending stroke and I with a descending ; which is always to be known from the manner of its union with the following character ; but in a few monosyllables where r is the only consonant in the word, and consequently stands alone, it is to be made as is shown in the alphabet for distinction's sake. The character for h, when lineality requires it, may be made from the bottom and inverted, as already described. And often ft may be omitted entirely. Z, as it is a letter seldom employed in the English language, and only a coarser and harder expression of s, may be supplied by s whenever it occurs: as for Zedekiah write Sedekiah, &c., or z itself may be used.

SECT. IV. — OF THE PREPOSITIONS AND TERMINATIONS.

The prepositions and terminations in this scheme are so simple, that the greatest benefit maybe reaped from them, and very little trouble required to attain them ; as the incipient letter or the incipient consonant of all the prepositions, and of several of the terminations, is used to express the whole. But, although we have already given sufficient specimens of the manner of their application, that the learner of more slow perception may have every assistance, we have subjoined the following directions : —

RULE I. — The preposition is always to be written without joining, yet so near as plainly to show what word it belongs to ; and the best way is to observe the same order as if the whole was to be connected.

RULE II. — A preposition, though the same letters that constitute it may be met with in the middle or end of a word, is never to be used, because it would expose to obscurity.

RULE III. — Observe that the preposition otnni is expressed by the vowel o in its proper position ; and for anti, antay ante, by the vowel a, which the radical part of the word will easily distinguish from being only simple vowels.

The first rule for the prepositions is (allowing such exceptions as may be seen in the plate) to be observed for the termination ; and also the second mutatis mutandis ; except that whenever sis, sus, sys, cious,

tious, and ces, occur, they are to be expressed as directed in the fourth rule for the consonants, whether in the beginning, middle, or end of words. But in a few words, where three horizontal characters meet, it will be better to express the sis, 8tc., by the semielliptical character in plate I. opposite tious.

RULE IV. — The terminative characters for tion, sion, don, cian, tian, is to be expressed by a small circle joined to the nearest letter, and turned to the right ; and the plurals tions, sions, dons, dans, tians, tience, by a dot on the same side.

RULE V. — The terminative character for ing is to be expressed likewise by a small circle, but drawn to the left hand ; and its plural ings by a dot. In horizontal characters, by the left hand is meant the top, and by the right the space below the letter. See ing which is joined. In all other characters the right and left positions cannot be mistaken.

RULE VI. — The plural sign s is to be added to the terminative characters when necessary.

RULE VII. — The separated terminations are never to be used but in polysyllables, or words of more syllables than one.

These rules duly observed will point out a method as concise and elegant as can be desired, for expressing the most frequent and longest prepositions and terminations in the English language. If it should be thought necessary to increase their number, by the addition of others, it will be an easy matter for any one of the least discernment to do so, by proceeding on the principles before laid down.

SECT. V.— RULES FOR ABBREVIATIONS.

Though a more concise method of writing, or more numerous abbreviations may not be indispensably necessary, if the foregoing directions be practised for a considerable time, yet contractions will be found extremely useful and convenient to those who have attained a proper knowledge c the subject, and lead to a greater degree of ,-xpedition, at the same time that they dimmish the labor of writing. It has been observed m the introduction that abbreviations are only to be employed by proficients in this art ; because expedition is not the first, though the ultimate object in view ; and that an easy legibility it of the ut-most consequence to the learner ; which, however, cannot be preserved, if he adopts too soon

those very rules which in time will afford him the greatest ease when applied with judgment.

The following short and practical rules will be found fully adequate to every purpose for which they were intended, and are far superior in the facil;*y of their application to any winch we have seen.

RULE I. — The usual abbreviations in long-hand are always to be followed ; as Mr. for Mas-ter, M. D. for Doctor of Physic, and Abp. for Archbishop, &c.

RULE II — Substantives, adjectives, verbs, and participles, when the sense will direct to the meaning, are to be expressed by their initial consonant with ‘the distinguishing marks exhibited in our plate; *viz.* asubstantive must have the dot exactly over its initiai consonant; an adjective must have a dot under it ; a verb is to be expressed by a comma over its initial consonant ; and £ participle by a comma under. The dot or comma, being placed thus, will never occasion them to be mistaken for vowels, because they should always be on one side or other ; whereas the marks for parts of speech must constantly be placed exactly orer or under. These being the four principal parts of speech will be sufficient ; and an adept will never be at a loss to know when he can with safety apply this rule to them.

RULE III. — To render the writing more legible, the last letter of the word may be joined to the first, and the proper mark applied.

RULE IV. — The constituent or radical part of words, especially if they are long, will often serve for the whole, or sometimes the first syllable ; as, we ought to moderate our ex. by our circum. ; a man’s man. commonly shape his for.

RULE V. — All long words without exception may have their prepositions or terminations expressed by the incipient consonant of such preposition or termination.

RULE VI. — When there is a great dependence between the parts of a sentence, the initial letter will often suffice ; as, L. is the capital of

Great JJ. ; the eldest S. of the king of G. B. is styled P. of W. Every one, it is presumed, will allow this to be perfectly legible, either in long or short hand.

RULE VII. — The termination ness and /ess may be omitted ; as faithfulness is only to be written faithful; forwardness, forward ; heedless, heed; stubborness, stubborn, &c.

RULE VIII. — The second and third persons of verbs, ending in eth and est, may be expressed by s ; as, he loves, thou teaches ; instead of he loveth, thou teachest ; or even without s ; as, he love, &c.

RULE IX. — Words naturally supplied by the sense may only often be entirely omitted, and yet no ambiguity ensue ; as. In beginning God created heaven and earth, for In the beginning God created the heaven and the earth.

RULE X. — When there is an immediate repetition of a sentence or word, a line is to be drawn under the sentence or word to be repeated ; as, Amen, Amen, is to be written Amen ; but if any words intervene, before a word or sentence is to be repeated, the line must be drawn as before, and a 4 or mark of omission placed where the

repetition should begin ; as, Is it just the innocents should be condemned i; reviled ?

SPECIMEN OF STENOGRAPHIC LETTER.

I. Fabncms's Reply to Pyrrhus. — As to my poverty, you have indeed, Sir, been rightly informed. My whole estate consists in a house of but mean appearance, and a little spot of ground, from which by my own labor I draw my support. But if by any means you have been persuaded to think that this poverty makes me less considered in my country, or in any degree unhappy, you are extremely deceived. I have no reason to complain of Fortune : she supplies me with all that nature requires ; and, if I am without superfluities, I am also Free from the desire of them. With these, I confess I should be more able to succor the necessitous, the only advantage for which the wealthy are to be envied ; but, as small as my possessions are, I can still contribute something to the support of the state and the assistance of my friends. With regard to honors, my country places me, poor as I am, upon a level with the richest; for Rome knows no qualifications for great employments but virtue and ability. She appoints me to officiate in the most august ceremonies of religion ; she entrusts me with the

command of her armies ; she confides to my care the most important negotiations. My poverty does not lessen the weight and influence of my counsels in the senate ; the Roman people ho-, nor me for that very poverty which you consider as a disgrace ; they know the many opportunities I have had in war to enrich myself without incurring censure ; they are convinced of my disinterested zeal for their prosperity : and, if I have anything to complain of in the return they make, it is only the excess of their applause. What value then can I set upon your gold and silver ! What king can add any thing to my fortune! Always attentive to discharge the duties incumbent on me, I have a mind free from self-reproach, and I have an honest fame. — Dodsley's Preceptor.

II. — A letter to a friend against waste of time. Converse often with yourself, and neither 'avish your time nor suffer others to rob you of it. Many of our hours are stolen from us, and others pass insensibly away ; but of both these losses the most shameful is that which happens through our own neglect. If we take the trouble to observe, we shall find that one considerable part of our life is spent in doing evil, and the other in doing nothing, or in doing what we should not do. We don't seem to know the value of time, nor how precious a day is : nor do we consider that every moment brings us nearer our end. Reflect upon this, I entreat you, and keep a strict account of time. Procrastination is the most dangerous thing in life. Nothing is properly ours but the instant we breathe in, and all the rest is nothing ; it is the only good we possess ; but then it is fleeting, and the first comer robs us of it. Men are so weak that they think they oblige by giving of trifles, and yet reckon that time as nothing for which the most grateful per-son in the world can never make amends. Let us therefore consider time as the most valuable of all things ; and every moment spent without

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some improvement in virtue, or some advancement in goodness, as the greatest sublunary loss. III. St. Paul's speech before Agrippa and Fes-tus. See Acts, xxvi. 1 — 29.

SECT. VI. — MR. GURNEY'S SYSTEM. This, as we have intimated, is the system which has been for many years most extensively patronised by parliament and the government. We subjoin the Introduction of the late Mr Gurney ; and cannot do better than give a general outline of his published remarks which are said to contain ' the whole theory.

To constitute a good system of short-hand, says this writer, it is essential — 1 . That the characters be as simple as possible, in order to their being written with facility : and, 2. That they be so distinct as to be read with ease at any distance of time.

The only distinct marks which can be made use of are a point, a circle, a straight line, and a curve. These may be varied by position.

As a point cannot be distinctly joined with any other character, it is unfit to be introduced into the alphabet. There are no other distinct positions of a straight line than horizontal, perpendicular, and oblique : thus ; — | \ /

The curve may be varied in the same manner ; thus: GO CO

The practise of placing a character above o below the line ; and also of varying it, by thickness or length, I totally expunge; as it could nererbe written swiftly, with any tolerable degree of precision.

We have therefore but nine simple distinct marks : namely, a straight line, and a curve, each in four different directions ; and a circle : whence it is obvious that these nine marks should be made to express

those consonants which most frequently occur in the short-hand orthography (the vowels being never written but when used to begin a word). The rest of the alphabet must necessarily consist of compound characters, which I have endeavoured to render as simple as possible.

It will, likewise, be noticed, that the same character being made to express a, s, and z, the a must be struck upwards, the s and z downwards. As the a is never written singly, the succeeding character will, at first view, show which letter is intended to be expressed.

When the letter r does not begin a word, it is expressed by a stroke upwards ; of which there are several specimens in the second column of the first page.

The long s is only to be used at the beginning and end of words. The circle is not to be written for s, at the beginning of a word, except when t immediately follows ; and never at the end of a word, for it would then stand for ing or < >rff>. When s immediately follows r, the oblique upward stroke is only prolonged.

T'ie first fqur engraved pages in Mr. Guiney's admirable book contain the whole theory of the art.

The alphabet should be got perfectly in me-mory ; and also the words which the letters stand for when wrote single. The other column, on the first page, is designed to give the learner

an idea of the manner of joining the letters, and of spelling words; but need not be committed to memory.

On the second page, the method of expressing the vowels is shown. Here the rules only are to be got in memory ; the short-hand characterˆ being merely an illustration of the rules.

When a person has made himself master of the alphabet, and of the method of expressing tfie vowels, he will then be able to write any thing .n the English language. But as it would be impossible, in that case, to write with swiftness sufficient to answer the usual purposes of short-hand, we are under the necessity of using contractions, and arbitrary characters; care, however, should be taken that too many of these be not crowded upon the memory. I have dismissed a great number which had place in the former editions of this system : and, to shorten the trouble of the learner, have disembarassed the art from many needless difficulties and real incumbrances.

The arbitrary characters, on the remainder of the second and third pages, should be got in memory ; as should, too, the abbreviating rules, on the fourth page.

The whole residue of the engraved pages is all mere matter of example and explanation.

It will be observed that in the spelling of words no particular regard is had either to the retaining or omitting of vowels; but such letters only are made use of as convey, by their sound, a competent idea of the word designed : and, therefore, one person may, if he so choose, admit more letters in a word than another. The farther, however, any person is advanced in the practice and experience of the art the more concisely he will write ; that is, the fewer letters will he use in spelling a word.

It is impossible to compose any system of short-hand, in which various words will not be spelt alike, or written with the same letters. For instance : despise and dispose. Dsps will stand for either word. But, in such case, the sense and connexion will immediately distinguish for which of these two words the contraction stands.

If any arbitrary character, or contracting rule, should not be instantaneously recollected ; it will be attended with no other inconvenience than the loss of the advantage arising from the use of such abbreviation; as the writer will then be obliged to pen it in the same manner as any other word for which there is no arbitrary character.

‘ When a word is meant to be erased, draw two lines through it. If several words are meant to be obliterated, a single line drawn through them all will be sufficient. I need say nothing with regard to punctuation. Were points, or stops, introduced into short-hand, they would both im-pede the writer’s despatch, and tend to confuse the characters. Though of manifest use in long-hand, the admission of them would be quite un-serviceable and even highly detrimental in hra-chvgraphy. To remedy the want of them, the writer has only to leave a short vacancy between each sentence ; and, for every new paragraph, to begin a fresh line.’

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STENTOR, a Grecian herald who went lo the Trojan war, and whose voice, says Homer, was so strong that it exceeded that of fifty men together.— Horn. II. v. 784. Hence the following derivatives.

STENTOREAN, strong-voiced ; long-tongued.

STENTOROPHON'ICK, adj. From Stentor, the Homerick herald, and QWVTI, a voice. Loudly speaking or sounding.

Of this stentorophonick horn of Alexander there is a figure preserved in the Vatican.

Derhams Physico-Theology.

STENWYCK (Henry), an eminent Dutch painter, born in 1550. He studied under John de Vries, who was eminent in architecture and perspective, but Henry excelled him. His Night Vlpws of thelnsides of Churches, illuminated by candles and flambeaux, were much admired. He died in 1603.

SjENWYCK'(Henry), the Younger, son of the old Henry, was taught by his father, and became also eminent. He came over to England, where he was much patronised by Charles I. He died at London in 1640.

STEP, v, n. & n. s.) Sax. pcceppan ; Belg.

STEPPING-STONE, J xtuppen, stop ; Goth stef. To move by a single movement of the foot ; advance by a sudden progression ; go ; move mentally ; walk gravely or slowly : a movement of this kind, corporeal or mental ; the space moved over ; progression ; gradation ; gait : in composition, step signifies one removed one degree from affinity by blood, i. e. one related only by marriage.

There is but a step between me and death.

1 Sam. xx. 3.

Whosoever first, after the troubling the water, stepped in, was made whole. John v. 4.

His wanton step-dame loved him the more ; But when she saw her offered sweets refuse, Her love she turned to hate. Spenser.

How should their minds chuse but misdoubt, lest this discipline, which always you match with di-vine doctrine as her natural and true sister, be found unto all kinds of knowledge a stepmother. Hooker.

The same sin for substance hath sundry steps and degrees, in respect whereof one man becometh a more heinous offender than another. Perkins.

Pyrrhus, the most ancient of all the bashaws stept forth, and, appealing unto his mercies, earnestly requested him to spare his life.

Knolles's History of the Turks.

While Solyman lay at Buda, seven bloody heads of bishops slain in battle were set in order upon a wooden step. Knolles.

Ventidius lately

Buried his father, by whose death he ‘s stepped Into a great estate. Shakspeare. Timon.

See where he comes ; so, please you, step aside : I’ll know his grievance. Id. Romeo and Juliet.

Thou sound and firm-set earth, Hear not my steps, which way they walk.

Id. Macbeth.

Lingering perdition, worse than any death Can be at once, shall step by step attend You and your ways. Id. Tempest.

You shall not find me, daughter, After the slander of most stepmothers, Illeyed unto you. Id. Cymbeline.

A father cruel, and a step-dame false. Shukspeare.

Cato the elder being aged, buried his wife, and married a young woman : his son came to him, and

said, Sir, what have I offended, that you have brought a stepmother into your house? The old man answered, Nay, quite the contrary, son ; thou pleasest me so well, as I would be glad to have more such.

Bacon.

The breadth of every single step or stair should be never less than one foot, nor more than eighteen inches. Wotton.

One of our nation hath proceeded so far that he was able, by the help of wings, in a running pace, to step constantly ten yards at a time.

Wilkinis Mathematical Magick. When you stepped forth, how did the monster rage, In scorn of your soft looks and tender age !

Cow ley.

My brothers, when they saw me wearied out, Stepped, as they said to the next thicket side To bring me berries. Milton.

O may thy power, propitious still to me, Conduct my steps to find the fatal tree In this deep forest. Dryden's JEneid.

The name of step-dame, your practised art, By which you have estranged my father's heart, All you have done against me, or design, Shows your aversion, but begets not mine.

Id. Aurengzebe.

A step-dame too I have, a cursed she, Who rules my hen-pecked sire, and orders me.

Dry den.

Who was the first to explore the untrodden path, When life was hazarded in every step ?

Addison's Cain.

The old poets step in to the assistance of the me-dalist. Addison. Those heights where William's virtue might have

staid, And on the subject world look'd safely down,

By Marlbro' passed, the props and steps were made Sublimer yet to raise his queen's renown. Prior.

To derive two or three general principles of motion from phenomena, and afterwards to tell us how the properties and actions of all corporeal things follow from those manifest principles, would be a very great step in philosophy, though the causes of those principles were not yet discovered. Newton.

The gradus, a Roman measure, may be translated a step, or the half of a passus or pace.

Arbuthnot on Coins.

Any body would have guessed Miss to have been bred up under the influence of a cruel itep-dame, and John to be the fondling of a tender mother.

Id. History of John Bull.

The reputation of a man depends upon the first steps he makes in the world. Pope.

They are stepping almost three thousand years back into the remotest antiquity, the only true mirrour of that ancient world.

Id. Preface to the Iliad.

One injury is best defended by a second, and this oy a third : by these steps the old masters of the pa-lace in France became masters of the kingdom ; and by these steps a general during pleasure might have grown into a general for life, and a general for life into a king. Swift.

When your master wants a servant'who happens to be abroad, answer, that he had but that minute stept out. Id.

Like stepping-stones to save a stride, In streets where kennels are too wide. Id.

Home the swain retreats, His flock before him stepping to the fold.

Thomson's Summer.

It was a saying among the ancients, Truth lies in a well ; and, to carry on this metaphor, we may

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justly say, that logick does supply us with steps, wheie-by we may go down to reach the water. Watts.

The querist must not proceed loo swiftly towards the determination of his point, that he may with more ease draw the learner to those principles step by step, from whence the final conclusion will arise.

Id.

STEP, in a ship, a block of wood fixed on the docks or bottom of a ship, and having: a hole in its upper side, fitted to receive the heel of a mast or capstern. The steps of the main and fore-masts of every ship rest upon the kelson, to which they are firmly secured by knees, bolts, or spike-nails. The step of the mizen-mast usually rests upon the lower deck.

To STEP, in military affairs, is to move forward or backward, by a single change of the place of the foot. To step out, to lengthen your pace. To step short, according to the regulations, is to diminish or slacken your pace. This step is useful when a momentary retardment of either a battalion in line, or of a division in column, shall be required. To step out, according to the regulations, is to lengthen the step to thirty-three inches, by leaning forward a little, but without altering the cadence. This step is necessary when a temporary exertion in line and to the front is required ; and is applied both to the ordinary and quick time. These phrases are frequently used in military movements, when it is found necessary to gain ground in front, or to give the rear of a column, &c., time to acquire its proper distance. The officer who leads a head division, should be particularly attentive, when he is ordered to step out, of step short, especially in the different wheelings, not to lose the precise moment when either may be thought expedient ; and, in marching in open column, every successive officer should watch the seasonable moment, after a wheel, of preserving his relative distance.

To STEP off, in a military sense, to take a prescribed pace from a halted position, in ordinary or quick time, in conformity to some given word of command or signal.

Balancing STEP (Fr. pas d’^cole), a step so called from the body being balanced upon one leg, in order to render it firm and steady in

military movements, &c. Men at the drill should be frequently exercised in this step.

The side or closing STEP (F.r. pas de cote, ou pas serre), a step which is taken in order to gain ground to the right or left, without altering the front of the battalion, or of closing it to its centre, whenever a chasm occurs in the line after it has wheeled from the column, &c. According to the regulations, this step is performed from the halt, in ordinary lime, by the following words of command : — Close to the right — march (Fr. appuyez, a la droite). Close to the left — march (Fr. appuyez a la gauche).

Back STEP (Fr. pas en arriere), a step taken to the rear from any position without any change of aspect. According to the regulations, the back step is performed in the ordinary time and length of pace, from the halt, on a given word of command. It will be generally recollected that a few paces only of the back step can be necessary at a time. ‘ VOL. XXI.

STEP BACK, MARCH (Fr. en arricjre, marche), a word of command which is given when one or more men are ordered to take the back step according to the regulation.

Quick STEP (Fr. pas accelere), a military step consisting of thirty inches (of which 108 are to be taken in a minute, making 270 feet in a mi-nute), which constitutes what is technically called quick time in marching.

Quickest STEP (Fr. pas precipite), a step measuring thirty inches, and of , which 120, making 300 feet, may be taken in a minute. This step is applied chiefly to the purpose of wheeling, and is the rate at which all bodies accomplish their wheels ; the outward file stepping thirty-three inches, whether the wheel is from line into co-lumn, during the march in column, or from co-lumn into line. In this time also, and by this step, should divisions double, and move up, when they pass obstacles in line; or when in the column of march the front of divisions is increased, or diminished.

To STEP BETWEEN, to interfere.

To STEP FORTH OR FORWARD, to take an active part in any thing. Thus, when the circle was formed, the grenadiers stepped forward to beg off their comrade, &c. The officers stepped forward, and remonstrated against their colonel.

STEP (Fr. echelon), according to the translator of rules and regulations for the field exercise and mano3uvres of the French infantry, echelon means, in a figurative sense, what we understood by step in military promotion. See Grades Militaires in the Nouveau Dictionnairc Militaire, by A. T. Gaigne.

STEP is likewise figuratively used to signify promotion. As, the next step from a lieutenancy is a troop or company, and from that to a majority ; except in the guards, wh6 have the exclusive privilege of going over this intermediate rank, and stepping into a lieutenant-colonelcy at once. The engineers enjoy the same privilege.

To STEP OVER, to rise above another. This term is generally used in a bad sense. As, young men of interest and connexion frequently step over old soldiers.

STEP AND LEAP is one of the se\en airs, or artificial motions of a horse, being as it were three airs. The step puts the horse upon the hand, and gives him a rise to leap, like unto one that runs before he leaps, and so may leap higher than he that goes every time a leap.

STEP-CHILD, the child of a husband or wife by a former marriage.

STEP-DAME (step and dame), a stepmother. See STEP, and STEPMOTHER.

STEP-DAUGHTER (step and daughter), the daughter of one's husband or wife, by a former wife or husband; often very absurdly stylec daughter-in-law, a term which should be restricted to the son's wife. See AFFINITY.

STEP-FATHER (step and father), the husband of a widow, who has children by a former husband. This decree is also confounded in common anguage, as well as in writing and absurdly calle father-in-law, a term which should be solely restricted to the father of a son's wife, or of a dauhter's husband. See AFFINITY, and FATHEH-

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STEPHANAS, one of the first Christian con- “erts at Corinth, baptized by Paul. He came to Paul at Ephesus with Fortunatus and Achaicus.

STEPHANIDES (Gulielmus), or William Fitz-Stephen, an ancient English historian of the twelfth century, who flourished from the reign of king Stephen to that of Richard I. See FITZ-STEPHEN. He is highly praised by Leland, as well as Bavle, who compares him to Plato.

STEPHANIUM, in botany, a genus’ of the monogynia order, and pentandria class of plants; natural order forty-seventh, stellatse : CAL. monophyllous, turbinated, and quinquepartite : COR. monopetalous, funnel-shaped, having its tubes curved and ventricose : the pericarpium is a bilocular berry containing two seeds, flattened on one side and round on the other. This genus is nearly allied to that of psychotria. There is only one species, *viz.* S. Guianeuse, a native of the warmer parts of America.

STEPHANOPHORUS, in antiquity, the chief priest of Pallas, who presided over the rest. It was usual for every god to have a chief priest ; that of Pallas was the Stephanophorus just mentioned, and that of Hercules was called Dadu-chus. Stephanophorus was also a priest that assisted the women in the celebration of the festival Thesmophoria.

STEPHANUS, an able grammarian, a native of Byzantium, who lived in the fifth or sixth century. He wrote a dictionary, in which he made a great number of observations, which showed the origin of cities and colonies, of which we have nothing remaining but a mean abridgment by Hermolaus the grammarian ; but from that work the learned have received great light ; and Sigonius, Casaubon, Scaliger, Salmasius, &c., have employed themselves in illustrating it.

STEPHANUS, the Latin name assumed by the learned printers of the name of Stephens. See STEPHENS.

STEPHEN, the first of the seven deacons, 2nd first martyr for Christianity ; whence he is called the protomartyr. from Trporoe, first. His election, miracles, apprehension, examination, glorious defence, and martyrdom, A. D. 33, are recorded in Acts vi. and vii. There is little else certain recorded of him. He is said to have been a leading man among the Helenistic Jews, educated by Gamaliel, and one of our Lord’s seventy disciples.

STEPHEN I., bishop of Rome, succeeded Lu-cius A. D. 253. He had a dispute with St. Cyprian and Firmilian about the rebaptisation of heretics, which he condemned. He suffered martyrdom, A. D. 257, during the persecution under Valerian.

STEPHEN II. was born in Rome, and was elected pope in 752. Astolphus, king of the Lombards, having threatened Rome, Stephen went to France, and asked the assistance of king Pepin, who marched into Italy, and prevailed on Astolphus to desist from his invasion. But on Pepin's departure Astolphus returned with his troops; on which Pepin attacked and defeated him, took several of his cities, and gave them to Stephen, which laid the foundation of that temporal power of the popes which afterwards be-came so enormous. Stephen died in 757.

STEPHEN III., a native of Sicily, was chosen Pope in 768. He was opposed by the anti-pope Constantine, who was condemned in a general council in 769. Stephen died in 772.

STEPHEN IV., a Roman, was elected in 816, and crowned Louis I. in France, but died in 817.

STEPHEN V. succeeded Adrian III. in 885 ; and is celebrated for his virtues, learning, and humility. He died in 891.

STEPHEN VI. was chosen by a party in 896, after the anti-pope Boniface VI. He caused the body of his predecessor Formosus to be taken up and thrown into the Tiber. But this act of vindictive malice rendered him so unpopular that the citizens revolted, took him prisoner, put him in jail, and soon after strangled him.

STEPHEN VII. succeeded Leo VI. A. D. 929, and died in 931.

STEPHEN VIII., a German," and a relation of the emperor Otho I., was elected pope in 939, after Leo VII. His conduct was tyrannical and very disagreeable to the Romans. He died in 942.

STEPHEN IX., brother of Godfrey duke of Lower Lorrain, was elected pope in 1057. He assembled councils for a reformation of the morals of the clergy ; which indeed they stood much in need of. He died in 1058.

STEPHEN, king of England. See ENGLAND.

STEPHEN BATTORI, an excellent king of Poland, if he had not been too zealous a Catholic. See POLAND.

STEPHEN (St.), king of Hungary, succeeded his father Geisa in 947. He was the apostle of his country ; propagated Christianity among the wild Hungarians, and enacted wise laws : for which Benedict IX. canonised him. He died at Buda in 1038.

STEPHENS, a family of printers who flourished at the revival of learning, and contributed greatly towards dispelling the cloud of ignorance which had so long overshadowed Europe. Some of the classics before the sixteenth century were in a great measure lost, and all of them were exceedingly corrupted. By their abilities and indefatigable industry these defects were supplied, and the learned were furnished with beautiful and correct editions of the Greek and Roman authors.

STEPHENS (Henry), the first of these illustrious men, was born in France soon after the discovery of printing, about 1465. He settled as a printer at Paris under Louis XII. A great proportion of the books which he published were Latin : they are printed in the Roman letter, and are not inelegant, though some of them abound rather too much in contractions. He died about 1520, and left behind him three sons. His widow married Simon de Colines (Colinseus, Lat.), who thus got possession of Henry's printing-house, and continued the profession till his death.

STEPHENS (Francis), the eldest son, carried on business along with his step-father Colinaeus, and died at Paris in 1550.

STEPHENS (Robert), the second son, was born in 1503. In his youth he made great proficiency in the Roman, Greek, and Hebrew languages, and at the age of nineteen had acquired so much knowledge that his step-father Colines entrusted him with the management of his press. An

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edition of the New Testament was published under his inspection, which gave great offence to the Paris divines, who accused him of heresy, and threatened to prevent the sale of the book. Soon after he began business himself, and married Perrete the daughter of Jodocus Badius, a printer and an author. She was a woman of learning. In 1531 he published his Thesaurus : a work of great importance, at which he labored for two years. The mark which he put upon all his books was a tree branched, with a man looking upon it, and these words, Noli ahum sapere, to which he sometimes added sed time. In 1539 Francis I. made him his printer, and ordered a new set of elegant types to be founded for him. His frequent editions of the New Testament gave great offence to the doctors of the iorbonne, who accused him of heresy for his annotations, and insisted upon the suppression of some of his books. Although Henry the • French king in some measure protected him, the persecution of these divines rendered him so unhappy, not to mention the expense and loss of time which an almost constant attendance at court unavoidably occasioned, that in 1552 he abandoned his country and went to Geneva, where he embraced the Protestant religion. He was burnt in effigy at Paris, for having changed his religion, and was falsely calumniated with having stolen the king's types. After his arrival at Geneva he published an account of the dispute between him and the Paris divines, which does as much honor to his abilities as his Thesaurus does to his learning. He died in 1559, after a life of the most extraordinary industry. The books of which he was the editor were not fewer than 360. Many of them were ancient classics in different languages. Several were accompanied with annotations which he collected, and all of them were corrected by collating MSS. He was so anxious to attain perfect accuracy that he used to expose his proofs in public, and reward those who discovered a mistake. His books consequently were very correct. It is said that his New Testament, called O Mirificam (because the preface begins with these words), has not a single fault. He first divided the New Testament into verses. His estate was left, exclusively to such of his children as should settle at Gene-va. He left behind him three sons, Henry, Ro-bert, and Francis.

STEPHENS (Charles), the third son of Henry, • was also familiarly acquainted with the learned languages. This recommended him to Lazarus, de Baif, who made him tutor to his son, and in 1540 carried him along with him to Germany. He studied medicine, and practised it

with success in France. He did not, however, forsake the profession of his family, but exercised it in Paris, where he became the editor of many books remarkable for neatness and elegance. He wrote above thirty treatises on different subjects, particularly on Botany, Anatomy, and History. He died in 1564.

STEPHENS (Robert), the son of Robert, did not accompany his father to Geneva, but continued to profess the Catholic religion, and to reside at Paris. His letter was remarkably beau-

tiful. He was made king's printer, and died about 1589.

STEPHENS (Francis), brother to the prece-hri", was also a printer. He embraced the Protestant religion, and resided at Geneva.

STEPHENS (Henry), the remaining son of Ro-bert, was born at Paris in 1528. He became the most -learned and most celebrated of all his family. From his very birth almost he gave proofs of uncommon abilities, and displayed an ardent passion for knowledge. He settled at Paris, and published the Odes of Anacrenn. li; 1554 he went to Rome, and thence to Naples. This journey was undertaken in the service of the French government. He was discovered, and would have been arrested as a spy, hail he not by his skill in the language of the country-been able to pass for a native of Italy. On hi* return to France he assumed the title of printer to Ulric Fugger, a very rich and learned Germain nobleman, who allowed him a considerable pen Sion. In 1560 he married a relation of Henry Scrirnzeour, a Scottish nobleman, with whom hr> was intimately acquainted. See SCRIM/KOI:. Ir, 1572 he published his Thesaurus Linguae Grcjca;, one of the greatest works, perhaps, that ever \as executed by one man, if we consider the wretched materials which more ancient dictionaries could furnish. This work had been carried on at ;i greater expense than he could well bear, lie expected to be reimbursed by the sale of the book, as he doubtless would have been; but John Scapula, one of his own servants, extracted from it whatever he thought would be most serviceable to students, and published it beforehand in -Ho. .By this act of treachery Henry was reduced to poverty. See SCAPULA. About this time lie was much beloved by Henry III. of France, who treated him so kindly, and made him such nattering promises, that he resided frequently at court. But these promises were never fulfilled, owing to the civil wars which soon after distracted France, and the unfortunate death of king Henry himself. During the remainder of his life his situation was very unsettled. We find him sometimes at Paris,

sometimes in Geneva, in Germany, and even in Hungary. He died at Lyons in 1598, at the age of seventy. He was fond of poetry from his very infancy. It was a custom of his to compose verses on horseback, and even to write them, though he generally rode a very mettlesome steed. His Thesaurus was his great work, but he was also the author of several other treatises. His poems are humorous : his Apology for Herodotus is a witty satire on the Roman Catholics. His Concordance to the New Testament must have been a laborious work, and has deservedly endeared him to every Christian who wishes to acquire a rational and critical knowledge of the Scriptures. The number of books which he published, though fewer than his father, was great, and superior in elegance to any thing which the world had then seen. He left behind him a son and two daughters, one of whom was married to the learned Isaac Casanbon.

STEPHENS (Paul), the son of Henry, continued his father's profession at Geneva. He was a man of learning, and wrote translations of several

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books, and published a considerable number of the ancient classics; but not with his father's elegance. He died in 1627, aged sixty, after selling his types to one Chouet a printer.

STEPHENS (Anthony), son of Paul, the last printer of the family, abandoned the Protestant religion, and returned to France, the country of his ancestors. He received letters of naturalization in 1612, and was made printer to the king ; but, managing his affairs ill, he was reduced to poverty, and obliged lo retire into an hospital, where he died in 1674, miserable and blind, aged eighty.

STEPHENS (Robert), a learned English antiquary, born at Eastington, in Gloucestershire. He was educated at Wotton, and thence sent to Lincoln College, Oxford, in 1681. He then entered at the Middle Temple, and was called to the bar. In 1702 he published A Collection of Bacon Lord Verulam's Letters, with valuable notes. He died in 1732, when a second Collection of Bacon's Letters, made by him, was printed.

STEPHENS, CAPE, a cape on the north-west coast of America, in long. 197° 41' E., lat. 63° 33' N.

STEPHENS, FORT (St.), a new town of the United States, in Washington county, Alabama territory. It is situated on the west bank of the Tombigbee, at the head of the sloop navigation, and is in a state of rapid improvement. It is built on very uneven ground, but in a healthy situation, and is the seat of government for the Alabama territory. 100 miles above Mobile by land, 120 or 130 by the river ; 1081 miles from Washington.

STEPHEN'S CHAPEL, (St.), the old building on the site of the lat,e house of commons, and Frequently giving name to it. See WESTMIN-STER.

STEPHEN'S DAY, (St.), a festival of the Christian church, observed on the 26th of December, in memory of the first martyr St. Stephen.

STEPHKN'S ISLAND, an island so called by Vancouver on the north-west coast of North America, about thirty miles in length. It is about ten miles to the north of Pitt's archipelago. On the north-west side is a ranee of innumerable rocky islets and rocks, occupying ˆ space of

about two miles in width. Long. 229° 30’ E., lat. 54° 1 1’ N.

STEPHEN’S ISLANDS, two small islands in the Eastern Seas, discovered by Carteret in 1767. They run about north-west by west, and south-east by east ; one is about three miles long, and the other about six. The passage between them appeared to be about two miles broad. They are surrounded with extensive reefs. Long. 138° 39’ E., lat. 0° 22’ S.

STEPHEN’S ISLAND, in Torres Strait, north of Darnley’s island, lying about long. 143° E., lat. 9° S. The cocoa nut grows abundantly here, and the natives dwell in huts, wherein are images of their gods, also several human skulls.

STEPHEN’S PASSAGE, the strait which divides Admiralty Island from the west coast of North America. Its general direction is nearly north, in which direction it extends along the eastern shore of Admiralty Island. The channel be-

tween Douglas’s Island and the mainland was found by Vancouver’s exploring party to be interrupted with ice, even in the month of August. The other tak?s a north-east direction from Point Salisbury about thirteen miles, and was encumbered with a great quantity of floating ice, the weather also being extremely cold. The shores; at its termination spread out to east and west, and form a basin about a league broad and two across. From the shores of this basin the party saw a compact body of ice extending some distance all around ; and the adjacent region is composed of a lofty range of frozen mountains, whose sides, almost perpendicular, are formed entirely of rock, excepting close to the water side, where a few scattered dwarf pine trees found sufficient soil to vegetate in. Above these the mountains were wrapt in undissolving frost and snow. From the gullies in their sides were projected immense bodies of ice, that reached perpendicularly to the surface of the water in the basin, and exhibited as dreary and inhospitable an aspect as the imagination can suggest. Long, of the south entrance 226° 35’ E., lat. 57° 29’ N.

STEPMOTHER. The wife of a man, who has children by a former marriage ; often erroneously styled mother-in-law, though no degrees in affinity can be more distinct. See AFFINITY and STEP. The situation of a stepmother is one of the most trying and critical in life. No woman should enter into it who cannot boast the prudence of Abigail, and the philosophy and fortitude of Socrates or Zeno. The saeva

noverca has been long and often justly complained of, but the fault is sometimes on the part of the step-children.

STEPNEY (George), an English poet and statesman, descended from an ancient family at Pendigrast, in Pembrokeshire, but born at Lon-don, in 1663. He was educated at Westminster, and then sent to Trinity College, Cambridge, in 1682; where he formed a strict friendship with Charles Montague, afterwards earl of Halifax ; through whose influence, after the revolution, he was nominated to several foreign embassies; as, in 1692, to the elector of Brandenburg; in 1693 to the emperor; in 1694 to the elector of Saxony; in 1696 to the electors of Mentz and Cologn, and the congress at France; and in 1696 queen Anne sent him envoy to the states-general. In all his negociations he was very successful. He published several poems, and some political tracts ; and died at Chelsea in • 1707, aged only forty-four.

STEPNEY, or STEBUNHETHE, a large and ancient parish in the hundred of Ossulston, Middlesex, maj be regarded as a suburb of London. It comprises the hamlets of Mile-End, liatcliffe, Poplar, and Blackwall.

The origin of the name Stepney is very doubtful, lmt is supposed to have been derived from the Saxon •fcteb-hyThe, a timber-wharf; or from Stiben, a corruption of Stephen. It is bounded by the parishes of Bromley, Stratford-Bow, Hackney, Bethnal Green, Spitalfields, St. George in the East, and Shadwell ; all of which, about a century since, were parts of the parish of Stepney. In the year 1794 it contained, as Mr. Lysons remarks, ‘ about 1530 acres jf land

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(exclusive of the site of buildings), of which about eighty were then arable, about fifty occupied by market gardeners, and' the remainder meadow, pasture, and marshy land.' But, since that year, the increase of buildings has produced a considerable diminution in the ground appropriated to agricultural and horticultural purposes. In 1299 Edward I. held a parliament here, in the house of Henry Walleis, lord mayor of London, and gave his confirmation to the great charter. The manor of this place was formerly possessed by the bishops of London ; and Roger Niger is thought to have died at the manorial residence in 1241. It passed, however, from that see to king Edward VI., by gift from the illfated Ridley; and, after having been granted to lord Wentworth, descended through him to Thomas, earl of Cleveland ; by whose influence with the king it was endowed with a court of re-cord, a weekly market at Ratcliffe cross, and an annual fair on Michaelmas day. Stepney manor is now vested in the family of Colebrook. Exclusive of this, the principal manor, the Domesday Survey states that the parish of Stepney contained several smaller ones ; all these were held, with the exception of two, of the bishop of London, and were entitled Stepney-Huskarls, Pomfret, lord Wake's, Helles, Poplar, Cobham, Mile-End, Ewell, and Rumbalds. In 1567 a water-course, which had formerly belonged to the convent of Friars-Minors, was granted to William, marquis of Winchester, with liberty to conduct its streams to his mansion-house in London.

Opposite the present rectory house, Henry, first marquis of Worcester, possessed a large mansion in 1663, of which the gateway only remains. It afterwards devolved to the family of Mead ; and in this dwelling Dr. Richard Mead was born, and commenced the practice of his profession. The church, dedicated to St. Dunstan and All Saints, is large, and consists of a chancel, nave, and two aisles, separated by columns and pointed arches. At the west end is a square tower. Tombs of several illustrious characters are to be found here, as of Sir Henry Colet, lord mayor in 1486 and 1495, the father of Dr. John Colet, who founded St. Paul's school ; Sir John Berry, a distinguished officer in the reign of Charles II., by whom he was knighted ; and Sir Thomas Spert, comptroller of the navy to Henry VIII., and founder of the Trinity House. The font stands on a circular pillar, surrounded by four others of a smaller size. The wall of a porch towards the north-east contains a stone, on which some verses, dated 1663, state it to have been brought from Carthage. The church-yard contains, with many

other celebrated names, those of Dr. Mead and his father. A short distance to the west is an ancient wooden mansion, built, it is supposed, in 1524, by Sir Henry Colet, and leased to Thomas, earl of Essex. Another of these relics of antiquity stands on Mile-End Green, and is now let in separate apartments. This latter, vith some other contiguous habitations, are held under Clare Hall, Cambridge. John Colet, before mentioned, who was vicar of Stepney, lived at the north end of White Horse Street,

Ratcliffe. Some time after his resignation, it was received by Dr. Pace, who died here in 1532, and was buried in Stepney church. This parish likewise contains several Dissenting and Methodist meeting-houses ; Sion chapel ; a cha-pel belonging to the Society of Friends in Brook Street, Ratcliffe ; that formerly occupied by Mr. Brewer, and some others of recent erection.

STEPPING OFF TO Music. In stepping off to music, or to the tap of the drum, it will be recollected that the word of command is the sig-nal to lift up the left foot, and that it comes down, or is planted, the instant the tap is given, or the music completes its first note, so that the time must be invariably marked by the left foot, and not by the right, as has been practised by the guards and the artillery, until a recent regulation.

STERCO RANIS™, STERCORARIANS, or STERCORISTS, from stercus, dung, a name which those of the Romish church anciently gave to such as held that the host was not only liable to digestion, but to all its consequences, as well as other food. See SCOTUS.

STERCORA'CEOUS, adj. Lat. stercoraceus-Belonging to or partaking of the nature of dung.

Green juicy vegetables, in a heap together, acquire a heat equal to that of a human body ; then a putrid stercoraceous taste and odour, in taste resembling putrid flesh, and in smell human fasces.

Arbuthiwt on Aliments.

STERCORA'TION, n. s. Lat. stercora. The act of dunging; the act of manuring with dung.

The first help is stercoration : the sheep's dung is one of the best, and the next dung of kine and that of horses. Jiacoit.

The exterior pulp of the fruit serves not only for the security of the seed, whilst it hangs upon the plant, but, after it is fallen upon the earth, for the stercoration of the soil, and promotion of the growth, though not the first germination of the seminal plant. Ray on the Creation.

Stercoration is seasonable. Evelyn's halendar.

STERCULIA, in botany, a genus of plants belonging to the class of monoecia, and order of monodelphia; natural order thirty-eighth, tricoc-ceae : MALE CAL. quinquepartite : COR. none, but there are fifteen filaments : FEMALE CAL. quinquepartite ; COR. none : the germen is placed on a pillar, and the CAPS, quinquelocular, and many seeded. There are three species ; *viz.* 1. S. balanghas; 2. S.fcetida; and 3. S. plata-nifolium ; which are all foreign plants.

STERE, a denomination, or rather a radical part of a denomination, in the new system of French measures, compounded like metre, litre, gramme, &c., with myria, kilo, &c.,and producing the new terms, myriastere, kilostere, hecto-stere, decnstere, decistere, centistere, and inilli-stere. All these are new terms for measures of wood for fuel. See MEASURE.

STEREOGRAPHIC PROJECTION is the projection of the circles of the sphere on the plant: of some one great circle, the eye being placed in the pole of that circle. See PROJECTION OF ™ r.

SPHERE.

STEREOMETER, an instrument invented in France for measuring the volume of a body however irregular, without plunging it in ;.nv

liquid. If the capacity of a vessel, or the vo-lume of air contained in that vessel, be measured when the vessel contains air only, and also when the vessel contains a body whose volume is required to be known, the volume of air ascertained by the first measurement,

deducting the volume ascertained by the second will be the volume of the body itself. Again, if it be admitted as a law that the volume of any mass of air be inversely as the pressure to which it is subjected, the temperature being supposed constant, it will be easy to deduce, from the mathematical relations of quantity, the whole bulk, provided the differences between the two bulks under two known pressures be obtained by experiment. Let it be supposed, for example, that the first pressure is double the second, or, which follows as a consequence, that the second volume of the air be double the first, and that the difference be fifty cubic inches ; it is evident that the first volume of the air will likewise be fifty cubic inches. The stereometer is intended to ascertain this difference at two known pressures. The instrument is a kind of funnel A B fig, 6, plate STEELYARD, 8cc. composed of a capsule A, in which the body is placed, and a cube B, as uniform in the bore as can be procured. The upper edge of the capsule is ground with emery, that it may be hermetically closed with a glass cover M slightly greased. A double scafe is pasted on the tube, having two sets of gradua-tions ; one to indicate the length, and the other the capacities, as determined by experiment. When this instrument is used it must be plunged in a vessel of mercury with the tube very upright, until the mercury rises within and without to a point C of the scale. See fig. 2. The capsule is then closed with the cover, which being greased will prevent all communication between the external air and that contained with-in the capsule and tube. In this situation of the instrument, in which the mercury stands at the same height within and without the tube, the internal air is compressed by the weight of the atmosphere, which is known and expressed by the length of the mercury in the tube of the common barometer. The instrument is then to be elevated, taking care to keep the tube constantly in the vertical position. It is represented in this position, fig. 7, second position. The mercury descends in the tube, but not to the level of the external surface, and a column D E of mercury remains suspended in the tube, the height of which is known by the scale. The interior air is therefore less compressed than be-fore, the increase of its volume being equal to the whole capacity of the tube from C to D, which is indicated by the second scale. It is known therefore that the pressures are in proportion to the barometiical column, and to the same column diminished by the subtraction of D E. And the bulks of the air in these two states are inversely in the same proportion ; and again the difference between these bulks is the aosolute quantity left void in the tube by the fall of the mercury ; from which data, by an easy analytical process, the following rule is deduced : — Multiply the number which expresses the less pressure by that which denotes the augmentation

of -capacity, and divide the product by the num-ber which denotes the difference of the pressures. The quotient will be the bulk of the air when subject to the greater pressure. To render this more easy by an example, suppose the height of the mercury in the barometer to be seventy-eight centimetres, and the instrument being empty to be plunged in the mercury to the point C. It is then covered, and raised until the small column of mercury D E is suspended, for example, at the height of six centimetres. The internal air, which was at first compressed by a force represented by seventy -eight centimetres, is now compressed only by a force represented by 78 — 6, 01 72, centimetres. Suppose it to be observed, at the same time, by means of the gradations of the second scale, that the capacity of the part C D of the tube which the mercury has quitted is two cubic centimetres. Then by the rule $8 X 2 give twenty four cubical centimetres, which is the volume of the air included in the instrument when the mercury rose as high as C in the tube. The body of which the volume is to be ascertained must then be placed in the capsule, and the operation repeated. Suppose, in this case, the column of mercury suspended to be eight centimetres, when the capacity of the part C D of the tube is equal to two centimetres tube. Then the greatest pressure being denoted by seventy-eight centimetres, as before, the least will be seventy centimetres, the difference of the pressures being eight, and the difference of the volumes two cubical centimetres. Hence y x 2 gives the bulk of the included air under the greatest pressure 17‘5 cubic centimetres. If therefore 17-5 centimetres be taken from twenty-four centimetres, or the capacity of the instrument when empty, the difference 6‘5 cubic centimetres will express the volume of the body which was introduced. And if the absolute weight of the body be multiplied by its bulk in centimetres, and divided by the absolute weight of one cubic centimetre of distilled water, the quotient will express the specific gravity of the body in the common form of the tables where distilled water is taken as unity, or the term of comparison. After this description and explanation of the use of his instrument, the author proceeds with the candor and acuteness of a philosopher to ascertain >the limits of error in the result ; an object seldom sufficiently attended to in the investigation of natural phenomena. From his results it appears that with the dimensions he has assumed, and the method prescribed for operating, the errors may affect the second figure, lie likewise gives the formulae by means of which the instrument itself may be made to sup-ply the want of a barometer in ascertaining the greatest pressure. He likewise adverts to the errors which may be produced by change oi temperature. To

prevent these, as much as possible, the actual form of the instrument and arrangements of its auxiliary parts are settled, as in fig. 3, by which means the approach of the hand near the vessel and its tube is avoided. In this figure the vertical position of the tube is secured by the suspension of the vessel, and a perforation in the table through which the tube passes. The table itself supports the capsule in

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its first position, namely, that at which the cover is required to he put on. Mr. Nicholson, from whose Journal this abstract is immediately taken, supposes, with great probability, that the author of the invention had not finished his meditations on the subject, when the memoir giving an account of it was published. If he had, says the ingenious journalist, it is likely that he would have determined his pressures, as well as the measures of bulks by weight. For it may be easily understood that if the whole instrument were set to its positions, by suspending it to one arm of a balance at H (fig. 8), the quantity of counterpoise, when in equilibrio, might be applied to determine the pressures to a degree of accuracy much greater than can be obtained by linear measurement.

STEREOMETRY, Srtpto/«rpia (of -rtpeoc solid and piTpov measure), is that part of geometry which teaches how to find the solidity or solid contents of bodies ; as globes, cylinders, cubes, vessels, ships, &c.

STEREOTOMY, (from -rsptoc, and ro/i?j, section), the art or act of cutting solids, or making sections thereof, as walls and other membranes in the profiles of architecture.

STEREOTYPE PRINTING. See PRINTING.

STER'IL, adj. ˆ Fr. sterile; Lat. sterilis.

STERIL'ITV, n. s. > Barren ; unfruitful ; not

STER'ILIZE, v. a. j productive ; wanting fecundity : the noun substantive and verb corresponding.

Our elders say,

The barren, touched in this holy chase, Shake off their tteril curse.

Shakspeare. Julius Ceesar. The sea marge steril, and rocky hard. Id. Tempest.

In very steril years, corn sown will grow to another kind. Bacon's Natural History.

Spain is thin sown of people, by reason of the sterility of the soil, and because their natives are exhausted by so many employments in such

vast territories. Id. War with Spain.

To separate seeds, put them in water ; such as are corrupted and steril swim.

Browne's Vulgar Errours.

She is grown steril and barren, and her births of animals are now very inconsiderable.

More against Atheism..

When the vegetative stratum was once washed off by rains, the hills would have become barren, the strata below yielding only mere sterile and mineral matter, such as was inept for the formation of vegetables. Woodward.

May we not as well suppose the sterilizing the earth was suspended for some time, till the deluge became the executioner of it? Id. Natural History.

An eternal sterility must have possessed the world, where all things had been fastened everlastingly, with the adamantine chains of spccifick gravity, if the Almighty had not said, Let the earth bring forth grass, the herb yielding seed, and the fruit-tree yielding fruit. Benttei/'s Sermons.

Go ! sterilize the fertile with thy rage. Savage.

He had more frequent occasion for repetition than any poet ; yet one cannot ascribe this to any sterility of expression, but to the genius of his times, which delighted in these reiterated verses.

Pope's Essay on Homer.

STERILITY. It has been asserted by many authors that all monsters produced by a mixture of different species of animals, such as mules,

are barren ; but this docs not hold universally, even with the mule, which is the instance most generally adduced. See MULE. Sterility in women sometimes happens from a miscarriage, or violent labor, injuring some of the genital parts; but one of the most frequent causes is the suppression of the menstrual flux.— There are other causes arising from various diseases incident to those parts, by which thu

uterus may be unfit to receive or retain the male seed ; — from the tubae fallopianae being too shoit, or having lost their erective power; in either of which cases no conception can take place ; — from universal debility and relaxation ; or ;i local debility of the genital system ; by which means, the parts having lost their tone or contractile power, the semen is thrown off immediately post coitum ; — from imperforation of the vagina, the uterus, or the tubae, or from diseased ova, &c. Hence medical treatment can only avail in cases arising from topical or universal debility ; in correcting irregularities of the menstrual flux, or in removing tumors, cicatrices, or constrictions of the passage, by the art of surgery.

STERIS, in botany, a genus of the digynia order, and pentandria class of plants : c.vi,. quinquepartite : COR. wheel-shaped ; the berry is unilocular, and many seeded. There is only one species, *viz.* S. Javana, a foreign plant ; a native of the isle of Java.

STER'LING, adj. & n. s. Camden derives this word from the Easterlings, or inhabitants of the Hanse towns, who were employed as coiners. An epithet by which genuine money is discriminated.

The king's treasure, that he left at his death, amounted unto eighteen hundred thousand pounds sterling. Bacon.

Several of them would rather clmse to count out a sum in sesterces than in pounds sterling. Addmon.

This visionary various projects tries, And knows that to be rich is to be wise : By useful observation he can tell The sacred charms that in true Stirling dwell ; How gold makes a patrician of a slave, A dwarf an Atlas, a Thersites brave. Garth

Great name ! which in our rolls recorded stands, Leads honours, and protects the learned bands, Accept this offering to thy bounty due, And Roman wealth in English sterling view.

C. Arbuthnot.

There is not one single witty phrase in this collection, which hath not received the stamp and approbation of one hundred years : he may therefore ba secure to find them all genuine, sterling, and authen-ticfc. Swift's Polite Conversation.

STERLING, among goldsmiths, is used synonymously with standard, and applied to gold and silver plate of the same degree of fineness with the sterling money of Great Britain; i. e. with a mixture of one-

twelfth of copper alloy in each metal ; which reduces the silver to eleven deniers, or eleven deniers two grains fineness per ounce. All goldsmiths in both kingdoms are bound to make every piece of gold or silver plate that is sold by weight of this standard or sterling fineness; and assay-masters are appointed arid sworn, in the principal cities in both kingdoms, to try their work and stamp it, when found sterling (see ASSAY-MASTER), and brcuk it down, if found deficient. Trinkets nui

sold by weight may be made of any degree of

coarseness.

STERN, adj. & n. s.~\ Saxon pˆr10-Severe STERN'AGE, n. ». /of countenance, aspect, STERN :LY, adv. £or manners; hard; af—

STERN'NESS, n. s. J flictive ; the adverb and

noun substantive corresponding. The stern of a

ship is from Sax. j-teori, erin, the steering place.

Of stature huge, and eke of courage bold, That sons of men amazed their sternness do behold.

Spenser.

She all at once her beastly body raised With doubled forces high above the ground, Though wrapping up her wreathed stern around. Id,

It shall not be amiss here to present the stern but lively countenance of this so famous a man.

Knolles's History of the Turks. I would outstare the sternest eyes that look. Outbrave the heart most daring on the earth, Pluck the young suckling cubs from the she-bear,

Yea, mock the lion when he roars for prey, To win thee, lady. Shakspeare. Merchant of Venice.

Women are soft, mild, pitiful, and flexible ; Thou, stem, obdurate, flinty, rough, remorseless.

Shakspeare.

If wolves had at thy gate howled that stern time, Thou shouldst have said, Go, porter, turn the key, All cruels else subscribed. Id. King Lear.

Did this in Caesar seem ambitious 1 When that the poor have cried, Caesar hath wept ; Ambition should be made of sterner stuff.

Id. Julius Caesar.

How would he look to see his work so noble Wildly bound up ! or how Should I, in these my borrowed flaunts, behold The sternness of his presence ! Shakspeare.

Mischiefe stood,

And with his stem steele drew in streames the blood.

Chapman.

No mountaine lion tore Two lambs so sternly. Id,

Gods and men

Feared her stern frown, and she was queen of the woods. Milton.

Sternly he pronounced

The rigid interdiction. Id. Paradise Lost.

Then shall the war, and stern debate, and strife .immortal be the business of my life ;• And in thy fame, the dusty spoils among, High on the burnished roof my banner should be

hung. Dry den.

Yet sure thou art not, nor thy face, the same, Nor thy limbs moulded in so soft a frame ; Thou look'st more sternly, dost more strongly move, And more of awe thou bearest, and less of love.

Id.

They turn their heads to sea, their sterns to land.

Id.

Let a barbarous Indian, who had never seen a ship, view the separate and disjointed parts, as the prow and stern, the ribs, masts, ropes, and shrouds, he would form but a very lame idea of it.

Watts on the Hind.

The judge supreme soon cast a stedfast eye, Stern, yet attempered with benignity. Harte.

The STERN is the posterior face of a ship ; or that part which is represented to the view of a spectator placed on the continuation of the keel behind. It is terminated above by the taffarel, and below by the counters; it is limited on the sides by the quarter-pieces, and the intermediate •pace comprehends the galleries and windows of

the different cabins. SPB QUARTER, SKIP, and SHIP-BUILDING.

STERNA, the tern or noddy, a genus of birds arranged under the order of palmipides. The marks of this genus are a straight, slender, pointed bill ; linear nostrils ; a slender and sharp tongue ; very lon<j wings ; a small back toe, and a forked tail. There are twenty-five species, according to Dr. Latham; *viz.* 1. S. Africana; 2. alba; 3. australis; 4. Boysii ; 5. Caspia; 6. Cayana; 7. cinerea; 8. fissipes; 9. fuligino-sa; 10. hirundo; 11. metopoleucos ; 12. minu-ta; 13. nigra ; 14. nilotica; 15. obscura; 16 panaya; 17. phillippina; 18. piscata ; 19. simplex; 20. sinensis; 21. spadicea; 22. stolida; 23. striata; 24. Surinamensis ; 25. vittata Of these only three are found in Britain ; *viz.* 1. S. fissipes the black tern, is of a middle size between the hirundo (No. 2.) and the minuta (No. 3). The usual length is ten inches; the breadth is twenty-four ; the weight two ounces and a half. The head, neck, breast, and belly, as far as the vent, are black ; beyond is white ; the male has a white spot under its chin ; the back and wings are of a deep ash color ; the tail is short and forked ; the exterior feather on each side is white ; the others ash colored ; the legs and feet of a dusky red. Mr. Ray calls this a cloven footed gull, as the webs are depressed in the middle, and form a crescent. These birds frequent fresh waters, breed on their banks, and lay three small esgs of a deep olive color, much spotted with bhirk. They are found during spring and summer in vast numbers in the fens of Lincolnshire, make an incessant noise, and feed on flies, as well as water insects and small fish. Birds of this species are seen very remote from land. Kalm saw flocks of hundreds in the Atlantic Ocean, midway between England and America, and a later voyager saw one 240 leagues from the Lizard in the same ocean.

2. S. hirundo, the common tern, or great sea swallow, weighs four ounces and a quarter ; the length is fourteen inches ; the breadth thirty ; the bill and feet are of a fine crimson ; the for-mer tipped with black, straight, slender, and sharp pointed ; the crown, and hind part of the head, black ; the throat, and whole under side of the body, white ; the upper part and coverts of the wings, a fine pale gray. The tail consists of twelve feathers ; the exterior edges of the three outmost are sray, the rest white ; the exterior on each side is two inches longer than the others : in flying, the bird frequently closes them together, so as to make them appear one slender feather. These birds are very common ; frequent our sea-coasts and banks of lakes and rivers during

summer, but are most common in the neighbourhood of the sea. They are found also in various parts of Europe and Asia, according to the season ; in summer as far as Greenland and Spitzbergen, migrating in turn to the south of Austria and Greece. The female lays three or four eggs in June, of a dull olive color, an inch and three-quarters in length, marked with irregular black spots, intermixed with some others of a smaller size, and less bright ; the little end is almost free from any marking. These are laid among grass or moss

The young are hatched in July, and quit the nest very soon after. They are carefully fed by their parents, and fly in about six weeks. This species appears to have all actions on the water which the swallow has on land, skimming on the surface, and seizing on every insect which comes

church.

In 1741 he married, and was soor afterwards made a prebendary of York, by the interest also of his uncle, who was then upon very good terms with him; but ‘quickly qnar-elled with him,’ he says, • and became his bitter-est enemy, because he would not be a party man,

in its way ; besides which, the moment it spies a and write paragraphs in the newspapers.’ Hv

(iˆ‘li in tKo ixrotar rlowto intrv thafr o 1 a m a n *o*-»r3 .-..i-, Uin ,„’. £*).. _ i

fish in the water, darts into that element, and, seizing its prey, arises as quickly to the place from which it dipped. These birds are also found in America, come into New England in May, and go away in autumn, and are called there the mackarel gull. At Hudson’s Bay they are known by the name of black head. They lay their eggs in small hollows on the shore, sometimes lined with a few leaves. They are often found in great numbers on the islets in the rivers, and are thought good eat’ing. They are bold, not fearing mankind, and in the time of incubation will attack any one, darting down so as to touch a person’s hat, without his giving the least offence. 3. S. minuta, the smaller sea swallow (called by Linnaeus larus minuta), weighs only two ounces five grains, is in length eight inches and a half; in breadth nineteen and a half. The bill is yellow, tipped with black ; the forehead and cheeks white ; from the eyes to the bill is a black line ; the top of the head and hind part black; the breast and under side of the body clothed with feathers so closely set together, and They consist of, 1. The Life “and Opinions of

his wife’s means he got the living of Stillinsrtoii, but remained nearly twenty years at Sutton, doing duty at both places. He was then in very good health, which, however, soon after forsook him ; and books, painting, fiddling, and shooting, were, as he tells us, his amusements. In 1760 he went to London to publish his two first volumes of Tristram Shandy ; and was that ye;ir presented to the curacy of

Coxwold. In 17(5ˆ he went to France, and two years after to Italy, for the recovery of his health ; but his health never was recovered. He languished under consumption, without the slightest depression of spirits, till 1768, when he died. His friend Garrick penned these four elegant lines for his epitaph : —

Shall pride a heap of sculptored marble raise, Some worthless, unmourned, titled fool to praise ; And shall we not by one poor grave-stone learn, Where genius, wit, and humor, sleep with Sterne

The works of Sterne are very generally read.

of such an exquisite rich gloss and so fine a white, that no satin can be compared to it : the back and wings of a pale gray ; the tail short, less forked than that of the former, and white ; the legs yellow ; the irides dusky. These two species are very delicate, seem unable to bear the inclemency of the weather on our shores during winter ; for they quit their breeding places at the approach of it, and do not return till spring. The manners, haunts, and food of this species are the same with those of the former ; but they are far less numerous.

STERNBERG, a town of Moravia, thirteen miles N. N. E. of Olmntz. It is well built with large houses, wide streets, and a spacious square ; having manufactures of woollen, linen, and canvas. It is a thriving place, and its population has for sometime back increased. Inhabitants 8000. Long. 17° 13’ E., lat. 49° 40’ N.

STERNE (Laurence), a writer of a very peculiar cast, born at Clonmell, in the south of Ireland, 24th of November 1713. His father Roger Sterne was the grandson of Sterne archbishop of York, who has been supposed to have been the author of the excellent book entitled The Whole Duty of Man. Laurence inherited nothing of his grandfather’s manner of writing, but rather resembled Rabelais, whose wit he carried with him even into the pulpit. In 1722 he was sent to school at Halifax in Yorkshire, where he continued till 1732, when he was removed to Jesus College in Cambridge. How long he resided in college, or what progress he made in literature or science, is not known : his works display rather native genius than profound erudition. Upon quitting the university he went to York, and, being in orders, was pre-Tristram Shandy; 2. Sermons; 3. A sentimental Journey; 4. Letters published since his death.

STERN FAST, a rope used to confine the stern of a ship or boat to any

wharf or jetty-head, &c

STERNHOLD (Thomas), an English poet, born in Hampshire, and educated at Wykeham's school near Winchester, about 1480. He afterwards studied at the university of Oxford, but did not graduate. He obtained the place of groom of the robes of king Henry VIII., and w ,s left 100 marks by the will of that monarc'1. He enjoyed the same office under Edward VI and was held in some esteem at court for his poetical abilities. With the honest intention of discouraging wanton songs, he turned into English metre fifty-one of the Psalms of David ; the rest were executed by Hopkins ; and this version of the Psalms of Sternhold and Hopkins was long so much esteemed that it was used in the English service, printed along with the book of common prayer, till Tate and Brady's more elegant version was preferred. But by the time of queen Anne, from the alteration of the language, &c., this version was become so obsolete, that Dean Swift treats these two poets with as little respect as Virgil treated Maevius and Bavius. Speaking of a bad poet of his own time, he says, ' Sternhold himself he out-stern- holded.' But the dean should have made allowance for the period at which they wrote. Sternhold died at London, in 1549, with the excellent character of a zealous reformer, and a very strict moralist.

STERNO-CLEIDO MASTOIDEUS. Sterno-mastoideus, and cleido-mastoideus, of Albinus ; mastoideus of Douglas and Cowper; and stt-r-

sented to the living of Sutton by the interest of no-clavio-mastoidien of Dumas ; are names of a his uncle Dr. Sterne, a prebendary of that muscle on the anterior and lateral part of the

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neck, which turns the head to one side, and bends it forward. It arises by two distinct origins ; the anterior tendinous and fleshy, from the top of the sternum near its junction with the clavicle: the posterior fleshy, from the upper and anterior part of the clavicle. Both unite a little above the anterior articulation of the clavicle to form one muscle, which runs obliquely upwards and outwards to be inserted by a thick strong tendon, into the mastoid process of the temporal bone which it surrounds ; and, gradually becoming thinner, is inserted as far back as the lambdoidal suture.

STERNO-COSTALES. These are considered as forming a single muscle on each side of a triangular shape ; hence we find the name of iriangularis adopted by Douglas and Albinus; but Verheyen, who first taught that they ought to be described as four or five distinct muscles, gave them the name of sterno-costales ; and in this he-is very properly followed by Winslovv, Haller, and Lieutaud. These muscles are situated at each side of the under surface of the sternum, upon the cartilages of the third, fourth, fifth, and sixth ribs. Their number varies in different subjects ; very often there are only three, sometimes five, and even six, but most usually we find only four.

The lowermost of the sterno-costales, or what would be called the inferior portion of the tri-angularis, arises tendinous and fleshy from the edge and inner surface of the lower part of the cartilage ensiformis, where its fibres intermix with those of the diaphragm and transversalis abdominis. Its fibres run nearly in a transverse direction, and are inserted, by a broad thin ten- • don, into the inner surface of the cartilage of the sixth rib, and lower edge of that of the fifth. The second and largest of the sterno-costales arises tendinous from the cartilage ensiformis and lower part of the sternum laterally ; and, running a little obliquely outwards, is inserted into the lower edge of the cartilage of the fifth, and sometimes of the fourth rib. The third arises tendinous from the sides of the middle part of the sternum, near the cartilages of the fourth and fifth ribs, and, ascending obliquely outwards, is inserted into the cartilage of the third rib. The fourth and uppermost, which is the most frequently wanting, arises tendinous from the beginning of the cartilage of the third rib and the adjacent part of the sternum ; and, running almost perpendicularly upwards, is inserted by a thin tendon (which covers a part of the second internal intercostal) into the cartilage and beginning of the bony part of the

second rib. All these muscles are more or less intermixed with one another at their origin, and this probably occasioned them to be considered as one muscle. Fallopius informs us that the plate Vesalius has given of them, was taken from a dog, in which animal they are much larger than in man. Douglas has endeavoured to account for this difference, but his explanation is far from being satisfactory. See ANATOMY.

STERN O-HYOIDEUS. This muscle, which arises from the clavicle as well as from the sternum, Winslow calls sterno-cleido-hyoideus. It

is a long, flat, and thin muscle, situated obliquely between the sternum and os hyoides, behind the lower part of the mastoideus, and covering the sterno-thyroideus and the hyo-thyroideus. It arises by very short tendinous fibres, from the cartilaginous part of the first rib, from the upper and inner part of the sternum, from the capsular ligament that connects that bone with the clavicle, and commonly from a small part of the clavicle itself; thence ascending along the anterior and lateral part of the neck, we see it united to its fellow, opposite to the inferior part of the larynx, by means of a thin membrane, which forms a kind of linea alba. After this the two muscles separate again ; and, each passing over the side of the thyroid cartilage, is inserted into the basis of the os hyoides, immediately behind the insertion of the last described muscle. Its use is to draw the os hyoides downwards.

STERNOMANTIS, in antiquity, a designation given to the Delphian priestess, more usually called Pythia. Sternomantis is also used for any one tliat had a prophesying demon within him.

STER'NON, n. s. Gr. <r£pvov. The breast-bone.

A soldier was shot in the breast through the sternon. Wiseman.

STERNO-THYROIDEUS, the sterno-thyroi- dien of Dumas; is flat and thin like the sterno-hyoideus, but longer and broader. It is situated at the fore part of the neck, between the sternum and thyroid cartilage, and behind the sterno-hyoideus. It arises broad and fleshy from the upper and inner part of the sternum, between the cartilages of the first and second ribs, from each of which it receives some few fibres, as well as from the clavicle, where it joins with thp sternum. Thence, growing somewhat narrower, it ascends ; and, passing over the thyroid gland and the cricoid cartilage, is inserted tendinous into the

lower and posterior edge of the rough line of the thyroid cartilage, immediately under the insertion of the sterno-hyoideus. Now and then a few of its fibres pass on to the os hyoides. Its use is to draw the thyroid cartilage, and consequently the larynx, downwards.

STERN POST, a long straight piece of timber erected on the extremity of the keel, to sustain the rudder and terminate the ship behind. This piece ought to be well secured and supported ; because the ends of all the lower planks of the ship's bottom are fixed in a channel, cut on its surface ; and the whole weight of the rudder is sustained by it.

STERN-SHEETS, that part of a boat which is contained between the stern and the attmost or hindmost seat of the rowers. It is generally furnished with benches to accommodate the passengers. See BOAT.

STERNUM (pectoris os). The breast-bone. The sternum, os pectoris-, or breast-bone, is the oblong flat bone placed at the fore part of the thorax. The ossification of this bone in the foetus beginning from many different points at the same time, we find it in young subjects composed of several bones united by cartilages ; but, as we advance in life, most of these cartilages ossify, and the sternum, in the adult state.

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is found to consist of three, and sometimes only of two pieces, the two lower portions being united into one; and very often, in old subjects, the whole is formed into one bone. But, even in the latter case, we may still observe the marks of its former divisions; so that, in describing the bone, we may very properly divide it into its upper, middle, and inferior portions. The upper portion forms an irreuglar square, which, without much reason, has by many writers been compared to the figure of a heart as it is painted on cards. It is of considerable thickness, especially at«its upper part. Its anterior surface is irregular, and slightly convex ; posteriorly it is somewhat concave. Its upper middle part is hollowed, to make way for the trachea. On each side, superiorly, we observe an oblong articulating surface, covered with cartilage in the recent subject, for receiving the ends of the clavicles. Immediately below this, on each side, the bone becomes thinner, and we observe a rough surface for receiving the caftilage of the first rib, and, almost close to the inferior edge of this, we find the half of such another surface, which, combined with a similar surface in the middle portion of the sternum, serves for the articulation of the cartilage of the second rib. The middle portion is much longer, narrower, and thinner than the former ; but is somewhat broader and thinner below than above, where it is connected with the upper portion. The whole of its anterior surface is slightly convex, and within it is slightly concave. Its edge, on each side, affords four articulating surfaces, for the third, fourth, fifth, and sixth ribs; and parts of articulating surfaces at its upper and lower' parts, for the second and seventh ribs. About the middle of this portion of the sternum we sometimes find a considerable hole, large enough in some subjects to admit the end of the little finger. Sylvius seems to have been the first who described it. Riolanus, and some others after him, have, without reason, supposed it to be more frequent in women than in men. In the recent subject it is closed by a cartilaginous substance ; and, as it does not seem destined for the transmission of vessels, as some writers have asserted, we may perhaps very properly, with Hunauld, consider it as an accidental circumstance, occasioned by an interruption of the ossification, before the whole of this part of the bone is completely ossified. The third and inferior portion of the sternum is separated from the former by a line, which is seldom altogether obliterated, even in the oldest subjects. It is smaller than the other parts of the bone, and descends between the ribs, so as to have been considered as an appendix to the rest of the sternum. From

its shape, and its being constantly in a state of cartilage in young subjects, it has been commonly named cartilago xiphoides, ensiformis, or sword-like cartilage ; though many of the ancients gave the name of xiphoides to the whole sternum ; comparing the two first bones to the handle, and this appendix to the blade of the sword. The shape of this appendix varies in different subjects; in some it is longer and more pointed, in others shorter and more obtuse. Veslingius has seen it reaching as

low as the navel, and incommoding the motion of the trunk forwards. In general it terminates obtusely, or in a single -point; sometimes, however, it is bifurcated; and Eustachius and Haller have seen it trifid. Very often we find it perforated, for the transmission of branches of the mammary artery. In the adult it is usually ossified and tipped with cartilage, but it very often continues cartilaginous through life; and Haller once found it in this state in a woman who died in her 100th year. The substance of the sternum internally is of a light spongy texture, covered externally with a thin bony plate; hence it happens that this bone is easily fractured.

STERNUTATION, n. s. Lat. sternutatio. The act of sneezing.

Concerning sternutation, or sneezing, and the cus-tom of saluting upon that motion, it is generally believed to derive its original from a disease wherein sternutation proved mortal, and such as sneezed died. Browne's Vulgar Erroms.

Physicians, in persons near death, use sternuta-tories, or such medicines as provoke unto snee/ing ; when, if the faculty arise, and sternutation ensueth, they conceive hopes of life. Browne.

Sternutation is a convulsive shaking of the nerves and muscles, occasioned by an irritation of those in the nostrils. Quincy.

STERSICHORUS, a Greek lyric poet of Si-cily, born in Hiinera. He wrote twenty-six books on music, poetry, &c., which are all lost, except a few fragments. He flourished about A. A. C. 556, and died at Catana, aged eighty-five. His name was originally Tysias, but changed to Stersichorus, on account of his improvements on music and dancing. He was a man of rank, and distinguished as a statesman among the Sicilians.

STETTIN, a town of the Prussian States, the capital of Pornerania, is situated on the Oder, about sixty miles from the Baltic. It stands on an

eminence on the left bank of the river, being here divided into four streams. Opposite to it, and connected by a long bridge over the main stream, is a part of the town called Lastadie. It has five gates and several squares. The principal public buildings are the castle, government-house, arsenal, barracks, hospitals, exchange, theatre, and public library. The majority of the inhabitants are Lutherans ; and there is here an academical gymnasium, with several professors, and two assistants, who hold classes of divinity, law, medicine, as well as of philosophy, mathematics, the classical, and some modern languages. The town school has been united with this institution since 1805; here is also a navigation school. The manufactures comprise woollens, linens, cotton, leather, soap, and tobacco; but above all, ships' anchors, ot which, as of ships and boats built here, there is a large export. Stettin is the great outlet for the manufactures of Silesia, and the import of colonial goods and foreign fabrics required by that province. The vessels, in general small, [that visit this town annually are about 1000, of which nearly one-fourth are the property ot the place. Of the exports, the leading articles are linen, corn, and timber ; of the imports, coffee, sugar.

cotton, dyewoods, and wine. Stettin is a place of strength, but fell 29th of October, 1806, without resistance, into the hands of the French. It was garrisoned by them after their retreat from Russia in 1812, but obliged to capitulate in October 1813, when the Dutch troops belonging to the garrison hoisted1 the Orange cockade. The adjoining country, called formerly the duchy of Stettin, was ceded to Sweden by the peace of Westphalia, but seized by the Prussians in the misfortunes of the latter years of Charles XII. Eighty miles N. N. E. of Berlin. Population 20,000. Long. 14° 45' 45' E., lat. 53° 25' 36' N.

STETTIN, a government of the Prussian States, comprising the middle part of Pomerania, begins at the river Peene, and extends eastward to a few miles beyond the Bega. Its area is computed at 6625 square miles, and its population at 300,000. It is divided into the following thirteen circles, *viz.* Randow, Anclam, Demmin, Usedom, Wollin,

Greifenhagen, Pyritz, Saatzig, Naugard-Daber, Flemming, Greifenberg, Osten-Blucher, and Bork.

STETTIN, NEW, a small town of Pomerania, in the government of Coslin, with 1800 inhabitants, and a gymnasium. Forty-one miles south by east of Coslin, and fourteen south by west of Baldenburg.

STEUART-Denham (Sir James), was born at Edinburgh on the 10th of October, O. S. 1713. His father was Sir James Steuart of Good-trees, Bart., solicitor-general for Scotland ; and his mother was Anne, daughter of Sir Hugh Dal-rymple of North Berwick, Bart., president of the college of justice. The first rudiments of his education he received at the grammar school of North Berwick, which at his father's death he quitted, at the age of fourteen, with merely the reputation of being a good scholar. From North Berwick, Sir James was sent to the university of Edinburgh, where he continued until 1735, when he passed advocate before the Court, of Session, and immediately afterwards went abroad to visit foreign countries. He was then in his twenty-third year, and had made himself well acquainted with the Roman law and history, and the municipal law of Scotland. He travelled till 1740, when he returned to Scotland, and married Lady Frances Wemyss, eldest daughter of the earl of Wemyss, in 1742. A few months after his marriage the representation of Mid-Lothian became vacant, by the member being made a lord of trade and plantations. The candidates were the late member and Sir John Baird of Newbyth. On the day of election Mr. Dundas of Arniston, one of the senators of the college of justice, was chosen preses of the meeting, and omitted to cause the name of Sir James Steuart to be called on the roll of freeholders. For this illegal use of his temporary power, Sir James commenced a suit against the president ; and resuming the gown as an advocate, he pleaded his own cause with great energy and eloquence, and with the applause of the bench, the bar, and the public. This called lord Arniston from the bench to plead his own defence at the bar; and Sir James could not have been opposed to an antagonist better qualified to call forth all his powers; for that judge is talked of

at this day in Edinburgh as the profoundest lawyer and the ablest pleader that ever graced the Scottish bench or the Scottish bar. With the issue of this contest we are not acquainted ; but it drew upon Sir James Steuart very general attention, and convinced the public that had he continued at the bar he must have risen rapidly to the head of his profession. On his travels, however, he had contracted friendships

with lord Marischal, and other eminent men, attached to the pretensions of the royal family of Stuart, and had received flattering attentions from the pretender to the British throae ; the impressions arising from which, added to the irritations of the controversy with the powerful party in Scotland attached to the court, led him, unadvisedly, into connexions with the movers of the rebellion in 1745. As he was by far the ablest man of their par-ty, the Jacobites engaged him to write the prince regent's manifesto, and to assist in his councils. Information having been given of his participation in these affairs, he thought it prudent, on the abortion of this unhappy attempt, to leave Britain ; and by the zeal it is said of Arniston he was excepted afterwards from the bill of indemnity, and rendered an exile from his country. He chose France for his residence during the first ten years of his banishment, and was chiefly at Angoulesme, where he superintended the education of his son ; thence he went to Tubingen in Suabia, for the benefit of its university, in prosecution of the same laudable design ; but in the end of the war, 1756, having been suspected by the court of Versailles of communicating intelligence to the court of Lon-don, he was seized at Spa, and kept some time in confinement ; from which being liberated, after the accession of the late king of Great Britain, he came by toleration to England, and resided at London, where he put the last hand to his System of Political Economy, the copyright of which he sold to Andrew Millar ; and, being permitted to dedicate this work to the king, he applied for a noli prosequi, which, after some malicious objections, he obtained, and had the comfort of returning to his family estate in Scotland. Having nothing professional to do, during his long residence in France, the active mind of Sir James was occupied in study. His book on the Principles of Political Economy contains most of the fruits of it. In the beginning of 1755 Sir James wrote his Apology or Defence of Sir Isaac Newton's Chronology, which at that time he intended to publish, but was prevented by other engagements. It was communicated to several persons of eminence in France and Germany in MS., and produced, in December that year, in the Mercure de France, an answer from M. Deshoulieres ; to which Sir James soon after replied. The great Newton, applying astronomical and statistical principles to the ancient chronology of Greece, had chastised the vanity of nations, and arrested the progress of infidelity in delineating the history of the world. Losf in the confusion of excessive pretensions to an antiquity beyond all measure, and disgusted b/ the superstitious aids that were assumed to support these pretensions among ancient nations, the

revivers of learning in Europe, during the last and the preceding century, turmoiled themselves with controversies between the comparative merits of the ancients and moderns ; and the abettors of the latter, entrenching themselves be-hind the falsehoods of the ancients, on the scope of their remote history, gave the lie to all antiquity, and in despair plunged themselves into the ocean of scepticism. Happy had it been for society if this scepticism had confined itself to the history of ancient nations in general ; but the same spirit, taking disgust at the horrors of Christian ambition and bigotry, and contemplating with derision the ridiculous legends of modern miracles, gave the lie to all religious scripture of the Jews and Christians, and attempted to banish divine intelligence, the superintending providence of Deity, and the true dignity of the human species, from the face of the earth ! It was a noble undertaking, therefore, in Sir James, to attempt to disperse this mist of error by dispassionately and scientifically explaining and supporting the chronology of Sir Isaac Newton. He has done it with great precision and effect ; and it is a book well worth the perusal of those who wish to read ancient history with improvement, or to prevent themselves from being bewildered in the mazes of modern conjecture. It was printed in 4to. at Frankfort on the Maine, for John Bernard Eichemberg the Elder, in 1757. In 1758 and 1759 the British House of Commons took up the consideration of a statute to regulate a general uniformity of weights and measures throughout the united kingdoms, which had been so often unsuccessfully attempted. This called the attention of Sir James not only to the investigation of the particular subject that engaged that of the House of Commons, but to devise a method of rendering a uniformity of weights and measures universal. He thought the cause of former disappointments in this useful pursuit had been the mistaken no-tion that one or other of our present measures should be adopted for the new standard. After the plan had been relinquished by the parliament of England he digested his note and observations on this important disquisition into the form of an epistolary dissertation, which he transmitted to his friend lord Barrington, and resolved, if there had been a congress assembled, as was once proposed, to adjust the preliminaries of the general peace in 1763, to have laid his plan be-fore the ministers of the different nations, who were to prepare that salutary pacification of the contending powers. This epistolary dissertation Sir J. afterwards reduced at Coltness, in 1777, into a form more proper for the public eye, and sent a corrected copy to a friend, reserving another for the

press, which was printed in 1790 for Stockdale in Piccadilly. In this tract the author shows, from the ineffectual attempts that have been made to alter partially, by innovation, the standards of measures or weights, that the effectual plan to be adopted is to depart entirely from every measure whatsoever now known, and to take, ad libitum, some new mass instead of our pound, some new length instead of onr ell, some new space instead of our acre, and some new solid instead of our gallon and bushel. For

this purpose Sir James proposes as the unit a mass to be verified with the greatest possible accuracy, equal in weight to 10,000 grs. Troy. The pendulum, as it swings at London, to beat seconds of time, he proposes to be the measure of length ; and, after having laid down his fundamental principles, he proposes an ingenious plan for rendering their adoption universal through the whole world. Having obtained his pardon, Sir James Steuart retired to Coltness, in the' county of Lanark, the paternal estate of his family, where he turned his attention to the improvement of his neighbourhood by public works and police, and drew the first good plan for a turnpike bill, suited to the circumstances of Scotland, which has been since generally adopted. He repaired his house, planted, improved, and decorated his estate, and in social intercourse rendered himself the delight of his neighbourhood and country. He was engaged by the directors of the East India Company of England to digest a code for the regulation of the current coin of Bengal; the plan for which important regulation he printed, and received from the court of directors a handsome diamond ring as a mark of their approbation. He prepared for the press, but never published, an antidote to the Systemo de la Nature by Mirabeau, wherein the paral-lelogisms and foolish reasoning of that infidel work are examined, detected, and confuted. It is written in French ; and, were the works or Mirabeau worth refutation, it might be printed with much advantage to Sir James's reputation as a controversial writer. This great and good man died in November 1780, and was buried at Cambusnethan, in Lanarkshire, on the 28th ; the duke of Hamilton and his neighbours performing the last offices to the remains of their highly valued friend, and bedewing his ashes with their tears. For this short sketch of the principal events of the life of Sir James Steuart Denham we are indebted to the direct communications of his nephew, the earl of Buchan, to the Encyclopedia Perthensis.

STEUARTIA, in botany, a genus of the polyandria order, and monodelphia class of plants ; natural order thirty-seventh, columniferze : CAL. simple, with a quinquefid stigma ; the apple is without juice, quinquelobed, monospermous, bursting open with a spring five ways. There is only one species, *viz.* S. malacadendron, which is a foreign plant.

STEUBEN, a county of the United States, in New York, bounded north by Ontario county, east by Seneca Lake and Tioga county, south by Pennsylvania, and west by Allegany county. Chief town, Bath.

STEUBENVILLE, a post town of the United States, the capital of Jefferson county, Ohio, situated on the Ohio. It is a very flourishing town, regularly laid out, having three churches, an academy, two banks, a market-house, a woollen manufactory, the machinery of which is put in motion by a steam engine; a steam paper-mill ; a flour-mill and cotton manufactory, driven by steam power ; a printing office, from wliich is issued a weekly newspaper; an air foundry, tv\< i.ty-seven mercantile stores, and sixteen public inns. The progress of this place has been

uncommonly rapid. In 1805 there were scarcely any houses where this town now stands. Sixty-nine miles by the river below Pittsburgh, thirty-eight by land ; 109 above Marietta, twenty-five north-east of St. Clairsville, and 150 east by north of Columbus. Population, in 1810, 800; and, in 1817, 2032.

STE'VEN, n. s. Sax. i-cep&n. A cry; loud clamor.

Ne sooner was out, but swifter than thought, Fast by the hide the wolf Lowder caught ; And had not Roffy renne to the steven, Lowder had been slaid thilke same even. Spenter.

STEVENAGE, a market-town and parish in Broadwater hundred, Herts, twelve miles north from Ilatfield, and thirty-one north-west from London. It was anciently called Stigenhaght, and belonged to the

abbey of Westminster, but at the dissolution it was granted to the bishops of London, who have enjoyed it ever since. The town consists of one large street, and several small ones, indifferently built; the church is an ancient building, and consists of one isle on each side, with a large chancel in the middle, and has a square tower. To the south of the town are six hills, supposed to have been the site of a Danish or Roman camp. Here is an alms-house, called All-Christian-Souls'-House, and a grammar free-school. Market on Wednesday. Fairs nine days before Easter and Whitsun-weeks, July 15th, and the first Friday in September.

STEVENS (Alexander), an ingenious English architect, who is said to have erected more stone bridges and other buildings in water than any other person in Britain. The aqueduct over the Lune at Lancaster, the bridge over the Liflfey at Dublin, and the locks and docks on the Grand Canal of Ireland, are monuments of his professional skill. He died at an advanced age in 1796. STEVENS (George Alexander), a poet and actor, born in London. Having spent some of his early years from inclination or necessity with itinerant companies of players, he at length procured an engagement at Covent Garden Theatre, but his performances were not admired. After living in every kind of dissipation, generally necessitous, and sometimes extravagant, he at length hit upon a measure by which he acquired independence. He composed a strange medley of humor and satire, sense and nonsense, wit and ribaldry, adapted to his own powers of performance, which is called A Lecture upon Heads, and read to crowded audiences ; at the same time exhibiting caricatures of the different heads, as he entered upon every new character of the lawyer, parson, statesman, politician, miser, spendthrift, &c. With this medley he travelled through England, and part of Scotland, and, from the novelty of the exhibition, was so uncommonly successful that he acquired a fortune sufficient to afford him a comfortable retreat in his old age. He wrote a novel in 2 vols., entitled The Adventures of Tom Fool, and some poems and dramatic pieces ; and died in 1784.

STEVENS, or STEPHENS (captain John), an English antiquary, born in the seventeenth century, and educated a Roman Catholic. His religion led him to follow the fortunes of James II.,

in whose service he accepted a commission, and accompanied him to Ireland. He compiled a Dictionary of the Spanish Language, and continued Sir William Dugdale's Monasticum An-glicanum. See DCGDALE. He died in 1726.

STEVENS (William), esq., of Broad Street, in the city of London, hosier, and many years treasurer of Queen Anne's bounty, was born in Southwark on the 2d March 1732. His father was a tradesman, and died while Mr. Stevens and a sister, the only issue of the marriage, were infants. His mother, who was the late bishop Home's paternal aunt, removed after her husband's death to Maidstone, to be near her brother's family. At the school of Maidstone Mr. Stevens was educated along with his cousin, under the Rev. Deodotus Bye. When Mr. Home went to Oxford, to complete his studies, Mr. Stevens was at the same period, in August 1746, placed out as an apprentice with Mr. Hookham, of No. 68 Old Broad Street (in which house from that time forth he lived and died), an eminent wholesale hosier, and a most respectable man. Of Mr. Steven's progress in business we shall say nothing. It led him to respectability and independence. But in this he has been equalled and surpassed by thousands. In his literary attainments, in the soundness of his principles, and in the unaffected purity of his manners, he has been equalled by few, and surpassed by still fewer, even of the learned professions and of the sacred order. He corresponded regularly with his cousin the Oxonian, who informed him of the studies in which he was engaged ; and Mr. Stevens spent all his leisure time in the acquisition, by his own labor and industry, of those stores which his cousin was acquiring under happier auspices. He acquired a complete knowledge of the learned languages ; and, though a layman, he became particularly eminent as a theologian, and intimately acquainted with the most eminent churchmen of his day. Being an excellent Hebrew scholar he became a great admirer of the works of John Hutchinson, whose principles he warmly espoused through life. In the year 1773 he published, anonymously, An Essay on the Nature and Constitution of the Christian Church, by a Lay-man ; which has been highly esteemed. He soon after published Cursory Observations, on the attempt to alter the articles and liturgy. In 1776 he published A Discourse on the English Constitution, &c. In 1777 he published two distinct works, in answer to two sermons (on the principles of the Revolution 1688), preached by bishop Watson before the university of Cambridge. Previous to these political discussions he published A New and Faithful Translation of Letters

from M. 1'Abbe de , Hebrew professor in

the university of , to the Rev. Benj. Ken—

nicott, &c. This we believe, notwithstanding the title, was an original work of his own. In the year 1800 Mr. Stevens was induced by his numerous friends to collect and publish his works together. He did so with the title of OvSiws tpya, the Works of Nobody, by which humble

name he was known among his friends for upwards of twenty years. In the preface to the second edition of Jones's life of Home, the author

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has introduced a defence of the Hutchmsonian divines of the church of England, which was somewhat severely criticised in the British Critic, February 1800. Mr. Stevens, under the name of Ain, the Hebrew word for Nobody, published A Review of the Review of a new Preface to the Second Edition of Jones's Life of Home. The last literary work in which he engaged was a uniform edition of the works of Mr. Jones of Naylaml, in 12 vols., 8vo., to which he prefixed a life of the venerable author, composed in such a style of artless and pathetic religious eloquence, as did no less honour to the deceased than to the head and heart of the affectionate writer. It is impossible not to perceive the striking resemblance between Isaac WALTON (see that article) and William Stevens. Both were tradesmen. Both were men of reading. Both were divines. Both were sincere Christians and zealous churchmen; and at the same time of the utmost cheerfulness of disposition. Both were the companions and friends of the most eminent prelates and divines that adorned the church of England. Both of them wrote at an advanced period of life, and in a style of artless simplicity remarkably similar. Stevens's Life of Jones was written, says his biographer, in his seventieth year, with great intellectual ability: and he may justly be denominated the Isaac Walton of the eighteenth century. We could fill many pages in detailing the worth of this amiable man. His charities were particularly remarkable, and in general were equally varied, extensive, and judicious. In his private books of account he had three heads of Clericus, Pauper, and Gifts, to which he regularly devoted certain proportions of his income, with large additions under each head when unforeseen demands (as was frequently the case) seemed to require more than the usual proportion. In one year it was accidentally discovered that Mr. Stevens's personal expenses amounted to £300 sterling, ' while the aggregate of clericus, pauper, and gifts, considerably exceeded £600 sterling ; the whole income in that year amounting to £1200 sterling.' Much, equally or more extraordinary, on this head, might easily be added ; while every thing was done with the most admirable delicacy, with the most unassuming modesty, and without ostentation. This amiable man, this admirable Christian, died suddenly in the beginning of February 1807, and was buried on the 14th, by his own desire, in the church yard of Otham Church, Kent ; in repairing and adorning which he had laid out £600 sterling. ' Mark the perfect man, and behold the upright ; for the end of that man is peace.'

STEVENSON (Sir John), musical composer, was a native of Ireland, and being admitted into the choir of St. Patrick's Cathedral, in the city of Dublin, under the tuition of Dr. Doyle, soon gave promise of what he lived to realize in the most successful manner. At an early age he was elected a Vicar Choral, and afterwards Doctor of Music. He obtained prize medals, and ornamental pieces of plate for glees, that displayed the utmost power and extent of harmonic science. His first dramatic music was composed for O'Keefe's " Agreeable Surprise." His church

music is of a high and sublime character. His glees and songs are numerous popular, and beautiful. The best known and most admired of his operas, are Love in a Blaze, The Bedouins, or Arabs 01 the Desert— The Swiss Patriot— Spanish Patriots —and The Burning of Moscow. He had the good fortune to have his sacred music introduced to the public by his friend Dr. Spray, perhaps the finest cathedral singer that has been known in any age ; and the advantage of being associated with Moore, in the publication of the Irish Melodies. After a life passed honourably and beneficially to his country, he expired at an advanced age, at the seat of his son-in-law, the Marquis of Headfort, in the county of Meath, Ireland, in Sept., 1833.

STEVERS (Palmedes), an eminent painter born at London in 1 607, but his father was a Fleming. He studied painting at Delft, and acquired great excellence in representing camps and battles. His paintings are scarce. He died in 1638.

STEVERS (Anthony), brother of Palmedes, was also a good painter of portraits, conversations, &c. He died in 1680.

STEVIN, or STEVINUS (Simon), a celebrated Dutch mathematician and engineer, was bom at Bruges about 1560. He invented the sailing chariots made in Holland. He published an excellent System of Mathematics in 1598 (see STATIJS), and wrote several other mathematical works in Dutch; which Snellius translated into Latin, and published in 2 vols , folio. He died in 1633.

STEW, ' v. a. Fr. estuver. To seethe any thing in a slow moist heat, with little water.

Ere I was risen from the place that showed My duty kneeling, came a reeking post, Stewed in his haste, half breathless.

Shakspeare. King Lear

STEW, n. s. Fr. estuve ; Ital. stufa ; Span estufa. A stove bath ; a bagnio ; a hot house.

As burning jEtna from his boiling stew Doth belch out flames, and rocks in pieces broke,

And ragged ribs of mountains molten new, Enwrapt in coal-black clouds and filthy smoke.

Spenser.

I have seen corruption boil and bubble, Till it o'er-run the itew, Shakspeare.

STEWARD, n. s. \ Sax. p:ipanb. OUR STEWARDSHIP. J who manages the affairs of another; one who has charge of an establishment or place ; a state officer : the other noun substantive corresponding. There sat yclad in red Down to the ground a comely personage,

That in his hand a white rod managed ; He steward was, high diet, ripe of age, 4nd in demeanour sober, and in council sage.

Spenter.

The duke of Suffolk is the first, and claims To be high steward.

Take on you the charge And kingly government of this your land : Not as protector, steward, substitute, Or lowly factor for another's gain.

Shalui'fure. Richard in.

If they are not employed to such purposes, we are false to our trust, and the stewardship committed to us, and shall be one day severely accountable to God for it. Calamy's Sermons.

What can be a greater honour than to be chosen one of the stewards and dispensers of God's bounty to mankind1! What can give a

generous spirit more complacency than to consider that great numbers owe to him, under God, their subsistence, and the good conduct of their lives 1 Swift.

Just steward of the bounty he received, And dying poorer than the poor relieved. Harte.

STEWARD, an officer in a ship of war, appointed by the pur:>er to distribute the different species of provisions to the officers and crew ; for which purpose he is furnished with a male and proper assistants.

STEWARD, LORD HIGH, OF ENGLAND, the greatest officer under the crown, an office that was anciently the inheritance of the earls of Leicester, till forfeited by Simon de Mountfort to king Henry III. But the power of this officer is so very great that it has not been judged safe to trust it any longer in the hands of a subject, excepting only pro hac vice, occasionally : as to officiate at a coronation, at the arraignment of a nobleman for high treason, or the like. During his office the steward bears a white staff in his hand ; and the trial, &c., ended, he breaks the staff, and with it his commission expires.

STEWARD, LORD HIGH, OF GREAT BRITAIN, COURT OF THE, is a court instituted for the trial of peers indicted for treason or felony, or for misprision of either. The office of this great magistrate is very ancient, and was formerly hereditary, or at least held for life, or dum bene se gesserit : but now it is usually, and has been for many centuries past, granted pro hac vice only ; and it has been the constant practice (and therefore seems now to have become necessary) to grant it to a lord of parliament, else he is incapable to try such delinquent peer. When such an indictment is therefore found by a grand jury of freeholders in the king's bench, or at the assizes before the justices of oyer and terminer, it is to be removed by a writ of certiorari into the court of the lord high steward, which has the only power to determine it. A peer may plead a pardon before the court of king's bench, and the judges have power to allow it, to prevent the trouble of appointing a high steward merely for the purpose of receiving such plea : but he may not plead in that inferior court any other plea as guilty or not guilty of the indictment, but only in this court ; because, in consequence of such plea, it is possible that judgment of death might be awarded against him. The king, therefore, in case a peer be indicted of treason, felony, or misprision, creates a lord high steward pro hac vice by commission under the great seal ; which recites the indictment so found, and gives his grace power to receive and try it secundum legem et consuetudinem Angliae. Then when the indictment is regularly removed by writ of certiorari, commanding the

inferior court to certify it up to him, the lord high steward directs a precept to a sergeant at arms, to summon the lords to attend and try the indicted peer. This precept was formerly issued to summon only

eighteen or twenty selected from the body of the peers; then the number came to be indefinite ; and the custom was for the lord high steward to summon as many as he thought proper (but of late years not fewer than twenty-three) ; and that those lords only should sit upon the trial ; which threw a monstrous weight of power into the hands of the crown and this its great officer, of selecting only such peers as the then predominant party should most approve of. And, accordingly, when the earl of Clarendon fell into disgrace with Charles II., there was a design formed to prorogue the parliament, to try him by a select number of peers ; it being doubted whether the whole house could be induced to fall in with the views of the court. But now, by stat. 7 W. III. c. 3, upon all trials of peers for treason or misprision, all the peers who have a right to sit and vote in parliament shall be summoned at least twenty days before such trial to appear and vote therein ; and every lord appearing shall vote in the trial of such peer, first taking the oaths ot allegiance and supremacy, and subscribing the declaration against popery. During the session of parliament the trial of an indicted peer is not properly in the court of the lord high steward, but before the court last mentioned of our lord the king in parliament. It is true a lord high steward is always appointed in that case to regulate and add weight to the proceedings : but he is rather in the nature of a speaker pro tempore, or chairman of the court, than the judge of it ; for the collective body of the peers are therein the judges both of law and fact, and the high-steward has a vote with the rest in right of his peerage. But in the court of the lord high-steward, which is held in the recess of parliament, he is the sole judge of matters of law, as the lords triers are in matters of fact ; and, as they may not interfere with him in regulating tht proceedings of the court, so he has no right to intermix with them in giving any vote upon the trial. Therefore upon the conviction and attainder of a peer for murder in full parliament, it hath been holden by the judges, that, in case the day appointed in the judgment for execution should lapse before execution done, a new time of execution may be appointed by either the high court of parliament during its sitting, though no high steward be existing, or in the recess of parliament by the court of king's bench, the record being removed into that court. It has been a point of controversy whether the bishops have now a right to sit in the court of the lord high steward and to try the indictments of treason and misprision. But Blackstone decides it in the negative, and says, ' What

makes their exclusion more reasonable is, that they have no right to be tried themselves in the court of the lord high steward, and therefore surely ought not to be judges there. For the privilege of being thus tried depends upon nobility of blood rather than a seat in the house, as appears from the trials of popish lords, of lords under age, and (since the union) of the Scottish nobility, though not in the number of the sixteen ; and from the trials of females, such as the. queen consort or dowager, and of all peeresses by birth ; and peeresses by marriage also, unless they have, when dowagers, disparaged

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themselves by taking a commoner to their second husband.'

STEWARD OF THE KING'S HOUSEHOLD, a lord, who is the chief officer of the king's court, has the care of the king's house, and authority over all the officers and servants of the household, except such as belong to the chapel, chamber, and stable.

STEWART, STUART, or STEUART, the surname of the royal family of Scotland, from A. D. 1371, when Robert II., but first of the name of Stewart, succeeded king David Bruce, till 1714, when the protestant royal line of that house ended by the death of queen Anne, and the accession of the house of Hanover took place in the person of her second cousin king George I. During that period of 345 years it furnished eight monarchs to Scotland, or nine, reckoning lord Darnley, and six to Great Britain. Of these three were murdered, two killed in bat-tle, two died of grief, two were ignominiously and unjustly executed on a scaffold, and one was justly deposed and expelled for his bigotry and tyranny. In short, a more unfortunate fa-mily has hardly reigned in any nation ; and yet the majority of them were well-meaning monarchs ; some of them learned, most of them brave, and many of them seemed to merit a better fate.

STEWART (Walter), the founder of the house of Stewart, was the son of Fleance, by a daughter of Lewellyn, prince of Wales, and grandson of Banqhuo, thane of Lochaber, who was murdered by Macbeth. See SCOTLAND. Walter acquired the surname of Stewart from his office, being appointed lord high steward of Scotland.

STEWART (princess Elizabeth), daughter of king James I. of England, and VI. of Scotland, wife of prince Frederick, elector palatine of the Rhine, mother of prince Rupert, and princess Sophia, electress of Hanover, by whom she be-came grandmother of king George 1. She, and her husband and family, suffered much for their attachment to the protestant religion ; but in the course of Providence their losses have been am-ply made up to their posterity.

STEWART (Dr. Matthew), an eminent mathematician, was born in 1717 at Rothsay in the isle of Bute, of which parish his father was minister. Being intended for the church, he was in 1734 received as a student into the University of Glasgow. There he had the happiness of having for his preceptors the celebrated professors Hutcheson and

Simson, until, wishing to re-move to Edinburgh, he was introduced by Dr. Simson to Mr. Mdclaurin. Mr. Stewart, however, had acquired from his intimacy with Dr. Simson a great predilection for the ancient geometry ; and while the second invention of porisms, to which .more genius was perhaps required than to the first discovery of them, employed Dr. Simson, Mr. Stewart pursued the same subject in a new and different direction. In doing so, he was led to the discovery of those curious and interesting propositions which were published under the title of General Theorems in 1746. He had before this period entered into the church; and obtained, through the patronage of the duke of Argyll and the VOL. XXI.

earl of Bute, the living Of lloseneath. But in 1747 he was elected to the mathematical chair in the University of Edinburgh, which had be-come vacant by the death of Mr. Maclaunn. The duties of his office gave a new turn to his pursuits, and this solution of Kepler's problem, which appeared in the second volume of the Essays of the Philosophical Society of Edinburgh for 1756, was the first specimen of this kind which he gave to the world ; it was impossible to have produced one more to the credit of the method he followed. In the first volume of the same collection there are some other propositions of Mr. Stewart's, which are an extension of a curious theorem in the fourth book of Pappus. The prosecution of the plan which lie had formed of introducing into the higher parts of mixed mathematics the strict and simple form of ancient demonstration, produced the Tracts Physical and Mathematical, published in 1761, and the Essay on the Sun's Distance, in 1763: but in this last work it is acknowledged that he employed geometry on a task which geometry cannot perform. The investigation, however, is every where elegant, and will probably be long regarded as a specimen of the most arduous enquiry which has been attempted by mere geometry. The Sun's Distance was the last work which Dr. Stewart published ; and, though he lived to see several animadversions on it made public, he declined entering into any controversy. A few months before this he gave to the world another work, entitled Propositiones Geometries, More Veterum Demonstrate. It consists of a series of geometrical theorems, mostly new; investigated first by analysis, and afterwards syn-thetically demonstrated by the inversion of that analysis. Dr. Stewart's health beginning to decline, and the duties of his office becoming burdensome to him, he retired in 1772 into the country, and never resumed his labors in the university, though mathematics continued to be his chief amusement till a very few years before his death, which took place on the 23d January 1785, at the age of sixty-eight.

STEWART (Dugald), esq., professor of morai philosophy in the university of Edinburgh, was the only son of the above Dr. Matthew Stewart who survived the period of infancy. He was born in the college of Edinburgh November 22d, 1753, and, being of feeble constitution, his education was long committed to the sole and admirable management of his mother.

At seven years of age, however, he entered the High School, and acquitted himself ˆvith great credit in his classical studies. Under such a mathematician as his father he could not fail to attain a respectable knowledge of the exact sciences ; but we find him, on his mother s death, in 1771, removing to the university of Glasgow to avail himself of the tuition of Dr. Reid, who was then illustrating in that city those great principles of metaphysical science to which Mr. Stewart became afterwards so much attached. On attaining his majority he was nominated assistant to his fattier, and continued to conduct the mathematical studies of the university of Edinburgh until the death o that honored parent, in 1778 he first Jinpta <

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to read a course of lectures in the moral philosophy class of the university, during the temporary absence of Dr. Ferguson ; and when his father died, in 1785, he effected an exchange with Dr. F., who retired on the salary of the mathematical professor, while Mr. Stewart undertook to preside permanently over the moral philosophy class. In 1792 he first appeared as an author, in the publication of his introductory volume on the Philosophy of the Human Mind ; this was succeeded in the following year by his Outlines of Moral Philosophy, and from about the same period to 1796 he read at meetings of the Royal Society of Edinburgh biographical sketches of the lives of Dr. Adam Smith, Dr. Robertson, and Dr. Reid.

These were his only known writings, until in 1810 appeared his volume of Philosophical Essays; in 1813 he published the second volume of bis Philosophy of the Mind, and his admirable Preliminary Essay to the Supplement of the Encyclopaedia Brittannica; in 1827 a continuation of the second part of the philosophy ; and finally, in 1828, at the age of seventy-five, the third volume, on the Active and Moral Powers of Man. Mr. Stewart was twice most happily married, but left no children. His ora-torical powers are said to have been as remarkable as the eloquence of his written style ; and he had the honor of training as his private pupils, at different periods of his life, some of the most celebrated statesmen and parliamentary orators of modern times. We need only mention the late lord Ashburton, the present marquis of Lansdowne, earl Dudley, and lord Palmerston ; much regretting that our limits forbid us to enlarge the present sketch of the life of so distinguished a philosopher and amiable and excellent a man. Mr. Stewart died at Edinburgh, llth of June, 1828,‘having suffered by rather ‘a severe stroke of palsy ever since the year 1822.

STEWART (the Hon. Admiral Keith), a late brave British naval officer, only brother of the earl of Galloway, was born in 1739. He was appointed a captain in the royal navy in 1762; commanded the Berwick of seventy-four guns, with a commodore’s broad pendant, at the action of the Dogger Bank, m 1781 ; and the Cambridge in lord Howe’s squadron, sent to the relief of Gibraltar in 1782. He represented the county of Wigton in four successive parliaments. He married Miss D’Aquilar, a Jewess, by whom he got a fortune, and left issue. He was afterwards raised to be vice admiral of the white, and was appointed receiver-general of the land-rents in Scotland. Like

many other great men he was addicted to deep gaming ; but, though often successful, did not increase his fortune by it. He died at Glasserton, in Wigtonshire, on the 5th March 1795, aged fifty-six.

STEWART (John), called Walking Stewart, from his pedestrian feats, was a late eccentric individual, who in the course of a long life wandered on foot over the greater part of the globe. He was born in Bond Street, and, having received the rudiments of education at the Charterhouse, was sent out in 1763 as a writer to Madras. In this situation he remained not quite two years.

Smitten with a strong inclination to travel, he prosecuted his route over Hindostan, walking to Delhi, Persepolis, and other parts of Persia, to Abyssinia and to Nubia. In the Carnatic he ob tained the favor of me then nawaub, who made him his private secretary, and to this circumstance he owed his support in his latter days, the British house of Commons voting him £15,000, some little time before his death, in liquidation of his demands upon the nawaub. Quitting the service of this prince, he set out to walk to Seringapatam, where he was arrested by Tippo Saib, who compelled him to enter his army, and bestowed on him a commission as captain of sepoys. While serving in this capacity he was wounded in the arm. He did not succeed in quitting the situation in which he was thus placed, till the exertions of Sir James Sibbald, the commissioner for settling the terms of peace between the presidency and the sultan, procured his liberation. Mr. Stewart now started to walk to Europe, crossing the desert of Arabia, and arriving at length safely at Marseilles. Thence he proceeded through France and Spain. Having walked through England, Scotland, and Ireland, he crossed the Atlantic, and perambulated the United States of America. In the course of his migrations he was of course frequently exposed to dangers, and once, on crossing from Ireland, narrowly escaped shipwreck ; in anticipation of which he entreated earnestly the crew, in case they should survive him, to take care of a MS. he then intended to publish, which he called his Opus Maximum. This, if kept with any care, must be a curious journal. The last ten years 01' his life were passed in the vicinity of Charing Cross, London, that he might be, to use his own expression, ' in the full tide of human existence.' He died at his house in Northumberland Street, the 20th of February, 1822.

STEWARTOWN, a pleasant and thriving town of Scotland, on the Annock water, in the district of Cunninghame, in Ayrshire. It is the seat of an extensive parish ; the chief manufactures are bonnet-

making, for which it has long been famed, and other branches of weaving. Four miles north by west of Kilmarnock, and eight north-east of Irvine.

STESVARTRY (from Stewart, a magistrate in Scotland), a term anciently used synonymously with county or shire, and still applied in the same sense to the counties of Kircudbright or Galloway, and of Orkney and Zetland.

STEYER, a town of Upper Austria, the chief place of the circle of the Traun, situated at the confluence of the rivers Steyer and Enns. It is a neat place, of considerable size, being about three miles in circumference, and has a number of country seats in the environs. The town has some manufacturing establishments of cottons and woollens ; but they are insignificant when compared with those of iron, which are said’to give employment to above 12,000 men in the town and neighbourhood. The largest establishment is a manufactory of fire arms and cutlery, for account of government. Steyer was originally a castle, built about the end of the tenth century, to check the inroads of the Magyars. On the expulsion of that horde from the Austrian states,

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houses were built round the castle, so as at last to form a town, which was for some time the capital of a duchy, and gave name to the province of Styria, Steyer has suffered repeatedly from fires. Inhabitants 10,000. Ninety-two miles west by south of Vienna, and sixteen S. S. E. of Lintz.

STEYNING, a post and market-town in Steyning hundred, rape of Bramber, Sussex, fifteen miles west from Lewes, and fifty-one south by west from London. This town consists of four streets, poorly built : it is chiefly noted for its church, which is a small but curious Norman built structure. The tower is more modern. In this church were buried St. Cuthman, and Ethel-wolf, king of Wessex, father of Alfred. Its name is supposed to be derived from a Roman way, called Steene street, running from Arundel to Dorking, in Surry. It was anciently a borough, and sent two members to parliament ; the num-ber of voters being about 100. The returning officer was the constable ; he is chief magistrate, arid annually chosen at the court-leet of the lord of the manor. Here is a free school and extensive barracks for infantry. Market on Wednesday, and on the second Wednesday in every month for cattle. Fairs June 9th, September 19th, and October 10th. The Michaelmas fair is very considerable for Welsh and other cattle, sheep, hogs, and seed wheat.

STHENELUS, in fabulous history, the son of Perseus and Andromeda, king of Mycenae. He married Nicippe, the daughter of Pelops, by whom he had Eurystheus and two daughters. See EURYSTHEUS. Sthenelus made war against Amphitryon, king of Argos, because he had accidentally killed his father-in-law Electryon, Sthenelus's brother, and took him prisoner. And, according to the poets, it was during this war that Jupiter put on the appearance of Amphitryon, and went to his wife Alcmena. See ALCMENA.

STHENIC (from ffGsvog, strength), of or belonging to, or arising from strength, or a strong constitution or habit ; the opposite of asther.ic. Dr. Brown, in the first edition of his Elementa Medicinae, made use of the word phlogistic to express this idea; because this class of diseases includes many of the inflammatory kind; but, as it does not include them all, many diseases apparently inflammatory being in fact asthenic, or diseases of debility, he adopted the terms sthenic and asthenic, and totally laid aside the terms phlogistic and antiphlogistic.

STHENIC DIATHESIS, that state of the body which produces sthenic diseases. ‘ The cause of sthenic diathesis,’ says Dr. Brown, ‘ is too great an excitement of the whole living system by the stimulant powers. All the functions are first increased ; a disturbance or irregularity then takes place in some ; others are impaired ; but not as long as this diathesis lasts by a debilitating operation.’ See BEUNONIAN SYSTEM.

STHENIC DISEASES, general diseases arising from excessive excitement, the opposite of asthenic diseases, or diseases of debility. Dr. Brown calculates the proportion of sthenic diseases to asthenic in our country and climate, where there is little to stimulate the majority of the people

very highly, to be as three in 100. But with all the poverty, poor diet, and debilitating powers of the climate in Scotland, it is thought he might have safely made the proportion ten in 100. See BRUNONIAN SYSTEM.

STHENO, one of the three Gordons,

STHENOBOEA, in fabulous history, the

daughter of Jobates, king of Lycia, wife of

Proetus, king of Argos, and stepmother to Bel—

lerophon, with whom she fell in love. See BEL—

LEROPHON.

STIBADIUM, among the Romans, a low kind of table couch, or bed of a circular form, which succeeded to the triclinia, and was of different sizes, according to the number of guests they were designed for. They were called hexa-clina, octaclina, or enneaclina, according as they held six, eight, or nine guests, and so of any other number.

STIB’IAL, adj. I Lat. stibium. Antimo—

STIBIA’RIAN, n. s. J nial : a man violent from the operation of antimony.

The former depend upon a corrupt incinerated melancholy, and the latter upon an adust stibial or eruginous sulphur. Harvey.

This stibiarian presseth audaciously upon the royal throne, and, after

some sacrification, tendereth a bitter pill of sacrilege and cruelty; but, when the same was rejected because it was violent, then he presents his antirnonian potion. White.

STICHI, an ancient kind of verse.

STICHOS, a name given by the old writers to a pectoral confection, the principal ingredient of which was the herb marrubium, or horehound.

STICK, v. n., v. a., & n. s.ˆ\ Pret & part.

STICKLE, v. a. tpass. stuck ; Sax.

STICKLER, n. s. f j-tican. To ad—

STICKY, adj. J here ; fasten upon ; be united with, or rest upon ; stop ; lose motion: hence to be constant ; remain ; sci'uple; hesitate : as a verb active, to fasten on, fasten by transfixion ; stab ; pain with any thing pointed : as a noun substantive, any long and slender instrument; a long and slender piece of wood : ' to stick out ' is to be remarkably prominent: to stickle is (literally) to interpose with sticks, as the seconds of prize fighters formerly did : to interpose between combatants ; contest ; altercate ; act between opposite parties : the noun substantive corresponding : sticky is visrous ; adhesive.

His flesh is consumed away that it cannot be seen, and his bones that were not seen stick out.

Job xxxiii. 21.

I will cause the fish of thy rivers to stick unto thy scales. Ezeh.

Basilius, the judge, appointed sticklers and trumpets, whom the others should obey. Sidney.

Now does lie feel His secret murthers sticking on his hands.

Slmfapeare. Macbeth.

Wherefore could I not pronounce amen ? I' had most need of blessing, and amen Stuck in my throat. Id.

If we should fail, —We fail !

But screw your courage to the sticking place, And we'll not fail. W—

The knave will stick by thee, I can assure thoc that : he will not out, he is true bred.

Shakspeare. Henru IV.

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Though the sword be put into the sheath, we must not sufler it there to rust, or stick so fast as that we shall not be able to draw it readily when need requires. Raleigh.

The green caterpillar breedeth in the inward parts of roses not blown, where the dew sticheth. Bacon.

The going away of that which had staid s» long, doth yet stick with me. Id. Natural History.

Herbs which last longest are those of strong smell, and with a sticky stalk. Id.

The church of Rome, under pretext of exposition of scripture, doth not stick to add and alter. Bacon.

Let them go to't, and stickle, Whether a conclave or conventicle. Cleaveland.

The first contains a sticking fast to Christ, when the Christian profession is persecuted ; and the se-cond a rising from sin, as he rose to a new Christian life. Hammond.

They never doubted the commons ; but heard all stuck in the lords house, and desired the names of those who hindered the agreement between the lords and commons. Clarendon.

Fortune, as she's wont, turned fickle, And for the foe began to stickle. Hudibras.

Quercetanus, though the grand stickler for the tria prima, has this concession of the irresolubleness of diamonds. Boyle.

They could not but conclude that to be their interest, and, being so convinced, pursue it and stick to it. Tillotson.

None of those, who stick at this impediment, have any enemies so bitter and implacable as they found theirs. Kettlewell.

Some strike from clashing flints their fiery seed, Some gather sticks the kindled flames to feed.

Dryden.

Two troops in fair array one moment showed ; The next, a field with fallen bodies strowed : The points of spears are stuck within the shield, The steeds without their riders scour the field, The knight's unhorsed. Id.

Some stic* to you, and some to t'other side. Id. I'll stand betwixt ; it first shall pierce my heart, We will be stuck together on his dart.

Id. Tyrannich Love. A lofty pile they rear ;

The fabrick's front with cypress twigs they strew, And stick the sides with boughs of baleful yew.

Dryden .

When he sees half of the Christians killed, and the rest in a fair way of being routed, he stickles betwixt the remainder of God's host and the race of fiends. Id.

Our former chiefs, like sticklers of the war, First sought to inflame the parties, then to poise :

The quarrel loved, but did the cause abhor; And did not strike to hurt, but make a noise. Id. Rather than impute our miscarriages to our own corruption, we do not stick to arraign providence itself.

L'Estrange.

If the matter be knotty, the mind must stop and buckle to it, and stick upon it with labour and thought, and not leave it till it has mastered the difficulty.

Locke.

That two bodies cannot be in the same place is a truth that nobody any more sticks at than at this maxim, that it is impossible for the same thing to be and not to be. Id.

Where they stick, they are not to be farther puzzled by putting them upon finding it out themselves. Id.

I shudder at the name !

My blood runs backward, and my fault'ring tongue Sticks at the sound. Smith's Phaedra and Hippolitus.

The Heruli, when their old kindred fell sick, stuck them with a dagger. Grew.

We are your only friends ; stick by us, and we will stick by you. Davenant.

Would our ladies, instead of sticking on a patch against their country, sacrifice their necklaces against the common enemy, what decrees ought not to be made in their favour ! Addison.

The advantage will be on our side, if we stick to its essentials. Id. Freeholder.

The ‘inferior tribe of common women have, inmost reigns, been the professed sticklers for such as have acted against the true interests of the nation. Id.

To stick at nothing for the publick interest, is represented as the refined part of the Venetian wisdom.

Id. on Italy.

Some stick not to say, that the parson and attorney forged a will. Arbuthnot.

He is often stigmatized with it, as a note of infa-my, to stick by him whilst the world lasteth.

Sanderson.

Oh for some pedant reign, Some gentle James to bless the land again ; To stick the doctor’s chair unto the throne, Give law to words, or war with words alone. Pope.

I am satisfied to trifle away my time, rather than let it stick by me. Id. Letters.

In their quarrels they proceed to calling names, till they light upon one th’at is sure to stick. Swift.

The tory or high church clergy were the stickler* against the exorbitant proceedings of king James II.

Id.

All place themselves in the list of the national church, though they are great sticklers for liberty of conscience. Id.

Souls a little more capacious can take in the connexion of a few propositions ; but if the chain be prolix, here they stick and are confounded.

Watts on the Mind.

Proverbial sentences are formed into a verse whereby they stick upon the memory. Watts.

If on your fame our sex a blot has thrown, ‘Twill ever stick thro’ malice of your own. Young.

STICKS, or FOOT-STICKS, in printing, slips of wood that lie between the foot of the page and the chase, to which they are wedged fast by the quoins, to keep the form firm in conjunction with the side-sticks, which are placed at the side of the page, and fixed in the same manner by means of quoins.

STICKLEBACK, or STICKLEBAG, in ichthyology. See GASTEROSTEUS.

STIFELIUS, a German divine and mathematician, born at Eslingen, in 1509. He published a treatise on Algebra, in the German language, and another on the Calendar. He died at Jena in 1657, aged fifty-eight.

STIFF, adj. ~} Sax. r-t’F 5 Danish

STIF’FEN, v. a & v. n. \ stiff; Swed. styf. Ri—

STIFFHEART”ETJ, adj. [_ gid ; inflexible ; strong ;

STIFF’LY, adv. (resisting flexure; not

STIFF’NECKED, adj. (flaccid; not pliant:

STIFF’NESS, n. s. J hence hardy; stubborn ; perHnicious, harsh; formal: to stiffen is to make stiff; grow stiff; become torpid or obstinate: the adverb and noun substantive follow th« senses of stiff, adjective : and the compounds are of obvious meaning.

He stiffened his neck, and hardened his heart from turning unto the Lord. 2 Chron. xxxvi. 13.

They are impudent children, and stiff-hearted.

Ezek. ii.

I commended them that stood so stiffly for the Lord. 2 Esdras*

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The poor, by them disrobed, naked lie, Veiled with no other covering but the sky ; Exposed to stiff ‘ning frosts, and drenching showers, Which thickened air from her black bosom pours.

Sandys.

An infinite charge to her majesty, to send over such an army as should tread down all that standeth before them on foot, and lay on the ground all the stiffnecked. Spenser.

There fill yourself with those most joyous sights, But speak no word to her of these sad plights , Which her too constant stiffness doth constrain. Id.

We neither allow unmeet nor purpose the stiff defence of any unnecessary custom heretofore received.

Hooker.

In matters divine, it is still maintained stiffly, that they have no stiffnecked force. Id.

How stiff is my vile sense, That I stand up, and have ingenious feeling Of my huge sorrows ! Better I were distract !

Shakspeare.

This is stiff” news. Id.

When the blast of war blows in our ears, Stiffen the sinews, summon up the blood, Disguise fair nature with hard-favoured rage.

Id. Henry V.

The Indian fig of itself multiplieth from root to root ; the plenty of the sap, and the softness of the stalk, making the bough, being over-loaden and not stiffly upheld, to weigh down. Bacon.

The stiffness and dryness of iron to melt, must be holpen by moistening or opening it. Id.

Yield to others when there is cause ; but it is a shame to stand stiffin a

foolish argument. Taylor.

On a stiff gale

The Thebari swan extends his wings. Denham.

This siiffnecked pride nor art nor force can bend,

Nor high-flown hope, to reason's lure descend. Id.

The pillars of this frame grow weak, My sinews slacken, and an icy stiffness Benumbs my blood. Id.

They, rising1 on stiff pinions, tower The mid aerial sky. Milton.

A war ensues, the Cretans own their cause, Stiff to defend their hospitable laws. Dryden.

Her eyes grow stiffen'd, and with sulphur burn. Id.

Her gtijpning grief,

Who saw her children slaughtered all at once, Was dull to mine. Id. and Lee.

The tender soil, then stiffening by degrees, Shut from the bounded earth the bounding seas.

Dryden.

Some souls we see Grow hard, and stiffen with adversity. Id.

Still less and less my boiling spirits flow ; / nd I grow stiff as cooling metals do.

Id. Indian Emperour.

To try new shrouds, one mounts into the wind, And one below their ease or stiffness notes.

Dryden.

The willow bows and recovers, the oak is stubborn and inflexible ; and the punishment of that stiffness is one branch of the allegory. L' Estrange.

Firmness or stiffness of the mind is not from adherence to truth, but submission to prejudice. Locke.

Mingling with that oily liquor, they were wholly incorporate, and so grew more stiff and firm, making but one substance. Burnet's Theory.

The vices of old age have the stiffness of it too ; »nd, as it is the unfittest time to learn in, so the unStness oi' it to unlearn will be found much greater. South's Sermons.

The French are open, familiar, and talkative ; the . talian stiff', ceremonious, and reserved.

Aildiam on Italy.

Fix'd in astonishment I gaze upon thee, Like one just blasted by a stroke from heaven, W ho pants for breath, and stiffens yet alive ; In dreadful looks, a monument of wrath. Id. Catn.

All this religion sat easily upon him, without any of that ttiffneu and constraint, any of those forbidding appearances, which disparage the actions of the sincerely pious. Atterburii.

Rules and critical observations improve a good ge-nius, where nature leadeth the way, provided he is not too scrupulous ; for that will introduce a stiffness and affectation which are utterly abhorrent from all good writing. Felton.

The glittering robe Hung floating loose, or stiff with mazy gold.

Thomson.

Stiff forms are bad, but let not worse intrude, Nor conquer art and nature to be rude. Young.

STIFFLE, or great muscle, in the manege, is the part of the hind leg of a horse which advances towards his belly. This is a most dangerous part to receive a blow upon.

STIGLIANO, or STILIGIANO, a town of Na-ples, in Basilicata, famous for its baths; twenty-four miles S. S. E. of Acerenza.

STIGMA, in botany, the summit or top of the style, accounted by the sexualists the female or-gan of generation in plants, which receives the fecundating dust of the tops of the stamina, and transmits its vapor or effluvia through the style into the heart of the seed bud, for the purpose of impregnating the seeds.

STIGMATA (plural of stigma), in antiquity, certain marks impressed on the left shoulders of soldiers when listed.

STIGMATA were also a kind of notes or abbreviations, consisting only of points, disposed various ways ; as in triangles, squares, crosses, &c.

STIGMATA is also a term introduced by the Franciscans to express the marks or prints of our Saviour's wounds, said to have been miraculously impressed by him on the body of their seraphic father St. Francis.

STIGMATA, in entomology, the apertures in different parts of the bodies of insects, communicating with the trachere or air-vessels, and serving for the office of respiration.

STIGMATIZING, among the ancients, was inflicted upon slaves as a punishment, but more frequently as a mark to know them by ; in which case it was done by applying a red-hot iron, marked with certain letters, to their foreheads, till a fair impression was made ; and then pouring ink into their furrows, that the inscription might be the more conspicuous. Soldiers were branded in the hand with the name or character of their general. It was also customary to stigmatize the worshippers and votaries of some of the gods. The marks used on these occasions were various ; sometimes they contained the name of the god, sometimes his particular ensign, as the thunderbolt of Jupiter, the trident of Neptune, the ivy of Bacchus, &c., or they marked themselves with some mystical number, whereby the god's name was described. To these three ways of stigmatizing, St. John is supposed to re-fer in Rev. chap. xiii. ver. 16, 17. Theodoret is of opinion that the Jews were forbidden to brand themselves with stigmata, because the ido-laters, by that ceiemony, used to consecrate

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themselves to their false gods. Among some nations, stigmatizing was considered as a distinguishing mark of honor and nobility. In Thrace, as Herodotus tells us, it was practised by none but persons of credit, nor omitted by any but persons of the meanest rank. The ancient Britons are also said to have imprinted on the bo-dies of their infants the figures of animals, and other marks, with hot irons.

STIL, or STIL DE GRAIN, in the color trade, the name of a composition used for painting in oil or water, and is made of a decoction of the lycium or Avignon berry, in alum water, which is mixed with whiting into a paste, and formed into twisted sticks. It ought to be chosen of a fine gold yellow, very fine, tender, and friable, and free from dirt.

STILAGO, in botany, a genus of plants belonging to the class of gynandria, and order of triandria. There is one female: CAL. monophyllous, and almost three-lobed : COR. none ; and the berry is globular. There is only one species, *viz.* S. bonius.

STILBE, in botany, a genus of plants belonging to the class of polygamia, and order of dicecia. The exterior calyx of the hermaphrodite flower is triphyllous ; the interior is quinquedentate and cartilaginous. The corolla is funnel-shaped and quinquefid. There are four stamina; and there is one seed in the interior calyx calyp-trate. The female flower is similar, has no interior calyx nor fruit. There are three species ; 1. S. cornua, 2. S. ericoides, and 3. S. pinastra, which are all foreign plants.

STILBE, or STILBEA, in the mythology, the daughter of the river god Peneus, by Creusa, and sister of the famous Daphne. She was not so shy as her sister, but, according to Diodorus, had two sons by her sister's lover, Apollo ; *viz.* Centaurus and Lapithus, the progenitors of the Centaurs and Lapithae.— Diod. iv.

STILBITE (trom <mX/3w, to shine), in mineralogy, a precious stone discovered by Hauy. See MINERALOGY.

STILE, n. s. Sax. pˆete* from rˆijan, to climb. A set of steps to pass from one enclosure to another.

There comes my master and another gentleman from Frogmore, over the stile this way. Sha/ispeare.

If they draw several ways, they may be ready to hang themselves upon every gate or stile they come ajt L' Estrange.

The little strutting pile, You see just by the church-yard stile. Swift.

STILE, n. s. \ Rather style. Fr. stile. A

STI'LAR. adj. } pin to cast the shadow on a sundial : belonging to the stile of a dial.

Erect the stile perpendicularly over the substilar line, so as to make an angle with the dial plane equal to the elevation of the pole of your plane.

Moxon's Mechanical Exercises.

At fifty-one and a half degrees, which is London's latitude, make a mark ; and, laying a ruler to the centre of the plane and to this mark, draw a line from the stilar line. • Moion.

STILES (Ezra), DD. and LL.D, a late learned and pious divine of the United States, born at North Haven in Connecticut, November 19th, 1727, O. S. He studied at Yale College,

and graduated there in 1746; and in 1749 was appointed one of its tutors, which station he held six years. In 1755 he was settled minister of Newport, in Rhode Island, and remained there till 1776, when the disturbances occasioned by the war obliged him to remove to Portsmouth in New Hampshire. In 1777 he was elected president of Yale College; which he held till his death, and was also professor of Church History. He maintained a correspondence with learned men on both sides of the Atlantic ; and was a member of several philosophical societies. He possessed in an eminent degree the faculty of communicating knowledge to his pupils. He published some tracts suitable to his profession; and died much respected as a citizen and a minister, on the 12th of May 1795, at Newhaven, Connecticut, of a bilious fever.

STILETTO, n. s. Ital. stiletto; Fr. stilet. A small pointed dagger.

When a senator should be torn in pieces, he hired one, who, entering into the senate-house, should assault him as an enemy to the state ; and stabbing him with stilettoes, leave him to be torn by others.

Hakewill on Providence.

STILICHO, a brave general of the Romans, under Theodosius the Great and Honorius, who twice merited and obtained the title of Deliverer of Italy. Yet, after all his services, he fell under the suspicion of Honorius, who ordered him to be beheaded, and his family extirpated, A. D. 408. From the confused and partial records of these dark ages it is difficult to discover the truth ; but contemporary writers vindicate Stili-cho. Claudian is loud in his praises, and Zosimus denies the truth of the charges against him. —Hist. v. See ROME.

STILL, v. a., adj., & n. s.-\ Saxon r-tillan ;

STILL'BORN, adj. f Belg. stillen ; Go—

STILL'NESS, n. s. 1 thic stilla is to fix ;

STILLY, adv. J To silence ; make

silent ; appease : quiet ; calm ; silent; motionless : hence in stillborn, signifying dead in the birth : a calm ; silence : stillness, corresponds with still, adjective and verb active : stilly is silently; calmly.

Gyrecia sit still, but with no still pensiveness.

Sidney.

Atin when he spied

Thus in still waves of deep delight to wade, Fiercely approaching to him loudly cried. Spenser.

Your wife Octavia, with her modest eyes, And stiil conclusion, shall acquire no honour, Demuring upon me.

Shakipeare. Antony and Cleopatra.

Herne the hunter,

Sometime a keeper here in Windsor forest, Doth all the winter time, at still of midnight, Walk round about an oak with ragged horns.

Shakspeare.

How sweet the moonlight sleeps upon this bank . Here will we sit, and let the sounds of musick Creep in our ears ; soft stillness and the night Become the touches of sweet harmony. Id.

Is this the scourge of France 1 Is this the Talbot so much feared abroad, That with his name the mothers still their babes 1

Id.

The gravity and stillness of your \outh The world hath noted. Id. Othello,

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From camp to camp, through the foul womb of

night, The hum of either army stilly sounds.

Id. Henry V.

Grant that our hopes, yet likely of fair birth, Should be stillborn, and that we now possest The utmost man of expectation, we are A body strong enough to equal with the king.

S/takspeare.

He had never any jealousy with his father, which might give occasion of altering court or council upon the change ; but all things passed in a still.

Bacon's Henry VII.

In all refrainings of anger, it is the best remedy to make a man's self believe that the opportunity of revenge is not yet come ; but that he foresees a time for it, and so to still himself in the mean time, and reserve it. Bacon.

From hence my lines and I depart ; I to my soft stili walks, they to my heart ; I to the nurse, they to the child of art. Dunne.

Many casualties were but matter of sense ; as, whether a child were abortive or stillborn.

Graunt's Bills of Mortality.

When black clouds draw down the lab'ring skies, An horrid stillness first invades the ear, And in that silence we the tempest fear. Dryden.

The pale assistants on each other stared With gaping mouths for issuing words prepared ; The stillborn sounds upon the palate hung, And died imperfect on the faultering tongue. _ Id.

That, in this state of ignorance, we shortsighted creatures might not mistake true felicity, we are endowed with a power to suspend any particular desire. This is standing still where we are not sufficiently assured. Locke—

Religious pleasure moves gently, and therefore constantly. It does not affect by rapture, but is like the pleasure of health, which is still and sober.

South.

The storm was laid, the winds retired Obedient to thy will ;

The sea that roared at thy command, At thy command was still. Addison.

Hope quickens all the still parts of life, and keeps the mind awake in her most remiss and indolent hours. *d.

Silius Italicus has represented it as a very gentle and still river, in the beautiful description he has given of it.

He, having a full sway over the water, had power to still and compose it, as well as to move and disturb it. Woodward. How all things listen while thy muse complains I Such silence waits on Philomela's strains In some still evening, when the whispering breeze Pants on the leaves, and dies upon the trees. Pope.

Thy stone, O Sisiphus, stands ttill ; Ixion rests upon his wheel. Id.

The third fair morn now blazed upon the main, Then glassy smooth lay all the liquid plain, The winds were hush'd, the billows scarcely curled, And a dead silence still' d the wat'ry world. Id. If a house be on fire, those at next door may es-cape, by the stillness of the weather. Swift.

I know a trick to make you thrive ; O, 'tis a quaint device !

Your stillborn poems shall revive, And scorn to wrap up spice. H.

STIIL, adv. Sax. palle. To this time; till now ; always ; ever ; in continuance ; nevertheless ; after that.

Unless God from heaven did by vision ttill shew them what to do, they might do nothing. Hooker.

In the primitive church, sucl> as by fear being compelled to sacrifice to strange gods, after repented and kept still the office of preaching the gospel.

Wldtgifte.

My brain I'll prove the female to my soul, My soul the father ; and these two beget A generation of sti(i-breeding thoughts.

Shakspe :re

I with my hand at midnight held your head ; And, like the watchful minutes to the hour, Still and anon cheared up the heavy time, Saying, What want you 1 Id. King John.

It hath been anciently reported, and is still received, that extreme applauses of great multitudes have so rarified the air, that birds flying over have fallen down. Bacon.

lie told them, that if their king were still absent from them, they would at length crown apes.

Davies on Ireland.

Whom the disease of talking still once possesseth, he can never hold his peace. Ben Jon son.

Chymists would be rich, if they could still do in great quantities what they have sometimes done in little. Bottle.

Trade begets trade, and people go much where many people are already gone : so men run still to a crowd in the streets, though only to see. Temple.

Thou, O matron !

Here dying, to the shore hast left thy name ; Cajeta still the place is called from thee, The nurse of great /Enasas' infancy.

Dry den's ASneld,

As God sometimes addresses himself in this man-ner to the arts of men ; so, if the heart will receive such motions by a ready compliance, they will re-turn more frequently, and still more and more powerfully. South.

The desire of fame betrays the ambitious man into indecencies that lessen his reputation ; he is stilt afraid lest any of his actions should be thrown away in private. Addison.

The moral perfections of the Deity, the more attentively we consider,

the more perfectly still \ve know them. Atterburi/.

The fewer still you name, you wound the more ; Bond is but one, but Hurpax is a score. Pope.

STILL, n. s. & v. n. ~\ From distil, and

STIL'LATORY, n. s. (Lat. stillo. A vessel

STILL ICIDE, f for distillation ; an a—

STILLICID'IOUS, adj. 'lembic: to drop; fall in drops : a stillatory is either the still or room where it is used : stillicide, a succession of drops : stillicidious, falling in drops : all these words are out of use.

In all stillatoriei, the vapour is turned back upon itself, by the encounter of the sides of the stillatory.

Bacon.

The stillicides of water, if there be water enough to follow, will draw themselves into a small thread, because they will not discontinue.

4d. Natural Hittory.

His sceptre against the ground he threw, And tew stilled from him which moved a) the crew.

Chapman,

All the offices that require heat, as kitchens, stilla-lories, stoves, should be meridional.

Wot ton i Aremtecture.

Short thick sobs, whose thundering volleys float, And roul themselves over her lubric throat In panting murmurs, stitted out of her breast, That ever bubbling spring.

Nature's confectioner, the bee, Whose suckets are moist alclmny

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The still of his refining mold

Minting the garden into gold. Cleaveland.

Crystal is sometimes found in rocks, and in some places not unlike the stirious or stillicidious dependencies of ice. Bruwn.

These are nature's stillutories, in whose caverns the ascending vapours are congealed to that universal aquavitae, that good fresh water.

More against Atheism.

In distilling hot spirits, if the head of the still be taken off, the vapour which ascends out of the still will take fire at the flame of a candle, and the flame will run along the vapour from the candle to the still. Newton's Opticks.

This fragrant spirit is obtained from all plants in the least aromatick, by a cold still, with a heat not exceeding that of summer.

Arbttthnot on Aliments.

STILL-BOTTOM, in the distillery, a name given by the traders to what remains in the still after working the wash into low wines. These bottoms are procured in the greatest quantity from the malt-wash, and are of so much value to the distiller in the fattening of hogs, &c., that he often finds them one of the most valuable articles of the business. See DISTILLATION.

STILLINGFLEET(Edward), bishop of Worcester, was the son of Samuel Stillingfleet, gent. and was born at Cranborn in Dorsetshire in 1635. He was educated at St. John's College, Cambridge ; and, having received orders, was, in 1657, presented to the rectory of Sutton in Not-tinghamshire. By publishing his Origines Sa-crae, one of the ablest defences of revealed religion that has ever been written, he soon acquired such reputation that he was appointed preacher of the Rolls Chapel ; and in January 1665 was presented to the rectory of St. Andrew's, Hoi-born. He was afterwards chosen lecturer at the Temple, and appointed chaplain in ordinary to king Charles II. In 1668 he took the degree of D. D., and was soon after engaged in a dispute •with those of the Romish religion, by publishing his Discourse concerning

the Idolatry and Fana-ticism of the Church of Rome, which he afterwards defended against several antagonists. In 1680 he preached at Guildhall chapel a sermon on Phil. iii. 26, which he published under the title of The Mischief of Separation ; and, this being immediately attacked by several writers, lie in 1683 published his Unreasonableness ot Separation. In 1685 appeared his Origines Britannica?, or the Antiquities of the British Church, in folio. During the reign of king James II. he wrote several tracts against popery, andwas prolocutor of the convocation, as he had likewise been under Charles II. After the Revolution he was advanced to the bishopric of Worcester, and was engaged in a dispute with the Socinians, and also with Mr. Locke ; in which last contest he is generally thought to have been unsuccessful. He died at Westminster in 1699, and was interred in the cathedral of Worcester, where a monument was erected to his memory by his son. Dr. Stillingfleet wrote several other works, which, with the above, have been reprinted in 6 vols. folio.

STILLINGFLEET (Edward), son of the bishop, was fellow of St. John's College in Cambridge, F. R. S., M. D., and Gresham professor of physic ,

but marrying in 1692 he lest his lucrative offices and his father's favor ; a misfortune that affected both himself and his posterity. However, going into orders, he obtained, by his father's means, the living of Newington Butts, which he immediately exchanged for those of Wood-Norton, and Swanton in Norfolk. He died in 1708.

STILLINGFLEET (Benjamin), only son of the preceding, was educated at Norwich school, which he left in 1720, with the character of an excellent scholar. He then went to Trinity College in Cambridge, at the request of Dr. Bentley, the master, who had been private tutor to his father, domestic chaplain to his grandfather, and much indebted to the family. Here he was a candidate for a fellowship, but was rejected by the master's influence. This was a severe and unexpected disappointment, and but little alleviated by the doctor's apology, that it was a pity that a gentleman of Mr. Stillingfleet's parts should be buried within the walls of a college. See BENTLEY. This ingratitude of Dr. Bentley was however not of any real disservice to Mr. Stillingfleet. By being thrown upon the world, he formed many honorable and valuable connet-tions. He dedicated some translations of Linnaus to the late lord Lyttleton, partly, he says, from motives of private respect and honor. Lori Barrington gave him the place of the master of the barracks at Kensington ; a favor to which Mr. Stillingfleet, in the

dedication of his Calendar of Flora to that nobleman, alludes with politeness and gratitude. His Calendar of Flora was found at Stratton in Norfolk in 1755, at the hospitable seat of his worthy and ingenious friend Mr. Marsham, who had made several observations of that kind, and had communicated to the public his curious observations on the growth of trees. But it was to Mr. Wyndham of Felbrig in Norfolk that he appears to have had the greatest obligations ; he travelled abroad with him, spent much of his time at his house, and was appointed one of his executors (Mr. Garrick was another), with a considerable addition to an annuity which that gentleman had settled upon him in his lifetime. Mr. Stillingfleet's genius seems to have led him principally to the study of natural history : which he prosecuted as an ingenious philosopher, a useful citizen, and a good man. In this walk of learning he mentions, as his friends, Dr. W'atson, Dr. Solander, Mr. Hudson, Mr. Price of Foxley, Mr. Pennant, and some others. Mr. Stillingfleet published a volume of miscellaneous tracts, which is in much esteem, and does great honor to his head and heart. They are chiefly translations of some essays in the Amcenitates Academicae, published by Linnaeus, interposed with some observations and additions of his own. But his Essay on Conversation, published in the first volume of Dodsley's Collection of Poems, entitles him to a distinguished rank among our English poets. Here more than once Mr. Stillingfleet shows himself still sore for Dr. Bentley's cruel treatment of him ; and, towards the beautiful and moral close of it, seems to hint at a mortification of a more delicate na-ture, which he had suffered from the other sex. To these disappointments it was perhaps owing that Mr. Stillingfleet neither married nor went

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into orders. His London residence was at a Saddler's in Piccadilly; where he died in 1771, aged above seventy, leaving several valuable papers behind him.

STILLINGIA, in botany, a genus of plants belonging to the class of monoecia, and to the order of monodelphia : MALE CAL. hemispherical and multiflorous : COR. tubulous, and erase or gnawed ; FEMALE CAL. uniflorous and inferior : COR. superior. The style is trifid, and the CAPS. three-grained. There is one species; S.sylvatica

STILOBATUM in architecture, denotes the body of the pedestal of any column.

STILPO, a celebrated philosopher of Megara, who flourished in the reign of Ptolemy Euergetes. In his youth he had been addicted to licentious pleasures, from which he religiously refrained from the moment that he ranked himself among philosophers. When Ptolemy Soter, at the taking of Megara, offered him a large sum of money, and requested that he would accompany him into Egypt, he accepted but a small part of the offer, and retired to the island of ./Egina, whence, on Ptolemy's departure, he returned to Megara. That city being again taken by Demetrius the son of Antigonus, and the philosopher required to give an account of any effects which he had lost during the hurry of the plunder, he replied that he had lost nothing ; for no one could take from him his learning and eloquence. So great was the fame of Stilpo that the most eminent philosophers of Athens took pleasure in attending upon his discourses. His peculiar doctrines were, that species or universals have no real existence, and that one thing cannot be predicated of another. With respect to the former of these opinions, he seemed to have taught the same doctrine with the sect afterwards known by the appellation of nominalists. To prove that one thing cannot be predicated of another, he said, that goodness and man, for instance, are different things, which cannot be confounded by asserting the one to be the other; he argued farther, that goodness is a universal, and universals have no real existence : consequently, since nothing can-not be predicated of any thing, goodness cannot be predicated of man. Thus, whilst this subtle logician was, through his whole argument, predicating one thing of another, he denied that any one thing could be the accident or predicate of another. If Stilpo was serious in this reasoning ; if he meant any thing more than to expose

the sophistry of the schools, he must be confessed to have been an eminent master of the art of wrangling ; and it was not wholly without rea-son that Glycera, a celebrated courtezan, when she was reproved by him as a corrupter of youth, replied that the charge might be justly retorted upon himself, who spent his time in filling their heads with sophistical quibbles and useless subtilties. In ethics he seems to have been a Stoic, and in religion he had a public and a private doctrine, the former for the multitude, and the latter for his friends. He admitted the existence of a supreme divinity, but had too much sense to reverence the Grecian superstitions.

STILTS, n. s. Sax j-toelcan ; Swed. styltcr. Supports on which boys raise themselves when thev walk.

Some could not be content to walk upon the battlements, but they must put themselves upon stilts, tfowel's England's Tear*.

Ihe heron, and such like fowl that live of fishes walk on long stills like the people in the marshes. More against Atheism.

Men must not walk upon stilts. L' Estrange.

STIMULATE, v.a. } Latin stimulo. To

STIMULA'TION, n. s. i prick ; to prick forward; excite; urge by a pungent motive: in physic, to excite a quick sensation, with a derivation towards the part : the noun substantive corresponding.

Extreme cold stimulates, producing first a rigour, and then a glowing heat ; those things which stimulate in the extreme degree excite pain.

Arbuthnot on Diet.

Some medicines lubricate, and others both lubricate and stimulate. Sharp.

Some persons, from the secret stimulation!; of vanity or envy, despise a valuable book, and throw contempt upon it by wholesale. Watts on the Mind.

STIMULI (Lat.) stimulus ; in botany, a species of armature or offensive weapon, witli which some plants, as nettle, cassada, acalypha, and tragia are furnished. Their use, says Linnaeus, is by their venomous punctures to keep off naked animals that would approach to hurt

them.

STIMULI, stimulants, or exciting powers, in the new system of medicine, comprehend every thing that can affect the human body, or mind, inwardly or outwardly. These Dr. Brown divides into internal and external ; and the latter he subdivides into durable and diffusible. See BRUNOMAN SYSTEM.

STING, v. a. & n. .- . ˆ Pret. I sturig or stang ;

STING'LESS, adj. Spurt, pass, stang or stung. Sax. r-tmˆan ; Isl. stungen, sore pricked. To pierce or wound with a darted point, as that of wasps or scorpions; to pain acutely: any thing that gives a sharp pain or morbid.sensation ; the point of an epigram.

The snake, rolled in a flow'ry bank, With shining checkered slough, doth sting a child That for the beauty thinks it excellent. Shakspeare.

His unkindness,

That stript her from his benediction, turned her To foreign casualties, gave her dear right To his doghearted daughters ;, these things sting him So venomously that burning shame detains him From his Cordelia. !»•

Serpents have venomous teeth, which are mistaken for their st ing. Bacon's Natural History.

His rapier was a hornet's sting, It was a very dangerous thing ; For if he chanced to hurt the king, It would be long in healing. Drayton,

He hugs this viper when he thinks it stingiest

Decay <f I1 inn.

That snakes and vipers tting, and transmit their mischief by the tail, is not easily to he justified ; the poison lying about the teeth, and communicated by the bite. Biwriir.

It is not the jerk or sting of an epigram, nor the seeming contradiction of a poor antithesis.

Dry /<•« .

No more I wave To prove the hero— slander stings the brave. /'«/*.

The stinging lash apply.

The Jews receiving this book originally with such sting in it, shews that the authority was high. J I in Acs.

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The STING is an apparatus in the bodies of certain insects, in form of a little spear, serving them as a weapon of offence. See BEE.

STING-RAY, in ichthyology. See RAIA.

STIN'GY, adj. Ital. stenau. A low cant word. Covetous ; niggardly ; avaricious.

A stingy narrow-hearted fellow, that had a deal of choice fruit, had not the heart to touch it till it be-gan to be rotten. L'Estrange.

He relates it only by parcels, and won't give us the whole ; which forces me to bespeak his friends to eugage him to lay aside that ttingy humour, and graj lify the publick at once.

Arbuthnot's History of John Bull.

STINK, v. n. & rz. s. ˆ P-et. I stunk or

STINK'ER, n.s. f stank. Sax. j-rinian ;

STINK'INGLY, adv. ˆBelgic and Teutonic

STINK'POT, n. s.) stincken ; Swed. stinka.

To emit an offensive smell, commonly a smell of putrefaction : a smell of this kind : a stinker is something intended to emit such a smell : the adverb corresponds with the verb neuter : and stinkpot is a name given to a composition peculiarly offensive to the smell.

When the children of Ammon saw that they stunk before David, they sent and hired Syrians.

2 Sam. x. 6.

John, it will be stinkiny law for his breath.

Shakspeare.

Those stinks which the nostrils straight abhor are not most pernicious ; but such airs as have some similitude with man's body, and so betray the spirits. Bacon's Natural History.

The air may be purified by burning of stinkpots or stinkers in contagious lanes. Harvey.

They share a sin, and such proportions fall, That, like a stink, ‘tis nothing to them all.

Dryden.

What a fool art thou to leave thy mother for a nasty stinking goat ! L’Est-ange.

Most of smells want names ; sweet and stinking “serve our turn for these ideas, which is little more than to call them pleasing and displeasing. Locke.

Chloris, this costly way to stink give o’er, Tis throwing sweet into a common shore ; Not all Arabia would sufficient be ; Thou smell’st not of thy sweets, they stink of thee.

GranviUe.

By what criterion do ye eat, d’ ye think, If this is prized for sweetness, that for stink. Pope.

The STINKPOT is an earthen jar or shell charged with powder, grenadoes, and other materials of an offensive and suffocating smell. It is frequently used by privateers, in the western ocean, in the attack of an enemy whom he designs to board ; for which purpose it is furnished with a light fuse at the opening or touch-hole. See BOARDING.

STINT, v. a. & n. s. Swed. and Goth, stynta ; Isl. stunta. To bound ; limit ; restrain ; stop : a limit; bound; restraint: hence a portion or assigned quantity.

Then hopeless, heartless, ‘gan the cunning thief, Persuade us die, to stint all further strife. Spenser.

The reason hereof is the end which he hath proposed , and the law whereby his wisdom hath stinted the effects of his power in such sort that it doth not work infinitely, but correspondently, unto that end for which it worketh. Hooker.

Touching the stint or measure thereof, rites and ceremonies, and other external things of the like na-

ture, being hurtful unto the church, either in respect of their quality, or in regard of their number ; in the former there could be no doubt or difficulty what would be done; their deliberation in the latter was more difficult. Id.

Our stint of woe

Is common ; every day a sailor's wife The masters of some merchant, and the merchant, Have just our theme of woe. Shakspeare.

He that gave the hint, This letter for to print, Must also pay the stint. Denham.

Nature wisely stints our appetite, And craves no more than undisturbed delight.

Drifden.

The exteriors of mourning, a decent funeral, and black habits, are the usual stints of common husbands. Fd.

A supposed heathen deity might be so poor in his attributes, so stinted in his knowledge, that a Pagan might hope to conceal his perjury from his notice.

Addison.

I shall not go about to extenuate the latitude of the curse upon the earth, or stint it only to the production of weeds ; but give it its full scope, in an universal diminution of the fruitfulness of the earth.

Woodward.

How much wine drink you in a day ? my stint in company is a pint at noon. Swift.

Few countries which, if well cultivated, would not support double their inhabitants ; and yet fewer where one-third are not extremely stinted in necessaries. Id.

She stints them in their meals, and is very scrupulous of what they eat and drink, and tells them how many fine shapes she has seen spoiled in her time for want of such care. Law. '

STIPA, feather-grass, in botany, a genus of plants belonging to the class of triandria and order of digynia; and in the natural system ranging under the fourth order, gramina. The calyx is bivalved. The exterior valve of the corolla is terminated by an awn; the base is jointed. There are nine species; *viz.* 1. S. ar-guens; 2. aristella; 3. avenacea; 4. capillata; 5. juncea; 6. membranacea ; 7. pennata; 8. spicata ; and, 9. tenacissima. Of these only one is British ; *viz.* S. pennata,

the common feather-grass. The beards are feathered. The plant rises to ten inches, grows on mountains, ajid flowers in July or August.

STI'PEND, n. s.) Lat. stipcndium.

STIPENDIARY, adj. &n. s. J Wages; settled pay : stipendiary is receiving salaries or a stated price : he who receives such price.

His great stipendiary prelates came with troops of evil appointed horsemen not half full.

Knolles's History. All the earth

Her kings and tetrarchs, are their tributaries ; People and nations pay them hourly stipends.

Ben Jonson.

This whole country is called the kingdom of T unis ; the king whereof is a kind of stipendiary unto the Turk. Abbot.

St. Paul's zeal was expressed in preaching without any offerings or stipend. Taylor.

If thou art become

A tyrant's vile stipendiary, with grief That valour thus triumphant I behold Which, after all its danger and brave toil Deserves no honour from the gods of men. Glover.

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Place rectors in the remaining churches, which are now served only by stipendiary curates. Swift.

STIPEND, among the ancient Romans, signified the same with tribute : and hence stipendiarii were the same with tributarii.

STIPULA, in botany, one of the fulcra or props of plants, defined by Linnaeus to be a scale, or small leaf, stationed on each side the base of the footstalks of the flower and leaves, at

He did keep

The deck, with glove, or hat, or handkerchief, Still waving, as the stirs and fits of ‘s mind Could best express how slow his soul sailed on How swift his ship. [d, Cymbelme.

A perpetual spring, not found elsewhere but in the Indies only, by reason of the sun’s neighbourhood, the life and stirrer up of nature in a perpetual activity. RaleiKh.

Preserve the right of thy place, but stir not ques-

their first appearance, for the purpose of sup-tions of jurisdiction; and rather assume thy rigluTn port. Elmgren restricts it to the footstalks of silence, than voice it with claims. Bacon,

the leaves only.

STIPULATE, v. n.)

STIPULATION, n. s. $ pulor. To contract; bargain ; settle terms : the noun substantive corresponding.

We promise obediently to keep all God’s commandments ; the hopes given by the gospol depend on our performance of that stipulation. Rogers.

The Romans very much neglected their maritime

Being advertised of some stirs raised by his unna—

Fr. stipuler ; Lat. sti-tu.ral sons in England, h* departed out of Ireland without a blow, Davies.

Tumultuous stirs upon this strife ensue. Dray ton.

Nestor next beheld The subtle Pylian orator range up and down the

field, Embattelling his men at armes, and stirring all to

blows. Chapman.

He did make these stirs, grieving that the name

~ . - , • .” … i .1 ,-, ,, . . •”<: “‘u maivc uiiese stin, yiieviuij uiai ill

affairs ; for they stipulated with the Carthaginians to of Christ was at all b ht fnto ˆ

tnrmch thorn ix/itn chine tr»r Trsnenftrt nmi wnr -r-r . .. .°

furnish them with ships for transport and war.

Arbuthnot.

STIPULATION, in the civil law, the act of stipulating, that is, of treating and concluding terms and conditions to be inserted in a contract. Stipulations were anciently performed at Rome with abundance of ceremonies ; the first whereof was, that one party should interrogate and the other answer to give his consent and oblige himself. By the ancient Roman law nobody could stipulate for himself; but as the tabelliones were pub-lic servants they were allowed to stipulate for their masters; and the notaries succeeding the tabelliones have inherited the same privilege.

STIR, v. a., v. n., & n. s. Sax. f tinian ; Belg. stooren ; Teut. stoeren. To move ; remove from its place : hence to raise ; excite ; agitate ;

He hath spun a fair thread, to make all this stir for such a necessity as no man ever denied.

Bishop BramhalL.

Tell, said the soldier, miserable Sir, Why all these words, this clamour, and this stir ? Why do disputes in wrangling spend the day ?

Den/tarn.

The vigorous spirit of Montrose stirred him tip to make some attempt, whether he had any help or no.

Clarendon.

They had the semblance of great bodies behind. on the other side of the hill ; the falsehood of which would have been manifest as soon as they should move from the place where they were, and from whence they were not to stir. Id.

Such mirth the jocund flute or gamesome pipe Stirs up among the loose unlettered hinds. Milton. Raphael, thou hearest what stir on earth

taking up (intens.) : as a verb neuter, to move Satan, from hell ‘scaped through the darksome gulf,

~-*: Hath raised in Paradise, and how disturbed

This night the human pair. Id.

One judgment in parliament, that cases of that nature ought to be determined according to the com-mon law, is of greater weight than many cases to

one’s self; change place ; be in motion : a commotion ; public disturbance ; agitation of the thoughts or passions.

Hell is moved for thee, to meet thee at thy coming ; it stirreth up the dead for thee. Isaiah xiv. 9.

The words of Judas were very good, and able to the contrary, wherein the question was no

stir them up to valour. 2 Maccabees xiv. 17.

The greedy thirst of royal crown, That knows no kindred, no regards, no right, Stirred Porrex up to put his brother down. Spenser. No power he had to stir, nor will to rise. Id.

yea, even though it should be stirred, and the contrary affirmed. Male.

The great stirs of the disputing world are but the conflicts of the humours. Olnnrillf.

The improving of his own parts and happiness

Whensoever the earl shall die, all those lands are stir$ him up to so notable a design.

More against Atheism.

After all this s(ir about them, they are good for nothing. TUlotim

Spenser's Ireland. My foot I had never yet in five days been able to

Having overcome and thrust him out of his king-stir, but as it was lifted.

to come unto her majesty ; he is like to make a foul stir there, though of himself of no power, yet through supportance of some others who lie in the wind.

dom, he stirred up the Christians and Numidians against him. Knolles.

With him is come the mother queen : An Ate stirring him to blood and strife.

Sftakspeare.

If you itir these daughters' hearts Against their father, fool me not so much To bear it tamely. Id. King Lear.

Come on ; give me your hand, Sir ; an early ttirrer. Shakspeare

The soldiers love her brother's memory, And for her sake some mutiny will stir. Dryden.

To stir tip vigour in him, employ him in some constant bodily labour.

Consider, after so much stir about genus at species, how few words we have yet settled definitions of.

Silence is usually worse than the fiercest loudest accusations ; since it proceeds from a kind of numbness or stupidity of conscience, and an aL>-

rrer. anamveure. — i — J . I

If the gentlewoman that attends the general's solute dominion obtained by sin over

*» CMu «

wife besting, tell her there's one Cassio entreats of her a little favour of speech. Id. Othello.

What hallooing and what stir is this to-day 1

hall not so much as d« *» snr. J~

Thou with rebel .nso ence die

that it make a

a aoong an wa sr s s -

These are my mates, that make their wills their law, To own and to prntec that Have some unhappy passenger in cl.ace. Shalˆmc. To rtir the factious rabble up to arms.

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STIRLING.

The great Judge of all knows every different de-gree of human improvement, from these weak stirrings and tendencies of the will, which have not yet formed themselves into regular purposes, to the last entire consummation of a good habit.

Addison’s Spectator.

The use of the passions is to stir up the mind and put it upon action, to awake the understanding, and to enforce the will. Addison.

Other spirits

Shoot through their tracts, and distant muscles fill : This sovereign, by his arbitrary nod, Restrains or sends his minister abroad ; Swift and obedient to his high command, They stir a finger, or they lift a hand. Blackmore.

Will it not reflect on thy character, Nic, to turn barreter in thy old days ; a stirrer up of quarrels betwixt thy neighbours 1 Arbuthnot.

If they happen to have any superior character, they fancy they have a right to talk freely upon every thing that stirs or appears. Watts.

We acknowledge a man to be mad or melancholy, who fancies himself to be glass, and so is afraid of stirring ,- or, taking himself to be wax, dares not let the sun shine upon him. Law.

STIR'IOUS, adj. Lat. stiria. Resembling icicles.

Chrystal is found sometimes in rocks, and in some places not much unlike the stirious or stillicidious dependencies of ice.

Browne's Vulgar Enours.

STIRLING, an ancient city of Scotland, situated on the river Forth, called also Sterling and Striveling; from the former of which Boethius and others derive the name Sterling money, because Osbeit, a Saxon prince, after the overthrow of the Scots, established a mint there. The name of Striveling is said to have been derived from the frequency of strifes or conflicts in the neighbourhood. The great street is very broad. The other streets are narrow and irregular. Stirling is in miniature a resemblance of Edinburgh, being built on a rock of the same form, with a fortress on the summit. The origin of the castle is unknown. The rock of Stirling was strongly fortified by the Picts, amongst whom architecture and other useful arts had made a considerable progress. As it lay in the extremities of their kingdom the possession of it was the occasion of frequent contests betwixt them and the Scots and Northumbrians ; each of whose dominions did for some time terminate near it. When the Scots, under Kenneth II., overthrew the Pictish empire in the ninth century (as related under S ,OTLAND) they endeavoured to obliterate every memorial of that people. They not only gave new names to provinces and towns, but, with all the rage of barbarians, demolished many magnificent edifices which had been reared up by them, and this fortress among the rest. The death of Kenneth II., the succession of Donald V., and the invasion

of Scotland by the Saxons, under Osbrecht and Ella, two Northumbrian princes, with the Cumbrian Britons, and the Picts, are recorded under SCOTLAND, with Donald's first success against them, and his fatal defeat afterwards, which ended in the total cession of all their dominions upon the south side of the Forth to the conquerors. The rebuilding of the castle of Stirling by the Northumbrians, their planting it with a strong garrison, their

erection of the stone bridge over the Forth, with the cross of separation, the Latin distich, and other circumstances so humiliating to the Scots, are also there recorded. Yet none of the ancient English historians mention this conquest. But its authenticity is confirmed by the arms of the town of Stirling, upon which is a bridge with a cross, and the last line of the Latin distich is the motto round it. In those times, however, that fortress bore no resemblance to the present structure. Its size and form resembled those castles which, under the feudal constitution, the English and Scottish barons used to erect upon tneir estates for dwelling-houses ; and which, in those barbarous ages, they fortified for their defence, both against foreign invaders and their own neighbours. It is directly such a Gothic figure as this which represents the Castrum Strivelense upon the arms of Stirling. This fortress, after it had continued in the possession of the Northumbrian Saxons about twenty years, was, together with the whole country upon the south side of the Forth, restored to the Scots upon condition of their assisting the Saxons against their turbulent invaders the Danes. Upon the arms of Stirling are two branches of a tree, to represent the Nemus Strivelense (the wood of Stirling), but the situation and boundaries of that forest cannot be ascertained. Upon the south of Stirling vestiges of a forest are still discernible for several miles. Banks of natural timber still remain in the castle park, at Murray's Wood, and near Nether Bannockburn; and stumps of trees, with much brushwood, are to be seen in all the adjacent fields. When Kenneth III. received intelligence of the Danes having invaded his dominions, he appointed the castle of Stirling to be the place of rendezvous for his army; and he marched thence to the battle of Loncarty, where, by the help of the brave Thomas Hay and his sons, he obtained a victory over those rovers in 970. See SCOTLAND. In the twelfth century this castle is spoken of as a place of great importance, and one of the strongest fortresses in the kingdom. In 1174 king William was taken prisoner in an unsuccessful expedition which he made into England ; and, after having been detained twelve months in captivity, was released upon stipulating to pay a large sum of money for his ransom ; and, until payment thereof, delivering into the hands

of the English the four principal fortresses in the kingdom; *viz.* Stirling, Edinburgh, Roxburgh, and Berwick. This was the first great ascendant that England obtained over Scotland ; and indeed the most important transaction which had passed between these kingdoms from the Norman conquest. Though the Scottish monarchs, in their perambulations through the kingdom, often visited Stirling, and held their courts in the castle, yet it did not become a royal residence till the family of Stewart mounted the throne. It was the birth-place of James II. ; and he frequently kept his court in it. It was the place where that prince performed an heroic deed, by stabbing William earl of Douglas with his own hand. Some historians call this an atrocious murder, but we differ from them. The earl had deserved death fifty times by his murders, oppressions, and other atrocities, and was at that

very time engaged in a formidable conspiracy against the king. James, therefore, after making him every offer of pardon, conciliation, and even, promotion, all which he obstinately refused, only did an act of justice and necessity, in the lawless state of government that then prevailed, by cutting off a villain who was above the law. The royal apartments were at that time in the north-west corner of the castle. The room where the earl met his well merited death still goes by the name of Douglas's room.

James III., contracting a fondness for the castle on account of its pleasant situation, made it the chief place of his residence, and added several embellishments to it. He built within it a magnificent hall, a noble structure, still entire. It is now called the parliament house, having been designed for the accommodation of that supreme court. It was covered with an oaken roof of exquisite workmanship, which, though very little decayed, was a few years ago removed to make way for one of more modern structure. James also erected a college of secular priests in the castle, which he called the chapel royal, and which proved one cause of his own ruin. As the expenses necessary for maintaining the numerous officers of such an institution were

considerable, he annexed to it the revenue of the rich priory of Coldingham, in the Merse, then vacant. This priory had long been holden by persons connected with the family of Hume ; and that family, considering it as belonging to them, strongly opposed the annexation. The dispute lasted several years ; one parliament passed a vote annexing the priory to the chapel royal ; and a subsequent one prohibited every attempt contrary to that annexation. James V. was crowned in the castle of Stirling, and the palace, which is the chief ornament of it, was the work of that prince. This is a stately and commodious structure, all of hewn stone, with much statuary work, built in form of a square, with a small court in the middle, in which the king's lions were kept; and hence it is still called the lions' den. The palace contains many large and elegant apartments : the ground story is now converted into barrack-rooms for the garrison ; the upper affords a house for the governor, with lodgings for the subaltern officers. Opposite to the palace, upon the north, stands an elegant chapel, built by James VI. for the baptism of his son prince Henry in 1594. In this chapel is preserved the hulk of a large boat, which that whimsical monarch caused to be built and placed upon carriages, to convey into the castle the provisions for that solemnity. A strong battery, with a tier of guns pointing to the bridee over the Forth, was erected during the regency of Mary of Lorrain, mother to queen Mary. It is called the French battery, because constructed by engineers of that nation. The last addition was made to the fortifications in the reign of queen Anne. Formerly they reached no farther than the old gate, upon which the flag-staff now stands ; but in that reign they were considerably enlarged upon the side towards the town ; and barracks, which are bomb-proof, with several other conveniences for a siege, were erected. Upon the south side of the castle lies a park enclosed with

a stone wall called the King's Park, and near to the foot of the rock on which the castle stands lay the royal gardens, vestiges of the walks and parterres, with a few stumps of fruit trees, still visible; but by long neglect, and the natural wetness of the soil, the place is now little better than a marsh. In the gardens is a mount of earth in form of a table, with benches of earth round it, where, according to tradition, the court sometimes held fetes champetres. In the castle-hill is a hollow, comprehending about an acre of ground, and having all the appearance of an artificial work, which was used for jousts, tournaments, and other feats of chivalry. Northward of the castle lies the Govan, or Cowling Hill ; in the middle of which is a small mount called Hurly Haaky, upon which duke Murdoch and his two sons were

executed for treason in the reign of James I. The prospect from the castle is delightful and extensive, being greatly beautified, especially upon the east, by the windings 01' /he Forth, which are so many that though the distance by land from Stirling to Alloa is, in a straight line, not quite six miles, it is twenty-four by water. The lordship and castle of Stirling were a part of the usual dowry of the queens of Scotland, after the family of Stewart came to the throne, in which they were invested at their marriage. Robert lord Erskine was appointed governor of the castle by king David II., and the office continued in that family till 1715. This fortress has been the scene of many transactions. Being by its situation considered as a key to the northern parts of the kingdom, the possession of it was always esteemed of great importance. It was undoubtedly a place of strength when the art of war by ordnance was in its infancy; and it resisted the utmost efforts of the rebels in 1746. The street on the summit of the hill is, as \ve have said, broad and spacious, but the other streets of the present town are still narrow and irregular. Considerable improvements, however, have been made within the last twenty years. On the north side of the town several new streets have been laid out, in which many new buildings have been erected, on a modern and an improved plan ; and in the old part of the town numbers of houses have also been rebuilt. At the south end of the town, on the way to Si. Ninian's, has been lately built a number of elegant villas on each side of the road ; those on the east side are said to be in Pitt Terrace, and those on the west in Melville Place. West of these, and separated from them by another road, have been built, and are now building, many fashionable houses, m a form something like an oblong, to which has been given the name of Wellington Place. The town is well supplied with excellent water, which i» brought m pipes from the hills of Touch some what more than three miles distant; and lately n new road was opened from the head of the High Street by Balenagiech, which, however, has proved to be of very little utility.

STIRLING, or STIRMKGSIIIBF, a county oi Scotland, of which Stirling is the capital. twenty miles long and twelve broad ; being bounded on the west by part of Lennox and Clydesdale; on the east by Clackmannansnire, the Forth, and part of Lothian ; on th« south-east

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by Lothian; and on the north by Monteith. The face of the country is open and agreeable, diversified by hills and dales, well watered with streams and rivers ; the principal of which is the Forth, which rising near a high mountain called Ben Lomond, and running east, forms the Frith of Edinburgh. The south part is hilly, affording plenty of game,and pasturage for sheep, horses, and black cattle. The east part is fertile, producing plentiful harvests of corn, and great abundance of coal. Lead ore is found in different parts, and the rivers abound with pike, trout, and salmon.

STIRP, n. s. Lat. stirps. Race ; family ; generation. Not used.

Sundry nations got footing in that land, of which there yet remain divers great families and stirps.

Sjtenser.

Democracies are less subject to sedition than when there are stirps of nobles. Bacon.

All nations of might and fame resorted hither ; of whom we have some stirps and little tribes with us at this day. //.

STIR'RUP, n. s. Sax. rriseriap, j-tirtap ; from prijan, to climb, and pap, a cord. An iron hoop suspended by a strap, in which the horseman sets his foot.

Neither is his manner of mounting unseemly, though he lack stirrups ; for, in his getting up, his horse is still going, whereby he gaineth way : and therefore the stirrup was called so in scorn, as it were a stay to get up ; being derived of the old English word sty, which is to get up, or mount.

Spenser.

Hast thou not kissed my hand, and held my stirrup ? Shalapeare.

His horse hipped with an old mothy saddle, the stirrup* of no kindred. Id. Taming of the Shrew.

My friend, judge not me, Thou seest I judge not thee. Between the stirrup and the ground, Mercy I asked, mercy I found. Camden's

Remains.

At this the knight ‘began to chear up, And, raising up himself on stirrup, Cried out, Victoria. Hudibras.

STIRRUP (Fr. etrier), a well known iron frame fastened to a saddle with a thong of leather for the foot of the rider to rest upon.

It is observed in a publication, entitled the Sportsman’s Dictionary, that you should bear vigorously upon your stirrup when you have your foot in it, and hold the point of your foot higher than your heel.

When you would stop your horse you must bear upon your stirrups.

You should keep your right stirrup half a point shorter than the left, for in combat the horseman bears and rests more upon the right ; which also., from the weight of the sword, carbine, &c., renders that side heavier than the left, and the pressure consequently greater. Besides, in mounting, the facility is increased by the imperceptible length of the left stirrup.

To lose one’s STIRRUPS, to suffer them to slip from the foot ; this may happen from the cox-combical practice of resting upon the toe instead of the ball of the foot, which is the true fulcrum.

STIRRUPˆ/OOˆ is the left foot.

STIRRUPS were unknown to the ancients. The want of them in getting upon horseback was supplied by agility or art. Some horses were taught

to stoop to take their uders up; bat the riders often leaped up by the help of their spears, or were assisted by their slaves, or made use of ladders for the purpose. Gracchus filled the highways with stones, which were intended to answer the same end. The same was also required of the surveyors of the roads in Greece as part of their duty.

STIRRUP OF A SHIP, a piece of timber put upon a ship’s keel when some of her keel happens to be beaten off and they cannot come conveniently to put or fit in a new piece, then they patch in a piece of timber, and bind it on with an iron, which goes under the ship’s keel, and comes up on each side of the ship, where it is nailed strongly with spikes ; and this they call a stirrup.

STITCH, v. a. & n. s.) Sax. rtician; Dan.

STITCH'ERY, n. s. \sticke; Belg. slichin.

Literally to prick : hence to sew; work with a needle on any thing; to join; unite: a stitch is a sharp pricking pain ; a single pass of a needle ; a link of yarn or thread; having a single ridge or furrow : stitchery, needle work.

It is in your hand as well to stitch up his life again, as it was before to rent it. Sidney.

If you desire the spleen, and will laugh yourself into ttitches, follow me ; yond gull Malvolio is turned heathen, a very renegado.

Shakspeare. Twelfth Night

Come lay aside your stitchet y ; play the idle house-wife with me this afternoon. Id. Othello.

Many men at plow he made, and drave earth here

and there, And turned up stitches orderly. Chapman's Iliads.

Having stitched together those animadversions touching architecture and their ornaments. Wotton.

A simple bloody sputation of the lungs is differenced from a pleurisy, which is ever painful, and attended with a stitch. Harvey on Consumptions.

A stitch-fallen cheek, that hangs below the jaw, Such wrinkles as a skilful hand would draw For an old grandam ape. Dryden.

There fell twenty stitches in his stocking.

Motleui.

I with a needle and thread stitched up the artery and the wound. Wiseman's Surgery.

STITH'Y, n. s. Sax. rti«, hard; Isl. stedie. An anvil ; the iron body on which the smith forges his work.

My imaginations are as foul As Vulcan's stithy. Shakspeare. Hamlet.

STIVE, v. a. Supposed of the same original with stew. To stuff up

close.

You would admire, if you saw them stive it in their ships. Sandy's Journey.

His chamber was commonly stived with friends or suiters of one kind or other. Wot ton.

STOB/EUS (John), a laborious Greek writer, who lived at the end of the fourth century, composed many works, of which there are only his Collections remaining, and even these are not as he composed them, many things being inserted: by later a; Ihors. This work contains many important sentiments collected from the ancient writers, poets, and philosophers, on which account it is much valued. The best editions are those of Aurel. Allob. folio, 1609, and Pans, 4to. 1623.

STOBI, a town of European Turkej, in Ma-

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cedonia, in the ancient Pceonia, forty -two miles north of Edessa. It retains its ancient name.— - Liv. 33. c. 19. 1. 40, 41.

STO’CAH, n. s. Irish stoach ; Erse stoclik. An attendant ; a wallet-boy ; one who runs at a horseman’s foot; a horseboy. Not in use.

He holdeth himself a gentleman, and scorneth to work, which he saith is the life of a peasant; but thenceforth becometh an horseboy or a stocah to some kern, inuring himself to his sword, and the gentlemanly trade of ttealing. Spenser.

STOCCADE (Nicholas de Helt), an historical and portrait painter, born at Nimeguen in 1614. He studied under Riccaert and then went to Italy. His paintings are esteemed.

STOCCA’DO, n. s. Ital. staccato, from stocco, a rapier. A thrust with the rapier.

You stand on distance, your passes, stoccados, and 1 know not what.

Shakspeare. Merry Wives of Windsor.

STOCK, TZ.S.&U.«.-\ Sax.ptoc; Goth.Swed. STOCK’JOBBER,«. s. I Teut. and Belg. stock; STOCK’ISH, adj. \Fr. estoc. The trunk or STOCK’ LOC K, n. s. I body of a plant : hence STOCK’STILL, adj.) a log ; a post : the support of a ship while building; a very stupid man; the race or lineage of a family ; any principal or capital store ; body ; quantity ; a public fund : to stock is to store ; lay up in store : ‘ stock up,’ reduce to a mere stock : a stockjobber is a com-mon jobber in the public funds : stockish, block-ish ; stupid : a stocklock, a lock fixed in a stock of wood : stockstill, motionless, as a stock.

There is hope of a tree, if cut down, that it will sprout again, though the root wax old in the earth, and the stock die in the ground. Job xiv. 8.

That furious beast

His precious horn, sought of his enemies, Strikes in the stock, ne thence can be released.

Spenser.

What tyranny is this, my heart to thrall, And eke my tongue with proud restraint to tie,

That neither I may speak nor think at all, But like a stupid stock in silence die? Id.

While we admire

This virtue and this moral discipline, Let’s be no stoieks, nor no stocks. Shakspeare.

Say what stock he springs of. — The noble house of Marcius. Id. Coriolanvs.

The poet

Did feign that Orpheus drew trees, stones, and floods ; Since nought so stockish, hard, and full of rage, But musick for the time doth change his nature.

Shakspeare.

Call not your stocks for me : I serve the king, On whose employment I was sent to you : You shall do small respect, shew to bold malice Against the grace and person of rny master, Stocking his messenger. Id. King Lear.

A king, against a storm, must foresee to a convenient stock of treasure. Bacon.

The cion over-ruleth the stock quite ; and the stock is passive only, and giveth aliment, but no motion, to the graft. Id.

Prodigal men Feel not their own stock wasting.'

Ben Jonson's Catiline. Thy mother was no goddess, nor thy stock From Dardanus ; but in some horrid rock, Perfidious wretch, rough Caucasus thee bred.

fJcihum.

The wild boar not only spoils her brandies, but stocks up her roots. Decay of Piety.

That they kept thy truth so pure of old, When all our fathers worshipped stocks and stones, Forget not. Milton.

Thou hast seen one world begin and end, And man, as from a second stock, proceed. Id.

His early virtues to that ancient stock Gave as much humour as from thence he took.

Waller.

Fresh supplies of ships, And such as fitted since the fight had been, Or new from stocks were fallen into the road.

Dryden.

Some honour of your own acquire ; Add to that stock, which justly we bestow, Of those blest shades to whom you all things owe.

Id.

Beneath one law bees live, And with one common stock their traffick drive : All is the state's, the state provides for all.

Id. Georgickt.

I, who before with shepherds in the groves Sung to my oaten pipe their rural loves, Manured the glebe, and stocked the fruitful plain.

Dryden.

If parents die without actually transferring their right to another, why does it not return to the com-mon stock of mankind? Locke.

There are locks for several purposes ; as street-door-locks, called stocklocks ; chamber-door-locks, called spring-locks ; and cupboard-locks.

Mason's Mechanical Exercises. The world begun to be stocked with people, and human industry drained those uninhabitable places.

Burnet.

'Tis the place where God promises and delights to dispense larger proportions of his favour, that he may fix a mark of honour on his sanctuary, and recommend it to the sons of men, upon the stock of their own interest as well as his own glory. South.

If a man will commit such rules to his memory, and stock his mind with portions of scripture answerable to all the heads of duty, his conscience can never be at a loss. Id.

Our preachers stand stockstill in the pulpit, and will not so much as move a finger to set off the best sermon. Addiion.

When we brought it out, it took such a quantity of air into its lungs that it swelled almost twice as big as before ; and it was perhaps on this stock of air that it lived a minute longer the second time.

Id. On Italy.

Why all this fury? What's the matter, That oaks must come from Thrace to dance?

Must stupid stocks be taught to flatter? And is there no such wood in France? Prior.

Of those stars, which our imperfect eye Has doomed and fixed to one eternal sky, Each, by a native stock of honour great, May dart strong influence, and diffuse kind heat.

<.

Springs and rivers are by large supplies continually stocked with water. Woodward.

Be ready to give, and glad to distribute, by setting apart something out of thy stock for the use of some charities. Atierlnn-y.

They had lawsuits ; but, though they spent their income, they never mortgaged the stock. Arbutlnmt.

He proposes to himself no small stock of faun-m future ages, in being the first who has undertaken this design.

As fruits ungrateful to the planter s care, On saviigertocfo inserted, learn to bear ;

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The surest virtues thus from passions shoot,

Wild nature's vigour working at the root. Pope.

Statesman and patriot ply alike the stocks, Peeres and butler share alike the box. Id.

An artificial wealth of funds and stocks was in the bands of those who had been plundering the publick.

Su-ift. The stockjobber thus from 'Change-alley goes down,

And tips you the freemen a wink ; Let me have but your vote to serve for the town,

And here is a guinea to drink. Id.

She has divided part of her state amongst them, that evtry one may be charitable out of their own ttock, and each of them take it in their turns to provide for the poor and sick of the parish. Law.

STOCK, n. s. ~\ Swed. sticka ; Belg. stikken, STOCK'ING, > to knit. Stock, in the old lan-STOCKS. j guage, made the plural stocken, which was used for a pair of stocks or covers for the legs. Stocken was in time taken for a singular, and pronounced stocking. The like corruption has happened to chick, chicken, chickens. The cravat or cloth of the neck; a covering of the leg : stocks are a prison for the legs.

In his first approach before my lady he will come to her in yellow stockings, and 'tis a colour she ab-hors. Shakspeare.

His lackey with a linen ttock on one leg, and a kersey boot hose on the other.

Id. Taming of tte Sfirew. Fetch forth the stocks : As I have life and honour, there shall he sit till noon.

Shakspeare.

Matrimony is expressed by a young man standing, his legs being fast in a pair of stocks. Peqcham.

By the loyalty of that town he procured shoes, stockings, and money for his soldiers. Clarendon.

Unless we should expect that nature should make jerkins and stockings grow out of the ground, what could she do better than afford us so fit materials for cloathing as the wool of sheep?

More against Atheism.

Stockinged with loads of fat town dirt he goes.

Dryden.

Stock-doves and turtles tell their amorous pain, And, from the lofty elm of love complain. Id.

He spent half a day to look for his odd stocking,

when he had them both upon a leg. L'Estrange.

The stocks hinder his legs from obeying the determination of his mind, if it would transfer his body to another place. Locke.

At amorous Flavio is the stocking thrown ; That very night he longs to lie alone. Pope.

The families of farmers live in the filth and nastiness, without a shoe or stocking to their feet. Swift.

STOCK, in gardening, &c. What stock is most proper for each kind of fruit, ought as well to be considered and known, as what soil is most suitable to trees ; for on these two things the future vigor of trees and the goodness of fruit equally depend. The best way for those who intend to plant is to raise their own stocks, by which they will be better assured of what they do ; but, if they should buy their trees of nurserymen, they should diligently enquire upon what stocks they were propagated. See GRAFTING.

STOCK (Christian), a celebrated German philo-logist, born at Carnburg in 1672. He became a professor in the university of Jena. He published, 1. Dissertationes de poenis Hebraeorum capitali-

bus; 2. Claris Linguae Sanctae veteris Testament! ; 3. Clavis LinguEs Sanctse Novi Testamenti. He died in 1733.

STOCKDALE (Percival), rev., was a native of Branxton, in Northumberland, where he was born about the year 1736. He was sent into Scotland for education, and studied at St. An-drew's, where he graduated, but afterwards embraced a military life, and served abroad. At length, on his return to England, he recurred to the lino of life for which he had been originally designed, and entered the church in 1759. Settling in London, he for some time continued to support himself by combining the profession of an author with that of a clergyman, till he again entered the king's service, in the capacity of chaplain to a ship, and eventually obtained the livings of Long Houghton and Lesbury in his own county. He published a series of Lectures on the Poets, an Essay on the Genius of Pope, and a Biographical Memoir of Waller, besides a volume of miscellaneous poems of no great merit, and a few sermons. He also wrote his own life with a sufficient portion of vanity. His death took place at the rectory house, in Long Houghton, in 1811.

STOCKHOLM, the capital of Sweden, is situated at the junction of the lake Maelar with an inlet of the Baltic. Its form is an irregular ob-long, extending from north to south; the waters cross it in two channels from east to west. The situation is extremely picturesque. Stockholm, strictly speaking, stands on three islands ; as, one large one to the southward called Sodermalm, a small one in the centre, another somewhat larger to the north-west, and a track of the mainland to the north, called Norrmalm. The smaller islands, or rather islets, contain forts or buildings for na-val purposes.

The central island constituted the old city, and is still the most busy part of the town, its quays being bordered by a stately range of buildings, the residences of the principal merchants. It contains the palace and other public buildings ; but, its houses being high and its streets narrow, its appearance is somewhat gloomy. We soon after, however, enter on the long streets of the Norrmalm. Of these the principal is Queen's Street, extending in a straight line more than a mile from the observatory to the side of the lake. In this part of the town are the prince's palace, the opera house, and in the centre of a square, a bronze equestrian statue of Gustavus Adolphus. The streets are at right angles to each other, but several of them are narrow and indifferently paved; a remark applicable also to the Sodei-malm, or southern division of the city, which contains but few public buildings, but has, on an eminence called the Mount of Moses, a view displaying an assemblage of rocks, houses, plantations, ships, and water, in all the variety of romantic scene: _y. The number of bridges, great and small, is twelve. The houses are built in the central part of the town, either of stone or of brick covered with plaster. Their foundations are

on piles ; their height seldom less than four or five stories ; but in the suburbs they are of only one or two stories, ‘and a number of them are of wood.

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The principal public building is the royal pa-lace, a large quadrangular structure, with a square or court in the middle. Tlie situation is elevated, and the style of the architecture grand but sim-ple. The lower part of the walls is of polished granite, and, though the upper part is of brick, a covering of stucco gives it the appearance of stone ; the roof, like that of a number of public buildings in Sweden, is of copper. In one of the halls are preserved certain relics of antiquity, brought from Italy by Gustavus III. (father of the king deposed in 1809), comprising a number of statues; among others the famous Endymion discovered in the Villa Adriana. At a short distance, on the quays, stands a fine bronze statue of Gustavus III., raised on a pedestal of polished porphyry. The palace, or house of assembling for the nobility, is an elegant edifice, ornamented on the outside with marble statues and columns, in the inside with paintings and sculptures. The arsenal, situated in a pleasant promenade called the king's garden, contains a number of trophies of the brilliant days of the Swedish monarchy, - and other objects, interesting from their connexion with the history of the country. The bank, built at the expense of the city, the mint, and the exchange, are all entitled to the notice of a stranger. After this come the hotel de ville, the royal stables, the great depot or warehouse for iron, the hospitals and philanthropic institutions. The churches are substantial, and in some cases elegant ; but it would be difficult to point out any one of them particularly remarkable for size, architecture, or decorations.

The literary societies of Stockholm are very respectable bodies. The academy of sciences, founded in 1739 by a small association which counted Linnaeus among its members, comprises 100 native and sixty foreign members. Its objects were originally agriculture, trade, and manufactures, but to these it subsequently added the mathematical and philosophical sciences. Its observatory, situated on an eminence in the upper part of the town, affords a beautiful prospect. The Swedish academy, founded by Gustavus III. in 1786, is on a more limited scale, comprising only eighteen members, and confining its labors to the improvement of the Swedish language, and to fixing, by the composition of a grammar and dictionary, on the plan of the academy of France, the standard of vernacular composition. Next in rank is the academy of fine arts, history, and antiquities ; a military academy, a patriotic and an agricultural society, an academy for painting and sculpture, and, finally, an academy of music. Here is also a medical

college, exercising a superintendence over the medical establishments of the kingdom at large. Of collections, the most interesting are the royal library (about 40,000 volumes), the cabinet of minerals, and the zoological cabinet. This city contains also a more than usual number of private collections.

Stockholm is the emporium of the central part of Sweden — the place to which its products are brought for export. Few harbours have greater depth or capacity. The only drawhack on the navigation arises from the number of small islands and detached rocks at the mouth of the inlet from the Baltic and its winding channel. The number VOL. XXI.

of vessels that enter the harbour annually is averaged at 1000. The chief exports are iron, steel, copper, pitch, tar, and timber ; the imports, colonial produce, wine, fruit, salt, and, in a limited degree, British manufactures. The extent of in-land trade becomes considerable even in this country, by the length of the lake, which extends sixty miles into the interior, with a much further prolongation by the canals of Arboga and Stroemsholm. Iron and steel articles are the chief exports. The timber is not so large as that in the southern parts of the Baltic.

The manufactures of this city are iron foundries, glass-works, sugar refineries; also leather, cotton, hats, stockings, silk, watches, clocks, mathematical .instruments, articles of gold and silver. Plates are likewise made in this city. Of late years the trade of the capital, as of the kingdom at large, has been greatly cramped by restrictions imposed partly in England, to favor the import of timber from Canada, and partly in Sweden.

Stockholm was founded in the thirteenth century and owed its increase to the commercial advantages of its situation, the court having con tinued at Upsal until the seventeenth century Since that period Stockholm has been the seat of government and the centre of commerce of the whole country. The population of the whole city and suburbs approaches to 80,000. 320 miles north-east of Copenhagen, 420 west of St Petersburg:, and 850 north-east of London. Long of the observatory 18° 3′ 30″ E., lat. 59° 20 31” N.

STOCKHOLM, an extensive province of Sweden, comprising the eastern parts of Upland and Sudermania, or the districts of Iloslagen and So-dertorn, having an area of 2736 square miles, with 100,000

“inhabitants. The city of Stockholm, with a small territory surrounding it, forms, however, a separate government.

STOCKINGS anciently were made of cloth, or of milled stuffs sewed together ; but since the invention of knitting and weaving stockings of silk, wool, cotton, thread, &c., the use of cloth stockings is given up. Dr. Howel in his History of the World, vol. ii. p. 222, relates that queen Elizabeth, in 1501, was presented with a pair of black knit silk stockings by her silk woman, and thenceforth never wore cloth ones. He adds that Henry VIII. ordinarily wore cloth hose, except there came from Spain a pair of silk stockings. Edward VL was presented wit-h a pair of silk stockings by Sir Thomas Gresham, and the present was then much taken notice of. Hence it is said that the invention of knit silk stockings originally came from Spain. Others relate thai one William Rider, an apprentice on London bridge, seeing at the house of an Italian merchant a pair of knit worsted stockings from Mantua, took the hint, and made a pair exactly like them, which he presented to William earl of Pembroke, and that they were the first of that kind worn in England in 1564. The modern stockings, woven or knit, are formed of an infinite number of _ little knots, called stitches, loops, or meshes inter minted. Knit stockings are wrought with needles made of polished iron, or brass v.-ire, which interweave the threads and form the meshes the stocking consists of. NVhen Ui

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of knitting was invented is not determined, though it has been attributed to the Scots, as it is said that the first works of this kind came from Scotland. It is added that, on this account, the company of stocking-knitters, established at Paris in 1527, took for their patron St. Fiacre, the son of a king of Scotland. Woven stockings are generally very fine ; they are manufactured in a machine made of polished iron, the structure of which it is needless to describe, as it may be seen in almost every considerable town in Great Britain. The invention of this machine is, by Mr. Anderson, attributed to William Lee, M. A. of St. John's College, Cambridge, at a period so early as 1589. Others give the credit of it to a student at Oxford at a much later period, who, it is said by Aaron Hill, was driven to it by dire necessity. This young man falling in love with an innkeeper's daughter, married her, though she had not a penny, and he by his marriage lost a fellowship. They soon fell into extreme poverty; and, their marriage producing the consequences naturally to be expected from it, the amorous pair became miserable, not so much on account of their sufferings, as from the melancholy dread of what would become of their yet unborn infant. Their only means of support was the knitting of stockings, at which the woman was very expert : ' But sitting constantly together from morning to night, and the scholar often fixing his eyes, with stedfast observation, on the motion of his wife's fingers in the dexterous management of her needles, he took it into his imagination that it was not impossible to contrive a little loom which might do the work with much more expedition. This thought he communicated to his wife, and joining his head to her hands, the endeavour succeeded to their wish. Thus the ingenious stocking loom, which is so common now, was first invented, by which he did not only make himself and his family happy, but has left his nation indebted to him for a benefit which enables us to export silk stockings in great quantities, and to a vast advantage, to those very countries whence before we used to bring them at a considerable loss in the balance of our traffic.'

STOCKPORT, a large Borough town and pa-rish in the hundred of Macclestield, Cheshire, situated on the river Mersey ; it is strictly speaking partly in Cheshire, and partly also in Lancashire, the portion in the latter county being called Heaton Norris, and united to the Cheshire part by two stone bridges over the river. On the advance of prince Charles, and his forces from Manchester, in the year 1745, Stockport old bridge was broken down to impede the march of the

rebels, and the prince was obliged to ford the Mersey, immersed to the waist in water. Stockport was a Roman station, the site of whose citadel stood upon the Castle Hill. Mr. Ormrod conjectures that Stockport was laid waste at the Norman conquest, and in this way accounts for the name not occurring in Domesday Book. The town gathered round the castle in the time of the D;spensers, and was made a free borough by Robert de Stokeport with the permission of Edward I., earl of Chester. A mayor is regularly appointed, but the office is now little more than nominal. The manorial rights at present

(1828) belong to the honorable Francis Maria Warren of Poynton. The police of the town managed by resident and neighbouring magistrates, two constables, four overseers of the poor, and four permanent churchwardens, together with commissioners of an act of parliament for better regulating the town, obtained in the sessions of 1826. It has also its gas company, as well as water works, both incorporated in the year 1825, the latter is the property of one individual. It returns two members to Parliament. There are tnree churches. The parish church of St. Mary's is a fine Gothic building erected under the authority of the act of Geo. III. c. 165, on the site of the ancient edifice. St. Pe-ter's is a plain but handsome brick building, erected at the sole expense of William Wright, esq., in the year 1765. The new fine and commodious church of St. Thomas's, built at a cost of £14,000, by the commissioners under an act for erecting additional churches, was opened for divine service September 1825. The town besides these contain four Methodist chapels, one of which built on the Lancashire side of the river, has a school room under it opened August 1826 ; and one belongs to the new connexion or followers of Kilham, another to the primitive Methodists or Ranters. Three Independent (one of these is also built on the Lancashire side). One Friends' meeting-house, one Baptist, one Catholic, and one Unitarian chapel : to most of these thej have their Sunday-schools attached, also a large school 132 feet by fifty-seven for all denominations of children, built in 1805. The national school, built by subscription in the year 1826 at a cost of upwards of £5,500, is well situated on the new line of London and Manchester road ; this road is connected to the Lancashire side by a bridge of eleven arches, which passes over several streets as well as the river, the height from the level of the water is forty-seven feet. The free grammar school was founded in the year 1487, by Sir Edmund Shaw, goldsmith and alderman of London. Has also its dispensary and fever wards.

The parish of Stockport contains fourteen townships, *viz.* Stockport,

Brnmhall, Bredbury, Brinnington, Disley, Duckinfield Etchells, or Stockport Etchells, Hyde, Marple, Norbury, Offerton, Romiley, Torkington, and Werneth. Silk was the original manufacture of this town, and the first mills in England for winding and throwing silk on the stalion principle are said to have been established here. The superior advantages of the cotton trade induced the proprietors at a subsequent period to turn their machinery to the spinning of cotton, and is now the staple manufacture of the place, together with the power loom weaving. In the year 1825 a calculation was made of them, being seventy steam engines of the power of 1960 horses; within the same limits there were 5730 power looms for weaving calicoes and shirtings, chiefly worked by such steam engines.

Stockport is seven miles south-east of Manchester, and 179 N.N.W. of London.

STOCKS, or public funds, in England. By the word stock was originally meant a particular

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sum of money contributed to the establishing of a fund to enable a company to carry on a certain trade, by means of which the person became a partner in that trade, and received a share of the profit made thereby, in proportion to the money employed. But this term has been extended farther, though improperly, to signify any sum of money which has been lent to the government, on condition of receiving a certain interest till the money is repaid, and which makes a part of the national debt. As the security both of the government and of the public companies is esteemed preferable to that of any private person, as the stocks are negociable and may be sold at any time, and as the interest is always punctually paid when due ; so they are thereby enabled to borrow money on a lower interest than what could be obtained from lending it to private persons, where there must be always some danger of losing both principal and interest. But as every capital stock or fund of a company is raised for a particular purpose, and limited by parliament to a certain sum, it necessarily follows that when that fund is completed no stock can be bought of the company ; though shares already purchased may be transferred from one person to another. This being the case, there is frequently a great disproportion between the original value of the shares and what is given for them when transferred ; for, if there are more buyers than sellers, a person who is indifferent about selling will not part with his share without a considerable profit to himself; and, on the contrary, if many are disposed to sell, and few inclined to buy, the value of such shares will naturally fall in proportion to the impatience of those who want to turn their stock into specie. A stock may likewise be affected by the court of chancery ; for, if that court should order the money, which is under their direction, to be laid out in any particular stock, that stock, by having more purchasers, will be raised to a higher price than any other of the like value. Hence the reader will perceive how much the credit and interest of the nation de-pend on the support of the public funds. While the annuities and interest for money advanced are there regularly paid, and the principal insured by both prince and people (a security not to be had in other nations), foreigners will “end us their property, and all Europe be interested in our welfare ; the paper of the companies will be converted into money and merchan dise, and Great Britain can never want cash to carry on her necessary expences either for peace or war.

STOCKS, n. s. Ital. stocco, a rapier. Thrust; a stoccado.

To see thee here, to see thee there ; to see thee pass thy puncto, thy stock thy reverse. Sliakspeare.

STOCKS, a frame erected on the shore of a river or harbour, whereon to build shipping. It generally consists of a number of wooden blocks, ranged parallel to each other, at convenient distances, and with a gradual declivity towards the water.

STOCKS, a wooden machine to put the legs of offenders in, for securing disorderly persons, and

by way of punishment in divers cases, ordained by statute, &c.

STOCKTON, a market town in Stockton ward, Durham, situate on the river Tees, four miles from Yarm, and 241 north of Lon-don. It consists chiefly of one main street, nearly half a mile long and sixty yards broad, the houses being neatly built of brick ; it is considered, by its recent improvements, to be the handsomest town in the north of England. In the centre of this street stands the town house, a handsome building erected in 1744, in which is a court room, an elegant suite of assembly rooms, and other apartments for public uses ; adjoining it is a commodious piazza for the use of the market. South of the town-house is a handsome column of the Doric order, thirty-three feet high, where the market is held. There are several inferior streets, or rather lanes, leading to the river, where there is a custom-house under the proper officers. The whole of the town is well paved, and lighted with gas. The church is a handsome brick structure. At the west end is a tower, eighty feet high, containing six bells. The whole was erected in 1712, previous to which it was only a chapelry to the mother church of Norton. Here is a grammar and charity school. Several alms houses, a public dispensary, and many other useful and benevolent institutions. The bridge over the Tees is an elegant structure of five arches, the span of the centre arch being seventy-two feet, twenty-three feet high from low water, and twenty-one feet broad; it was finished in 1771. Opposite the church is a Presbyterian meeting-house. In the outskirts of the town are a Quaker's meeting-house, a Roman Catholic chapel, a large chapel for Methodists, and a small one for Baptists. The manufactures of Stockton are principally those of sail-cloth, ropes, damask, drapery, huck-aback, and linen, &c., besides which it carries on trade to a great extent with the Baltic, Ham-burgh, Norway, and Holland. Vessels from forty to 400 tons are annually built here. Its ancient castle was dismantled during the civil war, and the only stone houses in Stockton have been built from its

ruins. The borough is governed by a mayor, alderman, and a recorder, who is always steward of the bishop's courts leet and baron. That part which constitutes the borough is all freehold; and the other buildings added to the original town are copyhold or leasehold, «nder the vicar, and not within the jurisdiction of the borough; each part having its distinct constable. Here are two banks, tin-Stockton and Cleveland, and the Tees hanks. The market day on Wednesday is well supplied with corn, coal, provisions, and vegetables. The church is a vicarge, under the bishop of Durham, and having been made a parish, by a late act of parliament, it pays one-third part of the first fruits, tenths, &c., for the parish of Norton, as a recompense for its separation.

STOEBE, bastard ˆEthiopian elchrysum, a genus of plants belonging to the class of syngenesia, and order of polygaraia segregata ; and in the natural system ranging under the forty-ninth order, composite. The calycleisun.no

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rous ; the corollets are tubular and hermaphrodite ; the receptacle is naked, and the pappus is leathery. There are nine species; viz, 1. S. ˆthiopica; 2. disticha; 3. ericoides; 4. gna-phaloides ; 5. gomphaloides ; 6. prostrata ; 7. reflexa ; 8. rhinocerotis ; and, 9. scabra. They are all natives of foreign countries.

STOECHADES, in ancient geography, five small islands in the Mediterranean, on the coast of Gaul (Lucan. iii. 516, Strabo 4), now called Hieres. See HIERES.

STOENI, an ancient nation, who lived among the Alps.

STOFLER (John), a German mathematician, born in Suabia, in 1452. He taught mathematics at Tubingen, and published several books with great reputation ; but, being addicted to astrology, he sunk his fame, as Nathaniel Bras-sey Halhed, esq., did in our own day, by predicting a great deluge to happen in 1524, which excited a general terror all over Europe. He lived to see himself laughed at, by the failure of his prophecy; and died in 1531.

STOICS, the name given to a sect of Grecian philosophers, from Sroa, the porch in Athens, which the founder of the sect chose for his school. For the peculiar tenets of this sect, see MORAL PHILOSOPHY, and ZENO.

STOK ESLEY, a market town and parish in Langbarough wap. North-Riding of York, seven miles from Yarm, and 235 north-west from London. It consists of one well-built and long street, on the banks of the Wisk, which flows to the Tees. A modern church has been built at the eastern extremity of the town. Petty sessions are held here. The town became a place of consequence so early as the Norman conquest. Market on Saturday. Fairs, Saturday before Palm Sunday, first Saturday after May 4th, and once a fortnight till Saturday before Trinity Sunday, the first Saturday in October, and the second Saturday in November.

STOKE-U PON-TRENT, a town and parish of England, in the county of Stafford, and in the north division of the hundred of Prirehill. It is a place |of considerable traffic, situated within two jmiles of Newcastle-under-line, and 152 miles from London. Extensive potteries are established here; and traffic is much promoted by the navigable river

Trent, and the Mersey canal, which pass by the place, and on the forum of which, are several potteries. There are two churches ; the more ancient ‘containing a tablet to tlie memory of Josiah Wedgewood, of Etruria ; and the living is ta rectory in the diocese of Lichfield and Coventry. The Independents, Wesleyans, and New Connexion Methodists, have chapels here. The population amounts to 52,946 ; and, by the provisions of the Reform Bill, this town returns two members to parliament.

STOLE, n. s. Lat. stola. A long vest.

STOLE, a sacerdotal ornament worn by the Romish parish priests above their surplice, as a mark of superiority in their respective churches ; and by other priests over the alb, at celebrating of mass, in which case it goes across the stomach ; and by deacons over the left shoulder, scarf wise ; when the priest reads the gospel for

any one, he lays the bottom of his stole on his head. The stole is a broad swath, or slip of stuff, hanging from the neck to the feet, with three crosses thereon.

STOLE, GROOM OF THE, the eldest gentleman of his majesty’s bed-chamber, whose office it is to present and put on his majesty’s first garment, or shirt, every morning, and to order the things in the chamber.

STOLIDITY, n. s. Fr. stoliditl; Lat. stoli-dus. Stupidity ; want of sense.

STOM’ACH, n.s.,v, a.,&v.n.ˆ\ Fr. esto-STOM’ACHED, adj. j much ; Lat.

STOM’ACHER, n. s. & adj. f slomachus.

STOM’ACHFUL, ˆThe ventri—

STOMACH’ICAL, (cle in which

STOM’ACHIC, \food is di—

STOM’ACHOUS. J gested ; appetite or desire of food : hence inclination ; liking; dislike; anger; violence or sullenness of temper ; pride : to stomach is to resent ; as a verb neuter, to be angry : stomached, filled with resentment : stomacher, a female covering of the stomach or breast : stomachful, sullen ; obstinate : stomachic and stomachical, relating to or adapted for the stomach : stomachous,

sullen ; stout ; stubborn.

Instead of a stomacher, a girding of sackcloth.

Isa. iii. 24.

That stranger knight in presence came, And goodly salved them ; but nought again

Him answered, as courtesy became ; But with stern looks, and stomachovs disdain, Gave signs of grudge and discontentment vain.

Spenser.

Disdaia he called was, and did disdain To be so called, and who so did him call :

Stern was his look, and full of stomach vain, His portance terrible, and stature tall. Id.

If you are sick at sea,

Or sfomocA-qualmed at land, a dram of this Will drive away distemper.

Shakspeare. Cymbeline.

Tell me, what is ‘t that takes from thee Thy stomach, pleasure, and thy golden sleep ?

Shakspeare.

He which hath no stomach to this fight, Let him depart. Id. Henry V

He was a man

Of an unbounded stomach, ever ranking

Himself with princes. Id. Henry VIII.

High stomached are they both, and full of ire ; In rage deaf as the sea, hasty as fire. Shakspeare.

Golden quoifs and stonmchers, For my lads to give their dears. Id. Winter's Tale.

The Vinusual distance of time made it sulijpct to every man's note, that it was an act against his stu-mach, and put upon him by necessity of state.

Bacon's Henry VII.

Thou marry'st every year

The lyrick lark, and the grave whispering dove, The sparrow that neglects his life for love, The household bird with the red stomacher. Donne.

Instead of trumpet and of drum, That makes the warrior's stomach come.

Butkr.

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A stomachful boy, pjt to school, the whole world .ould not bring to pronounce the first letter.

L' Estrange.

The lion began to show his teeth, and to stomach the affront. Id.

The very trade went against his stomach. Id.

Not courage, but stomach, that makes people break rather than they will bend. Id.

This sort of crying proceeding from pride, obstinacy, and stomach, the will where the fault lies, must be bent. Locke.

Obstinate or stomachful crying should not be permitted, because it is another way of encouraging those passions which 'tis our business to subdue. Id.

This filthy simile, this beastly line, Quite turns my stomach. Pope.

By a catarrh the stomachical ferment is vitiated.

Flayer.

STOMACH, in anatomy, is a membraneous receptacle, situated in the epigastric region, which receives the food from the oesophagus ; its figure is somewhat oblong and round : it is largest on the left side, and gradually diminishes towards its lower orifice, where it is the least. Its superior orifice, where the oesophagus terminates, is called the cardia; the inferior orifice, •where the intestine begins, the pylorus. The anterior surface is turned towards the abdominal muscles, and the posterior opposite the lumbar vertebrae. It has two curvatures : the first is called the great curvature of the stomach, and extends downwards from one orifice to the other, having the omentum adhering to it ; the second is the small curvature, which is also between both orifices, but superiorly and posteriorly. The stomach, like the intestinal canal, is composed of three coats, or membranes: 1. The outermost, which is very firm, and from the peritonaeum. 2. The muscular, which is very thick, and composed of various muscular fibres; and, 3. The innermost, or villous coat, which is covered with

exhaling and inhaling vessels, and mucous. These coats are connected together by cellular membrane. The glands of the stomach which separate the mucous are situated between the villous and muscular coat, in the cellular structure. The arteries of the stomach come chiefly from the cceliac artery, and are distinguished into the coronary, gastro-epiploic, and short arteries ; they are accompanied by veins •which have similar names, and which terminate in the vena portse. The nerves of the stomach are very numerous, and come from the eighth pair and intercostal nerves. The lymphatic vessels are distributed throughout the whole substance, and proceed immediately to the thoracic duct. The use of the stomach is to excite hunger and partly thirst, to receive the food from the oesophagus, and to retain it, till, by the mo-tion of the stomach, the admixture of various fluids, and many other changes, it is rendered fit to pass the right orifice of the stomach, and afford chyle to the intestines. See ANATOMY, Index.

STOMACHICA PASSIO, a disorder in which these is an aversion to food ; even the thought of it begets a nausea, anxiety, cardialgia, an effusion of saliva, and often a vomiting. Fasting is more tolerable than eating; if obliged to cut, a pain follows that is worse than hunger itself.

STOMACHICS are medicines that strengthen the stomach and promote digestion, &c. Stomachic corroboratives are such as strengthen the tone of the stomach and intestines ; among which are carminatives, as the roots of galangals, red gentian, zedoary, pimpinella, calamus aroina-ticus, and arum. Of barks and rinds, those of canella alba, sassafras, citrons, Seville and China oranges, &c. Of spices, pepper, ginger, cloves, cinnamon, cardamums, and mace. All these will be found occasionally useful, but the best of all corroboratives, according to the new sys-tem of medicine, are air, exercise, and fresh ani-mal food; which last, when the stomach is too weak to digest it in a solid form, should !,c given in the form of beef tea or veal or chicken broth.

STOND, n. s. For stand. Post; station. Obsolete.

On the other side, the assieged castle’s ward Their stedfast stands did mightily maintain. Spenser.

There be not stands nor restiveness in a man’s na-ture ; but the wheels of his mind keep way witli the wheels of his fortune. Bacon’s Esau us.

STONE, n. s., adj., & v. a. ~] Saxon ptan ; STONE’CROP, n. s. Gothic

slain;

STONE’CUTTER, Belgic stcen ;

STONE’FRUIT, Swedisli stcn ;

STONE’HORSE, ˆ Teut. stein. A

STONE’PIT, [body insipid,

STONE’PITCH, hard, not duc—

STONE’WORK, tile or malleable,

STONINESS, nor soluble in

STONY, adj. J water. — Woodward. A piece of building stone ; a monument ; a gem; a calculous secretion ; the disease arising therefrom ; the case of certain seeds ; testicle ; a weight (for which a stone was formerly used) ; a state of insensibility : ‘to leave no stone unturned ‘ is to do all we can to produce an effect : stone, adjective, is made of stone : to stone, to pelt; beat; kill with stones; also to harden : a stonecrop is a kind of tree : a stonecutter, one whose trade is to hew or cut stones : stonefnvit, that which contains a stone : stonehorse, a horse not castrated : stonepit a quarry : stonepitch, hard inspissated pitch ; the other noun substantives and the adjectives correspond.

These people be almost ready to stone me.

Erod. xvii. 4.

Now let the stony dart of senseless cold Pierce to my heart and pass through every side.

Spenser.

The stony hardness of too many patrons’ hearts, not touched with any feeling in this case. Hooker.

Eight yards of uneven ground is threescore and ten miles a-foot with me, and the stony hearted villains know it. Suibpeare. Oh perjured woman ! thou dost stone my heart ; And mak’st me call what 1 intend to do A murder, which 1 thought a sacrifice. Id. Othello.

I thought I saw

Wedges of gold, great anchors, heaps of pearl. Inestimable stones, unvalued jewels.

Id. Richard ill. With love’s light wings did 1 o’erperch these

walls ; For stony limits cannot hold love out.

Id. Rtnntn <”’’ Juliet

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Present her at the leet, Because she bought stone jugs, and no sealed quarts.

Shakspeare.

What need you be so boisterous rough 1 I will not struggle, I will stand stone still.

Id. King John.

The Egyptian mummies are reported to be as hard as stonepitch. Bacan's Natural History.

To make fruits without core or stone is a curiosity.

Bacon.

The English used the stones to reinforce the pier.

Huuicard. Five sharp smooth stonet from the next brook he

chose,

And fits them to his sling. Cowley.

He hath some stoniness at the bottom. Hammond.

Nor slept the winds

Within their stony caves, but rushed abroad From the four hinges of the world, and fell On the vext wilderness, whose tallest pines, Though rooted deep as high and sturdiest oaks, Bowed their stiff necks, loaden with stormy blasts, Or torn up sheer. Milton's Paradise Regained.

From the stony Maenalus Bring your flocks, and live with us. Milton.

And there lies Whacum by my side, Stojie dead, and in his own blood dyed. Hadibras.

Women, that left no stone unturned In which the cause might be concerned, Brought in their childrens' spoons and whistles, To purchase swords, carbines, and pistols. Id.

We gathered ripe apricocks and ripe plums upon one tree, from which we expect some other sorts of itonefruit. Boyle.

A specifick remedy for preventing of the stone, I take to be the constant use of alehoof-ale. Temple.

He crimes invented, left unturned no stone To make my guilt appear, and hide his own.

Dryden.

As in spires he stood, he turned to stone ; The stony snake retained the figure still his own.

Id.

She had got a trick of holding her breath, and lying at her length for stone dead. L' Estrange.

Small gravel or stoniness is found therein.

Mortimer.

They make two walls with flat stones, and fill the space with earth, and so they continue the stonework.

Id.

Where there is most arable land, stnnehorses or geldings are more

necessary. Id. Husbandry.

Stonecrop tree is a beautiful tree, but not common.

Mortimer.

Relentless time, destroying power, Whomsrone and brass obey. Parnel.

There is one found in a stonepit. Woodward.

They suppose these bodies to be only water petrified, or converted into these sparry or stony icicles.

Id.

A gentleman supposed his difficulty in urining proceeded from the stone. Wiseman's Surgery.

A stonecutter's man had the vesicula; of his lungs so stuffed with dust, that, in cutting, the knife went as if through a heap of sand.

Derham's Physico-Theology.

Crucifixion was a punishment unknown to the Jewish laws, among whom the stoning to death was the punishment for blasphemy. Stephens'* Sermons.

The name Hexton owes its original to the stoniness of the place. Hearne.

Should some relenting eye Glance on the stone where our cold reliques lie.

Pope. A have not yet forgot myself to stone. Id.

The cottagers, having taken a country-dance together, had been all out, and stood stone still with amazement. Id.

My prosecutor provided me a monument at the stonecutter's and would have erected it in the parish church. Swift.

Indifference clad in wisdom's guise, All fortitude of mind supplies ; For how can stony bowels melt, In those who never pity felt > Id.

In the next place there are they who are described as having received

the seed in a stony soil, or on a rock under a very shallow bed of earth : such, I mean, who having heard the message of pardon, life, and glory, which the word of the gospel brings, immediately receive it with a transport of joy — but, as they have no root of deep conviction and real love-to holiness in themselves, they have no true impression of the power of it on their hearts.

Doddridge on Matt. xiii.

STONE (Edmund), a distinguished self-taught mathematician, was born in Scotland ; but neither the place nor time of his birth are well known ; but it is said on the authority of Chevalier Ramsay, author of the Travels of Cyrus, that he was son of a gardener of the duke of Argyle. At eighteen years of age his acquired merits were discovered by the duke, who drew him out of his obscurity, and provided him with an employment which left him plenty of time to apply himself to the sciences. Mr. Stone was author and translator of several useful works; *viz.* 1. A New Mathematical Dictionary, in 1 vol. 8vo., first printed in 1726. 2. Fluxions, in 1 vol. 8vo., 1730. The Direct Method is a translation from the French, of Hospital's Analyse des Infiniments Petits ; and the Inverse Method was supplied by Stone himself. 3. The Elements of Euclid, in 2 vols. 8vo., 1731 ; with an account of the life and writings of Euclid, and a defence of his elements against modern objectors ; with other smaller works. Stone was F. R. S., and had inserted in the Philosophical Transactions (vol. xli. p. 218) an 'Account of two species of lines of the third order, not mentioned by Sir Isaac Newton or Mr. Stirling.'

A letter from the chevalier de Ramsay, author of the Travels of Cyrus, in a letter to father Castel, a Jesuit at Paris, and published in the Memoires de Trevoux, gives the following interesting particulars of Mr. Stone's early life : — 'True genius overcomes all the disadvantages of birth, fortune, and education ; of which Mr. Stone is a rare example. Born a son of a gardener of the duke of Argyle, he arrived at eight years of age before he learnt to read. By chance a servant having taught young Stone the letters of the alphabet, there needed nothing more to discover and expand his genius. He applied himself to study, and he arrived at the knowledge of the most sublime geometry and analysis without a master, without a conductor, without any other guide than pure genius.

' At eighteen years of age he had made these considerable advances without being known, and without knowing himself the prodigies of his acquisitions. The duke of Argyle, who joined to his military talents a general knowledge of every science that adorns the mind of a man

his rank, walking one day in his garden, saw lying on the grass a Latin copy of Sir Isaac Newton's celebrated Principia. He called some one to him to take and carry it back to his library. Our young gardener told him that the book belonged to him. 'To you?' replied the duke. ' Do you understand geometry, Latin, Newton V ' I know a little of them,' replied the young man, with an air of simplicity arising from a profound ignorance of his own knowledge and talents. The duke was surprised ; and, hav-ing a taste for the sciences, he entered into conversation with the young mathematician : he asked him several questions, and was astonished at the force, the accuracy, and the candor of his answers. ' But how,' said the duke, ' came you by the knowledge of all these things ?' Stone reph'ed, ' a servant taught me, ten years since, to read : does one need to know any thing more than the twenty-four letters in order to learn every thing else that one wishes ?' The duke's curiosity redoubled — he sat down upon a bank, and requested a detail of all his proceedings in becoming so learned. 'I first learned to read,' said Stone : ' the masons were then at work upon your house : 1 went near them one day, and I saw that the architect used a rule, compasses, and that he made calculations. I enquired what might be the meaning and use of these things; and I was informed that there was a science called arithmetic : I purchased a book of arithmetic and I learned it. — I was told there •was another science called geometry : I bought the books, and I learned geometry. By reading I found that there were good books in these two sciences in Latin : I bought a Dictionary, and I learned Latin. I understood also that there were good books of the same kind in French : I bought a dictionary, and I learned French. And this, my lord, is what I have done : it seems to me that we may learn every thing when we know the twenty -four letters of the alphabet.'

' This account charmed the duke. He drew this wonderful genius out of his obscurity; and he provided him with an employment which left him plenty of time to apply himself to the sciences. He discovered in him also the same genius for music, for painting, for architecture, for all the sciences which depend on calculations and proportions. ' I have seen Mr. Stone. He is a man of great simplicity. He is at present sensible of his own knowledge : but he is not puffed up with it. He is

possessed with a pure and disinterested love for the mathematics ; though he is not solicitous to pass for a mathematician : vanity having no part in the great labor he sustains to excel in that science. He despises fortune also ; and he has solicited me twenty times to request the duke to give him less employment, which may not be worth the half of that he now has, in order to be more retired, and less taken off from his favorite studies. He discovers sometimes, by methods of his own, truths which others have discovered before him. He is charmed to find on these occasions that he is not a first inventor, and that others have made a greater progress than he thought. Far from being a plagiary, he •attributes ingenious solutions, which he gives to certain problems, to the hints he has found in

others, although the connexion is but very distant,' &c.

STONE (Jerome), the son of a reputable sea-man, was born in the parish of Scoonie, in Fife. His father died abroad when he was but three years of age, and his mother, with her young family, was left in very narrow circumstances. Jerome having got the ordinary school education, reading English, writing, and arithmetic, commenced travelling chapman. But he soon converted his stock of buckles, garters, &c., into books, and for some years went through the country, and attended the fairs as an itinerant bookseller. Formed by nature for literature, he possessed a peculiar talent for acquiring languages with amazing facility. He taught himself Hebrew and Greek , and, by the aid of Mr Turcan, the parish schoolmaster, acquired some knowledge of Latin. Some time afterwards he. was encouraged to prosecute his studies at the university of St. Andrew's. An' unexampled proficiency in every branch of literature recommended him to the esteem of the professors ; and an uncommon fund of wit and pleasantry rendered him the favorite of all his fellow students. About this period some very humoroui poetical pieces of his 'composition were published in the Scots Magazine. Before he had finished his third session of St. Andrew's, on an application to the college by the master of th>; school of Dunkeld for an usher, Mr. Stone was recommended as the best qualified for that of-fice; and about two or three years after, the master being removed to Perth, Mr. Stone, by the favor of the duke of Atholl, who had conceived a high opinion of his abilities, was appointed his successor. Having, with his usual assiduity and success, acquired a complete knowledge of the Gaelic language, he collected a number of ancient poems, the production,ˆ Irish or Scottish bards. Some of these were translated into English verse, before Mr. Macpherson published his translations from Ossian. lie died while he

was writing and preparing for the press a treatise entitled, An Enquiry into the Original of the Nation and Language of the Ancient Scots, with Conjectures about the Primitive State of the Celtic and other European Nations. In this treatise he proves that the Scots drew their original, as well as their language, from the ancient Gauls. A fever put an end to his hie, his labors, and his usefulness, in 1757, the thirtieth year of his age. He left in MS. a much esteemed and well known allegory, entitled lie Immortality of Authors, which has been published and often reprinted since his death.

STONE (John), a celebrated English painter, in the reigns of Charles I. and II. He studied under Cross, and spent thirty-seven years abroad, where he acquired several languages, being man of learning as well as a good painter, died at London, August 24th, 1653.

STONE, a market-town and parish in I irchi hundred, Stafford, seven miles north of Stafford, and 141 north-west from London, on the banks of the Trent. Besides the advantages of the river Trent, it has a canal navigation, communicating with most of the principal towns in th adjacent counties, by which Us commercial ,,n

portance has been greatly increased. Considerable quantities of shoes are made in tnis town, and here is a patent roller-pump manufactory, which employs many hands. The town is chiefly formed of one tolerably good street. The church is a noble structure, with a square, but low, tower. Here is a charity and free grammar-school.

STONE, in merchandise, denotes a certain weight for weighing commodities. A stone of beef at London is eight pounds : in Herefordshire twelve pounds ; in the north sixteen pounds. A stone of glass is five pounds; of wax eight pounds. A stone of wool (by stat. 1 1 Hen. VII.) is to weigh fourteen pounds; yet in some places it is more, in others less : as in Gloucestershire fifteen pounds ; in Herefordshire twelve pounds. Among horse-coursers a stone is the weight of fourteen pounds. The reason of the name is obvious. Weights at first were generally made of stone. See Deut. xxv. 13, where the word J3K,

translated weight, signifies a stone.

STONE, PUDDING. See CALLANDER, and Mi—

KERALOGY.

STONE, ROCKING, or LOGAN, a stone of a prodigious size, so exactly poised that it would rock or shake with the smallest force. Of these stones the ancients give us some account. Pliny says that at Harpasa, a town of Asia, there was a rock of such a wonderful nature that if touched with the finger it would shake, but could not be mov-ed from its place with the whole force of the body. Ptolemy Hephaestion mentions a gygonian stone near the ocean, which was agitated when struck by the stalk of an asphodel, but could not ber emoved by a great exertion of force. The word gygonius seems to be Celtic ; for gwingog signifies motitans, the rocking stone. Many rocking stones are to be found in different parts of this island ; some natural, others artificial, or placed in their position by human art. In the parish of St. Leven, Cornwall, there is a promontory called Castle Treryn. On the western side of the mid-dle group, near the top, lies a very large stone, so evenly poised that any hand may move it from one side to another ; yet it is so fixed on its base that no lever nor any mechanical force can re-move it from its present situation. It is called the Logan stone, and is at such a height from the ground that no person can believe that it was raised to its present position by art. But there are other rocking stones, which are so shaped and so situated that there can be no doubt but they were erected by human strength. Of this kind Borlase thinks the great Quoit or Karn-lehau, in the parish of Tywidnek, to be. It is thirty-nine feet in circumference, and four feet thick at a medium, and stands on a single pedestal. There is also a remarkable stone of the same kind in the island of St. Agnes in Scilly. The under rock is ten feet six inches high, forty-seven feet lound the middle, and touches the ground with no more than half its base. The upper rock rests on one point only, and is so nicely balanced that two or three men with a pole can move it. It is eight feet six inches high, and forty-seven feet in circumference. On the top there is a basin hollowed out, three feet eleven inches in diameter at a medium, but wider at the brim, and three

feet deep. From the globular shape of this up-per stone it is highly probable that it was rounded by human art, and perhaps even placed on its pedestal by human strength. In Stithney parish, near Helston, in Cornwall, stood the famous lo-gan, or rocking stone, commonly called

Men Amber, q. d. men an bar, or the top-stone. It was eleven feet by six, and four high, and so nicely poised on another stone that a little child could move it, and all travellers who came this way desired to see it. But Shrubsal, Cromwell's governor of Pendennis, with much ado caused it to be undermined, to the great grief of the country. There are some marks of the tool on it; and, by its quadrangular shape, it was probably dedicated to Mercury. There is a rocking stone in Perthshire, near Balvaird Castle, in the Ochil hills, on the estate of Mr. Murray of Conland. That the rocking stones are monuments erected by the Druids cannot be doubted; but tradition has not informed us for what purpose they were intended. Mr. Toland thinks that the Druids made the people believe that they alone could move them, and that by a miracle ; and that by this pretended miracle they condemned or acquitted the accused, and brought criminals to confess what could not otherwise be extorted from them. How far this conjecture is right, we shall leave to those who are deeply-versed in the knowledge of antiquities to determine.

STONE, SONOROUS, a kind of stone remarkable for emitting an agreeable sound when struck, and much used in China for making musical instruments, which they call king. The various kinds of sonorous stones known in China differ considerably from one another in beauty, and in the strength and duration of their tone ; and what is very surprising is, that this difference cannot be discovered either by the different degrees of their hardness, weight, or fineness of grain, or by any other qualities which might be supposed to determine it. Some stones are found remarkably hard which are very sonorous ; and others exceedingly soft which have an excellent tone ; some extremely heavy emit a very sweet sound ; and there are others as light as pumice stone which haye also an agreeable sound. It appears that the Romans were formerly acquainted with a sonorous stone of the class of hiang-che. Pliny (says the abbe du Bos, in his Reflections on Poetry and Painting, when speaking of curious stones) observes that the stone called chalcopho-nas, or brazen sound, is black ; and that, according to the etymology of its name, it sends forth a sound much resembling that of brass when it is struck. The passage of Pliny is as follows : Chalcophonas nigra est ; sed elisa seris tinnitum reddit. Some sonorous stones were at length sent into France, and the late duke de Chaulnes examined them with particular attention. From the duke's observations there is reason to believe that the stones of which the king are formed are nothing else but a black kind of marble, the constituent parts of which are the same as those of the marble of Europe, but that some difference in their organisation renders them more or less sonorous.

STONE DIKE, in agriculture, is that sort of

dike or mound which is formed with stone and earth. These dikes should consist of a double face to two-thirds of their height, and the other third be of single stones, built up in an open form and manner, so as to hang firmly on each other. They are made in the Highland sheep districts, where this manner of forming them is much had recourse to, five or five feet a-nd a half high from the surface of the ground. A dike thus built, when well executed, and filled with through-bands, bids defiance, it is said, to most kinds of animals, none of which are fond of venturing over it; whereas a green sod on the top of a double-faced wall invites the sheep to attempt clearing it, which they not unfrequently do with facility. These dikes are equally durable and cheap ; even more so than the turf or sod covered or coped stone-walls, while they are greatly more effectual. They are the most pro-per for confining of sheep ; and, on farms purely of this kind, are perhaps the best sort of contrivance for restraining them of any yet known. They have different names in different sheep districts.

STONE INDIANS, a tribe of Indians inhabiting the south of Fire Fort, or Assiniboin River, in North America. Their number is estimated by Mackenzie at 450 warriors. They have great numbers of horses, which are generally brought from the Spanish settlements in Mexico. These are employed as beasts of burden, and also in the chase of the buffalo. The former are not considered as being of much value, as they may be purchased for a gun which costs twenty guineas in Great Britain. Many of the hunters, however, cost more than ten times this price. Of these useful animals no care whatever is taken ; for, when they are no longer employed, they are turned loose to provide for themselves.

STONES, MILL. In small corn-mills, where only one pair of stones is in use, they are, it is said, roughed on the surface, to enable them to tear, bruise, and reduce the grain, by the use of a small hand-pick. Stones, thus prepared and dressed, serve well for making of oatmeal, which is best and most relished when rough, and large in the grain; but they are not capable of grinding barley or peas to that fineness of flour

which is necessary for some uses. It is requisite to have a separate pair of stones for this purpose, which are dressed on the surface, with a small chisel, in grooves running in from the circumference to the centre, as in the stones of wheat-mills ; the edges of these grooves clip the grain like scissars, and there is no interstice through which any of the grain can escape, until it is reduced to the required fineness of meal which is proper.

STONE PICKERS are persons employed in picking stones from off the ground. In order to prevent the loss of time in filling and emptying the baskets, and that of having recourse to the team, the use of one horse and a light cart is advised, which attending seven or eight women, boys, and girls, may run over forty acres in about four days. It is advised by Mr. A. Young that constantly in a dry season an opportunity should be taken to stone-pick the grass and clover

fields intended for mowing. In this work, no stones are, he says, however, to be taken, but such as would impede the scythe. It is often the case, he adds, that the pickers, who generally like this work, will over-pick if they are not attended to, and propose to pick fields which are not to be mown ; but this is on no account to be permitted, if the stones be not much wanted. It has been often remarked, and is a known fact, that too much stone-picking has done a very sensible mischief, in many cases where picked by authority of parliament for turnpike roads. And Mr. Macro, of Suffolk, ascertained it experimentally.

STONE PITCH, or rather PITCH STONE. See MINERALOGY.

STONE WARE, or STONE-WARE, as it is often absurdly compounded, a species of pottery so called from its hardness. See DELFT, PORCE-•LAIN, and POTTERY. Clay is a principal ingredient in pottery of all kinds which has the properly of hardening in the fire, and of receiving and preserving any form into which it is moulded. One kind of clay resists the most violent action of the fire after being hardened to a certain degree, but is incapable of receiving a sufficient degree of hardness and solidity. A second kind assumes a hardness resembling that of flint, and such a compactness that vessels made of it have a glossy appearance in their fracture resembling porcelain. These two species owe their peculiar properties of resisting heat without melting, to sand, chalk, gypsum, or ferruginous earth, which they contain, A third species of clay begins to harden with a moderate fire, and melts entirely with a strong fire. It is of the second species that stone ware is

made. The most famous manufactory of stone ware, as well as of other kinds of pottery, is at Bursl'em in Staffordshire. This can be traced with certainty at least two centuries back ; but of its first introduction no tradition remains. In 1686, as ,we learn from Dr. Plot's N atural History of Staffordshire, only the coarse yellow, red, black, and mottled wares, were made in this country; and the only materials employed for them appear to have been the different colored clays which are found in the neighbourhood, and which form some of the measures or strata of the coal mines. These coarse clays made the body of the ware, and the glaze was produced by powdered lead-ore, sprinkled on the pieces before firing, with the addition of a little manganese for some particular colors. The quantity of goods manufactured was at that time so inconsiderable that the chief sale of them, Plot says, was ' to poor crate-men, who carried them on their backs all over the country.' About 1690 two ingenious artisans from Germany, of the name of Ellers, settled near Burslem, and carried on a small work for a little time. They brought into this country the method of glazing stone ware, by casting salt into the kiln while it is hot, and some other improvements of less importance ; but, finding they could not get their secrets kept, they left the place rather in disgust. From this time various kinds of stone ware, glazed by the fumes of salt in the manner above mentioned, were added to the wares before made. The white kind, which afterwards became, and for many succeeding

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years continued, the staple branch of pottery, is said to have owed its origin to the following accident:— A potter, Mr. Astbury, travelling to London, perceived something amiss with one of his horse's eyes. An ostler at Dunstable said he could soon cure him, and for that purpose put a common black flint stone into the fire. The potter observing it, when taken out, to be of a fine white, immediately conceived the idea of improving his ware by the addition of this material to the whitest clay he could procure : accordingly he sent home a quantity of the flint stones of that country, where they are plentiful among the chalk, and, by mixing them with tobacco-pipe clay, produced a white stone ware much superior to any that had been seen before. Some of the other potters soon discovered the source of this superiority, and did not fail to follow his example. For a long time they pounded the flint stones in private rooms by manual labor in mortars ; but many of the poor workmen suffered severly from the dust of the flint getting into their lungs, and producing dreadful coughs, consumptions, and other pulmonary disorders. These disasters, and the increased demand for the flint powder, induced them to try to grind it by mills of various constructions: and this method, being found both effectual and safe, has continued in practice ever since. With these improvements, in the beginning of the eighteenth century, various articles were produced for tea and coffee equipages. Soon after attempts were made to furnish the dinner table also ; and, before the middle of the century, utensils for the table were manufactured in quantity, as well for exportation as home consumption. But the salt glaze, the only one then in use for this purpose, is in its own nature so imperfect, and the potters, from an injudicious competition among themselves for cheapness rather than excellence, had been so inattentive to elegance of form and neatness of workmanship, that this ware was rejected from the tables of persons of rank ; and about 1760 a white ware, much more beautiful and better glazed than ours, began to be imported in considerable quantities from France. This inundation of a foreign manufacture, so much superior to any of our own, must have had very bad effects upon the potteries of this kingdom, if a new one, still more to the public taste, had not appeared soon after. In 1763 Mr. Josiah Wedgwood, who had already introduced several improvements into this art, invented a species of earthen ware for the table quite new in its appearance, covered with a rich and brilliant glaze, bearingsudden alternations of heat and cold, manufactured with ease and expedition, and consequently cheap, and having every requisite for the purpose

intended. To this new manufacture the queen was pleased to give her name and patronage, commanding it to be called Queen's ware, and honoring the inventor by appointing him her majesty's potter. The com-mon clay of the country is used for the ordinary sorts; the finer kinds are made of clay from Devonshire and Dorsetshire, chiefly from Biddeford ; but the flints from the Thames are all brought rough by sea, either to Liverpool or Hull, and and so by Burton. There is no conjecture formed

of the original reason of fixing the manuf, cture in this spot, except for the convenience of plentv of coal, which abounds under all the country.

SIOMKS, mode of moving, under this head it may be adviseable to point out the mode of employing the largest and most massive which has been conveyed from its earth-bound bed. We allude to the base of the statue erected to the memory of the emperor Peter, at St. Petersburg. It is represented in our Plate as it was removed by a series of friction balls, and motion communicated by the agency of pulleys, giving a mechanical advantage of sixteen to one pound of power employed. When the stone reached the sea-side, it was suspended between two Innje vessels which had been cut down for the occasion.

STONES, in the old system of mineralogy, were defined bodies which are insipid, not ductile nor inflammable, nor soluble in water. But as this is the definition given of earths, by chemists and naturalists, we must refer the reader to the article MINERALOGY, for a view of the classification of stones. Here we will only make a few observations concerning their natural history.

Some philosophers say that stones are vegetables ; that they grow and increase in size like a plant. This theory, we believe, was first offered to the world by M. Tournefort, in 1702, after returning from his travels in the east. It was founded on a curious fact. In surveying the labyrinth of Crete he observed that the names which visitors had engraved upon the rock were not formed of hollow but of prominent letters, like basso relievos. He supposes that these letters were at first hollowed out by knives ; that the hollows have since been filled up by the growth of the stone; and hence he concludes that stones vegetate. Allowing the supposition to be true that they were at first hollow, we reply it is only a single fact, and that it is altogether unphilosophical to deduce a general system from a single fact. But this protuberancy of the characters is very improperly called vegetation; for it is not

produced by a process in any respect like vegetation. Vegetation supposes vessels containing fluids and growth by expansion ; but who ever heard of vessels in a stone, of fluids moving in them, or of the different parts expanding and swelling like the branch or trunk of a tree? Even the fact which Tournefort mentions proves nothing. He does not pretend to say that the rock itself is increasing, but only that a few small hollows are filled with new stony matter, which rises a little above the surrounding surface of the rock. This matter evidently has been once li-quid, and at length has congealed in the channel into which it had run. But is not this easily explained by a common process, the formation of stalactites ? When water charged with calcareous matter is exposed to the action of air, the water evaporates, and leaves the calcareous earth be-hind, which hardens and becomes like a stone. Having thus examined the principal fact upon which M. Tournefort founds his theory, it is unnecessary to follow him through the rest of his subject. Upon the whole we conclude that no such theory as this, that stones are vegetables, can be drawn from the supposed *?ct respecting the labyrinth.

STONEHENGE.

STONES, in mythology, were objects of religious worship among the ancients. They were un-hewn shapeless masses, called by Sanchoniathon Bsetilia. See BˆTYLOS. Pausanias speaks of the statues of Hercules and of Cupid as merely such masses of stone. He adds that there were seen, even in one place, thirty square stones, which had the names of so many divinities.

STONEHAVEN, or STONEHIVE, a sea-port town in Kincardineshire, in the parish of Dun-nottar, Scotland, situate on the coast where the Cowie and Carron unite their waters as they flow into the sea ; about fifteen miles south by west of Aberdeen, and twenty-two north by east of Montrose. It is composed of an old and new town, the former lying on the south bank of the Carron, adjacent to the harbour, and consisting of two considerable streets ; the other on a peninsula formed by the Carron and Cowie. This last is laid out upon a regular plan, having broad streets and a square in the centre. The harbour is a natural basin, sheltered on the south-east by a high rock whicli runs out into the sea, and on the north-east by a quay, very convenient for unloading goods, but is neither very capacious nor safe. It derives its principal support from the sheriffs-court of the county, which has its

seat here. Of late the brown linen manufacture has been introduced, and the commerce of the place is rapidly increasing. Stonehaven is a burgh of barony, of which the jurisdiction is by charter vested in magistrates.

STONEHENGE, a celebrated monument of antiquity, stands in the middle of a flat area near the summit of a hill six miles from Salisbury. It is enclosed by a circular double bank and ditch nearly thirty feet broad, after crossing which we ascend thirty yards before we reach the work. The whole fabric consisted of two circles and two ovals. The outer circle is about 108 feet diameter, consisting when entire of sixty stones, thirty uprights and thirty imposts, of which remain only twenty-four uprights, seventeen standing and seven down, three feet and a half asunder, and eight imposts. Eleven uprights have their five imposts on them by the grand entrance. These stones are from thirteen to twenty feet high. The lesser circle is somewhat more than eight feet from the inside of the outer one, and consisted of forty lesser stones (the highest six feet), of which only nineteen remain, and only eleven standing : the walk between these two circles is 300 feet in circumference. The Ady-tum or Cell is an oval formed of ten stones (from sixteen to twenty-two feet high,) in pairs, with imposts, which Dr. Stukeley calls trilithons, and above thirty feet high, rising in height as they go round, and each pair separate, and not connected as the outer pair; the highest eight feet. Within these are nineteen more smaller single stones, of which only six are standing. Three of the five trilithons at the west end fell flat westward, levelling also in their descent a stone of the second circle that stood in the line of their precipitation, on the third of January 1797. At the upper end of the Adytum is the altar, a large slab of blue coarse marble, twenty inches thick, sixteen feet long, and four broad ; pressed down by the weight of the vast stones that have

fallen upon it. The whole number of stones, uprights, imposts, and altar, is exactly 14o! Ihe stones are far from being artificial, but were most probably brought from those called the grey weathers on Marlborough Downs fifteen or sixteen miles off; and if tried with a tool they appear of the same hardness, grain, and color generally reddish. The heads of oxen, deer, and other beasts, have been found on digging in and about Stonehenge; and human bones'in the circumjacent barrows. There are three entrances from the plain to this structure, the most considerable of which is from the north-east, and at each of them were raised on the outside of the trench two huge stones with two smaller within parallel to them. It has been long a

dispute among the learned, by what nation, and for what purpose, these enormous stones were collected and arran-ed. The first account of this structure we meet with is in Geoffroy of Monmouth ; who in the reisn of King Stephen, wrote the history of the Britons in Latin. He tells us that it was erected by the counsel of Merlin the British enchanter, at the command of Aurelius Ambrosius the British king, in memory of 460 Britons who were murdered by Hengist the Saxon. The next account is that of Polydore Virgil, who says that the Britons erected this as a sepulchral monument of Aurelius Ambrosius. Others suppose it to have been a sepulchral monument of Boadicea the famous British queen. Inigo Jones is of opinion that it was a Roman temple; from a stone sixteen feet long, and four broad, placed in an exact position to the east altar-fashion. Mr. Charlton attributed it to the Danes, who were two years masters of Wiltshire ; a tin tablet, on which were some unknown characters, supposed to be Punic, was digged up near it in the reign of Henry VIII. but is lost. Its common name, Stonehenge, is Saxon, and signifies a stone gallows, to which those stones, having transverse imposts, bear some resemblance. It is also called in Welsh choir gour, or the giant's dance. Mr. Grose thinks that Dr. Stukeley has completely proved this structure to have been a British temple in which the Druids officiated. He supposes it to have been the metropolitan temple of Great Britain, and translates the words choir gour, the great choir or temple. Mr. Bryant is of opinion that it was erected by a c lony of Cuthiles probably before the time of the Druids; because it was usual with them to place one vast stone upon another for a religious memorial ; anil these they often placed so equably that a breath of wind would sometimes make them vibrate. Ot such stones one remains in the pile of Stonehenge. The ancients distinguished stones erected with a religious view, by the name of amber; by which was signified any thing solar and divine. The Grecians called them Trtrpat a/i/3po<rtai, petra ambrosia. Stonehenge, according to Mr. Bryant, is composed of these amber stones : hence the next town is denominated Ambresbury ; not from a Roman Ambrosius, but from the ambrosia? petnv, in whose vicinity it stood. Some of these were rocking stones ; and there was a wonderful monument of this sort near Penzance in Cornwall, which still retains the name of main-amber, or the sacred stones. Such a one is mentioned by

Appollonius iRnodius, supposed to have been raised in the time of the Argonauts, in the island Tenos, as the monument of the two-winged sons of Boreas, slain by Hercules; and there are others in China and other countries.

Sir. R. C. Hoare, in 1812, observes : ‘ It is a melancholy consideration that at a period when the sciences are progressively advancing, and when newly discovered manuscripts are continually drawn forth from their cloistered retreats to throw a light on the ancient records of our country, it is mortifying, I say, that the history of so celebrated a monument as Stonehenge should still remain veiled in obscurity. The monks may boldly assert that Merlin and only Merlin was the founder of our temple ; and we cannot contradict, though we may disbelieve. The revolution of ages frequently illustrates history, and brings many important facts to light ; but here all is darkness and uncertainty ; we may admire, we may conjecture ; but we are doomed to remain in ignorance and obscurity.’

Mr. Davies, the learned author of Celtic Researches, and of the Mythology, &c., of the British Druids, enters more profoundly, perhaps, than any other author into the question in the latter work respecting the origin and appropriation of Stonehenge. He supposes that this structure, and Silbury-hill, are two of the three works alluded to in a Welsh Triad, as constituting the greatest labors of the island of Britain, i. e. lifting the stone of Ketti ; building the work of Emrys ; and piling the mount of the assemblies. That Stonehenge is really a Druidical structure, the same learned writer farther remarks, ‘ is evident from the language in which it •was described, and the great veneration in which it was held by the primitive bards, those immediate descendants and avowed disciples of the British Druids. As the great sanctuary of the dominion, or metropolitan temple of our heathen ancestors, so complex in its plan, and constructed upon such a multitude of astronomical calculations, we find it was not exclusively dedicated to the sun, the moon, saturn, or any other individual object of superstition ; but it was a kind of Pantheon, in which all the Arkite and Sabian divinities of British theology were supposed to have been present; for we perceive Noe andHu, the deified patriarch ; Elphin and Rheiddin, the sun ; Eseye, Isis ; Ked, Ceres, with the cell of her sacred fire ; Llywy, Proserpine ; Gwydien, Hermes ; Budd, Victory ; and several others.’ As to the precise date of Stonehenge, Mr. Da-Ties offers nothing definitive ; but remarks that it

was most likely of later origin than the introduction of the Helio-Arkite superstition, which is traditionally said to have been of foreign origin, and to have come into England by the way of Cornwall, and, therefore, probably from the tin merchants. He also remarks ‘ that it was a monument of venerable antiquity in the days of Hengist, and that its peculiar sanctity influenced the selection of the spot for the place of conference between the British and Saxon princes,’ p. 385, &c. Mr. Davies farther mentions a passage in the Greek historian Diodorus Siculus, describing a round temple dedicated to Apollo, and concludes this to have been most likely our

monument of Stonehenge. The substance of the Grecian author is : ‘ Among the writers of antiquity, Hecateus and some others relate that there is an island in the ocean, opposite to Celtic Gaul, and not inferior in size to Sicily, lying towards the north, and inhabited by Hyperborei, who are so called because they live more remote from the north wind. The soil is excellent and fertile ; and the harvest is made twice in the same year. Tradition says that Latona was born here, and therefore Apollo is worshipped above ai’y other deity; to him is also dedicated a remaik-ab!e temple of a round form, &c.’

Mr. Cunnington, in his History of Ancient Wiltshire, fol. 1812, grounds a new supposition on the difference in quality and size between the stones of the great circle and interior row, and those of the smaller ones : and hence supposes that Stonehenge was erected at different periods. He also supposes that the larger stones, with their imposts, constituted the old, or original work ; and that the small stones of the second circle, and those of the inner range, were raised at a later period, as ‘ they add nothing to the grandeur of the temple.’ To exemplify this opinion, Sir Richard Hoare has given a bird’s-eye view of the structure, thus divested of the smaller stones. Unfortunately for the theorist, this system is not warranted by any example among the numerous Druidical circles of Great Britain ; but, on the contrary, it will be more consistent with these, and with the practices of remote ages, to conclude that the second circle of small, rough, unhewn stones, with another circle immediately within the ditch, and some other members, now destroyed, formed the original, pristine temple.

‘ It may be naturally expected,’ says Sir Richard Hoare, in his Ancient Wiltshire, ‘ that, after quoting the various descriptions of others respecting Stonehenge, I should give some opinions of my own. This I shall do with diffi dence, and lament that the history of this celebrated ‘ wonder of the west’ will most probably ever remain unknown. I

cannot for a moment hesitate in declaring it to be neither Roman, Saxon, nor Danish. We learn from the Holy Scriptures that the earliest memorials were ot stone ; and we find to this day single, double, and triple upright stones, as well as numerous circles dispersed about our dominions : we then find some attempts at architecture in the cromlech and kistvaen, in both of which we see immense stones laid incumbent upon others that are up-Hght : whether these gave the idea of the imposts at Stonehenge, or vice versa, will be a difficult matter to determine; at all events, I consider Stonehenge of a much more modern date than Abury, where there are no imposts, and no marks of working on the stones ; but in the former we perceive a regular plan, a great deal of symmetry and great knowledge in mathematics. We know, also, that many stone monuments exist on the continent, and in that part of it whence our island probably received its earliest population, *viz.* Gallia-Celtica. The most remarkable of these monuments, and such as must excite curiosity in the highest degree, is situated in the hamlet of Carnac, near Vannes and Auray, on

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the western coast of Bretagne, and in the department of Morbihan, in France. M. Cam-bray, in his Monumens Celtiques, has given a very detailed and animated description of this interesting relic of antiquity. He tells us that some detached stones on the hills and sand-banks announce the approach to this grand theatre, which consists of an immense number of rude unhewn stones (amounting to four thousand, or more), standing in an upright position, on a sandy plain, near the sea-coast. They are ranged in eleven straight lines, which lines are separated from each other by a space of thirty or thirty-three feet, and the distance from one stone to another varies from twelve to fifteen feet. The highest of these stones measures twenty-two feet out of the ground ; the width varies ; one of them is twenty-two feet high, twelve feet wide, and six feet thick ; and many of them are moveable : these stones present the most singular aspect ; they stand alone on an extensive plain, attended only by the sand that supports them, and the vault of heaven that surrounds them ; not an inscription to explain, nor an analogy to inform ; the men whom you call, the traveller whom you interrogate, gaze at it, and either turn away their head, or recount follies. They recall to our memory those times which neither our calculation nor our history can ever attain. I have before stated my opinion, that our earliest inhabitants were Celts, who naturally introduced with them their own buildings, customs, rites, and religious ceremonies ; and to them I attribute the erection of Stonehenge, and the greater part of the sepulchral memorials that still continue to render its environs so truly interesting to the antiquary and historian.

The general title of Druid ical has been given to all these stone monuments, and some of my readers may be surprised that I have not adopted it. That the Druids existed in our island at a very early period, and officiated as priests, there can be no doubt ; but, as the learned Mr. Bryant, in his Mythology, observes, ‘ under the sanction of their names, we shelter ourselves whenever we are ignorant and bewildered.’ And Mr. Borlase, with equal justness, remarks ‘ that the work of Stonehenge must have been that of a great and powerful nation, not of a limited community of priests; the grandeur of the de-sign, the distance of the materials, the tediousness with which all such massive works are necessarily attended, all show that such designs were the -fruits of peace and religion.’ We arc ourselves much inclined to think, with an able writer in the Edinburgh Review of 1806, that

these Druidical temples, and especially this of Stonehenge, served the purpose (perhaps addi-tionally to that of places of worship) of rude observatories.

STONEHOUSE (Sir James), a pious English physician and divine, born in Berkshire, in 1715. He was educated at St. John's College, Oxford, where he took his degree of M. D., and afterwards . settled at Northampton. There he became intimate with Dr. Doddridge, Mr. Hervey, and other eminent divines. About 1762 he entered into orders, and was appointed lecturer of All-Saints, Bristol, and minister of Great and Little Cheve-

rel, Wilts. He succeeded to the family title and estate in 1792; but died in 1795,' agea eighty. He was admired as a man and a preacher. He published Friendly Advice to a Patient, and other religious tracts.

STONEPLOVER, or STONE CURLEW. See CHAR-ADRIUS.

STONY POINT, a post on the right bank of the Hudson, in the state of New York. In 1779 it was taken by the British, but recovered soon after by the Americans; and the whole garrison, consisting of 600 men, with their commanding officer, lieutenant-colonel Johnson, made prisoners of war.

STONYKIRK, or STEPHEN-KIRK, a parish in Wrigton-shire, composed of the united parishes of Stonykirk, Clashank, and Toscarton, on the west coast of the bay of Luce, six miles from Port-Patrick. Within this parish are four mills for dressing flax, and an extensive bleach-field. Here is a considerable fishery for cod, salmon, and mackarel. Here is also a chalybeate spring; and in a cave, near the bay Float, called the Good Wife's Cave, is a very remarkable echo.

STOOD. The pret. of To STAND, which see.

Adam, at the news, Heart-struck with chilling gripe of sorrow stood.

Milton.

STOOL, n. s. I Sax. n»l ; Goth, stol ;

STOOL'BALL, n. s. 5 Belg. stoel ; Teut. stuhl. A low seat without a back : evacuations by purgatives : for the stool of repentance, see below : stoolballs is a game.

Thou fearful fool, Why takest not of the same fruit of gold ?

Nesittest down on that same silver stool, To rest thy weary person in the shadow cold 1

Spenser.

There be medicines that move stnols, and not urine , some other urine, and not stools : those that purge by stool are such as enter not at all, or little, into the mesentery veins ; but either at the first are not digestible by the stomach, and therefore move immediately downwards to the guts, or else are afterwards rejected by the mesentery veins, and so turn likewise downwards to the guts. Bacon's Natural Histm-y.

Unequal and unreasonable judgments of things brings many a great man to the stool of repentance.

L'Estrange.

Now which were wise, and which were fools ? Poor Alma sits between two stools ; The more she reads, the more perplext. Prior.

While Betty dances on the green, And Susan is at stoolball seen. Id.

The peristaltick motion, or repeated changes of contraction and dilatation, is not in the lower guts, else one would have a continual needing of going to stoolf Arbnthnot on Aliments.

If a chair be defined a seat for a single person, with a back belonging to it, then a stool is a seat tor a single person without a back.

STOOL OF REPENTANCE, or cutty stool, in the kirks of Scotland, is somewhat analogous to the pillory. It is elevated above the congregation. In some places there may be A seat in it; but it is generally without, and the person stands therein who has been guilty of fornication, for three Sundays, in the forenoon ; and, after sermon, is called upon by name and surname, the beadle or kirk-officer, bringing the offender ,f refractory, forwards to his post; and then the preacher

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proceeds to admonition. Here too are set to public view adulterers; only these are habited in a coarse canvas, analogous to a hairy or monastic vest, with a hood to it, which they call sack, or sackcloth, and that every Sunday throughout a year, or longer.

STOOL, in mining, is used when the miners leave off digging deeper, and work in the ends forward. The end before them is called the stool.

STOOL, in ship-building, the name of the supporters of the poop and top lanterns.

STOOP, v. n. & n. s.) Sax. j-tupian ; Swed.

STOOP'INGLY, adv. istupa; Belg. stuypen. To bend down; bend forward; lout; yield; submit : the act of stooping ; degradation : and (Sax. j-toppa) a vessel of liquor : the adverb corresponds.

They, whose authority is required unto the satisfying of your demand, do think it both dangerous to admit such concourse of divided minds ; and unmeet that their laws, which, being once solemnly established, are to exact obedience of all men, and to constrain thereunto, should so far stoop as to hold themselves in suspense from taking any effect upon you, till some disputer can persuade you to be obedient. Hooker.

Come, lieutenant, I have a stoop of wine ; and here without are a brace of gallants that would fain have a measure to the health of Othello.

Shahspeare.

I am the son of Henry the Fifth, Who made the dauphin and the French to stoop.

Id.

Like unto the boughs of this tree, he bended downward, and stooped towards the earth. Rjleigh.

Where men of great wealth stoop to husbandry, it multiplieth riches exceedingly. Bacon.

Nani was noted to tread softly, to walk sfnopingly, and raise himself

from benches with laborious gesture. Woilon.

There is nothing more in nn,. Sir, but may be squeezed out without racking, cnlv a stwp or two of wine. Denhinn.

Cow’ringlo*

With blandishment, each bird stooped on h/s wing.

Milton.

Death, his death-wound shall then receive, And stoop inglorious. Id.

Satan ready now

To stoop with wearied wings and willing feet, On the bare outside of this world. Id.

Now will I wander through the air, Mount, make a stoop at every fair. Waller.

He that condescended so far, and stooped so low, to invite and to bring us to heaven, will not refuse us a gracious reception there.

Boyle's Seraphick Love.

When Pelopidas and Ismenias were sent to Artaxerxes, Pelopidas did nothing unworthy ; but Ismenias let fall his ring to the ground, and, stooping for that, was thought to make his adoration.

Stillingfleet.

Can any loyal subject see With patience such a stoop from sovereignty 1 An ocean poured upon a narrow brook 1 Dryden.

Mighty in her ships stood Carthage long, And swept the riches of the world from far ; Yet stooped to Rome, less wealthy, but more strong.

Id.

Twelve swans behold in beauteous order move, And stoop with closing pinions from above. Id.

An eagle made a sloop at him in the middle of his exaltation, and carried him away. L'Estrange.

A caldron of fat beef, and stoop of ale, On the huzzaing mob shall more prevail, Than if you give them with the nicest art, Ilagousts of peacocks' brains, or filbert tart. King.

These are arts, my prince, Tn which your Zama does not stoop to Rome.

Addhon.

STOOPING, in falconry, is when a hawk, being upon her wings at the height of her pitch, bends down violently to take the fowl.

STOP, v. a., v. n., & n. s. \ French estouper ;

STOP’COCK, n. s. I Italian stoppare ;

STOP’PAGE, £ Belg. stoppen ; L)a—

STOP’PLE. J nish stoppe. To

hinder ; interrupt ; suspend ; repress ; suppress ; close ; encumber ; regulate musical strings by the finger : as a verb neuter, to cease progress : as a noun substantive, cessation ; hinderance ; repression ; obstacle ; impediment ; a point in typography ; an instrument to regulate musical sounds ; act of applying such stops : a stopcock is a pipe supplied with a cock : stoppage, the act of stopping : stopple is the stop of a bot-tle or hole.

Smite every fenced city, stop all wells of water, and mar land with stones. 2 Kings, iii. 19.

They pulled away the shoulder, and stopped their ears, that they should not hear. Zech. vii. 11.

As the truth of Christ is in me, no man shall stop me of this boasting. 2 Cm-, xi. 10.

Encroachments are made by degrees from one step to another ; and the best time to stop is at the beginning. Lesley.

The proud Duessa, full of wrathful spight And fierce disdain to be affronted so,

Inforced her purple beast with all her might, That stop out of the way to overthrow. Spenser.

In weak and tender minds, we little know what misery this strict opinion would breed, besides the stops it would make in the whole course of all men’s lives and actions. Hooker.

You would play upon me, you would seem to know my stops ; you would pluck out the heart of my mystery. Shakspeare.

Blest are those.

Whose blood and judgment are so well commingled That they are not a pipe for fortune’s finger To sound what stnp she please. Id. Hamlet.

Thought’s the slave of time, and life time’s fool ; And time, that makes

survey of all the world. Must have a stop. Sltakipeare.

Friend, ‘tis the duke’s pleasure, Whose disposition all the world well knows Will not be rubbed nor stopped. • Id. King Lear.

Some strange commotion Is in his brain ; he bites his lip, and starts ; Stops on a sudden, looks upon the ground, Then lays his finger on his temple ; straight Springs out into fast gait, then stops again.

Id. Henry VIII Look you to the guard to-night ; Let’s teach ourselves that honourable stop, Not to outsport discretion. Shakspeare.

The further a string is strained, the less a super-straining goeth to a note ; for it requireth good winding of a string before it will make any note at all : and in the stops of lutes, the higher they go, the less distance is between the frets. Bacon.

In instruments of strings, if you stop a string high, whereby it hath less scope to tremble, the sound it more treble, but yet more dead.

Bacon’s Natural History.

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Hi* majesty stopped a leak that did much harm.

Bacon.

Stoppings and suffocations are dangerous in the body. Id.

hindrances m my way, when I was attempting |t;a commission of such a sin. ˚y,/”

A variety of strings may be observed on their harps, and of stops on their tibiae ; which shews the

Bottles swinged, or carried in a wheel-barrow upon little foundation that such writers have gone upon rough ground, fill not full, but leave some air ; for, who, from a short passage in a classick author have if the liquor come close to the stopple, it cannot determined the previse shape of the ancient musical

instruments, with the exact number of their pipes strings, and stops. Addison on Ital’

flower. Id.

They first raised an army with this design, to stop my mouth, or force my consent. King Charles.

Even the iron-pointed pen, That notes the tragick dooms of men, Wet with tears stilled from the eyes Of the flinty destinies, Would have learned a softer style, And have been ashamed to spoil His life’s sweet story by the haste Of a cruel stop ill-placed. Crashaw.

On indeed they went : but O ! not far : A fatal stop traversed their headlong course.

Daniel.

Th’ organ-sound a time survives the stop, Before it doth the dying note give up.

Id. Civil War.

The marigold, whose courtier's face Ecchoes the sun, and doth unlace Her at his rise, at his full stop Packs and shuts up her gaudy shop. Cleaveland. Mountains of ice that stop th' imagined way.

Milton. The harp

Had work, and rested not ; the solemn pipe, And dulcimer, all organs of sweet stop. Id.

- . -_- ._ — . .Hi Y.

Female zeal, though proceeding from so good a principle, if we may believe the French historians, often put a stop to the proceedings of their kings, which might have ended in a reformation. Addison. '

Occult qualities put a stop to the improvement of natural philosophy, and therefore have been rejected. Newton's Opticks.

So melancholy a prospect should inspire us with zeal to oppose some stop to the rising torrent, and check this overflowing of ungodliness. Jtoo-ers.

If the rude throng pour on with furious pace, And hap to break thee from a friend's embrace, Stop short, nor struggle through. Gay.

The stoppage of a cough or spitting increases phlegm in the stomach. Flayer on the Humours.

Celsus gives a precept about bleeding, that when the blood is good, which is to be judged by the co-lour, that immediately the vein should be stopped.

A rlinthnot.

The effects are a stoppage of circulation by too great a weight upon the heart, and suffocation. Id.

STOPPERS, in a ship, certain short pieces of rope, which are usually knotted at one or botli

These gates are no? sufficient for the communica-ends> according to the purpose for winch they

tion between the walled city and its suburbs, as daily are des.gned. They are either used to suspend

appears by the stops and embarasses of coaches near any heavy body, or to retain a cable shroud.

both these gates. Graunt. &.C., in a fixed position. Thus the anchors, when

If they should open a war, they foresee the con-first hoisted up from the ground, are hung to the

sumption France must fall into by the stop of their cat-head by a stopper attached to the latter,

wine and salts, wholly taken off by our two nations, which, passing through the anchor ring, is afterwards fastened to the timber head ; and the same

Temple.

My praise the Fabii claim, And thou, great hero, greatest of thy name, Ordained in war to save the sinking state, And, by delays to put a stop to fate.

Dryden’s JEneid. Almon falls,

Pierced with an arrow from the distant war : Fixed in his throat the flying weapon stood, And stopped his breath, and drank his vital blood.

Dry den.

A lion, ranging for his prey, made a stop on a sudden at a hideous yelling noise which startled him.

L’ Estrange.

rope serves to fasten it on the bow at sea ; or to suspend it by the ring which is to be sunk from the ship to the bottom. The stoppers of the

cable have a la/ge knot and a laniard at one end, and are fastened to a ring-bolt in the deck by the other. They are attached to the cable by the laniard, which is fastened securely round both by several turns passed behind the knot, or about the neck of the stopper; by which means the cable is restrained from running out of the ship when she rides at anchor. The stoppers of the shroud have a knot and a laniard at each end.

Brokers hinder trade, by making the circuit which They are only used when the shrouds are cut asun-

the money goes larger, and in that circuit more stops, so that the returns must necessarily be slower and scantier. Locke.

When men pursue their thoughts of space, they ttep at the confines of body, as if space were there at an end. Id.

There were no shuts or stopples made for the ears, that any loud or sharp noise might awaken it, as also a soft and gentle murmur provoke it to sleep.

Ray on the Creation.

No man could spit from him without it, but would where he was born in 1763. Early displaying drivel like some paralytick or fool ; the tongue being strong musical talent, he was sent by his father as a stopcock to the air, till upon its removal the to Italy, that he might enjoy every opportunity spittle is driven away. Crew's Cosmologia. yf cuitivation, and his progress was so rapid that

Every bold sinner, when about to engage in the at t))e . commencement of his career he pro-commission of any known sin, should arrest his con- £ celebrated finale to the first act of the fidence, and stop the execution of his purpose with p. , f ,j very best compositions. this question : Do I believe that God has denounced f 'ral,es> anc ,, L rpiided at Ihth death ,o such a practice, or do I not ? South. On his return to England ˆ res.ded at 1 ah

Blessed be that God, who cast rubs, stop,, and till the friendship of Mr. Michael

der in battle, or disabled by tempestuous weather ; at which time they are lashed, in the same man-ner as those of the cables, to the separated part of the shroud, which are thereby reunited, so ns to be fit for immediate service. This, however, is only a temporary expedient.

STORAGE (Stephano), an eminent composer of dramatic music, was the son of an Italian performer on the bass viol, long settled in London

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cured him the appointment of composer to Drury Lane theatre. Here he remained, with daily increasing reputation, till a violent attack of gout in the head carried him off, in 1796, in the flower of his age. His compositions are remarkable for their spirit, and his melodies have not often been excelled. His productions are the music to The Doctor and Apothecary, a farce, 1788; Haunted Tower, opera, 1789; No Song no Supper, farce, 1790; Siege of Belgrade, opera, 1791 ; Cave of Trophonius, musical in-terlude, 1791 ; Pirates, and Dido, operas, 1792; Prize, and Glorious First of June, musical entertainments; Cherokee, and Lodoiska, operas, 1794 ; Three and the Deuce, comic drama, 1795; My Grandmother, farce; Iron Chest, musical play ; and Mahmoud, an opera, 1796.

STORAGE (Anna Selina), sister to the above, an excellent comic actress and accomplished singer, was a pupil of Sacchini ; and after singing at Florence, Vienna, &c., from 1780 to 1787, with reputation, came to London, and soon rose to be a favorite in her profession, a station which she maintained till her decease in the neighbourhood of London in 1814.

STORAX, LIQUID. See LIQUIDAMBAR. Liquid storax is a resinous juice obtained from a tree called Liquidambar Straciflua, a native of Virginia and Mexico, lately naturalised in Britain. The juice called liquidambar exudes from incisions made in the trunk, and the liquid sto-rax is obtained by boiling the bark or branches in water. Two sorts of liquid storax are distinguished by authors ; one the purer part of the resinous matter that rises to the surface in boiling, separated by a strainer, of the consistence of honey, tenacious like turpentine, of a reddish or ash brown color, moderately transparent, of an acrid unctuous taste, and a fragrant smell, faintly resembling that of the solid storax, but somewhat disagreeable ; the other the more im-pure part, which remains on the strainer, is not transparent, in smell and taste is much weaker, and contains a considerable proportion of the substance of the bark. What is most commonly met with under this name in the shops is of a weak smell and a gray color, and is supposed to be an artificial composition. Liquid storax has been employed chiefly in external applications, but it is at present almost wholly h. disuse.

STO’RAXTREE, n. s. Lat. styrax. A plant; a resinous and odoriferous

gum.

I yielded a pleasant odour like the best myrrh, as galbanum, and sweet storax. Ecclut xxiv. 15.

STORE, n. s., v. a., & adj. \ Goth. Swed. Dan.

STOREHOUSE. i and Sax. star, all

signify large, great. The Teutonic dialects nearer to English seem not to have retained this word. Large number ; large quantity ; plenty ; a stock accumulated; hoard; magazine: to furnish ; replenish ; stock ; lay up ; hoard : Bacon uses it for hoarded ; laid up : a storehouse is a magazine ; granary ; depository ; a great mass reposited.

Joseph opened all the storehouses, and sold unto the Egyptians. Genesis xli. 56.

Is not this laid up in itore with me, and sealed up among mj treasures 1 Deuteronomy xxxii. 34.

They greatly joyed merry tales to feign, Of which a storehouse did with -her remain.

Faerie Queene.

Some were of opinion that it were best to stay where they were, until more aid and store of victuals were come ; but others said the enemy were but barely stored with victuals, and therefore could not long hold out. Knolles's History.

By us it is willingly confessed that the scripture of God is a storehouse abounding with inestimable treasures of wisdom and knowledge, in many kinds over and above things in this kind barely necessary.

Hooker.

Suffer us to famish, and their storehouses crammed with grain ! Shaltspeare. Coriolanus.

The ships are fraught with store of victuals, and good quantity of treasure. Bacon.

What floods of treasure have flowed into Europe by that action, so that the cause of Christendom is raised since twenty times told : of this

treasure the gold was accumulate and store treasure ; but the silver is still growing. Id. Holy War.

Let the main part of the corn be a common stock, laid in and stored up, and then delivered out in proportion. Bacon.

To these high powers a storehouse doth pertain, Where they all arts and general reasons lay ;

Which in the soul, even after death, remain, And no Lethean flood can wash away. Davies.

Wise Plato said the world with men was stored, That succour each to other might afford. Denham.

None yet, but store hereafter from the earth Up hither like aerial vapours flew, Of all things transitory and vain, when sin With vanity had filled the works of men. Milton.

Sulphurous and nitrous foam, Concocted and adjusted, they reduced To blackest grain, and into stnre conveved. Id.

My heart hath been a storehouse long of things And sayings laid up, portending strange events.

Id.

One having stored a pond of four acres with carps, tench, and other fish, and only put in two small pikes, at seven years' end, upon the draught, not one fish was left, but the two pikes grown to an excessive bigness. lldte.

As many different sounds as can be made by single articulations, so many letters there are in the storehouse of nature. Holder.

Jove, grant me length of life, and years good

store Heap on my bended back. Dry den's Juvenal.

We lived supine amidst our flowing store, We slept securely, and we dreamt of more.

Dry den.

The mind reflects on its own operations about the ideas got by sensation, and thereby stores itself with a new set of ideas, which I call ideas of reflection.

Locke.

The image of God was resplendant in man's practical understanding, that storehouse of the soul, in which are treasured up the rules of action and the seeds of morality. South.

Thee, goddess, thee, Britannia's isle adores ; How has she oft exhausted all her stores ! How oft in fields of death thy presence sought, Nor thinks the mighty prize too dearly bought !

Additim.

Her face with thousand beauties blest ; Her mind with thousand virtues stored ;

Her power with boundless joy confest, Her person only not adored. PnVr,

To store the vessel let the care be mine With water from the rocks, and rosy wine, And life-sustaining bread. Pope't Odystfy

STO

STOREKEEPER, a person entrusted with shows the superiority of true generalship o»-fr

Ine care of the stores in the magazines, such as brutal courage, we recommend it to the perusal

the provisions, forage, &c. During a war, store-of every officer, and to the imitation of every

keepers receive these articles from contractors, general who may have the lives of his fellovv—

and deliver them out to the troops. They have subjects entrusted to his judgment. The cele—

several clerks under them, appointed to different brated general Wolfe, always brave, always

departments of provisions, hay, straw, oats, &c. _../-., .,

The storekeepers belonging to the ordnance nave charge of all the king's stores, belonging both to land and sea-service. The government storekeeper-general is an appointment of recent date, which has been given to John Trotter, esq. STORESHIP. See SHIP. STORES, MILITARY, are provisions, forage, arms, clothing, ammunition, &c. Officers, storekeepers, or commissaries, who are convicted of embezzling or misapplying any military stores, are to make good the damage, forfeit £100, and be cashiered. See Mutiny Act, sect. 65.

STORES, MEDICAL, on board transports. Certain articles of diet, which are put on board each transport, are so called. These are to be considered as intended solely for the use of the sick, or convalescent; they are to remain in the charge of the master of the transport, and only to be issued upon demand in writing, made by the surgeon from time to time, as he shall judge proper; or, when there is no surgeon, upon de-mand of the commanding officer. And the surgeon or commanding officer is to give the master, at the end of the voyage, a certificate that his demands for the said medical stores have been made only upon proper occasions, and have not been expended for

any other use than that of the sick or convalescent.

STORK, n, s. Sax. j-toric ; Belg. stork ; Gr. •fopyt). A bird of passage, famous for the regularity of its departure.

STORK, in ornithology. See ARDEA.

STORK (Abraham), a celebrated Dutch painter, famed for sea-pieces and sea-ports. In these his figures were small; but so numerous, varied, and accurate, as to afford a great fund of entertainment. He died in 1708. His brother was a landscape painter, but not equal to Abraham.

STORM, n. $, Sav.n.t Welsh, ystorm; Sax.

STORM'Y, adj. \ r"corim ; Goth. Swed.

Dan. and Belg. storm ; Ital. stormo. A tempest ;

eager to put forth the energies of his nature, proposed to general Amherst, who commanded the besieging army, that the place should be stormed. The general asked his friend Wolfe, how many lives he thought it might cost? the latter said, about 300 ; and he then asked how long he thought it might hold out against a blockade ? Not above three days. Well, then, let us wait three days, and save our men. The place surrendered on the second day.

STORMING PARTY, a select body of men, consisting generally of the grenadiers, who first enter the breach, &c.

STORNOWEY, a harbour and port of the custom-house in Ross-shire, island of Lewis, Scotland. It has a post-office and regular packet, which sails every week with the mail and passengers for the mainland. The houses in the town are in general well built; and, besides a neat and commodious custom-house, here is a town-house, an assembly-room, an elegant church, and two good school-houses.

STORTHING, the Norwegian diet (from star, great, and thing, assembly). The citizens qualified to vote, choose electors, who, from among themselves or their constituents, select the representatives, whose number is not to be under seventy-five, nor above one hundred. A member of the storthing must be thirty years old ; must have resided ten years in the realm ; must hold no office, civil or military ; must not be attached to the court, nor receive a pension. Generally the

storthing is held every third year, at the beginning of February, in the capital, Christiania. After the storthing is opened by the king or his deputy, it chooses one fourth part of its members to form the logthiny ; the other three fourths form the odelsthing. Each thiny holds its sessions separately, and with open doors ; and the debates are published, unless a resolution to the contrary be passed. The storthing is authorized to make and abolish laws ; to impose taxes ;

a commotion of the elements; hence any violent open loans; see that the finances are properly assault, commotion,”-or calamity; to storm is, to administered; grant the civil list, &c. The attack by open force; to raise a tempest; to government protocols, and all public papers,

including treaties with foreign powers, must be laid before them, the secret articles only excepted, and these must not be contrary to the public ones ; it may summon any body before it, except the king and viceroy; and it confers naturalization. Laws are proposed in the odelsthing, by its members, or by a counsellor of state : if they pass there, they go to the loethine. The king is to sign the bills, or to decline so doing. If a bill, twice rejected by the king, is adopted without alteration by a third regular storthing, it becomes a law, even without the king’s sanction. In this manner nobility was abolished in Norway.

STO’llY. n. s & v. «• i Sax. ,-weji ; Belg. STO’RIED, adj. \ *toru; Ital. storm ; (,r.

STO’RYTELLER, n. s.) kopio ; Lat. hutoru.

rage; fume: stormy is, temoestous; violent passionate.

O turn thy rudder hitherward a while, Here may thy dorm-beat vessel safely ride. Spenier.

So now he storms with many a sturdy stoure, So now his blustering blast each coast doth scours.

Id.

We hear this fearful tempest sin, Yet seek no shelter to avoid the ttorm. Shahspeare.

Them she upstays, mindless the while Herself, though fairest unsupported flower, From her best prop so far, and storm so nigh.

Milton.

To STORM, in military matters, to make a

violent assault on any fortified place or works.

At the siege of Louisbourg, in the year 1758,

the following anecdote occurred; and, as it

A history , particularly a short history ; tale ; an idle or trifling tale ; account : as a verb active, to tell in history ; relate : storied is furnished or adorned with stories : storyteller, a narrator of tales; generally used in condemnation or contempt.

How worthy he is, I will leave to appear hereafter, rather than story him in his own hearing.

Shakspeare. Cvmbeline.

These flaws and starts would well become A woman's itory at a winter's fire, Authorised by her grandame. Id. Macbeth.

The fable of the dividing of the world between the three sons of Saturn arose from the true story of the dividing of the earth between the three brethren, the sons of Noah. Raleigh.

Matters of fact, concerning times, places, persons, actions, which depend upon story, and the relation of others, these things are not capable of being proved by such scientifical principles. Wilkins.

It is storied of the brazen Colossus, in the island of Rhodes, that it was seventy cubits high ; the thumbs of it being so big that no man could grasp one of them with both his arms. Id.

This scene had some bold Greek or British bard Beheld of old, what stories had we heard Of fairies, satyrs, and the nymphs their dames, Their feasts, their revels, and their am'rous flames !

Denham. And storied windows richly dight,

Casting a dim religious light. Milton.

'Tis not vain or fabulous

What the sage poets, taught by the' heavenly muse, ttoried of old in high immortal verse, Of dire chimeras and enchanted isles, And rifted rocks whose entrance leads to hell. Id.

Thee I have heard relating what was done Ere my remembrance : now hear me relate My itory, which perhaps thou hast not heard. Id.

The four great monarchies make the subject of ancient story, and are related by the Greek and Latin authors. Temple.

In such a satire all would seek a share, And every fool will fancy he is there -, Old storytellers too must pine and die, To see their antiquated wit laid by ; Like her who missed her name in a lampoon, And grieved to find herself decayed so soon.

Dry den.

Governments that once made such a noise, as founded upon the deepest counsels and the strongest force, yet by some slight miscarriage, which let in ruin upon them, are now so utterly extinct that nothing remains of them but a name ; nor are there the least traces of them to be found, but only in story.

South.

In the road between Bern and Seleurre, a monument erected by the republick of Bern tells us the story of an Englishman not to be met with in any of our own writers. Addison.

Some greedy minion or imperious wife

The trophied arches, storied halls, invade. Pope. Recite them, nor in erring pity fear

To wound with storied griefs the filial ear. Id.

My maid left on the table one of her story books, which I found full of strange impertinence, of poor servants who came to be ladies. Swift.

Company will be no longer pestered with dull, dry, tedious storytellers. Id. Polite Conversation.

STORY, n. s. &c v. a. Sax. r*0!^ place. A floor; a flight of rooms : to range in floors, or one under another.

Avoid enormous heights of seven stories, and the contrary fault of low distended fronts. Wotton.

Because all the parts of an undisturbed fluid are of equal gravity, or gradually placed or storied according to the difference of it, any

concretion that can be supposed to be naturally and mechanically made in such a fluid, must have a like structure of its several parts ; that is, either be all over of a similar gravity, or have the more ponderous parts nearer to its basis. Bentlei/‘s Sermom.

Sonnets or elegies to Chloris

Might raise a house about two stories ;

A lyrick ode would slate ; a catch

Would tile ; an epigram would thatch. Swift.

STOTHARD (Charles Alfred), a modern artist and antiquary of great talent, son of Tho-mas Stothard, R. 4-> was born July 5th, 1789. His' paintings are remarkable for the faithful delineation which they exhibit of ancient costume : his drawings of the effigies of various members of the house of Plantagenet, taken from the abbey of Fontevraud, are equally curious and accurate ; and it is satisfactory to reflect that his efforts not only succeeded in preserving copies of these relics, but mainly contributed to save the originals from destruction. In 1810 appeared his celebrated picture of the death of Richard II.. and in the same year the first number of his Monumental Effigies of Great Britain, the tenth number of which was preparing for publication when, by a melancholy accident, he was brought to an untimely end. In 1816 he visited France, and commenced at the instance of the Antiquarian Society his elaborate drawings from the celebrated tapestry of Bayeux ; which he afterwards, in a memoir addressed to the society, proved from internal evidence to be contemporary with the commonly received era of its production, the period succeeding the Norman conquest. This little essay is to be found in the nineteenth volume of the Archaiologia. In July 1819 he was elected a fellow of the Antiquarian Society ; and in the same year made a series of drawings from the paintings then lately discovered on the walls of the painted chamber in the house of lords. Being engaged to make some illustrations for Mr. Lyson's Magna Britannia, he set out for that purpose on a tour through Devonshire, and was employed in the act of tracing the stained glass in a window over the altar of the parish church of Bere Ferrers, in that county, when the ladder on which he was standing giving way, he was precipitated to the earth, and, his head striking against the monument of a knight in the chancel, his life was instantaneously terminated by a concussion of the brain. This fatal accident took place on the 28th of May, 1821, in the thirty-fourth year of his age. He left behind him several manuscripts and unpublished drawings, especially a work on ancient seals, which he had begun, and materials for a work illustrative of the age of Elizabeth. He lies buried in the church which was the scene of his catastrophe.

STOVE, n. s. Sax. pcopoa ; Isl. stoo, a fireplace ; Fr. estuve ; Belg. stove.

For December, January, and the latter part of November, take such things as are greon all winter ; orange trees, lemon trees, and myrtles, if they be staved; and sweet marjoram warm set. Bacon.

Fishermen, who make holes in the ice to dig up such fish with their nets as resort thither for breath-

ing, light on swallows congealed in clods of a slimy substance, and, carrying them home to their stoves, the waimth recovereth them to life and flight.

Carew's Survey of Cornwall.

Stoves, which could autumn of cold winter make ; Fountains in autumn to bring winter back.

Beaum. Psyche.

If the season prove exceeding piercing, in your great house kindle some charcoals ; and, when they have done smoaking, put them into a hole sunk a little into the floor, about the middle of it. This is the safest stove. Evelyn.

The most proper place for unction is a stove.

Wiseman.

The heat which arises out of the lesser spiracles Brings forth nitre and sulphur ; some of which it affixes to the tops and sides of the grottos, which are usually so hot as to serve for natural stoves or sweat- :ng-vaults. Woodward.

STOVES. Without pretending to explain the physical connexion of heat and light, we may observe that heat, as well as light, is communicated

to distant bodies in an instant by radiation. A person passing hastily by the door of a glass-house feels the glow of heat in the very moment he sees the dazzling light of the furnace mouth, and it is interrupted by merely screening his face with his hand. In this way is an apartment partly warmed by an open fire ; and we avoid the oppressive heat by sitting where the fire is not seen, or by interposing a screen. We are apt to connect this so strongly in the imagination with the light emitted by the fire, that we attribute the heat to the immediate action of the light. But this opinion is shown to be gratuitous by a curious experiment made before the Royal Society by Dr. Hooke, and afterwards, with more care and accurate examination, by Mr. Scheele. They found that by bringing a plate of the most transparent glass briskly between the fire and one's face, the heat is immediately intercepted without any sensible diminution of the light. Scheele, by a very pretty investigation, discovered that the glass made that separation, and did it both in refraction and reflection; for he found that, when the light of the same fire was collected into a focus by means of a polished «netal concave speculum, a thermometer placed there was instantly affected. But, if we employ u glass speculum foiled in the usual manner with quicksilver, of the same diameter and focal distance, and of equally brilliant reflection, there is hardly any sensible heat produced in the focus, and the thermometer must remain there for a very long while before it is sensibly affected. When we repeated this curious experiment, we found that, after the glass has remained a long while in this position, whether transmitting or reflecting the light, it loses in a great measure its power of intercepting the heat. By varying this observation, in many of its circumstances, we think ourselves entitled to conclude that the glass absorbs the heat which it intercepts, and is very quickly heated by the absorption. While it rises in its own temperature, it intercepts the heat powerfully ; but when it is, as it were, saturated, attracting no more than what it immediately imparts to the air in corporeal contact with it, the heat passes freely through along with the light. If the glass be held so near the fire

that the surrounding air is very much heated, no sensible interruption of heat is perceived after the glass is thus saturated. We found the cheek more quickly sensible than the thermometer of this instantaneous radiation of the heat which accompanies the light, or is separated from it in this experiment. It is a very instructive experiment in the physiology of heat. The accompaniment of light is not demonstrably necessary. We are certain that heat may be imparted without any sensible light, in a manner which we can hardly suppose

any thing but radiation. If a piece of very hot iron be placed a little without the principal focus of a metallic concave speculum, and a very sensible air thermometer be placed in its conjugate focus, it will instantly show an elevation of temperature, although the iron is quite imperceptible to an eye which has even been a long while in the dark. No such rise of temperature is observed if the thermometer be placed a little to one side of the focus of the speculum ; therefore the phenomenon is precisely similar to the radiation of light. We are obliged therefore to acknowledge that the heat is radiated in this experiment in the same way that light is in the common optical experiments. Although this is the most usual way that we in this country employ fuel for warming our apartments, it is by no means the only way in which the heat diffused from this fuel may be imparted to distant bodies. It is not even the most effectual method ; it is diffused also by immediate communication to bodies in contact. The air in immediate contact with the burning fuel is heated, and imparts some of its heat to the air lying beyond it, and this is partly shared with the air which is sti" fnrther off; and this diffusion, by communication in contactu, goes on till the remote air contiguous to the walls, the floor, the ceiling, the furniture, the company, all 'get a share of it, in proportion to their attractions and their capacities. And as the air is thus continually supplied, and continually gives one heat, the walls, &c., become gradually warmer, and the room becomes comfortable and pleasant. But no great proportion of the heat actually acquired by the room is communicated in this way. This diffusion by contact is but slow, especially in air which is very dry ; so slow, indeed, that the air in the immediate neighbourhood of the fuel is hurried up the chimney before it has time to impart any of the heat received in contact. We know that the time employed in diffusing itself in this way, through stagnant air, to any moderate distance, is very considerable. We imagine therefore that the heat communicated to our rooms by an open fire is chiefly by radiation, but in a way something different from what w mentioned before. We imagine that, as the piece of glass in Dr. llooke's experiment absorbs the heat, so the whole mass ot air whu fills the room intercepts the radiated heat in every part of the room where the fire is seen, and is as it were saturated with it throughout, and ready to impart it to every body immersed in it. We cannot otherwise account for th. equability of the heat in the different parts of the room. Mere radiation on the solid bodies would warm them in the inverse duplicate ratio of tl

distances from the fire; and diffusion by contact, if compatible with the rapid current up the chimney, would heat the room still more unequably. But, because all parts of the air of the room absorb radiated heat, what is saturated at a higher temperature, being nearer to the fire, rises to the ceiling, spreads outwards along the ceiling, and has its place supplied by the air which is thus pushed towards the fire from the places which are not directly illuminated. Far different is the method of warming the room by a stove. Here the radiation, if any, is very feeble or scanty ; and, if a passage were allowed up the chimney for the warmed air, it would be quickly carried off. This is well known to the English who reside in the cold climates of St. Petersburgh, Archangel, &c. They love the exhilarating flutter of an open fire, and often have one in their parlour ; but this, so far from warming the room during the extreme cold weather, obliges them to heat their stoves more frequently, and even abstracts the heat from a whole suite of apartments. But all passages this way are shut up when we warm a room by stoves. The air immediately contiguous to the stove is heated by contact, and this heat is gradually, though slowly, diffused through the whole room. The diffusion would however be very slow indeed, were it not for the great expansibility of air by heat. But the air surrounding the stove quickly ‘expands and rises to the ceiling, while the neighbouring air slides in to supply the place, nay is even pushed in by the air which goes outwards aloft. Thus the whole air is soon mixed, and the room acquires almost an equal temperature throughout. The warming by stoves must therefore be managed upon very different principles from those adopted in the employment of open fires. The general principle is, 1. To employ the fuel in the most effectual manner for heating the external part of the stove, which is immediately efficient in warming the contiguous air; and, 2. To keep in the room the air already warmed, at least as much as is consistent with wholesome-ness and cleanliness. The first purpose is accomplished by conducting the flue of the furnace round its external parts, or, in short, by making every part of the flue external. Of all forms, that of a long pipe, returned backwards and forwards, up and down (provided only that the place of its last discharge be considerably higher than its entry from the fireplace), would be the most effectual. A very small stove constructed in this way, the whole

being enclosed in a handsome case of polished iron plate, pierced and cut into elegant foliage like the cock of a watch, so that the odd looking pipes were completely concealed, though only three feet long, one foot thick, and six feet high, warmed a very lofty room of twenty-four feet by eighteen, and consumed less than half the fuel of a stove of the more usual make, which did not so fully warm a smaller chamber. It would occupy a volume to describe the immense variety of stoves which ingenuity or architectonic taste has constructed. We shall content ourselves with giving a specimen of the two chief classes into which they may be distinguished. The air of a room may be equally warmed, either by applying it to the

surface of a small stove made very hot, or to the surface of a much larger stove more moderately heated. The first kind is chiefly used in Holland, Flanders, and the milder climates of Germany and Poland. The last are universally used in the frozen climates of Russia and Sweden. The first are generally made of cast iron, and the last of brickwork, covered with glazed tiles or stucco.

The ancients are supposed to have used stoves which concealed the fire, but few traces remain of the manner in which they warmed their habitations. It is imagined they lighted the fire in a large tube in the middle of a room, of which the roof was open, and that the other apartments were warmed by portable braziers. In Seneca's time they began to construct tubes in the walls to convey the heat into the upper apartments, the fireplaces being placed below. It appears, however, that this was the origin of flues for smoke, and even of stoves; the situation and proportions of which have successively undergone various changes according to the localities, the wants of the inhabitants, &c. The custom of heating apartments by fires placed under arches or vaults seems to be very ancient : but this was confined to palaces and other edifices on a large scale ; and the vestiges that have been discovered among ancient ruins sufficiently point out their destination.

The northern Chinese have a method of warming the ground-floor which resembles the ancient plan. The floors are made of tiles a foot square and two inches thick ; their corners being supported by bricks set on end, that are a foot long and four inches square ; the tiles, too, join into each other by ridges and hollows along the sides under the whole floor, which on one side of the house has an opening into the air, where a fire is made ; and it has a funnel rising from the other side to carry off the smoke. The fuel is a sulphurous pit-coal, the smell

of which in the room is thus avoided, while the floor and room are well warmed.

Keslar of Frankfort, whose work, entitled ‘ Epargne-bois,’ &c. (the Wood-saver, &c.), appeared, in French, in 1619, is the oldest writer who has any useful ideas on the subject of stoves. He formed eight chambers, one above another, through which the smoke was to pass before it entered the chimney. He also brought air directly from without into the ash-pan to feed the fire ; and there was another aperture to draw air from the apartment for the same purpose. Savot, in the ‘ Architecture Fran 9 aise des Batimenspar-ticuliers’ (i. e. Architecture of Private Houses), printed in 1625, gave some advice relative to the best method of constructing chimneys with scarcely any other object than to prevent their smoking.

In 1686 M. Dalesme suggested the idea of a stove without smoke, which he called furnus acapnos. Here the smoke is forced to descend into the fireplace where it is consumed. Dr. Franklin afterwards executed a very complete stove on that principle, and spoke of it, in 1773, as a mere curiosity or philosophical experiment.

The machine in question consisted of a tube of iron plate, such as is used for the flue of a Ger-

man Btove. This was bent at nght angles, and many and Holland and the chimney of Gather

the part which was horizontal was about two feet In 1785 the doctor published the description0 of

in length, and joined to the rest of the tube which another stove which has the flame reversed that

ascended vertically. At the opposite end of the is, it passes downwards through the fuel The an

horizontal part the furnace was made : it con-pearance of this stove is that of a vase of cast

slsted of a cylindrical tube of plate-iron erected iron, with its pedestal ; and this is mounted upon

upon the horizontal tube near the end, and pro-the top or lid of an air-box standing upon the

vided with a grating, upon which the fuel was hearth of the fireplace, and built close in a niche

placed ; and the grate prevented the fuel falling in the stonework : but the vase being wholly de

down into the horizontal tube. To light this tached from the back of.theoiiche has a very neat

stove some clear burning charcoal was put into appearance. The top of the vase turns back

the large short tube or furnace, and supported on upon a hinge, so as to open like a lid, to put in

the grate. As soon as the tubes grew warm, the the fuel ; and the opening is covered by a brass

air within them would ascend in the perpendi-frame which allows the air to enter. The bottom

cular tube or chimney and go out at the top of of the vase has in it an opening, of about two

it : fresh air must enter into the horizontal tube inches diameter, which leads through the stem or

through the furnace. In this course it must de-foot of the vase into a hollow iron box, forming

scend through the burning fuel, and becoming the pedestal. At the bottom of this pedestal is a

heated by the burning coals, through which ifhas grating in the lid or top of the air-box upon

passed, would rise more forcibly in the longer tube in proportion to its degree of heat, or rarefaction, and the length of that tube. Such a machine is a kind of inverted siphon ; and as the greater weight of water in the longer leg of the common siphon, in descending, is accompanied by an ascent of the same fluid in the shorter ; so in this inverted siphon the greater quantity of levity of air in the longer leg, in rising, is accompanied by the descent of air in the shorter. The things to be burned being laid on the hot coals contained in the furnace, the smoke must descend through those coals and be converted into flame, which, after destroying the offensive smell, comes out at the end of the longer tube as mere heated transparent gas or vapor. Whoever would re-peat this experiment must take care that the part of the short tube is quite full of burning coals, so that no part of the smoke may descend and pass by them without going through them and being converted into flame; and that the longer tube is so heated that the current of ascending hot air will be established in it before the things to be burnt are laid on the coals, otherwise there will be disappointment.

There is a German book, entitled Vulcanus Famulans, by Joh. George Leutmann, P. D.,

which the vase stands. “The air-box is divided by four partitions, between which the smoke passes and repasses horizontally in a waving direction until it escapes into the chimney. Thus the smoke and flame, immediately after it has descended through the grate in the top of the air-box, passes backwards towards the chimney between the two middle partitions ; but, as it cannot enter into the chimney at that part, it turns round the ends of those partitions and returns in two currents towards the front of the box ; then returns again round the end of other partitions, and goes back into the chimney, which is behind, or rather at the sides of the niche in which the vase stands. The front plate of the air-box is made to slide in a groove, in two pieces, which meet together in the front like folding-doors; and these pieces being slided back expose the spaces between the partitions, which, as beforemen- tioned, act as winding flues for the smoke to circulate in, and give out its heat through the metal of the air-box. In the space between the two middle partitions, and into which the smoke first descends, a drawer is fitted to receive the ashes or cinders which may fall through the grate in the top of the air-box, and it can be readily withdrawn to clear it out. There is likewise a small

printed at Wirtemburg in 1723, which describes, grate at the lower part of the vase, upon which

among a great variety of other stoves, one which seems to have been formed on the same principle. It was probably taken from the hint thereby given. The construction is as nearly as possible the same, except in the proportion of the parts, the furnace being made in the form of a basin or vase, having the grate in the bottom.

the fuel contained in the vase will rest. When this fuel is lighted, the flame and smoke will draw downward, and, descending through the grate, will pass through the hole in the bottom of the vase into the hollow pedestal, and through the grate in the top of the air-box : it then passes horizontally in the space between the two middle

Gauger, “the author of La Mechanique du partitions of the air-box, and proceeds in the

Feu, &c., printed at Paris in 1709, was the por-same direction towards the back of the chimney ;

son to whom we are indebted for the first com-there dividing, one part of it turns to the right

plete system of experiments on the circulation of and passes round the farther end of the mid

heat by means of air-holes affording warm air; partition; then coming forwards it turns rou

:is also the manner of making one fire warm the near end of the outside partition; then moving

several rooms to send off the heat in elliptic backwards it arrives at the opening into the b

curves. We here find a description of a chim-torn of one of the upright corner funnels behind

ney, with the back, the hearth, and the jambs, of the niche, through which it ascends

hollow iron, to heat the air that is to enter the chimney, thus heating that half of the I .ox an

room: but it does not appear that this work pro-that side of the niche. The other par

duced much effect divided flame passes to the left, round the far end

In 1745 Dr. Franklin published an account of of the middle partition, round the near end

the new stoves of Pennsylvania ; the advantages of the outside partition, and so into nu up trie

whu-h he compares with those of the stoves of'Ger-othsr corner funnel ; thus heating the (

of the box, and the other side of the niche. The vase itself, and the box, will also be very hot ; *nd the air surrounding them being heated, and rising, as it cannot get into the chimney, it spreads in the room ; colder air succeeding is warmed in its turn, rises and spreads, till by the continual circulation the whole is warmed. If there is occasion to make the fire when the chimney does not draw it must not be begun in the vase, but in one or more of the passages of the lower air-box; first withdrawing the sliding front of the air-box, and covering the mouth of the vase. After the chimney has drawn some time with the fire thus low, and begins to be a little warm, those passages may be closed and another fire kindled in the hollow pedestal, leaving its sliding shutter a little open ; and when it is found that the chimney, being warmed, draws forcibly, that passage may be shut, and the vase opened, to make the fire there, as above directed. The chimney, well warmed by the first day's fire, will continue to draw constantly all winter, if the fire is made daily.

To avoid the inconvenience of smoke, the grate must be cleared before beginning to light a fire. If it is found clogged with cinders and ashes,

the grate must be lifted up with the tongs to let them fall upon the grate in the top of the air-box : the ashes will go through it into the drawer, and the cinders may be raked off through a sliding door in the pedestal, and returned into the vase when they are to be burnt. Care must be taken that all the sliding-plates are in their places, and closely shut, that no air may enter the stove but through the round opening at the top of the vase; and, to avoid the inconvenience of dust from the ashes, let the ash-drawer be taken out of the room to be emptied. The passages should be cleaned or raked out when the draught of the air is strong inwards; and the ashes must be put carefully into the ash-box whilst it remains in its place. If it be required to prevent the fire burning in the absence of the proprietor, it may be done by removing the brass frame from the top of the vase, and covering the passage or opening into the top of the vase with a round tin-plate, which will prevent the entry of more air than barely sufficient to keep a few of the coals alive. When the fire is wanted, though some hours afterwards, by taking off the tin-plate and admitting the air the fire will soon be recovered. The effect of this machine is to burn not only the coals, but all the smoke of them; so that while the tire is burning, if the top of the chimney is observed, no smoke will be seen issuing, nor any thing but clear warm air, which, as usual, makes the bodies seen through it appear waving. But it must not be imagined from this that it can be a cure for bad or smoky chimneys, much less that, as it burns the smoke, it may be used in a room that has no chimney. It is only by the help of a good chimney, and the higher the better, that it produces its effect at all.

It is certain that heated clean iron yields no offensive smell : whatever smell of that kind is perceived where there are iron stoves, proceeds, therefore, from some foulness burning or fuming on their surface; they should, therefore, never be spit upon or greased, nor should any dust be

suffered to lie upon them. The advantages of the reversed flame in stoves are very considerable. The chimney does not grow foul, nor ever need sweeping; for, as no smoke enters it, so no soot can form in it. The air heated over common fires instantly quits the room and goes up the chimney with the smoke ; but, in the stove, it is obliged to descend in flame, and pass through the long winding horizontal passages, communicating its heat to a body of iron-plate, which, having thus time to receive the heat, communicates the same to the air of the room, and thereby warms it to a greater degree. The whole of the fuel is consumed by being turned into flame, and the benefit of

its heat is obtained ; whereas, in common chimneys, a great part goes away in smoke, which may be seen as it rises, but it affords no rays of warmth. Some idea may be formed of the quantity of fuel thus wasted in smoke, by reflecting on the mass of soot that a few weeks' firing will lodge against the sides of the chimney; and yet this is formed only of those particles of the column of smoke which happen to touch the sides in its ascent. How much more must have passed off in the air ? And we know that this soot is still fuel, for it will burn and flame as such ; and, when hard caked together, is indeed very like and almost as solid as the coal from which it proceeds. The destruction of fuel goes on nearly in the same quantity in smoke as in flame, but there is no comparison in the difference of heat given. When fresh coals are first put on a fire a considerable body of smoke arises. This smoke is, for a long time, too cold to take flame ; but, if a burning candle is plunged into it, the candle, instead of inflaming the smoke, will instantly be itself extinguished. Smoke must have a certain degree of heat to be inflammable. As soon as it has acquired that degree, the approach of a candle will inflame the whole body, and the difference of the heat which it gives will be very sensible. A still easier experiment may be made with a candle itself. Hold your hand near the side of its flame, and observe the heat it gives ; then blow it out, the hand remaining in the same place, and observe what heat may be given by the smoke that rises from the still burning snuff; you will find it very little; and yet that smoke has in it the substance of so much flame, and will instantly produce it if you hold another candle above it so as to kindle it. Now the smcke from the fresh coals, laid on this stove, instead of ascending and leaving the fire, while too cold to burn, being obliged to descend through the burning coals, receives among them that de-gree of heat which converts it into flame ; and the heat of that flame is communicated to the air of the room, as above explained.

Franklin's stove is very ingenious, and has been much used in France, where the management of coal fires, however, is but little understood. He completed the stove just described in 1771, and used it in London during three winters. While he was in France he contrived another grate for burning pit-coals, which has the same property of burning the smoke, and at the same time the fire is exposed in a grate. The grate is a short cylinder, with its axis placed horizo tally, and the end turn ad towards -the

apartment ; one of its circular ends being made with bars, and the other is a back-plate . it is

have not in the other. It may with a touch be turned more or less from any one of the coin-

one foot (French) in diameter, and eight inches pany that desires to have less of its heat, or pre-

deep or long between the bars and the back : the . „„ „„„ ^^ ^111C uul Vl luc UU1U - ailllj

sides and back are of plate iron, the sides having when the front bars of the grate are supported in

a horizontal position, a tea-kettle may be boiled

holes of half an inch diameter, and three or four inches distant from each other, to let in air for enlivening the fire : the back is without holes, and the sides do not meet at either the top or bottom by eight inches : and this square space is filled with grates of small bars, crossing from front to back to let in air below, and let out the smoke or flame above. The three middle bars of the front grate, that is, the circular end, are fixed ; the upper and lower may be taken out and put in at pleasure, when hot, with a pair of pincers. The whole of this cylindrical grate turns upon pivots fixed in the opposite sides, across the centre of it : the pivots are supported by a crotchet, the stem of which is an inverted conical tube five inches deep, which fits as many inches upon a pin, which is fixed upright in a cast iron plate that lies upon the hearth. In the middle of the top and bottom grates are fixed small upright pieces, about an inch high, which, as the whole is turned on its pivots, stop it when the grate is perpendicular. By this

means the grate can be inverted by turning it over upon its pivots; but, as that will present the back-plate to the apartment, it requires to be turned half round horizontally upon the conical pin to bring the front bars to the room. In making the first fire in the morning, with this grate, there is nothing particular to be observed : it is made as in other grates, the coals being put into the cylindrical grate above, after taking out the upper bar, which must be replaced when they are in. The round figure of the front bars filled with fire, when thoroughly kindled, is agreeable : it represents the great giver of warmth to our sys-tem. As it burns down it leaves a vacancy above, which must be filled with fresh coals, the upper bar is to be taken out, and fresh coals thrown in, the bar being afterwards replaced. The fresh coals, while the grate continues in the same position, will throw up, as usual, a body of thick smoke ; but every one accustomed to coal fires in common grates must have observed that pieces of fresh ooal stuck in below among the red coals have their smoke so heated as that it becomes flame as fast as it is produced, which flame rises among the coals, and enlivens the appearance of the fire. Here, then, is the use of this swivel-on them.

Notwithstanding the advantages of Dr. Franklin's construction of a stove, the expense and trouble of it, and the difficulty of procuring workmen who understood the manner of executing it, have prevented the general use of it. Mr. James Sharp, with a view of obviating these objections and difficulties, has proposed several improvements, for which he has obtained his majesty's patent. According to the method which he proposes, they are easily accommodated to any rooms, where communications can be had with the external air ; both to those which have, and those which have not chimneys : so that not only small rooms, but the largest halls, libraries, or churches, may be warmed in a more effectual manner than had ever been done before, and the greatest degree of heat produced from a given quantity of fuel. Mr. Sharp, by adding funnels to the top, renders these stoves fit for any chimney, and, by lengthening the funnel, to any place without a chimney. By the hollow base with which his stove-grates are furnished, he is able to apply them with much greater effect to the external air, without any addition of brickwork ; and by the alterations in the air-box, a much greater quantity of warm air is introduced than it was possible to introduce in their former state. If a stove of this kind is to be placed in a com-mon fire place, a hole must be made through the back of the chimney, or through the hearth, to communicate with the external air ; and this hole should be made as large as possible, and in a descending position, so that the outward air rnay ascend towards the stove. The hollow base of the stove must be

placed against this hole, so as to cover it completely ; and the bottom of the base must be fitted so close to the earth, and pointed with lime or putty, that the air may not pass. Upon the stove there must be put a few feet of iron funnel to reach above the breast of the chimney ; and the chimney enclosed by iron plates, so constructed and placed in a square or oblong iron frame that they may be easily removed when the chimney wants sweeping. By this construction the warm air introduced by the stove will be carried into the room, which would

grate : by a push with the tongs or poker it can otherwise pass up the chimney and be lost. But be turned over on its pivots till it is inverted, if the stove is to be fixed in a room where there and the front bars face the back of the chimney ; is no chimney, it may_be placed in any part ˆ ot

it where communication may be had with the outward air; and nothing more is necessary than a sufficient length of funnel to carry it through the roof, or wall, or window, or into any other chimney that may be convenient, place be too small for the stove, ‘u be closed by the aforementim,

tained from them, and the red coals are longer plates, and the stove stand before

preserved from consuming. This construction, and the smoke t

though not so complete a consumer of all the circular elbow, into

smoke as the vase, is yet fitter for common use, tie-piece. Many 01

and very advantageous; it gives also a full sight “been lately put 11

<»f the fire always, a pJeasing object which we nies, and have

then turn it gently round on its vertical socket or axis till it again faces the room, whereby all the fresh coals will be found under the live ones, and the greater part of the smoke arising from the fresh coals will, in its passage through the live ones, be heated so as to be converted into flame. By this means much more heat is ob-

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STOVES.

Air-

particulars see Sharp’s Account of the Stove Grates, &c.

In the north of Europe the inhabitants have long been accustomed to the use of stoves in which the fire is shut up, and gives out its heat to a draught or current of air which is made to pass through proper openings in the stove, and when sufficiently warmed enters into the apartment. The smoke arising from the fuel is made to pass through a circuitous passage of flues, by which means the greatest part of the heat is absorbed. Stoves on this principle are known in England, but are very seldom used, except for warming of halls, staircases, and passages, in grand houses, as the English are not contented to feel the air warm unless they see the fire. In Russia, Sweden, and other northern countries, they are indispensably necessary. A common fireplace has too large an opening, and if care be not taken to supply it continually with wood, &c., the heat it produces is hardly sensible, because it follows the current of the air, and is carried off by the smoke. These stoves, on the contrary, retain the heat a much longer time; and as their external parts, and also their flues, are very thin, they communicate their heat very readily, so that with a small quantity of wood they warm an apartment much more than the fire of a common fireplace would do with six times the quantity. For it was not sufficient that the inhabitants of these severe climates should discover the most simple means of keeping up in their houses a comfortable degree of heat, it was also necessary that this should be

done with the least possible expense of fuel. The stores which they employ perfectly fulfil the above-mentioned intentions; they are also susceptible of every kind of ornament. The more surface we give to a stove constructed in this manner, the more the heat is increased; consequently we must not be surprised to find that this kind of stove sometimes occupies the whole height of an apartment, its width and depth being proportioned to its height.

The construction of these stoves is simple : they consist of four, five, or more small chambers built one above another : the lower one is for the fire which burns in it, and the smoke rising from it enters into the chamber immediately above, then into the third, and from that to the fourth. The passages or holes through which the smoke enters into one chamber from that beneath, are in all cases made at the corner of the chamber opposite to the passage at which the smoke will pass out from the same chamber to the next above it. By this means the smoke is obliged to pass through the whole of the chamber, and has the greatest chance of transmitting its heat. A fire lighted in one of these stoves early in the morning, and with a small quantity of fuel, retains a strong heat during the whole day. The door of the fireplace is only opened to put in wood, and remains afterwards constantly shut. The wood lies upon a grate, consequently it is not buried in and stifled by the ashes. The ash-hole is spacious, and one or two feet in height, according to the capacity of the stove. Two doors are placed at the extremities of the ash-hole, and the current of air is very considerable, by which the smoke is carried up with great force, and the wood burns very briskly Stoves of this kind may be advantageously placed in halls, at the bottom of staircases, and in the anti-chambers of great houses : they may also, by proportioning their size to that of the rooms for which they are intended, be made use of in the houses of private persons. To this it may perhaps be objected that the heat produced from these stoves is unwholesome, because they deprive the air of its moisture ; and that the air, by being made too dry, loses its elasticity, in consequence of which respiration becomes difficult and laborious. These objections would appear of great weight if we had not the example of the Russians, the Swedes, the Danes, the Germans, and in short of all the inhabitants of the north of Europe, to show that those who are habituated to such stoves do not find them unwholesome. If others should be sensible of inconveniencies from the dryness of the air in the apartment, it may be easily removed by the very simple expedient of placing upon the stove a vessel of glass or earthenware which has a large surface and is very shallow : this, being filled with water, will insensibly evaporate, and restore to the air that moisture of which the heat of the stove has deprived it : the air will

then recover its elasticity. If orange trees are exposed to the heat of such a stove, and the fire is not properly regulated, the plants grow yellow and lose their leaves, especially if the air is not changed, which in winter is not very conveniently done ; but, if a vessel of water be placed upon the stove, the evaporation of the water will preserve the trees.

In a memoir of M. Guyton in the Annales de Chimie, he has explained the construction of the stoves employed in Sweden, and recommends the adoption of one constructed on the same principle for general use in France. This me-moir is translated in the Repertory of Arts, first series, vol. xvi.

The construction of the stove there recommended may be improved, to adapt it to our use in England, where pit-coal is used : but the following principles which the author lays down are very useful as guides in making all kinds of stoves for warming apartments. 1. Heat is produced only in proportion to the volume of air consumed by the fuel. 2. The quantity of heat produced is greatest (the quantity and quality of the fuel being the same) when the combustion is complete. 3. The combustion is the more complete in proportion as the fuliginous part is longer retained in channels where it may undergo a second combustion. 4. The only useful heat is that sent out into and retained in the space intended to be heated. The temperature of that space will be higher in proportion as the current which must be renewed from without to support the combustion is less enabled to take up in its passage the heat produced.

The following inferences evidently arise : — 1. The fireplace ought to be insulated from all bodies that are rapid conductors of heat. All the heat that goes out of the apartment is absolutely lost, unless intentionally directed into another apartment. 2. Heat being produced only by combustion, and combustion being sustained

only by a current of air, the current should be brought in by channels where the needful rapidity may be preserved without being too distant

from the space to be warmed, so that the heat it there deposits may be gradually accumulated in the whole of the insulated furnace, in order afterwards to flow out of it slowly, according to the laws of the equilibrium of that fluid. 3. The wood being so far consumed as to give no more smoke, it is advantageous to close the mouth of these channels, in order to retain there the heat that would otherwise be carried off through the upper flue by the continuance of a current of fresh air, necessarily of a low temperature. 4. Lastly ; it follows from these maxims that, all things being equal, a higher temperature will be obtained and supported during a much longer time by forming, in the internal parts of the stove, or under the hearth of a chimney, and in their vicinity, tubes in which the air that comes from without may be warmed before it enters the apartment, to serve the purpose of combustion, or replace that which has been consumed. These have been called bouches de chaleur (mouths or apertures of heat) ; because, instead of contemplating their principal use and intention, it is commonly imagined that they are only made in order to give by their issues a more rapid current to the heat produced. Nor is this idea absolutely devoid of foundation, since the air that issues from them has only changed its temperature, by carrying off a portion of the heat that would have remained in the interior. Those, however, who would proscribe them, as opposing the most important object, which is the retaining of the heat as long as possible, do not consider that they rnay be closed, and all communication with the external air cut off by a simple slide, and therefore it is easy to derive from them every possible advantage without any inconvenience. And we may add that in small apartments, or such as are accurately closed, they are often indispensably requisite, if we could avoid being exposed to currents of cold air. Dr. Franklin very justly quotes a Chinese proverb to this effect : ‘ Shun a current of air from, a narrow passage as you would the point of an arrow.’

The Swedish or Russian stoves, having chambers for the reception of the flame and smoke, are little known in this country : but those which are in common use in the halls and vestibules of our great houses are French stoves. They differ from the others in having a very great length of small flues or winding passages, through which the smoke passes, and communicates its heat to the air, which circulates in similar passages, until it becomes warmed, and makes its exit through the mouths into the apartment. This method is not so simple as the small chambers or apartments of the Russian stoves, nor is it so good in the long run ; because the passages are very liable to become clogged with soot ; and, even before they are so clogged as to intercept the passage of the smoke, the transmission of the heat i?

much impaired, because the interior surfaces of the flues, becoming coated with, soot, do not conduct the heat so rapidly, and in consequence a great part will

still pass out into the chimney. Also these flues with small passages require a stronger draught in the chimney, to make the air pass through the passages, than when chambers are used. The Holland iron stove, which has a flue proceeding from the top, the fire place and ash-pit being closed by small iron doors opening into the room, comes next to be considered. It is frequently made of iron-plate, and is most commonly called a German stove. Its conveniencies are, that it makes a room warm all over; for, the chimney being wholly closed, except the flue of the stove, very little air is required to supply that, and therefore not much rushes in at crevices, or at the door when it is opened. Little fuel serves, the heat being nearly all saved ; for it radiates almost equally from the four sides, and the bottom and top, into the room, and presently warms the air around it, which being rarefied rises to the ceiling, and its place is supplied by the lower air of the room, which flows gradually towards the stove, and is there warmed and rises in its turn, so that there is a continual circulation, till all the air in the room is warmed. The air, too, is gradually changed by the stove doors being in the room, through which part of it is continually passing, and that makes these stoves more wholesome, or at least more pleasant, than the German stoves, next to be spoken of. But they have the inconvenience that there is no sight of the fire, which is in itself a pleasant tiling, nor can any other use be conveniently made of the fire but that of warming the room.

The true German stove is made like a box, one side wanting, and that side is built against the wall of the room. It is composed of five iron plates screwed together, and fixed so as that the fuel can be put into it from another room, or from the outside of the house. -It is a kind of oven reversed, its mouth being without and body within the room that is to be warmed by it. This invention certainly warms a room very speedily and thoroughly with little fuel : no quantity of cold air comes in at any crevice, because there is no discharge of air which it might supply, there being no passage into the stove from the room. These are its conveniencies. Its inconveniencies are, that people have not so much sight or use of the fire as in the Holland stoves, and are moreover obliged to breathe the same unchanged air continually, mixed with the breath and respiration from one another's bodies, which is very disagreeable to those who have not been accustomed to it. This may be remedied by making a small aperture into the flue,

with a register to draw off tin-air. This kind of stove is still less in use in England than that which we have before described, and which is generally called the Ger-man stove, although it is used by the Dutch instead of the Germans.

Messrs. Strutt, in their cotton mills at Belper, in Derbyshire, have employed a kind of stove which is found to answer extremely well ; it consists of what is called a cockle, that is, a square chest or vessel of iron plate, rivettod together in the manner of a boiler, and set in a furnace, so that a fire can be made withinside of

it upon a grate, and the smoke will pass off through a small passage into the flue which conducts to the chimney, the passage of which is regulated by a sliding damper. The cockle is of considerable dimensions, as much as four feet square and five feet in height, and the fire is made at the bottom of it, upon a grate of about fourteen inches by eighteen, so that the fire does not any where touch the inside of the cockle, but the heat rising up therein gives a considerable and equable heat, without rendering it so hot as to burn the air which it is intended to warm ; for if that is once done the air will be rendered unpleasant. The cockle is enclosed in a casing of brickwork, which is of the same shape as the cockle, and leaves a space all round between of a few inches. This case of brickwork is again surrounded by walls of brickwork, leaving a space of about eighteen inches all round ; and these walls are carried up above, to form the chimney or funnel to convey the warmed air up to the several apartments of the mill. This chimney is divided, by thin brick partitions, into as many different flues as there are floors to be warmed ; and a small opening is made, with a register, from each flue into the apartment it is intended to supply. This opening is made close to the floor ; and, in order to make a change of the air, ventilators are placed high up in the apartment, so as to be near the ceiling. This division of the chimney into several different flues is intended to equalise the supply of air to the several apartments, and by this means the upper apartments are equally well supplied with warm air as those below. In

order to make the air pass in contact with the surface of the heated cockle, a horizontal partition is built in the space between the chimney and the brick-casing of the cockle. The level of this partition is at about one half the height of the cockle, and its effect is to divide the brick-casing of the cockle into two halves, one above the partition and the other below. The cold air is freely admitted into the lower part of the chimney beneath the partition, but cannot escape into the chimney above it, without entering into the space between the cockle and its brick-casing, through a number of small openings made in it beneath the horizontal position ; and in thus passing in contact with the surface of the cockle the air becomes heated, and passes out again, through openings in the brick-casing, into the chimney above the partition. In order to make the cold air strike more forcibly against the heated surface of the cockle, a small iron tube is fitted through each of the openings in the lower part of the casing, and the ends of these tubes approach very near to the surface of the cockle. Mr. Strutt has introduced this kind of stove into the new infirmary at Derby, and in several other similar institutions it has been adopted with great success.

Mr. James Burns of Glasgow, in 1799, took out a patent for an improved stove, or fire-grate, to burn with an open fire : his stove has a very elegant appearance, and several advantages. The object of the improvement was to prevent the heat generated by combustion, and thrown out into the apartment bv radiation, from being

unnecessarily wasted by the draught of air for the support of the fire, as is usual in stoves or grates of the common construction ; where all the air that goes to maintain the combustion is furnished from the warm air in the room, the waste of which is supplied by the exterior cold air, which comes pouring into the room at the bottoms of the doors, or by the sides of the windows, and thereby undoes a great part of the effect that otherwise would be produced by the fire. To accomplish this intention, the air that maintains the fire in the improved stoves is brought through a tube, which is called the air-tube, from the outside of the house, and may be made to pass between two of the joists (where the floors and ceilings are close enough to allow this), so as to be brought to the bottom bars of the grate, without having any communication with the interior air of the room ; while, at the same time, the grate and parts connected with it are so constructed that, when the fire is not wished to be supplied with cold air from the outside of the house, the passage may be shut more or less perfectly by means of a valve, a small door, a cock, or any similar

contrivance. When convenience does not admit of the air-tube being carried to the outside of the house, it may be carried to a cellar, larder, or staircase, and the same end will be gained, with this farther advantage, that such cellar, or other apartment, will be always well ventilated, and prevented from acquiring or retaining any unhealthy or disagreeable smells. The principle is to supply the fire with air from without the room or apartment, so as to prevent the warm air of the room from being drawn to the fire place and hurried up the chimney, while, at the same time, all the advantages of open grates may be enjoyed. The form of Burns stove is that of a vase or urn placed in the chimney place, which is made circular, to form a niche for its reception. The urn is open at top, and the sides are formed of open work or grating, with a grated bottom, forming a sufficient space to contain the fire; but the pedestal and lower part of the vase are made close, to prevent the entrance of air to the fire, except that which passes up from the air-tube through the hollow pedestal ; and with-in this pedestal is an air-valve, which opens and shuts by a register, to regulate the entrance of the current from the open air. In the pedestal of the vase is a drawer, to receive the ashes. The niche or chimney, in which the vase is placed, has the usual opening at top to carry off the smoke. The air for the support of the fire enters from the external air, through the tube or air-pipe before described, and passes into the hollow pedestal of the vase ; and, having passed through the hollow neck or stem of the vase, it finds no difficulty in passing up through the bottom of the grate, the back or side of the ash-drawer next which the aperture is being made low, to allow it to flow in freely. The grate and its internal cavity may be of any convenient form, but circular or elliptical will answer best, especially when another improvement is applied. This is a glass talc or iron work fence or screen, to prevent those dreadful accidents which so frequently occur of ladies' or chil-

dren s clothes being set on fire by sparks from the grate. Where this safeguard fence or screen is wished to be applied, the inside of the chimney where the grate is to stand must be a semi-cylinder, or nearly so, with a lining or cover, made of metal, at such a distance from the semi-cylindrical wall or niche in which the stove is placed, as to give sufficient room for allowing the safeguard or fence to be slid round into it, when the fire is wished to be left open to introduce fresh fuel,

or when the drawer with the ashes is to be removed. The fence is a frame-nork of metal, which, when filled up with glass, or with wire-work, forms a portion of a cylinder, answerable to the curvature of the space between the back of the chimney and the lining above-mentioned, made in one or two pieces, and moving in a circular groove in the hearth, which serves to conduct it into its place behind the grate, when the fireplace is wanted to be left open, as before mentioned. The top of the front of the opening (the chimney piece) projects in a circular form, or is furnished with an added projection, made of metal, and furnished with a circular groove on its under surface, of the same radius as the groove in the hearth, for the purpose of guiding the upper part of the frame of the guard. The glass with which the frame of the guard is filled may be stained or painted : complete safety is thus obtained, and, at the same time, the comfort arising from the view of a cheerful fire is not prevented by the interposition of any opaque body. But for nurseries or the like, where convenience and safety are more the objects than elegance or luxury, the frame-work may be filled up with wire-work. Instead of such grooves at top and bottom for the fence to move in, the fence itself may be furnished with a groove at its top and one at its bottom, to receive any projecting piece of metal, or other substance of a proper curvature ; or its bottom groove may receive the upper edge of the fender, which, being made to a proper curve, and properly adjusted and kept in its place, will answer the same end. But whichever of these ways be followed, or whatever other me-thod of construction (for it may easily be varied to answer circumstances), rollers or castors should be provided at the lower part of the fence, to make it move with greater ease, either to the front of the grate, or into the space between the back of the chimney and the lining above-mentioned. Where either the glass or the wire-work frame, or both of them, are meant to be applied to square or rectangular chimneys, without the trouble of giving them a semi-cylindrical form, the lining to receive the fence or fences may be introduced at the sides, or jambs, of such chimneys ; or the fence may be made to rise, by means of pulleys, into the wall above the opening, or be slid sideways into the walls at the sides of the openings. Besides the advantages already pointed out as connected with them, these stoves possess also the following : — any room or apartment may be heated by their means with a much smaller quantity of fuel than by common open fires ; at the same time the advantage of seeing the fire is not lost, a* in close stoves ; for these grates have side as

well as bottom bars, which allow the radian', heat and light to be

thrown out into the room, without any impediment; and, in fact, large rooms, halls, and the like, which by the usua'. methods can hardly be warmed, or made at al comfortable in cold weather, may, by means of these improvements, be heated as effectually a« the smallest apartment; for, when their ml. effect is wanted to be procured, ii is only necessary to keep the fence in its recess, that eve : that portion of heat which would be kept back by the interposed glass or wire-work may b< thrown out into the room, and perform its office In 1804 Jowett of London obtained a paten for a similar contrivance, which he called a fire-guard stove, which is intended to prevent accidents from sparks of fire flying out. The stove itself is an open fire, and is usually made of u cylindrical form, the axis of the cylinder being vertical. One half of the cylinder which faces the apartment is made with bars at the lower part, to contain the fire, and an opening over them to feed it. The back part of the cylinder is made of cast iron plate ; but, instead of the brickwork being built up close round the back, a small space is left to receive the guard. The weight of the stove or grate is supported upon a vertical iron bar, which is in the centre, or axis of the cylinder, which forms the stove, and the guard swings round upon this bar as a cen tre, and, being a half cylinder of wire-work, can be brought in front to enclose the fire, or it can be turned round behind the stove out of sight. The fire-guard may be fixed to any stove which will admit of two centres or pivots being placed in a perpendicular line in the back of the stove, to suspend the fire-guard, and guide its motion ; and the stove must admit of grooves on either side, for the guard to pass through, as the levers will direct. The principle 6f the action of the fire-guard is that of being united to two centres or pivots, placed perpendicular one to the other; and it is connected to the two centres fixed to the stove by means of two lever-cranks, one end of which is fixed to the guard, and the other end of each to the centres o; pivots, by which the guard swings in a rotatory motion, passing through a groove formed in the stove on either side, to swing before the fire when required, and is brought into use by means of -a handle or nob, fastened to the front edge of the frime of the guard for that purpose ; or instead of drawing it out with ,the hand, as before described, it may be brought into use by means of a spring fastened to the crank, and pressing against the cheek or back of the stove, to throw the guard forward. The same effect may be produced by means of a balance !;istened to any part of the fire-guard, and working with a line or chain over pulleys fixei to the stove, or by means of the combined force of the spring and balance.

An important improvement in those fireplaces for burning of coal, which are generally called register-stoves, has been lately made by

Mr. John Cutler of London, for which he had a patent in 1815. The stoves constructed l> > him are nearly such as aro known by the name of register-stoves, being made of cast iron plate

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to enclose tne fire-piace at the back and sides, but open in front to the apartment ; leaving only a passage for the smoke through a register, at the upper part of the enclosed space. Mr. Cutler's improvement consists in applying to such grates or stoves a chamber, or magazine, situated beneath the grate (or the space enclosed by grating) in which the fire is to burn. This chamber is to contain a magazine of fuel sufficient to supply the combustion for a whole day, or other required space of time: the bottom plate of the chamber is moveable; and, by means of a wheel and axle, the fuel contained in the magazine can be elevated, so as to introduce a portion of the fuel into the grate at the lower part, or from beneath ; and thus, from time to time, replace the fuel which is consumed, without the trouble of occasionally throwing on coals. In order to make the fire burn, the flue or entrance to the chimney must be of such a construction as will produce the most efficient draught or current of air to pass through and across the top of the fire. This improvement, of introducing a supply of fuel into the grate from beneath, causes the fire to burn clear and with little smoke; because the smoke, or gas, which issues from the newly introduced fuel, when it is first heated, must of necessity ascend through the burning fuel, and be thereby consumed. Another improvement is to reduce the fire, or extinguish it, when it is left for the night. This is done by lowering down the whole of the fire from the grate into the chamber, or magazine, beneath the grate : the supply of air is thus interrupted, and the fire is completely enclosed in a deep chest, so that it is impossible sparks can fly out, and the fire soon becomes extinguished. The advantages of these improvements are by no means trifling. By burning the smoke the whole effect of the fuel consumed is produced ; and, were this invention universally introduced into London, that pernicious sooty atmosphere in which it is hidden would be so improved as to be equally pure with that of Paris, or other continental cities, where wood alone is used for fuel. The burning of the smoke renders the sweeping of the chimneys unnecessary, and the danger of fire from the soot contained in the flue is avoided : also chimneys which throw out smoke into the room will, in almost all cases, be cured by this improvement, because the quantity of air or gas which must pass through the chimney is so small. To avoid the trouble of throwing on coals, and to have at all times a bright and cheerful Tire, are matters of convenience, but are not wholly to be overlooked : and, lastly, to have the means of extinguishing the fire, when it is left for the night, is a most important improvement, when it

is considered that, amongst the fires which happen every year in London, how many break out in the hours when the fires are left, and a great proportion are doubtless occasioned by fires left unextinguished. The machinery for raising up the moveable bottom of Mr. Cutler's stove is simple. The magazine chamber is composed of iron plates screwed together, and the moveable bottom is fitted to it, so as to leave as small a space round the edges *s possible. A bar is fixed across, beneath the

bottom plate; and the ends cf this bar pass through slits, or narrow openings, in the side plates of the chamber. To the extremities of the bar the ends of two chains are attached, and the upper ends of these chains are made to wind upon the ends of a horizontal axle, which extends over the top of the stove, so as to be within the chimney, and out of sight. The axle is turned round by a face or crown-wheel, fixed upon the extremity of it, and the teeth thereof are engaged by the teeth of a small pinion, the axis of which comes through the iron work of the stove ; and the end has a small square hole in it, to receive a square or key upon a small winch handle. By means of this handle, the iron axle is turned round, and winds up the chains, so as to elevate the bottom plate of the magazine, and thereby raise up a portion of fresh fuel into the lower part of the grate, where it is burned, as before mentioned; and the smoke which first issues from the coal rises through the fire, and is thereby consumed.

STOUND, n. s. From the verb. Sorrow ; grief; mishap. Out of use. The Scots retain it. Begin and end the bitter baleful stound,

If less than that I fear. Spenser.

Thus we stood, as in a stound,

And wet with tears, like dew, the ground. Gay.

STOUR, n. s. Sax. yteorian, to disturb ; Runick star, a battle. Assault; incursion; tu-mult. Obsolete.

A nd he that harrowed hell with heavy stour, The faulty souls from thence brought to his heavenly bower. Spenser's Faerie Queene,

Love, that long since has to thy mighty powre Per force subdued my poor captivated heart,

And raging now therein with restless stowre, Dost tyrannize in every

weaker part. Spenser.

STOURBRIDGE, or STURBUIDGE, the name of a field on the banks of the Stour, ne < ir Cambridge, noted for its fair held annually on the 18th of September, under the jurisdiction of the university of Cambridge, and continuing a fortnight. But it has of late years much declined.

STOURBRIDGE, a flourishing market town anc township, forming the central division of the pa-rish of Old Swintord, in the lower division of the hundred of Halfshire, is 126 miles from London, twenty-one from Worcester, twelve from Birmingham, and seven from Kidderminster; situated at the south-western extremity of the great midland mining and manufacturing district of England, on the south bank of the river Stour, and near to the head of the Staffordshire canal, by which it enjoys a water communication with all parts of the kingdom. The appellation of Stourbridge was derived from a bridge erected over the river in the reign of Henry VIII. previous to which time the township was known by the name of Bedcote, \vhich is still the designation of a contiguous manor. Its vicinity abounds with valuable mines of coal, iron-stone, and clay. Various branches cf the iron manufactory are carried on here and in the adjacent villages, which give employment to several hundred hands. The church, or rather chapel of ease to Swinford, situate in the Rye-market, is dedicated to St. Thomas, and was built by voluntary subscription; it is not consecrated, which gives the inhabitants the privilege of electing a pastor i»-

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dependant of the parish rector. The other places of worship are a chapel each for thepresbyterians, calvinists, methodists, Roman Catholics and Quakers. The chief market is on Friday, but on Saturday, the town is also well supplied with every necessary of life. The fairs are March 22nd and September 9th ; the first continues seven days, and is a widely-noted horse fair. Population 5,090.

STOURPORT, a market town of Worcester, on the banks of the Stour, near its junction with the Severn. It is a place which owes its existence, as well as its increasing trade and prosperity, to the formation of the Trent and Severn, or Staffordshire and Worcestershire canal, which entering the latter county at Wolverley, and following the course of the Stour for about nine miles, terminates in a basin at Stourport, where it joins the Severn. This basin was begun in 1768, and finished in 1771. Previous to tnis there was no appearance of a town here. Population 4000. Here is an elegant iron-bridge over the Severn, consisting of one arch of 150 feet span, and fifty feat above the surface of the river. Stourport takes the lead of all other places in the kingdom as a mart for hops, apples, and perhaps for corn. Markets on Wednesday and Saturday.

STOUT, adj. & n. s. * Sax. ‘euht ; Belg. stout ; STOUT’LY, adv. ˆGoth. stautan, to strike. STOIJT’NESS, n. s.) Strong ; lusty; valiant; resoluie; firm: the adverb and noun substantive corresponding: stout is also a name for strong beer. The stout-hearted are spoiled. Psalm Ixxvi. 5. His bashfulness in youth was the very true sign of his virtue and stoutness after.

Ascham’s Schoolmaster. When I was young, I do remember how my father said, A stouter champion never handled sword.

Sliaks/ieare. Henry VI. Come all to ruin, let

Thy mother rather feel thy pride, than fear Thy dangerous stoutness: for I mock at death With as stout heart as thou. Id. Coriotanus.

The lords all stand, To clear their cause, most resolutely stout. Daniel.

Some captain of the land or fleet, Stout of his hands, but of a soldier’s wit, Cries, I have sense to serve my turn, in store, And he ‘s a rascal who pretends to more. Drydcn.

The stoutest vessel to the storm gave way, And sucked through loosened planks the rushing sea.

There virtue and stout honour passed the guard, Those only friends that could not be debarred.

Baihurst.

STOW, v. a. > Sax. r-*0? 5 Belg. slowen, STOW'AGE, n. s. $ to lay up. To lay up ; reposit in order, or in the proper place.

Foul thief! where hast thou stowed my daughter?

Shahspeare. So gives the' adventurous merchant, when he

throws

All his long-toiled-for treasure, his ship stows Into the angry main. Carew.

I' the' holsters of the saddle-bow Two aged pistols he did stow. Hudibras.

Some stow their oars, or stop the leaky sides.

Dry lien .

All the patriots were beheaded, stowed in dungeons, or condemned to work in the mines. Addlson.

In every vessel is (towage for immense treasures, when the cargo is pure bullion, or merchandise of as great a value. /^.

The goddess shoved the vessel from the shores, And stowed within its womb the naval stores. Pope.

STOW (John), the industrious historian, son of Thomas Stow, merchant-tailor of St. Michael's Cornhill, in London, was born about 1525. He was bred to his father's business, which in 1560 he relinquished, devoting himself entirely to the study of our ancient historians, chronicles, annals, charters, registers, and records. Of these he made a considerable collection, travelling for that purpose to different parts of the kingdom, and transcribing such MSS. as he could not purchase. But, this profession of an antiquary being attended with no present emolument, he was obliged for subsistence to return to his trade. It happened, however, that his talents and necessities were made known to Dr. Parker archbishop of Canterbury, who, being himself an antiquary, encouraged and enabled Mr. Stow to prosecute his, darling study. In those times of persecution, though Elizabeth was then upon the throne, ho-nest John Stow did not escape danger. His collection of popish records was deemed cause of suspicion. His younger brother Thomas preferred no less than 140 articles against him before the ecclesiastical commission ; but, the proof being insufficient, he was acquitted. In 1565 he first published his Summary of the Chronicles of England. About 1584 he began his Survey of London. In 1585 he was one of the two col-lectors for a great muster of Lime Street ward. He was principally concerned in the second edition of Hollinshed's chronicle, published in 1587. He also

corrected, and twice augmented Chaucer's works, published in 1561 and in 1597 His Survey of London was first published in 1 598. To these laborious works he would have added his large Chronicle, or History of England ; but he lived only to publish an abstract of it, under the title of Flores llistoriorum. The folio vo-lume, which was printed after his death, with the title of Stow's Chronicle, was taken from his papers by Edmund Howes. Having thus spent his life and fortune in these laborious pursuits, king James I. granted him, in 1603, a brief, which was renewed in 1604, authorizing him to collect in churches the benefactions of his* fellow citizens. He died in April 1605, aged eighty; and was buried in his parish church of St. Andrew's Undershaft, where his widow erected a decent monument to his memory. John Stow was a most indefatigable antiquarian, a faithful historian, and an honest man.

STOW, a parish in Buckingham hundred, Buckinghamshire, three miles from Buckingham, and sixty from London ; chiefly noted for containing the magnificent seat, gardens, and grounds of the duke of Buckingham, the great ornament of the country. Stow was visited by the most distinguished poets and literati of the last century ; and Pope, Chesterfield, Hammond, Lyttleton, Pitt, and West, were among its frequent guests.

STOW-MARKET, a market-town of Stow hundred, Suffolk, situate on he banks of the Orwell, three miles from Needham,and seventy-five N. N. E. of London. Besides the river it has a navigable canal to Ipswich. A manufacture of

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sacking, ropes, &c., is carried on in this town, which has also succeeded in making tammies and various kinds of Norwich stuffs. Here is likewise a goud malting trade. The church is a spacious building, having a steeple with a spire, 120 feet high, containing eight bells. Market on Thursday. Fairs, Whit-Friday, and June 29th, and a lamb fair on August 1st.

STOVV-ON-THE-WOLD, a market-town and parish in Slaughter hundred, Gloucester, near the river Windrush, eleven miles S. S. E. from Campden, and seventy-seven west by north of London. It stands in a very bleak part of the country, on a high eminence ; the buildings are very irregular, and the streets but indifferently paved. Its ancient church is situate on a hill, has a lofty tower, and contains several ancient monuments. Here are an hospital, free-school, and alms-houses, all well endowed. Shoes are the principal manufacture. This parish extends twelve miles in circumference, and was formerly a corporation ; it is now governed by two bailiffs. Market on Thursday. Fairs, May 12th, and October 24th, which have long been noted for the quantities of hops, cheese, and sheep, annually sold here.

STOWAGE, in sea language, is the general disposition of the several materials contained in a ship's hold, with regard to their figure, magnitude, or solidity. In the stowage of different articles, as ballast, casks, cases, bales, and boxes, there are several general rules to be observed, according to the circumstances or qualities of those materials. The casks which contain any liquid are, according to the sea phrase, to be bung up and bilge free, i. e. closely wedged up in a horizontal position, and resting on their quarters ; so that the bilges where they are thickest, being entirely free all round, cannot rub against each other by the motions of the vessel. Dry goods, or such as may be damaged by the water, or to be carefully enclosed in casks, bales, cases, or wrappers ; and wedged off from the bottom and sides of the ship, as well as from the bow, masts, and pump-well. Due attention must likewise be had to their disposition with regard to each other, and to the trim and centre of gravity of the ship ; so that the heaviest may always be nearest the keel, and the lightest gradually above them.

STRABO, a celebrated Greek geographer, philosopher, and historian, born at Amasia, and descended from a family settled at Gnossus in

Crete. He was the disciple of Xenarchus a Peripatetic philosopher, and at length attached himself to the Stoics. He contracted a strict friendship with Cornelius Gallus, governor of Egypt, and travelled into several countries to observe the situation of places, and the customs of nations. He flourished under Augustus, and died under Tiberius about A. D. 25, in a very advanced age. He composed several works, all of which are lost, except his Geography in seventeen books ; which are justly esteemed very precious remains of antiquity.

STRADA (Famianus), a very ingenious and learned Jesuit, born at Rome in 1572, where he taught rhetoric for fifteen years. He wrote several pieces upon the art of oratory, and published

some orations with a view of illustrating by example what he had inculcated by precept. Bo* his Prolusiones Academics and his Historia de Bello Belgico are the works which raised his reputation, and have preserved his memory. His history of the war of Flanders was published at Rome; the first decad in 1640, the second in 1647. He died iti 1649, aged seventy-seven.

STRAD'DLE, v. n. From striddle or stride. To stand or walk with the feet removed far fror" each other to the right and left ; to part the legs wide.

Let the man survey himself, divested of artificial charms, and he will find himself a forked straddling animal, with bandy legs. Arbuthnot and Pope.

STRADELLA (Alessandro), a Neapolitan musician and composer, one of the most celebrated writers of vocal music in the seventeenth century. His private history is romantic. While yet a youth he was employed by a Venetian nobleman to instruct his mistress, Hortensia (a girl descended of a patrician family at Rome, whom he had seduced), in the art of singing. A strong and mutual attachment between the mas-ter and pupil ensued ; then an elopement ; and the lovers fled to Rome. To this city tliey were followed by two ruffians, despatched by the Venetian to assassinate Stradella. The opportunity selected to carry this murderous design into execution was the evening after an oratorio of the intended victim's composition, in which he was both to play and sing in the church of St. John Lateran; on his return from which they determined to avail themselves of the darkness of the evening. Entering the church, during the performance, they resolved«to wait quietly till its conclusion, but long before that

took place, their hearts were so softened by its excellence that they found it impossible to execute their design, and, accosting him in the street, confessed their errand, and recommended him to ‘flee to some safer asylum. He retired to Turin, where-the duchess of Savoy, to whom they confessed their danger, placed the lady in the security of a convent, and retained Stradella in the palace as her chapel master. Their vindictive enemy however; enraged at their escape, sent after them two otheremissaries less accessible to the charms of music, who after residing for some time in the city under a passport from the French ambassador at Venice, in the character of merchants, at length surprised Stradella walking one evening on the ramparts, and plunged their daggers into his breast. This done, they took refuge in the house of the marquis de Villars, ambassador from the court of France to that of Turin, who, insisting on his privilege, refused to give them up ; and eventually, when acquainted with their real characters, allowed them to escape. In the mean time Stradella, whose wounds were not mortal, slowly recovered, and, a year having elapsed, he fancied the vengeance of his enemy had been satiated. In this supposition he was fatally deceived; for, being invited to Genoa to compose an opera in the year 1678, he set out with his wife for that ci y, intending to return to Turin for the carnival ; but scarcely had they reached the place of their destination when a third set of assassins found

mean., to enter their chamber early one morning, and, stabbing them both to the heart, effected their escape by means of a boat. Of the works of this unfortunate man, the most celebrated are John the Baptist, an oratorio written for five voices ; and a serious opera, the production of which at Genoa proved so disastrous to him, entitled La Forza dell' Amor paterno.

STRAETEN (N. Vander), a celebrated Dutch painter, born in 1680. He visited London, and travelled through great part of Europe, being esteemed one of the best portrait-painters of his time. But ho fell a victim at last to intemperance.

STRAG'GLE, v. a.&v.n.'i A frequentative STRAG'GLER, n. s. \ of stray, from

Ital. stravviare, of Lat. extra viam. To wander without certain direction ; to rove; ramble; ex-uberate : be dispersed, or stand single : the noun substantive corresponding.

The last should keep the countries from passage of stragglers from those parts, whence they use to come forth, and oftentimes use to work much mischief. Spenser's Ireland.

Let's whip these stragglers o'er the seas again, Lash hence these over-weening rags of France, These famished beggars. Shakspeare. Richard HI.

He likewise enriched poor straggling soldiers with great quantity. Id. Timon.

Having passed the Syrens, they came between Scylla and Charybdis, and the struggling rocks, which seemed to cast out great store of flames and smoke. Raleigh.

But stay ; like one that thinks to bring his friend A mile or two, and sees the journey's end, I straggle on too far. Suckling.

They found in Burford some of the straggling soldiers, who out of

weariness stayed behind.

Clarendon,

Wide was his parish, not contracted close In streets, but here and there a straggling house ; Vet still he was at hand. Dryden.

Let thy hand supply the pruning knife, And crop luxuriant stragglers, nor be loth To strip the branches of their leafy growth. Id.

A wolf spied out a straggling kid, and pursued him. L' Estrange.

Children, even when they endeavour their ut-most, cannot keep their minds from straggling.

Locke.

Trim off the small superfluous branches on each side of the hedge, that straggle too far out.

Mortimer's Husbandry.

Form itragyling mountaineers for public good, To rank in tribes, and quit the savage wood ; Houses to build, and them contiguous make, For cheerful neighbourhood and safety's sake. Tate.

His pruning hook corrects the vines, And the loose stragglers to their ranks confines.

Pope.

Bottles missing are supposed to be half stolen by ttragglers, and the other half broken. Swift.

STRAHAN (William), an eminent printer, born at Edinburgh, in 1715. His father, who had a small appointment in the customs, gave his son a liberal education. He was bred a printer, and while very young went to follow his trade in London. Sober, diligent, and attentive, while his emoluments were scanty, he lived rather within than beyond his income ; and though he married early, and without such a provision as prudence migh1: have dictated, lie

continued to thrive, and to better his circumstances. In 1770 he purchased a share of the patent for king's printer of Mr. Eyre. He now began to purchase copyrights, and gave authors more liberal prices than tiad been usual. In 1755 he was elected M. P. for Malmsbury in Wiltshire, with a very illustrious colleague, the hon. C. J. Fox ; and, in the succeeding" parliament, for Wootton Basset, in the same countv. In this station he was a useful member, and attended the house with a scrupulous punctility. His talents for business were not unnoticed by the minister. In his political connexions Ill-was a steady supporter of that party who were turned out of administration in 1784, and lost his seat by the subsequent dissolution of parliament. He died on the 9th of July 1785, aged seventy-one. In his elevated fortune none of his former acquaintance ever accused him of neglect. He attained prosperity without envy, enjoyed wealth without pride, and dispensed bounty without ostentation.

STRAIGHT, adj. & adv.} Sax. j-trvac ; Belg. STRAIGHTEN, v. a. tstrack; Dan. and

STRAIGHT'NESS, re. s. I Scots strak. It is STAIGIIT'WAY, adv. J observed by Ains—

worth, that for not crooked we ou ht to write straight, and for narrow, strait ; but for streiglit, which is sometimes found, there is no good authority. Not crooked ; direct; hence tense ; tight: as au adverb, directly; immediately, straiglit-way is a synonyme of straight as an adverb : lo straighten is, to make straight; make orderly ; tighten : the noun substantive corresponding.

Let me here for ay in peace remain, Or straightway on that last long voyage fare.

Spenser.

Soon as he entered was, the door straightway Did shut. * Id.

A crooked stick is not straightened, except it be as far bent on the clean contrary side. Hooker.

Of ourselves being so apt to err, the only way which we have to straighten our path is, by following the rule of his will, whose

footsteps naturally are right. id.

Beauty made barren the swelled boast Of him that best could speak ; feature, laming The shrine of Venus, or straight-fight Minerva.

Shakspeure.

If the devil come and roar for them, I will not send them. 1 will after straight, And tell him so. Id. Henry IV.

Like to a ship, that, having ‘scaped a tempest, Is straightway claimed and boarded with a pirate.

Sitakspeare.

A hunter’s horn and comet is oblique ; yet they have likewise straight horns ; which, if they be 01 the same bore with the oblique, differ little in sound, save that the straight require somewhat a stronger blast. Bacon’s Natural History.

Queen Elizabeth used to say of her instructions to great officers, that they were like to garments, itrait at the first putting on, but did by and by wear loose enough.

Those stinks which the nostrils straight abhor and expel are not the most pernicious.

Id. Natural History,

Some are for masts, as fir and pine, because of their length and itraighlness.

As soon as iron is out of the fire, it deadeth ttr-iiqhtuayt.

The sound of a bell is strong ; contmueth some

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time after the percussion ; but ceaseth itratghtinays if the bell or string be touched.

Id. Natural Hiftory.

There are many several sorts of crooked lines ; but there is one only which is straight. Dryden.

With chalk I first describe a circle here, Where the aetherial spirits must appear : Come in, come in ; for here they will be straight ; Around, around the place I fumigate. Id,

I know thy generous temper well ; Fling but the appeal ance of dishonour on it, It straight takes fire, and mounts into a blaze.

Addison.

Water and air the varied form confound ; The straight looks crooked, and the square grows

round. Prior.

The sun's power being in those months greater, it then straightways hurries steams up into the atmosphere. Woodward.

When I see a ttraight staff appear crooked while half under the water, the water gives me a false idea.

Watts's Logick.

STRAIN, v. a., v. n., & n. s. \ Fr. tstrein-STRAIN'ER, n. s. i dre ; Italian

strignere ; Lat. stringo. To compress ; constrain ; squeeze through something ; nitrate ; put to the utmost strength ; force in any way ; distort; sprain; weaken by violence: as a verb neuter to make violent efforts ; be filtered : an injury through violence ; also a race ; pedigree ; descent ; hereditary disposition (probably of Sax. jtnyan, to beget) ; rank; character; style; man-ner ; tone ; rate ; turn : a strainer is an instrument of nitration.

The jury make no more scruple to pass against an Englishman and the queen, though it be to strain their oaths, than to drink milk

unstrained.

Spenser's State of Ireland.

Too well I wote my humble vaine, And how my rhimes been rugged and unkempt ; Yet as I con my cunning I will strain. Spenser.

By this we see, in a cause of religion, to how desperate adventures men will strain themselves for re-lief of their own part, having law and authority against them. Hooker.

Thus far I can praise him ; he is of a noble strain, Of approved valour. Shakspeare.

Amongst these sweet knaves and all this courtesy ! the itrain of man's bred out into baboon and monkey.

Id.

Wilt thou love such a woman "> what, to make thee an instrument, and play false strains upon thee f

Id.

Thus mine enemy fell,

And thus I set my foot on's neck ; — even then The princely blood flows in his cheek ; he sweats, Strains his young nerves, and puts himself in posture That acts my words. Id. Cymbeline.

The lark sings so out of tune, Straining harsh discords and unpleasing sharp?.

Shakspeare.

You stand like greyhounds in the slips, Straining upon the start. Id. Henry V.

Earth doth not strain water so finely as sand.

Bacon.

Such take too high a strain at the first, and are magnanimous more than tract of years can uphold ; as was Scipio Africanus, of whom Livy saith, ' ultima primis cedebant.' Id.

The excrementitious moisture passeth in birds through a finer and

more delicate strainer than it doth in beasts ; for feathers pass through quills, and hair through skin. Id.

Csesar thought that all sea sands had natural springs of fresh water : but it is the sea-water , because the pit filled according to the measure of the tide ; and the sea-water, passing or straining through the sands, leaveth the saltness behind them. Id.

A bigger string more strained, and a lesser string less strained, may fall into the same tone. Id.

Because hereticks have a strain of madness, he applied her with some corporal chastisements, which with respite of time might happily reduce her to good order. Hayward.

Twelve Trojan youths, born of their noblest

strains I took alive ; and, yet enraged, will empty all their

veins Of vital spirits. Chapman's Iliad.

They strain,

That death may not them idly find t' attend Their certain last, but work to meet their end.

Daniel.

Intemperance and lust breed diseases, which, propagated, spoil the strain of a nation. Tiltotson.

lie talks and plays with Fatima, but his mirth Is forced and strained : in his looks appears A wild distracted fierceness. Denham.

Orpheus' self may heave his head From golden slumber on a bed Of heaped Elysian flowers, and hear Such strains as would have won the ear Of Pluto, to have quite set free His half-regained Eurydice. Milton.

My earthly by his heavenly overpowered, Which it had long stood under, strained to the

height,

In that celestial colloquy sublime, As with an object that excels the sense, Dazzled and spent, sunk down. Id. Paradise Lost.

Why dost thou falsely feign. Thyself a Sidney 1 from which noble strain He sprung, that could so far exalt the name Of love. Waller.

Credit is gained by custom, and seldom recovers a strain ; but, if broken, is never well set again.

Temple.

Old Evander with a close embrace Strained his departing friend, and tears o'erflowed his

face. Dryden's JEiieid.

But thou who, lately of the common strain, Wert one of us, if still thou dost retain, The same ill habits, the same follies too, Still thou art bound to vice, and still a slave.

Dryden.

The lark and linnet sing with rival notes ; They strain their warbling throats To welcome in the spring. Id.

It is the worst sort of good husbandry for a father not to strain himself a little for his son's breeding.

Locke.

Shave the goat's shaggy beard, lest thou too late In vain shouldst seek a strainer to dispart The husky terrene dregs from purer must. Philips.

In all pain there is a deformity by a solution of continuity, as in cutting; or a tendency to solution, as in convulsions or strains. Grew.

See they suffer death ; But in their deaths lemember they are men, Strain not the laws to make their torture grievous.

Addison.

Turn then to Pharamond and Charlemagne, And the long heroes of the Gallic strain. Prior.

These, when condensed, the airy region pours On the dry earth in rain or gentle showers : The insinuating drops sink through the sand, And pass the porous strainers of the land.

Blackincre.

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Our words flow from us in a smooth continued which the assemblage is strained, and there is a stream, without those strainings of the voice, motions tenclpnrv tr > nmtnn TI •

SPL PtUr6 ’” every Part: lhis stram “« , °\ ˆ Part’ and ls lhere ™d“‘ed y mechanical laws. These it is our bu-

of the body, and majesty of the hand, which are so much celebrated in the orators of Greece and Rome.

Atterburii.

urii.

The stomach and intestines are the press, and the Slness tO leain ; but our chif;f ol)Ject ‘» this in—

lacteal vessels the strainers, to separate the pure emul-vest’Ratlon ‘s to determine the strength of mate—

sion from its feces. Arbuihnot. rials which it is necessary to oppose in every

Their aliment ought to be light ; rice boiled in Parˆ *° this strain ; and how to oppose this

whey, and strained.

Id. on Diet. strength in such a manner that it shall be exerted

Your way is to wrest and strain some principles, to the best advantage. The notions of strain maintained both by them and me, to a sense

repug-and strength, therefore, hardly admit of separa-nant with their other known doctrines. Waterland. tion ; for it is even by means of the strength of

Macrobius speaks of Hippocrates' knowledge in the intermediate parts that the strain is propa- ,-ery lofty strains. Baker. o-atpH to, or excited in, the part under considera—

See STRENGTH.

When the first bold vessel dared the seas, High on the stern the Thracian raised his strain ;

While Argo saw her kindred trees Descend from Pelion to the main.

Pope's St. Cecilia. Straining with too weak a wing, We needs will write epistles to the king. Pope.

In our liturgy are as great strains of true sublime eloquence as are any where to be found in our language. S'l-ift.

There can be no other meaning in this expression, however some may pretend to strain it. Id.

Prudes decayed about may tack, Strain their necks with looking back. Id.

Strained to the root, the stooping forest pours A rustling shower of yet untimely leaves. Thomson.

tion.

STRAINING is the clarification of a liquor, by passing it through a sieve or filter. The word is derived from the French estreindre ; which is formed from ex, out of, and stringere, to press.

STRAIT, adj., n. s., & v. a. -\ Fr. elroit ;

STRAIT'EN, v. a. i Italian slretto ;

STRAIT'LACED, adj. > Latin stric/in:.

STKAIT'LY, adv V Narrow; clo<e;

STRAIT’NESS, n. s. } difficult; strict ;

intimate: used, though incorrectly, for direct, not crooked. A narrow pass, or frith ; distress or difficulty : to strait or straiten is to put to difii-culties ; make narrow ; contract ; confine; make

A STRAIN is a pain occasioned by the vio-tight ; distress : straitlaced is laced tight by stays : lent extension of some membranous or tendinous the adverb and noun substantive correspond with

strait adjective.

Therefore hold I strait all thy commandments ; and

part.

STRAIN and STRESS, in mechanics, are terms indiscriminately used to express the force which all false ways I utterly abhor

is excited in any part of a machine or structure of any kind tending to break it in that part. Thus every part of a rope is equally strained by

I’xulms. Common Prayer. The city of Sidon has a secure haven, yet with something a dangerous entrance, strained on the

the weight which it suspends. Every part of a north side by the ˆ-ruined wall of the mole.

. s -11 i i “j L-L •« Sanau s Jiinrn

pillar is equally ; strained by the load which it foreetting all former injuries > hadreceived

supports. A mill axle .s equally twisted and . p,exirt˚us into a strtnl (legree of favouf .

strained in every part which lies between the goodness be;ng as apt to be deceived as the otl part of the wheel actuated by the moving power, and the part which is resisted by the work to be performed. Every part of a lever or joist is differently strained by a force acting on a distant ‘ part. It is evident that we cannot make the structure fit for its purpose, unless the strength in every part be at least equal to the stress laid on, or the strain excited in that part. It is no

less plain that if we are ignorant of the princi- — 0 , 0

pies which determine this strain, both in intenries, their language and religion into all that coast of sity and direction, in relation to the magnitude Africk, even from Egypt to the streight, of Gibraltar.

craft was to deceive.

Fugitives are not relieved by the profit of their lands in England ; for theie is a straiyhter order taken.

Spenser.

Plant garrisons to command the streiyhts and nar-row passages.

Those laws he straitly requireth to be observed without breach or blame. Houkfr.

The Saracens brought, together with their

and the situation of its remote cause, the only

If your lass

Brerewwd on Language.

security we have for success is to give to every

/ , i_, u i-j-. »u~« ,,,o MII Interpretation snould abuse, and call tins

part of the assemb age such solidity that we can :

Your lack of love or bounty, you were straited

For a reply ; at least, if you make care

Of happy holding her. Shabpanv. Winter's Tal>:

If his own life answer the straitness of his proceeding, it shall become him well.

He now, forsooth, takes on him to reform Some certain edicts, and some strait decrees

leave no doubt of its sufficiency, perience shows us that this vague security is in many cases uncertain, if we are thus ignorant. In all cases it is slovenly, unlike an artist, attended with useless expense, and in machines is attended with a loss of power which is wasted in

changing the motions of a needless load of mat- 'pjiat jav too heavy on the commonwealth, ter. It must therefore greatly tend to the im- proceed no straiter 'gainst our uncle provement of all professions occupied in the erection or employment of such structures to have a distinct notion of the strains to which theii parts are exposed. Frequently, nay generally, these strains are not immediate, but arise from the action of forces on distant parts, by VOL. XXI.

Than from the evidence of good esteem jˆe be approved in practice

culpable.

Honour travels in a streight so narrow, Where one but goes abreast. ˆ

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Waters when straitened, as in the falls ot uridges, give” a roaring noise. Bacon’s Natural History.

It is a great errour, and a narrowness or straitness of mind, if any man think that nations have nothing to do one with another, except there be an union in sovereignty, or a conjunction in pact. Id. Holy War.

The straitness of my conscience will not give me leave to swallow down such camels. King Charles. Fretum Magellanicum, or Magellan’s straits.

Abbot.

The straitening and confining the profession of the common law, must naturally extend and enlarge the jurisdiction of the chancery. Clarendon.

The independent party, which abhorred all motion towards peace, were in as great streights as the other how to carry on their designs. Id.

If this be our condition, thus to dwell In narrow circuit, straitened by a foe Subtile or violent. Milton’s Paradise Lost.

Thyself

Bred up in poverty and streights at home, Lost in a desart here, and hunger-bit.

Id. Paradise Regained.

Among the Romans, the laws of the twelve tables did exclude the females from inheriting ; and had many other straitnesses and hardships, which were successively remedied. Hale.

Witnesses, like watches go, Just as they're set, too fast or slow, And, where in conscience they're straight laced, 'Tis ten to one that side is cast. Hudibras.

Stretch them at their length, And pull the streightened cords with all your strength.

Dry den.

'Tis hard with me, whatever choice I make, I must not merit you, or must forsake : But in this streight to honour I'll be true, And leave my fortune to the gods and you. Id.

The landed man finds himself aggrieved by the falling of his rents, and the streightening of his fortune, whilst the monied man keeps up his gain.

Locke.

Let nature have scope to fashion the body as she thinks best; we have few well-shaped that are straitlaced, or much tampered with. Id. on Education.

The straitness of the conveniencies of life amongst them had never reached so far as to the use of fire, till the Spaniards brought it amongst them. Locke.

Men, by continually striving and fighting to enlarge their bounds, and encroaching upon one another, seem to be straitened for want of room. Ray.

Kings reduced to streightt, either by their own, or by the negligence of their predecessors, have been always involved in dark and mean intrigues.

Davenant.

Some modern authors, observing what straits they have been put to in all ages to find out water enough for Noah's flood, say Noah's flood was not universal, but a national inundation. Burnet's Theory.

Let no man who owns a providence grow desperate under any calamity or strait whatsoever, but compose the anguish of his thoughts upon this one consideration, that he comprehends not those strange unaccountable methods by which providence may dispose of him. South.

The causes which straiten the British commerce, will enlarge the French. Addison's State of the War.

Several congregations find themselves very much straitened; and, if the mode increase, I wish it may not drive many ordinary women into meetings.

Id. Spectator. Cajsar sees

The streight* to which you're driven, and, as he knows Cato's high worth, is anxious for your life. Addison. A bell or a cannon may be neard beyond a hill

which intercepts the sight of the sounding body ; and sounds are propagated as readily through crooked pipes as through straight ones.

Neu-ton't Opticks.

Whatever straitens the vessels, so as the channels become more narrow, must heat ; therefore strait cloaths and cold baths heat. Arbuthnot en Diet.

Morality, by her false guardians drawn, Chicane in furs, and casuistry in lawn, Gasps, as they straiten at each end the cord. And dies when Dulness gives her page the word.

Dunciad.

Ulysses made use of the pretence of natural infirmity, to conceal the straits he was in at that time in his thoughts. Bruome.

They are afraid to meet her, if they have missed the church ; but then they are more afraid to see her if they are laced as strait as they can possibly be.

Lau:

She watches their time of need and adversitv, and, if she can discover that they are in great stmghtt or affliction, she gives them speedy relief. Id.

STRAIT, a narrow channel or arm of the sea, shut up between lands on either side, and affording a passage out of one great sea into another. There are three kinds of straits. 1. Such as join one ocean to another. Of this kind are the straits of Magellan and Le Maire. 2. Those which join the ocean to a gulf; the straits of Gibraltar and Babelmandel are of this kind, the Mediterranean and Red Sea being only large gulfs. 3. Those which join one gulf to another; as the straits of Caffa, which join the Palus Mseotis to the Euxine or Black Sea. The passage of straits is commonly dangerous, on account of the rapidity and opposite motion of currents.

STRAKES, or STREAKS, in a shipvthe uniform ranges of planks on the bottom and sides of a ship, or the continuation of planks joined to the ends of each other, and reaching from the stem to the stern-post and fashion-pieces ; the lowest of these, which is called the starboard

streak, is let into the keel below, and into the stem and stern-post. They say, also, that a ship heels a strake, that is, hangs or inclines to one side the quantity of a whole plank's breadth.

STRAKES, or STREKS, in mining, are frames of boards fixed on or in the ground, where they wash and dress the small ore in a little stream of water ; hence called straked ore.

STRALSUND, one of the new governments of the Prussian states, including the part of Pomerania which belonged to Sweden in 1813, along with Rugen and other islands on the coast. It is almost entirely surrounded by wa-ter, the Baltic bounding it on the north, and the Peene, the Trebel, and the Recknitz, three rivers partly navigable, on the other sides. Its area is 1400 square miles ; and it is much more fertile than the rest of Pomerania, having a heavy loam or black mould, producing fine crops of corn, rye, and pulse, as well as flax and tobacco. The pastures are not favorable for .the larger cattle ; but the number of sheep, hogs, and above all of geese is very considerable. Inhabitants about 115,000. See POMERANIA.

STRALSUND, a considerable town of Pomerania, long subject to Sweden, is situated on the strait which separates the .'sland of Rugen from

the mainland ; and is accessible only by bridges, it was a fortress of importance till 1807. Its harbour is capacious and safe, admitting ships of fifteen feet draught. The houses are low, but built of brick, and remarkable for being pointed at the top : the streets narrow, and indifferently paved. There are four Protestant and one Catholic church. The other public buildings are the government-house, town-house, mint, arsenal, and governor's house. Of public institutions, the chief are the academy or gymnasium, the orphan-house, the poor-house, the lunatic hospital, and the public library. The environs are flat and sandy, and the water is raised by a hydraulic machine. The manufactures comprise woollens, linen, tobacco, soap, glass : breweries and distilleries. Stralsund was a member of the Hanseatic league, and has long been a place of trade. Of corn, its principal export, there is sometimes shipped between 30,000 and 40,000 quarters. The imports consist chiefly of colonial produce and foreign manufactures ; and the building of ships and boats form a considerable branch of trade. The town has suffered much at different times by sieges, but has always recovered, in consequence chiefly of its trade. Population 12,000. Ninety miles N. N. W. of Stettin. Long. 30° 32' E., lat. 54° 19' N. STRAMONIUM. See DATURA. STRAND, n.s. &cv. a. Sax. j-trian&; Goth, and Swed. strund ; Belg. strande; Isl. strend ; Teut. strande. The verge of the sea, or of any water : to drive or force into shallow water.

I saw sweet beauty in her face ; Such as the daughter of Agenor had, That made great Jove to humble him to her hand, When with his knees he kissed the Cretan strand.

Shakspeare.

Tarchen's alone was lost, and stranded stood, Stuck on a bank, and beaten by the flood.

Dry den's JEneid.

Some from the stranded vessel force their way, Fearful of fate, they meet it in the sea ; Some, who escape the fury of the wave, Sicken on earth, and sink into a grave. Prior.

Some wretched lines from this neglected hand May find my hero on the foreign strand, Warmed with new fires. Id.

I have seen of both those kinds from the sea, but so few that they can only be such as have strayed from their main residence, and been accidentally intercepted and stranded by great storms.

Woodward on Fossils.

STRANGE, adj., inter}., &-\ Fr. estrange; STRANGE'LY, adv. [v. n. (Latin extraneus. STRANGE'NESS, n. s. { Foreign ; of an—

STRAN'GER, n. s. & v. a. * other country ; odd ; wonderful ; irregular ; new ; remote ; unacquainted; surprising! (an expression of won-der): to strange (an obsolete barbarism) is, to wonder; be astonished: the adverb and noun substantives correspond with the adjective : to stranger is used by Shakspeare for to estrange ; alienate.

Joseph saw his brethren, but made himself strange unto them. Genesis Ixii. 7.

I do not contemn the knowledge of strange and divers tongues. Ascham's Schoolmaster.

Long custom had inured them to the former kind alone, by which the latter was new and strange in their ears. Hooker.

Desire my man's abode, whera I did lenve him • He's strange and peevish. Shakspeare. Cymleline. bhe makes it strange, but she would be best

pleased To be so angered with another letter. Slialtspeare.

As by strange fortune It came to us, I do in justice charge thee That thou commend it strangely to some place, Where chance may nurse or end it.

Id. Winter's Tale. W ill you not observe The strangeness of his altered countenance 1

Id. Henry VI.

I am a most poor woman, and a stranger, Born out of your dominions ; having here No judge indifferent. Id. Henry VIII.

Strangers and foes do sunder, and not kiss.

Shakspeare.

My child is yet a stranger in the world, She hath not seen the change of fourteen years.

Id.

Will you, with those infirmities she owes, Dowered with our curse, and strangered with our

oath, Take her or leave her ? Id.

Men worthier than himself Plere tend the savage strangeness he puts on ; And undergo, in an observing kind, His humorous predominance.

Id. Troilus and Cressida.

If a man, for curiosity or strangeness sake, -vould make a puppet pronounce a word, let him consider the motion of the instruments of voice, and the like sounds made in inanimate bodies.

Bacon's Natural History.

It is evident, and it is one of the strangest secrets in sounds, that the whole sound is not in the whole air only, but is also in every small part of the air.

Id.

The natural subjects of the state should bear a sufficient proportion to the strange subjects that they govern. Bacon.

We ought to acknowledge that no nations' are wholly aliens and strangers the one to the other. Id.

In this peace there was an article that no Englishman should enter into Scotland, and no Scottishman into England, without letters commendatory : this might seem a means to continue a strangeness between the nations ; but it was done to lock in the boidcrers. Id.

As the man loves least at home to be, That hath a sluttish house, haunted with sprites ;

So she, impatient her own faults to see, Turns from herself, and in strange things delights.

A strange proud return you may think I make you, madam, when I tell

you it is not from every body I would be thus obliged. Suckling.

Thus the strange cure to our spilt blood applied, Sympathy to the distant wound does guide. Cowleii.

Here passion first I felt, Commotion strange !

He will vouchsafe

This day to be our guest : bring forth and pour Abundance, fit to honour and receive Our heavenly stranger.

Were all the assertions of Aristotle such as theology pronounceth impieties, which we strange not at from one of whom a father saith, Nee Deum coluit, i-.tc curavit.

His perusal of the writings of his friends and

I ‘ C 1 1 .

Strange! what extremes should thus preserve the

snow High on the Alps, or in deep caves below. M ,/

Milifn.

In.

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This made David to admire the law of God at that ttranga rate, and to advance the knowledge of it above all other knowledge. Titlotson.

How strangely active are the arts of peace, \Vhose restless motions less than wars do cease ; Peace is not freed from labour, but from noise ; And war more force, but not more pains, employs.

Dry den .

Strange to relate ! from young lulus' head A flambent flame arose, which gently spread Around his brows, and on his temples fed.

Id. MneiA.

I was no stranger to the original : I had also studied Virgil's design, and his disposition of it.

Dryden.

, Strange ! that fatherly authority should be the only original of government, and yet all mankind not know it. Locke.

We should carry along with us some of those virtuous qualities, which we were strangely careless if we did not bring from home with us.

Sprat's Sermons.

If I will obey the gospel, no distance of place, no strangeness of country, can make any man a stranger to me. Sprat.

This raised greater tumults and boilings in the hearts of men, than the strangeness and seeming unreasonableness of all the former articles. South.

There is no place in Europe so much frequented by ttraiigers, whether they are such as come out of curiosity, or such who are obliged to attend the court of Rome. Addison mi Italy.

In a time of affliction, the remembrance of our good deeds will strangely cheer and support our spirits.

Calamy.

Melons on beds of ice are taught to bear ; And strangers to fhe sun yet ripen here. Gramiille.

They came, and near him placed the stranger guest.

Pope.

After a year's interregnum from the death of Romulus, the senate of their own authority chose a successor, and a stranger, merely upon the fame of his virtues. Swift.

It would strangely delight you to see with what spirit he converses, with what tenderness he reproves, with what affection he exhorts, and with what vigour he preaches. Law.

Thus the majestick mother of mankind, To her own charms most amiably blind, On the green margin innocently stood, And gazed indulgent on the crystal flood ; Surveyed the stranger in the painted wave, And, smiling, praised the beauties which she gave.

Young.

How strangely crowds misplace things and miscal ! Madness in one is liberty in all. Harte.

STRANGE (Sir Robert), who carried the art of engraving to so great perfection in this country, was a rnan of general merit. His works •will perpetuate his name whilst any taste for the fine arts remains. He was born in the island of Pomona, in Orkney, 14th of July, 1721. He was descended from the Stranges or Strangs of Balcasky, in Fife, who settled in Orkney at the time of the reformation. He received his classical education at Kirkwall in Orkney, under Mr. Murdoch Mackenzie, who has rendered infinite service to his country by the accurate surveys and charts he has given of the islands of Orkney and of the British and Irish coasts. Mr. Strange was intended for the law, but soon perceived that his genius led him to drawing and engraving. For this purpose he was introduced to

the late Mr. Richard Cooper at Edinburgh, the only person there who had then any taste in that line. He was bound with him as an apprentice for six years, during which time he made rapid progress. In 1747 he married Isabella, only daughter of Willian Lumisden, son of bishop Lumisden ; and soon after went to Paris, where he prosecuted his studies under the celebrated Le Bas, from whom he had the first

hint of the dry needle ; which he afterwards greatly improved by his own genius, and which has added such superior beauties to his engravings. In 1751 he removed with his family from Edinburgh and settled at London, where he engraved several fine histo'rical prints, which acquired him great reputation. At this period historical engraving had made little progress in Britain, and he may properly be considered as its founder. In 1760 he went to Italy, where he made many admirable drawings, several of which he afterwards engraved. These are now in the possession of lord Dundas. Every where in Italy singular marks of attention were bestowed on Mr. Strange, by great personages, and by the principal academies in that country. He was made a member of the academies of Rome, Florence, and Bologna, and professor in the royal academy at Parma. The ceiling of the Vatican library, at Rome, in which the collection of engravings are kept, is elegantly painted by Signior Rotfanelli. It represents the progress of engraving; and the portraits of the most eminent artists in that line are there introduced, among which is that of our artist. He is the only British artist on whom this honor has been conferred. In France, where he resided many years, he was made a member of the Royal Academy of Painting at Paris. King George III., ever attentive to the progress of the fine arts, as a mark of his royal approbation of the merit of Mr. Strange, conferred the honor of knighthood on him the 5th of January 1787. Sir Robert Strange was no less distinguished by his amiable moral qualities. He left fifty capital plates, which are carefully preserved in his family, engraved from pictures by the most celebrated painters of Italy. From his earliest establishment, Sir Robert preserved about eighty copies of the finest and choicest impressions of each plate he engraved ; which, from length of time, have acquired a high degree of beauty. These he arranged in the order in which they were engraved. To each volume he prefixed two portraits of himself, the one an etching, the other a finished proof, from a drawing by John Baptiste Greuse. Each volume, besides a dedication to the king, contains an introduction on the progress of engraving, and critical remarks on the pictures from which his engravings are taken. These volumes were ready to be given to the public, when Sir Robert's death and consequent circumstances delayed this magnificent publication ; a publication which does honor to the artist, and to the country which gave him birth. He died at London, July 5th 1792.

STRANGEA, a secondary ridge of mountains, branching off from the Haemus chain on the south, and extending along the Black Sea to the Thracian Bosphorus. An inferior branch, called

Mount Tekis, becomes detached from this, and stretches partly in a south-west direction to the point of the Chersonesus, partly in a circular form, round the gulf of En.

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the tumor suppurates. Many colts have th« strangles at grass, and the tumor comes to matu—

charge, without any other help than what'nature

STRANGER, m law, denotes a person who is not affords ; though in some cases there is very rat privy or party to an act. Thus a stranger to a malignity, with a purulent runnina at the nose

judgment is he to whom a judgment does not belong ; in which sense the word stands directly opposed to party or privy.

STRAN'GLE, v. a. j Fr. etranger ; Lat.

STRAN'GLER, n. s. fstrangulo. To choak ;

STRANGULA'TION. j suffocate; kill by inter-

which is often dangerous. Those colts, however] that escape the strangles at grass, are liable, for the most part, to be seized when they are first taken up and put to business ; and we often observe the change of diet, an alteration in the air, &c., bring on the strangles. Other causes may

and strangled for his lionesses, and filled his holes with prey.

Nehemiah.

Dost thou not know that thou hast strangled thine husbands'? Tubit iii. 8.

His face is black and full of blood ; His eye-balls farther out than when he lived, Staring full ghastly, .like a strangled man.

Shakspeare. Henry VI. By the' clock, 'tis day ;

And yet dark night strangles the travelling lamp : Is 't night's predominance, or the day's shame ?

Id. Macbeth.

• I-, iii i - ° — 3"*"-" "^ »•"»-» ˆnwota may

cepting the breath ; suppress : both the noun be, their catching cold, shedding their teeth or

substantives corresponding. whatever may induce pain, or bring on irritation

The lion didˆ tear mˆ pieces enough for his whelps, at any critical time upon the throat and jaws.

When the strangles are coming upon a horse, he feels unusually hot, and sometimes very feverish, with a painful cough ; some go quite off their stomachs, others are only dainty, or eat and drink with pain in chewing and swallowing. When the swelling begins on the inside of the jaw-bone, it is much longer in coming to maturity than when it begins more towards the middlu. W hen the skin is tight and much stretched over the swelling, and that feels unusually dry and hot, the swelling will in that case be large before

The band that seems to tie their friendship together it breaks, and yield a plentiful discharge. When

the swelling of the strangles rises between the jaw-bones, under the middle of the tongue, it is always the most favorable; but if it rises upwards among the glands, and is divided into several little tumors, it is not so kindly, but is apt to break in several places and at different times before it sinks, which renders the case more tedious and troublesome.

When the strangles begin directly in the upper part of the throat, towards the head of the wind-pipe and gullet, they hinder a horse sometimes from swallowing for several days, until the tumor grows full and large on the outside. This degree of the strangles is not altogether without danger of suffocation. The pressure made upon the head of the wind-pipe makes the horse's eye look fixed, as if he was convulsed, with his nose turned outwards, and his nostrils open for want of

will be the very strangler of their amity.

Id. Antony and Cleopatra.

A spunge is mischievous, not in itself, for its power is harmless ; but because, being received into the stomach, it swelleth, and, occasioning its continual distension, induceth a strangulation.

Browne's Vulgar Errows.

So heinous a crime was the sin of adultery, that our Saxon ancestors compelled the adultress to strangle herself; and he who debauched her was to be hanged over her grave. Ayllfte.

1 he reduction of the jaws is difficult ; and, if they be not timely reduced, there happen paralysis and strangulation. Wtsimnn.

STRANGLES, in veterinary science. The French and other foreign writers have compared the strangles in horses to the small-pox in men ; and, as the small-pox is more incident to children than to grown persons, so it has been observed,

by these writers, that the strangles chiefly affect breath ; which symptom continues till the tumor, colts and young horses, when they catch invete-growing ripe, breaks and runs off. But the worst rate colds ; which is very true, for horses are sel-and most dangerous kind of strangles is, when, at

dom subject to the strangles after six years old, though Gibson speaks of some horses that he knew to have had this distemper at seven and eight, and sometimes at nine or ten, though these instances,

the same time that a horse is swelled under the jaws, he runs also at the nose, which Gibson attributes either to some constitutional malignity, or to bad management ; and this is what some

he says, are not very common. The strangles call the false or bastard strangles.

are also said to resemble the small-pox in this, that the disease never seizes horses oftener than

This disease seldom proves dangerous, unless the efforts of nature are interrupted. Doing much

once; whereas many other distempers, proceedin this case, says Gibson, is worse than doing too ing from common causes and accidents, will re-little, for the strangles seldom need any other turn as often as there are the proper causes to produce them. But, however this be, it is probable that the strangles are a critical swelling, —rr-* -

•which, when it suppurates and breaks, discharges but, besides the trouble of applying them, ai somewhat obnoxious to the constitutions of young renewing them often, they frequently prove hurt-horses, as they are usually rendered more healthful, by being composed of materials that are too

help than to assist suppuration, by keeping the swelling always moist with camphorated hog's Some apply poultices to the strangles;

lard.

ful than they were before.

stimulating, as turpentine, &c. Besides, if the

This disease begins with a swelling between poultices be not kept close, they are apt to chill

the jaw-bones, sometimes pretty low among the the part, and to repel rather than promote

muscles of the tongue, attended with great heat, charge of the humors, and this often It dry

pain, and inflammation, sometimes to such a de-and obstinate cough, or endangers the hors

gree that a horse is scarcely able to swallow till eyes. Another error, in the cura ol the si

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is opening the tumor before it comes to maturity, which defeats the purpose of nature ; for there are found in that case callous swellings under the throat, with a gleeting ulcer, sometimes followed by a plentiful running at the nose, which, without very great care, will end in the glanders.

If the strangles begin with great pain and inflammation, as sometimes happens ; if the horse's eyes be fixed, and he look convulsed ; his neck much swoln, and his jaws stiff, with his nose turned outwards ; it is necessary to take away a sufficient quantity of blood, to foment and apply a bran poultice to the part, covering it with a thin woollen cloth; and this should be persevered in till it comes to maturity and breaks. Sometimes the inflammation is so great as to destroy the skin that encloses the matter, by which means it falls off in pieces, like an eschar made by a caustic, and exposes the interstices of the muscles and contiguous glands. But here also nature will effect a cure, without any other help besides what has been already recommended ; for the cavity is soon filled by a new growth of flesh, and covered with skin and hair, as perfect as at first. Sometimes the strangles break inwardly, and the matter is discharged chiefly by the mouth ; and, when it is so, the horse's mouth may be washed once or twice a day, with equal parts of brandy and vinegar, with a spoonful of honey to each pint. This, with warm soft diet, will perfect the cure without any other help, and the swelling on the outside will soon wear off.

In some cases, where there is little swelling and inflammation, the horse will eat and drink without pain ; and though there be a collection of matter, yet, when it is small, it sometimes continues long without breaking. When matter is formed in this way, and may be felt by gentle pressure with the finger, Mr. Denny advises to open the tumor with a lancet in the most depending part.

STRANRAER, or STRANRAWER, a royal burgh of considerable antiquity in Wigtonshire, at the head of the bay of Loch-Ryan, fifty miles south of Ayr, and nine and three-quarters north of Glenluce. It is the seat of a Presbytery, and the chief town of the district of the Rinns. The principal street is of considerable length : the greatest part of the houses are old, and built on MO regular plan ; but whole streets of elegant houses have lately been built, and a handsome town-house and prison. It is a port of the cus-tom-house ; and has some trade to

the Baltic, Ireland, and England ; chiefly in the exportation of grain. The cotton and linen manufactures are carried on to a considerable extent. Here is also a considerable tan-work. The harbor of Stranraer is excellent, being sheltered on all sides, and lying at the head of Loch-Eyan, which affords excellent anchorage. Stranraer is governed by a provost, two bailies, a dean of guild, and fifteen councillors; and unites with Wigton, New-Galloway, andWhithorn,in sending a member to parliament. Near the town is the old castle of Stranraer, and not far from it is the cas-tle of Culhorn, the beautiful residence of that noble family.

STRAP, n. s. 1 Belg. stroppe ; Ital stroppa.

STRAPPA'DO. ji Lat. struppus. A narrow long slip of cloth or leather : chastisement by a strap.

These clothes are good er.ough to drink in, and so be those boots too ; an' they be not, let them hang themselves in their own straps

Shakspeare. Twelfth Night.

Were I at the strappado, or all the racks in the world, I would not tell you on compulsion.

Shahspeare.

I found but one husband, a lively cobbler, that kicked and spurred all the while his wife was carrying him on ; and had scarce passed a day without giving her the discipline of the strap. Addison's Spectator.

STRAP, among surgeons, a sort of band used to stretch out limbs in the setting of broken or disjointed bones.

STRAP, in a ship, the rope which is spliced about any block, and made with an eye to fasten it any where on occasion.

STRAPS, in the manege. The straps of a sad-dle are small leather straps, nailed to the bows ot the saddle, with which we make the girths fast to the saddle.

STRAPPADO, or STRAPADO, is a barbarous military punishment, wherein the criminal's hands being tied behind him, he is hoisted up with a rope to the top of a long piece of wood, and let fall again almost to the ground ; so that, by the weight of his body in the shock,

his arms are dislocated. Sometimes he is to undergo three strappadoes or more.

STRASBURG, a large city of Alsace, France, situated at the influx of the Brusche into the Ille, and about half a mile from the Rhine. Its form is semicircular; and it is divided into several parts by canals, over which there is a number of bridges. The construction of the houses is after the German manner, Alsace having belonged to France only since the latter part of the seventeenth century, and the language and customs of the majority of the inhabitants are still German. The material employed for building is a red stone found in the quarries of the neighbourhood. The houses are lofty but heavy : of the streets, the one called La Grande rue, and a few others, are wide and straight, but the far greater part are narrow. The place d'armes is a square, surrounded with good buildings. It is frequented as a public walk ; but the more extensive promenades are the Contadin, adjacent to the city walls ; and the Ruptborshant, a fine meadow, divided into a number of alleys bordered with trees. The fortifications are extensive : being divided into old and new, the former only repaired by Vauban, the latter entirely constructed by him. The citadel lies towards the east. It is a regular penta-gon, composed of five bastions, and as many half-moons, and with out-works extending almost to the Rhine.

The cathedral of Strasburg is justly classed among the most distinguished specimens of Gothic architecture. Its tower, 470 feet in height, is ascended by a stair of above 700 steps, and is said to be the loftiest building in the world, with the exception of the great pyramid of Egypt. It is built of hewn stone, cut with such nicety as to give it at a distance some resemblance to lace. It was upwards of a century and a half in building. Of the other churches, the only one worth notice is that of St. Thomas, containing the monument erected by Louis XV. to marshal Saxe. The town-hall, a large structure, has its facade ornamented with antique paintings. The episco-

pal palace is a good modern building, and the theatre handsome and spacious. Here are two hospitals, one for the military, the other for the

‘I hose oft are ftralagems which errors seem; Nor is it Homer nods, but we who dream. Pope.

STRATAGEMS, in the art of war, certain feints

lower classes, both extensive and well regulated, which are resorted to by able ‘generals ” &c~ Here is also a foundling hospital and an orphan-to cover their real designs during the operations house ; an artillery school, cannon-foundry, and Of a campaign. Strata-ems were much practised

arsenal; to which may be added, a telegraph station, a monument to general Desaix, and the wooden bridge over the Rhine, of the length of 3900 feet.

Strasburg is well situated for trade, the fertile soil of Alsace furnishing the means of subsistence to manufacturers, and the Rhine connecting it with Switzerland and the Netherlands. Its articles for export consist of corn, flax, hemp, wine, spirituous liquors ; also of linen, sailcoth, blankets, carpets, hardware, leather, cotton, and

by the ancients; the moderns wage war more openly, and on the square. Frontinus has made a collection of the ancient stratagems of war. It is impossible to lay down any specific rules on this head, as every general, according to the capacity and activity of his mind, makes use of the various means and expedients which grow out of times, circumstances, and occasions. It has been asserted by some writers that all sorts of stratagems (even those which are connected with treachery) may be adopted for the accomplishment

lace. Tobacco is a product of Alsace ; and snuff of any design. This maxim is, however, strongly

is consequently an object of manufacture here The medical school of

Strasburg, after being long an academy, was constituted a university in the seventeenth century, and, though curtailed in its classes during the French revolution, was replaced on its former footing in 1803. In that year also was established a Protestant university, taught by ten professors, and comprising a classical, philosophical, and theological course. The only other Protestant university (or, as they are here termed, academies) in France is Alontauban.

combated against by those who have written upon the law of nations. Probity, in fact, and elevation of mind (which are superior to the pitiful measures of treacherous affiliation or intercourse) should always bear the ascendancy in human actions. There are stratagems which may b* practised and carried on without the least deviation from honor and good faith. Many distinguished generals have had recourse to these; but none ever succeeded so well as Hannibal. Wishing to cross the river Rhone, and being in want

Strasburg also contains a law school ; two pub-Of aimost every article that was necessary to effect

lie libraries of old date ; and a botanic garden. For boys there is here a high school, on the plan of those of Rouen, Caen, and other large towns. Strasburg existed prior to the Christian era, having been known to the Romans by the name of Argentoratum. It early received the Reformation, and is said to have counted among its inhabitants a majority of Protestants until the

the passage in the presence of an enemy who was diligently watching his motions, he caused him to imagine that it was his intention to keep the ground he occupied. He ordered large fires to be lighted up in different quarters of his camp, and directed some of his troops to shout and make loud noises as if they were perfectly stationary. During this apparent state of inactivity

latter part of the seventeenth century. Till then ne Droke up his camp, marched along the river’s it had held the rank of a free city of the

empire. K\ˆfi > an(j crossed it at a place where it was least At present the proportion of Catholics exceeds expected he would make the attempt. Among

other good qualities, which are indispensably necessary in an able general, that of knowing how its vicinity has been more than once the scene of to conceal a projected march, and to anticipate

that of Protestants : the town is the see of a bishop and the residence of a prefect. This town and

modern warfare. In 1798, when the French re-volutionists were pressed by the Austrians ; in

the motions of an enemy, is not the least important.

the early part of the summer 1796, when the for-The army under the command of the duke of mer crossed the Rhine for the invasion of Ger-gaxe Weimar, having laid siege to Brissack in many; and, finally, in the autumn of that year, ˆ638, the imperialists went to the relief of that •when the French being expelled from Franconia, place. The duke, on receiving intelligence of Kehl, with its bridge leading to Strasburg, had their approach, instantly marched against them very nearly fallen into the hands of their oppo-wjth a body of forces composed of Swedes and nents. In the invasions of 1814 and 1815 Stras-French allies. The imperialists, who had ad-burg escaped attack. Sixty-six miles north of vanced by rapid marches, had gained possession Bale, seventy-five east of Nancy, and 290 east of of an eminence, by means of which they would Paris. have enjoyed all the advantages of local superio-STRATA, in mineralogy, the several beds or rity > liaci not the count de Gue”briant, who was Jayers of different matters whereof the earth ˆ is t])en a lieutenant-general in the Swedish service, composed.

JfERALOGY.

STRAT’AGEM, n. s.

Fr. stratageme ;

See QUARRY, GEOLOGY, and Mi-SUcro-ested a stratagem to dislodge the enemy.

Th” following plan was consequently adopted, Gr-and it succeeded to the full extent of his design :-

An artifice ; a trick by which an The dmms and trumpets of the different corps

were collected together and stationed in a neighbouring wood, so as to draw the enemy s force and attention from the quarter proposed to be

enemy is deceived.

Every minute now Should be the father of some stratagem.

Id. Henrii IV.

carried. The imperialists being naturally led if Rouse up your courage, call up all your counsels, be[ieve from t],e noise and concurrence of

many military instruments, that they were pom- ,™tˆ fmm that nuavter. beat to ;;rm»

And think on all those stratagems which nature Keeps ready to encounter sudden dangers.

Denham’s Sophy.

to be attacked from that quarter

and left their position in complete order of battle. They had scarcely quitted the eminence before the duke of Saxe Weimar appeared in their rear, took possession of the ground which they had so imprudently abandoned, and became master of all the advantages which his enemy would otherwise have enjoyed. An interesting account of this ingenious manoeuvre may be found in the History of Le Marechal de Gue-briant.

Stratagems of this-description have been frequently used by the French during the late war, particularly in Italy. Stratagems, in fact, constitute one of the principal branches in the art of war. They have been practised in all ages by the most able generals, and have contributed, in a great degree, to their military reputation. Vir-gil, in his ZEueid, book ii. says,

Dolus an virtus quis in hoste requirat.

The history of France abounds with instances in which stratagems of every kind have been successfully practised. It seems the peculiar talent of the inhabitants of that country to derive advantages' from well concerted feints, &c., in war, and to secure their victories more by science than by downright hardihood. Nevertheless far be it from us to detract from the latter. Modern Frenchmen, as soldiers, seem to have acquired, or to have had awakened in them, on shore, the courage and perseverance which are so remarkably conspicuous amongst us at sea. Perhaps it is out of the natural course of things that they should ever reach the naval excellence by which this country is so singularly distinguished ; and perhaps it is equally ordained that we should never be the first in military knowledge. France and England unquestionably hold between them the destinies of Europe, and of the three other quarters of the globe : France by the natural advantages of her continental position, added to a predilection for arms which is manifest throughout her population ; and England by its insular situation, rendered, as it were, impregnable by an innate courage, and unrivalled aptitude at sea. Time alone, and the experience of facts, must hereafter determine how far either nation will be benefited by a deviation from the primary advantages which nature furnishes to

each. For it must be acknowledged that the true element in which a Frenchman seems calculated to act is on shore, or within the guardian range of his artillery and fire-arms; and that an Englishman, though far from being wholly out of his element on land service, is thoroughly himself at sea. From the increase of our foreign possessions, but most especially from the extent of our territories in India, and the armed state of Europe, it has been found expedient to enlarge the scale of our military establishments, in proportion to the exigencies of a very desultory service abroad, and a possible necessity at home for military operations. Without, therefore, entering into the policy of either country, we shall content ourselves with observing that, as we have an army, it behoves every efficient character belonging to that army to obtain a thorough knowledge of his profession, and to study the nice shades of an art which, of all others, has principles that are fixed and immutable, under circumstances of the greatest apparent casualty. It has been wisely observed by a French writer, under the article of Stratagemes de Guerre, that a chief, who is defeated in a general action, will sometimes attribute his failure to fortune, although it be universally acknowledged that chance, or fortune, has a very trifling share in pitched battles, while art and science regulate the different movements, and finally determine their issue. W'hoever, therefore, suffers himself to be surprised by his enemy cannot be said to stand wholly exculpated from ignorance, or neglect, since it must have been in his power to have avoided the snares laid for him, by means of vigilant spies and unremitting attention. This remark appears to us not only to be generally correct, but it seems more immediately applicable to all generals that have secret service money at command. The influence of that commodity (upon which no embargo can be laid) will be felt in every garrison town, or sea-port; and those who have the management of the public purse must be dull indeed if they do not feel their way into the secret preparations of an enemy, before they hazard an attack against him. Of a deficiency on this ground we have had melancholy proofs both in Spain and Holland, particularly at Walcheren in 1809.

Besides the different stratagems, says major James, which may be used by an able general, to bring about the overthrow of the whole or part of an army, by leading it into an ambuscade, there are various ones which may be practised against a fortified place. To effect the latter purpose you may contrive to get soldiers in disguise through the gates at unguarded hours ; to introduce them through subterraneous passages, or by any other means that may offer. Before any attempt of this sort is made, every part of the fortifications should be narrowly reconnoitred, and as much knowledge be obtained of the interior

situation of the place as can be procured by means of good spies, or from deserters. You must, above all things, be well assured that the garrison is relaxed in duty ; that the different guards are negligently attended to; that the soldiers who compose them are in the habits of drinking or gaming; that their officers neglect their rounds, or go them without system or regularity ; that the gates are ill guarded, and the avenues to them ill watched ; and that there are certain places, or entrances, which are not watched at all; for it is almost impossible to surprise any place that has been regularly fortified while the garrison does its duty. If it should appear practicable to surprise a town, by taking advantage of the negligence of the sentries, &c., at some particular gate, previous means must be adopted to introduce some soldiers dressed like market women, or in the garb of some religious order. You may then contrive to get a waggon or cart (seemingly loaded with hay or straw, but with soldiers concealed beneath it) so placed in the entrance of the gate that it will serve as an obstacle when it may be found necessary to shut it. In order to do this effectually, let a pin b,e taken out, so that the wheel comes off, or the axletree gets broken. The instant this is doue the. soldiers, who had entered the town in disguise, must

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join the drivers, the men that have been con-Cornelius Nepos. Sometimes, indeed, as when cealed in the waggon will then leap out, and the a person was found of merit vastly superior and

whole must rush upon the port-guard. While j;—i /• • •

this happens the troops that have been placed in

ambush round the fortifications will advance with

promptitude and firmness, and endeavour to get

possession of the town before a sufficient force

can be collected to repel the attack. In the year

1789 a rabble from Courtray took advantage of besides many other privileges granted to the city

the carelessness of the imperial troops, who were of Athens, honored its chief magistrate with the

in garrison at Gand, in Flanders, and by seizing title of Mtyac Srparjjyoc, Magnus Dux.

exceedingly famed in war, the command was given to him alone : but it was ever a rule not to put any person in the office but whose estate was in Attica, and who had children, that there might be some hostages and securities for his conduct and fidelity. Constantine the Great,

upon the gate and port-guard brought about a temporary rebellion in the country. The author of this compilation was an eye-witness to the consequent effects of this coup de main ; and he is fully persuaded that Antwerp might have been taken in 1809 by a prompt and vigorous approach.

STRATEGY. Strategy differs materially from tactic ; the latter belonging only to the mechanical movement of bodies set in motion by the former. One is, in fact, the soul, the other the mere body of military science. In a most excellent publication, entitled Idees Raisonnees

This, indeed, was done without stratagem ; but sur un Systeme General, &c., pour ctudier la the circumstance proves that, when the sentries Science de la Guerre, &c., by Nockhern deSchorn,

of a fortified place are negligent in their duty, a surprise is always practicable. We are pre-eluded, by the limits of our undertaking, from

we find the following explanation of the term ; and, as it does not exist in any of our English lexicographers, we presume the extract must be

going more fully into this important branch of particularly gratifying to the intelligent officer.

military science. Several treatises have been In page 198, Troisieme Partie, Sixieme Chapitre,

written on the subject. Among others one ap-Sixieme table Methodique, our author thus con—

peared in 1756, entitled Stratagemes de Guerre, tinues : — ‘ We are at length got to the sixth intu—

illustrating, from history, the various stratagems gral part of military knowledge, which is termed

which had been practised by some of the ablest strategic, or the art of knowing how to command,

generals, during a long period of time, down to and how to conduct the different operations of the peace of Aix-la-Chapelle. It was published by Mr. Carlet de la Rosiere, an officer in the

French service, and acting engineer in the isles The term general or chief conveys the same mean-

war : the word is derived from the Greek strate-gos, which signifies chief or general of the army.

of France and Bourbon. ous matter.

STRATARITHMOMETRY, in war, the art of drawing up an army, or any part of it, in any

It contains much curi-ing, indeed, that constitutes the word universal, and points out an officer of superior rank whose mind is well stored with military theory, and who can practically lead into active service all

given geometrical figure; and of expressing the the different arms, or component bodies belo

number of men contained in such a figure, as they stand in order of battle, either at hand or at any distance assigned.

ing to war; such as cavalry, infantry, and artillery. This definition clearly points out the impropriety of confining the terms general, lietite-

STRATEGICS and TACTICS. Mr. C. Malorti nant-general, and major-general, to any particular

de Martemont, in his translation of a work enti-body of armed men : for what is a general whose

tied the Modern System of War, has defined skill consists in being able

to manage a body of

these terms in the following manner :— < I define cavalry, or of infantry only, without knowing

strategics, the science of the movements in war of how to conduct others ? A general, whether h

two armies, out of the visual circle of each other; be commander-in-chief, or be acting in a subor—

or, if better liked, out of cannon reach. Tactics dinate capacity to him, ought to know cavalry,

are the science of the movements made within infantry, and artillery movements, and possess

sight of the enemy, and within reach of his artil-all the branches of military science. Nor a

lery. The reader may, if he pleases, prefer the these observations confined to the generals an

reach of cannon to that of sight for the bounds superior officers of armies; subaltern o

within which the movements of war cease to be should be more or less versed in the scien<

strategics and become tactics. But were I to knowing how to conduct men into action, and

decide for one of them I should adopt the reach combine the different operations of war ; par

of sight, for the following reason : that deploying larly so if their natural ambition should 1«

columns in order of battle is an operation of tac-to aspire to the highest posts . tics; yet it is generally done out of cannon reach. At Rosbach, to be sure, it was not so, but what

was the consequence ?’ p. 87.

Strategy, or the knowledge of commanding armies, may be divided into two parts; one com-

STRATEGUr(,%a?wyoc),in antiquity, an prehendmg the higher and the other embnicmg

officer among the Athenian!, whereof there were the lower branches of the art. The hr> e. n aus

two chosen yearly, to command the troops of the all that a commander-.n-ch.ef, and

state. Plutarch says there was one chosen from subordinate generals, should nea

out of each tribe ; but Pollux seems to say they and the second (which may also be call. u

were chosen indifferently out of the people. The the guerre, being the diminutiye of ihe 1

people themselves made the choice, and that on pertains to the staff, and to a ce am p >no on

the last day of the year in the Pnˆx. The two of subaltern officers. To be ˆequate to

strategi did not command together, but took their command it is ^^^ZSSJ^^SˆSi

turns day by day, as we find from Herodotus and lected, should possess extraorc

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not only be master of all the theory of war, but likewise know, from practice and experience, every species of military operation. He should, in fact, to refer to one of our own articles (vide MIND) be gifted with a military mind.

In order to obtain all that can be obtained by study (for natural genius must supply a very large proportion) the intelligent officer will first fix upon a distinct and clear idea of the part he means to investigate. From one idea he will gradually proceed to another; and, when the whole system has thus been progressively touched upon, he will take an analytical view of the several component parts ; examine them, together ; weigh their relative points, and then look into the different authors that have written upon this vast and complicated subject. He will peruse what relates to the first branch, or La Grande Strategic, in the following works: — 1. Les Memoires de Monte”cuculi. 2. L’Esprit de Folard.

3. Art de la Guerre, par le Marechal de Puisegur.

4. Les Reveries du Marechal de Saxe. 5. L’Es-sai sur 1’Etat de la Guerre, par Turpin. 6. Les Instructions du Roi de Prusse 7. Le Cours et le Traite de Tactique, par Joly de Mezeroy. 8. Theorie de la Guerre, par le rneme. 9. Pensees sur la Tactique et la Strategic, par M. de Sylva. 10. L’Essai General de Tactique, par M. Gui-bert.

The best writings on what is called La Petite Strategic, or the inferior branches of the art of war, are, 1. Le Premier livre du 1 tome, et le cinquieme livre du 2 tome, de 1’Art de la Guerre, par M. Turpin. This work has been translated by captain Otway. 2. Le Traite” sur la Petite Guerre, par Grand Maison. 3. Le Partisan, par Jenny. 4. Principes sur la Petite Guerre : Ou-vrage ajoute” aux Instructions du Roi de Prusse.

5. La Petite Guerre, par M. le capt. Knock. 6. Sentimens d’un Officier Hessois sur Part de con-duire les detachemens a la guerre. 7. Le Chas-seur a la Guerre, ou du service des troupes le-geres. 8. Observations sur le Service de Cavalerie a la Guerre, par le Chevalier de Shonacken.

Although these celebrated writers ought to be considered by every young officer as the oracles of his profession, he must, nevertheless, guard his mind against that fatal persuasion which might lull it into a belief that nothing more is required than to peruse and to digest their

rules and legu-lations. When he has made himself completely master of their thoughts he must endeavour to identify himself, as it were, with the authors and the generals themselves. By this method he will probably hit upon some of those hidden truths in military science from which many secondary ones are drawn ; and in contemplating the commentaries, Sec., of great generals, he will discover that they knew well how to calculate dangers, to appreciate probabilities, and, by occasionally deviating from ordinary rules and prescribed principles, how to move in untrodden paths, and to obtain signal advantages where, to superficial minds, nothing but desperate hazard and destruction appeared.

STRATFIELD-SAY, a parish in Holdshott hundred, Basingstoke division, Hants, eight miles north-east of Basingstoke, and fifty-three from Londo» The duke of Wellington has a noble

seat here, given to his grace by a vote of parlb-ment as a national tribute for his eminent military services.

STRATFORD-ON-AVON, a market-town and parish in Barlichway hundred, Warwick. Eight miles south-west of Warwick, and ninety-four north-west from London, by Oxford; situate on the river Avon, over which is a bridge of brick and stone of fourteen arches. The town is well built, and the church, a noble building, has a lofty spire with six bells ; its origin is very ancient, but many parts of it are modern. Here is also a chapel the gift of sir Hugh Clapton, in the reign of Henry VII. This place is celebrated as being the birth-place of William Shakspeare, who died in 1616, and has a neat monument in the church. The noted mulberry-tree which grew in the garden of the poet was destroyed by a successor, who having sold it to a carpenter, he ingeniously worked it into various ornaments and trinkets, many of which were bought by the corporation and distributed as compliments to different personages of renown. In September, 1769, was the first commemoration of Shakapeare's Jubilee, when an amphitheatre was erected on the plan of Ranelagh for the reception of its visitors from all parts of the kingdom. It lasted three days, during which time every species of entertainment was exhibited; such as concerts, oratorios, pageants, fireworks, illuminations, &c. In the guildhall, in which is transacted the town business, is a large room called Shakspeare's hall, adorned with two excellent paintings of Shakspeare and Garrick. It was rebuilt in 1768 : over the hall is a free grammar-school. Here are also several good alms-houses. The chief trade is in corn and malt. The Avon is navigable to the Severn, and a canal lately completed opens a

communication with the northern parti of the kingdom. Market on Friday. Fairs Thursday after Lady-day, May 14in, September 25th, and the Thursday se'nnigiit after.

STRATFORD, LONG, a hamlet in West-Ham pa-rish, Beacontree hundred, Essex, being the first village in the county from London, and joined to Stratford-Bow by a stone bridge over the Lea, said to be the ferst arched stone bridge erected in England. To the south are the remains of a Cestercian monastery.

STRATFORD, STONT, a market-town situate partly in the parishes of Calverton and W'olver-ton, Newport hundred, Bucks, on the banks of the Ouse, over which it has a stone bridge to Old Strattford, in Norts. It is a long town, and lies six miles north-west from Fenny-Stratford, and fifty-two north-west from London. It had formerly two churches, or rather chapels of ease, but that on the east side of the road was nearly destroyed by fire in 1742, and has not since been rebuilt, but the tower is still standing; the other, dedicated to St. Giles, was rebuilt in a neat mo-dern manner in 1777; here are meeting-houses for Baptists and other dissenters. It is supposed to have derived its name of Stony, to distinguish it from Fenny-Stratford, and from its being situate on the Watling Street Roman paved road . The only manufacture here is that of lace-making. The town has many charity-schools, and a socieiy

for apprenticing out children. The market on Friday is well supplied with provisions, and considerable quantities of corn are sold here, forming the principle traffic and support of the place. The Fairs are August 2d, October 10th, and November 12th, for provisions, cattle, pedlary &c., and on the Friday before Old Michaelmas-‘ day is a statute fair.

STRATIOTES, water soldier, in botany, a genus of plants belonging to the class of polyandria, and to the order of hexagynia; natural order first, palmae. The spatha is diphyllous ; the perianth ium is trifid. There are three petals, and the berry is six-celled and inferior. There are three species; 1. S. acoroides; 2. S. alis-moides ; and 3. S. aloides, which alone is of British extraction, which is also called the water aloe, or fresh water soldier. The root consists of long fibres tufted at the ends. The leaves are thick, triangular, pointed, and prickly at the edges. The flowers are white and floating on the water, and blossom in June. -This plant may be seen in slow rivers and fens.

STRATO, a philosopher of Lampsacus, disciple and successor in the school of Theophrastus, about A. A. C. 248. He applied himself with uncommon industry to the study of nature ; but, after the most mature investigations, he supported that nature was inanimate, and that there was no God but nature. See PLASTIC NATURE. He was preceptor to Ptolemy Philadelphus, who revered his abilities and learning, and rewarded his labors with unbounded liberality. He wrote different treatises, all now lost.

STRATONICE, the beautiful daughter of Demetrius Poliorcetes, and the wife, first of Seleucus Nicator, king of Syria, and afterwards of his son, Antiochus Soter, with his full consent. The circumstances of the case were extraordinary, and, if any thing could justify such an incestuous connexion, they were indeed such. Antiochus fell sick and was at the point of death, to the great grief of his father, but the cause of his illness was unknown; till Erasistratus, the physician, observing his pulse to beat high every time his stepmother came into his room, immediately guessed the cause. Upon his putting the question to him, Antiochus confessed, what he had hitherto concealed, his affection for his stepmother. Seleucus, willing to save his son and heir, yielded up his wife, and they were regularly married. And thus Stratonice became the pro-genitrix of that impious race of princes who afterwards so

cruellv persecuted the Jews. See JEWS and SYRIA. ” But, allowing for Seleucus’s total ignorance of the divine law, his paternal affection and generosity in so readily yielding up his wife to save his son, appear almost an act of virtue. At least it affords a striking contrast to the conduct of a Christian prince in modern times (if a Christian we may call him, who murdered his subjects by millions for their religion), Philip II. of Spain, who, after his son prince Charles had seen and was betrothed to the princess Elizabeth of France, whose affection for him was mutual, had the monstrous barbarity to separate the .lovers, to marry the princess himself, and then to murder his son. the prince, because he repined at his villany. See PHILIP II.

STR ATONIC EA, an ancient city of Asia built by Seleucus, and so named by him in honor of Stratonice. It is now called Eski-Hissar.

STRATONICI, the followers of Strato ; an ancient Ptheistical sect. See HYDOZOISTS.

STRATTON, a market-town in the hundred of the same name, Cornwall, seven miles W.S.W. from Holdsworthy, and 222 from London. Here is a meeting-house for Wesleyan methodists. During the civil war the famous battle of Stratton was fought near this place. Market on Tuesday. Fairs, May 19th, November 8th, and December llth.

STRATUM, n. s. I Lat. stratum. A bed ;

STRA’TA. $ a layer : a term of philosophy : strata, the plural.

The terrestrial matter is disposed into strata, or layers, placed one upon another ; in like manner as any earthy sediment, settling down from a fluid, will naturally be. Woodward.

Another was found in a perpendicular fissure of a stratum of stone in Langron iron-mine, Cumberland.

Id.

With how much wisdom are the strata laid, Of different weight and of a different kind, Of sundry forms for sundry ends designed !

Blackmore.

Drilled through the sandy stratum, every way The waters with the

sandy stratum rise. Thomson.

STRAUB1NG, a large town of Bavaria, on the right bank of the Danube, stands partly on a height, and is divided into Upper and Lower. It is tolerably well built, and surrounded with a wall : the bridge over the river is defended, since 1809, by a tete de pont. It is the seat of a high court of justice, has several churches and charitable institutions, a flourishing academy, and, in a convent of Ursuline nuns, an establishment for female education; with well frequented markets of corn and cattle, and a trade on the Danube. The environs are fertile, but the town has suffered much from fire. Sixty-six miles N.N. E. of Munich, and twenty-three E.S.E. of Ratisbon.

STRAW, n. s. -\ Saxon rtrieo? ; Belgic STRAW'BERRY, I stroo ; Goth, strao. The STRAW'BUILT, adj. ˆ stalk on which corn grow?; STUAW'COLORED, I any stalk; any thing of STRAW'Y. 3 small value: strawberry

is a fruit with a straw-like stem : strawy, consisting of or abundant in straw : the compounds seem to explain themselves.

I can counterfeit the deep tragedian, Tremble and start at wagging of a straw, Intending deep suspicion.

Shakspeare. Richard Hi.

I will discharge it in your strawcolmtrcd beaid.

Shakspeare.

There the strawy Greeks, ripe for his edge, Fall down before him like the mower s swath Apples in hay and itraw ripened apparently ; l)i

the apple in the straw more.

Bucon't Natural Ihtlory.

Thy arms, thy liberty beside, All that's on the outside of thy hide, Are mine by military law, Of which 1 will net bate one arme.

They on the smoothed plank, The suburb of their strawbuilt citadel, New rubbed with balm expatiate.

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In a field of corn, blown upon by the wind, there •will appear waves of a colour differing from that of the rest ; the wind, by depressing some of the ears, and not others, makes the one reflect more from the lateral and strawy parts than the rest.

Boyle on Colours.

Content with food which nature freely bred, On wildings and on strawberries they fed. Dryden.

‘Tis not a straw matter whether the main cause be right or wrong. L’ Estrange.

My new straw hat thus trimly lined with green Let Peggy wear. Gay’s Pastorals.

Strawberries, by their fragrant smell, seem to be cordial : the seeds obtained by shaking the ripe fruit in winter are an excellent remedy against the stone. The juice of strawberries and lemons, in spring-water, is an excellent drink in bilious fevers.

Arbuthnot on Diet.

More light he treads, more tall he seems to rise, And struts a straw breadth nearer to the skies.

Ticket.

STRAWBERRY, in botany. See FRAGARIA.

STRAY, v. n., v. a., & n. s. Ital. stravviare, of Lat. extra via, to wander. To wander ; rove ; range beyond limits ; err : to mislead : the act of erring ; any erring creature or thing.

We have erred and strayed. Common Prayer.

What grace hath thee now hither brought this

way ? Or doen thy feeble feet unweeting hither stray 1

Spenser.

Nowhere can I stray, Save back to England : all the world's my way.

Shakspeare.

She hath herself not only well defended, But taken and impounded as a stray The king of Scots. Id. Henry V.

I would not from your love make such a stray, To match you where I hate. Shakspeare.

Hath not else his eye Strayed his affections in unlawful love? Id.

My eye, descending from the hill, surveys Where Thames among the wanton valley strays.

Denham.

Should I take you for a stray, You must be kept a year and day. Hudibras.

Wand'rest thou within this lucid orb, And strayed from those fair fields of light above, Amidst this new creation want'st a guide To reconduct thy steps 1 Dryden.

He cries out, Neighbour, hast thou seen a stray Of bullocks and of heifers pass this way? Addison.

When he has traced his talk through all its wild rambles, let him bring home his stray ; not like the lost sheep, with joy, but with tears of penitence.

Government of the Tongue.

STRAY, or ESTRAY, signifies any tame beast, as sheep, oxen, swine, and horses, or swans, found within a lordship, and not owned by any man; in which case, being cried according to law, in the church and two market-towns adjoining, if it be not claimed by the owner within a year and a day, it becomes the lord's of the soil where found. If the owner claims it within the year and a day, he must pay tbe charges of finding, keeping, and proclaiming; and he also may seize it, without telling the marks, or proving his property, which may be done at the trial if contested. If the beast stray within the year to another lordship, the first lord cannot retake it. An estray must be fed and kept, uninjured, and without labor, till it is reclaimed, or the limited time expire.

STREAK, n.s. & 7;. a. } Sax. r-rnice ; Belg;

STREAK' v, adj. $ streke ; Ital. stricia.

A line of color different from that of the ground : sometimes written strake: to stripe: variegate; draw out in stripes : streaky is striped.

The west yet glimmers with some streukt of day ; Now spurs the lated traveller apace, To gain the timely inn. Shakspeare. Macbeth.

All the yeanlings which were streaked and pied Should fall as Jacob's hire.

Id. Merchant of Venice.

She lurks in midst of all her den, and streaks From out a ghastly whirlpool all her necks ; Where, glotting round her rock, to fish she falls.

Chapman.

To morrow, ere fresh morning streak the east, When first approach of light we must be risen, And at our pleasant labour, to reform Yon flowery arbours. Milton.

When the hoary head is hid in snow, The life is in the leaf, and still between The fits of falling snows appears the streaky green.

Dryden.

The night comes on, we eager to pursue Till the last streaks of dying day withdrew, And doubtful moonlight did our rage subdue. Id.

While the fantastic tulip strives to break In two-fold beauty and a parted streak. Prior.

Now let us leave this earth, and lift our eye To the large convex of yon azure sky ; Behold it like an ample curtain spread, Now streaked and glowing with the morning red, Anon at noon in flaming yellow bright, And chusing sable for the peaceful night. Prior.

STREAM, n. s., v. n., & i Saxon j-tneam ;

STREAM'ER, n. s. [v. a. >Swed. strom ; Dan.

STREAM'Y, adj. J stresm ; Belg. stroom.

A running water ; the course of running water ; a current ; any thing forcibly or constantly issuing : to flow; run; issue constantly: to mark with colors in tracts : a streamer is an ensign ; flag : streamy, abounding in streams ; running in a current.

lie brought streams out of the rock, and caused waters to run down like rivers. Ps. Ixxviii. 16.

The breath of the Lord is like a stream of brimstone. Isaiah.

As plays the sun upon the glassy stream, Twinkling another counterfeited beam.

Shakspeare. Henry VI.

The very stream of his life, and the business h<j hath helmed, must give him a better proclamation.

Shakspeare. His brave fleet

With silken streamers the young Phoebus fanning.

Id.

Had their cables of iron chains had any great length, they had been importable ; and, being short, the ships must have sunk at an anchor in any stream of weather. Raleigh.

The herald's mantle is streamed with gold.

Bacon.

O could I flow like thee, and make thy stream My great example, as thou art my theme ! Tho' deep yet clear, tho' gentle yet not dull, Strong without rage, without o'erflowing full.

Denham.

Cocitus named of lamentation loud Heard in the rueful stream ; fierce Phlegethon, Whose waves of torrent fire inflame with rage j Far off from these a slow and silent stream, Lethe, the river of oblivion, rolls Her wa'try labyrinth. Milton.

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God bad the ground be dry, All but between those banks where rivers now Stream, and perpetual draw their humid train.

in the lordship of Stargard in the midst of lakes and marshes. It is divided into Old and NW

Thus, from one common source our streams divide : J?trelite, which f °™ properly two towns, a mile .,„ :„ «.!,„ T — ;„„ ‘. »u_ n j-_ •. distant trom each otiier.

Id.

Old Strelitz was formerly the ducal residence, but the palace having been burned in 1713, the duke built a new one jrlienke, a place at a little distance, and in 1733 founded a town called New Strelitz. The two came in time to be considered as one town. Old Strelitz contains 3000 inhabitants. New a

It is looked upon as insolence for a man to adhere better built place, has 4000, with a distinct maThe manufactures consist of woollen,

Ours is the Trojan, jour’s the Arcadian side.

Dryden. You, Drances, never want a stream of words.

Id.

The rosy morn began to rise, And wav’d her saffron streamer through the skies.

Id.

to his own opinion, against the current stream of antiquity. Locke.

The man of sense his meat devours, But only smells the peel and flowers : And he must be an idle dreamer, Who leaves the pie, and gnaws the streamer. Prior.

Arcadia,

However streamy now, adust and dry, Denied the goddess water : where deep Melas And rocky Gratis flow, the chariot smoaked Obscure with rising dust. Id.

The stream of beneficence hath, by several rivulets received on the first day of the year a present which have since fallen into it, wonderfully enlarged of some sprigs of vervain, gathered in a wood

consecrated to the goddess Strenia, authorised this custom to be observed afterwards, and

gistracy.

linen, and, in a small degree, of tobacco. Here are also the public offices of the duchy. Fifty-seven miles north by west of Berlin.

STRENˆE (Lat.), in Roman antiquity, new year's gifts, or presents made on the first day of the year, as a happy omen, and mark of the giver's good will. This practice took place so early as the reign of Titus Tatius, king of the Sabines, and colleague of Romulus; who havhi"-

STRENGTH, n. s.v.o.ˆ STRENGTHEN, v. a. & v. n. I

its current. Atterbury.

Before him flaming his enormous shield Like the broad sun, illumined all the field ; His nodding helm emits a streaming ray.

Pope's Iliad. On all sides around

Streams the black blood, and smokes upon the ground. Pope.

Then grateful Greece with streaming eyes would

raise Ilistorick marbles to record his praise. Id.

From opening skies may streaming glories shine, And saints embrace thee. Id.

STREATER (Robert), an English painter, liorn in 1624. lie was esteemed the most universal painter England ever bred. At the restoration in 1660 he was made serjeant painter to the king. He died of the stone in 1080.

STREET, ?i. s. Sax. r”cjwc ; Isl. strudn ; Dan. streede; Belg. straet ; Lat. stratum. A way ; properly a paved way between rows of prived of strength, houses; a public place or way.

That there be no leading into captivity, and no complaining in our streets. Ps. cxliv. 14.

The streets are no larger than alleys. Sandys.

He led us through fair streets; and all the way we went there were gathered people on both sides, standing in a row. Bacon.

When night

Darkens the streets, then wander forth the sons Of Belial, flown with insolence and wine ; Witness the streets of Sodom. Milton.

The Italians say the ancients always considered the situation of a building, whether it were high or low, in an open square, or in a narrow street, and more or loss deviated from their rule of art.

Addison on Italy.

Our publick ways would be so crowded, that we should want street-room. Id. Spectator.

Let us reflect upon what we daily see practised in the world; and can we believe, if an apostle of Christ appeared in our streets, he would retract his caution, and command us to be conformed to the world ? Kogers's Sermons.

When you tattle with some crony servant in the same street, leave your own sfreef-door open. Swift.

STRELITZ, a city of Germany, capital of the Plenty of mighty "spirits, to strength his state. grand duchy of Mecklenburg-Strelitz, is situated

to all such presents the name of Strenx. Romans on that day celebrated a festival in honor of Janus and Juno. See YEAR.

Sax. prjienjcS ; Teut. and Bolsr.

STRENG'THENER, n.s. ˆ streng; Gothic STRENGJHLESS, adj. i dreing. SLV

STRENG'THNER, n. s. j STRONG. Yieor ;

power ; force ; firmness ; power of resistance ; security : hence mental power ; animation ; validity ; argumentative force or prevalence; ;i fortification or fortress-used by Daniel for to strengthen, which signifies to make strong; increase in power or strength ; confirm ; establish ; animate : and, as a verb neuter, to grow strong: a strengthener is that which gives strength : strengthless, weak ; wanting or de-

Charge Joshua, and encourage him, and strengthen him. Deuteronomy.

Let us rise up and build : so they streni/theiird their hands for this work. Nehemiah ii. 18.

They sought the strengthening of the heathen.

1 Maccabees vi.

This presupposed, it may then stand very wdi with strength and soundness of reason thus to answer.

Hooker.

Our castle's strength

Will laugh a siege to scorn. Shak>i>can-.

What is his strength by land ?

Id. Antony and Cleovatm. Let noble Warwick, Cobham, and the rest, With powerful policy strengthen themselves.

Id. Henry I'l.

As the wretch, whose fever-weakened joints, Like strengthless hinges, buckle under life, Impatient of his fit, breaks like a fire Out of his keeper's arms. Id. Henry IV.

The rashness of talking should not only l« retarded by the guard of our heart, hut fenced in by certain ttrenglhs placed in the mouth.

Ben Jonson's Diicnveries. Edward's happy-ordered reign most fertile breeds

Strength there must be either of love or war, even such contrary ways

leading to the same unity.

Holyday.

Betrayed in all his strengths, the wood beset ; All instruments, all arts of ruin met. Denham.

Thou must outlive Thy youth, thy strength, thy beauty, which will

change To withered, weak, and grey. Milton.

He thought This inaccessible high strength to have seized. Id.

Oh men for flattery and deceit renowned ! Thus when y' are young ye learn it all like him ; Till, as your years increase, that strengthens too, T' undo poor maids. Otway's Orphan.

Authority is by nothing so much strengthened and confirmed as by custom ; for no man easily distrusts the things which he and all men have been bred up to. Temple.

Garlick is a great strengiliener of the stomach, upon decays of appetite, or indigestion. Id.

This liquor must be inflammable or not, and yet subtile and pungent, which may be called spirit ; or else strengthless or insipid, which may be named phlegm. Boyle.

Aristotle's large views, acuteness, and penetration of thought, and strength of judgment, few have equalled. Locke.

What they boded would be a mischief to us, you are providing shall be one of our principal strengths.

Sprat's Sernwiis.

The allies, after a successful summer, are too apt, upon the strength of it, to neglect their preparations for the ensuing campaign. Addison.

He enjoyed the greatest strength of good sense, and the most exquisite taste of politeness. Id.

We, like friendly colours, found our hearts unite, And each from each contract new strength and light.

Pope.

The disease, that shall destroy at length, Grows with his growth, and strengthens with his strength. Id.

If it were true that women were thus naturally vain and light, then how much more blameable is that education which seems contrived to strengthen and increase this folly ! Law.

STRENGTH, in mythology, the daughter of Pallas the giant, by the nymph Styx, and the sister of Valor and Victory.

STRENGTH OF MATERIALS, in mechanics, is a subject of so much importance that in a nation so eminent as this for invention and ingenuity in all species of manufactures, and in particular so distinguished for its improvements in machinery of every kind, it is somewhat singular that no writer has treated it in the detail which its importance and difficulty demand. The man of science who visits our great manufactures is delighted with the ingenuity which he observes in every part, the innumerable inventions which come even from individual artisans, and the determined purpose of improvement and refinement which he sees in every workshop. Every cotton-mill appears an academy of mechanical science ; and mechanical invention is spreading from these fountains over the whole kingdom. But the philosopher is mortified to see this ar-dent spirit so cramped by ignorance of principle, and many of these original and brilliant thoughts obscured and clogged with needless and even hurtful additions, and a complication of machinery which checks improvement even by its

appearance of ingenuity. There is nothing in which this want of scientific education, this ignorance of principle, is so frequently observed, as in the injudicious proportion of the parts of machines and other mechanical structures; proportions and forms of parts in which the strength and position are no wise regulated by the strains to which they are exposed, and where repeated failures have been the only lessons.

The strength of materials arises immediately or ultimately from the cohesion of the parts of bodies. Our examination of this property of tangible matter has as yet been very partial and imperfect, and by no means enables us to apply mathematical calculations with precision and success. The various modifications of cohesion, in its different appearances of perfect softness, plasticity, ductility, elasticity, hardness, have a mighty influence on the strength of bodies, but are

hardly susceptible of measurement. Their texture also, whether uniform like glass and ductile metals, crystallised or granulated like other metals and freestone, or fibrous like timber, is a circumstance no less important; yet even here, although we derive some advantage from remarking to which of these forms of aggregation a subject belongs, the aid is but small. All we can do in this want of general principles is to make experiments on every class of bodies. Accordingly, philosophers have endeavoured to instruct the public in this particular. The Royal Society of London at its very first institution made many experiments at their meetings, as may be seen in the first registers of the Society. Several individuals have added their experiments. The most numerous collection in detail is by Muschenbroek, professor of natural philosophy at Leyden. Part of it was published by himself in his Essais de Physique, in 2 vols. 4to. ; but the full collection is to be found in his system of Natural Philosophy, published after his death by Lulofs, in 3 vols. 4to. This was translated from the Low Dutch into French, by Sigaud de la Fond, and published at Paris in 1760, and is a prodigious collection of physical knowledge of all kinds, and may almost suffice for a library of natural philosophy. But this collection of experiments on the cohesion of bodies is not of that value which one expects. We presume that they were carefully made and faithfully narrated ; but they were made on such small specimens that the unavoidable natural inequalities of growth or texture produced irregularities in the results, which bore too great a proportion to the whole quantities observed. We may make the same remark on the experiments of Couplet, Pitot, De la Hire, Du Hamel, and others of the French academy. In short, if we except the experiments of Buffon on the strength of timber, made at the public expense on a large scale, there is nothing to be met with from which we can obtain absolute measures which may be employed with confidence ; and there is nothing in the English language, except a simple list by Emerson, which is merely a set of affirmations without any narration of circumstances, to enable us to judge of the validity of his conclu sions ; but the character of Mr. Emerson, as a

man of knowledge and of integrity, gives even to •these assertions a considerable value. But to make use of any experiments there must be employed some general principle by which we can generalise their results. They will otherwise be only narrations of detached facts. We

must have some notion of that intermedium, by

and it would require the penetration of more than Newton to detect the circumstance of similarity amidst millions of discriminating circumstances. Yet this is the only way of discovering which are the primary facts characteristic of the force, and which the modifications. The study is immense, but is by no means desperate ; and we entertait

the intervention of which an external force ap-great hopes that it will ere long be successfully

plied to one part of a lever, joist, or pillar, occasions a strain on a distant part. This can be nothing but the cohesion between the parts. It is this connecting force, which is brought into action, or, as we more shortly express it, excited. This action is modified in every part by the laws of mechanics. It is this action which is what we call the strength of that part, and its effect is the strain on the adjoining parts ; and thus it is the same force, differently viewed, that constitutes both the strain and the strength. When we consider it in the light of a resistance to fracture, we call it strength : we call every thing a force, which we observe to be ever accompanied by a change of motion ; or, more strictly speaking, we-infer the presence and agency of a force wherever we observe the state of things in respect of motion different from what we know to be the result of the action of all the forces which we know to act on the body. Thus, when we observe a rope to prevent a body from falling, we infer a moving force inherent in the rope with as much confidence as when we observe it drag the body along the ground. The immediate action of this force is undoubtedly exerted between the immediately adjoining parts of the rope. The immediate effect is the keeping the particles of the rope together. They ought to separate by any external force drawing the ends of the rope contrarywise ; and we ascribe their not doing so to a mechanical force really opposing this external force. When desired to give it a name, we name it from what we conceive to be its effect, and therefore its characteristic, and we call it cohesion. This is merely a name for the fact ; but it is the same thing in all our denominations.

We know nothing of the causes but in the effects ; and our name for the cause is in fact the name of the effect, which is cohesion. We mean nothing else by gravitation or magnetism. What do we mean when we say that Newton understood thoroughly the nature of gravitation, of the force of gravitation ; or that Franklin understood the nature of the electric force? Nothing but this : Newton considered with patient sagacity the

prosecuted ; but, in our particular predicament, we must content ourselves with selecting such general laws as seem to give us the most immediate information of the circumstances that must be attended to by the mechanician in his constructions, that he may unite strength with simplicity, economy, and energy. 1st, Then, it is a matter of fact that all bodies are in a certain degree perfectly elastic ; that is, when their form of hulk is changed by certain moderate compressions or distractions, it requires the continuance of the changing force to continue the body in this now state ; and when the force is removed the body recovers its original form. We limit the assertion to certain moderate changes : for instance, take a lead wire one-fifteenth of an inch in diameter and ten feet long; fix one end firmly to the ceiling, and let the wire hang perpendicular; affix to the lower end an index like the hand of a watch; on some stand immediately below let there be a circle divided into degrees, with its centre corresponding to the lower point of the wire; now turn this index twice round; and thus twist the wire. When the index is let go, it will turn backward again by the wire's untwisting itself, and make almost four revolutions before it stops ; after which it twists and untwists many times, the index going backwards and forwards round the circle, diminishing however its arch of twist each time, till at last it settles precisely in its original position. This may be repeated for ever. Now, in this motion, every part of the wire partakes equally of the twist. The particles are stretched, require force to keep them in their state of extension, and recover completely their original relative positions. These are all the characters of what the mechanician calls perfect elasticity. See ELASTICITY. This is a quantity quite familiar in many cases; as in glass, tempered steel, &c., but was thought incompetent to lead, which is generally considered as having little or no elasticity. But we make the assertion in the most general terms, with the limitation to moderate derangement of form. We have made the same experiment on a thread of pipe-clay, made by forcing soft clay through the small hole

and classed them with the utmost precision In like manner we shall understand the nature of cohesion, when we have discovered with

general facts of gravitation, and has°described of a syringe by means of a screw ; and we found

it more elastic than the lead wire : tor a thread of one-twentieth of an inch diameter and seven feet Ions allowed the index to make two turns,

vi i_v* i iij.-mju j vv i U;LI »» c nia » v* \j.u*\s » ^» v« • J ‘ £ ‘ t’

equal generality the laws of cohesion, or general and yet completely recovered its first positu

facts which are observed in the appearances, and 2dly. But, if we turn the index of the U

when we have described and classed them with four times round, and let it go again, it ui

equal accuracy. Let us therefore attend to the again in the same manner, but it makes I

more simple and obvious phenomena of cohe-than four turns back again; and after ma

sion, and mark with care every circumstance of dilations it finally stops in a posili

resemblance by which they may be classed, revolutions removed from Us

Let us receive these as the laws of cohesion cha-It has now acquired a new arranger

racteristic of its supposed cause, the force of and-this new arrangement ,s pe mane

cohesion. We cantot pretend to enter on this former; and, what ,s of particular mom , _.,

vastresearch. The modifications are innumerable; perfectly elastic. This change is bmi

known by the denomination of a set. The wire is said to have taken a set. When we attend minutely to the procedure of nature in this phenomenon, we find that the particles have as it were slid on each other, still cohering, and have taken a new position, in which their connecting forces are in equilibrio ; and in this change of relative situation it appears the connecting forces, which maintained the particles in their first situations, were not in equilibrio in some position intermediate between that of the first and that of the last form. The force required for changing this first form augmented with the change, but only to a certain degree ; and during this process the connecting forces always tended to the recovery of this first form. But, after the change of mutual position has passed a certain magnitude, the union has been partly destroyed, and the particles have been brought into new situations ; that the forces which now connect each with its neighbour tend, not to the recovery of the first arrangement, but to push them farther from it, into a new situation, to which they now verge, and require force to prevent them from acquiring. The wire is now in fact again perfectly elastic ; that is, the forces which now connect the particles with their new neighbours augment to a certain degree as the derangement from this new position augments. This is reasoning not from any theory. It is narrating facts on which a theory is to be founded. What we have been just now saying is evidently a description of that sensible form of tangible mat-ter which we call ductility. It has every gradation of variety, from the softness of butter to the firmness of gold. All these bodies have some elasticity; but we say they are not perfectly elastic, because they do not completely recover their original form when it has been greatly deranged. The whole gradation may be most distinctly observed in a piece of glass or hard seal-ing-wax. In the ordinary form glass is perhaps the most completely elastic body that we know, and may be bent till just ready to snap, and yet completely recovers its first form, and takes no set whatever; but when heated to such a degree as just to be visible in the dark, it loses its brittleness, and becomes so tough that it cannot be broken by any blow ; but it is no longer elastic, takes any set and keeps it. When more heated it becomes as plastic as clay ;

but in this state is remarkably distinguished from clay by a quality which we may call viscidity, which is something like elasticity, of which clay and other bodies purely plastic exhibit no appearance. This is the joint operation of strong adhesion and softness. When a rod of perfectly soft glass is suddenly stretched a little, it does not at once take the shape which it acquires after a short time. It is owing to this that, in taking the impression of a seal, if we take off the seal while the wax is yet very hot, the sharpness of the impression is destroyed immediately. Each part drawing its neighbour, and each part yielding, the prominent parts are pulled down and blunted, and the sharp hollows are pulled upwards and also blunted. The seal must be kept on till all has become not only stiff bu* hard. This viscidity is to be observed in all plastic bodies which are homogeneous. It is not observed in clay, because

it is not homogeneous, but consists of hard particles of the argillaceous earth sticking together by their attraction for water. Something like it might be made of finely powdered glass and a clammy fluid such as turpentine. Viscidity has all degrees of softness till it degenerates to ropy fluidity like that of olive oil. When ductility and elasticity are combined, in different proportions, an immense variety of sensible modes of aggregation may be produced. Some degree of both is probably to be observed in all bodies of complex constitution ; that is, which consist of particles made up of many different kinds of atoms. Such a constitution of a body must afford many situations permanent, but easily deranged. In all these changes of disposition which take place among the particles of a ductile body, the particles are at such distance that they still cohere. The body may be stretched a little ; and, on removing the extending force, the body shrinks into its first form. It also resists moderate compressions; and when the compressing force is removed the body swells out again. Now the corpuscular fact here is, that the particles are acted on by attractions and repulsions, which balance each other when no external force is acting on the body, and which augment as the particles are made, by any external cause, to recede from this situation of mutual inactivity; for since force is requisite to produce either the dilatation or the compression, and to maintain it, we are obliged, by the constitution of our minds, to infer that it is opposed by a force accompanying or inherent in every particle of dilatable or compressible matter : and as this necessity of employing force to produce a change indicates the agency of these corpuscular forces, and marks their kind according as the tendencies of the particles appear to be toward each other in dilatation, or from each other in compression

; so it also measures the degrees of their intensity. Should it require three times the force to produce a double compression, we must reckon the mu-tual repulsions triple when the compression is doubled ; and so in other instances. We see from all this that the phenomena of cohesion indicate some relation between the intensity of the force of cohesion and the distance between the centres of the particles. To discover this relation is the great problem in corpuscular mechanism, as it was in the Newtonian investigation of the force of gravitation. Could we discover this law of action between the corpuscles with the same certainty and distinctness, we might with equal confidence say what will be the result of any position which we give to the particles of bodies : but this is beyond our hopes. The law of gravitation is so simple that the discovery or detection of it amid the variety of celestial phenomena required but one step ; and in its own nature its possible combinations still do not greatly exceed the powers of human research. One is almost disposed to say that the Supreme Being has exhibited it to our reasoning powers as sufficient to employ with success our utmost efforts, but not so abstruse as to discourage us from the noble attempt. It seems to be otherwise with respect to cohesion. Mathematics informs us that, if it deviates sensibly from the law of gravitation, the simplest combinations will make the joint action

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of several particles an almost impenetrable mys-Though the faculties of the mind are improved by tery. We must therefore content ourselves, for a exercise, yet they must not be put to a stress beyond long while to come, with a careful observation of tnejir strength. ,

the simplest cases that we can propose, and with the discovery of secondary laws of action, in which many particles combine their influence. Our readers are requested to accept of these endeavours, not so much to communicate information on this important and difficult subject, as to excite curiosity and farther experiments. Many useful deductions might be made from these premises respecting the manner of disposing and combining the strength of materials in our structures. The best form of joints, mortises, tenons, scarfs; the rules for juggling, tabling, faying, fishing, &c., practised in the delicate art of mast-making, are all founded on this doctrine : but the discussion of these would be equivalent to writing a complete treatise of carpentry. We hope that this will be executed by some intelligent mechanician ; for there is nothing in our language on this subject but what is almost contemptible; yet there is no mechanic art that is more susceptible of scientific treatment. Such a treatise, if well executed, could not fail of being well received by the public in this age of mechanical improvement.

STRENGTHENERS, or corroborants, sucn medicines as add to the bulk and firmness of the solids ; and such are all agglutinant and astringent medicines. See MATERIA MEDICA.

STREN'UOUS, adj Lat. strenum. Brave ; bold; active; valiant; dangerously laborious.

Nations grown corrupt Love bondage more than liberty ; Bondage with ease than strenuous liberty.

Milton's Agonistes.

Many can use both hands, yet will there divers remain that can strenuously make use of neither.

Browne's Vulgar Errours.

There was no true ca'tholick but strenuously contended for it. Waterland.

He resolves to be strenuous for taking off the test, against the maxims of all wise Christian governments, which always had some established religion, leaving at best a toleration to others. Swift to Pope.

Writers dispute strenuously for the liberty of conscience, and inveigh largely against all ecclesiasticks under the name of high church. Swift.

STREP'EROUS, adj. Lat. strepo. Loud; noisy.

Porta conceives, because in a streperous eruption it riseth against fire, it doth therefore resist lightning. Browne. STRESS, n. s. & v. a. Sax. r*&ce, violence ; or from DISTRESS, which see. Importance ; important part ; weight ; violence ; force : to stress is to distress.

It shewed how very little stress is to be laid upon the precedents they bring. Lesley.

Stirred with pity of the stressed plight Of this sad realm. Spenser.

By stress of weather driven, At last they landed. Dryden's JEnnd.

A body may as well lay too little as too much stress upon a dream ; but the less we heed them the better. L' 'Estrange.

This, on which the great stress of the business depends, would have been made out with reasons sufficient.

VOL. XXI.

Consider how great a stress he laid upon this duty, while upon earth, and how earnestly he recommended it. Atterbury.

STRETCH, v. a., v. n., &) Sax. j-tpecan ; STRETCH'ER, n. s. [n. s. * Belgic strecken. To extend ; spread out to a distance ; elongate ; expand ; strain : to be extended ; bear extension ; push beyond the truth : as a noun substantive reach; extension ; effort : struggle; utmost reach: a stretcher is any instrument of extension. Take thy rod, and stretch out thine hand.

Exodus vii. 19.

The stretcldng out of his wings snail fill the breadth of thy land. Isaiah

viii. 8.

Idolatry is a horrible sin, yet doth repentance stretch unto it. Whitgifle.

This kiss, if it durst speak, Would stretch thy spirits up into the air.

Shakspeare. King Lear. A third ? a fourth ?

What ! will the line stretch out to the’ crack of doom 1 Shakspeare.

His hopes enstiled

His strength, the stretchor of Ulysses' string, And his steele's piercer. Chapman.

This to rich Ophir's rising morn is known, And stretched out far to the burnt swarthy zone.

Cuwley.

Leviathan on the deep Stretched like a promontory, sleeps.

Eden stretched her line From Auran eastward to the royal towers Of great Seleucia, built by Grecian kings.

Regions to which

All thy dominion, Adam, is no more Than what this garden is to all the earth And all the sea, from one entire globose Stretched into longitude.

Your dune-eon stretching far and wide beneath.

Id.

The inner membrane, that involved the liquors of the egg, because it would stretch and yield, remained unbroken. Boyle.

He thought to swim the stormy main, By stretch of arms the distant shore to gain.

Dryden's JEneid.

This fiery speech inflames his fearful friends ; They tug at every oar, and every stretcher bends.

Dry den,

Those put a lawful authority upon the stretch, to the abuse of power, under the colour of prerogative.

L'Estrange.

Disruption, as strong as they are, the bones would be in some danger of, upon a great and sudden stretch or contortion, if they were dry.

Ray on the Creation.

Tooth in the stretching course two inches with the stretcher only.

So the stretched cord the shackled dancer tries.

Smith.

Upon this alarm we made incredible stretches towards the south, to gain the fastnesses of Preston.

Addison.

What an allay do we find to the credit of the most probable event that is reported by one who uses to Itrftch ! Government oj the Tongue.

This is the utmost stretch that nature run, And all beyond is fulsome, false, and vain.

‘ Granntle.

Milton.

Id.

Id.

Locke. STRETTO, in Italian music,

sometimes

u

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nscd to signify that the measure is to be short and concise, and consequently quick. In this sense it stands opposed to Largo.

STRETTON, a parish of England, in Rutlandshire, nine miles north-east by east of Oakham.

STRETTON, a township of England, in Staffordshire, three miles south-west by west of Penkridge.

STREW, v. a. J Sometimes strow. Skin-STREW'MENT, n. s. 3 ner proposes strow, and Junius writes straw. Sax. r-rrteapian; Gothic strawan ; Belg. stroyen ; Dan. stroer. • Perhaps strow is best,' says Johnson, ' being that which reconciles etymology with pronunciation.' To spread by scattering, or being scattered ; to scatter loosely : the noun substantive corresponding. The calif he burnt in the fire, ground it to powder, and strawed it upon the water, and made Israel drink of it. Exodus.

Synah.can I tell thee more? And of our ladies bowre ;

But little need to strow my store, Suffice this hill of our. Spenser.

I thought thy bride bed to have decked, sweet

maid ! And not have strew'd thy grave.

Shakspeare. Hamlet.

Her death was doubtful. — For charitable prayers, Shards, flints, and pebbles should be thrown on her ; Yet here she is allowed her virgin chants, Her maiden strewments, and the bringing home Of bell and burial. Id.

Angel forms lay entranced Thick as autumnal leaves that strow the brooks In Valombrosa. Milton's Paradise Lost.

All the ground With shivered armour strown. Id.

The tree in storms The glad earth about her straws With treasure from her yielding boughs. Waller. Come, shepherds, come, and strow with leaves the

plain ; Such funeral rites your Daphnis did ordain.

Dry den.

With furies and nocturnal orgies fired, Whom e'en the savage beasts had spared, they

killed, And strawed his mangled limbs about the field. Id.

Is thine alone the seed that strews the plain? The birds of heaven shall vindicate their grain.

Pope.

Possession kept the beaten road, A nd gathered all his brother strowed. Swift.

STRI'jE, n. s. -\ Lat. strife. In natural STRI'ATE, or /history, the small channels STRI'ATED, adj. I in the shells of cockles and STRI'ATURE, n.s. J scallops : formed in striae : disposition of striae.

These effluviums fly by striated atoms and winding particles, as Des Cartes conceiveth ; or glide by streams attracted from either pole unto the equator. Browne's Vulgar Erronrs.

The salt, leisurely permitted to shoot of itself in the liquor, exposed to the open air, did shoot into more fair crystalline striee than those that were gained out of the remaining part of the same liquor by a more hasty evaporation. Boyle.

Des Cartes imagines this earth once to have been a sun, and so the centre of a lesser vortex, whose axis still kept the same posture, by reason of the etriate particles finding no fit pores for their passages, but only in this direction. •Raj/-

, when incorporated with the fibrous talcs, shews, if broke, a striated or fibrous texture, like those talcs. Woodward.

Parts of tuberous haRmatita; show several varieties in the crust, striature, and tbxture of the body. Id.

STRIATED LEAF, among botanists, one that has a number of longitudinal furrows on its surface.

STRIATED LIMESTONE, a species or variety of indurated carbonate, of

lime. See MINERALOGY.

STRICK,n.s. Gr.Tpir?;Lat.sˆr»>. A bird of bad omen.

The ill-faced owl, death’s dreadful messenger, The hoarse night-raven, trump of doleful drere, The leather-winged bat, day’s enemy, The rueful strick, still waiting on the bier. Spenser. STRICT, adj. ˆ Lat. strictus. Exact; STRICT’LY, adv. £ accurate ; rigorously nice ; STRICT’NESS, n. s. j confined ; close ; tight : the adverb and noun substantive corresponding. As they took the compass of their commission stricter or larger, so their dealings were more or less moderate. Hooker.

Implore her, in my voice, that she make friends To the strict deputy.

Shakspeare. Measure for Measure. These commissioners proceeded with such strictness and severity as did much obscure the king’s mercy. Bacon’s Henry VII.

His horse-troupes, that the vanguard had, he

strictly did command To ride their horses temperately. Chapman.

I could not grant too much, or distrust too little to men that pretended singular piety and religious strictness. King Charles.

Thou’lt fall into deception unaware, Not keeping strictest watch. Milton.

Thy will

By nature free, not over-ruled by fate Inextricable, or strict necessity. Id.

The god, with speedy pace, JustTthought to strain her in a strict embrace.

Dry den.

jCharge him strictly Not to proceed, but wait my farther pleasure. Id.

Such of them as cannot be concealed, connive at, though in the strictness of your judgment you cannot pardon. Id.

The other parts, being grosser, composed not only water, strictly so called, but the whole mass of li-quid bodies. Burnet.

\ ho were made privy to the secrets of heaven, but sucb as performed his revealed will at an higher rate of strictness than the rest ? South.

Vuma the rites of strict, religion knew ; On ev'ry altar laid the incense due. Prior.

Though in strictness our Saviour might have pleaded exemption from the Jewish tribute, he exerted his divine power in a miracle to pay it. Rogers.

The fatal noose performed its office, and with most strict ligature squeezed the blood into his face.

Arbuthnot.

We feel our fibres grow strict or lax, according to the state of the air. Id.

Eusebius, who is not in strictness to be reckoned with the Ante Nicenes. Walerland.

He checks the bold design ; And rules as strict his laboured works confine, As if the Stagynte o'erlooked each line. Pope.

STRICTURE, n.s. Lat. striclura. A spark; stroke ; touch ; contraction ; or closure maae by contraction.

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Thus have I past through all your letter, and given other works. He died in 1 569, a-ed on! v forty myself the liberty of these strictures, by way of re-five, flection on all and every passage. Hammond.

As long as there is thirst, with a free passage by utine, and stricture of the vessels, so long is water safely taken. Arbuthnot.

STRIDE, n.s., v.n., & v. a. Sax. r-triaese. A Jong or wide step ; a step taken with violence : to walk with such steps : pass by a step.

STRIKE, v.a.,v. n., &n.«.) Pret. I struck or

STRIG'MENT, n. s. Lat. strigmentum, from Stringo, to scrape. Scraping; recrement.

Many, besides the ttrigments and sudorous adhesions from men's hands, acknowledging that nothin"- proceeded! from gold in its usual decoction.

Browne's Vulgar Errours.

I'll speak between the change of man and boy, With a reed voice, and turn two mincing steps Into a manly stride.

Shakspeare. Merchant of Venice. The monster moved on with horrid strides.

Milton.

Mars in the middle of the shining shield Is graved, and strides along the liquid field.

Dry den. See him stride

Vallies wide. Arbuthnot.

• To Jove, or to thy father Neptune, pray, The brethren cried, and instant strode away. Pope.

Her voice theatrically loud, And masculine her stride. Swift.

STRIDONIUM, an ancient town of Hungary,

STRIK'ER, n. s. $ strook ; part. puss.

struck, strucken, stricken, or strook. Sax. artrii-can ; Teut. streichen ; Isl. adstrykia ; Swed. sln/ka , Dan. Strieker. To act upon, or hit with, a blow : hence to dash ; punish ; afflict; stamp ; note by a loud sound; lower; contract (applied particularly to sails); alarm; surprise; affect suddenly: to cause to sound by blows, taking up, emphati-cal ly ; to forge ; mint ; conclude a bargain ; taking the prepositions o/f and out as below : as a verb neuter, to make a blow or attack ; collide ; act by percussion ; be dashed ; pass with strong mo-tion or effort ; lower : ' to strike in with' is to conform ; ' strike out', spread or rove : a strike

famous for being the birth-place of St. Jerome', * .mea?ure °f-four Pecks : striker' a Persou or

now called Strigova.

STRID'ULOUS, adj. L&t.stridulus. Making a small noise.

It arises from a small and stridulous noise, which, being firmly rooted, maketh a divulsion of parts.

Browne.

STRIFE, re. s. i From STRIVE, which see.

STRIFE'FUL, adj. } Contention ; contest; discord ; war : hence lawsuit ; opposition of any kind : the adjective corresponding.

I and my people were at great strife with the children of Ammon. Judges xii. 2.

Some preach Christ even of envy and strife, and some of good will. Phil. i. 15.

thing that strikes.

Abraham and Sarah were old, and well stricken in age. Genesis.

The blood strike on the two side-posts.

Exodus xii. 7.

Fearing lest they should fall into the quicksands, they strake sail, and so were driven. Acts xxvii. 17.

A bishop then must be blameless, not given to wine, no striker. 1 Tim. iii. 3.

Wing, cartnave, and bushel, peck, strike, ready at hand. Tusser'i Husbandry.

He thought with his staff to have struck the striker.

Sandys.

The cunningest mariners were so conquered by the storm, as they thought it best with stricken sails to

He is proud, knowing nothing ; but doating about viejd 'to be governed by it.

questions and strife of words. 1 Tim. vi. 4.

The ape was strifeful and ambitious, And the fox guileful and most covetous. Spenser.

Artificial strife Lives in those touches, livelier than life.

Shakspeare,

These acts of hateful strife, hateful to all, How hast thou disturbed heaven's blessed peace !

Milton.

'Tis this that shakes our country with alarms, And gives up Rome a prey to Roman arms, Produces fraud, and cruelty, and strife. Addison.

I know not what new creation may creep forth from the strifeful heap of things, into which, as into •a second chaos, we are fallen. Dr. Maine.

Inheriting no strife,

Nor marrying discord in a noble wife. Pope. Thus gods contended, noble strife! Who most should ease the wants of life. Congreve.

STRIGELIUS (Victorinus), a learned Ger-man divine, born in Suabia, in 1524. In 1542 he went to the university of Wirtemberg to in-form himself of the opinions of the Protestants. He attended the lectures of Luther and Melanc-thon, and became such a master of their doctrines that he soon after read lectures himself. But in 1559 he was imprisoned for opposing some of the established theological doctrines. In 1562 he was liberated, on which he went to Leipsic ; where he taught divinity, logic, and «thics ; and published notes on the Psalter, and

Stdnei

That shall I shew as sure as hound The stricken deer doth challenge by the bleeding wound. Spenser.

Didst thou not see a bleeding hind, Whose right haunch earst my stedfast arrows strake?

Id.

The diums presently striking up a march, they plucked up their ensigns, and forward they go.

Knolles.

The admiral galley, wherein the emperor was, struck upon a sand, and there stuck fast. Id.

It pleased the king

To strike at me upon his misconstruction, When he tript me behind. Shaktpeare. King Lear. The Windsor bell hath struck twelve. Shakipi'arc. How many nobles then would hold their places, That must strike sail to spirits of vile sort !

Id. Henry /I".

He that is stricken blind cannot forget The precious treasure of his eyesight lost.

Shakspeare.

Strike up the drums, and let the tongue of war Plead for our interest, and our being here.

The king

Is wise and virtuous, and his noble queen Well struck in years ; fair, and not jealous. <.

Deliver Helen, and all damage else Shall be strtu-k off. Id. Troilus and Cres$ida.

Caesar, ‘tis ttrvclten eight. Sliahspeare.

I’d rather chop this hand off at a blow, And with the other fling it at thy face, Than bear so low a sail, to strike to thee. Id.

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The court paved striketh tip a great heat in sum-mer, and much cold in winter. Bticon.

Holding a ring by a thread in a glass, tell him that holdetn it, it shall strike so many times against the side of the glass, and no more. Id. Natural Hiitory.

Parker and Vaughan, having had a controversy touching certain arms, were appointed to run some courses, when Parker was stricken into the mouth at the first course. Bacon.

Though the earl of Ulster was of greater power than any other subject in Ireland, yet was he so tar stricken in vears as that he was unable to manage the martial affairs Davies.

The striker must be dense, and in its best velocity.

Digby.

These men are fortune's jewels, moulded bright, Brought forth with their own fire and light ; If I her vulgar stone for either took, Out of myself it must be ttruck. Cowley.

Waving wide her myrtle wand, She strikes an universal peace through sea and land.

Milton.

By expurgatory animadversions, we might strike out great numbers of hidden qualities ; and, having once a conceded list, with more safety attempt their reasons. Browne.

The rest struck with horror stood, To see their leader covered o'er with blood. Waller.

Those antique minstrels, sure, were Charles-like

kings,

Cities their lutes, and subjects' hearts their strings ; On which with so divine a hand they strook, Consent of motion from their breath they took. Id.

That conquering look, When next beheld, like lightning strook My blasted soul, and made me bow. Id.

To this all differing passions and interests should strike sail, and, like swelling streams running different courses, should yet all make haste into the sea of common safety. Temple.

They strike sail where they know they shall be mastered, and murder where they can with safety.

Dry den.

Sign but his peace, he vows he'll ne'er again The sacred names of fops and beaus profane : Strike up the bargain quickly ; for I swear, As times go now, he offers very fair. Id.

Jack Straw at London-stone, with all his rout, Struck not the city with so loud a shout. Id.

Take my caduceus !

With this *he 'nfernal ghosts I can command, And strike a terror through the Stygian strand. Id.

So ceased the rival crew, when Purcell came, They sung no more, or only sung his fame ; Struck dumb they all admired. Id.

He withered all their strength before he strook.

Id.

When, by their designing leaders taught To strike at power which for themselves they sought, The vulgar, gulled into rebellion, armed, Their blood to action by their prize was warmed.

Id.

Now and then a glittering beam of wit and passion strikes through the obscurity of the poem : any of these effect a present liking, but not a lasting admiration. Id.

He, like a patient angler, ere he strook, Would let them play awhile upon the hook. Id.

The memory in some men is very tenacious ; but yet there seems to be a constant decay of all our ideas, even of those which are struck deepest, and in minds the most retentive. Locke.

Consider the red and white colors in porphyry ; hinder light but from striking on it, and its colours vanish. Id.

Deep thoughts will often suspend the senses so far that about a man clocks may strike, and bells ring, which he takes no notice of. Grew.

They catch at every shadow of relief, strike in at a venture with the next companion, and, so the dead commodity be taken off, care not who be the chapman. Norris.

Those who, by the prerogative of their age, should frown youth into sobriety, imitate and strike in with them, and are really vitious that they may be thought young-. South.

When any wilful sin stands charged on our account, it will not be struck ojf' till we forsake and turn away from it. Kettleworth.

In this plain was the last general rendezvous of mankind ; and from ther.ce they were broken into companies, and dispersed ; the several successive generations, like the waves of the sea, over-reaching one another, and striking out farther and farther upou the land. Burnet's Theory.

A mass of water would be struck off and separate from the rest, and tossed through the air like a flying river. Burnet.

Though they the lines on golden anvils beat, It looks as if they struck them at a heat. Tate.

His virtues render our assembly awful, They strike with something like religious fear.

Addison't Cato.

Then do not strike him dead with a denial, But hold him up in life. Id.

He immediately struck in with them ; but described this march to the temple with so much horrour that he shivered every joint. Id. Freeholder.

It struck on a sudden into such reputation, that it scorns any longer to sculk, but owns itself publickly. Government of the Tongue.

Nice works of art strike and surprise us most upon the first view ; but, the better we are acquainted with them, the less we wonder.

Atterbury.

Some very^rare coins, struck of a pound weight of gold and silver, Constantius sent to Chilperick.

Arbuthnot.

Ask men’s opinions : Scoto now shall tell How trade increases, and the world goes well : Strike off his pension by the setting .sun, And Britain, if not Europe is undone. Pope.

The interest of our kingdom is ready to strife to that of your poorest fishing towns : it is hard you will not accept our services. Swift.

STRIKING, sometimes called pithing of animals, in rural economy, is a method of suddenly slaughtering or killing them for domestic purposes, by the use of a small sharp spear-pointed knife struck in so as to divide the spinal mar-row, instead of the more protracted and cruel practice of knocking them on the heads, and breaking and mashing the parts by means of the hammer-headed axe, as is generally the custom, to the great danger of the operator, and the disgust of the spectator. It is desirable, on several accounts, that this sudden mode of killing neat cattle, and other sorts of animals, by striking into and dividing this vital part, should become the common one ; and especially as removing the apparent cruelty, and lessening the sufferings of them more than in the other or ordinary practice. This method, which has long been universal, in a great measure, on the continent, especially in Portugal, Spain, and some other parts, as well as in some of the West Indian islands in our possession, has, within these few years, been tried in this country, in some instances, with

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complete success ; and the flesh of the beasts so killed has been found equally good, if not better, than that of those slaughtered in the usual man-ner. All accidents and bruises are avoided, which not uncommonly take place in forcing them into a proper situation and position for receiving the stroke or blow, when they are to be knocked down and killed in that way.

It has been stated, by the writer of the Report of the Agriculture of Shropshire, that a butcher in Lincolnshire practised this mode several years ago, in consequence of the representations made to him of it by captain Clarkson of the navy, who had seen animals so slaughtered for the use of our fleet when at Jamaica : and this practice obtains pretty generally on the Lincolnshire side or bank of the Humber river, as at Barton, and several other places. Calves, sheep, pigs, and other animals, are stated to have been killed in the same manner. Still the want of due precision iu the manner of performing the operation has prevented, or thrown some doubt upon its utility, especially in so far as tenderness and humanity towards the animal are concerned ; for though the beast may be managed completely by this mode, yet, without sufficient correctness and exactness in its execution, it is not so certain that its sense of feeling may be wholly destroyed. Indeed the contrary would seem to be the case, from the ingenious enquiries and experimental trials of Dr. Du Gard of Shrewsbury, who has shown that, though the spinal marrow may be divided, the nerves that supply the organs of respiration and most of the senses remain uninjured. But if the division be made sufficiently high up towards the cavity of the skull, so as to separate the medullary substance above the origin of the nerves which supply the diaphragm, it would appear, from the equally ingenious and correct experiments of others, as Hunter, Home, &c., that the animals may instantly be killed in the most certain and effectual manner; and that, by performing this operation in the same way, it will be attended with constant and perfect success. It is not improbable, indeed, that an instrument might be contrived by means of a strong spring, somewhat in the manner of that used in cupping, but only with one blade, that might, on being properly applied, force itself suddenly into the brain even, and thus instantly complete the business; or the operation might probably be performed in an equally complete, convenient, and more expeditious manner, by the discharge of a small pistol, loaded in some proper way for this purpose, and suitably directed.

STRING, n. s. &v.a.ˆ Saxon r«mn5 ‘• Belg-STRING’ED, adj. I streng ; Dan. stringhe ;

STRING’HALT, n.s. 'Ld..stringo. Aslender STRING’LESS, adj. i rope or cord ; any slen-STRING’Y. J der and flexible band; a

mu sical chord ; small fibre ; any thing con nected by a band ; the line of a bow : ‘ to have two strings to one’s bow,’ is to have two expedients or resources : to string is to furnish with or file on a string: to tune or fit up a stringed instrument ; string-halt is defined below : the adjective follows the sense of the noun substantive.

Praise him with stringed instruments and organs.

Pgalmt.

The wicked bend their bow, they make ready their arrows upon the string. Jd. xi. 2.

The string of his tongue loosed. Mark xxvii. 35.

Nothing ; all is said ; His tongue is now a stringless instrument, Words, life, and all, old Lancaster hath spent.

Shakspeare.

The most piteous tale, which in recounting, His grief grew puissant, and the strings of life Began to crack. Jd. King Lear.

Duckweed putteth forth a little string into the wa-ter, from the bottom. Bacon.

Any lower bullet, hanging upon the other above it, must be conceived as if the weight of it were in that point where its string touches the upper.

Willtins’s Daedalus.

Thus when two brethren strings are set alike, To move them both but one of them we strike.

Cowley.

Divinely warbled voice Answering the stringed noise, As all their souls in blissful rapture took. Milton.

No lover has that power To enforce a desperate amour, As he that has two strings to ‘* bow, And burns for love and money too. Hudibraf.

Their priests pray by their beads, having a string with a hundred of nutshells upon it ; and the repeating of certain words with them they account meritorious. Stillingjleet.

Toil strung the nerves, and purified the blood.

Dry den.

In pulling broom up, the least strings left behind will grow. Mortimer’s Husbandry.

A plain Indian fan, made of the small stringy parts of roots spread out in a round flat form. Grew.

The string that jars

When rudely touched, ungrateful to the sense, With pleasure feels the master's flying fingers, Swells into harmony, and charms the hearers.

Rome.

I have caught two of these dark undermining ver-min, and intend to make a string of them, in order to hang them up in one of my papers.

Addison's Spectator.

By the appearance they make in marble, there is not one string instrument that seems comparable to our violins. Adduon.

Here the muse so oft her harp has strung, That not a mountain rears its head unsung. Id.

Men of great learning or genius are too full to be

exact ; and therefore chuse to throw down their

pearls in heaps before the reader, rather than be at

the pains of stringing them. Spectator.

Round Ormond's knee thou tiest the mystick

string, That makes the knight companion to the king,

Prior.

By melting, expensive sweats, and an obstinate flux of the belly, the string parts of the tendons and members are left unrecruited. Blackmore.

Has not wise nature strung the legs and feet, With firmest nerves, designed to walk the street ?

Gay.

The strung bow points out the Cynthian queen.

Th' impetuous arrow whizzes on the wing,

,unds the tough horn, and twangs the <1"^ ™>K

Sounds

Stringhaltis a sudden twitching and snatching up of the hinder leg of a horse much higher than h other, or an involuntary or convulsive motion of t muscles that extend or bend the hough.

Farrier I Dtctwnary.

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STRIP, v. a., v. n., & n. s. Saxon bej-tjvlre, stripped ; Belgic streoˆn ; Isl. stryp, is naked. To make naked ; deprive of covering ; (with of before the thing taken away) ; divest ; rob; plunder ; peel ; take off covering ; cast off : a narrow shred.

They stript Joseph out of his coat.

Gen. xxxvii. 23.

He itript off his cloaths. 1 Sam. xix. 24.

They began to strip her of her cloaths when I came in among them. Sidney.

The apostle, in exhorting men to contentment, although they have in this world no more than bare food and raiment, giveth us to understand that those are even the lowest of things necessary ; that if we should be stript of all these things, without which •we might possibly be, yet these must be left. Hooker.

His unkindness,

That stript her from his benediction, turned her To foreign casualties, gave her dear rights To his doghearted daughters : these things sting him. Shakspeare.

Scarce credible it is how soon they were stript and laid naked on the ground. Hayward.

Now this curious built Phaeacian ship, Returning from her convoy, I will strip Of all her fleeting matter. Chapman.

We strip and divest ourselves of our own will, and give ourselves entirely up to the will of God.

Duppa.

Hadst thou not committed Notorious murder on those thirty men At Askelon, who never did thee harm, Then like a robber stripp’dst them of their robes.

Milton.

If the leaves or dried stocks be stripped into small straws, they arise unto amber, wax, and other electrics, no other ways than those of wheat or rye.

Browne's Vulgar Erroitrs.

A rattling tempest through the branches went, That stript them bare. Dryden's Knight's Tale.

He left the pillagers, to rapine bred, Without controul to strip and spoil the dead.

Dry den.

You cloath all that have no relation to you, and strip your master that gives you food. L'Estrange.

It is difficult to lead another by words into the thoughts of things, stripped of those specifick differences we give them. Locke.

Amongst men who examine not scrupulously their own ideas, and strip them not from the marks men use for them, but confound them with words, there must be endless disputes. Id.

That which lays a man open to an enemy, and that which strips him of a friend, equally attacks him in all those interests that are capable of being weakened by the one, and supported by the other.

South.

When some fond easy fathers strip themselves be-fore they lie down to their long sleep, and settle their whole estates upon their sons, has it not been seen that the father has been requited with beggary ?

Id..

One would imagine these to be the expressions of a man blessed with ease and affluence, not of one just stript of all those advantages, and plunged in the deepest miseries, and now sitting naked upon a dunghill. Atterbury.

The bride was put in form to bed ; He followed, stript. Swift.

These two apartments were hung in close mourning, and only a strip of bays round the other rooms.

Id.

Logick helps us to atrip off' the outward disguise of

things, and to behold and judge of them in their own nature. Watts.

STRIPE, n. s. Belg. strepe ; Dan. stribe. A lineary variation of color; a streak. This seems to be the original notion of the word : a shred of different color : a weal or discoloration by a lash : hence a lash ; a blow.

Gardeners may have three roots, among an hundred, that are rare, as purple and carnation of several stripes. Bacon.

A body cannot be so torn with stripes, as a mind with remembrance of wicked actions. Hayward.

To those that are yet within the reach of the stripes and reproofs of their own conscience, I would address that they would not seek to remove themselves from that wholesome discipline.

Decay of Piety.

One of the most valuable trimmings of their cloaths was a long stripe sowed upon the garment, called latus clavus. Arluthnot.

Cruelty marked him with inglorious stripes.

Thomson.

STRIP'LING, n. s. Probably from Strip, a shred. A youth ; one in the state of adolescence ; a slender young man.

'Thwart the lane,

He, with two striplings, lads more like to run The country base than to commit such slaughter, Made good the passage. Shakspeare. Cymbeline.

Now a stripling cherub he appears, Not of the prime, yet such as in his face Youth smiled celestial. Milton's Paradise Lost.

Compositions on any important subjects are not matters to be wrung from poor striplings; like blood out of the nose, or the plucking of untimely fruit. Id. On Education,

As when young striplings whip the top for sport, On the smooth

pavement of an empty court, The wooden engine whirls. Dryden's JEneid.

As every particular member of the body is nourished with a several qualified juice, so children and striplings, old men and young men, must have divers diets. Arbuthnot on Aliments.

STRIVE, v. n. Pret. I strove, anciently I strived ; part. pass, striven. Sax. j-tpifc ; Belg. streven ; Teut. streben ; Fr. estriver. To struggle ; labor ; make an effort ; contest ; vie ; emulate. Strive for the truth unto death. Ecclns iv. 28. Why dost thou striie against him ?

Job xxxiii. 13. Strive with me in your prayers to God for me.

Romans xv. So have I strived to preach the gospel.

Id. xv. 20.

Charge them that they strive not about words, to no profit. 2 Timothy ii. 14.

Many brave young minds have, through hearing the praises and eulogies of worthy men, been stirred up to affect the like commendations, and so strive to the like deserts. Spenser.

The immutability of God they stride unto, by working after one and the same manner. Hooker.

Do as adversaries do in law ; Strife mightily, but eat and drink as friends.

Shakspeare.

Was it for this that Rome's best blood he spilt, With so much falsehood, so much guilt'? Was it for this that his ambition strove To equal Caesar first, and after Jove 1 Cowley.

Now private pity strove with publick hate, Reason with rage, and eloquence with fate.

Denham.

S T R I X.

N»,r that sweet grove Of Daphne by Orontes, and the inspired Castalian spring, might with this paradise Of Eden strive. Milton.

Thus does every wicked man that contemns God ; who can save or destroy him who strives with his Maker? Tillotion.

If intestine broils alarm the hive, For two pretenders oft for empire strive, The vulgar in divided factions jar, And murm'ring sounds proclaim the civil war.

Dry den.

This is warrantable conflict for trial of our faith ; so that these strivings are not a contending with superior powers. L'Estrange.

Our blessed Lord commands you to strive to enter in ; because many will fail, who only seek to enter.

Law.

These thoughts he strove to bury in expence, Rich meatSj rich wines, and vain magnificence.

Harte.

STRIVALI (the ancient Strophades), a cluster of islands of the Ionian Sea, on the west coast of the Morea, four in number. The largest, the abode, according to the poets, of the harpies, abounds in olives and other fruit, but does riot produce corn enough for its limited population. The smallest is little else than a rock, and the two others form a kind of small harbour. Twenty-six miles south of Zante.

STRIX, the owl, in ornithology, a genus belonging to the order of accipitres. The bill is booked, but has no cere or wax ; the nostrils are covered with setaceous feathers ; the head is very large, as are also the ears and eyes ; and the tongue is bifid. There are forty-six species ; the most remarkable are, 1. S. brachyotos, the short-eared owl, is fourteen inches long ; three feet broad ; the head is small and hawk-like ; the bill is dusky ; weight fourteen ounces ; the circle of feathers that immediately surrounds the eyes is black ; the larger circle white, terminated with tawny and black ; the feathers on the head, back, and coverts of the wings, are brown, edged with pale dull yellow ; the breast and belly are of the same color, marked with a few long narrow streaks of brown pointing downwards ; the quill-fea-weather. Farmers are fond of seeing these birds in the fields, as they clear them from mice. They are found frequently on the hill of Hoy in the Orkneys,

where they fly about and prey by day like hawks. They are found also in Lancashire, and in New England and Newfoundland.

2. S. bubo, the great eared owl, in size is al-most equal to an eagle. Irides bright yellow; head and whole body finely varied with lines' spots, and specks of black, brown, cinereous, and' ferruginous. Wings long; tail short, marked with dusky bars. Legs thick, covered to the very end of the toes with a close and full down of a testaceous color. Claws great, mnc'i hooked, and dusky. They have been shot in Scotland and in Yorkshire. They inhabit inaccessible rocks and desert places ; and prey on hares and feathered game. Their appearance in cities was deemed an unlucky omen ; Rome it-self once underwent a lustration because one of them strayed into the capitol. The ancients held them in the utmost abhorrence; and thought them, like the screech-owls, the messengers of death. Pliny styles it bubo funebris, and noctis monstrum.

3. S. Cayennensis, the spectacle owl of Cayenne, which is accurately described by Dr. La-tham, is twenty-one inches in length : the upper parts of the body are of a reddish color; the lower parts of a rufous white : the head and neck are white, and not so full of feathers as those of owls generally are, and from this circumstance it appears not unlike a hawk : a large patch of dark brown surrounds each eye, giving the bird much the appearance of wearing spectacles ; the legs are covered with feathers quite to the toes, and are of a yellowish color. A specimen of this curious bird may be seen in the Leverian museum.

4. S. flammea, the common white owl.. The elegant plumage of this bird makes amends for the uncouthness of its form : a circle of soft white feathers surrounds the eyes. The upper part of the body, the coverts, and secondary feathers of the wings, are of a fine pale yellow : on each side of the shafts are two gray and two

thers are dusky, barred with red; the tail is of white spots, placed alternately; the exterior sides

a very deep brown, adorned on each side of the shaft of the four middle feathers with a yellow circle which contains a brown spot ; the tip of the tail is white. The horns of this species are very small, and each consists of only a single feather ; these it can raise or depress at

pleasure ; and in a dead bird are with difficulty discovered. This kind is scarce; and is a solitary bird, avoiding inhabited places. This species may be called long-winged owls, the wings when closed reach-

of the “quill feathers are yellow; the interior white, marked on each side with four black spots : the lower side of the body is wholly white; the interior sides of the feathers of the tail are white; the exterior marked with some obscure dusky bars ; the legs are feathered to the feet : the feet are covered with short hairs : the edge of the middle claw is seriated. The usual weight is eleven ounces; its length fourteen inches; its breadth three feet. This species is almost domestic ; inhabiting, for the greatest part of the

ing beyond the end of the tail; whereas in the inesnc , mii < u»n..p, •”. — & rcommon kinds they fall short of it. They are year, barns, hay lofts, and other out-houses ; a, birds of passage, and have been observed to visit are as useful in clearing those places Lincolnshire in the beginning of October, and to as the congenial cat : towards twilight t retire early in the spring; so probably, as they their perch, and take a regular circuit , the

‘ ‘ fields, skimming along the ground in quest field mice, and then return to their usual r dence: in the breeding season they take to the eaves of churches, holes in lofty buildings, or hollows of trees. During the tune th«: youni?

perform their migrations with the woodcock, their summer retreat is Norway. During day, they lie hid in long old grass ; when disturbed, seldom fly far, but will light, and sit looking at one, when the horns may be seen very distinctly. They do not perch on trees like other owls. They Usually fly in search of prey in cloudy hazy

are in the nest, the male and female alternately sally out in quest of fool, make thr-ir circuit,

beat the fields with the regularity of a spaniel, and drop instantly on their prey in the grass. They seldom stay out above five minutes; return with their prey in their claws; but as it is necessary to shift it into their bill, they always alignt for that purpose on the roof, before they attempt to enter their nest. This species do not hoot, but snore and hiss in a violent manner; and, while they fly along, will often scream most tremendously. Their only food is mice. As the young of these birds keep their nest for a great length of time, and are fed even long after they can fly, many hundreds of mice will scarcely suffice to supply them with food. Owls cast up the bones, fur, or feathers of their prey, in form of small pellets, after they have devoured it, as hawks do. A gentleman, on grubbing up an old pollard ash that had been the habitation of owls for many generations, found at the bottom many bushels of this rejected stuff. Some owls, when they are satisfied, hide the remainder of their meat like dogs.

5. S. otus, the long eared owl, is found, though not frequently, in the north of England, in Cheshire, and in Wales. Mr. Hasselquist saw it alive in Cairo, and it is not unfrequent all over Egypt. Its weight, according to Dr. Latham, is nine ounces ; the length fourteen inches and a half ; the breadth thirty-four ; the irides are of a bright yellow ; the bill black ; the breast and belly are of a dull yellow, marked with slender brown strokes pointing downwards ; the thighs and vent-feathers of the same color, but unspotted. The back and coverts of the wing are varied with deep brown and yellow ; the quill feathers of the same color, but near the ends of the outmost is a broad bar of red ; the tail is marked with dusky and reddish bars, but beneath appears ash-colored ; the horns or ears are about an inch long, and consist of six feathers variegated with yellow and black ; the feet are feathered down to the claws.

6. S. passerina, the little owl, is very rare in England; it is sometimes found in Yorkshire, Flintshire, and also near London : in size it scarcely exceeds a thrush, though the fulness of its plumage makes it appear larger : the irides are of a light yellow ; the bill of a paper color ; the feathers that encircle the face are white tipt with black ; the head brown, spotted with white ; on the breast is a mixture of white and brown ; the belly is white, marked with a few brown spots ; the tail of the same color with the back ; in each feather barred with

white ; in each adorned with circular wl«;ie spots, placed opposite to one another on both sides of the shaft ; the legs and feet are covered with feathers down to the claws. The Italians make use of this owl to decoy small birds to the limed twig ; the method of which is exhibited in Olina's Uccelliera, p, 65. Mr. Stuart, author of the Antiquities of Athens, informed Mr. Pennant that this species of owl was very common in Attica ; that they were birds of passage, and appeared there in the beginning of April in great numbers ; that they bred there ; and that they retired at the same time as the storks, whoss arrival they a little preceded.

7. S. stridula. the tawny owl. The female of

this species weighs nineteen ounces ; the length is fifteen inches; the breadth two feet eight inches; the irides are dusky; the ears in this, as in all owls, very large ; and their sense of hearing very exquisite. The color of this kind is sufficient to distinguish it from every other : that of the back, head, coverts of the wings, and on the scapular feathers, being a fine tawny red, elegantly spotted and powdered with the black or dusky spots of various sizes : on the coverts of the wings, and on the scapulars, are several large white spots : the coverts of the tail are tawny, and quite free from any marks: the tail is variously blotched, barred, and spotted with pale red and black ; in the two middle feathers the red predominates ; the breast and belly are yellowish, mixed with white, and marked with narrow black strokes pointing downwards : the legs are covered with feathers down to the toes. This is a hardier species than the Flammea ; and the young will feed on any dead thing, whereas those of the white owl must have a constant supply of fresh meat. It is the strix of Aldrovan-dus, and what we call the screech-owl, or hch owl, to which the folly of superstition had given the power of presaging death by its cries. The ancients believed that it sucked the blood of young children : a fact some think not incredible ; for Hasselquist describes a species found in Syria, which frequently in the evening flies in at the windows, and destroys the helpless infant. See Ovid. Fast. vi. 135.

8. S. ulula, the brown owl, agrees with the former in its marks; differing only in the colors : in this the head, wings, and back, are of a deep brown, spotted with black in the same man-ner as the former ; the coverts of the wings and the scapulars are adorned with similar white spots ; the exterior edges of the four first quill feathers in both are serrated : the breast in this is of a very pale ash color mixed with tawny, and marked with oblong jagged spots : the feet too are

feathered down to the very claws : the circle round the face is ash-colored, spotted with brown. Both these species inhabit woods, where they reside the whole day : in the night they are very clamorous ; and, when they hoot, their throats are inflated to the size of a hen's egg. In the dusk they approach our dwellings ; and will frequently enter pigeon-houses, and make great havoc in them. They destroy numbers of little leverets, as appears by the legs frequently found in their nests They also kill abundance of moles, and skin them with as much dexterity as a cook does a rabbit. They build in hollow trees or ruined edifices ; lay four eggs, of an elliptic form, and of a whitish color.

STROGONOFF (count Alexander de), a Russian nobleman, born about the middle of the eighteenth century, received a good education, and in his youth displayed a strong taste for French literature. Several years which he passed at Paris doubtless occasioned this partiality; returning to St. Petersburg, he was nominated president of the Academy of the Fine Arts, and made a noble use of his immense riches, by giving an asylum in his palace to authors and artists, and by forming a valuable collection of paintings, medals, and engravings, and a rich li-

He died at Petersburg, September 37th,

brary.

1811.

STROGONOFF (count Paul), nephew of the above, entered into the army, and served in Austria in 1805, and in Prussia in 1807, when he was made adjutant major-general. He was afterwards employed against the Swedes in Finland, and against the Turks in Moldavia; and after being engaged against the French, in the campaigns of 1812 and 1813, was killed under the walls of Laon, in February 1814.

STROGONOFF (baron Alexander de), born in 1772, displayed an early genius for learning and the arts, and travelled in Germany, France, and Italy. He published at Geneva, in 1809, two volumes of Letters to his Friends, written with great taste, to which were added two remarkable little pieces, entitled The History of the Chevaliers de la Valle”e : and the History of Pauline Dupuis. The baron then labored under a state of blindness and debility, which did not, however, disturb the tranquillity of his mind. His death took place in September, 1815.

STROKE, n. s. & v. a. From strook, the preterite of strike. A blow ; knock ; hostile blow or act; sudden act of one body upon another; sudden disease ; sound of a clock ; touch ; power ; efficacy.

He, hoodwinked with kindness, least of all men knew who stroke him. Sidney.

As cannons overcharged with double cracks, So they redoubled strokes upon the foe. Shakspeure,

What is ‘t o’clock •? — Upon the stroke of four. U, Ridiard III.

Take this purse, thou whom the heavens’ plagues Have humbled to all strokes. Id. King Lear.

The oars were silver,

Which to the tune of flutes kept stroke, and made The water which they beat to follow faster, As amorous of their strokes.

Id. Antony and Cleopatra,

He entered; and won the whole kingdom of Na-ples, without striking a stroke. Bacon.

These having equal authority for instruction of the young prince, and well agreeing, bare equal stroke in divers faculties. Hayward.

He was taken prisoner by Surinas, lieutenant-general for the king of Parthia, who stroke off his head. Hakewill.

one of the finishing strokes to it, and help to conclude the great work. Addismi.

A verdict more puts me in possession of my estate; I question not but you will give it the finishing stroke. Arbuthnot.

Oh lasting as those columns may they shine ! Free as thy stroke, yet faultless as thy line. Pope.

I had a long design upon the ears of Curl ; but the rogue would never allow me a fair stroke at them, though my penknife was ready. Swift.

At this one stroke the man looked dead in law ; His flatterers scamper, and his friends withdraw.

Harte.

Isiodore's collection was the great and bold stroke, which in its main parts has been discovered to be an impudent forgery. Baker on Learning.

STROKE, v. a. Sax. f tfiacan. To rub gently with the hand by way of kindness or endearment ; to sooth.

The senior weaned his younger shall teach, More stroken and made of when aught it doth aile More gentle ye make it for yoke or the paile—

Tusser.

Thus children do the silly birds they find With streaking hurt, and too much cramming kill.

Sidney.

Thy praise or dispraise is to me alike, One doth not stroke me, nor the other strike.

Ben Jonson.

He set forth a proclamation, streaking the people with fair promises, and humouring them with invectives against the king and government. Bacon.

He dried the falling drops, and, yet more kind, He stroked her cheeks. Dryden.

She plucked the rising flowers, and fed The gentle beast, and fondly sLroahed his head.

Addison.

When the big-uddered cows with patience stand, Waiting the sinkings of the damsel's hand. Gay.

STROKING, or rubbing gently with the hand, a method which has been employed by some persons for curing diseases. Mr. Greatrakes, or Greatrix, the famous Irish stroker, is said to have performed many wonderful cures. Hut, if they really were effected, they are most undoubtedly to be attributed to the imagination of the patient, rather than the operation of the practitioner.

STROLL, v. n. J Fr. router ; qu. Lat. e.rtr.i

STROL'I.F.R, n. s. } and roll. To wander; ram-

Perfectly opacous bodies can but reflect the in-ble ; rove ; be a vagrant: the noun substantive

cident beams"; those that are diaphanous refract them too, and that refraction has such a stroke in the production of colours generated by the trnjec-tion of light through drops of water, that exhibit a rainbow through divers other transparent bodies.

Boyle.

Then on the crowd he cast a furious look, And withered all their strength before he strook.

Dryden.

Both were of shining steel, and wrought so pure, As might the strokes of two such arms endure. Id.

He lias a great stroke with the reader, when he condemns any of my poems, to make the world have a better opinion of them. tA.

Another in my place would take it for a notable stroke of good breeding, to compliment the reader.

L' Estrange.

The subtile effluvia of the male seed have the greatest stroke in generation. Ray,

corresponding.

'Tis she who nightly slrowls with sauntering pace.

Gay. She's mine, and thine, and strolling up and down.

Qranville.

Your wine locked up, your butler strolled abroad.

Pope.

These mothers stroll, to beg sustenance for then helpless infants.

Two brother-hermits, saints by trade, Disguised in tattered habits went To a small village down in Kent ; Where, in the stroller's canting strain, They begged from door to door in vain. The men of pleasure, who never go to church, form their ideas of the clergy from a few poorer,)//, they often observe in the streets.

STROMATEUS, in icthyology, a genus of fishes belonging to the order of apodes. 'I he

As he purchased the first success in the present . = , ... nlared in the

ir. by forcing into the service of the confederates head is compressed , the tee h are placed , , army that was raised against them, he will give

jaws *nd palate ; the body is oval and slippery ,

war, an army

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and the tail is forked. There are three species : 1. S. cumarca; 2. S. fiatola; 3. S. paru; according to Dr. Gmelin.

STROMBOLI, the most northerly of the Li-pari islands, in the Mediterranean, belonging to Naples. Though small it produces very good wine, and the climate is mild and pleasant. The ‘nhabitants derive their subsistence partly from fishing, partly from the cultivation of fruits. Stromboli has from tame immemorial been remarkable for its volcano, the only one, perhaps, whose fires are in a state of incessant activity. Its mountain has two summits, one of great height, but the crater is on its side. The eruptions last for a few moments, but, recurring at snort intervals, the flames are seen by night, at a great distance, and are of considerable service to navigators. It is called sometimes the great light-house of the Mediterranean. The matter thrown out consists of lava, ashes, and stones; and each eruption is attended with an explosive noise. Sixteen miles N. N. E. of Li-pari, and thirty-four north of Melazzo, in Sicily.

STROMBUS, in natural history, a genus of vermes, belonging to the order of testacea. The animal is a Umax; the shell is univalve and spiral ; the opening is much dilated, and ends in a canal which turns to the left. Gmelin enumerates fifty-three species ; of which only one is peculiar to Britain, *viz.* S. pes pelicani. The spires are ten ; the lip is fingered ; the point very snarp; the length two inches.

STROMOE, the largest of the Faroe Islands, is situated in the centre of the group, and is about thirty miles in length, and six in breadth. It is deeply indented by bays and creeks, some of which form good harbours, particularly that of Westmanshavn, fit for the reception of vessels of any size. Tne coast presents a series of sublime scenery, the rocks rising in bold cliffs, almost perpendicular to the water, and forming in many places lofty detached columns : often are they hollowed so as to form immense caverns ; and in some cases they are completely perforated, and afford a passage for boats. In the interior is the mountain called Skieling Field, which rises to a perpendicular height of 3000 feet. The population of this and the neighbouring island, Nalsoe, is about 1600; subsisting, as in the other Faroe Isles, by fishing, cultivating a little corn, and rearing cattle, but depending on Denmark for annual supplies. In 1812 the number of horned cattle was 600, of sheep 9000, and of fishing-boats 150. The chief town is

Thorrhaven.

STROMSTADT, a small town in West Gothland, Sweden, celebrated for its shell-fish, particularly lobsters. It lies in a hilly district, contains 1100 inhabitants, and has a good harbour. Forty-three miles N.N.W. of Uddevalla. Long. 11° 12’ E., lat. 58° 55′ 30″ N.

STROND, n. s. For strand. The beach ; the bank of the water. Obsolete.

So looks the strand whereon the’ imperious flood Hath left a witnessed usurpation. Sliakspeare.

STRONG, adj. -\ Sax. r-tnanj. Vigorous;

STRONGFIST’ED, /forceful; of great power

STRONGHAND, n. s A or ability ; ardent; eager;

STRONG’ LY, adv. i full ; potent ; valid ; con—

STRONGWA.TER, n.s. J firmed ; cogent: the ad-

verb corresponding : the compounds of obvious meaning.

That our oxen may be strong to labour.

Psalm cxliv. 14.

While there was war between the houses of Saul and David, Abner made himself strong for Saul.

2 Sam. iii. 6.

Let the foundations be ftrongly laid. Ezra vi. 3.

Produce your cause ; bring forth your strong reasons. Isaiah.

In the days of his flesh he offered up prayers, with strong crying and tears. Heb. v. 7.

Strong meat belongeth to them that are of full age. Hebrews.

In process of time, an ungodly custom grown strong was kept as a law. Wisdom xiv. 16.

Better is the poor, being sound and strong in constitution, than a rich

man afflicted in his body.

Ecclus. xxx. 14.

Though ‘gan the villain wax so fierce and $trong That nothing may sustain his furious force,

He cast him down to ground, and all along Drew him through dirt and mire. Spenser.

When their captain dieth, if the seniory should descend to his child, and an infant, another would thrust him out by strongfand, being then unable to defend his right. Id.

There is no English soul

More stronger to direct you than yourself,

If with the sap of reason you would quench,

Or but allay, the fire of passion.

Shakspeare. Henry VIII, Messengers

Of strong prevailment in unhardened youth.

Shakspeare.

Within Troy's strong immures The ravished Helen with wanton Paris sleeps. Id.

The strong-winged Mercury should fetch thee up And set thee by Jove's side.

Id. Antony and Cleopatra.

When he was not six-and-twenty strong, Sick in the world's regard, wretched and low, My father gave him welcome to the shore.

Id. Henry IV.

All those accuse him strongly. Shakspeare.

Great Dunsinane he strongly fortifies. Id.

Her mother, ever strong against that match, And firm for doctor Caius, hath appointed That he shall shuffle her away. Id.

They wanting land wherewith to sustain their people, and the Tuscans having more than enough, it was their meaning to take what they needed by Stronghand. Raleigh.

An army of English engaged between an army of a greater number, fresh and in vigour on the one side, and a town strong in fortification, and strong in men, on the other. Bacon.

The colewort is an enemy to any plant, because it draweth strongly the fattest juice of the earth. Id.

He was, at his rising from Exeter, between six and seven thousand

strong. Id.

This is one of the strongest examples of a persona-tion that ever was. Id.

In choice of committees for ripening business for the council, it is better to chuse indifferent persons than to make an indifferency by putting in those that are strong on both sides. Id.

Metals receive in readily strongtcaters ; and strong-waters do readily pierce into metals and stones : and some will touch upon gold that will not touch upon silver. Id. Natural History.

Many of their propositions savour very strong of the old leaven of innovations. King Charles.

What strong cries must they be that shall drown so loud a clamour of impieties! Decay of Piety. t

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The scriptures make deep and strong impressions on the minds of men : and whosoever denies this, as he is in point of religion atheistical, so in understanding brutish. Corbet.

The prince of Cambay's daily food Is asps, and basilisk, and toad ; Which makes him have so strong a breath, Each night he stinks a queen to death. Hudibras.

A river of so strong a current that it suffereth not the sea to flow up its channel. Heylyn.

I was stronger in prophecy than in criticism.

Dry den.

Add with Cecropian thyme strong-scented cen-taury. Id.

The Marsian and Sabellian race, Strong-limbed and stout. Id.

It is no matter how things are ; so a man observe but the agreement of his own imaginations, and talk conformably, it is all truth : such castles in the air will be as strong holds of truth as the demonstrations of Euclid. Locke.

Like her sweet voice is thy harmonious song, As high, as sweet, as easy, and as strong. Smith.

The weak, by thinking themselves strong, are induced to proclaim war against that which ruins them ; and the strong, by conceiting themselves weak, are thereby rendered as useless as if they really were so. Soiith's Sermons.

Those that are strong at sea may easily bring them to what terms they please. Addison.

The dazzling light

Had flashed too strongly on hk aking sight. Id. The knight is a much stronger tory in the country than in town, which is necessary for the keeping up his interest. Id.

But her own king she likens to his Thames, Serene yet strong, majestick yet sedate, Swift without violence, without terror great. Prior.

By mixing such powders, we are not to expect a strong and full white, such as is that of paper ; but some dusky obscure one, such as might arise from a mixture of light and darkness, or from white and black, that is, a grey, or dun, or russet brown.

Newton's Opticks.

The heat of a human body, as it grows more intense, makes the urine smell more strong.

Arbuthnot.

John, who was pretty strongfisted, gave him such a squeeze as made his eyes water. Id.

Water impregnated with salt attenuates strongly.

The strongest and most important texts are these which have been controverted ; and for that very reason, because they are the strongest. Waterland.

In Britain's lovely isle a shining throng "War in his cause, a thousand beauties strong.

Tichell.

Full on his ankle fell the ponderous stone, Burst the strong nerves, and crashed the solid bone.

Pope.

Get strong beer to rub your horse's heels. Swift.

chanical figures and machines ; and died at Car lisle in 1798.

STRONGYLE, in ancient geography, one of the bolides in the Tyrrhene Sea, on the coast of Sicily; called also Naxos ; and now called Stromboli. It has a volcano, ten miles in circumference. See STROMBOLI.

STRONTIA. Its basis is strontium, a metal first procured by Sir H. Davy in 1808, precisely in the same manner as barium, to which it is very analogous, but has less lustre. It appeared fixed, difficultly fusible, and not volatile. It became converted into strontia by exposure to air, and. when thrown into water, decomposed it with great violence, producing hydrogen gas, and mak-ing the water a solution of strontia. By igniting the mineral strontianite (see HEAVY SPAR) intensely with charcoal powder, strontia is cheaply procured. Sir H. Davy, from indirect experiments, is disposed to regard it as composed of about 86 strontium -4-14 oxygen, in 100 parts; and, supposing it to be composed of a prime proportion of each constituent, the equivalent prime of strontium would be 6‘143, and of strontia 7’ 143. But from the proportions of the constituents in the carbonate, the prime of strontia appears to be 6‘4 or 6-5 ; and hence that of strontium will be 5-5.

A beautiful red fire, now so frequently used at the theatres, is composed of the following ingredients : forty parts dry nitrate of stroiainti, thirteen parts of finely powdered sulphur, live parts of chlorate of potash (hyperoxymuriate), and four parts of sulphuret of antimony. The chlorate of potash and sulphuret of antimony should be powdered separately in a mortar, and then mixed together on paper; after which they may be added to the other ingredients, previously powdered and mixed. No other kind of mixture than rubbing together on paper is required. Sometimes a little realgar is added to thesulphu-ret of antimony, and frequently, when the fire bums dim and badly, a very small quantity of very finely powdered charcoal or lamp-black will make it perfect.

STRONTIAN, in geography, a district of Ar-

• gyllshire, in the parish of Ardnamurchan, long

famous for its lead mi-nes ; but now famous for

the recent discovery of a new species of earth or

stone, found in it, and named from it.

STKOXTIAN, a village in the above district, erected for the accommodation of the miners.

STRONTIAN, in mineralogy, a new species of earth lately discovered at Strontian. Dr. Kir-wan says, the first information he received of it was from Dr. Crawford in 1790. In the Miners

(ipt stronir beer to ran vour horse s neeis. ouniit … • c

The ruinous consequents of Wood's patent have Journal for February 1791 a good descr.pt.on of

been strongly represented by both houses. Id. its external appearance, with some account .

ff.v i . ** ,/. i. _i_ i • _ i ..,n.. *-in Kl i .• ln»/l trnm IMP nil-

When the attention is "strongly fixed to any sub-chemical properties, was published from the ob-ject, all that is said concerning 'it makes a deeper in,- servations of Mr. Sulzer. Its external characters

are these : its color is whitish or light green ; its lustre common; its transparency intermediate between the semitransparent and opaque; its

pression. Watts.

STRONG (Joseph), an extraordinary genius, born in Carlisle. Though blind from his birth,

he displayed an amazing degree of skill in me-fracture striated presenting oblong ; distinct con-chanics. He not only made all hisown wearing cretions, somewhat uneven and b ntfj it. hard-

apparel, but constructed an organ, and played well upon it. He went to London for the express purpose of visiting Mr. Stanley, the blind organist. He also made a great number of me-

ness moderate, being easily scratcned, but not scraped. It is very brittle ; and its specific gravity from 3-4 to 3-644. its chemical qualities.

For a farther account of

See MlNERAI.OliY, ar-d

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Thorn. Chem. vol. I. p. 422, &c. It is not affected by the sulphuric acid ; but, when diluted, 10,000 parts of it will dissolve one of strontian. Diluted nitric acid dissolves it rapidly. The muriatic acid, whether diluted or oxydated, dissolves it in a similar manner. It has a strong resemblance to barytes, but essentially differs from it. Its specific gravity is less; it parts with its carbonic acid when urged by heat soiue-whac more readily, and without suffering fusion ; when calcined, it imbibes moisture with vastly greater avidity, swelling and cracking with more heat and noise. Strontian dissolves much more abundantly in hot water than barytes ; and the form of the crystals of these pure earths is very dissimilar. The compounds of strontian differ from those of barytes. This earth, united to nitric and muriatic acid, forms salts that suffer changes from exposure to air, which do not happen to the nitrate and muriate of barytes. They are likewise much more soluble in water, and have crystals of a peculiar figure. The combinations of strontian with acids are not, like those of barytes, decomposed by prussiate of lime or of potash. Strontian and . its compounds tinge flame, which barytes does not. Lastly, these earths disagree in the order of their attractions. It is also distinguished from limestone; for it is much heavier, and retains its fixed air with more obstinacy in the fire. The incomparably greater solubility of the pure earth in hot than in cold water, and the crystalline form it assumes, sufficiently distinguish it from lime, which the disposition of the nitrate and muriate to crystallize no less tends to do. 100 parts of stronlian are composed of 61 ‘21 of earth, 30-20 of carbonic acid, and 8-59 of water.

STRONTITES, the name first given by Dr. Charles Hope to the new earth ; now called strontian, from the district where it was first discovered

STROPHADES, in ancient geography, two islands in the Mediterranean, on the west coast of Peloponnesus, formerly called Plots ; famous in the mythology for being the scene where Phi-neus was tormented by the Harpies; till he was delivered from them by his brothers-in-law, Ca-lais and Zethes. The largest is five miles in circumference. ./Eneas’s fleet stopped at them. They are now called Strivali.

STROPHE, in ancient poetry, was a certain number of verses,

including a perfect sense, and making the first part of an ode.

STROPHIUS, in history partly fabulous, the son of Crisus, and king of Phocis. He married Anaxibia, the sister of Agamemnon, by whom he had PYLADES, celebrated for his friendship with his cousin ORESTES ; who, upon the murder of AGAMEMNON, was taken home by Strophius, and educated with his own son. See these articles.

STROPHULUS, in medicine, a papulous eruption, peculiar to infants, and exhibiting a variety of forms, described by Dr. Willan under the titles of intertinctus, albidus, confertus, volaticus, and candidus.

1. S. intertinctus, usually called the red gum, and by the French efflorescence benigne. The papulae characterising this affection rise sensibly

above the level of the cuticle, are of a vivid red color, and commonly distinct from each other. Their number and extent varies much in different cases. They appear most constantly on the cheeks, forearm, and back of the hand, but are sometimes diffused over the whole body. The papulae are, in many places, intermixed with stigmata, and often with red patches of a larger size, which do not, however, occasion any elevation of the cuticle. A child's skin thus variegated somewhat resembles a piece of red printed linen ; and hence this eruption was formerly called the red gown, a term which is still retained in several counties of England, and may be found in old dictionaries. Medical writers have changed the original word for one of a similar sound, but not more significant. The strophulus intertinctus has not, in general, any tendency to become pustular, a few small pustules containing a straw-colored watery fluid occasionally appear on the back of the hand, but scarcely merit attention, as the fluid is always reabsorbed in a short time without breaking the cuticle. The eruption usually terminates in scurf, or exfoliation of the cuticle; its duration, however, is very uncertain, the papulae and spots sometimes remain for a length of time without an obvious alteration, sometimes disappear and come out again daily; but, for the most part, one eruption of them succeeds another at longer intervals and with more regularity. This complaint occurs chiefly within the two first months of lactation. It is not always accompanied with or preceded by any disorders of the constitution, but appears occasionally in the strongest and most healthy children. Some authors connect it with aphthous ulcerations com-mon in children, supposing the latter to be a part of the same disease diffused

along the internal surfaces of the mouth and intestines. The fact however seems to be that the two affections alternate with each other; for those infants who have the papulous eruption on the skin are less liable to aphthae; and when the aphthae takes place to a considerable degree the skin is generally pale and free from eruption. The strophulus intertinctus is, by most writers, said to originate from an acidity, or acrimonious quality of the milk taken into a child's stomach, communicated afterwards to the blood, and stimulating the cutaneous excretories. This opinion might, without difficulty, be proved to have little foundation. The predisposition to the complaint may be deduced from the delicate and tender state of the skin, and from the strong determination of blood to the surface, which evidently takes place in infants. The papulous eruption is, in many cases, connected with a weak, irritable state of the alimentary canal, and consequent indigestion. For, if it be by any means suddenly repelled from the surface, diarrhea, vomiting, spasmodic affections of the bowels, and often general disturbance of the constitution succeed ; but as soon as it reappears those internal complaints are wholly suspended. Dr. Armstrong and others have particularly noted this reciprocation which makes the red gum, at times, a disease of some importance, though in its usual form it is not thought to be in any respect dangerous. On their remarks a necessary caution

is founded, not to expose infants to a stream of very cold air, nor to plunge them unseasonably in a cold bath. The most violent and even fatal symptoms have often been the consequence of such imprudent conduct.

2. S. albidus, by some termed the white gum, is merely a variety of strophulus intertinctus, but deserves some notice on account of the different appearance of its papulae. In place of those described as characterising the red gum, there is a number of minute whitish specks, a little elevated, and sometimes, though not constantly, surrounded by a-slight redness. These papula, when their tops are removed, do not discharge any fluid ; it is, however, probable that they are originally deformed by the deposition of a fluid which afterwards concretes under the cuticle. They appear chiefly on the face, neck, and breast, and are more permanent than the papulae of the red gum. In other respects they have the same nature and

tendency, and require a similar plan of treatment. Although a distinctive name has been applied to this eruption, when occurring alone, yet it is proper to observe that in a great number of cases there are red papulae and spots intermixed with it, which prove its connexion with the strophulus intertinctus.

3. S. confertus. An eruption of numerous papulae, varying in their size, appears on different parts of the body in infants during dentition, and has thence been denominated the tooth rash : it is sometimes also termed the rank red gum. About the fourth or fifth month after birth an eruption of this kind usually takes place on the cheeks and sides of the nose, extending sometimes to the forehead and arms, but rarely to the trunk or body. The papulae on the face are smaller and set more closely together than in the red gum ; their color is not so vivid, but they are generally more permanent. They terminate at length with slight exfoliations of the cuticle, and often appear again in the same places a short time afterwards. The papula? which in this complaint occasionally appear on the back or loins, are much larger, and somewhat more distant from each other, than those on the face. They are often surrounded by an extensive circle of inflammation, and a few of them contain a semi-pellucid watery fluid, which is reabsorbed when the inflammation subsides. In the seventh or eighth the strophulus confertus assumes a somewhat different form: one or two large irregular patches appear on the arms, shoulder, or neck; in which the papulae are hard, of a considerable size, and set so close together that the whole surface is of a high red color. Most commonly the forearm is the seat of this eruption, the papulae rising first on the back of the hand and gradually extending upwards along the arm. Sometimes, however, the eruption commences at the elbow, and proceeds a little upwards and downwards on the outside of the arm. It arrives at its height in about a fortnight; the papulse then begin to fade and become flat at the top, afterwards the cuticle exfoliates from the part affected, which remains discolored, rough, and irregular, for a week or two longer.

An obstinate and very painful modification of this disease takes place, though not often, on the

lower extremities. The pspnla spread from the calves of the legs to the

thighs, nates, loins, and round the body as high as the navel: being very numerous and close together they produce a continuous redness over all the parts above-mentioned. The cuticle presently, however, shrivels, cracks in various places, and finally separates from the skin in large pieces. During this process a new cuticle is formed, notwitlˆ standing which the complaint recurs in a short time and goes through the same course as before. In this manner successive eruptions take place during the course of three or four months, and perhaps do not cease till the child is one year old, or somewhat more. Children necessarily suffer great uneasiness from the heat and irritation occasioned by so extensive an eruption, yet, while they are affected with it, they often remain free from any internal or febrile complaint. This appearance should be distinguished from the intertrigo of infants, which exhibits a uniform, red, smooth, shining surface, without papula, and which affects only the lower part of the nates and inside of the thighs, being produced by the stimulus of the urine, &c., with which the child's clothes are almost constantly wetted. The strophulus confertus, where the child is otherwise healthy, is generally ascribed to a state of indigestion, or some feverish complaint of the mother or nurse. Dr. Willan, however, asserts that he has more frequently seen the eruption when no such cause was evident. It may with more probability be considered as one of the numerous symptoms of irritation arising from the inflamed and painful state of the gums in dentition ; since it always occurs during that process, and disappears soon after the first teeth have cut the gums.

4. S. volaticus is characterised by an appearance of small circular patches, or clusters of papulae, arising successively on different parts of the body. The number of papula? in each cluster is from six to twelve. Both the papulae and their interstices are of a high red color. These patches continue red with a little heat or itching for about four days, when they turn brown and begin to exfoliate. As one patch declines another appears at a small distance from it, and in this manner the complaint often spreads gradually over the face, body, and limbs, not terminating in less than three or four weeks. During that time the child has sometimes a quick pulse, a white tongue, and seems uneasy and fretful. In many cases, however, the eruption takes place without any symptoms of internal disorder. The above complaint has been by some writers denominated ignis volaticus infantum : under this title Astruc and Lorry have described one of the forms of crusta lactea, in which a successive eruption of pustules takes place on the same spot, generally about the mouth or eyes, in children of different ages, and sometimes in adults. The maculse volatic* infantum mentioned by Wittichius, Sennertus, and Sebizeus, agree in some

respect with the strophulus volaticus ; but they are described by other German authors as a species of erysipelas, or as irregular efflorescences affecting the genitals of infants, and often proving fatal. The strophulus volaticus is a complaint by

no means frequent. In most cases which have come under Dr. Willan's observation it appeared between the third and sixth month ; in one instance, however, it occurred about ten days after birth, and continued three weeks, being gradually diffused from the cheeks and forehead to the scalp, afterwards to the trunk of the body and to the extremities; when the patches exfoliated, a red surface was left with slight border of detached cuticle.

5. S. candidus. In this form of strophulus the papulse are larger than in any of the foregoing species. They have no inflammation round their base ; their surface is very smooth and shining, whence they appear to be of a lighter color than the adjoining cuticle. They are diffused, at a considerable distance from each other, over the loins, shoulders, and upper part of the arms ; in any other situation they are seldom found. This eruption affects infants about a year old, and most commonly succeeds some of the acute diseases to which they are liable. Dr. Willan has observed it on their recovery from a catarrhal fever, and after inflammations of the bowels or lungs. The papulae continue hard and elevated for about a week, then gradually subside and disappear.

STROUD, a town and parish in Shamwell hundred, Kent, is separated from Rochester by the river Medway, over which it has a stone bridge of eleven arches. It is twenty-eight miles and a half east from London. The church is a handsome building, consisting of a nave and two aisles, 100 feet in length. In the south aisle is a stone chapel, the pavement of which contains several specimens of Mosaic; and the remains of an ancient mansion of the Knights'-Templars is still discernible in a farm-house now called the Tem-ple-house, on the banks of the river. Fair, 28th of August.

STROUD, a market-town, in Bisley hundred, Gloucester, situate on an

eminence near the Stroud-water, which empties itself into the Se-vern, ten miles south-east of Gloucester, and 102 west by north from London. Its water is celebrated for the dyeing of scarlet and other grain colors, on which account the clothing trade has been extended for upwards of twenty miles along the river, and on its banks are several fulling-mills. The Severn canal passes this town to Cirencester, and joins the Thames at Lechlade. The church is a good building, having a high spire at the west end and a tower in the middle. Here are also meeting-houses for the dissenters, an endowed free-school, and several charity-schools. Market on Friday. Fairs, May 12th and August 21st. It returns two members

STROUT, v. a. For Strut. To swell out ; to puff out ; to enlarge by affectation.

1 will make a brief list of the particulars in an historical truth nowise strouted, nor made greater by language. Bacon.

STROY, v. a. For destroy.

Dig garden, stray mallow, now may you at ease.

Tusser,

STROZZI (Cyriacus), a Peripatetic philosopher, born at Florence, in 1504. He became professor of philosophy, and of Greek at Florence, Bologna, and Pisa; and in all these

places was much esteemed. He added two books in Greek and Latin to Aristotle's Treatise De Republica; and died in 1565.

STROZZI (Titus and Hercules), father and son, two Italian poets, natives of Ferrara. They both wrote in Latin, and their poems were printed together in 8vo. at Venice, in 1513. They consist of elegies, odes, &c., in a pleasing style. Titus was born in 1422, and died in 1502, aged eighty Hercules, his son, was killed by a rival in 1 508.

STRUCK. The old preterite and participle passive of strike.

Down fell the duke, his joints dissolved asunder, Blind with the light, and strucken dead with wonder.

Fairfax.

All liquors strucken make round circles, and dash.

Bacon.

Silent, and in face Confounded, long they sat as strucken mute. Milton.

This message bear : the Trojans and their chief Bring holy peace, and beg the king's relief ; Struck with so great a name, and all on fire, The youth replies, whatever you require. Dryden.

In a regular plantation, I can place myself in its several centers, so as to view all the walks struck from them. Spectator.

Some to conceit alone their taste confine, And glittering thoughts struck out at every line.

Pope.

STRUCTURE, n. s. Fr. structure; Lat. structura, structus. Act or practice of building ; the manner of building ; building made.

Ecbatana her structure vast there shews, And Hecatomphylos her hundred gates. Milton.

His son builds on, and never is content, Till the last farthing is in structure spent. Dryden.

Several have gone about to inform them ; but, for want of insight into the structure and constitution of the terraqueous globe, have not given satisfaction.

Woodward.

High on a rock of ice the structure lay. Pope.

There stands a structure of majestick frame. Id.

STRUDEL (Peter), an eminent historical painter, born in the Tyrolese, in 1680. He settled at Vienna, where he adorned the palaces and churches with many fine paintings. He died in 1717.

STRUENSEE (John Frederick) was the son of a clergyman of Halle, in Saxony, and born in 1737. At an early age he manifested promising talents, and devoted himself to the study of medicine ; having taken his degree of doctor in 1757 he removed to Altona, and there obtained extensive practice. Besides the acquaintance he formed with two

persons, *viz.* count Von Ranzau Aschberg and count Brandt, connected with his subsequent fate, he acquired also, in the course of his practice, the friendship of the widow of the chief marshal of the court to Frederic V. ; and thus was honored with an appointment, in 1768, to be one of the physicians of the king, whom he accompanied in his tour to Germany, France, and England. Soon after the marriage of Christian VII. with Matilda, the English princess, an open rupture succeeded a coolness that was observed to subsist between this prince and the queen. The queen-dowager availed herself of this circumstance with a view of recovering her influ

dice. On the birth of the crown-prince the misunderstanding between the queens increased; nor did the king's tour contribute to lessen his indifference towards his consort. On his return the discontent was manifested openly, and divided the nation into two parties. The most numerous party was supported by the minister and the principal officers of state ; and at the head of it was count Hoik, the king's favorite. The queen-dowager had her partisans at Friedensburg ; and some young persons, who had neither influence nor property, took part with Matilda, and entertained hopes that, on account of her youth, beauty, and engaging manners, a reconciliation might be effected between her and the king. The young queen, however, well knowing that these friends had no experience in court intrigues, formed her own plan, and determined to make every possible effort for depriving count Hoik of the royal favor, and thus of regaining the confidence of the king. Hoik, for his own security, endeavoured to widen the breach between the royal pair ; and, conceiving that Struensee hated the queen as much as he himself did, he persuaded his royal master to take Struensee with him whenever he visited the queen. But, contrary to Hoik's expectations, the king became attached to Struensee ; and the queen remarking this change became gradually familiarised to his company. The crown-prince being at this time successfully innoculated for the small-pox by Struensee, the queen informed him that, in recompense of his services, he should be entrusted with the prince's education.

Struensee was now made a counsellor of conference, with a salary of 1500 dollars, and appointed reader to the king and queen. This new favorite succeeded in his endeavours for producing a complete reconciliation between the king and his royal consort; which was followed by an indifference, on the part of the former, towards Ilolk. Bernstorf, the minister, became jealous of Struensee, and attempted, though unsuccessfully, to undermine the confidence reposed in him by the king and queen. Soon after, the court made a tour to Schleswic ; and the heads of the different parties composed the royal suite. The queen behaved to both parties in the same courteous manner. Brandt succeeded Hoik in the king's favor and confidence ; but Bemstorf, though mortified by the loss of his influence over the king, declined making a voluntary resignation. His fate, however, was soon determined, and intimation was given him that his services were no longer necessary. The remaining members of government were dismissed, and the administration was formed by the friends of the queen and of Struensee. During these events, the queen-dowager remained at Friedensburg, watching their progress, and condoling with the discarded ministers. The queen at length obtained a complete triumph. The king behaved to her with the affectionate tenderness which her amiable qualities deserved ; and Struensee possessed her confidence, and employed all possible means to retain it. The king, naturally of a weak mind, was secluded from society by Struensee ; and Brandt was commissioned to keep him constantly occupied with amusements. The

king was gratified by this mode of life; the influence of Struensee was augmented ; and he at length accomplished his main object, which was that of preventing his majesty from personally transacting any business with his ministers. In process of time, or towards the close of the year 1770, a circumstance occurred which served to place unlimited power in the hands of the young queen and her ministers. Struensee neglected no means to increase his power ; and, in order to retain it the more securely, he prevailed on the queen to commit to his management the whole business of the cabinet.

In consequence of this measure, the whole form of the government was new-modelled ; and pub-lic business was transacted in the king's name, by those immediately around him. But Struensee's paramount power was of no long duration. His boldness, approaching to the highest degree of insolence, degenerated into timidity when any of his measures were opposed ; and, though he conducted foreign affairs according to the principles of sound policy, his internal

administration, perverted by avarice or ambition, did not answer the purpose intended. The various measures which he projected for the improvement of the government and country, and which our limits will not allow us to detail, excited disgust and dissatisfaction amongst persons of every rank and condition, from the highest to the lowest. Struensee, however, was indefatigable in the complicated duties of his office, and sedulously attentive to the education of the crown-prince. Two of his brothers were advanced to stations of importance ; one in the new college of finance, and the other in the department of war. Brandt, Berger, the physician, and other confidential persons, remained constantly near the king's person, nor were any others, suspected to be a;l-rerse to the existing order of things, permitted to have any intercourse with him; so that his indifference to public business gradually increased, and his capacity for conducting it diminished. In July 1771 the queen was delivered of a princess; and as she knew the surmises, originating at Friedensburg, that w.re circulated on this occasion, she was not unapprehensive that they might serve as pretences to wrest from her the power which she had acquired. She was unfortunately dependent on Struensee, \lio, by the abuse of his power, had become an object of detestation. Not content with being enrolled in the list of the Spanish nobility, and being created count, he invented a new title, or that of private counsellor of the cabinet, and with this lie acquired a degree of power which had never bet enjoyed before by any minister of Denmark, fact, it was this ambitious minister's aim to ai nihilate the royal authority ; and in the circun stances then existing, and under the protectio of the queen, if he had conducted himself with more prudence, he would have defeated the machinations of those who were meditating his ruin.

But a spirit of discontent now pervaded all ranks ; the sailors and the soldiers complained of his conduct; and the populace joined malcontents in their opposition and murmur? The dissatisfaction and tumult that prevailed m-

creased Struensee's timidity : his measures were indecisive, and his

situation became every day more dangerous. The British minister, actuated by a respect for the young queen, endeavoured to hasten his removal from power, and he himself wished for a release. Accordingly he offered him a sum of money to enable him to quit the country. The queen, apprehending that her enemies would get the king into their hands, and obtain possession of all the royal power, *opposed this measure. A crisis, however, was approaching; and Struensee could no longer resist or control the counsels and operations of those who were hastening his downfall. Notwithstanding the measures which he adopted for insuring his own personal safety, and which were interpreted by the people into a kind of avowal of his political misconduct, every thing conspired, not only to accelerate his own ruin, but to favor the plan which had been formed against the young queen. On the morning of the 17th of January, 1772, the inhabitants of Copenhagen heard, not without astonishment and terror, that this princess, count Struensee, his brother, count Brandt, and all their friends and adherents, had been arrested in the night. At three o'clock in the morning, succeed ing a ball that had been given at court the preceding evening, and after the queen had closed about one o'clock with prince Frederick, colonel Roller, an inveterate enemy of Struensee's, whose regiment was on guard at the palace, informed his officers, after having admitted them into the palace, that he had the Ung's orders to take the queen into custody. The officers, without requiring to see the orders, which would have defeated the whole plan, implicitly obeyed. Ranzau hurried into the king's bed-chamber, and, drawing the curtains so as to awaken him, told him, before he had time for reflection, that his life was in danger. ' What must we do ?' said the alarmed king : ' shall we fly ? stand by me : give me your advice.' — ' Sign this,' replied Ranzau, ' it will save my sovereign and the whole royal family.' The king took hold of his pen. but let it drop as soon as he cast his eye on the name of his consort. At length he suffered himself to be persuaded ; and Ranzau, supported by colonel Eichstadt, whose dragoons surrounded the palace, and some other officers, carried out the fatal order ; and, in a manner the most violent and brutal, seized the person of the unfortunate Matilda, and conveyed her in a carriage to the castle of Cronenburg. Struensee's arrest was followed by the appointment of a commission for his trial ; and the proceedings against him were carried on with great zeal and severity. The indictment, drawn up by the fis-cal general in very intemperate language, and delivered to the court on the 21st of April, 1772, after relating the circumstances of his life and character, stated nine articles as capital charges. ' For many years before his fall,' says his biographer, who has compiled his article from a variety of original documents, and of which we have freely availed ourselves, ' Struense* had lived an avowed freethinker. He was convinced, however, of the existence of a Supreme Being, by whom the world was created ; but he considered mankind as mere machines, governed by no

moral principle ; looked upon a future s>tate as an idle dream ; and believed that after death a man had nothing to hope or to fear. During the first week of his imprisonment he endeavoured by these principles to compose his agitated mind ; and, giving way also to the warmth of his imagination, fancied that a thousand circumstances might occur to liberate him from his dangerous situation. He was thus able, for a little time, to bear up under his misfortunes, and to assume an apparent cheerfulness ; but these were merely palliatives, which losing their effect, he soon fell into a state of the most violent anguish and dis-may.

A visit, however, which he received from the celebrated Dr. Munter, a clergyman of Copenhagen, who went to see him in prison on the 1st of March, 1772, laid the foundation for a change in his sentiments, which enabled him afterwards to support his sufferings with more fortitude and resignation. This worthy man discussed with him proofs of Christianity ; listened to his doubts and objections, and answered them in the mildest yet most forcible manner ; and at length gained so much on his heart that he gave himself up entirely to his direction. When his trial came on, his advocate, in a short written defence, endeavoured to disprove all the charges that had been brought against him, with the exception of one, which was the disrespect personally shown to the king. Of this he acknowledged himself guilty, was heartily sorry for it, and threw himself on the mercy of his offended sovereign. The court, however, which had resolved that Struensee should suffer an ignominious death, rejected all representations made in his favor, and on the 25th of April passed the following sentence: — ‘ That after his right hand had been cut off he should be beheaded ; that his body should then be quartered, and in that state publicly exposed ; and that his head and hand should be affixed to a pole.’ On the next day, April the 26th, Dr. Munter paid him a visit, and informed him that this sentence had in every point been confirmed by the king, and that the 28th was the day appointed for its being carried into execution. The unfortunate count heard this intelligence with the utmost composure ; and declared that, in regard to the ignominious circumstances attending his doom, he was perfectly easy, as he believed in a future resurrection. He spent the intervening time in a manner becoming his situation, and suffered according to his sentence along with his friend Brandt, who had also been condemned, amidst an immense concourse of spectators.

STRUG’GLE, v.n. & n. s. Of uncertain etymology. To labor ; act with effort ; strive ; contend : the effort, contention, or contest made.

In the time of Henry VIII. differences of religion tore the nation into two mighty factions ; and, under the name of Papist and Protestant, struggled in her bowels with many various events. Temple.

Strong virtue, like strong nature, strugglei still, Exerts itself, and then throws off the ill. Dryden.

I repent, like some despairing wretch That boldly plunges in the frightful deep, Then pants and struggles with the whirling waves, And catches everv slender reed to save him. Smith.

S T R U T H I O.

No man is guilty of an act of intemperance hut he might have forborne it ; not without some trouble from the itrugglings of the contrary habit, but still the thing was possible. South.

If men struggle througr as many troubles to be miserable as to be happy, my readers may be persuaded to be good. Spectator.

When, in the division of parties, men only strove for the first place in the prince's favour, an honest man might look upon the struggle with indifference.

Addisim.

It began and ended without any of those unnatural struggles for the chair, which have disturbed the peace of this great city. Atterbury.

STRU'MA, n. s. Lat. struma. A glandular swelling ; the king's evil.

A glandulous consumption, such as does not affect the lungs with a rupture of its vessels, and coughing up blood, is produced by strumous or scrophulous humours. Blackmore.

A gentlewoman had a struma about the instep, very hard and deep about the tendons.

Wiseman's Surgery.

How to treat them when strumous, scirrhous, or cancerous. Wiseman.

STRUM FIA, in botany, a genus of plants belonging to the class of

syngenesia, and to the order of monogamia : CAL. quinquedentate and superior: COR. pentapetalous : and the berry monospermous. There is only one species ; *viz.* S. maritima.

STRUM'PET, n. s. & v. a. Of doubtful original. Stropo vieux mot palliardise : Lat. stu-prum. A whore; prostitute: to debauch.

If we two be one, and thou play false, I do digest the poison of thy flesh, Being strumpeted by the contagion. Shakspeare.

How like a younker or a prodigal The skarfed bark puts from her native bay, Hugged and embraced by the strumpet wind ! How like a prodigal doth she return, Lean, rent, and beggared by the strumpet wind !

Id.

If to preserve this vessel for my lord From any other foul unlawful touch, Be not to be ˆ.strumpet, 1 am none. Id. Othello.

Common fame is as false and impudent as a com-mon itrumpet. L'Estranye. Honour had his due ;

Before the holy priest my vows were tied ;

So came I not & strumpet out a bride. Dryden.

STRUT, v. n. & n. s. Teut. strotzen, of Goth. trotna. To walk with affected dignity ; swell ; play the fop or dandy : the noun substantive corresponding.

Adore our errours, laugh at's while we strut To our confusion.

Shakspeare. Antony and Cleopatra. Does he not hold up his head, and strut in his

gait 1 Shakspeare.

Though thou strut and paint, Yet art thou both shrunk up and old. Ben Jonson.

The false syren Struts on the waves, and shows the brute below.

Dryden.

We will be with you ere the crowing cock Salutes the light, and struts before his feathered

flock. /”•

The goats with “strutting dugs shall homeward

speed. 1’f—

The power appeased, with winds sufficed the sail, The bellying1 canvass strutted with the gale. Id. Voi. XXI.

As thy strutting bags with money rise, 1 he love of gain is of an equal size. Id.

STRUTT (Joseph), artist and antiquary, was born in 1749, at Springfield in Essex, where his father was a miller. In 1764 he was articled to W. Wynn Ryland engraver, and in 1770 obtained the gold and silver medals of the Royal Academy. Uniting the study of antiquities with his art, he published in 1773 his first work, entitled The Regal and Ecclesiastical Antiquities of England, 4to., which contained representations of all the English monarchs from Edward the Confessor to Henry VIII. This was followed by Horda Angel Cynnan, or a complete view of the manners, customs, alms, habits, &c., of the English, from the arrival of the Saxons to the times of Henry VIII., &c., 1774, 1775, and 1776, 3 vols. with 157 plates’, In 1777 and 1778 he published A Chronicle of England, which he meant to extend to six volumes, but dropped the design for want of encouragement. His Biographical Dictionary of Engravers appeared in 1785 and 1786, in 2 vols. In 1790 he was obliged by his health to quit the metropolis and retire into Hertfordshire, where he occupied himself in a series of plates for the Pilgrim’s Progress. In 1795 he returned to London, and began to collect materials forliis Complete View of the Dresses and Habits of the People of England, &c., the first volume of which appeared in 1796, and the second in 1799, 4to. In 1801 he published his last and most distinguished work, entitled the Sports and Pastimes of the People of England, with forty plates, of which a new octavo edition, with 140 plates, edited by Hone, has been lately projected. He died in London in October 1802, aged fifty-three. He left some MSS. in the possession of his son, from which have since been published his Queen Hoo Hall, a Romance, and Ancient Times, a Drama, 4 rols. 12mo. ; also The Test of Guilt, or Traits of Ancient Superstition, a dramatic tale.

STRUTHIO, in natural history, a genus of birds belonging to the order of grallae of Linne ; but, according to the new classification of Dr. Latham, it forms, along with the dodo, casuarius, and rhea, a separate order, under the name of struthiones.

I. S. camelus, the ostrich, lias a bill somewhat conical ; the wings are so short as to be unfit for flying ; the thighs J.<id sides ot the body are naked; the feet are formed for running, having two toes, one only of which is furnished with a nail. In this respect it differs entirely from the cassowary, which has three toes complete. The ostrich is without doubt the largest of all birds; it is nearly eight feet in length, and, when standing upright, from s to eight feet in height. We are told in tl Gentleman's Magazine that two ostriches were shown in London in 1750, and that the male was ten feet in height, and weighed 3Jcwt The hoai and bill somewhat resemble those c a duck ; and the neck may be likened to that of a swan, but that it is much longer ; the legs and thij-hs resemble those of a hen, though the whole appearance bears a strong resemblance to that of a camel. But, though usually seven

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feet high from the top of the head to the ground, from the back it is only four ; so that the head and neck are above three feet long. From the top of the head to the rump, when the neck is stretched out in a right line, it is six feet long, and the tail is about a foot more. One of the wings, without the feathers, is a foot and a half; and being stretched out, with the feathers, is three feet. The plumage is much alike in all ; that is, generally black and white, though some of them are said to be gray. There are no feathers on the sides, nor yet on the thighs, nor under the wings. The lower part of the neck, about half way, is covered with still smaller feathers than those on the belly and back ; and those also are of different colors. All these feathers are of the same kind, and peculiar to the ostrich ; for other birds have several sorts, some of which are soft and downy, and others hard and strong. Ostrich feathers are all almost as soft as down, being utterly unfit to serve the animal for flying, and still less adapted to be a

proper defence against external injury. The feathers of other birds have the webs broader on one side than the other, but those of the ostrich have their shaft exactly in the middle. The upper part of the head and neck are covered with a very fine clear white hair, that shines like the bristles of a hog ; and in some places there are small tufts of it, consisting of about twelve hairs, which grow from a single shaft about the thickness of a pin. At the end of each wing there is a kind of spur, almost like the quill of a porcupine. It is an inch long, hollow, and of a horny substance. There, are two of these on each wing, the largest of which is at the extremity of the bone of the wing, and the other a foot lower. The neck is slender in proportion to that of other birds, from its not being furnished with feathers. The skin in this part is of a livid flesh color. The bill is short and pointed, and two inches and a half at the beginning. The external form of the eye is like that of a man, the upper eye-lid being adorned with eyelashes, which are longer than those on the lid below. The tongue is small, very short, and composed of cartilages, ligaments, and membranes, intermixed with fleshy fibres. In some it is about an inch long, and very thick at the bottom; in others only half an inch, and a little forked at the end. The thighs are very fleshy and large, being covered with a white skin inclining to redness, and wrinkled like a net, whose meshes ad-mit the end of the finger. Some have small feathers on the thighs ; others have neither feathers nor wrinkles. The legs are covered before with large scales ; the end of the foot is cloven, and has two very large toes, which are also covered with scales. These toes are of unequal sizes. The largest, which is on the inside, is seven inches long, including the claw, which is nearly three-fourths of an inch in length, and almost as broad. The other toe is but four inches long, and is without a claw. The internal parts of this animal are no less peculiar. At the top of the breast, under the skin, the fat is two inches thick ; and on the fore part of the belly it is as hnrd as snet, ;>! id about two inches and a halt thick in some places. It has two distinct stomachs. Tae lowermost, in its natural situation, somewhat resembles the crop in other birds ; but it is considerably larger than the other stomach, and is furnished with strong muscular fibres, circular and longitudinal. The upper stomach has outwardly the shape of the stomach of a man ; and upon opening is always found filled with a variety of discordant substances, hay, grass, barley, beans, bones, and stones, some of which exceed in size a pullet's egg. The kidneys are eight inches long and two broad, and differ from those of other birds in not being divided into lobes. The heart and lungs are separated by a midriff as in quadrupeds, and the parts of generation also bear a very strong resemblance. The ostrich is a na-tive only of the torrid regions of Africa, and has long been celebrated by those who have had

occasion to mention the animals of that region. Its flesh is prohibited in Scripture to be eaten ; and most of the ancient writers describe it as well known. Its race is transmitted down without mixture, and it has never been known to breed out of that country which first produced it. It seems formed to live among the sandy and burning deserts of the torrid zone ; and, as in some measure it owes its birth to their genial influence, so it seldom migrates into other tracts. The Arabians assert that the ostrich never drinks, and the place of its habitation confirms the assertion. In these dreary regions ostriches are seen in large flocks, like a regiment of cavalry, and have often alarmed a whole caravan. There is no desert, how barren soever, but what is capable of supplying these animals with provisions ; they eat almost fvery thing; and these barren tracts are thus doubly grateful, as they afford both food and security. The ostrich is of all animals the most voracious. It will devour leather, glass, hair, iron, stones, or any thing. Those substances which the coats of the stomach cannot soften, pass whole : so that glass, stones, or iron, are excluded in the form in which they were devoured. In an ostrich dissected by Rauby there appeared such a quantity of heterogeneous substances, that it was wonderful how an animal could digest such an overcharge of nourishment. Valisnieri also found the first stomach filled with a quantity of incongruous substances ; grass, nuts, cords, stones, glass, brass, copper, iron, tin, lead, and wood; apiece of stone was found among the rest that weighed more than a pound. He saw one of these animals that was killed by devouring a quantity of quicklime. In their native deserts, however, it is probable they live chiefly upon vegetables, where they lead an inoffensive and social life ; the male, as Thevenot assures us, assorting with the female with connubial fidelity. They are said to be very much inclined to venery. They copulate like other birds by compression. They lay very large eggs, some of them being above five inches in diameter, and weighing above fifteen pounds. These eggs have a very hard shell somewhat resembling those of the crocodile, only those of the latter are less and rounder. The season for laying depends on the climate. In the north part of Africa, this season is early in July ; in the south about the °nd of December.

S T R U T H I O.

These birds are very prolific, and lay generally from forty to fifty eggs at one clutch, which are as big as a child's head. It has been affirmed that the female deposits them in the sand, leaves them to be hatched by the heat of the climate, and the young to shift for themselves. But no bird has a stronger affection for her young than the ostrich, nor none watches her eggs with greater assiduity. In those hot climates, indeed, there is less necessity for the continual incubation of the female ; and she often leaves her •eggs, which are in no danger of being chilled by the weather ; but, though she leaves them by day, she always carefully broods over them by night ; and Kolben, who has seen great numbers of them at the Cape of Good Hope, affirms that they bit on their eggs like other birds, and that the male and female take this office by turns. Nor is it true that they forsake their young after they are excluded the shell. On the contrary, the young ones are not even able to walk for several days after they are hatched. During this time the old ones are very assiduous in supplying them with grass, and encounter every danger in their defence. The young, when brought forth, are of an ash color the first year, and are covered with feathers all over. But in time these feathers drop ; and those parts which are covered assume a different and more becoming plumage. The beauty of a part of this plumage, particularly the long feathers that compose the wings and tail, is the chief reason that man has been so active in pursuing this harmless bird to its deserts, and hunting it with no small degree of expense and labor. The ancients used those plumes in their helmets ; our military wear them in their hats ; and the ladies make them an ornament in their dress Those feathers which are plucked from the animal while alive are much more valued than those taken when dead, the latter being dry, light, and subject to be worm-eaten. Besides the value of their plumage, some of the savage nations of Africa hunt them also for their flesh, which they consider as a dainty. They sometimes also breed these birds tame, to eat the young ones. Some nations have obtained the name of Struthiophagi, or ostrich eaters, from their peculiar fondness for this food ; and the Romans themselves were not averse to it. The eggs of the ostrich are said to be well tast-ed, and extremely nourishing ; but they are too scarce to be fed upon, although a single egg be a sufficient entertainment for eight men. As the spoils of the ostrich are thus valuable, man has become their most assiduous pursuer. The Arabians train up their fleetest horses to hunt the ostrich. Of all the varieties of the chase, this is said to be the most entertaining. As soon as the hunter comes within sight of his prey, he puts on his horse with a gentle gallop, so as to keep the ostrich still in sight, yet not so as to terrify him. Of all known animals, the ostrich is by far the swiftest in running : upon observing himself, therefore, pursued at a distance, he

begins to run at first but gently. In this situation he resembles a man at full speed ; his wings, like arms, keep working with a motion corresponding to that of his legs ; and his speed would very soon snatch him from the view of his pursuers; but, instead of

going off in a direct line, he takes his course in circles; while the hunters still make a small course within, relieve each other, meet him at unexpected turns, and keep him thus still followed, for two or three days together. At last, spent with fatigue and famine, and finding all power of escape impossible, he endeavours to hide himself from those enemies he cannot avoid, and covers his head in the sand or the first thicket he meets. Sometimes, however, he attempts to face his pursuers ; and, though the most gentle animal in nature, when driven to desperation he defends himself with his beak, wings, and feet. Such is the force of his mo-tion, that a man would be unable to withstand him in the shock. The Struthiophagi have another method of taking this bird ; they cover themselves with an ostrich's skin, and, passing up an arm through the neck, thus counterfeit all the motions of this animal. By this artifice they approach the ostrich, which becomes an easy prey. He is sometimes also taken by dogs and nets ; but the most usual way is that mentioned above. When the Arabians have thus taken an ostrich, they cut its throat; and, making a ligament below the opening, they shake the bird as one would rinse a barrel ; then, taking off the ligature, there runs out from the wound in the throat a considerable quantity of blood mixed with the fat of the animal ; and this is considered as one of the greatest dainties. They next flay the bird; and of the skin, which is strong and thick, sometimes make a kind of vest, which answers the purpose of a cuirass and a buckler. Others do not kill their captive, but endeavour to tame it, for the purposes of supplying those feathers which are in so great request. The inhabitants of Dara and Lybia breed up whole flocks of them, and they are tamed with very little trouble. In this domestic state, they are often ridden upon and used as horses. Moore assures us that at Jour he saw a man travelling upon an ostrich ; and Adanson asserts that at the factory of Podore he had two ostriches, which were then young, the strongest of which ran swifter than the best English racer, although he carried two negroes on his back. As soon as the animal perceived itself thus loaded, it set off running with all its force, and made several circuits round the village, till at length the -peo-ple were obliged to stop it by barring ui> the way.

II. 1. S. casuarius, the cassowary (the gnlr-ated cassowary of Dr. Latham) was first brought into Europe from Java by the Dutch about

1597. It is nearly equal in size to the ostrich, but its legs are much thickerand stronger in proportion. This conformation gives it an air of strength and force, which the fierceness and singularity of its countenance conspire to render formidable It is five feet and a half long from the point of the bill to the extremity of the claws The legs arc two feet and a half high from the belly to the end of the claws. The head and neck together are one foot and a half; and the largest toe, including the claw, is five inches long. The claw alone o the least toe is three inches and a half in leng The wing is so small that it does not appear, it being hid under the feathers of the back.

other birds a part of the feathers serve for flight, and are different from those that serve merely for covering ; but in the cassowary all the feathers are of the same kind, and outwardly of the same color. They are generally double, having two long shafts, which grow out of a short one, which is fixed in the skin. Those that are double are always of an unequal length ; for some are fourteen inches long, particularly on the rump, while others are not above three. The beards that adorn the stem or shaft are about half way to the end, very long, and as thick as a horsehair, without being subdivided into fibres. The stem or shaft is flat, shining, black, and knotted below ; and from each knot there proceeds a beard ; likewise the beards at the end of the large feathers are perfectly black, and towards the root of a gray tawny color; shorter, more soft, and throwing out fine fibres like down ; so that nothing appears except the ends, which are hard and black ; because the other part, composed of down, is quite covered. There are feathers on the head and neck ; but they are so short and thinly sown that the bird's skin appears naked, except towards the hinder part of the head, where they are a little longer. The feathers which adorn the rump are extremely thick ; but do not differ in other respects from the rest, excepting their being longer. The wings, when they are deprived of their feathers, are but three inches long ; and the feathers are like those on other parts of the body. The ends of the wings are adorned with five prickles of different lengths and thickness, which bend like a bow ; these are hollow from the roots to the very points, having only that slight substance within which all quills are known to have. The longest of these prickles is eleven inches ; and it is a quarter of an inch in diameter at the root, being thicker there than towards the extremity ; the point seems broken off. The part however which most distinguishes this animal is the head ; which though small, like that of an ostrich, does not fail to inspire some degree of terror. It is bare of feathers, and is armed with a helmet of horny substance, that covers it from the root of the bill to near half the head backwards. This helmet

is black before and yellow behind. Its substance is very hard, being formed by the elevation of the bone of the skull ; and it consists of several plates, one over another, like the horn of an ox. Some suppose that this is shed every year with the feathers ; but the most probable opinion is that it only exfoliates slowly like the beak. To the peculiar oddity of this natural armour may be added the color of the eye in this animal, which is a bright yellow ; and the globe being, above an inch and a half in diameter, gives it an air equally fierce and extraordinary. The hole of the ear is very large and open, being only covered with small black feathers. The sides of the head, about the eye and ear, being destitute of any covering, are blue, except the middle of the lower eye-lid, which is white. The part of the bill which answers to the upper jaw in other animals is very hard at the edges above, and the extremity of it is like that of a turkey cock. The end of the lower mandible is slightly notched, and the whole is cf a grayish brown, except a green spot on each side. As the beak

admits a very wide opening, this contributes much to the bird's menacing appearance. The neck is of a violet-color, inclining to that of slate ; and it is red behind in several places, but chiefly in the middle. About the middle of the neck before, at the rise of the large feathers, there are two processes formed by the skin, which resemble somewhat the gills of a cock, but that they are blue as well as red. The skin which covers the fore part of the breast, on which this bird leans and rests, is hard, callous, and without feathers. The thighs and legs are covered with feathers, and are extremely thick, strong, straight, and covered with scales of several shapes; but the legs are thicker a little above the foot than in any other place. The toes are likewise covered with scales, and are but three in number ; for that which should be behind is wanting. The claws are of a hard solid substance, black without and white within. The internal parts are equally remarkable. The cassowary unites with the double stomach of animals that live upon vegetables the short intestines of those that live upon flesh. The intestines of the cassowary are thirteen times shorter than those of the ostrich. The heart is very small, being but an inch and a half long, and an inch broad at the base. Upon the whole it has the head of a warrior, the eye of a lion, the defence of a porcupine, and the swiftness of a courser. Thus formed for a life of hostility, for terrifying others, and for its own defence, it might be expected that the cassowary was one of the most fierce and terrible animals of the creation. But nothing is so opposite to its natural character ; it never attacks others ; and, instead of the bill, when attacked, it rather makes use of its legs, and kicks like a horse, or runs against its pursuer, beats

him down, and treads him to the ground. The manner in which this animal moves is not less extraordinary than its appearance. Instead of going directly forward it seems to kick up behind with one leg; and then, making a bound onward with the other, it goes with such prodigious velocity that the swiftest racer would be left far behind. The voraciousness of the ostrich obtains as strongly here The cassowary swallows every thing that comes within the capacity of its gullet. The Dutch assert that it can devour not only glass, iron, and stones, but even burning coals, without testifying fear or injury. It is said, that the passage of the food through its gullet is performed so speedily, that even the eggs which it has swal-lowtd whole pass through it unbroken. In fact, the alimentary canal of this animal, being extremely short, it may happen that many kinds of food are indigestible in its stomach, as wheat or currants are to man when swallowed whole. The cassowary's eggs are of a gray ash color, inclining to green. They are marked with a number of little tubercles of a deep green, and the shell is not very thick. The largest of these is fifteen inches round, one way, and about twelve the other. The southern parts of the East Indies seem to be the natural climate of the cassowary.. His domain begins where that of the ostrich terminates. The latter has never been found beyond the Ganges; while the cassowary is never seen nearer than the islands of Banda, Sumatra, Java,

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the Molucca Islands, and the corresponding parts of the continent. Yet even here this animal seems not to have multiplied in any considerable de-gree, as we find one of the kings of Java making a present of one of these birds to the captain of a Dutch ship, considering it as a very great rarity.

2. S. casuarius Novae Hollandiae, the New Holland cassowary, differs considerably from the common cassowary. It is a much larger bird, standing higher on its legs, and having the neck longer than in the common one. Total length seven feet two inches. The bill is not greatly different from that of the common cassowary ; but the horny appendage or helmet on the top of the head in this species is totally wanting : the whole of the head and neck is also covered with feathers, except the throat and fore part of the neck about half way, which are not so well feathered as the rest ; whereas in the common cassowary the head and neck are bare and carun-oulated as in the turkey. The plumage in general consists of a mixture of brown and gray, and the feathers are somewhat curled or bent at the ends in the natural state : the wings are so very short as to be totally useless for flight, and in-deed are scarcely to be distinguished from the rest of the plumage, were it not for their standing out a little. The long spines which are seen in the wings of the common sort are in this not observable, nor is there any appearance of a tail. The legs are stout, formed much as in the preceding, with the addition of their being jagged or sawed the whole of their length at the back part. This bird is common in New Holland and Botany Bay. Though it cannot fly, it runs so swiftly that a greyhound can scarcely overtake it. The flesh is said in taste to resemble beef.

STRUTHIOLA, in botany, a genus of the monogynia order and tetrandria class of plants : COR. wanting : CAL. tubulous, with eight glandules at its mouth ; the berry is without juice, and monospermous. There are three species, viz., 1. S. erecta; 2. S. nana ; and 3. S. virgata; which are all plants of foreign extraction.

STRUTHIONES, in ornithology, struthious birds, a new order of birds, very properly classed by Dr. Latham as distinct from the grallse, with which they were formerly classed by Linnaeus. It consists of the didus,ordoda (see DIDUS); the rhea, or American ostrich (see RHEA) ; and the ostrich and cassowary. See STRUTHIO.

STRUTHIOPHAGI, an ancient nation of Ethiopia, so called from eating ostriches. See ETHIOPIA.

STRUTHIOUS, from struthio. Of or belonging to the ostrich, or to that order of birds.

STRUVIUS (George Adam), a learned Ger-man, born at Magdeburg in 1619. He became professor of jurisprudence at Jena, and counsellor to the duke of Saxony. In 1653 he published a great work, entitled Syntagma Juris leudalis; and in 1663 another entitled Syntagma Juris Civilis. He died in 1692 aged seventy-three.

STRUVIUS (Burchard Gotthelf), son of the preceding, was born at Weimar in 1761. He settled at Jena ; followed his father's profession, and was much esteemed for his learning and integrity. He published many works, and died in 1 738, aged sixty-seven.

STRY, a circle of Austrian Poland, between Hungary and the circle of Lemberg. It is one of the largest in Galicia, having a superficial ex-tent of 3100 square miles. Its appearance differs completely in the south and north, the former consisting almost entirely of mountains, the latter of extensive plains. A single large river (the Dniester) traverses it from west to east, and then from north to south; it is intersected in various directions by smaller streams.

STRY, or STRYI, a town of Austrian Galicia, the capital of the above circle, stands on a small river of the same name, which divides here into a number of branches. It is surrounded with a wall and ditch, has a castle, a Catholic and a united Greek church, with a circular school, and 5500 inhabitants. Thirty-five miles W. N. W. of Halicz, and forty-two south of Lemberg.

STRYCHNIA, or STRYCHNINE, is an alkalin substance obtained from the bean of the strychncn ignatia by the following process: — The bean was rasped down as small as possible. It was then exposed to the action of nitric ether in a Papin's digester. The residue, thus deprived of a quantity of fatty matter, was digested in alcohol as long as that re-agent was capable of dissolving any thing. The alkoholic solutions were evaporated to dryness, and the residue redissolved in water. Caustic potassa being dropped into the solution a white crystalline precipitate fell, which was strychnia. It was purified by washing it in cold water, dissolving it in alkohol, and crystallising it. Strychnia was obtained likewise from the bean of the strychnos ignatia, by boiling

the infusion of the beau with magnesia, in the same manner as Robiquet had obtained morphia from the infusion of opium.

The properties of strychnia, when in a state of purity, are as follows : — It is crystallised in very small four-sided prisms, terminated by four-sided low pyramids. It has a wh.te color; its taste is intolerably bitter, leaving a metallic impression in the mouth. It is destitute of smell. It is not altered by exposure to the air. It is neither fusible nor volatile, except at temperatures at which it undergoes decomposition. It is charred at the temperature at which oil enters into ebullition (about 580°). When strongly heated it swells up, blackens, gives out empyreumatic oil, a little water, and ascetic acid ; carbonic aciil and carburettcd hydrogen gases are disengaged, and a bulky charcoal remains behind, \hen heated with peroxide of copper it gives out only carbonic acid gas and water. It is very little soluble in cold water, 100,000 parts of that liquor dissolving only fifteen parts of strychnia; but it dissolves in 2500 times its weight . boiling water. A cold solution of strychnia in water may be diluted with 100 times its volume of that liquid, without losing its hitter t When strychnia is introduced into the stomae it acts with prodigious energy. A locked jaw is induced in a very short tin.e, and the animal is speedily destroyed. Half a grain of strychnia blown into the throat of a rabbit proved fatal … five minutes, and brought on locked jaw .r

m&SSate of strychnia i< a salt which crystallises in transparent cubes, soluble in less t!

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times its weight of cold water. Its taste is intensely bitter, and the strychnia is precipitated from it by all the soluble salifiable bases. It is not altered by exposure to the air.

Muriate of strychnia crystallises in very small needles, which are grouped together, and before the microscope exhibit the form of quadrangular prisms. When exposed to the air it becomes opaque. It is more soluble in water than the sulphate, has a similar taste, and acts with the same violence upon the animal economy as all the other salts of strychnia.

Phosphate of strychnia crystallises in four-sided prisms. It can only be obtained neutral by double decomposition.

Nitrate of strychnia can be obtained only by dissolving strychnia in nitric acid, diluted with a great deal of water. The saturated solution, when cautiously evaporated, yields crystals of neutral nitrate in pearly needles. This salt is much more soluble in hot than in cold water. Its taste is exceedingly bitter, and it acts with more violence upon the animal economy than pure strychnia. It seems capable of uniting with an excess of acid. When heated it becomes yellow, and undergoes decomposition. It is slightly soluble in alkohol, but it is insoluble in ether. When concentrated nitric acid is poured upon strychnia it immediately strikes an amaranthine color, followed by a shade similar to that of blood. To this color succeeds a tint of yellow, which passes afterwards into green. By this action the strychnia seems to be altered in its properties, and to be converted into a substance still capable of uniting with acids.

Carbonate of strychnia is obtained in the form of white flocks, little soluble in water, but soluble iu/carbonic acid. Acetic, oxalic, and tartaric acids, form with strychnia neutral salts, which are very soluble in water, and more or less capable of crystallising. They crystallise best when they contain an excess of acid. The neutral acetate is very soluble, and crystallises with difficulty.

Hydrocyanic acid dissolves strychnia, and forms with it a crystallisable salt. Strychnia combines neither with sulphur nor carbon. When boiled with iodine a solution takes place, and lodate and hydriodate of strychnia are formed. Chlorine acts upon it precisely in the same way. Strychnia, when dissolved in alkohol, has the property of precipitating

the greater number of metallic oxides from their acid solutions. It is precipitated by the alkalies and alkaline earths ; but the effect of the earths proper has not been tried.

STRYCIINOS, or STRYCHNUS, in botany, a genus of the monogynia order and pentandria class of plants ; natural order twenty-eighth, luridae : COR. quinquefid : BERRY unilocular, with a wooden bark. The species are four; *viz.* 1. S. colubrina ; 2. S. ignatii ; 3. S. mix vomica ; 4. S. potatorum ; are all natives of foreign countries. See Nux VOMICA.

STRYMA, an ancient town of Thrace, founded by a Thracian colony. — Herodotus vii. 109.

STRYMON, in ancient geography, a river constituting the ancient limits of Macedonia and Thrace ; rising in Mount Scombrus (Aristotle),

and formerly called Conozus. Authors dirler as to the modern name of this river.

STRYPE (John), an English divine, descended from a German family, born at London and educated at Cambridge. He was vicar of Low Layton in Essex, and distinguished himself by his compilations of Lives and Memoirs, in which, as Dr. Birch remarks, his fidelity and industry will always give a value to his writings, however destitute they may be of the graces of style. He died in 1737, after having enjoyed his vicarage nearly sixty-eight years.

STUART (lady Arabella), daughter of Charles, earl of Lennox, the younger brother of Henry, lord Darnley, husband of queen Mary and king of Scotland. Her mother was Elizabeth, daughter of Sir William Cavendish. Lady Arabella was born in 1577, but her near relation to the royal family only involved her in trouble. About the end of queen Elizabeth's reign, the pope formed the plan of placing her on the throne of England, and marrying her to cardinal Farnese, brother to the duke of Parma. The project was approved by the French court ; and after the accession of James VI. some English peers entered seriously into the scheme. But, the plot being discovered, some of the conspirators were executed. Some time after this she was privately married to the honorable William Seymour, son of the earl of Hertford ; but James hearing of it committed them both prisoners to the tower. Seymour escaped from prison and got off to France. Lady Arabella accompanied him ; but was taken and remanded to the tower, where

she died in 1615 ; adding one more to the number of unfortunate royal Stuarts.

STUART (Sir Charles), an English general, son of the marquis of Bute, was born in 1753. After having been presented at the principal European courts, he entered into the army, and was appointed aid-de-camp to the viceroy of Ireland. In 1775 he was sent to America, where he distinguished himself; and at the beginning of the late war was made a major-general, and employed in the Mediterranean. Here he made himself master of Corsica, and, after having conciliate ‘ the minds of the inhabitants towards the British government, returned home in 1796. His next service was in Portugal, whither he was sent at the beginning of 1797, at the head of an auxiliary corps of 8000 men ; and not only secured trie country against the hostile designs of the French directory, but also contributed to the future success of the British arms in the Peninsula. In 1 798 he distinguished himself by the conquest of Minorca, which he had scarcely completed when he was summoned to the defence of Sicily, which he effectually guarded from the French. At the close of the same year he was ordered to Malta ; and, after having taken the fortress of La Valette by blockade, returned to England : to his representations it was owing that the British government retained possession of that island. He died in 1801, leaving two sons.

STUART (James Edward Francis), the eldest son of James II., by his second wife, Mary of Modena, was born in London June 10th, 1688 ; and was but five months old when his father was dethroned, and his mother with her infant

fled to France. He was the child with whom this unfortnnate princess is said to have stood for some time in a bleak night under the shelter of Lambeth church wall, waiting for a boat. An attempt was made at the peace of llyswick, in 1697, to insure the future restoration of this young prince to the throne of England : an attempt defeated only by the opposition of his father, as William III. had agreed to procure the recognition of the prince of Wales, as he was styled, as his successor. On the death of the ex-king, in 1701, Louis XIV. recognized his son as king of England, by the title of James III., and a proclamation in the name of the latter was addressed to the English nation ; but no

measures were at this time adopted in his favor. The death of William III. revived his hopes; but nothing beyond unavailing negociation took place till 1708, when a maritime expedition against Scotland was fitted out, in which the prince embarked. The armament, however, being attacked by an English fleet of superior force, returned to France without landing ; and the young adventurer (who now assumed the name of the chevalier de St. George) joined the French army in Flanders, and distinguished himself at the battle of Malplaquet. In the latter part of the reign of Anne several intrigues were set on foot to secure the restoration of her brother, or his succession to the crown after her death ; but on the treaty of Utrecht taking place in 1713 he was obliged to submit to a retirement from France, and when he returned to Paris resided there in-cognito. The regent duke of Orleans wished to maintain peace with George I. ; and the British ambassador at Paris was rnformed of the projects of the chevalier de St. George by the abbe Strickland, one of his agents, who betrayed his confidence. When, therefore, the earl of Mar raised in Scotland the standard of the Stuarts, and proclaimed this prince under the title of James VIII. ; and the latter embarking at Dunkirk, made a descent on the Scottish coasts ; he soon perceived that success was hopeless, and was obliged to return to France. But that kingdom no longer yielded him an asylum, and he was forced to remove first to Avignon and then lo Rome. The prince was a few years after invited to Spain, where he was well received by Philip V.; but the visit had no important influence on his affairs, and Rome again became his retreat. IP 1720 he married Mary Casimira Sobieska, grand-daughter of the famous John Sobieski, king of Poland, a union not attended with domestic happiness, and a separation between the husband and wife was with difficulty prevented. He took no active part in the expedition against Scotland under his son in 174.5, and died January 2d, 1766.

STUART (Charles Edward Louis Philip Casimir), son of the preceding, known by the appellation of the young pretender, was born at Rome December 31st, 1720. In his youth he was called the count of Albany, and under that vitle travelled in the north of Italy, and visited Parma, Genoa, and Milan. The war which broke outbptween England and France, in 1740, inspired the exiled family with hopes, and excited the young prisce to risk his person in a

memorable attempt towards the recovery of thr> British throne. In June 1745 he embarked with a few followers at Nantes, and, landing on the western coast of Scotland, found himself ere lonˆ at the head of a considerable army. Hnvin’r taken possession of Perth, he proclaimed

hi? father king of England, Scotland, and Ireland, by the style of James III., and himself regent'. The submission of Edinburgh, and the victory of Preston pans, raised the hopes of his adherents, and induced them to march into England ; where they proceeded as far as Derby; but disappointed in his hopes of a general insurrection, ami alarmed at the approach of an English army, the prince found it necessary to return. The battle of Falkirk, which he gained in January 1746, was his last success; for he was soon after obliged to raise the siege of Stirling, and the decisive batiK; of Culloden, fought on the 27thof April, save t;, • death blow to his hopes. For several succeeding months the young pretender suffered the miseries and privations of a wretched outcast. At length he embarked on board a French vessel, and, afie; escaping some English cruisers, landed in safety at St. Pol de Leon in Brittany, October 10th, 1746. On the signature of the treaty of Aix-la- Chapelle, two years after his return, he found himself obliged to quit France. He then wont to reside at Rome. In 1755 the French ministers, in consequence of disputes with the English government, appear to have projected a new invasion ; and Charles Edward went to Nanci, and held a conference on the subject with count Lally; but, the differences between the two governments being adjusted, the design of invasion was relinquished, and the prince returned to Rome. He soon after married the young princess of Stolberg Gnedern; but this union did not answer the views of any of the parties concerned in it. He had no children by his wife, who'i? he appears to have used in a brutal nianne:, which induced her at length to take refuge in a convent in Florence; and she subsequently found an asylum with her brother-in-law, the cardinal of York, at Rome. Charles Edward Stuart spent the latter part of his life at Florence, abandoned to the lowest sensual indulgences ; and died in that city January 31st, 1788. He is said to have been in England in 1753, when lord Holdernesse, .enquiring of George II. what should be done with him, the king said, ' Nothing; when he is tired of staying here, let him go away.' It has been also asserted that he came here again at the period of the coronation of his late majesty.

STUART (Henry Benedict Maria Clement), cardinal of York, younger brother of the preceding, the last descendant of the royal line the Stuarts, was born at Rome, March 20th, 1725, and, being destined for thechuich, the I ope bestowed on him the right to hold benefices without receiving the ecclesiastical tonsure. 1745, when the last effort was made for the restoration of his family, he went to France, and assumed the command of troops assembled Dunkirk; but the battle of Culloden prevented the embarkation of this armament, and prii Henry returned to Rome. He now took hols orders, and in 1747 pope

him to the purple : he was subsequently made chancellor of the Basilic of St. Peter, and bishop of Frescati. On the death of his brother in 1788 he assumed the title to which the family had aspired ; and on that occasion caused a medal to be struck, with the inscription ‘ Henricus nonus, Anglise Rex ;’ and on the obverse, ‘ Gratia Dei, non Voluntate Hominum.’ Succeeding events had the singular effect of rendering the cardinal of York a dependent on the bounty of the late king of England ; for, when the French conquered Italy, he was obliged to flee to Venice, and was indebted for his support to a pension from our court. In 1801 he returned to Rome, and be-came dean of the sacred college. His death took place in 1807.

STUART (Gilbert), LL. D., son of George Stu-art, professor of humanity at Edinburgh, was born in 1746. Having finished his classical studies in the university, he applied himself to jurisprudence, without probably intending to follow the profession of the law. For that profession he has been represented as unqualified by indolence ; by a passion which at a very early period of life he displayed for general literature ; or by boundless dissipation : — and all these circumstances may have contributed to make him relinquish pursuits in which he could hope to succeed only by patient perseverance and strict decorum of manners. That he did not waste his youth in idleness, is, however, evident from An Historical Dissertation concerning the Antiquity of the British Constitution, which he published before he had completed his twenty-second year, and which had so much merit as to induce the university of Edinburgh to confer upon the author, though so young a man, the degree of LL. D. After a studious interval of some years, he produced a valuable work, under the title of A View of Society in Europe, in its Progress from Rudeness to Refinement : or, enquiries concerning the History of Laws, Government, and Manners. He had read and meditated with patience on the most important monuments of the middle ages : and in this volume (which speedily reached a second edition) he aimed chiefly at the praise of originality

and invention, and discovered an industry that is seldom connected with ability and discernment. About the time of the publication of the first edition of this performance, having turned his thoughts to an academical life, he asked for the professorship of public law in the university of Edinburgh. According to his own account he had been promised that place by the minister, but had the mortification to see the professorship bestowed on another, and all his hopes blasted by the influence of Dr. Robertson, whom he represented as under obligations to him. This part of the story, however, seems very incredible; as it is not easy to conceive how it ever could be in the power of Dr. Stnart to render to the learned principal any essential service. It was believed indeed by the earl of Buchan, and by others, who observed that the illiberal jealousy not unfrequent in the world of letters was probably the source of this opposition ; which entirely broke the intimacy of two persons who, before that time, were understood to be on the most friendly footing with

each other. Ingratitude, however, is as likely to have been the vice of Dr. Stuart as of Dr Robertson ; for we have been told by a writer (Chalmers, in his Life of Ruddiman), who, at least in one instance, has completely proved what he affirms, that, < such was Gilbert Stuart's laxity of principle as a man, that he considered ingratitude as one of the most venial sins ; such was his conceit, as a writer, that he regarded no one's merits but his own ; such were his disappointments, both as a writer and a man, that he allowed his peevishness to sour into malice, and indulged his malevolence till it settled in corruption.' Soon after this disappointment Dr. Stuart went to London, where he became, from 1768 to 1774, one of the writers of the Monthly Review. In 1772 Dr. Adam, rector of the high school of Edinburgh, published a Latin grammar, which he intended as an improvement of the famous Ruddiman's. Stuart attacked him in a pamphlet under the name of Bushby, and treated him with much severity. In doing this, he was probably actuated more by some personal dislike of Dr. Adam than by regard for the memory of his learned relation ; for on other occasions he showed sufficiently that he had no regard to Ruddiman's honor, as a grammarian, editor, or critic. In 1774 he returned to his native city, and began the Edinburgh Magazine and Review, in which he discussed the liberty and constitution of England, and distinguished himself by an enquiry into the character of John Knox the reformer, whose principles he reprobated in the severest terms. About this time he revised and published Sullivan's Lectures on the Constitution of England. Soon after he turned his thoughts to the history of Scotland, and published Observations concerning its Public Law and

Constitutional History ; in which he examined with critical care the preliminary book to Dr. Robertson's History. His next work was the History of the Reformation ; a book which deserves praise for the easy dignity of the narrative, and for strict impartiality. His last great work, The History of Scotland from the Establishment of the Reformation to the death of Queen Mary, which appeared in 1782, has been very generally read and admired. His purpose was to vindicate the character of the injured queen, and expose the weakness of the arguments by which Dr. Robertson had endeavoured to prove her guilty ; but, though the style of this work is his own, it contains very little matter which was not furnished by Goodall and Tytler ; and it is with the arms which these two writers put into his hands that Dr. Stuart vanquished his great antagonist. In 1782 he once more visited London, and engaged in the Political Herald and English Review; but, the jaundice and dropsy increasing on him, he returned by sea to his native country, where he died, in the house of his father, on the 13th of August 1786. In his person, Dr. Stuart was about the middle size and justly proportioned. His countenance was modest and expressive, sometimes glowing with sentiments of friendship, of which he was truly susceptible, and at others darting that satire and indignation at folly and vice which appear in some of his writings. He was a boon companion ; and, with a constitution

lhat might have stood the shock of ages, he fell a premature martyr to intemperance. His talents were certainly great, and his writings are useful ; but he seems to have been influenced more by passion than principle, and in his character there was not much to be imitated. Of his style in writing, see our article LANGUAGE.

STUART (James), a celebrated architect and antiquary, born in London in 1709. His father, who was a mariner, died while James was a boy, leaving a widow and four children, of whom he was the eldest, without any means of support. James, having an excellent turn for drawing, soon provided for the whole family, by painting fans. He soon after found a place for one of his sisters with his employer in the fan trade. Mean time he made astonishing exertions and acquisitions in various branches of learning. To perfect himself in drawing, he studied anatomy, geometry, the mathematical sciences in general, and at last, wishing to understand the Latin inscriptions on prints, he made himself master of that language, and soon after of the Greek, all by his own exertions without a teacher. His mother dying, after procuring places for his brother and second sister, he set out upon his travels to the continent on foot. He travelled through Holland and France to Paris, stopping occasionally at differ-jen towns, only so long as to gain as much as would carry him forward. At length he arrived at Home, where he attracted the attention and patronage of Sir Jacob Bouverie and Mr. Dawkins, who were astonished at his courage and perseverance. Here he also formed an intimacy with Mr. Revett the celebrated architect. Under the auspices of these gentlemen, Revett and he set out for Athens, where they remained several years, and made a number of drawings of the relics of ancient architecture. About this period, too, he engaged as chief engineer in the army of the empress queen of Hungary. When the campaign was over, he went back to Athens, and completed his drawings, which on his return to England, after fourteen years absence, he engraved and published, to the surprise and gratification of the learned world. The first volume

was published in 1762, under the title of Antiquities of Athens. This work, with the fame of his travels, procured him the title of Athenian Stuart. Upon his arrival, he had been received into Mr. Dawkin's family; and lord Anson, admiring his genius and exertions, appointed him surveyor of Greenwich hospital, which he held till his death. In 1781, after studying Grecian antiquities for seventy-two years, he fell in fancy will) a modern British beauty, an accomplished young lady of Sittingbourne in Kent, only in her twentieth year. Disparity of years were not objected to on the lady's part. They were married, and she bore him four children. This extraordinary genius died in 1788, aged seventy-nine; and other 2 vols. of his Antiquities of Athens have been published since his death.

STUB, n. s. & v. a. Sax. pˆb; Belg. and Dan. stubbe, stob ; Lat. stipes. A stump; a thick short stock left when the rest is cut off: to force up ; extirpate.

To buy at the stub is the best for the buyer, More timely provision the cheaper is fire. Tuase*.

Dametus guided the horses so ill, that tht »vhe« coming over a great ttub of a tree, overturned tht

coach.

Sidney

All about old stocks and stubs of trees, Whereon nor fruit nor leaf was ever seen, Did hang upon the ragged rocky knees. Spenser.

Upon cutting down of an old timber tree, the stub hath put out sometimes a tree of another kind.

Bacons Natural History.

A pain he in his head piece feels, Against a stabbed tree he reels, And up went poor Hobgoblin's heels. Dray ton.

To spight the coy nymphs, Hang upon our stubbed horns Garlands, ribbons, and fine poesies. Ben Jonsou.

\ ou shall have more ado to drive our dullest and laziest youth, our stocks and stubs, from the infinite desire of such a happy nurture, than we have now to haul our choicest wits to that asinine feast of sow thistles and brambles. Milton.

Prickly stubs instead of trees are found, Or woods with knots and knares deformed and old ; Headless the most, and hideous to behold. Dryden.

His two tusks serve for fighting and feeding ; by the help whereof he stubs up edible roots out of the ground, or tears off the bark of trees.

Grew's Hfuseum.

The base is surrounded with a garland of black and stubby bristles. Id.

The other tree was grieved, Grew scrubby, dried a-top, was stunted ; So the next parson stubbed and burnt it. Su-ift.

STUBBE (Henry), an English writer of uncommon talents, born at Partney in Lincolnshire, 28th February 1631. His father was a minister of the church of England, hut turning Baptist was ejected and went with his family to Ireland. But the rebellion breaking out, in 1641, the mother returned to England with her son, and settling in London, where she maintained herself by sewing, sent Henry to Westminster school. The boy's talents were soon observed by Dr. Busby, the master, who recommended him to Sir Henry Vane, and these two patronised him, and supplied him with money, books, &c., to complete his

education. In 1649 he was elected student of Christ Church, Oxford ; and in 1657 was made under keeper of the Bodleian library ; but was ejected upon the restoration, having made himself obnoxious by his publications on the other side. He then went to Strut-ford-upon-Avon, where he practised physic. In 1661 he went to Jamaica, with the title of king's physician ; but, the climate disagreeing with him, he returned ; and engaged in a violent controversy with the Royal Society. After various other literary controversies, and publishing many books, which are now no longer read, he was drowned on crossing a river, July 12th 167(5.

STU BBS (George), an ingenious English writer, who was rector of GranviHe, m Dorsetshire. He wrote many of the best papers ;n (he Freethinker, in 1718, in conjunction with Ambrose Philips, and others. He also published A New Adventure of Telemachus ; 2. A Dialogui on Beauty between Socrates and Aspasio, :n thr manner of Socrates; and, 3. A Translation of Madam Seviˆne's Letters, the first that ever ap peared in English, and much in the spirit i original.

STVBBS (George), was born in 1724 at 1

verpool, where, in early life, he was distinguished by his anatomical pursuits. At the age of thirty he went to Rome for improvement, and on his return settled in the metropolis. In 1766 he published the Anatomy of the Horse ; all the plates of which were drawn and engraved by himself. As a painter of animals, particularly the race courser, he was not excelled by any of his contemporaries, and his pictures of the Lion and Horse, and the Lion and Stag, were deservedly applauded. Mr. Stubbs was also the inventor of a species of painting landscapes on large plates of enamel ; and he published several prints, chiefly of animals. At the time of his death he was employed on a work entitled a Comparative Anatomical Exposition of the Structure of the Human Body, with that of a Tiger and Common Fowl. He was a man of such muscular strength that he has more than once carried a dead horse on his back up two pair of stairs to his dissecting room on the attic floor. He was an associate of the Royal Academy, and died in

1806.

STUB’BLE, n. s Fr. eslouble ; Lat. stipulu. The stalks of corn left in the field by the reaper.

This suggested

At some time, when his soaring insolence Shall reach the people, will-be the fire To kindle their dry stubble, and their blaze Shall darken him for ever. Shakspeare.

You, by thus much scene, Know by the stubble what the come hath beene.

Chapman.

If a small red flower in the stubble fields, called the wincopipe, open in the morning, be sure of a fair day. Bacun .

His succeeding years afford him little more than the stubble of his own harvest. Dryden.

After the first crop is off, they plow in the wheat ttubble. Mortimer's Husbandry.

Thrice happy Dick employed in threshing stubble, Thy toil is lessened, and thy profits double. Swift. STUB'BORN, adj. } Derived by Minshew STUB'BORNLY, adv. £from stoutborn ; referr-STUB'BORNNES», n.s. J edbyJuniustOTi/Sapoe; and deduced better by Mr. Lye from stub, perhaps from stub-horn. — Johnson. There is a Belgic styvern, of the same meaning. Obstinate ; inflexible; stiff; contumacious; hardy; firm: the adverb and noun substantive corresponding.

The queene is obstinate, Stubborn to justice, apt t' accuse it, and Disdainful to be tried by 't.

Shakspeare. Henry VIII. Stubbornly he did repugn the truth, About a certain question in the law.

Id. Henry VI.

He chose a course least subject to envy, between stiff stubbornness and filthy flattery. Hayward.

Then stood he neere the doore, and proud to draw The stubborne bow, thrice tried, and thrice gave law.

Chapman.

He believed he had so humbled the garrison that they would be no longer so stubborn. Clarendon.

I’ll not flatter this tempestuous king, But work his stubborn soul a nobler way. Dryden.

Take a plant of stubborn oak, And labour him with many a sturdy stroke. Id.

Patriots, in peace, assert the people’s right, With noble stitbborness resisting might. Id.

Stubbornness, and an obstinate disobedience must be mastered with blows, Lucke.

‘ All this is to be had only from the epistles them* selves, with stubborn attention, and more than com-mon application. Id.

He wilfully neglects his book, and stubbornly refuses any thing he can do. Id.

Patience under torturing pain, Where stubborn stoicks would complain. Sicift.

STUC’CO, n. s. Ital. stucco ; Fr. stuc. A kind of fine plaster for walls.

Palladian walls, Venetian doors, Grotesco roofs, and stucco floors. Pope.

STUCCO, in building, is a composition of white narble pulverised, and mixed with plaster of lime ; and the whole, being sifted and wrought up with water, is used like common plaster: this is called by Pliny marmoratum opus, and alba-riurn opus.

A patent has been granted to Mr. B. Higgins for inventing a new kind of stucco, or water ce-ment, more firm and durable than any heretofore. Its composition, as extracted from the specification signed by himself, is as follows : — ‘ Drift-sand, quarry, or pit-sand, which consists chiefly of hard quartose flat-faced grains with sharp angles ; which is the freest, or may be easily freed by washing, from clay, salts, and calcareous, gypseous, or other grains less hard and durable than quartz ; which contains the smallest quantity of pyrites or heavy metallic matter inseparable by washing ; and which suffers the smallest diminution of its bulk in washing in the following manner — is to be preferred before any other. And where a coarse and fine sand of this kind, and corresponding in the size of their grains with the coarse and fine sands hereafter described, cannot be easily procured,

let such sand of the foregoing quality be chosen as may be sorted and cleansed in the following manner : Let the sand be sifted, in streaming clear water, through a sieve which will give passage to all such grains as do not exceed one-sixteenth of an inch in diameter ; and let the stream of water and the sifting be regulated so that all the sand, which is much finer than the Lynn-sand commonly used in the London glass-houses, together with clay and every other matter specifically lighter than sand, may be washed away with the stream, whilst the purer and coarser sand, which passes through the sieve, subsides in a convenient receptacle, and whilst the coarse rubbish and rubble remain on the sieve to be rejected. Let the sand which thus subsides in the receptacle be washed in clean streaming water through a finer sieve, so as to be further cleansed and sorted into two parcels ; a coarser, which will remain in the sieve, which is to give passage to such grains of sand only as are less than one-thirtieth of an inch in diameter, and which is to be saved apart under the name of coarse sand ; and a finer, which will pass through the sieve and subside in the water, and which is to be saved apart under the name of fine sand. Let the coarse and the fine sand be dried separately, either in the sun or on a clean iron plate, set on a convenient surface, in the manner of a sand-heat, and stirred continually till dried, else it will be discolored. Let lime be chosen, which is stone-lime, which heats the most in slaking, slakes the quickest when duly watered, is the

freshest made and closest kept ; dissolves in dis- •illed vinegar with the least effervescence, and leaves the smallest residue insoluble, and in this residue the smallest quantity of clay, gypsum, or martial matter. Let fourteen pounds of the lime thus chosen be put in a brass-wired sieve ; let the sieve be finer than either of the foregoing; let the lime be slaked by plunging it in a butt filled with soft water; raising it out quickly, and suffering it to heat and fume ; by repeating this plunging and raising alternately, and agitating the lime, until it be made to pass through the sieve into the water ; let the part of the lime which does not easily pass through the sieve be rejected ; let fresh portions of the lime be thus used until as many ounces of lime have passed through the sieve as there are quarts of water in the butt. Let the water thus impregnated stand in the butt closely covered until it becomes clear ; and through wooden cocks, placed at different heights in the butt, let the clear liquor be drawn off as fast and as low as the

lime subsides for use. This clear liquor I call the cementing liquor. The freer the water is from salme matter the better will be the cementing liquor made Tvitb it. Let fifty-six pounds of the chosen lime be slaked, by gradually sprinkling on it, and especially on the unslaked pieces, the cementing liquor, in a close clean place. Let the slaked part be immediately sifted through the last-men- tioned fine brass-wired sieve : let the lime which passes be used instantly, or kept in air-tight vessels, and let the part of the lime which does not pass through the sieve be rejected. This finer richer part of the lime which passes through the sieve f call purified lime. Let bone ash be prepared in the usual manner, by grinding the whitest burnt bones, but let it be sifted, to be much finer than the bone ash commonly sold for making cupels. The most eligible materials for making my cement being thus prepared, take fifty-six pounds of the coarse sand and forty-two pounds of the fine sand ; mix them on a large plank of hard wood placed horizontally ; then spread the sand so that it may stand to the height of six inches, with a flat surface on the plank ; •wet it with the cementing liquor, and 1ft any superfluous quantity of the liquor, which the sand in the condition described cannot retain, flow away off the plank. To the wettest sand add fourteen pounds of the purified lime in several successive portions, mixing and beating them up together in the mean time with the instruments generally used in making fine mortar: then add fourteen pounds of the bone ash in successive portions, mixing and beating them all together. The quicker and the more perfectly these materials are mixed and beaten together, and the sooner the cement thus formed is used, the better it will be. This I call the water cement coarse grained, which is to be applied in building, pointing, plastering, stuccoing, or other work, as mortar and stucco now are ; with this difference chiefly, that as this cement is shorter than mortar or common stucco, and dries sooner, it ought to be worked expeditiously in all cases ; and in stuccoing it ought to be laid on by sliding the trowel upwards on it ; that the materials used along with this cement in building, or the

ground on which it is to be laid in stuccom-‘ ought to be well wetted with the cementing liquor, in the instant of laying on the cement™ and that the cementing liquor is to be used wh*ui it is necessary to moisten the cement, or when a liquid is required to facilitate the floating of the cement. When such cement is required to In-of a finer texture, take ninety-eight pounds of the fine sand, wet it with the cementing liquor, ami mix it with the purified lime and the bone ash in the quantities and in the manner above described; with this difference only, that fifteen pounds of lime, or thereabouts, are to be

used instead of fourteen pounds, if the greater part of the sand be as fine as Lynn sand. This [call water cement fine grained. It is to be used in giving the last coating, or the finish, to any work intended to imitate the finer grained stones or stucco. But it may be applied to all the uses of the water cement coarse grained, and in the same manner. When for any of the foregoing purposes of pointing, building, &c., such a cement is required much cheaper and coarser grained, then much coarser clean sand than the foregoing coarse sand, or well washed fine rubble, is to be provided. Of this coarse sand or rubble take fifty-six pounds, of the foregoing coarse sand twenty-eight pounds, and of the fine sand fourteen pounds ; and aftei mixing the.se, snd wetting them with the cementing liquor in the foregoing manner, iuld fourteen pounds or somewhat less of the purified lin>e. and then fourteen pounds or somewhat less of the bone ash, mixing them together as above. When my cement is required to be white, white sand, white lime, and the whitest bone ash are to be chosen. Gray sand, and gray bone ash formed of half burnt bones, are to be chosen to make the cement gray ; and any other color of the cement is obtained either by choosing colored sand, or by the admixture of the necessary quantity of colored talc in powder, or of coloivd vitreous 01 metallic powders, or other durable coloring ingredients commonly used in paint. To the end that such a water cement as 1 have described maybe made as useful as it is possible in all circumstances ; and that no person may imagine that my claim and right under these letters patent maybe eluded by divers variations, which may be made in the foregoing process without producing any notable defect in the ce-ment; and to the end that the principles of this art, as well as the art itself of making my ce-ment, may be gathered from this specification and perpetuated to the public ; I shall add the following observations: This my water cement, whether the coarse or fine grained, is applicable in forming artificial stone, by making alternate layers of the cement and of flint, hard stone, or brick, in moulds of the figure of the intended stone, and by exposing the masses so formed to the open air to harden : but they must not be exposed to rain till they are as hard as rortland stone. When such cement is required for water fences, two-thirds of the prescribed quantity of bone ashes are to be omitted ; and in the place thereof an equal measure of powdered terras is to be used ; and, if the sand employed be not of the coarsest sort, more terras must be added, so that the terras shall be by weight one-sixth part

of the weight of the sand. When such a cement is required of the finest grain, or in a fluid form, so that it may be applied with a brush, flint powder, or the powder of any quartose or hard earthy substance, may be used in the place of sand ; but in a quantity smaller, as the flint or other powder is finer ; so that the flint-powder, or other such powder, shall not be more than six times the weight of the lime, nor less than four times its weight. The greater the quantity of lime within these limits, the more will the cement be liable to crack by quick drying, and vice versa. Where such sand as I prefer cannot be conveniently procured, or where the sand can-not be conveniently washed and sorted, that sand which most resembles the mixture of coarse and fine sand above prescribed may be used as I have directed, provided due attention is paid to the quantity of the lime, which is to be greater as the quantity is finer, and vice versa. Sea sand well washed will answer. Where sand cannot be easily procured, any durable stony body, or baked earth grossly powdered, and sorted nearly to the sizes above prescribed for sand, may be used in the place of sand, measure for measure, but not weight for weight, unless such gross powder be as heavy specifically as sand. Sand may be cleansed from every softer, lighter, and less durable matter, and from that part of the sand which is too fine, by various methods, preferable, in certain circumstances, to that which I have described. Water may be found naturally free from fixable gas, selenite, or clay ; such water may, without any notable inconvenience, be used in the place of the cementing liquor; and water approaching this state will not require so much lime as I have ordered to make the cementing liquor ; and a cementing liquor sufficiently useful may be made by various methods of mixing lime and water in the described proportions, or nearly so. When stone lime cannot be procured, chalk lime or shell lime, which best resembles stone lime, in the characters above written of lime, may be used in the manner described, except that fourteen pounds and a half of chalk lime will be required in the place of fourteen pounds of stone lime. The proportion of lime which I have prescribed above may be increased without inconvenience, when the cement or stucco is to be applied where it is not liable to dry quickly ; and in the contrary circumstance this proportion maybe diminished; and the defect of lime in quantity or quality may be very advan-tajreously supplied by causing a considerable quantity of the cementing liquor to soak into the work, in successive portions, and at distant intervals of time, so

that the calcareous matter of the cementing liquor, and the matter attracted from the open air, may fill and strengthen the work. The powder of almost every well dried or burnt animal substance may be used instead of bone ash ; and several earthy powders, especially the micaceous and the metallic ; and the elixated ashes of divers vegetables whose earth will not burn to lime ; and the ashes of mineral fuel, which are of the calcareous kind, but will not burn to lime, will answer the ends of bone ash ir some degree. The quantity of bor.e ash

described may be lessened without injuring the cement, in those circumstances especially which admit the quantity of lime to be lessened, and in those wherein the cement is not liable to dry quickly. And the art of remedying the defects of lime may be advantageously practised to sup-ply the deficiency of bone ash, especially in building, and in making artificial stone with this cement.'

In the Transactions of the Society for the Encouragement of Arts, Commerce, &c., for 1811, we find the following, invented by H. B. Way, esq.,of Bridport, strongly recommended, and apparently not without just reason : one part chalk lime, and three-parts fine sand collected on the sea-shore, near Bridport Harbour, the whole mixed up to a proper consistence with strong lime-water. Both the lime and sand should be finely sifted ; and, when used as stucco, the first coat to be laid on half the thickness of a crown-piece ; let it remain two days, then with a painter's brush wash it over with strong lime-water, and lay on the second coat of the same thickness. The cost of this is indeed very low; it is thus calculated by Mr. Way as his own expense : —

s. d.

One sack and a quarter of lime, at 2s. 6d. 3 1£ Two men and one boy, two days each, fetching and mixing up materials, and laying on ; men 2s. 3d. per day, boy Wd. per day, and one pint of ale each per day, \1d... . . 11 10£

15 0

The space of wall covered with these materials amounted to twenty-

five square yards ; which is not more than l\d. per yard. It was the outside wall of the investor's house which was covered with this stucco, in a situation greatly exposed to the spray of the sea and bad weather ; yet he adds, though writing five years after its application, that by means of this stucco his house is perfectly free from damp, and the plaster still remains compact and durable.

It is highly probable that the above stucco may, for many years to come, answer very well for the situation in which it has been employed ; but, where the cement is required to be harder, or is wanted to resist water, it should be combined with a portion of some metallic oxide, as iron or lead, which give it a firmness equal to that of freestone : and hence the advantage of employing tarras or puzzolane in the composition of stuccoes or mortars for this purpose ; this singular material being nothing more than a kind of ferruginous clay, or clay combined and intermixed with iron oxide, baked and calcined by the force of volcanic fire, and hence reduced to the form of a light, porous, friable mineral. It is usually obtained from the neighbourhood of Puteoli, and is thrown forth from the craters of Vesuvius. The only preparation it undergoes is that of pounding and sifting, by which it is comminuted to a coarse powder, after which it is beater. up into a due degree of consistency with a certain portion of lime, sometimes with and sometimes without sand. This kind of cement is of considerable antiquity : it was commonly em-STUCCO.

ployed by the Romans along the skirts of the bay of Baiae, the most fashionable watering-place of this celebrated people, during their most luxurious era, in constructing the walls of their sum-mer villas, which were often erected immediately on the shore. It was employed by Mr. Smeatoa in building the Eddystone light-house, in the proportion of equal parts of puzzolane, and slaked Aberthaw lime, and is well known to have answered his fullest expectation. For works less exposed, however, as locks and basons for canals, the proportion of puzzolane may be diminished ; and the cement employed on such occasions, and with great success, is the following : slaked Aberthaw lime two bushels, puzzolane one bushel, clean sand three bushels ; the whole be-ing beaten well together with the proper quantity of water so as to yield 4-67 cubic feet of stucco. It is in consequence of the property we have just ascribed to metallic oxides, of giving solidification to stuccoes, that the scales detached by hammer-ing red-hot iron, and which are to be easily procured at the forges and blacksmiths' shops, are found so advantageous in compositions of this kind. Mr. Smeatori found by repeated experU ments that these

pounded and sifted, and incorporated with lime, produce a cement equal to puzzolane combined with lime in the same proportion. This material, he perceived also, renders common mortar capable of setting under water, lloasted iron-ore was found to answer the same purpose.

Coincidently with these facts Mr. Kirwan observes that Zimmerman mixed one part filings of iron, and three parts sand, and sprinkled, or rather covered them with water, and let them stand six months, at the end of which period he found the vessel burnt by the expansion of the oxygenated iron, and the sand so firmly compacted that the mass thus formed could not be broken but by a chisel and hammer. — Henckel, Origine des Pierres, p. 405 in note. And that this induration may and does take place at great depths in the sea is evidently proved by the observations of Kinman (Mem. Stockh. 1780, related by Gadd), that an iron anchor long deposited in the sea had hardened into stone all the sand, clay, and shells which surrounded it, to a pretty considerable distance; and is further confirmed by a similar observation of Mr. Edward K-'ng, Phil. Trans. 1779, p. 35, that a violent storm having laid bare part of the wreck of a man of war, that had been stranded thirty-three years before, several masses, consisting of iron, ropes, and balls, were found covered over with a hard substance, which, upon examination, appeared to be sand concreted and hardened into a kind of stone; that which concreted round the rope retained the impression of that part of the ring to which the rope was fastened, in the same manner as the impressions of extraneous fossils are often found in various strata. Also round the iron handle of a brass cannon, that remained in the sea a much longer time, a much harder incrustation of sand was found, enclosing cockles, mussels, limpets, oysters, &c., all so firmly fixed, and converted into a substance so hard, that it required as much force to break them as to break the substance of any hard rock.' — Geol. Essays

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A very valuable and curious preservation stucco was invented about fifty years ago by Mr Bachalier of Paris, which was capable ˆof being used in a very liquid state, so as not to injure the finest and most delicate sculpture, which, indeed, it was the direct object of this composition to protect. In this the metallic oxide seems to have been lead, and one of the principal ingredients the caseous part of cheese, so frequently used in our own country as an ingredient in cement for

uniting broken pieces of glass and china. This stucco-composition of Mr. Bachalier has of late years been esteemed of so much value in France that a committee of the first French chemists, Berthollet, Chaptal, Vauquelin, Le Briton, and Gayton-Merveau, have been appointed by the Imperial Institute to examine into its component parts, of whose report we shall offer the following abridgment : — ‘ It was in 1755 that Mr. Bachalier, struck with the speedy alteration of the stones employed in the principal buildings at Paris, and the inconveniencies of the process employed from time to time to renew their surfaces, proposed to thesuperintendant of the royal buildings to try a preservative stucco. Accordingly three pillars in the court of the Louv;e were coated with this stucco for half their length, two facing the south, the other the west. These were still remarkable in July last for the uniformity of their tint, strongly distinguished from the dull gray and earthy aspect of the contiguous parts : but, as the alterations made in completing the Louvre would necessarily destroy every trace of this experiment, the Institute appointed a committee to enquire concerning it before it should be too late. In company with Mr. Fontaine, architect of the Louvre, the gentlemen above-mentioned examined the pillars, and found that the stucco applied formed a coat too thin to in-jure the finishing of the most delicate sculpture ; that it retained a uniform color even in the parts exposed to the action of the wind, rain, and sun; that rubbing it with the hand made no impression on it ; and that, if one of the three pillars exhibited a reddish yellow tint, there could be no doubt, from its appearance in other respects, that this was owing to some coloring matter added intentionally. It could not be found on enquiry that Mr. Bachalier had consigned his process to writing, and the following was the best account his son could give of it from memory. ‘ Its basis consists of the sifted powder of oyster-shells, previously washed and calcined to whiteness, mixed with the butyraceous and caseous part of milk. My father used the common cheese known by the name of fromage a la pie (skimmed milk cheese). Me first separated all the wheyey part by pressure, and then left it some time exposed to the air to dissolve or soften. In this state lie mixed with it a quantity of calcined oyster-shells in fine powder. When this mixture was brayed on a stone, the cheese softened, and formed a very smooth and whitish liquid paste. To make the stucco he diluted this with a solution of alum in water; the quantity of water being proportioned according to the thickness of the coat intended to be applied.’

‘ Mr. Bachalier could say nothing of the]> pcrtiors of the ingredients ; he only ad.le 1 t’lut

his father having thought of employing this composition undiluted to cover leaves of paper, from which writing was easily effaced by a wet sponge, he observed that the oyster-shell powder was taken at random, and added to the cheese till it had acquired the consistency of a paste capable of being spread on paper. The committee hav-ing obtained from Mr. Bachalier a few leaves of paper covered with thin paste, found, from the very deep black immediately given it by the hydrosulphuret of potash, that it contained a considerable quantity of oxide of lead, the presence pf which there was no reason to suspect in the preservative stucco, so that they could not be considered as the same. It remained therefore to analyse the stucco, which was done by Mr. Vauquelin ; though, as a very small quantity only could be obtained by scraping the pillars, it did not admit of repeated trials. The results of his analysis gave

Carbonate of lime … .63 Sulphate of lime …. 7‘73 Carbonate of lead . … 6 Oxide of iron, about …4

Silex 2

Water 20

Organic matter, an indeterminate quantity.

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The surplus of 2-73 Mr. Vauquelin ascribes either to the matter not having been dried to the same degree, or to the escape of a little carbonic acid during the calcination. The presence of animal matter was sought for, but not a particle could be separated. The smell it emitted during calcination no way resembled that of animal matters ; on the contrary it had the pungent sharpness of vegetable substances. On being exposed to the action of heat in a retort, however, a clear and almost colorless liquid came over, from which potash expelled a

very evident ammoniacal vapor. This indicates that some animal substance entered into the composition, but that in time it was decomposed, and left only an ammoniacal salt. The brownish color it acquired in the tire also proves that some animal matter still remained in it, though altered in its nature, since it neither emitted the smell proper to such substances, nor yielded any perceptible quantity of oil. Lastly, this matter yielded no appreciable quantity of alumine, so that it may be presumed no alum was employed in the composition.

‘ Mr. Bachalier having some of the paper that had been prepared by his father, the coating of •his was analysed, and the result indicated that Quicklime ….. 56-66 Calcined gypsum …. 23-34 Ceruse or carbonate of lead . . 20 had entered into its composition.

‘ On these proportions more dependence can be placed than on the former, since it was impossible to detach the plaster from the pillars without some of the substance of the stone itself. That the caseous part of the milk is the proper vehicle for the powders we learn from the positive testimony of Mr. Bachalier, the son ; and its utility is confirmed by the experiments of Mr.

D’Arcet published some years ago. Of the efficacy of Mr. Bachalier’s composition there can be no doubt, as \ve have irrefragable and still existing testimony of it ; nor would it be difficult to estimate this beforehand, when we consider the causes that produce the gradual decay of the finest buildings in this capital, and the means ot guarding against them. Hard and fine grained calcareous stone, susceptible of a greater or les* degree of polish, is not liable to this alteration. It is therefore owing to the nature of the stone commonly employed, which is of a loose and unequal texture, filled with cavities, and found by analysis to contain ten or twelve per cent, of si-lex, and frequently three or four of oxide of iron. The difference of the stones from the quarries near Paris is evident from the tables of Mr. Rondelet, in his Treatise on the Art of Building ; where we see, for example, that what is called the grignard of Passy is of the specific gravity of 2-462, and supports a weight of 6750 kil. ; while the lambourde of St. Germain has only 1-560 specific gravity and is crushed by a weight of 921 kil. The prices of these two kinds of stone differ too in the proportion of twenty-six to ten.

‘ It is not at all strange that the little spider called by Linnaeus senoculala, the cellar spider of Geoffrey, should find on the surface of this stone a convenient situation to shelter itself, deposit its eggs, and

spread the nets in which it awaits its prey. Its web extends circularly round the cavity that serves as its den, forming round spots of three or four centimes (an inch or an inch and a half) radius. It is not thirty years since the hotel des monnoies was built, and I have counted no fewer than sixty-eight of these dark gray spots on one of the pillars of the vestibule. Similar ones are found not only on the stone, but on the coatings of plaster, and on the walls covered with common stucco. It is particularly in the joints and angles that the insect begins»to fix it-self. I have seen several on walls, the stucco of which had been coated afresh within less than seven years. These spots at length form a continued coat, retaining the sloughs of these insects, the remains of those on which they feed, and the dust raised by the wind, so that lichens soon take root in them. If it be asked, how is this to be prevented ? the answer is easy. By a composition that resists water, will adhere to the stone so as not to scale off, has a sufficient degree of consistency to stop the pores accurately, is liquid enough to be spread as a wash, and uniformly to ice over, as it were, all the saliant and indented parts without thickening the angles or blunting the edges, and lastly which gives to the assemblage of coarse grains the smooth surface of po-lishable stones, in which it appears these insects cannot nestle. And this we think may be expected from Mr. Bachalier's stucco. Meantime I must observe, that, in the present state of our chemical knowledge, other means of fulfilling these conditions may be pointed out. We know, for instance, that phosphate of lime is one of the most fixed combinations : it would be sufficient, therefore, to wash over the stone with phosphoric acid more or less diluted, or with phosphate of lime, lead, magnesia, Sec., held in solution by an

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a sieve not very fine, in order to separate the parts that will not slake. This is to be triturated with the cheese to the consistence of a soft, smooth, and coherent paste. To this are to

excess of their acid, to give it a sort of covering determined on, it is to be slaked in as little water that would render it as unalterable as the stone as possible, but enough to make it pass throu<‘h

of Logozan in Estramadura. It is equally known — : - *

that sulphate of barytes resists all agents in the humid way ; and we might certainly coat the stone with this earthy salt, by first impregnating

it with a solution of sulphate of iron, zinc, mag-added the calcined gypsum and the white “lea’.,, nesia, alumine, &c., and immediately washing it which must not be adulterated with chalk, anil over with barytes water. The insolubility of by farther grinding on the stone with a little water

the wl.Je is to be reduced to a pap, rather thick than fluid. Lastly, it is to be diluted with com-mon water the moment of using it, which is to be done with a painter’s or varnisher’s brush.’

Dr. Shaw informs us in his Travels (p. 286), that the cement or mortar used in Barbary, which is apparently of the same consistence and coin-position with those of the ancients, is made in the following manner: they take two parts of wood-ashes, three of lime, and one of fine sand, which, after being well sifted and mixed together, they beat for three days and nights incessantly with wooden mallets, sprinkling them alternately and at proper times with a little oil and water, till they become of a due consistence. This composition, he adds, is chiefly used in their arches, cisterns, and terraces ; but the pipes of their aqueducts are joined, by beating tow and

oxalates and tartrates of lime, and the adhesion they contract by deposition even ca polished substances, suggest processes for washes

iiot less solid, as the acids added to these salts to render them temporarily soluble, saturating themselves with their base from the substance of the stone itself, would not fail to connect together all the grains, fill up their intervals, and completely close the pores. Trials made with a view to as-certuin the justice of this reasoning have confirmed the expectation of a successful result ; since on the most porous stones they have produced a surface on which the eye could see no appearance of coating, but which, being rubbed with wet black cloth till the cloth showed signs of wear, was not in tbe least soiled by it. Preparations of this kind, however, would be much more expensive than Bachalier's stucco, so that

their use must be restricted to the preservation of lime together with oil only, without any mixture

sculpture of extreme delicacy.

' For farther satisfaction trials have been made with different kinds of stone, and stucco made in imitation of Bachalier's. These have given rise to the following observations. 1. All the compositions in which alum water was employed soiled the fingers, and were washed off by water. 2. The cheese that acquires the greatest consistency with dry substances is that whLh is almost entirely deprived of the butyraceous and wheyey parts. M. D'Arcet, in the paper already quoted, had remarked that these were more detrimental than useful, that painting with milk would not resist water, and that the cheese called f'romage a la pie might be used after it had grown dry, though less advantageously than when fresh made

of water. Both these compositions quickly as-sume the hardness of stone, and suffer no water to pervade them : and will, therefore, answer the purpose of :tucco.

STUCK. The fret, and part. pass, of STICK, which see: also, as a noun substantive, a thrust.

1 had a pass with rapier, scabbard and all ; and he gives me the stuck in with such a mortal motion, that it is inev *ble. Shahspeare. Twelfth Night.

What more infamous brands have records stuck iipon any, than those who used the best parts tor the. worst ends? Uecuy of Piety.

The partners of their crime will learn obedience, When they look up and see their fellow-traitors Stuck on a fork, and black'ning in the sun.

Addisan.

STUD, 71. s. & v. a. Sax. pcul>u ; Goth. slud.

and well drained. 3. A mixture of this cheese A or'stake; nail or knob: hence a stand tor

injitli } i met oi mnlir •fnrrvie a r\acre» t lint an 1 iPTPS nlll" ^ *11* .• _ r I I , , .A i 1 1 o

with lime simply forms a paste that adheres but slightly even to coarse grained stone, and not at all to paper. 4. Calcined gypsum, which in a small dose facilitates the union of the lime and cheese, renders the paste hard and clotty if it be used in too large proportion. 5. It had appeared that whiting, which is used in paper hangings, might be admitted into the preparation : but it was found that if this earthy substance, which in a process described by M. D'Arcet is carried to twenty times the weight of the lime, may be used with success for inside work, it would make too thick a coat, and would not adhere so strongly to the stone. 6. The addition of a very little ochre, or red oxyde of iron, to this preparation, will give it such a tint as may be wished, without altering its properties. The proportion of cheese must depend in some measure on the state in which it is, and cannot be determined precisely but by the condition of making a soft paste. A fourth of the weight of the solid matters appears to be a sufficient quantity of cheese tresh from the press.

'The quantity of lime to be used at .nee being

Raleitrh.

horses; and a collection of horses.— Junius. To furnish with, or adorn

with studs. Thy horses shall be trapped, Their harness studded all with gold andpeail.

Sliakspeare.

A belt of straw, and ivy buds, With coral clasps, and amber stuJs.

Handles were to add, For which he now was making studs.

Chapman s Iliutl.

Crystal and myrrhine cups, embossed with gems And stud* of pearl. Milton’* Paradise Regan

In the ttudTot Ireland, where care is taken, « see horses bred of excellent shape, v.gour, a™^;

A silver studded ax, alike bestowed.

Dryden s A-.neui.

STUDDING SAILS, certain light sails extended in moderate and steady breezes, beyond the ski’rts of the onncipal sails, where they a,.Fa ie yard-arms, hn) an English poet, who t

ryyaiˆiaTO-s

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studied at Trinity College, Cambridge. He translated several of Seneca's tragedies ; but was killed at the siege of Breda, where he had a command under prince Maurice, in 1587.

STUD'Y, n.s., v n., &O Fr. estude ; Latin

STIJ'DENT, n. s. \y.a. I ttudium. Application

STUD'IED, adj. {^ of mind to learning ;

Siun'iER, n. s. f attention ; medita—

STU'DIOUS, adj. tion ; subject of at—

STU'DIOUSLV, adv. J tention ; apartment appropriated to literary employment : to think with close application; endeavour: apply the mind to : a student and studier signify one who closely applies to study : studied and studious, given to books ; learned ; attentive to ; careful (taking of}: the adverb corresponding.

Study to be quiet, and do your own business.

1 T/tess. iv. 11.

Get me a taper in my study, Lucius.

Shakspeare. Julius Caesar.

Keep a gamester from dice, and a good student from his book. Id. Merry Wives of Windsor.

What can happen

To me above this wretchedness ? All your studies Make me a curse like this? Id. Henry VIII.

He hath studied her will, and translated her out of honesty into English. Id, Merry Wive*.

He died

As one that had been studied in his death, To throw away the dearest thing he owed, As ‘twere a careless trifle. Shakspeare.

I’m well studied for a liberal thanks Which I do owe you. Id. Antony and Cleopatra.

You could, for a need, study a speech of some dozen lines, which I would set down. Id. Hamlet.

The king of Castile, a little confused, and in a study, said, That can I not do with my honour.

Bacon’s Henry VII.

It will be fit that some man, reasonably studied in the law, go as chancellor. Bacon.

Studies serve for delight in privateness and retiring, for ornament in discourse, and for ability in the judgment and disposition of business. Id. Essays.

Let all studies and libraries be towards the east.

Walton.

Without study thia art is not attained, nor fit to be attained. Holyday.

Some servants of the king visited the lodgings of the accused members, and sealed up their studies and trunks. Clarendon.

Nothing lovelier can be found In woman, than to study household good. Milton,

Just men they seemed, and all their study bent To worship God aright, and know his works. Id.

Let my due feet never fail To walk the » udious cloister’s pale. Id.

Divines must become studious of pious and venerable antiquity. White.

During the whole time of his abode in the university, Hammond generally spent thirteen hours of the day in study. Fell.

STUFF, n.s., r.a..&) Fr. estoffe ; Dan., STUFF'ISG, n. <t. [v. n. S Belg., andTeut. staff. Any matter or body ; materials ; furniture ; essences ; that which fills any thing ; a medicine : 10 stuff is to thrust into ; to fill to repletion ; cause to swell out : as a verb neuter, to feed gluttonously : stuffing is that by which a thing is filled.

Let Phidias have rude and obstinate stuff to carve : though his art do that it should, his work will lack

that beauty which otherwise in fitter matter it might have had. Hooker.

She went for parsley to stuff a. rabbet. Shakspeare, These gloves the count sent me ; they are an excellent perfume. — I am stuft, cousin, 1 cannot smell. la.

I will be the man that shall make you great. — T cannot perceive how, unless you give me your doub let, and stuff' me out with straw. Id. Henry IV.

Thy verse swells with stuff' so fine and smooth, That thou art even natural in thine art. Id. Timm.

Such stuff as madmen Tongue and brain not. Shukspeare.

When we've stuffed

These pipes, and these conveyances of blood, With wine and feeding, we have suppler souls. Id.

I did compound for her A certain stuff, which being ta'en weuld seize The present power of life. Id. Ciimbeline.

Grief fills the room up of my absent child, Lies in his bed, walks up and down with me, Stuffs out his vacant garments with his form.

Shakspeare.

Put roses into a glass with a narrow mouth, stuffing them close together, but without bruising, and they retain smell and colour fresh a year.

Bacon's \alural Histori/. The workman on his stuff bis skill doth shew, And yet the stuff gives not the man his skill.

Dories.

Each thing beheld did yeeld Our admiration : shelves with cheeses heapt ; Sheds stuft with lambs and goats, distinctly kept.

Chapman.

He took away locks, and gare away the king's Stuff. Huyward.

It is not usual among the best patterns to stuff the report of particular lives with matter of public record.

Wolton.

Groaning waggons loaded high With stuff. Cowley's Davideit.

Those accusations are stuffed with odious generals, that the proofs seldom make good. Clarendon.

Of brick, and of that stuff', they cast to build A city and tower. Milton.

Rome was a farrago out of the neighbouring nations ; and Greece, though one monarchy under Alexander, yet the people, that were the stuffing and materials thereof, existed before. Hale.

Degrading prose explains his meaning ill, And shews the stuff, and not the workman's skill.

Roscommon

Please not-thyself tht flattering crowd to hear ; ‘Tis fulsome stuff to feed thy itching ear.

Dryden’s Persius. Officious Baucis lays Two cushions, stuffed with straw, the seat to raise.

Id.

What have we more to do than to stuff OUT guts with these figs 1 L’Estratige.

Pierce an hole near the inner edge, because the triangle hath there most substance of stuff.

Moron’s Mechanical Exercises. Arrach leaves are very good in pottage and stuffings. Mortimer.

This crook drew hazel-boughs adown, And stuffed her apron wide with nuts so brown.

Gay.

For thee I dim these eyes, and stuff this head With all such reading as was never read. Pope.

To-morrow will be time enough To hear such mortifying stuff. Swift.

STUHL-WEISSENBURG, a county of West Hungary, between the cov.nties of Vesz-

prim and Pest, from which last it is separated by the Danube. Its territorial extent is 1600 square miles. Except in the north, where it has a few hills, it is in general level and has several lakes and marshes. Besides the Danube, flowing along its eastern boundary, it is watered by the Sarvitz, formed into a canal for a considerable part of its course. The principal products are wheat, wine, and tobacco. Population

120,000.

STUHL-WEISSENBURG, or SZEPES-FRJAIIVAR, a town of the south-west of Hungary, the capital of a palatinate, and a bishop's see, was built by king Stephen in the eleventh century, and was, during five centuries, the place where the kings of Hungary were crowned and interred. It was called on that account Alba Regalis; three large moles or causeways proceeded from it ; and between these were churches, houses, and gardens, the whole forming extensive suburbs. The removal of the court, and the misfortunes occasioned by repeated sieges, have greatly altered it ; though it still contains several respectable buildings. It was formerly traversed by several canals, but these having been neglected are choked up, and the waters have formed marshes. At present it has about 13,000 inhabitants, with a gymnasium and barracks for soldiers ; its fortifications were demolished in 1702. The inhabitants are either Catholics, or of the Greek church. 'Here are some woollen manufactures, and in the neighbourhood a saltpetre work. Thirty-six miles south-west of Buda.

STUKELY (Dr. William), a celebrated antiquarian, descended from an ancient family in Lincolnshire, was born in Holbeach in 1687, and educated in Betmet College, Cambridge. While an under-graduate, he indulged a propensity to drawing ; but made physic his principal study, and first began to practise at Boston. In 1717 he removed to London, where, on the recommendation of Dr. Mead, he was soon after elected F. R. S. He was one of the first who revived that of the Antiquarians in 1718, and was their secretary for many years during his residence in town. In 1729 he took holy orders by the encouragement of archbishop Wake; and was soon after presented by lord chancellor King with the living of All Saints in Stamford. In 1741 he became one of the founders of the Egyptian Society, which brought him acquainted with the benevolent duke of Montague, one of the members ; who prevailed on him to leave Stamford, and presented him to the living of St. George the Martyr, Queen Square. He died of the palsy, in 1765. His Dissertation on the Spleen was well received ; as was also his Iti-nerarium Curiosum, the first fruit of his juvenile excursions. His great learning, and profound researches into the remains of antiquity, enabled him to publish many elaborate and curious works : his friends called him the arch-druid of his age. His discourses, entitled Palasographia Sacra, on the vegetable creation, show him a botanist, philosopher, and divine.

STUM, n.s. & v. a. Swed. stum, supposed to be contracted from Lat. mustum. Wine un-fermented ; must ; new or newly fermented wine :

to stum is to renew wine by fresh fermentation. Let our wines without mixture or stum be all fine Or call up the master, and break his dull noddle.

_· ·

Drink every letter on ‘t in stum, And make it brisk champaigne become. Hudibrcu.

An unctuous clammy vapour, that arises from the stum of grapes when they lie mashed in the vat, puts out a light when dipped into it. Addison on Italy.

Vapid wines are put upon the lees of coble wines to give them spirit, and we stum our wines to renew their spirits. Floyer.

STUM, in the wine trade, denotes the unfermented juice of the grape after it has been several times racked off and separated from its sediment. The casks are for this purpose well matched or fumigated with brimstone every time, to prevent the liquor from fermenting, as it would otherwise readily do, and become wine. See MUST.

STUM’BLE, v. n., v. a., &-s This word Ju—

STUM’BLER, n. s. [n. s. t nius derives from

STUM’BLINGBLOCK, ? stump, and says

STUM’BLINGSTONE. J the original meaning is to strike, or trip, against a stump. I ra-ther think it comes from tumble. — Johnson. See TUMBLE. To trip in walking; slip ; err; strike against or upon by chance : to make to boggle : a blunder or failure : the noun substantive and compounds corresponding.

The way of the wicked is as darkness ; they know not at what they stumble. Proverbs iv. 19.

He that loveth his brother abideth in the light, and there is none occasion of stumbling in him.

1 Jolin ii. 10.

We preach Christ crucified, unto the Jews a stum-blingblock, and unto the Greeks foolishness.

1 Corinthians i. 23.

What man art thou, that thus bescreened in night, So stumblest on my counsel 1

Shakspeare. Romeo and Juliet As we paced along

Upon the giddy footing of the hatches, Methought that Gloster stumbled ; and in falling Struck me, that sought to stay him, overboard.

Shakspeare.

Be sweet to all : is thy complexion sour ? Then keep such company, make them thy allay ;

Get a sharp wife, a servant that will lower : A stumbler stumbles least in rugged way. Herbert.

Such terms amused them all, And stumbled many. Milton's Paradise Lost.

If one illiterate man was stumbled, 'twas likely others of his form would be so too. I'ell.

One stumble is enough to deface the character of an honourable life. L' Estrange.

One thing more stumbles me in the very foundation of this hypothesis. Locke.

STUMP, n.s. > Swed. and Dan. stun/i/c ;

STUMP'V, adj. S Big. stompe. The part of any solid body remaining after the rest is taken away. See STUB. The adjective corresponds.

He struck so strongly, that the knotty sting Of his huge tail he quite in sunder cleft ; Five joints thereof he hewed, and hut the Hum), him J left.

Your colt's tooth is not cast yet.— Not win have a stump.

He through the bushes scrambles ; A stump doth trip him in his pace,
Down comes poor Hob upon his face

Amongst the briers and brambles. Drayton.

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Who, ‘cause they ‘re wasted to the stumps, Are represented best by rumps. Hudibras.

Against a stump his tusks the monster grinds, And in the sharpened edge new vigour finds.

Dryden.

A poor ass, now wore out to the stumps, fell down under his load. L’ Estrange.

A tongue might have some resemblance to the stump of a feather. Grew’s Musceum.

They burn the stubble, which, being so stumpy, ihey seldom plow in. Mortimer.

A coach-horse snapt off the end of his finger, and I dressed the stump with common digestive.

Wiseman’s Surgery.

Worn to the stump in the service of the maids, ‘tis thrown out of doors, or condemned to kindle a fire.

Swift.

STUN, v. a. Sax. ftunan, of jjepcun, noise,

Fr. etonner. To confound or dizzy with noise ;

or with a blow.

An universal hubbub wild

Of itunning sounds, and voices all confused,

Assaults his ear. Milton.

Still shall I hear, and never quit the score,

Stunned with hoarse Codrus' Theseid o'er and o'er.

Dryden. One hung a pole-ax at his saddle-bow,

And one a heavy mace to stun the foe. Id.

Too strong a noise stuns the ear, and one too

•weak does not act upon the organ. Cheync.

The Britons, once a savage kind, Descendents of the barbarous Huns, With limbs robust, and voice that stuns, You taught to modulate their tongues, And speak without the help of lungs. Swift.

STUNG. The pret. and part. pass, of sting.

To both these sisters have I sworn my love : Each jealous of the other, as the stuny Are of the adder. Shakspeare. King Lear.

With envy stung, they view each other's deeds ; The fragrant work with diligence proceeds.

Dry den's JEneid.

STUNT, v. a. Isl. stunta. To hinder from growth.

Though this usage stunted the girl in her growth , it gave her a hardy constitution ; she had life and spirit. Arbuthnot.

The tree

Grew scrubby, dried a-top, and stunted; And the next parson stubbed and burnt it. Swift.

STUPE, n. s. Lat. slupa. Cloth or flax dipped in warm medican ents, and applied to a hurt or sore.

A fomentation was by some pretender to surgery applied with coarse woollen stupes, one of which was bound upon his leg. Wiseman's Surgery.

STUPEFACTION, n. s. i Fr. stupefaction ;

STUPEFAC'TIVE, adj. \ Lat. stupefactus.

Insensibility ; dulness ; stupidity ; sluggishness of mind : causing such a state of mind ; narcotic.

It is a gentle fomentation, and hath a very little mixture of some stupef active.

Bacon's Natural Hittory.

All resistance of the dictates of conscience brings a hardness and stupefaction upon it. South.

She sent to every child From impudence, or stupefaction mild ; And straight succeeded, leaving shame no room, Cibberian forehead, or Cimmerian gloom. Pope.

STUPEN'DOUS, adj. Lat. stupendus. Wonderful; amazing; astonishing.

All those stupendous acts deservedly are the subject of a history excellently written in Latin by a learned prelate. Clarendon.

Great joy was at their meeting, and at sight Of that stupendous bridge his joy increased. Milton.

Portents and prodigies their souls amazed ; But most when this stupendous pile was raised.

Dryden.

Mortals, fly this cursed detested race ; A hundred of the same stupendous size, A hundred Cyclops, live among the hills.

Addison.

STU'PID, adj. ~) Fr. stupide; Lat. stupidus.

STUPID'ITY, n. s. £ Dull ; wanting sensibility

STU'PIDLY, adv. J or apprehension; heavy; sluggish of understanding: the noun substantive and adjective corresponding.

That space the evil one abstracted stood From his own evil, and for the time remained Stupidly good. Milton's Paradise Lost.

O that men should be so stupid grown As to forsake the living God ! Milton.

Men, boys, and women, itupid with surprise, Where'er she passes fix their wond'ring eyes.

Dryden.

Shadwel alone, of all rry sons, is he Who stands conlrmed in full stupidity. Id.

On the shield there were engraven maps of countries, which Ajax could not comprehend, but looked on as stupidly as his fellow-beast the lion. Id.

With wild surprise A moment stupid, motionless, he stood. Thomson.

STUPIDITY. The Greek word jtwporijc corresponds most with our English word stupidity or foolishness, when used to express that state of mind in which the intellects are defective. The immediate causes are said to be, a deficiency of vital heat, or a defect in the brain. Stupid children sometimes become sprightly youths; but, if stupidity continues to the age of puberty, it is hardly ever removed. If stupidity follows upon a violent passion, an injury done to the head, or other evident cause, and if it continues long, it becomes incurable. But the stupidity which consists in a loss of memory, and succeeds a lethargy spontaneously, ceases when the lethargy is cured.

STU'PIFY, v. a. Lat. stupefacio. To make stupid ; deprive of sensibility; to dull.

Those Will stupify and dull the sense a while.

Shakspeare. Cymleline.

It is not malleable ; but yet is not fluent, but ttu-pijied. Bacon.

Pounce it into the quicksilver, and so proceed to the stupifying. Id.

Consider whether that method, used to quiet some consciences, does not stupefy more. Decay of Piety.

Envy, like a cold poison, benumbs and stupefies ; and, conscious of its own impotence, folds its arms in despair. (Jollier.

STU'POR, n. s. Fr. stupeur; Lat. stupor. Suspension or diminution of sensibility.

A pungent pain in the region of the kidneys, a stupor or dull pain in the thigh, and colick, are symptoms of an inflammation of the kidneys.

Arbuthnot on Diet.

STUPRATION, n. s. Lat. stupratio, from stupro. Rape; violation.

Stupration must not be drawn into practice.

l.roume.

STURDY.

STURBRIDGE, a post-town of Worcester county, Massachusetts, eighteen miles south-west of Worcester, and fifty-eight south-wost of Boston. It is watered by the Quinebaug, and the turnpike from Worcester to Hartford passes through the town.

STUR'DY, adj. Fr. estourdi. Hardy; stout; brutal; stiff; obstinate. It is always used with some disagreeable idea of coarseness or rudeness.

The ill-apparelled knight now had gotten the reputation of some sturdy lout, he had so well defended himself. Sidney.

Then withdraw

From Cambridge, thy old nurse ; and, as the rest, Here toughly chew and sturdily digest The' immense vast volumes of our common law.

Donne.

lie was not of any delicate contexture, his limbs rather sturdy than dainty. Wotton.

Sturdiest oaks

Bowed their stiff necks, loaden with stormy blasts, Or torn up sheer. Milton's Paradise Regained.

This must be done, and I would fain see Mortal so sturdy as to gainsay. Hudibras.

Awed by that house, accustomed to command, The sturdy kerns io due subjection stand, Nor bear the reins in any foreign hand. Dryden.

A sturdy hardened sinner shall advance to the utmost pitch of impiety with less reluctance than he took the first steps, whilst his conscience was yet vigilant and tender. Atterbury.

STUKDY, a disease in sheep of much importance. There are two varieties of it, stated by Dr. Duncan, jun., in his useful paper on it, in the third volume of the Transactions of the Highland Society of Scotland; the appearances in each of which are as follow : — When a sheep is attacked with the first of these varieties of the sturdy, it ceases, it is said, to improve, becomes dull, is apt to loiter behind, and separates from the flock. It does not walk straight forward, but often deflects on one side, or dozes round in a circle. The eyes glare steadily in its head, and seem enlarged, from the pupil being round instead of oval, which in healthy sheep is always the case in the day time. Its vision is impaired, and it does not see any object which approaches until it be very near, when it starts away, and runs furiously without any aim. When caught, it is remarkably stupid on being again liberated. In dry weather, it follows eagerly to that quarter from which the wind blows. It has a great reluctance at passing water, as burns or brooks, and cannot easily get through them, but mostly frequents places where it can hear the sound of water. Some time after these appearances have presented themselves, in the course of perhaps about three weeks, there appears and is found, on examining the head, by pressing on it with the thumbs, a remarkable degree of softness at one part of it, where the skull seems to be wanting. But in a few instances no softness is to be discovered in any period of the disease, but in either case, if not relieved by a proper operation, the animal loses the power of standing, and dies perfectly emaciated. The continuance of this sort or variety of the disease extends or lasts from two months to a year, as the circumstances of th« particular case may be. The second or

latter of these varieties is, however, much more rapid in its progress, in which, in addition to some of the above appearances, a great degree of stupor comes on in a few days, which is followed by total blindness, and no softness is ever to be found in any part of the skull or bones of the head.

The appearances on opening the head, in the first of the above varieties, are an oval or round bag, which is found lying between the brain and the skull, quite unconnected with any of the surrounding parts, generally situated between or beneath the horns. These bags vary much in size, being sometimes no larger than a plum, while at others they are as big as a goose's eeg. They are filled with a clear fluid like water, sometimes intermixed with a thin crust, when i' is of a glutinous or slimy nature. Within, or in the skins of these bags, are seen, according to some, many little white bodies, nits, or the ova of insects. These are thus described by Mr. W. Hog, which, though in some measure hypothetical, display an accuracy of observation. He is induced to believe, from two or three recent cases and observations, that the dissolution of the brain, &c., is occasioned by numbers of animalculae, which have been noticed to be swimming loosely in the liquor. They resemble ants' eggs, both in shape and color, but are somewhat shorter. However, as all the animals upon which he made the observation had been dead for some time, so these puny inhabitants of the brain were also dead ; but if they had been living and organised animals, which he has no doubt they were, there would be multitudes of so diminutive a size, as to be quite imperceptible to the naked eye; and he is fully convinced that if the disease was minutely observed in all its stages by microscopical examination, whatever its beginning was, its progress would be, by the activity of these animalcule, increasing both in number and size. In proportion as the disease advances, the bag increases in size, and by its pressure causes the brain to decrease, while the skull immediately over the bag becomes soft and disappears, so that nothing intervenes between it and the integuments of the head. Sometimes, but only in those cases where no attempt has been made to cure or remove it, there are many small bags, unconnected with each other, distributed through the brain or cerebral parts.

In the second sort or variety of the disease, the water is not contained in a bag, but willnn the substance of the brain, in certain cavities termed its ventricles, and sometimes in the hinder parts, where it joins with the spinal mar-row, in which case it is thought to be quite incurable. Hard substances or excrescences growing out from the inside of the skull, and blows upon the head, occasionally produce all the appearances of real sturdy; but in these cases no water is to be

found in the parts. The cause of the appearances in this disease is therefore unquestionably pressure on the brain, \hether it arise from accidental contusion; from a bony excrescence, as in false sturdy ; or from a collection of water, as in the legitimate varieties of it, as seen above. What, however, gives rise to these collections of water, is not by any means

so well ascertained. Inflammation of the brain probably precedes its effusion in the latter variety of the disease; but the generation of the hydatids, or water-bags, in the former sort or variety, is not at all understood. The disease is not contagious ; neither is it peculiar to any soil. It generally affects sheep of the hog kind in the beginning months of the spring and summer, and is commonly ascribed to exposure to tempestuous weather, without sufficient shelter.

In resard to the cure of the disease, as the natural termination of it is invariably fatal, un-less those rare recoveries which are sometimes the consequence of accidental blows on the head, that probably rupture the bags, be except-ecl; and more especially as the mutton in this disease is good, the sooner an attempt is made to relieve the animal by the proper operation, the better; for want of which relief, although it is extremely simple, and not unfrequently successful, thousands of sheep are suffered to perish through carelessness or ignorance. The cure in these cases may be attempted in three different ways, as by tapping, trepanning, and wiring. Where the bag is seated any where in the crown of the head, some suppose that the most ready and the gentlest method is to tap it in the place where the skull is soft, and to let the water run out. This is most commonly performed by means of an awl, or large corking pin, though an instrument with a small tube in it, termed a trocar in surgery, might be easily contrived and formed, which would drain it off in a more complete manner. By this operation, if the instrument be not pushed too far, the animal is nothing the worse, it is said, whether it recover or not. But, what is very remarkable, this plan is not, it is said, successful on all farms

alike, of which many instances are known. An old shepherd has often been heard to remark that, in the course of thirty years' experience, not one sheep out of twenty which he had tap-ped on his own farm had died, while it was very rare that he could cure any on some of the neighbouring ones. He constantly performs it with a corking pin. Others assert that, in their neighbourhoods, more sheep have been cured by this operation than by any other, in performing which the sheep is advised to be laid on its *>ack, and the pin to be inserted in an oblique •oanner ; if water follow, the cure is said to be certain; but, even though it should not follow, provided the bag be pricked into, it is often successful in removing the disease. In the mode of cure by means of trepanning and extracting the bag or cyst, the description of which is accurately given below, there are several circumstances to be carefully attended to.

The animal' being properly secured, and the head placed in the most convenient position, the part to be cut being uppermost, the skin is to be divided by an incision an inch and a half in length, crossed by another of the same length at right angles to it. The skull, which is quite soft, is then to be cautiously divided in the same manner, until the bag with the fluid in it appeal-clear at. the bottom of the incision, which it commonly does. The soft skull is now to be turned back, or a bit cut out of it, so as to

render the bag completely evident. It should then be taken hold of by a pair of blunt forceps, and be gently moved backwards and forwards, to loosen it from its connexions, which are generally very slender. This may also be done by means of a crow's quill, or any blunt pointed instrument, carried frequently round it. The nose of the animal is now to be held, so as to restrain its breath, which may force the bayj from its situation. The operator is to continue moving and pulling it, stopping the breathing of the sheep at intervals, until it is quite extracted. The skin after this is to be laid neatly down again, and a cloth spread with tar placed and tied over the wound above the dry lint, which is folded and laid on it, to prevent either cold in the spring, or flies in the summer, from injuring it. This is to be allowed to remain for two days, when the dressings may be changed, and a bit of cloth spread with hog'* lard, fresh butter, tar, or some other ointment applied on the wound. The dressings should be changed every second day for ten clays or a fortnight, after which time, in ordinary cases, i* will require no more attention, being generally healed up. The skull crows over it in about a month, and then becomes of its usual hardness ; and the animal is equally healthy, as if no disease had

previously existed. It is said that the senses return after the operation in a few hours, and that the next day the sheep seems to be quite relieved.

When, in consequence of rashness or inattention, the bag containing the fluid has been ruptured, which sometimes happens, it is very difficult, and in many cases impossible, to extract the sac. The best practice, in this situation of things, is, it is said, to place the animal in such a position as that all the fluid may run out and be discharged ; washing the wound with spirits, and trying to extract, if possible, the remains of the sac, then dressing it with a mixture of tar and basilicon, or either separately, then turn the animal, which has now lost its stupid appearance, into a good pasture. The damps and cold of nights should be avoided, as they tend to produce inflammation, which very soon destroys the animal. In this case, the admission of the external air, and the irritating dressings, cause the sides of the sac to adhere : this, however, is not always the case, it is said, as after a week or two the appearances of the disease have been known to return, after the alleviation which the operation constantly produced. When this happens, it is almost impossible to extract the bladder or bag entire, on account of the inflammation, from the cutting, causing strong adhesion. In this case the bag may be opened, and a little spirits of port wine injected by means of a syr.nge, which has been known, in more than one case, to prevent a return of the symptoms. This operation should not, where possible, be performed in hot or very warm weather, as maggots are extremely apt to breed in the wound. In frost, too, inflammation is liable to be produced, which may also at that time render it improper. In these cases, the sheep should be fattened for the butcher as soon as possible.

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The operation of wiring is described in this manner by-Mr. Hog. In case the skull should feel soft in the forehead, then the operation must be performed by thrusting a stiff sharpened wire up each nostril, until it stop against the upper part of the skull. If this mode of cure were not well authenticated, by daily experience and observation, it might, it is said, appear a very severe and dangerous operation or practice, as the wire goes quite through the brain in two different places ; yet a far greater number of sheep are cured in this way than by any other. The above person has cured many both ways, he says, and killed a part too ; but those which he killed were generally with the wire, because, if the other fail of producing the desired effect, the wire is constantly

applied to as a last resource ; and many have been seen cured by it which were apparently past all means of recovery. By some of these means, properly made use of, this disease will be found to be mostly capable of being removed.

STUR'GEON, n. s. Lat. sturio, tursio. A sea-fish.

It is part of the scutellated bone of a sturgeon, being flat, of a porous or cellular constitution on one side, the cells being worn down and smooth on the «ther. Woodward.

STURGEON, STURIO. See ACCIPENSER. The sturgeon is supposed to be the OVHTKOG of Dorion, as quoted by Athenaeus, who says, its mouth is always open, and that it conceals itself in the hot months. Hence it must be of a cold na-ture; which is confirmed by the description given of the European species, by Mr. Forster, in his Essay on the Volga. He says, they are scarcely ever found in that river in spring or summer, but abound in vast numbers in autumn and winter, when they crowd up the river, from the sea, and are taken in great numbers. The ancients were also acquainted with the huso, another species, which affords ichthyocolla, or isinglass.

STURMIUS (James), a learned German, born at Strasburg in 1489. He rendered the most important services to his country, by contributing greatly to the reformation of religion at Strasburg; to the erection of a college there, and to his friend Sleidan's History of the Reformation in Germany. See SLEIDAN. He also served his country essentially as an ambassador to different foreign courts, and as a deputy to the diets of the empire. This Learned reformer died at Strasburg, October 30th, 1553.

STURMIUS (John), a learned philologer and rhetorician, born at Sleidan near Cologne in 1507; in the same town, and within a year of the celebrated J. Sleidan, along with whom he was educated. He afterwards studied with the sons of count de Manderscheid, whose receiver his father was : and next at Liege in the college of St. Jerome, and then went to Louvainin 1524; where he spent five years, three in learning and two in teaching. He set up a printing press with Rudger Rescius, professor of the Greek tongue, and printed several Greek authors. He went to Paris in 1529, where he was highly esteemed, and read public lectures on the Greek nnd Latin writers, and on logic. He married,

and kept a great number of boarders; but, as he inclined to the new opinions, he was more than once in danger; and therefore he removed to Strasburg in 1537, to a place offered him by the magistrates. In 1538 he opened a school, which became famous, and was by Maximilian II. made a university in 1566. He was well skilled in literature, wrote Latin with great purity, and was a good teacher. He was often entrusted with deputations in Germany and foreign countries, and discharged these employments with great honor. He showed extreme charity to the refugees on account of religion : he not only assisted them by his advice and recommendations, but he even impoverished himself for them. He died in 1589, in his eighty-second year, after he had been for some time blind. lie published many books; the principal of which are, l.Partitiones Dialectics ; 2. De Educatione Princi-pum; 3. De Nobilitate Anglicana; 4. Lingua; Latinae Resolvendse Ratio; 5. Excellent Notes on Aristotle's and Hermogenes's Rhetoric, &c.

STURMIUS (John), a native of .AJechlin, and physician and professor of mathematics at Louvain, also wrote several learned works.

STURMIUS (John Christopher), another learned German, born at Hippolstein, in 1635. lie became professor of philosophy and mathematics at Altdorf. He published a translation of Archimedes into German ; A Complete Course of Mathematics ; and several Philosophical Trea Uses. He died at Altdorf, in 1703.

STURNUS, the starling, a genus of birds belonging to the order of passeres. The beak is subulated, depressed, and somewhat blunt; the superior mandible is entire, and somewhat open at the edges ; the nostrils are marginated above ; and the tongue is sharp and emarginated. There are fifteen species according to Dr. Latham ; vi/..

I. S. Capensis ; 2. carunculatus ; 3. cellaris; 4. dauricus ; 5. gallinaceus ; 6. junceti.; 7. loyca ; 8. ludovicianus; 9. Mexicanus ; 10. militaris ;

II. moritanicus ; 12. olivaceus; 13. sericeus ; 14. viridis ; and,

15. S. vulgnris, the common starling, or stare, the only species that is indigenous. The weight of the male is about three ounces, that of the female rather less ; the length of the male is about eight inches and three-quarters : the bill is brown or yellow, but in old birds generally yellow. The whole plumage is black, very resplendent, with changeable blue, purple, and copper: each feather marked with a pale yellow spot. The lesser coverts are edged with yellow, and slightly

glossed with green. The quill feathers and tail dusky ; the former edged with yellow on the exterior side; the last with dirty white. The legs of a reddish brown. They breed in hollow trees, eaves of houses, towers, ruins, cliffs, and often in high rocks over the sea, such as that of the Isle of Wight. The female lays four or five eggs, of a pale greenish ash-color ; and makes its nest of straw, small fibres of roots, and the like. In winter, stares assemble in vast flocks : they collect in myriads in tne fens of Lincolnshire, and do great damage to the fen-men, by roosting on the reeds, and breaking them down by their weight ; for reeds are tltft thatch of the country, and are laid up in harvest

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with great care. These birds feed on worms and insects ; and they will get into pigeon-houses for the sake of the eggs. Their flesh is so bitter as to be scarcely eatable. They follow oxen and other large cattle in the meadows, attracted by the insects which flutter round them. They live seven or eight years, or even longer, in the domestic state. The wild ones cannot be decoyed by the call, because they regard not the scream of the owl. A method has been discovered of taking entire families, by fixing to the walls and the trees where they lodge pots of earthenware of a convenient form, which the birds often prefer to place their nests in. Many are also caught by the gin and draw-net. In some parts of Italy it is common to employ tame weasels to drag them out of their nests. The stare can be taught to speak French, Ger-man, Latin, Greek, &c., and to pronounce phrases of some length. Its pliant throat accommodates itself to every inflection and every accent. It can readily articulate the letter R, and acquires a sort of warbling which is much superior to its native song. These birds are spread through an extensive range in the ancient continent. They are found in Sweden, Germany, France, Italy, the Isle of Malta, the Cape of Good Hope, and are every where nearly the same ; whereas those American birds which have been called stares present a great diversity of appearance.

STUT, or STUT'TER, v.n. I Teut. and

STUT'TER, or STUT'TERER, n. s. J Belg. stotte-ren. To speak with hesitation ; stammer : one who stammers in his speech.

Divers slut : the cause is the refrigeration of the tongue, whereby it is less apt to move ; and therefore naturals stut. Bacon.

Many stutters are very cholerick, choler inducing a dryness in the tongue. Id. Natural History.

STUTTGARD, the capital of the kingdom of Wirtemberg, stands on the river Nisselbach, in a valley, and is only two miles from the Nec-kar, over which there is a fine bridge. It is divided into four parts, the Town Proper, two suburbs adjacent to each other, and the separate suburb called Esslingen. The Town Proper is badly built, the streets being narrow, and the houses of wood. The suburbs, being less antique, are somewhat better, particularly that of Esslingen, in which are the royal palace, gymnasium, barracks, &c. The palace is a noble structure, and has an extensive park : its interior contains a good

collection of paintings and statues ; around are several public establishments, a spacious opera house, a theatre, mu-seum, garden, and an academy for painting, sculpture, and architecture. The royal library is said to contain 100,000 volumes, among which is a unique collection of bibles. The gymnasium has an observatory, and a good collection of mathematical instruments. . The town has also a public library ; and though it can boast of no handsome streets, except King Street, adjoining the palace, it has several pleasant walks. Its public buildings are an old palace, now used for government offices, a mint, town-house, great church, and the royal stables. Stuttgard is surrounded by a wall and ditch, but is a place of

no strength ; and though repeatedly entered by the armies on both sides, between the years 1796 and 1815, it escaped those calamities which pressed so severely on it in the wars of the sixteenth and seventeeth centuries. The manufactures are on a small scale ; and coasist of leather, hats, cotton, silk, plated goods, and snuff. The expenditure of the court and nobility forms the chief support of the town. Provisions are abundant and reasonable, the surrounding country being equally fertile and beautiful. Thirty-seven miles £. S. E. of Carls-ruhe, and 116 W.N. W. of Munich.

STY, n. s. & v. a. Sax. priˆe ; Swed. stia. A cabin to keep hogs in ; any place of filthy character : to shut up in a sty.

Tell Richmond,

That in the sty of this most bloody boar My son George Stanly is franked up in hold.

Shakspeare. Richard III. Here you sty me

In this hard rock, while you do keep from me The rest of the island. Id. Tempest.

They all their friends and native home forget, ‘ To roll with pleasure in a sensual sty. Milton.

With what ease

Mightest thou expel this monster from his throne, Now made a sty. Id. Paradise Regained.

May thy black pigs lie warm in little sty, And have no thought to grieve them till they die !

King.

When her hogs had missed their way, Th' untoward creatures to the sty I drove, And whistled all the way. Gay.

STY'GIAN, adj. Lat. stygius. Hellish ; infernal ; pertaining to Styx, one of the poetical rivers of hell.

At that so sudden blaze the Stygian throng Bent their aspect. Milton.

STYGIAN LAKE, or RIVER. See STYX.

STYLE, ra. s. & v. .a. Lat. stylus. Manner of writing with regard to language ; mode of speech ; mode of painting ; title ; appellation ; a graver : the stalk of a flower, see below: to style is, to term; call.

No style is held for base, where love well named is. Sidney.

Happy

That can translate the stubbornness of fortune Into so quiet and so sweet a style. Shakspeare.

Ford ‘s a knave, and I will aggravate his stile ; thou shall know him for knave and cuckold. Id.

The king gave them in his commission the style and appellation which belonged to them.

Clarendon.

Fortune’s gifts, my actions May stile their own rewards. Denham’s Sophy.

Placing two stiles or needles of the same steel, touched with the same loadstone, when the one is removed but half a span, the other would stand like Hercules’s pillars. Browne.

Their beauty I will rather leare to poets than venture upon so tender and nice a subject with my severer style. More.

O virgin ! or what other name you bear Above that style, O more than mortal fair ! Let not an humble suppliant sue in vain.

Dryden’s JEneid

While his thoughts the lingering day beguile, To gentle Arciie let us turn our style. Dryden.

Whoever backs his tenets with authorities, thinks

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he ought to carry the cause, and is ready to stik it impudence in any one who shall stand out. Locke.

Style is the middle prominent part of the flower of a plant, which adheres to the fruit or seed : ‘tis usually slender and long, whence it has its name.

Quincy.

Let some lord but own the happy lines, How the wit brightens, how the style refines ! Pope.

Propitious hear our prayer, Whether the style of Titan please thee more, Whose purple rays the Achasmenes adore.

Id. Statius.

Proper words in proper places make the true definition of a style. Swift.

The great stile stands alone, and does not require, perhaps does not as well admit, any addition from inferior beauties. The ornamental stile also possesses its own peculiar merit : however, though the union of the two may make a sort of composite stile, yet that stile is likely to be more imperfect than either of those which go to its composition. Reynolds.

STYLE is a word of various significations, originally deduced from stylos, a kind of bodkin wherewith the ancients wrote on plates of lead, or on wax, &c., and which is still used to write on ivory leaves, and paper prepared for that purpose, &c.

STYLE, in language, is the peculiar manner in which a man expresses his conceptions. It is a picture of the ideas which rise in his mind, and of the order in which they are there produced. The qualities of a good style may be ranked under two heads ; perspicuity and ornament. Perspicuity ought to be essentially connected with every kind of writing; and, to attain it, attention must be paid, first to single words and phrases, and then to the construction of sentences. With respect to words and phrases, it requires these three qualities ; purity, propriety, and precision. With regard to sentences, it requires a clear

arrangement of the words and unity in the sense ; to which, ‘if strength and harmony be added, the style will become ornamented. One of the most important directions to be observed, by him who wishes to form a good style, is to acquire clear and precise ideas on the subject concerning which he is to write or speak. To this must be added frequency of composition, and an acquaintance with the style of the best authors. A servile imitation, however, of any author is carefully to be avoided; for he who copies can hardly avoid copying faults as well as beauties. A style cannot be -proper unless it be adapted to the subject, and likewise to the capacity of our hearers, if we are to speak in public. A simple, clear, and una-dorned style, such as that of Swift, is fittest for intricate disquisition ; a style elegant as Addison’s, or impetuous like Johnson’s, is most pro-per for fixing the attention on truths, which, though known, are much neglected. We must not be inattentive to the ornaments of style, if we wish that our labors should be read and admired : but he is a contemptible writer who looks not beyond the dress of language, who lays not the chief stress upon his matter, and who does not regard ornament as a secondary and inferior recommendation. For further observations on the different kinds of style, see LANGUAGE, ORATOUY, and SIMPLICITY. The

earl of Buchan in his Life of Fletcher, while he celebrates the style of that great patriot, pays no compliment to the orators of the present age • ‘Fletcher’ says his lordship, ‘was by far the most nervous and correct speaker in the parliament of Scotland ; for he drew his style from the pure models of antiquity, and not from the grosser practical oratory of his contemporaries; so that his speeches and his language will bear a comparison with the best speeches of the reign of queen Anne, the Augustan age of Great Britain, far superior to the meretricious, inflated, metaphorical style of our modern orators.’

STYLE, in botany. See BOTANY, Index.

STYLE, in dialing, denotes the gnomon or cock of a dial raised on the plane thereof to project a shadow.

STYLE, in jurisprudence, the particular form or manner of proceeding in each court of jurisdiction, agreeable to the rules and orders established therein: thus we say the style of the court of Rome, of chancery, of parliament, of the privy-council, &c.

STYLE, in music, denotes a peculiar manner of singing, playing, or

composing; being properly the manner that each person has of playing, singing, or teaching ; which is very different, both in respect of different geniuses, of countries, nations, and of the different matters, places, times, subjects, passions, expressions, &c. Thus we say, the style of Palestrina, of Lully, of Corelli, of Handel, &c. ; the style of the Italians, French, Spaniards, &c.

STYLE, NEW, in chronology, the Gregorian method of computation.

STYLE, OLD, the Julian method of computing time.

STYLEPHORUS CHORDATUS, a genus of fishes belonging to the order of apodes. This very curious genus was discovered by Dr. Shaw, who read a description of it before the Linnaean Society in 1788. The eyes are fixed on cylindrical pillars which lie close together. The rostrum, or narrow part which is terminated by the mouth, is connected to the back part of the head by a flexible leathery duplicature, which permits it either to be extended in such a manner that the mouth points directly upwards, or to fall back so as to be received into a sort of case, formed by the upper part of the head. There are three pairs of branchiae situate under the throat. The pectoral fins are small ; the dorsal fin runs from the head to within about an inch and a half of the tail ; the caudal fin is short, and is furnished with five remarkable spines. The body is extremely long, and compressed very much, and gradually diminishes as it approaches the tail, which terminates in a process or string of an enormous length, and finishes in a very fine point. This string, or caudal process, seems to be strengthened throughout its whole length, or at least as far as the eye can trace it, by a sort of double fibre or internal part. The stylephorus chordatus is a native of the West Indian Sea. It was taken between the islands of Cuba and Martinico, near a small cluster of little islands about nine leagues from shore, and was seen swimming near” the surface. The whole length of this uncommon animal, from the head to the

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extremity of the caudal process, is about thirty-two inches, of which the process itself measures twenty-two.

STYLET, a small dangerous kind of poniard, which may be concealed in the hand, chiefly used in treacherous assassinations. The blade is usually triangular, and so small that the wound it makes is almost imperceptible. See STILETTO.

STYLITES, or STILITES, pillar saints, a kind of solitaries, who stood motionless upon the tops of pillars. They were totally suppressed in the twelfth century. The tops of these columns were only three feet in diameter, and were defended by a rail, that reached almost to the girdle, somewhat resembling a pulpit. There was no lying down in it. The faquirs, or devout people of the east, imitate this extraordinary and most absurd kind of life to this day.

STYLOCERALOIDES, STYLOGLOSSUS, STY—

LOHYOIDJEUS, StYLOIDES, SlYLOPHARYNGˆUS,

the names of different muscles in the human body. See ANATOMY.

STYLOSANTHES, in botany, a genus of the decandria order, belonging to the diadelphia class of plants ; and in the natural method ranking under the thirty-second order, papilion-aceae. The calyx is tubulated, very long, having the corolla attached to it. The legumen or pod biarticulated and hooked. Of these there are two species, both natives of Jamaica, *viz.* 1. S. procumbens, the hedysarum procumbens of Linnaeus : a figure of which may be seen in Sloane's Natural History of Jamaica.

2. S. viscosa, the trifolium of Browne ; a figure of which is also given by Sloane.

STYPTERIA, a name given by the Greeks to a species of ALUM. Under the article alum which the ingenious Dr. Thomson ranks as the thirteenth of the sulphates, in his System of Chemistry, vol. ii. p. 272, he has the following remarks on this substance : ' The arvirrripia. of the Greeks, and the alumen of the Romans, was a native substance, which appears to have been nearly related to green vitriol, or sulphate of iron ; and which consequently was verydifferent from what we at

present denominate alum.’ ‘ From the researches of professor Beckman, it appears that we owe the discovery of alum to the Asiatics; but at what period, or by what means the discovery was made is unknown.’ ‘ The composition of alum has been but lately understood with accuracy. It has been long known that one of its ingredients is sulphuric acid; and the experiments of GeorTroy, Hellot, Pott, Margraff, and Macquier, prove incontes-tibly that alumina is another. But sulphuric acid and alumina are incapable of forming alum. Manufacturers knew that the addition of a quantity of potass, or of ammonia, or of some substance containing these alkalies, is almost always necessary ; and it was proved that, in every case in which such additions are unnecessary, the earth from which the alum is obtained, contained already a quantity of potass. Various conjectures were made about the part which potass acts in this case; but Chaptal and Vauquelin appear to have been the first chemists who ascertained, by decisive experiments, that alum is a triple salt, composed of sulphuric acid, alu-miua, and potass, or ammonia, united together.

As alum contains an excess of acid, it belongs to the class of super-sulphates.’ See SUPERSUL-PHATE.

STYPTIC, adj. ~\ Fr. styptique; Gr. -ruir—

SIYP’TICAL, >rl»coc. Often, though er—

STYPTI’CITY, n. s.j roneously, written stiptick The same as astringent; but generally expressing the most efficacious sort of astringents : the power of staunching blood.

There is a poor sour stiptick salt diffused through the earth, which, passing a concoction in plants, becometh milder. Browne.

In an effusion of blood, having dossils ready dipt in the royal stiptick, we applied them.

Wiseman’s Surgery.

Catharticks of mercurials precipitate the’viscidities by their stypticity, and mix with all animal acids.

Flayer.

Fruits of trees and shrubs contain phlegm, oil, and an essential salt, by which they are sharp, sweet, sour, or styptick. Arbuthnot on Aliments.

STYPTICS, in pharmacy, medicines which, by their astringency, stop hemorrhages, &c. See MATERIA MEDICA.

STYRAX, the storax tree, in botany, a genus of plants belonging to the class of decandria, and to the order of monogynia; and in the natural system ranging under the eighteenth order, bicornes. There are four species, *viz.* 1. S. ben-zoinum is described by Dr. Dryander in the Philosophical Transactions for 1787, p. 308, &c. It has been characterised by oblong acuminated leaves, whicli are downy underneath, and nearly of the length of the racemi. The botanical character of this tree was mistaken by modern botanists, till Dr. Dryander ascertained it to be a styrax. Benzoin was long supposed to be the produce of a species of laurus. Linnaeus detected this error: but he committed another ; for he tells us that it is furnished by a shrub which, in the country where it grows, is called croton bezoe; and afterwards, in his Supplementum Plantanum, describes the same plant a second time under the name of terminalia benzoin. This tree, which is a native of Sumatra, is deemed in six years of sufficient age for affording the benzoin, or when its trunk acquires about seven or eight inches in diameter; the bark is then cut through longitudinally, or somewhat obliquely, at the origin of the principal lower branches, from which the drug exudes in a liquid state, and by exposure to the sun and air soon concretes, when it is scraped off from the bark with a knife or chisel. The quantity of benzoin which one tree affords never exceeds three pounds, nor are the trees found to sustain the effects of these annual incisions longer than ten or twelve years. The benzoin which issues first from the wounded bark is the purest, being soft, extremely fragrant, and very white ; that which is less es teemed is of a brownish color, very hard, ana mixed with various impurities, which it acquires during its long continuance upon the trees. Es-chelskron distinguishes benzoin into three kinds, *viz.* camaya-n poeti, or white benjamin, which, upon being melted in a bladder by the heat of the sun, appears marked with red streaks or veins. Camayan bamatta is less white than the former, and often spo’ted with white circles called eyes, from the number of which its uood-ness is estimated: it likewise melts bv the heat

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of the sun. Camayan ham, or black benjamin, which requires to be melted in hot water from its preservation in bladders. In Arabia, Persia, and other parts of the east, the coarser kinds of benjamin are consumed for fumigating and perfuming the temples, and for destroying insects. The benzoin which we find here in the shops is in large brittle masses, composed partly of white, partly of yellowish or light brown, and often also of darker colored pieces : that which is clearest, and contains the most white matter, called by authors benzoe amygdaloides, is accounted the best. This resin has very little taste, impressing on the palate only a slight sweetness : its smell, especially when rubbed or heated, is extremely fragrant and agreeable. It totally dissolves in rectified spirit (the impurities excepted, which are generally in a very small quantity), into a deep yellowish red liquor, and in this state discovers a degree of warmth and pungency, as well as sweetness. It imparts, by digestion, to water also a considerable share of its fragrance, and a slight pungency : the filtered liquor, gently exhaled, leaves not a resinous or mucilaginous extract, but a crystalline matter, seemingly of a saline nature, amounting to one-tenth or one-eighth of the weight of the benzoin. Exposed to the fire in proper vessels, it yields a quantity of a white saline concrete, called stores benzoes, of an acidulous taste and grateful odor, soluble in rectified spirit, and in water by the assistance of heat. The principal use of this fragrant resin is in perfumes, and as .a cosmetic ; for which last purpose, a solution of it in spirit of wine is mixed with so much water as is sufficient to render it milky, as twenty ti'.iies its quantity or more. It promises, however, to be applicable to other uses, and to approach in virtue, as in fragrance, to storax and balsam of Tolu. It is said to be of great service in disorders of the breast, for resolving obstructions of the pulmonary vessels, and promoting expectoration : in which intentions the tiowers are sometimes given, from three or four grains to fifteen. The white powder, precipitated by water from solutions of the benzoin in spirit, has been employed by some as similar and superior to the floweis, but appears to be little other than the pure benzoin in substance ; it is not the saline, but the resinous matter of the benzoin, tnat is most disposed to be precipitated from spirit by water. The flowers, snuffed up the nose, are said to be a powerful errhine.

2. S. grandefolium ; 3. S. levigatum ; these are mentioned byAiton, inhisllortus Kewensis, or Garden of Kew.

4. S. officinale, the officinal storax, is the only species mentioned by Linnaeus. It usually rises above twenty feet high ; it sends off many strong branches, which are covered with aroughish bark of a gray color; the leaves are broad, elliptical, entire, somewhat pointed ; on the upper surface smooth, and of a light green color; on the under surface covered with a whitish down ; they are placed alternately, and stand upon short footstalks; the flowers are large, white, and disposed in clusters upon short peduncles, which terminate the branches ; the corolla is monopetalous, funnel-shaped, divided at the limb into five

lance-shaped segments; the filaments are ten, placed in a regular circle, and seem to adhere towards the base ; the anthera arc erect and ob-long ; the germen is oval, and supports a slender style, with a, simple stigma : the fruit is a pulpy pericarpium, which contains one or two nuts of an oval compressed figure. The resinous drug called storax issues in a fluid state from incisions made in the trunk or branches of the tree. Two sorts of this resin have been commonly distinguished in the shops. 1. Storax in the tear is scarcely, if ever, found in separate tears, but in masses, sometimes composed of whitish and pale reddish-brown tears, and sometimes of a uniform reddish-yellow or brownish appearance ; unctuous and soft like wax, and free from visible impurities. This is supposed to be the sort which the ancients received from Pamphylia in reeds or canes, and which was thence namad calamita. 2. Common storax : in large masses, considerably lighter and less compact than the former, and having a large admixture of woody matter like sawdust. This appears to be the kind intended by the London College, as they direct their styrax calamita to be purified, for medicinal use, by softening it with boiling water and pressing it out from the feces betwixt warm iron plates, a process which the first sort does not stand in need of. And indeed there is rarely any other than this impure storax to be met with in the shops. Storax, with some of the ancients, was a familiar remedy as a resolvent, and particularly used in catarrhal complaints, coughs, asthmas, menstrual obstiuctions, &c. ; and from its affinity to the balsams it was also prescribed in ulcerations of the lungs, and other states of pulmonary consumptions. And our pharmacopoeias formerly directed the pilulae estyrace ; but this odoriferous drug has now no place in any of the officinal compounds ; and, though a medicine which might seem to promise some efficacy in nervous debilities, yet by modern practitioners it is almost totally disregarded. See LIQUIDAMBAR and STORAX.

STYRIA, a considerable province of the Austrian empire, situated between Austria Proper and Illyria, or extending from 45° 54 to 47°

50’ N. lat. Its form would be nearly square, did it comprise Carinthia, a province situated to the south-west. Its extent is computed at 8500 square miles; its population, which, without being dense, is less thinly scattered than that of the northern part of Britain, is about 840,000. Its divisions are into Upper Styria towards the north, and Lower Styria towards the south. The former is subdivided into the circles of Judenburg and Bruck ; the latter into those of Gratz, Marburg, and Cilley.

Upper Styria is mountainous, being in a great measure a continuation of a branch of the Alps, which, after extending eastward through Switzerland, Tyrol, and Saltzburg, enter Styria at Us western boundary, and continue their direction throughout its whole extent. This range rises in various parts to the height of 7000, 8000, and 9000 feet, presenting several points covered wit.i perpetual snow. A number of ramifications ex-tend into Lower Styria, but become gradually lower as they remove from the mam chain, till they

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present only small elevations, on the sides of which the vine is cultivated. The plains, however, even here, are not extensive, if we except that of Pettau, along the banks of the Drave.

In the elevated districts, natural excavations sometimes of great extent are found ; and some naturalists have imagined that one or two mountains presented volcanic appearances. The rivers are numerous, but seldom navigable : the principal are the Enns, the Muhr, the Drave, and the Save. The climate presents great discrepancies, arising from the greater or less elevation of the soil. In Upper Styria the air is elastic, pure, and cold : winter begins in November, and the snow lies on the hills till May. In Lower Styria the climate is more temperate ; but, though the air is in general of great purity, endemic fevers prevail, and the constitutional imbecility or idiocy called Cretinism is very common. The quantity of rain is less than might be expected, not exceeding fifteen inches in the year. The soil of Styria is, with the exception of the higher mountains, fertile, and produces wheat, barley, oats, rye, and, in the warmer situations, maize. The potato, though introduced so lately as the middle of the eighteenth century, is now general. Agriculture is extremely backward, though irrigation is practised extensively.

Styria has long been remarkable for the care bestowed on its cattle. They are of middle size, but well shaped, and are driven in summer to the highest parts of the mountains, where, after passing the warm season, they return to the plains. In sheep, at least in the improvement of wool, the Styrians have not yet succeeded, and their horses are chiefly for draught. Poultry is abundant.

Styria produces coal, and several mines of it are wrought ; but it is at present not much used in mines and forges. Almost all the metals are found in Styria : gold, silver, and copper, hardly defray the expense of mining ; lead is less scarce ; but the great produce is iron. The mountain of Erzberg, situated in the north of Styria, was well known to the Romans. Instead of veins and strata, it presents a solid mass of ore, which has been wrought without intermission for eleven centuries; and, although nearly 13,000 tons of pure iron have been obtained annually from it for years, it hardly appears diminished, and the restriction in the quantity made arises chiefly from the limited supply of fuel. At the small town of Turroch is a mine producing the

celebrated Prescian steel, used by the Romans for sword blades. The other mines, though less rich, are not inconsiderable; and the total annual produce of iron in Styria is from 16,000 to 20,000 tons. Salt is yet more abundant, particularly at Aussee, from which almost any quantity might be produced, were the demand greater. Cobalt, arsenic, and molybdena, occur in Styria; and zinc, antimony, and bismuth, rarely.

The manufactures of Styria are of course principally derived from the mines. The country contains in all 200 forges, and about thirty manufacturing establishments, in which it is computed that 300,000 sickles, and a still larger quantity of scythes, are made annually Next

to these in importance are the copper forges, and various preparations of sulphate of iron, alum, saltpetre, earthenware, gunpowder, and sulphur. The flax raised in this country is made into coarse linen, or exported unwrought : the women are much employed in the fields. The exports consist of metals, corn, wine, flax, clover seed, cattle ; the imports comprise woollens, linens, silks, tobacco, oil, and groceries.

The Styrians have the hospitality and frankness of an agricultural people, but are as yet very imperfectly educated ; the great majority are Roman Catholics ; but the Protestants enjoy a full, and the Jews a limited toleration. In regard to government, the Styrians have a parliament under the name of States, composed of four orders, the higher clergy, the nobility, the deputies from the landholders, and the deputies ffom the towns.

Pliny and Strabo considered the inhabitants as descended from the Boii and Taurisci. They are described as altogether uncivilised, and as harassing the adjoining provinces by their incursions, till the reign of Tiberius (A. D. 8), when Styria was subdued, and included in the province of Noricum. During the period of its remaining in the Roman hands, considerable improvements took place, towns being built at the more important stations, tillage diffused, and in the fourth century Christianity introduced. But Styria was almost as unfortunate in the repeated invasions of the barbarians as the adjoining provinces of Illyria and Pannonia. History records an invasion of southern Germany by the Magyars, the conquerors of Hungary, and their expulsion from the limits of the empire by Otho I. in 933 : the reconquered territory was divided into a number of principalities, one of which, called the county of Steyr, rose by gradual and successive augmentations to its present extent. lu 1172 it was annexed to Austria, and has since been

governed either by the sovereign of that country, or by a member of his family.

STYTHY, v.a. See STITHY. To forge on an anvil.

By the forge that ttythied Mars his helm, I'll kill thee every where, yea, o'er and o'er.

Shatapeare.

STYX, in mythology, a celebrated river of hell, round which it flows nine times. The gods held the waters of the Styx in such veneration that to swear by them was reckoned an oath altogether inviolable. If any of the gods had perjured themselves, Jupiter obliged them to drink the waters of the Styx, which lulled them for one whole year into a senseless stupidity, for the nine following years they were deprived of the ambrosia and the nectar of the gods, and, after the expiration of the years of their punishment, they were restored to the assembly of the deities, and to all their original privileges. It is said that this veneration was shown to the Styx because it received its name from the nymph Styx, who with her three daughters assisted Jupiter in his war against the Titans. Styx was a river which it was necessary for departed shades to pass before they could enter the infernal regions ; and it wa* the office of Charon to ferry them

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over in a boat which \va? kept for that purpose. The ghosts of those who had not been honored with the rites of sepulture were obliged to wander 100 years before Charon could admit them into his boat to convey them before the judges of Hades. Mythological writers have said that the Greeks learned it from the Egyptians, which is indeed probable enough; that the Egyptians framed both this and some other fables relating to the dead, from certain customs peculiar to their country ; that in particular there was, not far from Memphis, a famous burying-place, to which the dead bodies were conveyed in a boat across the lake Acherusia ; and that Charon was a boatman who had long officiated in that service. The learned Dr. Blackwell says, in his Life of Homer, that, in the old Egyptian language, Cha-roni signified ferryman.

STYX, a sea nymph, daughter of Oceanus and Tellus. She married the giant Pallas, son of Crius and Eurybia, by whom she had three daughters, all goddesses, Victory, Strength, and Valor. She and her daughters assisted Jupiter against the giants ; and she gave name to the infernal river by which the gods swore.

SUANES, SUANETI, SUANI, or SOANES, a people of Asia, who inhabit one of the four divisions of Imeritia. They are chiefly employed in agriculture and rearing cattle. Major Rennell supposes them to be the descendants of a people of the same name and country, mentioned by Strabo. They were then a numerous and powerful nation, governed by a king and national council of 300. They collected gold in their rivers, washed down from the mountains, by sinking sheep-skins in them, with the wool uppermost ; whence Strabo derives the origin of the fable of the Golden Fleece. See ARGO, ARGO-NAUTS, COLCHIS, and MINGRELIA.

SUARDONES, an ancient nation of Germany. Tacitus de Germ. 40.

SUARES, or SUAREZ (Francis), a Spanish Jesuit, born in Grenada, 5th of January, 1548. He was professor of theology at Alcala, Sala-manca, Rome, and Coimbra in Portugal. He died at Lisbon in 1617, with great ease and resignation. His memory was astonishing : he could repeat the whole of his voluminous works by heart. His writings fill twenty-three folio volumes, mostly on theological and moral subjects. His Treatise of Laws has been reprinted in this country. His defence of the

Catholic Faith against the errors of England was written at the request of pope Paul V. This book was publicly burnt at London by order of James I.

SUA'SIVE, adj. Lat. suudeo. Having power to persuade.

It had the passions in perfect subjection ; and though its command over them was but snaiive and political, yet it had the force of coaction, and despotical. South.

SUA'VITY , n. s. Fr. suavite ; Lat. suavitas. Sweetness to the senses.

She desired them for rarity, pulchritude, and suavity, Browne.

SUBAC TD, adj. Lat. sub and acidns. Sour in a small degree.

The juice of the slem is like the chyle in the ani-

mal body, not sufficiently concocted by circulation and is commonly subacid in all plants.

Arbuthnot on Aliments.

SUBAC'RID, adj. Sub and acrid. Sharp and pungent in a small degree.

The green choler of a cow tasted sweet, bitter, lubacrid, or a little pungent, and turned syrup of violets green. flayer,

SUBACT, v. a. Lat. subactus. To reduce : to subdue.

Tangible bodies have no pleasure in the consort of air, but endeavour to subnet it into a more dense body. /}„„„„;

There are of concoction two periods : the one assimilation, or absolute conversion and subaction ; the other maturation : whereof the former is most conspicuous in living creajures, in which there is an absolute conversion and assimilation of the nourishment into the body. Id. Natural History.

SUBAH, the general name of 'the viceroyships, or greater governments, into which the Mogul empire was divided, consisting of several provinces.

SUBAHDAR, the viceroy, lord-lieutenant, or governor, holding a subah; the same as nabob or nazim. Also the black commander of a

company of seapoys.

SUBAHDAREE, or SUBAHSHIP, the jurisdiction of subahdar; the same-with nizamut.

SUBALTERN, adj. Fr. subalie.nie. Inferior; subordinate; that which in different respect? is both superior and inferior.

Love's subalterns, a duteous band, Like watchmen round their chief appear ;

Each had his lanthorn in his hand, And Venus, masked, brought up the rear. Prior.

One, while a subaltern officer, was every day complaining against the pride ot colonels towards their officers, yet, after he received his commission for a regiment, he confessed the spirit of colonelship was coming fast upon him, and it daily increased to his death. Swift.

This sort of universal ideas, which may either be considered as a genus or species, is called subaltern.

Watts.

SUBALTERN (Fr. officiers subalternes), subaltern officers. This word is used among the French, as with us., to signify all officers of a certain inferior degree, *viz.* les subalternes, the subalterns. All officers under the rank of major, technically considered, are subalterns ; captains of troops and companies, in an effective battalion, under arms, are in a subaltern station, and subject to the word of command given by OOP person ; hence subaltern, — from the Latin sub and alter — in the same manner that lieutenants cornets, and ensigns, are under the control of captains of troops or companies.

SUBBEA'DLE, n. s. Sub and beadle. An under beadle.

They ought not to execute those precepts by simple messengers, or subbeadles, but in their own persons.

A \ilijje.

SUBBULGUR, a town in the Mahrntta territories, in the province of Agra, situated sixty-rive miles south-west from the city of Agra, is stir-rounded by a high stone wall, in good repair, with a number of bastions ; but the artillery is very insufficient. One side of the fort stands on the edge of a deep precipice. Between Sub-

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bulghur and Bejighur, to the south, the country is tolerably well cultivated.

Also a town in the province of Delhi, on the east side of the Ganges, twelve miles south from Hurdwar. There is here an extensive line of fortification enclosing the town, but which exhibits little more than naked walls falling to de-cay. Much of the ground within the fort is under cultivation.

SUBCELESTIAL, adj. Sub and celestial. Placed beneath the heavens.

The most refined glories of subcelestial excellencies are but more faint resemblances of these.

Glanville.

SUBCLA;VIAN, adj. Lat. sub and claviu.

Subclavian is applied to any thing under the arm-pit or shoulder, whether artery, nerve, vein, or muscle.

Q'tincy.

The chyle first mixeth with the blood in the sub-elavian vein, and enters with it into the heart, where it is very imperfectly mixed, there being no mechanism nor fermentation to convert it into blood, which is effected by the lungs. Arbuthaot.

SUBCLAVIAN ARTERIES. See ANATOMY.

SUBCLAVIUS. See ANATOMY.

SUBCONSTELLATION, n. s. Sub and constellation. A subordinate or secondary constellation.

As to the picture of the seven stars, if thereby he meant the Pleiades, or subcomtetlativn upon the back of Taurus, with what congruity they are described, in a clear night an ordinary eye may discover.

Bruwne's Vulgar Errours.

SUBCONTRACTED, part. adj. Sub and contracted. Contracted after a

former contract.

Your claim,

I bar it in the interest of my wife , ‘Tis she is subcontracted to this lord, And I her husband contradict your banes.

Shakspeare. King Lear.

SUBCON’TRARY, adj. Sub and contrary. Contrary in an inferior degree.

If two particular propositions differ in quality, they are contraries : as, some vine is a tree ; some vine is not a tree. These may be both true together, but they can never be both false. Watts.

SUBCONTRARY POSITION, in geometry, is when two equiangular triangles are so placed as to have one common angle at the vertex, and yet their bases not parallel; consequently the angles at the bases are equal, but on the contrary sides.

SUBDEA’CON, n. s. Lat. subdiaconus.

In the Romish church they have a subdeacon, who is the deacon’s servant. Ayliffe’s Parergon.

SUBDEACON, an inferior minister, who anciently attended the altar, prepared the sacred vessels, delivered them to the deacons in time of divine service, attended the doors of the church during communion service, went on the bishop’s embassies with his letters or messages to foreign churches, and was invested with the first of the holy orders. They were so subordinate to the superior rulers of the church that, by a canon of the council of Laodicea, they were forbidden to sit in the presence of a deacon without his leave. According to the canons, a person must be twenty-two years of age to be promoted to the order of subdeacon. See DEACON.

SUBDEAiV, n. s. Lat. subdecanus. The vice-gerent of a dean.

Whenever the dean and chapter confirm any act, that such confirmation may be valid, the dean must join in person, and not in the person of a deputy or subdean only. Ayliffe.

SUBDELEG ATE; appointed to act under another, or one who is so.

SUBDERISO’RIOUS, adj. Lat. sub and de- ‘risor. Scoffing or ridiculing with tenderness and delicacy. Not used.

The stibderisoriut mirth is far from giving any offence to us : it is rather a pleasant condiment of our conversation. More.

SUBDIVER’SIFY, v. a. Sub and diversify. To diversify again what is already diversified.

The same wool one man felts into a hat, another weaves it into cloth, another into arras ; and these variously subdiversified according to the fancy of the artificer; Hate.

SUBDIVIDE’, v. a.) Fr. subdiviser. Sub

SUBDIVISION, n. s. } and divide. To divide a part into yet more parts : the noun substantive corresponding.

When Brutus and Cassius were overthrown, soon after Antonius and Octavianus brake and subdivided.

Browne.

The glad father glories in his child, When he can subdivide a fraction. Roscommon.

When the progenies of Cham amd Japhet swarmed into colonies, and those colonies were subdivided in many others, in time their descendants lost the primitive rights of divine worship, retaining only the no-tion of one deity. Dryden.

In the decimal table the subdivisions of the cubit, as span, palm, and digit, are deduced from the shorter cubit. Arbuthnot.

When any of the parts of any idea are farther divided, in order to a clear explication of the whole, this is called a tubdicision ; as when ayear is divided into months, each month into days, and each day into hours, which may be farther subdivided into minutes and seconds. Wattit Logick.

SUB’DOLOUS, adj. Lat. subdolus. Cunning; subtle ; sly.

In his own case he might have thought it a subdu-lous evasion ; a forced succession wholly nugatory on the footing of worldly success.

Whyte’s Poems, Notes.

SUBDOMINANT, in music, a name given by M. Rameau to the fourth note of the tone, which of consequence is the same interval from the tonic when descending as the dominant in rising. This denomination arises from the affinity which this author finds by inversion between the minor mode of the subdominant and the major mode of the tonic. See DOMINANT and Music.

SUBDUCE', v.a. } Lat. subduco, subdue tus.

SUBDUCT', > To withdraw ; take away ;

SUBDUC'TIOS, n. s) subtract : the noun substantive corresponding.

Or nature failed in me, and left some part Not proof enough such object to sustain ; Or, from my side subducting, took perhaps More than enough. Milton's Paradise Lnst.

Take the other operation of arithmetick, subduction : if out of that supposed infinite multitude of antecedent generations we should subduce ten, the residue must be less by ten than it was before, and yet still the quotient must be infinite. Hale.

Possibly the Divine beneficence subducting that influence which it communicated from the time of thcii

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first creation, they were kept in a state of immortality till that moment of the subduction.

Id. Origin of Mankind.

SUBDUE’, v.a. ˆ Lat. subdo, or subjugo. SUBDUE’MENT, n.s. > To crush; oppress; over-SUBDU’ER. 3 power ; sink; conquer;

tame : the noun substantives corresponding. Be fruitful and replenish the earth, and subdue it.

Gen. i. 28.

moisture from the air. Before the blowpipe it swells up, the acid is volatilised and decomposed, and nothing remains but the alumina.

2. ‘S. of ammonia crystallises in parallelepipeds. Its taste is saltish and leaves an impression of bitterness. It reddens vegetable blues. It is very soluble in water. It attracts moisture from the air. When placed upon burning coals it loses its water of crystallisation, and swells up • Them that rose up against me hast thou subdued and before the blowpipe it evaporates entirely under me. 2 Sam. xxu 40. It is decomposed by the aluminous and magne—

Great god of might, that reigneth in the mind, And all the body to thy hest dost frame :

Victor of gods, subduer of mankind, That dost the lions and fell tygers tame, Who can express the glory of thy might? Spenser.

Nothing could have subdued nature To such a lowness, but his unkind daughters.

Shakspeare.

As hot as Perseus, spur thy Phrygian steed, Bravely despising forfeits and subduements. Id.

Augustus Caesar subdued Egypt to the Roman em-pire. Peacham.

Nor ‘st unwholesome to subdue the land By often exercise ; and, where before You broke the earth, again to plow. May’s Virgil.

If aught were worthy to subdue The soul of man. Milton.

Their curious eye

Discerns their great subduer's awful mien And corresponding features fair. Philips.

The Romans made those times the standard of •their wit, when they subdued the world. Sprat.

Figs are great subduers of acrimony, useful in hoarseness and coughs, and extremely emollient.

Arbuthnot.

SUB'DUPLE,o$. > Fr. subdvple ; Lat. sub

SUBDU'PLICATE, ti. s. } and duplus. Containing one part of two.

As one of these under pulleys doth abate half of that heaviness which the weight hath in itself, and cause the power to be in a subduple proportion unto i*,, so two of them do abate half of that which remains, and cause a subquadruple proportion, and three a subsextuple. Wilhms's Mathematical Magick.

The motion generated by the forces, in the whole passage of the body or thing through that space, shall be in a subdupticate proportion of the forces.

Newton's Opticks.

SUBDUPLE RATIO is, when any number or quantity is contained in another twice. Thus three is said to be subduple of six, as six is duple of three. See RATIO.

magnesian salts.

3. ' S. of barytes does not crystallise. Heat makes it swell up and melts it. It is scarcely soluble in water except there be an excess of acid. It is decomposed by most of the salts, ex-cept the barytic salts and the fluat of lime.

4. ' S. of lime does not crystallise. It is perfectly white ; it has a saltish taste ; it does not redden the tincture of turnsole. It is very sparingly

soluble in water, except when hot; and, as the solution cools, most of the salt precipitates again. When placed upon burning coals it swells up, the acid is decomposed, and there remains only the lime in the state of powder. It is decomposed by 1. Muriate of alumina: 2. Carbonates of potash and soda: 3. Fluate of magnesia: 4. Phosphates of alumina and soda : 5. Borate of potass : 6. All the metallic solutions.

5. ‘ S. of magnesia is in the form of a powder ; it reddens the tincture of turnsole. It has a bit-ter taste; it is soluble in water, and attracts some moisture when exposed to the air. When heated it swells up and melts : before the blowpipe the acid is decomposed, and the magnesia remains in a state of purity. It is decomposed by 1. Muriate and phosphate of alumina: 2. Nitrates of lime and alumina : 3. Borate of potass : 4. Fluate of soda.

6. ‘ S. of potass ought to be formed by means of crystallised carbonat of potass. It crystallises in prisms having four unequal sides. It has a bitter saltish taste, and it reddens vegetable blues. It is very soluble in water. Caloric melts it, and at last volatilises the acid. It is decomposed by most of the metallic salts, and by sulphate of alumina, muriate of alumina and of lime ; nitrate of alumina and of lime ; and phosphate of alumina.

7. ‘ S. of soda does not crystallise. It reddens the tincture of turnsole. Its taste is slightly bit-

SUBDUPLICATE RATIO of any two quantities ter. It is very soluble in water and in alcohol.

is the ratio of their square roots. It attracts moisture from the air. Caloric pro—

SUBER, the cork-tree. See QUERCUS. duces the same effect on it that it does on sube—

SUBERAS, or SUBERAT, from suber, the rat of potass, No. 6. It is decomposed by tJi

cork-tree. A salt formed by the combination of calcareous, aluminous, and magnesian salts.

the suberic acid, or acid of cork, with different SUBERIC, from Lat. suber, the cork-tree.

bases. ‘ These salts,’ says Dr. Thomson in his Of or belonging to cork, or the cork-tree; c<

System of Chemistry, vol. iii. p. 434, ‘ have been sisting of the essence of cork.

SUBERIC ACID, or the acid of cork, one of the

described with a good deal of detail, by Bouil-

This salt does not crystallise. When its solution « o«ˆ ;— “

is evaporated by a moderate heat, in a wide ves-scription, is the bark of a tree which c.i s t •>•-*-•’. . e_mp namfi_ RV nieans of nitric acid Brug-

sel, the salt obtained is of a yellow color, transparent, having a styptic taste, and leaving an impression of bitterness on the tongue. When too much heat is employed it melts and blackens. It

same name. By means natelli converted it into an acid, which has been called the suberic acid, from tube Several chemists affirmed that this acid -*a» the

iiiuuii ueui. is eiumuyeu u uieiis ;mu uiai.i.cii.:>. *• , r«ioe

reddens the tincture of turnsole, and attracts oxalic, because it possesses several prˆtr

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common with it. These assertions induced Bouillon La Grange to undertake a set of experiments on suberic acid. These experiments, which have been published in the twenty-third volume of the Annales de Chimie, completely establish the peculiar nature of suberic acid, by showing that it possesses properties different from those of any other acid. Suberic acid may be formed by pouring six parts of nitric acid of the specific gravity l‘26l on one part of cork grated down, or simply broken down into small pieces, and distilling the mixture with a gentle heat as long as red vapors continue to escape. As the distillation advances, a yellow matter like wax appears on the surface of the liquid. While the matter contained in the retort is hot, it is to be poured into a glass vessel, placed upon a sand-bath over a gentle fire, and constantly stirred with a glass rod. By these means it becomes gradually thick. As soon as white vapors, exciting a tickling in the throat, begin to disengage themselves, the vessel is removed from the bath, and the mass continually stirred till it is almost cold. By these means an orange-colored mass is obtained of the consistence of honey, of a strong and sharp odor while hot, but having a peculiar aromatic smell when cold. On this mass twice its weight of boiling-water is to be poured, and heat applied till it becomes liquid ; and then that part of it which is insoluble in water is to be separated bj filtration. The filtered liquor becomes muddy; on cooling it deposits a powdery sediment, and a thin pellicle forms on its surface. The sediment is to be separated by filtration, and the liquor reduced to a dry mass by evaporating in a gentle heat. This mass is suberic acid. It is still a little colored, owing to some accidental mixture; from which it may be purified, either by saturating it with potass, and precipitating it by an acid, or by boiling it with charcoal powder. Suberic acid thus obtained is not crystallisable, but, when precipitated from potass by an acid, it assumes the form of a powder; when obtained by evaporation, it forms thin irregular pellicles. Its taste is acid and slightly bitter ; and, when dissolved in a small quantity of boiling water, it acts upon the throat, and excites coughing. It reddens vegetable blues; and, when dropped into a solution of indigo in sulphuric acid (the liquid blue of this country), it changes the color of the solution and renders it green. Water at 60° or even 70° dissolves only one 57-6th part of its weight of suberic acid ; and if the acid be very pure only one 144th part : boiling water on the contrary dissolves half its weight of it. When exposed to the air it attracts moisture, especially if it be impure. When exposed to the light of day, it becomes at last brown ; and this effect is

produced much sooner by the direct rays of the sun. When heated in a matrass the acid sublimes, and the inside of the glass is surrounded with zones of different colors. If the sublimation be stopped at the proper time, the acid is obtained on the sides of the vessel in small points formed of concentric circles. When exposed to the heat of the blowpipe, on a spoon ot platinum, it first melts, then becomes pulverulent, and at last sublimes entirely, with a smell resembling that of cebacic acid. It is not altered

by oxygen gas : the other acids do not dissolve it completely. Alcohol devolves an aromatic odor, and an ether may be obtained by means of this acid. It converts the blue color of nitrate of copper into a green ; the sulphate of copper into a green ; green sulphate of iron to a deep yellow; and sulphate of zinc to a golden yellow. It has no action either on platinum, gold, or nickel ; but it oxidates silver, mercury, lead, tin, iron, bismuth, arsenic, cobalt, zinc, antimony, manganese, and molybdenum. With alkalies, earths, and metallic oxides, it forms compounds named suberats.' See SUBEP.AT. Its affinities are as follows : — barytes, potass, soda, lime, ammonia, magnesia, alumina.

M. Chevreuil obtained the suberic acid by mere digestion of the nitric acid on grated cork, without distillation, and purified it by washing with cold water. Twelve parts of cork may be made to yield one of acid. When pure, it is white and pulverulent, having a feeble taste, and little action on litmus. It is soluble in eighty parts of water at 55° 30' Fahrenheit, and in thirty-eight parts at 140°. It is much more soluble in alcohol, from which water throws down a portion of the suberic acid. It occasions a white precipitate when poured into acetate of lead, nitrates of lead, mercury, and silver, muriate of tin, and protosulphate of iron. It affords no precipitate with solutions of copper or zinc. The suberates of potassa, soda, and ammonia, are very soluble. The two latter may be readily crystallised. Those of barytes, lime, magnesia, and alumina, are of sparing solubility.
SUBJA'CENT,«rf/. A Lat. subjacent, SuB'jECT,v.a., «</;'.,& n.s. fsubjectus. Lying SITJEC'TIOX, n. s. Bunder: to put un-SUBJEC'TIVE, adj. 3der; to reduce to

submission ; enslave ; expose ; make liable, subservient, or accountable : as an adjective, placed under ; liable ; obnoxious ; being that on which an action operates : the noun substantives correspond : subjective, relating to the subject.

How hard it is now for him to frame himself to subjection, that,

having once set before his eyes the hope of a kingdom, hath found encouragement.

Spenser.

Because the subjection of the body to the will is by natural necessity, the subjection of the will unto God voluntary, we therefore stand in need of direction after what sort our wills and desires may be rightly conformed to his. Hooker.

I live on bread like you, feel want like you, Taste grief, need friends, like you : subjected thus, How can you say to me I am a king 1

Shakspeare, Richard //. Now spurs the lated traveller apace To gain the timely inn, and near approaches The subject of our watch. Id. Macbeth.

Every subject's duty is the king's, But every subject's soul is his own. Id. Henry V.

The' eastern tower,

Whose height commands, as nibject, all the vale To see the fight. Id. Troilus and Cressida.

Most subject is the fattest soil to weeds ; And he, the noble image of my youth, Is overspread with them. Shakspeare.

Anger is certainly a kind of baseness, as it appears well in the weakness of those subject! in whom it reigns, children, women, old folks, sick folks.

Those J call subjects which are governed by the ordinary laws and magistrates of the sovereign.

Dam.es.

Here he would have us fix our thoughts ; nor are they too dry a subject for our contemplation.

Decay of Piety.

We must understand and confess a king to be a father, a subject to be a son ; and therefore honour to be by nature most due from the natural subject to the natural king. Holiday.

The angel

Led them direct, and down the cliff as fast To the subjected plain. Milton.

He subjected to man's service angel wings. Id. Both in subjection now to sensual appetite. Id. After the conquest of the kingdom, and subjection •if the rebels, enquiry was made who there were hat, fighting against the king, had saved themselves ty flight. Hate.

I will not venture on so nice a subjert with my se-rere style. More.

Christ, since his incarnation, has been subject to the Father : and will be so also, in his human ca-

pacity, after he has delivered up his mediatorial king-emptores was made.

il.n., Tf_j 1 I t?TTD TTVTrf^i n T»o/ci T

SUBINFEUDATION, in English law, was where the inferior lords, in imitation of their superiors, began to carve out and grant to others minuter estates than their own, to be held of themselves ; and were so proceeding downwards in infinitum, till the superior lords observed that by this method of subinfeudation they lost all their feudal profits, of wardships, marriages, and escheats, which fell into the hands of these mesne or middle lords, who were the immediate superiors of the terre-tenant, or him who occupied the land. This occasioned the statute of Westm. 3, or quia emptores, 18 Ewd. I., to be made; which directs that, upon all sales or feoffments of lands, the feoffee shall hold the same, not of his immediate feoffer, but of the chief lord of the fee of whom such feoffer himself held it. And hence it is held that all manors existing at this day must have existed by immemorial prescription; or at least ever since the 18 Edw. I. when the statute of quiu

Waterland.

Think not, young warriors, your diminished name Shall lose of lustre,

by subjecting rage To cool the dictates of experienced age. Dryden.

I see thee, in that fatal hour, Subjected to the victor's cruel power, Led hence a slave. Id.

All human things are subject to decay. And, when fate summons, monarchs must obey.

Id.

Were subjects so but only by their choice, And not from birth did forced dominion take, Our prince alone would have the public voice. Id. I enter into the subject matter of my discourse.

Id.

The blind will always be led by those that see, or fall into the ditch : and he is the most subjected, the most enslaved, who is so in his understanding.

Locke.

God is not bound to subject his ways of operation to the scrutiny of our thoughts, and confine himself to do nothing but what we must comprehend. lit.

Esau was never subject to Jacob, but founded a distinct people and government, and was himself prince over them. Id.

Heioick kings whose high perfections have made them awful to their subjects, can struggle with and subdue the corruption of the times. Davenant.

If the vessels yield, it subjects the person to all the inconveniencies of an erroneous circulation.

Arbuthnot.

The superficial parts of mountains are washed away by rains and borne down upon the subjacent plains. Woodward.

The medal bears each form and name , In one short view, subjected to our eve, Gods, emperors, heroes, sages, beauties lie,

Lat. sub and in-

SUBINGRES'SION, n. s.

gressus. Secret entrance.

The pressure of the ambient air is strengthened upon the accession of the air sucked out ; which forceth the neighbouring air to a violent subingression Of its parts. B, > yle.

SUBJOIN', v. a. Fr. sub and joindre ; Lat. subjungo. To add at the end; to add afterwards.

He makes an excuse from ignorance, the only thing that could take away the fault ; namely, that he knew not that he was the high-priest, and subjoins a reason. South.

SUBITO, in the Italian music, is used to signify that a thing is to be performed quickly and hastily : thus we meet with volti subito, turn over the leaf quickly.

SUB'JUGATE, v. a. Fr. subjuguer; Lat. subjugo. To conquer; subdue; bring under dominion by force.

This was the condition of the learned part of the world, after their subjugation by the Turks.

Hale.

O favorite virgin, that hast warmed the breast, Whose sovereign dictates subjugate the east! Prior.

He subjugated a king, and called him his vassal.

BaL'r.

SUBJUNCTION, n. s. > Lat. subjungo. The

SUBJUNC'TIVE, adj. \ state of being subjoined ; the act of subjoining : subjoined to something else.

The verb undergoes in Greek a different formation ; and in dependence upon, or subjunction to, some other verb. Clarke.

The verb undergoes a different formation, to sig-ify the same intention as the indicative, yet not

nify

Id. MOOD, in

My real design is that of publishing your praises ""• > ' "•"•—"- •- •*••"•«" - -•- • j-to the world; lot upon the Subject of your noble absolutely but rela.vely to some other verb, wh c j^k Swift is called the subjunctive mood.

The subject must obey his prince, because God commands it, human laws require it. Id.

The subject of a proposition is that concerning which any thing is affirmed or denied.

Watts's Logick.

Certainty, according to the schools, is distinguished into objective and subjective ; objective is when the proposition is certainly true in itself, and subjective, when we are certain of the truth of it.

Watts.

SUBJUNCTIVE, or SUBJUNCTIVE grammar. See GRAMMAR.

SUBLAPSA'RIAN, adj. \ Lat. sub and

SUBLAP'SARY.) lapsus. Done after

the fall of man.

The degree of reprobation, according to the . < w6-laptarian doctrine, being nothing else but a mere

g retention or non-election of some persons whom od left as he lounu involved in the guilt of the first Adam's transgression, without any actual per-

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•»onal sin of their own, when he withdrew some others as guilty as they. Hammond.

SUBLAPSAKIANS, OF INFRALAPSAHIANS. See SUPRA LAPSAKIANS.

SUBLEYRAS (Peter), an eminent French painter born in Languedoc, in 1699. He excelled in history and portraits : and was much patronised by the king and nobility, as well as by foreigners. He painted a grand piece for St. Peter's church at Rome; and died in 1749, aged fifty.

SUBLI'MABLENESS, n. s. •} Lat. sublimis. SUB'LIMATE, v. a., n. s., & adj. j Quality of SUBLIMA'TION, n. s. ! admitting to

SUBLIME', adj., n. s., v. a., & j be sublimat-SUBLIME'LY, adv. [v. n. ed, or raised

SUBLIM'ITY, n. s. J by the force

of fire : sublimate is also used for to raise ; exalt ; generally : but the noun substantive and adjective are only used chemically : sublimation is defined below : sublime is, high in place ; excellent style or sentiment; mien or manner: as a noun substantive, a grand or lofty style : to sublime, synonymous with to sublimate : sublimely is, loftily; grandly: the noun substantive that follows corresponding.

As religion looketh upon him who in majesty and power is infinite, as we ought we account not of it, unless we esteem it even according to that very height of excellency which our hearts conceive, when divine sublimity itself is rightly considered.

Hooker.

In respect of God's incomprehensible sublimity and purity, this is also true, that God is neither a mind nor a spirit like other spirits, nor a light such as can be discerned. Raleigh.

Enquire the manner of subliming, and what metals endure subliming, and what body the sublimate makes.

Bucon.

Separation is wrought by weight, in the settlement of liquors, by heat,

by precipitation, or sublimation ; that is, a calling of the several parts up or down, which is a kind of attraction. Id. Natural History.

She turns Bodies to spirits, by sublimation strange. Davies.

And as his actions rose, so raise they still their

vein

In words, whose weight best suits a sublimated strain.

Drayton.

Study our manuscripts, those myriads Of letters, which have passed ‘twixt thee and me : Thence write our annals, and in them lessons be To all, whom love’s subliming fire invades. Donne.

He was sublime, and almost tumorous, in his looks and gestures. Wotton.

Not only the gross and illiterate souls, but the most aerial and sublimated, are rather the more pro-per fuel for an immaterial fire. Decay of Piety.

The precepts of Christianity are so excellent and refined, and so apt to cleanse and sublimate the more gross and corrupt, as shews flesh and blood never revealed it. Id.

Although thy trunk be neither large nor strong, Nor can thy head, not helped itself sublime, Yet, like a serpent, a tall tree can climb. Denham.

They sum’d their pens, and soaring the’ air sublime With clang despised the ground. Milton.

My earthly strained to the height In that celestial colloquy sublime. Id.

Their hearts were jocund and sublime, Drunk with idolatry, drunk with wine. Id.

His fair large front and eye sublime declared Absolute rule. Id.

Flowers, and then fruit,

Man’s nourishment, by gradual scale sublimed, To vital spirits aspire. Id.

The fancies of most are moved by the inward springs of the corporeal machine, which, even in the most sublimed intellectuals, is dangerously influential.

Glanville.

He obtained another concrete as to taste and smell, and easy sublimableness, as common sal ammoniack.

Boyle.

Sublime on these a tower of steel is reared, And dire Tisiphone there keeps the ward. Dryden.

Can it be, that souls sublime Return to visit our terrestrial clime? And that the generous mind, released by death, Can covet lazy limbs ”. Id.

Art, being strengthened by the knowledge of things, may pass into nature by slow degrees, and so be sublimed into a pure genius, which is capable of distinguishing betwixt the beauties of nature and that which is low in her. Id. Dufresnoy.

Shall he pretend to religious attainments who is, defective and short in moral, which are but the rudiments and first draught of religion, as religion is the perfection, refinement, and sublimation of morality 1

South.

In English lays, and all sublimely great, Thy Homer charms with all his ancient heat.

Parnell.

The sublime rises from the nobleness of thoughts, the magnificence of the words, or the harmonious and lively turn of the phrase ; the perfect sublime arises from all three together. Addison.

Milton’s distinguishing excellence lies in the sublimity of his thoughts, in the greatness of which he triumphs over all the poets, modern and ancient. Homer only excepted. Id.

Easy in stile thy work, in sense sublime. Prior. Sublimation differs very little from distillation, excepting that in distillation only the fluid parts of bodies are raised, but in this the solid and dry ; and that the matter to be distilled may be either solid or fluid, but sublimation is only concerned about solid substances. There is also another difference, namely, that rarefaction, which is of very great use in distillation, has hardly any room in sublimation; for the substances which are to be sublimed, being solid, are incapable of rarefaction ; and so it is only impulse that can raise them. Quincy.

The particles of mercury, uniting with the acid particles of spirit of salt, compose mercury sublimate and, with the particles of sulphur, cinnabar.

Newton's Opticks.

Since oil of sulphur per campanam is of the same nature with oil of vitriol, may it not be inferred that sulphur is a mixture of volatile and fixed parts, so strongly cohering by attraction as to ascend together by sublimation ? Id.

The particles of sal ammoniack in sublimation carry up the particles of antimony, which will not sulilinvs alone. Id.

This salt is fixed in a gentle fire, and sublimes in a great one. Arbuthnat on Ailments.

Longinus strengthens all his laws, And is himself the great sublime he draws. Pope.

Meanly they seek the blessing to confine, And force that sun biit on a part to shine ; Which not alone the southern wit sublimes, But ripens spirits in cold northern climes.

Fustian's so sublimely bad, It is not poetry, but prose run mad.

SUBLIMATE, a chemical preparation, consisting

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of quicksilver united with the muriatic acid. See CHEMISTRY and PHARMACY.

SUBLIMATE, CORROSIVE. Bichloride of mercury.

SUBLIMATION is a process by which volatile substances are raised by heat, and again condensed in the solid form. This operation is founded on. the same principles as distillation, and its rules are the same, as it is nothing but a dry distillation. Therefore all that has been said on the article DISTILLATION is applicable here, especially in those cases where sublimation is employed to separate volatile substances from others which are fixed or less volatile.

Sublimation is also used in other cases; for instance, to combine volatile matters together, as in the operation of the sublimates of mercury ; or to collect some volatile substances, as sulphur, the acid of borax, and all the preparations called flowers. The apparatus for sublimation is sim-ple. A matrass or small alembic is generally sufficient for the sublimation of small quantities of matter. But the vessels, and the method of managing the fire, vary according to the nature of the matters which are to be sublimed, and according to the form which is to be given tc the sublimate.

The beauty of some sublimates consists in their being composed of very fine, light parts, such as almost all those called flowers ; as flowers of sulphur, of benzoin, and others of this kind. When the matters to be sublimed are at the same time volatile, a high cucurbit, to which is adapted a capital, and even several capitals placed one upon another, are employed. The sublimation is performed in a sand-bath, with only the precise degree of heat requisite to raise the substance which is to be sublimed, and the capitals are to be guarded as much as possible from heat. The height of the cucurbit and of the capital seems well contrived to accomplish this intention.

When, along with the dry matter which is to be collected in these sublimations, a certain quantity of some liquor is raised, as happens in the sublimation of acid of borax, and in the rectification of volatile concrete alkali, which is a kind of sublimation, a passage and a receiver for these liquors must be provided. This is conveniently done by using the ordinary capital of the alembic, furnished with a beak and a receiver.

Some sublimates are required to be in masses as solid and compact as their natures allow. Of this number are camphor, muriate of ammonia, and all the sublimates of mercury. The properest vessels for these sublimations are bottles or matrasses, which are to be sunk more or less deeply in sand, according to the volatility and gravity of the matters that are to be sublimed. In this manner of subliming, the substances, having quitted the bottom of the vessel, adhere to its upper part, and, as this part is low and near the fire, they there suffer a degree of heat sufficient to give them a kind of fusion. The art, therefore, of conducting these sublimations consists in applying such a degree of heat, or in so disposing the sand (that is, making it cover more or less the matrass), that the heat in the upper part of the matrass shall be sufficient to make VOL. XXI.

the sublimate adhere to the glass, and to give it such a degree of fusion as is ‘necessary to render it compact ; but at the same time this heat must not be so great as to force the sublimate through the neck of the matrass, and dissipate it. These conditions are not easily to be attained, especially in great works. Many substances may be reduced into flowers, and sublimed, which require for this purpose a very great heat, with the access of free air and even the contact of coals, and therefore cannot be sublimed in close vessels. Such are most soots or flowers of metals, and even some saline substances. When these sublimates are required, the matters from which they are to be separated must be placed among burning coals in open air; and the flowers are collected in the chimney of the furnace in which the operation is performed. The tutty, calainine, or pomphplix, collected in the upper part of furnaces in which ore are smelted, are sublimates of this kind.

SUBLIMATORY (from sublimation). Of or belonging to sublimation, or to the art of subliming.

SDBLIMATORY VESSELS. See CHEMISTRY, Index.

SUBLIMITY, in style. See LANGUAGE, ORATORY, and SIMPLICITY.

SUBLIN’GUAL, adj. Fr. mlllngual ; Lat. sub and lingua. Placed under the tongue.

Those subliming humours should be intercepted, before they mount to the head by su’iliiigual pills.

liaroey.

SUBLINGUAL ARTERY or SUBLI NOT AL GLANDS, See ANATOMY.

SUBLU'NAR, adj. I FT. sublunnirr; La!. SUB'LUNARY. i sub and lima. Situated

beneath the moon; earthly; terrestrial; of tins world.

Dull sublunary lovers ! love, Whose soul is sense, cannot admit

Of absence, 'cause it doth remove The thing which elemented it. Donne.

Through seas of knowledge we our course advance, Discovering still new worlds of ignorance ; And these discoveries make us all confess That sublunary science is but guess. Denltam.

Night measured, with her shadowy cone, Half way up hill this vast sublunar vault. Milton.

The celestial bodies above the moon, being not subject to chance, remain in perpetual order, while all things sublunary are subject to change.

Dryden's Dufresnoy. Ovid had warned her to beware Of strolling gods, whose usual trade is,

Under pretence of taking air, To pick up sublunary ladies. The fair philosopher to Rowley flies, Where in a box the whole creation lies ; She sees the planets in their turns advance, And scorns, Poitier, this sublunary dance. Young. SUBMARINE', adj. I at. sub and mure Lying or acting under the sea.

This contrivance may seem difficult, because th-sc submarine navigators will want winds and tide* loi motion, and the sight of the heavens for direc

Wilkiru

i\ot only the herbaceous and woody tubmannt plants, but also the lithophata, affect this manner of growing, as 1 observed in corals.

Kay on the. Creation,

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purposes.

SUBMISS’, adj. SUBMIS’SIOX, n. s. SUBMISSIVE, adj.

SUBMIS’SIVELY, adv.

SUBMERGE’, v.o. } Fr. submerger ; Lat. SUBMER’SION, n. s. S submergo. To drown; to put under water : act or state of drowning.

So half my Egypt was submerged, and made A cistern for scaled snakes.

Shakspeare. Antony and Cleopatra. The great Atlantick island is mentioned in Plato’s Timsus, almost contiguous to the western parts of Spain and Africa, yet wholly swallowed up by that ocean ; which, if true, might afford a passage from Africa to America by land before that submersion.

Hale’s Origin of Afankind. SUBMINISTER, v. a.) Lat. mbministro. SUBMIN’ISTRATE. \ To supply ; to afford.

A word not much in use.

Nothing subministrates apter matter to be converted into pestilent seminaries than steams of nasty folks.

Harveu—

Some things have been discovered, not only by the •ndustry of mankind, but even the inferior animals have subministered unto man the invention of many things, natural, artificial, and medicinal.

Hale’s Origin of Mankind.

Passions, as fire and water, are good servants, but bad masters, and subminister to the best and worst

L’ Estrange.

ˆ lAt.submissus. Hum- | ble; submissive; ob- ˆ sequious : submissive I is

the more common

SUBMIS'SIVENESS, n. s. | adjective of the same SUBMISS'LY, adv. J meaning: all the derivatives correspond.

Submission, dauphin ! 'tis a mere French word ; We English warriors wot not what it means.

Shakspeare.

Be not as extreme in submission as in offence. Id. On what submissive message art thou sent ? Id. King James, mollified by the bishop's submiss and eloquent letters, wrote back, that though he were in part moved by his letters, yet he should not be fully satisfied except he spake with him.

Bacon's Henry VII.

If thou dost sin in wine and wantonness, Boast not thereof, nor make thy shame thy glory ;

Frailty gets pardon by submissiveness, But he that boasts shuts that out of his story ; He makes flat war with God, and doth defy, With his poor clod of earth, the spacious sky.

Herbert.

Humility consists not in wearing mean cloaths, and going softly and submissly, but in mean opinion of thyself. Taylor.

Rejoicing, but with awe, In adoration at his feet I fell Submiss : he reared me. Milton.

Her at his feet submissive in distress He thus with peaceful words upraised. Id. No duty in religion is more justly required by God Almighty, than a perfect submission to his will in all things. Temple.

The goddess, Softrin her tone, submissively replies.

Dryden's 2Ene\A. Sudden from the golden throne With a submissive step I hasted down ; The glowing garland from my hair I took, Love in my heart, obedience in my look. Prior.

But speech even there submissively withdraws From rights of subjects, and the poor man's cause ; Then pompous silence reigns, and stills the noisy

laws. Pope.

Great prince, by that submission you'll gain more 'Than e'er your haughty courage won before.

Halifax.

SUBMIT', v. a. kv.n. Fr. toumettre; La;. subntitto. To let down ; sink ; subject : be subject.

Return to thy mistress, and submit thyself undei her hands. ' Genesis xvi. 9.

To thy husband's will Thine shall submit : he over thee shall rule. Milton.

\ ill ye submit your neck and chuse to bend The supple knee? Id.

Sometimes the hill submits itself a while In small descents, which do its height beguile ; And sometimes mounts, but so as billows play, Whose rise not hinders but makes short our way.

Drtjden.

Our religion requires from us not only to forego

Sleasure, but to submit to pain, disgrace, and even ealh. Rogers.

Whether the condition of the clergy be able to bear a heavy burden is submitted to the house.

Swift.

SUBMONTORIUM, an ancient town of Germany, in Vindelicia: now called Augsburg. SUBMULTIPLE, in geometry &c., coincides with an aliquot part.

SUBMULTIPLE RATIO is that between the quantity contained and the quantity containing. Thus the ratio of 3 to 21 is submultiple. In both cases submultiple is the reverse of multiple : '21, e. gr. being a multiple of 3, and the ratio of 21 to 3 a multiple ratio.

SUBNORMAL (Latin, sub and norma, a rule). Belonging to that point in the axis of a curvilinear space which is intersected by a perpendicular to a tangent drawn from any given point in the curve.

SUBNORMAL, the perpendicular to the tangent of a curve intercepting the axis.

SUBOCTAVE, adj. \ Lat. sub and octavus, SUBOC'TUPLE. $ and octuple. Containing one part of eight.

As one of these under pulleys abates half of that heaviness of the weight, and causes the power to be in a subduple proportion : so two of them abate half of that which remains, and cause a subquadruple proportion, three a sextuple, four a subucluple.

Wilkins's Mathematical Magick. Had they erected the cube of a foot for their principal concave, and geometrically taken its tuboctave, the congius, from the cube of half a foot, they would have divided the congius into eight parts, each of which would have been regularly the cube of a quarter foot, their well-known palm : this is the course taken for our gallon, which has the pint for its sub-octave. Arbuthnot on Coins. SUBOR'DINACY, n. s. N Lat. sub and ordi-SUBOR'DINAKCY. / natus. The state SUBORDINATE, adj. &v. a. -of being subject; SUBOR'DINATELY, adv. 1 series of subordi-SUBORDINA'TION, n. s. J nation : inferior in order, nature, dignity, or power : to make so : the adverb and noun substantive corresponding.

The two armies were assigned to the leading of two generals, rather courtiers than martial men, yet assisted with subordinate commanders of great experience. Bacon.

If I have subordinated picture and sculpture to architecture, as their mistress, so there are other inferior arts subordinate to them. Wotton.

It being the highest step of ill, to which all others subordinately tend, one would think it could be capable of no improvement. Decay of Piety.

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The natural creatures having a local subordination, the rational having a political, and sometimes a sacred. Holyday.

His next subordinate Awakening, thus to him in secret spake. Milton.

The tubordinancti of the government changing hands so often, makes an unsteadiness in the pursuit of the public interests. Temple.

Nor can a council national decide,

But with subordination to her guide. Drijden.

It was subordinate, not enslaved, to the understanding ; not as a servant to a master, but as a queen to her king, who acknowledges a subjection, yet retains a majesty. South.

Whether dark presages of the night proceed from any latent power of the soul during her abstraction, or from any operation of subordinate spirits, has been a dispute. Addison.

Pursuing the imagination through all its extravagancies is no improper method of correcting, and bringing it to act in subordinacy to reason.

Spectator.

These carry such plain characters of disagreement or affinity, that the several kinds and subordinate species of each are easily distinguished. Woodward.

If we would suppose a ministry, where every single person was of distinguished piety, and all great officers of state and law diligent in chusing persons who in their several subordinations would be obliged to follow the examples of their superiors, the empire of irreligion would be soon destroyed. Swift.

SUBORDINARIES. See HERALDRY. SUBORN’, v. a. (Fr. suborner; Lat.
SUBORNA’TION, n. s. $ suborno. To procure privately ; procure by secret collusion, or indirectly : the noun substantive corresponding.

Thomas earl of Desmond was through false subornation of the queen of Edward IV. brought to his death at Tredah most unjustly. Spenser on Ireland.

His judges were the self-same men by whom his Accusers were suborned. Hooker.

Fond wretch ! thou knowest not whatthou speakest, Or else thou art suborned against his honour la hateful practice. Shakspeare.

You set the crown

Upon the head of this forgetful man, And for his sake wear the detested blot Of murderous subornation. Id. Henry IV.

Reason may meet

Some specious object, by the foe suborned, And fall into deception. Milton.

His artful bosom heaves dissembled sighs ; And tears suborned fall dropping from his eyes.

Prior. Behold

Those who by lingering sickness lose their breath, And those who by despair suborn their death.

Dry den.

The fear of punishment in this life will preserve men from few vices, since some of the blackest often prove the surest steps to favour ; such as ingratitude, hypocrisy, treachery, and subornation. Swift.

SUBORNATION, in English law, a secret, underhand, preparing, instructing, or bringing in a false witness ; and hence subornation of perjury is the preparing or corrupt alluring to penury. The punishment for the crime was formerly death, then banishment or cutting out the tongue, afterwards forfeiture of goods ; and it is now a fine and imprisonment, and never more to be received as evidence. The stat. 2 Ceo. II. c. 25. superadded a power for the court to order the offender to be sent to the house of correction

for a term not exceeding seven years, or be transported for the same period.

SUBP(EN A, iu law, is a writ whereby common persons are called into chancery, in sucli cases, where the common law hath provided no ordinary remedy : and the name of it proceeds from the words therein, which charge the party cal-led to appear at the day and place assigned, sub pcena centum librarum, &c. The subpoena is the leading process in the court of equity ; and by statute, when a bill is filed against any person, process of subpoena shall be taken out to oblige the defendant to appear and answer the bill, &c.

SUBPCENA AD TESTIFICANDUM, a Writ Or prOcess to bring in witnesses to give their testimony. If a witness on being served with this process does not appear, the court will issue an attachment

against him; or a party, plaintiff or defendant, injured by his non-attendance, may maintain an action against the witness. See Blackstone's Commentaries, vol. III. p. 369.

SUBPCENA IN EQUITY, a process in equity, calling on a defendant to appear and answer to the complainant's bill. See stat. o Ceo. IF. c. 25, which enacts that where the party cannot be found to be served with a subpoena, and ab-sconds (as is believed) to avoid being served, a day shall be appointed him to appear to the bill of the plaintiff; which is to be inserted in the London Gazette, read in the parish church where the defendant last lived, and fixed up at the Royal Exchange : and, if the defendant doth not appear upon that day, the bill shall be taken pro confesso.

SUBQUAD'RUPLE, adj. Sub and quadruple. Containing one part of four.

As one of these under pulleys abates half of that heaviness the weight hath in itself, and causes the power to be in a subduple proportion unto it, so two of them abate half of that which remains, and cause a subquadruple proportion.

WMins's Mathematical Magick.

SUBQUINTUPLE, adj. Sub and quintuple Containing one part of five.

If unto the lower pulley there were added another, then the power would be unto the weight in a sul>- tjuintuple proportion

Wilkins's Mathematical dlagick.

SUBROGATION, or SURROCATIOX, in the civil law, the act of substituting a person, in the place, and entitling him to the rights of another. In its general sense, subrogation implies a succession of any kind, whether of a person to a person, or of a person to a thing. There are two kinds of subrogation : the one conventional, the other legal. Conventional subrogation is a contract whereby a creditor transfers his debt, with all appurtenances thereof, to the profit of a third person. Legal subrogation is that which the law makes in favor of a person who discharges an antecedent creditor ; in which rase there is a legal translation of all rights of the ancient creditor to the person of the new one.

SUBSALT, a term first used by Ur. Pearson fora salt having an excess of base beyond what is requisite for saturating the acid, as superset is one with an excess of the acid. The sulphate of ootash is the neutral

compound of sulphuric

za

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. } Fr. souscrire; fLat.subscribo. To 3 give consent to by

acid and potash ; subsulphate of potash a com-oound of the same ingredients, in which there is an excess of base ; supersulphaie of potash, a compound of the same acid and the same base, yi which there is an excess of acid.

SUBSCR,rBE,?;.u.&?;.n. Fr.

SUBSCRIBER, n. s.

SUBSCRIPTION. 3 give consent to by

underwriting the name ; attest by writing ; sub-mit : give consent : both the noun substantives corresponding.

Osius, with whose hand the Xicene creed was set down, and framed for the whole Christian world to subscribe unto, so far yielded in the end, as even with the same hand to ratify the Arians' confession.

Hooker.

Their particular testimony ought to be better credited than some other subscribed with an hundred hands. Whitgij't.

The king gone to-night ! subscribed his power ! Confined to exhibition ! all is gone. Shakspeare.

Advise thee what is to be done, And we will all subscribe to thy advice. Id.

I tax not you, you elements, with unkindness ; I never gave you kingdom, called you children ; You owe me no subscription. Id. King Lear.

The man asked, Are ye Christians? We answered we were ; fearing the

less because of the cross we had seen in the subscription. Bacon.

They united by subscribing a covenant, which they pretended to be no other than had been subscribed in the reign of king James, and that his majesty himself had subscribed it ; by which imposition people of all degrees engaged themselves in it. Clarendon.

So spake much humbled Eve ; but fate Subscribed not : natuie first gave signs, impressed On bird, beast, air. Milton's Paradise Lost.

The reader sees the names of those persons by whom this letter is subscribed. Addison.

The work he plied ; Stocks and subscriptions pour on every side. Pope.

Let a pamphlet come out upon a demand in a proper juncture, every one of the party who can spare a shilling shall be a subscriber. Swift.

SUBSCRIPTION, in general, signifies the signature put at the bottom of a letter, writing, or instrument. In commerce, it is used for the share or interest which particular persons take in a public stock or a trading company, by writing their names, and the shares they require, in the books or register thereof.

SUBSCRIPTION, in the commerce of books, signifies an engagement to take a certain number of copies of a book intended to be printed, and a reciprocal obligation of the bookseller or publisher to deliver the said copies on certain terms. These subscriptions, which had their rise in England about the middle of the last century, were lately very frequent in France and Holland, and are now very common among ourselves.

SUBSCRIPTION TO ARTICLES OF FAITH is a written solemn declaration of the subscriber's assent, and is governed, according to archdeacon Paley, by the same rule of interpretation with oaths; — which rule is tlir 'animus im-ponentis.' The enquiry, therefore, concerning subscription will be, 'quis imposuit, et quo animo.' The bishop who receives the subscription, says this ingenious writer, is not the i;n-poser, any more than the cryer of a court, who administers the oath to the jury and witnesses,

is the person that imposes it ; nor consequently is the private opinion or interpretation of the bishop of any signification to the subscriber, one way or other. The compilers of the thirty-nine articles are not to

be considered as the imposers of subscription, any more than the framer or drawer up of a law is the person that enacts it. The legislature of the 13th Eliz. is the imposer, whose intention the subscriber is bound to satisfy. They who contend that nothing less can justify subscription to the thirty-nine articles, than the actual belief of each and every separate proposition contained in them, must suppose that the legislature expected the consent of 10,000 men, in perpetual succession, not to one controverted proposition, but to many hundreds. It is difficult to conceive how this could be expected by any, who observed the incurable diversity of human opinion upon all subjects short of demonstration. If the authors of the law did not intend this, what did they intend ? Our author replies to this question that they intended to exclude from offices in the church, 1. All abettors of popery; 2. Anabap-tists, who were at that time a powerful party on the continent; and, 3. The Puritans, who were hostile to an episcopal constitution ; and in general the members of such leading sects or foreign establishments, as threatened to overthrow our own. Whoever, he says, finds himself comprehended within these descriptions, ought not to subscribe. For the general reasons upon which he justifies the imposition of this test on the teachers of religion, we must refer to his Moral Philosophy ; where it will appear that this writer seems to intimate, that our articles of faith might be converted into articles of peace; and acknowledges that subscriptions perpetuate the proscription of sects and tenets, from which any danger has long ceased to be apprehended. The cases in which subscription to the thirty-nine articles is required are, those of clergy officiating in the church, and entitled to its preferments and emoluments, and of schoolmasters, of young men in the university of Oxford at the time of their matriculation ; and at Cambridge all degrees in arts, law, physic, music, and divinity, are guarded by subscription, nor are any admitted to their first degree of bachelor of arts without a bona fide subscription, i. e. ‘ I, A. B., do declare that I am bona fide a member of the church of England as by law established.’

We must here, however, observe that the three articles contained in the thirty-sixth canon are those that are subscribed at Cambridge for a bachelor of divinity’s degree, and for a doctor’s in any faculty, divinity, law, or physic. They include all the thirty-nine articles, and are as follow :— 1. That the king’s majesty, under God, is the only supreme governor of the realm and all other his highness’s dominions and countries, IK well in spiritual or ecclesiastical things or causes, as temporal, and that no foreign prince, person, prelate, or potentate hath, or ought to have, any jurisdiction, ecclesiastical or spiritual, within his majesty’s said realms, dominions, and countries. 2. That the

book of common prayer, and of ordering of bishops, priests, and deacons, containeth nothing in it contrary to the *ord of

God ; and that it may lawfully be used ; and that he himself will use the form in the said book prescribed in public prayer, and administration of the sacraments, and no other. 3. That he alloweth the book of articles agreed upon by the archbishops, and bishops of both provinces, and the whole clergy in the convocation, holden at London in the year 1562 : and that he ac-knowledgeth all, and every, the articles therein contained (being in number thirty-nine, besides the ratification) to be agreeable to the word of God. We whose names are underwritten do willingly, and ex animo, subscribe to the three articles before mentioned, and to all things in them contained. — Excerp. e Stat. Acad. Cantab. p. 25.

Many persons who think highly of archdeacon Paley's judgment and liberality, and some who are inclined to interpret subscription with the utmost latitude, are not satisfied with his state-nent of the intention with which the articles were formed, and subscription to them enjoined. The truth of the case seems to be that the compilers of the articles considered them as comprehending scriptural doctrines, generally believed at the time when they were drawn up, and which they thought no one could reasonably dispute ; and that they were authoritatively enforced with a view of preventing diversity of opinion. This will appear if we take a cursory view of the manner in which they were introduced and established. Soon after the Reformation, when dissentions and separations took place among the reformed churches, particularly in Poland, Hungary, and Transylvania, and the Catholics charged these differences and dissentions upon the principles of the reformed, their leaders made attempts for vindicating themselves from the charge. Accordingly they determined to make a public declaration of their principles ; they drew up public confessions, and their teachers subscribed a profession of uniformity. A diet was held at Augsburg, in the year 1530, under Charles V., and there an explicit confession, confirmed by the leaders of the several

churches, received its birth. In process of time other churches followed the example, and the faith of eleven Protestant churches was comprehended in the Harmony, drawn up by the Belgic and Galilean churches, A. D. 1581. The Book of Concord among the Remonstrants in Holland, and the Corpus Confessionum, which appeared at Geneva in the year 1612, were productions of a similar kind, and formed for like purposes. In England measures of the same tendency were adopted. After Henry VIII. assumed the supremacy of the church, he proceeded, in the exercise of his newly acquired authority, to appoint six articles, ordaining, among other enact-ments, ‘ that all bishops and ministers were to believe the whole bible, the three creeds, *viz.* the Apostles’, the Nicene, and the Athanasian, and interpret all things according to them and in the same words.’ In the preface it is said, ‘ they are to maintain unity and concord in opinion.’ In the reign of Edward VI. Cranmer and others remonstrated against these articles, and they were repealed ; but forty-two articles were published ‘ for the avoiding of diversity of opinion, and the

gaining of true consent, touching true religion. In queen Elizabeth’s reign eleven articles “were set out by order of the metropolitans, and the rest of the bishops, ‘ for the unity of doctrine, to be holden by all parsons, vicars, and curates as well in testification of their common consent in the. said doctrine, as to the stopping of the mouths of those who go about to slander the ministers of the church for diversity of judgment..’ Some time after all of them were surveyed, and at length comprised within a system of thirty-nine articles. These articles were again ratified by James I., according to the form commonly prefixed to the book of articles of queen Elizabeth ; in which, among other things, are these words, ‘ that the articles of the church of England (which have been allowed and authorised heretofore, and which our clergy have generally subscribed unto) do contain the true doctrine of the church of England, agreeable to God’s won! ; which we. do therefore ratify and confirm, requiring all our loving subjects to continue in the uniform profession thereof, and prohibiting the least difference from the said articles, &c.’ It is added, after an assertion ‘that we are supreme governor of the church of England,’ and the recital of some other particular observations relating to these articles, ‘ that no man hereafter shall either print or preach to draw the article aside any way, but shall submit to it in the plain and full meaning thereof, and shall not put his own sense or comment to be the meaning of the articles, but shall take it in the literal and grammatical sense. That if any public reader in either of our universities, or any head or master of a college, or any other person respectively in either

of them, shall affix any sense to any article, or shall publicly read, determine, or hold any pub-lic disputation, or suffer any such to be held either way, in either the universities or colleges respectively; or if any divine in the universities shall preach or print any thing either way, other than is already established in convocation with our royal assent; he or they the offenders shall be liable to our displeasure, and the church's censure in our commission ecclesiastical, as well as any other; and we will see there shall be due execution upon them.'

By 13 Eliz. c. 12, none shall be admitted to the order of deacon, unless he shall iii st subscrib* to the said articles. And, by the same statute. none shall be made minister, or permitted U preach or administer the sacraments, unless he first bring to the bishop of that diocese, from men known to the bishop to be of sound religion, a testimonial of his professing the doctrine ex pressed in the said articles, nor unless he be able to answer and render to the ordinary an account of his faith in Latin, according to the said am cles, or have special gift or ability tobea preacher; nor unless he shall first subscribe to the said articles.

By the thirty-si»th canon, no person shall I received into the ministry, nor either by inst tion or collation admitted to any ecclesiast living nor suffered to preach, catechise, or to a lecturer or reader of divinity in either univer

sity, or in any c

athedral or collegiate church,

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city, or market town, narish-clmreli, K\M\W\, "«

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in any otb*r place, except he shall first subscribe to this article following : viz- ‘ That he alloweth the book of articles of religion agreed upon by the archbishops and bishops of both provinces, and the whole clergy in the convocation holden at London, in the year of our Lord God 1563; and that he acknowledged all and every the articles therein contained, being in number nine-and-thirty, besides the ratification, to be agreeable to the word of God.’ And by the statute of the 13 Eliz., c. 12, no person shall be admitted to any benefice with cure, except he shall first have subscribed the said articles in the presence of the ordinary ; and all admissions to be-aefices of any person contrary to this act, and all dispensations, qualifications, and licenses to the contrary, shall be merely void in law, as if they never were.

“The 13 & 14 Car. II., c. 4, require subscription to the thirty-nine articles mentioned in the 13th Eliz. c. 12, and a declaration of unfeigned assent and consent unto, and approbation of them, under certain express penalties. It has been observed, however, that by the 13 Eliz. c. 12, subscription is enjoined to those articles which only concern the confession of the true Christian faith, and the doctrine of the sacraments; and that by 14 Car. II. the articles to be subscribed are the articles mentioned in the preceding statute : the limiting clause, therefore, being still in force, there is no act of the legislature imposing the subscription to all the thirty-nine. Such is the opinion of archdeacon Black-burae and Mr. Selden, but others are of a different opinion. We shall here merely re-mark that the origin of the act of uniformity under Charles II., and various clauses in the act itself, suppose the reception of the disciplinarian as well as the doctrinal and sacramental articles, and that the canons of the church do actually impose them all.

By those who are acquainted with the history of the times under consideration, and with the sentiments and character of the compilers and imposers of the articles, it must, as it has been conceived, be allowed that the notion of diversity of judgment never entered into the minds of the English reformers ; they supposed that the Scriptures had but one meaning, and with an excess of confidence imagined that they were in possession of the truth. In confirmation of this it has been urged that when the Harmony of Confessions was published, among those of other reformed churches, that of the church of England appeared. So that bishop Burnet, though disposed on other occasions to a liberality of interpretation, and though he left his dying testimony against the hard injunction of subscription (Conclusion of his History, vol. ii. p. 634, fol. ed.), ingenuously confesses in his History of the Reformation (vol. ii. p. 169), that the thirty-nine articles were

something more than articles of peace, and adds, ‘ that the men who subscribed them, when thev were first set out, did either believe them to be true, or else they did grossly prevaricate.’ The bishop’s opinion seems to have remained unaltered ; for, when his Exposition was about lobe published, bishop Williams strongly recommended that they might be considered only as articles of peace. Upon which the late judge Burnet, mentioning this incident in his father’s life, observes * that there might, perhaps, be reason to wish that they had been only imposed as such ; but there was nothing in our constitution to warrant an expositor in giving that sense to them.’ Those who respect the opinion of these two able judges, the one of the original intention of the church, the other of the point of law, cannot consistently contend for the pacific sense of subscription. According to the intent of the first subscriptions, maintained by the bishop in his Hist. Reform, above-cited, he could no more give the subscribers of the present age the privilege of availing themselves of different grammatical terms, than he could allow them to consider the articles as articles of peace. Did not the royal declaration prefixed to them, to which we have already referred, and never invalidated by any act of the legislature, preclude a latitude of subscription ? The articles were to be subscribed ‘ex animo, in the literal and grammatical sense;’ and, as this declaration has been continued in every succeeding reign, does it not seem to imply that uniformity is still demanded ? We can easily conceive, however, that men ot as great integrity as learning, may think themselves warranted in subscribing with greater latitude. Some, as we have seen, have beee desirous of considering the articles as articles of peace, and not of faith : and others, again, may reconcile themselves to subscription on different principles. Some have felt the grievance, and have applied (unsuccessfully indeed) to the legislature for relief. Others, who had once subscribed, have declined preferment in the church, because they could not conscientiously renew their subscription : and others have actually surrendered their connexion with it. For a further account of the sentiments and reasonings of different writers, for and against subscription, we refer to archdeacon Blackburne’s Confessional.

SUBSEPTUPLE. Lat. sub and septuplus. Containing one of seven parts.

If unto this lower pulley there were added another, then the power would be unto the weight in a sub-quintuple proportion ; if a third, a subteptuple.

WiOuns.

SUB’S EQUENT, adj. ˆ Fr. subsequent ; Lat-SUB’SEQUENCE, n. s. >

subse quens. Impro-SCB’SEQCESTLT, adv. J perly pronounced long in the second syllable by Shakspeare. Following in train; not preceding : the noun substantive and adverb corresponding.

In such indexes, although small pricks To their subsequent volumes, there is seen The baby figure of the giant mass Of things to come at large.

Shakspeare. Troilus and Crestida. The subsequent words came ou before the precedent vanish. Bacon.

By this faculty we can take notice of the order of precedence and subtequence in which they are past.

Grew.

To men in governing most things fall out accidentally, and come not into any compliance with their preconceived ends : but they are forced to comply subsequently, and to strike in with things as they tall out, by postliminious after-applications of them to their purposes. South.

Wfcy does each fonHaciat ctg> Witt prudent hantMjr f<r«fri«f

In turns to more, a&d «U<*ey*e«t appear Tegiid tie globe a&d regulate the year 1

This article it introdu'jed as ini-tepaeirt to tfae treaty of M natter, made about !*>*£, when £njrli.:id was in the utmost coafaiiua

SUBSERVE", ». a. ˆ Lat. wfoervio. To n-1. x serve in subordination ; #. J to sent instrumental])- : the deriraures corresponding.

Not Etade to ruk Bat to imburrr*. »here wudtNB bean command.

Jfˆtcw.

There is aa immediate aad ayii nt&eniCTiee of the spirit* to tike empire of the sod.

Halt i Origin of Jfmikiitd.

It is a greater credit to kayw the ways of ca.puva.t-ing nature, and making her niinˆrce our purposes, than to Lav* learned all the ia-trig-.** of policy.

Hammond had aa incredible dexterity, scarce ever reading anj thing which he did not make ft-i-wr.?ˆ: in one kind or other. J>i.'.

Philosopher* aad common heathen* believed one God, to whom all things are referred : but under tb :s God they worshipped many inferior ar»d iuJwsrrif/.j gods. Sri/kwiˆef:.

Wicked spirits may by ti«ar canning carry farther in a seeming confederacy or «a*KTO£nrt/ u> the designs of a good angel. I/ryden.

The memory hath no special part of tbe braia de-Toted to its own serrioe, but uses all those parti which lukterve our sensations, as well as cai teinri-g powers. irciif..

Sense is wAiercieat unto fancv, faacr cnto intellect.

C-n.-.

We are not to consider the word as tbe body of God ; be is an uniform being, void of orran*. taeni-bers, or parts : and they are hi* creatures, Bnboidi-nate to him, and ruktenient to his will.

We cannot look upon d»e body, wbereia so much fitness, use, and «£m-＞wi/ to ir£ rii Uons, any otherwite than as the effect of co&tnvance.

There is a regular subordination and nttnttreifaef among all the parts to beoencial ends.

Chevne'i P}uletoprdc3.l Priitciplei.

Most critics, foad of some mtbterrifnt art, Still make tbe whole depend upon a part : They talk of principles, but notions prize, And all to one loved folly sacrifice. Pcfu.

SUBSEXTUPLE, 'adj. Lai. n& and teitu-pha. (Containing one part of six.

One of these under pullies abates half of that beaTi-DCSS the weight hath, and causes the power to be in a snbduple proportion unto it, two of them a snb-quadruple proportion, three a tvhicrtitfle.

WiOdiu'i Mathematical MazieL

SUBSIDE', r. *. ˆ Lat. wˆirfto. To sink ;

SCB'SJDESCE, n. t. J-tend downvrards. Com—

SCB'SIDESCT. ˆ monly used of one part of a compourid mergine in the whole : the noun substantives corresponding.

He shook the sacred honours of his head, With terror trembled heaven's Fubading hill, And from his shaken curls ambrosial dews

distill.

This gradual tubtideney of the abyss would take up a considerable time. Burnett Theory.

This miscellany of bodies being determined to cu fc- •oerely by their different specific gravities, all

those wuxi tad tfae tfcnˆ iti.ii ._>-„.–. i—

tune. jf”,ˆ- ”„.-‘

ij the altercate Hˆyi yf ˆ.jˆ -ˆ vˆˆ.! >e aafxeet *j* by tumt ir*s&d frva H.-UV.*. v •’ tact, aid by •< sudiei «.:,&«**,•*. rje« ti-c_i -.1′-″ itgrew tiii ezrm of u* air, tfae a-,-‘x»:“a bˆJ iˆ

tjr»ffr atittui.’**?!.

V» eigtit tie nfci. i wˆu tgaiisst u«e iaOv t L.tLr’. The dytbtfui bean. iy»s? 1,004 f.y:i Sl-ˆ. - k wzu luytit u

SUETSIDY, *. t. j Fr.

St-Kii*‘iAtT, arfj. $ such as zs given in aid.

Biner Bubstatoei bura tht

y adiised the king to b tmcntv eraˆibd t r

all tie fL.-Jt-.dv

It is a celebrated ˆotioi of •« pf-nx -.i.t.: i : •.;.•< ef coEMuoˆi should never ˆrtit Eu-_t. .ˆr&i.iˆ c.; ~ no pain Vj the peˆpie, ies: ri.e r_t—a-. i i.ˆ-. - -,• •'…. etac* tiiGtr a buraer irjev die iiy: :%; .

–

to ti»e king by pirl;amer.% :'-..* -.iˆ : i casiyns of t±»e LUUSCOID : tˆu:; .5 :-. -.. every subject of a,vii;ty. acc=j::.:ˆi-v. Talue c»f his lauds or ?coli : -'.'. " some of our statutes, is c-or::—:ci:: cavtozis. See Ti2.

iar?e sum of money, ofien arˆ'.—r v i ; v: -:…• r.». generously thrown away ty -ˆ L.-.-..M v: iˆ:-_— ment to certain foreign cei-rxcs vo: ˆL. uie-z.- seives our allies, to pev tiˆri! j vr riˆi/.-L'i '*! T ' own battles, and wbo, when v-ry g?: iˆt.: :•'-. eods aocomplisrjed, commonly maiit a ˆ-.-j—.-*. peace with tLe erjerjay. and nfˆ .n» ;i :v* larch : nay. sometime* tmarra'.ef-ilv ::L •ˆ•- '.~ against ns. By suc'i subsidies Br.-.-ˆi : "."ˆr. gains much ?lorr, b'Jt the pr.i: r'-ˆi ˆ.. '.: • -. : allies, while her national ds-bt ruL ˆjiretH-: Srr tie history of Europe for tr»e last «r-r*ry : r :i :.-T.

SUBS1GN'. r. a. Lai. nitvi£n:>. ' To i.,- under.

Neither Lave they seen, any deed before UK c:-i-qi»est. but *L\>rif-iiJtd. with crc*ses til Eiit-'t utrriei without surnames. Cowra?…

SUBSIST, r. R. } Fr. t*.btutr SrB;i?r'ESCE, R. F- >sutc>. To i«r : -iti ~-

means of living ; inbere : subcsier-c-e i?- rˆi_ bein? ; means of support; competsrjc* : :ˆe i– jective correspondin?.

Tbe flesh, and tbe coziunctira of tL* nes.:. w.-J, Gcxi, be?aE bi/th at one nistart : LIS n.tt_Li ti-taking to himself our neii wis : - :•- ‘•’ ‘<•’•

in Christ there is no personal n.i that from everlasticf .

Firm we Ribsirf. but possibk to

We knc-w as little bow the uidOT 1$ dissc.lvel : is, the chain of these cifKn-r ftfmˆf-r-a “it o pound us. as how it first cwuaeaoec—

Such as denv spirits mbsuzri” wjtt with djAculty’amrjB the separate tnsˆnc* of tbe r own.

bn ont. tu Hotter.

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Not only the things and subsistence, but the very images were of some creatures existing. StilHngfleet.

He shone so powerfully upon me, that, like the heat of a Russian summer, ne ripened the fruits of poetry in a cold climate ; and gave me wherewithal to subsist in the long winter which succeeded.

Dry den.

Though the general natures of these qualities are sufficiently distant from one another, yet when they come to subsist in particulars, and to be clothed with several accidents, then the discernment is not so easy.

South'.

His viceroy could only propose to himself a comfortable subsistence out of the plunder of his province.

Addison.

These qualities are not subsistent in those bodies, but are operations of fancy begotten in something.

Bentleu.

The very foundation was removed, and it was a moral impossibility that the republic could subsist any longer. Swift.

SUB'STANCE, n. s. ~) Fr. substance; Lat-SUBSTANTIAL, adj. substantia. Being;

SUBSTANTIALITY, n. s. something existing; SUBSTANTIALLY, adv. ˆsomething real ; the SUBSTAN'TIALNESS, n.s. essential part ; body; SUBSTAN'TIALS, n.s. means of life; wealth: SUBSTANTIATE, v. a. J substantial and substantially follow these senses : substantiality is reality of existence ; materiality ; corporeity : substantiate, essentials or essential parts : to substantiate, to make to exist; prove valid.

Trials of crimes and titles of right shall be made by verdict of a jury, chosen out of the honest and most substantial freeholders. Spenser on Ireland.

He hath eaten me out of house and home, and hath put all my substance into that fat belly of his ; but I will have some of it out again.

Shakspeare. Henry IV. O blessed, blessed night ! I am afraid, Being in night, all this is but a dream ; Too flattering sweet to be substantial. Shakspeare.

Shadows to-night

Have struck more terror to the soul of Richard, Than can the substance of ten thousand soldiers Armed all in proof, and led by shallow Richmond.

Id.

\Vhensubstantialness combineth withdelightfulness, fulness with fineness, how can the language which consisteth of these sound other than most full of sweetness 1 Camden's Remains.

Since then the soul works by herself alone, Springs not from sense, nor humours well agreeing ;

Her nature is peculiar, and her own ; She is a substance, and a perfect being. Duties.

In degree of substantialness next above the Dorique, sustaining the third, and adorning the second storv.

Wotton.

Having so substantially provided for the north, they promised themselves they should end the war that summer. Clarendon.

It will serve our turn to comprehend the substance, without confining ourselves to scrupulous exactness in form. Digby.

If happiness be a substantial good, Not framed of accidents, nor subject to them, I erred to seek it in a blind revenge. Denham.

To give thee being, I lent Out of my side to thee, nearest my heart, Substantial life. Milton.

He the future evil shall no less In apprehension than in substance feel. Id.

Substintia! doors, Cross-barred and bolted fast, fear no assaults. Id.

The strength of gods, And this empyreal substance, cannot fail. Id.

What creatures there inhabit, of what mould And substance ? Id.

In him his Father shone substantially expressed.

Id.

Time, as a river, hath brought down to us what is more light and superficial, while things more solid and substantial have been immersed. Glanville.

The laws of this religion would make men, if they would truly observe them, substantially religious towards God, chaste and temperate. TMotson.

Heroic virtue did his actions guide, And he the substance, not the' appearance, chose.

To rescue one such friend he took more pride, Than to destroy whole thousands of such toes.

Dry den.

The difference betwixt the empty vanity of ostentation, and the substantial ornaments of virtue.

L'Estrange.

God is no longer to be worshipped and believed in as a God foreshewing and assuring by types, but as a God who has performed the substance of what he promised. Nelsr-n.

The accidental of any act is said to be whatever advenes to the act itself already substantiated.

Ayliffe's Parergon.

Although a custom introduced against ihesubstan-stials of an appeal be not valid, as that it should not be appealed to a superior but to an inferior judge, yet a custom may be introduced against the accidentals of an appeal. Id.

The merchants, and substantial citizens, cannot make up more than a hundred thousand families.

Addison on the War.

They are the best epitomes, and let you see with one cast of the eye the substance of a hundred pages.

Addison.

Now shine these planets with substantial rays 1 Does innate*lustre gild their measured days? Prior:

Between the parts of opaque and coloured bodies are many spaces, either empty or replenished with mediums of other densities ; as, water between the tinging corpuscles wherewith any liquor is impregnated, air between the aqueous globules that constitute clouds or mists, and for the most part spaces void of both air and water; but yet perhaps not wholly void of all substance between the parts of hard bodies. Newton.

Observations are the only sure grounds whereon to build a lasting and substantial philosophy.

Woodward.

The qualities of plants are more various than those of animal substances. Arbnthnot on Aliments.

There may be a great and constant cough, with an extraordinary discharge of phlegmatick matter, while, notwithstanding, the substance of the lungs remains sound. Btackmore.

If this atheist would have his chance to be a real and substantial agent, he is more stupid than the vulgar. Bentley.

We are destroying many thousand lives, and exhausting our substance, but not for our own interest

Sicift.

The sun appears flat like a plate of silver, the moon as big as the sun, and the rainbow a large substantial arch in the ‘sky ; all which are gross falsehoods.]'utts.

Every being is considered as subsisting in and by itself, and then it is called a substance ; or it subsists in and by another, and then it is called a mode or manner of being 1 < 1.

SUBSTANTIAL means also belonging to the na-ture of substance.

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SUB’STANTIVE, n. s Fr. wbstantif; Lat. substantiwm. A noun betokening the thing, not a quality.

He considered how sufficient and substantive this laud was to maintain itself, without any aid of the foreigner. Bacon.

Claudian perpetually closes his sense at the end of a verse, commonly called golden, or two substantives and two adjectives, with a verb betwixt them to keep the peace. Dryden.

One is obliged to join many particulars in one proposition, because the repetition of the substantive verb would be tedious. Arbuthnot.

SUBSTANTIVE VERB, ir. grammar, a verb expressing existence ; as I am ; to be ; to exist. The Latin has four substantive verbs ; *viz.* Sum, fio, forem, and existo.

SUB’STITUTE, v. a. &n.s.\ Fr. substituer, SUBSTITUTION, n. s. $ Lat. substitutus,

from sub and statuo. To put in the place of another; one so placed : the act of substituting, or state of being substituted.

You ‘ve taken up,

Under the counterfeited zeal of God, The subjects of his substitute, my father. And here upswarmed them. Shakspeare. Henry IV.

He did believe

He was the duke, from substitution, And executing the' outward face of royalty, With all prerogative. Id. Tempest.

Nor sal, sulphur, or mercury, can be separated from any perfect metals ; for every part, so separated, may easily be reduced into perfect metal without substitution of that which chymists imagine to be wanting. Bacon's Physical Remains.

Hast thou not made me here thy substitute, And these inferior far beneath me set 1 Milton.

If a swarthy tongue Is underneath his humid palate hung, Reject him then, and substitute another. Diyden.

In the original designs of speaking, a man can substitute none for them that can equally conduce to his honour. Government of the Tongue.

Providence delegates to the supreme magistrate the same power for the good of men, which that supreme magistrate transfers to those several substitutes who act under him. Addison.

Some few verses are inserted or substituted in the room of others. Congreve.

SUBSTRAC'TION, n. s. Fr. soustrcure, soustraction ; Lat. subtraho. The act of taking away part from the whole.

I cannot call this piece Tully's nor my own, being much altered not only by the change of the style, but by addition and subtraction. Denham.

SUBSTRACTION and SUBSTRACT certainly are or ought to be obsolete. They are a vulgar and irregular spelling, totally unauthorised by the original Latin words, sub and traho. It is ab-surd to pretend they are derived from the French ; for in that case they should be soustract, and soustraction.

SUBSTRUCTION, n.s. Lat. substructio,sub and struo. Underbuilding.

To found our habitation firmly, examine the bed of earth upon which we build, and then the under-fillings, or substruction, as the ancients call it.

Walton’s Architecture.

SUBSTY’LAR, adj. Lat. tub and stylus. The substylar line is, in dialling, a right line, whereon

the gnomon or style of a dial is erected at right angles with the plane.

Erect the style perpendicularly over the tubstilar line, so as to make an angle with the dial-piano equal to the elevation of the pole of your place.

Moron’s Mechanical Eterchfa.

SUBSUL’LOIULY, odw. Lat. subsultus. In a bounding manner ; by fits ; by starts.

The spirits spread even, and move not subsidiary , for that will make the parts close and pliant.

Bacon’s Natural Hi,itnr > i.

SUBTANGENT OF A CURVE, the line that determines the intersection of a tangent wit’i t!,o axis, or that determines the point wherein the tangent cuts the axis prolonged. The tangent, subtangent, and semiordinate, always make a right-angled triangle.

It is a rule in all equations that, if the value of the subtangent comes out positive, the point of intersection of the tangent and axis falls on that side of the ordinate, where the vertex of the curve lines, as in the parabola and paraboloids.

If it come out negative, the point of intersection will fall on the contrary side of the ordinate, in respect of the vertex ur beginning of the absciss ; as in the hyperbola and hyperboliform figures. And universally, in all paraboliform and hyperboliform figures, the subtangent is equal to the exponent of the power of the ordinate multiplied into the absciss : thus, in the common parabola, whose property is px — yy, the subtangent is in length equal to x; the absciss multiplied by 2, the exponent of the power ot yy, the square of the ordinate ; that is, it is equal to twice the absciss ; and, by the former rule for paraboliform figures, it must be taken above the ordinate in the axi-s produced.

Thus, also, in one of the cubical paraboloids, where pxx — yi/y; the

length of-the subtangent will be | of the absciss ; and in a parabola of any kind, the general equation being «”’.rn— -f—

vmtn, the subtangent is — X J’, or its ra-

•” «

tio to the absciss, is constantly that of HI + n to n.

In the parabola the subtangent is double the absciss ; and in the logarithmic curve, the subtangent is also a constant quantity.

SUBTEND’, v.a. Lat. sub and tcmlo. To be extended under.

From Aries rightways draw a line, to end In the same round, and let that line subtend An equal triangle : now since the lines Must three times touch the round, and meet throe

signs, Where’er they meet in angles, those are trmes.

In rectangles and triangles, the square which is made of the side that subteiideth the right angle is equal to the squares which are made of the i containing the right angle.

SUBTERMANS (Justus), an eminent 1 ish painter, born at Antwerp, in 1597. famous for history and portraits. In the palace of Florence there is a celebrated painting by him, of the homage made to Ferdinand the Florentine nobles. He died : eighty-four.

SUBTERFUGE, n. ». Fr. tubterfuge ; Lat. gubter and /agio. A shift; an evasion ; a trick.

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The king cared not for subterfuges, but would stand envy, and appear in any thing that was to his mind. Bacon.

Notwithstanding all their sly subterfuges and studied evasions, yet the. product of all their endeavours is but as the birth of the labouring mountains, wind and emptiness. Glanville.

Affect not little shifts and subterfuges to avoid the force of an argument. Watts.

SUBTERRA'NEAL, adj.} Lat. sub and

SUBTERRA'NEAN, I terra; Fr. sous—

SUBTERRA'NEOUS, S terraine. Subter—

SUB'TERRANY, I ranean or subter—

SUBTERRAN'ITY, n.s. J raneous is the word now used. Lying under the earth ; placed below the surface : subterranity (obsolete) is a place under ground.

Metals are wholly subterrany ; whereas plants are part above earth, and part under.

Bacon's Natural History.

In tubterranies, as the fathers of their tribes, are brimstone and merctfry. Id.

The force

Of subterranean wind transports a hill Torn from Pelorus, or the shattered side Of thundering ..Etna, whose combustible And fueled entrails thence conceiving fire, Sublimed with mineral fury, aid the winds. Milton.

We commonly consider subterraniiies not in contemplations sufficiently respective unto the creation.

Browne.

Alteration proceeded from the change made in the neighbouring subterraneal parts by that great conflagration. Boyle.

Let my soft minutes glide obscurely on, Like subterraneous streams, unheard, unknown.

Norris.

This subterraneous passage was not at first designed so much for a highway as for a quarry.

Addison.

Tell by what paths, what subterranean ways, Back to the fountain's head the sea conveys The refluent rivers. Blackmore.

Roused within the subterranean world. The' expanding earthquake unresisted shakes

Aspiring cities. SUBTILE, adj. SUB'TILELY, adv. STJBTIL'IATE, v. a. SUBTILIA'T ON, n. s. SUBTILIZA'TION, SUB'TILIZE, v. a. & v. n. SUB'TILITY, n. s. SUB'TLE, adj. SUB'TLELY, adv.

Thomson.

Fr. subtile; Lat. subtilis. Often written subtle, which signifies thin ; not }>dense ; not gross ; nice; fine; piercing: hence cunning; art-ful; sly; deceitful: J both the adverbs cor-

responding : -ubtiliate and subtilize mean to make thin ; talk affectedly : the noun substantives corresponding : and subtilly with subtle, adjective.

A woman, an harlot, and subtile of heart.

Proverbs vii. 10. Finding force now faint to be, He thought grey hairs afforded subtilly. Sidney.

Some subtle headed fellow will put sonre quirk, or devise some evasion, whereof the rest will take hold.

Spenser.

Shall we think the subtle-wilted French Conj'rers and sorc'rers, that, afraid of him, By magick verse have thus contrived his end ?

Shahspeare. Henry VI. Think you this York Was not incensed by his subtle mother To taunt and »corn you ? Id. Richard Iff.

Like a bowl upon a subtle ground, I've tumbled past the throw. Id. Coriolanus,

The constitution of the air appeareth more subtilely by worms in oak-apples than to the sense of man. Bacon.

Whatsoever is invisible, in respect of the fineness of the body, or subtilty of the motion, is little enquired. Id.

But of the clock, which in our breasts we bear, The subtile motions we forget the while. Davies.

How shall we this union well express 1 Nought ties the soul, her subtilty is such. Id.

O subtile love, a thousand wiles thou hast By humble suit, by service, or by hire, To win a maiden's hold. Fairfax.

The rudeness and barbarity of savage Indians know not so perfectly to hate all virtues as some men's subtilty. Ki"§ Charles.

From his eyes the fleeting fair Retired, like subtle smoke dissolved in air.

Dryden's Georgicks.

Intelligible discourses are spoiled by too much subtlety in nice divisions. Locke.

Chyle, being mixed with the choler and pancre-atick juices, is further subtilized, and rendered so fluid and penetrant that the thinner and finer part easily finds way in at the streight orifices of the lacteous veins. Ray on the Creation.

Body cannot be vital ; for, if it be, then is it so either as subtilised or organized, moved or endowed with life. Grew.

The Arabians were men of a deep and subtle wit.

Spratt.

Bodies, the more of kin they are to spirit in subtlety, and refinement, the more spreading and self-diffusive are they. Norrii.

Pass we the slow disease, and subtile pain, Which our weak frame is destined to sustain ; The cruel stone, the cold catarrh. Prior.

Deny Des Cart his subtile matter, You leave him neither fire nor water. Id.

The opakest bodies, if subtilely divided, as metals dissolved in acid menstruums, become perfectly transparent Newton

Greece did at length a learned race produce, Who needful science mocked, and arts of use ; Mankind with idle subtilties embroil, And fashion systems with romantick toil. Blackmore.

Fluids have their resistances proportional to their densities, so that no subtilization , division of parts, or refining, can alter these resistances.

Cheyne's Philosophical Principles.

In the nice bee, what sense so subtly true, From pois'nous herbs extracts the healing dew !

Pope.

They give method, and shed subtilty upon their author. Baker.

SUBTILE, in physics, an appellation given to whatever is extremely small, fine, and delicate ; such as the animal spirits, the effluvia of odorous bodies, &c., are supposed to be.

SUBTRACT’, v.a. Lat. sublraclio. They who derive it from the Latin write subtiact; those who regard the French original subslract ; to withdraw part from the rest.

Reducing many things unto charge, which, by confusion, became concealed and subtracted from the crown. Davies.

What is subtracted or subducted out of the extent of the divine perfection, leaves still a quotient infinite. Hale.

The same swallow, by the subtracting daily of her eggs, laid nineteen successively, and then gave over.

Ray.

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SUBTRACTION, in arithmetic, the second rule, or rather operation, in arithmetic, whereby we deduct a less number from a greater, to learn their precise difference. See ARITHMETIC, In-dex; and ALGEBRA.

SUBTRI’PLE, adj. Fr. subtriple ; Lat. sub

SUBUR, in ancient geography; l. a river cf Mauritania; 2. a town of Spain.

SUB’UttB, n.s. 1 Lat. suburbium. A buihl—

SCBDBB’AH, adj. $ ing without the walls of a city ; the outer part : inhabiting the suburbs

i here’s a trim rabble let “

and triplus. Containing a third, or one part of faithful friends of the suburbs 1 three.

The power will be in a subtriple proportion to the

are all these your

Shakspeare. Henry I'll I. 1 he suburbs of my jacket are so gone,

weight. Wilkins's Mathematical Muyick. i have not left one skirt to sit upon. ' Cleavelutul

When our fortunes are violently changed, our s|n

Lat. subventa-

SU EVENT A'NEOUS, adj. neus. Addle; windy

Suitable unto the relation of the mares in Spain, and their subveutaneous conceptions from the western wind. Browne.

SUBVERSE', v. a.-j Latin subversus. To SUBVERSION, n. s. > subvert. Spenser uses SUBVERSIVE, adj. j subverst in the same

sense. The noun substantive and adjective corresponding

These seek subversion of thy harmless life.

Shakspeare. Henry VI. ,

m It is far more honourable to suffer, than to prosper d™rksr ; subordinate helper. in their ruin and subversion. Kin" Charles.

nts are unchanged, if they always" stood in the subum and expectation of sorrows. Taylar.

1'hey on the smoothed plank, The suburb of their strawbuilt citadel, Expatiate. Miltim_

Poor clinches the suburban muse affords, And Panton waging harmless

war with words.

Dryden.

Then weds an heiress of suburban mould, Ugly as apes, but well endowed with gold. Harte.

SUBWORK’ER, n.s. Sub and worker. Un-

Ile that governs well leads the blind , but he that ‘fhesVrhingsrefeVto the opening and”shuuing\°ne teaches gives him eyes : and it is glorious to be a

subworker to grace, in freeing it from some of the inconveniencies of original fin. South.

SUCCEDA’NEOUS, cdj. Lat. succedanms. and the subversion of that order they were intended to Supplying the place of something else.

abyss, with the dissolution or subversion of the earth.

Burnet. Laws have been often abused, to the oppression

preserve. Rogers.

Empires subversed, when ruling fate has struck The unalterable hour. Thomson’s Autumn.

SUBVERT’, v. a. J Fr. subvert ir ; Lat. sub-SUBVER’TER, n. s. $ verto. To overthrow; overturn ; turn upside down noun substantive corresponding.

Strive not about words to no purpose but to the subverting of the hearers. 2 Tim. ii. 14.

God, by things deemed weak, Subverts the worldly strong and worldly wise.

Milton,

O traitor ! worse than Simon was to Troy ; O vile subverter of the

Gallick reign, More false than Gano was to Charlemaigne !

Dryden. Trees are subverted or broken by high winds.

Mortimer.

They anathematize them as enemies to God, and subverters of souls. Waterland.

SUBULARIA, rough-leaved alysson, or awl-wort, in botany, a genus of plants belonging to

Nor is yfttius strictly to be believed when he pre-scribeth the stone of the otter as a succedaarous unto castoneum. /J/Y.I.—K;.

I have not discovered the menstruum •. I ,vill present a succeduneous experiment made with a common

destroy: the liquor' B"^'

SUCCEED', v. n. Sc v.a. ^ French succider, SUCCEED'ER, n. s. } Lat. succcdo. To

follow in order; terminate an undertaking effectually : have a good effect : to follow ; prosper: one who follows. See SUCCESS.

If thou deal truly, thy doings shall prosperously succeed to thee. Tab. iv. 6.

If I were now to die, 'Twere to be most happy ; for I fear My soul hath her consent so absolute, That not another comfort like to this Succeeds in unknown fate. Shakspeure. Oiliello.

Nature has so far imprinted it in us, that shouli1 the envy of predecessors deny tha secret to siiccreder*, they yet would find it out. Suckling.

Workmen let it cool by degrees in such relenting* lest it should shiver in pieces 1 >\ a

the class of tet'radynamia, and order of siliculosa, ^^cceeding of air in the room of the fire.

and in the natural order ranging under the thirty-Diyby en Hudim.

ninth order, siliquosas. The silicula is entire and Enioy till I return

ovate ; the valves are ovate, concave, and con-Snort pieasures ; for long woes are to succeed.

trary to the partitions. The style is shorter than

the silicula. There is only one species, *viz.* ln that place no creature was hurtful unto man ;

S. aquatica, which is a native of Britain. It and those destructive effects they now discover si

is about an inch high. The leaves are awl-ceeded the curse, and came in with thorn: shaped, and grow in clusters round the root. ”";

The stalk is naked, and produces four or five elt °“rˆshf, withoi.i : prelatioii

small white flowers growing alternately on short succeeded him in cjjpar ners ||Pˆ]e p0rt;on—

footstalks. It flowers under water, whereas most or Prel ;/„/,.

aquatic plants emerge above water at the time T) make one man’s particular fancies, perhaps

of flowering. The author of nature has, however, fai]in ‘ confining laws to others, and convey them

carefully prevented the tender flower from re-to thm’swuxeden, who afterwards misname all unob—

ceiving any injury from the water by making the se(]lliousness as presumption, petals close and form themselves into a kind of Revenge succeeds to love, and rage to griet arch. This plant grows on the borders of the

Highland lakes, in Loch Tay, in Scotland, also These dull harmless makers o flanipoo

ia Wales and Ireland. of dangerous example to the pullick .

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Fr. succis ; Latin successus. The happy termination of any thing : the adjective, [adverb, and noun sub- ˆstantive following corresponding : succession is consecutive-ness ; series ; lineage ; order of descendants :

men may succeed to their designs, and, mixing sense with malice, blast the reputation of the most innocent. Id.

Tis almost impossible for poets to tucceed without ambition : imagination must be raised by a desire of fame to a desire of pleasing. Id.

This was impossible for Virgil to imitate, because of the severity of the Roman language : Spenser endeavoured it in Shepherd's Kalendar ; but neither will it succeed in English. Id.

SUCCESS', n.s. SUCCESSFUL, adj. S UCCESS'FULLY, adv. SUCCESS'FULNESS, n. s. SUCCESSION, SUCCESS'IVE, adj. SUCCESSIVELY, adv.

SuCCESs'lVEIfESS, n. S.

SUCCESS'LESS, adj.

SUCCESS'OR, ra. «. successive, following in order; inherited by succession: the adverb and noun substantive corresponding : successless, luckless ; unfortunate : successor, he who succeeds.

The succession of Moses in prophecies.

Ecclus. xlvi. 1.

For good success of his hands, he asketh ability to do of him that is most unable. Wisdom xiii. 19.

This king by this queen had a son of tender age, but of great expectation, brought up in the hope of themselves, and a ready acceptation of the inconstant people, as successor of his father's crown.

Sidney.

All the sons of these five brethren reigned By due success, and all their nephews late, Even thrice eleven descents, the crown retained.

Spenser.

Three sons he left, All which successively by turns did reign.

Faerie Queene.

St. Augustine, having reckoned up a great num-ber of the bishops of Rome, saith, in all this order of succession of bishops, there is not one found a Dona-tist. Hooker.

He is too young, yet he looks successfully.

Shukspeare. Cassibelan, And his succession, granted Rome a tribute.

Id. Cymbeline.

It is upon record ? or else reported Successively from age to age? Id. Richard III.

Countrymen, Plead my successive title with your swords.

Shakspeare.

The empire being elective, and not successive, the emperors, in being, made profit of their own times.

Raleigh.

These decays in Spain have been occasioned by so long a war with Holland ; but most by two succes-tions of inactive princes. Lacon.

“We that measure times by first and last, The sight of things successively do take, When God on all at once his view doth cast, And of all times doth but one instant make.

Davies.

Three with fiery courage he assails, And each successive after other quails, Still wondering whence so many kings should rise.

Daniel.

An opinion of the succesffulness of the work is as necessary to found a purpose of undertaking it, as the authority of commands, or the

persuasiveness of premises. Hammond.

A second colony is sent hither, but asiuccessletiu the first. Heylyn.

The feac of what was to come from an unacknowledged tuccessour to the crown, clouded much of that prosperity then, which now shines in chronicle.

Clarendon,

Perplexed and troubled at his bad success The tempter stood. Milton.

A long succession must ensue ; And his next son the clouded ark of God Shall in a glorious temple enshrine.

Id. Paradise Lost. God hath set

Labour and rest, as day and night, to men Successive. Id.

All the notion we have of duration is partly by the successiveness of its own operations, and partly by those external measures that it finds in motion.

Hale.

Not Lemuel's mother with more care Did counsel or instruct her heir ; Or teach with more success her son The vices of the time to shun. Waller.

Every reasonable man cannot but wish me success in this attempt, because I undertake the proof of that which it is every man's interest that it should be true.

Tillutson.

The hopes of thy successless love resign. Dryden.

What people is so void of common sense, To vote succession from a native prince ! Id.

The surly savage offspring disappear, And curse the bright successor of the year ; Yet crafty kind with daylight can dispense. Id.

He observed the illustrious throng, Their names, their fates, their conduct, and their

care, In peaceful senates and successful war. Id,

Let a cannon-bullet pass through a room, and take with it any limb of a man, it is clear that it must strike successirely the two sides of the room, touch one part of the flesh first, and another after, and so in succession. Locke.

The Bavarian duke,

Bold champion ! brandishing his Noric blade, Bes.t tempered steel, successless proved in field.

Philips.

God, by reason of his eternal indivisible nature, is by one single act of duration present to all the successive portions of time, and all successively existing in them. South.

They were terrible alarms to persons grown wealthy by a long and successful imposture, by persuading the world that men might be honest and happy, though they never mortified any corrupt appetites.

Id.

Whether a bright successor, or the same. Tate.

Whilst malice and ingratitude confess, They've strove for ruin long without success. Garth.

Passion unpitied, and successless love, Plant daggers in my heart. Addison's Cato

Send the successive ills through ages down, And let each weeping father tell his soiv. Prio~

The early hunter

Blesses Diana's hand who leads him safe O'er hanging cliffs ; who spreads his net successful, And guides the arrow through the panther's heart.

Id.

I inclined the paper to the rays very obliquely, that the most refrangible rays might be more copiously reflected than the rest, and the whiteness at length changed successively into blue, indigo, and violet. Neu'ton's Oplicks.

This is the most proper and most successful season to meet and attack the advancing enemy.

Bluckmore.

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The rule of imitating God can never be

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„ no remedy, they were suffered to sit down proposed but upon Christian principles ; such as that partly supported by the bushes, and Tn’

this world is a place not of rest, but of discipline.

Atterbury.

Military successes, above all others, elevate tne minds of a people. Id.

Gas sulpnuris may be given with success m any disease of the lungs. Arbnthnot on Diet.

Bleeding, when the expectoration goes on successfully, suppresseth it. Id.

The descendants of Alexander’s successors cultivated navigation in some lesser degree. Arbuthnot.

We have a tradition coming down to us from our

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- “lto a Profound sleep. Soon

‘ ,’ S°me , Pe°Ple who had been sent f(>- ward returned with the welcome news that a lit,- was kindled about a quarter of a milt farther <n the way. Mr. Banks then endeavoured to wak, Dr. Solander, and happily succeeded ; buttliouˆ:, he had not slept five minutes, he had almost lost the use of his limbs, and the muscles were so shrunk that his shoes fell from his feet ; lie consented to go forward, with such assistance as

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fathers; a kind of inheritance successively conveyed could be given him, but no attempts to rel

tn ll« nv tnA nnmitivp fiaints: frnm tnp ar»n=floc tKom . T-» • i i

to us by the primitive saints from the apostles themselves. Waterland.

No such motion of the same atom can be all of it existent at once : it must needs be made gradually and successively, both as to place and time ; seeing that body cannot at the same instant be in more places than one. Rentiers Sermons,

Successless all her soft caresses prove, To banish from his breast his country’s love. Pope.

A reformation successfully carried on in this great town would ifl time spread itself over the whole kingdom. Swift.

SUCCESS, or GOOD SUCCESS BAY, a bay on the south-east coast of Terra del Fuego, straits of Le Maire. On the mountains Mr. Banks and Dr. Solander found many new Alpine plants, unknown in Europe : but the cold was so intense that the latter had well nigh fallen a sacrifice to its severity in the midst of summer. Dr. Solander, who had more than once crossed the mountains which divide Sweden from Norway, well .knew that extreme cold, especially when joined with fatigue, produces a torpor and sleepiness that are almost irresistible : he

therefore conjured the company to keep mov-ing whatever pain it might cost them, and whatever relief they might be promised by an inclination to rest. ‘ Whosoever sits down,’ says he, ‘ will sleep ; and whosoever sleeps will wake no more.’ The Dr. himself, however, was the first who found the inclination, against which he had warned others, irresistible; and insisted upon being suffered to lie down. Mr. Banks intreated and remonstrated in vain; down he lay upon the ground, though it was covered with snow, and it was with great difficulty that his friend kept him from sleeping. Richmond also, one of the black servants, began to linger, having suffered from the cold in the same manner as the doctor. Mr. Banks, therefore, sent five of the company, among whom was Mr. Buchan, forward to get a fire ready at the first convenient place they could

poor Richmond were successful, who, with ,1 seaman sent to his relief, died. Lonˆ. G.33 27’ W., lat. 54° 50 S.

SUCCESSION, in law. See DESCENT, Ixiir.un-ANCE, and LAW,

SUCCESSION, in metaphysics, the idea wliich \vo get by reflecting on the ideas which follow one another in our mind; and from the succession of ideas we get the idea of time. See MI:IA-PHYSICS.

SUCCESSION OF COLONELS. A particular part of the official army list is so called. The datrs in the of the several appointments are therein specified, inl-and together with the numbers and facings of die different regiments.

A commission in SUCCESSION, a commission in which an individual has an inherent property from having purchased it, or raised men ; or which, through interest, he is at liberty (o sell to the best ad vantage, provided it does not go in tlrj regiment ; in which case no more than the king’s regulation can be taken.

SUCCESSION TO THE CROWN OF ENC.I.ANI:. See HEREDITARY RIGHT. From the days of Egbert, the first sole monarch of England, even to the present, the four cardinal maxims mentioned in that article have ever been held constitutional canons of succession. It is true, as Sir William Blackstone observes, this succession, through fraud or force, or sometimes through necessity, when in hostile times the crown descended on a minor or the like, has been very frequently suspended ; but has generally at last returned back into the old hereditary channel, though sometimes a very considerable period has

intervened. And even in those instances where this succession has been violated, the crown has ever been looked on as hereditary in the wearer of it ; of which the usurpers themselves were so sensible that they for the most part endeavoured to vamp up some feeble show of a

u»v, it-««ay CIL LUC mat *-uu » cu i \~IJL LJ* ***•*» nn-j \^^. .

find, and himself and four others remained with title by descent, to amuse the people, while

the doctor and Richmond, whom, partly by per-took the possession of the kingdom. And, w

suasion and intreaty, and partly by force, they possession was once gamed, they consul

brought on, till they both declared they could go as the purchase or acquisition of a new

no farther. Mr. Banks had recourse to intreaty inheritance, and transmitted, or

and expostulation, but they produced no effect, transmit it, to their own posterity bv a kin

When Richmond was told that if he did not go hereditary right of usurpation-See Bl

now he would in a short time be frozen to death, Commentaries, vol. i. 1

he answered that he desired nothing but to lie torical view there given it appea

to the crown is at present hereditary, tin so absolutely hereditary *s formerly; and the common stock, or ancestor, from whom lh

though he had before told the company that to scent must be derived, is also d, r,f .In th, sleep was to perish. Mr. Banks and the rest time of the Anglo-Saxons the cc found it impossible to carry them, and there being king Egbert ; then William I. intro

down and die. The doctor did not so explicitly renounce his life ; he

said he was willing to go on, but that he must first take some sleep,

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race of Normans. In the person of Henry II. the Saxon and Norman blood were united. In Henry VII. were united the blood of the jarring houses of York and Lancaster, whose dissensions had occasioned the shedding of so much royal blood. In Henry's veins too flowed the blood of the British king Arthur, the progenitor of the house of Tudor. By the marriage of Henry VII.'s daughter, Margaret, with king James IV. of Scotland, the royal blood of both kingdoms was united in James V., whose son James VI. united the crowns and the two common stocks ; and so continued till the vacancy of the throne in 1688, when William III., Mary II., and Anne succeeded ; but the succession was fixed in the heirs of the princess Sophia, in whom the inheritance was vested by the new king and parliament. Formerly, the descent was absolute, and the crown went to the next heir without any restriction ; but now, upon the new settlement, the inheritance is continued ; being limited to such heirs only of the body of the princess Sophia as are Protestant members of the church of England, and are married to none but Protestants. And in this due medium consists the true constitutional notion of the right of succession to the imperial crown of these kingdoms. The extremes between which it steers are each of them equally destructive of those ends for which societies were formed and are kept up. Where the magistrate, upon every succession, is elected by the people, and may, by the express provision of the laws, be deposed (if not punished) by his subjects, this may sound like the perfection of liberty, and look well enougli when delineated on paper; but in practice will be ever productive of tumult, contention, and anarchy. And, on the other hand, divine indefeasible hereditary right, when coupled with the doctrine of unlimited passive obedience, is surely of all constitutions the most thoroughly slavish and dreadful. But, when such an hereditary right as our laws have created and vested in the royal stock, is closely interwoven with those liberties which are equally the inheritance of the subject, this union will form a constitution in theory the most beautiful of any, in practice the most approved, and, we trust, in duration the most permanent. Et esto perpetual Amen.

In France the succession to the monarchy was formerly limited to heirs male (see SALIC), but in Navarre the crown was inherited by the heir of line, whether male or female. Philip IV., king of France, in 1285, espoused Jane queen of Navarre in her own right ; and, as king consort of this latter kingdom, added the title of Navarre to that of

France. Louis X., son and heir of Philip and Jane, succeeded to both crowns. By Margaret his first wife, who had been crowned queen of Navarre, he left one daughter Joan. His se-cond wife Clementina was pregnant at the time of his decease, and was delivered of a posthumous son, whom most of the French annalists recognise as John I. of France, though he lived only three weeks. On his death the kingdom of , France passed to Philip V., and that of Navarre to Joanna the only child and heir of Louis X. and Margaret. From Joanna, in lineal succession, the kingdom of Navarre passed to Jane

d'Albeit, mother of Henry IV. of France, and wife of Anthony of Bourbon, who, as king consort, wore the crown of Navarre. On the accession of Henry to the kingdom of France the two monarchies were united, and the four succeed ;ng princes assumed the joint titles.

SUCCINAS, or STCCINAT (from Lat. succinum, amber), a salt formed by the combination of the succinic acid with different bases. 'These bases are acids, alkalies, and metallic oxides. But scarcely any of these succinats have yet been examined with attention. ' For the few experiments (adds Dr. Thomson) that have been made, we are indebted to Stockar, Wenzel, Leonhardi, and Bergman.' The doctor then enumerates seven species besides the metallic succinats ; *viz.* 1. Succinat of alumina. This salt, according to Wenzel, crystallises in prisms, and is easily decomposed by heat. 2. Succinat of ammonia forms needle-shaped crystals. It has a sharp bitter and cooling taste; when exposed to heat it sublimes without decomposition. 3. Succinat of barytes. This salt, according to Bergman, is difficultly soluble in water. 4. Succinat of lime. This salt forms oblong, pointed, non-deliquescent salts, which are difficultly soluble even in boiling water. It is not altered by exposure to the air. It is decomposed by muriat of ammonia, and by the fixed alkaline carbonats. 5. Succinat of magnesia has the form of a white, glutinous, frothy mass ; which, when dried by the fire, attracts moisture from the air, and deliquesces. 6. Succinat of potass. This salt, according to Leonhardi and Stockar, crystallises in three-sided prisms. It has a bitter saline taste, is very soluble in water, and deliquesces when exposed to the air. When exposed to heat it decrepitates and melts, and in s strong heat is decomposed. 7. Succinat of silver. See SILVER. 8. Succinat of soda. When pure succinic acid is saturated with soda, the solution by spontaneous evaporation yields beautiful transparent crystals of succinat of soda; some of whichare four-sided prisms with dihedral summits; others six-sided prisms terminated by an oblique face. This salt has a bitter taste, is less soluble in water than common salt, and does not deliquesce when

exposed to the air. It is decomposed completely when exposed to a sufficient heat in close vessels. See SUCCINIC ACID.

SUCCINATED, impregnated with amber, or the succinic acid.

SUCCINCT, adj. French succinct ; Lat. suc-cinctus. Literally' tucked or girded up ; having the clothes drawn up to disengage the legs : hence short; concise.

A strict and succinct style is that where you can take nothing away without loss, and that loss manifest. Ben Jotison.

Let all your precepts be succinct and clear, That ready wits may comprehend them soon.

Roscommon.

I'll recant, when France can shew me wit As strong as ours, and as succinctly writ. Id.

I shall present you very succinctly with a few reflections that most readily occur. Boyle.

His vest succinct then girding round his waist, Forth rushed the swain. Pope.

SUCCINIC (from Lat. succinum, amber), of or belonging to amber; containing the vr-

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lues or essence of amber ; of the nature of amber.

SUCCINIC ACID, or the acid of amber, one of the recently discovered acids extracted from amber. See AMBER and CHEMISTRY, Index. When amber (says Dr. Thomson, vol. ii. p. 134) is distilled, a volatile salt is obtained, which is mentioned by Agricola under the name of salt of amber; but its nature was long unknown. Boyle was the first who discovered that it was an acid. It is obtained by the following process : — Fill a retort half way with powdered amber, and cover the powder with dry sand ; lute on a receiver and distil in a sand bath, without employing too much heat. See CHEMISTRY. Dr. Thomson adds, ‘ It may be made tolerably pure by dissolving it in hot water, and putting upon the filter a little cotton moistened with oil of amber ; this substance retains most of the oil, and allows the solution to pass clear. This acid is then to be crystallised by a gentle evaporation, to be repeated till the acid be sufficiently pure.’ Guyton Morveau has discovered that it may be made quite pure by distilling off it a sufficient quantity of nitric acid, taking care not to employ a heat strong enough to sublime the succinic acid. The crystals are transparent, white, shining, and of a foliate, triangular, prismatic form; they have an acid taste, but are not corrosive : they redden tincture of turnsole, but have little effect on that of violets. They sublime when exposed to a considerable heat, but not at the heat of a water bath. In a sand bath they melt, and then sublime and condense in the upper part of the vessel; but the coal which remains shows that they are partly decomposed. One part of this acid dissolves in ninety-nine parts of water, at the temperature of 50°, according to Spielman in twenty-four parts at 52° ; and in two parts of water at 212°, according to Stockar de Neuforn; but the greatest part crystallises as the water cools. According to Rox, however, it still retains more of the acid than cold water is capable of dissolving; 240 grains of boiling alcohol dissolve 177 of this acid; but crystals again shoot as the solution cools. The compounds which it forms with acids, alkalies, and metallic oxides, aie named succinats. When the succinat of soda is distilled in a retort the succinic acid is completely decomposed. There passes over into the receiver an acid liquor, which is the acetous much diluted and a quantity of brown oil. At the same time carbonic acid gas, and carbonated hydrogen gas, are disengaged, and there remains in the retort soda and charcoal. Hence it follows that this acid is decomposed by heat, and is composed of oxygen, hydrogen, and

carbon. Its affinities, Morveau says, are barytes, lime, pot-ass, soda, ammonia, magnesia, alumina, metallic oxides.

SUCCINUM, amber, in mineralogy, a species of bitumen classed under the inflammable substances. As a full accoant of this mineral was given under AMBER, nothing remains but to mention a few things which recent experiments en-able us to add. According to Dr. Kirwan 100 grains of amber afford about seventy-two of pe-tro eum, forty-five of succinic acid, and a residue r fixed matter and water. Mr. Scheele says that

when distilled it yields an aqueous acid resembling vinegar in its qualities. This would induce us to believe it to be of vegetable origin. But its origin is a point not yet ascertained. Its specific gravity is from 1-065 to MOO, and it melts at 550° of Fahrenheit. Wallerius affirms that mirrors, prisms, &c., may be made of amber.

SUC'CORY, n. s. Lat. cichoreum. A plant.

A garden sallad Of endive, radishes, and succory. l)n, <le>i.

The medicaments to diminish the milk are lettuce., purslane, endive, and succory.

Wiseman of Tumours.

SUCCORY, in botany. See CICHORIUM.

SUCCORY, gum. See CHONDRILLA.

SUCCORY, wart. See LAPSANA.

SUCCOTH BENOTH, a goddess of the Chal-deans ; supposed to be the same with Mylitta or the Assyrian Venus; in honor of whom the young women were obliged to prostitute themselves once in their lives in her temple ; where each was called on in her turn by a man throwing a piece of money in her lap. The worship of this obscene goddess was introduced into Samaria, along with the corrupted worship of the true God, by the Babylonian emigrants settled there by Shalmanezer, 2 Kings xvii. 30. As Succoth signifies tents, perhaps the rites of Succotli Be-noth were celebrated in tent-beds.

SUC'COUR, v. a.&cn.s. \ French sccourir ;

SUCCOUR'LESS, adj. } la. succurro. To

help ; assist in difficulty or distress; relieve : tin: noun substantive and adjective corresponding.

She hath been a succourer of many.

Rom. ivii. 2.

Fear nothing else but a betraying of succour which reason offereth. Wisdom xvii, 12.

As that famous queen Of Amazons, whom Pyrrhus did destroy, Did shew herself in great triumphant joy, To succour the weak state of sad afflicted Troy.

,. Sjienser.

Here's a young maid with travail oppress 'd, And faints for succour. Shakspeare.

Our watchful general hath discerned from far The mighty succour which made glad the foe.

Dryden,

A grateful beast will stand upon record, against those that in their prosperity forget their friends, that to their loss and hazard stood by and succoured them in their adversity. L'Estrange.

Succourless and sad, She with extended arms his aid implores. Thornton.

SUCCUBUS, a term used by some writers for a demon who assumes the shape of a woman, and as such lies with a man ; in which sense :l stands opposed to incubus, which was a demon in form of a man that lies with a woman. But the truth is that succubus is only a species < the incubus, or the night-mare. See MKDICISE.

SUC'CULENCE, n. *. > !•>• succulent ; Ij

SUC'CULENT, adj. 3 ness ; juicy ; moist.

These plants have a strong, dense, and succulent, moisture, which is not apt to exhale.

Divine Providence has spread her table every where, c-1 with a

juiceless green carpet, but j succulent herbage and nourishing grass, upon whu

most beasts feed.

On our account has Jove.

Indulgent, to all lands some succulent plan’

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Allotted, that poor helpless man might slack

His present thirst. Philips.

SUCCULENT PLANTS, among botanists, such whose leaves are thick and full of juice.

SUCCULENTS, in botany, an order of plants in the natural method. See BOTANY, Index.

SUCCUMB*, v. n. Lat. succumbo ; Fr. suc-comber. To yield ; to sink under any difficulty.

To their will we must succumb, Quocunque trahunt, ‘tis our doom. Hudibrat.

SUCCUSSA’TION, n. s. Lat. ‘SUCCUHO. A trot.

They rode, but authors do not say Whether tolutation or succumntioit. Bnller.

They move two legs of one side together, which is tolutation or ambling ; or lift one Iboc before, and the cross foot behind, which is succusmtion or trotting. Browne’s Vulgar Errours.

When any of that risible species were brought to the doctor, and when he considered the spasms of the diaphragm, and all the muscles of respiration, with the tremulous succussion of the whole human body, he gave such patients over. Martin Scriblerus.

SUCH, pronoun. Sax. ppilc ; Goth, sulleiks ; Belg. sulk ; Swed. salik. So-hke ; of that kind ; of the like kind ; taking as before the thing to which it relates : the same that ; a particular person or thing, as in the phrase, ‘ such and such.’

Can we find such a one as this, in whom the spirit of God is 1 Genesis xli. 38.

I have appointed my servants to such and such place 1 Samuel.

You will not make this a general rule to debar tuch from preaching of the gospel, as have through infirmity fallen. Whitgifte.

If you repay me not on such a day, In such a place, tuch sum or sums as are Expressed in the condition, let the forfeit Be an equal pound of your flesh.

Shtikspeare. Merchant of Venice. I saw him yesterday With such and such. Id. Hamlet.

Scarce this word death from sorrow did proceed, When in rushed one, and tells him such a knight Is now arrived. Daniel's Civil War.

That which doth constitute any thing in its being, and distinguish it from all other things, is called the form or essence of such a thing. Wilkins.

That thou art happy, owe to God ; That thou continuest such owe to thyself. Milton.

Such precepts as tend to make men good, singly considered, may be distributed into suck as enjoin piety towards God, or such as require the good government of ourselves. Tillotson.

Such another idol was Manah, worshipped between Mecca and Medina, which was called a rock or stone. Stillinyfieet.

Such are the cold Riphean race, and such The savage Scythian. Dryden's Virgil.

The same sovereign authority may enact a law, commanding such or such an action to-day, and a quite contrary law forbidding the same to-morrow.

South.

To assert that God looked upon Adam's fall as a sin, and punished 1* as such, when, without any antecedent sin, he witndrew that actual grace upon which it was impossible for him not to fall, highly Teproaches the essential equity of the Divine Nature.

Id.

You lo\e a \erse, 'ake such as I can send. Pc\>e.

SUCK, v. a., v. n., & n, s.~) Sax. j-ucan; Fr. SUCK'ER, n. s. sucer; Ifal. suc—

SUCK’ET, tiure ; Lat. sugo,

SUCK’ING-LOTTLE, J-suctum. To draw

SUCK’LE, v. a. j by making a rare—

SCCK’LING, n. s. \ faction of the air;

SUC’TIOX. j draw in with the

mouth ; empty by sucking ; draw or drain : as a verb neuter to draw by rarefaction; draw the breast; imbibe; the act of sucking; milk given by females : a sucker is a draining instrument ; the embolus of a pump ; a young twig, ‘ perhaps,’ says Johnson, ‘ from Lat. surculus. Sucket is a sweetmeat : sucking-bottle, a bottle to aid children in sucking, or as a substitute for the breast : to suckle, to nurse at the breast : suckling, the creature nursed : suction is the act of sucking.

A nursing father beareth with the sucking child.

Numb, xi.

The cup of astonishment thou shall drink, and suck it out. Ezekiel xxiii. 34.

Desire, the more he sucked, more sought the breast, Like dropsy folk still drink to be a-thirst. Sidney. They draw with their suck the disposition of nurses.

Sperutr. Thy valiantness was mine, thou sucked’st it from

me ; But own thy pride thyself. Shakspeare. Coriolanus.

The breast of Hecuba, When she did suckle Hector, looked not lovelier.

Shakspeare.

I can suck melancholy out of a song, as a weasel sucks egjs. Id.

I would

Pluck the young sucking cubs from tlie she-bear, To win thee, lady. Id. Merchant of Venice.

The cutting away of suckers at the root and body doth make trees grow high.

Bacon's Natural History.

The crown had sucked too hard, and now, being full, was like to draw less. Bacon's Henry VIII.

Pumping hath tired our men ; Seas into seas thrown, we suck in again. Donne.

Nature's confectioner, the bee, Whose suckets are moist alchimy ; The still of his refining mold Minting the garden into gold. Cleaveland.

The ascent of waters is by suckers, or forcers, or something equivalent thereunto. Wilkivss Deedatus.

Oil must be poured into the cylinder, that the sucker may slip up and down in it more smoothly.

Boyle.

Though the valve were not above an inch and a half in diameter, yet the weight kept up by suction, or supported by the air, and what was cast out of it weighed ten pounds. Id.

We'll hand in hand to the dark mansions go, Where sucking in each other's latest breath, We may transfuse our souls. Dryden.

Bees on tops of lilies feed,

And creep within their bells to suck the balmy seed.

Id.

Those first unpolished matrons Gave suck to infants of gigantic mold. Id.

I provide a suckling,

That ne'er had nourishment but from the teat. Id. She nurses me up

and suckles me. L’Estrange. A fox lay with whole swarms of flies sucking and galling of him. Id.

He that will say children join these general abstract speculations with their sucking-bottles, has more zeal for his opinion, but less sincerity. Locke.

Such as are nourished with milk rind the paps and

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tuck at them ; whereas none of those that are not designed for that nourishment ever offer to suck.

Raff on ihe Creation.

Out of this old root a sucker may spring, that with a little shelter and good seasons, may prove a mighty tree. Ray.

Continual repairs, the least defects in sucking pumps are constantly requiring. Mortimer's Husbandry.

Marines aye ply the pump, So they, but chearful, unfatigued, still move The draining sucker. Philips.

One of the round leathers wherewith boys play, called suckers, not above an inch and half diameter, being well soaked in water, will stick and pluck a stone of twelve pounds up from the ground.

Grew's Museum.

The Roman soldiers bare on their helmets the first history of Romulus, who was begot by the god of war, and suckled by a wolf. Addison on Italy.

Young animals participate of the nature of their tender aliment, as sucklings of milk.

Arbuthnot on Alimenti.

Transfixed as o'er Castalia's streams he hung, He sucked new poisons with his triple tongue.

Pope's Statins.

SUCKLING (Sir John), an English poet and dramatic writer, was the son of Sir John Suckling, comptroller of the household to king Charles I., and born at Witham in Essex, in 1613. He discovered an uncommon propensity to the acquiring of languages, insomuch that he is reported to have spoken latin at five years of age, and to have written it at nine. When he was grown up he travelled ; b.ut seems to have affected nothing more than the character of a courtier and a fine gentleman ; which he so far attained that he was allowed to have the peculiar

happiness of making every thing he did be-come him. In his travels he made a campaign under the great Gustavus Adolphus : and his loyalty, if not his valor, appeared in the beginning of our civil wars; for, after his return to England, he raised a troop of hors* for the king's service entirely at his own charge ; and mounted them so completely and richly that they are said to have cost him £12,000. But his troop, with Sir John at its head, behaved so ill in the engagement with the Scots, upon the English borders, in 1639, as to occasion the famous lampoon composed by Sir John Mennis : —

' Sir John he got him an ambling nag, &c.' This ballad, which was set to a brisk tune, was much sung by the parliamentarians. This disastrous expedition, and the ridicule that attended it, was supposed to have hastened his death ; being seized by a fever, of which he died, at twenty-eight years of age. He was a sprightly wit, and an easy versifier, but no great poet. His works, consisting of a few poems, letters, and plays, have nevertheless gone through several editions.

SUCRO, a river of Hispania Tarraconensis,

famous for a battle fought on its bank between

Sertorious and Pompey the Great, in which

the latter was defeated. It is now called Xucar.

SUCTION, in physiology, the act of drawing

into the mouth fluids and other substances by

means of the pressure of the external air. When

an infant is imbibing its food from the breast of

the mother its lips are applied closely to the

nipple, so that no air can enter ; by enlarging the chest, the atmospheric pressure is removed from the surface of the nipple, while it still continues on the external surface of the breast ; and thus forces the contents of the lactiferous tubes' into the mouth. If the lips are immersed in any fluid, and the chest expanded, the pressure of the external atmosphere -will force it into the mouth. The act of suction,

indeed, depending on this atmospheric pressure, is in all cases essentially the same. See LUNGS. Air is sucked through a pipe in the same manner as with the naked mouth ; it being here the same as if the mouth were extended through the length of the pipe. If a man apply his mouth to one end of an open tube, the other end of which is placed in water, the operation of sucking is performed in the following manner. By enlarging his chest, he rarefies the air, and of course diminishes its pressure ort the liquor, which is immediately under the tube; in consequence of which the pressure of the atmosphere on the surface of the surrounding liquor forces the liquor to ascend into the tube.

The suction of heavier liquors is performed after the same manner, e. gr. in lying prone to drink out of a spring, &c., the lips are applied close to the surface of the water, so as to prevent any passage of the air between them ; then the cavity of the abdomen, Sec., being distended us before, the pressure of the air incumbent on the surface of the water, without the circumference of the mouth, prevailing over that upon tin-water within the same, the fluid is raised from the same principle as water in a pump. In sucking a heavy liquor, as water, through a pipe, the longer the pipe is, the greater difficulty is found in the suction ; and the bigness and diameter of the pipe make a farther alteration therein. The reason of this arises from that great principle in hydrostatics, that fluids press in the compound ratio of the bases, and perpendicular altitudes.

From what we have said, it evidently enough appears that what we call suction is not performed by any active faculty in the mouth, lungs, &c. ; but by the mere impulse and pressure of the atmosphere. A very curious and intelligent person distinguishes two different sorts of suction, performed after two quite different manners ; a distinction which, however hitherto overlooked by authors, seems absolutely necessary. Suction then, according to him, is performed either, 1st, by the dilatation of the thorax ; or, 2dly, by that of the cavity of the mouth. In the former case the lungs are kept continually di tended ; for, if the breath be let go ever so little, the liquor in the tube will begin to subside. On the contrary, when suction is performed by enlarging the cavitv of the mouth, we may suck wit our utmost force, and yet breathe freely througl the nostrils at the same time. Ihis is the true proper suction: the other ought rather to b.

called supping than sucking through a u ,e.

Note, the cavity of the mouth is enlarged by being a little opened, while the lips are close shutf the tongue being at the same t.me contracted, and drawn backwards towards he throat. In the operation of sucking, after the manner of children, the rarefaction is produced m U.

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fore part of the mouth ; i. e. the tongue is applied so as to fill up the space between the lips and the nipple, or pipe which conveys the milk or other liquor ; then the tongue is drawn backwards, whilst the lips are laterally pressed against it, by which means a small vacuum is formed before it, and the liquor is forced into that vacuum by the pressure of the atmosphere upon its external surface, or upon the surface of the bag which contains it. It is for the same reason that snails remain attached to solids, that limpets adhere very firmly to rocks, that the sea polypus holds with great force whatever it fastens its claws to, and that some insects suspend themselves to solids; for, though not performed with the mouth, the principle of the operation is exactly the same, *viz.* a soft membrane is applied to the solid, then the middle part of that surface is withdrawn a little way, so as to form a vacuum, or at least a rarefaction of the air between the centre of the soft membrane and the solid, in consequence of which the parts of the membrane which surround that spot are, by the gravity of the atmosphere, pressed against the solid, and the latter is pressed against the former ; hence the adhesion takes place.

Leather suckers, which act precisely upon the same principle, are not unfrequently seen in the hands of boys about the streets of London. A circular piece of thick leather, about two inches in diameter, has a string fastened to its centre. The leather, being previously well soaked in water, is applied flat and close to the smooth surface of a stone. The interposition of a little water promotes the adhesion. Then the boy pulls up the string, and the stone, if not too heavy, comes up adhering to the leather. The claws of the polypus are furnished with a great many suckers of the like nature. The limpet forms one sucker of its whole body, and the same thing, with little variation, is done by various other animals, especially of the insect tribe. The action of the glass cup, which is made to adhere to the flesh, for the purpose of bleeding, depends upon the same principle ; excepting that the air within the glass cup is rarefied by means of heat, or by means of a small exhausting engine. It is hardly needful to add that the limpet could not adhere to the rock, nor could the leather sucker act, or, in short, that none of those sucking operations could take place, in vacuo.

SUCZAVA, an ancient town in the Bukowine, Austrian Galatia, at the confluence of the Suczava and Sereth. It is surrounded with a wall and

ditch, and contains about 4000 inhabitants, but is only a shadow of what it once was, having been the residence of the princes of Moldavia, the ruins of whose palace, with those of seventeen large churches, bear testimony to its former grandeur. At present it contains hardly any establishment worth notice, except a manufactory of Russian leather, and a school for training teachers for the adjacent country. Seventy miles west of Jassy, and ninety-seven S. S. E. of Lemberg.

SUDBURY, a borough and market-town, consisting of three parishes, in Babergh hundred, Suffolk, situated on the river Stour, fourteen miles S.S.E. of Bury-St.-Edmund's, and fifty-four north-

east of London. The streets are tolerably well built, and there are three handsome churches; *viz.* St. Gregory's, St. Peter's, and All-Saints';" over the river is a good stone bridge. The traffic of the town has much increased since the Stour has been made navigable for barges to Manningtree. It is said to have been one of the first towns in which the woollen manufactory was introduced, but that is now gone to decay, and is succeeded by serges and a silk manufactory. It first returned members to parliament in 1559; and now sends two, chosen by those who are free of the borough, the number of voters being about 720. It is governed by a mayor, six aldermen, and twenty-four Common councilmen. Market on Saturday. Fairs 12th of March and 10th of July.

SUD'DEN, adj. & n. s.) Sax. j-oˆen ; Fr.

SUD'DENLY, adv. >smulain. Happening

SUD'DENNESS, n. s. J without notice ; com-ing without common preparatives : hence hasty; violent : as a noun substantive, surprise ; an unexpected occurrence ; thus ' on a sudden' is sooner than could have been anticipated : the adverb and noun substantive following correspond.

All in the open hall amazed stood, At suddenness of that unwary sight, And wondered at his breathless hasty mood.

Spenser.

He speedily run forward, counting his tuddenness his most advantage, that he might overtake the English. Id.

We have not yet set down this day of triumph ; To-morrow, in my judgment, is too sudden.

Slmk. < pearc. I grant him Sudden, malicious, smacking of every sin. Id.

Following the flyers at the very heels, With them he enters, who upon the sudden Clapt to their gates. Id. Macbeth.

If thou canst accuse, Do it without invention suddenly. Id. Henry VI.

If elision of the air made the sound, the touch of the bell or string could not extinguish so suddenly that motion. Bacon.

Parents should mark the witty excuses of their children at suddains and surprisals, r-ather than pam-per them. Wotton.

SUDERMANIA, or SODERMANLAND, a province of Middle Sweden, to the west of Stockholm. Its greatest length from east to west is about 100 miles ; its breadth from north to south fifty-five : its territorial extent is 3470 square miles. The face of the province is hilly, finely variegated with lakes : the climate, though cold, is not intemperate ; and the air is pure and healthy. The inhabitants raise corn in sufficiency for consumption and a small export. The pasturage is good ; the forests extensive. In the mountains are mines of lead, copper, iron ; and from Tunaberg a large quantity of cobalt ore is sent to England. Population 150,000.

SUDETES, a large mountain chain of Germany, separating the Austrian states from those of Saxony and Prussia. It is distinguished by the names of the Erzgebirge and the Riesenge-birge, *viz.* the Mining and the Giant's Mountains. Besides this great chain it sends off on both sides a number of branches into Bohemia, Moravia, Lusatia, and Silesia.

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./ A 1*-‘vuMiig or CUV

sweat : the noun substantive corresponding

Physicians may well provoke sweat in bed by bottles, with a decoction of atdorijkk herbs in hot water.

Exhaling the most liquid parts of the blood l>Ts«- donflck or watery evaporations, brings it into a morbid Sta’e’ . Arbutlnwt.

As to mdorifickt, consider that the liquid which goes off by sweat is often the most subtile part of the blood. Jd

SU’DOROUS, adj. Lat. sudor. Consisting of sweat. Not used.

Beside the strigments and sudorous adhesions from men’s hands, nothing proceedeth from gold in the usual decoction thereof. Browne’s Vulgar Errours.

SUE, v. a. & v. n. Fr. suiver ; Lat. sequor ; Gr. ££W. To prosecute by law ; to petition ; entreat; beg : obtain by law or petition.

If any sue thee at the law, and take away thy coat, let him have thy cloak also. Matt. v. 40. ‘

Full little knowest thou that hast not tried, What hell it is in suing long to bide. Spenser.

If me thou deign to serve and sue, At thy command, lo ! all these mountains be. Id.

Ambassadors came unto him as far as the mouth of the Euphrates, suing unto him for peace. Knolles.

We were not born to sue, but to command.

Shakspeare.

For this, this only favor let me sue,

IT’V Tit “I a smau stream flowing from the lake of Albufera. It stands on the great rod along the coast, contains 4800 inhabitants and oeiODged formerly to the grand master of the ValSda Ontm’ Twenty-°ne miles south of

Refuse it not : but let my body have The last retreat of human kind, a grave.

Dryden’s /Eneid. ‘Twill never be too late, To sue for chains, and own a conqueror.

Addison’s Cato. The fair Egyptian

Courted with freedom now the beauteous slave, Now faltering sued, and threatening now did rave.

Blackmwe.

By adverse destiny constrained to sue, For counsel and redress, he sues to you.

Pope’s Odyssey.

SUE (John Joseph), F. R. S., an eminent French surgeon, who was surgeon in chief of the hospitals at Paris. He wrote several learned works on surgery and medicine; and was admitted F. R. S. of London. He died in 1792.

SVEABORG, a sea port and fortress on the Gulf of Finland, three miles and a half south of Helsingfors. The harbour, capable of containing seventy men of war, is defended by batteries which sweep the channel forming its only entrance. Here are several small islands, of which the principal, called Wargoe, contains the arsenal, docks, basins, and magazines for fitting out or repairing men of war. The fortifications are likely, when completed, to stand a comparison with Gibraltar, and the garrison often amounts to 3500 men. The works were begun in 1748, and continued by the Swedish government, with more or less activity, from that date to 1808, when the place falling into the hands of the Russians, they have been farther continued. The walls are chiefly of granite, covered with earth from six to ten feet in thickness, and in some places forty in height. In 1790 Gustavus III. of Sweden defeated the Russians in a naval engagement near this place. Population 3500. SUECA, a town in the province of Valencia,

ˆftv, “• — — —”•“Es, SUESSONES, a branch of he Remi, a people of Gallia Belgica (Pliny} called sometimes Suessones, it, the lower a’e Suessi; situated between the Remi to the east’ the Nervn to the north, the Veromandoui to the west, and the Meldae to the south, in the tract now called Soissonois.

SUESSONES, SUESSIONES, or SI-ESSCNF*- the name of their city in the lower age ; thought to have been formerly called Noviodunum (Lsesar), now called Soissons. See SAXON v, aoissoNNois, and SOISSONS.

SU’ET, n.s. > From old Fr. suet, according

Su ETV, adj. J to Skinner. A hard fat, particularly that about the kidneys : of the nature of or abounding in suet.

The steatoma being suet, yields not to escaroticks.

If the matter forming a wen resembles fat, or a suety substance, it is called steatoma.

Sliarp’s Surgery.

SUET, sevum, a fat found in deer, sheep, oxen, hogs, &c., which, melted down and clarified, makes what we call tallow, used in the makitri of candles. The word is formed from the Latin suedum, sebum, or sevum, which signify the same ; and these a sue, sow, by reason of the fatness of that beast.

Of all real animal fats mutton-suet is the most consistent; it has some degree of hrittleness, and requires a temperature of 127° Fahrenheit to melt it. In other respects it agrees with animal fats in general. Like these it is emollient : it is sometimes boiled in milk in the proportion of ˆij of the suet to Oj of milk, and a cupful of the mixture is given occasionally in chronic diarrhoea when there is much acrimony of the contents of the bowels ; but its principal use is to give consistence to ointments and plasters. The sevum praeparatum, or prepared suet of the London pharmacy, is obtained by cutting the suet in pieces, then melting it by a gentle heat, and pressing it through linen. Another kind of fat which we shall mention is the axungia porcina of the Edinburgh pharmacy, the adeps suillus of Dublin, the adeps of London, or the hog’s lard. The lard is chiefly obtained from the flank of the animal. It is freed from the membranes and vessels by being cut in small pieces, then well washed in water till the water comes off

colorless, and afterwards melted with a very gentle heat in a shallow vessel, kept on the fire till the water is wholly evaporated. While still liquid it is poured into bladders, in which it concretes, and in this state it is brought to market.

This fat is inodorous, tasteless, and white: soft, and nearly semifluid. Exposed to u heat of 97° it melts, and concretes again when cooled. It is insoluble in water, alcohol, and ether : but is dissolved by the strong acids, being at the same time decomposed ; and, like the fixed oils, it combines with the alkalies and forms soap. It

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is oxidised if when melted a little nitric acid be stirred into it ; and assumes a greater degree of firmness, with a yellow color. By destructive distillation it affords results very similar to those obtained from the analysis of fixed oil ; and appears to be a compound of oxygen, hydrogen, and carbon, in unknown proportions. When lard is long exposed to a warm air it becomes yellow, emits a foetid odor, and, owing to oxygen being attracted from the atmosphere, the sebacic acid is formed. This state of rancidity may in some degree be removed by washing it with very pure soft water ; which during the operation becomes acid, and reddens litmus paper. Lard is emollient, and on account of its softness and unctuosity is preferable to fat as a friction, but seldom used for this purpose ; and is chiefly employed in the formation of ointments. Its officinal preparation is the adeps prseparata, or prepared lard. That of the London pharmacopoeia is obtained by cutting the fat into small fragments, then melting it by a gentle heat, and pressing it through linen. The adeps suillus praeparatus, or prepared hog's lard of the Dublin pharmaco-1 pceia, is had by cutting fresh lard into small pieces, then melting it by a moderate heat, and straining by pressing it through a linen cloth. Lard prepared by the dealers, and preserved with salt, is to be melted with twice its weight of boiling water, and well stirring the mixture : it is then allowed to cool, when the lard may be separated. The above-mentioned processes are intended for purifying suet and lard ; but in order to obtain them very pure they should be washed in water till the water comes off colorless, before they be melted. During the melting the lemaining water is evaporated ; and that this is the case may be ascertained by throwing a little of the melted fat into the fire, when it will crackle if any water remain. The heat must not be raised above 97°, the melting point of fat ; because otherwise the fat is decomposed, rendered acrid, and assumes a yellow color. This purification is seldom attempted by the apothecary, as both kinds of fat may be procured very well purified from the dealers. To keep lard clean, and preserve it from the action of the air, it is, as we have already said, run into bladders in its liquid state. — Thomson's Disp.

SUETONIUS TRANQUILLUS (Caius), a fa-mous Latin historian, was born at Rome, and became secretary to the emperor Adrian, about A. D. 118; but that post was taken from him three years after, for not showing the empress Sabina all the respect she deserved. During his disgrace he composed many works, which •are lost. Those extant aie

his History of the Twelve Caesars, and a part of his Treatise of the Illustrious Grammarians and Rhetoricians. Pliny the Younger was his intimate friend, and persuaded him to publish his books. His History of the Twelve Caesars has been much commended by many of the literati. He represents, in a series of curious particulars, without digressions or reflections, the actions of the emperors, exposing their vices in all their deformity ; yet mentions their good qualities ; but the horrid dissoluteness and obscene actions he

relates of Tiberius, Caligula, Nero, &c., have made some say that he wrote the lives of the emperors with the same licentiousness with which they lived. The edition of this history by Graev us at Utrecht, in 1672, with the excellent Commentaries of Torrentius and Casaubon, and the notes of some other learned critics, is much esteemed.

SUETRI, an ancient nation of Gaul, who inr habited near the Alps.

SUEVI. See ALEMANNI.

SUEVI, the Catti or Chatti of Caesar, an ancient nation of Germany, who lived on the Rhine ; considerably distant from the proper Suevi or Alemanni. See SAXONS.

SOEVI, a common name of the people situated between the Elbe and the Vistula (Tacitus), distinguished otherwise by particular names ; as in Ptolemy, Suevi Angeli, Suevi Senones.

SUEUR (Eustace le), a-n eminent French painter, born at Paris in 1617. He studied un-der Simon Vouet, but soon greatly excelled him. Although he was never out of France, he attained the highest degree of perfection. His works, which are chiefly at Paris, exhibit a grand style, formed upon antiquity, and after the best masters. His master-piece is St. Bruno, formerly in the convent of Carthusians, probably now in the National Museum. He died in 1655, aged only thirty-eight.

SUEVUS, in ancient geography, a river of Germany, thought to be the same with the Viad-rus or Oder, running by three mouths into the Baltic, the middlemost of which is called Swine or Swene.

SUEZ, a city of Egypt, remarkable for its situation at the head of the Red Sea, on the borders of Arabia. The existing city appears to have been of modern origin. According to D'Anville it occupies the site of the ancient Arsinoe. Volney thinks that place was situated farther north, towards the bottom of the gulf. The celebrated Arabian city

called Kolzum, which among that people gave its name to the Red Sea, was also farther to the north. Its ruins may still be traced. Suez, about the beginning of the sixteenth century, became a flourishing mart, being at once the emporium of the trade with India, and the rendezvous of the numberless pilgrims who went from every part of the Turkish empire to Mecca. When Niebuhr was there, Suez appeared to him as populous as Cairo. Since that time it has greatly declined, in cons£- quence of the diminution both of the general trade of the Red Sea, as well as of the concourse to Mecca. It sustained, also, irreparable injury from the devastations of the French. Great part of the trade being carried on by the Beys, each of whom had a factor stationed here, the French, in revenge for the spirited resistance made by that race, demolished a great part of the town.

Suez is so situated that vessels cannot approach nearer than two miles and a half. From this point the water is divided into three channels, which unite before reaching the town. The surrounding country is a complete desert, compose i of a bed of rock, slightly covered with sand. Ail provisions and necesssaries of life are brought

frcm Cairo. Its very bad water also is brought from the distance of about two leagues, at the opposite side of an arm of the gulf. The town contains about 500 stone houses, of which more than half were destroyed by the French. It has no walls ; but the houses are built so close together that it can be entered from the land side only at one point, defended by three canon; eight are placed on the side towards the sea. Mr. Turner conceives Suez to be indisputably the most miserable place in the Levant, and that only the settled passion for money, which characterises the Levantines, could induce any man to make it his residence. Its trade lies under many disadvantages, particularly from the difficult navigation of this part of the Red Sea, where vessels can only pass through a narrow channel, amid rocks often sunk beneath the surface. Danger also arises from the north winds, which blow with great violence for nine months. Cos-seir, which is less liable to these disadvantages, is now, notwithstanding the inconvenience of a longer and more difficult land journey, often preferred for the trade to Egypt. Suez, however, still carries on much of the communication of Syria, Arabia, and India, with Cairo. Coffee is the staple import.

SUF’FER, v. a. &v.n.^| Fr. souffrir; Lat.

SUF’FERABLE, adj. suffero. To endure ;

SUF’FERABLY, adv. 1 undergo; support;

SUF’FERANCE, n. s. j pass through ; be af—

SUF’FERER, fected by ; allow ;

SUFFERING. J permit: to undergo

pain, inconvenience, or penalty ; be injured : sufferable is tolerable; such as may be endured: the adverb corresponding : sufferance, inconvenience; pain; tolerance; permission; moderation : a sufferer, one who endures suffering ; one who permits or allows (unusual) : suffering is pain or inconvenience suffered.

Rebuke thy neighbour, and not ntffer sin upon nim. Leviticus.

A man of great wrath shall suffer punishment.

Prov. xix.

A woman suffered many things of physicians, and spent all she had. Mark v. 26.

He thought t’ have slain her in his fierce despight ; But hasty heat tempering with sufferance wise, He staid his hand. Spenser.

In process of time, somewhiles by sufferance, and somewhiles by special leave and favor, they erected to themselves oratories not in any sumptuous or stately manner. Hooker.

He wondered that your lordship Would suffer him to spend his youth at home.

Shakspeare.

Oft have I seen a hot o’erweening cur Run back and bite, because he was withheld : Who being suffered, with the bear’s fell paw Hath clapt his tail betwixt his legs and cried. Id.

Some villains of my court Are in consent and sufferance in this. Id.

He must not only die,

But thy unkindness shall the death draw out To lingering sufferance. Id. Measure for Measure.

Thy rages be Now no more sufferable. Chapman.

He hath given excellent sufferance and vigorous-ness to the sufferers, arming them with strange courage. Taylor.

>? SUF

_ .It is tufferable in any to use what liberty they list in their own writing, but the contracting and extending the lines and sense of others would appear a thankless office. 11 <!«,>,

This evil on the Philistines has fallen, The sufferers then will scarce molest us here : From other hands we need not much to iear.

_ Jl/iil.m.

1 o suffer, as to do,

Our strength is equal, nor the law unjust That so ordains. jj

Obedience imposed, On penalty of death, and suffering death. id.

Both gloried to have escaped the Stygian flood, As gods, and by their own recovered strength ; Not by the sufferance of supernal power.

Id. Paradise Ltift.

The air now must suffer change. Milton.

And, should I touch it nearly, bear it With all the sufferance of a tender friend.

Otway's Orphan.

Nor was his sufferance of other kinds less exemplary than that he evidenced in the reception of ca-lumny. Fen,

Publick business suffers by private infirmities, and kingdoms fall into weaknesses by the diseases or de-cays of those that manage them. Temple.

He thus

Was forced to suffer for himself and us ! Heir to his father's sorrows with his crown.

Dryden.

SUFFERANCE, in law. Tenant at sufferance is he who holdeth over his term at first lawfully granted. — Terms de Ley. A person is tenant at sufferance that continues after his estate is ended, and wrongfully holdeth against another, &c. — 1 Inst. 57. An estate at sufferance is \vhere one comes into possession of land by lawful title, but keeps it afterwards without any title at all. As if a man takes a lease for a year, and, after the year is expired, continues to hold the premises without any fresh leave from the owner of the estate. Or, if a man maketh a lease at will, and dies, the estate at will is thereby determined ; but, if the tenant continueth possession, he is tenant at sufferance. — Co. Litt. 57. But a lease at will being now considered as a lease from year to year, which cannot be vacated without half a year's notice to quit, the tenant cannot be ejected at the death of the lessor without half a year's notice from his heir.— 2 Term Rep. 159. And it is also necessary, in case of the death of the tenant, to give that notice to his personal representative.— 3 Wils. 25. No man can be tenant at sufferance against the king, to whom no laches or neglect, in not entering and ousting the tenant, is ever imputed by law; and his tenant, so holding over, is considered as an absolute intruder.— 1 Inst. 57. But, in the case of a subject, this estate may be destroyed whenever the true owner shall make an actual entry on the lands and oust the tenant; for, before entry, he cannot maintain an action of trespass against the tenant by sufferance as he might against a stranger ; and the reason is, because the tenant being once in by a lawful title, lly law (which presumes no wrong in any man) wil\ suppose him to continue upon a title equally lawful, unless the owner of the land, by son." public and avowed act, such * entry is, will dr-358

SUFFOLK.

OPAITLA.

UFFICE', v. n. & v. a.-\ Fr. suffire ; Lat. UFFI'CIENCY, f sufficio. To be

UFFI’CIENT, adj. £ enough; be suffi—

UFFI’CIENTLY, adv. J cient, or efficient,

clare his continuance to be tortious, or, in com-mon language, wrongftu. — 1 Just. 57 : 2 Comm. c. 9, p. 150.

SUFFETES, magistrates of Carthage. SUFFETIUS. See METIUS and ROME. SUFFETULA, an ancient town of Africa, in the dominions of Carthage, probably so called from suffetes, the title of the magistrates of that city. It is now called Spaitla, in the kingdom of Tunij, and has many elegant remains of antiquity. There are three temples in a great measure entire ; one of them of the Composite order, the other two Corinthian. The town lies in the most beautiful spot in Barbary, surrounded by great numbers of juniper trees,’ and watered by a pleasant stream, which sinks under the earth at that place, without appearing any more. See SPAITLA.

SUFFICE’, v. n. & v. a.-j Fr. suffirej Lat. SIFFI

to an end or purpose : as a verb active to afford ; supply ; satisfy : sufficiency is, competency ; qualification for a purpose; enough : sufficient, equal to an end or purpose ; qualified : the adverb corresponding.

Parched corn she did eat, and was sufficed, and left. Ruth.

Israel, let it suffice you of all your abominations.

Ezeh. Sufficient unto the day is the evil thereof.

Matthew vi. 34.

If religion did possess sincerely and sufficiently the hearts of all men, there would need be no other restraint from evil. Hooker. If thou ask me why, sufficeth, my reasons are good.

Shakspeare.

In saying he is a good man, understand me, that he is sufficient. Id. Merchant of Venice.

I am not so confident of my own sufficiency, as not willingly to admit the counsel of others.

King Charles.

Seem I to thee sufficiently possessed Of happiness? Milton.

To recount almighty works, What words or tongue of seraph can suffice, Or heart of man suffice to comprehend 1 Id.

Let it suffice thee that thou knowest us happy.

Id.

Heaven yet retains Number sufficient to possess her realms. Id.

His sufficiency is such that he bestows and possesses, his plenty being unexhausted. Boyle.

Man is not sufficient of himself to his own happiness. Tillotson. Sufficiency is a compound of vanity and ignorance.

Temple.

Their pensioner De Wit was a minister of the greatest authority and sufficiency ever known in their state. Id.

Thou king of horned floods, whose plenteous urn Suffices fatness to the fruitful corn, Shall share my morning song and evening vows.

Dry den.

When the herd, sufficed, did late repair To ferny heaths, and to the forest lare. Id.

The indolency we have, sufficing for our present happiness, we desire not to venture the change; being content ; and that is enough. Locke.

She would ruin me in silks, were not the quantity that goes to a large pincushion sufficient to make her a gown and petticoat. Addison.

All to whom they are proposed, are by his grace sufficiently moved to attend and assent to them ; svf-Jicicntly, but not irresistibly ; for if all were irresistibly moved, all would embrace them ; and if none were sufficiently moved, none would embrace them.

Rogers.

Seven months are a sufficient time to correct vice in a Yahoo. Suifi.

The most proper subjects of dispute are questions not of the very highest importance, nor of the meanest kind ; but rather the intermediate questions between them ; and there is a large sufficiency of them in the sciences. Watts ‘s Imp. of the Mind.

An elegant sufficiency, content. Thomson.

SUFFIELD, a post town of Hartford county, Connecticut, on the west bank of the Connecticut; eleven miles south of Springfield, and seventeen north of Hartford. It is a pleasant and considerable town, £.nd contains four houses of public worship, two foi Congregationalists, and two for Baptists. Here is a mineral spring considerably resorted to.

SUFFI’SANCE, n.s. Fr. tuffucnce. Ex-cess; plenty. Obsolete.

There him rests in riotous suffisance Of all gladfulness and kingly

joyance. Spenter. SUFFOCATE, v. a. \ Fr. suffoquer ; Latin SUFFOCA'TION, n. s. >sujfoco. To choke by SUF'FOCATIVE, adj. j exclusion or intercep-tion of air : the act of choking or state of being choked : having the power to choke. This chaos, when degree is suffocate, Follows the choaking.

Shakspeare. Troilus and CressiAa. Diseases of stoppings and suffocations are dangerous. Bacon.

A swelling discontent is apt to suffocate and strangle without passage. Collier of Friendship.

Mushrooms are best corrected by vinegar ; some of them, being poisonous, operate by suffocation, in which the best remedy is wine or vinegar and salt, and vomiting as soon as possible.

Arbuthnot on Diet.

From rain, after great frosts in the winter, glandulous tumours and suffocative catarrhs proceed.

Id. on Air.

White consists, in an equal mixture of all the primitive colours, and black in a suffocation of all the rays of light. Ctieyne.

All involved in smoke, the latent foe From every cranny suffocated falls. Thomson.

SUFFOLK, a maritime county of England, bounded north by Norfolk, west by Cambridgeshire, south by Essex, and on the east by the German Ocean. The river Stour divides it from Essex, the Little Ouse and Waveny from Norfolk, and the Great Ouse and its branches from Cambridgeshire. Its figure resembles a crescent, with the concavity towards the north, and the two horns projecting along the coast towards Yarmouth, and westward along the Ouse; but an oblong of almost unindented form may be measured on its surface from east to west, forty-seven miles long, and thirty broad. Mr. Young estimates its area at 1269 square miles, or upwards of 800,000 acres. It contains from 150 to 160 inhabitants to each mile.

The two grand divisions are the liberty of Bury St. Edmund's, and vhat is termed the Body of the County, having each a separate grand jury. It is subdivided into twenty-one him-

dreds and seventy-five parishes, which contain four boroughs, viz., Eye, Ipswich, Sudbury, and Bury St. Edmund's,' and twenty-one other market towns, viz., Beccles, Bildeston, Brandon, 'Botesdale, Bungay, Clare, Debenham, Framlingham, Hadleigh, Haverhill, Ixworth, Lavenham, Lowestoff, Mendlesham, Mildenhall, Needham, Neyland, Saxmundham, Southwold, Stow Market, and Woodbridge. It sends thirteen members to parliament, viz., four for the county, one for Eye, and two for each of the other boroughs.

Suffolk is in general a level county, with few elevations ; the highest part is in the west, where a great chalk ridge extends from Haverhill, by Bury, to Thetford, in Norfolk. This is some-dmes called High Suffolk. The rivers, besides the Stour, Waveney, and Ouse, on the borders, are none of them of any magnitude, except perhaps the Orwell, which rises above Stow Mar-ket; and, under the name of Gipping, descends by Needham to Ipswich, where it becomes navigable, widens into an estuary, and then joins the Stour at Harwich. Other rivers are the Deben, Aid, and Blyth, along the coast, and the Lark on the west.

The climate is reckoned the driest in the kingdom : the frosts are severe, and north-east winds are in the spring sharp and prevalent. The soil of this county is very distinctly marked into 1st, a strong loam or a clay marl bottom pervading the centre and greatest part of the county, from Haverhill to Beccles on the one hand, and from near Ipswich to beyond Ixworth on the other. 2d, On the east, and between the former and the coast, extending northwards of the river Orwell, a district of sandy soil, and southwards -a much, smaller one of rich loam. 3d, To the west again occurs a considerable district of sand, which extends to the north-west corner of the county, where a fourth track of fen land is included between the Great and Little Ouse. The loam in the middle of the county is of a clayey nature, and highly productive, but varies in different places, more particularly along the banks of the rivers and streams, where it becomes a rich friable loam of superior quality. The sandy district along the coast varies from pure sand to loamy sand, and rests on a substratum of sand chalk, or a shell marl, termed here crag, which is found in great masses in various parts of the county. This is one of the best cultivated districts in England, and abounds with wealthy farmers. Besides its arable land, it contains heaths, which afford extensive sheep walks, and marshes covered with cattle. The sea shore is composed of cliffs, which are

continually falling flown by the action of the waves. The soil of the fens is composed, from one to six feet under the surface, of peat bog : part of the land is under water, but a good deal has been drained.

Suffolk is almost solely an agricultural county. The largest estate is supposed not to exceed £9000 a year ; and of the smaller estates, which are very numerous, many are occupied by the proprietors. The size of farms is in general large: but the farm houses, much improved of late years, are still too often built of lath and

plaster. The common crops are wheat, barley oats, rye, beans, pease, buck-wheat, cole-seed turnips, clover, trefoil, white clover, and suinfom! Buck-wheat forms a very valuable crop on sandy soils, and is more common here, ever, on the poorest, than in most other parts of England. Cole-seed is one of the principal productions of the tens. Ihe culture of turnips prevails greatlv • various other crops are raised in particular snots" A district called the Sandlands, lying between Woodbridge, Saxmundham, and Orfbrd, is famous for its carrots, which have been raised here in great quantities for upwards of two centuries, and formerly used to supply the London market. Hops are raised in small quantity at Stow Market and in the neighbourhood, and cabbages for cows on the heavier land. Hemp is raised in a district about ten miles in breadth, extending from Eye to Beccles. It is woven on the spot into cloth of various degrees of fineness Lucerne and chicory are also raised.

The management of arable land, and the courses of crops, vary considerably in the different districts. In strong soils the best rotation is, first fallow, second wheat, third beans, fourth barley, fifth clover, and sixth wheat. On the rich loam and sand, the most usual course is, first turnip, second barley, third clover, and fourth wheat. On the said districts, turnips are every where the preparative, both for corn and grass. In the fenny district cole-seed is usually sown after paring and burning ; and, after two successive oat crops, the land is laid down in grass for six years. Several new agricultural implements have been introduced into this coun-ty. Irrigation is very little practised.

The dairy district lies near Framlingham, ami extends about twenty miles by twelve ; but the late high price of corn induced the ploughing

up of a great quantity of pasture. The butter made is chiefly used in this and the adjoining county of Essex. Much cheese is also made ; but is of an inferior quality. Suffolk cows have long bepn celebrated for their milk, which, in proportion to the quantity of food, and sixe of the animal, exceeds that of any other kind in the kingdom. They are all of the hornless or polled breed. The best milkers are in general red, brindled, or of a yellowish cream color. They yield from four to six gallons a day. The practice of feeding them on cabbages, once universal, is now on the decline. In some parts of the county black cattle are bought from north country drovers, to eat up the turnips. After being fattened, these are sent to the metropolis. The sheep, of which large flocks are kept in the county, were, till of late years, almost entirely of the Norfolk breed. The South Down, however, which were introduced by Mr. Young, are now very prevalent, and, from their superior qualities, have superseded the former.

Suffolk is no less noted for its horses than for its cows. These are found in the highest perfection in the maritime district, extending to Woodbridge, Debenham, Eye, and l.owcstofl. Of hogs, the short white breed in the cow district has great merit Poultry is kept hero in abundance, and great quantities of pigeons are reared in the open field. .SuHolk contains also

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many rabbit warrens. One near Brandon is reckoned to return about 40,000 rabbits in a year. Of late years, however, considerable tracks occupied by them have been converted into arable and pasture land. Mr. Young estimates the waste lands in this county at 100,000 acres, comprehending sheep walk, commons, warrens, &c. ; most of which are capable of improvement. It contains few woods or plantations of con-

primitive churches, as the best and safest commeO upon the other. Walerland.

SUFFRAG'INOUS, adj. L.at. suffrage. Belonging to the knee joint of beasts.

In elephants, the bought of the forelegs is not directly backward, but laterally, and somewhat in-ward ; but the hough, or suffraginous flexure behind, rather outward. Browne.

SUFFRUTEX, among botanists, denotes an

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sequence. The commerce and manufactures of undershrub, or the lowest kind of woody plants

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Suffolk have been long on the decline, and are inconsiderable. Corn and malt are the principal exports, and the imports are for the supply of the county with the articles of ordinary consumption. Lowestoff is noted for its herring fishery. The spinning and carding of wool was formerly carried on to a great ex-tent, but this has been of late in a great measure transferred to Yorkshire. At Sudbury, one of the first seats of the Flemings, there is a manufactory of serges, and a small silk manufactory. Some calimancoes are still made at Lavenham. At the time of the Roman invasion, Suffolk belonged to the Tiene, and

afterwards formed a part of the province of Flavia Csesariensis.

SUFFOLK, a county of New York, on the east part of Long Island, bounded north by Long Island Sound, east and south by the Atlantic, and west by King's county. It comprises about two-thirds of the island. Chief towns, River-head, Sag Harbour, Satauket, and Huntington.

SUFFRAGAN, n. s. Fr. suffragant ; Latin suffraganeus. A bishop considered as subject to his metropolitan.

The four archbishops of Mexico, Lima, S. Foy, and Dominico, have under them twenty-five suffragan bishops, all liberally endowed and provided for.

Heylyn.

Becket, archbishop of Canterbury, insolently took upon him to declare five articles void, in his epistle to his suffragans. Hale.

Suffragan bishops shall have more than one riding apparitor. Aijliffe's Parergon.

SUFFRAGAN is likewise the appellation given to a bishop who is occasionally appointed to reside in a town or village, and assist the diocesan.

SUF'FRAGE. n. s. 3 French suffrage ; Latin SUF'FRAGATE, v. n. } suffragium. Vote; voice given in a controverted point : to vote or agree with.

Noble confederates, thus far is perfect, Only your suffrages I will expect At the assembly for the chusing of consuls.

Ben Jonsan.

No tradition could universally prevail, unless there were some common congruity of somewhat inherent in nature, which suits and suffragates with it, and closeth. with it. Hale.

Fabius might joy in Scipio, when he saw A beardless consul made against the law ; And join his suffrage to the votes of Rome.

Dryden.

The fairest of our island dare not commit their cause to the suffrage of those who most partially adore them. Addison.

Lactantius and St. Austin confirm by their suffrage the observation made by the heathen writers.

Atterbury.

To the law and to the testimony let the appeal be in the first place ; and next to the united suffrage of the

as lavender.

SUFFU'MIGE, n. s. Latin suffumigo. A medical fume. Not used.

For external means, drying suffumiges or smoaks, are prescribed with good success; they are usually composed out of frankincense, myrrh, and pitch.

Harvey.

If the matter be so gross as it yields not to remedies, it may be attempted by suffumigatim.

Wiseman's Surgery.

SUF'FUSE, v. a. > Lat. suffusus. To spread SUFFU'SION, n. s. $ over with something expansible, as with a vapour or a tincture : the noun substantive corresponding.

A drop serene hath quenched their orbs, Or dim confusion veiled. Milton.

The disk of Phoebus, when he climbs on high, Appears at first but as a bloodshot eye ; And, when his chariot downward draws to bed, His ball is with the same suffusion red. Dryden.

Suspicions, and fantastical surmise, And jealousy suffused with jaundice in her eyes.

Id.

To those that have the jaundice, or like suffusion of eyes, objects appear of that color. Hay.

To that recess,

When purple light shall next suffuse the skies, W?ith me repair. Pope.

Instead of love-enlivened cheeks, With flowing rapture bright, dark looks succeed, Suffused and glaring with untender fire. Thomsim.

SUG, M. s. Lat. sugo, to suck. A kind of lice.

Many have sticking on them tugs, or trout-lice, which is a kind of worm like a clove or pin, with a big head, and sticks close to him, and sucks his moisture. Walton.

SUG'AR, n. s. &v.a.\ Fr. sucre ; Lat. sac-SUG' ART, adj. Scharum. The native

salt of the sugar-cane. See below. Any thing proverbially sweet; a dry chemical crystallisation: to impregnate with sugar; sweeten: su-gary is abounding with sugar.

All the blood of Zelmane's body stirred in her, as wine will do when sugar is hastily put into-it.

Sidney.

With the suggary sweet thereof allure Chaste ladies' ears to phantasies impure. Spenser.

Your fair discourse has been as sugar, Making the hard way sweet and delectable.

Shakspeare.

Thou would'st have plunged thyself In general riot, and never learned The icy precepts of respect, but followed The sugared game before thee. Id. Timon

His glossing sire his errand daily said, And sugared speeches whispered in mine ear.

Fairfax.

Lumps of »ugar loose themselves, and twine Their subtle essence with the soul of wine.

SUGAR.

Who casts out threats, no man deceives, But flattery still in sugared words betrays, And poison in high-tasted meats conveys. Denham. Sugar of lead, though made of that insipid metal, and sour salt of vinegar, has in it a sweetness surpassing that of common sugcu-. Boyle.

enclosed within a quadruple sheath of seminal leaves, rise to a considerable height. « A field of canes, when standing, in November, when it is in arrow or full blossom,' says Mr. Becktbrd m his Account of Jamaica, < is one of the most

SMˆar-piumbs when he has a mind, rather than be out of humour ; why, when he is grown up, must he not be satisfied too with wine 1 Locke.

Saccharum candidum shoots into angular figures, by placing a great many sticks a-cross a vessel of liquid sugar. Crete.

SUGAR. From the few remains of the Grecian and Roman authors which have survived the ravages of time, we can find no proofs that the juice of the sugar-cane was known at a very early period. There can be no doubt, however, that in those countries where it was indigenous its value was not long concealed. It is not im-

possibly describe. It in

common rises

ference of soil or the varieties of culture. It is when ripe of a bright and golden yellow ; and, where obvious to the sun, is in many parts very beautifully streaked with red ; the top is of a darkish green; but the more dry it becomes, from either an excess of ripeness or a continuance of drought, of a russet yellow, with Ion”- and narrow leaves depending ; from the centre of which shoots up an arrow like a silver wand from two to six feet in height ; and from the summits of which grows out a plume of white

probable that it was known to the ancient Jews ; feathers, which are delicately fringed with a lilac for there is some reason to suppose, that the He-dye; and indeed is, in its appearance, not much

brew word fUp, which occurs frequently in the Old Testament, and is by our translators rendered sometimes calamus and sometimes sweet-cane, does in fact mean the sugar-cane. The sugar-cane was first made known to the western parts of the world by the conquests of Alexander the Great. Strabo relates that Nearchus his admiral found it in the East Indies A. A. C. 325. It is evidently alluded to in a fragment of Theophrastus, preserved in Photius. Varro, who lived A. C. 68, describes it in a fragment quoted by Isidorus, as a fluid pressed from reeds of a large size, which was sweeter than honey. Dioscorides, about A. A. C. 35, says, ‘ that there is a kind of honey called saccharon, which is found in India and Arabia Felix. It has the appearance of salt, and is brittle when chewed. If dissolved in water, it is beneficial to the bowels and stomach, is useful in diseases of the bladder and kidneys, and, when sprinkled on the eye, removes those substances that obscure the sight.’ This is the first account we have of its medical qualities. Galen often prescribed it as a medicine. Lucan relates that an oriental nation in alliance with Pompey used the juice of the cane as a common drink. Pliny says it was produced in Arabia and India, but that the best came from the latter country. It is also mentioned by Ar-rian, in his Periplus of the Red Sea, by the name of 2ax«p (sachar) as an article of commerce from India to the Red Sea. ./ Elian, Tertullian, and Alexander Aphrodisaeus, mention it as a species of honey procured from canes.

unlike the tuft that adorns this particular and elegant tree.’

That the sugar-cane is an indigenous plant of the East Indies we have the strongest reason to believe ; for Thunberg found it in Japan, and has mentioned it as a native of that country in his Flora Japonica, published m 1784. Osbeck also found it in China in 1751. Marco Paolo, a noble Venetian, who travelled into the east about 1250, found sugar in abundance in Bengal. Vasco de Gama, who doubled the Cape of Good Hope in 1497, relates that a considerable trade in sugar was then carried on in the kingdom of Calicut. Dioscorides and Pliny, say that it i.s a native of Arabia; but Niebuhr, in his Travels, has omitted it when enumerating the most valuable plants of that country. Mr. Bruce found it in Upper Egypt. John Lioni says that a considerable trade was carried on in sugar m Nubia, in 1500; it abounded also at Thebes, on the Nile, and in the northern parts of Africa, about the same period. There is reason to believe that the sugar-cane was introduced into Europe dur-ing the crusades. Peter Martyr, in the third book of his first decade, composed during Columbus’s second voyage, between 1493 and 1495, says that the sugar-cane was then known in Hispaniola. There are authors who maintain that it is a native both of the islands and of the continent of America ; and that it is not for the plant itself, but for the secret of making sugar from it, that the West Indies are indebted to the Spaniards and Portuguese; and these to the naThe sugar-cane, or saccharum officinarum of tions of the east.

botanists, is a jointed reed, commonly measuring As the cane is a rank succulent plant, it

(the flag part not included) from three and a quires a strong deep soil to bring i””

half to seven feet in height, but sometimes rising The soil most favorable to th

, ,

(the flag part not included) from three and a quires a strong deep soil to bring _it to perfection

half to seven feet in height, but sometimes rising The soil most

favorable to the cultivation ol

to twelve feet. When ripe it is of a fine straw the dark gray loam of St. Christophers, winch

color w rducin leaves or is so light and porous as to be penetrable by the

color, inclining to yellow, producing leaves or

blades, the edges of which are finely and sharply

serrated, and terminating in an arrow decorated

with a panicle. The joints in one stalk are deep Canes planted ,r .par icula sp , . t .s

from forty to sixty in number, and the stalks island have yielded 8000

rising from one root are sometimes very numerous, sugar from a single

The young shoot ascends from the earth like

the point of an arrow ; the shaft of which soon

Dreaks, and the first two leaves, which had been

.lightest application of the hole. The under stratum is gravel from eight to twelve inches

The average product!

of “the island for a series of years has been 16,000 hogsheads of I6cwt., which is one-ln of the whole cane land, or 8500 acres, \neu

SUGAR.

annually cut, it gives nearly two hogsheads of 16 cwt. per acre, for the whole of the land in ripe canes. Next to the ashy loam of St. Christopher's is the soil which in Jamaica is called brick-mould ; not as resembling a brick in color, but as containing such a due mixture of clay and sand as is supposed to render it well adapted for the use of the kiln. It is a deep, warm, and mel-low, hazel earth, easily worked ; ana, thougli its surface soon grows dry after rain, the under stratum retains a considerable degree of moisture in the driest weather ; with this advantage, too, that even in the wettest season it seldom requires trenching. Plane-canes, or canes of the first growth, have in very fine seasons yielded two tons and a half of sugar per acre. After this may be reckoned the black mould of several varieties. The best is the deep black earth of Barbadoes, Antigua, and some other of the windward islands ; but there is a species of this mould in Jamaica that is but little, if any thing, inferior to it, which abounds with limestone and flint on a substratum of soapy marie. Black mould on cray is more common; but as the mould is generally shallow, and the clay stiff and retentive of water, this last sort of land requires great la-bor, both in ploughing and trenching, to render it profitable. When manured, and properly pulverised, it becomes very productive. There is a peculiar sort of land on the north side of Jamaica, chiefly in the parish of Trelawney, remarkable, not only on account of its scarcity, but its value ; few soils producing finer sugars, or such as answer so well in the pan ; an expression signifying a greater return of 'refined sugar than common. This land is of a red color; the shades however, vary considerably from a deep chocolate to a rich scarlet; in some places it approaches to a bright yellow, but it is every where remarkable for a glossy surface, and, if wetted, stains the fingers like paint. It is of great importance that the plants for seed be put into the ground at the commencement of this season. As the cane requires a great deal of moisture to bring it to maturity, the properest season for planting it is in September and October when the autumnal rains commence, that it may be sufficiently luxuriant to shade the ground before the dry weather sets in. Thus the root is kept moist, and the crop is ripe for the mill in the beginning of the next year. Canes planted in November, or later, lose the advantage of the autumnal rains ; and dry weather in the beginning of the year retards their vegetation until the May rains set in, when they sprout both at the roots and the joints ; so that by the time they are cut, the field is loaded with unripe suckers instead of sugar-canes. A January plant, however, commonly turns out well; but canes planted very late in the spring, though they have the benefit of the May rains, seldom answer expectation ; for they generally come in unseasonably, and throw the succeeding crops out of regular rotation. They are therefore often cut before they are ripe ; or, if the autumnal

seasons set in early, are cut in wet weather, which has probably occasioned them to spring afresh : in either case the effect is the same. The juice is unconcocted, and, all the sap being in motion, the root is deprived of its natural nourishment, to the great injury of the ratoon. The chief objection to a fall plant is this, that the canes become rank and top heavy, at a period when violent rains and high winds are expected, and are therefore frequently lodged before they are fit to be cut. The sugar-cane is propagated by the top shoots, which are cut from the tops of the old canes. The usual method of planting in the West In-dies is this : — The quantity of land intended to be planted, being cleared of weeds and other incumbrances, is first divided into several plats of certain dimensions, commonly from fifteen to twenty acres each ; the spaces between each plat or division are left wide enough for roads, for the conveniency of carting, and are called intervals. Each plat is then subdivided, by a line and wooden pegs, into small squares of about three and a half or four feet. The negroes are then placed in a row in the first line, one to a square, and directed to dig out with their hoes the several squares, to the depth of five or six inches. The mould which is dug up being formed into a bank, at the lower side, the excavation or cane-hole seldom exceeds fifteen,inches in width at the bottom, and two feet and a half at the top. The negroes then fall back to the next line, and proceed as before. Thus the several squares between each line are formed into a trench of much the same dimensions with that which is made by the plough. An able negro will dig from 100 to 120 of these holes for his day's work of ten hours ; but, if the land has been previously ploughed and lain fallow, the same negro will nearly double the number in the same time. The cane-holes or trench being now completed, whether by the plough or by the hoe, and the cuttings selected for planting, which are commonly the tops of the canes that have been ground for sugar (each cutting containing five or six gems), two of them are sufficient for a cane-hole of the dimensions described. These, being placed longitudinally in the bottom of the hole, are covered with mould about two inches deep ; the rest of the bank being intended for future use. In twelve or fourteen days the young sprouts begin to ap-pear; and, as soon as they rise a few inches above the ground, they are carefully cleared of weeds, and furnished with an addition of mould from the banks. This is usually performed by the hand. At the end of four or five months the banks are wholly levelled, and the spaces between ihe rows carefully hoe-ploughed. Frequent cleanings, while the canes are young, are indeed essentially necessary. A careful manager will remove all the lateral shoots or suckers that spring up after the canes begin to joint, as they seldom come to maturity, and draw nourishment from the original plants. In the cultivation of other

lands, in Jamaica especially (says Mr. Edwards, the elegant historian of the West Indies), the plough has been introduced of late years, and in some few cases to great advantage : but it is not every soil or situation that will admit the use of the plough ; some lands being much too stony and others too steep. The only advantageous system of ploughing in the West Indies is to confine it to the

simple operation of holing, which may be performed with much greater facility by the plough than by the hoe ; and the relief which, in the case of stiff and dry soils, is thus given to the negroes, exceeds all estimation, in the mind of a humane owner. At a plantation of niy own, the greatest part of the land which is annually planted is neatly and sufficiently laid into cane-holes, by the labor of one able man, three boys, and eight oxen, with the common single-wheeled plough. The plough-share indeed is somewhat wider than usual : but this is the only difference, and the method of ploughing is the simplest possible. By returning the plough back along the furrow, the turf is alternately thrown to the right and to the left, forming a trench seven inches deep, about two feet and a half wide at the top, and one foot wide at the bottom. A space of eighteen or twenty inches is left between each trench, on which the mould being thrown, by the share, the banks are properly formed, and the holing is complete. Thus the land is not exhausted by being too much exposed to the sun ; and a rield of twenty acres is thus holed with one plough, and with great ease, in thirteen days. The plants are afterwards placed in the trench as in the common method where manual labor is alone employed. In most parts of the West Indies it is usual to hole and plant a certain proportion of the cane land, commonly one-third, in annual rotation. The sprouts that spring from the roots of the canes that have been previously cut for sugar are called ratoons ; the first yearly returns from their roots are called first ratoons ; the second year's growth second ratoons. Mr. Edwards informs us that the manure generally used is a compost, formed, 1st, Of the vegetable ashes drawn from the fires of the boiling and still houses. 2dly, Feculencies discharged from the still-house, mixed up with rubbish of buildings, white lime, &c. 3dly, Refuse, or field-trash, *i.e.* the decayed leaves and stems of the canes ; so called in contradistinction to cane-trash, reserved for fuel. 4thly, Dung, obtained from the horse and mule stables, and from moveable pens, or small enclosures made by posts and rails, occasionally shifted upon

the lands intended to be planted, and into which the cattle are turned at night. 5thly, Good mould, collected from gullies and other waste places, and thrown into the cattle-pens.

The sugar-cane is liable to be destroyed by monkeys, rats, and insects. The upland plantations suffer greatly from monkeys ; these creatures, which now abound in the mountainous parts of St. Christopher's, were first brought thither by the French, when they possessed half that island ; they come down from the rocks in silent parties by night ; and, having posted sen-tinels, to give the alarm if any thing approaches, they destroy incredible quantities of the cane, by their gambols as well as their greediness. It is in vain to set traps for these creatures, however baited ; and the only way to protect the plantation, and destroy them, is to set a numerous watch, well armed with fowling-pieces, and furnished with dogs. The negroes will perform

this service cheerfully, for they are very fond 01 monkeys as food. Labat says they are very delicious, but the white inhabitants of St Kitt s never eat them. The lowland plantations suffer as much by rats as those on the mountains do from monkeys; they also came with the shipping from Europe, and breed in the ground under loose rocks and bushes ; the field negroe* eat them greedily, and they are said to be publicly sold in the markets at Jamaica. To free the plantations from these vermin, the breed of wild cats should be encouraged, and snakes suffered to multiply unmolested ; they may also be poisoned with arsenic, and the rasped root of the cassava, made into pellets and plentifully scattered over the grounds. This practice, however is dangerous; for, as the rats when thus poisoned become exceedingly thirsty, they run in droves to the neighbouring streams, which they poison as they drink, and the cattle grazing on the banks of these polluted waters have frequently perished by drinking after them. It is safer therefore to make the pellets of flour, kneaded with the juice of the night-shade, the scent of which will drive them away though they will not eat it. There is an East Indian animal called mungoes, which bears a natural antipathy to rats; if this animal were introduced into our sugar islands it would probably extirpate the whole race of these noxious vermin. The formica omnivora of Linnaeus, the carnivorous ant, which is called in Jamaica the raffle's ant, would soon clear the sugar plantations of rats. The sugar-cane is also subject to a disease

which no foresight can obviate, and for which human wisdom has in vain attempted to find a remedy. This disease is called the blast, and is occasioned by the aphis of Linnaus. When this happens, the fine broad green blades become sickly, dry, and withered ; soon after they appear stained in spots ; and, if these spots are carefully examined, they will be found to contain innumerable eggs of an insect like a bug, which are soon quickened, and cover the plants with the vermin ; the juice of the canes thus affected becomes sour, and no future shoot issues from the joints. Ants also concur with the bugs to spoil the plantation, and against these evils it is hard to find a re-medy.

The crops of sugar-canes do not ripen precisely at the same period in all the colonies. In the Danish, Spanish, and Dutch settlements they begin in January and continue till October. This method doth not imply any nxetl season for the maturity of the sugar-cane. The plant, however, like others, must have its progress; and it has been justly observed to be in flower in the months of November and December, must necessarily follow, from the custom these nations have adopted of continuing to gather their crops for ten months without intermission, that they cut some canes which are not ripe enough, and others that are too ripe, and then the fruit has not the requisite qualities. time of gathering them should be at a fi season, and probably the months of March April are the fittest for it; because all li.c sweet fruits are ripe at that time, while the sour on. s do not arrive to a state of maturity nil U»e

months of July and August. The English cut their canes in March and April ; but they are not induced to do this on account of their ripeness. The drought that prevails in their islands renders the rains which fall in September necessary to their planting; and, as the canes are eighteen months in growing, this period always brings them to the precise point of maturity. ‘ The time of crop in the sugar islands,’ says Mr. Edwards, is the season of gladness and festivity to man and beast. So palatable, salutary, and nourishing, is the juice of the cane, that every individual of the animal creation, drinking freely of it, derives

health and vigor from its use. The meagre and sickly among the negroes exhibit a surprising alteration in a few weeks after the mill is set in action. The laboring horses, oxen, and mules, though almost constantly at work during this season, yet, being indulged with plenty of the green tops of this noble plant, and some of the scummings from the boiling house, improve more than at any other period of the year. Even the pigs and poultry fatten on the refuse. In short, on a well regulated plantation, under a humane and benevolent director, there is such an appearance during crop-time of plenty and busy cheerfulness, as to soften in a great measure the hardships of slavery.'

The plants being cut, the branches at the top are given to the cattle for food ; the top shoot, which is full of eyes, is preserved for planting. The canes are cut into pieces about a yard long, tied up in bundles, and carried in carts to the mill, where they are bruised and the juice is extracted from them. The mill consists principally of three upright iron-plated rollers or cylinders, from thirty to forty inches in length, and from twenty to twenty-five inches in diameter ; and the middle one, to which the moving power is applied, turns the other two by means of cogs. Between these rollers the canes (being previously cut short and tied into bundles) are twice compressed ; for, having passed through the first and second rollers, they are turned round the middle one by a circular piece of frame-work or screen, called in Jamaica the dumb returner, and forced back through the second and third ; an operation which squeezes them completely dry, and sometimes even reduces them to powder. The cane-juice is received in a leaden bed, and thence conveyed into a vessel called the receiver. The refuse or macerated rind of the cane (which is called cane-trash, in contradistinction to field-trash), serves for fuel to boil the liquor. The juice as it flows from the mill, taken at a medium, contains eight parts of pure water, one part of sugar, and one part consisting of coarse oil and mucilaginous gum, with a portion of essential oil. As this juice has a strong disposition to fermentation, it must be boiled as soon as possible. There are some water mills that will grind with great ease canes sufficient for thirty hogsheads of sugar in a week. It is necessary to have boiling vessels, or clarifiers, that will correspond in dimensions to the quantity of juice flowing from the receiver. These clarifiers

are commonly three in number, and are sometimes capable of containing 1000 gallons each ; but it is more usual to see them of 300 or 400 gallons each. Besides the clarifiers which are used for the first boiling there are generally four coppers or boilers. The clarifiers are

placed in the middle or at one end of the boiling house. If at one end, the boiler called the teache is placed at the other, and several boilers (generally three) are ranged between them. The teache is ordinarily from seventy to 100 gallons, and the boilers between the clarifiers and teache diminish in size from the first to the last. Where the clarifiers are in the middle, there is usually a set of three boilers on each side, which constitute in effect a double boiling house. On very large estates this arrangement is found use-ful and necessary. The objection to so great a number is the expense of fuel, to obviate which, in some degree, the three boilers on each side of the clarifiers are commonly hung to one fire. The juice runs from the receiver along a wooden gutter lined with lead into the boiling house, where it is received into one of the clarifiers. When the clarifier is filled, a fire is lighted, and a quantity of Bristol quicklime in powder, which is called temper, is poured into the ves-sel. The use of the lime is to unite with the superabundant acid, which, for the success of the process, it is necessary to get rid of. The quantity sufficient to separate the acid must vary according to the strength of the quicklime and the quality of the liquor. Some planters allow a pint of lime to every 100 gallons of liquor ; but Mr. Edwards thinks that little more than half the quantity is a better medium proportion ; and even then that it ought to be dissolved in boiling water, that as little of it as possible may be precipitated. The heat is suffered gradually to increase till it approaches within a few degrees of the heat of boiling water, that the impurities may be thoroughly separated. But, if the liquor were suffered to boil with violence, the impurities would again incorporate with it. It is known to be sufficiently heated when the scum begins to rise in blisters, which break into white froth, and appear generally in about forty minutes. The fire is then suddenly extinguished by means of a damper, which excludes the external air, and the liquor is allowed to remain about an hour undisturbed, during which period the impurities are collected in scum on the surface. The juice is then drained off, either by a syphon or a cock ; the scum, being of a tenacious gummy nature, does not flow out with the liquor, but remains behind in the clarifier. The liquid juice is conveyed from the clarifier by a gutter into the evaporating boiler, commonly termed the grand copper ; and, if it has been obtained from good canes, it generally appears transparent. In the evaporating boiler, which should be large enough to receive the contents of the clarifier, the liquor is allowed to boil ; and as the scum arises it is taken off. The scumming and evaporation are continued till the liquor becomes finer and thicker, and so far diminished in bulk that it may be easily contained in the second copper. When put into the second copper, ‘t

« nearly of the color of Madeira wine; the extract from the report of the committee of privy

boiling and scumming are continued ; and, if council for trade on the subject of the Africii

the impunties be considerable, a quantity of slave-trade, drawn up by Mr. Botham We -ive

lime-water is added. This process is carried ;* ;~ *K~ «—‘i-— ‘- - •• …

it in the author’s own words. « Having been for two years in the English and French West Indian islands, and since conducted sugar estates in the East Indies, before the abolition of the slave

on till the liquor be sufficiently diminished in quantity to be contained in the third copper. After being purified a third time, it is put into

the fourth copper, which is called the teache, trade was agitated in parliament, it “mayVd’e”

where it is boiled and evaporated till it is judged sirable to know that sugar of a superior quality

sufficiently pure to be removed from the fire, and inferior price to that in our islands is pro—

In judging of the purity of the liquor, many of duced in the East Indies; that the culture of the

the negroes (says Mr. Edwards) guess solely by cane, the manufacture of the sugar and arrack

the eye (which, by long habit, they do with great is, with these material advantages, carried on by

accuracy), judging by the appearance of the free people. China, Bengal, the coast of Mala—

grain on the back of the ladle : but the practice bar, all produce quantities of sugar and spirits ;

most in use is to judge by what is called the touch; *i.e.* taking up with the thumb a small portion of the hot liquor from the ladle ; and, as the heat diminishes, drawing with the fore finger the liquid into a thread. This thread will suddenly break, and shrink from the thumb to the suspended finger, in different lengths, according as the liquor is more or less boiled. The proper boiling height for strong muscovado sugar is generally determined by a thread of a quarter of an inch long. It is evident that certainty in this experiment can be attained only by long habit, and that no verbal precepts will furnish any degree of skill in a matter depending wholly en constant practice. The juice being thus purified, by passing through the clarifier and four coppers, it is poured into coolers, which are usually six in number. The removal from the teache to the cooler is called striking. The cooler is a shallow wooden vessel, seven feet long, from five to six wide, about eleven inches deep, and capable of containing a hogshead of sugar. As the liquor cools, the sugar grains, that is, collects into an irregular mass of imperfect crystals, separating itself from the melasses. It is then removed from the cooler and conveyed to the curing-house, where the melasses drain from it. For receiving them there is a large cistern, the sloping sides of which are lined with boards. Directly above the cistern a frame of joist-work without boarding is placed, on which empty hogsheads without heads are ranged. The bottoms of these hogsheads are pierced with

but, as the most considerable growth of the cane is carried on near Batavia, I shall explain the improved manner in which sugar estates are there conducted. The proprietor of the estate is generally a wealthy Dutchman, who has erected on it substantial mills, boiling and curing houses. He rents this estate to a Chinese, who resides on it as a superlntendant : and this renter (supposing the estate to consist of 300 or more acres) relets it to freemen in parcels of fifty or sixty, on these conditions : ‘ that they shall plant it in canes, and receive so

much per pecul of 133£ Ihs. for every pecul of sugar that the canes shall produce.' When crop time comes on the superintendant collects a sufficient number of persons, from the adjacent towns or villages, and takes off his crop as follows. To any set of tradesmen who bring their carts and buffaloes he agrees to give such a price per pecul to cut all his crop of canes, carry them to the mill, and grind them. A second to boil them per pecul. A third to clay them and basket them for market per pecul. So that by this method of conducting a sugar estate, the renter knows to a certainty what the produce of it will cost him per pecul. He has not any permanent or unnecessary expense ; for, when the crop is taken off, the taskmen return to their several pursuits in the towns and villages they came from ; and there only remains the cane planters who are preparing the next year's crop. This, like all other complex arts, by being divided into several branches, renders the labor cheaper, and the work more perfectly done. Only clayed

eight or ten holes, in each of which the stalk of sugars are made at Batavia; these are in quality

a plantain leaf is fixed, so as to project six or eight inches below the joists, and rise a little above the top of the hogshead. The hogsheads being filled with the contents of the cooler, consisting of sugar and melasses, the melasses being liquid, drain through the spongy stalk, and drop into the cistern. After the melasses are drained off, the sugar becomes pretty dry and fair, and is then called muscovado or raw sugar. Such -J process for extracting sugar, which

equal to the best sort from the West Indies, and are sold so low from the sugar estates as eighteen shillings sterling per pecul of 133$ Ibs. This is not the selling price to the trader at Batavia, as the government there is arbitrary, and sugar subject to duties imposed at will. The shabander exacts a dollar per pecul on all sugar exported. The price of common labor is from ninepence to tenpence per day. By the method of carrying on the sugar estates, the taskmen gain

13 i ; process iur eAiiduiiiii: ougai, «• — j— a . e

generally adopted in the British West India considerably more than

this not only from worl

* v 4 «..,1:«.*…, l.,,,,!*^- Hut frnm hpmcr COII-

Islands, according to the latest improvements

The above is the method of cultivating and manufacturing sugar in the West Indies, where

5ng extraordinary hours, but from being considered artists in their several branches. They do not make spirits on the sugar estates. The rnelasses is sent for sale to Batavia, where one

slaves alone are employed : but we feel a pecu-mciu«i-3 ««…. .». •— - - • .

liar pleasure in having it in our power to add a distillery may purchase the produJfe of^ 100

short description of the method used in the East -ndies, because there sugar is manufactured by free men, on a plan much more economical than what is followed in the West Indies. It is an

estates. Here is a vast saving and reduction of the price of spirits , not, as in the West Indies, a distillery for each estate; many centre in one, and arrack is sold in Batavia from twenty-one to

twenty-fire rix dollars per leaguer of 160 gallons ; say eightpence per gallon.'

The operation of the French sugar refiners consists in dissolving the cassonade, or clayed sugar, in lime-water. Bullocks' blood is added to promote the clarifying ; and, when the liquor begins to boil, the heat is diminished, and the scum carefully taken off. It is in the next place concentrated by a brisk heat ; and, as it boils up, a small quantity of butter is thrown in to moderate its agitation. When the boiling is sufficiently effected, the fire is put out ; the liquor is poured into moulds and agitated, to mix the syrup together with the grain sugar already formed. When the whole is cold, the moulds are opened, and the loaves are covered with moistened clay, which is renewed from time to time till the sugar is well cleansed from its syrup. The loaves, being then taken out of the moulds, are carried to a stove, where they are gradually heated to 145° Fahrenheit. They remain in this stove eight days, after which they are wrapped in blue paper for sale.

The following is the method by which the French make their sugar purer and whiter than ours. A quantity of sugar from the cooler is put into conical pans or earthen pots, called by the French formes, having a small perforation at the apex, which is kept closed. Each cone, reversed on its apex, is supported in another earthen vessel. The syrup is stirred together, and then left to crystallise. At the end of fifteen or sixteen hours, the hole in the point of each cone is opened, that the impure syrup may run out. The base of these sugar loaves is then taken out, and white pulverised sugar substituted in its stead ; which being well pressed down, the whole is covered with clay moistened with water. This water filters through the mass, carrying the syrup with it which was mixed with the sugar, but which by this management flows into a pot substituted in the place of the first. This second fluid is called fine syrup. Care is taken to moisten and keep the clay to a proper degree of softness as it becomes dry. The sugar loaves are afterwards taken out, and dried in a stove for eight or ten days ; after which they are pulverised, packed, and exported to Europe, where they are still farther purified. The reason assigned why this process is not universally adopted in the British sugar islands is this, that the water which dilutes and carries away the melasses dissolves and carries with it so much of the sugar that the difference in quality does not pay for the difference in quantity. The French • planters think otherwise.

The art of refining sugar was first made known to the Europeans by a Venetian, who is said to have received 100,000 crowns for the invention. This discovery was made before the new world was

explored ; but whether it was an invention of the person who first communicated it, or was conveyed from China, where it had been known before, cannot be ascertained. We find no mention made of the refining of sugar in Britain till 1659, though it probably was practised several years be-fore. The sugar which undergoes the operation of refining in Europe is either raw sugar, sometimes called muscovado, or cassonado, which is raw sugar in a purer state. The raw sugar generally

contains a certain quantity of melasses as well as earthy and feculant substances. The cassonado, by the operation of earthing, is freed from its melasses. As the intention of refining these sugars is to give them a higher degree of whiteness and solidity, it is necessary for them to undergo other processes. The first, of these is called clarification. It consists in dissolving the sugar in a certain proportion of lime water, adding a proper quantity of bullock's blood, and exposing it to heat in order to remove the impurities which still remain. The heat is increased very gradually, till it approach that of boiling water. By the assistance of the heat, the animal matter which was thrown in coagulates, at the same time that it attracts all the solid feculent and earthly matter, and raises it to the surface in the appearance of a thick foam of a brownish color. As the feculencies are never entirely removed bv a first process, a second is necessary. The solution is therefore cooled to a certain degree, by adding some water ; then a fresh quantity of blood, but less considerable than at first, is poured in. The fire is renewed, and care is taken to increase the heat gently as before. The animal substance seizes on the impurities which remain, collects them on the surface, and they are then skimmed off. The same operation is repeated a third and even a fourth time, but no addition is made to the liquor except water. If the different processes have been properly conducted, the solution will be freed from every impurity, and appear transparent. It is then conveyed by a gutter into an oblong basket about sixteen inches deep, lined with a woollen cloth ; and, after filtering through this cloth, it is received in a cistern or copper, which is placed below. The solution being thus clarified, it undergoes a second general operation called evaporation. Fire is applied to the copper into which the solution was received, and the liquid is boiled till it has acquired the proper degree of consistency. A judgment is formed of this, by taking up a small portion of the liquid and drawing it into a thread. When, after this trial, it is found sufficiently viscous, the fire is extinguished, and the liquid is poured into coolers. It is then stirred violently by an instrument called an oar, resembling the oar of a boat. This is done to diminish the viscosity, and promote what is

called the granulation, that is, the forming of it into grains or imperfect crystals. When the liquid is properly mixed and cooled, it is then poured into moulds of the form of a sugar loaf. The moulds are ranged in rows. The small ends, which are lowest, are placed in pots ; and they have each of them apertures stopped up with linen for filtering the syrup, which runs from the moulds into the pots. The liquor is then taken out slowly in ladlefuls from the coolers, and poured into the moulds. When the moulds are filled, and the contents still in a fluid state, it is necessary to stir them, that no part may adhere to the moulds, and that the small crystals which are just formed may be equally diffused through the whole mass. When the sugar is completely crystallised, the linen is taken away from the apertures in the moulds, and the syrup, or that part which did not crystallise, descends into the pots in which the moulds are placed. After this

purgation the moulds are removed and fixed in other pots, and a stratum of fine white clay diluted with water is laid on the upper part of the loaf. The water descending through the sugar by its own weight, mixes with the syrup which still remains in the body of the loaf, and washes it away. When the clay dries, it is taken off, and another covering of moist clay put in its place ; and, if it be not then sufficiently washed, a third covering of clay is applied. After the loaves have stood some days in the moulds, and have acquired a considerable degree of firmness and solidity, they are taken out and carried to a stove, where they are gradually heated to the 50° of Reaumur (64° of Fahrenheit), in order to dissipate any moisture which may be still confined in them. After remaining in the stove eight days, they are taken out ; and after cutting off all discoloring specks, and the head if still wet, they are wrapped in blue paper, and are ready for sale. The several syrups collected during the different parts of the process, treated in the same manner which we have just described, afford sugars of inferior quality ; and the last portion, which no longer affords any sugar, is sold by the name of melasses. The beauty of refined sugar, when

formed into loaves, consists in whiteness, joined to a smallness of grain ; in being dry, hard, and somewhat transparent. The process which we have described above, refers to sugar once refined ; but some more labor is necessary to produce double refined sugar. The principal difference in the operation is this, the latter is clarified by white of eggs instead of blood -u ‘ fresh water in place of lime-water.

As the sugar-cane is the principal production of the West Indies, and the great source of their riches ; as it is so important in a commercial view, from the employment which it gives to sea-men, and the wealth which it opens for merchants ; and besides is now become a necessary of life — it may justly be esteemed one of the most valuable plants in the world. The quantity consumed in Europe is estimated at £9,000,000 sterling, and the demand would probably be greater if it could be sold at a reduced price. In the Portuguese island of St. Thomas, in 1024, there were seventy-four sugar ingenios, each having upwards of 200 slaves.

An idea of the imnortance of this import at the present time nr.: < y be found from the following parliamentary papers : —

I. ACCOUNT of the Quantity of SUGAR Imported into GREAT BRITAIN from the several British Colonies and Plantations, from the British Possessions in the East Indies, and from Foreign Countries, from 5th January 1825 to 5th January 1826 ; distinguishing the several Sorts of Sugar, and the Colonies and Countries from which the same was Imported.

Countries.

Sugar Unrefined.

British Plantation.

Foreign Plantation, or uncertified.

East India.

Total Quantity Imported.

British Colonies and Plantations

Cwt. qr. Ib.

Cwt. qr. Ib.

Cwt. qr. Ib.

Cwt. qr. ib.

Antigua …. Barbadoes

142,901 2 4 278,346 3 25

2211

142,901 2 4 278,349 2 8

Dominica . Grenada …. Jamaica …. Montserrat

38,036 0 a

209,984 2 12 1,115,366 0 10 19,653 1 9

6 3 13

38,03,0 0 3 209,984 2 12 1,115,372 3 2:5 19,653 1 9

Nevis . SLKitt's …. St. Lucia . St. Vincent's

49,769 3 22 78,658 1 21 82,362 2 27 257,800 1 3

469 2 9 2 0 17

78,658 1 21 82,364 3 16 257,800 1 3 111 34<1 3 0

Tobago …. Tortola …. Trinidad …. • Demerara …. Berbice .

111,349 3 0 13,670 1 9 188,927 0 25 650,276 2 6 58,274 1 19

1,145 0 9 76 1 19 3 2 13

14,815 1 1« 189,003 2 IfJ

650,280 0 19

58,274 1 T9 0 1 Hi

Honduras

2 1 16

0 0 20

Brit. N. American Colonies East Indies and China

0 0 20

244,068 0 5 2 0 27

244,068 0 5

202?

Cape of Good Hope .

Foreign Colonies ; *viz.*

86 479 2 8

86,479 2 8

Cuba .

000

St. Thomas

006

America ; *viz.* United States .

Rricil

1,887 3 20 72,710 0 26

1,887 3 20 72,710 0 20

Total, exclusive of Ireland

162.784 0 11

244,070 1 4

3,702,235 0 2‘2 28,201 3 3

3,295,380 3 7

Ireland ….

28,251 3 3

.

Total from all parts

3,323,632 2 10

162,784 0 11

244,070 1 43,730,400 3 25

II. An ACCOUNT of the Quantity of SUGAR Imported into IRELAND from the several British Colonies and Plantations, from the British Possessions in the East Indies, and from Foreign Countries, from 5th January 1825 to 5th January 1826 ; distinguishing the several Sorts of Sugar, and the Colonies and Countries from which the same was Imported.

British Colonies and Plantations, *viz.*

British Colonies in North America : Cwt. qrs. Ibs.

Newfoundland 26 0 8

British West Indies :

Antigua 19,082 3 19

Barbadoes 40,948 1 14

Jamaica 20,057 2 7

St. Lucia 8,604 0 14

Trinidad 87,414 0 8

Demerara 29,766 3 8

Total …. 205,899 3 22

III. An ACCOUNT of the Average Prices of SUGAR in GREAT BRITAIN, at the several periods at which the Rates of Duty may have been regulated; from the 5th January 1825 to the 5th January 1826, with the rate of Duty payable at each of the said periods respectively.

Average Price, Duty. Exclusive of the Duty. P.ate of Duty.

£ *. d. £ t. d.

5th January, 1 825 … . 184. .170

5th May, 1825 … . 1 11 9J . .170

5th September, 1825 … 115 2* . .170

5th January, 1826 … . 1 19 7£ . .170

IV. An ACCOUNT of the Average Prices of SUGAR in IRELAND, at the several periods at which the Rates of Duty may have been regulated, from the 5th January 1825 to the 5th January 1826 ; with the rate of Duty payable at each of the said periods respectively.

Average Price as Published in the Dublin Gazette. Rate of Duty.

£ s. d. £ s. d.

From January 5th to May 5th 1825 … 1 11 9f per cwt. 1 7 0 per cwt.

From May 5th to September 5th 1825 . . 1 15 2£ do. 170 do.

From September 5th 1825 to January 5th 1826 . 1 19 7£ do. 170 do.

There are several other vegetables raised in more terrible death. In this emergency recourse ow own country which afford sugar; as beet-was had to the sugar. The consequence was the roots, skirrets, parsnips, potatoes, celery, red symptoms of the scurvy went off, the crew found cabbage stalks, &c., besides the shoots of Indian it a wholesome and substantial aliment, and re-wheat. The sugar is most readily obtained from turned in good health to France. ‘ Sugar (says these by making a tincture of the subject in rec-Dr. Rush) affords the greatest quantity of nou-tified spirit of wine ; which, when saturated by rishment in a given quantity of matter of any heat, will deposit the sugar upon standing in the substance in nature; of course it may be pre-cold. served in less room in our houses, and may be

The uses to which sugar are applied are indeed consumed in less time, than more bulky and less

numerous and important. It can be made so nourishing-aliment. It has this peculiar advan—

solid as in the art of preserving to receive the tage, over most kinds of aliment, that it is not

most agreeable colors and the greatest variety of liable to have its nutritious qualities affected by

forms. It can be made so fluid as to mix with time or the weather ; hence it is preferred by the

any soluble substance. It preserves the juice and Indians in their excursions from home They

substance of fruits in all countries and in all mix a certain quantity of maple sugar with an

seasons. It affords a delicious seasoning to many equal quantity of Indian corn, dried and povr—

kinds of food. It is useful in pharmacy; for it dered, in its milky state. This mixture is packed

unites with medicines and removes their disa-in little baskets, which are frequently wetted in

greeable flavor. It is the basis of all syrups. M. travelling without injuring the sugar. A few

Macquer has shown in a very satisfactory man-spoonfuls of it mixed with half a pint of spring

ner how useful sugar would be if employed in water afford them a pleasant and strengthening

fermenting wines. Sugar has also been found a meal. From the degrees of strength and nourish—

remedy for the scurvy, and a valuable article of ment which are conveyed into animal bodies by

food in cases of necessity. M. Jambert de a small bulk of sugar, it might probably be given

Lennes, first surgeon to the late duke of Orleans, to horses with great advantage, when they are

published the following story in the Gazette de used in places or under circumstances which

Sante which confirms this assertion. A vessel make it difficult or expensive to support them

laden with sugar bound from the West Indies with more bulky or weighty aliment. A pound

was becalmed in its passage for several days, of sugar with grass or hay has supported the

during which the stock of provisions was ex-strength and spirits of a horse during a whole

hausted. Some of the crew were dying of the day's labor in one of the West India islands. A

scurvy, and the rest were threatened with a still larger quantity given alone has fattened horses

and cattle, during the war before last in Hispaniola, for a period of several months, in which the exp.ortation of sugar, and the importation of grain, were prevented by the want of ships. The plentiful use of sugar in diet is one of the best preventatives that has ever been discovered of the diseases which are produced by worms. Nature seems to have implanted a love for this aliment in all children, as it were on purpose to defend them from those diseases. I knew a gentleman in Philadelphia who early adopted this opinion, and who, by indulging a large family of children in the use of sugar, has preserved them all from the diseases usually occasioned by worms. Sir John Pringle has remarked that the plague has never been known in any country where sugar composes a material part of the diet of the inhabitants. It is probable that the frequency of malignant fevers of all kinds has been lessened by this diet, and that its more general use would defend that class of people who are most subject to malignant fevers from being so often affected by them. In the numerous and frequent disorders of the breast, which occur in all countries where the body is exposed to a variable temperature of weather, sugar affords the basis of many agreeable remedies. It is useful in

weaknesses, and acrid” defluxions upon other parts of the body. Many facts might be adduced in favor of this assertion. Upon my enquiring of Dr. Franklin, at the request of a friend (says Dr. Rush), about a year before he died, whether he had found any relief from the pain of the stone from the blackberry jam, of which he took large quantities, he told me that he had ; but that he believed the medicinal part of the jam resided wholly in the sugar; and, as a reason for thinking so, he added that he often found the same relief by taking about half a pint of syrup, prepared by boiling a little brown sugar in water, just before he went to bed, that he did from a dose of opium. It has been supposed by some of the early physicians of our country that the sugar obtained from the maple-tree is more medicinal than that obtained from the Wes’ India sugar-cane; but this opinion, I believe, i* without foundation. It is preferable in its q’,aliues to the West India sugar only from its superior cleanliness. Cases may occur in which sugar may be required in medicine, or in diet, by persons who refuse to be benefited, even indirectly, by the labor of slaves. In such cases the innocent maple sugar will always be preferred. It has been said that sugar injures the teeth ; but this opinion now has so few advocates that it does tiot deserve a serious refutation.’

Sugar is soluble in water, and in a small de-gree in alcohol. When united with a small portion of water, it becomes fusible ; from which quality the art of preserving is indebted for many of its preparations. It is phosphoric and combustible; when exposed to fire emitting a blue flame if the combustion be slow, and a white flame if the combustion be rapid. By distillation it produces a quantity of phlegm, acid, oil, gas, and charcoal. Bergman, in treating sugar with the nitrous acid, obtained a new acid, now known by the name of the oxalic acid ; but he omitted to mention the principles of VOL. XXI.

which sugar is composed. Lavoisier, however, supplied this omission ; and after many experiments has assigned three principles in sugar, hydrogen, oxygen, and carbon, if the juice expressed from the sugar-cane be left to itself, it passes into the acetous fermentation ; and during the decomposition of the sugar, which is continued for three or four months, a great quantity of glutinous matter is separated. This matter when distilled gives a portion of ammoniac. If the juice be exposed to the spirituous fermentation, a wine is obtained analogous to cyder. I f this wine, after being kept in bottles a year, be distilled, we obtain a portion of eau de v.ie.

It appears that sugar has the property of rendering some of the earths

soluble in water. This property was accidentally discovered by Mr. William Ramsay, of Glasgow. Being employed in making experiments on sugar, and happening to put some quicklime into a cold solution of it, he noticed that it had acquired an uncommon caustic taste. Hence he concluded that sugar possesses the property of dissolving a certain proportion of lime; and, in order to ascertain its capacity in this respect, experiments were made upon this earth, together with strontites magnesia, and barytes.

Sugar, dissolved in water at the temperature of 50°, is capable of dissolving one-half of its weight of lime. The solution of lime in sugar is of a beautiful white-wine color, and has the smell of fresh-slaked quicklime. It is precipitated from the solution by the carbonic, citric, tartaric, sulphuric, and oxalic acids; and it is decomposed by double affinity, by caustic and carbonated potash and soda, the citrate, tartrate, and oxalate of potash, &c.

An equal weight* of strontia, with the sugar employed, is capable of being dissolved at the temperature of 212°, and of being retained in solution by the sugar at 50° of Fahrenheit. On exposing the crystals, which had fallen down during the cooling of the liquid, to the air of the atmosphere, they attracted carbonic acid, and effloresced.

The solution of strontia in sugar is of a fine white-wine color, and, like that of lime, has a peculiar caustic smell. This earth is precipitated by caustic and carbonated potash and joda; also by the carbonic, citric, tartaric, sulphuric, and oxalic acids ; and it is decomposed, by compound affinity, by the carbonates of potash and soda ; also by the citrate, tartrate, and oxalate of potash.

The solution of magnesia in syrup, like those of lime and strontia, was of a pure white color, and had no sensible variation in smell or taste from the common solution of sugar, farther than that the sweet seemed much improved, and was softer and more agreeable to the palate, as i were entirely freed from the earthy taste which unrefined sugar frequently has. On its remaimtiR at rest for some months, in a bottle well cor ied, the magnesia appears to be entirely separated. Very little alumina is dissolved by a solution of sugar, when fresh precipitated earth is present to it, either in the cold or hot state.

The union of sugar with the alkalies has been long known ; but this is rendered more sink. „„;;?<,.,* K« ˆrhnnated DOtash or soda, tor m2 B

evident, by carbonated potash

stance, decomposing the solutions of lime and •>trontia in sugar, by double affinity. The power possessed by tartaric acid of preventing the precipitation of iron and some other metals from their muriatic solution, is well known from the observations of M. Rose and others. A similar effect is produced by sugar, according to M. Peschier, if the mixture be boiled, but not otherwise.— Ann. de Chim. et Phys. xxxi. 197.

In making solutions of unrefined sugar for culinary, purposes, a gray-colored substance is found frequently precipitated. It is probable that this proceeds from a superabundance of lime, which has been used in clarifying the juice of the sugar-cane at the plantations abroad. Sugar with this imperfection is known among the refiners of this article by the name of weak. And it is justly termed so, the precipitated matter being nothing but lime which has attracted carbonic acid from the sugar (of which there is a great probability), or from the air of the atmosphere. A bottle in which I had kept a solution of lime in sugar for at least four years, closely corked, was entirely incrusted with a yellowish-colored matter, which on examination was found to be entirely carbonate of lime.

In the ordinary refining of raw sugars, from twenty to thirty-five per cent, of melasses are separated, of which a considerable part, probably two-thirds, are formed by the high heat used in the concentration of the syrup. Various plans have been contrived to diminish this production of melasses. One of these consisted in surrounding the sugar boiler with oil or steam at a high temperature, instead of exposing it to a naked fire. In a second, the boiler is covered at top, and by means of an air-pump the atmospheric pressure is removed, so as to favor ebullition, and rapid evaporation, at moderate heats.

The celebrated chemist, Mr. Howard, took out a patent for his plan, which is undoubtedly the most scientific and productive of any ; but requires superior skill and very minute attention in the manufacturer.

No blood is used for clarification. This is accomplished by a system of most ingenious canvass filters, aided by the inter-mixture with the syrup of a small quantity of pasty gypsum and alumina, made by saturating a solution of alum with quicklime. In the final purification the base of the inverted sugar cone is covered with a stratum of very pure saturated syrup, instead of moist pipe-clay.

The third method is founded on the property which animal charcoal (bone-black) possesses, of destroying vegetable coloring matter. Perhaps the combination of the last two modes promises the best results.

A fourth process for refining sugar is that of Mr. Daniel Wilson, for which a patent was granted. The specification is in the thirty-fourth volume of the Repertory, p. 134. The pan is to be charged with strong lime-water, the sugar added, and the fire set in the usual manner. For every hundred weight of sugar used, a solution is to be made of four ounces of sulphate of zinc in as small a quantity of water as will dissolve it. When the sugar in the pan is melted, the solution of sulphate of zinc is added, and the whole well stirred. The oxide of zinc combines with

the extractive matter, tannin, and gal\ic acid, and renders them insoluble, while the sulphuric acid, in combination with the lime, becomes insoluble. When raw sugar contains much acid, and a strong grain is required, take one ounce of lime in powder for every four ounces of sulphate of zinc, and as much water as will form a milk of lime, which is added to the solution of sugar in the pan, about five minutes after the solution of sulphate of zinc lias been added. This purification of sugar by separating impurities chemically combined with it, is employed with much advantage in conjunction with the patent filtering apparatus invented by Mr. John Sutherland. The solution of sugar brought to the boiling point is run through the filter, and afterwards boiled to a proof. Mr. Wilson boils the syrup in a pan, having a coil of tinned copper or pure tin tubes placed along its bottom and sides, through which a constant stream of strongly heated oil, or rather fatty matter, is made to pass. The oxide of zinc, precipitated previously by adding a solution of the salt to lime-water, is also recommended, as well as the oxide of tin.

Mr. Kirchoff, an ingenious Russian chemist, accidentally discovered that starch is convertible into sugar, by being boiled for some time with a very dilute sulphuric acid. Saussure showed that 100 parts of

starch yield 110 of sugar. He concluded that this sugar was merely a compound of water and starch. According to his analysis starch consists of

Oxyeen …. 56-87 Carbon …. 37-29 Hydrogen … 6-84

100-09

Sugar of grapes, according to the same chemist, is composed of,

Oxygen . Carbon . Hydrogen

56-51

36-71

6-78

100-00

Common sugar has been analysed by many eminent chemists. The following is a general view of the results: —

G.Lussacand Berzelius, Prout.

Thenard. Mean of 3.

Oxygen 50-63 49-856 53-35

Carbon 42-47 43-265 39-99

Hydrogen 6-90 6-879 6-66

100-00 100-000 100-00

By my ultimate analysis of sugar its constituents are,

Carbon . . 43-38 5 atoms 45‘4

Hydrogen . 6-29 4 . . 61 (Jxygen

50-33

48-5

100-00 100-0

Phil. Trans. 1822.

It may be observed that Dr. Front’s experimental results agree with M.Gay Lussac’s theory, of sugar being a compound of 40 parts of carbon -|- 60 of water, or its elements. By Berzelius’s analysis starch consists of,

S L G A Tt

Oxygen Carbon Hydrogen

371

49-j

43-5

7-0

100-0

The abstraction of a little hydrogen and car-oon would convert it into sugar. But no car-oonic acid or other gas is extricated during the conversion, according to Vogel's experiments. I find that potatoes digested with dilute sulphuric acid yield sugar cheaply and abundantly. The acid is afterwards removed by chalk ; and the strained liquor left to repose, after due evaporation, affords crystals of sugar. From starch sugar, <?ood beer has been made. I would recommend potatoes for this purpose. They are washed, grated down, and treated with the dilute acid for a day or two at a temperature of 212°.

M. Braconnot has recently extended our views concerning the artificial production of sugar and gum. Sulphuric acid (specific gravity 1-827) mixed with well dried elm dust, became very hot, and on being diluted with water, and neutralised with chalk, afforded a liquor which became •gummy on evaporation. Shreds of linen triturated in a glass mortar with sulphuric acid yield a similar gum. Nitric acid has a similar power. If the gummy matter from linen be boiled for some time, with dilute sulphuric acid, we obtain a crystallisable sugar, and an acid, which M. Braconnot calls the vegeto-sulphuric acid. The conversion of wood also into sugar will no doubt appear remarkable ; and, when persons not familiarised with chemical speculations are told that a pound weight of rags can be converted into more than a pound weight of sugar, they may regard the statement as a piece of pleasantry, though nothing, says M. Braconnot, can be more real.

Silk is also convertible into gum by sulphuric acid. Twelve grammes of glue, reduced to pow-der, were digested with a double weight of concentrated sulphuric acid without artificial heat. In twenty hours the liquid was not more colored than if mere water had been employed. A deci-litre of water was then added, and the whole was boiled for five hours, with renewal of the water, from time to time, as it wasted. It was next diluted, saturated with chalk, filtered, and evaporated to a syrupy consistence, and left in re-pose for a month. In this period a number of granular crystals had separated, which adhered pretty strongly to the bottom of the vessel, and iiad a very decided saccharine taste. This sugar crystallises much more easily than cane sugar. The crystals are gritty under the teeth, like sugar-candy, and in the form of flattened prisms or tabular groups. Its taste is nearly as saccharine as grape sugar ; its solubility in water scarcely exceeds that of sugar of milk. Boiling alcohol, even when diluted, has no action on this sugar. By distillation it yields ammonia, indicating the presence of azote. This sugar combines intimately with nitric acid without sensibly decomposing it, even with the assistance of heat, and there results a peculiar crystallised acid, to which •he name nitro-saccharine has been given. — Annales de Chimie, xii., or Tilloch's Magazine, vol. 55 and 56.

The varieties of sugar are, cane sugar, maple sugar, liquid sugar of fruits, sugar of figs, sugar of grapes, starch sugar, the musnroom sugar"of Braconnot, manna, sugar of gelatin, sugar of honey, and sugar of diabetes.

Sugar of grapes does not affect a peculiar form. It is deposited from its alcoholic solution in small grains, which have little consistence, are grouped together, and which constitute tubercles similar to those of cauliflowers. When put in the mouth it produces at first a sensation of coolness, to which succeeds a saccharine taste not very strong. Hence, to sweeten to an equal degree the same quantity of water, we must em-ploy two and a half times as much sugar of grapes as of that of the cane. In other respects it possesses all the properties of cane sugar. Its extraction is very easy. The expressed juice of the grapes is composed of water, sugar, mucilage, bitartrate of potash, tartrate of lime, and a small quantity of other saline matters. We pour into it an excess of chalk in powder, or rather of pounded marble. There results, especially on agitation, an effervescence, due to the unsaturated tartaric acid. The liquor is then clarified with whites of eggs or blood. It is next evaporated in copper pans till it marks a density of 1-32 at the boiling temperature. It is now allowed to cool. At the end of some

days it concretes into a crystalline mass, which, when drained, w.ished with a little cold water, and strongly compressed, constitutes sugar. In the south of France, where this operation was some years back carried on on the great scale, to prevent fermentation of the; must, there was added to this a little sulphate of lime, or it was placed in tuns in which sulphur matches had been previously made to burn. Tin-oxygen of the small quantity of air left in the tuns being thus abstracted by the sulphurous acid, fermentation did not take place. By tins means the must can be preserved a considerable time; whereas, in the ordinary way, it would lose its saccharine taste at the end of a few days and become vinous. Must thus treated is said to be muted. The syrup was evaporated to tlio density of only 1-285. — Proust, Ann. de Chimie, Ivii. 131; and the Collection of Memoirs published by Parmentier in 1813.

It is this species of sugar which is obtained from starch and woody fibre by the action ot dilute sulphuric aci'l.

Sugar of diabetes has sometimes the sweetening force of sugar of grapes ; occasionally muHi less.

Braconnot's mushroom suimr is inn sweet than that of the i-ane. It crystallises remarkable facility, fonnin-Ions: quadriln prisms with square bases. It yields alcoh fermentation.

All honeys contain two species of sugar similar to sugar of the grape, another like the uncrystallisable sugar of the cane (melassc These combined, and mingled in different pro portions with an odorant matter, constitute tl honeys of good quality. Those of inferior quality contain, bes.des, a certain quantity of was and acid: the honeys of Britanny conta.n ovr an animal secretion (couvain) to which they o< their putrescent quality. A slight washing *

a little alcohol separates the uncrystallisable sugar, and leaves the other, which may be purified by washing with a very little more alcohol.

‘ The relation,’ says Dr. Prout, ‘ which exists oetween urea and sugar seems to explain in a-satisfac’.ory manner the phenomena of diabetes, which may be considered as a depraved secretion of sugar. The weight of the atom of sugar

is just half that of the weight of the atom of urea; the absolute quantity of hydrogen in a given weight of both is equal ; while the absolute quantities of’ carbon and oxygen in a given weight of sugar are precisely twice those of urea.’ The constituents of these two bodies and lithic acid are thus expressed by that ingenious philosopher : —

ELEMENTS.

UEEA.

SUGAR.

LITHIC ACID.

No.

Per

Atom.

Per Cent.

No.

Per

Atom.

Per

Cent.

No.

Per

Atom.

Per Cent.

Hydrogen Carbon

2 1

2-5 7-5

6-66 19-99

1 1

1-25 7-50

6-66 39-99

1

2

1-25 15-00

235 34-28

Oxygen Azote

1 1

10-0 17-5

26-66 46-66

1

10-00

53-33

1 1

10-00 17-50

22-85 40-00

5

37-5

100-00

3

18-75

100-00

5

43-75

100-00

The above compounds appear to be formed by the union of more simple compounds, as sugar, of carbon and water ; urea, of carburetted hydrogen and nitrous oxide ; lithic acid, of cya-nogen and water, &c., whence it is inferred that their artificial formation falls within the limits of chemical operations.

SUGAR, ACID OF. See ACID, CHEMISTRY, and OXALIC ACID.

SUGAR CANDY is the true essence of the cane formed into large crystals by a slow process. When the syrup is well clarified it is boiled a little, but not so much as is done for the proof mentioned in the process for making common sugar. It is then placed in old moulds, having their lower ends stopped with linen, and crossed at little distances with small twigs to retain the sugar as it crystallises. The moulds are then laid in a cool place. In proportion as the syrup cools, crystals are formed. In about nine or ten days the moulds are carried to the stove and placed in a pot ; but the linen is not removed entirely, so that the syrup falls down slowly in drops. When the syrup has dropped away, and the crystals of the sugar-candy are become dry, the moulds are taken from the stove and broken in pieces to disengage the sugar, which adheres strongly to the sides of the moulds. If the syrup has been colored with cochineal the crystals take a slight tint of red; if indigo has been mixed they assume a bluish color. If it be desired to have the candy perfumed, the essence of flowers or amber may be dropped into the moulds along with the syrup.

SUGARCANE, in botany. SeeSACCHARUM and SUGAR.

The SUGAR MAPLE, acer saccharinum of Linnaeus (see ACER), as well as the sugar-cane, produces a great quantity of sugar. This tree grows in great numbers in the western counties of all the middle states of the American union. Those which grow in New York and Pennsylvania yield the sugar in a greater quantity than those which grow on the waters of Ohio. These trees are generally found mixed with the beech, hemlock, white and water ash, the cucumber

tree, linden, aspen, butter nut, and wild cherry trees. They sometimes appear in groves covering five or six acres in a body, but they are more commonly interspersed with some or all of the forest trees which have been mentioned. From thirty to fifty trees are generally found upon an acre of ground. They grow only in the richest soils, and frequently in stony ground. Springs of the purest water abound in their neighbourhood. They are, when fully grown, as tall as the white and black oaks, and from two to three feet in diameter. They put forth a beautiful white blossom in spring before they show a single leaf. The color of the blossom distinguishes them from the acer rubrum (see ACER), or the common maple, which affords a blossom of a red color. The wood of the sugar maple-tree is extremely inflammable, and is preferred upon that account by hunters and surveyors for fire-wood.

Its small branches are so much impregnated with sugar as to afford support to the cattle, horses, and sheep of the first settlers during the winter, before they are able to cultivate forage for that purpose. Its ashes afford a great quantity of potash, exceeded by few, or perhaps by none, of the trees that grow in the woods of the United States. The tree is supposed to arrive at its full growth in the woods in twenty years. It is not injured by tapping; on the contrary, the oftener it is tapped the more syrup is obtained from it. In this respect it follows a law of animal secretion. A single tree had not only survived but flourished after forty-two tappings in the same number of years The effects of a yearly discharge of sap from the tree, in improving and increasing the sap, are demonstrated from the superior excellence of those trees which have been perforated in a hundred places by a small wood-pecker which feeds upon the sap. The trees, after having been wounded in this way, distil the remains of their juice on the ground, and afterwards acquire a black color. The sap of these trees is much sweeter to the taste than that which is obtained from trees which have not been previously wounded, a«J it affords more sugar. From twenty-three gai-SUGAR MAPLE.

ions and one quart of sap, procured in twenty-four hours from only two of those dark colored trees. Arthur Noble, esq., of the state of New York, obtained four pounds and thirteen ounces of good grained sugar. A tree of an ordinary size yields in a good season from twenty to thirty gallons of sap, from which are made from five to six pounds of sugar. Samuel Lowe, esq., a justice of peace in Montgomery county, in the state of New York, informed Arthur Noble, esq., that he had made twenty pounds and one ounce of sugar between the 14th and 23d of April, in 1789, from a single tree that had been tapped for several successive years before ; and that he had once obtained twenty-three gallons in one day from a single tree. But such instances are uncommon. From the influence whrch culture has upon forest and other trees it has been supposed that, by transplanting the sugar maple-tree into a garden, or by destroying such other trees as shelter it from the rays of the sun, the quantity of the sap might be increased, and its quality much improved. A farmer in Northampton county, in Pennsylvania, planted a number of these trees above thirty years ago in his meadow, from three gallons of the sap of which he obtained every year a pound of sugar. The sap distils from the wood of the tree.

Trees which have been cut down in winter, for the support of the domestic animals of the new settlers, yield a considerable quantity of sap as soon as their trunks and limbs feel the rays of the sun in the spring. It is in consequence of the sap of these trees being equally diffused through every part of them that they live three years after they are girded, that is, after a circular incision is made through the bark into the substance of the tree for the purpose of destroying it. It is remarkable that grass thrives better under this tree in a meadow than in situations exposed to the constant action of the sun. The season for tapping the trees is in February, March, and April, according to the weather v4iich occurs. Warm days and frosty nights are most favorable to a plentiful discharge of sap. The quantity obtained in a day from a tree is from five gallons to a pint, according to the greater or less heat of the air. There is always a suspension of the discharge of sap in the night if a frost succeed a warm day. The perforation in the tree is made with an axe or an augur. The latter is preferred from experience of its advantages. The augur is introduced about three quarters of an inch, and in an ascending direction (that the sap may not be frozen in a slow current in the mornings or evenings), and is afterwards deepened gradually to the extent of two inches. A spout is introduced about half an inch into the hole made by this augur, and projects from three to twelve inches from the tree. The spout is generally made of the sumach or elder, which usually grows near the sugar trees. The tree is first tapped on the south side ; when the discharge of its sap begins to lessen, an opening is made on the north side, from which an increased discharge takes place. The sap flows from four to six weeks, according to the temperature of the weather. Troughs large enough to contain three or four gallons made of while pine, or white as!t, or of

dried water ash, aspen, linden, poplar, or com-mon maple, are placed under the spout to receive the sap, which is carried every day to a large receiver, made of either of the trees before mentioned. From this receiver it is conveyed, after being strained, to the boiler. There are three modes of reducing the sap to sugar ; by evaporation, by freezing, and by boiling; of which the latter is most general, as being the most expeditious. The profit of the maple tree is not confined to its sugar. It affords most agreeable melasses, and an excellent vinegar. The sap which is suitable for these purposes is obtained after the sap which affords the sugar has ceased to flow, so that the manufactories of these different products of the maple tree, by succeeding, do not interfere with each other. The melasses may be made to qpmpose the basis of a pleasant summer beer. The sap of the maple is also capable of

affording a spirit.

Dr. Rush, in the Transactions of the American Philosophical Society, vol. iii., has given an account, at length, of the sugar maple tree, of which the following is a short abstract : — The acer saccharinum of Linnaeus, or sugar maple tree, grows in great quantities in the western counties of all the middle States of the American Union. It is as tall as the oak, and from two to three feet in diameter; puts forth a white blossom in the spring, before any appearance of leaves ; its small branches afford sustenance for cattle, and its ashes afford a large quantity of excellent pot-ash. Twenty years are required for it to attain its full growth. Tapping does not injure it, hut on the contrary, it affords more syrup, and of a better quality the oftener it is tapped. A single tree has not only survived, but flourished after tapping, for forty years. Five or six pounds of sugar are usually afforded by the sap of one tree; though there are instances of the quantity exceeding twenty pounds. The suga; is separated from the sap either by freezing, by spontaneous evaporation, or by boiling. The latter method is the most used.

Dr. Rush describes the process; which is simple, and practised without any difficulty by the farmers. From frequent trials of this sugar, it does not appear to be in any respect inferior to that of the West Indies. It is prepared at a time of the year when neither insect, nor the pollen of plants, exists to vitiate it, as is the case with common sugar. From calculations grounded on facts, it is ascertained that America is now capable of producing a surplus of one-eighth more than its own consumption ; that is, on the whole, about 135,000,000 Ibs. ; which, in the country, may be valued at fifteen pounds weight for one dollar. The Indians likewise extract sugar from the pith of the bam-boo The beet has lately been much cultivated in Germany for the purpose of extracting sugar from its root. For this the roots are taken up in autumn, washed clean, wiped, sliced lengthwise, strung on threads, and hung up to dry. these the sugar is extracted by maceration in a smaU quantiser water; drawing off , h» .unon fresh roots, and adding fresh water to the roots, which is again to be employed m the same way, «o as to get out all iheir sugar, and satur

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the water as much as possible with it. This wa-ter is to be strained and boiled down for the sugar. Some merely express the juice from the fresh roots, and boil this down ; others boil the roots ; but the sugar extracted in either of these ways is not equal in quality to the first.

Professor Lampadius obtained fromllOlbe. of the roots four pounds of well-grained white powder sugar ; and the residuums afforded seven pints of a spirit resembling rum. Achard says that about a ton of roots produced him 100 Ibs. of raw sugar, “which gave fifty-five pounds of refined sugar, and twenty-five pounds of treacle. But the sugar which is so universally used is afforded by the sugar-cane (arundo saccharifera) which is raised in our colonies. When this plant is ripe it is cut down, and crushed by passing it between iron cylinders placed perpendicularly and moved by water or animal strength. The juice which flows out by this strong pressure is received in a shallow trough placed beneath the cylinder. The juice is called in the French sugar colonies vesou1; and the cane, after having undergone this pressure, is called begasse. The juice is more or less saccharine, according to the nature of the soil on which the cane has grown, and the weather that has predominated during its growth. It is aqueous, when the soil or the weather has been humid ; and in contrary circumstances it is thick and glutinous.

The juice of the cane is conveyed into boilers, where it is boiled with wood ashes and lime. It is subjected to the same operation in three several boilers, care being taken to remove the scum as it rises. In this state it is called syrup ; and is again boiled with lime and alum till it is sufficiently concentrated, when it is poured into a vessel called the cooler. In this vessel it is agitated with wooden stirrers, which break the crust as it forms on the surface. It is afterward poured into casks, to accelerate its cooling ; and while it is still warm, it is conveyed into barrels standing upright over a cistern, and pierced through their bottom with several holes stopped with cane. The syrup which is not condensed filters through these canes into the cistern beneath; and leaves the sugar in the state called coarse sugar, or muscovado. This sugar is yellow and fat, and is purified in the islands in the following manner: — The syrup is boiled, and poured into conical earthen vessels, having a small perforation at the apex, which is kept closed. Each cone, reversed on its apex, is supported in another earthen vessel. The syrup is stirred together, and then left to crystallise. At the

end of fifteen or sixteen hours, the hole in the point of each cone, is opened, that the im-pure syrup may run out. The base of these sugar-loaves is then taken out, and white pulverised sugar substituted in its stead, which being well pressed down, the whole is covered with clay, moistened with water. This water filters through the mass, carrying the syrup with it which was mixed with the sugar, but which by this management flows into a pot substituted in the place of the first. This second fluid is called fine syrup. Care is taken to moisten and keep the clay in a proper degree of softness as it becomes dry. The sugar loaves are afterward taken out and

dried in a stove for eight or ten days ; after which they are pulverised, packed, and exported to Europe, where they are still farther purified.

SUGAT, a town of Asia Minor, in the pa-chalic of Bursa, occupying the site of the ancient Tottarium. The houses are built of wood and mud, in general two stories high, with projecting verandahs, and roofed with a red tile, which al-most always admits the rain. It is remarkable for the tomb of Ali Osman.

SUGER (abbe), a French priest and prime minister of France, who flourished in the eleventh century, and died in 1 152. His reputation was so great that after his death it was thought sufficient to inscribe on his tomb, Cy git 1'abbe" Sugar. Here lies the abbe Sugar. Of consequence we know no more of him. David Hume was influenced by a similar piece of vanity when he ordered his name, and no more, to be inscribed on his monument.

SUGGEST, v. a..) Fr. suggcrer; Lat. sug—

SUGGEST'ER, n. s. >gero, suggestum. To hint;

SUGGES'TION.) intimate ; insinuate good or ill ; inform secretly ; seduce (these last two are obsolete) : the noun substantives corresponding.

It alldyeth all base and earthly cogitations, ba-nisheth and driveth away those evil secret suggestions which our invisible enemy is always apt to minister.

/ Hooker.

He was a man

Of an unbounded stomach, ever ranking Himself with princes ; one that by suggestion Tied all the kingdom. Shakspeare. Henry VIII.

When devils will their blackest sins put on, They do suggest at first with heavenly shows.

Shakspeare.

Arthur, they say, is killed to-night On your suggestion. Id. King John.

Are you not ashamed ? What spirit suggests this imagination 1 Shakspeare.

Some ideas make themselves way, and are suggested to the mind by all the ways of sensation and reflexion. Locke.

Native and untaught suggestions of inquisitive children. Id.

These Romish casuists speak peace to the consciences of men, by suggesting something to them which shall satisfy their minds, notwithstanding a known, actual, avowed continuance of their sins.

South.

Search for some thoughts thy own suggesting mind, And others dictated by heavenly power Shall rise spontaneous. Pope's Odyssey.

SUG'GILATE, v. a. Lat. suggillo. To beat black and blue ; to make livid by a bruise.

The head of the os humeri was bruised, and remained suggilated long after. Wiseman's Surgery.

SUGULMESSA, SIGILMESSA, or, according to Jackson, SEGIN MESSA, a district of Africa to the south-west of Morocco, beyond the Atlas. It forms part of that immense plain which intervenes between Barbary and the Great Sahara. Aridity is the prevailing character of the soil, though it still retains moisture sufficient for the production of dates. At an early period Sugulmessa was a city of importance, being the rendezvous of the caravans from Morocco to Soudan ; but since these have been in the habit of passing by Akka and Jaffa, Sugulmessa has lost its importance : the district is now included in the kingdom of Tafilet.

SUICIDE.

SUHLA, a town of Prussian Saxony, the chief p.ace of the circle of the Henneberg, is situated in the hilly track called the Forest of Thuringia. It contains four churches, four hospitals, and two manufactures of a very different description, *viz.* fire-arms and cotton goods, particularly dimity. From the fifteenth to the seventeenth century this was the principal place in Germany for fire-arms. At present this manufacture, though shared with a' number of other towns, is still sufficient to consume the metals prepared at six forges. The cotton manufactures were introduced in the latter part of the eighteenth century. Inhabitants 6000. Eight miles north by west of Schleussingen.

SUHM (Peter Frederick), a celebrated Danish historian, was born at Copenhagen October 18th, 1728, and descended from a family originally from Germany, but long settled in Denmark. He displayed in his youth an unconquerable passion for reading; and in 1746 he was admitted into the university of Copenhagen, where the ensuing year he received the title of hof-junker, or gentleman of the court. He was after appointed assessor of the court tribunal ; but having accepted of this office merely to gratify his father, an admiral in the Danish service, he ere long resigned it. Though the government successively made him gentleman of the royal chamber, counsellor of conference, chamberlain, and at last historiographer royal, he scarcely ever interfered in public affairs ; the only occasion on which he is known to have done so having been at the revolution, which proved fatal to Struensee, when he joined the party of the queen-dowager, and drew up the plan of a temperate monarchical constitution, which, however, was not adopted. Suhm, who was a member of almost all the literary academies in the north of Europe, died of the gout on the 7th of September, 1798. His principal writings are An Introduction to the Critical History of Denmark, 1769—73, 5 vols. 4to; The Critical History of Denmark during the Pagan Ages, 1774—81, 4 vols.; The Mo-dern History of Denmark, of which seven volumes have been published, the first of which appeared in 1782. His miscellaneous works were collected and reprinted, with an account of his life, at Copenhagen 1788—98, 15 vols.

SU'LCIDE, n. s. Lat. suicidium. Self-mur- der; the crime of destroying one's self: a self-murderer.

Child of despair, and suicide my name. Savage. To be cut off by the sword of injured friendship is the most dreadful of all deaths, next to suicide.

Clarissa.

If fate forbears us, fancy strikes the blow ; We make misfortunes, suicides in woe. Young.

SUICIDE is one of those crimes which are not common among savage nations. The first instances of it recorded in the Jewish history are those of ‘Saul and Ahithophel; for the death of Samson is not a proper example. It never be-came common among the Jews till their wars with the Romans, when multitudes slaughtered themselves that they might not fall alive into the hands of their enemies. But at this period the Jews were a most desperate and abandoned race of merij had corrupted the religion of their fathers,

and rejected that pure system wnicn their promised Messiah came to Jerusalem to announce We know not when it became remarkable among the Greeks ; but it was forbidden by Pythagoras, by Socrates and Aristotle, and by the Theban and Athenian laws. In the earliest ages of the Roman republic it was seldom committed ; though that republic owed its origin to the suicide of Lucretia: but, when luxury and the Epi-curean and Stoical philosophy had corrupted the simplicity and virtue of the Roman character, then they began to seek shelter in suicide from their misfortunes or the effects of their vices. The religious principles of the Brahmins of India led them to admire suicide on particular occasions as honorable. Accustomed to abstinence, mortification, and the contempt of death, they considered it as a mark of weakness of mind to submit to the infirmities of old age. The mo-dern Gentoos, who still in most things conform to the customs of their ancestors, when old and infirm, are frequently brought to the banks of rivers, particularly to those of the Ganges, that they may die in its sacred streams, which they believe can wash away the guilt of their sins. But the maxims of the Brahmins, which have encouraged this practice, we are assured by Mr. Holwell, are a corruption of the doctrines of the Shasta, which positively forbid suicide. The practice wh’ich religion or affection has established

among the Gentoos, for women at the death of their husbands to burn themselves alive on the funeral pile (See HINDOOS), we do not think ought to be considered as suicide ; for, were we to extend it thus far, it would be as proper to apply it to those who choose rather to die in battle than escape at the expense of their honor ; and we should condemn as suicides the brave Spartans, who died at Thermopylae in the defence of their country: we should also be obliged to apply the same disgraceful epithet to all those well-meaning but weak-minded Christians • in this island, who in the seventeenth century chose rather to die as martyrs than comply with commands which they thought unlawful, though they were not morally wrong.

According to the historians of Japan, voluntary death is common in that empire. The devotees of the idol Amida drown themselves in his presence, attended by their relations and friends, and several of the priests, who all consider the devoted person as a saint who is gone to everlasting happiness. Such being the supposed honors appropriated to a voluntary death, it is not surprising that the Japanese anxiously cherish a contempt of life. Accordingly suicide is held as the most heroic of actions. A notion also prevailed am«ng the ancient Scythian tribes, that it was pusillanimous for a man whose strength was wasted with disease or infirmity, to continue live It was reckoned an heroic action voluntarily to seek that death which he had the good fortune to meet in battle. The tribes of Scandinavia, who worshipped Odin the 'father slaughter,' were taught that dying in the h of battle was the most glorious event that could befal them. See MYTHOI.OC.Y, ODIN, ami \ AI HALLA. This was a maxim suited to a warlil nation. Natural death being thus deemed inglo-376

rious, and punished with exclusion from Val-halla, the paradise of Odin, he who did not fall in battle was led to suicide, when sickness or old age began to assail him. In such a nation suicide must have been very common. As suicide prevailed much in the decline of the Roman empire, when luxury, licentiousness, profligacy, and false philosophy, pervaded the world, so it continued to prevail even after Christianity was established. But the principles from which it proceeded were explained, so as to appear more agreeable to the new system which they had espoused. It was committed, either to secure from the danger of apostasy, to procure the honor of martyrdom, or to preserve the

crown of virginity. Jn modern times we lament to find so many instances of suicide among the most polished nations who have the best opportunities of knowing the atrocity of that unnatural crime. The English have long been reproached by foreigners for the frequent commission of it ; and the ‘ gloomy month of November ‘ has been stigmatized as the season \»hen it is most common. • But this imputation may be justly attributed, not to the greater frequency of the crime in England than in other places, but to the custom of publishing in the newspapers every instance of suicide which is known. Mr. Moore was at great pains to obtain accurate information concerning the perpetration of this crime in different countries. Mercier, who wrote in 1782, says that the annual number of suicides in Paris was then about 150. But the abbe Fontana asserts that more persons put an end to their lives in Paris than in London. He had this information from the lieutenant of police. Air. Moore was informed by a magistrate of Geneva that in that city, which contains about 25,000 inhabitants, the average number of suicides is about eight. In twenty-eight years there were thirty-two each year for London, Southwark, and Westminster at the same period, and in Edinburgh, containing above 80,000 inhabitants, the average number of suicides did not exceed four. Mr. Moore was informed by the coroners of Kent that for the last eighteen years the number had been upwards of thirty-two each year. Kent then containing about 200,000 inhabitants, and London 800,000. In the metropolis, therefore, many instances of suicide occur which are never known to the world ; whereas in the country towns and villages it is scarcely possible to conceal such an action. The calculation therefore respecting Kent we may receive as true, while we must increase the average number in London very considerably. Mercier says that at Paris the lower ranks were most commonly guilty of it; that it was committed in garrets or hired lodgings ; and that it proceeded from poverty and oppression. Many, he says, wrote letters to the magistrates before their death. Mr. Moore’s correspondent from Geneva informed him that from 1777 to 1787 more than 100 suicides were committed in Geneva; that two-thirds of these unfortunate persons were men ; that few of the clerical order have been known to commit it ; and that it is not so much the end of an immoral, irreligious, dissipated life, as the effect of melancholy and poverty. By the information obtained irom the coroners of Kent,

it appears that, of the thirty-two, three-fourth* destroyed themselves by hanging; that the pro. portion of males to females has been about two-thirds of the former; that no one season of the year is more

distinguished for this crime than another; and that suicide was upon the increase. Our accounts respecting London are very imperfect; but we think that suicide is more common among the great and wealthy than among the lower ranks, and that it is usually the effect of gaming and dissipation.

As suicide was deemed a crime by the most illustrious of the Greek and Roman philosophers, it was considered as a crime by the laws, and treated with ignominy. By the law of Thebes suicides were to have no honors paid to their memory. The Athenian law ordained the hand which committed the deed to be cut off, and burned apart from the rest of the body. The body was not buried with the usual solemnities, but was ignominiously thrown into some pit. In Cea and Massilia (the ancient Marseilles) it was considered as a crime against the state. Plutarch relates, that an unaccountable passion for suicide seized the Milesian virgins ; from which they could not be prevented by the tears and entreaties of friends : b'ut a decree being issued, ' that the body of every young woman who hanged herself should be dragged naked through the streets, by the same rope with which she had committed the deed,' a complete stop was put to the extraordinary frenzy. In the early part of the Roman history the only instance recorded occurs in the reign of Tarquin I. The soldiers who were appointed to make common sewers, thinking themselves disgraced by such offices, put themselves to death in great numbers. The king ordered the bodies of all the self-murderers to be exposed on crosses, and this put a stop to the practice. There was no law against suicide dur-ing the republic ; but under the emperors it was thought proper to lay it under certain regulations. When the Christian church had extended its jurisdiction in the Roman empire it was decreed, in the sixth century, that no commemoration should be made in the eucharist for such as destroyed themselves; neither should their bodies be carried out to burial with psalms, nor have the usual service said over them. This ecclesiastical law continued till the reformation, when it was admitted into the statute code of England by the authority of parliament. As an additional punishment, however, confiscation of land and goods seems to have been adopted from the Danes. At present the punishment consists in confiscating all the personal property of a felo de se for the use of trie crown, and in excluding his body from interment in consecrated ground. Formerly the warrant of the coroner required that the body should be buried in some public highway, and a stake driven through it ; but this has been recently abolished. Suicide is a common evil, but it is difficult to find an effectual remedy ; for what motives can be held out sufficient to influence that man's mind who is dead to the voice of nature, and

nature's God ? His reputation and property are indeed within the reach of the laws, his body may be treated with ignominy, and his property con-SUI

fiscated; but this punishment will not be a pre-nacy as the want of sleep, or what physician,

ventive even rf it could be always inflicted; and call an altered state of sleep It is

that it is seldom inflicted is well known. Hu-duced by a continued melancholy and _„„„ ,1,ˆ0= „„ t. ™m™*w0 «,,,K «.. ,„„„ ‘

is often

inanity disposes us to sympathise with the relations of the deceased, instead of demanding that the sentence of the law should be executed .

over past misfortunes .

occasioned by excessive joy upon some sudden circumstance of great prosperity. The writer of

In countries, such as some of those above-this article knew a melancholy instance of tl

mentioned, where suicide is recommended by ‘— -*a*-—. 1

false views of honor or of religion, there can be no preventive till a general change takes place in such customs and habits of thinking. But in the civilised countries of Europe, where no such false opinions prevail, much might be done, with proper care and attention, to prevent many of the accidents of this kind that daily happen. We call them accidents, and not crimes, because

last effect A gentleman possse(] of-a fortune, by the death of a relation abroad fell heir to a large estate. The fourth day after the news had arrived the writer called and congratulated him on his good fortune; when, amidst much hospitality, and many promises of making all his friends the better for it, he mentioned that he had got no sleep since he received the letter. To this the writer replied that this was a dan-

among the class we speak of, the deed is often gerous state of health, and sleep must be pro-involuntary, and therefore not criminal. For cured by soporifics as quickly as possible, although there have doubtless been many who else the consequences might be fatal. Next time

very unfortunately have been led to commit this crime from pride, habits of dissipation, and a total want of religious principle, yet of the great numbers whom we annually read of in the public newspapers, we may charitably hope that the majority are really in a state of insanity when they commit this rash action. Persons of either sex, who have met with great misfortunes, either by loss of property, or still more readily by the loss of near and dear relations, are apt, if allowed to indulge their grief, to grow low-spirited and melancholy, and gradually to fall into such a weak state of the nerves as at last to affect the brain. They either do not sleep, or their sleep is not sound or refreshing. Young women, by

he called, which was only within a week, his unfortunate friend was in confinement under keepers ; and within two months, so rapidly did his son seize the opportunity his father's misfortune afforded him, the old gentleman was cognosced as ;i lunatic, and the son legally put in possession of the whole fortune;. thus fulfilling Ovid's remark, Filius ante diem patrios inquint«iff annos !

SUIDAS, a Greek writer, who, according; to some, flourished in the eleventh century under Alexius Comnenus ; according to others in the tenth century. He wrote, in Greek, an Historical and Geographical Dictionary or Lexicon, a work which, though not always strictly accurate,

disappointments in love, and married women by is nevertheless of great importance, as it con-

ˆr , • i f i •! i r, _ tome manv tnintrc takpn frnm tnp nnnpnts nn-

the death of husbands or favorite children, often fall into such a degree of hysteria as to be nothing short of absolute lunacy. And it is acknowledged by physicians that the most amiable of the sex, and those of the best dispositions, are, from their excess of sensibility, most apt to fall into that habit of body and mind in consequence of the loss of near and dear relations. In such cases such persons should never be left a moment alone while under the influence of such a malady : and, though medicine can do little to recover patients in

these cases, yet the most fatal effects may be prevented by a constant attention to them on the part of friends, and by their endeavours to console and solace them, by amusement, air, and exercise, and every species of kind The writer of this article knew an instance

tains many things taken from the ancients nowhere else to be found. The best edition of Suidas is that of Kuister, in Greek and Latin, with notes, in three volumes folio, which has been much improved by Toup.

SUIL'LAGE, n. s. Fr. souillage. Drain of filth. Obsolete.

When they have chosen the plot, and laid out the limits of the work, some Italians dig wells and cisterns, and other conveyances for the tuitlage of the house. " Mon"

SU'ING, n.s. From Fr. suer, to sweat, it is perhaps peculiar to Bacon. The act of soaking through any thing.

Note the percolation or suing of the verjuice through the wood : for verjuice of itself would never have passed through the wood.

SUIONES, an ancient people of Germany,

usage

of a lady in Edinburgh, who had lingered long

in a desperate state of hysteria, who one night ^^d C Tacitus, supposed to have inhu-rose out of bed and ran to a window four stories Sweden

high, which she opened, but was prevented from throwing herself over by her husband awaking and catching her in his arms just when she had nearly accomplished it. She thought she was in a prison, and that was the easiest way out. She was afterwards, by proper care, completely restored to her senses; but it is highly probable that, among the numerous suicides we daily hear of, there are many similar instances where no deliberate intention of self-murder is entertained.

In the whole train of nervous, hysterical, and hypochondrrac affections, there is no symptom so decisive of the approach of an incipient lu- \>lio

SUIT, n. *.,v. a., &«.»O

SUIT'ABLE, adj. SUIT'ABLY, adv. SUIT'ER, or SUIT'OR, n. s. SUIT'RESS. tion at law; courtship

Fr. suite . A sot : number of things (correspondent one ("to the other ; a set I of clothes J a petition regular order

series ; an ac-1 out of

fit; adapt; be

neuter, to agree; accord: suital is,

according : the adverb

Sspondmg : suiter or suitor, he, su.tres*. she

fitting ; substantive

Many shall make suit unto Uee. Job xi. 19.

All that had any suits in law came unto them.

Susanna.

Through all those miseries, in both there appeared a kind of nobleness not suitable to that affliction.

Sidney.

High amongst all knights hast hung thy shield, Thenceforth the suit of earthly conquest shone, And wash thy hands from guilt of bloody field.

Spenser.

As humility is in suiters, a decent virtue, so the testification thereof, by such effectual acknowledg-ments, not only argueth a sound apprehension of his supereminent glory and majesty before whom we stand, but putteth also into his -hands a kind of pledge or bond for security against our unthankful-ness. Hooker.

What he did purpose, it was the pleasure of God that Solomon his son should perform, in manner suitable to their present and ancient state. Id.

He that hath the steerage of my course, Direct my suit. Shakipeare. Borneo and Juliet.

Wear this for me ; one out of suits with fortune, That would give more, but that her hand lacks means. Shakspeare.

Suit the action to the word, the word to the action, with this special observance, that you o'erstep not the modesty of nature. Id. Hamlet.

I would I could find in my heart that I had not a hard heart ; for truly I love none.

— A dear happiness to women ! they would else have been troubled with a pernicious suitor.

Shakspeare. Be better suited ;

These weeds are memories of those misfortunes : I pry'thee put them off to worser hours. Id.

I'll disrobe me

Of these Italian weeds, and suit myself As does a Briton peasant. Id. Cymbeline.

What a beard of the general's cut, and a horrid suit of the camp, will do among foaming bottles, and ale-washed wits, is wonderful. Id. Henry V.

She hath been a suitor to me for her brother, Cut off by course of justice.

Id. Measure for Measure.

Wars are suits of appeal to the tribunal of God's justice, where there are no superiors on earth to determine the cause. Bacon'* TFar with Spain.

Not only bind thine own hands, but bind the hand of suitors also from offering. Bacon.

By many suitors sought, she mocks their pains, And still her vowed virginity maintains. Dry den.

This says, because it suits with his hypothesis, but proves it not. Locke.

Whosoever speaks upon an occasion may take any text suitable thereto ; and ought to speak suitably to that text. South.

He creates those sympathies and suitablenesses of nature that are the foundation of all true friendship, and by his providence brings persons so affected together. Id.

Give me not an office That suits with me so ill ; thou knowest my temper.

Addison. 'Twere pity

That could refuse a boon to such a suitress ; Y' have got a noble friend to be your advocate.

Rowe.

My lord, I come an humble suitor to you. Id.

It will be as unreasonable to expect that God should attend and grant those suits of ours, which we do not at all consider ourselves. Duty of Man.

John Bull was flattered by the lawyers that his tuit would not last above a year, and that before that.

time he would be in quiet possession of his business.

Arbuthnot.

As the blessings of God upon his honest industry had been great, so he was not without intentions of making suitable returns in acts of charity.

Atterbury.

He drew his seat, familiar, to her side, Far from the suitor train, a brutal crowd.

Pope's Odyssey.

It is as great an absurdity to suppose holy prayers and divine petitions without an holiness of life suitable to them, as to suppose an holy and divine life without prayers. Law.

SUIT is used in different senses; as, 1. Suit custom, which is where one and his ancestors have owed suit time out of mind. 2. It is used for a petition to the king or any person of dignity, where a lord distrains his tenant for suit and none is due. In this case the party may have an attachme1 ' against him to appear in the king's court.

SUIT, in law, is the same as action. The Romans introduced pretty early set forms for actions and suits into their law, after the example of the Greeks; and made it a rule that each injury should be redressed by its proper remedy only. See ACTIO and ACTION. The forms of these actions were originally preserved in the books of the pontifical college as choice and inestimable secrets, till one Cneius Flavius, the secretary of Appius Claudius, stole a copy and published them to the people. The concealment was ridiculous. Bracton, speaking of the

original writs upon which all our actions are founded, declares them to be fixed and immutable, unless by authority of parliament. And all the modern legislators of Europe have found it expedient to fall into the same or a similar method. In England the several suits of justice are, from the subjects of them, distinguished into three kinds; actions personal, real, and mixed. 1. Personal actions are such whereby a man claims a debt, or personal duty, or damages in lieu thereof; and likewise whereby a man claims a satisfaction in damages for some injury done to his person or property. The former are said to be founded upon contracts, the latter upon torts or wrongs. Of the former nature are all actions upon debts or promises ; of the latter are all actions of trespasses, nuisances, assaults, defamatory words, and the like. 2. Real actions (or feudal actions), which concern real property only, are such whereby the plaintiff, here called the demandant, claims title to have any lands or tenements, rents, commons, or any other hereditaments, in fee-simple, fee-tail, or for term of life. By these actions formerly all disputes concerning real estates were decided ; but they are now pretty generally laid aside ; a much more expeditious method of trying titles being introduced by actions personal and mixed. 3. Mixed actions are suits partaking of the mixture of the other two, wherein some real property is demanded, and also personal damages for a wrong sustained. As for instance an action of waste: which is brought by him who hath the inheritance, in remainder or reversion, against the tenant for life, who hath committed waste therein, to recover not only the land wasted, which would make it

a real action, but also treble damages, in pursuance of the statute of Gloucester, which is a personal recompense; and so both, being joined together, denominate it a mixed action. See LAW.

SUITE, n. s. Fr. suite. Retinue ; company.

Plexirtus's ill-led life, and worse-gotten honour,

Let them die that age and sulleiu have.

,r ,, Shakspeare.

1 o tit my snllennesi He to another key his style doth dress. Donne

Wilmot continued still sullen and perverse and every day grew more insolent. Clarendon.

* vernal ons when the air is calm and

should have tumbled together to destruction, had Pleasant-ll were an injury and sullennen against na-ture not to go out and see her riches. Milttm.

Things are as sullen as we are, and will be what they are, whatever we think of them. Titlotian.

Wift these comforts about me, and mllennea enough to use no remedy, Zulichem came to see me.

Temple.

A man in a jail is tulleu and out of humour at his first coming in. L' Estrange.

A glimpse of moon-shine, streaked with red, A shuffled, sullen, and uncertain light, That dances through the clouds, and shuts again.

JJryden

He in chains demanded more Than he imposed in victory before : He sullenly replied, he could not make These offers now. Id. Indian Empero-.

Forced by my pride, I my concern suppressed ; Pretended drowsiness, and wish of rest ; And sullen I forsook the imperfect feast. Prior.

No cheerful breeze this sullen region knows ; The dreaded east is all the wind that blows. Pope.

there not come in Tydeus and Telenor, with fifty in their suite to his defence. Sidney.

SUL'CATED, adj. Lat. sulcus. Furrowed.

All are much chopped and sulcated by having lain exposed on the top of the clay to the weather, and to the erosion of the vitriolick matter mixed amongst the clay. Woodward.

SULI, a large valley of Greece, enclosed by almost inaccessible mountains. The only entrance, a defile on the south, is defended by three towers, nearly a mile distant from each other, and situated on eminences where the road is most difficult ; the other three sides are composed of perpendicular precipices. This territory, about twenty-six miles long from north to south, and eight in breadth, is inhabited by a tribe of Greeks, who, until lately, maintained themselves in the form of an independent republic. It contains eighteen villages, of which five are situated in the southern and less difficult part of the valley towards Louro, and thirteen in the upper or more rugged and inaccessible part. The principal places are Mega Souli, the capital, Navarikes, and Kiapha. On the east, at the foot of the mountain, is a fine plain of about six square leagues. In it the Suliotes have settled for the purpose of cultivating the land, but in times of danger retire with their property to the mountains. On the south Suli is bounded by the Chimatra mountains. The population of this tribe is about 10,000. Their wars, particularly between 1786 and 1803, were remarkable for the courage and pertinacity which they displayed. In vain in 1792 did AH Pacha attack them with a powerful army. He was repulsed as well in that year as subsequently ; and it was not until 1803 that he definitely succeeded. On the loss of their independence, a part of the Suliotes left their country, and took service in Russia and France.

Their country is at present again subject to the Porte.

SULIA, a large river of New Granada, in Pamplona. It rises in the vicinity of this province, runs north, and, collecting the waters of many other rivers, unites itself with the Cata-cumbo, and again separating itself, after a little space, it forms three mouths, whereby to enter the lake Maracaibo. Its mouth is in lat. 8° 35’ N.

SUL’LEN, adj. -\ Saxon raj. rx1-The

SUL’LENLY, adv. /etymology is obscure;

SUL’LENNESS, n. s. 4 gloomily angry or disconSUL’LENS, n. s. J tented ; intractable ; dark ; heavy ; dull : the adverb and noun substantive corresponding : the plural sullens is used burlesquely for morose temper ; gloominess.

Speech being as rare as precious, her silence without tullenness, her modesty without affectation, and i;ttie SpOts and sullieila his reputation. ˆ her shamefacedness without ignorance. Sidney.

Why are thine eyes fixt to the sullen earth, Gazing at that which seems to dim thy sight 1

Shaktpeare. Henry VI.

SULLIVAN, a county of New York, United States, bounded north-west by Delaware, north-east by Ulster, south by Orange, and south-west by the Delaware, which separates it from Pennsylvania. It contains a pretty large proportion of mountainous country, with fertile plains, however, intervening. Thompson is the chief town.

SULLIVAN COVE, a harbour about nine miles from the mouth of Derwent River, in Van Diemen’s River, where a settlement was established in 1804.

SULLIVAN ISLAND, an island of the United States, at the mouth of Ashley and Cooper Rivers, six miles below Charleston, South Carolina; much resorted to by the people of Charleston during the summer months.

SULLIVAN MOUNTAINS, mountains of the United States, in New

Hampshire, extending from Cockburne to the White Mountains; they are about 2000 feet high.

SUL'LY, v. a. & n. s.) Fr. souiller, sulliuˆe.

SUL'LIAGE, n. s. (To soil ; tarnish ; dirt :

a tarnish or spot; pollution; filth. Neither of the noun substantives are in use.

You laying these light sullies on my son, As 'twere a thing a little soiled i' the working.

Shulai > fare.

Calumniate stoutly; for, though we wipe away with never so much care the dirt thrown at u.-,, there will be left some ivlliage behind.

Decay oj I teiy.

The falling temples which the gods provoke, And statues sullied yet with sacrilegious wool

He's dead, whose love had lullyed all your reign. And made you empress of the world in vaiiu

A noble and triumphant merit breaks through

MctfUor.

Lab'ring years shall weep their destined race. Charged with ill omens, mUM w."- •

Ye walkers too, that youthful colours wear, Three sullying trades avoid with equal care ; The little chimney-sweeper skulks along, And marks with sooty stains the heedless throng.

Gay.

Let there be no spots to sully the brightness of this solemnity.
Atterbury.

SULLY (Maximilian de Bethune, duke de), born at Rosny, December 13th, 1560, was of an ancient family, being the second son of Francis de Bethune and Charlotte D'Auvet. He was educated as a Protestant ; and his father, possessing but a moderate fortune, presented him at the age of eleven to the queen of Navarre, who educated him with her son, afterwards Henry IV. Accompanying the latter to Paris, he narrowly escaped becoming a victim in the massacre of St. Bartholomew's day, and when the young king escaped from the court the baron du Rosny, as Sully was then called, retired with him. In the wars which Henry carried on before he obtained the crown, du Rosny greatly distinguished himself, particularly at Mannande, Lectoure, Coutras, where he commanded the artillery, and at Ivry, where he took the standard of the duke of Maine, and was dangerously wounded. In 1591 he took Gisors ; and at Dreux in 1593, at Laon in 1.594, at La Fere in 1596, at Amiens in 1597, and at Monlmelian in 1600, reaped new laurels. His abilities as a diplomatist were no less remarkable. In 1586 lie concluded a treaty with the Swiss for a supply of 20,000 troops; and in 1597 was placed at the head of the department of finance : about the same time he nogociated the marriage of Henry with Mary de Medici. After the death of our queen Elizabeth, he displayed great penetration and address inatreatyhe concluded with James I., and was for some time ambassador at the English court. In addition to his other offices he was now appointed grand -surveyor of France, grand master of the artillery, governor of the Bastile, and superintendant of fortifications. The revenues of the government, which had been reduced to a state of complete dilapidation by civil anarchy or open warfare, were by his care restored to order and affluence. He was no less firm than wise in his conduct. Whilst he was resisting applications for oppressive edicts, to which the king, who was always disposed to listen to the requests of his favorites and mistresses, inclined, his mistress d'Entra-gues, the marchioness de Verneuil, haughtily said to him, ' To whom would you have the king to grant favors, if not to his relations, courtiers, and mistresses ?' — ' Madam,' he replied, * you would be in the right if his majesty took the money out of his own purse ; but is it reasonable that he should take it from those of the traders, the artisans, the laborers, and peasants? These people, who maintain him and all of us, find one master sufficient, and have no need of so many courtiers, princes, and mistresses.' His industry was unwearied. Rising every morning at four o'clock, he dedicated a regular time to business, and then gave

audience to all who solicited admission to him. Though he persevered in the reformed religion, he does rot appear to have been very conscientiously

attached to it, as it was principally owing to his counsels that the king professed himself a Catholic. The pope, however, having addressed to him a letter, in which, after paying him many compliments, he invited him to become a Catholic, and concluded with declaring that he should always pray for his conversion ; Sully, in his reply, observed that, on his part, he would never cease to pray God for the conversion of his holiness. In 1606 the territory of Sully-sur-Loire was erected into a duchy in his favor. After the murder of Henry IV. he was obliged to retire from court ; but after some years he was recalled, and, on making his appearance in the royal circle, the courtiers did not treat him with that respect to which he thought himself entitled ; on which he said to Louis XIII. ‘ Sire, when your father did me the honor to consult me, we never spoke on affairs till he had dismissed his flatterers and buffoons to the ante-chamber.’ In 1634 he received the staff of a marshal in exchange for the office of grand master of the artillery ; and died at Villebon, December 22d, 1641. His Memoirs were partly published by himself, under the title of Economies Royales, Amsler-cam, 1634, 2 vols. folio, but printed in his own house ; the third and fourth volumes were published at Paris in 166‘2.

SULMO, an ancient town of Italy, belonging to the Peligni, about ninety miles from Rome, founded by one of ./Eneas’s followers. It is famous for having been the birth place of the poet Ovid ; and is now called Sulmona.

SULMONA, an ancient town of Naples, in the Abruzzo Citra. It was the birth place of Ovid: in 1709 it was greatly injured by an earthquake. At present it contains 4000 inhabit- ” ants, and is the see of a bishop. Twenty-one miles south of Civita di Chieti, and seventy-two north of Naples.

SULPHATES, in chemistry, are definite compounds of sulphuric acid with the salifiable bases. See SULPHURIC ACID, and the respective bases.

SULPHITES is also a name for definite compounds of sulphuric acid with the bases.

SUL’PHUR, ns.s.) Lat. sulphur. Brim—

SULPHU'REOUS, adj. S stone. See below. The

SUL'PHUROUS. j adjectives correspond.

My hour is almost come, When I to sulphurous and tormenting flames Must render up myself. Shakspeare. Hamlet.

Dart and javelin, sto.ies and sulphurous fire.

Milton.

In his womb was hid metallick ore, The work of sulphur. Id.

Is not the strength and vigour of the action between light and sulpliureous bodies, observed above, one reason why sulphureous bodies take fire more readily, and burn more vehemently, than other bodies do ? Newton's Oficichs.

Sulphur is produced by incorporating an oily or bituminous matter with the fossil salt. Woodward.

No sulphureous glooms Swelled in the sky, and sent the lightning forth.

Thomson.

SULPHUR is a well known substance, yellow, hard, brittle, and when rubbed becomes electric. Its specific gravity is from 1-990 to 2'35. Ac-

cording to Bergman, it gently evaporates at 170°, melts at 185°, and flames at 302° of Fahrenheit. It burns with a blue flame, and a disagreeable suffocating smeˆ ; in close vessels it sublimes without decomposition, or only a decomposition proportionable to the quantity of air they contain; when melted it becomes red, but recovers its color on cooling. It is insoluble in water, though by long trituration water will take up some of it, but it is rather diffused than dissolved in it ; neither can spirit of wioe unite to it, except when both are in a

vaporous state, and then seventy-two parts of spirit of wiue take up one of sulphur ; it is soluble in hot oils, and also :n fixed alkalies, both in the dry and liquid way. See CHEMISTRY, Index. Sulphur, formerly considered as a compound, is now reckoned a sim-ple substance, and is even ranked among the elements. This conclusion is founded on the following facts : 1. Sulphur does not burn unless •oxygen have access to it. 2. During combustion it absorbs vital air from' the atmosphere. 3. The sulphuric acid produced by the combustion of sulphur is equal in weight to the sulphur employed and the quantity of air that has been consumed.

Sulphur unites readily with most metallic substances, excepting gold, platinum, and zinc. The affinities of sulphur, according to Geoffrey, Bergman, and Dr. Thompson, are fixed alkalies, iron, copper, tin, lead, silver, bismuth, antimony, mercury, arsenic, and molybdenum. The compounds formed by sulphur with different metals are different; but all of them possess a metallic lustre, without any ductility : these combinations of sulphur and of metals are very frequently found in a natural state. Almost all the metals dug from the earth are found combined with sulphur, forming most of the ores and metallic minerals. It is a curious 'phenomenon, that nitre mixed with sulphur burns rapidly, even in close vessels ; this is easily explained by the new system. Nitre, when heat is applied to it, yields a great quantity of oxygen gas'; and sulphur has a strong attraction for oxygen. As oxygen is thus supplied, which is the only principle necessary to combustion, communication with the atmospheric air is unnecessary. The sulphur will burn till the whole oxygen which the nitre furnishes be consumed. The products obtained by this process are different according to the proportions of nitre and suiphur employed. If eight parts of sulphur and one of nitre be set on fire in a close vessel, sulphuric acid is pro-1 duced ; and this is the method by which oil of vitriol or strong sulphuric acid was formerly made in Great Britain. The vessels in which the operation was performed were large glass balloons, with very large necks, each containing 400 or 500 pints. But it was attended with great expense, on account of the high price and bitterness of the balloons. A few years ago a cheaper method was attempted with success in France. The sulphur is burned on a kind of gridirons, in large apartments lined with lead. As the acid condenses it is conveyed by gutters into a reservoir, and afterwards concentrated. The sulphuric acid thus obtained is always combined with a little sulphur and sulphate of potash, a small quantity of aluminous sulphate and sulphate of lead ; but these substances are in so small a proportion, that for common use it is not necessary to separate them. If necessary, however, it may easily be done by distilling the acid to

dryness. Gunpowder, the terrible effects of which are owing to its strong tendency to combustion,ˆ is a mixture of sulphur, nitre, and charcoal. See GUNPOWDER. But there is another mixture., of which sulphur is an ingredient, still more violent in ks effects: this is called fulmi-nating powder, and is composed of three parts of nitre, two parts of the carbonate of potash, and one of powdered sulphur. These being closely united together by trituration, in a hot marble mortar, when exposed to a slight degree of heat, will melt, and produce a violent detonation like the report of a cannon. A dram of this mixture is sufficient for the experiment. Sulphur is of great use in chemistry, in medicine, and the arts. Sulphur is useful in making some fusions, precipitations, and separations of metals and minerals : but is particularly useful, as being the substance from which the sulphuric acid is obtained. Sulphur is employed in medicine both internally and externally. It is given either in flowers or in lozenges, made up with sugar, or joined to magnesia, crystals of tartar, manna, cassia, lenitive electuary, &c. Two or three drams generally prove laxative; and it is given in such doses in cases of piles, of uterine and other haemorrhagies ; because it does not stimulate nor heat during its operation, nor leave a disposition to costiveness, as rhubarb, aloes, and other hot residuous purges do. Sulphur was formerly much recommended in coughs and diseases of the breast, but of late its virtues as a pectoral have been much doubted. When applied externally, it is mixed with some unctuous substance, as hog's lard, batter, &c., and is ruhbed on such parts of the body as are affected with eruptions. Some physicians and chemists, considering that sulphur is insoluble in water, and capable of resisting the action of most menstruums, have affirmed tha* it can produce no effectwhen taken internally, single and unaltered ; but this assertion seems to be without foundation ; for it is certain that the sweat and perspiration of those who take sulphur internally have a smell evidently sulphureous. Besides sulphur is much more soluble than is generally believed. It is attacked by all oily and saponaceous substances, and consequently by almost all animal liquors. We cannot easily form a very distinct and clear, idea of the manner whicn sulphur acts internally upon our bodi but, from observations made upon its effects, it appears to be dividing, stimulating, and s what heating: it principally acts upon the perspirable parts of the body, the chief of "hi are the skin and lungs; and from tins property it is particularly useful in some d.se uses of parts Sulphur is also a powerful repellent, as appears from its curing several kinds of ilch merely by external application, in form i "ntmentsyand pomatums Several jmn,r,il « ters which are .drunk or used as bath, for Sales! owe their good qualities to sulphur contained in them.

SULPHUR.

Sulpr.ur is found sometimes pure, and sometimes in combination with other substances. Of native sulphur there are seven varieties; 1. Transparent sulphur, in eight-sided crystals, with two truncated pyramids. It is generally deposited by water on the surface of calcareous spar. Cadiz sulphur is of this kind. 2. Transparent sulphur in irregular fragments. Such is the sulphur of Switzerland. 3. Whitish pulverulent sulphur deposited in siliceous geodes. In the ci-devant tranche Compte there are flints full of sulphur. 4. Pulverulent sulphur deposited on the surface of mineral waters, such as those of Aix-la-Chapelle. 5. Crystalline sulphur that has been sublimed, found in the neighbourhood of volcanoes. 6. Pulverulent sulphur sublimed from volcanoes, found in abundance at Solfatara in the vicinity of Naples. See SOLFATARA. 7. Sulphur in stalactites, formed by volcanic fires. Sulphur is also found united with different substances, as with metals, and in this state was formerly called pyrites. See PYRITES. It is also extracted from vegetables, from dock-root, cochlearia, &c. M. Deyeux obtained it from the white of eggs. It has been also procured from horse dung. The sulphur used in Great Britain is generally brought in a pure state from volcanic countries, where it abounds in an inexhaustible quantity. Some of the metallic ores in this country abound with it ; but, from the common mode of purifying them, the sulphur is dissipated and lost. Dr. Watson has shown, in a paper on lead ore in the Philosophical Transactions, that no less than 700 tons are annually dissipated in the various lead mines of England. It is extracted from pyrites in Saxony and Bohemia.

Sulphur is also used in several arts. By means of it fine impressions of engraved stones are taken. Matches are formed of it ; and its utility as an ingredient in the preparation of gunpowder and fireworks is well known. Lastly, it is used for whiting wool, silk, and many other matters exposed to its vapor during its combustion ; the colors and redness of which could not be destroyed by any other substance, but are quickly effaced by this acid vapor.

Of native or prismatic sulphur, says Dr. Ure, there are two species, flie

common and volcanic; the former is of two kinds, compact and earthy sulphur.

1. Compact common sulphur. — Color sulphur-yellow, and yellow of other shades. Massive, disseminated, and crystallised. Its primitive figure is a pyramid of 107° 19'; and 84° 24'; basis — 102° 41'. The secondary figures are, the primitive variously truncated or acuminated, and delicate acicular crystals. Shining or glimmering. Cleavage prismatic and axifrangible. Fracture uneven. Translucent. Refracts double. Harder than talc. Brittle. When rubbed, it exhales a faint sulphureous smell, and becomes resino-electric. Specific gravity 1-9 to 2'1. It occurs in considerable abundance in primitive mountains, in a state of combination with metals, forming the different genera of pyrites, glance, and blende. In secondary mountains it is more abundant in the pure uncombined state. It is found in the island of Iceland, associated

with gypsum; or in crusts investing alluvia: substances. Very superb specimens of crystallised sulphur are found at Conil near Cape Trafalgar. It occurs abundantly in Sicily, at Urbino, in the Papal States, in Arragon in Spain, and Lauenstein in Hanover.

2 Earthy common sulphur. — Color pale straw-yellow. Massive and disseminated. Dull Fracture fine earthy. Opaque. Does not soil Soft to friable. It occurs in drusy cavities in flint, and along with the compact varieties in gypsum, and other rocks.

Volcanic sulphur. — Color pale sulphur-yellow. Massive, imitative, and crystallised in pyramids. v Glistening, inclining to adamantine. Fracture uneven. Slightly translucent. It occurs abundantly at Solfaterra, in the neighbourhood of Vesuvius, and in Iceland.

Sulphur is a simple inflammable body, of great importance in chemistry and the arts. To the properties above-mentioned we shall here add, that its fusing point is about 220° Fahrenheit, before which temperature it begins to evaporate. At 560° it takes fire in the open air, and burns with a pale blue flame. When kept melted in an open vessel for some time, about 300° Fahrenheit, it becomes thick and viscid; and, if it be then poured into a basin of water, it appears of a red color, and ductile like wax. In this state it is used for taking impressions of seals or medals. Its specific gravity is said to be increased from 1-99 to 2-325. This change is not owing to oxidation, for it takes place in close vessels. When a roll of sulphur is suddenly

seized in a warm hand, it crackles, and sometimes falls in pieces. This is owing to the unequal action of heat, on a body which conducts that power slowly, and which has little cohesion. If a mass of sulphur be melted in a crucible, and, after the surface begins to concrete, if the liquid matter below be allowed to run out, fine acicular crystals of sulphur will be obtained.

Sulphur is insoluble in water ; but in small quantity in alcohol and ether, and more largely in oil. It combines with oxygen in four definite proportions, constituting an interesting series of acids. See SULPHURIC ACID. From these combinations it is inferred, that the prime equivalent of sulphur is 2 ; and the density of its vapor is 1-111 — that of oxygen gas.

Sulphur combines readily with chlorine. This compound was first made by Dr. Thomson, who passed chlorine gas through flowers of sulphur. It may be made more expeditiously by heating sulphur in a retort containing chlorine. The sulphur and chlorine unite, and form a fluid substance, which is volatile below 200° Fahrenheit, and distils into the cold part of the retort. This substance, seen by reflected light, appears of a red color, but is yellowish-green when seen by transmitted light. It smokes when exposed to air, and has an odor somewhat resembling that of sea-weed, but much stronger ; it affects the eyes like the smoke of peat. Its taste is acid, hot, and bitter. Its specific gravity is 1-7. It does not redden perfectly dry paper tinged with litmus ; when it is agitated in contact with water, the water becomes cloudy from the ap-SULPHUR

pearpnce of sulphur, and strongly acid, and it is found to contain oil of vitriol. According to Sir H. Davy's experiments, ten grains of pure sulphur absorb nearly thirty cubic inches of chlorine, so that the compound contains about 2 sulphur to 4-5 chlorine, or a prime equivalent of each. The compound formed in the manner above described cannot be made to unite to more chlorine; but it can dissolve a considerable portion of sulphur by heat, and becomes of a tawny-yellow color.

Iodide of sulphur is easily formed by mixing the two ingredients in a glass tube, and exposing them to such a heat as melts the sulphur. It is grayish-black, and has a radiated structure like that of sulphuret of antimony. When distilled with water, iodine is disengaged.

Sulphur and hydrogen combine. Their union may be effected by

causing sulphur to sublime in dry hydrogen in a retort. There is no change of volume, but only a part of the hydrogen can be united with the sulphur in this mode of operating. The usual way of preparing sulphuretted hydrogen is to pour a dilute sulphuric or muriatic acid on the black sulphuret of iron or antimony in a retort. For accurate experiments it should be collected over mercury. It takes fire when a lighted taper is brought in contact with it, and burns with a pale blue flame, depositing sulphur. Its smell is extremely fetid, resembling that of rotten eggs. Its taste is sour. It reddens vegetable blues. It is absorbable by water, which takes up more than an equal volume of the gas. Its specific gravity, according to M.M. Gay Lussac and Thenard, is to that of air as 1-1912 to 1-0. From Sir H. Davy's experiments, it would appear to be a little less, but he is inclined to adopt the results of the French cherrists, rather than his own, as their gas was weighed in larger quantity and dried. Notwithstanding this preference of other experiments to his own, we must prefer a number nearer to Sir H. Davy's than M. Gay Lussac's. Its true specific gravity is 1-1805. 100 cubic inches weigh 36-006 ; and it consists of 1 vol. vapor of sulphur = 1-1111 + 1 vol. of hydrogen = 0-0694 — 1-1805 ; or a prime equivalent of each — 2-125. If platina wires be ignited in it by the voltaic apparatus, it is rapidly decomposed. Sulphur is deposited, and an equal volume of hydrogen remains. The same change is effected more slowly by electric sparks.

M. Berthier recommends the following process for procuring pure sulphuretted hydrogen at an economical rate : — Powdered common iron pyrites is to be mixed with half its weight of dry carbonate of soda, and heated red hot in a crucible ; a fused sulphuret of sodium and iron is obtained, which may be poured out on a stone to cool. It is then a homogeneous deep-yellow colored mass, having a lamellar fracture. It absorbs much water, forming with it a black paste, which, when acted on by sulphuric or muriatic acid, instantly yields abundance of sulphuretted hydrogen ; leaving a black sulphuret of iron, which, by the application of acid and heat, will yield a second portion of the gas. Sulphuret of lime, made by decomposing the sulphate at a high heat, with one-fifth of its

weight of charcoal, yields 46-8 per cent, of sulphuretted hydrogen, when acted on with dilute muriatic acid.— Ann. de Cliimie, xxiv. 271.

When a few drops of fuming nitric acid are put into a flask filled with pure sulphuretted hydrogen, the hydrogen is oxidized by the nilnc acid, and the sulphur is disengaged in a solid form. If the flask be

closed with the fin»er, so that the gas which becomes heated cannot es-cape, its temperature is raised so much as to produce combustion with a beautiful flame, and a slight detonation which forces the finger from the mouth of the flask. This experiment may be made without the least danger, with a flask containing four or five cubical inches of gas. — Berzelius.

Of all the gases, sulphuretted hydrogen is perhaps the most deleterious to animal life. A greenfinch, plunged into air, winch contains only jsjjj of its volume, perishes instantly. A dog of middle size is destroyed in air that contains jj-,; and a horse would fall a victim to an atmosphere containing ˆ

Dr. Chaussier proves that, to kill an animal, it is sufficient to make the sulphuretted hydrogen gas act on the surface of its body, when it is absorbed by the inhalants. He took a bladder having a stopcock at one end, and at the other an opening, into which he introduced the body of a rabbit leaving its head outside, and securing the bladder air-tight round the neck by adhesive plaster. He then sucked the air out of the bladder, and replaced it by sulphuretted hydrogen gas. A young animal in these circumstances usually perishes in fifteen or twenty minutes. Old rabbits resist the poison much longer. \ hen potassium or sodium is heated, merely to fusion, in contact with sulphuretted hydrogen, it becomes luminous, and burns with extrication of hydrogen, while a metallic sulphuret remains, combined with sulphuretted hydrogen, oj: a sulphuretted hydrosulphuret. Sulphuretted hydrogen combines with an equal volume of ammonia, and unites to alkalies and oxides, so that it has all the characters of an acid. These compounds are called hydrosulphurets.

All the hydrosulphurets, soluble in water, have an acrid and bitter taste, and, when in the liquid state, the odor of rotten eggs. All those which are insoluble are, on the contrary, insipid, and without smell. There are only two colored hydrosulphurets, that of iron, which is black, and of antimony, which is chestnut-brown. All the hydrosulphurets are decomposed by the ac-tion of fire. That of magnesia is transformed into sulphuretted hydrosen and oxide of mag-nesium ; those of potash and soda into sulphuretted hydrogen, hydrogen, and sulphui alkalies ; those of manganese, zinc, iron, tin, an antimony, into water and metallic sulphurots. When we put in contact with the air, at the « dinary temperature, an aqueous solution o hydrosulphuret, there results, in the space i some days, 1st. water, and a sulphuretted hydrosulphuret, which is yellow and soluble; 2 waler, and a colorless hydrosulph.te, winch, if IU base be potassa, soda, or ammoma, ren.au, solution in the water; but winch falls down in

acicular crystals, if its base be barytes, slrontia,

or lime. The acids in general combine with the base of the hydrosulphurets, and disengage sulphuretted hydrogen with a lively effervescence, without any deposition of sulphur, unless the acid be in excess, and be capable, like the nitric and nitrous acid, of yielding a portion of its oxygen to the hydrogen of the sulphuretted hydrogen.

The hydrosulphurets of potash, soda, ammonia, lime, and magnesia, are prepared directly, by transmitting an excess of sulphuretted hydrogen gas through these bases, dissolved or diffused in water. The composition of the hydrosulphurets is such that the hydrogen of the sulphuretted hydrogen is to the oxygen of the oxide in the same ratio as in water. Hence, when we calcine the hydrosulphurets of iron, tin, &c., we convert them into water and sulphurets.

Hydrosulphuret of potash crystallises in four-sided prisms, terminated by four-sided pyramids. Its taste is acrid and bitter. Exposed to the air, it attracts humidity, absorbs oxygen, passes to the state of a sulphuretted hydrosulphuret, and finally to that of a hydrosulphite. It is extremely soluble in water. Its solution in this Lquid occasions a perceptible refrigeration. Subjected to heat, it evolves much sulphuretted hydrogen, and the hydrosulphuret passes to the state of a sub-hydrosulphuret.

Hydrosulphuret of soda crystallises with more difficulty than the preceding.

Hydrosulphuret of ammonia is obtained by the direct union of the two gaseous constituents in a glass balloon, at a low temperature. As soon as the gases mingle, transparent white or yellowish crystals are formed. When a mere solution of this hydrosulphuret is wished for medicine or analysis, we pass a current of sulphuretted hydrogen through aqueous ammonia till saturation.

The pure hydrosulphuret is white, transparent, and crystallised in

needles or fine plates. It is very volatile. Hence, at ordinary temperatures, it gradually sublimes into the upper part of the phials in which we preserve it. We may also by the same means separate it from the yellow sulphuretted hydrosulphuret, with which it is occasionally mixed. When exposed to the air, it absorbs oxygen, passes to the state of a sulphuretted hydrosulphuret, and becomes yellow. When it contains an excess of ammonia, it dissolves speedily in water, with the production of a very considerable cold.

Sub-hydrosulphuret of barytes is prepared by dissolving, in five or six parts of boiling water, the sulphuret of the earth obtained by igniting the sulphate with charcoal. The solution, being filtered while hot, will deposit, on cooling, a multitude of crystals, which must be drained, and speedily dried by pressure between the folds of blotting paper. It crystallises in white scaly plates. It is much' more soluble in hot than in cold water. Its solution is colorless, and capable of absorbing, at the ordinary temperature, a very large quantity of sulphuretted hydrogen.

Sub-hydrosulphuret of strontites crystallises in the same manner as the preceding. The crystals obtained in the same way must be dissolved in water ; and the solution being exposed to a stream of sulphuretted hydrogen, and then

concentrated by evaporation in a retort, will afford, on cooling, crystals of pure sub-hydrosul- phuret. Hydrosulphurets of lime and magnesia have been obtained only in aqueous solutions. The metallic hydrosulphurets of any practical importance are treated of under their respective metals.

When we expose sulphur to the action of a solution of a hydrosulphuret, saturated with sulphuretted hydrogen, as much more sulphuretted hydrogen is evolved as the temperature is more elevated. But when the solution of hydrosulphuret, instead of being saturated, has a sufficient excess of alkali, it evolves no perceptible quantity of sulphuretted hydrogen, even at a boiling heat ; although it dissolves as much sulphur as in its state of saturation. It hence follows, 1st. That sulphuretted hydrogen, sulphur, and the alkalies, have the property ot forming very variable triple combinations ; 2d. That all these combinations contain less sulphuretted hydrogen than the hydrosulphurets; and, 3d. That the quantity of sulphuretted hydrogen is inversely as the sulphur they contain, and reciprocally. These compounds have been called, in general, sulphuretted hydrosulphurets; but the name of hydrogenated sulphurets is more

particularly given to those combinations which are saturated with sulphur at a high temperature, because, by treating them with acids, we precipitate a peculiar compound of sulphur and hydrogen, of which we shall now treat.

This compound of hydrogen and sulphur, the proportions of the elements of which have not yet been accurately ascertained, is also called hydruret of sulphur. It is formed by putting flowers of sul hur in contact with nascent sulphuretted hydrogen. With this view, we take an aqueous solution of the hydrogenated sulphuret of potash, and pour it gradually into liquid muriatic acid, which seizes the potash, and forms a soluble salt, whilst the sulphur and sulphuretted hydrogen unite, fall down together, collecting by degrees at the bottom of the vessel, as a dense oil does in water. To preserve this hydruret of sulphur, we must fill with it a phial having a ground stopper, cork it, and keep it inverted in a cool place. We may consider this substance either as a combination of sulphur and hydrogen, or of sulphur and sulphuretted hydrogen ; but its properties, and the mode of obtaining it, render the latter the more probable opinion. The proportion of the constituents is not known.

The most interesting of the hydrogenated sulphurets is that of ammonia. It was discovered by the honorable Robert Boyle, and called his fuming liquor. To prepare it, we take one part of muriate of ammonia and of pulverised quicklime, and half a part of flowers of sulphur. After mixing them intimately, we introduce the mixture into an earthen or glass retort, taking care that none of it remains in the neck. A dry cooled receiver is connected to the retort by means of a long adopter-tube. The heat must be urged slowly almost to redness. A yellowish liquor condenses in the receiver, which is to be put into a phial with its own weight of flowers of sulphur, and agitated with it seven or eight

minutes. The greater part of the sulphur is dissolved, the color of the mixture deepens remarkably, and becomes thick, constituting the hydrogenated sulphuret. The distilled liquor diffuses, for a long time, dense vapor in a jar full of oxygen or common air; but scarcely any in azote or hydrogen ; and the dryness or humidity of the gases makes no difference in the effects. It is probably owing to the oxygen converting

the liquor into a hydrogenated sulphuret, or perhaps to the state of sulphite, that the vapors appear. Hydrogenated sulphurets are frequently called hydroguretted sulphurets. Sulphur combines with carbon, forming an interesting compound, to which the name of sulphuret of carbon is sometimes given.

SULPHUR ISLAND, an island of the North Pacific Ocean, discovered by captain Gore, in 1779 ; about five miles long, in a N. N. E. and S. S. W. direction. The south point is a high barren hill, flat at top, and presents an evident volcanic crater. Long. 141° 12’ E., lat. 24° 28’ N.

SULPHUR MOUNTAIN, in geology, a volcanic mountain, frequently found in the islands of the Western Atlantic, perpetually throwing forth sulphurous or sulphuric exhalations from fissures or a direct crater ; and which exhalations often concrete and form beautiful crystals on the surrounding parts of the mountain. The best description we have met with of these sulphur mountains is given by Dr. Nugent, and published as follows in the Transactions of the Geological Society, vol. i.

‘ On my voyage last year (October 1810) from Antigua to England, the packet touched at Montserrat, and my curiosity having been excited by the accounts I received of a place in the island called The Sulphur, and which, from the descriptions of several persons, I conceived might be the crater of an inconsiderable volcano, I determined to avail myself of the stay of the packet to visit that place.

‘ The island of Montserrat, so called by the Spaniards from a fancied resemblance to the celebrated mountain of Catalonia, is every where extremely rugged and mountainous, and the only roads, except in one direction, are narrow bridle-paths winding through the recesses of the mountains : there is hardly a possibility of using wheeled carriages, and the produce of the estates is brought to the place of shipment on the backs of mules. Accompanied by a friend, I accordingly set out on horseback from the town of Plymouth, which is situated at the foot of the mountains on the sea shore. We proceeded by a circuitous and steep route about six miles, gradually ascending the mountain, which consisted entirely of a uniform porphyritic rock, broken every where into fragments and large blocks, and which-in many places was so denuded of soil as to render it a matter of astonishment how vegetation, and particularly that of the cane, should thrive so well. The far greater part of the whole island is made up of this porphyry, which by some systeraatics would be considered as referrible to the newest floetz trap formation, and by others would be regarded only as a variety of lava. It is a compact and highly indurated argillaceous

and perfect crystals of white felspar and black hornblende. Rocks of this description germ-rally pass in the West Indies by the vague denomination q/ fire-stone, from the useful property they possess of resisting the operation of intense heat. A considerable quantity of this stone is accordingly exported from Montserrat to the other islands which do not contain it, being essential in forming the masonry around the copper boilers in sugar works. We continued our ride aˆ considerable distance beyond the estate called Galloway's (where we procured a guide), till we came to the side of a very deep ravine which extends in a winding direction the whole way from one of the higher mountains to the sea. A rugged horse-path was traced along the brink of the ravine, which we followed, amidst the most beautiful and romantic scenery. At the head of this ravine is a small amphitheatre, formed by lofty surrounding mountains, and here is situated what is termed The Sulphur. Though the scene was extremely grand, and well worthy of observation, yet I confess I could not help feeling a good deal disappointed, as there was nothing like a crater to be seen, or any thing else that could lead me to suppose the place had any connexion with a volcano. On the north, east, and west sides were lofty mountains wooded to the tops, composed apparently of the same kind of porphyry we had noticed all along the way. On the south the same kind of rock, of no great height, quite bare of vegetation, and in a very peculiar state of decomposition. And, on the south-eastern side, our path and the outlet into the ravine. The whole area thus included might be 300 or 400 yards in length, and half that distance in breadth. The surface of the ground, not occupied by the ravine, was broken and strewed with fragments and masses of the porphyritic rock, for the most part so exceedingly decomposed as to be friable and to crumble on the smallest pressure. For some time I thought that this substance, which is perfectly white, and in some instances exhibits an arrangement like crystals, was a peculiar mineral; but afterwards became convinced that it was merely the porphyritic rock singularly altered, not by the action of the air or weather, but, 'as I conjecture, by a strong sulphureous or sulphuric acid vapor which is generated here, and which is probably driven more against one side by the eddy wind up the ravine, the breeze from any other quarter being shut out by the surrounding hills.

‘ Amidst the loose stones and fragments of decomposed rock are many fissures and crevices, whence very strong sulphureous exhalations arise, and which are diffused to a considerable distance : these exhalations are so powerful as to impede respiration, and near any of the fissures are quite intolerable and suffocating. The buttons of my coat, and some silver and keys in my pockets, were instantaneously discolored. An intense degree of heat is at the same time evolved, which,added to the apprehension oft ground crumbling and giving way, renders it difficult and painful to walk near any of fissures. The water of a rivulet which f)< down ths sides of the mountain, and paˆcs

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this place, is made to boil with violence, and becomes loaded with sulphureous impregnations. Other branches of the same rivulet, which do not pass immediately near these fissures, remain cool and limpid; and thus you may with one hand touch one rill which is at the boiling point, and with the other hand touch another rill which is of the usual temperature of water in that climate. The exhalations of sulphur do not at all times proceed from the same fissures, but new ones appear to be daily formed, others becoming, as it were, extinct. On the margins of these fissures, and indeed almost over the whole place, are to be seen most beautiful crystallisations of sulphur, in many spots quite as fine and perfect as those from Vesuvius, or indeed as any other specimens I have ever met with. The whole mass of decomposed rock in the vicinity is, in like manner, quite penetrated by sulphur. I did not perceive at this place any trace of pyrites, or any other metallic substance, except indeed two or three small fragments of clay iron-stone at a little distance, but did not discover even this substance any where in situ. It is very probable that the bed of the glen or ravine might throw some light on the internal structure of the place ; but it was too deep, and its banks infinitely too precipitous, for me to venture down to it. I understood that there was a similar exhalation and deposition of sulphur on the side ot a mountain not more than a mile distant in a straight line; and a subterranean communication is supposed to exist between the two places.

‘ Almost every island in the western Archipelago, particularly those which have the highest land, has in like manner its sulphur, or, as the French better express it, its souffriere. This is particularly the case with Nevis, St. Kitts, Guadaloupe, Dominica, Martinico, St. Lucia, and St. Vincent’s. Some islands have several such places, analogous, I presume, to this of Montserrat ; but in others, as Guadaloupe, St. Lucia, and St. Vincent’s, there are decided and well characterised volcanos, which are occasionally active, and throw out ashes, scoriae, and lava with flame. The volcano of St. Vincent’s is represented by Dr. Anderson, and others who have visited it, as extremely large and magnificent, and would bear a comparison with some of those of Europe. These circumstances appear to have been entirely overlooked by geologists in their speculations concerning the origin and formation of these islands. It has indeed occurred to most persons, on surveying the regular chain of islands extending from the southern Cape of Florida to the mouths of the Orinoco, as exhibited on the map, to

conclude that it originally formed part of the American continent, and that the encroachments of the sea have left only the higher parts of the land, as insular points above its present level. But this hypothesis, however simple and apparently satisfactory in itself, will be found to accord very partially with the geological structure of the different islands. Many of them are made entirely of vast accretions of marine organized substances ; and others evidently owe their origin to a volcanic agency, which is either in some degree apparent at the present time, or else may be readily traced by vestiges comparatively recent. There is every reason to believe, however, that some of the islands are really of contemporaneous formation with the adjacent parts of the continent, from which they havf,- been disjoined by the incursions of the sea, or by convulsions of nature, and it is probably in those islands which contain primitive rocks that we are chiefly to look for a confirmation of this supposition.'

SULPI1URET OF LIME having been recommended by Mr. Hiegins as a substitute for potash in the new method of bleaching, which, if it answer, may certainly be afforded at less expense, we shall here give the method of preparing the sulphuret. Take of sulphur, or brimstone in fine powder, f.mr pouuds ; lime well slaked and sifted twenty pounds ; water sixteen gallons : these are all to be well mixed and boiled for about half an hour in an iron vessel, stirring them briskly from time to time. Soon after the agitation of the boiling is over, the solution of the sulphuret of the lime clears, and may be drawn off free from the insoluble matter, which is con<iderable, and which rests upon the bottom of the boiler. The liquor in this state is pretty nearly of the color of small beer, but not quite so transparent. Sixteen gallons of fresh water are afterwards to be poured upon the insoluble dregs in the boiler, to separate the whole of the sulphuret from them. When this clears (being previously well agitated) it is also to be drawn off and mixed with the first liquor ; to these again thirty-three gallons more of water may be added, which will reduce the liquor to a proper standard for steeping the cloth. Here we have (an allowance being made for evaporation, and for the quantity retained in the dregs) sixty gallons of liquor from four pounds of brimstone. Although sulphur by itself is not in any sensible degree soluble in water, and lime but very sparingly so, water dissolving but about ˆth part of its weight of lime ; yet the sulphuret of lime is highly soluble. When the above proportion of lime and sulphur is boiled with only twelve gallons of water, the sulphuret partly crystallises upon cooling ; and when once crystallised it is not easy of solution.

SULPHURETS OF ALKALIES AND EARTHS.

Heretofore these were reckoned compounds of the alkalies and earths themselves with sulphur, that is, sulphureted oxides ; but M. Berthierhas proved that they are all true metallic sulphurets. He reduces the sulphates of alkalies into sulphurets, not by mixing them directly with powdered charcoal, but by placing them in the centre of a crucible thickly lined with charcoal, covering, them with the same substance, and, after having luted on a cover, heating the whole in a furnace. In this way the sulphates are reduced by cementation. All are reducible at a white heat, and where the sulphuret is fusible very quickly. In this way not only are pure sulphurets formed, but the result may be collected without the smallest loss, its weight ascertained, and the weight of oxygen evolved accurately estimated.

If a sulphate of barytes, strontites, or lime, be thus reduced to a sulphuret, and weighed, the loss will be found to equal exactly the quantity of oxygen contained in the base and the acid If

the sulphuret be dissolved in dilute muriatic acid, nothing will be liberated but pure sulphureted hydrogen ; no sulphur will be set free, nor any acid containing sulphur and oxygen formed ; finally, if a portion of the sulphuret be heated in a crucible of silver, with nitre equal to three or four times its weight, the sulphate regenerated will correspond with the quantity of sulphuret

wise, in the ensuing distillanon, greatly weaken the acid. As soon as the calcination is finished the vitriol is to be put immediately, while it is warm, into a coated earthen retort, which is to be filled two-thirds with it, so that the ingredients may have sufficient room upon being distended by the heat, and thus the bursting of the retort be prevented. It will be most advisable to have

employed, and will contain neither acid nor base the retort

immediately enclosed in brickwork …

in excess. These three experiments prove that a reverberatory furnace, and to stop up the neck

the sulphuret produced contains no oxygen. of it till the distillation begins, in order to prc—

SULPIIUIIIC ACID. Oil of vitriol. Vitriolic vent the materials from attracting fresh humidity

acid. When sulphur is heated to 180° or 190° from the air. At the beginning of the distillation

in an open vessel, it melts, and soon afterwards the retort must be opened and a moderate fire

•emits a bluish flame, visible in the dark, but is to be applied to it, in order to expel from the

which, in open daylight has the appearance of vitriol all that part of the phlegm which does not

a white fume. This flame has a suffocating taste strongly of the acid, and which may be it -

smell, and has so little heat that it will not set ceived in an open vessel placed under the retort. fire to flax, or even gunpowder, so that in this

way the sulphur may be entirely consumed out of it. If the heat be still augmented, the sulphur boils and suddenly bursts into a much more luminous flame, the same suffocating vapor still continuing to be emitted. The suffocating vapor of sulphur is imbibed by water, with which it forms the fluid formerly called volatile vitriolic, now sulphurous acid. If this fluid be exposed for a time to the air it loses the sulphurous smell it had at first, and the acid becomes more fixed. It is then the fluid which was formerly called the spirit of vitriol. Much of the water may be driven off by heat, and the dense acid which remains is the sulphuric acid, commonly called oil of vitriol ; a name which was probably given to it from the little noise it makes when poured out, and the unctuous feel it has when rubbed between the fingers, produced by its corroding and destroying the skin, with which it forms a soapy compound.

The stone or mineral called martial pyrites, which consists for the most part of sulphur and iron, is found to be converted into the salt vulgarly called green vitriol, but more properly

But .s soon as there appear any acid dro; receiver is to be added, into which has been previously poured a quantity of the acidulous fluid which has come over, in the proportion of half a. pound of it to twelve pounds of the calciriiMi vitriol ; when the receiver is to be secured \itU a proper luting. The fire is now to be raise;! by little and little to the most intense decree of heat, and the receiver carefully covered \vith \rt cloths, and, in winter time, with snow cr ice. as the acid rises in the form of a thick white vapor, which toward the end of the operation becomes hot and heats the receiver to a great degree. The fire must be continued at this high pitch for several days till no vapor issues from the retort, nor any drops are seen trickling down its sides. In the case of a great quantity of vitriol being distilled, Bernhardt has observed it to continue emitting vapors in this manner for the space of ten days. When the “essels are quite cold the receiver must be opened carefully, so that none of the luting may fall into it; after which the fluid contained in it is to be poured into a bottle and the air carefully excluded. The fluid that is thus obtained is the German’ sulphuric acid, of

sulphate of iron, by exposure to air and mois-which Bernhardt got sixty-four pounds from 600

ture. In this natural process the pyrites breaks and falls in pieces ; and if the change takes place rapidly a considerable increase of temperature follows, which is sometimes sufficient to set the mass on fire. By conducting this operation in an accurate way it is found that oxygen is absorbed. The sulphate is obtained by solution in water and subsequent evaporation ; by which the crystals of the salt are separated from the earthy impurities which were not suspended in the water.

The sulphuric acid was formerly obtained in this country by distillation from sulphate of iron,

cvvt. of vitriol ; and, on the other hand, when n water had been previously poured into the receiver, fifty-two pounds only of a dry concrete; acid. This acid was formerly called glacial oil of vitriol, and its consistence is owing to a mixture of sulphurous acid, which occasions it to become solid at a moderate temperature.

It has been lately stated by Vogel that \hnt this fuming acid is put into a glass retort, and distilled by a moderate heat into a ic; Tiver cooled with ice, the fuming portion comes over first, and may be obtained in a solid state hv stopping the distillation in time. This has ITCH

as it still is in many parts abroad: ‘the common supposed to constitute absolute sulphuric ;

green vitriol is made use of for this purpose, as or acid entirely void of water.

it is to be met with at a low price and the acid is -filaments, tough, difficult to cut and somewha

most easily to be extracted from it. With re-like asbestos. Exposed to the air it Fume

strongly and gradually evaporates. It does not act on the skin so rapidly as concentrated oil of vitriol. Up to 66° it continues solid, but at temperatures above this it becomes a colorless

spect to the operation itself the following particulars should be attended to: — First the vitriol must be calcined in an iron or earthen vessel till it appears of a yellowish-red color : by this operation-it w ”” in order to water which it has attracted into its crystals dur-

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ill lose half its weight. This is done vapor, which whitens on contact wit»i a,,.

, dep.ive it of the greater part of the ped into water in small quantities

waicr wmch it has attracted into its crystals dur-hissing noise as if it were red-hot iron in larger

ing the crystallisation, and which would other-quantities it produces a speci .f explosion

is said to be convertible into ordinary sulphuric acid by the addition of a fifth of water. It dissolves sulphur, and assumes a blue, green, or brown color, according to the proportion of sulphur dissolved. The specific gravity of the black fuming sulphuric acid, prepared in large quantities from copperas at Nordhausen, is 1‘896. Its constitution is not well ascertained.

The sulphuric acid made in Great Britain is produced by the combustion of sulphur. There are three conditions requisite in this operation. Oxygen must be present to maintain the combustion ; the vessel must be so close as to prevent the escape of the volatile matter which rises, and water must be present to imbibe it. For these purposes a mixture of eight parts of sulphur with one of nitre is placed in a proper vessel, enclosed within a chamber of considerable size, lined on all sides with lead, and covered at bot-tom with a shallow stratum of water. The mixture being set on fire will burn fora considerable time by virtue of the supply of oxygen which nitre gives out when heated, and the water imbibing the sulphurous vapors becomes gradually more and more acid after repeated combustions, and the acid is afterward concentrated by distillation. Such was the account usually given of this operation till Clement and Desormes showed, in a very interesting memoir, its total inadequacy to account for the result. 100 parts of nitre, judiciously managed, will produce, with the requisite quantity of sulphur, 2000 parts of concentrated sulphuric acid. Now these contain 1200 parts of oxygen, while the 100 parts of nitre contain only thirty-nine and a half of oxygen ; being not one-thirtieth part of what is afterwards found in the resulting sulphuric acid. But after thec«mbustion of the sulphur the nitre is converted into sulphate and bisulphate of potassa, which mingled residuary salts contain nearly as much oxy-gen as the nitre originally did. Hence the origin of the 1200 parts of the oxygen in the sulphuric acid is still to be sought for. The following ingenious theory was first

given by Clement and Desormes: — The burning sulphur, or sulphurous acid, taking from the nitre a portion of its oxygen, forms sulphuric acid, which unites with the potassa, and displaces a little nitrous and nitric acids in vapor. These vapors are decomposed by the sulphurous acid into nitrous gas, or deu-toxide of azote. This gas, naturally little denser than air, and now expanded by the heat, suddenly rises to the roof of the chamber, and might be expected to escape at the aperture there which manufacturers were always obliged to leave open, otherwise they found the acidification would not proceed. But, the instant that nitrous gas comes incontactwith atmospherical oxygen, nitrous acid vapor is formed, which, being a very heavy aeriform body, immediately precipitates on the sulphurous flame and converts it into sulphuric acid ; while itself resuming the state of nitrous gas reascends for a new charge of oxygen, again to redescend and transfer it to the flaming sulphur. Thus we see that a small volume of nitrous vapor, by its alternate metamorphoses into the states of oxide and acid, and its consequent interchanges, maybe capable of acidifying a great quantity of sulphur.

This beautiful theory received a modification from Sir H. Davy. He found that nitrous gas had no action on sulphurous gas, to convert it into sulphuric acid, unless water be present. With a small proportion of water, four volumes of sulphurous acid gas and three of nitrous gas are condensed'into a crystalline solid, which is instantly decomposed by abundance of water; oil of vitriol is formed, and nitrous gas given ofT, which with contact of air becomes nitrous acid gas, as above described. The process continues, according to the same principle of combination and decomposition, till the water at the bottom of the chamber is become strongly acid. It is first concentrated in large leaden pans, and afterwards in slass retorts heated in a sand bath. Platinum alembics, placed with-in pots of cast-iron of a corresponding shape and capacity, have been lately substituted in many manufactories for glass, and have been found to save fuel and quicken the process of concentration.

The proper mode of burning the sulphur with the nitre, so as to produce the greatest quantity of oil of vitriol, is a problem concerning which chemists hold a variety of opinions. Thenard describes the following as the best : — Near one of the sides of the leaden chamber, and about a foot above its bottom, an iron plate, furnished with an upright border, is placed horizontally over a furnace, whose chimney passes across, under the bottom of the chamber, without having any connexion with it. On this plate, which is enclosed in a little chamber,

the mixture of sulphur and nitre is laid. The whole being shut up, and the bottom of the large chamber covered with water, a gentle fire is kindled in the furnace. The sulphur soon takes fire,' and gives birth to the products described. When the combustion is finished, which is seen through a little pane adapted to the trap-door of the chamber, this is opened, the sulphate of potassa is withdrawn, and is replaced by a mixture of sulphur and nitre. The air in the great chamber is mean-while renewed by opening its lateral door and a valve in its opposite side. Then, after closing these openings, the furnace is lighted anew. Successive mixtures are thus burned, till the acid acquires a specific gravity of about 1-390, taking care never to put at once on the plate more sulphur than the air of the chamber can acidify. The acid is then withdrawn by stopcocks and concentrated.

The following details are extracted from a paper on sulphuric acid, which Dr. Ure published in the fourth volume of the Journal of Science and the Arts : — ' The best commercial sulphuric acid that I have been able to meet with,' says he, ' contains from one-half to three-quarters of a part in the 100 of solid saline matter, foreign to its nature. These fractional parts consist of sulphate of potassa and lead, in the proportion of four of the former to one of the latter. I-is, I believe, difficult to manufacture it directly, by the usual methods, of a purer quality. The ordinary acid sold in the shops contains often three or four per cent, of saline matter. Even more is occasionally introduced, by the employment of nitre, to remove the brown color given to the acid by carbonaceous matter. The amount of these adulterations, whether acci-SULPHURIC ACID.

dental or fraudulent, may be readily determined by evaporating, in a small capsule of porcelain, or rather platinum, a definite weight of the acid. The platinum cup placed on the red cinders of a common fire will give an exact result in five minutes. If more than five grains of matter re-main from 500 of acid we may pronounce it sophisticated.

' Distillation is the mode by which pure oil of vitriol is obtained. This process is described in chemical treatises as both difficult and hazardous; but since adopting the following plan I have found it perfectly safe and convenient : — I take a plain glass retort, capable of holding from two to four quarts of water, and put into it about a pint

measure of the sulphuric acid (and a few fragments of glass), connecting the retort with a large globular receiver, by means of a glass tube four feet long, and from one to two inches in diameter. The tube fits very loosely at both ends. The retort is placed over a charcoal fire, and the flame is made to play gently on its bot-tom. When the acid begins to boil smartly, sudden explosions of dense vapor rush forth from time to time, which would infallibly break small vessels. Here, however, these expansions are safely permitted, by the large capacity of the retort and receiver, as well as by the easy communication with the air at both ends of the adopter tube. Should the retort, indeed, be exposed to a great intensity of flame, the vapor will no doubt be generated with incoercible rapidity and break the apparatus. But this accident can proceed only from gross imprudence. »It resembles, in suddenness, the explosion of gunpowder, and illustrates admirably Dr. Black's observation that, but for the great latent heat of steam, a mass of water, powerfully heated, would ex-plode on reaching the boiling temperature. I have ascertained that the specific caloric of the vapor of sulphuric acid is very small, and hence the danger to which rash operators may be exposed during its distillation. Hence, also, it is unnecessary to surround the receiver with cold water, as when alcohol and most other liquids are distilled. Indeed the application of cold to the bottom of the receiver generally causes it, in the present operation, to crack. By the above method I have made the concentrated oil of vitriol flow over in a continuous slender stream, without the glebe becoming sensibly hot.

' I have frequently boiled the distilled acid till only one-half remained in the retort ; yet at the temperature of 60° Fahrenheit I have never found the specific gravity of acid so concentrated, to exceed 1-8455. It is, I believe, more exactly 1-8452. The number 1-850, which it has been the fashion to assign for the density of pure oil of vitriol, is undoubtedly very erroneous and ought to be corrected. Genuine commercial acid should never surpass 1-8485; when it is denser we may infer sophistication, or negligence, in the manufacture.'

The sulphuric acid strongly attracts water, which it takes from the atmosphere very rapidly, and in larger quantities, if suffered to remain in an open vessel, imbibing one-third of its weight in twenty-four hours, and more than six times its weight in a twelvemonth. If four parts by

weight be mixed with one of water at .."u' tnev produce an instantaneous heat of 300° Fahrenheit ; and four parts raise one of ice

to 212° : on the contrary, four parts of ice mixed with one of acid sink the thermometer to 4° below 0. When pure it is colorless and emits no fumes. It requires a great degree of cold to freeze it ; and if diluted with half a part or more of water, unless the dilution be carried very far, it becomes more and more difficult to congeal; yet at the specific gravity of 1-78, or a few hundredths above or b« low this, it may be frozen by surrounding it with melting snow. Its congelation forms regular prismatic crystals with six sides. Its boiling point, according to Bergman, is 540°, according to Dalton 590°.

Pure sulphuric acid is without smell and color, and of an oily consistence. Its action on litmus is so strong that a single drop of acid will give to an immense quantity of water the power of reddening. It is a most violent caustic, and has sometimes been administered with the most criminal purposes. The person who unfortunately Swallows it speedily dies in dreadful agonies and convulsions. Chalk, or common carbonate of magnesia, is the best antidote for this as well as for the strong nitric and muriatic acids. Wheii transmitted through an ignited porcelain tube, of one-fifth of an inch diameter, it is resolved into two parts of sulphurous acid gas, and one of oxy-gen gas, with water. Voltaic electricity causes an evolution of sulphur at the negative pole; whilst a sulphate of the metallic wire is formed at the positive. Sulphuric acid has no action on oxygen gas or air. It merely abstracts their aqueous vapor.

If the oxygenised muriatic acid of Thenard be put in contact with the sulphate of silver there is immediately formed insoluble chloride, cf silver and oxygenised sulphuric acid. To obtain sulphuric acid in the highest degree of oxygenation, it is merely necessary to pour barytes water into the above oxygenised acid, so as to precipitate only a part of it, leaving the rest in union with the whole of the oxygen. Oxygenised sulphuric acid partially reduces the oxide of silver, occasioning a strong effervescence.

All the simple combustibles decompose sulphuric acid with the assistance of heat. About 400° Fahrenheit sulphur converts sulphuric into sulphurous acid. Several metals at an elevated temperature decompose this acid, with evolution of sulphurous acid gas, oxidisement of the metal, and combination of the oxide with the undecomposed portion of the acid.

The sulphuric acid is of very extensive use in the art of chemistry, as well as in metallurgy, bleaching, and some of the processes for dyeing; in medicine it is given as a tonic and stimulant, and is sometimes used externally as a caustic. The combinations of this acid with the various

bases are called sulphates, and most of them have long been known by various names. With barytes it is found native and nearly pure in various forms; in coarse powder, rounded masses, stalactites, and regular crystallisations, which are in some lamellar m oiiiers needly, in others prismatic or pyramidal. salt, if at all deleterious, is less so than the rar-

bonate of barytes, and is more economical for preparing the muriate for medicinal purposes. It requires 43,000 parts of water to dissolve it ai 60°.

Sulphate of strontian has a considerable resemblance to that of barytes in its properties. It is found native in considerable quantities at Aust 1'assa.e and other places in the neighbourhood of Bristol. It requires 3840 parts of boiling water to dissolve it. Its composition is 5 acid + 6'5 base.

The sulphate of potassa, vitriolated kali, formerly vitriolated tartar, sal de duobus, and ar-canum duplicatum, crystallises in hexahedral prisms, terminated by hexagonal pyramids, but susceptible of variations. Its crystallisation by quick cooling is confused. Its taste is bitter, acrid, and a little saline. It is soluble in five parts of boiling water, and sixteen parts at 60°. In the fire it decrepitates, and is fusible by a strong heat. It is decomposable by charcoal at •A high temperature. It may be prepared by di-rect mixture of its component parts ; but the usual and cheapest mode is to neutralise the acidulous sulphate left after distilling nitric acid, the sal enixen' of the old chemists, by the addition of carbonate of potassa. The sal polychrest of old dispensatories, made by deflagrating sulphur and nitre in a crucible, was a compound of the sulphate and sulphite of potassa. The acidulous sulphate is sometimes employed as a flux, and likewise in the manufacture of alum. In medicine, the neutral salt is sometimes used as a de-obstruent, and in large doses as a mild cathartic; dissolved in a considerable portion of water, and taken daily in such quantity as to be gently aperient, it has been found serviceable in cutaneous affections, and is sold in London for this purpose as a

nostrum ; and certainly it deserves to be distinguished from the generality of quack-medicines, very few indeed of which can be taken without imminent hazard. It consists of 5 acid + 6 base ; but there is a compound of the same constituents, in the proportion of 10 acid + 6 potassa, called the bisulphate.

The sulphate of soda is the vitriolated natron of the college, the well known Glauber's salt, or sal mirabile. It is commonly prepared from the residuum left after distilling muriatic acid, the superfluous acid of which may be saturated by the addition of sod.?, or precipitated by lime; and is likewise obtained in the manufacture of the muriate of ammonia. Scherer mentions another mode by Funcke, which is, making eight parts of calcined sulphate of lime, five of clay, and five of common salt, into a paste with water; burning this in a kiln ; and then powdering, lixiviating, and crystallising. It exists in large quantities under the surface of the earth in some countries, as Persia, Bohemia, and Switzerland; is found mixed with other substances in mineral springs and sea water; and sometimes effloresces on walls. Sulphate of soda is bitter and saline to the taste. It is soluble in 2'85 parts of cold water, and 0*8 at a boiling heat. It crystallises in hexagonal prisms bevelled at the extremities, sometimes grooved longitudinally, and of very large size, when the quantity is yreat. These effloresce completely into a white powder if exposed to a dry air, or even if kept wrapped up in paper in a dry place; yet they retain sufficient water of crystallisation to undergo the aqueous fusion on exposure to heat ; but, by urging the fire, melt. Barytes and strontian take their acid from it entirely, and potassa partially ; the nitric and muriatic acids, though they have a weaker affinity for its base, combine with a part of it when digested on it. Heated with charcoal its acid is decomposed. As a purgative its use is very general ; and it has been employed to furnish soda. Pajot des Charmes has made some experiments on it in fabricating glass ; with sand alone it would not succeed, but equal parts of carbonate of lime, sand, and dried sulphate of soda, produced a clear, solid, pale, yellow glass. It is composed of 5 acid -(- 4 base + 11-25 water in crystals ; when dry, the former two primes are its constituents. Sulphate of soda and sulphate of ammonia form together a triple salt.

Sulphate of lime, selenite, gypsum, plaster of Paris, or sometimes alabaster, forms extensive strata in various mountains. The specular gyp-sum, or glacies Mariae, is a species of this salt, and affirmed by some French travellers to be employed in Russia, where it abounds, as a substitute for glass in windows. Its specific gravity is from 1-872 to 2-311. It requires 500 parts of cold water, and 450 of hot, to dissolve it. When calcined, it decrepitates, becomes very friable and white, and

heats a little with water, with which it forms a solid mass. In this process it loses its water of crystallisation. In this state it is found native in Tyrol, crystallised in rectangular parallelepipeds, or octahedral or hexahedral prisms, and is called anhydrous sulphate of lime. Both the natural and artificial anhydrous sulphate consists of 56-3 lime, and 43-6 acid, according to Chenevix. The calcined sulphate is much employed for making casts of anatomical and ornamental figures ; as one of the bases of stucco; as a fine cement for making close and strong joints between stone, and joining rims or tops of metal to glass ; for making moulds for the Staffordshire potteries; for cornices, mould-ings, and other ornaments in building. For these purposes, and for being wrought into columns, chimney-pieces, and various ornaments, about 800 tons are raised annually in Derbyshire, where it is called alabaster. In America it is laid on grass land as a manure. Ordinary crystallised gypsum consists of 5 sulphuric acid -+• 3-5 lime -(- 2-25 water; the anhydrous variety wants of course the last ingredient.

Sulphate of magnesia, the vitriolated magnesia of the late, and sal catharticus amarus of former London Pharmacopoeias, is commonly known by the name of Epsom salt, as it was furnished in considerable quantity by the mineral water at that place, mixed, however, with a considerable portion of sulphate of soda. It is afforded, however, in greater abundance, and more pure, from the bittern left after the extraction of salt from sea water. It has likewise been found efflorescing on brick walls, both old and recently erected, and in small quantity in the ashes of coals. The capillary salt of Idria, found in silvery crystals mixed with the aluminous schist in the mines of

that place, and hitherto considered as a feathery alum, has been ascertained by Klaproth to consist of sulphate of magnesia, mixed with a small portion of sulphate of iron. When pure, it crystallises in small quadrangular prisms, terminated by quadrangular pyramids or dihedral summits. Its taste is cool and bitter. It is very soluble, requiring only an equal weight of cold water, and three-fourths its

weight of hot. It effloresces in the air, though but slowly. If it attract moisture, it contains muriate of magnesia or of lime. Exposed to heat, it dissolves in its own water of crystallisation, and dries, but is not decomposed nor fused, but with extreme difficulty. It consists, according to Bergman, of 33 acid, 19 magnesia, 48 water. A very pure sulphate is said to be prepared in the neighbourhood of Genoa, by roasting a pyrites found there ; exposing it to the air in a covered place for six months ; watering it occasionally, and then lixiviating. Sulphate of magnesia is one of our most valuable purgatives; for which purpose only it is used, and for furnishing the carbonate of magnesia. It is composed of 5 acid + 2-5 magnesia + 7-875 water, in the state of crystals.

Sulphate of ammonia crystallises in slender, flattened, hexahedral prisms, terminated by hexagonal pyramids; it attracts a little moisture from very damp air, particularly if the acid be in excess ; it dissolves in two parts of cold, and one of boiling, water. It is not used, though Glauber, who called it his secret ammoniacal salt, vaunted its excellence in assaying. It consists of 5 acid + 2-125 ammonia -+• 1-125 water in its most desiccated state; and in its crystalline state of 5 acid + 2-125 ammonia + 3-375 water. If sulphate of ammonia and sulphate of magnesia be added together in solution, they combine into a triple salt of an octahedral figure, but varying much; less soluble than either of its component parts; unalterable in the air; undergoing on the tire the watery fcsion ; after which it is decomposed, part of the ammonia flying off, and the remainder subliming with an excess of acid. It contains, according to Fourcroy, 68 sulphate of magnesia, and 32 sulphate of ammonia.

Sulphate of glucina crystallises with difficulty, its solution readily acquiring and retaining a syrupy consistence ; its taste is sweet, and slightly astringent; it is not alterable in the air; a strong heat expels its acid, and leaves the earth pure ; heated with charcoal, it forms a sulphuret; infusion of galls forms a yellowish-white precipitate with its solution.

yttria is readily dissolved by sulphuric acid ; and, as the solution goes on, the sulphate crystallises in small brilliant grains, which have a sweetish taste, but less so than sulphate of glucina, and are of a light amethyst-red color. They require thirty parts of cold water to dissolve them, and give up their acid when exposed to a high temperature. They are decomposed by oxalic acid, prussiate of potassa, infusion of galls, and phosphate of soda.

Sulphate of alumina in its pure state is but recently known, and it was

first attentively examined by Vaunuelin. It may be made by dissolving pure alumina in pure sulphuric acid, heating them for some time, evaporating the solution to

dryness, drying the residuum with a pretty strong heat, redissolving it, and crystallising. Its crystals are soft, foliaceous, shining, and pearly ; hut these are not easily obtained without cautious evaporation and refrigeration. They have an astringent taste; are little alterable in the air; are pietty soluble, particularly in hot water ; give out their acid on exposure to a high temperature ; are decomposable by combustible substances, though not readily; and do not form a pyrophorus like alum. If the evaporation and desiccation directed above be omitted, the alumina will remain supersaturated with acid, as may be known by its taste, and by its reddening vegetable blue. This is still more difficult to crystallise than the neutral salt, and frequently thickens into a gelatinous mass. A compound ot acidulous sulphate of alumina, with potassa or ammonia, has long been known by the name of alum.

Sulphate of zircon maybe prepared by adding sulphuric acid to the earth recently precipitated, and not yet dry. It is sometimes in small needles, but commonly pulverulent; very friable ; insipid ; insoluble in water, unless it contain some acid ; arid easily decomposed by heat. Sulphuric acid is a powerful antiseptic and tonic : it is given, properly diluted, in the dose of from one to three drops with cinchona and other medicines in the cure of fevers and debilities, and it is often applied externally, when very mucli diluted, against psora and some chronic affections of the skin.

SULPHURIC JEuiEK, and SULPHURIC SALTS. See CHEMISTRY, Index.

SULPHUROPRUSSIC ACID. The sulphureted chyazic acid of Porrett. Dissolve in water one part of sulphuret of potassa, and boil it for a considerable time with three or four parts of powdered Prussian blue added at intervals. Sulphuret of iron is formed, and a colorless li-quid containing the new acid combined with potassa, mixed with hyposulphate and sulphate of potassa. Render this liquid sensibly sour, liy the addition of sulphuric acid. Continue tho boiling for a little, and, when it cools, add a little peroxide of manganese in fine powder, which will give the liquid a fine crimson color. To the filtered liquid add a solution containing per-sulphate of copper, and protosulphate of iron, in the proportion of two of the former salt to three of the latter, until the crimson color disappears. Sulphuroprussiate of copper falls. Boil this wftli a solution of potassa, which will separate the copper.

Distil the liquid mixed with sulphuric acid in a glass retort, and the peculiar acid will come over. By saturation with carbonate of harytes, and then throwing down this by the equivalent quantity of sulphuric acid, the sulphuroprussic acid is obtained pure. It is a transparent and colorless liquid, possessing a strong odor, somewhat resembling act-tsc acid. Its specific gravity is only 1-022. It dissolves a little sulphur at a boiling heat. It then blackens nitrate of silver ; but the pure acid throws down the silver white. By repeated distillations sulphur is separated and the acid is decomposed.

SULPHUROUS. See SULPHUREOUS. Sulphurous is preferred to sulphureous by many mo-dern chcirists.

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SuLPiiunous ACID. Sulphur burned at a low temperature absorbs less oxygen than it does when exposed to greater heat, and is consequently acidified in a slighter degree, so as to form sulphurous acid. This in the ordinary state of the atmosphere is a gas; but on reducing its temperature very low by artificial cold, and exposing it to strong compression, it becomes a liquid. To obtain it in the liquid state, however, for practical purposes, it is received into water, by which it is absorbed.

As the acid obtained by burning sulphur in this way is commonly mixed with more or less sulphuric acid, when sulphurous acid is wanted, it is commonly made by abstracting part of the oxygen from sulphuric acid by means of some combustible substance. Mercury or tin is usually preferred. For the purposes of manufactures however, chopped straw or saw dust may be employed. If one part of mercury and two of concentrated sulphuric acid be put into a glass retort with a long neck, and heat applied till an effervescence is produced, the sulphurous acid will arise in the form of gas, and may be collected over quicksilver, or received into water which at the temperature of 61° will absorb thirty-three times its bulk, or nearly an eleventh of its weight. Water thus saturated is intensely acid to the taste, and has the smell of sulphur burning slowly. It destroys most vegetable co-lors, but the blues are reddened by it previous to their being discharged. A pleasing instance of its effect on colors may be exhibited by holding a red rose over the blue flame of a common match, by which the color will be discharged wherever the sulphurous acid comes into contact with it, so as to render it beautifully variegated, or entirely white. If it be then dipped into water, the redness after a time will be restored.

Sulphurous acid is used in bleaching, particularly for silks. It likewise discharges vegetable stains, and iron-moulds from linen. In combination with the salifiable bases, it forms sulphites, which differ from the sulphates in their properties. The alkaline sulphites are more soluble than the sulphates, the earthy less. They are converted into sulphates by an addition of oxygen, which they acquire even by exposure to the air.

SULPICIA, or SULPITIA, an ancient Roman poetess, who lived under the reign of Domitian, and has been so much admired as to be termed the Roman Sappho. We have nothing, however, left of her writings but

a satire, or rather the fragment of one, against Domitian, who published a decree for the banishment of philosophers from Home : which satire is to be found in Scaliger's Appendix Virgiliana. She is mentioned by Martial and Sidonius Appollinaris ; and is said to have addressed a poem on conjugal love to her husband Calenus, a Roman knight. — Mart. Ep. 35.

SULPICIUS SEVERI-S. See SEVERUS. He was contemporary with Rufinus and St. Jerome ; the disciple of St. Martin of Tours, whose life he has written ; and the friend of Paulinus bishop of Nola, with whom he held an intimate correspondence. The style of his Ilistoria Sacra is elegant beyond the age he lived in.

SULTAN, n. s. Arab, sooltan. Tie Turkish emperor.

By this scimitar, That won three fields of sultan Solyman.

Shakspeare*

I affirm the same of the sultanry of the Matna-lukes, where slaves bought for money, and of unknown descent, reigned over families of freemen.

Bacon.

Turn the sultana's chambermaid. Cleaveland.

Lay the towering lultunest aside. Irene.

SULTAN, or SOLDAN, is said by Vattier to be a Turkish word, and to signify king of kings ; adding that it was first given to the Turkish princes Angrolipex and Masgud, about A. I) 1055 ; others will have it originally Persian, alleging, in proof hereof, an ancient medal of C osroes ; others derive it from soldanus, quasi solus dominus : others from the Hebrew BˆIP, schalet or sheleth, to rule. It had its rise under Mahmoud, son of Sebecteghin, the first emperor of the dynasty of the Gaznevides, towards the close of the fourth century of the era of the Hegira : when that prince going to Segestan to reduce Kalaf, governor of that province, who affected the sovereignty, Kalaf was no sooner advertised of his coming than he went out to meet him, delivered the keys of his fortress, and owned him his sultan, that is, his lord or commander. The title pleased Mahmoud so well that he assumed it ever afterwards ; and from him it passed to his descendants, and to other Mahometan princes. It is chiefly confined to the Turkish and Persian monarchs.

SULTANIA, an ancient and considerable town of Persia, in Irac, built in the thirteenth century, on the ruins of the ancient Tigranocerta. It was often a royal residence, and was once one of the largest cities of Asia. It was taken and pillaged by Tamerlane ; but he spared the edifices dedicated to religion. It has a magnificent mosque, and is fifty miles north-west of Casbin, and 225 or 250 N. N. W. of Ispahan.

SULTRY, adj. Imagined by Skinner to be corrupted from sulphury, or sweltry. But Sax. j-ol, like Lat. sol, is both heat and sun. Hot without ventilation ; hot and close.

The sultry breath Of tainted air had cloyed the jaws of death.

Sand v s.

It is very sultry and hot. Shakipeare. Hamlet.

Such as, born beneath the burning sky And sultry sun, betwixt the tropicks lie.

Drydens JEneid. Our foe advances on us, And envies us even Lybia's sultry desarts.

Addison's Cata.

Then would sultry heats and a burning air have scorched and chapped the earth, and galled the ani-mal tribes in houses or dens. Cheyne.

SULZER (John George), a celebrated philosopher, born at Winterthun, in Zurich, October 16th, 1720. He was the youngest of twenty-five children. His early education did not promise much, though it was by no means neglected. He made but a small progress in the learned languages, to prepare him for theology, for which his parents designed him. At sixteen, when he went to the academical school of Zurich, he had no notion of the sciences, nor any taste for study. The first incident that develoned a hidden eerrr

of philosophical genius was his meeting with Wolfe's Metaphysics : this excited his taste for science ; but he wanted a guide. The clergyman with whom he lodged was ignorant; and the academical prelections were as yet above the reach of his comprehension. On the other hand a sociable turn of mind led him often into company, where he lost much time in frivolous amusements, yet without corrupting his morals. The learned Gesner rendered Sulzer's inclination to study triumphant over his passion for amusement. Animated by the counsels and example of this worthy man, he applied himself to philosophy and mathematics with great ardor, and resumed the pursuit of Grecian literature and the Oriental languages. The contemplation of nature became his favorite passion. An ecclesiastical settlement in a rural scene that exhibited happy objects and occasions for this delightful study began to ren-der his days happy and useful; and he published in 1741 Moral Contemplations of the Works of Nature; and in 1742 an account of a journey he had made through the Alps ; which showed his knowledge of natural history, and the sensibility with which he surveyed the beauties of nature, and the grandeur and goodness of its Author. He afterwards became private tutor to a young gentleman at Magdeburg.- This procured him the acquaintance of Messrs.

Maupertuis, Euler, and Sack, which opened to his merit the path of preferment, and advanced him successively to the place of mathematical professor in the King's College at Berlin in 1747, and to that of member of the Royal Academy in 17.50. In this last quality he distinguished himself in a very eminent manner, enriched the class of speculative philosophy with a great number of excellent memoirs, and was justly considered as one of the first-rate metaphysicians in Germany. But his genius was not confined to this branch of science. His Universal Theory of the Fine Arts is a valuable production. A profound knowledge of the arts and sciences, and a perfect acquaintance with true taste, are eminently displayed in this work. The first volume was published in 1771, and the second in 1774. His Remarks on the Philosophical Essays of the late Mr. Hume is a work of real merit, which does justice to the acuteness, while it often detects the sophistry, of the British Bayle. The moral character of M. Sulzer was amiable and virtuous ; and his virtues were animated by that sacred philosophy that forms the Christian, ennobles man, and is the only source of that heart-felt serenity and sedate fortitude which support humanity when every other object of confidence fails. His dying moments were calm, humble, and sublime. He had no enemy ; and his friends were numerous, affectionate, and worthy of the tender returns he made them. Frederick the Great of Prussia distinguished him by repeated marks of munificence and favor, though he had never seen him before 1777. Sulzer died in 1779.

SUM, n. s. & v. a. i Lat. summa ; Fr. somme.

SUM'LESS, adj. I The whole ; many particulars aggregated; compendium; amount; height ; completion ; abridgment : to compute ; comprise; comprehend : in falconry, to have full grown plumage: the adjective corresponds.

The high priest may sum the silver brought in.

„ . 2 Kings xxii.

How precious are thy thoughts unto me, O God ! how great is the sum of them ! Psalm cxxxix. 17.

We may as well conclude so of every sentence, as of the whole sum

and body thereof. Hooker.

This, in effect, is the sum and substance of that which they bring by way of opposition against those orders which we have common with the church of Rome. jj

You cast the* event of war, And summed the' account of war.

Shakspeare. Henry IV. I did send to you For certain sums of gold, which you denied me.

Shakspeare.

Make his chronicle as rich with prize, As is the ouzy bottom of the sea With sunken wreck and sumless treasuries.

Id. Henry V.

In sickness, time will seem longer without a clock than with it ; for the mind doth value every moment, and then the hour doth rather sum up the moments than divide the day. Bacon.

This having learned, thou hast attained the sum Of wisdom. Milton.

So lovely fair !

That what seemed fair in all the world, seemed now Mean, or in her summed up, in her contained. Id.

With prosperous wing full summed. Id.

A sumless journey of incorporeal speed. Id.

To conclude, by summing up what I would say concerning what I have, and what 1 have not been ; in the following paper I shall not deny that I pretended not to write an accurate treatise of colours, but an occasional essay. Boyle.

I appeal to the readers, whether the sum of what I have said be not this. Tillotsun.

SUMATRA, a large island in the eastern seas, obliquely divided by the equator into almost equal parts, is situated the most to the west of all the Sunda chain. Its northern point stretches into the Bay of Bengal ; its south-west coast is exposed to the great Indian Ocean ; towards the south-east it is separated by the Straits of Sunda from the island of Java ; on the east by the China and Eastern Seas from Borneo and

other islands ; and on the north-east by the straits of Malacca from the Malay Peninsula. In length it may be estimated at 1050 miles, by 165 miles the average breadth. Among the eastern people generally, and the better informed of the natives, this island is known by the names of Pulo I'uri-chu and Indalas; the origin of the name Sumatra is uncertain. By Marco Polo it is called Java Minor.

A chain of mountains runs through its whole extent, the range being in some parts double and triple; but, in general, much nearer the western than the eastern shore. Its distance from the sea on the former side is seldom more than twenty miles, but on the latter a level country intervenes of at least 150 miles in the broadest part. The height of these mountains is not sufficient to cause them to be covered with snow during any part of the year. The highest point visible from the sea is Mount Ophir, which is situated nearly under the equator, and is stated by Marsden to be 13,842 feet high-Many other points are also very elevated, and the sum - mit of a volcano, south of Mount Ophir, is said,

by the same writer, to be 12,465 feet above the sea. Between these ridges there are extensive plains of considerable height, which render the air cool, and make them the most desirable parts of the island. They are consequently the best peopled, and the most cleared from woods, which, in other parts, cover both hill and valley with perpetual shade. Many large and beautiful lakes are interspersed amid these mountains, which greatly facilitate the intercourse between the adjacent districts. These are represented as of great extent, but of uncertain situation, as the accounts are merely derived from the natives, who have not the means of correctly determining their positions. One in the Lampon,' country, towards the southern extremity of the island, is navigated by large boats with sails, and is said to require a day and a night to cross it; but it is not said at what season. Few parts of the world, indeed, are better supplied with water. Numerous streams descend from the interior to the coasts, and water the intervening regions. From the proximity of the elevated tracts,

those on the west are too small and rapid for the pur- } oses of navigation, but those on the opposite side of the island, flowing through a much wider space, accumulate a great number of subsidiary streams, and acquire a more equable and gentle current before they reach the sea. They are iherefore navigable for many miles from the coast ; but the entrance of most of them is impeded by sand banks thrown up by the violent surf that continually beats against the shore. The same cause also compels many of them to run nearly parallel to the coast before they mingle their wa-ters with the sea.

As to the climate of this island, Mr. Marsden observes, ‘ The heat of the air is by no means so ntense as might be expected, in a country occupying the middle of the torrid zone. It is more temperate than in many regions within the tropics, the thermometer at the most sultry hour, which is about two in the afternoon, generally fluctuating between 82° and 85°. I do not recollect • o have ever seen it higher than 86° in the shade, ;it Fort Marlborough ; although at Natal, in lat. ::4’ N., it is not unfrequently at 87° and 88°. At fun-rise it is usually as low as 70°; the sensation of cold, however, is much greater than this would seem to indicate, as it occasions shivering and a chattering of the teeth ; doubtless from t.he great relaxation of the body and openness of the pores in that climate ; for the same temperature in England would be esteemed a considerable degree of warmth. These observations on the state of the air apply only to the districts near the sea coast, where, from their comparatively low situation, and the greater compression of the atmosphere, the sun’s rays operate more powerfully. Inland as the country ascends, the degree of heat decreases rapidly, insomuch that, beyond the first range of hills, the inhabitants find it expedient to light fires in the morning, and continue them till the day is advanced, for the purpose of warming themselves ; a practice unknown in other parts of the island ; and in the journal of lieutenant Dare’s expedition it appears that, during one night’s halt on the summit of a mountain, in the rainy season, he lost several of his

party from the severity of the weather, whilst the thermometer was not lower than 40°. The atmosphere is in common more cloudy than in Europe, which is sensibly perceived, from the unfrequency of clear starlight nights. This may proceed from the great rarefaction of the air occasioning the clouds to descend lower, and become more opaque, or merely from the stronger heat exhaling from the land and sea a thicker and more plentiful vapor. The fog, called kabut by the natives, which is observed to rise every morning among the distant hills, is

dense to a surprising degree ; the extremities of it, even when near at hand, being perfectly defined; and it is seldom observed to disperse till about three hours after sun-rise.' Thunder and lightning are so common here that they scarcely attract the attention of persons who have been long resident : but during the north-west monsoon the explosions are extremely violent-. The sky frequently seems on fireˆ and the agitation of the ground resembles a slight earthquake. In the opposite monsoon the lightning is more constant, but the coruscations are less vivid, and the thunder more feeble. Some variation-takes place in the monsoon in the different parts of the archipelago, as well as on the opposite coasts of the Indian peninsula. On the west side of Sumatra, and south of the equator, the south-east monsoon, or dry season, commences in May, and declines in September. The wind sets in from the opposite quarter in November, and the heavy rains cease in March. Variable wind and weather occupy the intermediate periods. In both this and the other countries within the tropics, the land and sea breezes alternately prevail, and contribute greatly towards mitigating the intensity of the solar rays.

The soil is in general a black mould upon a substratum of red clay, which produces an exuberance of vegetation ; . and what would be one of the most productive countries on the globe, if properly cultivated, naturally, becomes an impervious forest. Rice is the staple product of agriculture, and the crops are often very abundant. According to the historian of Sumatra the return is frequently a hundred-fold. Nearly all the vegetables and animals of the torrid zone are to be found in this island, which also abounds in minerals and fossil treasures. It has in all ages been noted for its gold, besides which there are copper, iron, tin, and sulphur, saltpetre, and coals, with other-fossils. Petrifactions, and all the substances ejected by volcanoes, are also met with, and coral reefs are formed in many places off the coast. The English settlement at Bencoolen, or Fort Marlborough, is near the western shore, in 3° of S. lat. Belonging to the residency at Bencoolen are a number of districts chiefly inhabited by the tribe of Sumatrans called Rejang, who are a peaceable and inoffensive race. These tracts are devoted to the growth of pepper, of which they yield about 1000 tons annually. The culture of the clove and nutmeg has also been introduced.

Acheen, or Achin, the most celebrated native kingdom of the island, occupies the north-west extremity of the island. See ACHEEN. It is the only one whose political importance has been thought sufficient to render its transactions the

subject of general history. Acheen the capital is situated on a plain near the banks of a river, about a league from the sea.

Among tlie productions of Sumatra which are regarded as articles of commerce, the most abundant, and formerly the most important, was pep-per, of which the East India Company used to export large quantities, but it is now reduced to one solitary cargo annually of the value of about £15,000. The white pepper is made by bleaching the grains of the common sort, by which it is deprived of its exterior pellicle. This article takes little damage by submersion in sea water. On the capture of the Moluccas, in 1796, nut-meg and clove plants were introduced, and have since rapidly increased. There are now, according to major Hamilton, above 20,000 nutmeg t<-ees in full bearing, capable of yielding annually 200,000 Ibs. and 56,000 Ibs. of mace. Among the most valuable productions of the is-land is camphor, for which Sumatra and Borneo have been celebrated from the earliest times. The tree is sometimes fifteen feet in circumference, the camphor being found in a concrete state in the natural fissures and crevices of the wood. The natives cut down a great many trees at random before they find one that contains a sufficient quantity to repay their labor, although always assisted in their research by a professional conjurer, whose skill must be chiefly employed in concealing or accounting for his own mistakes. The whole quantity brought for sale rarely exceeds fifty peculs (133j Ibs. each). The trade is chiefly in the hands of the Acheenese, who buy the article from the Batta people, and dispose of it to the Europeans and Chinese. The Japan camphor is of a very inferior quality.

Benzoin, or benjamin, is found almost exclusively in the Batta country. The best is sent to Europe, and the inferior sort is exported to Arabia, Persia, and some parts of Hindostan, where it is burned to perfume their temples and private houses. From England it is re-exported to the Roman Catholic and Mahometan countries, to be used as incense. It is also employed in medicine as a styptic. Cassia is also produced and exported, and rattans furnish annually many cargoes. The annual and the shrub cotton are cultivated by the natives, but only in sufficient quantities to supply their own wants. The silk cotton is a most

beautiful raw material, but owing to the shortness and brittleness of the staple is unfit for the reel and the loom, and is only applied to the unworthy purposes of stuffing pillows and mattresses. The coffee tree is universally planted, but the berry is not of a good quality, probably owing to the want of skill in the management. Among the other articles of commerce are danimer, a species of turpentine or resin ; dragons' blood, a drug obtained from a large species of rattan ; gambir, a juice extracted from the leaves of a plant of the same name. Lignum aloes, or agila wood, highly prized in the east for its fragrant scent while burning.

The forests contain an inexhaustible store and endless variety of timber trees, many sorts of which are capable of being applied to ship-

building; but the teak does not appear to be indigenous to the island, although it flourishes to the northward and southward, in Pegu and Java. The other remarkable trees are the poon, so named from a Malay word, which signifies wood in general, and is preferred for masts and spars. The camphor wood is used for carpenters' purposes. The iron wood so named on account of its hardness. The marbau, used as beams for ships and houses. The pinaga, valuable as crooked timber from frames and knees. The ebony ; the kayu gadis, a wood possessing the flavor and qualities of sassafras ; the rangi,˚supposed to be the manchineel tree of the West Indies, has a resemblance to mahogany. Of the various sorts of trees producing dammer, some are also valuable as timber, and here also is found the spreading banyan tree of Hindostan.

In the central parts of the island gold is procured, and Menancabow has always been esteemed the richest in this metal. In the districts inland from Padang, which is the principal mart, it is collected from mines, and from the channels of rivers ; pieces of gold have also occasionally been found, weighing nine ounces and upwards. Probably only one-half of all the gold procured reaches the hands of Europeans ; yet it is asserted, on good authority, that from 10,000 to 12,000 ounces have been annually received at Padang alone, at Nalaboo 2000, at Natal 800, and at Mocomoco 600. The merchants carry the gold from the interior to the sea coast, where they barter it for iron and iron working tools, opium, and the fine piece goods of Madras and Bengal. When bought at the settlements, it used formerly to be purchased at the rate of £3 5s. per ounce, but afterwards rose to £3 18s., which would yield no profit on exportation to Europe. In many parts of the country it is employed instead of coin, every man carrying

a small pair ot scales about with him. At Acheen small thin gold coins were formerly struck, but the coinage has been abandoned in modern times. Silver is not known as a production of Sumatra. Tin is a considerable article of trade, the mines of which are situated on the island of Banca. Iron ore is dug on Sumatra, but not in large quantities, the consumption of the natives being supplied with English and Swedish bar iron. Sulphur is procured from the volcanoes, and yellow arsenic is an article of traffic. In the country of Kuttaun are extensive caves, from the soil of which saltpetre is extracted; and from similar caverns the edible bird nests are procured for the China market, where also the biclie de mar is sent, and is there employed as a seasoning. At Batavia the last article sells for forty-five dollars per pecul of 133J Ibs. The other exports are bees' wax, gum lac, and ivory. Elephants vvere formerly exported from Acheen to the Coromandel coast, in vessels built on purpose, but this trade has long declined.

The most general articles of import, says Mr. Hamilton, are the following. I'rom the coast of Coromandel various cotton goods, such as long cloth, blue and white chintzes, colored handkerchiefs, and also salt. From Bengal muslins striped and plain; and several kinds of cotton

goods, as baftaes, cossaes, hummums, &c., taf-fetas and some other silks, and opium in considerable quantities. From the western coast of India various cotton goods, mostly of a coarse fabric. From China coarse porcelain, iron pans in sets of different sizes, tobacco shred very fine, gold threads, fans, and a number of small articles. From Celebes (known here by the name of its chief provinces, Macassar, Buggess, and Mandar), Java, Bally, Ceram, and other eastern islands, the rough striped cotton cloth, commonly called Buggess clouting, the universal body dress of the natives ; creeses, and other weapons ; silken creese belts, tudongs. or hats, small pieces of ordnance, commonly of brass, called rantaka, spices, salt of a large grain, and sometimes rice, chiefly from Bali. From Europe are imported silver, iron, steel, lead, cutlery, various sorts of hardware, brass wire, and

broad cloths, especially scarlet.

‘ The beautiful gold and silver filagree work of Sumatra has long been celebrated and admired, and is a matter of still greater curiosity from the extreme coarseness of the tools employed in the manufacture. From a piece of old iron hoop the wire drawing instrument is made, a hammer head stuck in a block serves for an anvil ; and a pair of compasses is seen composed of two old nails tied together at one end. The gold is fused in a piece of a rice pot ; in general they use no bellows, but blow the fire with their mouths through a joint of bamboo. If the quantity of gold to be melted be considerable, three or four peisons sit around their furnace, which is an old iron pot, and blow altogether. But little skill is shown by the natives in forging iron. They make nails, although seldom used in building They are ignorant of the use of the saw, except where it has been introduced by the Europeans. Painting and drawing they are strangers to ; in carving they are fanciful, and their designs grotesque, and always out of nature. Silk and cotton cloths manufactured by themselves are worn by the natives in all parts of the country. Their looms and weaving apparatus are extremely defective. They manufacture different kinds of earthenware of a coarse fabric ; and extract the cocoa nut oil, which is in general use. Gunpowder is manufactured in various parts of the island, but less in the southern provinces than among the people of Menancabow, the Battas, and the Acheenese, whose frequent wars demand large supplies. The powder is very imperfectly granulated, being often hastily prepared in small quantities for immediate use. Salt is mostly supplied by cargoes imported, but they also manufacture it themselves by a very tedious process.’

Among the modern political divisions of the island, the principal are the empire of Menancabow and the Malays ; in the next place, the Acheenese; then the Battas, the Rejangs, and next to them the people of Lampong. The chain of islands which extends in a line nearly parallel to the western coast, at the distance of little more than a degree, are inhabited by a race, or races of people, apparently from the same original stock as those of the interior of Sumatra. Their genuineness of character has been preserved to a

remarkable degree, whilst the islands on the eastern side are uniformly peopled with Malays, Until about 100 years ago the southern coast of Sumatra, as far as the Urei River, was dependant on the king of Bantam in Java, whose lieutenant came yearly to Bencoolen, or Sillebar, to collect pepper, and fill up the vacancies.

Almost all the forms of government throughout Sumatra are a mixture of the feudal and patriarchal ; but the system of government among the people near the sea coast is much influenced by the power of the Europeans. The districts over which the East India Company's influence extends are preserved in a state of uninterrupted peace, and, were it not for this coercion, every village would be in a state of perpetual hostility with its neighbour. The form of government among the Rejangs applies generally to the Orane ulu, or inhabitants of the interior. Among the hills and woods property in land depends upon occupancy, unless where fruit trees have been planted ; and, as there is seldom any determined boundary between neighbouring villages, such marks are rarely disturbed.

The Sumatran laws are properly a set of long established customs handed down to them from their ancestors, the authority for which is founded in usage and general consent. The law which renders all the members of a family reciprocally bound for each other's debts, forms a strong connexion amon,j them. When a man dies, his effects descend to his children in equal shares. The Sumatran code admits of a pecuniary compensation for murder, on which account their laws take no cognisance of the distinction between a wilful murder and what we term manslaughter. Corporeal punishment of any kind is rare. The place of the greatest solemnity for administering an oath is the burying ground of their ancestors ; and they have certain reliques, or swearing apparatus, which they produce on important occasions. These generally consist of an old broken creese, a broken gun barrel, some copper bullets, or any thing else to which chance or caprice has annexed the idea of extraordinary virtue. These they generally dip in water, which the person who swears drinks off, after pronouncing a form of words. At Manna the relique most venerated is a gun barrel, which, when produced to be sworn on, is carried to the spot wrapt up in silk, and under an umbrella. The Sumatran impressed with the idea of invisible powers, but not of his own immortality, regards with awe the supposed instruments of their agency, and swears on creeses, bullets, and gun barrels, weapons of personal destruction.

Slavery is established in this island, as it is universally throughout the east ; yet but few instances occur of the country people actually having slaves, although they are common in the Malayan or sea-port towns. At Bencoolen the East India Company have a body ot negro slaves. These hold the natives of the island in great contempt, have an antipathy to them, and enjoy any occasion of doing them mischief; the Su-raatrans, on the other hand, consider the negroes merely as devils half humanized.

The inhabitants are rather below the middle size ; their limbs are, for the most part, sliglu,

‘jut well shaped, and are particularly small at the wrists and ancles. The women follow the preposterous custom of flattening the noses and compressing the skulls of children newly born, and also pull out the ears of the infants to make them stand at an angle with the head. The males destroy their beards, and keep their chins remarkably smooth. Their complexion is pro-peily yellow, wanting the red tinge that constitutes a tawny or copper color. The females of the upper classes, not exposed to the rays of the sun, approach to a degree of fairness. Persons of superior rank encourage the growth of their hand nails to an extraordinary length ; the hands of the natives generally, and even those of the half breed, are always cold. The inland natives are superior in size and strength to the Malays on the coast, and possess also fairer complexions. Among the hills the inhabitants are subject to monstrous wens, or goitres on the throat. Both sexes have the extraordinary cus-tom of filing and disfiguring their teeth, which are naturally very white and beautiful, from the simplicity of their food. Many, particularly the women of the Lampong country, have their teeth rubbed down even with their gums ; others have them formed into points, while some file off no more than the outer extremities, and then blacken them with the empyreumatic oil of the cocoa nut shell. The great men set their teeth in gold, by casing with a plate of that metal the under row; which ornament, contrasted with the black dye, has by candle light a very splendid effect. It is sometimes indented to the shape of their teeth, but more usually is quite plain, and it is not removed either to sleep or eat. The original clothing of the Sumatrans is the same with that found by navigators among the South Sea Islands, and in Europe generally called Ota-heitan cloth. It is still used among the Rejangs as their working dress, hut the country people now conform to the costume of the Malays.

The dusuns, or villages for the inhabitants, are so few that they are not entitled to the name of towns, are always situated on the banks of

a ri-ver or lake, for the convenience of bathing and of transporting goods. Their buildings are of wood and bamboos, covered with palm leaves. The frames of the houses rest on stout wooden pillars, about six or eight feet in height, and are ascended to by a piece of stout bamboo cut into notches. Detached buildings in the country are raised ten or twelve feet from the ground, as security against tigers. The furniture is extremely simple, and neither knives nor forks are required, as in eating they take up the rice and other victuals between the thumb and fingers, and throw it into the mouth by the action of the thumb. The art of medicine here consists almost entirely in the application of simples. Every old man and woman is a physician, and their rewards depend on their success, but they generally procure a small sum in advance, under the pretext of purchasing charms. In fevers, during the paroxysm, they pour over the patient a quantity of very cold water, which afterwards brings on a copious perspiration. The venereal disease, although common in the Malay bazars, is little known in the interior.

On the sea-coast the Malay language is intermixed with the Batta and other original languages. The Malays fix the length of the year at 354 days, or twelve lunar months of twonty-nine days and a half each ; the original Sunm-trans count their years from the number of their crops of grain. They are fond of music, and have many instruments, mostly borrowed from the Chinese. The Malays of Sumatra use the Arabic character, and have incorporated a great many Arabic, and also Portuguese words, in their language. The other principal languages of Sumatra are the Batta, the Rejang, and the Lampong ; the difference between them being chiefly marked by their being expressed in distinct written characters. They write on the inner bark of a tree, and on bamboos, and form their lines from their left hand towards the right. The native Sumatran of the interior differs in some respects from the Malay of the coast, being mild, peaceable, and forbearing, unless when roused by violent provocation. lie is temperate and sober, his diet being mostly vegetable, and his only beverage water. Their hospitality is very great with very simple manners ; and they are in general, except among the chiefs, devoid of the Malay cunning and chicane. On the other hand they are litigious, indolent, and addicted to gaming, dishonest in their dealings with strangers, which they consider as no moral defect, regardless of truth, mean, servile; and, though cleanly in their persons, filthy in their apparel, which they never wash. They are careless and improvident of the future, and make no advances in improving their condition. The Macassars and Buggesses, who come annually from Celebes in their prows to trade at

Sumatra, are looked up to by the Sumatrans and Malays as their superiors in manners. They also derive part of the respect paid to them from the richness of their cargoes, and the spirit with which they spend the produce in gaming, cock fighting, and smoking opium. Through every rank of the people theie prevails a strong propensity to gam-ing, and to cock-fighting they are still more passionately addicted. The artificial spur used resembles the blade of a scimitar, and proves a more destructive weapon than the European spur. The Malay breed of cocks are much esteemed by connoisseurs who have had an opportunity of trying them. In some places they match quails in the manner of cocks, which fight with great inveteracy, and endeavour to seize each other by the tongue.

The Sumatrans generally, but more particularly the Malays, are much addicted to the custom of smoking opium. The poppy which produces it not growing on the island, it is annually imported from Bengal in considerable quantities, in chests of 140 Ibs. each, and on the west coast about 20,000 Ibs. are used annually. It is mixed up with tobacco into the form of pills about the size of a pea, which quantity is consumed at one whiff. The smoke is never emitted by the mouth, hut usually receives vent through the nostrils, and sometimes by adepts through the passages of the ears and eyes. Although so much opium is smoked in this island, the practice of running a muck (call-ed by the natives mangamok) is by no means fre-

quent. It is remarkable that at Batavia, where the criminals are broken on the wheel with every jipcrravation of cruelty, mucks or deadly affrays often occur ; while at Beticoolen, where they are executed in the easiest manner, the offence is extremely rare. On the west coast the Malays have been so long accustomed to the mild government of the British, that their manners and habits are considerably improved ; while on the east coast they continue ferocious, sanguinary, and treacherous. The original Sumatran vessel for boiling rice, and which is still used for that purpose, is a joint of green bamboo. By the time the rice is dressed, the utensil is nearly destroyed by the fire ; but it

resists the flame so long as there is no moisture within. Although the natives subsist in a great measure on vegetable food, they are not restrained by any prejudice of caste from other aliments ; and accordingly, at their entertainments, the flesh of the buffalo, the goat, and fowls, are served up. Their dishes are almost all dressed as curries, and their flesh meat is cooked immediately after it is killed, which is still warm. Sago, although common, is not in such general use at. among the more eastern islands, where it is employed as a substitute for rice. When these articles of subsistence fail, the Sumatran finds others in the woods ; hence famines in the island are never attended with any very destructive consequences.

The natives are in general good speakers, the gift of oratory seeming natural to them. A Sumatran ever scrupulously abstains from pronouncing his own name, not from any motive of superstition, but merely as a punctilio in manners : and it occasions him infinite embarrassment when a stranger, unacquainted with their customs, requires it of him. As soon as he recovers from his confusion, he solicits the interposition of his neighbour. They can seldom give an accurate account of their age ; but, so far as can be inferred from observation, not a great proportion of the men attain the age of fifty, and sixty is accounted a long life.

If by religion is meant a public or private form of worship of any kind, and of prayers, processions, meetings ; offerings, images, or priests, are all or any of them necessary to constitute it ; the Rejangs, that race of Sumatrans with which we are most acquainted, are totally without religion, and cannot with propriety be even termed pagans, if that phrase is understood to convey the idea of mistaken worship. They neither worship God, devil, nor idol. They are not, however, without superstitious beliefs of many kinds ; and have a confused notion, though perhaps derived from their intercourse with other people, of some superior beings, who have the power of rendering themselves visible and invisible at pleasure. These they call orang alus, fine or impalpable beings, and regard them as possessing the faculty of doing them good or evil. They also call them maleikat and jin, which are the angels and evil spirits of the Arabians, and the idea was probably borrowed at the same time with the name. They have no word in their language to express the person of God ex-cept the ‘Allah tala’ of the Malays, corrupted by them to ‘ Ulah talo.’ The Sumatrans, where

untinctured with Mahometanism, do not appear to have any notion of a future state. Where Mahoinetanism prevails boys are circumcised

between the sixth and tenth year.

The superstition which has the strongest influence on their minds, and which approaches the nearest to a species of religion, is that which leads them to venerate, almost to the point of worshipping, the tombs and manes of their deceased ancestors. They have an imperfect notion of a metempsychosis, but not in any degree systematic, nor considered as an article of religious faith. They seem to think in general that tigers are actuated by the spirits of deceased men, and speak of them with a degree of awe. They relate stories also of a place in the interior country, where the tigers have a court, and maintain a regular form of government, and have their houses thatched with women's hair. The Sumatrans are also firmly persuaded, that various par ticular persons are what they term betuah (sacred impassive, invulnerable and not liable to accident) ; and this quality they extend to things inanimate, such as ships and boats.

Few attempts have ever been made by mis sionaries, or others, to convert the inhabitants of this island to Christianity. Of the many thousands baptised in the Eastern Isles by the celebrated Francis Xavier, in the sixteenth century, not one of their descendants are now found to retain a ray of the light imparted to them. As it was novelty only, and not conviction, that induced the original converts to embrace a new faith, the impression lasted no longer than the sentiment which recommended it, and disappeared as rapidly as the missionary. Under the influence, however, of the Spanish government at Manilla, and of the Dutch at Batavia, there are many native Christians educated as such from their childhood. The neglect of missions to Sumatra is one of the causes that the interior of the country is so little known. From various sources of information, sufficiently distinct from each other, the conclusion may be drawn, that the Mahometan religion had not made any considerable progress in the interior of Sumatra earlier than the fourteenth century. The province of Menancabow, although situated inland, is by far the most completely converted, the inhabitants being wholly Mahometans. Perhaps it is less surprising that this one kingdom should have been completely converted than that so many districts should remain to this day without any religion whatever. Every thing conspires to induce the Sumatran to embrace a system of belief, and scheme of instruction, in which there is nothing repugnant to prejudices already imbibed ; he relinquishes no favorite ancient worship to adopt a new, and is manifestly a gainer by the exchange.

SUMBHAWA, a large island of the eastern seas, situated between 8° and 9° S. lat., separated from Lombhook by the Straits of Allass ; in

length it may be estimated at 180 miles, by forty the average breadth. It is deeply indented near the middle, by an extensive bay, which almost divides it into two portions.

This island contains the petty states of Bi:T>a, Dompo, Tambora, Sangar, Papikat, and Sutnb-

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havva. Tlieir chiefs were either the allies of, or with the Mahanuddy. At this place, after the

under the protection of the Dutch East India rains, the natives find the diamonds in the red

Company ; and were all sufficiently obedient, earth of the river Hebe. The matrix is a clay,

except the last, which was refractory, being in-which appears burned red, nearly to the decree'

stigated thereto by the Macassars and Wadjorese bricks usually are.

of Celebes, who resort in great numbers to this SUM'MARY, adj. 8cn.s. 1 FT. sommairc ; or

island, especially the latter. Country ships here SUM'MAIULY, adv.] from Sum. Slio'rt ;

procure articles of trade for the China market ; brief; compendious : a compendium or abstract :

and, in 1778, sapan wood to the amount of the adverb corresponding

580,000 Ibs weight was exported from this The decalogue of Moses declareth mnmaril3 tho.,

island, and sold in Holland. The Dutch trade things which we ought to do; the prayer of our

to Sumbhawa was under the superintendance of Lord, whatsoever we should request or desire,

the Macassar residency. linker.

Bima is at the east end of Sumbhawa, and We are enforced from our most quiet sphere

comprehends under its jurisdiction the Straits of By tne rough torrent of occasion ;

Sapy, the whole of Manjeray, and the island of And have ‘he summary of all our griefs,

Goonong Api. The Bima language extends over When time sha11 s*rve > to show in articles.

the east part of Sumbhawa, and the western portion of the Island of Ende, denominated Floris by the early Portuguese navigators. The dialect of Sumbhawa, which prevails in the districts not subject to the sultan of Bima, is of a more mixed character than that of Bima. Neither the latter,

Shahs] > eare. Henry IV. When the parties proceed summarily, and thcv chuse the ordinary way of proceeding, the cause is made plenary. Aiitijfe.

In that comprehensive summary of our duty to God, there is no express mention thereof. Rogers. The judge

nor the Sumbhawa, have any peculiar character, Directed them to mind their brief,

but use indifferently the Buggess or Malay characters, ton.

SUMBHOONAUTH, a town and temple in the Shoorkhali territories, in Nepaul, in lat. 27° 33’ N., long. 85° 38’ E. The temple is a very ancient edifice, having been erected when Nepaul was subject to the Tibet race, who, having been expelled by the Newars, obtained the name of Khat Bhooteas (or Bhooteas of Catmandoo), which they preserve : at present they occupy the

Nor spend their time to shew their reading ; Stavorinus and Notes, Ley den, Hamil-She’d have a summary proceeding. Swift.

SUM’MER, n. s., v. n., & / Saxon j-umen;

SUM’MERHOUSE, n. s. [v. a. \ Belg. sower, -Goth. xuniar. The season

in which the sun arrives at the hither solstice : to pass the summer : to keep warm : a summerhouse is a garden apartment used chiefly in summer.

He was sitting in a summer parlour.

Judges iii. 20. The fowls shall summer upon them, and all the

Kutchar mountains. The possession of the tern-beasts shall winter them /M'ia/J xviii ti

pie is claimed by the Delai lama (the sovereign pontiff of Lehassa), as a dependency on his spirituality. Upon the rupture which took place some years ago between the Tibetians and Ne-paul, the lama's vicar was obliged to evacuate the sanctuary, which was afterwards held on the part of the Deb rajah of Bootan. The temple principally visited by the Bootias and Bahauras is on the terrace of a hill, and is distinguished at a great distance by its spires covered with plates of copper, highly gilt. It is chiefly celebrated for its perpetual fire, the priests asserting that the flame of the two largest lamp wicks have been preserved from time immemorial.

SUMBHULPOOR, or SAMBHALPURA, a town

and district in the province of Gundwana, situ-Resplendent as the blaze of summer noon, ated between the twenty-first and twenty-second Orˆthe pale radiance of the midnight moon. parallels of N. lat. This territory takes its name from the capital, but the rajah is styled Rajah Autaraghur, or the rajah of eighteen forts. It is bounded on the west by the district of Ruttun-poor and Boora Shumbur ; to the east by Bim-bera, Landacoli, and Boad ; to the south by Patna and Coondon ; and on the north by Gang-poor and Sirgoojah. The air is very unwholesome, owing to the quantity of jungle. The soil in the valleys is a rich loam, in which grain or pulse thrive; and in the mountains gold and diamonds are found. The natives, in washing

the sand of the rills that descend from them,

procure considerable quantities of gold. The mer is the quarter during which, in northen diamonds are found about thirteen miles beyond climates, the sun passes through the signs Sumbhulpoor, near the junction of the Hebe cer, Leo, Virgo, or from the time of the gro

Can’t such things be, And overcome us like a summer’s cloud, Without our special wonder? Sliakspeare. Macbeth.

Maids well summered, and warm kept, are like flies at Bartholomew-tide, blind, though they have thuir eyes. Shakspeare.

I’d rather live

With cheese and garlick, in a windmill, far Than feed on cates, and have him talk to me, In any summerhouse in Christendom.

Id. Henry IV. In all the liveries decked of summer’s pride.

JUiltim. Dry weather is best for most summer corn.

Mortimer. The dazzling roofs.

With here a fountain, never to be played And there a summerhouse that knows no shade. <•

Child of the sun, See sultry summer comes. //ium.v’».

SUM’MER, n. s. (Trabu summaria). The prii.- cipal beams of a floor.

Oak, and the like true hearty timber, may lc better trusted in cross and transverse works for summers, or girders, or binding beams. II i>l/ <w.

SUMMER, one of the quarters of the year, when the year is divided into four quarters, or one-half when the year is divided only into summer and winter. In the former case. MUD-

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declination, till the sun come 4.o the equinoctial again, or have no declination ; which is from about the 21st of June till about the 22d of September. In the latter case, summer contains the six warmer months, while the sun is on one side of the equinoctial ; and winter the other six months, when the sun is on the other side of it. See METEOROLOGY.

SUMMER FALLOWING, in agriculture, a term applied to the process or practice of frequently ploughing and working over arable land at. this season, with the view of clearing it of wteds. It is chiefly had recourse to for crops of the •wheat kinds, but sometimes for those of the barley, turnip, and some other sorts, which require a fine mouldy clean state of the more superficial pans of the soil. Sir II. Davy in his Agricultural Chemistry has supposed that the chemical theory of summer-fallosving is very simple. It affords, it is said, no new source of riches to the soil or land ; it merely tends to produce an accumulation of decomposing matter, which in the common course of crops would be employed as it is formed ; and that it is scarcely possible to imagine a single instance of a cultivated soil, which can be supposed to remain in summer-fallow for a year with advantage to the farmer. The only cases where this practice can be beneficial, it is said, seem to be those in which it may be used for the destruction of weeds, and for cleansing such soils as are in a foul condition. In this ancient practice, which is still extensively made use of, the soil or mouldy surface earth is much exposed to the air, and submitted to different processes, which are purely of a mechanical nature. It is thought that the benefits arising from fallows, or fallowings, have been much overrated ; that a summer-fallow, fallowing, or a clean fallow, may sometimes be necessary on lands overgrown with weeds, especially if they be lands which cannot be pared and burnt with advantage; but that it is certainly unprofitable as a part of a general system in husbandry 01 management of land.

It has been supposed, it is said, by some writers, that certain principles necessary to fertility are derived from the atmosphere, which are exhausted by a succession of crops ; and that these are again supplied during the repose of the land, and the exposure of the pulverised or broken down parts of the soil to the influence1 of the air ; but that this, in truth, is not the case. The earths commonly found in soils cannot, it is said, be combined with more oxygen; none of them unite

with azote; and such of them as are capable of attracting carbonic acid are always saturated with it in those soils on which the practice of summer-fallowing is adopted. The vague ancient opinion of the use of nitre, and of nitrous salts, in vegetation seems, it is said, to have been one of the principal speculative reasons for the defence of summer-fallows or fallowings. Nitrous salts are produced, it is said, during the exposure of soils containing vegetable and animal remains, and in the greatest abundance in hot weather ; but that it is probably by the combination of azote from these remains with oxygen in the atmosphere, that the acid is formed ; and at the

expense of an element which otherwise would have formed ammonia; the compounds of which are evidently much more efficacious than the nitrous compounds in assisting vegetation.

It is further noticed, on the subject, that when weeds are buried in the soil, by their gradual decomposition they furnish a certain quantity of soluble matter ; but that it may be doubted whether there is as much useful manure in the land at the end of a clean fallow, or fallowing, as at. the time the vegetables clothing the surface were first ploughed in. Carbonic acid gas is formed during the whole time by the action of the vegetable matter upon the oxygen of the air, and the greater part of it is lost to the soil in which it was formed, being dissipated in the atmosphere. The action of the sun, too, upon the surface of the soil or land tends, it is said, to disengage the gaseous and the volatile fluid matters that it contains ; and heat increases the rapidity of fermentation ; and, in the summer-fallow or fallowing, nourishment is rapidly produced, at a time when no vegetables are present capable of absorbing or drinking it up, by which much waste is the consequence.

It is justly concluded that land, when it is not employed in preparing food for animals, should be applied to the purpose of the preparation of manure for plants ; which is effected by means of green crops, in consequence of the absorption of carbonaceous matter in the carbonic acid of the atmosphere. But that in a sum-mer's fallow, or fallowing, a period is constantly lost, in which vegetables may be raised, either as food for animals, or as nourishment for the next crop ; and that the texture of the soil or land is not so much improved by its exposure then as in the winter season, when the expansive powers of frost and ice, the gradual dissolution of snows, and the alternations from wet to dry, tend to pulverize and reduce it, and to blend its different parts together more fully. From these facts and circumstances it is evident that the practice of summer-fallowing should be had recourse to as

little as possible by the farmer, as there is obviously much waste and loss by it in other ways than by the length of time the land lies idle and unproductive.

SUM'MERSAULT, n.s.) Fr. soubresault.

SUM'MERSET. J A high leap, in

which the heels are thrown over the head.

And if at first he fail, his second summersault He instantly assays. Drayton.

Some do the summersault,

And o'er the bar like tumblers vault. Hudibras. Frogs are observed to use divers summersaults.

Walton.

The treasurer cuts a caper on the strait rope : I have seen him do the m nmerset upon a trencher fixed on the rope, which ii no thicker than a com-mon packthread. Swift.

SUM'MIT, n. s. Lat. summit*!. The top , the utmost height.

Have I fall'n or no 1

— From the dread summit of this chalky bourn ! Look up a-height, the shrill-gorged lark so far Cannot be seen or heard. Shakspeare. King I^ear.

.(Etna's heat, that makes the summit glow, Enriches all the vales below. Swift.

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SUM'MON, v.a. \ Lat. summoneo. To call

SUMMONER, w. s. > with authority; admonish

SUMMONS. 3 to appear; cite; call up;

excite : a summoner is he who cites or summons : summons, the call or admonition made ; citation ; authoritative call.

Catesby, sound lord Hastings, And summon him to-morrow to the Tower.

Shakspeare. Richard III. Close pent up guilts, Rive your concealing continents, and ask These dreadful summoners grace. Id. King Lear.

When the blast of war blows in our ears, Stiffen the sinews, summon up the blood.

Id. Henry V.

The tirsan is assisted by the governor of the city where the feast is celebrated, and all the persons of both sexes are summoned to attend. Bacon.

He sent to summon the seditious, and to offer par-don ; but neither summons nor pardon was any thing regarded. Hay ward.

The course of method summoneth me to discourse of the inhabitants. Crete's Survey of Cornwall.

The sons of light

Hasted, resorting to the summons high, And took their seats. Milton's Paradise Lost.

This summons, as he resolved unfit either to dispute or disobey, so could he not, without much violence to 'his inclinations, submit unto. fell.

We are summoned in to profess repentance and amendment of all our sins. Kettleicell.

Nor trumpets summon him to war, Nor drums disturb his morning sleep. Dryden.

Love, duty, safety, summon us away ; 'Tis nature's voice, and nature we obey. Pope.

SUMOROKOF (Alexander), the founder of *he Russian theatre, was the son of Peter Sumorokof, a Russian nobleman, born in Moscow, November 14th, 1527. He began his studies in his father's house ; and afterwards received a liberal education at Petersburg, where he gave early proofs of a genius for poetry. On leaving the seminary of cadets, he was appointed adjutant, first -to count Colovkin, next to count Ro-somouski ; and soon after was patronised by John count Shuvalof, the Maecenas of Russia, who introduced him to the empress Elizabeth. In 1756 he wrote his celebrated tragedy of Ko-ref; which was first acted by some of his fellow cadets, who had previously performed a play of Racine's. The empress, hearing of this dramatic phenomenon, expressed a desire to see it. It was accordingly performed in her presence ; and the author and actors were highly applauded. This encouraged Sumorokof to proceed in his dramatic career; and he produced, in succession, the tragedies of, 1. Hamlet; 2. Aris-tonaj 3. Smaf and Truvor; 4. Zemira; 5. Di-misa; 6. Vitshelaf; 7. The False Demetrius; and 8. Micislaf. He was equally fertile in co-medy; and published, 9. Trisotinus; 10. The Judge; 11. The Dispute between Husband and Wife; 12. The Guardian; 13. The Portion acquired by Fraud; 14. The Envious Man; 15. Tartuffe; 16. The Imaginary Cuckold; 17. The Mother who Rivals her Daughter; 18. The Gossip; and, 19. The Three Royal Brothers. Mean time the empress Elizabeth rewarded his exertions, by raising him to the rank of a brigadier, appointing him director of the Russian theatre, and settling upon him a pension of

£4000 a year. Catherine II. also honored and rewarded him : created him a counsellor of state, and conferred on him the order of St. Anne. He also attempted every species of poetry, except the epic ; wrote two operas, *viz.* Alcestes, and Cephalus and Procris ; and three historical tracts, *viz.* 1. A Chronicle of Moscow; 2. A History of the First Insurrection of the Strelitz, in 1682, by which prince John was appointed joint sovereign with Peter the Great, and the princess Sophia regent : and, 3. An Account of Stenko Razin's Rebellion. He died at Moscow, October 1st, 1777, aged nearly fifty-one.

SUMP, in metallurgy, a round pit of stone, lined with clay within, for receiving the metal on its first fusion from the ore.

SUMPII, in mining, denotes a pit sunk down in the bottom of the mine, to cut or prove the lode still deeper than before ; and in order to slope and dig it away if necessary ; and also to drive on the lode in depth. The sumph principally serves as a basin or reservoir to collect the water of a mine together, that it may be cleaned out by an engine or machine.

SUMPTER, n. s. Fr. sommier ; Ital. somaro. A horse that carries the clothes or furniture.

Return with her !

Persuade me rather to be a slave and sampler To this detested groom. Id. King Lear.

With full force his deadly bow he bent, And feathered fates among the mules and sumpter sent. Dryden.

Sumpter mules, bred of large Flanders mares.

Mortimer.

SUMPTION, n. s. Lat. swnptus. The act

of taking. Not in use.

The sumption of the mysteries does all in a capable

subject. Taylor.

SUMPTUOUS, adj. -\ Latin, sumptuosus, SUMP'TUARY, / sumptus. Costly ; ex—

SUMPTUOS'ITY, n. s, > pensive ; splendid : SUMP'TUOUSLY, adv. I

sumptuary is, relating SUMF'TUOUSNESS, n. s. J to expense ; regulating

cost : sumptuosity, costliness : the adverb and

noun substantive following agree with sumptuous. We see how most Christians stood then affected.

how joyful they were to behold the sumptuous stateliness of houses built unto God's glory. Hooker. This monument five hundred years hath stood.

Which 1 have sumptuously re-edified.

Shakspeare. Titus Andrnnicns. He added sumptuosity, invented jewels of gold and

stone, and some engines for the war. Raleigh.

ing and well' balancing of trade, the banishing of idleness, the repressing of waste and excess by sumptuary laws.

I 'will not fall out with those that can reconcile sumptuousness and charity.

Ethelwold, bishop of Winchester, in a famine sold all the rich vessels and ornaments of the church , to relieve the poor with bread ; and said. There was no reason that the dead temples of God should be sump-tumisly furnished, and the living temples suffer pe-nury.

We are too magnificent and nunptu,™ in our tables

and attendance.

SUMPTUARY LAWS, leges sumpturise, are laws made to restrain excess in apparel, costly

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ture, eating, &.c. Most ages and nations have had their sumptuary laws ; and some retain them still. But it is observed that no laws are worse executed than sumptuary laws. Political writers have been much divided in opinion with respect to the utility of these laws to a state. Montes-quieu observes that luxury is necessary in monarchies, as in France, but ruinous to democracies, as in Holland. With regard to England, whose government is compounded of both species, it may still be a dubious question, says judge Blackstone, how far private luxury is a public evil, and as such cognisable by public laws. The sumptuary laws of that ancient Locrian legislator Zaleucus are famous : by these it was ordained that no woman should go attended by more than one maid in the street, except she were drunk : that she should not go out of the city in tlie night, unless she went to commit fornication : that she should not wear any gold or embroidered apparel, unless she proposed to be a common strumpet; and that men should not wear rings or tissues except when they went a whoring, &c. Among the Romans, the sumptuary laws were very numerous : by the Lex Orchia, the number of guests at feasts was limited, though without any limitation of the charges : by the Fannian law, made twenty-two years afterwards, it was enacted that more than ten asses should not be spent at any ordinary feast : for the solemn feasts, as the Saturnalia, &c., 1 00 asses were allowed; ten of which, Gellius informs us, was the price of a sheep, and 100 of an ox. By the Didiau law, which was preferred eighteen years after, it was decreed that the former sumptuary laws should be in force, not only in Rome, but throughout all Italy ; and that for every transgression, not only the master of the feast, but all the guests too should be liable to the penalty. The English have had their share of sumptuary laws, chiefly made in the reigns of Edward III., Edward IV., and Henry VIII., against shoes with long points, short doublets, and long coats ; all repealed by stat. 1 Jac. I. c. 25. As to excess in diet, there remains still one law unrepealed. Under king Henry IV., Camden tells us, pride was got so much into the foot that it was proclaimed that no man should wear shoes above six inches broad at the toes. And their other garments were so short that it w»s enacted, 25 Edward IV., that no person nnder the condition of a lord should, from that time, wear any mantle or gown, unless of such length, that it might reach below his waist.

SUMY, a large town of European Russia, in the government of Charkov, on the Psol. It is surrounded with a wall and ditch, and

defended by an old citadel. Chiefly built of wood and wretchedly paved ; it still contains several excellent charitable institutions, and public depots and warehouses. It is the chief place of a cir-cle, and agriculture, tillage, or pasturage, forms the chief employment of the inhabitants ; for the only manufacture is the distilling of spirits. The traffic is considerable, but confined in a great measure to four annual fairs, which a num-ber both of Greek and Russian merchants attend. Inhabitants 11,000. Ninety miles north-west of Charkov.

SUN, n.s. Si v. a. ~) Sax. j-onna; Goth, sun-STJN'BEAM, n. s. no ; Swed. son ; Tent. SUN'BEAT, adj. sonne ; Belg. zon. The

SUN'BIUGHT, luminary of day ; a place

SUN'BU RUING, n.s. particularly warmed by SUN'BURNT, adj. the sun ; any thing emi-SUN'DAY, n. s. nently splendid or great :

SUS'LESS, adj. •' under the sun' is, in this

SUN'LIKE world : to sun is to expose

SUN'NY, to, or warm in the sun :

SUN'RISE, n. s. Sunday is treated of at

SUN'RISING, large below : sunless is

SUN'SET, wanting sun or warmth :

SUN'SHINE, sunny, resembling the

SUN'SHINY, adj. J sun; bright as sunbeams;

exposed to or colored by the sun: the other

compounds are of obvious meaning.

There is no new thing under the tun.

Ecctesiatticui i. 9.

Doth beauty keep which never sun can burn, Nor storms do turn t Sidney.

The fruitful -headed beast amazed At flashing beams of that tunshiny

shield, Became stark blind, and all his senses dazed, That down he tumbled. Spenter.

She saw Duessa sunny bright, Adorned with gold and jewels shining clear. Id.

Gathering up himself out of the mire, With his uneven wings did fiercely fall Upon his sunbright shield. Id.

The cry to shady delve him brought at last, Where Mammon earst did tun his treasury. Id.

Her sunny locks Hang on her temples like a golden fleece.

Shukspeare.

Bid her steal into the pleached bower, Where honey-suckles, ripened by the sun, Forbid the sun to enter. Id.

An' she were not kin to me, she would be as fair on Friday as Helen is on Sunday.

Id. Troilus and Crcssitla. The Roman eagle, winged From the spongy south to this part of the west, Vanished in the sunbeams. Id. Cymbeline.

My decayed fair A sunny look of his would soon repair. Shafopeare.

If thou canst love a fellow of this temper, Kate, whose face is not worth sunbiirning, let thine eye be thy cook. Id.

Now would I have thee to my, tutor, How and which way I may bestow myself, To be regarded in her sunbright eye. Id.

When the sun sets the air doth drizzle dew ; But for the sunset of my brother's son It rains downright. Id.

Send out a pursuivant

To Stanley's regiment ; bid him bring his power Before sun-rising. Id. Richard III.

That man that sits within a monarch's heart, And ripens in the sunshine of his favour, Would he abuse the countenance of the king, Alack, what mischiefs might be set abroach, In shadow of such greatness ! Id. Henry IV.

In those days the giants of Libanus mastered all nations, from the sunriring to the sunset.

Raleigh' t Histnry.

The stars are of greater use than for men to gaze on after sun-set. Raleigh.

I will never consent to put out the sun of sovereignty to posterity, and all succeeding kings.

King Charles.

He had been many years in that sunshine, when a new comet appeared in court. Clarendon.

SUN.

Where such radiant ights have shone, No wonder if her cheeks be grown Sunburnt with lustre of her own. Cleaveland.

I that in his absence Blazed like a star of the first magnitude. Now in his brighter sunshine am not seen.

Deiihatns Sophy.

High in the midst exalted as a God, The' apostate in his sunbright chariot sat, Idol of majesty divine ! inclosed With flaming cherubims and golden shields. Milton.

SUN, SOL,©. See ASTRONOMY, Index. The sun is certainly that celestial body which of all others should most attract our attention. It

has accordingly employed much of the time and meditation, not only of the astronomer, but also

a view of it with a seven feet refiec'or, charged with a very high power, it appeared to be divided into two parts. The largest of the two, on the 19th of April, measured V 8-06* in diameter, which is equal in length to more than 31,000 miles. Both together must certainly have extended above 50,000. ' The idea of Us being occasioned by a volcanic explosion violently driving away a fiery fluid, ought to be rejected,' says Dr. Herschel, 'on many accounts. To mention only one, the great extent of the spot is very unfavorable to such a suppostion. in-deed a much less violent and less pernicious cause may account for all the appearances of the spot. When we see a dark belt near the equator of the planet Jupiter, we do not recur

of the speculative philosopher, in all ages of the to earthquakes and volcanoes for its origin An

atmosphere, with its natural changes,\vill explain such belts. Our spot on the sun may b» accounted for on the same principles. The earth is surrounded by an atmosphere composed of

world ; and many hypotheses have been formed, and some discoveries made respecting the nature and the uses of this vast luminary. Sir Isaac Newton has shown that the sun, by its

tive power, retains the planets of onr system in various elastic fluids. The sun also lias its at-

their orbits : he has also pointed out the method whereby the quantity of matter which it contains may be accurately determined. Dr. Brad-ley has assigned the velocity of the solar light with a degree of

precision exceeding our utmost expectation. Galileo, Scheiner, Hevelius, Cassini, and others, have ascertained the rotation of

the sun upon its axis, and determined the posi-were placed on the rrioon, he would see the solid tion of its equator. By means of the transit of body of the earth only in those places where the Venus over the disk of the sun, mathematicians transparent fluids of our atmosphere would per-have calculated its distance from the earth, its ”” ‘ T

mosphere; and, if some of the fluids which enter into its composition should be of a shining brilliancy, in the manner that will be explained hereafter, while others are merely transparent, any temporary cause which may remove the lu-cid fluid, will permit us to see the body of the sun through the transparent ones. If an observer

real diameter and magnitude, the density of the matter of which it is composed, and the fall of heavy bodies on its surface. We have therefore a very clear notion of the vast importance and powerful influence of the sun on its planetary system ; but, with regard to its internal construction, we are yet extremely ignorant. Many ingenious conjectures have indeed been formed on the subject ; a few of which we shall mention as an introduction to Dr. Herschel’s, of which, as it is the latest, and perhaps the most plausible, we shall give a pretty full account, nearly in his own words. The dark spots in the sun, for instance, have been supposed to be solid bo-dies revolving very near its surface. They have been conjectured to be the smoke of volcanoes, or the scum floating upon an ocean of fluid matter. They have also been taken for clouds. They were explained to be opaque masses swim-ing on the fluid matter of the sun, dipping down occasionally. It has been supposed that a fiery liquid surrounded the sun, and that, by its ebbing and flowing, the highest parts of it were occasionally uncovered, and appeared under the shape of dark spots; and that, by the return of the fiery liquid, they were again covered, and in that manner successively assumed different phases. The sun itself has been supposed to be a globe of fire. The waste it would undergo by

mit him. In others, the opaque vapors would reflect the light of the sun without permitting his view to penetrate to the surface of our

globe. He would probably also find that our planet had occasionally some shining fluids in its atmosphere : as, not unlikely, some of our northern lights might not escape his notice, if they happened in the unenlightened part of the earth, and were seen by him in his long dark nig'it. Nay, we have pretty good reason to believe, that probably all the planets emit light in some degree ; for the illumination which remains on the moon in a total eclipse cannot be entirely ascribed to the light which may reach it by the refraction of the earth's atmosphere. For instance, in the eclipse of the moon October 22d, 1790, the rays of the sun refracted by the atmosphere of the earth towards the moon, admitting the mean horizontal refraction to be 30' 50'8*, would meet in a focus 189,000 miles beyond the moon; so that consequently there could be no illumination from rays refracted by our atmosphere. It is, however, not improbable that about the polar regions of the earth there may be refraction enough to bring some of the solar rays to a shorter focus. The distance of the moon at tho time of the eclipse would require a refraction of 54′ 6″, equal to its horizontal parallax at that time, to bring them to a focus so as to throw light on the moon. The unenlightened part of

a gradual consumption, on the supposition of the planet Venus has also been seen by different

its being ignited, has been ingeniously calculated ; and in the same point of view its immense power of heating the bodies of such comets as draw very near to it has been assigned. In 1779 there was a spot on the sun which was large enough to be seen with the naked eye. By

persons ; and, not having a satellite, those regions that are turned from the sun cannot possibly shine by a borrowed light; so that this faint illumination must denote some phosphoric quality of the atmosphere of Venus.'

In the instance of the large spot on the sun 2 1) ?.

already mentioned, Dr. Herschell concludes from appearances, that he viewed the real body of the sun itself, of which we rarely see more than its shining atmosphere. In 1783 he observed a fine large spot, and followed it up to the edge of the sun's limb. Here he took notice that the spot was plainly depressed below the surface of the sun, and that it had very broad shelving sides. He also suspected some part, at least, of the shelving sides to be elevated above the surface of the sun ; and observed that, contrary to what usually happens, the margin of - that side of the spot which was farthest from the limb was the broadest. The luminous shelving side of a spot may be explained by a gentle and gradual removal of the shining fluid, which permits us to see the globe of the sun. As to the uncommon appearance of the broadest margin be-ing on that side of the spot which was farthest from the limb when the spot came near the edge of it, we may surmise that the sun has inequalities on its surface, which may possibly be the cause of it. For, when mountainous countries are exposed, if it should chance that the highest parts of the landscape are situated so as to be near that side of the margin or penumbra of the spot which is towards the limb, they may partly intercept our view of it when the spot is seen very obliquely. This would require elevations at least 500 or 600 miles high ; but, considering the great attraction exerted by the sun upon bodies at its surface, and the slow revolution it has upon its axis, we may readily admit inequalities to that amount. From the centrifugal force at the sun's equator, and the weight of bo-dies at its surface, he computes that the power of throwing down a mountain by the exertion of the former, balanced by the superior force of keeping it in its place of the latter, is nearly six times and a half less on the sun than on our equatorial regions ; and, as an elevation similar to one of three miles on the earth would not be less than 334 miles on the sun, there can be no doubt but that a mountain much higher would stand very firmly. The little density of the solar body seems also to be in favor of the height of its mountains; for, caeteris parihus, dense bodies will sooner come to their level than rare ones. The difference in the vanishing of the shelving side, instead of explaining it by mountains, may also, and perhaps more satisfactorily, be accounted for from the real difference of the extent, the arrangement, the height, and the intensity of the shining fluid, added to the occasional changes that may happen in these particulars during the time in which the spot approaches to the edge of the disk. However, by admitting large moun- •ains on the face of the sun, we shall account for the different opinions of two eminent astronomers ; one of wnom believed the spots

depressed below the surface of the sun, while the other believed them elevated above it. For it is not impossible that some of the solar mountains may be high enough occasionally to project above the shining elastic fluid, when, by some agitation or other cause, it is not of the usual height : and this opinion is much strengthened by the return of some remarkable spots which served Cassini to ascertain the period of the sun's rotation. A

very high country, or chain of mountains', may oftener become visible, by the removal of the obstructing fluid, than the lower regions, on account of its not being so deeply covered with it. In 1791 the doctor examined a large spot on the sun, and found it evidently depressed below the level of the surface. In 1792 he examined the sun with several powers from ninety to 500, when it appeared evident, that the black spots are the opaque ground, or body of the sun ; and that the luminous part is an atmosphere, which, being interrupted or broken, gives us a transient glimpse of the sun itself. He perceived, likewise, that the shining surface of the sun is unequal, many parts of it being elevated and others depressed ; and that the elevations, to which Hevelius gave the name of faculae, so far from resembling torches, were rather like the shrivelled elevations upon a dried apple, extended in length, and most of them joined together, making waves orwaving lines. The faculte being elevations, very satisfactorily explains the reason why they disappear towards the middle of the sun, and reappear on the other margin ; for, about the place where we lose them, they begin to be edge-wise to our view ; and, if between the faculae should lie dark spots, they will most frequently break out in the middle of the sun, because they are no longer covered by the side views of these faculae. The doctor gives a very particular account of all his observations, which seem to have been accurately made, and we need scarcely add with excellent telescopes. For that account, however, we must refer to the memoir itself, and hasten to lay before our readers the result of his observations.

' That the sun,' says he, 'has a very extensive atmosphere, canno't be doubted ; and that this atmosphere consists of various elastic fluids, that are more or less lucid and transparent, and of , which the lucid one is that which furnishes us with light, seems also to be fully established by all the phenomena of its spots, of the facula?, and of the lucid surface itself. There is no kind of variety in these appearances but what may be accounted for with the greatest facility, from the continual agitation which, we may easily conceive, must take place in the regions of such extensive elastic fluids. It will be

necessary, however, to be a little more particular as to the manner in which I suppose the lucid fluid of the sun to be generated in its atmosphere. An analogy that may be drawn from the generation of clouds in our own atmosphere, seems to be a very proper one, and full of instruction. Our clouds are probably decompositions of some of the elastic fluids of the atmosphere itself, when such natural causes, as in this grand chemical laboratory are generally at work, act upon them : we may therefore admit that in the very extensive atmosphere of the sun, from causes of the same nature, similar phenomena will take place ; but with this difference, that the continual and very extensive decompositions of the elastic fluids of the sun are of a phosphoric nature, and attended with lucid appearances, by giving out light. If it should be objected, that such violent and unremitting decompositions would exhaust the sun, -we may recur again to

our analogy, which will furnish us wivh tne following reflections. — The extent of our own atmosphere, we see, is still preserved, notwithstanding the copious decompositions of its fluids in clouds and falling rain ; in flashes of lightening ; in meteors, and other luminous phenomena ; because there are fresh supplies of elastic vapors continually ascending to make good the waste occasioned by these decompositions. But it may be urged that the case with the decomposition of the elastic fluids in the solar atmosphere would be very different, since light is emitted, and does not return to the sun, as clouds do to the earth when they descend in showers of rain. To which I answer, that, in the decomposition of phosphoric fluids, every other ingredient but light may also return to the body of the sun. And that the emission of light must waste the sun is not a difficulty that can be opposed to our hypothesis ; for as it is an evident fact that the sun does emit light, the same objection, if it could be one, would equally militate against every other assignable way to account for the phenomenon. There are, moreover, considerations that may lessen the pressure of this alleged difficulty. We know the exceeding subtilty of light to be such, that in ages of time its emanation from the sun cannot very sensibly lessen the size of this great body. To this may be

added, that very possibly there may always be ways of restoration to compensate for what is lost by the emission of light, though the manner in which this can be brought about should not appear to us. Many of the operations of nature are carried on in her great laboratory which we cannot comprehend ; but now and then we see some of the tools with which she is at work. We need not wonder that their construction should be so singular as to induce us to confess our ignorance of the method of employing them ; but we may rest assured that they are not a mere lusus naturae.' Here he alludes to the great number of small telescopic comets ; which he supposes, as others had done before him, may be employed to restore to the sun what had been lost by the emission of light. < My hypothesis, however,' continues he, ' does not lay me under any obligation to explain how the sun can sustain the waste of light, nor to show that it will sustain it for ever ; and I should also remark that, as in the analogy of generating clouds, I merely al-lude to their production as owing to a decomposition of some of the elastic fluids of our atmosphere, that analogy, which tirmly rests upon the fact, will not be less to my purpose, to whatever cause these clouds may owe their origin. It is the same with the lucid clouds, if I may so call them, of the sun. They plainly exist, because we see them ; the manner of their being generated may remain an hypothesis — and mine, till a better can be proposed, may stand good ; but, whether it does or not, the consequences I am going to draw from what has been said, will not be affected by it.' Before he proceeds to draw these consequences, he informs us that, according to the above theory, a dark spot in the sun is a place in its atmosphere, which happens to be free from luminous decompositions; that faculae are, on the contrary, more copious mixtures of

such fluids as decompose each other ; and mat the regions in which the luminous solar cioutis are formed, adding thereto the elevation of me faculae, cannot be less than 1843, nor much more than 2765 miles in depth. It is true, continues he, that in our atmosphere the extent of the clouds is limited to a very narrow compass ; but we ought rather to compare the solar ones to the luminous decompositions which take place in our aurora borealis, or luminous arches, which extend much farther than the cloudy regions. The density of the luminous solar clouds, though very great, may not be exceedingly more so than that of our aurora borealis. For if we consider what would be the brilliancy of a space 2000 or 3000 miles deep, filled with such coruscations as we see now and then in our atmosphere, their apparent intensity, when viewed at the distance of the sun, might r*t be much inferior to

that of the lucid solar fluid. From the luminous atmosphere of the sun,he proceeds to its opaque body; which, by calculation from the power it exerts upon the planets, we know to be of great solidity ; and from the phenomena of the dark spots, many of which, probably on account of their high situations, have been repeatedly seen, and otherwise denote inequalities in their level, we surmise that its surface is diversified with mountains and valleys. What has been said enables us to come to some very important conclusions, by remarking that this way of considering the sun and its atmosphere removes th ; great dissimilarity we have hitherto been used t > find between its condition and that of the rest of the great bodies of the solar system. The sun, viewed thus, appears to be nothing else than a very eminent, large, and lucid planet, evidently the first, or, in strictness of speaking, the only primary one of our system, all others being truly secondary to it. Its similarity to the other globes of the solar system with regard to its so lidity, its atmosphere, and its diversified surfac >, the rotation upon its axis, and the fall of heavy bodies, leads us on to suppose that it is most probably also inhabited, like the rest of the planets, by beings whose organs are adapted to the peculiar circumstances of that vast globe. It may, however, not be amiss to remove a certain difficulty, which arises from the effect, of the sun's rays upon our globe. The heat which is her,.-, at the distance of 95,000,000 miles, produced by these rays, is so considerable that it may be objected, that the surface of the globe of the sun itself must be scorched up beyond all conceptio i. This may be very substantially answered by many proofs drawn from natural philosophy, which show that heat is produced by the sun'-; rays only when they act upon a calorific medium ; they are the cause of the production of heat, by uniting with the matter of fire which is contained in the substances that are heated ; as the collision of flint and steel will inflame a magazine of gunpowder, by putting all the latent fire it contains into action. But an instance or two of the man-ner in which the solar rays produce their effect will bring this home to our most common experience. On the tops of mountains of a sufficient height, at an altitude where clouds can very sel-dom reach to shelter them from the direct rays

of tlie sun, we always find regions of ice and snow. Now, if the solar rays themselves conveyed all the heat we find on this globe, it ought to be h-Alest where their course is least interrupted. Again, our aeronauts all confirm the coldness of the upper regions of the atmosphere ; and since, therefore, even on our earth, the heat of any situation depends upon the aptness of the medium to yield to the impression of the solar rays, we have only to admit that, on the sun itself, the elastic fluids composing its atmosphere, and the matter on its surface, are of such a nature as not to be capable of any excessive affection from its own rays ; and indeed this seems to be proved by the copious emission of them ; for if the elastic fluids of the atmosphere, or the mat-ter contained on the surface of the sun, were of such a nature as to admit of an easy chemical combination with its rays, their emission would be much impeded. Our author then proceeds to support his theory by analogical reasonings ; but, as these will occur to such of our readers as are conversant with the speculations of astronomers, we pass on to his reflections upon the consequences of this theory. ‘ That the stars are suns can hardly admit of a doubt. Their immense distance would perfectly exclude them from our view, if the light they send us were not of the solar kind. Besides, the analogy may be traced much farther. The sun turns on its axis , so does the star Algol ; so do the stars called /3 Lyra;, $ Cephei, ij Antinoi, o Ceti, and many more ; most probably all. From what other cause can we so probably account for their periodical changes ? Again, our sun has spots on its surface; so has the star Algol, and so have the stars already named, and probably every star in the heavens. On our sun these spots are changeable ; so they are on the star o Ceti, as evidently appears from the irregularity of its changeable lustre, which is often broken in upon by accidental changes, while the general period continues unaltered. The same little deviations have been observed in other periodical stars, and ought to be ascribed to the same cause. But if stars are suns, and suns are inhabitable, we see at once what an extensive field for animation opens itself to our view. It is true that analogy may induce us to conclude that since stars ap-pear to be suns, and suns, according to the com-mon opinion, are bodies that serve to enlighten, warm, and sustain a system of planets, we may have an idea of numberless globes that serve for the habitation of living creatures. But, if these suns themselves are primary planets, we may see some thousands of them with our own eyes, and millions by the help of telescopes, when at the same time the same analogical reasoning still remains in full force with regard to the planets which these suns may support.’ The doctor then observes that, from other considerations, the idea of suns or stars being merely the supporters of systems or planets, is not absolutely to be admitted

as a general one. ‘ Among the great number of very compressed clusters of stars I have given,’ says he, ‘ in my catalogue, there are some which open a different view of the heavens to us. The stars in them are so very close

together, that, notwithstanding the great distance at which we may suppose the cluster itself to be, it will hardly be possible to assign any sufficient mutual distance to the stars composing the cluster, to leave room for crowding in those planets for whose support these stars have been, or might be, supposed to exist. It should seem, therefore, highly probable, that they exist for themselves ; and are, in fact, only very capital, lucid, primary planets, connected together in one great system of mutual support. The same remark may be made with regard to the number of very close double stars, whose apparent diameters being alike, and not very small, do not indicate any very great mutual distance, from which, however, must be deducted all those where the different distances may be compensated by the real difference in their respective magnitudes. To what has been said may be added, that, in some parts of the milky way, where yet the stars are not very small, they -are so crowded that in 1 792, August 22d, I found by the gauges, that in forty-one minutes of time, no less than 258,000 of them had passed through the field of view of my telescope. It seems, therefore, upon the whole, not improbable, that in many cases stars are united in such close systems as not to leave much room for the orbits or planets or co-mets ; and that consequently, upon this account also, many stars, unless we would make them mere useless brilliant points, may themselves be lucid planets, perhaps unattended by satellites.’ What a magnificent idea does this theory give of the universe, and of the goodness, as well as power, of its Author 1 And how cold must be that heart, and clouded that understanding, which, after the contemplation of it, can for one moment listen to the atheistical doctrines of those men who presume to account for all the phenomena of nature by chemical affinities and mechanical attraction ! The man who, even in his heart, can say that such an immense system, differing so widely in the structure of the different parts of it, but every where crowded with life, is the effect of unintelligent agency, is indeed, to use the emphatic language of an ancient astronomer — a fool.

SUNAPEE, a lake of the United States, in New Hampshire, in the townships of Fisherfield, Wendell, and New London. It is eleven miles long, and one and a half broad. Little Sunapee, two miles long, lies north-east in New London.

SUNART, LOCH, a navigable inlet of the sea, between the counties of Argyle and Inverness, in Scotland, about twenty miles long, and from one and a half to two miles broad. Also the name of the district bordering on the Loch.

SUNDA, STRAITS OF. An arm of the sea which separates the islands of Sumatra and Java ; by the Malays it is termed Sunda Kalapa. The length of this channel, taken from the flat point to Varkens, or Hog Point, is about seventy miles, and on the opposite coast, from Java Head to Bantam Point, about ninety. In the mouth lies Prince's Island, by the situation of which two passages are formed; one between Prince's Island and Java, which is made use of for the most part by ships which have to pass the straits during the south-east monsoon, in

order that, sailing close in with the Jara shore, they may soon get within anchoring depth. The other passage, called by seamen the Great Channel, sometimes also serves as an entrance to the straits during the south-east monsoon, but it is with the greatest difficulty, and after continual struggling with the south-easterly winds and the current that this can be effected. In the narrow-est part of the straits, opposite to Hog's Point, on Sumatra, lies an island that on account of its situation has been called Thwart the Way, or Middle Isle. A strong current runs through the passage on both sides of this island during the whole year, setting with the prevailing easterly or westerly winds, either to the north-east or south-west. The chief islands in these straits are Prince's Isle, Krakatau, Thwart the Way, and Pulo Baby. The others are very insignificant, mostly level, founded on beds of coral and covered with trees. A few have steep naked sides, and at a little distance resemble old castles, mouldering into ruins; but, on a nearer view, appear to be of volcanic origin. The Dutch East India Company claim an absolute sovereignty over the Straits of Sunda, but it never has been enforced.

SUNDAY, or the Lord's-day, is a solemn festival observed by Christians on the first day of every week, in memory of our Saviour's resurrection. See SABBATH, In the breviary and other offices we meet with Sundays of the first and second class. Those of the first class are Palm, Easter, Advent, and Whitsunday, those of Quasimodo and Quadragesima. Those of the second class are the common Sundays.

Anciently each Sunday in the year had its particular name, which was taken from the introit of the day ; which custom has only been continued to some few ia Lent ; as Reminiscere, Lsetare, Oculi, Judica. The Lord's day, mentioned in the Apocalypse, is certainly our Sunday; which was very early instituted by the apostles. A re-gard was had to this day in the earliest ages of the church, as appears from the first apology of Justin Martyr, where he describes the exercise of the day not much unlike to ours. See SABBATH. But Constautine the Great first made a law for the proper observation of Sunday ; and, according to Eusebius, appointed it to be regularly celebrated throughout the Roman empire. Before him, and even in his time, they observed the Jewish Sabbath as well as Sunday. By his law, made in 321, it was decreed, that the Sun-day should be kept a day of rest in all cities and towns ; but the country people were allowed to follow their work. In 338 the council of Orleans prohibited country labor; but because there were still many Jews in Gaul, and the people fell into many superstitious usages in the celebration of the new Sabbath, like those of the Jews among that of the old, the council declares that to hold it unlawful to travel with horses, cattle, and carriages, to prepare food, or to do any thing necessary to the cleanliness and decency of houses or persons, savours more of Judaism than of Christianity. See SABBATH-BREAKING.

The appellation of Lord's day was adopted and applied to the iirst day of the week by the Christian writers. At the time when St. Johu

wrote the book of his revelation, the first day of the week seems to have obtained this name (Rev. i. 10); and this name, together with St. John's use of it, sufficiently denotes the appropriation of the day to the service of religion; as well as that this appropriation was perfectly known to the churches of Asia. We have reason to believe that, by the < Lord's day,' was meant the 'first day of the week; because we find no traces of any distinction of days, which could entitle any other to that appellation; accordingly this appellation was used both by the Greek and Latin churches. So it is styled by Clemens Alexandrinus, by Ignatius, by Dionysius, bishop of Corinth, by an African synod, and by Tertullian. Sometimes, indeed, it is simply called fi Kvptarj), and ' Dominicus,' that is, ' the Lord's,' without the addition of the word ' day,' as it is thus called rr\v icopiKKrjv by Ignatius, and ' Do-rainicus'

by Cyprian. Clemens Alexandrinus writes to this effect : — that a true Christian, according to the commandment of the gospel, observes the Lord's day, by casting out all evil thoughts and entertaining all good ones, glorify-ing the resurrection of the Lord on that day.' Barnabas says, < we keep the eighth day with gladness, on which Christ arose from the dead ;' and Ignatius also says, ' let us keep the Lord's day, on which our life arose through him.' Justin Martyr also relates, that ' on Sunday the Christians assembled together, because it was the first day of the week, on whichrGod out of the confused chaos made the world, and Jesus Christ our Saviour arose from the dead ; for on Friday he was crucified, and on Sunday he appeared to his apostles and disciples, and taught them those things which the Christians now believe.' To the same purpose, Origen advises his auditors to pray unto Almighty God, ' especially on the Lord's day, which is a commemoration of Christ's passion ; for the resurrection of Chrjst is not only celebrated once a year, but every seven days.' That this day was denominated ' Sunday ' at a very early period, is evinced by a variety of testimonies, which it is needless to cite. Justin Martyr and Tertullian in particular use this appellation. But, though they so far complied with the Heathens to call this day Sunday, yet they do not seem to have so far indulged the Jews as to call it the 'Sabbath-day;' for through all their writings they violently declaim against sabbatizing, or keeping the sabbath-day, that is the Judaical observation of the seventh day, which we must always understand by the word ' Sab-batum ' in the writings of the ancients, not the observation of the first day, or the Lord's day ; for that was constantly celebrated : and, by those who condemn the observance of the sabbath-day, the sanctification of the Lord's day is approved and recommended, as by Justin Martyr and Tertullian, and also by Ignatius, who says in one place, ' let us no longer sabbatize,' and in another, ' instead of sabbatizing, let every Christian keep the Lord's day, the day oa which Christ arose again ; the queen of daysmen which our life arose, and deatlv was conquered by Christ.' The Eastern churches, however, in compliance with the Jewish converts, who were numerous in those parts, performed on the seventh day th«

same public religious services that they did on the first, observing both the one and the other. Whence Origen enumerates Saturday as one of the four feasts solemnised in his time ; though, on the contrary, some of the Western churches, that they might not seem to judaize, fasted on Saturday.

The principal arguments pertaining to this question have been glanced at under the article SABBATH. Paley, who adopted the opinion of those who maintain that the institution of the Jewish sabbath first took place in the wilderness, considers, as they do, the blessing and sanctification, i. e. the religious distinction and appropriation of the seventh day, mentioned in the book of Genesis, as not having been made till many ages afterwards. He alleges that the •vords do not assert, that God then ‘ blessed ‘ and * sanctified ‘ the seventh day, but that he blessed and sanctified it, because he had on that day rested from the work of creation, and for that reason : and if it be asked, why the sabbath, or sanctification of the seventh day, was then mentioned, if it was not then appointed, our author replies, that the order of connexion, and not of time, introduced the mention of the sabbath in the history of the subject which it was ordained to commemorate. This interpretation, he says, is strongly supported by a passage in the prophecy of Ezekiel, where the sabbath is plainly spoken of as given, or, as the expression is supposed to mean, as first instituted, in the wilderness. Ezek. xx. 10, 11, 12. Nehemiah also accounts the promulgation of the sabbatic law amongst the transactions in the wilderness, and this circumstance is considered as affording another important argument in favor of the same opinion. Nehem. ix. 14. If the divine command, by which the sabbath was instituted, was actually delivered at the creation, as many learned writers have maintained, it was without doubt addressed to the whole human species alike, and continues, unless repealed by some subsequent revelation, obligatory upon all who have the knowledge of it. But, if the command was published for the first time in the wilderness, then it was immediately directed to the Jewish people alone, and the sabbath ought to be regarded as part of the peculiar law of the Jewish policy, in farther support of this latter opinion, it is alleged that the sabbath is described as a sign between God and the people of Israel (Exod. xxxi. 16, 17, Ezek. xx. 16) ; and that it does not seem easy to understand how the sabbath could be a ‘ sign ‘ between God and the people of Israel, unless the observance of it was peculiar to that people, and designed to be so. The distinction of the sabbath is, in its nature, as much a positive ceremonial institution as that of many other seasons which were appointed by the Levitical law to be kept holy, and to be observed by a distinct rest: such were the first and

seventh days of unleavened bread ; the feast of pentecost ; the feast of tabernacles ; and, in the twenty-third chapter of Exodus, the sabbath and these are recited together. It is further argued, that the observation of the sabbath was not one of the articles enjoined by the apostles in the fifteenth chapter of Acts, upon them ‘ which, from

among the Gentiles, were turned unto God.’ St. Paul evidently appears to have considered the sabbath as part of the Jewish ritual, and not binding upon Christians as such. Col. ii. 16, 17.

If the law by which the Sabbath was instituted be considered as a law only to the Jewsr it becomes an important enquiry, whether the founder of Christianity delivered any new command upon the subject ; or, if that should not appear to be the case, whether any day was appropriated to the service of religion by the authority or example of his apostles ? The practice of holding religious assemblies upon the first day of the week was so early and universal in the Christian church, that we derive hence considerable proof of its having originated from some precept of Christ, or of his apostles, though no such precept be now extant. It was on the first day of the week that the disciples were assembled, when Christ appeared to them for the first time after his resurrection. John xx. 19. If we allow that this might have been accidental, yet we read in the twenty-sixth verse of the same chapter, ‘ that after eight days,’ that is, on the first day of the week following, ‘ again the disciples were within,’ which second meeting upon the same day of the week seems like an appointment and design to meet on that particular day. The same custom seems also to have been observed in a Christian church at a great distance from Jerusalem. Acts xx. 6, 7. The practice mentioned in this passage seems now to have been familiar and established. See also 1 Cor. xvi. 1, 2. From these passages we de-duce ample evidence that the Christians held and frequented religious assemblies upon the first day of the week. Nevertheless, a cessation upon that day from labor, beyond the time of attendance upon public worship, is not intimated in any passage in the New Testament ; nor did Christ or his apostles deliver, as Paley supposes, any command to their disciples for a discontinuance upon that day of the common offices of their respective professions. This reserve cannot be censured as a defect in the Christian institution by any who consider that, in the primitive condition of Christianity, the observation of a new sabbath would have been useless, or inconvenient, or impracticable. During Christ’s personal ministry, his religion was preached to the Jews alone. They already had a sabbath, which, as subjects of that economy, they were

obliged to keep, and did keep. It was not, therefore, probable that Christ would enjoin another day of rest in conjunction with this.

Dr. Paley deduces from his whole enquiry on this subject the conclusion that the assembling upon the first day of the week, for the purpose of public worship and religious instruction, is a law of Christianity, of divine appointment ; and that the resting on that day from our employments, longer than we are detained from them by an attendance upon these assemblies, is to Christians an ordinance of human institution ; binding, nevertheless, upon the conscience of every individual of a country in which a weekly sabbath is established, for the sake of the beneficial purposes which the public and regular observance of it promotes ; and recommended, perhaps, in some

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degree, to the divine approbation, by the resemblance it bears to what God was pleased to make a solemn part of the law which he delivered to the people of Israel, and by its subserviency to many of the same uses. In general, we may observe, that if the design of a religious assembly require that it be held frequently, it is most expedient that it should return at stated intervals ; and that the same seasons should be observed throughout the country. That part of the religious distinction of seasons, which consists in a general intermission of labor and business during times set apart for the exercise of public worship, is founded in the reasons which make public worship itself a duty. But, as the celebration of divine service never occupies the whole day, the other interval of Sunday, that is not spent at church, must be considered as a mere rest from the ordinary occupations of civil life ; and he, says Paley, who would defend the institution, as it is required to be observed in Christian countries, unless he can produce a command for ‘ a Christian sabbath,’ must point out the uses of it in that view. First, that interval of relaxation which Sunday affords to the laborious class of mankind contributes, in a great degree, to the comfort and satisfaction of their lives, both as it refreshes them for the time, and as it relieves their six days’ labor by the prospect of a day of rest always approaching. In this view of the institution, whatever may be its origin, it must ap-pear to be highly useful ; nor is any thing lost to the community by the intermission of public industry one day in the week ; for in countries tolerably advanced in population, and the arts of civil life, there is always more than enough of human labor. Secondly, Sunday, by suspending many public diversions, and the ordinary rotation of employment, leaves to men of every rank and profession sufficient leisure, and not more than sufficient, both for the external offices of Christianity, and the actual, but equally necessary, duties of religious meditation and enquiry. And thirdly, they whose humanity embraces the whole sensitive creation, will esteem it no inconsiderable recommendation of a weekly return of public rest, that it affords a respite to the toil of brutes.

The uses of this institution, therefore, being to facilitate attendance upon public worship, or to meliorate the condition of the laborious classes of mankind, and, by a general suspension of business and amusement, to invite and enable persons of every description to apply their time and thoughts to subjects pertaining to their salvation, the duty of the day must be violated ; first, by all such employments or

engagements as hinder our attendance upon public worship, or occupy so much of our time as not to afford sufficient leisure for religious reflection ; such are travelling, visiting during the whole day, or employing the time at home in any kind of business that bears no relation to religion. Secondly, by unnecessary encroachments on the rest and liberty which Sunday ought to afford to the inferior orders of the community. Thirdly, by such recreations as are customarily forborne, out of respect to the day ; as hunting, shooting, fishing, public diversions, and playing at cards or dice.

SUNDAY SCHOOLS. See EDUCATION.

SUNDEEP ISLE (Somadwipa, or Isle of the Moon), an island in the district of Chittagong, and province of Bengal, which may be estimated at sixteen miles in length, by eight the average breadth. It contains a government establishment for the manufacture of salt, subordinate to the Bulwa and Chittagong agency. A number of Portuguese settled on this coast at the conclusion of the sixteenth century, many of whom entered into the service of the native princes, and obtained grants of land. They were extirpated or expelled from Arracan about A. D. 1607, the few who escaped taking refuge amon" the islands, where they practised piracy. Futteh Khan, the Mogul governor of Sundeep, having attempted to suppress them, was defeated and killed, and his whole fleet captured. On this event the pirates elected for their chief a com-mon sailor, named Sebastian Gonzales, and in 1609 gained possession of Sundeep. This chief established an independent principality, his force amounting to 1000 Portuguese, 2000 native troops, 200 cavalry, and eighty vessels of different sizes, well supplied with guns. Soon after he added to his territory the adjacent island of Shahabaspoor, and some others. With common prudence his power now might have attained a considerable height and stability, but he soon disgusted his subjects by the brutal tyranny of his government, and rendered the Moguls and Arracaners hostile by the perfidy and cruelty of his conduct. He was finally abandoned by the greater part of his followers, and in 1616 was defeated by the Rajah of Arracan, who conquered Sundeep and the other islands. This island continued in possession of these barbarians until A. D. 1666, when Shaista Khan, the Mogul governor of Bengal, having fitted out a fleet at Dacca, despatched it down the Megn;i to attack Sundeep, where the Mughs (so the Arracaners were now called) had erected fortifications, which they defended with great resolution for a considerable time, but were at length all taken or destroyed. Since that period it remained attached to the Mogul government of

Bengal, until it devolved, along with that province, to the East India Company.

SUN’DER, v. a. & n. s. Sax. rym > ruan. To part ; separate ; divide : two.

He breaketh the bow, and cutteth the spear in sunder. P talma.

Vexation almost stops my breath, That sundred friends greet in the hour of death.

Skakipeare.

She that should all parts to reunion bow, She that had all magnetick force alone, To draw amd fasten Hundred parts in one. Dmne.

It is sundred from the main land by a sandy plain.

Curew.

The enormous weight was cast, Which Crantor’s body sundered at the waist.

Drtlden.

Bears, tigers, wolves, the lion’s angry brood, Whom heaven endued with principles of blood, He wisely nmdred from the rest, to yell In forests.

Bring me lightning, give me thunder ; Jove may kill, but ne’er shall mnder. Granviltf.

SUNDERBUNDS, a woody tract of country

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on ihe coast of Bengal, being part of the Delta cf the Ganges, and extending along the bay about 180 miles, it is in fact a labyrinth of rivers and creeks, all of which are salt, except those that communicate immediately with the principal arm of the Ganges : these numerous natural canals are so disposed as to form a complete inland navigation. In tracing the coast of this Delta, eight openings are found, each of which appears to be the principal mouth of the Ganges. The navigation of the Sunderbunds is effected chiefly by means of the tides, there be-ing two distinct passages ; the one named the Southern or Sunderland Passage, and the other the Balliaghaut Passage. The first is the furthest, and leads through the widest and deepest rivers, opening into the Hooghly or Calcutta River, about sixty-five miles below the town. The Balliaghaut Passage opens into a lake on the cast side of Calcutta. The navigation by these passages extends more than 200 miles through a thick forest, divided into numberless islands by a multitude of channels, so various in point of width that a vessel has at one time her masts entangled among the branches of trees, and at other times sails on a broadly expanded river, beautifully skirted. The water is every where salt, and almost the whole forest abandoned to wild beasts. But during the dry season the lower shores of these rivers are visited by the salt-makers and woodcutters ; while tigers of the most enormous size not only appear on the mar-gin, but frequently swim off to the boats that lie at anchor in the rivers. These waters also swarm with alligators. Throughout the year these passages are open ; and, during the season, when the Ganges is low, the whole trade of Bengal (the western districts excepted) passes either by Channel Creek, or by Balliaghaut; but chiefly by the former. The existence of this forest also has always been considered of importance as a strong natural barrier along the southern frontier of Bengal. Great quantities of excellent salt are here manufactured, and esteemed of peculiar sanctity, as being extracted from the Ganges. The woods also present an inexhaustible supply of timber for fuel, boat building, and other purposes. In 1784 the Sunderbunds, Cooch Bahar, and Rangamatty, all nearly waste, according to major Rennell, contained 37,549 square miles.

SUNDERLAND, a sea-port and market-town of Durham, is situate at the mouth of the river Wear, where it falls into the ocean, thirteen miles north-east of Durham, anˆ 276 north of London. The High Street, which is the principal, is nearly a mile in length, running from east to

west ; the houses in general are well built, and the street in many places thirty yards broad. Parallel with this runs the Lower street, - which is very narrow and dirty, and may be called the Wap-ping of the town, on the bank of the river ; but in these, and the numerous narrow lanes connecting the two streets, there have of late years been many improvements, and it is well lighted. Besides an extensive church, at the top of the town, here is a neat built chapel of ease, and several meeting-houses; a dispensary, humane society, charity for decayed seamen, and sea-men's widows; besides four good charity schools,

and other benevolent institutions. Here are also a handsome exchange, public library, large assembly room, theatre, commercial bank, &c. The harbour is too shallow for large vessels to take in their lading, so that they are obliged to lie in the open road, and receive their coals by the keels. The entrance of the harbour is defended by a pier' projecting about 200 yards, and its mouth by a battery, opposite to which are barracks for 3000 men. The harbour has been further improved by the erection of an oiegant light-house.

The trade of Suaderland has been long on the increase : its imports are flour, wines, liquors, timber, iron, flax, &c. : of its exports, coal is the staple article, which alone employs nearly 600 vessels ; the other articles are lime, glass, glass bottles, copperas, patent ropes, earthenware, &c. : ship-building is also carried on here. At the extremity of the town, towards Bishop-wearmouth, is a bridge over the Wear, built of cast iron, and of a single arch; it is 100 feet high and 236 feet Ion;;, so that any vessel that can navigate the depth of water can pass with her topmast up. This is a borough, governed by a mayor, and returns two members to parliament. Market on Friday. Fairs, May 12th, and October 12th.

SUN-DEW, in botany. See DROSERA.

SUN'DIAL, n. s. Sun and dial. A marked plate on which the shadow points the hour.

All your graces no more you shall have, Than a sundial in a grave. Donne.

The body, though it really moves, yet, not changing perceivable distance, seems to stand still ; as is evident in the shadows of sundials. Locke.

SUNDIAL. See DIAL and DIALLING.

SUN'DRY, adj. Sax. runberi. Several; more than one.

Not of one nation was it peopled, but of sundry people of different manners. Spenser.

That law, which, as it is laid up in the bosom of God, we call eternal, receiveth, according unto thu different kind of things which are subject unto it, different and sundry kinds of names. Hooker.

He caused him to be arrested upon complaint of tuitdry grievous oppressions. Davies.

But, dallying in this place so long why do'st thou

dwell. So many sundry things here having yet to tell ?

Drayton.

I have composed sundry collects, as the Advenlual, Quadragesimal, Paschaf or Pentecostal.

Sanderstm.

Sundry foes the rural realm surround. ' Drtitten.

SUN -FISH. See SQUALTJS. SUN-FLOWER, in botany. See HELIAN—

THUS.

SUN-FLOWER, BASTARD. See HELEKIUH.

SUNG. The pret. and part. pass, of SING, which see.

A larger rock then heaving from the plain, He whirled it round, it sung across the main. Pope.

SUNK. ThepreLand part. pass, of SINK. which see.

We have large caves ; the deepest are sunk six hundred fathom, and some digged and made under great hills. Bacon.

Thus we act, and thus we are,

Or tossed by hope or sunk by care. Priori,

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His spitit cjuite sunk with those reflections that solitude and disappointment brings, lie is utterly un-distinguished and forgotten. Strift.

SUOVETAUR1LIA, an ancient Roman sacrifice, so called because it consisted of a pig (sus), a sheep or rather ram (ovis), and a bull (taurus). They were all males, to denote the masculine courage of the Roman people. It was likewise called solitaurilia, because the animals offered up were always solida, whole or uncut.

SUP, v. a., v. n., n.s Sax. j-upan ; Norman Fr. souper ; Belg. noepen. To drink by mouthfuls ; drink by little at a time ; to sip : to treat with supper : eat the evening meal: a small draught.

When they had tupped, they brought Tobias in.

Tobit yiii.

You'll sup with me ?

— Anger 's my meat ; 1 sup upon myself, And so shall starve with feeding.

Skakspeare. Coriolanus.

He 's almost supped ; why have you left the chamber 1 Shakspeare.

Let what you have within be brought abroad, To sup the stranger. Chapman's Odyssey.

Tom Thumb had got a little sup, And Tomalin scarce kissed the cup. Dray ton.

There 's none observes, much less repines, How often this man sups or dines. Carew.

To feed my life with : there I'll sup

Balm and nectar in my cup. Crashaw.

Lale returning home, he supped at ease. Dryden.

A pigeon saw the picture of a glass with water in it, and flew eagerly up to ‘t for a sup to quench her hirst. L’Estrange.

We saw it smelling to every thing set in the room ; and, when it had smelt to them all, it supped up the milk. Hay.

The least transgression of your’s, if it be only two bits and one sup more than your stint, is a great debauch. Swift.

SUPERABOUND’, v. n.~\ Super and a—

STJPERABUN’DANCE, n. s. (bound. To be ex—

SUPERABUN’DANT, adj. £ uberant ; be stored ‘ SUPERABUNDANTLY, adv. 3 with more than enough : the noun substantive, adjective, and adverb, corresponding.

This case returneth again at this time, except the clemency of his majesty superabound. Bacon.

She superabounds with corn, which is quickly convertible to coin. Hmcel.

The precipitation of the vegetative terrestrial mat-ter at the deluge amongst the sand, was to retrench the luxury and superabundance of the productions of the earth. Woodward.

Nothing but the uncreated infinite can adequately fill and superabundantly satisfy the desire. Cliei/ne.

So much superabundant zeal could have no other design than to damp that spirit raised against Wood.

Swift.

SUPERADD’, v. a. \ Lat. suptraddo. To

SUPERADDI’TION, n.s. S add over and above; to join any thing extrinsic : the act of doing so.

The strength of any living creature, in those external motions, is something distinct from and superadded unto its natural gravity.

Wilkins’s Mathematical Magick.

The fabiick of the eye, its safe and useful situation, and the superaddition of muscles, are a certain pledge of the existence of God.

More.

The schools dispute, whether in morals the external action superadds any thing of good or evil to the internal elicit act of the will ; but certainly the en-

mity of our judgments is wrought up to an high pitch before it rages in an open denial. Souili.

An animal, in the course of hard labour, seems tc be nothing but vessels : let the same animal con tmue long in rest, it will perhaps double its weight and bulk : this superaddition is nothing hut fat.

SUPERADVE'NIENT, adj. Lat. ' .J,F"'^- venieru. Coming to the increase orassisiance o. something.

The soul of man may have matter of triumph, when he has done bravely by a ntperadvenient assistance of his God. More.

SUPERANNUATE, v. a. & v. n. Lat. super and annus. To impair or disqualify by age or length of life : last beyond the year.

The dying of the roots of plants that are annual, is by the over-expence of the sap into stalk and leaves ; which being prevented, they will supcrannn-ate- Bacon's Natural History.

If such depravities be yet alive, deformity need not despair, nor will the eldest hopes be ever superannuated. Browne.

When the sacramental test was put in gxecution, the justices of peace through Ireland, that had laid down their commissions, amounted only to a down, and those of the lowest fortune, and some of them superannuated. Swift

SUPERB', adj. Fr. superbe; Lat. snperhns. Grand; pompous; lofty; august; stately; magnificent.

SUPERBUS (Lat.) the Proud, a nickname of the tyrant Tarquin II., who was deservedly banished Home, with his wicked family. See ROME.

SUPERCARGO, n.s. Super and cargo. An officer in the ship whose business is to manage the trade.

I only wear it in a land of Hectors, Thieves, supercargoes, sharpers, and directors, I'ojie.

SUPERCELES’TIAL, adj. Super and celestial. Placed above the firmament.

I dare not think that any supercelesticl heaven, or whatsoever else, not himself, was increate and eternal. Raleigh.

Many were for fetching down I know not what svpercelestial waters for the purpose.

Woodward’t Natural History.

SUPERCILIOUS, adj. \ From Lat. super—

SUPERCILIOUSLY,ˆ!). S cilium. Haughty; dogmatical ; dictatorial ; overbearing : the ad-verb corresponding.

He, who was a punctual man in point of honour, received this address superciliously enough, sent it to the king without performing the least ceremony.

Clarendon.

Those who are one while courteous, within a small time after are so supercilious, fierce, and exceptions, that they are short of the true character of friendship. South.

Several supercilious criticks will treat an author with the greatest contempt, if he fancies the old Ro-mans wore a girdle. Addison.

SUPERCONCEFTION, n.s. Super and conception. A conception admitted after another conception.

Those supercimceptioni, where one child was like the father, the other like the adulterer, seem idle.

Browne’s Vulgar Erroitm.

SUPERCON’SEQUENCE, n. s. Super and consequence. Remote consequence.

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Not attaining the deuteroscopy, and second intention of the words, they omit their superconsequences and coherences. Browne.

SUPERCRES'CENCE, n. s. Lat. super and cresco. That which grows upon another growing thing.

Wherever it groweth it maintains a regular figure, like other supercrescencet, and like such as, living upon the stock of others, are termed parasitical plants.

Browne's Vulgar Errours.

SUPEREM'INENCE, n.s.~\ Latin super SUPEREM'INENCY, f and emineo. Un—

SUPEREM'INENT, adj. £ common degree

SUPEREMINENTLY, adv. J of eminence ; eminence above others though eminent : the adjective and adverb corresponding.

As humility is in suiters a decent virtue, so the testification thereof by such effectual acknowledg-ments nol only argueth a sound apprehension of his supereminent glory and majesty before whom we stand, but putteth also into his hands a kind of pledge or bond for security against our unthankful-ness. Hooker.

The archbishop of Canterbury, as he is primate over all England and metropolitan, has a supereminency, and even some power over the archbishop of York. Ayliffe's Pareryon.

SUPERER'DGATE, v. n. » Lat. super and

SUPER' OGATORV, adj. S erogatio. To do

more than duty requires : performed beyond the strict demands of duty.

Supererogatory services, and too great benefits from subjects to kings, are of dangerous consequence.

Howel.

So by an abbey's skeleton of late, I heard an eccho supererogate Through imperfection, and the voice restore, As if she had the hiccup o'er and o'er. Cleaveland.

Aristotle acted his own instructions, and his obsequious sectators have supererogated in observance. Glanville's Scepsis.

There is no such thing as works of supererogation ; no man can do more than needs, and is his duty to do, by way of preparation for another world.

Tillotson.

SUPEREROGATION, in theology, is what a r in does more than he is commanded to do. The L nanists stand up strenuously for works of supererogation, and maintain that the observance of evangelical councils is such. By means hereof a stock of merit is laid up, which the church has the disposal of, and which she distributes in indulgences to such as need. This doctrine was first invented towards the close of the twelfth century, and modified and embellished by St. Thomas in the thirteenth : according to which it was pretended that there actually existed an immense treasure of merit, composed of the pious deeds and virtuous actions which the saints had performed beyond what was necessary for their own salvation, and which were therefore applicable to the benefit of others; that the guardian and dispenser of this precious treasure was the Roman pontiff; and that of consequence he was empowered to assign to such as he thought proper a portion of this inexhaustible source of merit, suitable to their respective guilt, and sufficient to deliver them from the punishment due to their crimes. The reformed church do not allow of any work of supererogation; but hold, with the apostles, that when we have done oui

best, we are but unprofitable servants. See SOLIFIDIANS.

SUPEREXALTATION, n. t. Super and exalt. Elevation above the common rate.

In a tuperexaltation of courage, they seem a* greedy of death as of victory. Holiday.

SUPEREX'CELLENT, adj. Super and excellent. Excellent beyond common degrees of excellence.

We discern not the abuse ; suffer him to persuade us that we are as gods, something so superexcellent, that all must reverence and adore. Decay of Piety.

SUPEREXCRES'CENCE, n. s. Super and excrescence. Something superfluously growing

As the escar separated between the scarifications I rubbed the superexcrescence of flesh with the vitriol stone. Wiseman.

SUPERFETAJE, v. n. } Lat. super and

SUPERFETA'TION, n. s. S fatus. To conceive after conception : for the noun substantive see below.

Superfttation must be by abundance of sap in the bough tnat putteth it forth. Bacon's Natural History.

It' the superfetation be made with considerable intermission, the latter most commonly becomes abortive ; for the first being confirmed engrosseth the aliment from the other. Browne.

The female brings forth twice in one month, and so is said to superfetate ; which, saith Aristotle, is because her eggs are hatched in her one after another.

Grew's Museum.

SUPERFETATION, in midwifery, is a second conception, happening when the mother, already pregnant, conceives of a later coition ; so that she bears at once two foetuses of unequal age and bulk, and is delivered of them at different times. We meet with instances of superfeta-tions in Hippocrates, Aristotle, Du Laurens, &c. ; but they are said to be most frequent in hares and swine.

SU'PERFICE, n. s. ˆ Fr. superficie ; Lat.

SUPERFICIAL, adj. \superficies. Outside;

SUPERFICIALITY, n. s. (surface: which the*

SUPERFI'CIALLY, adv. f Lat. superficies also

SUPERFI'CIALNESS, ns. (signifies: superficial

SUPERFI'CIES.) is, lying on the surface; relating to, or not beyond, the surface: the derivatives all correspond.

He on her tuperjicies stretched his line. Saud’it.

You have said well ;

But on the cause and question now in hand, Have glozed but superficially.

Shakspeare. Troilus and Cressida. This superficial tale Is but a preface to her worthy praise.

Id. Henrti VI.

That, upon the superficial ground, heat and moisture cause putrefaction, in England is found not true.

Bacon.

His eye so superficially surveys These things, as not to mind from whence they

grow, Deep under ground. Hilton s Paradise Lnsi.

By these salts the colours of bodies receive degrees of lustre or obscurity, superficialty or profundity.

Browne.

Then if it rise not to the former height Of superfice, conclude that soil is light. Dryden.

A convex mirror makes objects in the middle to come out from the superficies : the painter must, in respect of the light and shadows of his figures, give them more relievo. Id.

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SUPERFICIES, or SURFACE, in geometry, is the Horace will our superfluous branche3 prun*.

exterior face of any body. This is considered as Give us new rules, and set our harps in tune!

having the two dimensions of length and breadth Roscommon.

only, but no thickness ; and therefore it makes .H's conscience cheered him with a life well spen't

t_ His prudence a superfluous something lent,

Which made the poor who took, and poor' who gave content. Harle/

no part of the substance or solid content or matter of the body. The terms or bounds, or extremities, of a superficies, are lines ; and superficies maybe considered as generated by the SUPERFLUOUS INTERVAL, in music, is one that

motions of lines. Superficies are either rectili-excee(ˆs aˆtrue diatonic interval by a semitone

near, curvilinear, plane, concave, or convex. mmor-See INTERVAL.

A rectilinear superficies is that which is bounded SUPERGA, a mountain of the north of the

Sardinian states, in Piedmont, about five miles from Turin, remarkable for its picturesque scenery> and for the elegance of a church winch crowns its summit. This edifice, built by Yic-

by right lines. Curvilinear superficies is bounded by curve lines. Plane superficies is that which has no inequality in it, nor risings, nor sinkings, but lies evenly and straight throughout,

so that a right line may wholly coincide with tor Amadeus, is of a circular form, supported it in all parts and directions. Convex superfi- bv Pillars of beautiful marble, and surmounted cies is that which is curved and rises outwards. bv.a dome : the altars are decorated with bas—

reliefs > and tue pavement is of variegated mar-

Concave superficies is curved and sinks inward. See GEOMETRY.

SUPERFINE', adj. Super and fine. Eminently fine.

Some, by this journey of Jason, understand the mystery of the philosopher's stone ; to which also other superfine chymists draw the twelve labours of Hercules. L'Estrange.

If you observe your cyder, by interposing it between a candle and your eye, to be very transparent, it may be called superfine. Mortimer's Husbandry.

SUPERFLU'ENCE, n.s.ˆi Lat. super and

SUPERFLU'ITANCE, SUPERFLU'ITANT, adj.

SUPERFLUITY, n. s. SUPERFLUOUS, adj. SU'PERFLUX, n. s.

I fluo. More than is [necessary : super- { fluitance is the act

of flowing above : superfluitant is floating above : superfluity, more than enough : superfluous, exuberant; unnecessary: superflux, that which is more than is wanted.

As touching the ministering to the saints, it is superfluous to write. 2 Cor. ix. 1.

I think it superfluous to use any words of a subject so praised in itself as it needs no praises. Sidney.

When a thing ceaseth to be available unto the end which gave it

being, the continuance of it must then appear superfluous.. Honker.

Having this way eased the church, as they thought, of superfluity, they went on till they had plucked up even those things which also had taken a great deal deeper root. Id.

Take physick, pomp ; Expose thyself to feel what wretches feel, That thou may'st shake the superflux to them.

Shakspeare.

A proper title of a peace, and purchased At a ntperflumts rate. Id.

They are as sick that surfeit with too much as they that starve with nothing ; therefore it is no mean happiness to be seated in the mean : superfluity comes sooner by white hairs, but competency lives longer. Id.

' A quiet mediocrity is still to be preferred before a troubled superfluity. Suckling.

The superfluence of grace is ordinarilj proportioned to the faithful discharge of former trusts, making use of the foregoing sufficient grace. Hammond.

If ye know,

Why ask ye, and superfluous begin Your message, like to end as much in vain 1 Milton.

Spermaceti, which is a mperfluitance on the sea, is not the sperm of a whale. Browne's Vulgar Errours.

Like the sun, let bounty spread her ray. And shine that superfluity away. reft*

ble. It is the burial place of the royal family, is seen from the surrounding country to a considerable distance, and commands a most delightful view.

SUPERINCUM'BENT, adj. Lat. super and incumbent. Lying on the top of something else.

It is sometimes so extremely violent that it forces the superincumbent strata ; breaks them throughout, and thereby perfectly undermines

and ruins their foundations. Woodward.

SUPERINDUCE’, v. a. > Lat. super and

SUPERINDUC’TION’ n. s.] indico. To bring in as an addition to something else : the act of so doing.

To superinduce any virtue upon a person, take the living creature in which that virtue is most eminent.

Bacon.

Custom and corruption superinduce upon us a kind of necessity of going on as we began. L’ Estrange.

Father is a notion superinduced to the substance of man, and refers only to an act of that thing called man, whereby he contributed to the generation of one of his own kind, let man be what it will. Locke.

In children, savages, and ill-natured people, learning not having cast their native thoughts into new moulds, nor, by superinducing foreign doctrines, confounded those fair characters nature had written, their innate notions might lie open. Id.

Relation is not contained in the real existence of things, but something extraneous and superinduced.

Id.

Long custom of sinning superinduces upon the soul new and absurd desires, like the distemper of the soul, feeding only upon filth and corruption. Smith.

A good inclination is but the first rude draught of virtue ; the superindw.tion of ill habits quickly defaces it. l(i—

SUPERINTEND’, v. a. ~\ Super and in—

SUPERINTEND’ENCE, n. s. f tend. To over—

SUPERINTEND’ENCY, {see; overlook; to

SUPERINTENDENT, J to take care of

others with authority: the derivatives correspond.

The king will appoint a council, who may superintend the works of

this nature, and regulate what concerns the colonies. Bacon's Advice to Villiers.

Next to Brama, one Deundre is the snperintendent deity, who hath many more under him. Stillingfleet.

Such an universal snperintendencii has the eye and hand of Providence over all, even the most minute and inconsiderable things. South.

The world pays a natural veneration to men of virtue, and rejoice to see themselves conducted by those who act under the care of a Supremo Ucing

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and who think themselves accountable to the great Judge and Superintendent of human affairs. Addison.

The divine Providence, which hath a visible respect to the being of every man, is yet more observable in its superintendence over societies. Grew.

This argues design, and a superintending wisdom, power and providence in this special business of food.

Derham.

An admirable indication of the divine superintendence and management. Id.

Angels, good or bad, must be furnished with prodigious knowledge, to oversee Persia and Grecia of old ; or if any such superintend the affairs of Great Britain now. Walls.

SUPERINTENDENT, or SUPERINTEXDANT, denotes an ecclesiastical superior in several reformed churches where episcopacy is not admitted; particularly among the Lutherans in Germany, and the Calvinists in some other places. The superintendent is similar to a bishop ; only his

of the image was not increased ; but its superior par* which in the first prism suffered the greater refraction, and appeared violet and blue, did again in the second prism suffer a greater refraction than its inferior part, which appeared red and yellow. Newton's Opticki.

He laughs at men of far superior understanding* to his, for not being as well dressed as himself.

SUPERIOR LAKE, or UPPER LAKE, the largest lake in North America, and supposed to be the largest body of fresh water in the world, being computed 1500 miles in its circle. The boundary line between the United States and Upper, Canada passes through the central part of it. The surrounding coast is rocky and un-even. There are in it many

islands ; two of them very considerable; one of them, Isle Royal, is not less than 100 miles in length, and in some places forty broad. The lake abounds with fish, particularly trout and sturgeon, which may be

power is somewhat more restrained than that of caught at almost any season in the greatest the diocesan bishops. He i* the chief pastor, abundance. The trout in general weigh about and has the direction of al' the inferior pastors In Germany they

within his district or diocese, had formerly superintendents general, who were superior to the ordinary superintendents. These, in reality, were archbishops ; but the dignity is sunk into disuse ; and at present none but the superintendent of \V irtemberg assumes the quality of superintendent general.

SUPE'RIOR, adj. & n. s. (Fr. superieur ;

SUPERIORITY, n. *. S Lat. superior.

Higher; upper; greater in dignity or excellence; preferable or preferred ; above ; unaffected ; free from emotion or censure : a more excellent or more skilled person : superiority is, exaltation ; pre-eminence.

In commending another, you do yourself right ; for he that you commend is either superiour to you in that you commend, or inferiour : if he be inferiour, if he be to be commended, you much more : if he be superimr, if he be not to be commended, you much less glorious. Bacon.

Although superior to the people, yet not superior to their own voluntary engagements once passed from them. Taylor.

Here passion first I felt, Commotion strange ! in all enjoyments else Superior and unmoved. Milton.

Bellarmine makes the formal act of adoration to be subjection to a superiour ; but he makes the mere apprehension of excellency to include the formal reason of it ; whereas, mere excellency without superiority doth not require any subjection, but only estimation.

Stillingfleet.

Heaven takes part with the oppressed, and tyrants are upon their behaviour to a superiour power.

L’ Estrange.

Superior beings above us, who enjoy perfect happiness, are more steadily determined in their choice of good than we, and yet they are not less happy or less free than we are. Locke.

The person who advises, does in that particular exercise a superiority over us, thinking us defective in our conduct or understanding. Addison’s Spectator.

There is not in earth a spectacle more worthy than a great man superiour to his sufferings. Id.

Those under the great officers of state have more frequent opportunities for the exercise of benevolence than their superiors. Id.

By the refraction of the second prism, the breadth

twelve pounds, but some are caught that exceed fifty. This lake is as much affected by storms as the Atlantic Ocean ; the waves run as high, and are equally dangerous to ships. It discharges its waters from the south-east corner, through the straits of St. Mary. See AMERICA NORTH.

SUPKR’LATIVE, adj. \ Fr. superlatif; Supr.R’LATivELY, adv. 9 Lat. superlativus. SUPER’LATIVENESS, n. s. ˆImplying or ex-
SUPERLA’TION. ./ pressing the highest

degree ; rising in the highest degree : the adverb and both the noun substantives correspond.

The high court of parliament in England is superlative. Bacon’s Advice to Villiers.

Martyrdoms I reckon amongst miracles ; because they seem to exceed the strength of human nature ; and I may do the like of superlative and admirable holiness. Bacon.

I shall not speak superlatively of them; but that I may truly say, they are second to none in the Christian world. Id.

There are words that as much raise a style as others can depress it ; superlation and overmuchness amplifies : it may be above faith but not above a mean.

Ben Jnnson.

It is an usual way to give the superlative unto things of eminence ; and, when a thing is very great, presently to define it to be the greatest of all.

Browne's Vulgar Errours.

The generality of its reception is with many the persuading argument of its superlative desert ; and common judges measure excellency by numbers.

Glanville.

Ingratitude and compassion never cohabit in the same breast ; which shews the superlative malignity of this vice, and the baseness of the mind in which it dwells. Souih.

Tiberius was bad enough in his youth ; but superlatively and monstrously so in his old age. Id.

The Supreme Being is a spirit most excellently glorious, superlatively powerful, wise and good, Creator of all things. Bei-tleu.

Some have a violent and turgid manner of talking and thinking ; they are always in extremes, and pronounce concerning every thing in the superlative.

Watts.

SUPERLU'NAR, adj. Lat. super and lunu. Not sublunary ; placed above the moon ; not of this world.

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The mind, in metaphysicks, at a loss, May wander in a wilderness of moss ; The head that turns at superlunar things, Poised with a tail, may steer on Wilkins' wings.

Pope.

SUPERNA, in Hindoo mythology, is a name of a celebrated bird in the legends of the east, usually employed to carry the person of the god Vishnu. Most of the Hindoo deities have animals assigned them as vehicles for journeying. They are called in Sanscrit van, or vahan ; one of the commonest names of Superna is Garuda, sometimes pronounced Garoor, by which a large species of falcon, well known in all parts of India, is also called. The English usually style it the Brahmany kite; it being held in veneration by many Hindoos, who very much dislike having it killed. In this there is utility, as well as superstition ; for the bird in question is very useful, in concert with the vulture, in devouring carrion, and performing the office of ccavenger.

The mythological Garuda is variously por-trayed, as a man with the beak and wings of an eagla, painted red, green, or blue. He is also frequently seen in casts ; and as sculptured in the cavern temple at Elephanta, with Vishnu, is seated straddling, rather ridiculously in our eyes, on his shoulders ; Garuda holding by both hands on Vishnu's ancles. Wherever he appears in this cave his projecting nose or beak has been broken off, as it is said, and with rea-son, by the iconoclastic fury of the Portuguese, while Bombay and its contiguous islands, including that called by us Elephanta, were in their possession.

The birth, life, and exploits of Garuda, are constantly referred to in Hindoo writings. One of the Puranas is called after him, Garuda Pu-rana. Vishnu being the sun, Garuda seems, as his apparent vehicle, and in some points of fa-mily and character, to be a personification of the sky. His younger brother is named Aruna, and is the driver or precursor of the glorious car of Surya, or the sun ; hence corresponding perhaps with the Aurora, or dawn, of western fable; as well as carrying Vishnu, and his consort Lakshmi. Garuda is seen also flying through the air with Rama and Sita, and sometimes with Krishna, on his back. But there are representations by sectaries of these several gods, who, each adoring the incarnation as the deity, array the object of their adoration in the attributes of the archetype.

Garuda is stated to have married a beautiful woman, when the tribe of serpents, alarmed at this marriage, lest the offspring should inherit he propensities of the fire, waged fierce war against him ; but he destroyed them all, save one, which he placed in an ornament about his neck. In several parts of the Elephanta cave Garuda is seen with this appendage ; and, on very ancient Hindoo coins and medals, he has snakes and elephants in his talons and beaks : for he is sometimes spread and double-headed, like the eagle of Prussia. Garuda had a son of some note, named Sunabha ; and a daughter of surprising beauty, named Su-mati, who was espoused by Sagara, or the sea. If we recollect

the surmise that Garuda, or Superna, as the vehicle of Vishnu, a type of the aqueous element, is a personification of the sky or visible firmament, we may discover some connexion in the allegory of an alliance between his descendant and the sea. The beauteous maiden (the meaning of her name, Su-mati) thus allied, became wonderfully prolific : she brought forth (if the Hindoo romantic language be rightly construed) a gourd, whence issued 60,000 male children. The author of the Hindoo Pantheon, in his account of Garuda, notices the extensive preva lence of serpentine forms in the mythological machinery of Egypt and Greece, as well as in India.

SUPER'NAL, adj. Lat. supernus. Having a higher position ; locally above us.

That supernal Judge that stirs good thoughts In any breast of strong authority, To look into the blots and stains of right.

Slmkspeare.

By heaven and earth was meant the solid matter and substance, as well of all the heavens and orbs supernal, as of the globe of the earth, and waters which covered it. Raleigh.

He with frequent intercourse Thither will send his winged messengers, On errands of supernal grace. Milton.

SUPERNATANT, adj. J Lat. tupernatans.

STJPERNATA'TION, n. s. J Swimming above: the act of swimming above.

Touching the supernatation of bodies, take of aqua-fortis two ounces,

of quicksilver two drams, the dissolution will not bear a flint as big as a nutmeg.

Bacon's Natural History.

Bodies are differenced by supernatation, as floating on water ; for chrystal will sink in water, as carrying in its own bulk a greater ponderosity than the space of any water it doth occupy ; and will therefore only swim in molten metal and quiksilver.

Browne's Vulgar Errours.

Whilst the substance continued fluid, I could shake it with the supernatant menstruum, without making between them any true union. Bai/le.

SUPERNATURAL, adj. Lat. super and natura. Being above the powers of nature.

There resteth either no way unto salvation, or, if any, then surely a way which is supernatural, a way which could never have entered into the heart of a man, as much as once to conceive or imagine, if God himself had not revealed it extraordinarily ; for which cause we term it the mystery or secret way of salvation. Hooker.

No man can give any rational account how it is possible that such a general flood should come, by any natural means. And, if it be tupernatwal, that grants the thing I am proving, namely, such a supreme being as can alter the course of nature.

Wilkint.

The understanding is secured by the perfection of its own nature, or by tttpernatwal assistance.

Tittotum.

What mists of providence are these, Through which we cannot see ? So saints by supernatural power set free Are left at last in martyrdom to die. Dryden.

The Son of God came to do every thing in mirad to love supernaturally, and to pardon infinitely, a» even to lay down the Sovereign while he assumea the Saviour.

SUPERNUMERARY, adj. Fr. tupcrmunt-

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ratre ; “Lai. super and numerus. Being above a slated, a necessary, a usual, or a round num-ber.

U’ell if thrown out, as supernumerary To my just number found. Milton’s Paradise Lost.

In sixty-three years there may be lost eighteen days, omitting the intercalation of one day every fourth year, allowed for this quadrant or six hours supernumerary, Broune.

Besides occasional and supernumerary addressee, Hammond’s certain perpetual returns exceeded Da-vid’s seven times a-day. Fell.

The odd or supernumerary six hours are not accounted in the three years after the leap year.

Holder.

The produce of this tax is adequate to the services for which it is designed, and the additional tax is proportioned to the supernumerary expense this year. Addisons Freeholder.

A supernumerary canon is one who does not receive any of the profits or emoluments of the church, but only lives and serves there on a future expectation of some prebend. Ayliffe.

Antiochus began to augment his fleet ; but the Roman senate ordered his supernumerary vessels to be burnt. Arbuthnot.

SUPERPARTICULAR PROPORTION, or ratio, is that in which the greater terra exceeds the less by unit or 1. As the ratio of 1 to 2, or 2 to 3, or 3 to 4, &c.

SUPER PARTIENT (from super and to part), containing more than a division.

SfPERPARTIENT PROPORTION, OF ratio, is

when the greater term contains the less term once, and leaves some number greater than one remaining. As the ratio of 3 to 5, which is equal to that of 1 to 1§ ; of 7 to 10, which is equal to that of 1 to 1$, Sec.

SU’PERPLANT, n. s. Super and plant. A plant growing upon another plant.

No superplant is a formed plant but roisletoe.

Bacon.

SU’PERPLUSAGE, n. s. Lat. super and plus. Something more than enough.

After this there yet remained a siiperplusage for the assistance of the neighbouring parishes. Fell.

SUPERPRO PORTION, n. s. Lat. super and proportio. Overplus of proportion.

No defect of velocity, which requires as great a tuperproportion in the cause, can be overcome in an instant. Digby.

SUPERPURGATION, n. s. Fr. superpurgation ; super and purgation. More purgation than enough.

There happening a superpurgation, he declined the repeating of that purge. Wiseman’ » Surgery.

SUPERREFLEX’ION, n. s. Super and reflexion. Reflection of an image reflected.

Place one glass before and another behind, you shall see the glass behind with the image within’the glass before, and again the glass before in that, and divers such superreflerions, till the species speciei at last die. Bacon’s Natural History.

SUPERSA’LIENCY, n. s. Lat. super and salio. Better written supersiliency. The act of leaping upon any thing.

Their coition is by super saliency, like that of horses.

Bruwne.

To SUPERSATURATE, in chemistry, to saturate a basis with excess of acid. See SALT.

SUPERSCRIBE’, v . u. \ Lat. super and

SUPERSCRIPTION, n. s. S scribo. To inscribe upon the top or outside : the noun substantive corresponding.

Read me the superscription of these letters ; I know not which is which. bhakspeare. Tuiiun.

No superscriptions of fame, Of honour or good name. Suckling.

I learn of my experience, not by talk, How counterfeit a coin they are who friends Bear in their superscription ; in prosperous days They swarm, but in adverse withdraw their head.

Milton.

It is enough her stone May honoured be with superscription Of the sole lady, who had power to move The great Northumberland. Waller.

Fabretti and others believe, that by the two Fortunes were only meant in general the goddess who sent prosperity or afflictions, ajid produce in their behalf an ancient monument, superscribed. Addison.

SUPERSEDE', v. a. I Lat. super and *edeo.

SUPERSE'DEAS, n. *. i To make void or inef-ficacious by superior power; to set aside: for supersedeas see below.

The far distance of this county from the court hath afforded it a supersedeas from takers and purveyours.

Carevo.

Passion is the drunkenness of the mind, and therefore in its present workings not controulable by reason, for as much as the proper effect of it is, for the time, to supersede the workings of reason. South.

In this genuine acceptation of chance, nothing is supposed that can supersede the known laws of natu-fal motion. Bentley.

SUPERSEDEAS, in English law, is a writ that lies in a great many cases ; and signifies in general a command to stay some ordinary proceedings at law, on good cause shown. It is used for the staying of an execution, after a writ of error is allowed and bail put in : but nc supersedeas can be made out on bringing writ, of error, till bail is given, where there is judgment upon verdict, or by default, in debt. Nor in actions for tithes, promises for payment of money, trover, covenant, detinue, and trespass : stat. 13 Car. II. st. 2, c. 2, and

execution shall not be staid in any judgment after verdict (ex-cept in the case of executors) by writ of error or supersedeas thereon, unless bail be put in. — Stat. 16 and 17, Car. II, c. 8, § 3.

A writ of error is said to be in judgment of law a supersedeas, until the errors are examined, &c., that is to the execution ; not to action of debt on the judgment at law. From the time of the allowance, a writ of error is a supersedeas : and, if the party had notice of it before the allowance, it is a supersedeas from the time of such notice ; but this must be where execution is not executed, or begun to be executed. Where a first writ of error abates, or is put an end to by the act of the plaintiff in error, a second writ of error brought in the same court is not a supersedeas of execution as the first is : and execution may then Be sued out without leave of the court. But in error of matter of fact coram vobis, which is not within the statutes requiring bail in error, the writ of error is or is not a supersedeas according to circumstances; and the court must be moved for leave

to sue out executions pending it. — 8 East's Rep. 412. If, before execution, the defendant bring a writ of error, and the sheriff will execute a fieri facias and levy the money, the court will award a supersedeas, quia erronice emanavit, and to have restitution of the money. — Stile 414. After an execution, there was a supersedeas, quia executio improvide emanavit, &c., issued ; and, there being no clause of restitution in the supersedeas, it was insisted that the execution was executed before the supeuedeas awarded, and that a faulty supersedeas is no supersedeas ; but the court ordered another supersedeas, with a clause of restitution. — Moor.

466.

A supersedeas, quia erronice emanavit, lies to restore a possession, after an habere facias seisi-nam, when sued out erroneously ; so of a supersedeas after execution upon a capias subsatis-faciend, if it be immediately delivered to the sheriff. It appearing from affidavit that there were two writs of execution executed upon one judgment, the party moved for a supersedeas, because there cannot be two such executions, but where the plaintiff is hindered either by the death of

the defendant, or by some act in law, that he can have no benefit of the first; and so it was adjudged. — Stile 255. A supersedeas is grantable to a sheriff to stay the return of an habeas corpora ; and if he return it afterwards, and the parties proceed to trial, it is error ; and so are all the proceedings in an inferior court, after an habeas corpora delivered, unless a pro-cedendo is awarded, in which case a supersedeas is not to be granted. — Cro. Car. 43. 350.

When a certiorari is delivered, it is a supersedeas to inferior courts below ; and, being allowed, all their proceedings afterwards are erroneous ; and they maybe punished. If a sheriff holds plea of 40s. debt in his county court, the defendant may sue forth a supersedeas, that he do not proceed, &c. Or, after judgment, he may have a supersedeas directed to the sheriff, requiring him not to award execution upon such judgment ; and upon that an alias, a pluries, and an attachment, &c. — New Nat. Br. 432. Supersedeas may be granted by the court for setting aside an erroneous judicial process, &c. Also a prisoner may be discharged by super-yedeas ; as a person is imprisoned by the kirg's writ, so he is to be set at liberty : and a supersedeas is as good a cause to discharge a person, as the first process is to arrest him. — Finch. 453 : Cro. Jac. 379. If a privileged person is sued in any jurisdiction foreign to his privilege, he may bring his supersedeas. — Vaugh. 155. It is false imprisonment to detain a man in custody after a supersedeas delivered ; for the supersedeas is to be obeyed ; and in such case it is a new caption without any cause. — 2 Cro. 379. There is a supersedeas where an audita querela is sued ; and, out of the chancery, to set a person at liberty, taken upon an exigent, on giving security to appear, &c. And in cases of surety of the peace and good behaviour, where a per-son is already bound to the peace in the chancery, &c.— New Nat. Br. 524, 529, 532. So where a warrant issues against a man, on an indictment found against him, for a misde-Voi.. XXI.

meaner, or other bailable offence, and he, having notice of it, does, before caption, duly put m bail, to appear and traverse the indictment &c he is entitled to a supersedeas, to prevent a caption.

SUPERSER'VICEABLE, adj. Super and serviceable. Over officious ; more than is necessary or required.

A glass-gazing superserviceable finical rogue.

Shakspeare.

SUPERSTITION, n.5.-) Fr. aperitif inn .-

SUPERSTI'TIOUS, adj. £ Lat. superstitlo.

SUPERSTI'TIOUSLY, adv.) Unnecessary fear or scruples in religion ; observance of unnecessary and uncommanded rites or practises ; religion without morality : addicted to superstition : the adverb corresponds with the adjective.

They had certain questions against him of their own superstition. Acts xxv. 19.

At the kindling of the fire, and lighting of candles, they say certain prayers, and use some other superstitious rites, which shew that they honour the fire and the light. Spenser.

Have I

Been out of fondness superstitious to him ? And am I thus rewarded? Shakspeare. Henry VIII.

There reigned in this island a king, whose memory of all others we most adore ; not superstitiously , but as a divine instrument. Bacon.

Nature's own work it seemed, nature taught art, And, to a superstitious eye, the haunt Of wood-gods and wood-nymphs. Milton.

A rev'rent fear, such superstition reigns Among the rude, ev'n then possessed the swains.

Dry den.

A venerable wood,

Where rights divine were paid, whose holy air Was kept and cut with superstitious care. Id.

Neither of these methods should be too scrupulously and supersthiuusly pursued. Watts's Loyick.

If we had a religion that consisted in absurd superstitions, that had no regard to the perfection of our nature, people might well be glad to have some part of their life excused from it. Law.

SUPERSTITION is a word that has been used so indefinitely that it is difficult to determine its precise meaning. From its resemblance in sound to the Latin word superstes, ' a survivor,' it is evidently derived from it, and different attempts have been made to trace their connexion in signification. Balbus, in the dialogue De Natura Deorum of Cicero, says, that they who prayed and sacrificed whole days that their children might survive them, were called superstitious. Lactantius censures this etymology, and says they were not called superstitious who wished that their children might survive them (for this we all wish), but because they who survived their parents worshipped their images. Others again say that superstition is derived from superstes, because it consisted in considering the dead as if they were alive. But these etymologies are conjectural and trifling. A more probable etymology may be traced from the primitive words, super, above, and sto, I stand ; for the superstitious in all ages and religions flatter themselves that they stand superior to the rest of mankind in holiness. Superstition is a word of a very extensive signification. We

apply it to the idolatry of the heathens ; we apply it also to the Jews, who made the will of God of no effect by

their traditions, and substituted ceremonies in place of the religion of their fathers. We say also that Christians are guilty of superstition ; the Roman Catholics, who believe in transubstantiation and in the efficacy of prayers to saints; and those Protestants who esteem baptism and the Lord's supper, and the punctual performance of other ceremonies, without regard to morality, as sufficient for salvation. Those persons also are reckoned superstitious who believe, without evidence, that prophecies are still uttered by di-vine inspiration, and that miracles are still performed. The word is also extended to those who believe in witchcraft, magic, and apparitions, or that the divine will is declared by omens or augury ; that the fortune of individuals can be affected by things indifferent, by things deemed lucky or unlucky, or that diseases can be cured by words, charms, and incantations. Through all these various superstitions, there runs one general idea, the belief of what is false and contrary to reason. But this does not prove that whatever is false and contrary to reason may be denominated superstition. It is false and irrational to say that there ever lived on earth a race of men who walked on one leg, and had their eyes in their breast ; or that there were giants ninety feet high : yet we should only call the man who believes these chimeras credulous. Superstition has always a reference to God, to religion, or to beings superior to man. We do not however distinguish all false and irrational opinions in religion by the name of superstition. We do not, for instance, apply this name to the opinions which some of the ancients entertained, that God is the soul of the world, and that men are only portions of him separated for a time, or that the soul aftei death lives successively in different bodies. Superstition implies ignorance of the moral attributes of God ; we never say a man is superstitious for entertaining erroneous opinions of the attributes of God. Some Socinians have denied the prescience of God ; and M. La Metherie has not only rejected the belief that he is a spirit, but has presumed to say that he is composed of a species of crystals ! The first of these opinions discovers very imperfect ideas of God, and the second is the height of impiety and absurdity ; yet the Socinians are not accused of superstition, nor can this French philosopher be suspected of it. Superstition has sometimes been called the opposite of infidelity, for it always includes the idea of credulity. It consists not in falsely denying that God possesses any particular moral attributes, but in believing mote than what is true concerning them ; in forming mean unworthy ideas of them ; in supposing that he is guided by passion like mankind, and enjoins upon his creatures

commandments which are irrational and absurd. As all superstition arises from ignorance and credulity in the understanding, so it has also a seat in the passions. Fear has been commonly considered as the passion of the human mind from which it chiefly derives its origin ; and there is no doubt that more superstition has arisen from fear, united with ignorance and credulity, than from any other passion. Yet we cannot exclude all other passions. We cannot account for the superstition of the Egyptians, without supposing that much of it arose from gratitude. They worshipped the Nile, because it distributed fertility and abundance over the land of Egypt ; and they worshipped some animals, because they prevented the increase of other animals which were noxious. Thus they adored the ibis, because it destroyed the eggs of the crocodile. In a word, superstition respects God and beings superior to man, and extends to our religious opinions, worship, and practices ; and may be defined absurd opinions and actions arising from mean and defective ideas of the moral attributes of God. Superstition involves the idea of a blameable inattention to reason, or a credulity arising from an indolence of understanding. We generally make a distinction between the imperfect opinions which a savage, from his situation, forms of the attributes of God, and those which civilized nations entertain. We ascribe the ignorance of the savage to his situation ; but we call the Roman Catholic superstitious, and we blame him for not having those just ideas of God which he might obtain from his Bible, by the exercise of his understanding. Superstition then does not originate so much from the natural weakness of the human understanding, as from a misapplication or a neglect of it. We cannot therefore with propriety apply the term superstition to polytheism ; for what all the ancient philosophers, after much study and reflection, concluded to be true, could never proceed from credulity and inattention, but from their situation. We very properly, however, call idolatry by the name of superstition ; because there is no man so devoid of understanding as noi to be capable of discovering that a piece of metal, or wood, or stone, can neither hear nor answer petitions. Superstitition was a name which the ancient philosophers gave to those who entertained mean opinions of the gods, or did foolish things to obtain their favor. Theophrastus gives a most ridiculous picture of a superstitious pagan, and of the various whimsical ceremonies performed by such persons to prevent mischief, and to avert the wrath of the gods. The superstitious opinions and practices among Jews and Christians have all equally arisen from mean and absurd ideas of the moral attributes of God ; for they have generally entertained noble opinions of his natural attributes. The Jews Considered God«as a partial Being, who had a predilection for their nation in preference to all others, and preferred external homage

and ceremony to moral-purity. If the Roman Catholics think consistently, they must esteem God as a Being who can be prevailed upon by the importunity of a dead man to assist another, or as a Being whose patience would be fatigued with hearing prayers constantly. Hence their practice of praying to saints. They consider a strict adherence to a variety of ceremonies, to forms, to pomp, and show, as essential to the worship of God : this is treating God as a vain glorious Being. They thought it their duty to extirpate heretics : this was supposing God a cruel and revengeful Being. Even among Protestants, a great deal of superstition still remains ; many, like the Jews, considering God, as partial to

their own peculiar sect, and as reprobating the rest of mankind. Besides those superstitious opinions and practices which entirely respect our duty to God, there are others which may be termed vulsjar superstitions. These also arise from imperfect and mean ideas of the moral attributes of God. To believe vulgar prophecies, which are always the effusions of enthusiasm or knavery, is to suppose that God, who has drawn a veil over futurity, and only delivers prophecies to accomplish some great moral purpose, sometimes gives them for no purpose at all, or to gratify idle curiosity,

The belief of witchcraft, of apparitions, and the second sight, may be resolved into the same principle. To suppose that God would communicate the power of doing mischief, and of controlling his laws, to any being, merely for gratifying their own passions, is believing what is unworthy of God. The belief of apparitions is equally inconstant with the goodness of God. See SPECTKE. The same objection rises against the second sight, and may be extended to omens, astrology, things lucky and unlucky, fortune-telling, &c. A judicious history of superstition would exhibit the human character in a remarkable point of view. Superstition is most prevalent among men of weak and uncultivated minds ; it is more frequent in the female sex than among men ; for this reason, that by their education they have less opportunity of improving their minds. It also, for the same reason, abounds more in the rude than in the refined stages of society. It gained admission into the science of medicine at an early period. He who was endowed with superior genius aud knowledge was reckoned a magician. Dr. Bartolo was seized by the inquisition at Rome, in the

seventeenth century, because he unexpectedly cured a nobleman of the gout. Diseases were imputed to fascination, and hundreds of poor wretches were dragged to the stake for being accessary to them. Mercatus, physician to Philip II. of Spain, a writer of uncommon accuracy and information, appears strongly inclined to deny the existence of fascinatory diseases ; but he is constrained to acknowledge them for two reasons ; 1st, Because the inquisition had decided in favor of their reality ; 2dly, Because he had seen a very beautiful woman break a steel mirror to pieces, and blast some trees by a single glance of her eyes ! As the opinions concerning the cause of diseases were superstitious, those concerning the method of curing them were not less so. In the Odyssey we read of a cure performed by a song. Josephus relates that he saw a certain Jew, named Eleazor, draw the devil out of an old woman's nostrils by the application of Solomon's seal to her nose in the presence of Vespasian. Many different kinds of applications were used for expelling the devil. Flagellation sometimes succeeded admirably. Dr. Mynsight cured several bewitched persons with a plaster of assafce-tida. Nor was it only in medicine these superstitious opinions were entertained ; they prevailed also in natural philosophy. The pernicious effects in mines, which we know now are occasioned by noxious air, were confidently imputed to the demons of the mine. Even Van Ilclmont,

Bodinus, Strozza, and Luther, attributed thunder and meteors to the devil. Chemists were employed for centuries in search of the philosopher's stone, with which they were to do miracles. It was a common question among philosophers, in the seventeenth century, whether the imagination could move external objects? A question generally decided in the affirmative ! Though superstition be generally the mark of a weak mind, such is the infirmity of human nature that we find many instances of it among men of the most sublime genius and most enlightened minds. Socrates believed that he was guided by a de-mon. Lord Verulam believed in witchcraft ; and relates that he was cured of warts by rubbing them with a piece of lard with the skin on, and then nailing it with the fat towards the sun on the post of a chamber window. Henry the Great was rendered very uneasy, by some prophecies of his assassination before it happened ; but Julius Caesar neither believed his wife's dreams, nor the augur's prediction, by which ex-cess of courage he lost his life, and thus both were fulfilled. What say infidels to this ? See ROME. Superstition would have saved Crcsar. The enlightened Cudworth defended prophecies in general, and called those who opposed the belief of witchcraft by the name of atheists ; and the predictions of Rice Evans have been supported in the

present century by the celebrated names of Warburton and Jortin. Dr. Hoffman, the father of the Modern Theory and Practice of Medicine, in a dissertation published in the large edition of his works in 1747, says that the devil can raise storms, produce insects, and act upon the animal spirits and imagination; and, in fine, that he is an excellent optician and natural philosopher, on account of his long experience. Dr. Johnson, the leviathan of literature, believed in the SECOND SIGHT. See that article. With respect to the effects of superstition on the human mind, they are indeed deplorable. It chains down the understanding, sinks it into the most abject and sordid state, and keeps it under the dominion of fear, and sometimes of cruelty. The Christian religion gave a violent shock to the heathen superstition ; the Reformation in a great measure demolished the superstition of the church of Rome ; and the superstition which remained among protestants after their separation from that church has been gradually yielding to the influence of enlightened reason, or to the bold and daring attacks of infidelity and deism. We behold the prospect of its ruins with pleasure, and thank the deists for their zeal ; but it is from the firm hope that the religion of Jesus will arise in all its beauty and simple majesty, and be admired and respected as it deserves ; for, mean and contemptible as superstition certainly is, we would rather see. men do what they reckon their duty from superstitious principles, than see anarchy and vice prevail, even though attended with all the knowledge and liberality of sentiment which deism and infidelity can inspire.

SUPERSTRAIN', v. a. Super and strain. To strain beyond the just stretch.

In the straining of a string, the further it u strained, the less utpentraining goeth to a note.

SUPERSTRUCT, v. a.~\ Lat. superstruo,

SUPERSTRUC'TION, n. s. tsvperstructus. To

SfPERbTRUCT'ivE, adj. I build upon any

SUPERSTRUCTURE, n. s. J thing : both the

noun substantives signify that which is so built :

superstmctive, built upon something else.

This is the only proper basis on which to super-tlruct first innocency, and then virtue.

Decay of Piety.

Two notions of fundamentals may be conceived ; one signifying that whereon our eternal bliss is immediately superstructed, the other whereon our obedience to the faith of Christ is founded. Hammond.

He that is so sure of his particular election, as to resolve he can never fall, must necessarily resolve, that what were drunkenness in another is not so in him ; and nothing but the removing his fundamental error can rescue him from the superstructive, be it ne-ver so gross. Hammond.

I want not to improve the honor of the living by impairing that of the dead ; and my own profession hath taught me not to erect new supentructions upon an old ruin. Denham.

Purgatory was not known in the primitive church, and is a superstructure upon the Christian religion.

Tiilotson.

You have added to your natural endowments the superstructures of study. Dryden.

He who builds upon the present, builds upon the narrow compass of a point ; and, where the foundation is so narrow, the titperstructure cannot be high and strong too. South.

SUPERVENE', v. n. Lat. supervenio. To come as an extraneous addition.

That branch of belief was in him supervenient to Christian practice, and not all Christian practice built on that. Hammond.

If it were unjust to murder John, the supervenient oath did not extenuate the fact, or oblige the juror into it. Browne.

His goodwill, when placed on any, was so fixed and rooted, that even supervening vice, to which he had the greatest detestation imaginable, could not easily remove it. Fell.

Such a mutual gravitation can never supervene to matter, unless impressed by a divine power.

Bent ley.

SUPERVISE', v. a. Lat. super and visus. To overlook; to oversee; to intend.

How satisfied, my lord ! Would you be supervisor, grossly gape on ?

Shakspeare.

I am informed of the author and supervisors of this pamphlet. Dryden.

Mr. Bayle speaks of the vexation of the supervis-ing of the press, in terms so feeling that they move compassion. Congreve.

A supervisor may signify an overseer of the poor., an inspector of the customs, a surveyor of the highways, a supervisor of the excise. Watts's Logick.

SUPERVIVE', v. n. Latin super and vivo. To overlive ; outlive.

Upon what principle can the soul be imagined to be naturally mortal, or what revolutions in nature vill it not be able to resist and supervive ? Clarke.

SUPERUS FLOS. See BOTANY, Glossary.

SUPINATION, in anatomy, the action of a supinator muscle, or the motion whereby it turns the hand so as that the palm is lifted up towards heaven.

SU’PINE, adj. &n.s.-\ Lat. supinus. Ly- (ing with the face up-

f ward : opposed to J]

SUPINE’LY, adv.

SUPINE’NESS, n. s.

SUPIN’ITY. } prone : leaning backward ; exposed ; negligent ; careless : the aa-verb and noun-substantive corresponding.

Who on the beds of sin supinely lie, They in the summer of their age shall die. Sandus.

These men suffer by their absence, silence, negligence, or supine credulity. King Charles.

The fourth cause of errour is a supinity or neglect of enquiry, even in matters wherein we doubt, rather believing than going to see.

Browne’s Vulgar Errovrs.

Upon these divers positions in man, wherein the spine can only be at right lines with the thigh, arise those remarkable postures, prone, supine, and erect.

Id.

The old imprisoned king, Whose lenity first pleased the gaping crowd ; But when long tried, and found supinely good, Like ˆEsop’s log, they leapt upon his back.

Dryden.

At him he lanced his spear, and pierced his breast ; On the hard earth the Lycian knocked his head, And lay supine ; and forth the spirit fled. Id.

If the vine

On rising ground be placed, or hills supine, Extend thy loose battalions. ..

What advantage hath a man by this erection above other animals, the faces of most of them being more supine than ours? Ray on the Creation.

Wilt thou then repine To labour for thyself ? and rather chuse To lie supinely, hoping heaven will bless Thy slighted fruits, and give thee bread unearned?

Philips.

Supine in Sylvia's snowy arms he lies, And all the busy cares of life defies. Tatler.

Beneath a verdant laurel's shade, Horace, immortal bard ! supinely laid. Prior.

When this door is open to let dissenters in, considering their industry and our supineness, they ma/ in a very few years grow to a majority in the hous; of commons. Swift.

SUPINE, in the Latin grammar, part of the conjugation of a verb, being a verbal substantive of the singular number and the fourth declension. There are two kinds of supines ; one called the first supine, ending in urn of the accusative case, which is always of an active signification, and follows a verb of motion; abiit deambiilatum. The other, called the last supine, and ending in. u of the ablative case, is of a passive signification, and is governed by substantives or adjectives; as facile dictu, &c. They have their name, says Probus, and after him Vossius, quod ad in-star supinorum et otiosorum hominum omnia habent confusa ; or, according to Priscian, quod nascuntur a participiis passivis, quze supina ap-pellata sunt, quia, in infimo loco sita, totam conjugationis molem suscipiant.

SUPPEDA'NEOUS, adj. Lat. sub and pet. Placed under the feet.

He had slender legs, but increased by riding after meals ; that is, the humour descended upon their pendulosity, they having no support or suppedaneous stability. Browne.

SUFFER, n. s. > Fr. souper. From sup.

SUP’PERLESS, adj. \ The last meal of the day ; the evening repast: wanting supper.

SUPPER.

To-night we hold a solemn supper. Shakspean.

I’ll to my book :

{•‘or yet, ere supper-time must I perform Aiuch business. Id. Tempest.

The’ hour of supper comes unearned. Miltmi.

His physicians, after his great fever that he had in Oxford, required him to eat suppers. Fell.

Suppose a man’s going supperkss to bed should introduce him to the table of some great prince,

Spectator.

She eyed the bard, where supperless he sat, And pined, unconscious of his rising fate. Pope.

A SUPPER of heavy food should be avoided, because the stomach is more oppressed with the same quantity of food in an horizontal posture than in an erect one, and because digestion goes on more slowly when we sleep than when we are awake. It should be eaten long enough before bed-time, that it may be nearly digested before going to sleep ; and then a draught of pure water will dilute that which remains in the stomach.

SUPPER OF THE LORD, otherwise called the Eucharist, is a sacrament ordained by Christ in his church, of which the outward part is bread and wine, and the inward part or thing signified the body and blood of Christ, which the majority of Christians believe to be in some sense or other taken and received by the faithful communicants. See SACRAMENT. There is no ordinance of the gospel which has been the subject of more violent controversies between different churches, and even between different divines of the same church, than this sacrament ; and, though all confess that one purpose of its institution was to be a bond of love and union among Christians, it has, by the

perverseness of mankind, been too often converted into an occasion of hatred. The outward and visible sign, and the inward and spiritual grace, have equally afforded matter of disputation to angry controvertists. Many members of the church of Rome condemn the Greek church and the Protestants for using leavened bread in the Lord's Supper, contrary to the example set them by our Saviour ; whilst the Greek church in general, and some Protestant societies in particular, unite with the church of Rome in censuring all churches which mix not the wine with water, as deviating improperly from primitive practice. See EUCHARIST. That it was unleavened bread which our Lord blessed and brake and gave to his disciples as his body, cannot be questioned r for at the time of the passover, when this ordinance was instituted, there was no leavened bread to be found in Jerusalem. For the mixed cup the evidence is not so decisive. It is indeed true that the primitive Christians used wine diluted with water ; and Maimonides says it was the general custom of the Jews, as well at the passover as at their ordinary meals, to add a little water to their wine on account of its great strength ; but that this was always done, or that it was done by our Saviour in particular, there is no clear evidence. Origen indeed affirms that our Lord administered in wine unmixed ; and he was not a man to hazard such an affirmation, had there been in his days any certain tradition, or so much as a general opinion to the contrary. On this account

we have often heard with wonder the necessity of the mixed cup insisted on by those who without hesitation make use of leavened bread ; for, if it be essential to the sacrament that the very same elements be employed by us that were employed by our Saviour, the necessity of unleavened bread is certainly equal to that of wine diluted by water. But the mixed cup is said to he emblematical of the blood and water which flowed from the side of our Lord when pierced by the spear of the Roman soldier, while the absence of leaven is emblematical of no particular circumstance in his passion. This argument for the mixture is as old as the era of St. Cyprian, and has since been frequently urged with triumph by those who surely perceived not its weakness. The flowing of the blood and water from our Saviour's side was probably the consequence of the spear's having pierced the pericardium. But, whatever was the cause of it, how can the mixing of wine with water in the sacrament be emblematical of the flowing of blood and water separately ? We urge not these objections to the mixed cup from any dislike to the practice. It is unquestionably harmless and primitive ; and we wish that greater regard were paid to primitive practices than most of Christians seem

to think they can claim ; but let the advocates for antiquity be consistent ; let them either restore, together with the mixed cup, the use of unleavened bread, or acknowledge that neither the one nor the other is essential to the sacrament. This last acknowledgment must indeed be made if they would not involve themselves in difficulties from which they cannot be extricated. If either the mixed cup of unleavened bread be absolutely necessary to the validity of the sacrament, why not wine made from the grapes of Judea? But the controversies respecting the outward part of the sign of the Lord's Supper are of little importance when compared with those which have been agitated respecting the inward part or thing signified ; and of these we hasten to give as comprehensive a view as the limits prescribed to such articles will admit.

The institution of the Lord's Supper, as recorded in the gospel by St. Matthew, St. Paul, St. Mark, and St. Luke, we need not quote. That it was the bread which Christ blessed and brake that is called his body, and the wine over which he gave thanks that he styles his blood of the new testament, will admit of no reasonable doubt ; but in what sense they became so has been the subject of many controversies. The church of Rome, which holds that, after consecration, Jesus Christ, God and man, is really, truly, and substantially contained under the outward appearance of the bread and wine, informs us that, about the middle of the mass, when the priest, taking into his hand, first the bread, and then the wine, pronounces over each separately the sacred words of consecration, the substance of these elements is immediately changed by the almighty power of God into the body and blood of Christ; but that all the o it-ward appearances of the bread and wine, and all their sensible qualities remain. This more than miraculous change is called transubstant.-ition ; and has been traced to the philosophy of Arts-422

totle, which resolves all bodies into matter and form (see PHILOSOPHY) ; for it is only the matter or imperceptible substance which supports the forms or sensible quantities of bread and wine, and is changed into the substance or matter of the body and blood of Christ, so that this divine matter, coming into the place of the former earthy matter, supports the same identical forms which it supported. Hence we are told 'that Jesus Christ, now present instead of the bread

and wine, exhibits himself to us under those very same outward forms or appearances which the bread and wine had before the change.' See TRANSUBSTANTIATION. The churches of England and Scotland, in their established doctrine respecting the Lord's Supper, appear to be Cal-vinistical ; but the compilers of the Thirty-nine Articles and of the Confession of Faith must have been much more rational divines than Beza and Peter Martyr. They agree in condemning the doctrine of transubstantiation as contrary to common sense, and not founded on the word of God ; they teach that to such as rightly, worthily, and with faith, receive the sacrament, the bread which we break is a partaking of the body of Christ, and the cup of blessing a partaking of the blood of Christ ; and they add that the body and blood of Christ are eaten and drank, not corporally and carnally, but only after a heavenly and spiritual manner, by which the communicants are made partakers of all the benefits of his death. In one important circumstance these two churches seem to differ. The Confession of Faith affirms that, in the Lord's Supper, there is no sacrifice made at all. The thirty-first article of the church of England likewise condemns the popish sacrifice of the mass as a blasphemous fable and dangerous deceit ; but in the order for the administration of the Lord's Supper, or Holy Communion, the cele-brator ' beseeches God most mercifully to accept the alms and oblations of the congregation,' and again, ' to accept their sacrifice of praise and thanksgiving :' from which petitions many have inferred that, in the Lord's Supper, that church offers a commemorative and eucharistical sacrifice. This inference seems not to be wholly without foundation. In the order for the administration of the Lord's Supper, according to the form of the book of Common Prayer set forth by act of parliament in the second and third years of king Edward VI., the elements were solemnly offered to God as a sacrifice of praise and thanksgiving; but the prayer containing that oblation was, at the review of the liturgy some years afterwards, removed from the prayer of consecration, to which it was originally joined, and placed where it now stands in the post-communion service. The English church, however, has not positively determined any thing respecting this great question : and whilst she condemns the doctrine of the real presence, with all its dangerous consequences, she allows her members to entertain very different notions of this holy ordinance, and to publish these notions to the world. Accordingly, many of their most eminent divines, particularly archbishops Laud and Wake; the bishops Poynet, Andrews, Bull, and Patrick ; tlift doctors Hickes, Crabe, and Brett ; Messrs.

Bingham, Johnson, Mede, Wheatly, Scandaret, Bowyer, &c., have

maintained that, in the celebration of the Lord's Supper, the elements of bread and wine are offered to God as a sacrifice commemorative of Christ's one sacrifice for the sins of the whole world : that these elements, though they undergo no substantial change, yet receive such a divine virtue, by the descent of the Holy Ghost, as to convey to the worthy communicant all the benefits of Christ's passion : that they are therefore called his body and blood ; because being, after their oblation, eaten and drunk in 'remembrance of him, they supply the place of his body and blood in the feast upon his sacrifice ; and that it is customary with our Saviour to give to any thing the name of another of which it completely supplies the place, as when he calls himself the door of the sheep, because there is no entrance into the church or kingdom of God but by faith in him. They observe that the Eucharist's being commemorative, no more hinders it from being a proper sacrifice than the typical arid figurative sacrifices of the old law hindered them from being proper sacrifices : for as to be a type doth not destroy the nature and notion of a legal sacrifice, so to be representative and commemorative doth not destroy the nature of an evangelical sacrifice.

Our limits will not permit us to give even an abstract of their arguments ; but the reader who wishes to see more of the subject may peruse Johnson's unbloody Sacrifice and Altar unveiled and supported ; whence he may discover that their notions are totally irreconcileable with the doctrine of transubstantiation and the popish sacrifice of the mass. Other English divines of great learning, with the celebrated Hoadley bishop of Winchester, contend strenuously that the Lord's Supper, so far from being a sacrifice of any kind, is nothing more than bread and wine reverently eaten and drunk, in remembrance that Christ's body was broken and his blood shed in proof of his Father's and his own love to mankind ; that nothing is essential to the sacrament but this remembrance, and a serious desire to honor and obey our Saviour as our head ; that the sacrament might be celebrated without uttering one prayer or thanksgiving, merely by a society of Christians, whether small or great, jointly eating bread and drinking wine with a serious remembrance of Christ's death ; that St. Paul enjoins a man to examine himself before he eat of that bread and drink of that cup, not to discover what have been the sins of his past life in order to repent of them, but only that he may be sure of remembering Christ's body broken and his blood shed ; that, however, it is his duty in that as in every other instance of religious worship, to resolve to obey from the heart every precept of the gospel, whether moral or positive ; and that to partake worthily of the Lord's Supper is acceptable to God, because it is paying obedience to one of these

precepts ; but that no particular benefits or privileges are annexed to it more than to any other instance of duty. The celebrated archbishop Tillotson advances the same doctrine in his Persuasive to Frequent Communion. Bishop Hoadley acknowledges that when St. Paul says, ‘ The cuy

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of blessing which we bless, is it not the communion of the blood of Christ ? The bread which we break, is it not the communion of the body of Christ ?' he has been supposed by many learned men to affirm that all the benefits of Christ's passion are in the Lord's Supper conveyed to the worthy communicant; but this, says he, is an idea which the apostle could not have in his thoughts as at all proper for his argument. The Greek word Koivwvia, and the English communion, signify only a partaking of something in common with others of the same society ; and the apostle's meaning, he says, can be nothing more than that in the Lord's Supper we do not eat bread and drink wine as at an ordinary meal, but as memorials of the body and blood of Christ, in honor to him as the head of that body of which we are all members. That the word Kotvwvia is not meant to denote any inward or spiritual part of the Lord's Supper he thinks evident, because the same word is used with re-gard to the cup and the table of idols, where no spiritual part could be thought of, and in an argument which supposes an idol to be nothing. Other divines steer a middle course between the mere memorialist and the advocate for a real sacrifice in the holy Eucharist, and insist that this rite, though no sacrifice itself, is yet a feast upon the one sacrifice offered by Christ, and slain upon the cross. The most eminent patrons of this opinion have been Dr. Cudworth, bishop Warburton, and Dr. Cleaver, bishop of St. Asaph ; and they support it by such arguments as the following : — ' In those ages of the world when victims made so great a part of the religion both of Jews and Gentiles, the sacrifice was al-ways followed by a religious feasting on the thing offered; which was called the feast upon or after the sacrifice, and was supposed to con-vey to the partakers of it the benefits of the sacrifice. Now Jesus, say they, about to offer himself a sacrifice on the cross for our redemption, did, in conformity to general practice, institute the last supper, under the idea of a feast after the sacrifice ; and the circumstances attending its institution were such, they think, that the apostles could not possibly mistake his meaning. It was just before his passion, and while he was eating the paschal supper, which was a Jewish feast upon the sacrifice, that our blessed Lord instituted this rite ; and as it was his general custom to allude, in his actions and expressions, to what passed before his eyes, or presented it-self to his observation, who can doubt when, in the very form of celebration, we see all the marks of a sacrificial supper, but that the divine insti-tutor intended it should bear the relation to his sacrifice on the cross which the paschal supper

then celebrating bore to the oblation of the paschal lamb? ‘ Thus have we given such a view as our limits permit of the principal opinions that have been held respecting the nature and end of the Lord’s Supper. After all a plain Christian, who is not w.illing to believe more than what is in Scripture, nor is fettered with the prejudices of particular sects or parties, will be apt to think that both Protestants and Roman Catholics have darkened counsel by words without knowledge, upon a very plain, simple, commemorative ceremony. The late Mr. Barclay, the Berean, often said, ‘ the Papists had made a god of it, and most Protestants had made it a demi-god.’

SUPPLANT”, w. a. ¥t. supplanter ; Lat. sub and planta. To trip up the heels ; displace by stratagem ; overpower.

It is Philoclea his heart is set upon ; it is my daughter I have borne to supplant me. Sidney.

If it be fond, call it a woman’s fear ; Which fear, if better reasons can supplant, I will subscribe, and say, I wronged the duke.

Shakspeare.

Upon a just survey, take Titus’ part, And so supplant us for ingratitude. Id.

For such doctrines as depend merely upon institution and the instruction of others, men do frequently differ both from themselves and from one another about them ; because that which can plant, can supplant. Wilkins.

His legs entwining

Each other, till supplanted down he fell A monstrous serpent on his belly prone. Milton.

Suspecting that the courtier had supplanted the friend. Fell.

The thronging populace with hasty strides Obstruct the easy way ; the rocking town Supplants their footsteps ; to and fro they reel.

Philips.

SUP’PLE, adj., v. a., & { Fr. sauple. Pliant ;

SUP’PLENESS, n.s. [v.n. t flexible ; yielding : hence fawning ; flattering : to make pliant or soft : to grow soft or pliant : the noun substantive corresponding.

When we ‘ve stuffed

These pipes and these conveyances of blood With wine and feeding, we have suppler souls Than in our priestlike fasts. Shakspeare.

Each part deprived of supple government, Shall stiff, and stark, and cold appear, like death.

Id.

Knaves having, by their own importunate suit, Convinced or suppled them, they cannot chuse, But they must blab. Id. Othello.

The joints are more supple to all feats of activity in youth than afterwards. Bacon.

Will ye submit your necks, and chuse to bond The supple knee 1 Milton.

Study gives strength to the mind, conversation grace ; the first apt to give stiffness, the other tup-pleness. Temple.

No women are apter to spin linen well than the Irish, who, labouring little in any kind with their hands, have their ringers more supple and soft than other women of the poorer condition in England.

Id.

Ev’n softer than t\v own. of suppler kind, More exquisite of taste, and more than man refined.

Dry den.

The stones

Did first the rigour of their kind expel, And suppled into softness as they fell.

A mother persisting till she had bent her daughter’s mind, and suppled her will, the only end of correction, she established her authority thoroughly ever after. Lacke ”” Sdvealvm.

If punishment reaches not the mind, and make not the will supple, it hardens the offender. Locke.

There is something so supple and insinuating in this absurd unnatural doctrine, as makes it extremely agreeable to a prince’s ear.

To in rule a carcase, drench it in water.

Arbuthnot.

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by which its defects are supplied ; supply ; store : the adjectives corresponding.

Unto the word of God, being in respect of that end for which God ordained it, perfect, exact, and absolute in itself, we do not add reason as a supplement of any maim or defect therein, but as a necessary instrument, without which we could not reap by the Scripture's perfection that fruit and benefit which it yieldeth. Hooker.

\Ve had not spent

Our ruddie wine a-ship-board ; supplement Of large sort each man to his vessel drew. Chapman.

Divinity would not then pass the yard and loom, nor preaching be taken in as an easier supplementary trade, by those that disliked the pains of their own.

Decay of Piety.

Supplemental acts of state were made to supply defects of laws ; and so tonnage and poundage were collected. Clarendon.

Provide his brood next Smithfield fair, With supplemental hobby horses ; And happy be their infant courses. Prior.

His blood will atone for our imperfection, his righteousness be imputed in supplement to what is lacking in ours. Rogers.

Instructive satire, true to virtue's cause ! Thou shining supplement of publick laws ! Young.

SUPPLEMENT, in literature, an appendage to supply wlial is wanting in a book. It has been generally remarked, that no literary work stands so much in need of a supplement as a dictionary of arts and sciences, on account of the successive and daily progress and improvement of the arts and sciences.

SUPPLEMENT OF AN ARCH oil ANGLE, in geometry or trigonometry, is what it wants of a semicircle, or of 180°; as the complement is what it wants of a quadrant, or of 90°. So the supplement of 50° is 130° ; as the complement of it is 40°.

SUFPLETORY, n. s. Lat. suppletorium. That which is to fill up deficiencies.

That suppletory of an implicit belief is by Romanists conceived sufficient for those not capable of an explicit. Hammond.

SUPPLIANT, .adj. & n. s. FT. suppliant. Entreating ; beseeching ; submissive : he who begs in that manner.

To those legions your levy

Must be suppliant. Shakspeare. Cymbeline.

A petition from a Florentine I undertook, Vanquished thereto by the fair grace and speech Of the poor suppliant. Shakfpeare.

To bow and sue for grace with suppliant knee.

Milton.

The rich grow suppliant, and the poor grow proud : Those offer mighty gain, and these ask more.

Dry den.

Hourly suitors come :

The east with incense, and the west with gold, Will stand like suppliant! to receive her doom. Id.

Constant 10 his first decree, To bow the haughty neck, and raise the suppliant

knee. Prior.

SUPPLICATE, v.n-l Fr. supplier; Lat. SUPPLICA'TION, n. s. $ supplico, from supplex. To implore ; entreat ; petition submissively : the noun substantive corresponding.

Praying with all prayer and supplication, with all perseverance and supplication for all saints.

Ephesians vi. 18.

The prince and people of Nineveh assembling themselves a main army of supplicants, God did not withstand them. Hooker.

My lord protector will come this way by and by, and then we may deliver our supplications in the quill.

Shakspeare. My mother bows,

As if Olympus to a mole-hill should In supplication nod. Id.

Coriolanvs.

Many things a man cannot with any comeliness say or do ; a man cannot brook to supplicate or beg.

Bacon.

Bend thine ear To supplication ; hear his sighs though mute.

Milton.

We should testify our dependence upon God, and our confidence of his goodness, by constant prayers and supplications for mercy. Twotttm.

These prove the common practice of the worship of images in the Roman church, as to the rites of supplication and adoration, to be as extravagant as among the heathens. Stillingjieet.

Thither the kingdoms and the nations come, In supplicating crowds, to learn their doom.

Addison.

A second sort of publick prayer is, that all in a family that are members of it join in their common supplications. Duty of Man.

The wise supplicant, though he prayed for the condition he thought most desirable, yet left the event to God. Rogers.

Abraham, instead of indulging the supplicant in his desire of new evidence, refers him to what his brethren had. Atterbury.

SUPPLICATIO, in antiquity, a religious solemnity observed on account of any remarkable success against an enemy; and especially when the army had conferred the title of imperator on their general. On such occasions the imperator sent messengers, crowned with laurel, with letters to the senate, which were likewise adorned with laurel, to demand of them the title of imperator, and the honor of a supplication. The solemnity consisted in sacrificing and feasting in the temples, with giving thanks to the gods for success obtained, and praying for the continuance of their assistance. At first there were only a few days taken up in such festivals ; but afterwards they were increased gradually, till they came to no less than fifty. On subduing the Sabines, in the year of the city 304, a supplication of one day only was ordained ; on the taking of Veii, Camillus had a supplication of

four days decreed him ; Pompey had twelve on putting an end to the Mithridatic war ; Caesar had fifteen, and afterwards twenty, for reducing Gaul ; Octavianus and Pansa had fifty days of supplication for delivering the colony of Mutina.

SUPPLICAVIT, a writ issuing out of chancery, for taking surety of the peace, when one is in danger of being hurt in his body by another; it is directed to the justices of the peace and sheriff of the county, and is grounded upon the stat. 1 Edw. III., stat. 2, c. 16, which ordains that certain persons shall be assigned by the chancellor to take care of the peace, &c. — F. N. B. 80, 81. When a man hath purchased a writ of supplicavit, directed to the justices of the peace,

against any person, then he, against whom the writ is sued, may come into the chancery, and there find sureties that he will not do hurt or damage unto him that sueth the writ ; and upon that he shall have a writ of supersedeas, directed to the justices, &c., reciting his having found sureties in chancery, according to the writ of supplicavit : and also reciting that writ, and the manner of the security that he hath found, &c., commanding the justices that they cease to arrest him, or to compel him to find sureties, &c. And, if the party who ought to find sureties cannot come into the chancery to find sureties, his friend may sue a supersedeas in chancery for him ; reciting the writ of supplicavit, and that such a one and such a one are bound for him in the chancery in such a sum, that he shall keep the peace according to it; and the writ shall be directed to the justices, that they take surety of the party himself, according to the supplicavit, to keep the peace, &c., and that they do not arrest him; or, if they have arrested him for that cause, that they deliver him. — New Nat. Br. 180. Sometimes the writ of supplicavit is made re-turnable into the chancery at a certain day; and, if so, and the justices do not certify the writ, nor the recognizance, and the security taken, the party who sued the supplicavit shall have a writ of certiorari directed unto the justices of peace to certify the writ of supplicavit, and what they have done thereupon, and the security found, Sec. — New Nat. Br. 180. If a recognizance of the peace be taken in pursuance of a writ of supplicavit, it must be wholly governed by the directions of such writ ; but, if it be taken before a justice of peace below, the recognizance may be at the discretion of such justice. — Lamb. 100; Dal:, c. 70.

At the common law it was sufficient, in order to obtain this process for surety of the peace from the court of chancery, if the party who demanded it made oath that he was in fear of some corporal hurt, and that he did not crave the same out of malice, but for the safety of his body. — F. N. B. 79, 80. But by stat. 21 Jac. I., c. 8, all process of the peace shall be void, unless granted on motion in open court on affidavit in writing.

When articles of the peace are exhibited in the court of chancery, and oath is made that the surety of the peace is not craved by the party through malice, but for the safety of his life, a writ of supplicavit issues, directed to the justices of the peace generally, or to some one justice of the peace, or to the sheriff, commanding them or him to

take security in the sum thereon indorsed ; and, if the surety refuses to find such security, to commit him to the town gaol until he does find such security. If there be no proceedings on a supplicavit within a year, the recognizance is of course discharged ; and, if the party be committed after the expiration of that time, he shall be discharged upon very slight security. — Fitz. 268. If taken below, and the party appear pursuant to the condition, no indictment being lodged, he must be discharged. — Hardwick's Cases. But the court in discretion may refuse to discharge a recognizance, even though the exhibitant appear and consent ; for a breach against any other person is equally a forfeiture.

SUPPLY’, v. a. & 7». s. Fr. supplier ; Lat. suj>- pleo. To fill up as deficiencies happen ; afford what is wanted ; yield ; serve instead of; accommodate ; give or bring: the noun substantive means relief of want ; cure of want or deficiency.

I mean that now your abundance may be a supply for their want, that their abundance also may be a supply for your want. 2 Cor. viii. 14.

Out of the fry of these rakehell horseboys are their kearn supplied and maintained. Spenser.

Although I neither lend nor borrow,

Yet, to supply the ripe wants of my friend,

I’ll break a custom.

Shahspeare. Merchant of Venice.

They were princes that had wives, sons, and nephews ; and yet all these could not supply the comfort of friendship. Bacon.

The reception of light must be supplied by some open form of the t’abrick. Walton.

Upstart creatures to supply our vacant room.

Milton

Burning ships the banished sun supply, And no light shines but that by which men die.

Waller.

I wanted nothing fortune could supply, Nor did she slumber till that hour deny. Dryden.

While trees the mountain-tops with shades supply, Your honour, name, and praise, shall never die.

Id.

Nearer care supplies Sighs to my breast, and sorrow to my eyes. Prior.

Art from that fund each just supply provides, Woiks without show, and without pomp presides.

Pope.

My lover, turning away several old servants, supplied me with others from his own house. Swift.

SUPPORT > .a.&n.s.ˆ Yr.supporter; Ital. SUPPORT'ABLE, adj. I supportare. To sus-SUPPORT'ANCE, n. s. > tain ; prop ; bear up ; SUPPORTA'TION, i endure : all the noun

SUPPORT'ER. J substantives, and the

adjective following, correspond : the last two

noun substantives are obsolete.

As great to me, as late ; and, supportable, To make the dear loss, have I means much weaker Than you may call to comfort you.

Shakspeare. Tempest.

You must walk by us upon either hand, And good supporters are you.

Id. Measure for Measure.

Give some supportance to the bending twigs.

Shakipeare.

The benefited subject should render some small portion of his gain for the supportation of the king's expence. Bacon.

The sockets and supporters of flowers are figured. Id.

More might be added of helms, crests, mantles, and supporters. Camden.

The beginning of the earl of Essex I must attribute in great part to my lord of Leicester ; but yet as an introducer or supporter, not as a teacher. WMon.

Such propositions as these are competent to blast and defame any cause which requires such aids, and stands in need of such supporters. Hammond.

Stooping to support each flower of tender stalk.

Milton. Strongly to suffer and tupport our pains. Id.

With inward consolations recompensed, And oft supported.

We shall be discharged of our load ; but you, that are designed for beams and supporters, shalUxjar.

L'Estru n«f.

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This fierce demeanour, and his insolence,

The patience of a god could not support. Dryden.

She scarce awake her eyes could keep, Unable to tupport the fumes of sleep. Id.

Love was no mote, when loyalty was gone, The great supporters of his awful throne. W»

Though the idea we have of a horse or stone be but the collection of those several sensible qualities which we find united in them ; yet, because we can-not conceive how they should subsist alone, we suppose them existing in and supported by some common subject, which support we denote by the name substance, though it be certain we have no clear idea of that support. Locke.

Because a relation cannot be founded in nothing, and the thing here related as a supporter, or a support, is not represented to the mind by any distinct idea.

Id.

There is no loss of room at the bottom, as there is in a building set upon supporters. Mortimer.

The saints have a companion and supporter in all their miseries. South.

None can support a diet of flesh and water without acids, as salt, vinegar, and bread, without falling into a putrid fever. Arbuthnot.

I wish that whatever part of misfortunes they must bear, may be rendered supportable to them. Pope.

Alterations in the project of uniting Christians might be very supportable, as things in their own na-ture indifferent. Swift.

SUPPORTED, in heraldry, a term applied to the uppermost quarters of a shield when divided into several quarters, these seeming as it were supported or sustained by those below. The chief is said to be supported when it is of two colors, and the upper color takes up two-

thirds of it. In this case it is supported by the color underneath.

SUPPOSE’, v. a. & n. s.ˆi Fr. supposer ; Lat.

SUPPO’SABLE, adj. SUPPO’SAL, n.s. SUPPOS’EK, SUPPOSITION, SIJPPOSI’TIOUS, adj. SUPPOS’ITITIOUS, Suppos’mvELY, adv.

1 suppono. To lay down without

(ˆ proof ; advance or ” suggest without maintaining the truth of the po-J sition ; to assume ; admit without proof; imagine; make to appear reasonable as a consequence : suppose, noun substantive, has been barbarously used for supposition : supposable signifies, that may be supposed or conjectured : supposal is but a synonyme of supposition : supposer, he who supposes : supposition, position or hypothesis assumed ; unproved imagination : suppositious, imaginary ; unreal ; spurious : suppositively, upon supposition.

Let not my lord suppose that they have slain all the king’s sons ; for Amnon only is slain.

2 Sam. xiii. 32.

Tell false Edward, thy supposed king, That Lewis of France is sending over maskers.

Shakspeare. Young Fortinbras,

Holding a weak supposal of our worth, Thinks our state to be out of frame. Id.

We come short of our suppose so far, That, after seven years siege, yet Troy-walls stand.

Id.

Thou hast by marriage made thy daughter mine, While counterfeit siipposers bleered thine eyne. Id.

In saying he is a good man, understand me that he is sufficient ; yet his means are in supposition. Id. The destruction of Mustapha was so

fatal to Soly-

man’s line as the succession oi’ the Turks from Solyman is suspected to be of strange blood , for that Selymus II. was thought to be supposititious.

Bacon.

Invincible ignorance is, in the far greatest number of men, ready to be confronted against the necessity of their believing all the severals of any supposable catalogue. Hammond.

\ hen this comes, our former supposal of sufficient grace, as of the preaching of the word, and God’s calls, are utterly at an end. Id.

The unreformed sinner may have some hope suppo-sitirely, if he do change and repent : the honest penitent may hope positively. Id.

Where we meet with all the indications and evidences of such a thing, as the thing is capable of, supposing it to be true, it must needs be very irrational to make any doubt of it. Wilkins, I suppose we should compel them to a quick result.

Milton. This supposeth something, without evident ground.

Hale.

Little can be looked for towards the advancement of natural theory, but from those that are likely to mend our prospect : the defect of events, and sensible appearances, suffer us to proceed no further towards science, than to imperfect guesses and timorous supposalt. Gianville’s Scepsis, Preface.

This is to be entertained as a firm principle, that when we have as great assurance that a thing is, as we could possibly, supposing it were, we ought not to make any doubt of its existence. Tillotson.

This is only an infallibility upon supposition, that if a thing be true, it is impossible to be false. Id.

There is a Latin treatise among the supposititious pieces ascribed to Athanasius. Waterland.

Is Egypt’s safety, and the king’s, and your’s, Fit to be trusted on a bare suppose That he is honest ? DryderCs Cleomenes.

Suppose some so negligent that they will not he brought to learn by gentle ways, yet it does not thence follow that the rough discipline of the cudgel is to be used to all. Locke.

Interest, with a Jew, never proceeds but upon supposal at least of a firm and sufficient bottom.

South.

It is their opinion, that no man ever killed his father ; but that, if it should ever happen, the reputed son must have been illegitimate, supposititious, or begotten in adultery. Addison.

Some alterations in the globe tend rather to the benefit of the earth, and its productions, than their destruction, as all these supposititious ones manifestly would do. Woodward.

Such an original irresistible notion is neither requisite upon supposition of a Deity, nor is pretended to by religion. Bentley.

One falsehood always supposes another, and renders all you can say suspected. Female Quixotte.

Artful men endeavour to entangle thoughtless wo-men by bold supposals and offers. Clarissa.

SUPPOSITION, in music, is when one of the parts dwells on a note, while another part makes two or three more lesser notes equivalent to it, by conjoint degrees. Supposition is defined the using of two successive notes of the same value as to time ; the one whereof, being a discord, supposes the other a concord. The harmony, Mr. Malcolm observes, is always to be full on the accented parts of the bar or measure ; but on the unaccented, discords may transiently pass, without any offence to the ear. This transient use of discords, followed by con-

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cords, mak/; what we, after die French, call supposition. Concords by supposition are those where the continued bass adds or supposes a new sound below the fundamental bass ; whence such concords always exceed the extent of the octave. Of these concords there are three sorts, all which are concords of the seventh ; the first, when the added sound is a third below the fundamental sound ; such is the concord of the ninth ; and if the concord of the ninth is formed by the mediant, added below the sensible concord in the minor mode, then the concord is called the superfluous fifth. The second kind is, when the supposed sound is a fifth below the fundamental sound, as in the concord of the fourth or eleventh ; and if the concord is sensible, and the tonic be supposed, this concord is called the superfluous seventh. The third kind is that where the supposed sound is below a concord of the diminished seventh; if it is a fifth below, i. e. if the supposed sound be the mediant, the concord is called the concord of the fourth and superfluous fifth : if it is a seventh below, i. e. if the supposed sound be the tonic, the concord is called the lesser sixth and superfluous seventh.

SUPPOSITORY, n. s. Fr. suppositoire ; Lat. suppositorium. A kind of solid clyster.

Nothing relieves the head more than the piles ; therefore suppositories of honey, aloes, and rocksalt ought to be tried. Arbuthnot.

A SUPPOSITORY is a kind of medicated cone, which is introduced into the anus for opening the belly. It is usually composed of common honey, mixed up with either soap or oil, and formed into pieces of the length and thickness of the little finger, only pyramidal. To the composition is sometimes also added powder of scammony, euphorbium, colocynthis,.salt, aloes, &c , according to the case of the patient. The suppository was invented for the convenience of such as have an aversion to the taking of clysters ; or to be used when the disease does not allow thereof.

SUPPRESS’, v. a. ˆ Fr. supprimer; Latin

SUPPRESSION, n. s. > supprimo, suppressus. To

SUPPRES’SOR. J crush ; overpower; overwhelm ; subdue ; reduce to inactivity ; to hide ; conceal ; keep in : the noun substantives

corresponding.

Glo’ster would have armour out of the Tower, To crown himself king, and suppress the prince.

Shakspeare. Henry VI.

Well did’st thou, Richard, to suppress thy voice ; For, had the passions of thy heart burst out, I fear we should have seen decyphered there More ranc’rous spight, more furious raging broils.

Shakspeare.

Every rebellion, when it is suppressed, doth make the subject weaker, and the prince stronger.

Davies on Ireland.

Sir William Herbert, with a well armed* and ordered company, set sharply upon them; and, oppressing some of the forwardest of them by death, suppressed the residue by fear. Hamnavd.

Things not revealed, which the invisible King, Only omniscient, hath suppressed in night. Milton.

You may depend upon a suppression of these verses.

Pope.

Stsll she suppresses the name, and this keeps him

in a pleasing suspense ; and, in the very close of her speech, she indirectly mentions it.

.Broom* on the Odyssey.

SUPPRESSION, in medicine, is generally used to signify a retention of urine or of the menses.

SUPPURATION is’ the second way wherein an inflammation terminates; being a conversion of the inspissated blood and the first adjacent parts, as the vessels and fat into pus or matter ; which disorder, when it has not yet found an opening, is generally called an abscess.

SUP’PURATE, v. a. Fr. suppurer; Latin pus puris. To generate pus or matter.

The great physician of souls sometimes cannot cure without cutting us : sin has festered inwardly, and he must lance the imposthume, to let out death with the suppuration. South.

If the inflammation be gone too far towards a suppuration, then it must be promoted with suppuratives, and opened by incision. Wiseman.

This great attrition must produce a great propensity to the putrescent alkaline condition of the fluids, and consequently to suppurations.

Arbuthnot on Aliments.

This disease is generally fatal : if it suppurate* the pus, it is evacuated into the lower belly, where it produceth putrefaction. Id. On Diet.

SUPPUTATION, n.s. Fr. supputation ; Lat. supputo. Reckoning; account; calculation. Not used.

From these differing properties of day and year, arise difficulties in carrying on and reconciling the supputation of time in long measures.

Holder on Time.

The Jews saw every day their Messiah still farther removed from them ; that the promises of their doctors, about his speedy manifestations, were false ; that the predictions of the prophets whom they could now no longer understand, were covered with obscurity ; that all the supputntions of time either terminated in Jesus Christ, or were without a period.

West.

SUPRALAPSA’RIAN, adj. \ Lat. supra and

SUPRALAP’SARY.) lapsus. Antecedent to the fall of man.

The supralapsarians, with whom the object of the decree is homo conditus, man created, not yet fallen ; and the sublapsarians, with whom it is man fallen, or the corrupt mass. Hammond.

SUPRALAPSARIANS, in theology, are* persons who hold that God, without any regard to the good or evil works of men, has resolved, by an eternal decree, supra lapsum, antecedently to any knowledge of the

fall of Adam, and independently of it, to save some and to damn others ; or, in other words, that God intended to glorify Ins justice in the condemnation of some, as well as his mercy in the salvation of others ; and for that purpose decreed that Adam should necessarily fall, and by that fall bring himself and all his offspring into a state of everlasting condemnation. These are also called antelapsaries. and are opposed to sublapsarians and infralapsarians. cording to the supralapsarians, the object of pre destination is, homo creabilis et labilu ; and, according to the sublapsarians, and infralapsa nans, homo creatus et lapsus.

SUPRAVUL'GAR, adj. Lat. suprn and \ gtiris. Above the vulgar.

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SUPREME', adj.~\ Lat. supremus. Highest;

SUPREM'ACY, n. s. £ highest in dignity, autho—

SUPREME'LY, adv.) rity and excellence : the noun substantive and adverb corresponding.

SUPREMACY. According to the Roman Catholics, St. Peter was not only the head of the apostolic college, but the pastor of the universal church. The Roman pontiff is the successor of this prince of the apostles, and, like him, has authority and jurisdiction over the whole church, all believers, without exception, owing him respect and obedience. The council of Trent declared that the sovereign pontiff is the vicar of God, upon earth, and has supreme power over all the church. The extent of the authority thus assumed by the pope, is different in different countries, and the whole doctrine of the papal supremacy is of course rejected by the Protestant, Greek and other churches. In 1534, Henry VIII. assumed the title of the only supreme head on earth, of the church of England. The oath of supremacy (that is, of renunciation of the papal supremacy), with the oath of abjuration, was formerly required to be taken by all persons in office, and might be tendered, by two justices of the peace, to all persons suspected of disaffection in England. Some modifications of the law requiring this oath were made in 1793 (see Catholic Emancipation) ; but it was still, with the declaration against transubstantiation, the invocation of saints, and the sacrifice of the mass, requisite for a qualification for sitting and voting in parliament, and for holding certain offices, until the passage of the Catholic relief bill. This bill repeals all former acts on the subject, and requires of a Roman Catholic peer, or member of the house of commons, &c., besides the oath of allegiance and abjuration, the following oath of supremacy: I do declare that it is not an article of my faith, and that I do reject, renounce and abjure the opinion, that princes excommunicated or deprived by the pope, or any other authority of the see of Rome, may be deposed or murdered by their subjects, or by any person whatsoever ; and I do declare that I do not believe that the pope of Rome, or any other foreign prince, prelate, person, state or potentate, hath, or ought to have any temporal or civil jurisdiction, power, superiority or pre-eminence, directly or indirectly within this realm.

SUR, or SHUR, in ancient geography a desert of Arabia Petrsea, extending between Palestine and the Arabian Gulf ; into which the Israelites, after marching through the Red Sea, first came. — Exod. xv. 22, In Numbers xxxiii. 8, it is said that from the sea they went three days' journey into the wilderness of Etham ; whence some conclude that Etham and Shur are the same wilderness ; or only differ as a part from the whole, Shur being the general name, and Etham that part of it lying nearest to the place of encampment of the same name. As to the route which the Israelites followed, in their passage through the Red Sea, Mr. Bryant h;is <jiven an account in his work on the Plagues of Egypt. Shur is now called Corondel.

SURA, in anatomy, the lesser bone of the calf of the leg.

SURA, in geography, a river of Norway, in Drontheim, which runs into the North Sea, opposite Christiansand .

SURADDITION, n. s. Sur and addition. Something added to the name.

He served with glory and admired success, So gained the suraddition, Leonatus.

Shakspenre. Cymbeline.

SU'RAL, adj. Lat. sura. Being in the call of the leg.

He was wounded in the inside of the calf of his leg, into the tural artery. Wiseman's Surgery.

SUR'ANCE, n. s. From SURE. Warrant; security; assurance.

Give some surance that thou art revenge ; Stab them, or tear them on thy chariot wheels.

Shakspeare.

SURAT, one of the largest, if not the very largest city of Hindostan, is situated on the south side of the Tuptic River, about twenty-eight miles from its junction with the sea, although its trade has unavoidably suffered by the proximity of Bombay. In 1796 one estimate, according to major Hamilton, raised the population of Surat so high as 800,000 souls ; but another reduced it to 600,000, which probably exceeds the actual number. In 1807 this city contained 1200 parsees of the mobid or sacerdotal class, and about 12,000 of the

behdeen, or laity parsees. Large ships do not ascend the river, but cast anchor about twenty miles below the town. The harbour, on the whole, is not commodious ; it is, however, one of the best on this coast during the prevalence of the north-east and north-west winds ; and the anchorage is only dangerous with winds from the south and west. A large quantity of cotton was formerly exported from Surat direct to China; but much the greater portion is now sent by trie way of Bombay. The cotton trade from this part of India to China is of a recent date, and did not commence earlier than 1775, at which era there was a greater number of ships belonging to Surat than there is now to Bombay. The import and export trade which it still retains is much engrossed by the Arabian and Boras merchants.

Surat is mentioned in the Ramayuna, a Hin-doo poem of great antiquity. After the discovery of the passage to the east by the Cape of Good Hope, it was much frequented by European vessels, who exported hence pearls, diamonds, amberg is, civet, musk, gold, silks, and cottons of every description, spices, fragrant woods, in-digo, saltpetre, and all other objects of Indian traffic. Hence also great multitudes of pilgrims embarked for Arabia ; on which account Surat was always considered by the Mahometans of Hindostan as one of the gates of Mecca. In 1612 captain Best received permission to settle an English factory here, where he left ten persons with a stock of £4000 to purchase goods. The Dutch did not visit Surat until 1617. The French carried on a considerable but losing trade with Surat during the first years of the eighteenth century ; and, having contracted debts to the natives, deserted it altogether. Some time afterwards, in 1714, a company was formed at St. Maloes, which despatched ships to the East Indies ; but these were seized and sequestered at Surat. to liquidate the debts of the former com-SUR

pany. In January 1664 the Maharattas, under Sevajee, made a sudden attack on Surat, when the governor shut himself up in the castle, and the inhabitants fled. In this emergency Sir George Oxinden, the chief, and the rest of the Company's servants, shut themselves up in the factory with the Company's property, valued at £80,000 ; and, having fortified it as well as the time would allow, called in the ships' crews to assist in its defence. When attacked, they made so vigorous a resistance, that they not only preserved the factory, but the greatest part of the town ; for which they received the thanks of the Mogul commander. Surat was attacked, and partially pillaged, by the Mahrattas in 1670, and afterwards in 1702. In April, 1707, it was again invested by them ; but they were unable to make any progress. Moyen ud Deen, the ancestor of the present nabob, was an adventurer who, in 1748, possessed himself of the castle : his successors, Cuttub

ud Deen in 1763, Nizam ud Deen in 1792, and Nassir ud Deen in 1800, were all invested by the East India Company. On the 13th of May, in that year, a treaty was concluded with Nassir ud Deen, the reigning na-bob, by which he agreed that the management of the city and district of Surat, and the administration of civil and criminal justice, should be exclusively vested in the British : the latter engaging to pay the nabob and his heirs one lack of rupees annually, and also a proportion of one-fifth of the surplus annual revenue, deducting all charges. By the treaty of 1803 the Mahrattas were compelled to abandon all their claims on this city. Since this period the country has been much cleared of robbers, and every way improved. Travelling distance from Bom-bay 177 miles; from Poonah 243; from Oojain 309 ; from Delhi 756 ; and from Calcutta, by Nagpoor, 1238 miles.

SURBATE,' u. a. Fr. solbatir. To bruise and batter the feet with travel; harass; fatigue. Not used.

Their march they continued all that night, the horsemen often alighting, that the foot might ride, and others taking many of them behind them ; however they could not but be extremely weary and surbated. Clarendon.

Chalky land surbates and spoils oxen's feet.

Mortimer.

SI' RBET'. The part. pass, of surbeat, which Spenser seems to have used for surbate.

A bear and tiger being met In cruel fight on Lybick ocean wide,

Espy a traveller with feet surbet, Whom they in equal prey hope to divide. Spenser.

SURCEASE', v.n.,v.a.,&n.s. Fr. sur and cesxer ; Lat. cesso. To be at an end ; stop ; leave off: cease : put an end to : cessation ; stop.

All pain hath end, and every war hath peace ; But mine no price, nor prayer, may surcease.

Spenser.

To fly together from God, to despair that creatures unworthy shall be able to obtain any thing at his hands, and under that pretence to surcease from piayers, as bootless or fruitless offices, were to him no less injurious than pernicious to our own souls.

Hooker,

It might very well agree with your principles, if your discipline were fully planted, even to send out

your writs of tureease unto all courts of England for the most things handled in them. Id.

Small favours will my prayers increase : Granting my suit you give me all ;

A nd then my prayers must needs surcease ; For I have made your godhead fall. Donne.

Nor did the British squadrons now surcease To gall their foes o'erwhelmed. 1'hilips.

SUR'CIIARGE, v. a. & n. s. Fr. wrchargcr. To overburden; overload: burden added to burden ; overburden.

They put upon every portion of land a reasonable rent, which they called Romescot, the which might not surcharge the tenant or freeholder.

Spenser on Ireland.

Tamas was returned to Tauris, in hope to have suddenly surprised his enemy, surcharged with the pleasures of so rich a city.

ˆKnulles's History of the Turks. The air, after receiving a charge, doth not receive a surcharge, or greater charge, with like appetite as it doth the first. Bacon's Natural History.

More removed,

Let heaven surcharged with potent multitude, Might hap to move new broils.

Milton's Paradise Lost. When graceful sorrow in her pomp appears, Sure she is dressed in Melesmda's tears : Your head reclined, as hiding grief from view, Droops like a rose surcharged with morning dew.

Dryden.

The moralists make this raging of a lion to be a surcliarge of one madness upon another.

L'Estranye.

SURCHARGE OF COMMON is a disturbance of common pasture, by putting more cattle therein than the pasture and herbage will sustain, or the party hath a right to do. This injury can only happen where the common is appendant or ap-purtenant, and of course limitable by law; or where, when in gross, it is expressly limited and certain; for where a man hath common in gross, sans nombre, or without stint, he cannot be a surcharge. In this case, indeed, there must be left sufficient for the lord's own beasts. The usual remedies for surcharging the common are by the lord's distraining the surplus number, or by his bringing an action of trespass, or by a special action on the case, in which any commoner may be plaintiff. The ancient and most effectual method of proceeding is by writ of admeasurement of pasture.

SURCHARGE OF THE FOREST is when a commoner puts more beasts in the forest than he has a right to do. See FOREST.

SURCHARGE, WRIT OF S£coND,de secunda su-peroneratione, is given by the stat. of Westm. 2. 13. Edw. I. cap. 8, when, after the admeasurement of pasture hath ascertained the right, the same defendant surcharges the common again ; and thereby the Sheriff is directed to enquire by a jury whether the defendant has in fact again surcharged the common; and, if he has, he shall then forfeit to the king the supernumerary cattle put in, and also shall pay damages to the plaintiff

SUR'CINGLE, n.s. Lat. sur and cingulum. A girth with which the burden is hound upon ;i horse ; the girdle of a cassock.

Justly he chose the turcingle and gown. Murul.

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SUR’CLE, n. s. Lat. surculus. A shoot; a twig; a sucker. Not in general use.

It is an arboreous excresence, or superplant, which the tree cannot assimulate, and therefore sprouteth not forth in boughs and surcles of the same shape unto the tree; Browne.

The basilica dividing into two branches below the cubit, the outward sendeth two surcles unto the thumb. Id.

SUR’COAT. n.s. Old Fr. surcot. Sur and coat. A short coat worn o~ver the rest of the dress.

The honourable abilaments, as robes of state, parliament-robes, the surcoat and mantle. Camden.

That day in equal arms they fought for fame ; Their swords, their shields, their surcoats were the

same. Dryden.

The SURCOAT is a coat of arms worn over the body armour. It is properly a loose thin taffety coat, with arms embroidered or pointed on it; such as worn by heralds ; and was anciently also used by military men over their armour to distinguish them.

SURCULT, in botany, the middle ramifications of the ribs of a leaf.

SURCULUS, a shoot; a set or slip; ascion or graft ; a young twig or branch of a tree.

SURD NUMBER, in arithmetic and algebra, any number or quantity that is incommensurable to unity; otherwise called an irrational number or quantity. See ALGEBRA.

SURE, adj. & adv.-\ Fr. sur ; of Lat. secu-SURE’FOOTED, ITUS. Firm; certain;

SURE’LY, adv. £ unfailing; infallible: SURE’NESS, n. s. Whence confident,; undoubting ; steady : it is also used adverbially for certainty ; without doubt : surefooted is of firm or steady feet or tread : the adverb and noun substantive correspond with sure.

In the day that thou eatest thereof thou shall surely die. Genesis.

He that walketh righteously, walketh surety.

Psalms.

The testimony of the Lord is sure, and giveth wisdom unto the simple. Id. xix. 7.

Thy kingdom shall be sure unto thee, after that thou shall have known that the heavens do rule.

Dan. iv. 26.

Friar Lawrence made them both ; Him he knew well, and guessed that it was she : But being masked, he was not sure of it.

Shahpeare.

Thou the garland wearest successively ; Yet though thou standest more sure than I could do, Thou art not firm enough. Id. Henry IV.

I wish your horses swift and sure of foot, And so I do commend you to their backs.

Id. Macbeth. Something, sure, of state

Hath puddled his clear spirit. Sliakspeare.

I wrapt in sure bands both their hands and feet,

And cast them under hatches. Chapman.

True earnest sorrows, rooted miseries, Anguish in grain, vexations ripe and blown, Surefooted griefs, solid calamities. Herbert.

The subtle ague, that for sureness sake Takes its own time the assault to make. Cowleji.

The youngest in the morning are not sure That ‘till the night their life they can secure.

Denham. Who knows, Let this be good, whether our angry foe

Can give it, or will ever 1 How he can Is doubtful ; that he never will,

is sure.

Milton’s Paradise Lost. Let no man seek what may befall ; Evil he may be sure. Milton.

Thou surely hadst not come sole fugitive. Id. Virtue, dear friend, needs no defence ; The surest guard is innocence. Roscommon.

They have a nearer and surer way to the felicity of life, by tempering their passions, and reducing their appetites. Temple.

A peace cannot fail, provided we make sure of Spain. Id.

They would make others on both sides sure of pleasing, in preference to instruction.

Dryden’s Dufresnoy.

Revenge is now my joy : he ‘s not for me, And I’ll make sure he ne’er shall be for thee.

Dry den.

He bade me make sure of the bear, before I sell his skin. L’Estrange.

Our coin beyond sea is valued according to the silver in it : sending it in bullion is the safest way, and the weightiest is sure to go. Locke

Doubting thus of innate principles, men will call pulling up the old foundations of knowledge and certainty : I persuade myself that the way I have pursued, being conformable to truth, lays those foundations surer. Id.

Sure the queen would wish him still unknown ; She loaths, detests him, flies his hated presence.

Smith.

He that created something out of nothing, surely can raise great things out of small. South.

Make Cato sure, and give up Utica, Caesar will ne’er refuse thee such a trifle. Addison.

Her looks were flushed, and sullen was her mien, That sure the virgin goddess, had she been Aught but a virgin, must the guilt have seen.
I<1.

He diverted himself with the speculation of the seed of coral ; and for more sureness he repeats it.

Woodward.

They have reason to make all actions worthy of observation, which are sure to be observed.

Atterbury.

Objects of sense would then determine the views of all such, to be sure, who conversed perpetually with them. Id.

Though the chymist could not calcine the caput mortuum, to obtain it fixed salt, to be sure, it must have some. Arbuthnot.

The curious have thought the most minute affairs of Rome worth notice; and surely the consideration of their wealth is at least of as great importance as grammatical criticisms. Id.

If you find nothing new in the matter, I am sure much less will you in the style. Wake.

Surely we may presume, without affecting to sit in the seat of God, to think some very fallible men liable to errors. Waterland.

To prove a genuine birth, On female truth assenting faith relies : Thus, manifest of right, I build my claim, Sure founded, on a fair maternal fame.

Pope's Odyssey.

Be silent always, when you doubt your sense ; And speak, though sure, with seeming diffidence.

Pope.

Sure, upon the whole, a bad author deserves better usage than a bad critick. Id.

SURENAS, a celebrated Parthian general, who defeated the Romans under Crassus, the father and son, and gave the old avaricious Roman what he merited. See PAUTHIA.

SURETY.

SURENHUSIUS (William), a learned He-braean, of the university of Amsterdam, who flourished in the end of the seventeenth and beginning of the eighteenth centuries. He published an editiDn of the Mischna, with notes of his own, and a Latin version, in 1703, in three volumes folio. It contains also the commentaries of the rabbins Maimonides and Bartenora. SURETY, n.s. 1 Fr. wrete, From SURE. SURE'TYSHIP. S Certainty ; indubitableness ; ratification ; confirmation ; security against loss or damage : hence a hostage ; bondsman ; pledge : the office of a surety ; the act of being bound lor another.

Know of a surety that thy seed shall be a stranger. Gen. xv.

I will be surety for him ; of my hand shalt thou require him. Id. xliii. 9.

He that hateth suretyship is sure. Solomon.

There the princesses determining to bathe, thought it was so privileged a place as nobody durst presume to come hither ; yet, for the more surety, they looked round about. Sydney.

She called the saints to surety, That she would never put it from her finger, Unless she gave it to yourself. Shakspeare.

There remains unpaid

A hundred thousand more, in surety of the which One part of Aquitain is bound to us. Id.

That you may well perceive I have not wronged

you,

One of the greatest in the Christian world Shall be my surety. Id. All's Well that ends Well.

Idly, like prisoners, which whole months will swear That only suretiihip hath brought them there. Donne.

Yet be not surety, if thou be a father ; Love is a personal debt ; I cannot give My children's right, nor ought he take it. Herbert.

All. in infancy, are by others presented with the desires of the parents, and intercession of sureties, that they may be early admitted by baptism into the school of Christ. Hammond.

If here not cleared, no suretiship can bail Condemned debtors from the' eternal gaol. Denham.

We our state

Hold, as you yours, while our obedience holds ; On other surety none. Milton.

Hath not the greatest slaughter of armies been effected by stratagem? And have not the fairest estates been destroyed by suretiship ? South,

SURETY OF THE PEACE AND GOOD BEHAVIOUR is considered by Blackstone as a species of preventive justice ; by obliging persons, whom there is a probable ground to suspect of future misbehaviour, to stipulate with, and to give full assurance to the public, that such offence as is apprehended from them shall not happen; through the means of pledges or sureties for keeping the peace, or for their good behaviour. — 4 Comm, c. 18.

I. By the Saxon constitution these sureties, by means of king Alfred's wise institution of < cendiaries or frankpledges, were always at hand, the whole neighbourhood or tithing of freemi being mutually pledges for each others gooc behaviour. But this great and general security being now fallen into disuse, and neglected, there hath succeeded to it the method of making suspected persons find particular and special securities for their future conduct; of which we find mention in the laws of king Edward the

Confessor ; ' tradat fidejussores de pace ct lega-litate tuenda,' cap 18.

This security, therefore, at present consists in being bound with one or more sureties, in a recognizance or obligation to the king, entered on record, and taken in some court, or by some judicial officer ; whereby the parties acknowledge themselves to be indebted to the crown in the sum required (for instance £100) with condition to be void and of none effect, if the party shall appear in court on such a day : and in the mean time shall keep the peace ; either generally towards the king, and all his liege people ; or particularly, also, with regard to the person who craves the security. Or, if it be for the good behaviour, then on condition that he shall demean and behave himself well (or be of good behaviour), either generally or specially for the time therein limited, as for one or more years, or for life. This recognizance, if taken by a justice of the peace, must be certified to the next sessions, in pursuance of the stat. 3 Hen. VII. c. 1. and if the condition of such recognizance be broken, by any breach of the peace in the one case, or any misbehaviour in the other, the recognizance becomes forfeited or

absolute ; and being estreated or extracted (taken out from among the other records), and sent up to the exchequer, the party and his sureties, having now become the king's absolute debtors, are sued for the several sums in which they are respectively bound. — 4 Comm.c. 8.

II. Any justices of the peace, by virtue of their commission, or those who are ex officio conservators of the peace, may demand such security according to their own discretion : but a secretary of state, oraprivy counsellor, is not, ex officio, "such conservator, and therefore can-not bind to the peace or good behaviour. — 11. St. Tr. 317. Or it may be granted at the request of any subject, upon due cause shown, provided such demandant be under the king's protection , for which reason it has been formerly doubted whether Jews, Pagans, or persons convicted of a pramunire, were entitled thereto.— 1. Hawk. 1 C. Or, if the justice is averse to act, it may be granted by a mandatory writ, called a sun-plicavit, issuing out of the court of king's bench or chancery : which will compel the justice to act, as a ministerial and not as a judicial officer; and he must make a return to such writ, specify-ing his compliance, under his hand and seal. But this writ is seldom used ; for, when application is made to the superior courts they usually take recognizances there, under the i rectionsof the stat. 21, Jac. I. c. 8. And indeed a peer or peeress cannot be bound over in any other place than the courts of kings bench en-chancery; though a justice of the peace h power to require sureties of any other person being compos mentis, and under the degree of nobility, whether he be a fellow justice or other magistrate, or whether he be merely a private "an Wives may demand it against their h bands : so peeresses against their lords ; or 1 u - bands, if necessary, against the.r wives But feme coverts, and infants under ago ought to find security by their friends only, and not to be bound tnlelLs : for they are incapable of en-
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gating themselves to answer any debt ; which is the nature of these recognizances or acknowledg-ments. See RECOGNIZANCE.

If the person, against whom it is demanded, be present, the justice of the peace may commit him immediately, unless he offers sureties; and a fortiori he may be commanded to find sureties, and be committed for not doing it. But, if he is absent, a warrant for committing him cannot be granted, till a warrant is issued commanding him to find sureties; and this warrant, which must be under seal, ought to show the cause for which it is granted and at whose suit.

Any justice of the peace may, ex officio, bind all those to keep the peace, who, in his presence, make any affray; or threaten to kill or beat another ; or contend together with hot and angry words ; or go about with unusual weapons or attendance, to the terror of the people ; and all such as he knows to be common barrators ; and such as are brought before him by the constable for a breach of the peace in his presence ; and all such persons as, having been before bound to the peace, have broken it and forfeited their recognizances. Also, wherever any private man hath just cause to fear that another will burn his house, or do him a corporal injury, by killing, imprisoning, or beating him, or that he will procure others so to do, he may demand surety of the peace against such person : and every justice of the peace is bound to grant it, if he who demands it will make oath that he is actually under fear of death or bodily harm ; and will show that he has just cause to be so by rea-son of the other's menaces, attempts, or having lain in wait for him ; and will also farther swear that he does not require such surety out of malice or for mere vexation. This is called swearing the peace against another : and, if the party does not find such sureties as the justice in his discretion shall require, he may immediately be committed till he does.— 1 Hawk. P. C. c. 60. Surety of the peace may be demanded by a wife, if her husband gives her unreasonable correction. — Moor. 874: Godb. 215: F. N. B. 80. Surety of the peace ought not to be granted to a man for fear of danger to his servant or cattle. It hath, however, been said that a man may have the surety of the peace against one who threatens to hurt his wife or child. — Dalt. 266. The surety of the peace ought not to be granted for any past battery, unless there is a fear of some present or future danger : but the offender must, in such case, be punished by action or indictment.— Dalt. 266. The demand of the surety of the peace ought to be soon after the ˆcause of fear ; for the suffering much time to pass before it is demanded shows that the party has been under no great terror. It is said, the fear of one cannot be the fear of another : and therefore every recognizance must be separate. But in Mich. 23 Geo. II. B. R. the court allowed three women to file joint articles of the peace against three men.— R. v. Nettle, cited 1 Hawk. P. C. c. 60. § 5, Leach's note. Although the fact from which the fear arises be pardoned, the court of king's bench will receive it as a ground to grant the security upon. — Stra. 473.

At the common law, the oath of the party was

a sufficient ground for the court of king's bench to grant the surety of the peace ; but this cannot be done since the stat. 21 Jac. I. c. 8, unless

articles of the peace are exhibited in court, upon motion in open court.

The court will not peimit the truth of the allegations to be controverted by the defendant, but will order security to be taken immediately, if no objections arise upon the face of the articles themselves. But if, on application for the assistance of the court to enforce the subsequent process, the articles should manifestly appear, from the corroborated affidavit of the defendant, to have been a malicious, voluntary, and gross perjury, the court will resist the application, and commit the offender. When surety of the peace is granted by the court of king's bench, if a supersedeas comes from the court of chancery lo the justices of that court, their power is at an end; and the party as to them discharged.

Justices of peace are empowered by the stat. 34 Edw. III. c. 1 to bind over to the good behaviour, towards the king and his people, all them that be not of good fame, wherever they be found, to the intent that the people be not troubled nor endamaged, nor the peace diminished, nor merchants and others, passing by the highways of the realm, be disturbed nor put in peril, which may happen by such offenders. Under the general words of this expression, that be not of good fame, it is holden that a man may be bound to his good behaviour for causes of scandal contra bonos mores, as well as contra pacem ; as for haunting bawdy-houses with women of bad fame ; or for keeping such women in his own house ; or for words tending to scandalize the government ; or in abuse of the officers of justice, especially in the execution of their office. Thus also a justice may bind over all night-walkers ; eaves-droppers ; such as keep suspicious company, or are reported to be pilferers or robbers ; such as sleep in the day and wake in the night; common drunkards; whore-masters; the putative fathers of bastards ; cheats ; idle vagabonds ; and other persons whose misbehaviour may reasonably bring them within the general woids of the statute, as persons not of good fame; an expression, it must be owned, of so great a latitude, as leaves much to be determined by the discretion of the magistrate himself. But, if he commits a man for want of sureties, he must express the cause thereof with convenient certainty ; and take care that such cause be a good one . — 1 Hawk, P. C. c. 61 : 4 Comm.

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III. A recognizance may be discharged, either by the demise of the

king, to whom the recognizance is made ; or by the death of the principal party bound thereby, if not before forfeited ; or by order of the court to which such recognizance is certified by the justices (as the quarter-sessions, assizes, or king's bench) if they see sufficient cause : or in case he at whose request it was granted, if granted upon a private account, will release it, or does not make his appearance to pray that it may be continued. Such recognizance for keeping the peace, when given, maybe forfeited by any actual violence, or even an assault, or menace, to the person of him who

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demanded it, if it be a special recognizance ; or, if the recognizance be general, by any unlawful action whatsoever, that either is, or tends to a breach of the peace ; or, more particularly, by any one of the many species of offences against the public peace ; or by any private violence committed against any of his majesty's subjects. But a bare trespass upon the lands or goods of another, which is a ground for a civil action, unless accompanied by a wilful breach of the peace, is no forfeiture of the recognizance. Neither are mere reproachful words, as calling a man a knave or liar, any breach of the peace, so as to forfeit one's recognizance (being looked upon to be merely the effect of unmeaning heat and passion), unless they amount to a challenge to fight.— 1 Hawk. P. C. c. 60 : 4 Comm. 255, 6.

By the stat. 3 Hen. VII. c. 1, beforemention-ed, it is enacted, ' That if the party who is called at a sessions of the peace, upon a recognizance of keeping the peace, makes default, his default shall be then and there recorded, and the same recognizance, with the record of the default, be sent and certified into the chancery, or before the king in his bench, or into the king'j exchequer.' He who is bound to keep the peace, and to ap-pear at the sessions, must appear there, and record his appearance ; otherwise his recognizance is forfeited. And, although the party who craved the surety of the peace comes not to pray that it may be continued, the justices may in their discretion order it to be continued till another sessions.

But if an excuse, which is judged by the court to be a reasonable one, is given for the non-appearance of a party, it seems that the court is not bound peremptorily to record his default, but may discharge the recognizance, or respite it till the next sessions. A recognizance for keeping the peace may be forfeited by any actual violence to the person of another, whether it be done by the party bound, or others by his procurement. In support of a rule to stay proceedings in a scire facias, upon a recognizance for keeping the peace, it was said that the assault, which had been made, was not upon him at whose request the surety of the peace was granted, but upon another person. It was held that this makes no difference ; and the rule was discharged. MS. Rep. Rex v. Stanley and his bail, Trin. 27 Geo. II. But a recognizance for keeping the peace is not forfeited where an officer, having a warrant against one who will not suffer himself to be arrested, beats or wounds liirn in the attempt to lake him. So it is not forfeited, if a

parent in a reasonable manner chastises his child ; a master his servant, being actually in his service at the time ; a schoolmaster his scholar ; a gaoler his prisoner ; a husband his wife.

It has been held, that a recognizance for the peace may be forfeited by any treason against the person of the king, or by an unlawful assembly in terrorem populi. — Lamb. 115, 1 Hawk. P. C. c. 60. Words which tend directly to a breach of the peace as challenging a man to fight, or threatening to beat one who is present, amount to a forfeiture of such recognizance. A recognizance is likewise forfeited by threatening to beat a person who is absent, if the party who has so threatened, VOL. XXI.

does afterward lie in wait to heat !iim. A court of quarter-sessions cannot in ;uiy case proceed against the parties, for a forfeiture of a reco< >m-zance for keeping the peace; but the recognizance must be sent into some of the king's courts in Westminster Hall. All proceedings upon a forfeited recognizance must be by scire facias, and not by indictment ; because, where a scire facias is brought, the parties have an opportunity of pleading any matter in their discharge.

The usual practice of a court of quarter-sessions is to continue a recognizance for keeping the peace from sessions to sessions until the court thinks proper to discharge it. It is the constant course of the court of king's bench to take a recognizance for twelve months; and, if no indictment is within that time preferred against tin; party bound to keep the peace, it rnay, at the expiration thereof, be discharged. This seems also to be the practice of the court of chancery. A recognizance for the good behaviour may be forfeited by all the same means as one for the security of the peace may be ; and also by some otiiers; as by going armed witii unusual attendance, to the terror of the people; by speaking words tending to sedition ; or by committing any of those acts of misbehaviour which the recognizance was intended to prevent. But not by barely giving fresh cause of suspicion of that which perhaps may never actually hap-pen; for, though it is just to compel suspected persons to give security to the public against misbehaviour that is apprehended, yet it would be hard upon such suspicion, without the proof of any actual crime, to punish them by a forfeiture of ttieir recognizance.

SURF, a term used by seamen to express a peculiar swell and breaking of the sea upon the shore. It sometimes forms but a single ranue along the shore, and at others three or four, be-hind one another, extending

half a mile out to sea. The surf begins to assume its form at some distance from the place where it breaks, trraduully accumulating as it moves forward, till it gam, not uncommonly, in places within the limits of the trade-winds, a height of fifteen or twenty feet, when it overhangs at top, and falls like a cascade with great force and a prodigious noise. Countries where surfs prevail require boats of a particular construction, very different from the greater part of those which are built in Kurope. In some places surfs are great at high, and in others at low water; ‘but are uniformly most violent during the springtides. It is not easy to assiyn the cause of surfs. That they arc affected by the winds can han’-ly be questioned: but that they do not proceed from the immediate operation of the wind, in the places where they happen, is evident from this circumstance, that the surf is often highest and most violent w hen-there is least wind, and vice versa. On the coast of Sumatra the highest are experienced durmg the south-east monsoon, which is never attended with such gales as the north-west. As they are most general in the tropical latitudes, Mr. .Marsden, who seems to have paid much attent.on to the subject, attributes them to the trade-winds which prevail at a distance fiom shore between the parallels of 30° north and south, whose ui,i

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form and invariable action causes a long and constant swell, that exists even 111 the calmest weather, about the line, towards which its direction tends from either side. This swell, when a squall happens or the wind freshens up, will for the time have other subsidiary waves on the extent of its surface, breaking often in a direction contrary to it, and which will again subside as a calm returns, without having produced on it any perceptible effect. Sumatra, though not continually exposed to the south-east trade-wind, is not so distant but that its influence may extend to it : and accordingly at Poolo Pesang, near the southern extremity of the island, a constant southerly sea is observed, even after a strong north-west wind. This incessant and powerful swell rolling in from an ocean, open even to the pole, seems an agent adequate to the prodigious effects produced on the coast; whilst its very size contributes to its being overlooked. It reconciles al-most all the difficulties which the phenomena seem to present, and in particular it accounts for the decrease of the surfs during the north-west monsoon, the local wind then counteracting the operation of the general one ; and it is corroborated by an observation, that the surfs on the Sumatran coast ever begin to break at their southern extreme, the motion of the swell not being perpendicular to the direction of the shore. This explanation of the phenomena is certainly plausible; but, as the author candidly acknowledges, objections may be urged to it. The trade-winds, and the swell occasioned by them, are remarkably steady and uniform ; but the surfs are much the reverse. How then comes a uniform cause to produce unsteady effects? In the opinion of our author, it produces no unsteady effects. The ir-regu.arity of the surfs, he says, is perceived only within the remoter limits of the trade-winds. But the equatorial parts of the earth performing their diurnal revolution with greater velocity than the rest, a larger circle being described in the same time, the water thereaoout, from the stronger centrifugal force, may be supposed more buoyant ; to feel less restraint from the sluggish principle of matter; to have less gravity; and therefore to be more obedient to external impulses of every kind, whether from the winds or any other cause.

SUR’FACE, n. s. Fr. sur and face. Superficies ; outside : accented by Milton on the last syllable.

Which of us who beholds the bright surface Of this ethereous mold, whereon we stand. Milton.

Errours like straws upon the surface flow ; He who would search for pearls must dive below.

Dry den.

All their surfaces shall be truly plain, or truly spherical, and look all the same way, so as together to compose one even surface. Newton's Opticks.

SURFACE. See SUPERFICIES. SUR'FEIT v. a., v. n., & } French sur and SURFEIT'ER, n. s. [n. s. Ifaire, to do more SURFEIT'WATER. 3 than enough ; to

overdo. To feed with meat or drink to satiety and sickness ; to cram : to be full ; to satisfy : asurfeiter is he who so feeds; a glutton: surfeitwater, that which cures surfeits.

The surfeited grooms Do mock their charge with snoie.s. S/tukipeare.

When we are sick in fortune, often the surfeits of our own behaviour, we make guilty of our disasters the sun, the moon, and stars. Id. King Lear.

They are as sick that surfeit with too much, as they that starve with nothing. Id. Merchant of Venice.

Now comes the sick hour that his surfeit made ; Now shall he try his friends that flattered him.

Id. Richard II. I did not think

This amorous surfeiter would have donned his helm For such a petty war. Id. Antony and Cleopatra.

Surfeits many times turn to purges, both upwards and downwards. Bacon's Natural History.

Why, disease, dost thou molest Ladies, and of them the best ? Do not men grow sick of rites, To thy altars, by their nights, Spent in surfeits 1 Ben Jonson.

Peace, which he loved in life, did lend Her hand to bring him to his end ; When age and death called for the score, No surfeits were to reckon for. Crashaw.

Though some had so surfeited in the vineyards, and with the wines, that they had been left behind, the generosity of the Spaniards sent them all home.

Clarsndon. Our father

Has ta'en himself a surfeit of the world, And cries, it is not safe that we should taste it.

Otway.

They must be let loose to the childish play they fancy, which they should be weaned from, by being made toˆtirfeit of it. Loclie.

A little cold distilled poppy-water, which is the true surfeitwater, with ease and abstinence, often ends distempers in the beginning. fd.

SIT.FEIT, in medicine, is a sickness with a sensation of a load at the stomach, usually proceeding from some error in diet, either with regard to the quantity or quality of the food taken. Sometimes, however, a surfeit is only a. plethora from indolence and full but proper feeding ; in which case perspiration is defective ; and eruptions form themselves on the skin. A surfeit from animal food, as muscles, putrid flesh, &c., is best remedied by the use of vegetable acids, which may be taken diluted with water, a vomit being premised, and this even though a vomiting and purging both attend. When an excess of feeding is the cause, the primae viae being evacuated, and the nature of the plethora attended to, that the load may be properly evacuated, the indication of the cure will be, to recover the perspiratory discharge, consistent with which diuretics may be used in preference to medicines which produce any other evacuation. But the most natural and effectual remedy for a surfeit is abstinence, and temperance afterwards.

SURFEIT, in farriery. See FARRIERY.

SURGE, n. s. & v. a. Lat. surgo. A swelling sea ; wave rolling above the general surface of the water : to swell ; rise > on high.

It was formerly famous for the unfortunate loves of Hero and Leander, drowned in the uncompassionate surges. Sandys.

From midst of all the main The surging waters like a mountain rise. Spenser.

The realm was left like a ship in a storm, amidst all the ragng surges,

unruled and undirected of any.

Id.

The wind-shaked surge, with high and monstrous

main,

Seems to cast water on the. burning bear, And quench the guards of the ever-fired pole: I never did like molestation view On the enchafed flood. Shultspeare.

The serpent moved, not with intended wave, Prone on the ground as since ; but on his rear, Circular base of rising folds, that towered Fold above fold, a surging maze ! Miltim.

The sulph'rous hail

Shot after us in storm, o'erblown hath laid The fiery surges, that from the precipice Of heaven received us falling. LI.

He sweeps the skies, and clears the cloudy north : He flies aloft, and with impetuous roar Pursues the foaming siiryes to the shore. Dryden.

Thetis, near Ismena's swelling flood. With dread beheld the rolling surges sweep In heaps his slaughtered sons into the deep. Pope.

Do publick or domestick cares constrain This toilsome voyage o'er the surgy main ? Id.

SUR'GEON, n. s. J Corrupted from chi—

SUR'GERY. $ rurgeon. One who cures

by manual operation ; one whose duty it is to act in external maladies by the direction of the physician : the act of curing by manual operation.

The wound was past the cure of a better surgeon than myself, so as I could but receive some few of her dying words. Sidney.

It would seem very evil surgery to cut off every unsound part of the

body, which, being by other due means recovered, might afterwards do good service. Spenser. Strangely visiled people,

The mere despair of surgery, he cures.

Shakspeare. Macbeth.

They are often tarred over with the surgery of our sheep, and would you have us kiss tarl Shakspeare.

Tito' most were sorely wounded, none were slain; The surgeons soon despoiled them of their arms, And some with salves they cure. Dryden.

A SURGEON, or CniuuncFON, is one who professes the art of surgery. In England there an-two distinct companies of surgeons now occupying the science or faculty of surgery; the one coiupany called barbers, the other surgeons, which latter are not incorporated. The two are united to sue, and be sued, by the names of masters or governors and commonalty of the mystery of barbers and surgeons of London, 32 Henry VIII. c. 42. No person using any barbery or shaving, in London, shall occupy any surgery, letting of blood, or other matter; drawing of teeth only excepted. And no person using the mystery or craft of surgery shall occupy or exercise the seat or craft of barbery, or shaving, neither by himself, nor any other for his use, 32 Henry VIII. c.42. l?y the same statute, surgeons are obliged to have signs at their doors. Under the old French government, the French chirurgeons, being refused to be ad mitted into the universities (although their art i> a branch of medicine), on pretence of its bordering a little on butchery or cruelty, associated themselves into a brotherhood, under the protection of St. Cosmus and St. Damian ; on \hich account, according to the laws of their institution, they were obliged to dress and look to wounds gratis the first Monday of each month. They distinguished between a chirurgeon of the loirj; robe and a barber chirurgeon. The first had studied physic, and was allowed to wear a gown. The skill of the other, besides what relates to the management of the beard, was supposed to he confined to the more simple and easy operations in chirurgery; as bleeding, tooth-drawing, ˆt. They were formerly distinguished by badges : those of the long gown bore a ease of instruments; the barber, a bason. The surgeons and barbers of Edinburgh were formerly united in one incorporation, but were disjoined about 1720. Ste BARBERS, and SURGERY.

SURGERY.

SURGERY, chirurgia, x«p, manus, cpyov, opus, embraces all those diseases which affect the solid parts of the human body, and which can in any way be relieved by a manual operation. In this paper we present the reader with, I. A concise history of this art; II. With a detail of those diseases, according to a classification prefixed.

PART I. HISTORY.

The history of this now noble arid important science, presents nothing calculated to awaken a very strong interest in its earlier records. In the pristine ages, when men led unvitiated lives, diseases were few, and considered, when they did occur, to be inflicted by the gods as a punishment for real or imaginary crimes. This supposition must have existed at the time of the Trojan war ; for Homer describes the disorders among the Greeks, arising probably from the heat of the sun on the Trojan marshes, as destroying arrows, hurled by Apollo in his anger, thus : —

fj.iv Trpurov ITTMˆITO, icJi iciivac upyn£ AvTap nreir' avroiai jGfXoc t%iirivKtG tˆtnc BaXX' awi OE nvpai vtKvuv KUIOVTO 3a/«t«i. 'Evv»;/ iap fiiv ava rparov it)\tTo icijXa oio.

On mules and dogs the infection first began, At last the vengeful arrows fixed in man ; For nine long nights through all the dusky air The pyres, thick flaming, shot a dusky glare. These diseases, then, were to be removed only by prayer and supplication, and the cure effected through the medium of the priests. But as wounds, &c., were always liable to happen tu men constantly engaged in warfare (which is t be expected in all imperfectly civilised societies) so men were naturally liable, through a des mitigating their companions' sufferings, to seek for and employ suitable remedies. The occupation of attending to the wounds of their fellow-soldiers was thus reckoned honorable— and i kings did not disdain to practise it. Thus H. extols several of his heroes not more for their valor than their knowledge of the healing art • «ncli were Chiron,' Machaon, and Podalmus

and we may estimate the value set upon such men, by the eager desire of his companions to save Machaon when he had fallen in the battle wounded by an arrow. It was not until mankind had become settled in cities, and devoted their hours to the study of science, that medicine was considered as a legitimate object of enquiry, associated with the other branches of philosophy. It is not surprising therefore that, under these circumstances, the science of surgery should not have advanced : as its true basis must ever be found in anatomical knowledge. Pythagoras, Empedocles, and Democritus, were writers on medicine and surgery who only studied it in their closets; and it was not till the time of Hippocrates that diseases were made a separate study. This great man, being in affluent circumstances, gave his whole time to the study of medicine ; not in the vague manner that his predecessors had done, but by actual observation and practice ; by which he was enabled to write such a clear and definite account of diseases (but more especially acute ones) that moderns still express their admiration of it. He also treated of several surgical subjects with considerable success ; but, as it is doubtful whether this great master had ever an opportunity of ac-tual dissection, except of animals, we must not be surprised that this branch did not keep pace with medicine. The surgical subjects on which he has written are, Fractures, Dislocations, Wounds of the Head, Ulcers, and Fistula. After Hippocrates, we have no existing works published till the beautiful one of Celsus, from which we merely learn the names of those who professed medicine ; these were Diocles, Carystius, Praxa-goras, Chrysippus, Herophilus, and Erasistratus, which last two began anatomical investigations under the auspices of Ptolemy Philopater, in whose reign the study of medicine was divided into dietetics, pharmaceutics, and surgery. This last art, says Celsus, was practised in Egypt by Philoxenes, Gorgias and Sostratus, Heron and the two Apollonii, with Ammonius Alexandrinus, •who was distinguished by the name of Lithoto-mos. These flourished shortly before the Christian era. Whilst at Rome the principal surgeon, just before the time of Celsus, was Meges, who operated for the stone, &c. ; so that surgery must have attained some progress. Celsus lived in the reigns of Augustus Tiberius, and Caligula.

After this there is agflin a considerable deficiency in the annals of

surgery till the writings of Galen, who was born at Pergamus in Asia Minor, from which he went to Rome, in the second century, under the emperor Severus. He, however, did not practise surgery alone, preferring the study of medicine. Making comments, however, on the surgery of Hippocrates, he opened the jugular veins, and performed arte-riotomy at the temples, recommended leeches, scarifications, and cupping glasses, to draw blood, and also described with accuracy the different species of herniae, and the different methods of using bandages. In the year 500 flourished ./Etius, who described many tilings omitted by Celsus, particularly relating to operations, and the diseases of women. His works, however, were much eclipsed by Paulus

who flourished in 640, and wrote a treatise on surgery superior to all the ancients.

This science was now, in common with all others, doomed to a long oblivion by the overthrow of the Roman empire. The resuscitation of surgery happened about the year 900, when the Arabians discovered the writings of the ancients, and appropriated them to tneir own use, making great additions, which but disgraced the original. Such are the compilations of Rhazes, Haly-Abbas, Albucasis, and Avicenna. Medicine, however, owes more to these men than surgery ; for by their agency many new remedies were introduced from the east. From the eleventh century till the sixteenth, the practice of surgery was confined to ignorant priests, or still more unlearned barbers and farriers, with occasionally a quack strolling over Europe and imposing on the credulity of the superstitious by his magical rites. In the sixteenth century a new era sprung up. Fabricius al Aqua-pindente published his treatise on surgery, which drew from the illustrious Boerhaave the following compliment : — Ille superavit omnis ; et Nemo, illi; hanc disputat gloriam ; omnibus patius quam hocce, carere possumus. And now anatomy, under the celebrated Vesalius, began to shed her influence over the cultivation of our art, giving rise to .the father of modern surgery, Ambrose Pare, the first of the French surgeons. Educated in the Hotel Dieu, he was appointed body-surgeon to four of the French kings successively, Henry II., Francis. II., Charles IX., and Henry III. These he followed to the field, and was held in such estimation by the soldiers, that it is said his presence in a besieged town was sufficient to reanimate the drooping defenders. He was one of the very few protestants that escaped the odious massacre of St. Bartholomew, by the protection of the king himself. The works of Pare abound with interest, although disguised by the absurd matter

introduced by those whom he employed to write tiiem. But surgery owes an immortal obligation to him for the discovery and use of ligatures to restrain haemorrhage. In this respect he was the first to break through the trammels of the ancients, who always employed the actual cautery, which of course rendered them fearful of performing operations. Beneficial as this discovery was, it met with most violent opposition from the physicians of the time, who were astonished that a surgeon should dare to publish any plan of treatment not found in the writings of the ancients ; and accordingly we find the use of the ligature after his death declined. Next to Pare, in the order of illustrious surgeons, followed Petit, in the seventeenth century, who cultivated anatomical knowledge when a mere boy, and published his treatise on diseases of the bones when only a very young man. This remained the best work on this subject for nearly a hundred years : he also published several other works and treatises, and was justly considered an ornament to the French school. About his time also lived Le Dran, who wrote several able works, as did Gaungeot, Le Lat Sabatier, Levret, Desault, who has given the profession much use-ful information on fractures, &c., to whom may

ba added La Motte, Goulard, Daniel, Poteau, and Frere Cosme the lithotomist. But the genius of surgery was not confined to France ; Holland had its eminent men; foremost amongst whom stands Raw, the most distinguished lithotomist in Europe, but who had the cruelty and meanness not only to conceal his mode of operating, but deceive his professional spectators, who came from all parts of Europe, by which many lives are said to have been sacrificed. He even concealed his operation from his intimate friends and pupils, Heister and Albinus, whose merits effaced the stigma of Raw from Holland, as did the conduct of the illustrious Camper in the following century. And now we begin to trace the surgical art in England. Wiseman, surgeon to Charles II., was the father of English, as Pare was of French surgery ; and in his time lived Harvey, the great discoverer of the circulation, which constituted in itself a host of discoveries. To these succeeded Chesselden, White, Douglas, the two Monroes, Sharp, Cowper, Warner, Alanson, and Percival Pott (who first gave surgical lectures at Bartholomew's Hospital iiv!729) Hawkins, Smellie, and the two Hunters. It is to John Hunter that we owe our now successful treatment of aneurism. It was he who first pointed out the danger of

operating on a diseased artery, too fully confirmed by experience, and showed how that might be obviated : it is to him in fact that surgery owes the greater part of her scientific reasonings. He was also the best operator in his day, having once removed a tu-mor from the side of the head and neck, as large, if not larger, than the head to which it

belonged ; and at another time dissected out a tumor which one of our best operators had declared, too hastily, that none but a madman would meddle with. He was also equally remarkable for his investigations in comparative anatomy. France has also furnished her (almost) Hunter in the person of Bichat, who gave him self up to anatomy and physiology, and died lamenting that he could not finish his labors. But, within the last twenty or thirty years, most important improvements have certainly been made' in almost every branch of surgery ; and it must gratify every Englishman to find that his own countrymen have acted a very leading part in effecting such an object, especially in operations on arteries. Tnus tbjs country may c'.aiin the names of a sir E. Home, an Abernethy, a sir A. Cooper, Lawrence, Guthrie, 8cc. France may also boast of her baron Savrey, Dupuytioi,, Roux, Sec.; and Italy of a Scarpa.

PART II. DETAIL OF DISEASES.

INTRODUCTION.

As little has been done towards a methodical arrangement of those diseases which come within the defined limits of surgery, the following attempt at a classification must therefore be received with candor and allowance. The utility of a classification in the method of induction, by affording appropriate divisions for the allotment of facts and phenomena, has of late been too well understood to render it necessary for us to insist upon in this place.

CLASSIFICATION.

CLASS. — DISEASES AFFECTING THE SOLIDS. ORDER I.— EVIDENTES, arising from manifest causes. ORDER II.— OCCULTI, where the cause is not apparent.

ORDER I.— EVIDENTES (comprehends three genera).

Genus 1.

VIOLENTES. From mechanical injury. Species.

Wounds causing hemorrhage. Tetanus. Emphysema. Contusions. Fractures. Dislocations.

Rupture of tendon Achilles. Sprains.

Injuries of head. Hernia.

Genus 2.

VENENANTES. From the action of poisonous matters.

Species Syphilis. Gonorrhoea. Hydrophobia. Dissecting wounds.

Genus 3.

LETHALES. From the application of matters tending immediately to the destruction of vitality.

Species.

Burns and scalds. Frostbites. Chilblains.

ORDER II.— OCCULTI (having two genera). Gaaal. DIFFUSI. Affecting the system at Species.— Scrofula. Hysteria. Cancer.

Genus 2. LOCALES. Attacking particular parts. This is the largest genus, and comprehends many species, being diseases of the

BONES AND CARTILAGES.

ARTERIES.

VEINS.

NERVES. t

VISCERA.

SKIN.

GLANDS.

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Varieties.

Varieties.

Varieties.

Varieties.

Varieties.

Varieties.

Varieties.

Var.

Inflammation

Ossification

Inflammation

Tic doloureux

Urinary&

Inflammation

Absorbents

Eye

Merosis

Aneurism

Varix

Sympathetic

genital

(Edema

Salivary

Nose

Caries

pains

organs,

Boil

Mammary

Mouth

;Exostosis

viz.

Carbuncle

Thyroid

Rachitis

Teslis

Tumors

Mollities

Penis

Corn

Distortion of

Urethra

Bunyon

spine

Bladder

Whitlow

Diseases of

Prostate

Warts

joints, *viz.*

Rectum

Navus

Inflammation

Vagina

Ulceration of

Uterus

cartilages

[ntestines

Scrofulous

diseases

Loose cartilages

CHAPTER I. — OF INFLAMMATION.

Most surgical writers have concurred in commencing their subject with some account of the phenomena of inflammation : and with good reason ; for most diseases that come within the province of a surgeon are either immediately dependent upon, or are intimately connected with it.

The word inflammation, from inflammo, to burn, or kindle, conveys its own definition, on account of the burning heat experienced by the patient in the part affected by it.

SECT. I. — ON THE SYMPTOMS AND TERMINATIONS OF INFLAMMATION.

When inflammation attacks any part, the symptoms which indicate its presence are redness, heat, pain, and tumor, together with interruption or derangement of any function which the part attacked may have to perform ; and if it be violent, or of large extent, the constitution sympathizing with it remarkably, it produces a greater or less degree of fever. It is also frequently preceded by a cold shivering, particularly when it affects important parts. But it is obvious that many of these symptoms may at times be wanting, or rather that we cannot ex-pect to find them. Thus, for instance, if the affection be of an internal part, we cannot expect that redness should be visible, nor can we generally detect any tumor in such cases.

These symptoms require a little separate consideration; and first the pain, as the least variable, presents itself to our notice. When any part is inflamed, we observe (if external) that the capillary vessels, which were too small previously to be able to receive red globules of blood, become distemled so as now to admit them with facility, and at the same time the main ar-tery near the affected part becomes enlarged in its calibre, so that a much greater quantity of

blood is admitted into an inflamed part than is natural. This will at once account for the swelling of the part, and also the pain which is evidently caused by the sudden stretching of the nerves. It is also probable that, having increased their vascularity, they may become more sensitive. It is difficult perhaps to explain exactly how the pain is produced ; for as Mr. Samuel Cooper, in his excellent work called ‘

First Lines of the Practice of Surgery,' says, ' It is more easy to conceive than describe how any deviation from the natural state of parts must excite pain.' It is the unusual condition into which the nerves are thrown, which is to be regarded as the proximate cause. In chronic inflammation the graduality of the change allows the nerves to become adapted to it, and the degree of pain only amounts to a dull uneasy sensation ; but in phlegm, or when the change is quick, the pain is considerable. The throbbing which accompanies the pain manifestly depends on the strong pulsation of the arteries. Pain then may be considered as a constant attendant on acute inflammation ; but, when it is of a more chronic character, there may be either very little or (or as in some scrofulous tumors) none at all.

The tumor has been noticed to depend on the increased quantity of blood in the part, but it is also assisted by effusion of lymph into the cellular interstices ; which takes place after inflammation has been established for a very short period. It is also probable that, in this state, absorption does not proceed so rapidly as in healthy parts.

The redness, when apparent, must also depend upon the inflamed vessels carrying red particles, which they could not receive in their natural state. This is particularly manifest in inflammations of the eye.

Increased heat. — This is in many cases an illusive symptom; for it is sometimes felt in internal

as well as in external parts. Its existence in external parts may be easily accounted for. The blood near the heart, and in internal surfaces, is commonly at nearly 100° of Fahrenheit, whilst the temperature of the surface of the body is materially lower, on account of the constant evaporation kept up by both the sensible and insensible perspiration ; but, when any part becomes inflamed, it admits a much greater quantity of blood, and this causes an unusual sensation of heat upon the nerves accustomed to a lower temperature. It is, however, not so easy to explain the feeling of heat in internal inflammations; that such increase above the natural temperature is not

real, but only imaginary, has been proved by several experiments of Mr. John Hunter, who excited inflammation in the chest of a dog,, and in the abdomen, rectum, and vagina of an ass, without being able to discover any obvious rise of temperature. It may, however, be noticed that in some diseases the whole mass of blood is augmented in temperature, sometimes rising as high as 106° or 107° Fahrenheit.

There is yet one more symptom of the presence of inflammation, which, being a secondary one, has not yet been noticed. This is the buffy coat found on the blood which has been abstracted from the patient when affected by this complaint. This appearance has been well accounted for by John Hunter, in his excellent Treatise on the Blood : — He says, ‘ The blood, when taken out of the living vessels, spontaneously separates into two distinct parts, the serum and the crassamen-tum. The last is a compound substance, consisting chiefly of coagulating lymyh, and red globules, the most heavy ingredients in the blood. Blood, taken away from persons affected with inflammation, is longer in coagulating, and coagulaies more firmly, than in other instances. Hence the red globules, not being so soon entangled in the lymph, descend, by their gravity, more deeply from its surface, which, being more or less divested of the red coloring matter, is, from its appearance, termed the buffy coat, or inflammatory crust. The firmer and more compact coagulation of the lymph compresses out an unusual quantity of serum from it, and the surface of the sizy blood is often formed into a hollow, the edges being drawn inward.’

Having thus briefly described the symptoms of inflammation, the terminations of it are next to be considered. These are various, as 1. Resolution ; 2. Effusion ; 3. Ulceration ; 4. Mortification ; or it may pass on imperceptibly into a chronic state.

1. Resolution. — This is the most favorable termination, consisting of that state of the body in which nature is able to overcome the morbid action, and restore her own regularity of function ; and this is, on the whole, the most com-mon termination. It is effected in the following manner : — ‘ The pain becomes less, the swelling subsides, the fever, and every other symptom, gradually abate, till at last the part is wholly restored to its natural size and color. There is no formation of pus, nor any permanent injury of structure.’

2. Effusion. — This may be of various matters, as i. Serum. This is peculiarly liable to take

place from serous membranes; as, for instance, :i man receives a blow on the testicle which becomes slightly tender, and is followed by an eflusioi. between the tunica, vaginalis, propria, and reflexa testis. This forms what is commonly called hydrosele, and is in fact a serous effusion"; or a person is struck on some part where the cellular texture is very loose ; as, for instance-, the eyelids, a slight inflammation follows, which is succeeded by a serous effusion into the ceils. Jn internal cavities this is frequent, as the head, chest, and abdomen. ii. Fibrine or lymph. This generally occurs where the inflammation is very severe, and is in fact the solid part of tht, blood. This happens indiscriminately in all structures, as is seen in inflammations of veins or arteries which have been tied or cut across, or in all common incised wounds, causing adhesion by the first intension. It may also take place in solid or glandular bodies, causing permanent induration, as in affections of the testis or epididymes, which frequently remain during the patient's life. It is, however, less frequently met. with in mucous surfaces,which seems a kind provision of nature, for as these last are canals, the stoppage of them by adhesion would be fatal, iii. Purulent effusion. Tlvs may take place in any part or structure of the body, and is often a very unfavorable termination. This is generally called suppuration, which when it happens in circumscribed cavities is generally fatal, as in the head, chest, or abdomen ; it may, however, occur in parts contained within these cavities, and not necessarily terminate fatally. Thus an abscess may form in the liver which may burst and discharge its contents externally or into the biliarv ducts, and eventually heal. Tin's effused fluid pus, resembles cream in its consistence, is heavier than water, and is composed of particles nearly similar to the fibrine of the blood floating in a fluid. ' The fluid part of pus resembles serum ; and, like it, is coagulable by heat ; but it cannot, like milk, be coagulated by the gastric juice of animals. Healthy pus has little smell, is void of acrimony, and is of the consistence of cream, its globules are abunda/it, and of a lightish co-lor. When pure, it does not readily putrify ; but this quality is lost when there are extraneous additions blended with the matter. In specific diseases, cases of caries, &c., the matter is often mixed with blood, coagulating lymph, &c., and then it has more tendency to putrify and become offensive. Pus always partakes of the nature of the sore which produces it. To the surface secreting it, pus is quite unirritating, though it may greatly irritate any other. Hence, it is useless to wipe matter so completely from the surface of granulations as some are wont to do ; but it is highly proper to keep the surrounding skin free from it.

' Secretions of another kind sometimes have a resemblance to pus. The

following circumstances form a line of distinction. Pus sinks in water, mucus floats ; pus communicates to wa-ter a uniformly troubled white color, mucus gives the appearance of stringy portions floating in it; mucus is more readily dissolved by sulphuric ac.d than pus. If water be added to such solutions, the pus is precipitated to tl

while the mucus, instead of being completely precipitated, forms swimming flakes. A solution of caustic alkali dissolves both pus and mu-cus ; but, when water is added, the pus becomes separated, but not the mucus.'

When an effusion of pus takes place in a solid part, or in cellular texture, it becomes surrounded by a membraneous bag or cyst, partly by condensation of surrounding texture, and partly by effusion of lymph, and forms what is commonly called an abscess, derived from ab-scedo, to go away, because the ancients believed it to be formed by the dissolution or departure of the solids from their natural condition. But that pus may be formed without any dissolution of the solids, was noticed first by Dr. Hunter in cases of empyema or collections of pus in the chest, and afterwards by John Hunter, in his Treatise on Gonorrhoea, wherein it is demonstrated to be secreted from the mucous surface of the urethra fora long.time, without any breach of the surface in either case. 'The modern doctrine of suppuration is, that the pus is separated from the blood by the inexplicable operation of the secerning arteries, just as ordinary secretion takes place, and that the peculiar mode of ac-tion in the arteries is the reason why pus should be -separated from the circulation, rather than coagulating lymph, mucus, &c. &c. It is further believed that the solids never suffer any dissolution, so as to enter into the composition of pus, and that the deficiency frequently apparent in them, arises from absorption. The arteries, in producing pus, a fluid so dissimilar from blood, and of which, at least, it must be considered a new combination, seem to assume all the power of glandular secretion.'

The symptoms of suppuration are, after along continued inflammation, without signs of resolution, the patient has a remission of the fever (if any were formerly present) and pain ; the redness also subsides round the part, but becomes more dull upon it, presenting a yellowish or whitish appearance in the middle. He has frequent shiverings (these are particularly marked in suppurations after injuries of the head), and the humor grows larger ; and, if superficial, has a conical eminence, upon touching which a fluctua - tion is apparent. If, however, it be deeply seated, there is tenderness on pressure, and a considerable a?dema of the limb ; the pulse becomes soft, and in large suppurations hectic fever supervenes. The treatment of abscesses in general •will be found in the treatment of inflammation and its

consequences.

3. Ulceration is a preternatural increase in the action of the absorbents beyond the proportional power of deposition from the arteries ; causing a rough surface to be formed, which, in healthy ulcers, is covered with pus, not adherent to its surface, and the roughness is caused by small projections of a conical form called granulations. These are very common sequels of inflammation, particularly if any thing have deprived the part affected of a portion of its vitality. Thus most severe bruises, where the nerves have been compressed, are liable to end in ulceration ; and it is a remark of Mr. Brodie's that all extraneous morbid growths, as schinus or other .

tumors, are very liable to ulcerate. The parts, too, nearer the heart are less liable than those re-mote. They are also of very frequent occurrence after fevers in the mucous follicles of the small intestines. Ulcers in parts of much vitality would naturally heal were it not for some foreign cause. Their mode of healing is by the granulations rising to a level with the surrounding skin, from the edges of which new skin gradually forms and spreads over the ulcer ; or else, in large ulcers, a spot of new skin forms in the middle, from which portions shoot like rays.

Sir A. Cooper notices that it is a curious law, with respect to the ulcerative process, that it has a tendency to the nearest external surface of the body. This is a law which is attended with the most salutary effects ; for, if it were otherwise, the body would very frequently be destroyed by the ulcerative process. In consequence of this tendency, matter formed at a depth in the body finds its way through the integuments, instead of proceeding through the more important parts. Many examples may be given of this law. One of the most remarkable is this: — Matter forms-not unfrequently behind the sternum close to the pleura and pericardium, which membranes are extremely thin — not so thick as paper. From the proximity of these membranes it might be expected that the matter would generally open into the pleura, and, by discharging itself into thecavity of the chest, destroy life. Instead of this, IUDW-ever, the pleura undergo no other alteration than that of becoming thick, and, while they are acquiring this addition of substance, the process of absorption is going on in the inner part of the sternum, an aperture is formed through it, and the matter makes its way through the bone and integuments rather than through the pleura and pericardium. The same circumstance takes place with respect to the peritoneum. If matter be formed in the

abdominal muscles, the peritoneum is very rarely absorbed to admit the mat-ter into the cavity of the abdomen, but the mat-ter makes its way through the integuments, and finds an outlet on the surface of the body.

Ulcers have been divided by Sir Eveiard Home, in his excellent treatise, into six varieties, which are, 1. Ulcers in parts which have sufficient strength to carry on the actions necessary for their recovery. 2. Ulcers in parts which are too weak for that purpose. 3. Ulcers in parts whose actions are too violent to form healthy granulations, whether this arises from the state of the parts, or of the constitution. 4. Ulcers in parts whose actions are too indolent, whether this arises from the state of the parts, or of the constitution. 5. Ulcers in parts which have acquired some specific action, either from a diseased state of the parts, or of the constitution. 6. Ulcers in parts which are prevented from healing by a varicose state of the superficial veins of the upper part of the limb.

i. Simple or healthy ulcers. — Sir E. Home remarks that, in this species of ulcer, the pus is of a white color, thick consistence, and readily separates from the surface of the sore, and when diluted, and examined in a microscope, is found to be made up of small globules, swimming in a transparent fluid. The granulations are small

florid, and pointed at the top. As soon as they have risen to the level of the surrounding skin, those next to the old skin become smooth, and are covered with a thin semitransparent film, which afterwards becomes opaque, and forms cuticle.

In the treatment of this kind of ulcer, it is only necessary to keep the surface clean, and prevent the natural processes from being interrupted. Sir E. Home observes that this is in general best done by the application of dry lint, for the purpose of absorbing and retaining the matter, which serves as a soft covering for the granulations, and by putting over the lint a pledget of any simple ointment, in order to hin-der the matter from evaporating, by which means the dressings

will not become adherent, and may be easily taken off as often as requisite. Although healthy ulcers ‘require no medicated application to be made to them, the dressings must be such as do not disagree with the granulations or surrounding skin. A roller is also often use-ful to support the skin and muscles, which are sometimes relaxed from the want of natural exercise of the part. When the sore, however, does not secrete enough in twenty-four hours to moisten the lint, a little simple ointment may be used, or it may be dressed only once in two days.

ii. Weak or fungous ulcurs. — The granulations of these sores are larger, more round on their external surface, and of a less compact texture, than those formed on ulcers in healthy parts. Sir E. Home has also noticed their semitrans- parent appearance. When they have filled up the cavity of an ulcer to a level with the surface of the body, they do not readily form skin, but, rising up in a still higher manner, often lose altogether the power of producing new cutis. When the parts are still weaker, the granulations sometimes continue gradually to fill up the hol-low of the ulcer, and then, all on a sudden, are suddenly absorbed, so as to leave the sore as deep as it was before. Ulcers may be weak from the first, or become so in the progress of the case. Even granulations of the most healthy kind, if they are not skinned over in a certain time, gradually lose their primitive strength.

These ulcers appear in persons debilitated, either mentally or bodily. In the treatment, therefore, of this kind of ulcer, tonics are to be exhibited, particularly bark and steel, and every thing which disagrees with the constitution is to be avoided. Wine and cordial medicines are also usually prescribed. Porterj however, is deemed better than wine for working people. The lo-cal treatment is to prevent the granulations rising too high. This, says Sir E. Home, is better accomplished by keeping them down by strong stimuli than by allowing them to rise and then destroying them. Pressure also is very useful, either by bandage or a piece of sheet lead, as stimuli. A weak solution of argentum nitratum may be used, or powdered rhubarb, which, if too exciting, may be mixed-, -with a fourth part of powdered opium. The best ointments are, the ung. l.yd. nitri. or ung. nitrico. oxyd. each diluted with five parts of hog’s-lard.

iii. Irritable ulcers, when well marked, have

these symptoms :— The margin of the surrounding skin being jagged, and terminating in an edge, which is sharp and undetermined. The bot-tom of the ulcers being made up of concavities of different sizes.

There being no distinct appearance of granulations, but, a whitish spongy substance, covered with a thin ichorous discharge. Every thing that touches the surface gives pam, and very commonly makes it bleed. The discharge is altered from common pus to athin fluid, in proportion to the degree of irritability communicated to the sore by constitutional causes.

When the above-mentioned signs of an irritable ulcer are not present, we must form a judgment of the nature of the sore from listening to the history of the case, the effects of various applications, &c. When this kind of information cannot be obtained, Sir E. Home recommends the treatment to begin on the supposition of the ulcer being of an irritable nature. Irritable sores are very often situated over the lower end of the tibula, or anterior edge of the tibia.

Treatment. — All applications should be sedative. Thus steaming the part or fomenting with decoct, papav. or applying lint dipped in a solution of hemlock, or opium, will be found beneficial. Emollient poultices may be used as a continued application. But, as the patient can-not always bear their weight, it should be contrived that the part may rest on the poultice instead of the poultice on it. They are, however, to be left off, if they relax the ulcer too much, causing flabby, large granulations with a gaping wound. Powdered charcoal has been found use-ful, as has cold cream when the patient could not bear heat.

iv. Indolent ulcers. — The indolent ulcer forms in its appearance a complete contrast to the irritable one. The edges of the surrounding skin are thick, prominent, smooth, and rounded. The surface of the granulations is smooth and glossy. The pus, instead of being of a perfect kind, is thin and watery, being composed of a mixture of pus and coagulating lymph. The lymph consists of flakes, which cannot be easily separated from the surface of the sore. The bottom of the ulcer forms quite a level, or nearly so, and, as Sir E. Home very accurately remarks, the general aspect conveys an idea that a portion of the skin and parts underneath has been for some time removed, without the exposed surface having begun any new action to fill up the cavity. When, however, the indolence of the ulcer is not so strongly marked, the sore does not correspond to the preceding description, but resembles in appearance the ulcer which possesses an inferior degree of irritability, and can only be discriminated from it by receiving no benefit from soothing applications. These are the ulcers that most commonly occur in old persons, and so we fi a great number in every hospital.

Treatment— Solutions of lunar caustic ; touching the surface of the ulcer with the caustic it self; diluted nitrous acid ; the unguent, hydrarg. nitrat; and the unguent, hydrarg. nitrat. rubr.; and supporting the sore and the neighbouring skin and muscle* with a roller ; are the best means which were used for healing common indolent ulcers, before Mr. Baynton hud before the

public his very successful method. This gentleman's practice consists in applying strips of adhesive plaster round the limb, so as to cover the sore, and, at least, one inch of the parts both above and below the ulcer. The strips of plaster are to be two or three inches broad, and long enough to surround the limb, and leave an end about four inches long.

The middle of the strip, so prepared, is to be applied to the sound part of the limb, opposite the inferior part of the ulcer, so that the lower edge of the plaster may be placed about an inch below the edge of the sore; and the ends are then to be drawn over the ulcer with as much gradual extension as the patient can well bear. As many strips are to be applied in this manner as will cover the whole surface of the sore, and one inch of the limb below and above, it. Soft compresses are to be laid over the part, and the limb is to be rolled, from the toes to the knee, with calico bandages. The affected parts are then to be kept moist with cold, spring water, which enables the surgeon to remove the strips of plaster without hurting the patient, and, at the same time, keeps off inflammation.

v. Ulcers with specific action. — These are very various ; as the scrofulous, venereal, cancerous, &c., which will be treated of under these separate articles. A few, however, may be mentioned here. 1. An ulcer noticed by Sir E. Home, particularly in servants who have led indolent lives, occurs on the instep and foot, has very thick edges, and is attended with a diseased state of the surrounding skin, so as to bear some resemblance to elephantiasis ; these are to be cured by mercurial fumigations and applications. 2. Ulcers which appear on the ancle or knee with swelling of the joints. — These are generally suspected to

be scrofulous, but they are more painful than strumous ulcers commonly are. These are best managed by applications of hemlock. 3. There is a kind of ulcer which does not extend more deeply than the cutis, but spreads in all directions. The specific morbid action does not continue in the paits which have ulcerated, but only affects the edge of the skin, where the ulcer is increasing ; for the surface first affected heals, while the parts beyond are in a state of ulceration. For such ulcers, of which there are several varieties, a solution of the argentum nitratum is the best application.

The last specific ulcer which I shall here no-tice is the fungated one. It is seen on the calf of the leg and sole of the foot, shooting out a fungus from the surface. The new formed substance is extremely broad, and narrow at its root ; it is tender, and bleeds from very slight causes. The disease, in its origin, somewhat resembles a scrofulous affection of the metatarsal bones, until the skin ulcerates and the fungus protrudes. One species of this ulcer contaminates the lymphatic glands in the course of absorption ; another kind does not do so. The first case cannot be cured by the internal and external use of arsenic; the second may.

vi. Varicose ulcers. — These are generally si- “tuated on the inside of the leg, having somewhat the appearance of indolent ulcers, but may be known, as the name implies, by a varicose state of the saphena vein.

Treatment. — A horizontal posture is absolutely necessary to take off the weight of the superincumbent column of blood ; apply lotio nigra to the wound, oiled silk or sheet lead over this, and then bandage the limb tightly from the foot upwards. Sir A. Cooper recommends bleeding from the affected veins. It is obvious that the varicose ulcer must be alleviated by any thing that will benefit the condition of the varicose veins themselves — to the article on which, this consideration must be referred.

vii. There are some ulcers which may be hindered from healing by mechanical impediment, as constant motion. Of this sort are those called fistula, which will be separately treated of ; also abscesses in the lungs, or other moveable viscera ; others by some irritating cause, as ulcers of the toes under the nail. These are very troublesome on account of the nail growing into the ulcer, from which a little fungus sprouts.

Treatment. — Sir A. Cooper notices that there are two modes of treating these ulcers ; either the application of a blister; or introducing a piece of lint under the nail ; the former brings away the cuticle and sometimes the nail along with it ; the latter, however, is more lenient, and a better remedy. Pare down the nail as thin as you can, without producing bleeding; then raise it a little, and introduce a small piece of lint : in this way the irritating cause may generally be removed ; but sometimes it happens that the sore is so exceedingly irritable that even lint cannot be lodged on its surface without producing increase of inflammation and pain; in such cases, I would recommend slitting up the nail with a pair of scissors, on that side where the disease exists, and then, with a pair of forceps, turn back and completely remove the divided portion. The part should be poulticed after the operation.

There is another not uncommon ulcer, which has not yet been noticed ; this is the gangrenous or phagedenic ulcer. In ulcers of this kind, the surface is perfectly free from any discharge; the surrounding edges of a livid appearance, with small vesicles or blistered spots on them ; and the patient suffers much from irritative fever.

In the treatment of these cases you must adopt constitutional as well as local remedies : the recumbent posture must first be enjoined, as it is essentially necessary to promote the separation of the dead parts ; a generous diet allowed; stimulating medicines administered; and moderate stimulating applications, to promote a slightly increased action on the part ; sometimes, however, when the action is excessive, you must, on the contrary, sooth the part, and lessen the stimulating nature of your constitutional treatment. The most approved constitutional treatment in these ulcers is rest and generous diet ; port wine should also be allowed, and spirits may be given to those who have been in the habits of using them : by brandy and opium I have seen these wounds cured ; in fact, they are our sheet anchors in the treatment of gangrenous ulcers. The best medicine to be administered is opium and ammonia; twenty drops of the tincture of opium, three times a day, with ten grains of the ammonia, in an ounce and a

half of camphor mixture, and one drachm of compound tincture of cardamoms.

When there is debility of the part, a slight stimulus should be employed ; but when there is excessive action it is to be avoided. The best application for producing a slight stimulus, and ‘ checking gangrene of the part, is the nitric acid ; there is none equal to this ; fifty drops of it to a quart of distilled water is the average quantity ; but this, however, may be increased or diminished, just as it may give pain to the part.

We come now to consider the next termination of inflammation. This is

4. Gangrene or Mortification (from ypaw to feed upon, because it consumes the living flesh). This, the worst, is happily the least frequent se-quel of inflammation, and occurs only when the affection has been of the most severe character ; and seems to be produced by the sudden failing of nervous energy in the part attacked, in consequence of its being no longer able to continue that high state of excitement which such severely increased action demanded : as we may imagine a bow to be bent till it snaps asunder. When this happens, there ensues a loss of life to a greater or less extent in the part affected. There frequently, however, occurs a gangrene in parts which have not been previously subjected to inflammation ; but which, for some reason or other, are endued with less vitality. This has been called idiopalhic or dry gangrene, in contradistinction to the other, which is the humid or acute. There are besides cases of mortification, preceded by inflammation, which do not arise wholly from that as a cause, but combined with a deficiency of vitality ; of this nature are carbuncle, and the slough formed in the small-pox pustule, &c.

Symptoms of gangrene. — The symptoms of mortification from inflammation take place variously, yet generally, as follows. The pain and sympathetic fever suddenly diminish, the part affected becomes soft and of a livid color, losing at the same time more or less of its natural warmth and sensibility. In some places the cuticle is detached ; while, in other situations, vesicles arise, filled with a clear or turbid fluid. On touching the part, there is a crepitus perceptible, owing to the generation of air, from the decomposition of the cellular substance. As this state of things proceeds, the parts become quite black, flaccid, easily lacerable, destitute of heat, motion, and

sensation. They are now said to be in a state of sphacelus or mortification. Mr. Thompson observes, in his Lectures on Inflammation, that ‘ the part of the body which becomes affected with gangrene does not immediately lose its sensibility ; for the pain, on the contrary, is often very much aggravated by the ‘ approach of this state. The blood also still continues to circulate, at least in the. larger vessels of the part, but perhaps with less force ; and, from the resistance which it meets with in passing through the capillaries, in less quantity than formerly. The serous effusion into the cellular membrane continuing to increase, and the action of the absorbent and sanguifcrous vessels to diminish, the part becomes at length incapable of being restored to its former office in the animal

economy. It is therefore in its earlier stages only that gangrene is to be considered as an affection admitting of cure ; for there are limits beyond which, if it pass, recovery becomes impossible. These limits it may not in every instance be easy to define; but they form the boundaries between incipient gangrene and the ultimate termination of that state in sphacelus.’ When sphacelus, however, has taken place, it always has a tendency to spread and deprive the neighbouring textures of their vitality, and it stops only when it encounters a part which has vital energy enough to resist it. It is then that nature draws a line of separation between the living and dead matters, which last, if left to themselves, are gradually thrown off, leaving for the most part a healthy ulcer exposed.

The separation of mortified parts’ or sloughs would be attended with great danger from hit morrhage, where it not kindly provided by nature-thai the arteries leading to a part thus affected, having no longer any circulation to carry on, be-come obliterated by lymph, so that the patient is secured from this terrifying addition to his sufferings.

The constitutional symptoms that occur in acute gangrene are a high degree of irritative fever, gradually assuming the form of typhus, with a quick, small, and thready pulse, generally intermitting, and often accompanied by delirium of the low or muttering character, and vomitiny, togetherwith a very uniform and important symptom, hiccough. Frequent cold sweats supervene, and the patient’s countenance assumes a wild cadaverous look.

Mortifications not following acute inflammation.— These may occur from various causes ; as

1. A simple diminution of vitality, which takes place in the sloughing of extraneous growths.

2. Pressure on the veins of any part obstructing the return of blood. In this case the blood-vessels become turgid, and the part swells, and becomes livid and very painful. Vesicles soon arise, and, at length, the part becomes soft, ccde-matous, emphysematous, cold, black, insensible, and fetid. A strangulated hernia affords an instance of such mortification. 3. Impediment to the flow of arterial blood to the supply of a part. This produces first softness and boldness of the part, which soon becomes shrivelled, black, and lifeless — parts enclosed in very tight ligatures are examples of this. 4. Pressure obstructing the general circulation. Surgeons have frequent occasion to see melancholy examples ofjhis kind of mortification, particularly in cases of fra-tiires, paralysis from disease of the vertebrae, &c. The mischief most readily occurs where the bones have the least fleshupon them, and consequently where all external pressure has the most Hied ; as, for instance, about the os sacrum, os ilium, spines of the scapulae, &c. The disordered pan always first becomes soft, livid, red at the circumference, and oedematous, afterwards losin its sensibility, and acquiring a black appearance: at length it is converted into a foul sloughing ulcer. 5. Violent concussions or contusions. 6. Extremes of heat applied suddenly. 7. Kx-tremes of cold applied suddenly : all these thn «> last occasion immediate loss of vrtulily. f

continued application of moderate cold or heat. 9. Ossification of arteries in old persons, as proved by Mr. Hodgson, though Pott has denied this. 10. A peculiar sort of mortification, .beginning at the extremity of one or more of the small toes, and passing on to the foot and ancle, and sometimes a part of the leg, quite unpreceded by any inflammation. In some few instances it makes its appearance with little or no pain ; but commonly the patient feels great uneasiness through the whole foot and ancle-joint, particularly in the night time, even before the parts show any marks of distemper, or while there is only a small discolored spot on the end of one of the little toes. From

this spot the cuticle is always detached, and the skin underneath is of a dark red color. Sometimes it is slow in spreading from toe to toe. At other times its progress is rapid and horridly painful. It is most frequent in males, and is more often .met within the rich and voluptuous than in the laboring poor. It frequently happens to persons advanced in life ; but it is by no means peculiar to old age. It is said to happen often in persons subject to gouty pains in the feet, without having regular paroxysms of the disorder. Few mortifications proceed so slowly as that now described ; it spreads, however, more quickly when it invades fleshy parts. 11. Gangrene of an epidemic character. This is commonly called hospital gangrene, and is to be noticed where a great many wounded people are crowded together in a confined space. This first shows itself locally, says Mr. Thompson, by 'a more or less acute pain, and a viscid whitish exudation on the surface of the granulations, which lose their vermi-Hon color, and present at several points spots of a. grayish or dirty-white hue, resembling venereal ulcers, or aphthae. These ulcerated points, thus engrafted (as it were) upon the original ulcer, soon spread and join together, so as to give to the whole surface of the solution of continuity a gray ash-color. The surface also becomes more or less indurated, and sometimes bleeds. A red, purplish, cedamatous circle, of a greater or less extent, is next formed in the surrounding skin. Sometimes, when the patient is of good habit, the causes of infection less active, and the constitution sufficiently strong, the disorder has now a btop put to it. Indeed, as we have already remarked, it may not even extend to the whole surface of the ulcer. But most frequently its progress is extremely rapid, and occasionally quite terrifying. 'She edges of the wound, or ulcer, become hardened and everted, the granulations are large and tumid, being, according to Boyer, swelled up with a considerable quantity of gus. They are afterwards detached in the form of soft reddish sloughs, which, savs Boyer, very much resemble the substance of the fetal brain when in a putrid state. From day to day, until nature alone, or aided by art, puts limits to the disorder, it invades new parts both in breadth and depth, so that its ravages extend to aponeuroses, muscles, blood-vessels, nerves, tendons, the periosteum, and even the bones themselves. Imflamed absorbent vessels are sometimes seen extending from the surfaces affected with hospital gangrene,* to the contiguous or communicating, cervical, inguinal, or axillary glands.

Artery seems to be the texture which resists most powerfully the destructive action of hospital gangrene, as well as of most other species of mortification. When adhesive inflammation does not occur, hemorrhage is liable to take place, and, in some instances, to prove fatal. Even in cases in which distinct hemorrhage does not occur, a

thin, fetid, bloody sanies is often discharged, and the pus, which is secreted during the separation of the sloughs, is frequently reddened by an admixture of blood.

These are the principal causes of gangrene ; the treatment will be considered when we come to speak of the treatment of inflammation in general, and its consequences.

The last termination of inflammation may be said to be its passing into a chronic form. This, however, differs little from the acute, except in the mitigated violence of the symptoms. But chronic inflammation may happen, as it very commonly does, without any previous acute attack. It is to be observed that it is this which causes or accompanies most surgical complaints.

There has as yet been noticed only one sort of inflammation, *viz.* common orphlegmonaeus; but besides this there are various specific inflammations,-either produced constitutionally, as rheumatism, gout, scrofula, schirrus; or by application of some poison, as syphilis, &c. ; but of these some come within the province of the physician, others will be mentioned afterwards.

SECT. II. — OF THE CAUSES OF INFLAMMATION.

These have been divided by most writers into remote and proximate. By the remote cause is meant both the indirectly predisposing and the directly exciting cause; and, by proximate is meant, in (act, an illustration of the modus operandi of inflammation.

. Remote, considered under its two divisions : i. Predisposing. This, as the term implies, denotes all those accessary causes which render a person more liable to inflammation at one time than at another; as, for instance, a state of de-b'lity produced by any means whatever, as excessive fatigue of body or mind, want of proper nourishment, &c. &c. That some predisposing cause is necessary to produce this malady, is obvious from this, that many persons may have been equally subjected to an exciting cause, but of these a few only are attacked, ii. Exciting causes. All substances applied to the body, tending to injure the vitality of the parts that they touch. This includes chemical agents, especially stimulants, as cantharides, heat, acids, alkalies, metallic oxides, salts, and acrid vapors, as many of the gases. But the most curious though common agent is cold. This may be applied to one part and produce inflammation in another, as is seen in the production of diseases of the chest when cold is applied to the feet. It however often has a local effect, as is seen in frost-bitten parts, chilblains, or

inflammations of the fauces and nostrils, from inhaling cold air. Touching a piece of metal previously cooled to a very low degree will produce a blister, and a sensation similar to that of burning; so that cold, though not considered by many

as a direct exciter of inflammation, may, however, very fairly be classed with the other causes, all of which excite it by the violent effort of na-ture in the threatened part, to rid herself of the noxious matter.

2. Proximate cause. — This has been a favorite topic of controversy amongst medical philosophers for several ages. Boerhaave supposed it to depend upon a too great viscidity of the blood, which clogged up the vessels : he also imagined that, in consequence of the perspiration being stopped, the smaller vessels were distended with it; so that the thick red globules found their way into these capillaries, forming an error loci. This created resistance to the circulation, causing heat, pain, and redness, by the accumulation of blood behind. Mr. Burns says, ‘ The viscidity of the blood cannot be admitted as the proximate cause of inflammation; because we have no proof that this state ever exists ; or, granting that it did, it would not explain the phenomena. Were a viscidity to occur, it would exist in the whole mass of blood, would affect every part of the body alike, and could not be supposed to produce only a local disorder. How also could such a lentor be produced by causes which bring on inflammation suddenly, without there being time for changes of the fluids to take place?

‘ With regard to the doctrine of error loci, or of red globules going into vessels which did not formerly transmit them, the fact must be admitted, at the same time that the conclusion is denied. When the eye becomes inflamed, the tunica conjunctiva is seen with its vessels full of red blood, which in health is not the case ; but this redness rever appears until the inflammation has commenced, and must therefore be considered as an effect, not a cause. Nor can this error loci occasion any obstruction in these vessels ; for if they be divided the blood flows freely, which shows that they are large enough to

aiiow an easy circulation.' Dr. Cullen believed that it is produced by a spasm of the extreme vessels, with an increased action in the course of them. The inconsistencies in Cullen's theory are very glaring. The congestion or accumulation of blood, which is only an effect or consequence of inflammation, is set down as the cause of the spasm of the vessels, to which spasmodic constrictions, Cullen, strangely enough, assigns the name of proximate cause. The spasmodic contraction of the extremities of the vessels, instead of propelling the accumulated quantity of blood, would render the passage of the blood from the arterial into the venous system still more difficult. Mr. Hunter believed that inflammation is to be considered only as a disturbed state of parts, which requite a new but salutary mode of action to restore them to that state wherein a natural mode of action alone is necessary.

It used to be generally considered that the pulsation of arteries causing throbbing was in consequence of the contractile action of such vessels. But Mr. Brodie has proved in recent experiments that pulsation depends upon the stroke of the heart in a great measure, if not entirely. In one experiment, to prove this, he laid bare the carotid of an ass; and, having divided it, insert-

ed a glass tube into the lower portion, to the end of which was attached a silken tube, and lie found that, when he allowed the blood to flow, the silken tube pulsated as strongly as an artery. To refute the old doctrine of spasm, or obstruction in the capillaries, Dr. Wilson, in company with Mr. Boraston, instituted some experiments. He found that in an inflamed webb of a frog's foot the capillaries, particularly the anastomosery vessels, were inordinately distended, so as to admit red globules, which they could not do previously ; but at the same time the rapidity of circulation was diminished in proportion. These experiments have been corroborated by Mr. Brodie, who supposes that these vessels are dilated beyond their powers of contraction, so that they become inert tubes, and thus the circulation stagnates. It would seem probable, then, that inflammation takes place in this man-ner. Nature is able to repair injuries in living bodies only through the medium of the circulation, influenced no doubt by the nerves, winch allow the arteries to dilate, or cause them to contract, and thus at times to receive greater or less volumes of blood. Whenever then any part is threatened with loss of vitality, from an irritating or sedative cause, the resistance which naturally takes place is the pouring of a larger volume of blood to the part; and, as the intention is that of reparation, so it would seem those arteries allow themselves to be

dilated most readily which are for the nourishment of the part, whilst a stop is put to all secretions, by which, part of the blood in the organ would be drained off. It seems then probable, by ob.seiv-ing what takes place in the frog's foot, that those arteries which would not convey red blood before, now become dilated beyond their power of recovery, as is the case sometimes with the urinary bladder, and that this is the real distinction between mere increase of action where there is no inflammation, as in pregnancy, rutting seasons of animals and growth of the slags' antlers, and the state in which real inflammation is present, this may help to show why effusions of any sort abate or cure the inflammation, it being by unloading the vessels and allowing them to recover their natural tone and calibre; this state of distension may be noticed in inflammations of the eye, especially when they assume a chronic form.

SECT. III. — OF SYMPTOMATIC FF.VERS. Symptomatic fevers of different sorts art-present in most inflammations, according to the nature of the part attacked. These are caused by the sympathising of the entire frame with the action that is going on in the part affected.

. Sympathetic inflammatory ftnr. — The symptoms are, a frequent, strong, and full pulse; diminution of the secretions ; a hot dry state of the skin; scanty high-colored urine; dry furred tongue; thirst; disturbance of the nervous system ; loss of appetite and sleep ; in some cases delirium. The febrile symptoms appear in this form when any considerable phlegmonous inflammation affects common parts, a integuments in any situation in the body, tli

disturbance of the system being in a great measure proportioned to the extent and violence of the local affection.

The effects of inflammation on the constitution, however, are not simply proportioned to the quantity of inflammation ; they are influenced as much by the nature of the parts in which it is situated as by its extent. When muscles, cellular membrane, skin, &c., are inflamed, the pulse is, as we have described, strong and full. These may be said to be common structures.

If the inflammation be in tendinous, ligamentous, or bony parts, the stomach sympathises more than when muscles, &c., are inflamed. The

pulse is quicker, but has not so much fulness, and the blood, not being propelled so far into the small vessels, forsakes the skin. When inflammation is in vital parts, or such as sympathise with the stomach, there is great depression blended with the constitutional symptoms, the pulse is frequent and small, and the blood is not pushed into the minute vessels. A very remarkable depression of strength very frequently attends an inflammation of the intestines, and the pulse is small and hard ; whereas, when the surface of the body is the seat of the affection, there is often a temporary augmentation of tone, with a full, strong, and hard pulse. In fact, when the peritoneum and intestines are inflamed, the patient frequently seems so reduced, and his pulse so small, that the surgeon is afraid to use the lancet. Perhaps, however, he at length ventures to do so; the blood appears exceedingly sizy, and the pulse gains strength, in proportion as the disease yields to, and is benefited by, the evacuation.

It is a very curious fact, remarked by Mr. Hunter, that all inflammations of parts, which derive their nerves from the great sympathetic nerve, occasion an unusual lowness of spirits. When the constitution is good, and parts not very essential to life are inflamed, the pulse becomes increased in strength and fulness. When the same parts are affected in weak irritable persons, and in women who lead sedentary lives, the pulse is quick, hard, and small, at the commencement of the inflammation, just as if vital parts were concerned. Thus we see that all the varieties of inflammatory fever depend chiefly on four circumstances ; *viz.* the extent of the inflammation ; the structure of the parts affected ; their functions ; and the nature of the constitution.

Treatment. — It is obvious that by taking away the cause we must mitigate this fever, so that we ought to direct our attention chiefly to the local injury. But it is possible that the fever may run so high as to have a bad effect on the diseased part, in which case we must bleed from the arm, administer purgative medicines (so that no further source of irritation may arise from the faulty intestinal action), and diaphoretics, chiefly antimonial.

2. Hectic fever arises in consequence of long continued suppurations, from the inability of the system any longer to supply the constant dram without using an extraordinary exertion,

and not as the old surgeons supposed from absorption of pus. Its symptoms are a soft frequent pulse, profuse sweats, particularly at

night ; great debility ; tongue moist ; urine copious, with great deposits ; generally of a pink-ish white color; failure of appetite; and, when the disease becomes fully formed, there are frequent attacks of diarrhaea, with sudden chills and flushes of heat. Mr. Hunter has noticed that there are two practical varieties of hectic fever. The first arising entirely from a local complaint in a good constitution, which is only disturbed by too great an irritation ; and a hectic fever, arising principally from the badness of the constitution, which does not dispose the parts to heal. In the first species it is only necessary to remove the part (if removable), and then all will do well ; but, in the second, nothing is gained by a removal of the part, unless the wound made in the operation is much less, and more easily put into a local method of cure ; by reason of which the constitution sinks less under this state and the operation together, than under the former one. Here the nicest discrimination is requisite.

Treatment. — We cannot expect to cure this fever without first healing the abscess, aud, as this is frequently impossible, we must content ourselves with mitigating it only. No medicine, not even bark itself, has any direct power of communicating strength to the human constitution. All that can be done in the treatment of hectic fever, when it is thought inexpedient or impracticable to remove the morbid part, is to combat particular symptoms, and to promote digestion. It is by bringing about the latter object that bark is useful in these cases. The infusum cinchonae, being more apt to agree with the stomach than the decoction or powder, should generally be preferred. Nourishing food, easy of digestion, should be frequently taken in small quantities at a time. Nothing is more prejudicial to a weak constitution than overload-ing the stomach. Wine may also be given, but not too freely, and not at all if it should create heartburn, as it sometimes does in hectic patients. Madeira is less apt to have this disagreeable effect than port. In these cases it is likewise often found useful to administer gentle cordial aromatic draughts. But, of all medicines, opium is perhaps the most valuable to those who are afflicted with hectic fever; it alleviates pain, procures sleep, and checks the diarrhoea, which so frequently attends such cases.

When the hectic fever arises from local diseases, in parts which the constitution can bear the removal of, the morbid part should be taken a%vay, if it cannot be cured consistently with the ad vice already given. When the disease arises from some incurable disease, in an extremity, all the above-mentioned symptoms cease almost immediately after the limb has been taken off. A hectic pulse, at 120, has been known to sink to ninety in a few hours after the removal of the hectic cause. Persons have been known to sleep soundly the first

night afterwards, who had not slept tolerably for several preceding weeks. Cold sweats have stopped immediately, as well as

those called coHiquative. A purging has immediately ceased, and the urine began to drop its sediment.

These are the principal fevers met with in surgical cases : but others do occur. Thus, in inflammations of the veins, a fever resemblin°-typhus supervenes ; and Mr. Brodie remarks that, when putrid matter is confined in an abscess, it causes symptoms of the greatest malignity, which will entirely disappear on evacuating the fluid.

Having now given some account of the phenomena it will be requisite to consider

SECT. IV. — THE TREATMENT OF INFLAMMATION AND ITS SEQUELS.

This consists in unloading the arteries of the affected part, which may be done in several ways.

1 . By diminishing the general volume of blood in the body. — For which purpose the best and most efficacious remedy is blood letting from the arm or other large veins, or the temporal arteries. This is, however, only requisite when the symptoms are violent. It has been known and practised as a valuable remedy from the days of Hippocrates. In the repetition of general blood letting we should be guided rather by the symptoms than by the buffy appearance of the coagulum of blood.

The next method in point of efficacy is local bleeding, which may be performed either by leeching, cupping, or scarifying, the part. Inflamed parts, however, do not bear this last operation well during the early stages, but it is frequently performed afterwards with good effect, as in ophthalmics. This is a most excellent and manageable remedy, as it not only unloads the system in general, but more

particularly the vessels of the affected part. It therefore will in most cases be the preferable remedy, as general bleeding need only be resorted to when the constitution is much distressed.

Another very useful auxiliary is the use of purgatives (except in cases where their employment is prohibited). These act in several ways : — 1st, They remove any source of irritation in the bowels from confined matters. 2dly, They increase the secretions from the mucous surface of the intestines, and so materially assist in lessening the volume of circulating fluids by the copious watery evacuations which are produced. This at the same time does not tend to weaken the patient nearly so much as blood letting.

2. Restoring the secretions. — Perspiration. This end is answered effectually by the use of diaphoretic medicines, such as antimonials, either with or without calomel. This last preparation seems to have a peculiar influence over the process of inflammation, and therefore deserves our most serious consideration. This we particularly notice in cases of iritis, which seems to yield to no other remedy. Of the specific actions of calomel, as well as of very many other medicines, we as yet know little or nothing. Physiologists and others have in vain attempted to explain them. All, however, that we do know of calomel is, that it affects the absorbent system by causing an increased action in it, as indeed it does in

the vascular system generally, and also acts p;>i ticularly by rousing the liver and salivary glands, the secretions of which it materially augments. The last symptom indeed is a certain siˆn of its having affected the constitution, and is a guide for its further employment.

3. Lessening the force of circulation.— Tim may be effectually done by keeping up a constant nausea of the stomach by emetic medicines exhibited in small doses, or by remedies which act directly as sedatives to the heart's action. Such are conium, digitalis, belladonna, &c. : great caution is required in the use of these last, as they are apt to accumulate by repetition of doses, so that they act suddenly in a very powerful manner as narcotic poisons.

4. Local applications. — The most., valuable of these is cold, in the form of lotion or pounded ice, laid over the inflamed part ; which, l.y condensing the volume of fluid, must materially diminish its bulk, and so admit of its action in another manner, which is constringing the vessels, thereby lessening their diameter. Cold also acts as a sedative

to the nerves, where the action is not too violent. In which cases cold cannot be borne. It is then that we find the employment of warm applications so serviceable, particularly combined with moisture. We see this commonly in cases of inflamed testicle or incipient acute ophthalmics. Sir A. Cooper thinks they act by producing relaxation, opening the pores, and allowing the perspiration to exude. The best mode of applying heat is by a steam bath, which may be made at the moment by placing a common strainer over a pail of boiling water, upon which the patient may rest his limb, which is then to be covered up with flannel, so as to prevent the egress of the steam ; or he may have a flannel pipe leading to the spout of a boiling vessel, dilated at the end intended to be applied to the body by a circular piece of cane or whalebone. The most common way, however, of applying heat is to foment with flannel dipped into warm water, otherwise to apply a poultice made of some substance which can retain heat; for this purpose linseed meal is commonly used.

5. Counter irritation is often of value in checking inflammation, by drawing a quantity of blood to the part on which we produce it, and thus relieving the inflamed part of a portion of its blood. It is, however, more serviceable in chronic inflammation, or when the first violence of the acute is abated. Indurations very frequently re-main after inflammations ; they are to be got rid of by diminishing the circulation of the part, and promoting absorption. For this purpose the best remedies are pressure, friction, electricity, and mercury.

When all the means for subduing inflammation have been used, and fail, the most frequent sequel is suppuration; the symptoms of win h having been already described, it only remains to notice the treatment. When we find a part In-ginning to suppurate it is best to use warm applications. These relieve the pain by relaxing the parts around, which thus allow themselves to become distended by the abscess without resistance. It is probable, also, t!i;;t the ‘ e.U may ex-

cite the absorbents to a more steady action, and thus hasten the ulcerative process. When, at length, an abscess does present itself, it

becomes a question whether the surgeon should interfere or not. It will be best as a general rule to leave all abscesses to burst of themselves which by remaining unbroken can do no mischief.

The cases for the surgeon's interference are chiefly, i. Cases in which it is of consequence to save the skin from being much disfigured, as in scrofulous glands of the neck in females, which would else follow the course of all abscesses, viz., increase in size, and thus expose a greater surface to ulceration. Sir A. Cooper recommends these to be opened by a lancet transversely to the axis of the neck, as the scar will then be hidden amongst the folds of skin.

ii. All abscesses under fasciae, which must necessarily bind them down and cause them to burrow amongst the adjacent textures, ought to be opened by the lancet or scalpel as soon as the surgeon can convince himself of the presence of matter. These are most common in the thigh, arm, and perineum.

iii. All abscesses pressing on bones should be speedily opened, as they are else apt to occasion the death or ulceration of the part. This is particularly the case with the bones of the cranium.

iv. Abscesses in parts of loose texture; where they are, on that account, very liable to spread, as near the anus, &c.

v. Abscesses pressing on either vital parts, or such as are of much importance, as the brain, eye, &c.

Surgeons used formerly to open abscesses with caustic and setons, but now these are very seldom used, the lancet or scalpel being generally far preferable. The caustic potash may be employed when the skin is sure to slough afterwards. Care should be taken in opening collections of matter to make the orifice in as depending a situation as possible ; so that the pus may have a ready vent. Much, however, must depend upon the relative thinness of the skin.

After treatment. — When an abscess has burst of itself, and it is unnecessary to enlarge the opening, all that is requisite is to keep the surrounding parts clean. The continuation of the same kind of poultice, which was before used, is, perhaps, as good a practice as any; and when the tenderness, arising from the inflammation, is over, lint and a pledget may be made use of, instead of the poultice. But an abscess, opened by a cutting instrument, is both a wound and a sore, and partakes more of the nature of a fresh wound in proportion to the thickness of the parts cut. Hence it is necessary that something should

be put into the opening to keep it from healing by the first intention. If it is lint, it should be dipped in some salve, which will answer better than lint alone, as it will allow of being taken out sooner. This is advantageous, because such sores should be dressed the next day, or, at latest, on the second day, in order that the pus may be discharged again. When the cut edges of ihe opening have suppurated, which will be in a few days, the future dressings may be as simple as

possible; for nature will, in general, complete the cure.

Healing of abscesses. — This takes place-by granulation. Thus when an abscess is opened, or when a wound has been produced, if the edges are not brought together, inflammation is excited ; and this inflammation occasions an effusion of the fibrin of the blood upon the surface of the wound. This fibrin is poured out in a layer upon the surface, and soon becomes vascular ; for blood-vessels, which are elongations of the vasa vasorum of the divided vessels, are forced by the action of the heart into the fibrin which has been deposited. The fibrin which is thrown out, besides the purulent secretion from the vessels, forms a second layer, into which the vessels shoot as before. The vessels supporting the first layer are the means of supporting the second layer, where the vessels terminate as before, by open mouths on the substance effused. In this manner layer after layer is formed, until the ca-vity becomes filled.

Of chronic abscesses. — These demand a little separate consideration. For, 1. Their general treatment should be directly opposed to ih;it of acute ones ; for here the patient must be allowed a generous diet and tonic medicines. 2. Their local treatment differs very materially, as they often require stimulating applications to bring them forward ; such as poultices of oatmeal and yeast, or flour and vinegar wetted with a solution of common salt; or plasters, as the compound galbanum or mercurial, with ammoniacum, and soap plaster. When suppurated they are to be opened as the others. Care must be taken, however, to prevent access of air or violence to large cysts; which, under these circumstances, may inflame and produce symptoms of malignant fever. When, however, the cysts are small, as in scrofulous glands, we should take care to squeeze out all the flakes of unorganised matter, which will facilitate the healing.

It should be observed that abscesses situated over diseased substances, as bone or glands, can-not heal till these last are either removed or cured. Also when situated so as to be kept in motion they heal with

difficulty. When matter has penetrated far in a longitudinal direction under the skin, we say there is a sinus. This is often observed under i'asciffi or about the rectum. These may often be cured by pressure; which should, indeed, be applied gently or gradually to all cysts of chronic abscesses. When, however, pressure will not remove them, they must be laid open and dressed to the bottom .

We come now to consider the treatment of the last sequel of inflammation.

SECT. V. — GANGRENE.

In treating this there are two indications. 1. To put a stop to its progress. 2. To separate fhe dead from living parts.

1. When gangrene is threatened from severe inflammatory action, all applications, says Mr. Hunter, should be 'cold till the excessive action be somewhat subdued. Cold, however, cannot be persevered in too long, as it then becomes a cause of gangrene. Whilst the constitutional

symptoms are violent, blood may be taken locally or generally ; but, if they threaten exhaustion, opium with cordials must be administered and bark will now prove efficacious. When gangrene has formed, then we should endeavour to save the neighbouring parts by stimuli, which prevent the stagnation of blood in the vessels and enable them to resist the gangrenous action : for this purpose poultices of stale beer grounds with linseed meal, port wine poultices, spirituous application, yeast, vinegar, camphor, turpentine, charcoal, and carrot poultices, are all useful. Some surgeons preferring one " and some another. 2. When a slough or sphacelus has formed, and the constitution has tone enough, it will be separated from the living parts ; so that the surgeon need only await the result, except, indeed, it should occur under the skin, or where the egress is difficult, as in cases of effusion of urine into the scrotum. Here the surgeon must make free scarifications down to the sound parts ; so as to allow it the most ready exit. In common cases, however, as in the extremities, a line is formed between the

living and dead matters. We should then apply the less violent stimuli, and nature will generally make a tolerably good stump; so that all the surgeon need do, is to saw through the bone, unless the surface be left very ragged and uneven, as is sometimes the case, on account of the different degrees of vitality of parts. Thus tendons or membranes are less vital than skin and muscle, and so often slough to a greater extent. In this case the surgeon had better perform amputation when the patient is able to bear it. As a general rule amputation should never be practised whilst the mortification is spreading, as in these cases the stump is very liable to slough also. But the baron Larrey, in his Memoirs de Chirurgie Militaire", says that in cases where gangrene is the result of a mechanical cause, and puts the patient's life in danger, amputation ought to be performed without waiting till the disorder has ceased to spread guided by the maxim of Celsus ; that an uncertain remedy is preferable to abandoning a patient to certain destruction.

There is another case, noticed by Mr. Sharp in his Critical Enquiry, in which amputation ought not to be performed ; viz., in mortification of the toes and feet in old persons ; for, as this depends on an ossified state of the arteries and consequent incapability of nourishing the lower limbs, we cannot expect the stump to be in a better condition than the toes were. In treating this loathsome complaint, Mr. Pott observes, we should avoid stimuli, as the vessels cannot bear increased action, and apply only warm and soothing dressings.

In cases of mortification from the effects of cold we must beware of too sudden a stimulus. Sir A. Cooper says, if gangrene is likely to arise from the application of cold, the treatment must be different: in these cases the action of the parts is feeble, from the diminution of nervous power, and it will be proper to restore it to a healthy state by stimulants of the most gentle kind. For this purpose the best application is the camphorated spirit of wine, accompanied with gentle friction. If you are called to a patient

whose feet are benumbed from the effects of cold, you must sit by his bed-side, pour camphorated spirit into your hand, and rub it on his feet with the utmost gentleness, so that the part may not be irritated by violent friction. When the first effects of cold are removed, it will be pro-per to apply cold poultices ; for warm applications are to be carefully avoided. When parts are frost-bitten, in colder climates, the common practice is to restore the circulation by rubbing them with snow.

Hospital gangrene must not be confounded with ulcers from scurvy, which generally occur with the other symptoms of this last disease, as, bleeding gums, blotches on the skin, &c., and are benefited by vegetable acids and fresli diet. The most efficacious treatment seems that recommended and practised by the French surgeons Boyer, Dupuytzen, &c., who make a firm, hard eschar, by the application of the actual cautery to the ulcers, which they repeat if the wounds reassume gangrenous action. These surgeons have no confidence in constitutional remedies for this complaint. When the disease is stopped, it is notified by the appearance of a phleamonous swelling at the circumference of the ulcer, for which Boyer recommends at first a poultice, but as soon as pus is secreted this is too relaxing. He then enjoins some mild tonic, as the decoct. cinchonae.

There is another disease which, bearing considerable analogy to phlegmon, demands our next attention. This is

SECT. VI. — ERYSIPELAS.

Erysypelas, ipvui, to draw, TrtXac, adjacent, or St. Anthony's tire, derives its first name from its tendency to draw the neighbouring parts into the same state ; it was known first by this name in the time of Aretaeus. According to tlie doctrines of Pythagoras, it was supposed to be formed by bilious humor, and, as a disease, was well known to Galen. The cause of this formidable malady seems to be an inflammation of the skin and subjacent cellular structure ; it differs, however, materially from phlegmon, both in symptoms, and in its not attacking alike all structures, being confined to the skin ; or, as Dr. Cullen supposed, to this and mucous membrane. This disease presents itself in two very different forms, with, however, every degree of modification between them, one acute or phlegmonous, the other atonic.

Symptoms.— General. An attack of erysypc-las is mostly preceded by considerable constitutional disturbance, particularly nausea and heat ache, with great derangement of the digestive organs, and is ushered in by a shivering, llicn a red spot appears, which sooi. spreads rapidly, causing a little elevation of the skin, not circumscribed, but often with a well defined edge between it and the healthy parts ; its color is a bright red, more or less tinted with brown, which, on pressure, vanishes, leaving a white spot, but which quickly regains its color. It is atte with a burning pain ; not throbbing as in phlegmon We shall now consider its two varieties,

1.' Plilegmonm*, or acute. —In this the constitutional symptoms

assume the form of mflam-

matorv fcver. The eruption is of a brighter red, pulse full, urine high-colored, great pain in the head, and frequently delirium. It generally terminates favorably in four or five days by the appearance of little vescicles, or desquama-tion of the cuticle ; or, if violent, an abscess may arise and burst. When not very severe, this disease frequently leaves the part first attacked, and settles on some other. It is particularly dangerous on the face, as the membranes of the brain then often become inflamed.

Treatment. — 1. General. This must depend on the constitutional symptoms ; if they are violent, bleeding generally must be resorted to. Local bleeding has been recommended, but it is apt to aggravate the irritation of the affected part, whether leeches, cupping, or scarifying, be used. Calomel, with mild purgatives and diaphoretics, seem the best remedies, and, indeed, it may be treated as any other fever. 2. Local remedies in this variety are not of so much importance. But, on the whole, cold applications are most serviceable. Greasy applications, as ointments, have been recommended, and often prove beneficial. Fine hair powder, during the vesiccation, is comfortable to the patient ; it is chiefly useful in absorbing the discharge.

2. Atonic erysypelas. — In this variety the fever aas much of a typTioid appearance. It is in general not so acute at first as the other, but more gradual in its approach, mostly, however, preceded by shiverings. There is a cold and clammy skin, pulse weak and irregular, eruption of a deep reddish brown, with vesiccation from its commencement, vomiting, and low delirium. This variety is exceedingly apt to end in sloughing and imperfect suppuration of the subjacent cellular texture, extending even under the fascia, which soon contaminates the superincumbent skin, if it be not allowed a ready exit. The cellular texture is more liable to gangrene than the skin, because it has less vitality. This state of things may be known by an oedema of the part, with a doughy feel, and cvepitus.

Treatment. — On nothing have surgeons more disagreed than the treatment, both local and constitutional, of this formidable malady, which in itself must argue much inherent malignity and variety of disease. Some have recommended stimuli from the commencement, and particularly bark, but most modern surgeons prefer waiting till the violence of the fever is over before they commence with this then efficacious medicine. In the early treatment an emetic seems of much benefit when there is disturbance of stomach or liver. This may be followed by gentle stimuli, as ether, camphor, ammonia, &c., in proper forms, and if the patient be very low we must admit of wine or brandy.

Local treatment. — In this variety cold is not admissible, but rather any thing which will assist in supporting the vitality, as warm spirit lotions, or, what are better, Port wine lotions, made with one part of wine ami two of water, or an imitation of it thus : — K. Sp. vin. rect. Jiv. Decoct, papav. 3V>. Decoct, quercus, ˆvi. mfial., lotio. sapae tipida. applicanda. Poultices are generally too heavy to be borne without a great deal of pain.

When sloughs or pus have formed under the skin, the sooner they are allowed to escape b\ free incisions the better, as, by this means, we avoid the coi.stitutional irritation they would cause, and save the skin above the slough from dying. Many modern surgeons have gone so far as to make free incisions in the first instance, long before any slough can have formed, but this practice seems unnecessarily severe.

Causes of erysypelas. — There can be no specific cause assigned for its origin ; but it generally at-attacks those whose chylopoietic viscera have lately suffered, but no constitution seems exempt. It frequently assumes a contagions character, as we see in hospitals, where at times it will attack nearly all wounds in them ; and it is to be remarked that wounds seem always an exciting cause, even when of the most trivial description, as a scratch or leech bite.

CHAP. II. — OF WOUNDS.

Wound? are solutions of continuity in the soft parts, occurring suddenly ; they may be either of a simple nature, or complicated with other injuries or lodgment of foreign bodies; their danger must depend considerably on their size, and relative importance of the part. Thus, wounds of the brain, heart, or stomach, of very small size, prove fatal. Some textures also are less able to bear injuries than others: of this

nature are joints, of which all wounds are attended with danger. But a point of great consideration, in the estimation and treatment of wounds, is the degree of violence done to the parts, besides their mere separation.

Wounds may be healed in two manners, 1. Union by first intention ; 2. Suppuration.

1. Union by first intention. — Is the natural process of uniting divided surfaces, and is effected in the following manner : — The sides of the wound must be in immediate contact; with no foreign body intervening (in this case even a clot of blood which has been long extravasatecl becomes a foreign body by having thus lost its vitality). Then there takes place an effusion of coagulating lymph from the adjacent parts, which from non-exposure, being yet vital, soon becomes vascular, from the neighbouring vessels being elongated into the clot, which thus becomes the living bond of union between the cut surfaces.

2. Suppuration.— Is a much slower process, and consists of an effusion of pus from the sides and bottom of the wound, which thus becomes an ulcer and heals by granulation.

Wounds may be simple or incised, punctured, lacerated, contused (comprising gunshot wounds), or poisoned.

SECT. I. — SIMPLE OR INCISED.

The simple or incised wounds are, cceleris paribus, the least formidable of all ; they are also least liable to the presence of foreign bodies, except such as are cut by glass. These should always be attempted to be healed by the first intention, having previously removed any foreign body (if any be present). They may, however, be complicated with other injuries; thus they may extend into a joint, which is known by the es-

‘.ape of synovia and their position, in which vase, if it do not. heal by the first intention, the oint swells, violent inflammatory fever supervenes, and, if the patient survive the violence of the attack, an abscess is formed in the joint which often destroys those cavities. In very favorable cases, however, the secretion of pus gradually diminishes, and the joint recovers its ˆunction. In treating these cases, it is obvious that we should endeavour to get union by the first intention, and to this end the surgeon should be very careful not to irritate by over officious probing. If, however, inflammation supervene, we must use the most active means already recommended for the subduing of inflammations, *viz.* repeated bleedings, both general and local, and keeping the patient in a constant state of nausea and depression. If abscess form, its treatment does not differ from common abscesses : we should allow it to burst and offer no violence to it. If anchylosis be threatened, we should try to place the limb in the most favorable posture for use; and if long continued suppuration supervene, which is gradually wearing away the patient’s health, we must have recourse to amputation.

Another most serious and common complica-cation of wounds is the occurrence of

1 . Hemorrhage, of at/tot, blood, and TTEW, to flow. This is always more formidable when occurring from an artery than a vein ; for the latter may generally be secured by pressure, unless it be from a very deep and large trunk, in which rase it will be necessary to tie it with a ligature of silk. When an artery, however, is wounded, it bleeds with much greater velocity than a vein, as it comes direct from the heart. It may be known by the florid color of the blood. If a wounded artery be small, it will often cease bleeding spontaneously ; this happens through the contraction of the wounded artery, and a coagulum forming in the end of it. This then being the natural process of stopping bleedings from small arteries, it is obvious that if the artery be divided only partially or punctured, it cannot contract, and so will continue to bleed ; in this case it will be best, if the artery be small, to divide it entirely. This was known to and advised by Ambroise Pare”, the father of modern surgery. But, when an artery of larger size be wounded, the force of the circulating fluids prevents its contraction, and, having no valves like the veins, it will bleed from both its upper and lower ends, by its anastomosing branches, enlarging and bringing the blood again into the trunk below the wound. To stop arterial bleeding many remedies are practised. Styptics are of very little service, except for small vessels and from veins; lint should be dipped in saturated solutions of them, and applied to the parts. They are, however, useful after operations in checking the oozing of blood,

which might exhaust a patient already enfeebled by loss from larger vessels. But in these cases they are not admissible, where union by the first intention is attempted.

2. Pressure is a remedy of great value, especially in wounds of many smaller arteries, which either cannot, or would occupy too much time and space to be tied. In this case we should

not fill up the wound as the older surgeons did. But this is executed by applying a bandage, ant compresses in such a manner that they mechanically stop the effusion of blood. Formerly surgeons used to fill the cavities of wounds with lint, and then make pressure on the bleeding vessels, by applying a tight roller over the part. The moderns understand too well the utility of not allowing any extraneous substance to intervene between the opposite surfaces of a recent wound, to persist in the above plan, except in a few instances. They know that the sides of the. wound may be brought into contact, and that compression may yet be adopted, so as both to restrain particular hemorrhages, and rather promote, than retard, the union of the wound. When the blood does not issue from any particular vessels, but from numerous small ones, compression is preferable to the ligature. The employment of the latter would render it necessary to tie the whole surface of the wound. In order to make effectual compression, in this case, the wound is to have its opposite surfaces brought into contact ; compresses are then to be placed over the wound, and a roller is to be applied as tightly as can be done, without hazard of stopping the circulation in the part.

Pressure is also sometimes made on very small openings into larger sized arteries when they run near bones on which they can be compressed . this is often practised in wounds of the humoral artery from bleeding; in which case the wound may heal, but in most instances the artery will be obliterated; but not necessarily so, as Dr. Jones proved. If, however, this plan do not succeed, then we must cut down, expose the ar-tery, and tie both ends.

3. Ligature must be used in all cases of wounded large arteries, which cannot be compressed against bone, where there is time to ap-ply them. They must be applied bc-th above and below the wound, and should be of silk, drawn tightly so as to rupture both the inner and middle coats of arteries. This causes inflammation of the vessel, and effusion of lymph, which prevents haemorrhage when the ligature comes away by ulceration, which happens in from two to fourteen

days, depending on the size of the artery. Care should be taken in tying large arteries not to detach them too much from" their surrounding connexions, \hcn ;i ligature has been applied, one end should In-cut off close to the vessels, leaving only one portion of extraneous matter in the wound instead of two. Some have recommended a very fine ligature to be used, and cut off close to the ves-sel, and the wound healed over it ; but tins is generally found to cause suppuration— .sometimes, however, not of large extent or importance.

4. Actual cautery was in very common u amongst the ancients. It is very painful :i inconvenient; but its chief disadvantage is, Hi the part to which it is applied must s causing a tedious suppurating wound which, < >. the separation of the slough in the first mstn)<•< >, is liable to bleed again. There arc sonic cases. however, in which even this is serviceable ;

as bleeding from the mouth, or parts wU-.e t

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vessel cannot be got at and tied. In these cases it should be applied through a canulu, so as to protect the surrounding parts, it must also be used in extirpating large tumors where the surgeon has not time to tie the vessels on account of their number and size, and the deluge of blood which they are pouring out; such are fungous growths from the dura mater, &c. : or, again, when it is wished that the parts adjacent to the removed part should slough, as in malignant tumors, when it is difficult to extirpate the whole of the disease otherwise.

FURTHER REMARKS. — i. When a haemorrhage takes place from arteries, if left alone, it will continue till the patient faints, in which case, as the heart ceases to propel the blood, no more escapes, whilst the faintness continues ; and now a coagulum often forms in the mouth of the divided artery, of sufficient size and firmness to stop the exit of blood when the heart may re-sume its action, and thus the

patient's life is saved. This often happens, on the field of battle, in sabre wounds ; for, were it not for this beautiful provision of nature, every one with a wounded artery of any size must perish.

ii. When an artery is torn, and not cut, it is found that the disposition to haemorrhage is materially diminished ; and very often, as in gunshot wounds, even when a main artery of a limb is torn across, there follows scarcely a drop of blood. Mr. C. Bell explains this phenomenon as follows : — He believes that the fluidity of the blood depends upon its contact with the inner coat of arteries; and there are many circumstances which would make this appear probable. In lacerations, then, of arteries, it must happen that the inner coat, being the least elastic of the three, is torn away to greater or less extent, leaving the outer one projecting; the blood then, being in contact with the outer coat, coagulates, and stops the bleeding.

iii. When a haemorrhage takes place from ulcerated morbid growths, it is sometimes impossible to stop it without removing the tumor ; for, if the bleeding vessels be even tied, they will (through partaking of the disease) presently ulcerate, without producing adhesion, and the bleeding returns : if however the tumor be removed, we then come to the artery in its healthy state, and tying can now be safely practised.

Having now considered haemorrhage, we come to the means by which incised wounds are to be united.

1. The position of the part should be attended to. This is to be regulated on the principle of relaxing the wounded integuments and muscles. If the extensor muscles be. injured, the joints which they move ought to be placed in an extended posture ; if the flexor muscles be wounded, the limb is to be bent. When the integuments alone are cut, the same posture which relaxes the muscles situated immediately beneath the wound, also serves in general to relax the skin. In transverse wounds of muscular fibres it is astonishing what immense effect the observance of a proper posture produces. This is never to be neglected, whatever may be the other means adopted.

'2. Adhesive plaster is generally applied in

strips, between every two of which an inter space is recommended to be left for the purpose of allowing discharge to escape. To bring the edges of the wound effectually together, and at the same time to cover as little of the wound as possible, are the objects to which we ought to

attend in using adhesive plaster. Hence, when thp strips are broad, it is not unfrequent to cut out an oval piece of each strip, just where it crosses the wound.

3. Bandages are often serviceable, besides the mere adhesive plaster; for they support the parts around, and hinder them from gravitating on the wound; and so keeping up a constant tendency to separation of the lips.

4. Sutures. One only is employed by most modern surgeons, *viz.* the interrupted, which consists of one or more separate stitches, taken with a curved needle and ligature, each stitch being tied, and the ends cut off close. These are only used to assist the adhesive plaster in cases where there is much opposition to the contact of the lips of the wound, and where n bandage will not have the effect. It is generally used where there has been loss of structure. Their employment is always regarded with a jealous eye by modern surgeons, as they naturally irritate the wound, and sometimes seem to produce erysypelas.

SECT. II. — OF PUNCTURED WOUNDS.

Mr. S. Cooper says punctured wounds are not only dangerous on account of their frequently extending to a considerable depth, and injuring important blood-vessels, nerves, and viscera, they are also dangerous inasmuch as they frequently give rise to very extensive inflammation. It is not uncommon to see formidable collections of matter follow wounds of this description, especially when the instrument with which they have been made, has penetrated any aponeurosis, or fascia. Stabs, and all oilier punctures, are not simple divisions of the fibres of the bod), they are attended with more or less contusion and laceration. Hence there is not the same readiness to unite, which we observe .in wounds made with sharp cutting instruments; and, when ligamentous expansions are among the objects of injury, both the structure of the wounded parts, and the nature of the wound itself, often produce a train of severe local and constitutional symptoms. When an artery of consequence is punctured, the haemorrhage must be suppressed either by exposing the vessel and tying it, or by applying graduated compresses and a bandage. Punctured wounds are frequently very difficult and tardy of cure, on account of their being attended with the formation of deeply-seated abscesses and sinuses. The narrowness of thei-orifices also renders the extraction of any extraneous bodies by no means easy of accomplishment.

Treatmtnt. — It has been recommended by many writers, who erroneously confounded these recent wounds with true fistula, to lay them open, pass setons through them, and irritatn them by stimulant applications ; but this treatment is quite contrai / to the true practice, when we consider ths inflammation is almost

sure to follow, without any additional irritation which then can only do mischief. In our treatment then, in the first stage of a punctured wound, the indication is to guard against the attack of violent inflammation. When no considerable quantity of blood has been lost, general and topical bleeding should be practised. In short, the antiphlogistic plan is to be followed. As no man can pronounce whether such wounds will unite or not, and as no harm can result from the attempt, the orifice ought to be closed with strips of adhesive plaster, and gentle compression applied along the whole course of the puncture. Perfect quietude is to be observed. When the pain is very severe, opium is to be administered. Sometimes, under this ireatment, the surgeon is agreeably surprised to find the consequent inflammation mild, and the wound speedily united by the first intention. More frequently however, in cases of deep stabs, the pain is intolerable ; and the inflammatory symptoms run so high as to leave no hope of avoiding suppuration. In this condition an emollient poultice is the best local application : and, when the matter is formed, the treatment must conform to the principles already noticed in the chapter on suppuration.

SECT. III. — LACERATED AND CONTUSED WOUNDS.

Lacerated wounds are those in which the fibres, instead of being divided by a cutting instrument, have been torn asunder by some violence, capable of overcoming their force of adhesion. The edges of such wounds, instead of being straight and regular, are jagged and unequal. The term contused is applied to those wounds which are occasioned by some blunt instrument, or surface, which has violently struck a part of the body. These two species of wounds greatly resemble each other, and, as they require nearly the same kind of

treatment, writers usually treat of them together.

Both these sorts of wounds are much more perilous than incised ones. Wounds made with sharp instruments are frequently attended with vast retraction of the divided parts, and profuse haemorrhage ; but it is known, at the same time, that they are generally capable of being united by the first intention. It is almost a constant effect of lacerated and contused wounds to pour forth very little blood, even when important blood-vessels have been injured. Whole limbs have been torn from the body without the occurrence of bleeding. The experienced practitioner is not deceived by the absence of this symptom ; for he knows that, in proportion as the bleeding from large contused and lacerated wounds is trivial, the violence applied to the injured parts has been great. The pain is generally in an inverse ratio to the extent of mischief done.

Treatment— In a lacerated wound, not caused by gunshot, we cannot expect that total adhesion by the first intention wil. take place, but rather inflammation and suppvration, notwithstanding which we should apprci-‘imate the edges by sutures or plasters, and let it ake its chance, t eating it afterwards as its appurance may indicate. But in contused wour ->. n« gunshot.

we know that the surrounding parts have received so much injury that they must of necessity slough to a greater or less extent. In treating them, we should first remove any extraneous body, if this can be accomplished without much force; then endeavour to abate the inflammation around, which will necessarily arise ; for this, we may bleed locally or generally, as the symptoms demand. The best application to the part is a poultice, till the sloughs come away, after which the simplest dressings possible. It is seldom, if ever, good practice to dilate openings caused by bullets ; nor should we use violence in attempting to extract them. When they have wounded a large artery, we must then cut open and tie it. But in severe lacerations, when it is obvious we cannot save the limb, from the amount of injury done, we must amputate as soon as possible. In many gunshot wounds also this is necessary; and baron Larrey enumerates several cases in which it should be performed at the time of the injury without delay, in which he has been borne out by Mr. Guthrie in his excellent treatise on Gunshot Wounds. They are, 1. A limb carried away by cannon-shot, leaving an irregular sturnp. 2. A limb shattered by the same cause, which will else be succeeded by gangrene. 3. A ball carrying away soft parts containing the main

artery of the limb without fracturing the bone. 4. Soft parts with the principal nerve. 5. Extensive fracture and injury to soft parts without lesion of skin. This is generally caused by a ball striking the part very obliquely, which was formerly considered the wind of a ball, or else by a spent ball. 6. Fractures of articulating ends of bones by balls or lodgment in joints. 7. When a bone is extensively denuded without fracture. 8. A large wound of a ganglymoid joint witli effusion of blood into it. 9. Fractures of the thigh from gunshot wounds.

SECT. IV. — GUNSHOT WOUNDS DEMANDING AMPUTATION CONSECUTIVELY. 1. Spreading mortification. 2. Convulsions of wounded limbs threatening tetanus. . Bad state of discharge, with hectic fever happening in fractures from shot.

Wounds of the abdomen.— If large, these ad-mit of protrusion of viscera, which must be returned either without, or by means, of dilatation of the external wound When small, it becomes a matter of doubt whether the wound has penetrated, this must be ascertained by the finger. When a man is stabbed, or shot in the belly, the surgeon can seldom do any good by being very officious ; and the wisest conduct that he can in general adopt is to keep his patient as quiet as possible, have recourse to bleeding, prescribe anodynes, and the lowest fluid diet, and content himself with applying superficial dressings In the event of severe pain and swellings of the belly coming on, leeches, fomentations, and emollient poultices will be necessary, and nothing will now avail except the most ngorou antiphlogistic means.

Wounds of the chest arc always dangerous, but may be considered less so when the pleura i< penetrated alone without containing

reign body injurious to ths lunjs, or hemorrhage into the cavity of the thorax. When a wound is known to have entered the pleura, and there is no symptom leading to a suspicion that the lunˆs, or any large vessel, is wounded, the injury is to be dressed according to common principles, and the more superficially the better. Authcrs also usually

direct us, just before we close ‘he opening, to tell the patient to make a deep inspiration, for the purpose of expelling as r. .ich cf the air as possible, which may have got into the cavity of the pleura. At the end of such inspiration the edges of the wound in the skin are to be brought together, and kept so with sticking plaster compresses, and a roller applied round the body. The other grand indications in the treatment are to avert inflammation of the pleura and lungs, by a rigorous adoption of the antiphlogistic plan, copious bleeding, in particular, not being forgotten.

Wounds of intercostal arteries are manifest by the haemorrhage, where the external wound is ample, or may be ascertained by putting the finger on what we suspect to be the artery, and seeing if that commands the bleeding ; but, when the wound is small, the artery bleeds into the cavity of the thorax, and cannot yet be known. When it can be ascertained, most modern surgeons (condemning the old practice of putting compresses into the thorax) simply recommend cutting across the artery, and closing the external wound.

Emphysema. — This is a term applied to a swelling arising from a diffusion of air among the cells of the cellular substance. This symptom may occur in wounds which just enter the cavity of the chest ; in others that extend more deeply, so as to wound the lungs ; and also in cases in which these organs are wounded by the spiculae of a broken rib, or clavicle, while there is no outward wound whatever. I believe emphysema is never very extensive, unless the air vesicles of the lungs are injured, and there is no outer wound, through which the air can freely make its escape. Hence we find that emphysema is a more common consequence of fractured ribs, and narrow stabs, than of large penetrating wounds ; because, in the latter cases, the air readily passes outward through the opening.

When the chest becomes expanded in the act of inspiration, some of the air, which enters through the trachea into the wounded lunsr, instead of distending this organ, now passes through the breach in it, so as to get into the space between the pleura pulmonalis and pleura costalis. Dr. Halliday has very accurately remarked that, in the living body, the whole of the inspired air will not be thus effused ; but that, as it must pass through the lung, it will at first distend it, more or less, according to the size of the opening in the pleura pulmonalis. This partial dilatation of the wounded lung will always happen while air continues to be inspired on that side.

When the thorax is next diminished in the act of expiration, the effused air is compressed against the wounded lung; but none of it can

enter this viscus again, because the whole of the ‘iir contained in the lung must be forced out, and the effused air makes equal pressure on every

part of the organ, as this becomes ron.spsed, so that it cannot separate any particular part, and make a passage for itself towards trie trachea. In this manner fresh air accumulates in the space Vetween the pleura at every inspiration, while nouf can escape during expiration. This case may produce suffocation from the pressure of the collected air on the diaphragm, mediastinum, ana opposite lung. However as emphysema commonly follows narrow stabs, or fractures of the ribs, attended with injury of the lungs, the pleura costalis and intercostal muscles are at the same time wounded or lacerated, so that part of the air also usually gets through the above wounded membrane and muscles, into the cellular substance on the outside of the chest, and thence is sometimes diffused through the same substance, over the whole body, so as sometimes to inflate it in an extraordinary degree. The inflation of the cellular substance has been considered the most dangerous part of the disease; but Mr. Hewson very ably shows that this is a very erroneous supposition.

From what has been stated, it is evident that, in cases of emphysema, the danger does not de-pend so much on the degree of external swelling, as on the degre of compression produced on the mediastinum, diaphragm, and the lung of the opposite side.

Treatment. — When there is no wound of the lungs, and not as yet much air confined in the pleura, the wound had better be closed with adhesive plaster at the end of a powerful expiration. But, if the emphysema increases, we must then conclude that the lungs are wounded, and allow the air to pass and repass through the wound till the lung can heal ; but, if the wound be too small, it must, if conveniently situated, be enlarged, or else another opening must be made in the chest : if on the right side, between the fifth and sixth; if on the left, between the seventh and eighth, to avoid the pericardium, and at the upper margin of the ribs, to avoid the artery. The use of making this opening is to cause the wounded lung to collapse, and so, not being used, no more air escapes from it, and the wound has time to heal, which it generally doe? in five or six days, and the remaining air is absorbed. Bandages round the chest are, generally speaking, improper. When the emphysema is large, it is always proper to give an outlet to the air, by making small punctures in various situations, and promoting its exit by frictions. In-deed the surgeon is always to be

content with this practice, unless the symptoms of compression on the diaphragm and opposite lung, and the approach of suffocation, denote that the air cannot get out of the cavity of the pleura so quickly as it finds its way into it ; in which cas : a small but direct opening is to be made intT that side of the chest on which the wound is situated.

Extravasation in the thorax. — This is liable to happen in all cases in which the lungs, the intercostal, or internal mammary arteries are wounded. The symptoms of blood thus effused are, great oppression of the breathing ; inability to stand or sit up, owing to the weight of the fluid on the diaphragm ; the most easy posture is on

.he affected side ; out the patient cannot lie on the opposite side without great aggravation of his oppressed breathing ; the respiration is short, frequent, and interrupted ; the countenance is particularly pale. Together with these symptoms, which are indeed very inconclusive, the extremities become cold ; a clammy perspiration takes place ; and, if the lungs are wounded, frothy blood is spit from the mouth, and air often escapes from the wound. It is to be regretted that these symptoms are very fallacious.

Treatment consists in evacuating the blood. Several things which promote this end have been practised. 1. Placing the patient in such a posture is as favorable to the exit of blood from the wound. 2. Drawing the blood out by a syringe. 3. Enlarging the wound. 4. Making use of injections. 5. Making an opening at a depending part of the chest.

1 . We can only expect to afford relief, by mere posture, when the wound is large, and direct in its course, and the blood is in a fluid state.

2. Syringes, to exhaust the blood out of the chest, are seldom necessary; when the blood is fluid it will escape spontaneously, on a depending opening being made; and; when coagulated, it cannot be drawn out by a syringe.

3. The wound should only be enlarged when its situation is favorable for the escape of blood.

4. When the blood is coagulated, the injection of warm water is extremely proper. It should not be done with too much force ; and it may be repeated every day, till the fluid returns untinged with red globules, and quite free from coagula.

5. When the wound is narrow, and situated either at a fleshy part of the chest, or at its up-per part, a counter opening should be made in a depending situation.

Poisoned wounds. — The most frequent are those caused by animals or insects, such as the bee, wasp, hornet, &c., in this country. These often cause a great deal of heat, redness swelling, and pain near the wound. The best cure, if too late to evacuate the poison by sucking, is by applying vinegar, lemon juice, Goulard's lotion, cold wa-ter, hartshorn, or oil ; if stung in many places, bleed, and keep the antiphlogistic regimen.

Bite of the viper.— The bad symptoms usually commence in about twelve or fifteen hours. An acute pain and a burning heat are experienced in the part affected, which begins to swell. The tumefaction, tension, heat, and pain, gradually spread over the whole limb, and in some cases the whole body is said to be swollen. Dejection of spirits, smallness and weakness of the pulse, headache, nausea, and vomiting ensue. A fixed pain is felt in the region of the heart, and all the surface of the body assumes a yellow tinge. The urine seems as if it were impregnated with'bile. Cold perspirations and convulsions take place, and death sometimes finishes the tragedy.

Treatment.— Prevention of the spreading or absorption of the poison is the only plan from which the surgeon can ensure safety ; for this various plans have been proposed, the most efficacious of which certainly is the removal of the bitten part by excision, taking care not to leave any of the bite ; or by the actual cautery. Oil has

been recommended by some, which must act I - insinuating itself between the poison and the wound. Also cantharides, which may act l>y washing away the poison in the profuse discharge. Lately, however, it has been proposal to apply a cupping glass over the wound, winch has a constant tendency to draw out the poison, and this has appeared to answer very well.

Constitutional treatment.— Emetics have been very much extolled by Dr. Mead, for the relief which they afford, in bringing to a conclusion

the nausea and sickness arising from the bite.

But the testimony of almost all writers decides in favor of medicines which possess the faculty of allaying irritability and promotinj; perspiration. The volatile alkali has obtained the greatest celebrity. Ten drops of the ;u|. ammon. pur. may be given every hour. Opium, musk, and camphor, are other medicines, to which one may advantageously resort.

Tetanus (from rtiv < a, tendo; Ttravoe, distended) demands notice in this place, from beinˆ commonly induced by wounds, particularly lace rated ones. This is commonly called traumatic (rpavfia, a wound) to distinguish it from the idiopatic form, which does not fall under the dominion of the surgeon.

Symptoms. — A stiffness is first experienced about the back of the neck. — The muscles of the lower jaw next become hard, and incessantly contracted, so that some difficulty is experienced in moving the part. At length the patient can-not open his mouth at all. The muscles concerned in deglutition are oftentimes the next affected, and the difficulty of swallowing makes the complaint bear some resemblance to hydro-phobia. All the muscles of the neck, back, and indeed of the whole body, become successively affected with the most rigid spasm. The limbs are stiff and immoveable, and, the muscles of respiration being prevented from performing their office, the patient dies. The fingers often retain their motion till the last, as does the tongue, which is sometimes thrust out of the mouth, and dreadfully lacerated by the teeth. This disease is seldom accompanied by fever, and the patient retains the vigor of his mind till nearly the last. The occurrence of this formidable disease is more common in hot than in temperate climates. The causes of tetanus remain yet unknown ; and though, in some instances, inflammation of nerves or the spinal marrow have been found ; yet in so many others have they been wanting that we cannot assign these as the true, though they might have been the accidental causes.

Treatment.— On this head, also, surgery must deplore its ignorance, no remedy having been yet discovered. Tobacco and opium have been used in alarming quantities without the slightest relief; mercury, bark, camphor, and musk, have proved equally inefficient; even amputating the wounded limb has been practised with no better result. In some cases, indeed, performed by baron Larrey, the symptoms were cheeked, bi always returned and proved fatal. There is one remedy, however, which has proved useful mitigatory in several late cases, which is dashing cold water over the body, but this by frequti

repetition becomes of noenvrt.

SURGERY.

SECT. V. — CONTUSIONS

Are the consequence of forceable contact of blunt substances with the body, which cause a great deal of injury to the parts underneath, without a breach of continuity on the surface.

The consequences of such violence are a diminution of the tone of the injured fibres and a rupture of an infinite number of small vessels. The bruised muscles are weakened, and cannot be exerted without pain ; and the extravasation of blood causes swelling and discoloration of the skin. Sometimes vessels of considerable size are ruptured by the force, and very copious accumulations of effused blood are the result. In contusions of the head we often see the scalp enormously elevated by hemorrhage beneath it, and large collections of blood are frequently found extravasated in the cellular substance of almost any situation in the body.

The mischievous effects of a contusion are not always proportioned to the force applied ; they often depend on the nature of the injured part. If the bruise take place on a bone which is thinly covered with soft parts, the latter always suffer very severely in consequence of being wounded, at the time of the accident, between two hard bodies. Hence bruises of the skin so frequently cause sloughing and troublesome sores.

Treatment. — We must' endeavour to abate the inflammation by leeches, or, if it be violent, by general bleeding and cold lotions applied to the part : these last should have some stimulating power to promote the absorption of the effused blood. When muscles are bruised they should be kept quiet and in a relaxed position. When the tenderness has quite abated, but a swelling and discoloration are left, we may apply friction with the camphor or other liniments, and make pressure by bandages. Sometimes, however, there remains a tumor containing congealed blood, which may be known by its peculiar fluctuation, and which will often not be reabsorbed in spite of all our endeavours. This had better be laid quite open with a bistoury and the blood turned out, and so healed up by granulation. This is particularly to be done when an imperfect suppuration takes place in the tumor,

forming a bloooy pus, which irritates the constitution wonderfully.

CHAP. III. — OF FRACTURES.

Fractures are solutions of continuity in the bony structures, and always the consequence of violence done to the limb ; but this need not have been inflicted at the exact spot where the fracture exists, but very frequently (as in the cylindrical bones) at the end of the limb, in which case the weakest part of the bone gives way, which accounts for the frequent occurrence of fracture near the middle of long bones. The flat bones are far less often fractured than the long ones, with the exception of the skull, which, as it produces peculiar symptoms from its affecting the brain, will be noticed particularly hereafter. It is not however to the middle that fractures of the long bones are confined ; for their extremities are often found so to suffer, which is always to be regarded as more unfavorable. There are two ways in which a long bone may be broken ; *viz.*

transversely or obliquely. It is more particularly in this last case that the surgeon finds great difficulty in keeping the ends of the bone in opposition, as in all fractures there is a spasmodic action of the muscles, to a greater or less extent, which draws the lower end of the bone over the upper.

A fracture may or may not be complicated with an external communicating wound; if which be present it is called a compound fracture, otherwise it is said to be simple.

SECT. I. — OF SIMPLE FRACTURES.

The symptoms are pain, inability to move the part, with swelling after a longer or shorter pe-riod. Crepitus on handling, with an indefinite shortening of the limb (if it be one), together with a deficiency of the bone when the surgeon traces it with his fingers. But where a limb has two bones there will be no shortening if only one has suffered ; for the other will act as a splint. In these cases we must trust to the other symptoms, of which the most unequivocal is the crepitus. It often happens that there is deformity of the limb produced, in which case we need no other mark.

Treatment consists in bringing into and keeping the ends of the bone in perfect opposition and quietude ; for which purpose Mr. Pott has insisted strongly on the necessity of putting the limb into such a posture that the muscles, which are inserted into the broken end or

limb below it, may be relaxed ; upon this principle, that when such a severe injury as fracture of bone takes place, the soft parts around are necessarily more or less injured by the ends of the bone, which it is, in fact, that causes the pain. The muscles then, either from being included in the injury, or from sympathy of the nerves which move them, are thrown into a state of spasmodic action, which, in some cases, will last for a long period, constantly shortening the limb, and thus drawing one end of the bone over the other. The position by which this indication can be best answered is one between flexion and extension in most cases. The rest of the local treatment consists in keeping the bones in opposition by means of splints and bandages, interposing a thin soft cushion between the splint and limb, which last had better be supported by a many tailed bandage. If there be much swelling'and pain leeches may be applied previously, and the limb may be kept wet with cold lotion even after it is put up in splints. In this manner the limb wil unite; if an upper one in about a month, a lower oue six weeks, but this may be influenced by circumstances.

Manner of union. — This is effected by a deposit of bony matter called callus, which surrounds the ends of the bones and confines one to the other, and which is formed thus. Mr. Brodie, and afterwards Mr. Mayo, found, on breaking the bones of chickens and rabbits, that in a few days after the injury there was a deposit of coagulable lymph round the broken ends, which after some lapse of time began to contain specks of ossific matter, which gradually shot into each other, and at last became quite bony, enclosing the fractured ends, so that no union is

accomplished till nearly the end of the time, the gradual preparation consuming by far the greatest portion. In recent union, then, the bone is surrounded by an irregular substance, which is gradually absorbed upon using the limb ; so that ultimately no such great projection is found. This explanation will account for the union of fractures when put up after a lapse of some weeks after the accident.

Some fractures however do not unite at all, and others not by bone,

and in general it is in consequence of insufficient vascularity in the neighbouring textures; of this nature are fractures completely within joints. When those in limbs not in joints do not unite, they will, if left to themselves, form a false joint capable of much motion, which entirely takes away the use of such limb from want of muscles to fix it. When this is the case, or is threatened, we should endeavour to bring on irritation by rubbing the ends of the bones against one another. Besides this several other means have been employed. Mr. C. White recommended, when there is a complete joint formed, cutting down to it and sawing off the ends of the bones, which he practised in several instances and with considerable success ; hut it has often failed, and in some cases proved fatal. In December, 1802, a new method was proposed by Dr. Physic of Philadelphia, which was the passing of a seton through the limb and between the ends of the bone, and practised by him there and tried since by several eminent surgeons here. It succeeded in many cases, but has failed in nearly as many, which induced Mr. Aymesbury, very lately, to propose a new plan ; which was that of keeping the ends of the bone constantly pressed against each other by an immoveable apparatus. This has raised considerable expectations, which, as yet, do not seem likely to be disappointed. Sometimes, however, the causes of non union are old age or motion in the fractured limb. In the former case we must allow it to remain a longer time in splints ; in the latter our remedy is obvious. Our limits will not admit our entering fully ‘into each particular fracture, but we shall briefly notice a few of the most importance, or which differ in treatment from the general rules.

The lower jaw is very difficult to retain in opposition, as the fore portion always sinks from the posterior; for all the muscles of the former running to the os hyoides tend to depress it, whilst the temporalis and masseter elevate the latter. It has been recommended to keep it in position by twisting wire round the molar teeth across the fracture. This keeps the ends from riding, but does not hinder the dropping of one portion. To remedy which we should put a piece of stiff pasteboard under the jaw, and bind the jaws together by a bandage from the head, coming under the chin. The patient must be content to live on liquids, which must be introduced into the mouth through any deficiency of the teeth if there be one, or else the mouth need not be quite closed, but wedged tightly a little way open.

The vertebra, when fractured, cause paralysis of every part whose nerves come off lower than the injury. Respiration is often carried on en-

tirely by the phrenic nerve: they are always fatal at a sooner or later period. When the spine suffers violent concussion it produces symptoms like those of fracture, in a less degree, but by antiphlogistic treatment these generally do well.

Ribs. — These generally happen near the greatest convexity of the bones, several of which are often broken together. The first rib being protected by the clavicle, and the lower ribs being very flexible, are less liable to be fractured than the middle ones. See Emphysema.

When a spiculaof a fractured rib is beaten in-ward it may lacerate the pleura, wound the lungs, and cause the dangerous train of symptoms attendant on emphysema.

As a broken rib cannot suffer displacement on account of its anatomical relations, it is often difficult, particularly in fat people, to ascertain it. This may be assisted by making the patient cough, when the crepitus will be more liable to be felt, and he will complain of a pricking sensation ; but when there still remains much doubt most surgeons prefer treating it as if fractured.

Treatment consists in preventing any movement of the ribs, and guarding against the occur-renceof peripneumony, which is indeed very likely to supervene. The first may be accomplished by rolling the ribs tightly with a flannel bandage, or sewing a piece of linen round the chest; for the latter the strict antiphlogistic means must be used.

Ossa innominata frequently prove fatal fronˆ the quantity of injury done to the pelvic viscera. The treatment consists in applying a laced belt round the pelvis, and obviating the effects of inflammation.

Neck of lite femur may occur in three places. 1. In the’ middle of the cervix, or close to the head, always transverse. 2. At the junction with the trochanter major, extending externally ; in which case the upper part is sometimes wedged in the lower, as was found by Dessault. 3. Fracture of the trochanter beyond the joint.

Within the ligament.— The symptoms are sometimes very obscure ; but Sir Astley Cooper says, ‘ Under this accident the leg is from one to two inches shorter than the other ; the foot and knee are everted. There is little pain when at rest in the recumbent posture. But on rotation a pain is felt, from the rough end of the bone grating against the synovial membranes-lining the capsular ligament. The thigh may be perfectly extended,~but flexion is more difficult and attended with pain; this is increased if the thigh be directed towards the pubes, and

lessened if carried outwards. A crepitus is also discoverable when the limb is drawn down, so as to be of the same length as the opposite one, and then rotated, but not so when the patient is lying on his back with the limb shortened.'

This fracture generally occurs in people c from fifty to eighty years old, and not in young persons ; so that a very slight violence is often sufficient to produce the accident.

Treatment.— If there be any doubt it is best to give the patient the chance, and treat i common Iracture. But if this do not succei-d then adopt Sir Astley Cooper's method :-

Finding the patient's health suffer from the necessary confinement, what I now direct to be done is that a pillow be placed under the limb, throughout the whole length, and another be put under the knee, and the limb be in this way extended for ten days or a fortnight, until the inflammation has subsided. Then let the patient get out of bed, and sit on a high chair, to prevent being too much bent, afterwards walk with crutches, bearing gently at first on the foot, then increase the pressure more and more, until the ligament becomes thickened and the power of the muscles increased. Next let him use a shoe with a high heel, which would very much diminish his lameness.

The patient treated in this way walks after a day or two with a crutch, then with a stick, and in a few months requires no additional support. This is a fracture which is thought by most never to unite by bone.

Fractures external to the capsule generally occur in younger persons; in these the leg is only from half to three quarters of an inch shorter. The foot and toe are everted, much pain is felt at the hip, and on the inner and upper part of the thigh, and the usual rotundity of the joint is lost ; crepitus is easily produced by a slight motion of the limb, and it is not necessary in this accident to draw the leg down to feel the crepitus, as the retraction is not so great as in the former accident. There is also usually great extravasation into the surrounding parts,

and this swelling is quickly followed by a great tenderness to the touch ; also violent pain is produced upon slight motion of the joint, followed by a high degree of constitutional irritation ; and many months elapse before the patient recovers a proper use of the limb. The accident is usually the result of very severe injury.

Treatment consists in pressing the ends of the bone together and extending the limb. The first may be performed by applying a broad leather strap round the pelvis, including the trochanter major ; the latter by placing the limb on a double inclined plane.

Fractures through the trochanter major are generally oblique, and may happen without in-jury to the neck.

These fractures occur at any period of life, and are marked by the following symptoms : — The limb is very little and sometimes not at all shortened ; there is a numbness in the foot ; the patient, cannot turn in bed without assistance, and the attempt is productive of great pain. The trochanter is sometimes drawn forwards towards the ilium, sometimes it falls towards the tuberosity of the ischium, but is generally widely separated from that portion of bone remaining in connexion with the neck. The foot is greatly everted, and the patient cannot sit, as any attempt to do so produces very great pain. You can feel a crepitus with great difficulty, if the detached portion of the trochanter be either much fallen or much drawn forwards.

That for treatment is the same as the last fracture.

Fractures into joints cause great swelling and inflammation, and, if not properly attended to, often produce anchylosis.

Treatment consists in abating the inflammation at first, then applying a pasteboard splint ; but after four or five weeks we should commence a gradual motion of the joint to prevent anchylosis.

Patella is very often caused by violent spasm of the extensor muscles ; as when a person endeavours to prevent his falling after tripping. In treating them we must relax the muscles attached to it, by extending the limb on a plane inclined upwards, and bending the body on the thigh; then bring the bones together by bandages or straps.

Clavicle is generally treated by placing a pad under the axilla, and then applying one bandage round the shoulders and armpits, behind the back in the form of the figure 8, and another supporting the arm

from the front, going from the bent elbow to the opposite shoulder.

SECT. II — OF COMPOUND FRACTURES.

These differ from simple in having an external wound communicating with the fracture, which makes a great difference in symptoms, treatment, and process of healing. If the wound be not very large, and be caused by the ends of the bone, or any sharp instrument, we should merely put a piece of lint over, and it will most likely heal, thus at once converting it into a case of simple fracture.

But there are other complications which ren-der the management truly critical, and call forth all the powers and skill of the surgeon, and in nothing more so than the important question of when it is necessary at once to deprive the patient of his limb; or when the surgeon, having duly considered and weighed all his reasons for and against it, determines to try and save it, at the greater hazard of his patient's life : but, be-fore considering this, it will be better to explain the mode of union and symptoms of compound fractures.

When the wound of a compound fracture does not unite, then a suppuration must come on, attended with more or less disturbance of the constitution ; then, if the patient have been of robust health and no bad symptoms intervene, the discharge of pus is gradually abated ; grauu lations arise from the surface of the abscess, which surround the bone ; these are gradually converted into cartilage, in which ossific deposits take place; and thus the bones are united, the granulations fill up the external wound, and the patient recovers. But if the accident be severe, and the patient's health not able to -bear the shock, the wound inflames, puts on an erysype latous appearance, matter burrows amongst the muscles, forming considerable lodgments, attended by hectic fever in its worst form, the discharge is profuse and fetid, and, the powers of the patient being unable to sustain all this, he sinks and dies. Or the ease may be still worse ; for gangrene may seize the affected limb, in which case amputation is his only chance of escape.

Cases in which amputation is necessary. These are not so easily reduced to rule now as formerly, when the surgeons enumerated a list of cases in which this operation was to be performed at once.

But, if any cases seem to demand it more than

others, it must be when the injury to the soft to be performed by making extension of the disparts is extensive, or when a large joint is lace-located limb, having previously either fixed the rated and fractured. Formerly it was held as a limb above, or else making counter-extension at maxim that when a large artery was wounded, the same time. This may be undertaken by with a compound fracture, the limb must mortify, manual aid in recent cases ; but, when lon«— cori-But Sir A. Cooper recommends tying the artery tinued force is required, it will be better to use at the wound if possible, or, if not, taking it up pullies as counter-extensors. The obstacles to higher in the limb, and giving the patient his chance of recovery, which he has seen take place

in several instances. In old people, who cannot sustain a suppuratory process, it is fit to amputate. As to amputating the limb afterwards, we must be guided by our own judgment, and, if we find the patient sinking, perform the operation.

Treatment of compound fracture. — Our first step must be to reduce the bones, which are often found protruding. If we cannot do this without a great deal of violence, we had better enlarge the external wound. If, however, the fracture be very oblique, sawing off the ends is preferable. If there are many splinters of bone they must be removed. Sometimes, in spite of all the surgeon can do, there are violent spasms of the muscles, in which case we must amputate. The rest of the treatment consists in keeping the parts immoveable by an eighteen tailed bandage, and splints or fracture boxes, dressing the wound lightly, and treating the constitutional symptoms as they arise ; but above all endeavouring to heal the wound.

SECT. III. — OF DISLOCATIONS.

These consist of a separation of the articulating surfaces of bone from one another, and may be divided, like fractures, into simple, when there is no communicating wound ; and compound, when such complication is present. They may also be combined with fracture, as at the ancle, where the fibula is mostly broken. A dislocation is said to be partial when it is not entirely separated from its articulation. These

injuries are commonly the result of violence, but may arise independent of direct force, as in ulceration of the cartilages of the hip joint, where the head of the femur is drawn by the muscles into the dorsum of the ilium ; or, in dislocation of the patella, from too much distension of the knee joint by synovia.

Symptoms are an alteration in the length of the limb, as also in its axis. It becomes unnaturally fixed, capable of being only slightly moved by another person, painful and swelled, the ap-

reduction are —

1. The muscular power of the patient, constantly, though involuntarily exerted in opposition to the surgeon. These, then, it should be our fixed endeavour to relax, by attending to the position of the limb, and if that fail, by bleeding and nauseating the patient ; for now, when the strength is exhausted, the muscles can be readily overcome by constant but gradual extension. This was the great doctrine laid down by Mr. Pott, which, before his time, was not sufficiently attended to.

2. Difficulties in reduction, likewise arise from the head of the bone catching against the articulating cavity. As in the dislocation of the thigh bone into the foramen ovale, and ischiatic notch, where it is necessary to raise the head be-fore it can be returned ; or where the head of the bone is larger than its cervix, as in dislocations of the radius.

3. The peculiar ligaments of the joints sometimes prevent the reduction of dislocations. This is particularly to be noticed in the knee, where the bone should be moved in such a direction as to relieve that ligament which remains entire. The ligaments of the ancle joint are of extraordinary strength, and the bones of this joint will often rather break than their ligaments give way.

4. Length of time elapsed is another impediment ; for, after a lapse of time, the bone is retained in its new position by adhesion.

After we have succeeded in reducing dislocations, we must keep the limb bandaged, perfectly immoveable, and subdue the inflammation' of the joint, which will in all probability supervene. Then, after a short period allow the patient to exercise his limb by degrees.

Compound dislocations. — Having previously noticed that any wound of a joint was dangerous, it would be almost fruitless to expatiate on

the increased risk when a joint is not only wounded, but forcibly torn open or lacerated with displacement of the articulating ends. In such cases, then, all the nice discernment of the surgeon is again (as in compound fracture) called

pearance of the joint much altered from that of into activity. The degree of violence and laceration done to the soft parts, the great or little chance of healing the wound by the first intention, and the youth or advanced age of the patient,

j .v „_ v _, ….. are circumstances which ought to influence the

rounding cellular membrane, becoming thicker judgment in this difficult part of surgery. In

its fellow. There is also sometimes a crackling to be felt on motion, that ma'y be mistaken for the crepitus of fracture ; but the former is caused merely by the escape of synovia into the sur-

by absorption. It is obvious that in dislocations, the neighbouring parts must suffer considerable injury by the pressure of the head of the bone ; and it is remarkable that, if a limb or joint be left unreduced, a condensation of the parts around happens, and a new synovial membrane is formed, whilst a cavity is at the same time prepared to receive the dislocated end by the bone on which it rests.

Treatment should be to reduce the dislocation

the country, also, many cases would recover, which in town would not do so, without amputation.

Treatment consists in reducing the dislocated bones with as little violence as possible ; and if one end is found projecting, and cannot be managed without force, it is better to saw it off than offer such violence to the already ruptured ligaments as its reduction must occasion. The rest of the treatment to be adopted is the keeping the

to its natural position, which in most cases is parts perfectly motionless, so «iv:

gament, an opportunity of healing, and endeavouring as soon as possible to close the external wound. The symptoms of inflammation must then be treated as they arise ; and, if suppuration take place, we must follow the rules already laid down.

Particular dislocations are of the lower jaw, and may be caused by violent gaping or yawning, particularly by a blow on the chin while in the latter act.

Symptoms. — When the jaw is completely dislocated> both its condyles are advanced into the space between the surface of the temporal bone and zygomatic arch. The jaw is known to be completely dislocated, by the mouth being opened, and the patient not being able to shut it by any pressure which you may make on the chin. The lower teeth will be found in a line anterior to the upper. You may depress the jaw a little, but to a very inconsiderable extent. The appearance is just that of a person when yawning. The pain, though severe, is not attended with danger. The saliva is very much increased in quantity, in consequence of the irritation of the parotid glands, and it dribbles over the mouth; or the dislocation may be only of one side, in which case the symptoms will be present only on that side, giving the jaw a ludicrous twisted appearance.

Treatment. — They are generally reduced by wrapping a handkerchief around the thumbs ; placing them on the coronoid processes, and depressing the jaw, you force it backwards as well as downwards, and the bone suddenly slips into its place. But if it be of longer duration we should place two corks behind the molar teeth, and then, keeping these for fulcra, elevate the jaw.

Clavicle. — Sternal end. This may be dislocated in two ways, forward and backward. The latter is very uncommon, and generally the result of distorted spine, consequently nearly irreme-diable. The former, however, is more common, and may be readily distinguished by the swelling over the sternum and sensation to the fingers.

Treatment. — We need only apply the figure of 8 bandage, without supporting the arm.

Clavicular end. — This dislocation may be detected by putting the finger on the spine of the scapula, and tracing it forwards towards the

acromion, where the finger will be stopped by the projecting portion of the clavicle. The shoulder will be depressed and drawn inwards towards the sternum, and from the projection of the clavicle it will appear flattened, something like the dislocation into the axilla.

Treatment. — Let the knee be put between the patient's shoulders, and draw them backwards and upwards, and the clavicle immediately is brought into its place ; then put a thick cushion into each axilla, to keep the scapula from the side, to raise it, and to prevent the axilla from being injured by the bandages. Then the clavicle bandage is to be applied, and its straps should be broad enough to press upon the clavicle and scapula. The arm should be supported in a short sling, so as to keep the scapula well up.

The humerus may be dislocated in four directions. 1. Downwards, into the axilla, resting on the inner edge of the inferior costa of the scapula.

In which case there is a projection of the acromion, natural rotundity of the shoulder lost by a flattening of the deltoid muscle, which is dragged with the head of the bone ; downwards the elbow is always projected from the side and semiflexed. Treatment. — Fix the scapulawell by one bandage, or long towel, held by assistants, passing above the acromion down to the opposite side, and another passing under the scapula up to the opposite side; then, raising the arm to a right angle, make gradual extension, by fastening a towel round it by what is called a clove hitch, and which will not slip ; making, at the same time, a slight rotatory motion which relaxes the muscles. When the extension has been made sufficiently long, the surgeon may elevate the head of the bone by any handy means, and it will slip into its natural cavity. The shoulder should then be bandaged by a figure of 8, and the arm confined to the body. If a surgeon have no assistant at hand he may make the patient lie down and extend the arm, fixing his heel in the axilla, for the counter-extension ; and this often succeeds in recent cases.

2. Forwards under the pectoral muscle and upon the second rib, when the projection of the acromion is very great. Depression of the deltoid more considerable. There is more pain ; and the prominence of the head of the bone may be felt and seen beneath the clavicle. The elbow is thrown from the side and backwards.

Treatment. — The extension must first be made obliquely downwards

and backwards, until the head of the bone has passed the coracoid process ; then it may be raised in an horizontal direction, and, by the pressure of the heel in the axilla, the bone will be easily returned.

3. Backwards on the dorsum of the scapula, just beneath the spine. This may be known by the projection of the head of the bone. The reduction is the same as for that in the axilla; but the head should be rotated inwards.

A partial dislocation is a very frequent accident. In this dislocation, the head of the bone is thrown forwards against the coracoid process ; there is a hollow at the back part of the shoulder joint ; the axis of the arm is thrown inwards and forwards ; the under motions of the arm are still performed, but it cannot be raised, from its striking against the coracoid process. The head of the bone may be felt to rotate.

The reduction of this dislocation is the same as that for the dislocation forwards : but the shoulders should also be drawn backwards, to bring the head of the bone to the glenoid cavity. After the reduction the shoulders must be secured by the clavicular bandage, or the bone will again slip forwards, against the coracoid process.

There are several accidents which are liable to be mistaken for dislocations of the humerus. These are, 1. Fracture of the acromion; in which the shoulder loses its roundness and the head of the bone drops towards the axilla ; buL the joint recovers its shape on elevating the head of the bone. There is also a crepitus on raising and rotating the elbow.

Treatment. — Elevate the fractured piece of bone by the head of the os humeri, plac;i g a pad between the elbow and side; uppcrt the elbow

in a tight sling, placing the forearm across the chest, and preventing all motion by binding the humerus to the side.

2. Fracture through the neck of the scapula is more likely to be mistaken for dislocation than any other ; but by carrying the hand over the shoulder, and resting the finger on the caracoid process, and then rotating the arm, a crepitus will be felt. Again, place your arm under the arm of the patient, and, by raising it a little, you will restore the natural appearance of the joint ; but, when you take away your support, the shoulder will again sink.

The treatment of this fracture is to place a thick pad in the axilla, to carry the humerus, and with it the glenoid cavity, outwards ; to support the humerus in a short sling, to preserve the parts in apposition. The clavicular bandage will as-sist in keeping the head of the bone outwards, and the motion of the arm may be prevented, by confining it to the chest by a roller. It requires from ten to twelve weeks for its recovery, and continues weak for three weeks after.

3. Fracture through the neck of the humerus, may be distinguished from dislocation in the same manner as the accident just mentioned, and by passing the hand over the shoulder-joint, and fixing the head of the humerus with the fingers, whilst at the same time having raised the elbow, and carried the upper part of the humerus a little outwards, you will feel a crepitus on rotating the elbow, but the head of the bone does not follow the rotation of the arm. In this accident you are to apply a roller, from the elbow to the shoulder joint, and put a splint on the in-ner and outer side of the arm, to be confined by another roller; a thick pad is to be placed in the axilla, and the arm gently supported in a sling. The principal difficulty is to prevent the pectoral muscle drawing the body of the bone forwards ; but, if the inner splint be properly applied, its influence will be counteracted. It requires from three to six weeks to unite, according to the age of the patient.

Dislocations of the hip. — 1 . And most frequent. Upwards and backwards on the dorsum of the ilium.

Symptoms. — The limb is from one inch and a-half to two inches and a half shorter than the other. The toes are turned inwards and rest on the tarsus of the other foot. The knee a little advanced on the other; abduction of the limb is prevented ; but adduction is still practicable to a small extent. This accident may be confounded with fracture of the thigh bone, within the capsular ligament, but is known by the toes turning inwards, not outwards, as in the latter.

Treatment. — Extension must be made by assistants or pulleys (the latter are generally necessary), and at the same time counter-extension, by passing some strong girt between his thighs round the pelvis, which must be well secured. Then, when the head is brought nearly to a level with the acetabulum, we should rotate the bone and it will slip into its place ; but we rmist not ex-pect in this case to hear the sudden snap, as the muscles are previously so much exhausted as to be unable to act spasmodically. This, however, is not all that is necessary. For, unless the subject be naturally weak, we must begin the treatment by bleeding and nauseating to reduce the muscular power.

2. Downwards into the thyroic foramen. Symptoms. — The dislocated limb, in this case,

is two inches longer than the other. Bv making pressure with the hand on the upper and inner part of the thigh, you can, in thin persons, distinctly feel the head of the thigh bone. There is a flattening of the hip on that side ; the body is bent forwards, owing to the psoas magnus and iliacus internus being put upon the stretch. It' you desire the patient to stand upright, you find that the knee is considerably advanced towards the trunk. It is widely separated from the other knee, and it cannot be brought to touch it without much difficulty and pain. The foot is generally turned outwards or inwards, but the toes point to the ground.

Treatment. — If the accident be recent, place the patient on his back, separate the thighs as widely as possible, and place a girt between the pudendum and upper part of the thigh; fix the girt to the staple in the wall, then take hold of the ancle of the dislocated side, and draw it over the other leg, or, if the thigh be very large, behind the sound limb, and the head of the bone usually slips into the socket.

When of longer standing, in these casts, it is better to place the patient on his sound side, and fix the pelvis by one bandage, and carry another under the dislocated thigh, to which the pulleys are to be affixed perpendicularly ; then draw the thigh upwards, and, at the same time, press down the knee and foot, to prevent the lower part of the limb being carried with the thigh, and you thus use the limb as a lever of considerable power. But take care not to advance the leg too much, as the head of the bone will be forced be-hind the acetabulum into the ischiatic notch, from which it would be extremely difficult to re-move it.

3. Backwards, into the ischiatic notch, is the most difficult of all the

dislocations of the thigh to detect, because the length of the limb diflers

considered as one of the established operations of surgery ; but, for my own part, I do not consi-

The amputation at the hip joint has been so but little, and its position is not so much changed, often performed with success that it may now be as respects the knee and foot, as in the disl

tion upwards.

In this dislocation the head of the bone is

der" it should be done when you can saw through placed on the pyriformis muscle, between the the trochanter major. When the acetabulum is edge of the upper partˆf the notchani laid open, great constitutional irritation is produced by the suppurative process ; abscess after abscess arises, and the life of the patient is put into imminent danger; whereas the amputation through the trochanter major is attended with

very little risk.

cro-sciatic ligaments. The limb is from half an inch to an inch shorter than the other, but usually not more than half an inch, and the toe resb against the ball of the great toe of the oppoMt. foot. The natural prominence formed by tl trochanter major is lost, but it still remains

Dearly at right angles with the clorsum, but it has a slight inclination towards the acetabulum. Ex-cept in very thin persons, you cannot feel the lead of the bone, and then only by rolling it a little forwards. The knee and foot are turned inwards, but less so than in the dislocation upwards : the knee is only very slightly bent, and therefore is not so much advanced as in that dislocation. The toe touches the ground when the patient is standing, but not so the heel. Flexion and rotation are in a great degree prevented from the limb being so firmly fixed.

Treatment. — Lay the patient on his side; make extension and counter extension ; and, at the tame time, lift the thigh outwards by a bandage placed as near the head of the bone as possible.

4. Dislocation in the pubes is the most easily distinguished of any.

Symptoms. — The limb is an inch shorter ; knee and foot turned outwards, incapable of rotation in%vards, and the head of the bone may be felt on the pubis, outside the ingiunal artery.

Treatment. — Place the patient on his side ; make extension .and counter extension ; and, after a little time, lift the head of the bone forwards over the pecten and acetabulum.

Pott's dislocation or fracture is a dislocation inwards of the ancle joint, attended with fracture of the fibula, about three inches higher up, and laceration of the internal or deltoid ligament. This is a very serious injury ; often causing permanent lameness. It is to be reduced as soon as possible, and protected by splints or junks. The limbs should be bent to relax the muscles, and the leg laid on its outside.

Rupture of tendo Achillis happens mostly in persons advanced in life, and usually upon mak-ing some sudden or unusual exertion. It has been known to happen to old men when, after a lapse of years, they attempt to dance. The symptoms by which it may be known are these : — The patient, whilst making this exertion, feels as if struck with a whip or stone at the back of his leg, and often hears a loud crack, and falls down from inability to use his foot. The gastroenemii muscles act spasmodically and pull the upper away from the lower portion, which can readily be felt on examination.

Treatment. — Formerly the patient was laid up, and the foot kept extended for four or five weeks ; out surgeons are now content to let them wear a very high heeled shoe, and hobble about with sticks, till it is well.

Sprains are caused by forcing a joint in any direction beyond what the

ligaments will allow; consequently these latter are more or less put on the stretch or ruptured, depend ing on the relative degree of violence offered. They are always attended with pain and swelling, and the motions of the joint very much impaired. They are most frequently met with in the wrist and ancle.

Treatment. — If the inflammation and pain be excessive, leeches must be applied; when, however, they are only moderate, we maybe content with applying cold to the part and keeping it perfectly quiet; and, when the violence of the symptoms has abated, we should support the parts by adhesive straps and rollers, which will be found very much to assist motion.

CHAP. IV. — OF INJURIES OK THE HEAD.

Mr. Pott has remarked that the scalp cannot be considered in the light of a common integument ; for, from its intimate connexion with the skull and brain, it deserves particular notice. When any part of it is cut we may treat it as a si:nple wound. But when it is lacerated by a stroke of a stick, or any instrument which must have been applied with some violence, we then no longer consider the mere wound as the grand object of our treatment, but keep a strict watch for the symptoms which may arise of injury within the head.

Contused or lacerated wounds of the scalp should be treated like other wounds, but we should not be too anxious to heal them quickly at one part, leaving another to suppurate; by which a collection of matter may take place, pressing on the bone, and often lifting the pericranium from it, in which case there is always a tendency in the dura mater (which acts as an internal pericranium), to separate also, thus entirely depriving a portion of bone of its nourishment, so that it dies and exfoliates. It is the duty of the surgeon then to open all collections of pus in the scalp as soon as possible. When the scalp is much lacerated and jagged, the surgeon should avoid cutting off the irregular portions, as they have always a chance of living, and so covering the skull, and, if they slough, it will then be time enough to remove them ; but exposure of the skull is always to be avoided. When the scalp has been bruised there frequently takes place an effusion of fibrine and serum, making a swelling, which, on pressure, allows the finger to sink a little way, but then gives the sensation of a distinct acute edge, and so may be mistaken for a fracture of the skull with a piece of bone driven in. It may be known by its want of symptoms of depression, or by the acute edge also subsiding on pressure. An

erysypelatous inflammation, says Mr. Pott, is very liable to occur after scalp wounds, which, though alarming in appearance, is not so dangerous in reality ; it occurs generally in bilious subjects, and is to be treated by bleedings, saline purges, and cold lotions.

There are three sorts of accidents that affect the head; 1. Blows without symptoms of concussion ; 2. With symptoms of concussion at the time of the injury ; 3. Compression of the brain.

SECT I. — OF BLOWS WITHOUT SYMPTOMS OF

CONCUSSION.

It is to Mr. Pott that the profession owes the earliest account of the first injury, *viz.* a person receives a blow on the skull which may or may not produce a wound ; he is a little stunned at the time, but it goes off in a moment, and he thinks no more of it. In a few days he returns to his medical attendant, having had one or more shiverings, with nausea, pain, at first confined to the spot, afterwards extending over the head, languor, restlessness, quick and hard pulse, and a flushed face, a puffy tumor, tender, but not painful, arises on the stricken part. If this were cut into and examined, the pericranium would be found either partially or totally separated

from the bone, and containing a small quantity of reaction ; for not only may very small ves

of black colored ichor. The color of the bone also is found altered. From this time the symptoms advance more rapidly, the fever increases, the pulse becomes quicker, the skin hotter, the sleep more disturbed, and the shiverings more frequent, not followed by perspiration. It is now that matter becomes smeared over the

be lacerated by the severe shock, but some of great size, and particularly the middle artery of the dura mater, which does not bleed whilst the patient lies in that state of syncope into which he is at first thrown ; but, when the heart resumes Us strong action, the bloud is propelled from this vessel into the surface of the brain, causinˆ gr;i-

dura mater, and after this the symptoms are ex-dual symptoms of compression. The other great

danger is the supervention of inflammation o~f the meninges of the brain. This occurs at various times, but commonly in three or four days alter the accident. The symptoms of this inflammation differ from idiopathic inflammation of the the brain, the fever being of a much lower type ; the face is a little flushed, the eye particularly

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asperated every hour, convulsive motions come on, attended, in some, by delirium, in others by paralysis, coma, and death. If there had been a wound of the scalp, in this case, it would also have sympathised, and become pale, glassy, and flabby.

Treatment. — If called to the patient early, our

ndeavour should be to hinder suppuration ; and sensible to light intolerance of noise; pain in t!

for this purpose we should bleed, and use strict antiphlogistic regimen, especially keeping the patient quiet ; but, if we find by the symptoms that matter has formed between the skull and dura mater, we cannot let it out too soon, by perforating the bone with a trephine (of which hereafter), and the place where it should be applied will be indicated by the puffy tumor. If the collection is found extensive, and the symptoms do r,ot yield to one perforation, we must remove another portion of skull. In our after treatment, we must guard against increased inflammation of the dura mater, using the most powerful antiphlogistics, of which bleeding and cold applications will be found most serviceable. The cause of all this mischief seems to be a

laceration of the fine vessels, running from the dura mater and pericranium into the bone, by the vibration of the blow, so that a trifling inrlamma-head, particularly in the forehead; much restlessness, and muttering delirium ; the pulse is quick but not so full as in idiopathic phrenitis. If these symptoms cannot be checked, suppuration will supervene, causing compression. It is marked by an attack of shivering delirium, ptosis of the upper eyelid, convulsions, and death.

Treatment. — In the first instance the powers of the patient are very much depressed; whilst he is in this state the surgeon need not interfere ; but, as soon as the pulse rises, he should be bled largely for two reasons ; one, to prevent internal hemorrhage : the other, to render the supervention of inflammation less probable. If the headache continue, with , restlessness, &c., we should repeat the bleeding, preferring small quantities, taken oftener, to large ones at once, giving free purgatives and diaphoretics; and, if symp-

tion is set up, which, from the susceptibility of toms of inflammation come on, we should shave

the parts concerned, soon becomes aggravated, and gives rise to the above-mentioned symptoms.

SECT II. — OF CONCUSSION OF the BRAIN.

To produce this, a greater degree of violence must have been offered, and in this case, as in the former, there may or not be a wound of the scalp. The symptoms are these : the person who receives such injury, is at once deprived of sensation and motion, but which return in some measure almost immediately, and the surgeon finds him lying down? > apparently insensible, but he is capable of being aroused, and giving coherent though peevish answers, relapsing immediately into his former state; his face is pale, the pulse, not much hurried at first, but very weak and thin, and sometimes even intermitting; he generally vomits in a few minutes after the accident, which the surgeon considers as a sign of nonexistence of compression ; the pupil is also capable of motion, when exposed to a strong light. If the case is favorable, these symptoms

the head, and apply bladders filled with ice to the scalp, and repeat our large bleedings, with other remedies for inflammation. If symptoms of compression supervene, either from hemorrhage or pus effused, we should trephine the part where the puffy tumor exists; or, if there be none, we must then choose the point where the violence was inflicted. If the suppuration has occurred between the dura mater and bone this may be successful; but it too frequently occurs between the dura mater and arachnoid, in which case it is out of the reach of art.

SECT. III. — OF COMPRESSION or THE BRAIN.

We have already noticed cases in which this may arise, but it is caused most frequently by a fracture and depression of a portion of the skull. Its symptoms are a total state of stupor, stentorous breathing, immobility of the pupil (which is nearly always dilated) when irritated by light, face tinged, pulse slow, full, and laboring, convulsions or paralysis, retention of urine, and con-

gradually subside, and the patient thinks himself stipation of the bowels, or else involi cured ; but the well informed surgeon, knowing charges from the bladder and rectum; and

the liability of the occurrence of secondary inflammation, keeps a watchful eye over him for several days, enforcing a light diet, and perfect quiet.

There are two great dangers to be apprehended in cases of mere concussion : One is the occur-

symptoms do not abate but increase.

Treatment.— When a piece of the skull is fractured and driven in, it must be removed by the operation of trephining, which isˆ to be performed in the following manner :— The integuments are to be divided by a crucial incision, to

in cases ot mere concussion : Une is tne occu , lh ,

rence of hemorrhage within the skull in a short give freedom to the operation provid,

time after the iniurv. and unon the establishment not a sufficiently large wound of the scalp , and

time after the injury, and upon the establishment

now the surgeon can examine the injury; if there be comminution of bone, the pieces may sometimes be taken away by forceps and elevators, but if a piece is wedged in, we must then re-move a sound piece by the trephine to get at the depressed portion ; the operator then (without tearing, rasping, or scraping, the pericranium, as was recommended formerly) fixes his trephine in the sound bone, and makes several turns. Having now established a groove for the free play of the teeth, he withdraws the central point, which being projected would otherwise pierce the bone earlier than the sawing part, and so wound the dura mater, the endeavour to avoid which must regulate every movement of the operator, who now proceeds slowly and cautiously, withdrawing the trephine at short intervals ; to find out by probing (for which purpose apiece of quill is generally used), whether or not he has perforated any part of the circle ; for the thickness of the skull, varies considerably both generally and in small spots, so that it is very common, even in the small bit enclosed by a trephine, to find three or four different degrees of thickness. When he finds the instrument has penetrated one part, he must remove all farther pressure at that point by an inclination of his hand and wrist, still sawing the part not yet accomplished; when he finds that his task is nearly finished, he need not wait for the division of every little portion, but, having found no further resistance to his probe at several points, introduces an elevation or forceps into the sawed fissure, and forcibly breaks up the circular bit, which, being now accomplished,

leaves him at liberty to elevate the depressed portion ; but it is sometimes necessary to take out another piece by the trephine before he can accomplish it : or an obstruction may be caused by a projecting piece of the skull, which will be found to be more easily removed by the saw recommended by Mr. Hey of Leeds.

When the operation is concluded, the wound is to be dressed with lint dipped in oil, coming to a level with the skull, and the integuments brought over it ; or if the opening has been made to let out congealed blood ; or at other times, when the termination of the case is clear, the scalp may be brought at once over the dura mater, and confined by sutures, leaving a depending opening for the escape of pus, which must form in order that the wound may granulate, which it does from the surface of the dura mater. It was formerly supposed that all fractures of the skull required this treatment, whether there were depression or not. But modern surgeons, following the advice of Dessault, John Bell, and Abernethy, totally disregard the presence of a mere fissure, and shape their treatment entirely by the symptoms : so that if those be only of concussion, and the skull be fractured, or even slightly depressed, the case is merely to be treated as a severe one of concussion.

There was also great stress laid formerly on the parts of the skull which we should not trephine; such as the part over the frontal sinuses ; longitudinal sinus over the middle artery of the dura mater, &c. But surgeons now find they can, by using caution and care, trephine in even

these parts. For if there be haemorrhage from the artery, or sinus, they may be stopped by moderate pressure, or the artery tied.

It is to be noticed that fissures often run for a considerable extent beyond the part where the injury was inflicted, causing perhaps extravasation in their whole course. Thus, the forehead being struck, a fissure is often found quite across the orbitary plate of the os frontis ; and in violent falls on the top of the head, or injuries of the temple, fissures run along the base of the brain ; in either case they are mostly fatal.

There yet remains one source of mischief from wounds of the head and skull : fungus cerebri. This arises when the dura mater becomes ulcerated or sloughy, either from wounds, or as a consequence of the operation, not having been then indeed wounded ; but the pulsation of

the brain pressing it continually against the sharp edge of bone left by the trephine. This disease should be attempted to be subdued by pressure and mild stimuli ; but there have been instances of its being cut off without proving fatal.

CHAP. V. — OF HERNIA.

Hernia, epvoe, germen-ramus, from its shooting forward, though applicable to all protrusions of viscera, has yet been appropriated to those of the abdomen, from their greater frequency. Of these there are three principal varieties, *viz.* the inguinal, femoral, and umbilical. Their causes seem to be a sudden straining of the diaphragm and abdominal muscles, as in some sudden exertion, which violently thrusts out some viscus.

1 . Inguinal hernia presents itself at the groin, at the external abdominal ring, sometimes descending into the scrotum of males, or labium pudendi of females. It is much more common in males. Its symptoms are, a hard tumor in the groin following the course of the spermatic chord, and descending into the scrotum; suddenly augmented on coughing ; capable of being returned into the abdomen when the patient is recumbent, with a gurgling noise , and again appearing on his resuming the erect posture. It is not transparent, and the testicle can generally be felt distinctly below the tumor. This hernia may or not be contained in a bag of peritoneum, which it pushes before it ; in the latter case it is called a congenital hernia, from its occurrence at the time of birth, or very soon after, before the opening from the abdomen into the tunica vaginalis is closed, and so is in contact with the testicle.

SECT. I. — TREATMENT OF REDUCIBLE HERNIA

In the common inguinal hernia the patient should, after reduction, apply a truss, which, if the patient be old, must be worn for life ; if young, the complaint may be cured in three or four years, by producing obliteration of the opening through which it protrudes. The dan-ger to be apprehended in all hernia is that the gut, or omentum contained in them, may become strangulated, which, if not relieved by art, wil. prove fatal. In congenital hernia, we cannot apply a truss on such young children on account of its inconvenience; it is better, therefore, to put a compress o>er the opening, and strips ct

sucking plaster round the pelvis to retain it, and it may, by changing the dressing every

tnre at the point of exit; an extra portion of intestine or omentum wedging itself in the point

week, be generally cured in three or fourmonths. of exit; or an augmentation of hulk in the part

T>… .v. — :. *: „„„„„„ :„ *u: already descended, particularly an inflammatory

affection of that part.

Treatment.— The first remedy which suggests itself to the surgeon is the operation of the taxis, or an attempt by manipulation to return the her-nia into the abdomen. For this purpose, the muscles near or affecting the part must be relaxed by position ; and the surgeon gently kys hold of the tumor, and does not attempt to return it by pushing it straight back, but rather pulls it downwards, at the same time pressing it to expel its contents, and, when successful, a portion of the air contained in the intestine escapes through the stricture with a gurgling noise, which is followed slowly by the hernia itself. In using this means of cure, we should avoid using too much violence, as instances of the tumor bursting have been known.

If the tumor is so much inflamed as not to bear the taxis, and the symptoms are not urgent, cold should be applied for some time. If we fail in our attempt at reduction, after using the taxis for a quarter of an hour or twenty minutes, the patient should be bled largely, or to syncope, being previously placed in a warm bath, which materially assists the supervention of syncope ; and now, whilst he is in that state, with every fibre of the body relaxed, we should renew our taxis, and it often succeeds ; if it does not, we should give a tobacco glyster, infusing one drachm of tobacco in a pint of boiling water for a quarter of an hour, of which it is best to give only one-third at once, as it

produces different effects in people. -It makes the pulse small, the skin cold and pallid, and relaxes the fibres generally, particularly muscular ones ; so that it succeeds bftener in hernia near muscles, as inguinal or umbilical, than in the femoral. If, after waiting a short time and again trying the taxis, the symptoms become urgent, we must proceed at once to the operation ; and, as this is a little different in each her-nia, we must describe each separately.

But there is one caution necessary in this case : it is that the testicle may not have descended ; so that in this case we must not obliterate its passage, but wait till it appears, and then commence our treatment. This caution will sometimes be found necessary, even in adults.

2. Femoral hernia appears under Poupart's ligament at the femoral ring ; has a sac like the first species, and is more common in women. It is likewise more liable to strangulation, though generally of small size. But this last circumstance has been noticed by Sir A. Cooper to predispose to strangulation, as it argues a less capacity in the opening. Its treatment does not differ from that of inguinal hernia, except that the pad must be more at right angles with the truss.

3. Umbilical hernia presents itself, as its name implies, at the umbilicus, and does not differ from the others in its mode of treatment.

SECT. II. — IRREDUCIBLE HERMA.

Hernia not congenital often contains omentum as well as intestine, which is a frequent cause of their becoming irreducible, either by growing into a solid fatty substance, too large to be returned, or by forming adhesions to the peritoneal sac, which last may happen to either intestine or omentum. When a hernia becomes irreducible, it has always a tendency to grow larger, so that in some old men scrotal hernia have contained the bulk of the intestines.

Treatment. — The patient should wear a truss with a hollow pad, with a spring not strong enough to give pain ; but in very large scrotal hernia a suspensory bandage, fastened round the loins or neck, will be found to answer better. A person with irreducible hernia should be always on his guard against strangulation, and so should avoid all violent exercise, and be particularly careful to guard the tumor from blows, or other injuries, and attend to the keeping up a free action of the alimentary canal.

SECT. III. — STRANGULATED HERNIA.

This name is applied when either after the :tudden appearance of a hernia, or from extraneous cause, in an old one, the patient finds himself unable to reduce it; has an obstinate costiveness, pain, and redness in the tumor, with vomiting, gradually becoming more severe, at last bilious or feculent; pain being felt also in the abdomen, especially about the umbilicus ; the pulse weak, frequent, and thready, with hie-

SECT. IV. — OPERATIONS FOR HERNIA. 1. Bubonocele or inguinal hernia. — The patient should be laid on a table with his legs hanging over the end, and, the hair having been removed from the pnbes, the incision should commence at the upper part of the tumor, and be continued to its lower part ; but, if large, it need not quite reach so low. We should now secure any bleeding vessels. The division of the skin brings the fascia of the chord into view, which must be

cup and anxious countenance; and, if not re-carefully lifted up with a pair of dissecting forceps, and perforated into this opening ; a direch must be introduced, and the fascki may be safely slit up, bringing the cumastic muscle into view, which must be treated like the last fasci.i ; and we shall now in recent hernia come to the sac, o blue semitransparent appearance (but in old

Heved, cold sweats come on. The hiccup becomes more severe, the eyes glassy, pulse softer and fuller, but intermitting; a sudden cessation of pain ensues : the tumor becoming of a dull leaden color and mephysematous. In short the tumor has mortified, and the patient, deceived

by the cessation of pain, often fancies that he is hernia there may be many layers of cornier

about to get better, whilst he is expiring. cellular membrane). This mu:

These symptoms are caused by the circulation divided, being

previously lifted up, as

of the contents of the hernial tumor being stopped, were, and on puncturing it

either by a thickening of the neck of the sac, a capes, if there be intestine in it

spasm of the abdominal muscles causing a stric-If there be both omentum and intestine, th« VOL. XXI.

mcr ‘is before the latter behind, and now commences the difficulty. You must ascertain the seat of the stricture, and in recent hernia it will be likely to be at the external ring. This is to be ascertained by the little finger, and if it be there a director is to be introduced and the stricture divided, for a small distance, by a probe pointed bistoury. But this is not the common seat of stricture ; it is generally at the internal ring or neck of the sac, in which case Sir. A Cooper recommended dividing the stricture leaving the sac entire ; but this has been justly condemned by Mr. Lawrence in his valuable treatise on Hernia, who prefers the old method of dividing both sac and stricture at once ; in this man-ner introduce the ringer as far as the stricture, and on it the bistoury invented by Sir A. Cooper, which is quite straight and blunt, except half an inch, situated at a quarter of an inch from the top which has a cutting edge. This is to be kept flat till it reaches the stricture, but we then turn its cutting edge upwards and divide both sac and stricture. We must beware of cutting inwards, as we then run a great risk of wounding the epigastric artery, which is contained in the inner pillar of the internal ring. The stricture having been freely divided, we reduce the intestine first piecemeal, handling it carefully and tenderly, and then the omentum, if there be any. But the intestine is sometimes found to have formed adhesions. These, if slight, may be torn with the fingers, but, when more dense, they must be separated from the sac by cutting; and, if they are very short, we must cut off small portions of the adherent sac and return altogether in the abdomen. But sometimes the intestine will be found

gangrenous, when it will be found of a deep brown or chocolate color, covered with a layer of bn>wn coagulated lymph, fetid, and interspersed -fith purple or leaden-colored spots, which readily break down under the impression of the finger. Il only a portion of the cylinder be gangrenous, we need not, says Mr. Lawrence, put a ligature round the attached mesentery to Keep it to the mouth of the sac, for its natural adhesions, which it has formed, will prevent it going far, and there is no danger of extravasation of feces into the abdomen, as was stated by de la Faye and Dessault, and the ligature will only increase irritation. In this case there must be a discharge of feces from the wound ; but they have been often known to recover their natural passage after some time by the aperture of the intestine becoming agglutinated or healed by granulation. The next case is when the whole cylinder is found gangrenous, when our treatment must be, the slitting up the diseased portion, to let out its contents, and give an exit for fecal mat-ter from the rest of the intestine, to facilitate which the stricture should be divided. The gut should then be left to slough away, and if the patient does not sink under this injury, he recovers with that loathsome disease an artificial anus, which, however, does not prove fatal if the bowel have been part of the colon or even ilium; but, if it have been a portion situated high up in the alimentary canal, the patient dies of ination, there not being sufficient length of intestine to absorb nutriment. But this complaint if not

fatal is productive of great misery from tlie continual discharge of feces, which, however, do not smell so offensive as when retained longer. It is best treated by causing the patient to wear a slightly elastic truss, with a pad, which must be taken away when the patient feels a desire to discharge his feces

When the omentum is found adherent we may use more freedom in separating it, by tearing up the adhesions ; and if any vessels bleed, securing them. If the quantity be large, or indurated, we may cut off a great portion of it and tie all the vessels, which do not stop on being lacerated with a pair of forceps, leaving the ligatures hanging out of the wound, and reduce the rest to the mouth of the sac. When the omentum is mortified we should pursue the same plan of excision, &c ; we may know it by the blocd in the veins coagulating. Its color, however, is not like that of intestine, black or green, but of a livid dull red ; and when pressed by the fingers it gives a sensation of sickness.

Treatment after the operation. — After the operation for strangulated

hernia, there are two things from which danger is to be apprehended ; the first, that the intestines may not perform their office, and the feces not pass in their natural course ; secondly, and principally, that peritoneal inflammation may come on, and produce the same effects as if gangrene were present. The object consequently should be, as soon as the hernia is returned, to close the wound as completely as possible, by means of sutures, and to employ gentle pressure. But, if the hernial sac remains open, the integuments should be brought together by means of sutures, slight pressure should be made by dossils of lint, and the pans should be supported in a suspensory bandage.

The horizontal posture must be strictly ordered ; and, in five or six hours after the operation, give a little sulphate of magnesia or castor-oil ; the more motions your patient has, the better. We must not be satisfied if the patient have three or four motions on the following day, but keep up a constant discharge from the bowels; on the next day the abdomen will become tense, with constipation and constant vomiting, in which case we must bleed or purge freely. If hiccup now supervene, -it need not be a symp-ton of gangrene, but peritoneal or intestinal inflammation. When the inguinal hernia is very large we need not lay open the sac, nor endeavour to reduce it ; for its adhesions will be too extensive, but must content ourselves with cutting down to and dividing the stricture, leaving the hernia incarcerated

2. Direct, or ventro inguinal hernia, comes down inside the epigastric artery through the outer ring, but not the inner one. The difference in the operation is, that it has another covering, *viz.* a portion of the fascia transversal is ; and the artery lies to the outside of its abdominal aperture.

3. Congenital hernia. — In this the testicle can-not be felt at the lower part, and there is no peritoneal sac, or rather the sac is formed by what is to be the tunica vaginalis, which remains yet enclosed. There is no difference in the operation.

4. Femoral hi-nia is seated deeper and more laterally than inguinal. The symptoms of strangulation are more urgent than those of the latter,

fingers underneath it. But its appearances are also various ; for it may consist of a solid gristly substance with very small ulcers; sometimes a

on account of the smallness and inelasticity of sore on the broad surface of the glands, burrow-

the aperture.

In operating for femoral hernia, you make your first incision in the course of Poupart's ligament, along the tumor, extending from one side to the other ; the second you may make at right angles to the first, towards the umbilicus, so that the two incisions resemble the letter j, inverted. The angular flaps are to he next dissected off, and reflected, so as to allow of greater room. By this incision you expose the superficial fascia, which you next divide, and the hernial bag, called by some fascia propria, is brought into view. This is next cut through, and the hernial sac, or peritoneal covering, makes its appearance. The next point is to make an incision into the hernial sac with the greatest possible care, and then introduce a director to ascertain the seat of stricture. Having opened the hernial sac, and exposed the intestine, divide the stricture directly upwards and inwards, a little inclined to the umbilicus. The seat of stricture in femoral her-nia is at the crural arch, just where the intestine' leaves the abdomen ; therefore, in dividing the stricture, after introducing the director, a bistoury, blunted at the point, is to be put on it, and placed against the stricture; in this way there is no danger of wounding the intestine. The bistoury is next to be gently raised, and with a slight touch of the instrument, the fibres will give way, and by a little pressure the parts are easily returned.

5. Umbilical hernia must be treated like the others. There is no difference in the operation. In dividing the stricture we should cut upwards, and afterwards endeavour to heal the wound as soon as possible to prevent the liability to peritoneal inflammation.

PART 111.

ing deep, with no surrounding inflammation. Sometimes it spreads quickly by ulceratiun or sloughing, and often bleeds.

Chancre situated on the fraenum, or external meatus, is very difficult to heal, on account of the constant dribbling of urine on it ; when it is situated on the edge of the prepuce it will make the part swell and cause phymosis. When the matrix of a chancre becomes indurated, the patient is more liable to secondary symptoms. There are other sores appearing on the penis of suspicious appearance, but which are not chancres, and not followed by secondary symptoms. Such are little ulcers on the prepuce, reaching as far back as the verona glandis ; deep, irritable, and painful, presenting a honeycombed appearance, often attended by discharge from a swelling of the prepuce. These generally get well by stimulating them and several others.

Treatment of chancre. — It has been proved that chancres may now be cured without mercury ; but nevertheless this is not so safe, as the patient is more liable to secondary symptoms, so that we should put him on a mild mercurial course, giving five grains of blue pill, with a quarter of a grain of opium night and morning, and so keep up a gentle action on the mouth, and dress the chancre with mild applications, the black wash is one of the best. But, if it be very indolent, we may touch it with the caustic. If the chancre .heal quickly, we should nevertheless still continue the mercury for three weeks at least. Sometimes during the treatment ;i chancre becomes very irritable and much inflamed all round it. This may often have been produced by the action of mercury : in any case we must suspend all mercurials, apply poultices and sedatives, give opium internally combined with salines; and, when the irritation has subsided we may return to our mercury, giving also the compound decoction of sarsaparilla. Sometimes a chancre may take on the sloughing action, so as if not stopped even to destroy the penis. This may proceed from the patients in- .

and absorbed into the system, producing at first ,e ‘rate habits, or from the bad use of mer-

an ulcer, called a chancre, at the place where it was so applied, generally on the organs of generation; the matter of which, being absorbed, gets into the glands of the groin and produces a bubo, and, continuing onwards, is received into the circulating system ; when it produces eruptions and ulcerations of various parts of the body, particularly affecting the throat, skin, periosteum, ar d bones.

SECT. I. — OF CHANCRE.

cury. In this case the mercury must be stopped, and a lotion applied of from thirty to fifty drops of nitric acid to a quart of water, or warm spirits of turpentine, or strong solutions of opium with poultices. The patient must be allowed a generous diet and stimulant medicines, of which one of the best is ammonia with musk, or what i still better opium in one grain doses three or four times a day.

Chancres in women are often worse than in

The average time for its appearance is from men ; they attack thelabia and nympha, ar

four to seven days after connexion ; but there to be cured by the same means, appears reason to believe that the poison may be Phymosis is induced by a gr

dormant for a much longer time. It begins first the prepuce, winch causes t

as a red spot which ulcerates, or as a pimple tract, so -that it cannot be .drawn b jk over t

surrounding edges with a yellow surface and in-slough, allowing the passage* flamed margin, also a hardness to be felt by the the opening.

The treatment consists in mitigating the inflammation, and if mercury be the cause it must be suspended, otherwise we mu?t apply cold lotions, inject black wash under the skin, purge the patient and give him opium. If all these fail, we must introduce a director under the prepuce as far as the corona glandis, and slit it up with abistoury ; then make the internal and external parts correspond, (otherwise the internal will not be so freely divided as the external), and put a stitch into each side, which hinders the inner and outer edges from being so much separated by the swelling which takes place ; dress it lightly that the patient may be able to readjust it when ‘•e makes water. Sometimes when the prepuce is very long it is better to cut a circular piece off.

Parophymosis is applied to the state when a patient has retracted his prepuce behind the glands, but that swells and he cannot get it back again, so that there is a tight ligature round the glands, which, if it continued, would effectually strangulate it.

Treatment. — We must endeavour to reduce the size of the glands by pressure, and after some time push it back with our thumbs, drawing forward the prepuce with our fingers. If after several trials this do not succeed, we must introduce a director or probe under the stricture, then passing a sharp pointed bistoury along it divide the stricture. After this apply poultices.

Warts, though formerly considered venereal, are now not treated as such ; any mild stimulus will remove them if soft, such as the liq. plumb, subacet. dil. when they are hard they should be poulticed, and then touched with an ointment made of arsenic, 3i, cerate, Ji, and this will make them slough.

SECT. II. — OF BUBOE.

When syphylitic is commonly confined to one gland (on either or both sides) situated high in the groin, which distinguishes it from those caused by irritation alone, when a chain of them is affected. It produces the same symptoms as a common abscess, and must be treated as such, but at the same time we should give mercury ; except

when it assumes a chronic form, in which case we should act on the bowels, and try to diminish it by leeches, lotions, &c.

Sometimes a buboe takes on a sloughing ac-tion, in which case we must treat it as sloughing chancre, but there is great danger of its opening the femoral artery.

A buboe often leaves a sinus, which must be injected with a solution of oxymuriate of mercury ; and, if that fail, laid open.

A chronic buboe often presents a diseased gland at its base, which must be destroyed with irritating troches or the potassa fusa.

A buboe sometimes becomes a phagedenia ulcer. It had then better be dressed with a solution of nitrate of silver. Give bark, ammonia, and opium internally.

Secondary symptoms, may appear in a fortnight after contamination ; but it is generally six or eight weeks, or sometimes even months before their occurrence. They make their appearance either by a sore throat, when it appears as if a piece had been dug out of the tonsils, leaving a

foul ulcer, not very painful, or eruptions preceded or not by fever. These are of various characters ; the most common is the venereal lipra, consisting of copper colored blotches, circular, and little elevated ; or a crop of either pimples or pustules may come out; or there may be red and conical tubercles, or the elevated brown rupia, shaped like a limpet shell, which falls off, leaving a deep painful ulcer. When the throat is affected, the eustachian tube often becomes blocked up, causing permanent deafness, which is only to be remedied by puncturing the membrana tympani. But the bones and periosteum become shortly after affected, causing nodes and caries, particularly of the bones of the nose and palate, both of which may be perforated by it. Another part liable to be attacked is the eye, in which a violent iritis appears, and sy-philitic pains may attack any other parts of the body.

Treatment. — Mercury may be considered as the great remedy, but it must be discontinued if it disagrees with the patient. If there be much fever we may bleed. When the pains are severe, use the, warm bath, give Dovers' powder, gui-acum, or colchicum. For eruptions, the warm bath is the best remedy ; when there is mild sore throat it should be gargled ; but, when severe, we must bleed or leech and blister it. Foul

ulcers in it may be touched with the linimentum eruginis. Indolent ones with solution of argentum nitratum. When irites supervenes, we must throw in mercury as quickly as possible, cup in the back of the neck or temples, and blister, and apply extract of belladonna to prevent adhesions of the pupil. When the bones are affected give sarsaparilla, or mercury. If the nodes are very painful cut them through down to the bone.

It not unfrequently happens that an opening is made in the bony palate, causing a disagreeable snuffling when the patient speaks. This after healing the ulceration may be stopped up with lint or cork, or an instrument invented by Mr. Weis of the Strand.

It is often of importance to know how mercury may be made to affect the system soonest. This indication is answered by the hyd. oxymur. internally, and mercurial fumigations externally, which is effected by exposing the patient to the fumes of cinnabar, thrown on to a red hot iron. When complaints arise from the use of mercury, we should give sarsaparilla or nitric acid, which prove very efficacious in stopping them.

SECT. III. — OF GONORRHCEA.

(From -yovt], semen, and ptw, to flow). The derivation would imply that this disease was a flow of semen, but it is a flux of purulent matter from the urethra, formerly supposed to come from ulceration, but Mr. Hunter proved that there is no breach of surface, but that it is a secretion from the vessels of the urethra.

The symptoms generally arise in three or four days after infection, very rarely exceeding seven days, but may arise earlier than three. The patient first experiences a sense of titiliation in tha urethra, as if a drop of urine were contained in

it. This directs his attention to the part, and he finds that the lips of the urethra are red, and that there is a slight mucous discharge.

Afterwards the urethra begins to be affected with considerable heat, and pain is experienced in voiding the urine, which state is called ardor urinse. The pain increases till it becomes, in many cases, excessively severe ; there is an appearance of threads mixed with the urine, which arises from the adhesive inflammation in the lacuna; of the urethra. The next effect is a considerable diminution in the stream of urine, the swollen state of the urethra contracting the size of the canal. The urine is often discharged in two, three, or more streams, in consequence of the contracted and irregular state of the urethra. At first the discharge from the urethra is mucous, but after a little time it assumes a purulent appearance. The matter becomes yellow, and, if the inflammation is very considerable, green ; and it is often intermixed with blood, so as to give it a sanious appearance. The glands of the groin are generally sympathetically affected, and, in a first gonorrhoea, seldom fail to become enlarged and painful. They very rarely go on to the formation of matter, if proper attention is paid on the part of the surgeon.

Chordee is a not unfrequent accompaniment to gonorrhoea. It is a painful erection of the penis, which feels bound down and is either curved or bent considerably to one side, being caused by inflammation and effusion of lymph into the corpus spongiosum. There is often a great irritation of the muscles of the perineum, producing violent spasmodic contractions. If any constitutional disease, as a fever, occurs during; a gonorrhoea, the discharge will be suspended till the constitutional symptoms abate, and will then reappear.

Treatment. — If it be a first attack there is always more irritation, so that it will be advisable to begin with saline purgatives, and afterwards to use colocynth and calomel as mere aperients. The patient should at the same time use diluent drinks, such as nitre, subcarbonate of potassa, or soda dissolved in mucilage. When any of these increase the irritability of the bladder they are to be discontinued. If the penis be much inflamed with chordee we may apply leeches ; and, if the constitution sympathises, a general bleeding will be very useful. Hanging the penis in warm water mitigates the difficulty of micturation, and when the ardor urina and pain from chordee are very great, we may give twenty drops of the liq. potassse, with from three to five grains of conium. After the first week we may apply cold saturnine lotion to the penis ; and, when the inflammatory symptoms have abated, give the balsam of copaiba in doses from twenty to thirty drops, morning and evening, and when this has made an impression on the discharge we may begin injections, of which one of the best is the liq. plumb, subacet. dil., afterwards made stronger by the addition of sulph. linci.

In subsequent attacks we need not be so cautious, but begin at once, if there is not too great an irritation, with doses of copaiba and cubibs, and shortly after to commence with the

same or various other injections, such as half a grain of the sulphate of copper in an ounce of rose water, or one grain of oxymur. hydr. in twelve ounces of water : these two are Tery powerful, but the strength of injections must depend on their effect. If there remains much gleet we should introduce bougies, which will stop it. The treatment of women does not differ from that of men, except that we need use less caution. During the latter stage of gonorrhoea it often happens that the bladder becomes very irritable, so as to cause desire to make water every quarter of an hour, which when voided is often mixed with blood.

Treatment. — Opium should be given in doses of from one to two grains, with a view of allaying the pain and irritation ; and, with the same object, five or six grains should be introduced into the rectum in the form of suppositories. The liquor potassae with opium or some bitter tincture is also recommended ; castor oil as a purgative ; and, after shaving off the hair, a blister should be applied over the region of the pubes : the counter irritation thus produced will prove of infinite service.

Swelled testicle, or hernia humoralis, is a frequent result of the use of the bougie, or shows itself in from ten to fourteen days after the discharge. When confined to the epiilydymis there is little pain ; but, when it extends to the body itself, the unyielding nature of the tunica albuginea causes much pain. We may first foment them, and purge the patient; and, if this does not succeed, apply leeches, cold lotions, &c. ; and it is sometimes necessary to give anodynes at night.

Bubo may arise from gonorrhoea, but rarely suppurates. It must be treated as other buboes.

Gleet may be only a symptom of stricture ; but it' it be the sequel of gonorrhoea it is often difficult to cure, and, to accomplish it, we must use both constitutional and local remedies. Balsams, turpentines, and cantharides, are useful, but generally produce their effect in five or six days, so that space of time may be considered as a fair trial. When the whole system is weak we may prescribe cold baths, bark and steel. The local applications may be either injections or passing bougies. Gleets have also been cured by counter irritants, as a blister under the

urethra, &c.

CHAP. II. — OF HYDROPHOBIA.

From v£wp, water, and QofSoc, fear. This most melancholy and dangerous disease is the consequence of bites by rabid animals, particularly dogs, cats, and wolves. The poison resides in the saliva of the mad animal, and so is introduced into a wound by the teeth. This disease is generally some time in showing itself after infection, hardly ever earlier than a fortnight or three weeks, and in some instances as late as several months.

Symptoms.— At some indefinite period, and occasionally long after the bitten part seems quite well, a slight pain begins to be felt in it, now and then attended with itching, but generally resembling a rheumatic pain. It soon extends from the wound up to the arm, and arfects the situation of the trapezius muscle, and the neck.

on the same side as the bite. The cicatrix, in the mean \hile, begins to swell, inflames, and at length discharges an ichorous matter. There are often pains of a more flying, convulsive kind, felt in various parts of the body. As the disease advances the patient complains of the pain shooting from the situation of the bite towards the region of the heart. Lassitude, a dull pain in the head, and a vertigo, soon come on : the patient is commonly melancholy, though not always, mutters, is forgetful, and drowsy ; his mind seems disordered ; his temper irritable and irregular; his slumbers disturbed, and convulsive agitations immediately follow his waking; a deafness is sometimes complained of; the eyes are watery ; the aspect sorrowful ; the face pale and contracted ; sweat breaks out upon the temples ; and an unusual discharge of saliva is made from the mouth. From the beginning a peculiar stricture and heaviness on the breast, occasional involuntary sighing, and nausea take place. There is often a bilious vomiting. The idea of drinking any kind of fluids creates considerable alarm and agitation, and the attempt to do so generally brings on most afflicting pains and convulsions, attended with a dreadful sense of

suffocation and choaking. These soon come on without any attempt to swallow; the patient becomes deli rious, and dies, exhausted by continual and furious ravings. The time in which the attack proves fatal varies from thirty-six hours to three or four days.

Treatment. — There has yet been nothing discovered that can contribute to the relief of this formidable malady. It has lately been proposed to inject warm water into the veins, and at the same time abstract blood : its success is as yet doubtful. There is, however, one thing that lies in the surgeon's power. It is to exeise or destroy the bitten part as soon as possible after the accident, not allowing the smallest portion to remain which will ensure the patient's safety. But all people who are bitten are not affected by the complaint, especially if the bite has taken place through much clothing, so that the saliva of the animal may have been wiped off from the teeth. When, however, symptoms do come on. they are next to certainty fatal.

CHAP. III. — OF DISSECTING WOUNDS. These have lately attracted the serious attention of surgeons especially, from the number of fatal events caused by them within these last few years. The violence of their symptoms seems to depend on the particularly noxious qualities of putrid, applied to live animal substance. These, however, differ from the last mentioned disease by affecting persons with every degree of violence, sometimes very lightly, at others fatally; they, however, resemble the last in not contaminating alike all persons, seeming to attack most vigorously those who have been previously debilitated. When a person innoculates himself with dead animal matter it produces these symptoms : the wound becomes painful and inflamed ; the inflammation spreads up the arm, affecting especially the absorbents, which is demonstrated by in-fiurated red lines over their course; the glands of the axilla become affected ; a symptomatic typhus

seizes the patient ; the arm swells, or becomes erysypelatous ; matter forms under the fascia, or in the glands of the axilla ; and the patient often sinks under symptoms of the most malignant putridity. But, when the disease attacks a person of more robust constitution, it puts on quite another appearance, being then a mere inflammation of the absorbents, which may stop at any period of its course. Its treatment must depend then on the form it assumes. Wrhen it is inflammatory it is to be treated like other inflammations; but, when it puts on the putrid form, it is better to take a small quantity of blood from the system first ; then apply warm and soothing applications to the wound

and arm ; give the patient cordials with doses of opium ; and, if matter forms, give it a ready exit.

There is a form in which this disease appears in persons who are much in the habit of handling offals. This consists of an eiysypelatous blush over the hand, with considerable swelling and running from one finger to another, remaining a long while. This may be cured by mercurials, particularly the oxymuriate in small doses.

CHAP. IV. — OF LETHALES, from application of substances tending to direct destruction of vitality.

SECT. I. — OF BURNS AND SCALDS.

These may affect persons in very different degrees, which are visible directly after the accident, as they produce three distinct effects. These are, 1. Mere vesication. 2. Desquamation. 3. Mortification of the skin.

1. Vesication. — This form is not dangerous, although it be of considerable extent ; it is usually produced by scalding water. We should not open them in the first instance, but allow the inflammation to subside first, and then they may be opened with advantage. The best applications are cooling and sedative ones first, but when we open them, they heal best by beinq sprinkled with a little very finely levigated chalk, or calamine.

2. Desquamution. — In this the cuticle separates at once, leaving the cutes exposed and inflamed, and ready to slough. This is the most painful variety of burn, and dangerous in proportion to its extent. Patients who die of large burns are found to have sometimes inflammation of the lungs, at others ulceration of the intestines : various remedies have been proposed for this form of burn. But the best seem the following:— When the patient is chilly or much exhausted by its violence, give stimuli internally, as opium and wine, &c. But as soon as reac-tion takes place, we must take care it be not too violent, to mitigate which we must employ our means for inflammation, and even bleed if necessary. Our local treatment must be to prevent the tendency to sloughing, for which purpose we must keep up an irritation by means of lime-water and oil, or milk spread over the part, or, what is still better, spirits of turpentine ; but, if this last gives too much pain, we may dilute it \vith oil, &c. This must be continued till reaction takes place, when we apply milder dressings. When contiguous parts are burnt, we must interpose dressings to prevent adhesions.

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very application the part is to be well dried « - — o”” >«««aiii£ and covered with leather socks

can act on the dead matter. We must give wine, opium, and ammonia to support the constitution! When burns heal they leave large cicatrices which keep gradually contracting. It has been proposed to divide them ‘ — -•—*•- “

together; this last, however, can sel-dom be necessary, as it is always in the surgeon’s power to heal them at first in this manner.

SECT. II.— OF FROSTBITES.

Frostbites affecting particular parts have been already noticed under the head gangrene. It remains now, to treat on that state in which the whole body has been affected with cold. In this case the patient experiences a drowsiness steal over him, followed by an irresistible desire to sleep ; which, when he gratifies by lying down, proves fatal ; for, so long as he continues any exercise, heat enough is generated to preserve life, but as soon as he ceases his exertions, there is no longer a sufficient supply for the rapid abstraction, his senses desert him, the brain-can no longer furnish the body with sufficient vital energy, and he dies quietly and insensibly. When, however, a per-son is discovered before the fatal termination, we must use every exertion to reanimate him, by restoring warmth in the most gradual manner”; and for this the best plan is to rub the body, qr envelope it in snow or ice water, which will gradually thaw it. Sternutatories are to be applied to the nostrils, and cordials introduced to the stomach. But, above all, artificial respiration is to be carried on, either naturally or by opening the trachea. The body is now to be laid between two blankets and rubbed constantly, augmenting the temperature as gradually as circumstances will permit, and this treatment will often succeed in

restoring persons apparently lost. If the frozen parts are incautiously heated they will mortify.

SECT. III. — OF CHILBLAINS.

Chilblains are a less violent effect of cold, consisting of an inflammation with diminished vitality, and thus liable to slough when severe. The symptoms when mild are, swelling, with heat and itching, after a time spontaneously disappearing. In a more severe form, the tumor is larger and redder, sometimes of a dark blue color. The heat, itching, and pain so vehement that the patient cannot use the part. In a third form small vesicles arise, which burst, leaving ulcers which penetrate deeply, and secrete a thin matter ; they are very slow in healing. In the worst cases, the inflammation ends in mortification.

Treatment. — One of the best applications to chilblains of the first and second sort is ice-cold water. The part affeqted is to be immersed in

tinct. myrrh ; the alum lotion, vinegar, &c. lr. other instances, oleum terebinthinje mixed with the balsam copaivae ; and a mixture of two parts of spir. vini camph. and one part of aq-litharg. acet have proved the best applications. Suppurated chilblains require topical stimulants, such as warm vinegar; a mixture of aq. litharg. acet. and aq. calcis ; or a salve containing the hydrarg. nitrat. rub. It is frequently necessary to touch the ulcers with the argentum nitratuin. Gangrenous chilblains must be treated according to the rules explained in the chapter on mortification.

CHAP. V. — OCCULTI, cause not apparent.

SECT. I. — DIFFUSI, affecting the system at large.

1. Scrofula, scrofa, a sow, because supposed to affect swine. This disease shows itself more particularly in young people or children than in adults, and has been noticed to exist in those, especially females, of florid complexion, light hair and eyes, long eyelashes, and dilated pu-pils, with a thick upper lip, and adune nails, generally of precocious intellect and lively dispositions. The forms in which it manifests itself are various, but attacks chiefly the absorbent glands and joints. When a part suppurates it does not contain pure pus; but this last is mixed up with flakes of unorganized lymph looking like curd, or sometimes thick like cheese. The ul-cers which it produces are always very indolent with livid purple margins. This disease seems to be hereditary, and more common in cold climates..

Treatment. — There is no one medicine that has specific influence over this disease ; but our object must be to strengthen the patient, and give a firmer tone to the body. If it be a child the diet should be nutritious, but not stimulating ; and meat plainly cooked should not be allowed more than once a day, the rest should be farinaceous. There are indeed exceptions to this ; for when a child is very much emaciated, or does not improve upon the light diet, we must then allow it animal food often, and but a little at a time, in preference to vegetables, and also a slight stimulant, as good beer or wine, if it does not prove too irritating. The patient should not be exposed to change of weather, and his clothing should be attended to. But air and exercise will prove of the greatest utility, particularly sea air and bathing, which, however, should not be continued for more than six months at a time and then varied. The bowels should be kept open, giving occasionally a purgative of calomel and rhubarb: and courses of bark. Steel, sarsaparilla, or liq. potassac may be given, varying them also, and persisting for ˆcvera' months.

2. Hysteria, 'vartpa, the womb, because this is thought to be the cause of it, is a diseased state of the nerves to which women are subject, though many surgeons have seen positive cases of it in men who lead sedentary lives. It does not show itself till puberty, and therefore there is rea-son to suppose it connected with the genital or-gans. It appears especially in young and unmarried females who do not take sufficient exercise, and consequently are often stout ; but it is not confined exclusively to either of these states. The symptoms it produces are, fits of convulsions, with laughing and crying, &c. ; but these are generally treated by the physician, and it is only the anomalous symptoms that fall under the province of the surgeon. These are very various, but it is of consequence that they should not be confounded with real diseases.

Thus we find difficulty of swallowing, loss of voice, retention of urine, pains in various parts, as the breast, knee, spine or sides, particularly the left. These pains come on gradually, and after some time occasion a little puffy swelling, which is marked by being as tender when

touched very lightly as if pressed heavily ; these are sometimes very severe, and last for months or years ; but still they do not impair the patient's health or disturb her rest. They are very com-mon in the joints, as was noticed by Mr. Brodie ; they sometimes leave one part and attack another.

Treatment. — If originating from want of exercise or other constitutional causes, such as an impaired menstruation, the remedies will be obvious ; but these are often not to be detected, in which case, when the pain is severe, we must apply a lotion of sp. rosmar. ˆifi-mixt. camph; ˆvi., or a belladonna plaster. The best constitutional remedies are valerian and ammonia.

3. Cancer. — Cancer, Latin, a crab ; because the tumor with the surrounding enlarged veins has a distant resemblance to a malignant disease which attacks indiscriminately all' the structures of the body, particularly glandular, beginning by a hardening, and ending in ulceration and sloughing. There are two varieties: 1. The common hard cancer : 2. The soft cancer, or fungus haemmatodes.

1. Common cancer is known in two distinct states. 1st, before it has ulcerated, when the nam e schirrus has been applied to it, from Sˆtppow, to harden. 2dly, After ulceration, then called open cancer ; but these are but stages of the same disease.

Symptoms. — In incipient schirrus there is nothing more apparent than an indurated cartilaginous tubercle, affected by acute lancinating pains, though these do not come on sometimes till later in the disease. Ligamentous bands may often be felt intersecting each other, leaving spaces mostly filled with fluid; the skin becomes puckered over it; discolored; and, by and by, ulcerates ; the ulcer having thick wetted edges, discharging a thin ichor, not pus, extremely fetid ; the progress of it is generally slow, but it sometimes spreads quickly, sloughing at times and causing profuse haemorrhages ; fungous growths often sprout up; it contaminates every part near it, and so increases in

size. This indeed happens some time before the morbid growth shows itself. Then it affects the neighbouring chain of absorbent glands, which are also converted into cancerous structure; and, at last, the patient dies emaciated and exhausted. Fungus haemmatodes is a white, soft, medullary substance, having sometimes ligamentous bands, and a feeling as if there were water in it. It is generally contained in a cyst; there is no structure or age exempt from it,

whereas cancer is a disease of advanced life. It does not contaminate the absorbent glands, and is not so painful as cancer, but it spreads by contaminating the parts around.

Treatment. — No medicines of any sort have the least power of cure over these formidable diseases, but they may be removed by an operation ; though even this is not always successful, as the disease often exists in the constitution ; but by it the patient is saved for a time, and enjoys a few years more of valuable life ; or he may in the mean time die of some other, and not so terrible a disease. If the operation be not successful, in removing every portion of disease, it will aggravate it, and the symptoms will reappear with increased violence, so that we should in some cases hesitate to operate ; for instance, where the disease exists in two places at once, or in very old people, or where it is indolent and may last for years, or when the skin is contaminated and much ulcerated ; for in this case the malady will mostly reappear either on the matrix or some other part. In cases where the operation cannot be done, keep the patient quiet ; apply cold lotions, low diet, and occasional purgatives. If there be ulceration, a carrot or hemlock poultice, or black wash, or oxyd of bismuth ointment.

CHAP. VI. — LOCALES. SECT. I. — DISEASES OF BONES.

Inflammation may exist in either an acute or chronic form, but generally the latter, producing an enormous swelling of the limb, with pain and more or less fever. This may produce two effects, 1. Suppuration; 2. Necrosis.

1. Suppuration in bones has received the odd name of spina ventosa. If it be acute the pain is excessive, on account of its unyielding structure ; but it gradually swells and bursts, generally forming several sinuses in the skin and soft parts, which require a long time for healing, as the bone mostly exfoliates. This inflammation is to be treated as any other in the first instance, and, as soon as matter is suspected in the bone, an opening should be made with a trephine. If it is long in healing, the patient’s strength must be supported by tonics and generous diet.

2. Necrosis, vticpos, dead. — By this is implied the death of bone that takes place, either in consequence of inflammation or from separation of the periosteum. It has been used improperly by many writers as synonymous with caries, but the latter is analogous to ulceration, the former mortification of soft parts. Necrosis attacks dense bones most frequently, as they have least power to resist injury, and so die ; when this takes place in long bones, or where the penos-

teum is not destroyed, the latter forms a bony case round the dead portion, which is now called a sequestrum. This generally separates into several portions, each of which may have an external opening by means of a fistulous sinus, from the mouth of which there mostly arises a fungous granulation, and, if left alone, each portion of separated dead bone is brought by the action of the live parts to present itself at the external opening ; but this is a very tedious process, and wastes the patient's health and strength by the constant discharge, with occasional febrile attacks.

Treatment consists in supporting the patient's strength, and leaving the rest to nature in most

ficient to make the bones, particularly those ot the lower extremity, deviate from their natural figure. There are various mechanical contrivances sold in London for supporting rickety bones, and gradually restoring them to a straight figure! It is not necessary to offer here a description of any apparatus for the purpose. Bark, tonic medicines in general, and cold sea-bathing, ire-prove rickety children by strengthening the sys-tem; for, in proportion as this happens, the phosphate of lime becomes secreted in a more regular manner, and, with the aid of mechanical contrivances, very great deformities are gradually removed.

6. Mollities ossium. — The bones sometimes in

cases ; taking care to prevent the lodgment of adults become remarkably soft and flexible from

matter, giving free opening to the discharge, and dressing the sores

lightly; and, when a piece of bone is to be felt, separated, we must take it away by enlarging the wound ; but, if the case does not go on favorably, and there seems no separation of the dead parts, then the surgeon should cut down upon the new shell, and remove a portion by a trephine or mallet and gouge, and draw out the dead pieces from the opening. But there are also cases in which the patient's health is rapidly sinking, and then we must amputate the limb to save his life.

3. Caries, from K£ipw, to abrade. An ulceration in bones, similar to that in soft parts, is often caused by matter locked up in bones, as between the tables of the skull, but is often caused by other diseases, as syphilis, scrofula, &c. ; in which cases it attacks the soft or spongy bones, some of which have been mentioned, and others will be hereafter. When a caries is accessible, Boyer recommends touching it with the actual cautery, which changes it to a necrosis, and stimulates the parts underneath to throw it off. If a carious portion is contained in the canulli of long bones, we should trephine them.

4. Exostosis, from £?, out, and 6<r£ov, a bone, is a morbid growth of matter from a bone, generally not painful in itself, but occasionally by its size pressing on the neighbouring nerves, and thus giving a great deal of pain. There are two sorts, one hard and bony, generally arising from the periosteum, into which spicula of bone shoot; the other a fungous growth from the canulli, surrounded by a shell of bone. The first sort often becomes inconvenient from its size and pain by pressure on nerves ; and, when it is situated in accessible parts, it may be removed by a saw, or gouge and mallet; but otherwise the limb must be amputated : the latter affection cannot be removed by an operation, on account of its malignant tendency; so that amputation is here our only resource : and

a deficiency of phosphate of lime, and so are bent by the action of the muscles. No means of cure or prevention are yet known.

Distortion of the spine, may exist in two ways, 1st, there may be a single or double lateral curvature without caries of the bones; 2dly, a projection of the spinous processes caused by caries : the lateral curvature is caused by the weakness of the muscles supporting the spine being overcome by the weight of the head and shoulders, forming a bend to one side, generally near the loins, in which case the patient is obliged to make another bend near the shoulders to allow the head to rest perpendicularly on the pelvis; and there is generally a prominence of the hip, usually the left. It may be produced, however,

by other causes besides mere weakness, as ii constant unvaried position; for, in this complaint (which mostly occurs in young females), not only are the muscles weak, but also the ligaments allowing of considerable elongation.

Treatment. — Strengthen the system generally by tonics, air, and exercise, particularly on horseback ; change the position often; attend to tht function of menstruation that it is performed rightly, and exercise gradually the muscles of the spine, allowing the patient to rest in the horizontal posture after such exercise. Uul sometimes this disease is combined with rickets in which case the patient must wear some instrument when she is not being exercised, to take off the weight of the head, and give a moderate support to the spine; sucli a one has been made by a Mr. Laurie of Bartholomew's Close Smithfield.

Caries of the. spine, causing absorption of the bodies of the vertebrae, and projection of the spine, with pressure on the spinal marrow, generally exists as a symptom of scrofula, and may attack either the bones or cartilages, producing, when it shows itself, paralysis, total or partial, of all the parts below the disease: its symptoms

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it should be noticed that, if the disease exists at vary a little, according to the part attacked ; tin

any part of a limb, we cannot ensure the rest of the bone being healthy ; so that it is adviseable to remove the whole, limb if possible.

5. Rachitis, from pax'C, the spine of the back

in the loins, the patient first begins to feel a loss of motion in his legs and thighs, causing him to trip, succeeded by a numbness or pain ; there is also pain in the lumbar vertebra-, quick

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Weak, and particularly scrofulous children, are pulse, sbiverings, and an abscess takes pla,

*’• - psoas muscle, presenting itself under 1 ou-

:‘s ligament, or in the loins: the surgeon. also finds a projection of tin-wh ch are tender when struck

subject to this disorder, in which the bones, in consequence of a deficiency of lime in their structure, cannot bear the weight of the body, and become distorted. In infants, who are too young to walk, the action of the muscles is suf-

the

part

upon examination,

spinous processes,

or pressed.

Treatment. — We must, in the early stage, endeavour to prevent suppuration, by keeping the patient in bed, cupping on the loins, and the application and continuation of caustic issues near the affected part. If, however, abscess does present itself, we should open it, and let it heal »up again, taking care not to use violence to it, or we shall bring on inflammation of the cyst, which produces symptoms of the worst typhus, from the matter in it becoming putrid. In this case we must open the abscess, and give wine, ammonia, and bark, and the inflammation may subside in a few days. When a psoas abscess has continued open, the patient becomes hectic, and seldom recovers. .

Caries of the back. — In this, as in the oilier, there is difficult motion below, with pain on pressure; and the patient soon becomes unable to walk at all, not from complete paralysis but from violent spasms of the muscles. There is not much tendency in this case to form abscess.

Neck. — When this is diseased, the upper extremities are paralysed as well as the lower ones ; there is also difficulty in breathing, and the bladder is often paralysed.

Treatment. — If ever this disease is cured, it is by anchylosis of the bones taking place, and in children this is not uncommon, but adults have not so good a chance of escape, as it then mostly proves fatal. This may be assisted by perfect rest and abating the internal inflammation by counter irritants, as caustic issues.

8. Diseases of joints. — Inflamed synovial membrane, as described by

Mr. Brodie, is either a constitutional or local disease, and acute or chronic. When local it produces pain in the joint, exasperated by motion, soon followed by swelling of the joint spreading under the extensor muscles and on each side ; and fluid may be felt to fluctuate, which is effused synovia. If acute, there is a symptomatic inflammatory fever. In treating this form we must bleed both generally and locally ; and if the pain be violent we may apply warm fomentations and poultices; if not, cold lotion will be more serviceable. \Vhen the acute stage has subsided it leaves a swelling of the joint from, 1st, thickened capsule; 2dly, ef* fusion of lymph into the surrounding skin ; 3dly, effused synovia in the joint. And now we are to apply either one blister, keeping it open, for some time, or a succession of blisters ; and then, if there remains any swelling or stiffness, we must use stimulating liniments. When it proceeds from gout or other causes, give colchicum ; if rheumatic calomel and opium, or Dover's pow-der. When we have subdued the disease, Mr. Brodie strongly recommends the use of plasters and bandages to support the joint. Sometimes the disease assumes a chronic form; and, if neglected, the synovial membrane becomes altered in structure, appearing like a medullary sarcoma, which suppurates and ulcerates, extending first to the cartilages, then to the bones themselves ; abscess forms in the joint, bursts, and the patient dies of hectic fever if the limb be not amputated. This then should be attacked vigorously in the early stage by rest, leeches, blisters, and cold lotions, and a milder climate may be tried if other remedies do not succeed.

9. liberation of the cartilages may be brought on by other diseases, but when it exists as an idiopathic disease, unconnected with scrofula, it produces these symptoms: — 1st, When it attacks the hip joint there is at first pain referred to the knee, which gradually increases, when it may still be referred to the knee or sole of the foot, and is more severe during the night. It is aggravated by moving the limb, particularly pressing the head of the femur into the acetabulum. The nates become flattened and appear wider ; the limb wastes, and in the early stage appears longer but in an advanced period shorter, and the toes are turned in ; but, as yet, there is no real difference, the appearances being caused by the twisting of the pelvis. But at last the bone becomes dislocated by the absorption of the acetabulum and its own head, so that the muscles pull it into the dorsum of the ilium, but the capsule remains entire. Abscess now forms in the joint, marked by rigors, which shows itself externally, often at some distance, and is followed, when it bursts, by hectic fever.

When this disease exists in the knee joint there is pain in the knee which keeps increasing ; it becomes a little swollen from effusion ot lymph outside the joint, and the muscles, both above and below, waste away ; matter soon forms in the joint, bursting at the inner or outer side of the knee, which may also be dislocated into the ham.

Treatment. — A most essential remedy for this disease is perfect rest. If there be much inflammation and fever we may bleed, cup, or leech. Issues should then be made near the joint with potassa fusa. When there is an abscess presenting we should puncture it, and allow the matter to escape, and the abscess to take its chance of either healing or remaining open ; and give the patient tonics, and place tfie limb in the most favorable position for anchylosis, if this favorable event should take place; but in older persons this is rare, and they will die of the complaint unless the limb can be amputated.

10. Scrofulous joints. — This differs from th-last in this respect, that whereas in the former the disease commenced in the cartilage extending to the bone, in the scrofulous disease, it commences in the cancellous structure of the bone, which (says Mr. Brodie) first becomes very vascular, then the earthy matter is absorbed, causing the bone to become soft, then a yellow cheesy substance is deposited in the cancelli ; the morbid affection now spreads to the cartillages, causing them to ulcerate, and an abscess is formed, making its way outside the joint amongst the muscles, and sometimes a small portion of bone exfoliates into the articular cavity. This is a disease of early life, and sometimes exists in more joints than one in the same individual.

The symptoms which this disease produces do not differ in the later periods from those of the last affection ; but in the first instance there is swelling of the joints of some duration, with little or no pain; this, with the aspect of the patient, enables the surgeon at once to decide upon the case.

Treatment consists in applying antiphlogistic remedies when there is pain, and putting the

joint into splints to keep it perfectly quiet. We must be cautious how we use counter irritants, as they frequently aggravate the disease ; they, however, are admissible when the pain is severe. We should trust, however, chiefly to rest and the constitutional treatment recommended for scrofula.

Loose cartilages are generally found in the knee joint, and often exist without any traceable cause. They are at first connected with the synovial membrane, but soon become detached. Their size varies considerably.

Symptoms. — They sometimes give no pain, but this is rare; for in general they slip down into the articulation, giving a sudden and severe pain, causing the person to fall down ; followed by inflammation and swelling of the joint, which lasts for some days and even weeks. Sometimes they become fixed in the joints, hindering all motion for some time.

Treatment.— We should endeavour to secure it in any part of the joint by pressure, which may cause it to adhere to that part, and so re-move the inconvenience ; but if this fails, which it generally does, we may remove it by an operation, if the joint be not otherwise diseased, which is not however unattended with considerable risk, from making a wound into a joint, so that it is only to be done in urgent cases.

When we set about removing it we must previously fix it by the fingers, if possible, at the inside of the joint, for there the parts are thinnest ; and, drawing aside the skin, cut at once upon the body and seize it with a tenaculum. By this retraction of the skin the external wound is made valvular into the joint, which, by excluding the ingress of air, materially diminishes the risk of inflammation. It is almost needless to add that the patient must be kept in bed, and very quiet, till the wound has quite healed.

SECT. II. — DISEASES OF ARTERIES.

1. Ossification frequently takes place in persons of advanced age, but

does not generally produce many symptoms of itself, though it lays the foundation of other diseases, as ossified arteries are liable to rupture. In this way are produced apoplexy or haematocele ; but they act in another manner, by not allowing themselves to be filled with blood, or by a diminution of calibre, depriving the parts which they ought to supply of their proper nourishment, as is manifested in the gangrene of the toes in old people, and angina pectoris, caused by ossification of the coronary arteries of the heart. These, however, are diseases that cannot be remedied by art.

Aneurism (avtvpvvu, to dilate) may be defined to be a pulsating tumor, containing blood and coagulum, communicating with the inner coat of an artery, which, if left to itself, gradually becomes thinner, till at last it bursts and proves fatal by the profuse haemorrhage. Aneurisms are met with chiefly on the larger arteries, and may be produced by various causes; but the most frequent is a diseased state of the inner coat causing it to ulcerate, or burst suddenly, on an extraordinary exertion being made. They may also be caused by wounds of arteries. Aneu-lisms u?ed formerly to be divided into true and

false ; the true one being considered a dilatation of the coats, the false one a wound in the artery which caused a condensation of the surrounding parts to form a sac. But professor Scarna has denied that aneurism ever can take place without rupture of at least the inner coat of the ar-tery; and to which assertion, when a little modified, few modern surgeons have dissented. The

formation of an aneurism is as follows : The

inner coat of an artery being diseased, either ulcerates or bursts from sudden violence, and the muscular coat, being unable to bear the impetus of the blood, gives way also. Thus all its force is borne by the cellular coat, which, being distensible, causes a tumor which resists for some time, but at length yields also, and the blood rs received into the cellular membrane, condensed by the previous pressure of the tumor. And now the blood becomes coagulated, and forms successive layers of febrine, inside the sac, which still increases in size by the force of the pulsation of the contained blood. But this increase in size is ˆattended with a diminution of thickness of the layers of lymph, which at last give way at one point ; the sac bursts also, and the patient dies of internal or external haemorrhage.

Symptoms. — These differ as the disease is situated in internal or external parts. When externally there is a small tumor pulsating strongly which may be reduced in size by pressure, on ceasing which it again returns, producing a numbness and spasms in the limb. It increases in size and becomes of a dark color. A small slough of the skin is produced, which bleeds alarmingly on separation, and may either kill the patient at once or by repeated bleedings. Internal aneurisms cannot be known at first; they produce disordered function in any part to which they are near, and absorption of all bony and hard structures that they touch. Tumors sometimes are situated ove~ arteries; in which case you may feel them pulsate ; but they may be known by not pulsating in every part as an aneurism does, but only directly over the artery which vibrates through them. They may also be sometimes moved from the artery, in which case there is no pulsation in them. In some very thin persons the abdominal aorta may be felt to pulsate through the integuments, and this may be mistaken for aneurism.

Aneurism, however, may be produced by other methods ; there may be a dilatation first of the whole calibre of an artery, as described by Mr. Hodgson, which in time bursts, and so forms an aneurism.

Aneurism is also caused by wounds of arteries, when it may either condense the cellular structure round it and form a common aneurism, or extravasation may take place into the whole limb, which, being constantly augmented, may press on every part so severely as to cause gangrene ; in which case the limb must be amputated.

Treatment. — Aneurisms, in about one case out of twenty or thirty, undergo a spontaneous cure by pressing on the artery above till it becomes obliterated, so no more blood passes into the sac and it is absorbed. But as this is so rare it is never relied on; and it is the duty of the sur-

geon to cure the disease by an operation. This was formerly practised by cutting into the tumor, turning out the coagulum, and tying the

artery at both ends ; but this was a severe and bloody operation, and often failed, because the artery was diseased where the ligature enclosed it, so that secondary haemorrhage came on. This attracted the notice of Mr. J. Hunter, who, seeing the process that nature established for a cure, proposed imitating it by tying the artery before it came to the sac and at some distance from it, to have a healthy artery to operate upon. This was accordingly done in popliteal aneurism, by taking up the artery in the thigh where it passes under the edge of the sartorius muscle ; and it succeeded and is the operation now practised, that is to say, the surgeon must tie an artery, for aneurism, as far from the tumor as he well can, taking care that he does not separate the artery more than he need from its connexions ; and that no large branches are given off immediately before the ligature, as in this case there will be no room for the formation of a coagulum, and there will be haemorrhage when the ligature comes away, and he should on no account use a broad ligature. After the operation the wound is to be brought together by adhesive plaster, leaving one end of the ligature hanging out, the other being previously cut off, leaving also between the strips of plaster small spaces for the escape of matter. Care must be taken in cold weather to preserve the warmth of the limb, which if it were suffered to lose too much heat would mortify. The ligature generally comes away in from twelve to fourteen days.

There are, however, many cases in which the surgeon must operate close to the tumor, as subclavian, carotid, inguinal, or hiar aneurisms, all which arteries have been tied successfully. Also in cases where there is a recent wound of an ar-tery, with extravasation, the surgeon had better cut down upon the wound through the coagulum and tie the vessel above and below. In aneurisms on the scalp, from a blow, the surgeon had better cut it quite through and then apply firm pressure.

Varicose aneurism occurs from a puncture of an artery through a vein, which openings be-come permanent whilst the external ones heal. This causes an enormous dilatation of the vein over the artery, by the rushing of the blood from the artery into the vein, which also renders the color of the vein more arterial ; and there is not a distinct pulsation but a feeling of whizzing. This, if the artery and vein are in contact by the formation of adhesions between the two wounds, becomes stationary after a time, and does not require any interference ; but it more commonly happens that an intermediate sac forms between the artery and vein, which may increase so as to render an operation necessary.

Aneurism by anastomosis. — This is the term which Mr. John Bell, of Edinburgh, has given to a species of aneurism which resembles such bloody tumors (noevi materni) as appear in new-born children, grow to a large size, and, ultimately bursting, emit a considerable quantity of blood. We find clear descriptions of this disease in writers, though, before the publication ot

Mr. John Bell's Principles of Surgery, it was not classed with aneurisms. Thus, Desault has recorded a case of this affection for the express purpose of proving that pulsation is an uncertain sign of the existence of an aneurism.

The aneurism from anastomosis often affects adults, increasing from an appearance like that of a mere speck, or pimple, to a formidable disease, and being composed of a mutual enlargement of the smaller arteries and veins. The disease originates from some accidental cause ; is marked by a perpetual throbbing ; grows slowly, but incontrollably ; and is rather irritated than checked by compression. The throbbing is at first indistinct, but when the tumor is perfectly formed the pulsation is very manifest. Every exertion makes the throbbing more evident. The occasional turgid states of the tumor produce sacs of blood in the cellular substance, or dilated veins, and these sacs form little tender, livid, very thin points, which burst from time to time, and then, like other aneurisms, this one bleeds so profusely as to induce extreme weakness.

'This aneurism,' observes Mr. John Bell, ' is a mere congeries of active vessels, which will not be cured by opening it ; all attempts to obliterate the disease with caustics have proved unsuccessful, nor does the interrupting of particular vessels, which lead to it, affect the tumor; the whole group of vessels must be extirpated. In varicose veins, or in aneurisms of individual arteries, or in extravasations of blood, such as that produced under the scalp from blows upon the temporal artery, or in those aneurisms produced in schoolboys by pulling the hair, and also in those bloody effusions, from blows on the head, which have a distinct pulsation, the process of cutting up the varix enables you to obliterate the vessel and perform an easy cure. But in this enlargement of innumerable small vessels, in this aneurism by anastomosis, the rule is ' not to cut into, but to cut it out.' These purple and ill-looking tumors, because they are large, beating, painful, covered with scabs, and bleeding, like a cancer in the last stage of ulceration, have been but too often pronounced cancers ! incurable bleeding cancers ! and the remarks which I have made, while they

tend in some measure to explain the nature and consequences of the disease, will remind you of various unhappy cases, where either partial incisions only had been practised, or the patient left entirely to his fate.'

SECT. III. — DISEASES OF VEINS.

1. Inflammation is generally the consequence of injury, though it is sometimes idiopathic as in the phlegmasia dolens. When it happens from wounds it is always acute, the inflammation extending in both directions from the wound, but is most severe towards the heart. There is violent constitutional disturbance, and if the disease run into suppuration in large veins it is accompanied by the worst symptoms of typhus, and the patient dies ; but, when it ends more favorably, it is by effusion of lymph obliterating the vein.

Treatment must be the same as for other inflammations, but we must be cautious of bleed

!ng if the disease originates from that, and em-ploy leeches repeatedly, &c.

2. Varicose veins occur mostly in tall persons or pregnant women, or when the blood meets with any obstruction in its way to the heart. They are caused by an over-distension of the vein, so that the valves cease to act, and are either absorbed or thickened, producing a swelled and knotted appearance and feel of the veins, whose coats now become thicker to support the column of blood instead of the valves giving the veins a cartilaginous feel. There is no pain at lirst, but after some time the veins become more distended, lengthened, coiled up, and tortuous, and the patient feels first an itching, then a heavy numbness, and sometimes a very acute pain, and in many cases the limb becomes oedematous. Strings of coagulable lymph are now effused into the veins, and in a few instances have even caused obliteration, or at other times the blood becomes coagulated in the veins when they are hard to the feel, and often inflame and ulcerate. The ulcers are generally oval shaped in the direction of the veins ; very painful ; and have an ichorous discharge. Their color is dark blue when the patient is standing ; of a livid red when lying down, and they are liable to bleed. In cases where there is no coagulation they

sometimes burst and bleed alarmingly.

Treatment. — Put the limb into the horizontal posture, apply a bandage or laced stocking; if there is much pain apply cold lotions or blisters. When there are ulcers, heal them by pressure and sticking-plaster. When a particular cluster gives pain by pressing on a nerve, or hinders an ulcer from healing, we should cut them across with a convex bistoury, sharp at the convex side, which is to be introduced under the skin at a little distance, keeping the instrument flat ; then, when it is over the veins, the cutting edge is to be turned towards them, and divides them as the instrument is withdrawn. Thus we have a valvular opening, which heals more readily, and is not so liable to inflammation. This is a much preferable operation to the old one of tying the vein, which was very dangerous.

SECT, IV. — DISEASES OF NERVES.

1. Tic doulcureux is a most painful disorder, existing in the nerves of the face, especially the divisions of the fifth pair ; but it is found occasionally in other parts of the body. The cause of this malady is quite unknown : in a few instances it has depended on a diseased state of the nerve itself either within or without the cranium, but in most cases nothing can be discovered. It generally, attacks adults, and seems a disease of debility. The symptoms come on gradually, beginning at first with a slight pain, which increases progressively, till it becomes suddenly intolerable, making the patient scream •with agony. It is at first limited, but soon extends over the whole face. The pain, however, is not permanent, but occurs in paroxysms, which last only for a few minutes at a time, but return several times a day, being brought on by any mental emotion, any sudden draught of air upon the face, &c. It is the peculiarity of all nervous pains that thev cease when the person is asleep.

These pains do not necessarily impair tin-patients health, and they often recover

Treatment.— Vie must first ascertain that the disease is not produced by a deranged state of health; if it be we must direct our attention to that; but, if not, we should give tonic« as car bonate of iron, arsenic, bark, &c. In some instances large bleedings have cured the disease but are not to be relied on. If these remedies fail, we may give the patient a temporary state of ease by dividing the nerve at its exit from th« skull into the face, simply cutting it aero;.-: with a bistoury or scalpel.

2. Nervous pains frequently affect persons with disordered digestive organs, as described by Mr Abernethy in his treatise, and may be cured bv attending to this circumstance; but they ma exist independently, in which case we should give tonics, and apply a belladonna plaster to the part affected.

SECT. V. — VISCERA

URINARY AND GENITAL ORGANS. 1. Testicle inflammation, when idiopathic, is generally acute. There is much swelling, retaining the oval shape of the testicle; and it is very much hardened, with a painful feel of tension, even producing •sickness. The pains often extend along the course of the spermatic chord to the loins, generally accompanied by symptomatic fever. It seldom goes on to suppuration.

Treatment is the same as that recommended to inflamed testicle from gonorrhoea.

Chronic inflammation may be merely a sequel of the acute, or come on spontaneously. It is generally met with in persons whose health has been previously impaired.

Its first symptom is a dull pain in the back and loins, extending towards the testicle; then, shortly after a pain is felt in the testes itself; then a swelling occurs, being at first irregular and knobby, but afterwards becomes oval; then if the disease be not checked, an abscess forms secreting a yellow cheesy matter, and, when ;r bursts, a fungus protrudes, which looks like the body of the testicle, sometimes covered by granulations, and having this cheesy matter on its inner side.

Treatment. — Put the system gently under the influence of mercury, either by calomel and opium, or the oxymuriate, or by rubbing mercurial ointment with camphor into the part. This must be continued for five or six weeks ; but, if the disease arise from syphilis, or the previous exhibition of mercury, we should then give only very small doses, combined with the use of sarsaparilla. If an abscess forms, and sprouts out, we must sprinkle the surface with red precipitate, and keep the patient in bed ; and, when it begins to granulate, dress it with some stimulant application.

There is another chronic enlargement, which arises from the irritation of a stricture in the urethra; the cure of which is therefore obvious, *viz.* to cure the stricture; but if it does not then subside we must give mercury for it as for the former.

tichirrus testicle is not of common occurrence , but when it does appear it is first in the body of

the testicle, pi educing a hard swelling which feels like a marble body in the scrotum, and is irregular and knobbed on the surface. It is attended with severe pain, which becomes more intolerable as the complaint advances. It next attacks the epididymis, and spreads up thes pˆr-matic cord, which becomes enlarged and tuberculated. In true schirrus the testicle itself does not grow to any considerable size.

Treatment. — The only remedy for this disease is extirpation, which must be performed before the neighbouring glands become contaminated, if we wish for success, as otherwise the disease is sure to return. Incision of the testicle is to be performed in the following manner : —

This is one of the most simple operations in surgery ; but, before it is undertaken, be cautious that the disease does actually require to be removed, and particularly bear in mind the circumstances which should regulate its removal.

You grasp the testicle in your left hand ; be-gin your incision at the upper part of the abdominal ring, and extend it to the lower extremity of the testicle. Lay bare the spermatic cord completely at the abdominal ring ; and put a needle and ligature through it and the artery of the vas deferens. Having divided the cord, you draw it towards you, and detach the cellular membrane behind it : in this consists the whole of the operation. The spermatic artery, the ar-tery of the vas deferens, and several in the scrotum, are the vessels which require securing.

In making your first incision, you must not leave any part of the Scrotum undivided ; for, if it is not carried to the lower part, a bag of mat-ter will form, and the healing process be thus prevented.

Fungus Hamatodes. — This disease is much more common than the

last ; it begins, like true scirrhus, in the body of the testicles ; but, unlike that disease, it almost immediately affects the whole body of the testicle at its first commencement.

In a very short time, the epididymis becomes affected; next the spermatic cord ; and, in the course of a very few weeks, a tumor forms in the loins. The disease is at first unattended with pain ; but, when the spermatic cord and the tu-mor in the loins become of great magnitude, the patient suffers considerably.

The fungoid swelling of the testicles sometimes increases to the weight of several pounds ; and usually occurs between the age of seventeen and thirty-five.

The appearance of the surface is somewhat livid ; the spermatic cord is loaded with blood, and in some parts you may feel a fluctuation, as if there was a cyst within it : it also becomes covered with tubercles of considerable size.

The tumor has a soft pulpy feel, readily yielding to pressure ; and, on the first examination, you might suppose the disease to be hydrocele.

It may be distinguished from hydrocele in the following manner : — in the first place, it is flattened on the fore part, whereas in hydrocele it is pyriform j if you squeeze any of the fungoid tumor, the patient will complain of the pain arising from the compression of the testicles, which he will not do in hydrocele, unless you

squeeze the posterior part of it: the fungoid tumor rather yields to the pressure of the finger than fluctuates from one side to the other, as in hydrocele ; and, lastly, the great weight of the swelling when you lift up the sides, and the livid appearance of the scrotum, mark the malignant characters of this disease. The treatment is the same as for schirrus.

Varicoctle, or varicose veins of the spermatic cord, are most common in persons of costive habit of body, and occur more frequently on the left side. They are sometimes annoying from the pain which they create, or, what is worse, from an absorption of the testis on that side. They may be mitigated by wearing a suspensory bandage, blistering over them, and keeping the bowels open. They are sometimes liable to be mistaken for rupture, but may be distinguished thus : — make the patient lie down and the tu-mor will subside on pressure upwards ; but ou continuing the pressure, reappeais, which a her-nia does not.

Hydrocele may exist in two forms, first in the tunica vaginalis ; second, in the spermatic cord.

Tunica vaginal is has two varieties, the common and consenital. The common may occur in consequence of a slight inflammation, or without being traceable to any cause.

Symptoms. — The symptoms of this complaint are, a colorless, smooth, roundish, pyriform, sometimes oblong swelling, which slowly and gradually extends upward from the lower part of the scrotum. The tumor does not disappear on pressure. At first, it is soft and fluctuating; and, on the fingers being removed, it immediately rises to its former level. The swelling cannot be diminished, nor pushed into the cavity of the abdomen, by any artifice of the surgeon. When the disease is more advanced, and has attained a larger size, the tumor becomes oblong, heavy, and hard, though much less so than in the case of an enlarged testicle. At the same time, the fluctuation grows less distinct. If the fluid contained in the tunica vaginalis be clear, this membrane not much thickened, and a candle be placed behind the tumor, the scrotum has a semitransparent appearance. At last the hydrocele so conceals the testicle that this body can only be distinguished, at the upper and back part of the tumor, by a certain hard feel. The spermatic cord, however, is still quite obvious to the touch. Though the swelling may have acquired its greatest size, and the scrotum be considerably distended, the corrugations of the latter part are seldom so obliterated as in the anasarcous hydrocele. The penis seems small, and, as it were, sunk in the tumor. The integuments of the scrotum also acquire an increased thickness; the veins appear large, and there is rather a sense of elasticity than of fluctuation, communicated to the surgeon’s fingers. The spermatic cord itself even becomes somewhat concealed, when the hydrocele has ascended very far. In these cases, the tunica vaginalis always becomes more and more thickened, which change is common to all membranes, when they are long distended.

Treatment. — In young persons we may endeavour to obtain an absorption of the fluid by

using a suspensory bandage for the scrotum, and giving internal

remedies, as calomel, scammony,

matic cord ; in the former case the testicle feels like a double one ; there is no pain ; the latter

and jalap; at the same time applymg discutient is also not painful, and is oval shaped It 1S lotions. But this often fa.ls, and when it does, likely to be mistaken for hernia, butb distin we must either adopt a palliative or radical guished from it by its semitranaparent appear" treatment; the palliative consists m merely in-ance, by its not being able to be returned into troducmg a trocar and canula, and so drawing off the abdomen, and by the edge between it and

the latter being well defined.

Treatment. — In boys they may generally be

dispersed by stimulant lotions ; but this is not

the water, which may be required to be done usually once in six months, but in some cases in one, two, or three months. In performing this

operation we must remember the situation of the the case with adults, in whom' they may he in-testicle, to aroid wounding it; it is at the pos- -~-*-J-L " terior part two-thirds of the way downwards. The radical cure may be performed by causing the inner surfaces of the hydrocele to adhere, by inflammation and effusion of lymph ; or we may make an incision into the tumor, and heal it by granulation. This last is preferable when we suspect a diseased state of the testicle itself, but should not be attempted in old persons, as in them it often produces very violent symptoms. To produce adhesions there are commonly two ways employed, one the passage of a seton through the tumor, which is preferable in young people, though more tedious, as it

generally requires ten or fourteen days. This was the me-thod recommended by Mr. Pott. The other, and commonly the best manner, is by injecting the cavity with a stimulating fluid, and is generally performed thus : — a common trocar and canula is introduced, the water is drawn off, and an India rubber bottle, filled with injection, and provided with a tube and stopcock, is now fixed into the canula; the contents emptied into the sac by pressure, and the stopcock closed till the patient feels an uneasy sensation or pain in the loins, which generally happens in about four 01 five minutes. The bottle is now to be taken away, and the stopcock turned so that the injected fluid may run out. The patient must then be kept quiet for some days. Care must be taken in this operation that the fluid is injected into the sac and not the cellular membrane of the scrotum, as in that case sloughing must take place, endangering the patient's life.

Congenital hydrocele occurs in those children whose tunica vaginalis remains open from their birth, communicating with the cavity of the abdomen, and in which the serous secretion of the peritoneum is accumulated by gravitation. These hydroceles may be distinguished from common ones by our being able to empty the fluid from the sac into the abdomen by pressure.

Treatment. — The patient should wear a truss to prevent the formation of a rupture, and close the passage from the abdomen, which it does by the formation of adhesions, through the pressure and the communication being stopped ; the effused fluid will be absorbed, if the patient be in good health ; but if the swelling does not diminish it causes wasting of the testicle, or other inconvenience ; then we may inject the tumor, taking care to prevent the passage of any portion into the abdomen by pressure on the abdominal ring. This was recommended and practised successfully by Desault ; for it does not produce universal inflammation of the peritoneum as was apprehended.

Encysted hydroceles may occu between the zimica vaginalis and albuginea, or in the sper-

jected when of large size; but when small should be laid open and dressed to the bottom with lint or flour.

Hamatocele. — This signifies a swelling of the scrotum, or spermatic cord, occasioned by blood. The disease is of four kinds, two of which have their seat in the tunica vaginalis ; one within the albuginea, and

the fourth in the membrane investing the spermatic vessels.

1. In letting out the water of a hydrocele a vessel is sometimes wounded. After the operation, the blood insinuates itself partly into the tunica vaginalis, and partly into the cellular substance of the scrotum, so as to form in a very short time a tumor nearly equal in size to the original hydrocele. The blood colors the fluid of the hydrocele, when it is flowing through the canula.

2. Another species is when the blood is effused in consequence of a spontaneous rupture of a vessel after the operation, and it is entirely confined to the cavity of the tunica vaginal is. The fluid of the hydrocele is not tinged with blood, when discharged.

3. In the third kind of hsematocele, the blood is extravasated within the tunica albuginea, from the vessels of the glandular part of the testicle.

4. The fourth arises from a rupture of a branch of the spermatic vein.

Treatment. — The first two cases may generally be cured by opening the cavity of the tu-nica vaginalis, removing the effused blood, and applying dry lint to the inside of the membrane. If the quantity of blood were very small, discutients might disperse it, and do away all necessity for operating.

The two other cases are less frequent. The third arises from a morbid state of the substance of the testicle, and can only be cured by castration.

The last species of haematocele, or that arising from a rupture of the spermatic vein, is generally caused by great or sudden exertions, contusions,ˆ.

When the case is clearly distinguished from a hernia, attempts must be made to promote the absorption of the extravasated blood, by applying to the tumor the sal ammoniac lotion, or even camphorated liniments. About twice a week, a purgative should also be exhibited.

If the case should obstinately resist such treatment, a thing which can hardly occur, an incision must be made into the tumor, and, the bleeding point being discovered, it should either be tied, or stopped with a dossil of lint.

2. Diseases of the penis.— The penis is subject to a variety of herpes, called herpes preputii. It is of consequence to recognise this, as it may

else be mistaken for chancre. Its appearances are first two or three little vesicles, or one larue

one, which soon become pustules ; these break about the fouith or fifth day, and leave little ulcers, which h ive a white base, and a slightly elevated edge ; and, if any escharotic be applied, it leaves a hard base like a true chancre. Jn treating it we should avoid all stimulating applications at first ; and, if they do not heal, we may then touch with the nitrate of silver.

The penis is also liable to be attacked by cancer, which must be treated as other cancerous diseases ; but there is one variety which deserves notice, this is

Cancer scroti. — The peculiar and distinguishing character of this disease from common can-cer is, that it is nearly or entirely unaccompanied by pain. It is a disease which always makes its first attack on, and its first appearance in, the inferior part of the scrotum ; where it produces a superficial, painful, ragged, ill-looking sore, with hard and rising edges : the trade call it the soot wart. I never saw it under the age of puberty, which is, I suppose, one reason why it is generally taken, both by patient and surgeon, for venereal, and, being treated with mercurials, is thereby soon and much exasperated : in no great length of time, it pervades the skin, dartos, and membranes of the scrotum, and seizes the testicle, which it enlarges, hardens, and renders truly and thoroughly distempered ; whence it makes its way up the spermatic process into the abdomen, most frequently indurating and spoiling the inguinal glands : when arrived within the abdomen, it affects some of the viscera, and then very soon becomes painfully destructive. The only plan of treating this dreadful malady is by extirpating it before the ulceration has attained any considerable magnitude.

3. Stricture of the urethra sometimes exists at the orifice caused by recent ulceration and cicatrisation. This must be dilated with a bistoury, and then a piece of bougie must be constantly worn till it

heals over it. Other strictures mostly take place on the membranous portion of the urethra, and may be produced by a thickened state of the membrane itself, or a mere chasm of the surrounding muscles, or by a union of both, which is most common. But a spasmodic stricture will lay the foundation of a permanent one, and permanent strictures vary very much ; for one day it produces a great deal of distress, but another the patient is scarcely sensible of the disease. The symptoms of a permanent stricture are often liable to be mistaken for those of a gonorrhoea, there being difficulty in making water, sometimes pain, with a divided or fine stream, and discharge of mucus from the urethra. Then the bladder becomes irritable in proportion to the resistance the stricture offers. So that when we wish to ascertain what the disease is, we must pass a full sized bougie (as a smaller might be caught by the lacuna) which, if there be a stricture, will be stopped by it. Then we .may try to pass to a metal sound. If a stricture be neglected the bladder becomes inflamed, and so irritable that it will not hold an ounce of urine, secreting a thick ropy mucus, which clogs up the passage. Sometimes from the effort of straining, sacculi are formed in the bladder, which grow larger and larger ; and if

the patient is subject to stone, these form receptacles for them. When there is great difficulty of passing the urine, the bladder becomes constantly distended ; then the ureters become dilated, and the urine accumulating, the pressure is continued up to the glandular stricture of the kidneys, causing it to be absorbed; but urine is still secreted by the cortical part. It is generally accompanied by pain in the loins, and the constitution is generally affected. In permanent stricture an abscess often forms in the perineum behind the stricture, accompanied with much constitutional disturbance, the fever being inflammatory, if no urine finds its way to it, but more commonly there is a communication be-hind the stricture with the urethra, in which case the fever assumes a typhoid appearance, till the abscess bursts or is opened ; which should be done as soon as the complaint is detected. Then the abscess is kept open by the constant dribbling of urine through the wound, round which is generally a little fungous growth, forming a fistula in perineo.

Treatment of stricture. — This consists in dilating it gradually, by the long continued use of bougies or catheters. Bougies generally give least irritation, when made of wax or plaster, but in old cartilaginous strictures, whose absorption we wish to. promote by pressure, we should employ metallic ones ; or, if they are very inveterate and contracted, we may destroy them by bougies, armed with nitrate of

silver. A small bougie only can be passed at first, but the size may be afterwards gradually increased. If the passage of a bougie in a recent stricture gives much pain, or causes bleeding, we should omit its use for some days.

In passing all instruments into the urethra, we should be cautious of using violence, as the instrument may then be pushed through the urethra between the bladder and rectum, making what is called a false passage, and is known by the want of urine following it, in which case we should endeavour1 to find the true one, and keep a catheter in the urethra till the wound has healed. In cases where there is violent pain and irritation in the urethra, we should not attempt to pass an instrument, but bleed the patient and give him sedatives. When there is a spasmodic stricture, it may generally be relieved by the bougie aided by sedatives or the warm bath.

In cases of fistula in perineo, we should endeavour to pass instruments through the stricture ; in which, if we succeed, the wound will probably heal, but in many cases this is impossible, even a probe not being admitted into the stricture. In this case we should cut down across the stricture, previously introducing a probe into it if possible; if not, we must be guided by our anatomical knowledge. Having divided the stricture, we should pass a catheter into the bladder, and heal the stricture over it.

4. Bladder. — Chronic inflammation. When this exists, which is not uncommon in old persons, there is a constant desire to make water, and pain after making it ; the urine deposits a thick ropy mucus; it is often accompanied by febrile symptoms; the patient's countenance looks anxious, and he has a urinous smell.

SURGERY.

Treatment.— Cup on the loins or perineum, or apply leeches ; keep the patient quiet, give him opiate suppositories every night, and warm water injections to bring them away in the morning. The best medicines are uva urie ; small doses of Cubeb's mercurials, or balsam of copaiba. It is seldom that we succeed in curing the disease, but these remedies mitigate it considerably.

Calculus. — This complaint may exist in two states: 1. Gravel in the urine; 2. Stone in the bladder.

Gravel may be of two sorts ; the lethic acid, which is of a yellow color, or phosphate of ammonia and magnesia, which is of a whiter color. It produces a frequent desire to make water, blood sometimes accompanying it, and pain in the urethra.

Treatment. — Attend to the state of the general health, and if acid prevail in the urine, give a dose of calomel and rhubarb occasionally, with alkalies constantly. Let the patient avoid all acid substances, and take a vegetable diet. When the alkali prevails, give acids, as the citric or muriatic.

Calculi of three sorts are formed in the kid-ney. 1. Lithic acid ; 2. The triple phosphates; 3. Oxalate of lime, or mulberry calculus ; when the latter are voided, the disease is not likely to return, but the two former may always recur. A calculus in the kidney keeps on increasing in size, dilating the pelvis, and causing abscess ; also pain in the kidney and outside the hip, which is very intolerable. These symptoms may be relieved, but not cured, by alkalies, which hinder the growth of the calculus, keep the urine only a little acid ; when calculi descend into the ureters, they cause pain there and in the testicle, and after a time it becomes swollen and hard; but when they drop into the bladder the pain suddenly ceases, but the bladder becomes a little irritated. If they be very small they may pass through the urethra ; but, if not so, they may lodˆe in it, causing retention of urine. For this the patient must use a warm bath, have an opium glyster, and then a strong purgative, which may make it pass more easily ; or, it may, if small enough, be extracted by forceps made for the purpose; or this plan will sometimes answer: give the patient diluent, and diuretic drinks, after dilating the urethra for a fortnight, then let him keep a bougie in the passage as long as he can possibly bear the distended state of his

made water, the pain becomes more severe, often excruciating. There is mostly blood in the urine at some time or other, often whilst making water the stream suddenly ceases, or the patient at times can only make water in one position. The sediment is a reddish mucus. These symptoms are all produced by the rough substance irritating the sensitive neck of the bladder ; so that when there is an enlarged prostate, the symptoms are less violent. When a stone is very large, it presses on the rectum and causes pain, or piles, or frequent desire to void the faeces, when in reality the gut is empty. Stone often produces an inflammation of the bladder, and even of the kidneys, and sometimes ulceration of the bladder.

Treatment. — Stone may be hindered by proper remedies from growing larger, but by no plan hitherto proposed can it be dissolved when once formed, so that our only remedy is to remove it by an operation, except where the general health is bad, or there exists some other disease in the bladder. The pain may be relieved by an horizontal position, opiate glysters. When the bladder is diseased give demulcent drinks, and small doses of copaiba or culules. Females should seldom be operated on, as the urethra may in general be sufficiently dilated to admit of its extraction. An instrument has been invented for this purpose by Mr. Weiss.

5. Acute inflammation of' the prostate gland. — This complaint is not confined, like the chronic enlargement, to late periods of life, but attacks persons of any age, and generally terminates in suppuration. The most prominent symptom which characterises this complaint is violent pain immediately after discharging the urine, and in this respect the disease resembles stone. As the inflammation advances, an abscess will be produced in the gland, and retention of urine the consequence.

Our treatment, in this case, must consist of blood-letting, and administering mild laxatives, together with antimonial medicines. The catheter it is also necessary should be used. \ e therefore pass a common catheter, and about the fourth day you will perceive that matter escapes through it; so that this, coupled with other circumstances, stamps the nature of the complaint. Rigors do not attend the formation of this matter.

Chronic inflammation, or enlargement of the

bladder, and, when it is withdrawn, the calculus prostate gland. This is the consequence of age,

may be forced out by the gush of urine. and not of disease ; and is characterised by a

Stone in the bladder may arise from any sub-number of symptoms sufficiently particular

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stance lodging in the bladder, and forming a nucleus, round which

fresh matter is deposited.

distinguish it from stone. In these cases there is sometimes partial retention of urine ; the pa-

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The most common cause is a kidney calculus, tient is a long time voiding his urine, which has Children and old men, with diseased prostate a particularly powerful smell, arising fr

• lining-ammomated in consequence ot its long

gland, are most liable to it. It is composed generally of lithic acid, but sometimes of the triple phosphate of ammonia and magnesia, or the oxalate of lime. In general a small stone produces no serious inconvenience except in diseased bladders ; but, when of larger size, there is a pain in the glans penis, sometimes dull, sometimes burning, with pain in the bladder. Frequent desire to make water, coining on suddenly when the patient moves; after having VOL. XXL

being ammoniated in consequence continuance in the bladder. The next symptoms observable are pain and numbness in the glans penis ; the prepuce not possessing ils usual sensibility ; there is a sense of weight and uneasiness in the perineum, relieved by pressure with the finger; pain in the back of one or both thighs, ‘in the Joins, and at the origin of t sciatic nerve, and course of the ureters; and the faeces are flattened from the pressure which is

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made upon the rectum by the swollen gland. The urine finally acquires a highly offensive ammoniacal smell, and at length becomes white or milky, and, when long retained, brown, and even bloody.

If the enlargement of the prostate gland continues to proceed for a length of time, it will, in many cases, occasion a complete retention of urine.

Treatment of enlarged prostate. — Your object of treatment maybe to endeavour to act upon the gland, by means of small doses of the oxymuriate of mercury, when the enlargement is the only complaint ; but, if there is retention, you must relieve this symptom, and afterwards guard against its return. When no urine passes whatever, and when there is great pain at the neck of the bladder, you should take away blood from the arm, apply leeches to the perineum, administer purgatives, and put the patient into a warm bath. If these means should succeed in procuring relief, the best medicine that can afterwards be given for the purpose of preventing a return of the retention, and, at the same time of lessening the inconvenience which sometimes attends the complaint, is composed of fifteen drops of the liquor potassx, five drops of the balsamum copaibse, and an ounce and a half of the mistura camphorse. This is the best medicine you can use; it will afford considerable relief, which is all that yon can expect; for you must not dream of making a cure.

When you are called upon to relieve retention of urine, from enlarged prostate, by the introduction of a catheter, the instrument should be fourteen inches in length, and a quarter of an inch in diameter. In consequence of the pressure within, a broad instrument will answer better than a narrow one, but, being bulbous at the end, it will readily ride over the enlargement.

When the difficulty of introducing the catheter is great, it is better to leave it in the bladder.

Retention of urine may arise from two causes : 1. Spasmodic stricture. 2. Diseased prostate plane!. The former then is the case with young, ihe latter with old persons; this must be treated as recommended in diseased prostate. Spasmodic stricture generally occurs after a fit of intemperance and drunkenness, and is generally so complete that with all his efforts, the patient can barely squeeze out a single drop of urine, lie becomes alarmed, his pulse rises, the bladder becomes more and more distended, and the patient’s efforts proportionally increased.

The countenance becomes anxious, the pain of the bladder excessive ; but after the patient has been in this ?tate for two days, or a little more, the pain Abates, and a few drops of urine begin to flow. The sufferer now flatters himself that he shall be soon relieved, as he finds his clothes wet with urine; but this dribbling is caused by the full and violent distension of the bladder, which, not being able to hold another drop, forces out, by its tension, the urine which continues to be secreted by the kidneys. In a short time after this the patient feels something give way, or else feels himself suddenly relieved, and now thinks in earnest that he is well ; but is miserably deceived. The bladder, from a continued state of inflammation, has sloughed, forming a round aperture in the perineum, into which the urine cannot flow for its dense fascia, but makes its appearance in the cellular membrane of the scrotum, penis, and above the pubis, and, if he be not relieved, the patient dies of the mortification of these parts.

Treatment. — In the early stage we must t/y to introduce a very small catheter or bougie without using violence, for that will aggravate matters. If we cannot succeed, we must put in practice every method for overcoming spasm, such as by the warm bath, particularly opium glysters, which succeed in nine cases out of ten. Doses of tinct. ferri. muriatis, as recommended by Mr. Cline, and the tobacco glyster. If these fail we may try a bougie armed with linen caustic, which will sometimes succeed ; but it all fail we must then have recourse to puncturing the bladder.

Puncturing the bladder. — The operation of puncturing the bladder above the pubes is very simple, and is founded on the following anatomical circumstances : — in the natural formation of the parts, the peritonaeum falls from the inner side of the rectus, over the upper part of the bladder, and is reflected backwards to the fun-dus, leaving a space filled with cellular tissue, between the pubes and the reflected peritonaeum. This is the space in which the operation is performed, and all that is required, is to make your incision through the integuments, to the extent of an inch above the pubes. It is best to open the integuments in the first instance, because the trocar will afterwards enter the bladder with more ease, and because, if there should be any extravasation of urine by the side of the instrument, it will more readily escape. The incision should extend as far as the linea alba. With respect to the direction in which the tro-car is to be passed, you must not, on any account, direct the point downwards towards the anus, but obliquely from the penis to the back of the pelvis, just towards the basis of the sacrum. The trocar and canula being introduced, the water passes through the canula; and an elastic gum catheter should be introduced through the canula, and may be left in

the bladder for a great length of time without producing any injurious consequences.

In the female it is absolutely necessary this operation should be performed in cases of retention of urine, from retroverio uteri, and from a cancerous disease affecting the meatus urinarius. Operating through the vagina ought never to be performed.

Operation through the rectum. — This operation is performed in the triangular space formed by the meeting of the vasa deferentia, constituting the apex ; the sides from the vasa deferentia as they diverge in their passage backwards; and the basis of the triangle, by the peritoneum, as it is reflected from the posterior part of the bladder to the upper part of the rectum. When you pass your finger into the rectum, you will feel the bladder projecting into it. It is elastic, and yields with difficulty to the pressure of the finger; you will readily feel the fluctuation.

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Thus leads you to the spot where the trocar is to thus:-The patient must be made to sit o

be introduced ; the triangular space above-men- warm water, and strain ; and when the piles co

t.oned is directly presented to the point of the down, run a needle, armed with adouble Sa'u"

instrument. You introduce your finger about through them, and tie one on each side £t lv

an inch (never less than half an inch) behind round the base. This is not very painfu

the prostate gland, and then upon the upper soon sloughs away.

part of the finger pass the trocar, which may be Fistula in ano.-This name has been imnro—

e.ther curved or straight, to the posterior part of perly applied to all abscesses about the rectum

the bladder. When the point of the instrument but it is only applicable to those which do -i.

rests upon the upper part of the rectum and the heal but leave a sinus, lined with a cartilaginous

posterior part of the bladder, you pass the tro-matter and secreting not pus but ichor \hes(‘ >

car into the bladder obliquely upwards and sinuses may or may not communicate with the

forwards by a slight and sudden motion of the rectum, and can generally only be cured by an

hand. An elastic gum catheter is then to be operation.

employed. On the whole, however, though an Treattnent.— It is of great importance to give easy operation, there are many objections, and such medicines as will bring the fistula into a I would not recommend it to be performed. healthy state. With this view the balsam of co-But Sir A. Cooper says, In cases of accumu-paiba may be given with great advantage : if there lation of urine in the bladder, for which many is much irritation give soda, which has great em-would have recourse to puncturing that organ, I cacy in diminishing the irritability of the rectum. have found opening the urethra only, a better Aromatic medicines should be given, especially and safer course. All I do is this, I desire the the confectio piperis nigri of the London 1’liar-patient to draw up his legs as if he was going macopceia. This medicine in a very short time to be operated on for stone; I then make my brings the fistula into a healing state; healthy incision into the urethra, according to the seat granulations arise from the surface, and the dis-of the stricture, and the result is, that the urine charge, instead of being serous or bloody, con-is passed by the perinaeum, and the bladder is sists of good pus. Submuriate of mercury, with relieved, without being in the slightest degree saline purges, should be occasionally given dur-injured.

ing the use of aromatics, with a view of promot-

If we are not called to the patient before the ing the secretion of the liver and intestines.

bladder has given way, we must make an inci-The operation of dividing the sphincter ani is

sion into the urethra, through or behind the simply in proportion as you find a ready opening

stricture, and scarify the swollen parts freely to into the rectum. You introduce a small probe-

let out the urine and sloughs ; then we must apply poultices to promote their separation, and

pointed bistoury into the fistula, pass your finger up the rectum to meet the instrument, and, ear-

when the wounds begin to look clean, dress rying the point downwards, divide the interven-

them.

6. Rectum. — Piles are caused by varicose veins of the rectum ; they are situated either

ing parts. If the fistula is very extensive, you will be under the necessity of putting your finger on the extremity of the instrument, drawing the

above or below the splenetic muscle, but not on knife downwards. If the fistula does not open

it. When they are situated externally, they into the rectum to meet the knife, place it along

often swell and inflame, becoming very trouble-the end of the knife, and move the rectum for

some ; but, when internally, they produce first some little time with your finger nail, and

an itching of the rectum and scrotum, then a then, cutting through the cellular tissue, bring the

sensation of some foreign body in the rectum, point of the instrument into the rectum. A very

which subsides and returns alternately ; then when at stool the patient notices something protruding, which becomes more and more every time ; they will return spontaneously at first, but presently the patient is obliged to press on them; and at length it is with great difficulty and length of time, that he can get them up at all ; now there is a great discharge of mucous;

copious bleeding generally follows the divisioi of the intestine ; you must not, therefore, leave your patient, but endeavour to stop the hajmorr-hage by introducing a portion of lint into the wound. No union of the sphincter ani will take place until granulations have arisen at the parts of the wound most distant from the rei'tum. You should not change the lint for several days,

pain when they protrude; they inflame and but apply poultices, and merely introduce often bleed profusely ; the patient becomes pale probe from day to day, to see that there is no

improper adhesion.

Ulcers of the rectum, give the patient a great

anil feeble, and has a voracious appetite ; they often lay the foundation of a prolapsus ani, and at last they make large fleshy tumors, which deal of pain and mental anxiety; pausing an

ulcerate;or form abscesses, causing fistula in ano. unpleasant discharge and a gradual decay of the

Treatment.— Keep the bowels moderately health. They may often be cured by mild laxa—

open ; when they are in a mild form, wash them tives, then stimuli, as copaiba, cubebs, or \ arc! s

with cold water, and inject this every morn-paste ; but when they do not heal it is generally

ing after a stool. If they are more severe, add owing to their being constantly agitated by the

to the injection alum, or a muriated tincture of splenetic muscle; so that division of this, in a

iron, and give the patient Ward's paste. If they backward direction, will accomplish the cure, are very severe, and bleed, we may remove them Prolapsus ani is common in children of cost.ve

by an operation. If seated externally they may habit; in whom purgative med.cn.es alone will

be snipped off with knife-edged scissars; but this generally succeed in removmg it ; but ,f not w<-

is not safe where they are infernal, on account of may support, the rectum by a compress and use the profuse haemorrhage. These are to be tied

of astringent injections. In adults, it generally depends upon internal piles, upon the cure of which the disease ceases.

SECT. VI. — DISEASES OF THE SKIN.

1. (Edema is a preternatural accumulation of aqueous fluid in the interstices of the cellular substance of a part. The tumor is uncircumscribed. The skin of the swollen part retains its natural color : if at all changed it is rather paler. The part has a cold feel, and the pressure of the finger occasions an impression, or pitting, which remains some time, and disappears slowly. There is no acute pain ; but there is an uneasiness or sense of weight, and tightness. When the cedametous limb is in a depending posture, the magnitude of the tumor is increased , et vice versa.

(Edema may depend on constitutional, or on local debility. Contusions, sprains, the long-continued use of relaxing poultices, and washes, are often local causes of oedema. A part which has undergone acute inflammation often remains eedematous for some time afterwards. In all these instances the tone of the vessels being impaired is the cause of the disease. The complaint is very often owing to some impediment, preventing a return of blood to the heart. The pressure of the gravid uterus on the iliac veins often renders the lower extremities cedematous. Aneurisms frequently compress the chief veins of an extremity, and bring on this affection. (Ede-ma must frequently be a mere symptom of other diseases, which operate as a cause. It accompanies ascites, hydrothorax, deeply seated abscesses, &c.

Treatment. — No cure can be expected till the particular cause has been removed. To promote the absorption of the extra vasated fluid, and to re-establish the original tone of the vessels, are always, however, grand indications. The limb should be kept in an horizontal position. Frictions made on the part with flannel, fumigated with aromatic vapors ; the application of came-ra le flowers, and preparations containing camphor ; and a moderately tight roller ; tend strongly to rouse the absorbents into action. The operation of these means is considerably assisted, by giving internally purgatives, diuretics, and emetics. If the tumour should not soften under this plan, but become so tense as to occasion pain, inflammation, and the danger of gangrene, the fluid may be discharged by means of small punctures. These, however, are not void of danger; for all wounds, in dropsical constitutions, and parts, easily become gangrenous. The punctures, therefore should be as small as possible. It is chiefly, however, in cases of anasarca, or those attended with a general dropsy of the whole body, and an extensive extravasation of water in the cellular substance, that scarifications become necessary, and not for the local swelling, implied by the term cedema.

2 Roil. — This does not differ from common abscess, except in

containing a small slough at the bottom, which is commonly called the core; this should be squeezed out and it will heal up. Persons are often troubled with a course of them after illnesses ; in these cases country air will be set viceable, and a course of liq. potassa or bark, &c.

3. Carbuncle occurs in persons of broken down constitution, either from free living or other causes ; it may be called a malignant or gangrenous boil. It is always attended by considerable constitutional disturbance. The swelling is not much elevated above the level of the surface of the body , the skin, over the middle of the disease, assumes a dull brown, red color; and, what is always very remarkable, it becomes so hardened and thickened, that, when handled, it feels like brawn. As the complaint advances, several apertures generally form in the tumor. Through these openings, a yellow, greenish, bloody, irritating discharge flows out, while the great mass of the matter, ana sloughy cellular membrane, still continues confined, and the gangrenous mischief, in conse. quence of an early, free opening, not being made, ofien spreads to such an extent that the patient perishes. Indeed, the ravages attendant on carbuncles are at their deepest part, or their base which always occupies a much greater extent than the superficial portion of the disease.

Treatment. — We must lay them open by a crucial incision, and poultice till the sloughs have separated ; then stimulate them. Give the patient cordials and tonics, and, if he have several in succession, sarsaparilla or mercury, with generous diet, country air, and exercise.

4. Tumors, encysted, occur mostly in the substance of the skin, and are composed of a cyst, analogous to a serous membrane, which secretes a pulpy cheesy substance, very offensive and ran-cid. They are situated very commonly in the scalp. They sometimes inflame and burst, leaving a little orifice, from which matter flows and is incrusted, sometimes in the shape of a horn.

Treatment. — It is seldom, if ever, that we can discuss these tumors, but we may check their growth by cold and stimulating lotions; the only cure is by removing them. In doing this \e take care to avoid opening the cyst; but, by dissecting round it, turn it out entire, without much difficulty. If we should accidentally wound it we must then take hold of the cyst by a pair of dissecting forceps, and care must be taken not to leave any of it remaining, or else fungus granulations often rise from it, hindering the wound from healing. The

wound may otherwise be healed by the first intention.

Fatty tvmors are either contained in a fine cyst or not; ihe former is the most common. It gives the patient no pain but continues to increase. If it gets beyond a certain size it is liable to inflame, and either suppurate or ulcerate.

When it ulcerates, the growth of the tumor is more rapid, and discharges a thin watery pus with flakes of fatty matter floating in it. This may be distinguished from other tumors by the feel, it being soft, elastic, and possessing no fluctuation ; they sometimes run into more malignant tumors. The only method of curing these is to dissect them out when they become troublesome. It is generally a very easy operation. We must cut into the middle of them, and can mostly separate them from the surrounding parts by the fingers.

There are several other varieties of tumors, not contained in cysts, and not of malignant nature, such are the sarcomatous or fleshy tumors do-

scribed by Mr. Abernethy. same treatment.

These require the the patient, as it hinders the motions of the tongue. It is caused by an obstruction of the

5. Corns and bunyons are caused by a lami-duct, so that the saliva accumulates in it and nated induration of the cuticle from constant then becomes inspissated ; it is not painful and pressure or friction, and are generally produced may be treated by making an artificial opening on the feet by wearing tight shoes ; when the into the mouth, either by cutting a piece out or disease is more severe, or in that form which is opening the tumor, and preventing it from heal-commonly called bunyons, ‘ a buva mucosa/ ing.

says Mr. Brodie, « is formed under the part 3. Salivary fistula.— When a salivary gland in—

which often inflames, though it seldom ends in flames and suppurates, it may break externally

abscess, but causes a great deal of pain.' through which opening, the saliva pours in in—

Treutment. — We may either palliate or radi-credible quantity, so that the patient is constantly

cally cure them ; the first may be done by annoyed, particularly at meal times ; these may

causing the patient to wear looser shoes ; paring be best cured by running a seton through the

the corn ; soaking it in warm water ; defending it external opening into the mouth,

from pressure by wearing a felt sole with a hole 4. Thyroid gland is liable to schirrus as well

cut tc receive the corn, or applying pieces of dia-as other glands ; but this is very rare, the most

chylon plaster spread on leather over the corn, common affection of it, being a preternatural

but, leaving a little aperture in the middle, which growth of its own substance, so that it forms a

just allows the greater part of the corn to enter; monstrous tumor in front of the neck ; this lias these will generally succeed in quieting them, but when they inflame, we must leech them, and apply cold lotions. If they suppurate they will

been termed goitre, and is very common mountainous countries ; so much so, that in s'-. districts of Switzerland they are considered or-

then touch it with lunar caustic. Mr. Brodie says they may be cured by blistering.

6. Whitlow, is an abscess situated at the root of the nail, very often burrowing under it, causing a great deal of pain and death of the nail. It should be opened as soon as possible, and, if there be matter under the nail, we should let it out by scraping the nail with a piece of glass till it is quite thin, and then slit it up ; when the nail dies it acts as a foreign body and irritates the abscess, so we should bring it away as soon as possible.

burs.t and cure themselves radically; otherwise namental; they are more frequent in scrofulous this maybe accomplished by rest, soaking the persons. These tumors cannot be removed from feet every day, and then paring away as much the quantity of blood vessels, but they may be as possible, till we can dig out the little heart in diminished or even cured by the exhibition of the middle, or else we may pare it very thin, and iodine, internally or externally.

5. Diseases of the breast. — This gland is liable to inflame, especially when nursing; it is generally accompanied by acute pain, and mostlv ends in suppuration, forming an abscess, which, when deeply seated, breaks by several openings, forming sinuses between them.

Treatment. — The antiphlogistic means must be used the first instance ; but, if the pain be violent, warm applications must be used instead of cold ones. If it suppurates it is generally better to allow it to break. If sinuses form they must be laid open ; and Mr. Hey

7. Warts have been already mentioned as oc-recommends that, if any portion of breast is curring about the pudenda, the treatment of contained between two sinuses, it should be re-which will apply to common warts; but these moved.

last may be safely removed, by nitric acid or li-Schirrus breast never happens under puberty, gature. seldom under twenty-seven years of age, but

8. Navus. — These are spots in the skin which mostly when menstruation begins to cease. It have grown with the child, and consist of a plexus is sometimes situated at the nipple, sometimes of small arteries and veins, which sometimes it forms a substance superadded to the gland, spontaneously enlarge, and are apt to bleed ; if but mostly attacks the latter, causing its struc-the application of cold does not succeed in ture to become altered. There is frequently in checking them, they must be treated as aneu-the first instance a

bloody discharge from the risms by anastomosis which they very much re-nipple ; then comes on a round tumor, hard semble. knobbed and irregular, with lancinating pain,

but not always at the commencement ; then the SECT. VII. — DISEASES OF GLANDS. nipple is tucked in, the skin adheres and ulcer —

1. Absorbents.— Inflammation of these does ates, having every character of the cancerous not differ from common inflammations, except ulcer as already described. After some time i that there are lines seen running from one to the becomes adherent to the pectoral muscle, and next above it; this is particularly the case on the the affection spreads to the glands of the axilla arm, but this disease is generally caused by ex-or behind the clavicle.

traneous matter, which has already been noticed Treatment.— This, like all other a ers, ca under the head of poisoned wounds, and dissecting only be cured by an operation, and this s wounds. But the most common affection of these not be performed if the neighbouring parts glands is the scrofulous affection of them, in much contaminated, or if the patient I which case they proceed to suppurate very The operation of removing this or most other •iowly ; they must be treated as recommended in cancerous tumors is a mere piece of dissection. scrofula The incision is generally double and semi-oval,

2. Sahvary Wamfe.-Ranula is a tumor of to include the portion of diseased or superfluou the sublingual gland, which is very annoying to skin, thus (){ the apex should point

axilla, so that if We find a gland diseased near the breast, we may extirpate it by this first incision ; several small arteries are generally wounded, and may be compressed by an assistant. The dissection should now be continued on both sides, and then the base may be removed when we expose the pectoral muscle and meet with the mammary arteries. These are to be tied, and the ligatures left hanging

out at the lower aperture. The wound is now to be closed by adhesive plaster, &c.

There are other diseases of the female breast not schirrus. One which grows to a very large size, the pancreatic sarcoma, which is not likely to return when removed, or there may be tumors containing hydatids, also to be removed.

SECT. VIII. — DISEASES OF THE ORGANS OF SENSE.

1. Eye. — Our limits will not admit of even a description of most of the disorders incident to this beautiful and complicated organ ; we must therefore be content to describe one or two most interesting to the surgeon.

Fistula lachrymalis, which consists, in the first instance, of an obstruction of the lachrymal duct, so that the tears become accumulated in the sac, and after some little time flow over the face ; then the tears lodging in the sac become inspissated, create irritation and inflammation of the sac, which however does not suppurate at first, but furnishes a thin mucus of a pale color, which, as the disease advances, gradually assumes a more purulent appearance ; at last the skin over the sac, by repeated attacks of inflammation, becomes thin and bursts ; and now the tears flow freely over the face, being extremely troublesome : the eye also becomes more or less inflamed, and the bones of the ductus ad nosum not unfrequently carious.

Treatment. — In the first stage it is best to in-ject some bland fluid, as milk or whey, into the nose from the punta lachrymalia, by means of Anel's syringe. Having thus cleared a passage for the tears, a slightly astringent and stimulating collyrium may be dropped into the eye, from which it will naturally find its way to the sac, and this is often successful; but, when the duct is quite closed, we may make an opening into the sac, or, if there be one already, dilate it ; then pass a probe down the duct, and withdraw it, leaving in its place a silver style, with a small flat head, to prevent its slipping into the nose ; this should be taken out and replaced once a day for alfout a week, and then less often : it may be discontinued in about a month or five weeks. But when the sacculus is quite obliterated, or tl>e bones carious, a new passage altogether rtiust be made ; and for this purpose it is usual to perforate the os unguis which divides the posterior part of the sac from the cavity of the nose; this is effected by a small trephine, or a curved trocar, and into the aperture a style is to be introduced, as in the former case, for fear of the opening healing.

Extirpation of the eye may be required in cases of cancer, &c., and is to be performed thus : — The eyelids are to be divided at the outer canthus, to give freedom to the operation, and the conjunctiva to be separated above and

below ; then the eye may be seized by a tenacti* him, and a straight knife introduced above, and to the inner side of the ball, which thus divides the optic nerve and muscles at once. It may then be passed round under the eye to free it ; a good deal of haemorrhage generally occurs, but may be stopped by pressure : the inner surface granulates, and so heals.

2. Nose. — Polypus. There are two sorts which affect the nostrils, generally growing from the superior spongy bone ; the more common one being transparent and gelatinous, and more liable to return ; the other being fleshy, and not so liable. These occasion great uneasiness by plugging up the nostril, and sometimes deafness, by pressing on the opening of the eustachiau tube ; or one may even press on the jugular vein, causing giddiness, headache, and other signs of venous obstruction upon the brain. These are to be removed by an operation which consists in passing a curved pair of forceps as near the root as possible, and then pulling them away ; but, as they depend upon a diseased state of the bone or membrane of the nose, they are liable to return ; so that, when we have removed them, we should endeavour to cure or alleviate the disease by touching the part with some stimulating application, as the ung. hyd. nil. mitius.

Ozana generally occurs in scrofulous people, but is met with occasionally in others. It be-gins with a sense of fulness in the nostrils, and discharge of mucus, as if the patient were affected by a common cold. This is caused by the membrane being thickened, which thus contracts the nostrils : this goes on increasing, till at last the patient cannot breathe at all through the nostrils, and he wakes in the morning with a dry tongue as hard as a board, giving him great uneasiness : this goes on for some time, till at last the membrane ulcerates, discharging a very foetid matter, and the bone dies and exfoliates. In the latter stage the patient feels pain in the nostrils, and at the root of the nose, on the forehead.

Treatment. — In the early stage we should em-ploy stimulating and astringent lotions, or snuff; when the disease is more advanced, we may dip a camel’s-hair pencil in the following liniment, and apply it all over the nostril internally : ung. hyd. nil. mitius : ol. olivffi, a a

partes tsequalis. Sometimes it is useful to give the oxymuriate of mercury and sarsaparilla. Ulcerated openings in the septum may often be cured by touching it with the ung. hyd. nil. mitius, or solution of argentum nitratum.

Abscess of the untrum highmorianuni is occasioned by obstruction of the duct leading into the nose. It occasions the antrum to swell enormously, disfiguring the face; the bone grows as thin as paper, and there is very great pain. An opening must be made by drawing the third molar tooth, and perforating its socket into the cavity ; or, what answers better, is to cut away with a curved knife a piece of the projecting tumor under the upper lip, where the bone is so thin that it may be cut easily.

3. Mouth. — Enlargement of the tonsils occurs often after common quinzy, especially in scro-

glutition uncomfortable and obstructs the breathing, particularly during sleep, and sometimes causes deafness. This enlargement generally subsides spontaneously soon after the age of puberty.

Treatment. — If it is very troublesome we must endeavour to mitigate it by giving burnt sponge or iodine, steel bark or sarsaparilla, and send the person to the sea side. If this treatment does not succeed we may remove the whole or greater portion by ligature,*or what answers better, as it is less inconvenient, is to cut off about three-fourths of it with a curved pair of knife-edged scissars, having probe points. The bleeding is not considerable and the pain trifling.

Some persons are affected with an elongation of the uvula, which thus drops down into the fauces, causing a constant cough and irritation. In this case we may snip off a portion and gargle the throat with astringent substances.

The lip is peculiarly liable to cancer, especially the lower one ; in which case we should remove it, and by bringing the edges together,

and retaining them by hare lip pins, we shall get them to heal without much deformity.

4. Hare lip. — This is a malformation of children, there being a fissure or longitudinal division in oue or both lips. It most commonly exists in the upper lip, and the fissure may be double with a little portion of lip between them. It commonly affects only the lip, but sometimes extends along the bony palate as far as the uvula.

This deformity may be remedied by an operation, which is merely paring off the opposite edges, by a knife or scissars, in a straight direction, and bringing them together; and in order to retain them in apposition it is usual to employ one or more silver pins, at one end of which is a moveable point. These are thrust through the opposite parts and the points withdrawn. Then silk is to be twisted round them to retain them.

This wound being a clean cut unites by the first intention, but it is not prudent to take out the pins too early ; they should be left for about four or five days, then sticking plaster will be sufficient. When there are two fissures we should operate on one at a time. When the bone is deficient it obstructs the voice and swallowing; a piece of sponge or metal plate may be adapted to fit it and will remedy these inconveniences.

PART III.

VARIOUS SURGICAL OPERATIONS AND OBSERVATIONS.

SECT. I.- — OF AMPUTATION. Amputation, derived from ab and puto (the b becoming m by vocal assimilation), implies the pruning off or severing from the body a diseased limb ; and thus, by removing the offending part, allowing the constitution, which has become affected by sympathy, liberty to recover its pristine health and soundness. Something terrible associates itself in the imagination of mankind with the idea of cutting off a portion of the human frame, so that the application of the knife was looked upon as the last resort; according to

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anui securing a lappet ot nesn to cover and prevent the protrusion of the truncated bone was unknown. In the year 1679 it was proposed by Jacob Young, an English surgeon, in a treatise which bore the title of Currus Trimphalis est Terebintho to preserve a flap of flesh and skin which might be folded over the bone, and, by coalescing, effectually prevent the inconveniences of excoriation or rawness which might otherwise be apt to take place. We might antecedently conjecture that the first attempts were unsuccessful, owing to our ignorance of a method of healing the wound by the first intention, to an inap-titude of the instruments, and to an awkward manipulation in the operator.

Amputation may be rendered necessary either when a member is so much diseased as to be useless, or when it puts life in danger. The general causes rendering this operation necessary are bad compound fractures; extensive lacerated and contused wounds; part of the limb being carried off by a cannon ball or otherwise ; the bones being unequally broken and not properly covered; extensive mortification ; white swell ings of the joints ; large exostoses ; ulcers attended with extensive caries ; cancer or other incurable ulcers; varicose kinds of tumors; particularly distoxsions of the bones.

Amputation may also be sometimes necessary from violent haemorrhages of some principal artery during ths cure of a fractured limb, or from such a profuse discharge of matter taking place that the strength of the patient is exhausted. Lacerated and contused wounds may require amputation on account of haemorrhage ensuing which cannot be stopped. Extensive mortification may take place, and such large quantities of matter be formed that the patient will be unable to bear up under the discharge. Where part of the limb is carried off it is necessary to amputate higher up, so as to cut the bone, as well as the soft parts, in such a manner as may admit of a much speedier and safer cure. When mortification occurs every thing ought to be done for the support of the patient till this symptom be stopped ; the first sign of which is the appearance of an inflamed circle between the diseased and sound parts. As soon as the diseased begin to separate from the sound parts, amputation of the limb ought to be performed, and no

time ought now to be lost, lest the patient suffer from the absorption of putrescent matter.

No part of surgery is brought to greater perfection than the manner of performing amputation. Before the invention of the tourniquet, and the method of securing the vessels by ligature, the operation was seldom undertaken ; and a great proportion of those upon whom it was performed died soon after. In the present improved method one death does not happen in twenty, or even thirty cases. In performing tlie operation particular attention is to be paid to the spot where the incision is to be made ; the quantity of skin and cellular substance necessary to be saved, so as to cover the muscles and l;t::e

completely without being stretched ; cutting the muscles in such a manner that they may unite with each other and entirely cover the end of ihe bone; the prevention of haemorrhages during the operation ; the tying of the arteries alone, without including the nerves or any of the contiguous parts ; securing the integuments so as to prevent them from retracting after the operation ; and a proper subsequent treatment of'the case.

The following are the general steps of the operation : — The patient being properly placed, with assistants to attend, and the apparatus in proper order, the flow of the blood to the limb is to be stopped by the tourniquet. The first incision is to be made through the skin and cellular substance by one or two circular strokes of the amputating knife. These are next to be separated from the muscles as far as may appear sufficient for covering the stump. The separated skin or flap should be strongly drawn up, or, what perhaps answers better, turned up all round the limb, leaving this part of the muscles quite bare. The flap is to be kept in this situation by an assistant, while the operator makes the next incision at the edge of the reflected skin, and cuts till he comes to the bone. This incision should be begun on the lower side of the limb, that the blood may not prevent the eye from readily following the edge of the knife during the whole cut. The muscles are now to be separated from the bone as high as may enable them

afterwards completely to cover it. The soft parts in general are then to be drawn up by retractors, which may be either of leather or metal. The periosteum is to be divided at the place where the saw is to be applied ; but no part of the bone is to be denuded of this membrane, which is afterwards to cover the stump, otherwise troublesome exfoliations may ensue. At this place the saw is to be applied, and the bone divided with long steady strokes. In this part of the operation a good deal depends upon the steadiness of the assistant who holds the limb ; for, if it be held too hi<rh, the motion of the saw will be impeded ; while the bone may be splintered if it be not sufficiently raised. Any points or splinters which may be left should be immediately removed with the pincers. The retractors are now to be laid aside, and the principal arteries separated from the nerves, and secured by the tenaculum, or forceps, and ligatures.

The tourniquet should next be a little slackened, to allow the different branches to be discovered. The clotted blood is to be .cleared away with a warm sponge. The patient should get some warm cordial drink, and all the arterial branches which can be discovered ousht to be taken up. The ends of the ligatures are then to be cut of such a length as to allow them to hang •without the lips of the wound. The muscles and skin are now to be drawn down and brought into close contact, that the stump may be completely covered. The parts are next to be secured by proper bandaging ; and, if the operation has been properly performed, the cure will commonly be made by the first intention, and may be completed in the course of three or four weeks, and sometimes in a shorter period. This, however, must depend much upon the constitution

of the patient, as well ad the manner of performing the operation.

Of amputation of the arm and forearm. — Amputation of the arm is performed according to the rules already laid down. No more of it should be removed than is diseased ; for the longer the stump is the more useful it proves. The tourniquet is to be applied a little above the part where the operation is to be performed : as much of the integuments should be saved as may be perfectly sufficient for covering the sore. In taking up the artery, after the bone has been divided, the operator ought to be attentive not to include the radial nerve, which may be readily discovered and separated, as it lies close upon the fore part of the artery. The forearm is to be amputated nearly in the same manner as the leg ; only that the stump may be covered by amputating with the double incision, without the

assistance of a flap, which it is necessary to form in the leg.

Of amputation of the thigh. — In performing this operation the patient ought to be placed upon a table of ordinary height, with the diseased limb supported and secured by an assistant seated before him, while other assistants take care of the other leg and the arms. The course of the blood is to be stopped by applying the tourniquet over the trunk of the femoral artery, near the upper part of the thigh. No more of the thigh ought to be removed than is rendered necessary by the disease, as the more of it is left the more useful it will be to the patient. An assistant should grasp the limb with both hands a little above the place where the skin is to be divided, and draw it up as far as possible ; while the operator, standing on the outside of the limb, makes a circular incision down to the muscles by one or two strokes of the knife. As much of the integuments is then to be dissected with a scalpel from the muscles as may cover the stump completely ; and this part of the skin may either be turned back or drawn tightly up by an assistant. The muscles may then be divided quite across to the bone by the edge of the skin, in the com-mon way, or cut obliquely upwards, according to the method of Allanson, so as to lay the bone bare two or three fingers' breadth higher than i.« done in the common way. The muscles are next to be separated from the bone with a scalpel a little way, that a sufficient quantity may be left for covering the end of it. The rest of the operation is to be performed exactly according to the general rules laid down in sect. I. The muscles and integuments are to be drawn over the end of the bone, and applied closely together, that the skin may completely cover the stump, and retained in this situation by an assistant till a a flannel or cotton roller, according to the season of the year, which has been previously fixed round the body, be applied in such a manner as to support and fix them. For which purpose it should be passed two or three times, in a circular direction, round the top of the thigh, and should afterwards, with spiral turns, be brought down near to the end of the stump, and fastened with pins ; and it should not be tighter than may be sufficient to assist the plaster? in preventing retraction.

The ends of the divided muscles are now to be laid exactly over the bone ; and the edges of the skin are to be brought into contact, either so as to form a straight longitudinal line, according to the method of Mr. B. Bell, &c. ; or they are to be placed horizontally, ‘ that the wound may appear only in a line with the angles at each side,’ as advised by Allanson. The ligatures may either hang over the edges of the wound, or be brought to the angles. After the edges of the skin are in this manner exactly applied to each other, either a few slips of adhesive plaster are to be laid across the face of the stump, or two large pieces of adhesive plaster, with several pieces of tape fixed to them, are to be applied to the surface of the skin. The tapes are then to be tied with a running knot immediately over the wound ; by which the parts will be kept so closely together as to prevent any collection of matter from being formed. The whole surface of the stump should next be covered with a large pledget spread with an emollient ointment, over which a compress of fine tow is to be put, and retained in its place by a broad cross strap of old linen, passing some way up the thigh, so as to be secured by the roller, which is now to be passed two or three times round the stump ; and the pressure formed by the cross strap may afterwards be increased or diminished at pleasure, by drawing it with more or less tightness, and fix-ing it with pins to the roller. While the stump is dressing the tourniquet is removed, but replaced again loosely to enable the attendants to check any hsemorrhage which may afterwards ensue.

The patient is now to be laid to rest, and the limb is to be placed upon a little tow covered with linen, or upon a thin soft pillow ; and to prevent the patient from involuntarily moving the limb, and to guard against spasmodic start-ings, which frequently happen after this operation, it may be fixed to the bed by two straps. A basket or hooped frame ought to be placed over the stump to protect it from the bed-clothes. The patient should immediately get an anodyne draught, which will generally procure ease through the rest of the day. For this purpose no more light should be let into the room than is merely necessary for allowing the attendants to pay attention to the stump. As haemorrhages sometimes appear several hours after the operation, the person who takes the charge of the patient should watch this circumstance with the greatest attention. If there be only a slight ooz-ing of blood there is no occasion for being alarmed ; but whenever it appears to proceed from a large artery it must be secured. The spasmodic affections which frequently occur after amputation are seldom troublesome, unless some nerve has been included in securing the arteries ; but, when they do appear, laying the limb in the easiest posture, and giving opiates, are the principal means of procuring

relief.

To prevent inflammation as much as possible, the patient is to be kept upon a strict antiphlogistic regimen, and his bowels kept open by laxative clysters till the inflammatory stage is over, which will generally be in a few days. If, notwithstanding this treatment, the stump swells,

and the patient complain of pain and tightness, we ought to endeavour to discover from what cause the uneasiness originates. If it be owing to the straps being too tightly fixed they must be slackened. If the stump be found much swelled, a saturnine solution should be applied by means of several folds of linen; and if the patient be young and plethoric he ought to lose a few ounces of blood from the arm ; but if he is weak and emaciated a different mode of treatment must be followed.

At the end of the third or fourth day, at farthest, the stump should be examined; and if it appear somewhat open and flaccid, the parts must be brought closer together and secured more firmly. After this time the dressings should be renewed every day, or every second day. In about a week after the operation the ligatures may generally be removed with ease ; but if they do not separate readily they may be gently pulled at every dressing, when they will, in a short time, be brought away, and the wound will be soon healed by the first intention. The roller should be cleaned and renewed as often as it is found sullied ; nor should it be laid entirely aside till the end of the third or fourth week after the operation. When the roller is removed, we may depend upon the straps or tapes for keeping the parts together till the cure be quite accomplished. When the inflammatory symptoms are entirely gone, no medicines ought to be given which would debilitate the patient, nor is any thing more necessary than to keep the bowels gently open till a complete cure be made.

Of amputation of the leg. — The leg may be amputated fora disease in the foot at two different parts; the one a hand-breadth under the knee, the other a little above the ancle. The former makes a sufficient support for the body to rest upon an artificial leg, but the latter does that equally well, and likewise preserves the motions of the knee.

In performing the operation a little way und°r the knee, the patient is to be placed and secured in the same manner as in operating upon the thigh. The tourniquet is to be placed a little above the knee, with the

cushion upon the artery in the ham. The surgeon places himself upon the inside of the leg, and makes a circular incision through the integuments down to the muscles. The place where the incision should ln> made must depend upon the length of the limb ; but in general it may be between six and seven inches under the top of the tibia in an adult, or far enough down upon the limb to save as much integuments as will cover the stump. After the integuments are cut through, in the manner already directed, as much of the muscles are to be divided by the knife as can be done by a circular incision; and the interosseous parts are to be divided by a scalpel or catlin. The retractors are then to be applied, and the bone sawed off immediately below the insertion of the tendons of the flexor muscles. In sawing, the operator ought to begin upon both bones at the same time, that he may finish upon the tibia, lest splinters should be formed. The vessels are next to be secured ; the soft parts drawn over the bones; the adhesive plasters and other bamlai

applied in the same manner as directed for amputating the thigh, only that here ihe roller need not be applied so high as in the former operation. Two or three turns above the knee, however, are necessary to prevent the dressings from slipping down.

In amputating upon the ancle, the operator should fix upon that spot which will leave the stump of such a length as may be most convenient for being fitted with an artificial machine resembling the other leg. Nine inches from the joint of the knee, in a leg of ordinary length, was found by Mr. Wilson, a late ingenious artificial limb maker in Edinburgh, to be the best part suited to this purpose, on account of the equal pressure it makes upon the surface of the leg, without making any upon the end of the tender stump. The operation is performed in the same manner as that a little below the knee.

Of amputation at the joints of the extremities. — The circumstances most to be attended to in performing amputation at the joints are, first to stop the circulation by the tourniquet ; or, where that is impracticable, to take up the trunk of the artery by a ligature; to make

a circular incision in such a place as may, after the operation is over, be sufficient to cover the wound : then a longitudinal incision is to be made upon the opposite sides of the limb, extending from the joint to the circular cut, and as deep as the bone, by which two flaps will be formed to cover that part of the joint which remains after the operation is finished. The ligaments of the joint are next to be divided, and the affected limb or part of the limb removed. After this part of the operation, jt was formerly a frequent practice to scrape off the remaining cartilage, to unite the parts more firmly together. But this is now found to be unnecessary ; for, when the flesh is applied properly to the bone, if it do not grow to it, the union at least is so close that it afterwards gives no inconvenience to the patient. Any branches of arteries which may have been cut during the operation are now to be secured ; clotted blood is to be removed; and the muscles and skin are to be brought into close contact with the ends of the ligatures hanging out of the wound. The parts are to be retained by adhesive plasters, or twisted suture, or both ; and proper bandages applied in such a way that a cure may be made by the first intention.

Amputating the arm at the shoulder joint has always been considered as a dangerous as well as a difficult operation. It should never be attempted, when the same purpose can be accomplished by operating lower down. But cases occasionally occur where the life of the patient cannot, in any other manner, be saved.

Amputation may become necessary here in consequence of abscesses of the joint ; caries of the humerus reaching to the joint ; compound fractures, especially those from gunshot wounds, extending to the head of the bone; and of mortification.

ID performing the operation, the patient should be laid upon a table of convenient height, covered with a mattress. He is then to be brought as near to the edge of it as possible, and secured by assistants. The circulation of the blood in the arm is next to be stopped, by

an assistant pressing strongly with a firm compress over the subclavian artery, where it passes over the first rib ; or an incision may be made along the course of the artery, which may be secured after separating from it the contiguous nerves. When the artery is compressed, it will readily be known whether the compression proves effectual, by observing when the pulse at the wrist is entirely stopped. As soon as this is the case, a circular incision is to be made through the integuments at the insertion of the deltoid muscle into the

humerus. An assistant then draws the skin a little back, and at the edge of the retracted skin the muscles are to be cut in a circular direction to the bone. If the artery has not been taken up at the beginning of the operation, it is now to be secured, as well as any branches which come in the way.

The amputation knife is now to be laid aside, and the rest of the operation finished with a strong scalpel. A perpendicular in vision is next to be made at a little distance from the outside of the artery, beginning at the acromion, and terminating in the circular incision, cutting as deep as the surface of the bone. A similar inr cision is to be made upon the back part of the arm, so that the flaps may be nearly of an equal breadth. The arterial branches are here to be secured ; the flaps are to be separated from the bone, guarding against wounding the trunk of the artery ; the flaps are to be supported by an assistant; and the capsular ligament of the joint is to be cut from the scapula : and thus the arm will be entirely separated.

After the arm has been separated, any arteries which appear about the joint are to be tied, and all the ligatures brought over the edges of the wound. The parts are to be cleared of clotted blood, and the two flaps drawn over the wound, and secured by the twisted suture. A pledget of any emollient should then be applied, and a sufficient cushion of lint, with a compress of old linen, put over the whole. A moderate pressure is next to be applied by a flannel roller : by which the parts will be supported, their union facilitated, and matter most likely prevented from being lodged. The treatment is then the same with that after amputation in other parts of the extremities. For two or three days after the operation, it is necessary that an assistant sit with the patient to compress the artery in case a bleeding should ensue.

When it is necessary to amputate the whole hand, the operation may be performed at the wrist, so as to leave as much of the member as possible ; and the same rules hold here as in amputating at any of the rest of the joints. The tourniquet is to be applied to the artery in the arm, and the cure is to be completed by the first intention. When any of the carpal bones are affected, the sore will not heal till they either work out by suppuration, or are cut out by the knife. When the middle of any of the meti-carpal bones is diseased, while their extremities are sound, the trepan may be applied, and the diseased parts removed, while the remaining sound parts ai:e preserved. But if the whole bodies of one or two of these bones be affected, while the rest remain sound, all the afl’ectw-1 bones ought lu be remove;!. In performing the

operation, an incision is to be made along the course of the part affected ; and, if the operator have it in his choice, the incision should be made upon the back part, so as to save the great vessels and nerves situated in the palm. The integuments are then to be dissected, and turned to each side ; after which the diseased bones or parts of bones are to be removed, guarding as much as possible against wounding the principal arteries or nerves which lie near them.

The diseased parts are next to be separated ; any arteries which happen to be cut are to be secured ; and, on account of the free communication which they have with neighbouring branches, they ought to be tied at both cut ends. If, after this, a bleeding still continue, compresses, styptics, and other remedies proper for stopping, blood, are immediately to be used. The sides of the wound are to be brought together, and an attempt made to cure them by the first intention.

In amputating the fingers, it was formerly the practice to operate upon the bodies of the bones in the same manner as in the larger extremities ; but at present the removal at the joints is more frequently practised. In performing the operation, it is necessary to save as much skin as may cover the stump, and this ought to be done upon the side next the palm, so as to guard against the effects of friction. The general steps of the operation are the same with those for amputation of the larger joints.

A circular incision is to be made on the finger by a crooked bistoury, about the middle of the phalanx, and it may be carried at once to the bone. Another incision is to be made with a common scalpel at each side of the finger, beginning at the circular one, and continuing it to the joint, by which two flaps will be left to cover the stump. The ligaments of the joints are now to be divided, and the bone removed. The blood vessels are to be secured by ligature, and the flaps exactly applied to each other; but, in order to protect the end of the bone completely, a small portion may be cut from the uppermost flap. The flaps are to be retained by adhesive plaster, or by the twisted suture ; but if the latter be used, the tendons ought to be avoided. Over the

sore an emollient pledget is to be applied, and then a compress and roller. If the disease be so situated that, instead of amputating at the cavity of the joint, the surgeon shall think proper to operate upon the body of the bone, flaps are to be formed as above, and the bone is to be divided by means of a small spring saw.

The amputation of the thigh, at the hip-joint, has always been considered as one of the most formidable operations in surgery ; so much so, that very few cases appear on record of its hav-ing ever been put in practice. In the Medical Commentaries of Edinburgh an instance is recorded where the thigh was amputated at this joint, and where the patient survived the operation eighteen days, and then died from a different cause, when all risk of haemorrhage was over, and when the sore had even a favorable appearance, which shows at least that the operation has been done with safety. It certainly ought never to be done, however, unless as the last resource,

and when the life of the patient is in absolute danger ; and then only when as much skin and muscles can be saved as will cover the sore, and when there is also a probability of being able to stop the haemorrhage, and prevent it from returning.

When the operation is to be performed, the patient is to be laid upon his back on a table, and properly secured by assistants ; one of whom should be ready with a firm cushion to press, if necessary, upon the top of the femoral artery, just after it passes from behind Poupart's ligament to the thigh. A longitudinal incision is now to be made through the skin, beginning immediately under the ligament, and continuing it downwards along the course of the artery for about six or seven inches. The aponeurosis of the thigh is then to be divided by gentle scratches till a furrowed probe can be introduced, when the opening is to be dilated by means of a scalpel, till two or three inches of the artery be laid bare. A strong ligature is now to be put under the artery by the assistance of a curved blunt-pointed needle.

The part where the ligature should be passed is immediately above the origin of the arteria profunda ; for, if that artery be not affected by the ligature, the patient might suffer by the loss of blood during the rest of the operation. The ligature is now to be secured by a running knot : another ligature is to be introduced a little be-low the former, and likewise secured ; the artery is then to be divided between the ligatures. A circular incision is now to be made through the integuments of the thigh, about six inches from its upper end. The

retracted skin is then to be pulled at least an inch upwards, and at the edges of it the amputating knife is to be applied, so as to cut the muscles down to the bone. This being done, a cut is to be made upon the posterior part of the thigh, beginning a little higher than the great trochanter, and continuing it down to the circular incision, and as deep as the joint. A similar cut is to be made on the anterior part of the thigh, at a small distance from the artery, and this reaching likewise down to the bone. The two muscular flaps are to be separated from the bone and joint, and held back by an assistant. Every artery which appears is now to be secured. Then the capsular ligament, and next the round one, are to be separated from the acetabulum ; by which means the limb will be removed from the body. The acetabulum and neighbouring bone are next to be examined ; and, if they ap-pear sound, the case will be more favorable; but, at any rate, a cure is to be attempted by the first intention. For which purpose, after removing all the clotted blood from the surface of the wound, and bringing the ligatures over the edges of the skin, the muscles are to be placed as nearly as possible in their natural situation ; and, drawing the flaps together so as to cover the wound in the most accurate manner, they are « be kept in this situation by adhesive plaster, and by the twisted suture and oilier dressings, as in amputating at the under part of the thigh. The dressings are to be retained by a broad flannel roller passed three or four times round the body, and soirally over the stump, and s

cured. The patient is then to be laid in bed on the sound side, and treated as for amputation in other parts of the body ; only that greater attention is necessary, as there is no assistance from a tourniquet. Uncommon attention will also be necessary to prevent inflammation, and every symptom of fever which may succeed to the operation.

When the foot is so much diseased as to require amputation, the operation might be performed at the point of the ancle ; but, for the reasons given when treating of amputation of the leg, it is found better to do it above the ancle. When a considerable part remains sound, it

ought to be saved. If any of the tarsal bones are affected, these are to be removed. When the middle or whole body of any of the metatarsal bones arc diseased, they are to be removed in the same manner as directed for similar operations in bones of the hand ; and, if even two of them remain sound, provided they be so placed as to support the toes, they ought to be preserved, as it is known that, by proper treatment, an osseous matter may afterwards fill a considerable part, if not the whole, of the void ; or, if any cavity remain, it may be so stuffed that the use of the foot may still be enjoyed.

In performing an operation of this kind, the patient should be laid upon a table, and the tourniquet applied in the ham to prevent haemorrhage. An incision is then to be made along the affected part; and, if the seat of the disease admit it, the incision should be made upon the upper side of the foot, so as to save the sole. The integuments are to be separated and turned to each side, to allow the affected parts to be completely removed. The principal vessels and nerves are to be saved as much as possible; but, if any particular artery be cut, it is to be secured, and the part treated as after the removal of similar parts of the hand. The amputation of the toes is exactly similar to that of the fingers.

Of removal of the ends of carious bones in the joints. — In compound fractures, the ends of bones, when they protruded in such a manner that they could not otherwise be returned, have frequently been sawed through, and their place has frequently been supplied by a renewal of bone, so as to preserve the ordinary use of the limb. Many cases have likewise happened where a large part of the body of the bone has been thrown out by suppuration, and its place supplied ; and a few are upon record where either the whole of a bone, or that end next the joint, has been thrown out, and its place filled up with callus, so that no inconvenience has been felt. From these circumstances, Mr. White of Manchester was led to preserve an arm by sawing off the head of a diseased humerus ; and Mr. Park of Liverpool to save a limb, by sawing off the ends of the bones, in a case of white-swelling of the knee. When therefore it happens that the end of a bone is diseased, while the other parts are sound, the diseased part may be removed, and the sound one saved, so as, in a great measure, to preserve the free use of the limb.

In performing the operation, the first step should be to use such means as may enable the operator to have a full management of the circu-

lation of the part affected. Then a longitudinal incision of sufficient length, and perhaps another across it, may be necessary to be made through the soft parts of the joint; and this opening ought to be at a distance from the large blood-vessels, that they may be in no danger of being injured. After the end of the diseased bone is sufficiently laid bare, it is either to be brought out of the joint, or a spatula or some other proper substance is to be introduced between the bone and soft parts, so as to defend the latter in time of sawing the bone. After the diseased part of the bone is removed, the arterial branches are to be secured, and the wound treated like any other wound of equal size.

During the cure, the limb ought to be kept in the posture most favorable for the removal of the bone, and afterwards for the preservation of the natural motion of the joint. In this way a limb may sometimes be saved which would otherwise have been removed. But, though the removal of the diseased end of one bone may be readily effected, the removal of all that part of the bones which enters into the composition of a joint must be attended with so much inconvenience that it can seldom be useful, unless it be where the ends of bones are destroyed by external violence ; for then it appears that this operation may be performed with considerable success.

SECT. II. — OF OPHTHALMIA, AND ITS TREATMENT.

Ophthalmia is generally understood to mean the inflammation of the eye, but since this term is derived from o<j>6a\[ios, the eye, without any adjunctive to specify on what account the eye is alluded to, there is nothing prescriptive in the sense, and we may extend its signification so as to make it embrace all those diseases which have their origin and seat in parts of the eye. The disease of which we are about to treat may be induced by a variety of those causes which operate in producing inflammation in other situations ; a severe cold in the eyes, if it should be contemporaneous with some affection in the pituitary sinuses, fauces, and trachea, will occasion the disease in question. Other exciting causes have been enumerated, such as a change of weather, sudden transition from heat to cold, the prevalence of cold winds; residence in damp or in snndy countries, during the seasons of summer's drought, exposure of the eyes to the glaring light of the sun, &c. Since from the nature of things a multitude of similar causes are likely to happen at the same time, it ought not to seem extraordinary that the ophthalmia should sometimes put on the appearance of an epidemic and afflict persons of every age and sex. Mr. Green has presented us in Castle's Manual with such an excellent arrangement and description on the indications and treatment of the various modifications of diseases affecting the different parts of the

eye, that we cannot do better than avail ourselves of a portion of such valuable materials, beginning with the simple inflammation of the conjunctiva.

1. Simple inflammation of the conjunctiva. — Simple inflammation of the conjunctiva may be divided, like other inflammations, into acute and chronic ; and first of the acute.

(1.) Acute ophthalmia. — The symptoms of the affection in question do not differ from those of chronic inflammation of other parts of the body, except in so far as they are modified by the structure of the part, and by the function of the organ. We will speak of the local appearances, and afterwards of the constitutional derangements.

The first symptom is redness of the part, which is very remarkable, because the blood naturally conveyed by the vessels to this part is colorless. The vessels become injected with red blood. When the irritation continues the vessels become still more apparent, and at length all the inter-lacements and anastomoses of the vessels of the conjunctiva partake of the inflammation, and present almost one uniform appearance of redness. During this time more or less pain is experienced ; at first, as the vessels become filled, an uneasy sensation is felt ; this increases, and at length, upon the admission of light, a sharp lancinating pain is experienced ; the patient is under the necessity of keeping the eye closed, and, indeed, has some difficulty in raising it not only from the pain he suffers, but from the degree of fulness and swelling with which it i> accompanied. This pain goes on increasing, and at length the patient complains of a burning heat and a sensation as if some extraneous body were lodged in the conjunctiva of the lid. At this time the admission of the least light or air produces such lancinating pain that the eye is spasmodically closed. The affection is also attended with a more abundant secretion of tears, which, at the highest stage of excitement, is suddenly diminished, and there is a preternatural dryness of the eyes, producing painful sensations. A considerable degree of swelling takes place, the conjunctiva becomes turgid from the quantity of blood admitted by

the vessels, and effusion follows. Although the swelling is pretty equally diffused over the whole surface of the conjunctiva, it seems to be the greatest at the transparent cornea, because here the coat is more tightly adherent. The conjunctiva is here elevated in a circular fold, and this appearance is called chemosis. The eyelids are in general more or less swollen. Not only is pain experienced in the eye, from the causes I have mentioned, but also a sense of weight and fulness in the globe of the eye, as if the ball were too large for the socket. The neighbouring parts also, the forehead and temples, partake of the pain ; there will be a shooting pain to the maxillary bone, or more deeply seated in the head ; and these pains are in some instances extremely violent.

The local symptoms, as we have already hinted, are attended with considerable constitutional effects. There will be a greater or less degree of constitutional irritation; great lassitude; prostration of strength ; dullness or rigor followed by heats. The skin will often be hot and dry, pulse quick and hard, stomach affected, and vomiting produced. The patient will also complain of pain in the back, and in short, of all the symptoms which indicate a considerable fever of the sympathetic kind, arising from local irritation. The degree in which the symptoms of this disease occur, will very much depend on the constitution of the t>atient.

(2). Chronic ophthalmia.— The term chronic, to inflammation of the conjunctiva, is not applied merely with reference to duration of time ; it is not only applied to signify that state of congestion and debility of vascular action produced by the acute stage ; but it is also applied to that state of inflammation which from the commencement has a character of atony and debility. As this is the most frequent form in which you will rind this inflammation, whether primary or following the acute stage, it is necessary to attend particularly to the symptoms by which it is distinguished, as the mode of treatment is very different from that which is required in acute inflammation. The symptoms of chronic differ from those of acute inflammation of the conjunctiva rather in degree than in kind ; so that after they have existed for some time in the acute stage, you find the disease gradually passing into the chronic stage. The redness will be less intense, the pain which accompanies it less acute, the intolerance of light will be less, the chemosis and swelling will be diminished, the effusion of tears less considerable, the constitutional irritation will in a great degree have subsided, and, in short, all the acute symptoms will be mitigated. There will still, however, remain a considerable degree of irritability

in the eye, on exposure to light; some artificial defence to exclude the light will be necessary, and the person will still be incapable of applying the organ to the ordinary purposes of vision. The causes of chronic inflammation, both exciting and predisposing, are very similar to those of acute inflammation ; but there are many causes which tend to produce this inflammation, accompanied with atony and debility in the very onset, which distinguish it from acute inflammation. Chronic inflammation of the conjunctiva is very apt to take place, where the patient has for a long time been laboring un-der disorder of the digestive organs.' It is not unfrequently the concomitant of dentition, the measles, or small pox ; it sometimes accompanies rheumatism and gout. Frequent intoxica-tion and various other causes may predispose to it. It is also very apt to arise from, or to be kept up by exposure to acrid fumes or smoke in particular trades. In general, inflammation of the conjunctiva is a very manageable complaint. It passes into chronic inflammation after the acute stage has continued for a certain time, and it not unfrequently subsides of it<elf. A spontaneous cure must not, however, be depended on, and we ought on no account to neglect or re-lax in the proper mode of treatment, from any reliance upon such a cure; because by .simple inflammation of the deeper seated tunics of the globe of the eye, suppuration may be induced, the organ may at length become permanently ilis-organised, and the sight of the eye irretrievably lost. The consequences of inflammation of tlii. membrane are v» ry similar to those of inflainma tion in other parts of the body ; namely, effusion, adhesion, suppuration, ulceration, and mortification. It sometimes terminates in effusion, the serum or blood under the conjunctiva rising in a roll above the cornea. It sometimes produce the adhesive process; and, when it terminates in this manner, the adhesive matter is depoiUtd

under the conjunctiva, which covers the transparent cornea, and is recognised by a hazy appearance at the part. The adhesion is various, both in extent and quantity; it is sometimes so slight as only to produce a simple clouded appearance over a certain part of the cornea, which is technically called nebula; it is at other times more

considerable in quantity, and produces an appearance of considerable opacity in the cornea, which is usually called albugo or leucoma. The inflammation sometimes proceeds to the suppurative process; indeed, the tunica conjunctiva appears to be of a nature very analogous to the mucous membranes of the body, and, like these, is exceedingly prone to the suppurative stage of inflammation. The suppuration generally proceeds from the surface of the conjunctiva, as from the surface of any mucous membrane in a state of inflammation. In other instances, the formation of pus is circumscribed ; a deposit of lymph takes place where the conjunctiva covers the cornea, or in its immediate vicinity, and a little abscess or pustule arises from the centre. Ulceration is sometimes produced, and this usually occurs in the cornea in consequence of laying open the pustule just alluded to, probably from the denudation or exposure of the cornea. Lastly, sloughing and mortification of the cornea is not an uncommon effect of a high degree of suppurative inflammation.

Treatment. — In the treatment of simple inflammation of the conjunctiva it will be necessary to adopt at once, with vigor, antiphlogistic remedies, as the best mode of diminishing the action of the heart and arteries ; and with this view the use of the lancet should be freely resorted to in the commencement. You ought not to be satisfied with taking away a certain quantity of blood ; as, for instance, eight, ten, or sixteen ounces ; but you should in this, as in all other cases of acute inflammation, accompanied with hardness of the pulse, make a free orifice in a large vein, and take away a quantity of blood, until some manifest effect is produced upon the action of the heart and arteries ; keep your finger on the pulse of the patient, in order to ascertain how the heart is afi'ected, and carry on the bleeding even to faintness. This may prevent the necessity of again having recourse to the lancet ; or, if it should be necessary to do so, blood may be taken away in much smaller quantities. You will of course be guided by the state of the patient's pulse, as the only criterion.

When you have diminished the pulse, by general bleeding, leeches may be afterwards conveniently applied, and other resources made beneficial. The application of leeches in the first instance, except in very large numbers, is seldom sufficient in acute inflammation; three or four will scarcely produce any effect upon it. Opening the temporal artery has been recommended, and it is attended with very good effect. Some practitioners advise the practise of dividing the vessels of the part by scarifying the conjunctiva, but it is a plan we do not recommend.

Great benefit is derived from treatment directed more especially to the

body at large ; such as diaphoretic medicines; and the constitutional irritation may be materially abated by keeping

up the secretions from the intestines, by altering them and rendering them more healthy.

The tartarbed antimony should be used with the first view. The bowels should be freely acted upon by doses of calomel, combined with jalap, scammony, or cathartic extract ; and the effects of these medicines should be kept up by the exhibition of neutral salts, so as to produce a considerable number of watery stools. At the same time the diet of the patient should be low, and he should be kept in a state of perfect rest and quietude. When an impression lias been produced on the symptoms, by the treatment we have laid down, it will then be proper to adopt other measures.

For instance, where blood has been taken to a considerable extent, the application of a blister to the nape of the neck will be attended with beneficial effects. The treatment of the part should also be considered, the head should be raised, and the access of air or light should also be prevented, by keeping the room darkened. With respect to local applications, both warm and cold remedies may be used with benefit, but the choice should depend entirely on the feelings of the patient ; if he does not find relief from warm, you should then try the effects of cold applications.

Such is the plan of treatment you would adopt in acute inflammation of the conjunctiva ; but, when the chronic stage has commenced, you must pursue a different course. The evacuating plan may to a considerable extent be laid aside; the diet, though not stimulating, may be generous ; there will be no necessity for continuing the diaphoretic medicines, as the skin will generally be sufficiently moist ; nor will it be necessary to evacuate the bowels so freely, though every attention should be paid to their due action ; alterative medicines will often be found beneficial.

The local applications which are used for the chronic inflammation should be entirely different from those used in the acute. They ought to be moderately astringent and stimulating, as your object now is to excite some degree of action in the vessels, and to get rid of their relaxation and atony, care being taken not to stimulate the parts too much. Various collyiia or eye-waters are used for this purpose, all of them moderately astringent or stimulating ; such as the solution of

alum in water, solutions of the sulphate of zinc or the sulphate of copper, or the liquor plumbi subacetatis. These solutions at first should be very much diluted, and afterwards gradually strengthened in proportion to their action on the part, and the decree of stimulus which may be produced. To judge how far the stimulus may be carried, the criterion is exceedingly simple ; if you find that a certain degree of smarting and pain is produced, which soon subsides, and leaves the patient much more easy than before, you may be convinced that the collyrium is beneficial ; if, on the other hand, the patient experiences a great degree of pain, which does not subside speedily, and the vessels be-come turgid, you may be assured that the collyrium is doing harm, and that the quantity of stimulus ought to be diminished , Among the numerous applications recorr.nended in this

complaint, we will speak of those most fre-vessels of the part. At this Mme the violence of fluently employed, and the manner of using the acute symptoms is mitigated, but the patient them. 1 hose commonly employed are the so-labors under considerable prostration of strenmli - water, solutions of the sul-Purulent ophthalmia has a great tendency also nlnhnto nf ™™o. „, .u~ to terminate in sloughing. Sometimes the sloughing commences in a small portion, and gradually lamella after lamella is destroyed, until the aperture assumes a funnel-like shape ; at other times a slough forms in a considerable portion of cor-nea at once, and opens into the anterior chamber.

The causes of purulent ophthalmia are various : it is often occasioned by the violent degree of inflammation produced by some highly irritating substance ; and it occasionally occurs in new-born infants. In the last case it is doubtful whether it arises from the first exposure of the eye to the light, or, as is commonly supposed, from the vaginal secretions to the eyes of the child on its passage into the world. It generally takes place in the first week or month after the birth of the child, and seldom later than three months. Another, and one of the most violent forms of purulent ophthalmia, is that which is called gonorrhceal, from its being produced by the application of gonorrhoeal matter to the conjunctiva. This of all others produces the most intense degree of inflammation ; and, although it is said upon good authority to be depending on a metastasis of the gonorrhoeal symptoms from the urethra to the conjunctiva, I have never seen a case in which I could entertain the least suspicion that the complaint was produced in that way, and I do not think that there is sufficient

evidence to establish such an opinion.

There is another form of ophthalmia, which has been called the epidemic or Egyptian. Although we cannot correctly ascertain the cause of this affection, there can be no doubt that it arises spontaneously, and often attacks epidemically a number of persons in the same district.

Treatment. — The treatment of purulent ophthalmia must obviously very much depend on the stage of the complaint. During the first stage, when all the indications of acute inflammation are present, you must bleed largely from the arm of the patient ; topical bleeding is out of the question except with children. All the other antiphlogistic remedies, which 1 before enumerated to you, are to be put in practice in this case. Purgatives should be administered so as to produce a considerable quantity of watery stools ; diaphoretic medicines, and especially the tartarised antimony, in doses of a quarter to half a grain, should be given at such intervals as to keep the patient in a state of nausea ; and topical applications should be employed very much in the same manner as in simple inflammation. During the first stage of the complaint, moist warmth in the form of fomentations and poultices, will be found beneficial : the acute stage, however, is of very short duration, and they are not to be continued bejond that period.

The extent to which the antiphlogistic plan should be carried, must vary according to the

lution of alum in

phate of zir.c, or the sulphate of copper, or the liquor plumbi subacetatis ; and the best mode of applying these eye-washes is to inject them by means of a silver or ivory syringe, introduced under the lids every three or four hours. In this way, you may be certain that the solution is diffused over the whole surface of the conjunctiva. An eye-cup will answer the purpose very well, if the person, after immersing his eye in the cup, has the courage to open it. They will succeed better with the chill off than otherwise. The vinum opii seems to be one of the best stimuli which can be employed in chronic ophthalmia ; it acts as a mild astringent, and at the same time, by its soothing quality, sheaths the effect of the stimulus, so that no pain is produced ; it may be employed in the quantity of one drop, or even of two or three drops, two, three, or four times a day. “It will be best to drop it into the inner canthus of the eye. with a carnel-hair pen-cil ; the patient should then shut his eye, and move it about, so that the fluid may be diffused over the Whole surface. The patient should wear no bandages, have no other protection than a shade, and, if he can bear a moderate degree of light; it should be freely admitted.

In addition to the local treatment we have gone through, you must give those medicines which will act on the morbid state of the constitution.

Of purulent ophthalmia. — Suppurative inflammation of the conjunctiva is the most severe form of inflammation in that membrane. It is exceedingly acute, very rapid in its progress, and often very destructive in its ultimate effects; consequently requires very active treatment.

The symptoms of purulent ophthalmia are so manifest that there can be no doubt of the na-ture of the complaint, its prominent character being the formation of a considerable quantity of purulent matter. In other respects the symptoms are not very different from those which char-acterize inflammation generally. The patient at first feels an uneasy sensation about the eyes ; next some degree of pain on the admission of light; redness, and swelling of the part; eyelids swollen ; conjunctiva, where it covers the fore part of the globe of the eye, is tumid ; considerable chemosis, and often such tergescence of the upper lid as to prevent the patient from raising it. The lids are often so much tumefied as to become everted, so that a sort of roll of the lid is formed. These are the symptoms which precede the discharge of matter. A fluid first appears which is not opaque, and has the

character of tenacious mucus ; in the course of twenty-four hours it assumes the appearance of pus. It is thick, yellow, sometimes green, and poured The tunica con-out in considerable quantity, junctiva has the appearance of a villous membrane highly injected.

The acute stage of purulent ophthalmia is of violence of the complaint and tl

very short duration ; it has a tendency to pass rapidly into the atonic stage, in which there is action without power,

the patient. You must not in any constitution

«c, „, „ be deterred from adopting an active plan of

and congestion of the treatment until you have produced a inamtes

effect on the system of the patient ; until the pulse becomes soft ; the skin moist; the pain, swelling, tension, and throbbing of the eyes considerably abated; the chemosis diminished; and, in fact, all the acute symptoms more or less subdued. When this is the case, the subsequent treatment will in general be very easy. If it should happen that you are not called upon for this complaint until it has arrived at the chronic stage, when the conjunctiva is feebly pouring out pus; the pulse depressed; the skin cold and clammy ; the countenance sallow ; and, when the constitution has materially suffered from the progress of the disease, an entirely different plan of treatment will be required. Gently stimulating applications should be employed by means of a syringe, so as to cleanse the conjunctiva, and free it from the pus which has collected on its surface, and at the same time stimulate the relaxed vessels. In general it will be necessary to employ tonic remedies, such as bark, for instance ; always attending to the due

action of the bowels, without which tonics would be useless, and even injurious. With respect to the treatment of the sloughing cornea some nicety will be required. When you have ascertained that the sloughing process is commencing, from the hazy or opaque appearance of the cornea, the antiphlogistic must be changed for a gently stimulating and tonic plan of treatment. Weak astringent collyria should be used, to favor the throwing off of the sloughs. Observe the process of the sloughing from time to time ; if there is a firm layer beneath, the patient is going on well, but if the sloughing has a flocculent, soft, ash-colored appearance, in addition to mild stimulants to the part, you should. employ tonic remedies, such as bark. The errors in the treatment of purulent ophthalmia may be comprised in two words : they consist either in continuing the depleting plan too long, or not resorting to it sufficiently early.

If the antiphlogistic plan be not adopted at a very early stage of the disease, the tonic treatment will afterwards be of no service ; and, on the other hand, if you continue the depleting plan too long, you will check the restorative process, and the beneficial effects which nature would otherwise assist in producing.

Strumous ophthalmia. — Strumous or scrofulous ophthalmia is so called, because it is met with in those persons who are of a scrofulous diathesis. It occurs in children and not unfrequently in adults. In this affection, the inflammation is of the chronic kind from the commencement; the patient cannot bear the least access of light ; there is great difficulty of opening the lids, the orbicularis palpebrarum is spasmodically contracted, and so difficult is it for the patient to open the eyes that he can seldom do it. The only way by which this can be done is fixing the head of the patient, when it is a child, between your knees ; with the fore finger of the one hand to raise the upper lid, and that of the other to depress the lower, which will give you an opportunity of seeing the eye ; but in doing this great caution will be required to prevent eversion of the under lid, or any undue violence to the part. In this complaint

it is of the greatest importance that the cornea should be narrowly watched ; for, if the inflammation continues for a long time, ulcers are very apt to form on it. Disorganisation of the different parts of the eye often take place ; the cornea, or rather conjunctiva covering it, becomes covered with an opaque capsule, with vessels shooting over the cornea, so as to give it an herpetic appearance ; that is, there will be seen, over the cornea, yellow spots, which are deposits of lymph.

These open into smal1 ulcers, which are streaked with vessels carrying red blood. The eye becomes very painful, and extremely irritable, and there is often, in this state, intense redness of the conjunctiva. Under these circumstances, similar ulcers form in different parts of the cornea. The formation of these ulcers produces all the symptoms ot acute inflammation of the eye, and the organ not unfrequently becomes slowly and gradually disorganised. So long, however, as the cornea continues bright, and of its natural color, there will be no danger to be apprehended from the formation of ulcers.

Treatment — Although Strumous ophthalmia is of the chronic nature, there is still considerable irritation ; and, as the constitution in which it occurs is of an unhealthy character, your treatment must be both general and local. First, constitutional. The mild depleting plan must be first adopted, regulated as far as the constitution will bear it ; you must remove the symptoms of irritation; open the bowels freely by calomel purges, repeated more or less frequently, as they improve the secretions. Alterative mercurial medicines should then be given, and if necessary they should be combined with rhubarb and magnesia, but not so as to produce watery stools. When the fever becomes diminished, the bowels perform their natural functions, the tongue looks clean, and the skin assumes its healthy feel, you may begin with tonic remedies, and alter the diet, &c. Aromatic bitters, combined with alkalies; light and nutritious diet; warm clothing; moderate exercise ; sea-bathing, &c.

As for the treatment of the part affected, it will be right to employ depletion at the onset, and mild astringent applications afterwards. Leeches should be employed ; it will also be proper to apply blisters behind the ears, or to the nape of the neck ; and blisters in this complaint are no ordinary remedy; warm and moist applications are beneficial ; the steam of water containing opium will also prove useful. If any of these applications be used at the onset, they must not be long continued ; mild astringent collyria must be had recourse to, and their strength must be regulated by the feelings of the patient. The vinum opii is particularly adapted to the purpose in question. Alteratives are also sometimes necessary.

Psorophthalmy. — Psorophthalmy is an inflammation particularly of that part of the conjunctiva which lines the lids, but it extends sometimes over the whole of the conjunctiva, covering; the globe. This complaint is very nearly allied to Strumous ophthalmia, because it is in general a consequence of it ; it is characterised by the same intolerance of light; the inflammation is of the

chronic kind, and the patient complains of a sensation as if there were some extraneous body in the eye, grit or sand, which gives rise to an effusion of tears. At the origin of the disease there is a glutinous matter secreted on the edge of the lids ; ulcers form ; and there is often great difficulty in separating the lids from one another. By this means matter lodges on the lids, and tends to keep up the irritation of the whole of the part; the redness sometimes extends down the cheek, and excoriation of the cuticle takes place. There are also numerous other circumstances attending this complaint. This affection of the eye is of difficult management, and is frequently found in persons of a scrofulous diathesis; in children of large towns, who are ill fed and badly clothed, with little attention to cleanliness. It is a complaint very obstinate in its cure ; and, if relieved, it generally returns and becomes as bad as ever. The affection is not, however, confined to the lower classes, but the higher and middling ranks of society are sometimes attacked with it ; those who are of the scrofulous diathesis. In schools also it will be found ; it frequently arises from the irritating matter being applied to the lid, which may be conveyed from one to another by using the same towel, or in some such way.

Treatment. — The treatment of psorophthalmy does not essentially differ from that of the strumous ; it is an inflammation without power ; one of the atonic kind. Your remedies must be both constitutional and local. Depletion must not be pursued to any extent. It will be right, when any symptoms of irritation are present, to remove them by the application of leeches, and gently opening the bowels by mild aperients, combined with mercurial medicines, such as calomel, the hydrargyrus cum creta, or the blue pill, and in quantities so as to give tone to the system. When any febrile excitement that may have existed is removed, begin with tonic remedies ; that is, when the skin is clean, and the secretions from the bowels are regular in their quantity and quality. The applications to the parts should consist of stimulants, and the best form in which they can be employed is that of ointment. Any of the milder stimulating mercurial ointments will do ; and their degree of strength must be regulated by the effect on the eye. The use of the vinum opii will be attended with beneficial results, and the application of blisters will have an universally good effect, but they should al-ways be healed immediately, and repeated again if required. The consequences of inflammation of the eye requiring distinct notice,

and which are accompanied with an equal or less inflammation of the conjunctiva, and kept up or excited by attendant circumstances, are now to be spoken of.

Nebula. — This complaint is so called from the nebulous or cloudy appearance of the transparent part of the eye, which is produced by deposits of lymph into the conjunctiva covering the cornea. The membrane or layer stretched over the cornea will vary according to the more or less relaxed state of the vessels of the conjunctiva, which will be seen carrying red blood to the VOL. XXI.

part. The veins corresponding to the nebulous parts will become turgid and prominent.

Treatment. — The inflammation in this affection is generally of the chronic kind, and arises from a relaxed state of the vessels, which require stimulating applications, in order that they may recover their tone and convey the blood uninterruptedly. If the vessels be stimulated, the blood will be likely to flow through the veins ; the absorbents will be excited, and remove the effused lymph. If there is considerable inflammation, it must be removed by active means; and in these cases it will be proper to deplete. Care must be taken that in the treatment of this complaint, no undue degree of stimulus be employed; if there should be inflammation it will be increased, and the complaint be as bad as ever. By stimulating applications, the cornea will frequently be restored to the same transparency as before the attack. A good stimulus which may be used, is one with the sulphate of zinc, containing about a grain to an ounce of wa-ter, gradually increased in strength.

Pustules.— Pustules are generally seated at the junction of the transparent with the opaque cor-nea; but they sometimes occur in the cornea itself, or on the conjunctiva covering it, or the ball. They are seated in different parts. The appearances they present, at first, are red or yellowish spots arising from a deposit of lymph in those parts, and are slightly elevated. There is considerable turgescence of the vessels around them. If they occur on the cornea, it will be nebulous and opaque ; the vessels round the cornea will be seen distended, carrying red blood, and having a radiated disposition. If the lymph secreted in this complaint is not absorbed, the pustules break, matter escapes, and ulcers form in their place. Sometimes there is only one of these ulcers, frequently two, one on each side of the cornea, just at the junction of the transparent with the opaque cornea, and occasionally the cornea is

encircled by them. They are very difficult to cure, and easily reproduced.

Treatment.— As for the treatment which pustules require, if there should be much inflammation you must deplete ; but, as the inflammation is of the tonic kind, depletion must not he pursued to too great an extent at the outset. The system must be invigorated by tonic remedies, and tone given to the vessels of the part. First, apply leeches, not in too large numbers ; evacuate the bowels by mild aperients ; and attend to the secretions: blisters will be useful if the sight be affected. When the state of the bowels has been regulated, you must begin with tonic remedies, and as early as possible with astringent collyria, and the best is the vinum opii.

1'ungus of the conjunctiva.— This appearance of the conjunctiva 'is the result of purulent ophthalmia, and occurs in diseased persons. The conjunctiva becomes loose and red, the vessels turgid with blood, and there is a told of this membrane on the inside of the lids, which produces considerable irregularity on its surface; a morbid secretion is kept up on the part, and not unfrequently emersion of the lids is the re-sult. Extraneous bodies often enter the eye

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and disturb it considerably. To prevent this, and remedy the complaint, the loose portion of the conjunctiva should be removed, which is a very easy operation ; an assistant holding the lid, you, by means of a pair of curved scissors, remove it. As to the after treatment, you must keep down inflammation, should it appear, by the means already recommended.

Granulations of the conjunctiva. — These are nothing more than loose irregularities of this membrane, where it lines the lids. These projections continue to pour out a morbid secretion, which stimulates and irritates the whole eye ; the palpebral conjunctiva becomes altered in its texture, and its .surface is covered with a fleshy

elevation, having the exact appearance of granulations. These granulations covering the surface of the conjunctiva lining the lids, are constantly rubbed over the globe of the eye whenever it moves, producing pain and irritation, and keeping up morbid secretion, and, in fact, giving rise to chronic ophthalmia.

Treatment. — Granulations of the conjunctiva, if not removed or remedied, produce ultimate blindness. Cases of this complaint are difficult to cure ; and the remedies you are to use are, caustic applications and the division of the varicose and enlarged vessels. These may be aided by setons, issues, blisters, and attention to the general health.

Encanthis. — This consists in an alteration of the structure of the caruncula lachrymalis, and neighbouring semilunar fold of the conjunctiva. In this complaint the caruncula is enlarged; at the commencement it has a granulated appearance, which it loses as it increases, and then becomes similar to a hazel nut, being ash-colored and streaked with varicose vessels. This enlargement or excrescence prevents the lids from closing, and allows extraneous matter to enter, which keeps up inflammation of the eye, and it also presses on the puncta lachrymalia, and turns them out of their place : the tears, thus prevented from getting into the lachrymal sac, are effused on the cheek.

Treatment. — The best treatment you can adopt for the cure of this complaint is the entire removal of the diseased part. The operation should be thus performed : — an assistant is to raise the lid, you then take up the tumor with a pair of forceps, and remove it with a pair of curved scissors with convex edges. When this complaint has not assumed the malignant form, it is always remediable by excision. Never operate, however, when the encanthis has become of the malignant kind, and put on the cancerous appearance. This will be known by the dull red color of the excresence, its excessive hardness, lancinating pains extending to the eye-ball and forehead, particularly when touched, foul ulcers with irregular edges, having all the appearance of cancer in other parts of the body.

Pterygium. — This is always of the triangular shape, and may be divided into the membranous and fleshy.

Membranous pterygium.—This kind has the appearance of a thin film of minute vessels converging towards the cornea. The usual seat of this affection is towards the inner canthus, that

is, with the base at the canthus, and the apev against the cornea. It is always of a triangular shape, and the vessels proceed from the base to the apex.

Fleshy pterygium. — The fleshy pterygium differs from the membranous, and is more vascular. They first appear of a yellowish color ; then the vessels running through them become large, and they have a red appearance ; but always retain their triangular shape.

Treatment. — When a pterygium has proceeded far on the transparent part of the eye, the only treatment to adopt will be the removal of a part of the pterygium. This consists simply in raising the membrane as near as you can to the cornea, and cutting it through whilst suspended. When the pterygia are fleshy, more care must be taken in dividing them; they must be divided more to the margin of the cornea, and turned back from the apex towards the base.

2. Inflammation and ulceration of the cornea. — At the outset, in inflammation attacking the transparent cornea, there is a hazy appearance, the cornea loses its natural lustre, and in a short time there may be discovered on its surface vessels carrying red blood, and then the symptoms will be the same as those of inflammation in general ; the patient will complain of intolerance of light, and also have effusion of tears. If the inflammation of the cornea should continue, mat-ter very frequently forms between its lamella?, and the appearance which it then assumes is called onyx, or unguis, from its resemblance to a nail; the matter is to be very distinctly seen in the transparent part of' the eye, and gradually extends till it occupies one-third or fourth of the cornea. If you place the eye in profile you can generally observe yellow spots, which are usually seated at the anterior part of the cornea ; and if you employ gentle pressure with a probe, the fluid may be felt fluctuating within. In the various positions of the head the matter does not shift its situation, but remains in the same spot. By proper treatment the matter often becomes absorbed ; but it not unfrequently makes its way externally, or an opening is formed internally, and the matter then is effused into the anterior chamber of the eye.

Ulceration. — Ulceration of the cornea is the common consequence of inflammation of the cornea; but it is very frequently produced by the contact of matter in purulent ophthalmia; c>r, in fact, any irritating substance, mechanical or chemical, that may be introduced into the eye. The inflammation produces the formation of pus ; this breaks and

an ulcer is formed.

In ulcers of the cornea you will find the edges rugged, uneven, and elevated, the ulcer itself having an ash-colored appearance, and the patient complaining of great pain ; there will also be a discharge of a good deal of acrid and irritating matter. In general there will be no difficulty in distinguishing ulcers of the cornea; all you have to do is to put the eye in profile and take a side view of this organ, and you will see the ulcer with the appearances I have described. The situation of ulcers of the cornea varies; as also do the ulcers vary in their appearance. Treatment. — The treatment required in inflam-

mation of the cornea does not materially differ Iritis.— Inflammation of the ins is a peculiar

from that of inflammation of the conjunctiva, or and specific inflammation, attended “with” Yyinp—

any other part of the eye. You must rely upon toms which, in some cases, are with difficulty

the efficacy of a strict antiphlogistic plan, and, recognised. In looking into the eye, you see

when the acute inflammation has been subdued, on the iris changed in color, or having a’brownish

the use of mild astringent collyria. When ulcers v

form in any part of the cornea it will be proper to use active means, if they are accompanied

with acute inflammation ; but most frequently

hue, or rather a reddish-brown color (this however varies according to the natural color of the iris), from the increased number of vessels on its surface carrying red blood. The iris itself is

they are accompanied by chronic ophthalmia, and altered in texture, being puckered and thickened.

have a disposition to spread rather than heal. When they are of a spreading disposition astringent lotions will be of great service; but of all

These appearances are soon removed, and deposits of yellow lymph, resembling yellow tubercles, will be seen on the iris, the pupil becomes

remedies in ulcers of the cornea the nitrate of irregular and altered in shape, and thp mipillary

silver is the one on which you are to depend : it is generally used in the state of solution, about two grains to an ounce of water; or it may be better to begin with a grain to an ounce, regu-

lating the strength in proportion to the degree of pearances

margin of the iris thickened and turned back towards the posterior chamber. These are the principal symptoms by which you recognise iritis ; but there are many other marked ap-

irritation it may produce. When ulcers of the cornea are attended with

acute inflammation, it will be necessary to employ bleeding by leeches before the use of astringents, and at the same time to keep the bowels regular by mild aperients. During the progress of the ulcers it will be necessary to watch them very closely, and examine them frequently ; but in doing so great caution must be used lest the eye-l:ds become everted. When ulcers of the cornea heal it is by cicatrisation, as in any other part of the body. The specks which are left upon cicatrisation are nothing more than rounded spots of coagulable lymph, and are denominated leucoma or albugo; and in these cases the rays of light are not prevented entering the eye, except when the spots are on the axis of vision.

Staphylomu. — In this disease the cornea becomes opaque, considerably elevated, and altered in texture. It frequently comes on after small pox, and is one of the sequelae belonging to that formidable complaint. In staphyloma the eyelids are prevented from being closed ; there is perpetual irritation kept up by friction of the palpebrae on the ball. By the separation of the lids extraneous bodies often enter the eye, irrita-

Iritis is not unfrequently accompanied by inflammation of the tunics of the eye, which has been called ophthalmitis, or deep seated inflammation of the globe of the eye. But for the treatment and further description of this very usual variety, we must refer to Mr. Castlu's Manual. For cataract see CATARACT.

SECT. III. — LITHOTOMY.

This operation was practised by the ancient Egyptian surgeons under the Ptolemies, especially Ammonius Alexandrinus, and afterwards at Rome by Meges, and is described particularly by Celsus. It was then a very simple operation, and performed thus : — The presence of a stone being ascertained by a strait sound, the rectum was emptied by an injection, and the patient directed to walk about, as so to make the stone gra-vitate to the neck of the bladder ; and now the patient was secured, as at present, for the lateral operation ; and the operator introduced two, or sometimes even three, fingers of his left hand into the rectum, and, feeling the stone, thrust it forward into the perineum and cut directly upon by a semilunar incision transverse, and having its ends pointing to the hips ; then a smaller one, at the

tion is produced by the friction of the lids and deepest part of the first, in the same direction,

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eyelashes, and thus a considerable degree of inconvenience is produced to the patient, and the eye kept in a state of chronic ophthalmy ; and

till it reached the stone, which either started out, or was brought out by a hook for the purpose. There are several objections to this operation.

the sound eye becomes sympathetically affected. 1. The same parts are not always cut, as that The iris often protrudes ; the vitreous humor is must depend upon the degree of forcewith which

altered in texture; and the crystalline lens is projected forwards.

the operator protrudes the stone. 2. The urethra may be altogether divided from the prostate. :

Treatment.— In this complaint nothing can be If the bladder be much pushed forward, it may

_» . , .» i u« J:..:J~J *!,.,,,* M»iMtA<MAl«f homnn thH Dros-

done for the restoration of sight; and the only plan of treatment will be to remove the staphy-

be divided thus transversely, behind the prostate, so including the vesicula seminales. This

lomatous part, so as to return the eye within the operation, together with surgery and medicine

was entirely lost in the dark ages

orbit, andrmit the use of an artificial eye. The operation is exceedingly simple : the surgeon

quacks ; but it was known to and practised La Raoux, at Paris, 140 years ago. Tins

first passes a needle with a ligature through the — —__.-, — - -

• • operation proved much too simple I

barous physicians and surgeons of the middle knife, and removes as much of the projecting age, as it was practised by many quacksˆ &c..

staphylomatous part, in order to steady the eye ; -r • i— •— — - • , .

and then, with the other hand, takes the cornea barous physicians and surgeons of

-»-. > ”-” Y~ r. ‘ .- . - , •.

which deprived them of *, am •

tins last reason, .says HeUton, th luce ta to adopt a

part as may be necessary ; the operation gives little pain ; it generally happens that the iris adheres to the cornea, and that a portion of it is

removed. The crystalline lens escapes, together once increased their own with a portion of vitreous humor, and the eye fees ^“P^.^^nvS by 1 e collapses, so that when the part is healed an ar-and cruel operat.on was ed ^ Jona

tificial eye may be worn.

de Romanis, who, it seems, did not dare to practise or publish it ; but his pupil Marianus Sane-tus published it in 1524, not as his own but his master’s invention ; and this operation, which neither dared own, was greedily seized on by the profession. It was performed all over Europe for many years thus : — ‘ A groove-staff was first introduced ; then the operator, kneeling on one knee, made an incision with a razor along the perineum, on one side the raphe, and, feeling with his little finger for the curve of the staff, opened the membranous part of the urethra ; and, fixing the point of his knife in the groove of the staff, gave it an assistant to hold, while he passed a probe along the knife into the groove of the staff, and thus into the bladder. The urine now flowed out and the staff was withdrawn.’

•The operator next took two strong iron probes, called conductors ; one named the fe-male, having a groove like a modern director ; the other the male, having a probe point corresponding with the groove. The grooved one was first introduced along the probe, then the latter was withdrawn, and the male passed along the groove of the female into the bladder. Then commenced the operation of dilating. The lithotomist took a conductor in each hand, and, by making their shafts diverge, dilated; or, in plain language, tore open, the prostate gland. After this a pair of strong forceps, with a large blade, were used to dilate it still more. Then these were withdrawn, and a blunt gorget introduced ; upon this the vals extractors were introduced, and the stone brought out. This operation lasted for many years, till 1097, when a new operation was introduced by a wandering friar, called Freie Jocque, his real name was Jacque Beaulieu, and it appears that he had learned his operation of another quack, and had then wandered over Europe, and at length came to Paris with certificates of

his success, and volunteering to operate. He took no fees, but acted for the glory of the Divinity, receiving only enough to afford himself sustenance, and keep his instruments in order. He was authorised by the government to operate in the hospitals of La Charite", and the Hotel Dieu, and, though violently opposed by the profession, seems to have been eminently successful at first; but hating no knowledge of anatomy, he did not always cut the same parts, and latterly failed in several instances ; so that at last his envious rivals prevailed, and he left Paris and travelled to the provinces and Holland, and, having stud led anatomy, operated again with the greatest success. His operation was the

Lateral operation. — He introduced a straight staff into the bladder, and plunging his knife into the side of the perineum near the tuber ischie, about two fingers breadth from the raphe, cut upon the staff, which served as a guide into the bladder, cutting upwards from the anus. He never withdrew his knife till he had made a sufficient opening for the stone, which he withdrew by a pair of forceps in a rough manner, using sometimes a director, but more commonly his finger. This operation was imitated and practised by Raw, Marechal, Bamber, and Chesselden, which last modified it in several ways, and at last performed it as we perform it at present.

Sir Astley Cooper says, ' In the lateral operation of lithotomy, you are to begin your incision a little on the lelt side of the raphe, immediately below the symphysis pubis, and carry it obliquely downwards and outwards to midway between the anus and tuberosity of the ischium, and the termination of the incision should be opposite to the centre of the anus. Before you commence the incision you should draw aside the raphe towards the ramus of the ischium on the right side. Never begin an operation without having first reflected well on what you are going to do; and, in making incisions through the skin, you should, before you apply the knife, mark out with your eye the course which such incisions should take, and the precise point where they should terminate. Well then, the first cut through the skin, made in the direction just mentioned, penetrates the skin and cellular substance, and lays bare the accelerator urinae ; you then with the fingers of your left hand push or draw the bulb of the penis under the ramus of the ischium on the right side, so that the next incision will pass between the bulb and crus penis of the left side ; there is no necessity in reality for cutting the bulb, and it should therefore be avoided ; well, carrying your knife forward between the bulb and crus, you divide the accelerator urinse, and this you should do completely,

for if you permit any portion of its fibres to re-main undivided, particularly at the upper part, if the stone should be at all large, you will find that their contractions would very much increase the difficulty of withdrawing the stone ; immediately that the accelerator urinae has been cut through, you expose the transversus periuei ; you are then to feel for the groove of the staff with the nail of the index finger of the left hand, and, having fully satisfied yourself of its situation, you are to cut through it into the membranous part of the urethra by means of the same scalpel with which you made the other incisions— and then, fixing the beak of the gorget in the groove of the staff, you are to bring down towards you the handle of the latter instrument, while at the same moment you push the gorget into the bladder, with its point directed upwards, and its handle of course somewhat depressed. I give you this last direction for the purpose of preventing the dreadful accident of the gorget slipping and passing between the bladder and rectum, instead of its entering the former viscus.' An instrument for dividing the prostate and bladder has of late been used with success in the lateral operation of lithotomy : it is called the bistourie cache" ; it was invented by Cosme, a French surgeon, about 100 years since ; it consists of a knife enclosed in a sheath which, after being introduced into the bladder and turned with its edge outwards and downwards, cuts its way out when withdrawn. Many operators use a knife to open the bladder, and it answers in young persons ; but, in old ones with diseased prostate, it does not cut enough to admit the stone.

The high operation, lately recommended by Mr. Corpue and practised by sir Everard Home, was first made known to the world in 1561, by Pierre Franco, who, in his Treatise on Hernia,

•says he once performed it on a child with very good success, but discourages the farther practice of it. After him Rossetus recommended it, with great zeal, in his book entitled Partus Cse-sarius, printed in 1591 ; but he never performed the operation himself. Monsieur Tolet makes mention of its having been tried in the

Hotel-Dieu ; but, without entering into the particular causes of its discontinuance, says only that it was found inconvenient. About the year 1719 it was first done in England by Mr. Douglas ; and after him practised by others.

The patient being laid on a square table, with his legs hanging off and fastened to the sides of it by a ligature passed above the knee, his head and body lifted up a little by pillows so as to relax the abdominal muscles, and his hands held steady by some assistants ; inject through a catheter, into the bladder, as much barley-water as he can bear, which, in a man, is often about eight ounces, and sometimes twelve. The bladder being filled, an assistant, in order to prevent the reflux of the water, must grasp the penis the moment the catheter is withdrawn, holding it on one side in such a manner as not to stretch the skin of the abdomen ; then with a round-edged knife make an incision about four inches long between the recti and pyramidal muscles, through the membrana adiposa as deep as the bladder, bringing its extremity almost down to the penis ; after this, taking a crooked knife, continue the incision into the bladder, carrying it a little un-der the os pubis ; and immediately upon the water's flowing out, introduce the forefinger of your left hand, which will direct the forceps to the stone. Sabatier wisely condemns making the cut in the bladder from below upward lest the knife injure the peritonaeum.

Although this is one of the easiest and to all appearance the safest method of operating, several objections soon brought it into disuse. 1. The irritation of a stone often causes such a thickened and contracted state of the bladder that this viscus will not admit of being distended so as to rise above the pubes. 2. If the operator should break the stone, the fragments cannot be easily washed away, and remaining behind will form a nucleus for a future stone. 3. Experience has proved that the high operation is very commonly followed by extravasation of urine, attended with suppuration and gangrenous mischief in the cellular membrane of the pelvis. This happens because the urine more readily escapes out of the wound in the bladder than through the urethra ; and also because when the bladder contracts, and sinks behind the os pubis, this wound ceases to be parallel to that in the linea alba and integuments, and becomes deeper and deeper. For the prevention of these ill consequences, says Sabatier, it will be in vain to make the patient lie in an horizontal posture and to keep a catheter introduced, as Rousset and Morand recommended : experience has evinced that the bad effects, which we have described, were neither less frequent nor less fatal. 4. The danger of exciting inflammation of the peritonaeum. 5. The injection itself is exceedingly painful, and, however slow the fluid be injected, the bladder can seldom be dilated

enough to make the operation absolutely secure; and, when hastily dilated, it is sometimes even burst, or, at leas'i, its tone destroyed. We need not enumerate other inconveniences.

Some of the objections, however, do not apply to certain instances. In many men, we know by searching that their bladder is very large, so that we can run no risk of meeting with it in a contracted state, and, therefore, the objection is of no weight when we are certain that the bladder extends itself a considerable way above the puhes. and will admit a large quantity of injection. Stones are sometimes known to be of large size, and they are less likely to be broken in this than any other mode of lithotomy, so that the objection of the difficulty of extracting small calcul: and fragments is less forcible. The excoriations, from the effusion of urine all over the skin near the wound, may be prevented by embroca-tions, ointment, &c. The abscesses and gangrenes arising from the extravasation of urine in the cellular substance, says an able surgeon, may be very much prevented by the introduction of a cannula, as practised in the puncture of the bladder above the os pubis.

Lithotomy in women. — The naturally large size and dilatable nature of the female urethra have suggested the plan of endeavouring to expand this passage by various means, so that a stone in the bladder may be taken out with a pair of forceps, without having occasion to employ any cutting instrument whatsoever. This method was proposed by Douglas nearly a century ago, who not only recommended the use of sponge for the purpose, but also dried gentian root, as being more gradual in its expansion, and better adapted to the object.

Lithotomy on females is much more easy of execution, and less dangerous, than the same operation on the male subject. It may be done in various ways ; but the surgeons of the present time constantly follow the mode of making the requisite opening by dividing the urethra and neck of the bladder. A straight staff, or director, is introduced through the meatus urinarius ; the groove is turned obliquely downwards and outwards, in a direction parallel to the ramus of the left os pubis ; and a gorget, or knife, is thus conducted into the bladder, and makes the necessary incision. Some operators prefer the lithotome cache, which, after being introduced, is opened as far as is deemed proper, and then drawn out with its edge turned obliquely outwards and downwards.

The French surgeons Louis and Flurant, were the inventors of particular bistouries for dividing both sides of the female urethra at once The instrument of the former effected this purpose, in passing

from without inwards ; that of the latter, in passing from within outwards. Fin-rant's bistoury bears some resemblance in principle to Frere Come's lithotome cache, or to the cutting forceps, with which Franco used to di-vide the neck of the bladder. The reason assigned in recommendation of these bistouries. is, that they serve to make a freer opening for the passage of large stones, than can be safely made by cutting only in one direction. Al present, however, they are never iiM > d

SECT. IV. — SUPPLEMENTARY VIEW OF DISEASES OF THE SKIN.

In this part of our article we shall, after ex” plaining a few terms of less frequent occurrence touch upon the leading diseases of this species? conceiving that though some writers have spoken of them as pertaining to medicine, they may with greater propriety be enrolled among surgical cases, since they affect the contexture of the body, and may in many occasions be relieved by a manual operation.

But it may not be amiss in the first place to present the reader with Dr. Willan’s classification and definitions, which we intend to fol-low.

CLASSIFICATION.

ORDER I. — PAPULA. Genera.

Strophulus (red gum, tooth eruption, &c.) Lichen (spring eruption, scorbutic pimples, &c.) Prurigo (gratelle, or universal itching of the skin).

ORDER II. — SQUAM*. Lepra (leprosy of the Greeks). Psoriasis (dry or scaly tetter). Pityriasis (dandriff). Icthyosis (fish-skin).

ORDER III. — EXANTHEMATA. Rubeala (measles). Scarlatina (scarlet fever). Urticaria (nettle rash). Roseola (rose rash). Purpura (purple or scorbutic rash). Erythema (red rash).

ORDER IV. — BULIJE.

Erysipelas (St. Anthony’s fire). Pemphigus (vesicular fever). Pompholyx (water-blebs).

ORDER V. — PUSTUUE.

Impetigo (running tetter).

Ecthyma (large inflamed pustules).

Variola (small-pox).

Scabies (itch).

Porrigo (scald head honeycomb-scab, &c.)

ORDER VI. — VESICUL.E.

Herpes (ring worm, shingle?, wild fire, &c.) Varicella (chicken pox, and swine pox). Vaccinia (cow-pox). Miliaria (miliary eruptions). Eczema (heat eruption). Aphtha (thrush).

ORDER VII.— TUBERCULA. Phytna (boils, carbuncles, &c.) Verruca (warts). Molluscum (small soft wens). Vitiligo (white smooth tubercles). Acne (stone-pock, red tuberculated face, &c.) Lupus (or noli me tangere). Elephantiasis (Arabian leprosy). Frcimbasia (yaws).

ORDER VIII. — MACULA. Ephelis (sun spots).

Spilm, moles, and other original marks.

1. Papula, pimple ; a very small and acuminated elevation of the cuticle, with an inflamed base, very seldom containing a fluid, or suppurating, and commonly terminating in scurf.

2. Squama, scale ; a lamina of morbid cuticle, hard, thickened, whitish, and opaque, Scales, when they increase into irregular layers, are denominated crusts.

3. Exanthema, rash, superficial red patches, variously figured, and diffused irregularly over the body, leaving interstices of a natural color, and terminating in cuticular exfoliations.

4. Bulla, bleb, a large portion of the cuticle detached from the skin by the interposition of a transparent watery fluid.

5. Pustula, pustule, an elevation of the cuticle, with an inflamed base, containing pus.

Four varieties of pustules are denominated in this arrangement, as follows : —

a. Phlyzacium, a pustule, commonly of a large size, raised on a hard circular base, of a vivid red color, and succeeded by a thick, hard, dark-colored scab.

b. Psydracium, a small pustule, often irregularly circumscribed,

producing but a slight elevation of the cuticle, and terminating in a lami-nattd scab. Many of the psydracia usually appear together, and become confluent ; and, after the discharge of pus, they pour out a thin watery humor, which frequently forms an irregular incrustation.

c. Achor ; and

d. Favus. These two pustules are considered by the majority of writers, from the Greeks downwards, as varieties of the same genus, differing chiefly in magnitude. The achor may be defined a small acuminated pustule, containing a straw-colored matter, which has the appearance and nearly the consistence of strained honey, and succeeded by a thin brown or yellowish scab. The favus, or Kijpiov, is larger than the achor, flatter, and not acuminated, and contains a more viscid matter; its base, which is often irregular, is slightly inflamed ; and it is succeeded by a yellow, semitransparent, and sometimes cellular scab, like a honeycomb ; whence it has obtained its name.

6. Vesicula, vesicle, a small orbicular elevation of the cuticle, containing lymph, which is sometimes clear and colorless, but often opaque, and whitish or pearl-colored. It is succeeded either by scurf, or by a laminated scab.

7. Tuberculum, tubercle, a small, hard, superficial tumor, circumscribed, and permanent, or suppurating partially.

8. Macula, spot, a permanent discoloration of some portion of the skin, often with a change of its texture.

The following terms are used in their ordinary acceptation ; *viz.*

9. Wheal, a rounded or longitudinal elevation of the cuticle, with a white summit, but not permanent, not containing a fluid, nor tending to suppuration.

10. Furfur, scurf, small exfoliations of the cuticle, which occur after slight inflammations of the skin, and a new cuticle being formed underneath during the exfoliation.

11. Scab, a hard substance, covering superfi

cial ulcerations, and formed by a concretion of the fluid discharged from them.

12. Stigma, a minute red speck in the skin, without any elevation of the cuticle. When stigmata coalesce, and assume a dark-red or li-vid color, they are termed petechioe.

Order I. — PAPULE. Papulae, or pimples, appear to originate in an inflammation of the papillae of the skin, by which these are enlarged, elevated, and indurated, and made to assume more or less of a red color. Sometimes even a slight effusion of lymph takes place, which gives a vesicular appearance to several of the papula ; but the fluid is reabsorbed without breaking the cuticle, and they terminate for the most part in scurf. The varieties of papulous eruptions are comprehended in this arrangement under three genera; namely, strophulus, lichen, and prurigo.

i. Strophulus. — This genus comprises several papular affections, peculiar to infants, which are known by the common appellations of red gum, tooth-eruption, &c. They arise in consequence of the extreme vascularity and irritability of the skin at that period of life, when the constitution is accidentally disturbed by irritation, either, in the alimentary canal, the gums, or other parts. As they are not, however, very important objects of medical practice, but interesting only from their occasional resemblance to some of the ex-anthemata, I shall not dwell upon them at any length. The following varieties are mentioned by Dr. Willan : — 1. Strophulus intertinctus, the red gum or gown, is characterised by papulae of a vivid red color, situated most commonly on the cheeks, forearms, and back of the hands, but sometimes universally diffused. 2. Strophulus albidus. 3. Strophulus confertus. 4. Strophulus volaticus : not a frequent complaint. 5. Strophulus candidus.

ii. Lichen is denned by Dr. Willan to be ‘ an extensive eruption of papulae, affecting adults, connected with internal disorder, usually terminating in scurf, recurrent, not contagious.’ The varieties of this eruption are seven.

1. The lichen simplex is an eruption of red papulse, first appearing on the face or on the arms, and extending, in the course of three or four days, to the trunk and lower limbs. It is preceded for a few days by slight febrile irritation, which commonly ceases when the eruption appears. This is accompanied with an unpleasant sensation of tingling, especially in the night : it continues nearly stationary about a week, when its color begins to fade, and the skin soon exhibits numerous

scurfy exfoliations, which remain longest about the flexures of the joints. The duration of the complaint varies considerably, however, from ten days to three weeks. 2. Lichen circumscriptus is characterised by clusters or patches of papulae, which have a well-defined margin, and are of an irregularly circular form. 3. Lichen agrius is ushered in by febrile symptoms, which are commonly relieved on the appearance of the papulous eruption. The papulae occur in large patches, are of a high red color, and have a degree of inflammation diffused round them to a considerable extent. They are accompanied by itching, heat, and a painful ting- ‘ng, which are augmented to a sensation of

smarting and scalding by the heat of the bed, washing with soap, drinking wine, or using violent exercise. The symptoms undergo a daily increase and remission: for they are all greatly diminished m the morning, and recur after din-ner. Some small vesicles, filled with a straw-colored fluid, are occasionally intermixed with the papulae; but they are not permanent. 4. Lichen hvidus is distinguished by the dark red or livid hue of its papulae, which appear chierly on the extremities, and without any accompanying symptoms of fever. The papulae are more permanent, however, than in the foregoing varieties; and, after their desiccation, the disorder is liable to be prolonged for many weeks by a fresh eruption.

iii. Prurigo.— The characteristic symptoms of this genus are, a severe itching, accompanied by an irruption of papulae of nearly the same color with the adjoining cuticle. It affects the whole surface of the skin, under three varieties of form, as well as some parts of the body locally. 1. Prurigo mitis is accompanied by soft and sinootli papul&e, somewhat larger, and less acuminated than those of lichen, and seldom appearing rod or inflamed, except from violent friction. Hence an inattentive observer may overlook the papulu: altogether: more especially as a number of small thin black scabs are here and there conspicuous, and arrest his attention. These originate from the concretion of a little watery humor, mixed with blood, which oozes out, when the tops of the papulae are removed, by the violent rubbing or scratching which the severe itching demands.

2. Prurigo formicans. This affection differs materially from the preceding, in the obstinacy and severity of its symptoms, although its

appearances are not very dissimilar. The itching accompanying it is incessant, and is combined with various other painful sensations; -as of insects creeping over and stinging the skin, or of hot needles piercing it.

3. Prurigo senilis. The frequent occurrence of prurigo in old age, and the difficulty of curing it, have been the subject of universal observation. The sensation of itching, in the prurigo of that period of life, is as intolerable and more permanent than in the P. formicans ; and the appearances which it exhibits are very similar, except that the papulae are for the most part larger. The comfort of the remainder of life is sometimes entirely destroyed by the occurrence of this disease.

Order II. — SQUAMJE. Scaly diseases. — Those opaque and thickened laminae of the cuticle, which are called scales, are commonly produced by some degree of inflammation of the t rut-skin, over which they are formed ; but occasionally, as in the slighter forms of pityriasis, the cuticle alone, or with the rete mucosum, appears to be in a morbid condition. If the definition be carefully attended to, scales will not be confounded with the scabs succeeding confluent pustules and vesicles, or superficial ulcc-rations. The four genera of scaly diseases are lepra, psoriasis, pityriasis, and ichthyosis.

i. Lepra, — The term lepra is here appropriated solely to the leprosy of the Greeks, as dcscrihcd

by the more accurate of those writers. It is characterised by ‘ scaly patches, of different sizes, but having always nearly a circular form.’

1. Lepra vulgaris, the ordinary species of the disease in this country, commences with small, round, reddish, and shining elevations of the skin, at first smooth, but within a day or two exhibiting thin white scales on their tops. These gradually, sometimes rapidly, dilate to the size of half-a-crown, still retaining their oval or circular form, and are covered with shining scales, and encircled by a dry, red, and slightly elevated border. In some cases these scales accumulate, M as to form

thick prominent crusts. If the scales or crusts are removed, the skin appears red and shining, being very smooth, and free from the cuticular lines in the beginning, but marked, in the advanced stages, with long deep lines and reticulations, not always coinciding with those of the adjoining surface.

ii. Lepra alphoides. This is a less severe form of the disease than the preceding. It differs chiefly in the small size of the patches, which seldom extend beyond the diameter of a few lines, or become confluent, in the minuteness and greater whiteness of the scales, and in its limitation to the extremities. This variety of lepra is most common in children. It is tedious and difficult of cure, like the former, and requires similar treatment.

2. Psoriasis. — The psoriasis, or scaly tetter, occurs under a considerable variety of forms, exhibiting in common with lepra, mote or less roughness and scaliness of the cuticle, with a redness underneath. It differs, however, from lepra in several respects. Sometimes the eruption is diffuse and continuous, and sometimes in separate patches of various sizes ; but these are of an irregular figure, without the elevated bor-der, the inflamed margin, and the oval or circular outline of the leprous patches : the surface under the scales is likewise much more tender and irritable in general than in lepra; and the skin is often divided by rhagades or deep fissures. It is commonly accompanied by some constitutional disorder, and is liable to cease and return at certain seasons.

1. The psoriasis guttata is a sort of connecting link between this genus and lepra, the little patches being distinct, and small (seldom exceeding two or three lines in diameter), but with an irregular circumference, and the other peculiar characters just described. They appear on almost every part of the body, and even on the face : but in the latter situation they exhibit only a redness and roughness, without scales. This eruption is most common in the spring, at which season it is liable to recur for several years. It is preceded by general pains, and slight feverish-ness. In children it often spreads rapidly over the body in two or three days; but in adults its progress is gradual and slow.

2. The psoriasis inveterata is the most severe modification of the complaint, beginning in separate irregular patches, which extend and be-come confluent, until at length they cover the whole surface of the body, except a part of the face, or sometimes the palms of the hands and •oles of the feet, with a universal scaliness,

interspersed with deep furrows, and a harsh, stiff, and thickened state of the skin.

iii. Pityriasls. — The pityriasis is a very superficial affection, characterised by irregular patches of thin scales, which repeatedly exfoliate and recur, but which never form crusts, nor are accompanied with excoriations. It is not contagious. It occurs under three or four varieties of form.

1. The pityriasis capitis, which in infants is called dandriff, appears in a slight whitish scurf along the top of the forehead and temples, but in larger, flat, separate semitransparent scales on the occiput. A similar affection occurs on the scalp of aged persons.

2. The pityriasis rubra occurs most frequently in advanced life, and is the result of a slight inflammation of the portions of the skin affected, somewhat resembling in this respect the psoriasis diffusa. The cuticle is at first only red and rough, but soon becomes mealy or scurfy, and exfoliates, leaving a similar red cuticle underneath, which undergoes the like process ; the scaliness becoming greater as the exfoliation is repeated. This complaint is attended with a dry and unperspiring surface, a troublesome itching, and a feeling of stiffness. There is also a general languor and restlessness. When the redness and scales disappear, the patches are left of a yellowish or sallow hue. But the whole process is liable to be repeated at short intervals, and the disease to be thus greatly prolonged.

3. The pityriasis versicolor is most remarkable for the chequered and variegated discoloration of the cuticle which it exhibits. It appears mostly about the breast and epigastrium, and sometimes on the arms and shoulders, in brown patches of different shades, variously branphing and coalescing, and interspersed with portions of the natural hue.

iv. Ichthyosis. — The ichthyosis, or fish-skin disease, is characterised by a thickened, hard, rough, and in some cases almost horny texture of the integuments of the body, with some tendency to scaliness, but without the deciduous exfoliations, the distinct and partial patches, or the constitutional disorder, which belong to lepra and psoriasis.

1. Ichthyosis simplex. In its commencement this disease exhibits merely a thickened, harsh, and discolored state of the cuticle, which appears, at a little distance, as if it were soiled with mud. When further advanced, the thickness, hardness, and roughness, become much greater, and of a warty character, and the color is nearly black.

2. Ichthyosis cornea. Several cases of a rigid and horny state of the integuments, sometimes partial, but sometimes extending nearly over the whole body, have been recorded by authors ; and occasionally such a condition of the cuticle has been accompanied with the actual production of excrescences of a horny texture. These however, are rare occurrences.

Order III. — EXANTHEMATA. Rashes. The term exanthema, efflorescence, appears to have been used by the Greek writers in a very general sense, equivalent to that of our word eruption;

and it has been employed, in this acceptation, by many modern authors. The nosologists, however, have limited it to those eruptions which are accompanied with fever, and which have their regular periods of efflorescence and decline.

i. Rubeola. Measles. The rash, in the measles, appears usually on the fourth, but sometimes on the third, fifth, or sixth day of a febrile disorder, and, after a continuance of four days, gradually declines with the fever. The disease commences from ten to fourteen days after the contagion has been received, and appears under three varieties of form.

1. Rubeola vulgaris. The diagnosis of this rash is thus summed up by Dr. Bateman. It first shows itself in distinct, red, and nearly circular spots, somewhat less than the ordinary areolae of flea-bites. As these increase in number, they coalesce, forming small patches, of an irregular figure, but approaching nearest to that of semicircles or crescents. These patches are intermixed with the single circular dots, and with interstices of the natural color of the skin : on the1 face they are slightly raised, so as to give the sensation of inequality of surface to the finger passed over the cuticle. The whole face, in-

deed, is often sensibly swelled at the height of always with fever.

Urticaria evanida. Distinguished by the alternating appearance and reappearance of the wheals, as under the influence of various causes. Urticaria perstans. Its specific name expresses its characteristic.

Urticaria conferta. Wheals coalescing into patches.

Urticaria subcutanea. Marked by a violent and almost constant tingling of the skin.

Urticaria tuberosa. Wheals forming hard tuberosities.

iv. Roseola.— This efflorescence is mostly symptomatic, and occurs in connexion with different febrile complaints. It is rose-colored, without wheals or papulae, and not contagious.

Roseola sestiva commences upon the face, and is distributed in small patches over various parts of the body.

Roseola autumnalis occurs in children in distinct, circular, or oval patches.

Roseola vaccina, -\ The signification of these Roseola miliaris, f terms conveys an idea of Roseola variolosa, £ the principal characteris- Roseola in fan til is. J tics. v. Purpura is known by an efflorescence consisting of small, distinct, purple specks and patches, attended with general debility, but not

the eruption; and occasionally the tumefaction of the eyelids is so great as to close the eyes for a day or two, as in the small pox : hut on the other parts of the body they are not sensibly elevated.

ii. Scarlatina. — The scarlet fever is characterised by a close and diffuse efflorescence, of a high scarlet color, which appears on the surface of the body, or within the mouth and fauces, usually on the second day of fever, and terminates in about five days.

1. Scarlatina simplex. The scarlatina simplex consists merely of the rash, with a moderate de-gree of fever. The day after the slight febrile symptoms have appeared, the efflorescence be-gins to show itself, about the neck and face, in innumerable red points, which, within the space of twenty-four hours, are seen over the whole surface of the body. These, as they multiply, coalesce into small patches, but, on the following day (the third), form a diffuse and continuous efflorescence over the limbs, especially round the fingers.

2. Scarlatina anginosa. A variety of the preceding, accompanied with an inflammation about the fauces.

3. Scarlatina maligna. This form of scarlatina commences like the last, but is attended with very dreadful symptoms. The eyes are dull and suffused with redness, the cheeks exhibit a dark-red flush, and the mouth is encrusted with a black or brown fur. The ulcers in the throat are covered with dark sloughs, and surrounded by a livid base ; and a large quantity of viscid phlegm clogs up the fauces, impeding the respiration, and occasioning a rattling noise, as well as increasing the

difficulty and pain of deglutition.

iii. Urticaria. — Urticaria febrilis. Attended with fever, headach, and sickness in the stomach.

1. Purpura simplex. In this variety there is an appearance of petechiae, without much disorder of the constitution, except languor, and loss of the muscular strength, with a pale 01 sidlow complexion, and often with pain in tin; bmbs. The petechiae are most numerous on the breast, and on the inside of the arms and less and are of various sizes, from the most minute point to that of a flea-bite, and commonly circular. They may be distinguished from recent flea-bites, partly by their more livid or purple color, and partly because, in the latter there iv a distinct central puncture, the redness around which disappears on pressure. There is no itching or other sensation attending the petechin?.

2. Purpura hasmorrhagica is considerably more severe ; the petechice are often of a larger size, and are interspersed with vibices and ec-chymoses, or livid stripes and patches, resembling the marks left by the strokes of a whip or by violent bruises.

3. Purpura urticans.

4. Purpura senilis. I give this appellation to a variety of the complaint of which I have seen a few cases, occuring only in elderly women. It appears principally along the outside of the fore arm, in successive dark purple blotches, of an irregular form and various magnitude.

iv. Erythema is defined by Dr. \ illan to be ‘ a nearly continuous redness of some portion of the skin, attended with disorder of the constitution, but not contagious.’ Dr. Willan has described six varieties, which will include all the ordinary forms of the efflorescence. In some of them, as will appear from their titles, the surface is more or less elevated at some period of its course, approximating to the papular or tuber-cular tumors; but these are obscurely formed. and’soon subside, leaving the redness undiminished.

1. Erythema fugax consists of red patches, of an irregular form, and short duration, resembling the redness produced from pressure.

2. Erythema laeve exhibits a uniformly smooth, shining surface, and chiefly appears on the lower extremities, in confluent patches, and is generally accompanied by anasarca.

3. Erythema marginatum.

4. Erythema papulatum occurs chiefly on the arms, neck, and breast, in extensive irregular patches, of a bright red hue, presenting not an inelegant painted appearance. For a day or two, before the color becomes vivid, the surface is rough or imperfectly papulated.

Order IV. — BULL*. The large and often irregular vesications, which are termed bullae, discharge a watery fluid when they break ; and the excoriated surface sometimes becomes covered with a flat yellowish or blackish scab, which remains till a new cuticle is formed underneath ; and sometimes is converted into an ulcer, which does not readily heal.

i. Erysipelas, considered under the head of Inflammation.

li. Pemphigus. — Authors are not agreed about the distinct nature of those diseases which have been described under this appellation.

iii. Pompholyx. — An eruption of bullae appearing without any inflammation round them, and without ferer, and therefore, differing most materially from the pemphigus described by nosologists, Dr. Willan applied the appellation of pompholyx.

1. Pompholyx benignus exhibits a succession of transparent bullae, about the size of a pea, or sometimes of a hazel nut, which break in three or four days, discharge their lympth, and soon heal. They appear chiefly on the face, neck, and extremities; and occur in boys in hot weather, in infants during dentition, and in young persons of irritable habit from eating acrid vegetable substances, or from swallowing a few grains of mercury.

Order V. — PUSTUIJE. Pustules originate from an inflammation of the skin, and the consequent partial effusion of purulent matter under the cuticle, by which the latter is elevated into small circumscribed

tumors. Sometimes several of these elevations arise upon a common inflamed surface ; but most frequently the inflammation of the base of each is distinct and circumscribed. They often terminate in a scabby incrustation, varying in hardness according to the various tenacity of the contained fluid ; and sometimes in superficial ulceration.

i. Impetigo, humid or running tetter. This eiuption is characterised by the appearance of the small pustules denominated psydracia. It is not accompanied by fever, not contagious, nor communicable by inoculation.

1. Impetigo figurata deserves particular no-tice, because in its early stages it is very apt to be mistaken for the scabies. It appears in circumscribed patches, of various figure and magnitude, which are usually smaller and more circular on the upper, and larger, oval, and irregular on the lower extremities. The patches consist at first of clusters of the yellow psydracious pustules, set close together, and surrounded by

a slight inflammatory border ; the whole being somewhat raised, but the pustules not very prominent or acuminated. In a few days the pustules break and discharge their fluid ; the surface becomes red and excoriated, shining as if it were stretched, but exhibiting numerous minute pores, from which a considerable ichorous discharge is poured out, accompanied with much troublesome itching, heat, and smarting. The discharge soon concretes partially into thin yellowish or greenish scabs ; but still continues to ooze from under the scab which it forms. In the course of three or four weeks, as the quantity of the discharge diminishes, the scabs dry and fall off, leaving the surface of the cuticle red, rough, and somewhat thickened, and at the same time extremely brittle, and liable to crack and to be excoriated ; so that the ichorous discharge and scabbing are easily reproduced, and the disease is often thus much prolonged in its duration. Occasionally fresh crops of the psydracious pustules reappear, as at the commencement ; and the whole course of eruption is repeated.

2. Impetigo sparsa differs from the preceding chiefly in form.

3. Impetigo erysipelatodes.

4. Impetigo scabida. We shall insert an account of this species as observed among the natives of the Sandwich Islands, where this genus is very common.

‘ Pupu, a cutaneous disease common among those who neglect the cleanly state of their persons, and expose the surface to the inclemencies of the weather. The categorematic pu signifies any kind of effervescence or bubbling up, and is well expounded by OXww, the root of phlyzacia ; but, as these pustules are not accompanied by any heat or febrile symptoms, they properly come under the denomination of psydracious, constituting a particular kind of cutaneous ma-lady called impetigo or running tetter. This disease is often mistaken by foreign visitors for the itch ; but differs from it in not being contagious, and in having the lamellated scabs, which leave large deep red aveolae behind them. The easy method of cure always makes it obvious that this affection differs essentially from the itch on one hand, and the porrigo on the other, though my friend Dr. Pearson of Macas, judging from report, referred it to the latter; for, by keeping the body clean and covered, it gradually disappears ; and since the people have adopted the European mode of culture, its appearance has become less general than formerly. I have noticed that those poor men who work a great deal in those artificial swamps called taro-patches are peculiarly exposed to its virulence, and I have sometimes thought that the origin of this disease might” be attributed to an irritation which the acrid qualities of the areum, or as it is now called calladium, might have at first occasioned in the skin, till by frequent occurrence it grew, by disposing the constitution to contract this mor-bid habit, to its present state of violence. It often attacks the legs or ancles in form of large scaly tumors, and in its worst form cracks and emits an ichorous discharge. 1 have sometimes seen the legs of a dropsical person covered, as it were, with greaves of one entire scab, and was

in its worst condition whilst the water was accumulating; but, after the operation of tapping, it would scale off and present for a time only a deep red, and hardened surface.’

ii. Porrigo. Ringworm of the scalp, scalled head, *etc.* — The porrigo is a contagious disease, principally characterised by an eruption of the

pustules denominated favi and achores unaccompanied by fever. The several appearances which the disorder assumes are reducible to five or six specific forms.

1. The porrigo larvalis, or crusta lactea of authors, is almost exclusively a disease of infancy. It commonly appears first on the forehead and cheeks, in an eruption of numerous minute and whitish achores, which are crowded together upon a red surface. These pustules soon break, and discharge a viscid fluid, which concretes into thin yellowish or greenish scabs. As the pustular patches spread, the discharge is renewed, and continues also from beneath the scabs, increasing their thickness and extent, until the forehead, cheeks, and even the whole face, become enveloped, as by a mask (whence the epithet larvalis), the eyelids and nose alone remaining exempt from the incrustation.

2. Porrigo furfurans. In this form of the disease, which commences with an eruption of small achores, the discharge from the pustules is small in quantity, and the excoriation slight ; the humor, therefore, soon concretes, and separates in innumerable thin laminated scabs, or scale-like exfoliations.

3. The porrigo lupinosa is characterised by the formation of dry circular scabs, of a yellowish-white color, set deeply in the skin, with elevated edges and a central indentation or depression, sometimes containing a white scaly powder, and resembling, on the whole, the seeds of lupines.

4. The porrigo scutulata, popularly termed the ringworm of the scalp, appears in distinct and even distant patches, of an irregularly circular figure, upon the scalp, forehead, and neck. It commences with clusters of small light-yellow pustules, which soon break and form thin scabs over each patch, which, if neglected, become thick and hard by accumulation.

5. Porrrigo decalvans, the aXwTrijS of the Greeks. — This singular variety of the disease presents no appearance whatever, except patches of simple baldness, of a more or less circular form, on which not a single hair remains, while •that which surrounds the patches is as thick as usual. The surface of the scalp, within these area, is smooth, shining, and remarkably white. It is probable, though not ascertained, that there may be an eruption of minute achores about the roots of the hair, in the first instance, which are not permanent, and do not discharge any fluid.

6. Porrigo favosa. This species of the disorder consists of an eruption of the large, soft, straw-colored pustules, denominated favi. These are not in general globular with a regularly circular margin, but somewhat flattened, with an irregular edge, and surrounded by a slight inflammation. They occur on all parts of the body ; sometimes on the scalp alone, and sometimes on the face, or on the trunk and extremities only ;

but most commonly they spread from the scalp, especially from behind the ears to the face, or from the lips and chin to the scalp, and occasionally from the extremities to the trunk and head. They are usually accompanied with considerable itching. Children from six months to four years of age are most liable to this eruption : but adults are not unfrequently affected with it.

iii. Ecthyma. — The ecthyma (0y<j, to fume) is an eruption of the inflamed pustules, termed phlyzacia. They are usually distinct, arising at a distance from each other, seldom very numerous, unaccompanied by fever, and not contagious.

1. Ecthyma luridum.

2. Ecthyma vulgare.

3. Ecthyma infantile.

4. Ecthyma cachecticum.

iv. Scabies. — The scabies, or itch, is an eruption of pustules, or of small vesicles, which are subsequently intermixed with, or terminate in, pustules ; it is accompanied by constant and importunate itching, but not with fever ; and is in all its varieties contagious. It appears occasionally on every part of the body, the face only excepted ; but most abundantly about the wrists and fingers, the fossa of the nates, and the flexures of the joints.

1. The scabies papuliformis, or rank itch, consists of an extensive eruption of minute itching vesicles, which are slightly inflamed and acuminated, resembling papulae when examined by the naked eye. They commonly arise first about the bend of the wrist and between the fingers, or in the epigastrium ; on which parts, as well as about the axillse and nates, and in the flexures of the upper and lower limbs, they an: at all periods most numerous, and often intermixed with a few phlyzacious pustules containing a thick yellow matter.

2. The scabies lymphatica, or watery itch, k distinguished by an eruption of transparent v.: sides, of a considerable size, and without any inflammation at their base. They arise in succession, with intense itching, chiefly round th;; wrists, between the fingers, on the back of the hands, and on the feet and toes: they often occur also about the axillae, the hams, the bend of the elbows, and fossa of the nates, where they are intermixed with pustules : but they do not frequently appear, like the papuliform species, over the breast and epigastrium, nor on the thighs and upper parts of the arms.

3. The scabies purulenta, or pocky itch, is, I believe, often mistaken by those who confine their notion of the disease to the ordinary small and ichorous vesicle of the two former species. The eruption consists of distinct, prominent, yel-low, pustules, which have a moderate inflammation round their bases, and which maturate and break in two or three days, and then ulterute, with increasing pain and inflammation. Fhese pustules commonly appear first, and attain t largest size, on the hands and feet, especially about the knucklesand roots of the toes, bt-tw the fingers, and particularly between the f<

and thumb, and round the wrists. I n Ihest tious the pustules often exceed two lines in d

ier, and assume a prominent globular form : whence, from their general resemblance to the large well matured pustules of small pox (and not from any allusion to syphilis, as some have erroneously supposed), the popular term pocky has been applied to them.

4. Scabies cachectica. This variety of scabies exhibits, in different parts of the body, all the appearances which belong to the three foregoing species. It is occasionally also combined with patches resembling lichen, psoriasis, or impetigo, especially in adults, or young persons approaching the term of puberty ; whence it assumes an ambiguous character.

Order V. — VESICUUE.

In this order varicella and vaccinia being generally understood, we shall proceed to

i. Herpes (tpirw, to creep). This appellation is here limited to a vesicular disease, which, in most of its forms, passes through a regular course of increase, maturation, and decline, and terminates in about ten, twelve, or fourteen days. The vesicles arise in distinct but irregular clusters, which commonly appear in quick succession, and they are set near together, upon an inflamed base, which extends a little way beyond the margin of each cluster.

1. Herpes phlyctaenodes. — This species of the eruption, including the miliary variety above-mentioned, is commonly preceded by a slight febrile attack for two or three days. The small transparent vesicles then appear in irregular clusters, sometimes containing colorless, and sometimes a brownish, lymph ; and, for two or three days more, other clusters successively arise near the former.

2. Herpes zoster. — Shingles.

3. Herpes circinatus. — This form of the herpes is vulgarly termed a ringworm, and is, in this country, a very slight affection, being unaccompanied with any disorder of the constitution. It appears in small circular patches, in which the vesicles arise only round the circumference : these are small, with moderately red bases, and contain a transparent fluid, which is discharged in three or four days, when little prominent dark scabs form over them. The central area, in each vesicular ring, is at first free from any eruption ; but the surface becomes somewhat roush and of a dull red color, and throws off an exfoliation as the vesicular eruption declines, which terminates in about a week with the falling off of the scabs, leaving the cuticle red for a short time.

4. Herpes labialis. — A vesicular eruption upon the edge of the upper and under lip.

5. Herpes praeputialis. — This local variety of herpes was not noticed by Dr. Willan ; but it is particularly worthy of attention, because it occurs in a situation where it is liable to occasion a practical mistake of serious consequence to the patient. The resemblance alluded to is that of chancfe on the prepuce, which has been already explained when treating of diseases of the penis.

iv. Rupia. — The rupia (rumporupi) is characterised by an appearance of broad and flattish vesicles, in different parts of the body, which do

not become confluent : they are slightly inflamed at the base, slow in their progress, and succeeded by an ill-conditioned discharge, which concretes into thin and superficial scabs that are easily

rubbed off and presently regenerated. It appears under some varieties of form which may be included under the following heads: —

1. Rupia simplex consists of little vesications, containing, on their first appearance, a clear lymph, and appearing on many parts of the body. In a short time the fluid included in them begins to thicken, and becomes at length opaque and somewhat puriform : a slight ulceration of the skin takes place, with a sanious discharge, followed by scabbing; and when this heals it leaves the surface of a livid or blackish color, as if from a thickening of the rete mucosum.

2. Rupia prominens is distinguished by elevated conical scabs, which are gradually formed upon the vesicated bases. A fluted scab is first generated, and with some rapidity (e. g. in the course of the night), as the fluid of the vesication concretes.

v. Miliaria. — The miliaria (milium) is characterised by a scattered eruption of minute round vesicles, about the size of millet seeds, surrounded by a slight inflammation, or rash, and appearing at an uncertain period of febrile disorders. The eruption is immediately preceded by unusual languor and faintness, by profuse perspiration, which often emits a sourish odor, and by a sense of great heat, with a prickling and tingling in the skin. It appears most abundantly upon the neck, breast, and back, sometimes in irregular patches, and sometimes more generally diffused, and remains on those parts during several days : on the face and extremities it is less copious, and appears and disappears several times without any certain order. The vesicles, on their first rising, being extremely small and filled with a perfectly transparent lymph, exhibit the red color of the inflamed surface beneath them ; but, in the course of thirty hours, the lymph often acquires a milky opacity, and the vesicles assume necessarily a white or pearly appearance.

vi. Eczema. — The eczema (£tw, to boil) is characterised by an eruption of small vesicles on various parts of the skin, usually set close or crowded together, with little or no inflammation round their bases, and unattended by fever. It is not contagious.

This eruption is generally the effect of irritation, whether internally or

externally applied, and is occasionally produced by a great variety of irritants in persons whose skin is constitutionally very irritable.

vii. Aphtha, thrush. The aphthae (airrw, to kindle), are small, whitish, or pearl-colored vesicles, appearing on the tongue, lips, and the interior surface of the mouth and throat, generally in considerable numbers, proceeding to superficial ulceration, and terminating by an exfoliation of whitish crusts.

Order VII.— TUBERCULA.

7 have been treated of in an i earlier part of this article.

111. JHOCWKWH J

iv. Vitiligo. — This is an uncommon disease, and defined to be an appearance of smooth white shining tubercles, which gradually subside to the level of the skin, creeping along and chequering the whole superfices with a veal like appearance. Wherever the disease passes all the hairs drop

out, and never sprout again, leaving a smooth polished appearance of the skin during life.

v. Acne.-^— This genus is characterised by an eruption of distinct, hard, inflamed tubercles, which are sometimes permanent for a considerable length of time, and sometimes suppurate very slowly and partially. They usually appear on the face, especially on the forehead, temples, and chin, and sometimes also on the neck, shoulders, and upper part of the breast ; but never descend to the lower parts of the trunk, or to the extremities. As the progress of each tubercle is slow, and they appear in succession, they are generally seen at the same time in the various stages of growth and decline ; and, in the more violent cases, are intermixed likewise with the marks or vestiges of

those which have subsided. The eruption occurs almost exclusively in persons of the sanguine temperament, and in the early part of life, from the age of puberty, to thirty or thirty-five; but, in those of more exquisite temperament, even later. It is common to both sexes ; but the most severe forms of it are seen in young men. There are four varieties of this eruption, which may be designated by the titles of acne simplex, punctata, indurata, and rosacea.

vi. Sycosis (avKt), a fig), consists of an eruption of inflamed but not very hard tubercles, occurring on the bearded portion of the face and on the scalp, in adults, and usually clustering together in irregular patches. Celsus has correctly stated that some difference takes place in the appearance and progress of the eruption, when it is seated in the chin, and in the scalp; whence he divides it into two species.

In the sycosis menti the tubercles arise first on the under lip, or on the prominent part of the chin, in an irregularly circular cluster; but this is speedily followed by other clusters, and by distinct tubercles, which appear in succession, along the lower part of the cheeks up to the ears, and under the jaw towards the neck, as far as the beard grows. The tubercles are red and smooth, and of a conoid al form, and nearly equal to a pea in magnitude. Many of them continue in this condition for three or four weeks, or even longer, having attained their full size in seven or eight days ; but others suppurate very slowly and partially, discharging a small quantity of thick matter, by which the hairs of the beard are matted together, so that shaving becomes impracticable, from the tender and irregular surface of the skin. Tins condition of the face, rendered rugged by tubercles from both ears round to the point of the cliin, together with the partial ulceration, and scabbing, and the matting together of the unshaven beard, occasions a considerable degree of deformity; and it is accompanied also with a very troublesome itching.

vii. Lupus, treated like ulceration in general.

viii. Elephantiasis.— The elephantiasis, as described by the Greeks, is principally characterised by the appearance of shining tubercles, of different sizes, of a dusky red or livid color, on the face, ears, and extremities ; together with a thickened and rugous state of the skin, a diminution or total loss of its sensibility, and a falling off of all the air, except that of the scalp.

But at present by this term we understand to be meant what is

vulgarly called Barbadoes' leg and constitution, a remarkable thickening of the integuments of the legs, unattended with any pain or any appearance of disease. This inconvenient disorder affects the natives of the Society Islands, and even some of the missionaries who have been resident there many years.

ix. Frambtesia.— The eruption of the yaws sometimes commences without any precursory symptoms of ill-health ; but it is generally preceded by a slight febrile state, with languor, debility, and pains of the joints, resembling those of rheumatism. After several days minute protuberances appear on various parts of the skin, at first smaller than the head of a pin, but gradually enlarging, in some cases to the diameter of a sixpence, and in others even to a greater ex-tent : they are most numerous, and of the largest size, in the face, groins, axillae, and about the anus and pudenda. But the crop is not completed at once; new eruptions appear in different places, while some of the earlier ones dry off'. When the cuticle is broken a foul crust is formed on the surface, from under which, on the larger protuberances, red fungous excrescences often spring up, which attain different magnitudes, from that of a small raspberry to that of a large mulberry, which fruit they somewhat resemble from their granulated surfaces.

Order VIII.— MACUI.JE.

i. Ephelis, jjXtoe, the sun. The term ephelis denotes not only the freckles, or little yellow lentigines, which appear on persons of fair skin, and the larger brown patches which likewise arise from exposure to the direct rays of the sun, as the name imports ; but also those large dusky patches, which are very similar in appearance, but occur on other parts of the surface, which are constantly covered.

ii. Ntsvus comprises various congenital .excrescences and discolorations of the skin. These are composed of a tissue of small veins and arteries, which communicate freely with each other, and are apt at times to enlarge even to an alarming extent. The only mode of cure is complete extirpation, as recommended by John Bell in his surgical works.

iii. Spilus, moles. These occur in most cases at the time of birth, but have been known to supervene afterwards. It is in general not safe to meddle with them, as we reap no advantage from any kind of treatment, and they seldom occasion any trouble to the individual whom they affect.

We have thus given a brief sketch of the diseases of the skin,

preserving the classification of Drs. Willan and Baternan, to which works, not foro-etting also the later and more splendid publication of Alibert, we must refer those who wish to render their knowledge of this department more perfect and satisfactory. It must lamented that more light has not been hitherto thrown on this interesting though obscure clas of maladies ; but we may confidently anticipate a near approach to the period when this will i ceive its share of that improvement which is now making such rapid strides in every otla ment of science.

SUR

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SURINAM, a colony of Guiana in South America, settled by the Dutch. It is bounded on the north by the Atlantic, on the east by the river Marawina, on the south by a country of Indians, and on the west by the river Corentin ; about 150 miles from east to west, and sixty from north to south. The rivers that belong to this settlement are the Surinam (from which the colony takes its name), Corentin, Copename, Seramica, and Marawina. The first only is navigable; the rest, not excepting the Marawina, being, though very long and broad, so shallow and beset with rocks and islands that they are of little consequence. The other branch of this large river is named Commewina, and keeps due east for about sixteen miles, with a depth of about three or four fathoms at high-water mark ; but, as the tide makes a difference of twelve feet, it is not considered as navigable for any ships of burden, though its breadth may be computed at about two miles. The banks, though later cultivated than those of the Surinam, are in a more flourishing condition,and considered more healthy. Coffee is mostly planted on the estates which lie on the side of this river; and the plantations have : respectable appearance. At the distance of sixteen miles the Commewina is again divided into two branches, one of which bears the same name to the south-east for above fifty miles, and that of Cot-tica to the E. S. E. for more than forty miles, when this last lakes a meandering course to the S. S. W. Into all these rivers, the courses of which are serpentine, are discharged a number of large creeks or rivulets, the banks of which are inhabited by Europeans, and cultivated with sugar, cocoa, cotton, and indigo ; but in some places the wjods, &c., are absolutely impenetrable, a small path of communication between Paramaribo and the river Seramica being the only passable road in the settlement. The rivers whose banks are uncultivated, such as the Corentin, Copename, Seramica, and Marawina, afford but little matter for description. It is therefore only necessary to remark that they are generally from two to four miles in breadth, exceedingly shallow and crowded with quicksands, islands, and rocks, which form very beautiful cascades. In the Marawina is frequently found a curious stone or pebble, which is known by the name of the Marawina diamond, and which being polished bears a very near resemblance to that most valuable gem, and is consequently often set in rings, &c. A full description of this coast will be found in our article AMERICA, SOUTH, § 208. Paramaribo is the chief town.

SUR’LY, adj.) Sax. j-urt, sour ; Swed.swr—

SUR’LING, n. s. $ ley. Morose ; rough ; uncivil ; sour; silently or gloomily; angry: a sour morose fellow.

Tis like you’ll prove a jolly surly groom, That take it on you at the first so roundly. Shaktpeare.

That surly spirit melancholy, Had baked thy blood, and made it heavy thick, Which else runs tickling up and down the veins, Making that idiot laughter keep men’s eyes, And strain their cheeks to idle merriment.

Id. King John.

Against the capitol I met a lion, Who glared upon me, and went surly by, Without annoying me. Id. Julius Caesar.

These sour surlings are to be commended to sieui Gaulard. Camden.

Thus pale they meet ; their eyes with fury burn ; None greets ; for none the greeting will return ; But in dumb surliness, each armed with care His foe profest, as brother of the war. Dryden

Repulsed by surly grooms, who wait before The sleeping tyrant’s interdicted door. Id.

What if among the courtly tribe You lost a place, and saved a bribe 7 And then ia surly mood came here To fifteen hundred pounds a year, And fierce against the whigs harangued 7 Swift.

The zephyrs floating loose, the timely rains, Now softened into joy the surly storms. Thomson.

SURMISE’, v.a. & n.s. Fr. surmise. To suspect; image imperfectly; to imagine without certain knowledge : the noun substantive corresponding.

Of questions and strifes of words cometh onvy, railings, and evil surmisings. 1 Tim. vi. 4.

They were by law of that proud tyranness, Provoked with wrath, and envy’s false surmise,

Condemned to that dungeon merciless, Where they should live in woe,

and die in wretchedness. Spenser.

Man coveteth what exceedeth the reach of sense, yea somewhat above capacity of reason, somewhat divine and heavenly, which with hidden exultation it rather surmiseth than conceiveth. Hooker.

To let go private surmises, whereby the thing itself is not made better or worse ; if just and allowable reasons might lead them to do as they did, then are these censures frustrate. Id.

My thought, whose murthering yet is but fantastical,

Shakes so my single state of man, that function Is smothered in surmise. Shakspeare. Macbeth.

No sooner did they espy the English turning from them, but they were of opinion that they fled towards their shipping ; this surmise was occasioned, for tliat the English ships removed the day before.

Hay ward.

We double honour gain From his surmise proved false. Milton.

Surmise not His presence to these narrow bounds confined. Id.

It wafted nearer yet, and then she knew That what before she but surmised, was true.

Dryden.

This change was not wrought by altering the form or position of the earth, as was surmised by a very learned man, but by dissolving it.

Woodward.

Hence guilty joys, distastes, surmises, False oaths, false tears, deceits, disguises. Pope.

No man ought to be charged with principles he actually disowns, unless his practices contradict his profession ; not upon small surmises. Swift.

SURMOUNT, v.a. Fr. surmonter. To rise above ; conquer ; overcome ; surpass.

The mountains of Olympus, Atho, and Atlas. over-reach and surmount all winds and clouds.

What surmounts the reach 1, human sense, I shall delineate so, By likening spiritual to corporeal forms, As may express them best. Milton’s Paradise Lo*t.

He hardly escaped to the Persian court ; from whence, if the love of his country had not surmounted its base ingratitude to him, he had many invitations to return at the head of the Persian fleet . but he rather chose a. voluntary death. Swift.

Though no resistance was made, the English had much ado to surmount the natural difficulties of the place the greatest part of one day. Hayward.

SURMULLET, in ichthyology, a name used both by French and English naturalists for the mullus major, a fish of the cuculus kind, and in the Linnean system the mullus cirris geminis, &c., in many things resembling the mullus barbatus, or ruber, but differing from it in that it is twice as big, being often caught of twelve or fourteen inches in length. Its fins also are yellowish, and have a slight blush of red mixed with that color. Its scales are large, and broad, and thick, and are more firmly joined to the flesh. It has also three or four straight yellow lines running parallel with one another down its sides. It is caught in the Mediterranean and in the British seas, especially on the coast of Cornwall, and is every where esteemed a very delicate fish. Pennant calls this species of mullus the striped surmullet ; but he expresses a doubt whether this is not a variety, as Gronovius apprehends, of the red surmullet, or mullus barbatus. This last, he observes, was highly esteemed by the Romans, and bore a very high price. They presented it alive to their guests in a glass vessel that they might observe the beautiful changes of its eva-nescent colors during its expiration. Plin. 1. ix. c. 17. See Hor. Sat. lib. ii. § 2. 33., and Juvenal, sat. iv. See MULLUS.

SUR’NAME, n.s.&v.a. Yr.surnom. Thename of a family ; name which

one lias over and above what is called the Christian name. See below. The verb active corresponding.

Another shall subscribe with his hand unto the Lord, and surname himself by the name of Israel.

fsaiah xliv. 5.

Many which were mere English joined with, the Irish against the king, taking on them Irish habits and customs, which could never since be clean wiped away ; of which sort be most of the surnames that end in an, as Hernan, Shinan, and Mungan, which now account themselves natural Irish. Spenser.

He, made heir not only of his brother’s kingdom, but of his virtues and haughty thoughts, and of the surname also of Barbarossa, began to aspire to the empire. Knnlleis History.

Witness may

My surname Coriolanus : the painful service, The extreme dangers, and the drops of blood Shed for my thankless country, are requited But with that surname. Shakspeare. Coriolanus.

Pyreicus, only famous for counterfeiting earthen pitchers, a scullery, rogues together by the ears, was surnamed Rupographus. Peacham on Drawing.

How he, surnamed of Africa, dismissed In his prime youth the fair Ibernian maid. Milton.

God commanded man what was good ; but the devil surnamed it evil, and thereby baffled the command. South .

The epithets of great men, monsieur Boileau is of opinion, were in the nature of surnames, and repeated as such. Pope.

SURNAME is that which is added to the proper name for distinguishing persons and families. It was originally distinguished from sirname, which denotes the name of the sire or progenitor ; thus Macdonald and Robertson are sirnames expressing Ihe son of Donald, the son of Robert. The word surname, again from Fr. sur, above or upon, and nom, name, signified some name

superadded to the proper name to distinguish the individual, as Artaxerxes Longimanus, Harold Harefoot, Malcolm Canmore. From this it is evident that every sirname was a surname, but every surname was not a sirname. In modern times they are nearly confounded ; and, as then,- is now little occasion to preserve the distinction, Dr. Johnson has rejected the word sirname altogether ; in which he certainly was premature, for he has retained words much more obsolete. See NAME. Surnames have been introduced among most nations, but among many not at ,1 very early period. They seem to have been formed at first by adding the name of the father to that of the son. Among the Hebrews Caleb is denominated the son of Jejihunneh, and Joshua the son of Nun. But it is evident that these were not used as surnames. F,ven so late as our Saviour's time the Jews had no regular family surnames. Some had personal epithets from accidental or characteristical circumstances, as Simon Peter, Judas Lebbaeus, Joseph Barsa-bas Justus, Judas Iscariot, &c. But none of these were hereditary, as all surnames properly are. Iscariot is thought by some

commentators to have been a name taken by Judas from his landed property. We admit that in all nations, while men had but one name, it was usual to distinguish them by mentioning the name of their fathers. That the ancient Greeks as well as the Jews did so is evident from the very first line of the Iliad : A%iX\jjoc rbjXijiafcc, Achilles the son of Peleus. This perhaps gave rise to surnames, which at last became common among most nations. The old Normans used Fitz, which signifies son ; as Fitzherbert, Fitzsimmons, the son of Herbert, the son of Simon. The Irish used O, or Oy, for grandson, which is still used in many parts of Scotland ; the compiler's maternal great-grandmother boasted that she had 100 oyes : O'Neal, O'Donnel, &c., therefore signify the grandson of Neal and of Donald. The Scottish Highlanders employed Mac ; as Macdonald, the son of Donald. The Saxons added the word son to the end of the father's name, as Williamson. The Romans generally had three names, often four or five. The first, called prsenomen, answered to our Christian name, and was intended to distinguish the individuals of the family; the second, called nomen, corresponded to the word clan in Scotland, and was given to all those who were sprung from the same stock ; the third, called cognomen, expressed the particular branch of the tribe or clan from which an individual was sprung. Thus Publius Cornelius Scipio : Publius corresponded to our names John, Robert, and William : Cornelius was the name of the clan or tribe, as Campbell was formerly the name of all the duke of Argyle's clients, and Douglas of the retainers of the duke of Hamilton's progenitors : Scipio being added conveyed this information, that Publius, who was of the tribe of the Cornelii, was of the family of that Scipio who led about his a cod blind father, and became a scipio or stan" to him. But they had also the Agnomen, which was generally personal, though sometimes hereditary ; and was derived from some particular circumstance or accident happening to individuals. See Ac NO-512

S U R N A M E.

MEN and COGNOMEN. Du Chesne observes that surnames were unknown in France before 987, when the lords began to assume the names of their demesnes. Camden relates that they were first taken up in England a little before the conquest, under king Edward the Confessor; but he adds that they were never fully established among the common people till the time of Ed-ward II. Till then they were varied with the father's name : if the father, e. g., was called Richard

or Roger, the son was called Richard-son or Hodgson ; but from that time they were settled, some say, by act of parliament. The oldest surnames are those we find in Domesday-book, most of them taken from places, with the addition of de ; as Godefridus de Mannevilla, Walterus de Vernon, Robert de Oyly, &c. Others from their fathers, with filius ; as Gulielmus filius Osberni : others from their offices ; as Eudo Dapifer, Gulielmus Camerarius, Gisleber-tus Cocus, &c. But the inferior people are noted simply by their Christian names, without any surnames. Some think they were first introduced into Scotland in the time of William the Conqueror by the English, who accompanied Edgar Atheling when he fled into that kingdom. These had their proper surnames, as Moubray, Lovell, Lisle, &c., using the particle de before them ; which makes it probable that these surnames had been derived from the lands which their ancestors or they themselves had possessed. But Scottish historians mention some surnames in Scotland at much earlier periods ; and trace the surname of Macalpine from a natural son of king Alpine, and that of Macgregor from another bastard of king Gregory the Great, who both reigned in the ninth century. See SCOTLAND. Some antiquaries date the origin of the surname of Graham so early as the fifth century from one Graham, a Scottish hero, who leaped over and demolished part of Antoninus's wall, thence called Graham's Dyke. And it is certain that in Kenneth II.'s time, in 800, the great men had begun to call their lands by their own names ; and soon after the various branches of their families took their surnames from these estates. Others, as surnames increased, took their names from their offices, as Stewart; from their business, as Smith, Taylor, &c. ; others from their complexion or stature, as Black, White, Red, Brown, Long, Short, &c. It was long before any surnames were used in Wales, except that of son ; as Evan ap Rice, Evan the son of Rice ; David ap Howel, David the son of Howel : but many of them have at length formed separate surnames, as the English and Scots by leaving out the a in ap, and joining the p to the father's name : thus Evan ap Rice becomes Evan Price ; Griffin ap Howel, Griffin Powel.

We are told surnames were unknown in Swe-den till 1314, and that the common people of that country use none to this day, and that the same is the case with the vulgar Irish, Poles, and Bohemians. Many surnames were doubtless originally bestowed on account of the qualities of mind, as Bold, Hardy, Meek ; some for the qualities of body, as Strong, Low, Short, &c. But the dreatest number of surnames were borrowed from the names of places, and not a few from the

country at large ; as Scott, Scotland, English, Inglis, England, Wales,

Welsh, Ireland, &c. Camden says that there is not a village in Normandy but has given its name to some fa-mily in England. He mentions as examples Percy, Devereux, Tankerville, Mortimer, Warren, &c. They were introduced with William I. Several have been derived from places in the Netherlands, as Gaunt, Tournay, Grandison ; and many from the names of towns and villages in England and Scotland, as Wentworth, Mark-ham, Murray, Aberdeen. Many have been formed from the names of animals, as Lion, Dog, Hog, Cock, Salmon, &c. ; many from vegetables and minerals, &c. Others are formed from such a variety of accidents that it would be trifling to particularise them. After the revival of learning, when most European authors wrote in Latin, it was a very general practice to Latinize their surnames, either by adding a Latin termination to them, or by a complete translation, which often disguised them entirely. Thus Francis Holyoak, author of a Latin dictionary, called himself Franciscus de Sacra Quercu ; Kirkwood and Ruddiman, in their Latin grammars, called themselves Kirkwodus and Ruddimannus ; and even so late as the end of last century Dr. Brown, in his Elementa Medicinae, styled himself Joannes Bruno ; whence the epithet Brunonian was applied to his doctrine and his followers. But surnames ought never to be translated; and Christian names always ought, except when borrowed from surnames. See Louis.

SURPASS', v. a. Fr. surpasser. To excel ; to exceed ; to go beyond in excellence.

The climate's delicate, Fertile the isle, the temple much surpatsing The common praise it bears.

Shakspeare. Winter's Tale.

O, by what name, for thou above all these, Above mankind, or aught than mankind higher, Surpassest far my naming ! how may I ' Adore thee, author of this universe ? Milton.

O thou ! that, with surpassing glory crowned, Lookest from thy sole dominion like the god Of this new world. Id. Puradisf Lost.

Achilles, Homer's hero, in strength and courage surpassed the rest of the Grecian army. Dryden.

His miracles proved him to be sent from God, not more by that infinite power that was seen in them, than by that surpassing goodness they demonstrated to the world. Calamy.

Under or near the line are mountains which, for bigness and number,

surpass those of colder countries, as much as the heat there surpasses that of those countries. Woodward.

SUR'PLICE, n. s. Fr. surpelis, surplis ; Lat. super pellicium. The white garb which the clergy wear in their acts of ministration.

It will wear the surplice of humility over the black gown of a big heart.

Shakspeare. All's Well that Ends Well.

The cinctus gabinus is a long garment, not unlike a surplice, which would have trailed on the ground, had it hung loose, and was therefore gathered about the middle with a girdle. Addisjn.

SURPLICE. By Can. 58 every minister saying the public prayers, or ministering the sacrament or other rites of the church, shall wear a decent and comely surplice with sleeves, to be provided at the charge of the parish. But by 1 Eliz. c. 2

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and 13 and 14 Car. II., the garb prescribed by act of parliament, in the second year of king Edward VI., is enjoined ; and this requires that in the saying or singing of matins, and even songs, baptizing and burying, the minister in

Ihe greatest actions of a celebrated person, however surprising and extraordinaiy, are no more than what are expected from him. Addisan. Spectator.

It out of these tea thousand we should take the men that are employed in public business, the hi

parish churches and chapels shall use a surplice. ber of those who remain wil1 be surpriziugly little.

And, in all cathedral churches and colleges, the archdeacon, dean, provosts, masters, prebendaries, and fellows being graduates, may use in the choir, besides their surplices, such hoods as pertain to their several degrees. But in all other places every minister shall be at liberty to use a surplice or not. For the holy communion the rubric appoints a white alb plain, which differs from the surplice in being close-sleeved, with a vestment or cope. See ALB.

SUR'PLUS, n.s.) Fr. sur and plus. A su-SURPLUS'AGE.) pernumerary part; over-plus ; what remains when use is satisfied.

If then thee list my offered grace to use, Take what you please of all this surplusage ; If thee list not, leave have thou to refuse. Spenser. That you have vouchsafed my poor house to visit, It is a surplus of your grace. Shakspeare.

The officers spent all, so as there was no surplusage of treasure ; and yet that all was not sufficient.

Davies.

When the price of corn falleth, men give over surplus tillage, and break no more ground.

Carew's Survey of Cornwall. We made a substance so disposed to fluidity, that by so small an agitation as only the surplusage of that which the ambient air is wont to have about the middle even of a winter's day, above what it hath in the first part. Boyle.

Whatsoever degrees of assent one affords a proposition beyond the degrees of evidence, it is plain all that surplusage of assurance is owing not to the love of truth. Locke.

SURPRl'SAL, n. s. \ Fr. surprise. From the SURPRI'SE. S verb. The act of taking

unawares ; the state of being taken unawares : a dish, explained in the extract.

The castle of Macduff I will surjrrise, Seize upon Fife, give to the edge o' the' sword His wife, his babes. Shakspeare. Macbeth.

I set aside the taking of St. Jago and St. Domingo, in Hispaniola, as surprizes rather than encounters.

Bacon. Now do our ears before our eyes,

Like men in mists, Discover who'd the state surprize,

And who resists. Ben Jcnison.

Parents should mark heedfully the witty excuses of their children, especially at sudden surprisals ; but rather mark than pamper them. Wotton.

This let him know,

Lest willfully transgressing, he pretend Surprisal, unadmonished, unforewarned.

Milton's Paradise Lost.

ljp he starts, discovered and surprised. Milton. 1'eople were not so much frightened as surprized at the bigness of the camel. L'Estrange.

This strange surpriitil put the knight And wrathful squire into a fright. Hudihras. He whose thoughts are employed in the weighty cares of empire is not presumed to inspect minuter things so carefully as

private persons ; the laws therefore relieve him against the surprises and machinations of deceitful men. Davenuni.

There is avast difference between them, as vast as between inadvertency and deliberation, between surprize and set purpose. South. VOL. XXI.

Addison.

rew care for carving trifles in disguise, Or that fantastick dish some call surprise.

King's Cookery.

How shall he keep, what, sleeping or awake, A weaker may surprise, a stronger take ? Pope.

Who can speak The mingled passions that surprized his heart !

Thomson.

SU R'QUEDRY, n. s. Old Fr. sur and cuitkr, to think. Overweening; pride; insolence. Obsolete.

They overcommon were deprived Of their proud beauty, and the one moiety Transformed to fish for their bold surquedry.

Spenstr.

Late-born modesty

Hath got such root in easy waxen hearts, That men may not themselves their own good parti; Extol, without suspect of surquedry. Dunne.

SURRENDER, v. a., v. n.,) Old Fr. »•«/•-

SURREND'RY, n.s. [Stn.s. \ rendrc. To yield up; deliver up : yield ; give one's self up : the act of yielding or resigning.

Solemn dedication of churches serves not only to make them public, but further also to sunender uj> that right which otherwise their founders might have in them, and to make God himself their owner.

Hooker.

He, willing to surrender up the castle, forbade his soldiers to have any talk with the enemy. Kiioltrs.

If our father carry authority with such disposition as he bears, this last surrender of his will but offend US. S/iu/tspeure.

Ripe age bade him surrender late, His life and long good fortune unto final fate.

Fairfax.

As oppressed states made themselves homagers to the Romans to engage their protection, so we should have made an entire mrrendry of ourselves to God, that we might have gained a, title to his deliverances.

Decaii of Piety.

That hope quickly vanished upon the undoubted intelligence of that surrender. Cltiremiun.

Our general mother, with eyes Of conjugal attraction unreproved, And meek surrender, half-embracing leane'd On our first father. Milton's Paradise Li>.(.

This mighty Archimedes too surrenders now.

Glanaille.

Recal those grants, and we are ready to surrender ours, resume all or none. Dacemint.

In passing a thing away, by deed of gift, is required a surrender on the giver's part of all the property he has in it; and, to the making of a thing sacred, this surrender by its right owner is necessary

South.

Juba's surrender Would give up Afiick unto Casar's hands.

Addison.

Having mustered up all the forces he could, the clouds above and the deeps below, he prepares for a surrender ; asserting, from a mistaken computation, that all these will not come up to near the quantity requisite. Woodward.

Surrender up to me thy captive breath : My power is nature's power, my name is Death.

llarte 2 I.

SURRENDER, in common law, is a deed or instrument, testifying that the particular tenant of lands and tenements, for life or years, doth sufficiently consent and agree, that he who has the next or immediate remainder or reversion thereof shall have the present estate of the same in possession ; and that he hereby yields and gives up the same to him, so that the estate for life or years may merge or drown by mutual agreement of the parties. Of surrenders there are three kinds ; a surrender properly taken at common law ; a surrender of copyhold or customary estates; and a surrender improperly taken, as of a deed, a patent, &c. The first is the usual surrender, and it is usually divided into that in deed and that in law.

SURRENDER, in deed, is that which is really made by express words in writing, where the words of the lessee to the lessor prove a sufficient assent to surrender his estate back aˆain.

SURRENDER, in law, is that wrought by operation of the law, and which is not actual. As if a man have a lease of a farm for life or years, and during the term he accepts a new lease ; this act is, in law, a surrender of the former.

SURRENDER of a bankrupt. See BANKRUPTCY.

SURRENDER OF COPYHOLDS is the yielding up of the estate by the tenant into the hands of the lord, for such purposes as are expressed in the surrender : as to the use and behoof of A and his heirs, to the use of his own will, and the like. This method of conveyance is so essential to the nature of a copyhold estate that it cannot possibly be transferred by any other assurance. No feoffment, fine, or recovery (in the king's courts) hath any operation upon it. If I would exchange a copyhold with another, I cannot do it by an ordinary deed of exchange

at the common law, but we must surrender to each other's use, and the lord will admit us accordingly. If I would devise a copyhold, I must surrender it to the use of my last will and testament ; and in my will I must declare my intentions, and name a devisee, who will then be entitled to admission.

SURRENDER OF LETTERS PATENT AND OFFICES. A surrender may be made by letters patent to the king, so that he may grant the estate to whom he pleases, &c. ; and a second patent for years to the same person for the same thins; is a surrender in law of the first patent. — 10 Rep. 66. If an officer for life accepts of another grant of the same office, it is in law a surrender of the first grant ; but if such an officer takes another grant of the same office to himself and another, it may be otherwise.

SURREPTION, n. s. Lat. surreptus. Sud-den and unperceived invasion or intrusion.

Sins compatible with a regenerate estate are sins of a sudden stirreption. Hammond,

SURREPTITIOUS, o$. > lAt.surreptitious.

SURREPTITIOUSLY, adv. S Done by stealth : gotten or produced fraudulently.

Scaliger hath not translated the first ; perhaps supposing it surreptitious, or unworthy so great an assertion. Rrowne.

The Masorites numbered not only the sections and lines, but even the words and letter of the Old Testament, the better to secure it from surreptitious practices. Government of the Tongue.

Thou hast got it more surreptitiously than he did, and with less effect. fd.

A correct copy of the Dunciad, the many surreptitious ones have rendered necessary.

Letter to Publisher of Pope's Dunciad.

SURREY, an inland county of England, in the southern part of the kingdom, is bounded by Sussex on the south, by Kent on the east, by Berkshire and Hampshire on the west, and on the north is separated

from Middlesex and a small part of Buckinghamshire by the river Thames. This ranks below most of the other counties of England in extent; its greatest width from north to south being about twenty-six miles, and its utmost length from east to west about thirty-eight. The best authorities compute its contents at 81 1 square miles, or 519,000 acres.

The surface consists of a gentle diversity of hill and dale, the hills in some parts rising to a considerable height, and the whole presenting as great a variety of scenery as any portion of the kingdom. In some parts naked heaths impart a wildness to the prospect, strikingly contrasted with the numberless beauties occasionally scattered over the surface by the hand of art; while the hills, aspiring to the bold character and picturesque scenery of mountains, gradually decline into richly wooded dales, and highly cultivated plains. Its extensive downs also afford extensive pastures. Across the middle of the county, the downs rise with a gentle slope from the north, and are broken in their eastern division into deep and waving valleys. Towards the northern border there are several hills, which afford an extensive view. To the south of the downs, the surface of the county above rises into hills that overhang the Weald. As we approach the Western extremity, these hills cover a greater breadth ; and near Wonersh, Godalming, and Peperharrow, are covered with a rich foliage, and wave with a graceful line, into intermediate valleys, watered by the different branches of the Wey. On Leith Hill, to the south-west of Dorking, Tilbuster Hill near Godstone, and Gratewood Hill near Godalming, the views are very extensive.

Of the soil of this county the different species are much intermixed. They may be reduced to the general heads of clay, loam, and chalk. The most extensive and uniform tract is that which occupies the whole southern border, and forms what is denominated the Weald of Surrey ; a district about thirty miles in length, and from three to five in breadth. This consists of a cold, retentive clay, upon a subsoil of the same na-ture ; its surface flat, covered with wood, and its elevation less perhaps than any other vale district in the island. Proceeding northwards, the soil is loam, across the whole county. Near Godalming it runs to a great depth, and rests on a base of sandstone, veined with iron ore. Here commences the most remarkable district of the chalky downs, which lie nearly in the middle of the county, entering from Kent, into Surrey, by Croydon and Limpsfield, where their width is about seven miles. They, however, gradually decrease towards the west. Along the summit of the downs, particularly about Walton and Hed-ley, and between the Mole and the Wey, is a

iarge extent of heath, which for a considerable depth separates the chalk of the northern from the southern compartment of downs. From the eastern extremity of the downs, running northward, is a variety of soils, consisting chiefly of strong clay and sandy loam, with patches of gravel, reaching almost to Dulwich, from which place to the extremity of the county, near Rotherhithe, is a strong clay.

It is the general opinion that less rain falls in Surrey than in the metropolis ; so that the climate may, upon the whole, be regarded as dry, as far as respects the quantity of rain ; but the southern border and the low parts near the Thames are damp, from the nature of the soil, the flatness of the surface, and the immense number of trees which cover it. On the other hand, the atmosphere of the chalk hills, which run across the who * county from east to west, is dry, keen, and bracing. On the heaths about Bagshot, Aldershot, and Hind-head, a similar climate prevails. The spring is in general early, and vegetation is not so often checked by frosty mornings, and cold, raw, easterly winds, as in some of the more southern counties. The summers are commonly dry and warm, and the harvest generally commences in the first ten days of August. The wind blows most frequently from the west and south-west, seldom keeping long in any point between the north-west and north-east : b.ut in the spring, and frequently towards the end of autumn, easterly winds prevail ; and the weather is then cold and raw ; but the greatest quantity of rain falls when the wind blows from the S. S. W. or south.

Iron ore is found in considerable quantities in the south-west part of Surrey, about Haslemere, Dunsfold, and Cranley ; and in the south-east quarter, about Lingfield and Home ; but in consequence of the high price of fuel the works have been neglected. Fuller's earth is found both to the north and south of the downs, but the former is of inferior quality. Extensive quarries of stone are worked near Godstone and its vicinity. When first taken from the quarry it is incapable of bearing a damp atmosphere ; but after berng kept covered for a few months it becomes sufficiently firm to resist the heat of a common fire, and is called fire-stone. In consequence of this property it is much in demand for fireplaces. The stones are of various sizes, from ten inches thickness to seventy-two superficial feet. There are large quarries of limestone near Dorking, particularly serviceable in the

construction of works under water. Chalk is abundant and in general use as a manure. The sand is in great request for hour-glasses ; and the brick-earth produces excellent fire-bricks.

The principal rivers are the \Vey, Mole, and Wandle; the Thames also washes the northern border of this county. The former, after watering the county in different directions, finally discharge themselves into the Thames. A considerable branch of the Medway rises in the parishes of Godstone and Home, and passing through Lingfield quits Surrey and enters Kent. The Loddon also skirts Surrey on its west side, and is used for the supply of the Basingstoke canal. In the western and south-eastern parts of the

county are ponds, preserved as stew-ponds, to keep fish to supply the London market. The mineral waters of Surrey were at one period in high repute, but are now wholly neglected. This county is in general well furnished with springs. As to agricultural improvement, the drill husbandry has not found many followers, except in the west part of the county, in some parts of which it is general. The produce of wheat is from two to five, and sometimes six quarters an acre, and that of barley, which is here a tine crop, from four to seven and a half. The climate of Surrey seems to be less favorable to oats, the produce of which is sometimes very low, not exceeding three quarters per acre. (Jar-den peas and beans are cultivated in the neighbourhood of the metropolis, and the sandy loams near the Thames, about Mortlake ; while the field varieties of both are extensively grown in most other parts, and especially on the chalk hills. Turnips are raised in large crops ; and hops are largely cultivated about Farnham. Carrots, clo-ver, sainfoin, and hops, are also extensively cultivated ; and a greater quantity of land is employed in raising physical herbs, we are told, than in any other county in Britain. Those which are chiefly reared are peppermint, lavender, camomile, aniseed, liquorice, and poppy. The whole quantity of garden ground employed for the London market in this county amounts to about 3500 acres. Surrey is not celebrated for any particular breed of cattle. The Holderness, or short-horned breed of cows, is preferred ; and the rearing of calves for the metropolis was once a common employment, but is now almost disused. The cattle chiefly bred are sheep, oxen, and hogs; many geese are also kept. Within the last ten years large tracts of the heath-lands have been enclosed and cultivated ; before which period it was calculated that nearly one-sixth part of Surrey was in a very unprofitable state : the whole amount of waste lands is still computed at 70,000 acres. This county contains the Basingstoke canal, which runs from that place to

the Wey ; the Wey and Arun junction canal, which falls into the Wey about a mile above Guildford, thus opening a direct communication with the sea ; the Surrey, which communicates with the Thames at Rotherhithe ; and the Croydon, which commences there and enters the Surrey canal at Deptford. On the Wey the first locks used in England were erected.

According to the Roman division of England, Surrey formed a part of the province of Britannia 1'rima. At the Saxon heptarcliy it constituted, with Sussex, a distinct state, under tin; title of Suth-Seaxna-rice; and on the division into shires, this district, from its southern situation, was called Suthrea, since modulated to Sur-rey. On the Danish invasion, and the Norman conquest, the landed property was divided and given to the followers of the victorious monarchs. In later times the history of Surrey is trivial. During the civil wars it adhered to the parliament, "and petitioned them for the removal of the ' evil counsellors' who were around thcˆkinjj As early as the time of the Saxons it conferred the title of earl; and Huda, the first who hori that distinction, was slain, in HA:'., m l-attlu with 2 L 2

the Danes. Surrey is divided into thirteen hundreds, which contain one county town, fourteen boroughs and market towns, and 140 parishes, all in the diocese of Winchester, with the exception of nine parishes peculiar to the see of Canterbury. It is represented in parliament by eleven members, four for the county, and two for each of the boroughs of Southwark, Guildford, and Lambeth, and one for Reygate.

SURROGATE, SURROGATUS, a person substituted or appointed in room of another ; most commonly of a bishop, or bishop's chancellor.

SURROUND', v. a. Fr. surrender . To environ ; encompass ; enclose on all sides.

Cloud and ever-during dark Surround* me, from the cheerful ways of men Cut off. Milton.

As the bodies that surround us diversely effect our organs, the mind is forced to receive the impressions.

Locke.

SURSOL'ID, n. s. In algebra. The fourth multiplication or power of any number whatever taken as the root. A sursolid problem is that which cannot be resolved but by curves of a higher nature than a conic section.

SURTOUT', n. s. ft. surtout. A large coat worn over all the rest.

The surtout, if abroad you wear, Repels the rigor of the aii.j Would you be warmer, if at home You had the fabrick, and the loom ? Prior.

Sir Roger she mortally hated, and used to hire fellows to squirt kennel -water upon him, so that he was forced to wear a sin-tout of oiled cloth, by which means he came home pretty clean, except where the surtout was a little scanty. Arbuthtwt.

SURVENE', v. a. Fr. survenir. To supervene; to come as an addition.

Hippocrates mentions a suppuration that survenes lethargies, which commonly terminates in a consumption. Harvey. SURV'EY', v. a.&n.s. } Old Fr. surveoir. SURVEY'OR, n. s. S To overlook ; have under the view ; examine : a view ; prospect ; superintendence : a surveyor is an overseer ; one placed to superintend ; a measurer of land.

The husbandmen's self came that way, Of custom to survey his ground. Spenser.

Should we survey

The plot of situation, and the model ; Question surveyors, know our own estate, How able such a work to undergo, To weigh against his opposite.

Shahpeare. Henry IV. Wer't not madness, then To make the fox surveyor of the fold 1 Id. VI.

Bishop Fox was not only a grave counsellor for war or peace, but also a good surveyor of works.

Bacon's Henry VII. Though with those streams he no resemblance

hold,

Whose form is amber, and their gravel gold ; His genuine and less guilty wealth t' explore, Search not his bottom, but survey his shore.

Denham.

Under his proud survey the city lies, And like a mist beneath a hill doth rise. Id.

Her stars in all their vast survey Useless besides ! J/i/ton,

With altered looks, All pale and speechless, he surveyed me round.

Dryden.

Early abroad he did the world survey As if he knew he had not long to stay. Waller.

SURVEYING OF LAND is the art of measuring, planning, and computing the contents of fields and estates. In England the unit of land measure is the acre, which contains 4840 square yards; and it is subdivided into roods and perches, or poles; four roods making an acre, and forty perches a rood.

Land is measured with a chain, called Gun-ter's chain, from its inventor. It is twenty-two yards long, and is divided into 100 equal links, each 7-92 in length. An acre therefore contains 100,000 square links.

The lines measured, for ascertaining the dimensions and determining the contents of fields, are generally set down, and their contents computed in links; and, five figures on the right of the contents in links being pointed off for decimals, the figures on the left are acres, and, the decimals being reduced to roods and perches, the content is exhibited in the usual denominations of acres, roods, and perches.

In measuring distances with a chain, provide ten small arrows, and give them to the person who is to lead the chain, and, holding one end of the chain in your left hand at the point at which you are to begin to measure, let the leader go forward in the required direction, holding the other end of the chain and one of the arrows in his right hand; you pointing with your right hand to the right or the left, according to the direction in which you wish him to move. When he is exactly in a line with the object which you wish to measure to, point towards the ground, to indicate that the leader must there stick an arrow in the ground at the end of the chain. The leader must then move forward another chain length, keeping the follower in a line with the object departed from, and the follower keeping him in a line with the object to be measured to ; the leader and follower thus mutually checking each other, and the leader leaving an arrow at the end of each chain, which is taken up by the follower when the leader has pricked in the next. When all the ten arrows are used, they are returned to the leader to use over again, being changed at the end of every ten chains till the line to be measured is finished ; and the number of changes shows the number of tens ; to which the arrows in the hands of the follower, and the odd links over from the end of the last chain to the end of the line being added, the length of the line in chains and links is obtained. Thus, if there should be six changes of arrows, and the follower should have eight arrows in his hand, and there be twenty-three links over from the last chain to the mark or end of the line, then the line is in length 6823 links.

In measuring a sloping line, a small pocket level is useful to show how many links ought to be deducted from each chain to reduce the line to its horizontal length, to be used in mapping or plotting the figure ; for, though the area of the surface with all its undulations is the content which it is required to exhibit in figures for the content, it is only its surface reduced to a horizontal plane that can be represented on a plan.

Fiv.JO.

Fia.lt.

fiff.ll.

A staff of ten links long, called an offset staff, is useful in measuring short distances from the main lines.

The cross staff too is a very useful and simple instrument for determining the places from which perpendiculars are to be measured from the main or diagonal lines, to the angles of the field or estate. It consists of two pair of sights at right angles to each other, set on a staff, with a sharp point to fix in the ground. In measuring along the line, when nearly opposite a point of which the perpendicular distance is required, the cross staff is fixed up, and turned round till both ends of the line can be seen through one pair of sights ; and it is then moved backward and forward along the line, till, while both the ends of the line are seen through one pair of sights, the object whose perpendicular distance is required, is seen through the other pair ; and the distance from the cross staff to the object is its perpendicular distance from the line.

In extensive surveys a theodolite is used to measure angles, and from them, conjoined with a measured base, the lengths of the leading lines are computed trigonometrically, and thus the relative positions of the more distant and principal points in the survey are determined.

But, with whatever instruments the survey may be made, a field book must be kept to register all that is necessary for computing the area, and making a plan of the field or estate surveyed.

The following is a specinien of the form commonly used in measuring along A B in fig. 1, Plate SURVEYING.

Offsets on the left. m 38 . .

A B.

120 156

OlJsets on the right. . 67 Well.

n 19 . .

170

304

. 59 o

q 50 . .

320 330

. 64;i

r 43

380

402

. 37s

422

. 18 t

460

B

In small surveys, such as the preceding is a specimen of, a good way of setting down the work is to sketch on a piece of paper a figure resembling that which is to be measured, and writing the dimensions as they are found against or upon the corresponding parts of the figure.

To survey a triangular field, as A B C, fig. ‘2, measure one of the sides, as A B, and, by means of the cross staff, find at what point the perpendicular C D will meet the case, and measure that perpendicular. Or measure the three sides of the triangle ; or two of its sides and the angle which they include.

Then in the first case the area of the triangle

AB x CD .

— ; in the second the area —

V/S • S— A B • S— B C • S— A C, where S — half the sum of the three sides ; and in the third case, supposing A B, B C, and the angle B mea —

A B • B C • sin. B sured, the area = —

Example.— Suppose A B r: 1084, A C 896, and B C 738 links, the angle B 55° 2’, and C D = 605 : required the area by each of the three methods ?

A. R. P.

By method first, the area =

1084 x 605

=327910 links = 3 1 4-6

A. 11. P.

By the second, the area = ../1 359 X 275 X463 X 621 = 327803 links = 3 1 4-4

A. R, 1'.

1084 X 738 x A at sin. 55° ^ .by the third, the area =

lin]f< =

4-4.

These calculations will be considerably facilitated by the use of logarithms. Thus the computation by the second method will stand thus :

AB 1084

AC 896

BC 738

Area Acres

Rods

2)2718

1359 275 463 621

Links

327803

3-27803 4

1-11212

40

Log.

3-133219 2-439333 2-665581 2-793092

2)11-031225

Log. 5-515612

To measure a four sided field as A BCD, fig. 3.

First method. — Measure all the sides, and the diagonal, and the figure will then be divided into two triangles, the area of each of which may be computed by the second of the preceding methods.

Second method.— Measure the diagonal AC, and find by means of the cross staff where the perpendiculars D E and B F from the angles and B meet the diagonal, and measure D

A C x D E + B F. B F, and the area will be = — — ˆ —

Third method.— Measure the longest side, fig. 4, as A B, the several distances A E, 1 and F B ; and the perpendicular C K and I then find the area of each of the parts, A K C, E F D C, and F D B, and their sum will he the area of the whole.

Perches 4—ip-i80

The .‘rt ‘ of the triangle. \ F. (.’ is

A K x EC

518

*hat of the trapezoid C E F D is

EF x EC + DF

; and that of the triangle

Offsets Left B 180

BFDis

BF X FD

In the preceding figure the area is AC x DE + BF

2

Thus if AC = 1284, DE = 326, and BF

1284 X 326 + 290

= 290 links ; then the area =

D230

1284 X 616 790944

= 395472 links =

2 2

A. R. P.

3-95472 acres = 3:3: 32-7.

In the last figure suppose the annexed the field book of the admeasurements : —

A C

135

410

550

C

Offsets Right 130 G

CG

152

440

G

Offsets left. C 245 . D289 .

AB.

267

612

843

B

Then 612—267 = 345 = EF, and 843—612

267 X 245 = 231 = F B, and — - = 32707 links, ACxBw + Gm

F D

120 237

288 80

520

D

Or the figure might have been measured by means of a diagonal form BE, and perpendiculars upon it from the angles on each side. Or, supposing the dimensions of the trapezium A B C G taken as above, the remaining part C GF ED might have been measured by means of a diagonal from C to F, and perpendicular upon it from D, E, and G.

From the above field book to compute the area of the figure : — Area of A B C G zz

345 X 245 + 289 the area of A E C ; = 92115

links, the area of E F D C ; and =

•

33379 links, the area of BFD.

Hence 32707

92115 33379

A. 1-58201

4

zz 85250 links; area of

zz 50600 links ; area of

R. 2-32804

A. R. P.

P. 13-12160, or the area is 1 2 13-1

Any field of which the sides are straight lines may be divided into triangles, the sides of which being measured, the area of each may be computed, according to the second method above given; for finding the area of a triangular. But they may in general be more advantageously surveyed in the following manner, which we shall give in the words of Dr. Hulton :

1 Having set up marks at the corners where necessary of the proposed field ABCDEFG, fig. 5, walk over the ground and consider how it can be best divided into triangles and trapeziums, and measure them separately. Thus the annexed figure is divided into the two trapeziums, A BCD, GDEF, and the triangle GC D. Then in the first trapezium, beginning at A, measure the diagonal AC, and the two perpendiculars G m, B n. Then the base G C and the perpendiculars D q. Lastly, the diagonal D F, and the two perpendiculars p E, and o G. All which measures write against the corresponding parts of a rough figure drawn to resemble the figure to be surveyed, or set them down in any other form you choose.' Thus

2-52000 links

Then 85250 + 50600 + 52000 = 187850 links, zz 1 A. 3 R. 20-5 P.

Many pieces of land may be very well surveyed by measuring any base line, either within or without them, together with the perpendiculars let fall on it from every corner of them. For they are thus divided into several triangles and trapezoids, all of whose parallel sides are perpendicular to the base line ; and the sum of these triangles and trapeziums will be equal to the figure proposed, if the base line fall within it, if not the sum of the parts without being taken from the sum of the whole within and without, the remainder will be the area of the figure.

In pieces that are not very large it will be sufficiently exact to find the points in the base line, where the several perpendiculars will fall by means of the cross, or even by estimating by the eye, and measuring thence to the corners for the lengths of the perpendiculars ; and it will be generally better when practicable to have the diagonal within the

figure, as the measuring over hedges is attended with inconvenience.

The computing of the contents of very irregular fields may often be greatly simplified, by reducing the crooked sides to straight ones upon the plan ; an operation .which may be easily and accurately enough performed thus : —

‘ Stretch a hair over the crooked sides of the figure, so that the small parts cut off by it may be equal to those taken in, an equality which by a little practice may be judged of with great nicety; then mark the ends of the hair with two points, and proceed in the same manner with the other sides till the whole is reduced to

a straight lined figure, of which the content may be found as above.

ˆ Thus, in fig. 6, let the dotted lines A B, BC, CD, DA, represent the lines which reduce the curvilinear area to an equivalent rectangular one; then if AC, measured on the scale from which the figure is laid down, be 843 links, and the perpendiculars D e and B / be 424 and 518 respectively, we have the’ area = A C

L ± _/ = 3 A. 3 K. 35-28 P. i

On dividing lands. — In the division of commons, after the whole is surveyed and the area cast up, the quantity due to each claimant must be assigned in proportion to the value of his claim ; and, if the land be of different qualities, the quantity to be assigned to each claimant will be inversely proportional to the quality of the land assigned to him. Thus if a, b, c, and d represent the claims of A,B,C,and D to a common whose area is x, and a’, b’, c’, and d’ represent respectively the value per acre of the land, from •which the allotments to A, B, C, and D are ren b c d spectively to be made; then — , + -, + -7 + —, ‘• x

—, to A’s share ; and

-7 to B's share, &c. b

To cut off from a plan a given quantity by a line drawn from any proposed point in the side of it.

Let A, fig. 7, be the proposed point. Draw any line A B, and measure the space A B Q by the method indicated above. Let us suppose that this is found in defect by a quantity «, then erect at B a perpendicular B D, and make A

2 u — - , and through D draw D C parallel to

A .D

A B, and join A C ; then A C B Q will be the part required to be cut off.

To divide a triangle into two parts, having a given ratio, m : n. 1st. By a line drawn from one angle of the triangle. — Make A D : A B : : m : m + n (fig. 8), and join C D ; then ADC and B D C will be the parts required. Here it is

and D B =

plain that A D —

A B;

-AB.

m -f-n 2d. By a line parallel to one of

its sides. Let ABC (fig-9) be the given triangle, to be divided into two parts, in the ratio of m to n, by a line parallel to the base A B. Make C E to E B as m to n ; and at E draw the perpendicular E D meeting a semicircle described on C B as a diameter in D. Make C F — CD, and

through F draw F G parallel to A B, and F G will divide the triangle in the given ratio. For C B : C E : : m + n : n ; but C B : C E : : C B3 : C D2 : : C B2 : C F3, whence the triangle ABC: triangle C G E : : m + n •.

n. It is obvious that C F = C B

and C G =

m -f-n

drawn Irom a given point in one of the sides. — Let P, fig. 9, be the given point, I) the point which divides the side AB, n the given ratio ;

join DP, and through C draw C F. paiallel to D P, and join P E, which will divide the triangle as required. For AC D : BC D : : m : n. But the triangles P C D and P D E are equal ; therefore the triangles APE and AC D are equal • therefore A P E : A B C D : : m : m + n.

On geodetic surveying.— The extensive processes usually termed geodetic, or trigonometrical surveying, are usually undertaken either to determine the differences of longitude between t\o moderately distant and noted meridians, to i;i\- greater accuracy to maps, or to determine from the lengths of degrees of the meridian, in different latitudes, the figure of the earth.

As the foundation of the operations, a line of a few miles in length is carefully measured on some plain, so nearly level as to facilitate the determination of an actually horizontal line; and this being done upon such hills and elevated spots as are suitably situated, and visible from each other, signals are placed ; and the straight lines joining those points constitute a series of triangles, of which the measured base forms a side of the first. The angles of these triangles are carefully measured by a theodolite, which is carried from one station to another; and in such a series of triangles care is taken that one side is always common to two of them ; .so that by the principles of trigonometry the lengths of all the sides of the triangles can be determined in terms of the measured base; and the bearing of ;mv one of the sides, with respect to the meridian, being determined, the

bearing of any other side may be found by computation. As a check on operations of this kind towards the end of the survey, another base line, called a base of verifi-cation, is generally measured, and determined also from the survey as one of the sides of the chain of triangles; and the agreement of the results is a test of the accuracy with which the operations in the survey, have been performed.

In every such series of triangles, when each angle is to be determined by the same instrument, it is desirable that, as neaily as circumstances will admit, they should be equilateral. For, if it were possible to choose the stationˆ m such a manner that each angle should be exactly 60°, half the number of triangles in the series, multiplied by the length of one of the sides, would (as in fig. 10) give the total distance; and then also the sides of the scale or ladder constituting the series of triangles would be parallel to each other, and so also would the diagonal steps marking the progress from one extremity of the survey to another; and the first side might be found by a base crossing it perpendicularly as at II, and the last side verified by such another base as R at the other extremity.

If the earth were a sphere the length of the degrees of the meridian would be every where the same ; but if it be an oblate spheroid, the degrees in receding from the equator to the poles would increase in length, and this increase would b.; proportionate to the square of the sine of the latitude ; and the ratio of the earth's axes, as well as their actual lengths, may be ascertained by comparing the lengths of degrees m different latitudes.

Instead however of actually tracing out a n>e-

ridian on the surface of the earth, a construction is employed which gives the same result. Let A, B, C, D, E, F, &c., be a series of triangles carried on as nearly as may be in the direction of the meridian ; these triangles are spherical or spheroidal triangles, but their curvature being extremely small they are treated as rectilinear triangles, either by reducing them to the chords of the respective terrestrial arcs, or by

subtracting from each angle one-third of the excess of the sum of the three angles above two right angles, and working with the remainder and the three sides as the parts of a plain triangle, the proper reduction for the horizon and the level of the sea having been previously made. ThesB computations being made throughout the series, the sides of the successive triangles are contemplated as arcs of the terrestrial spheroid. Suppose we know by observation and computation the inclination of A C to the first portion A M of the measured meridian, and that we find by trigonometry the point M where that curve will act the side B C. The points A, B, C, and the line A M, will be in the same horizontal plane, but the prolongation M M' of that line will be above the plane of the second horizontal triangle BCD. If therefore, without changing the triangle C M M', the line M M' be brought down to coincide with the plane of this second triangle, the point M' will describe a small arc of a circle which may be regarded as a line perpendicular to the plane BCD. Hence the operation is reduced to bending down the side M M' in the plane of the meridian, and calculating the distance A M M' to find the position of M'. By bending down thus in imagination one after another, and in points of the meridian, the corresponding horizontal triangles, we obtain by computation the direction and length of the meridian from one extremity of the triangles to the other.

When all the triangles which constitute such a series have been computed, the respective positions of their angular points, with respect to each other, may be determined thus : —

Let the triangles A B C, B C D, &c., make parts of a chain of triangles of which the sides are arcs of the sphere ; and as we know from observation the angle C A x which measures the inclination of A C to the meridian A x ; then, having found the excess e of the three angles of the triangle AC c(C e being perpendicular to the meridian) above two right angles, deduct a third of E from each angle of the triangle, and by means of the following proportion find A c and C e.

sin. (90°— E) : cos. (CAc— —) ;: AC: Ac

sin. (90°— J) : sin. (C A c — J E) ; ; A C : A c.

The azimuth of A B is given at once ; for B A X = C A B — C A X ; and, if the spherical excess proper to the triangle A B M' be computed, we shall have AM'B= 180°— M'A B — A B M' + E.

To determine the sides A M', B M', a third of E must be taken from each of the angles of the triangle A B M', and then

Sin. (180° - M' A B — A B M' + f E) : sin. (ABM — iE);: AB: AM'.

Sin. (180° — M' A B — A B M' + J E") : sin. (M'AB — | E) : AB : BM.

In each of the right-angled triangles A b B, M' d D, are known two angles and the hypothenuse, whence A 6, b B, and M' d, d D, are readily determined ; and consequently the distances of B, D, from the meridian and from the perpendicular, are known.

Proceeding in the same manner with the tri • angle A C N, or M' D N, to obtain A N and D N, the prolongation of C D ; and then with the triangle D N F to find the side N F, and the angles D N F and D F N it will be easy to complete the rectangular co-ordinate of F.

The distance/ F, and the angles D E N, N F/, being thus known, we have by geometry f F P = 180° — E F D — D F N — N F/. So that in the right-angled triangle f F P two angles and one side are known, and hence the spherical ex-cess may be computed, and thence the angle F P/? and the sides /P, F P. Resolving next the right-angled triangle e E P we obtain the position of the point E with respect to the meridian AX, and to its perpendicular AY; and thus we may proceed through the whole series.

Such is a concise sketch of the method to be pursued in determining the length of an arc of the meridian comprised between two points A and X ; the corresponding arc of the celestial meridian is found by determining the latitudes of each of the extremities of the meridian measured ; or more commonly by finding the difference of the zenith distances of some known fixed star observed at each extremity.

To deduce from angles measured near one of the stations the true ariiˆle at the station. — When the centre of the instrument cannot be placed in the vertical line occupied by tne axis of the signal, the angles observed must undergo a reduction. Let C, fig. 12, be the centre of the station, P the place of the centre of the instrument, it is required to find A C B, supposing them to be known A P B =P, B P C = p, C P = d, B C = L, A C = R.

We have here AIB = P + IAP; and AIP = C + CBP; whence C = P + I A P

-CBP. Butsin.CAP= <f-sin-(P+P);

. C B P = — ‘— - , and, as the angles C A P,

-

CBP, are necessarily very small, we may take d • sin. P + p d • sin.

R – L

or‘10

have the reduction in seconds, C — P =

sin. 1”

sin. p. \ \^ Tl IT”/

The space to which we are limited compels us to omit the investigation of many formulae connected with the interesting and important application of science to practice. The following are a few of the most important of these formulae : —

To reduce angles measured in a plane inclined to the horizon to the corresponding angles in the horizontal plane.

Let h, h’, represent the altitudes of the objects C the angle measured on the oblique plane, and

C’ the required corresponding one on the horizontal plane; then sin. —
- —

sin. C + h +h' C + A + k' \ A-sin. , If-

If-sect. A-sect. A'.

rad. 2.

In a spherical triangle knowing two sides and the included angle to determine the angles comprehended by the chords of those two sides.

Let A, B, C, represent the angles of the triangle; A', B', C', the corresponding angles made by the chords ; the spherical sides opposite A, B, C, being a, b, c, and the chords a, /3, y.

Then cos. A'— cos. — • cos. — • cos. A 4- — + -.

2 2 22

be b

Or cos. A — cos. — • cos. — cos. A -f-sin. — -

K

• sin. — •

cos. A’— \ )3 y

V 1—40 -l + ip-l-i.

To compute the spherical excess, E :-

LetS = the arc of the triangle, ir = 206-2G4- 8”,

the seconds in an arc equal to the radius, and r

the radius of the earth; then E = — — . Hence

r

„, b • c • sin. A. it may be noted that S = —

2

Given a base, B, measured at an elevation, L, above the level of the sea, to find the corresponding base, b, when reduced to the level of the sea f Let r = the radius of the earth, then

Given two sides and the included angle of a E~b> or the reducti™ = B ‘ (7-7?” rectilineal triangle, it is required to find the spherical angle of the two arcs of which these two sides are the chords ?

Let /3 and y be the chords, A’ the angle which they include, and A the required spherical angle. Then

-71 + fa.;

From the measures M and m of a degree, or like small portions of the meridian in different latitudes L and /, to find the ratio of the polit axis c to the equatorial axis d.

d_ /(M. j • sin. L + OT j sin. /) • (M j • sin. L— M

- »’ /•„ 1 …, *L M 1 nnc, T* \ . *f,. 1* . , <. 1\/T 1

• sin. /) cos. L)’

— ~1 = - is called the compression of the c

(m I • cos. /-f-M J cos. L) • (n J • cos. /— M L

give the position of C. Proceed ˆin this manner till the situation of all the principal points are

terrestrial spheroid, and it is f videnlly given when determined, and then either sketch in the interf ‘ c »,,r,/j;.,i« UTˆOˆOC V>ˆr tho ov» r\r Inv thpm f own irnm

— is determined. c

Surveying of harbours. — The method of sur-

mediate spaces by the eye or lay them down from particular admeasurements. To find the situation of anchoring places, suci. as E; or rocks or sands such as F; row off to those places in a

general conducted in the same manner as com-mon surveying. A base line if possible is measured on shore, and, signals being erected at the principal points round the harbour, the angles which they make with the base line are determined, and then their position with respect to

•f v • j e c >v,ˆm sanus sucu us x , iuw uu i>-> mw«. j’»-

veymg harbours, and forming maps of them, bo ˆ when ˆ £ measure t,)e angles AK ,,

depends on the same principles, and is in and ˆ E D and segments of circles described in

rt.ˆrn-iwr.1 fin-nA 11 /ifilH in iV» t» OO TY»O TV» Q n T» f* T US! PHPfl —

AB and BD respectively, to containˆ those angles will give the position of the point E. Or with a compass take the bearing of any two points

as B and D, and the intersection of those lines of bearing will give the position of E, the relative bearing of the principal point on shore being

each other found either by computation or pro-jousl ˆetermined. Thus may the situation

jection. The best instrument for measuring such l / r . t jn the narbour > be deter—

angles is Hadley's reflecting quadrant or sextant, ˆ.ˆ an/inserte([in the plan. as it is the only instrument in which neither the SURVIEW v a. Old Fr. surveoir. To exactness of the observation nor the ease with over,ook . tQ ha've jn view . to survey. Not in use which they may be made is sensibly atiected by That tu'rret's frame most a(irairable was, the motion of the vessel, and in this department of Like hi hest heaven compassed round, surveying it will often be necessary to measure angles afloat. Let it be proposed to take the necessary measures for making a plan of the harbour CGD, fig. 13.

Select some convenient place, as A B, to mea—

i _ ..A / ' T"\

And lifted high above this earthly mass, it surviewed, as hills do lower ground.

Spenser.

SURVIVE', v. n.&v.a.ˆ ˆ Lat. supervivo ; SURVI'VOR, n. ', /Fr-suri-ivre.

SURVIVORSHIP. > live after the death

sure a base line, and set up signals at C, D, oultv , VUIVOIll. .

G, &c. At A measure the angle C' A D, and at of another : survive any person or tl

B measure the angle CBA; then these angles noun substantives corresponding, with A B will give the position of C with respect NQW that he is dead, his immortal fame n

, ,, -n ™ ˆA »* and flourisheth in the mouths of all people.

to A B. At B measure the angle C B D, and at C measure the angle BC D; or going to D measure the ansle B D C; these measures with C ii, determinedly the triangle ABC, will give the position of D. At C' and D take the G C" D and G D C', which with C D' already determined will 1 o do obsequ.o

Your father lost a father.

That father 1,..; „ «" obte

im,nd

0

ll.imlet.

SURVIVORSHIP.

Try pleasure,

'Yhich, when no other enemy survives, Still conquers all the conquerors. Denham.

I did discern From his survivors, I could nothing learn. Id.

Although some died, the father beholding so many descents, the number of survivors must still be very great. Browne.

The love of horses which they had alive. And care of chariots, after death survive. Dryden.

Her majesty is heir to the survivor of the late king.

Swift .

No longer now that golden age appears, When patriarch-wits survived a thousand years , Is'ow length of fame, our second life, is lost, And bare threescore is all even that can boast ; Our sons their fathers' failing language see, And such as Chaucer is, shall Dryden be. Pope.

Such offices granted in reversion were void, unless where the grant has been by survivorship.

Aylijfe's Parergon.

The rapsodies, called the Characteristics, would never have survived the first edition, if they had not discovered so strong a tincture of infidelity. Watts.

SURVIVORSHIP is that branch of mathematics which treats of reversions payable, provided one or more particular persons survive certain others. By reversions are meant payments not to take place till some future period. Survivorship forms one of the most difficult and complicated parts of the doctrine of reversions and life annuities. It has been very fully treated of by Simpson in his Select Exercises ; and brought to a state of comparative perfection by Dr. Price and Mr. Morgan, who bestowed a great deal of attention on this subject. See ANNUITIES.

The calculations are founded or! the expectation of lives at different ages, deduced from tables formed from bills of mortality, of which see examples under the article MORTALITY. By the expectation of life is meant the mean time that any single or joint lives at a given age is found to continue ; that is, the number of years which, taken one with another, they actually en-joy, and may be considered as sure of enjoying; those who survive that period enjoying as much more time in proportion to their number as those who fall short of it enjoy less. Thus, supposing forty-six persons alive all forty years of age, and that one will die every year till they are all dead in forty-six years, half forty-six or twenty-three will be the expectation of each of them. If M. de Moivre's hypothesis were true, that men al-ways decrease in an arithmetical progression, the expectation of a single life is always half its complement, and the expectation of two joint lives one-third of their common complement. By the complement of a life is meant what it wants of eighty-six, which M. de Moivre makes the boundary of human life. Thus if a man be thirty, the complement of his life is fifty-six. Thus, supposing a man forty, his expectation would be twenty-three, the half of forty-six, his complement : the expectation of two joint lives, each forty, would be fifteen years four months, or the third part of forty-six. The number expressing the expectation, multiplied by

the num-ber of single or joint lives (of which it is the expectation), added annually to a society, gives the

whole number living together, to which such an annual addition would in time grow. Thus, since nineteen, or the third of fifty-seven, is the expectation of two joint lives, whose common age is twenty-nine, twenty marriages every year between persons of this age would in fifty-seven years grow to twenty times nineteen, or 380 marriages, always existing together. And, since the expectation of a single life is always half its complement, in fifty-seven years twenty single persons added annually to a town will increase to twenty times 28-5, or 570 ; and when arrived at this number the deaths erery year will just equal the accessions, and no farther increase be possible. Hence it appears that the particular proportion that becomes extinct every year, out of the whole number constantly existing together of single or joint lives, must, wherever this number undergoes no variation, be exactly the same with the expectation of those lives, at the time when their existence commenced. Thus was it found that one-nineteenth part cf all the marriages among any bodies of men, whose numbers do not vary, are dissolved every year by the deaths of either the husband or wife, it would appear that nineteen was, at the time they were contracted, the expectation of these marriages. In like manner was it found in a society, limited to a fixed number of members, that one twenty-eighth part dies annually out of the whole num-ber of members, it would appear that twenty-eight was their common expectation of life at the time they entered. So likewise, were it found in any town or district, where the number of births and burials are equal, that a twentieth or thirtieth part of the inhabitants die annually, it would appear that twenty or thirty was the expectation of a child just born in that town or district. These expectations, therefore, foi all single lives, are easily found by a table ol observations, showing the number that die annually at all ages out of a given number alive at those ages ; and the general rule for this purpose is to divide the sum of all the living in the table, at the age whose expectation is required, and at all greater ages, by the sum of all that die annually at that age and above it ; or, which is the same, by the number (in the table) of the living at that age ; and half unity subtracted from the quotient will be the required expectation. Thus, in Dr. Halley's table, the sum of all the living at twenty and upwards is 20-724, which, divided by 598, the number living at the age of twenty, and half unity subtracted from the quotient, gives 34-15 for the expectation of twenty. In calculating-the value or expectation of joint lives, M. De Moivre fell into various mistakes, which we need not enumerate ; as Dr. Price and Mr. Morgan

have given tables of the value of lives, not founded on any hypothesis, but deduced from bills of mortality. Mr. Morgan has likewise given rules for calculating values ot lives in this manner. Dr. Price, in the third essay of the first volume of his Treatise on Reversionary Payments, has also given proper rules for calculating these values, the most important of which are comprehended in the following paragraphs.

I. Suppose ;i set of married men to enter into

a society in order to provide annuities for their number which we have been enquirin* aftet widows, and that it is limited to a certain num-The marriage of widows will dimmish this ber of members, and constantly kept up to that number, but not so much as the other causes number by the admission of new members as the will increase it. II. If the society coirprehemN old ones are lost ; it is of importance, in the first in it from the first all the married people of all

place, to know the number of annuitants that : —

after some time will come upon the establishment. Now, since every marriage produces either a widow or a widower, and since all marriages taken together would produce as many widows as widowers, were every man and his wife of the same age, and the chance equal which

ages in any) r among any s ˆ

where the numbers always continue tlie same, the whole collective body of members will be at their greatest age at the time of the establishment of the society; and the number of widows lefi. every year will at a medium be always the same. The number of widows will increase continuallv

shall die first ; it is evident that the number of on the society, till as many die off every >e;i

widows that have ever existed in the world, would in this case be equal to half the number of marriages. And what would take place in the world must also, on the same suppositions, take place in this society. In other words, every other person in such a society leaving a widow, there must arise from it a number of widows equal to half its own number. But this does not determine what number, all living at one and the same time, the society may expect will come to be constantly upon it. It is, therefore, necessary to determine how long the duration of survivorship between persons of equal ages will be, compared with the duration of marriage. And the truth is, that, supposing the probabilities of life to decrease uniformly, the former is equal to the lat-ter ; and, consequently, that the number of survivors (or, which is the same, supposing no second marriages), of widows and widowers alive

are added. “This will not” be till the whole collective body of widows are at their greatest acre, or till there are among them the greatest possible number of the oldest widows ; and therefore nut till there has been time for an accession to the oldest widows from the youngest part. Let u*, for the sake of greater precision, divide the whole medium of widows that come on every year into different classes according to their different a_rcs, and suppose some to be left at fifty-six years of age, some at forty-six, some at thirty-six, am! some at twenty-six. The widows, constantly in life together, derived from the first class, will come to their greatest age, and to a maximum, in thirty years, supposing, with M. de Moivre, eighty-six to be the utmost extent of life. Th,: same will happen to the second class in forty years, and to the third in fifty years. But the whole body composed of these classes will not

together which will arise from any given set of come to a maximum till the same happens to the

such marriages constantly kept up, will be equal to the whole number of marriages ; or half of them (the number of widows in particular) equal to half the number of marriages. Now it appears that in most towns the decrease in the probabilities of life is in fact nearly uniform. According to the Breslaw Table of Observation, almost the same numbers die every year from twenty years of age to seventy-seven.

After this, indeed, fewer die, and the rate of decrease in the probabilities of life is retarded. But this deviation from the hypothesis is inconsiderable ; and its effect, in the present case, is to render the duration of survivorship longer than it would otherwise be. According to the London rr-1-1- -e

fourth or youngest class ; that is, not till the end of sixty years. After this, the affairs of the society will become stationary, and the number of annuitants upon it of all ages will keep always nearly the same. III. If a society begins with its complete number of members, but at the same time admits none above a particular age ; if, for instance, it begins with 200 members all under fifty, and afterwards limits itself to this number and keeps it up by admitting every year at all ages between twenty-six and fifty, new members as old ones drop off; in this case, the period necessary to bring the maximum of annuitants will be just doubled. To determine the sum

Observations, the numbers dying every year begin to grow less at fifty years of age ; and hence to extreme old age there is a constant retardation in the decrease of the probabilities of life. Upon the whole, therefore, it appears that, according to the Breslaw Table, and supposing no widows

Table of that every individual ought to pay in a single

present payment, in order to entitle his widow to a certain annuity for her life, let us suppose the annuity £3 per annum, and the rate of interest four per cent. It is evident that the value of such an expectation is different, according to the different ages of the purchasers, and the nro-

to marry, the number enquired after is somewhat portion of the age of the wife to that of the hus-

greater than half the number of the society ; but according to the London Table a good deal greater. This, however, has been determined on

band. Let us then suppose that every person in such a society is of the same age witli his wife, and that, one with another, all the members

. , ,

the supposition that the husbands and wives are when they enter may be reckoned

of equal ages, and that then there is an equal age, as many entering above tins age as be

chance who shall die first. But in reality bus-it. It has been demonstrated by M. de &

bands are generally older than wives, and males and Mr. Simpson that the value of an annuity 01

have been found to die sooner than females, as the joint continuance of any two bves subtract,,

appears incontestably from several of the tables from the value of an anmuty on the life in Dr. Price's Treatise on Reversions. It is

therefore more than an equal chance that the on what may hap husband will die before his wife. This will in-

pectation, gives the true present value i. ,

on what may happen to remain of t the two lives after he other In he ,

crease cons.derably te uraton o survvor case, the value of the anmn.v

on the part of the women, and consequently the during the joint continuance

forty years of age, is by Table II. 9‘826, according to the probabilities of life in the Table of Observations, formed by Dr. Halley from the bills of mortality of Breslaw in Silesia. The value of a single life forty years of age, as given by M. de Moivre, agreeably to the same table, is 13-20; and the former subtracted from the latter, leaves 3-37, or the true number of years’ purchase, which ought to be paid for any given annuity, to be enjoyed by a person forty years of age, provided he survives another person of the same age, interest being reckoned at four per cent, per annum. The annuity therefore being £30, the present value of it is 30 multiplied by 3‘37, or £lOl 2s. IV. If, instead of a single present payment, it is thought preferable to make annual payments during the marriage ; what these annual payments ought to be, is easily determined by finding what annual payments during two joint lives of given ages are equivalent to the value of the reversionary annuity in present money. Suppose, as before, that the joint lives are each forty, and the reversionary annuity £30 per annum. An annual payment during the continuance of two such lives is worth 9-82 years’ purchase. The annual payment ought to be such as, being multiplied by 9-82, will produce £lO’l the present value of the annuity in one payment. Divide then 101-1 by 9‘82, and 10-3 the quotient will be the annual payment. This method of calculation supposes that the first annual payment is not to be made till the end of a year. If it is to be made immediately, the value of the joint lives will be increased one year’s purchase ; and, therefore, in order to find the annual payments required, the value of a present single payment •nust be divided by the value of the joint lives ifiueased by unity. If the society prefer paying part of the value in a present single payment on admission, and the rest in annual payments ; and if they fix these annual payments at a particular sum, the present single payment paid on admission is found by subtracting the value of the annual payment during the joint lives from the whole present value of the annuity in one payment. Suppose, for instance, the annual payments to be fixed at five guineas, the annuity to be £30, the rate of interest four per cent., and the joint lives each forty : the value of the annuity in one present single payment is £101*1. The value of five guineas or 5-25 per annum, is

(5‘25 multiplied by 9-82, the value of the joint lives) 51-55; which, subtracted from £101*1, gives 49-5, the answer. V. If a society takes in all the marriages among persons of a particular profession within a given district, and subjects them for perpetuity to a certain equal and com-mon tax or annual payments, in order to provide life annuities for all the widows that shall result from these marriages ; since, at the commencement of such an establishment, all the oldest, as well as the youngest, marriages are to be entitled equally to the proposed benefit, a much greater number of annuitants will come immediately upon it than would come upon any similar establishment which limited itself in the admission of members to persons not exceeding a given age. This will check that accumulation of money which should take place at first, in order

to produce an income equal to the disbursements at the time when the number of annuitants comes to a maximum ; and therefore will be a particular burden upon the establishment in its infancy. For this some compensation must be provided ; and the equitable method of providing it is, by levying fines at the beginning of the establishment on every member exceeding a given age, proportioned to the number of years which he has lived beyond that age. But if such fines cannot be levied, and, if every payment must be equal and common, whatever disparity there may be in the value of the expectations of different members, the fines must be reduced to one common one, answering as nearly as possible to the disadvantage, and payable by every member at the time when the establishment begins. After this, the establishment will be the same with one that takes upon it all at the time they marry ; and the tax or annual payment of every member adequate to its support, will be the annual payment during marriage due from persons who marry at the mean age at which, upon an average, all marriages may be considered as commencing. The fines to be paid at first are, for every particular member, the same with the difference between the value of the expectation to him at his present age, and what would have been its value to him had the scheme begun at the time he married. Or, they are, for the whole body of members, the difference between , the value of the common expectation, to persons at the mean age of all married persons taken together as they exist in the world, and to persons at that age which is to be deemed their mean age when they marry. VI. Suppose we wish to know the present value of an annuity to b,e enjoyed by one life, for what may happen to remain of it beyond another life, after a given term ; that is, provided both lives continue from the present time to the end of a given term of years ; the method of calculating is this : —

Find the value of the annuity for two lives, greater by the given term of years than the given lives; discount this value for the given term ; and then multiply by the probability that the two given lives shall both continue the given term ; and the product will be the answer. Thus, let the two lives be each thirty, the term seven years, the annuity £10 interest for four per cent. The given lives, increased by seven years, become each thirty-seven. The value of two joint lives, each thirty-seven, is (by Table II.) 10-25. The value of a single life at thirty-seven is 13-67. The former subtracted from the latter is 3-42, or the value of an annuity for the life of a person thirty-seven years of age, after another of the same age, as has been shown above: 3‘42 discounted for seven years (that is, multiplied by 0-76 the value of £l due at the end of seven years) is 2-6. The probability that a single life at thirty shall continue seven years is |§.* The

* The probability that a given life shall continue any number of years, or reach a given age, is (as is well known) the fraction whose numerator is the number of the living in any table of observations opposite to the given age, and denominator the num-ber opposite to the present age of the given life.

probability, therefore, that two such lives shall continue seven years, is §ˆJJ, or in decimals 0765; and, 2-6 multiplied by 0-765 is 1-989, the number of years’ purchase which ought to be given for an annuity to be enjoyed by a life now thirty years of age, after a life of the same age, provided both continue seven years. The annuity then being ˆ£10, its present value is £19-89. Suppose the value is required of an annuity to be enjoyed for what may happen to remain of one life after another, provided the life in expectation continues a given time. 1. Find the present value of the annuity for the remainder of the life in expectation after the given time, which is done in this manner : — Multiply the present value of the life at the given time by the present value of £l to be received at that time, and multiply the product again by the probability that the life in expectation will continue so long. Let the given time which the life in expectation is to continue be

fifteen years, and let the person then be arrived at fifty years of age. A life at fifty according to M. de Moivre's valuation of lives, and reckoning interest at four per cent, is worth 11-34 years' purchase. The present value of £l, to be received at the end of fifteen years, is 0-5553, and the probability that a life at thirty-five will continue fifteen years is ^|. These three values multiplied into one another give £4-44 for the present value of the life in expectation. 2. Find the value of the reversion, provided both lives continue the given time, by the rule given above. 3. Add these values together, and the sum will be the answer in a single present payment. We shall now illustrate this rule by an example. An annuity of £10, for the life of a person now thirty, is to commence at the end of eleven years, if another person now forty should be then dead ; or, if this should not happen at the end of any year beyond eleven years in which the former shall happen to survive the latter : What is the present value of such an annuity, reckoning interest at four per cent., and taking the probabilities of life as they are in Dr. Halley's table given in the article MORTALITY ? The value of £10 per annum, for the remainder of the life of a person now thirty, after eleven years is £69-43. The probability that a person forty years of age shall live eleven years, is, by Dr. Halley's table, $i. The probability, therefore, that he will die in eleven years, is f?| subtracted from unity *, or JJjj ; which multiplied by £69-43, gives £17-16. — The value of the reversion, provided both live eleven years, is £17, and this value added to the former makes £34-16, the value required in a single present payment; which payment divided by £11-43, the value of two joint lives, aged thirty and forty, with unity added gives £3 ; or the value required in annual payments during the joint lires, the first payment to be made immediately.

The values of joint lives in these tables have been computed for only one rate of interest; and of single lives in Table III. for only two

* For the difference between unity and the fraction expressing the probability that an event will happen, gives the probability that it will not happen.

rates of interest. The following rules will show that it would be a needless labor to compute these values (in strict conformity to the observations) for any other rates of interest. Account of a method of deducing, from the correct values (according to any observation) of any single or joint lives at one rate of interest, the same values at other rates of interest.

PRELIMINARY PROBLEMS.

PROB. I. — The expectation given of a single life by any table of observations, to find its value, supposing the decrements of life equal, at any given rate of interest. Solution. — Find tin-value of an annuity certain for a number of years equal to twice the expectation. Multiply this value by the perpetuity increased by unity, and divide the product by twice the expectation : the quotient subtracted from the perpetuity will be the value required. Example. — The expectation of a male life aged ten, by the Sweden observations, is 43-94. Twice this expectation is 87-88. The value of an annuity certain for 87-88 years is (reckoning interest at four per cent.) 24-200. The product of 24-200 into 20 (the perpetuity increased by unity) is 629”2 which divided by 87-88 gives 7-159. And tin’s quotient subtracted from 25 (the perpetuity) gives 17‘84 years’ purchase, the value of a life aged ten, deduced from the expectation of life at that age according to the Sweden observations. (See the tables in Dr. Price on Reversions, v. iii.)

PROB. II. — Having the expectations given of any two lives, by any table of observations, to decide thence the value of the joint lives at any rate of interest, supposing an equal decernment of life. Solution. — Find the difference between twice the expectation of the youngest life and twice the expectation of the oldest life, increased by unity and twice the perpetuity. Multiply this difference by the value of an annuity certain for a time equal to twice the expectation of the oldest life ; and by twice the same expectation divide the product, reserving the quotient. From twice the perpetuity subtract the reserved quotient, and multiply the remainder by the perpetuity increased by unity. This last product, divided by twice the expectation of the youngest life, and then subtracted from the perpetuity, will be the required value. When twice the expectation of the youngest life is greater than twice the expectation of the oldest lift-increased by unity, and twice the perpetuity, the reserved quotient, instead of being subtracted from twice the perpetuity, must be added to it, and the sum, not the difference, multiplied by the perpetuity increased by unity. Example. — Let the joint lives proposed be a female lift-aged ten, and a male life aged fifteen ; and let the table of observations be the Sweden tuMe for lives in general, and the rate of interest tem-per cent. Twice the expectations of the two lives are 90-14 and 83-28. Twice the expectation of the oldest life, increased by unity, and twice the perpetuity, is 134-28, which lessens by 90-14 (twice the expectation of the youngest life), leaves 44-14 for the reserved remainder. This remainder, multiplied by 24-045 (the value of an annuity certain for 83-28 years), and the

product divided by 83-28 (twice the expectation of the oldest life), gives 12-744, the quotient to be reserved ; which, subtracted from double the perpetuity, and the remainder (or 37-255) multiplied by the perpetuity increased by unity (or by 26) gives 968-630, which, divided by 90-14 (twice the expectation of the youngest life), and the quotient subtracted from the perpetuity, we have 14-254 for the required value. The value of an annuity certain, when the number of years is a whole number with a fraction added (as will be commonly the case) may be best computed in the following manner : — In this example the number of years is 83-28. The value of an annuity certain for eighty-three years is 24-035. The same value for eighty-four years is 24-072. The difference between these two values is 0-37; which difference, multiplied by -28 (the fractional part of the number of years), and the product (-0103) added to the least of the two values, will give 24-045 the value for 83-28 years. General Rule. — Call the correct value (supposed to be computed for any rate of interest) the first value. Call the value deduced (by the preceding problems) from the expectations at the same rate of interest the second value. Call the value deduced from the expectations for any other rate of interest the third value. Then the difference between the first and second values added to or subtracted from the third value, just as the first is greater or less than the second, will be the value at the rate of interest for which the third value has been deduced from the expectations. The following examples will make this perfectly plain. Example 1. — In the two last tables the correct values are given of two joint lives among mankind at large, without distinguishing between males and females, according to the Sweden observations, reckoning the interest at four per cent. Let it be required to find from these values the values at three per cent, and let the ages of the joint lives be supposed 10 and 10. The correct value, table IV. (reckoning interest at four per cent.), is 16-141. The expectation of a life aged ten is 45-07. The value deduced from this expectation at four per cent, by prob. II. is 14-539. The value deduced by the same problem from the same expectation at three per cent, is 16-808. The difference between the first and second values is 1-602, which, added to the third value (the first being

greater than the second), makes 18-410, the value required. Example II. — Let the value be required of a single male life aged ten, at three per cent, interest, from the correct value at four per cent, according to the Sweden observations. First, or correct value, at four per cent, (by table III.) is 18-674. The expectation of a male life aged ten is 43-94. The second value (or the value deduced from this expectation by prob. I.) is 17-838. The third value (or the value deduced from the same expectation at three per cent.,) is 21-277. The difference between the first and second is '836 ; which (since the first is greater than the second) must be added to the third ; and the sum (that is, 22-113) will be the value required. The third value at five per cent, is 15-286 ; and the difference added to 15-286 makes 16-122 the value of a male life

aged ten at five per cent, according to the Swe-den observations. The exact value at five per cent, is (by table III.) 16-014. Again : the difference between 16-014 (the correct value at five per cent.) and 15-286 (the value at the same interest deduced from the expectation), is -728 ; which, added (because the first value is greater than the second) to 13-335 (the value deduced at six per cent, from the expectation) gives 14-063, the value of the same life, reckoning interest at six per cent. These deductions, in the case oi single lives particularly, are so easy, and give the true values so nearly, that it will be scarcely ever necessary to calculate the exact values (according to any given observations) for more than one rate of interest. If, for instance, the correct values are computed at four per cent, according to the observations, the values at 3, 3£, 4£, 5, 6, 7, or 8 per cent, may be deduced from them by the preceding rules as occasion may require, without much labor or any danger ot considerable errors. The values thus deduced will seldom differ from the true values so much as a tenth of a year's purchase. They will not generally differ more than a twentieth or thirtieth of a year's purchase. In joint lives they will differ less than in single lives, and they will come equally near to one another whatever the rates of interest are. The following tables furnish the means of determining the exact differences between the values of annuities, as they are made to depend on the survivorship of any male or female lives; which hitherto has been a desideratum of considerable consequence in the doctrine of life annuities. What has made this of consequence is chiefly the multitude of societies lately established in this and foreign countries for providing annuities for widows. The general rule for calculating from these tables the value of such annuities is the following: — Rule: ' Find in table III. the value of a female life at the age of the wife. From this value subtract the value in table IV. of the joint continuance of two lives at the ages of the

husband and wife. The remainder will be the value in a single present payment of an annuity for the life of the wife should she be left a widow. And this last value divided by the value of the joint lives increased by unity, will be the value of the same annuity in annual payments during the joint lives, and to commence immediately.' Example. Let the age of the wife be twenty-four, and of the husband thirty. The value in table III. (reckoning interest at four per cent.) of a female life aged twenty-four, is 17'252. The value in table IV7. of two joint lives, aged twenty-four and thirty, is 13-455; which, subtracted from 17-252, leaves 3-797, the value in a single present payment of an annuity of £l for the life of the wife after the husband ; that is, for the life of the widow. The annuity therefore being supposed £20, its value in a single payment is 20 multiplied by 3-797, that is, £75-94. And this last value, divided by 14-455 (that is, by the value of the joint lives increased by unity), gives 5-25, the value in annual payments beginning immediately, and to be continued during the joint lives of an annuity of £20 to a wife aged twenty four for her life, after her husband aged thirty.

SURVIVORSHIP.

JLABLE i. — snowing tne rresent Value or an Annuity of £l on a single life, according to M. de Moivre's Hypothesis.

> '?

61 (32

6£

64 05 66 67 58 69 70

3

per Ct

9-419

•107

8-787

•462 •132

7-794

•450 •099

6-743

•378

6-008 5-631

•246

4-854

•453 •046

3-632

•207

2-776

•334

3« per Ct

9-07 8-78(

•48! •18,

7-87,

•55f •23ˆ 6‘90i •56ˆ •21 <

4

. per Ct.

4J

per Ct

8-449

•197

7-938

•672 •399 •119

6-831

•534 •230

5-918

5

per Ct

6

per Ct.

5 8-753 5 ‘482

i -205

5 7-921 5 ‘631 5 -333 1 ‘027

I 6-714 > -394

) ‘065

8-1C1

7-926

•684 •435 •179

6-915

•643 •362 •073

5-775

7-633

•428 •21 (i

6-997

•770 •535 •292 •040

5-770

•508

> ?

3

per Ct.

3i >er Ct.

4

er Ct.

4J er Ct.

5

per Ct.

14-544

•607 •607

a

per Ct.

8 9

10

11

12 13

14 15

10 17 18 19 20

19-736

•868 •868

18-160

•269 •269

6-791

•882

882

5-595

•672 •672

12-790

•839 •839

19-736

•604 •469 •331 •192 •050

18-905

•759 •610 •458

18-160

•049

17-937

•823 •707 •588 •467 •344 •220 •093

6-791

•698 •604 •508 •410 •311 •209 •105

5-999

•891

5-595

•517 •437 •356 •273 •189 •102 •015

4-923

•831

4-544

•480 •412 •342 •271 •197 •123 •047

3-970

•891

12-790

•741 •691 •639 •586 •532 •476 •419 •361 •301

“1 “2 73 74 75 76 “7 8 9 0

5-86ˆ •505 •13€

4-759

•373

3-978

•575 •163

2-741

•309

5-728

•383 •029

4.666

•293

3-912

•520 •111

2-707

•284

5-596

•265

4-926

•576 •217

3-847

•467 •076

2-673

•259

5-468

•152

4-826

•489 •143

3-784

•415 •034

2-641

•235

5-228 4-937

•636 •324

•000

3-604

•315

2-953

•578 •188

1-783

•362

0-925 0-472

0-000

21 22

23 24 25 26 27 28 29 30

18-305

•148

17-990

•827 •664 •497 •327 •154

16-979

•800

6-963

•830 •696 •559 •419 •279 •133

5-985

•835 •682

5-781

•669 •554 •437 •318 •197 •073

4-946

•816 •684

4-737

•641 •543 •442

.340

•235 •128 •018

3-905

•791

3-810 727

•642 •555 •466 •375 •282 •186 •088

2-988

2-239

•177 •112 •045

1-978

•908 •837 •763 •688 •610

1 2 3

4

5

1-886

•429

0-961 0-484

o-ooo

1-867

•411

0.955 0-483

O’OOO

1-850

•406

0-950 0-481

o-ooo

1-832

•394

0-943 0-479 0.000

1-816

•384

0-937 0-476

o-ooo

ˆABLE II. — Showing the Value of an Annuit on the Joint Continuance of two Lives ac cording to M. de Moivre’s Hypothesis.

31 32 33

34 35 36

37 38 3<

40

41 42 43 44 45 40 47 48 4< 5(

16-620

•436 •248 •057

15-864

•666 •465 •260 •053

14-842

14-626

•407 •185

13-958

•728 •493 •254 •012

12-764

•511

5-526

•367 •204 •039

14-871

•699 ‘•524 •345 •163

13-978

13-789

•596 •399 •199

12-993

•784 •571 •354 •131

11-904

4-549

•411 •270 •126

3-979

•829 •676 •519 •359 •196

3-028 2-858

•683 •504 •322 •135

11-944

•748 •548 •344

3-673

•553 •430 •304 •175 •044

2-909

•771 •630 •485

2-855

•780 •673 •562 •449 •333 •214 •091

1-966

•837

1-530

•449 •365 •278 •189 •098 •003

0-907

•807 •704

Age of Ygst.

Age of A Eldest.

ralue at 2 jer Cent.

Value at 4 per Cent.

Value at 5 per Cent.

10

10 15 20 25 30 35 40 45 50 55 60 65 70

15-206 14-878

•503 •074

13-585

•025

12-381 11-644 10-796 9-822 8-704 7-417 5-936

13-342

•093

12-808

•480 •102

11-665

•156

10-564 9-871

•059

8-105 6-980 5-652

11-855

•661 •430 •182

10-884

•537 •128

9-646

•074

8-391 7-572 6-585 5-391

12-337

•185 •029

11-870

•707 •540 •368 •192 •012

10-827

11-705

•570 •431 •288 •142

10-992

•837 •679 •515 •348

10-599

•490 •378 •263 •144 •021

9-895

•765 •630 •492

15

15 20 25 30 35 40 45 50 55

GO

65 70

14-574

•225

13-822

•359

12-824

•207

11-496 10-675 9-727 8-632 7-377 5-932

12-860

•593 •281

11-921

•501 •013

10-440

9-7«7

8-975

•041 C-934

5-623

11-478

•266 •022

10-730

•402 •00»

9-541 8-985

•318

7-515 0-544 5-304

51

52 53 54 5’ 5(57

5t

5! 6(

12-255 11-994

•729 •457 •183

10-902

•eie

•32£ •02£

9-727

11-673

•437 •195

10-950

•698 •443 •18

9-91

•64 •36

11-135 10-921

•702 •478 •248 •014

9-773

•527 •275 •01

10-638

•443 •243 •039

9-829

•614 •393 •166

8-933

•694

10-176 9-999

•817 •630 •437 •239 •036

8-826

•61 •38S

9-349

•201 •049

8-891

•729 •561 •387 •208 •023

7-831

528

SURVIVORSHIP.

TABLE II. — Continued.

Age ol Young est.

Age of Eldest.

Value at 3 per Cent.

Value at 4 per Cent.

Value at 5 per Cent.

Age of Youngest.

Age of Eldest.

Value at C per Cent.

Value at 4 per Cent.

Value at 5 per Cent.

20

20 25 30 35 40 45 50 55 60 05 70

13-904

•531 •098

12-594

•008

11-325 10-536 9-617 8-549 7-308 5-868

12-341

•051

11-711

•314

10-847

•297

9-648 8-879 7-967 6-882 5-590

11-067 10-840

•565 •278

9-870

•420

8-880

•233

7-448 6-495 5-333

55

55 60 65 70

7-849

•220

6-379 5-201

7-332 6-781

•036

5053

6-873

•386

5-724 4-833

60

60 65 70

6-737

•043

5-081

6351 5-730 4-858

6-001 5-444 4-653

65

65 70

5-547 4-773

5-277 4-571

5‘031

4-385

25

25 30 35 40 45 50 55 60 65 70

13-192 12-794

•333

11-770

•130

10-374 9-488 8-452 7-241 5-826

11-786

•468 •093

10-655

•131

9-509 8-766 7-880 6-826 5-551

10-621

•367 •067

9-708

•278

8-761

•134

7-371 6-440 5-294

70

70

4-270

4-104

3-952

TABLE III. — Showing the Values of Annuities on Single Lives among Males and Females, according to the Probabilities of the Duration of Life in the Kingdom of Sweden.

>

1

Males.

Females.) Lives in genera

4p.Ct.

Sp.Ct.

4p.Ct.

5p.Ct.4p.

Ct

Sp.Ct.

1

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

40

16-503 17-355

•935

18-328

•503 •622 •693 •725 •715 •674 •600 •491 •378 •246 •105

17-958

•803 •643 •492 •335 •192 •042

16-887

•742 •592 •436 •274 •105

15-930

•751 •575 •395 •208 •014

14-812

•601 •382 •154

13-916

•668

14-051

•778

15-279

•624 •786 •901 •977

16-021

•030 •014

15-970

•896 •819 •724 •624 •517 •404 •285 •175 •059

14-955

•846 •732 •627 •517 •402 •282 •156 •024

13-889

•756 •619 •477 •327 •170 •006

12-833

•652 •462 •261

16-820 17-719 18-344

•780 •927

19-045

•131 •162 •151 •109 •041

18-952

•840 •707 •568 •424 •290 •151 •013

17-872

•725 •573 •414 •252 •087

16-915

•751 •588 •427 •261 •104

15-941

•787 •629 •465 •278 •070

14-854

•629 •401

14-271 15-034

•571 •951

16-088

•203 •291 •335 •343 •325 •286 •229 •153 •059

15-960

•856 •761 •662 •563 •462 •356 •245 •129 •009

14-886

•757 •636 •515 •396 •272 •136 •035

13-923

•806 •684 •542 •382 •213 •036

12-856

16-17- 18-

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•i • < •f •{ •1 •(•<|

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i

•1 •(17-f •7

•e

•4 •3 •1

16-9

•8 •6 •5 •3 •1 •0

15-8

•6 •4 •3 •1

14-9

•7 •5 •2 •0

T1

14-161

•906

15-425

•787 •937

16-052

•134 •178 •186 •169 •128 •062

15-986

•891 •792 •686 •582 •473 •369 •260 •155 •045

14-930

•818 •701 •579 •459 •335 •210 •080

13-956

•827 •700 •566 •427 •274 •107

12-932

•749 •558

30

30 35 40 45 50 55 60 65 70

12-434

•010

11-502 10-898

•183

9-338 8-338 7-161 5-777

11-182 10838

•428

9-936

•345

8-634 7-779 6-748 5-505

10-133 9-854

•514 •112

8-620

•018

7-280 6-373 5-254

337 131 354

?i:

33:

)i. H:)3.°

591 520 “21 01 76 536 91

>4<i

97 52 03 .58 07 50 97 39 75 12 46 78

OG

39 68 97 21 38 39 26 04 72 34

S5

35

40 45 50 55 60 65 70

11-632

•175

10-622 9-955

•156

8-202 7-066 5-718

10-530

•157

9-702

•149

8-476 7-658 6-662 5-450

9-600

•291

8-915

•450

7-879

•172

6-294 5203

40

40 45 50 55 60 65 70

10-770

•283

9-677 8-936

•038

6-951 5-646

0-826

•418

8-911

•283

7-570

S-556

5-383

9-014 8-671

•244

7-710

•039

6-198 5-141

45

45 50 55 60 65 70

9-863

•331

8-662 7-831 6-807 5-556

9-063 8619

•044

7-332 6-435 5-300

8-370 7-987

•500

6-875

•080

5-063

50

50 55 60 65 70

8-892

•312

7-568 6‘623 5-442

8-235 7-738

•091

6-258 5-193

7-660

•230

6-664 5-926 4-964

SURVIVORS HI P.

TABI.K III. — Continued.

‘J^

Males.

I1 emales.

Lives in gen.

>

tic

Males.

Females.

Lives in ten. ‘

<D

4p.Ct.

5 p. Ct.

4p.Ct.

5p.Ct.

4p.Ct.

5 p. Ct.

ts

4p. Ct.

Sp.Ct.

4p.Ct.

Sp.Ct.

4 p. Ct.

Sp.Ct.

41

•426

•065

1-85

•687

13-805

•376

69

5-933

•628

•253

5.926

•093

5-777

42

•196

11-880

13-994

•538

•595

•209

70

•670

•389

5-897

•599

5-783

•494

43

12-984

•710

•798

•387

•391

•048

71

•418

•158

•564

•293

•491

•225

44

•763

•532

•596

“229

•179

11-880

7-2

•180

4-940

•261

•013

•220

4-976

45

•535

•347

•383

•061

12-959

•704

73

4-940

•719

4-998

4-770

4-969

•744

46

•297

•153

•151

11-876

•724

•514

74

•724

•521

•792

•581

•758

•552

47

•051

10-591

12-894

•668

•472

•309

75

•487

•302

•582

•388

•534

•345

48

11-795

•738

•620

•443

•217

•090

76

•253

•084

•367

•189

•310

•131

49

•528

•516

•333

•205

11-930

10-860

77

•024

3-871

•145

3-983

•084

3-927

50

•267

•298

•049

10-970

•658

•634

78

3-768

•631

3-913

•767

3-840

•699

51

•030

10-100

11-769

•737

•399

•418

79

•512

•390

•668

•536

•590

•463

52

10-785

9-895

•492

•507

•138

•201

80

•260

•152

•402

“285

•331

•218

53

•531

•682

•220

•280

10-875

9-981

81

•017

2-921

•145

•041

•081

2-981

54

•269

•460

10-937

•042

•603

•751

82

2-792

•706

2-905

2-812

2-848

•759

55

9-998

•229

•642

9-792

•320

•510

83

•600

•523

•699

•615

•649

•569

56

•717

8-988

•334

•529

•025

•258

84

•473

•403

•559

•480

•516

•441

57

•425

•736

•012

•253

9-718

8-994

85

•371

•306

•552

•476

•461

•394

58

-140

•489

9-692

8-976

•416

•732

86

•281

•222

•518

•446

•399

•334

59

8-845

•232

•358

•687

•101

•458

87

•154

•103

•431

•365

•292

•338

60

•540

7-963

•039

•406

8-789

•184

88

1-955

1-912

•294

•236

•124

•074

61

•241

•700

8‘7i?9

•144

•490

7-922

89

•698

•664

•108

•059

1-903

1-861

62

7-950

•442

“453

7-895

•201

•668

90

•417

•392

1-873

1-833

•645

•612

63

•669

•193

•166

•643

7-917

•418

91

•154

•136

•628

•596

•391

•366

64

•382

•938

7-870

•382

•626

•160

92

0-835

0-824

•349

•325

•092

•075

65

•090

•676

•566

•111

•328

6-893

93

0-477

0-471

•071

•054

0-774

0-762

66

6-792

•408

•252

6-831

•022

•619

94

0-240

0-238

0-799

0-788

0-519

0-513

67

•489

•134

6-930

•541

6-709

•337

95

o-ooo

o-ooo

0-544

0-537

68

•201

5-872

•596

•239

•398

•055

96

0-000

o-ooo

0-320

0-317

TABLE IV. — Showing the Value of Annuities on two joint Lives, according to the probabilities of the duration of human life among Males and Females collectively, reckoning Interest at 4 per cent. — Difference of 0, 6, 12, and 18 years.

Ages.

Values.

Ages. Values.

Ages.

V alues.

Ages.

Values.

1— 1

12-225

1— 7

13-989

1—13

13-894

1—19

13-389

2— 2

13-583

2— 8

14-780

2—14

14-557

2—20

14-008

3— 3

14-558

3— 9

15-323

3—15

14-988

3—21

14-417

4— 4

15-267

4—10

15-685

4—16

15-259

4—22

14671

5— 5

15-577

5—11

15-817

5—17

15-326

5—23

14-725

6— 6

15-820

6—12

15-887

6—18

15-354

6—24

14-740

7— 7

16-003

7—13

15-914

7—19

15-351

7—25

14-727

8— 8

16-109

8—14

15-888

8—20

15-310

8—26

14-673

g g

16-152

9—15

15-824

9—21

15244

9—27

14-590

10—10

16-141

10—16

15-729

10—22

15-149

10—28

14-484

11 — 11

16-087

11 — 17

15-617

11—23

15-033

11—29

14-357

12—12

15-982

12—18

15-477

12—24

14-889

1 2—30

14-202

13—13

15-855

13—19

15-327

13—25

14-736

13—31

14-045

14—14

15-701

14—20

15-164

14—26

14-566

14—32

13-!i74

15—15

15-535

15—21

15-001

15—27

14-392

15—33

13-700

16—16

15 361

16—22

14-832

16—28

14-216

16—34

13-520

17—17

15-196

17—23

14-665

17—29

14-042

17—35

13-340

18—18

15-023

18—24

14-491

18—30

13-860

18—36

13-141

19—19

14-854

19—25

14-320

19—31

13-687

19—37

12-934

20—20

14-682

20—26

14-144

20—32

13-512

20—38

12-720

21—21

14-525

21—27

13-976

21—33

13-345

21—39

12-505

22—22

14-360

22—28

13-807

22—34

13-173

22—40

12-286

23—23

14-194

23—29

1 3-635

23—35

12-997

23—41

12073

24—24

- 14-020

24—30

13-455

24—36

12-801

24—42

11-873

25—25

13-849

25—31

13-284

25—37

12-599

2.5 — 43

11-683

26—26

13-671

26—32

13-108

26—38

12-387

26—44

11-485

27—27

13-495

27—33

12-935

27—39

12-170

27—45

11 ‘284

28—28

13-323

28—34

12-763

28—40

11-953

28—46

11-072

29—29

13-148

29—35

12-586

29—41

11-742

29—47

10-847

30—30

12-965

30—36

12-390

30—42

11-543

30— ˆ B

HC606

31 31

12-795

31 37

12-192

31—43

11-359

31—19

10-365

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530

SURVIVORSHIP.

TABLE IV. — Continued.

Ages.

Values.

Ages.

Values.

Ages.

Values.

Ages.

Values.

32—32

12-624

32—38

11-988

32—44

11-170

32—50

10-128

33—33

12-456

33—39

11-779

33—45

10-978

33—51

9-905

34—34

12-286

34—40

11-568

34—46

10-775

34—52

9-679

35—35

12-109

35—41

11-361

35—47

10-557

35—53

9-452

36—36

11-904

36—42

11-156

36—48

10-314

36—54

9-207

37—37

11-683

37—43

10-953

37—49

10-059

37—55

8-951

38—38

11-452

38—44

10-741

38—50

9805

38—56

8-683

39—39

11-209

39—45

10-519

39—51

9-558

39—57

8-404

40—40

10-964

40—46

10-286

40—52

9-308

40—58

8-124

41—41

10-732

41—47

10-049

41- -53

9-066

41—59

7839

42—42

10-531

42—48

9-813

42-54

8-830

42—60

7-569

43—43

10-346

43—49

9-581

43—55

8-597

43—61

7-318

44—44

10-154

44—50

9-351

44—56

8-354

44—62

7-075

45—45

9-954

45—51

9-129

45—57

8-101

45—63

6-836

46—46

9-736

46—52

8-897

46—58

7-841

46—64

6-586

47—47

9-497

47—53

8-658

47—59

7-563

47—65

6-323

48—48

9-236

48—54

8-402

48—60

7-281

48—66

6048

49 — 49

8-966

49—55

8-139

49—61

7-008

49—67

5-764

50—50

8-707

50—56

7-874

50—62

6-749

50—68

5-487

51—51

8-469

51—57

7-613

51—63

6-505

51—69

5-221

52—52

8-230

52—58

7-351

52—64

6-256

52—70

4-953

53—53

7-994

53—59

7-083

53—65

6-004

53—71

4-694

54—54

7-748

54—60

6-814

54—66

5-743

54—72

4-455

55—55

7-495

55—61

6-555

55—67

5-474

55—73

4-231

56—56

7-229

56—62

6-299

56—68

5-204

56—74

4-043

57—57

6-924

57—63

6-045

57—69

4-936

57—75

3-844

58—58

6-678

58—64

5-788

58—70

4-664

58—76

3-637

•59—59

6-388

59—65

5-519

59—71

4-395

59—77

3-430

60—60

6-104

60—66

5-249

60—72

4-149

60—78

3-210

61—61

5-844

61—67

4-984

61—73

3-927

61—79

2-974

62—62

5-600

62—68

4-729

62—74

3-747

62—80

2-744

63—63

5-367

63—69

4-482

63—75

3-563

63—81

2-557

64—64

5-128

64—70

4-231

64—76

3-370

64—82

2-396

65—65

4-881

65—71

3-982

65—77

3-180

65—83

2-252

66—66

4-626

66—72

3-750

66—78

2-974

66—84

2-123

67—67

4-362

67—73

3-527

67—79

2-743

67—85

2-010

68—68

4-103

68—74

3-340

68—80

2-514

68—86

1-910

69—69

3-851

69—75

3-147

69—81

2-324

69—87

1-798

70—70

3-593

70—76

2-946

70—82

2-155

70—88

1-661

71—71

3-345

71—77

2-752

71—83

2-004

71—89

1-464

72—72

3-128

72—78

2-558

72—84

1-875

72—90

1-189

73—73

2-935

73—79

2-355

73—85

1-768

73—91

0-937

74—74

2-797

74—80

2-172

74—86

1-692

74-92

0-708

75—75

2-648

75—81

2-017

7.5—87

1-605

75—93

0-575

76—76

2-490

76—82

1-877

76—88

1-497

76—94

0-481

77—77

2-340

77—83

1-756

77—89

1-339

T— 95

0-421

78—78

2-170

78—84

1-639

78—90

1-097

79—79

1-967

79—85

1-524

79—91

0-863

80—80

1-758

80—86

1-416

80—92

0-638

81—81

1-600

81—87

1-320

81 — 93

0511

1

82—82

1-472

82—88

1-225

82—94

0427

83—83

1-364

83—89

1-094

83—95

0-379

84—84

1-276

84—90

0-902

85—85

1-212

85—91

0-725

86—86

1-172

86—92

0-556

87—87

1-127

87—93

0-459

88—88

1-071

88 — 94

0-396

89—89

0-949

89—95

0-364

90—90

0-718

91—91

- 0-516

92—92

0-326

93—93

0-236

94—94

0-190

95—95

0-024

TABLE V. — Showing the values of two joint lives, according to the probabilities of the duration of

human life among males and females collectively. Interest four per cent. Difference of age 24, 30, 36, and 42 years.

1—25

12-832

1—31

12-196

1—37

11-465

1—43

10-546

2—26

13-409

2—32

12-730

2—30

11-913

2—44

10-940’

3—27

13-778

3—33

13-066

3—39

12-164

3—45

11-168

4—28

14-003

4—34

13-264

4—40

12-284

4—46

11-260

5—29

14-037

5—35

13-277

5—41

12-242

5—47

11-133

6—30

14-033

6—36

13-242

6—42

12-185

6—48

11-064

7—31

14-006

7—37

13-170

7—43

12-112

7—49

10-915

8—32

13-944

8—38

13-059

8—44

12-004

8 -50

10-743

9—33

13-855

9—39

12-913

9—45

11-865

9—51

10-560

10—34

13-741

10—40

12-743

10—46

11-694

10—52

10-357

11—35

13-604

11—41

12-563

11—47

11-493

11—53

10-140

12—36

13-428

12—42

12-379

12—48

11-259

12—54

9-898

13—37

13-234

13—43

12-190

13—49

11-011

13—55

9-644

14—38

13-023

14 — 44

11-997

14—50

10-759

14—56

9371

15—39

12-798

15—45

11-787

15—51

10-514

15—57

9-087

16—40

12-570

16—46

11-562

16—52

10-264

16—58

8-799

17—41

12-351

17—47

11-328

17-53

10-018

17—59

8-503

18—42

12-146

18—48

11-076

18—54

9-761

18—60

3-208

19—43

11-951

19—49

10-319

19—55

9-500

19—61

7-928

20—44

11-751

20—50

10-567

20—56

9-228

20—62

7-658

21—45

11-550

21—51

10-332

21—57

8953

21—63

7-3°^

22—46

11-335

22—52

10-092

22—58

8-675

2?.— 64

7-i27

23—47

11-107

23—53

9-352

23—59

8-385

23—65

6851

24—48

10-862

24—54

9-602

24—60

8-097

24—66

6-c”?

25—49

10-612

25—55

9-347

25—61

7-823

25—67

0-275

26—50

10-364

26—56

9-080

26—62

7-557

26—68

5-986

27—51

10-130

27—57

8-807

27—63

7-297

27—69

5-702

28—52

9-894

28—58

8-534

28—64

7-032

28—70

5-415

29—53

9-659

29—59

8-250

29—65

6761

29—71

5-136

30—54

9-413

30—60

7-967

30—66

6-481

30—72

4-831

31—55

9-167

31—61

7-702

31—67

6-197

31—73

4-646

32—56

8-912

32—62

7-446

32—68

5-917

32—74

4-453

33—57

8-651

33—63

7-196

33—69

5-642

33—75

4-251

34—58

8-389

34—64

6-942

34—70

5-364

34—76

4-040

35—59

8-114

35—65

6-679

35-71

5-093

35—77

3-833

36—60

7-833

36—66

6-402

36—72

4-840

36—78

3-605

37—61

7-561

37—67

6-H5

37—73

4-603

37—79

3-352

38—62

7-296

38—68

5-828

38—74

4-405

38—80

3-098

39—63

7-033

39—69

5-543

39—75

4-195

39—81

2-889

40—64

6-763

40—70

5-254

40—76

3-975

40—82

2-710

41—65

6-492

41—71

4-977

41—77

3762

41—83

2-553

42—66

6-225

42—72

4-730

42—78

3-539

42—84

2 418

43—67

5-957

43—73

4-507

43—79

3-295

43—85

2-305

44—68

5-689

44—74

4-322

44—80

3-052

44—86

2-203

45—69 46—70

5-426 5-153

45—75 46—76

4-128 3-921

45—81 46—82

2854 2684

45—87 46—88

2-083 1-933

47—71 48—72 49—73 50—74 51—75 52—76 53—77

4-884 4-633 4-398 4-205 4-008 3-803 3-605

47—77 48—78 49—79 50—80 51—81 52—82 53—83

3-715 3-489 3-238 2-990 2-792 2-623 2-475

47—83 48—84 49—85 50—86 51—87 52—88 53—89

2-533 2-396 2-277 2-171 2-050 1-901 1-681

47—89 48—90 49—91 50—92 51—93 52—94

53-95

1-708 1-385 1-090 0818 0662 0-551 0-468

54—73

3-389

54—84

2-344

54—90

1-366

55—79

3-150

55—85

2-232

55—91

1-073

&u— 80

2-909

56—86

2-130

56—92

0-810

57—81

2-710

57—87

2-010

57—93

0-655

58 — 82

2-539

58—88

1-864

58—94

0-546

59—83

2-385

59-89

1-644

59—95

0-464

60—84

2-248

60—90

1-333

61—85

2-135

61—91

1’OSO

62—86

2-037

62—92

0-789

63—87

1-916

63-93

0-639

64—88

1-790

64—94

0-533

65—89

1-585

65—95

0-456

66—90

1-290

67—91

1-017

68—92

0-764

69—93

0-617

70—94

0-514

i 71—95

Upon this subject we have been waiting (see tne article LIFE ANNUITIES) for the long promised new tables of Mr. Babbage : they have not yet appeared. We can therefore at present only furnish the reader with the former data, a'jove given. It is probable that these importan contributions to science may be forthcoming in time, to be added to a few Supplementary Articles of which we have memoranda.

SURYA, in the Hindoo mythology, is the common name of the sun, or of a personification of that luminary. This luminary, as in all idolatrous nations, appears to have been invoked by the lower classes superstitiously ; but by brahmins and the initiated it is asserted typ"-cally of that ' divine and incomparably greater light which illumines all, delights all, from which all proceed, to which all must return, and which alone can irradiate (not our visual organs merely, but our souls and) our intellects.' These, as we are told by Sir W. Jones, may be considered as the words of the most sacred text in Indian scripture.

For we must not be surprised, as remarked by the same author, at finding that, on a close examination, the characters of all the pagan deities, male and female, melt into each other, and at last into one or two. It seems a well-founded opinion that the whole crowd of gods and goddesses, in ancient Rome and modern Benares, mean only the powers of nature, and principally those of the sun, expressed in a variety of ways, and by a multitude of fanciful names. A plausible opinion has been entertained by learned men, that the principal source of idolatry among the ancients was their enthusiastic admiration of the sun ; and that when the primitive religion of mankind was lost amid the distractions of establishing regal governments, or neglected amid the allurements of vice, they ascribed to the great visible luminary, or to the wonderful fluid of •which it is the general reservoir, those powers of pervading all sj %ce, and

animating all nature, which their vis1 ancestors had attributed to one Eternal Mind, by whom the substance of fire had been created as an inanimate and secondary cause of natural phenomena. The mythology of the east confirms this op.nion. Still the noble truth, so well expressed in the concluding stanza of an ode addressed to Surya by Sir William, is fully recognized by intelligent Hindoos.

‘ Though the Sanscrit song Be strown with fancy’s wreathes And emblems rich, beyond low thoughts refin’d, Yet heav’nly truth it breathes With attestation strong,

That, loftier than thy sphere, th” Eternal Mind, Unmov’d, unrival’d, undefiled,

Reigns with providence benign.’

— Since thou, great orb, with all-enlightening ray,

Rulest the golden day,

How far more glorious He, who said serene,

Be — and thou wast — Himself unform’d,unchang’d,

We find the Hindoos ascribing to Surya the properties or attributes of the three persons or powers that coalesce mythologically and form

their Trimurti, or Trinity, as it has been usual to call it, or that, physically contemplated, are the secondary causes of natural phenomena. One of the names of the sun is Treyitenu, or in shortness Tritnu, meaning three bodied, as embracing the creative power of Brahma in his capacity of producing forms by his genial heat ; the preservative power of Vishnu in the property of light ; and the destructive energy of Siva in the concentrated force of his igneous matter. And these are in fact the attributes of the one God, the Eternal Mind, of Hindoo theologians, who is called Brahm. The sun, or Surya, is therefore declared to be Brahma, Vishnu, and Siva. At night and in the west he is Vishnu ; he is Bruh-ma in the east and in the morning; from noon to evening he is Siva.

In pictures Surya is usually represented four-handed, seated in a golden car drawn by seven green horses, a nimbus encircling his head,

and sometimes blazing round the whole. Sometimes his car is drawn by one horse with seven heads. A legless charioteer, with a red face, named Aruna, guides the chariot with reins of variegated hue.

Surya's seven horses, as well as Aruna's variegated reins, are supposed to have reference to the tints of his preceding ray ; but we have yet to learn if the Hindoos have attained a knowledge of optics, warranting a supposition of their being acquainted with a prismatic divisibility of a ray of light. The regents of the sun and of fire, intimately connected as their primary properties are, we may expect to find agreeing in their emblems or attributes. Thus Surya's ' mystic orb triform,' and Agnis ' triplicate of legs,' are deducible from the three descriptions of sacred fires venerated by the Hindoos, and proceeding from, and reabsorbed in, the sun, as the three great powers of nature proceed from, and return to, the Eternal Mind. We may thus discern an additional reason for a people of idolatrous propensities identifying the sun with Brahm, or that being who said BE ! and the sun was. Surya's seven horses, and Agnis seven legs, are again referrible to the idea of the com-mon properties of light and heat.

The theory of the learned author of the Analysis of Ancient Mythology would have derived a considerable accession of strength in his mind, had he been possessed of the speculation of the Hindoos on the universality of the sun. Sir W. Jones, not altogether agreeing with Newton, that ancient mythology is nothing but historical truth in a poetical dress ; nor with Bacon, that it consisted in moral and metaphysical allegories; nor with Bryant, that all the heathen deities are only different attributes and representations of the sun, or of deceased progenitors ; reasonably conceived that the whole system of religious fables rose, like the Nile, from several distinct sources ; and inclined to the opinion, that one great spring and source of idolatry, in the four quarters of the globe, was the veneration paid by men to the sun ; and another, the immoderate respect shown to the memory of deceased ancestors, especially the founders of kingdoms, legislators aud warriors.

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of whom the sun and moon were wildly supposed to be the parents.

But although the sun is found in the Hindoo system to include the

three great powers, Surya externally more resembles Vishnu than either of the others. His forehead is marked wit!) the sectarial hieroglyphic of the Vaishnavas, that is, with perpendicular lines ; the Saivas, or sectar-ists of Siva, marking their and their gods' foreheads with horizontal lines. Surya is also frequently seen with Vishnu's commonest attributes, the shank or shell, and lotos. Vishnu is farther considered as more immediately the sun than either Brahma or Siva ; and his most glorious incarnation in the person of Krishna is of direct solar reference. Among the names of Surya will be found both Vishnu and Krishna ; and it may be here remarked, on the authority of general Vallencey , that Krishna is the sun in Irish as well as in Sanscrit ; and Arun is the ptecur-sor of the sun (that is, the dawn, Aurora) both in Irish and Hindoo mythology. The various names of the sun, among the Hindoos, amount it is said to nearly fifty. It may lead to some curious speculation to consider that the primary name of the sun means the attractor. See Sir William Jones's admirable Essay on the Philosophy of the Asiatics, in the fourth volume of the Asiatic Researches, and in his works edited by lord Teignmouth.

Surya has wives assigned him, termed Sakti. The consort that we oftenest read of is Prabha, which means brightness or effulgence. The Hindoos, like some other distant people, consider the moon as a male deity ; and, as conjunctions of the sun and moon are a common language with all astrologers and mythologists, we rind sexual fables invented for bringing them logether, and into separations, or oppositions. The sun and moon are therefore both male and female with the Hindoos, and are duly married, separated, &c. The Greeks had similar tales. See Potter's Arch. Graec. c. xix.

We are told, by Mr. Turner, that among the Anglo-Saxons the moon was a male and the sun a female deity ; and the same peculiarity of gen-der, the author says, obtained in the ancient northern language. It is curious, he further remarks, that in a passage of an Arabian author (in Not. ad Carmen Tograi, p. 13.) we meet with a female sun and masculine moon. The distich is,—

Nee nomen fcemininum Soli dedecus, Nee masculinum Lunae gloria.

There is also a solar race in Hindoo fable, like the Heliades of Greece, and the similar families of the Peruvians. Suryavansa, or offspring of Surya, is the Sanscrit designation of these illustrious descendants. The river Yamuna, called Jumna by European geographers, is styled in Hindoo poetics ' the blue-eyed daughter of the sun.'

Representations of Surya are very common throughout India, in

pictures, sculptures, and casts ; both separately and associated with other deities. Several engravings of him in both situations are given in the Hindoo pantheon, from the three several originals. lie is seen seated

in his car, surrounded by ablaze of glory, drawn by seven foaming steeds, or by one seven-head- ed, drawn by the imperfect dawn, Aruna. And he is described as followed by thousands of genii, worshipping him and modulating his praises. The following is a translation of the first verse of a hymn addressed, with oblations, to the regents of the nine planetary spheres, extracted from Colebrook's Essay on the Religious Ceremonies of the Hindoos, in the seventh volume of the Asiatic Researches :— ' The divine sun approaches with his golden car, returning alternately with the shades of night; rousing mortal and immortal beings, and surveying worlds. May this oblation to Surya be e&cacious !' In some zodiacal representations, Surya .is mounted on a lion, and placed in the centre, indicating an early knowledge of the true soiar system. His car is sometimes followed by a black ill-favored figure, a personification, probably, of the darkness that the god of day is dispelling.

SUS, the hog, in zoology, a genus of quadrupeds, belonging to the class of mammalia and order of belluae. There are four cutting teeth in the upper jaw, whose points converge; and, for the most part, six in the lower jaw, which stand forwards. There are two tusks in each jaw, those in the upper jaw being short, while those of the under jaw are long, and extend out of the mouth. The snout is prominent, moveable, and has the appearance of having been cut off or truncated. The feet are armed with divided or cloven hoofs. There are six species : —

1. S. j'Ethiopicus, the engallo, or Ethiopian hog, has no fore teeth, but small tusks in the lower jaw, -very large ones in the upper, in old boars bending towards the forehead in form of a semicircle : nose broad, depressed, and al-most of a horny hardness : head very large and broad ; beneath each eye a hollow, formed of loose skin, very soft and wrinkled ; under these a great lobe or wattle, lying almost horizontal, broad, flat, and rounded at the end, placed so as to intercept the view of any thing below from the animal. Between these and the mouth, on each side, there is a hard callous protuberance The

mouth is small ; skin dusky ; bristles disposed in fasciculi, of about five each ; longest between the ears and on the beginning of the back thinly dispersed on the rest of the back. Ears large and sharp pointed, inside lined with long whitish hairs ; tail slender and flat, not reaching lower than the thighs, and is covered with hairs disposed in fasciculi. Body longer, and legs shorter than in the common swine; its whole length four feet nine inches; height before two feet two inches ; but in a wild state it grows to an enormous size. These animals inhabit the hottest parts of Africa, from Senegal to Congo, also the island of Madagascar. They are very fierce, active, and swift ; they will not breed with the domestic sow. They burrow under ground, into which they dig with surprising expedition. Buffon confounds this with the African.

2. S. Africanus, the African hog, has only two fore teeth in the upper jaw, and six in the lower ; on each side six grinders. The body is co/ ered

with very long and fine bristles ; the tail reaches to the first joint of the hind leg ; is very slender, and ends in a large tuft ; the head is long; nose slender ; the upper jaw extending far beyond the lower ; the ears narrow, erect, and pointed, with very long bristles at the end. They inhabit Africa, from Cape Verd to the Cape of Good Hope.

3. S. babyrussa, the Indian hog, has four cutting teeth in the upper, six in the lower jaw ; ten grinders to each jaw; in the lower jaw two tusks pointing towards the eyes, and standing nearly eight inches out of their sockets ; from two sockets on the outside of the upper jaw two other teeth, twelve inches long-, bending like horns, their ends almost touching the forehead; ears small, erect, sharp-pointed ; along the back are some weak bristles ; on the rest of the body only a sort of wool, such as is on lambs; the tail long, ends in a tuft, and is often twisted : the body plump and square. It inhabits Buero, a small isle near Amboyna; it is also found in Celebes, but neither on the continent of Asia nor Africa. They are sometimes kept tame in the Indian isles; live in herds; have a very quick scent; feed on herbs and

leaves of trees ; never ravage gardens like other swine; their flesh well tasted. When pursued, and driven to extremities, they rush into the sea, swim very well, and even dive, and pass thus from isle to isle. In the forests they often rest their heads, by hooking their upper tusks on some boughs. The tusks, from their form, are useless in fight.

4. S. porcus, the Guinea hog, has no bristles ; the hinder part of the back is covered with long hairs ; the tail is long and naked, and hangs down to the ground ; the ears are longish and much pointed; the body is covered with short and shining red hairs. This species inhabits Guinea. There is a variety called the Siamese hog. Both are smaller than the common hog.

5. S. scrofa, the common hog, having the body covered with bristles ; two large teeth above and below. There are four varieties : —

i. S. scrofa domesticus, the domestic hog, has the ears long, sharp-pointed, and slouching ; the color generally white, sometimes mixed with other colors. In a tame state it is universal, ex-cept in the frigid zones, and in Kamschatka, where the cold is very severe. Since its introduction into America by the Europeans, it abounds to excess in the hot and temperate parts. Of all quadrupeds the hog is the most rude and brutal. All his habits are gross ; all his appetites are impure ; all his sensations are confined to a furious lust and a brutal gluttony. He devours indiscriminately every thing that comes in his way, even his own progeny the moment after their birth. This voraciousness seems to proceed from the perpetual cravings of his stomach, which is of an immoderate size ; and the gross-ness of his appetites, it is probable, arises from the bluntness of his senses of taste and of feeling. The rudeness of the hair, the hardness of the skin, and the thickness of the fat, render these animals less sensible to blows. Mice have been known to lodge upon a hog's back, and to eat his skin and fat, without his showing any marks of feeling. The other senses of the hog

are very good. It is well known to the hunters that the wild boar hears and smells at a great distance; for, to surprise him, they are obliged to watch him in silence during the night, and to place themselves opposite to the wind, that he may not perceive the smell, which never fails to make him turn back. The parts of this animal are finely adapted to its way of life. As its method of feeding is by turning up the earth with its nose for roots of different kinds, so it has a more prone form than other animals; a strong brawny neck ; eyes small, and

placed high in the head ; a long snout, nose callous and tough, and a quick sense of smelling te trace out its food. Its intestines have a strong resemblance to those of the human species. Notwithstanding its powers of motion, it is by nature stupid, inactive, and drowsy; much inclined to increase in fat, which is disposed in a different manner from that of other -animals, and forms a regular coat over the whole body. It is restless at a change of weather, and in high winds is so agitated as to run violently, screaming horribly at the same time ; it is fond of wallowing in the dirt, either to cool its surfeited body, or to destroy the lice, ticks, and other insects with which it is infested. Its diseases generally arise from foul feeding and intemperance; such as meazles, imposthumes, and scrophula. These are best prevented by keeping the animals, as the ancients strongly recommended, very clean in their sties; allowing them air, exercise, and a sufficiency of water. Linnaeus observes that its flesh is wholesome food for athletic constitutions, or those that use much exercise ; but bad for such as lead a sedentary life ; it is, however, of most universal use, and furnishes numberless materials for epicurism. The boar, or male, is chosen with great care, when intended for propagation; and is thus employed from the age of two to five years, and then either sold or fatted. The males not allotted to this use are castrated, sometimes at the age of six weeks, sometimes six months ; and then fed to a great size either for sale or for use. Sows are kept for breed generally from one year old to seven, and are then fatted. They have commonly more grease on their intestines than hogs, these being fattest on their backs. Aristotle says, that hogs in general live twenty years ; and adds that both males and females are fertile till they arrive at fifteen. They can engender at nine or twelve months; but it is better to restrain them till they be eighteen months or two years. The first litter of the sow is not numerous ; and, when only one year old, her pigs are weak, and even imperfect. She may be said to be in season at all times. Though impregnated, she solicits the approach of the male, which is an excess among animals; for almost every other species refuse the male af-ter conception. The ardor of the sow, though almost perpetual, is however marked by paroxysms and immoderate movements, which always terminate by her wallowing in the mire. She, at the same time, emits a thick whitish fluid. She goes four months with young ; brings forth in the beginning of the fifth ; and soon after solicits the male, is impregnated a second time, and thus brings forth twice a-year. Only eight

or nine of the litter are kept; the rest are sold. In fifteen days pigs are excellent food. The flesh of all the different species of swine, and at all ages, is a very substantial and agreeable aliment; and, in their proper seasons, the different sorts of provisions thus supplied are all of them very saleable. The flesh was much more in fa-vor with our ancestors than with us ; though brawn has still many admirers, is made in the greatest perfection, and considered as a rarity peculiar to this country. Pork, though it might be wisely prohibited in some warm countries, is found equally nutritive and salutary here. As such it furnishes a very large proportion of that food which is vended in our markets. It takes salt better, and keeps longer, than the flesh of any other animal ; and the consumption of it is prodigious when pickled or salted, more especially in our foreign garrisons and in the sea service. Our bacon is differently cured, so as to render it acceptable to all palates ; and our hams are not at all inferior to those of other countries. Fresh pork sells nearly as dear as beef; the lard brings double or triple the price ; the blood, the intestines, the feet, and the tongue, are all prepared as food. The fat of the intestines and web, which differs from com-mon lard, is employed for greasing axles of wheels, and for many other purposes. Sieves are made of the skin ; and brushes, pencils, &c., of the bristles. The dung is reputed next in value to that of sheep. Mr. Worlidge proposes that swine should be turned into a close well-paled, and planted with greens, pulse, and roots, on which they may feed, and by their trampling and their dung raise a great quantity of excellent soil. Mr. Mortimer assures us that some on poor light shallow land in Staffordshire sow a small white pea, which they never reap, but turn in so many hogs to eat them as they think they will fat; and there they lie day and night, and their dung will so enrich the land that it will bring a good sward upon it, and will graze many years afterwards. Our old husbandmen had an ill opinion of this dung, as supposing it bred weeds. In some places they wash with hogs' dung for want of soap ; which answers tolerably well, if the linen hangs long enough in the air to become thoroughly sweet. The snout of an old boar is the only part that is esteemed ; but every part of the castrated and young boar, not exceeding one year fed, makes delicate eating. The pork of the domestic boar is worse than that of the wild boar ; and it can only be rendered fit for eating by castration and fattening.

ii. S. scrofa dom. monungulus, the single-hoofed hog, has undivided hoofs on all the feet, and resembles the common kind in every thing else. They inhabit Upsal in Sweden, and other places ; and are mentioned by the ancients.

iii. S. scrofa dom. Sinensis, the Chinese hog, has the back almost naked, and the belly hanging down to the ground ; the legs are short, and the tail short and pendulous. They are common in China, the islands in the Indian Ocean and South Sea, and in New Guinea. They are cultivated in Europe, and are much more cleanly than the common hog. . iv. S. scrofa ferus, the wild hog, is of a dark

brinded color, and beneath the bristles is a soft short hair; the ears short and a little rounded. It is found wild in most parts of Europe. In the forests of South America there are vast droves, which derive their origin from the European kind relapsed into a state of nature ; and are what Mr. Bancroft, in his history of Guiana, describes as a particular species by the name of warree. They cannot bear excessive cold ; inhabit wooded countries ; and are very swift. In America they are useful by clearing the country of rattlesnakes, which they devour without danger. The external form of its body is very unwieldy ; yet, by the strength of its tendons, the wild boar is enabled to fly from the hunters with amazing agility : the back toe on the feet of this animal prevents its slipping while it descends declivities, and must be of singular use when pursued. As to the age of these animals, it is said the life of tne wild boar may be extended to twenty-five or thirty years. The flesh of the wild boar was esteemed a great delicacy by the ancient Romans. The wild sow, which every way resembles the domestic kind, produces only once a year. This difference in fertility is probably owing to want of nourishment, and the necessity of suckling her pigs much longer than the domestic sow, which is never allowed to nurse her young above fifteen days or three weeks. The wild boar was formerly a native of England, as appears from the laws of Hoel Dha, who permitted his grand huntsman to chase that animal from the middle of November to the beginning of December. William I. punished with the loss of their eyes any that were convicted of killing the wild boar, the stag, or the roebuck ; and Fitz Stephen tells us that the vast forest that in his time grew on the north side of London was the retreat of stags, fallow-deer, wild boars, and bulls. Charles 1 turned out wild boars in the New Forest Hampshire, but they were destroyed in the civil wars. On the continent the wild boar is nunted with dogs, or killed by surprise during the night, when the moon shines. As he runs slowly, leaves a strong odor behind him, and defends himself against the dogs, and often wounds them dangerously, fine hunting dogs are unnecessary, and would have their nose spoiled, and acquire a habit of moving slowly, by hunting him. Mastiffs, with very little training, are sufficient. The oldest, which are known by the track of their feet, should only be attacked : a young boar of three

years old is difficult to hunt down, because he runs very far without stopping. But the older boars do not run far, allow the dogs to run near, and often stop to repel them. During the day, he commonly remains in his soil, which is in the most sequestrated part of the woods. He comes out in the night in quest of food. In summer, when the grain is ripe, it is easy to surprise him among the cultivated fields, which he frequent every “night. As soon as he is slain, the hunters cut off his testicles, the odor of which is so stiong that in a few hours it would infect the who flesh. The ancients castrated the young boar which they could carry off from their moth and returned them to the woods, where they gi fat, and their pork was much belter than domestic hogs.

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6. S. tajassus, the tajassu, pe:.ary, or Mexican hog, with four cutting teeth above, and six below ; two tusks in each jaw ; those in the upper jaw pointing down, and little apparent when the mouth is shut; the others hid : length from nose to the end of the rump about three feet : head not so taper as in common swine : ears short and erect : body covered with bristles, stronger than those of the European kind, and more like those of a hedge-hog ; they are dusky, surrounded with rings of white ; those on the top of the neck and back are nearly five inches long ; shorter on the sides ; the belly almost naked ; from the shoulders to the breast is a band of white : no tail : on the lower part of the back is a gland, open at the top, discharging a foetid ichorous liquor; this has been by mistake called a navel. Inhabits the hottest parts of South America, and some of the Antilles : lives in the forests on the mountains : is not fond of mire or marshy places : less fat than the com-mon hog. These animals go in great droves. They are very fierce, and will fight stoutly with the beasts of prey : the jaguar, or American leopard, is their mortal enemy ; often the body of that animal is found, with several of these hogs, slain in combat. Dogs will scarcely attack this animal : if wounded, it will turn on the hunters. They feed on fruits and roots ; also on toads and all manner of serpents, which they hold with their fore-feet, and skin with great dexterity. The flesh is reckoned very good food ; but all writers agree that the dorsal gland must be cut out as soon as the animal is killed, or the flesh will become so infected as not to be eatable. The Indian name of this species is paquiras, whence is derived that of pecary.

SUSA, or SHUSHAN, the ancient royal residence of the kings of Persia, built by Darius Hystaspis, according to Pliny ; though he probably only restored it, being a very ancient city, founded by Tithonus, the father of Memnon. It was in compass 120 stadia, of an oblong quadrangular form, with a citadel called memnoneum. In Scripture it is called Shushan, the royal citadel, from the great number of lilies growing in that district (Athenseus) ; situate on the river Ulai or Eulseus (Daniel) : Susa was the winter as Ecbatana was the summer residence of the kings of Persia (Xenophon, Strabo, Plutarch). Here the kings kept their treasure ; and Alexander found immense riches in it (Herodotus). It is now called Suster.

SUSA, a province of Piedmont, with a superficial extent of 700 square miles, and 65,000 inhabitants. It consists of a broad valley at the foot

of the Cottian Alps, interspersed with steep rocks and eminences. Its products are wine, chestnuts, fruit, silk, and corn. Grazing is also extensively followed. It has mines of iron and marble, and manufactures linen and leather.

SUSA, a fruitful province of Morocco, at its south extremity. There is not, perhaps, a finer climate in the world ; its fruits are exquisite, particularly olives, the plantations of which are so extensive that a man may travel uninterrupt-edly through them for many days. The sugar cane is said to grow spontaneously. Cotton, ndigo, and gums, are abundant. Stick-liquorice abounds to such a degree as to be called the root

of Suse. Almonds and olive oil are ulso produced for exportation.

SUSCEPTIBLE', adj. ˆ Fr. susceptible ; Lat.

SUSCEPTIBILITY, n.s. tsusceptus. Prior has

SUSCEP'TION, £ accented this impro—

SUSCEP'TIVE, adj. J perly on the first syllable. Capable of admitting; disposed to admit : susceptibility, the quality of admitting-: suscep tion, the act of taking : susceptive, capable to admit.

He moulded him platonically to his own idea, delighting first in the choice of the materials, because he found him susceptible of good form.

Wotton.

The susceptibility of those influences, and the effects thereof, is the general providential law whereby other physical beings are governed. Hale.

In their tender years they are more susceptible of virtuous impressions than afterwards, when solicited by vulgar inclinations. L' 'Estrange.

Children's minds are narrow, and usually susceptible but of one thought at once.

Locke on Education.

Blow with empty words the susceptible flame.

Prior.

A canon, promoted to holy orders before he is of a lawful age for the susceptiou of orders, shall have a voice in the chapter. Aylijfe's Parergon.

Since our nature is so susceptive of errours on all sides, it is fit we should have notices given us how far other persons may become the causes of false judgments. Watts's Logiclt.

SUS'CITATE, v. n. Fr. susciter; Lat. sus-cito. To rouse ; to excite.

It concurreth but unto predisposed effects, and only suscitates those forms whose determinations are seminal, and proceed from the idea of themselves. Browne's Vulgar Errours.

SUSPECT', v. a., v. n., & n. s. Lat. suspicio, suspectum. To imagine with a degree of fear and jealousy ; imagine guilt ; hold uncertain ; doubt : as a participial adjective, doubtful : as a noun substantive, an obsolete synonyme of suspicion.

No fancy mine, no other wrong suspect, Make me, O virtuous shame, thy laws neglect.

Sidney.

The sale of offices and towns in France, If they were known, as the suspect is great, Would make thee quickly hop without a head.

Shakspeare. If I suspect without cause, let me be your jest.

Id.

There be so many false prints of praise, that a man may justly hold a suspect. Bactrn.

Nothing makes a man suspect much, more than to know little ; and therefore men should remedy suspicion by procuring to know more. Id.

Nothing more jealous than a favorite towards the waining time and suspect of satiety. Wotton.

If the king ends the differences, and takes away the suspect, the case will be no worse than when two duellists enter the field. Suckling

They might hold sure intelligence Among themselves, without suspect

t’ offend.

Daniel.

Let us not then suspect our happy state, As not secure. Milton.

Sordid interests or affectation of strange relations lire not like to render your reports suspect or partial.

Glunville.

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SUSPENSION BRIDGES.

SUSPEND’, v.a -x Fr. suspend™ ; La,t.

SUSPENSE’, n. s. & adj. [suspendo. To hang;

SUSPENSION, n.s. i to make to hang by

SUSPEN’SORY, adj. “any thing; make to depend upon: hence to interrupt; delay; keep undetermined. Suspense is uncertainty ; delay ; as an adjective, held in doubt : suspension, the act of hanging up ; temporary cessation : suspensory, hanging by ; that by which any thing is suspended.

The self-same orders allowed, but yet established in more wary and suspense manner, as being to stand in force till God should give the opportunity of some general conference what might be best for every of them afterwards to do. Hooker.

Suspend your indignation against my brother, till you can derive from him better testimony of his in-tent. Sliakspeare.

To themselves I left them ; For I suspend their doom. Milton.

SUSPENSION, or SUSPENSE, in music, is produced by supposition, and is nearly the same. It consists in retaining as many as possible of the sounds in a preceding chord that they may be heard in that which succeeds.

SUSPENSION BRIDGES, in civil engineering, are now substituted, in a variety of cases, for the massive and costly structures of stone, some of which we have already described in our article BRIDGES. These bridges recommend themselves as wel. by the economy and durability of their construction as by the simplicity and elegance of their appearance.

The first chain bridge in this country is believed to have been that of Winch Bridge, over the river Tees, which forms a communication between the Bounties of Durham and York. This bridge, of which we have given a view in fig. 1 plate II. SUSPENSION BRIDGES, is described by Hutchinson, in his Antiquities of Durham, ‘ as a bridge suspended upon iron chains stretched from rock to rock over a chasm nearly sixty feet deep, for the passage of travellers. It is seventy feet in .ength, and little more than two feet broad; with a hand-rail on one side, and planked in such a manner that the traveller experiences all the tremulous motion of the chain.’

The King’s Meadow Wire Bridge (fig. 2), on the estate of Sir John Hay, bart., is thrown across the Tweed, a little below Peebles. This is likewise a foot-bridge. It is 110 feet in length, and four feet in breadth; and is ornamented with a handsome lodge, as is represented in the figure. This bridge was contracted for, and executed by Messrs. Redpath and Brown of Edinburgh, in the summer of 1817, and cost about £160. The lower ends of the hollow tubes, forming the piers on the opposite sides of the river, are secured by a brander or grating of timber laid under ground and shown in the connecting diagram marked a fig. 2.

The Dryburgli Chain Bridge, represented in fig. 3, is intended for foot

passengers and led horses, and was built in 1817, in little more than four months, by Messrs. John and William Smith, architects near Melrose, at the expense of the earl of Buchan ; and has altogether cost his lordship about £720. This bridge is 260 feet in extt-i.it between the points of suspension, and

!0oU,rofeet,.in breadth-On the 1.5th of January, •18, this bridge, after it had been finished about six months, was completely destroyed bva violent gale of wind. The eyes formed on one end t the rods or links of the chains supporting the bridge were welded, but the other end was simply turned round and fixed with a collar as shown m the diagram marked 6 fig. 3. It deserves no-tice that, after the bridge fell, not more than one or two instances appeared of the iron havino-failed at the welded end ; but it had uniformly broken at the open eye of the link as shown in the diagram b, above alluded to. The utility of Dryburgh Bridge, as contrasted with a troublesome ferry, having been on so short a trial sufficiently proved, his lordship ordered it to be rebuilt; and in less than three months it was again opened to the public. To this new bridge are added guys, or mooring chains, consisting of rods of iron fixed to stakes in the opposite banks of the river. These guys are attached to the beams of the roadway, as shown in the plan connected with fig. 3. They are said to have some effect in lessening the motion of the bridge in high winds. The post of piers, over which the catenarian chains pass, are formed of logs of memel timber fourteen inches square, erected ir. pairs as shown in the left hand diagram of fig. 3 marked ‘ approach of fig 3.’

The work to which the reader’s attention is next drawn is the Union Chain Bridge, across the river Tweed, at Norham Ford, about five miles from Berwick, as shown in fig. 4. This bridge was begun in August 1819, and opened on the 26th July, 1820; having required only a period of about twelve months for its erection, while a stone bridge must have been the work of abou three years. It was designed and executed b captain Samuel Brown of the royal navy. It is eighteen feet in width, and no less than 361 feet in length. The roadway is suspended from the catenarian, or main chains, by circular rods one inch in diameter. These perpendicular rods are wedged into caps or pieces of cast iron called saddles, which are placed at the distance of five feet apart, and are made to rest upon the shackles or joints of the

catenarian chains, as shown in the connecting diagram marked c fig. 4 ; ‘ the approacix at fig. 4’ represent* an end view on the Scotch side of the river.

The gigantic structure crossing the Monti Strait is represented in plate II. SUSPENSION BRIDGES. It was commenced in 1821, and the first chain was thrown over in the month of April 1825. The extreme length of the chains, from the fastenings in the rocks at either extremity, is about 1600 feet; and the road consists of two carriageways of twelve feet each, with a foot-path of four feet in width in the centre. In the first examination of Mr. Rennie before the house of commons, in 1802, it was proposed to have a solid iron bridge with stone abutments ; but Mr. Telford, the architect of the present structure, proved that the cost would have beer incalculably greater by adopting Mr. liennie’s plan, while the power of resistance would have been less.

The suspension bridge at Hommmmith now icmains to be described. The design is by .Mr.

Tierney Clark, tne engineer, and the whole has been executed under his direction. The following are the dimensions : —

Feet. In.

The extent of water-way between the suspension towers rising from the bed

of the river 400 o

The distance between these and the piers on shore are as follow : —

On the Middlesex side 142 1 1

On the Surrey side 145 6

Leaving a clear water-way of … 688 8

The suspension towers are forty-eight feet above the level of the roadway, where they are twenty-two feet thick. The roadway is slightly curved upwards, and is sixteen feet above high water ; and the extreme length from the back of the piers on shore is 822 feet eight inches, supporting 688 feet of roadway; being 135 feet more than the Menai bridge. There are eight chains composed of wrought iron bars five inches deep, and one inch thick, each. Four of these chains have six bars in each chain, and four have only three bars in each chain, making in the total thirty-six bars which, make a dip or curvature in the centie of about twenty-nine feet. From these, vertical rods are suspended, which support the roadwav, formed of strong timbers covered with broken granite. The width of the carriageway is twenty feet, with foot ways five feet wide. The chains p-‘ss over the suspension towers, and are secured to the piers on each shore. The suspension towers are built of stone, and designed as archways of .ne Tuscan order. The bridge has cost £80,000.

SUSPI’CION, n. s. -v Fr. suspicion; La:.

SUSPI’CIOUS, adj. {suspicio. The act of

SISPI’CIOUSLY, adv. (suspecting; imagina—

SUSPI’CIOUSNESS, n. s.) tion of ill : the adjective, adverb, and noun substantive corresponding.

They, because the light of his candle too much drowned theirs, were glad to lay hold on so colour-able matter, and exceeding forward to traduce him as an author of suspicions innovations. Hooker.

Suspicion all our lives shall be stuck full of eyes , For treason is but trusted like a fox, Who, ne’er so tame, so cherished and locked up, Will have a wild trick of his ancestors. Shakspeare.

SUSPIRE’, v. n. > Lat. suspiro. To sigh ;

SUSPIRA’TION, n. s. J to fetch the breath deep : it seems in Shakspeare to mean only to begin to breathe : the noun substantive corresponding.

Since the birth of Cain, the first male child, To him that did but yesterday suspire, There was not such a gracious creature born.

Shakspeare.

Not customary suits of solemn black, Nor windy suspiration of forced breath, That can denote me truly. Id.

In deep suspirations we take more large gulphs of air to cool our heart, overcharged with love or sorrow

More.

SUSQUEH ANNA, the largest river of Pennsylvania, North America, which is formed by the east and west branches. The east rises in Otsego Lake, New York, and the west in Huntingdon county Pennsylvania. They unite at Northumberland. The

river thes runs south-east into the head of the Chesapeake, in Maryland. It is one mile and a quarter wide at its mouth, but it is navigable only five miles. The Susquehanna was surveyed in 1817 by commissioners appointed by Pennsylvania, who reported that below Columbia no ascending navigation was practicable, but that, at the expense of about 20,000 dollars, every obstacle might be removed to the head of the two branches. It is contemplated to unite the waters of this river with those of the Schuylkill.

SUSQUEHANNA, a county on the north side of Pennsylvania, bounded north by New York, east by Wayne county, south by Lucerne county, and west by Ontario county. Chief town Montrose.

SUSSEX, one of the southern counties of England, bounded on the west by Hampshire, on the north by Surrey, on the east and north-east by Kent, and on the south by the British Channel. It is seventy-six miles in length, and nearly twenty in average breadth. Towards Kent it is contracted to an obtuse point.

Sussex, like Surrey, is varied by the inequalities of the downs, with intervening valleys, through which the many little streams of the county pursue their respective courses ; and the wooded scenery and pasture land give to the county in general a rural and a rich diversity of appearance. The tracts which come under the description of mere wastes, however, are very considerable. They occupy the northern side of the county, where, in a district containing by computation 500,000 acres, these almost desert tracts form not less than 110,000. Upon the downs the climate fronting is bleak, being exposed to violent winds, impregnated with saline particles. In the western part of the maritime district the climate is warm and highly favorable to the purposes of vegetation ; in that called the Weald the climate is cold and damp.

In the easternmost parts of the Weald is found every sort of limestone ; and the Sussex marble, when cut into slabs and polished, is equal to most kinds for beauty and quality. It is an excellent stone for square building and paving, and affords a very valuable manure. It is found from ten to twenty feet under ground, where it lies in strata nine or ten inches thick. The limestone has been found superior to both that of Maidstone and Plymouth ; and for cement it is thought to surpass all other. Iron-stone abounds in this county; and to the ferruginous mixture with which its soil is in many places so highly impregnated, is to be ascribed the sterility of so large a portion of the surface. Chalk is still more plentiful, a vast range of hills which occupy a considerable part of the county contiguous to the coast being composed of it. On the south side of these hills marl is dug. Fuller's earth is found at Tillington and consumed in the neighbouring mills; and red ochre at Graffham, Chid-ham, and other places on the coast.

The rivers of Sussex are insignificant when compared with those of some other parts of the kingdom ; but they are exclusively its own, as their origin and courses are confined within the limits of the county All of them fall into the British Channel.

SUSSEX.

Sussex has, from the remotest antiquity, been celebrated for its oak. Before the Norman conquest it was one continued forest; and the quantity of woodland which it at present contains cannot be estimated at less than 170,000 acres. The reigning feature of the Weald is timber, which overspreads it in every direction. The quality of the timber may be collected from this circumstance, that the navy contractors are said to stipulate for Sussex oak in preference to every other. The roads of this county are in general good, being largely composed of whinstone and Kentish rag. There are no considerable canals in Sussex, but the Arun has been made navigable from the sea to its junction with the New Cut, a distance upwards of seventeen miles ; and thence a company of merchants have extended it to Newbridge. A similar process has also been taken with the Rother, a branch of the former river, which constitutes part of a grand plan for connecting London with Sussex, by means of the junction of the Arun with the Wey at Guildford. A plan has also been proposed for cutting another canal from Newbridge on the Rother to Horsham, and thence to the iron railway at Merstham near Reigate in Surrey.

The proportion between pasture and arable land varies in different parts of this county. In the Weald a third is pasture, a third arable, and a third wood and waste. On the south side of thp downs the arable exceeds the pasture in the proportion of thirty to one. The rotation of crops entirely depends upon the district. Some instances have occurred on very rich land where wheat has been repeated four or five years in succession, and the product amounted to four or rive quarters per acre. The crops commonly raised in Sussex are wheat, oats, clover, turnips, peas, barley, and tares. The crops not commonly cultivated are beans, potatoes, buck-wheat, lettuces, hops, carrots, rhubarb, opium, sainfoin, lucerne, and chicory. The management of the meadow and pasture lands varies but little from the practices common in other counties; though here indeed there is but too much reason to complain of negligence with respect to the improvement of grazing land. Irrigation is but locally known ; and it is only in the western parts of the county that any signs of it are to be observed. Very great improvements, however, have of late years been effected in the marshes situated along the coast, or in the neighbourhood of the rivers. In the western part of Sussex are some considerable orchards; and where the soil is adapted to the fruit, the plantations are thickly interspersed. The neighbourhood of Petworth yields the best cyder of any in the county. The manures used in Sussex, besides common dung, are chalk, lime, marl, sleech, soap-ashes, wood-ashes, peat-ashes, coal-ashes, rags, sheep-clippings, pilchards, paring-dust, and gypsum. The first three are applied in great abundance; tfie rest, from their nature, but partially.

Sussex is celebrated for its breed of sheep, which are fed on the south downs, and require but a very slight quantity of food for their subsistence. Their wool is little, if at all, inferior to that of the Hereford sheep, and their

hardiness is demonstrated by their healthiness and freedom from losses. The total amount of the sheep kept in the county is about 450,000. The largest estate in Sussex does not greatly ex-ceed £7500 per annum, and most of the proprietors hold their land in their own occupation.

The principal manufacture in this county was the making of iron into

bars ; but this has decayed on account of the great establishments in Scotland and Wales, where, by the use of pit-coal, the article is supplied at a much cheaper rate. The county contains many Roman and some British antiquities. The Ermine Street, one of the eight British roads, led from this coast to the south-east part of Scotland. Here also was the Stane Street of the Romans, which passed from east to west of the county, with a vicinal, or branching road, towards Porchester. There are also many remains of Roman encamp-ments situated in the vicinity of the downs, and overlooking the Weald. Mr. Dallaway, in his History of Western Sussex, recounts eleven of these relics of early encampment. Over the downs, and other parts of Sussex, are scattered various tumuli, or barrows, which, when opened, have been found to contain either bones, urns, or entire skeletons. Sussex, and the adjoining-counties of Hants and Surrey, were by the Ro-mans denominated Belgae, from the circumstance of their being inhabited by a people so called. These were afterwards joined by the Regni, who settled in the same district antecedent to the invasion of England by Julius Caesar. After that event, during the Roman dominion of Britain, there were four large stations or towns in Sussex, which included the minor tribes of the Bibroci and the Rhemi. Under the Britons Sussex formed a part of the Suth-Seaxna-rice, as already mentioned in Surrey; and by a similar modulation has been reduced to its present sound. Like the other counties of England Sussex was, at the Norman invasion, divided into lordships and assigned to some of the followers of king William. At that period the title of the earl of Sussex was given to one of these, and the title continued til/ 1801. It was then constituted a dukedom, and given to Augustus Frederick, sixth son of his late majesty.

The general division of Sussex is into rapes, a division peculiar to this county. These rapes, each of which is said to have had its particular castle,' river, and forest, are Chiohester, Arundel, and Bramber, forming the western ; and Lewes, Pevensey, and Hastings, the eastern portion. The rapes are subdivided into sixty-five hundreds, and comprehend 313 parishes. C'hichester is the chief town. Sussex sends eighte MI members to parliament, four for the county, two each for Chichester, Brighton, Hastings, Lewes, New Shoreham, and one each for Arun.iv.-i, Iloi-shain, Midhurat, and Rye.

SUSSEX, a county of the United States in New Jersey, bounded N. N. E. by New York, south-east by Bergen, Morris, and Hunterdon counties, and west and north-west by the Delaware, which separates it from Pennsylvania. Ch.cl town, Newton.

SUSSEX, a county of Delaware, United States, bounded north by Kent

county, east by Delu-

sus

540

ware Bay and the Atlantic, south and west by Maryland. Chief towns Georgetown and Lewis-town.

SUSSEX, a county of Virginia, bounded north-east by Surrey county, S. S. E. by Southampton county, south-west by Greensville county, and north-west by Dinwiddie and Prince ‘ George counties.

SUSTAIN’, v. a.~\ Fr. soustenir ; Lat. susti-SUSTAIN’ER, n. s. f neo. To bear ; prop ; hold SUS’TEN ANCE, (up ; maintain ; endure ; suf-SCSTENTA’TION. J fer : a sustainer is one who endures : sustenance and sustentation, both mean support ; maintenance ; necessaries of life ; support of life.

There are unto one end sundry means : as for the sustenance of our bodies many kinds of food, many sorts of raiment to clothe our nakedness.

Hooker. If you omit

The offer of this time, 1 cannot promise But that you shall sustain more new disgraces, With these you bear already.

Shakspeare. Henry VIII.

They charged, on pain of perpetual displeasure, wither to entreat for him, or any way nutain him.

Shakspeare.

When there be great shoals of people, which go on to populate, without foreseeing means of life and sustentation ; it is of necessity that once in an age they discharge a portion of their people upon other nations. Bacon.

But it on her, not she on it depends ; for she the body doth sustain and cherish. Davies.

Thyself hast a sustainer been Of much affliction in my cause. Chapman’s Iliad.

My labour will sustain me. Milton.

Were it I thought death menaced would ensue This my attempt, I would sustain alone The worst, and not persuade thee. Id.

A very abstemious animal, by reason of its frigidity and latitancy in the winter, will long subsist without a visible sustentation.

Browne's Vulgar Erroun.

Scarcely allowing himself fit sustenance of life, rather than he would spend those goods for whose sake only he seemed to joy in life. Sidney.

Sacharissa's beauty's wine Which to madness doth incline; Such a liquor as no brain That is mortal can sustain. Waller.

These streams, once raised above the earth, have their ascent and sustentation aloft promoted by the air. Boyle.

If he have no comfortable expectations of another life to sustain him under the evils in this world, he is of all creatures the most miserable.

TOIatum.

The admirable curiosity and singular excellency of this design will sustain the patience, and animate the industry, of him who shall undertake it.-

Holder.

The ancients were inventers of all arts necessary to life and sustenance, as plowing and sowing.

Temple.

Vain is the force of man, To crush the pillars that the pile sustain.

Dryden's JEneid,

His sons, who seek the tyrant to sustain, And long for arbitrary laws again, lie dooms to death, asserting public right. Id.

Can Ceyx then sustain to leave his wife. And unconcerned forsake the sweets of life ?

Dryden.

The experiment cost him his life for want of sustenance. L' Estrange.

Is then the honour of your daughter of greater moment to her than to my daughter her's whose sustenance it was 1 Addison.

The mind stands collected within herself, and sustains the shock with all the force which is natural to her ; but a heart in love has its foundations-sapped. Id.

The largeness and lightness of her wings and tail sustain her without lassitude. More.

SUTE, n. s. For Suite. Sort. Perhaps only misprinted.

Touching matters belonging to the church of Christ, this we conceive, that they are not of one sute. Honker.

SUTHERLAND-SHIRE, one of the most northerly counties of Scotland, extending the whole breadth of the island ; about eighty miles in length, from north-west to south-east, and forty miles in breadth, containing 1800 square miles, or 1,122,560 acres ; of which forty-seven square acres are water. It is bounded on the north-east by Caithness, on the east and south-east by the German Ocean and the Frith of Dornoch, on the south and south-west by Ross-shire, on the west by the Atlantic Ocean, and on the north by the North Sea.

This county comprehends the districts of Strathnaver, Assint, and Sutherland. The face of the country is mountainous and rocky ; partly covered with forests, and part being bleak and barren heaths. The valleys are occupied by numerous lakes and rivers, the chief of which are Loch-Shin, Locli-Naver, Loch-Lyol; and the rivers Oikel, Helmdale, Shin, Naver, Strathy, Brora, &c. The coasts, for the most part, on the north and west, are bold and rocky, indented by numerous bays of great extent. The principal arms of the sea are, Lochs Eribole, Durness, Laxford, Inchaid, and Lowie ; and the chief promontories are, Cape Wrath, Far-out-head, Whiten-head, and Strathy-head. Many small islands are scattered along the coast, but few of which are inhabited. It possesses several commodious harbours and fishine-stations, chiefly at the mouth of the rivers. The principal crops raised in Sutherland are oats, and bear alternately, with a few potatoes. The climate is temperate, especially on the east coast; towards Assint and the north-west it is rather cold nnd damp, from its vicinity to the sea, and is subject to frequent storms. Here are three great deer forests. The people of Sutherland are hardy, and make excellent soldiers ; and, for the most part, speak the language of the Lowlanders. Sutherland-shire

contains only one town ; *viz.* Dornoch, which is the county town ; and several small fishing villages, it is divided into thirteen parochial districts, which contain 23,840 inhabitants. This county has abundance of freestone, limestone, and slate ; the limestone, in the parish of Assint, is of the nature of marble. Rock crystals and pebbles are found in many parts ; and beautiful garnets are found on the coast, in the parish of Tongue. In no part of Scotland have greater changes and improvements taken place, within the last few years, than in this county ; and this change has been accomplished by the forming of new roads, building new bridges, ;uid removing the hardy natives from the.r moun

tamous glens to the sea-coasts, and other situations better suited to advance their own interests, and to increase the prosperity of the country. So strongly, however, were the inhabitants attached to their ancient customs, and modes of living, that the change was not effected but by the adoption of the most decisive measures, on the part of the land proprietors, and even their masters were opposed with a spirit, on the part of the mountaineers, which gave the fullest evidence of their reluctance to relinquish the habitations and pursuits of their ancestors. In 1820 the opposition to their removal totally subsided, and the hardy inhabitants are now establishing fisheries, and devoting themselves to agricultural improvements, in those situations which are best calculated to reconcile them to their new occupations, and to excite them, by their advantages, to habits of industry and perseverance. The county gives the title of earl to the Sutherland family. It sends one member to parliament.

SUTLER, n. s. Belg. soeteler ; Germ, sudler. A man that sells pro visions and liquor in a camp.

I shall sutler be Unto the camp, and profits will accrue.

Shakspeare. Henry V.

Send to the sutler’s, there you ‘re sure to find The bully matched with

rascals of his kind.

Dryden.

SUTTON (Thomas), esq., founder of the Charterhouse, was born at Knaith in Lincolnshire, in 1532, of an ancient and genteel family. He was educated at Eton, and Cambridge, and studied the law in Lincoln's-Inn ; but preferred travelling, and during his absence his father died, and left him a large fortune. On his re-turn he became secretary to the earl of Warwick, and his brother the earl of Leicester. By the former, in 1569, he was appointed master of the ordnance at Berwick ; and, distinguishing himself greatly on the rebellion which broke out in the north, he obtained a patent for that office for life. He was one of the chiefs of those 1500 men who marched into Scotland, by order of queen Elizabeth, to assist the regent, Morton, in 1573. He purchased the manors of Gateshead and Wickham; which, producing coal mines, became to him a source of extraordinary wealth. Soon after this he married a rich widow, who brought him a considerable estate ; and, commencing merchant, riches flowed in to him. He was likewise a commissioner for prizes, and took a Spanish ship worth £20,000. His whole fortune, at his death, was, in land, £5000 a year ; in money above £60,000; the greatest estate then in the possession of any private gentleman. He lived with great munificence and hospitality ; but, losing his lady in 1602, he retired from the world, and, having no issue, he purchased of the earl of Suffolk Howard House, or the Charter-house, near Smithfield, for £l 3,000, where he founded the present hospital, in 1611, for the re-lief of poor men and children. He died December llth, 1611, at Hackney, aged seventy-nine. His body was conveyed to Christ-church, and there deposited, till 1614, when it was removed to the charter-house, and interred in the chapel under a magnificent tomb. SUTTON (Samuel), was born at Alfretton in

Derbyshire, and going into the army served under the duke of Marlborough in queen Anne's wars with great credit. He afterwards came to London, commenced brewer, and kept a coffee-house in Aldersgate Street, which was well frequented by the learned men of that time, l>y whom Mr. Sutton was much respected a« a man of strong natural parts and cultivated genius. About 1740 he schemed a very simple and natural method for extracting the foul air from the wells of ships, by pipes communicating with the fireplaces of the coppers; which operated HS long as any fire was. kept burning for the ship's use. He took out a patent in 1744, to secure the profits of his

invention ; and died in 1752.

SUTTON-COLEFIELD, a market-town in Hemlingford hundred, Warwick. One milr from Warwick, and 110 from London. Tl it-parish is very extensive, but the town is situate in a very bleak and barren tract of land. It has a good church, with a square tower, containing six bells. Here is a free grammar-school, which, with other very considerable advantages to the town and the poor, was founded by Vesey, bishop of Exeter, in the reign of Henry VIII. The Birmingham trade has been introduced here. The town is governed by a warden and ten aldermen. Its chase (the remains of a forest) is an extensive tract. Market on Monday. Fairs, Trinity-Monday, and November 8th.

SUTTULEGE, SETLEGE, or SUDLEGE, a celebrated river of Hindostan, the easternmost of the five which are called the Punjab. It rises in the Himalaya mountains, and, running to the south-west, is joined by the Beyah or Hyphasis, in the lat. of 30° N. The united streams fail into the Indus, near 29°. It is estimated to be about 600 miles in length, and to be navigable by large boats for 200 miles above its junction with the Indus.

SUTURE, 7i. s. Lat. sutura. A maiiner of sewing or stitching wounds. See below.

Wounds, if held in close contact for some time, reunite by inosculation : to maintain this situation, several sorts of sutures have been invented : those now chiefly described are the interrupted, the glovers, the quilled, the twisted, and the dry sutures ; but the interrupted and twisted are almost the only use-ful ones. Sharp’s Surgery.

Many of our vessels degenerate into ligaments, and the sutures of the skull are abolished in old age.

Arbiilhnot,

SUTURE, in anatomy. See ANATOMY.

SUTURE, in surgery. See SURGERY.

SUVARROF, SUWAIIROW, or SUWOROW (Alexander, count Rymnikski), a late eminent general in the Russian service. His family was ancient and respectable; but being far from affluent, and their property lying at the extremity of the empire, the subject of this memoir was the first of the family that ever was at court. He was born in 1730. His father had destined him for the law, but his inclination led him to the profession of a soldier; and in 1742 he was enrolled as

a fusilier in the guards of Seimonow. He was afterwards a corporal, then a Serjeant, and in 1754 he quitted the guards with the brevet of lieutenant in the army. He made h first campaign in the seven years war against

Prussians, in 1759, entering upon actual service under prince Wolgonski. In 1761 he was ordered on service in the light troops under general Berg ; and with the rank of a lieutenant colonel he performed prodigies of valor. At the peace of 1762 he received from the empress a colonel's commission, written with her own hand; and being advanced, in 1768, to the rank of brigadier, he was, in November, ordered to repair to the frontiers of Poland. The object of the empress, at this time, was to subdue the Polish confederates, and to possess herself of certain provinces of that illfated kingdom. How completely she and her two allies, the emperor of Germany and the king of Prussia, succeeded in their enterprise, has been related under PO-LAND. Here we need only observe that the successes of the Russians were chiefly owing to the military skill of Suworow. In 1770 he had been promoted to the rank of major-general ; and, for his exploits in the Polish war, the empress conferred upon him, at different times, the orders of St Anne, St. George, and Alexander Newsky. After performing some important services on the frontiers of Sweden, Suworow was ordered, in 1773, to join the army in Moldavia, under field-marshal Romanzow ; and there he began that successful career which soon made his name a terror to the Turks. His first exploit was the taking of Turtukey. During the remainder of the war, which was short, Suworow was constantly engaged, and constantly successful. Early in 1774, he was promoted to the rank of lieutenant-general, and on the llth of June he defeated the Turks in a great battle. Soon after this victory, peace was concluded, and Suworow was called to Moscow to quell the rebellion of the Cossac Pugatscheff. For several years after Suworow was employed in the Crimfa, on the Kuban, and against the Nogay Tartars, in a service, which, though it was of the utmost importance to the empress, and required all his address, furnished no opportunities for that wonderful promptitude

and resource which had characterised his more active campaigns. In the end of 1786, Suworow v/as promoted to the rank of general-in-chief; and, at the breaking out of the war with the Turks in 1787, he made a most masterly defence of Kinburn ; a place of little strength, but great importance, as it is situated at the mouth of the Dnieper, opposite to Oczakow. For his zeal and abilities, on this occasion, the empress honored him with the order of St. Andrew. At the siege of Oczakow, Suworow, who commanded the left wing of the army under prince Po-temkin, received a dangerous wound in the neck, which was followed by so smart a fever, that, for some time his life was despaired of; but, preferring regimen to medicine, his health was gradually re-established. In 1789 he was appointed to command the army which was to co-operate with the prince of Saxe-Coburg in Wa-lachia ; and, by marches of inconceivable rapidity, he twice, in two months, preserved the army of that prince from destruction. Putting himself at the head of 8000 Russians, and literally running to the aid of his ally, he came up with the Turks in time to change the fate of the day at the battle of Forhani, which was fought on the 21st

of July ; and again at Ryrinik, which with 7000 men he had reached with equal celerity, he gained, on the 22d of September, in conjunction with the prince, one of the greatest victories that have ever been achieved. No quarter was given to the Turks; and on this account the Russian general has been charged with savage ferocity. The taking of Bender and Belgrade were the immediate consequences of the victory of Rymnik ; and so sensible was the emperor Joseph II. how much the military skill of Suworow had contributed to that victory, that he created him a count of the Roman empire, and accompanied the diploma with a very flattering letter. Similar honors were conferred upon him by Catherine II., who sent him the diploma of count of the empire of Russia, with the title of Rymnikski, and the order of St. An-drew. In autumn 1790 he took Ismailow, after being defended by the Turks at an expense of 33,000 men killed or dangerously wounded ; 10,000 taken prisoners; besides 6000 women and children, and 2000 Christians of Moldavia, who fell in one general massacre. Peace being concluded with the Turks, in December 1791, no events occurred from that period to call forth the talents of Suworow till 1794; when mutinies having broken out among the Polish troops in the service of Russia, and the empress with her two allies having resolved on the second partition of Poland, Suworow received orders, in May, to proceed into Red Russia, with a corps of 15,000 men, and to disarm all the Polish troops in that province. This service he soon performed, disarming in less than a fortnight 8000

men, dispersed over a country of 130 miles in circuit. Soon afterwards he was ordered to march into Poland ; the king of Prussia having raised the siege of Warsaw, and the empress perceiving that more vigorous measures were necessary to accomplish her design. Under the article POLAND we have given a detailed account of his route to Warsaw. Suffice it to add that he in the course of a very few months overturned the kingdom and republic of Poland. For this service Catherine promoted him to the rank of field-marshal general, loading him with jewels and presenting him with an estate of 7000 peasants in the district of Kubin, which had been the scene of his first battle in the campaign. From the subjugation of Poland we hear little more of Suworow till he entered upon his great career in Italy. For his services in this part of Europe Paul rewarded him by creating him a prince by the title of prince Suworow Italiski ; but he gave him a very different reception when he returned into the Russian dominions at the head of his veteran bands. He would not see him, and positively forbad his appearance at court. To the messenger who brought the order, he gave a purse of money, turned his carriage another way, and drove to a wooden house at a distance from the court, and from his former friends, where the conqueror of the Turks, the Poles, and the French republicans, died, almost unattended, on the 18th of May, 1800. The sovereign, who thus disgraced him at the end of his life, gave him a magnificent funeral ! In his person Suworow was tall, considerably exceed-SWA

ins, six feet, and full chested. His countenance was stern ; but among his friends his manners M'ere pleasant, and his dispositions were kind. His temper was naturally violent; but that violence he labored much to moderate, though he was never able completely to extinguish it. He was a scholar, a man of science, and a poet. In 1774 he married a daughter of the general prince John Prosotovvski, by whom he had two children, now living ; Natalia, married to general count Nicolas Zubow ; and Arcadius count Su- \vorow, a youth of promising abilities, who accompanied his father in his march from Italy into Switzerland.

SUZE (Henriette de Coligni), countess of, daughter of the celebrated marshal De Coligni, d French lady, eminent for her poetical abilities. She married first Thomas Hamilton, a Scottish nobleman, and after his death the count La Suze, who was also of an illustrious family. But this second marriage proved unhappy, and end-ed in a separation. She wrote a great number of Poems, which were much admired; and were collected and printed with those of Pellisson and madam Scudery, at Trevous, in 1725, 12mo. She died in 1673.

SWAB, v. a.) Sax. pp&bban. Belg. swab—

SWAB'BER, n. s.] her. To clean with a mop : a sweeper of the deck. Used chiefly at sea.

The master, the swabber, the boatswain and I, Loved Moll, Meg, and Marian, and Margery.

Shakspeare.

Was any thing wanting to the extravagance of this degenerate age, but the making a tarpawlin and a swabber the hero of a tragedy 1 Dennis.

He made him swab the deck. Shelvock's Voyage.

SWABIA. See SUABIA.

SWAD'DLE, v. a. & n. s., -\ Saxon pPe—

SWAD'DLINGBANDS, n. s. (ban. To swathe;

SWAD'DLINGCLOTH, f bind in clothes,

SWAD'DLINGCLOUT. .) generally used

of binding new-born children : the noun substantives the band or cloth used.

Invested by a veil of clouds, And swaddled as new-born in sable shrouds; For these a receptacle I designed. _ Sandys.

From thence a fairy thee unweeting reft, There as thou slep'st in tender swaddlingband, And her base elfin brood there for thee left ; Such men do changlings call, so changed by fairies theft. Spenser.

That great baby you see there is not yet out of his swaddling-douts. Shakspeare. Hamlet.

How soon doth man decay ! When cloths are taken from a chest of sweets,

To swaddle infants, whose young breath Scarce knows the way ;

Those clouts are little winding sheets, Which do consign and send unto death. Herbert.

Great on the bench, great in the saddle, That could as well bind o'er as swaddle. Hudibras.

The iwaddlingbandi were purple, wrought with gold. Dryden.

I begged them to uncase me ; no, no, say they ; and upon that carried me to one of their houses, and put me to bed in all my swaddles. Addison.

They swaddled me up in my night-gown with long pieces of linen, till they had wrapt me in about a hundred yards of swathe.

SWAFFHAM, a market-town in South-Green- iioe hundred, Norfolk, fifteen miles south-east of

Lynn, and ninety-three N. N. E. from London. The church is a handsome building, in the form of a cathedral. The vaults and aisles are supported by light pillars, forming fourteen handsome arches, seven on a side, over which there are twenty-eight neat, light windows. Here is a quakers' meeting-house. On a heath near the town, horse-races are held. On the market-hill a handsome cross has been erected by the carl of Orford, and on the west side of the hill a

subscription assembly-room has been built. Its noted butter-market was originally held at Deie-ham. Market on Saturday. Fairs, May 13lh, July 21st, and November 3rd. It is a vicarage, value £14 8s. lOd. Patron, the bishop of Norwich.

SWAG, v. n. I Sax. nsan ; Isl. swelgia. Tc

SWAGG'Y, adj. $ sink down by its weight ; hang heavy: the adjective corresponding.

They are more apt, in stragging down, to pierce with their points, than in the jacent posture, and crevice the wall. Walton.

The beaver is called animal ventricosum, from his stiuggy and prominent belly.

Browne's Vulgar Erraurs.

Being a tall fish, and with his sides much compressed, he hath a long fin upon his back, and another answering to it on his belly ; by which he is the better kept upright, or from swagging on his sides.

Gi eu\

SWAGE, v. a. From asswage. To ease ; to soften ; to mitigate.

Nor wanting power to mitigate and swage, With solemn touches, troubled thoughts, and chase Anguish, and doubt, and fear from mortal minds.

Milton.

I'd find some intervals when my poor heart Should swage itself, and be let loose to thine.

Olwaij.

SWAG'GER, v. n. (Sax. r7e3an 5 BelS'c

SWAG'GEHER, n. s. $ swadderen. To bluster ; bully ; be turbulently proud and insolent : the noun substantive corresponding.

Drunk 1 squabble ? swagger ? and discourse sustain with one's own shadow? Oh thou invincible spirit of wine ! Shalujieure.

He's no swaggerer, hostess ; a tame cheater : you may stroke him as gently as a puppy greyhound.

Id. Henry IV.

The lesser size of mortals love to swagger for opinions, and te boast infallibility of knowledge.

Glanville's Scepsis.

Confidence, how weakly soever founded, hath some effect upon the ignorant, who think there is something more than ordinary in a swaggering man, that talks of nothing but demonstration. TUlotxm.

He chucked,

And scarcely deigned to set a foot to ground, But swaggered like a lord.

Many such asses in the world huff, look big, stare, dress, cock, and swagger at the same noisy rate.

L' Estrange.

Tote great is not to be starched, and formal and supercilious ; to swagger at our footmen and brow-beat our inferiours. Collier on I n,.f.

What a pleasure is it to be victorious in a cause to swagger at the bar ' for a lawyer I was born, an

a lawyer I will be.

Arbnthnot's Hutory ofJt.hn Bull.

SWAIN, n.s. Sax. and Ilunick ppem ; (loth. noeina. A young man ; country servant or you a lover.

That good knight wouM not so nigh repair, Himself estranging from their joyance vain, Whose fellowship seemed far unfit for warlike swain.

Spenser.

It were a happy life To be no better than a homely swain.

bhakspeare, Henry VI.

Blest iwains ! whose nymphs in every grace excel ; Blest nymphs ! whose swains those graces sing so

well. Pope.

Leave the mere country to mere country swains, And dwell where life in all life's glory reigns.

Harte.

SWAL'LOW,t>. a. 8cn.s. Sax. rpeltfin ; Bel','. swelgcn ; Goth, and Swed. swelgia. To take down the throat : hence to absorb ; receive without examination; seize; engross; waste: as a noun substantive, a throat ; voracity.

If the earth open her mouth and swallow them up, ye shall understand that these men have provoked the Lord. Numbers xvi.

Far be it from me that I should swallow up or destroy. 2 Samuel.

Death is swallowed up in victory. 1 Cor. xv. 54.

The priest and the prophet are swallowed up of wine. Isaiah.

If little faults

Shall not be winked at, how shall we stretch our eye, Whose capital crimes chewed, swallowed, and digested, Appear before us f Shakspenre. Henry V.

Though you unite the winds, and let them fight, Against the churches, though the yesty waves Confound and swallow navigation up. ˆhakspenre.

I may be plucked into the swallowing womb Of this deep pit, poor Bassianus' grave;

Id. Titus Andronictts.

He hid many things from us, not that they would swallow up our understanding, but divert our attention from what is more important. Decay of Piety.

In bogs swallowed up and lost. Milton.

Nature would abhor

To be forced back again upon herself,

And, like a whirlpool, swallow her own streams.

Dry den.

Men are, at a venture, of the religion of the country ; and must therefore swallow down opinions, as silly people do emperick pills, and have nothing to do but believe that they will do the cure. Locke.

Consider and judge of it as a matter of reason, and not s-aallow it without examination as a matter of faith. Id.

The necessary provision for life swallows the greatest part of their time. Id.

Had this man of merit and mortification been called to account for his ungodly swallow, in gorging down the estates of helpless widows and orphans, he would have told them that it was all for charitable uses. South.

Should not the sad occasion swallow up

My other cares, and draw them all into it 1

Addison.

Homer excels all the inventors of other arts in this, that he has swallowed up the honour of those «ho succeeded him. Pope.

Corruption swallowed what the liberal hand

Of bounty scattered. Thomson's Autumn.

SWAL'LOW, n. s. Sax. j-palepe. A small bird of passage. See below.

The swallow follows not summer more willingly than we your lordship. Shakfpeare. Timon.

The swallows make use of celendine, and the linnet of euphragia. .Aore.

\Vlien swallows fleet soar high and sport in air, He told us that the welkin would be clear. Uuy. SWALLOW, in ornithology. See HIRUXHO. Concerning these birds, a question has oft been discussed, What becomes of them in winter? Upon this subject there are three opinions. Some say that they migrate to a warmer climate; some that they retire to hollow trees and caverns, where they lie in a torpid state ; and others affirm that they lie in the same state in the bottom of lakes and under the ice. The first opinion is supported by Marsigli, Ray, Willoughby, Catesby, Reaumur, Adanson, Buffon, 8cc. The first and second opinions are both adopted by Pennant and White. The third is sanctioned by Schaeffer, Ilevelius, Derham, Klein, Ellis, Linne, Kalm: and the second and third have been strongly defended by the honorable Daines Barrington. Those who assert that swallows migrate to a warmer country in winter, argue, That many birds migrate is a fact fully proved by the observations of natural historians. See MIGRATION. Is it not more probable, therefore, that swallows, which disappear regularly every season, retire to some other country, than that they lie in a state of torpor in caverns or lakes ? But this opinion is founded on facts. We often see them collected in great flocks on churches, rocks, and trees, about the time when they annually disappear. The direction of their flight has been observed to be to the southward. Mr. White, the ingenious historian of Selborne, travelling near the coast of the British Channel one morning early, saw a flock of swallows take their departure, with an easy and placid flight towards the sea. Mr. Laskey of Exeter observed the direction which a flock of swallows took in autumn 1793. On the 22d of September, about 7 A. M., the wind being easterly, accompanied with a cold drizzling rain, Mr. Laskey ‘s house was entirely covered with house swallows. At intervals large flocks-arrived and joined the main body, and at thei~ arrival an unusual chirping commenced. The appearance of the whole company was so lethargic that he found it an easy matter to catch a ‘considerable number of them, which he kept in a room all that day. By heating the room they all revived ; he opened four of them, and found their stomachs quite full. The main body occupied the house top all day, except for two hours. About half an hour after 9 A. M. the 23d, there was a great commotion, with very loud chirping, and, within a few minutes after, the whole multitude took their flight, in a south-east direction, having ascended to a great height in the, atmosphere. He let go the birds which he had caught, at certain intervals till four o’clock, and they all fled toward the same quarter. They have also been found on their passage at a great distance from land. Mr. Adanson informs us, that about fifty leagues from the coast of Senegal four swallows settled upon the ship on the 6th of October ; that these birds were taken ; and that he knew them to be European

swallows, which, he conjectures, were returning to the coast of Africa. Sir Charles Wager, says, ‘ Returning home, in spring, as I came into soundings in our channel, a great flock of swallows came and settled on all my rigging ; every rope

was covered ; they hung on one another like a facts :— < Dr. Wallerius, the celebrated Swedisa

swarm of bees ; the decks and carving were fill-chemist, informs us that he has seen, more that)

ed with them. They seemed almost famished once, swallows assembling on a reed till they

and spent, and were only feathers and bones ; were all immersed and went to the bottom ; this

but, being recruited with a night’s rest, took being preceded by a dirge of a quarter of an hour’s

their flight in the morning.’ This vast fatigue length. He had seen a swallow caught during proves that their journey must have been very

great, considering their amazing swiftness ; in all probability they had crossed the Atlantic Ocean, and were returning from the shores of Senegal, or other parts of Africa ; so that this account, from that most able and honest seaman, confirms the latter information of Mr. Adanson. Mr. Bruce also mentions, in his travels, that in Abyssinia there is a great variety of swallows ; but ‘those that are common in Europe appear in passage at the very season when they take their flight thence. We saw the greatest part of them in the island of Masuah, where they lighted and tarried two days, and then proceeded with moonlight, to the south-west.’ Mr. Ivdm acknowledges that in crossing the Atlantic, from Europe, a swallow lighted on the ship on the 2d of September, when it had passed only two-thirds of the ocean. Since, therefore, swallows have been seen assembled in great flocks in au-tumn, llying off in company towards southern climes, since they have been found both in their passage from Europe and returning again, can there be any doubt of their annual migration ? The second notion (says Mr. Pennant) has great antiquity on its side. Aristotle and

Pliny say that swallows do not remove very far from their summer habitation, but winter in the hollows of rocks, and during that time lose their feathers. Of late several proofs have been brought

winter out of a lake with a net, drawn, as is com-mon in northern countries, under the ice ; this bird was brought into a warm room, revived, fluttered about, and soon after died. Mr. Klein applied to many farmers general of the king of Prussia's domains, who had great lakes in their districts, the fishery in them being a part of the revenue. All the people that were questioned made affidavits upon oath before the magistrates. 1. The mother of the countess of Lehndorf said that she had seen a bundle of swallows brought from the Frishe-Hoff (a lake communicating with the Baltic at Pislau), which, when brought into a moderately warm room, revived and fluttered about. 2. Count Schileben gave an instrument on stamped paper, importing that by fishing on the lake belonging to his estate of Gerdauen in winter, he saw several swallows caught in the net, one of which he took up in his hand, brought it into a warm room, where it lay about an hour, when it began to stir, and half an hour after it flew about in the room.' Mr. Kalm mentions similar affidavits made by four farmers ; and at last adds, ' 7thly, I can reckon myself,' says our author, ' among the eye-witnesses of this paradox of natural history. In 1735, being a boy, I saw several swallows brought in winter by the fishermen from the Vistula to my father's house ; where two of them were brought into a warm room, revived and flew about. I saw them se-of some species having been discovered in a torpid veral times settling on the warm stove, and I re-state. Mr. ColHnson mentions three gentlemen, collect well that the same forenoon they died, eye-witnesses to numbers of sand martins being and I had them, when dead, in my hand. In

January 1754, being covered with ice, I ordered the fishermen to fish therein, and/ in my presence several swallows were taken, which

^.^ ~-i ••- -•- tne fishermen threw in again; but one I took

ofJswaiiow7"have'beeT found 'in olcTdry walls up myself, brought it home, five miles from and in sand hills near his lordship's seat in East thence, and it revived, but died about an horn-Lothian, from year to year; and that when they afVr.' These are facts attested by people of the

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drawn out of a cliff on the Rhine, in March 1762. And the honourable Uaines Barrington communicated the following fact, on the authority of the late Lord Belhaven : — That numbers

were exposed to the warmth of a fire they revived. We have heard of the same annual dis-

highest quality. It is therefore incontestably true, that swallows retire in the northern coun-

C I1C<* I U. \Jl tllC OdlJit *ni i» v»*ii * »o- — _

Morpeth, in Northumberland, tries, during winter, into the water, and

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coveries near i«.ui pcm, m j.iun.m*niiˆ** »**”«• —— 7 —- c* ‘ /.

Others prove the residence of those birds in a there in a torpid state till the return of warmth

torpid state during winter. 1. In the chalky revives them again in spring. Ihe swa I lows , ,,

cliffs of Sussex; as was seen on the fall of a Spain, Italy, !• ranee, and perhaps .one

great fragment some years ago. 2. In a decayed Emrland. remove to warmer clir

hollow tree that was cut down, near DolgeUi, in

Merionethshire.

Yorkshire; where, on digging out a fox, whole

England, remove

English ones, and some in Germany and c

3. In a cliff, near Whitby, mild countries, retire into clefts and I holes in rocks, and remain there in a torpid state. In th colder northern counties the swallows immerse n the sea, in lakes, and rivers; and remain in a

It is ol>-

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rds,

obvious .

loose only

bushels of swallows were found in a torpid con—

ago, onTSint %%% torpid state, under ice, during .inter.

t^olSrSf numbers jected Why do “

of swallows clinging to the timbers of the shaft Uc seemingly asleep; and on flinging some gravel

ng

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part of the swallow tribe migrate, and that others secured against t he « onem es As ,o e ˆ have their winter quarters near home. The third ment taken from tn opinion is that of Mr. Kalm, wh6 pleads for their with immersion in water ; and mentions the following VOL. XXI.

ˆ

on them they just moved, but never attempted to such pla f rushes • so that sinki

fly: this was between All Saints and Christmas, as are near r * and uJies o t From all these facts, we must conclude that one

tween

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t corruption, there is a real diflerence animals suffocated in water and animals

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being torpid therein. Natural history ought to tie studied as a collection of facts. There are five species of swallows which visit Britain dur-ing summer ; the common swallow, the martin, sand martin, swift, and goat-sucker. l.Tlw? common swallow frequents almost every part of the old continent ; being known, says Dr. Latham, from Norway to the Cape of Good Hope on the one side, and from Kamtschatka to India and Japan on the other. It is also found in all parts of North America, and in several West Indian islands. In Europe it disappears during winter. It appears generally a little after the vernal equinox ; but rather earlier in the southern, and later in the northern latitudes. It adheres to the usual seasons with much regularity. In the warm spring of 1774 they appeared no earlier than usual. They remain in some warm countries the whole year. Kolben assures us that this is the case at the Cape of Good Hope. Some birds of this species live, during winter, even in Europe; e. g. on the coast of Genoa. 2. The martins are widely diffused through the old continent. 3. The sand martins are found in every part of Europe, and often spend the winter in Malta. 4. The swift visits the whole continent of Europe ; has also been observed at the Cape of Good Hope, and in Carolina in North America. 5. The goat suckers are not very common, yet are found in every country between Sweden and Africa: also in India. Mr. iVJ ark wick of Catsfield, near Battle in Sussex, lias drawn up an accurate table, expressing the day of the month on which the migratory birds appeared in spring, and disappeared in autumn, for sixteen years, from 1766 to 1783 at Catsfield. Were tables of the same kind made in every different country, particularly within the torrid zone, it would be easy to determine the question which we have been considering. To many, perhaps, it may not appear of so much importance as to be worth the labor. But the enquiry must be highly gratifying to every mind that admires the wisdom of the Great Architect of nature. The instinct of the swallow is indeed wonderful : it appears among us just at the time when insects become numerous : and it continues with us during the hot weather, to prevent them from multiplying too much. It disappears when these insects are no longer troublesome. It is never found in solitude; it is the friend of man, and always takes up its residence with us, to protect us from being annoyed with swarms of insects.

SWALLOW HARBOUR, a convenient harbour on the shore of Terra del Fuego. There are two channels into it, which are both narrow, but not

dangerous, as the rocks are easily discovered by their weeds. It is surrounded by steep mountains, covered with snow, which have a most horrid appearance, and seem to be altogether deserted. Long. 74° 30’ W., lat. 53° 40’ˆS.

SWALLOW ISLAND, one of the Queen Charlotte’s Islands, of the South Pacific, about six leagues in length. Long. 165° 58’ E., lat. 10° 8’ S.

SWAL’LOWTAIL, n. s. Swallow and tail. A species of willow.

The shining willow they call swatloiztail, because o:’ the pleasure of the leaf.

JSr.rrn’i Natural History.

SWAMMERDAM (John), a celebrated natu ral philosopher, was the son of John James Swarnmerdam, an apothecary and famous naturalist of Amsterdam, and born in 1637. Ilia father intended him for the church, and with this view had him instructed in Latin and Greek; but he preferred physic. Being kept at home till he should engage in that study, he was often employed in cleaning his father’s curiosities, and putting every thing in order. This inspired him with an early taste for natural history ; so that he soon beyan to make a collection of his own. When crown up, he attended to his anatomical and medical studies; but spent part of the day and the night in discovering, catching, and examining the flying insects of Holland, Guelderland, and Utrecht. Thus initiated in natural history, he went to the university of Leyden in 1651 ; and in 1663 was admitted a candidate of physic. While studying anatomy he considered how the parts of the body, prepared by dissection, could be preserved for anatomical demonstration ; and he succeeded, as he had done before in his nice contrivances for dissecting the minutest insects. He then went to France, where he spent some time at Saumer, and became acquainted with several learned men. In 1667 he returned to Leyden, and took his degree of M. D. In 1668 the grand duke of Tuscany, being in Holland, came to view the museum of our author and his father; and Swammerdam made some anatomical dissections of insects in his presence. He was struck with admiration at his great skill in managing them; and proving that the future butterfly lay with all its parts neatly folded up in a caterpillar, by removing the integuments, and exhibiting all its parts, however minute, with incredible ingenuity by instruments of inconceivable fineness. The duke offered him 12,000 florins for his collection, on condition of his removing them into

Tuscany, and residing at the court of Florence; but Swammerdam declined. In 1663 he published a General History of Insects. About this time his father, offended at his neglecting the practice of physic, would neither supply him with money nor clothes. This reduced him to some difficulties. In 1675 he published his History of the Ephemeras; and his father dying, in 1676, left him a fortune; but he died in 1682, aged only forty-five. Gabius translated all his works from the Dutcli into Latin, from which they were translated into English, in folio, in 1748. See ENTOMOLOGY. Boerhaave wrote his life.

SWAMP, n. s.) Sax. rPamP5 Goth, and

SWAM'PY, adj. \ Swed. swamp; Isl. suamm ;

Dan. stuimp. A marsh ; bog; fen : boggy ; fenny.

Swampy fens breathe destructive myriads.

Thomson.

SWAN, «. s. Sax. j-pan ; Dan. suan ; Swed. sn-an; Belg. swaen. A large water-fowl. See the extract from Calmet.

With untainted eye

Compare “her face with some that I shall show, And I will make thee think thy stoan a crow.

Shakspeare.

Let musick sound while he doth make his choice; Then, if he lose, he makes a stow-like end. Id.

The fearful matrons raise a screaming cry, Old feeble men with fainter groans reply ; A jarring sound results, and mingles in the sky, Like lhat of swans remurmuring to the floods.

Dryden,

SWAN. See ANAS. It is now ascertained, beyond the possibility of douht, that there are black swans, of equal size and the same habitudes with the common white swans of this island. These fowls have been seen chiefly in New Holland ; and captain Vancouver, when there, saw several of them in very stately attitudes, swimming on the water, and, when flying, discovering the under part of their wings and breast to be •white. Black swans were likewise seen in New Holland by governor Philips, captain White, and by a Dutch navigator, so long ago as in 1697. Governor Phillips describes the black swan as a •very noble bird, larger than the common swan, and equally beautiful in form. Mr. White, in-deed, says that its size is not quite equal to that of the European swan ; but both agree with captain Vancouver, in mentioning some white feathers in its wings.

SWAN, SWEYN, SUENO, or SWENO, I., II., and III., three kings of Denmark. See DENMARK and SWENO.

SWAN RIVER ; a British colony, on the western coast of New Holland, established in 1829. It is situated on Swan river, so called from the great number of black swans seen upon it, •which empties into the ocean in lat. 32° 16’ S., Ion. 115° 40’ E. Several settlements have been formed, and the soil is represented as fertile. Swan river was explored for nearly sixty miles from its mouth, by M. Bailly, mineralogist to the expedition of Baudin, who found it to flow over calcareous rocks, through a country covered •with thick forests of gum trees. At the point where his examination ceased, the river was a third of a mile in width, with a slow current. A group of islands opposite the mouth of the river offer some roadsteads, with safe anchorage for large vessels. Chief town, Perth.

SWAN RIVER, a river of North America, •which takes its rise in lake Etowwemahmeh, •whence it passes through Swan Lake into the Little Winriipic. This latter is connected, by a considerable river, with the lake of Manitoba, which, by the river Dauphin, finally discharges its waters into lake Winnipic, the common reservoir for the waters of a

great number of the adjacent rivers and lakes. All the country in the neighbourhood of this, and of Red Deer River, to the south branch of the Saskatchiwine, abounds in beaver, moose deer, fallow deer, elks, bears, buffaloes, &c. The soil is good, and, wherever attempts have been made to raise the esculent plants, it has been found productive. On this river a fort is erected for the convenience of the fur trade.

SWAN RIVER, a river of North America, which falls into the Mississippi about forty miles from its source.

SWANPAN, or Chinese Abacus, nn instrument for performing arithmetical operations, described by Du Halde, in his history of China. It is composed of a small board, crossed with ten or twelve parallel rods or wires, each strung

with ivory balls, which are so divided, by a partition in the middle, that !wo are on one side of it, and five on the other. The two on the up'ier part stand each for five units, and each of th<! five in the lower part for one. ' In joining and separating these balls, they reckon much as uc> do with counters ; but, according to our author, more expeditiously than Europeans do even with figures.' This is hardly credible; but, if ail the Chinese weights and measures be decimally divided, it is easy to conceive how computation may be made, by this instrument, very expeditiously.

SWANSEA, or SWANSEY, is a borough town within the liberty of Gower, Glamorganshire, South Wales, governed by a portreeve, recorder, twelve aldermen, two common attornics or chamberlains, two Serjeants at mace, and an unlimited number of burgesses, and, together with four other contributory boroughs, viz., Kenfig, Aberavon, Neath, and Loughor, bv the provisions of the Reform Bill, returns a mem-ber to parliament. The town lies at the confluence of the river Tawe with the Bristol Channel, whence the \Yelsh name Abertawe. It stands near the centre of a beautiful bay, denominated after the town, and has a capacious harbour, enclosed from the sea by two piers on the eastern and western side of the entrance. In the neighbourhood are very numerous and extensive collieries of bituminous coal, which is consumed at the copper works and other manufactories, and shipped off in large quantities to Ireland, Cornwall, and Devon. A canal extends from the town for nearly eighteen miles up the vale of Tawe to Hen-noyadd in Breconshire, for the conveyance of stone coal, culm, iron ore, &c., which is in a very flourishing state, -and has been productive of great benefit to the

town. There are two extensive potteries within the ‘borough, and eight large copper smelting works, all within three milts distance, from which about 8000 tons of copper are annually exported to London, Liverpool, &c. In 1768, 694 vessels sailed from this port, tonnage 30,621; in 1792 the number of vessels was 2,590, tonnage 134,264; and in 1819 the number of ships sailing out of the port was 2750, tonnage 175,629, exclusive of 140,280 crates of earthenware shipped foreign, and 3521 crates coast-wise. It has two markets, abundantly supplied, on Wednesday and Saturday, and is famed for ship-building, castle, which was formerly very extensive, was erected by Henry Beaumont, earl of \ arwirl>, in the reign of Henry I.; it is now part of the possession of the duke of Beaufort. The town also contains two churches, and twelve met -ting-houses, belonging to Dissenters of various denominations. During the summer season tl town is much frequented for sea-bathmg. is forty-two miles W. N. W. of Cardiff, and 206 west of London.

SWAltD, n. s. Swed. sward. The skin o bacon; the surface of the ground.

Water, kept too long, loosens and softens the sward, makes it suhject to rushes and course grass.

Ao/<r on Ivttcr.

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To plant a vineyard in July, when the earth is very dry and combustible, plow up the swarth and burn it

Mortimer.

The noon of night was past, and then the foe Came dreadless o'er the level swart, that lies Between the wood and the swift streaming Ouse.

A. Philips.

SWARM, n. s. & v. n. Sax. f pearim ; Belg. swerm ; Swed. swarm. A great body or number of small animals, particularly those bees that migrate from the hive : to gather or rise in a body; be crowded or thronged.

These garrisons you have now planted throughout all Ireland, and every place swarmt with soldiers.

Spenser.

From this swarm of fair advantages, You griped the general sway into your hand.

Shakspeare.

The merciless Macdonel, The multiplying villames of nature Do swarm upon. Id. Macbeth.

Her lower region swarms with all sort of fowl, her rivers with fish, and her seas with whole shoals.

Howel.

What a multitude of thoughts at once Awakened in me swarm, while I consider What from within I feel myself, and hear What from without comes often to my ears !

Milton.

Not so thick swarmed once the soil Bedropped with blood of Gorgon.

Id. Paradise Lost.

Those days twarmed with fables, and from such grounds took hints for fictions, poisoning the world ever after. Browne.

A swarm of bees that cut the liquid sky, Upon the topmost branch in clouds alight.

Dryden's AZneid. Then mounts the throne, high placed before the

shrine ;

In crowds around the swarming people join. Id. Swarmed on a rotten stick the bees I spied. Gay. When bees hang in swarming time, they will presently rise, if the weather hold.

Mortimer's Husbandry.

If we could number up those prodigious swarms that had settled themselves in every part of it, they would amount to more than can be found.

Addison on Italy.

This twarm of themes that settles on my pen, Which I, like summer-flies, shake off again, Let others sing Young.

Life swarms with ills, the boldest are afraid, Where then is safety for a tender maid 1 Id.

SWART, adj. & v. a. ˆ Sax. ppearit: ; Goth-SWARTH, adj. or >swarts. Black; darkly SWARTHY. j brown ; tawny; dark of

complexion : to blacken.

A nation strange, with visage swart, And courage fierce, that all men did affray,

Through the world then swarmed in every part.

Spenser. A man

Of swarth complexion, and of crabbed hue, That him full of melancholy did shew. Id.

Whereas I was black and swart before ; With those clear rays which she infused on me, That beauty am I blest with, which you see.

Shakspeare. Henry VI.

Though in the torrid climates the common color is black or swarthy, yet the natural colour of the temperate climates is more transparent and beautiful. Hate's Oriyin of Mankind.

No goblin, or swart fairy of the mine, Hath hurtful power o'er true virginity. Milton.

The heat of the sun may swart a living part, or even black a dead or dissolving flesh.

Browne's Vulgar Errours Set me where, on some pathless plain, The swarthy Africans complain. Roscommon

Did they know Cato, our remotest kings Would pour embattled multitudes about him ; Their swarthy hosts would darken all our plains, Doubling the native horrour of the war, And making death more grim. Addison.

SWASH, v.n. \ To make a great clatter or SWASH'ER, n. s. S noise : whence swashbuck-ler: a swasher is, a swaggerer; a bully. Not in use.

We'll have a swashing and a martial uutside, As many other mannish cowards have. That do outface it with their semblances.

Shakspeare.

Draw, if you be men : Gregory, remember thy swathing blow. Id. Romeo and Juliet.

I have observed these three twashers ; three such anticks do not amount to a man. Id. Henry V.

SWATCH, n. s. Corrupted from swath. A swathe. Not in use.

One spreadeth those bands so in order to lie, As barlie in swatches may fill it thereby. Tusser.

SWATH, or SWATHE, n. s. & v. a. Belgic swade. A line of grass cut down by the mower; a band or fillet; to bind.

With tossing and raking, and setting on cox, Grasse, lately in swathes, is meat for an ox.

Taster.

The strawy Greeks, ripe for his edge, Fall down before him, like the mower's swath.

Shalupeare.

He had two sons ; the eldest of them at three

years old,

I' th' swathing cloaths the other, from their nursery Were stolen. Id. Cymbeline.

Their children are never swathed, or bound about with any thing, when they are first born ; but are put naked into the bed with their parents to lie.

Abbot's Description of the World.

Swathed in her lap the bold nurse bore him out, With olive branches covered round about. Dryden.

As soon as your grass is mown, if it lie thick in the swath, neither air nor sun can pass freely through it. Mortimer.

An Indian comb, a stick whereof is cut into three sharp and round teeth four inches long : the other part is left for the handle, adorned with fine straws laid along the sides, and lapped round about it ia several distinct swaths. Grew.

Long pieces of linen they folded about me, till they had wrapped me in above an hundred yards of swathe. Guardian.

Master's feet are swathed no longer, If in the night too oft he kicks, Or shews his locomotive tricks. Prior.

SWAY, v. a., v. n., & n. s. Teut. schweben ; Goth, sweiga. To poise; weigh; wield ; govern ; direct: to hang heavy; be drawn by weight; have weight; bear rule: as a noun substantive, the sweep or swing of a weapon ; weight ; preponderation; power; rule.

A n evil mind in authority doth not only follow the sway of the desires already within it, but frames to itself new desires not before thought of.

Sidney.

Glancing fire out of the iron played,

As sparkles from the anvil rise, When heavy hammers on the wedge are swayed.

,.,, Spenser.

I he example of sundry churches, for approbation of one thing, doth sway much ; but yet still as hav-ing the force of an example only, and not of a law.

,r, . Hooker.

1 his sort had some fear that the filling up the seats in the consistory with so great number of lay-men, was but to please the minds of the people to the end they might think their own sway somewhat.

Heaven forgive them, that so much have swayed' Your majesty's good thoughts away from me.

Sltakspeare.

The lady's mad : yet if 'twere so, She could not sway her house, command her followers. With such a smooth, discreet, and stable bearing.

Id.

The mind I sway by, and the heart I bear, Shall never sagg with doubt, nor shake with fear.

Id.

Aged tyranny sways not as it hath power, but as it is suffered. Id. King Lear.

Only retain

The name and all the' addition to a king ; The sway, revenue, execution of the host, Beloved sons, be yours. Id.

In these personal respects, the balance sieays on <w part. Bacon.

On Europe thence, and where "Rome was to sway The world. Milton's Paradise Lost.

A gentle nymph, not far from hence, That with moist curb sways the smooth Severn stream, Sabrina is her name. Milton.

Here thou shall monarch reign ; There didst not : there let him still victor iway.

Id.

To strike with huge two-handed sway. Id.

The only way t' improve our own, By dealing faithfully with none ; As bowls run true by being made On purpose false, and to be swayed. Hudibras.

Thy judgment is swayed by passion, and stored with ludicrous opinions, instead of clearly conceived truths. Glanville.

When examining these matters, let not temporal and little advantages sway you against a more durable interest. Tillotson.

With these I went,

Nor idle stood with unassisting hands, When savage beasts, and men's more savage bands, Their virtuous toils subduing; yet those I swayed With powerful speech : I spoke, and they obeyed.

Dryden.

Too truly Tamerlane's successors they ; Each thinks a world too little for his sway.

Id. A urengzebe.

They rush along, the rattling woods give way, The branches bend before their sweepy sway.

Dryden.

They will do their best to persuade the world that no nian acts upon principle, that all is ncayed by particular malice. Davenant.

W'hen vice prevails, and impious men bear sway, The post of honour is a private station.

Addison's Cato.

SWEAR, v. n. & v. a.) Fret, swore or SWEAR'ER, n. s. J sware ; part, pass

sworn. Sax. j-pefuan; Gothic

oath; to put to oath; declare upon oath-th* noun substantive corresponding ‘

Jacob said, Swear to me ; and he swear unto him.

- .-»„ ,„„ a vow unto the j d nee ‘„ his wo°rd d hlS S°Ul WUh a b°Dd’ he sha11 «?«t break Because of swearing the land mourneth.*”” ^”” „„ , Jer. xxiii. 10.

We shall have old swearing That they did give the rings away to men -. But we 11 outface them, and outswear them too.

Shaktpeare.

1 would have kept my word ; But, when I swear, it is irrevocable.

Id. Henry VI. At what ease

Might corrupt minds procure knaves as corrupt ro swear against you ! Id, Henr VVIU

Ubey thy parents, keep thy word justly • Swe° r not’ u Id. King Lear.

bwom ashore, man, like a duck; I can swim like a duck, I 11 be sworn. W. Tempeit.

JNow, by Apollo, king, thou swear’st thy gods in

vain.

— O vassal ! miscreant ! Shakspeare.

And must they all be hanged that wear and lie ? — Every one. — Who must hang them 1 — Why, the honest men.

— Then the liars and swearers are fools ; for there are liars and swearers enow to beat the honest men, and hang them up. yˆ

Bacchus taken at Rhodes by Demetrius Poliorcetes, which he so esteemed, that, as Plutarch reports, he sware he had rather lose all his

father’s images than that table. Peacham.

Take not his name, who made thy mouth, in vain It gets thee nothing, and hath no excuse :

Lust and wine plead a pleasure, avarice a gain ; But the cheap swearer, through his open sluice Lets his soul run for naught. Herbert.

Of all men a philosopher should he no nceurer ; for an oath, which is the end of controversies in law, cannot determine any here, where reason only must induce. Browne.

None so nearly disposed to scoffing at religion as those who have accustomed themselves to swear on trifling occasions. Tillotsun.

Let me swear you all to secrecy ; And, to conceal my shame, conceal my life.

Dryden.

Thee, thee an hundred languages shall claim, And savage Indians swear by Anna’s name. Tickell. It is the opinion of our most refined swearers that the same oath or curse cannot, consistently with true politeness, be repeated above nine times in the same company by the same person.

Swift’s Polite Conversation.

Hark ! the shrill notes transpierce the yielding air, And teach the neighbouring echoes how to swear.

Yo,,na.

SWEAT, n.s., v.n.,&v.a. Sax. j-peat ; Helg. sweet. The matter evacuated at the pores : of the skin; hence labor ; toil; drudgery: to exude, or bemoist with such matter; to toil ; drudge; emit as sweat: the adjective correspond inur. 1 This painful labour of abridging was not easy, hut a matter of sweat and watching. 2 Mac. ii. 2f>.

awuru. oax. r-pe/uun; vjuuni; su/u»u« , Belgic Let them be free, marry them to your heirs,

sweeren. To obtest some superior power ; utter Why sweat they under burthens ?

an oath: declare or engage, or give evidence on Sliaksjteare. Merchant .>/' ! ,

SWE

Mistress Page at the door, sweating and blowing, aud looking wildly, would needs speak with you.

Shakspeare.

Grease that ‘s sweaten From the murtherer’s gibbet, throw Into the flame. Id. Macbeth.

The rabblement hooted and clapped their chopped hands, and threw up their sweaty night caps.

Shakspeare. Julius Cxsar.

Sweat is salt in taste ; for that part of the nourishment which is fresh and sweet turneth into blood and flesh ; and the su-eat is that part which is excerned. Bacon.

About this time in autumn there reigned in the city, and other parts o.” the kingdom, a disease then new ; which, of the accidents and manner thereof they called the sweating sickness.

Id. Henry VII. Wainscots will sweat so that they run with water.

Bacon.

A young tall squire

Did from the camp at first before him go ; At first he did, but scarce could follow strait, Sweating beneath a shield's unruly weight. Cowley.

What from Jonson's oil and sweat did flow, Or what more easy nature did bestow On Shakspeare's gentler muse, in thee full grown Their graces both appear. Denham.

The field To labour calls us, now with sweat imposed.

Milton.

How the drudging goblin swet To earn his cream bowl duly set ; When in one night, ere glimpse of morn, His shadowy flail hath threshed the corn. Id.

A sweaty reaper from his tillage brought First-fruits, the green ear, and the yellow sheaf. Id.

Our author, not content to see That others write as carelessly as he ; Though he pretends not to make things complete, Yet, to please you, he'd have the poet's TON at.

Waller.

Some insensible effluvium, exhaling out of the stone, comes to be checked and condensed by the air on the superficies of it, as it happens to sweat on the skins of animals. Bottle.

When Lucilius brandishes his pen, And flashes in the face of guilty men, A cold sweat stands in drops on ev'ry part, And rage succeeds to tears, revenge to smart.

Dry den.

For him the rich Arabia sweats her gum. Id. Beans give in the mow ; and therefore those that are to be kept are not to be threshed till March, that they have had a thorough sweat in the mow.

Mortimer's Husbandry.

In cold evenings there will be a moisture or sweating upon the stool. Mortimer.

Those who labour

The sweaty forge, who edge the crooked scythe, Bend stubborn steel, and harden gleening armour, Acknowledge Vulcan's aid. Prior.

Sweat is produced by changing the balance between the fluids and solids, in which health consists, so as that projectile motion of the fluids overcome the resistance of the solids. Arbuthnot.

And then, so nice, and so genteel, Such cleanliness from head to heel, No humours gross, or frowsy steams, No noisome whiffs, or sweaty streams. Swift.

SWEAT. See ANATOMY and PERSPIRATION. The excess of sweat dries and weakens the body, deprives the humors of their watery parts, and induces the blood to an inflammatory and atra-

biliary disposition. A sudden suppression of it will hurt as well as a suppression of perspiration. In cases of excessive sweating, from hard labor, many people ruin their health for life, and sometimes even bring on sudden death, by too suddenly exposing themselves to cold air, taking cold drinks, &c. In all cases of excessive perspiration, the most speedy and effectual antidote against all dangerous consequences is a glass of spirits, and keeping moderately warm till the perspiration wear gradually off. All persons exposed by their daily labor to excessive sweating should wear flannel next their skin.

When the temperature of the body is much increased, either by being exposed to a hot atmosphere or by violent exercise, the perspired vapor not only increases in quantity, but even appears in a liquid form. This is known by the name of sweat.

Beside water, it cannot be doubted that carbon is also emitted from the skin ; but in what state, the experiments hitherto made do not enable us to decide. Mr. Cruickshanks found that the air if the glass vessel in which his hand and foot had been confined for an hour contained carbonic acid gas; for a candle burned dimly in it, and it rendered lime-water turbid. And Mr. Jurine found that air which had remained for some time in contact with the skin, consisted almost entirely of carbonic acid gas. The same conclusion may be drawn from the experiments of Ingenhousz and Milly. Trousset has lately observed that air was separated copiously from a patient of his while bathing. Be-side water and carbon, or carbonic acid gas, the skin emits also a particular odorous substance. That every animal has a peculiar smell is well known : the dog can discover his master, and even trace him to a distance by the scent. A dog, chained up several hours after his master had set out on a journey of some hundred miles, followed his footsteps by the smell. But it is needless to multiply instances of this fact ; they are too well known to every one. Now this smell must be owing to some peculiar matter, which is constantly emitted ; and this matter must differ somewhat, either in quantity or some other property, as we see that the clog easily distinguishes the individual by means of it. Mr. Cruickshanks has made it probable that this matter is an oily substance ; or at least that there is an oily substance emitted by the skin. He wore repeatedly, night and day for a month, the same under waistcoat of fleecy hosiery, during the hottest part of the summer. At the end of this time he always found an oily substance

accumulated in considerable masses on the nap of the inner surface of the waistcoat, in the form of black tears. When rubbed on paper ft rendered it transparent, and hardened on it like srease. It burned with a white flame, and left behind it a charry residuum.

Berthollet has observed the perspiration acid ; and he has concluded that the acid which is present is the phosphoric ; but this has not been proved. Fourcroy and Vauquelin have ascertained that the scurf which collects upon the skins of horses consists chiefly of phosphate of lime, and urea is even sometimes mixed with it

According to Thenard, however, who has lately endeavoured more particularly to ascertain this point, the acid contained in sweat is the acetous ; which, he likewise observes, is the only free acid contained in urine and in milk, this acid existing in both of them when quite fresh. His account of his examination of it is as follows : — The sweat is more or less copious in different individuals ; and its quantity is perceptibly in the inverse ratio of that of the urine. All other circumstances being similar, much more is produced during digestion than during repose. The maximum of its production appears to be twenty-six grains and two-thirds in a minute; the minimum nine grains troy weight. It is much inferior, however, to the pulmonary transpiration ; and there is likewise a great difference between their nature and manner of formation. The one is a product of a particular secretion, similar in some sort to that of the urine; the other, composed of a great deal of water and carbonic acid, is the product of a combustion gradually effected by ihe atmospheric air.

The sweat, in a healthy state, very sensibly reddens litmus paper or infusion. In certain diseases, and particularly in putrid fevers, it is alkaline; yet its taste is always rather saline, and more similar to that of salt than acid. Though colorless it stains linen. Its smell is peculiar and insupportable when it is concentrated, which is the case in particular during distillation. But

before he speaks of the trials to which he subjected it, arrd of which he had occasion for a great quantity, he describes the method he adopted for procuring it, which was similar to that of Mr. Cruickshanks. Human sweat, according to M. Thenard, is formed of a great deal of water ; free acetous acid ; muriate of soda ; an atom of phosphate of lime, and oxide of iron ; and an in-appreciable quantity of animal matter, which approaches much nearer to gelatin than to any other substance.

SWEATING. See SWEAT.

SWEATING SICKNESS, a disorder which appeared in England about 1481, and was by lo-reigners called the English sweat. It returned again in 1485; then in 1506; afterwards in 1517. It appeared again in 1528 or 1529, at which time alone it spread itself to the Netherlands and Germany ; a circumstance which shows the impropriety of calling it the English sweat, in Latin sudor Anglicanus : besides Sennertus takes no-tice that it spread as far as Denmark, Norway, and France. It raged again in 1548. And the last return of it in London was in 1551, when it was so violent as in one day to take off' 120 of the inhabitants of Westminster. Some wen; seized abroad, and cut off in the road, others at home ; some when awake, others when fast asleep. Some died in a moment, and others in one, two, three, four, or more hours aft'M they began to sweat.

SWEDEN.

SWEDEN, a considerable kingdom of Northern Europe, extends, including Swedish Lapland, from lat. 55° 20 to 69° N., or about 1000 miles in extreme length; while its breadth varies from between 200 to 300 miles. It contains altogether an area of about 172,000 square miles, of which Swedish Lapland constitutes one-third. Its long, is from about 11° 20' to 23° 20' E. This country lost in 1809 the valuable province of Finland ; for which it was professedly compensated, in 1814, by the accession of Norway in exchange for the small province of Swedish Pomerania. The native geographers divide the kingdom into the North, Middle, and Southern Provinces. These are again subdivided into districts, denominated laens or stadtholderships ; but, among the greater part of the inhabitants, the ancient distinction of provinces is still preserved.

The geographical enumeration of the lams is thus given : —

I..TIIS.

Extent in Sq. Miles.

Population.

Capitals.

Middle Sweden. Stockholm city, Drot-tingsholm, Stockholm district . T’psal . -. Westerns

2,624 2,261 2,793

172,029 84,128 84,808

Stockholm Vpsal \Vestcras

Lsens.

Extent in Sq. Miles.

Population.

C;i| ital..

Middle Sweden.

Nykoping .

2,880

98,761 1 Nykoping

Orebro . .

3,670

ICO,428

Orebro

Carlstadt .

6,550

140,100

Carlstadt

South Sweden.

Gottenburg

1,835

119,514

Gottenburg

Elfsborg

3,008

156,271

Menersborg

Staraborg .

3,207

138,410

Mariestad

Linkoping . Calmar . .

4,305 4,181

162,859 136,296

Linkoping

Calmar *

.Toenkoping Cronoberg . C’arlskrona .

4,267 3,495 1,088

117,381 89,631 63,824

Joenkopini: Merioe Carlskron

Gothland .

1,045

32,988

Wisby

Ilalmstad .

1,963

73,594

Halmstad

Christianstad

2,174

120,547

Christianstad

Malmoe

1,750

149,892

Malmoe

North Sweden.

Falun or Sto—

rakoppar-berg . .

12,587

124,816

Falun

Gefleborg .

7,765

79,000

Geflel-or—

Jaemtland .

18,261

32,000

(kˆUTsuit’l

Norrland

10,496

62,000

UlTIU’«‘Olll!

Maester, and

Nordboi—

teas • •

vl.V-7 70,000

l’li: > .0

\

552

SWEDEN.

The chief places, or those containing more than 3000 inhabitants, are as follows : — Stockholm 65,474; Gottenburg 17,760; Carlscrona 10,553; Norrkopping 9428 ; Gefleborg 5930 ; Malmoe 4932; Upsal 4897; Falun 4709; Uddewalla 3971; Wisby 3819 ; Landskrona 3776; Carls-ham 3387; Orebro 3242 ; Lund 3224 ; Christianstad 3106 ; Calmar 3058. Of the towns eighty-eight are denominated cities, and four market towns. They are mostly small, except the few above enumerated. The inhabitants of these

cities and towns, according to the tables of 1815, were 248,029, or one-tenth of the whole population ; the other nine-tenths were living in 2214 parishes, containing 65,284 farms.

A curious table, exhibiting a complete view of the population and professions of Sweden, before the separation of Finland, was drawn up by Mr. Nicander, and published in the Transactions of the Swedish Academy of Sciences for 1809, of which the following is an abstract: —

Number.

Males. Females.

Clergy and teachers of various kinds . . ‘ . 13,884

Exercising civil offices and professions … 11,097

In the war department …… 57,788

Various kinds of merchants ….. 6,291

Seamen, including pilots and light-house keepers . 11,313

Peasants 799,322

Officers of gentlemen …… 35,226

Artists and handicraftsmen ….. 15,705

Persons free from service and proprietors of lands, &c. 34,309

Employed in trades and manufactures … 30,765

Artists and tradesmen in towns …. 26,184

Children . 531,678

Beggars and prisoners (females 53,993) - . . 24,394

Laplanders (females 2,968) 2,476

Married women, widows, and female children . - 1,279,024

Unmarried women 442,136

Total Grand total

1,599,487 1,721,160 3,320,647

The lakes of Sweden are said to occupy an area of 9200 square miles, or one-eighteenth of the whole surface of the country. Wenner, the largest of all, situated in the south-west of the kingdom, communicates with Gottenburg by the canal of Trolhaetta, and is likely ere long to communicate with Stockholm by the extension of that canal to the Malar Lake. Other great lakes are the Wetter and the Hjelmar, both to the southward of the capital, and at some distance from it. Of the rivers the Ljusna, the Dal, and the Clara, rise in the mountains bordering on Norway, and flow, the first two into the gulf of Bothnia, the last into the lake of Wenner. From that lake issues the Gotha, which flows southward in a full stream, but not a long course, until reaching the Cattegat; while the waters of the Wetter Lake are conveyed to the Baltic by the Mottala. The other rivers of Sweden are of secondary size ; but on approaching Lapland we meet with streams of some magnitude, flowing into the gulf of Bothnia, *viz.* the Angerman, the Umea, the Skeleftea, the Pitea, the Lulea, ihe Torneo. In winter, these flowing from frost-bound mountains, are comparatively inconsiderable ; but in summer the melting of the snow often swells them prodigiously, and they overflow large tracts of country.

Not more than a twentieth part of Sweden is capable of cultivation, and of that only about one-half is cultivated. The soil, according to Akrel, yields not more than five times the seed that is sown in good years : in ten years the same writer states that one of them fails, two are scanty, rive are moderate, and two are abundant.

The deficiency of corn for the support of the inhabitants compels them to mix the rind if the pinus silvestris, and the roots of some bog-plants, with their flour ; but the late extensive cultivation of potatoes has been found to afford mo t valuable aid to the subsistence of the lower classes. Hemp, flax, and tobacco, are grown for domestic use ; and hops are cultivated and exported. Altogether the vegetable production * of Sweden are very similar to those of Great Britain, with the exception of several, such as broom, furze, and the walnut-tree, which

have not strength to withstand a Swedish winter: hut throughout all the temperate part of Sweden the oak, elm, and alder, thrive as in England, while some trees, such as the spruce and Scotch fir, succeed better. Apple, pear, and cherry trees grow but languidly; while berries of many different kinds are produced spontaneously and luxuriantly. Corn and wheat succeed best of course in the southern provinces ; oats are raised more generally and in larger quanties ; rye and barley are the grain most frequently met with. With respect to the appearance of the oak, Von Buch remarks, ‘ The course of the boundary of oaks in the northern regions is singular. It distinctly demonstrates the manner in which the climate deteriorates with the distance from the great ocean. In Norway the oaks grow vigorously in the interior of the sea-bays, at Christiansund, -and at Molde almost as high as 63°, and even at Drontheim they are not altogether extinct. Harness, on the other hand, does not lie higher than 60° 40’. On the other side of the Uothnian Gulf oaks scarcely go beyond Abo ; in the Fin-SWEDEN.

nish bays they only cover the coasts to Helsingfors, and on the south side they cannot penetrate beyond Norva in Ingria, so that they do not even reach 60°. Georgi relates that the czar Peter I. ordered oaks to be planted at Petersburgh. They grew indeed to the thickness of a man, but irregularly, and with a decayed appearance quite unsuitable to their age and nature. On the road to Moscow they first appear on the banks of the river Masta ; and, although the country does not rise in any considerable degree, their boundaries in an eastern direction towards Siberia are to be found in the neighbourhood of Ossa, between Cassan and Catherinenburg, in lat. 57° 30’.’

The breeding of cattle is productive, though the races are generally small. In the north the rein-deer is a valuable domestic animal, and some proprietors have herds of more than 1000 ; goats and pigs are also thinly scattered over the •whole country. The fisheries yield employment and numerous articles of export ; but the herrings are considerably diminished of late years.

The chief production of the soil is timber ; and the far greater part of the dwellings are composed wholly of wood; the demand for wood as fuel is also great ; and yet the export of planks, masts, pitch, tar, potashes, and charcoal, forms the chief foreign trade.

The mines of Sweden have long been worked, and long stationary as to product. They average about sixty-four ounces of gold; 12,900 •ounces of silver; 24,800 quintals of copper; 431 quintals of lead; 100,000 tons of iron; 22,000 quintals of alum; 35,000 tons of coal; and 65,000 quintals of saltpetre. The manufactures are confined to the few articles required for the home supply, cloths, cottons, silks, and hnens, and many smaller articles, being furnished from the different parts of the kingdom, to an annual amount of about £280,000 sterling.

The foreign commerce of Sweden, favored for a time by her neutrality, became after 1807 from her participating in hostilities exposed to great losses; since 1814 it has had its full share also of the fluctuations so general throughout Eu-rope. To these unavoidable evils have been added impediments originating in arbitrary restrictions and prohibitions on the imports. The result is that these imports take place illegally, depriving government of the benefit that would arise from a small duty, disseminating the habit of smuggling, and finally obliging the consumer to pay “higher. The export of timber, for instance, was very cramped by the law obliging foreign vessels to pay five per cent, more of duty on it than is paid by the Swedish. The mercantile navy of Sweden consists of about 11,000 vessels, aggregating about 180,000 tons, and navigated by nearly 10,000 seamen. Sweden has suffered greatly from paper currency. In 1657 the bank of Stockholm was conducted with regularity; but since the latter part of the eighteenth century, advances to government have produced an over issue, and consequently a great depreciation of its credit. The exclusive privileges granted to the East India Company, and some smaller associations, are also sources of disadvantage.

The chief txports are iron, copper, timber,

and tar. Herrings may be said to have ceased to form an article of export, the coast being at present deserted. The imports are corn from Poland and Russia, wine from France and the south of Europe ; cotton from America and the West Indies; tea from China; sugar, coffee, and other tropical products, from the West In-dies.

The revenue, is derived from the rent of royal domains, a portion of the great tythes, duties on imports and exports, a tax on spirituous liquors, and one of more questionable policy on mines forges, and chimneys, along with a poll tax and a few monopolies. The amount is about £l, 000,000 sterling, and as it never was greater, the military force of Sweden has at no time been so permanent or so large as might

have been imagined from its achievements. The troops which crossed the Baltic, along with Gustavus Adolphus, did not exceed 10,000 men ; and, though they subsequently received reinforcements, the chief part of his army were Germans. A progressive increase took place towards the close of the eleventh century ; but, even in the exploits of Charles XII., a large proportion of his followers were foreigners, supported by foreign resources. In the reign of Gustavus III. the Swedish army was larger; and in 1808, the aid of a British subsidy, £1,200,000 a year, carried it to 50,000 regulars, and a reserve of 30,000. At present it is on a peace establishment, but on a scale abundantly large for the means of the country. There is a national force, or militia, for the levy and support of which, the whole country is divided into petty districts, called hemmans, each of which is bound to furnish a soldier, and a spot of land for his maintenance. This land the soldier in time of peace cultivates, being pledged to attend at exercise only a specified number of days in each year : when permanently absent, the inhabitants of the district are bound to cultivate it for him. The officers are supported in the same manner; the colonel by a property placed in the centre of his regiment; the captain by a less extensive lot in the centre of his company, and so on down to the corporal. When in the field, these troops receive the same pay as the rest of the army, but at other times the government supplies only their clothing.

The Swedes were early ranked among the vigorous supporters of the Reformation, having adopted it with great unanimity in the reign of Gustavus Vasa, and having subsequently made the most signal exertions for its maintenance in Germany. The established creed is Lutheran-ism ; and though particular sects, such as the Swedenborgians, have arisen, the dissenters are, on the whole, not numerous. To the Catholics there prevails a general antipathy, nor would it have been prudent, before the latter part of tho eighteenth century, for a Catholic priest to have shown himself openly. The ecclesiastical establishment consist* of one archbishop, eleven bishops, seventy archdeacons, and 3230 other cler-0-ymen.

° The university of Upsal, founded in 1477, lias in general maintained a high character for physical science. The number of professors :s

twenty-two : the students necessarily vary; their greatest number (in 1774) was 1500. During Ihe late war they decreased greatly. The university of Lund, in Schonen in the south, is of more recent date, and on a smaller scale : the number of its students at present is about 600. The gymnesia, or high schools, of which the number in the kingdom is eleven, are also well attended of late, having, along with the minor classical establishments, nearly 2000 pupils. Of elementary schools, the number in Sweden is great : the primary or fundamental part of education being, as in Scotland, generally diffused. Government disburses, for the universities and schools of every description, in the shape of salaries, allowances to the poorer students, purchase of books, &c., about £60,000 annually.

The Swedish language bears a great resemblance to the Danish, and not a little to the English, being evidently sprung from the same source as the Saxon or German ; but, being little known out of the country, the Swedish men of letters have frequently adopted Latin as the medium of their publications. The necessity of seeking for information in other languages has made the literati in general familiar with Ger-man, French, English, and Italian. In natural history, poetry, and general history, the Swedes have several late writers of great merit.

The scientific and literary societies of Stockholm are numerous. An antiquarian society was founded so far back as 1668 ; a medical society in 1688 ; and the royal academy of sciences in 1739. In 1753 an academy was founded by the queen for the investigation of subjects connected with the language, the history, and the poetry of Sweden ; and, being a numerous association, it was subsequently divided into two sections. The society of sciences at Upsal dates from 1728. Of printing presses in Swe-den, the number is only between forty and fifty, of which one-third are in Stockholm ; of annual publications, averaging between 300 and 400, one-fourth, or rather more, are translations. On the whole, Sweden is receiving considerable improvements, such as the new modelling of its civil code, and the establishment at Stockholm of a great central school.

In general the Swedes are of fair complexion, resembling the inhabitants of the north of Germany. In the towns this simplicity is less remarkable ; but the population of Sweden is, in a great degree, agricultural, which joined to the effect of the reformed faith, and the

general diffusion of education, has produced a great degree of honesty among the lower orders. In other respe< ts they have the virtues and defects of a people little advanced in civilisation; highly hospitable on the one hand, they are not, on the other, exempt from the charge of excess in the indulgence of personal appetites. The population being thinly scattered, and the communication far less frequent than in the most retired counties of Wales, ancient usages are kept up, and very slowly modified. Dalecarlia, in particular, remote from the capital, is said to be a province where hereditary customs are handed down from age to age.

The government of Sweden is a limited mon-

archy, now hereditary in the male line of B rnadotte : in case of the failure of males in that family, a successor is to be nominated by the king, and approved by the legislature. The appointed civil list is 320,000 rix dollars banco, or about £50,000 sterling for the king ; that of the crown prince one-third. The states are composed of 1100 nobles, fifty to eighty clergy, from 100 to 200 burgesses, and 100 peasants, who vote by classes, not by the head. They must assemble every fifth year, and more frequently if convened by the king. They make laws, grant taxes, regulate the coinage and the press, and superintend the administration of justice. The laws are contained in a volume of 480 pages, which is looked up to with much veneration from its antiquity, having been adopted as early as the year 1442. All new cases of differences that occur are referred to the principles of this fundamental code. There are courts of revision and of appeal, however, and lawyers find or make a trade here.

The public expenses may be said to be rigidly watched, and have recently been considerably reduced ; at present they stand thus : — Establishment of the royal households £210,000 For the senators and the government 180,000 For the judicial and police branches 50,000 For the military branch …. 370,000

For the marine branch 180,000

For extraordinary expenses, including interest on the public debt 150,000

£1,140,000

The public income is nearly commensurate with the expenditure. The public debt, 16th of April 1819, amounted to 6,371,862 Reichs-

thalern banco, or about £1,387,500 sterling ; having been reduced £250,000 since the year 1813. It is wholly owing to residents in Sweden ; and, on the plan of a sinking fund now in progress, will be extinguished in fourteen years. The chief fi.iartcial evil under which the kingdom suffers is from the vast quantity of paper money which still circulates, but measures are in train by which this paper is gradually to be withdrawn.

The early history of Sweden is no less involved in fables than that of most other nations. Al-stedius gives a chronological list of 149 monarchs of Sweden, from Magog, the son of Japhet, and grandson of Noah, who, he says, began to reign in Sweden and Gothland, A. M. 1745, eighty-eight years after the flood, to queen Christina, in 1633. Others affirm that ancient Scandinavia was first governed by judges elected for a certain time by the voice of the people. Among these temporary princes the country was divided, until A. M. 2054, when Eric I. was raised to the supreme power, with the prerogatives of all the temporary magistrates united in his person for life. From this very early period, till 1366 of the Christian era, the histories of Sweden, present us with nothing but what is common to all nations in their early periods, *viz.* the endless combats and massacres of barbarians, tending to no other purpose than the effusion of blood, and the temporary acquisition of a little ttr-SWEDES.

ritory. At this time, however, Albert of Mecklenburg, having concluded a peace between Swe-den and Denmark, which had been at violent war for some time before, was proclaimed king of Sweden.

Sweden until the appearance of Gustuvus Vami. — The peace above mentioned was of short duration, being broken in 1368; on which Albert entered into an offensive and defensive league with the earl of Holstein, the Jutland nobility, the dukes of Sleswick, Mecklenburg, and the Hanse Towns, against the kings of Denmark and Nor-way. Albert proved very successful against Wal-demar king of Denmark at that time, driving him entirely out of his dominions ; but he himself was defeated by the king of Norway, who laid siege to his capital. Soon after this a new treaty of peace was concluded, by which Albert was allowed to enjoy the crown of Sweden in peace. However, having formed a design of rendering himself absolute, he fell under the displeasure of his subjects, and Margaret of Norway was proclaimed queen of Sweden by the malcontents. A war immediately ensue-l, in which Albert was defeated and taken prisoner; but as the princes of Mecklenburg, the earls of Holstein, and the Hanse Towns, entered into

a league in his favor, the war was so far from being extinguished by this event, that it raged with more fury than ever. At length, in 1394, the contending parties came to an accommodation. Albert was set at liberty, on condition that he should in three years surrender to Margaret all pretensions to the city of Stockholm ; and the Hanse Towns engaged to pay 60,000 marks of silver in case of Albert's breach of faith. Not long after this, Eric the son of Albert died; and he, having no other child, did not think it worth his while to contend for the kingdom of Sweden : he therefore acquiesced in the pretensions of Margaret, and passed the remainder of his days at Mecklenburg. Margaret died in 1412 or 1415. See DENMARK.

Margaret was succeeded by Eric XIII. of Pomerania. This prince's reign was cruel and oppressive to the last degree. The people were ruined by taxes; and the Danes, being every where preferred to the offices of power, committed the greatest cruelties. The consequence of this was a revolt ; and Charles Canutson, grand mareschal of Sweden and governor of Finland, having joined the malcontents, was declared commander in chief of their army. Eric was now formally deposed, and commenced pirate : Canutson was chosen regent : but beginning to oppress the people, and aspiring openly at the crown, the Swedes and Danes revolted ; in consequence of which a revolution took place, and Christopher duke of Bavaria, nephew to Eric, was chosen king of Denmark, Sweden, and Norway, in 1442. On the accession of the new prince, complaints against Canutson wore brought from all quarters; but, through the interest of his friends, he escaped punishment; and in 1448, Christopher having died after a tyrannical reign of five years, he was raised to the throne by°the name of Charles VIII. However, the kingdoms of Denmark and Norway refused to own allegiance to him ; upon which a war immediately commenced. In 1454 peace was concluded, and Denmark for the present freed from the Swedish yoke. Neither did Charles VIII. long enjoy the crown of Sweden: Having quarrelled with the archbishop of Upsal, the latter formed such a strong party that the k:ng could not resist him. Christian I. kinsj of Denmark was called to the throne of Sweden ; and, in 1459, once more united the three kingdoms. But, having begun to oppress his subjects in an arbitrary manner, he was soon after obliged to retire-to Denmark in 1463. Katil bishop of Lin-kioping, who had driven out the king, took upon himself the office of regent. Next year Christian returned with a powerful army, but was defeated. The people then recalled Charles ; but he, on his accession, having offended bishop Katil, \a\ by him defeated, and obliged to renounce his right to the crown. After this the kinu.dom was rent into factions, between whom the mo>t cuu 1 civil wars took place, until 1467, when Charles was

again recalled, and enjoyed the kingdom, though not without opposition, till his death, in

1470.

The confusion in which the Swedish affairs had been so long involved did not cease on t'.u death of Charles. Christian again invad-"! Sweden; but was defeated by Steno Stun, nephew of the late king. After this the kingdom remained in peace till 1487, when the Russians invaded Carelia, committing every where tin: greatest ravages. These were soon driven oi;t : but in 1497, a rupture happening between Stun: and the senate, an offer was made of the Swedish crown to John king of Denmark, who readily accepted the offer, and was crowned accordingly : but no sooner was he seated on the throne thai: he became odious to the Swedes, from his partiality to the Danes. In a short time he set out for Denmark, leaving his queen with a strong garrison in the citadel of Stockholm. lie was no sooner gone than the capital was inve>te 1 ; an !, though the queen made a noble defence, she was obliged to capitulate, on condition of being allowed to pass into Denmark. All the garrison were made prisoners of war, and the queen wrr. confined in a monastery till 1498. The Swedish affairs continued to be involved in the same dreadful confusion until 1520, when a great revolution was effected by Gustavus Vasa, the son of Eric Vasa, a nobleman of the first rank, who restored the kingdom to its liberty, and laid tin-foundation of its future grandeur. The occasion of this great revolution was as follows:— In 15 Christian II. king of Denmark invaded Sweden, with a design to subdue the whole country ; but being defeated with great loss by young Sh-no Sture, then regent, he set sail for Denmark, meeting with contrary winds, he made s descents on the Swedish coast, which he ravaged with all the fury of an incensed barbarian, inhabitants, however, bravely defended selves, and Christian was reduced to the . distress: one-half of his forces hav.ufi perished with hunsjer, and the other being in the most imminent danger by the approach of a n-.r winter. He then thought of a stratagem, wlm-h almost proved fatal to the recent; for havi vited him to a coufc/rcnre. at which he dcs

either to assassinate or take him prisoner, Sture was about to comply, had not the senate, who suspected the plot, interposed and prevented him. Christian then offered to go in person to Stockholm to confer with Sture, upon condition that six hostages should be sent in his room. This was accordingly done ; but, the wind happening then to prove favorable, he set sail for Denmark with the hostages. Next year he returned ; and, having drawn Sture into an ambush, the regent received a wound of which he died soon after. The kingdom being thus left without a head, matters soon came to the most desperate crisis. The army disbanded itself; and the senate, instead of taking proper measures to op-pose the enemy, spent their time in idle debates. Christian, in the mean time, advanced into the heart of the kingdom, destroying every thing with fire and sword; but, on his arrival at Stragnez, he granted a suspension of arms, to give the people time to deliberate on their situation, and to reflect that they might easily get rid of their troubles by electing him king. This they accordingly did ; and Christian proved one of the most bloody tyrants that ever sat on the throne of any kingdom. Immediately after his coronation, he gave grand entertainments for three days ; during which time he projected the diabolical design of extirpating at once all the Swedish nobility, and actually executed above sixty people of the first rank. Innumerable other cruelties were committed. At last he departed for Denmark, ordering gibbets to be erected, and causing the peasants to be hanged on them for the slightest offences, as he passed along ; and at Jencoping he caused two boys to be whipped to death.

Sweden under, and to the death of, Gustavus I. — This monstrous cruelty, instead of securing him on the throne, exasperated the whole nation against him. Gustavus Vasa was among the hostages whom Christian had perfidiously carried to Denmark in 1519. Large promises had been made to reconcile him to Christian, and threats had been used for the same purpose, but all in vain. Banner, a Danish nobleman, prevailed on the king to put him into his hands, to try whether he could prevail upon him to change his sentiments. The king, however, told Banner, that he must pay 6000 crowns in case the prisoner should make his escape. Banner generously assented ; and, having brought the noble prisoner to his fortress of Calo in Jutland, soon allowed him all the liberty he could desire, and otherwise heaped favors upon him. All this, however, could not extinguish his remembrance of the cruelties of Christian, and the desire he had of being serviceable to his country, fie therefore determined to make his

escape. With much difficulty, and under various disguises, he effected his escape, which Banner was no sooner acquainted with than he set out after him, and found him at Lubec. He reproached him as ungrateful and treacherous ; but he was soon appeased by the arguments urged by Gustavus, and by the promise he made of indemnifying him for the loss of his ransom. Upon this Banner returned, giving out that he could not find his prisoner. Christian, enraged at his escape, ordered Otho his

general to do his utmost to arrest him. Gustavus applied to the regency for a ship to convey him to Sweden, but the captain steered a different course, and put him on shore near Calmar ; a city hitherto garrisoned by the troops of Christina, widow of the regent. When Gustarus arrived, he made himself known to the governor and the principal officers of the garrison, who were mostly Germans, and his fellow soldiers in the late administrator's army. He flattered himself that his birth, his merit, and his connexions, would immediately procure him the command. But they, seeing him without troops and without attendants, threatened to kill or betray him if he did not instantly quit the city. Thus disappointed, Gustavus departed with great expedition ; and, his arrival being known, he was again forced to have recourse to disguise to conceal himself from the Danish emissaries who were in search of him. In a waggon, loaded with hay, he passed through every quarter of the Danish army, and at last repaired to an old family castle in Sudermania. Hence he wrote to his friends, notifying his return to Sweden, and beseeching them to assemble all their forces to break through the enemy's army into Stockholm, at that time besieged ; but they, too, refused to embark in so hazardous and desperate an attempt. He next applied to the peasants ; but they also refused to engage. At length, after several vain attempts to throw himself into Stockholm, and disappointed in all his hopes, he determined to apply to the Dalecarlians. Attended by a peasant, to whom he was known, he travelled in disguise through Sudermania, Nericia, and Westermania, and, after a laborious and painful journey, arrived in the mountains of Dalecarlia. Scarcely had he finished his journey, when he found himself deserted by his companion and guide, who carried off with him all the money he had provided for his subsistence. Thus forlorn, destitute, half starved, he entered among the miners, and wrought like a slave under ground ; here he continued until he was discovered accidentally by a gentleman, his acquaintance, in the neighbourhood, who offered him an asylum in his house. This he joyfully accepted ; but, finding it impossible to make him take arms in his behalf, he fled to the house

of one Peterson with whom he had formerly served. This last proved a traitor to his friend, and Gustavus would have been delivered to the Danes had he not received timely warning from the wife of his host. By her advice he took refuge with a clergyman, who shut him up in an apartment adjoining to the church, and counselled him to apply at once to the peasants at an approaching annual festival. They listened to him with enthusiasm, and he instantly led them against the governor's castle ; which he took by assault, and put the garrison to the sword. This inconsiderable enterprise was attended with the most happy consequences. Great numbers of the peasants flocked to his standard ; some of the gentry openly espoused his cause, and others supplied him with money. Christian was soon acquainted with what had passed ; but, despising such an inconsiderable enemy, he sent only a slender detachment, nnd(jr the command of one Soren Norby, to assist, his

adherents in Dalecarlia. Gustavus advanced with about 5000 men, and defeated a body of Danes commanded by one Meleen ; but he was strenuously opposed by the archbishop of Upsal, who raised numerous forces for king Christian. The fortune of Gustavus, however, still prevailed, and the archbishop was defeated with great loss.

Gustavus then laid siege to Stockholm; but, his force being too inconsiderable for such an undertaking, he was forced to abandon it with loss. This check did not prove in any considerable degree detrimental to the affairs of Gustavus; the peasants from all parts of the kingdom flocked to his camp, and he was joined by a reinforcement from Lubec. Christian, un-able to suppress the revolt, wreaked his vengeance on the mother and sisters of Gustavus, whom he put to death with the most excruciating torments. Several other Swedish ladies he caused to be thrown into the sea, after having imposed on them the inhuman task of making the sacks in which they were to be enclosed. His barbarities served only to make his enemies more resolute. Gustavus, having assembled the states at Wadstena, was unanimously chosen regent, the diet taking an oath of fidelity to him, and promising to assist him to the utmost. Hav-ing thus obtained the sanction of legal authority, he pursued his advantages against the Danes. A body of troops appointed to throw succors into Stockholm were totally cut in pieces ; and the regent, sending some troops into

Finland, struck the Danes there with such terror that the archbishop of Upsal, together with Slaborg and Bal-denacker the Danish governors, fled to Denmark. He then sent express orders to all his governors and officers in Finland and Sweden to massacre the Swedish gentry without distinction. The Swedes made reprisals by massacring all the Danes they could find ; so that the whole country was filled with bloodshed and slaughter. In the mean time Gustavus had laid siege to the towns of Calmar, Abo, and Stockholm ; but Norby obliged him to raise all of them with loss. Gustavus, in revenge, laid siege to the capital a third time, and petitioned the regency of Lubec for a squadron of ships, and other succors, for carrying on the siege. This was complied with, but on very hard conditions, *viz.* that Gustavus should oblige himself, in the name of the states, to pay 60,000 merks of silver as the expense of the armament; that, until the kingdom should be in a condition to pay that sum, the Lubec merchants trading to Sweden should be exempted from all duties on imports or exports; that all tther nations should be prohibited from trading with Sweden, and that such traffic should be deemed illicit ; that Gustavus should neither conclude a peace, nor even agree to a truce with Denmark, without the concurrence of the regency of Lubec ; and that, in case the republic should be attacked by Christian, he should enter Denmark at the head of 20,000 men. Upon these hard terms did Gustavus obtain assistance from the regency of Lubec ; nor did his dear bought allies prove very faithful. They did not indeed go over to the enemy ; but in a sea-fight, wiiere the Danes were entirely in the power of their

enemies, they suffered them to escape, when their whole force might have been entirely destroyed. This treachery had well nigh ruined the affair* of Gustavus; for Norby was now making preparations effectually to relieve Stockholm ; in which he probably would have succeeded : but, at this critical period, news arrived that the Danes hail unanimously revolted, and driven Christian from the throne ; and that the king had retired into Germany, in hopes of being restored by the arms of his brother-in-law, the emperor. On hearing this news, Norby retired with his whole fleet to the island of Gothland, leaving but a slender garrison in Calrnar. Gustavus did not fail to improve this opportunity to his own advantage, and quickly made himself master of Calmar. Meantime Stockholm continued closely invested ; but Gustavus protracted the siege until he should get himself elected king.

Having for this purpose called a general diet, the first step was to fill up the vacancy in the senate occasioned liv the massacres of Christian. Gustavus had the address to get such nominated as were in his interest ; and of consequence the assembly was no sooner met than a speech was made containing the highest encomiums on Gustavus, setting forth in the strongest light the many eminent services lie had done for his country, and concluding th.it the states would show themselves equally ungrateful and blind to their own interest if they did not immediately elect him king. This proposal was acceded to by such tumultuous acclamations that it was impossible to collect the votes; so that Gustavus himself acknowledged that their affection exceeded his merit, and was more agieeable to him than the effects of their gratitude.

Gustavus on his election was urged to have the ceremony of his coronation immediately performed; but the king, having some designs on the clergy, did not think proper to comply with their request, as he would have been obliged to take an oath to preserve them in their rights am! privileges. Indeed he had not been long seated on the throne before he incurred the displeasure of that body; for, having large arrears due to the army, with other incumbrances, Gustavus found it necessary to raise large contributions on the clergy. On this he was accused of avarice and heresy before the pope's nuncio. Gustavus defended himself against these accusations; and soon after showed a great partiality for the doctrines of Luther, which by this time had been preached and received by many people in Sweden. This embroiled him more than ever with the clergy ; and it soon appeared that either Gustavus must resign his throne, or the clergy some part of the power they had assumed. ˆ Matters were driven to extremities by the king's allowing the Scriptures to be translated into the Swedish language. In 1526 the king, finding them entering into a combination against the reformists, went to Upsal, and publicly declared his resolution of reducing the number of oppressive and idle monks and priests, who, under the pretence of religion, fattened on the spoils of the industrious people. At last, taking advantage of the war between the pope and Charles V. of Spain, he declared himself to be of the reformed religion.

and established it throughout his dominions; and at the same time, to humble the arrogance of the ecclesiastics, he gave the senators the precedency of them, and in many other respects degraded them from the dignities they formerly enjoyed. Foi some time the states hesitated at supporting the king in his work of reformation ; insomuch that at last he threatened to resign the kingdom, which he said was doomed to perpetual slavery either to its temporal or spiritual tyrants. On this the states came into his measures, and retrenched the privileges of the ecclesiastics in the manner he proposed. Several disturbances however ensued. An impostor, who pretended to be of the family of Sture, the former regent, having claimed the throne, the Dalecarlians revolted in his favor ; but, on the approach of a powerful army sent by Gustavus, they submitted. Soon after Lutheran professors were established in every diocese ; upon which a new rebellion ensued. At the head of this was Tli u re Johanson, who had married the king's sister. Several of the nobility joined him ; and the king of Denmark acceded to their cause, thinking, by means of these disturbances, to reunite the three kingdoms of Sweden, Denmark, and Norway, as formerly. But Gustavus prevailed, and the rebels were obliged to take refuge in Denmark. A fresh accident, however, had like to have embroiled matters worse than before. The subsidy granted to the regency of Lubec was still due; and for the payment of it the states granted to the king all the useless bells of the churches and monasteries. The people were shocked at the sacrilege; and the Dalecarlians again betook themselves to arms. Intimidated, however, by the courage and vigorous conduct of the king, they again submitted, and were taken into favor. But tranquillity was not yet restored. Christian, having established a powerful interest in Norway, once more made an attempt to recover his kingdoms, and was joined by the Dalecarlians ; but, being defeated by the Swedish forces, he -was forced to return to Norway, where, being obliged to capitulate with the Danish generals, he was kept prisoner all his life. In 1542 Gustavus, having happily extricated himself out of all his troubles, prevailed on the states to make the crown hereditary in his family ; after which he applied himself to the encouragement of learning and commerce. A treaty was set on foot for a marriage between his eldest son Eric and Elizabeth queen of England. The prince's brother, duke John, went over to England, and resided for some time at the court of London with great splendor. He returned full of expectations of success ; but, bringing with him no sort of proofs in writing, his father soon perceived that he had been the dupe of Elizabeth's superior policy. However, at last he allowed prince Eric to go in person to England ; but, before he could

embark, the death of Gustavus, in 1569, made him lay aside all thoughts of the voyage and marriage.

Sweden, until the death of Gvttanu Adolphus. — Gustavus Vasa was succeeded by his son Eric XIV. The new king was a man possessed of all the exterior ornaments which give an air of dignity to the person; but he had neither the

prudence nor the penetration of his father. lie created the first nobility that were ever known in Sweden ; which he had no sooner done than he quarrelled with them, by passing some acts which they thought derogatory to their honor and dignity. The whole course of his reign was disturbed by wars with Denmark, and disputes with his own subjects. In the former he was unfortunate, and towards the latter he behaved with the greatest cruelty. At last, by the torments of his own conscience, it is said, he ran mad. He afterwards recovered his senses, but was dethroned by his brothers ; of whom duke John, who had been hitherto kept prisoner by Eric, succeeded him in the kingdom.

This revolution took place in 1568, but with no great advantage to Sweden. Disputes about religion between the king and his brother, and wars with Muscovy, threw matters into the ut-most confusion. At last prince Sigismund, the king's son, was chosen king of Poland, which proved the source of much trouble to the kingdom. See POLAND. In 1590 king John died ; and, as Sigismund was at a distance, every thing fell into the utmost confusion ; the treasury was plundered, and the wardrobe quite spoiled, be-fore even duke Charles could come to Stockholm to take the administration into his hands, until king Sigismund should return. This, however, was far from being the greatest disaster which befel the nation at this time. It was known that the king had embraced the popish religion, and it was with good reason suspected that he would attempt to restore it upon his arrival in Sweden. Sigismund also was obliged, on leaving Poland, to promise that he would stay no longer in Sweden than was necessary to regulate his affairs. These circumstances served to alienate the minds of the Swedes from their sovereign, even before they saw him ; and the universal dissatisfaction was increased, by seeing him attended, on his arrival in Sweden in 1593, by Malaspina the pope's nuncio, to whom he made a present of 30,000 ducats to defray the expenses of his journey to Sweden. What the people had foreseen was too well verified ; the king refused to confirm the Protestants in their religious privileges, and showed such partiality on all occasions to the Papists that a party was formed against him; at the head of which was duke

Charles his uncle. Remonstrances, accompanied with threats, took place on both sides ; and, at an interview between the king and Charles, the dispute would have ended in blows, had they not been parted by some of the nobility. This, however, made such an impression upon Sigismund that he was apparently reconciled to his brother, and promised to comply with the inclinations of the people in every respect, though without any inclination to perform what he promised. The agreement indeed was scarcely made, before Sigismund conceived the horrid design of murdering his uncle at the Italiai/ comedy, acted the night after his coronation. The duke, however, having notice of the plot, avoided it. This enraged the king so mucn that he resolved to accomplish his design by force ; and therefore commanded a Polish army to march towards the frontiers of Sweden, where

they committed all the ra\a;;es that could be expected fram an enraged and cruel enemy. Complaints were made by the Protestant clergy to the senate ; but no other reply was made them than that they should abstain from these bitter invectives and reproaches, which had provoked the Catholics, until the king's departure; at which time they would be more at liberty. In 1595 Sigismund set sail for Dantzic, leaving the administration in the hands of duke Charles. The consequence of this was that, the dissensions which had already taken place being continually increased by the obstinacy of the king, duke Charles assumed the sovereign power; and in 1604 Sigismund was formally deposed, and his uncle Charles IX. raised to the throne, lie proved a wise and brave prince, restoring the tranquillity of the kingdom, and carrying on a war with vigor against Poland and Denmark. He died in 1611, leaving the kingdom to his son, the celebrated Gustavus Adolphus.

Though Charles IX. by his wise and vigorous conduct had in a great measure retrieved the affairs of Sweden, they were still in a very disagreeable situation. The finances of the kingdom were entirely drained by a series of wars and revolutions ; powerful armies were preparing in Denmark, Poland, and Russia; while the Swedish troops were not only inferior in number to their enemies, but the government was destitute of resources for their payment. Though the Swedish law required that the prince should have attained his eighteenth year

before he was of age, yet such striking marks of the great qualities of Gustavus appeared, that he was allowed by the states to take upon him the administration even before this early period. His first act was to resume all the crown grants, that he might be the better able to carry on the wars in which he was unavoidably engaged ; and to fill all places, both civil and military, with persons of merit. At the head of domestic and foreign affairs was placed chancellor Oxenstiern, a person every way equal to the important trust, and the choosing of whom impressed mankind with the highest opinion of the young monarch's penetration and capacity. Soon after his accession, Gustavus received an embassy from James I. of Britain, exhorting him to make peace with his neighbours. This was seconded by another from Holland. But, as the king perceived that the Danish monarch intended to take every opportunity of crushing him, he resolved to act with such vigor as might convince him that he was nofeasily to be overcome. Accordingly he broke into Denmark with three different armies at once ; and though the enemy's superiority at sea gave them great advantages, and the number of the king's enemies distracted his attention, he carried on the war with such spirit that in 1613 a peace was concluded upon good terms. This wa> being finished, the king applied himself to civil polity, and made some reformations in the laws of Sweden. In 1615 hostilities were commenced against Russia, on account of the refusal of that court to restore some money which had been formerly lent them. The king entered Ingria, took Kexholm by storm, and was laying siege to Plescow, when, by the mediation of

James I., peace was concluded, on condition of the Russians repaying the money, and yielding to Sweden some part of iheir territory. In this and the former war, notwithstanding the shortness of their duration, Gustavus learned tin-rudiments of the military art for which he soon became so famous. In one campaign he not only learned, but improved, all the military maxims of La Gardie, a celebrated general, brought the Swedish army in general to a more steady and 'regular discipline than formerly had been exercised, and formed and seasoned an invincible body of Finlanders, who had afterwards a very considerable share in the victories of the Swedes. Peace was no sooner conclude;! with Russia than Gustavus was crowned \u!i great solemnity at Upsal. Soon after this, Gustavus ordered his general La Gardie to acquaint the Polish commander, Codekowitz, that as tin-. truce between the two kingdoms, which had been concluded for two years, was now expired, he desired to be certainly informed whether 1 .<• was to expect peace or war from his master. In the mean time, having borrowed money of tin Dutch for the redemption of a town

from Don-mark, he had an interview on the frontiers with Christian IV. At this interview the two monarchs conceived ‘ttie utmost esteem and friendship for each other; and Gustavus obtained a promise that Christian would riot assist Sigismund in any designs he might have against Sweden. In the mean time, receiving no satisfactory answer from Poland, Gustavus began to prepare for war. Sigismund entered into a negociation, and made some pretended concessions, with a view to seize Gustavus by treachery ; but, the latter having intimation of his design, the whole negociation was changed into reproaches and threats on the part of Gustavus. Immediately after this Gustavus made a tour in disguise through Germany, and married Kle-onora, the daughter of the elector of Branden-burgh. He then resolved to enter heartily into a war with Poland, and with this view set sail for Riga, with a great fleet, which carried 20,000 men. The place was well fortified, an .1 defended by a body of veterans enthusiastically attached to Sigismund ; but it was carried after a siege of six weeks, acompanied by much desperate fijhting.

After “the reduction of Riga, the Swedish monarch entered Courland, where he reduced Mittau ; but ceded it again on the conclusion of a truce for one year. Sigismund, ho\ve\er, n< > sooner had time to recover himself than he began to form new enterprises against the Swedes in Prussia; but Gustavus setting sail with Ins whole fleet for Dantzic, where the king of Poland then resided, so broke his measures that lie \v obliged to prolong the truce for another year. Sigismund, however, was not yet apprrsed < the danger he was in, and refused to listen to any terms of accommodation; upon which G tavus, entering Livonia, defeated the I oh* general, and took Dorpt, Hockenhiuisen, a several other places of les* importance; which, entering Lithuania, he took Birsen. Notwithstanding tins succors, t.u-t: vus proposed peace on the san.e equitible terms

as before ; but Sigismund was still infatuated with the hopes that, by means of the emperor of Germany, he should be able to conquer Sweden. Gustavus, finding him inflexible, resolved to push his good

fortune. His generals, Horn and Thurn, defeated the Poles in Semigallia. Gustavus himself with 150 ships set sail for Prussia, where he landed at Pulaw. This place was immediately delivered up to him ; as were also Brannsberg, Frauenherg, Elbing, Marienburg, Mew, Dirschau, Stum. Christburg, &c. Sigismund, alarmed at the great successes of Gustavus, sent a body of forces to oppose him, and to prevent Dantzic from falling into his hands. In this he was attended with as bad success as before. His troops were defeated before Marienburg, Mew, and Dirschau; and in May, 1627, Gustavus arrived with fresh forces before Dantzic, which he would probably have carried had he not been wounded in the belly by a cannon shot. The Poles in the mean time recovered Mew; and the States of Holland sent ambassadors to mediate a peace between the two crowns. Sigismund, however, depending upon the assist-nnce of the emperor of Germany and king of Spain, determined to hearken to no terms, and resolved to make a winter campaign ; but Gustavus was so well intrenched, and fll his forts were so strongly garrisoned, that the utmost efforts of the Poles were to no purpose. Dantzic in the mean time made such a desperate resistance as ureatly irritated Gustavus. In a sea engagement the Swedish fleet defeated that of the enemy ; ;ifter which Gustavas, having blocked up the harbour with his fleet, pushed his advances on the land side with incredible vigor. He made a surprising march over a morass fifteen miles broad, assisted by bridges of a peculiar construction, over which he carried a species of light cannon invented by himself. By this unexpected manoeuvre he got the command of the city in such a manner that the garrison were on the point of surrendering, when, by a sudden swell of the Vistula, the Swedish works were ruined, and the king was obliged to raise the siege. In other respects, however, the affairs of Gustavus went on with their usual good fortune. His general, Wrangel, defeated the Pcles before Brodnitz; and at Stum the king gained another and more considerable victory in person. In addition to these misfortunes of the Poles, a famine and plague raged in their camp, so that they were at last obliged to consent to a truce for six years, to June 1635. Gustavus restored some places, but kept the port and citadel of Memel, the harbour of Pillau. the town of El-bine:, Bransbergh, and all that he had conquered in Livonia.

Gustavus having thus brought the war with Poland to an honorable conclusion, began to think of resenting the conduct of the emperor in assisting his enemies and oppressing the Protestant states. Before embarking in such an important undertaking it was necessary that he should consult the diet. In this the propriety of engaging in a war with Germany was warmly debated ; but, after much altercation, Gustavus,

in a very noble speech, determined the matter; and set forth in such strong terms the virtuous motives

by which he was actuated that the whole assembly wept, and every thing was granted which he could require. It was not difficult for Gustavus to begin his expedition. His troops amounted to 60,000 men, hardened by a succession of se-vere campaigns in Russia, Finland, Livonia, and Prussia. His fleet exceeded seventy sail, carrying from twenty to forty guns, and manned with 6000 mariners. Embarking his troops, he landed at Usedom on the 24th of June 1730, the Imperialists having evacuated all the fortresses they possessed there ; and the isle of Rugen had been before reduced by general Lesly, in order to se-cure a retreat if fortune should prove unfavorable. Passing the frith Gustavus stormed Wolgast and another strong fortress in the neighbourhood, leaving general Bannier with a garrison for the defence of these conquests. He then proceeded to Stettin ; which was no sooner invested than it consented to receive a Swedish garrison, and the king persuaded the duke of Pomerania to enter into an alliance with him. In consequence of this the Swedish troops were received into several towns of Pomerania ; and the most bitter en-mity took place between the Imperialists and Pomeranians, each refusing the other quarter. These successes of Gustavus struck the empire with consternation ; for, being already overwhelmed with civil dissensions, they were in no condition to resist so impetuous an enemy. At this time also the Imperialists were without a general ; but at last count Tilly was fixed upon, and invested with the dignity of Field Marischal. In the mean time the king, being reinforced by a considerable body of troops in Finland and Livonia under Gustavus Horn, defeated the Imperialists before Griffenhagen, taking the place soon after by assault. By this and some other conquests he opened a passage into Lusatia and Silesia ; but, in the mean time, count Tilly cut off 2000 Swedes at New Brandenburg, owing to the obstinacy of their. commander Kniphausen5 who had orders to evacuate the place and join the main army. This advantage, however, was soon overbalanced by the conquest of Frankfori. on the Oder, which Gustavus took by assault, making the whole garrison prisoners. Thus he commanded the rivers Elbe and Oder on both sides, and had a fair passage not only to these countries, but also to Saxony and the dominions of the house of Austria. Soon after this Gustavus laid siege to Landsberg, which he took by assault; though the number of soldiers he had with him was so inconsiderable that he had thoughts of sending to the main army for a reinforcemem before the prisoners should march out, being apprehensive that they might give him battle in the open field, though

they could not defend themselves Behind walls. About this time the Protestant princes held a diet at Leipsic; to which Gustavus sent dep.uies, and conducted his negociations with such address as tended greatly to promote his interests. Immediately after this he reduced Gripswald, and with it all Pomerania. Then, marching to Custrow, he restored the dukes of Mecklenburg to their dominions. Here the Imperialists had tyrannised in such a manner that Gustavus was received as the deliverˆ af the people,- and the ceremony of the duke's inau-S W EDEN.

guration was performed with great solemnity. All this time count Tilly was employed in the siege of Magdeburg ; but now, being alarmed at the repeated successes of the Swedes, he left Pappenheim with part of the army before that city, while he marched with the rest into Thuringia, to attack the landgrave of Hesse-Cassel and the elector of Saxony. After a most obstinate defence Magdeburg fell into the hands of Pappenheim, where he committed all imaginable cruelties. Gustavus formed a plan of recovering the city; but, relinquishing it, he ordered Bannier to attack Havelsburg; which was done with such resolution that the place was forced in a few hours, and all the garrison made prisoners. Werben was next obliged to submit after an obstinate conflict, in which many fell on both sides. These successes obliged count Tilly to attempt in person to check the progress of the Swedes. He detached the vanguard of his army, composed of the flower of the imperial cavalry, within a few miles of the Swedish < >amp. An action ensued, in which Bernstein tvj imperial general was defeated and killev., with 1500 of his men. Gustavus, after this advantage, placed himself in a situation so much superior to his enemies that count Tilly was fired with indignation, and marched up to the Swedish lines to pive him battle. Gustavus kept within his works, and Tilly attacked his camp, though almost impregnably fortified, keeping up a most terrible fire from a battery of thirty-two pieces of cannon ; which, however, produced no other effect than obliging the Swedish monarch to draw up his army behind the walls of Werben. Tilly had placed his chief hopes in being able to nail up the enemy's cannon, or set fire to their camp in divers quarters; after which he proposed making his grand attack. With this view he bribed some prisoners ; but they betrayed him and told his design to Gustavus. The king ordered fires to be lighted in different parts of his

camp, and his soldiers to imitate the noise of a tumultuous disorderly rabble. This had the desired effect. The count led his army to the breach made by the cannon; where he was received with such a volley of grape-shot as cut off the first line, and put the whole body in disorder, so that they could never be brought back to the charge. In this confusion the imperial army was attacked by Bauditzen, and, after an obstinate conflict, obliged to quit the field.

Soon after this action the queen arrived at the camp with a reinforcement of 8000 men ; at the same time a treaty was concluded with Charles I. of England, by which that monarch allowed the marquis of Hamilton to raise 6000 men for the service of Gustavus. These auxiliaries were to be conducted to the main army by a body of 4000 Swedes; and were in every thing to obey the king-while he was personally present, hut in his absence were to be subject to the orders of ihe marquis. With these troops the king had resolved to make a diversion in Bremen : but the marquis, finding it impossible for him to effect a junction with the Swedish army, resolved, without debarking his troops, to steer his course for die Oder, and land at Usedom. Gustavus was very much displeased at finding his project thus VOL. XX I.

disconcerted ; however, making the best of the existing circumstances, he commanded the British troops to act on the Oder inslead of the Weser. The number of this little army was magnified exceedingly by report, insomuch that count Tilly had some thoughts of marching against them with his whole force; but, on the departure of the marquis for Silesia, he reinforced the army in that country with alarge detachment, which was thought to contribute not a little to the defeat he soon aAer received. Ever since the late action, Gustatus had kept within his entrenchments, where his army was well provided with every thing. Tilly made several attempt, to surprise or draw him to an engagement ; but, finding all his endeavours fruitless, he marches into Saxony and laid siege to Leipsic. This precipitate measure proved highly advantageous to the Swedish monarch ; as thus the elector, who had been wavering in his resolution*, was now obliged to have recourse to the Swedes, to preserve himself from utter destruction. A treaty offensive and defensive was immediately concluded with Gustavus: and the elector willingly promised every thing that was required of him ; and, among the rest, that not only the prince his son, but he himself should reside in the Swedish camp and engage his life and fortune in the common cause. Tilly, in the meantime, carried fire and sword into the unhappy electorate. At the head of an army of

44,000 veterans, he summoned Leipsic to surrender ; denouncing the same vengeance against it as had been executed on Maadeburg, in case of a refusal. By this the governor was so much intimidated that he instantly submitted ; and also surrendered the castle of Passenberg, which was in a condition to have stood out till the arrival of the Swedish army. The elector, enraged at the loss of these valuable places, ordered his army to join the Swedes with all expedition, and pressed the king so warmly to engage that at last he yielded to his desire. On the 7th of September, 1631, Gustavus gained the celebrated battle of Leipsic, in which 7000 Imperialists lay dead on the field of battle ; 4000 were taken prisoners ; a fine train of artillery was lost, and upwards of 100 standards, ensigns, and other military trophies. On this occasion the Scottish regiment in the Swedish service first practised the method of firing in platoons ; to which some ascribe the astonishment and confusion that appeared in the Imperial army.

Gustavus next penetrated into Francom*, where he reduced the fort of Workburg and other places. Tilly having collected his scattered troops, which formed an army still superior to that of Gustavus, marched to the relief of this place; but came too late. He then directed his march towards Rottenberg, where four regiments were cut in pieces by a Swedish detachment. After this the king reduced Hanau, rrankfort on the Maine, ;.nd Mentz; destroying a body o Spaniards, who had thrown themselves in the way to obstruct his passage. The court of \ ienn was now thrown into the utmost confusion ; and sent every where begging assistance, and solid ing the Catholic princes to arm in defence of their religion. The emperor was most embarrass

finding out a general capable of opposing Gustavus in the field ; for the late misfortunes of count Tilly had entirely sunk his reputation. Wallestein, an old experienced officer, was made choice of; but, as he had formerly been disgraced, it was apprehended that he would not accept of the command ; yet he not only accepted, but, at his own expense, augmented the army to 40,000 men. During the whole winter the Swedish army kept the field ; and before the approach of

summer had reduced Crantznach, Bobenhausen, Kirchberg, Magdeburg, Gozlar, Northeim, Got-tingen, and Dunderstadt ; while the landgrave William made great progress in Westphalia. Gustavus Horn was repulsed before Bamberg ; but soon had his revenge, by entirely destroying two regiments of Imperialists. The king row resolved to give battle to Tilly, who was marching into Bavaria to prevent the Swedes from gaining a footing in that electorate. He pursued the imperial general through a vast tract of country, defeated his rear-guard, and, having reduced many towns and fortresses on the Da-nube, penetrated as far as Ulm. Advancing to the river Leek, count Tilly posted himself in a wood on the opposite side, to dispute his passage. Gustavus endeavoured to dislodge him by a regular fire from seventy pieces of cannon. The slaughter was dreadful ; and Tilly himself, be-ing wounded by a cannon-ball in the knee, died a few days before he was to have been superseded by Wallestein. The following night the imperial army evacuated the post ; part retiring to Ingold-stadt and others to Newburg. Gustavus immediately crossed the river, and seized the towns of Rain and Newburg, which the enemy had abandoned. Augsburg next submitted; and from the inhabitants of this place Gustavus exacted an oath of fidelity, not only to himself but to the crown of Sweden. This measure gave the greatest offence to many of the Germanic body, and made them imagine that the king of Sweden had other views than the defence of the Protestant cause. From Augsburg the Swedes advanced towards Ratisbon : but were disappointed in their design of getting possession of that city, by the Bavarians having thrown a very numerous garrison into the place. In the mean time ambassadors arrived from Denmark, offering the mediation of that crown for obtaining a lasting peace. Gustavus, however, replied that no such peace could take place till the Catholic princes thought proper to grant the Protestants full and ample security for their enjoyment of future tranquillity. But the ambassadors had no instructions to propose any thing farther. Gusta-vns now, resolving to retort upon the Bavarians the cruelties they had inflicted on the Protestants, laid the towns of Morzbourg, Frielengen, and I.andshut, in ashes. The inhabitants of Munich saved themselves by submission; but, as the peasants in that neighbourhood had collected themselves into bodies to murder the stragglers from the Swedish army, Gustavus burnt their houses, and defeated the forces of the elector, who had been joined by a body of militia. While Gustavus was thus employed Wallestein had assembled a vast army. He was solicited by the elector of Bavaria to come to his assistance ; but, in

revenge of the elector’s having formerly obtained the command for

count Tilly in preference to himself, he drew off towards Bohemia to encounter the Saxons. Arnheim, who commanded the Saxon forces in that place, was the enemy of Gustavus, who had formerly rallied him for his cowardice. He therefore permitted Wallestein to gain an easy victory, in hopes that his master the elector of Saxony, a prince entirely devoted to his pleasure, might be induced to relinquish the friendship of such a restless and warlike ally as Gustavus ; and, indeed, he used all the eloquence of which he was master to detach him. from the Swedish cause. Several advantages, in the mean time, were gained by the imperialists. Pappenheim defeated the archbishop of Bremen's cavalry at Warden; and three Swedish regiments were cut off near Kadingen. Pappenheim, however, was forced to withdraw his forces from Stade ; of which the Swedes took possession. Wallestein and the elector of Bavaria, who had now joined their forces, threatened Gustavus with greatly superior numbers. At last, however, the king, being reinforced with 15,000 men, no longer declined the engagement ; but Wallestein was too wise to trust the fate of the empire to a single engagement against such an enemy as the king of Sweden. Gustavus attacked his camp, but was repulsed with the loss of 2000 men ; which caused a general murmuring against his rashness. Several other misfortunes happened to the Swedes ; and, at last, after various manoeuvres, Wallestein bent his course towards Misnia, to oblige the elector of Saxony to declare against the Swedes, and to draw them out of Bavaria. Gustavus, notwithstanding the inconstancy of Augustus, immediately set out to assist him. With incredible speed he marched to Misnia, where the imperialists -were assembling their whole strength. Hearing that the enemy were encamped at Wesenfells, and that Pappenheim had been detached with a strong corps, Gustavus resolved to engage them before they could effect a junction. With this view he marched to Lutzen, where he attacked Wallestein with incredible fury. The Swedish infantry broke the imperialists in spite of their ut-most efforts, and took all their artillery. The cavalry not being able to pass the river so expeditiously as the king thought it necessary, he led the way, attended only by the regiment of Smaland and the duke of Saxe-Lauwenburg. Here, after charging impetuously, he was killed, as Puffendorff alleges, by the treachery of the duke; who, being corrupted by the emperor, shot him in the back during the heat of the action, The news of his death was in an instant spread over both armies. The courage of the imperialists revived, and they now made themselves sure of victory. But the Swedes, eager to revenge the death of their beloved monarch, charged with such fury that nothing could resist them. The imperialists were defeated a second time, just as Pappenheim, with his fresh corps, came up to their assistance. On this the battle was renewed, but the Swedes were still irresistible.

Pappenheim was mortally wounded, and his army finally routed, with the loss of 9000 killed in the field and in the pursuit.

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SWEDEN.

To the treaty of IVestpfuilia.-Tlie victory of loss of 1500 men, but he himself

ir? £2*2 fT U”f°rtUnate ? Sv?d(;n than the Pursuit > and his army oblig d

the greatest defeat. The crown devolved upon Weser. Some ‘

Christina, an infant of six years old ; the nation the neighbourly

was involved in an expensive foreign war, with-who had assembled a considemW^”^nnv^^

out any person equa to the arduous task of Alsace, Bernar.l, duke of Saxe\ eymar Seat d

commanding the armies or regulaung domestic count Gallas the imperial general and “dist”^

affairs as Gustavus had done.

tina^the daughter ofj > ustavus, was immediately successful for the Swedes, the city’of M~agdebui£

However, Chris-his army. But when every thing seemed „, , successful for the Swedes, the city of Ma < rdel

proclaimed queen. The regency devolved on the contrary to the expectation of every bo°dy, sur-

grand I bailiff, the manschal, the high-admiral, rendered for want of powder, which the gam.on

the chancellor, and the treasurer of the crown, had wantonly

consumed. The Saxons also made

Oxenstiern was invested with the chief manage-some conquests on the Elbe, which obliged Ban

ment of affairs, and conducted himself with the nier to recal general Lesly from Westphalia to

greatest prudence. He was greatly embarrassed march against them. The Saxons fixed on -i

indeed by the divisions among the Protestant most convenient situation, where they hoped to

princes, which became more violent after the destroy the Swedish army without coming to -i

death of Gustavus ; but, in spite of all difficulties, battle. But Bannier, resolving to hazard every

he went on pursuing the interest of his country, thing rather than suffer his army to be wasted by

and planning the means of retaining the Swedish famine, advanced towards Berleberg, a plac”<.>

conquests. Matters went on pretty successfully till 1634, when, through the rashness of the Swe-

closely blocked up by the enemy. Here lie dmvu from an advantageous post four regiments of

dish soldiers, they were defeated at Nordlingen, Saxon curassiers,~having* killed or taken prison-with the loss of 6000 men killed, a number of ers 400 men; after which he soon forced them to prisoners, and 130 standards taken by the enemy, a general engagement. The numbers were very Oxenstiern’s constancy was shaken by this dread-unequal, Bannier’s army amounting to 9000 ful blow; but he applied himself diligently to horse and 7000 foot, and the Saxons to 15,000 repair the loss by recruiting the army and rendering the allies faithful. The latter proved the most difficult task.

The death of Gustavus, and the defeat of Nordlingen, had thrown them into despair ; and every one was desirous of making the best terms he could with the emperor. The Saxons not only renounced their alliance with

Sweden, but openly commenced war against it ;

horse and thirteen battalions of foot. The battle began with great fury ; the right wing of t!ic Swedes was almost oppressed by numbers be-fore the left could come to their assistance. They were ten times driven back, and as often returned to the charge. At last they made such a desperate effort that the enemy were entirely defeated; 5000 killed on the spot, 3000 wounded,

and though the regency would gladly have con-and as many taken prisoners, with 150 standards, sented to an honorable peace, the enemy were now and several pieces of cannon, too much flushed with success to grant it. Oxenstiern had no other resource than an alliance

with France and the bravery of his generals. In

Thus ended the campaign of 1636, in a man-ner highly honorable to the Swedes. Some fruitless nc^ociations were set on foot during the

1635 he went in person to the court of Louis winter; but these coming to nothing Bannier XIII. and concluded a treaty, which, however, quitted his winter quarters very early in the se.i-

was never observed. The enemy, in the mean time, pushed their good fortune. They sur-

son ; and falling upon eight regiments of Saxons cantoned at Eulenburg pursued them to Torgau,

to obstruct his march. Yet he still found his situation every day more straitened from tho

prised Philipsburg, where the French had laid where he obliged them to surrender at discretion, up vast magazines; and reduced Spires, Augs-Another party of Saxons was defeated near Leip-burg, Treves, Wurtsburg, ..Cobourg, and some sic; which he proposed investing, but was dis-other places. To complete the misfortunes of appointed by the imperialists penetrating into Sweden it was expected that the Poles would Thuringia. He then called in all his detach-immediately invade Prussia. To prevent this ments ; defeated 2000 imperialists near Pegau, La Gardie was despatched thither with a power-and destroyed several detachments that attempted ful army; but, as it was impossible to resist so many enemies at once, the chancellor purchased

the friendship of Poland for twenty-six years by continual increase of the enemy's forces ; which

ceding that duchy to the republic. Thus he got obliged him at last to retreat into^Pomerania,

rid of a powerful enemy; and the Swedish affairs out of which he soon drove count Gallas. The

began to revive by a victory which general Ban-affairs of the Swedes were now once more on

nier gained over the Saxons, in consequence of the brink of ruin through the misconduct of

which they were driven beyond the Elbe. Early general Wrangel, who had also an army in Poin spring 1636 the Saxons made some motions merania, but who, imagining himself Perfectly

as if they intended to cut off Bannier's commu-secure, cantoned his troops, and extended his

nication with Pomerania. This he prevented by quarters, to accommodate his army. But Gallas

” suddenly returned, ravaged all Upper I omerania, and reduced the towns of Usedom, Dern-min, and Wollin ; after which, leaving garrisons in the forts, he returned to his winter quarters in

a stratagem, defeated a body of the enemy, and obliged the Saxons to retire. Soon after this he drove them out of their winter quarters with considerable loss ; at which time also a consi-

derable body of imperialists who came to their Saxony. This unfortunate campa.gn count, assistance were dispersed. In Westphalia genn-balanced all the advantages of the former, ral Kniphausen beat the imperialists with the gel was so struck with the suddennor* of

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blow that he could take no measure for opposition. Some of the Swedish allies again fell off, and took up arms against them. In 1638 the Swedish affairs again began to revive in this quarter, through the excellent conduct of Bannier, who defeated count Gallas with the loss of 3000 men killed and taken prisoners. Pursuing his good fortune, he so harassed the count that be obliged him to repass the Elbe and take shelter in Austria.

Great as Bannier’s exploits had been, however, they were eclipsed by those of Bernard duke of Saxe-Weimar. That general had so increased his army in the Protestant cantons of Switzerland, and in Franche Comte, that he was in a condition to act without the assistance of the French, who indeed were but treacherous allies. Advancing to the Rhine he seized on Seckingen and Lassuburg, and laid siege to Rheinfield. The imperialists, in conjunction with the troops of Bavaria, advanced to the re-lief of the place. An engagement ensued in which the victory was disputed ; the enemy threw succors into the city, and

the duke withdrew his army. Within a month he gave them battle a second time; and so completely defeated them that only one imperial officer above the rank of a captain escaped being killed or taken prisoner. He then renewed the siege of Rheinfield, which he reduced, as well as several other important places. Advancing to Brisac he blocked it up to force the garrison to surrender. General Gotz, with 12,000 men, attempted to throw in 1000 waggons of provisions ; but he was defeated with the loss of all his men except 2500. Duke Charles of Lorrain, with 4000 men, joined the remains of Gotz's array, but being surprised by Bernard his whole army was cut in pieces. A third attempt was made by Gotz, but it proved as unsuccessful as the for-mer; and the place being reduced to great straits was obliged to capitulate. In January, 1639, the two victorious generals Bernard and Bannier prepared to attack the enemy on their own ground. Bannier made an irruption into Anhalt and Halberstadt. Leaving his infantry he pushed on with his cavalry, and surprised Salis, grand-master of the imperial artillery. After a bloody conflict the Swedes gained a complete victory, seven regiments of the enemy being cut to pieces. Next entering Saxony he defeated four regiments of the enemy, obliging a much larger body to take shelter under ihe cannon of Dresden. Hearing that the Saxons were encamped near Chemnitz, where .they waited to be joined by the imperialists, he attacked them before this junction could be effected, and the Saxons were almost all killed or taken. Bannier next entering into Bohemia laid the country under contribution ; after which, returning across the Elbe, he fell on general Hofskirk, who was encamped near Bran-deiz with ten regiments of horse and several battalions of foot. Him he defeated with the loss of 2000 men. The remains of the imperial forces were pursued to the walls of Prague, and the generals Hofskirk and Montecuculi were taken prisoners. Yet notwithstanding these successes the enemies of Bannier multiplied daily. The Protestant princes, overawed by the enemy, did

not send him assistance. Undismayed, however, by difficulties, Bannier performed wonders, lie defeated a body of imperialists at (Ji.uz; drove the Saxons thrice from their camp at Firn, and yet was forced to evacuate the place because lu; could not spare a garrison. His army beimc destitute of recruits was much diminished in number; yet with it he reduced many towns, and obtained various other important advantages, when on a sudden all his hopes were blasted by the death of the duke of Saxe-Weymar; poisoned, as was supposed, by the French, who wished to get Brisac into their hands, from which the duke prevented them.

The difficulties to which Bannier was now reduced proved extreme. Louis XIII. took upon him to dispose of the army and conquests of Bernard as he thought proper. Brisac, and other places of importance, he kept to himself; after which the French endeavored to ruin the army. In the mean time the imperial army under Piccolomini, in the Netherlands, was prodigiously augmented ; and the archduke Leopold William, as generalissimo, was assembling his whole strength to crush the Swedes at once. But Bannier did not despair. George duke of Lunenburg, being disgusted at die emperor, Bannier hoped to gain him over; he therefore approached nearer to his country, and also drew towards the armies of Weymar and Hesse. In his way he cut in pieces a body of 3000 Croats. General Konigsmark routed the imperialists at Cera ; a second time at Scholen; and a third time entirely defeated them near Leipsic. Banuier was very pressing on the allies to join him ; and at last, in 1640, he was joined by the Weymar army under the dukes of Longueville and Gubrien, a body of Russians led by general Melander, and ihe troops of Lunenburg commanded by general Klitzing. The army now amounted to twenty-two battalions of infantry and 22,000 horse ; so that they were much more than a match for their enemies, had they been under the sole direction of Bannier. But unanimity was wanting; every one would be supreme, and Bannier, the best general, had the least influence. Instead of those masterly strokes by which the Swedes had hitherto distinguished themselves, the armies continued looking at one another, each suffering the rigors of famine. At last Bannier, resolving to expose his troops no longer, set out for Thuringia, through Franconia, to seize an advantageous post on the Maine; but, as he advanced to the Sala, he found the imperialists entrenched on the other side. Finding it impossible to force a passage, he took the road through Hesse, where his troops suffered greatly by famine. Here he proposed to fight the enemy ; butthe Landgrave and duke of Lunenburg refused their consent. Upon this he threatened to leave them to the mercy of the confederates, and thus obliged them to be somewhat more pliant. None of those brilliant successes, however, now attended the operations of the Protestant allies; the campaigns of 1640 and 1641 were spent in useless marches and counter-marches; serving only to bring the army into the greatest dangers, from which they were as constantly relieved by the active and intrepid Bannier. At last this brave general, worn out with perS W E DEN.

petual fatigues f]ie,j of a fever m 1641j]eaviI,K the Swedish army in a worse situation than evei” The imperialists were too well acquainted with the abilities of Bannier not to take advantage of the opportunity

offered by his death. A Swedish detachment was cut in pieces at Quedlinburg. The Swedish army, accustomed only to be obedient to Bannier, became mutinous, and Piccolomini resolved to fall upon them with his whole force. But the four generals, Wrangel, Konigsmark, Wittemberg, and Pful, having convinced the soldiers of the necessity of defending themselves, made such excellent dispositions that the imperialists durst not attack them. Piccolomini then detached part of his army to attack the Hessians in their quarters; but Wrangel and Konigsmark threw themselves in their way, and defeated them with the loss of 2000 men. This victory, however, did not retrieve the Swedish affairs. Dissensions and mutiny began again to take place in the army to such a degree as threatened its dissolution. In 1642 general Torstenson was sent from Sweden with money, and a strong reinforcement, to take upon him the supreme command. This general was inferior to none of his predecessors, and designed to come to an immediate engagement ; but the Weymar army separating from him obliged him to re-main for a considerable time inactive. He was also confined to his chamber by the gout ; and thus, a report of his death being spread, the imperialists were encouraged to begin a long march through roads scarcely passable, in hopes of surprising the Swedish army without a general. But Torstenson seized an ad vantageous post, which could not be forced, and thus obliged the enemy to retreat, after having suffered as much by their fatiguing march as if they had fought a bloody battle. Then joining general Stalhanch, who had been driven by the imperialists out of Silesia, he reduced Great Glogau, with a number of other important places ; after which he laid siege to Schweidnitz. The duke ofSaxeLauenburg, with his cavalry, endeavoured to throw in succors ; but was defeated with the loss of 3000 men, taken prisoner, and died of chagrin a few days after. In consequence of this defeat Schweidnitz surrendered at discretion ; and Torstenson, having sent a detachment to in vest the city of Neisse, proceeded with the rest to drive the enemy entirely out of Silesia. This he effectually performed, obliging them to retire over barren mountains, almost famished for want of provisions, and harassed by his light troops ; so that this lately formidable army was almost entirely ruined. With his victorious troops the Swedish general then poured into Moravia ; where in five days he reduced the strong town of Olmutz.

Litta and Neustadt shared the fate of Olmutz; after which the Swedes, returning suddenly to Silesia, took Oppelen and Brieg, and laid siege to Breslau. Here the garrisons made such an obstinate defence that the imperialists had time to assemble under the conduct of the archduke Leopold, and come to their relief. As Torstenson was greatly inferior in

number, he raised the siege; but appeared so formidable in his retreat, that the enemy durst neither attack him,norattempt

to prevent his encamping in a very advantageous situation. The imperialists then laid si.ˆe to Glogau ; but, after having lost a great number of men, they were forced to abandon the enterprise on the junction of Wrargel with Torstenson: bv which means the Swedes were once more in a condition to face their enemies in the field. Torstenson now projected an irruption into Bohemia, but in this he was prevented by the vigilance of the enemy: however, he reduced the city of Zittau, where for the first time a cartel for'pii-soners was established; by which means the Swedish army was considerably augmented. Torstenson then directed his course to Leipsic, but the imperial generals assembled their whole force, and set out to relieve it. The two armies soon came in sight of each other ; and the Swedes, after an obstinate conflict, obtained a complete victory, 5000 of the enemy being killed on the spot, 3000 wounded, and as many taken prisoners. This victory was followed by the immediate surrender of Leipsic.

In all probability the Swedes would have finally triumphed over all their enemies, had not a rupture with Denmark ensued. Torstenson and Horn behaved with their usual valor in Holstein and Schonen, while general Konigsmark distinguished himself in Germany ; but the ruin of the Weymar army, which was totally dfifeated with the loss of one half its number at Dettingen by the Bavarians, proved a dreadful blow, from which the Swedes could scarcely recover themselves. Indeed, notwithstanding the valor and success of the Swedes, their affairs in Germany must have gone to wreck in the campaigns of 1643 and 1644, had not the French under Conde and Turenne made a most powerful diversion, and performed such exploits as immortalised their names. In 1645 the war against Denmark was pushed with such vigor that a peace, very advantageous for Sweden, was concluded. Torstenson now took measures for carrying the war into the Austrian dominions. Hatfield assembled a considerable army to oppose the Swedes ; and the emperor came to Prague to animate his troops. The two armies came in sight at Jancowitz, and prepared for an engagement. The valor of the Swedes once more prevailed, and they totally defeated their enemies : 4000 of the imperialists were killed on the spot, among whom were general Hatfield and many officers; and nearly 5000 were taken prisoners. Yet no great advantages were derived from this victory. Some towns indeed were reduced : but at last Torstenson was obliged to retire into Moravia, where he put his

army into winter quarters; and, in thebeginnim? of 1646, resigned the command to Wrangel. Wrangel conducted the Swedish affairs with great ability and success ; till at last the imperialists, unable to drive the Swedes out of Germany, concluded a peace in 1648. This was the memorable treaty of Westphalia, by which the Germanic constitution was settled, and those disputes which had so long torn the empire were ended : the duchies of Bremen and Verden, all the Upper and part of Lower Pomerania,the city of \Vismar and the isle of Ilugen, were assigned to Sweden, and 5,000,000 of crowns were given to the army. Su-edcn to the death of Char If s A'.— bwwlcti

now enjoyed some years of repose. Charles Gustavus, count palatine, having gained the favor of Christina, was appointed generalissimo of the forces, and heir apparent to the crown. A marriage was proposed between them; but the queen would never listen to this or any other proposal of the kind. In 1650 the ceremony of the queen's coronation was performed ; but in 1654 she resigned the crown in favor of Gustavus. See CHRISTINA.

Charles Gustavus, who now took the name of Charles X., found himself involved in considerable difficulties on his accession. The treasury was quite exhausted ; great part of the revenue was appointed for the support of Christina's household ; the people were oppressed with taxes ; the nation, having been disarmed for several years, began to lose its reputation. To remedy these evils, Charles proposed to resume all the crown lands which had been alienated to favorites during the late reign ; to repeal the duty upon salt ; to put the kingdom in a posture of defence; and to enter upon a war with some neighbouring state. Under pretence that Casimir king of Poland had questioned his title to the throne, he prepared to invade that kingdom. Several embassies were sent from Poland to Stockholm ; but they returned without their errand. General Wittemburg made an irruption into Poland from Pomerania. The Poles opposed him with an army of 15,000 men, but in a short time they entirely dispersed themselves. Charles, with a powerful army, pursued his march, all the

cities throwing open their gates to him. As he advanced to Cracow, Casimir made one effort to save his capital. But his army amounted only to 10,000 men ; and these, after a feeble resistance, fled with precipitation, having lost 1000 men in killed and prisoners. A few days after this, Charles defeated the Poles a second time about twenty-four miles from Cracow ; upon which Casimir fled with his family to Oppelen, in Silesia. The capital was then invested ; and, though defended with the utmost valor by Stephen Czarneski, was soon obliged to capitulate. Thus, in less than three months, Charles apparently be-came master of Poland ; but the Poles had no intention of abandoning their former sovereign.

In 1656 a war took place with the elector of Brandenburg. While Charles was employed in the conquest of Poland, that prince had invaded the Royal and Ducal Prussia, and reduced the most considerable towns. The king of Sweden marched against him, defeated his forces in several slight encounters, and obliged him to own that he was a vassal of Sweden. These rapid conquests alarmed all Europe ; and the different powers sought for means of driving the S %vedes out of Poland, which they had so unjustly seized. The Poles, assured that they should be assisted, every where revolted and massacred the Swedes. Casimir returned from Silesia ; and those troops and generals who had submitted to Charles now ranged themselves under his antagonist. Charles immediately marched for Prussia, and totally defeated 12,000 Poles under Czarneski. This did not hinder all the Poles incorporated with his troops to desert ; which reduced his army : and, the campaign beine performed in the depth of winter, he was

obliged to retreat to Prussia. In his march he was harassed by the Poles ; and a body of 400O Swedes was defeated by them at Warka. But this loss was soon after compensated by a complete victory gained by Adolphus the king’s brother, and general Wrangel, over Czarneski. In the mean time Charles took measures for laying siege to Dantzic; but the Dutch threatened to oppose him, unless a proper regard was paid to their interest. Charles accordingly granted them advantageous terms ; and afterwards gained o*er the elector of Brandenburg, by ceding to him the sovereignty of Prussia, that he might be at liberty to turn his whole strength against Poland. By the treaty with the elector, the latter was to assist Charles in his war with Poland; but the elector had so procrastinated matters, that the Poles, having obtained assistance from the Tartars, had reduced the city of Warsaw. The two princes however now marched in concert against their enemies, who

were encamped in a strong situation near Warsaw, their camp being fronted by the Vistula. The Poles were driven from their entrenchments with prodigious slaughter, and a vast number taken prisoners. The Poles and Tartars then labored to break the alliance; entered Ducal Prussia, and defeated the electoral army, taking prince Radzivil and other great persons prisoners. The Swedes soon had their revenge. General Steinboek attacked the Polish army at Philippowa, and overthrew it with such slaughter as obliged the Poles to quit the field. A more tormidable enemy than the Poles now began to appear. The Russians invaded the provinces of Careha, Ingermania, and Livonia, while the elector of Brandenburg began to waver in his fidelity. To preserve this only ally at such a critical juncture, Charles was obliged to give him more advantageous terms ; while the Russians were repulsed in Carelia.and Ingermania. But in Livonia they had better success, two important fortresses falling into their hands ; after which they laid siege to Riga. For seven months they battered the walls of this city, without once venturing to pass the ditch or storm the practicable breaches. The besieged, under Magnus de la Gardie and Simon Elelmfield, defended themselves with the greatest intrepidity, cutting off many thousands of the enemy in the sallies they made. At last they attacked the Russian camp, drove them out of it with great slaughter, and obliged them to raise the siege with precipitation.

Charles, notwithstanding the number of his enemies, was now become so formidable by the valor of his troops that whole armies often fled on the very news of his approach. At last, in 1657, the Poles, finding they could not resist him in the field, harassed the Swedes on their march, and cut off the foragers and convoys. This proved much more destructive to the Swedes than their former method ; so that Charles was obliged to enter into an alliance with Ragotski prince of Transylvania, by assigning him certain provinces in his neighbourhood, to furnish himself with irregular troops, who might fight the Poles in their own way. But the confederates, after spending a whole campaign in Lithuania, were obliged to return without accomplishing

more than the reduction of a single fortress ; upon which Charles returned with the Swedish army to Prussia. Leopold, the young king of Hungary, having beheld for a long time the Swedes with a jealous eye, resolved to declare for Poland. To curb the ambition of the Swedish monarch he solicited the king of Denmark to break with him. This was complied with, and the Danes invaded Bremen. Charles hastened to oppose this new enemy ; which gave such offence to Ragotski that he neglected to take proper measures for his own defence in the absence of the Swedes, and suffered his army to be destroyed by the Poles and Tartars. At the same time the Turks invaded Transylvania, under pretence that Ragotski, being a vassal of the grand seisnior, had no right to invade Poland without his leave. Rogotski opposed them in the field ; where he was defeated and killed, leaving Charles destitute of the only ally on whom he could have depended. But, not dismayed by this misfortune, he traversed Pomerania and Mecklenburg ; after which he fell upon Holstein, while general Wrangel with another corps entered Bremen. In fifteen days Wrangel retook all the towns which the enemy had reduced ; defeated and drove the Danish army out of the country, killing 3000 of their best soldiers. In Holstein the king reduced several fortresses, laid Itzehoe in ashes, defeated a body of Danes, and laid siege to Frederic Udda, into which the Danes had thrown a strong garrison. The conduct of this siese he left to Wrangel, he himself retiring to Wismar to observe the situation of Poland ; but no sooner was he gone than Wrangel attacked the place with such fury that he became master of it in two hours. In Holland the Swedes were defeated ; but the enemy derived no advantage from their victory : at sea the fleets met and maintained a hot engagement for two days, without any considerable advantage on either side. In Poland matters went on much worse. The house of Austria had now declared for Casirnir ; a German army entered Poland and reduced Cracow, though not without great loss. Czarneski entered Pomerania, where he butchered the unhappy peasants ; but on the approach of Charles he fled as usual, having gained nothing by his expedition but the character of a cruel barbarian. The king of Sweden was now surrounded by enemies. The elector of Brandenburg had declared against him ; and he had besides to en-gage the armies of Austria, Poland, Russia, and Denmark in the field. In this dangerous situation he resolved to attack Denmark in such a manner as should oblige that power to come to a speedy accommodation. His designs were forwarded by a very early frost which enabled him to transport his troops without shipping. Having passed over on the ice to the island of Funen, he cut in pieces a body of 4000 Danish soldiers and 500

peasants. The whole island was reduced in a few days ; after which he passed to Langland, then to Laaland, after that to Falstre, and lastly to Zealand. The Danes were terrified at this unexpected invasion, and were giving themselves up to despair, when Charles offered peace upon equitable terms. The king of Denmark very gladly consented. By this treaty, called the

treaty of Roschild, concluded 12th March J658, the provinces of Schonen, Halland, and Bleking, Lyster, and Huwen, the isle of Borkholm, the bailliages of Bahus and Drontheim in Norway, were yielded to Sweden, and a free passage through the sound was granted to the Swedish ships.

No sooner was Charles retired than the kins,' of Denmark began to act against him in an un-derhand manner ; on which, resolving to anticipate him in his design, he appeared unexpectedly with a fleet before Copenhagen. Had he given the assault immediately, before the inhabitants had time to recover from their surprise, it would probably have surrendered at once ; but, by landing at the distance of seventeen miles, he gave them time to prepare for their defence : the siege proved extremely tedious, and at last the place was relieved by a Dutch fleet. On this Charles converted the siege into a blockade, which continued till the end of the war. Wrangel reduced the strong fortress of Gronenburg ; and the Swedish forces were so judiciously posted that all Denmark was in a manner blocked up ; when in 1660 king Charles X. died of an epidemical fever : and thus an end was put for that time to all the ambitious designs of Sweden.

To the imprisonment of Charles XI I. in Turkey. — The new king Charles XI. was a minor at his father's death ; and, as the kingdom was involved in a dangerous war with so many enemies, the regency determined to conclude a peace, if it could be obtained on reasonable terms. A treaty was accordingly concluded at Oliva : by which Casimir renounced his pretensions to the crown of Poland, and that republic gave up all pretensions to Livonia. Bornholm and Drontheim were ceded to Denmark ; and an equivalent in Schonen remained with Sweden. During the minority of the king nothing remarkable occurred. In 1672 he entered into alliance with, Louis XIV.; which, in 1674, involved him in a war with the elector of Brandenburg. At first the Swedes carried all before them ; and, general Wrangel having fallen sick, they continued their conquests under Mardenfeldt. Almost all the towns in Brandenburg were reduced when the elector arrived with an army. lie retook several towns, defeated Mardenfeldt in a general

engagement, and soon after forced them to abandon all their conquests. In conjunction with the Danes, he then invaded the Swedish dominions : main-places of importance were reduced ; and in 1076 Sweden received a most destructive blow by the defeat of her fleet in an engagement witliˆ the combined fleets of Denmark and Holland. Soon after this the king took the government into his own hands, and in some degree restored the fortune of Sweden ; but, though matters went on in a prosperous way where the king commanded in person, the same disgrace attended the Swedish arms in every other quarter. In Pomerania count Konigsmark lost every part of importance excepting Stralsund, Stetin, and Gripswald. In 1678 the Swedish fleet was defeated in two en-oao-ements. At Landscroon a most obstinate battle was fought from 10 A. M. till 6 I'- M.. when both parties were obliged by fitijiuc to r«- tire to their camps. At Oldcval, in Noru '

Swedes were defeated ; and the Danes laid desolate the islands of Oeland, Smaland, Unno, and Kuno ; while the electoral troops and Imperialists reduced count Konigsmark to the utmost distress near Stralsund. But in this deplorable situation count Konigsmark attacked his enemies to such advantage that he obtained a complete victory ; after which he ravaged the duchy of Mecklenburg. Yet he could not prevent the elector from reducing Slralsund ; after which he was obliged to evacuate Pomerania; and, to complete his distress, the fleet which transported the Swedish army from Pomerania was wrecked on the coast of Bornholm; by which accident 2000 persons were drowned, and the remainder plundered and taken prisoners by the Danes, though they had been furnished with passports from king Frederic. In this unprosperous situation of affairs a peace was concluded at St. Germain's with France, by which the Swedes and Danes were left to decide their quarrel by themselves. Denmark being no match for Sweden, even in her distressed situation, a treaty was soon concluded on terms very favorable to Sweden ; and confirmed by a marriage between Charles and Ulrica Eleonora, daughter to the king of Denmark. From this time the Swedish monarch applied himself to

the reformation of the state ; and, by artfully managing the disputes between the nobility and peasants, he obtained a decree of the states empowering him to alter the constitution as he pleased. Being thus invested with absolute power, he proceeded to take some very extraordinary measures. In 1685 it was projected to liquidate the public debts by raising the nominal value of money, without adding any thing to its intrinsic value. This was put into execution in 1686, by which the creditors of the government lost upwards of 9,000,000 of crowns. This, with some other arbitrary steps, disgusted all the nobility, merchants, and crown creditors. In Livonia they were highly resented ; and remonstrances were repeatedly sent by the hands of deputies, who had orders to insist upon their privileges, confirmed by many acts of the king's predecessors. The deputies could obtain nothing, so that the diet was assembled. On their report the nobility resolved to draw up a stronger remonstrance than any of the former, to be presented to the king by captain Patkul, one of the deputies, who had already distinguished himself by his boldness and attachment to liberty. His public spirit, however, produced no other effect than to procure his own destruction. See PATKUL. On the 15ih April, 1697, died Charles XL, leaving his crown to his son, the celebrated Charles XII., then a minor.

Charles XIL, on his accession, was only fifteen. He was scarcely seated on the throne when a powerful combination was formed against him. Augustus, kinsr of Poland, formed designs on Livonia ; Christian V. of Denmark revived the disputes with the duke of Holstein, as a pre-lude to a war with Sweden ; and Peter the Great of Muscovy began to form designs upon Ingria, formerly a province of Russia. In 1699 Christian marched an army into Holstein ; Charles sent troops to the duke's assistance ; but before their arrival the Danes had ravaged the

country, taken the castle of Gottorp, and laid siege to Tonningen. Here Christian commanded in person ; and was assisted by the troops ot Saxony, Brandenburg, Wolfenbuttle, and Hesse-Cassel. England and Holland as guarantees of the last treaty with Denmark, in concert with Sweden, joined Charles against this confederacy,, and sent fleets to the Baltic. They proposed a termination of the war upon equitable terms ; but these were haughtily refused by the Danish monarch, who despised the youth of Charles, and relied upon his alliance with Saxony, Brandenburg, Poland, and Russia. The town of Tonningen, however, resisted all his efforts ; andr when he ordered the place to be stormed, his troops were driven headlong from the walls by a few Swedes under general Bannier. In 1700 Charles, having entrusted the

affairs of the nation with a council chosen out of the senate, set out on the 8th of May from his capital, to which he never afterwards returned. He embarked at Carlscroon, and defeated the fleet of the allies. Having made a descent on Zealand, he defeated a body of cavalry, and proceeded to invest Copenhagen by sea and land. Frederick IV., the new king of Denmark, saw the danger of having his capital destroyed, and concluded a treaty in eleven days, upon the same terms as the former. Charles, being thus at liberty to turn his arms against the other princes, resolved to lead his army against Augustus king of Poland ; but, hearing that the czar had laid siege to Narva with 100,000 men, he immediately embarked at Carlscroon, though it was then mid winter, and the Baltic scarcely navigable ; and soon landed at Pernaw in Livonia with part of his forces. His army did not exceed 20,000 men ; but they were the best soldiers in Europe, while the Russians were only an undisciplined rabble. The consequence was, the Swedes were victorious, entirely routing this vast army, and taking all the cannon, 20,000 prisoners, and entirely destroying the remainder.

Peter was advancing with 40,000 men to surround the Swedes, when he received intelligence of the dreadful defeat at Narva. He was greatly chagrined ; but returned to his own dominions to raise another army. He evacuated all the provinces which he had invaded, and for a time abandoned all his great projects, thus leaving Charles at liberty to prosecute the war against Poland. As Augustus had expected an attack, he endeavoured to draw the czar into a closer alliance with him. The two monarchs had an interview at Birsen, where it was agreed that Augustus should lend the czar 50,000 German soldiers, to be paid by the czar, who should send an equal number of his troops to be trained up to war in Poland ; and that he should pay the king 3,000,000 of rixdollars in two years. Of this treaty Charles had notice, and, by means of his minister, count Piper, entirely frustrated the scheme. In 1701 Charles, having received a reinforcement from Sweden, took the field, and appeared suddenly on the banks of the Duna, along which the Saxon army was posted to receive him ; he gained a signal victory.

This victory was followed by the surrender of all the towns and fortresses in the duchy of Cour .

SWEDEN.

laud, ine King then passed into Lithuania, where every town opened its gates to him. At Birsen an army of 20,000 Russians retired with precipitation on his approach, when Charles, perceiving that Poland was greatly disaffected to Augustus, began to project the scheme of dethroning him by means of his own subjects. While count Piper was intriguing with the Poles for this purpose, Augustus determined to trust his fortune to the Saxon army and the r.obility of Cracow, who offered to support him to the utmost. The Saxon army was now advanced to the frontiers, and Augustus put himself at the head of it. Being joined by the nobility of Cra-cow, his forces amounted to 30,00o"men, all brave and well disciplined. With these he marched in quest of his enemy ; who did not decline the combat, though he had with him only 12,000 men. Though the Saxons were strongly posted, they were entirely defeated, with the loss of 4000 killed, 2000 prisoners, and all their baggage and cannon. This victory was followed by the loss of Cracow ; after which Charles set out in pursuit of the flying army, with a design of preventing them from reassembling; but his horse falling under him, he had the misfortune to break his thigh bone, by which he was confined six weeks; and thus Augustus obtained some respite.

Augustus made the best of this interval. Hav-ing convoked a diet first at Marienburg, and then at Lublin, from them he obtained the following resolutions: that an army of 50,000 men should be raised by the republic for the service of the prince ; that six weeks should be allowed the Swedes to determine whether they were for war or peace ; and that the same time should be granted to the turbulent and discontented nobles of Poland to make their concessions. To counteract the effects of these resolutions, Charles assembled another diet at Warsaw ; and, while the two assemblies disputed concerning their rights and privileges, he recovered of his wound, received a strong reinforcement from Pomerania, and utterly defeated and dispersed the remains of the Saxon army. The ill-fortune of Augustus continued. In 1704 he was formally deposed \iy the diet, and the crown conferred by Charles on Stanislaus Lecsinsky palatine of Posnania. Augustus, however, did not yet tamely give up his kingdom. His adherents daily skirmished with the Swedes, and Augustus himself, being reinforced by 9000 Russians, retook Warsaw, and was very near surprising the new king, who lived in perfect security in the city, while Charles fought in his cause. Count Horn, with 1500 Swedes, vigorously defended the citadel; but, finding it no longer

tenable, he surrendered at discretion. The reduction of Warsaw was amongst the last advantages gained by Augustus in this war. His troops were now composed of Saxon recruits and undisciplined Poles, who had no attachment to his person. Charles and Stanislaus advanced with the victorious army ; the Saxons fled, and the towns for several miles round sent their submissions. The Poles and Saxons were under Schullemberg, a most expe-general, who used every expedient to

check the progress of the Swedes. But, with all his conduct and caution, he found himself out-witted, and Charles near his carnp, ready to fall upon him, while he thought him at fifty leagues distance. The king attacked him with a superior army, but entirely composed of horse. This was almost the first time that infantry had been regularly opposed to cavalry, and the superiority of the former was evident. After the engagement had continued about three hours, the Saxons retreated in good order ; which no enemy had ever done before in any engagement with Charles. The Swedes pursued them towards the Oder but Schullemberg effected a retreat which Charles always spoke of with admiration, and said he had been conquered by SchullemberK. No material advantage, however, resulted from t'his to Augustus ; who was again obliged to leave Poland, and fortify the capital of Saxony which he expected every moment to see invested. In the mean time, the Russians, having recovered their spirits, fell upon the Swedes in Livonia with the utmost fury. Narva, Dorpt, and several other towns were taken, and the inhabitants and garrisons treated with great barbarity. Soon after an army of 100,000 Russians entered Poland : 60,000 Cossacks, under Mazeppa, entered the country at the same time, and ravaged every thing with the fury of barbarians. Schullemberg, loo, advanced with 14,000 Saxons and 7000 Russians, disciplined in Germany, and reputed excellent soldiers. But Charles seemed to triumph over his enemies with more ease, the more numerous they were. The Russians were defeated so fast that they were all dispersed be-fore one party had notice of the misfortunes of another. The Swedish general Renschild engaged and defeated Schullemberg in half an hour. Whole regiments of Saxons threw do\Mi thr-ir arms, and bested their lives : 6000 were .slain in the field, and 7000 taken prisoners; thirty-six pieces of cannon, 11,000 muskets, forty pairs of colors and standards, with all the Saxon baggage, fell into the hands of the Swedes : and the consequences were still more important ; for now a passage was opened into Saxony, and Augustus seemed to be in as great danger of losing his hereditary dominions as he had be.en of losing Poland. This extraordinary victory, which was

gained February 12th, 1706, was looked upon with admiration, and thought to make the re-nown of Renschild equal to that of his sovereign. Charles himself became jealous of his fame. But the cruelty of 1'enschild sullied his reputation ; for six hours after the engagement, he caused 1000 Russians to he massacred in cold blood, to revenge, as he said, the cruelties they had committed in Poland.

Soon after this victory, Charles entered Saxony at the head of 24,000 men. The diet at Hatis-bon declared him an enemy to the empire if he crossed the Oder. But to this declaration he paid no resard, but pursued his march ; while Augustus was reduced to the condition of a vagrant in Poland, where he possesst-d not a single town besides Cracow. Into this city he threw himself with a few Saxon, Polish, and Russian regiments, and began to erect some for-

tifications for its defence ; but the approach of the Swedish general Meyerfeldt, and the news of the invasion of Saxony, disconcerted all his measures, and threw him into despair. The Russians indeed were his faithful allies ; but he dreaded them almost as much as the Swedes : so that he was under the necessity of writing to Charles with his own hand, begging for peace on any terms. But, as he was then at the mercy of the Russians, this transaction was concealed with the greatest care. His emissaries were introduced to Charles in the night time ; and received the following answer :- — That Augustus should for ever renounce the crown of Poland, acknowledge Stanislaus, and promise never to reascend the throne, should an opportunity offer ; that he should release the princes Sobieski, and all the Swedish prisoners made in the course of the war; surrender Patkul, then resident at his court as ambassador for the czar of Muscovy ; and stop proceedings against all who had passed from his into the Swedish service. Augustus all this time was obliged to continue a show of war, though he had neither ability nor inclination to carry it on. He was joined by prince Menzikoff with 30,000 Russians ; which obliged him, contrary to his inclination, to engage with Meyerfeldt, who commanded 10,000 men, one half of whom were Swedes. As at this

time no disparity of numbers was reckoned an equivalent to the valor of the Swedes, Meyerfeldt did not decline the combat, though the army of the enemy was four times as numerous as his own. With his countrymen he defeated the enemy's first line, and was on the point of defeating the second when Stanislaus, with the Poles and Lithuanians, gave way. Meyerfeldt then perceived that the battle was lost ; but he fought desperately, to avoid the disgrace of a defeat. At last, however, he was oppressed by numbers, and forced to surrender : suffering the Swedes, for the first time, to be conquered by their enemies. The whole army were taken prisoners excepting major-general Krassau; who, having repeatedly rallied a body of horse formed into a brigade, at last broke through the enemy, and escaped to Posnania.

Augustus had scarcely sung Te Deum for this victory, when his plenipotentiary returned from Saxony with the articles of the treaty above-mentioned. The king hesitated and scrupled, but at last signed them ; after which he set out for Saxony, glad at any rate to be freed from such an enemy as the king of Sweden, and from such allies as the Russians. The czar Peter was no sooner informed of this extraordinary treaty, and the cruel execution of his plenipotentiary Patkul (see PATKUL), than he sent letters to every court in Christendom, complaining of this gross violation of the law of nations, but without effect. In 1707 he entered Poland at the head of 60,000 men. Advancing to Leopold, he made himself master of that city, where he assembled a diet and solemnly deposed Stanislaus, with the same ceremonies which had been used with regard to Augustus. The country was now reduced to the most miserable situation ; one party through fear adhered to the Swedes ; another was gained over, or forced by Peter to

take part with him : u violent civil war took place between the two, and great numbers of people were butchered, while cities, towns, and villages, were laid in ashes by the frantic multitude. The appearance of a Swedish army under king Stanislaus and general Lewenhaupt put a stop to these disorders, Peter himself not caring to stand before such enemies. He retired, therefore, into Lithuania, giving as the cause of his retreat, that the country could not supply him with provisions and forage necessary for so great an army. In the mean time Charles had taken up his residence in Saxony, where he gave law to the court of Vienna, and intimidated all Eu-rope. He declared himself the protector of the Protestant interest in Germany, particularly of the emperor s Protestant subjects in Silesia. He desired, or rather commanded, the emperor to renew and confirm to them all the liberties granted by the

treaties of Westphalia, but since that time reclaimed or eluded at the treaty of Rys-wick. The emperor durst not refuse; and upwards of 100 churches were given to the Protestants. At last, Charles began to evacuate Saxony, in pursuit of his great plan, the dethroning czar Peter, and conquering the vast empire of Russia. While the army was on full march, in the neighbourhood of Dresden, he surprised king Augustus with a visit with only five attendants.

The armies of Sweden, in Saxony, Poland, and Finland, now exceeded 70,000 men ; a force more than sufficient to have conquered all the power of Russia had they met them on equal terms. Peter, who had his army dispersed in small parties, instantly assembled it on receiving notice of the king of Sweden's march ; was making all possible preparations for a vigorous resistance, and was on the point of attacking Stanislaus, when the approach of Charles struck his whole army with terror. In January 1708 he passed the Niemen, and entered the south gate of Grodno, just as Peter was quitting the place by the north gate. Charles at this time had advanced to some distance before the army at the head of 600 horse. The czar, having intelligence of his situation, sent back a detachment of 2000 men to attack him : but they were utterly defeated ; and this disappointment was followed by the total evacuation of Lithuania. The king pursued his flying enemies in the midst of snow and ice, over mountains, rivers, morasses, and through almost every obstacle that could be surmounted by human power; and, coming up with them at the Boristhenes, completely defeated them.

The czar, finding himself closely pursued bv the enemy with whom he was not able to cope, proposed peace; but Charles returned no other answer than that he would treat at Moscow ; which being reported to Peter, he coolly replied, ' My brother Charles affects to play Alexander, but he will not find in me a Darius.' However he did not venture an engagement, but continued his retreat ; and Charles pursued so closely that he was daily skirmishing with the rear of the enemy. In these actions the Swedes had generally the advantage, though in the main these victories proved detrimental, by weakening th*j army in a country where it was impossible to re-

emit. Near Smolensko, the king, with only six regiments, defeated a

body of 10,000 horse and 6000 Calmucks. In this engagement he was exposed to the utmost danger, the enemy having separated him from his troops.

By the 3d of October 1708 Charles was within 109 leagues of Moscow; but Peter had made the roads impassable, either by laying them under water, digging deep ditches, or covering them with the wood of whole forests. He had also destroyed the villages on every side, and taken away every possibility of subsisting an army. The season was also far advanced ; the intense severe weather was approaching; so that the Swedes were threatened with all the miseries of cold and famine, at the same time that they were exposed to the attacks of an enemy greatly superior in number. For these reasons the king resolved to pass through the Ukrain, where Ma-y.eppa, a Polish gentlemau, was general and chief of the nation. Mazeppa, having been affronted by the czar, readily entered into a treaty with Charles, whom he promised to assist with 30,000 men, great quantities of provisions and ammunition, and with all his treasures, which were immense. The Swedish army advanced towards the Disna, where they had to encounter the greatest difficulties ; a forest above forty leagues in extent filled with rocks, mountains, and marshes. To complete their misfortunes, they were led ninety miles out of the right way; all the artillery was sunk in bogs and marshes; the provision of the soldiers, which consisted of biscuit, was exhausted ; and the whole army spent and emaciated when they arrived at the Disna. Here they expected to have met Mazeppa with his reinforcement; but, instead of that, they perceived the opposite banks of the river covered with a hostile army, and the passage itself almost impracticable. Charles, however, was still undaunted ; he let his soldiers by ropes down the steep banks ; they crossed the river, either by swimming or on rafters hastily put together; drove the Russians from their post, and continued their march. Mazeppa soon after appeared, having with him about 6000 broken remains of the army he had promised. The Russians had got intelligence of his designs, defeated and dispersed his adherents, laid his towns in ashes, and taken all the provisions collected for the Swedish army. However, he still hoped to be useful by his intelligence in an unknown country; and the Cossacks, out of revenge, crowded daily to the camp with provisions. Greater misfortunes still awaited the Swedes. When Charles entered the Ukrain, he had sent orders to general Lewenhaupt to meet him with 15,000 men, 6000 of whom were Swedes, and a large convoy of provisions. Against this detachment Peter now bent his whole force, and marched against him with an army of 65,000 men, Lewenhaupt defeated him in a number of engagements, and at last arrived at the camp of Charles with 4000

men, after having killed upwards of 30,000 of the enemy on their match.

This was the last effort of Swedish valor. The difficulties they had now to undergo exceed what human nature could bear; yet still they hoped by constancy and courage to overcome

every obstacle-. [„ the severest winter known tor a long tune, evcˆn in Russia, they made Ion-marches, clothed like savages in the skins ,.} wild beasts; all the draught horses perished-thousands of soldiers dropped dead with cold and hunger : so that by February, 1707, the whole army was reduced to 18,000. Amidst numberless difficulties these penetrated at last to Pultowa, a town on the eastern frontier of the Ukrain where the czar had laid up magazines ; and of these Charles resolved to get possession. The place made an obstinate defence, the Swedes were repulsed in every assault, and 8000 of them were defeated and almost entirely cut off, in an engagement with a party of Russians. To complete his misfortunes, Charles received a shot from a carabine in his heel, which shattered the bone. For some days the czar, with an army of 70,000 men, hud lain at a small distance, harassing the Swedish camp, and cutting off the convoys of provision ; but now intelligence was received, that he was advancing, as if with a design of attacking the lines. In this situation, Charles determined to be the assaulter, and on the 8th of July, 1709, he lost the memorable battle of Pultowa, which decided the fate of the Swedes. Our limits forbid a detail of the particulars, but the issue of the day was, that Charles escaped with a mere handful of followers; the rest of his army being slain or taken prisoners.

Charles fled in a mean calash, attended by a little troop inviolably attached to his person, some on foot, and some on horseback. They were obliged to cross a sandy desert, where neither herb nor tree was to be seen, and where the burning heat and want of water were more intolerable than the extremities of cold they had formerly suffered. They reached Oczakow, the bashaw of which supplied the king with every necessary. But it was some time before boats could be got ready for transporting the whole of the king’s attendants ; by which accident 500 Swedes and Cossacks fell into the hands of thr-enemy. This loss affected him more than all his other misfortunes. The king remained

but a few days at Oczakow, when the serasquier of Bender sent an aga to compliment him on his arrival in the Turkish dominions, and to invite him to that city. Here he was treated with the utmost hospitality. In the Turkish divan it was proposed to escort Charles with a numerous army to the frontiers of Poland : but the revolution which took place there quickly put an end to all such projects. Augustus thought himseit' no longer bound to observe »he treaty which he had made, than Charles was at hand to force him to it. After the battle of Pultowa, therefore, he entered Poland, and took every measure, in concert with the czar, for the recovery of his kingdom. Stanislaus was obliged to leave his dominions and fly to Bender, in the disguise of a Swedish officer, to share the fortune of Charles. It was not in Poland alone that the Swedish affairs be<jan to suffer in consequence of the defeat at Pultowa. The Danes invaded the province of Schonen with an army of 13,000 foot and 2500 horse. Only 13,000 Swedish forces remained to defend all the territories possessed by

Charles in Germany ; and of these only a small part were allotted for the defence of Schonen. The regency of Sweden, however, exerted themselves to the utmost to repel this ungenerous invasion; and, having collected an army of 12,000 militia and 8000 regulars, despatched them under general Steenboek into Schonen. Some Saxon troops were incorporated in this army ; and among these a prodigious desertion took place, which the general found it impossible to prevent ; and thus the Danes gained several advantages, and at last took Christianstadt. Their insolence on this success was so great that the Swedes demanded to be instantly led against them. Here the good fortune of Sweden seemed once more to revive. The Danes were driven from a very strong situation, with the loss of 8000 killed and taken prisoners, besides a vast number wounded.

In the mean time Charles, by his agents, count Poniatowski and Sieur Neugebar, used his utmost efforts to procure a rupture between the Porte and Russia. For a long time the money bestowed by Peter on the viziers and janisaries prevailed; but at last, in 1711, the grand

seignior, influenced by his mother, who was strongly in the interest of Charles, and who had been wont to call him her lion, determined to avenge his quarrel with Peter. He therefore gave orders to the vizier to fall upon the Russians with an army of 200,000 men. The vizier promised obedience ; but professed his ignorance in the art of war. The khan of Crim Tartary, who had been gained over by the reputation and presents of the king of Sweden, had orders to take the field with 40,000 of his men, and had the liberty of assembling his army at Ben-der, that Charles might see that the war was undertaken upon his account. The czar, on these news, left the siege of Riga, where he had continued for some months ; and with 24,000 men entered Moldavia, where he was joined by Cantemir, a vassal of the Porte. The vizier marched against him with a prodigious army; and, through the negligence of the czar, cooped him up in such a manner that he could neither advance nor retreat. In this desperate situation he perceived that he was now in as bad a situation as Charles at Pultowa ; and gave orders for breaking through the enemy with fixed bayonets. The desponding spiritless soldiers, however, were little disposed to execute these orders; when Catharine, wife to the czar, without his knowledge, set on foot a treaty with the vizier ; and, having soon obtained his consent, had the peace signed in six hours ; by which meat:? the who t Russian army was saved. The new treaty was most violently opposed by count Poniatowski and the khan of Tartary. The former had made the king acquainted with the situation of both armies; on which he instantly set out from Bender, filled with the hopes of fighting the Russians, and taking ample revenge. Having ridden fifty leagues post, he arrived at the camp just as the czar was drawing off his half-famished troops. He alighted at Poniatowski's tent ; and, being informed of particulars, instantly flew in a. rage to the vizier, whom he loaded with reproach« and accused of treachery. Recollecting himself, however, he proposed a method by which the fault might be remedied ; but, finding his proposal rejected, he posted back to Bender, after having by the grossest insults showed his contempt of the vizier. This violent behaviour of Charles did not promote his interest. The vizier perceived that his stay in Turkey might prove fatal to himself, and therefore determined to get him out of the country as soon as possible, either by fair means or foul. Succeeding viziers adopted the same plan; and at last the grand seignior himself wrote a letter to the king, in which he desired him to depart by next winter, promising to supply him with a sufficient guard, with money, and every thing else necessary for his journey. Charles gave an evasive answer, and determined to procrastinate his journey, as well to gratify his own stubborn temper as because he discovered a correspondence between Augustus and the khan of

Tartary, the object of which he had reason to believe was to betray him to the Saxons. When he was therefore again pressed to fix the day of his departure, he replied that he could not think of going before his debts were paid. Being asked how much was necessary for this purpose, he replied, 1000 purses (of thirty sequins each). 1200 purses were instantly sent to the serasquier at Bender, with orders to deliver them to the king of Sweden, but not before he should have begun his journey. By fair promises, however, Charles persuaded him to part with the money; after which, instead of setting out, he squandered away his treasure in presents and gratifications, and then demanded 1000 purses more before he would set out. The serasquier was astonished at this behaviour. He shed tears; and, turning to the king, told him, that his head would be the forfeit of having obliged him with the money. The grand seignior, on being acquainted with this shameful behaviour of Charles, flew into a rage, and called an extraordinary divan, where he himself spoke, a thing very unusual for the Turkish monarchs. It was unanimously agreed that such a troublesome guest ought to he removed by force should other means fail. Orders were therefore positively sent to Charles to depart ; and, in case of refusal, to attack him in his quarters. Nothing could equal his obstinacy on this occasion : in spite of the menaces of his enemies, in spite of the intreaties of his friends, he persisted in his resolution ; and at last determined to resist, with 300 Swedes, being all the attendants he had, an army of 20,000 janisaries well armed and furnished with cannon. At length he was attacked in earnest; though, even in this extremity, the Turks showed their regard to him, and were tender of his life. Most of the Swedes surrendered, as thinking it the only method of saving the king's life. But Charles became the more obstinate the more desperate his affairs seemed to be. With forty menial servants only, and the generals Hord and Dardorff, he determined to defend himself to the last extremity, and, after the house was on fire, he was forcing his way to an adjoining building, which had a stone roof, when his foot slipped, and his fall saved his life by making him a prisoner. This happened on the 12th of February

1713. He was now kept prisoner, with all his retinue: and in this situation he was visited in disguise by the unfortunate Stanislaus, whom he desired ' never to make peace with Augustus;' adding, ' we shall soon have a change in our affairs.'

Sweden, from the return of Charles XII. unto his death. — Such were the considerations that still occurred to the mind of Charles; however, at last he seemed inclined to submit to his fate, and began seriously to think of returning to his kingdom, now reduced to the most deplorable situation. His habitation was now fixed at Demotica, a small town about six leagues from Adrianople. Here he was allowed provisions for his own table and those of his retinue ; but only twenty-five crowns a day in money, instead of 500 which he had received at Bender. During his residence here he received a deputation from Hesse-Cassel, soliciting his consent to the marriage of Frederick the landgrave with Ulri-ca Eleonora, princess royal of Sweden ; to which he readily agreed. A deputation was also sent him by the regency of Sweden, requesting that he would prepare for returning to his own dominions which were ready to sink under a ruinous war in his absence. What determined him, however, more than any thing to hasten his return, was the following accident : — The new grand vizier Ibrahim Molla, having for private reasons determined to come to a rupture •with the czar, invited Charles to a conference, in the style and with the familiarity of an equal. Charles was so much chagrined at this indignity, that he sent his chancellor Mullern to meet the vizier with a pretence that he was sick. To avoid giving offence to this minister, Charles was obliged to keep his bed during his residence at Demotica, which was for ten months after. At last this vizier being strangled, and the Swedish interest at the Porte thereby entirely ruined, he determined to quit Turkey at all events. His departure was to be negociated by his favorite Grothusen, whom he vested with the character of ambassador extraordinary; sending him to Adrianople with a train of fourteen persons richly dressed. To equip this retinue the king was reduced to the most mortifying shifts, and to the necessity of borrowing money from usurers at fifty per cent. The great object was, to obtain from the vizier money and a passport. Grothusen was received with all the respect due to his rank ; but the vizier started difficulties. With regard to the passport, he said, it could be of no use until the consent of the court of Vien-na was first obtained ; and, as to money, he said, ‘ his master knew how to give when he thought proper, but it was beneath his dignity to lend ; that the king should have every necessary provided for his journey, and possibly the Porte might make some pecuniary present, but he would not have it expected.’ The imperial minister, however, removed every difficulty with regard to the passport, by granting it in the most full and ample manner, in the name of the emperor, the princes and states, of Germany. He sent also a present to the king, consisting of a tent of scarlet richly embroidered with gold ; a sabre, the handle of which was studded with

jewels; and eight fine horses richly cnparisoned. Money, the article most wanted, was entirely forgotten ; however, the day was fixed for Charles's departure, and the vizier appointed sixty carriages loaded with all kinds of provisions, and several companies of janisaries and other troops to attend him to the frontiers of Transylvania. On the 14th oi October, 1714, Charles quitted his bed at Demotica, and set out for Sweden. All the princes through whosu territories he was to pass had given orders for his entertainment in the most magnificent man-ner; but the king, perceiving that these compliments only rendered his imprisonment and other misfortunes more conspicuous, suddenly dismissed his Turkish attendants, and, assembling his own people, bid them take no care about him, but make the best of their way to Stralsund. After this he set out post, in the habit of a German officer, attended only by colonel During. Keeping the bye-roads through Hungary, Moravia, Austria, Bavaria, Wirtemburu, the Palatinate, Westphalia, and Mecklenburg, he arrived on the 21st of November at midnight before the gates of Stralsund. Being unknown, he was admitted with difficulty ; but, being soon recognised by the governor, the greatest tokens of joy were shown all over the town. In the midst of the tumult Charles went to bed. He had been booted for sixteen days, and now his legs were swelled to such a degree that it was necessary to cut his boots off. Having slept for some hours, he arose, reviewed his troops, and gave orders for renewing the war with redoubled vigor.

Sweden was now in the greatest distress. On the defeat at Pultowa, the Danes had invaded Schonen, but were defeated by general Steenboek. This victory, however, did not put an end to the war, for the kings of Denmark and Poland, with the czar of Muscovy, entered into stricter bonds of amity than ever. They dreaded the return of Charles to his own dominions, and apprehended that numberless victories would soon efface the remembrance of Pultowa. They determined therefore to make the best use of their time ; and Charles never took a more imprudent resolution than obstinately to remain so long in the Turkish dominions. The kings of Denmark and Poland invaded Pomerania ; but after laying siege in vain to Stralsund, Wismar, and other places, they were obliged to retire with disgrace. In 1712 the king of Denmark invaded and reduced Bremen and Verden; but the same year met with a terrible defeat from Steenboek, with the loss of a vast number killed and wounded, and almost all their artillery taken. The following year, however, this general being pursued, and surrounded by the united forces of the Russians, Danes, and Saxons, was obliged to throw himself into the neutral town of Tonnm uen-where he was

besieged, and obliged to surrender at discretion, with his whole army. The consequence was an invasion of 1-inland by the czar ; which he totally reduced, after defeating the Swedes in several battles. Indeed the Swedish forces were now unable to cope with almost any enemy. The return of Charles, however, seemed to give new life to the nation.

Though the number of inhabitants was visibly diminished, the levies he had ordered were completed in a few weeks ; but the hands left to cultivate the earth consisted of the infirm, aged, and decrepid ; so that a famine was threatened in consequence of the military rage which had seized all the youth of the kingdom. The presence of Charles did not now produce those consequences which the allies had feared. The kingdom was too mucli reduced to be able to furnish the necessary supplies of men and money; and, though the king's coinage and military skill were not in the least diminished, the efforts he made, instead of restoring Sweden to its splendor, served entirely to ruin it. In 1715 Prussia declared against him, on account of his demanding back the town of Stettin, which that monarch had seized. To complete his embarrassment, George I. of Britain also became his enemy. The forces of Denmark, Prussia, Saxony, and Hanover, joined to invest Wismar, while a body of 36,000 men formed the siege of Stralsund ; at the same time that the czar, with a fleet of twenty large ships of war, and 150 transports, carrying 30,000 men, threw every part of the Swedish coast into the greatest consternation. The heroism of Charles could not prevail against so many enemies ; yet he was still so dreadful that the prince of Anhalt, with 12,000 brave troops, did not think himself a match for this furious enemy, when at the head of only 2000, till he had entrenched his army behind a ditch, defended by chevaux de frize. This precaution was not unnecessary ; for in the night Charles with his men clambered up the ditch, and attacked the enemy furiously. Numbers, however, at last prevailed, and Charles was obliged to retire, after having seen his favorite Grothusen, general Dardorff, and During, the companions of his exile, killed by his side, he himself being wounded in the breast. This rash attempt was made to save Rugen, whence the town of Stralsund was> supplied with

provisions. The place was well fortified and garrisoned with 9000 men, with Charles himself at their head ; but nothing could resist the eiforts of the enemy. The houses were laid in ashes by the bombs ; the walls miserably shattered, and large breaches made in them by the cannon ; so that by the 1 7th of December it was proposed to give the assault. The attack on the horn work was desperate ; the enemy was twice repulsed ; but at last, by dint of numbers, effected a lodgment. The next day Charles headed a sally, in which he dealt terrible destruction among the besiegers, but was at length overpowered and obliged to retreat into the town. At last his officers, apprehending that he must either fall into the hands of the enemy, or be buried in the ruins of the place, intreated him to retire. A retreat, however, was now almost as dangerous as to remain in the town, on account of the fleets of the enemy with which the sea was covered ; and this very circumstance induced the king to consent to it. Setting out, therefore, in a small boat with sails and oars, he passed all the enemy's ships and batteries, and arrived safe at Ystedt in Schonen.

To revenge himself for these losses, Charles

invaded Norway with an army of 25,000 men The Danes were every where defeated and pursued with that vigor for which Charles was so remarkable ; but strong reinforcements arriving from Denmark, and provisions failing, he was at last obliged to retire. Soon after this the Swedes lost Wismar ; but, when every thing seemed to go to wreck, baron Goertz, the chief minister and favorite of Charles, set on foot a treaty with the czar, by which the most formidable of all Charles's enemies was taken off. The minister prevailed upon the inflexible temper of Charles, by representing to him that the cession of certain provinces to Peter would induce him to as-sist him in his projects of again dethroning Augustus, and of replacing James on the throne of Britain ; which last scheme he had projected out of revenge for the elector of Hanover having seized on the duchies of Bremen and Verden. In consequence of the conferences between the czar and Goertz, the former engaged to send into Poland an army of 80,000 men to dethrone that prince whom he had so long defended. He engaged also to furnish ships for transporting 30,000 Swedes to Germany, and 10,000 into Denmark. This treaty, however, was not fully ratified ; and the king's death put a final stop to all the great prospects of Sweden. Charles had resolved on the conquest of Norway, and he marched his army into that cold and barren country in October, when the ground was covered with frost and snow. With 18,000 men he formed the siege of Frederickshall, though the severity

of the frost rendered it almost impossible to break the ground. Charles, however, resolved to form trenches : and his soldiers cheerfully obeyed, digging into the ground with the same labor as if they had been piercing a rock. On the llth of December 1718 the king visited the trenches in the midst of a terrible fire from the enemy, to animate his men by his presence. He took his post in a most dangerous station, standing upon a gabion and leaning over the parapet, while the enemy were firing chain shot at the very spot where he stood. He was intreated to change his station ; but he remained obstinate, as if he had been proof against cannon bullets. At last he was seen to fall on the parapet with a deep groan. A small cannon ball had struck him on the temple, beat in the left eye, and forced the right eye quite out of its socket ; his right hand in the mean time grasped the hilt of his sword, as if he had meant to revenge the blow. See CHARLES XII.

From the death of Charles XII. until the revolution in 1772. — Charles XII. was succeeded by his sister, princess Ulrica Eleonora, wife to Frederick, hereditary prince of Hesse. On this occasion the states took care to make a previous stipulation for the recovery of their liberties, and obliged the princess to sign a paper to this purpose before entering on the government. Their first care was to make a peace with Great Britain, which the late king intended to have invaded. The Swedes then, to prevent their farther losses by the progress of the Russian, the Danish, the Saxon, and other arms, made many great sacrifices to obtain peace from those powers. In 1720 queen Ulrica Eleonora resigned the

crown in favor of her husband Frederick, who was elected by the States, and crowned May 3d, 1721. The French, about 1738, formed a dangerous party in the kingdom, under the name of the Hats ; which not only broke the internal quiet of the kingdom, but led it into a ruinous war with Russia, by which the province of Finland was lost. Their Swedish majesties having no children, it was necessary to settle the succession ; especially as the duke of Holstein was descended from the queen's eldest sister, and was, at the same time, the presumptive heir to the empire of Russia. Four competitors appeared : the duke of Holstein Gottorp, prince Frederick of Hesse-Cassel, nephew to the king, the prince of Denmark, and the duke of Deux-Ponts. The duke of Holstein had undoubtedly the best right. His name was Peter Ulric, the

son of Charles Frederick, prince of llolstein-Gottorp, and grandson of duke Frederick IV. by Hedwiga Sophia, eldest sister to Charles XII., but he had embraced the Greek religion, that he might succeed to the throne of Russia; which he did, on the death of Elizabeth, and became the unfortunate Peter III. The czarina interposed, and offered to restore all the conquests she had made from Sweden, excepting a small district in Finland, if the Swedes would receive the duke of Holstein's uncle, Adolphus Frederick, bishop of Lubec, as their hereditary prince and successor to their crown. This was agreed to; and a peace was concluded at Abo, under the mediation of his Britannic majesty. This peace was so firmly adhered to by the czarina, that the king of Denmark dropt all resentment for the indignity done his son. Queen Ulrica Eleonora died in 1741, and king Frederick, her husband, in 1751.

King Adolphus Frederick was elected successor to the throne July 4th, 1743 ; and on July 17th, 1744, had married princess Louisa Ulrica, third sister to the king of Prussia. In 1751 he entered into the possession of his new dignity, which proved to him a crown of thorns. Through a strange medley of affairs and views of interest, the French had acquired vast influence in all the deliberations of the Swedish senate. The intrigues of the senators forced Adolphus to take part in the late war against Prussia ; but as that war was disagreeable not only to the people, but also to the king of Sweden, the nation never made so mean an appearance ; and, upon Rus-sia's making peace with the king of Prussia, the Swedes likewise made their peace, upon the terms of leaving things as they stood at the beginning of the war. Adolphus died dispirited in 1771, after a turbulent reign of twenty years ; and was succeeded by his son Gustavus III.

The most remarkable transaction of the reign of Gustavus III. is the revolution which took place in the government in 1772, by which the king, from being the most limited, became one of the most despotic monarchs in Europe. Ever since the death of Charles XII. the whole power of the kingdom had been lodged in the states ; and this power they had on all occasions most grievously abused. Gustavus therefore determined either to seize on that power of which they made such a bad use, or perish in the at-

tempt. By the power of his eloquence, he ol>- tamed the acquiescence of all the military in cr.e day : and on the following morning the terrifted senate subscribed with acclamations to fifty-sever. new articles of government which he presented to them, lodging their

power in his own hand. The power, however, thus obtained, the king employed for the good of his subjects. He took care that the law should be administered with impartiality to the richest noble and the poorest peasant, making a severe example of such judges as were proved to have made justice venal. He gave particular attention and encouragement to commerce, was a liberal and enlightened patron of learning and science, and labored strenuously to introduce into his kingdom the most valuable improvements in agriculture that had been made in foreign countries.

Sweden, history of, until the present time.— Gustavus, while thus active in promoting the arts of peace, was not inattentive to those of war. The fleet and the army he placed on a more respectable footing than they had ever before attained. Of this the war with Russia afforde 1 numerous proofs. It is needless for us to ent>T into a detail of the particulars of that war, which , as well as the astonishing activity and milit.irv skill displayed by the Swedish monarch, ;uv fresh in the memory of all our readers. Suffice it to say, that neither Gustavus Adolphus nor Charles XII. gave greater proofs of undaunted courage and military conduct in their long and bloody wars, than were given by Gustavus III. from the end of 1787 to 1790, when peace w;is restored between the courts of St. Petersburg and Stockholm. In 1792 he entered into the alliance that was formed against the revolutionary government of France ; and to raise an army to co-operate with the emperor and the king of Prussia, he was obliged to negociate large loans, and to impose upon his subjects heavy taxes. The nobles took advantage of that circumstance to prejudice the minds of the people against tin; sovereign, who had labored so long for their real good. On the 16th of March, 1792, he re-seived an anonymous letter, warning him of his immediate danger from a plot that was laid to take away his life, requesting him to remain at home, and avoid balls for a year. Gustavus, like Caesar, read the note with contempt, and at a late hour went to a ball that very night. He mingled, without apprehension, among the crowd ; and just as he was preparing to retire, in company with the Prussian ambassador, lie was surrounded by several persons in masks, one of whom fired a pistol at the back of the kins;, and lodged the contents in his body. The king languished from the 17th to the ‘29th of March, when he dted with that unshaken courage he ha 1 manifested during his life. A few hours before his decease he appointed his brother, the auk; of Sudermania, sole regent, till his son, who was then about fourteen, should have attained the ivˆe of eighteen. His last words were a decl.ir.it ion of pardon to the conspirators against his life. But his orders in this instance were disobeyed. The assassin Ankarstrom, who had been detected by the

pistols and cutlass he dropped, was • verely whipped three successive days; on tin:

last of which his right hand and head were cut off, and his body impaled. Four of his accom-plices were beheaded, and others were imprisoned, and some pardoned. Immediately on the death of the king, his son was proclaimed king by the title of Gustavus IV.

Gustavus IV., during his short and unfortunate reign, certainly displayed much of the genius of his illustrious ancestors ; but madness was mixed with his genius, and the utmost extravagance of mind with the greatest generosity of intention. His conduct in the unfortunate war which first removed Prussia from the list of European powers, and the singular and unexpected revolution by which his aged uncle, the worthless tool of France, deprived him of his crown, are the most remarkable circumstances of his reign. .The unfortunate monarch, with all the fine qualities with which he was adorned, seems to have had in his own country neither friend nor party. He lived for a little while in England, which he quitted suddenly. He then retired to Switzerland, and took the simple name of Gottorp ; acquiescing, it would appear, in his own exclusion, and in that of his family. He after this repudiated his wife, became a Moravian in religion, and proposed to marry a

young lady of that sect; all evident signs of mental derangement, belying, in a very melancholy manner, the promise of his early years. The election of Bernadotte lobe crown prince of Sweden followed ; and the war with Russia (2d September 1812). A treaty of peace had been signed between Great Britain, Russia, and Swe-den ; and lord viscount Cathcart went out as British ambassador to Russia, and Mr. Thornton to Sweden. An expedition was then prepared, in concert with Great Britain and Russia, under the crown prince (Bernadotte), in Sweden, with the view of attacking Buonaparte in his rear.

It seems that the election of Bernadotte as crown prince or successor to the throne was without any intrigues on his own part, but certainly without any on the part of the French emperor (who was jealous of this success of his protegee), chiefly on account of the reputation he

had acquired through the north of Europe, by his wise and humane conduct in the government of Hanover. On the demise of Charles XIV., after hi? co-operation with the allies in the deliverance of Europe, Bernadotte mounted the throne, and succeeded in uniting Sweden and Norway under his government, and in establishing in his family the succession to the crown

SWEDENBORG (Emanuel), was born at Stockholm, in Sweden, January 29th, 1688. His father, Jesper Swedberg, was bishop of Skara, in West Gothland, a member of the society for the propagation of the gospel, formed on the plan of that in England, and president of the Swedish churches in England and America. The subject of this memoir, Emanuel, was ennobled by queen Ulrica Eleonora in 1719 and named Swedenborg. His youth was remarkable for uncommon assiduity and application in the usual exercises of that age. A son of the bishop of Skara could not fail to have a good and careful education, suitable to the manner of the times in which he lived. He was placed in the road to useful and extensive knowledge ; and he advanced with a speed and success rarely witnessed. In 1709, when little more than twenty years of age, he published at Upsal a small collection of maxims, from Seneca and others, with the following title : L. Annaei Senecae et Pub. Syri Mimi, forsan et aliorum, Selectse Sententiae, &c., which was applauded as a remarkable production for a young man. In 1710 he published at Skara a superior collection of pieces on different subjects, in Latin verse, under the title of Ludus Heliconius, sive Carmina Miscellanea, qua variis in locis cecinii Emanuel Swedherg. The same year he began his travels, first into England, afterwards into Holland, France, and Germany. On his return, in 1714, from his first voyage, he applied himself chiefly to mathematics and physics, in which he soon became so distinguished a proficient that he was made the associate of the celebrated Polhammar, in the superintendance of the construction of public works ; and two years afterwards was appointed assessor extraordinary to the Royal College of Mines by Charles XII., who

honored him with frequent conversations, and bestowed upon him a lan;e share of his favor. In 1716, at the age of twenty-eight years, he published essays and observations on the mathematical and physical sciences, under the title of Daedalus Hyperboreus. In 1718 he executed a work of the greatest importance at the time of the siege of Frederickshall, where he gave evident proof of his extraordinary

abilities. Charles could not send his heavy artillery to Frederickshall, on account of the badness of the roads, which were then deeply covered with snow. In this extremity Swedenborg brought the sciences to the aid of valor. By help of proper instruments he cut through the mountains, raised the valleys which separated Sweden from Norway, and then sent to his master two galleys, five large boats, and a sloop, loaded with pieces of artillery, to be employed in the siege. The length of this canal was about two miles and a half, Swedish measure, or upwards of sixteen miles English. Mechanism, however, was not his only study ; for he gave the Continuation of his Daedalus Hyperboreus in 1717 and 1718; and in the lat-ter year an introduction to algebra, under the title of The Art of the Rules. He is said to have been the first person in Sweden who wrote on the subject of the integral and differential calculus.

Having lost his patron Charles XII. at the sieˆe of Frederickshall, he was taken under the protection of queen Ulrica Eleonora, the sister and successor of that hero; and, in 1719, he was ennobled by her and named Swedenborg, as before observed ; from which time he took his seat with the nobles of the equestrian order in the Triennial assemblies of the states. But his elevation to this rank did not lessen his ardor for tie sciences ;

for he published in the same year A Method to Sx the Value of Money, and to determine the Swedish Measures in such a Way as to suppress all the Fractions, and to facilitate the Calculations. About the same time he gave the public a treatise On the Position and Motion of the Earth and the other Planets ; with another On the Height of the Tides and the Flux and Reflux of the Sea ; which, from information gathered in different parts of Sweden, appeared to have been greater formerly than when he wrote. From some experiments, of which he published an account, he concluded, agreeably to a well-established fact, that the earth is flatter at the poles than at the equator. The three last-mentioned works are said to have been printed in the Swedish language.

Assiduous in his attention to the duties of his office, as assessor of the mines, Swedenborg undertook a second journey into foreign countries, to examine their mines and smelting-works, particularly those of

Saxony and Harts. He was particularly noticed at this time by the duke of Brunswick, who did much to facilitate his labors. During these travels, which were undertaken for the improvement of the manufactures of his na-tive country, he printed the following tracts, vi&.

1. Prodromus Principiorum Natural uim. sive Novorum Tentaminum, Chemiam et Physi-cam, experimentalem geometrice explicandi.

2. Nova Observata et Inventa circa Ferrum et Ignam praecipua Naturam Ignis Elementorum, una cum novaCamini inventione. 3. Methodus nova inveniendi Longitudines locorum, terra marique, ope Lunae. 4. Modus construendi Receptacula Navalia, vulgo en Suedois, Docky-bygnadder. 5. Nova constructio Aggeris Aqua-tici. 6. Modus explorandi Virtutes Navigiorum. 7. Miscellanea Observata circa res Naturales, prsesertim Mineralia, Ignem, et Montium Strata. The first six of these tracts were printed at Amsterdam in 1721, and the last at Leipsic and Hamburg in 1722. Few literary men have ever performed so much in so short a time. After his return home in 1722 Swedenborg did not remain idle, but so equally divided his time between the duties of his office, as metallic assessor to the Royal College, and his private studies, that in 1733 he finished his grand work, entitled Opera Philosophica et Mineralia, and had it printed under his own direction in 1734, part at Dresden and part at Leipsic; in which year he also went to inspect the mines of Austria and Hungary. This work is divided into three volumes folio : the title of the first is Principia Rerum Naturalium, sive Novorum Tentaminum, Phae-nomena Mundi Elementaris philosophice explicandi ; the second Regnum Subterraneum sive Minerale de Ferro ; and the third Regnum Subterraneum sive Minerale de Cupro et Orichalco; all of them written with great strength of judgment, and ornamented with 155 copper platesˆ to facilitate the comprehension of the text. The first volume treats of elementary principles ; of magv.etism, and the variations of the magnetic needle ; of the sun and its vortex, the origin of the planetary bodies, and of paradise and the first man. It is remarkable that, in treating on the origin of the planets in our solar system, he

makes express mention of seven primary ones besides the moon and the other satellites. This was more than forty years before the discovery of the seventh planet by Dr. Herschel. The second and third volumes treat on mineralogy, and are generally termed Swedenborg's Regnum Minerale. The professor of natural philosophy in the university of Pennsylvania, R. M. Patterson, observes on this work, that < it is an extraordinary production of one of the most extraordinary men certainly, that ever lived. Many of the experiments and observations on magnetism, presented in this work, are believed to be of much more modern date, and are unjustly ascribed to much more recent writers.' Indeed it has been frequently remarked, by other learned men, that several important discoveries in science, claimed by different writers, were anticipated, and in some cases minutely described, by Swedenborg.

His name had now been most deservedly enrolled among the academicians at Upsal, Stockholm, and Petersburg; and several distinguished foreigners were anxious to have the honor and advantage of corresponding with him. Wolfius, with many other learned men, valued his correspondence and consulted him on the most difficult subjects. The editors of the Acta Erudito-rum, at Leipsic, found in his works a rich harvest to ornament their collection with. The authors, also, of the magnificent Description of Arts and Trades, which are carried on at Paris, found the second part of Swedenborg's work on iron and the preparation of steel, which abounds with valuable information, of so much consequence, that they translated and inserted the whole in their collection of the best things written on these subjects.

After the year 1737 he made eight different voyages into foreign parts, particularly England and Holland. He visited France and Italy ; spent some time at Venice and Rome ; and on his return published an account of his travels. Besides the works already mentioned Swedenborg was the author of the following. 1. Prodromus Philosophise ratiocinantis de Infinite, de Causa Creationis, et de Mechanismo Operatioms, Ani-mse et Corporis; printed at Dresden in 1733. 2. (Economia Regni Animalis ; in two parts, the first printed at Amsterdam in 1740, and the second in 1741. 3. Regnum Animale : in three parts ; the first two printed at the Hague in 1744; and the third in London in 1746. 4. De Cultu et Amore Dei; London, 1745.

In the two works entitled (Economia Regni Animalis and Regnum Animale, the author made many important discoveries in anatomy, and in the circulation of the blood : but, owing to the little pains taken to circulate his philosophical and scientific writings, those discoveries

are not generally known to belong to him. The treatise De Cultu et Amora Dei is also an extraordinary work. It is in two parts, the first of which traces the origin of the earth from the sun ; then treats of paradise ; and of the birth, infancy, and love of the first man, or Adam. The second part treats of the marriage of the first man ; of the soul ; of the intellectual spirit ; of the state of integrity, and of the image of God. The existence of a seventh primary planet in our solar

system is again noticed in this little work, which was published about thirty-five years before the discovery made by Dr. Herschel.

Having thus given an account of the principal works, which Swedenborg published before he undertook to write on theology, it will now be proper to state that about this time, 1743 or 1744, an extraordinary change seems to have taken place in his studies and pursuits. His views were directed to subjects which he conceived to be of infinitely greater importance than those of mere literature and science. By many persons the reputation which baron Swedenborg acquired as a philosopher, and the high consideration in which he was held by the public academies of Europe, and by learned men of all nations, would have been prized almost beyond measure : but by him they were not so regarded, when he came to enter upon that new scene which he now states to have opened before him. ‘ Whatever of worldly honor and advantage,’ says he, ‘ may appear to be in the things befoie-oientioned, I hold them but as matters of low estimation, when compared to the honor of that holy office to which the Lord himself hath called me, who was graciously pleased to manifest himself to me, his unworthy servant, in a personal appearance, in the year 1743 ; to open in me a sight of the spiritual world, and to enable me to converse with spirits and angels ; and this privilege has continued with me to this day. From that time I began to print and publish various unknown Arcana, that have been either seen by me or revealed to me, concerning Heaven and Hell, the state of man after death, the true worship of God, the spiritual sense of the Scriptures,

and many other important truths tending to salvation and true wisdom. And that mankind might receive benefit from these communications, was the only motive which has induced me at different times to leave my home to visit other countries. As to this world's wealth I have what is sufficient; and more I neither seek nor wish for.' The extraordinary event, or impression of his mind, here related, was followed by a series of theological publications, which have no parallel in the annals of Christianity. We give the titles of them in the order in which they appeared ; and as they have obtained in the world no small notice, even among persons of sound judgment and most amiable dispositions, we shall allow them to stand on their own merits, and leave the reader to form his own opinion of the nature of their contents. 1. Arcana Caelestia, or Heavenly Mysteries, contained in the sacred Scriptures, or word of the Lord : being an explanation of the spiritual sense of the books of Genesis and Exodus ; interspersed with relations of wonderful things seen in the world of spirits, and the heaven of angels. In 8 vols. 4to. London, 1749 to 1756. 2. De Ccelo et Inferno, ex Auditis et Visis ; a treatise concerning heaven and hell, and the wonderful things heard and seen there, London, 1758. 3. De Nova Hierosolyma, et Ejus Doctrina Coelesti ; concerning the New Jerusalem, and its heavenly doctrines ; London, 1 758. 4. De Ultimo Judicio, et Babylonia De-structa; concerning the last judgment, and the destruction of Babylon ; London, 1758 5. De

Equo Albo, de quoin Apocalypsi; concerning the white horse mentioned in the Revelation ; London, 1758. 6. De Telluribus in Mundo nostro Solari, quse vocantur Planetse ; et de Telluribus in Coelo Astrifero ; deque illarum Incolis, &c. ; concerning the earths in our solar system, and in the starry heaven ; with an account of their inhabitants, &c. ; London, 1758. 7. Doctrina Novae Hierosolymse de Domino; the doctrine of the New Jerusalem, concerning the Lord; Amsterdam, 1763. 8. Doctrina Novae Hierosolymse de Scriptura Sacra seu Verbo Domini ; the doctrine of the New Jerusalem concerning the sacred scripture, or word of the Lord ; Amsterdam, 1763. 9. Doctrina Vitse pro Nova Hierosolymse, ex Praeceptis De-calogi ; the doctrine of life for the New Jerusalem, from the precepts of the decalogue; Amsterdam, 1763. 10. Doctrina Novae Hierosolymse de Fide; the doctrine of the New Jerusalem concerning faith ; Amsterdam, 1763. 11. Continuatis de Ultimo Judicio, et de Mundo Spirituali ; continuation concerning the last judgment, and concerning the spiritual world ; Amsterdam, 1763. 12. Sapientia Angelica de Divina Amorse et Divina Sapientia; angelic wis-dom concerning divine love and divine wisdom ; Amsterdam, 1763. 13. Sapientia Angelica de

Divina Providentia; angelic wisdom concerning divine providence; Amsterdam, 1764. 14. Apocalypsis Revelata ; the apocalypse revealed ; Amsterdam, 1766. 15. Delitiae Sapientiae de Amore Conjugiali, &c. ; the delights of wisdom concerning conjugal love; after which follow the pleasures of insanity concerning scortatory love; Amsterdam, 1768. 16. Sumonaria Expositio Doctrinse Novse Ecclesiae ; a brief exposition of the doctrine of the new church ; Amsterdam, 1769. 17. De Commercio Animae et Corporis ; concerning the intercourse between the soul and body; Amsterdam, 1769. 18. Vera-Christiana Religio,continens Universalem Theologian Novae Ecclesise ; Amsterdam, 1771.

These works have all been translated into English, and circulated very extensively both in Great Britain and America. The author left behind him many other works in MS., of which the following have been printed : — 1. Coronis seu Appendix ad Veram Christianam Religionem ; a coronis or appendix to the true Christian religion ; London, 1780. 2. Clavis Hieroglyphica Arcanorum Naturalium et Spiritual ium, &c. ; an hieroglyphic key to natural and spiritual mysteries, by way of representations and correspondences; London, 1784. 3. Summaria Expositio Sensus Interni Librorum Prophetico-rum Verbi Veteris Testamenti, necron et Psalm-orum Davidis ; a summary exposition of the internal sense of the prophetical books of the Old Testament, and of the Psalms of David ; London, 1784. 4. Apocalypsis Explicata secundum Sensum Spiritualem ; the apocalypse explained according to the spiritual sense ; 4. vols. 4to., London, 1785 to 1789.

Sublime things are announced by all these titles ; and though the works are many, and embrace a great variety of subjects, they all assume to be connected by one chain of argument and illustration. The application requisite to pro-

duce so many and such important works, not allowing him to continue the necessary functions of his office as assessor, beyond the year 1747, he resigned his situation in the Royal College, and obtained in the same year permission from the king to retire, and to retain his salary

as an appointment for life, without any prejudice to his title and rank. He assisted as a member of the house of nobles during several diets ; and his behaviour was such as to procure him universal esteem and respect. He was honored with the favor and particular kindness of the kings who reigned during his time ; and all who had the happiness of enjoying his company soon became sensible of his superior wisdom, erudition, and virtue. The rules of life which he laid down for his own practice, and which after his death were found placed and repeated in various parts of his MSS., bespeak a temper of mind truly Christian, and are well worthy of being universally observed. These were, 1. 'To read often, and to meditate well on, the word of the Lord. 2. To be always resigned and content under the dispensations of Providence. 3. Always to observe a propriety of behaviour, and to preserve the conscience clear and void of offence. 4. To obey that which is ordained ; to be faithful in the discharge of the duties of our employment ; and to do every thing in our power to render ourselves as universally useful as possible.'

Of the particular circumstances connected with the appointment of this extraordinary man to the office, which he says he was called by the Lord to perform, we have no account that can be depended upon but that which he has himself given in several of his printed works, particularly in his work entitled True Christian Religion, in the chapter on the consummation of the age, the coming of the Lord, and the new heaven and new church, n. 779, 780 ; from which we quote the following passage :— ' That this second com-ing of the Lord is effected by the instrumentality of a man (meaning himself), before whom he hath manifested himself in person, and whom he hath filled with his spirit, to teach from him the doctrines of the new church by means of the word.— Since the Lord cannot manifest himself in person (to the world), as was shown above, and yet he foretold that he would come and establish a new church, which is the New Jerusalem, it follows that he will effect this by the instrumentality of a man, who is able not only to receive the doctrines of that church in his understanding, but also to publish them in print. That the Lord hath manifested himself before me his servant, and sent me on this office, and that afterwards he opened the sight of my spirit and thereby let me into the spiritual world, and granted me to see the heavens and the hells, and also to converse with angels and spirits, and this now continually for several years, I testify in truth ; and farther, that from the first day of my call to this office, I never received any thing appertaining to the doctrines of that church from any angel, but from the Lord alone, whilst I was reading the word. To the end that the Lord might be constantly present, he revealed to me the spiritual sense

of his word, in which sense divine truth is in its light, and in this light he is

continually present.' A similar statement is made in n. 851 of the same work, where he asserts, ' that the privilege of conversing with an-gels and spirits had continued with him for twenty-seven years,' that is, from 1743 to 1770, when he wrote that work two years before his death ! The following are, according to one of his respectable followers, the chief articles of doctrine deducible from the whole of baron Swedenborg's Theological Writings, *viz.* 1. That Jehovah God, the creator and preserver of heaven and earth, is a Being of infinite love, wisdom, and power, that he is one in essence and in person, in whom nevertheless is a divine trinity, consisting of Father, Son, and Holy Spirit, like soul, body, and operation in man ; and that the Lord and Saviour Jesus Christ is that God. 2. That Jehovah God himself came down from heaven as divine truth, which is the word, and took upon him human nature, for the purpose of subduing and removing the powers of darkness, of restoring the spiritual world to order, of preparing the way for a new church upon earth, and thus of accomplishing the great work of redemption : that through the process of sufferings and temptations he also glorified his humanity by uniting it with his essential divinity; and that all who believe in him from the heart, with the understanding, and in the life, will be saved. 3. That the word of the Lord, or sacred Scripture, was written by divine inspiration ; that it contains an internal spiritual sense for the use of angels in heaven, and an external natural sense for the use of men upon earth; and that in each sense it is holy and divine. That these two senses, the spiritual and the natural, are united by correspondences, like soul and body ; and thus that the word is the medium of communication with heaven, and of conjunction with the Lord. 4. That all evils, whether of affection, of thought, or of life, ought to be shunned as sins against God, because they proceed from the devil, that is, from hell, and destroy in man the capacity of enjoying the happiness of heaven. But that, on the other hand, good affections, good thoughts, and good actions, ought to be cherished and performed, because they are of God, and from God ; and that every act of love and charity, of justice and equity, both towards society in general and towards individuals in particular, ought to be done by man as of himself, nevertheless under the acknowledgment and belief that they are really and truly from the Lord, operating; in him and by him. 5. That man, during his abode in the world, is kept in a state of spiritual equilibrium between heaven and hell, or good and evil, in consequence of which he enjoys free-will in spiritual as well as natural

things, and has the capacity either of turning himself to the Lord, or of separating himself from the Lord ; that so far as he does the work of repentance, and lives in charity according to the truths of faith, so far his sins are remitted, that is to say, so far his evils are removed ; and in the same proportion also he is regenerated, or created anew by the Lord. 6. That man is not life in himself, but only a recipient of life from the Lord, who alone is life in himself; which life is communicated by influx to all in the spiritual world, whether

ainˆ lo heaven or to hell, and to all in the natural world; but is received differently by each according to ttie quality of the recipient subject. 7. That adequate means of salvation are, by the divine mercy and providence of the Lord, extended to all of the human race without exception ; and consequently that men of every persuasion or denomination upon the face of the earth, whether they be Christians, Jews, Mahometans, or Pagans, may be saved, if they live in mutual love and charity from religious motives, according to the best of their knowledge and understanding. But that nevertheless the new and true Christian religion, inasmuch as it is more immediately derived from our Lord and Saviour Jesus Christ, who is the One only God of heaven and earth, is of all religions the most capable of effecting close and intimate conjunction with him; and on that account is to be esteemed more excellent, more heavenly, and more divine, than any other. 8. That every event or occurrence in human life, whether of prosperity or of adversity, is under the immediate superintendance and direction of the Divine Providence ; and that nothing does or can befal man, either in his collective or in his individual capacity, but what even in the most minute, as well as in the more important circumstances attending it, is made to contribute in a way known only to infinite wisdom, to the final benefit and advantage of those who love and obey the Lord. 9. That immediately on the death of the material body, which will never be reassumed, man rises again as to his spiritual or substantial body, wherein he exists in a perfect human form, with every faculty which he before enjoyed ; and that his eternal state, as to happiness or misery hereafter, will altogether depend on the quality

of liis past life, whether it has been good or evil. 10. But that with respect to children dying be-fore they come to the use of reason, and the exercise of their own judgment, all such, whether baptised or unbaptised, whether within the Christian church or without it, and whether they be the offspring of godly or of ungodly parents, are received into heaven by the Lord, and after instruction, or improvement in understanding and wisdom, participate in all the happiness and perfection of angels. 11. That there is not in the universal heaven a single angel that was created such at first, nor a single devil in all hell that had been created an angel of light, and was afterwards cast out of heaven ; but that all both in heaven and in hell are of the human race, in henven such as had lived in the world in heavenly love and faith, and in hell such as had lived altogether according to the principles of self-love and the love of the world. 12. That true conjugal love, which can only exist between one husband and one wife, is a primary characteristic of the new church, being grounded in the marriage or conjunction of good and truth, and corresponding with the marriage of the Lord and his church; and therefore it is more celestial, spiritual, holy, and pure, than any other love in angels or men. 13. That baptism and the holy supper are sacraments of divine institution, and are to be permanently observed ; baptism teiiis an external medium of introduction

into the church, and a sign representative of man's purification and regeneration; and the holy sup-per being an external medium, to those who receive it worthily, of introduction, as to spirit, into heaven, and of conjunction with the Lord, of which it is also a sign and seal. 14. That the last judgment, so frequently spoken of in the gospels, and in the Apocalypse, being a separation of the evil from the good in the spiritual world, where heretofore they had been collected and mixed in society together, from the time of the Lord's first advent into the world till the time of his second advent, was actually accomplished in the year 1757; when the former heaven and the former earth, or the old church, passed away according to the Scriptures, and the foundation of a new church was laid, wherein all things are become new. 15. That therefore, as an act of mercy towards the human race, which would otherwise have perished in eternal death, the second ad-vent of the Lord has already taken place and still continues in the present day ; being a com-ing not in person, but in the power and glory of the spiritual sense of his holy word, as demonstrated in the theological writings of his servant Emanuel Swedenborg : and thus that the holy city, New Jerusalem, is now descending from God out of heaven, prepared as a bride adorned for her husband.

‘ In addition to these articles of doctrine,’ says the gentleman to whom we are indebted for the above summary, ‘ there are many other important subjects contained in the writings of Swedenborg. The doctrine of correspondences is one, according to which, he says, the whole of the Sacred Scriptures is written, and without a knowledge of which its true and genuine sense cannot possibly be understood. This doctrine he represents as having been ‘ hidden now for some thousands of years, *viz.* ever since the time of Job ; at which time, and in the ages before it, the science of correspondences was esteemed the chief of all sciences, being the fountain of wisdom to man, because it was the fountain of knowledge concerning spiritual things relating to heaven and the church ; but, by rea-son of its being perverted to idolatrous purposes, it was so obliterated and destroyed, by the divine providence of the Lord, that no traces of it were left remaining : that nevertheless it is at this time again revealed by the Lord, in order to effect a conjunction of the members of the church with him, and their association with the angels, which purposes are effected by the word, in which all and every thing are correspondences.’

He further declares ‘ that there is a sun in the spiritual world distinct from the sun of the natural world ; that the former sun is pure love, and the latter sun pure fire ; that therefore whatever proceeds from the spiritual sun, by reason of its being pure love, hath something of life in it, and whatever proceeds from the natural sun, by reason of its being pure fire, hath in it nothing of life ; that hence ariseth the distinction between what is spiritual, and what is natural,’ the one not being a refinement, attenua-tion, or exaltation of the other, in the way of continuous degrees, from grosser to purer of the

same order, but a discreetly distinct and superior order of things, just as the light of truth ui the mental eye is discreetly distinct from the light of the sun or of a candle in the bodily eye ; « which distinction heretofore unknown (or at least not properly attended to) is now revealed, together with the source of that light which en-Jighteneth the human understanding with wis-dom, and the source of that heat

which kindleth Jove in the human will.'

He also affirms ' that the planets in our solar system are inhabited by human beings, nay, that millions of planetary bodies, revolving about other suns in the starry heavens, are in like man-ner the abodes of men, and that he himself has actually been permitted to visit many of them, not in body, but in spirit. The manner in which he explains this subject is really curious, and well worthy of notice. He states that, in consequence of his intercourse with angels and spirits for many successive years of his life, he discovered that distances in the spiritual world are not like distances here on earth, but are altogether according to the several states of the interiors of the inhabitants. They who are in a similar state are together in one society, and in one place ; for all presence is caused by similitude of state, and all distance by dissimilitude of state. Hence to be present with any spirit or angel, whether he be from this earth, or from any other earth in the universe, it is only requisite to be in a similar state with such spirit or angel as to the interiors of the mind, that is, as to the interior affections and thoughts. And in this way, he says, it is as possible for the spirit of a man still living in the body, whose interiors are open to heaven, to be led by the Lord into a similitude of state with the spirits and angels from other earths or planets, and even with the inhabitants themselves, as with the spirits, angels, and distant inhabitants of this earth. Now when the interior faculties of a man are so far opened as to enable him to see and converse with spirits and angels (which however is a rare case in the present day, owing to causes which need not be here stated), then such spirits and angels as are present with him (and every man is surrounded with beings of this description) can see through his eyes the natural objects of this world and hear through his ears the conversation that passes among men ; which they cannot otherwise do. So, again, the man whose interiors are open may, by being brought into a similar state with an inhabitant of some distant earth, in like manner see through the eyes of such inhabitant, if his interiors are open, the natural objects of his world, and hear through his ears the natural sounds there produced.

This doctrine of the possibility of man's seeing and conversing with spirits and angels, -Swedenborg confirms by a variety of testimo- •ies from the sacred Scriptures, particularly by the cases of Abraham and Sarah, Lot, the inhabitants of Sodom, Joshua, Gideon, Manoah and his wife, Zacharias, Mary, John, and many others, who all saw and conversed with angels as with men. He adds also his own experience, sayin?, ' Inasmuch as it hath been granted me by the Lord to be at one and the same time in

the spiritual world and in the natural world, and thereby to converse with angels as with men, and thus to become acquainted with the states of those who, after deuth, flock together into that heretofore unknown world (for I have conversed with all my relations and friends, and likewise with kings and princes, and men of learning, after their departure out of this life, and this now for twenty-seven years without interruption), therefore I am able to describe the state* of men after death, from lively experience, both in relation to such as have lived good lives, and such as have lived evil.' He then goes on to describe the successive states of those after death who had confirmed themselves in false doctrines, by a misapplication and perver-sion of the sacred Scriptures. See True Christian Religion, n. 281.

We select another passage from the same work, n. 792, 794, for the information of the reader, which, with the other peculiarities taught by Swedenborg will furnish a just view of the nature of his publications, and the extraordinary character of the writer. ' With respect to the state and nature of a future life, mankind have heretofore remained in the dark : it has been generally believed that man after death is a mere soul, and the common idea concerning such soul has been that it is something like ether, or air, consequently that it is like the breath which goes out of a man's body when he dies, in which nevertheless there resides some vital principle. But then it has been conceived that this vita! principle neither has the faculty of seeing, sued as belongs to the eye, nor of hearing, such a, belongs to the ear, nor of speaking, such as belongs to the organs of speech : when nevertheless man after death is as much a man as lie was before, and so little changed that he does not know but he is still living in the former world; for he sees, hears, and speaks, as ,in the former world; he walks, runs, and sits, as in the former world ; he lies down, sleeps, and wakes, as in the former world ; he eats and drinks, as in the former world ; he enjoys conjugal delight, as in the former world ; in a word, he is a man in all and every respect. From which circumstances it is evident that death is not an extinction but a continuation of life, and consequently that it is only a passage from one state to another.— In consequence of what I have seen, and been an eye-witness of for many years together, I can assert the following facts relatin"- to the spiritual world ; that there are earths "in that world, just as in the natural world, and that there are also plains and valleys, mountains and hills, fountains and rivers ; that there are paradises, gardens, groves, and woods ; that there are cities, with palaces and houses contained therein ; also that there are writings and books, employments and merchandises; and that there are gold, silver, and

precious stones ; in a word, that there is in the spiritual world all and every thing that is in the natural world, bi that in heaven such things are in an infinitely

paradises, meˆts, and other things and that they

are created according to a correspondence with the interiors of angels and spirits, that is, of their affections and thoughts ; whereas all things that are seen in the natural world begin to exist and grow from seed.'

The Rev. Thomas Hartley, formerly rector of Winwick, in Northamptonshire, who was person-sonally acquainted with Swedenborg, describes his character as follows : — ' The extensive learning displayed in his writings evinces him to be the scholar and the philosopher ; and his polite behaviour and address bespeak the gentleman. He affects no honor, but declines it ; pursues no worldly interest, but spends his substance in travelling and printing, in order to communicate instruction and benefit to mankind ; and he is so far from the ambition of heading a sect, that, wherever he resides on his travels, he is a mere solitary, and almost inaccessible, though in his own country of a free and open behaviour. He has nothing of the precisian in his manner, nothing of melancholy in his temper, and nothing in the least bordering upon the enthusiast in his conversation or writings ; in the latter of which he delivers facts in the plain style of narrative, speaks of his conversation with spirits and angels with the same coolness that he treats of earthly things, as being alike common to him ; he proves all points of doctrine from Scripture testimony; always connects charity and a good life with true faith ; and is, upon the whole, the most rational divine I ever read.' — Hartley's Preface to the Intercourse between the Soul and Body. He died at his lodgings in Great Bath Street, Cold Bath Fields, Clerkenwell, London, on the 29th of March 1772, in the eighty-fifth year of his age; and, after lying in state at an undertaker's, his 'emains were deposited in a vault under the Swedish church in Prince's Square, Ratcliff Highway.

SWEDENBORGIANS, or, as they call themselves, the Members of the New Jerusalem Church, are the followers of Emanuel Swedenborg, a Swedish nobleman, distinguished by his writings as a philosopher and theologian; for an account of whom, and the doctrines taught by him, see the preceding article. During the lifetime of this author, and for some years after his deaui, it appears that only a few individuals in his own country, and still fewer in England, cordially embraced his

doctrines. In 1782, however, a society of gentlemen was formed in Manchester, for the purpose of translating, printing, and publishing the author's works in English ; and the next year, 1783, a similar society was formed in London. But it was not till the year 1788 that the followers of Swedenborg instituted public worship separately from the other professors of Christianity : in that year they opened a chapel in Great East Cheap, London, as members of the New Jerusalem Church ; and their doctrines soon began to excite very general attention. In a few years societies were formed in different parts of Great Britain, and numerous places of worship have either been erected or engaged by them in some of the principal towns, as well as villages, throughout the kingdom. It is supposed there are many thousands in England, Scotland, and Ireland, who profess baron

Swedenborg's doctrines ; and it is well known that his writings have obtained a favorable reception - among many distinguished and well-informed persons in France, Holland, Germany, Sweden, Denmark, Russia, Poland, North and South America, the West India Islands, the East Indies, and other distant parts of the globe. In England the admirers of his system use a printed liturgy, and have appropriate forms for baptism, the holy supper, and other rites of the church, whereby uniformity of worship is established among them. They also hold annual conferences of the ministers and other members of their church ; and, on the whole, they appear to be in a prosperous condition. They have among them writers of eminence, who have distinguished themselves by their successful vindica-tions of the character and writings of Swedenborg against the various attacks that have from time to time been made against them. The Rev. John Clowes, rector of St. John's Church, Manchester, the translator of many of the baron's works, and the able advocate of the New Jerusalem doctrines, completely refuted the calumnies brought against the noble author by the abbe Barruel. Mr. Robert Hindmarsh, also of Lon-don, formerly printer extraordinary to his royal highness the prince of Wales, and afterwards George IV., succeeded in answering Dr. Priest-ley, Mr. Wesley, and some others. And the Rev. Samuel Noble, minister of the New Jerusalem church in Cross Street, Hatton Garden (late the Caledonian Asylum, where Mr. Irving formerly officiated), has been said to be equally successful in silencing the ungenerous and ill-founded attacks which have been more recently directed against the doctrines of the New Jerusalem. Besides these writers, many others might be named, whose varied productions are held in high estimation, and do credit to the cause which they are intended to serve.

SWEEP,u.a., t;.n.,&n.s.-v Part , & part

SWEEP'INGS, n. s. I pass., swept. Sax.

SWEEP'NET, S rpapan ; Swed.

SWEEP'STAKE, 1 swepa. To drive

SWEEP'Y, adj. J away with a besom ; to clean with a brush or besom : hence to carry off; carry with pomp or parade : pass with violence or pomp : the act or instrument of sweeping ; violent destruction ; direction of any particular motion ; compass: the sweepings are that

which is swept away: sweepnet, a net that sweeps all : sweepstake, a man that wins all : sweepy is far-reaching ; passing with great speed or violence.

The river Kishon swrpt them away. Jud. v.

A poor man that oppresseth the poor, is like a tweeping rain which leaveth no food.

Prov. xxviii. 3.

What woman, having ten pieces of silver, if she lose one, doth not sweep the house, and seek clili • gantly till she find it 1 Luke, xv. 8.

The blustering winds striving for victory swept the snow from off the tops of those high mountains, and cast it down into the plains in such abundance that the Turks lay as men buried alive.

Knowles's History.

Let frantic Talbot triumph for a while, And, like a peacock, tweejt along his tail.

Shattspeare. Henry VI

SWE

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Though I could,

With barefaced power, sweep hi»i from my sight, And bid my will avouch it ; yet I must not.

Shakspeare. She sweeps it through the court with troops of

ladies,

More like an empress than duke Humphrey's wife.

Id.

Is 't writ in your revenge,

That sweepstake you will draw both friend and foe, Winner and loser ? /<$.

She was a sweepnet for the Spanish ships, which happily fell into her net. Camden.

Cowen in her course Towards the Sabrinian shores, as sweeping from her

source,

Takes Towa. Drayton.

In countries subject to great epidemical sweeps, men may live very long ; but, where the proportion

the pancreas of a calf: sweet briar, a fragrant shrub : to sweeten is, to make sweet, mild, or kind ; to palliate ; reconcile ; soften : and, as a verb neuter, to grow sweet: sweetener corresponds : sweetheart is a lover or mistress : sweeting, a particularly sweet apple ; a term of endearment: sweetish, somewhat sweet: sweetly, in a sweet manner; delicately: sweetmeat, a sweet preserve : sweetness, the qualitv of being sweet ; lusciousness ; mildness ; agreeableness.

The best wine for my beloved goeth down sweetly.

Cani.

The right form, the true figure, the natural colour that is fit and due to the dignity of a man, to the beauty of a woman, to the sweetness of a young babe.

Ascham. A child will chuse a sweeting, because it is pre-

of the chronical distemper is great, it is not likely to ˆutly fair and pleasant, and refuse a runnel, be-be so. Graunt. cause i* ˆ tnen green, hard, and sour.

Flying bullets now To execute his rage appear too slow ; They miss or sweep but common souls away ; For such a loss Opdam his life must pay. Waller.

My looking is the fire of pestilence, That sweeps at once the people and the prince.

Dry den.

I have already swept the stakes, and with the common good fortune of prosperous gamesters can be content to sit. Id.

Before tempestuous winds arise, Stars shooting through the darkness gild the night With sweeping glories, and long trails of light. Id.

They rush along, the rattling woods give way, The branches bend before their aweepy sway. Id.

A door drags, when, by its ill hanging on its hinges, or by the ill boarding of the room, the bot-tom edge of the door rides in its sweep upon the floor. Moron’s Meclianical Exercises.

A torrent swelled

With wintry tempests, that disdains all mounds, Breaking away impetuous, and involves Within its rweep, trees, houses, men. Philips.

To sweep fame, power, and wealth away : The past is all by death possest, And frugal fate that guards the rest,

By giving, bids them live to-day. Fenton.

Having made one incision a little circularly, being a second, bringing it with an apposite sweep to meet the other. Sharp.

Descend, ye nine ; descend, and sing ; The breathing instrument inspire,

Wake into voice each silent string, And sweep the sounding lyre. Pope.

A duke holding in a great many hands, drew a huge heap of gold j but never observed a sharper, who under his arm swept a great deal of it into his hat. Swift.

Should this one broomstick enter the scene, covered with dust, though the sweepings of the finest lady's chamber, we should despise its vanity. Id.

Id. Schoolmaster. She, the sweetness of my heart, even sweetening the death which her sweetness brought upon me.

Sidney.

Mopsa as glad as of sweetmeats to go of such an errand, quickly returned. Id.

Balm his foul head with warm distilled waters, And burn sweet wood, to make the lodging sweet.

Shakspeare. Heaven bless thee ; Thou hast the sweetest face I ever looked on. Id.

Let me report to him

Your sweet dependency, and you shall find A conqueror that will pray in aid of kindness. Id.

Pluck out

The multitudinous tongue, let them not lick The sweet which is their poison. Id. Coriolanus.

Sweet! leave me here a while ; My spirits grow dull, and fain I would beguile The tedious day with sleep. Shakspeare.

Give me an ounce of civet to sweeten my imagination. Id. King Lear.

Mistress, retire yourself Into some covert ; take your sweethearts, And pluck o'er your brows. Shaktpeare.

Trip no further, pretty sweeting ; Journies end in lovers meeting. Id.

Where a rainbow hangeth over or toucheth, there breatheth a sweet smell ; for that this happeneth but in certain matters which have some sweetness, which the dew of the rainbow draweth forth. Bacon.

Time changeth fruits from more sour to more sweet ; but contrariwise liquors, even those that are of the juice of fruit, from more sweet to more sour.

Id. Natural History.

For March come violets and peach-tree in blossom, the cornelian-tree in blossom, and sweetbriar.

SWEET, fldj.&n.s. -

SwEET*BREAD,n. S.

SWEET'BRIAR, SWEET'EN, v. a. & v. n. SWEETEN'ER, n. $. SWEET'HEART, SWEET'ING, SWEET'ISH, adj. SWEETLY, adv. SWEET'MEAT, n. s. SWEET'NESS.

Bacon.

Where a wasp hath bitten in a grape, or any fruit, it will sweeten hastily. Id. Natural History.

This honey tasted still is ever tweet. Davies. Nothing so sweet is as our

countries earth. And joy of those from whom we claim our birth.

Chapman.

What softer sounds are these salute the ear, From the large circle of the hemisphere, As if the center of all sweet* met here 1 Ben Jonson.

Wherefore frowns my sweet 1 Have I too long been absent from these lips ? Id.

a I would have my love

pleasing' to" a sense' Angry sometimes, to iweeien off the rest or the senses ; a word Of her behaviour, of endearment ; a per-If every sweet, and every grace

J fume : sweetbread is Must fly from that forsaken face.

Sax.

zoet ; Dan. soed ; Goth. soet ; Lat. suavis. Luscious to the taste or smell ; eye or ear ; soft ; mild ; gentle ; grateful ; something

C'u re it .

SWE

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Never tie yourself always to eat meats of easy digesture, as veal, pullets, or iweetbreads.

Harvey on Consumption. One thing, sweetheart, I will ask, Take me for a new-fashioned mask. Cleaveland.

The dulcimer, all organs of sweet stop. Milton.

The Pleiades before him danced, Shedding sweet influence. Id.

Hail ! wedded love, Perpetual fountain of domestic sweets ! Id.

Shred very small with thyme, »u;eet-margory, and a little winter savoury. Walton's Angler.

Serene and clear harmonious Horace flows, With sweetness not to be exprest in prose.

Roscommon.

His sweetness of carriage is very particularly remembered by his contemporaries. Fall.

Mercy has, could Mercy's self be seen, No sweeter look than this propitious queen. Waller.

Powder of crabs' eyes and claws, and burnt egg-shells, are prescribed as sweeteners of any sharp humours. Temple.

The sails drop with rain, kweet waters mingle with the briny main. Dryden.

Euryalus,

Than whom the Trojan host No fairer face or sweeter air could boast.

Dryden's JEneid.

Now since the Latian and the Trojan brood Have tasted vengeance, and the sweets of blood, Speak. Id.

As, in perfumes,

‘Tis hard to say what scent is uppermost ; Nor this part musk or civet can we call, Or amber, but a rich result of all : So she was all a sweet. Dryden—

Sweetbread and collops were with skewers pricked About the sides ; imbibing what they decked. Id.

Corregio has made his memory immortal, by the strength he has given to his figures, arid by sweetening his lights and shadows, and melting them into each other so happily that they are even imperceptible. Id. Dufresnoy.

She interprets all your dreams for these, Foretells the’ estate, when the rich uncle dies, And sees a sweetheart in the sacrifice. Id. Juvenal.

There was plenty, but the dishes were ill sorted ; whole pyramids of sweetmeats for boys and women, but little solid meat for men. Dryden.

These lessons may be gilt and sweetened as we order pills and potions, so as to take off the disgust of the remedy. L’ Estrange.

A wench was wringing her hands and crying ; she had newly parted with her sweetheart. Id.

If a child cries for any unwholesome fruit, you purchase his quiet by giving him a less hurtful sweetmeat : this may preserve his health, but spoils his mind. Locke.

Sweet and stinking commonly serve our turn for these ideas, which, in effect, is little more than to call them pleasing or displeasing ; though the smell of a rose and violet, both sweet, are certainly very distinct ideas. Id.

All kindnesses descend upon such a temper, as rivers of fresh water falling into the main sea ; the sea swallows them all, but is not changed or sweetened by them. South.

Thy mercy sweetened every soil, Made every region please ;

The hoary Alpin hills it warmed, And smoothed the Tyrrhene seas.

Addison’s Spectator.

At a lord-mayor’s feast, the sweetmeats do not make their appearance till people are cloyed with beef and mutton. Addison.

This old man’s talk, though honey flowed In every word, would now lose all its sweetness. Id.

Flowers

Innumerable, by the soft south-west Opened, and gathered by religious hands, Rebound their sweets from the' odoriferous pavement.

Prior.

When metals are dissolved in acid menstruums, and the acids, in conjunction with the metal, act after a different manner, so that the compound has a different taste much milder than before, and sometimes a sweet one ; is it not because the acids adhere to the metallic particles, and thereby lose much o' their activity ? Newton's Opticks.

Make your transparent sweetmeats truly nice, With Indian sugar and Arabian spice.

King's Cookery.

The streets with treble voices ring, To sell the bounteous product of the spring ; /Sweet-smelling flowers, and elders early bud. Gnu.

They esteemed that blood pituitous naturally, which abounded with an exceeding quantity of sweetish chyle. F layer.

The balmy zephyrs, silent since her death, Lament the ceasing of a sweeter breath. Pope.

Praise the easy vigour of a Ijne, Where Denham's strength and Waller's sweetness join. Id.

When you roast a breast of veal, remember your sweetheart the butler loves a sweetbread. Swift.

Be humbly minded, know your post ; Sweeten your tea, and watch your toast. Id.

Those softeners, sweeteners, and compounders, shake their heads so strongly that we can hear their pockets jingle. Id.

No poet ever sweetly sung, Unless he were like Phoebus young ; Nor ever nymph inspired to rhyme, Unless like Venus in her prime. Id.

They are allowed to kiss the child at meeting and parting ; but a professor, who always stands by, will not suffer them to bring any presents of toys or sweetmeats. Id.

A man of good education, excellent understanding, and exact taste ; these qualities are adorned with great modesty, and a most amiable sweetness of temper. Id.

Sweet expresses the pleasant perceptions of almost every sense : sugar is sweet, but it hath not the same sweetness as musick ; nor hath musick the sweetness of a rose, and a sweet prospect differs from them all : nor yet have any of these the same sweetness as discourse, counsel, or meditation hath ; yet the royal psalmist saith of a man, we took sweet counsel together : and of God, my meditation of him shall be sweet. Watts.

Devotion softens his heart, enlightens his mind, sweetens his temper, and makes every thing that comes from him instructive, amiable, and affecting.

Law.

SWEETWILLIAM. See DlANTHUS. SwEETWILLIAM OF BAltBADOES, a Species of

ipomoea.

SwEETWILLOW. See MYRICA.”

SWELL, v. re., v. a., &) Part. pass, swollen-SWEL’LING, n. s. [n. s. $ Sax. r-pellan ; Belg. swellen ; Teut. schwellen. To grow bigger ; grow turgid; extend; inflate: aggravate; cause to grow big : extension of bulk : a swelling is an effort to grow big, or for vent; a morbid tumor; protuberance.

I will help every one from him that swelleth against him, and will set him at rest. Ps. xii. 6.

SWE

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This iniquity shall be as a breach ready to fall, swelling out in a high wall. Isaiah xxx. 13.

Strangely visited people, All swollen and ulc'rous, pitiful to the eye, The mere despair of surgery he cures.

Sluikspeare. Macbeth.

My pity hath been balm to heal their wounds, My mildness hath allayed their swelling griefs.

Shakspeare.

Here he comes, swelling like a turkey-cock. Id. The hearts of princes kiss obedience, So much they love it ; but to stubborn spirits Theysu>eM and grow as terrible as storms. Id.

O for a muse of fire, that would ascend The brightest heaven of invention ! A kingdom for a stage, princes to act, And monarchs to behold the smelling scene. Id.

The swan's down feather, That stands upon the swell at full of tide, And neither way inclines. Id. Antony and Clerpatra. All these miseries proceed from the same natural causes, which have usually attended kingdoms swollen with long plenty, pride, and excess. Clarendon.

Peleus and Telephus, exiled and poor, Forget their swelling and gigantick words.

Roscommon.

Propitious Tyber smoothed his wat'ry way, He rolled his river back, and poised he stood, A gentle swelling, and a peaceful flood.

Dryden's Mneid.

Swol'n in his breast; his inward pains increase, All means are used, and all without success.

Dryden.

In all things else above our humble fate, Your equal mind yet swells

not into state. Id.

The king of men, who, swofn with pride, Refused his presents, and his prayers denied. Id.

My heart was torn in pieces to see the husband suppressing and keeping down the swellings of his grie?. Tatkr.

Your youth admires

The throes and swellings of a Roman soul, Cato's bold flights, the extravagance of virtue.

Addison.

The superficies of such plates are not even, but have many cavities and swellings, which, how shallow soever, do a little vary the thickness of the place. Newton's Optieks.

There is not a chronical disease that moie frequently introduces the distemper I am discoursing of than strumous or scrophulous swellings or ulcers.

Btackmore.

It is low ebb with his accuser, when such peccadil-los are put to twell the charge. Atierbury. SWELT, v. n. To break out in sweat. Chearful blood in faintness chill did melt, Which, like a fever fit, through all his body welt.

Spenser's Faerie Queene. If the sun's excessive heat Makes our bodies rwelter,

To an osier hedge we get For a friendly shelter ; There we may Think and pray, Before death

Stops our breath. Chalkhil.

Some would always have long nights and short days • others again long days and short nights ; one climate would be scorched and uoetitrtd with ever-lastine dog-days, while an eternal December blasted another. ****$'• Sermons—

SWELLING. See SURGERY and TUMOR. SWELLING, WHITE, or Paronychia. SURGERY, Index.

SWENO I., or SUENO, SWAN, SWEIN, o

SWEYN, a king of Denmark, who flourished ii» the tenth century, twice invaded England, conquered part of it, and became father of Canute the Great, who conquered the whole of it, and reigned many years. See DENMARK and ENGLAND.

SWENO, II. and III. See DENMARK.

SWENO'S STONE, an ancient monument near Forres, erected in memory of the defeat of the Danes under Sweno. On that side of it which fronts the south, and measures the thickness of the obelisk about four feet above the pavement on the top of the steps by which one ascends, is an inscription disposed in two lines, on a scale of fifteen inches in length. The Rev. Dr. Playfair reads it thus : LO11H in resi ; and says it composes the initials of the following words : lege obelisci hujus hieroglyphicis in nostro reg-no extinctionem Suenone invasionis ; which the Dr. translates thus, ' understand that the hieroglyphics of this obelisk represent the extinction, in our kingdom, of the invasion under Sweno.' The monument was placed here, because the Danes had attempted to form their settlement in this quarter. Translated literally it signifies ' by the hieroglyphics of this obelisk, read the extinction, in our kingdom, of the invasion under Sweno.'

SWERD, v. n. See To SWARD. To breed a green turf.

The clays that are long in swerding, and little subject to weeds, are the best land for clover.

Mortimer.

SWERTIA, or more properly SUERTIA ; for, it is monstrously unclassical to put W even into a modern Latin word. To avoid such barbarism the late Dr. Browne turned his name into Bruno. Marsh Gentian, in botany, a genus of plants belonging to the class of pentandria, and to the order of digynia; and in the natural sys-tem ranging under the twentieth order, rbtaceae. The corolla is wheel-shaped. There are necta-liferous pores at the bases of the segments of the corolla. The capsule is unilocular and bivalve. There are six species ; *viz.* 1. S. carinthiaca ; 2. corniculata; 3. dichotoma; 4. difformis ; 5. perennis ; and 6. llotata. S. perennis is a na-tive of England. It is distinguished by radical oval leaves. It flowers in August.

SWERVE, v. n. Saxon and Belg. iwervcn ; Swed. swarfwa. To wander; rove; bend from a straight course or direction; deviate; wind round.

The ungodly have laid a snare for me ; but yet I twerve not from thy commandments. Common Prayer.

A maid thitherward did run, To catch her sparrow which from her did sverrr.

Sidney.

That which angels do clearly behold, and without any swerving observe, is a law celestial and heavenly.

J Hanker.

Were I the fairest youth That ever made the eye su>m*.

Annihilation in the course of nature defec and innin in the creature, would

Till then his majesty had not in the least from that act of parliament.

Firm we subsist, yet possible to suc

The swerving vines on the tall elms prevail, Unhurt by southern showers or northern hail.

Dry dm.

She fled, returning by the way she went, And swerved along her bow with swift ascent. Id.

Many who, through the contagion of an example, swerve exceedingly from the rules of their holy faith, yet would upon such an extraordinary warning be brought to comply with them. Atterbury's Sermons.

SWIETEN. See VAN SWIETEN.

SWIETENIA, or more properly SUIETENIA, mahogany, in botany, a genus of plants belonging to the class of decandria, and to the order of

monogynia ; and in the natural system arranged under the fifty-fourth order, miscellanea. The calyx is quinquefid. There are five petals ; the nectarium is cylindrical, supporting the antherae with its mouth. The capsule is five-celled, woody, and opening at the mouth. The seeds are imbricated and winged. There is only one species ;

S. mahagoni, a native of the warmest parts of America, growing also in the island of Cuba, Jamaica, Hispaniola, and the Bahama Islands. It abounded formerly in the low lands of Jamaica, but it is now found only on hills and places difficult of access. It thrives in most soils, but varies in texture and grain according to the nature of the soil. On rocks it is of a smaller size, but very hard and weighty, of a close grain and beautifully shaded ; while the produce of the low and richer lands is observed to be more light and porous, of a paler color and open grain ; and that of mixed soils to hold a medium between both. The tree grows very tall and straight, and is usually four feet in diameter ; the flowers are of a reddish or saffron color, and the fruit of an oval form, and about the size of a turkey's egg. The wood is generally hard, takes a fine polish, and is found to answer better than any other sort in all kinds of cabinet ware. It is said to be used sometimes in ship-building ; a purpose for which it is remarkably adapted, if it were not too costly, be-ing very durable, capable of resisting gunshots, and burying the shots without splintering. The seed vessels are of a curious form, consisting of a large cone splitting into five parts, and disclosing its winged seeds, disposed in the regular manner of those of apocynum. The seeds, being winged, are dispersed on the surface of the ground, where some falling into the chinks of the rocks strike root ; then creep out on the surface of it, and seek another chink, into which they creep and swell to such a size and strength, that at length the rock splits and is forced to admit of the root's deeper penetration ; and with this little nutriment the tree increases to a stupendous size in a few years. The first use to which mahogany was applied in England was to make a box for holding candles for Dr. Gibbons, an eminent physician in the latter end of the seventeenth and beginning of the eighteenth century, who had a brother, a West India captain, who brought over some planks of this wood as ballast. The superior qualities of it being immediately discovered, it soon came into general use.

SWIFT, adj. kn.s.~\ Sax. rpipt-Quick ;

SWIFT'LY, adv. > moving far in a short

SWIFT’NESS, n. $. j time; fleet; speedy;

rapid : the current of a stream : the adverb and

noun substantive correspond.

Men of war, whose faces were like the faces of lions, and as swift as the roes upon the mountains.

1 Chron. xii. 8. Let every man be swift to hear, slow to speak.

James i. 19. Thou art so far before That twiftest wing of recompence is slow To overtake thee. Shakspeare.

We may outrun

By violent swiftness that which we run at ; And lose by over-running. Id. Henry VIII.

We imitate and practise to make swifter motions than any out of other muskets. Bacon.

These move swiftly, and at great distance; but then they require a medium well disposed, and their transmission is easily stopped. Id. Natural History

Exulting, till he finds their nobler sense Their disproportioned speed does recompense : Then curses his conspinng feet, whose scent Betrays that safety which their swiftness lent.

Denham.

To him with swift ascent he up returned. Milton. Speed to describe whose swiftness number fails.

Id. He can live in the strongest swifts of the water.

Walton.

Pleased with the passage, we slide swiftly on, 4.nd see the dangers which we cannot shun.

Dryden.

Such is the mighty swiftness of your mind, That, like the earth's, it leaves our sense behind.

Id.

Things that move so swift as not to affect the senses distinctly with several distinguishable distances of their motion, and so cause not any train of ideas in the mind, are not perceived to move.

Locke.

Thy stumbling foundered jade can trot as high As any other Pegasus can fly ; So the dull eel moves nimbler in the mud, Than all the swz/t-finned racers of the flood.

Dorset.

It preserves the ends of the bones from incales-cency, which they, being solid bodies, would contract from any swift motion. Ruy.

Clouded in a deep abyss of light, While present, too severe for human sight, Nor staying longer than one swift-winged night.

Prim:

In decent order they advance to light ; Yet then too swiftly fleet for human sight, And meditate too Soon their everlasting flight. Id,

Mantiger made a circle round the chamber, and the swift-holed martin pursued him. Arbutlinut.

There too my son — ah once my best delight, Once swift of foot, and terrible in fight.

Pope's Odyssey.

SWIFT, n. s. From the quickness of their flight; apus. A bird like a swallow; a martin.

Swifts and swallows have remarkably short legs, and their toes grasp any thing very strongly.

Derham.

SWIFT (Dr. Jonathan), a wit and classical writer of the English language, was born in Dub-lin, November 30th, 1667. His father was an attorney, and of a good family ; but, dying poor, the expense of his son's education was defrayed by his friends. At the age of six young Swift

was sent to the school of Kilkenny, whence he removed in his fifteenth year to Trinity College, Dublin. So much did he despise the study of .he old logicians, at that time held so indispen-rably necessary, that he was refused a degree on 'ccount of his ignorance of their writings, and

bbtained it afterwards through the interest of his friends, and ‘ by special favor,’ as inserted in the college registry. He remained in the college nearly three years after this, little known or regarded. By scholars he was reckoned a block-head ; and, as his circumstances would not permit him to keep company with persons of equal rank upon an equal footing, he lived much alone, and his time was employed in pursuing his course of reading in history and poetry. Yet, under this pressure, he conceived the first rude draught of the Tale of a Tub. In 1688, being by the death of Godwin Swift his uncle, who had chiefly supported him, left without subsistence, he went to consult his mother, who then lived in Leicester, about the future course of his life ; and, by her direction, solicited the advice and patronage of Sir William Temple, whose father had lived in great friendship with Godwin Swift. Temple received him with great kindness, and was so much pleased with his conversation that he detained him two years in his house, and recommended him to king William, who offered to make him a captain of horse. This not suiting his disposition, and Temple not having it quickly in his power to provide for him otherwise, Swift left his patron (1694) in discontent : having previously taken his master’s degrees at Oxford. He now resolved to enter into the church, where his first preferment was only £100 a-year, being the prebend of Kilroot in Connor; which some time afterwards, upon Sir William Temple’s earnestly inviting him back to his house at Mor-park, he resigned. In 1699 Swift.lost his patron Sir W. Temple, who left him a legacy in money, with the property of his MSS. ; and, on his death-bed, obtained for him a promise from the king, of the first prebend that should become vacant at Westminster or Canterbury. Swift dedicated to the king the posthumous works with which he was entrusted, and for a while attended the court ; -jut soon found it in vain. He was then invited by the earl of Berkely to accompany him into Ireland, where he obtained the livings of Laracor and Rathbaggin, in the diocese of Meath ; and soon afterwards invited over the unfortunate Stella, a young woman of the name of Johnson, whose life he contrived to embitter, and whose days, though he certainly loved her, we may confidently affirm that he shortened by his caprice. This lady is generally believed to have been the daughter of Sir W. Temple’s steward, though it has been said that she was Sir William’s own natural daughter, and Swift himself his natural son ; and that a discovery of this relationship was the cause of Swift’s otherwise unaccountable conduct to that excellent woman. This apology, however, seems worthy of no credit. But, be it as it may, it is certain that Sir William left her £1000; and that, accompanied by Mrs. Dingley, whose whole fortune amounted to an annuitv of £27 for life, she went, in consequence of Swift’s invitation, to Laracor. With these

he passed his hours of relaxation, and to them he opened his bosom ; but they never resided in the same house, nor did he see either without a witness. In 1701 Swift published A discourse of the contests and dissensions in Athens arid Home. It was the only work which he ever expressly acknowledged. Early in the following spring king William died ; and Swift, on his next visa to London, found queen Anne upon the throne. He was during the earlier part of the queen's reign of no party, but employed himself in discharging the duties of his function, and in publishing from time to time such tracts as he thought might be useful. In 1704 he published The Tale of a Tub ; which, considered merely as a work of genius, is unquestionably the greatest which he ever produced; but the levity with which religion was thought to be there treated, raised up enemies to him among all parties, and eventually precluded him from a bishopric. From that period till 1708 he seems to have employed himself in solitary study; but he then gave successively to the public The sentiments of a Church of England man, the ridicule of astrology under the name of Bickeistaff, the Argument against abolishing Christianity, and the defence of the Sacramental Test. Soon after began the busy and important part of Swift's life. He was employed in 1710 by the primate of Ireland to solicit the queen for a remission of the first fruits and twentieth parts to the Irish clergy. This introduced him to Mr. Ilarley, afterwards earl of Oxford, who, though a whig himself, was at the head of the tory ministry, and in great need of an auxiliary so able as Swift, by whose pen he and the other ministers might be supported in pamphlets, poems, and periodical papers. In 17 10 was commenced the Examiner, of which Swift wrote thirty-three papers, beginning his first on the 10th of November. 1711. In 1712 he published The Conduct of the Allies ten days before the parliament assembled ; and soon afterwards, Reflections on the barrier Treaty. The purpose of these pamphlets was to persuade the nation to a peace, by showing that ' mines had been exhausted and millions destroyed' to secure the Dutch and ag-grandise the emperor, without any advantage whatever to Great Britain. Though these two publications, together with his Remarks on the Bishop of Sarum's Introduction to the third Vo-lume of his History of the Reformation, certainly turned the tide of popular opinion, and effectually promoted the designs of the ministry, the best preferment which his friends could venture to give him was the deanery of St. Patrick's, which he accepted in 1713. In the midst of his power and hi? politics, he kept a journal of his visits, his walks, his interviews with ministers, and quarrels with his servant, and

transmitted it to Mrs. Johnson and Mrs. Dingley, to whom lie knew that whatever beftl him was interesting; but in 1714 an end was put to his power by the death of the queen, which broke down at once the whole system of tory politics, and nothing remained for him hut to withdraw from persecution to his deanery. In the triumph of the whigs, Swift met with every mortification that a sj.irit like his could possibly be exposed to.

The people of Ireland were irritated against him beyond measure ; and every indignity was offered him as he walked the streets of Dublin. Nor was he insulted by the rabble only, but persons of distinguished rank and character forgot the decorum of common civility to give him a personal affront. In this situation he retired from the world to discharge his duties as a clergyman, and attend to the care of his deanery. That no part of his time might lie heavy on his hands, he employed his leisure hours on some historical attempts relating to the change of the ministers and the conduct of the ministry ; and completed the History of the four last years of queen Anne's reign, which had been begun in her lifetime, but which he never published. Of the work which bears that title, and is said to be his, Dr. Johnson doubts the genuineness ; and it certainly is not such as we should have expected from a man of Swift's sagacity and opportunities of information. In 1716 he was privately married to Mrs. Johnson by Dr. Ashe, bishop of Clogher; but the marriage made no change in their situation, 4 and it would be difficult to prove,' says lord Orrery, 'that they were ever afterwards together but in the presence of a third person.' The dean lived in a private manner, known and regarded only by his friends, till about 1720 that he published his first political pamphlet relative to Ireland, entitled A Proposal for the Universal Use of Irish Manufactures ; which so roused the indignation of the ministry that they commenced a prosecution against the printer, which drew the attention of the public to the pamphlet, and at once made its author popular. Whilst he was enjoying the laurels which this work had wreathed for him, his felicity, as well as that of his wife, was interrupted by the death of Mrs. Van Homrigh, and the publication of

his poem called Cadenus and Vanessa, which brought upon him much merited obloquy. With Mrs. Van Homrigh, he became acquainted in London during his attendance at court; and finding her possessed of genius, and fond of literature, he took delight in directing her studies, till he got, insensibly, possession of her heart. From being proud of his praise, she grew fond of his person; and, despising vulgar restraints, she made him sensible that she was ready to receive him as a husband. She had wit, youth, beauty, and a competent fortune to recommend her, and for a while Swift seems to have been undetermined whether or not he should comply with her wish. She had followed him to Ireland, where she lived in a house about twelve miles from Dub-lin; and he continued to visit her occasionally, and to direct her studies, as he had done in Lon-don ; but with these attentions she was not satisfied, and at last sent to him a letter written with great ardor and tenderness, insisting that he should immediately accept or refuse her as a wife. His answer, which probably contained the secret of his marriage, he carried himself; and, having indignantly thrown it on the lady's table, instantly quitted the house, we believe, without speaking to her, and returned to Dublin to reflect on the consequences of his own conduct. These were dreadful. Mrs. Van Homrigh survived her disappointment but a few weeks ;

during which time she cancelled a will that she had made in his favor, leaving him a large fortune of £8000 a-year ; and ordered the poe-n to be published in which Cadenus had proclaimed her excellence and confessed his love. In 1724 his patriotism again burst forth, to obstruct the currency of Wood's halfpence, and his zeal was crowned with success. Wood had obtained p. patent to coin £l 80,000 in halfpence and farthings for the kingdom of Ireland ; and was about tc turn his brass into gold, when Swift, finding that the metal was debased to an enormous degree, wrote letters under the name of M. B. Drapier, to show the folly of giving gold and silver fur coin not worth a third part of its nominal value. A prosecution was carried on against the printer; and lord Carteret, then lord lieutenant, issued a proclamation, offering £300 reward for discovering the author of the fourth letter. The day after Swift brushed up to the lord lieutenant at a levee at the castle, and upbraided him in loud and petulant terms with persecuting a pooi shop-keeper whose crime was an endeavour to save his country from ruin ; when lord Carteret, who had listened with great composure to the whole speech, made this fine reply, in a line of Virgil : —

Res durae, & regni novitas me talia cogunt Moliri.

From this time Swift was considered by the populace as the champion, patron, and instructor of Ireland. In 1727 he returned to England; where, in conjunction with Pope, he collected three volumes of miscellanies; and the same year he sent into the world his Gulliver's Travels. Whilst he enjoyed the reputation of this work, he was suddenly called to a home of sorrow. Poor Stella was sinking into the grave ; and, after a languishing decay of about two months, died in her forty-fourth year, January 28th, 1728. With her vanished all his domestic enjoyments ; the severity of his temper increased ; he drove his acquaintance from his table, and wondered why he was deserted. The fits of giddiness and deafness to which he had been subjected from his boyish years became more frequent and violent as he grew old. In 1736, while he was writing a satire, called the Legion Club, against the Irish parliament, he was seized with so dreadful a fit of his malady that he left the poem unfinished ; and never after attempted a composition that required a course of thinking. Fro.i» this time his memory gradually declined. In 1741 he became utterly incapable of conversation; and it was found necessary to appoint legal guardians to his person and his fortune. He now lost all sense of distinction. During next year a short interval of reason ensuing gave hopes of his recovery; but in a few days l:e sunk into lethargic stupidity, motionless, heedless, and speechless. After a year of total silence, however, when his housekeeper told him that the usual illuminations were preparing to celebrate his birth, he answered, ' It is all folly : they had better let it alone.' He at last sunk into a perfect silence, which continued till the 29th of October 1745, when he expired without a struggle, in his seventy-eighth year. By liis will, dated May 1740, just before he censed to

he a reasonable being, he left about £1200 in specific legacies; and the rest of his fortune, which amounted to about £l 1,000, to erect and endow an hospital for lunatics and idiots. He was buried in the most private manner, according to his will, in the great aisle of St. Patrick's cathedral.

SWIFT (Dean, esq.), a near relation of the dean, grandson to Godwin Swift, the dean's uncle, was born in Dublin, educated at the university there, and completed his studies at Oxford. He had a fine taste, wrote entertaining verses, and was esteemed a perfect master of the Greek

and Roman classics. He published an Essay upon the Life, Writings, and Character of Dr. Jonathan Swift, 1755; 2. The eighth 4to. volume of the dean's works, 1765; and, 3. His Letters, in 2 vols., 1768. He died at Worcester in 1783.

SWIFT, in ornithology. See HIRUNDO.

SWILL, v. a. & n. s. Sax. fPˆan. To drink, luxuriously and grossly ; wash ; drench ; inebriate : drink thus lavishly taken or poured down.

The wretched, bloody, and usurping boar, That spoiled your summer fields and fruitful vines, Suiills your warm blood like wash, and makes his

trough In your embowelled bosoms.

Shakspeare. Richard III.

As fearfully as doth a galled rock, O'erhang and jiitty his confounded base, Swilled with the wild and wasteful ocean. Shakspeare.

I should be loth

To meet the rudeness and swilled insolence Of such late wassailers. Milton.

He drinks a swilling draught ; and, lined within, Will supple in the bath his outward skin. Dryden.

Give swine such swill as you have. Mortimer.

With that a German oft has swilled his throat, Deluded that imperial Rhine bestowed The generous rummer. Philips.

The most common of these causes are an hereditary disposition, and twilling down great quantities of cold liquors. Arbuthiiot.

Such is the poet, fresh in pay, The third night's profits of his play ; His morning draughts till noon can swill, Among his brethren of the quill. Swift.

Thus as they swim in mutual swill, the talk Reels fast from theme to theme. Thomson.

SWIM, v. n., v. a., &•> Pret. swam, sworn,

SWIM'MER, n. s. [n. s. for swum. Sax. rpim—

SWIM'MINGLY, adv. j man ; Belg. swimmen. To move or float on the water ; be conveyed by water; glide along; be floated; be dizzy; to flow in any thing ; hence, have abundance of a thing : to pass by swimming : the bladder of a fish : a swimmer is one who swims : swimmingly is, smoothly : without obstruction.

The soldiers' counsel was to kill the prisoners, lest any of them should swim out and escape.

Acts xxvii. 42.

The rest, driven into the lake, were seeking to save their lives by twimming ; they were slain in coming to land by the Spanish horsemen, or else in their twimming shot by the harquebusiers.

KnoUes.

I will scarce think you have swam in a gondola.

Shakspeare.

Leap in with me into this angry flood, And neim to yonder point. Id. Julius C<esar.

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She with pretty and with twimming gate Following, her womb then rich with my younir

squire,

Would imitate. Shakspeare.

We have ships and boats for goin» under water and brooking of seas; also swimming-girdles and supporters. Bacon—

Birds find ease m the depth of the air, as ncim-mers do in a deep water. /j

With tenders of our protection of them from the fury of those who would soon drown them, if they refused to twim down the popular stream with them.

King Charles. They now swim in joy,

Ere long to swim at large, and laugh ; for which The world a world of tears must weep. Milton.

Animals swim in the same manner as they go, and need no other way of motion for natation in the water, than for progression upon the land.

Browne's Vulgar Errottrs.

Latirostrous and flat-billed birds being generally twimmers, the organ is wisely contrived for action.

Browne.

The frighted wolf now swimt among the sheep, The yellow lion wanders in the deep : The stag swims faster than he ran before. Dryden.

I s-woom with the tide, and the water under me was buoyant. Id.

A hovering mist came swimming o’er his sight,

And sealed his eyes in everlasting night. Id.

I am taken with a grievous swimming in my head,

and such a mist before my eyes that I can neither

hear nor see. Id.

Sometimes he thought to swim the stormy main,

By stretch of arms the distant shore to gain. Id.

My slack hand dropt, and all the idle pomp, Priests, altars, victims swam before my sight !

Smith.

The braces have the nature and use of tendons, in contracting the swim, and thereby transfusing the air out of one bladder into another, or discharging it from them both. Grew.

When the heavens are filled with clouds, when the earth swims in rain, and all nature wears a lowering countenance, I withdraw myself from these uncomfortable scenes into the visionary worlds of art.

Addison’s Spectator.

John got on the battlements, and called to Nick, I hope the cause goes on swimmingly. A rbuthnot. The fainting soul stood ready winged for flight, And o’er his eye-balls swum the shades of night.

Pope. Sudden the ditches swell, the meadows swim.

Thomson.

Life is oft preserved

By the bold swimmer, in the swift illapse Of accident disastrous. Id—

SWIMMING, the art of suspending one's self on water, and at the same time making a progressive motion through it. Although swimming is not natural to man, yet there are no nations so barbarous but the art is known among them, even in greater perfection than among civilised people. It is probable, therefore, that the art, though not absolutely natural, will always be acquired by people in a savage state from imitating the brutes, most of whom swim naturally. The theory of swimming depends upon this simple principle : that if a force is applied to any body, it will always move towards that side where there is the least resistnnce. This is evident in the motion of vrs.-pls ; and tlif same thin" takes place in swimming, whether tin-aniO I

raal be man, quadruped, bird or fish. When a man swims, he strikes the water with his hands, arms, and feet; in consequence of which the body moves in a direction contrary to the stroke. Upon this principle, and on this only, a man may either ascend, descend, or move obliquely, in any possible direction in the water. It is incredible what expert swimmers will perform in this way ; of which Mr. Forster gives a remarkable instance in the inhabitants of Otaheite; whose agility was such, that when a nail was thrown overboard, they would jump after it into the sea, and never fail to catch it before it came to the bottom. As to the practice of swimming, few directions can be given. The great obstacle is the natural dread which people have of being drowned ; and this it is impossible to overcome by any thing but practice and habit. With regard to the real danger of being drowned, it is but little, and arises entirely from terror. Dr. Franklin observes, ' 1st. That though the legs, arms, and head, of a human body, being solid parts, are specifically heavier than fresh water, yet the trunk, particularly the upper part, from its hollowness, is so much lighter than water, as that the whole of the body, taken together, is too light to sink wholly under water, but some part will remain above until the

lungs become filled with water : which happens from drawing water into them instead of air, when a person in the fright attempts breathing while the mouth and nostrils are under water. 2dly, That the legs and arms are specifically lighter than salt water, and will be supported by it ; so that a hu-man body would not sink in salt water though the lungs were filled as above, but from the greater specific gravity of the head. 3dly, That therefore a person throwing himself on his back in salt water, and extending his arms, may easily lie so as to keep his mouth and nostrils free for breathing ; and by a small motion of his hands may prevent turning, if he should perceive any tendency to it 4thly, That in fresh water, if a man throws himself on his back near the surface, he cannot long continue in that situation, but by a proper action of his hands on the water. If he uses no such action, the legs and lower part of the body will gradually sink till he comes to an upright position ; in which he will continue suspended, the hollow of the breast keeping the head uppermost. 5thly, But if in this erect position the head is kept upright above the shoulders, as when we stand on the ground, the immersion will, by the weight of the part of the head that is out of the water, reach above the mouth and nostrils, perhaps a little above the eyes ; so that a man cannot long remain suspended in water with his head in that position. 6thly, The body continuing suspended as before, and upright, if the head be leaned quite back, so that the face looks upwards, all the back part of the head being then under water, and its weight consequently in a great measure supported by it,' the face will remain above water quite free for breathing, will rise an inch higher every inspiration, and «ink as much every expiration, but never so low as that the water may come over the mouth. 7thly, If, therefore, a person unacquainted with swimming, and falling accidentally into the water, could have presence of mind to avoid struggling and plunging, and to let the body take this natural position, he might continue long safe from drowning, till, perhaps, help would come ; for, as to the clothes, their additional weight, while immersed, is very inconsiderable, the water supporting it; though, when he comes out of the water, he would find them very heavy indeed.' The doctor's method of learning to sˆvim is as follows : — The person must walk into water so deep that it will reach to the breast. He is then to lie down gently on the belly, keeping the head and neck perfectly upright, the breast advancing forward, the thorax inflated, and the back bent ; then, withdrawing the legs from the bottom, and stretching them out, strike the arms forward in unison with the legs. Swimming on the back is somewhat similar to that on the belly ; but with this difference, that, although the legs are employed to move the body forwards, the arms are generally unemployed, and the progressive motion is derived from the movement of

the legs. In diving, a person must close his hands together, and, pressing his chin upon his breast, make an exertion to bend with force forwards. While in that position, he must continue to move with rapidity under the surface ; and, whenever he wishes to return to his former situation, he has nothing to do but bend back his head, and he will immediately return to the surface. It is very common for novices to use corks or bladders to assist in keeping the body above the water. Dr. Franklin allows that they may be of service for supporting the body while one is learning what is called the stroke, or that manner of drawing in and striking out the hands and feet that is necessary to produce progressive motion. ‘ But,’ says he, ‘ you will be no swimmer till you can place confidence in the power of the water to support you : I would, therefore, advise the acquiring that confidence in the first place, especially as I have known several whn, by a little of the practice necessary for that purpose, have insensibly acquired the stroke, taught as it were by nature. The practice I mean is this : — Choosing a place where the water deepens gradually, walk coolly into it till it is up to your breast : then turn round your face to the shore, and throw an egg into the water between you and the shore ; it will sink to the bottom, and be easily seen there, if the water is clear. It must lie on the water so deep as that you cannot reach it to take it up but by diving for it. To encourage yourself to do this, reflect that your progress will be from deeper to shallower water ; and that at any time you may, by bringing your legs under you, and standing on the bottom, raise your head far above the water : then plunge under it with your eyes open, throwing yourself towards the egg, and endeavouring, by the action of >our hands and feet against the water, to get forward till within reach of it. In this attempt you will find that the water buoys you up against your inclination, and it is not so easy a thing to sink as you imagined ; that you cannot but by active force get down to the esrg. Thus you feel the power of the watei to support you, and learn to confide in that power ; while your endeavours to overcome it,

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and to reach the egg, teach you the manner of east of London; containing 345 houses and 1695

acting on the water with your feet and hands; inhabitants. Market on Thursday £ first

which action is afterwards used in swimming to Thursday in June and second n October support your head higher above water, or to go -«*~ forward through it.' Many other rules have been laid down for acquiring this ; but, if a young

man once gets rid of fear, these are sufficient, influence or power that moves ;"couwe""'libert7

and by practice he may soon acquire various "«-«-»—• — -> *— j-

SWING, v. n., v. a., & n. $. Sax. rpmgan. lo wave to and fro loosely : whirl around in the air; wave loosely : motion of this kind, or the

evolutions ; or he may find a full account of these in the Encyclopedie Methodique.

SWIMMING OF FISH. A great proportion of the inhabitants of the waters have an air-bladder, by which they poise themselves. Their movements chiefly depend upon their tail. See ICHTHYOLOGY and ZOOTOMY.

SWINDON, a market-town and parish in Kingsbridge hundred, Wilts., situate on an eminence, ten miles north from Marlborough, and eighty-three from London ; containing 272 houses and 1580 inhabitants. This is a neat town, and the houses are well built of stone. The church is neatly fitted.up in its interior. Here is a free-school for boys and girls, and in the vicinity of the town are some excellent stone quarries. Market on Monday. Fairs, Monday before April 5th, second Monday after May llth, September and October. It is a vicarage, value £17.

SWINE, 7i. s. "i Sax. rpm; Belg. swyn; Goth.

SWINE'HERD 5 and Swed. swin. Probably the plural of some old word, but now the same in both numbers. A hog ; a pig : a keeper of hogs.

There swineherd, that keepcth the hog. Tusser.

O monstrous beast ! how like a noine he lies !

Shakspeare,

Now I fat his twine, for other's cheere. Chapman.

Who knows not Circe,

The daughter of the Sun 1 whose charmed cup Whoever tasted, lost his upright shape, And downward fell into a grovelling swine. Milton.

Had the upper part, to the middle, been of hu-man shape, and all below swine, had it been mur-der to destroy it ? Locke.

How instinct varies in the grovelling swine, Compared, half-reasoning elephant, with thine !

Pope.

The whole interview between. Ulysses and Eu-meus has fallen into ridicule : Eumeus has been judged to be of the same rank and condition with our modern swineherds. Broome.

SWINE, in zoology. See Sus. SWINE, in geography, a branch of the Oder, anciently called Suevus.

SWINE-GRASS, or SWINE CRESS. See COCHLEARIA.

SWINE'S CRESS, a species of cochlearia.

SWINE-STONE, lopis suillus, or fetid stone, so called from its excessively fetid smell, is a species of saline stone. It is found, 1. Solid, with the particles scarcely risible, of s> black color ; as the marble of Flanders and Jutland. 2. With visible grains of a blackish-brown color, found in Swe-den. 3. With coarse scales, found also in Sweden. Many of the limestones found in England belong to this species, and emit a very fetid smell when struck violently ; but it goes off in the fire. See MINERALOGY.

SWINESIIEAD, a market-town and parish in Kirton hundred, parts of Holland, Lincolnshire, six miles south-west of Boston, and 113 north-

unrestrained tendency ; sweep.

Where the swing goeth, there follow, fawn, flatter, laugh, and lie lustily at other men's liking.

Ascham's Schoolmaster. His sword prepared, He swang about his head, and cut the winds.

Shakspeare.

The ram that batters down the wall, For the great twing and rudeness of his poise, They place before his hand that made the engine.

Id.

Take bottles and swing them : fill not the bottles full, but leave some air, else the liquor cannot play nor flower. Bacon.

In casting of any thing, the arms, to make a greater swing, are first cast backward.

Id. Natural History. Facts unjust Commit, even to the full swing of his lust.

Chapman.

Swing thee in the air, then dash thee down, To the hazard of thy brains, and shattered sides.

Milton.

Those that are so persuaded, desire to be wise in a way that will gratify their appetites, and so give up themselves to the swing of their unbounded propen-sions. Glanville.

Swinging a red hot iron about, or fastening it unto a wheel under that motion, it will sooner grow cold. Browne.

In this encyclopaedia, and round of knowledge, like the great wheels of heaven, we are to observe two circles, that, while we are daily carried about, and whirled on by the swing and rapt of the one, we may maintain a natural and proper course in the sober wheel of the other. Id.

The descending of the earth to this orbit .is not upon that mechanical

account Cartesius pretends, namely, the strong swing of the more solid globuli that overflow iu More.

1 tried if a pendulum would swing faster, or continue swinging longer in our receiver, in case of ex-suction of the air than otherwise. Boyle.

If one approach to dare his force, He swings his tail, and swiftly turns him round.

Dry den.

Take thy swing : For not to take is but the self-same thing. Id.

Men use a pendulum, as a more steady and regular motion than that of the earth ; yet, if any one should ask how he certainly knows that the two successive swings of a pendulum are equal, it would be very hard to satisfy him. Locke.

Were it not for these, civil government were not able to stand before the prevailing swing of corrupt nature, which would know no honesty but advantage.

South,

These exuberant productions only excited and fomented his lusts ; so that his whole time lay upon his hands, and gave him leisure to contrive, and with full swing pursue his follies. Woodward.

If the coach swung but the least to one side, she used to shriek so loud, that all concluded she was overturned. Artothnot.

Jack hath hanged him»elf : let us go see how he tujingt.

SWI

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When the swinging signs your cars offend With creaking noise, then rainy floods impend.

Gay. Let them all take their swing

To pillage the king, And get a blue ribband instead of a string. Swift.

SWINGE, v. a. & n. s.-j Sax. rpmgan. To SWINGEBUCK'LER, n. s. (whip; bastinade ; SWIN'GING, adj. £ punish; flourish

SWIN'GINGLY, adv. J about: a sweep or iway : a swingebuckler is a bully : swinging,

antiquary, the son of John Swinton of Bexton, gent , was born in Cheshire in 1703. His parents were not affluent, as he was entered at Oxford as a Servitor at Wadham College in October, 1719. On June 30, 1723, he was elected a scholar on a Cheshire foundation. In December, 1723, he became B. A., and on December 1, 1726, M. A. He was ordained deacon May 30, 1725; priest May 28, 1727; and made rector of St. Peter le Bailey in Oxford in February, 1728. In June 1728 he was elected a fel-

sweeping ; huge ; great ; a low word : the adverb low of his college ; but willing to see the world,

corresponding

You had not four such smngebucklert in all the inns of court again. Shakspeare. Henry IV.

Sir, I was in love with my bed : I thank you, you swinged me for my love, which makes me the bolder to chide you for your's.

Id. Two Gentlemen of Verona. He, wroth to see his kindom fail, Swinges the scaly horror of his folded tail. Milton.

The shallow water doth her force infringe, And renders vain her tail's impetuous swinye.

Waller.

This very reverend letcher, quite worn out With rheumatisms, and crippled with his gout, Forgets 'vhat he in youthful times hath done, And swinges his own vices in his son.

Dryden,jun. Juvenal.

The countrymen, seeing the lion disarmed, with a twinging cudgel broke off the match. L' Estrange.

A good swinging sum of John's readiest cash went towards building of Hocus's country-house.

Arbuthnot.

The printer brought along with him a bundle of those papers, which, in tlje phrase of the whig-coffee-houses, have swinged off the Examiner.

Swift.

he accepted of a chaplainship to the English factory at Leghorn. But as he did not enjoy his health he went to Florence in April 1733, where he attended Mr. Coleman, the English envoy, in his last moments. He returned through Venice and Vienna, and visited Presburg in Hungary. While he was abroad he was admitted into some foreign societies; *viz.* the Academy degli Apa-tisti at Florence, and the Etruscan Academy of Cortona. On his return he settled at Oxford, where he became chaplain to the gaol. He married in 1743 and gave up his fellowship.

In 1759 he became B. D. ; in 1767 he was elected custos Archivorum; and, on April 4th, 1777, he died without issue. His wife died in 1784, and both were buried in the chapel of Wadham College. His publications were numerous and learned. He published, 1. De Liuguse Etruriae Regalis vernacula Dissert. 4to. 19 p. Oxon, 1738. 2. A Critical Essay on the Words Aai/xwv and Aai/ioviov, 8vo. London, 1739. 3. De priscis Romanorum literis, 4to. 20 p. Ox. 1746. 4. De Primogenio Etruscorum Alphabeto, Ox. 1746. 5. Inscriptiones Citicse ; sive in binas Inscriptio-Henceforward he'll print neither pamphlets nor nes Phcenicias, inter rudera Citii nuper repertas

1 i T-icin • . A 3 •* J_ *'!_ 1 C*

conjecture. Accedit de nummis quibusdam Samaritanis et Phceniciis, vel insolitam prae se literaturam ferentibus, vel in lucem hactenus non

linen, And, if swearing can do't, shall be swingingly

mauled. Id.

SWINGING, a kind of exercise strongly recom-edui dissertatio 4to 87 p. Ox. 1750. 6. In-mended to persons in consumption by some scriptˆones Citic4; sive irf binas alias Inscriptiones Phcenicias, inter rudera Citii nuper repertas, conjecture, 4to. 19 p. 7. De nummis quibusdam Samaritanis et Phceniciis, vel insolitam prae se literaturam ferentibus, vel in lucem hactenus non editis diss. 2da. 4to. 36 p. 8. Metilia:

physicians, and disapproved of by others. See MEDICINE.

SWING-TREE of a waggon is the bar fastened across the fore-guide to which the traces of the horses are fastened.

SWING-WHEEL, in a royal pendulum, that give de jnano Gentjs MetiU -t nummis ve_

wheel which drives the pendulum.

or balance clock it is called the crown-wheel.

SWINK, v. n., v. a., & n. s. Sax. j-pmcan, To labor; toil; drudge: to over-labor: such labor ; drudging. Obsolete.

Riches, renown, and principality, For which men swink and sweat incessantly.

Spenser.

Ah, Piers, been thy teeth on edge, to think How great sport they gaynen with little swinkel Id.

Thou ‘s but a lazy loorde, And rekes much of thy swinke. Id.

The laboured ox

In his loose traces from the furrow came, And the swinked hedger at his supper sat. Milton.

tustis cseteroquin minimum notae, diss. 4to. 22 p. Ox. 1750. 9. Several dissertations in the Philosophical Transactions. As, A Dissertation upon a Parthian Coin ; with characters on the reverse resembling those of the Palmyrenes, vol. xlix. p. 593. Remarks on a Parthian Coin, with a Greek and Parthian Legend, vol. 1. p. 16. A Dissertation upon the Phoenician Numeral Characters anciently used at Sidon, vol. 1. p. 791. In nummum Parthicum hactenus ineditum con-jectune, vol. ii. p. 683. A Dissertation upon a Samnite Denarius, vol. lii. p. 28. An Account of a Subserated Denarius of the Plaetorian Family, with an Etruscan Inscription, vol. Ixii. p. 60.

SWINNA, an island of Scotland, in the Pent-Observations upon Five Ancient Persian Coins,

land Frith, one mile long and half a mile broad, inhabited by six families, and about twenty-two souls, who live chiefly by piloting vessels through the dangers of the frith, and the whirlpools, called the Wells of Swinna.

SWINTON (John), a very celebrated English

struck in Palestine or Phoenicia before the Dissolution of the Persian Empire, vol. Ixii. p. 345. 10. A part of the Ancient Universal History, in the sixth and seventh volumes of that work The particulars of this piece of literary history were communicated by Dr. Johnson to Mr. Ni-

SWITZERL A N D.

diols, in a paper printed in the Gentleman's Magazine for December, 1784. The original is deposited in the British museum. It assigns the following divisions of the history to Mr. Swinton : — The history of the Carthaginians, Nuini-dians, Mauritanians, Gaetulians, Garamantes, Melano-Gaetnlians, Nigritiae, Cyrenaica, Mar-morica, the Regio Syrtica, Turks, Tartars, and Moguls, Indians, and Chinese; a Dissertation on the Peopling of America, and one on the Independency of the Arabs.

SWITCH, n. s. & v. a. Isl. and Swed. swig. A small flexible twig : to lash ; jerk.

Fetch me a dozen crabtree staves, and strong ones ; these are but switches. Shahspeare. Henry VIII.

Lay thy bridle's weight Most of thy left side ; thy right horse then switching,

all thy throat

Spent in encouragements give him ; and all the rein let float. Chapman's Iliad.

‘ When a circle ‘bout the wrist Is made by beadle exorciit, The body feels the spur and switch. Hudiln-ai.

Mauritania, on the fifth medal, leads a horse with something like a thread ; iu her other hand she holds a switch. Addison

SWITZERLAND, a delightful country in the interior of Europe, bounded on the west by France, on the south by Italy, on the north and east by Germany. It extends from east to west nearly 200 miles, and from north to south about 140. Its form is a medium between an oblong and an oval ; and, though the limits of its circumference are irregular, it is on the whole compact. Various have been its modern territorial changes and arrangements; but it was recognised by the congress of Vienna, in 1815, as consisting of twenty-two cantons of the following extent and population : —

Cantons.

Extent.

Population.

Chief Towns.

Square miles.

Population.

Zurick

960

224,150

Zurick … 10,470

Berne ….

3,690

356,710

Berne … 13,000

Lucerne

768

105,560

Lucerne … 5,000

Uri …

512

13,930

Altorf … 3,000

Schwitz

470

96,040

Schwuz … 4,640

Unterwalden

260

23,150

Sarnen … 3,000

Glarus

453

28,000

Glarus … 3,000

Zug ….

125

14,710

Zug … 2,500

Fryburg

490

67,814

Fryburg … 6,460

, Solothurn

277

54,380

Solothurn . . 4,100

Basle ….

266

55,330

Basle … 16,200

Schaffhausen

170

28,050

Schaffhausen . . 5,500

Appenzell .

223

57,510

S Herisau … 7,000 < Appenzell . . 3,000

St. Gall

853

157,700

St. Gall … 9,000

Gray League

2,986

98,090

Chur … 3,350

Aargau

768

152,900

Aargau … 3,000

Thurgau

357

89,845

Frauenfeld . . 1,800

Tessino

1,183

103,950

Lugano … 3,400

Vaud or Waadt .

1,493

178,880

Lausanne . • 9,960

Vallois or Wallis .

1,962

77,570

Sitten or Sion . . 2,500

Neufchatel .

320

56,640

Neufchatel . .5,150

Geneva

95

53,560

Geneva … 22,000

18,681, or

2,037,030

11,955,840 acres

!

Each of the cantons has its own system of government; out they all form a general community, by mean? of representatives chosen from each, who meet to regulate the external relations of the union, and to provide the means, in troops and money, for the common defence ; assembling yearly in July, or more frequently, on the requisition of any five of them. Treaties of peace, or declarations of war, require the assent of three-fourths of the votes. All other matters are determined by majority. The place of meeting is ‘n rotation, Zurick, Berne, and Lucerne, each for two years, where the supreme court is held, and thechancellor and state-secretary hold theiroffices. The expenses of the general government are defrayed by contributions from each canton, according to their estimated wealth, which, as well as the military contingent, is adjusted every period VOL. XXI

of twenty years. The revenues, expenses, and debts of the cantons are generally kept as a kind of state secret; and the taxes are various, but,

in general, very light.

Every man capable of bearing arms is occasionally trained and exercised, but a more permanent force is arranged, to which each of the cantons must furnish their proportion, at the rate of two men out of every hundred of the proper age. These form an*afmy of nearly 34,000 men, as follows : —

Artillery . . 32 companies

Sappers … 2 ditto

Pontoniers . . 1 ditto

Train ….. • • •

Light cavalry . 17 troops

Sharpshooters ‘10 companies 1.00C

Infantry. . 2Q4 ditto 25,199

2,272 men.

Yagars … 2 companies 2,000 men.

Staff corps 586

A militia, mustered under the direction of each individual canton, amounts also to 67,516 men, besides the landwehr, or levy en masse, which comprehends the whole of the male population. To cherish the military spirit, the cantons permit great numbers of their young men to enter into the service of foreign states. In 1816 the numbers so engaged were estimated at 30,000; of whom 12,370 were in France; 10,000 in the Netherlands; 430 in Prussia; and the others in Spain and Sardinia.

Lucerne, Uri, Schwitz, Unterwalden, Zug, Fryburg, Solothurn. Tessino, and a part of Appenzell, still adhere to the Roman Catholic religion. Protestantism is established in Zurich, Berne, Basle, Schaffhausen, Vaud, Neufchatel, Geneva, and a part of Appenzell : and both religions in Glarus, Thurgaw, Aargau, St. Gall, and the Gray League, but here the majority of the people are Protestants. The number of the Reformed or Calvinists are estimated to be 1,046,000; of the Catholics 682,000 ; in the remainder are comprised a few Jews, Lutherans, and Baptists.

Switzerland, the most mountainous country in Europe, is largely occupied by various branches of the Alps. The only extensive tract of vales, •with mountains of more moderate height, is to the westward, in the cantons of Bale, Zurich, and part of Berne; but even here the frontier is formed by mountains, the Jura ridge extending in a long line from north to south. The most remarkable valley of Switzerland is that of the Rhone ; being at once the widest, and surrounded by the highest mountains. The Alps vary in height from 5000 to 8000, 10,000, and even 15,000 feet. After Mont Blanc, computed at 15,500 feet, comes Monte Rosa, 14,200 feet. Mount St. Gothard, the great St.

Bernard, and the Simplon, well known as the route of travellers, are still not equal in height to several mountains of the interior, such as MontCervin, 13,800 feet ; the Jungfrau-horn, the Tursteraarhorn, the Furca, Schreckhorn, each nearly 14,000 feet; the Wetter-horn and Gallenstock, between 11,000 and 12,000, &c. Toward their base the Alps exhibit every variety of temperature and product; rich corn fields or luxuriant pastures extending along the lower part of many of them. The mid-dle consists of pastures less productive, but containing a great variety of plants ; while the summits are composed of rocks, craggy, inaccessible, devoid of vegetation, and covered with enormous masses of ice and snow. In some parts the transition from pasture to sterility takes place very gradually ; in others it is more rapid . Every mountain has its rivulets, which dash from rock to rock, and frequently its beautiful cascades. At Staub-bach, in the valley of Lauter-bronnen, in the canton of Berne, is a stream which precipitates itself over a rock of nearly 1000 feet. Other parts offer a transition from scenes bleak and savage to landscapes of luxuriant verdure.

Switzerland is less remarkable for its minerals than might be expected. Iron, however, is found in several parts, particularly in the district of Sargans, in the east ; and there are mines, or

rather quarries, of rock salt in th<- canton of Berne. Mines of silver, copper, and lead, are also found in different parts ; but they do not re-pay the labor of working. Marble, porphyry, alabaster, crystal, and sulphur, are found occasionally : of mineral waters the most considerable are those of Leuck and Schintznach, and the warm baths of Pfeffers. The glaciers, or lakes of frozen snow, accumulated to avast height, or ra-ther depth, are found first at about 8000 or 9000 feet above the sea ; although, in a winter of unusual rigor, their ramifications extend considerably lower. Their surface, in some cases smooth and unbroken, is in others marked by deep chasms and pinnacles rising in fantastic forms, and presenting to the eye the appearance of a city of crystal. In the long alpine range, extending along the south of Switzerland, from Mont Blanc in the west, to the extremity of Tyrol in the east, are reckoned no less than 400 of these glaciers, differing greatly in magnitude, but frequently extending from sixteen to eighteen miles in length by one or two in breadth. The latter can with difficulty be ascertained, but is supposed to vary from 100 to 600 feet; the total extent of their surface has been calculated at 1000 square miles. Bourrit’s description of one of these magnificent scenes is as follows : — ‘ At length,’ says he, ‘ we perceived through the trees a mountain of ice as splendid as the sun, and flashing a

similar light on the environs. The first aspect of the glacier of the Rhone inspired us with great expectation. A moment afterwards, this enormous mass of ice having disappeared behind thick pines, it soon after met our sight between two vast blocks of rock, which formed a kind of portico. Surprised at the magnificence of this spectacle, and at its admirable contrasts, we be-held it with rapture. At length we reached this beautiful portico, beyond which we were to discover all the glacier. We arrived ; at this sight, one would suppose one's self in another world ; so much is the imagination impressed with the nature and immensity of the objects. To form an idea of this superb spectacle, figure in your mind a scaffolding of transparent ice, filling a space of two miles, rising to the clouds, and darting flashes of light like the sun. Nor were the several parts less magnificent and surprising. One might see, as it were, the streets and build-insrs of a city, erected in the form of an amphitheatre, and embellished with pieces of ice, cascades, and torrents. The effects were as prodigious as the immensity and the height. The most beautiful azure, the most splendid white, the regular appearance of a thousand pyramids of ice, are more easy to be imagined than described. Such is the aspect of the glacier of the Rhone, reared by nature on a plan which she alone can execute : we admire the majestic course of the river without suspecting that what gives it birth and maintains its waters, may be still more majestic and magnificent.'

No country is better provided with water, particularly in summer, when the melting of the snow affords a copious supply. The Rhone, ris-ing in the centre of Switzerland, holds a westerly course through a beautiful valley, and pours into the lake of Geneva a stream which, turbid at

its influx, becomes pure and transparent when reissuing from the lake. The Ticino collects the waters flowing from Mount St. Gothard and the Alps, which look towards Lombardy. TheAar, rising on the northern slope of the central Alps, receives numberless streams flowing towards the western or more level parts of Switzerland; while the Rhine,

holding at first a north-east course, encircles a part of the cantons, flows through the lake of Constance and Zell, and receives successively the Thur, the Limmat, the Reuss, and the Aar, which, joined to its own waters, render it, ere quitting the Swiss terri tory, the second river in Europe. The lakes of Switzerland are also numerous : the principal are those of Geneva, Constance, Neufchatel, Bienne, Zurich, Wallenstadt, Walstadter or Lucerne, Thun, and Brientz; most of them navigable. On this account a number of the towns of Switzerland are situated on their sides ; and the mountains, rising from the shore in an amphitheatre form, render the scenery beautifully romantic.

The valleys of Switzerland and the bases of the mountains enjoy the warmth of an Italian sun, where their ascent discovers a scanty vegetation, and the summit is doomed to all the rigors of an Arctic winter. Such a contrast is not, however, exhibited in the northern or level part of the country, where the climate differs little from that of the south of Germany. In winter, however, the degree of cold is greater in the valleys of Switzerland, than in most parts of France or Germany, in consequence, doubtless, of the accumulation of snow and ice on the adjacent mountains ; and stormy weather frequently occurs.

In travelling through this country one is constantly surprised at the care bestowed on the most unpromising spots; and at seeing vines, corn, and rich pasturages, where at one time there can have been little else than naked rocks. The products are wheat, barley, oats, maize, flax, hemp, and tobacco : the fruits of frequent occurrence, vines, chestnuts, prunes, peaches, walnuts, cherries; in the colder situations, apples and pears; and in the southern valleys the almond and fig. Wood, both for building and fuel, is found in most parts : but the corn raised is considerably below the consumption ; and bread is by no means of universal use. The breeding of cattle, a branch of industry pointed out by the abundance of pasture, and the difficulties attending tillage, forms the grand source of national subsistence : the herds are driven to the mountains in spring, and graze there until the approach of winter forces them to descend ; cheese, butter, allow, hides, form the chief articles of export. After cattle, the animals chiefly raised are goats, sheep, and hogs. The summits of the Alps are occupied by the chamois, wild goat, white and red fox, and a kind of hare, which, in summer, resembles the hare of Britain, but in winter becomes white.

Switzerland has on the whole a fair share of trade. The conveyance of goods along the Aar, the Reuss, and the Rhine, facilitates its intercourse with Germany and the Netherlands ; and the Rhone, though more difficult of navigation, serves the same purpose in regard

to

France: the exports aiP linen, cotton cloth, woollens, and, in a small degree, silks ; also cat-tle, sheep, hides, tallow, butter, and cheese ; the chief imports, corn from Germany, salt from Ty-rol and Franche Comte ; spices, dyewoods, groceries, and other colonial produce from Holland ; raw silk from Italy, and manufactured articles (such as hardware and cotton yarn), from England. The manufactures are linen, lace, thread, and woollens, and are of old standing ; cottons have been introduced, or at least extended, since the latter part of the eighteenth century; leather gloves, silks, porcelain, pottery, toys, tobacco, and snuff, are made in various places; and clocks and watches have long been staple articles at Geneva and Neufchatel.

The universities of Geneva and Basle have long been distinguished. There are, besides, academies or colleges at Zurich, Berne, and Lausanne, and schools of good repute in various towns, in particular Neufchatel, Schaffhausen, and St. Gall ; also at Coire, the small sequestered capital of the Grisons. Among literary associations are to be mentioned the Helvetic society of Bale, the physical of Zurich, and the economical of Berne. In regard to improvements in education, it suffices to mention the names of Pestallozzi and Fellenberg, both inhabitants of Switzerland : nor is there any reluctance here to borrow improvements from other countries, the method of Bell and Lancaster having been introduced in several places.

The Swiss were anciently called Helvetii, ancl the country Helvetia, whence the modern name of the Helvetic Republic. The ancient Helvetians were a Gaulish or Celtic people, and Helvetia was divided into four cantons or territories. Julius Caesar was the first who reduced the inhabitants under the dominion of the Romans, and these founded colonies here under the names of Julia Equestris, Augusta Raurocorum,' and Aventicum. Their dominion continued till the fifth century, when the country was overrun by the Burgundians and Germans ; but soon after the Franks made themselves entire masters of it. On the decease of Louis I., king of the Franks and emperor of the Romans, the south part of Helvetia, or Burgundy, devolved to the emperor Lotharius, and the north, or that of Allen-win, to king Louis the German. Lotharius II., son to the former and king of Austrasia, retained the south part of Helvetia, which, together with Burgundy, or Franche Comte, was styled the Lesser Burgundy. After his demise this south part also devolved to Louis the German, who thus became possessed of all Switzerland, and from him it descended to his son

Charles the Fat. In 8S» Rodolphus, duke of the Lesser Burgundy, took on him the title of king, but the north part of Switzerland continued under the dominion of the emperor Arnolphus. Rodolphus II., son to the former, obtained a grant of the Argau from the empeior Henry I. This prince was succeeded by his son Conrad, as the latter was by his son Rodolphus III., who, in 1032, by a formal will, bequeathed his kingdom of the Lessor Burgundy to the emperor Conrad II., whereby all Switzer-iand once more became united to the German empire. In the thirteenth century it became a

ihird time a nominal province of the German empire, which, however, was possessed of little real authoritf here. A great part of the country was in the hands of the clergy, and the remainder in general of particular nobles. The inhabitants of Uri, Schwitz, Underwald, and the territory of Hasli, were, from time immemorial, possessed of the right of being governed by their own magistrates, with other important privileges; and, in tbe twelfth century, the first three entered into an alliance which they solemnly renewed every tenth year. They had always declared themselves averse to the authority of the emperor's stadtholder in Switzerland, till, in 1209, Otho IV. compelled them to receive Rodolphus III., count of Habsburg, as his representative, though he was to take an oath that he would govern according to law and equity, and make no encroachments upon their rights and liberties. This nobleman seems to have been little observant of that engagement; for, in 1231, we find them unanimously addressing the emperor, Henry VII., to recal him; which he accordingly did, farther confirming to them all their privileges. In 1249 the like was done by his successor Frederick. In 1257, during the interregnum, in consideration of his great power, they chose for their protector Rodolphus V. count of Habsburg, who, in 1273, became emperor of Germany. At the solicitation of his son Albert, duk? of Austria, he intended to have erected a particular dukedom in Switzerland, which design did not transpire till several years after, when it appeared that

he had purchased of the abbot of Murbach the town of Lucern, with his revenues, and prerogatives in several villages in the territory of Schwitz. These three districts, on the death of Rodolphus, faithfully adhered to his successor the emperor Adolphus, which gave so much offence to his son, duke Albert, that on his accession to the crown of Germany, on the death of the latter, he displayed his resentment in more than one instance, not only refusing peremptorily to confirm their privileges, without vouchsafing to allege any reason for his refusal, but likewise setting over them two noblemen of the most infamous character for avarice and arrogance, whose administration became quite insupportable. On this, seeing that nothing less was in agitation than the total deprivation of their liberties, and the bringing thern under the yoke of Austria, they united in a firm resolution to defend themselves to the last extremity, The tyranny of Grisler, the Austrian governor, hastened this revolution by his barbarously ordering William Tell, the celebrated Swiss patriot, to shoot an ˆpple off his son's head at a considerable distance. Tell, having accomplished this without hurting his son, Grisler observed that he had another arrow concealed under his cloak, and asked him for what purpose that was. To which Tell boldly replied, ' To have shot you through the heart if I had had the misfortune to have killed my son.' On this the enraged governor ordered Tell to be hanged ; but his fellow citizens flew to arms, attacked and vanquished Grisler, who was shot to death by William Tell, and instantly formed an association for their independence. This memorable event liappened on the 7th of

November, 1307. See TELL. Arnold Melcnthal of Underwalden was the first who raised the standard of liberty. The citizens chose for commanders three gentlemen of approved courage and abilities; namely, Werner, or Gerhard Stauf-fach, of Schwitz, Walthur Furst of Uri, and Ar-nold Melchthal above-mentioned, who secretly agreed together that, on the first day of January, 1308, they should surprise and demolish the castles in which the imperial governors resided. This resolution being effected, these three places joined again in a league for ten years, which gave birth to the Helvetian confederacy. Schwitz being the most powerful of the three confederate places, and the first meeting of the confederates being held at Brunnen in its territories, as also the first league concluded there, and after that the first battle, by the success of which the liberty of the confederates was retrieved, being fought within its jurisdiction, its name was given to the general confederacy. The emperor Albert, thinking that this was the season for totally reducing these three places by force of arms, hastened to Baden to begin the preparations, but being, on his return, murdered by his

brother's son, John of Habsburg, the design was dropped ; till, not long after, the house of Austria invented another pretence for failing on the United Cantons. For these and other parts of Switzerland adhering to the emperor Louis of Bavaria, his competitor, Frederick of Austria, was so extremely irritated that the Switzers having, during their contests with the abbey of Einsidlen, made some of its monks prisoners, put them under the ban, to which the bishop of Constance added excommunication. The former was taken off again by the emperor Louis, and the latter by the archbishop of Mentz. Leopold, duke of Austria, by virtue also of a commission from his brother Frederick, above-mentioned, in 1315 attacked the confederates with a powerful army, but was defeated by them at Morgarten. Hereupon, on the 8th of December, 1315, they entered into a perpetual alliance, which proved the origin of the late Helvetian confederacy. In 1332 Lucern acceded to it; in 1351 Zurich and Glaurus; and, in 1352, their number was increased by the accession of Zug and Berne.

For the space of 125 years this confederacy was composed only of the above eight territories or cantons, on which account they are called the Old Cantons. In 1481 Friburg and Soleure, and in 1501 Basil and Schaffhausen, were admitted into the confederacy; and in 1513 Appenzell also acceded to it. These thirteen towns and counties, which properly constituted the Helvetic republic, were united by a reciprocal convention, which, though not in all places the same, and the unions of the eight old and five later cantons differing in certain respects, yet in the principal points nearly agreed ; the first and chief articles relating to the succors, assistance, and protection, to be given to any one of them in case of any unjust violence, and determining in what manner and by whom the reasons for any military enterprise should be discussed ; as also how and where such succor should be given, and stating both the expenses of the war and the distribution of any acquisitions. The second

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ˆAde 5CgU!a,ted tbeir P.r°cedure in accommo-money of France.

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at pleasure, provided such connexions did not affect the original confederacy ; but in the conventions with the later towns and cantoa« It was expressly stipulated that they should iwt contract any engagements without the privity, ad-vice, and consent, of the old ones. The federal union, however, extended no farther than to the succors stipulated in the leagues, and other cases set forth in the same; in all other incidental affairs relative to the confederacy, the majority of votes was not obligatory to the whole body ; particularly with respect to the making of alliances with foreign powers, wherein every town and canton was at liberty to act as a contracting party or not, and that even though such alliance should have been approved of by all the other towns and cantons. Thus the whole Helvetian body consisted properly of thirteen distinct republics or free states, united by oath for their mutual security and maintenance. It had for some centuries before the French revolution supported itself in an absolute freedom and independency, enjoyed all the privileges of majesty, made wars, concluded treaties, received and sent envoys from and to the several European powers, entered into alliances with them, given what form they thought proper to theii constitution, enacted laws and ordinances both in temporal and spiritual affairs, and exercised all the various prerogatives of sovereignty. Accordingly, at the peace of Westphalia in 1648, it was acknowledged to be a free state even by the emperor and empire.

This brave nation continued to enjoy their freedom and independence under their respective various constitutions with little interruption, ex-cept what took place in their internal governments by occasional alterations, from 1648 till the commencement of the French revolution in 1789. But soon after that great event, which more or less convulsed all the states of Europe, the rage for innovation, and the hopes of establishing a perfect liberty and equality, reached the Swiss Cantons ; and the democratic party not only attempted to overturn the old aristocratic governments, but even to new model those democratic cantons, the governments of which by universal suffrage, and other established privileges, appeared to be as perfectly free as they could be rendered by any change. At last, on the 22nd of March, 1798, they were revolutionised upon the plan of the French republic, under a directory and two councils. See HELVETIC REPUBLIC. After this the whole country was repeatedly overrun, and successive changes made in its government, by the different belligerent powers ; while the

inhabitants, notwithstanding the natural strength of their situation, were subjected to all the horrors of war.

One benefit however, was derived from these changes. An uniform mode of keeping accounts was adopted, *viz.* in franken or francs of ten bat-7.f n ; each batze being divided into ten rappen. The franc is equal to one franc and a half ot the

five batzen.

friendly, and humane. In short there is not a people in Europe whose national character stands higher. In their persons they are generally tal! robust, and well made; but their complexions are none of the best, and those that live in the neighbourhood of the mountains are subject to wens. The women are generally handsome and well-shaped, sensible and modest, yet frank, easy, and agreeable in conversation. Few of the peasants are miserably poor; many of them are rich, especially in the Protestant cantons, and that of Berne in particular.

Before the time of the French Revolution, the form of government was in some monarchical, in others aristocratical, and in others democratical. Their sovereigns were the princes of the empire, such as the bishop of Basil, and the abbot of St. Gall. The aristocratical governments were the cantons of Zurich, Basil, and Schaffhausen, with some incorporate places, as the towns of St. Gall, Muhlhauser., and Biel, the cantons of Berne, Lucerne, Fribur", and Soleure, over which were appointed Schuf-thers/en or justiciaries, and Neufchatel, and Geneva. The democratical form of government prevailed in the six cantons of Uri, Schwitz, Underwalden, Zug, Claris, and Appenzell, which were under the direction of Landamrnans ; as also, though with some variation, in the Grisons and the Valais, but in all every male of the age of sixteen, whether master or servant, had a vote in the enacting of laws, and electing of magistrates. The general annual diets were held at Baden or Frauenfeldt, extraordinary diefs at Altorf. Lucerne took the lead of the Roman Catholic cantons, but Zurich, though less powerful than Berne, took the precedence of the whole. With respect to their military establishments the only regular forces here were those of the garrisons of Zurich, Berne, Basil, Geneva, and Arburg ; but every burgher, peasant, and subject, was diligently to exercise himself in the use of arms, to appear on the stated days for shooting at a mark, to furnish himself with proper clothing,

accoutrements, powder, and ball, to be always ready for the defence of his country, and punctually to comply with every article of war. Switzerland was, and probably still is, well provided with arsenals, particularly at Berne ; but the only fortified places in it are Soleure, Zurich, Berne, Basil, and Arburg. TheSwitzers engaged in the service of foreign princes and states either merely as guards, or as marching regiments ; in the latter case the government permitted the enlisting volunteers, though only in .Mich states as they were in alliance or had made a previous agreement with : and no subject was to be forced into foreign service, nor even to In: enlisted without the concurrence of the magistracy. All the advantages arising lo the regencies from these levies, were usually only an anmu: subsidy paid by the slate in whose favor \l.c

levies were thus granted; and perhaps a promise of reciprocal aid when necessary. The public benefit, however, attending this custom was that these men, returning home after a long service abroad, were a great improvement to the standing militia of their country. The confederates of the Swiss cantons were the abbot of St. Gall and the Vaiais ; the Grisons, towns of Geneva, St. Gall, Bienne, Muhlhausen, and Neufchatel. The independent states under the protection of the states or the allies were Gerisau Engelberg, and Kapperschweil, Roman Catholics ; and Halden-stein, Protestants. The subjects were Baden, Morat, Granscn, Echalen, Orbe, Schwartzen-burg, Werdenberg, and Bienne, Protestants ; the free bailiwics Utznach Gaste.r, the Italian bailiwics, Roman Catholics ; and the Thurgau, Rheinthal, Surgans, and Tockenburg, mixed. But great changes have taken place in the constitution and government of this country during the late revolutionary war.

At last, in the spring of 1814, the allied ar-mies approached the Swiss frontier, and entered it with an overpowering force, refusing to acknowledge the neutrality, but promising the fu-ture independence of Switzerland. They proved faithful to this engagement. The number of cantons, increased by the French to nineteen, was now carried by the addition of the Vaiais, Geneva, and Neufchatel, to twenty-two, the integrity and independence of which were recognised, as we have seen, by the congress of Vienna. Austria, however, reserved to herself the Valte-line, a mountainous district in the south-east, and formerly a dependency of the Grisons.

SWITZERLAND, a county of Indiana, United States, bounded west by Jefferson, south by the Ohio River, north in part by Indian lands, and east by Dearborn county. Its surface is, in some places, broken by the Ohio and Silver Creek hill. It is watered by Venoge and Plum creeks, and several small streams, some running into the Ohio, and others into White River. Vevay is the chief town.

SWOB’BER, n. s. See SWABBER. A sweeper of the deck.

Cubbed in a cabbin, on a mattress laid, On a brown george with lousy swobbers fed.

Dryden.

The clergyman used to play at whist and swobbers : playing now and then a sober game at whist for pastime, it might be pardoned ; but he

could not digest those wicked swobbers. Swift.

SWOLLEN’, } The part . pass, of SWELL, SWOLN. } which see.

Unto his aid she hastily did draw Her dreadful beast, who, swoln with blood of late, Came ramping forth with proud presumptuous gait.

Spenser.

When thus the gathered storms of wretched love In my swoln bosom with long war had strove, At length they broke their bounds : at length their

force

Bore down whatever met its stronger course ; Laid all the civil bonds of manhood waste, And scattered ruin as the torrent past. Prior.

Whereas at first we had only three of these principles, their number is already swoln to five.

Baker on Learning.

>t SWO

SWOON, v. n. & n.s. Saxon aj-punan. Tu suffer a suspension of thought and sensation; faint : the fit of fainting.

So play the foolish thongs with one that swoons ; Come all to help him, and so stop the air By which he should revive. Shakspeare.

We see the great and sudden effect of smells in fetching men again, when they swoon. Bacon.

The most in years swooned first away for pain ; Then, scarce recovered, spoke. Dryden.

There appeared such an ecstacy in his action, that he seemed ready to swoon away in the surprize of joy. Taller.

The woman finds it all a trick, That he could swoon when she was sick ; And knows that in that grief he reckoned On black-eyed Susan for his second. Prior.

SWOOP, v. a. & n. s. Saxon j-pipan; Goth. sivepa. To seize by falling at once as a hawk upon his prey : the act of so doing.

All my pretty ones “ >

Did you say all 1 What all 1 O hellkite ! all 1 What, all my pretty chickens and their dam, At one fell swoop ? Shakspeare. Macbeth.

The nine-stoned trophy thus whilst she doth entertain,

Proud Tamer swoops along with such a lusty train, As fits so brave a flood. Drayton.

A fowl in Madagascar, called a ruck, the feathers of whose wings are twelve paces, can with as much ease swoop up an elephant as our kites do a mouse.

II ilkins.

The physician looks with another eye on the medicinal herb, than the grazing ox, which swoops it in with the common grass. Glanville's Scepsis.

This mouldering piecemeal in your hands did fall, And now at last you came to swoop it all. Dryden.

The eagle fell into the fox's quarters, and carried away a whole litter of cubs at a swoop. L' Estrange.

SWOP, v. a. Of uncertain derivation. — Johnson. Mr. Thomson says, ingeniously, of Teut. zwo, two, and happen, to acquire or gain. To change ; to exchange one thing for another. A low word.

When I drove a thrust home, he put it by, And cried, as in derision, Spare the stripling ; Oh that insulting word ! I would have swopped Youth for old age, and all my life behind, To have been then a momentary man.

Dryden't Cleomenes.

SWORD, n.s. ") Sax. j-peojvo; Belg. sweerd ; SWORD'ED adj. Teut. schwerd ; Goth, siord. SWORD'ER, n. s. A weapon used in cutting SWORD'FISH, I or thrusting : hence destruc-SWORD'KNOT, j tion by war; the punishment SWORD' LAW, or authority of justice : SWORD'MAN, sworded is girt with asword : SWORD'PLAYER. J a sworder, a cut-throat ; a soldier : swordfish, a fish with a long bone projecting from its head : swordknot, the ribbon tied on the hilt of a sword : swordlaw is violence : swordman is also a soldier ; one dextrous with the sword : swordplayer, a fencer; gladia-tor ; a public prizefighter with the sword.

Each man took his sword, and slew all the males.

Genesis. The sword without, and terrour within.

Deut. xxxii. 25.

A swordfish small him from the rest did sunder, That in his throat him pricking softly under, His wide abyss him forced forth to speiv. £pptise~.

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Old unhappy traitor, the sword is out That must destroy thee. Shakapeare. King Lear.

A Roman sworder and banditto slave Murthered sweet Tully. Id. Henry VI.

Worthy fellows, and like to prove most sinewy swordmen. Id. Alt's Well that ends Well.

At Lecca's house,

Among your swordmen, where so many associates Both of thy mischief and thy madness met.

Ben Jonson.

These they called swordplayers, and this spectacle a sword-fight. Hakewill on Providence.

Essex was made lieutenant-general of the army, the darling of the swordmen. Clarendon.

But the sword

Of Michael from the armoury of God Was given him tempered so, that neither keen Nor solid might resist that edge : it met The sward of Satan with steep force to smite Descending, and in half cut sheer. Milton.

The swarded seraphim

Are seen in glittering ranks with wings displayed.

Id.

So violence

Proceeded, and oppression, and swordlaw, Through all the plain, and refuge none was found.

Id.

This I, her su > ord-bearer, do carry, For civil deed and military. Hudibras.

Justice to merit does weak aid afford, She quits the balance and resigns the sivord.

Dryden

Our little fleet was now engaged so far, That like the swordfah in the whale they fought ;

The combat only seemed a civil war, Till through their bowels we our passage wrought.

Id.

Malphigi observed the middle of the optick nerve of the sword-Jish to be a large membrane, folded, according to its length, in many doubles, like a fan.

Derham's Physico-Theology.

Wigs with wigs, switrdknots with swordknots strive, Beaus banish beaus, and coaches coaches drive.

Pope.

A SWORD is an offensive weapon worn at the side, and serving either to cut or stab. Its parts are the handle, guard, and blade ; to which may be added the bow, scabbard, pummel, &c.

SWORD OF STATE, which is borne before the

period had the command of four adjacent nations. of twenty-five towns, and an army of 300,00o men. The city walls were six miles and a hall in circumference, and the suburbs covered seven miles of the banks of Crathis. It was five times destroyed, but always rebuilt. It stood a long and vigorous siege by the Crotonians, but at last was reduced by the Pythagoreans, A. A.C. 508. A town was built on its site called Thu-rium, A. A. C. 444.

SYBARITE, SYBARITES, the people of Sybaris, who were long celebrated for bravery and skill in arts ; but at last degenerated so much by the increase of luxury that Sybarite became synonymous with effeminate.

SYC'AMIN E, n. s. (Or. <rvKo/topoc. A tree.

SYC'AMORE. } See below. The syca—

itiore of Scripture is not the same with ours.

If ye had faith as a grain of mustard-seed, ye might say unto this sycamine tree, Be thou plucked up, and it should obey you. Luke xvii. 6.

I was no prophet, but an herdman, and a gatherer of sycamore fruit. Amos vii. 14.

Go to yonder sycamore tree, and hide your bottle of drink under its hollow root. Walton's Angler.

Sycamores with eglantine were spread : A hedge about the sides, a covering over head.

Dry Jen.

Sycamore is our acer majus, one of the kinds of maples : it is a quick grower.

Mortimer's Husbandry.

SYCAMORE, in botany. See ACER.

SYCAMORE TREE of SCRIPTURE. See Ficcs.

SYCIIAR, a city of Samaria, anciently called Shechem. See SAMARIA, and SHECHEM.

SYC'OPHANT, n. s. Gr. ffwco0«vr>jc ; Lat. sycophanta. A talebearer; makebate; a malicious parasite.

Accusing sycophants, of all men, did best sort to his nature ; but therefore not seeming tycophants, because of no evil they said, they could bring any new or doubtful thing unto him, but such as already he had been apt to determine ; so as they came but as proofs of his wisdom, fearful and more secure, while the fear he had figured in his mind had any possibility of event. Sidney.

~ Men know themselves void of those qualities which

king, lords, and governors of counties, cities, the -dmi sycophant> at the same time, both asor boroughs, &c. For or before the king it ought cribes [Q tnera>- and in nis s]eeve iaug|,s at them for

to be carried upright; the hilt as low as the Believing.

South.

bearer’s waist, the blade up between his eyes. His wcopfororinj arts being detected, that game is For or before a diVce the blade must decline not to be played a second time ; whereas a man of

from the head, and be carried between the neck and the right shoulder. For or before an earl the blade is to be carried between the point of the shoulder and the elbow ; and for or before a baron the blade is to be borne in the bend of the

lear reputation, though his barque be split, has something left towards setting up again.

Government of the Tongue.

SYCOPHANT was an appellation given by the ancient Athenians to those who informed of the

arm. This ceremonial form no less denotes the exportation of figs contrary to law ; and hence

‘ it is still used in general for all informers, parasites, flatterers, &c.

SYDENHAM (Floyer), M. A., a learned English writer, born in 1710, and educated i

Obsole’te. ” But the Scottish dialect Wadham College, Oxford ; where he took his

degree in 1734. lie translated some parts of Plato’s writings, and published them between 1753 and 1767. He was known and esteem

dignity of a governor than the coronet set on his coat of arms.

SWORD FISH. See XIPHIAS.

SYB, adj. Properly sib. Sax. pb. Related

, i • — •- - — « « f~*

by blood, retains it.

If what my grandsire to me said be true, Siker, I am very syb to you. Spenser's Pastorals.

IA.C I j L a.111. vciy !>uif lU yuu» tf^nrnm

SYBARIS, an ancient city of Italy, in Luca-by many gentlemen eminent in htt

nia, at the mouth of the river on the bay of Ta-having, from that excess of mo, es >

rentum; founded by a colony of Acha-ans. It often accompanies Krca men

became very rich aud powerful ; and at one sibil.ty, concealed his distress, hu «

SYD

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for a small debt contracted for maintenance, and died without letting his friends know his wants. Of this melancholy event the rev. and ingenious David Williams speaks in the following indignant and affecting terms in his Claims of Literature, p. 93 : — ‘ During the summer of 1788 an event took place which tarnished the character of English opulence and humanity, and afflicted the votaries of learning. Floyer Sydenham, the well known translator of Plato, one of the most useful, if not one of the most competent Greek scholars of his age, a man revered for his knowledge, and beloved for the candor of his temper, and the gentleness of his manners, died in consequence of having been arrested and detained for a debt to a victualler, who had for some time furnished his frugal dinner. At the news of that event every friend of literature felt a mixture of sorrow and shame ; and one of the members of a club at the Prince of Wales’ coffee house proposed, that it should adopt, as its object and purpose, some means to prevent similar afflictions, and to assist deserving authors and their families in distress.’ This gave rise to the establishment of that excellent institution, the Literary Fund for the relief of Authors and their Families. SYDENHAM (Thomas), M. D., an excellent English physician, was the son of William Sydenham, of Winford Eagle, in Dorsetshire, and was born there about 1624. He studied at Magdalen Hall, Oxford ; but left that university when Oxford was garrisoned for king Charles I., and went to London : where, becoming acquainted with Dr. Thomas Cox, an eminent physician, that gentleman persuaded him to study physic ; accordingly, after the garrison was delivered up to the parliament, he retired again to Magdalen HAH, entered on the study of medicine, and in 1648 was created M. B. Soon after he was made a fellow of All Souls College, and continued there several years : when, leaving the university, he settled at Westminster ; became M. D. at Cambridge ; grew famous for his practice ; and was the chief physician in London from 1660 to 1 670 ; when he became disabled by the gout. He died in 1689.

SYDENHAM (William), elder brother of the a’oove, was for some time a gentleman commoner of Trinity College, Oxford. Entering into the army of the parliament, he acquitted himself so wc!l that he rose to the highest offices. In 1649 he was appointed governor of the Isle of Wight, and vice admiral of that isle and of Hampshire. In 16.53 he was chosen M. P. for Dorsetshire; in 1654 was appointed commissioner of the treasury, and a member of the privy council ; and

in 1658 was summoned to parliament by the protector, Richard Cromwell. What became of him after the Restoration we know riot.

SYDEROPCECILUS, in mineralogy, a stone mentioned by the ancients. It was found in Arabia, and obtained this name from its being spotted with a ferruginous color. It might possibly be a granite with spots of this peculiar color.

SYDERVELT, a town of Holland, in the department of the Rhine, and late province of Guelderland ; six miles west of Culemburg.

SYDLING, a town of England, in Dorset-

shire ; called also St. Nicholas ; with a fair December 6th.

SYDNEY, a thriving town of New Holland, and the capital of the British settlements in New South Wales. It is about seven miles from the mouth of Port Jackson, in a cove to which it gives name, and stands principally on two hilly necks of land, with a proportion of flat ground intervening. These together form one of the finest natural basins of water that can be imagined, and for safety and convenience rival the finest works of art. It is perfectly secured against any wind, and ships of any dimensions lie there. The western side of the town extends to the wa-ter's edge, and occupies, with a small exception round Dawe's battery, the whole of the neck of land which separates Sydney Cove from Lane Cove. On the eastern neck of land, the extension of the town has been stopped by the government-house, and the adjoining domain, which occupies the whole of Bennilong's point.

Until the administration of governor Mac-quarrie, little or no attention had been paid to-the laying out of the streets, and each proprietor was left to build as caprice inclined him. He, however, succeeded in establishing a perfect regularity in most of the streets, and, in all future additions that may be made to it, the proprietors of leases will not be allowed to deviate from the lines marked out by the surveyor-general. Here is a very good market, established by this governor in 1813, and very well supplied with grain, vegetables, poultry, butter, eggs, and fruit. It is held three times a week ; *viz.* on Mondays, Wednesdays, and Fridays, in a large oblong enclosure. The vender pays a small duty to the clerk of the market. Here is also the New South Wales bank.

Two excellent public schools have been founded at Sydney. One is a day school for boys, and of course only intended to impart gratuitous

instruction : — the other is designed both for the education and support of poor and helpless fe-male orphans. Besides these two public schools in the town of Sydney, which together contained, by late accounts, 224 children, there are establishments for the gratuitous diffusion of education in every populous district throughout the colony: the masters being allowed stipulated salaries from the orphan fund. Formerly particular duties, those on coals and timber, which still go by the name of ‘ the orphan dues,’ were allotted for the support of these schools ; but they were found to be insufficient, and afterwards one-fourth, and more recently one-eighth, of the whole revenue of the colony was appropriated to this purpose. Independent of these laudable institutions, supported at the expense of the government, there are various private ones intended for the dissemination of religious knowledge One is termed the Auxiliary Bible Society of New South Wales, and its object is to co-operate with the British and Foieign Bible Society, and to distribute the holy Scriptures either at prime cost, or gratis, to deserving applicants. Another is the New South Wales Sunday School Institution. There are also in this town and other parts of the colony, several good private semi-SYL

The harbour of Port Jackson is considered equal to any in the world, and would contain the shipping of all countries. It is navigable for vessels of any burden for about seven miles above the town, i. e. about fifteen from the entrance, and possesses the best anchorage all the way. Value of land in Sydney town is daily increasing ; rents are in consequence high ; and Mr. Wentworth, in his statistical account of the British settlements in this quarter, mentions, that it is very far from a commodious house that can be had for £100 a year unfurnished. Population 7000. Long. 151° 25’ E, lat. 33° 15’ S.

SYDNEY, a river in the interior of New Holland, seen by Mr. Oxley in his second expedition. Its course was northward, and the part of it seen crossed 31° S. lat, long. 151° 15’ E.

SYDNEY BAY, a bay on the south coast of Island, in the South Pacific. Lono-. I’ E, lat, 29° 5’ N.

E, an ancient city of Egypt, situated, according to Mr. Bruce, in lat. 24° 0’ 45’ N, although Pliny and Strabo both say that it lay directly under the tropic of Cancer. Syene is remarkable for being the place where the first attempt was made to measure the circumference of the earth, by Eratosthenes, whom Ptolomy Eurgetes had invited from Athens to Alexandria. It is now called Assouan. Here is still a small temple, supposed by some to be the ancient observatory. Mr. Hamilton cleared it till he reached the pavement, but he was interrupted before he dug down to the spot where the ancient well might have been expected. There are also the remains of a Roman bridge, and a handsome stone quay. But the principal ruins of Syene are those of the Saracen town, including the city wall, built of unburnt bricks, and flanked with square towers. Many large houses are still in a state of extraordinary preservation, as well as mosques, with lofty minarets, still entire. Although Syene is considered as a military station, yet the Aga is not provided with any force, and the castle is of no strength. In the Nile, opposite to Syene, is ELEPHANTINA, which see.

SYLAH, a large fortified town of Gujrat, district of Chalawara, Hindostan. The south of this town marks the boundary of Cottiwar, and here Gujrat Peninsula may be considered as terminating. This place is larger than Wankaneer, but not so well fortified. It belongs to a Rajpoot chieftain, but, like all others in this neighbour- : ood, pays a

tribute to the Guicowar. A very large sheet of water covers the south face of the town. (Macmurdo, &c.)

SYLBURGIUS (Frederick), a learned Ger-man, born at Marpurg in Hesse, in 1546. He taught Latin, Greek, and French for some time at Licha ; but afterwards applied himself solely to the revising and correcting of ancient authors, particularly the Greek classics, for the presses of Wechel and Commelin. lie also greatly assisted the celebrated Henry Stephens in compiling his Thesaurus Greece Linguae. See STEPHENS. He likewise published a Greek Grammar, which was much esteemed. For these services he had a salary from the university of Marpurg. He died in 1596.

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from a branch quite distil

Scipios. Hi! “

> am no. ˆ.uˆuim wuu ms excellent education. Nicopolis, a rich courtezan, left him heir to her great estate. He learned the art of war under Marius, whom he attended to Numidia asquestor; and soon became the most skilful soldier m the army, while by his obliging behaviour he gained the esteem of all. His course and dexterity contributed to the success of the war; and his eloquence persuaded Bocchus to deliver up Jugurtha. He served afterwards in the social war, and as a reward he was raised to the praetorship, next elected consul, and soon after declared general of the army against Mithridates VII. king of Pontus. Marius was exasperated that the management of this war was not committed to him. The people were persuaded, by his intrigues, to reverse the decree, and substitute him in place of Sylla. Upon this he sent down officers to take the command of the army ; but Sylla by this time had gained over the soldiers, who, instead of obeying the decree of the people, slew Marius’s officers, and intreated Sylla to lead them instantly to Rome. Accordingly he entered the city sword in hand, slew Sulpicius the con-sul, obliged Marius to flee, new-modelled the laws, and afterwards marched into the east, and immediately laid siege to Athens; for that city, together with the rest of Greece, had fallen into the power of Mithridates. He wrote to the Am-phyctions, who were assembled at Delphi, to send him all the gold in the temple of Apollo, promising to restore it at the end of the war ; and when he received it said that he now was sure of victory, since the gods themselves furnished him with money. Athens was at last taken by assault, and Sylla was upon the point of destroying it, when he recollected its ancient glory, and spared, as he said, the living for the sake of the dead. After burning the Piraeus he-gained two decisive victories over the generals of Mithridates. In the second battle, fought at Orchomenus, ne was almost defeated ; his troops began to flee, when, leaping from his horse, lie snatched up a standard, and crying out, ‘ 1 will die here gloriously ; and soldiers, when you are asked where you abandoned your general, an-swer, At Orchomenus.’ This reproach recalled the courage of the Romans ; they followed him and gained a complete victory. Mtthridates tliei: sued for peace. Mean time Cinna had declart.-i against Sylla in Italy ; and Marius retiirni- •_• from banishment had taken the most severe vengeance on all his enemies. Sylla was declared a traitor ; his laws reversed, his friem.‘s were murdered, and the government new modelled. These news induced Sylla to conclude a treaty with Mithridates, and march directly to Rome. His approach tei rifled the

Ilomai s. Marius and Cinna were both dead ; but the consuls made vigorous preparations to oppose him. A civil war was begun, but Sylla in the end subdued all his enemies, and entirely ruined the M;iri;in faction. He entered Rone :il the ho;i<l of his victorious army, and assumed the ti'ii' nt I'dix

SYL

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Happy. The remainder of his life was stained with the most abominable cruelties. He ordered 8000 wretches, who had thrown themselves upon his clemency, to be butchered in the Campus Martius. To carry on these cruelties with the appearance of justice, he commanded the people to elect him dictator. He kept this office above two years ; and then, to the amazement of all, laid it down, and offered to stand his trial before the people. Soon afterwards he retired into the country, and plunged into every kind of debauchery. He died of the lousy disease, in the sixtieth year of his age. His person was elegant, his air noble, and his manners easy. He was eloquent, liberal, crafty, insinuating ; and a profound master of dissimulation, by which he concealed a hideous train of vices. This Nero of the republic did one essential service to science by recovering the works of Aristotle at the taking of Athens.

SYL'LABLE, n. s. & v. a. Fr. syllabe ; Gr. (TuXXa/3»). As much of a word as is uttered by the help of one vowel, or one articulation : to utter ; pronounce.

Abraham, Job, and the rest that lived before any syllable of the law of God was written, did they not si a as much as we do in every action not commanded ?

Hooker. I heard Each syllable that breath made up between them.

Shakspeare.

To-morrow, and to-morrow, and to-morrow, Creeps in this petty pace from day to day; To the last syllable of recorded time ; And all our yesterdays have lighted fools The way to dusty death. Id. Macbetn.

Airy tongues that syllable men's names On sands, and shores, and desart wildernesses.

Milton.

There is that property in all letters of aptness to be conjoined in syllables and words, through the voluble motions of the organs from one stop or figure to another, that they modify and discriminate the voice without appearing to discontinue it.

Holder’s Elements of Speech.

He hath told so many melancholy stories, without one syllable of truth, that he hath blunted the edge of my fears. Swift.

SYL’LABUB, n. s. Rightly SILLABUB, which see. Milk and acids.

No syllabubs made at the milking pail, But what are composed of a pot of good ale.

Beaumont.

Two lines would express all they say in two pages : ‘tis nothing but whipt syllabub and froth, without solidity. Felton.

A SYLLABUB is a kind of compound drink, most usual in summer; ordinarily made of white wine and sugar, into which is squirted new milk with a syringe or wooden cow. Sometimes it is made of canary, in which case the sugar is spared, and a little lemon and nutmeg are added in lieu of it. To prepare it the best way, the wine and other ingredients, except the milk, are to be mixed over night, and the milk or cream added in the morning. The proportion is, a pint of wine to three of milk.

SYLLABUB WHIPT. To half a pint of white wine or rhenish is put a pint of cream, with the whites of thrt« eggs. This they season with

sugar and beat with birchen rods, or work with a syringe. The froth is taken off as it rises, and put into a pot ; where, after standing to settle two or three hours, it is fit to eat.

SYLLABUS, in literature, denotes a table of contents, or an index to the chief heads of a book.

SYLLEPSIS (<rwXAtir«Ttc, Gr.), in grammar, a figure in which two nominative cases of the singular number are joined to a plural verb.

SYL’LOGISM, n. s. -\ Fr. syllogisme; Gr.

SYLLOGIS’TIC, or *o-vXXoyKr*tdc. An

SYLLOGIS’TICAL, adj. V argument composed

SYLLOGis’TiCALLY,odu. k of three proposi—

SYL'LOGIZE, v. n. J tions : as, ' every man

thinks ; Peter is a man ; therefore Peter thinks :' the derivatives all strictly corresponding.

Though we suppose subject and predicate, and copula, and propositions and syllogistical connexions in their reasoning, there is no such matter ; but the entire business is at the same moment present with them, without deducing one thing from another.

Male's Origin of Mankind.

A piece of rhetorick is a sufficient argument of logick, an apologue of ./Esop beyond a syllogism-in Barbara. Browne.

A man knows first, and then he is able to prove syllogutically ; so that syllogism comes after knowledge, when a man has no need of it. Locke.

What a miraculous thing should we count it, if the flint and the steel, instead of a few sparks, should chance to knock out definitions and syllogisms!

Bentley.

Though the terms of propositions may be complex, yet, where the composition of the whole argument is thus plain, simple, and regular, it is properly called a simple syllogism, since the complexion does not be-long to the syllogistick form of it. Watts's Logick.

Men have endeavoured to transform logick into a kind of mechanism, and to teach boys to syllogize, or frame arguments and refute them, without real knowledge. Watts.

Logick is, in effect, an art of syllogizing. Baker.

A SYLLOGISM, in logic, consists of three pro-prositions ; the first two called premises ; the las* the conclusion. See LOGIC.

SYLOES, a promontory of Africa.

SYLPH, in modern mythology and daemono-logy, an ideal being, somewhat analogous to the fairy of the British (see FAIRY) ; supposed to attend with anxious care about all the minutiar and paraphernalia of a fine lady. — Pope's Rape.

SYLVA. See PANCARPUS.

SYL'VAN, adj. & n. s. Fr. sylvain. Woody ; shady ; relating to woods : a wood-god ; a rustic.

Cedar and pine, and fir, and branching palm, A sylvan scene ! and, as the ranks ascend, Shade above shade, a woody theatre Of stateliest view. Milton's Paradise Lost.

Eternal greens the mossy margin grace, Watched by the sylvan genius of the place. Pope.

Her private orchards, walled on every side, To lawless sylvans all access denied. Id. '

SYLVANUS, a brave warrior among the Franks, under the emperor Constantius, who being, by the most deliberate villany and forgery ofDynames, compelled to declare himself emperor, was afterwards, when his innocence was discovered, murdered by Ursicinus, another traitor See CONSTANTINOPLE.

SYM

Ciu3

SYLVESTER (Joshua), born in 1563. He translated the works of Du Bartas ; some pieces of Fracastorius from the Latin ; and the Quatrains of Pibrac, with some other tracts from the French. He died in Holland, in 1618.

SYLVIA, or Ilia, or Ithea Sylvia, the mother of Romulus. See RIIEA and ROME.

SYLVIA, in ornithology, a modern genus of birds, belonging to the order of passeres, formed by Dr. Latham, by limiting the motacilla to the wagtail, and arranging the other species formerly classed under that genus under the sylvia. See ORNITHOLOGY. The motacilla he thus describes : — The beak is subulated, slender, and somewhat indented at the point. The tongue seems torn at the end. and the tail is long, lie thus characterises the sylvia : — The beak is subulated, straight, and small ; the mandibles are nearly equal, The nostrils are obovate, and a Jitile depressed. The exterior toe is joined at the under part to the base of the middle one. The tongue is cloven, and the tail is small. He makes thirteen species of the motacilla, and 174 species of the sylvia. See MOTACILLA.

SYLVIUS (/Eneas), I. and II. kings of Alba, the son and grandson of *Eneas the Trojan, by Lavinia. See ROME.* • *SYLVIUS (*Eneas). See Pius II.

SYLVIUS (James), or James Du Bois, a celebrated French anatomist and physician, the son of Nicholas Du Bois, a camblet weaver, born at Amiens, in Picardy, in 1478. He acquired a great knowledge of Greek and Latin, and some Hebrew, under his elder brother Francis Sylvius,

They both symbolize in this, that they love to loo' upon themselves through multiplying glasses.

Hˆei.

1 he sacrament is a representation of Christ's death, by such symbolical actions as himself appointed.

Taylor.

It symbolically teaches our duty, and promotes charity by a real signature and a sensible sermon.

Id.

Salt, as incorruptible, was thes.;/ro6o/ of friendship ; which, if it casually tell, was accounted ominous, and their amity of no duration. Ermrne.

By this encroachment idolatry first crept in, men converting the symbolical use of idols into their proper worship, and receiving the representation of things unto them as the substance and thing itself. <?

Some symbolize the same from the mystery of its colors. Id. Vulgar EI-THUM.

The hieroglyphical symbols at Scripture, excellently intended in the species of things sacrificed in the dreams of Pharaoh, are oftentimes racked beyond their symbolizations. Id.

I affectedlv symbolized in careless mirth and freedom with the libertines, to circumvent libertinism.

Mwe.

Aristotle and the schools have taught that air and water, being symbolizing elements, in the quality of moisture, aie easily transmutable into one another.

Boule.

The soul is such, that it strangely symbolizes uitii the thing-it mightily desires. South'* S<-rnn-n-.

Words are the signs and symbols of things ; am! us, in accounts, cyphers and figures pass for real sums, so words and names pass for things themselves. l>l.

The heathens made choice of these lights as apt symbols of eternity, because, contrary to all sublunary beings, though they seem to perish every niglit. they

on on Met.il*. Beginning with the symbol of our faith, upon that the author of the gloss enquires into the nature .

A SYMBOL is a sign or representation of some-

or Du Bois, who was principal of the College of renew themselves every morning. Adtlii

Tournay, at Paris, and a treat promoter of learning. James wrote several works on anatomy,

medicine, and pharmacy, which have been often

printed, though he was much opposed by his

contemporaries. He defended Galen aga.nst thing moral, by the figures or properties of na—

Vesalius. See ANATOMY, Index. He was also tural things. Hence symbols are of, vano

a good mathematician, and invented several use-kinds ; as hieroglyphics, types, enigmas, par:

ful machines. His great vice was avarice, which bles, fables, &c.

prevented him from taking the degree of M. D., SYMBOLUM, an ancient town of Macedo—

though he went to Montpelier in 1520 on pur-nia, near Plulippi; on the borders ot

pose ; but he was reconciled to his brethren and admitted M. B. in June 153 1. He read lectures on Hippocrates and Galen, which spread his fame far and wide. In 1535 he was appointed a

Lempr.

SYME. See SYMA. SYMI, or SIMI. SeeSiMi. SYMMACHUS, a writer who flourished in

professor in the college of Triquet, and in 1548 the second century, and translated the 11

,. , •.•_.!.- T»— -i n_n otPo-ie. Bible into Greek. Only a few fragments ot las

}rk are extant.

SYMMACHUS, a senator and orator of Home, who was consul A. D. 391. He wrote ten books

professor of physic in the Royal College at Paris;

which office he retained till his death, in 15.55. work are extant.

He was never married.

SYMA, or SYME, a town of Asia. — Lempr.

of Epistles against the Christian religion ; which arc pvtnnt. nnd have been refuted by Ambrose,

are extant, and have been

bishop of Milan, and Prudentius, the Christian — •* He was banished from Rome by \ alenti-

nian! but recalled and received into favor by . Theodosius. Ammianus Marcelhmis snea type; figurative representation: the adjective and j)jm as a man of great learning and i

adverb corresponding : to symbolize is to have ScioppjUS) pareus, and other learned men, h; some quality, or something in common with written notes upon his epistles. ‘Ihe b

anotherˆ by symbolic representation : as a verb active, to make representative: symbohzation corresponding.

tions are those of Geneva, 8vo., 1598 4to , 1604 ; and Franckfort, 8vo., Io42,

S YM’M ETRY, »i. s. A Fr. tymmctru ;

SYMME’TRIAN,H.S. f <n/v and ,«rpov. Aclap-

of order

The pleasing of colour symbolizeth with the pleasing *’ i-T’RI, Ui. itation or agreement of

any single tone to the ear; but the pleasing ot & M» ET R .,,) nro,)O1m,n ; harder doth svmbolize with harmony. Bacmi. ˆv M if LI

SYM

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mony : a symmetrian or symmetrist is one who studies proportion : symmetrical, proportionate.

His face was a thought longer than the exact sym-metii&ns would allow. Sidney.

She by whose lines proportion should be

Examined, measure of all symmeti-y ; Whom had that ancient seen, who thought souls

made Of harmony, he would at next have said

That harmony was she. Donne.

Some exact symmetrists have been blamed for being tjo true. Walton's Architecture.

Symmetry, equality, and correspondence of parts, is the discernment of reason, not the object of sense.

More.

Nor were they only animated by him, but their measure and symmetry were owing to him. Dryden.

SYMMETRY is the just proportion of the several parts of any thing, so as to compose a beautiful whole.

SYMMETRY, in painting. See PAINTING.

SYMMONS (Charles), D. D., a native of Cardigan, which his father had represented in three successive parliaments, was born in 1749, and received the rudiments of his education at Westminster school, whence he removed to Glasgow, and subsequently to Clare-hall, Cambridge. Having graduated in 1776 as bachelor of divinity, he obtained two years afterwards the rectory of Narberth, and in 1794 that of Lampe-ter in Pembrokeshire. This last piece of preferment he narrowly escaped losing, in consequence of a sermon preached by him at Cambridge, before the presentation was made out, the discourse containing some whiggish sentiments little congenial to those then in power. The same cause operated to throw difficulties in the way of his

doctor's degree, and he therefore found it advisable to enter himself ad eundum at Jesus College, Oxford, in which university he proceeded D. D. in March. Dr. Symmons was a warm admirer of literature, and a zealous supporter of the Literary Fund. His own writings consist of Inez, a dramatic poem, 1797; a se-cond entitled Constantia, 1800 ; an octavo vo-lume of miscellaneous poetry, partly of his own composition and partly that of his daughter, 1813 ; a Rhymed translation of the / Eneid, 1817; and a Life of Milton, prefixed to an edition of that author's prose works. After his decease, which took place at Bath in the spring of 1826, his friend, Mr. Whittingham, published a posthumous biographical sketch of Shakspeare of his writing.

SYMONDSBOROUGH, a remarkable large borough of Flintshire, near Wellington in Devonshire, in the northern extremity of Hemyock. The people have a notion that a king called Sy-mon was buried here.

SYMPATHETIC INK. A good sympathetic ink has been made from a solution of a mixture of sulphate of copper and muriate of ammonia, which appears of a bright yellow when exposed to heat, but disappears with cold or moisture.

SYM'PATHY, n. $. -\ Fr. sympathie ;

SYMPATHETIC, or I Greek ffvfnraSoui.

SYMPATHET'ICAL, adj. SFellowfeelingjmu—

SYMPATHET'ICALLY, adv. i tual sensibility; the

SYMPATHIZE, v. n. } quality cf being af-

fected by tne affection of another : the adjective, adverb, and verb neuter correspond.

You are not young ; no more am I : go to, then, there's sympathy : you are merry, so am I ; ha ! ha ! then there's more sympathy ; you love sack, and so do I ; would you desire better sympathy ?

Shakspeare. Merry Wives of Windsor.

They saw, but other sight instead, a crowd Of ugly serpents : horror on them fell, And horrid sympathy. Milton,

Or sympathy, or some connat'ral force, Powerful at greatest distance

to unite, With secret amity, things of like kind, By secretest conveyance. Id. Paradise Lost.

The thing of courage, As roused with rage, with rage doth sympathize.

Milton.

To confer at the distance of the Indies by sympathetick conveyances, may be as usual to future times as to us in a literary correspondence. GlanviLLe.

Hereupon are grounded the gross mistakes in the cure of diseases, not only from sympathetick receipts, but amulets, charms, and all incantatory applications. Browne.

United by this sympathetick bond, You grow familiar, intimate, and fond. Roscommon.

Green is a pleasing color, from a blue and a yel-low mixed together, and by consequence blue and yellow are two colours which - sympathize. Dryden.

Can kindness to desert like your's be strange ? Kindness by secret sympathy is tied ; For noble souls in nature are allied. Id.

There are such associations made in the minds of most men ; and to this might be attributed most of the sympathies and antipathies observable in them.

Locke.

There never was any heart truly great and generous, that was not also tender and compassionate . it is this noble quality that makes all men to be of one kind ; for every man would be a distinct species to himself, were there no sympathy among individuals.

South's Sermons.

Their countrymen were particularly attentive to all their story, and sympathized with their heroes in all their adventures. Addison's Spectator.

To you our author makes her soft request, Who speak the kindest, and who write the best ; Your sympathetick hearts she hopes to move. From tender friendship and endearing love. Prior.

Though the greatness of their mind exempts them from fear, yet none

condole and sympathize more heartily. Collier.

All the ideas of sensible qualities are not inherent in the inanimate bodies ; but are the effects of their motion upon our nerves, and symptitlietical and vital passions produced within ourselves. Benlley.

SYMPATHY also signifies an agreement of affections and inclinations, or a conformity of natural qualities, humors, temperaments, which make two persons delighted and pleased with each other.

SYMPATHY may subsist either between different persons or bodies, or between different parts of the same body. It is either similar cr dissimilar : similar, when the affection or action in the sympathiser is similar to the affection or action in the sympathant ; and dissimilar when those are-different. — Sympathy, too, is often an imitative faculty, sometimes involuntary, frequently without consciousness : thus we yawn when we see others yawn, and are excited to laugh by the laughing of others. Sympathy, according to Dr. Jackson, relates to the operations of the affec-

tions of the mind, to the operations of the imagination, and to the affections of the external senses. 1. The affections of the mind produce in the body different sensations and impressions, and, as sympathies of consciousness, determine in general the spirits to those parts which are most apt to be affected. The affections of the mind of one person will often work upon the spirits of many. Thus whole companies are sometimes disposed to be sad and melancholy or merry and jovial, when any one present is much inclined to either of those states of mind. Those tender sympathetic affections which lay hold of the mind at the representation of theatrical performances originate from the same principle, while they are the surest test, of just execution in the actor, and of the expressive language of the author. Indeed all stage effect depends on sympathy. 2. It is probable that a connexion between the affections and sensations of the fe-male mind and uterus is very materially concerned in the process of generation, and probably can alone give efficacy to those actions and impressions subservient to conception through the sympathising affections of the mind. But this is a subject of which we as yet know little; though the facts are numerous and incontrovertible ; but physiologists seem unwilling to admit of them, because they cannot account for them. See SURGERY. 3. As affecting the senses, sympathies have been compared

to unisons of sound in music, which produce agreeable sympathetic feelings; and the reverse produces disagreeable feelings. ‘All concords and discords of music are sympathies and antipathies of sound.’ A disagreeable sound will often set the teeth on edge. The most agreeable as well as odious objects operate in a secondary way in producing those sympathetic impressions and actions which they commonly give rise to. An increased secretion of saliva often takes place at the sight of a favorite dish. Many have attempted to account for the remarkable sympathy which takes place between parts of the body seemingly unconnected with each other; but these attempts are merely conjectures.

SYMPHLEGMA (Gr. <rvfiir\iyna, an embracing, from aw, with, and TrXtj/iw, to fold or and sculpture, a term used to

A learned searcher from Pythagoras’s school, where it was a maxim that the images of all things are latent in numbers, determines the comeliest proportion between breadths and heights reducing symmetry to symphony, and the harmony of sound to a kind of harmony in sight. WuCtun.

Up he rode,

Followed with acclamation and the sound Symphonious of ten thousand harps, that tunea Angelick harmonies. Milinii.

Speak ye who best can tell, ye sons of light, Angels !| for ye behold him, and with songs And choral symphonies, day without ni”ht, Circle his throne rejoicing. Id. Paradise Lost.

The trumpets sound, And warlike symphony is heard around ; The marching troops through Athens take their way ; The great earl marshal orders their array. Dnjdtu.

SYMPHONY, in music, denotes a consonance of several sounds agreeable to the ear, whether vocal or instrumental. See HARMONY.

SYM’PHYSIS, n. s. Gr. avv and 0VU. Defined below.

Siimphusis, in its original signification, denotes a connascency, or growing together ; and perhaps is meant of those bones which in young children are distinct, but after some years unite and consolidate

into one bone. \Vheman.

SYMPHYSIS, in anatomy, one of the kinds of junctures or articulations of the bones. See AXA-

SYMPHYTUM, comfrey, in botany, a genus of plants belongingto the class of pentandria, and order of monogynia ; and in the natural sys-om ranging under the forty-first order, asperifolio.-. The limb of the corolla is tubular and ventricosi-, and the throat is shut with awl-shaped rays. There are three species ; of which S. otricinah: is a British plant. The stem is about two fe< t high, round, branched, green, and rough. The radical leaves are very large and rough; those on the stalks are decurrent and alternate… The flowers grow on loose spikes, and are either of a yellowish or purple color. It grows on tin.- banks of rivers and flowers from May to October.

SYMPLEGADES, or Cyanese, two rugged islands at the entrance of the Euxine Sea ; ‘.wenty stadia from the mouth of the Thracian Hosphorus : the one on the coast of Asia, and the

other. Thus we may, according to Winckelmann, ˆSff^^^S^^^^^^^SS1?!ˆ

to be buried in flesh than in marble ; and the other of Heliodorus, who represented the struggle of Pan and Olympus. But this appellation of symphlegma cannot be applied to two figures placed by each other’s side, as Gort has imagined.

SYMPHONIA, in botany, a genus of plants, belonging to the class of monadelphia and order of pentandria.— There is one pistil : COR. globular, and the berry five-celled. There is only one species yet discovered, *viz.* S. globolifera.

SYM’PHONY, n.s. \ Fr. symphony; Gr.

or instruments ; harmony of sounds : the adjective corresponding.

or floated.

SYMPLOCE, ffvpirXoKT), in rhetoric, a where the same word is

repeated. See TORY.

SYMPLOCOS, in botany, a genus belonging to the class of nnlvitelotna. an order of polyandria : ai

ful. The calyx is quinquefid and •• ••<••• corolla is pentapetalous : the stamina ;uv ed to the tube of the corolla in a fouiju There are' five species; *viz.* 1. i S. arechea; and, 3. S. cisponima; d'-si Mr. L'Heritier of the Academy of b ic

figure, OKA—

plants

tO till!

svsU’ia

al!;u .,,. .^

nia; ‘.’.

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Paris. 4. S. Martinicensis, the only species described by Linnaeus, is a native of Martinico, 5. S. tinctoria, a plant used by dyers, is also mentioned by L'Heritier.

SYMPO'SIAC, adj. Fr. symposiaque ; Gr. ciˆwoffuzicoc. Relating to merry makings, or a drinking party.

By desiring a secresy to words spoke under the rose, we only mean in society and compotation, from the ancient custom of symposiack meetings to wear chaplets of roses about their heads. Browne.

In some of those symposiack disputations amongst my acquaintance, I affirmed that the dietetick part of medicine depended upon scientifick principles.

Arbuthnot.

SYMPOSIARCH, from ffvpiroffiov, a banquet, and apx°v> governor, in antiquity, the director or manager of an entertainment. This office was sometimes performed l>y the person at whose

As his custom was, he went into the synagogue on the sabbath. Gospel.

Go, Tubal, and meet me at our synagogue.

Shakspeare.

SYNAGOGUE, among the Jews, was a place where people met to worship. Authors are not agreed about the time when the Jews first began to have synagogues : some will have them as old as the ceremonial law, and others fix their beginning to the times after the Babylonish captivrty. They erected synagogues not only in towns and cities, but also in the country, especially near rivers, that they might have water for their purifications and ceremonious washings. No synagogue was built in any town, unless there were ten persons of leisure in it ; but there might be many in one town, or in one quarter of a town, provided it was very populous. Jerusalem is to have contained 480. The chief things

charge the entertainment was provided; some-belonging to a synagogue were, 1. The ark or times by another named by him ; and at other chest> made after the mode, of the ark of the times, especially in entertainments provided at covenant, containing the Pentateuch. 2. The the common expense, he was elected by lot, or by the suffrages of the guests.

SYMPTOM, n. $. ~\ Fr. symptome ;

SYMPTOMAT'IC, or ˆ Greek ovfuirrtafia.

SYMTOMAT'ICAL, adj. I Something that hap—

SYMTOMAT'ICALLY, adv.) pens concurrently with something else : hence a sign or token : the adjective and adverb corresponding.

Symptomaticul is often used to denote the difference between the primary and secondary causes in diseases ; as a fever from pain is said to be symptomatical, because it arises from pain only ; and therefore the ordinary means in fevers are not in such cases to be had recourse to, but to what will remove the pain ; for, when that ceases, the fever will cease, without any direct means taken for that. Quincy.

pulpit and desk in the middle of the synagogue, in which he that was to read or expound the law stood. 3. The seats or pews for the people. 4. The lamps to give light at evening service, and the feast of dedication. 5. Rooms or apartments for the utensils and aim-chests. The synagogue was governed by a council or assembly, over whom was a president, called the ruler of the synagogue. These are sometimes called chiefs of the Jews, the rulers, the priests or elders, the governors, the overseers, the fathers of the synagogue. Their business was to punish the disobedient by censures, excommunication, or penalties, such as fines and scourging ; to take care of the alms,

The symptoms, as Dr. Sydenham remarks, which which are frequently called by the name of righteousness. The chief ruler, or one of the rulers, gave leave to have the law read and expounded, and appointed who should do it. In every synagogue there were several ministers who had different offices assigned to them. Service was perfoivˆed three times a day, *viz.* in the morning, in the afternoon, and at night;

at the time of morning sacrifice, evening sacrifice, and after the evening sacrifice on Mondays, Thursdays, and Saturdays, there was a more forcible obligation upon the people to attend, than upon the other days. There are synagogues at London, Amsterdam, Rotterdam, Avignon, Metz, &c.

SYNALE'PHA, n. s. Greek <™va\oi0r/. A contraction, or excision of a syllable in Latin verse, as ill' ego. — Bailey.

Virgil, though smooth, is far from affecting it : he frequently uses synalephas, and concludes his sense in the middle of his verse. Dryden.

SYNALEPHA, or SYNALCEPHA, in grammar, or collisio, a contraction of syllables, performed principally by suppressing some vowel or diphthong at the end of a word, on account of another vowel or diphthong at the beginning of the next, as ill' ego for ille ego, &c. Conticuer' omnes intentiqu' ora tenebant. Virgil.

SYNARTHRO'SIS,w.s. Gr. ffvv and op&poˆ A close conjunction of two bones.

There is a conspicuous motion where the conjunction is called diarthrosis, as m the elbow ; an ob

are commonly scorbutick, are often nothing but the principles or seeds of a growing, but unripe gout.

Blackmore.

By fomentation and a cataplasm the swelling was discussed ; and the fever, then appearing but symptomatical, lessened as the heat and pain mitigated.

Wiseman's Surgery.

The causes of a bubo are vicious humours abounding in the blood, or in the nerves, excieted sometimes critically, sometimes symptomaticaliy.

Wisem ;. '

Ten glorious campaigns are passed, and now, like the sick man, we are expiring with all sorts of good symptoms. Swift.

SYMPTOM, in medicine, means any circumstance which indicates the existence, nature, or stage of a disease. Pain, weakness, drowsiness, convulsions, suppression of urine, difficulties of breathing and swallowing, coughs, distastes, nauseas, thirsts, swoonings, faintings, looseness, costiveness, dryness and blackness of the tongue, are the principal symptoms of diseases. See MEDICINE.

SYMUS, a mountain of Armenia, from which the Araxes rises.

SYN/ERESIS, or Crasis, contraction, in gram-Tiar, a figure whereby two syllables are united in one ; as vemens, for vehemens, oˆic for oˆiac,

f JX°Q f°r *“wx£°C’ ˆc—

SYN’AGOGUE, n. «. Fr. synagogue; Gr. ffwafwyr). An assembly of the Jews to worship : a place for such worship.

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scureone, where the conjunction is called si/narthrosis, as in the joining of the carpus to the metacarpus. Wiseman's Surgery.

SYNARTHROSIS. See ANATOMY, Index.

SYNCELLUS, an ancient Byzantine historian, of whom we have met with no memoir ; which is the more surprising that his works are still extant, and were published at Paris in folio, in 1652.

SYNCELLUS, or SINCELLUS, an ancient officer

followed by two, three, or more longer note.; before another short note occurs, equal to that which occasioned the driving, to make the num-ber even, e. gr. when an odd crotchet comes before two or three minims, or an odd quaver before two, three, or more crotchets. In syncopated or driving notes, the hand or foot is taken up, or put down, while the note is sounding SYNCOPE, n.j. 3 Fr. syncope; Gr. °ffvr SYN'COPIST. 3 KOTTJ). Fainting fit ; con-

in the family of the patriarchs, and other pre-traction of a word; a contractor of wo'rds

lates of the eastern church. The word, in the corrupt Greek, ervyKjjXXoc, signifies a person who

To outshine all the modern syncopic, and thoroughly content my English readers, l' intend to

lies in the chamber with another ; a chamber-publish a Spectator that shall not have a sin"le fellow or chum. The syncellus was an eccle-vowel in it.

siastic, who lived with the patriarch of Constantinople, to be a witness of his conduct; whence it is that the syncellus was also called the patriarch's eye; because his business was to observe and watch. The other prelates had also their syncelli, who were clerks living in the house

The symptoms attending gunshot wounds are pain, fever, delirium, and syncope. Wiseman.

SYNCOPE, in grammar, an elision or retrenchment of a letter or syllable out of the middle of a word, as caldus for calidus.

SYNCOPE, in medicine, fainting; a deep and

with them, and even lying in the same chamber, sudden swooning, wherein the patient continues

to be witnesses of the purity of their manners. Afterwards the office degenerated into a mere dignity; and there were made syncelli of churches. At last it became a title of honor, and was bestowed by the emperor on the prelates themselves ; whom they called pontificates syncelli, and syncelli Augustnles.

SYNCONTHRO'SIS, n. s. Greek ai,» and

SynchondrosLi is an union by gristles of the sternon to the ribs. Wiseman.

SYNCHRONISM, n. s. j Greek riv and SYNCHROJN'ICAL, adj. Sˆpovoc. Concur-SYN'CHRONOUS. j rence of events

happening at the same time : both the adjectives corresponding.

The coherence and synchronism of all the parts of the Mosaical chronology, after the Flood, bear a most regular testimony to the truth of his history.

Hale. It is difficult to make out how the air is conveyed

without any sensible heat, motion, sense, or respiration, and is seized with a cold sweat over the whole body ; all the parts, in the mean time, turning pale and cold, as if he were dead. See MEDICINE.

SYNDIC, in government and commerce, an officer in divers countries, entrusted with the affairs of a city or other community, who calls meetings, makes representations and solicitations to the ministry, magistracy, &c., according to the exigency of the case.

SYNDICATE, v. n. Fr. syndiquer ; Gr. ai,v and SIKTI. To judge ; pass judgment on ; censure. Not in use.

Aristotle undertook to censure and syndicate his master, and all law-makers before him. Hakewill.

SYN'DROME, n. s. Gr. ovvdpopr,- Concurrent action; concurrence.

All things being linked together by an uninterrupted chain of causes, every single motion owns a

J-l la UllUVUJb LU HMMWJ \JUL 11VJV? Lll"^ U.II »-J v-v »» • \^j v^i* i 17 f " 1

into the left ventricle of the heart, the systole and dependance on such a syndrome of prerequired motors

diastole of the heart and lungs being far from syn-chronical. Boyle.

The variations of the gravity of the air keep both

SYNEC'DOCHE, n. s.

SYNECDOCH'ICAL, adj.

Glanville's Scepsis.

Fr. synecdoche ; Gr. ffwucSoKt). A

the solids and fluids in an oscillatory motion, syn-figure by which part is taken for the whole, or

the whole for part: the adjective corresponding.

Because they are instruments of grace in the hand of God, and by these his holy spirit changes our hearts ; therefore the whole work is attributable to them by a synedoche ; that is, they do in this man-ner the work for which God ordained them.

Taylw't Worthy Communicant.

Should I, Lindamer, bring you into hospitals, and shew you there how many souls, narrowly lodged in itfnedochical bodies, see their earthen col-lages moulder away to dust, those miserable persons, by the loss of one iimb after another, surviving bi; part of themselves, and living to see themselves dead and buried by piecemeal !

SYNECDOCHE. See ORATORY.

SYNECPHONESIS, in grammar,a coalition, whereby two syllables are pronounced as OIK- ;

chronous and proportional to their changes

Arbuthnot on Air.

SYNCHYSIS, in Latin prosody, that confused and intricate order of the words, which is so frequently used by the best Latin poets, and is commonly called the artificial order : as Saxa vocant Itali mediis quae in fluctibus Aras. — Vir-gil.

SYNCOPATION, in music, denotes a striking or beating of time, whereby the distinction of the several times or parts of the measure is interrupted. However, it is more properly used for the connecting the last note of any measure or bar, with the first of the following measure, «o as only to make one note of both. A syn-' cope is sometimes also made in the middle of a measure. Syncopation is also used when a note

measure. ciyncopauon is aisu ust-u mien <i •” “-> v -• • -/– i . is:.,

of one part ends or terminates on the middle of being much the same as Synaloepha

.1 • i _ •

a note of the other part. This is otherwise denominated binding. It is likewise used for a

driving note; that is, when some shorter note at by the construction of a sente.i the beginning of a measure, or half measure, is not by the words, but by the sense, as

ntcresis.

SYNESIS, in Latin grammar, a figure where-regulated

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or number : as, in Livy, Latiurn Capuaque agro multati ; instead of Latini et Capuani.

SYNESIUS, a Celebrated father of the Christian church, who flourished under Theodosius II. He was born at Cyrene, in Africa, of noble parentage. In 410 he was appointed bishop of Ptolemais. His works consist of 155 Epistles, and some other curious tracts, written in very pure and elegant Greek. The best editions are those of Paris, in 8vo., 1605; folio, 1612, and 1633 ; and Amsterdam, 1749.

SYNEUROSIS. See ANATOMY.

SYNGE (Edward), a late eminent prelate of Ireland, was the son of Dr. Edward Synge, bi-shop of Cork, and born April 6th, 1659, at Inis-honane. He was educated at Cork ; admitted commoner and A. B. at Christ Church, Oxford ; and finished his studies at Dublin. He was made vicar at Christ Church, in Cork, and after other promotions rose to be bishop of Raphoe, in 1714; and at last, in 1716, archbishop of Tuam, being a zealous whig. He wrote and published many excellent tracts on divinity, in 4 vols. 12mo; and died at Tuam, in 1741.

SYNGENESIA, <rvv and ytvtotc, congenera-tion. The nineteenth class in Linnaeus's artificial system; comprehending those plants which have the antherae united into a cylinder. The orders are six : 1. Polygamia aequalis. 2. Polygamia superflua. 3. Polygamia frustranea. 4 Polygamia necessaria. 5. Polygamia segregata. 6. Monogamia. The first five orders contain the compound flowers, and form a class truly natural. See BOTANY.

SYNGNATHUS, in ichthyology, pipe fish, according to Linneeus, a genus belonging to the class of amphibia, and order of nantes, but arranged by Gmelin more properly under the class of pisces, and order of branchiostegi. The head is small; the rostrum somewhat cylindrical, long, and turned up at the point, where the mouth is placed, which is covered with a lid or valve. The gills are covered in the same man-ner. The body is covered with a strong crust, and has no ventral fins. There were formerly enumerated eight species. Of these, three are found in the British seas, *viz.* No. 1, 3, and 5.

1. S. acus, the needle fish, or shorter pipe fish, is thicker than the barbarus (No. 3), yet it has been seen of the length of sixteen inches.

The middle of the body in some is hexangular, in others heptangular. The mouth is formed like that of the barbarus, the irides are yellow ; close behind the head are the pectoral fins, which are small and short. On the lower part of the back is one narrow fin ; beyond the vent the tail commences, which is long and quadrangular. At the extremity is a fin round and radiated. The body is covered with a strong crust, elegantly divided into small compartments. The belly is white ; the other parts are brown.

2. S. sequoreus.

3. S. barbarus, or longer pipe fish. One described by Sir Robert Sibbald was two feet in length ; that examined by Mr. Pennant only sixteen inches. The nose was an inch long, compressed sidewise, and the end of the lower mandible turned up; the aperture of the mouth

was very small. The irides were red; behind each ear was a deep brown line. The body, in the thickest part, was equal to a swan's quill, hexangular from the end of the dorsal fin ; thence to the tail quadrangular. The belly was ' slightly carinated, and marked along the midd1 with a dusky line. Under the tail, commencin0 at the anus, is a fulcus or groove, six inches and a half long, covered by two longitudinal valves, which conceal a multitude of young fish. On crushing this part, hundreds may be observed to crawl out.

4. S. hippocampus, the sea horse, which was classed by Artedi under the Syngnathus, is now, by later ichthyologists, arranged under TRICHE-cus ; which see.

5. S. ophidion, or little pipe fish, seldom exceeds five inches in length, is very slender, and tapers to a point. It wants both the pectoral and tail fins ; is covered with a smooth skin, not with a crust. The nose is short, and turns a little up; the eyes are prominent. On the back is one narrow fin. This species is not viviparous : on the belly of the female is a long hollow, to which adhere the eggs in two or three rows. They are large, and not numerous. Serpent is used in several languages to express these fish : the French call one species orueul, from a sort of snake, like the blindworm; the Germans call it meherchlange ; and the Corinth the sea adder.

6. S. Pelagicus, 7. S. tetragonus, 8. S. typhele, and S. aequoreus, are all natives of foreign countries.

SYNNADA, or SYNNAS, an ancient town of Phrygia, famous for

marble quarries. — Strab. 12, Claud.

SYNNEURO'SIS, n. s. Gr. <T{IV and vtvpoc-Synneurosis is when the connexion is made by a ligament. Of this in symphysis we find instances, in the connexion of the ossa pubis together, espe cially in women, by a ligamentous substance. In articulation, it is either round, as that which unites the head of the os femoris to the coxa ; or broad, as the tendon of the patella, which unites it to the o» tibiae. Wiseman's Surgery.

SYNOCHA, and SYXOCHUS, in medicine, species of continued fever. See MEDICINE. SYN'OD, n.s. ~) Yr.synode; Gr. <ruvo&)c. SYNOD'ICAL, adj. >An assembly called for S YNOD'ICALLY, adv.) consultation: it is used particularly of ecclesiastics. A provincial synod is comn.only used, and a general council ; conjunction of the heavenly bodies : the adjective and adverb follow both these senses.

The glorious gods sit in hourly synod about thy particular prosperity. Shakspeare. Coriolantis.

Since the mortal and intestine jars 'Twixt thy seditious countrymen and us, It hath in solemn synod been decreed T' admit no traffick to our adverse towns.

Shakspeare.

The opinion was not only condemned by the syiwdt ' but imputed to the emperor as extreme madness.

Bacon.

Howe'er love's native hours are set, Whatever starry synod met, 'Tis in the mercy of her eye, If poor love shall live or die. Crashaw.

His royal majesty, according to these presbytenan rules, shall have no power to command hi.s clergy to keep a national synod. Tr'An*.

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The various dignity of their several churches, and VIII. o. 19, it was made unlawful for of their many functions, rules and orders in them, to meet but by royal author! v See by reason ol the frequency of their synodical and ~-J “- -

processional meetings, have necessarily raised many questions of place among them. Selden.

Flea-bitten synod, an assembly brewed Of clerks and elders ana, like the rude Chaos of presbytery, where laymen guide. With the tame woolpack clergy by their side.

Cleaveland.

Let us call to synod all the blest Through heaven’s wide bounds. Milton.

Their planetary motions and aspects Of noxious efficacy, and when to join In synod unbenign. Id.

and CONVOCATION.

SYNODALS, or SYNODIES, were pecuniary rents (commonly of 2s.) paid to the bishop or archdeacon at the time of their Easter visitation bv every parish priest. They were thus called, because usually paid in synods ; as anciently bishops used to visit and hold their diocesan synods once. They are sometimes also denominated synoda-lica; but more especially procurations.

SYNODICAL EPISTLES are circular letters written by the synods to the absent prelates and churches ; or even those general ones directed to

It shall be needful for those churches synodically a]l the faithfu, t inform ~h f h to determine something ,n those points. Bunders. in the synod

SYNOECIA, in Grecian antiquity, a feast celebrated at Athens in memory of Theseus'* having united all the petty communities of Attica into one single commonwealth ; the seat whereof was at Athens, where all the assemblies

The diurnal and annual revolutions of the sun, to us are the measures of day and year ; and the synodick revolution of the moon measures the month.

Holder.

St. Athanasius writes a sijnndical epistle to those of Antioch, to compose the differences among them upon the ordination of Paulinus. Stillingjleet.

The second council of Nice, he saith, I most irreverently call that wise synod; upon which he falls Thucydides, it was held in the month into a very tragical exclamation, that I should dare nion. to reflect so much dishonour on a council.

were to be held. This feast was dedicated to Minerva; and, according to the scholiast on

Id.

As the planets and stars have, according to astrologers, in their great synods, or conjunctions, much more powerful influences on the air than are ascribed to one or two of them out of that aspect ; so divers particulars which, whilst they lav scattered among the writings of several authors, were inconsiderable, when they come to be laid together, may oftentimes prove highly useful to physiology in their conjunctions. Boyle. Parent of gods and men, propitious Jove !

And you bright synod of the powers above,

On this my son your gracious gilts bestow.

Dry den.

The moon makes its synodical motion about the earth in twenty-nine days twelve hours and about forty-four minutes.

Locke’s Elements of Natural Philosophy.

The alterations made by the commissioners were brought to the convocation then sitting, where they were lynodicatly agreed upon. Nelson.

SYNOD, in astronomy, a conjunction or con course of two or more stars or planets, in the same optical plane of the heavens.

SYNOD signifies also a meeting of ecclesiastical persons to consult on matters of religion. Of these there are four kinds, *viz.* 1. General or ecumenical, where bishops, &c., meet from all nations. These were first called by the emperors, afterwards by Christian princes; till in later ages the pope usurped to himself the greatest share in this business, and by his legates presided in them when called. 2. National, where

those of one nation only come together, to deter-the parts, mine any point of doctrine or discipline. The first of this sort held in England was that of Herudford or Hertfort, in 673 ; and the last was held by cardinal Pole, in 1555. 3. Provincial, where those only of one province meet, now called the convocation. 4. Diocesan, where those, but of one diocese meet, to enforce canons made by general councils, or national and provincial synods, and to consult upon rules of discipline for themselves. These were not wholly laid aside, till, by the act of submission, 25 Hen. Vol. XXI.

S YNON’ YMISE, v.a.) Lat. synony ma ; G r.

SYNON’YMOUS, adj. ii ffwuvvpof. To express the same thing in different words : the adjective corresponding.

This word fortis we may synonymise after all thesi: fashions, stout, hardy, valiant, doughty, courageous, adventurous, brave, bold, daring, intrepid.

Camden’s Remains.

These words consist of two propositions, which are not distinct in sense, but one and the same thins; variously expressed ; for wisdom and understanding are synonymous words here. Tillotion.

iortune is but a. synonymous word for nature and necessity. Bentley's Sermons.

When two or more words signify the same tiling, as wave and billow, mead and meadow, they/ are usually called synonymous words. Wutts's Lagick.

SYNOPTICAL, adj. Gr. awoˆif. Affording a view of many parts at once.

We have collected so many synoptical tables, calculated for his monthly use. Evelyn's Calendar.

SYNOVIA, in anatomy, a term first used by Paracolsus and his school for the nutritious juice proper and peculiar to each part; as the synovia of the joints, &c.

S YIN O VIAL GLANDS. See ANATOMY.

SYNTAGM, SYNTAGMA, Gr. avvrnfua, from aw, with, and raaaio, to order. A disposition of things according to order in literature : a regular treatise on any subject.

SYNTASIS, from aw vim, and rtivta, to stretch, in surgery, a preternatural distension of

SYNTAX, n. S. I Gr. avvratic. A system;

SYNTAX'IS.'. S a number of things joined together: that part of grammar which teaches the construction of words.

They owe no other dependance to the first than what is common to the whole tyntax of beings.

Glanvillf.

I can produce a hundred instances to convince any reasonable man that they do not so much as understand common grammar and iiininf.

SYNTAX, in grammar, the proper construction

or due disposition of the words of a language into sentences and phrases. See GRAMMAR.

SYNTHESIS, n. s. > Gr. owtoaif. The act

SYNTHET'IC, adj. $ of joining : opposed to analysis: conjoining; compounding: opposed to analytic.

The synthesis consists in assuming the causes discovered and established as principles, and by them explaining the phenomena proceeding from them, and proving the explanations. Newton's Opticks.

Synthetick method is that which begins with the parts, and leads onward to the knowledge of the whole : it begins with the most simple principles and general truths, and proceeds by degrees to that which is drawn from them, or compounded of them ; and therefore it is ctlled the method of composition.

Watts's Logick.

SYNTHESIS, in logic, denotes a certain branch or method, opposite to analysis. In the synthe-tic method we pursue the truth by reasons drawn from principles before established or assumed, and propositions formerly proved ; thus proceeding by a regular chain to the conclusion. Such is the method in Euclid's Elements, and most demonstrations of the ancient mathematicians, which proceed from definitions and axioms to prove propositions, &c., and from those propositions proved to prove others. This method we also call composition, in opposition to analysis or resolution. See ANALYSIS and ANALYTIC.

SYPII/EUM, an ancient town of the Bruttii, in Italy. See MURANUM.

SYPHAX, king of the Masaesyli, in Numidia. For his adventures, see NUMIDIA. He married Sophonisba. See SOPHONISBA. He died in prison at Rome, A. A. C. 201.

SYPHILIS. See MEDICINE, Index.

SY'PHON, n. s. Gr. <n0wv. A tube ; pipe.

Take your glass, syphon, or crane ; and draw it off from its last faeces into small bottles. Mortimer.

SYPHON. See HYDROSTATICS. Some uncommon phenomena in nature may be accounted for upon the principles of the syphon ; as, for instance, that of reciprocating springs.

SYRACOSIA, festivals anciently held in Syracuse, for teu days annually, during which the women were chiefly employed in sacrificing. Syracosia was also the name of another annual festival, celebrated near the lake where it was supposed that Pluto had carried off Proserpina.

SYRACUSA, SYRACUSE, ancient names of Syracuse.

SYRACUSE, a celebrated city of Sicily, the capital of the island. It was built, according to Thucydides and Strabo, by Archias, one of the Heraclidae, who came from Corinth into Sicily in the second year of the eleventh Olympiad, or about 732 years before the Christian era. It was named Syracusae from Syraco, a marsh near it. This city was of a triangular form, and in its most flourishing state extended 180 stadia, or twenty-two English miles and four furlongs, in circumference, and was divided into four districts, *viz.* Ortygia, Acradina, Tycha, and Neapolis. There was also a fifth district, called Epipolae ; but, as it was thinly inhabited, it is often omitted by geographers. Each of the four chief districts formed separate cities, and were fortified with three citadels, and threefold or

triple walls. Syracuse had also two spacious harbours, separated from each other by the island of Ortygia. See ORTYGIA. The greatest harbour was above 5000 paces in circumference, and its entrance 500 paces wide. The city was well built, and the houses were stately and magnificent.

What form of government first prevailed in the city is not known. The history is obscure till the time of Gelon, who was born in Gela, in Sicily. He signalised himself in a war carried on by Hippocrates tyrant of Gela against the Syracusans, whom he defeated in a pitched bat-tle, and had well nigh taken their city. Having thus become very powerful, he soon seized on the sovereignty. Putting himself at the head of some Syracuˆan exiles, he marched towards that place, where he was received with loud acclamations by the faction to which they belonged ; and by their means obtained possession of the city. Gelon,

to people the capital of his new dominions, first demolished the neighbouring city of Camarina, and transplanted the inhabitants to Syracuse. Soon after, entering into a war with the Megareans, he defeated them, took and razed their cities, and in like manner transplanted the people. Syracuse thus became very powerful, and full of inhabitants ; and the friendship of Gelon was courted both by Athens and Lacedsemon at the time of the Persian invasion. His assistance, however, was afterwards rejected, as he insisted upon being made commander-in- chief either of the fleet or the army. In the mean time the Carthaginians had entered into a treaty with the Persians; by which it was agreed that the former should attack those of the Greek name in Sicily and Italy, to divert them from assisting one another. Sicily was accordingly invaded by the Carthaginians with a vast army ; but they were utterly overthrown by Gelon and his father-in-law Theron, prince of Agrigentum, as is related under the article CARTHAGE. After this victory, the people out of gratitude obliged him to take upon himself the title of king, which till that time he had refused. A decree also passed without opposition, by which the crown was settled on his two brothers Hiero and Tlini-sybulus after his death. The new king sptisat the remainder of his short reign in studying the hap-pinessof his people. Hedied A.A.C. 471, after leigning four years.

Gelon was succeeded by his brother Hiero, whose character is differently drawn by historians. He was twice engaged in a war with the Agrigentines, and drove from their habitations the people of Catan and Naxus, settling in their room a colony of Syracusans and Peloponne-sians. Ilieio I. died A.A.C. 459, and was succeeded by Thrasybulus ; who, proving a tyrant, was in ten months driven out, and a popular government restored, which continued fifty-five years.

Several persons for some time aspired at the sovereignty ; to prevent which they had recourse to petalism ; but, being productive of great inconveniences, the law was repealed soon after it had been enacted. See PETALISM. About this time the Syracusans entered into a war with the Siculi, which terminated in the subjection of the

latter. Syracuse now became so powerful that it in a manner gave law to the whole island. The Leontines disputing the supremacy of the Syracusans, their territory was laid waste, and their city reduced tc great straits. Leontini was an Athenian colony ; and this furnished the Athenians, who had already meditated the conquest of Sicily, with a pretence to attack the Syracusans with their whole force. But the Leontines, sensible that their pretended allies aimed at the conquest of the whole island, concluded a peace with Syracuse. In A. A. C. 416, a dispute happening between the inhabitants of .fligesta, or Segesta and Selinus concerning some lands which the latter had seized, the Segestines applied for assistance to Agrigentum, Syracuse, and even to Carthage. But, as none of these states chose to interest themselves in their quarrel, they applied at last to the Athenians, who joyfully accepted of the opportunity of again interfering in the affairs of Sicily. With the most sanguine expectations the Athenians landed 7000 men in Sicily, under Nicias, possessed themselves of a strong post, and put the Syracusans to flight.

In the mean time the Syracusans received assistance from the Lacedaemonians under the command of an experienced officer named Gylippus, who arrived just in time to prevent Syracuse from surrendering. At the head of 7000 foot and 200 horse he made directly for Epipolse, where Nicias had fortified himself in a castle named Labdalon ; he drew up his small army under the walls ; and sent a herald to Nicias to tell him that he would allow him only five days to leave Sicily. Nicias returned no answer; but Gylippus soon after stormed the fort, and put to the sword all the Athenians in it. This opened a way into the city, where he was received with loud acclamations. The fortune of the war was a°-ain changed. The Athenians gained an advantage by land, but were next day defeated with great loss. The Syracusans received fresh supplies from Corinth, and the Athenians from Attica. Many engagements both by sea and land took place, in which the success was ultimately in favor of the Syracusans. At last the Athenian affairs were totally ruined by the loss of a sea-fight, in which sixty of their ships were taken or destroyed, and the rest left quite un-serviceable. In this desperate situation it was determined to abandon their ships, and retire that night to the city of their confederates. But this measure was delayed from a piece of false intelligence ; and Nicias did not march out till the third day after. The Atlienr. ns and their al-lies also matched out to the mirr.oer of 40,000;

but finding themselves shut up on all sides, and being obliged to fight their way through every outlet, they soon sunk into despair. Nicias did his utmost to encourage them ; and at last they marched out in two bodies. The vanguard, led by Nicias, continued to advance in good order ; out half the rear, commanded by Demosthenes, iost their way in the night, and were obliged to surrender. Nicias, being informed of this misfortune, offered to pay the whole expense of the war. provided he was allowed to march off with his inen. But, this being rejected, he set out,

though galled all the way by showeis of darls from his enemies. Arriving at a river callea Asmarus, they rushed into it without order; in which confusion the Syracusan cavalry attacked them so desperately that 18,000 perished, and the river, for many miles, was dyed with their blood. The remainder surrendered, on condition of having their lives saved ; but the terms were shamefully broken by the Syracusans. The generals were*nrst ignominiously whipped, and then put to death : the soldiers were sent to labor in quarries, where they were allowed only two small measures of flower and one of water a day ; and where, being crowded, they suffered inex-pressible miseries for many months. Most of them perished by this cruel treatment, and the few who survived were sold for slaves.

The war was scarcely ended when a new anil formidable invasion by the Carthaginians took place ; but the event of that expedition was as unfortunate to the Carthaginians as the former had been, of which a particular account is given under the article CARTHAGE. See also AGRIGENTUM. In the mean time, however, a considerable revolution had happened in Syracuse. Dionysius, a man of great valor and eloquence, acquired such influence with the populace, that step by step he attained to sovereign power, possessed himself of the citadel, where all the arm-; and provisions were kept, and publicly took the title of king of Syracuse, A. A.C. 404. The Syracusans did not tamely submit to their new master: but Dionysius managed matters so well, that their frequent revolts answered no other purpose than more certainly to entail slavery on themselves ; and he was allowed to possess the throne, without much opposition, till his death, A.A.C. 366. See DJONYSIUS I., and SICILY.

On the death of Dionysius, he was succeeded by his son, Dionysius II. He was naturally of a mild and peaceable temper, averse from cruelty, and inclined to learning; but his father, to whom all merit, even in his own children, gave umbrage, stifled as far as possible his good

qualities by a mean education. He no sooner ascended the throne than Dion, brother .to Aristomache the other wife of Dionysius the elder, undertook to correct the faults of his education, and to inspire him with thoughts suitable to the high station in which he was placed. For this purpose he sent for the philosopher Plato, under whose care h-; put the young king. This produced a reformation on Dionysius; but the courtiers, dreading the effects of the philosopher's instruction-, prevailed on him to banish Dion, and to keep Plato himself in a kind of imprisonment in the citadel. At last, however, he set him at liberty ; upon which Plato returned to his own country. Dion, in the meantime, visited several of the Grecian cities, and at last took up his residence in Athens; but the honors which were every where paid him raised such jealousies in thr breast of the tyrant that he stopped his revenue and caused it to be paid in to hi* own treasury In a short time Dionysius again sent for I lato , but, finding it impossible to dissolve the friendship between him and Dion, disgraced, am. placed him in a very dangerous situation, in th midst of assassins who hated him. See 1 i *i«.

Xot daring, however, to offer him any violence, he allowed him soon after to depart; revenging himself on Dion, whose estate he sold, and gave his wife Arete in marriage to Timocrates, one of his own flatterers. Dion now resolved to revenge himself on the tyrant for the many injuries he had sustained, and at once to deliver his country from the oppression under which it groaned. He began with raising foreign troops privately, by proper agents. Many Syracusans of distinction entered into his scheme, and gave him intelligence of what passed in the city ; but of the exiles only twenty-five joined him, with about 800 men. He arrived at the port of Minoa, near Agrigentum. Here they received intelligence that Dionysius had set sail for Italy with a fleet of eighty galleys. On this Dion resolved to take advantage of the tyrant's absence ; and immediately set sail for Syracuse. On his march he prevailed upon the inhabitants of Agrigentum, Gela, Camarina, and other cities, to join him. As soon as he entered the territories of Syracuse, multitudes flocked to him ; and, as nobody

appeared to oppose him. he boldly entered the city, where he quickly found himself at the head of 50,000 men. Seven days after Dion's arrival, Dionysius returned and entered the citadel by sea. Finding his affairs in a desperate situation, he had recourse to artifice ; and having amused the Syracusans by a feigne.l negociation, until he observed that they kept a negligent guard, he attacked them all at once with such fury that he had almost taken the city. But Dion encouraged the soldiers by his example so much that lie at last obtained a complete victory ; for which they presented him with a crown of gold. Dionysius was obliged to fly to Italy.

It was not long, however, before the ungrateful Syracusans began to confer quite different rewards on their benefactor. Dion, having opposed a proposal for a new division of lands, was obliged to leave the city and reside some time at Leontini, where he was received with respect. In the mean time the citadel still continued in the hands of the adherents of Dionysius. Being blocked up on all sides, they were reduced to great straits, and were actually making proposals of capitulation, when Nypsius, an experienced general, and greatly attached to Dionysius, appeared with a numerous squadron of galleys, and a large fleet of transports laden with provisions. The general landed his men, and got them into the citadel ; but almost all his galleys and ships laden with corn were sunk or taken. This victory proved the ruin of the Syracusans ; for, giving themselves up to riot and debauchery, the enemy sallied out in the night-time from the citadel, and massacred the citizens without mercy. An embassy was then sent to Dion, entreating him to return and save the city a second time. To this he agreed, and instantly set out on his march ; but in the mean time, as the soldiers of Dionysius, satiated with the slaughter, had retired into their fortress, the ungrateful Syracusans began to repent of their having sent an embassy to Dion. The chief commanders, therefore, sent messengers to stop his march ; but, as some of his friends sent deputies to him at the same time, contradicting this

message, he proceeded on his journey. The infatuated mob seized the gates to dispute his entrance ; but they paid dear for their frenzy. The Dionysians again sallied out upon them, and made a second massacre. As they knew that Dion was hastening to the relief of the city, they endeavoured to destroy it entirely before his arrival ; for, after they had murdered all the inhabitants they could find, they set fire to the houses, by which great numbers perished. But, during this confusion, Dio'n arrived ; and, having briskly attacked the enemy, at last

defeated them with great slaughter, driving the remainder into the citadel. The citadel soon after surrendered; and Dion allowed Apollocrates the tyrant's son, who commanded there, to retire with five galleys to his father. As soon as Dion entered the citadel, he was met by his sister and wife Areta, whom he received with affection, notwithstanding her having lived so long with Timocrates. He then left the Syracusans in possession of the citadel, rewarded his followers, dismissed his guards, and lived like a private citizen. In a short time after he lost his life, through the base treachery of Calippus, or Gylippus, who pretended to be his intimate friend, and who immediately after caused his wife and sister to be carried to prison. See DION.

Calippus, having thus removed Dion, soon made himself master of Syracuse, where he committed all manner of cruelties ; but was driven out, and forced to fly to Rhegium, where he was murdered with the same dagger wliere-with he had killed Dion. In 350 B. C. Dionysius again made himself master of Syracuse ; and, being exasperated by his past misfortunes, tyrannized worse than ever. The Syracusans first had recourse to Icetas tyrant of Leontini ; but, as the Carthaginians took this opportunity to invade them with a powerful fleet and army, they were obliged to apply to the Corinthians. By them Timoleon, a celebrated commander, was sent to assist the Syracusans, whom he found in a very distressed situation ; Icetas bein.; master of the city, the Carthaginians of the harbour, and Dionysius of the citadel. As all parties were equally the enemies of Dionysius, he found it impossible to hold out, and therefore surrendered himself to Timoleon, by whom he was sent to Corinth; where at last he was reduced to the necessity of teaching a school for his support.

After the expulsion of the tyrant, Timoleon withdrew to Catana, leaving only 400 Corinthians, under the command of an experienced officer named Leon, to guard die citadel. These were immediately besieged by Icetas and the Carthaginians, but Timoleon relieved them in spite of all opposition ; and having dispersed emissaries through the army of Mago the Carthaginian general, exhorting the mercenary Greeks to forsake him, he was so much intimidated that, in spite of all the remonstrances Icetas could make, he set sail for Africa, leaving his colleague to carry on the war in the best manner he could. The day after the departure of Mago, Timoleon assaulted the city so briskly that the troops of Icetas were driven from the walls, and the Corinthians became masters of the place. Timoleon

invited the inhabitants to assist in demolishing the citadel and other castles, which he called nests of tyrants ; after which he caused edifices to be erected in the place where the citadel had stood, for the administration of justice. He found the city in a most miserable situation, and almost a desert. He supplied the city with inhabitants from Corinth and other cities of Greece, and distributed the lands among them gratis ; but sold the houses, and with the money arising f om the sale established a fund for the support of the poor. Having thus restored Syracuse, he in like manner delivered all the Greek cities of Sicily from the tyrants who had taken possession of them, all of whom he put to death. After this he resigned his authority, and led a retired life, honored in the highest degree by the Syracusans, and by all the cities in Sicily. After his death lie was honored as a god.

For twenty years the Syraousans enjoyed the fruits of Timoleon's victories ; but, new disturbances arising, another tyrant started up, who exceeded all that had gone before him in cruelty and other vices. This was the celebrated Agathocles, of whose exploits against the Carthaginians, some account is given under the articles AGATHOCLES, AGRIGENTUM, CARTHAGE, and SI-CILY. But further particulars belong to this article. In two years he subdued all the Greek part of Sicily. He next committed great devastations in the Carthaginian territories, their general Hamilcar not offering to disturb him. This perfidious conduct greatly incensed the people of those districts against Hamilcar, whom they accused before the senate. He died, however, in Sicily ; and Hamilcar the son of Gisco was appointed to succeed him in the coinmand of the forces. The last place that held out against Agathocles was Messana, whither all the Syracusan exiles had retired. Pasiphilus, Agathocles's general, cajoled the inhabitants into a treaty; which Agathocles paid no regard to, but, as soon as he was in possession of the town, cut off all those who had opposed his government ; for, as he intended to prosecute the war with the utmost vigor against Carthage, he wished to destroy as many of his Sicilian enemies as possible. The Carthaginians in the mean time having landed a powerful army in Sicily, an engagement ensued, in which Agathocles was defeated with the loss of 7000 men. After this defeat he was obliged to shut himself up in Syracuse, which the Carthaginians immediately invested, and most of the Greek states in the island submitted to them. Agathocles seeing himself stripped of almost all his dominions, and his capital itself in danger of falling into the hands of the enemy, determined to transfer the war into Africa,

and lay siege to the enemy's capital. For this purpose he contrived to carry over 14,000 men, and land them with little opposition. As soon as his forces were landed, Agathocles burnt his fleet, that his soldiers might have no possibility of flying. He first advanced to a place called the Great City. This, after a feeble resistance, he took and plundered. Hence he marched to Tunis, which surrendered on the first summons; and Agathocles levelled both places with the ground.

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The Carthaginians were at first thrown into the greatest consternation ; but, recovering themselves, the citizens took up arms, and in a few days they had an army of 40,000 foot and 1000 horse, with 2000 armed chariots. The command of this army they entrusted to Ilanno and Bo-milcar, two generals between whom there subsisted a great animosity. This occasioned the defeat of their whole army, with the loˆs of then-camp. Upon this defeat the Carthaginians, according to their barbarous superstition, offered up 200 children, and other 300 voluntary human sacrifices. In Sicily, Hamilcar still resolve;! to storm the city, did his utmost to conceal from the Syracusans the intelligence of Agathocles's victory; but in vain, for Agathocles got it conveyed by a galley. Hamilcar then erected scaling ladders, and began his attack upon Syracuse, but, though at first he was somewhat successful, he was soon repulsed with great loss. Raising the siege, he overran the country and took some towns in alliance with Syracuse ; after which he renewed his attack on the city in the night, but was completely defeated, his troops slaughtered, and himself taken prisoner, carried into Syracuse, and beheaded.

About this period the Agrigentines, finding the Carthaginians and Syracusans had greatly weakened each other, thought it a proper time to seize the sovereignty of the whole island, and therefore commenced a war against both ; in which they had such success that they took many capital towns both from the Carthaginians and Syracusans. — In the mean time Agathocles was extremely successful in Africa. He took most of the towns of note in the Carthaginian territories ; and hearing that Elymas king of Libya, their ally, was coming against him, lie entered Upper Libya, and gave him a complete overthrow, slaughtering a great number of his troops with his general at their head. After this he advanced against the Carthaginians with such expedition that he surprised and defeated them, with the loss of 2000

killed, and a great number taken prisoners. He next prepared for the siege of Carthage itself; and advanced within five miles of that city ; but, notwithstanding the great losses they had sustained, the Carthaginians, with a powerful army, encamped between him and their capital. In this situation Agathocles received advice of the defeat of the Carthaginian forces before Syracuse, along with the head of Hamilcar. Upon this he immediately rode up to the enemy's camp, and, showing them the head, gave them an account of the total destruction of their army before Syracuse. This threw them into such consternation that in all human probability Agathocles would have made himself master of Carthage, had not an unexpected mutiny arisen in his camp, which gave the Carthaginians time to recover from their terror. The year following an engagement happened, in which neither party gained any great advantage ; but, soon after, the tyrant, notwithstanding all his victories, found himself unable to carry on the war alone: and therefore endeavoured to gain over Ophelias, one of the captains of Alexander the Great. In this he succeeded : Ophelias brought an army to his assistance through

many trials ; in reward for which, Agathocles cut him off by treachery, and then by promises persuaded his troops to serve under himself.

Agathocles now, finding himself at the head of a numerous array, assumed the title of king of Africa, intending to complete his conquests by the reduction of Carthage. He began with the siege of Utica, which was taken by assault. After this he marched against Hippo Ujarrhytus, the Biserta of the moderns, which was also taken by storm ; and after this most of the peo-ple bordering upon the sea coasts, and even those who inhabited the inland parts, submitted. But in the midst of this success the Sicilians formed an association to recover their liberty ; which obliged the tyrant to return home, leaving his son Archagathus to carry on the war in Africa. Archagathus, after his father's departure, greatly extended the African conquests. He sent Eumachus at the head of a large detachment to invade some of the neighbouring provinces, while he himself, with the

greatest part of his army, observed the motions of the Carthaginians. Eumachus, falling intoNumidia, first took the great city of Tocas, and conquered several of the Numidian cantons. Afterwards he besieged and took Phellina ; which was attended with the submission of the Asphodelodians, a nation (says Drodorus) as black as the Ethiopians. He then reduced several other cities ; and, being at last elated with such a run of good fortune, resolved to penetrate into the more remote parts of Africa. Here lie at first met with success; but, hearing that the barbarous nations were advancing in a formidable body to gire him battle, he abandoned his* conquests, and retreated with the utmost precipitation towards the sea-coasts, after having lost many men. This unfortunate expedition made a great alteration for the worse in the affairs of Arcagathus. The Carthaginians, hearing of Eumachus's bad success, resolved to repair their former losses. They divided their forces into three bodies ; one they sent to the sea-coasts ; another into the Mediterranean parts, and the last to Upper Africa. Archagathus divided his forces likewise into three bodies ; one he sent to observe the Carthaginian troops on the coasts, and advance afterwards into Upper Africa ; another, under jEschrion, he sent into the heart of the country ; and with the last, which he led in person, he kept nearer Carthage, preserving a communication with the other two, to send them succors, or recall them, as the exigency should require. The Carthaginian troops sent into the heart of the country were commanded by Hanno, a general of great experience, who, being informed of the approach of /Eschrion, laid an ambuscade for him, into which he was drawn and cut off with 4000 foot and 200 horse. Himilco, who commanded the Carthaginian forces in Upper Africa, having advice of Eumachus's march, immediately advanced against him. An engagement ensued, in which the Greeks were almost totally cut off, or perished with thirst after the battle ; out of 8000 foot only thirty, and of 800 horse only forty having escaped. Archagathus, receiving the news of these two defeats, immediately called in the detachments lie had sent out. He was, however, soon hemmed

in on all sides in such a manner, as to be reduced to the last extremity for provisions, and ready every moment to be swallowed up by his numerous enemies. In this distress, he sent an express to his father informing him of his losses. Hereupon Agathocles, leaving the care of the Sicilian war to Leptines, procured the assistance of eighteen Etruscan ships, with which he fought the Carthaginian squadron then on the coast, took five of their ships and made prisoners of their men. Having thus become master of the port, and secured a passage into it for trading vessels, plenty was soon restored ; of which, taking a

sufficient supply for himself, he immediately sailed for Africa. Upon his arrival he found his forces to consist of 22,000 Greeks, Samnites, Etruscans, Celtes, and Africans ; besides 1500 horse. He offered the enemy battle, but they declined. He, however, forced them to action, attacked the camp with his usual bravery, and in all probability would have gained a complete victory, had not his mercenaries deserted him. The barbarous sacrifice made by the Carthaginians, and its dreadful consequences to their whole army, are related under CARTHAGE, as well as its consequences to Agathocles, who with difficulty escaped from his enemies and his own enraged soldiers, who murdered his sons, and made peace with Carthage. After all this reverse of fortune, Agathocles returned to Italy, gathered a new army, relieved Corcyra, and forced Cassander to raise the siege of it ; burned the Macedonian fleet ; avenged the murder of his wives and children ; met with his old troops, who had deserted him in Africa ; defeated and massacred them all ; ravaged the coasts of Italy ; and took Hipponium. At last he was poisoned,.some say by his grandson, others by one Moenon, A. A. C. 289, in the twenty-eighth year of his reign, and ninety-fifth of his age.

After Agathocles's death, a succession of tyrants followed, till at last the city, being held by two ˆrivals, Toenion and Sosistratus, who made war within the very walls, Pyrrhus king of Epirus was invited into Sicily, to put an end to these destructions. He willingly complied with the invitation : and was every where received with loud acclamations as the deliverer not only of Syracuse, but of all Sicily. Puffed up with the expectation of reducing the whole island, he caused his son to take upon him the title of king of Sicily ; but in the mean time having displeased the Sicilians, by his arbitrary behaviour, they deserted from him in such numbers that he was glad to set out for Italy. He embarked in the ships which he had brought with him from Italy ; but was met at sea by the Carthaginians, who sunk seventy of his vessels, and dispersed or took the rest ; so that he saved himself in Italy only with twelve vessels, the poor remains of a fleet of 200 sail.

After the departure of Pyrrhus, Hiero II. the son of Hierocles, a descendant of Gelon the first king of Syracuse, wns chosen general of the forces, along with another named Artemidorus. The two generals earnestly wished to put an end to the confusion and disorder which reigned in the city ; for which reason they entered it at tin head of their forces. On this occasion Hiero

discovered extraordinary talents for government. By mere dint of insinuation and address, without shedding blood or hurting a single citizen, he so gained the affections of all, that he was invested with the whole civil as well as military power in the state. Soon after this he married the daughter of one of the first citizens ; and, having distinguished himself by his exploits against the Mamertines, was unanimously elected king of Syracuse, A. A. C. 265. Some time after Hiero's accession to the throne, he again defeated the Mamertines, and reduced them to such straits that they were obliged to call in the Romans to their assistance. The consequences of this have been fully related under the articles ROME and CARTHAGE. Iliero, who had allied himself with the Carthaginians, being himself defeated by the Romans, and finding his allies unable to protect him against the power of that republic, concluded an alliance with them, and continued faithful to them even in the time of the second Punic war, when they were in the greatest distress. In his reign flourished the celebrated mathematician Archimedes, whose genius he employed in fortifying the city of Syracuse, by innumerable machines, in such a manner as rendered it absolutely impregnable to e-very method of attack known at that time. See ARCHIMEDES. Hiero II. died about A. A. C. 211.

Hiero was succeeded by his grandson Hiero-nymus; but he imprudently forsook the counsels of his grandfather, and entered into an alliance with the Carthaginians. Soon after this he was murdered in consequence of his tyranny and cruelty, and the greatest disorders took place in the city ; which Hannibal, though then in Italy, found means to foment, in hopes of keeping the Syracusans in his interest. This indeed he effected ; but as his own affairs in Italy began to decline (see CARTHAGE) he could not prevent Marcellus from landing in Sicily with an army which the Sicilians were unable to resist. Syracuse was soon invested ; but the machines invented by Archimedes baffled all attempts to take it by assault. These were so stupendous and powerful, that ships were dashed to pieces by the huge rocks they discharged, and the troops were more annoyed by the showers of arrows and stones than modern armies are by musketry. The consuls, finding themselves thus defeated in every attempt, turned the siege into a blockade, reduced most of the other places in the island, and defeated the forces which were sent against them ; and at last Marcellus made himself master of Syracuse itself, of which the

following account is given by Mr. Hooke : — ‘ He took the opportunity of a festival, when the soldiers and citizens had drunk plentifully, to make a detachment scale the walls of Tyche, in that part of it which was nearest to Epipolae, and which was ill guarded. He presently after possessed himself of Epipolse; whereupon the inhabitants of Neapolis, as well as Tyche, sent deputies to him and submitted. Marcellus granted life and liberty to all of free condition, but gave up those quarters of the city to be plundered. Notwithstanding this there was a great deal yet to do. Acradina and Ortygia, which were strongly fortified, still held out; Hippocrates and Himilco arrived with

their troops to the relief of the besieged, .m < i tlw Romans were forced to exert all their bravery and skill to maintain the advantages t’ley had gained. But now a plague made tenible havock in both armies. At the first breaking o il of the pestilence the Sicilians, who served un ler Hippocrates and Himilco, disbanded themse’ves and returned to their respective homes; but all the Carthaginian soldiers perished together with those two generals. The Romans suffered less by the infection ; because, having been a long time before Syracuse, they were seasoned to the air and water of the country. About this time Bomiicar arrived on the coast of Sicily from Carthage with a fleet of 130 galleys and 700 ships of burden; but was long hindered by contrary winds from doubling the Cape of Paehy-num. Epicides, fearing the Carthaginians might sail back to Africa, left the command of Acradina to the generals of the mercenaries, and went to Bomiicar in order to persuade him to fight the Roman fleet. The admiral would not engage, but sailed away to Tarentum with all his galleys, ordering his ships of burden to return to Africa. Epicydes, thus frustrated of his hopes, and knowing himself unable to defend a city already half taken, retired to Agrigentum ; whereupon the Syracusans massacred the commanders appointed by him, chose new prsetors to govern in the town, and sent deputies to Marcellus to treat of peace. In the mean time the deserters, fearing to be given up to the vengeance of the Romans, persuaded the mercenaries that they also would have the same fate. Instantly the soldiers ran to arms, put to death the new praetors, together with many of the Syracusans, and plundered part of the city. After this slaughter they chose six generals, three to command in Acradina, and three in Ortygia. Upon tl e return of the deputies from Marcellus, the mercenaries finding that their case was different from that of the deserters, and that there was no design against their lives, became perfectly satisfied, and the negociationˆ went on. During the course of the treaty, Marcellus found means to corrupt Mericus, a Spaniard , one of the six generals chosen by the

soldier.-, and engaged him to admit the Romans into that part of the city where he commanded. Mericus, the better to accomplish this design, feigned an extraordinary zeal for the preservation of the place ; pretended not to like that deputies should have leave to go out and in at pleasure ; and proposed that, for the greater security of the town, each general should have a distinct quarter assigned him, and be responsible for any neglect of duty in it. The motion was agreed to; and upon the division, that district of Ortygia which extended from the fountain of Arethusa to the mouth of the great port fell to his care. Marcellus, informed of what was done, took his measures accordingly. He sent a body of troops to _that side where Mericus commanded, and the Spaniards admitted them at the gate of Arethusa At the same time the proconsul ordered a false attack to be made on Acradina; which drawing almost all the soldiers of the garrison thither, Ortygia was in a manner left defenceless Foreseeing this he had detached Another party of soldiers to take advantage of it. These entered

Ortygia almost without fighting; upon which the deserters made then escape, the Romans giving them way ; and the Syracusans in Acradina, thus delivered from the fear of the deserters, immediately opened their gates to Marcellus, who thereby became master of the whole city. And now the conqueror, who is said to have wept during the siege with compassion for the inhabitants, gave up both Ortygia and Acradina to be plundered by his army, after he had secured the late king’s treasures for the use of the republic, and the statues, paintings, and principal ornaments of Syracuse to illustrate his triumph. The soldiers had orders to spare the lives of the citizens; but they were cruel in their avarice, slew many of them, and among the rest the incomparable Archimedes. He was very intent «>ri a demonstration in geometry, and calmly drawing his lines, when a soldier entered the room and clapped a sword to his throat. ” Hold (s;iid Archimedes) one moment, and my demonstration will be finished.” But the soldier, equally regardless of his prayer and his demonstration, killed him instantly. There are different accounts of the manner of his death, but all agree ihat Marcellus regretted it

extremely, and showed a singular favor to his relations for his sake.'

The apostle Paul spent three days in this city in his voyage to Rome, and Christianity was early planted in it. It continued subject to the western empire till its declension, when, the island of Si-cily being ravaged by different barbarians, the capital also underwent various revolutions. In 675 it was taken and plundered by the Saracens, who, about 827, had subdued all Sicily, and destroyed much of its ancient grandeur (see CONSTANTINOPLE); but in 1090 it was recovered by Koger, earl of Sicily. It has since shared the fortune of the rest of Sicily. Near this port there was a sea engagement, in 1718, between the Spaniards and the British, in which the former were defeated and obliged to leave Sicily ; but, in 1735, they retook Syracuse. Like the rest of Sicily it is much subject to earthquakes ; and, in 1693, was almost totally destroyed by one.

At present the only inhabited part of Syracuse is a south-east portion, containing Ortygia and] art of Aciadina. It is insulated, walled, and entered by drawbridges. The streets are regular l>ii t narrow ; the houses tolerably built. The population is not above 1o,000. The cathedral nr principal church is the ancient temple of Minerva.

SYRIA, a veiy ancient country or kingdom of Asia, lying between the Mediterranean on the west, the Euphrates on the east, and Arabia De-serta, Phoenicia, and Palestine on the south, or, as Crutwell describes it, ' this name is given to the whole space contained between two lines drawn the one from Alexandretta to the Euphrates, and the other from Gaza in the desert of Arabia; bounded on the east by this desert, and on the west by the Mediterranean.' But Lempriere says that ancient Syria, whose boundaries are not accurately ascertained by the an-cii-nts, was bounded on the east by the Euphrates, north by mount Taurus, west by the Mediterra-nenn, and south by Arabia.

This country appears in the patriarchal age to

have been divided into a great number of cantons or petty principalities. Very early after the flood it went by the general name of Aram, from Aram the youngest son of Shem, who settled in it. Hence the different cantons were named Aram-naharaim,Aram-zobah,Aram-maachah, and Aram-zehob. Within a few centuries afterwards it had obtained its present name of Syria ; for we find Bethuel the nephew, and Laban the grand-nephew of Abraham, styled Syrians, even in the patriarchal age. See Gen. xxv. 20. It is a piece of

learned folly, therefore, to quote Plutarch's derivation of this name from the fabulous hero Syrus, the son of Apollo, Much more credit is due to those etymologists who suppose it to be a contraction of the name Assyria, which the best historians, etymologists, and ohronologists, derive from Ashuˆ, the second son of Shern. See ASSYRIA. Lempriere makes it so very extensive as to have comprehended ' Phoenicia, Seleucia, Judea or Palestine, Mesopotamia, Babylon, and Assyria;' which last name, he adds, was used indifferently with Syria by some ancient authors. But, be that as it may, all the petty states, provinces, principalities, and cantons, into which Syria Proper was originally divided, appear to have been afterwards reduced under subjection to the four principal ones, Zobah, Damascus, Hamath, and Geshur. Afterwards the whole country was divided into two parts only ; *viz.* Coelesyria and Phoenicia; though the Phoenicians, Idumeans, Jews, Gazites, and Azorites, inhabiting the whole country of the Philistines, were included. After the death of Alexander, Syria, in the great extent of the word, was divided, according to Strabo, into Comagene, Seleucis of Syria, Coelesyria, Phcenice on the sea-coast, and Judea in the midland. Ptolemy, however, subdivides these; and in the Proper Syria reckons only Comagene, Pieria, Cyrrhistica or Cyrrhes-tica, Seleucis, Cassiotis or Casiotis, Chalybonitis, Chalcidice or Chalcidene, Apamene, Laodicene, Phoenicia Mediterranea, Coelesyria, and Palmyrene. It has long been, and still is, named by the Arabs, the descendants of Ishmael, Barr el Sham, or the country of Shem.

The history of the ancient Syrians, till the time of their being carried away by the king of Assyria, is altogether unknown, excepting a few particulars to be gleaned from Scripture, which it is unnecessary here to repeat. During the continuance of the empires of Babylonia and Persia, the history of Syria affords nothing peculiar, being involved in that of these countries; but after the death of Alexander the Great, who had subdued all these empires, it became a very considerable kingdom, which makes a conspicuous figure in ancient history.

At the death of Alexander, the name of Syria was not confined to Syria properly so called, but comprehended all those vast provinces of Upper Asia which formed the Persian empire ; being, in its full extent, bounded by the Mediterranean upon one side, and the river Indus on the other. Seleucus, one of the generals of Alexander the Great, after the death of that conqueror, being made governor of Babylon, was tempted, by the example of Alexander's other captains, to set up for himself. Eumenes, who had sincerely at

heart the interest of Alexander's family, solicited his assistance against Antigonus, who had openly revolted ; but Seleucus not only refused his assistance, but attempted to destroy Eumenes himself with his whole army, by cutting the sluices of the Euphrates, and laying under water the whole plain where they were encamped. Eumenes, however, escaped the danger without the loss of a man. Upon this Seleucus endeavoured to gain over his troops ; but, finding that impossible, he made a truce with Eumenes, and granted him a safe passage through his province ; but at the same time sent an express to Antigonus, desiring him to fall upon him before he was joined by the governors of Upper Asia. Antigonus did not fail to follow his advice ; but, having thus prevailed against Eumenes through treachery, he next thought of bringing Seleucus himself under subjection. On his return to Babylon, therefore, after having been feasted with his whole army by Seleucus, he demanded an account of the revenues of his province. This being refused, Antigonus was so much exasperated that Seleucus, not thinking himself a match for him, fled into Egypt. By the flight of Seleucus, Antigonus was left master of all his provinces ; but, his son Demetrius being afterwards defeated by Ptolemy at Gaza, Seleucus began to think of recovering what he had lost. Being furnished by Ptolemy with 1000 foot and 200 horse, he set out with that slender force to attempt the recovery of Babylon. Nothing could have a more desperate appearance than this undertaking ; yet Seleucus on his arrival at Carrhae in Mesopotamia, partly by force and partly by persuasion, prevailed on the Macedonians, who garrisoned that place, to revolt from Antigonus and join him. Being thus reinforced, he entered the territories of Babylon, where new supplies were continually added to his army ; his ancient subjects flocking to him from all parts, and declaring themselves ready to stand by him with their lives and fortunes. This happened in consequence of the lenity with which they had been treated by Seleucus ; whereas Antigonus was universally detested on account of his severity. As he approached the city, those who favored Antigonus retired into the citadel, but were soon obliged to surrender; and in that fortress Seleucus found his children, friends, and domestics, whom Antigonus had kept prisoners ever since his flight into Egypt. Seleucus having thus made himself master of Babylon, in A. A. C. 312, began to prepare for encountering

Antigonus, who he knew would soon attack him with all his force. Nicanor, governor of Media under Antigonus, first advanced against him at the head of 10,000 foot and 7000 horse; but Seleucus, with only 3000 foot and 400 horse, having drawn him into an ambush, cut off almost the whole of his army, and the surviving soldiers willingly enlisted under him. The consequence of this victory was the submission of all Media and Susiana ; which alarming Antigonus, he sent his son Demetrius with an army of 5000 Macedonian foot, 10,000 mercenaries, and 4000 horse. Seleucus was then in Media; and Patrocles, whom he had left to take care of Babylon, finding his force inadequate to that purpose, compelled the inhabitants to leave the o.Uy and disperse themselves in the adjacent countries, while he himself, with what troops he had, retired into two forts, which he thought could easily be defended. When, therefore, “Demetrius entered Babylon, he was surprised to find it deserted, upon which he instantly attacked the forts. One was quickly reduced ; but, as the other held out till the expiration of the time which had been allowed him by his father, he left 5000 foot and iOOO horse under Archelaus to carry on the siege. With the rest he marched away, suffering his soldiers to live at discretion as he went along; which so provoked the Babylonians that they were ever after attached to Seleucus as if he had been their natural prince. On the return of Seleucus to Babylon, he easily drove out the troops left by Antigonus, recovered the castle which he had garrisoned, and settled his authority on such a firm foundation that it could never afterwards be moved. Having then marched again into Media, he defeated and killed with his own hand Nicanor, whom Antigonus had sent against him ; after which, having settled the affairs in Media, he reduced all Persia, Bactria, and Hyrcania, subjecting to his new kingdom these and all the other provinces on this side the Indus which had been conquered. Seleucus, being now master of .all the countries which lie between the Euphrates and the Indus, took the title of king of Babylon and Media. But not satisfied with these possessions, ample as they were, he crossed the Indus, to conquer those regions which had submitted to Alexander beyond that river. But, luring the time that the generals of Alexander had been making war upon his family and upon one another, Sandrocottus, a native of India, had driven out the Macedonians and made himself master of the whole country. See SANDRO-COTTUS. He opposed Seleucus with an army of 600,000 men, and a prodigious number of elephants ; which intimidated the Macedonian so’ much that he offered to leave Sandrocottus in quiet possession of his dominions, provided he would furnish him with 500 elephants. To this Sandrocottus readily assented; upon which Seleucus marched back into the west against Antigonus, and, in conjunction

with Lysimachus and Ptolemy, engaged and totally defeated and killed himatlpsus. See ANTIGONUS I. After this Seleucus marched into Upper Syria, which he reduced entirely, and built the city of Antioch on the Orontes. In the sume country he built several other cities; one of which he called Seleucia, from his own name ; another Apainea,. from his wife Apama, the daughter of one Arta-bazus a Persian ; and a third Laodicea, from his mother Laodice. He first entered into an alliance with Demetrius, and married Stratonice his daughter ; but soon after assisted Lysimachus and Ptolemy to deprive him of the best part of his dominions. • Thus, Demetrius being reduced so low that he could give him no farther jealousy, Seleucus built another city, called likewise Seleucia, seated where Bagdad now stands. Besides these, he built many others ; sixteen of which he called Antioch, from his brother or son Antiochus ; nine Seleucia ; three Apainea ; one Stratonicea; and six Laodicea, from his relations

‘above-mentioned. In 284 Seleucus entered into a war with Lysimachus, with whom lie had hitherto lived in amity. Out of thirty-six general officers, left by Alexander the Great, they two only survived, and both were upwards of seventy years old ; yet both were filled with the ambition and animosity of young men. The two armies met at a place called Curopidion in Phrygia, where an obstinate engagement took place. Victory was long doubtful ; but at last Lysimachus was run through with a spear, and died on the spot ; on which his troops fled, and left Seleucus master of all their baggage. This victory added to the possessions of Seleucus all those provinces which had formerly been subject to Lysimachus. He exulted much in his good fortune ; boasting that he was now the last of Alexander’s captains, and by this victory became, as he styled it, the conqueror of conquerors ; whence he is generally called Nicator, or the conqueror. His triumph, however, was but short lived ; for seven months after, as he was marching towards Macedcn to take possession of that kingdom, he was treacherously murdered by Ptolemy Ceraunus, on whom he had conferred innumerable favors. Phile-taerus, prince of Pergamus, purchased his body at a great price from Ptolemy, and sent

it to his son Antiochus ; who, with extraordinary pomp, burned it iu Seleucia on the sea-coast, erecting on the place a magnificent chapel, called from his surname Nicatorium.

Seleucus was succeeded by his son Antiochus Soter, who reigned nineteen years. He resigned to Antigonus Gonatas all pretensions to the crown of Macedon ; and, having engaged in a war with Eumenes king of Pergamus, he was defeated by him, and obliged to yield up part of his dominions. He died in 261 B. C.

Antiochus I. was succeeded by his son Antiochus II., blasphemously surnamed Theos, or the God, who having engaged in a war with Ptolemy Philadelphus, king of Egypt, the Parthians and Bactrians took an opportunity to re-volt, and could never afterwards be reduced. In 246 B. C. the God was poisoned by his wife Laodice, whom he had divorced for Berenice daughter to Ptolemy, with whom he made peace on the revolt of the Bactrians. On the death of Ptolemy, Antiochus had divorced Berenice, and took back Laodice ; who, to secure herself against the effects of his fickle disposition, poisoned him, and raised to the throne her own son, named Seleucus Callinicus.

Laodice, not thinking herself safe as long as Berenice lived, began immediately to concert measures for putting both her and her son to death. Berenice attempted to save herself by retiring to Daphne, where she shut herself up in an asylum built by Seleucus Nicator. There she was closely besieged by the sons of Seleucus ; of which the cities of Asia having intelligence, formed a confederacy in her favor. Her brother the king of Egypt also hastened to her relief with a considerable army ; but, before either of these could come to her assistance, both she and her son were barbarously murdered, with all the Egyptians who attended them. Ptolemy, on hearing the melancholy news of his sister's death, determined to take the most severe vengeance on

her murderers. Joining his forces to those of the Asiatics, he carried every thing before him. Having first killed the cruel Laodice, he made himselif master of all Syria and Cilicia; then, passing the Euphrates, he subdued all the country as far as Babylon and the Tigris ; and had not the progress of his arms been interrupted by a sedition, which obliged him to return to Egypt, it is probable that he would have subdued the whole Syrian empire. As soon as he was returned, Seleucus attempted to revenge himself; but his fleet being destroyed by a violent stormr and his army defeated by Ptolemy, he concluded a truce for ten years.

During all this time Arsaces, the prince of Parthia, had established himself so firmly on the throne, that it was in vain to think of dispossessing him. However, as soon as his other affairs would permit, Seleucus undertook an expedition against Arsaces, by whom he was utterly defeated, taken prisoner, and carried into Parthia, where he died four years after. He was succeeded by his eldest son Seleucus JIL, surnamed Callinicus, or the Thunderer, a weak prince, and was poisoned by two of his officers, when he had reigned one year.

Antiochus, surnamed the Great, brother of Seleucus III., ascended the throne in 225 B. C. In the beginning of his reign two of his generals, Alexander and Molo, rebelled against him. The former had been appointed governor of Persia, and the latter of Media ; but they, despising the king's youth, refused to obey. The occasion of this revolt is said to have been their dread of the cruelty of Hermias, the king's prime minister; and as they hoped to draw into their schemes Achaeus, governor of Asia Minor, they doubted not of success. In this, however, they failed. Epigenes, the commander of the troops about the king's person, advised him to march without delay against the rebels ; but as Hermias reproached him with treachery, and a design to betray him into the hands of his enemies, Antiochus sent two of his generals into the east, while he himself undertook an expedition against Ptolemy Philadelphus, to recover Ccelesyrra. In this attempt, however, he was disappointed ; and the generals whom he had sent into the east were totally defeated, and their troops cut off; upon which he determined to lay aside his Syrian enterprise, and march in person against the rebels. This was again opposed by Hermias ; but, as he found it impossible to alter the king's mind, the treacherous minister found means to get Epigenes, the author of this project, executed, under pretence of holding a correspondence with Molo, one of the rebel chiefs. Antiochus in the mean time pursued his march against the rebels, whom he defeated in a pitched battle ; upon which their chiefs killed themselves. On his return he received the submission of the Atropatii, a barbarous people in Media , and put to death his prime minister Hermias, whose treachery he at last discovered. During his life, however, the traitor, by accusing Achaeus. of treason, had obliged him to revolt in his own defence; so that the king had still two important wars on his hands, *viz.* that with Ptolemy, king of Egypt, and the other against Achaeus. After some deliberation he resolved to march first

against the king of Egypt ; and was at first very successful, reducing many cities in Coelesyria and Palestine, and defeating the Egyptians in a pitched battle; but in 217 B.C., being worsted in the battle of Raphia, he was obliged to abandon all his conquests; of which Ptolemy immediately took possession, and Antiochus was obliged to cede them to him, that he might pur-sue war against Achaeus. Antiochus, having made vast preparations for his expedition, soon reduced Achaeus to such distress that he was obliged to shut himself up in the city of Sardis, which he defended for some time with great bravery ; till at last, being betrayed by two Cretans, he was delivered up to the king, and by his order put to death. Antiochus then undertook an expedition against the Parthians, whom he obliged to conclude a peace on very advantageous terms. ” He then turned his arms against the king of Bactria, whom he also compelled to agree to his terms ; one of which was, that he should give him up all his elephants. For the confirmation of the treaty, the king of Bactria sent his son to Antiochus ; who, being taken with his majestic mien and agreeable conversation, gave him one of his daughters in marriage. He then crossed Mount Caucasus, and entered India; where, having renewed his alliance with Sophagasenus, the king of that country, he received a number of elephants, which increased his stock to 150. See INDIA. From India he marched into Arachosia, Drangiana, and Carmania, establishing order and discipline in all those countries ; then, passing through Persia, Babylonia, and Mesopotamia, he returned to Antioch, after an absence of seven years.

In the year 204 B. C. Antiochus made an easy conquest of Judea; but treated the Jews with great kindness and humanity. In the same year he entered into a league with Philip V. of Macedon, on purpose to deprive Ptolemy Epiphanes, the infant king of Egypt, of all his dominions. The Egyptians, however, put the young king under the tuition of the Romans ; who immediately required the confederate princes to desist from any enterprise against the king of Egypt, under the penalty of incurring the displeasure of the republic. After delivering this message, M. ˆEtnilius Lepidus. one of the ambassadors, repaired to Egypt, where he took upon himself the office of regent and guardian to the young king. Having regulated affairs there in the best manner he could, he returned to Rome, after having appointed one Aristomenes, an Acarnanian, to be chief minister to the king.

Aristomenes, being a man of prudence and fidelity, acquitted himself very well in his new station. Having taken care to recruit his army as well as he could, he sent one Scopas, a man of great authority among the ./Etolians, into that country, to raise auxiliaries. Scopas soon raised an army of 6000 ./Etolians, at that time reputed the best soldiers in the world; arid, having joined the Egyptian army, reduced all Judea, put a garrison into the castle at Jerusalem, and on the approach of winter returned to Alexandria, loaded with booty. These exploits, owever, were performed when Antiochus was

absent in Asia Minor ; and no sooner was he returned than the face of affairs was changed. Scopas was defeated in a pitched battle, where one half of his men were destroyed. He himself escaped to Sidon, where he shut himself up with 10,000 of his soldiers; but, Antiochus having invested the place, Scopas was reduced to the necessity of surrendering at discretion. The king pursued his conquests ; recovered all Palestine and Ccelesyria; after which he invaded Asia Minor, in hopes of reducing it also, and restoring the Syrian empire to the same extent it had in (he time of Seleucus Nicator. The free cities in Asia Minor immediately had recourse to the Romans, who sent an embassy to Antiochus on the occasion ; but, as both parties treated each other haughtily, no satisfaction was given, but every thing tended to an open rupture. While matters were in this situation, Hannibal the Great, being obliged to leave his own country, fled to Antiochus ; from whom he met with a gracious reception. As Hannibal had, while a child, sworn perpetual enmity against the Ro-mans, he used all his eloquence to persuade Antiochus to make war with them ; and, as the many victories which he had gained over them left no room to doubt of his capacity, Antiochus doubted nothing of being able, by his assistance, to conquer that haughty people. Several embassies passed between the two nations; but chiefly with a design on the part of Antiochus to gain time. Hannibal endeavoured to draw his countrymen into the confederacy against Rome, but without effect. Antiochus, having strengthened himself by several alliances, at last resolved to begin the war in earnest. To consult on the measures proper to be taken, he called a council of war; but excluded from it the only man whoˆe advice I e ought to have followed; *viz.* Hannibal. The reason of this was, that he had become jealous of him from the too great intimacy, as he thought, which he had kept with the Roman ambassadors. However, in this council, it was agreed that the war should be immediately commenced. The king himself was prevailed upon by the /Etolians to pass over into Greece, and entirely to reject the advice which Hannibal had formerly given, of sending him with

an army into Italy. Here he was made generalissimo of the Greek forces ; but made none of those efforts that had formely obtained him the title of Great. Indeed it now plainly appeared, not only that he was incapable of carrying on war against such enemies as the Romans, but even of accepting proper advice when it was given him. In another council in which Hannibal was admitted, that commander advised the king, before he undertook any thing else, to use his utmost endeavours to gain over Philip V. of Macedon ; which, he said, was a step so important, that if it could be gained they might, without much ado, become masters of all Greece. But, if Philip could not be prevailed on to make war on the Romans, he was of opinion that the kins should send his son Seleucus into Macedon at the head of an army, and thus prevent Philip from giving the Romans any assistance. But he still maintained that the only way to defeat the Romans was to send an army into Italy. This

advice was again rejected ; and the king imprudently became the aggressor by falling on a body of 500 Romans before war had been declared. He also made Philip his enemy by entertaining the regent of Athamania, who was a pretender to the crown of Macedon. To complete all, he himself fell in love, though above fifty years of age, with a beautiful young woman of Chalcis, whom he married ; and became so great a slave to this passion that he entirely neglected his affairs ; the army gave themselves up to dissipation and debauchery, and every trace of military discipline vanished. In 191 B. C. Antiochus was roused from his lethargy by a declaration of war against him at Rome, and set out for/Etolia. His army at this time amounted to no more than 10,000 foot, and 500 horse. He had been made to believe that he would receive a vast reinforcement in ˆEtolia; but all the troops he could raise there amounted to only 4000 men. With this force, so exceedingly inadequate to the purpose, he was obliged to oppose the Roman army, who were advancing in conjunction with the Macedonians, and had already made surprising progress. Antiochus seized the straits of Thermopylae; but was driven from them by the Romans, the king himself being the first that fled. Almost his whole

army was destroyed in the battle or in the pursuit, and Antiochus reiurned with disgrace into Asia.

Soon after his return Antiochus equipped a fleet of 200 sail; on which lie immediately embarked for the Thracian Chersonesus, now Crim Tartary, where he fortified the cities of Lysi-inachia, Sestus, and Abydos, with others in that neighbourhood, to prevent the Romans from crossing the Hellespont. In the mean time Polyxenidas, the Syrian admiral, sent intelligence to the king that the Roman fleet had appeared off Delos; upon which he desired him to seek them out and engage them at all events. He did so, and was defeated with the loss of forty ships taken or sunk in the engagement. This was soon after revenged by the destruction of the Rhodian fleet by the artifice of Polyxenidas; but in the end the king's affairs went every where to wreck. Having laid siege to the city of Pergamus, he was obliged to raise it with loss ; the Phoenician fleet commanded by Hannibal was defeated by the Rhodians ; and soon after the Syrian fleet under Polyxenidas was utterly defeated by the Romans. Antiochus was so much disheartened, by these repeated defeats, that he appeared like one infatuated. Instead of fortifying more strongly those cities which lay on the frontiers of his kingdom, he entirely deserted them ; and thus Lysimachia and Abydos, the two keys to Asia, fell into the hands of the Romans without the least resistance. The arrival of the Romans in Asia, struck Antiochus with such terror, that he instantly sued for peace. The terms he offered were indeed very advantageous, but by no means agreeable to the expectations of the Romans. They therefore gave him this final answer: — 1. That, since he had drawn upon himself the war, he should defray the whole expense of it. 2. That he should re-tore liberty in general to all the Greek cities in Asia : and, 3. That, to prevent future hosti-Uties. he should relinquish all Asia on this side

Mount Taurus. These terms, however, still appeared to him so intolerable that he resolved to continue the war ; and determined also to take the most imprudent method of carrying it on, namely, by hazarding all on the event of a general engagement. The king encamped near Magnesia, and strongly fortified his camp. The Romans insulted him in his trenches, and proposed to attack his fortifications, if he continued to decline an engagement. At last the king, thinking it would be shameful for him longer to refuse an engagement, fought a battle, which issued in his entire defeat. No fewer than 50,000 foot, and 4000 horse were killed; 1500 were taken prisoners, and fifteen elephants. In the consular army there were but

300 foot killed, and twenty-five horse.

Antiochus retired to Sardis with as many of his forces that had escaped the slaughter as he could draw together. From Sardis he soon marched to rejoin his son Seleucus, who had fled to Apamea. As for the consul, he took advantage of the king's defeat and flight, making himself master of all the neighbouring countries. Deputies hastened to him from all parts; the cities of Thyatira, Magnesia, Trallis, Magnesia in Caria, all Lydia, and Ephesus itself, though highly favored by Antiochus, declared for the Romans. Polyxenidas, upon the news of the king's defeat, left the port of Ephesus, and sailed to Patara, where he landed with a very small guard, and returned by land into Syria. The consul took the road to Sardis, which opened its gates to him. Antiochus, finding his affairs in a bad situation both by sea and land, hastened to conclude a peace, which he obtained on the following terms : — He was to confine his dominions within Mount Taurus; to pay 15,000 Euboic talents for the expenses of the war ; to deliver up Hannibal and some other foreigners who were obnoxious to the Romans. For the fulfilment of these articles he gave seventy hostages, one of whom was his youngest son Antiochus. The peace being ratified by the Sarati, the Greek cities were by the Romans restored to their liberty, the provinces of Caria and Lydia given to the Rhodians, and all the rest that had belonged to Antiochus on that side of Mount Taurus bestowed upon Eumenes.

Antiochus did not long survive his misfortune at Magnesia. Some tell us, that, being greatly puzzled how to raise the sum he had engaged to pay to the Romans, he seized on the riches which had for many ages been deposited in a temple of Jupiter Belus in the province of Elymais ; upon which the populace rose in arms, and slew him and all his attendants. Others inform us that he was killed at an entertainment by one of his guests. Antiochus the Great died in 187, and with him the glory of the Syrian empire.

Antiochus the Great was succeeded by his son Seleucus IV., surnamed Philopat-ir, A. A. C. 187, who reigned only twelve years, dying in 175, and leaving the Syrian throne to his son, or his brother according to Alstidius, Antiochus IV., surnamed Epiphanes, the most barbarous and bloody tyrant that ever reigned in Syria. The Romans now gave laws to the kings of Syria; insomuch that, when Antiochus Epiphanes hesitated at obeying the commands of the

senate,ˆ one of the ambassadors drew a circle round him with a rod on the floor, and told him he should not go out of that spot before he had told him what he was to do. But the most horrible transactions of this prince are his wars with the Jews, and persecutions of them ; of which a full account is given under the article JEWS.

After the miserable death of the monster Epiphanes, at Tabse, the Syrian throne fell a prey to a series of tyrants, impostors, and usurpers, of whom it is sufficient to give the following brief chronological list : Antiochus V., surnamed Eu-pator, succeeded his wicked father in 164 ; but reigned only two years. He was succeeded in 1 62 by Demetrius I., surnamed Soter, a brother of Antiochus Epiphanes, who had only reigned eleven years, when, in 151, the crown was claimed by Alexander Balas an impostor, who pretended to be a son of Epiphanes ; and being supported in this false claim by Ptolemy Philo-meter, king of Egypt, by the kings of Pergamus and Cappadocia, and by the Romans, defeated and killed Demetrius, and reigned five years, some say six ; but was at last killed in Arabia, A. A. C. 146. See ALEXANDER BALAS. Demetrius II., surnamed Nicator, the lawful heir, being the son of Demetrius I., then succeeded ; but he being taken prisoner two years after by the Parthians, in 144, the throne was seized by Antiochus VI., surnamed Entheus, who reigned two years along with a usurper named Diodo-tus Tryphon, who afterwards assumed the sole power for other three years, till A. A. C. 139, when he was expelled by Antiochus VII., surnamed Zidetes, and also Pius and Soter, the son of Demetrius I., and brother of Demetrius II., who reigned ten years. But Demetrius II., being now liberated by the Parthians, was restored to his kingdom ; but had reigned only three years, when Alexander Zebina, a new impostor, who pretended to be the son of the impostor Alexander Balas, being assisted and supported by Ptolemy Physcon, the tyrant of Egypt, expelled Demetrius a second time in 126, and reigned three years. In 123, however, the usurper Ze-bina was justly dethroned and killed by Antiochus VIII., surnamed Grypus, the son of Demetrius II. See ALEXANDER ZEBINA. Grypus reigned twenty-nine years in all ; but, in his ninth year, his brother Antiochus Cyzicenus rebelled against him, and in his eleventh, A. A. C. 112, erected Ccelesyria into a separate kingdom, wherein he reigned for eighteen years, and hence is ranked as Antiochus IX. by chronologists. On the death of these two brothers,

A. A. C. 94 and 93, Seleucus V., a third son of Antiochus VIII., claimed the crown of Syria, but was opposed by four other pretenders, *viz.* Antonius Eusebes, Philip, Demetrius III. surnamed Eucerus, and Antioclms X. surnamed Pius, all chiming as descendants of the royal house of the Seleucidae. These claimants involved the country in a civil war for six years; when Philip, overcoming them all, reigned two years alone. But Aretas seized Ccelesyria in 85; and, two years thereafter, Tigranes king of Armenia, taking advantage of the dissensions of the Seleucidae, and being invited by a party of the Syrians themselves, reduced the whole country in 83,-t.nd governed it for

eighteen years with more tranquillity than it had enjoyed for a long period. Antiochus XI.,hovvever, surnamed Asiaticus, or the XIII. as he is styled by some (for there were other two usurpers of the name), the son of Cyzicenus, who had been skulking in Cilicia, claimed the crown, in A.A.C. 69, and was supported against Tigrane.s by Lu-cullus the Roman general, who defeated Tigranes, and declared Antiochus king of Syria. But his reign was short, only four years : for Tigranes, attempting to recover the kingdom, was defeated by Pompey the Great, who, disregarding Antiochus's claim, reduced the whole kingdom to a Roman province, A. U. C. 691, and A.A.C.

65.

From being a province of the Roman republic, Syria became, on the division of the Roman empire, subject to the emperors of the East; but in A. D. 634 it was invaded by the Saracens, who completed the conquest of it in 640, when it was confirmed to them by the treaty made with Constantine IV. SeeCoNSTANTiNOi'u:, and SARACENS.

In A. D. 970 Syria was conquered by the Fatemite Khalifs, soon after their conquest of Egypt. See EGYPT. But the emirs of Damascus revolted in 1067; and those of Aleppo in 1068. In 1096 the crusades from Europe commenced ; and the Christians conquered that part of Syria called the Holy Land, which they kept possession of for above 100 years. See CRUSADES. In 1166 Nureddin, or Nuroddin, emir of Damascus, defeated the Egyptians, and conquered the greatest part of Syria; and his nephew, the famous Saladin, soon after, on the death of the khalif Aded, seized the government of Egypt, put an end to the power of the Fatemites, and erected a new dynasty. See EGYPT. But in

1259 all Syria was overrun and conquered by the Tartars under Ilulaku.

The Tartars did not long retain possession of Syria. It was soon recovered by the sultans of Egypt; who also, ir 1291, totally expelled the Christian crusaders. Syria was again overrun and ravaged by Tamerlane in 1400 ; but he did not attempt to retain it. After this period it underwent the revolutions of Egypt, till both were conquered by the Turks under Selim I. in 1517. See EGYPT.

Ever since the above conquest, by Selim, this country continued in the undisturbed possession of the Turks, till the invasion of Egypt by the French in 1798. Soon after that event Buonaparte overran Syria, and took Gaza and Jaffa, or Joppa, &c.; but found a fatal btop put to his victorious career by British valor, at Acre, or St. Jean D'Acre, the ancient Ptolemais ; where the brave Sir Sidney Smith gained immortal fame by the defence of that small town.

The present state of Syria differs little from that of the rest of Asiatic Turkey. Its open plains, separated by no denned boundary from Arabia, Persia, and Asia Minor, are variously occupied by wandering tribes of Turks and Greeks, who form, as elsewhere, the basis of the population. The only tribes which can be considered as appropriate to Syria arc the ti'nant> of the heights of Lebanon, the mo,t remarkable of which are the Driues and Marunites.

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SYRINGA, the lilac, or pipe tree, in botany, i genus of plants belonging to the class of dian-dna, and order of monogynia ; and in the natural system ranking under the forty-fourth order, sepiarias. The corolla is quadrifid, and the capsule is bilocular. There are three species, *viz.* 1. S. Persica, the Persian lilac, is a native of Persia. It has lanceolate leaves, and was cultivated in Britain in the middle of the seventeenth century, about 1658, or earlier. 2. S. suspensa, the hanging lilac, is a native of Japan. 3. S. vulgaris, the common lilac, is originally a native of Persia. It is distinguished by oval heart-shaped leaves, and was cultivated in Britain about 1597 by Mr. John Gerard.

SYR'INGE, n. s. & v. a. Gr. yvpiyZ. A pipe through which any liquor is squirted : to spout by a syringe.

The heart seems not designed to be the fountain or conservatory of the vital flame, but as a machine to receive the blood from the veins, and force it out by the arteries through the whole body, as a syringe doth any liquor, though not by the same artifice.

Ray,

A flux of blood from the nose, mouth, and eye, was stopt by the syringing up of oxycrate.

Wiseman's Surgery.

The SYRINGE is a well-known instrument, serving to imbibe or suck in a quantity of fluid, and to squirt or expel the same with violence. It is formed from the Greek <rr>piy?, or the Latin sy-rinx, a pipe. A syringe is only a single pump, and the water ascends in it on the same principle as in the common sucking pump. See HY—

DRf STATICS.

SYRINGOIDES LAPIS, a fossil stone.

SYRINX (Gr. ffvpty?, a pipe), in mythological painting and sculpture, a nymph of Arcadia, daughter of the river Ladon. Pan became enamoured of her and attempted to offer her violence ; but Syrinx escaped, and at her own request was changed by the goasintoareed, called syrinx by the Greeks. The god made himself a pipe with the

reeds into which his favorite nymph had been changed, and upon this pipe he is often introduced playing, in pictures. The syrinx, or Pan's pipe, is frequently found figured upon ancient monuments. It is composed of seven tubes of unequal size. Ordinarily it is placed in the hands of fauns and satyrs (the followers of Pan) ; but is sometimes also the accompaniment of rustics. Upon the sarcopha-gus of Tyrrania, preserved in the Museum at Aries, and of which a description and engraving are included in the second volume of Millin's Monumens Antiques Inedits (plate 37) is de-picted a syrinx in a case or box. It is occasionally found on the earlier Christ an monuments as an emblem of our holy faith ; the divine founder of Christianity having been regarded as the shepherd of his spiritual flock, and the syrinx being the common musical instrument of the husbandman or shepherd.

SYRMA (Gr. ovufia, the train of a gown, from <rvpw, to drag along), in archaiology, a very long tunic descending even to the heels, but which nevertheless had not an amplitude greater than the thickness of the body.

SYRNA, the wife of Podalirius, the son of ˆsculapius.

SYRNA, an ancient town of Cariii, built by Podalirius, where he was afterwards worshipped SYRO-GRECIA-N (from Syria and Grecian). an epithet applied to the empire of the Seleucidae in Syria, being founded by the Greeks in Syria. See SYRIA.

SYRO-GRECIANS, the people of Syria, under the Seleucidae, being a mixture of Greeks and Syrians.

SYRO-MACEDONIAN (from Syria and Macedon), a word synonymous with Syro-Graecian. SYRO-MACEDONIAN ERA. See SELEUCIDJE. SYRO-PHCENICIA, a country lying between Syria and Phoenicia, inhabited, according to Bochart, by natives of both nations mixed

SYROS, in ancient geography, an island in the jEgean Sea, one of the Cyclades ; about twenty miles in circumference, and very fertile in corn, wine, and fruits. The climate is mild, and the inhabitants long-lived. Horn. Od. xv. 504. Strabo 10.

SYROS, a town of Caria. Paus. iii. c. 26. SYRTES, in ancient geography, two large sand-banks in the Mediterranean, on the coast of Africa ; the one near Leptis, the other near Carthage. As they often shifted, and were sometimes very high, sometimes very low under water, they were very dangerous, and often fatal to ships. Mela i. c. 7.

ii. c. 7.

SYRTICA REGIO, the SYRTIC REGION, a country of Africa, one of the three great divisions of ancient Libya. It comprehended the coast of Barbary between Tripoli and Barca ; and was so named from

SYRTIS, an island and a spacious gulf of Africa, on the coast of Barbary, between the above limits; now called Sidra. The quicksands in the gulf shifted, whence the word was used as an appellative.

SYR'TIS, n. s. Lat. si/rtis. A quicksand ; a bog.

A boggy syrtis, neither sea, nor good dry land.

Milton.

SYRUS, in fabulous history, the son of Apollo by the nymph Sinope. See SINOPE. He is fabled to have given his name to Syria. Plut. in Luc.

SYRUS (Publius), a Syrian mimic poet, who flourished about forty-four years B. C. He was originally a slave sold to a Roman patrician called Domitius, who brought him up with great attention, and gave him his freedom when of age. He gained the esteem of the most powerful men at Rome, and reckoned J. Csesar among his patrons. He soon eclipsed the poet Laberius, whose burlesque compositions were in general esteem. There remains of Syrus a collection of moral sentences, written in iambics, and placed in alphabetical order.

SYS1GAMBIS, or SISYGAMBIS, the mother of Darius III. king of Persia. She was so very kindly treated by Alexander the Great, that, though she had been able to survive the death of her son, and the overthrow of his empire, she could not survive that of Alexander, but killed herself when he died. See MACEDON.

SYSSARCOSIS, in anatomy (from aw, with, and trapicoc, flesh), a kind of articulation by the intervention of flesh. Ash.

SYSTEM, n. s. j Fr. systems ; Gr.

SYSTEMATICAL, adj. >en;<?jj/*a. Any com—

SYSTEMAT'ICALLY, adv.) plexure or combination or things together; a scheme which unites many things in order or mutual dependence : the adjective and adverb corresponding.

I treat of the usefulness of writing books of essay, in comparison of that of writing systematically.

Boyle.

He presently bought a system of divinity, with design to apply himself straightway to that study.

• Fell.

It will be necessary, in a discourse about the formation of the world, to give you a brief account of some of the most principal and systematical phenomena that occur in it. Bentley.

The best way to learn any science is to begin with a regular system, or a short and plain scheme of that science well drawn up into a narrow compass.

Walts.

Now we deal much in essays, and unreasonably despise tyttematical learning ; whereas our fathers had a just value for regularity and systems. Id.

Aristotle brings morality into system, by treating of happiness under heads, and ranges it in classes according to its different objects, distinguishing virtues into their several kinds, whicli had not been handled systematically before. Baker.

SYSTEM, in general (from ffwTtjjua, composition,) denotes a chain of principles and conclusions, or the whole of any doctrine, the several parts whereof are bound together, and depend on each other.

SYSTEM, in music, an assemblage of the rules for harmony, deduced from some common principle by which they are reunited ; by which their connexion one with another is formed ; whence, as from their genuine source, they natively flow ; and to which, if vre would account for them, we must have recourse.

SYS'TOLE, n s. Fr. systole; Gr. wˆoXy. In anatomy. The contraction of the heart.

The systole resembles the forcible bending of a spring, and the diastole its flying out again to its natural site. Ray.

SYSTOLE, in anatomy, is the opposite state to the diastole, or

dilatation of the heart. See ANATOMY.

SYSTYLE, in architecture, that manner of placing columns where the space between the two shafts consists of two diameters, or four modules. See ARCHITECTURE.

SYTHAS, a river of Peloponnesus, running through Sicyonia, into the bay of Corinth. Pans. ii. 7.

SYXHANDEMAN (Sax.), a man of the mill-die rank, under the Anglo-Saxon government : ,i man worth 600 shillings. Asft.

SYZYGIA, or SYZYGY (from ervgvyia, conjunction), in astronomy, a term equally used lor the conjuction and opposition of a planet with the sun. The word is formed from the Gietk <n> £vyia, which properly signifies conjunctio. On the phenomena and circumstances of the syzy-gies a great part of the lunar theory depends. See ASTRONOMY.

SZEGED1N, a large town of East Hungary, in the county of Csongrad, opposite to the confluence of the rivers Theyss and Maros. It is surrounded by a mound and moat, and has a brick fort erected by the Turks in the sixteenth century. This is one of the principal towns of Hungary, containing manufactures of woollens, leather, and toys, on a small scale, but all ot' importance in a country where manufactures are in their infancy. Its commercial intercourse is considerable. The inhabitants possess a num-ber of barges, some of the size of 200 or 250 tons, with which they navigate not only tin.- Maros and the Theyss, but the Danube : then-exports consisting chiefly of the products of the adjacent country, *viz.* corn, cattle, wool, tobacco, and timber. Cotton they import from Turkey, and make the object of a transit trade : salt from Transylvania. The tobacco raised in this neighbourhood is in good repute. As to religion, the Catholics and the followers of the Greek churcli predominate. Here is a monastery of Minorites; a school taught by the Piarist monks ; a gymnasium or classical school ; and a small philosophical seminary. Other public buildings are several hospitals, a work-house, and theatre. This town fell, in the beginning of the sixteenth century, into the hands of the Turks, and continued in their possession above a century and a half, being retaken by the Austrians only in 1686, some time after the route of the Turkish army by Sobieski. Population 26,000. 100 miles S. S. E. of Pest, and thirty north of Csongrad.

SZOLNOK, Belso or Inner, a palatinate of Transylvania, bordering on Hungary on the north, and the district of Nosnerland on the east, having a territorial extent of 1335 square miles, with about 110,000 inhabitants.

SZOLNOK, Koscep or Middle, a palatinate of Transylvania, bounded by Hungary entirely on the north, and partly on the west. 835 square miles, and its population .50,000.

T.

T is usfd, 1. as a letter ; 2. as an abbreviation ; 3. as a word ; and 4. it was anciently used as a numeral. I. As a letter, T, or t, is the nineteenth of our alphabet, and the fifteenth consonant. The sound is formed by a strong expulsion of the breath through the mouth, upon a sudden drawing back of the tongue from the fore part of the palate, with the lips at the same time open. The proper sound of t is expressed in most words

beginning or ending with that letter, as in -ake, tell, hot, put. ‘1 1 before a vowel 1ms tne sound of si, or rather of*/iJ, as in creation, except when s precedes, as in question; and in derivatives from words ending in ty, as mighty, mightier. Anciently this syllable ti was considered as di tirict from the vowel that followed it, and such words as na-ti-on, sta-ti-on, &c., formed tr.syl-lub’.es in poetry, as appears from the version of

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tlie Psaims stiil used in our churches. But now, in modern improved English, ti is not considered as a distinct syllable, but only as softening the t to the sound of sh, as if the words -ft-ere spelt na-shon, sta-shon, See. Th has two sounds ; the one hard, as thou, father ; the other soft, as thing, think. The sound is hard in these words, the, then, than, there, with their derivatives and compounds ; and in the words that, this, thus, thy, they ; and in all words in which th comes between two vowels, as whether, rather ; and between r and a vowel, as burthen : but it is soft in thane, thank, thatch, thaw, theatre, theft, thence, theocracy, and all other derivatives of 6E02, theorem, theory, thesis, and all other words of Greek derivation, thick, thief, thigh, thin, third, thirst, thistle, though, thong, thorn, thorough, thought, thousand, thrall, thrash, thread, threat, three, thrice, thrift, thrive, throat, throne, throng, through, throw, thrumb, thrush, thrust, thump, thunder, thursday, thwack, thwart, &c., and all their compounds and derivatives. But in the word thither, and its compounds, th sounds soft in the first syllable and hard in the second ; and in thyme the h is not sounded. II. As an abbreviation T was used among the Roman writers for Titus, Titius, &c. ; Tab. for Tabularius ; Tab. P. H. C. Tabularius Provinciae His-paniae Citerioris ; Tar. Tarquinius ; Ti. Tiberius ; Ti. F. Tiberii filius ; Ti. L. Tiberii libertus ; Ti. N. Tiberii Nepos ; T. J. A. V. P. V. D. tempore judicem arbitrumve postulat ut det ; T. M. P. ter-minum posuit; T. M.D.D. terninum dedicavit; Tr. trans, tribunus ; Tr. M. or Mil. tribunus mili-tum; TR. PL. DES. tribunus plebis designatus ; TR. jER. tribunus aerarii ; TRV. CAP. triumviri capitales ; T. P. or TRIE. POT. tribunicia potes-tate ; Tul. H. Tullus Hostilius. In music T stands for tutti, all or altogether. III. As a word it is used without a vowel, both in surgery and mechanics. IV. As a numeral T was used among the ancients for one hundred and sixty ; and with a dash at top, thus T, it signified one hundred and sixty thousand.

T, adj., is used as a distinction for a peculiar kind of bandage in surgery.

T, n. s. T SQUARE, or TEE SQUARE, in drawing and mechanics, an instrument so named from its resemblance to a capital T.

TAANATH-SHILOH, a town of Israel, in Ephraim, ten miles east of Shechem. It existed under the name of Thenath as late as A. D. 400.

TAAS, or TAAES, a considerable city of Ye-men, in Arabia, between Mocha and Sana, forty-eight miles from Mocha. It is surrounded by mountains, which are said to be very productive of plants. They are in the possession of several sheiks, who are independent of, and even hostile to the Imam, and Niebuhr was not allowed to make any excursions among them. The city is described by Sir Henry Middleton as about half the size of Sana.

TAAUT, TAAUTES, TA AUTOS, TAAUTUS, or THOTH, a Phoenician deity, the same with Hermes of Egypt, and Mercury of the Greeks and Romans. See HERMES, MERCURY, MYSTERIES, POLYTHEISM, and THOTH. But Mr. Letnpriere makes him the same with Saturn, for which he quotes Varro.

TAB, the ancient Arosis, a river of Persia which rises in the mountains of l-ars, divides that province from Khusistan, and falls into the Persian gulf near Endian. At that place it is eighty yards wide, and navigable for boats of twenty tons.

TABAGO, or TABOGA, a mountainous island in the Pacific, near the coast of Mexico, about three miles long and two broad. On the north side the high land declines with a gentle descent, and near the strand the soil is a black mould, and deep. This side of the island makes a very pleasant appearance, and seems to be a garden of fruit trees. The principal products are plantains and bananas. There was formerly a small town here near the sea, but it was ruined by privateers. Before it is a good road, about a mile from the shore, where ships may ride very safely in sixteen or eighteen fathom water. Eighteen miles south of Panama.

TABANUS, the breeze-fly, a genus of insects belonging to the order of diptera. The mouth is extended in a fleshy proboscis, terminated by tvro lips. The rostrum is furnished with two pointed palpi placed on each side of the proboscis, and parallel to it. Gmelin has enumerated thirty-eight species ; of which three only are found in Great Britain; *viz.* 1. T. bovinus, or great horse fly, has a gray head ; the ayes almost of a black brown, occupying the greatest part of it. The thorax is of a gray color ; the abdomen is yellowish, with a triangular white spot on the middle of every ring, which constitutes a longitudinal band of spots, the point of which is directed towards the thorax. The thighs are blackish, and the legs yellow. The wings are dusky, with brown veins of a deeper dye. This insect is the terror of horned cattle, horses, &c. Its mouth is armed with two sharp hooks which penetrate their

hide ; while with its proboscis, which is shaped like a sting, it sucks their blood, of which it is very greedy. The puncture of the tabanus is keen and painful. The insect is very common in damp woods and meadows, especially during the great heats, when it is most troublesome. The horned cattle are sometimes so molested by their stings that they go mad, run down precipices, tear themselves on the stumps of trees, stones, &c. 2. T. concutiens has a brown head ; eyes green and brown, with black spots ; the thorax brown with black spots ; the abdomen above, yellow with triangular brown spots ; yellow legs, and white wings with black and brown spots. The length is four lines and a half. 3. T. pluviatilis is of an ashen gray color ; its eyes are green, with brown streaks. The thorax is brown, marked with about seven longitudinal gray lines ; the wings, which are brown and ash-colored, are dotted over with small white spots, and have a black spot on the margin ; the legs are surrounded with brown and white rings alternately. This species is very common in meadows, and is about four lines in length.

TABARCA NEUVA, a small island of Spain, in the Mediterranean, on the coast of Valencia. It is almost destitute of trees and water, but is inhabited by the descendants of a colony of Spaniards, \ho were, in 177), redeemed from

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slavery in Barbary by the government, and settled here.

TABASCO, an island, or rather neck ofland, in the south-west part of the gulf of Mexico, at the bottom of the gulf of Campeachy, on which is built the town of Tabasco. It is about thirty-six miles in length, and seven or eight broad. Near it, on the continent, are great plains abounding in cattle, sheep, &c., and a wild animal call-ed the mountain cow, or tapir, which subsists on moss. It is separated from the continent by the river.

TABASCO RIVER, a river of North America, which runs into the bay of Campeachy, long. 93° 40’ W., lat. 186 15’ N.

TABASHEER, a Persian word, signifying a hard substance found in the cavities of the bam-boo or Indian reed, and highly valued as a medicine in the East Indies. From the experiments of Dr. Russel it appears that the tabasheer is the juice of the bamboo thickened and hardened. Its medical effects are mentioned in a Persian work of Mahoramed Monein Hosemy, by Mr. Williams, a surgeon in the East Indies. It is useful in bilious vomitings, the bloody flux, palpita-tions of the heart, faintings, cases of debility from heat ; also in the piles, acute burning fevers, pustules in the mouth, thrush ; and, with oxy-mel, is of great service against restlessness, melancholy, and hypochondriacal affections. The habitual internal use of it is prejudicial to the virile powers, and to the lungs. Its correctives are the gum of the pine and honey.

TAB’BY, n. s. Fr. tails ; Ital. tabi, tabino. A kind of waved silk : hence a striped appearance of any other kind.

A tabby cat sat in the chimney-corner. Addkon.

On her tabby rival’s face She deep will mark her new disgrace. Prior.

Brocades, and tobies, and gauses. Swift.

TABBYING, a passing the silk or stuff under a calendar, the rolls of which are made of iron or copper variously engraven, which, bearing unequally on the stuff, renders the surface thereof unequal, so as to reflect the rays of light differently, making the representation of waves thereon.

TAB’EFY, v. n. Lat. tube/ado. To waste ; to extenuate.

Meat eaten in greater quantity than is convenient tubefies the body. Harvey on Consumptions.

TABELLARIˆ LEGES, in Roman antiquity, laws made by suffrages delivered upon tabellae, tablets, and not viva voce. There were four of them, *viz.* the Gabinian, by Gabinius, A. U. C. 614 ; the Cassian, by Cassius, A. U. C. 616 ; the Papirian, by Papirius Carbo, A. U. C. 622 ; and the Caelian, by Caelius, A. U. C. 646.— Cic. de Legg. iii. c. 16.

TABELLIO, in the Roman law, an officer or scrivener, much the same with our notaries oublic, who are often called tabelliones.

TABERNACLE, «. s. & v. n. Fr. laber-nacle ; Lat. tabernaculum. A temporary habitation ; casual dwelling : to house; enshrine.

The word was made flesh, and tabernacled amongst us, and we beheld his glory. John i. 14.

They sudden reared Caslestial tabernacles, where they slept Fann’d with cool ‘winds. Milton’s Paradise Lost.

The greatest conqueror did not only compose his divine odes, but set them to musick : his works, though consecrated to the tabernacle, became the national entertainment, as well as the devotion of his people. Addison.

The TABERNACLE, under the Hebrew theocracy, was a kind of building in the form of a tent, set up, by command of God, for the performance of religious worship, sacrifices, &c., during the journeying of the Israelites in the wilderness ; and, after their settlement in Canaan, used for the same purpose till the building of the temple. It was divided into two parts ; the one covered, and properly called the tabernacle ; and the other open, called the court. — See Exodus xxv. — xxvii.

TABERNACLES, FEAST OF, a solemn festival of the Hebrews, observed after harvest, on the fifteenth day of the month Tisri, instituted to commemorate the goodness of God, who protected the Israelites in the wilderness, and made them dwell in booths when they came out of Egypt. On the first day of the feast they began to erect booths of the

boughs of trees, and in these they continued seven days. The booths were placed in the open air, and were not covered with cloths, nor made too close by the thickness of the boughs ; but so loose that the sun and the stars might be seen, and the rain descend through them. For further particulars see Leviticus xxiii.

TABERNJE, in Roman antiquity, were houses made of boards, shops, or warehouses. Such shops set up in conquered countries gave rise to towns; as, 1. T. Rhenanse, a town of Germany, nt the conflux of the Rhine and the Felbach ; now called Rhine-Zabern. 2. T. Riguae, a town of ancient Gaul, on the Moselle ; now called Bern Castle. 3. T. Tres. See TRES TABERNE. 4. T. Triboccorum, a town of Gaul, in the ci-devant province of Lower Alsace, now in the department of the Lower Rhine, called Saverne. See SAVERNE.

TABERN.EMONTANA, in botany, a genus of plants belonging to the class of pentandria, and order of monogynia ; and in the natural system arranged under the thirtieth order, con-tortse. There are two horizontal follicles, and the seeds are immersed in pulp. There arc eight species, all foreign plants.

TAB'ID, adj. Fr. tabide ; Lat. tabidus. Wasted by disease ; consumptive.

The tapid disposition, or the ulcer or ulcers of the lungs, which are the foundation of this disease, is very different from a diminution of the hody, and decay of strength from a mere relaxation.

Blachmore.

In tabid persons milk is the best restorative, being chyle already prepared. Arbuthnot on Aliments.

TA'ˆBLE, n. s., v. n., & v. «•") French table ; TA'BLF.BOOK, n. s. Latin tabula.

TA'BLECLOTH, Any flat or level

TA'BLEMAN, ˆsurface, for exTA'BLETALK, (hibition or

otherwise; a

TAB'LET, TAB'ULAR, (id TAII'ULATED.

picture ; synopsis ; index ; 2S

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•a. raised surface or board at which meals are par-taken : hence an entertainment ; persons sitting at table : the palm of the hand : to table is to board ; live at the table : also to note down in a table or catalogue : ‘ to turn the tables ‘ is to change the condition or fortune entirely : the compounds are of obvious meaning : tablet is a diminutive of table ; also a medicine in a square form : tabular is set down in tables ; laminated : tabulated, flat of surface.

Upon the castle hill there is a bagnio paved with fair tables of marble. Sandys.

He was the writer of them in the tables of their hearts. Hooker.

Give me some wine, fill full, I drink to the general joy of the whole table.

Shakspeare.

What might you think, If I had played the desk or table-book ? Id. Hamlet.

I never loved myself, Till now, infixed, I beheld myself Drawn in the flattering table of her eye.

Shakspeare. We may again Give to our tables meat, sleep to our nights. Id.

I could have looked on him without admiration, though the catalogue of his endowments had been tabled by his side, and I to peruse him by items.

Id. Cymbeline. Monsieur the nice, When he plays at tables, chides the dice.

Shakspeare.

Let me praise you while I have a stomach, — No, let it serve for table-talk,

Id. Merchant of Venice.

It hath been anciently in use to wear tablets of ar-senick, or

preservatives against the plague ; as they draw the venom to them from the spirits. Bacon.

In clericals the keys are lined, and in college they use to line the tablemen. Id. Natural History.

I will end with Odo holding master doctor's mule, and Anne with her tablecloth. Camden'i Remaint.

All these true notes of immortality In our heart's table we shall written find. Davies.

I have no images of ancestors Wanting an ear or nose ; no forged tables Of long descents, to boast false honors from.

Ben Jonson.

Mistress of a fairer table

Hath not history nor fable. Id.

His Jalysus or Bacchus he so esteemed, that he had rather lose all his father's images than that table.

Peacham.

We are in the world like men playing at tables , the chance is not in our power, but to play it, is ; and when it is fallen, we must manage it as we can.

Taylor.

Nature wipes clean the table-book first, and then pourtrays upon it what she pleaseth.

More against Atheism.

You will have no notion of delicacies, if you table with them ; they are all for rank and foul feeding.

Felton .

If there is nothing else to discourage us, we may safely come to the Lord's table, and expect to be kindly entertained by him when we do. Kettlewell.

If it be thus, the tables would be turned upon me ; but I should only fail in my vain attempt. Dryden.

Put into your table-book whatsoever you judge worthy. Id.

His fate makes table-talk, divulged with scorn, And lit; a jest into his grave is born. Id. Juvenal.

I prepared to pay, in verses rude, A most detested act of ingratitude : Ev'n this had been your elegy which now Is offered for your health, the table of my vow.

Dryden.

It was by the authority of Alexander, that through all Greece the

young gentlemen learned before all other things, to design upon tablets of boxen wood.

Id.

They that are honest would be arrant knaves if the tables were turned. L'Estrange.

Children at a table never asked for any thing, but contentedly took what was given them.

Locke on Education.

It might seem impertinent to have added a table to a book of so small a volume, and which seems to be itself but a table : but it may prove advantageous at once to learn the whole culture of any plant.

Evelyn's Kalendar.

Nor hath the fruit in it any core or kernel ; and differing from other apples, yet is a good table fruit.

Mortimer.

Many of the best diamonds are pointed with six angles, and some tabulated or plain, and square.

Grew's Museum.

He improves by the table-talk, and repeats in tin; kitchen what he learns in the parlour. Guardian.

This shuts them out from all table conversation and the most agreeable intercourses.

Addison's Spectator.

Among the Romans, the judge or praetor granted administration, not only according to the tables of the testament, but even contrary to those tables.

Aylife's Parergon.

The pillared marble, and the tablet brass, Mouldering, drop the victor's praise. Prior.

All the nodules that consist of one uniform substance were formed

from a point, as the crusted ones, nay, and most of the spotted ones, and indeed all whatever except those that are tabular and plated.

Woodward on Fossils.

No fair adversary would urge loose table-talk in controversy, and build serious inferences' upon what was spoken but in jest. Atterburij.

There are books extant which the atheist must al-low of as proper evidence ; even the mighty volumes of visible nature, and the everlasting tables of right reason ; wherein, if they do not wilfully shut their eyes, they may read their own folly written by the finger of God in a much plainer and more terrible sentence than Belshazzar's was by the hand upon the wall. Bentley's Sermons.

The nymph the table spread, Ambrosial cates, with nectar rosy red. Pope.

Nature's fair table-book, our tender souls, We scrawl all o'er with old and empty rules Stale memorandums of the schools.

Swift's Miscellany.

A TABLE is a moveable piece of furniture, usually made of wood or stone, and supported on pillars or feet, for the reception of things placed on it.

TABLE, in mathematics, a system of numbers calculated to be ready at hand for expediting astronomical, geometrical, and other operations.

TABLES, LAWS OF THE TWELVE, were the first set of laws of the Romans ; thus called either because the Romans then wrote with a style on thin wooden tablets covered with wax; or rather because they were engraved on tables or plates of copper, to be exposed in the most noted part of the public forum. After the expulsion of the kings, as the Romans had no fixed system of

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law ample enough to take in the various cases that might occur, they resolved to adopt the best laws of the Greeks. One Hermodorus was appointed to translate them, and the decemviri arranged them in ten tables. After much care they were enacted and confirmed by the senate and people, A. U. C. 303. In 304 they found something wanting, which they supplied from the laws of the kings, and from certain customs which use had authorised ; all these being engraven on two other tables made the law of the twelve tables so famous in the Roman jurisprudence, the source of the civil or Roman law.

TABLES OF THE LAW, in Jewish antiquity, two tables on which was written the decalogue, or ten commandments, given by God to Moses on mount Sinai.

TABLE MOUNTAIN, a mountain of the CAPI: OF GOOD HOPE colony, which see. — Also a mountain of the United States, in Pendleton district, South Carolina, near the north-west bor-der of the state, 3168 feet higher than the surrounding country, and about 4000 above the level of the sea. It presents on one side a tremendous precipice of solid rock, about 900 feet nearly perpendicular.

TA’BOR, n. s. kv.n. “| Old Fr. tabourin,

TA’BORER, n. s. \ tabour. A small

TA’BORET, ! drum; a drum beaten

TABORINE’, f with one stick to ac—

TABRERE, | company a pipe: to

TAB’RET. J strike as on a tabor

or lightly : laborer and tabrere are names of the player on this instrument : taboret and taborine, small kinds of tabors.

Wherefore didst thou steal away, that I might have sent thee away with mirth and with tabret?

Gen. xxxi. 27.

And her maids shall lead her as with the voice of doves, labouring

upon their breasts. Nah. ii. 7.

I saw a shole of shepherds outgo, Before them yode a lusty tabrere, That to the merry hornpipe plaid, Whereto they danced. Spenser's Pastorals.

Would I could see this labourer. Shakspeare.

Trumpeters,

With brazen din blast you the city's ear, Make mingle with our rattling tabourines, That heaven and earth may strike their sounds together, Applauding our approach.

Id. Antony and Cleopatra.

If you did but hear the pedlar at the door, you would never dance again after a tabour and pipe.

Id. Winter's Tale.

Some blow the bagpipe up, that plays the country

round :

The tabour and the pipe some take delight to sound.

Dray ton.

Morris dancers danced a maid marian, and a ta-bour and pipe. Temple.

They shall depart the manor before him with trumpets, tabourets, and other minstrelsy. Spectator.

TABOR, in ancient geography, a mountain of Galilee, near Kadesh, about twelve miles from Tiberias. It has the form of a sugar-loaf, in the midst of an extensive plain, and is thirty stadia in height. — Josephus. The ascent is so easy that one may ascend on horseback. On the top there is a plain two miles in circumference. Flavius Josephus, the historian and governor of Galilee,

caused the summit of this mountain, for tw« miles and a half, to be surrounded with walls. The inhabitants of Tabor long braved the power of the Roman armies ; but, being deprived of water, they were

forced to surrender to Placidius the general of Vespasian. Several churches and monasteries were built upon this mountain by St. Helen. Tabor was also the seat of a bishop, dependent on the patriarch of Jerusalem. When Godfrey of Bouillon seized on this mountain, he repaired the ancient churches. Under Baldwin I., in 1113, the Saracens retook Tabor. It again fell into the hands of the Christians; but the Catholic standard was by Saladin pulled down the year after, and all the churches destroyed. The Christians retook it in 1253, and rebuilt them. Pope Alexander IV. granted Ta-bor to the Templars who fortified it again. At length, in the course of 1290, the sultan of Egypt destroyed and laid waste the buildings of this mountain which could never be repaired afterwards; so that it is now uninhabited.

TABOR, a city given by the Zebulonites to the Merarites. 1 Chron. vi. 77.

TABOR, a circle of Bohemia, bounded on tin north by the circle of Czaslau, on the east by Moravia, and on the south and west by the circle of Budweis. Its extentis 1270 square miles; population nearly 160,000. Its soil is fertile, and adapted both to tillage and pasturage. Ilen> are manufactures of woollen, cotton, and linen ; and the higher grounds contain productive mines. Bohemian is the only language spoken.

TABOR, a town of Bohemia, the capital of a circle, is situated on a hill, on the river Lusch-nitz, eighty-eight miles west by north of Brunn, and forty-nine south by east of Prague. It is fortified, and naturally strong ; but has been frequently taken It contains 3800 inhabitants. The Hussites called it llradistic Hory Tabor, or the camp of Mount Tabor ; and as it was. their capital they took from it the name of Taborites.

TABORITES, o/ THABORITES, in ecclesiastical history, were a branch or sect of the Hussites, who, towards the beginning of the fifteenth century, dividing into several parties, one of them retired to a little mountain or rock, situate in Bohemia, fifteen leagues from Prague, and there put themselves under the conduct of Ziska. They now built a fort or castle, and a regular city, which they called Tabor or Thabor, either from the general word thabor, which in the Scla-vonic language signifies castle ; or from the mountain Tabor, mentioned in Scripture ; and hence they became denominated Thaborites. The other party were denominated Calixtins.

The Taborites demanded the erection of a new church and hierarchy, in which Christ alone should reign, and all things should be carried on by a divine direction and impulse. In maintaining these demands,

some of their leaders went so far as to natter themselves with the chimerical notion, that Christ would descend in person upon earth, armed with fire and sword, to extirpate heresy, and purify the church. This enthusiastic class of Hussites alone, Mosheim says, we are to look upon as accountable for all thoˆe acts of violence which are too indiscriminately laid to the charge of the Hussites in gene-

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nil, and to their two leaders, Ziska and Proco-pius, in particular. After the time of the council of Basil, in 1433, which endeavoured, though without success, to reconcile the Taborites with the Roman pontiff, they began to review their religious tenets, and their ecclesiastical discipline, with a design to render them more perfect. This review, conducted with great prudence and impartiality, gave a rational aspect to the religion of this sect, who withdrew themselves from the war with Sigismund, in which they were engaged, abandoned the doctrines, which, upon serious examination, they found to be inconsistent with the genius and spirit of the gospel, and banished from their communion all those whose disordered brains or licentious manners might expose them to reproach. The Taborites, thus new-modelled, were the same with those Bohemian brethren (or Picards, i. e. Beghards, as their adversaries call them) who joined Luther and his successors at the Reformation, and of whom there are at this day many of the descendants and followers iu Poland and other countries. — Mosh. Eccl. Hist. vol. iii.

TABOUROT (Stephen), a French poet, born at Dijon in 1549. He was king's advocate in the parliament of Dijon; and was a man of ge-nius, hut addicted to trifles; and his poetry was licentious agreeably to the taste of the times. He published Les Bigarrures, Paris, 1582; and Les Touches, Paris, 1585 ; with some other pieces ; in all of which he assumed the whimsical title of Lord of Accords. He died July 24th, 156!, aged forty-six.

TABHACA, an ancient sea-port town of Africa, near Hippo. It was made a Roman colony. The forests abounded with monkeys.. Plin. v. 3.

TACAMAHAC, or TACAMAHACA, in pharmacy, a solid resin, improperly called a gum in the shops. It exudes from a species of poplar, and is in repute for mitigating pains and aches, and is also reckoned a vulnerary. See MATERIA MEDICA.

TACARIGUA,alarge lake of South America, in theprovince of Venezuela, not to be confounded with the lake of Valencia, to which the Indians give the same name. This lake is in fact a bay, except that a bar of quicksand frequently cuts off its communication with the sea. Its form is circular. It measures about seven leagues from the sea on

the north-east, to its deepest recess on the south-east, and abounds in all kinds of sea fish. It is particularly remarkable for the great number of alligators which are seen in it.

TACCA, in botany, a genus of plants belonging to the class of dodecandria and order of trigynia. The flower is above. The corolla has six petals, and is vaulted. The calyx is hexaphyllous; the fruit a dry, angular, three-celled berry. There is only one species ; *viz.* T. pinnatifida.

TACFARINAS, a Numidian, who, after serving some time in the Roman legions, became a general in his own country, and commanded an army against its conquerors in the reign of Tiberiu*. Tac. Ann. n.

TAC HA. See TACHAV.

, an island in the Nile, near

Thebais. The Egyptians held one-half of it, and the /Ethiopians the other, llerodot. ii.

TACHE', n.s. From tack. Any thing taken hold of; a catch ; a loop ; a button.

Make fifty taches of gold, and couple the curtains together with the inches. Eiod. xxvi. 6.

TA'CIT, adj. } Fr. taclte; Lat. tad—

TA'CITLY, adv. >tus. Silent; implied;

TACITURN'ITY, n.s. J not expressed by words: the adverb corresponding : taciturnity, habitual silence.

The secretest of natures Have not more gift in taciturnity. Shakspeare.

As there are formal and written leagues respective to certain enemies, so is there a natural and tacit confederation amongst all men against the common ene-my of human society, pirates. Bacon's Holy War.

Some women have some taciturnity, Some nunneries some grains of chastity.

Donne.

In elective governments there is a tacit covenant, that the king of their own making shall make his makers princes. L'Estrange.

Captiousness not only produces misbecoming expressions and carriage, but is a tacit reproach of some incivility. Locke.

»While they are exposing another's weaknesses, they are tacitly aiming at their own commendations.

Addison .

Indulgence to the vices of men can never be tacitli/ implied, since they are plainly forbidden in scripture. Rrgers't Sermons.

Too great loquacity, and too great taciturnity by fits. Arbnthnot.'

TACITA, in the Roman mythology, the goddess of Silence. King Numa Pompilius paid particular veneration to her.

TACITUS (Caius Cornelius), a celebrated Roman historian, and one of the greatest men of his time, born about A. U. C. 809. He applie.l himself early to the bar, in which he gained lu<jh reputation. Having married the daughter of Agricola, the road to public honors was open to him under Vespasian and Titus ; but during the sanguinary tyranny of Domitian, he and his friend Pliny retired from public affairs. The reign of Nerva restored these luminaries of literature to Rome, and Tacitus was engaged, in 850, to pronounce the funeral oration of the venerable Vir-ginius Rufus, the colleague of the emperor in the consulship, and afterwards succeeded him as consul A. D. 97. It is supposed that he died in the end of the reign of Trajan. His works which remain are, 1. Five books of his History. 2. His Annals. 3. A Treatise on the Different Nations who then Inhabited Germany. 4. The Life of Agricola. 5. A Treatise on Eloquence. No ancient author has obtained a more splendid reputation than Tacitus. Kings, princes, and authors of all ranks have read and admired him, though a spirit of liberty runs through his whole works. Never were description and sentiment so beautifully blended, nor the actions and characters of men delineated with such precision ; in short he has all the merits of other author* without their defects. There have been five translations of his works into English.

TACITVS (M. Claudius), an excellent emperor of Rome, who succeeded Aurelian A. D. 275 See ROME.

TACTICS.

TACK, v. a. Breton tocher. See ATTACH. To fasten to any thing; join; unite: to hold tack is to last ; hold out.

Martilmas beefe doth bear good tacke, Wnen countrey folke do dainties lacke. Tusser.

There's but a shirt and a half in all my company ; and the half shirt is two napkins tacked together, and thrown over the shoulders like a herald's coat without sleeves. Shakspeare.

Of what supreme almighty power Is thy great arm, which spans the east and west, And tacks the centre to the sphere ! Herbert.

If this twig be made of wood That will hold tack, I'll make the fur Fly 'bout the ears of that old cur. Hudibras.

True freedom you have well defined : But living as you list, and to your mind, And loosely tacked, all must be left behind.

Dry den.

I lacked two plays together for the pleasure of variety . Id.

At each tack our little fleet grows less, And, like maimed fowl, swim lagging on the main.

Id.

Frame so as to be covered with the hair-cloth, or a blanket tacked about the edges. Mortimer.

The symmetry of clothes fancy appropriates to the wearer, tachiny them to the body as if they belonged to it. Grew.

They serve every turn that shall be demanded, in hopes of getting somecommendam tacked to their sees, to the great discouragement of the inferior clergy.

Swift.

TACK, v. n. Probably from tackle. To turn a ship.

This verseriam they construe to be the compass, which is better

interpreted the rope that turns the ship ; as we say, makes it tack about.

Browne's Vulgar Errours.

Seeing Holland fall into closer measures with us and Sweden, upon the triple alliance, they have tacked some points nearer France. Temple.

On either side they nimbly tack, Both strive to intercept and guide the wind.

Dry den.

They give me signs To tack about, and steer another way. Addison.

TACK, in ship-building, a rope used to confine the foremost lower corners of the courses and stay-sails in a fixed position when the wind crosses the ship's course obliquely; also the rope employed to pull out the lower corner of a studding-sail or driver to the extremity of its boom. The mainsail and foresail of a ship are furnished with a tack on each side, which is formed of a thick rope tapering to the end, and, having a knot wrought upon the largest end by which it is firmly retained in the clue of the sail. One tack is thus always fastened to the windward, at the same time that the sheet extends the sail to the leeward.

TACK is also applied by analogy to that part of any sail to which the tack is usually fastened. A ship is said to be on the starboard or larboard tack when she is close hauled, with the wind upon the starboard or larboard side ; and in this sense the distance which she sails in that position is considered as the length of the tack ; although this is more frequently called BOARD. See that article.

To TACK is to change the course from one board to another, or turn the ship about from

the starboard to the larboard tack, in a contrary wind. Thus a ship being close hauled on the larboard tack, and turning her prow suddenly to windward, receives the impression of the wind on her head-sails, by which she falls off upon the line of the starboard tack. Tacking is also used, in a more enlarged sense, to imply that manoeuvre in navigation by which a ship makes an oblique progression to the windward in a zigzag direction. This, however, is more usually called beating or turning to windward. See NA-VAL

TACTICS, NAVIGATION, and SAILING.

TAC'KLE, n.s.-) Welsh tacel; Belg. luc—

TAC'KLED, adj. >ckel, a rope; Isl. tang. An

TACK'LING, n. s. J arrow : all the instruments of sailing in a ship : tackled is, made of ropes ; tacked together : tackling, a synonyme of tackle.

The takil smote, and in it went. Chaucer.

After at sea a tall ship did appear, Made all of heben and white ivory,

The sails of gold, of silk the tackle were, Mild was the wind, calm seemed the sea to be.

Spenser. My man shall

Bring thee cords, made like a tackled stair, Which to the high top-gallant of my joy Must be my convoy in the secret tight. Shakspeare.

Tackliny, as sails and cordage, must be foreseen and laid up in store. Bacon's Advice to Villiers.

They wondered at their ships and their tacklings.

Abbot.

As for tackle, the Boeotians invented the oar; Daedalus, and his son Icarus, the masts and sails.

Heylin.

A stately ship

With all her bravery on, and tackle trim, Sails filled, and streamers waving, Courted by all the winds that hold them play.

Milton.

She to her tackle fell, And on the night let fall a peal Of blows so fierce, and pressed so home, That he retired. Hudibras.

I will furnish him with a rod, if you will furnish him with the rest of the tackling, and make him a fisher. Walton.

Ere yet the tempest roars, Stand to your lade, mates, and stretch your oars.

Dry den.

Being at work without catching any thing, he resolved to take up his tacfe/eand be gone. L' Estrange.

Red sheets of lightning o'er the seas are spread ; Our tacking yield, and wrecks at last succeed.

Garth.

If he drew the figure of a ship there was not a rope among the tackle that escaped him.

Addison's Spectator.

TACQUET (Andrew), a Jesuit of Antwerp, who nourished in the seventeenth century. lie was a most laborious writer in mathematics ; and published a Treatise on Astronomy, an edition of Euclid, and many other tracts. His works were collected and printed at Antwerp in one large volume, folio, 1669. He died m

1660.

TACTICS, n s. Gr. rajcriKJj. The art (f ranging men in the field of battle.

When Tully had read the tacticks, he was thinking on the bar, which was his field of battle. Dryden.

TACTICS, MILITARY AND NAVAL, in their general acceptation, relate to those evolutions, manoeuvres, and position.-;, which constituU! tin1

main spring of military and naval finesse : they are the means whereby discipline is made to support the operations of a campaign, and are, in every regular service, studied for the purpose of training all the component parts according to one regular plan or system ; whereby celerity, precision, and strength, are combined, and the whole rendered completely efficient.

The Greeks were skilful in this part of the military art ; having public professors of it, call-ed tactici, who taught and instructed their youth. We have an account of the progress of this art among them in Thucydides, Xenophon, and Polybius. ˆ.lian also hath a particular book on this subject ; and there is a great deal of it in Arrian, in his History of Alex. M. and in Mau-ritius, and Leo Imperator. But the Romans may be considered the first nation whose military array could be termed regular, and whose forces maintained that order which rendered each inferior individual subject to the control of certain subaltern officers commanding small bodies, corresponding with our sections ; which being again compacted, under officers of a second class, formed small divisions, as in our platoons, or companies; and which divisions, being collected under a third class of officers, constituted what we term battalions. The soldiers of ancient Italy were not only inured to great hardships, as a part of their usual exercise, but were taught many evolutions suited to the modes of warfare in those days. Time has occasioned a considerable .change in that particular ; for, since the invention of gunpowder, our battles have frequently been decided by distant cannonades : and by no means resemble those arduous conflicts in which the heroes of old used to engage, individually contending for the day, and causing the whole field to resemble an infinity of single combats. In this practice all barbarous nations seem uniformly to agree : the sword, the tomahawk, the club,&c., being the chief instruments ; though in some instances

the javelin, or spear, or the bow and arrow, may be primarily resorted to. Hence such warfare is far more sanguinary than that carried on with fire arms ; which rarely do much execution, unless when aided by artillery, and then only when at such distances as to be within reach of case shot. It will no doubt surprise most of our readers, but; it is strictly true, that, taking the average quantity of musket ammunition expended, as a sum to be divided by the number of killed and wounded, not more than one shot in fifty will be found to take effect. Thus, after a battalion of 1000 men may have fired twenty rounds per man, making in all 20,000 discharges of musketry, they will have made terrible havoc if 400 of the enemy be disabled. Hence we find that the great features in decisive actions are few indeed ; and they depend chiefly on tactics. Thus where a large force is brought to bear upon any particular point, while the enemy is kept in ignorance as to the object in view ; or where certain aclvant-Hges of locality are gained, merely by dint of superior science in the art of conducting troops by the shortest means, and in the greatest order; or where by certain evolutions a small force is made to supply the purpose of a larger, or to resist,

independently of entrenchments, &c., a more numerous body : all these evince the presence of the man of tactics, and qualify him for the designation of an able general.

We have also another branch, which is in a degree secondary, because it depends greatly on the success of the former ; namely, the arrangement, or disposition, of a line, in such manner as may allow each description of force to act with effect ; this can be done only when the na-ture of the service to be performed is suited to the nature of the troops by which it is to be attempted. In this we necessarily mean to restrict the operations of infantry to storming parties, cavalry to champaign operations, and artillery to situations where it can be duly protected, while rendering essential service. Hence the able tactician always arranges his force in such manner as to allow each to perform its duty without interfering with the evolutions of any other class ; and, in what is called manoeuvring his army, never fails to estimate the distances, and the time in which each may execute the assigned duty ; so that the whole may coincide with one great intention, and insure success by the accurate execution of its respective functions ; were it to be otherwise, the whole must be subject to disorder; one failure often leading to the most serious consequence ; the same as is caused by the want of a cog, or tooth, of any wheel in a piece of machinery. From this it may be seen how

great a superiority that commander must possess who, by means of this science, fully comprehends the most ready arrangement of troops, where change of position becomes necessary ; and who has, in the first instance, so disposed them as to be able to make those changes (even under the disadvantages ever attendant upon such necessity) with celerity, and in good order.

TACTICS, NAVAL, relate to those operations, in the management of a vessel, which enable her to attain any particular object, such as reaching a port, avoiding danger, gaining an advantage over an enemy, &c. In a more extended sense, they denote those manoeuvres, stratagems, and decep-tions, employed by the commander of a fleet, for the purpose of gaining a weather-gage, cutting off any part of a line, or attacking any particular portion thereof, in such manner as may either defeat the views of a hostile fleet, or subject it to loss and discomfiture. The old system of tactics in this, as well as in the military branch, was burdened with ceremonies, and with received opinions, which were held to be inviolable : the difference of one or two ships in favor of the enemy, was considered a sufficient excuse for a variety of precautions generally amounting to forbearance from engaging the superior power; and, although we certainly can count a number of gallant exploits performed by our fleets when somewhat inferior to the enemy, it has been reserved for latter times to exhibit what could be done by the British navy, even when opposed to nearly double their own force. This wonderful change was introduced by Rodney ; who, in the year 1782, engaged the French fleet under count de Grasse ; when, by boldly cutting off a part of its rear, he compelled nearly half the enemy’s

force to surrender; the rest sought their safety French ships of the line • an escape

in flight. Since that date admiral Jervis, by a tirely from the manoeuvres of the firitish'admlral—

skilful manoeuvre, cut off a large portion of a whereby he fully convinced the French that a

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Spanish fleet, near Cape St. Vincent's (whence the peerage bestowed on him received its designation) ; but the late lord Nelson appears most conspicuous in that mode of attack which, in general, secured a victory. The battle of the Nile was doubtless a master-piece of tactical science; it merits notice from its simplicity, and, if we may be so bold as to use the term, its infallibility. The manoeuvre he used was, to throw two of his ships upon every one of the weathermost of the enemy's line, by causing his

large force was at hand. The present unparalleled state of discipline, throughout our navy, would, of itself, give us the command of the ocean ; but we are greatly indebted, at the same time, to an excellent code of signals, both for the day and the night, whereby every operation and manoeuvre may be directed with readiness and perspicuity.

When orders are given to clear ship for action, the boatswain and his mates whistle, and call at the various hatchways, to warn all who are be-

fleet to divide as it approached them; conse-tween decks; the

hammocks, or beds, are instantly

quently including each French ship between two unhooked, packed, and sent on deck, to be put

of ours. The residue, which were moored in a into the nettings on the waist, forecastle, quarters,

line a-head, fully expected to see ours range up poop, &c., where they serve as an excellent de-

their whole length, and oppose ship to ship. They saw their error when it was too late ; being to leeward, it was impossible for them to render efficient aid, and they fell in detail ; with the exception of a very small portion, which escaped by putting out to sea, whither we were not in a condition to follow with any hopes of overtaking them.

In the battle of Trafalgar, in which the immortal Nelson quitted his earthly frame, the combined fleets were drawn up in the form of a crescent, and awaited our attack, which was made in a double column, apparently bearing down upon their centre. This novel mode of coming into action kept the enemy completely in suspense ; it threatened every part of their line. If our two columns had turned the same way, they would have been able to do infinite damage in that quarter, before the other wing of the ene-my could come up to succor their overpowered friends : if the two columns should cut through the centre, they must destroy it, and effectually separate the two wings, so as to leave them ignorant of each others fate. Such was the fact : the enemy, though superior in numbers, lost no less than nineteen sail of the line.

Perhaps nothing can place a fleet in a more dangerous state, and render it less able to resist an attack, than making sail before the wind, in a line of battle a-head, to avoid a pursuing enemy. In such a case, whenever the rear of that line can be brought to action, it becomes subject to an accumulating force, in consequence of the pursuing fleet thickening upon it ; while the van of its own line, being to leeward, must make many tacks, or at least two long ones, before it can succor its rear. The disadvantage must be very great even if all the ships, on both sides, sail upon an exact equality ; but,as that is never the case, many of the flying ships will be probably driven completely to leeward, and never be able to afford the smallest assistance. Yet British seamen, even when compelled to retire before a very superior

force, generally manage, by somft well-contrived device, to intimidate their pursuers, or to put on so good a face as to

fence against musketry. While some of the seamen are thus employed between deck,, others are aloft securing the yards in chain slings, so as to prevent them from falling when the haul-yards may be severed by cannon shot; materials for repairing the rigging are also placed in readiness ; shot plugs, for stopping holes, near or under the surface of the water, are dispensed ; and every attention is paid to ascertain that the pumps are in order, so as to clear the hold in case of leaks. The decks are cleared of every incumbrance, by the removal of chests, &c., into the hold ; the various gun tackles are inspected ; and all the necessary implements, such as pon-der ladles, worms, rammers, sponges, &c., are duly supplied. All being ready, the surgeon and his mate, together with the chest of medicines, instruments, bandages, &c., are prepared in the cock pit ; that is, down the hatchway, below the ordinary reach of the enemy's shot. The officers and men repair to their posts, the powder room is opened, the hatches are all laid, the marines drawn up on the forecastle, quarter-deck, and poop, the guns are run out and levelled, and the courses (that is, the lower sails) are clued up, to prevent their being set on fire by the discharges from the cannon ; also to render the ship more manageable.

The greatest attention is always paid to tak-ing a good aim before a gun is fired ; that every shot may hit some part of the enemy's hull ; the nearer to the water's edge the better. The captain, master, purser, &c., remain on deck to fight the ship, and to note down all occurrences, while the signal master attends to and answers whatever signals may be thrown out of the commander of the fleet, or division. It is ever a primary object to place the ship in such a position as may annoy the enemy most; yet, at the same moment, evade his principal defences: this is best done by laying diagonally upon her quarter, or bow, and especially across her stern, so as to rake her fore and aft ; whereby her guns will soon be dismounted, and the men driven from their quarters. This description of the manner in which the battle is carried on by eacli

convince them of the dear price at which the vie-ship will serve as an illustration of the whole;

tory is to be bought. Of this we cannot quote a but it may be necessary

to add that the dispo—

more appropriate instance than the escape of five sition of a fleet must be suited to the position

s.nl of our ships, under the command of admiral the adversary may have assumed. When an

Cornwallis, from no less than nineteen sail of enemy opposes a direct line, opposite ‘o thai

his own fleet, the admiral rarely does more than make the signal for line of battle abreast, perhaps a cable’s length asunder, thus coming at once to close engagement, ship opposed to ship, or rather the two fleets intermixed alternately, their heads laying different ways : if they should pass each other, it is usual to put about, and resume the engagement in the same manner. When the enemy bear down in a line a-head, it is customary to receive them in the same manner, to prevent their cutting off a part of the line ; this depends greatly on the direction of the wind ; but, if it be on the beam, that is full on the side, or in any direction affording the means of aiding your van, without delay, by a press of sail, such a mode of attack will subject the enemy to have his own line cut, as was done by Rodney; or doubled upon, as in the battle of the Nile.

During an engagement, as the courses are commonly hauled up, the top-gallant sails and stay-sails are also furled. The movement of each ship is chiefly regulated by the main and fore-top sails, and the jib, reserving the mizen to fill, or to be thrown a-back, as an aid, either to accelerate the ship, or as a check to prevent her passing the enemy. The frigates, tenders, and other small vessels generally lay to, or hover about in the rear, to repeat signals, or to aid crippled ships. These, not being considered as ships of the line, are not attacked, except by vessels of their own class; therefore, when a fleet is not well manned, it is common to take all the spare hands from such to assist on board the fighting ships. When a fleet is superior in numbers, it is proper to

keep some of them in reserve, stationing them behind the weaker parts of the line to succor such as may, by the loss of masts, &c., become unmanageable, and to take advantage of any opportunity to chase, and lay aboard of whatever of the enemy's ships may quit the line for the purpose of escaping. In order to observe what is going on, the admiral generally removes to some frigate, on board which he hoists his flag; near him should be some of the best sailing cutters, brigs, &c., to convey orders which could not be accurately delivered by signal, or by telegraph.

Boarding is most commonly resorted to by privateers, in their attacks upon merchant vessels ; but among ships of the line is rarely practised. Our commanders are perhaps more forward than those of any other nation, except the Turks, in this kind of enterprise, which is replete with hazard. The best mode of boarding, especially if there be any swell, is to keep on the enemy's weather quarter ; now and then, if the sailing of your ship will allow yawing, so as to throw your tire into her stern : when, by this means, you have done any execution, it will be proper to pass close under the enemy's stern, raking her fore and aft with your guns double shotted, and then lay her aboard upon her lee beam, having your tops well manned to fire upon the enemy's decks, on which also grenades, stink pots, fire balls, &c., should be discharged. Having grappled the ship to your adversary's chains, your boarders jump into her, under the cover of the fire of your small arms. In case

of repulse, the attack to leeward is most favor able to the retreat of your men ; besides, it is far easier to cast off from the enemy, than it would be if you were to windward of her.

The writers on naval tactics have been but few, indeed, considering the importance of the subject ; and the only countries that have produced writers on this subject, so far as we know, are France and Britain, particularly the former. One would be led to imagine that Britain, from its insular situation, having bred so great a num-ber of excellent seamen, and having so often been engaged in naval contests, would naturally have produced a number of writers on this, as well as on subjects of much less consequence to it as a nation. The reader will, however, no doubt be surprised to hear, that till lately we had only the treatise on naval tactics, entitled An Essay on Naval Tactics, 8cc., by John Clerk, esq., of Elden, near Edinburgh; most of the other treatises published in Britain on this subject being either translations from the French, or remarks upon the French authors. Some of the

principal French treatises on naval tactics are the following : 1 . L'Art des Armees Navales, ou Traite des Evolutions Navales, par Paul L'Hoste, 1 vol. folio, printed at Lyons, 1727. This book was translated and published by Christopher O'Bryen, esq., in 4to., in 1762. 2. Tactique Navale, ou Traite" des Evolutions et des Sig-naux, par M. le Viscompte de Morogues, 4to., Paris, 1763. 3. Le Manceuvrier, par M. Bourde de Villehuet. 4. L'Art de Guerre en Mer, ou Tactique Navale, &c., par M. le Viscompte de Grenier. Translations of the two last have appeared in English in 4to., in 1788, under the name of the Chevalier de Sauseuil ; and a translation of parts of the three last is in the second volume of the Elements and Practice of Rigging and Seamanship, published at London in 1794. Other books on evolutions and tactics are Theorie de la Manoeuvre des Vaisseaux, Paris, 1689. Pilot's Theory of working Ships applied to Practice, &c., translated by Stone, 1743. De la Manoeuvre des Vaisseaux, ou Traite •'e Mechanique et de Dynamique, &c., par M. Bouguer. The British Mars, &c., by William Flexney, 1763. A Sea Manual, by Sir Alexander Schomberg, 1789. A View of the Naval Force of Great Britain, &e., by an Officer of Rank, 1791; and the ingenious treatise on Naval Tactics by captain Hamstead.

TACTILE, adj. Fr. tactile; Lat. tactilis, tactum. Susceptible of touch.

At this proud yielding word She on the scene her tactile sweets presented.

Beaumont's Psyche.

We have iron, sounds, light, figuration, tactile qualities ; some of a more active, some of a more passive nature. Hale.

TACUNGA, a province of Quito, bounded east by the valley of Vicioso, north by the province of Quito, north-west by that of Esmeraldas and also Guayaquil, south-west by that of Chim-bo, and south by that of Ambato. It is twenty-one leagues long from east to west, and fourteen wide from north to south; and of a cold temperature, but abounds in pasturage. It produces also wheat, barley, and rye, and wools of many

kinds. It likewise abounds throughout with nitre. Tacunga, the capital, is situated in an extensive plain to the south of Quito, near the Cordillera of the Andes.

TADCASTER, a market-town of Barkstone-Ash wapentake, west-riding of York, situate on the river Wharfe, over which is a good stone

bridge, nine miles S.S.W. of York, and 187 north by west from London. The town is neat, well-built, and pleasant. Besides the church, here is a free grammar-school, a hospital, and some charity-schools. It was anciently a Roman station, called Calcaria. The neighbourhood produces much limestone. Market on Thursday. Fairs, the last Wednesday in April, May, September, and October. It is a vicarage.

TADMOR. See PALMYRA.

TAD'POLE, n. s. Sax. tab, toad, and pola, a young one. A young shapeless frog or toad.

I'll broach the tadpole on my rapier's point.

> Shakspeare.

Poor Tom eats the toad and the tadpole. Id.

A black and round substance began to dilate, and after a while the head, the eyes, the tail, to be discernible, and at last become what the ancients called gyrinus, we a porwigle or tadpole.

Browne's Vulgar Errours.

The result is not a perfect frog, but a tadpole, without any feet, and having a long tail to swim with. Kay.

TJENARIA, festivals held in honor of Neptune at Tsenarus.

TjˆENARUS, a promontory of Laconia, the most southern point of the Morea, where Neptune had a temple. It is now called Matapan. It had a large and deep cavern, whence issued a black unwholesome vapor (probably fixed air, or carbonic acid gas), whence the poets feigned that it was one of the entrances to hell, through which Hercules dragged the triple-headed infernal dog Cerberus up to the earth. Pausanias says that this cavern was the resort of a large serpent whose bite was mortal, and which Hercules killed and carried to Eurystheus ; and that this gave rise to the story of his chaining the dog of hell.

TJENARUS, a town of Laconia, forty stadia from the cape, famous for beautiful green marble.

TˆNARUS, a son of Neptune who gave name to the cape, town, and festivals.

TˆNIA, in architecture, a member of the Doric capital resembling a

square fillet, serving instead of a cymatium, being made fast to a capital below the tri glyphs, whereof it seems the base.

TJENIA, in entomology, the tape-worm, a genus of animals belonging to the class of vermes and order intestina. The body is long, depressed, and jointed like a chain, and contains a mouth and viscera in each joint. According to Gmelin there are ninety-two species; all which inhabit the intestines of various animals, particularly of quadrupeds. The tamia appears destined to feed on such juices of animals as are already animal-ised, and is therefore most commonly found in the alimentary canal, and in the upper part, where there is the greatest abundance of chyle ; for chyle seems to be the natural food of the tac-nia. As it is thus supported by food which is already digested, it is destitute of the complicated

organs of digestion. Seven species are pecaliat to man. See ENTOMOLOGY.

TˆENIAS, a part of lake Mceotis. Strabo.

TAENSA, a town and settlement of West Florida, on (the east channel of the Mobile, on the side of an ancient Indian town. The wax tree abounds near it See MYRICA.

TAF, or TAAFFE, a river of Wales, which rises among the hills in Brecknockshire, from two sources, forming two streams, the Greater and Lesser Taf, which unite their waters below the village of Coed-y Cymmer, on their entrance into Glamorganshire ; and thence proceed by Merthyr Tydvil. About twelve miles below this town it receives the Bangoid Taf, a mountain stream which flows into it from the eastward, Lower down it is joined by the Cynou from the west, and a few miles lower by the two Khonddas. It then proceeds nearly southwards by Llandaff, and afterwards by Cardiff, towards the southern sea, which it enters in the small bay of Pinarth. In dry weather the Taf contains little water; but is a handsome stream when swollen by the land floods, and navigable for small craft as far as Cardiff. Over this river the noted bridge of Pont-y-Prydd is built.

TAF’FETA, n. s. Fr. and Span, ta/elas. A thin silk ; flimsy talk.

All hail, the richest beauties on the earth ! — Beauties no richer than rich taffata. Sfuiksjieurc. Never will I trust to speeches penned ;

Tttjfata phrases, silken terms precise,

Three piled hyperboles. Id. Love's Labour Lost.

Some think that a considerable diversity of colours argues an equal diversity of nature ; but 1 am not of their mind, for not to mention the changeable tajj'ety, whose colours the philosophers call not real, but apparent. Boyle on Cotoun.

TAFFETA, or TAFFETY, in commerce, a fine smooth silken stuff, remarkably glossy. There are taffeties of all colors, some plain and others striped with gold, silver, &c., others checquered, others flowered, 8cc., according to the fancy 01 the workmen.

TAFFI (Andrew), an eminent Italian artist, born at Florence in 1213. Having learned the art of designing in Mosaic from some Greek artists employed in decorating the church of St. Mark in Venice, the chief of whom was Apollonius, he introduced it into Italy. His chief work is a Mosaic piece of our Saviour dead in a chapel at Florence. He died in 1294.

TAFILELT, a large district to tne south-east of the Atlas chain, and tributary to the empire of Morocco. It consists of a vast single plain, presenting an unvaried surface, traversed by two rivers running in opposite directions, one of which loses itself in the desert of Angad, the other in the sands of the Sahara. Brackish water is every where found at the depth of twelve feet. The inhabitants live in a patriarchal man-ner, and are said to be remarkably honest. Dates are the chief produce and wealth. A great number of Shereefs, who boast of themselves as the descendants of Mahomet, live here. Sigil-messa was once the chief place, but the town called Tafilelt has now supplanted it. The province is stated by Jackson to contain 650,000 inhabitants.

TAG, n. s. & v. a. Isl. tag, the point of a lace ; Goth, and Swed. tagg. A point put to the end of a string ; any thing paltry and mean : to fit any thing with a tag ; to join (probably for tack). If tag and rag be admitted, learned and unlearned, it is the fault of some, not of the law. Whitgift.

Will you hence

Before the tag return, whose rage doth rend Like interrupted waters ! Sliukspeare. Cariolanus, The tow-rag people did not clap him and hiss him.

Shakspeare.

They feed on ing worms and lugges. Carew.

There are other worms ; as the marsh and tagtail.

Walton.

His courteous host

Tags every sentence with some fawning word, Such as my king, my prince, at least my lord.

Dryden.

‘Tis tagged with rhyme, like Berecynthian Atys, The mid-part chimes with art, which never flat is.

Id. He invited tag, rag, and bob-tail, to the wedding.

L’Estrange.

Compelled by you to lay in rhimes The common slanders of the times. Swift. Resistance, and the succession of the house of Hanover, the whig writers perpetually tag together.

Id. Miscellanies.

TAGANROG, a town of the south-east of European Russia, in the government of Eka-terinoslav, near the north-west extremity of the sea of Azoph, fortified by Peter the Great. It stands on the cliff of a lofty promontory, containing 6000 inhabitants ; and, being the staple of all the mercantile intercourse between the interior of Russia and foreign countries, through the medium of the Don, its traffic is extensive.

TAGARA, a city of ancient India, the metropolis of a large district called Ariaca, which comprehended the greatest part of the Subah of Au-rengabad and the south part of Concan. Arrian says that it was situated about ten days’ journey to the east of Pultanah; which, according to the rate of travelling in that country with loaded carts, might be about 100 British miles. This fixes its situation at Deoghir, a place of great antiquity, and famous through all India on account of the pagodas of Elousa. It is now called Dowlat-abad.

TAGES, in the mythology, a son of Genius and grandson of Jupiter, who first taught the Etrurians augury. He was found by a Tuscan ploughman in the form of a clod, and immediately assumed a human shape to teach them augury. — Cicero. Had this divine clod taught them agriculture instead of augury it would have been a better allegory.

TAGETES, marigold, in botany, a genus of plants belonging to the class of syngenesia and order of polygamia superflua; and in the

natural system ranging under the forty-ninth order, corn-posits. The receptacle is naked; the pappus consists of five erect awns or beards ; the calyx fs monophyllous, quinquedentate, and tubular ; and there are four persistent florets of the ray. There are three species; *viz.* 1. T. erecta, the African marigold, is a native of Mexico, but has been cultivated in British gardens since 1596. It has a stem subdivided and spreading. There are many varieties : — 1. Pale yellow, or brimstone color, with single, double, and fistulous flowers.

2. Deep yellow, with single, double, anJ fistulous flowers. 3. Orange-colored, with »mgle, double, and fistulous flowers. 4. Middling African, with orange-colored flowers. 5. Sweet-scented African. These are all very subject to vary; so that unless the seeds are very carefully saved from the finest flowers they are apt to degenerate : nor should the same seeds be too long sown in the same garden. Those who wish to have these flowers in perfection should exchange their seeds with some person of integrity at a distance, where the soil is of a different nature, at least every other year. If this is done the varieties may be continued in perfection. They flower from the beginning of July till the frost sets in.

2. T. minuta, the small marigold.

3. T. patula, the French marigold, has a sim-ple erect stem, and the peduncles are scaly and multiflorous. It has been cultivated in the British gardens since 1596. There are several varieties; some have larger flowers than others, and their color varies greatly; some are beautifully variegated and others quite plain ; but all these are accidents arising from culture, for seeds saved from the most beautiful flowers will degenerate, if they are sown in the same garden for several years together without changing the seeds. These plants have a strong disagreeable scent, especially when handled ; for which reason they are not planted near habitations ; the flowers of the sweet-scented sort being preferred, especially for small gardens.

TAGUS, TAJO, or TEJO, a large river of Spain, issues from a spring in the mountains of Albaracin, between Arragon and Old Castile, at the distance of little more than 100 miles from the Mediterranean. Pursuing a westward course to the Atlantic, it passes the palace of Aranjuez, the cities of Toledo, Talavera, Alcantara, Abrantes,and Lis-bon, and flows into the sea seven miles below the capital of Portugal. Long before reaching Lisbon it receives the tide, and its volume of water is large throughout ; but in so mountainous a country as Spain

river navigation is very limited : that of this river is not at present carried farther than Abrantes in Portugal. Several places on or near its banks, such as Santarem, Almaraz, and Talavera, were the scenes of military operations in the last war.

TAHPANHES, or TEHAPHNEHES, or Hanes, an ancient city of Egypt, supposed to be the same with Daphnoe, about sixteen miles south of Pelusium, on the east bank of the Nile. To this city the remnant of the Jews left by Nebuchadnezzar retired, after the murder of Gedaliah. It was afterwards taken by Nebuchadnezzar. — Jer. xliii. 1 — 11. Ezek. xxx. 18.

TAIL, n. s. & v. n.) Sax. raeˆl ; Goth. tagl.

TAIL'ED, adj. i That which terminates certain animals behind ; the continuation of the vertebras of the back hanging behind ; the lower, hinder, or pendant part of a thing : ' to turn tail' is to fly : to tail, to pull by the tail, a foolish word of Butler's : tailed is furnished with a tail.

The Lord shall make thee the head, and not the tail ; and thou shall be above, and not beneath.

Deut. xxviii. 13. Would she turn tail to the heron, and flv q>iite

out another way ; but all was to return 111 a higher pitch. Sidney.

Oft have I seen a hot o'erweening cur Run back and bite, because he was withheld, Who having suffered with the bear's fell paw, Hath clapt his tail betwixt his legs, and cried.

Shakspeare.

Duretus writes a great praise of the distilled water of those tails that hang upon willow trees.

Harvey an Consumptions.

With the helm they turn and steer the tail.

Hudibras. The conquering foe they soon assailed,

First Trulla staved, and Cerdon tailed. Id.

This sees the cub, and does himself oppose, And men and boats his active tail confounds.

Waller.

The lion will not kick, but will strike such a stroke with his tail that will break the back of his encounterer. More.

Rouzed by the lash of his own stubborn tail, Our lion now will foreign foes assail. Dryden.

Snouted and tailed like a boar, footed like a goat.

Grew.

The tail fin is half a foot high, but underneath level with the tail. Id.

TAIL, in anatomy, is the train of a beast, bird, or fish ; which in land animals serves to drive away flies, &c., and in birds and fishes to direct their course, and assist them in ascending or descending in the air or water.

TAIL, or FEE-TAIL, in law, is a conditional estate or fee, opposed to fee simple. See FEE. A conditional fee, at the common law, was a fee restrained to some particular heirs exclusive of others ; as to the heirs of a man's body, by which only his lineal descendants were admitted, in exclusion of collateral heirs ; or to the heirs male of his body, in exclusion both of collaterals and lineal females also. It was called a conditional fee, by reason of the condition expressed or implied in the donation of it, that, if the donee died without such particular heirs, the land should revert to the donor. For this was a condition annexed by law to all grants whatsoever, that, on failure of the heir specified in the grant, the grant should be at an end, and the land re-turn to its ancient proprietor. They therefore called it a fee simple on condition that he had -ssue. So that, as soon as the grantee had any issue born, his estate was supposed to become ab-sc ute by the performance of the condition ; for these three purposes : — 1. To enable the tenant to alienate the land, and thereby to bar the donor of his interest in the reversion. 2. To subject him to forfeit it for treason. 3. To empower him to charge the land with rents, commons, and other encumbrances,

so as to bind his issue. But, if the tenant did not alienate the land, the course of descent was not altered ; for if the issue had afterwards died, and then the tenant or original grantee had died, without making any alienation, the land, by the terms of the donation, could descend to none but the heirs of his body, and therefore must have reverted to the donor. To subject the lands therefore to the ordinary course of descent, the donees of these conditional fee simples took care to alienate as soon as they had issue ; and afterwards repxirchased the lands, which gave them a fee simple absolute, that would descend to the heirs general, according to the common law. And thus stood the old law with re-gard ˆ to conditional fees: which things, says Sir Edward Coke, are necessary to be known for the sake of annuities, and such like inheritances as are not within the statutes of entail, and therefore remain as the common law. On the other hand the nobility, who wished to perpetuate their possessions in their own families, procured the statute of Westminster the second, de donis conditionalibus, to be made ; which paid a greater regard to the intentions of a donor than to the propriety of such intentions. This restraint revived the ancient feudal restraints originally laid on alienations, by enacting that from thenceforth the will of the donor be observed ; and that the tenements so given (to a man and his heirs) should at all events go to the issue, or, if none, should revert to the donor. Upon this act the judges determined that the donee had no longer a conditional fee-simple, but they divided the estate into two parts, leaving in the donee a new kind of particular estate, which they denominated a fee tail ; and vesting in the donor the ultimate fee simple of the land, expectant on the failure of issue ; which expectant estate is what we now call a reversion. And hence Littleton says that tenant in fee tail is by virtue of this statute. About 200 years intervened between the making of the statute de donis and the application of common recoveries to this intent, in the twelfth of Edward IV. ; which were then openly declared by the judges to be a sufficient bar of an estate tail. For though the courts had, so long before as the reign of Edward III., very often hinted that a bar might be effected upon these principles, yet it was never carried into execution ; till Edward IV., observing (in the disputes between the houses of York and Lancaster) how little effect attainders for treason had on families whose estates were protected by the sanctuary of entails, gave his countenance to this proceeding, and suffered Taltarum's case to be brought before the court ; wherein, in consequence of the principle then laid down, it was in effect determined that a common recovery suffered by tenant in tail should be an effectual destruction thereof. These common recoveries are fictitious proceedings, introduced by a kind of pia fraus, to elude the

statute de donis, which was found so intolerably mischievous, and which yet one branch of the legislature would not then consent to repeal ; and that these recoveries are now become by long use a most common assurance of lands ; and are looked upon as the legal mode of conveyance by which a tenant in tail may dispose of his lands and tenements ; so that no court will suffer them to be shaken or reflected on, and even acts of parliament have by a < side-wind' countenanced and established them. This expedient having greatly abridged estates tail, with regard to their duration, others were soon invented to strip them of other privileges. The next that was attacked was their freedom from forfeitures for treason. For, notwithstanding the large advances m.uk-by recoveries, in the compass of about sixty years, towards unfettering these inheritances, and thereby subjecting the lands to forfeiture, tho rapacious prince then reigning, finding them Iro

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quently resettled in a similar manner to suit the convenience of families, had address enough to procure a statute, whereby all estates of inheritance (under which estates tail were covertly included) are declared to be forfeited to the king upon any conviction of high treason. The next attack which they suffered was by stat. 32 Hen. VIII. c. ,28, whereby certain leases made by tenants in tail, which do not tend to the prejudice of the issue, were allowed to be good in law, and to bind the issue in tail. But they received a more violent blow in the same session of parliament by the construction put upon the statute of fines, by stat. 32 Hen. VIII. c. 36, which declares a fine duly levied by tenant in

tail to be a complete bar" to him and his heirs, thenTali have a possibility to inherit one after the and all persons claiming undersuch entail. Ihis other. Taille special is that whereby lands or tene-

*«« .1 •..• *f»TT* ATTT …»

Taillage originally signifies a piece cut out of the whole ; and, metaphorically, a share of a man's substance paid by way of tribute. In law, it signifies a toll or tax. CoweU.

TAIL'LE, n. s. Fr. taille. See below.

Taille, the fee which is opposite to fee-simple, because it is so minced or pared that it is not in his free power to be disposed of who owns it ; but is, by the first giver, cut or divided from all other, and tied to the issue of the donee. This limitation, or taille, is either general or special. Taille general is that whereby lands or tenements are limited to a man, and to the heirs of his body begotten ; and the reason of this term is, because how many soever women the tenant, holding by this title, shall take to his wives, one after another, in lawful matrimony, his issue by

was agreeable to the intention of Henry VII., whose policy it was to lay the road as open as possible to the alienation of landed property, to weaken the overgrown power of his nobles. But, as they were not

easily brought to consent to such a provision, it was couched, in his act, under obscure expressions. And the judges, though willing to construe that statute as favorably as possible for the defeating of entailed estates, yet hesitated at giving fines so extensive a power by mere implication, when the statute de donis had expressly declared that they should not be a bar to estates tail. But the statute of Henry VIII., when the doctrine of alienation was better received, and the king's will more implicitly obeyed, established that intention. Yet, to preserve the property of the crown from infringement, all estates tail created by the crown are excepted. And the same was done with regard to common recoveries, by stat. 34 & 35 Hen. VIII. c. 20, which enacts that no feigned recovery had against tenants in tail, where the estate was created by the crown, and the reversion continues in the crown, shall be of any force and effect ; which is allowing indirectly their full force and effect with respect to ordinary estates tail, where the royal prerogative is not concerned. Lastly, by stat. 36 Hen. VIII., all estates tail are rendered liable to be charged for payment of debts due to the king by record or special contract; as since, by the bankrupt laws, they are also subjected to be sold for the debts contracted by a bankrupt. And, by the construction put on the stat. 43 Eliz. c. 4, an appointment by tenant in tail of the lands entailed to a charitable use is good without fine or recovery. Estates tail, being thus by degrees unfettered, are now reduced again to almost the same state, even before issue born, as conditional fees were in at common law, after the condition was performed by birth of issue. For, \ . The tenant in tail is now enabled to alienate his lands and tenements by fine, by recovery, or by certain other means ; and thereby to defeat the interest as well of his own issue, •hough unborn, as also of the reversioner, except in the case of the crown: 2. He is now liable to forfeit them for high treason : and, lastly, He may charge them with reasonable leases, and also with such of his debis as are due to the crown on specialties, or have been contracted with his fellow subjects in a course of extensive commerce. TAIL'LAGE, n.s. Vr.tailler. Defined below.

ments be limited unto a man and his wife, and the heirs of their two bodies begotten. Coioell.

TAl'LOR, n. s. Fr. tailleur, from tailler, to cut. One whose business is to make clothes.

I'll entertain a score or two of tailors, To study fashions to adorn my body.

Shakspeare. Richard 111.

Here's an English tailor come for stealing out of a French hose ; come, tailor, you may roast your goose.

Shakspeare.

The knight came to the tailor's to take measure of hi* £0wo. Camdeu.

The world is come now to that pass that the tailor and shoe-maker may cut out what religion they please. Howel.

In Covent-garden did a tailor dwell, That sure a place deserved in his own hell. King.

It was prettily said by Seneca, that friendship should not be unript, but unstitcht, though somewhat in the phrase of a tailor. Collier.

TAINT, v. a., v. n., & n. s. ") Fr. teindre ; of TAIST'LESS, adj. SLaLfuuro. To im—

TAIX'TURE n.s. j bue or impregnate

with any thing; corrupt; spoil; be infected: used in a bad sense generally : the noun substantive and adjective corresponding.

\Ve come not by the way of accusation To taint that honour every good tongue blesses.

iShakspeare. Her offence

Must be of such unnatural degree That monsters it ; or your forevouched affection Fallen into taint. Id. King Lear.

Now I

Vnspeak mine own detraction ; here abjure The taints and blames I laid upon myself.

Shakspeare.

See here ths taintnre of thy nest, And look thyself be faultless. Id.

Sirens fain*

The minds of all men, whom they can acquaint With their attractions. Chapman's Odyssey.

They the truth With superstitions and traditions taint. 31ilic-n.

Those pure immortal elements Eject him tainted now, and purge him off As a distemper. Id.

My hellhounds shall lick up the draff and hlth, Which man's polluting sin with taint hath shed On what was pure. Id.

Nothing taints sound lungs sooner than inspiring the breath of consumptive lungs.

Harvey on Consumptions.

A father that breeds his son at home, can keep him better from the taint of servants than abroad. Lvcl.t.

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There is found in the summer a spider called a slowly cut willi a razor, the blood is caught in a taint, of a red color, and so little that ten of the bowl, and handed round amongst the guests largest will hardly outweigh a gram. PVprv nr,0 ˆf ,,,>,ˆr ;,. \ˆ.,~,i ,„ .iS_i, ,r :…

largest will hardly outweigh a g;

Browne’s Vulgar Errours. But is no rank, no station, no degree, From this contagious taint of sorrow free 1 Prior.

Salts in fumes contract the vesicles, and perhaps the tainted air may affect the lungs by its heat.

Arbuthnot on Air.

With wholesome herbage mixt, the direful bane Of vegetable venom taints the plain. Pope.

No humours gross, or frowzy streams, Could from her taintless body flow.

Swift’s Miscellanies.

A sweetbread you found it tainted or fly-blown.

Swift.

The yellow tinging plague Internal vision taints. Thomson’s Spring.

The spaniel, struck

Stiff by the tainted gale, with open nose Draws full upon the latent prey. Thomson,

TAI-TONG, a city of the first rank in China, in Chan-si, in a mountainous country ; abounding with medicinal and other plants. It is well fortified, has a strong garrison, and four cities of the second rank, and seven of the third, in its jurisdiction. Its territories abound with lapis lazuli, and a particular kind of jasper called yieche, which is as white and beautiful as agate ; marble and porphyry are also

common ; and a great revenue is produced from the skins whidi are dressed here. 155 miles west of Pekin.

TAKA, a considerable district of Nubia, in the track between Shendy and Suakin. It is about three days journey in length, and one in breadth, and of extreme fertility. Its inhabitants are largely composed of Bedouin Arabs. Its dhourra is of the best quality, and is sold in the market of Jidda twenty per cent, higher than that of Egypt. Its camels “and oxen are equally celebrated. The people are hospitable, but accused of treachery to strangers. The chief articles imported are tobacco, natron, spices, especially cloves, incense, beads, and hardware : in return for which they give dhourra..

The chief tribe are the Bisharein, who have their bouza huts, and their public women. Wives make no difficulty in receiving strangers into their tents ; ‘ but,’ says Burckhardt, with great simplicity, ‘ this never happened to me : for whenever I presented myself before a tent, the ladies greeted me with loud screams, and waved their hands for me to depart instantly.’ These people eat the blood of animals coagulated over the fire, and the liver and kidneys raw ; but the rnilk of the camel and dhourra are their principal articles of food. Like the Bishareins of Atbara, those of Taka are treacherous, revengeful, and addicted to theft. ‘ A Hadendoa seldom scruples to kill his companion on the road in order to possess himself of the most trifling article of value, if he entertains a hope of doing it with impunity ; but the retaliation of blood exists in full force. Among the Hallenga, who draw their origin from Abyssinia, a horrible custom is said to attend the revenge of blood ; when the slayer has been seized by the relatives of the deceased, a family feast is proclaimed, at which the murderer is brought into the midst of them, hound upon an angareyg, and, while his throat is

every one of whom is bound to drink of it at the moment the victim breathes his last.’ — Burckhardt.

TAKE, v. a. & v. n. ˆ Saxon taecan ; Goth. TAˆKEK, n. s. ˆtaka; Swed. tagu ,

TA’KING. y barb. Lat. tago of tango.

To receive ; lay hold on ; seize ; snatch ; arrest ; surprise ; captivate ; entrap ; exact ; obtain in any way ; adopt ; employ ; swallow ; to perform any action; follow; pursue; convey; receive mentally; admit;

assume ; endure; bear. Such are the principal senses : Dr. Johnson observes, ‘ This verb, like prendre in French, is used with endless multiplicity of relations. Its uses are so numerous that they cannot easily be exemplified ; and its references to the words governed by it so general and lax, that they can hardly be explained by any succedaneous terms. But commonly that is hardest to explain which least wants explication.’ It takes the adjuncts away, care, course, down, from, head, heed to, in, in hand, notice, oath, off, order with, out, part, place, timt’, •up, upon, as exemplified below. The verb neuter means to direct the course; have a tendency to; please ; gain reception ; have a designed effect ; catch ; fix ; and has the adjuncts after, in with, on, to, up, up with, with, &c. A taker is one who takes : a taking, seizure; distress or strong affection of mind.

Enoch walked with God, and he was rot, for God took him. Gen. v. 24.

I will take you to me for a people, and I will be to you a God. Exodus vi. 7.

Thou shall not take the name of the Lord in vain.

Exnilus.

Take no usury of him or increase. Lev. xxv. 36.

Hath God assayed to take a nation from the midst of another1? Deut. iy. 34.

No man shall take the nether or the upper mill-stone to pledge. Id. xxiv. 6.

Thou art taken in thy mischief. 2 Sam. xvi. 8.

Take us the foxes that spoil the vines.

Cant. ii. 15.

Peradventure we shall ‘prevail against him, ami take our revenge on him. Jer. xx. 10.

He put forth a hand, and look me by a lock of 1117 head. Ezek. viii. 3.

They shall not take shame. Mic. ii. b’.

Whensoever he takelh him he teareth him ; and he foameth. Murk ix. 18.

If any take away from the book of this prophecy, God shall take away his part out of the book of life.

Rev. xx. 1!».

Five hundred asses yearly took the horse, Producing mules of greater speed and force.

Sandys.

No purposes whatsoever which are meant for the good of that land will prosper, or take good effect.

Spenser.

Damasco, without any more ado, yielded unto tin-Turks ; which the bassa took in so good part, that h« would not suffer his soldiers to enter it.

Knollfs's History of the Turks.

This great bassa was born in a poor country village, and in his childhood taken from his Christian parents by such as take up the tribute children.

lil.

I will frown as they pass by, and let them take it as they list.
Sh<:ksi>earr. Romeo mid Juliet

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La you ‘ if you speak ill of the devil, how he takfs it at heart. Id. Twelfth Night.

Appoint a meeting with this old fat fellow, Where we may take him, and disgrace him for it.

Shakspeare.

More than history can pattern, though devised And played to take spectators. Id.

Strike her young bones,

You taking airs with lameness ! Id.

That hand which had the strength, even at your

door, To cudgel you, and make you take the hatch. Id.

This I take it Is the main motive of our preparations. Id.

You must forsake this room, and go with us ; Your power and your command is taken off, And Cassio rules in Cyprus. Id.

The smooth pates now wear nothing but high shoes ; and, if a man is through with them in honest taking »/;>, they stand upon security. Id.

I take not on me here as a physician : Nor do I, as an enemy to peace, Troop in the throngs of military men : But rather

To purge the’ obstructions which begin to stop Our very veins of life. Shakspeare. Henry IV.

How will my mother, for a father’s death, Take on with me, and ne’er be satisfied ! Shakspeare.

He will hang upon him like a disease : He is sooner caught than the pestilence, And the taker runs presently mad. Id.

What a taking was he in, when your husband asked who was in the basket ! Id.

The words are more properly taken for the air or aether than the heavens. Raleigh.

The queen, hearing of a declination of monarchy, took it so ill as she would never after hear of the other's suit. Bacon.

A following hath ever been a thing civil, and well taken in monarchies, so it be without too much popularity. Id.

You take me right, Eupolis ; for there is no possibility of an holy war. Id. Holy War.

If any of the family be distressed, order is taken for their relief : if any be subject to vice, or take ill courses, they are reproved. Id. New Atlantis.

Before I proceed, I would take some breath. Bacon. It appeared in his face, that he took great contentment in this our question. Id.

Men die in desire of some things which they take to heart. Id.

They that come abroad after these showers are commonly taken with sickness. M.

They meant to take a course to deal with particulars by reconcilements, and cared not for any head.

Id.

To stop schisms, take off the principal authors by winning and advancing them, rather than enrage them by violence. Id.

A great vessel full being drawn into bottles, and then the liquor put again into the vessel, will not till the vessel again so full as it was, but that it may take in more. Id.

Though he would have turned his teeth upon Spain, yet he was taken order with before it came to that. ' Id.

Men once placed take in with the contrary faction to that by which they enter. Id. Essays.

Our gracious master is a precedent to his own sub-ects, and seasonable mementos may be useful : and, being discreetly used, cannot but take well with him.

hi.

Berry coffee and tobacco, of which the Turks are great takers, condense the spirits, and make them strong. Id.

When news were brought that the French kin;; besieged Constance, he posted to the sea-coast to take ship. Camden.

The knight coming to the taylor's to take measure of his gown, perceiveth the like gown cioth lying there. Id.

Why, now you take me ; these are rites That grace love's days, and crown his nights : These are the motions I would see. Ben Jonson.

The dear sale beyond the seas increased the num-ber of takers ; and the takers jarring and brawling one with another, and foreclosing the fishes, taking their kind within harbour, decreased the number of the taken. Carew.

Should a great beauty resolve to take me in with the artillery of her eyes, it would be as vain as for a thief to set upon a new-robbed passenger. Stickling.

His wind he never took whilst the cup was at his mouth, but observed the rule of drinking with one breath. Hakewill.

If I renounce virtue, though naked, then I do it yet more when she is thus beautified on purpose to allure the eye, and take the heart. Decay of Piety.

God's decrees of salvation and damnation have been taken up by some of the Romish and reformed churches, affixing them to men's particular entities, absolutely considered. Hammond.

The parliament took upon them to call an assembly of divines, to settle some church controversies, of which many were unfit to judge. Sanderson.

Scaliger, comparing the two orators, says, that nothing can be taken from Demosthenes, nor added to Tully. Denham:

Few like the Fabii or the Scipios are, Takers of cities, conquerors in war. Id.

The diminution of the power of the nobility they took very heavily. Clarendon.

They silenced those who opposed them, by traduc- .ng them abroad, or taking advantage against them in the house. Id.

Resolutions taken upon full debate were seldom prosecuted with equal resolution. Id.

He took himself to have deserved as much as any man, in contributing more, and appearing sooner, in their first approach towards rebellion. Id.

Till there were a perfect reformation, nothing would prosper that they took in hand. Id.

The bill for taking away the votes of bishops was called a bill ior taking away all temporal jurisdiction.

Id.

He alone To find where Adam sheltered took his way. Milton.

Take to thee from among the cherubim Thy choice of flaming warriors. Id.

I hope you will not expect from me things demonstrated with certainty ; but will take it well that I should offer at a new thing. Grawit.

I am contented to dwell on the Divine Providence, and take up any occasion to lead me to its contemplation. Hale. Tygers and lions are not apt to take the water.

Id.

She saw in what a taking The knight was, by his furious quaking. Hudibras.

I ought to have a care To keep my wounds from taking air. Id.

Beasts, that converse With man, take after him, as hogs Get pigs all th' year, and bitches clogs. Id.

Turkeys take down stones, having found in the gizzard of one no less than seven hundred.

Browne'1* Vulgar Errours.

Princes were so taken up with wars that few could write or read

besides those of the long robes.

Temple.

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Chemists tale, in our present controversy, something for granted, which they ought to prove. Boyle.

When the frost and rain have taken them, they grow dangerous. Temple.

The firm belief of a furure judgment is the most forcible motive to a good life, because taken from this consideration of the most lasting happiness and mi-sery. Tillotson.

15e thou advised, thy black design forsake ; Death, or this counsel, from Lucippus take. Waller.

An honest man may take a knave's advice, But ideots only may be cozened twice. Dryden.

In fetters one the barking porter tied, And took him trembling from his sovereign's side.

Id.

Old as I am, I take thee at thy word, And will to-morrow thank me with my sword. Id. I took not arms till urged by self-defence. Id.

A long sigh he drew, And, his voice failing, took his last adieu. Id. Fables.

Her lovers' names in order to run o'er, The girl took breath full thirty times and more.

Dryden.

Distressed myself, like you, confined I live, And therefore can compassion take and give. Id.

If I have been a little pilfering, I take it bitterly of thee to tell me of it. Id.

Our phcenix queen was pourtrayed too so bright, Beauty alone could beauty take so right. Id.

At first they warm, then scorch, and then they take, Now with long

necks from side to side they feed ;

At length grown strong their mother fire forsake, And a new colony of flames succeed. Id.

Few are so wicked as to take delight In crimes unprofitable. Id.

I took your weak excuses. Id.

Take my esteem :

If from my heart you ask or hope for more, 1 grieve the place is taken up before. Id.

L can be as quiet as any body with those that are quarrelsome, and be as troublesome as another when 1 meet with those that will take it. L'Plstrange.

The cat presently takes a tree, and sees the poor fox torn to pieces. Id.

The ass takes up with that for his satisfaction, which he reckoned upon before for his misfortune. Id. Give them one simple idea, and see that they take it right, and perfectly comprehend it. Locke.

Upon this assurance he took physick. Id.

He that should demand of him how begetting a child gives the father absolute power over him, will find him answer nothing ; we are to take his word for this. Id.

A multitude, how great soever, brings not a man any nearer to the end of the inexhaustible stock of number, where still there remains as much to be added as if none were taken out. Id.

I take liberty to say that these propositions are so far from having an universal assent, that to a great part of mankind they are not known. Id.

Time is taken for so much of minute duration as is measured out by the great bodies of the universe. Id. It is not in the power of the most enlarged understanding to frame one new simple idea in the mind not taken in by the ways aforementioned. Id.

Were the pleasure of drinking accompanied, the moment a man taket off his glass, with that sick stomach which, in some men, follows not many hours after, no body would ever let wine touch his lips. Id.

The least things are taken up by the thumb and forefinger : when we would take up a greater quantity, we would use the thumb and all the fingers. Ray.

If you slit the artery, thrust a pipe into it, and (ast a straight ligature upon that part containing the

pipe, the artery will not beat lx;low tiie ligature ; yt» do but take it <;//", and it will beat immediately.]<l.

No beast will eat sour grass ti'l ihe frost hatli taken it. Mortimer.

Upon the sea-coast are parcels of land that would oay well for the taking in. ,.

Madam, were 1 as you, I'd take her counsel.

Philips.

So soft his tresses, filled with trickling pearl, You'd doubt his sex, and take him for a girl. Talc. 1 took a walk in Lincoln's Inn Garden. Taller. The Carthaginian took his seat, and Pompey entered with great dignity in his own person. Id.

Honeycomb, on the verge of threescore, took me aside, and asked me whether I would advise him to marry? Addison's Spectator.

The husband's affairs made it necessary for him to take a voyage to Naples. Id.

Doctor Moore, in his Ethicks, reckons this particular inclination, to take a prejudice against a man for his looks, among the smaller vices in morality, and names it a prosopolepsia. Id.

Lovers flung themselves from the top of the precipice into the sea, where they were sometimes taken up alive. Addison.

Lacqueys were never so saucy and pragmatical as now, and he should be glad to see them taken dou-n.

Id.

Take off z\ their models in wood. Id.

We took up arms, not to revenge ourselves, But free the

commonwealth. Id.

Arnobius asserts that men of the finest parts and learning, rhetoricians, lawyers, physicians, despising the sentiments they had once been fond of, took up their rest in the Christian religion.

Id. on the Christian Religion, These heads are sufficient for the explication of this whole matter ; taking in some additional discourses, which make the work more even. Burnet.

Tell an ignoramus in place to his face that he has a wit above all the world, and, as fulsome a dose as you give him, he shall readily take it down, and ad-mit the commendation, though he cannot believe the thing. Smth.

Is a man unfortunate in marriage ? Still it is because he was deceived ; and so took that for virtue and affection which was nothing but vice in a disguise. Id.

This grated harder upon the hearts of man than the strangeness of all the former articles that took up chiefly in speculations. Id.

It concerns all, who think it worth while to be in earnest with their immortal souls, not to abuse themselves with a small confidence ; a thing so easily taken up, and so hardly laid down. Id. Sermons. I lake thee at thy word. Howe's Ambitious Stepmother.

Heightened revenge he should have took; He should have burnt his tutor's book. Prior.

Wise men are overborn-when taken at a disadvantage. Collier of Confidence.

Though he that is full of them thinks it rather an ease than oppression to speak them out, yet his auditors are perhaps as much taken up with themselves. Government of the Tongue. The living fabrick now in pieces take, Of every part due observation make ; All which such art discovers. Blackmore.

We always take the account of a future state into our schemes about the concerns of this world.

Atterbury.

Young gentlemen ought not only to take along with them a clear idea of the antiquities on meduli and figures, but likewise to exercise their

arithmetick in reducing the sums of money to those of their own country. Aibutlniot on Cnii,',

Tiberius, noted for his niggardly temper, only gave his attendants their diet; but once he was taken with a fit of generosity, and divided them into three classes.

Arbut/tnot.

Cleombrotus was so taken with this prospect that he had no patience. Wake.

Charity, taken in its largest extent, is nothing else but the sincere love of God arfd our neighbour. Id.

Your present distemper is not so troublesome as to lake you off from all satisfaction. Id.

Men in their loose unguarded hours they take, Not that themselves are wise, but others weak.

Pope.

Some lories will take you for a whig, some whigs will take you for a tory. Id.

Not foes nor fortune take this power away,

And is my Abelard less kind than they ? Id.

Take part in rejoicing for the victory over the Turks. Id.

I am possessed of power and credit, can gratify my favourites, and take vengeance on my enemies. Swift.

As I take it, the two principal branches of preaching are, to tell the people what is their duty, and then to convince them that it is so. Id.

Though so much of heaven appears in my make, The foulest impressions I easily tabs. Id.

‘ With a two foot rule in his hand measuring my walls, he tuok the dimensions of the room. Id.

Miss Betsy won’t take to her book. Id.

This man always takes time, and ponders things maturely, before he passes his judgment. Watts.

A student should never satisfy himself with bare attendance on lectures, unless he clearly takes up the sense. Id.

TALAVERA DE LA REYNA, an ancient town, of Spain, in New Castile, on the right bank of the Tagus, over which there is a bridge of thirty-five arches, 1200 feet in length. It is surrounded by a fertile plain of vast extent, intersected by the river. Part of the old ramparts are in preservation, but they are little more than an object of curiosity ; it is, in a military sense, altogether open. Here are several well built churches, in particular that of the Hieronymites ; and two public walks, one on the north, the other on the south of the town. But the dwelling houses are seldom more than one story in height; and the streets are badly paved and crossed by a number of narrow lanes. Its population, including the suburbs, is about 8000. Silk manufactures, established here about the year 1748, are still carried on ; and in the neighbouring village of Cervera are manufactures of soap, hats, and earthenware, on a small scale. Talavera contains many Ro-man monuments ; but it does not, as some imagine, correspond to the ancient Ebora. It fell into the hands of the Moors in 714, continued long in their possession, and, when the Christians succeeded in re-occupying the inland provinces, was repeatedly taken and retaken. In the beginning of the twelfth century it was sacked by the Moors. This place has given birth to several men of eminence, of whom the best known is Mariana the historian. It is memorable for the battle fought on 27th and 28th July 1809, between a French army, amounting to 47,000 men, and an allied force, in which there were 19,000 British, and between 30,000 and 40,000 Spaniards ; and in which the French, after making several desperate attacks, were repirlsed. Sixty-three miles W. S.W. of Madrid.

TALBOT (William), U D., an eminent English prelate, born in t659, and educaied at

Oxford. In the reign of James II. he preacl.t-u with great courage and zeal against popery ; ;o.- which, after the revolution, he was promoted to be dean of Worcester, and afterwards bishop of Salisbury. In 1722 he was made bishop of Durham; published several sermons; and died in 1730.

. TAI.BOT (Catherine), an ingenious lady, was the only child of

Edward, second son of bishop Talbot, and born five months after the decease of her father, who died early. Her mother, therefore, accepted the invitation of Dr. Seeker, afterwards archbishop of Canterbury, the friend of her late husband, to become a part of their family. Here Miss Talbot received an excellent education, which she much improved by her own application. On the death of the archbishop in 1768, who bequeathed £400 to Mrs. and Miss Talbot, they removed to a habitation of their own ; and after a while, in cpnsequence of the declining health of Miss Talbot, to the house of the marchioness De Gray at Richmond, where the latter died of a cancer in her forty-ninth year. This lady was the intimate friend of Mrs. Carter, with whom she kept up a literary correspondence of considerable interest. Her works are Reflections on the Seven Days of the Week, Essays on Various Subjects, Letters to a Friend on the Future State, Dialogues, Prose Pastorals, Imitations of Ossian, Allegories, and poetry.

TALC, or TALK, in the old system of mineralogy, a species of fossil formerly arranged under the magnesian earths; and, in Magellan's edition of Cronstedt's Mineralogy, ranked as a species of Mica. See MICA. There are two varieties, *viz.* : 1. T. Muscovy, called also lapis specularis, is very common in Russia, and Cyprus ; and in the Alps, the Appennines, and many mountains of Germany. It is imported in large quantities into England, and is used by the lantern-makers , instead of horn in their nicer works ; by the painters to cover miniature pictures; and by the microscope-makers to preserve small objects for viewing by glasses. The ancients used it instead of glass in their windows. It differs from plaster stone in this, that it does not, after being calcined and wetted with water, swell and concrete into a hard stony substance. Muscovy-talc and lapis sjitrjularis were long considered as the same, but a distinction is now discovered between them. See MINERALOGY. Talc is employed, in places where it is found in considerable quantity, in compositions for earthen vessels, tests and cupels, &c. From its smoothness, unctuosity, and brightness, it has been celebrated as a cosmetic ; and former chemists submitted it to a variety of operations, for procuring from it oils, salts, tinctures, magisteries, Sec. But all their labors proved in vain.

2. T. Venetian, is not so named from being a production of the territories of Venice (for it is seldom met with in that country), but as an article of Venetian commerce. It abounds in England, Norway, Hungary, Bohemia, Spain, and in many countries of Asia. With half its weight of alkaline salt, it may, in a strong fire, he brought into perfect fusion, though not to perfect trnnsparency ; with equal weight, or less of bor;;x, it mns into n, beautiful, pellucid, greenish yellow

talebearing, to set her against the rest of the servant*.

Arbuthnot. This story prepared their minds for the reception

glass. Talc does not melt with any other earth, nor even bake or cohere with any but the argillaceous ; mixtures of it with them all are nevertheless brought into fusion by a remarkably less °^ any tales relating to other countries. quantity of saline matter than the ingredients TAL'ENT, n. s. Lat. talent urn. So much separately would require. Thus equal parts of weight : hence a sum of money ; the value difter-talc and chalk, with only one-fourth their weight ing according to different ages and countries: of borax, melt in a moderate heat into a fine faculty ; power ; ability ; quality ; disposition.

transparent greenish glass, of considerable hardness and great lustre. On substituting gypseous earths to chalk, the fusion is as easy, and the glass as beautiful ; in color not green, but yellow

Five talents in his debt, His means most short, his creditors most straight.

Slia/ts/ieare. Many who knew the treasurer's talent in removing

like the topaz. Talc, with half its weight of PreJudices. and reconciling himself to wavering affec-

sand, and a quantity of nitre equal to both, yields also a transparent topaz yellow glass. See other experiments.by Mr. Pott, in Mem. de 1' Acad. de Berlin, 1746.

TALC, in the new system of mineralogy, is reckoned by Dr. Thomson a species quite distinct from mica; and is subdivided into three varieties; *viz.* 1. The scaly talc; 2. The Venetian or common talc; and 3. The shistose talc. See MINERALOGY.

TALCITE, n. s. A name given by Kirwan to scaly talc. See MINERALOGY.

TALE, n. s. \ Sax. rale, from rellen, to

TALE'BEARER, Mell. A narrative ; a story;

TA LE'BEARING. j information ; something told : hence a number reckoned ; numerical account : commonly a slight or petty account of some trifling or fabulous incident : as, ' a tale of a tub :' a talebearer is an informer; tattler: always used in an ill or reproachful sense: the other noun substantive corresponding.

We spend our years as a tale that is told.

Psalm xc. 9.

Number may serve your purpose with the ignorant, who measiue by tale, and not by weight. Hooker.

My conscience hath a thousand several tongues, And every tongue brings in a several tale, And every tale condemns me for a villain. Shukspeare.

Hermia, for aught I could read, Could ever hear by tale or history, The course of true love never did run smooth. Id.

Birds live in the air freest, and are aptest by their voice to tell tales what they find, and by their flight to express the same. Bacon.

Twelve returned upon the principal pannel, or the tales, are sworn to try according to their evidence.

Hale.

Money being the common scale Of things by measure, weight, and tale; In all the' affairs of church and state, Tis both the balance and the weight. Hudibras.

For every bloom his trees in spring afford, An autumn apple was by tale restored.

Dryden’s Virgil.

The herald for the last proclaims A silence, while they answered to their names, To shun the fraud of musters false ; The tale was just. Id. Knight’s Tale.

The liberty of a common table is a tacit invitation to all intruders ; as buffoons, spies, talebearers, flatterers. L’ ‘Estrange.

In great families, some one false, paultry talebearer, by carrying stones from one to another, shall inflame the minds, and discompose the quiet, of the whole family. South.

Reasons of things are rather to be taken by weight than tale. Cullier on Cloaihs.

The said Timothy was extremely officious about

Uons> believedthe loss of ˆ duke was unseasonable

Though the nation generally was talent to the church in doctrine or discipline, yet they were not without a jealousy mat popery was not enough discountenanced. ,.

He, Agelius, though otherwise a very worthy man, yet, having no talent for disputation, recommended Sisinnius, his lector, to engage in a conference.

Water land.

Two tripods cast in antick mould, With two great talents of the finest gold. Drijden.

He is chiefly to be considered in his three different talents, as a critick, satirist, and writer of odes. Id.

It is the talent of human nature to run from one extreme to another. Swift.

‘Tis not my latent to conceal my thoughts, Or carry smiles and sunshine in my face, When discontent sits heavy at my heart.

Addison’s Cato.

They are out of their element, and logick is none of their talent. Baker on Learning.

Persons who possess the true talent of raillery are like comets ; they are seldom seen, and all at once admired and feared. Female Qtiisote.

TALENT, ATTIC. The common Attic talent of weight contained sixty Attic ininre, or 6000 Attic drachmas; and weighed, according to Dr. Arbuthnot, 56 Ibs. 11 oz. 17£ gr. English troy weight. There was another Attic talent, by some said to consist of eighty, by others of 100 mince.

TALENT, EGYPTIAN and ANTIOCHIAN. The Egyptian talent was 80 minos; the Autiochian also 80 ; the Ptolematic of Cleopatra 86f ; that of Alexandria 96 ; and the Insular talent 120.

TALENT, GRECIAN, SYRIAN, TYRIAN, &c. In the valuation of money, the Grecian talent, according to Dr. Arbuthnot, was equal to 60mina-, or, reckoning the mma at £3 4s. 7d., equal to £193 15s. The Syrian talent in this valuation consisted of 15 Attic mina3 ; the Ptolemaic of 20; the Antiochian of 60; the Euboic of <K> ; the Babylom'c of 70; the Greater Attic of "(' ; the Tyrian of 80; the Eginean of 100; tiu' Rhodian of 100 ; and the Egyptian of 8O miiut . There is another talent much more ancient, wluc'i Dr. Arbuthnot calls the Homeric talent of gold, which seems to have weighed six Attic drachms or three darics, a daric weighing very little more than a guinea.

TALENT, JEWISH. Talents, as a species of money, among the Hebrews, was sometimes IKM! for a gold coin, the same with the shekel of gold, called also stater, and weighing only four drachms. The Hebrews reckoned by these talents as we do by pounds, See. Thus a million of gold, or million of talents of gold, among them, was a million of shekels or nummi; the

J. uc aaiu. .1 luiutiiy waa CAHCUICJJ wu*v*vt*» »*w»" . ..

their mistress's person, endeavouring, by flattery and nummus of gold being the same weight willi

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the shekel, *viz.* four drachms. But the Hebrew talent weight of silver, which they called cicar, was equivalent to that of 3000 shekels, or 113 Ibs. 10 oz. 1 dwt. 10$ gr. English troy weight, according to Arbuthnot.

TALENT, ROMAN. Among the Romans there were two kinds of talents, the little and the great talent ; the little was the common talent ; and, •whenever they say simply talentum. they are to be understood of this. The little talent was 60 minse or Roman pounds ; the mina or pound estimated at 100 drachmae or denarii; it was also estimated at twenty-four great sesterces, which amounted to 60 Ibs. The great talent exceeded the less by one-third part. Budaeus computes, that the little talent of silver was worth £75 sterling, and the great £99 6s. 8d. sterling. The greater of gold was worth £1125 sterling.

TALESSE. See TALA.SSEE.

TALETUM, a town of Laconia, on mount Taygetus, famous for its temple of Apollo. Horses were sacrificed in it. Paus.

TALHAIARN, a celebrated bard of Wales, •who flourished in the middle of the seventh century. He composed among other poems a poetical prayer, which became a general formula among the bards.

TALIACOTIUS (Caspar), chief surgeon to the great duke of Tuscany, was born at Bononia, in Italy, in 1553. He wrote a Latin treatise entitled Chirurgia Nota de Curtis Membris, in which he teaches the art of engrafting noses, ears, lips, &c., giving representations of the instruments and proper bandages.

TALIESSIN, the most famous of the ancient bards of Wales. He flourished in the sixth century, under princes Elphin and Urien. About eighty of his poems are preserved, and published in the Welsh Archaeology.

TALIO, lex talionis, or the law of retaliation; a species of punishment, in the Mosaic law, whereby an evil is returned similar to that committed against us by another; as an ‘eye for eye, tooth for tooth.’ This law was first inserted in the XII. tables amongst the Romans ; but afterwards set aside, and a power given to the praetor to fix upon a sum of money for the da-mage.

TAL’ISMAN, n. s. \ Gr. Tt\fffˆa.— Skin-TALISMAN’IC, adj. S ner. Arab, talia az-tnan is to try fortune. A magical character. See below. The adjective corresponding.

The figure of a heart bleeding upon an altar, or held in the hand of a Cupid, has always been looked upon as talismanick in dresses of this nature.

Addison. Of talismans and sigils knew the power,

And careful watched the planetary hour. Pope.

If the physicians would forbid us to pronounce gout, rheumatism, and stone, would that serve like so many talismani to destroy the diseases 1 Swift.

TALISMANS are magical figures cut or engraved with superstitious observations on the character- ,jsms and configurations of the heavens, to which some astrologers have attributed wonderful virtues, particularly that of calling down celestial influences. The talismans of Samothrace, so famous of old, were pieces of iron formed into certain images, and set in rings ; these were esteemed meservatives against all kinds of evils.

There were likewise talismans taken from vece-tables, and from minerals.

TALK’, v. n. & n. s. ~\ Belgic taelen, or TALK’ATIVE, adj. I from TALE. To speak TALK’ATIVEXESS, n. s. >in conversation; speak TALK’ER, i fluently and familiarly;

TALK’Y, adj. J converse ; prattle :

oral conversation ; speech; report; rumor: talkative, loquacious : the noun substantives following correspond : talky, consisting of talk : resembling talk.

Will ye speak wickedly for God, and talk deceitfully for him. Jab xiii. 7.

The princes refrained talking, and laid their hand on their mouth. Id. xxix. 9.

Let me talk with thee of thy judgments.

Jer. xii. 1.

The children of thv people still talk against thee.

Ezekict.

How can he get wisdom that driveth oxen, is occupied in their labours, and whose talk is of bullocks?

Ecclits. xxxviii.

If I have held you overlong, lay hardly the fault upon my old age, which in its disposition is talkative.

Sidney.

Perceiving his soldiers dismayed, he forbad them to have any talk with the enemy.

Knollet't History of the Turks.

I will buy with you, sell with you, talk with you ; but I will not eat with you. Shakspeare.

We do remember ; but our argument Is all too heavy to admit much talk. Id.

Keep me company but two years, Thou shall not know the sound of thine own tongue. — Farewell ; I'll grow a talker for this jeer. Id.

As God remembers that we are but flesh, unable to bear the nearer approaches of divinity, and so talks with us at once with Moses through a cloud ; so he forgets not that he breathed into us the breath of

life, a vital active spirit. Decay of Piety.

The greatest talkers in the days of peace have been the most pusillanimous in the day of temptation.

Taylor.

Hypocrites austerely talk Of purity. Milton.

The crystalline sphere, whose balance weighs The trepidation talked. Id\

What delight to be by such extolled, To live upon their tongues and be their talk, Of whom to be despised were no small praise ? Id.

Here free from court compliances he walks, And with himself, his best adviser, talks. Waller.

Consider well the time when Petavius first began to talk in that manner. Waterlatid.

We will consider whether Adam had any such heir as our author talks of. Locke.

This ought to weigh with those whose reading is designed for much talk and little knowledge. Id.

I hear a talk up and down of raising our money, as a means to retain our wealth, and keep our money from being carried away. Id.

If it were desirable to have a child a more brisk ttilker, ways might be found to make him so, but a wise father had rather his son should be useful when a man, than pretty company. Id. em Education.

My heedless tongue has talked away this life.

Rome.

I am ashamed I cannot make a quicker progress in the French, where every body is so courteous and talkative. Addison.

We call this talkativeness a feminine vice ; but he that shall appropriate loquacity to women, may perhaps sometimes need to light Diogenes's candle to seek a man. Government of the Tonaue.

It is a difficult task to talk to the purpose, and to put life and perspicuity into our discourses.

Collier on Pride.

The coxcomb bird so talkative and grave, That from his cage cries cuckold, whore, and knave ; Though many a passenger he rightly call, You hold him no philosopher at all. Pope.

In various talk the instructive hours they past, Who gave the ball, or paid the visit last. Id.

Learned women have lost all credit by their impertinent talkativeness and conceit. Swift.

Talking over the things which you have read with your companions, fixes them upon the mind. Watts.

Let me give for instance some of those writers or talkers who deal much in the words ISature or Fate.

Id.

TALK, n. a. } From TALC, which see. Fr.

TALK'Y, adj. $ talc. A mineral : the adjective corresponding.

Venetian talk kept in a heat of a glass furnace, though brittle and discoloured, had not lost much of its bulk, and seemed nearer of kin to talk than mere earth. Boyle.

Stones composed of plates are generally parallel, and flexible and elastick : as talk, cat-silver or glimmer, of which there are three sorts, the yellow or golden, the white or silvery, and the black.

Wcudward on Fossils.

The lalhi] flakes in the strata were all formed be-fore the subsidence along with the sand. Id.

TALL, adj. > Fr. tailte ; Ital. taglia;

TALL'NESS, n. s. $ Span, tails ; Welsh tal. High in stature ; lofty ; sturdy : the noun substantive corresponding.

An hideous giant, horrible and high, That with his tallness seemed to threat the sky.

Spenser.

Bring word how tall she is.

Shukspeare. Antony and Cleopatra.

I'll swear thou art a tall fellow of thy hands, and that thou wilt not be drunk ; but I know thou art no tall fellow of thy hands, and that thou wilt be drunk ; but I would thou wouldst be a tall fellow of thy hands. Id. Winter's Tale.

The eyes behold so many naked bodies, as (oit/tll-nets of stature could hardly be equalled in any country. Hayward.

Two of nobler shape, Erect and tall. Milton.

Winds rushed abroad

From the four hinges of the world, and fell On the vest wilderness, whose tallest pines, Though rooted deep as high, and sturdiest oaks, Bowed their stiff necks. Milton's Paradise Regained.

May they encrease as fast, and spread their boughs, As the high fame of their great owner grows ! May he live long enough to see them all Dark shadows cast, and as his palace tall ! Methinks I see the love that shall be made, The lovers walking in that amorous shade. Waller.

They lop, and lop, on this and that hand, cutting away the full, sound, and substantial timber, that used to shelter them from the winds. Davenant.

TAL'LAGE, n. s. Fr. taillage. Impost; ex-cise.

The people of Spain were better affected unto Philip than to Ferdinando, because he had imposed upon them many taxes and tallages.

Bacon's Henry VII.

TALLARD (Camillus d'Hostun), count of, a celebrated French general, born at Provence in 1652. lie commanded the army on the Rhine in 1702, and in 1703 was made a marshal ; when

he defeated the prince of Hesse-Cassel, and took Landau. In 1704 he was sent with an army of 40,000 men against the duke of Marlboroueh and prince Eugene; but was defeated and taken prisoner at the battle of Hochstet, and brought over to England, where he was detained seven years. Upon his return to Paris he was created a duke, and made secretary of state in 1720. He died in 1728.

TALLEYRAND-PERIGORD (Alexandra Angelique de) the son of the marquis cle Talleyrand, and uncle of the celebrated statesman of the same name, was born at Paris in 1736. He obtained various benefices in the church early in life, and became royal almoner, and grand vicar of Verdun : before he was thirty he was appointed coadjutor of the archbishop of Rheims, whom he succeeded in 1777. Nominated a member of the second assembly of the Notables, and afterwards a deputy of the States General, he vainly endeavoured to defend the privileges of the clergy. At length he retired to Aix-la-Chapelle, and

subsequently resided at Weimar and Brunswick. Louis XVIII. having invited him to Mittau, lie accompanied that prince to England ; and on the death of the cardinal de Montmorenci, in 1 808. succeeded him as grand almoner. At the restoration he had at first great influence in ecclesiastical affairs, but his councils were afterwards neglected. In 1816 he resigned the archbishopric of Rheims, and the following year was appointed to that of Paris and made a cardinal. The execution of the concordat of 1817 meeting with obstacles, he did not. take possession of his see till 1819, and the remainder of his life was devoted to the regulation of its concerns. He died October 20th 1821.

TALLIEN (Jean Lambert), one of the leaders in the French revolution, was originally a porter and then a steward, after which he became a clerk under government. In 1791 he was editor of the Moniteur; and about the same time was made secretary-general of the commune of Paris. During the reign of terror he did some praiseworthy actions, and M. Hue, valet-de-chamhre to Louis XVI., and Madame de Stael, \ere indebted to him for their lives. The end of that dreadful anarchy in the downfall of Robespierre will hand the name of Tallien down to posterity with honor, when his other deeds are forgotten. He had formed an attachment for Madame Cabarus ; but at this period the connexion was broken off and she was thrown into a dungeon. Robespierre, being afraid of Tallien, offered her life and liberty if she would betray him. But, though her lover had been faithless, she rejected the proposal, and sent privately this note to Tallien : — ‘ The minister of police has announced to me that to morrow I am to appear at the tribunal—that is to say, I am to ascend the scaffold, I dreamt last night that Robespierre was no more, and that my prison doors were opened. A brave man might have realised this dream ; -but, thanks to your cowardice, no one remains capable of Us accomplishment.’ Tallien answered— ‘ Be as prudent as I shall prove brave ; and above all be tranquil.’ The next day he hurried to the tribune, and, regardless of all danger, attacked Robespierre to his face with

such eloquence that the hearers were electrified. Then, snatching a dagger from his bosom, he swore that he would bury it in the tyrant's heart if he were not publicly denounced. The moment was critical — the fate of Tallien hung on a thread — but the assembly joined him, the miscreant fell, and Madame Cabarus was saved. Tallien accompanied Buonaparte to Egypt, but died in penury at Paris, aged fifty-four, in 1820.

TALLIS (Thomas), an English musician of the sixteenth century, reckoned one of the most eminent that ever England bred. But his abilities were wholly devoted to sacred music. He is said to have been organist of the chapel royal to Henry VIII., Edward VI., Mary I., and Elizabeth. It is certain he was organist along with Bird under Elizabeth ; and these two published an admired collection of Hymns for the Church Service. He composed the Morning, Evening, and Communion Services, in four parts, with the preces, responses, and litany ; and several anthems. He died 23d of November 1585, and was buried in Greenwich church.

TAL'LOW, n. s.) Swed. and Dan.

TAL'LOWCHANDLER. $ talge ; Belg. talk. The grease or fat of an animal ; coarse suet : the tallowchandler is the dealer in and melter of the fat.

She's the kitchen wench, and all grease ; and 1 know not.vvhat use to put her to, but to make a lamp of her, and run from her by her own light. I warrant her rags, and the tallow in them, will burn a Lapland winter. Shakspeare.

The new world is stocked with such store of kine and bulls, brought hither out of Europe since the first discovery, that the Spaniards kill thousands of them yearly, for their tallow and hides only.

Heylyn

Nastiness, and several nasty trades, as tallow - chandlers, butchers, and neglect of cleansing of gutters, are great occasions of a plague.

Harvey on the Plague.

Snuff the candles close to the tallow, which will make them run. Swift.

TALLOW, in commerce, is the fat of certain animals melted and clarified. It is procured from most animals, but chiefly from bullocks, sheep, hogs, and bears. Some kinds of tallow are used as unguents in medicine, some for mak-ing soap and dressing leather, and some for making candles. See ANATOMY, CHEMISTRY, and FAT.

TALLOW, MOUNTAIN, a mineral substance, specimens of which were lately found in a bog on the borders of Loch Fyne in Scotland. This curious mineral was first observed by some peasants on the coast of Finland in 1736; and it was afterwards found in one of the Swedish lakes. It has the color and feel of tallow, and is tasteless. It melts at 118° Fahrenheit, and boils at 290°. When melted it is transparent and colorless: on cooling it becomes opaque and white, though less so than at first. It is insoluble in water, but soluble in hot alcohol, oil of turpentine, olive oil, and naphtha, but precipitates as these liquids cool. Its specific gravity in the natural state is 0-6078, but it is then full of air-bubbles. After fusion its density is 0-983, which is something above ordinary tallow. It does not combine with alkalies nor form soap. Thus it

differs from every class of bodies known. From the fixed oils in not saponifying; from the volatile oils and bitumen in being tasteless and destitute of smell. In volatility and combustibility it resembles naphtha. — Edin. Phil. Jo'irn. xi.

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TALLOW, PINEY, a concrete inflammable substance, obtained by boiling in water the fruit of the vateria Indica, a tree of the Malabar coast. It partakes of the nature of both wax and oil, and from its appearance may not inaptly be termed a tallow. It is employed in the town of Mangalore as an external application for bruises and rheumatic pains. It melts at 97£° Fahrenheit; is generally white, sometimes yellow, and is greasy to the touch with some degree of waxiness. Specific gravity 0-926 at 60°. It is not soluble in alcohol, which takes merely two per cent, of elain. Fixed alkalies saponify it. It forms excellent candles, coming freely from the mould. Its ultimate constituents are,

Carbon

Hydrogen

Oxygen

77-0 — 10 atoms 123 — 9

10-7 = 1

Dr. Babington in Journal of Science, xix. 177.

TALLOW TREE. See CHINA. Sir George Staunton says that the candles made of the vegetable tallow are firmer than those made of ani-mal tallow, and free from all offensive smell. They are not, however, equal to those of wax or spermaceti ; but the latter is not within the reach of the Chinese, and the art of blanching the for-mer is little known to them. The tallow tree has been transplanted to Carolina, and flourishes there as well as in China.

TAL'LY, n. s., v. a., & v. n. See TAILLE. Fr. tailler, to cut. A stick notched or cut in conformity to another stick, and used to keep accounts by : hence to suit ; fit : be fitted ; conform.

So right his judgment was cut fit, • And made a tally to his wit. Hudibras.

So suited in their minds and perso.ns, That they were framed the tallies for each other : If any alien love had interposed, It must have been an eye sore to beholders.

Dry den.

The only talents in esteem at present are those of Exchange Alley ; one tally is worth a grove of bays.

Garth.

I found pieces of tiles that exactly tallied with the channel. Addison on Italy.

Nor sister either had nor brother ; They seemed just tallied for each other. Prior.

Have you not seen a baker's maid Between two equal panniers swayed ? Her tallies useless lie and idle, If placed exactly in the middle. Id.

They are not so well tallied to the preseut juncture. Pope.

From his rug the skewer he takes, And on the stick ten equal notches makes ; With just resentment flings it on the ground, There take my tally of ten thousand pound. Swift.

The TALLY is used by bakers, brewers, &c. And this was the ancient way of keeping all accounts, one part being kept by the creditor, the other by the debtor, &c. Hence the tallier o the exchequer, whom we now call the teller

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TALLY COURT, a court where the two deputy chamberlains of the exchequer and the tally-cutter attend ; and a tally is generally the king's acquittance for money paid or lent, and has written on it words proper to express on what occasion the money is received.

TALLY-CUTTER, an officer in the court of exchequer, who cuts or marks the tally. See TALLY.

TALLY-MAN, a person that sells or lets goods, clothes, &c., to be paid by so much a-week.

TALMA (Francis Joseph), the late Roscius of the French drama, was born at Paris about the year 1770, and is said to have given the first indication of his histrionic talent when only eight years old, in an old tragedy entitled Tamerlane, performed by boys. But soon after his father, who had settled in London, sent for him to England ; and after a few years spent at a boarding-school in Lambeth, articled him to a surgeon. At this period his fondness for theatrical amusements introduced him to sir John Gallini, manager of an amateur French company which performed at the Hanover Square rooms, and he appeared in several comedies, especially as count Almaviva in Beaumarchais' comedy of the Barber of Seville. The performances of Kemble and Siddons are said to have decided Talma's taste. He returned to Paris, and, through the interest of Mole the actor, made his debut on the boards of the theatre Francais in the part of Seide, in Voltaire's tragedy of Mahomet. After performing a variety of insignificant characters, accident lifted him to the summit of his profession. Chenier's tragedy of Charles IX. was put in rehearsal, when Saintfal, the principal actor, returned his part, saying, with a sneer to the author, ' give it to young Talma.' Chenier took him at his word ; Talma accepted the part with delight, and devoted all his energies to the study of it, and to a strict fidelity of costume; so that the audience, equally surprised and delighted, continued to him, throughout the representation, the tumultuous approbation with which they first greeted his appearance. His greatest triumph, however, was yet to follow. Ducis had translated the Othello of Shakspeare; but, not daring to contend so far against French prejudices as to exhibit the murder of Desde-mona on the stage, he had furnished a new catastrophe. Talma was bold enough to prefer the original termination, and, after considerable hesitation, resolved, with the consent of the author, to

risk it. His success astonished even himself, and was most honorably rewarded. From this moment he became the paramount tragedian, and continued at the summit of his profession, by which he acquired a handsome fortune, till his death. He was generally esteemed by men of rank and talents for his powers of fascination also in private society, and was a great favorite with the emperor Napoleon. In 1825 he published ‘ Reflexions’ on his art, which display a considerable variety of study and research. The death of Talma took place at Paris October ‘19th, 1826, after a distressing illness arising from an obliteration of a portion of the large intestines. Before his death he embraced his theatrical friends Jouy, Arnault, and Dnvilliers, and expired ejaculating the name of Voltaire’

TAL’ON, 7j. s. Fr. and Span, talon, of Lat. talus. The claw of a bird of prey.

It may be tried whether birds may not be made to have greater or longer talont.

Ba mi’s Natural History.

Upward the noble bird directs his wing, And, towering round his master’s earth born foes, Swift he collects his fatal stock of ire, Lifts his fierce talon high, and darts the forked fire.

Prior.

TALMUD is the name of two Jewish works, the Talmud of Jerusalem and the Talmud of Babylon. Each of these is composed of two parts ; the Mishna, which is the text, and is common to both, and the Gemara or commentary. See GK-MARA and MISHNA. The Mishna, which comprehends all the laws, institutions, and rules of life, which, besides the ancient Hebrew Scriptures, the Jews thought themselves bound to observe, was composed, according to their own unanimous testimony, about the close of the second century. It was the work of Rabbi Juda Hakkadosh, who was the ornament of the school at Tiberias, and is said to have occupied him forty years. The commentaries and additions which succeeding rabbi es made were collected by Rabbi Johanan Ben Eliezer, in the fifth, sixth, or seventh century, under the name of Gemara, that is, completion ; because it completed the Talmud. A similar addition was made to the Mishna by the Babylonish doctors in the sixth or seventh century. The Talmud of Babylon is most valued by the Jews ; and this is the book which they mean, when

they talk of the Talmud in general. An abridgment of it was made by Maimonides in the twelfth century, in which he rejected some of its greatest absurdities. The last edition of the Talmud of Babylon, printed at Amsterdam, is in 12 vol-. folio. The Talmud of Jerusalem is in one large folio.

TALOOK, an Arabic word, which signifies literally attachment, connexion, dependence. In Bengal, however, where it occurs perpetually in the enumeration of the districts and subdivisions of that province contained in the institutes of Akber, it signifies a tenure of land. Hence tht talook of Cashinat, the talook of Meheys the headman, the talook of Ahmed Khan, &c. See A Dissertation concerning the Landed Property of Bengal, by Sir Charles Rouse Boughton.

TALPA, in zoology, the mole, a genus of quadrupeds belonging to the order of ferae and class of mammalia. It has six unequal foreteeth in the upper jaw, and eight in the lower ; one tusk on each side in eaph jaw ; seven grinders on each side above, and six below. There are seven species, *viz.* 1. T. aurea, the gilded mole, or Siberian mole of Pennant, has three toes on the fore feet, with very large claws ; five on the hind, with weak claws ; but no tail. The snout is shorter than that of the European (No* 3); the nose naked; the head and body four inches ; the fur above varied with glossy green, golden, and reddish copper color; the lower a cinereous ‘brown. They inhabit the Cape of Good Hope and Siberia.

2. T cristata, the crested mole, or sorex cris-tatus of Gmelin, has five toes on each foot ; ;i short tail ; and the nose long and surrounded at

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the point with ten or fifteen short radiated tendrils forming a star; the body is thick and round, and covered with a fine short dusky fur. They feed on roots, and inhabit North America.

3. T. Europaea, the European mole, is the only species found in Britain. They inhabit the whole of Europe, except Ireland, where no moles are found. They are also common in the North of Asia and Africa. They chiefly frequent moist fields exposed to the sun, meadows, and gardens; through which they form subterraneous roads in every direction in search of worms, on which and the larvae of insects they feed, and not on vegetables, though they do great damage by loosening the roots of plants. They are most active before rain, as the worms are then in mo-tion. The penis of the male is exceedingly long in proportion: they pair and propagate in spring, tlie female bringing four or five young at a birth, which are placed in nests made of moss, leaves, and dried grass, under the largest hillocks of the field ; these are constructed with wonderful ingenuity, consisting of an interior hillock, surrounded with a ditch, which communicates with several galleries, on purpose to carry off the moisture ; and the nest is covered over with a dome of earth, like the flat arch of an oven. Moles are destroyed by a paste composed of palma christi and white hellebore, or by flooding the fields which they infest ; though, in the latter case, they sometimes escape by ascending trees. This species is five inches and three-quarters in length, and its tail about one inch. It has a large head, without any external ears, and eyes so very small, and so completely hid in the fur, as to make it vulgarly believed that it has none. As they live entirely below ground , they have certainly no occasion for eyes ; and as they probably find their food by the smell, which is acute, eyes may serve merely to warn them when they happen to emerge from the ground to return to their subterraneous dwelling. There are four varieties, *viz.* i. T. Europsea alba, the white mole, with fur uniformly white, ii. T. Europaea cinerea, the gray mole, has narrow fore paws1; the fur is of a cinereous color, iii. T. Europaea nigra, the black mole, has fur uniformly black, iv. T. Europaea variegata, the variegated mole,, has fur variegated with white spots.

4. T. flava, the yellow or American mole, has five toes on each foot, the fur is of a yellowish-brown color at the tips, and dark gray at the roots; the head is brightest ; the rump dark; the belly deep brown ; the feet and tail white. They inhabit North America.

5. T. fusca, the brown mole, the sorex aquati-cus, or aquatic shrew, of Graelin, has five toes on all the feet, which are palmated ; the tail and feet short and white ; two fore teeth in the upper, and four in the lower jaw. The head and body are five inches and a half long ; the tail not an inch ; the nose is slender; the upper jaw longer than the under. They inhabit North America. This and the cristata were formerly ranked under the genus sorex; but, as they have the manners and figure of the moles, they are very properly restored to this genus by Mr. Pennant.

6. T. longicaudata, the long tailed mole of Pennant, has five toes on all the feet, which are broad, naked, and palmate;! ; the fore feet have

strong short claws ; the hind feet long and slender ones, and are scaly. The head and body are from four to six inches long; the tail two, sometimes three. They inhabit North America.

7. T. rubra, the red American mole, has thr -o toes on the fore feet, four on the hind, and a short tail. It is of a palered color, and in form resembles the European, but is larger, and the root of the tail is thicker. They inhabit America. — Kerr's Animal Kingdom, vol. i. p. 199—203.

TALTHYBIUS, a celebrated herald in the Grecian camp, during the Trojan war, the friend and minister of Agamemnon, who sent him to bring away Briseis from Achilles. He died at jElgium, in Achaia. Horn. II. i. v. 320, &c., Paus. vii. c. 23.

TALUD, or TALUS, in architecture, the inclination or slope of a work ; as of the outside of a wall, when its thickness is diminished by degrees, as it rises in height, to make it the firmer.

TALUS, in fortification, the slope of a work, whether of earth or masonry.

TALUS, in history, partly fabulous, the nephew of Daedalus, and, like his uncle, a great mathematical genius, having invented the saw, compasses, and other mechanical instruments. But this merit occasioned his murder. See Daedalus. The poets fabled that he was, turned into a partridge.

TAMANDUA, or TAMANOIR, in zoology. See MYRMECOPHAGA.

TAMAlt, in Scripture history, a name com-mon among the Israelitish

women, as, 1. The wife of Er and Onan, Judah's sons, and mother of Pharez and Zarah by himself; 2. A daughter of David and full sister of Absalom, ravished by her brother Amnon. See ABSALOM and AMNON. 3. A daughter of Absalom.

TAMARACA, a province of Brasil, bounded north by the province of Paraiba, and south by that of OUnda, east by the sea, and west by the country of the Indians. It is seven leagues along the coast, but thirty or forty in the interior of the country, and takes its name from an island which it has opposite to it near the continent, producing large quantities of Brasil wood, cotton, cocoa-nuts, sugar, melons, citrons, &c., besides a good deal of timber for fuel and other purposes. It is about nine miles in length, three in breadth, and about twenty-two in circuit. It has a commodious haven on the south side, and good fresh water. The entrance into the port is by a channel of between fifteen and sixteen feet water, commanded by a castle, built on an eminence, and formerly taken by the Dutch. The French had formerly a canton or settlement on this coast, but the Portuguese obliged them to evacuate it. The capital,*called Nostra Segnora de Conceizao, or da Tamaraca, stands at the entrance into the river of the latter name ; and near it is a small castle with a re-doubt; about four miles north of the mouth of the river is the famous point denominated Punta Pedro.

TAMARACA, the capital of the above district, is situated on the top of a mountain, and has a magnificent parish church. Fourteen miles north of Olincla, and sixty-fo ir suuih of Paraiba. Long. 35° 6' W., lat. 7° 59' S.

TAM ARIL, a town of Spain in Catalonia; two miles north-east of Tarragona.

TAM'ARIND, n. s. Lat. tamarindus ; Pers. tamar. A fruit.

Lenitives are cassia, tamarinds, manna.

Wiseman' t Surgery. Lay me reclined

Beneath the spreading tamarind, that shakes, Fanned by the breeze, its fever cooling fruit.

Thomson.

The flower of the tamarind tree consists of several leaves, which are so placed as to resemble a papilio-naceous one in some measure ; but these expand circularly, from whose many-leaved flower-cup rises the pointal, which afterward becomes a flat pod, containing many flat angular seeds surrounded with an acid blackish pulp. Miller.

TAMARIND TREE, or TAMARINDUS, in botany, a genus of plants arranged by Linnaeus under the class of triandria and order of monogynia ; but Woodville, Schreber, and other late botanists, have found that it belongs to the class of monadelphia and order of triandria. In the natural system it is ranked under the lomentacese. There is only one species, *viz.*

T. Indica, a native of both Indies, of America, of Arabia, and Egypt. It was cultivated in Britain before 1633. It rises to thirty or forty feet, sending off numerous large branches, which spread to a considerable extent, and have a beautiful appearance ; the trunk is erect, and covered with rough bark of a grayish or ash color ; the leaves are small and pinnated, and of ayellowish green color ; the flowers resemble the papiliona-ceous kind, and grow in lateral clusters ; the calyx consists of four leaves, and the corolla of three petals, of a yellowish hue, and beautifully diversified with red veins; the fruit is a pod of a roundish compressed form, from three to five inches long,

containing two, three, or four seeds, in a dark pulpy matter. The Homers appear, according to Jacquin, in October and November ; but, according to Dr. Wright, during the whole of June and July. The pulp of the tamarind, with the seeds connected together by numerous tough strings or fibres, are brought to us freed from, the outer shell, and commonly preserved in syrup. The fruit produced in the East Indies is more esteemed than that of the West, and is distinguished by the greater length of the pods, and the pulp being dryer and of a darker color. This fruit, the use of which was first learned of the Arabians, contains a large proportion of acid, with the saccharine matter, and is therefore not only employed as a laxative, but a-lso for abating thirst and heat in various inflammatory complaints, and putrid disorders, especially those of a bilious kind ; in which the cathartic, antiseptic, and refrigerant qualities of the fruit have been found equally useful. When intended merely as a laxative, it may be joined with manna, or purgatives of a sweet kind, by which it is rendered safer and more effectual. Three drachms of the pulp are usually sufficient to open the body ; but, to prove moderately cathartic, one or two ounces are required. It is an ingredient in electuarium e cassia, and electuarium e senna or lenitive electuary. . See MATERIA MEDICA, and PHARMACY.

The pulp consists, according to Vauquelin, of

bitartrate of potash 300, gum 432, sugar 1 1 52, jelly 576, citric acid 864,tartaric acid 144, malic acid 40, feculent matter 2880, water 3364 • ;n 9752 parts.

TAMARIS, a river of Spain. Lempr. TAM'ARISK, n. s. Lat. tamarice. The flowers of the tamarisk are rosaceous. Miller. Tamarisk is a tree that grows tall, and its wood is medicinal. Mortimer's Husbandry.

TAMARISK, TAMARIX, in botany, a genus of plants belonging to the class of pentandria, and order of tryginia; and in the natural system ranging under the thirteenth order, succulents. The calyx is quinquepartrte ; the petals are five ; the capsule is unilocular and trivalvular, and the seeds pappous. There are only two species known: *viz.* — 1. T. Gallica, French tamarisk, which grows upon the sea coasts. When burnt it affords sulphate of soda. See CHEMISTRY, Index, ii. T. Germanica, German tamarisk. TAMARUS, a mountain of Epirus. Strabo. TAMARY. See SOCOTORA and TAMARA. TAMASA, a river of Asia, in Mingrelia. TAMASCAL, the name given in California to a kind of sand-bath employed by the natives in the cure of the

venereal disease. It is prepared by scooping a trench in the sand, two feet wide, one foot deep, and of a length proportioned to the size of the patient ; a fire is then made through the whole extent of it, as well as upon the sand which was dug out of the hollow. When the whole is thoroughly heated, the fire is removed, and the sand stirred about, that the warmth may be equally diffused. The sick person is then stripped, lam down in the trench, and covered up to his chin with heated sand. In this position a very profuse sweat soon breaks out, which gradually diminishes according as the sand cools. The patient then rises and bathes in the sea, or the nearest river. This process is repeated till a complete cure is obtained. While the patient is undergoing the operation of the tamascal, he drinks a considerable quantity of a warm sudorific, prepared by the decoction of certain herbs, chiefly of the shrub called by the Spaniards Gouvernante.

TAMASEA, a plain of Cyprus, sacred to Ve-nus. Plin. 5.

TAMBARINE', n. s. Fr. tambourin. A ta-bor ; a small drum. It should be TAMBOURIN, which see.

Calliope with muses moe, Soon as thy oaken pipe began to sound,
Their ivory lutes and tambarines forego.

Spenser's Pastwals.

TAMBOV, a large province of European Russia, lying to the west of those of Penza and Saratov, between lat. 51° 30' and 55° 20' N., and long 39° 40' and 43° 40' E. Its territorial extent is calculated at about 21,000 square miles, and its population at 1,135,000. It is level, and occupied by extensive steppes. Many tracts are woody and marshy, but in general a sandy soil pervades the north, and a black and fertile mould the south. It is well watered both by rivers and small lakes. The winter is severe, but in summer the heat is such that the Polish cochineal and Spanish fly are common. The htoppes contain various beasts cf g:irne, and the

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mineral products are iron, sulphur, and saltpetre. In 1808, on making a statistical survey, there were found in this government twenty-seven large manufacturing establishments, and the capital employed in trade was returned at £500,000 sterling. The province is divided into twelve circles.

TAMBOV, a considerable town, the capital of the above government, is situated on the river Zna. It is the see of a Greek bishop ; with a seminary, gymnasium, and schools for the families of the better classes. It has a large monastery, in which there are two churches ; and the town contains fourteen other churches. It has manufactures of woollens, canvas, linen, and alum, and a considerable carrying trade; but the chief employment of the inhabitants is agriculture. Inhabitants 10,700. 286 miles south-east of Moscow.

TAMBOUR, in architecture, a term applied to the Corinthian and Composite capitals, as bearing some resemblance to a drum, which the French call tambour. Some choose to call it the vase, and others campana or the bell.

TAMBOUR is also used for a little box of tim-ber work, covered with a ceiling, w.ithinside the porch of certain churches; both to prevent the view of persons passing by, and to keep off the wind, &c. ; by means of folding doors, &c.

TAMBOUR also denotes a round course of stone, several whereof form the shaft of a column, not so high as a diameter.

TAMBOUR, in the manufactures, is a species of embroidery. The tambour is an instrument of a spherical form, upon which is stretched, by a string and buckle, a piece of linen or thin silken stuff; which is wrought with a needle of a particular form, and by means of silken or gold and silver threads, into leaves, flowers, or other figures.

TAMBOURIN, a tabor or small drum : also a dance performed on the French stage. The air is lively and the movements are quick. See Music.

TAME, adj. & v. a. -ˆ Sax. tame ; Belg.

TAME’ABLE, adj. I taem ; Dan. turn. Sub—

TAME’LY, adv. >dued; gentle; domes—

TAME’XESS, n.s. Vtic; crushed; depress—

TA’MER. Jed: to reduce from

wildness ; reclaim; make gentle: the adjective, adverb, and noun substantives corresponding.

If you should need a pin, You could not with more tame a tongue desire it.

Shakspeare.

A most poor man, made tame to fortune’s blows, Who, by the art of known and feeling sorrows. Am pregnant to good pity. Id. King Lear.

If the heavens do not their visible spirits Send quickly down to tame the offences, Humanity must perforce prey on itself. Id.

A puling cuckold would drink up The lees, and dregs of a flat tamed piece.

Shakspeare.

True obedience, of this madness cured, Stoop tamety to the foot of majesty. Id. Henry IV.

They cannot tame

Or overcome their riches ; not by making Baths, orchards, fish-pools, letting in of seas Heie; and then there forcing him out again.

Ben Jonson.

Ganzas are supposed to be great fowls of a strong flight, and easily tameable ; divers of which may be so brought up as to join together in carrying the weight of a man. Wilkini.

Praise him, each savage furious beast, That on his stores do daily feast , And you, tame slaves of the laborious plough, Your weary knees to your Creator bow.

Eoscomnton.

A race unconquered, by their clime made bold, The Caledonians, armed with want and cold, Have been for ages kept for you to tame. Waller.

What courage tamely could to death consent, And not by striking first the blow prevent ? Dry den.

Has he given way 1 Did he look tamely on, and let them pass 1 Addiion.

Thales the Milesian said, That of all wild beasts a tyrant is the worst, and of all tame beasts a flatterer. Id.

Such a conduct must appear rather like tamenest than beauty, and expose his authority to insults.

Rogers. .

He, great tamer of all human art, Dulness ! whose good old cause I yet defend. Pope.

Can you love and reverence your prelate, whom you tamely suffer to be abused 1 Swift.

TAMERLANE, or TIMUR BEK, a celebrated prince and conqueror. As he very early exhibited uncommon courage, he had at the age of twenty-five attained the highest dignities. He spent nine years in

different countries, travelling for improvement. He conquered the three great empires of Persia, India, and Egypt; plundered Bagdad, Delhi, Cairo, and other rich cities ; and took prisoner Bajazet I. emperor of the Turks ; so that his power, riches, and magnificence became immense. There remain vast monuments of his grandeur in the cities, towns, castles, and walls, which he built; in the rivers and canals which he dug, as well as in the bridges, gardens, palaces, hospitals, mosques, and monasteries, which he erected in the various parts of Asia. Timur, according to the historian Arab-shah, was very corpulent and yet tall. He had a large forehead, and a big head. His countenance was agreeable, and his complexion fair. He had a large beard, was very strong, and well limbed ; had broad shoulders, thick fingers, and long less. His constitution was amazingly vigorous; but he was maimed in one hand, and lame of the right side. His eyes appeared full of fire ; his voice was loud and piercing ; and, when far advanced in years, his understanding was sound, his body vigorous and robust. He died on the first of April 1405, aged seventy-one, in the thirty-sixth year of his reign. See BAG-DAD, INDIA, MOGULS, PERSIA, and SYRIA.

TAMESIS, in ancient geography, a river of South Britain, now called the Thames. Cas. de Bel. Gal. v. c. ii.

TAMMEAMEA, or TAMAHAMA, king of the Sandwich isles, in the Pacific Ocean, who at the death of Captain Cook, in 1 780, had arrived at manhood, but had no concern in that event. Tirrioboo, the king of Owhyhee, the largest of the Sandwich Islands, having offended his principal officers, he was put to death, and Tammeamea was chosen to succeed him. He soon showed extraordinary talents for his situation, and it was a part of his policy to encourage the settlement of Europeans in his dominions.

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When Vancouver visited Owhyhee, Tammeamea put himself under the protection of that officer, as the representative of the king of Great Britain ; ;and, as the price of his submission, he was assisted in building a fine vessel. Tammeamea afterwards formed a fleet, with which he conquered the adjoining islands, and traded to China. He subsequently erected a fort on the island of Vahou, and obtained from the Russians some artillery ; while, by encouraging the trading of his subjects with navigators, he added to his own wealth and importance as well as that of his people. This enterprising monarch died in March, 1819. Rhio Rhio, the son and successor of Tammeamea, having made a visit to this country, together with his queen, in 1824, both their majesties died in London, after a few months' residence.

TAM'PER, v. a. Derived by Skinner from Lat. tempera : by others considered as a frequentative of tempt. To try in a meddling way; med-dle ; be busy with physic ; practise secretly.

That key of knowledge, which should give us entrance into the recesses of religion, is by so much tampering and wrenching made useless.

Decay of Piety. Others tampered For Fleetwood, Desborough, and Lambert.

Hudibras. 'Tis in vain

To tamper with your crazy brain,

Without trepanning of your skull

As often as the moon's at full. Id.

'Tis dangerous tampering with a muse, The profits small, and you have much to lose : For, though true wit adorns your birth or place, Degenerate lines degrade the attainted race.

Roscommon.

He tried washes to bring him to a better complexion, but there was no good to be done ; the very tampering cast him into a disease. L'Eitrange.

TAMTAM, a flat drum used by the Hindoos, resembling a tabor, but it is larger, and sounds louder.

TAMUS, black briony, in botany, a genus of plants belonging to the class of dicecia, and order of hexandria ; and in the natural system ranging under the eleventh order, sarmentacese. The male and female flowers are both sexpartite ; there is no corolla; the style is trifid; the berry is trilccnlar and inferior, and contains two seeds. There are only two species known : — 1. T. corn-munis, the common black briony ; is a native of England, but has not been observed growing wild in Scotland. It' has a large root, which sends forth several long slender stems : the leaves are large, heart-shaped, dark green, and grow on long footstalks : the flowers are greenish, ;md the berry red. It flowers from May to August, and is common in hedges. 2. T. elephantipes is a native of the Cape of Good Hope, and was first described by L'Heritier.

TAMWORTH, a borough and market-town, partly in Staffordshire and partly in Warwick-shire, at the conflux of the rivers Tame and Anker, near the great navigable canal, eight miles south-east of Litchfield, and 114 north-west of London. The church is an ancient irregular building, containing several curious monuments ; and the town is large and well-built, and has

two bridges. In the town are places of worship for dissenters, a hospital, and a grammar-school. It is governed by two bailiffs, being one for each county : twenty-four burgesses, town-clerk, &c., with a high steward, recorder, and under steward. It was first incorporated by queen Elizabeth, and returns two members to parliament, one for each part of the town, the number of voters being about 250. The

returning officers are the bailiffs. The town has a considerable manufacture of narrow cloths, and is noted for good ale. Calico-printing and tanning are now the principal trades carried on here. Here are two bank-ing houses. Tarn worth-castle is the seat of the earl of Leicester. Market on Tuesday. Fairs, May 4th, July 26th, and October 24th. It is a curacy.

TAN, v. a. Fr. tanner ; Belg. tannen ; Arm. tann, oak.; Teut. tan, the fir. To impregnate or imbue with bark; imbrown, particularly by the sun.

His face all tanned with scorching sunny ray, As he had travelled many a summer's day Through boiling sands of Araby and Ind. Spenser.

Like sun-parched quarters on the city gate, Such is thy tanned skin's lamentable state. Donne.

A brown for which heaven would disband The galaxy, and stars be tanned. Cleaveland.

A human skull covered with the skin, having been buried in some limy soil, was tanned or turned into a kind of leather. Grew's Museum.

Black cattle produce tallow, hides, and beef; but the greatest part of the hides are exported raw for want of bark to tan them. Swift.

They sell us their bark at a good price for tanning our hides into leather. Id. Miscellanies.

Tanners use that lime which is newly drawn out of the kiln, and not slacked with water or air. Moron.

TAN, the bark of the oak after it has been ground and used by the tanner. The smaller sort is generally made up in little square cakes called turf, and sold for firing. The coarser sort is sometimes dried in the sun, and used by bakers for heating their ovens, &c., but its chief use is for hot-beds, to raise pine apples and other plants. William III. introduced the use of it from Holland, for raising orange trees; after which it was discontinued till about 1719, when ananas were first brought into England . It came into general use, and has ever since been much used by gardeners for forcing, &c., by its strong and lasting fermentation. The smaller the tan, the quicker it heats ; but the larger sort acquires heat more gradually and retains it longer : gardeners therefore use the one or the other, or a mixture of both, according to the purpose for which it is wanted. It is some time after the tan comes out of the pit before it begins to heat; but, having lain a week or two,

it ferments, and, if put into hot-beds properly prepared, will retain a moderate heat for three or four months. When useless for the hot-house it is still an excellent manure

TAN is sometimes, though improperly, used for the bark itself, which is the chief ingredient in the tanning of leather. Oak bark, on account of its great astringency and gummy resinous properties, is preferred to all other substances for the purpose of tanning, as it not only prest r \e< the

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leather from rotting, but also, by condensing the pores, renders it impervious to water. Sue TANNING.

TAN, in chemistry, is a substance found in most vegetables, which, not having hitherto been resolved into component parts, is therefore considered as simple.

TANA, a large river of Lapland, forming the boundary between Russia and Sweden for 150 miles. It traverses part of Finmark, and falls into the Arctic Ocean in lat. 71° N., long. 31° 30’ E., at a gulf to which it gives name. A large quantity of salmon is caught here

TANACETUM, tansy, in botany, a genus of plants belonging to the class of syngenesia, and order of polygamia superflua; and in the natural system ranging under the forty-ninth order, com-positffi. The receptacle is naked ; the pappus somewhat emarginated ; the calyx imbricated and hemispherical ; the florets of the radius are trifid, and scarcely distinguishable. Gmelin has enumerated seven species, of which only one is a native of Britain, *viz.* T. vulgare, common tansy, grows three or four feet high ; the leaves are bi-pinnated and serrated ; the flowers yellow, and terminate the branches in flat umbels. It is found on the borders of fields and dry banks ; it abounds at Wark, and Ford-castle near Kelso; on the side of Gareloch on the west coast of Ross-shire ; and in Breadalbane. It flowers generally in August. There is a variety with curled leaves, called curled tansy. It has a bitter taste, and an aromatic smell disagreeable to many people. It is good for warming and strengthening the stomach; the young leaves are therefore used as an ingredient in puddings, &c. It is rarely used in medicine, though extolled as a good em-menagogue. A drachm of the dried flowers has been found beneficial in hysteric disorders arising from suppression. The seeds and leaves were formerly in esteem for destroying worms in children, and are reckoned good in colics and flatu-lencies. In some parts of Sweden and Lapland, a bath with a decoction of tansy is used to assist parturition. See MATERIA MEDICA.

TANJECIUM, in botany, a genus of the an-giospermia order, belonging to the didynamia class of plants; and in the natural method ranking under the twenty-fifth order, putamineae. The calyx is monophyllous, tubulated, truncated, and entire ; the corolla long, monopetalous, and white ; the tube cylindrical ; the lymbi erect, spreading, and nearly

equal : the fruit a berry covered with a thick bark, large, oblong, internally divided into two parts ; in the pulp are contained a num-ber of seeds. There are only two species, *viz.* 1. T. jaroba, and 2. T. parasiticum, both natives of Jamaica. They grow by the sides of rivers, and climb on trees and bushes. This genus is omitted by Mr. Lee.

TANAGER, in ancient geography, a river of Italy, in Lucania, remarkable for its beautiful cascades and meanders, through a fine picturesque country. Virg. Geor. iii. v. 151. It is now called Negro.

TANAGRA, an ancient town of Bocotia, near the Euripus, between the Asopus and Thermo-don, famous for cock-fighting.

TAN AGRA TANAGEU, in ornithology, a genus of

birds belonging to the order of passeres. The beak is conical, acuminated, emarginated almost triangular at the base, and inclining a little towards the point. Dr. Latham has described forty-four species, all of which are of foreign extraction.

TANDY (James Napper), born in Ireland in 1757, a merchant at Dublin, who, being an enemy to the ascendancy of England, attempted to bring about a revolution. In 1791 he published a plan of reform, and was appointed secretary of a Catholic association, though himself a Protestant dissenter. He was also nominated colonel of the volunteers of Dublin ; but rendered himself so obnoxious to the government, that to avoid being arrested he fled to France. Here the executive directory gave him a commission as general of brigade in a*n expedition against Ireland, in August, 1798, under general Rey. On its failure he took refuge at Hamburg ; but, being delivered up to the English minister, he was taken to Ireland, tried for high treason, and received sentence of death. But the judgment was not executed, and, being liberated after the peace of Amiens, he went to France, and died at Bordeaux, ia August, 1803.

TANETUM, an ancient town of Italy, in Mutina, now called Tonedo.

TANFANJE Lucus, a sacred grove in Germany, in the country of the Marsi, between the Ems and Lippe. Tac. An. i. c. 51.

TANG, n.s. & v. n. Dut. tunghe, acrid; Lat. tango. A strong taste ; taste left in the mouth : obsolete. To ring with (for twang.)

Be opposite with a kinsman, surly with thy servants ; let thy tongue

tang arguments of state ; put thyself into the trick of singularity.

Shakspeai-e. Twelfth Night. She had a tongue with a tang, Would cry to a sailor, Go hang. Id. Tempest.

There is a pretty affectation in the Allemain, which gives their speech a different tang from ours.

Holder.

Sin, taken into the soul, is like a liquor poured into a vessel ; so much of it as it fills it also seasons ; so that although the body of the liquor should be poured out again, yet still it leaves that tang behind it. South.

It is strange that the soul should never once recal over any of its pure native thoughts, before it borrowed any thing from the body ; never bring into the waking man's view any other ideas but what have a tang of the cask, and derive their original from that union. Locke.

There was not the least tang of religion, which is indeed the worst affectation in any thing he said ot did. Atterbury.

TAN'GENT, n. s.) Fr. tangent ; Lat. tan*

TAN'GTBLE, adj.) gens. For the definition of tangent see below : tangible, perceptible to the touch.

Tangible bodies have no pleasure in the consort of air, but endeavour to subact it into a more dense body. Bacon.

By the touch, the tangible qualities of bodies are discerned, as hard, soft, smooth. Locke.

Nothing in this hypothesis can retain the planets in theirorbs, but they would immediately desert them ami the neighbourhood of the sun, and vanish away

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in tangents to their several circles into the mundane space. Bentley's Sermons.

TANGENT OF AN ARCH is a right line drawn perpendicularly from the end of a diameter passing to one extremity of the arch, and terminated by a right line drawn from the centre through the other end of that arch, and called the secant. See GEOMETRY.

TANGIER, a celebrated sea-port of Fez, in Morocco, is situated on the straits of Gibraltar, a few miles to the east of cape Spartel. It was known under the name of Tingis or Tinja to the Romans, who took it under Sertorius. On the invasion of the Saracens, it was surrendered to them by count Julian. In modern times Tangier has been a subject of eager contest between the Moors and Portuguese. In 1437 it was besieged by prince Ferdinand ; but his army was defeated, and capitulated. In 1471 Alonzo of Portugal succeeded in obtaining possession of it ; and about two centuries after, in 1 662, it became the property of England, being ceded to Charles II. as a marriage portion with the princess Catharine of Portugal. The English, however, abandoned it in 1684. Tangier became afterwards a distinguished station of piracy, for which its situation at the mouth of the straits gave it great advantages ; but the disuse of this nefarious practice has greatly diminished its importance. It now subsists chiefly by supplying the British garrison of Gibraltar with cattle and vegetables, permission for which purpose was given by Muley Ismael, the grandfather of the present emperor. The bay is encumbered by the ruins of the mole and fortification, and is not very safe during winter in westerly winds. The best anchorage is at the eastern point. There are still some batteries facing the bay: 108 miles N. N. W. of Fez, and thirty-eight W. S. W. of Gibraltar. Long. 5° 50' W., lat. 35° 42' N.

TAN'GLE, v. a., v. n., & n. s. See ENTANGLE. To implicate; knit together; ensnare; entrap; embroil : be entangled : a tangle is a knot of interwoven or complicated things.

She means to tangle mine eyes too, 'Tis not your inky brows, your black silk hair, Your bugle eye-balls, nor your cheek of cream.

Shakspeare.

I do, quoth he, perceive My king is tangled in affection to A creature

of the queen's, lady Anne Bullen. Id.

You must lay lime to tangle her desires By wailful sonnets, whose composed rhimes Shall be full fraught with serviceable vows. Id.

When my simple weakness strays, Tangled in forbidden ways, He, my Shepherd ! is my guide, He's before me, on my side. CratJtaw.

He leading swiftly rowled In tangles, and made intricate seem strait, To mischief swift. Milton's Paradise Lost.

Now ly'st victorious Among thy slain self-killed, Not willingly, but tangled in the fold Of dire necessity. Id. Ayonislet.

With subtile cobweb cheats, • They 're catchcd in knotted law-like nets ; In which when once they are entangled, The moie they stir, the more they 're tangled.

Hudibras.

TANGROLIPIX, sultan of the Turks, in the eleventh century, a barbarous but not ungenerous conqueror, and the first of the Turks who made inroads upon the Eastern empire. He and his nephew, Cutlu-Moses, ravaged Iberia. Tangroli-pix also conquered Persia in 1030, and founded a new dynasty of Turkish sultans, who reigned there for a century. See PERSIA.

TANJORE. A district of the Southern Carnatic, Hindostan, situated between 10° and 12° of N. lat. To the north it is bounded by the Cauvery ; on the south by the sea ; to the east it has also the sea ; and on the west Trichinopoly and the polygar's territory.

This principality is entitled to the second rank among the provinces of Hindostan for agriculture and valued rent, the first being assigned to the district of Burdwan in Bengal. For the purposes of irrigation, prodigious mounds have been raised at Coilady to prevent the waters of the Cavery from rejoining those of the Coleroon after they have separated near Trichinopoly. From this southern branch of the river canals are conducted in all directions, which, by means of em-bankments and reservoirs, are diverted into every field, and fertilize a tract of country from Devicotta to Point Calymere, which would otherwise remain a barren sand. The inhabitants of this district are uncommonly industrious and expert in husbandry ; there is consequently but a very small proportion of waste land compared with

what is seen in some of the neighbouring territories. The dry and wet cultivation are nearly equal, being about fifty per cent. each.

It appears that, in 1807, the province consisted of 5873 townships. Of this number there are 1807 townships, in which one individual holds the whole undivided lands; 2202 of which the property is held by several persons having their distinct and separate estates ; and 1774 the landed property, in which is held in common by all the Meerassdars, or proprietors of the village, who contribute labor, and receive a share of the crop in the proportion of their respective properties.

The principal articles exported to Madras are indigo, cocoa nuts, rice, grain, paddy, lamp-oil, with some piece goods. The remaining articles, from their description, appear to have been first received from the eastward, Ceylon, or the Malabar coast, and afterwards sent to Madras. These consist of betel nut, tin, pepper, tortoise-shell, benjamin, arrack, Trincomale wood, and hing. The imports into this province from Madras are small in quantity and value, and are composed chiefly of articles for the European troops and residents, with some iron hoops, camphor, raw silk, silk piece goods, anchors, iron of various sorts, gunnies, planks, and long pepper-roots. The sea-ports of most commerce are Tranquebar, Nagore, Negapatam, Carical, and Devicotta.

The Hindoo religion has been preserved in considerable splendor here, and the ancient places of worship, with their vast endowments, remain untouched. In almost every village there is a pagoda with a lofty gateway of massive architecture, where a great number of Brahmin? are maintained; and on all the great roads arc

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choultries, built for the accommodation of pilgrims. The Brahmins are here the chief holders of land, and perform almost every office of husbandry, except holding the plough". They are all extremely loyal to the British, who grant 45,000 pagodas annually for the support of the poorer temples.

In remote times Tanjore was distinguished geographically by the name of Chola Desa, from whence originated by several corruptions the word Coromandel,and in native manuscripts its sovereign is still designated the Cholia rajah. The present race are descended from Eccojee, a Mahratta chief (the brother of Sevajee), who, in A. D. 1675, conquered the city and province, which have been retained by the same dynasty ever since, the Mahratta being the proper language of the Tanjore court. The expedition of the British troops into Tanjore, in 1749, was the first warfare in which they were engaged against the forces of a native prince; and it proved unsuccessful as to its main object, the restoration of a deposed rajah of Tanjore, who had applied for assistance to the governor of Fort St. David. Sersajee, the present rajah, is the adopted son of Tuljajee, who died A. D. 1786, and was carefully educated under the celebrated Danish missionary Mr. Schwarts; yet he continued a staunch adherent to the Brahminica". doctrines and superstitions. In every other respect he is a man of liberal sentiments, and particularly indulgent to the Da-nish missionaries who live in his country. \Vhile yet an independent prince he protected their schools, and extended his kindness to the Ro-man Catholics also, who, in 1785, were estimated at 10,000 persons.

In 1799 the territory of Tanjore was subjected by treaty to the British authority ; on this event the rajah reserved to himself several palaces, the Tranquebar tribute of 2000 chuckrums, a clear allowance of one lack of rupees annually, and one-fifth of the surplus revenues after payment of the civil and military disbursements, which amounts to nearly twice as much more. He was allowed, AS a particular favor, to retain the two forts of Tanjore, which he keeps in excellent repair, and garrisoned with 1500 men. The province now forms one of the districts of the Madras presidency, and the arrangement has proved equally advantageous to the inhabitants and to the British.

TANJORE. A city in the Southern Carnatic, the capital of the above district, comprehends two fortresses, both of which are given up to the

rajah ; but, on the exigence of war, the British have a right to re-occupy them. The small fort is a mile in circumference, very strong, and in good repair. The walls are lofty, and built of large stones, and on the corners of the ramparts are cavaliers. The ditch, which is broad and deep, is cut out of the solid rock, and has a well formed glacis. It joins on one side to the large fort where the rajah resides, which is fortified in a similar manner. In the small fort is the celebrated pagoda, the chief building of which is perhaps the finest specimen of the pyramidical temple in Hindostan. Within is a bull carved from a block of black granite, an excellent example of Hindoo sculpture. From one of the

cavaliers there is a beautiful view. The pagodrt forms the foreground ; then appears the large fort with the rajah's palace and temples, behind which a rich country is seen covered with rice fields and clumps of trees, and beyond all a chain of lofty mountains. The river Cavery here is at the highest when the periodical rains prevail in Mysore. In early ages this was the great seat of learning in the South of India, and here the almanacs were framed, according to which the year 1800 of the Christian era corresponds with the year 1722 of Salivahanam, and the 4901 of the Cali Yug ; which reckoning differs one year in the former era, and seven in the latter from that used in Karnata. The British were repulsed from before Tanjore in A. D. 1749, and it was besieged without success by M. Lally in 1758. Travelling distance from Madras, 205 miles ; from Seringapatam, 237 ; and from Calcutta 1235 miles.

TANIS, in ancient geography, a large lake of Egypt, now called Menzaleh. See MENZALEH.

TANIS, an ancient city of Egypt, seated near the lake, on one of the eastern mouths of the Nile.

TAN'IST, n.s. \ An Irish word. Erse an

TAJJ'ISTRY. $ taanister. The holder of a life estate : tanistry corresponding. Obsolete.

Presently after the death of any of their captains they assemble themselves to chuse another in his stead, and nominate commonly the next brother ; and then next to him do they chuse next of the blood to be tanist, who shall next succeed him in the said captainry. Spenser on Ireland.

The Irish hold their lands by tajiistry, which is no more than a

personal estate for his lifetime that is timist, by reason he is admitted thereunto by election. Id.

If the Irish be not permitted to purchase estates of freeholds, which might descend to their children, must they not continue their custom of tanistry 1 which makes all their possessions uncertain.

Davies on Ireland.

By the Irish custom of tanistry, the chieftains of every country, and the chief of every sept, had no longer estate than for life in their chieferies ; and, when their chieftains were dead, their sons or next heirs did not succeed them, but their tanists, who were elective, and purchased their election by strong hand. Id.

TANK, in the language of Ilindostan, is a place enclosed for receiving aud retaining the rain. During the periodical rains the tanks are filled, and thus in the dry season furnish water for the rice fields and cattle. Some of them are of great extent, measuring 300 or 400 feet on the side; they are of a quadrangular form, and lined with granite, descending in regular steps from the margin to the bottom.

TANK, n. s. Fr. tanque. A large cistern or bason.

Handle your pruning-knife with dexterity ; go tightly to your business ; you have cost me much, and must earn it ; here's plentiful provision, rascal •, sallading in the garden, and water in the tank; and, in holv davs, the licking of a platter of rice when you deserve it. Dryden's Don Sebastian.

TANK'ARD, n. a. Tr. tmii/uaerd ; Belgic tankaerd. A large vessel with a cover, for strong drink.

Hath his tankard touched your brain Sure they 're fallen asleep again. Ben Jonson.

Marius was the first who drank out of a silver tankard, after the

manner of Bacchus. Arbuthnot.

When any calls for ale, fill the largest tankard cup top full. Swift.

TANNA, an island in the South Pacific, one of the New Hebrides, was discovered by captain Cook in the year 1774 ; about twenty-two miles in length, and ten in breadth. The inhabitants would not suffer Cook, or any of his company, to advance far into the island. The produce, as far as could be seen, is bread-fruit, plantains, cocoa-nuts, a fruit like a nectarine, yams, tarra, a sort of potato, sugar-cane, wild figs, a fruit like an orange, which is not eatable, and some other fruits and nuts. Hogs did not seem to be scarce, but they saw not many fowls. Land birds are not more numerous than at Otaheite ; but they saw some small birds with a very beautiful plumage, which they had never seen before, and a great variety of trees and plants. The people are of the middle size, but few.

TANNER (Dr. Thomas), an English prelate and celebrated antiquarian, born in 1674. He was admitted of Queen's College, Oxford. In 1697 he was chosen fellow. In 1722 he was made archdeacon of Norwich; and in 1731 bishop of St. Asaph. He died at Oxford in 1735; and after his death was published an elaborate work, said to have employed him for forty years, entitled Bibliotheca Britannica Hibernica, sive, de Scriptoribus qui in Anglia, Scotia, et Hibernia, ad saeculi XVII. initium floruerunt, &c.

TANNIN, in chemistry and the arts, one of the immediate principles of vegetables, was first distinguished by Seguin from the gallic acid, with which it had been confounded under the name of the astringent principle. He gave it the name of tannin, from its use in the tanning of leather; which it effects by its characteristic property, that of forming with gelatine a tough insoluble mat-ter. It may be obtained from vegetables by macerating them in cold water ; and precipitated from this solution, which contains likewise gallic acid and extractive matter, by hyperoxygenised muriate of tin. From this precipitate, immediately diffused in a large quantity of water, the oxide of tin may be separated by sulphureted hydrogen gas, leaving the tannin in solution.

Professor Proust has since recommended another method, the precipitation of a decoction of galls by powdered carbonate of potash, washing well the greenish-gray flakes that fall down with cold water, and drying them in a stove. The precipitate grows brown in the air, becomes brittle and shining like a resin, and yet remains soluble in hot water. The tannin in this state, he says, is very pure.

Sir II . Davy, after making several experiments on different methods of ascertaining the quantity of tannin in astringent infusions, prefers for this purpose the common process of precipitating the tannin by gelatin ; but he remarks that the tan-nin of different vegetables requires different proportions of gelatin for its saturation ; and that the quantity of precipitate obtained is influenced by the degree in which the solutions are concentrated.

M. Chenevix observed that coffee berries acquired by roasting the property of precipitating gelatin ; and Mr. Hatchett has made a number of experiments, which show that an artificial tannin, or substance having its chief property, may be formed, by treating with nitric acid matters containing charcoal. It is remarkable that this tannin, when prepared from vegetable substances, as dry charcoal of wood, yields, on combustion, products analogous to those of animal matters. From his experiments it would seem that tannin is, in reality, carbonaceous matter combined with oxygen ; and the difference in the proportion of oxygen may occasion the differences in the tannin procured from different substances, that from catechu appearing to contain most.

Bouillon Lagrange asserts that tannin by absorbing oxygen is converted into gallic acid. It is not an unfrequent practice, to administer medicines containing tannin in cases of debility, and at the same time to prescribe gelatinous food as nutritious. But this is evidently improper, as the tannin, from its chemical properties, must render the gelatin indigestible. For the chief use of tannin, see the following article.

According to Berzelius, tannin consists of hydrogen 4-186 + carbon 51-160 + oxygen 44-654. And the tannate of lead is composed of,

Tannin 100 26-923

Oxide of lead 52 14—

But there is “much uncertainty concerning the definite neutrality of this compound.

TANNING. The several kinds of leather are prepared from the skins of animals macerated for a long time with lime and water, to promote the separation of the hair and wool, and of the fat and fleshy parts, in which recourse is also had to the assistance of mechanical pressure, scraping, and the like. The skin, when thus deprived of its more

putrescible part, and brought considerably toward the state of mere fibre, is tanned by maceration with certain astringent substances, particularly the bark of the oak tree.

The hide consists almost wholly of gelatin, and all that is necessary is to divest it of the hair, epidermis, and any flesh or fat adhering to it. This is commonly done, after they have been soaked in water some time, and handled or trodden to cleanse them from filth, by immersing them in milk of lime. Some, instead of lime, use an acescent infusion of barley or rye-meal, or spent tan ; and others recommend water acidulated with sulphuric acid. Similar acidulous waters are afterwards employed for raising or swelling the hide, when this is necessary. The skins, thus prepared, are finally to undergo what is properly called the tanning. This, is usually done by throwing into a pit, or cistern made in the ground, a quantity of ground oak-bark that has already been used, and on the skins and fresh bark in alternate layers, covering the whole with half a foot of tan, and treading it well down. The tanning may be accelerated by adding a lit-tle water. As it is a long time before tlie hide is thoroughly tanned in this mode, at least many months, during which the bark is renewed three or four times ; M. Seguin steeps the skins in a

strong infusion of tan, and assists its action by heat. ‘ Chaptal observes, however, that this requires an extensive apparatus for preparing the liquor and skins : the leather imbibes so much Hvater that it remains spongy a long time, and wrinkles in drying ; and it is extremely difficult so to arrange the hides in a copper as to keep them apart from each other, and free of the sides of the vessel.

The following account of M. Seguin’s practice was transmitted to England in the year 1796 : — To tan a skin is to take away its putrescent quality, preserving, however, a certain degree of pliability. This is effected by incorporating with the skin, particles of a substance which destroys their tendency to putrefaction.

The operations relating to tanning are therefore of two kinds : — the

first is merely depriving the skin of those parts which would oppose its preservation, or which adhere to it but little, such as hair and flesh ; the other consists in incorporating with it a substance, which shall prevent its putrefying. The operations of the first kind are technically termed, unhairing and flesh-ing; the operations of the second kind belong to tanning, properly so called. Fleshing is an operation merely mechanical ; unhairing is a mechanical operation, if performed by shaving ; or a chemical operation, if effected by dissolution or decomposition of the substance which connects the hair with the skin.

According to the ancient method, the dissolution of this substance was effected by means of lime; the decomposition either by the vinous fermentation of barley, by the acetous fermentation of oak-bark, or by the putrid fermentation produced by piling the hides one upon another. Unhairing by means of lime would often take twelve or fifteen months ; this operation with barley, or the acetous part of tan, could not be performed in less than two months. The slowness of these operations, which the experiments of Seguin have shown may be finished in a few days, and in a more advantageous manner, by means of the same substances, proves that the nature of those operations was not understood by those who performed them. Those of tanning, properly so called, were as little known as the details we are about giving will prove, which we compare with the least improved routine now in practice. Whatever the method of unhairing was, the mode of tanning was always the same' for skins unhaired with lime, or those prepared with barley or tan. This mode of operating would take eighteen months or two years, often three years, when it was wished to tan the hides thoroughly.

Among the substances for tanning, gall-nut, sumach, and the bark of oak, to which may be added catechu, appear the most proper, at least in the present state of our knowledge. In the mid-dle departments of France, oak-bark is preferred, because it is the cheapest and most abundant substance. To use it, it is first ground to pow-der ; then, according to the old mode, it is put into large holes dug in the ground, which are filled by alternate layers of ground bark and unhaired hides. As the principle which effects

trie tanning cannot act in fne interior of the skin, unless carried in by some liquid in which it is first dissolved, tanning is not produced by the immediate action of the powdered bark upon the skin, but only by the action of the dissolution of the tanning principle originally contained in the bark. The tan therefore has the tanning property only

when wetted so much as not to absorb all the water thrown on it. But as tanners put in their vals only a small portion of water compared to what would be necessary to deprive the bark of all the tanning principle which it contains, the bar-k put into the vats preserves, when taken out, a portion of its tanning principle.

This waste is not the only disadvantage of the old modes of proceeding; they are, besides, lia-ble never to produce in the skins a complete saturation with the tanning principle. For, as the property of attraction is common to all bodies, according to the different degree of saturation, the water containing in solution a certain quantity of the tanning principle will not part, tog fixed weight of skins, with as much as the same quantity of water will in which a greater quantity of the principle is dissolved.

As the water which, in the old manner of proceeding, is in the vats, can contain but a small portion of the tanning principle, owing to the nature of the operation, it can give but a small portion of it to the skin, ajid even this it parts with by slow degrees. Hence, the slowness in the tanning of skins, according to the old method, which required two whole years, and sometimes three, before a skin was well tanned to the cen-tre. Hence, also, the imperfection of skins tann-ed by that method; an imperfection resulting from the non-saturation of the tanning principle, even when it had penetrated the centre.

The important desideratum was, therefore, to get together, within a small compass, the tanning principle, to increase its action, and produce in the hide a complete saturation in a much shorter time than that necessary for the incomplete tanning produced in vats. But, first of all, it was necessary to analyse the skin, analyse the leather, and analyse the oak-bark. The principles of these three substances were to be insulated, nnd their action upon one another determined, the influence of their combination upon that action known, and the circumstances most productive of its greatest action found out.

Seguin, by following this method, has determined : — 1. That the skin deprived of flesh and hair is a substance which can easily, by a pro-per process, be entirely converted into an ani-mal jelly (giue). 2. That a solution of this last mentioned substance, mixed with a solution of tan, forms imm'ediately an imputrescible and in-dissoluble compound. 3. That the solution of tan is composed of two very distinct substances ; one of which precipitates the solution of glue, and which is. the true tanning substance ; the other which precipitates sulphate of iron, without precipitating the solution of glue, and which produces only the necessary disoxygenation of the skin, and of the substance which

connects the hair to the skin. 4. That the operation of

tanning is not a simple combination of the skin with the principle which precipitates the glue, but a combination of that principle with the skin disoxygenised by the substance, which in the solution of tan is found to precipitate the sulphate of iron ; so that every substance proper for tanning should possess the properties of precipitating the solution of glue, and of precipitating the sulphate of iron. 5. That the operation of tanning consists in swelling the skins by means of an acidulous principle ; to disoxygenise, by means of the principle which in the solution of bark precipitates the solution of sulphate of iron, that substance which connects the hair to the skin, and thus produce an easy unhairing ; to disoxygenise the skin by means of the same principle, and to bring it by this disoxygenation to the middle state between glue and skin ; and then to combine with it, after this disoxygenation and while it is in this middle state, that particular substance in oak-bark, as well as in many other vegetables, which is found to precipitate the solution of glue, and which is not, as has been hitherto conceived, an astringent substance.

Agreeably to these discoveries, there only remains, in order to tan speedily and completely, to condense the tanning principle so as to accelerate its action. Seguin, to effect this, follows a very simple process. He pours water upon the powdered tan, contained in an apparatus nearly similar to that made use of in saltpetre works. This water, by going through the tan, takes from, it a portion of its tanning principle, and by successive filtrations dissolves every time an additional quantity of it, till at last the bark rather tends to deprive it of some than to give up more. Seguin succeeds in bringing these solutions to such a degree of strength, that, he says, he can, by taking proper measures, tan calf-skin in twen-ty-four hours, and the strongest ox-hides in seven or eight days. These solutions, containing a great quantity of the tanning principle, impart \o the skin as much of it as it can absorb, so that it can then easily attain a complete saturation of the principle, and produce leather of a quality much superior to that

of most countries famous for their leather.

‘ On the above I have only to remark,’ says Dr. Ure, ‘ that every new art or considerable improvement must unavoidably be attended with many difficulties in the establishment of a manufactory in the large way. From private enquiry I find that this also has its difficulties, which have hitherto prevented its being carried into full effect in this country Of what nature these may be I am not decidedly informed, and mention them in this place only to prevent manufacturers from engaging in an undertaking of this kind, without cautious enquiry.’

M. Desmond has recommended to saturate water with tannin by affusion on successive portions of oak-bark, or whatever may be used ; and, when the bark will give out no more tannin, to extract what gallic acid still remains in it, by pouring on fresh water. To the latter, or acidulous liquor, he adds TDJj,th part by measure of sulphuric acid ; and in this steeps the hide, till the hair will come off easily by scraping. When raising is necessary, he steeps the hide ten or

twelve hours in-water acidulated with ˆth part by measure of sulphuric acid ; after which they are to be washed repeatedly, and scraped with the round knife. Lastly, the hides are to be steeped some hours in a weak solution of tannin, then a few days in a stronger, and this must be renewed as the tannin is exhausted, till the leather is fully tanned.

For the softer skins, as calves, goats, &c., he does not use the acid mixture, but milk of lime. Of substances used for tanning Sir II. Davy observes, that one pound of catechu is nearly equal to two pound and a quarter of galls, three of sumach, seven and a half of the bark of the Leicester willow, eight and a half of oak-bark, eleven of the bark of the Spanish chestnut, eighteen of elm-bark, and twenty-one of common willow bark, with respect to the tannin contained in them. He observes, too, that leather slowly tann-ed in weak infusions of barks appears to be bet-ter in quality, being both softer and stronger than when tanned by strong infusions ; and he ascribes this to the extractive matter they im-bibe. This principle, therefore, affects the quality of the material employed in tanning ; and galls which contain a great deal of tannin make a hard leather, and liable to crack, from their deficiency of extractive matter. — Vide Ann. de Chim. et de Phys. — Philos. Trans. — Piiilos. Mag. — Chaptal’s Chem.

A more practical view of this useful art may be thus given : — When

the hides which are to be tanned are raw (in which state they are called green hides), they are put to steep in water, in order to clear them of the blood and filth they may have collected in the slaughter-house. They are left to soak in the water for some time, and, if the hides are dry, they are steeped a longer time, sometimes for fourteen days ; less in hot weather, or more in cold. They are drawn out once or twice to see if they are well softened. The neighbourhood and the command of water are necessary to these operations. Without these the hides cannot be prepared.

After the hides have been well softened, they next proceed to cleanse or free them from the hair. With this intention several different methods are employed ; that which is the oldest, and still most generally followed, consists in the application of lime. In all tanneries, pits are formed under-ground, having their sides lined with stone or brick, in which limestone is slaked so as to form milk of lime. These pits are divided into three kinds, according to the greater or less strength of the lime. The hides intended to be scoured are first put into the weakest of these pits, wherein they are allowed to remain until the hair readily yields to the touch. If this liquor be not sufficiently active, they are removed to the next in gradation. The time they are soaked is longer or shorter in proportion to the strength of the lime, the temperature of the air, and the nature of the hides. It has been proposed to substitute lime-water in place of the milk of lime. But, though the lime-water acts at first with sufficient strength, its action is not sufficiently permanent, and, in order to succeed in clearing the hides by this means, it is necessary to renew it occasionally ; and in this way the

hides may be prepared in a few days. In some tanneries, after they have been kept in the pits for a short time, they pile them up in a heap on the ground, in which state they are suffered to remain during eight days; after which they re-turn them into the same pits whence they were taken, and this process is repeated till the hair can be easily scraped off.

In many countries they mix a large quantity of ashes with the lime ; but the only effect this mixture appears to produce, is that of rendering the leather less consistent than when lime is solely employed. Many attribute the bad qualities of leather to the tqo great use of lime, which has a tendency to burn and render it brittle. Hence, in several well-conducted tanneries, in manufacturing leather for some particular uses, the employment of lime is carefully avoided. Hides may, indeed, be cleansed by subjecting them to an incipient fermentation, which may be produced in a variety of ways. But, in whatever manner the first part of the operation has been conducted, as soon as it is perceived that the hair is in a fit state to be removed, it is scraped off, on a wooden horse, by means of a crooked knife, which is not so sharp in any part of its edge as to injure the hide, or by a whetstone. This operation is not only intended to remove the hair, but likewise the scurf and filth which collect on the skin at the root of the hair.

After removing the hair and filth, the next ob-ject is to free the hides from the adhesion of any part of the muscle, or fat, and to render them soft and pliant. Those which are intended for particular kinds of work, such as calves' skin for the upper leather of shoes, and neats' leather for shoulder-belts, do not require to be raised or swelled. As soon, therefore, as they are cleansed and freed from the flesh, 8cc., they are laid in a pit. The hides intended for the soles of shoes, and other strong leathers, are afterwards raised by means of processes which vary in different countries. «When lime is employed, the operation is commenced by putting the cleansed skins into the weakest of the lime-pits, and afterwards passing them successively through the two others. They are kept about a week in each of the two weakest pits, and another in the strongest. During this operation care is taken to withdraw them, and pile them up in a heap, every two or three days, putting them again into the pit after it has been well stirred. Lime hardens the skin, and in those tanneries where it is used, the hides are put into a ley of pigeon's dung in order to soften them, and this process is termed graining. They are daily withdrawn from the ley, and laid up in a heap for half an hour. This operation is usually continued for ten or fifteen days. Sometimes also acid compositions are employed for raising the hides ; and this operation is greatly accelerated by using the acids warm, as well as by the method practised in this country, of removing them from a weaker liquor into a stronger, until they be properly raised or swelled.

The skin, being thus prepared, is next subjected to the operation of tanning; and to this purpose vegetable astringents are employed. Those vegetables answer best which contain the

greatest portion of the astringent principle, now known under the name of tannin. Sir H. Davy has demonstrated that caoutchouc, or Japan earth, contains more of this principle than any other vegetable with which we are acquainted ; but oak bark is the substance most commonly employed in our climates ; for it is not only very abundant in Europe, but likewise contains much tannin. Every species of oak, however, does not supply us with bark of the same quality ; the white oak is inferior to the green oak which grows in the south, while this in its turn yields in the value of its bark to that procured from the roots of the kermes-bearing oak, which is employed in southern climates for tanning strong leathers. But, whatever kind of bark be employed, it is ground down to powder. The tan-pits are sometimes of a round, and at others of a square form, dug out to a considerable depth in the earth, and lined with wood or mason-work ; their size being in proportion to the extent of the works. The method of tanning is different in different countries. According to calculation, from five to six pounds of tan is required to each pound ot strong leather ; and 1 cwt. of hides yields from fifty-two to sixty-six pounds of leather.

We will now detail another method chiefly taken from Sir H. Davy's memoir on the subject. After the skin has been cleaned, it is submitted to other operations before it is immersed in the tan liquor. According to Sir Humphry's account of the practices of the art, the large and thick hides which have undergone incipient putrefaction, are introduced for a short time into a strong" infusion of oak bark, and after this they are acted on by water impregnated with a little sulphuric or acetic acid ; in consequence of which they become harder and denser than before, and fitted after being tanned, for the purpose of forming the stouter kinds of sole leather. The lighter and thinner skins are treated in a different man-ner : they are macerated for some days in a ley formed from the infusion of pigeons' dung in water, which contains a little carbonate of ammonia ; the skin is thus deprived of its elasticity, and becomes more soft. The tanning liquor is prepared by infusing bruised oak bark in water; and skins are tanned by being successively immersed in such infusions, saturated in different degrees with the astringent principles of the bark. The first leys in which they are immersed are weak, but towards the completion of the process they are used as strong as possible ; and, in preparing stout sole leather, the skins are kept in an ooze, approaching to saturation, by means of layers of oak bark.

The infusion of oak bark, especially that obtained by the first maceration, contains principally tannin and extractive matter ; the

gallic acid, if present, as has been supposed, being at least in an inconsiderable proportion. In the course of the maceration of the skins in these liquors, the tannin combines gradually with the gelatin, which, in an organised form, principally constitutes the skin, and forms with it a compound insoluble in water, dense and impermea-ble to that fluid, while it possesses at the same time a certain degree of elasticity. The extractive matter also enters into the combination ; for

•when skin in a large quantity has exerted its full action on a small quantity of infusion, it at length abstracts the whole dissolved matter, and renders it colorless. From this extractive mat-ter color is derived, and the skin may perhaps be rendered more dense.

It has been supposed that the gallic acid, frequently contained in vegetable astringents, facilitates the action of their tanning, in converting skin into leather. According to the theory of the operation, as given by Seguin, skin is gelatin in a hardened state from slight oxidisement; the gallic acid in some measure de-oxidizes it, and hence reduces it to that state in which it combines more easily with gelatin. There is little proof given, however, of this theory ; and it appears sufficiently established that the operation can be performed without the presence of this acid ; and indeed in the tan liquor prepared by one maceration from oak bark it is scarcely discoverable, and, if it do exist in it, it is in intimate combination with the extractive matter.

The operation of tanning, as now described, requires a number of months, from the skins being successively and slowly introduced into infusions of different degrees of strength. We have seen that Seguin, after his discovery of tan-nin, proposed to abridge the process by introducing the skins more speedily into strong infusions of the tanning substance ; and in this way, according to the excellent report given on the art of tanning by Pelletiere and Lelivre, in which his method is fully described, the whole could be finished in about twenty days, and leather obtained equal in quality to that prepared by the old method. There is reason, however, to doubt of the superiority of this method. Mr. Nicholson, in some observations on this subject, when a

patent was taken out for Seguin's method in this country, stated that, from information acquired from the manufacturers, he found that they had previously been sufficiently acquainted with the powers of the strong tanning infusions ; and that it had been even proposed to employ them so as to abridge the process. But the leather thus prepared was by no means equal to that prepared in the oid method. The advantage of the slow and gradual process appears to be, that the whole substance of the skin is penetrated and equally chanced ; while in the more rapid me-thod the external parts must be more acted on ; and the texture probably will be more unequal. It appears also, from Sir H. Davy's experiments, to combine with a larger quantity of the extractive matter contained in the astringent infusion ; and hence too the advantage of the immersions in the weak liquors, as these contain more of this than the strong infusions. It must be confessed, however, that for any thing theory can discover, the common process appears to be unnecessarily protracted, and some advantage might probably be derived from adopting some of the manipulations of Seguin. The skin in drying increases in weight from the fixation of the vegetable matter : the quantity of this sel-dom exceeds one-third of its weight.

Of tawing, leather-dressing and dyeing, and other processes. — The dressing and preparing of the skins of lambs, sheep, goats, and other thin VOL. XXI.

hides, though in many particulars closely resembling the method used with the thick cow ana ox hides, forms a totally distinct branch of business, and is one in which a good deal of practical skill and nicety of manipulation are required to succeed perfectly. The processes are various according to the article required, and this branch of the manufacture supplies the immense demand of white and dyed leather for gloves, the morocco leather of different colors and qualities for coach-linings, book-binding, pocket-books, and thin leather for an infinite number of smaller purposes. Of these the white leather alone is not tanned, but finished by the process of tawin<" ; the coloied leather receives always a tanning independently of the other dyeing materials. The previous preparation of each, or that in which the skin is thoroughly cleansed and reduced to the state of simple membrane in which it is calhd pelt, is essentially the same whether for tawing or dyeing. It is thus performed at Ber-mondsey, near London, a place long celebrated for all branches of the leather business.

By far the greater number of the sxms are imported : if lambs they are thus prepared : — The skins are soaked for a time in water to cleanse

them from any loose dirt and blood, and put upon the beam commonly used for the purpose, which is a half cylinder of wood covered with leather, and scraped on the flesh side with the semicircular blunt knife with two handles used in this operation. They are then covered with a coat of lime of the consistence of paint on the flesh side, and hung up in considerable numbers in a small close room heated by flues, where they remain to putrefy for a given time. During this process a thick slime works up to the surface of the skin, by which the regularity of the process is ascertained, and the wool is loosed so that it readily comes off with a slight pull. Each skin is then returned to the beam, the wool taken off, and all the lime worked off with the knife, and the rough edges pared away. The skin is then put into a pit filled with lime-water, and kept there from two to six weeks, according to the nature of the skin, which has the effect of checking the further putrefaction, and produces a very remarkable hardening and thickening of its substance, and probably also it detaches a further portion of the slime. The skin is again well worked, and much of its substance pared down, and all inequalities smoothed with the knife. Pains and judgment are required in these operations, on the one hand not to endanger the substance of the skin by the putrefaction, and on the other hand to work out every particle of the lime, of which the least if retained will prevent the skin from dressing well in the subsequent processes, and from taking the dye uniformly and well. The skin is then again softened and freed from the lime. All the thickening produced by the lime is thus removed, and the skin is now highly purified, and is a thin extensible white membrane called in this state a pelt, and is fit for any subsequent operation of tawing or dyeing, or oil-dressing, or shammoying.

The method of bringing kid and goats' skins to the state of pelt is nearly the same as for lambs, except that the lining is used br-fore the

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hair is taken off, the hair being of but little importance and only sold to the plasterers; but the lambs' wool, which is more valuable, would

be greatly injured by the lime. Kids' skins will take a longer time in tanning than lambs'.

If the pelts are to be tawed they are put into a solution of alum and salt in warm water, in the proportion of three pounds of alum and four pounds of salt to every 120 middle sized skins, and worked therein till they have absorbed a sufficient quantity. This again gives the skin a remarkable degree of thickness and toughness.

The skins are now taken out and washed in water, and then again put into a vat of bran and water, and allowed to ferment till much of the alum and salt is got out, and the unusual thickening produced by it is for the most part reduced. They are then taken to a room with a stove in the middle, and stretched on hooks, and kept there till fully dry. The skins are now converted into a tough, flexible, and quite white »eather; but to give them a glossy finish, and to take off the harshness of the feel still remaining, they are again soaked in water and put into a large pail containing the yolks of eggs beat up with water. Here the skins are trodden for a long time, by which they so imbibe the substance of the egg that the liquor above them is rendered almost perfectly limpid ; after which they are hung up in a loft to dry, and finished by glossing with a warm iron.

The essential difference, therefore, between tanning and tawing is that in the former case the pelt is combined with tan and other vegetable matter, and in the latter with something that it imbibes from the alum and salt (possibly alumine), and which is never again extracted by the subsequent washing and branning.

The Morocco leather, as it is called, prepared from sheep skins chiefly, and used so largely for coach-linings, pocket-books, and the best kind of book-binding, is thus made : — The skin, cleansed and worked in the way already described, is taken from the lime-water, and the thickening brought down, not by bran-liquor as in tawing, but by a bath of dogs' or pigeons' dung diffused in water, where it remains till suppled, and till the lime is quite got out and it becomes a perfectly white clean pelt. If intended to be dyed red, it is then sewed up very tight in the form of a sack with the grain side outwards, and is immersed in a cochineal bath of a warmth just equal to what the hand can support, and is worked about for a sufficient time till it is uniformly djed. The sack is then put into a large vat containing sumach infused in warm water, and kept for some hours till it is sufficiently tanned. The skins intended to be black, or any color but red, are merely sumached without any previous dyeing. After some further preparation, the color of the red skins being finished with a

weak bath of saffron, the skins when dry are grained and polished in the following way : — They are stretched very tight upon a smooth inclined board, and rubbed over with a little oil. Those intended for black leather are previously rubbed over with an iron liquor, which, uniting with the gallic acid of the su-mach, instantly strikes a deep and uniform black.

They are then rubbed by hand with a ball o” glass with much manual labor, which polishes them and makes them very firm and compact. Lastly, the graining or ribbed surface by which this kind of leather is distinguished, is given by rubbing the leather very strongly with a ball or box-wood, round the centre of which a number of small equidistant parallel grooves are cur forming an equal number of narrow ridges, the friction of which gives the leather the desired inequality of surface.

The process for the real Morocco leather, as prepared from goat-skins at Fez and Tetuan, is thus described by M. Broussonet: — The skins are first cleansed, the hair taken off, limed, and reduced with bran nearly in the way already described for the English morocco leather. After coming from the bran they are thrown into a second bath made of white figs mixed with wa-ter, which is thereby rendered slimy and fermentable. In this bath the skins remain four or five days, when they are thoroughly salted with sal-gem, or rock salt alone, after which they are fit to receive the dye, which for the red is cochineal and alum, and for the yellow pomegranate bark and alum. The skins are then tanned, dressed, suppled with a little oil, and dried.

Much excellent leather, and of various colors, is manufactured in different parts of Russia; of which the processes are given in Mr. Tooke’s View of the Russian Empire, vol. iii. The saffian, or manoquin, which is prepared largely at Astracan, is manufactured only from the. skins of goats and bucks; the usual colors of these are red and yellow. The shagreen, which is also manufactured at Astracan, consists of hides of horses and asses ; but of these only a small part is used, cut from the crupper-line along the back about thirty-four inches upon the crupper, and twenty-eight along the back. The chief dyes of shagreen are green, blue, and black.

Various processes have been invented to ren-der leather for shoes and boots water-tight, which is effected by an additional dressing with an oily or resinous matter ; the following recipe is said to be effectual : — One pound of linseed-oil ; half a pound of mutton suet ; six ounces of

bees-wax, and four of resin, are to be melted, thoroughly incorporated, and applied, while warm, to the upper-leather and the soles.

TANSILLO (Lewis), a celebrated Italian poet, born at Nola, about 1510. His poem, entitled II Vindemiatore, i. e. the Vintager, being very indecent, all his poems were proscribed. To make some reparation for this error, he wrote La Lagrime de St. Pietro, i. e. the Tears of St Peter; which being presented to Pope Paul IV. he took off the interdict from all his poems, except the Vintager. He died about 1569.

TANTALIDES, in fabulous history, the descendants of Tantalus, as Atreas, Agamemnon, Menelaus, &c.

TANTALIZE, v. a. ˆ From Tantalus,

TAN'TALISM, n. s. £ whose punishment

TANT'LING. 7 was to starve among

fruits and water which he could not touch. To torment by the show of unattainable pleasure : tantalism is a punishment of this kind : tantling, one who is seized with unattainable hopes.

TAN

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Hard life,

To be still hot Summer's tantlings, and The shrinking slaves of Winter. Shakspeare.

Thy vain desires, at strife Within themselves, have tantalized thy life. Dryden.

The maid once sped was not suffered to tantalize the male part of the commonwealth. Addison.

A lively representation of a person lying under the torments of such a tantalism, or platonick hell.

Id. Spectator.

TANTAMOUNT, n. s. French, tantamount. Equivalent.

If one-third of our coin were gone, and men had equally one-third less money than they have, it must be tantamount; what I scape of one-third less, another must make up. Locke.

TANTALUS, in fabulous history, king of Phrygia and Paphlagonia, was the son of Jupiter and the nymph Plota. He one day entertained the gods at his table; when, to prove their divinity, he served up his son Pelops cut in pieces. All the deities except Ceres perceived his cruelty and impiety, and would not touch his provisions. That goddess inadvertently eat a part of his left shoulder. Pelops, however, was restored to life; and an ivory shoulder given him in the room of that which had been eaten ; but Tantalus was thrown into Tartarus, where he was punished with perpetual hunger and thirst. He was chained in a lake : the water of which reached up to his chin, but retired when he attempted to drink. The branch of a tree loaded with fruit hung down even to his lips, but on his attempting to pluck the fruit, the branch sprung upwards.

TANTALUS, a son of Thyestes, the first husband of Clytemnestra. Paus. 2

TANTALUS, in ornithology, a genus of birds belonging to the order of gralke. The bill is long, subulated, and somewhat crooked ; the face

naked ; the tongue short ; and the feet have four toes palmated on the under part. There are, according to Dr. Latham, twenty-three species ; of which the most remarkable is the T. ibis, the ibis, the bird so much valued by the ancient Egyptians for its utility in freeing the country from serpents, but now no longer found in Egypt. Mr.Bruce found a bird in Abyssinia, which, after comparing it with the description of the ancient writers, and the embalmed ibis of Egypt, he concludes is the same with the Egyptian ibis. It is minutely described by Mr. Bruce. It has a beak shaped like that of a curlew, two-thirds straight, and the remaining third crooked ; the upper part of a green horny substance, and the lower part black. It measures four inches and a half from the occiput to the place where it joins the beak. The leg, from the lower joint of the thigh to the foot, is six inches; the bone round and very strong ; and, from the lower joint of the thigh to where it joins the body, is five inches and a half. The height of the body from the sole to the middle of the back is nineteen inches; the aperture of the eye one inch; the feet and legs black; three toes before armed with sharp and straight claws; and a toe behind. The head is brown, and the plumage of the same color down to the back, or the place where the neck and back are joined. The throat is white, as well as the back, breast,

and thighs ; the largest feathers of the wing are of a deep black for thirteen inches from the tail; and six inches up the back from the extremity of the tail is black likewise.

TANTALDS'S CUP. See HYDROSTATICS. TAP, v. a. 8c n. s.) Fr. tapper ; Belg. ttip-TAP'STER, n.s. S pen. To touch or strike lightly; to pierce or broach a vessel. It is usc.l likewise of the liquor: a pipe out of which the liquor spouts : a tapster is one whose business it is to draw beer.

The oath of a lover is no stronger than the word of a tapster ; they are both the confirmers of false reckon-ings- . Shakspeare.

This is the right fencing grace, tap for tap, and so part fair. Id. Henry I V.

That blood already, like the pelican, Hast thou tapt out, and drunkenly carouzed.

Shakspeare.

The world is come now to that pass that the vint-ner and tapster may broach what religion they please , and the apothecary may mingle her as he pleases.

Howel.

Some put under the trees raised of seed, about four inches below the place where they sow their seeds, a small piece of tile to stop the running down of the taproot, which occasions it to branch when it comes to the tile. Mortimer's Husbandry.

He has been tapping his liquors, while I have bten spilling my blood. Addiso*,.

Each shakes her fan with a smile, then gives her right hand woman a tap upon the shoulder.

Id. Spectator.

As at hot cockles once I laid me down, And felt the weighty hand of many a clown, Buxoma gave a gentle tap. Gay's Pastorals

Wait with patience till the tumour becomes troublesome, and then tap it with a lancet.

Sharp's Surgery.

A gentleman was inclined to the knight of Cias-coigne's distemper, upon hearing the noise of a tap running. Derham.

Though the painting grows decayed, The house will never lose its trade ; Nay, though the treacherous tapster Thomas Hangs a new angel two doors from us. Swift.

So Huron-leeches, when their patient lies In feverish restlessness with unclosed eyes. Apply with gentle strokes their ozier rod, And tap by tap invite the sleepy god. Hartc.

TAPANOOLY, a British settlement of Sumatra, on the island of Puchong Keechil, at the bottom of the Bay of Tapanooly, on the north-west shore, distant about two miles and a half or three miles. The Bay of Tapanooly, with the island of Mansalar, forms one of the finest ports in the world.

TAPAYOS, or TAPAJOS, a magnificent river of Brasil, in the capitania of Matto G rosso, which derives its copious sources from numerous branches rising in the interior mountains. Jt is one of those great rivers which come from the south and feed the vast stream of the Amazons. Its course is north for more than 600 miles between the Chingu and the Aladera, and it falls into the Amazons in long. 55° W.

lat. 2° 2-1′ 50″ S.

TAPE, n.s. Sax. tseppan; Isl. and Svved. tepp. A narrow fillet or band of linen.

Will you buy any tape, or lace for your cape, My dainty duck, my clear-a? Sltakspeare

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TAPESTRY.

This poucn that s tiei with a tape I'll wager that the prize shall be my due Gay,

On once a flock-bed, but repaired with straw, With tape-tied curtains never meant to draw. Pope.

TA'PER, n. s., adj., k v. n. Saxon, raperi ; Goth, tap; Swed. top. A wax candle; a light: the adjective means pyramidal or conical, from the form of a taper : the verb neuter, to grow gradually smaller or towards a point.

Get me a taper in my study, Lucius : When it is lighted, come and call me. Shakspeare.

1 f any snatch the pure taper from my hand, and hold it to the devil, he will only burn his own fingers, but shall not rob me of the reward of my good intention. Taylor.

There the fair light,

Like Hero's taper in the window placed, Such fate from the malignant air did find, As that exposed to the boisterous wind. Waller .

To see this fleet,

Heaven, as if there wanted lights above, for tapers made two glaring comets rise. Dryden.

Her taper fingers, and her panting breast, He praises. Id.

The back is made tapering in form of a pillar, the lower vertebres

being the broadest and largest ; the superior lesser and lesser, for the greater stability of the trunk. Ray.

From the beaver the otter differs in his teeth, which are canine ; and in his tail, which is feline, or a long taper. Grew.

Such be the dog, With tapering tail, that nimbly cuts the wind.

Tickell.

TAPER, or TAPERING, is understood of a piece of timber, or the like, when thick at one end and gradually diminishing to the other ; as is the case in pyramids, cones, &c.

TAPER also denotes a kind of tall wax candle, placed in a candlestick, and burnt at funeral processions arid in other church solemnities. Tapers are made of different sizes ; in some places, as Italy, &c, they are cylindrical ; but in most other countries, as England, France, Sec., they are conical or taper ; whence the came ; unless we derive it in the adjective sense, from the substantive taper, Saxon, tapen, or tapon, cereus, wax-candle. Both kinds are pierced at bottom for a pin in the candlestick to enter. There are two ways of making tapers, the first with the ladle, the second by hand. See CANDLE.

TAPER, PASCIIAL, among the Romanists, is a iarge taper, whereon the deacon applies five bits of frankincense, in holes made for the purpose, in form of a cross ; and which he lights with new fire in the ceremony of Easter Saturday. The jiontifical makes pope Zosimus the author of this usage ; but Baronius will have it more ancient, and quotes a hymn of Prudentius to prove it. F. Papebroch gives the original of the paschal taper in his Conatus Chronico-IIistori- cus, &c. Though the council of Nice regulated the day whereon Easter was to he celebrated, it uijoiued the patriarch of Alexandria to make a yearly canon thereof, and to send it to the pope. As all the other moveable feasts were regulated by that of Easter, a catalogue of them was made every year ; and this was written on a consecrated taper, cereus. -This taper, according to the abbot Chastelain, was not made to be burnt ; il had no wick, and was only a column of wax,

made to write the list of moveable feasts on for a year. For the anc.onts, when any thing was to be written to last for ever, engraved it ou marble or steel ; when it was to last a long while they wrote it on Egyptian paper; and when it was only -to last a short time they wrote it on wax. They came at last to write the moveable feasts on paper,

but they still fastened it to the paschal taper.

TAPER-BORED (taper and bored) is applied to a piece of ordnance when it is wider at the mouth than towards the breech.

TAP'ESTRY, n. s. Fr. tapesterie, tapisserie, tapis ; Lat. lapetwn ; Gr. raTrijc. Cloth woven in regular figures. See below.

In the desk

That's covered o'er with Turkish tapestry, There is a purse of ducats. Shakspeare.

The casements are with golden tissue spread, And horses' hoofs, for earth, on silken tup'ttry tread.

Dryden.

One room is hung with tapestry, in which are wrought the figures of the great persons of the fa-mily. Adrlisnn.

TAPESTRY. The art of weaving tapestry is borrowed from the Saracens ; accordingly the workmen employed in this manufacture in France were formerly called Sarazins or Sarazinois. Guicciardini ascribes the invention of tapestry hangings to the inhabitants of the Netherlands ; but he has not mentioned at what time the discovery was made. This art was brought into England by William Sheldon near the end of Henry VIII.'s reign. In 1619 a manufacture was established at Mortlake, in Surry, by Sir Francis Crane, who received £2000 from king James to encourage it. The first manufacture of tapestry at Paris was set up under Henry IV. in 1606 or 1607 by several artists whom that monarch invited from Flanders. Under Louis XIV. the manufacture of the Gobelins was instituted, which introduced very beautiful cloths, remarkable for strength, for elegance of design, and a happy choice of colors. The finest paintings are copied, and eminent painters have been employed in making designs for the work.

Tapestry is distinguished by the workmen into two kinds, *viz.* high and low warp ; though the difference is rather in the manner of working than in the work itself; which is in effect the same in both ; only the looms, and consequently the warps, are differently situated ; those of the low warp being placed flat and parallel to the horizon, and those of the high warp erected perpendicularly. The English anciently excelled all the world in the tapestry of the high warp ; and they still retain their former reputation, though with some little change : their low warps are still admired; but the high ones are quite laid aside by the French. The French, before the Revolution, had three considerable tapestry manufactures besides that of the Gobelins ; the first at Abusson in Ouvergne, the second at Fel-lettin in the Upper Marche, and the third at Bcauvais. They were all equally established for the high and the low warp ; but they had all laid aside the high warp excepting the Gobelins. There were admirable low warps likewise in

Flanders generally exceeding those of France; the chiei and almost only Flemish manufactures were aw

Brussels, Antwerp, Oudenard, Lisle, Tournay, Bruges, and Valenciennes. The usual widths of tapestry are from two to three ells Paris measure. The loom on which it is wrought is placed perpendicularly : it consists of four principal pieces ; two long planks or cheeks of wood, and two thick rollers or beams. The planks are set upright, and the beams across them, one at the top and the other at the bottom, or about a foot from the ground. They have each their trunnions, by which they are suspended on the planks, and are turned with bars. In each roller is a groove from one end to the other, capable of containing a long round piece of wood, fastened with hooks to tie the ends of the warp to. The warp, which is a kind of worsted, or twisted woollen thread, is wound on the upper roller ; and the work, as fast as wove, is wound on the lower. Withinside the planks, which are seven or eight feet high, fourteen or fifteen inches broad, and three or four thick, are holes pierced from top to bottom, in which are put thick pieces of iron, with hooks at one end serving to sustain the coat stave ; these pieces of iron have also holes pierced by putting a pin in which the stave is drawn nearer or set farther off; and thus the coats or threads are stretched or loosened at pleasure. The coatstave is about three inches diameter, and runs all the length of the loom ; on this are fixed the coats or threads, which make the threads of the warp cross each other. It has much the same effect as the spring-stave and treddles have in the common looms. The coats are little threads fastened to each thread of the warp with a kind of sliding knot, which forms a sort of mash or ring. They serve to keep the warp open for the passage of broaches wound with silks, woollens, or other matters used in the piece of tapestry. In the last place there are a number of little sticks of different lengths, but all about an inch in diameter, which the workman keeps by him in baskets, to make the threads of the warp cross each other by passing them across; and, that the threads thus crossed may retain their proper situation, a packthread is run among them above the stick. The loom being thus formed, and mounted with

its warp, the first thing the workman does is to draw on the threads of this warp the principal lines and strokes of the design to be represented on the piece of tapestry; by applying cartoons made from the painting he intends to copy to the side that is to be the wrong side of the piece, and then, with a black lead pencil, following and tracing out the contours thereof on the thread of the right side ; so that the strokes appear equally both before and behind. The original design of the work is hung up behind the workmen, and wound on a long staff, from which a piece is un-rolled from time to time as the work proceeds. Besides the loom, &c., here described, there are three other principal instruments required for working the silk or the wool of the woof within the threads of the warp ; these are a broach, a reed, and an iron needle. The broach is made of hard wood, seven or eight inches long, and two-thirds of an inch thick, ending in a point with a little handle. This serves as a shuttle, the silks, woollens, gold, or silver, to be used in

the work being wound on it. The reed or comb is also of wood, eight or nine inches long, and an inch thick on the back, whence it grows “less and less to the extremity of the teeth, which are more or less apart, according to the greater or less degree of fineness of the intended work. Lastly, the needle is made in form of the com-mon needle, only bigger and longer. Its use is to press close the wool and silks when there is any line or color that does not fit well. AH things being prepared for the work, and the workman ready to begin, he places himself on the wrong side of the piece, with his back towards the design : so that he works as it were blindfold, seeing nothing of what he does, and being obliged to quit his post, and go to the other side of the loom whenever he would view and examine the piece, to correct it with his pressing-needle. To put silk, &c., in the warp, he first turns and looks at the design ; then, taking a broach full of the proper color, he places it among the threads of the warp, which he brings across each other with his fingers, by means of the coats or threads fastened to the staff; this he repeats every time he has to change his color. Having placed the silk or wool, he beats it with his reed or comb ; and, when he has thus wrought in several rows over each other, he goes to see the effects they have, in order to reform the contours with his needle, if there be occasion. As the v,o>k advances it is rolled upon the lower beam, and they unrol as much warp from the upper beam as suffices them to continue the piece : the like they do of the design behind them. When the pieces are wide several workmen may be employed at once. The high warp tapestry goes on much more slowly than the low warp, and takes up almost twice the

time and trouble. All the difference that the eye can perceive between the two kinds consists in this, that in the low warp there is a red fillet, about one-twelfth of an inch broad, running on each side from top to bottom, which is wanting in the high warp.

The loom or frame whereon the low warp is wrought is much like that of the weavers : the principal parts are two strong pieces of wood forming the sides of the loom, and bearing a beam or roller at each end ; they are sustained at bottom with other strong pieces of wood in manner of trestles ; and to keep them firm they are fastened to the floor with a kind of buttresses, which prevent any shaking, though there are sometimes four or five workmen leaning on the fore-beam at once. The rollers have each their trunnions, by which they are sustained : they are turned by large iron pins, three feet long. Along each beam runs a groove, wherein is placed the wich, a piece of wood about two inches diameter, and almost the length of the roller : this piece fills the groove entirely, and is fastened therein, from space to space, by wooden pins. To the two wiches are fastened the two extremities of the warp, which is wound on the farther roller, and the work, as it advances, on the nearer. Across the two sides, almost in the middle of the loom, passes a wooden bar, which sustains little pieces of wood, not unlike the beam of a balance : to these pieces are fastened strings, which bear certain spring-staves, uhcre-TAP

with the workman, by two ireddles under the loom whereon he sets his feet, gives a motion to the coats, and makes the threads of the wasp rise and fall alternately. Each loom has more or fewer of these spring-staves, and each staff more or fewer coats, as the tapestry consists of more or fewer threads. The design or painting the tapestry worker is to follow is placed under the warp ; where it is sustained from space to space with strings, by which the design is brought nearer the warp. The loom being mounted, two instruments are used in working it, *viz.* the reed and the flute. The Hute does the office of the weaver's shuttle ; it is made of hard polished wood, three or four lines thick at the ends, and somewhat more in the middle, and three or four inches long. On it are wound the silks or other matters to be used as the woof of the tapestry. The comb or reed is of wood or ivory ; it has usually teeth on both sides ; it is about an inch thick in the middle, but diminishes each way to the extremity of the teeth : it serves to beat the threads of the woof close to each other, as fast as the workman has passed and placed them with his flute among the threads of the warp. The workman is seated on a bench before the loom, with his breast against the beam, only a cushion or pillow between them ; and, in this posture, separating with his fingers the threads of the warp that he may see the design underneath, and taking a flute mounted with a proper color, he passes it among the threads, after having raised or lowered them by the treddles moving the spring-staves and coats. Lastly, To press and close the threads of the silk or yarn, &c., thus placed, he strikes each course (i. e. what the flute leaves in its passing and coming back again) tvith the reed. See WEAVING.

TAP'ET, n. s. Latin, tupetia. Worked or figured stuff.

To their work they sit, and each doth chuse What story she will for her tapet take. Spenser.

TAPHIjˆE, in ancient geography, islands in the Ionian Sea, between Achaia and Leucadia, called also Teleboides, from Taphius and Telebous. The Taphians made war against Electryon, king of Mycenae, and killed all his sons. Upon this he promised his daughter Alcmena, with his kingdom, to any man who should avenge him of the Taphians. This was accomplished by Amphitryon.— Horn. Od. i. 181, &c. See ALCMENA.

TAPHIANS, the natives of the Taphise. They were expert sailors, but addicted to piracy. — Plin. iv. c. 12.

TAPHIASSUS, or TAPHIUS, a mountain of Locris, on the confines of Jitolia. — Lempr.

TAPHIUS, and TELEBOUS, in fabulous history, the sons of Neptune, by Ilippothoe, the daughter of Nestor : they reigned in the Taphise, and gave their names to them. — Strabo, 10.

TAPHIUSA, a town near Leucas, famous for a particular stone, called taphiusius. — See Plin. 36, c. 21.

TAPIIIUE,, an ancient town on the isthmus of Taurica Chersonesus ; now called Prekop. — Mela ii, c. i. Plin. iv. c. 12.

TAPIOCA, a species of starch which the ftrasilians make from the roots of the cassada plant. See JATROPHA.

TAi'JR, in zoology, the elephant hog, a genus

of quadrupeds of the order of bellua?, resembling the hippopotamus. The fore feet have each four hoofs ; the hind feet three. There is only one species, *viz.* — T. Americanus, the American tapir. The nose of the male extends far beyond the lower jaw, is slender, and forms a sort of proboscis ; it is capable of being contracted or extended ;U pleasure, and its sides are sulcated. The extremities of both jaws end in a point, and there are ten cutting teeth in each. Between them and the grinders there is a vacant space; and there are ten grinders in e;ich jaw. The ears are erect, the eyes small, and the body is shaped like that of a hog. The back is arched ; the legs are short ; and the hoofs small, black, and hollow. The tail is very small. The animal grows to the size of a heifer half a year old. The hair is short: when young it is spotted with white ; when old of a dusky color. They inhabit the woods and rivers of the east side of South America, from the isthmus of Darien to the Amazon. They sleep during day in the darkest and thickest forest adjacent to the banks, and go out in the night time in search of food. They feed on grass, sugar-canes, and fruits. If disturbed they run to the water; and swim very well, or sink below ; and, like the hippopotamus, walk on the bottom as on dry ground. They make a sort of hissing noise. This is the largest of the American animals.

TAPLIN (William), an eminent veterinary surgeon. He was one of the first scientific cul-tivators of his art in England, and contributed not a

little to its improvement by his writings. His principal publications are, the Gentleman's Stable Directory, or the Modern System of Farriery, 1790, 2 vols. 8vo.; Practical Observations upon Thorn Wounds, Punctured Tendons, and Ligamentary Lameness in Horses, with Instructions for their Treatment and Cure, 8vo ; and a Compendium of Experimental Farriery, originally suggested by Reason and confirmed by Practice, 1796, 8vo. He also published a tract on the Preservation of Game ; and other pieces. He is said to have been deranged in the latter part of his life owing to domestic misfortunes. lie died in London in January 1807.

TAPORICA, or ITAPORICA, an island in the 8ay of Todos Santos, Brasil, the largest, most populous and fertile, of all those in the bay. This island defends the entrance of the bay ; upon the point or extremity is the fort of San Antonio, and a town called Vieja, in lat. 13° S.

TAPPAHANNOCK, a port of entry and the capital of Essex, county Virginia, on the south-west bank of the Rappahannock ; it is fifty-five miles E. S. E. from Fredericksburg, and fifty north-east from Richmond. Its situation is low and unhealthy. It contains a court-house, a jail, and an Episcopal church. All the shipping belonging to the towns on the Rappahannock is entered at the custom-house of this place

TAPPING, in general, the act of piercing a hole in a vessel, and applying a tube or canula in the aperture, for the commodious drawing off the liquor contained therein.

TAPPING, in surgery. See SURGERY.

TAPSUS. 1. A maritime town of Africa (Sil. Ital. 3). 2. A peninsula on the east coast of Sicily.

TAR

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who resided

TAPYRI, an ancient nation, near ilyrcanla. — Dionys. Perieg.

TAQUARI, a river of Brasil, on the borders of Paraguay, which runs a western course from

TARANTO, or TAUENTO, an ancient and considerable town of Naples, in the province of Otranto, eighty miles W.N.W. of the city of tnat name. It is built on a small island in the

the mountains and falls into the Paraguay oppo-great bay called the Gulf of Taranto and has

° ~ ”” -”””” - several advantages as a maritime position, havino

behind it, towards the north and east,- a great maritime inlet called Mare Piccolo (little sea), which extends into the interior, while it commu- . - . nicates with the sea by two channels, one on

when it turns west and enters the sea in the gulf each side of the island, or rather islet, occupied

Ol Sfln iXllorilAl Tic canrlc aK/lllnll in fina rrn\A Kir »kn #rt,. T* . •

site the lake of Marmore, by many mouths, the largest of which is in long 54° W., lat. 19° 15’ S TAQUASO, a large river of South America, in the province of Darien. Its course is from north-east to south-west for a great distance,

of San Miguel. Its sands abound in fine gold.

TAQUILE, or TAQUUNA, an island of the great lake of Chucuito, or Titicaca, in the district of the province of Paucarolla, in Peru. In the higher grounds of this island are some plains on which are to be seen the ruins of some large old towns built of stone.

TAR, n. s. & v. a. Sax. rape ; Belg. turre ; Dan. tiere. Liquid pitch ; the turpentine of the pine or fur drained out by fire ; a sailor : to smear with tar : hence to tease ; provoke : or, as Johnson thinks, from Gr. rapaira.

Then, foaming tar, their bridles they would champ, And trampling the fine element would fiercely ramp.

Spenser.

There has been much to do on both sides ; and the nation holds it no sin to turre them on to controversy. Shakspeare.

Two curs shall tame each other ; pride alone Must tar the mastiffs on, as ‘twere the bone. Id.

A man will not lose a hog for an halfpennyworth of tar. Camden’s Remains.

In senates bold, and fierce in war, A land commander, and a tar. Swift’s Miscellanies.

TAR is prepared in great quantities in Nor-way, Sweden, Germany, Russia, and North America, and in other countries where the pine and fir abound. For the method of obtaining it, see PINUS. Becher, the celebrated chemist, first proposed to make tar from pit-coal. Manufactures for this purpose have been established many years ago in the ci-devant bishopric of Liege, and in several parts of England. In 1781 the earl of Dundonald obtained a patent for extracting tar from pit-coal by a new process of distillation. See CHEMISTRY, Index, and COAL. Tar, which is well known for its economical uses, is properly an empyreumatic oil of turpentine, and bias been much used as a medicine both internally and externally. See MATERIA MEDICA and PHARMACY.

TAR WATER, or water impregnated with the soluble parts of tar, was, about a century ago, a very popular remedy ; but is now almost entirely out of use.

TARANIS, a name of Jupiter, among the ancint Gauls. — Lucan, i. 146.

TARANTAISE, a province of Sardinia, in Savoy, between Faucigny, Savoy proper, Mau-rienne, and Aosta. Its superficial extent is about 780 square miles ; its surface rugged and un-even, covered with mountains and rocks, and little susceptible of culture. The least sterile

parts are brought into surprising cultivation, and made to produce corn, saffron, fruit, and chestnuts : the pastures nourish a fine race of cattle. A number of the inhabitants, however, go out to seek employment in more favored countries. Population 39,000.

by the town. Taranto contains 18,500 inhabitants, and has a castle of some strength.

TARANTULA, n.s. Ital. tarantula; Fr. ta-rantule. An insect whose bite is said to be cured by music.

This word, lover, did no less pierce poor Pyrocles than the right tune of musick toucheth him that is sick of the tarantula. Sidney.

He that uses the word tarantula, without having any idea of what it stands for, means nothing at afl ty it-Locks.

TARAS, a son of Neptune, who built Tarentum.

TARAS, an ancient name of Tarentum.

TARASCO, an ancient town of Gaul, now Tarascor.

TARASCON, a considerable town in the south-east of France, on the Rhone, and opposite to the town of Beaucaire, with which it communicates by a bridge of boats. There are manufactures of woollens, silk, stockings, and an export trade in wine, brandy, olive-oil, and other products. Of public buildings the principal is the castle, a structure of hewn stone fortified in the Gothic manner, and surmounted by a platform, affording a fine view of the adjacent country. Some of the churches are likewise handsome. Inhabitants 12,000. Nine miles north of Aries, and fifty-five north-west of Marseilles.

TARAXACUM, in botany, dandelion. See LEONTODON and MATERIA MEDICA.

TARAXIPPUS, a deity worshipped in Elis, who superintended the races and other games. His statue was placed near the race ground, and his protection implored to the horses and their riders. — Paus. vi. 20.

TARBELLjE, a name of the Pyrenees, from

TARBELLI, an ancient people of Gaul, at the foot of the Pyrenees. —

Caes. de Bell. Gall.

TARBES, an inland town in the south-west of France, and the capital of the department of the Upper Pyrenees, is situated on the left bank of the Adour. It is the see of a bishop, and is surrounded with a wall defended by an old castlr. Here are a public square, cathedral, several fine churches, the residence of the bishop, a theatre, and an hospital, and the streets of the town are tolerably broad and well paved. The houses, though low, are not badly built of brick or gray marble, and covered with slate. Here are, also, on a small scale, manufactures of linen, handkerchiefs, paper, knives, and small copper articles. There is here also a royal stud. Inhabitants 8000. On the 20th of March, 1814, the French army under Soult were forced from their position here by the British under the duke of Wellington. Twenty-two miles east by south of Paris.

TAR

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. gish ; dilatory ; un-wary : to delay ; hin- ‘ der : tardigradous,

TARCHON, an Etrurian chief, who assisted TKneas against the Rutuli ; and built Tarquinii. Virg. jEn. viii. 603.

TARCHONANTHUS, flea-bane, in botany,

a genus of plants belonging to the class of syngenesia, and to the order of polygamia aequalis,

and in the natural system ranging under the

forty-ninth order, composite. The receptacle is

villous, and the pappus plumy; the calyx is

monophyllous, turbinated, and half divided into

seven segments. There are only three species,

viz. T. camphoratus, ericoides, and glaber.

TAR’DY, adj. & v.a.ˆ Lat. tardus ; FT.

TARDIGRA’DOUS, adj. f tardif. Slow ; slug—

TAR’DILY, adv.

TAR’DINESS, n. s.

TAR’DITY.

moving slowly : the adverb and noun substantives correspond with tardy.

Nor should their age by years be told, Whose souls more swift than motion climb, And check the tardy flight of time. Sandys.

He was indeed the glass,

. Wherein the noble youth did dress themselves ; Speaking thick,

which nature made his blemish, Because the accents of the valiant ; For those that could speak low and tardily, Would turn their own perfection to abuse, To seem like him. Shakspeare. Henry IV.

A. tardiness in nature, Which often leaves the history unspoke That it intends to do. Id. King Lear.

I chose

Camillo for the minister, to poison My friend Polixenes ; which had been done, But that the good mind of Camillo tardied My swift command. . Id. Winter's Tale.

Suppose some observable tardily in the motion of light, and then ask how we should arrive to perceive it ? Digby.

Death he as oft accused Of tardy execution, since denounced The day of his offence. Milton's Paradise Lost.

Yield, scoundrel base, quoth she, or die, Thy life is mine, and liberty : But if thou think'st I took thee tardy, And dar'st presume to be so hardy To try thy fortune o'er afresh, I'll wave my title to thy flesh. Hudibras.

It is but a slow and tardigradous animal, preying upon advantage, and otherwise may be escaped.

Browne.

The tardy plants in our cold orchards placed, Reserve their fruit for the next age's taste : There a small grain in some few months will be A firm, a lofty, and a spacious tree. Waller.

When certain to o'ercome, inclined to save, Tardy to vengeance, and with mercy brave. Prior.

If they take them tardy, they endeavour to humble them by way of reprisal : those slips and mismanagements are usually ridiculed. Collier on Pride.

You may freely censure him for beicg tardy in his payments. A rbuthnot.

TARE, n. s. Dut. teeren, to consume. — Skinner. A weed that grows among corn.

Through hatred of tares, the corn in the field of God is plucked up. Hooker.

The liberal contributions such teachers met with, served to invite more labourers, where their seed-time was their harvest ; and by sowing tares they reaped IP!'!. Decay of Piety.

My country nriphbours begin not lo think of being in general, which is being abstracted 1’iom r»l’ its in-

ferior species, ‘before they come to think of the fly in their sheep, or the tares in their corn. Locke.

TARE, or VETCH, in botany. See RURAL ECONOMY.

TARE, in commerce, is an allowance for the outside package that contains such goods as can-not be unpacked without detriment ; or for the papers, threads, bands, &c., that enclose or bind any goods imported loose; or though imported in casks, chests, &c., yet cannot be unpacked and weighed neat.

TARENTINES, the ancient inhabitants of Tarentum, long famous for their bravery, and afterwards equally infamous for their luxury and effeminacy.

TARENTINE WAR, a war which lasted ten years, between the Tarentines assisted by Pyrrhus, and the Romans. See EPIRUS, ROME, and TARENTUM.

TARENTUM, TARENTUS, or TARAS, an ancient city of Italy in Calabria, seated near the mouth of the Galesus, and capital of a republic. It was founded by a colony of Spartans, under Phalanthus, about A. A. C. 707. The government was democratical, though they had occasionally some monarchs. It was for some time the residence of Pythagoras, who taught the citizens his philosophy, inspired them with the love of virtue, and rendered them superior to their neighbours, both in the cabinet and the field. They were long independent, and maintained their superiority over thirteen tributary cities ; when they could arm 100,000 foot and 3000 horse. Becoming rich, they grew voluptuous and indolent; so that the delights of Tarentum became proverbial. In the pride of their prowess, however, they quarrelled with the Romans, and invited Pyrrhus into Italy. See ROME. But the war ended, after ten years, in the total conquest of their republic, its annexation to that of Rome, and the capture of 30,000 prisoners.

TARGE, n. s. } Sax. rariˆa ; Fr. targe , Ital.

TAR’GET. ftarga; Span, tarja ; Welch,

TARGET’IER j tarian ; Erse taargett. A

kind of buckler or small shield borne on the

left arm : one armed with a target.

Glancing on his helmet made a large And open gash therein, were not his targe That broke the violence. Spenser.

I took all their seven points in my target.

Shakspeare. For horsemen and for targetiers none could with

him compare. Chapman.

The arms she useth most is the target, to shroud herself under, and fence away the blow.

HoiceVs England's Tears. Those leaves They gathered, broad as Amazonian large. Milton.

The Greeks the gates approached, their targets cast Over their heads, some scaling ladders placed Against the walls. Derhain.

TARGIONIA, in botany, a genus of plants belonging to the class of cryptogamia, and natural order of algae. The calyx is bivalved, including a globular body. There is only one species, *viz.* — T. hypophylla, the vetch tare, a native of Great Britain. It has leaves about a quarter of an inch long, of a heart-shape, inverted, and growing prostrate in a clump together ; their

upper surface is green, covered with whitish papillae, and their lower surface is black. The fructification grows at the great end of the leaf on the lower side, and consists of two concave valves of a reddish-black color, enclosing a chocolate colored globule, resembling the seed of a tare or vetch, full of a yellow powder. The leaves increase by shooting out young offsets from their sides like the polypus. This plant is found in the north of England, and near Tarb.it of Kin-tyre in Scotland.

TARGUM, QOV>, a paraphrase on the pentateuch in the Chaldee language. It signifies paraphrases or expositions, because they are rather comments and explications than literal translations of the text. They are written in the Chaldee tongue, which became more familiar to the Jews after their captivity in Babylon, than the Hebrew itself. But though the custom of making these expositions in the Chaldee language be very ancient among the Hebrews, yet have thoy no targums before the era of Jonathan and Oizkelos.

i. The TARGUM OF JERUSALEM is only upon the Pentateuch ; nor is that entire or perfect.

ii. The TARGUM OF JONATHAN, the son of IJ'/iel, is upon the greater and lesser prophets. If-: flourished under Herod the Great, about A A. C. 30.

iii. The TARGUM OF JOSEPH THE BLIND is upon the Hagiographa. This author is much more modern, and less esteemed than those above-mentioned.

iv. The TARGUM OF ONKELOS is the most of all esteemed, and copies are to be found in which it is inserted verse for verse with the Hebrew. It is so short and so simple that it cannot be suspected of being corrupted. This paraphrast wrote only upon the books of Moses ; and his style approaches nearly to the purity of the Chaldee, as it is found in Daniel and Ezra. This targum is cited in the Mischna, but was not known either to Eusebius, St. Jerome, or Origen. See ONKELOS.

TARICILEUM, a fortified town of Judea.— Cicero ad Div. xii. c. 14.

TARIFF, n. s. Span, tarifa ; Fr. tarif. A cartel of commerce.

This branch of our trade was regulated by a tariff, or declaration of the duties of import and export.

Addison.

TARIF is a table or catalogue containing the names of different sorts of merchandise, with the duties to be paid as settled by authority among trading nations.

TARIN (Peter), a French physician and au-thor, born at Courtenai, about the end of the seventeenth century. He published, 1. Adver-saria Anatomica, 4to. 2. An Anatomical Dictionary, 4to. 3. Osteographia, 4to. 4. Anthro-peomia, or the Art of Dissecting, 2 vols. 12mo. 5. A Treatise on Ligaments. 6. Observations on Medicine and Surgery, 3 vols. 12mo.: and, 7. A Description of the Muscles, 4to. He died in 1761.

TARLETON (Richard), a celebrated English actor, born about the beginning of the sixteenth century at Condover in Shropshire ; whence he was brought to London, and patronised by Ro-

bert, earl of Leicester. Stowe says he was one of the twelve whom, in 1583, queen Elizabeth appointed her players at Barn-Elms ; allowing them wages and liveries as grooms of the chambers. He wrote a dramatic piece, called The Seven Deadly Sins. He died about 1589.

TARN, a fertile department of the south of France, formed of a part of the province of Languedoc, and adjacent to the departments of tin; Aveyron and Upper Garonne. It has the mountains of Languedoc on the east, and commands, at a distance, a prospect of the Pyrenees ; but its whble surface may be termed an undulating plain, traversed by several chains of small hills. Its principal river is the Tarn, a large stream flowing from the north-east to the Garonne. The climate is steady and temperate, and the products are wheat, barley, maize, hemp, flax, vines, and fruit of different kinds. Here are also occasional tracts of fine pasture. Of corn, enough is raised to afford a small annual export. The culture of the vine is extensive ; but the wines, with the exception of the kind called vin du Cog, do not keep sufficiently to admit of export. Here arc, on a small scale, mines of iron and coal ; some silk also is cultivated. This department is divided into four arrondissements, *viz.* Albi (the chief town), Castres, Lavaur, and Gaillac. It has an extent of 2100 square miles, and a population of nearly 296,000, of whom above 40,000 are Protestants.

TARN AND GARONNE, a department in the south of France, formed, so lately as 1808, of portions of the departments of the Lot and Up-per Garonne. It lies to the west of the department of the Tarn. Its surface is a plain, traversed by three chains of hills, the highest oi which is said not to exceed 1200 feet. Its principal rivers are the Tarn and Garonne. The soil is in general fruitful, and the climate mild, but the labors of the husbandman are frequently exposed to hazard from hail storms. Its products are wheat, barley, maize, hemp, flax, vines, chesnuts, and several fruits of a southern climate, as almonds and figs. The pastures are of limited extent. The domestic animals are mules, asses, horses ; poultry is particularly abundant. The culture of silk is on a limited scale. This department is divided into three arrondissements, *viz.* Montauban (the capital), Moissac, and Castel Sarrazin. It has an extent of 1500 square miles, and a population of 240,000, of whom above 30,000 are Protestants.

TAR'NISII, v. a.&v.n. Fr. ternir. To sully; soil; dull : to lose brightness.

Let him pray for resolution, that he may discover nothing that may

discredit the cause, tarnish the elorv, and weaken the example of the suffering.

C’Mitr.

If a fine object should tarnish by having a great many see it, or the musick should run mostly into one man’s ears, these satisfactions would be made inclosure. l’L °f Env!’-

Low waves the rooted forest, vexed, and shed What of its tarnished honours yet remain.

Thomson.

TARNOW, a circle of Austrian Galicia, lying along the river Dunajee, and bounded on the north by the Vistula. Its area i.s 1300 square

TAR

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miles, and its population 205,600. It is in general a level country, with the exception of some hills in the south.

TARPAWL'ING, n. s. From tar. Hempen cloth smeared with tar.

Some the galled ropes with dauby marling bind, Or searcloth masts with strong tarpawling coats.

Dry den.

Was any thing wanting lo the extravagance of this age. but the making a living tarpawlin and a swabber the hero of a tragedy ? Dennis.

TARPEIA, a vestal virgin who oetrayed the citadel of Rome to the Sabines; for which, by a voluntary mistake, they rewarded her with death. See ROME.

TARPEIAN ROCK, in Roman antiquity, a steep rock in Rome ; whence, by the law of the XII. tables, those guilty of certain crimes were precipitated. It took its name from Tarpeia, who was burnt near it.

TARPEIUS MONS, the Tarpeian Hill, on which stood the Tarpeian Rock. See last article. It was eighty feet perpendicular in height. It was also called Capitolinus, from the Capitol being built on it.

TARQUIN I., king of Rome, succeeded An-cus Martius, A. A. C. 615. See ROME. •

TAEQUIN II., surnamed the Proud, a tyrant and usurper. See ROME.

TARQUINIA, the daughter of Tarquin I. and the wife of Servius Tullius. After the mur-der of her husband (see ROME), she buried his body, and died of grief the night following. Others say that she was poisoned by the parricide Tullia.

TARQUINIENSES, the ancient inhabitants of Tarquinii. They endeavoured to restore Tarquin II. See ROME.

TARQUINII, an ancient city of Etruria, built by Tarchon, an ally of ˆneas. Lucumo the Corinthian was educated in it, took his surname Tarquinius from it ; and after he became king of Rome, by the name of Tarquin I., made it a Roman colony. — Strabo 5. It is now called

Tarchina.

TARQUINIUS (Lucius, Collatinus), one of the two first consuls of Rome, the husband of Lucretia and colleague of Brutus. See COLLATINUS and ROME.

TARQUITUS, a son of Faunus and Dryope, who assisted Turnus against ./Eneas, and was killed by the latter.— Virg. ./En. x. v. 550.

TARRACINA, or Anxur, an ancient city of the Volsci, between Rome and Naples (see ANXUR) ; now called Terracina.

TARRACO, in ancient geography, a city of Hispania Tarraconensis, of which it was the capital, founded by the Phoenicians ; and planted with a Roman colony by the two Scipiones Afri-cani, and seated on the coast of the Mediterranean. It is now called Tarragona.

TARRACONENSIS HISPANIA, an ancient Roman province of Spain, called also Hispania Citra, or Citerior, in respect of its situation as to Rome. It was bounded on the north by the Pyrenees and the Cantabrian Sea, now the Bay of Biscay; on the east by the Mediterranean; south by Lusitania, and Hispania Bcetica ; and M-esi bv the Atlantic Ocean. It was famous for

its wines. Tarraco was the capital. It comprehended Catalonia and some adjacent districts. See CATALONIA.

TARRAGONA, a sea-port of Catalonia, Spain, near the mouth of the Francoli. It is a place of great antiquity, built on a hill, and surrounded by walls with turrets, erected either by the Moors, or by the Christians of the middle ages. It was occupied by the British in the beginning of the eighteenth century,with an intention of rendering it a naval station, but on the acquisition of Gibraltar, in 1704, the design was abandoned. Tarragona contains 7500 inhabitants, is the see of a bishop, and has a large and elegant cathedral, built in the Gothic style. It was under the Romans the chief town of the province of Tarraconensis.

TARRANTIUS (Lucius), an ancient Roman mathematician and philosopher, who was contemporary with Cicero, and was one of his friends. He has been styled the Prince of Astrologers. He made two famous horoscooes, the one of Romulus, the other of Rome.

TARRAS, or TERRAS, a volcanic earth used as a cement, and which

does not differ much in its principles from pouzzolana; but is much more compact, hard, porous, and spongy. It is generally of a whitish-yellow color, and contains more heterogeneous particles, as spar, quartz, schorl, &c., and something more of a calcareous earth. It effervesces with acids, is magnetic, and fusible per se. When pulverised it serves as a cement, like pouzzolana. It is found in Germany and Sweden.

TAR'RIANCE, n. s. From tarry. Stay ; delay; perhaps sojourn. Obsolete.

Dispatch me hence ;

Come, answer not ; but do it presently, I am impatient of my tarriance. Shakspeare.

TAR'RIER, n. s. Or terrier, from Fr. terre, the earth. A sort of small dog, that hunts the fox or otter out of his hole.

The fox is earthed ; but I shall send my two terriers after him. Dryden.

TAR'RY, v. n. & v. a. Fr. targir. To stay J to continue in a place ; delay; wait: wait for.

Tarry ye here for us until we come again.

Exodus xxiv. 14.

Thou art my deliverer, make no tarrying, O God !

Psalms.

Who hath woe and redness of eyes ? they that tarry long at the wine. Proverbs xxiii. 30.

I will go drink with you, but I cannot tarry din-ner. Shakspeare.

Tarry I here, I but attend on death ; But fly I hence, I fly away from life. Id.

I yet am tender, young, and full of fear, And" dare not die, but fain would tarry here.

Dryden,

TAR'SEL, n. s. Teut. tarzel. A kind of hawk.

Hist ! Romeo, hist ! O for a falc'ner's voice, To lure this tarsel gentle

back again ! Shakspeare.

A falc'ner Henry is, when Emma hawks; With her of tarsels and of lures he talks. Prior.

TAR'SUS, n. s. Fr. terse ; Gr. rapffoc-In anatomy, the space betwixt the lower end of the focil bones of the leg, and the beginning of the five long bones that are joined with, and bear up, the toes.

TAR

66?

An obscure motion, where the conjunction is called synanthrosis ; as in joining the tarsus to the meta-tarsus. Wiseman.

TARSUS, a city of Asia Minor, the ancient capital of Cilicia. It possesses very high antiquity, and is said by Arrian and Strabo to have been founded by Sardanapalus on the same day with Anchiale ; others are of opinion that it was a Grecian colony, founded by Triplolemus. It was much favored by Augustus and Adrian, and rose to such celebrity as to rival Athens, Antioch, and Alexandria, in wealth and grandeur, as well as in literature and science. It was also adorned with a number of magnificent temples, a gymnasium, and a theatre. It has, however, been subject to many vicissitudes, and retains scarcely a vestige of its former magnificence.

The city is situated in a fertile plain, on the right bank of the Cydnus ; the houses, intersected by gardens and orchards, seldom exceed one story in height, are flat-roofed, and mostly constructed of hewn stone. There is a castle, said to be built by Bajazet ; and portions of a wall, probably the remains of that erected by Haroun al Raschid. On an eminence to the south-west are the ruins of a spacious edifice, which may very probably have been the gymnasium ; and, about 200 yards farther to the west, an ancient gateway. The city contains two public baths, several mosques, and caravanserai, and a small ancient church. The land in the neighbourhood is exceedingly fertile. The port is about seven or eight miles from the town. Population 25,000 to 30,000.

TART, adj. ˆ Saxon tear* ; Belgic

TART’LY,ao}’. ftaertig ; Gr. repew. Sour;

TART’NESS, re. s. j acid ; acidulated ; sharp ;

keen; severe : the adverb and noun substantive

corresponding.

\V hy so tart a favour To trumpet such good tidings 1 Shakspeare.

How tartly that gentleman looks ! — He is of a very melancholy disposition. Id.

They cannot be too sweet for the king's tartness.

Id.

Figures, with divers coloured earths, under the windows of the house on that side near which the garden stands, be but toys ; you may see as good sights in tarts. Bacon's Kssays.

When his humours grew tart, as being now in the lees of favour, they brake forth into certain sudden recesses. Wotton.

lelograms and parallelepipeds. This dress is much worn by the Scottish Highlanders. The tartan dress is said to have been derived from the ancient Gauls or Celtse ; the Galli non-brac- cati. The tartan is made into plaids, coats, and philibegs. The most elegant form of this dress is wnen the coat is made of that kind of tartan in which the red stripes chiefly prevail; the vest entirely white ; the philibeg, drawers, or trowsers, of that in which the green or blue chiefly predominates; and the plaid, with either the green or blue predominant, but differing from that of the philibeg. Set PHILIBEG.

TARTAN PLAID. See PLAID.

TAR'TANE, n s. Fr. tarlane ; Ital. tartunu. A vessel used in the Mediterranean, with one mast and a three-cornered sail.

I set out from Marseilles to Genoa in a tartane, and arrived late at a small French port called Cassis.

Add imm.

TARTANE, in sea language, a small coasting vessel navigated in the Mediterranean Sea, and having only one mast and a bowsprit, the principal sail, which is extremely large, being extended by a lateen yard. When tartanes put up a square sail it is called a sail of fortune.

TARTAR, n. s. Lat. tartarus. Hell. A word used by the old poets. Now obsolete.

With this the damned ghosts he governeth, And furies rules, and tartare tempereth. Spenser.

He's in tartar limbo worse than hell ; A devil in an everlasting garment hath him, One worse hard heart is buttoned up with steel.

Sbakspeife.

His throne mixed with tartarean sulphur. Millon.

The spirit of God downward purged The black tartareous cold infernal dregs, Adverse to life. Id.

TARTAR, n. s. Fr. tartre. The concretion of wine casks ; wine lees ; see below.

The fermented juice of grapes is partly turned into liquid drops or lees, and partly into that crust or dry feculency that is commonly called tartar ; and this tartar may by the fire he divided into five differing substances, four of which are not acid, and the other not so manifestly acid as the tartar itself.

Boyle.

In fruits, the tartareous parts of the sap are thrown the fibres designed for the stone, and the oily the seed within it. Crew's Cosmology.

TARTAR is deposited on the sides of casks

,caBCB. during the fermentation of wine ; it forms a lin—

Of these sweets put in three gallons, more or less, ing more or less thick, which is scraped off. This

into an hogshead, as the tartness of your cider requires. Mortimer.

TARTAGLIA (Nicholas), a celebrated Italian mathematician, born at Brescia, where he became

is called crude tartai,and is sold in Languedoc from ten to fifteen livres the quintal. All wines do not afford the same quantity of tartar. Neumann remarked that the Hungarian

wines left

a famous teacher of the mathematical sciences, only a thin stratum ; that the wines He published severa\ works which are esteemed, afforded more; and that the Rhenish wm <

“•’ ‘ forded the purest and the greatest quantity.

Tartar is distinguished from its color into red and white: the first is afforded by red wine, and is purified from an abundant extractive principle, by processes which are executed at Montpellier and at Venice.

The following is the process used at I pellierˆThe tartar » dissolved « ™t«, and

red, green, white, black, and yellow, &c., run-suffered to crystallize by cooling. The tryst ning in parallel lines and crossing each other ; are then bo.led in another vessel, with .ie a 1 - and thus forming various colored squares, paral-tion of five or six pounds of the wh.lc

His chief tract is on numberand measure, entitled Trattat di Numeri et Misure, 1556, folio. e died about 1558.

TARTAR, an idol of the Avites. See SAMA-RITANS.

TARTAN, or TARTAN CLOTH, a kind of cloth, made generally of woollen, sometimes of linen, and often of silk, of various colors; as blue,

ceous earth of Murviel to each quintal of the salt. After this boiling with the earth, a very white salt is obtained by evaporation, which is

known by the name of cream of tartar, or the acidulous tartrate of potash.

M. des Maretz has informed us that the process used at Venice consists, 1. In drying the tartar in iron boilers ; 2. Pounding it, and dissolving it in hot water, which, by cooling, affords purer crystals ; 3. Redissolving these crystals in water, and clarifying the solution by whites of eggs and ashes. The process of Montpellier is preferable to that of Venice. The addition of the ashes introduces a foreign salt, which alters the purity of the product.

TARTAR, in mythology. See HELL and TARTARUS.

TARTAR, CHALYBEATED. This is prepared by boiling three parts of the supertartrate of potash and two of iron-filings in forty-six parts of water, till the tartar appears to be dissolved. The li-quor is then filtered, and crystals are deposited on cooling, more of which are obtained by continuing the evaporation.

TARTAR, CREAM OF, the proper name of the purified supertartrate of potash.

TARTAR, CRUDE, the supertartrate of potash in its natural state, before it has been purified.

TARTAR, EMETIC, the tartrate of potash and antimony. See ANTIMONY.

TARTAR OF THE TEETH, the popular name for the concretion that so frequently incrusts-the teeth, and which consists apparently of phosphate of lime.

TARTAR, PHENOMENA AND PROPERTIES OF. See CHEMISTRY.

TARTAR, REGENERATED, acetate of potash.

TARTAR, SALT OF, the subcarbonate of pot-ash.

TARTAR, SECRET FOLIATED EARTH OF, acetate of potash.

TARTAR, SOLUBLE, neutral tartrate of pot-ash.

TARTAR, VITRIOLATED, sulphate of potash.

TARTARIC ACID. The casks in which some kinds of wine are kept become incrusted with a hard substance, tinged with the coloring matter of the wine, and otherwise impure, which has long been known

by the name of argal, or tartar, and distinguished into red and white according to its color. This being purified by solution, filtration, and crystallisation, was termed cream, or crystals of tartar. It was afterwards discovered that it consisted of a peculiar acid combined with potash; and the supposition that it was formed during the fermentation of the wine was disproved by Boerhaave, Neumann, and others, who showed that it existed ready formed in the juice of the grape. It has likewise been found in other fruits, particularly before they are too ripe ; and in the tamarind, sumac, balm, carduus benedictus, and the roots of rest-harrow, germander, and sage. The separation of tartaric acid from this acidulous salt, is the first discovery of Scheele that is known. He saturated the superfluous acid, by adding chalk to a solution of the supertartrate in boiljng water as long as any effervescence ensued, and expelled the acid from the precipitated tartrate of lime by

means of the sulphuric. Or four parts of tartar may be boiled in twenty or twenty-four of water, and one part of sulphuric acid added gradually. • By continuing the boiling, the sulphate of potash will fall down. When the liquor is reduced to one-half, it is to be filtered ; and, if any more sulphate be deposited by continuing the boiling, the filtering must be repeated. “When no more is thrown down, the liquor is to be evaporated to the consistence of a syrup; and thus crystals of tartaric acid, equal to half the weight of the tartar employed, will be obtained.

The tartaric acid may be procured in needly or laminated crystals, by evaporating a solution of it. Its taste is very acid and agreeable, so that it may supply the place of lemon juice. It is very soluble in water. Burnt in an open fire it leaves a coaly residuum ; in close vessels it gives out carbonic acid and carburetted hydrogen gas. By distilling nitric acid off the crystals, they may be converted into oxalic acid, and the nitric acid passes to the state of nitrous.

To extract the whole acid from tartar, M. Thenard recommends, after saturating the redundant acid with chalk, to add muriate of lime to the supernatant neutral tartrate, by which means it is completely decomposed. The insoluble tartrate of lime, being washed with abundance of water, is then to be treated with three-fifths of its weight of strong sulphuric acid, diluted previously with five parts of water. But Fourcroy’s process, as improved by Vauquelin, seems still better. Tartar is treated with quicklime and boiling water in the proportion, by the theory of equivalents, of 100 of tartar to thirty of

dry lime, or forty of the slaked. A caustic magma is obtained, which must be evaporated to dryness, and gently heated. On digesting this in water, a solution of caustic potash is obtained, while tartrate of lime remains ; from which the acid may be separated by the equivalent quantity of oil of vitriol.

Accoidingto Berzelius, tartaric acid is a compound of 3-807 hydrogen + 35-980 carbon + 60-213 oxygen zz 100; to which result he shows that of M. Gay Lussac and Thenard to correspond, when allowance is made for a certain portion of water, which they had omitted to estimate. The analysis of tartrate of lead gives 8‘384for the acid prime equivalent; and it may be made up of —

3 hydrogen . zz 0-375 4-48

4 carbon . z= 3-000 35‘82

5 oxygen . zz 5-000 59-70

8-375 100-00

The crystallised acid is a compound of 8-375 acid + 1-125 water zz 9-5; or in 100 parts 88-15 acid + 11-85 water.

The tartrates, in their decomposition by fire, comport themselves like all the other vegetable salts, except that those with excess of acid yield the smell of caromel when heated, and afford a certain quantity of the pyrotartaric acid. All the soluble neutral tartrates form, with tartaric acid, bitartrates of sparing solubility ; while all the insoluble tartrates may be dissolved in an excess of their acid. Hence, by pouring gradually an

excess of acid into barytes, strontites, and lime-waters, the precipitates

formed at first cannot fail to disappear ; while those obtained by an excess of the same acid, added to concentrated solutions of potash, soda, or ammonia, and the neutral tartrates of these bases as well as of magnesia and copper, must be permanent. The first are always flocculent ; the second always crystalline'; that of copper alone is in a greenish-white powder. It likewise follows, that the greater number of acids ought to disturb the solutions of the alkaline neutral tartrates, because they transform these salts into bitartrates ; and on the contrary they ought to affect the solution of the neutral insoluble tartrates, which indeed always happens, unless the acid cannot dissolve the base of the tartrate. The order of apparent affinities of tartaric acid are, lime, barytes, strontites, potash, soda, ammonia, and magnesia.

The tartrates of potash, soda, and ammonia, are not only susceptible of combining together, but also with the other tartrates, so as to form double or triple salts. We may thus easily conceive why the tartrates of potash, soda, and ammonia, do not disturb the solutions of iron and manganese; and on the other hand disturb the solutions of the salts of barytes, strontites, lime and lead. In the first case, double salts are formed, however small a quantity of tartrate shall have been employed ; in the second no double salt is formed unless the tartrate be added in very great excess.

The tartrates of lime and barytes are white, pulverulent, and insoluble.

Tartrate of strontian, formed by the double decomposition of muriate of strontian and tartrate of potash, according to Vauquelin, is soluble, crystallisable, and consists of 52-88 strontian, and 47' 12 acid. That of magnesia forms a gelatinous or gummy mass.

Tartrate of potash, the tartarized kali of the London college, and vegetable salt of some, formerly called soluble tartar, because much more so than the supertartrate, crystallises in oblong squares, bevelled at the extremities. It has a bitterish taste, and is decomposed by heat, as its solution is even by standing some time. It is used as a mild purgative.

The supertartrate of potash, already mentioned at the beginning of this article, is much used as a cooling and gently opening medicine, as well as in several chemical and pharmaceutical preparations. Dissolved in water, with the addition of a little sugar, and a slice or two of lemon-peel, it forms an agreeable cooling drink by the name of imperial: and if an infusion of green balm be used, instead of water, it makes one of the pleasantest liquors of the kind with which we are

acquainted. Mixed with an equal weight of nitre, and projected into a red-hot crucible, it detonates, and forms the white flux ; treated in the same way with half its weight of nitre, it forms the black flux ; and simply mixed with nitre, in various proportions, it is called raw flux. It is likewise used in dyeing, in hat-making, in gilding, and in other arts.

The blanching of the crude tartar is aided by boiling its solution with one-twentieth of pipe-clay.

According to the analysis ot Rerzelius, it consists of 70-45 acid + 24‘8 potash + 4-75 water = 100; or—

2 primes acid — 16-75 1 potash — 5-95

1 water — 1-125

23-825

70-30

24-95

4-75

100-00

sixty parts of water dissolve four of bitartrate at a boil ing heat; and only one at 60° Fahrenheit. It is quite insoluble in alcohol. It becomes very soluble in water, by adding to it one-fifth of its weight of borax ; or even by the addition of boracic acid. It appears by Berzelius that neutral tartrate of potash, dried in the sun, differs from the bitartrate, in containing no water of crystallization. He states it to be compounds of 58-69 acid + 41-31 potash — 100 ; which afford 155-7 tartrate of lead. Now, 8-375 : 5-95 : : 58-5:41-5; which are the equivalent proportions.

On considering the great solvent property of cream of tartar, and that

it is even capable of dissolving various oxides, which are insoluble in tartaric acid, as the protoxide of antimony, M. Gay Lussac has recommended it as a useful agent in chemical analysis. He thinks that in many cases it acts the part of a single acid. According to this view, tartar emetic would be a compound of the cream-tarter acid, and protoxide of antimony. Cream of tartar generally contains from three to five per cent, of tartrate of lime, which are in a great measure separated when three parts of tartar are boiled with one of borax for a few minutes in a sufficient quantity of water. The soluble cream of tartar which is obtained by this process is deliquescent ; it dissolves in its own weight of boiling water, at 54‘5°, and in half its weight of boiling water. Its solution is very imperfectly decomposed by the sulphuric, nitric, and muriatic acids. Four parts of tartar and one ot boracic acid form a permanent saline compound, very soluble in water. Alum also increases the solubility of tartar.

By saturating the superfluous acid in this su-pertartiate with soda, a triple salt is formed, which crystallises in larger regular prisms of eight nearly equal sides, of a bitter taste, efflorescent, and soluble in about five parts of water. It consists, according to Vauquelin, of fifty-four parts tartrate of potash, and forty-six tartrate of soda ; and was once in much repute as a purgative by the name of Itochelle salt, or sel de Seignette.

The tartrate of soda is much less soluble than this triple salt, and crystallises in slender needles or thin plates.

The tartrate of ammonia is a very soluble bitter salt, and crystallizes easily. Its solution is spontaneously decomposable. This too forms, with tartrate of potash, a triple salt, the solution of which yields, by cooling, fine pyamidal or prismatic efflorescent crystals. Though both the neutral salts that compose it are bitter, this is not, but has a cooling taste. See SALT.

TARTARINE. The name given by Kirwau to the vegetable alkali, or potash.

TARTAHUM. See MATERIA MF.DICA.

TARTARUS, in the mythology, the infernal regions, or the hell of the ancient Greeks, Ro-mans, and Egyptians ; which consisted of two divisions, the one called Elysium, for the reception of the virtuous ; the other Tartarus, for that of the wicked. See ELYSIUM and HELL. Tartarus was surrounded with a brazen wall, and its entrance was continually hidden from the sight by a cloud of darkness three times more gloomy than the obscurest night. Hesiod says (Theog. 720) it was a prison, at a greater distance from the earth than the earth is from the heavens. Virgil says (ˆn. vi.) it was surrounded by three impenetrable walls, and by the impetuous burning streams of the river Phlegethon. The entrance was by a large lofty tower, whose gates were supported by columns of adamant, which neither gods nor men could open. In Tartarus, he adds, were punished all who had been disobedient to parents, traitors, adulterers, barbarous conquerors, who undertook unjust and cruel wars, faithless ministers, &c. It was the place where Tantalus, Ixion, Sisy-phus, the Danaides, and other heinous offenders were punished (Ovid. Met. iv. fab. 13, Horn. Odys. xi.); and was frequented by the Furies, the Harpies, and other monsters of the heathen mythology.

TARTARY, a name applied very indefinitely to an extensive region of central Asia, and inter posing between Asiatic Russia on the north, and the great empires of Persia, Hindostan, and China, on the south. The Tartar race was known and celebrated in antiquity under the name of Scythians, a people who are described under the same warlike, rude, and pastoral features which now distinguish the tenants of these regions. The simplicity of their manners, their ignorance of money and of luxury, and their hospitality, caused them to be quoted with admiration by the Greek sages : at the same time, the records of history bear ample testimony to the calamities which their inroads inflicted. Even under the Assyrian dynasty, they are represented as having overwhelmed and held the sceptre of Western Asia for twenty-eight years. If we may believe Herodotus, Cyrus, after having subdued the rest of Asia, found the termination of his life in his conflict with Tomyris, queen of this race. Da-rius, his successor, with difficulty escaped the same fate, and Alexander was little more fortunate ; for, though he compelled the Scythians to cross the Jaxartes, he in vain attempted to pursue them beyond it.

At these earlier periods, although the Scythian tribes frequently laid waste the southern empires, they were unable to effect any permanent conquest or settlement. It was during the decline of the Roman empire that these tribes began permanently to forsake their own plains, in

search of more fertile regions, and the first of these ra-vagers, whose terror and fame reached the frontier of Italy, were the Huns, the ancestors of the modern race of Mongols. The deformity of their aspect, and the ferocity of their manners, rendered their name more terrible than that of any of the German barbarians, and under Atti—

la, characterised as ‘ the scourge of God, and the

destroyer of nations,’ they materially hastened the

downfall of the empire. On the eastern frontier, another Tartar race took no less active a part. The Turks orToorks, inhabiting extensive tracts of what is now called Chinese and Independent Tartary, poured down in large bodies upon the Persian empire, where they established a dynasty, under the name of Seljukian ; and ultimately established themselves at Constantinople. In the twelfth century Tartary became the seat of the most formidable and extensive empire that perhaps has ever been established. Zingis, originally an obscure chief, having succeeded in uniting under his standard all the neighbouring tribes, successively conquered China, Persia, and all Central Asia, from the Black Sea to the East ern Ocean. His successors added Russia, and overran Poland, with part of Germany. Fd some time the greatest panic prevailed in Europe. But in the course of a few reigns this vast em-pire was split into parts. The lead was now taken by the populous countries on the Oxus and the Jaxartes, where Timur established a sway, which, though less extended than that of Zingis, was superior in the value and importance of its regions. Timur conquered all Persia, broke the power of the Turks in Asia Minor, and established in India a dynasty, which continued to reign, and to form the most splendid court of Asia, till the close of the last century. China has also always been subject to Tartar dynasties. Tartary may now be considered as divided into Chinese and Independent Tartary. The latter, since the time of Timur, has been occupied, and the ancient inhabitants either exterminated or expelled by the Uzbecks, a people of the widely extended race of Turk or Toork, but whose original seat is not precisely ascertained. It has the country of Bulkh (part of Cabul) and Korassim on the south ; the Caspian on the west ; and Asiatic Russia on the north. The Uzbecks, like other Turks, are celebrated in the east for their beauty, the reputation of which, however, arises chiefly from its contrast to the hideous forms of the Mongols, Calmucs, and other Tar-tar tribes. They have broad foreheads, high cheek bones, thin beards, and small eyes : their complexion is clear and ruddy, their hair generally black. The political constitution is a complete and pure

despotism, the will of the sovereign being the only law. This circumstance depends probably upon the military habits formed by conquest; and according to which, and to the forms and customs of a camp, the whole government is administered. In Bokhara the men are divided, like troops, into parties or masses of ten each, who have a boiler, a tent, and a camel in common. The authority of the sovereign is also strengthened by the Mahometan religion, which is here* professed in its utmost rigor. The Koran is implicitly assumed as the guide, not only in faith and doctrine, but in civil government and domestic life. The kin°-, now reigning at Bokhara, was raised to the throne by the ostentatious profession of poverty, and of all those observances which establish the character of a Mussulman saint. Even in his present elevation, he spends part of every day in teaching the Mahometan religion, and of every night in watching and prayer. The revenue is colT A R T A R Y.

lected exactly in the proportions prescribed in the Koran ; and one-tenth of it is expended in alms.

All the habitations of the Uzbecks consist of a species of moveable tent called onool, composed of a lattice of thin lath, covered with black, felt. From twenty to fifty of these compose a species of moveable village or camp. Many of them now, however, reside in towns. Horsemanship is their favorite pursuit, and their horses are considered, next to the Arabian, as the best in Asia. An immense exportation formerly took place to India. In this trade, horses are still purchased in the markets of Bokhara or Bulkh, where they cost from £5 to £100, and are fattened on the way in the rich pastures of Cabul. Horse flesh, and koumiss, or fermented mares' milk, are considered as the greatest of luxuries here ; in regard to which last even the Mahometan law is obliged somewhat to relax its rigor. Horses are so numerous that there is scarcely a man so poor as to walk ; even beggars travel on horseback, or at least on camels or asses. As might be expected in a people with these habits, the Uzbecks produce numerous bodies of light cavalry, and excel in predatory warfare. Their arms are a long and heavy lance, swords, and a shield; but many have long knives and daggers. They charge in a body, with shouts, which are described as terrific. In battle they are drawn up in three lines, so that, even after being repulsed, they return twice to the

charge. Their laws of war are most barbarous, giving no quarter except to infidels, whom the Koran allows them to sell as slaves ; while the faithful, who cannot thus be subjected, have the honor of being killed on the spot. Yet, compared with many other Asiatics, they are sincere and honest, and murder scarcely ever occurs. Foreign merchants are also protected and encouraged, notwithstanding the national bigotry.

Bokhara may be considered as the most important of the kingdoms into which Independent Tartary is now divided. This territory includes the finest part of the country on the banks of the Oxus, and, though not very extensive, maintains an army of 80,000 or 100,000 cavalry. The city of Bokhara contains upwards of 100,000 inhabitants, with very extensive establishments for the cultivation of learning: and Samarcand, though declined from its ancient splendor, contains many fine buildings, and exhibits the same beauty of climate and situation for which it was anciently celebrated. The present possessor has paid much attention to it. On the Jaxartes, the bey of Koukan or Ferganna, possesses an extensive, fertile, and highly populous kingdom. The cities of Koukan, Khojund, and Murghelan, are said in populousness and beauty of situation to surpass any other in Central Asia. The population generally retains its pastoral and migratory habits, more particularly as we proceed northwards among the Kirghises. The country on the Upper Oxus, and that between the Aral and the Caspian, consists almost entirely of a vast sandy desert, tenanted by roving tribes of Uzbecks and Turcomans, who subsist partly by pasturage, and partly by plunder. Even here, however, are a few richer tracts, on which towns are built.

Chinese Tartary. — The tracts of Central Asia, over which the Chinese empire holds a nominal sway, include the whole territory contained between Hmdostan and Asiatic Russia, and from the Eastern Ocean to the mountain boundary of Independent Tartary ; a space comprising about 70° of longitude, and 20° of latitude. The southern and mountainous part of this vast tract passes under the name of Thibet. The western part of what is usually called Chinese Taitary is among the regions of the globe with regard” to which our information is most imperfect. The great emporium of this region is Yarcund, situated to the south, and forming the rendezvous of the merchants from India, Cabul, and Independent Tartary. Proceeding eastward, the principal kingdoms are Koten or Khoten, and Kami or Chamil. The former is represented as very flourishing, containing numerous fortified cities, and excelling both in agriculture and manufactures. It is particularly

celebrated for a species of beautifully variegated marble, which bears a high price in China. Ilami is also de— scribed as a wealthy region, inhabited by a dissolute people. In this part of Asia are mentioned Acsu, Cialis, Ciarcian, Lop, and Peym : but c.i • of its most distinguishing features is the gic. t desert of Shamo or Cohi, which extends from west to east through nearly its whole extent. I extends in this direction nearly 2000 miles, and cannot be crossed without almost insuperable difficulties. Yet its position is such as to make it impossible to avoid it, on going from Cashgar to China. The caravans therefore coast its northern border, till they come to Lop, where they cross from north to south, and proceed to China along the south border.

Tartary, to the west and north-west of China, consists entirely of naked plains, particular portions only of which afford pasture and water, and traversed by wandering tribes. All of them own the supremacy of the Chinese empire, though it is necessary to secure their allegiance by giving pensions to chiefs. At the same time these wandering tribes claim the right of making war upon each other, though, when these contests rise to an alarming height, a Chinese force is employed to suppress them. All these people are devoted to Shamanism, or the religion of the Lamas ; and in each distinguished place there is a sovereign priest, who claims the privilege of immortality and pre-existence.

The eastern extremity of Tartary, bordering on the Pacific, consists of the country of the Mantchoo Tartars, which, in consequence of having given a dynasty to China, forms now a province of that empire. It is still a favorite hunting residence of the emperors. The country consists generally of lofty mountains, covered with immense forests. No grain except oats can be raised ; and, though the latitude be only that of the south of France, the climate resembles that of Norway. The most valued production is ginseng, a medicinal plant which grows on the declivity of wooded mountains, or on the rocky banks of deep rivers. The root is the part used in physic, and the value of it is enhanced by its age. In China it is highly esteemed. The persons who collect it carry with them neither hor.srs,

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baggage, tent, nor even a bed. They nave merely a bag of dried millet, and lodge at night under the shelter of trees, or in temporary huts. Their greatest danger is from wild beasts, with which every part of the country is infested. The Mantchoo Tartars in person resemble the Mongols, except that they are fairer. They have adopted, only to a very limited extent, the religion of Fo or Boodh, but have an ancient religion of their own, and a language peculiar to themselves. Their country is traversed by the river Amour or Saghalien, which, in the upper part of its course, forms the boundary of the Chinese and Russian empires. Besides these tribes, who inhabit the region properly called Tartary, a great part of the southern provinces of Asiatic Russia have a Tartar population, among these may particularly be distinguished the Kalmucs and Baschkirs.

TARTINI (Joseph), a celebrated Italian musician, born at Pisano, in Istria, in 1692. He became so capital a performer on the violin, that he was appointed master of the band in the famous church of St. Anthony. He published several valuable tracts on music ; and is styled by Dr. Burney, the Admirable. He died 1770.

TARTRATE. A neutral compound of tartaric acid with a base.

TARUFFI (Emilius), an eminent Italian painter, born at Brescia, in 1632. His landscapes and historical pieces were much admired, as well as his choice of scenery. He died in

1694.

TARVISIUMj an ancient town of Italy, now Treviso.

TARUNTIUS (Spurina, Lucius), a celebrated mathematician, who flourished about A. A. C. 61. Cic. ad div. ii. c. 47.

TARUSATES, an ancient people of Gaul, who inhabited the country now called Tursan. Cses. de Bel. Gal. iii. 23.

TARUSCUM, an ancient town of Gaul.

TASK, n. 5. & v. a. 1 Fr. tasche ; Ital. tassa ;

TASK’ER, n. s. £ Lat. ta.ru. Something

TASKMASTER. J imposed by another to

be done; employment : ‘ to take to task’ is to reprove; reprimand: to task, to impose a burden or business upon another : the noun-substantives that follow corresponding.

Forth he goes,

Like to a harvestman, that’s tasked to mow, Or all, or lose his hire. Shakspeare. Coriolanus.

I have drunk but one cup to night, and that was craftily qualified too ; and behold what innovation it makes here. I am unfortunate in the infirmity, and dare not task my weakness with any more.

Id. OtMlo.

All is, if I have grace to use it so, As ever in my great taskmaster’s eye. Milton.

Relieves me from my tusk of servile toil Daily in the common prison else enjoined me. Id.

Divert thy thoughts at home ; There tatk thy maids, and exercise the loom.

Dry den.

Hear, ye sullen powers below ; Hear, ye taskert of the dead. Id. and Lee.

A holy man took a soldier to task upon the subject of his profession. L’Estrange.

The service of sin is perfect slavery ; and he who will pay obedience to the commands of it, shall find

it an unreasonable taskmaster, and an unmeasurablc exactor. Smith.

He discovered some remains of his nature when he met with a football, for which Sir Roger took him to task. Addison.

His mental powers were equal to greater tasks.

Atterbury.

No happier task these faded eyes pursue, To read and weep is all they now can do. Pope.

TAS'SEL, n. s. Fr. tasse ; Swed. tass ; low Lat. tasselus. An ornamental bunch of silk or glittering substances.

Their heads are tricked with tassels and flowers.

Sandys.

Then took the squire an horn of bugle small, Which hung adown his side in twisted gold And tassels gay. Spenser—

Early, ere the odorous breath of morn Awakes the slumbering leaves, or tasselled horn Shakes the high thicket, haste I all about. Milton.

TASSIE (James), modeller, born near Glasgow, of obscure parents, began his life as a country stone mason. Going to Glasgow, he acquired a knowledge of drawing in the academy instituted by the Fowlises ; while, at the same time, he was obliged to labor at stone cutting for his support. Resorting to Dublin for employment, he became known to Dr. Quin, who was amusing himself with trying to imitate the precious stones in colored pastes, and take impressions of the engravings that were on them, Dr. Quin soon discovered Tassie to be one in whom he could place perfect confidence. He was endowed with fine taste ; modest, unassuming, patient, and possessed the highest integrity. The doctor committed his laboratory and experiments to his care. The associates were fully successful ; and found themselves able to imitate all the gems, and take accurate impressions of the engravings. The doctor, when the discovery was completed, encouraged Mr. Tassie to repair to London, and to devote himself to the preparation and sale of those pastes as his profession. In 1766 he arrived in the capital ; and until his death, in 1799, he continued acquiring eminence and wealth. In addition to this elegant art, he practised the modelling of portraits in wax, which he afterwards moulded and cast in paste.

TASSISUDON, or TADISSOO JEUNG, a city of Northern Hindostan, the capital of the province of Bootan, and residence of the Deb Rajah stands in a highly cultivated valley, about three miles in length, by one in breadth ; intersected by the Tehintchieu River. On the surrounding mountains are timber trees, intermixed with fir and pine, and a great variety of shrubs. The climate generally is described as remarkably salubrious.

The castle or palace of Tassisudon is situated near the centre of the valley, and is a quadrangular building of stone. The walls are thirty feet high, pierced below with very small windows, apparently more for the purpose of admitting air than light. The citadel is very lofty, consisting of seven stories, each from fifteen to twenty feet high. From the centre rises a square piece of masonry, which supports a canopy of copper richly gilt, supposed to be immediately over the idol Maha Moonee. The Deb Rajah of Bootan dwells in the citadel, on the fourth story from the ground.

IAS

673

Nearto the city are a lonpr line of sheds, where the workmen arc employed in forging brazen gods, am! various other ornaments of their religious edifices. There is here also a considerable manufacture of paper, made from the deah bark, which grows in great abundance near toTassisu-don. It is very strong, and capable of being woven, when gilt, into the texture of silks and satins.

TASSO (Bernard) an illustrious Italian law-yer, descended of the ancient and noble family of Torreggiani. He was author of several ingenious compositions in verse and prose. He was sent to accompany the prince of Salerno upon a deputation from Naples, to the emperor Charles V., to remonstrate against the erection of an Inquisition there. He was afterwards employed by William Gonzago, duke of Mantua, as his principal secretary, who at last promoted him to be governor of Ostiglia, upon the Po; where he died in 1585. He was father to the celebrated Torquato.

TASSO (Torquato), a justly celebrated Italian poet, born at Sorrento in Naples, in the year 1549, the son of Bernard, by Portia di Rossi, a lady of an illustrious family of Naples. At nine he and his father were condemned to death for treason, but escaped ; and three years after they went from Rome to Mantua : Tasso had then completed his knowledge of the learned languages. He was soon after sent to the university of Padua; and, in his eighteenth year, published his Rinaldo. He next went to Bologna, by the invitation of the city and coltege ; but soon returned to Padua at the request of Scipio Gonzago, who had been elected prince of the academy then established by the name of the ./Etheroi, of which Tasso was made a member. Here he formed the plan of his Jerusalem Delivered. Being pressed by the duke, and his brother cardinal Lewis, to reside with them at Ferrara, he consented, and the duke gave him an apartment in his palace, where he lived in affluence, and prosecuted his work ; which he dedicated to the duke. When he was about twenty-seven, he published a pastoral comedy called Aminta. In his thirtieth year, he finished his Jerusalem, and, the whole being reprinted and published together, its success was astonishing, and it was immediately translated into Latin, French, Spanish, and even the oriental languages. But it was Tasso's fate to become wretched as soon as he gained the summit of reputation. Soon after his Jerusalem was published, he lost his father ; his Jerusalem was attacked by invi-dious critics ; and the perfidy of a

friend drew upon him greater misfortunes. In consequence of a rencontre, in which he behaved very bravely, the duke put him in prison, under pretence of securing him from any future attacks. But Tasso within a year escaped, and retired to Turin, where he was recommended to the duke of Sa-voy ; but Tasso, fearing that the duke of Ferrara would require him to be delivered up, set out for Rome : there he was visited by princes, cardinals, prelates, and all the learned in the city. But, being impatient of exile, he made his peace with the duke, who gave him fresh marks of his esteem. But Tasso, having made some attempts VOL. XXI.

on the duke's sister, princess Leonora, whom he had celebrated in his verses, the duke caused him to be confined in the hospital of St. Anno, as a person deranged. Tasso applied to the duke, by every friend he had, to release him, but without effect ; for Tasso was certainly disordered in his mind. At last, after he had been a prisoner seven years, Vincent Gonzago, prince of Mantua, came to Ferrara, during the festivals, procured his liberty, and took him to Man-tua, he being then in the forty-second year of his age. At Mantua he lived about a year in great favor with the prince, but he became weary of a state of dependence, and therefore resolved to go to Naples, and endeavour to recover his mother's jointure, which had been seized by her relations when he went into exile. Finding his lawsuit not likely to be soon determined, he went from Naples to Rome, where he continued about a year in high favor with pope Sixtns V., and then went to Florence, at the invitation of Ferdinana, giand duke of Tuscany. Having spent another year at Florence, he returned to Naples, and published his Jerusalem Delivered. Soon after this Sixtus V. died, and was succeeded by Clement VII.; and his nephews, Cynthio and Peter Aldrobandini, were created cardinals. Cynthio, who was a patron of learning, prevailed with him to leave Naples, and live with him in Rome. He returned again to Naples, but came back to Rome, in order to be crowned with laurels in the capital. While they were waiting for fair weather, Cynthio fell sick ; and, before he recovered, Tasso was taken ill, and died on the fifteenth day, aged fifty-one. His poems had acquired him an immortal reputation. His works were printed together at Florence in 1724, in 6 vols. folio, with the criticisms. His Aminta and Gierusalemme Liberata have been translated into English.

TASSONI (Alexander), an Italian poet, bom at Modena, in 1565. He was a member of the academy of Umeristi ; and, among other works, published Secchia llapita, or the Rape of the Bucket: which was the first model of a Mock Heroic poem in the Italian language. He died in

Fr. taster, to try ; Ital. tastare ; Teut. fasten; barb. Lat. taato. To perceive, distinguish, or try, by the palate ; have perception of food ; re-

TASTE, v.a.,v.n., &

TAST'ABLE, adj. [n. s.

TAST'ED,

TAST'ER, n. s.

TASTE'FUL, adj.

TASTE'LESS,

TASTE'LESSNESS, n. s.ˆ , lish: hence to eat a small quantity; to relish mentally ; obtain pleasure from : as a verb neu-ter to try by the mouth ; to eat ; have a smack ; be tinctured ; enjoy in a small degree : as a noun substantive the act of tasting ; gust ˆperception ; sensibility ; a crude portion or specimen ; intellectual relish or discernment; an essay; trial: the adjectives correspond with the above terms : a taster is one who takes the first portion of food : tastlessnesss, insipidity ; want of relish or perception.

Manna was like coriander seed, white ; and the iasle of it was like wafers made with honey.

Ezodut xvi. 31. 2 X

TAS

674

The ruler of the feast tasted the water made wine.

John ii.

He should taste death for every man. Heb. ii. 9.

The tasting of death touched the righteous also, and there was a destruction of the multitude in the wilderness. Wisdom.

Seeing they pretend no quarrel at other psalms which are in like manner appointed to be daily ready, why do these so much offend and displease their tastes? Higher.

Roscetes was seldom permitted to eat any other meat but such as the prince before tasted of.

Knolles.

I have almost forgot the taste of fears : The time has been, my senses would have cooled To hear a night shriek. Shakspeare. Macbeth.

Cowards die many times before their deaths, The valiant never taste of death but once.

Shakspeare.

I hope, for my brother's justification, he wrote this as an essay or taste of my virtue. Id.

When kine feed upon wild garlick, their milk iasteth of it. Bacon.

Bees delight more in one flower than another and therefore have taste. Id. Natural History.

Coleworts prosper exceedingly, and are better tasted, if watered with salt water. Id.

They thought 't not safe to resolve, till they had taste of the people's inclination. Id. Henry VII.

The body's life with meats and air is fed, Therefore the soul doth use the tasting power

In veins, which, through the tongue and palate

spread, Distinguish ever relish sweet and sour. Davies.

So shall thou be despised, fair maid, When by the sated lover tasted ; What first he did with tears invade, Shall afterwards with scorn be wasted. Carew.

Fair hope ! our earlier heaven ! by thee Young time is taster to eternity. Craskaw.

Musick of sighs thou shalt not hear, Nor drink one lover's tasteful tear. Cowley.

Bold deed to taste it, under ban to touch. MilUm.

Delicacies of taste, sight, smell. Id.

Best of fruits, whose taste gave elocution. Id.

Sion's songs to all true tastes excelling, Where God is praised aright. Id.

Of nature's bounty men forbore to taste, And the tnst portion of the earth lay waste. Waller.

The tardy plants in our cold orchards placed, Reserve thsir fruit for the next age's taste. Id.

By depurating chemical oils, and reducing them to an elementary simplicity, they could never be made tasteless. Boyle.

Their distilled oils are fluid, volatile and tusteable.

Id.

Besides the prayers mentioned, I shall give only a taste of some few recommended to devout persons in the manuals and offices. Stillingfleet.

Thou and I marching before our troops, Maw taste fate to them, mow them out a passage.

Dry den.

This fiery game your active youth maintained, Not yet by years extinguished, though restrained ; You season still with sports your

serious hours, For age but tastes of pleasures, youth devours. Id.

Says the fly, Are not all places open to me 1 AM not I the taster to princes in all their entertainments. L'Estrange.

Though there be a great variety of tastes, yet, as in smells, they have only some few general names.

Locke.

If by his manner of writing a critick is heavy and xistelesi, I throw aside his criticisms.

Addison's Spectator.

As he had no taste of true glory, we see him equipped like an Hercules, with a club and a lion's skin. Addison.

The understanding cannot, by its natural light, discover spiritual truths ; and the corruption of our will and affections renders them tasteless and insipid to us. Rogers'* Sermons.

Your way of life, in ray fartr, will be the best.

Pipe.

Not tasteful herbs that in these gardens rise, Which the kind soil with milky sap supplies, Can move. Id.

Scholars, when good sense describing, Call it tasting and imbibing. Swift.

How ill a taste for wit and sense prevails in the world ! Id.

Pleasure results from a sense to discern, and a taste to be affected with, beauty. Seed's Sermons.

Apicius, here, the taster of the town, Feeds twice a-week, to settle their renown. Young.

However contradictory it may be in geometry, it is true in taste, that many little things will not make a great one. Reynolds.

TASTE is a certain sensation, or class of sensations, excited in the mind by certain bodies, which are called sapid, applied to the tongue

and palate, and moistened with the saliva. This is the original and proper meaning of the word taste (see METAPHYSICS); but, as the qualities of bodies which produce these sensations are unknown, they have in all languages got the names of the sensations themselves, by that figure of speech which substitutes the cause for the effect. Hence we talk of the taste of sugar, wormwood, honey, vinegar, &c. ; and say that the one is sweet and the other sour, &c. Tastes have been divided into simple and compound ; and philosophers have to very little purpose endeavoured to ascertain the number of each species. See Phil. Trans. No. 280, 299; and Abercromb. Nov. Med. Clavis.

TASTE is likewise used in a figurative sense to denote that faculty of the mind by which we perceive and enjoy whatever is i/Mutiful or sublime in the works of nature or of art. J.ike the taste of the palate, this faculty relishes some things, is disgusted with others, and to many is indifferent; and from these obvious analogies between it and the external sense it has obtained its name. It has likewise been called an internal sense, and by Dr. Hutchinson a reflex sense ; whilst others have considered it, not as a distinct faculty or sense, but as the joint exertion of perception and judgment in some cases, and as a play of the imagination in others.

TASTELESS EARTH (agust erde), the name given by professor Trommsdorff to a new simple earth, which he discovered in the Saxon beryl. It is distinguished, he says, from other earths by being white, and totally insoluble in water. In a fresh state, when moistened with water, it is somewhat ductile. In the fire it becomes transparent, and very hard, so as to scratch glass, but remains insipid and insoluble in water. The burnt earth dissolves very easily in acids, and produces with them peculiar salts, which are entirely devoid of taste ; and hence he gave it the name of tasteless earth. Fixed alkalies do not dissolve this earth, either in the dry or in the wet way ; and it is equally insoluble with

the carbonic acid ard with caustic ammonia. It has a greater affinity to the oxalic than to the other acids.

TATA, or Dotis, a large town of Western Hungary, situated on a height in the midst of marshes, sixty-four miles E. S.E. of Presburg. It contains 8600 inhabitants, and is divided into two parts called Dotis and Tovaros. The inhabitants carry on a number of employments on a

small scale, such as the manufacture of woollens, sawing of timber, and, finally, the preparing of whetstones for sale and export. They are descended from a mixed race of Magyars, Sclavonians, German settlers, and Jews. In religion the Catholic predominates, and here are a Catholic gymnasium and monastery, conducted by the Piarists.

TATARBASAR, or TATAR BAZARGIK, a considerable inland town of European Turkey, in Bulgaria, near the Marizza; the ancient Hebrus. It is situated on the great road from Constantinople to Belgrade, and is little visited by travellers ; but is said to contain several mosques, baths, and other good buildings, with about 10,000 inhabitants. Fourteen miles N.N.W. of Philippopoli.

TATE (Nahum), a poet, born at Dublin, where he received his education, in 1652. He was made poet laureat to king William III. upon the death of Shadwell, and held that place until the reign of George I., whose first birth-day ode he wrote, with unusual spirit. He died in the mint in 1716. He wrote nine dramatic performances, a great number of poems, and a version of the psalms in conjunction with Dr. Nicholas Brady.

TATIAN, a writer of the primitive church, in the second century, born in Assyria, and trained up n the heathen religion and learning. He become Christian and disciple of Justin Martyr, whom he attended to Rome ; and, while Justin lived, continued orthodox ; but after his death made a schism, and founded a new sect, condemning marriage, enjoining abstinence from wine and animal food, and suffering only water to be used in the holy mysteries ; whence his followers were called Encratitce and Hydroparas-tatae. None of his works are extant but his piece against the Gentiles, entitled his Oration to the Greeks.

TATIENSES, a name given by Romulus to a tribe of the Roman people, in honor of his colleague king Tatius, to whom part of them had been subjects. They lived on the mounts Capitolinus and Quirinalis.

TATIUS (Titus), king of the Sabines and Ro-mans. See ROME and SABINES.

TATIUS (Achilles), a native of Alexandria, was the author of a book on the sphere. There is also attributed to him a Greek romance on the lives of Leucippe and Clitophon, of which Salmasius has given a beautiful edition its Greek and Latin, with notes. Suidas says that Tatms was a Pagan, but afterwards became a Christian, and a bishop. Photius mentions him in his Bibliotheca.

TATTA, a large district of Ilindostan, in Sinde, comprehending the whole Delta of the Indus, calculated at 150 miles in length, by fifty

in breadth. Being intersected by rivers, travelling takes place mostly by water. The country is in general sandy and barren, and many parts of it only fit for pasturing camels or goats ; but it also produces a quantity of rice and salt, and the rivers abound with fish. This district has for nearly forty years belonged to the Ameers of Sinde. Its principal town j.s Tatta, and its chief port Corachie. In the beginning of the eighth century this province was invaded by the Arabs, and may be considered as having been subject to the Mahometans from that period. It was taken possession of by the emperor Akbar in 1590, and acknowledged the Mogul authority till the dissolution of that em-pire. Its former capital was Brahminabad, which is said to have been enclosed by a brick wall, having 1400 round towers or bastions.

TATTA, an ancient city, capital of the above-mentioned district, is situated on the banks of the Indus, about 130 miles from the sea. The town stands in a fertile valley, formed by a range of low hills, which, during the freshes of the river, is inundated; a circumstance which often gives the city the appearance of an island. Some of the houses are of brick and mortar, but the greater number are of mud and timber. The old English factory, purchased in 1751, is still reckoned the best house in the town. The circumference of the modern town is four miles, and is supposed to contain 15,000 inhabitants. It was formerly famous for its commerce and manufactures ; but its greatness is much diminished. On a hill, about a mile from the town, is an immens” number of Mahometan tombs, in good preservation. The stone mausoleum of Mirza Isa is um-ommoiu’y magnificent and well executed ; and supported by many columus : the interior is covered with inscriptions formed of different colored stones. The modem city of Tatta was founded by Jam Mundel, the 14th of the So-meah dynasty, A. D. 1485, and was plundered by the Portuguese in 1555. Dr. Robertson was of opinion that Tatta was the Pattala of the Greeks.

TATTER, v. a. & n. s.) Sax. rotserian. To

TATTERDFMAL’ION. « s. } tear; rend; make ragged : a rag ; a fragment : tatterdemalion seems a word formed in the caprice of ridicule.

Through tattered cloaths small vices do appear : Robes and furred

gowns iiide all.

Shakspeare. King Lt'ar.

This fable holds, from him that sits upon the throne, to the poor devil that has scarce a tatter.

I,' Estrange*

As a poor fellow was trudging in a bitter cold morning with never a rag, a spark that was warm clad called to this tatterdemalion, how he could en dure this weather?

Where waved the tattered ensigns of Kagfair, A yawning ruin hangs.

Little tyrants raged, Tore from cold wintry limbs the tattered weed.

Thit'iiwn,

Here Satan vanished— He had fresh commands, And knew his pupil was in able hands ; And now, the treasure found, and matron's store, Sought other objects than the tattered poor. Harte.

TATTERS II ALL, a market-town and parish in Gartrce hundred, Lincolnshire, on rlie river

Bain, eight miles S. S. W. from Horncastle, and 128 north of London. The church is a handsome building formerly collegiate in the form of a cross; some of the windows still contain some good paintings on glass. The castle was demolished during the civil war. The Bain is navigable for barges to the Witham. Market on Friday. Fairs, May llth, and September 25th. It is a curacy.

TATTLE, v. n. & n. s.) Belg. tateren ; Goth.

TAT'TLER, n. s. > tatala. To prate; talk

idly ; use many words with little meaning : idle talk: an idle talker.

He stands on terms of honourable mind,

Ne will be carried with every common wind

Of court's inconstant mutability,

Ne after every tattling fable fly. Spenser.

The one is too like an image, and says nothing ; and the other too like my lady's eldest son, evermore tattling. Shakspeare.

Going from house to house, tattlers, busy bodies, which are the canker and rust of idleness, as idleness is the rust of time, are reproved by the apostle.

Taylor.

Excuse it by the tattling quality of age, which is always narrative. Dryden.

The world is forward enough to tattle of them.

Locke.

The French language is extremely proper to tattle in ; it is made up of so much repetition and compliment. Addison.

They asked her how she liked the play 1 Then told the tattle of the day. Swift's Miscellany.

A young academick shall dwell upon trade and politicks in a dictatorial stile, while at the same time persons well skilled in those different subjects hear the impertinent tattle with a just contempt.

Watt's on the Mind.

TATTOO', n.s. Fr. tapotez tous. The beat of drum by which soldiers are warned to their quarters.

All those whose hearts are loose and low, Start if they hear but the tatto. Prior.

TATTOOING or TATTOWING, an operation in use among the islanders in the South Sea for marking their bodies with figures of various kinds which they consider as ornamental. It is performed by puncturing the

skin and rubbing a black color into the wounds. See OTAHEITE.

TAVAI POENAMMOO, an island in the South Pacific Ocean, being the most southerly of the two which form New Zealand, and separated from the northern island by a channel called Cook's Straits, discovered by captain (then lieutenant) Cook, who sailed round them both in the year 1769. It is about 500 miles in length from south-west to north-east, and from 55 to 140 broad. See ZEALAND, NEW.

TAVARONE (Lazarus), a celebrated Italian painter of history and portraits, born at Genoa in 1556. He was a disciple of Luke Cangiagio, and succeeded him as painter to the king of Spain. He died in 1631.

TAUBMAN (Frederick), a learned German critic born in Franconia, about 1565. He be-came professor of poetry and belles lettres at V irtemberg. He published Commentaries on Virgil and Plantus. He died in 1633.

TAVERNIER (John Baptist), a famous French traveller, born at Paris in 1605. In the

course of forty years he travelled six times to Turkey, Persia, and the East Indies ; and visited all the countries in Europe, travelling mostly on foot. His Travels have been often printed. He died on his journey, at Moscow, in 1609.

TAVERN, n. s. ^\ Fr. taverne ; Lat. taberna. TAV'ERNER, (A house where wine is

TAV'ERNKEEPER, {sold, and drinkers are en-TAV'ERNMAX. Jtertained: the other names mean the person who keeps a tavern.

Enquire at London, 'inong the taverns there For there they say he daily doth frequent, With unrestrained loose companions.

Shakspeare. Richard II.

After local names, the most in number have been derived from occupations ; as tailor, archer, taverner.

Camden.

To reform the vices of this town, all taverns and alehouses should be obliged to dismiss their company by twelve at night, and no woman

suffered to enter any tavern or alehouse. Swift.

TAVISTOCK, a borough and market-town in Tavistock hundred, Devonshire, near the river Tavy, fourteen miles north from Plymouth, and 206 west by south of London. The manufacture principally occupying the inhabitants is that of serges. This town is well built, but the streets are narrow, and indifferently paved. The church is large and handsome. It is one of the stannary towns. The ruins of its benedictine abbey are still observeable. It sends two members to parliament, the right of election being in the freeholders, inhabitants of the borough ; number of voters about 110 ; the returning officer is the portreeve. Here is a chalybeate mineral water. Market on Saturday. Fairs, January 17th, May 6th, September 9th, October 10th, and December llth. It is a vicarage. Patron, the duke of Bedfotd.

TAUNT, v. a. & re. s.) Fr. tanser.— Skinner.

TAUNT'INGLY, adv. i Mr. Thomson observes that taunt, in sea language, signifies too high or lofty (contracted from too haught). To reproach ; insult; revile; treat with insolence: the reproach used; insult; scoff: the adverb corresponding.

When I had at my pleasure taunted her, She in mild terms begged my patience. Shaksjieare.

With scoffs and scorns, and contumelious taiintt, In open market-place produced they me, To be a publick spectacle. Id. Henry VI.

It tauntingly replied

To the' discontented members, the' mutinous parts, That envied his receipt. Id. Coriolanus.

The bitterness and stings of taunting jealousy, Vexatious days, and jarring joyless nights, Have driven him forth. Rowe's Jane Slutre.

Julian thought it more effectual to persecute the Christians by taunts and ironies than by tortures. Government of the Tongue.

He, by vile hands to common use debased, Shall send them flowing round his drunken feast, With sacrilegious taunt and impious jest. Prior.

TAUNTON, a market-town and borough of Somerset, is situated on the river Tone; and, in point of size, buildings, and general respectability, may vie with many cities. It extends nearly a mile from east to west, and consists of four principal streets, with various minor one*. The streets are wide and airy ; the houses very well built, and most of them have gardens bˆ-

hind. Within the last twenty years the town has undergone many alterations and improvements, in most of which, views of utility have been judiciously combined with embellishment. The vale of Taunton, or Taunton Dean, is proverbial for its fertile soil and temperate climate. The public buildings are the market-house, town-hall, free grammar school, and the parish churches, St. Mary Magdalen's and St. James's. St. Mary's is an elegant and splendid building, situated near the centre of the town, built in the Gothic style of architecture ; whence it has been supposed to have been founded by Henry VII., as were several other churches in Somersetshire. It is extremely spacious and beautiful, and at one end here is a lofty tower of magnificent workmanship. It contains thirteen windows, adorned with a variety of curious ornaments. The height of the whole is 153 feet ; and from the balustrades at the bottom of the pinnacles there is an extensive view of the adjacent country. The roof is extremely curious, and is supported by twenty-four pillars in four rows, which divide the whole into five aisles and a chancel. In the centre stands the desk and pulpit,

beautifully adorned with carved work. In the mid-dle aisle, over the pillars, are twelve niches, supposed to have been occupied with the images of the apostles. There are no less than forty-four windows in this church, some of which still re-tain traces of the ancient painting. The church of St. James is a plain ancient building, which seems to have been erected in the thirteenth century. Besides the parish churches, there are several dissenting meeting-houses in the town. Paul's meeting-house is perhaps the oldest. The Baptist chapel is a large, expensive, and handsome building, fifty-four feet in length, and forty-nine in breadth ; the roof is supported by two strong and curious pillars of the Corinthian order. The pulpit and staircase are enriched with elegant carved work ; and the fronts of the galleries and pews are of Flemish oak. The Octagon chapel, erected by the Rev. Mr. Wesley, in -1778, is a neat building in Middle Street, St. James's. The Wesleyan Methodists have another cliapel in Upper High Street, built by Mr. James Lack-iugton, the late bookseller, Finsbury Square, London. The Baptists have also another chapel in Silver Street, which is a small neat structure. The Quaker meeting-house is a neat building, kept extremely clean, and the Catholics have a respectable chapel in the Crescent. The market-house stands in the centre of the town, and is a handsome and commodious building : in the lower part is the town-hall, and a coffee-room furnished with newspapers, &c. On the first floor there is an elegant assembly-room, fifty-feet long, and thirty wide, in which hang two superb chandeliers, presented to the inhabitants by the late colonel Coxe. In the upper floor is a handsome room, supplied with a billiard-table. On each side of this house is a large wing or arcade, for the accommodation of those who attend the markets with poultry, butter, and other articles of provisions. The corn-market is held in one of the arcades. In front is a spacious area, on which are erected moveable stalls, placed in rows, for the use of the butchers. This area is

enclosed by posts and chains. In the middle of it, to the north, is a noble pavement of broad stones, 216 feet in length, and eighteen broad which is called the Parade.

The free grammar-school was founded in the reign of Henry VII., by Fox, bishop of Winchester, and liberally endowed, about the year 1553, by William Walbee. The charitable institutions in Taunton

consist likewise of several alms-houses, two work-houses, and an hospital or infirmary. Taunton hospital is an oblong building, situate in East Reach, and was erected by subscription in 1811, to commemorate the jubilee kept in honor of his late majesty's having attained the fiftieth year of his reign. The building (erected about fifty years ago for the purpose of an hospital) has been converted into a convent, and is now inhabited by nuns of the order of St. Bridget, who came into England during the revolution in France. Part of the castle of Taunton remains. It was originall" built by Ina, king of the West Saxons. The principal part of the castle, as formerly laid out, was the great hall, which is 119 feet and a half long, by thirty feet and a half broad, and twenty feet five inches high. It is now the place in which the Lent assizes, the county sessions, and the courts of the bishops of Winchester, are held. The assize-hall, and some other parts of this building, were repaired, and elegantly fitted up, in the end of the last century, by Sir Benjamin Hammet, member for the borough.

On the north side of the town stands the Priory farm, near to which there was once a priory of black canons, which was founded by William Gifford, bishop of Winchester, in the reign of Henry I. Besides this, there were several chapels and chantries in Taunton, all of which were dependent on the mother church, in the convent dedicated to St. Peter and St. Paul. Taunton carries on some manufactures, and a considerable trade to Bridgewater by means of the Tone. It was for a long period the principal seat of the manufacture of coarse woollen goods, such as serges, corduroys, sagathies, druggets, shalloons, &c., a manufacture which flourished here soon after its introduction into England. For many years, however, it has been on the decline; and the inhabitants are at present occupied in a great measure in the silk trade. Large quantities of malt liquor are sent from this town to Bristol. Taunton is a borough by prescription, its rights being confirmed by charter at a very early period. In the reign of Charles II. it was deprived of its charter on account of its adherence to the parliament: but he restored its privileges about seventeen years after. About 1792 the corporate body was dissolved, and the charter lost, on account of the number of members having been allowed to decrease below a majority of the whole. In the adjoining village of Wilton there is a bridewell, built and maintained by the county, for the confinement of criminals only, debtors being sent to the county jail at Ilchester. Taunton sends two members to parliament, who are elected by such of the inhabitants residing within the borough as do not receive alms, and are potwallers or potwallopers, that is, every inhabitant who dresses his own victuals. The

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number of voters is about 500. The legal returning officers of this borough are the bailiffs, elected at the annual court leet, as was decided by a committee of the house of commons on the 3d of May 1803. Numerous Roman coins have been found in this neighbourhood, and it is certain that it was a place of some note in the time of the Saxons, from the circumstance of king Ina building his castle here. Markets on Wednesday and Saturday, which are very considerable. Thirty-one miles north-east of Exeter, and 140 west by south of London. Population 8534.

TAUSTON, a post-town and capital of Bristol county, Massachusetts, on the river Taunton, twenty -one miles east of Providence, twenty-four north of Bristol,twenty-seven north by west of New Bedford, and thirty-two and a half south of Bos-ton. It is a pleasant and handsome town, containing a court house, a jail, town house, bank, academy, printing office, paper mill, three rolling and slitting mills, two cotton manufactories, and five houses of public worship, two for Congregationalists, two for Baptists, and one for Friends. Large quantities of bricks are made in this neighbourhood

TAUR7E, in zoology (from Lat. taurus a bull, literally a female bull, differing from vacca, a cow), the name given by the Romans to that hermaphrodite kind of ox which is neither bull nor cow, and which British farmers call a free-martin. See HERMAPHRODITE.

TAURANIA, a town of Italy, in the country of the Bruttii. — Lempriere.

TAURANTES, an ancient people of Armenia, who dwelt between Artaxata and Tigranocerta. — Tacit. Ann. 14, c. 24.

TAURI, an ancient nation of European Sar-matia, who inhabited Taurica Chersonesus, and sacrificed all strangers to Diana. The statue of this goddess, which theybeliev. to have fallen down from heaven, was carried off to Sparta by IPHIGENIA and ORESTES. See these articles. — Herodot. iv. c. 99. Eurip. Iphig. &c.

TAU R 1C (from Taurica), of or belonging to, or produced in Taurida, or Taurica Chersonesus. The term is chiefly applied to animals, natives of that country ; particularly the Tauric goats, from the skins of which the celebrated Morocco leather is manufactured at Karasubazar, a

town in Taurica.

TAURIC GOAT'S LEATHER, or Morocco Leather, is the staple of an ancient manufacture, in Karasubazar, where they make large quantities from the skins of the numerous flocks of Tauric goats. They begin the process by cleaning the skins in the following manner : — After having steeped some raw hides in cold water for twenty-four hours, to free them from blood and other impurities, the fleshy parts are scraped off with proper instruments. They are next macerated for ten days in cold lime water, to loosen the hair, which is likewise scraped off as clean as possible. For fifteen days they lie in clean cold water, and then are worked under foot in a succession of clean water ; the last being impregnated with dog's dung to loosen the hair still more, when they receive a second scraping, and are drained of their humidity ; which finishes the cleaning process. They now proceed to what

they call feeding the skins, by steeping them four days in a cold infusion of wheat bran ; then in a decoction of honey and water, twenty-eight pounds to five pails, cooled down to the temperature of new milk; out of which they are put under press into a vessel with holes at the bottom to let the liquor escape. They are lastly steeped four days in a light solution of salt and water, one pound to five pails ; this finishes the preparation, and the leather is now ready to receive the dye. A strong decoction of artemisia annua, or southern-wood, in the proportion of four pounds to ten pails of water, seems to be the basis of all the different colors that they give to Morocco in Taurica, Astracan, and the other cities ' formerly belonging to the Tartar empire, where the secret has remained till now. When a red color is intended, a pound of cochineal in pow-der is gradually stirred into ten pails of fine yel-low decoction of artemisia, and boiled up in it for half an hour, with five or six drachms of alum, and poured on the leather in a proper vessel. They are next worked under feet in an infusion of oak leaves in warm water, till they become supple and soft ; when they are finally rinsed in cold water, then rubbed over with olive-oil and calendered with wooden rollers ; which finishes the manufacture. The yellow Morocco is dyed with the decoction of artemisia alone; only stronger; twenty pounds of it to fifteen pails, being the proportion when used without other admixture ; but two pounds of alum in fine powder are gradually added, by half a table spoonful at a time ; and with this each skin is twice stained before the last operation of oiling and calendering. It is proper to remark that there is a little difference in the preparation of the skins for receiving the pure yellow

dye described above, as neither honey nor salt are used ; but, instead of them, the hides are steeped for two days in an infusion of oak - leaves ; and immediately after being taken out of the infusion of bran wherein they must have lain four days, and then be worked under foot for a few hours of these four days, next rinsed in cold water, and placed one above another on poles, to drain off the water and make them ready for staining.

TAURICA, in the mythology, a surname of Diana, because she was worshipped by the inhabitants of Taurica Chersonesus.

TAURICA CHERSONESUS, in ancient geography a large peninsula of Europe, at the sotfih west end of the Palus Mceotis, joined to Scythia by an isthmus, and bounded by the Cimmerian Bosphorus, the Euxine Sea, and the Palus Mceotis. The inhabitants were called Tauri, and were very savage. Strabo, iv. Plin. iv. 12. Its modern name, till lately, was Crimea, or Crim Tartary. See TARTAR and TARTARY. The inland country was anciently possessed by the Scythians, who extended themselves on the north beyond the Perekop, west to the Dnieper, and east as far as the Don. The west andˆsouth coasts were inhabited by some Greek colonies, of which the town of Chersonesus became the most powerful. The east side on the Don and the opposite country, or the tract from the Don along the sea of Azoph to the Black Sea and Mount Caucasus, was under the kings of the

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Bosphoric Greeks, so called from the strait of Bosphorus. The Scythians proving troublesome neighbours to the Greeks, they asked the assistance of Mithridat«s VII. king of Pontus, who drove the Scythians out of the peninsula, and formed the kingdom of Bosphorus, which comprehended the whole peninsula, and the country facing it on the east towards Mount Caucasus. In the reign of Dioclesian, the Sarmatse were in sole possession of this kingdom, except that the Goths had seized a part of it, on the west side of the peninsula, and the whole tract lying north of it, along the Don. The peninsula afterwards fell under the emperors of the east, though partly shared with the Huns ; who were succeeded by the Cozars, and these by the Polawzers. About the end of the twelfth century, the Genoese, having made themselves masters of the Euxine or Black Sea, with all its harbours, settled also in the Crimea. In the thirteenth century the Tartars expelled the Polawzers out of the Crimea; but the strength of the Genoese ports and castles baffled their undisciplined fury; and held out till 1471, when the Turks reduced the whole Crimea and placed a khan over it. In 1698 the Russians made, an attempt on the Crimea, but took only Perekop. In 1736 they were more successful under count Munich, who again took Perekop, and opened a passage into the Crimea, though garrisoned by 100,000 men in a great number of sfong towers. In 1737, 1738, and 1739, the Russians renewed their invasion with such success, tha they ravaged one-half of the Crimea, while the Tartars ravaged the other; and vast numbers of the people perished by famine. The khan, however, continued after this to govern the greater part of it; and assumed the title of Khan of Lesser Tartary, though he was only a vassal of the Ottoman Porte, till 1774, when he was declared independent. But in 1783, from the farther successes of the Russians, under Catherine II., he abdicated his government, and ceded the whole country to Russia.

TAURICA CHERSONESUS, in modern geography, is the ancient name restored to the Crimea, by the late empress of Russia, Catherine II., after her complete conquest of the whole country. It is also called Taurida, Tauris, and Russian Tartary, and simply Taurica. In the Russian language it is called Tauricheskaia.

TAURICOR'NOUS, adj. Lat. taurus and fornu. Having horns like a bull.

Their descriptions must be relative, or the tauri-cornous picture of the

one the same with the other.

Browne.

TAURIDA, a province of European Russia, which lies between long. 31° 36’ and 40° 24’ E., and between lat. 44° 32’ and 47° 50’ N. ; has a superficial extent of 35,000 square miles ; but the inhabitants are so thinly scattered that their number does not exceed 260,000, making hardly seventy-four to the square mile. It contains some fertile tracts, particularly in the Crimea, but has also immense steppes, many of them almost entirely unproductive, and all deficient in water, though others are covered with the finest grass. The summer is mild, but the winter, though short, is very severe. Without any particular insalubrity of climate, a species

of scurvy, common in this country, is more prevalent here than in other parts of the south of Russia. In the peninsula a regular system of agriculture is carried on ; but, throughout the rest, little is to be found except wandering tribes. The principal products have been described un-der the head of CRIMEA. The inhabitants consist of a mixture of Tartars of three or four different tribes, Cossacs of two or three, Russians, Jews, gypsies, and foreign colonists, chiefly of German descent. The province is divided into six circles, besides the isle of Taman, and the land of the Czernomorski Cossacs.

TAURIDA. This is also the name of a range of mountains, which sweep along the whole coast of the Crimea from east to west. They are apparently distinct from the great chains of Europe and Asia ; the highest, the Tschatyrdag, is about 6800 feet above the Euxine. They are composed of sand, limestone, and marl-slate. In the Isle of Taman, at the eastern extremity of the peninsula, is a volcano in this line of mountains, which broke out for the first time in 1804. These mountains divide the Crimea into two parts, remarkable for difference of climate ; the northern, by much the larger, being neither pleasant nor healthy, while the southern, which may be said to resemble in its degree of heat, and in its vegetable products, the most fa’vored parts of Asia Minor.

TAURINI, the ancient inhabitants of

TAURINUM, a town of Gallia Cisalpina ; (Sil. Ital. iii. 646, Plin. Hi. 17), now called Turin.

TAURIS, a city of Persia, which at different periods has been the

capital of the empire. Sir William Jones and other writers conceive it to be the ancient Ecbatana. D'Anville, however, imagines it to be Gaza, or Ganzaca, where Cyrus deposited the treasures of Croesus. It was a favorite city of Haroun el Raschid; and, according to Persian tradition, was founded by Zobeida, one of his wives. It was probably to him that it was indebted for that extraordinary magnitude and splendor which it once exhibited. In th? time of Chardin, it was reckoned to contain upwards of 500,000 inhabitants, and carried on an extensive trade with Russia, Tartary, and India; and, for the accommodation of strangers, there were 300 spacious caravanseras. The manufacture of silk, particularly of turbans, was very extensive. Tauris, however, has suffered in a more than ordinary degree under those revolutions which have laid waste all the modern cities of Persia. Situated near (he frontier, it has alternately been the object of contest to Turks, Tartars, and Persians, and has been taken and sacked eight different times. It has suffered still more by earthquakes. The last, in 1724, is supposed to have destroyed 100,000 inhabitants. At present Tauris does not contain more than 30,000 people, and is, on the whole, one of the most wretched cities in Persia. The wall that surrounds it is decayed ; and, while the ruins of the ancient city cover a great extent of ground, they exhibit nothing but a confused heap of old mud walls. Long. 46° 37' K., lat. 38° 10' N.

TAUROMENIUM, or TAUROMINIUM, an ancient town of Sicily, between Messana mid

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• Jatana; built by the Zancleans, Sicilians, and Ilybleans, by order of Timoleon, in the age of Dionysius II. tyrant of Syracuse. The hills adjacent were famous for their grapes and wines; and for the extent and beauty of their prospects. Diodor. It was built on the site of Naxus, and is now called Taormina. See NAXUS, and TAORMINA.

TAUROMINIUS,a river near Taurominium.

TAURUS, in astronomy, one of the twelve signs of the zodiac.

TAURUS, the name which Europeans give to a lofty chain of mountains, situated in the eastern part of Asia Minor, where it borders on Syria, called by the Turks Gebel Kurin. They approach so near to the Mediterranean as in some places to leave only narrow passes, the most celebrated of which is that of Issus, where the battle was fought between Darius and Alexander. These mountains are in many places very rugged, and covered with vast pine forests. They are traversed in summer by Turcoman shepherds, who in winter descend and take up their residence in towns.

TAUSENAU. See DAUSENAU.

TAUTOL'OGY, n. s. Fr. taulologie; Gr. TavroXoyia ; ravro and Xoyof. Repetition of the same words, or of the same sense in different words.

All science is not tautology ; the last ages have shewn us, what antiquity never saw, in a dream.

Glanville's Scepsis.

Saint Andre's feet ne'er kept more equal time, Not even the feet of thy own Psyche's rhime ; Though they in numbers as in sense excel, So just, so like tautology, they fell. Dryden.

Every paper addressed to our beautiful incendiaries hath been filled with different considerations, that enemies may not accuse me of tautology.

Addistm's Freeholder.

TAW, n. s. Perhaps from Sax. rapian, to whiten. A marble to play with.

Trembling 1 ‘ve seen thee Mix with the children as they played at taw; Nor fear the marbles as they bounding flew, Marbles to them, but rolling rocks to you. Swift.

TAWDRY, adj. From. St. Audry, St. Aw-drey, or St. Etheldred, as the things bought at St. Etheldred’s fair. — Henshaw and Skinner. Mean-ly showy ; fine without grace ; showy without elegance. It is used both of persons and things. Bind your fillets fast, And gird in your waste, For more fineness, with a tawdrie lace.

Spenser’s Pastorals. Not the smallest beck, But with white pebbles makes her tawdries for her

neck. Drayton.

He has a kind of coxcomb upon his crown, and a few tawdry feathers. L’ Estrange.

Old Romulus, and father Mars, look down1 Your herdsman primitive, your homely clown, Is turned a beau in a loose taiotlrti gown.

Drgdm’t Juvenal.

He rails from morning to night at essenced fops and tawdry courtiers. Addisan’s Spectator.

A clumsy beau makes bis ungraceful ness appear the more ungraceful by his tau’driness of dress.

Clarissa.

TA WE ETA WEE. A cluster of islands, nearly sixty in number, in the eastern seas, form-

ing part of the Sooloo Archipelago. Some are of considerable extent, others high, some low, and not a few mere rocks. The chain of islands to the south-east of Taweetawee are all low, with an infinite number of shoals between them, which abound with fish, and are the site of a pear’, fishery. The island of Taweetawee has plenty of excellent waters, but very few inhabitants ; the names of many of these small islands in tb>! Malay language are so indecent that they do not admit of being translated.

TAWING. See TANNING.

TAW’NY, adj. Fr. tone, tanne. Yellow ; tan-colored ; like things tanned..

This child of fancy, that armado hight, For interim to our studies shall relate, In high born words, the worth of many a knight From tawny Spain, lost in the world’s debate.

Sliakspeare.

Eurus his body must be drawn the colour ot the tawny Moor, upon his head a red sun. Pencham.

The tawny lion pawing to get free. Milton.

Whilst they make the river Senaga to bound the Moors, so that on the south side they are black, on the other only tawny, they seem not to derive it from the sun. Browne.

Where ‘s the worth that sets this people up Above your own Numidia’s tawny sons t

Addison’s, Cato.

TAX, n. s. & v. a. ~\ Fr. taxer ; Belg. taxe ,

TAXA’TION, n. s. > Lat. taxo ; Welsh tasg. An

TAX’EH j impost or tribute imposed ;

an excise; a tallage ; charge; censure: to im-pose a tribute or charge ; to censure : taxation is the act of doing so ; impost : taxer, he who taxes.

Jehoiakim gave the silver and gold to Pharaoh, but he faj-et/.the land to give the money.

2 Kinys, xxiii. 35.

The subjects could taste no sweeter fruits of having a king, than grievous taxations to some vain purposes ; laws made rather to find faults than to prevent faults.

Sidney.

I bring no overture of war, no taxation of homage ; my words are as full of peace as matter.

Sltahspeare. Twelfth Night.

How many Irath he killed 1 I promised to eat all of his killing, — Niece, you tax signior Benedick too much : but he'll be meet with you. Shakspeare.

1 am not justly to be taxed with any presumption for meddling with matters wherein I have no dealing.

Raleigh.

These rumours begot scandal against the king, taxing him for a great taier of his people.

Bacon's Henri/ VII.

They cannot fax others' omissions towards them without a tacic reproach of their own.

Decay of Piety.

He could not without grief of heart, and without some tur upon himself and his ministers for the not executing the laws, look upon the bold licence of some pamphlets. Clarendon.

Tax not divine disposal : wisest men Have erred, and by bad women been deceived.

Milton.

Men's virtues I have commended as freely as I have taxed their crimes. Dryden.

If he taxes both of long delay, My guilt is less, who sooner came away. Id.

With wars and taxes others waste their own, And houses burn, and household gods deface, To drink in bowls which glittering gems enchase

Id.

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This salutation cannot be tared with flattery, since tt was directed to a prince, of whom it had been happy for Rome if he had never been born, or ir lie had never died. Addi*uu.

The tax upon tillage was two shillings in the pound in arable land, and four in plantations : this tax was oftea levied in kind upon corn, and called decumsc or tithes. Arbuthnot.

Various news I heard, Of old mismanagements, taxations new ; All neither wholly false nor wholly true. Pope. TAXATIO ECCLESIASTICA. The valuation of ecclesiastical benefices made through every diocese in England, on occasion of pope Innocent IV. granting to king Henry III. the tenth of all spirituals for three years, was first made by Walter, bishop of Norwich, delegated by the pope to this office in 38 Hen. III. This taxation is sometimes called Pope Innocent's Valor, and Taxatio Norwicensis.

In 1288 pope Nicholas IV. granted the tenths to king Edward I. for six years, towards defray-ing the expense of an expedition to the Holy Land ; and, that they might be collected to their full value, a taxation by the king's precept was begun in that year (1288), and finished as to the province of Canterbury in 1291, and as to that of York in the following year ; the whole being under the direction of John, bishop of Winton, and Oliver bishop of Lincoln. A third taxation, entitled Nova Taxatio, as to some part of the province of York, was made A. D. 1318 (11 Ed. II.) by virtue of a royal mandate directed to the bishop of Carlisle, chiefly on account of the invasion of the Scots, by which the clergy of those border countries were rendered unable to pay the former tax.

The taxation of pope Nicholas is important, because all the taxes, as well to our kings as to the popes, were regulated by it, until the survey made in the twenty-sixth year of Henry VIII. ; and because the statutes of colleges which were founded before the Reformation are also interpreted by this criterion, according to which their benefices under a certain value were exempted from the restriction in the statute 21 Hen. VIII. c. 13 concerning pluralities. Various detached parts of this record had been published in county histories ; but the whole was for the first time given to the public in 1802, under the direction of the commissioners on the public records, from two MSS. in the king's

remembrancer's office, exchequer, collated with a Cottonian MS. of much greater antiquity in the British museum, Tiberius C. X. which has unfortunately suffered, some damage from the fire which happened to the Cottonian library whilst lodged at Westminster. By a strange carelessness in the introductory note to the volume, published under such high authority, mention is made of pope Innocent XXII. instead of pope Innocent IV7.

A new Valor Beneficiorum was instituted in 26 Hen. VIII., when the first-fruits and tenths of every ecclesiastical promotion were annexed to the revenue of the crown, by stat. 26 Hen. VIII. c. 3. To ascertain their value, ecclesiastical surveys were taken by virtue of commissions in the king's name issuing under the great seal, 26 Hon. VIII. ; and these surveys, preserved in

the first-fruits office, are admitted as evidence of the amount at that period, although they are generally considered as estimating the value much too low. These surveys are commonly called ' The King's Books,' according to which the value of livings is ascertained in case of pluralities. In like manner, and upon the same principle, surveys of the possessions of religious houses, previous to the dissolution of monasteries, are received in evidence, Kellington, vicar, v. Trinity Coll. Camb.; 1 Wils. 170; and these surveys are held admissible, although the commissions under which they were taken are not now to be found. See 1 Wils. 170; 2 Gwill. 542. TAXES. A tax in England differs from what is commonly called a subsidy, in this, that it is always certain as it is set down in the exchequer book, and levied in general of every town, and not particularly of every man, 8cc. See Rastall's Abridgment, title Taxes. A tax may now be defined to be a general aid, subsidy, or supply, granted by the commons in parliament assembled, and confirmed by act of parliament; constituting the king's extraordinary revenue, and paid yearly towards the expenses of government. 1 Comm. c. 8.

Under title King V. 4 the taxes are stated, from Blackstone, as part of the king's extraordinary revenue, as applicable to the purposes of government : they may, however, more properly be considered as the national revenue applicable to public purposes. For their nature and account see GREAT BRITAIN.

TAXILA, in ancient geography, an extensive country of India, between the Indus and the Ilydaspes.

TAXILES, or TAXILUS, a king of Taxila, called also Omphis in the age of Alexander. He submitted to the conqueror, who rewarded him liberally. See MACEDON.

TAXIMAQUILUS, a king in the south part of Britain, contemporary with Julius Caesar. Caes. de Bel. Gal. c. 22.

TAXIS, in ancient architecture, the ordonance ; the disposition. Ash.

TAXUS, the yew tree, in botany, a genus of plants belonging to the class of dioecia, and order of monodelphia ; and in the natural system ranging under the fifty-first order, coniferse. The male calyx is triphyllous, gemmaceous, and imbricated : there is no corolla ; the stamina are numerous; the antherce peltated and octofid. The female calyx resembles the male ; there is no corolla nor style, and only one seed with a calycle resembling a berry very entire. There are five species:—!. T. baccata, the common yew tree, is a native of Britain, France, Switzerland, &,c., and of North America. It is distinguished from the other species by linear leaves which grow very close, and by the receptacles of the male flowers being subglobose. The wood is reddish, full of veins, and flexible, very hard and smooth, and almost incorruptible. Its hardness renders it very proper for turners and cabinet makers. It produces brines which arc red, mucilaginous, and have a sweet mawkish taste. They are often eaten by birds, and are therefore not poisonous : but it is a common opinion that the leaves an; poisonous to cattle, and many I'.icU

are mentioned of horses and cows having died by eating tliem.. But others deny this. 2. T. Capensis, a native of the Cape of Good Hope, is mentioned by Mr. Sonnerat. 3. T. rnacro-phylla is described by Sir Charles Thunberg, in his Flora Japonica, as a native of Japan. 4. T. nucifera, the nut bearing yew, is the only other species mentioned by Linnaeus.

5. T. verticillata, another species growing in Japan, is described by Sir Charles Thunberg.

TAY, called by the Romans Tavus or Taus, a river in Scotland) which is said to contribute a greater quantity of water to the ocean than any river in Great Britain. It rises in Breadalbane, on the frontiers of Lorn ; and, having augmented its stream by several small rills, spreads itself into a lake called Loch Dochart; out of which having run but a little space, it expands again. Leaving this second lake, it rolls some miles with a considerable body of water, arid then diffuses itself into the spacious Loch Tay, which is sixteen miles long. Almost as soon as it issues from this lake, which it does under a handsome bridge, it receives the river Lyon; and, pursuing a course due east, it receives ten miles farther on the Tummel, which conveys the united riyulets of Athol into its channel. Bending them to the south for six miles, it reaches Dunkeld ; where an elegant bridge was built in 1806. Declining still to the south-east with a winding course, for above twelve miles, the Tay receives the Isla, and a large supply of waters from the county of Angus ; and, then running south-west for eight miles more, is joined in that space by several rivers, the most considerable of which is the Almond. Turning then to the south-east, this copious river rolls past Perth, the capital of the county. The Tay, continuing still a south-east course, receives a few miles below Perth the river Earne. Swelled by the waters of this last river, the Tay, running next directly east, enlarges itself till it becomes about three miles broad ; but contracts again before the town of Dundee; soon after which it opens into the German Ocean. At the entrance of the frith there are sands both on the north and south side : the former styled Goa, the latter Aberlay and Drumlan : and before these, in the very mouth of the frith, those which are called the Cross Sands. At Buttonness, which is the northern promontory, there are two light houses. The space between the north and the south sands may be nearly a mile, with about three fathoms water ; but, being within the

frith, it grows deeper, and in the road of Dundee is full six fathoms. The frith of Tay is not indeed so large or so commodious as that of Forth, but from Buttonness to Perth it is not less than forty miles ; and the whole may be without any great impropriety styled a harbour, which has Fife on one side, and the shires of Perth and Angus on the other.

TAY, a river of Ireland, in Waterford, which runs into the sea; seven miles W. N. W. of Dun-gar von Bay.

TAY, FRITH OF, an arm of the sea, at the mouth of the Tay, which divides the county of Fife from those of Perth and Forfar.

TAY, LOCH, a lake of Perthshire, through

which the river Tay runs, sixteen miles long, and in many parts above one broad. The banks of this lake are finely shaded with trees ; and it has an island, on which are the ruins of a priory built by Alexander I.

TAYGETA, or TAYGETE, in the mythology, a daughter of Atlas and Pleione, and mother or Lacedaemon by Jupiter. She became one of the Pleiades.

TAYGETUS, a mountain of Laconia, west of the Eurotas. It hung over Lacedaemon, and a part of it once fell down and destroyed the suburbs. The Spartan women celebrated the Bacchanalia upon it.

TAYLOR (Dr. Jeremy), was the son of a barber at Cambridge, where he was educated. He became divinity lecturer of St. Paul's in London ; and was, by the interest of archbishop Laud, elected fellow of All Soul's College, Cambridge, in 1636. In 1638 he became chaplain to the archbishop, who made him rector of Uppingham in Rutlandshire. In 1642 he was chaplain to the king ; and a frequent preacher before him at Oxford. He afterwards attended his army as chaplain. Upon the declining of his cause, he retired into Wales, where he officiated as minister, and kept a school. Having spent several years there, he lost three sons of great hopes in three months. This made him leave the country, and go to London, where he officiated in a private congregation of loyalists. At length Edward lord Conway carried him over into Ireland, and settled him at Portmore. Upon the Restoration he returned to England ; soon after he was advanced to the bishopric of Down and Connor in Ireland. He was likewise made a privy-counsellor and vice-chancellor of the university of Dublin ; which he held till his death. He died of a fever at Lisnegarvy in 1667. He was

the author of several works on divinity.

TAYLOR (Dr. Brook) was born at Edmonton, August 18th, 1685. He was the son of John Taylor, esq., of Bifron's House in Kent, by Olivia, daughter of Sir Nicholas Tempest, of Durham, bart. His grandfather, Nathaniel Tay-lor, was one of those puritans whom ' Cromwell appointed by letter, June 14th, 1653, to represent Bedford in parliament.' In 1701 he was entered a Fellow Commoner of St. John's College, Cambridge. In 1708 he wrote his treatise On the Centre of Oscillation, in the Philosophical Transactions. In 1709 he took his degree of A. B. In 1712 he was chosen F. R. S. In 1712 he presented to the Royal Society three papers : — 1 . On the Ascent of Water between two Glass Planes ; 2. On the Centre of Oscillation ; and, 3. On the Motion of a Stretched String. In 1713 he presented a paper on Mu-sic. In 1714 he was elected secretary: same year he took at Cambridge his degree of LL. D., and sent to Sir Hans Sloane, An Account of some Curious Experiments relative to Magnetism ; which was printed in the Transactions. In 1715 he published in Latin his Methodus Incre-mentorum ; also a curious essay, preserved in the Philosophical Transactions, entitled An Account of an Experiment for the Discovery of the Laws of Magnetic Attraction ; likewise a treatise On

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iba Principles of Linear Perspective. In the same year he conducted a controversial correspondence with the count Raymond de Mont-mort, on the Tenets of Malebranche ; which occasioned his being particularly noticed in the eulogium pronounced by the French academy, on that eminent metaphysician. The new philosophy of Newton engaged the attention of mathematicians and philosophers both at home and abroad. In 1716 he went to Paris, where his society was very much courted. In 1717 he returned to London, and wrote three treatises, which were published in the Philosophical Transactions, vol. xxx. His intense application hav-ing impaired his health, he went to Aix-la-Chapelle, and resigned his secretaryship in 1718. After his return, in 1719, he applied to subjects of a very different kind, such as A Treatise on the Jewish Sacrifices, and a Dissertation on the Lawfulness of Eating Blood. He also revised his treatise on Linear Perspective. Drawing continued also to be his favorite amusement to his last hour. In 1721 he published his last paper in the Philosophical Transactions, entitled An Experiment to ascertain the Proportion of Expansion of Liquor in the Thermometer, with regard to the degree of Heat. In 1721 he also married Miss Bridges of Wallington in Surrey. She died in 1725, and he united himself to Miss Sawbridge of Olantigh, in Kent. In 1 729, on the death of his father, he succeeded to the fa-mily estate of Bifrons. In 1730 he lost his wife in child bed. In the interval between 1721 and 1730 he wrote a Treatise of Logarithms. The essay entitled Contemplatio Philosophica, published by Sir William Young in 1793, appears to have been written about this time. Having survived his second wife little more than a year, Dr. Brook Taylor died of a decline, aged forty, December 29th, 1 73 1 . He was a finished Christian, gentleman, and scholar.

TAYLOR (Dr. John), a learned dissenting minister, born in Lancashire. He settled first at Kirkstead in Lincolnshire, where he preached to a small congregation, and taught a grammar-school for nearly twenty years. Afterwards he removed to Norwich, where he preached many years, until he went to superintend the academy at Warrington, in Lancashire. He died in 1761 ; and, among several other performances, was the author of a Hebrew and English Concordance, 2 vols. folio.

TAYLOR (Jane), an accomplished female writer, born September 23d, 1783, in London, where her father, a respectable artist, then resided.

Being also a dissenting minister, Mr. Taylor accepted, in 1792, an invitation from a congregation at Colchester to officiate as their pastor, and carried his daughters thither with him, continuing to superintend their education, and teaching them his own art as an engraver. It was in the intervals between these pursuits that Miss Taylor began to commit the effusions of her genius to writing; and, a visit to London in 1802 introducing her to the society of some young females of congenial disposition and talent, she, as well as her sister, was induced to join them in contributing to the Minor's Pocket Book, a small publication, in which her first work, the Beggar

Boy, appeared in 1804. The success of this little poem encouraged her to proceed, and from this period till 1813 she continued to publish occasionally miscellaneous pieces in verse, of which the principal are entitled Original Poems for In-fant Minds, in 2 vols. ; Rhymes for the Nursery, in 1 vol. ; and some verses in The Associate Minstrels, a publication written in conjunction with the ladies already alluded to, and Mr. Jo-siah Conder. In the winter of the last mentioned year she commenced a prose composition of higher pretension, which appeared in 1815 under the name of Display, and met with much success. Her last and principal work consists of Essays in Rhyme on Morals and Manners. The latter part of her life was passed in occasional excursions from Ongar, in which place her family had resided since the year 1810. After some months of lingering debility, in which however ihe vigor of her mind appears to have remained to the last, this amiable-and intellectual female expired of a pulmonary complaint in the month of April 1823. TAYLOR BIRD. See MOTACILLA. TAY It A, in zoology. See MUSTELA. TCHANG TE, a city of China, of the first rank, in Ho-nan, the most northern in the province. A fish resembling a crocodile is said to be known here, the fat of which, when kindled, cannot be put out. It has also a mountain so steep and inaccessible that in time of war the citizens retire to it, and bid defiance to their foes. It comprehends one city of the second class, and six of the third in its district ; and is 255 miles S. S. W. of Peking. Long. 131° 4-i' E. Ferro, lat. 36° 6' N.

TCHANG-TCHA, a city of China of the first rank, on the Heng River, in Hou-quang. A great festival is celebrated here in the filth month throughout the empire. The mandarin who governed this city, being much esteemed and beloved by the people foi his probity, happening to be drowned in the river, they instituted this festival to his honor. It includes certain fights upon the water, as if they intended to search for the mandarin. The festival was at first peculiar to this city, but

came afterwards to be observed throughout the empire. 742 miles S. of Peking. TCHANG-TCHEOU, a city of China of the first rank, in Fo-kien, the most southerly in the province. It stands on a river, and carries on a considerable trade. The neighbouring mountains abound with the finest crystal. 950 miles south of Peking.

TCHANG-TCHEOU, a city of China of the first rank, in Kiang-nan. It is two leagues in circumference, situated on the great canal, and has a very extensive trade. The population has been estimated at 200,000 souls. 525 miles S. -S. E. of Peking.

TCHANG-TE, a city of the first rank in China, in Ilou-quang. It stands on a river near the great lake Tong-ting. 717 miles S. S. W. of Peking.

TCHAOU-KING, a city of China of the first rank, in Quang-tong. It is reckoned the best built city in the province, and is the residence of the tsong-tsi, or governor. The port is very spacious, placed at the confluence of three rivers, one of which communicates with Canton. 1062 miles S.S. W. of Peking.

TCHE-KIANG, a province of China, bounded on the north and north-west by Kiang-nan, on the east by the sea, on the south by Fo-kien, and on the south-west by Kiangsee ; about 200 miles in length from north to south, and from 120 to 180 broad. This was formerly the residence of some of the emperors, and is one of the most considerable provinces in the empire, on account of its maritime situation. The air is pure and healthful, the plains watered by a number of rivers and canals, and it abounds with springs and lakes. The natives are mild and polite to strangers, but extremely superstitious. A prodigious quantity of silk-worms are bred in this province. The principal branch of trade, therefore, consists in silk stuffs, an immense quantity of which is sent to every part of China, Japan, the Philippines, and Europe. A complete suit of silk may be bought here as cheap, we are told, as one of the coarsest woollen cloth in France. Excellent hams are also brought from this province; and the tallow-tree grows here. In Tche-kiang there are reckoned to be eleven cities of the first class,

seventy-two of the third, and eighteen fortresses, which in Europe would be accounted large cities. According to Sir George Staunton the number of inhabitants is 21,000,000.

TCHEOU-CHEN, an island of China, sixty miles from Ning-po, where the British embassy first landed.

TCHEOU-KONG, a celebrated Chinese astronomer, who flourished above 1 000 years be-fore the Christian era, and is said to have invented the mariner's compass. He erected a tower in the city of Ho-nan, for an observatory ; and there is still to be seen in it an instrument which he made and used for finding the shadow at noon, and determining the latitude.

TCHING-KIANG, a city of China of the first rank, in Kiang-nan, on the south side of the Yang-tse. This city is not above a league in circumference ; but it is one of the most considerable for its situation and commerce, and the key of the empire towards the sea. The walls are above thirty feet in height in several places, and the streets and suburbs are paved with marble. 470 miles S. S. E. of Peking.

TCHINQ-TCHEOU, a city of China of the first rank, in Hou-quang. It is situated on an angle made by two rivers, and the country is watered by a great number of brooks, and yields plenty of quicksilver, lapis lazuli, and green stones for painting. There are also mines of silver and gold. The district of this city contains one of the second order, and nine of the third. 65 miles S. S. W. of Peking.

TCHING-TEOU, a town of Corea, thirty miles S. S. W. of Kang-tcheou.

TCHING-TING, a large city of China of the first rank, in Pe-che-lee. It is about four miles in circumference, and its jurisdiction is very extensive, and comprehends thirty-two towns, five of which are of the second, and twenty-seven of the third class.

TCHING-TOU, a city of China of the first rank, in Se-chuen. This was formerly the residence of the emperors, and one of the largest and most beautiful in China ; but ii. 1646 it was al-

most entirely destroyed by the Tartars. Its temples, bridges, and the ruins of ancient palaces, are still, however, objects of great admiration. 810 miles south-west of Pekin.

TC HONG-KING, a very flourishing city of China of the first rank, in

Se-chuen. It is indebted for its trade to its situation at the confluence of two remarkable rivers; one of which, called Kin-cha-kiang, or Golden-sand, receives in its course all the streams from the mountains which rise in the neighbouring confines of Tartary. The other is Ta-kiang, which has its source beyond the boundaries of China, and is called also Yang-tse-kiang. Tchong-kiug is built upon a mountain, and rises in the form of an amphitheatre. The air is wholesome and temperate ; and the city is celebrated for its fish, and a particular kind of trunks made with canes, interwoven like basket work. It has in its district three cities of the second class, and eleven of the third. It is 150 miles west of Pekin.

TCI-NAN, or TSI-NAN, a populous city of China of the first rank, in Shan-tung, situated south of the river Tsing-ho, or Tsi. This city is much respected by the Chinese on account of its having been formerly the residence of a long series of kings, whose tombs, rising on the neighbouring mountains, crown a delightful prospect. It is 235 miles south of Pekin.

TEA, n. s. French the ; Chinese theli. A well-known Chinese plant. See below.

The muses' friend, tea, does our fancy aid, Repress those vapours which the head invade.

Waller.

One has a design of keeping an open tea table.

Additon.

He swept down a dozen tea dishes. Spectator.

Green leaves of tea contain a narcotick juice, which exudes by roasting ; this is performed with great care before it is exposed to sale.

Arbuthnot on Aliments,

A living tea pot stands, one arm held out, One bent ; the handle this, and that the spout.

Pope.

The mistress of the tea shop may give half an ounce. Swift.

When you sweep, never stay to pick up tea spoons.

Id.

TEA. The tea plant, which is an evergreen, grows to the height of five or six feet : Le Compte says ten or twelve. The leaves, which are the only valuable part of it, are about an inch and a half long, narrow, indented, and tapering to a point like those of the sweet briar, and of a dark green color. The root is like that of the peach tree, and its flowers resemble those of the white wild rose. The stem spreads into many irregular branches. The wood is hard, of a whitish green color, and the bark is of a greenish color, with a bitter, nauseous, and astringent taste. The fruit is small, and contains several round blackish seeds, about the bigness of a bean or large pea.

The tea plant delights in valleys, is frequent on the sloping sides of mountains and the banks of rivers, where it enjoys a southern exposure. It flourishes in the north latitudes of Pekin, as well as round Canton, but attains the greatest perfection in the mild temperate regions of Nan-kin. It is said only to be found between 30° and 45° lat N. In Japan it is planted round the

borders of fields, without regard to the soil ; but, as it is an important article of commerce with the Chinese, whole fields are covered with it, and it is by them cultivated with care. It is propagated by seeds ; from six to twelve are put into a hole about five inches deep, at certain distances from each other. The reason why so many seeds

avenues and alleys. The care of this place is entrusted to people who guard the leaves from dust and defend them from the inclemency of the weather. The laborers who are appointed to collect the tea abstain from every kind of gross food for some weeks before they ‘begin, that their breath and perspiration may not in the least in-

are sown in the same hole is said to be, that only jure the leaves. They gather them with the most

a fifth part vegetate. Being thus sown they grow without any other care.

scrupulous nicety, and never touch them but with very fine gloves. When this choice tea

The leaves are not fit for being plucked till undergone the process necessary for its nrenaia-

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the shrub be of three years’ growth. In seven years it rises to a man’s height ; but, as it then bears but fe»v leaves, it is cut down to the stem, and this produces a new crop of fresh shoots the following summer, every one of which bears nearly as many leaves as a whole shrub. Sometimes the plants are not cut down till they are ten years old. We are informed by Kcempfer that there are three seasons in which the leaves are collected in the isles of Japan, from which the leaves derive different degrees of perfection. The first gathering commences at the end of February or beginning of March. The tea is then small, tender, and unfolded, and not above three or four days old : these are called ficki tsiaa, or tea in powder, because it is pulverised ; it is also called imperial tea, being generally reserved for the court and people of rank; and sometimes also it is named bloom tea. It is sold in China for Is. 8d. or 2s. per pound. The laborers employed in collecting it do not pull the leaves by handsful, but pluck them one by one, and take every precaution that they should not nreak them. However long and tedious this labor may appear, they gather from four to ten or fifteen pounds a day. The second crop is gathered about the end of March or beginning of April. At this season part of their leaves have attained their full growth, and the rest are not above half their size. This difference does not, however, prevent them from being all gathered indiscriminately. They are afterwards picked and assorted into different parcels, according to their age and size. The youngest, which are carefully separated from the rest, are often sold for leaves of the

first crop, or for imperial tea. Tea gathered at this season is called too-tsiaa, or Chinese tea, because the people of Japan infuse it and drink it after the Chinese manner. The third crop is gathered in the end of May or in June. The leaves are then very numerous and thick, and have acquired their full growth. This kind of tea, which is called Ben-tsiaa, is the coarsest of all. Some of the Japanese collect their tea only at two seasons of the year, which correspond to those already mentioned ; others confine themselves to one general gathering of their crop in June ; but they always form afterwards different assortments of their leaves. The finest and most celebrated tea of Japan is that which grows near Ud-si, a village near Meaco on the coast. In the district of this village is a delightful mountain of

tion, it is escorted by the superintendent of th mountain and a strong guard to the emperor's court, and reserved for the use of the imperia' family.

When the tea leaves have been collected, they are exposed to the steam of boiling water ; afte'r which they are put upon plates of copper, and held over the fire until they become dry and shrivelled, and appear such as we have them in Europe. Kcempfer says, tea is prepared in the same manner in the isles of Japan. The people of Japan and China generally keep their tea a year before using it, because, when fresh and newly gathered, it possesses a narcotic quality which hurts the brain. Imperial tea is generally preserved in porcelain vases, or in leaden or tin canisters covered with fine mats made of bam-boo. Common tea is kept in narrow-mouthed earthen pots ; and coarse tea, the flavor of which is not so easily injured, is packed up in baskets of straw.

The Chinese pour boiling water over their tea, and leave it to infuse, as we do in Europe ; but they drink it without any mixture, and even without sugar. The people of Japan reduce theirs to a fine powder, which they dilute with warm water until it has acquired the consistence of thm soup.

Tea was introduced into Europe in 1610 by the Dutch East India Company. It is generally said that it was first imported from Holland to England in 1666 by the lords Arlington and Ossory, who brought it into fashion among people of quality. But it was used in Coffee-houses before this period, as appears from an act of parliament made in 1660; in which a duty of 8d. was laid on every gallon of the infusion sold in these places, In 1666 it was sold in London for 60s. per pound, though

it did not cost more than 2s. 6d. or 3s. 6d. at Batavia. It continued at this price till 1707. In 1715 green tea began to be used; and, as great quantities were then imported, the price was lessened, and the practice of drinking tea descended to the lower ranks. In 1720 the French began to send it to us by a clandestine commerce. Since that period the demand has been increasing yearly, and it has become almost a necessary of life in several parts of Europe, and among the lowest as well as the highest ranks.

Many attempts have been made to introduce this valuable plant into Europe; but, from want

the same name, the" climate of which is said to of proper precautions, most of these attempts

be extremely favorable to the culture of tea ; it is have miscarried. The seeds, being of an oily

therefore enclosed by a hedge, and surrounded nature, are apt to prow rancid during a longvoy—

with wide ditches, which prevent all access to it. age, unless proper care is taken to preserve them

The tea shrubs that grow on this mountain are The finest tea-plant known in England was

planted in regular order, arul are divided by raised in Kew gardens; but the fust that ocr

flourished in Europe was one belonging to the duke of Northumberland at Sion. The plants which are cultivated in toe gardens near London thrive well in the green-house during winter, and some stand that season in the open air. Linnaeus, who obtained this shrub in its growing state, contrived to preserve it in the open air

in the northern latitude of Sweden. France has also procured some plants. There can be no doubt but they would succeed in many countries of Europe, if proper care were paid to their cultivation till they became innured to the climate.

In this country, teas are generally divided into three kinds of green, and five of bohea : The former are, 1. Imperial or bloom tea, with a large loose leaf, light green color, and a faint delicate smell. 2. Hyson, so called from the merchant who first imported it ; the leaves of which are closely curled and small, of a green color, verging to a blue : And 3. Single tea, from the name of the place where it is cultivated. The boheas are, 1. Souchong, which imparts a yellow green color by infusion. 2. Camho, so called from the place where it is made: a fragrant tea, with a violet smell ; its infusion pale. 3. Congo, which has a larger leaf than the following, and its infusion somewhat deeper, resembling common bohea in the color of the leaf. 4. Pekpe tea is known by the appearance of small white flowers mixed with it. 5. Common bohea, whose leaves are of one color. There are other varieties, particularly a kind of green tea, done up in roundish balls, called gunpowder tea.

Dr. Lettsom thinks it most probable that there is only one species of tea, and that the difference between the green and bohea teas depends on the nature of the soil, culture, age, and the manner of drying the leaves. He adds that it has even been observed that a green tea tree, planted in the bohea tea country, will produce bohea, and on the contrary ; and that on his examining several hundred flowers, brought both from the bohea and green tea countries, their botanical characters have always appeared uniform. We are principally indebted to Kaemp-fer, Le Compte, and Du Halde, for an authentic history of the culture of this exotic shrub, and the manner of preparing or curing its leaves.

The particulars of greatest importance that have been recited have lately been judiciously collected, and the subject further illustrated by additional observations of this writer.

The present consumption of tea in this country is immense, both among the rich and poor. Dr. Lettsom tells us that he has been informed, that at least 3,000,OuC Ibs. are allowed for the annual home consumption, not including the incredible quantity smuggled into the kingdom ; and that the East India Company have generally ir. their warehouses a supply for three years. In the appendix to Sir George Staunton’s Account of lord Macartney’s Embassy to China, we have also several statements relating to the tea trade. The average of

teas exported from China to Europe in foreign ships, for nine years, *viz.* from March 1772 to 1780, the average of the number of ships being twelve, was 13,198,201 Ibs.; in English ships, at the average of nine, 5,639,939 Ibs. : the total average of

ships is twenty-one, and of exported tea 18,838,140 Ibs. The annual consumption of tea by foreigners in Europe is estimated ai 5,500,000 Ibs. ; and the consumption of Gre:u Britain and her dependencies is at least 1 3,338,1 40 Ibs., which, at 700,000 Ibs. per ship, would em-ploy thirty-eight large ships constantly in the China trade, instead of eighteen ships, as above, most of which were small, one fleet going out when another is coming home. The above is exclusive of private trade teas, brought legally and illegally into Europe. It is said, upon the authority of confidential information, that the English ships have often smuggled from 1000 to 3000 chests of tea each ; and also that the foreign captains bring a large quantity of tea, which they either smuggle at sea, or throw into the sea, the punishment being severe. The loss to the public-on 1000 chests of hyson tea smuggled is above £20,000.

The properties of tea, medicinally considered, are strangely controverted : the eastern nations are at least as much possessed with an idea of their extraordinary virtues as the Europeans , but it is, perhaps, because imagination bears as great a sway there as here. The reason why the gout and stone are unknown in China is ascribed to the use of this plant.

Tea, on the one hand, has been extolled as the greatest of all medicines : moderately and properly taken, it certainly acts as a gentle astringent and corroborative : it strengthens the stomach and bowels, and is good against nauseas, indigestions, and diarrhaas. It acts also as a diuretic and diaphoretic. The immoderate use of it, however, has been very prejudicial to many, who have been thereby thrown into the diabetes. In Europe, also, infusions of tea leaves have been extravagantly condemned by some, and commended by others. From the contradictory opinions, even of medical writers, on this subject, the natural inference seems to be that they possess neither noxious nor beneficial powers, in any very considerable degree. They seem, when moderately used, to be for the most part innocent; in some cases they seem to le salutary; in some they are apparently prejudicial. They dilute thick juices, and quench thirst more apparently, and pass off by the natural emunctoriˆs more freely, than more watery fluids : they refresh the spirits in heaviness and sleepiness, and seem to counteract

the operation of inebriating liquors. From their manifest astringency, they have been supposed to strengthen and brace up the solids ; but this effect experience does not countenance, as it ;s in disorders, and in constitutions in which corroborants are more serviceable, that the immoderate use of tea is peculiarly hurtful, in cold indolent habits, cachexies, chlorosis, dropsies, and debilities of the nervous system. Lewis's Materia Medica.

Dr. Lettsom has particularly enquired into the medical effects of tea ; and, having observed that infusions of bohea and green tea contribute to preserve sweet some small pieces of beef immersed in them, he infers that they possess an antiseptic power, when applied t» the dead ani-mal fibre, and, from their striking a purple color

with salt of iron, he deduces tneir astringent quality.

From other experiments he concludes that the activity of tea chiefly resides in its fragrant and volatile parts ; and that if the use of it be beneficial or injurious to any particular constitution, it becomes so principally by means of this odorous fragrant principle. He apprehends that it is the safest course to use the infusion of the more ordinary kinds of this plant, which abound less with this fragrant principle. Or the tea may be boiled a few minutes, in order to dissipate this volatile part, which stands charged as the cause of those nervous affections that are said to be produced, or aggravated, by the use of this liquor. By this process may likewise be extracted more copiously the more fixed, bitter, and stomachic parts of this vegetable. Our author seems to be thoroughly persuaded of the occasionally noxious effects of this volatile principle, in the finer teas especially, and recommends this last mentioned mode of making tea, or the substitution of the extract instead of the leaves ; by the use of which the nervous relaxing effects, which follow the drinking of tea in the usual manner, would be in a great measure avoided. This extract has been imported hither from China, in the form of small cakes, not exceeding a quarter of an ounce each in weight, ten grains of which might suffice one person for breakfast ; but it might easily be made

here by sim-ple decoction and evaporation, by those who experience the noxious qualities of the volatile principles of this plant. It may be farther observed

that the eifect of drinking large quantities of any warm aqueous liquor would be to enter speedily into the course of circulation, and pass off a”s speedily by urine or perspiration, or the increase of some of the secretions.

Its effects on the solid parts of the constitution would be relaxing, and thereby enfeebling. If this warm aqueous fluid were taken in considerable quantities, its effects would lie proportionable, and still greater if it were substituted instead of nutriment. The infusion of tea, however, has those two peculiarities. It is not only posses-i Of a sedative quality, but also of a considerable astringency; by which the relaxing power, ascribed to a mere aqueous flui’d, is in some measure corrected on this account. It is, perhaps, less injurious than many other infusions of herbs, which, besides a very slight aromatic flavor, have very little, if any, stypticity, to prevent their relaxing debilitatin;;; effects. So far, therefore, tea, if not too line, it’ not drank too hot, nor in too great quantities, is perhaps preferable to any other known vegetable infusion. And if we take into consideration, likewise, its known enlivening energy, our attachment to it will appear to be owing to its superiority in taste and effects to most other vegetables. See Dr. Lettsom’s Natural History of the Tea Tree, with Observations on the Medical Qualities of Tea, and Effects of Tea Drink ing, 4to., 1772.

The following results of experiments on tea, by Mr. Brande, have been published by hin. in his Journal: —

One hundred parts of Tea.

Soluble in Water.

Soluble in Alcohol.

Precipit. with Jelly.

Inert Residue.

Green Hyson 14s. per Ib.

41

44

31

56

Ditto … 12s.

34

43

29

57

Ditto …. 10s

36

43

26

57

Ditto …. 8s.

36

42

25

58

Ditto . . 7s.

31

41

24

59

Black Souchong 12s.

35

36

28

64

Ditto . . - 10s.

34

37

28

63

Ditto …. 8s.

37

35

28

63

Ditto …. 7s

36

35

24

64

Ditto . . 6s.

35

31

23

65

TEA TREE of New Zealand, a species of myr-tie, of which an infusion was drunk by Captain Cooke's people in their voyages round the world. Its leaves were finely aromatic, astringent, and had a particular pleasant flavor at the first infusion; but this went off at the next filling up of the tea-pot, and a great degree of bitterness was then extracted ; for which reason it was never suffered to be twice infused. In a fine

soil in thick forests this tree grows to a considerable size ; sometimes thirty or forty feet in height, and one foot in diameter. On a hilly and dry exposure it degenerates into a shrub of five or six inches; but its usual size is about eight or ten feet high, and three inches in diameter. In this case its stem is irregular and unequal, dividing very soon into branches, which rise at acute angles, and only bear leaves and flowers

at top. The flowers are white, and very ornamental to the whole plant. Mr. White, in his Journal of a Voyage to New South Wales, mentions a shrub which he calls a tea-tree, merely from its being used by the convicts as a succe-daneum for tea ; for he had not seen the flower, nor did he know to what genus it belonged. It is a creeping kind of a vine, running to a great extent along the ground : the stork slender ; the leaf not so large as the common bay leaf ; the taste sweet, exactly like the liquorice root of the shops.

TEACH, v. a. & v. n. ~\ Fret, zndpurt.jiuss.

TEACH’ABLE, adj. f tan-lit, sometimes

TEACH’ABLENESS, n. s. 4 teached, which is now

TEACH’ER. ‘ obsolete. Saxon tx—

can. To instruct; inform: correlative to learn :

dictate; impress on the mind; show; tcl! : tn

TEA

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perform the office of instructor : the adjective and noun substantives corresponding. Moses wrote this song, and taught it.

Deut. xxxi. 22.

The Lord will teach us of his ways, and we will walk in his paths. tsaiuh, ii. 3.

All thy children shall be taught of the Lord.

Id. liv. 13.

In vain they worship me, teaching for doctrines the commandments of men. Matt. xv. 9.

Huswives are teached, instead of a clocke, How winter night passeth by crowing of cocke.

Tusser.

Nature is no sufficient teacher what we should do that may attain unto life everlasting. Hooker.

I am too sudden bold . To teach a teacher ill beseemeth me. Sfuikspeare.

I have laboured,

And with no little study, that my teaching, And the strong course of my authority, Might go one way. Id.

For the choice of a governor more sufficient, the teachers in all the churches assembled themselves.

Raleiyh.

Our lecture men, and some others, whom precise people stile powerful teachers, do seldom honour it.

White.

Tis sufficient that matters of faith and religion be propounded in such

a way as to render them highly credible, so as an honest and teachable man may willingly and safely assent to them, and according to the rules of prudence be justified in so doing.

Wilkins.

Teach us by what means to shun The' inclement seasons. Milton.

Wolves shall succeed for teachers. Id.

1 went into the temple, there to hear . The teachers of our law, and to propose What might. improve my knowledge or their own.

Id. How hast thou satisfied me, taught to live.

Id.

These were notions born with us ; such as we were taught without the help of a teacher.

South's Sermons.

If some men teach wicked things, it must be that others should practise them. Id.

Dissenting teachers are under no incapacity of accepting civil and military employments. Swift.

We ought to bring our minds free, unbiassed, and teachable, to learn our religion from the word of God.

Watt*

And O ! that, humble as my lot, And scorned as is my strain,

These truths, though known, too much forgot, I may not teach in vain. Cowper.

TEAD, or TEDE, n. s. Lat. tozda. A torch ; a flambeau. Not in use. A bushy tead a groom did light, And sacred lamp in secret chamber hide. Spenser. Hymen is awake,

And long since ready from his mask to move, With his bright tead that flames with many a flake.

Id.

TEAGUE, a name of contempt used for an Irishman.

TEAK WOOD. See TECTONA.

TEAL, n. s. Belg. teelingh. A wild fowl.

Some serve for food to us, and some but to feed themselves ; amongst the first sort we reckon the dip-chick, coots, teal, wigeon.

Cnrew's Survey of Cornwall.

TEAM, n. s. Sax. tyme, a yoke ; Lat. tcmo,

the team of a carriage. A number of horses or oxen drawing at once the same carriage.

Thee a ploughman all unvveeting found, As he his toilsome team that way did guide. And brought thee up in ploughman's state to bide.

Spenser.

I am in love ; but a team, of horses shall not pluck that from me, nor who 'tis I love. Shaktpeare.

Making such difference betwixt wake and sleep, As is the difference betwixt day and night, The hour before the heavenly harnessed team Begins his golden progress in the east.

Id. Henry IV. After the declining sun

Had changed the shadows, and their task was done, Home with their weary team they took their way.

fidMMMMR,

He heaved with more than human force to move A weighty stone, the labour of a team. Dryden.

Like a long team of snowy swans on high, Which clap their wings and cleave the liquid sky.

Id.

In stiff clays they may plow one acre of wheat with a team of horse. Mortimer's Husbandry.

TEANTJM, two ancient towns of Italy, 1. In Campania, on the Appian road, on the east bank of the Liris, called also Sidicinium, to distinguish it from 2. Another town in the west of Apulia, on the coast of the Adriatic. — Cic. Cluent 9, 69. Plin. 31 c. 2.

TEAR, v. a. & v. n. Pret. tore, anciently tare ; part. pass. torn. Sax. raerian ; Swed. tar a. To pull in pieces ; lacerate ; rend ; separate by violent pulling; break; shatter; pull or drive violently : to fume ; rave with passion : bluster.

The one went out from me ; and I said, Surely he is torn in pieces, and saw I him not since.

Gen. xliv. 28.

Neither shall men tear themselves for them in mourning, to comfort them for the dead. Jer. xvi. 7.

Come, feeling night ! And with thy bloody and invisible hand Cancel and tear to pieces that great bond Which keeps me pale. Shakspeare. Macbeth.

Old men with dust deformed their hoary hair The women beat their breasts, their cheeks they tare.

Shakspeare.

In the midst a tearing groan did break The name of Antony. Id. Antony and Cleopatra.

Solyman Rhodes and Buda from the Christians tore. Waller.

As storms the skies, and torrents tear the ground, Thus raged the prince, and scattered death around.

Dry den.

He roared, he beat his breast, he tore his hair.

Id.

All men transported into outrages for small trivial matters, fall under the inuendo of this bull, that ran tearing mad for the pinching of a mouse. L'Estrange.

Is it not as much reason to say that God destroys fatherly authority, when he suffers one in possession of it to have his government torn in pieces, and shared by his subjects ? Locke.

The hand of fate Has torn thee from me, and I must forget thee.

Addison.

Blush rather that you are a slave to passion, Which, like a whirlwind, tears up all your virtues, And gives you not the leisure to consider.

A. Philips.

John tore off lord Strutt's servants' clothes : now and then they came home naked.

Arbuthnot'i History rf Juhn Bull.

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Ambassadors sent from Carthage were like to be t<r-n to pieces by the populace. Arbuthnnt,

TEAII, 71. s., v. a., Sc v. n. ~\ Saxon, tenp ; TEAR FALLING, adj. , Dan. t aare-The

TEAP/FU: j water which

strong passion or emotion forces from the eyes ; any moisture trickling in drops : the adjectives correspond.

I am in

So far in blood, that sin will pluck on sin : Tearj'alling pity dwells not in this eye. Shakspeare.

She comes, and I'll prepare My /ear-stained eyes to see her miseries. Id.

The pretty vaulting sea refused to drown me, Knowing that thou wouldst have me drowned on

shore With tears as salt as sea, through thy unkindness.

Id.

Is't meet that he

Should leave the helm, and, like a fearful lad, With tearful eyes add water to the sea ? Id.

Cromwell, I did not think to shed a tear In all my miseries ; but thou hast forced me. Let's dry our eyes. Id. Henry VIII.

Tears are the effects of compression of the moisture of the brain upon dilatation of the spirits.

Bacon's Natural History.

She silently a gentle tear let fall. Milton.

Let Araby extol her happy coast, Her fragrant flowers, her trees with precious tears, Her second harvests. Dri/den.

This clears the cloudy front of wrinkled care, And dries the tearful sluices of despair : Charmed with that virtuous draught, the exalted

mind All sense of woe delivers to the wind.

Pope's Odyssey, The losses, the crosses,

That active man engage ! The fears all, the tears all,

Of dim declining age ! Burns.

lie dared not raise to his that deep blue eye, Which downcast drooped in tearless agony. Byron.

TEARS. For an accurate analysis of this fluid we are indebted to Messrs. Fourcroy and Vauquelin. It is transparent and colorless like water; has scarcely any smell, but its taste is always perceptibly salt. Its specific gravity is somewhat greater than ˆthat of distilled water. It gives to paper stained with the juice of the petals of mallows or violets a permanently green color, and therefore contains a fixed alkali. It unites with water, whether cold or hot, in all proportions. Alkalies unite with it readily, and render it more fluid. The mineral acids produce no apparent change upon it. Exposed to the air, this liquid gradually evaporates and becomes thicker. When nearly reduced to a state of dryness, a number of cubic crystals form in the midst of a kind of mucilage. These crystals possess the properties of muriate of soda ; but they tinge vegetable blues green, and therefore contain an excess of soda. The mucilaginous matter acquires a yellowish color as it dries.

Tears are composed of the following ingredients : — 1. Water; 2. Mucus; 3. Muriate of soda ; 4. Soda ; 5. Phosphate of lime ; G. Phosphate of soda. The saline parts amount only to about 0-01 of the whole, or probably not so much.

TEARUS, a river of ancient Thrace, rising in VOL. XXI

the same rock from thirty-eight different sources, some of which were hot, and others cold. Darius raised a column on its banks when he marched against the Scythians. — Plin. iv. c. 11.

TEARY, or TEHREE, a town of Hindostan, province of Allahabad, capital of a chief under the British protection, whose territories are situated on the north-west boundary of Bundelcund. Although compelled to pay tribute for a long period to the Mahrattas, he was never dispossessed of his lands, and during the war, in 1809, the rajah requested to be enrolled among the num-ber of the British allies, and was of considerable utility. His revenue is estimated at about £50,000 per annum.

TEASK, v. a. i Sax. taepan. To comb or TEAS'ER, «. s. \ unravel wool or flax : scratch cloth in order to level the nap : hence torment or vex impertinently : the noun substantive corresponding.

Not by the force of carnal reasons, But indefatigable teasing. Ilttdibras.

My friends always tease me about him, because ho has no estate. S/ w.tatur.

After having been present in public debates he w;is teased by his mother to inform her of what had passed.

Addison.

We system-makers can sustain The thesis, which you grant was plain ; And with remarks and comments tease ye, In case the thing before was easy. Prior.

A fly buzzing at his ear makes him deaf to the best advice. If you would have him come to himself, you must take off his little teaser, which holds his reason at bay. Collier.

Thus always teasing others, always teased, His only pleasure is — to be displeased. Cowper.

TEA'SEL, n. s. Sax. werl. A plant.

The species are three : one is called carduus fullo-num, and is of singular use in raising the nap upon woollen cloth. Miller.

TEAT, n. s. Sax. tit; Berg, tette; Welsh. teth. The dug of a beast; anciently the pap of a woman.

And in the myddil of seuene golden candlestickis oon lyk to the sone of man clothed with a long ga: nement, and gird at the tetis with a golduii girdil.

Wiclif. Apoc. .

Even at thy teat thou hadst thy tyranny.

Shakspeare.

Snows cause a fruitful year, watering the earth better than rain ; for the earth sucks it as out of the teat. Bacon.

When we perceive that bats have teats, we infer that they suckle their younglings with milk.

Brtnt tie's Vulgar F.rroiirs. It more pleased my sense, Than smell of sweetest fennel, or the teats Of ewe or goat diopping with milk at even. Miltuii.

Infants sleep, and are seldom awake but wlien hunger calls for the teat. Locke.

The goat, how bright amidst her fellow stars, Kind Amalthea, reached her teat distent With milk, thy early food. Prior.

An’ tent them duly, e’en an’ morn, Wi’ teats o’ hay, an’ rips o* corn. Burnt.

TEATE, TEATEA, or TEGEATK, an ancient town of Italy in Latium.—Sil. Hal. 8 v. .V22

TEA-TREA, a moveuble board, with a raised border, generally pierced, made of inotiil, m:ilii>-

gany, or other wood, for holding the tea apparatus.

TECHES, a mountain of Pontus, from the top of which Xenophon and his 10,000 Greeks first saw the sea. — Xenophon 4.

TECHMESSA, the daughter of Teuthras, king of Phrygia, who was carried captive by Ajax, and became mother of his son Erysaces by him. She afterwards prevented him from killing himself; which forms the subject of a scene in one of Sophocles's tragedies.

TECH'NICAL, adj. Fr. technique ; Gr. rtx-vieoc. Belonging to arts; not in common or popular use.

In technical words, or terms of art, they refrain not from calling the same substance sometimes the sulphur, and sometimes the mercury of a body. Locke.

TECHNICAL expresses somewhat relating to arts and sciences. It is also particularly applied to a kind of verses wherein are contained the rules or precepts of any art, thus digested to help the memory to retain them.

TE'CHY, adj. Ital. testactico. Peevish ; fretful; irritable; froward. Obsolete.

I cannot come to Cressid but by Pandar, And he is as techy to be wooed to wooe, As she is stubborn-chaste against all sute.

SJutkspeare.

When it did taste the wormwood on the nipple, and felt it bitter, pretty fool, to see it techy, and fall out with the dug ! Id. Romeo and Juliet.

TECMON, an ancient town of Epirus. Livy.

TECRIT, A town of Irak Arabi, in Mosul, on the western bank of the Tigris. It is thought to be the Birtha or Vitra of the ancients, and was a considerable town in 1393, when it was taken by Timur. It contains now only 500 or 600 houses, with two coffee-houses ; but the ruins are extensive. Long. 42° 37' E., lat. 34° 37' N.

TECTAMUS, the son of Dorus, grandson of Helen, and great grandson of Deucalion. He went to Crete at the head of a body of ./Etolians and

Pelasgi; was made king of Crete, and married a daughter of king Cretheus, by whom he had a son named Asterius.

TECTONA, in botany, a genus of plants belonging to the class of pentandria and order of monogynia. The stigma is dentate ; the fruit a dry spongy plum within an inflated calyx ; and the nucleus is trilocular. There is only one species, *viz.* T. grandis, Indian oak, or teak wood, which is a native of India.

TECTOSAO?E, or TECTOSAGES, an ancient nation of Gallia Narbonensis, so named because, sagis tegerentur, they were protected by sorcerers. They were among those Gauls who pillaged Rome under Brennus (see ROME), and afterwards attempted to plunder the temple of Apollo at Delphi. On their return home they were attacked by a pestilence ; and to stop it were ordered to throw into the river all the plunder. Some of them went into Germany and settled in the Hercynian forest ; another colony passed into Asia and conquered Phrygia, Cappadocia, and Paphlagonia. Cres. de Bel. Gal. vi. 23. Strabo 4; Liv. 38, c. 16.

TECULET, a town of Africa, in the empire of Morocco, situate near the coast of the Atlnntic,

on the edge of a mountain: In 1514 this town was sacked by the Portuguese. It has been since re-peopled : fifteen miles east of Mogodor, and ninety-nine north-west of Morocco.

TED, v. a. Sax. tea&an, to prepare. To lay grass newly mown m rows.

The smell of grain or tedded grass, or kine, Or dairy, each rural sight, each rural sound.

Milton.

Prudent his fallen heaps Collecting, cherished with the tepid wreaths Of tedded grass, and the sun's mellowing beams, Rivalled with artful heats. Philips.

Hay-makers following the mowers, and casting it abroad they call tedding. Mortimer's Husbandry.

TEDANIUS, a river of Liburnia. Plin. 3.

TED'DER, or TETHER, n. s. Belg. tudder ; Erse teiglier. A rope with which a horse is tied in the field: any thing by which one is restrained.

We live joyfully, going abroad with our tedder.

Bacon .

We shall have them against the wall ; we know the length of their tedder ; they cannot run far from us.

Child.

TE DEUM, n. s. Lat. te Deum. An hymn of the church, so called from the two first words of the Latin.

The choir,

With all the choicest musick of the kingdom, Together sung Te Deum. Shakspeare. Henry VIII.

Te Deum was sung at Saint Paul's after the vie-tory. Bacon.

TE DETJM is sung in the Romish church with great pomp and solemnity upon the gaining of a victory or other happy event ; and is

believed to be the composition of St. Ambrose bishop of Milan.

TE'DIOUS, adj. ˆ Fr. tedieux ; Lat. tee—

TE'DIOUSLY, adv. >dium. Wearisome by conTE'DIOUSNESS, n. s. j tinuance ; troublesome ; irksome.

That I be not further tediout unto thee, hear us of thy clemency a few words. Acts xxiv. 4.

They unto whom we shall seem tediout are in no-wise injured by us, because it is in their own hands to spare that labour, which they are not willing to endure. Hooker.

In vain we labour to persuade them that any thing can take away the tediousneu of prayer, except it be brought to the same measure and force whicli themselves assign. Id.

Since brevity's the soul of wit, And tediousness the limbs and outward nourishes, I will be brief. Shakspeare. Hamlet.

She distastes them all within a while ; And in the sweetest finds a tediousness. Davie?.

More than kisses, letters mingle souls, For thus friends absent speak : this ease controuls The tediousness of my life. Donne.

Chief mastery to dissect With long and tedious havock fabled knights.

MUlOII.

The one intense, the other still remiss, Cannot well suit with either, but soon prove Tedious alike. Id

Pity only on fresh objects stays, But with the tedious sight of woes decays. Dryden.

But then the road was smooth and fair to see, With such insensible declivity, That what men thought a tedious course to run, Was finished in the hour it first begun. Hartf.

T E E T H.

TEDZEN, a considerable river of Korassan, in Persia, the largest, next to the Oxus, in this part of Asia. It is supposed by Mr. Kinneir to rise near Serukhs ; and, after a course from east to west, falls into the gulf of Balkan.

TEEM. To pour. A low word imagined by Skinner to come from Dan. tommen, to draw out; to pour. The Scots retain it; as, teem that water out; hence Swift took this word.

Teem out the remainder of the ale into the tankard, and fill the glass with small beer.

Swift's Directions to the Butler.

TEEM, v. n. & v. a. > Sax. team, offspring.

TEEMLESS, a$. S To bring young; be

full, or, as it were, pregnant ; bring forth ; produce : teemless, unfruitful.

What's the newest grief? — Each minute teems a new one.

Shakspeare. Macbeth. Common mother, thou

Whose womb unmeasurable, and infinite breast, Teems and feeds all. Id. Timon of Athens.

The earth obeyed ; and strait Opening her fertile womb, teemed at a birth Innumerous living creatures.

Milton's Paradise Lost.

When the rising spring adorns the mead, Teeming buds and cheerful greens appear. Dryden.

Such wars, such waste, such fiery tracks of dearth, Their zeal has left, and such a teemless earth. Id.

There are fundamental truths, the basis upon which a great many others rest : these are teeming truths, rich in store, with which they furnish the mind, and, like the lights of heaven, give light and evidence to other things. Locke.

We live in a nation where there is scarce a single head that does not teem with politicks. Addison.

The deluge wrought such a change that the earth did not then teem forth its increase, as formerly, of its own accord, but required culture.

Woodward's Natural History.

TEEN, n. s. Sax. tman, to kindle; Flem. tenen is to vex ; Sax. teonan, injuries. Sorrow; grief. Not in use.

Fry not in heartless grief and doleful teen .

Spenser.

My heart bleeds To think of the teene that I have turned you to,

Shakspenre.

TEEMBOO, a city of central Africa, the ca-

without difficulty rats, Tnoles, and snakes : yet no woman must eat an egg. Tt is thirty miles north-west of Koonickary.

TEETH, the bones placed in the jaws for chewing food that it may be the more easily digested in the stomach. For the anatomical structure of these see ANATOMY and ZOOTOMY. The diseases to which they are liable, with the most successful remedies, are fully detailed under MEDICINE and SURGERY. Quacks and mounte-banks use various washes for teeth, the sudder. effects of which, in cleaning and whitening the teeth, surprise and please people, but the effects are very pernicious. All the strong acid spirits will do this. One of the best mixtures is the following:— Take plantane-wateran ounce, honey of roses two drachms, muriatic acid ten drops; mix the whole, and rub the teeth with a piece of linen rag dipped in this every day -till they are whitened. The mouth ought to be well washed with cold water after the use of this or any other acid li-quor; and indeed the best of all washes is cold water with or without a little salt; the constant use of this will keep them clean and white, and prevent them from aching.

In early infancy Nature designs us for the softest aliment, so that the gums alone are then sufficient for manducation; but as we advance in life, and require a different food, she wisely provides us with teeth, the hardest and whitest of our bones, and, at full maturity, usually

amounting to thirty-two in both jaws ; *viz.* sixteen above, and as many below. Their num-ber varies indeed in different subjects : but it is seldom seen to exceed thirty-two, and it will very rarely ba found to be less than twenty-eight.

Each tooth has its body, or that part which appears above the gums; and its fangs or root, which is fixed into the socket. The boundary between these two, close to the edge of the gum, where there is usually a small circular depression, is called the neck of the tooth. The teeth of each jaw are commonly divided into three classes ; but all are of similar general structure. That is, every tooth is composed of its cortex or enamel, and its internal bony substances. The enamel, or, as it is sometimes called, the vitreous part of the tooth, is a very hard and compact

pital of Foota Jallo, the principal kingdom of substance, of a white color, and peculiar to the

the Foulahs. It contains about 7000 inhabitants, who manufacture narrow cloths, iron, silver, wood, and leather. The houses are neatly and conveniently built, at a little distance from each other. 1 60 miles east of Sierra Leone.

TEES, a considerable river of England, arising in the mountains of Westmoreland, and taking

teeth. It is found only upon the body of the tooth, covering the outside of the bony or internal substance. When broken it appears fibrous or striated ; and all the striae are directed from the circumference to the centre of the tooth. This enamel is thickest on the grinding surface, and on the cutting edges or points of the teeth,

an easterly direction, it divides the North Hiding becoming gradually thinner as it approaches the

neck, where it terminates insensibly. Some writers have described it as being vascular, but it is certain that no injection will ever reach this substance; that it receives no tinge from mad-der ; and that it affords

no appearance of a circulation of fluids. The bony part of a tooth resembles other bones in its structure, but is much harder than the most compact part of bones in general. It composes the inner part of the body and neck, and the whole of the root of the tooth.

of Yorkshire from the county of Durham in its whole extent. It passes Barnard Castle, Stain-drop, Darlington, Yarm, and Stockton, and falls into the German Ocean, in a wide estuary called the Teesmouth, on the south of Hartlepool.

TEESDALE FOREST, a township of England, in Durham, eleven miles north by west of Barnard castle. Population 998.

TEESEE, a large unwalled town of central Africa, in the kingdom of Kasson. The Man-

dingo inhabitants are remarked by Park for their This part of a tooth, when completely formed, want of delicacy as to articles of diet, eating does not, like the other bones, receive a tinge

from madder, nor do the minutest injections penetrate into its substance, although many •writers have asserted the contrary. Mr. Hunter has been therefore induced to deny its being vascular. But we find that a tooth recently drawn, and transplanted into another socket, becomes as firmly fixed after a certain time, and preserves the same color as the rest of the set ; whereas a tooth that has been long drawn before it is transplanted will never become fixed. Mr. Hunter, indeed, is aware of this objection, and refers the success of the transplantation, in the first instance, to the living principle possessed by the tooth, and which he thinks may exist independent of a circulation. But, however applicable such a doctrine may be to zoophytes, it is suspected that it will not hold good in man, and others

of the more perfect animals : and there does not appear to be any doubt but that, in the case of a transplanted tooth, there is a real union by vessels. 2dly, The swellings of the fangs of a tooth, which in many instances are known to be the effects of disease, and which are analogous to the swelling of ether bones, are a clear proof of a similarity of structure, especially as we find them invested with a periosteum. 3dly, It is a curious fact, though as yet perhaps not generally known, that, in cases of phthisis pulmonalis, the teeth become of a milky whiteness, and in some degree transparent. Does not this prove them to have absorbents ? Each tooth has an inner cavity, which, commencing by a small opening at the point of the fang, becomes larger, and terminates in the body of the tooth. This cavity is supplied with blood vessels, and nerves, which pass through the small hole in the root. In old people this hole sometimes closes, and the tooth becomes then insensible. The teeth are also invested with periosteum from their fangs to a little beyond their bony sockets, where it is attached to the gums. This membrane seems to be common to the tooth which it encloses, and to the sockets which it lines. The teeth are likewise secured in their sockets by a red substance called the gums, which every where covers the alveolar processes, and has as many perforations as there are teeth. The gums are exceedingly vascular, ‘ and have something like cartilaginous hardness and elasticity, but do not seem to have much sensibility. The gums of infants, which perform the offices of teeth, have a hard ridge extending through their whole length ; but in old people, who have lost their teeth, this ridge is wanting. The three classes into which the teeth are commonly divided are incisores, canini, and molares,*or grinders.

The incisores are the four teeth in the fore-part of each jaw ; they derive their name from their use in dividing and cutting the food in the manner of a wedge, andvhave each of them two surfaces, which meet in a sharp edge. Of these surfaces, the anterior one is convex, and the posterier one somewhat concave. In the upper jaw they are usually broader and thicker, especially the two middle ones, than those of the under iaw, over which they generally fall by being placed a little obliquely.

The canini, or cuspidati, are the longest of all 4he teeth, deriving their name from their rese n-

blance to a dog’s tusk. There is one of these teeth on each side of the incisores, so that there are two in each jaw. They are the longest of all

the teeth. Their fangs differ from that of the incisores only in being much larger, and their shape may be easily described to be that of an incisor with its edge worn off, so as to end in a narrow point instead of a thin edge. The canini not being calculated for dividing like the incisores, or for grinding, seem to be intended for laying hold of substances. Mr. Hunter remarks, of these teeth, that we may trace in them a similarity of shape, situation, and use, from the most imperfect carnivorous animal, which we believe to be the human species, to the lion, which is the most perfectly carnivorous.

The molares, or grinders, of which there are ten in each jaw, are so called, because from their size and figure they are calculated for grinding the food. The canini and incisores have only one fang, but the three last grinders in the under jaw have constantly two fangs, and the same teeth in the upper jaw three fangs. Sometimes these fangs are divided into two points near their base, and each of these points has, perhaps, been sometimes considered as a distinct fang. The grinders likewise differ from each other in their appearance. The first two on each side, which Mr. Hunter appears to have distinguished very properly by the name of bicuspides, seem to be of a middle nature between the incisores and grinders ; they have in general only one root, and the body of the tooth terminates in two points, of which the anterior one is the highest, so that the tooth has in some measure the appearance of one of the canini. The two grinders beyond these, on each side, are much larger. Their body forms almost a square with rounded angles ; and their grinding surface has commonly five points or protuberances, two of which are on the inner, and three on the outer part of the tooth. The last grinder is shorter and smaller than the rest, and, from its coming through the gums later than the rest, and sometimes not appearing till late in life, is called dens sapientiffi. The variation in the number of teeth usually depends on these denies sapientiae.

The alveolar process, which begins to be formed at a very eaily period, appears about the fourth month of pregnancy only as a shallow longitudinal groove, divided by slight ridges into a number of intermediate depressions, which are to be the future alveoli or sockets. These depressions are at first filled with small pulpy substances, included in a vascular membrane ; and these pulpy substances are the rudiments of the teeth. As these advance in their growth, the alveolar processes become gradually more completely formed. The surface of the pulp first begins to harden, the ossification proceeding from one or more points, according to the kind of tooth that is to be formed. Thus, in the iu-cisores and canini, it begins from one point; in the bicuspides from two points, corresponding with the future shape of those teeth ;

and in the molares from four or five points. As the ossification advances, the whole of the pulp is gradually covered with bone, excepting its under surface, and then the fang begins to be forme;)

Soon after the formation of this bony part, the tooth begins to be incrusted with its enamel ; but, in what manner this is deposited, we are as yet unable to explain.— Perhaps the vascular membrane, which encloses the pulp, may serve to secrete it. It gradually crystallises upon the surface of the bony part, and continues to increase in thickness, especially at the points and basis of the tooth, till some time before the tooth begins to pass through the gum ; and, when this happens, the enamel seems to be as hard as it is afterwards, so that the air does not appear to have the least effect in hardening it, as has been sometimes supposed. — While the enamel is thus forming, the lower part of the pulp is gradually lengthened out and ossified, so as to form the fang. In those teeth which are to have more than one fang, the ossification begins from different parts of the pulp at one and the same time. In this manner are formed the incisores, the canini, and two molares on each side, making in the whole twenty teeth, in both jaws, which are sufficient for the purposes of manducation early in life. As the fangs of the teeth are formed, their upper part is gradually pushed upwards, till at length, about the seventh, eighth, or ninth month after birth, the incisores, which are the first formed, begin to pass through the gum. The first that appears is generally in the lower jaw. The canini and molares, not being formed so soon as the incisores, do not appear till about the twentieth or twenty-fourth month. Sometimes one of the canini, but more frequently one of the molares, appears first.

The danger to which children are exposed during dentition arises from the pressure of the teeth in the gum, so as to irritate it, and excite pain and inflammation. The effect of this irritation is that the gum wastes, and becomes gradually thinner at this part, till at length the tooth protrudes. In such cases therefore we may, with great propriety, assist nature by cutting the gum. These twenty teeth are called temporary or milk teeth, because they are all shed between the age of seven and fourteen, and are supplied by others of a firme.r texture, with large fangs, which remain till they become affected by disease, or fall out in old age, and are therefore called the permanent or adult teeth. The rudiments of these adult teeth begin to be formed at different periods.

The pulp of the first adult incisor, and of the first adult grinder, may be perceived in a foetus of seven or eight months, and the ossification begins in them about six months after birth. Soon after birth the second incisor, and canine tooth on each side, begin to be formed. About the fifth or sixth year the first bicuspis, and about the seventh the second bicuspis begins to ossify. These bicuspides are destined to replace the temporary grinders. All these permanent teeth are formed in a distinct set of alveoli ; so that it is not by the growing of one tooth under another in the same socket, that the uppermost tooth is gradually pushed out, as is commonly imagined ; but the temporary teeth, and those which are to succeed them, being placed in separate alveoli, the upper sockets gradually disappear, as the under ones increase in size, till at length the teeth they contain, having

no longer any support, consequently fal on;. But, besides these twenty teeth, which succeed the temporary ones, there are twelve others to bu added to make up the number thirty-two. These twelve are three grinders on each side in both jaws; and, in order to make room for this addition, we find the jaws grow as the teeth grow, so that they appear as completely filled with twenty teeth as they are afterwards with thirty-two. Hence in children the face is flatter and rounder than in adults. The first adult grinder usually passes through the gum about the twelfth year; the second, which begins to be formed in the sixth or seventh year, cuts the gum about the seventeenth or eighteenth ; and the third, or dens sapientiae, which begins to be formed about the twelfth year, passes through the gum between the age of twenty and thirty. The denies sapientiae have, in some instances, been cut at the age of forty, fifty, sixty, and even eighty years ; and it sometimes happens that they do not ap-pear at all. Sometimes likewise it happens that a third set of teeth appear about the age of sixty or seventy. Diemerbroek tells us that lit himself, at the age of fifty-six, had a fresh canine tooth in the place of one he had lost several years before ; M. du Fay saw two incisores and two canini cut the gum in a man aged eighty-four; Mr. Hunter has seen two fore teeth shoot up in the lower jaw of a very old person ; and an account was lately published of a man who had a complete set of teeth at the age of sixty. Other instances of the same kind are to be met with in authors. The circumstance is curious, and from the time of life at which it takes place, and the return of the cafamenia, which sometimes happens to women at the same age, it has been very ingeniously supposed, that there is some effort in nature to renew the body at that period.

TEETH of various sorts of machines, as of mill wheels, &c. These are

often called cogs by the workmen; and by working in the pinions, rounds, or trundles, the wheels are made to turn one another. Mr. Emerson (in his Mechanics, prop. 25) treats of the theory of teeth, and shows that they ought to have the figure of epicycloids for properly working in one another.

TEFF, in botany, a kind of grain sown all over Abyssinia, from which is made the bread commonly used throughout the country. Mr. Bruce says it is herbaceous; and that from a number of weak leaves surrounding the root proceeds a stalk of about twenty-eight inches in length, not perfectly straight, smooth, but jointed or knotted at particular distances. This stalk is not much thicker than that of a carnation or july-flower. About five inches from the top a head is formed of a number of smaller branches, upon which it carries the fruit and flowers ; the latter of which are small, of a crimson color, and scarcely perceptible by the naked eye but from the opposition of that color. The pistil is divided into two, seemingly attached to the germ of the fruit, and has at each end small capilla-ments forming a brush. The stamina ;ire three ; two on the lower side of the pistil, and one on the upper. These are each of them crowned with two oval stigmata, at first green but after-TEI

wards crimson. The fruit is formed In a capsu'a, consisting of two conical hollow leaves, which, when closed, seem to compose a small conical pod pointed at the top. The fruit or seed is ob-long, and is not so large as the head of the smallest pin; yet it is very prolific, and produces these seeds in such abundance as to yield a very great quantity of meal. Of this teff-bread the natives make a liquor. When well toasted it is broken into small pieces, which are put into a large jar and have warm water poured upon them. It is then set by the fire, and often stirred for several days, the mouth of the jar being closely covered. After being allowed to settle for three or four days it acquires a sourish taste, and is what they call bouza, or the common beer of the country. The bouza in Atbara is made in the same manner, only, instead of teff, cakes of barley-meal are employed. Both are very bad liquors, but the worst is that made of barley.

TEFLIS, or TIFLIS, a city of Asia, and capital of the kingdom of Georgia, was visited in 1817 by Sir R. Kerr Porter, who describes it as situated on the sublime banks of the Kur, at the extremity of a defile formed by two bold ranges of mountains.

This city was founded in 1063, by the Tzar Liewvang, who wished to derive personal benefit from certain warm springs in its neighbourhood, and built hovels for the convenience of the oc-cupiers of a small fortress, which stood on an adjacent height. The remains of this ancient bulwark are still to be seen on a hill to the south of the town, at some distance from the station of the modern citadel, of Turkish origin. The position of the old work completely commanded the road along the western bank of the Kur. The streets are, without exception, nar-row, and intolerably filthy in wet weather, and dusty in dry; but, since it has come under the dominion of Russia, this inconvenience has been in some degree remedied. The governor had ordered the streets to be paved, and the work was already begun when Sir R. Kerr Porter visited the city ; other improvements were also going forward. Teflis has been long celebrated for its baths. Population about 15,000.

TEGEA, an ancient town of Peloponnesus, where Orestes' gigantic bones were found. It was famous for its temples to Apollo, Pan, Ceres, Proserpine, and Venus.

TEGEATES, a son of Lycaon, the founder of Tegea.

TEG'UMENT, n. s. Lat. tegumentum. Cover; the outward part. A word seldom used but in anatomy or physicks.

Clip and trim those tender strings in the fashion of beard, or other hairy teguments.

Browne's Vulgar Errours.

In the nutmeg another tegument is the mace between the green pericarpium and the hard shell.

Ray on the Creation.

Proceed by section, dividing the skin and separating the teguments. Wiseman's Surgery.

TEHAMA, a belt of sand, which stretches along the eastern shore of the Red Sea, to the mountains of the interior. It is of varying but considerable breadth, and is probably augmented by the blowing of the moving sands, which ap-

pear to have encroached upon the limit of the sea. It is almost entirely barren, and bears every mark of having been anciently a part of the bed of the sea.

TEHRAUN, a large city of Persia, which, during the two last reigns, has been the capital of the empire. Its situation is striking, having to the south the ruins of the immense ancient city of Rey or Rae ; to the north and east the lofty mountain ranges of Elburz and Demavend, and to the west a plain enriched with cultivation and villages. The modern city is about four miles in circumference, surrounded by a strong wall, flanked by innumerable towers, and a broad dry ditch, with a glacis. After being destroyed by the Afghauns at the beginning of this century, it was rebuilt by Kurreen Khan, and enlarged by Agn Mahommed, who made it the seat of government. It has been still farther enlarged and adorned by his successor.

TEH-HE, v. n. A cant word made from the sound. To laugh with a loud and more insolent kind of cachinnation ; to titter.

They laughed and teh-he'd with derision, To see them take your deposition. Hudibrcu.

TEHUACAN, a town in the intendency of Mexico, and one of the most frequented ancient sanctuaries of the Mexicans. It has four principal churches, besides convents. The streets, houses, and squares are handsome. Long. 97° 14′ 30″ W., lat. 18° 30* N.

TEHUANTEPEC, TEGUANTEPEQUE, or TE-COANTEPEQUE, a sea-port of Mexico, in the intendency of Oaxaca, in the bottom of the creek formed by the ocean, between the small villages of San Francisco, San Dionisio, and Santa Maria de la Mar. This port, impeded by a dangerous bar, may become of consequence, when navigation in general, and especially when the transport of the indigo of Guatimala, shall become more frequent by the Rio Guasacuallo. It is about 196 miles south-east of Mexico.

TEHUANTEPEC, a large open gulf in the front of the above city, from which it takes its name.

TEIGNMOUTH, EAST, a sea-port, township, and chapelry, in the parish of Dawlish, hundred of Exminster, Devon, near the mouth of the Teign, fifteen miles south of Exeter, and 187 west by south of London. The church or chapel is near the beach, and a venerable pile of Saxon architecture. This place has been much improved of late years, and is now become a place of fashionable resort for sea-bathing. The public rooms are in a neat brick building. The bathing machines are commodious, and here are two good inns. It has a considerable commerce in the export of pipe-clay to Bristol, Liverpool, &c. It also employs a great number of vessels in the Newfoundland fisheries.

TEIGNMOUTH, WEST, is divided from the above by the rivulet Tame. The old church was taken down in 1821, and a handsome octagonal edifice erected in its stead. This church is a curacy under Bishop's-Teignton, as that of East Teign-niouth is under that of Dawlish, the incumbents of these parishes nominating the minister who serves the churches alternately. The theatre is a handsome new structure. The market-place has been lately built, and is very commodious

Across the Teign lies the delightful little village of Shaldon, containing several new lodging-houses. Market on Saturday. Fair September 29th. It is a member of the port of Exeter.

TEILTREE, n. s. Lat. tilia. The same with LINDEN or LIME TREE : which see.

A teiltree and an oak have their substance in them when they cast their leaves. Isaiah vi. 13.

TEIL TIIEE, in botany. See TILIA. TEINT, n. s. Fr. teinte. Color; touch of the pencil.

Glazed colours have a vivacity which can never be imitated by the most brilliant colours, because the different teints are simply laid on, each in its place, one after another. Dryden.

TEINTS and SEMITEIN.TS, in painting, denote the several colors used in a picture, considered as more or less high, bright, deep, thin, or weakened and diminished, &c., to give the proper -elievo, softness, or distance, &c., of the several objects.

TEJUCO, a district of Brasil, of which the «own of Tejuco is the capital, around which it extends sixteen leagues from north to south, and about eight from east to west.

TEJUCOS, BAY OF, on the coast of Brasil, in South America, some miles to the north of the Island of St. Catharine's. It is from two to three .eagues across, and extends the same distance inland, being well sheltered, and affording good anchorage, and fine situations for loading timber. * Along the beach of this bay,' observes Mr. Mawe, ' I found the shell of the murex genus, which produces that beautiful crimson dye so valued by the ancients. It is here called purpura, and, to my great surprise, its use is in some degree known to the natives, one of whom showed me some cotton fringe, dyed with an extract of it, though ill prepared. The shell is about the size of the common whelk, and contains a fish, on whose body appears a vesicle, full of a pale yellow, viscid, purulent substance, which constitutes the dye. The mode of extracting it, is to break the shell carefully with a hammer, so as not to crush the fish, and then let out the liquor in the vesicle with a lancet or other sharp instrument. I, for greater convenience, used a pen, and immediately wrote my initials, &c., on a handkerchief; the marks in half an hour after were of a dirty green color, and, on being exposed to the air a few hours longer, changed to a most rich crimson. The quantity produced by each animal is very small, but quite

sufficient for such an experiment. The best time for making it is when the animal is in an incipient state of putrescency. I have not a doubt that if a sufficient quantity of them were taken, and the dyeing matter, when extracted, were liquified in a small degree with gum-water, a valuable article of commerce might be produced ; at least the trial is worth making. The liquid is a perfect substantive dye, and of course resists the action of alkalies.' Lat. 26° 56' S.

TELAMON, a celebrated Grecian hero, the *on of ./Eacus and Endeis, brother of Peleus and Phocus, and father of Teucer and Ajax. Having accidentally killed his brother Phocus he fled irom Megara, his birth-place; and arriving at Salamis married Glaucc, the daughter of king

Cychreus, whom he succeeded. He was one cf the Argonauts, and accompanied Hercules when he took Troy, who gave him the princess Hesione to wife.

TELAMONE, a town of Naples, the chie, port of the Presidii, ten miles north of Orbitello. It is famous for the victories obtained by the Romans under the consuls C. A. Regulus and /Emilius Lepidus over the Gauls.

TE'LARY, adj. Lat. tela, a web. Spinning webs.

The pictures of telary spiders, and their position in the web, is commonly made lateral, and regarding the horizon ; although we shall commonly find it downward, and their heads respecting the centre. Browne's Vulgar Errours.

TELCHINES, an ancient people of Rhodes, originally from Crete. They were the inventors of many useful arts, whence the poets fabled that they could change themselves into whatever shapes they pleased. Diod.

TELCHINIA, a territory of Crete, whence the Telchines emigrated to Rhodes.

TELCHIS, the son of Europus, and grandson of /Egialeus, one of the first kings of Peloponnesus.

TELEGONUS, a son of Ulysses, by Circe, born in JEea. He went to Ithaca to seek his father, but being shipwrecked on the coast he got into a quarrel with the people after landing, and killed his father in the squabble without knowing him, to his great grief upon the

discovery. He afterwards founded Tusculum in Italy, and left a daughter, named Mamilia, from whom the Roman family of Mamilii claimed their name and descent.

TELEGRAPH (from TIJ\£, far off, and ypaˆo,, to write), the name very properly given to an instrument by means of which information may be almost instantaneously conveyed to a considerable distance.

The telegraph, though it has been generally known and used by the moderns only for a few years, is perhaps not entirely a modern invention. There is reason to believe that amongst the Greeks there was some sort of telegraph in use. The burning of Troy is said to have been known in Greece very soon after it happened, and before any person had returned thence. But we have no certainty of this. The Chinese, when they send couriers on the great canal, or when any great man travels there, make signals by fire from one day's journey to another to have every thing prepared; and most of the barbarous nations used formerly to give the alarm of war by fires lighted on the hills or rising grounds. Polybius calls the different instruments used by the ancients for communicating information nvp-atiai, pyrsiae, because the signals were always made by fire. At first they communicated information of events merely by torches ; but this method was of little use, because it was necessary before hand to fix the meaning of every particular signal. /Eneas, a contemporary of Aristotle, who wrote a treatise on the duties of a general, endeavoured to correct those imperfections, but by no means succeeded. His method was defective, because it could not convey any other intelligence except what was written

on the sticks, and even that not exactly. With regard to all unforeseen events it was quite useless. A method was invented by Cleoxenus, or Democlitus, and very much improved by Polybius, as he himself informs us. This was by the letters of the Greek alphabet divided into five parts. But neither this nor any other method mentioned by the ancients seems ever to have been brought into general use.

The most ingenious of the moderns had not thought of such a machine as a telegraph till 1663, when the marquis of Worcester, in his Century of Inventions, affirmed that he had discovered ‘ a method by which, at a window, as far as eye can discover black from white, a man may hold discourse with his correspondent, without noise made or notice taken; being according to occasion given, or means afforded ex re nata, and no need of provision before hand ; though much better if foreseen, and course taken by mutual consent of parties.’ This could be done only by means of a telegraph, which in the next sentence is declared to have been rendered so perfect that by means of it the correspondence could be carried on ‘ by night as well as by day, though as dark as pitch is black.’

The first idea of a telegraph upon the modern construction, was suggested by Dr. Hooke towards the end of the last century. He gave the complete description of such a machine, as appears by the following extract, from a paper of his, read before the Royal Society on the 21st of May, 1684 : * I proposed,’ says he, ‘ some years since, a method of discoursing at a distance, not by sound but by sight : I say that it is possible to convey intelligence from any one high and eminent place, to any other that is in sight of it, though thirty or forty miles distant, in as short a time almost as a man can write what he would have sent ; and as suddenly to receive an answer, as he that receives it has a mind to return it, or can write it down on paper. Nay, by the help of three, four, or more eminent places visible to each other, lying in a straght line, ‘tis possible to convey intelligence almost in a moment, to twice, or thrice, or more times that distance, with as great a certainty as by writing. For the performance of this, we must be beholden to a late invention, which we do not find any of the ancients knew ; that is, the eye must be assisted with telescopes, that whatever characters are exposed at one station, may be made plain and distinguishable at the other. First: for the stations, if they be far distant, it will be necessary that they should be high, and lie exposed to the sky ; that there be no higher hill or part of the earth beyond them, that may hinder the distinctness of the characters, which are to appear dark against the sky, beyond them appearing white, by which means also the vapors near the ground will be passed over and avoided. Next, in choosing these stations, care must be taken, as near as may be, that there be no hill that interposes between them, .•hat is almost high enough to touch the visible ray, because in such cases the refraction of the air of that hill will be very apt to disturb the clear appearance of the object. The stations being found convenient, the next thing to be considered is, what telescopes will be necessary for each station.

One of these telescopes must be fixed at each extreme station, and two of them in each intermediate station ; so that a man for each glass, sitting and looking through them, may plainly discover what is done in the next adjoining station, and with his pen write down on a paper the characters there exposed, in their due order; so that there ought to be two persons at each extremp station, and three at each intermediate one, that intelligence may be conveyed backwards and forwards at the same time. Next there must be certain limes agreed on, when the correspondents are to expect it ; or else there must be set at the top of a pole, in the morning, the hour appointed by either of the correspondents for acting that day. ‘ Next there must be convenient apparatus of characters, consisting of at least as many distinct characters as there are necessary letters in the alphabet (to be made use of as is expressed in plate TELEGRAPH, fig. 1). And these must be either day characters or night characters. If they are to be made use of in the day-time, they may all be made of deals, and of a size convenient for the several distances, any one of which characters may signify any one letter of the alphabet, and the whole alphabet may be varied 10,000 ways, so that none but the two extreme correspondents shall be able to discover the information conveyed. If the characters are for the night, then they may be made with links, or lights disposed in a certain order, which may be covered or Uncovered, according to the method agreed on. There will be also requisite several other characters, which may for expedition express a whole sentence, such as ‘ I am ready to communicate ;’ ‘ I am ready to observe.’ I could instance a hundred ways of facilitating the method of performing the design with the more dexterity and quickness, and with little change, but that I think will be needless at present, since, whensoever such a way of correspondence shall be put in practice, those and many more than I can think of at present will of themselves occur, so that I do not in the least doubt but that with a little practice all things may be made so convenient, that the same character may be seen at Paris, within a minute after it hath been exposed in London ; and that the characters may be exposed so quick after one another, that a composer shall not much exceed the exposer in swiftness, and this not only at the distance of one station, but of 100 ; for supposing all things ready at all of those several stations for observing and exposing as fast as the second observer doth read the characters of the first exposer, the second exposer will display them to the observer of the third station, whose exposer will likewise display them for the fourth observer, as fast as his observer doth name them to him or write them down. There may be many objections brought against this

way of communication, because it has not yet been put in practice, but hardly any that may not be easily answered and obviated.'

Dr. Hooke thus illustrates his invention : let ABC (fig. 2) represent three very long masts or poles erected, E the top piece that joins them, together, D a screen, behind which all the deal-board characters ha'ng upon certain rods or lines, nncl may, by the help of small lines cormrcU-d

TJEJLJES K A I' II -

.T. Shui-y sculp

TELEGRAPH.

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with each of them, be exposed at T, or drawn back at D, as occasion shall require.

After this M. Amontons, a French academician, born in 1663, prepared a telegraph. His method was this : — Let there be people placed in several stations, at such a distance from one another that by the help of a telescope a man in one station may see a signal made in the next before him ; lie must immediately make the same signal that it may be seen by persons in the station next after him, who are to communicate it to those in the following station, and so on. Amontons tried this method in a small tract of land before several persons of the highest rank at the court of France.

It was not till the French revolution that the telegraph was applied to useful purposes. M. Chappe invented the telegraph first used by the French about the end of 1793, on principles nearly similar to those of Amontons. The man-ner of using this telegraph was as follows : — At the first station, which was on the roof of the palace of the Louvre at Paris, M. Chappe, the inventor, received in writing, from the

committee of public safety, the words to be sent to Lisle, near which the French army then was. An upright post was erected on the Louvre, at the top of which were two transverse arms, moveable in all directions by a single piece of mechanism, and with inconceivable rapidity. He invented a number of positions for these arms which stood as signs for the letters of the alphabet; and these, for the greater celerity and simplicity,he reduced in number as much as possible. The intermediate operators were only instructed generally in sixteen signals; which were so distinct, so marked, so different the one from the other, that they were easily remembered. The construction of the machine was such that each signal was uniformly given in precisely the same manner at all times. M. Chappe having received at the Louvre the sentence to be conveyed, gave a known signal to the second station, which was Mont Martre, to prepare. At each station there was a watch tower, where telescopes were fixed, and the person on watch gave the signal of preparation which he had received, and this communicated successively through all the line, which brought them all into a state of readiness. The person at Mont Martre then received, letter by letter, the sentence from the Louvre, which he repeated with his own machine; and this was again repeated from the next height, with inconceivable rapidity, to the final station at Lisle. The first description of the telegraph was brought from Paris to Frankfort on the Maine by a ci-devant member of the parliament of Bordeaux, who had seen that which was erected on the mountains of Belville.

Dr. Hutton has thus described his telegraph : — - Let A A be a beam or mast of wood placed upright on a rising ground (fig. 3), which is about fifteen or sixteen feet high. B B is a beam or balance moving upon the centre A A. This balance-beam may be placed vertically or horizontally, or any how inclined, by

means of strong cords, which are iixed to the wheel D, on the edge of which is a double groove to receive the two cords. This balance is about eleven or twelve feet long and nine inches broad, having at the ends two pieces of wood, C, (‘, which likewise turn upon angles by means of four other cords that pass through the axis of the main balance, otherwise the balance would derange the cords; the pieces C are each about three feet long, and may be placed either to the right or left, straight or square, with the balance-beam. By means of these three the combination of movement is very extensive, remarkably simple, and easy to perform. Below is a small wooden hut, in which a person is employed to observe the movements of the machine. In the

mountain nearest to this another person is to re-peat these movements, and a third to write them down. The time taken • up for each movement is twenty seconds; of which the motion alone is four seconds, the other sixteen the machine is stationary. Two working models of this instrument were executed at Frankfort, and sent by Mr. W. Playfair to the duke of York ; and hence the plan and alphabet of the machine came to England. Various experiments were in consequence tried upon telegraphs in this country; and one was soon after set up by government in a chain of stations from the admiralty, London, to the sea coast. It consisted of six octagon boards, each of which was poised upon an axis in a frame in such a manner that it could bo either placed vertically, so as to appear witli its full size to the observer at the nearest station, as in fig. 4, or become invisible to him by being placed horizontally, as in fig. 5, so that the nar-row edge alone would be exposed. Fig. 4 is a representation of this telegraph, with the parts all shut, and the machine ready to work. T, in the officer's cabin, is the telescope pointed to the next station. Fig. 3 is a representation of the machine not at work, and with the ports all open. The opening of the first port (fig. 4) expresses a, the second b, the third c, the fourth d, the fifth e, and the sixth /', &c. Six boards make thirty-six changes by the most plain and simple mode of working, and they will make many more if more were necessary.

Several other improvements have been proposed ; but none, perhaps, of the telegraphs hitherto offered to the public exceeds the following either in simplicity, cheapness, or facility in working, and it might, with a few trifling additions, be made exceedingly distinct. It is thus described in the Repertory of Arts, vol. i. p. 382. For a nocturnal telegraph let there be four large patent reflectors, lying on the same plane, parallel to the horizon, placed on the top of an observatory. Let each of these reflectors be capable, by means of two winches, either of elevation or depression to a certain degree. 15y elevating or depressing one or two of the reflectors, eighteen very distinct arrangements may be produced, each reflector, after every arrangement, being restored to its place, as the following scheme will explain : —

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For the sake of example the above arrangements are made to answer to the most necessary letters of the alphabet ; but alterations may be made at will, and a greater number of changes produced without any addition to the reflectors. In the first observatory there need only be a set of single reflectors ; but in the others each reflector should be double, so as to face both the preceding and subsequent observatory ; and each observatory should be furnished with two telescopes. The proper diameter of the reflectors, and their distance from each other, will be ascertained by experience. To convert this machine into a diurnal telegraph nothing is necessary but to insert, in the place of the reflectors, gilt balls, or any other conspicuous bodies.

In 1806 a new set of telegraphs was established on the whole extent of the coast of the French em-pire, of which the following description is given by captain C. W. Pasley,inthe Philosophical Magazine. See figs. 6 and 7. Every telegraph consists of an upright post R, to which are attached three arms, A, B, and C, exactly similar to each other, and each moving upon its own distinct spindle or axis. The axis of one of these arms, A, is near the head of the post R ; and the distance between the centres of motion of either of the two uppermost arms, and the centre of the one immediately below it, is rather less than double the length of one arm. The highest of the three arms A, can exhibit seven distinct positions, as is shown by the dotted lines A 1 , A 2, A 3, &c. ; but the other two arms B and C can only exhibit six positions each, because they are hid-den by the post when in a vertical position. The total number of combinations, or of distinct signals, which can be made by this telegraph, will constantly be 391 ; but as the arm A, when in the vertical position A 4, may appear to be part of the post R, it is not safe to employ that position, and this will reduce the number of signals to 342. As only three bodies are employed in this telegraph, it appears very superior to the admiralty telegraphs used in England, which, by the combination of double that number of bodies, can only make sixty-three distinct signals. Captain Pasley observes, that the mechanism of the French telegraphs just described, must be either imperfect, or the men employed in working them must have -been very unskilful, for the signals

were made and repeated in an aukward manner, with what seemed to him much unnecessary loss of time. But these defects, it will be evident, detract nothing from its merit as an invention. In regard to

the mechanical construction, he could only observe that the arms, which were painted black, and appeared solid at a distance, were made in the fashion of a Venetian blind, in order, it may be presumed, to diminish the ac-tion of the wind in bad weather. Each arm had a counterpoise of thin materials painted white, which, unless the observer be very near the telegraph, becomes invisible.

Fig. 6 shows the telegraph in a state of rest, the dotted lines marking the several positions in which the arms can be exhibited. Fig 7 is a specimen of the telegraph at work. Fig. 8 shows the construction of one of the arms on a larger scale, D E being the part which is fashioned like a Venetian blind, and E F the counterpoise.

Sir Home Popttam's telegraph. — The original telegraphs at the admiralty, with the six boards, have been lately taken down, and a new kind substituted. It is on the same principle with the French, being an upright mast with two indicators, which move upon centres one above the other, in the manner of the last described. The mast is made to turn round on its vertical axis, so as to present its arm successively to all quarters, when required. The mechanism, which is the invention of Sir Home Popham, is the best that has ever been contrived, the movements being very simple, and effected by iron spindles and endless screws, so that the indices below are certain to accompany the indicators exactly in their movements, and place them precisely in their required positions, which cannot be done by the old machinery with cords, because they are liable to expand and contract by wet or dry weather. The machinery for this set of telegraphs was constructed in the most substantial manner by Maudslay in 1816. See figs. 9, 10, and 11. LM is a tall mast of an hexagonal form, framed up from six fir planks put together at the angles, and bound by iron hoops at different places, so as to be hollow within. The lower end L terminates in a pivot, and the mast is retained in a vertical position by a circular collar at O, which embraces it, and is supported in the roof of the building. The two arms P M and Q R are moveable upon centres, one at the top of the mast and the other haif way down. When the arms are placed in a vertical position, they shut up within the hollow rf the mast, so as to be entirely concealed ; and for this purpose two of the six sides are cut away at the upper part, so as to leave an ooening through the mast of sufficient width to admit the two arms to work in it. To communicate motion to the arms, a small toothed wheel is fixed upon each arm at the centre of motion, and close to the side of the arm. The teeth of these wheels are actuated by endless screws or worms, formed on the upper ends qf the long spindles d e and fg, which descend down to the bottom of the hollow mast, and have small bevelled wheels upon them, which are actuated

by wheels of similar size, fixed on the ends of short horizontal spindles, which have handles p,y, applied at the extremi-TEL

ties. See fig. 12. By turning these hanules, motion is given to the vertical spindles d zndf; and, by means of the endless screws upon the upper ends of them, the wheels at M and It, on the centres of the arms, are turned round, and the arms are put into any required position. But, in order that the people below may at all times know exactly what positions the arms stand in, two dials, m and r, are formed on the lower part of the mast, the upper one m being for the upper arm M, and the other r for the lower arm R ; and each dial has an index or hand, which turns round with a motion exactly corresponding to the motion of the arms. For producing this motion, the axle of each hand or index has ft small toothed wheel s or t (fig. 11) fixed upon it in the middle ; and an endless screw is form-ed upon the upright spindle to work in the teeth of the wheel. The wheels upon the centre of the arms, and those upon the axes of the indices, have the same number of teeth ; and, as every turn of the spindles and screws will move the wheels round one tooth, the angular motion of the arms P M and Q R, and the hands m and r, will in all cases be the same. The dials are each divided into eight, corresponding with the eight positions in which the arms are to be exhibited ; *viz.* pointing vertically; 1st, upwards; and 2dly, downwards : pointing horizontally ; 3dly, to the right; and 4thly, to the left : pointing upwards at an inclination of 45° ; 5thly, to the right ; and 6thly, to the left : pointing downwards at an inclination of 45° ; Tthly, to the right ; and 8thly, to the left. But of these eight positions, only the four last are made use of to represent characters ; because, in the two vertical positions, the pointers enter within the mast, and cannot therefore be seen whether they are pointing upwards or downwards : the horizontal positions of the arms are reserved for the necessary signals of preparation, &c. Each arm, then, has four positions, in which it will express different signals ; and these positions are all made with the pointer, at an inclination of 45° from the horizontal line.

These signals either express the letters of the alphabet, or the numeral characters, according to previous arrangement, which must be made known by exhibiting a preparatory signal, before the communication is begun. The signal to prepare for receiving letters is the lower arm extended horizontally to the right ; and, for the numerals, both arms are extended horizontally to the left.

The upper pointer P M used by itself, at an elevation of 45°, denotes,

A, or 1, when pointing upwards to the left.

B, or 2, when pointing downwards to the left.

C, or 3, when pointing upwards to the right.

D, or 4, when pointing downwards to the right.

The lower pointer Q R used by itself, at an elevation of 45°, denotes,

E, or 5, when pointing upwards to the left.

F, or 6, when pointing downwards to the left.

G, or 7, when pointing upwards to the right. 11, or 8, when pointing downwards to the right.

It is easy to conceive that, by repeating all these positions with both arms exhibited together instead of one singly, various combinations may

be made, which are sufficient to express all the remaining letters, and some other necessary signals. The dial for each arm is double ; that is, a dial is fixed at each side of the mast, and the axles of the indices or hands proceed quite through the mast, so as to have a hand at each end. These dials are not numbered exactly similar to each other, but are reversed ; and the two indices on the opposite ends of the same axle, though they point in one direction, do not indicate the same numbers on the two dials; because each dial is adapted to indicate the meaning which the different positions of the arms will have, when the telegraph is viewed on that side to which the dial faces. For, when a signal is made, that arm which projects from the right-hand side, if the telegraph is examined on one side, will project on the left hand when the telegraph is viewed on the other side. It was stated before that the telegraph can be turned round, so as to present its arms to any direction. This is done by the pivot L, at the lower hand ; but, to hold it fast in the desired direction, a circular iron plate is placed on the floor, with holes in it; and a bolt W is fitted into two eyes, which are fixed to the axle of the mast. The point of this bolt drops into any of the holes in the plate, and thus holds the mast firm; but if the bolt is lifted up, to draw its point out of the holes, it can bo turned round. The arms are made with boards, like Venetian blinds ; and each has a piece of cast-iron at the opposite end, to counterpoise the weight and make the arm move freely into all positions.

TELEMACHUS, the son of Ulysses and Penelope, was in the cradle when his father went with the rest of the Greeks to the Trojan war. When a child he fell into the sea, but was brought ashore by a dolphin. At the end of that war Telemachus went to seek his father; and as the place of his residence, and the cause of his long absence, were unknown, he visited the courts of Menelaus and Nestor to obtain information, accompanied by Minerva in the form of Mentor. He afterwards returned to Ithaca, where the suitors of Penelope had conspired to murder him, but he avoided their snares ; and by means of Minerva he discovered his father, who had arrived in the island two days before him, and was then in the house of Eumseus. With this faithful servant and Ulysses, Telemachus consulted how to deliver his mother from the importunities of her suitors, and it was effected with great success. After his father's death he went to the island of TEaea, where he married Cassi-phone the daughter of Circe, by whom he had a son called Latinus. He some time after had the misfortune to kill his mother-in-law Circe, and fled to Italy where he founded Clusium. From these stories, collected from Homer and the other poets, the celebrated Fenelon archbishop of Cam-bray composed his well known Adventures of Telemachus; which, though not in verse, is justly esteemed a poem.

TELEPHASSA, the wife of Agenor, and mo-ther of Cadmus, Phoenix, Cilix, and Europa. She died in Thrace, seeking her daughter Eu-ropa.

TELEPII1UM, true orpine, in botany, a gc-

nus of plants belonging to the class of pentandria, and order of trigynia ; and in the natural system ranging under the fifty-fourth order, mis-cellanese. The calyx is pentaphyllous ; there are five petals, which are inserted into the receptacle; the capsule is unilocular and trivalvular. There are two species : 1. T. imperati ; and 2. T. oppositifolia.

TELEPHUS, a son of Hercules by Auge, the daughter of Aleus. He was exposed as soon as born on mount Parthenis, but was preserved by a

she goat and her shepherd. Auge, to avoid her father's rage, fled to Teuihras king of Mysia, and was by him adopted as his daughter. Mean time Telephus grew up, and on consulting the oracle as to his parentage, was advised to go to Mysia. Teuthras, being harassed by the depredations of Idas the son of Aphareus, offered his daughter Auge, and the succession to his crown, to any man who would repel Idas. Telephus undertook the task, and at the head of the Mysian troops conquered Idas, and claimed his reward. But, as he was just going to marry Auge, a monstrous serpent interrupted the ceremony; upon which, Auge imploring the aid of Hercules, the god appeared and told her that Telephus was her own son. After this Telephus became king of Mysia, married a daughter of Priam king of Troy, and assisted him in his war against the Greeks, a party of whom he defeated ; but was mortally wounded by Achilles, who, however, was ordered by the oracle to cure him with the same spear that had wounded him. This Achilles did by the rust of the spear; and Telephus, in gratitude, joined the Greeks against the Trojans. — Paus. 8, c. 48 ; Diod. 4, &c.

TEL'ESCOPE, n. s. } Fr. telescope ; Gr. re\oc

TELESCOP'IC, or £and oxoTrew. A long

TELESCOP'ICAL, adj. j glass by which distant

objects are viewed : belonging to a telescope ;

seeing at a distance.

The telescope discovers to us distant wonders in the heavens, and shews the milky way, and the bright cloudy spots, in a very dark sky, to be a collection of little stars. Watts.

Where Science points her telescopic eye, Fanaliai with the wonders of the sky.

Coicper.

TELESCOPE is derived from the Greek, rjjXt, far off, and aKoiruv, to look at. This name is commonly appropriated to the larger sizes of the ;nstrument, while the smaller are called perspective glasses, spy glasses, or opera glasses. A particular kind, which is thought to be much brighter than the rest, is called a night glass.

To what has been said on the invention of this most noble instrument, in the article OPTICS, we may add the following : — Mr. Leonard

Digges, a gentleman of the seventeenth century, of great and various knowledge, asserts in his Stratoticos, and in another work, that his father, a military gentleman, had an instrument which he used in ‘.he field, by which he could bring distant objects near, and could know a man at the distance of three miles. He says, that when his father was at home he had often looked through it, and could distinguish the waving of the trees on the opposite side of the Severn. Mr. Digges resided near Bristol. Francis Fontana, in his Celestial

Observations, published at Naples in 1046, says, that he was assured by a Mr. Hardy, advocate of the parliament of Paris, a person of great learning and undoubted integrity, that on the death of his father there was found among his things an old tube, by which distant objects were distinctly seen ; and that it was of a date long prior to the telescope lately invented, and had been kept by him as a secret. From the table and scheme which Sirturus has given us of the tools or dishes in which the spectacle-makers fashioned their glasses, that they had convex lenses formed to spheres of twenty-four inches diameter, and of eleven inferior sizes. He has given us a scheme of a set which lie measured belonging to a spectacle-maker of the name of llogette, at Corunna, in Spain ; who, he says, had tools of the same sizes for concave glasses. It also appears that it was a general practice to use a convex and concave glass together. If any person should put together a twenty-four inch convex and a twelve inch concave (wrought on both sides) at the distance of six inches, he would have distinct vision, and the object would appear of double size. Concaves of six inches were not uncom-m6n; and one such combined with the convex of twenty-four, at the distance of nine inches, would have distinct vision, and objects would be quadrupled in diameter. When such a thing occurred, it was natural to keep it as a curiosity, although the rationale of its operation was not understood. It is plain that Galileo’s first telescope was of this kind, made up of such spectacle glasses as he could procure ; for it magnified only three times in diameter ; a thing easily procured by such glasses as he could find with every spectacle-maker. And he could not but observe, in his trials of their glasses, that the deeper concaves and flatter convexes he employed, he produced the greater amplification ; and then he would find himself obliged to provide a tool not used by the spectacle-makers, *viz.* either a much flatter tool for a convex surface, or a much smaller sphere for a concave. His next telescope magnified but five times. But he groped his way with such spectacle-glasses as he could get, till he at last made tools for very flat object-glasses and very deep eye-glasses, and produced a telescope which magnified about twenty-five times.

Sirturus saw it, and took the measures of it. He afterwards saw a scheme of it which Galileo had sent to a German prince at Inspruck, who had it drawn (that is, the circles for the tools) on a table on his gallery. The object-glass was a plano-convex, a portion of a sphere, of twenty-four inches diameter ; the eye-glass was a double concave of two inches diameter; the focal distances were therefore twenty-four inches and one inch nearly. This must have been a very lucky operation, for Sirturus says, it was the best telescope he had seen ; and we know that it requires the very best work to produce this magnifying power with such small spheres. Telescopes continued to be made in this way for many years ; and Galileo never made them of any other form. Kepler published his Dioptrics in 1611 ; in which he tells us all that he or others had discovered of the law of refraction, *viz.* that in very small obliquities of

incidence, the angle of refraction was nearly one-third of the angle of incidence. This was indeed enough to have pointed out, with sufficient exactness, the construction of every optical instrument that we are even now possessed of; for this proportionality of the angles of incidence and refraction is assumed in the construction of the optical figure for all of them ; and the deviation from it is still considered as the refinement of the art, and was not brought to any rule till fifty years after by Huyghens, and called by him aberration. Yet even the sagacious Kepler seems not to have seen the advantage of any other construction of the telescope; he just seems to acknowledge the possibility of it; and we are surprised to see writers giving him as the author of the astronomical telescope, or even as hinting at its construction. It is true, in the last proposition, he shows how a telescope may be made apparently with a convex eye-glass ; but this is only a frivolous fancy; for the eye-glass is directed to be made convex externally, and a very deep concave on the inside ; so that it is, in fact, a meniscus with the concavity prevalent. In the eighty-sixth proposition he indeed shows that it is possible so to place a convex glass behind another convex glass, that an eye shall see objects distinct, magnified, and inverted ; and he speaks very sagaciously on the subject. After having said that an eye placed behind the point of union of the first glass, will see an object inverted, he shows that a small part only will be seen ; and then he shows that a convex glass, duly proportioned and properly placed, will show more of it. But in showing this, he speaks in a way which shows evidently that he had formed no distinct notions of the manner in which this effect would be produced, only saying vaguely that the convergency of the second glass would counteract the divergency beyond the focus of the first. Had he conceived the matter with any tolerable distinctness, after seeing the great advantage of taking in a field greater in almost any proportion, he would have eagerly catched at the thought, and enlarged on the immense improvement. Had he but drawn one figure of the progress of the rays through two convex glasses, the whole would have been open to his vrew. This step, so easy and so important, was reserved for Scheiner, as has been observed under OPTICS ; arid the construction of this author, together with that of

Jansen, are the models on which all refracting telescopes are now constructed ; and in all that relates to their magnifying power, brightness, and field of vision, they may be constructed on Kep-ler's principle, that the angles of refraction are in a certain given proportion to the angles of incidence. But after Huyghens had applied his elegant geometry to the discovery of Snellius, *viz.* the proportionality, not of the angles, but of the sines, and had ascertained the aberrations from the foci of infinitely slender pencils, the reasons were clearly pointed out why there were such narrow limits naturally affixed to the performance of optical instruments, in conseqxience of the indistinctness of vision which resulted from constructions where the magnifying power, the quantity of light, or the field of vision, were extended beyond certain moderate bounds. The

theory of aberrations, which that most excellen geometer established, has enabled us to diminish this indistinctness arising from all these causes; and this diminution is the sole aim of all tho different constructions which have been contrived since the days of Galileo and Scheiner.

The general aim, in the construction of a telescope, is to form, by means of mirrors or lenses. an image of the distant object, as large, as bright, and as extensive as is possible, consistently with distinctness : and then to vievv the image with n magnifying glass in any convenient manner. This gives us an arrangement of our subject. \Vt: shall first show the principles of construction of the object-glass or mirror, so as that it shall form an image of the distant object with these qualities ; and then show how to construct the magnifying glass or eye-piece, so as to preserve them unimpaired. This indistinctness, which we wish to avoid, arises from two causes ; the spherical figures of the refracting and reflecting surfaces, and the different refrangibility of the differently colored rays of light. The first may be called the spherical, and the second the chromatic indistinctness; arid the deviations from the foci, determined by the elementary theorem, may be called the spherical and the chromatic aberrations. The limits of our work will not permit us to give any more of the doctrine of aberrations than is absolutely necessary for the construction of achromatic telescopes; and we refer the reader for a general view of the whole to Euler's Dioptrics, and other works of that kind. Dr. Smith has given as much as was necessary for the comparison of the merits of different glasses of similar construction, and in a very plain and elegant manner. His improvement of the fundamental theorem of that

most elegant geometer Huyghens is as follows : —

I. In REFLECTION. Let A V B(fig. 1, plate I., TELESCOPE) be a concave spherical mirror, of which C is the centre, V the vertex, C V the axis, and F the focus of an infinitely slender pencil of parallel rays passing through the centre. Let the ray a A, parallel to the axis, be reflected in A G, crossing the central ray C V in f. Let A P be the sine of the semi-aperture A V7, A D its tangent, and C D its secant. The aberration F f from the principal focus of central rays is equal to £ of the excess V D of the secant above the radius, or very near equal to -J-of V P, the versed sine of the semi-aperture. For, because A U is perpendicular to C A, the points C, A, D, are in a circle, of which C D is the diameter ; and because A/ is equal to C/, by reason of the equality of the angles/ A C, fC A, and C A «, fis the centre of the circle through C, A, 1), and *Diszzˆ CD. But FC isrz i C V; therefore F*is J of V D. But because D V : V P — D C : V C, and I) C is very little greater than V C when the aperture A B is moderate, I) V is very little greater than V P, and F/ is very nearly equal to £ of V P. COR. 1 . The longi-A Va tudinal aberration is = -f,ˆ, ; for P \ is very

‘4CNa

AV

nearly— — r^- COR. 2. The lateral aberration FGis=™.. ForFG:F/ =AP:I'/=

A V3

A V : J C V nearly, and therefore F G zr

4C V 2 _ AV3 .

C V "

II. In REFRACTIONS. Let

2 C V2

A B V (fig. 2 or 3) be a spherical surface separating two refracting substances, C the centre, V the vertex, A V the semi-aperture, A P its sine, PV its versed sine, and F the focus of parallel rays infinitely near to the axis. Let the extreme ray a A, parallel to the axis, be refracted into A G, crossing C F in/ which is therefore the focus of extreme parallel rays. The rectangle of the sine of incidence, by the difference of the sines of incidence and refraction, is to the square of the sine of refraction as the versed sine of the semi-aperture is to the longitudinal aberration of the extreme rays. Call the bine of incidence t, the sine of refraction r, and their difference d. Join C A, and about the centre *describe the arch A D. The angle A C V is equal to the an-gle of incidence, and C A*is the angle of re-daction. Then, since the sine of incidence is to -he sine of-refraction as V F to C F, or as A/ to C f, that is, as D/to

C/, we have

CF : FV = C/:/D by conversion C F : C V = C/ : C D altern. conver. C F — C/: C V— C D— CF : C V or … F/: VDrˆCF :CV — r:d.

A P2 A P2

, and

the longitudinal aberrations from the focus of central parallel rays are as the squares of the apertures directly, and as the focal distances inversely ; and the lateral aberrations are as the cubes of the apertures directly, and the squares of the focal distances inversely; and the angular aberrations are as the cubes of the aperture directly, and the cubes of the focal distances inversely. To simplify the investigation, some small errors are admitted. P V and P D are not in the exact proportion that we assumed them, nor is D/ equal to F V. But in tne small apertures which suffice for optical instruments, these errors maybe disregarded. This spherical aberration produces an indistinctness of vision in the same manner as the chromatic aberration does; *viz.* by spreading out every mathematical point of the object into a little spot in its picture; which spots, by mixing with each other, confuse the whole. We must now determine the diameter of the circle of diffusion. Let a ray *3 a (fig. 4) be refracted on the other side of the axis into a H 0, cutting A* G in H, and draw the perpendicular E H Call A V a, a V a, V/ (or V F, or V 0, which in this comparison may be taken as equal) — f

Now > p v = =

CP + CV

AP* AP2

F 0 (already demonstrated) and F 0 — ~ b, and F/- F , (or/,) = b-a-lb, = *Z-f > . =

nearly > = TFV

PD = jF + 7v >

nearly. Therefore P V : PI3 = F V : C V, and DV:PV = CF:FVnearly.

Wehadabove F/:VD = r:d;

and now . VD: P V = CF :‘p V, = r •» •

therefore . F/: P V = r* : d i,

and F/ = JL. x P V. Q. E. D. The aberration will be different according as trie refraction is made towards or from the perdendicular; that is, according as r is less or greater than i. They

r2 »’* are m the ratio of — to -—, or of r 3 to i3 The

at dr

aberration therefore is always much diminished When the refraction is made from a rare into a dense medium. The proportion of the sines for air and glass is nearly that of 3 to 2. When the light is refracted into the glass, the aberration is nearly § of PV; and, when the light passes out of glass into air, it is about § of P V. COR. 1. F/ =

b b

-5 X a —a2, = — Xrt + aX a — a. Also

And P „ : P *— £ H : E A or a ;f-aJL.a±

~.f a’

= E0. Therefore /0 rr °-f + r, - a + a-J,

• ** • i i • r ‘ A H2

ˆyX nearly, and it is alsor= — v ..

zi_/v. /£ *2 V V*

because P V = ˆ-ˆ nearly, and i : d = F V : C V. COR. 2. Because/ P PA = F f : F G

or F V : A V= F/: F G nearly we have FG, the lateral aberration, — F f x AV r” AV3 r2 AV3 ~ ‘

FV

2 F V3 >:

2CV2’

COR. 3.

FG

F V

very nearly, we have the angular aberration F A f

r_* AV3 r AV3

d 2 X 2Tv~3 = = 7T x orV3-1° general,

Because the angle F-A / is proportional to

_ -X a + a. Therefore — x a + a— — r X « a a2

_, ., , x b b

a T a X a — a, ana -~ — x a — a, and x = —

a a2 a2

X a (a — a). Therefore x is greatest when a

X a — a is greatest ; that is when a =. J a. Therefore E H is greatest when P IT is equal to the half of A P-When this is the case we have

at the same time — x a (a — a) m r-X i a2,

and x — \ b, or EH — i FG. That is, the diameter of the circle of aberration, through which the whole of the refracted light must pass, is one-fourth of the diameter of the circle of aberration at the focus of parallel central rays. In the chromatic aberration it was one-half; so that in this respect the spherical aberration does not create so great confusion as the chromatic. We are now able to compare them, since we have now the measure of both the circles of aberration. It has not been found possible to give more than four inches of aperture to an object glass of 100 feet focal distance, so as to preserve sufficient distinctness. If we compute the diameter of the circle E H, corresponding to this aperture, we shall find it not much to exceed -^^ of an inch. If we restrict the circle of chromatic dispersion to ?fe of the aperture, which is hardly the fifth

TE LESCOPE.

part of the whole dispersion in it, it is of an

OZij

inch, and is about 1900 times greater than the other. The circle of the spherical aberration of a plano-convex lens, with the plane side next the distant object, is equal to the circle of chromatic dispersion when the semi-aperture is about 1 5° : for we saw formerly that E H is one-fourth

r1 AP8 of F G, and that F G is—— oT7~3> a”d therefore

i 2 A. y >

T* A P3 A P

EG =— x -. This being made = -,

-, which is nearly

55 r

gives us A P —

-— , and corresponds to an aperture of 30° diameter, if r be to i as 3 to 2. Sir Isaac Newton was therefore well entitled to say that it was quite needless to attempt figures which should have less aberration than spherical ones, while the confusion produced by the chromatic dispersion remained uncorrected. Since the indistinctness is as the squares of the diameters of the circles of aberration, the disproportion is quite beyond our imagination, even when Newton has made such a liberal allowance to the chromatic dispersion. But it must be acknowledged that he has not attended to the distribution of the light in the circle of spherical aberration, and has hastily supposed it to be like the distribution of the colored light, indefinitely rare in the margin and denser in the centre. We are indebted to abbe Boscovich for the elegant determination of this distribution, which we have given in the article OPTICS. From this it appears that the light in the margin of the circle of spherical aberration, instead of being incomparably rarer than in the spaces between it and the centre, is incomparably denser. The indistinctness, therefore, produced by the intersection of these luminous circumferences is vastly great, and increases the whole indistinctness exceedingly. By a gross calculation it appears to be increased at least 500 times. The proportional indistinctness therefore, instead of being 1900s to 1, is only 190°a

y 500 ‘

or nearly 7220 to 1 ; a proportion still sufficiently great to warrant Newton’s preference of the reflecting telescope of his invention. And we may now observe that the reflecting telescope has even a great advantage over a refracting one of the same focal distance with respect to its spherical aberration: for we have seen (Cor. 2.) that

r1 AV3 the lateral aberration is — . This for a

9 AV3 4~2W*- And

the diameter of the circle of aberration is one—

9 A V3 fourth of this, or -. x n ,-;•.-„. In like manner

16 2C V*

the lateral aberration of a convave mirror is AV3 oTfys » an(* tne diameter of the circle of dis—

persion is ; and therefore, if the surfaces were portions of the same sphere, the

plano-convex glass is nearly

diameter of the circle of aberration of refracted rays would be to that of the circle of aberration of reflected rays as $ to £, or as nine to four. But when the refracting and reflecting surfaces, in the position here considered, have the same focal distance, the radius of the refracting surface is four times that of the reflecting surface. The proportion of the diameters of the circles of spherical aberration is that of 9 y 42 to 4, or of 144 to 4, or 36 to 1 . The distinctness, therefore, of the reflector is 36 X 36, or 1296 times greater than that of a plano-convex lens (placed with the plane side next the distant object), of the same breadth and focal distance, and will therefore ad-mit of a much greater magnifying power. This comparison is indeed made in circumstances most favorable to the reflector, because this is the very worst position of a plano-convex lens. But we have not as yet learned the aberration in any other position. In another position the refraction and consequent aberration of both surfaces are complicated. Before we proceed to the consideration of this very difficult subject, we may deduce from what has been already demon strated, several general rules and maxims, in the construction of telescopes, which will explain (tn such readers as do not wish to enter more deeply into the subject) and justify the proportion which long practice of the best artists has sanctioned. Indistinctness proceeds from the com-mixture of the circles of aberration on the retina of the eye. For any one sensible point of the retina, being the centre of a circle of aberration, will at once be affected by the admixture of the rays of as many different pencils of light as there are sensible points in the area of that circle, and will convey to the mind a mixed sensation of as many visible points of the object. This number will be as the area of the circle of aberrations, whatever be the size of a sensible point of the retina. Now, in vision with telescopes, the diameter of the circle of aberration on the retina is as the apparent magnitude of the diameter of the corresponding circle in the focus of the eye-glass; that is, as the angle subtended by this diameter at the centre of the eye-glass ; that is, as the diameter itself directly, and as the foca. distance of the eye glass inversely. And the area of that circle on the retina is as the area of the

circle in the focus of the eye-glass directly, and as the square of the focal distance of the eye-glass inversely. And this is the measure of the apparent indistinctness. COR. In all sorts of telescopes, and also in compound microscopes, an object is seen equally distinct when the focal distance of the eye-glasses are proportional t. the diameters of the circles of aberration in the focus of the object glass. Here we do not consider the trifling alteration which well-constructec1 eye-glasses may add to the indistinctness of the first image. In refracting telescopes, the apparent indistinctness is as the area of the ob-ject-glass directly, and as the square of the focal distance of the eye-glass inversely. For it has been shown that the area of the circle of dispersion is as the area of the object-glass, and that the spherical aberration is insignificant when compared with this. Therefore, to make reflecting telescopes equally distinct, the diarm tor

of the object-glass must be proportional to the focal distance of the eye-glass. But, in reflecting telescopes, the indistinctness is as the sixth power of the aperture of the object-glass directly, and as the fourth power of the focal distance of die object-glass, and square of the focal distance of the eye-glass, inversely. This is evident from the dimensions of the circle of aberration, which was

AV3 found proportional to JTT-Z- Therefore, to have

them equally distinct, the cubes of the apertures must be proportional to the squares of the focal distance multiplied by the focal distance of the eye-glass. By these rules, and a standard telescope of approved goodness, an artist can always proportion the parts of any instrument he wishes to construct. Mr. Huyghens made one, of which the object-glass had thirty-feet focal distance and three inches diameter. The eye-glass had 3-3 inches focal distance. And its performance was found superior to any which he had seen : nor did this appear owing to any chance goodness of the object-glass, because he found others equally good which were constructed on similar proportions. This has therefore been adopted as a standard. We should now proceed to the most difficult part of our subject, the compound aberrations of

different surfaces. But our limits will not permit us to enlarge on this deep subject. We must therefore refer to what we have said upon it under the article OPTICS. We may also recommend to the curious reader Clairault's Dissertationˆ in the Memoirs of the Academy of Paris, 1756, &c. ; those of Boscovich in the Memoirs of the Academy of Bologna, and in his five volumes of Opuscula, published at Bassano in 1785, and those of D'Alembert and Euler. The only treatise in our language is the translation of a very imperfect work by Schserter. In what follows, we shall, however, give a general view of it.

Estimate of the dispersive power of the refracting telescope. — The separation of the red, violet, and intervening rays, is called dispersion ; and, although this arises merely from a difference of the refractive power in respect of the different rays, it is convenient to distinguish this particular modification of the refractive power by a name, and we call it the dispersive power of the refracting substance. It is susceptible of degrees; for a piece of flint-glass will refract the light, so that, when the sine of refraction of the red ray is 77, the sine of the refraction of the violet ray is nearly 78£ ; or if the sine of refraction of the red ray, measured on a particular scale, is 1'54, the sine of refraction of the violet ray is 1-57. The dispersion of this substance, being measured by the difference of the extreme sines of refraction, is greater than the dispersion of the other glass, in the proportion of three to two. But this alone is not a sufficient measure of the absolute dispersive power of a substance. Although the ratio of 1-54 to 1-56 remains constant, whatever the real magnitude of the refractions of common glass may be; and though we therefore say that its dispersive power is constant, ve know that, by increasing the incidence and the refractions, the absolute dispersion is also increased. Another substance shows the same properties, and in a particular

case may produce the same dispersion ; yet it has not, for this sole reason, the same dispersive power. If indeed the incidence and the refraction of the mean ray be also the same, the dispersive power cannot be said to differ ; but, if the incidence and the refraction of the mean ray be less, the dispersive power must be considered as greater, though the actual dispersion be the same ; because, if we increase the incidence till it becomes equal to that in the common glass, the dispersion will now be increased. The proper way of conceiving the dispersion, therefore, is to consider it as a portion of the whole refraction ; and, if we find a substance making the same dispersion with half the general refraction, we must say that the dispersive quality is double ; because, by making the refraction equal, the

dispersion will really be double. If therefore we take m as a symbol of the separation of the

extreme rays from the middle ray, is the

natural measure of the dispersive power. We shall express this in the Leibnitzian notation thus,

, that we may avoid the indistinctness

m — 1

which the Newtonian notation would occasion when m is changed for m or m”. It is not unusual for optical writers to take the whole separation of the red and violet rays for the measure of the dispersive power, and to compare this with the refracting power, with respect to one of the extreme rays. But it is surely better to consider the mean refraction as the measure of the refracting power ; and the deviation of either of the extremes from this mean is a proper enough measure of the dispersion, being always half of it. It is attended with this convenience, that, being introduced into our computations as a quantity infinitely small, and treated as such for the ease of computation, while it is really a quantity of sensible magnitude; the errors arising from this supposition are diminished greatly by taking one-half of the deviation and comparing it with the mean refraction. This method has, however, this inconvenience, that it does not exhibit at once the refractive power in all substances respecting any particular color of light ; for it is not the ray of any particular color that suffers the mean refraction. In common glass it is the ray which is in the confines of the yellow and blue ; in flint glass it is nearly the middle blue ray : and in other substances it is a different ray. These circumstances appear plainly in the different proportions of the colors of the prismatic spectrum exhibited by different substances. This is a great bar to the perfection of achromatic instruments.

Method of constructing an achromatic lens. — The way in which an achromatic lens is constructed is, to make use of a contrary refraction of a second lens to destroy the dispersion OP spherical aberration of the first. The

first purpose will be answered if - — be equal

to — . For, in order that the different con lored rays may be collected into one point by

two lenses, it is only necessary that — .-, the reci-

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procal of ;he focal distance of rays refracted bj both, may be the same for the extreme and mean

, • m -4-d m — 1 m 4-d m’ — 1

rays, that is, that — — 1

n n

1 , , m — 1 m — 1

-4-be of the same value with -j ; —

r n n

1 … dm d m’

-- _; which must happen if H be zz

r n n

dm d in .

0, or — — r-1 his may be seen m ann n

other way, more comprehensible by such as are not versant in these discussions. In order that the extreme colors, which are separated by the first lens, may be rendered parallel by the second ; we have shown already that re and n' are proportional to the radii of the equivalent isosceles lenses, being the halves of these radii. They are therefore (in these small refractions) inversely proportional to the angles formed by the surfaces at the edges of the lenses ; re' may therefore be taken for the angle of the first lens, and n for that of the second. Now the small refraction by a prism, whose angle (also small) is re', is m — 1 x re'. The dispersive power being now substituted for the refractive power, we have for this refraction of the prism d m X «'• This must be destroyed by the opposite refraction of the other prism dm x n. Therefore dm x «' — dm' x n, or

dm dm

— — — . In like manner, this effect will

n n

..dm . dm’ ,

be produced by three lenses if -, — -

n n

— r bezz 0, &c. Lastly, the errors arising from re

the spherical figure, which we expressed by — R2 (q -(•• q'} will be corrected if q -{• q' be zz 0.

Method of constructing a double achromatic object-glass. — Here we have to determine four radii, a, b, a', and b'. Make n zz 1. This greatly simplifies the calculus, by exterminating it from all the denominators. This gives

dm dm'

for the equation 1 — zz 0, the equation

n n

dm’ d m . 1

d m A zz 0, or d m zz , and - zz

n n n

- zz — u. Also we have r’, the focal

d m

distance of the light incident on the second lens, the same with the principal focal distance p of the first lens (neglecting the interval, if

-i ~n J

any). Now — zz — — , which in the present case p 7. ‘

is zz m — 1. Also-, is zz — u (m — 1), and =r-P

— m — 1 — u (m — l)zz u. Make these substitutions in the values of — 3L_ and — ; »

m — 1 m — 1

and we obtain the following equation: cm2 — c(2m+l)+c(m + 2) ˆ_,2 «»(2m’+l)

are factors of — , — , tf- — , Or independent quantities. It puts on this form : c (m + 2) x

)\ ˆ _t

/ u

(wi — 1)

-— _

m u’ m

Arrange these term? in order, according as they Vol.. XXI

c m* + w2 (3 ni + 1) (TO — 1) — us m”* — u (3m’ + 2) (m — I)3

— —> — — = 0-Let A be the cod

ficientof — , B that of — , C that of—, D that a a a*

of — , and E the sum of the independent quantity: that is, let Abe zz Ci™_+_J g— c (2 m + p,

m

„ u (m’ 4-2”i ˆ C = -ˆ-, D = «’ (2 m’ + .2) -

4 to (m’ +l)(»i— 1)

— — -, and E zz c m* +v2(3 m’ + l)

(m — 1) u3m‘2 . . ()ur

r A B C D

final equation becomes— -. -- Lzz 0.

The coefficients of this equation and the independent quantity are all known, from our knowledge of /», m d w, d m ; and we are to find the values of a and «', and from them and re zz 1 to find the values of b and b'. But it is evidently an indeterminate equation, because there aretw'ii unknown quantities; so that there may be an infinity o'f solutions. It must be rendered determinate by means of some other conditions to which it may be subjected. These conditions must depend on some other circumstance which may direct our choice. One circumstance occurs which we think of veˆy great consequence. In the passage of light from one substance to another, there is always a considerable portion reflected from the posterior surface of the first and from the anterior surface of the last; and this reflection is more copious in proportion to the refraction. This loss of light will therefore be diminished by making the infernal surfaces of the lenses to coincide; that is, by making b zz d. This will be attended with another advantage. If we put between the glasses a substance of nearly the same refracting power, we shall not only completely prevent this loss of light, but we shall greatly diminish the errors which arise from an imperfect polish of the surfaces. We have tried this, and find the effect very surprising. The lens, being polished immediately after the figure has been given it, and while it was almost impervious to light by reason of its roughness, which was still sensible to the naked eye, performed as well as when finished in the finest manner. This condition, by taking away one refraction, obliges us to increase those which remain, and therefore increases the spherical aberrations. And since our formula; do not fully remove those (by reason of the small quantities neglected in the process), it is uncertain whether this condition be the most eligible. We have, however, no direct argument to the contrary. By

comparing this object-glass with the former, we may remark, that diminishing a a little increases b, and in this respect improves the lens. It in-deed has diminished b', but this being already considerable no inconvenience attends this diminution. But we learn, at the same time, that the advantage must be very small ; for we cannot diminish a much more, without making it as small as the smallest radius of the object-glass. This proportion is therefore very near the maximum, or best possible; and we know that in such cases, even considerable changes in the radii will make but small changes in the result : for these reasons we are disposed to give a strong preference to the first construction, on account of the other advantages which we showed to attend it. As another example, we may take a ease which is very nearly the general practice of the London artists. The radius of curvature for the anterior surface of the convex crown glass is five-sixths of the radius of the posterior surface, so that A zz $. This, being introduced into the determinate equation, gives

a — 0-2938 b— —0-3526

Method of constructing a triple achromatic object-glass. — It is plain that there are more conditions to be assumed before we can render this a determinate problem, and that the investigation must be more intricate. At the same time, it must give us a much greater variety of constructions, in consequence of our having more conditions necessary for giving the equation this determinate form. Our limits will not allow us to give a full account of all that may be done in this method. We shall therefore content ourselves with giving one case which will sufficiently point out the method of proceeding. We shall then give the results in some other eligible cases, as rules to artists by which they may construct such glasses. Let the first and second glasses be of equal curvatures on both sides ; the first being a double convex of crown-glass, and the second a double concave of flint-glass. Still making n the unit of our calculus, we have in the first place a zz

— b, zz — a', zz b'. Therefore — , — zz —

fr 1 — — izr — — zz-zz— ~nd— 6 a~ I’ *a”*6”~~ 2′ 6″

zz — ; — — r, zz — -u’ ‘. Substituting these values a’ n’ «’

in the equation, we obtain the three formulae : 1. - era2 — | e (2 M *4> 1) +

m’ 4-2

4 m

2. — m’ 2 4- \ (2 m’ 4-1) —

4 in

(3 m’ + (SOT’

— 1) —

(m — I)2

3. c u 3 m3

l^

cc‘2u’(3jn 4-2) _

m Now arrange these quantities according as they

are coefficients of — — - and of — , or independ—

u l a

ent quantities. Let the coefficient of — be A, that of — - be B, and the independent quantity

beC;wehaveAzzC”’(;M+2), B = c «* (2 w+ 1)

” + 2)

= cm

4 m

•f } (2 m + 1) 4- (3 m + 1) (w— 1) + cu‘3 m*

m‘4-2 2 Qw‘4- !)(>»— 1) (3t»’+ 2) (m — Tf 4m m’ m’

— cc u‘9 (3 m + !)• Our equation now becomes

A B

— „ — — + C rz 0. This reduced to numbers, a a a

by computing the values of the coefficients, is

i.Qio 1-907

ifif _ l™ _ 0-3257 zz 0. This, divided

ff a

by 1-312, gives szz — 0-92; and f zz — 0-2482;

— JszzO-46; is2rz 0-2116; and ˆ i < * — t

(~— £•), orLrz -1—1. Therefore = ± 0-6781. And, finally, -
=0-46±0‘6781.

dm dm the equation • 1 —

d in”

u ll

— 1 + -77— 0,or — zz — 1.

zz 0 becomes

Let us call

this value u’. We have — zz m — 1 ; — — — P P’

zz m — m’ 4-u’ (in — 1). And, if we make m’ — OT zz C’, we shall have — zz — C, + »’ (m —

.)• Also — rzz m — 1 ;-T-ZZ m — 1 — (in — 1} r r

zz m — m’t zz — C’. The equality of the two curvatures of each lens gives — zz — . There-

This has two roots, *viz.* 0-2181 and — 1-1381. The last would give a very small radius, and is therefore rejected. Now, proceeding \ith this

value of —r and the — , we get the other radius a n’

b”, and then, by means of u, we get the other ra-dius which is common to the four surfaces.

Then, by 7p— -ˆ — c’, we get the value of P.

The radii being all on the scale of which n is the unit, they must be divided by P to obtain their value on the scale which has P for its uni;. They will give us

a — — /’, zz — «’, zz b’, ~ 0-530 b’. = 1-215

//’ — — 0-3046

P - I’

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Upon the whole, an amateur has little chance of succeeding in these attempts. The diversity of glasses, and the uncertainty of the workman’s producing the very curvatures which he intends, is so

great, that the object-glass turns out different from his expectation. The artist who makes great numbers acquires a pretty certain guess at the remaining error ; and, having many lenses, intended to be of one form, but xinavoidably differing a little from it, he tries several of them with the other two, and, finding one better than the rest, he makes use of it to complete the set. The great difficulty in the construction is to find the exact proportion of the-dispersive powers of the crown and flint glass. The crown is pretty constant ; but there are hardly two pots of flint glass which have the same dispersive power. Even if constant, it is difficult to measure it accurately ; and an error in this greatly affects the instrument, because the focal distances of the lenses must be nearly as their dispersive powers. The best method of examining this is as follows : The sun's light, or that of a brilliant lamp, passed through a small hole in a board, and fell on another board pierced also with a small hole. Be-hind this was placed a fine prism A fig. 5, which formed, a spectrum ROV on a screen pierced with a small hole. Behind this was placed a prism B of the substance under examination. The ray which was refracted by it fell on the wall at D, and the distance of its illumination from that point to C, on which an unrefracted ray would have fallen, was carefully measured. This showed the refraction of that color. Then, in order that we might be certain that we always compared the refraction of the same precise color by the different prisms placed at B, we marked the precise position of the prism A when the ray of a particular color fell on the prism B. This was done by an index A G attached to A, and turning with it, when we caused the different colors of the spectrum formed by A to fall on B. Having examined one prism B with respect to all the colors in the spectrum formed by A, we put another B in its place. Then bringing A to all its former positions successively, by means of a graduated arch H G K, we were certain that when the index was at the same division of the arch, it was the very ray which had been made to pass through the first prism B in a former experiment. We did not solicitously endeavour to find the very extreme red and violet rays ; because, although we did not learn the whole dispersions of the two prisms, we learned their proportions, which is the circumstance wanted in the construction of achromatic glasses. It is in vain to attempt this by measuring the spectrums themselves; for we cannot be certain of selecting the very same colors for the comparison, because they succeeded in an insensible gradation. We have hitherto proceeded on the supposition that when, by means of contrary refractions, we have united the extreme red and violet rays, we have also united all the others. But this is quite gratuitous. Sir Isaac Newton would, however, have made the same supposition ; for he imagined that the different colors divided the spectrum formed by all substances

in the proportions of a musical canon. This is

a mistake. When a spectrum is formed by a prism of crown glass, and another of precisely the same length is formed by the side of it by prism of flint glass, the cosine between the greer. and blue will be found precisely in the middle of the first spectrum, but in the second it wii! be considerably nearer to the red extremity. Jn short, different substances do not disperse t'ho colors in the same proportion. The effect of this irrationality (so to call it) of dispersion, will appear plainly. Let A, fig. 6, represent a spot of white solar light falling perpendicularly on a wall. Suppose a prism of common glass placed behind the hole through which the light is admitted, with its refracting angle facing the left hand-It will refract the beam of light to the right, and will at the same time disperse this heterogeneous light into its component rays, carrying the extreme red ray from A to R, the extreme orange from A to O, the extreme yellow from A to Y, &c., and will form the usual prismatic spectrum ROYGBPVC. If the whole length It C be divided into 1000 parts, we shall have (when the whole refraction A R is small) R O very nearly 125, R Y — 200, R G ~ 333, R B zr: 500, R P — 667, R V — 778, and R C *1000; this being the proportion observed in (he differences of the sines of refraction by Sir Isaac Newton. Dr. Blair has found that certain fluids, particularly such as contain the muriatic-acid, when formed into a prism, will refract the light from H" (in the lower line) so as to form a spectrum R" C' equal to RC,and as far removed from A" as R C is from A, but having the colors .more dilated toward R", and more constipated toward C, than is observed in R C ; so that the ray which was carried by the prism of common glass to the middle point B" considerably nearer to C". Let us now suppose that instead of a white spot at A, we have a prismatic spectrum A B fig. 7, and that the prism of common glass is applied as before, immediately behind tin? prism which forms the spectrum A B. We-lt now that this will be refracted sidewise, ami will make a spectrum R O Y GB PC, inclined to the plane of refraction in an angle of 45° ; so that drawing the perpendicular RC' we have RC'— CC. We also know that the prism of flint glass would refract the spectrum formed by the first prism on EHF, in such a manner that the red ray will go to R, the violet to C, and the intermediate rays to points o,y,g, b,p, v, so situated that O'o is — R' O' of the other figure: Y y is* R'Y', &c. These points must therefore lie in a curve R oygbpvC, which is con-vex toward the axis 11' C'. In like manner we may be assured that Dr. Blair's fluid will form a spectrum R o' y' g b' p v C', concave towards R'C. This is a very good me-thod for discovering whether a medium disperses the light in the same proportion with the prism which is employed for forming the first spectrum A B or E F. It

disperses in the same or in a different proportion, according as the oblique spectrum is straight or crooked ; and the exact proportion corresponding to each color is had by measuring the ordinates of the curves R6C or Rfc'C. Having formed the oblique spectrum RBC by a prism of common glass..

<) 7 o

an equal prism of the same glass, placed in a contrary position, will bring back all the rays from the spectrum R B C to the spectrum A B, laying each color on its former place. In like manner, having formed the oblique spectrum R b C by a prism of flint-glass, we know that another prism of flint-glass, placed in the opposite direction, will bring all the rays back to the spectrum E H F. But having formed the oblique spectrum R B C by a prism in common glass, if we place the flint-glass prism in the contrary position, it will bring the color R back to E, and the color C to F ; but it will not bring the color B to H, but to a point A, such that B h is equal to b H, and b B to h H.~ In like manner, the other colors will not be. brought back to the straight line E H F, but to a curve EAF, forming a crooked spectrum. In like manner the fluids discovered by Dr. Blair when employed to bring back the oblique spectrum R B C, formed by common glass, will bring its extremities back to E and F, and form the crooked spectrum EA'F lying beyond EHF. This experiment evidently gives us another method for examining the proportionality of the dispersion of different substances. Having by common glass brought back the oblique spectrum formed by common glass to its natural place A B, suppose the original spectrum at A B to contract gradually {as Newton has made it to do by means of a lens), it is plain that the oblique spectrum will also contract, and so will the second spectrum at A B ; and it will at last coalesce into a white spot. The effect will be equivalent to a gradual compression of the whole figure, by which the parallel lines AR and B C gradually approach, and at last unite. In like manner when the oblique spectrum formed by flint-glass is brought back to E H F by a flint-glass prism, and the figure compressed in the same

gradual manner, all the colors will coalesce into a white spot. But when flint-glass is employed to bring back the oblique spectrum formed by common glass, it forms the crooked spectrum EAF. Now let the figure be compressed. The curve EAF will be doubled down on the line H h, and there will be formed a compound spectrum H A, quite unlike the common spectrum, being purple or claret colored at H by the mixture of the extreme red and violet, and green edged with blue at A by the mixture of the green and blue. The fluid prisms would in like manner form a spectrum of the same kind on the other side of II. This is precisely what is observed in achromatic object-glasses made of crown glass and flint ; for the reflection from A to R corresponds to the refraction of the convex crown-glass ; and the contrary refraction from R to E corresponds to the contrary refraction of the concave flint-glass, which still leaves a part of the first refraction, producing a convergence to the axis of the telescope. It is found to give a purple or wine-colored focus, and within this a green one, and between these an imperfect white. Dr. Blair found that, when ihe eye-glass was drawn out beyond its proper distance, a star was surrounded by a green fringe, by the green end of the spectrum, which crossed other within the focus ; and, when the eye-glass was too near the object-glass, the star had a wine-colored fringe. The green rays were ultimately most refracted. Dr. Blair very properly calls these spectrums II A and H A secondary spectrums, and seems to think that he is the first who has taken notice of them. But Mr. Clairault was too accurate a mathematician, and ‘too careful an observer, not to be aware of a circumstance which was of primary consequence to the whole enquiry. He could not but observe that the success rested on this very particular, and that the proportionality of dispersion was indispensably necessary. This subject was touched on by Clairault ; and fully discussed by Boscovich, first in his Dissertations, published at Vienna in 1759 ; then in the Comment. Bo-noniensis; and, lastly, in his Opuscula, 1785. Dr. Blair read an ingenious Dissertation on Achromatic Glasses to the Royal Society of Edinburgh in 1793. Boscovich shows how to unite the two extremes with the most outstanding color of the secondary spectrum, by means of a third substance. When we have done this, the aberration occasioned by the secondary spectrums must be prodigiously diminished ; for it is evidently equivalent to the union of the points H and A of our figure. Whatever cause produces this, must diminish the curvature of the arches E A and A F ; but, even if these curvatures were not diminished, their greatest ordinates cannot exceed one-fourth of II A ; and we may say, without hesitation, that, by uniting the mean or most outstanding . ray with the two extremes, the remaining dispersion will be as much less than the uncorrected color of Dol-land’s achromatic

glass, as this is less than four times the dispersion of a common object-glass. It must therefore be altogether insensible. Boscovich asserts, that it is not possible to unite more than two colors by the opposite refraction of two substances, which do not disperse the light in the same proportions. Dr. Blair makes light of this assertion, as he finds it made in general terms in the extract made by Priestly from Boscovich in his Essay on the History of Optics ; but, had he read this author in his own dissertations, he would have seen that he was perfectly right. Dr. Blair, however, hit on % very ingenious and effectual method of producing this union of three colors. In the same way as we correct the dispersion of a concave lens of crown-glass by the opposite dispersion of a concave lens of flint-glass, we may correct the secondary dispersion of an achromatic convex lens by the opposite secondary dispersion of an achromatic concave lens. But this union does not contradict the assertion of Boscovich, because it is necessarily produced by means of three refracting substances. The most essential service which the public has received from Dr. Blair is the discovery of fluid mediums of a dispersive power. By composing the lenses of such substances we are at once freed from the irregularities, in the refraction and dispersion of flint glass, which the chemists have not been able to free it from. In whatever way this glass is made, it consists of parts which differ both in refractive and dispersive power ; and when taken up from the pot these parts mix in threads,

«vhich may be disseminated through the mass in any degree of fineness. But they still retain their properties ; and, when a piece of flint glass has been formed into a lens, the eye, placed in its focus, sees the whole surface occupied by glistening threads or broader veins running across it. Great rewards have been offered for removing this defect, but hitherto to no purpose. We would propose the following method : — Let the glass be reduced to powder, and then melted with a great proportion of alkaline salt, so as to make a liquor silicum. When precipitated from this by an acid, it must be in a state of very uniform composition. If again melted into glass we should hope that it would be free from this de-fect ; if not, the case seems to be desperate.

But by using a fluid medium Dr. Blair was free from all this embarassment ; and he acquired another immense advantage, that of adjusting at pleasure both the refractive and dispersive powers of his lenses. In solid lenses we do not know whether we have taken the curvatures suited to the refractions till our glass is finished; and, if we have mistaken the proportions, all our labor is lost. But when fluids are used it is enough that we know nearly the refractions. We suit our focal distances to these, and then select our curvatures, so as to remove the aberration of figure, preserving the focal distances. Thus, by properly tempering the fluid mediums, we bring the lens to agree precisely with the theory, perfectly achromatic and the aberration of figures as much corrected*as is possible. Dr. Blair examined the refractive and dispersive powers of a great variety of substances, and found great varieties in their actions on the different colors. This was indeed to be expected. There is no doubt now among naturalists about the mechanical connexion of the phenomena of nature ; and all agree that the chemical actions of the particles of matter are perfectly like in kind to the action of gravitating bodies; that all these phenomena are the effects of forces like those which we call attractions and repulsions, and which we observe in magnets and electrified bodies ; that light is refracted by forces of the same kind, but differing chiefly in the small extent of their sphere of activity. One who views things in this way will expect that as the actions of the same acid for the different alkalies are different in degree, and as the different acids have also different actions on the same alkali, in like manner different substances differ in their general refractive powers, and also in the proportion of their action on the different colors. Nothing is more unlikely, therefore, than the proportional dispersion of the different colors by different substances. Common glass disperses the rays in such a manner that the ray which is in the cosine of the green and blue occupies the middle of the prismatic spectrum ; but in glasses, and many other substances which are more dispersive, this ray is nearer to the ruddy extremity of the spectrum. While, therefore, the straight line RC', fig. 7, terminates the ordinates O o', Y Y,' Gg', &c., which represent ;*»« dispersion of common glass, the ordinates which express the dispersions of these substances are terminated by a curve passing through II and C', but lying

below the line R C1. When, therefore, parallel heterogeneous light is made to converge to the axis of a convex lens of common glass, as happens at F in fig. 5, C, the light is dispersed, and the violet rays have a shorter focal distance. If we now apply a concave lens of greater dispersive power, the red and violet rays are brought to one

focus F' ; but the green rays, not beiiuj so much refracted away from F, are left behind at <j>, and have now a shorter focal distance. But Dr. Blair afterwards found that this was not the case with the muriatic acid, and some solutions in it. He found that the ray which common glass caused to occupy the middle of the spectrum was much nearer to the blue extremity when refracted by these fluids. Therefore a concave lens formed of such fluids which united the red and violet rays in F' refracted the green rays tof. Having observed this, it was an obvious conjecture that a mixture of some of these fluids might produce a medium, whose action on the intermediate rays should have the same proportion that is observed in common glass ; or that two of them might be found which formed spectra similarly divided, and yet differing sufficiently in dispersive power to enable us to destroy the dispersion by contrary refractions, without destroying the whole refraction. Dr. Blair accordingly found a mixture of solutions of ammoniac.*! and mercurial salts, and also some other substances which produced dispersions proportional to that of glass, with respect to the different colors. We have examined one of his telescopes : the focal distance of the object-glass did not ex-ceed seventeen inches, and the aperture was fully three inches and a half. We viewed some single and double stars and some common objects with this telescope, and found that in magnifying power, brightness, and distinctness, it was manifestly superior to one of Mr. Dollond's of forty-two inches focal length. It also gave us an opportunity of admiring the dexterity of the London artists, who could work the glasses with such accuracy. We had most distinct vision of a star when using an erecting eye-piece, which made this telescope magnify more than 100 times; and we found the field of vision as uniformly distinct as with Dollond's forty-two inch telescope magnifying forty-six times. The intelligent reader must admire the nice figuring and centering of the very deep eye-glasses which are necessary for this amplification.

Methods of conducting und correcting the eye-glasses.— The proper construction of an eye-piece is not less essential than that of the object-glass. But our limits will not allow us to treat this subject in the same detail, having already extended this article to a sjreat length. Our readers will find abundant information in Dr. Smith's Optics concerning the eye'-glasses, chiefly deduced from Huyghens's fine theory of aberration. At the same time we must again pay Mr. Dollond the merited compliment of saying, that he was the first who made any scientific application of this theory to the compound eye-piece for erecting the object. His eye-pieces of five and six glasses are very ingenious reduplications of Huyghens's eye-piece of two glasses, and would probably have superseded all others had not his

discovery of achromatic object-glasses caused opticians' to consider the chromatic dispersion with more attention, and pointed out methods of correcting it in the eye-piece without any compound eye-glasses. They have found that this may be more conveniently done with four eye-glasses, without sensibly diminishing the advantages which liuyghens showed to be the result from employing many small refractions instead of a lesser number of great ones. As this is a very curious subject, we shall endeavour to make our readers fully acquainted with it, and content ourselves with merely mentioning the principles of the other rules for constructing an eye-piece. If A B, fig. 8, plate I , be a lens, R a radiant point of focus of incident rays, and a the focus of parallel rays coming from the opposite side; then, 1. Draw the perpendicular a a' to the axis, meeting the incident ray in «', and a' A to the centre of the lens. The refracted ray B F is parallel to a A ; for R a' : a A (= R a : a A) = R B : B F (= R A : A F), which is the focal theorem. 2. An oblique pencil B P b, proceeding from any point P .which is not in the axis, is collected to the point *, where the refracted ray B F cuts the line P A* ' drawn from P through the centre of the lens ; for P a : «' A = P B : B /", which is also the focal theorem.

The principle of the common astronomical telescope may now be exhibited. See fig. 9. The beam of parallel rays, inclining to the axis, is made to converge to a point G, where it forms an image of the lowest point of a very distant object. These rays, decussating from G, fall on the eye-glass ; the ray from the lowest point B of the object-glass falls on the eye-glass at b ; and the ray from A falls on a ; and the ray from the centre O falls on o. These rays are rendered parallel, or nearly so, by refraction through the eye-glass, and take the direction b i', o I, u i. If the eye be placed so that this pencil of parallel rays may enter it, they converge to a point of the retina, and give distinct vision of the lowest point of the object. It appears inverted, because the rays by which we see its lowest point come in the direction which in simple vision is connected with the upper point of an object. They come from above, and therefore are thought to proceed from above. We see the point as if situated in the direction I o. In like manner the eye placed

at I sees the upper point of the object in the directwn I P, and its middle in the direction I E. Trie proper place for the eye is I : if brought much nearer the glass, or removed much farther from it, some, or the whole, of this extreme pencil of rays will not enter the pupil. It is therefore of importance to determine this point. Because the eye requires parallel rays for distinct vision, it*s plain that F must be the principal focus of the eye-glass. Therefore, by the common focal theorem, O F : O E = O E : 0 I or O F : F E = O E : E I. The magnifying power being measured by the magnitude of the visual angle, compared with the magnitude of the visual angle with the naked eye, we have

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the line O E, joining the centres of the lenses, and perpendicular to their surfaces, is called the axis of the telescope, so the ray O G is called the axis of the oblique pencil, being really the axis of the cone of light which has the object-glass for its base. This ray is through its whole course the axis of the oblique pencil ; and, when its course is determined, the amplification, the field of vision, the apertures of the glasses, are all determined. For this purpose we have only to consider the centre of the object-glass as a radical point, and trace the process of a ray from this point through the other glasses; this will be the axis of some oblique pencil. It is evident, therefore, that the field of vision depends on the breadth of the eye-glass. Should we increase this, the extreme pencil will pass through I, because O and I are still the conjugate foci of the eye-glass. On the other hand the angle resolved on for the extent of field of vision gives the breadth of the eye-glass. For all optical instruments there ‘must be two optical figures considered. The first shows the progress of a pencil of rays coming from one point of the object. The various focuses of this pencil show the places of the different images, real or virtual. Such a figure is formed by the three rays A G a i’, O G o I, B G b i. The second shows the progress of the axis of the different pencils proceeding through the centre of the object-glass. The focuses of this pencil of axes show the places where an image of the object-glass is formed ; and this pencil determines the field of vision, the apertures of the lenses, and the application or magnifying power. The three rays O G o I, O F E I, O H P I, form this figure. See also fig. 1 4, where the progress of both sets of pencils is more diversified. The perfection of a telescope is to represent an object in its proper Aape, distinctly magnified, with a great field of vision, and sufficiently bright. But there are limits to all these qualities; and an increase of one of them, for the most part, diminishes the rest. The brightness depends on the aperture of the object-glass, and will increase in the same proportion, because ii’ will always be to A B in the proportion of E F to F O, till the diameter of the emergent pencil is equal to that of the pupil of the eye. Increasing the object-glass any more, can send no more light into the eye. But we cannot make the emergent pencil nearly so large as this when the telescope magnifies much ; for the great aperture of the object-glass produces an indistinct image at G F, and its indistinctness is magnified by the eye-glass. A great field of vi-sion is incompatible with the true

shape of the object ; for since the ang'cs of the marginal parts are enlarged by the aberration of the eye-glass, the marginal parts themselves will appear enlarged, or the object appear distorted. Thus a chess board, viewed through a reading glass, appears drawn out at the corners, and the straight lines are all changed into curves. The circumstance which most peremptorily limits the extent of field is the necessary distinctness. If the vision be indistinct, it is useless, and no other quality can compensate this defect. The distortion is very inconsiderable in much larger angles of vi-sion than we can admit, and it is unworthy of the attention paid to it by optical writer;. They

nave been induced to take notice of it, because the means of correcting it, in a considerable de-gree, are attainable, and afford an opportunity of exhibiting their knowledge ; whereas the indistinctness which accompanies a large field is a subject of most difficult discussion, and has hitherto baffled all their efforts to express by any intelligent or manageable formulae. This subject must, however, be considered. The image at GF, fig. 9, of a very moderate object, is not a plain surface perpendicular to the axis of the telescope, but is nearly spherical, having O for its centre. If a number of pencils of parallel rays crossing each other in I fall on the eye-glass, they will form a picture on the opposite side, in the focus F. But this picture will by no means be flat, nor nearly so, but very concave towards E. Its exact form is of most difficult investigation. The elements of it are given by Dr. Barrow. Therefore it is impossible that the picture formed by the object-glass can be seen distinctly in all its parts by the eye-glass. Even if it were flat, the points G and H, fig. 9, are too far from the eye-glass when the middle F is at the proper distance for distinct vision. When, therefore, the telescope is so adjusted that we have distinct vision of the middle of the field, in order to see the margin distinctly we must push in the eye-glass ; and, having so done, the middle of the field becomes indistinct. When the field of vision exceeds 12° or 15°, it is not possible by any contrivance to make it tolerably distinct all over; and we must-turn the telescope successively to the different parts of the field that we may see them agreeably. The cause of this

indistinctness is the shortness of the lateral foci of lateral and oblique pencils refracted by the eye-glass. But the determination is not complete, and relates only to those rays which are in a plane passing tlnongh tlie axis of the lens. But the oblique pencil b G «, fig. 9, by which an eye placed at I sees the point G of the image, is a cone of light having a circular base on the eye-glass, of which circle a b is one of the diameters. There is a diameter perpendicular to this, which, in this figure, is represented by the point a. Figs. 10 and 11, represents the base of the cone as seen by an eye placed in the axis of the telescope, with the object-glass as appearing behind it. The point b is formed by a ray which comes from the lowest point B of the object-glass, and the point a is illuminated by a ray from A. The point c at the right hand of the circular base of this cone of light came from the point C on the left side of the object gla3s ; and the light comes to d from D. Now the laws of optics demonstrate that the rays which corne through the points c and (fare more convergent after refraction than the rays which come through a and b. The analogies, therefore, which ascertain the foci of rays lying in planes passing through the axis do not determine the foci of the others. Of this we may be sensible by looking through a lens to a figure on which are drawn concentric circles crossed by radii. When the telescope is so adjusted that we see distinctly the extremity of one of the radii, we shall not see distinctly the circumference which crosses the extremity with equal distinctness, and vice versa. This difference, however, between the foci of the rays which come through a and b, and those which conic through c and d, is not considerable in the fields of vision which are otherwise admissible. But the same difference of foci obtains also with respect to the dispersion of light, and is more remarkable. Both d'Alembert and Euler have attempted to introduce it into their formula;; but they have made them useless for any practical purpose by their inextricable complication. This must serve as a general indication of the difficulties which occur in the construction of telescopes, even although the object-glass wero perfect, forming an image without the smallest confusion or distortion. There is yet another difficulty. The rays of the pencil aGb, fig. 9, when refracted through the eye-glass, are "also separated into their component colors. The edge of the lens must evidently perform the office of a prism, and the white ray G b will be so dispersed that, if bi be the path of its red ray, the violet ray, which makes another part of it, will take such a course b n that the angle i'bn will be nearly one-twenty-seventh of G b i'. The ray G a, passing through a part of the lens whose surfaces are less inclined to each other, will be less refracted, and will be less dispersed in the same proportion very nearly; therefore the two violet rays will be very nearly parallel when the two red rays are rendered parallel. Hence it

must happen that the object will appear bordered with colored fringes. A black line, seen near the margin on a white ground, will have a ruddy and orange border on the outside, and a blue border within; and this contusion is altogether independent on the object-glass, and is so much the greater as the visual angle b I E is greater. Such are the difficulties ; they would be insurmountable were it not that some of them are so connected that, to a certain extent, the diminution of one is accompanied by a diminution of the other. The point G is very nearly in the caustic formed by a beam of light consisting of rays parallel to I o, and occupying the whole surface of the eye-glass, because the pencil of rays which are collected at G is very small. Any thing therefore that diminishes the mutual inclination of the adjoiniag rays puts their concourse farther off. Now this is precisely what we want; for the point G of the image formed by the object-glass is already beyond the focus of the oblique slender pencil of parallel rays iu and i' b ; and therefore, if we could makethis focus goa little farther from a and b, we shall bring it nearer to G, and obtain more distinct vision of this point of the object. Now let it be recollected that, in moderate refractions through prisms, two rays which are inclined to each other in a small angle are, after refraction, inclined^ to each other in the same angle; therefore, if we can diminish^the aberration of the ray a i or o I, or b i', we diminish their mutual inclination, and consequently the mutual inclination of the rays G <z, G o, G b', and therefore lengthen the focus, and get more distinct vision of the point G. Therefore we at once correct the distortion and the indistinctness ; and this is the aim of Mr. lluyghens's great principle of dividing the refractions. The general method is as follows :— Let o be the object-glass

(fig. 12) and E the eye-giass of a telescope, and F their, common focus, and F G the image form-ed by the object-glass. The proportion of their focal distances is supposed to be such as gives as great a magnifying power as the perfection of the object-glass will admit. Let B I be the axis of the emergent pencil. It is known by focal theorem that G E is parallel to B I ; therefore B G E is the whole refraction or deflection of

the ray O H B from its former direction. Let us diminish the aberrations by dividing this into two parts by means of two glasses D and e, so as to make the ultimate angle of vision bie equal to BIE, and thus retain the same magnifying power and visible field. Let us divide it into the parts B G C and C G E. From G draw any line G D to the axis towards O ; and draw the perpendicular D H, cutting O G in H ; draw H c parallel to G C, cutting G D in g ; draw gf perpendicular to the axis, and g e parallel to G E ; draw eb perpendicular to the axis ; draw D S parallel to G C, and S d perpendicular to the axis. Then if there be placed at D a lens whose focal distance isDrf, and another at e whose focal distance is ef, the thing is done. The ray O H will be refracted into H b, and this into b i parallel to B I. The demonstration of this construction is so evident, by means of the common focal theorem, that we need not repeat it. We have the same magnifying power, and the same field of vision ; we have less aberration, and therefore less distortion and indistinctness; and this is brought about by a lens H D of a smaller aperture and a greater focal distance than B E. Consequently, if we are contented with the distinctness of the margin of the field with a single eye-glass, we may greatly increase the field of vision ; for if we increase D H to the size of E B we shall have a greater field, and much greater distinctness in the margin; because II D is of a longer focal distance, and will bear a greater aperture, preserving the same distinctness at the edge. On this account the glass H D is commonly called the field-glass. It must be observed here, however, that although the distortion of the object is lessened, there is a real distortion produced in the image fg. But this, when magnified by the glass e, is smaller than the distortion produced by the glass E, of greater aperture and shorter focus, on the undistorted image GF. But, because there is a distortion in the second image fg, this construction cannot be used for the telescopes of astronomical quadrants, and other graduated instruments, because then equal divisions of the micrometer would not correspond to equal angles. But the same construction will answer in this case, by taking the point 1) on that side of F which is remote from O (fig. 13;. This is the form now employed in the telescopes of all graduated instruments. The great refractions which take place on the eye-glasses occasion very considerable dispersions, and disturb the vision by fringing every thing with colors. To remedy this, achromatic eye-glasses may be employed, constructed by the rules already delivered. This construction, however, is incomparably more intricate than that of object-glasses; for the equations must involve Jlic-distance of the radiant point, and be more

complicated ; and this complication is immensely increased on account of the great obliquity of the pencils. Fortunately the Huyghenian construction of an eye-piece enables us to correct this dispersion to a great degree of exactness. By it we may free the eye-glasses from the greatest part of the effect of dispersion. We may do it entirely by pushing the eye-glass a little nearer to the field-glass. This will render the violet rays a little divergent from the red, so as to produce a perfect picture from the bottom of the eye. But by doing so we have hurt the distinctness of the whole picture. We remedy this by drawing both glasses out a little, and the telescope is made perfect.

Presuming that the reader is now pretty familiar with the different circumstances which must be considered in the construction of an eye-piece, we proceed to consider those which must be employed to erect the object. This may be done by placing the lens which receives the light from the object-glass in such a manner that a second image (inverted with respect to the first) may be formed beyond it, and this may be view-ed by an eye-glass. But, besides many other defects, it tinges the object prodigiously with color. But the common day telescope, invented by F. Rheita, has, in this respect, greatly the ‘ advantage of the above. This telescope may be improved by substituting for the eye-glass ik (fig. 7) the Huyghenian double eye-glass, or field-glass and eye-glass, figs. 12 and 13; and the first of these may be improved and rendered achromatic. This will require the two glasses af and g A to be increased from their present dimensions to the size of a field-glass, suited to the magnifying power of the telescope, supposing it an astronomical telescope. Thus we shall have a telescope of four eye-glasses. The first three will be of a considerable focal distance, and two of them will have a common focus. But this is considerably different from the eye-piece of four glasses which are now used, and are far better. We are indebted for them to Mr. Dollond, who was a mathematician as well as an artist, and in the course of his research discovered resources which had not been thought of. He had not then discovered the achromatic object-glass, and was busy in improving the eye-glasses by diminishing their spherical aberration. His first thought was to make the Huyghenian addition at both the images of the day telescope. This suggested to him the following eye-piece of five glasses. Fig. 14 represents this eye-piece, but there is not room for the object-glass at its proper distance. A pencil of rays coming from the upper point of the object is made to converge (by the object-glass) to G, where it would form a picture of that part of the object. But it is intercepted by the lens A a, and its axis is bent towards the axis of the telescope in the direction a b. At the same time the rays which converged to G con verge to g, and there is

formed an inverted picture of the object at gf. The axis of the pencil is again refracted at b, crosses the axis of the telescope in H, is refracted again at c, A.d, and at e,‘and at last crosses the axis in I. The rays of this pencil, diverging from g, are made less diverging, and proceed as if they came from

g’, in the line Bgg’. The lens c C causes them to converge tog’, in the line G’Cg’. The lens d D makes them converge still more to G”, and there they form an erect picture G” F”; diverging from G”, they are rendered parallel by the refraction at e. At H the rays are nearly parallel. Had the glass B b been a little farther from A, they would have been accurately so, and the object-glass, with the glasses A and B, would have formed an astronomical telescope with the Huyghenian eye-piece. The glasses C, D, and E, are intended merely for bending the rays back again till they again cross the axis in I. The glass C tends chiefly to diminish the great angle B H b ; and then the two glasses D and E are another Huyghenian eye-piece. The art in this construction lies in the proper adjustment of the glasses, so as to divide the whole bending of the pencil pretty equally among them, and to form the last image in the focus of the eye-glass, and at a proper distance from the other glass. Bringing B nearer to A would bend the pencil more to the axis. Placing C farther from B would do the same thing; but this would be accompanied with more aberration, because the rays would fall at a greater distance from the centres ‘of the lenses. The greatest bending is made at the field-glass D ; and we imagine that the telescope would be improved, and more distinct at the edges of the field, by employing another glass of great focal distance between C and D. There is an image formed at H of the object-glasses, and the whole light passes through a small circle in this place. It is usual to put a plate here pierced with a hole which has the diameter of this image. A second image of the object-glass is formed at I, and indeed wherever the pencils cross the axis. A lens placed at H makes no change in any of the angles, nor in the magnifying power, and affects only the place where the images are formed. And, on the other hand, a lens placed at _/) or F”, where a real image is formed, makes no change in the places

of the images, but affects the mutual inclination of the pencils. This affords a resource to the artist, by which he may combine properties which seem incompatible. The aperture of A determines the visible field and all the other apertures. We must avoid forming a real image, such as f g, or F" G", on or very near any glass. For we cannot see this image, without seeing along with it every particle of dust and every scratch on the glass. We see them as making part of the object when the image is exactly on the glass, and we see them confusedly, and so as to confuse the object, when the image is near it. For, when the image is on or very near any glass, the pencil of light occupies a very small part of its surface, and a particle of dust intercepts a great proportion of it. Tliis construction will not do for the telescope of graduated instruments, because the micrometer cannot be applied to the second image fg, on account of its being a little distorted. Also the interposition of the glass C makes it difficult to correct the dispersion . By proper reasoning from the correction in the Huyghenian eye-piece, we are led to the best construction of one with three glasses. Let PA (fig. 15) be the glass

which first receives the light proceeding from the image formed by the object-glass, and let OP be the axis of the extreme pencil. This is refracted into P II, which is again refracted into R r by the next lens B r. Let b be the focus of paralle. rays of the second lens. Draw P B ?•. We know that A 6 : b B zz P B : B r, and that rays of one kind diverging from P will be collected at r. But if PR, PV, be a red and a violet ray, the violet ray will be more refracted at V, and will cross the red ray in some intermediate point g of the line R r. If therefore the first image had been formed precisely on the lens PA, we should have a second image at fg free from all colored fringes. If the refractions at P and It are equal (as in the common day telescope), the dispersion at V must be equal to that at P, or the angle v V r zz VPR. But we have ultimately R P V : Rr V — EC : A B (zz B b : A b by the focal theorem) ; therefore g V r : g r V (or g r : g V, or C/:/B)zzB b : A 6, and AB : A b — R r '. R g. This shows the advantage of the common day telescope. In this AB zz 2 A b, and tlierc-fore_/"is the place of the last image which is free from colored fringes. But this image will not be seen free from colored fringes through the eye-glass C r, if *' be its focus ; for had g r, g v, been both red rays, they would have been parallel after refraction; but g v, being a violet ray, will be more refracted. It will not indeed be so much deflected from parallelism as the violet ray, which naturally accompanies the red ray to r, because it falls nearer the centre. By computation its dispersion is diminished about one-seventh. That g v may be made parallel to g r, after refraction, the refraction at r must be such*

that the dispersion corresponding to it may be of a proper magnitude. Let the dispersion at g be to the dispersion produced by the refraction at r (which is required for producing the intended magnifying power) as 1 to 9. Make 9 : 1 =.'./' -f C zz *'C : CD, and draw the perpendicular 1) r' meeting the refracted r r in r'. Then we know, by the common focal theorem, that if* ' be the focus of the lens C r, red rays diverging from g will be united in r'. But the violet ray g v will be refracted into v v parallel to r r'. For the angle v r r : v g r zz (ultimately) fC : C D zz 9:1. Therefore the angle v r' r is equal to the dispersion produced at r, and therefore equal to r' v v', and v v is parallel to r r . But by this we have destroyed the distinct vision of the imaˆe formed at fg, because it is no longer at the focus of the eye-glass. But distinct vision will be restored by pushing the "lasses nearer to the object-glass. This makes the rays of each particular pencil more divergent after refraction through A, but scarcely makes any chant;*' in the directions of the pencils themselves. Thus the image comes to the focus /", and makes no sensible change in the dispersions. In the common day telescope, the first image is formed in the anterior focus of the first eye-glass, and the second image is at the anterior focus of the last eye-glass. If we change this last for one of half the focal distance, and push in the eye-piece till the image formed by the object-plass is half way between the first eye-glass and its focus, the last image will be formed at the focus of the new

eye-glass, and the eye-piece will be achromatic. This is easily seen by making the usual computations by the focal theorem. But the visible field is diminished, because we cannot give the same aperture as before to the new eye-glass ; but we can substitute for it two eye-glasses, like the former, placed close together. This will have the same focal' distance with the new one, and will allow the same aperture that we had before. On these principles may be demonstrated the correction of color in eye-pieces with three glasses of the following construction. Let the glasses A and B be placed so that the posterior focus of the first nearly coincides with the anterior focus of the second, or rather so that the anterior focus of B may be at the place

where the image of the object-glass is formed, by which situation the aperture necessary for transmitting the whole light will be the smallest possible. Place the third, C, at a distance from the second, which exceeds the sum of their focal distances by a space which is a third proportional to the distance of the first and second, and the focal distance of the second. The distance of the first eye-glass from the object-glass must be equal to the product of the focal distance of the first and second divided by their sum. Let O o, A a, B 6, C c, the focal distances of the glasses, be O, a, b, c. n make A B — a -f-b nearly ; B C ~ b -f-c +

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nifying power will be ~ — ; the equivalent eye-

(I C

glass = -7-; and the field of vision = 3438’ x

Aperture of A _,,

- — r. Ihese eye-pieces will admit the

toe. dist. ob. gl.

use of a micrometer at the place of the first image, because it has no distortion.

Mr. Dollond was anxious to combine this achromatism of the eye-pieces with the advantages which he had found in the eye-pieces with five glasses. This eye-piece of three glasses necessarily has a very great refraction at the glass B, where the pencil which has come from the other side of the axis must be rendered again convergent, or at least parallel to it. This occasions considerable aberrations. This may be avoided by giving part of this refraction to a glass put between the first and second, in the same way as he has done by the glass B put between A and C in his five glass eye-piece. But this deranges the whole process. His ingenuity, however, surmounted this difficulty, and he made eye-pieces of four glasses, which seem as perfect as can be desired. If we make the rays of different colors unite on the surface of the field-glass, the thing will be done, because the dispersion from this point of union will then unite with the dispersion produced by this glass alone; and this increased dispersion may be corrected by the last eye-glass in the way already shown. Therefore let A, B (fig. 16, plate I.), be the stations which we have fixed on for the first and second eye-glasses, in order to give a proper portion of the whole refraction to the second glass. Let 6 be the anterior focus of B. Draw P B r through the centre of B. Make A b

: b B = A B : B K. Draw the perpendicular K r, meeting the refracted ray in r. By the focal theorom, red rays diverging from P will converge to r ; but the violet ray P V, being more refracted, will cross R r in

some point g. Drawing the perpendicular f g, we get j” for the proper place of the field-glass. Let the refracted ray K r, produced backwards, meet the ray O P coming from the centre of the object-glass in O. Let the angle of dispersion R P V be called p, and the angle of dispersion at V, that is r \ v, be v, and the angle V r R be r. It is evident that OR : O P — p : v, because the dispersions are proportional to the sines of the refractions, which, in this case, are very nearly as the refractions themselves. Let OP/ op

OR vOI > ~

— m p ; also p : r — B K :AB — b B : A b,

Ab Ab

and r zz p. ˆ g or, making — ~ n, r — n p;

op p B\

»~B01/7~B/

be made ~ m. Then v

_ p_B A_6 _ *b B : 13 6’*

therefore v : r — m : n, — r-rr : m , ~ p B

A b. The angle RgV — gVr-f-gr V — p. m -f-n ; and R g V : R r v — R r : R g, or m

+ n : n — R r : R g, and R g — R r

But R r is ultimately — B K = A B — T r = •

A b r.

AB n AB

Therefore Rg — X — — — , and

n m -f-n m -- n

A R

Bf — ~- . This value of B f is evidently

m + n

AB

= 6B x-

. Now b B being a con-p B -(- A b slant quantity, while the glass Bis the same, the

place of union varies with — ˆ — • r—r. If we p B + A 6

remove B a little farther from A, we increase AB, and p B, and A b, each by the same quantity. This evidently diminishes B f. On the other hand, bringing B nearer to A increases B f. If we keep the distance between the glasses the same, but increase the focal distance b B, we augment B/j because this change augments the numerator and diminishes

6B xAB the denominator of the fraction — ˆj—. — T-J-,

p B + A b •

Thus we can unite the colors at what distance we please, and consequently in the place of the intended field-glass, from which they will diverge with an increased dispersion, *viz.* with the dispersion competent to the refraction produced there, and the dispersion p X m + n conjoined. It only remains to determine the proper focal distances of the field-glass and eye-glass, and the place of the eye-glass, so that this dispersion may be finally corrected. This is an indeterminate problem, admitting of an infinity of solutions. We shall limit it by an equal division of the two remaining: refractions, which are necessary to produce the intended magnifying power. This construction has the advantage of diminishing the aberration. Thus we know the two refractions, and the dispersion competent to each ; it being nearly one-twenty-seventh of the refraction.

Call this q. The whole dispersion at the field-glass consists of q, and of the angle K g V of fig. 16 which we also know to be — p x m + n. Call their sum s. Let fig. 17 represent this addition to the eye-piece. C g is the field-glass coming in the place of f g of fig. 19, and R g w is the red ray coming from the glass B R. Draw g s parallel to the intended emergent pencil from the eye-glass; that is, making the angle Csg •with the axis correspond to the intended magnifying power. Bisect this angle by the line g K. Make s g : g q — s : q, and draw q K, cutting C g in t. Draw tS D, cutting g *c in S, and the axis in D. Draw S d and D r perpendicular to the axis. Then a lens placed in D, having the focal distance D d, will destroy the dispersion at the lens g c, which refracts the ray g w into g r. Let g v be the violet ray, making the angle v g r — s. By the common optical theorem, gr will be refracted into rr parallel to S D. Draw g D r’ red rays g r g v, will be united in r. But the violet ray g v will be more refracted, and will take the path v v\ making the angle of dispersion r’ v v’ — q, very nearly, because the dispersion at v does not sensibly differ from that at r. Now, in the small angles of refraction which obtain in optical instruments, the angles r r’ v, r gv, are very nearly as g r and r r, or as g D and D* , or as CD and DT; which, by the focal theorem, are as C d and d D ; that is, D d : d c = r g v : r r’ v. But D d : d C = D 5 : $ t, = ± s g : g q = s : q. But r g v — s; therefore /• r’ v = q, = r v v\ rmd v v’ is parallel to r r’, and the whole dispersion at g is corrected by the lens D r. The focal distance C c of C g is had by drawing C K parallel to K g, meeting R g in K, and drawing K c perpendicular to the axis. It is easy to see that this elegant construction is not limited to the equality of the refractions w g r, Kr r’. In whatever proportion the whole refraction w g s is divided, we always can tell the proportion of the dispersions which the two refractions occasion at g and r, and can therefore find the values of s and q. Indeed this solution includes the problem above stated. In it some quantities and ratios are assumed as equal which are not strictly so, in the same manner as in all the elementary optical theorems. The parallelism, however, of v v’ and rr may be made accurate, by pushing the lens D r nearer to C g, or retiring it from it. We may also, by pushing it still nearer, induce a small divergency of the violet ray, so as to produce accurate vision in the eye, and may thus make the

vision through a telescope more perfect than with the naked eye, where dispersion is by no means avoided. It would therefore be an improvement to have the eye-glass in a sliding tube for adjustment. Bring the telescope to distinct vision ; and, if any color be visible about the edges of the field, shift the eye-glass till this color is removed. The vision may now become indistinct; but this is corrected by shifting the place of the whole eye-piece. In examining the progress of a red and a violet ray through many eye-pieces of 1)ollond's and Ramsden's best telescopes, in all of them the colors are united on or very near the field-glass. We mee1 'with many made by other artists, where a considerable degree of color remains, sometimes

in the natural order, and often in the contrary order. This must happen in the hands of mere imitators, ignorant of principle.

Fig. 18 represents the eye-piece of a very finr spy-glass by Mr. Ramsden : the focal length of its object-glass is eight inches and a half, with IjLth of aperture, 2° 05' of visible field, and 15-4 magnifying power. The distances and focal lengths are of their proper dimensions, but the apertures are half larger, that the progress of a lateral pencil might be more distinctly drawn. The dimensions are' as follow: foe. lengths A« = 0-775 B b =1-025 Ccrz.1-01 D d =. 0-79 distances. ABrr M8 BC:= 1-83 C D — 1-05. It is perfectly achromatic, and the colors are united, not precisely at the lens C g, but about one-twentieth of an inch nearer the eye-glass. This combination of glasses may be used °as a microscope; for if, instead of the image formed by the object-glass at FG, we substitute a small object, illuminated from behind, as in compound microscopes ; and if we draw the eye-piece a very small way from this object, the pencils of parallel rays emergent from the eye-glass D will become convergent to very distant points, and will there form an inverted and enlarged picture of the object, which may be viewed by a II uyghenian eye-piece ; and we may thus get high magnifying powers without using very deep glasses. The eye-piece, of which we have given the dimensions, in this way might be made to magnify 180 times with very great distinctness. When used as the magnifier of a solar microscope, it surpasses every thing we have seen. The picture formed by a solar microscope is generally very indistinct ; but with this magnifier it seemed perfectly sharp. The only thing which remains to be considered in the theory of refracting telescopes is the forms of the different lenses. Hitherto we have had no occasion to consider any thing but their focal distances ; but their aberration depends greatly on the adjustment of their forms to their situations. When the conjugate focuses of a lens are determined by the

service which it is to perform, there is a certain form or proportion between the curvatures of their anterior and posterior surfaces, which will make their aberrations the smallest possible. We obtain this formula for a, the radius of curvature for

1 2 r/r 4-iti

the anterior surface of a lens. — zz — - -f-u 2 m -)- 4

4 m -4-4

— , where m is the ratio of the sine of in-2 (m) r

cidence of the sine of refraction, and r is the distance of the focus of incident rays, positive or negative, according as they converge or diverge, all meeting r r' and join v r'. By the focal theorem two measured on a scale of which the unit is n, zr half of the radius of the equivalent isosceles lens. It will be sufficiently exact for our purpose to suppose m zz 3 fj 1

-— , though it is more nearly • — . In this case

o ' 6 J on

2

1 _ b 10 _ 42 r + 70

20

7r'

49 r

49;-

And — zˆ I , nr

Therefore 1 — H

70’ ” b

example, let it be required to

For

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curvature in inches for the eye-glass be, fig. 12, which we shall suppose of one inch and a half focal distance, and that e c (~ /•) is 3ˆth inches. The radius of curvature for the equivalent isosceles lens is 1-5, and its half is 0‘75. There—

3J fore r~ — ˆ-, n; 5, and our formulae is a —

‘

49 X 5 _

42 X 5 + 70 ‘ ~~ 1— a 0-125

245 1

-, — 0-875; and r-rz o

280

and b =

0-875

-, = 7. These

a ‘ ~ 0-875’ ‘ 0-1-25

values are parts of a scale, of which the unit is 0-75 inches. Therefore

a, in inches, = 0‘875 X 0-75, = 0-65525

b, in inches, = 7 X 0-75. = 5‘25.

And here we must observe that the posterior surface is concave ; for 6 is a positive quantity, because 1 — a is a positive quantity as well as a; therefore the centre of sphericity of both surfaces lies beyond the lens. And this determi nation is nearly the same with the usual practice, which commonly makes this lens a plane convex with its flat side next the eye ; and there will not be much difference in the performance jf these two lenses ; for in all cases of maxima and minima, even a pretty considerable change of the best dimensions does not make a sensible change in the result. The same consideration .eads to a rule which is very simple, and sufficiently exact for ordinary situations. This is to make the curvature such, that the incident and emergent pencils may be nearly equally inclined to the surfaces of the lens. Thus, in the eye-piece with five glasses, A and B should be most convex on their anterior sides; C should be most convex on the posterior side ; D should be nearly isosceles; and E nearly plano-convex. Bui this is not so easy as it appears at first sight. The lenses of an eye-piece have not only to bend the several pencils of light to and from the axis of the telescope ; they have also to form images on the axis of these pencils. These offices frequently require opposite forms. Thus the glass A, of fig. 18, should be most convex on the side next the object, that it may produce little distortion of the pencils. But it should be most convex next the eye, that it may produce distinct vision of the image F G, which is very near it. This image should have its concavity turned towards A, whereas it is towards the object-glass. We must therefore endeavour to make the vertical image fg flatter, or even convex. This requires a glass very flat before and convex behind. For similar reasons the object-glass of a microscope and the simple eye-glass of an astronomical telescope should be formed the same way. This is a subject of most difficult discussion, and requires a theory which few of our readers would relish; nor do our limits afford

room for it. The artists are obliged to grope their way. The proper method of experiment would be, to make eye-pieces of large dimensions, with extravagant apertures to increase the aberrations, and to provide for each station A, B, C, and D, a num-ber of lenses of the same focal distance, but of different forms ; and we would advise making the trial in the way of a solar microscope, and to have two eye-pieces on trial at once. Their

pictures can be formed on the »ame screen, and accurately compared ; whereas it is difficult to keep in remembrance the performance of one eye-piece, and compare it with another. We have now treated the theory of refracting telescopes with considerable minuteness. \e can-not add any thing to what Dr. Smith has delivered on the theory of reflecting telescopes. There appears to be the same possibility of correcting the aberration of the great speculum by the contrary aberration of a convex small speculum, that we have practised in the compound object-glass of an achromatic refracting telescope. But this cannot be,, unless we make the radius of the convex speculum exceedingly large, whicli destroys the magnifying power and the brightness. This therefore must be given up. Indeed theii performance, when well executed, does already surpass all imagination. Dr. Herschel has found great advantages in what he calls the front view, not using a plane mirror to throw the pencils to one side. But this cannot be practised in any but telescopes so large that the loss of light, occasioned by the interposition of the observer's head, may be disregarded. Nothing remains but to describe the mechanism of some of the best.

We may commence with the reflecting telescope. This was an important improvement on the long and unwieldy refractors, which were in use among astronomers towards the close of the seventeenth century. With a Newtonian reflector, only six feet long, celestial objects may be viewed with as high a magnifying power, and with equal distinctness, as with a common refracting telescope of 120 feet in length. By means of these instruments, the late Dr. Herschel made those brilliant discoveries which have extended our views of the solar system, and of the grandeur of the universe, and which have rendered his name immortal in the annals of astronomy. It was not a little singular, however, that more than half a century elapsed, after the construction of this instrument was suggested by Gregory and Newton, before any reflecting telescope of a size calculated for celestial observation was actually constructed. In the year 1663 Mr. James Gregory of Aberdeen published his account of the construction of that

form of the reflecting telescope which bears his name, in a treatise entitled Optica promota ; and in the year 1672 Sir Isaac Newton constructed two small reflecting telescopes, about six inches in length, of a form somewhat different from that proposed by Gregory, which he presented to the Royal Society : but we hear no more about the construction of reflectors, til! the year 1723, when Mr. Hadley published, in No. 376 of the Philosophical Transactions, an account of a large Newtonian reflector, which he had just then constructed, and which left no room to fear that this invention would remain any longer in obscurity. The large speculum of this instrument was sixty-two inches and five-eights focal distance, and five inches and a half diameter, was furnished with magnifying powers of from 190 to 230 times, and equalled in performance the famous aerial telescope of Iluyghens of 123 feet in length. Since this period the reflecting telescope has been iu

general use among astromoners in most countries of Europe, and has received numerous improvements, under the direction of Short, Mudge, Edwards, and Herschel, the last of whom constructed reflectors of seven, ten, twenty, and even forty feet in focal length, which far surpassed in brightness and magnifying power all the instruments of this description which had previously been attempted.

Plate II. fig. 1 exhibits a general representation of an improved instrument by Mr. Dick. A B is the short tube which holds the speculum ; CD the arm which carries the eye-tubes, which consist of two distinct pieces of mahogany ; the part D being capable of sliding along the under side of C, through the brass sockets E, F. To the under part of the socket F is attached a brass nut, with a female screw, in which the male screw a b acts, by applying the hand to the knob c, which serves for adjusting the instrument to distinct vision. G is the brass tube %vhich receives the eye-pieces. It is supported by a strong brass wire d e, which passes through a nut connected with another strong wire, which passes through the arm D. By means of the nut/, this tube may be elevated or depressed, and firmly fixed in its proper

position ; and, by the nut g, it may be brought nearer to, or farther from, the arm D. By the same apparatus, it is also rendered capable of being moved either in a vertical or a horizontal direction : but, when it is once adjusted to its proper position, it must be firmly fixed, and requires no farther attention. The eye-piece represented in this figure is the one used for terrestrial object^, which consists of the tubes belonging to a small achromatic telescope. When an astronomical eye-piece is used, the length of the instrument extends only to the point I. In looking through this telescope, the right eye is applied at the point H, and the observer's head is understood to be uncovered. For those who use only the left eye, the arm would require to be placed on the opposite side of the tube, or the tube along with the arm be made to turn round 180°.

Fig. 2 represents a front or rather an oblique view of the instrument, in which the position of the speculum may be seen. All the specula fitted up by Mr. D. in this form, having been originally intended for Gregorian reflectors, had holes in their centres. The eye-piece was, therefore, directed to a point nearly equidistant from the hole to the exterior edge of the speculum, that is, to the point a. In one of these' instruments fitted up with a four feet speculum, the line of vision is directed to the point b, on the opposite side of the speculum; but, in this case, the eye-tube is removed farther from the arm than in the former case. The hole in the centre of the speculum is obviously a defect in this construction of a reflecting telescope, as it prevents us from obtaining the full advantage of the rays which fall near the centre of the mirror ; yet the performance of the instruments, even with this disadvantage, is superior to what we should previously have been led to expect.

The principal nicety, in the construction of this instrument, consists in the adjustment and proper direction of the eye-tube. There is only one po-

sition in which vision will be perfectly distinct. It must neither be too high nor too low,— it must be fixed at a certain distance from the arm, and must be directed to a certain point of the speculum. This position must be ultimately determined by experiment, when viewing terrestrial objects. A person unacquainted with this construction of the telescope, would, perhaps, find it difficult, in the first instance, to make this adjustment; but, were it at any time deranged, through accident or otherwise, the adjustment may be made a-new in the course of five or six minutes.

In pointing this telescope to the object intended to be viewed, the eye is applied at K (fig. 1), and looking along the arm, towards the eye-piece, till it nearly coincide with the object, it will, in most cases, be readily found. In this way a person may easily point this instrument to Jupiter or Saturn, or to any of the other planets visible to the naked eye, even when a power of 170 or 180 times is applied. When high magnifying powers, however, are used, it is expedient to fix, on the upper part of the short tube in which the speculum rests, a finder, such as that which is used in Newtonian telescopes. When the moon is the object intended to be viewed, she may be instantly found by moving the instrument till her reflected image be seen from the eye-end of the telescope on the face of the mirror.

Mr. D. has fitted up five or six instruments of the above description, with specula of eight, sixteen, twenty-seven, thirty-five and forty-nine inches focal distance. One of these having a speculum eight inches focus, and two inches diameter, with a terrestrial eye-piece, magnifying about twenty-four times, forms an excellent parlour telescope, for viewing land objects, and exhibits them in a brilliant and novel aspect. When compared with a small Gregorian, of the same size and magnifying po\<er, the quantity of light upon the object appears nearly doubled, and the image is equally distinct. It represents objects in their natural colors, without that dinjy and yellowish tinge which appears when looking through a Gregorian. Another of these instruments, having a speculum of 27 inches focal distance, and an astronomical eye-piece, prod ac in" a magnifying power of about 100 times, serves as an excellent astronomical telescope. By this instrument the belts and satellites of Jupiter, the ring of Saturn, and the mountains and cavities of the moon, may be contemplated witli great ease and distinctness. With a magnifying power of forty times, terrestrial objects appear extremely bright and well defined. Another of these instruments is about four feet long. The speculum which belongs to it is a very old one : when it came into Mr. D's possession it was so completely tarnished as scarcely to reflect a ray of light. After it was cleaned it appeared to be scarcely half-polished, and its surface was variegated with yellowish stains. Were it fitted up upon the Gregorian plan, it would, observes Mr. Dick, be of very little use, unless when a very-small magnifying power was applied. Vet, in its present form, it bears with great distinctness a magnifying power of 170 times, and is su-718

perior in its performance to a four feet achromatic refractor, with a similar magnifying power. It exhibits very distinct and interesting views of the diversities of shade, and of the mountains, vales, caverns, and other inequalities of the moon's surface. The smallest instrument I have fitted up on this plan is one whose speculum is only five inches and a half focal distance, and one inch and three-quarters in diameter. With a magnifying power of about fifteen times, it shows land objects with great distinctness and brilliancy. But Mr. D. would deem it inexpedient to fit up any instrument of this description with specula of a shorter focal distance than ten or twelve inches.

The following are some of the properties and advantages peculiar to this construction of the reflecting telescope.

1. It is extremely simple, and may be fitted up at a comparatively small expense. Instead of large and expensive brass tubes, such as are used in the Gregorian and Newtonian construction, little more is required than a short mahogany tube, two or three inches long, to serve as a socket for the speculum, with an arm about the focal length of the mirror. The expense of small specula, either plain or concave, is saved, together with the numerous screws, springs, &c., for centring the two specula, and placing the small mirror parallel to the large one. The only adjustment requisite in this construction is that of the eye-tube to the speculum ; and, by means of the simple apparatus already described, it can be effected in the course of a few minute?. Almost the whole expense of the instrument consists in the price of the speculum and the eye-pieces. The expense of fitting up the four feet speculum, alluded to above, including mahogany tube and arm, brass sockets, screws, eye-tube, brass joint, and a cast iron stand, painted and varnished, did not amount to £l 7s. A Gregorian of the same size would have required a brass tube at least four feet and a half in length, which would cost four or five guineas, besides the apparatus connected with the small speculum, and the additional expense connected with the fitting up of the joint and stand requisite for supporting and steadying so unwieldy an instrument. While the one instrument would require two persons to carry it from one room to another, and would occupy a considerable portion of an ordinary apartment, the other can be moved, with the utmost ease, to any moderate distance, and the space it occupies is very small.

2. It is more convenient for viewing celestial objects at a high altitude than any other telescope. W'hen we look through a Gregorian reflector, or an achromatic telescope of four or five feet in length, at

an object elevated 50° or 60° above the horizon, the body requires to be placed in an uneasy and distorted pos.tion, and the eye is somewhat strained, while the observation is continued. But, when observing similar objects by the aerial reflector, we can either stand perfectly erect, or sit on a chair, with the same ease as we sit at a desk when reading a bock or writing a letter. In this way, the surface of the moon, or of any of the planets, may be contemplated for an hour or two, without the least weariness or

fatigue. A delineation of the lunar surface may be taken by this instrument, with more ease and accuracy than with any other telescope, as the observer can sketch the outline of the object by one eye, on a tablet placed a little below the eye-piece, while the other eye is looking at the object. For the purpose of accommodating t!in instrument to a sitting or a standing ppsture, 1 caused a small table to be constructed, capable of being elevated or depressed at pleasure, on which the stand of the telescope is placed. When the telescope is four or five feet long, and the ob-ject at a very high elevation, the instrument may be placed on the floor of the apartment, and the observer will stand in an erect position.

3. This instrument is considerably shorter than a Gregorian telescope, whose large minor is of the same focal length. When an astronomical eye-piece is used, the whole length of the instrument is nothing more than the focal length of the speculum. But a Gregorian, whose large speculum is four feet focus, will exceed five f^et in length, including the eye-piece.

4. The aerial reflector far excels the Gregorian in brightness. The want of light in Gregorians is owing to the second reflection from the small mirror; for it has been fully proved, by experiment, that, about the one-half of the rays of light which fall upon a reflecting surface is lost by a second reflection. The image of the object may also be presumed to be more correct, as it is not liable to any distortion by being reflected from another speculum.

5. There is less tremor in these telescopes than in Gregorian reflectors. One cause among others of the tremors which affect Gregorians i? the formation of a second image at a great distance from the first, besides that which arises from the elastic tremor of the small speculum, when carried by an arm supported only at one end. But as the image formed by the speculum, in the aerial telescope, is viewed directly, without being exposed to any subsequent reflection, it is not so liable to the

tremors which are so frequently experienced in other reflecting telescopes. Notwithstanding the length of the arm, of the four feet telescope above-mentioned, a celestial object appears remarkably steady, when passing across the field of view, especially when it is at a moderate degree r f altitude ; and it is easily kept in the field by a gentle motion applied to the arm of the instrument.

The specula used in the instruments to which we have alluded above, were far from being good, being of a yellowish color, and some of them scarcely half polished. They had likewise large holes in their centre, as they were originally intended for Gregorian telescopes. Were they fitted up in the Gregorian form, they would be of little use, unless with small degrees of magnifying power. Yet, with all these imperfections, they exhibit the object with more brightness and accuracy than the generality of reflectors ; and therefore observes Mr. D. have no doubt that, were instruments of this construction fitted up with specula of the best figure and polish, they would equal if not surpass, in brilliancy and distinctness, the general run of achromatic telescopes.

We have now to notice one of the greatest improvements that has been made in the reflecting telescope since the commencement of the present century. It is an instrument constructed by lord Oxmantown, a young nobleman of high mathematical attainments. It may be best described in his own words : —

‘ The following considerations,’ observes his lordship, ‘ induced me to make the experiments on the specula of reflecting telescopes which I am about to describe. The reflecting telescope would be almost a perfect instrument, could we devise means of freeing it from spherical aberration ; it would then retain merely the defects necessarily arising from imperfections in the workmanship, and perhaps some others of a much more trifling nature, such as those derived from the inflection of light. The refractor, however, is not only affected by the spherical aberration in common with the reflector, but also by the different refrangibility of ‘the rays of light. Both of these defects may indeed be

in a great degree corrected by giving curves of proper radii to the lenses which compose the object-glass. The spherical aberration may by this be almost entirely obliterated ; but a considerable portion of the chromatic aberration still remains, owing to the irrationality of the spectra formed by the different kinds of glass, of which the object-glass is necessarily composed, the different colored rays not being refracted by each in the same proportion. The refractors until lately were limited- to a very small scale, owing to the impossibility of procuring suitable glass of large dimensions ; and although a new process has lately been discovered on the continent, which has considerably extended the limits of their construction, still I believe that large pieces of glass, of a tolerably homogeneous nature, are procured with great difficulty ; and there seems to be but little prospect of our being able, with the present state of our knowledge, to construct efficient refractors, at least with glass lenses of apertures at all approaching the late Sir VV. Herschel's reflectors. I have been thus minute in stating my reasons for making the following experiments, as many practical men whom I have spoken to, seem to think that since Fraunhofer's discoveries, the refractor has entirely superseded the reflector, and that all attempts to improve the latter instrument are useless.

' Two modes have been hitherto adopted for diminishing the spherical aberration in reflectors, the one by rubbing down the outer surface of the speculum from the edge to the centre, so as to make its figure approach to that of a paraboloid, the other by increasing the focal length in proportion to the aperture. It is certainly extremely probable that a very skilful workman, who has devoted the greater part of his life to the construction of reflectors, may succeed in some instances, particularly when the instrument is what is technically termed a dumpy, in forming a surface approaching to the paraboloid, which will perform better than one which is truly spherical ; but when we consider the extreme accuracy necessary, and that a true surface can only be obtained by the process of

polishing, when two motions are combined, the one in some degree at right angles to the other,' and that a spherical surface is the only surface' which can be formed by these two motions, it will be evident that when we attempt the parabolic form we abandon an essential requisite to the formation of an accurate surface. It is scarcely worth while remarking, that, in every attempt to improve a speculum of an accurate spherical figure, I have invariably rendered it worse; these attempts were not on very dumpy instruments. The other method of

diminishing the spherical aberration, by increasing the focal length in proportion to the aperture, is certainly unexceptionable; but it will be immediately evident that it has its limits, and that instruments become unwieldy after they exceed a certain length. I will now immediately proceed to describe one of the instruments I have constructed, with a view of diminishing the spherical aberration without introducing either of these defects : —

. ‘In fig. 3, plate II., A B is a brass plate turned true on both sides by means of a slide apparatus, which at the same time renders its sides parallel. The dimensions are seven inches by five-eighths thick. C D is another brass plate, made true by the same means, half an inch thick. The two plates were then screwed together in a temporary manner, their centres coinciding ; three holes were then bored through them one-fourth of an inch in diameter, accurately perpendicular to their surfaces. The two plates were then unscrewed, and the holes in the plate C D were carefully tapped with a tap, having one-sixtieth of an inch interval between its threads. T ree cast steel spindles were then accurately turned, the shank E F being made to fit the holes of the plate A B, and the screw G II nicely to tit the holes in the plate CD. It is almost needless to observe that the flanches, and indeed every part of the spindles, must be very carefully turned. The three cast steel spindles were then put through the holes in the plate A B, till their flanches rested on it. They were secured there by washers I, K, put on the shanks of the spindles at the back of the plate, and the washers were retained in their places by milled nuts L, M. To prevent the washers from shaking as the steel spindles were turned backwards and forwards, which would loosen the milled nuts, each washer was provided with a screw on its side O, which enters the groove P in the shank, and keeps it steady. The plate C D was then laid upon the three screws G II of the spindles, which were then gradually turned round in succession by a key fitting their other ends till the plate C D reached within about one-eighth of an inch of their flanches. To prevent the spindles from shaking either in the plate AB, or C I), 1 teral holes were drilled reaching the princi pal holes o, o, o, v, v, v. These were stuffed with small bits of leather, which were kept constantly pressed against the spindles by small screws. This precaution is essential. Besides, ser»jws were inserted at the back of the plate through the holes marked i, i, i, which were serened the plate C I), to prevent the possihiliiy

of its shaking in the slightest degree during the operation of grinding and polishing the speculum.

‘ The mechanism being now complete, a speculum was cast one inch thick. This was secured to the plate C D by three small screwed wires cast into it, by a groove in the plate C D, and by a cement composed of resin, wax, and sulphate of lime. A ring of speculum me’al was also cast one inch and a half thick, which was secured to the plate AB in a similar mariner, leaving a very minute interval between it and the piece of speculum metal it surrounded. The whole together formed a speculum of six inches aperture, and two feet focal length, which was ground and polished in|the common way, till by repeated trials it was found to be of a good spherical figure. The small screws i, i, i, were then drawn back, the speculum placed in the tube, and the spindles turned round a certain number of times, by which the centre part of the speculum was made to approach nearer the plate A B, by a quantity ascertained in a manner I shall presently point out. The two images were then made to coincide, and the image was then found to be apparently as distinct as either image had been when separate. It is necessary to observe that, in order to effect the adjustment properly, each image must be brought to the same degree of brightness, which can be accomplished by shades on the mouth of the telescope, and that no higher power should be used than each metal, when separately employed, can bear with distinctness.

‘ I rather think that instruments of this construction will pretty frequently require adjustment ; however, this is easily effected in the space of two or three minutes. The first I attempted consisted of a solid metal surrounded by two rings. Owing to a defect in the mechanism it required very frequent adjustments, the smallest shock displacing the images. The one I have described is almost entirely free from this defect, remaining in perfect adjustment even after very violent shocks. I have a speculum like the first I made, consisting of three parts, which is almost ready for grinding ; and I expect it will turn out well. I have not yet perceived any ill effects from expansion and contraction, which was the difficulty I most apprehended. Whether they will become perceptible in instruments of higher powers, or whether, if perceived, means may or may not be devised of obviating them, can only be ascertained by future trials. On my return

from parliament, if other avocations do not interfere, I propose to construct a speculum in three parts of eighteen inches aperture and twelve feet focal length ; — this will be giving the experiment a fair trial on a large scale. It may perhaps be as well to observe that I do not think the principle of subdividing the aberration can be applied with advantage to small instruments. The object to be gained by it is a diminution of the focal length with a given aperture and power, and this is by no means desirable in small instruments, as it forces us to make use of deep eye-glasses, which are .on many accounts objectionable.

‘ To compute the respective lengths of the

curves composing a compound speculum, such as has been described, so that the aberration of the whole speculum may be equally divided between them.

‘ Let E, fig. 3, be the centre of the surface. Let a ray proceed from Q and intersect the axis in V. Let q be the geometrical focus of rays proceeding from the point Q.

Let q represent E Q, Let q” represent E v 9’ Egr, 0 RE A

J E F, v ver sin 9

Then considering q” a function of ver. sin 0, v being of course = 0 in each coefficient, we have

which by proper substitutions becomes <?’= <?/ <?2.A ffv*

-f

&c.

(q +/)’

The aberration being q” — q’ is evidently represented by this series

without its first term, which, expressed geometrically, amounts to Q E2 A N QE3 A N2 Q F2 ‘ 2 *~ Q F3 ‘ 4 E F + &°’ which, when the rays are parallel, becomes AN AN2.

4EF-

‘ It is evident that the first term of this series will afford a sufficiently near approximation -for compound specula; if we therefore represent the ver. sines of the arcs DO, D P, U Q, fig. 3, by A N, A N,’ A N,” the problem becomes, Given A N = A N’ — A N = A N” — A N,’ the length of the arc D Q and its radius, to find the lengths of the arcs D O and D P.

‘ Example. — Let a be the arc D Q = 3 inches, r its radius =48 inches, x the seconds in a, then

a \

x = 206265 — = 206265— -— 12891”, which r 16

in degrees amounts to 3° 35’ whose v. s. = •0019550.

£ of which = -OC06516, corresponding to arc, 2° 4* = 7440” = 1-77 inches.

| of which = -0013034’ corresponding to arc 2° 54′ 30″ = 10470 = 2-44 inches.

Arc D O = 1-77 inches, and D P = 2‘44 inches.

‘It is evident tliat the arc PO must be drawn back, a quantity equal to D’C’ = J DC, and D O must be drawn back 2 D’ C’ = D C .’

We have in the article OPTICS fully explained the principle of a reflecting specula mirror for telescopes, and it may now be advisable to furnish our readers with some important particulars in the art of annealing this part of the instrument. It is from the pen of Dr. M’Culloch, and was published in the Journal of Science for June, 1828. Dr. M’Culloch commences his paper by the following observations : —

‘ It is much more than twenty years since I spent some time in constructing specula for reflecting telescopes ; nor, till very recently, had I any reason to conjecture that in any part of the process, which it

was my lot, like that of others, to labor through for myself, I was possessed of

knowledge which was not equally known to every one who had attended to this subject, much more to the makers of such telescopes. Having lately, however, had an opportunity of conversing with Mr. Ramage about his processes, I believe that there is one point at least which has been misun-derstood, and, consequently, often mismanaged ; the result being the production, by accident, of good metals, perhaps one good metal only, among many failures, when, if I am right, those may be produced with comparative certainty, and possibly in such hands as those of Mr. Ramage himself with absolute precision. It may perhaps, indeed, be considered that it is wrong here to suppose that because this excellent constructor has overlooked a necessary portion of his process, others should be supposed to have done the same; but, as I have no means of ascertaining what are the knowledge and practice of the different makers, I must even hazard the chance of here attempting to teach any one what he knew before; while I must still trust that some may hereafter derive, from my experience, precautions by which they will be saved considerable disappointment and some expense. Such is the apology for this paper, should it prove superfluous to any one; while I cannot help considering the subject as of some importance, as, not merely the color of the metal, but, as I think, its durability, and its power of giving a clear image, depend much on the nature of the management in that part of the process to which I allude.

‘ I am not aware that it is necessary to say any thing respecting the proportions of the two metals in the alloy; though I would caution makers of specula respecting the purity of the tin and copper, being convinced by some trials that the presence of arsenic is apt to lead, in time, to the tarnishing of the surface. I must equally presume that every one is acquainted with the temperature required for the separate metals before mixing, with the necessary flux, the method of pouring in the alloy, the position of the mould, and so forth ; though with respect to the best form of the metal itself, that is as to relative thickness in its several parts, I must confess that I have never yet been able to satisfy myself: such are the complicated difficulties, entangled between the cooling and annealing first, and the optical consequences

afterwards depending on changes of temperature, and on weight or flexure, that beset any calculations on this subject; while it is probable that they are really irreconcileable, or that there is no one form which will be the best, as concerns the original nature of the metal and its action when completed.

‘ To pass from these points, therefore, the ob-ject to which I am desirous of especially calling the attention of those who may be interested in this question, is the process of annealing the metal after casting, since it is in this, as far as I have found, that the chief disappointments take place ; and in consequence of a species of mismanagement which attention will be able to prevent when once the principle has been explained. Here it is at least that I did fail myself, until I contrived to examine and discover the cause; and here it is that Mr. Ramage has found the same difficulties, and made the same failures — VOL. XXI.

not likely, I trust, to hap; -en often again, though, in a process so delicate, certainty must not al-ways be expected.

‘ I need scarcely say that if this alloy were suffered to cool rapidly it would break, or might break, and that it requires to be cooled slowly in the mould, or annealed; this being true, particularly of the larger metals, as there is not so much hazard with respect to small ones. The process itself is simple and easy : it would scarcely, indeed, be necessary to describe it \cic it not for its frequently injurious consequences ; and it consists commonly in covering the metal in the mould with hot ashes or cinders, and thus retaining it, often for a considerable time and at a high temperature.

‘ To state now what those failures are, before enquiring into the cause, — I must first remark, that the fracture of speculum metal ought to be that which mineralogists term flat conchoidal, or resembling that of gun-flint ; and the surface of the fracture ought to be lucid and smooth, or like that of glass, utterly free of granulation or roughness of any kind, and as polished in reality as it can afterwards be rendered on the tool. Without this, it is in vain to expect the greatest light which a speculum is capable of giving, nor the purest color; and without this, also, it will be found that the surface will be apt to fail after long use, or in consequence of frequent exposure to the atmosphere and vacillations of temperature. A speculum metal, therefore, which does not thus come out at the annealing, ought to be rejected ; it is not worth the subsequent labor.

‘It is true, that, as far as four inches diameter, a very moderate degree of care will generally insure success; the difficulty occurs in the larger ones, and increases rapidly with their increase of size. And the failure consists in the reverse of what I have just stated. The fracture becomes granular or rough, and is at tile same time dull as might be anticipated; while the degree of this fault varies with the extent of the mismanagement; which is a mismanage me nt in the annealing alone, as I shall presently show, while the nature of the metals used, or something in the flux, or in the casting, is often accused for faults depending on a much simpler cause.

‘ Nor is it only that the metal is dull from th/- nature of the fractured surface, or that this is a mere deception which the polishing will remove. So far from that, the absolute color of the alloy itself is imperfect or bad; it has no longer that clear silver whiteness which will take what is technically called a black polish, but is gray and sometimes of different tones, often so gray and so dark as to be palpably unfit for its purpose, though often, in the least imperfect instances, retained and finished for use, with the production assuredly of some disappointment even at first, and of somewhat more, I have fully ascertained, after long use, as I shall presently explain.

‘ In such cases of extreme failure, as the blame is generally laid on the metals of the alloy, the fault remains uncorrected ; and if others have found the same difficulties as 1 at first encountered myself, and as Mr. Ramage had always _

done when I inspected his processes, they will be well pleased to know where the error lies ; though it must still depend on a nicety of attention which it is impossible to describe to find the remedy.

‘ Could the speculum be suddenly or quickly cooled after casting, it would be always perfect; the evil is the result of slow cooling — of that very process which is necessary, or thought necessary, to secure its integrity ; and the slower the cooling the greater the evil or the failure. Or, by rapid cooling, the texture and the color are the most

perfect which can be obtained from this alloy; while it is possible, by a proceeding as highly reverse as possible, to render it absolutely useless, and utterly unlike to what is desired; and «ven while the most rigid analysis shows that the bad metal and the good are precisely the same after having been cast, if we should not be satisfied as to this, from having produced by those different treatments a perfectly good and an extremely bad metal out of the same pots at the same time.

‘There ought now to be no difficulty in seeing what the efficient cause of this evil is. It is the crystallisation of the alloy, permitted or encouraged by the application of too high a heat in the annealing, and by continuing that heat too long. Nor is fluidity necessary to this process ; it oc-curs after the metal is consolidated, as I have amply proved; since it is even easy to bring a metal to this state by annealing, after having been thoroughly well cast and annealed, and after having been tried by fracture. Nor is it a fact to excite any surprise, since it belongs to a wide train of analogies on which my experiments, long since ready to be made public, amount perhaps to thousands.

1 We can now, therefore, trace the cause of all those variations of defect, which occur in this case, between the best and the worst specimens ; as it will be found that the degree of crystallisation on which depend the faults, is always proportioned to the extent to which the annealing process has been carried ; or on the duration and the intensity of the heat applied to the metal after consolidation. The reason of this, also, is apparent ; but I need not, in this merely practical notice, enter into a subject which I have treated fully in a paper of another nature.

‘ But, to convince observers that this is the real cause of the defect of such metals, it is always easy to dissect the crystallisation, if I may use such a term, by means of an acid, and thus to see how the defect goes hand in hand with the crystallisation, while the variety of texture in speculum metals thus discovered will also be found very considerable, and often, I may add, very unexpected ; since, among other singular varieties not easily described, I have found even examples of what mineralogists call the spheroidal concretionary structure.

‘ But, if I dare not here dwell on the properly theoretical part of this subject, I must suggest one circumstance or change, which, under high or extreme degrees of snnealing, seems to occur, and which is probably the real cause of the defect as to color, since it is not so easy to suppose that mere texture could produce a gray

tint, such as is often found in these defective metals. I call it a suggestion, because, while engaged in thest investigations, I was never able to discover any method of analysis by which the fact, if it be one, could be ascertained.

‘ The suggestion is srmply this, — that under the complete liberty of crystallisation permitted by high and long-continued heat, an alloy is formed different from that which was intended ; or that a certain definite combination takes place between the tin and copper, so as to produce a mixture which is possibly that of two alloys, or else is such as to set a portion of one or other of the metals free, though of course under a state of mixture which is unassignably minute. It is plain that this is at besta probable state of things, while I need»not say how difficult the proof must be at present. It is probable, for this rea-son : there is a crystallised metal or alloy, crystallisation takes place only in simple bodies or definite compounds, and it would be very singular if the proportion of twenty-five copper and twelve tin, which was my compound, should be that definite compound, while as other proportions are used by Mr. Ramage, such an occurence cannot, plainly, happen in both cases. And, in defect of analysis, it has often seemed to me, on the trial by acids, that there was more .than one substance in the defective and crystallised speculum, distinguishable by the manner in which the acid acted on the surface. It might not be yery difficult to approximate to this point to a greater nicety by the application of different acids, and by a subsequent examination of the proportions of tin and copper dissolved ; but what I neglected to do, when I had the power, my state of health has long prevented me from following up.

‘ It seems unneccessary to add more on this part of the subject in a paper so merely practical ; and if I ought now to show how the annealing ought to be carried on, so as to avoid the evil in question, I find it very difficult to give such directions as will enable any one to do as I have done in these cases with success. And, indeed, it can scarcely be necessary ; since the general principle, and the cause of the evil having been once explained, it will be easy for the speculum-maker to apply what, after all, must be a matter of trial, and which must also vary with each magnitude of speculum. I could not describe a temperature for which there is no measure, nor lay down a period of time which must depend partly on that temperature, and partly on the size of the metal, and partly also, I may add, on its form and thickness, and even on the temperature of the atmosphere. But if each maker must feel his way for himself, and for each size that he may

cast, let him always remember that the speculum metal is rather a mixture than a true alloy, and that it has a tendency to separate as to crystallise, when under liberty, by heat ; that the best and most brilliant metal is that which cools most suddenly, or which is soonest deprived of the power of crystallising, and therefore that his object must be to cool his speculum as rapidly as it can possibly be cooled without breaking. And, as to the practical method of annealing, I may add that I think the ordinary

mode bad, inasmuch as it is difficult to regulate. Whether my own method may prove better in other hands or not it is not for me to pronounce, but it was to use sand for that purpose. In this case the mass of sand was placed over a horizontal iron-plate flue, so as to be at a high red-heat in one place and to cool gradually at another; and while the speculum was placed in the hottest part after casting, it was slowly moved to the cooler parts till the desired end was obtained.

‘ I have but one other suggestion to offer as to the effects which have seemed to me to follow from polishing for use, specula, of which the texture had been thus crystallised. Whether there should be two alloys, or an alloy and a metal, or not, or whether the whole result is mechanical, depending on the intersected surface of this confused crystallisation, it is certain that a polished surface of this nature is irregular in its action on light, and that good images are scarcely attainable, from optical causes that will be sufficiently obvious, to say nothing of an absolute loss of light produced by this cause And I have further reason to believe from numerous experiments, which it would be impossible as improper to detail here, that such crystallised specula undergo further changes of their crystalline texture from the ordinary vacillations of temperature to which the uncrystallised ones are either less subject, or from which they are exempt; the consequence being a slow deterioration, as may easily be imagined without further explanation. To this cause, indeed, we must, I believe, trace some of the deteriorations of specula which do not depend on tarnish or corrosion, though I must also add, in concluding, that the crystallised specula are more easily tarnished than others, probably from the irregular action of moisture on them, or, possibly, because the definite compound and its associate thus intermixed, one or other, or both, offer less resistance to the air than that mixture of tin and copper

which constitutes a good speculum.'

We may now furnish our readers with some particulars of the powerful achromatic telescope, constructed by M. Lerebours. On this subject we may best quote the opinions of Messrs. Herschel, South, and Amici.

' The diameter,' says Mr. South, ' of the object-glass of the achromatic telescope, constructed by M. Lerebours, now in the Royal Observatory of Paris, is rather better than 9-2 inches English, uncovered by the cell, but of which 8'4 inches only are in actual use. Its focal length is eleven feet.

' The magnifying powers with which I used it, on the night of the 15th of March last, are 136, 153, 224, 240, 420, and 560. With all, except 560 (which, by some forgetful ness, was not applied), Venus was extremely well defined during a dark night; of course, Jupiter and Saturn were well shown. The two stars of Castor, of y Leo-nis, of £ Orionis, were exhibited with 240, 420, and 560, as round as possible, u Leonis presented by its side a light blue star with 420, which could not be overlooked by the most careless observer, and with 560 both stars were admirably defined.

' I neea not inform you that a telescope, having an object-glass of the diameter above-mentioned" which, with these powers, will neatly define the limb of the planet Venus, and will give to the discs of the double stars here named images absolutely round, deserves to be well spoken of. Indeed, I have no hesitation in saying that this telescope is the best achromatic I ever pointed to the heavens ; nor will I withhold my regret, or even the mortification I feel in asserting, "that England, when I visited it in May last, could not produce an achromatic any thing like it. The stand upon which it is mounted is not provided with any means of giving to the telescop, equatorial motion.

'Whilst, however, I say thus much, I am far from entertaining the sentiments of Mr. Fraunhofer, as to the decided superiority of refractors over reflectors, nor can I accompany Mr. Struve in his idea, that the Dorpat telescope ' may perhaps rank with the most celebrated of all reflect ing telescopes, namely, Herschel's.' It is true, I have not had the enviable qualification of hav-ing seen the former; still I think

the Paris telescope furnishes me with data upon which to form something like a rational conjecture.

‘ Its object-glass actually in use is in proportion to Mr.Struve’s(if all of it be effective), as seventy to ninety -two neaily, a difference not very hard to be allowed for.

‘I have seen the nebulae in Orion ; the planets Jupiter and Saturn, with the Paris telescope ; and with their appearances in Mr. Herschel’s twenty feet reflector, I am perfectly familiar, and the comparison is many times in favor of the latter.

‘The power of the twenty feet reflector nt Slough is well authenticated ; and if the indefatigable astronomer of Dorpat will turn his probably matchless achromatic upon some of the faint nebula in the constellation Virgo, or upon some others, not easily resolvable into stars, he will soon satisfy himself, that his ideas of its space penetrating power are much overrated.

‘ The star £ Bootis was seen ‘ close double’ by Mr. Pond at Lisbon, perhaps twenty years ago, and, as I believe, with a Newtonian reflector of six inches aperture, and the circumstances mentioned in a letter written by him to Dr. Wollaston. The instrument with which I first observed it, in 1810, ‘close double,’ was a reflector of the worst possible construction, *viz.* a Gregorian reflector of six inches aperture, and thirty inches focal length, but a very perfect instrument, made for me by Mr. Watson in the year 1809, and Which is now in the possession of my friend Mr. Perkins.’

After speaking of the merits of the telescope of M. Lerebours, Mr. Herschel proceeds as follows : —

‘ My object, in writing this, is to obviate an erroneous impression that may arise in the mind.ˆ of those who read Mr. Fraunhbfer’s Memoir, a* to the great inferiority of reflecting telescopes in point of optical power to achromatics in general, and more especially to those constructed with such delicacy as his own doubtless are. Those who have witnessed the performance of M. Amici’s beautiful Newtonian reflector will not

3 A V!

readily admit this inferiority, but will feel disposed to wisli that some attempt might be made to accomodate such admirable instruments to the more exact purposes of astronomy, an ob-ject which appears to have been too easily lost sight of.

‘ Mr. Fraunhofer’s expressions, when speaking of the loss of light by metallic reflection, are, I think, too strong. He observes that ‘ the most perfect metallic mirror reflects only a small part of the incident light, and that the greater part is absorbed ;’ and that, in consequence, the intensity of the light entering the eye of the observer is always very small.’ A metallic mirror, however, reflects 0-673 of the incident light, or more than two-thirds, and absorbs less than one-third of the whole. M. Fraunhofer appears rather to have in view the Newtonian construction, where two metallic mirrors are used, and where the whole effective quantity of light is only 0-452 of the incident rays. No one who has been half blinded by the entrance of Sirius, or of a Lyrae, into one of my father’s twenty feet reflectors, will say that the intensity of its light is small, nor, to take a less extreme case, will any one who uses one of M. Amici’s Newtonian reflectors of twelve inches aperture (a perfectly convenient and manageable size, and of which he has constructed several), be disposed to complain of its want of light. The ordinary reflector used by my father, in his reviews of the heavens, was a Newtonian, seven feet focus, and barely six inches in aperture ; and consequently equal, cceteris paribus, to an achromatic of 4J (4-254) English, or 3-999 Paris inches, and therefore by no means proper to be put in competition with M. Fraunhofer’s chef d’ceuvres of seven and nine inches ; yet it will be recollected that with this telescope, and with a magnifying power of 460, w Leon is was discovered to be double, and distinctly separated, and its angle of position measured.

‘ In order to demonstrate the superiority of refracting over reflecting telescopes, M. Fraunhofer has selected the star £ Bootis, which my fa-ther lias described as a double star of the sixth class (No 104), in his second catalogue of double stars, but without mentioning the division of the ˆarge star into two, as a double star of the first class. It might, however, be very easily overlooked in a review in indifferent weather. It is, at least, as difficult to resolve as 17 Coronoe, more so than a, either of which, with any telescope, be its goodness what it may,

requires a favorable atmosphere for its separation. From this omission, however, Mr. Fraunhofer concludes that the power of the telescope was insufficient to resolve it, and must, therefore, have been inferior to that of an achromatic in the hands of Mr. Bessel, with which it was recognised by that eminent astronomer as double. It will be seen, in reference to the memoir on Double Stars by Mr. South and myself, that this star had been long since ascertained to be double, not only by Mr. Bessel, but by Messrs. Struve, Pond, and South, and, what is more to the present purpose, by Sir. W. Herschel himself. It was only by oversight that we omitt.ed to refer, in that work, to his account of it, which is published in his paper On the Places of 145 ne\v Double Stars,

in the first volume of the Transactions of the Astronomical Society, p. 178, and read in June

1821.

‘ In large reflectors, in which only one metallic mirror is used, the disadvantage, in point of light, under which they labor, in comparison with refractors, is, however, much less formidable. A reflector of eighteen inches aperture would be equivalent to an achromatic of fifteen and a half, and one of forty-eie;ht inches to an achromatic of forty-one and a half in aperture : a size we cannot suppose (from any thing we have yet seen) that it is possible the latter should ever attain. Reflectors of eighteen or twenty inches are perfectly manageable, and, I apprehend, quite within the power of any good artist to execute, and (if intended only for use, and not at all for show) at no very ruinous expense. That which I habitually use, of the former dimension, is my own workmanship; and, though inferior in distinctness to the exqusite one used by my father in his sweeps, is by no means an instrument to be despised. Indeed, from the experience I have had of these telescopes, I am satisfied of their appli-cability, even to the more exact purposes of astronomy, and that great improvements in their construction and mechanism remain to be made.

‘ Having succeeded in observing the eclipses of Jupiter’s satellites in the day time, and in measuring the diameters with one of his Newtonian reflectors, professor Amici was desirous of ascertaining the dimensions of an achromatic telescope, capable of showing these phenomena with the same distinctness.

‘ With this view,’ says he, • I took a Newtonian telescope of my own making, having a focal distance of thirty inches, and an aperture of thirty-six lines, and I compared with it an achromatic telescope ‘of the same length, having an English object-glass of two lenses, two inches and a half diameter. In applying to these instruments two equal eye-glasses, and directing them to the same object, I saw this object with most brightness through the achromatic telescope. In order to be certain of this fact, I constructed a parallelepiped, three inches long, by placing, in opposite directions, two prisms, one of colorless, and the other of obscure glass, such as those which are employed for observing the sun. This apparatus furnished a regular gradation of transparency ; by placing it between the eye of the eye-glass, I could easily find the opacity necessary for intercepting entirely the light of the object which I looked at alternately with each instrument. In order to avoid all calculation, I diminished by diaphragms the aperture of the brightest telescope, till the light of the object was extinguished in the two apparatuses at the same division of the parallelepiped. After several trials I found that, in order that the refractor and the reflector should have the same brightness, the first must have an aperture of twenty-seven lines, and the second of thirty-six. I am of opinion, indeed, that this ratio of 3 to 4 ought to be the same for telescopes of all dimensions, as we cannot take into account the slight loss of light arising from the great thickness of the two glasses in these telescopes.

‘ In order, then, to see the satellites as bright as I have seen them, we require an achromatic

telescope of eight inches and a half in diameter, and having a focal distance such that the instrument may magnify 400 times. The great object-glass, therefore, of seven inches and a half aperture at Naples, will show the satellites less distinctly than mine, while the nine inch object-glass at Dorpat will show them more distinctly.

‘ The result obtained by Sir W. Herschel does not differ from the above. By the method of Bouguer he found that the diameters of a double achromatic, and of a Newtonian reflector, must be as 7 to 10, in order to produce the same brightness with the same magnifying power, or as 5 to 6, if the small Newtonian mirror is not used. Hence, in order that an achromatic telescope may equal his forty feet

reflector, its ob-ject-glass must be forty English inches in diameter.

1 If reflecting telescopes, for which I have a partiality, have, in general, the advantage over

1. When the reflectors have a small mirror

2. When the small mirror is not used

3. When the reflectors have a small mirror

4. When the reflector has a small mirror

Professor Barlow has suggested a new fluid telescope which is deserving of attention. He employs sulphuret of carbon for a correcting medium as a substitute for flint glass in the achromatic instrument. This is enclosed between two plate glasses, ground and polished to the proper curves, and placed at any distance be-hind the plate front lens, from actual contact to two-thirds of the focal length of the plate. This being premised, it may be observed that, in the usual construction of achromatic telescopes, the two or three lenses composing the object-glass are brought into immediate contact, and in the fluid telescope proposed by Dr. Blair the construction is the same, the fluid having been enclosed in the object-glass itself. Nor could any change iu this arrangement in either case be introduced with advantage ; because the dispersive ratio between the glasses in the former instance, and between the glass and fluid in the latter, is too close to admit of bringing the concave correcting medium far enough back to be of any sensible advantage. The case, however, is very different with the sulphuret of carbon. The dispersive ratio here varies (according to the glass employed) between the limits -298 and -334; which circumstance has enabled me to place the fluid correcting lens at a distance from the plate lens equal to half its focal length ; and I might carry it still farther back, and yet possess sufficient dispersive power to render the object-glass achromatic. Moreover by this means the fluid lens, which is the most difficult part of the construction, is reduced to one-half, or to less than one-half of the size of the plate lens ; consequently to construct a telescope of ten or twelve inches aperture involves no greater difficulty in the manipulation than in making a telescope of the usual description of five or six inches aperture, except in the simple plate lens itself: and; what will be thought perhaps of greater importance, a telescope of this kind of ten or twelve feet length

refractors, with respect to the distinctness of the images, magnifying power, and smaller focal distance, they must always yield to the latter on account of the smaller apertures which these require, the facility with which they may be applied to different instruments, and the immutability of the substance of their lenses, which ren-der comparable observations made at distant epochs, and partly for the convenience of ushvz them, arising from this, that the object-glass preserves always the well centered position which the artist has given it. This last quality is so much valued, by some observers, that they do not hesitate to prefer a moderate achromatic telescope to a good Newtonian one.'

We shall now present, in a small table, the relative performances of achromatic telescopes, with double object-glasses, and Newtonian reflectors, according to Sir. W. Herschel, Mr. Ilerschel, and Professor Amici.

Ratio of diameters when the performance is equal. Achromatic. Reflector. . 7 . to 10) Sir W. 8J to 10 f Ilerschel. 7,'jj to 10 Mr.Ilerschel. 7i to 10 Prof. Amid.

will be equivalent in its focal power to one of sixteen or twenty feet. We may therefore by this means shorten the tube several feet, and yet possess a focal power more considerable than could be conveniently given to it on the usual principle of construction. This will be better understood from fig. 4, plate II.

In this figure A B C D represent the tube of the six inch telescope, C D the plate object-glass, F the first focus of rays, de the fluid concave lens, distant from the former twenty-four inches. The focal length M F being forty-eight inches, and, consequently, as 48 : 6 : : 24 : 3 inches, the diameter of the fluid lens. The resulting compound focus is 62 5 inches ; it is obvious, therefore, that the rays df, e f, arrive at the focus under the same convergency, and with the same light, as if they proceeded from a lens of six incites diameter, placed at a distance beyond the object-glass C D (as C' D'), determined by producing these rays till they meet the sides of the tube produced in C' D', *viz.* at 62-5 inches beyond the fluid lens. Hence it is obvious the rays will converge as they would do from an object-glass, C'D', of the usual kind, with a focus of ten feet five inches. We have thus, therefore, shortened the tube 38-5 inches, or have at least the advantage of a focus 38-5 inches longer than our tube ; and the same principle may be carried much farther, so as to reduce the usual length of refracting

telescopes nearly one-half, without increasing the aberration in the first glass beyond the least that can possibly belong to a telescope of the usual kind of the whole length. It should, moreover, be observed that the adjustment for focus may be made either in the usual way or by a slight movement of the fluid lens, as in tin: Gregorian reflectors by means of the small ˆspeculum. In the latter case the eye-piece is fixed, which may probably be convenient for astronomical purposes, in consequence of the great delicacy of the adjustment.

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TELESIA, in ancient geography, a town of Italy in Campania. It was taken by Hannibal I,iv. 21. c. 13, &c. It is now called Telese.

TELESILLA, a lyric poetess of Argos, who bravely defended her country against the Spartans.— Paus. ii. c. 20.

TELESINUS, a general of the Samnites,who joined the party of Marius, and fought against the generals of Sylla. He marched towards Rome, and defeated Sylla himself with great loss. But at last he was defeated and killed in a bloody battle, after displaying the utmost bravery. — Plut.

TELFORD (Thomas), civil engineer, was born at Langholm in Dumfriesshire, Scotland, in the year 1755, which he quitted at an early age, and, acquiring a knowledge of the bricklayer's and stonemason's trades, rose graduallyfrom such an humble position, to the undisputed head of the profession of civil engineers. While Telford was employer] in building with his own hands the round of the village school at Inverness, Alexander Nirnmo, who subsequently rose to the head of the profession of civil engineers in Ireland, was instructor of the children ; and these two distinguished men preserved the closest intimacy to their latest moments. In industry, integrity, and professional ability, Telford has not been exceeded. His works are so numerous, as to render individual or separate description inconvenient here. It must suffice to mention the most public and valuable ; they are the Menai and Conway Bridges — Caledonian Canal — Aqueducts at Pont-y-Sysyllte and Chirk (N. Wales) — Holyhead road through the North Wales mountains — St. Katherine's Dock, Lon-don— Highland roads, and Salopian canals. He may be said to have been the founder of the Society of Civil Engineers, an Institution over which he presided until within a few weeks of his decease in 1834, and to which he bequeathed £2000, together with library, maps, and instruments. In early life Telford exhibited a taste for poetry, and was author of several small pieces, that do not by any means lessen* the estimate formed of his genius. H's remains were deposited in Westminster Abbey, whither they were followed by many of the members of the Institution of Civil Engineers.

TELINGANA, an ancient kingdom of Hindostan, now divided between the British and the Nizam. It was intersected by the river Godavery.

The districts lying to the north of that river were called Andhra ; those situated on the south of it, Kalinga. The Telinga language is still spoken by the Hindoos. Between Ganjam and Pulicat, it contains a number of Sanscrit words, and has some affinity to the Bengaly.

TELL, v. a. Sc v. n. \ Pret. and part. pass.

TELL'TALI:, n. s, \ told ; Sax. re-Han ; Belg. taellan, tellen. To utter ; express ; speak ; relate ; teach; discover; number: trive an account: a telltale is one who gives petty or malicious information.

You speak to Casca, and to such a man That is no flearing telltale. Shaktpearf , Julhis Caesar.

"Pis dono : vjiort displays her telltale \vinˆ-", And to each car the news and tidings brings.

Fairfax.

Numerous sails the fearful only tell ; Courage from hearts, and not from numbers, grows.

Id.

Eurydice and he are prisoners here, But will not long be so : this telltale ghost Perhaps will clear them both. Id. and Lee.

A child can tell twenty before he has any idea of infinite. Locke.

She doubts if two and two make four, Though she has told them ten times o'er. Prior.

The rest are vanished, none repassed the gate, And not a man appears to tell their fate.

Pope's Odyssey.

TELL (William), an illustrious Swiss patriot, the chief instrument of the revolution which delivered the Swiss cantons from the German yoke in 1307. See SWITZERLAND. Animated by William Tell's courage and patriotism the Swiss flew to arms ; attacked and vanquished Grisler, who was shot to death by Tell; and the association for the independency was immediately formed. Tell was oiered the government, but he refused it. While endeavouring to alter the course of a torrent, and prevent its farther desolations, he was carried off by

the impetuous stream in 1354.

TELLIAS, or TELLIUS, a famous astronomer and soothsayer, of Elis, who flourished in the acre of Xerxes. — Paus. x. 1. ” TELLICHERY, a sea-port town of the south of India, province of Malabar. It is a place of considerable consequence, and ships of great burden may safely anchor opposite it, at two miles distance, in six fathoms water. The East India Company established a factory here, for the purchase of pepper, &c., so early as the year 1683, and in 1708 purchased the fort from the Colastry, or Cherical rajah.

TELLINA, in zoology, a genus of anima belonging to the class of vermes, and order of testacea. The animal is a tethys; the shell is bivalve, generally sloping to one side, with three teeth at the hinge. Gmelin reckons about ninety species. The tellinse bury themselves in the mud or sand at the bottom of the sea, keeping a communication with the water above by means of short tubes or pipes.

TELLURIUM, in mineralogy, a new metal which Mueller first suspected to exist in the au-rum paradoxicum or problematicum, which has the appearance of an ore of gold, though very little can be extracted from it. Klaproth afterwards established its existence, not only in this but in some other Transylvanian ores, and named it tellurium. Pure tellurium is of a tin white color, verging to lead-gray, with a high metallic lustre; of a foliated fracture; and very brittle, so as to be easily pulverised. Its specific gravity is 6-115. It melts before ignition, requiring a little higher heat than lead, and less than anti-incny ; and, according to Gmelin, is as volatile as arsenic. When cooled without agitation, its surface has a crystallised appearance. Before the blowpipe on charcoal it burns with a vivid blue light, greenish on the edges ; and is dissipated in grayish-white vapors, of a pungent smell, which condense into a white oxide. This oxide heated on charcoal is reduced with a kind of explosion, and soon again volatilised. Heated

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in a glass retort it fuses into a straw-colored striated mass. It appears to contain about sixteen per cent, of oxygen.

Tellurium is oxidized and dissolved (by the principal acids. To sulphuric acid it gives a deep purple color. Water Separates it in black floccttli, and heat throws it down in a white precipitate. With nitric acid it forms a colorless solution, which remains so when diluted, and affords slender dendritic crystals by evaporation. The muriatic acid, with a small portion of nitric, forms a transparent solution, from which water throws down a white submuriate. This may be redissolved almost wholly by repeated affusions of water. Alcohol likewise precipitates it.

Sulphuric acid, diluted with two or three parts of water, to which a little nitric acid has been added, dissolves a large portion of the metal, and the solution is not decomposed by water. The alkalies throw down from its solutions a white precipitate, which is soluble in all the acids, and by an excess of the alkalies or their carbonates. They are not precipitated by prussiate of potash. Tincture of galls gives a yellow flocculent precipitate with them. Tellurium is precipitated from them in a metallic state by zinc, iron, tin, and antimony.

Tellurium fused with an equal weight of sulphur, in a gentle heat, forms a lead colored striated sulphuret. Alkaline sulphurets precipitate it from its solutions of a brown or black color. In this precipitate either the metal or its oxide is combined with sulphur. Each of these sulphurets burns with a pale blue flame, and white smoke. Heated in a retort, part of the sulphur is sublimed, carrying up a little of the metal with it. It does not easily amalgamate with quicksilver.

TELLURETTED HYDROGEN, in chemistry, a gas formed by the combination of tellurium and hydrogen. To make this compound, hydrate of potash and oxide of tellurium are ignited with charcoal, and the mixture acted on by dilute sulphuric acid, in a retort connected with a mercurial pneumatic apparatus. An elastic fluid is generated, consisting of hydrogen holding tellurium in solution. It is possessed of very singular properties. It is soluble in water, and forms a claret-colored solution. It combines with the alkalies. It burns with a bluish flame, depositing oxide of tellurium. Its smell is very strong and peculiar, not unlike that of sulphureted hydrogen. This elastic fluid

was discovered by Sir H. Davy in 1809. When tellurium is made the electrical negative surface in water, in the voltaic circuit, a brown powder is formed, which appears to be a solid combination of hydrogen and tellurium. It was first observed by Mr. Ritter in 1808. The composition of the gas and the solid hydruret has not been ascertained. The prime equivalent of tellurium, according to Sir H. Davy, is 4-93, reduced to the oxygen radix. Berzelius makes the oxide of tellurium a compound of metal 100 + oxygen 24-8. If we call the oxy-gen 25, then the atom or prime would be 4. In this case telluretted hydrogen, if analogous in its constitution to sulphuretted hydrogen, would have a specific gravity of 2-2916 (not 2-3074, as Dr. Thomson deduces it Jrom the same data).

TELLUS, Lat., i. e. the earth, in the mythology, one of the Roman names of the goddess Cybele, and which in common language signified the same with terra, the earth ; but in the mythology Terra was the name appropriated to the mother, the wife of Coelus, and Tellus to the daughter, the wife of Saturn. See OPS.

TEMENUS, a leader of the Heraclidze, who became king of Argos. He was succeeded by Deiphon, who had married his daughter Hyme-tho.

TEMERA'RIOUS, adj. i Fr. temeraire ;

TEMER'ITY, n. s.] Latin temerarius.

Rash ; heady ; unreasonably adventurous, or contemptuous of danger: the noun substantive corresponding.

The figures are bold even to temerity. Cowley.

Resolution without foresight is but a temerarious folly ; and the consequences of things are the first point to be taken into consideration. L'Estraiige.

Should he find upon one single sheet of parchment an oration written full of profound sense, adorned with elegant phrase, the wit of man could not persuade him that this was done by the temerarious dashes of an unguided pen. Ray.

TEMESVAR, BAKAT or BANNAT OF, a province in the south of Hungary, bounded by Transylvania, and by the rivers the Marosch, the Theyss, and the Danube. Its extent is about 9450 square miles; its population above 700,000. In the south-east it contains a range of

high mountains, where pasturage and mining form the principal employment of its inhabitants ; but the rest is level, and in many places marshy or sandy, though in general of great natural fertility. From the middle of the sixteenth century to 1 71 6, this province was subject to the Turks, and had, under their management, become overrun with robbers; so that when the conquests of prince Eugene restored it to Austria, many parts of it were almost uninhabited : and the renewal of the Turkish war in 1737 ruined many of the European establishments. On the restoration of peace, however, a number of Servians, Rascians, Macedonians, and Bulgarians, repaired hither from the Turkish provinces, bringing their property along with them ; and the new governor exerted himself with great zeal in the cause of improvement. In 1752 the government was changed from the military to the civil form, and, with the exception of a temporary check during the seven years' war, this province has gone on ever since in a gradual course of improvement.

TEMESVAR, a considerable town in the south of Hungary, the capital of the county of the same name, and one of the strongest fortresses of the Austrian empire. It stands at the confluence of the Temes and Rega, is well built for so backward a country, and contains a population of 11,000, a mixed race, of Rascian, Ger-man, and Greek origin. The chief public buildings are the cathedral, a Greek and a Catholic church, three monasteries, three hospitals, a synagogue, and extensive barracks for the garrison. The town is the residence both of a Catholic and of a Greek bishop. The chief manufacture is silk ; but iron and woollens are also objects of traffic.

TEMKSVAE, a frontier district of Hungary, in-

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eluding the south and south-east parts of the bannat. On the west it is marshy, containing, however, fine and extensive plains ; but in the east it is mountainous, with rich mines of copper. It is divided into the districts of German and Wallacho-Illyrian, and contains 173,000 inhabitants. The chief town is Pancsova, but the general's residence is at the town of Temesvar.

TEMESVAR, a palatinate of Hungary, occupying the central part of the bannat. Its area is 2460 square miles, with 244,000 inhabitants.

TEMPE, in ancient geography, a valley of Thessaly in Phthiotis, between Mount Olympus on the north, and Ossa on the south, through which the Peneus runs into the .&gean Sea. All the poets celebrate this valley as the most delightful spot on earth ; with verdant walks, cool shady groves, and the melodious singing of birds, &c., and hence the name Tempe became proverbial for a pleasant spot. It was five miles long, but in some places not above an acre and a half broad. But Livy gives a quite different account of it, and says the Roman army '^ere struck with horror in passing over the precipitous rocky chasm. Strabo accounts for the difference by the depredations of an earthquake. See Strabo ix. and Livy.

TEM'PER, v.a. &n. s.

TEM'PERAMENT, n. s.

TEMPEUAMEN'TAL, adj.

TEM'PERANCE, n. s.

TEM'PERATE, adj.

TEM'PEUATELY, adv.

TEM'PERATENESS, n. s.

TEM'PERATURE,

TEM'PERED, adj. substantive means due mixture; middle course ; mean constitution of body or mind ; frame of mind ; state to which certain metals are brought by art: temperament is also constitution; predominant disposition : the adjective corresponding : temperance,

moderation; patience; calmness : temperate, moderate ; unimpassioned : the adverb and noun substantive corresponding: temperature is natural constitution ; degree of natural qualities ; mediocrity ; moderation : tempered is disposed in regard to the passions ; adjusted, generally.

Prepare the sixth part of an ephah and the third part of an hin of oil, to temper with the fine flour.

Ezek. xlvi. 14.

Thy sustenance serving to the appetite of the eater, tempered itself to every man's liking.

Wisdom xvi. 21.

The potter tempering soft earth, fashioneth every vessel with much labour. Id. xv. 7.

11 is senseless speech and doted ignorance When as the noble prince had marked well, He calmed bis wrath with goodly temperance.

Spenser.

Solon, in his laws to the Athenians, laboured to temper their warlike courage with sweet delights of .'earning and sciences . so that as much as the one excelled in arms, the other exceeded in knowledge. Spenseion Inland.

In that proud port, which her so goodly graceth, Most goodly temperature you may descry. Spenser.

With which the damned ghosts he governeth, .'.nil furies rules, and Tartare tewperei.li. Id.

Fr. temperer ; Lat. tempera. To mix so that one part qualifies the other ; compound ; bring to proper consistence or proportion: hence to soften ; mollify ; govarn : the noun

When was my lord so much ungently tempered, To stop his ears against admonishment !

Shakipeare.

If you could find out but a man To bear a poison, I would temper it ; That Romeo should upon receipt thereof Soon sleep in quiet. Id.

She's not forward, but modest as the dove : She is not hot, but temperate as the morn. Id.

What ! are you chafed?

Ask God for temperance, that's the appliance only Which your disease requires. Id. Henry VIII.

Now will I to that old Andronicus, And temper him with all the art I have. Shakspeare.

Here draw I

A sword, whose temper I intend to stain With the best blood that I can meet withal. Id.

The brain may devise laws for the blood, but a hot temper leaps over a cold decree.

Id. Merchant of Venice. Temperately proceed to what you would Thus violently redress. Shakspeare.

Nothing better proveth the excellency of this soil and temper than the abundant growing of the palm trees. Raleigh.

Use a temperate heat ; for they are ever temperate heats that digest and mature ; wherein we mean temperate, according to the nature of the subject ; for that may be temperate to fruits and liquors, which will not work at all upon metals. Bacon.

Birds that change countries at certain seasons, if they come earlier, shew the temperature of the weather.

Id.

As the world's sun doth effects beget Different in divers places every day ;

Here autumn's temperature, there summer's heat, Here flowery springtide, and there winter grey.

Davies.

Restore yourselves unto your tempers, fathers, And without perturbation hear me speak.

Ben Jonson.

It lieth in the same climate, and is of no other temperature than Guinea.

Abbot's Description of the World. Langley's mild temperateness Did tend unto a calmer quietness.

Daniel's Civil War.

This, I shall call it evangelical, temper is far from being natural to any

corrupt child of Adam.

Hammond.

God esteems it a part of his service if we eat or drink ; so it be temperately, and as may best preserve health. Taylor.

His sleep

Was airy, light, from pure digestion bred, And temperate vapours bland. Milton.

Observe

The rule of not too much ; by temperance taught In what thou eatest and drinkest ; seeking from

thence Due nourishment, not gluttinous delight. Id.

These soft fires with kindly heat Of various influence foment and warm, Temper or nourish. Id.

The sword

Of Michael from the armoury of God Was given him tempered so, that neither keen Nor solid might resist that edge. Id.

Remember with what mild And gracious temper he both heard and judged, Without wrath or reviling. Id. Paradise Lost.

The common law has wasted and wrought out those distempers, and reduced the kingdom to its just state and temperament. Hale.

Intellectual representations are received with as

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unequal a fate, upon a bare temperamental relish or disgust. Glanville.

From temperate inactivity we are unready to put in execution the suggestions of reason.

Browne's Vulgar Errours.

That temperamental dignotions, and conjecture of prevalent humours, may be collected from spots in our nails, we concede. Id.

There may be as much difference as to the temperature of the air, and as to the heat and cold, in one mile, as in ten degrees of latitude ; and he that would cool and refresh himself in the summer, had better go up to the top of the next hill, than re-move into a far more northern country. Id. Travels.

Woman ! Nature made thee To temper man : we had been brutes without you.

Olway.

In the tempering of steel, by holding it but a mi-nute or two longer or lesser in the other competent heat, gives it very different tempers as to brittleness or toughness. Boyle.

Temperance, that virtue without pride, and fortune without envy, gives indolence of body and tranquillity of mind ; the best guardian of youth and support of old age. Temple.

Repeated peals they hear,

And, in a heaven serene, refulgent arms appear : Reddening the skies, and glittering all around, The tempered metals clash, and yield a silver sound.

Dryden.

This will keep their thoughts easy and free, the only temper wherein the mind is capable of receiving new informations. Locke an Education.

Bodies are denominated hot and cold, in proportion to the present

temperament of that part of our body to which they are applied. Locke.

This body would be increased daily, being supplied from above and below ; and, having done growing, it would become more dry by degrees, and of a temper of greater consistency and' firmness.

Burnet's Theory of the Earth. The good old knight, with a mixture of the father and master of the family, tempered the inquiries after his own affairs with kind questions relating to themselves. Addison.

By winds that temperately blow, The bark should pass secure and slow. Id.

If, instead of this variation of heat, we suppose an equality or constant temperature of it before the deluge, the case would be much altered.

Woodward's Natural History. Health itself is but a kind of temper, gotten and preserved by a convenient mixture of contrarieties.

Arbuthnot.

These needles should have a due temper ; for, if they are too soft, the force exerted to carry them through the flesh will beud them ; if they are too brittle, they snap. Sharp.

1 advised him to be temperate in eating and drinking. Wiseman.

Teach me, like thee, in various nature wise, To fall with dignity, with temper rise. Pope.

If the estates of some bishops were exorbitant be-fore the reformation, the present clergy's wishes reach no further than that some reasonable temper had been used, instead of paring them so quick.

Swift's Miscellanies.

Memory depends upon the consistence and the temperature of the brain. Watts.

All irregular tempers in trade and business are but like irregular tempers in eating and drinking. Law.

TEMPERAMENT, among physicians, is a certain disposition of the solids and fluids of the human body, by which it may be properly denominated

strong, weak, lax, &c. In every person there is erhaps a temperament peculiar to himself, ‘hough the ancients only took notice of four, which indeed seem to have a real existence, and are capable of receiving an explanation. The two that are most distinctly marked are the sanguineous and melancholic, *viz.* the temperaments of youth and age. 1. Sanguineous. — Here there is laxity of solids, discoverable by the softness of hair and succulency ; large system of arteries, redundancy of fluids, florid complexion ; sensibility of the nervous power, especially to pleasing objects; irritability from the plethora; mobility and levity from lax solids. 2. Melancholic habit. — Here greater rigidity of solids oc-curs, discoverable by the hardness and crispature of the hair ; small proportion of the fluids, hence dryness and leanness; small arteries, hence pale color; venous plethora, hence turgescency of these, and lividity ; sensibility, frequently exquisite ; moderate irritability, with remarkable tenacity of impressions ; steadiness in action and slowness of motion, with great strength ; for excess of this constitution in maniacs gives the most extraordinary instance of human strength we know. This temperament is most distinctly marked in old age, and in males. 3. The choleric temperament takes place between youth and manhood. In this the distribution of the fluids is more exactly balanced ; there is less sensibility, and less obesity, with more irritability, proceeding from greater tension, less mobility and levity, and more steadiness in the strength of the nervous power. As to the 4. Phlegmatic, it cannot be distinguished by any characters of age or sex. It agrees with the sanguineous in laxity and succulency. It differs from that temperament and the melancholic, by the more exact distribution of the fluids. Again it differs from the sanguineous, by having less sensibility, irritability, mobility, and. perhaps strength, though sometimes indeed this last is found to be great. These are the ancient temperaments. The temperaments indeed are much more various ; and very far from being easily marked and reduced to their genera and species, from the great variety which is observable in the constitutions of different men. But the late Dr. Brown, among other bold assertions, insisted that there is no natural difference of constitution but what is occasioned by habit and accident.

TEMPERAMENT, in music, is defined by Rousseau to be an operation, which, by a slight alteration in the intervals, causes the difference between two contiguous sounds to disappear, makes each of these sounds seem identical with the other, which, without offending the ear, may still preserve theirrespective intervals or distances one from the other. By this operation the scale is rendered more simple, and the

number of sounds which would otherwise be necessarily retrenched. Had not the scale been thus modified, instead of twelve sounds alone, which aˆe contained in the octave, more than sixty would be indispensably required to form what we properly call modulation in every tone. See Mrsic.

TEMPERING, in the mechanic arts, the preparing of steel and iron, so as to render them

more compact, hard, and firm ; or more soft and pliant, according to their respective occasions. See IRON and STEEL.

TEM'PEST. n. s. &c v. a. ~\ French tempeste ;

TEMP'ESTBEATEN, adj. I Lat. tempestas. The

TEMP'ESTTOST, N utmost violence of

TEMPESTIV'ITY, n.s. i the wind: to dis—

TEMPEST'UOUS, adj. J turb by a tempest. ' The names,' says Johnson, ' by which the wind is called according to the gradual increase of its force seem to be, a breeze; a gale; a gust; a storm ; a tempest : ' any commotion or storm : the two compounds following are of obvious meaning : tempestivity is a Latinism only used, as we find, by Brown for seasonableness : tempestuous is stormy ; turbulent.

Tempestuous fortune hath spent all her spight, And thrilling sorrow thrown his utmost dart.

Spenser.

I have seen tempests, when the scolding winds Have rived the knotty oaks.

Shakspeare. Julius Ccesar. The tempest in my mind Doth from my senses take all feeling else, Save what beats there. Id. King Lear.

Though his bark cannot be lost, Yet it shall be tempest -tost. Id. Macbeth.

What at first was called a gust, the same Hath now a storm's, anon a tempest's name. Donne.

Some have been driven by tempest to the south.

Abbot.

Part huge of bulk,

Wallowing unwieldy, enormous in their gait, Tempest the ocean. Milton.

We, caught in a fiery tempest, shall be hurled Each on his rock transfixed. Id.

Which of them rising with the sun, or falling, Should prove tempestuous. Id.

Since their dispersion, the constitutions of countries admit not such tempestivity of harvest.

Browne's Vulgar Ei—ours.

In the calm harbour of her gentle breast, JMy tempest-beaten soul may safely rest.

Dryden's Aurengezebe.

Her looks grow black as a tempestuous wind, Some raging thoughts are rowling in her mind.

Dry den.

Pompey, when dissuaded from embarking because the weather was tempestuous, replied, My voyage is necessary, my life is not so.

Collier on the Value of Life. With clouds and storms

Around thee thrown, tempest o'er tempest rolled, Thou humblest nature with thy northern blast.

Thomson.

TEMPESTA (Antony), an Italian painter, born at Florence in 1555. He studied under Strada, and excelled in landscapes with figures. He also engraved some prints. He died in 1630.

TEMP'LAR, n. s. \ From the Temple, a

TEM'PLE. $ house near the Thames,

anciently belonging to the knights templars, originally from the temple of Jerusalem. French, temple ; Lat. templum. A student in the law : a building devoted to divine worship or to acts of religion.

The honoured gods Throng our large temples with the shews of peace.

Shakspeare.

Most sacrilegious murther hath broke ope The Lord’s anointed temple, and stole thence The life o’ the’ building. Id. Macbeth.

Wits and templars every sentence raise, And wonder with a foolish face of praise.

Pope's Epistle.

TEMPLARS, TEMPLERS, or knights of the tem-ple, a religious order instituted at Jerusalem in the beginning of the twelfth century, for the defence of the holy sepulchre, and the protection of Christian pilgrims. They were first called the poor of the holy city, and afterwards assumed the appellation of templars, because their house was near the temple. The order was founded by Baldwin II., king of Jerusalem, with the concurrence of the pope : and the principal articles of their rule were : — That they should hear the holy office throughout every day ; or that, when their military duties should prevent this, they should supply it by a certain number of pater no«<ters ; that they should abstain from flesh four days in the week, and on Fridays from eggs and milk meats ; that each knight might have three horses and one esquire; and that they should neither hunt nor fowl. After the ruin of the kingdom of Jerusalem, about 1186, they spread themselves through Germany and other countries of Europe, to which they were invited by the liberality of the Christians. In 1228 this order acquired stability, by being confirmed in the council of Troyesˆ and subjected to a rule of discipline, drawn up by St. Bernard. In every nation they had a particular governor, called master of the temple, or of the militia of the temple. Their grand master resided at Paris. The order flourished for some time, and acquired, by the valor of its knights, immense riches and an eminent degree of militaiy renown ; but, as their prosperity increased, their vices multiplied, and their arrogance, luxury, and cruelty, rose at last to such a monstrous height, that their privileges were revoked, and their order suppressed, with the most terrible circumstances of infamy and severity. Their accusers were two of their own body, and their chief prosecutor Philip the Fair of France, who -addressed his complaints to Clement V. The pope, though at first unwilling to proceed against them, was under a necessity of complying with the king's desire ; so that, in 1307, upon an appointed day, and for some time afterwards, all the knights who were dispersed throughout Europe, were seized and imprisoned, and many of them, after trials for capital crimes, were convicted and put to death. In 1312 the whole order was suppressed by the council of Vienna. A part of the rich revenues they possessed was bestowed upon other orders,

especially on the knights of St. John, now of Malta, and the rest confiscated to the respective treasuries of the sovereign princes in whose dominions their possessions lay.

TEMPLE (Sir William), an eminent statesman, born in London in 1628. His family was ancient, and assumed the surname of Temple from the manor of temple, in the hundred of Sparken Hall, Leicestershire. He was first sent to Pen-sehurst, in Kent, under his uncle, Dr. Hammond ; but at ten he was removed to Bishop's Stortford, in Hertfordshire. In his seventeenth year he went to Cambridge, where he was placed under the tuition of Dr. Cudworth. Afier

acquiring a competency of French and Spanish, he was sent abroad to finish his education. Having resided two years in France, Mr. Tem-ple made a tour through Holland, Flanders, and Germany. In 1654 he returned home, and married Miss Osborn, daughter of Sir Peter Osborn, of Chicksand. He rejected all offers of employment under Cromwell ; but at the restoration, in 1690, being chosen a member of the Irish convention, while others were trying to make their court to the king, Mr. Temple opposed the poll-bill with so much spirit that his conduct soon attracted the attention of the pub-lic, and brought him into notice. In the next parliament, in 1661, he was elected with his father for the county of Carlow; and in 1662 was chosen one of the commissioners from that parliament to the king. Soon after he went back to Ireland, where he met with a very favorable reception from the duke of Ormond. In

1665 he was sent with a secret commission to the bishop of Munster, which he executed so much to the satisfaction of Charles II. that on his return to Brussels he appointed him resident there, and created him a baronet. In April

1666 he sent for his family; but, before their arrival, he had been again obliged to depart upon business to the prelate's court. Having finished his business at Munster he returned to Brussels, where he passed a year. In spring 1667, a new war breaking out between France

and Spain, which exposed Brussels to danger, Sir William sent his lady, and family to England ; but he himself remainedrtnere with his sister till December 25th, when h'e was ordered by the king to come over privily to London. Taking the Hague in his way, he paid a visit to De Witt, and proposed those overtures which produced the triple alliance. Soon after his arrival at the British court, he returned, on the 16th of January, 1668, with the character of envoy extraordinary and plenipotentiary to Holland ; where a conference being opened, he brought that treaty to a perfect conclusion in five days. The ratifications of this alliance being exchanged on the 15th of February, he repaired to Brussels ; and a treaty being set on foot between France and Spain at Aix-la-Chapelle, he set out for that place on the 24th of April in quality of his majesty's ambassador extraordinary. He arrived on the 27th ; and it was chiefly owing to his assistance that the Spaniards were brought to sign the articles of that peace on the 2d of May. He then returned to Brussels, with a view of remaining there in his former station of resident ; but he received letters from the earl of Arlington, with the king's order to be his ambassador. Sir William upon this returned to England, and was received with every possible token of favor by the kin?. Setting out again for Holland, in his new character of ambassador, he arrived at the Hague in August, 1668; where he enjoyed the confidence of that great minister De Witt, and lived in great intimacy with the prince of Orange, then only eighteen years of age; but in September, 1669, he was hurried back to England by lord Arlington, and pressed to return to the Ila<j;ue, and pave the way f«>r a war with Holland.

This, however, he refused to have any hand in ; which so much provoked the lord treasurer Clifford that he refused to pay him an arrear of £2000 due from his embassy. Disgusted with Arlington's behaviour, Sir William returned to his house at Sheen, near Richmond, in Surrey. About the end of summer, however, 1673, the? king, wishing to put an end to the war, sent for Sir William to negociate a peace; but, powers having been sent from Holland to the marquis de Fresno, the Spanish ambassador at London, Sir William was ordered to confer with him; and a treaty was concluded in three days, and the point carried respecting the superiority of the British flag, which had been so long contested. In June 1674 he was again sent ambassador to Holland to offer the king's mediation between France and the confederates, then ;it war, which was accepted-soon after; lord Berkeley, Sir William Temple, and Sir Leoline Jenkins, being declared ambassadors and mediators; Nimeguen, which Sir William had proposed, was at length agreed upon by all parties to be the place of

treaty. During his stay at the Hague, the prince of Orange, who was fond of the English language, constantly dined and supped once or twice a-week at his house ; and by this familiarity he so much gained the prince's confidence and esteem, that he had a considerable hand in his marriage with the princess Mary, daughter of James II. In July, 1676, he removed his family to Nimeguen, and in 1677 his son was sent over with letters ordering him to return, and succeed Mr. Coventry as secretary of state. In consequence of this order, Sir William came over to England in spring 1677 ; and, though the affair of the secretaryship was dropped at his desire, he did not return to Nimeguen that year. About this time the prince of Orange came over, and married the princess Mary ; and this gave occasion for a new coolness between lord Arlington and Sir William, as he and the lord treasurer Osborn, who was related to Sir William's lady, were only privy to that affair. After the prince and princess were gone to Holland, as the court seemed inclined to favor France, the king wished to engage Sir William in some negociations with that crown ; but lie was so ill satisfied with this proposal, that he offered to give up all pretensions to the office of secretary ; and, desiring the lord treasurer to acquaint his majesty with his intentions, retired to Sheen, in hopes of being taken at his word. Upon a discovery, however, of the French designs not to evacuate the Spanish towns agreed by the treaty to be delivered up, the kin<i commanded him to go upon a third embassy to the states ; with whom he concluded a treaty ; by which England engaged, in case France refused to evacuate the towns in forty days, to declare war immediately against that nation ; but, before half that time was elapsed, one l)u Cross was sent from the English court to Holland upon a business which damped all the good humor excited by the treaty there, and which produced such sudden changes here as gave Sir William a distaste for all pubKc employments. In 167(.> he went back to Nimeguen, where the French delayed to sign llie treaty till tin; last hour ; but,

having concluded it, he returned to the Hague, -whence he was soon after sent for to enter upon the secretary's office, which Mr. Coventry

at length resolved to resign. He accordingly came over and went to court, with a full intention of assuming his office ; but he started a difficulty that he had not a seat in the house of commons ; and, notwithstanding the king's repeated intreaties, refused to accept, but advised him to choose a council in whom he could confide, and upon whose abilities he could depend. This advice was followed, and, the choice of the persons being concerted between the king and Sir William, the old council was dissolved four days after, and the new one established, of which Sir William was a member. In 1680 the council began again to be changed on the king's illness, at the end of the summer, and the duke of York returned privately to court. In this juncture Sir William, endeavouring to restore to the king's favor some persons to whom he had taken a dislike, he met with such treatment as gave him a fresh distaste to the court ; so that he resided principally at Sheen. Soon after this the king sent for him again ; and, having proposed that he should go as ambassador into Spain, Sir William consented ; but when his equipage was almost ready, and part of the money paid down for it, the king proposed to defer his journey till the end of the session of parliament, in which he was chosen a member for the university of Cambridge. In this session the spirit of party ran so high that it was impossible to bring the house to any temper. The duke was sent into Scotland; but nothing would satisfy them but a bill of exclusion, which Sir William strenuously opposed. Not long after this period, the parliament being dissolved by the king, without the advice of his privy council, and contrary to his promise, Sir William made a bold speech against it ; for which he was very ill used by some of those who had been most earnest in promoting the last change in the ministry. Upon this he grew quite tired of public business, declined the offer he had of again serving for the university in the next parliament, that soon after met at Oxford ; and, seeing the king resolved to govern without his parliament, and to supply his treasury through another channel, he retired to Sheen, resolving never more to meddle with public affairs. From that time Sir William lived at this place, till, having purchased a seat, called Moor-Park, near Farnham in Surrey, which he conceives a great fondness for, he resolved to spend the remainder of his life in this agreeable retreat. At the time of the revolution, in 1688, Moor-Park becoming unsafe, as it lay in the way of both armies, he went back to the house at Sheen, which he had given up to his son. When the prince reached Windsor, he went thither to wait upon his highness, and carried his son along with him. The prince pressed him to enter into his service, and to be secretary of state ; but, his age and infirmities confirming him in the resolution he had made not to meddle any more with public affairs, he was satisfied that his son alone should enjoy his majesty's favor. Mr. John Temple

NV.IS appointed secretary at war; but he had

hardly been a week in that office when lie drowned himself. In 1694 S,r William lost his lady. After this he lived four years, very much afflicted with the gout; and died in January 1698. His body was interred in Westminster Abbey, and a marble monument erected in 1722. Sir William's principal works are, 1. Memoirs from 1672 to 1692. 2. Remarks upon the State of the United Provinces. 3. An Introduction to the History of England. 4. Letters written during his last embassies : and, 5. Miscellanies, which contain many curious pieces. He was an accomplished gentleman, a sound politician, a. patriot, and a scholar.

A TEMPLE is a public building erected ir honor of some deity, either true or false ; and wherein the people meet to pay religious worship. The word is formed from the Latin tern-plum, the Greek Tefiivog, signifying the same thing; from reˆvoi, I separate, as a temple ib a place separated from common uses. Others with more probability derive it from the old Latin word templare, to contemplate. It is certain the ancient augurs gave the name templa to those parts of the heavens which were marked out for the observation of the flight of birds. Their formula was, Templa tesqua sunto. Temples were originally all open, and hence received their name. See Philosophical Transactions No. 471 , sect. 5, where we have an account of an ancient temple in Ireland of the same sort as Stonehenge.

Templum, among the old Romans, signified a place consecrated by the augurs, whether enclosed or open, in the city or in the fields. Clemens Alexandrinus and Eusebius refer the origin of temples to the sepulchres built for the dead. This notion has been lately illustrated and confirmed by Mr. Farmer in his Treatise on the Worship of Human Spirits, p. 373, &c. Herodotus and Strabo say, the Egyptians were the first who built temples to the gods. The first erected in Greece is ascribed to Deucalion, by Apollonius, Argonaut.. lib. iii. The Druids and others of the ancients performed their sacrifices in all places indifferently, from a persuasion that the whole world is the temple of God, and that he required no other. This was the doctrine of the magi, followed by the Persians, the Scythians, the Numidians, and many other nations mentioned by Herodotus, lib. i, Strabo, lib. xv, and Cicero in Verrem. 2. The Romans had several kinds of temples ; whereof those built by the kings, &c., consecrated by the augurs, and wherein the exercise of religion was regularly performed, were called, by way of eminence, templa. Those that were not consecrated were

called redes. The little temples, that were covered or roofed, they called aediculte. Those open sacella. Some other edifices, consecrated to particular mysteries, they called fana and delubra. The most celebrated temples among the Romans were the Capitol and Pantheon. They had also the temple of Saturn, which serv-ed for the public treasury ; and the temple of Janus. The Indian temples, or pagodas, are sometimes of a prodigious size. They are commonly erected near the banks of the (Janges, Kist-na, or other sacred rivers, for the benefit of ab-lution in the purifying stream. Where no river

flows near the foot of the pagoda, there is invariably in the front of it a large tank or reservoir of water. These are, for the most part, of a quadrangular form, are lined with freestone or marble, have steps regularly descending from the margin to the bottom, and Mr. Crauford observed many between 300 and 400 feet in breadth. At the entrance of all the more considerable pagodas there is a portico, supported by rows of lofty columns, and ascended by a handsome flight of stone steps; sometimes, as in the instance of Tripetti, to the number of more than a hundred. Under this portico, and in the courts that generally enclose the whole building, an innumerable multitude assemble at the rising of the sun ; and, having bathed in the stream below, and, in conformity to an immemorial custom over all the east, having left their sandals on the border of the tank, impatiently await the unfolding of the gates by the ministering brahmin. The gate of the pa-goda universally fronts the east, to admit the rays of the solar orb ; and, opening, presents to the view an edifice partitioned out, according to M. Thevenot in his account of Chitanagar, in the manner of the ancient cave temples of Elora, having a central nave or body ; a gallery ranging on each side ; and, at the farther end, a sanctuary, or chapel of the deity adored, surrounded by a stone balustrade to keep off the populace. Those who wish to peruse a more particular account of the Indian temples may consult Maurice's Indian Antiquities. See also PAGODA and SERINGHAM.

The TEMPLE AT JERUSALEM was similar in its plan to the tabernacle.

The first temple was begun by Solomon about A. M. 2992, and A. A. C. 1012, and finished in eight years. It consisted of the holy of holies, the sanctuary, and a portico. The holy of holies was a square room of twenty cubits ; the sanctuary, or holy place, was forty cubits long, and twenty broad, consequently the length of both these together was sixty cubits. The portico, which stood before the sanctuary, was twenty cubits long, and ten broad. The whole length of the temple, computing the cubit at twenty-two inches, did not exceed 110 feet in length, and thirty-six feet eight inches in breadth. In the portico stood the two brazen pillars called Jachin and Boaz, which appear to have been forty cubits high, and about four in diameter. The court about the tabernacle was 100 cubits long, and fifty broad ; and, as Solomon made every par{ of the temple about twice as large as the corresponding part in the tabernacle, we may conclude, that the court around the temple was 200 cubits long, and 100 broad. According to this description, the tem-ple of Solomon was by no means so large as it is commonly represented. Still, however, it was very magnificent in size, and splendid in ornament. It was plundered of its treasures in the reign of Rehoboam, and repaired by Joash ; it was again spoiled in the time of Ahaz and of Hezekiah; and, after being restored by Josiah, was demolished by Nebuchadnezzar in A. M. 3416, after it had stood 476 years according to Josephus, and, according to Usher, 428 years. The second temple was built by the Jews, after their return from the Babylonish captivity, under

the direction of Zerubbabel their governor, and of Joshua the high priest, with the encouragement of Cyrus the Great to whom Judea was become a tributary kingdom. This temple was destitute of five remarkable appendages, which were the chief glory of the first temple; *viz.* the ark and mercy-seat, the shechinah, the holy fire on the altar, which had been first kindled from heaven, the urim and thummim, and the spirit of prophecy. This temple was plundered and profaned by Antiochus Epiphanes (see JEWS), but afterwards purified by Judas Maccabaeus, who restored the divine worship ; and, after hav-ing stood 500 years, rebuilt by Herod, with a magnificence approaching to that of Solomon's. Tacitus calls it immensse opulentioe templum; and Josephus says, it was the most astonishing structure he had ever seen, as well on account of its architecture as its magnitude, and the richness and magnificence of its various parts and sacred appurtenances. This temple, which Herod began to build about sixteen years before the birth of Christ, and so far completed in nine years and a half as to be fit for divine service, was at length destroyed by the Romans on the same month and day of the month on which Solomon's

temple was destroyed by the Babylonians.

TEMPLES, in architecture. The ancient temples were distinguished, with regard to their construction, into various kinds; as templum i >. antis, or ./Edes in antis. These, according to Vitruvms, were the most simple of all temples, having only angular pilasters, called an lac or parastatse, ,at the corners, and two Tuscan columns on each side of the doors. Temple, tetrastyle, or simply tetrastyle, was a temple that had four columns in front, and as many behind. Such was the temple of Fortuna Virilis at Rome. Temple, prostyle, that which had only columns in its front or fore-side ; as that of Ceres at Eleusis in Greece. Temple, amphiprostyle, or double prostyle, that which had columns both before and behind, and which was also tetrastyle. Temple, periptere, that which had four rows of insulated columns around, and was hexastyle, i. e. had six columns in front; as the temple of Honor at Rome. Temple, diptere, that which had two wings, and two rows of columns around, and was also octostyle, or had eight columns in front ; as that of Diana at Ephesus.

TEM'PLES, n. s. Lat. tempora. The upper part of the sides of the head where the pulse is felt.

Her sunny locks Hang on her temples like a golden Ceece.

Shaks e..re.

The weapon entered close about his ear, Cold through his tempks glides the whizzing spear.

Pope.

We may apply intercipients of mastich upon t!ie temples; frontals also may be applied.

II iseman s Sttryery.

To procure sleep, he uses the scratching of the temples and ears ; that even mollifies wild beasts.

Arbuthnot.

TEMPLES, in anatomy, a double part of the head, reaching from the forehead and c-yes to the two ears. The temples are chiefly formed of two bones called ossa ternporis. These parts, accord

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ing to physicians, were called tempora, from their showing the age or time of a man by the color of the hair, which turns white in this part before any other ; which Homer seems to have been aware of, by his calling men poliocrotaphi, i. e. gray templed.

TEMPLES also denote two inns of court in London, thuscalled, because anciently the dwelling-house of the knights-templars. At the suppression of that order, they were purchased by the professors of the common law, and converted into hospitia or inns. They are called the inner and middle temple, in relation to Essex-house ; which was also a part of the house of the templars, and called the outer temple, because situated without Temple Bar. In the middle temple, during the time of the templars, the king's treasure was kept ; as was also that of the kings of France in the house of the templars at Paris. The chief officer was the master of the temple, who was summoned to parliament in 47 Hen. III. ; and from him the chief minister of the tem-ple church is still called master of the temple.

TEMP'LET, n. s. A diminutive of temple. A piece of timber in a building.

When you lay any timber on brickwork, as lin-teols over windows, or templets under girders, lay them in loom. Moxon's Mechanical Exercises.

TEM'PORAL, adj.ˆ Fr. temporal ; low

TEMPORAL'ITY, n.s. Lati temporalis. Mea—

TEM'PORALS, [sured by time; r.ot

TEMPORALLY, adv. [eternal ; not spiritual ;

TEMPORALLY, n. s. \ placed at the temples :

TEM'PORARY, adj. J temporality and temporals mean temporal or secular possessions : temporally, the laity ; secular people : temporary, lasting only for a limited time.

As there they sustain temporal life, so here they would learn to make provision for eternal. Hooker. . All the temporal lands which men

devout By testament have given to the church, Would they strip from us. Shakspeare. Henry V.

Call not every temporal end a defiling of the intention, but only when it contradicts the ends of God, or when it is principally intended : for sometimes a temporal end is part of our duty ; and such are all the actions of our calling. Taylor.

The residue of these ordinary financies is casual, as the temporalities of vacant bishopricks, the profits that grow by the tenures of lands. Bacon.

These temporary truces were soon made and soon broken ; he desired a straighter amity.

Id. Henry VII.

The pope sucked out inestimable sums of money, to the intolerable grievance of clergy and temporally .

Abbot.

If the Lord's immediate speaking, uttering, and writing, doth conclude, by a necessary inference, that all precepts uttered and written in this manner are simply and perpetually moral ; then, on the contrary, ail precepts wanting this are merely temporary.

'White.

There is scarce any of those decisions but giˆes good light, by way of authority or reason, to some questions that arise also between temporal dignities, especially to cases wherein some of our subordinate temporal titles have part in the controversy. Selden.

Such revenues, lands, and tenements, as bishops have had annexed to their sees by the kings and ethers from time to time, as they are barons and lords of the parliament. Cowell.

Sinners, who are in such a temporally happy con-

dition, owe it not to their sins, but wholly to their luck. South.

The king yielded up the point, reserving the ceremony of homage from the bishops, in respect of the temporalities, to himself. Ayliffe.

The republick, threatened with danger, appointed a temporary dictator, who, when the danger was over retired again into the community. Addison.

Prayer is the instrument of fetching down all good things to us, whether spiritual or temporal.

Duty of Man.

Our petitions to God, with regard to temporals, must be that medium of convenience proportioned to the several conditions of life. Rogers's Sermons.

Copious bleedings, by opening the temporal arteries, are the most effectual remedies for a phrensy. Arbuthnot on Aliments.

All temporal power hath been wrested from the clergy, and much of their ecclesiastick. Swift.

TEMPORAL ARTERIES, the arteries of the temples. See ANATOMY, Index, and TEMPLES.

TEMPORALTY. Those of bishops are the revenues, lands, tenements, and lay fees, belonging to bishops, as they are barons and lords of parliament. The custody of the temporalties of bishops forms a branch of the king's ordinary revenues. These, upon the vacancy of the bishopric, are immediately the right of the king, as a consequence of his prerogative in church matters; whereby he is considered as the founder of all archbishoprics and bishoprics, to whom, during the vacancy, they revert. This revenue of the king, which was formerly very considerable, is now by a customary indulgence almost reduced to nothing : for, at present, as soon as the new bishop is consecrated and confirmed, he usually receives the restitution of his tempcral-ties quite entire and untouched from the king ; and then, and not sooner, he has a fee-simple in his bishopric, and may maintain an action for the profits.

TEM'PORIZE, v. n. } Fr. temporiser ; Lat.

TEMPORI'ZER, n. s. $ tempus. To delay ; procrastinate ; comply with the times ; compound : the noun substantive corresponds.

If Cupid hath not spent all his quivers in Venice, thou wilt quake for this shortly.

— I look for an earthquake too then.

— Well, you will temporise with the hours.

Shakspeare.

The dauphin is too wilful opposite, And will not temporize with my entreaties : He flatly says, he'll not lay down his arms. Id.

I pronounce thee a hovering temporizer, that Canst with thine eyes at once see good and evil, Inclining to them both. Id. Winter's Tale.

The earl of Lincoln, deceived of the country's concourse, in which case he would have temporised, resolved to give the king battle. Bacon's Henry VII.

They might their grievance inwardly complain, But outwardly they needs must temporize. Daniel.

TEMPT, v. a. -\ Fr. tenter; Lat. tento. TEMPT'ABLE, adj. f To incite ; entice ; solicit TEMPT A'TION, n.s. £ to ill; try; attempt: TEMPT'ER. J the adjective and noun

substantives corresponding.

Come together, that Satan tempt you not.

1 Cor. vii. 5. JTis not the king that sends you to the Tower :

My lady Gray tempts him to this harsh extremity.

Shakspfurt.

I'm much too vent'rous In tempting of your patience. Id. Henry VII I.

Set a deep glass of rhenish wine on the contrary casket ; for if the devil be within, and that temptation without, he will chuse it. Id. Merchant of Venice.

Is this her fault or mine 1 The tempter or the tempted, who sins most 1 Not she ; nor doth she tempt.

Id. Measure for Measure.

The experience of our own frailties, and the watchfulness of the

tempter, discourage us.

Hammond's Fundamentals.

When by human weakness and the arts of the tempter, you are led into temptations, prayer is the thread to bring you out of this labyrinth. Dappa.

He that hath not wholly subdued himself, is quickly tempted and overcome in small things.

Bishop Taylor.

Fixed on the fruit she gazed, which to behold Might tempt alone. Milton.

Still his strength concealed

Which tempted our attempt, and wrought our fall. Id. All temptation to transgress repel. Id.

Foretold what would come to pass, When first this tempter crossed the gulf from hell.

Id.

Those who are bent to do wickedly will never want tempters to urge them on. Tillotson.

Withhold

Your talons from the wretched and the bold ; Tempt not the brave and needy to despair ; For, though your violence should leave ‘em bare Of gold and silver, swords and darts remain.

Dry den.

This from the vulgar branches must be torn, And to fair Proserpine the present born, Ere leave be given to tempt the nether skies. Id.

Dare to be great without a guilty crown ; View it and lay the bright temptation down : ‘Tis base to seize on all. Id. Aurengzebe.

My work is done : She’s now the tempter to ensnare his heart. Dryden.

The devil can but tempt and deceive ; and, if he cannot destroy so, his power is at an end. South.

O wretched maid !

Whose roving fancy would resolve the same With him who next should tempt her easy fame.

Priar.

The roving crew, To tempt a fair clothe all their tilts in blue. Gaty.

If the parliament were as temptable as any other assembly, the managers must fail for want of tools to work with. Swift.

TEMSENA, a province in the empire of Morocco, bordering on the Atlantic, is very productive in corn, and abounds in cattle. The best cavalry in the empire are found in this province. The men are a strong, robust, copper race, while the women possess a great share of beauty. The very name is said to signify the salubrity of the air, being derived from the two words Tamam Sana, ‘ once a year,’ to express that such a residence is sufficient to restore health to the invalid. In the forests is found a kind of resinous cedar, a remarkably hard and incorruptible wood. The inhabitants of this province, with that of Shawia, which is contiguous, and closely connected, are stated by Mr. Jackson at

1,160,000.

TEN, adj. Sax. ryn ; Goth, and Bel?, lien. The decimal number ; twice five, the number by which we multiply numbers into new denominations ; a proverbially large number.

Thou shall have more Than two tens to a score. Shakspeare. King Lear.

Tun hath been extolled as containing even, odd, long, and plain, quadrate and cubical numbers ; and Aristotle observed, that Barbarians as well as Greeks used a numeration unto ten.

Browne's Vulgar llrrmtn.

With twice ten sail I crossed the Phrygian sea, Scarce seven within your harbour meet. Dri/den.

There's a proud modesty in merit, Averse from begging ; and resolved to pay Ten times the gift it asks. Id. Cleomcues,

From the soft lyre,

Sweet flute, and (en -stringed instrument, require Sounds of delight. Prior.

Although English is too little cultivated, yet the faults are nine in ten owing to affectation.

Stcif't's Miscellanies.

TEN'ABLE, adj. Fr. tenable. Such as may be maintained against opposition or attack.

The town was strong of itself, and wanted no industry to fortify and make it tenable.

Bacon's War with Spain.

Sir William Ogle seized upon the castle, and put it into a tenable condition. Clarendon.

Infidelity has been driven out of all its out-works ; the Atheist has not found his post tenable, and is therefore retired into Deism. Addison's Spectator

TENA’CIOUS, adj. ~\ Lat. tenux. Grasp—

TENA’CIOUSLY, adv. (ing hard ; inclined to

TENA’CIOUSNESS, n. s. i hold fast; retentive;

TENA’CITY. J cohesive ; not willing

to let go ; with of before the thing held : the ad-verb and noun substantives corresponding.

Some things our juvenile reasons tenaciously adhere to, which yet our maturer judgments disallow of.

Glanville.

Griping, and still tenacious of thy hold, Would’st thou the Grecian chiefs, though largely

souled, Should give the prizes they had gained ?

True love’s a miser ; so tenacious grown, He weighs to the least grain of what’s his. own. Id.

Men are tenaciom of the opinions that first possess them. Locke—

A resolute tenacious adherence to well chosen principles, makes the face of a governor shine in the eyes of those that see his actions. South.

Three equal round vessels filled, the one with water, the other with oil, the third with molten pitch, and the liquors stirred alike to give them a vertical motion ; the pitch by its tenacity will lose its motion quickly, the oil being less tenacimu will keep it longer, and the water being less tenaciau* will keep it longest, but yet will lose it in a short time.

Newton.

If many contiguous vortices of molten pitoh were each of them as large as those which some suppose to revolve about the sun and fixed stars, yet these and all their parts would, by their tenacity ami stiff ness, communicate their motion to one another till they all rested among themselves.

He is tenacious of his own property, and ready to invade that of others.

Substances, whose tenacity exceeds the powers oi dio-estion, will neither pass, nor be converted into all—

0 Id.

When winter soaks the fields, and female feet, Too weak to struggle with tenaeiou* clay, Or ford the rivulets, are best at home, The task of new discoveries falls on me.

TF.NACITY, in natural philosophy, is that quality <»f bodies by which they sustain a consider-

able pressure or force of any kind without breaking. It is the quality opposite to fragility or brittleness. See STRENGTH.

TENACULUM, in surgery, an instrument used in amputation, for pulling out bleeding vessels that are to be tied by ligatures. See SURGERY, Index.

TENAILLES, and TENAILLIONS. See FORTIFICATION.

TEX'ANCY, n. s. Old Er. tenanche ; law Lat. tenentia, from tenant. Temporary possession of what belongs to another.

This duke becomes seized of favour by descent, though the condition of that estate be commonly no mote than a tenancy at will. Wutton.

TENANT, n. s. & v. a. i Fr. tenant. One

TEX'ANTABLE, adj. >that holds of anTEX'AXTLESS; J other; one that on

certain conditions has temporary possession and use of that which is the property of another : correlative to landlord; the adjectives corresponding.

I have been your tenant, And your father's tenant, these fourscore years.

Shakspeare.

O thou, that dost inhabit in my breast. Leave not the mansion so long tenantlets ; Lest growing ruinous the building fall, And leave no memory of what it was ! Id.

The ruins that time, sickness, or melancholy, shall bring, must be made up at your cost ; for that thing a husband is but tenant for life in what he holds, and is bound to leave the place tenuntable to the next that shall take it. Suckling.

That the soul may not be too much incommoded in her house of clay, such necessaries are secured to the body as may keep it in tenantuble repair.

Decay I’f Piety.

The English being only tenants at will of the natives for such conveniency of fishing. Heylyn.

O fields, O woods, oh when shall I be made The happy tenant of your shade ! Cotc/ei/.

Such is the mold, that the blest tenant feeds On precious fruits, and pays his lent in weeds.

Waller.

Jupiter had a farm long for want of a tenant.

L’Estrange.

Sir Roger’s estate is tenanted by persons who have served him or his ancestors. Addison.

His cheerful tenants bless their yearly toil, Vet to their lord owe more than to the soil. Pope.

The father is a tyrant over slaves and beggars, whom he calls his tenants. Suift.

The bear, rough tenant of these shades. Tlwmson.

The tenants of a manor fall into the sentiments of thiir lord. Watts.

The beams of April, ere it goes, A worm, scarce visible, disclose ; All winter long content to dwell The tenant of his native shell. Coicper.

Kind souls ! to teach their tenantry to prize What they themselves, without remorse, despise : Nor hope have they, nor fear of aught to come, As well for them had prophecy been dumb. Id.

TENANT, in English law, is used with divers additions ; thus, tenant in do’.ver, is she that possesses land by virtue of her dower. Tenant by statute-merchant, he that holds land by virtue of a statute forfeited to him. Tenant in frank-mar- riage, he that holds lands or tenements by virtue of a gift thereof made to him upon marriage between him and his wife. Tenant by the curtesy,

he that holds for his life, by reason of a child begotten by him of his

wife, being an inheritrix, and born alive. Tenant by elegit, that holds by virtue of the writ called an elegit. Tenant in mortgage, that holds by means of a mortgage. Tenant by the verge, in ancient demesne, who is admitted by the rod in the court of ancient demesne. Tenant by copy of court-roll, who is admitted tenant of any lands, &c., within a ma-nor, which, timeout of mind, had been demisable according to the custom of the manor. Tenant by charter, that holdeth by feoffment in writing, or other deed. There were also tenants by kniahts'-service, tenant in burgage, tenant in soccaˆe, tenant in frank-fee, tenant in villeinage : so there is tenant in fee-simple; tenant in fee-tail ; tenant at the will of the lord, according to the custom of the manor ; tenant at will by the common law ; tenant upon sufferance ; tenant of estate of inheritance ; tenant in chief, that holdetli of the king in right of his crown; tenant of the king's, he that holds of the person of the king, or has some honor; very tenant, that holds immediately of his lord, Kitch. fol. 99-; tenant per-avail, the lowest tenant of the fee who is tenant to one who holds over of another. F. N. B. 135. So there are also joint-tenants, that have equal right in lands and tenements by virtue of one title; tenants in common, that have equal right, but hold by divers titles ; particular tenant, as tenant for years, for life, &c., that holds only for his term ; sole tenant, he that hath no other joined with him ; several tenant, as opposite to joint-tenant, or tenant in common.

And there is tenant to the pracipe, in case of fines and recoveries ; tenant in demesne, which is he that holdeth the demesnes of a manor for a rent, without service; tenant on service, he that holdeth by service ; tenants by execution, that hold lands by virtue of an execution upon any statute, recognisance, &c., with divers others — Cowell.

TENANTS IN COMMON, are such as hold by several and distinct titles, but by unity of possession ; because none knoweth his own severally, and therefore they all occupy promiscuously. This tenancy therefore happens, where there is a unity of possession merely, but perhaps an en-tire disunion of interest, of title, and of time. For, if there be two tenants in common of lands, one may hold his part in fee-simple, the other in tail, or for life ; so that there is no necessary unity of interest : one may hold by descent, the other by purchase ; or the one by purchase from A., the other by purchase from B. ; so that there is no unity of title. One's estate may have been vested fifty years, the other's but yesterday ; so there is no unity of time. The only unity there is, is that of possession : and for this Littleton gives the true reason, because no man can certainly tell which part is his own . otherwise, even this would be soon destroyed. — 2 Comm. c. 12.

Tenancy in common may be created, either by the destruction of two estates, in joint-tenancy and coparcenary, or by special limitation in a deed. By the destruction of the two estates mentioned is intended such destruction as does not sever the unity of possession, but only the

unity of title or interest . as, if one of two joint-tenants in fee alienes his estate for the life of the alienee, the alienee and the other joint-tenant are tenants in common ; for they now have several titles, the other joint-tenant by the original grant, the alienee by the new alienation ; and they also have several interests, the former joint-tenant in fee-simple, the alienee for his own life only, Litt. s. 293. So, if one joint-tenant gives his part to A. in tail, and the other gives his to B. in tail, the donees are tenants in common, as holding by different titles and conveyances. Litt. s. 292. If one or two parceners alienes, the alienee and the remaining parcener are tenants in common ; because they hold by different titles, the parcener by descent, the alienee by purchase. Litt. s. 309. So likewise, if there be a grant to two men, or two women, and the heirs of their bodies, here the grantees shall be joint-tenants of the life-estate, but they shall have several inheritances ; because they cannot possibly have one heir of their two bodies, as might have been the case had the limitation been to a man and a woman, and the heirs of their bodies begotten : and, in this and the like cases, their issues shall be tenants in common ; because they must claim by different titles, one as heir of A., and the other as heir of B. ; and those too not titles by purchase, but descent. See Litt. s. 283. In short, whenever an estate in joint-tenancy or coparcenary is dissolved, so that there be no partition made, but the unity of possession continues, it is turned into a tenancy in com-mon. 2 Comm. c. 12. A tenancy m common may also be created by express limitation in a deed : but here care must be taken not to in-sert words which imply a joint estate; and then if lands be given to two or more, and it be not ioint-tenancy, it must be a tenancy in common. Land given to two, to be holden, the one moiety to one, and the other moiety to the other, is an estate in common ; and, if one grants to another half his land, the grantor and grantee are also tenants in common : because joint-tenants do not take by distinct halves or moieties ; and by such grants the division and severally of the estate is so plainly expressed that it is impossible they should take a joinl inlerest in the whole of the tenements. But a devise to two persons to hold-* joinlly and severally has been held lobe a joint-tenancy ; because that is necessarily implied in the word ‘ jointly ;’ the word ‘ severally,’

perhaps only implying the power of partition : and an estate given lo A. and B., equally to be divided between them, though in deeds it hath been said to be a joint-tenancy (for il implies no more lhan the law has annexed to thai eslate, *viz.* divisibility), yet in wills it is certainly a tenancy in common, because the devisor may be presumed to have meant what is most beneficial to both the devisees, though his meaning is imperfectly expressed. See 1 Eq. Ab. 291 : 1 P. Wms. 17: 3 Rep. 39 : 1 Vent 32. And this nicety in the wording of grants makes it the most usual as well as the safest way (in them as well as in wills), when a tenancy in common is meant to be created, to add express words of exclusion as well as description, and limit the estate to A and B., to hold as tenants in common and nol as joinl-tenants. VOL. XXI.

The tenure of joint-tenants, though formerly favored in law, is now considered as odious, la consequence of this, in wills, the expressions, equally to be divided, share and share alike, respectively between and amongst, have been held to create a tenancy in common. And tlu;ie seems but little doubt that the same construction would now be put even upon the word severally ; but these words certainly are only evidence of intention, and will nol crea'.e a tenancy in com-mon, where the contrary, from the other parts of the will, appears to be the manifest intention of the testator.— 3 Bro. C. R. 215.

As to the incidents attending a tenancy in com-mon : tenants in common (like joint-tenants) arc compellable by the statutes 31 Hen. VIII. c. 1 ; 32 Hen. VIII. c. 32, to make partition of their lands; which Ihey were nol al ccmmon law. They properly take by distinct moieties, and have no entirely of inleresi ; and therefore there is no survivorship between lenants in common. Their olher incidenls are such as merely arise from the unity of possession ; and are therefore the same as appertain to joint-tenants merely upon that account : such as being liable to reciprocal aclions of waste and cf account, by the stats. Weslm. 2, c. 22 : 4 Ann. c. 16, and see 8 Term Rep. K. B. 145. — For by the common law no tenant in common was liable to account with his companion for embezzling the profits of the es-tate; though, if one actually turns the other out of possession, an aclion of ejeclment will lie against him. — 1 Inst. 199, 200. See 2 Comm. c. 12. Adverse possession, or the uninterrupted receipt of the rents and profits, is now held lo be evidence of an actual ouster. And where one tenant in common has been in undisturbed possession for twenty years, in an ejectment brought against him by the co-tenant, the jury will be

directed to presume an actual ouster, and consequently to find a verdict for the defendant. — Cowp. 217. Other incidents of joint-tenants, which arise from the privity of title, or the union and entirely of inleresi (such as joining or being joined in aclions, unless in Ihe case where some entire or indivisible thing is to be recovered), these are not applicable to tenants in common, whose interesls are distinct, and whose litles are not joint, but several.

Estates in common can only be dissolved two ways. 1. By uniting all the litles and interests in one tenant, by purchase or otherwise; whicfi brings the whole to one severally. 2. By mak-ing partition between the several tenants in com-mon, which gives them all respective severaltic<. For indeed tenancies in common differ in nothing from sole estates, but merely in the blending aivl unity of possession.

TENANT-SAW seems rather to be derived from tenant, and it is a principal inslrnmenl used in that branch of carpentry.

TENAR, or THENAU, in anatomy, the muscle, which draws Ihe thumb from the fingers, called also abductor brevis pollicis, and abductor pollicis manus. See ABDUCTOR, and ANATOMY.

TENASSERIM, or TANENGSAIU, a district in the Birman empire, extending along the' sen coast from 11° to 14° N. lat. The west coast i* prelected from the south-west monsoon, by *

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connected barrier of islands, extending 135 miles from north to south, with a strait between them and the main land, from fifteen to thirty miles broad. The language of the inhabitants, denominated Tinnaw by the Siamese, differs considerably from the common Birman, and has many peculiarities. The natives are named by the Birmans Dawayza and Byeitza, from the two governments of which their country consists. They have most frequently been subject to Siam and Pegu.

TEKASSERIM, a post town in the Birman em-pire, the capital of a province of the same name. Lat. 11° 42’ N., long. 98° 50’ E. In 1688 the court of directors of the East India Company ordered their servants at Madras to endeavour to obtain possession of it from the king of Siam, and to fortify it. In 1759 it was taken from the Siamese by Alompra, the Birman monarch, after a feeble resistance. It was then a flourishing place.

TENBURY, a market town of Doddingtree hundred, Worcestershire, situate on the river Teme, which divides it from Salop. Nine miles north-east from Leominster, and 134 north-west from London. The town is well built and partly paved. Over the Teme is a neat stone bridge of six arches. The church has a square tower, with six bells. The corn-market is an ancient building ; but the butter-cross modern and convenient. The trade of the town is principally in hops, cyder, and the tanning of leather. The Leominster canal runs at a short distance. Market on Tuesday. Fairs, April 25th, July 18th, and September 26th. Here are annual horse-races.

TENBY, or TENBIGII, a sea-port town of South Wales in Pembrokeshire, with markets on Wednesdays and Saturdays. It is a rapidly improving and beautiful bathing place, and is remarkable for the exquisitely romantic and picturesque charms of its situation, being on the western edge of the fine bay of Caermarthen, with a harbour capable of sheltering vessels of 200 or 300 -tons burden. The Tenby season usually commences in May and ends in October. It is ten miles east of Pembroke, and 250 west of London, and shares with Pembroke and other places in sending a member to parliament.

TENCH, n. s. Sax. tince : Lat. tinea. A pond fish.

Having stored a very great pond with carps, tench, and other pond-fish, and only put in two small pikes, this pair of tyrants in seven

years devoured the whole. Hale.

• TENCH, in ichthyology. See CYPRIXT s.

TENCHTHERI, an ancient nation of Germany, who often changed the place of their residence. Tacitus, Ann. xiii. c. 56, II. iv. c. 21. TEND, v. a. & v. n. ~\ Contracted from at-TEN'DANCE, n. s. (tend. To accompany TEN'DENCE, /as an assistant or deTEN'DENCY.) fender ; watch ; guard :

as a verb neuter, move toward a given point ; to aim at ; contribute ; wait ; attend : tendance is, state of or persons attending ; care ; act of tending : tendence and tendency, direction ; course ; drift.

Unhappy wight, born to disastrous end, That doth his life in so long tendanm spend ! Spenter.

Nymphs of Mulla which, with careful heed, The silver scaly trouts did tend full well.

Id. Epithal,

Go thou to Richard, and good angels tend thee !

S/iakspeare. She purposed,

By watching, weeping, tendance, to Overcome you with her shew. Id. Cymbeline,

The bark is ready, and the wind at help ; The associates tend. Id. Hamlet.

[I is lobbies fill with tendance, Rain sacrificial whisperings in his ear ! Shakspeare.

Give him tending, He brings great news. Id.

They had a view of the princess at a mask, having overheard two gentlemen tendijig towards that sight.

Wottnn.

Many times that which we ask would if it should be granted, be worse for us, and perhaps tend to our destruction; and then God, by denying the particular matter of our prayers, doth grant the general matter of

them. Hammond.

It is not much business that distracts any man, but the want of purity, constancy, and tendency towards God. Tayltrr.

The greater congruity or incongruity there is in any thing to the reason of mankind, and the greater tendency it hath to promote or hinder the perfection of man's nature, so much greater degrees hath it of moral good or evil ; to which we ought to proportion our inclination or aversion. Wilkins.

Despair Tended the sick, busiest from couch to couch.

Milton.

Admiration seized All heaven, what this might mean and whither tend.

Id.

They at her coming sprung, And touched by her fair tendance gladlier grew. Id.

The laws of our religion tend to the universal happiness of mankind. Tillotson.

He led a rural life, and had command O'er all the shepherds, who about those vales Tended their numerous flocks.

Dryden and Lee's Oedipui. To these abodes our fleet Apollo sends : Here Dardanus was born, and hither tends.

Dryden.

These opinions are of so little moment that, like motes in the sun, their tendencies are little noticed.

Locke.

Writings of this kind, if conducted with candour, have a more particular tendency to the good of their country, than any other compositions.

Addisnn's Freeholder.

All of them are innocent, and most of them had a moral tendency to soften the virulence of parties, or laugh out of countenance some vice

or folly.

‘Swift.

Those with whom I now converse Without a tear will tend my herse. Id.

Our humbler province is to tend the fair ; To save the powder from too rude a gale, Nor let the imprisoned essences exhale. Pope.

We may acquaint ourselves with the powers and properties, the tendencies and inclinations, of body and spirit. Watts.

TEND’ER, adj., v. «., & n. s. } Fr. tendre. TEN’DERLY, adv. [> Soft ; easily

TEN’UEKNESS, n. s. j impressed or

injured ; sensible ; dilute ; nut firm or hard : amorous ; young ; weak : as a verb active, to offer ; exhibit; hold; esteem; hold in regard or kindness: an offer; proposal; regard; concern: the

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adverb and noun substantive following agree with tender, adjective.

Instead of their warlike miisick [Cyrus] appointed to them certain lascivious lays, by which their minds were so mollified and abated, that they forgot their former fierceness, and became most tender and effeminate. Spenser on Ireland.

The tender kindness of the church it well beseemeth to help the weaker sort, although some few of the perfecter and stronger be for a time displeased.

‘ Hooker.

Some of the chiefest laity professed with greater stomach their judgments, that such a discipline was little better than popish tyranny disguised, and tendered unto them. Id.

Think yourself a baby ; That you have ta’en his tenders for true pay, Which are not sterling. Shakspeare, Hamlet.

I thank you, madam, that you tender her : Poor gentlewoman, my

master wrongs her much.

Shakspeare .

Unneath may she endure the flinty street, To tread them with her tender feeling feet ! (.

Tenderly apply to her Some remedies for life. Id.

I love Valentine ; His life's as tender to me as my soul. Id.

Well we know your tenderness of heart, And gentle, kind, effeminate remorse To your kindred. Id. Richard III.

All conditions, all minds, tender down Their service to lord Timon. Shakspeare.

Tender yourself more dearly ; Or, not to crack the wind of the poor phrase, Wringing it thus, you'll tender me a fool. Id •

Some are unworthily censured for keeping theii own, whom tenderness how to get honestly teacheth to spend discreetly ; whereas such need no great thrifti-ness in preserving their own, who assume more liberty in exacting from others. Wotton.

In things that are tender and unpleasing, break the ice by some whose words are of less weight, and reserve the more weighty voice to come in as by chance. Bacon.

Pied cattle are spotted in their tongues, the tenderness of the part receiving more easily alterations than any other parts of the flesh. Id.

Beneath the dens where unfletched tempest lie, And infant winds their tender voices try. Cnwley.

From each tender stalk she gathers. Milton.

This not mistrust but tender love enjoins. Id.

Owe not all creatures by just right to thee Duty and service, not to stay till bid, But tender all their power ? Id. Paradise Regained.

She embraced him, and for joy Tenderly wept. Milton.

What mad lover ever died, To gain a soft and gentle bride ? Or, for a lady fender-hearted, Tn purling streams or hemp departed "! Hudibras.

The civil authority should be tender of the honour of God and religion. Tillotson.

Be tenrfer-hearted and compassionate towards those in want, and ready to relieve them. Id.

The earl accepted the tenders of my service.

Dry den.

Our bodies are not naturally more tender than out faces ; but, by being less exposed to the air, they be-come less able to endure it. L'Eitrange.

The face when we are born is no less tender than any other part of the body : it is use alone hardens it, and makes it more able to endure the cold.

Locke on Education.

A quickness and tenderness of sight could not en-dure bright sunshine. Lorlf.

;y TEN

True tenaeritrs:, of conscience is iiotlmi"- else bi.t an awful and exact sense of the rule which should di-rect it; and, while it steers by this compass, and is sensible of every declination from it, so Ion" it is property tender. ° &„„.

lo declare the calling of the Gentiles by a fnv unlimited tender of the gospel to all. Id. Sermons.

As I have been tender of every particular person's reputation, so I have taken care not to give offence.

Addhm:.

With what a graceful tenderness he loves ! And breathes the softest, the sincerest vows ! Id.

Our tenders of duty every now and then miscarry.

There being implanted in every man's nature a great tenderness of reputation, to be careless of it is looked on as a mark of a degenerous

mind.

Government nf tlis Tongue.

He had never heard of Christ before ; and so ‘more could not be expected of him than to embrao:; him as soon as he was tendered to him.

Duty of Man.

When the frame of the lungs is not so well v.ov<-ii, but is lax and tender, there is great danger that, alter spitting of blood, they will by degrees putrifv ai:u consume. Blackmore.

The difference of the muscular flesh depends upi.n the hardness, tenderness, moisture or dryness of ti;._ fibres. Arlmlluwi.

There are examples of wounded persons, that \-.\- roared for anguish at the discharge of ordnance, though at a great distance ; what insupportable torture then should we he under upon a like concussion in the air, when all the whole body would have tim lenderness of a wound ! Bentlei/‘s Sermon*.

Marcus with blushes owns he loves, And Brutus tenderly reproves. Pop”.

As in the bosom of the stream

The moon-beam dwells at dewy e’en ;

So trembling, pure, was tender love,

Within the breast o’ bonnie Jean. Burns.

They are the most perfect pieces of Ovid, and tlio style tenderly passionate and courtly.

Preface to OviJ.

TENDER, in law, is the offering of money or any other thing in satisfaction ; or circumspectly to endeavour the performance of a thing : as ;> tender of rent is to offer it at the time and place when and where it ought to be paid. Soe RENT. Also it is an act clone to save the penalty of a bond before action brought, Src. There are several statutes which authorise a tender of amends where otherwise it would not have been allowable. As stat. 11 Geo. II. c. 19, § 20, in cases of distress for rent. Stat. 17 Geo. II. c. 38, § 10, in cases of

distress for poor's rates. Stat. 24 Geo. II. c. 44, in actions against justices of the peace. Stat. 23 Geo. III. c. 70, § 30, in actions against excise officers. And stat. 24 Geo. 1 1 *I.e.* 47, § 35, in actions against custom-house officers.

Tender of money on a bond is to be made lo the person of the obligee at the day appointed to save the penalty and forfeiture of the bond, and itoughttobed'one before witnesses ; though, if the obligor be sued afterwards, he must still pay it. But if the obligor be to do any collateral thing, or which is not part of the obligation, as to deliver a horse, &c., and the obligor offer to do his part, and the obligee refuseth it, the condition is performed, and the obligation discharged for ever. By stat. 4 & 5 Ann. c. lo, § I-1, the plea of solvit post diem is (ranted to an a.—

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tion on bond ; but a tender and refusal of principal and inteiest at a subsequent day cannot be pleaded, as not being within the equity of the statute : for such construction would be prejudicial ; as' it would empower the obligor, at any time, to compel the obligee to take his money without notice. — Bull. Ni. Pri. 171 : Sellon's Pract. Tender.

Every tender at the common law, or which is given by statute, must be made before the writ sued out. If a tender be in fact made before the bringing of the action, though, by the teste of the writ it may appear to have been afterwards (as if tender in vacation and teste of preceding term), the exact time when the writ was in fact sued out may be shown in pleading, or sometimes given in evidence contrary to the teste : but if a bill be filed on the same day the tender is made, though subsequent thereto, it seems that the defendant can no way avail himself by pleading the prior tender ; as there is no fraction of a day in law. — See Sellon's Pract. Tender.

It is no answer to a plea of tender, before the exhibiting of the plaintiff's bill, that the plaintiff had before such tender retained an attorney, and instructed him to sue out a writ against the defendant; and that the attorney had accordingly applied, before the tender, for such writ, which was afterwards sued out. A right to damages on account of the non-payment of a debt, or non-performance of a duty, may, after being taken away by a tender and refusal, be revived again by a demand subsequent to the tender and refusal ; a new cause of action arises from the non-payment or non-performance thereof upon such demand : and therefore the plaintiff may reply such subsequent demand and refusal by the defendant, which, if proved, the plaintiˆ" must have a verdict. — Brownl. 7.

Wherever the debt or duty arises at the time of the contract, and is not discharged by a tender and refusal, it is not enough for the party who pleads the tender, to plead a tender and refusal, and uncore prist (that he is still ready), but he must also plead tout temps prist (that he was always ready).

A plea of tender after the day of payment of a bill of exchange, and before action brought, is not good ; though the defendant aver that he was always ready to pay from the time of the tender, and that the sum tendered was the whole money then due, owing, or payable to the

plaintiff in respect of the bill, with interest from the time of the default, for the damages sustained by the plaintiff, by reason of the non-performance of the promise.— 8 East's Rep. 168. Every requisite which is in a particular case necessary to the validity of a tender must, in pleading such tender, be showed to have been complied with ; else the plea is not good.— Salk. 624.

On a tender being pleaded, and the money paid into court, the plaintiff replied a subsequent demand and refusal, whereupon issue being joined and tried, a verdict was found for the defendant. Whereupon lie moved to have the money paid into court returned, in part of his costs; but the court was of opinion it could not be done. — Hardw. 206. Thouch a tender is made, and the plaintiff refuses the money, yet

the tender cannot be pleaded in bar of the action cither in debt or assumpsit, but in bar of the damages only. — Ld. Raym. 254.

There is a difference in pleading a tender in action of debt, and in action on the case : in an action of debt, the defendant ought to conclude his plea by praying judgment, if the plaintiff ought to have or maintain his action to recover any damages against him; for, in this action, the debt is the principal, and the damages are only accessary. But, in assumpsit, the damages are the principal ; and therefore, in pleading a tender, the defendant ought to conclude his plea with a prayer of judgment, if the plaintiff ought to have or maintain his action, to recover any more or greater damages than the sum tendered, or any damages by reason of the non-payment thereof.

Tender may be of money in bags, without showing or telling it, if it can be proved there was the sum to be tendered ; it being the duty of him that is to receive the money tr> put out and tell it. — 5 Rep. 115. Though where the per-son held the money on his arm in a bag, at the time of offering, this was adjudged no good ten-der, for it might be counters or base money. — Noy. 74. A tender in bank notes is sufficient, unless the creditor expressly refuses to receive notes, and insists upon cash. If a tender '** made of more than is due it is good.

TENDO ACHILLIS, in anatomy, the tendon of Achilles, a large tendon of the heel, so named from the tradition that Achilles get his mortal wound in that part. See ANATOMY. The celebrated Dr. Monro senior made a capital cure of a rupture of this tendon upon himself. See SURGERY.

TEN’DON, n.s. 1 Lat. tendon. A sinew ;

TEN’DINOUS, adj. $ a Kgature by which the joints are moved : the adjective corresponding.

The entrails these embrace in spiral strings. Those clasp the’ arterial tubes in tender rings ; The tendons some compacted close produce, And some thin fibres for the skin diffuse.

Blackmore.

Nervous and tendinous parts have worse symptoms, and are harder of cure than fleshy ones. Wiseman.

A struma in her instep lay very hard and big amongst the tendons. Id. Surgery.

TENDONS, in anatomy, are white, firm, and tenacious parts, contiguous to the muscles, and usually forming their extremities. See ANATOMY.

TEN’DRIL, n.s. Fr. tendrillon. The clasp of a vine or other climbing plant. In wanton ringlets waved, As the vine curls her tendrils ; which implied Subjection. Milton’s Paradise Lost.

So may thy tender blossoms fear no blite ; Nor goats with venomed teeth thy tendrils bite.

Drijden.

The tendrils or claspers of plants are given only to such as have weak stalks, and cannot raise up or support themselves. Ray on the Creation.

TENEBRIO, in entomology, a genus of insects belonging to the order of coleoptera. The antennae are moniliform, the last joint being roundish; the thorax is plano-convex and marginated ; the head projecting, and the elytra are somewhat stiff. Gmelin enumerates about sixty-three species. The larvae of some live in daiap

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places under ground among rubbish; of others in flour and different kinds of food, where they undergo their metamorphosis. The perfect insects are very troublesome in houses, eating bread, meat, Sec. They precipitately avoid the light ; resorting in troops to dark damp cellars, where putrefaction allures and nourishes them. They are all of a very dark gloomy appearance, from which circumstance they take their name.

TENEDIA SECURIS [Lat.j, *i.e.* the axe of Tenedos, a proverbial expression for a severe law, derived from a law made bj Tenes the first king of that island, that adulterers should be beheaded with an axe. See TENEDOS. This sentence was executed on the king's son. Aristotle says that this was commemorated on the coins of Tenedos, which on one side had two heads of the king and his son, and on the reverse an axe.

TENEDOS, in ancient geography, an island on the coast of Troas, forty stadia from the continent, and eighty in compass ; with a cognomi-nal .ZEolian town, and a temple of Apollo Smin-theus. Its origin is derived from Tenes, who being exposed in a coffer or bog by his father Cygnus the Thracian, at the instigation of his stepmother, was by fate carried to this island, made king of it, and at length worshipped as a god on account of his virtues. The island was famous for its earthenware, for which purpose it had an excellent red clay ; and hence Bochart would derive the appellation from tinedom, a red clay. This island still retains its ancient name, and is one of the smallest of the archipelago, situated near the coast of Lesser Asia, west of the ruins of Troy.

TENEDOS, a small rocky island of the Grecian archipelago, close to the coast of Asia Minor and at a small distance from the entrance of the Dardanelles. It is mentioned by Homer under the name which it now bears, and its position tends to identify the site of the plain of Troy. Vessels bound to the city successively called Byzantium and Constantinople have found shelter in its ports, or safe anchorage in the road, during contrary winds. The emperor Justinian erected a large magazine here. In 1302 it was annexed by the caliph Othman to the Turkish empire. The harbour has formerly been enclosed by a mole, of which no part now appears above wa-ter, but loose stones are piled on the foundations. The Turks give to it now the name of Bogtcha-Adassi. This island is remarkable for producing the finest

wine in the archipelago. A mountainous ridge encloses the port, and the town stands on the slope of a hill. It is supposed to contain 600 Turkish and 300 Greek families. Long. 26° E., lat. 39° 53’ N.

TEN’EMENT, n. s. Fr. tenement; law Lat. tenetnentnm. Any thing held by a tenant.

What reasonable* man will not think that the tenement shall be made much better, if the tenant may be drawn to build himself some handsome habitation thereon, to ditch and enclose his ground.

Spenser on Ireland.

Tis policy for father and son to take different sides ; for then lands and tenements commit no treason.

Druden.

Who has informed us that a rational soul can inhabit no tenement, unless it has just such a sort of frontispiece. Locke.

Treat on, treat on, is her eternal note, And lands and tenements glide down her throat.

Pope.

TENERIFFE, a considerable island of the group of the Canaries, off the western coast of Africa. It is of a triangular form, each side being about thirty-six miles in length. It is chiefly remarkable for its lofty peak, of the sloping sides of which the island actually consists, and the volcanic eruptions which issue from its sides. By none, however, has it been so carefully examined as by Humboldt.

The climate is delightful and salutary ; and by the rapidity of its rise it presents, within a very short distance, every variation of temperature, from the colder climates of Europe to those of the equinoctial regions. The port of Santa Cm?., indeed, from which the principal trade is carried on, is intensely hot, not only from the lowness of its situation, but from the reflection of the basaltic rocks above it. Laguna, however, elevated about 2000 feet above it, is cool and agreeable. Nothing prevents it from being the capital of the island, except the filling up of its port of Garachico by the ravages of a volcano. Teneriffe is here encircled by a darkish brown basaltic rock, which, however, is not formed into columns. The traveller, crossing a hilly

tract from Laguna, comes to the western coast, of the beauty of which all visitors speak with enthusiasm.

Humboldt, after having traversed the banks of the Orinoco, the Cordilleras, and the most beautiful valleys of Mexico, declares that lie never beheld a landscape more agreeable, more harmonious, and more attractive. Orange, myr-tle, and cypress trees, entwine the chapels reared on the eminences. The declivities and rising hills are covered with vines and cultivated like a garden. Perpetual spring prevails in the district, and in the summer evenings the breeze from the sea comes loaded with delicious coolness. In this part of the island tne date tree, the plantain, the sugar-cane, the Indian fig, the arum colocasia (the root of which furnishes the lower class with a nutritive meal), the olive tree, the fruit trees of Europe, the vine and corn, are cultivated. Wheat is reaped from the end of March to the beginning of May ; and the culture of the bread-fruit tree ofOtaheite, of the cinnamon, the coffee, and the cocoa, have been tried with success. Above this fertile tract rises what is called the region of the laurels, forming an extensive border that extends all round TenerifTe. These trees are fed by a vast number of springs that rise up amid a turf covered with perpetual verdure. Extensive plantations of chestnut occur in the lower part, above which rise four species of laurel, and an oak resembling that of Thibet, besides some other trees. The underwood in the lower part consists of arborescent heath, and in the upper part of ferns. Above this is a vast forest of oak and pine, those trees which characterise the colder regions of the earth. The pie-vailing species has the appearance of the Scotch fir, with very long and stiff leaves sprouting by two, or oftener by three in one sheath. Above this is a vast plain, like a sea of sand, covered with the dust of pumice stc ne, which continually fills the air. It is embcllif ;«d with tufts of the?

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beautiful shrub called the retama, growing to the height of nine feet, and loaded with odoriferous flowers. It is said to communicate a peculiar excellence to the flesh of the goats which feed upon it. At the entrance of this plain the rich verdure of the island terminates, as well as all appearance of habitation; and the traveller ascends afterwards through a complete solitude. Above this plain are iˆie Malpays, a name which the Spaniards, in all their volcanic districts, apply to a ground destitute of vegetable mould, and covered with loose and broken fragments of lava. The ascent here is steep and extremely fatiguing, as the blocks of lava roll from beneath the feet and often leave deep hollows. At the extremity of the Malpays are found those spiracles which are called by the natives the Nostrils of the Peak, consisting of watery and heated vapors, which issue at intervals from crevices in the ground. The Piton, or summit, is of a conical form ; the ascent steep, and rendered difficult by the loose ashes with which it is covered. At the top there is scarcely room to stand, and the crater is enclosed by a wall so steep that it could not be entered were there not a breach in . one spot. The sides of the crater are almost perpendicular, though it can be descended by pieces of broken lava. This crater has long ceased to emit flames, and the heat is perceptible only in a few crevices which give vent with a buzzing noise to aqueous vapors. The view from the top is characterised by peculiar beauty.

From the flanks of the Peak several violent eruptions have taken place in the course of the present century. In 1704 there occurred one in the district of Guimar, which buried several valleys, and approached within a short distance of the port of Orotava. Two years after, the lava issuing forth in a different quarter, buried the port of Garachico, then the finest and most frequented harbour in the island. In two hours this opulent and populous city was totally destroyed, not a single edifice being left standing. The port was fifled up and converted into a promontory, and the whole surface of the surrounding country entirely changed. The volcanic power now remained dormant for nearly a century, till 1796, when the mountain of Chahorra, which had always been considered as an extinguished volcano, began pouring out, by four mouths, vast torrents of lava for three months and six days, but being fortunately in an uncultivated part of the island no serious injury fol-jowed. The commercial importance of TenerifTe depends chiefly on its wine, which is in considerable

demand. From 10,000 to 15,000 pipes are annually exported.

TENES, the first king of Tenedos, who acquired his kingdom in consequence of his stepmother Philonome's lust, and his father's credulity. See TENEDIA and TENEDOS.

TENESiS, a district of ancient Ethiopia. Strabo.

TENES MUS, n.s. Barb. Lat. tenesmus. De-nned below.

The stone shutting" up the orifice of the bladder is \ttended wit!; a ienestnus, or needing to go to stool.

Arbulhnot.

Tr.:\ESMis in medicine, a name given by

medical writers to a complaint vvinoh is a continual desire of going to stool, but without any stool being ready to be voided. This is properly no primary disease, but merely a symptomatic one, and differs in degree according to the disease on which it is an attendant. See MEDICINE.

TEN'ET, n. s. Lat. tenet, he holds. Sometimes written tenent. Position ; principle ; opinion.

While in church matters, profit shall be the touch-stone for faith and manners» we are not to wonder if no gainful tenet be deposited. Decay of Piety.

That all animals of the land are in their kind in the sea, although received as a principle, is a tenet very questionable. Browne's Vulgar Errours.

This savours of something ranker than Socinianism, even the tenets of the fifth monarchy, and of sovereignty founded only upon saintship. Suuih.

They wonder men should have mistook The tenets of their master's book. Prior.

TENIERS (David), the elder, a Flemish painter, born at Antwerp in 1582. He received the first rudiments of his art from the famous Rubens, and afterwards finished his studies at Rome. He attached himself to Adam Elsheimer for six years ; and formed to himself a

peculiar style, which his son cultivated so happily afterwards as to bring it to the utmost perfection. His pictures were small ; and his subjects usually shops, elaboratories, humorous conversations, and rural festivities. He died at Antwerp in

1649.

TENIERS (Abraham), son of David, was equal to his father and brother in the expression of his characters, and in the clara obscuro ; though he was inferior in sprightliness of touch and lightness of pencil.

TENIERS (David), the younger, also an admirable painter, was the son of the former, and was born at Antwerp in 1610. He obtained the name of Ape of Painting, from his imitating the manner of different painters with such exactness as to deceive even the nicest judges. His principal talent lay in landscapes adorned with small figures. He also painted men drinking and smoking, chemists' elaboratories, country fairs, and the like. His small figures are superior to his large ones. He died in 1694.

TENISON (Dr. Thomas), archbishop of Canterbury, was born at Cottenham in Cambridgeshire in 1636; and studied at Corpus Christi College in Cambridge. In his youth he applied himself to physic ; but afterward went into orders, and became minister of St. Andrew's church, Cambridge. He showed himself very active against the growth of popery, by his writings, both in the reigns of Charles II. and James II. In 1680 he was made vicar of St. Martin's in the Fields, London, to which parish he made several donations; and, among others, endowed a free school and built a handsome library, which he furnished with useful books. King William and queen Mary, in 1689, appointed him archdeacon of London; in 1691 he was nominated bishop of Lincoln ; and in 1694 he succeeded Dr. Tillotson as archbishop of Canterbury. He performed all the duties of a good primate for twenty jears, and died in 1715.

T E N N E S S,E E.

TENNESSEE, one of the United States of North America, bounded north by Kentucky ; east by North Carolina and Virginia; south by Georgia, Alabama territory, and Mississippi state; and west by the Mississippi. Long. 81° 28’ to 91° 37’ W. It is 420 miles long and 102 broad; containing 40,000 square miles. The number of militia in 1812 was 29,193. This state is divided by the Cumberland mountains into two divisions, East Tennessee and West Tennessee. The counties, population in 1810, and chief towns, are exhibited in the. following tible:—

EAST TENNESSEE.

Counties.

Pop.

Chief Towns.

Anderson

3,959

Clinton

Bledsoe

8,839

Pikeville

Blount

3,259

Maryville

Campbell .

2,668

Jacksonburg

Carter .

4,190

Elizabethtown

Claiborne

4,798

Tazewell

Cocke .

5,154

Newport

Granger

6,397

Greene

9,713

Greenville

Hawkins

7,643

Rogersville

Jefferson

7,309

Dandridge

Knox .

10,171

Knoxville

Rhea .

2,504

Washington

Roane .

5,581

Kingston

Sevier .

4,595

Sevierville

Sullivan

6,847

Blountsville

Washington .

7,740

Jonesborough

WEST TENNESSEE.

Counties.

Pop.

Chief Towns.

Bedford

8 ~2 \ ‘

Shelbyville

Davidson

15,608

Nashville

Dickson

4,516

Charlotte

Franklin

5,730

Winchester

3iles .

4,536

Pulaski

Elickman

2,583

Vernon

Elumphries .

1,511

Reynoldsburg

Jackson

5,401

Williamsburg

Lincoln

6,104

Fayetteville

Montgomery

8,021

Clarkesville

Maury

10,359

Columbia

Overton

5,643

Monroe

Robertson .

7,270

Springfield

Rutherfoid .

10,265

Murfreesborough

Sumner

13,792

Gallatin

Smith

11,649

Carthage

Stuart

4,262

Dover

Wilson

11,952

Lebanon

Williamson .

13,153

Franklin

White .

4,028

Sparta

Warren

5,725

M’Minville

Murfreesborough is the seat of government. The other most considerable towns in West Tennessee are Nashville, Franklin, Fayetteville, Shelbyville, Columbia, Clarkesville, Carthage, and Gallatin; in East Tennessee, Knoxville, .Tonesborough, Greenville, and Rogersville. The state bank of Tennessee is at Knoxville, with a

branch at Nashville. There are independent banks at Nashville and Franklin. These three banks have each a capital of 400,000 dollars. The legislature, in 1817, granted charters for ten new banks, with a capital of 400,000 dollars each, to be established at Murfreesborough, Jonesborough, Columbia, Maryville, Shelbyville, Rogersville, Fayetteville, Carthage, Nashville, and Kingston. Four colleges have been incorporated in this state at Knoxville, Nashville, Greenville, and in Washington county. Those at Knoxville and Nashville have never gone into operation. There are academies at Knoxville, Nashville, Carthage, Murfreesborongh, Rogersville, Gallatin, Fayetteville, and near Franklin, Springfield, Lebanon, and Clarkesville. The principal denominations of Christians in Tennessee are Baptists, Methodists, and Presbyterians. The legislature is composed of a senate and house of representatives ; the members of each, together with the governor, are chosen biennially on the first Thursday in August and the day succeeding. The meeting of the general assembly is on the third Monday in September.

Tennessee is marked by bold features. It ii washed by the great river Mississippi on the west, and the fine rivers Tennessee and Cumber-. land pass through it in very serpentine courses. The western part is undulating; some of it level; in the middle it is hilly; and the eastern part, known by the name of East Tennessee, abounds in mountains, many of them lofty, and presenting scenery peculiarly grand and picturesque. Of these mountains the Cumberland, or great Laurel Ridge, is the most remarkable. Stone, Yellow, Iron Bald, Smoky, and Unaka mountains, join each other, and form, in a direction nearly

north-east and south-west, the eastern boundary of the state. North-west of these, and separated from each other by valleys of from five to fifteen miles wide, are Bay's Mountain, Copper Ridge, Clinch Mountain, Powell's Mountain, and Welling' s Ridge. The last four terminate north of Tennessee river. The principal rivers are the Tennessee, Cumberland, Holston, Clinch, French-Broad, Notahacky, Iliwassee, Tellico, Duck, Reelfoot, Obian, Forked Deer, and Wolf. The mountains last mentioned are all encircled by-valleys which open passages for rivers and roads, and which, together with the numerous cascades, render the views very sublime. Caves of great depth and extent are found throughoutjhe state.

The geological formation of this state is wholly secondary, except a small portion of the eastern part which is transition, and numerous spots on the banks of rivers which are alluvial. A considerable portion of the state is bedded on limestone. A large deposit of gypsum has been lately discovered. Copperas, alum, nitre, and lead, are among the minerals. Some silver has been found. Coal is supposed to be plentiful. Saltpetre is so abundant as to form a great article of commerce. There are several mineral springs, and many 'valuable salt springs. soil in a country so uneven must be very various. The western part of the state has a black rich soil ; in the middle are great quantities of excellent land; in the eastern part of the mountains are lean, but many tenilc vall-y-s.

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There is a great profusion of natural timber, poplar, hickory, walnut, oak, beach, sycamore, locust, cherry, sugar-maple, &c., and in many places are great quantities of cane remarkably thick and strong. The state also abounds with medicinal plants, such as snake root, ginseng, Carolina pink, angelica, senna, annise, spikenard, &c. Tennessee is also well supplied with animals and birds of various kinds, and the rivers abound in divers sorts of fish.

The climate is generally healthy. In East Tennessee the air is so tempered by the mountain air on one side, and by refreshing breezes from the gulf of Mexico on the other, that this part of the state has one of the most desirable climates in North America. The middle part resembles Kentucky in climate. The winter in Tennessee resembles the spring in New England. Snow seldom falls to a greater depth than ten inches, or lies longer than ten days. Cumberland river has been frozen over but three times since the country was settled. Cattle are rarely sheltered in winter. In the western parts there are some low bottoms on which the inhabitants are subject to bilious fevers; and fever and ague in the autumn.

The great business of the state is agriculture. The soil produces abundantly cotton and tobacco, which are the staple commodities. The inhabitants also raise a plentiful supply of grain, grass, and fruit. They export cotton, tobacco, and flour in considerable quantities ; also salt petre and many other articles. The principal commerce is carried on through the Tennessee and Cumberland rivers, and from them through the Ohio and Mississippi to New Orleans. This state also supplies Kentucky, Ohio, &c., with cotton for inland manufactures ; and from East Tennessee considerable numbers of cattle are sent to the sea-ports on the Atlantic. It is probable that a new avenue to commerce will soon be opened, by means of roads or a canal, between the Tennessee river and the navigable waters of the Tombigbee. The western part of this state, lying between the Tennessee river and the Mississippi, belongs to the Chickasaw Indians; and a large district in. the south-east part is included in the Cherokee country.

TENNESSEE RIDGE, mountains in the state of Tennessee, between the rivers Tennessee and Cumberland.

TEN’NIS, n. s. Supposed by Skinner to be so named from the word

tonez, take it, hold it, or there it goes, used by the French when they drive the ball. A play at which a ball is driven with a racket.

Those four garrisons, issuing forth upon the enemy, will so drive him from one side to another, and tennis him amongst them, that he shall find no where safe to keep his feet in, nor hide himself.

Spenser on Ireland.

The barber's man hath been seen with him, and the old ornament of his cheek hath already stuffed tennis balls. Shakspeare.

It can be no more disgrace to a great lord to draw a fair picture than to play at tennis with his page.

Peacham.

A prince, by a hard destiny, became a tennis ball long to the blind goddess. Howel's Vocal Forest.

Tin inside of the uvea is black like the walls of a

tennis court, that the rays falling upon the retina may not, by being rebounded thence upon the uvea, be returned again ; for such a repercussion would make the sight more confused. More against Atheism.

We conceive not a tennis-ball to think, and consequently not to have any volition or preference of motion to rest. Locke.

We have no exedra for the philosophers adjoining to our tennis court, but there are alehouses.

Arbuthnot and Pope.

TENNIS, from Fr. tenex, or from Tennois, an ancient town of France. A play at which a ball is driven by a racket. The size of a tennis court is generally about ninety-six or ninety-seven feet by thirty-three or thirty-four. A line or net hangs exactly across the middle, over which the ball must be struck. Upon the entrance of a tennis court, there is a long gallery which goes to the dedans, that is a kind of front gallery, into which, whenever a ball is struck, it tells for a certain stroke. This long gallery is divided into different compartments or galleries, each of which has its particular name, as follows ; from the line towards the

dedans are the first gallery door, second gallery, and the last gallery, which is called the service side. From the dedans to the last gallery are the figures 1, 2, 3, 4, 5, 6, at a yard distance each, by which the chaces are marked. On the one side of the line are also the first gallery door, second gallery, and laat gallery ; which is called the hazard side. Every man struck into the last gallery on this side reckons for a certain stroke the same as the de-dans. Between the second and this last gallery are the figures 1, 2, to mark the chaces on the hazard side. Over this long gallery, or these compartments, is a covering, called the pent-house, on which they play the ball from the service-side, in order to begin a set of tennis, from which it is called a service. When they miss putting the ball (so as to rebound from the pent-house) over a certain line on the service-side, it is deemed a fault, two of which are reckoned for a stroke. If the ball rolls round the pent-house, on the opposite side of the court, so as to fall beyond a certain line described for that purpose, it is called passe, reckons for nothing on either side, and the player must serve again. On the right hand side of the court from the dedans is the tambour, a part of the wall which projects, and is so contrived in order to make a variety in the stroke, and render it more difficult to be returned by the adversary ; for, when a ball strikes the tambour, it varies its direction, and requires some extraordinary judgment to return it ever the line. The last thing on the right hand side is called the grill, wherein if the ball is struck, it is also fifteen, or a certain stroke. The game of tennis is played by what they call sets ; a set of tennis consists of six games ; but if they play what is called an advantage set, two above five games must be won successively by one of the parties. When the player gives his service at the beginning of a set, his adversary is supposed to return the ball ; and, whenever it falls after the first rebound untouched, the chace is called accordingly ; for example, if the ball at the figure 1, the chace is called at a yard, that is to say, at a yard from the dedans : this chace

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remains till a second service is given ; and if the player on the service-side lets the ball go after his adversary returns it, and if the ball falls on or between any of these figures or chaces, they must change sides, there being two chaces ; and he who then will be on the hazard side, must play to win the first chace : which if he wins by striking the ball so as to fall, after its first rebound, nearer to the dedans than the figure 1, without his adversary's being able to return it from its first hop, he wins a stroke, and then proceeds in like manner to win the second chace, wherever it should happen to be. If a ball falls on the line with the first gallery door, second gallery, or last gallery, the chace is likewise called at such or such a place, naming the gallery door, &c. When it is just put over the line, it is called a chace at the line. If the player on the service-side returns a ball with such force as to strike the wall on the hazard-side so as to rebound, after the first hop over the line, it is also called a chace at the line. The chaces on the hazard-side proceed from the ball being returned either too hard or not quite .hard enough; so that the ball, after its first rebound, falls on this side of the blue line, or line which describes the hazard-side chaces; in which case it is a chace at 1, 2, &c., provided there is no chace depending. When they change sides, the player, in order to win this chace, roust put the ball over the line any where, so that his adversary does not return it. When there is no chace on the hazard-side, all balls put over the line from the service-side, without being returned, reckon for a stroke. This game is marked in a singular manner. The first stroke is called fifteen, the second thirty, the third forty, and the fourth game, unless the players get four strokes each ; in that case, instead of calling it forty all, it is called deuce; after which, as soon as any stroke is got, it is called advantage ; and, in case the stroke becomes equal again, deuce again, till one or the other gets two strokes following, which win the game. Although but one ball at a time is played with, a number of balls are made use of at this game to avoid trouble, and are handed to the players in baskets for that purpose ; by which they can play as long as they please, without ever having occasion to look for a ball.

TEN'ON, n. s. Fr. tenon. The end of a piece of timber cut to be fitted into another piece.

Such variety of parts, solid with hollow ; some with cavities as mortices to receive, others with tenons to fit them. Kay.

The tenant saw, being thin, hath a back to keep it from bending. Moxon's Mechanical Exercises.

TEN OR, n. s. Lat. tenor ; Fr. teneur. Continuity of state ; constant mode ; currency ; course ; drift ; in music, see below.

We might perceive his words interrupted continually with sighs, and the tenor of his speech not knit together to one constant end, but dissolved, in itself, as the vehemency of the inward passion prevailed.

Sidney.

When the world first out of chaos sprang, So smiled the days and so the tenor ran Of their felicity ; a spring was there, An everlasting spring the jolly year

Led round in, his great circle; no wind's breath As now did smell of winter or of death. Crashaw,

By the stern brow and waspish action, Which she did use as she was writing of it, It bears an angry tenor. Shakspeare. As you like it.

The treble cutteth the air too sharp to make the sound equal ; and therefore a mean or tenor is the sweetest part. Bacon's Natural History.

Water and air he for the tenor chose, Earth made the base, the treble flame arose. Cowlcy.

Still I see the tenor of man's woe Held on the same, from woman to begin. Milton.

Inspire my numbers, Till I my long laborious work complete, And add perpetual tenor to my rhimes, Deduced from Nature's birth to Caesar's times.

Dryden.

Can it be poison ! poison 's of one tenor, Or hot, or cold. Id. Don Sebastian.

Does not the whole tenor of the divine law positively require humility and meekness to all men ?

Sprat.

Reading it must be repeated again and again, with a close attention to the tenor of the discourse, and a perfect neglect of the divisions into chapters and verses. Locke.

There is so great an uniformity amongst them, that the whole tenor of those bodies, thus preserved, clearly points forth the month of lUay.

Woodward's Natural History.

In such lays as neither ebb nor flow, Correctly cold, and regularly low, That, shunning faults, one quiet tenor keep, We cannot blame indeed — but we may sleep. Pope .

TENOR, or TENOUR, the purport or content of a writing or instrument in law, &c.

TENOR, in music, the first mean or middle part, or that which is the ordinary pitch of the voice, when neither raised to a treble nor lowered to a bass. See TENOUR.

TENOS, TINE, or ISTENPIL, a pleasant and fertile island of the Cyclades group, in the Grecian archipelago, between Myconi and Andros. Its circumference is about thirty-four miles ; its population nearly 25,000 souls, almost alt Greeks. The surface is hilly, and covered with rocks, but the soil is well cultivated and very fertile. The chief products are silk, wine, fii,rs, oranges, and honey. The island has no good harbour. St. Nicolo is the chief town.

Lat. tensus. Stretched ; stiff; not lax : tenseness is contraction ; tension : ten-p-sible, and tensile, capable of extension : tension, the act of stretching, or state

TEN'SURE, n. s. J of being stretched : this also is the meaning of tensure : tensive is giving a sense of stiffness.

All bodies ductile and tensile, as metals that will be drawn into wires, have the appetite of not discontinuing. Bacon.

Gold is the closest and therefore the heaviest of metals, and is likewise the most flexible and tvmible.

Id.

This motion upon pressure, and the reciprocal thereof, motion upon tensure, we call motion of liberty, which is, when any body being forced to a preternatural extent restoreth itself to the natural.

All bodies, ductile and tensile, as metals, that will be drawn into wires ; wool and tow, that will he

TENSE, adj. TENSE’NESS, n. s. TEN’SIBLE, adj. TEN’SILE, TEN’SION, n. s. TEN’SIVE, adj.

drawn into yarn or thread ; have in them the appetite of not discontinuing strong, which maketh them follow the force that pulleth them out, and yet so as not to discontinue or forsake their own body. Id.

For the free passage of the sound into the ear, it is requisite that the tympanum be terse, and hard stretched, otherwise the laxnessof the membrane will certainly dead and damp the sound. Holder.

It can have nothing of vocal sound, voice being raised by stiff tension of the larynx ; and, on the contrary, this sound by a relaxed posture of the muscles thereof. Id.

Still are the subtle strings in tension found, Like those of lutes, to just proportion wound Which of the air's vibration is the force.

Blackmore.

Should the pain and tenseness of the part continue, the operation must take place.

Sharp's Surgery.

From choler is a hot burning pain ; a beating pain from the pulse of the artery ; a tensive pain from distension of the parts by the fulness of humours. Flayer on Humours.

TENSE, n. s. Fr. temps ; Lat. tempus. In grammar, tense, in strict speaking, is only a variation of the verb to signify time.

As foresight, when it is natural, answers to me-mory ; so when methodical it answers to reminiscence, and may be called forecast ; all of them expressed in the tenses given to verbs. Memory saith, I did see ; reminiscence, I had seen ; foresight, I shall see ; forecast, I shall have seen. Grew.

Ladies, without knowing what tenses and participles are, speak as properly and as correctly as gentlemen. Locke.

He should have the Latin words given him in their first case and tense, and should never be left to seek them himself from a dictionary. Watts.

TENSE, in grammar, an inflection of verbs, whereby they are made to signify or distinguish the circumstance of time in what they affirm. See GRAMMAR.

TENT, n.s. & v. a. Fr. tente. A roll of lint put into a sore : to search as with such a roll.

Modest doubt is called

The beacon of the wise ; the tent that searches To the bottom of the worst.

Shahspeare. Troilus and Cressida.

I have some wounds upon me, and they smart. — Well might they fester ‘gainst ingratitude, And tent themselves with death. Id. Coriolamts,

A declining orifice keep open by a small tent dipt in some medicaments, and after digestion withdraw the tent, and heal it. Wiseman s Surgery.

Some surgeons, possibly against their own judgments, keep wounds tented, often to the ruin of their patient. . Wiseman.

TENT, n. s. & v. n.) Fr. tente ; Lat. tento-TENTED adj. J num. A soldier’s moveable lodging-place : to lodge as in a tent : covered or furnished with tents.

Because of the same craft he wrought with them ; for by occupation they were tent makers.

Acts xviii. 23.

The Turks, the more to terrify Corfu, taking a hill not far from it, covered the same with tents.

Knolles.

These arms of mine till now have used Their dearest action in the tented field.

Shakspeare. Othello. The smiles of ‘knaves

Tent in my cheeks, and schoolboy’s tears take up The glasses of my sight. i’/icfo; •<? re.

He savT a spacious plain, whereon Were tents of various hue : by some were herds Of cattle grazing. Milton’s Paradise Lost.

To Chassis’ pleasing plains he took his way, There pitched his tents,

and there resolved to stay.

Drvden,

The foe deceived, he passed the tented plain, In Troy to mingle with the hostile train.

Pope’s Odyssey.

A TENT, in war, is a pavilion or portable house. Tents are made of canvas, for officer:* and soldiers to lie under when in the field. The size of the officers’ tents is not fixed ; some regiments have them of one size and some of another; a captain’s tent and marquee is generally ten feet and a half broad, fourteen deep, and eight high ; the subalterns’ are a foot less ; the major’s and lieutenant-colonel’s a foot larger ; and the colonel’s two feet larger. The subalterns of foot lie two in a tent, and those of horse but one. The tents of private men are six feet and a half square, and five feet high, and hold five soldiers each. The tents for horse are seven feet broad and nine feet deep ; they hold likewise five men and their horse accoutrements.

TENT, in surgery, a roll of lint made into the shape of a nail with a broad flat head, chiefly used in deep wounds and ulcers. They are of service, not only in conveying medicines to the most intimate recesses and sinuses of the wound, but to prevent the lips of the wound from uniting before it is healed from the bottom ; and by their assistance grumous blood, sordes, &c. are readily evacuated.

TENTATIVE, adj. > Fr. tentative; Lat. TENTA’TION, n. s. $ tento. Trying ; essay-ing : trial ; temptation.

The first delusion Satan put upon Eve, and his whole tentation, when he said, Ye shall not die, was, in his aquivocation, You shall not incur present death. Browne’s Vulgar Errnurs.

This is not scientifical, but tentative. Berkley.

TENTER, n. s., v. a., & v. n. Lat. tendo, tentus. A hook on which things are stretched : ‘ to be on the tenters ‘ is to be on the stretch : be in difficulties : to tenter is to stretch by hooks • admit extension.

A blown bladder pressed riseth again ; and when leather or cloth is tentered, it springeth back.

Bacon’s Natural History.

Woollen cloth will tenter, linen scarcely. Bacon.

In all my past adventures, I ne'er was set so on the tenters ; Or taken tardy with dilemma, That every way I turn does hem me. Hudibras.

TENTER, TRIER, or PROVER, a machine used in the cloth man Ja tory, to stretch out the pieces of cloth, stuff, &c., or only to make them even and set them square. It is usually about four feet and a half high, and for length exceeds that of the longest piece of cloth. It consists of several long square pieces of wood, placed like those which form the barriers of a manege ; so, however, as that the lower cross pieces of wood may be raised or lowered as is found requisite, to be fixed at any height by means of pins. Along the cross pieces, both the upper and under one, are hooked nails, called tenter-hooks, driven in from space to space.

TENTER, TO PUT A PIECE OF CLOTH ON THE. While the piece is yet quite wet, one end is fastened to one of the ends of the tenter; then it is

meanness: the adjective

exility; smallness ;

corresponding.

Firs and pines mount of themselves in he’zht with—

pulled by force of arms towards the other end, out side boughs ; partly heat, and partly tenuity of to bring it to the length required ; that other end juice, sending the sap upwards, being fastened, the upper list is hooked on to the upper cross-piece, and the lowest list to the lowest cross-piece, which is afterwards lowered by force, till the piece have its desired breadth. Being thus well stretched, both as to length and breadth, they brush it with a stiff hair-brush, and thus let it dry. Then they take it off; and, till they wet it again, it will retain the length and breadth the tenter gave it.

TENTERDEN, a market-town in Tenterden

Bacon’s Natural Histv-u.

i he tenuity and contempt of clergymen will soon let them see what a poor carcass they are, when parted from the influence of that supremacy.

King Charles.

Another way of their attraction is by a tenuous emanation, or continued effluvium, which after some distance retracteth unto itself.

Browne’s Vulgar F.rrourn.

Consider the divers figurings of the brain ; the strings or filaments thereof; their difference in te-

hundred, lathe of Scray, Kent, five miles east by nuity, or aptness for motion. Gtanville's .,

south from Cranbrook, and fifty-seven east by Aliment, circulating through an animal body,

south of London. The church, standing at the recluced to an almost imperceptible tenuity before it

north end of the town, has a lofty steeple, on

which formerly was a beacon, for alarming the

country in case of invasion. Here are two ' at wonde/ful tenuity, that if a small sphere o

chapels for dissenters, a free-school, a town-hall ˆTn°Dtv ' *M dia™lfteVhtfuI < 1Jbe expanded

u-t IT • to the thinness of that aether, it would more than

in which assemblies are occas.onally held, and a take up lhe orb of Sat which °s ffia™'mi ˆ

market-house. At the first introduction of the *! — L •• •

can ˆ"e animal purposes. Arbutlmat.

At the beiSht of four thousand miles the aether is

woollen manufacture, this place had a considerable trade in weaving, but at present the grazing business is the chief occupation of its inhabitants. This is a member of the cinque ports, and is annexed to the town of Rye ; the corporation consists of a mayor, twelve jurats, and twelve com-mon-councilmen. Market on Friday. Fairs, first Monday in May, for cattle and pedlary.

TENTH, AND FIRST FRUITS OF SPIRITUAL PREFERMENTS, a branch of the king's revenue. See REVENUE. These were originally a part of the papal usurpations over the clergy of this kingdom ; which were annexed to the revenue of the crown. By statute 26 lien. VIII. c. 3

times bigger than the earth. Bentlru.

TEIN'URE, n. s. Fr. tenure ; Lat. tento. The legal manner in which a tenement is held.

The service follows the tenure of lands; and lhe lands were given away by the kings of England to those lords. Spetner.

The uncertainty of tenure, by which all worldly things are held, ministers very unpleasant meditation

I'tileitjh.

Man must be known, his strength, his state, And by that tenure he holds all of fate. Drydrn.

TENURE, in the English law, signifies the manner whereby lands or tenements are held, or the service that the tenant owes to his lord. Almost all the real property of England is by the

(confirmed by stat. 1 Eliz. c. 4) queen Anne policy of the law supposed to be granted by,

granted her royal charter, which was confirmed dependent upon, and holden of, some superior

by the stat. 2 Anne c. 1!, whereby all the reve-lord, by and in consideration of certain ••services

nue of first fruits and tenths is vested in trustees to be rendered to the lord by the tenant or pos—

for ever to form a perpetual fund for the aug-sessor of this property. The thin": holden is

mentation of poor livings. This is usually called Queen Anne's bounty ; which has been still farther regulated by subsequent statutes.

TENTHREDO, the saw-fly, a genus of insects belonging to the order of hymenoptera. The mouth is furnished with jaws, which are horny, arched, dentated within ; the tight jaw

therefore styled a tenement, the possessors thereof tenants, and the manner of their possession a tenure. Thus all the lands of the kingdom are supposed to be holden, mediately or immediately, of the king; who is styled the lord paramount, or above all. Such tenants as held under the king immediately, when they granted out portions

being obtuse at the apex; the lip cylindrical, of the lands to inferior persons, became also lord

trifid ; there are four feelers, unequal and filiform ; the wings are plain and turned ; the sting consists of two serrated laminae, and the scutel- lum of two grains placed at a distance. Gmelin mentions 143 species. These insects are not very shy. Some by means of their saw deposit in the buds of flowers, others on the twigs of trees or shrubs, eggs from which are produced caterpillars. The implement with which they are armed is nowise formidable; as it appears only destined to the purpose of depositing their eggs. TENTZELIUS (William Ernest), a learned German, born at Armstadt in Thuringia, in 1659. He wrote, 1. Saxonia Numismatica, in 4 vols. ; and 2. Supplementum Historian Gothanas, 3 torn. 4to. — Moreri.

TENU'ITY, «. s. $ Fr. lenuite; Lat. tcnu-TrisVors, adj. Situs, fcnuis. Thinness;

with respect to those inferior persons, as they were still tenants with respect to the king; and, thus partaking of a middle nature, %vere called mesne or middle lords. All tenures being thus derived from the king, those that held immediately under him, in right of his crown and dignity, were called his tenants in capite, or in chief. ' Tenements are of two kinds, frank-tenement and villenage. And, of frank-tene- ments, some are held freely in consideration of homage and knight-service ; others in free-soccage, with the service of fealty only. Arid again, of villenages, some are pure, and others privileged. He that holds in pure villenage shall do whatsoever is commanded him, and always be bound to an uncertain service. The other kind of villenage is called villein-soccage; and these villein-socrnen do villein-services, but such as are ctr-TEP

tain and determined.' Of which the sense seems to be as follows: first, where the service was free, but uncertain, as military service with homage, that tenure was called the tenure in chivalry, per servitium militaire, or by knight-service. Secondly, where the service was not only free, but also uncertain, as by fealty only, by rent and fealty, &c., that tenure was called liberum socagium, or free soccage. These were the only free holdings or tenements; the others were villenous or servile : as, thirdly, where the service was base in its nature, and uncertain as to time and quantity, the tenure was purum villenagium, absolute or pure villenage. Lastly, where the service was base in its nature, but reduced to a certainty, this was still villenage, but distinguished from the other by the name of privileged villenage, villinagium privelegiatum ; or it might still be called soccage (from the uncertainty of its services), but degraded by their baseness into the inferior title of villanum socagium, villein-soccage. 1. The military tenure, or that by knight-service, was done away by stat. 12 Car. II. For an account of this species of tenure see FEUDAL SYSTEM, and KNIGHT-SERVICE; and for its incidents, see RELIEF, PRIMER-SEISIN,WARDSHIP, MARRIAGE, FINES, and ESCHEAT. 2. The second species ot tenure or free-soccage, not only subsists to this day, but has in a manner absorbed and swallowed up (since the statute of Charles II.) almost every other other species of tenure. See SOCCAGE. The other grand division of tenure, mentioned by Bracton, is that of villenage, as contradistin-guished from liberum tenementum, or frank-tenure. And this he subdivides into two classes, pure and privileged villenage ; whence have arisen two. other species of our modern tenures. 3. From the tenure of pure villenage have sprung the present copyhold tenures, or tenure by copy of court-roll at the will of the lord. See MANOR. Two main principles are held to be the supporters of a copyhold tenure, and without which it cannot exist : 1. That the lands be parcel of and situate within that manor under which it is held. 2. That they have been demised, or demisable, by copy of court-roll immemorially. For immemorial custom is the life of all tenures by copy ; so that no new copyhold can, strictly speaking, be granted at this day. In some manors, where the custom hath been to permit the heir to succeed the ancestor in his tenure, the estates are styled copyholds of inheritance ; in others, where the lords have been more vigilant to maintain their rights, they remain copyholds for life only; for the custom of the manor has in both cases so far superseded the will of the lord, that, provided the services be performed or stipulated

for by fealty, he cannot in the first instance refuse to admit the heir of the tenant upon his death ; nor, in the second, can he remove his present tenant so long as he lives, though he holds nominally by the precarious tenure of his lord's will. The fruits and appendages of a copyhold tenure, that it hath in common with free tenures, are fealty, services (as well in rents as otherwise), reliefs, and escheats. The two latter belong only to copyholds of inheritance ; the former to those for life also. But, besides these, copyholds have also heriots, wardship, and fines. Ileriots, which

are agreed to be a Danish custom, are a render of the best beast or other good (as the custom may be) to the lord on the death of the tenant. This is plainly a relic of villein tenure ; there being originally less hardship in it, when all the goods and chattels belonged to the lord, and he might have seized them even in the villein's lifetime. These are incident to both species of copyhold ; but wardship and fines to those of inheritance only. Wardship, in copyhold estates, partakes both of that in chivalry and that in soccage. Like that in chivalry, the lord is the legal guardian, who usually assigns some relation of the infant tenant to act in his stead ; and he, like guardian in soccage, is accountable to his ward for the profits. Of fines, some are in the nature of primer-seisins, due on the death of each tenant; others are mere fines for alienations of the lands ; in some manors only one of those sorts can be demanded, in some both, and in others neither. They are sometimes arbitrary and at the will of the lord, sometimes fixed by custom; but, even when arbitrary, the courts of law, in favor of the liberty of copyholders, have tied them down to be reasonable in their extent; otherwise they might amount to disherison of the estate. No fine therefore is allowed to be taken upon descents and alienations (unless in particular circumstances) of more than two years improved value of the estate. From this instance we may judge of the favorable disposition that the law of England (which is a law of liberty) hath always shown to this species of tenants, by removing, as far as possible, every real badge of slavery from them, however some nominal ones may continue. It suffered custom very early to get the better of the express terms upon which they held their lands ; by declaring that, the will of the lord was to be interpreted by the custom of the manor; and, where no custom has been suffered to grow up to the prejudice of the lord, as in this case of arbitrary fines, the law itself interposes in an equitable method, and will not suffer the lord to extend his power so far as to disinherit the tenant. 4. There is yet a fourth species of tenure, described by Bracton, under the name sometimes of privileged villenage, and sometimes of villein-soccage.

See VILLENAGE, PRIVILEGED. There is still one other species of tenure, reserved by the statute of Charles II., which is of a spiritual nature, and called the tenure in FRANK ALMOIGN ; see that article.

TEOS, one of the twelve Ionian cities, was situated on the south side of the Ionian peninsula, and distinguished by being the birth place of the poetAnacreon and the historian Hecataeus.

TEP'ID, adj.) Latin, tepidus. Luke—

TE'POR, n. s.) warm ; warm in a small degree : the noun substantive corresponding.

The tepid caves, and fens, and shores, Their brood as numerous hatch. Milton.

He with his tepid rays the rose renews, And licks the dropping leaves, and dries the dews.

Dryden.

Such things, as relax the skin are likewise sudori-fick ; as warm water, friction, and tepid vapours.

Arbutfmnt.

The small-pox, mortal during such a season, grew more favourable by the tepor and moisture in April.

Id.

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TEQUENDAMA, CATARACT OF, a remarkable fall of the Rio Bogota, in South America. This river receives numerous tributary streams as it passes over the plain of Bogota, and it is about 140 feet in breadth, a short distance above the fall. Approaching the crevice through which it dashes, its breadth is diminished to thirty-five; when, with accumulated force, it rushes down a perpendicular rock at two bounds, td the astonishing depth of 600 feet, into a dark unfathomable gulf, out of which the river again issues under the name of Rio Meta, and continues its course, by an immense descent, till it joins the Magda-lena. In the fall of this river may be observed a strange variety of climate. The plain of Bo-gota is covered with crops of wheat, with oaks, elms, and other productions of a temperate re-gion. At the foot of the fall are seen the palms of the equinoctial low lands. The face of the rock, which finishes and borders the vast plain of Bogota, near the cataract, is so steep that it takes three hours to descend from the river Funza to the Rio Meta ; and the basin or gulf cannot be approached very close, as the rapidity of the water, the deafening noise of the fall, and dense mass of vapor, render it impossible to get nearer the edges of the abyss than 400 or 500 feet. The loneliness of the spot, the dreadful noise, and the beauty of the vegetation, render this situation one of the wildest and most picturesque scenes in the whole world.

TERAPHIM, or JTHERAFHJM, a word in the Hebrew language, which has exercised much the ingenuity of the critics. It occurs thirteen or fourteen times in the Old Testament, and is commonly interpreted idols.

TERCE, n. s. FT. tierce ; Lat. triens. A vessel containing forty-two gallons, or the third part of a butt or pipe of wine.

In the poet’s verse The king’s fame lies, go now deny his tierce.

Hen Jonson.

TERCERA, an island forming part of the group of the Azores, near the coast of Africa. The Portuguese gave this name to it from its be-ing the third in succession that was discovered. In consequence of its central situation, and the safety of the roadstead at Angra, it has been made the seat of government ; and it is about fifty-four miles in circumference, surrounded with steep rocks, which render it inaccessible, except at a few points, which are strongly fortified. The

interior is extremely agreeable, the summits of the mountains consisting, for the most part, of beautiful and fertile plains, abundantly supplied with fine water. Vines are cultivated, but the wine is by no means excellent. Agriculture and pasturage are the chief employments ; and fruit, grain, and cattle, are in such abundance, that the population, though amounting to 50,000 souls, subsist in the greatest plenty, and export corn to Lisbon. The only two places of consequence are Angra arid Praya.

TEREBELLA, the piercer, in entomology, a genus of insects belonging to the class of vermes and order of molusca. The body is filiform, the mouth placed before; the preputium puts forth a pedunculated tubulous gland. There are several

capillary tentacula about the mouth. There are ten species.

TEREBIN'THINATE, adj.) Fr. terebln—

IEREBIJ/THINE. ˆ thine ; Lat. tc—

rebmthum. Consisting of turpentine ; mixed with turpentine.

Salt serum may be evacuated by urine, by ierebiii-thmates : as tops of pine in all our ale. Floi/er.

TEREBRATUL/E, in zoology, or rather ichthyology, a species of anomia which have been supposed not to exist now but as petrified shells. See ANOMIA. This, however, is a,mistake. The anomia is an inhabitant of every region, and has existed in every age.

TER'EBRATE,t;.a. J Latin, tercbro. To

TEREBRA'TION, n. s. \ bore; perforate; pierce : the noun substantive corresponding.

Terebration of trees makes them prosper better; and also it maketh the fruit sweeter and better.

Bacon.

Consider the threefold effect of Jupiter's trisulk, to burn, discuss, and terehrate.

Browne's Vulgar Erronrs.

Earth-worms are completely adapted to their way of life, for terebrating the earth and creeping.

Derham.

TEREDO, in entomology, a genus of vermes belonging to the order of testacea. The animal is a terebella; there are two valves, calcareous, hemispherical, and cut off before, and two lanceolated. The shell is tapering, bending, arid capable of penetrating wood. There are only three species; *viz.* 1. T. clava, the nail worm. 2. T. navalis, the ship worm, has a very slender smooth cylindrical shell, inhabits the Indian seas, whence it was imported into Europe. It penetrates easily into the stoutest oak-planks, and produces dreadful destruction to the ships by the holes it makes in their sides; and it is to avoid the effects of this insect that vessels require sheathing. The head of this creature is coated with a strong armour, and furnished with a mouth like that of a leech ; a little above this it has two horns which seem a kind of continuation of the shell ; the neck is furnished with -several strong muscles; the rest of the body is only covered by a very thin and transparent skin, through which the motion of the intestines is plainly seen by the naked eye. This creature is wonderfully minute when newly excluded from the egg, but it grows to the length of four or six inches, and sometimes more. When the bottom of a vessel, or any piece of wood which is constantly under water, is inhabited by these worms, it is full of small holes; but no damage appears till the outer parts are cut away. Then their shelly habitations come into view; in which there is a large space for enclosing the animal and surrounding it with water. There is an evident care in these creatures never to injure one another's habitations; by these means each case or shell is preserved entire. Dissection has shown that every individual has the parts of both sexes, and is therefore supposed to propagate by itself. 3. T. utriculus, the hottle worm.

TEREDON, in ancient geography, a town on the coast of the Arabic Gulf. — Dion I'erieg.

TERENCE. See TERENTIUS.

TERENTIA, 1. the wife of Cicero, and mo-

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‘.her o? his son Marcus and his daughter Tul-Jiola. While the orator was in Asia she behaved so ill that he divorced her. She afterwards married his enemy Sallust. 2. Ta-entia the wife of Maecenas who behaved equally ill to that great man.

TERENTIANUS. See MAURUS.

TERENTIUS AFER (Publius or Terence), a celebrated comic poet of ancient Rome, born at Carthage in Africa. He was slave to Teren-tius Lucanus the senator, who gave him his liberty on account of his wit, his good mien, and great abilities. Terence, on his becoming a freedman, applied himself to the writing of comedies. Terence died while on a voyage into Greece, about the fifteenth year before the Christian era. There are six of his comedies extant, of which the best editions are the Elzevir one 1635, 12mo. ; that cumpntegris notis Donati, et selectis variorum, 1686, 8vo. ; Westerhovius’s, in 2 vols. 4to. 1726; and that of Bentley the same year, 4to. A very good English translation was published in 4to. 1768, by Mr. Colman.

TERGIVERSATION, n. s. Lat. tergum and verso. Shift; subterfuge; evasion.

Writing is to be preferred before verbal conference, as being freer from passions and tergiversations.

Bishop Bramhall.

The colonel, after all his tergiversations, lost his life in the king’s service. Clarendon.

TERLIZZl, a large town of Italy, in the south-east of Naples. Its population is said to amount to 8000, and it stands on the high road leading from the town of Bari on the coast, in a north-west direction, across the Ofanto or Aufi-dus. This -part of Italy, the ancient Apulia, is thinly peopled ; and Terlizzi has few manufactures. It stands twenty miles south of the site of Cannse, and sixty north-west of Tarentum.

TERM, n. s. & v. a.~\ Lat. terminus. Limit ;

TERM’LESS, adj. I boundary: hence words

TERM'LY, adv. t expressing a certain

TERM'ER, n. s. J thing or meaning; language ; condition ; limited time : for legal terms see below : to term is, to name ; call ; describe : the adjective corresponding: termly is, term by term : a termer is one who travels up to the term.

Would curses kill, as doth the mandrake's groan, I would invent as bitter searching terms, As curst, as harsh, as horrible to hear. Shukspeare.

I am thy father's spirit, Doomed for a certain term to walk the night. Id.

These betraying lights look not up towards termless joys, nor down towards endless sorrows. Raleigh.

To apply notions philosophical to "plebeian terms, or to say, where the notions cannot be fitly reconciled, that there wanted a term, or nomenclature for it, be but shifts of ignorance. Bacon.

Corruption is a reciprocal to generation ; and they two are as nature's two terms or boundaries, and the guides to life and death. Id. Natural Historu.

The clerks are partly rewarded by that means also, besides that termly fee which they are allowed.

Bacon.

Nor have my title leaf on post or walls, Or in cleft sticks advanced to make calls For termers, or some clerk-like serving man.

Ben Joiiion.

The term suiters may speed their business : for the end of these sessions delivereth them space enough 10 overtake the besinninc; cf the ierws. Caretc.

God to Satan first his doom applied Though in mysterious terms. Milton.

Too long vacation hastened on his term. Id.

Those men employed as justices daily in term time consult with one

another. Hale.

What are these to those vast heaps of crimes Which terms prolong 1 Dryden.

Live, though unhappy, live on any terms. Id.

In painting, the greatest beauties cannot always be expressed for want of terms. Id.

Men term what is beyond the limits of the universe imaginary space, as if nobody existed in it.

Locke.

Those parts of nature into which the chaos was divided, they signified by dark and obscure names, which we have expressed in their plain and proper terms. Burnet.

We flattered ourselves with reducing France to our own terms by the want of money, but have been still disappointed by the great sums imported from America. Addison.

Why should Rome fall a moment ere her time 1 No ; let us draw her term of freedom out In its full length, and spin it to the last. Id.

Did religion bestow heaven, without any terms or conditions, indifferently upon all, there would be no infidel. Bentlev.

Had the Roman tongue continued vulgar, it would have been necessary, from the many terms of art required in trade and in war, to have made great additions to it. Swift.

TERM, in law, is generally taken for a limitation of time or estate ; as a lease for term of life or years. Term is more particularly used for that time wherein our courts of justice are open; in opposition to which the rest of the year is called vacation.

TERM, in grammar, denotes some word or expression in a language. The word term (from terminus) is borrowed metaphorically, by the grammarians and philosophers, from the measurers or surveyors of lands : as a field is defined and distinguished by its termini or limits, so is a thing or matter spoken of by the word or term it is denoted by.

TERM, in the arts, or term of art, is a word which, besides the literal and popular meaning which it has or may have in common language,

bears a further and peculiar meaning in some art or science.

The TERMS in law above enumerated are not observed by the high court of parliament, the chancery, and inferior courts ; only the courts of king's bench, common pleas, and exchequer, which are the highest courts at common law. These terms are supposed by Mr. Selden to have been instituted by William the Conqueror; but Sir H. Spelman hath shown that they were gradually formed from the canonical constitutions of the church ; being no other than those leisure seasons of the year which were not occupied by the great festivals or fasts, or which were not liable to the general avocations of rural business. Throughout all Christendom, in very early times, the whole year was one continued term for hearing and deciding causes.

Oxford terms.— These are four ; which begin and end as below : —

Lr. > TT-TERM

Begins . . January 14th.

Ends . . Saturday before Palm Sunday.

TER ?

EASTER-TERM

Begins . . Wednesday after Low Sunday. Ends . . Thursday before Whit-Sunday.

TRINITY-TERM

Begins . . Wednesday after Trinity-Sunday. Ends . . Saturday after the Act.

MICHAELMAS-TERM Begins . . October 10th. Ends . . December 16th.

N. B. The Act is the first Monday after the 6th of July. When the day of the beginning or ending happens on a Sunday, the terms begin or end the day after.

Cambridge terms. — These are three, as below :

LENT-TERM

Begins . . January 13th. Ends . . Friday before Palm-Sunday.

EASTER-TERM

Begins . . Wednesday after Low-Sunday. Ends . . Friday after Commencement.

MICHAELMAS-TERM Begins . . October 10th. Ends . . December 16th.

N. B. The commencement is the first Tuesday in July. There is no difference on account of the beginning or ending being Sunday.

TERMS, IRISH. In Ireland the terms are the same as at London, except Michaelmas term, which begins October 13th, and adjourns to November 3rd, and thence to the 6th.

TERMS, SCOTTISH. The court of session has two terms, the winter and summer. The winter begins on the 12th of November, and ends the llth of March, only there is a recess of three weeks at Christmas. The summer term commences on the 12th of May, and ends the llth of July. The court of exchequer has four terms. 1. Candlemas term begins January 15th, and ends February 3rd. 2. Whitsuntide term begins May 12th, and ends June 2nd. 3. Larnmas term begins June 17th, and ends July 5th. 4. Martinmas term begins November 24th, and ends December 20th.

TER'MAGANT, adj. & n.s.) Sax. rynand

TER'MAGANCY, n. s. \ rnajan, eminently powerful : or tyrt, taken as a name of Mars. Tumultuous ; turbulent : a turbulent person : turbulence ; tumultuous violence.

Twas time to counterfeit, or that hot termagant Scot had paid me scot and lot too.

'Shakspeare. Henry-,IV.

I would have such a fellow whipt for o'erdoing Termagant ; it outherods Herod. Id. Hamlet.

For zeal's a dreadful termagant, That teaches saints to tear and rant. Hudibms.

She threw his periwig into the fire : Well, said he, thou art a brave termagant. Taller.

The eldest was a termagant, imperious, prodigal, profligate wench. Arbuthnot's History nf John Bull.

The sprites of fiery termagants in flamt Mount up, and take a salamander's name. Pope.

By a violent termagancy of temper, she may never suffer him to have a moment's peace. Barker.

TERMES, in entomology, a genus of insects belonging to the order of aptera according to Linnseus; but by others it is arranged more pro-

perly under the neuropleia. The mouth has two horny jaws ; the lip is horny and quadrifid, the lacinia: being linear and acute ; there are four feelers, which are equal and filiform. The antennae are moniliform in most species, and the eyes two. There are eight species according to Gmelin ; *viz.* T. arda, Capensis, destructor, divi-natorius, fatalis, fatidicus, mordax, and pulsu-torius. But, as Gmelin has followed the classification of Linnaeus in arranging the termes under the order of aptera, it is not improbable that several of those which are mentioned as species of the termes may belong to a different genus. It will be sufficient here to describe the fatalis, which we are enabled to do from very accurate information.

T. fatalis bellicosus, or the white ant, is of a yellow color above; the wings also yellowish; the costa is ferruginous ; the stemmata are near the eyes, the central point being somewhat prominent. Of the white ant we have a very curious and interesting description in tiie Philosophical Transactions for 1781 by Mr. Henry Smeathman of Clement's Inn. According to this account the works of these insects surpass those of the bees, wasps, beavers, and other animals, as much at least as those of the most polished European nations excel those of tlie least cultivated savages. In the interior construction of their habitations they appear greatly to exceed any work of human construction. The most striking parts of these structure? are the royal apartments, the nurseries, magazines of provisions, arched chambers and galleries, with their various communications; the ranges of sjo-thic-shaped arches, projected, and not formed by mere excavation, some of which are two or three feet high, but which diminish rapidly like the arches of aisles in perspective; the various roads, sloping staircases, and bridges, consisting of one vast arch, and constructed to shorten lite distance between the several parts of tlie building, which would otherwise communicate only by winding passages. In some parts near Senegal their number, magnitude, and closeness of

situation, make them appear like the villages of the natives. But these and many pther curious instances of the great sagacity and powers of these insects cannot be understood without viewing the plates in which their feeble frames, and comparatively stupendous works, are delineated. See Philosophical Transactions above referred to. There are three distinct ranks among them. These are, first, the laborers, or working insects ; next the soldiers, or fighting order, who do no kind of labor, and are about twice as long as the former, and equal in bulk to about fifteen of them ; and, lastly, the winged or perfect insects, which may be called the nobility or gentry of the state; for they neither labor nor fight, being scarcely capable even of self-defence. ‘ These only are capable of being elected kings or queens; and nature has so ordered it that they emigrate within a few weeks after they are elevated to this state, and either establish new kingdoms or perish within a day or two.’ The first order, the working insects, are most numerous, being in the proportion of 100 to one of the soldiers. In this state they are about a quarter of an inch long,

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and twenty-five of them weigh about a grain; so that they are not so laree as some of our ants. The second order, or soldiers, have a very different form from the laborers, and have been by some authors supposed to be the males, and the former neuters ; but they are, in fact, the same insects as the foregoing, only they have undergone a change of form and approached one degree nearer to the perfect state. They are now much larger, being half an inch long, and equal in bulk to fifteen of the laborers. The third order, or the insect in its perfect state, varies its form still more than ever. The head, thorax, and abdomen, differ almost entirely from the same parts in the laborers and soldiers; and besides this the animal is now furnished with four fine large, brownish, transparent wings, with which it is, at the time of emigration, to wing its way in search of a new settlement. It differs so much from the other two that they have not hitherto been supposed to belong to the same community.' In fact they are not to be discovered in the nest till just before the commencement of the rainy season ; when they undergo the last change, which is preparative to the formation of new colonies. They are equal in bulk to two soldiers, and about thirty laborers ; and, by means of the wings with which they are furnished, they roam about for a few hours; at the end of which time they lose their wings, and become the prey of innumerable birds, reptiles, and insects ; while probably not a pair out of many millions of this unhappy race get into a place of safety, fulfil the first law of nature, and lay the foundation of a new community. In this state many fall into the neighbouring waters and are eaten with avidity by the Africans. The author found them delicate, nourishing, and wholesome, without sauce or other help from cookery than merely roasting them in the manner of coffee. The few fortunate pairs who happen to survive this annual massacre and destruction are represented by the au-thor as being casually found by some of the laborers that are continually running about on the surface of the ground, and are elected kings and queens of new states. Those who are not so elected and preserved, certainly perish, and most probably in the course of the following day. By these industrious creatures the king and queen elect are immediately protected from their innumerable enemies, by enclosing them in a chamber of clay, where the business of propagation soon commences. Their ' voluntary subjects ' then busy themselves in constructing wooden nurseries, or apartments entirely composed of wooden materials, seemingly joined together with gums. Into these they afterwards carry the eggs produced from the queen,

lodging them there as fast as they can obtain them from her. After impregnation a very extraordinary change begins to take place in her person, or rather in her abdomen only. It gradually increases in bulk, and at length becomes of such an enormous size as to exceed the bulk of the rest of her body 1500 or 2000 times. She becomes 1000 times heavier than her consort, and exceeds 20,000 or 30,000 times the bulk of one of the laborers. In this state the matrix has a constant peristaltic or undulating motion ; the consequence of which is

(as the author has counted them) the protrusion of 80,000 eggs in twenty-four hours.

TERMINALIA, in antiquity, feasts celebrated by the Romans in honor of the god Ter minus.

TERMINALIA, in botany, a genus of plants belonging to the class of polygamia and order of moncecia. The male calyx is quinquepartite ; there is no corolla; the stamina are ten. The hermaphrodite flower is the same with that of the male ; there is one style ; the fruit, which is a drupe or plum, is below, and shaped like a boat. There are two species; *viz.* 1. T. augusti-folia, the narrow-leaved, or benzoin plant; but though it has this name it does not yield benzoin. See STYRAX. 2. T. Catappa.

TER’MINATE, v. a. & v. n. i Fr. terminer ;

TERMINATION, n.s. $ Latin termino.

See TERM. To bound ; limit ; put an end to : be limited ; or at an end : the noun substantive corresponding.

She speaks poniards, and every word stabs : if her breath were as terrible as her terminations, there were no living near her, she would infect to the north stai.

Shakspeare.

It is not an idol ratione termini, in respect of termination ; for the religious observation thereof is referred and subservient to the honour of God and Christ : neither is it such ratione modi, for it is kept holy by the exercise of evangelical duties.

White.

These are to be reckoned with the heathen, with, whom you know we undertook not to meddle, treating only of the scripture-election terminated in those to whom the scripture is revealed. Hammond.

Its earthly and salinous parts are so exactly resolved, that its body is left imporous, and not discreted by atomical terminations.

Browne's Vulgar Errours. Ere I the rapture of my wish renew, I tell you, then, it terminates in you.

Dryden's Aurengzebe.

Bodies that are solid, separable, terminated, and moveable, have all sorts of figures. Locke.

TERMINI, in architecture, denotes a kind of statues or columns, adorned on the top with the figure of a man's, woman's, or satyr's head, as a capital ; and the lower part ending in a kind of sheath or scabbard. Suidas thinks they should rather be called hermetes than termini, as they originated from the Athenian hermeses, which were used as ornaments, and not from the Ro-man termini, which were used as land-marks. See HERMES.

TERMINI, a considerable sea-port of Sicily, in the Val di Mazzara, on the north coast, and at the mouth of a river of this name. It stands on a rocky eminence, surrounded by a wall, and has, on the side of the sea, an old castle. The public establishments consist of a Monte di Pieta, two hospitals, a poor-house for females, several convents, and some rather richly ornamented churches. Here is a tolerable port .and the inhabitants have long been in the practice of ex- ¥orting corn, olive oil, and other products, hough a place of some note in antiquity, it has at present few remains, but it has long been celebrated for its hot mineral springs. Inhabitants about 8700. Eighteen miles E. S.E. of Palermo. Long 13° 45' E., lat. 38° 5' N

TERMIKTIIUS, M.S. Grc-.-k rjp/«v0oc. A tumor.

Terminihus is of a blackish colour ; it breaks, and within a day the pustule conies away in a slough.

Wiseman.

TERMINUS, in Pagan worship, an ancient deity among the Romans, who presided over the stones or land-marks called termini, which were held so sacred that it was accounted sacrilege to move them ; and as the criminal became devoted to the gods it was lawful for any man to kill liim. The worship of this deity was instituted by Numa Pompilius, who, to render land-marks, and consequently the property of the people, sacred, erected a temple on the Tarpeiau mount to Terminus.

TERMIOVA, a town of Maritime Austria, in Istria, eighteen miles north-east of Pedena.

TERMITES. See TERMES.

TERMOLI. See TERMINI.

TERMUYDEN, a strong town of Holland, in the department of the Meuse and ci-devant province of Dutch Flanders, north-east of Sluys.

TERN, in ornithology. See STERNA.

TERNAI, the name given by Perouse to a very fine bay which he discovered on the coast of Tartary in lat. 45° 13’ N., long. 135° 9’ E. of Paris. The bottom is sandy, and diminishes gradually to six fathoms within a cable’s length of the shore. The tide rises five feet; it is high water at eight hours fifteen minutes at full and change; and the flux and reflux do not alter the direction of the current at half a league from the shore.

TER’NARY, or ˆ Latin ternarius, ternio.

TER’NION, n. s. 5 The number three.

These nineteen consonants stood in such confused order, some in ternaries, some in pairs, and some sin-gle. Holder.

TERNATE, the northernmost of a chain of islands on the west coast of

Gilolo, and formerly the seat of sovereignty over all the adjacent Molucca islands, Tidore, Bachian, Motir, and Machian. The first Mahometan sovereign of Ternate is said to have reigned from A. U. 1466 to 1486. In 1521 it was visited by the Portuguese, who took formal possession ; but they were expelled in 1530. In 1579 it was touched at by Sir Francis Drake, who, according to the fashion of the day, took possession of it in the name of queen Elizabeth. Along with the kingdom of Portugal it devolved to the Spaniards, who lost Ternate in 1606; but retained a footing in the Molucca so late as 1663. In 1680 the Dutch compelled the sultan of Ternate to become tributary to them, and the princes of the other Moluccas were so thoroughly subdued that in the year 1778 the kings of Tidore and Bachian were deposed, and exiled to Batavia. It was taken from the Dutch in the course of the revolutionary war, but was restored at the peace of Amiens. It was again taken in August 1810, and was restored to the Dutch, with their other possessions in India, by the peace of Paris.

TERNAVASSO, a town of the French empire, in the department of the Po, and ci-devant province of Piedmont, six miles north-east of Carmagnola, and eight south of Chieri. VOL. XXI.

TERNI, a town in the; State of the Church, situated in a luxuriant valley, between two branches of the Nera. It has a cathedral urn] several churches, but no other public building of consequence. It is a place of antiquity, and still contains several interesting ruins. The cascades of the Eveline, called the Cadutu delle Marmore are very fine. Population about 7000. Twelve miles south of Spalato, and forty-live north of Rome.

TERNSTROMIA, in botany, a genus of plants belonging to the class of polyandria and order of monogynia. The calyx is mone-phyllous ;;nd quinquepartite ; the corolla is monopmulous, quinquepartite or sexpartite, globular, and bell-shaped ; the berry is dry, biloculur, and valvo-less. There is only one species, *viz.* T. mcri-dionalis.

TERPANDER, a celebrated Greek poet and musician. The Oxford marbles tell us that lie was the son of Derdeneus of Lesbos, and that lie flourished in the thirty-eighth year of those records ; which nearly answers to the twenty-seventh Olympiad, and sixty-first year 13. C. The marbles inform us likewise that he taught the nomes, or airs, of

the lyre and flute, which he performed himself upon this last instrument in concert witli other players on the flute. Several writers tell us that he added three strings to the lyre, which before his time had but four. S< <: LYRE. Among the many signal services which Terpander is said to have done to musin, none was of more importance than the notation that is ascribed to him for ascertaining and preserving melody, which before was traditional and wholly dependent on memory. The invention indeed of musical characters has been attributed by Alypius and Gaudentius, two Greek writers on music, and upon their authority by Boethius, to Pythagoras, who flourished full two centuries after Terpauder. But Plutarch gave the invention to Terpander, and so does Clemens Alexandrinus. Plutarch says, ‘ no other proof need b< > urged of the excellence of Terpander in the art of playing upon the cithara than what is given by the” register of the Pythic games, from which it appears that he gained four prizes successively at those solemnities. Of the works of this poet only a few fragments are now remaining-TERPSICHORE, in the mythology, one of the Nine Muses. She presided over dancing, of which she was reckoned the inventress. In painting she is drawn with a musical instrument in her hand, and crowned with laurel.— Juv. vii. v. 35.

TERRA (Lat. the earth), in the mythology, the wife of Coelus and mother of Saturn and Ops, or Tellus. See OPS and TELLUS.

TERRA DEL FUEGO, an island separated from the southern extremity of America, by a narrow sea called the Straits of Magellan; so called from the volcanoes observed on it. Of the south-west coast of Terra del Fuego, captain Cook says :— ‘ With respect to inlets, islands, &c., it may be compared to the coast of Norway c for I doubt if there be an extent of three leagues where there is not an inlet or harbour which will receive and shelter the largest shipping. The

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worst is that, till these inlets are better known, one has, as it w.ere, to fish for anchorage. There are several lurking rocks on the coast; but happily none of them lie far from land, the approach to which may be known by sounding, supposing the weather so obscure that you cannot see it. For, to judge of the whole by the parts we have sounded, it is more than probable that there are soundings all along the coast, and tor several leagues out to sea. Upon the whole, it is by no means the dangerous coast it has been represented. The currents between Cape Deseada and Cape Horn set from west to east, that is, in the same direction as the coast ; but they are by no means considerable. To the east of the Cape their strength is much increased, and their direction is north-east to Staten Land. They are rapid in Strait le Maire and along the south coast of Staten Land, and set like a torrent round Cape St. John, where they take a north-west direction, and continue to run very strong both within and without New Year's Isls. While) we lay at anchor within this island, I observed that the current was strongest during the flood ; and that on the ebb its strength was so much impaired that the ship would sometimes ride head to the wind when it was at west and west-north- west. This is only to be understood of the place where the ship lay at anchor ; for, at the very time we had a strong current setting to the westward, one of equal strength was found near the coast of Staten Land setting to the eastward ; though probably this was an eddy current or tide.' The aspect of the country is dreary and uncomfortable, consisting of a chain of stupendous rocks, continually covered with snow. The inhabitants are said to be naturally as fair as Europeans, but go naked, and paint their bodies with the most gorgeous colors. Those on the south side are particularly barbarous ; while those on the opposite side are simple and affable. The skins of wild animals are sometimes used to co-ver their bodies, upon occasions of extraordinary pomp ; and their tents are made of poles, disposed in a conical form, covered with skins, or the bark or leares of trees. Long. 51° 20' to 58° W., lat. 52° 30' to 55° 35' S.

TERRA FIRMA, an extensive tract of country in South America, which comprehends the three provinces of Darien, Veragua, and Pana-ma or Terra Firma proper. Towards the east it is bounded by the province of Carthagena, the river St. Juan being the mutual boundary ; on the west by the province of Costa Rica, in the kingdom of Guatamala ; and on the north and south by the Atlantic and Pacific oceans. Its length

from east to west is about 150 leagues, but if measured along the coast it is above 200. It is ninety leagues wide in the broadest part ; and at the isthmus of Darien, where it is nar-rowest, its breadth is only eight leagues. It is watered by a variety of rivers.

TERRA JAPOXICA, more commonly called catechu, a drug formerly supposed to be an extract from the seeds of the areca catechu, but lately discovered by Mr. Kerr, assistant surgeon to the civil hospital at Bengal, to be obtained from the mimosa catechu. Mr. Kerr gives the fo'lowing account of the manner in which the extract is

made : — ' After felling the trees the manufacture, carefully cuts off all the exterior white part ot the wood. The interior colored wood is cut into chips, with which he fills a narrow-mouthed un-glazed earthen pot, pouring water upon them until he sees it among the upper chips ; when this is half evaporated, by boiling, the decoction, without straining, is poured into a flat earthen pot, and boiled to one-third part; this is set in a cool place for one day, and afterwards evaporated by the heat of the sun, stirring it several times in the day. When it is reduced to a considerable thickness it is spread upon a mat or cloth, which has previously been covered with the ashes of cowdung ; this mass is divided into square or quadrangular pieces by a string, and completely dried by turning them frequently in the sun un-til they are fit for sale.' This extract is called cutt by the natives, by the English cutch, and by different authors, terra japonica, catechu, khaath, cate, cachou, &c. ' In its purest state it is a dry pulverable substance, outwardly of a reddish color, internally of a shining dark brown, tinged with a reddish hue; in the mouth it discovers considerable astringency, succeeded by a sweetish mucilaginous taste.' According to Lewis ' it dissolves almost totally in water, excepting the impurities which are usually of the sandy kind, and amounting in the specimens I examined to about one-eighth of the mass. Of the pure mat-ter, rectified spirit dissolves about seven-eighths into a deep red color; the part which it leaves undissolved is an almost insipid mucilaginous substance.' Catechu may be usefully employed for most purposes where an astringent is indicated, provided the most powerful be not required. But it is particularly useful in alvine fluxes ; and, where these require the use of astringents, we are acquainted with no one equally beneficial. Besides this it is employed also in uterine prorluvia, in laxity and debility of the viscera in general, in catarrhal affections, and various other diseases where astringents are necessary. It is often suffered to dissolve leisurely in the mouth, as a topical astringent for laxities and exulcerations of the gums, for apthous

ulcers in the mouth, and similar affections. This extract is the basis of several fixed formulee in our phar-macopeias, particularly of a tincture and an electuary; but one of the best forms under which it can be exhibited is that of a simple infusion in warm water, with a proportion of cinnamon or cassia; for it is thus at once t;eed from its impurities, and improved by the addition of the aromatic.

TERRA NUOVA, a considerable sea-port on the south coast of Sicily, in the Val di Noto, at the mouth of a river of this name. Among its public establishments are eight convents, an asylum, hospital, castle, and several well-built churches. Although the bay is somewhat exposed, there is good anchorage during the summer season, within a mile of the town, in eight or nine fathoms water. Terra Nuova is noted for its export of sulphur, dug up and manufactured in large quantities in the neighbourhood. Wine, corn, and fruits of various kinds, likewise form articles of export. Population 9000. Nineteen miles east of Licata, and fifty west of Syracuse.

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TER’RACE, n. s. ˆ French terrace ; Ital. terTER’RACED, odj. S racciu ; of Lat. terra. A small mount of earth covered with grass : the adjective corresponding.

The reception of light into the body of the building must now be supplied, by terracing any story which is in danger of darkness.

Wotton’s Architecture.

He made her gardens not only within the palaces, but upon termsses raised with earth over the arched roofs, planted with all sorts of fruits. Temple.

Fear broke my slumbers : I no longer stay, But mount the terrace, thence the town survey.

Dryden .

Clermont’s terraced height and Eshei’s groves.

Thomson.

A TERRACE is a walk or bank of earth raised in a garden or court to a due elevation for a prospect. The name is also given to the roofs of houses that are flat, and whereon we may walk.

TERRACINA, an ancient city of Italy, in the pope’s territory, in the Campagna of Rome, with a bishop’s see. It was anciently called Anxur, and was the capital of Volsci. See ANXUR and ‘ TERRACINA. Its principal church was originally a temple of Jupiter, who was supposed to have a great partiality for the town, and is therefore styled Anxurus by Virgil. It is seated on the sea-coast, on the side of a mountain, forty-six miles south-east of Rome. Long. 13° 15’ E., lat. 41° 24’ N.

TERR./E FILIUS, son of the earth, a student of the university of Oxford, formerly appointed in public acts to make satirical and jesting speeches against the members thereof, to tax them with any growing corruptions, &c.

TERRANTONA, a town of Spain in Arragon, eight miles south-east of Ainsa.

TERRA’QUEOUS, adj. Lat. terra and aqua. Composed of land and water.

The terraqueous globe is, to this day, nearly in the same condition that the universal deluge left it.

Woodward.

TERRAS, or TRAAS, in mineralogy, a species of argillaceous earth. It differs but little in its principles from puzzolana, but is much more compact and hard, porous and spongy. It is generally of a whitish yellow color, and contains more heterogeneous particles, a spar, quartz, shoerl, &c., and something more of calcareous earth ; it effervesces with acids, is magnetic, and fusible per se. When pulverised it serves as a cement, like puzzolana. It is found in Germany and Sweden. A species of red earth has been found in the parish of St. Elizabeth in Jamaica, which turns out to be an excellent substitute for terras or puzzolana earth, and may therefore be of great value to the inhabitants of the West Indies. One measure of this earth, mixed with two of well slaked lime and one of sand, form a cement that answers extremely well for building any dam or bridge, or any structure in water; for it will soon harden and become like a stone.

TERRASSON (Andrew), a French divine and priest of the oratory, born at Lyons, and much admired for his eloquence. His Sermons in 4 vols. 12mo. ‘are esteemed. He died at Paris in 1723.

TERRASSON (Abbe John), brother of Ai»dru»- a French writer, born at Lyons in 1669. lie distinguished himself in the dispute concerning Homer between La Motte and Madam Dacie:, by writing a Dissertation centre 1’Iliade. lie wrote a political and moral romance called Sethos, full of learning and philosophy; and another capital work of his is a French translation of Diodorus Siculus. He died in 1750.

TERIIASSON (Anthony), a relation of the t\v,. preceding, was born at Paris in 1705. He w;i, eminent as an advocate, and wrote the History of Roman Jurisprudence, in folio, for which he was appointed censor royal, and a professor in the royal college. He also wrote Miscellanies of Hi.s-tory, Literature, &c., 12mo. He died in 1782

TERRE’-BLUE, n.s. Fr. terre and bleu. A sort of earth.

Terre-blue is a light, loose, friable kind of lapis armenus. Woodward on VosslU.

TERRELLA, or little earth, is a magnet turned of a spherical figure, and placed so as that its poles, equators, &c., do exactly correspond with those of the world.

TERRENE', adj. Lat. terrenus. Earthly ; terrestrial.

They think that the same rules of decency which serve for things done unto terrene powers, should universally decide what is fit in the service of God.

Hooher,

Our terrene moon is now eclipsed, And it portends alone the fall of Antony.

Shakspeare.

God set before him a mortal and immortal lift:, u nature ccelestial and terrene ; but God gave man to himself. Raleigh.

Over many a tract

Of heaven they marched, and many a province wide, Tenfold the length of this terrene.

Milton’s Paradise Loul .

TER’REOUS, adj.} Lat. terreus. Earthy;

TERRES’TRIAL, (consisting of earth : this

TERRES’TRIFY, v. a. {also terrestrial and ter—

TERRES’TRIOUS, adj. J restrious signify : tc-r- restrify is to reduce to an earthly state.

Far passing the height of men terrestrial, Like an huge giant of the Titan race. Spenser

Terrestrial heaven! danced round by other h .;-

vens

That shine, yet bear their bright officious lamps, Light above light. Milton .

There is but little similitude betwixt a terrcous humidity and plantal germinations.

Gtanville's Scepsis.

According to the temper of the terreous parts at the bottom, variously begin intumescencies.

Browne's Vulgar Errours.

Though we should affirm, that heaven were but earth celestified, and earth but heaven terrestrified ; or, that each part above had an influence on its divided affinity below ; yet to single out these relations is a work to be effected by revelation. Id.

This variation proceedeth from terrestrioits eminences of earth respecting the needle. Browne.

Thou broughtest Briareus with his hundred hands So called in heaven ; but mortal men below By his terrestrial name vEgeon know. Dryden.

I did not confine these observations to land, or terrestrial parts of the globe, but extended them to the fluids. Wwhranl.

TERRE-PLEIN, or TERRE-PLAIN, in fortification, the top, platform, or hori/ontal -nrfac o (if

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the rampart upon which the cannon are placed, and where the defenders perform their office. It is so called because it lies level, having only a little slope outwardly to counteract the recoil ;f the cannon. Its breadth is from twenty-four to thirty feet; being terminated by the parapet on the outer side, and inwardly by the inner talus.

TERRE'-VERTE, n. s. FT. terre-verte. A sort of earth.

Terre-verte owes its colour to a slight admixture of copper. Woodward on Fossils.

Terre-verte, or green earth, is light ; it is a mean betwixt yellow-ochre and ultramarine.

Dryden's Dufresnty.

TERRE-VERTE, in the color trade, green earth, .is much used by painters, both singly for a good standing green, and in mixture with other colors. It is an indurated clay, of a deep bluish green color, and is found in the earth not in continued strata or beds, as most of the other earths are, but in large flat masses of different sizes imbedded in other strata; these break irregularly in the cutting, and the earth is generally brought out of the pit in lumps of different sizes. It is of a fine regular and even structure, and not very hard. It is of an even and glossy surface, very smooth to the touch, and in some degree resembling the morochthus or French chalk, but adhering firmly to the tongue. It does not stain the hands in touching it ; but being drawn along a rough surface it leaves an even white line with a greenish cast. It does not ferment with acids, and it burns to a dusky brown color. It is dug in the island of Cyprus, and in many parts of France and Italy. That from the neighbourhood of Verona has been esteemed the best in the world ; but of late there has been some dug in France that equals it. There is also an earth dug on Mendip Hills, in the sinking for coal, which, though wholly unobserved, is nearly, if not wholly, of equal value. When scraped, and the finer parts separated, it is ready to be made up with oil for the tise of the painters, and makes the most true and lasting green of any body they use.

TER'RIBLE, adj. } Fr. terrible; from

TER’RIBLY, adv. >Lat. terrihilis. Dread—

TER’RIBLENESS, n. s. 3ful; formidable ; causing fear : hence great, so as to overpower or offend: the adverb and noun substantive corresponding.

Having quite lost the way of nobleness, he strove to climb to the height of terriblentss. Sidney.

Was this a face to be exposed In the most terrible and nimble stroke Of quick, cross lightning 1 Shakspeare. King Lear,

Being indisposed by the terrible coldness of the season, he reposed himself till the weather should mend. Clarendon.

Fit love for gods, Not terrible, though terrour be in love. Milton.

1 began to be in a terrible fear of him, and to look upon myself as a dead man. Tillotsun.

The polished steel gleams terribly from far, And every moment nearer shows the war. Dryden.

Thy native Latium was thy darling care, Prudent in peace, and terrible in war. Prior.

Their terribleness is owing to the violent contusion and laceration of the parts. Sharp’s Surgery.

The poor man squalled terribly. Swift.

TERRICOLIST (from terra and colo), one who cultivates or inhabits the earth. — Ash.

TER’RIER, n. s. Fr. terrier; From Latin terra. A dog that follows his game under-ground.

The fox is earthed, but I shall send my two terriers in after him. Dryden’s Spanish Friar.

King James’s canons require that the bishops procure a terrier to be taken of such lands. Aylijfe.

TERRIER, in zoology. See CANIS.

TER’RIFY, v. a.) Latin terror and fucio.

TERRIF’IC, adj. J To fright ; shock with fear; to make afraid : the adjective corresponding.

Thou scarest me with dreams, and terrifies* me through visions. Job vii. 14

In nothing terrified by your adversaries.

Phil. i. 28.

Neither doth it beseem this most wealthy state to be terrified from that which is right with my charges of war. Knolks.

The serpent, subtlest beast of all the field, Of huge extent sometimes, with brazen eyes And hairy mane terrifick. Milton’s Paradise Lost.

Though he was an offender against the laws, yet in regard they had treated him illegally, in scourging him and Silas uncondemned, against the privilege of Romans, he terrifies them with their illegal proceedings. Kettlewell

The British navy through ocean vast Shall wave her double cross, t’ extremest climes Terrijick. Philip .

The amazing difficulty of his account will rather terrify than inform him, and keep him from setting heartily about such a task as he despairs ever to go through with. South,

Meteors for various purposes to form ; The breeze to cheer ; to terrify, the storm.

Blackmore.

TER’RITORY, n. s. Fr. territoire ; law Lat. territorium. Land; country; dominion; district.

Linger not in my territories longer than swiftest expedition will give thee time to leave our royal court. Shakspeare.

They erected a house within their own territory, halfway between their fort and the town.

Hay ward,

Ne’er did the Turk invade our territory, But fame and terror doubled

still their files.

Deitham,

He saw wide territory spread Before him, towns and rural works between.

Milton.

Ars and sciences took their rise, and flourished only in those small territories where the people were free. Swift.

TER’ROR, n. s. Lat. terror; Fr. terreur. Fear communicated or received.

They shot through both the walls of the town and the bulwark also, to the great terrour of the defendants. Knolles.

It is the cowish terrour of his spirit, •

That dares not undertake. Khakspeare. King Lear.

O sight

Of temmr, foul and ugly to behold, Horrid to think, how horrible to feel ! Milton,

So spake the griesly terrour. Id.

Those enormous terrors of the Nile. Prior.

The pleasures of the land and ‘terroum of the main.

Blachmore.

TERRORISTS, a name too justly given to that furious party of .the French jacobins, who,

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daring the dictatorship of Robespierre, supported and applauded all his worst measures, while he murdered the greatest and best men of France, constantly calling out ‘ let terror be the order of the day,’ and thus paved the path of blood that led to the establishment of the imperial despotism. See FRANCE.

TERSE, adj. Lat. terms ; Fr. ters. Smooth. Not in use.

contained three, whence the name, which i* formed of the Latin tres unciffi. Teruncius was also used for the quarter of the denarius ; so that when the denarius was at ten asses, tho teruncius was worth two and a half: and, when the denarius was risen to sixteen, the teruncius was worth four. See DENARIUS.

TESCHEN, a town and circle of Austrian Silesia, comprehending the eastern part of that province, with an area of 740 square miles, and 152,000 inhabitants. It is very hilly on the south side, where the Carpathian chain commences, but the north is flat and marshy, so that throughout it is better adapted for grazing than tillage.

Many stones precious and vulgar, although terse and smooth, have not this power attractive.

Browne’s Vulgar Errours.

To raw numbers and unfinished verse, Sweet sound is added now to make it terse. Dryden.

These accomplishments in the pulpit appear by a The inhabitants are ‘mostly of Sclavonian oridn quaint, terse, florid style, rounded into periods TESCHEREM.ISSES without propriety or meaning. Swift’s Miscellanies.

Various of numbers, new in every strain ; Diffused, yet terse, poetical, though plain. Harte.

TERTIAN, n. s. Lat. tertiana. Is an asju

intermitting but one day, so that there are tv» o fits in three days.

Tertians of a long continuance do most menace this symptom. Harvey on Consumptions.

TERTIAN FEVER. See MEDICINE.

TERTIUS, a prsenomen very common among the Romans, who often distinguished their children by their numbers in the order of their birth, as Secundus, Tertius, Quartus, Quintus, Sextus, Septimus, Octavius, Decimus, &c.

TERTRE (John Baptist), a learned domini-can, born at Calais in 1610. After having figured as a soldier, he entered into the monastic state, and1 became a zealous missionary in America, whence he returned in 1658. He wrote a General History of the French West India Islands, in 4 vols. 4to., and died at Paris in 1687.

TERTRE (Francis Joachim Duport Du), a learned French Jesuit, born at St. Malo in 1715. He wrote, 1. An Abridgment of the History of England, in 3 vols. 12mo. 2. An Abridgment of the History of Spain, in 5 vols. 12mo. ; and other works. He died in 1759.

TERTULLIAN, or Quintus Septimus Florens Tertullianus, a celebrated priest of Carthage, was the son of a centurion in the militia, who served as a proconsul of Africa. He was educated in the Pagan religion ; but being convinced of its errors, embraced Christianity, and became a zealous defender of the faith. He married, it is thought, after his baptism. Afterwards he took orders, and went to Rome : where, during the persecution under the emperor Severus, he published his Apology for the Christians; and, at the beginning of the third century, he embraced the sect of the Montanists. He lived to a very great age, and died in the reign of Caracalla, about the year 216. Many of his works are still extant. The best editions are those of Rigault \ especially that of Venice in 1746, folio

TERUNCIUS, in antiquity, a very small brass coin, in use among the Romans. The inconvenience of such very small pieces being soon found, the teruncius became disused, but its

, a nation of Tartan See TARTARY.

TESHOO LOOMBOO, or Skiggatzee Jeung. the seat of the Teshoo lama, and the capital oi all that part of Tibet immediately subject to his authority. Lat. 29° 4’ N., long. 89° 7’. E.

This place is properly a large stone monastery, consisting of 300 or 400 houses, the habitations of the gylongs, besides temples, mausoleums, and the palace of the sovereign pontiff. The buildings are none less than two stories high, flat roofed, and crowned with a parapet rising considerably above the roof, composed of heath and brushwood. The fortress of Shiggatzee Jeung stands on a prominent ridge of rock, and commands the pass. From hence are roads to Bootan and Bengal, to Lahdack and Cashmere ; to the mines of lead, copper, cinnabar, and gold ; by Tingri Meidaun to Nepaul ; to Lassa and China. The distance to Catmandoo, the capital of Nepau!, by the marching road, is estimated at 400 miles. In 1780 the journey of the deceased lama’s attendants, from Pekin to Teshoo Loomboo, occupied seven months and eight days. On the north is situated the territory of Taranath Lama, bordering upon Russia and Siberia, and whose influence more especially extends over the Kil-muaks, or hordes of Calmuc Tartars.

The rock of Teshoo Loomboo is by far the loftiest in this neighbourhood. From the sum-mit the eye commands a very extensive prospect, but no striking traces of population are to be discovered, the natives crowding into the hollow recesses. From the north side the celebrated river Brahmapootra, styled in the language < >f Tibet Erechoomboo, is visible. It here flows in a widely-extended bed through many channels, forming a multitude of islands. Its principal channel is described as being narrow, deep, and never fordable. In 1783 there were reckoned on the establishment of the monastery at Teslmo Loomboo no less than 3700 gylongs for the performance of daily prayer in the goomba or tem-ple. Four lamas, chosen from among them, superintend and direct their religious ceremonies. Their stated periods of devotion are the risiii’.y of the sun, moon, and sunset. Youth, intended for the service of the monastery, are received into it at the age of eight, or ten years. On mi-mission they are enjoined sobriety, forego the

name was still retained in reckoning, and thus it society of women, and confine themselves to

became a money of account. The teruncius at first was a quarter of the as -or libra : hence, as the as contained twelve ounces, the teruncius

austere practices of the cloister. There are also a considerable number of nunneries, the regulations of which are equally strict. And at this

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place there is an extensive establishment, under the direction of the monastery, for the manufacture of images, in which they excel the Chinese.

The annual consumption of tea in the territory of Teshoo Loomboo amounts to the value of £70,000. At the capital 300 Hindoos, Gosains, and Sunyasses, are daily fed by the bounty of the lama. The whole system exhibits a hierarchy of long duration, great opulence, and many practical benefits to the people. The gylongs, or monks, having devoted themselves to the duties of religion, obtain a large portion of respect from their countrymen, who follow worldly avocations. Being attached by a common bond of union, the one portion to labor, and the other to pray, they enjoy in peace and harmony the bounties of nature ; and find it unnecessary to employ a single man in arms, either to defend their territory, or maintain their rights.

TES'SELLATED, adj. Lat. tessella. Variegated by squares.

Van Helmont produced a Stone very different from the tessellated pyrites. Woodward on Fossils.

TESSELLATED PAVEMENTS, those of rich Mosaic work made of curious square marbles, bricks, or tiles, called tessela from their resembling dice.

TESSERA, in Roman antiquity, denoted in its primary sense a cube or dye ; so called from the Greek word Ttaaapa or riffffpa, four ; respect being had to its number of sides, distinct from the two horizontal planes above and below. And it was thus distinguished from the talus, which, being round at each end, contained only four planes or faces on which it could stand ; and therefore when thrown had no more than two-side faces in view. Hence ludere talis et ludere tesseris are spoken of by Roman writers as two different games. The syllable tes occurs often in Roman inscriptions. The word tessera was applied to many other things, not so much from a similitude in the figure, as from the relation they bore to some other thing of which they were the sign or token ; as the points on the upper plane of the dye denoted the good or ill success of the cast. 1. T. frumentaria was a small tally given by the emperors to the populace at Rome, entitling them to the reception of a quantity of corn from the public at stated seasons. The person who had the inspection of these was called tesserarius. They

were made of wood and of stone. There was another kind of tessera which entitled persons to a sight of the public games and other diversions, usually made in the form of an oblong square.

2. T. hospitalis was either public or private. As to the former, we find, among the inscriptions published by Gruter, instances of two municipal towns which put themselves under the patronage of the Roman governor ; and the reciprocal engagement between them, engraved on two copper plates, in the form of an oblong square, with a pediment at the top, is called in both tessera hospitalis. The design of it was to cultivate or maintain a lasting friendship between private persons and their families; and gave a mutual claim to the contracting parties and their descendants of a reception and kind treatment at each other's houses, as occasion offered.

For which end those tesserae were so contrived as best to preserve the memory of that transaction to posterity; and one method of doing this was by dividing one of them lengthwise into two fequal parts; upon each of which one of the parties wrote his name, and interchanged it with the other. From this custom came the prevailing expression tesseram hospi-talem confringere, applied to persons who violated their engagements.

3. T. militaris was a signal given by the general, or chief commander of an army, as a d,- rection to the soldiers for executing any duty or service required of them. This, upon urgent occasions, was only vocal ; but, in ordinary cases, it was written on a tablet, commonly made of wood. Besides these civil and military tesserae, there are others which relate to religious affairs, and may be called sacred.

TEST, n. s. I Fr. test ; Ital. testa. The

TEST'ED, adj. \ cupel by which refiners try their metals; trial ; examination ; any means of trial ; judgment; distinction: tested is tried by a test.

Let there be some more test made of my metal, Before so noble and so great a figure Be stampt upon it.

Shakspeare. Measure for Measure.

Not with fond shekels of the tested gold.

Shakspi'iire.

Whom should my muse then fly to, but the best Of kings for grace ; of poets, for my test 1

Ben Jonson.

They who thought worst of the Scots, did not think there would be no fruit or discovery from that test. Clarendon.

What use of oaths, of promise, or of test, Where men regard no god but interest ? Waller.

To be read herself she need not fear : Each test, and every light, her muse will bear.

Dry den .

Our penal laws no sons of yours admit, Our test excludes your tribe from benefit. Id.

Thy virtue, prince, has stood the test of fortune Like purest gold, that, tortured in the furnace, Comes out more bright, and brings forth all its weight. Addison.

Unerring Nature, still divinely bright, One clear, unchanged, and universal light, Life, force and beauty, must to all impart, At once the source, and end, and test of art. Pope.

The TEST is a vessel used in metallurgy for absorbing the scoria of metallic bodies when melted. See CUPEL. Some of the German writers recommended, both for tests and cupels, a sort of friable opaque stone, called white spath, which appears to be a species of gypsum, or of the stones from which plaster of Paris is prepared. The spath is directed to be cakined with a gentle fire, in a covered vessel, till the slight crackling which happens at first has ceased, and the stone has fallen in part into powder : ihe whole is then reduced into subtle powder, which is passed through a fine sieve, and moistened with so much cf a weak solution of green vitriol as is sufficient for making it hold together. Gel-lert, however, finds, that if the stone is of the proper kind, which can be known only by trials, calcination is not necessary. Scheffer observes, that these kinds of tests are liable to soften or fall asunder in the fire, and that this inconvenience may be remedied by the mixing with the

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uncalcined stone somewhat less than equal its weight, as eight-ninths of such as has been already used and is penetrated by the scoria of the lead, taking only that part of the old test which appears of a screen gray color, and rejecting the red crust on the top. Tests or cupels made of the spath are said not to require so much caution in nealing and heating them as the common ones ; it appears, however, from Scheffer's account, that they are less durable than those made of the ashes of bones, though greatly superior to those of wood-ashes. Vegetable ashes, which stand pretty well the testing of silver, can scarcely bear any great quantity of gold, this metal requiring a considerably stronger fire than the other ; but bone-ashes answer so effectually, and are among us so easily procurable, that it is not needful for the refiner to search for any other materials ; though those who work off large quantities of lead, in order to gain a little silver or gold contained in it, may possibly, in places remote from populous cities, avail themselves of substances similar to the spath above-mentioned. The test, for its greater security, is fixed in the mould in which it was formed ; which is sometimes a shallow vessel made of crucible earth or cast-iron, more commonly an iron-hoop, with three bars arched downwards across the bottom, about two inches deep, and of different widths, from three or four inches to fifteen or more, according to the quantity of metal to be tested at once. The ashes or earthy powder, moistened as for making cupels, are pressed down in the mould so as to completely fill it or rise a little above the sides ; with care to make the mass equally solid, and to put in at once, or at least after the bottom has been pressed close, as much of -the matter as will be sufficient for the whole ; for any additional quantity will not unite thoroughly with the test, but be apt to part from it in the fire. The edges are pared smooth, and a portion cut out from the middle with a bent knife, so as to leave a proper cavity, which is smoothed by strewing some dry powder on the surface, and rolling on it a wooden, or rather a glass ball. The process of testing is often performed in the same manner as that of cupellation ; but, where great quantities of base metal are to be worked off from a little gold, recourse is had to a more expeditious method, that of testing before the bellows. An oval test is placed in a cavity, made in a hearth of a convenient height, and some moistened sand or ashes pressed round it to keep it steady ; the nose of a bellows is directed along its surface, in such a manner, that if ashes are sprinkled in the cavity of the test, the bellows may blow them completely out ; some have an iron plate fixed before the

bellows, to direct the blast downwards. To keep the surface of the test from being injured in putting in the metal, some cloths or pieces of paper are interposed. The fuel consists of billets of barked oak laid on the sides of the test, with others laid crosswise on these ; the bellows impel the flame on the metal, clear the surface of ashes or sparks of coal, hasten the scorification of the lead, and blow off the scoria, as fast as it forms, to one end of the test, where it runs out through a notch made for that purpose. About

two-thirds of the scorified lead may bo thus collected ; the rest being partly absorbed by the test, and partly dissipated by the action of the bellows. Care must be taken not to urge the blast too strongly, lest some portion of the gold should be carried away by the fumes impetuously forced off from the lead, and some minute particles of it entangled and blown off with the scoriae.

TEST ACT, in law, was the statute. 25 Car. 11. cap. 2, which directs all officers, civil and military, to take the oaths, and make the declaration against transubstantiation, in the court of king's bench or chancery, the next term, or at the next quarter-sessions, or (by subsequent statutes) within six months after their admission; and also within the same time to receive the sacrament of the Lord's Supper, according to the usage of the church of England, in some public church, immediately after divine service or ser-mon, and to deliver into court a certificate thereof, signed by the minister and churchwarden, and also to prove the same by two credible wit— nesses, upon forfeiture of £500, and disability to hold the said office. It has been the honor of the ministry of the duke of Wellington to procure the repeal of this most objectionable and absurd law.

TESTACEA, in the Linnsean system of /oo-logy, the third order of vermes. This order comprehends all the shell-fish arranged by Linnaeus under thirty-six genera. Shell-fish are animals with a soft body, covered by or enclosed in a firm, hard, and as it were, stony habitation, composed, according to their three separate or-ders, 1st, Of many parts which are arranged under the name of multivalve ; 2d, Of two parts which are called bivalves ; 3d, Of one part o piece only, which we call univalves. Those parts, pieces, or valves, are more or less moveable at the animal's pleasure. See CO>CIIOLOGY.

TESTA'CEOUS, adj. Fr. testacee ; Lat. tes-taceus. Consisting of shells ; composed of shells ; having continuous, not jointed shells ; opposed to crustaceous.

Testaceous, with naturalists, is a term given only to such fish whose strong and thick shells are entire, and of a piece ; because those which are joined, as the lobsters, are crustaceous : but, in medicine, all preparations of shells and substances of the like kind are thus called. Quiiicy.

Several shells were found upon the shores, of the crustaceous and testaceous kind.

Woodward's Natural History.

TESTACEOUS, in medicine, all preparations of shells, and such like substances, are called testaceous. Such are powders of crabs' claws and eyes, pearls, &c. Dr. Quincy ami others suppose the virtue of all testaceous medicines to be-alike ; that they seldom or never enter the lacteals, but that the chief of their action is in the first passages ; in which, however, they are of great use in absorbing acidities. Hence they become of use in fevers, and especially in rectifying the many distempers in children which generally osve their origin to such acidities.

TESTACEOUS, in zoology, is synonymous with testacca.

The vast mountains of calcareon-rarlh \liich

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occur in different parts of the world, owe their origin, in general, it is supposed, to the destruction of marine testaceous animals, which in long process of time formed these extensive and accumulated heaps ; Fourcroy, in his Chemical Elements, has given a beautiful account of this process of nature, to which we refer. — See Dr. John Thomson's edition, partiii. chap. 7, sect. 1.

According to our navigators, there are in the Southern Ocean perpendicular coralline rocks, formed entirely of sea-shells, which are of such magnitude as to render the navigation of those seas extremely dangerous. The shells of some of the testaceous animals in the South Sea are of a vast size. The kemo shell on the coast of Sumatra is frequently found three or four feet in diameter, and as white as ivory. See Marsden's History of the Island of Sumatra, page 10.

It may be remarked that, while testaceous shells are formed with carbonate of lime, the shells of crustaceous animals and the shells of bird's eggs contain also a portion of phosphate of lime. Its use in the former is not known ; but the design of nature in furnishing the shells of eggs with phosphoric acid is very apparent. The body of the egg contains neither pbosphoric acid nor lime ; it was necessary, therefore, that nature should provide means of furnishing both these substances, which it does at the expense of the shell ; which becomes thinner and thinner during the whole time of incubation, till the liv-ing embryon hath appropriated a sufficient quantity for the formation of its bones. Part of the albumen combines will) the shell for this purpose, and another portion forms feathers.

One thousand parts of egg-shells are composed of —

Carbonate of lime . 8D6 Phosphate of lime . 57

Gluten and moisture . 47

1000

If fowls are kept in a state of confinement, where they cannot get at

any calcareous earth, they lay their eggs without shells.

TESTAMENT, n.s. } Fr. testament; Lat

TESTAMEN'TARY, adj. \teslamentum. A will; any writing directing the disposal of the possessions of a man deceased : given by, or contained in, a will.

He bringeth arguments from the love which always the testator bore him, imagining that these, or the line proofs, will convict a testament to have that in it which other men can no where by reading find.

Hooker.

All the temporal lands, which men devout Py testament have given to the church, Would they strip from us. Sfuikspeure. Henri/ V.

How many testamentary charities have been defeated by the negligence or fraud of executors ; by the suppression of a will : the subornation of witnesses, or the corrupt sentence of a judge !

Alterbttry.

He ordained by his last testament, that his /Eneid should be burnt. Ll.

TESTAMENT, or LAST WILL, according to the old Roman lawyers, is, voluntatis nostrae justa sententia, de eo quod quis post mortem suam h'-ri vdit ; which m;iy If thus rendered in Eng-

lish, ' the legal declaration of a man's intentions, which he wills to be performed after his death.' It is called sententia, to denote the circumspec-tion and prudence with which it is supposed to be made ; it is voluntatis nostrae sententia, because its efficacy depends on its declaring the testator's intention, whence in English it is em-phatically styled his will ; it is justa sententia ; that is, drawn, attested, and published, with all due solemnities and forms of law : it is de eo quod quis post mortem suam fieri velit, because a testament is of no force till after the death of the testator. These testaments arc divided into two sorts ; written, and verbal or nuncupative, being declared by the testator in extremis, before a sufficient number of witnesses, and afterwards reduced to writing. But as nuncupative wills and codicils (which were formerly more in use than at present when the art of writing is become more general) are liable to great impositions, and may occasion many perjuries, the statute of frauds, 29 Car. II. c. 3,

enacts, 1. That no written will shall be revoked or altered by a subsequent nuncupative one, except the same be in the lifetime of the testator reduced to writing, and read over to him, and approved ; and unless the same be proved to have been so done by the oaths of three witnesses at the least, who, by statute 4 and 5 Anne, c. 16, must be such as are admissible upon trials at common law. 2. That no nuncupative will shall in anywise be good, where the estate bequeathed exceeds £30 unless proved by three such witnesses, present at the making thereof (the Roman law requiring seven), and unless they, or some of them, were specially required to bear witness thereto by the testator himself; and unless it was made in his last sickness, in his own habitation or dwelling-house, or where he had been previously resident ten days at the least, except he be surprised with sickness on a journey, or from home, and dies without returning to his dwelling. 3. That no nuncupative shall be proved by the witnesses after six months from the making, unless it were put in writing within six days. Nor shall it be proved till fourteen days after the death of the testator, nor till process has first issued to call in the widow, or next of kin, to contest it if they think proper. As to written wills, they need not any witness of their publication. We speak not here of devises of lands, which are entirely another thing, a conveyance by statute, unknown to the feodal or common law, and not under the same jurisdiction as personal estates. But a testament of chattels, written in the testator's own hand, though it has neither his name nor seal to it, nor witnesses present at its publication, is good; provided sufficient proof can be had that it is his hand-writing; and, though written in another man's hand, and never signed by the testator, yet if proved to be according to his instructions, and approved by him, it hath been held a good testament of the personal estate. No testament is of any effect till after the death of the testator ; Nam Omne testamentum morte consammatum est, ft volunta testatoris est ambulatoria usque ad mortem. And therefore, if there be many testaments, the last will overthrows all tho former; but the repubiication of a former will revokes

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one of a later date and establishes the first again. Regularly, every person hath full povvev and liberty to make a will that is not under some special prohibition by law or custom ; which prohibitions are principally upon three accounts ;

for want of sufficient discretion; for want of .... 0 0_.

sufficient liberty and free-will ; and on account Dv kindness, or by promise and common right.

of criminal conduct. 1. In the first species are

to be reckoned infants, under the age of fourteen

if males, and twelve if females ; which is the

rule of the civil law. Madmen, or otherwise

non compotes, idiots or natural fools, persons

TESTATE, adj. ~\ Lat. testatus. Having TESTA'TOR, n. s. £made a will : he or she who TESTA'TRIX. J makes a will. He bringeth arguments from the love or goodwill which always the testator bore him. Hooker.

The same is the case of a testator giving a "

Tai/tor.

By the canon law, the bishop had the lawful distribution of the goods of persons dying testate and intestate.

TESTER, n.s. Fr. teste, a head; this coin

grown childish by reason of old age or distem-
Probablybeingdistinguished by the head stamped

per, such as have their senses besotted with drunkenness. 2. Such persons as are intestable for want of liberty or freedom of will, by the civil law, are of various kinds; as prisoners, captives, and the like. But the law of England does not make such persons absolutely intestable ; but only leaves it to the discretion of the court to

upon it. A sixpence; the cover of a bed.

Come manage me your cavalier : hold, there is a tester for thee. Shakspeare. Henri/ 1 V.

A crown goes for sixty pence, a shilling for twelve pence, and a tester for six pence. Locke.

Those who bore bulwarks on their backs, And guarded nations from attacks, Now practise every pliant gesture,

judge, upon the consideration of their particular Op'ning their trunk for every tester.

circumstances of duress, whether or no such persons could be supposed to have liberum ani-mum testandi. A married woman is not only utterly incapable of devising lands, being excepted out of the statute of wills, 34 and 35 Hen. VIII. c. 5, but also she is incapable of making a testament of chattels, without the licence of her husband. The queen-sort is an

Swift's Miscellany. Young man, your days can ne'er be long, In flower of age you perish for a song : Plums and directors, Shylock and his wife, Will club their testers now to take thy life. Pope.

TESTER, TESTON, the name of a coin struck in France by Louis XII., in 1513, and in Scotland in the time of Francis II., and Mary queen

exception to this general rule ; for she may dis-of Scotland, so called

from the head of the king, pose of her chattels by will, without the consent which was engraved upon it. The silver it con-

of her lord ; and any feme-couvert may make her will of goods which are in her possession in auter droit, as executrix or administratrix; for these can never be the property of her husband ;

tained was eleven deniers eighteen grains, its weight seven deniers 11£ grains, and its value ten sols. The coinage of it was prohibited by Henry III. in 1575, when the value of it was

and if she has any pin-money, or separate main-augmented to fourteen sols six deniers. The

tenance, it is said she may dispose of her savings teston or tester among us was rated at I2d. in

thereout by testament, without the control of the reign of lienry VIII., and afterwards reduced

her husband. But if a feme-sole make her to 6d.

will, and afterwards marries, such subsequent marriage is esteemed a revocation in law, and entirely vacates the will. 3. Persons incapable of making testaments on account of their criminal conduct are, in the first place, all traitors and felons, from the time of conviction ; for then their goods and chattels are no longer at their own disposal, but forfeited to the king. Neither can a felo de se make a will of goods and chattels, for they are forfeited by the act and manner of his death ; but he may make a devise of his lands, for they are not subject to any forfeiture. Outlaws also, though it be but for debt, are incapable of making a will so long as the outlawry subsists ; for their goods and chattels are forfeited during that time. As for persons guilty of other crimes, short of felony, who are

TESTES, in anatomy, the testicles. See TESTICLE, and ANATOMY.

TESTICLE, n. s. Lat. testiculus. Stone.

That a beaver, to escape the hunter, bites off his testicles or stones, is a tenet very ancient.

Browne's Vulgar Errours.

The more certain sign from the pains reaching to the groins and testicles. Wiseman's Surgery.

TESTIFY, v.n. & v. a. 2 Lat. lealificor. To

TESTIFICATION, n. s. 5 witness : prove ; give evidence : give evidence on a point : the noun substantive corresponding.

One witness shall not testify against any, to ciu.. - him to die. Numb. xxxv. 30.

Jesus needed not that any should testify of man ; for he knew what was in man. John ii. 25.

We speak that we do know, and testify that we

by the civil law precluded from making testa-have seen ; and ye receive not our witness.

ments (as usurers, libellers, and others of a worse stamp), at the common law their testaments may be good. And, in general, the rule is, and has been so at least ever since Glanvil's time, quod libera sit cujusque ultima voluntas. Testaments may be avoided three ways: 1. If made by a person laboring Under any of the incapacities beforementioned ; 2. By making another testament of a later date ; and, 3. By cancelling or revoking it. For though I make a last will and testament irrevocable in the strongest words, yet I am at liberty to ivvokc it.

,. iii. 11.

When together we have all received those heavenly mysteries wherein Christ imparteth himself unto us. and giveth visible testification of our Mussed '•otiumi-nion with him, we should, in hatred of all heresies,

factions, and schisms, decline openly ourselves united.

IJiioher,

The’ event was dire. As this place testifies. Milton’s Puru<li*<-
l.<>nt.

She appeal:; to their closets, to their hooks ot devotion, la testify what care she lias taken to establish her children iu a liic of solid piety and devotion.

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in places solemnly dedicated for that purpose, is a more direct service and testification of our homage to God. South.

TESTIMONY, n. s. & v. a. Lat. testimonium. Evidence given ; proof by witness ; public or open attestation : to witness.

The proof of every thing must be by the testimony of such as the parties produce. Spenser.

If I bring you sufficient testimony, my ten thousand ducats are mine. Shakspeare. Cymbeline.

Let him be but tettimonied in his own bringings forth, and he shall appear a scholar, a statesman, and a soldier. Shakspeare.

To quote a modern Dutchman, where I may use a classic author, is as if I were to justify my reputation, and neglect all persons of note and quality that know me, and bring the testimonial of the scullion in the kitchen. Selden.

We maintain the uniform testimony and tradition of the primitive church. White.

Evidence is said to arise from testimony, when we depend upon the credit and relation of others for the truth or falsehood of any thing. Wilkins.

By his prescript a sanctuary is framed, An ark ; and in the ark his testimony ; The records of his covenant. Milton.

Thou for the testimony of truth hast born Universal reproach. Id.

I could not answer it to the world, if I gave not your lordship my testimony of being the best husband.

Dry den.

It is possible to have such testimonials of divine authority as may be sufficient to convince the more reasonable part of mankind, and pray what is wanting in the testimonies of Jesus Christ ?

Bin-net’s Theory of the Earth.

A clerk does not exhibit to the bishop letters missive or testimonial, testifying his good behaviour.

Ayliffe.

Hospitable people entertain all the idle vagrant reports, and send them out with passports and testimonials, and will have them pass for legitimate.

Government of the Tongue.

TESTUDO, the tortoise, in zoology, a genus belonging to the class of amphibia, and order of reptilia. The body has a tail, and is defended with a bony or coriaceous covering. The mouth has naked mandibles without teeth. There are thirty-three species, of which

TESTUDO MIDAS, the common sea turtle, is the most remarkable. It is found in the island of Ascension and other places in the South Sea. The shell is so very strong that it can carry more than 600 Ibs. on its back, or as many men as can stand on it loaded. It digs round holes in the sand, in which it lays a vast number of eggs yearly, to the amount of 1000, it is said. It broods on them during the night. Its flesh is of a greenish color, makes excellent food, and is the favorite dish of sailors as well as of epicures. It lives on cuttle and shell fish, and grows to a prodigious size, some having been found to weigh 480 Ibs. The Americans find so good account in catching turtle, that they have made themselves very expert at it; they watch them from their nests on shore, in moonlight nights; and, before they reach the sea, turn them on their backs, and leave them till Tr.orning; when they are sure to find them, since they are utterly un-able to recover their former posture ; at other times they hunt them in boats, with a peculiar kind of spear, striking them with it through the

shell; and, as there is a cord fastened to the spear they are taken much in the same manner as the whales.

TESTUDO, in antiquity, was particularly use:! among the poets, &c., for the ancient lyre ; because it was originally made by its inventor Mercury, of the back or hollow of the testudo aquatica, or sea tortoise, which he accidentally found on the banks of the river Nile. See LYRE.

TESTUDO, in the military art of the ancients, was a kind of cover or screen which the soldiers, e. gr. a whole company, made themselves of their bucklers, by holding them up over their heads, and standing

close to each other.

TESTUDO was also a kind of large wooden tower which moved on several wheels, and was covered with bullock hides, serving to shelter the soldiers when they approached the wails to mine them, or batter them with rams. It was called testudo, from the strength of its roof, which covered the workmen as the shell does the tortoise.

TESTY, adj. J Fr. testie ; Ital. testurdo.

TES'TINESS. n. s. J Fretful; peevish : the noun substantive corresponding.

Must I stand and crouch under your testy humour?

Shakspeare.

King Pyrrhus cured his splenetick And testy courtiers with a kick. Hudibras

Testiness is a disposition or aptness to be angry.

Locke.

In all thy humours, whether grave or mellow, Thou'rt such a touchy, testy, pleasing fellow ; Hast so much wit, and mirth, and spleen about thee, There is no living with thee, nor without thee.

Addisnn.

TETANUS, a dreadful spasmodic disorder, in which the whole body becomes rigid and inflexible. It most commonly proves mortal. See MEDICINE.

TETBURY, a market-town in the county of Gloucester, and on the verge of the' county of Wilts. It once boasted of a good trade in the woollen manufactory, which has of late years declined materially ; indeed the place is rendered uncommonly dull, in consequence of the desertion of trade. The town is much esteemed for the salubrity of its air, and richness of its soil ; the streets are capacious and clean, and the houses principally built of small stone, covered with mortar. The church, which was rebuilt in 1781, is a rich and beautiful specimen of modern Gothic architecture. There is a spacious market-house and a convenient town hall. The Bristol Avon river takes its rise in this parish, which it leaves immediately, and passing by Broken-borough, Malmesbury, Chippenham, Bradford, and Bath, (where it becomes

navigable), runs to Bristol, and thence on to the spacious bosom of the channel. The town is governed by the feoffees and a bailiff, who is chosen annually. Mar-ket day is Wednesday. Fairs Ash Wednesday, and 22d of July, for cattle, sheep, and horses; Wednesday before old Lady day, Wednesday before old Michaelmas, and Wednesday after, for hiring servants. Population 2734.

TET'CHY, adj. Ital. testaccio. Froward ; peevish : or a corruption of testy or touchy, perhaps.

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A. grievous burthen was thy birth to me, Tetchy and wayward was thy infancy.

Shakspeare. Richard HI.

A silly schoolboy, coming to say my lesson to the world, that peevish and techy master. Graunt.

TETE A TETE, «. s. Fr. tite d ttte. Cheek by jowl.

Long before the squire and dame Are tele a tete. Prior,

Deluded mortals, whom the great Chuse for companions tete a tete ; Who at their dinners, en famille, Get leave to sit whene'er you will.

Swift's Miscellanies.

TETH'ER, n. s. See TEDDER. A string by which horses are held from pasturing too wide.

Hamlet is young,

And with a larger tether he may walk Than may be given you. Shakspeare.

Fame and censure witii a tether, By fate, are always linked together.

Swift's Miscellanies.

Imagination has no limits ; but where it is confined we find the shortness of our tethers. Suiif't.

TETHYS, in the mythology, the greatest of all the sea goddesses, the daughter of Coelus or Uranus, and Terra, and the wife of Oceanus, and mother of the river gods, the sea nymphs, &c.

TETHYS, in entomology, a genus of insects belonging to the class of vermes, and order of mollusca. The body is oblong, fleshy, and without feet ; the mouth consists of a cylindrical proboscis under the duplicature of a lip; and there are two foramina at the left side of the neck. The species are two, both inhabitants of the ocean.

TETRACERA, in botany, a genus of plants belonging to the class of polyandria, and order of tetragynia, and in the natural system ranging under the doubtful. The calyx is hexaphyllous, and the capsules four. There is only one species, *viz.* T. volubilis.

TETRADYNAMIA (rsffcmptc, four, and Sv-vafus, power), four powers; the fifteenth class of Linnaeus's sexual system, consisting of plants with hermaphrodite flowers having six stamina, four of which are long, and two short ; it corresponds to the siliquosse of Ray, and cruciformes of Tournefort. All the species are distinguished by cruciform flowers. It comprehends two or-ders, gymnospermia, those plants which have naked seeds, being four in number; (except phryma which is monospermous) ; and an-giospermia, which contains those plants the seeds of which are enclosed in a capsule. See BO-TANY, Index.

TETRAEDRON, or TETRAHEDRON, in geometry, is one of the five platonic or regular bo-dies or solids, comprehended under four equilateral and equal triangles. Or it is a triangular pyramid of four equal and equilateral faces.

TETRAGON, in astrology, denotes an aspect of two planets with regard to the earth, when they are distant from each other a fourth part of a circle, or 90°. The tetragon is expressed by the character a, and is otherwise called a square or quartile aspect.

TETRAGON, in geometry, a quadrangle, or a figure having four angles. Such as a square, a

parallelogram, a rhombus, and a trapezium. It sometimes also means peculiarly a square.

TETRAG'ONAL, adj. Gr. rtrpaywvoe. Four square.

From the beginning of the disease, reckoning on unto the seventh day, the moon will be in a tetnu/K-nat or quadrate aspect, that is, four signs removed from that wherein the disease began : in the fourteenth day it will be in an opposite aspect, and at the end of the third septenary tetragonal again.

Browne's Vulgar Errours.

TETRAGONIA, in botany, a genus of plants belonging to the class of icosandria, and order of monogynia ; and in the natural system

ranging under the thirteenth order, succulents. The calyx is divided into three, four, or five parts. There is no corolla; the drupa is beneath, and the nut three or eight-celled. There are seven species; the puticosa, decumbens, herbacea, echinata, expansa, crystallina, and japonica.

TETRAGRAMMATON («rpaypa/i/iarcw, a denomination given by the Greeks to the Hebrew name of God nin% Jehova, because in the Hebrew it consists of four letters.

TETRAGYNIA, (rtffffaptc, four, and yvvi], a woman), the name of an order in the fourth, fifth, sixth, eighth, and thirteenth classes in the sexual system ; consisting of plants which, 10 the classic character, whatever it is, add the circumstance of having four styles or female organs. Herb paris and grass of Parnassus furnish examples. See BOTANY.

TETRANDRIA (rtaoaˆ, four, and «v;;o, a man or husband), the name of the fourth class in Linnseus's sexual system, consisting of plants with hermaphrodite flowers, which have four stamina or male organs that are of equal length. In this last circumstance consists the main difference, according to Linnseus, between the plants of the class in question and those of the fourteenth class didynamia, in which the-four stamina are of unequal length, two of them being long, and two short. The orders of this numerous class are three, founded upon the number of styles or female organs. Scabious, teazel, barren wort, the starry plants of Ray, and the greater number of genera in this class, have one style; dodder and hypecoum have two ; holly and a few-others have four.

TETRAO, in ornithology, a genus of birds belonging to the order of gallinae, and thus characterised by Linnseus : there is a spot near the eyes naked or papillose, or covered, though more rarely with feathers. Gmelin has enumerated about sixty-six species. The genus tetrao comprehended both the grous partridge and quail ; but Dr. Latham, with great judgment and propriety, has made two genera of them, under the names of tetrao, comprehending the grous ; and perdix, comprehending the partridge and quail. See PERDIX. Dr. Latham thus distinguishes the genus tetrao : the bill is like a crooked cone, with a naked scarlet skin above each, eye, and the feet feathered to the toes. He reckons twenty species. The four following are found in Britain : —

1. T. la<j;opus, the white game, or ptarmigan, is fifteen inches in length, and weighs nineteen ounces. Its plumage is of a pale brown or ash

color, elegantly crossed or mottled with small dusky spots and m’miHe bars ; the head and neck with broad bars of black, rust color, and white : the belly and wings are white, but the shafts of the greata-ˆuill-feathers black. In the male the gray color predominates, except on the head and neck, where there is a great mixture of red, with bars of white. The females and young birds have a great deal of rust color in them. The tail consists of sixteen feathers ; the two middle of which are ash colored, mottled with black, and tipped with white; the two next black, slightly marked with white at their ends, the rest wholly black ; the feathers incumbent on the tail are white, and almost entirely cover it. Ptarmigans are found in these kingdoms only on the summits of the highest hills of the Highlands of Scotland, of the Hebrides, and Orkneys ; and a few still inhabit the lofty hills near Keswick in Cumberland, as well as the mountains of Wales. They live amidst the rocks, perching on the gray stones, the general color of the strata in those exalted situations. They are very silly birds ; so tame as to bear driving like poultry; and, if provoked to rise, take very short flights, making a great circuit like pigeons. Like the grouse, they keep in small packs ; but never, like those birds, take shelter in the heath, but beneath loose stones. To the taste they scarcely differ from a grouse. These birds are called by Pliny lagopi, their feet being clothed with feathers to the claws, as the hare’s are with fur : the nails are long, broad, and hollow. The first circumstance guards them from the rigor of the winter ; the latter enables them to form a lodge among the snow, where they lie in heaps to protect themselves from the cold. - The feet of the grouse are clothed in the same manner; but those of the last two species here described, which perch upon trees, are naked, the legs only, being feathered, not be-ing in want of such a protection.

2. T. Scoticus, the red game, or moor-fowl, is peculiar to the British islands. The male weighs about nineteen ounces ; and is in length fifteen inches and a half. The bill is black : the irides hazel colored. The throat is red. The plumage on the head and neck is of a light tawny red ; each feather is marked with several transverse bars of

black. The back and scapular feathers are of a deeper red; and on the middle of each feather is a large black spot; the breast and belly are of a dull purplish brown, crossed with numerous narrow dusky lines ; the quill-feathers are dusky; the tail consists of sixteen feathers of an equal length, all of them (except the four middlemost) are black, and the middle feathers are barred with red ; the thighs are of a pale red, barred obscurely with black ; the legs and feet clothed to the very claws with thick soft white feathers. The claws are whitish, very broad and strong. The female weighs only fifteen ounces. The colors in general arc duller than those of the male ; the breast and belly are spotted with white ; and the tips of some of the coverts of the wings are of the same color. These birds pair in the spring, and lay from six to ten eggs. The young brood follow the hen the whole sum-mer ; in the winter they join in flocks of forty or fify, and become remarkably shy and wild;

they always keep on the tops of the hills, are scarcely ever found on the sides, and never descend into the valleys. Their food is the mountain berries and the tops of the heaths. See SHOOTING.

3. T. tetrix, black grouse, or black cock, like the woodcock, is fond of woody and mountainous situations ; feeding on bilberries and other mountain fruits, and in the winter on the tops of the heath. In the summer they frequently descend from the hills to feed on corn. They never pair : but in the spring the male gets upon some eminence, crows and claps his wings ; on which signal all the females within hearing re-sort to him. The hen lays seldom above six or seven eggs. When the female is obliged, during the time of incubation, to leave her eggs in quest of food, she covers them up so artfully with moss or dry leaves that it is very difficult to discover them. On this occasion she is. extremely tame and tranquil, however wild and timorous at other times. She often keeps to her nest, though strangers attempt to drag her away. As soon as the young ones are hatched, they are seen running with extreme agility after the mo-ther, though sometimes they are not entirely disengaged from the shell. The hen leads them forward for the first time into the woods, to show them ant's eggs and the wild mountain berries, which, while young, are their only food. As they grow older their appetites grow stronger, and they then feed upon the tops of the heather and the cones of the pine tree. In this manner they soon come to perfection. An old black cock is in length twenty-two inches, and weighs nearly four pounds. The bill is dusky; and the plumage of the whole body black, glossed over the neck and rump with a shining blue. The coverts of the wings are of a dusky

brown ; the inner coverts white ; the thighs and legs are covered with dark brown feathers ; the toes resemble those of the former species. The tai. consists of sixteen black feathers, and is much forked ; the exterior feathers bend greatly outwards, and their ends seem as if cut off. The female weighs only two pounds ; and its length is one foot six inches. The head and neck are marked with alternate bars of dull red and black; the breast with dusky black and white, but the last predominates. The back, coverts of the wings, and tail, are of the same color as the neck, but the red is deeper. The tail is slightly forked ; it consists of eighteen feathers variegated with red and black. The feathers under the tail are white, marked with a few bars of black and orange. This bird hatches its young late in the summer. It lays from six to eight eggs, of a dull yellowish white color, marked with numbers, of very small ferruginous specks ; and towards the smaller end with some blotches of the same hue.

4. T. urogallus, the woodcock, inhabits woody and mountainous countries; in particular, forests of pines, birch trees, and junipers; feeding on the tops of the former and berres of the latter; the first often infects the flesh with such a taste as to render it scarcely eatable. In the spring it calls the females to its haunts with a loud and shrill voice ; and is at that time so very inatteu

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five to its safety as to be very easily shot. It stands perched on a tree, and descends to the females on their first appearance. They lay froui eight to sixteen eggs ; eight at the first and more as they advance in age. These birds are com-mon in Scandinavia, Germany, France, and several parts of the Alps. They are found in no other part of Great Britain but the Highlands of Scotland, and are very rare even in those parts. They are there called capercalzie, auer-calzie, and in the old law books caperkally ; the last signifying the horse of the woods : this species being, in comparison of others of the genus, pre-eminently large. The length of the male is two feet nine inches ; its weight sometimes fourteen pounds. The female is much less, the length being only twenty-six inches. The sexes differ also greatly in colors. The bill of the male is of a pale yellow ; the head, neck, and back, are elegantly marked with slender lines of gray and black running transversely. The upper part of the breast is of a rich glossy green ; the rest of the breast and the belly black, mixed with some white feathers ; the sides are marked like the neck ; the coverts of the wings crossed with undulated lines of black and reddish brown ; the exterior webs of the greater quill-feathers are black : the tail consists of eighteen feathers, the middle of which is the longest ; these are black, marked on each side with a few white spots. The legs are very strong, and covered with brown feathers; the edges of the toes are pectinated. Of the female the bill is dusky ; the throat red ; the head, neck, and back, are marked with transverse bars of red and black ; the breast has some white spots on it, and the lower part is of a plain orange color; the belly is barred with pale orange and black; the tips of the feathers are white. The tail is of a deep rust color, barred with black, tipped with white, and consists of sixteen feathers. See SHOOTING.

TETRAPET'ALOUS, adj. Gr. nimapce and iftrakov. Such flowers as consist of four leaves round the style.

All the tetrapetaloiLS siliquose plants are alkale-scent. Arbuthnot.

TETRAPODOLOGY (rerpaTroc, and Xoyoc) that branch of zoology which treats of quadrupeds, in the Linnxan system called mammalia.

TETRAPOLIS, an ancient name of Antioch in Syria, because it contained four cities.

TE'TRARCH, n. s. Fr. tetrarque ; Lat. te-trarcha ; Gr. rtrpapxijc-A

Roman governor of the fourth part of a province.

All the earth,

Her kings and tetrarchs, are their tributaries : People and nations pay them hourly stipends.

Ben Jonson.

A TETRARCH is a prince who holds and governs a fourth part of a kingdom. Such originally was the import of the title tetrarch; but it was afterwards applied to any petty king or sovereign ; and became synonymous with eth-narch.

TETRASTICK, n. s. Gr. «rpaT»x˚c-An epigram or stanza of four verses.

The tetrastich obliged Spenser to extend his sense to the length of four lines, which would hnve been more closely confined in the couplet. Pnw.

TETRASTYLE, in the ancient architecture, a building, and particularly a temple, with four columns in its front.

TE’TIIICAL, adj.) Fr. letrique ; Lat. tc—

TETRI’COUS. S tricm. Froward ; perverse ; sour.

In this the tetrical bassa finding him to exec!, gav him as a rare gift to Solyman.

Knolles’s History nf the Turks.

TETRODON, in ichthyology, a genus of fishes arranged by Linnaeus under the class of amphibia, and order of nantes; but placed by Gmelin under the class of pisces, and order of branchiostegi. The jaws are bony, stretched oui, and cloven at the point; the aperture of the gi’Is is linear ; the body is muricated beneath, and there are no ventral fins. There are thirteen species ; of which the most remarkable i.s T. lineatus, called by Mr. Hasselquist fahaka, which is the Egyptian and Arabic name. It has of late been found in the Nile about Cairo, but was never known in former times. It is said to grow to a prodigious size. When jusi caught it pricks the skin if it is taken in the bare hands, and produces small pustules in the same manner a> nettles. The flesh is poisonous. Mr. Foster confirms the account of the poisonous nature ni’

a species of tetrodon in his account of New Caledonia.

TETTER, n. s. Sax. teteri. A scab ; a scurf ; a ringworm.

A most instant tetter barked about, Most lazar like, with vile and loathsome crust, All my smooth body. Shaltspeare. Hamlet.

A scabby tetter on their pelts will stick. Vryden.

TETUAN, a sea-port of Morocco, in the province of El Garb, on the Mediterranean, within the Straits of Gibraltar. A branch of the Atlas. passing through the province of Tedla, comes within a few miles of the town. The environs are planted with vineyards and gardens, and the oranges are reckoned very superior. Several European consuls and merchants were settled here till 1770, when an Englishman having shot a Moor the emperor banished all Europeans, and would no longer permit any to reside there. A considerable communication, however, is maintained with Gibraltar, whence ships often repair, when the wind is unfavorable for making Tangiers; and our fleets, entering the Mediterranean, often water and victual in the bay. Thirty miles south-east of Tangiers.

TETZEL, or TESTZEL (John), a monk of the sixteenth century, whose honest bigotry may be classed among the proximate causes of the Reformation. He was born at Piern upon the Elbe, and, having taken the habit of St. Dominick, received a commission from the archbishop ot Mayence, to preach up the indulgences of Leo X. The extravagant power and virtue which In; attributed to his commodities, declaring that they were sufficient to procure impunity for a sinner, though he had even violated the mother of God herself! first roused the indignation of Luther, and drew upon him those attacks which were at. length transferred from the effect to the cause, and diverted from combating the absurdities themselves to exposing the corruption of the system by which they were.' sanctioned. The eyes of the

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papal government were at length, when too late, opened to the mischief which Tetzel had occasioned, and he received so severe a rebuke from the legate that he is said to have died of a broken heart in 1519.

TEUCER, the son of Scamander by Ida the founder and first king of Phrygia, from whom his subjects were called Teucri. Dardanus married his daughter Batca, and succeeded him. — Virg. #,n. iii. 108.

TECCER, a son of Telamon and brother of Ajax. He built a town in the isle of Cyprus, which he called Salamis from his birth-place.

TEUCRI, a name given the Trojans from Teucer their first king.

TEUCRIUM, germander, in botany, a genus of plants belonging to the class of didynamia, and order of gymnospermia; and in tne natural system ranging under the forty-second order, verticillatae. The corolla has no upper lip, is divided into two parts beyond the base, and is divaricated where the stamina issue out. There are thirty species ; of which three are natives of Great Britain, *viz.*

1. T. chamsedrys, the smaller creeping germander, has fibrous, very creeping, spreading roots; many four cornered, very branchy, trailing stalks, nearly a foot long; oval, cuneiform, cut, equated leaves on short footstalks ; and reddish flowers, growing almost in a verticillus, on whorls, round the stalk, three on each peduncle ; appearing in June and July.

3. T. scocodonia, wood sage, or germander, is distinguished by leaves which are heart-shaped, serrated, and petiolated ; by racemi, which are lateral and ranged in one row ; and by an erect stem. The flowers are straw-colored, and the filaments red. The plant has a bitter taste, and smells like hops with a little mixture of garlic. It is used in brewing in the isle of Jersey instead of hops.

3. T. scordium, the common water germander, has creeping perennial roots, sending up many square, procumbent, or trailing stalks, branching diffusely ; oblong, indented, serrated, close-sit- ting, opposite leaves; and small reddish flowers, generally two together, from the sides of the stalks and branches, in July and August. This plant was formerly considered as medicinal, but has now fallen into disuse. It grows naturally in marshy places, in the isle of Ely and other parts of England, and most parts of Europe ; and is sometimes admitted into gardens, in moist places, for variety, and as a medicinal plant.

TEURART, an ancient town of Africa, in Fez, seated on a mountain, near the river Za ; it was anciently a very important city.

TEUTHIS, in ichthyology, a genus of fishes belonging to the order of abdominales. The head is somewhat truncated on the fore part ; the branchil membrane has five rays ; the teeth equal, rigid near each other, forming a regular series. There are two species, *viz.* 1 . T. hepatus ; and 2. T. Java.

TEUTHRAS, king of Mysia. SeeTELEPnus.

TEUTOBOCHUS, a gigantic king of the Teutones.

TEUTONES, or TEUTONI, an ancient people, always by historians joined with the Cimbri ;

both seated, according to Mela, beyond the Elbe, on the Sinus Codanus, or Baltic ; and there, it is supposed, lay the country of the Ten-tones, now Ditmarsh ; diversity of dialects producing the different terms Tent, Tut, Dit. Tid, and Thod, which in the ancient German language signified people. Of these Teutones VTirgil is to be understood in the epithet Teutonicus, an appellation which more lately came to be applied to the Germans in general, and later still the appellation Alemanni.

The TEUTONIC LANGUAGE is supposed to have been the language of the ancient Germans, and hence is reckoned amongst the mother tongues. See PHILOLOGY.

TEUTONIC ORDER, an order of military knights, established towards the close of the twelftn century, in the Holy Land, where, after the death of Barbarossa, the Germans behaved with so much bravery, that Henry king of Jerusalem, the patriarch, and several other princes, determined to reward their valor by instituting the order. They had at first the title of the knights of St. George, and afterwards were called Equites Mariani, or knights of St. Mary. Among their other obligations it was required that every knight should be of noble parentage ; that the order should de-fend the Christian religion and the Holy Land ; that they should exercise hospitality towards the Christians in general, but particularly those of their own country ; and that they should with all their power endeavour to propagate and extend the Christian faitli and the religion of Jesus. In 1190, having become rich by donations from the superstitious, they elected their first grand master, Henry Walpot, a German, who had distinguished himself by his zeal and

valor. In 1191 pope Celestine III. confirmed their privileges already granted, giving them the title of the Teutonic knights of the hospital of St. Mary the Virgin. By the conditions of this bull they -vowed perpetual continence, obedience, and poverty ; obligations which it may well be imagined were not very strictly kept. See POLAND, and PRUSSIA.

TEVV'EL, n.s. Fr. tuyau or tuyul. Defined below.

In the back of the forge, against the fireplace, is fixed a thick iron plate, and a taper pipe in it about five inches long, called a tewel, or tewel iron, which comes through the back of the forge ; into this tewel is placed the bellows. • Mniou.

TEWIT, in ornithology. See TRINGA.

TEWKESBURY, a market town and borough of England, in the county of Gloucester, situated on the eastern bank of the Avon, near its confluence with the Severn. The access to the town is by several commodious bridges. That over the Avon is a stone structure of considerable length. The town is large, handsome, and populous. It consists mostly of three principal streets, with several lanes and alleys branching off, which are mostly well paved and lighted. The houses in the town are chiefly built of brick, but the old habitations with projecting stones, and pyramidal roofs, have been mostly pulled down. The act for paving and lighting the streets was obtained in 1786; and, from that period, a growing spirit of improvement has diffused itself among the inhabitants. Of the

public buildings the principal is the Abbey church, almost the only remains of the ancient monastery. This structure displays an interesting example of early Norman architecture, combined with specimens of other kinds. It is built in the cathedral form, and consists of a nave, choir, transept, and central tower, with the addition of several chapels. The nave and choir are separated from the aisles by eighteen massive columns sustaining the roof, and four substantial

piers which support the tower. The arches above the columns in the nave and over the piers are plain and semicircular, but those of the choir are pointed. Above the crown of the former arches runs a triforium, opening into the nave by a series of double round headed arches, two over each arch. The roof of the nave is ornamented with groins springing from crocket heads over each pillar ; and at the intersections are various angels and other figures, playing on different musical instruments. At the west end is a large window, with a pointed arch, which appears to have been introduced within a semicircular arch in 1656. The aisles are lighted with pointed arched windows. These were probably altered to that shape about the beginning of the fourteenth century. In 1796 this was again altered, fitted up with new pews, and otherwise improved, at an expense of £2000. The effect of this portion of the fabric is singularly beautiful. The east end is hexagonal, and is separated from the aisles by six massive short columns, which support pointed arches. Beneath these are some large monuments, and over the arches are windows filled with painted glass. On the south side of the altar are three stone stalls, part of which displays some elegant carving. The ceiling is adorned with a profusion of tracery, and at each intersection is a carved flower or knot of foliage. Branching out from the north and south aisles of the choir are five or six small private chapels or oratorios, containing the tombs or ashes of their respective founders. The Lady chapel is entirely destroyed ; but a large arch, through which it was entered from the church, is still seen on the outside. The cloisters were on the south side of the nave, and some fragments of them still remain. The tower is lofty, and, according to the abbey chronicles, was once terminated by a wooden spire, which fell on Easter day 1559: the most remarkable specimens of its architecture are three tiers of arcades ; in the upper part the arches of the middlemost tier are intersected. The whole length of the church is 300 feet, of the transept 120. The breadth of the choir and side aisles is seventy feet ; of the west front 100. The height from the area to the roof is 120 feet; the height of the tower is 152 feet. The monuments in Tewkesbury church have attracted the attention of various antiquaries. Between two of the pillars on the north side of the choir is an elegant and light chapel of stone, erected by abbot Par-ker in 1097, over the tomb of Robert Fitz-Hamon, who was slain at Falaise, in Normandy, in 1107, and originally buried in the chapter-house, whence his bones were removed by abbot Robert in 124.1. On the north side of the altar is a monument of the most delicate sculpture and

beautiful proportions, in four stages of open arched work, with a tomb

beneath, surrounded by an embattled border, and the sides ornamented alternately with single and double arches. This splended monument appears to have been erected to the memory of Hugh le Despencer, and his wife Elizabeth, daughter of William Montacute earl of Salisbury. Other elegant monuments we have not room to particularise. Tewkesbury abbey was founded in the year 715, by two Saxon brothers, Dodo and Odo, who were then dukes of great opulence and high consideration in the kingdom of Mercia, and the first lords of the manor here. Besides the church, Tewkesbury contains meeting-houses for Independents, Quakers, Baptists, and Methodists. The town-hall is a handsome building. The old town hall, or Tolsey, originally serve°d as a market place ; but, after that building was removed, twenty persons entered into an agreement with the corporation to erect the present market-house, in consideration of a grant of the profits of the stalls, Sec., for ninety-nine years. The curious old structure which had for centuries been used as the borough jail was originally the companile or bell tower annexed to the abbey : this was pulled down in 1817, and a most substantial and elegant school, for the education of children on the national or Bell's system, erected in its place. The new jail is a neat and suitable building, situate at the top of the High-street The house of industry is singularly spacious and commodious, and situate on Holme hill, near the entrance of the town from Gloucester. The charitable institutions in the town are a free grammar school, endowed charity school, schools on the national and Lancasterian plans, a great number of alms-houses, a dispensary, a lying-in charity, and numerous other benevolent associations. Tewkesbury had once a considerable share in the clothing business, but this trade has long since declined. It was likewise noted for its mustard. At present the chief manufacture carried on in the town is that of stocking frame-work knitting, particularly in cotton. A considerable trade is also carried on in maltine:, and the making of nails. Tewkesbury was incorporated by a charter granted by queen Elizabeth, and confirmed by James I.; but, in the reign of James II., the corporate officers surrendered their seal to that monarch, who in his second year re-incorporated them by the names of the mayor, alderman, and common council. The revolution which immediately followed prevented the charter from being carried into effect, and the town remained in a state of uncertainty as to its government till the thirteenth of William III., when it was settled in the present form. By this, the government of the town is vested in two bailiffs and four justices, annually chosen, and a recorder. The corporate body consists of twenty-four principal burgesses, and the same number of assistants ; but, as each principal burgess holds also the office of assistant, the members of the corporation are now

uniformly confined to twenty-four persons, instead of forty-eight as formerly. The town sends two members to parliament, the privilege of which was obtained from James I. in 1609. The right of election

TEX /(

is possessed by the freemen and freeholders. It was at Tewkesbury that the last battle was fought between the adherents of the houses of York and Lancaster, which it is well known proved fatal to the latter. The field on which it was fought is still called the bloody meadow, and is situated about half a mile from the town. In the civil wars, in the reign of Charles I., Tewkesbury was the scene of many severe contests. Markets on Wednesday and Saturday, and various annual fairs. Ten miles north of Gloucester, and 102 W. N. W. of London.

TEW'TAW, v.a. Formed from tew byre-duplication. To beat ; to break.

The method and way of watering, pilling, breaking, and tewtawing of hemp and flax, is a particular business. Mortimer.

TEXAS, a tract of country in North America, claimed by the United States as a part of Louisiana, and by Spain as a part of the Internal provinces, included in the intendency of San Luis Potosi. It is bounded north by Red River, east by the state of Louisiana, south by the gulf of Mexico, and west by the del Norte ; containing upwards of 100,000 square miles. There are some scattering Spanish presidios in this country, yet it is for the most part a wilderness. The population was estimated in 1807 at 7000. The interior towards Red River is bar-ren, but the part towards the gulf of Mexico resembles the southern part of Louisiana.

TEXEL, an island of the Netherlands, at the entrance of the Zuyder Zee, separated from North Holland by the narrow channel called the Mars-diep. Its iom, ;s oblong, twelve miles in length, and about six in breadth, and it is secured from the sea by strong dikes. The soil is well fitted for sheep pasture, and it has long been noted for its cheese. Besides the town of Texel, it contains six villages, and has in all about 5000 inhabitants. It has a large and secure harbour, with a fort which commands the entrance ; it has likewise a commodious roadstead on the east. It was in the neighbourhood of the Texel that admiral Blake defeated the Dutch under Van Tromp, in 1653: in 1673 another battle was fought near this, between the Dutch and the combined fleets of England and France, with doubtful success ; a pesult far different from that of an encounter near the Texel in the end of Au-gust 1799, between the British and Dutch fleets, when the latter, disaffected to the republican government, surrendered after a slight resistance.
TEXT, n. s. } Fr. texte ; Latin

TEXT’MAN, re. s. > textus. That on

TEXT’UARY, adj. & n. s. J which a comment is written ; a sentence of scripture : textman and textuary mean one versed in texts : textuary also means contained in the text; or serving a« a text.

In religion

What errour, bat some sober brow Will bless it, and approve it with a lexi ?

Shakspiare.

Some prime articles of faith are not delivered in ci literal or catechistical form of speech, but are collected and concluded by argumentation out of sentences of scripture, and by comparing of sundry texts with one another, White.

Men's daily occasions require the doing of a thousand things, which it would puzzle the best textmnn readily to bethink himself of a sentence in the Bible, clear enough to satisfy a scrupulous conscience of the lawfulness of. Sanderson.

He extends the exclusion unto twenty days, which in the textuary sense is fully accomplished in one.

Browne.

I see no ground why this reason should be textuary to ours, or that God intended him an universal head-ship. Glanville.

We expect your next Should be no comment, but a text, To tell how modern beasts are vext. Waller.

His mind he should fortify with some few texts, which are home and apposite to his case. South.

TEXTURE, n.s.) Ldt. textus. The act or

TEX'TILE, adj. S manner of weaving; a

TEX'TRINE.) web or thing woven ; particular combination of parts : the adjective corresponding.

The placing of the tangible parts in length or transverse, as in the warp and woof of textiles.

Bacon's Natural History.

The materials of them were not from any herb, as other textiles, but from a stone called atniantus.

WiUeins.

Spirits

Nor in their liquid texture mortal wound

Receive, no more than can the fluid air. Milton.

Under state of richest texture spread. Id.

Skins, although a natural habit unto all before the invention of texture, were something more unto Adam. Browne.

It is a wonderful artifice, how newly hatched maggots, not the parent animal, because she emits no web, nor hath any textrine art, can convolve the stubborn leaf, and bind it with the thread it weaves from its body. Dei-ham.

A veil of richest texture wrought she wears.

Pope.

Others, far in the grassy dale, Their humble texture weave. Thomson's Spring.

TEXTURE properly denotes the arrangement and cohesion of several slender bodies or threads interwoven or entangled among each other, as in the webs of spiders, or in the cloths, stuffs, &c. Texture is also used in speaking of'auy union or constituent particles of a concrete body, whether by weaving, hooking, knitting, tying, chaining, indenting, intruding, compressing, attracting, or any other way. In which sense we say, a close compact texture, a lax porous texture, a regular or irregular texture, &c

END OF VOL. XXI.

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Sic oportet ad librum, presertim miscellanel generis, legendnm accedere lectorem, nt tolet ad connvium coarira ci>ili>. ConriTator annititnr omnibni satisfacere ; et tamen si quid apponitur, quod hujns aui illiui palato non reipondeat, et hie et

A reader should >it down to a book, especially of the miscellaneous kind, ai a well behared visitor does to a banquet. The master of the feast exerts himself to satisfy his guests; bnt if, after all his care and paius, something should appear on the

thrj- mar not distress a kind host. Trantlalim.

BY THE ORIGINAL EDITOR OF THE ENCYCLOPAEDIA METROPOLITAN A,

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THE

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THALES, a celebrated Greek philosopher, and the first of the seven wise men of Greece, was born at Miletus about 640 B. C. Thales acquired great reputation by his wisdom and learning ; he was the first among the Greeks who foretold eclipses of the sun, and made extraordi- nary discoveries in astronomy. Thales was the author of the Ionian sect of philosophers, who were thus called, from his beinir born at Miletus, a city of Ionia. He maintained that water was the principle of which all the bodies in the uni- verse are composed ; that the world was the work of God ; and that God sees the most secret thoughts in the heart of man. Thales went to see Croesus, who was marching with a powerful army into Cappadocia, and enabled him to pass the Halys without making a bridge. He died soon after, at about ninety years of age. He composed several treatises in verse, on meteors, the equinoxes, &c., but they are all lost.

THALES, another celebrated Greek philoso- pher, a native of Gorthynia.

THALESTRIS, a queen of the Amazons, who came, attended by 300 women, fifteen days' journey to meet Alexander, during his expedition into Asia, that she might raise up a race of heroes by so great a man. — Q. Curt. vi. c. 5. Strabo, 11. Justin, c. 4.

THALIA, in pagan mythology, one of the nine muses. She presided over Comedy ; and is represented crowned with a garland of ivy, holding a mask in her hand, and wearing buskins on her feet. See MUSES.

THALIA, in botany, a genus of plants belong- ing to the class monandria, and order of mono- gynia ; and in the natural system ranging under the eighth order, scitamineae. The corolla is pentapetalous and undulated ; and the drupe has a bilocular kernel. There is only one spe- cies, viz. T. geniculata.

THALICT RUM, meadow rue, in botany, a genus of plants belonging to the class of polyan- dria, and order of polygynia ; and in the natural system ranging under the twenty-sixth order, multisiliquse. There is no calyx ; the petals are four or five in number, and the seeds are naked and without a tail. There are fifteen species, three of which are indigenous, viz.

1. T. alpinum, or alpine meadow rue, has a very simple stalk, and almost naked ; and a racemus simple and terminal. It is a pretty little plant, about a finder's length in height ; the leaves all rise from the root, the stalks being naked and branched ; the flowers nod, and have four petal?, tsvelve stamina, and eight pistils. It is frequent on the sides of rivulets, in the high- land mountains, and other places. VOL. XXII.— PART 1.

2. T. flavum, the common meadow rue, has a leafy furrowed stalk, and a manifold erect panicle. It has commonly twenty-four stamina, and from ten to sixteen pistils. The root and leaves of this plant dye a yellow color, and cattle are fond of it. It grows on the banks of some rivers.

3. T. minus, or small meadow rue, has sex- partite leaves, and bending flowers. The stalk is striated, and about a foot hiuh ; the leaves are lax and divaricated, having rigi.l foot-stalks ; they are smooth and glaucous, and their lobes gene- rally trifid ; the panicle is branched and open, and the flowers nod ; the petals are pale green, tinged with red ; the stamina are from fifteen to twenty ; the seeds deeply striated, and from two to seven in number. This plant is frequent in sandy soils and mountainous pastures.

THALLAND, a province of Sweden, called also DA LEA and DA LI A, which see.

THAMAS KOULI KHAN, or Nadir Shah, the murderer and successor of the preceding mo- narch, a bloody monster. He began his bloody career with the murder of' his own uncle, whose fort and territories he seized. See DELHI, INDIA, and PERSIA.

THAME, a market-town in the hundred of Thame, Oxon, pleasantly seated on an eminence on the banks of the Thame, thirteen miles east from Oxford, and forty-five north-west of London. The parish contains about 4600 acres of land, and is divided into six hamlets or liberties. The town consists of one long and spacious street, in the centre of which is a capacious market- place, and the church is a good Gothic structure. It has a town-hall, a free-school, an alms-house, and several

other charitable institutions. In 1138 Alexander, bishop of Lincoln, erected a monastery here, which, at the general dissolu- tion, was given to the duke of Somerset. The river is navigable for barges to the Thames at Dorchester. The market on Tuesday is well supplied with corn and cattle. Fairs Easter Tuesday, and Old Michaelmas-day. It is a vi- carage, with Tetsworth, Towersey, and Sydden- ham churches annexed. Population 2880.

THAME, a river which rises on the eastern side of Bucks, near Ivinghoe, crosses that county, and falls into the Thames at Dorchester, in Ox- fordshire.

THAMES, the most remarkable river in Eng- land, particularly as connected with the com- merce of the metropolis, and navigable from its mouth to Letchlade, in Gloucestershire, a dis- tancr: of 230 miles. The tide flows as high as Richmond in Surrey, more than seventy miles from the ocean. From the depth ~f water at London, which is capable of navienting the

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largest ships, the metropolis «s one of the greatest commercial ports in the universe. The real wa- ter is exceedingly wholesome ; and abounds with a variety of fish. Its banks, westward from the metropolis, are ornamented with the most beau- tiful .villas and pleasure grounds, and in its course it is joined by numerous rivers and streams, particularly the Kennet, Loddon, Coin, Charwell, Tame, Isis, Wey, Mole, Wandle, Lea, Roding, Darent, Medway, &c. ; it is also joined by several navigable canals, viz. the Grand Junc- tion canal, at Brentford ; the Oxford and War- wick canal, at Oxford ; the Thames and Severn Canal at Letchdale; and the city Canal at Lime- house forming a connected chain of inland navigation throughout the whole of the kingdom.

THAMES, a river of Connecticut, which is formed by the Shetucket and Yantic, at Nor- wich, and flows south into Long Island Sound, two miles below New London. It is navigable through its whole course.

THAN, adv. Sax. tSanne. A particle placed in comparison after the comparative adjective or adverb, noting a less degree of the quality com- pared in the word that follows than : as, monar- chy is better than anarchy.

Were we not better to fall once with virtue, Than draw a wretched

and dishonoured breath ?

Ben Jonson.

I never met with a more unhappy conjuncture of affairs, than in the business of that unfortunate earl.

King Charles.

More true delight in that small ground, Than in possessing all the earth was found.

Daniel.

I love you for nothing more than for the just es- teem you have for all the sons of Adam. Swift.

THANE, n.*. Sax. Sexn. An old title of honor, perhaps equivalent o baron.

By Sinel's death I know I'm thane of Glamis ; But how of Cawdor? the thane of Cawdor lives.

Shahpeart.

THANE (Lat. tha'nus) was a title formerly given to the nobility in Britain. It signifies a minister or honorable retainer, from the verb thenian, to minister. There were several degrees of nobility among the Anglo-Saxons ; but those most commonly mentioned are the king's thanes and the alderman's thanes. The king's thanes seem to have been of three different degrees, ac- cording to their different degrees of wealth or favor at court. The alderman's thanes seem to have been of the lowest degree of nobility, and next to them those who were promoted to that dignity from their advancement in the church, from their valor, success in agriculture or com- merce : for if a ceorl or farmer applied to learn- ing and attained to priest's orders; if he acquit- ted himself so well as to obtain from a noble- man five hyt'nes of land, or a gilt sword, helmet, and breast-plate, the reward of his valor ; or if by his industry he had acquired the property of five hythes of land ; or if he applied to trade, and made three voyages beyond sea in a ship of his own, and a cargo belonging to himself — he was denominated a thane. The thanes were obliged to attend the king with their followers in military expeditions, to assist in building and defending the royal castles, and in keeping the

bridges and highways in proper repair. This title of thane was abolished in England at the conquest, upon the introduction of the feudal system by William I. The titles of earl and baron were about the same period introduced into Scotland by Malcolm Canmore, and the title of thane fell into disuse.

THANET, ISLE OF, a celebrated part of the county of Kent, lying on the south shore of the Thames, ten miles in length, from the North-Foreland to Saar Bridge, and eight miles across from Westgate to Sandwich Ferry. It is sepa- rated from the rest of the county by a narrow channel of the Stour, and contains ten parishes, to which there are now only seven churches. On this Isle are the popular bathing places of Mar- gate, Ramsgate, and Broadstairs. The soil is particularly fertile in grain and all the ordinary crops ; and in the south and west parts are ex- cellent pasture and marsh-lands, on which large numbers of sheep and cattle are fattened. The climate is remarkably dry and salubrious.

Sax.fcancian; Belg. danck ; Goth, thank. To return acknow- ledgments : the ac-

knowledgment re- turned (often used in the plural): thankful is grateful ; ready to

THANK, v. a. & n. s.

THANK'FUL, adj.

THANK'FULLY, adv.

THANK'FULNESS, n. s.

THANK'LESS, adj.

THANK'LESSNESS, n. s.

THANK'OFFERING,

THANKSGIVING,

THANK'WORTHY, adj. j acknowledge a favor : the adverb and noun substantive corresponding: thankless, ungrateful ; not likely or deserving to gain thanks: the noun substantive that follows corresponding: the compounds are of obvious meaning.

Be thankful unto him, and bless his name.

Psalm c. 4.

Of old there were songs of praise and thanksgiving unto God. Nehemiah vii. 46.

He took bread, and gave thanks to God in presence of them all. Acts xxvii. 35.

We thank God always for you. 2 Thets. i. 3. This is thankworthy, if a man endure grief.

1 Pet. ii. 19. A thankful remembrance of his death.

Common Prayer.

He scarcely would give me thanks for what 1 had done, for fear that thankfulness might have an intro- duction of reward. ‘nev.

Lest so great good as he for her had wrought, Should die unknown, and buried be in thanhlest

thought. Spenser.

These sacred hymns Christianity hath peculiar to itself, the other being songs too of praise and thanks- giving, wherewith as we serve God, so the Jews like- wise. Hooker.

That she may feel

How sharper than a serpent’s tooth it is, To have a thankless child. SJiakspeare. King Lear.

Will you give me this maid your daughter 1 — As freely, son, as God did give her me. — Sweet prince, you loam me noble thankfulneti.

Shakipearr.

The forlorn soldier, that so nobly fought, He would have well become this place, and graced The thanking! of a king. Id. CvmbeKne.

h or your stubborn answer The king shall know it, and, no doubt, thank you.

Shukspea-rt. The poorest sen-ice is repaid with thanks. Id.

THA

‘ Here is lieUer than the open :ur ; take it thank- fully. Id.

Some embrace suits which never mean to deal ef- fectually in them ; but they will win a thank, or take a reward. Bacon.

In favour, to use men with much difference is good ; for it maketh the peisons preferred more thank- ful, and the rest more officious. Id. Euayi.

If love be compelled, and cannot chuse, How can it grateful or thankm > rthy prove? Davies.

Not t’ have written then, seems little less Than worst of civil vices, thanklessness. Donne.

The contracting and extending the lines and sense of others, if the first authors might speak for themselves, would appear a thankless office. IfWron.

Wage still their wars,

And bring home on thy breast more thankless scars.

Croftov.

The celebration of these holy mysteries being ended, retire with all thankfulness of heart for having been admitted to that heavenly feast. Taylor.

For this to the infinitely good we owe Immortal thanks. Milton.

Ill fare our ancestor impure ! For this we may thank Adam. Id.

\Ve should acknowledge our obligations to God for the many favours we receive, by continual praises and thanksgiving. Tillotson.

Out of gold, how to draw as many distinct sub- stances as I can separate from vitriol, I shall very thankfully learn. Boyle.

Live, thou great encourager of arts ; Live ever in our thankful hearts. Dryden.

Weigh the danger -with the doubtful bliss. And thank yourself, if aught should fall amiss. Id.

If you have lived, take thankfully the past ; Make, as you can, the sweet remembrance last. Id.

Thankfulness and submission make us happy.

L’ Eilrange.

The common practice of all Christian churches and states, in appointing and keeping days of public ihaiiksgiving and humiliation, is argument sufficient to prove, that in the common sense of Christians it is not forbidden in scripture. Nelson.

One grateful woman to thy fame supplied What a whole thanhltst land to his denied. Pope.

I hat Portugal hath yet no more than a suspen- sion of arms, they may thank themselves, because they came so late into the treaty ; and, that they came so late, they may thank the Whigs, whose false representations they believed. Swift.

A thousand thankajj’erings are due to that provi- dence which has delivered our nation from these ab- surd iniquities. Watts.

TIIAPS1A, the deadly carrot, in botany, a genus of plants belonging to the class of pentan- dria, and order of digynia ; and in the natural system ranging under the forty-fifth order, um- bellate. The fruit is oblong, and girt with a membrane. Thereare fivespecies: — T. asclepium, foetida, garganica, trifoliata, and villosa. The roots of the fcetida were formerly ordered in medicine, but are now entirely disused ; a small dose ope rating with extreme violence both upwards and downwards.

THAPSUS, a town of Africa Proper, where Scipio and Juba were defeated by Julius Caesar Liv. 29, c. 30.

THARGELIA, in Grecian antiquity, festivals in honor of Apollo and Diana.

THAROPS, the father of Oeagrus and grand- father of Orpheus. Bacchus made him king of Thn.-e. Diod. 4.

THAUUS, in ornithology, the Chilese eagle. See FALCO.

THASOS, or THASVS, an island in the /Egean Sea, anciently called / Ethria, famous for its gold mines ; with a town so named.

THASUS, a brother of Cadmus, whom he* ac- companied in search of

Europa. Apollod. 3.

THAT, pron. & conj. Saxon $aer ; Gothic thatu ; Dut. dut. Not this, but the other ; which; who ; what ; such as ; the thing : as a conjunc- tion, because ; noting consequence or final end.

Yet, for all that, when they be in the land of their enemies I will not cast them away.

Lfviticus xxvi. 44.

The Nazarite hath vowed, besides that that his hand shall get. \nmbers vi. 21.

They said, What is that to us 1 see thou to that.

Matthew.

Ye defraud, and that your brethren. 1 Cor. iv. 8.

The sinner makes an aberration from the scope or mark that is set before him. Perkins.

Things are preached not in that they are taught, but in that they are published. Hooker.

Octavia, not only that,

That were excusable, that and thousands more _ Of semblable import, but he hath waged New wars against Pompey. Shakspeare.

I'll know your business, that I will. Id. Henry IV.

Sir, I think the meat wants that I have, — Basting. Id. Comedy of Errourt.

We answered, that we held it so agreeable, as we both forgot dangers past and fears to come, that we thought an hour spent with him was worth years of our former life. Bacon's New Atlantis.

In the midst of this darkness they saw so much light, as to believe that when they died they went immediately to the stars. Heylyn.

This is that Jonathan, the joy and grace, That Jonathan, in whom does mixt remain All that fond mother's wish. Cowley.

They weep, as if they meant That way at least proud Nabas to prevent.

Id.

In this scale gold, in t' other fame does lie, The weight of that mounts this so high. Id.

He made that art which was a rage. Id.

Forgive me that I thus your patience wrong. Id.

I have shewed before, that a mere possibility to the contrary can by no means hinder a thing from being highly credible. Wilkins.

It is not that I love you less Than when before your feet I lay ;

But to prevent the sad increase Of hopeless love, I keep away. Waller.

By religion is meant a living up to those princi- ples, that is, to act conformably to our best reason, and to live as becomes those who believ,* a God and a future state. Tillotson.

This runick subject will occur upon that of poetry.

Temple.

This is not fair ; nor profitable that ; Nor t' other question proper for debate.

Dryden's Persitu.

The custom and familiarity of these tongues do sometimes so far influence the expressions in these epistles, that one may observe the force of the He- brew conjugations. Locke.

We must direct our prayers to right ends ; and that either in respect of the prayer itself, or the things we pray for. Duty of Man.

Saints that taught and ied the way to heaven.

Tickle.

Whit is inviting in this sort of poetry proceeds not so much from the idea of a country life itself, as from that of its tranquillity. Popr.

THA

THE

THATCH, n.t.bv.n.l Sax. Sace, straw,

THATCH'ER, n. s. J (Skinner), from Sac,

aroof ; i.i Islttiak.— Lye. Straw laid upon the

top of a house to keep out the weather: to 6, ctob tk Ande* clifted side, coter as with straw : one whose trade is thus Qr , Jhe Nile>s coy source abidej cover houses. ' "

Burnished steel, that cast a glare From far, and seemed to thmr the freezing air.

O solitude ! romantick maid Whether by nodding towers you tread,

Su-ift. Id.

Make false hair, and thatch Your poor thin roofs with burthens of the dead.

Shaks}>eare.

Moss groweth chiefly upon ridges of houses tiled or thatched. Bacon t Natural Hutory.

' Then Rome was poor, and there you might be- hold The palace thatched with straw. Dryden.

Ash is universal timber ; it serves the soldier, seaman, carpenter, thatcher, and husbandman.

Mortimer.

Hard by a stye, beneath a roof of thatch, Dwelt Obloquy, who in her early days Baskets of fish at Billingsgate did watch, Cod, whiting, oyster, mackrel, sprat, or plaise.

Pope.

Sonnets or elegies to Chloris Might raise a house above two stories : A lyric ode would slate, a catch Would tile, an epigram would thatch. You merit new employments daily ; Our thatcher, ditcher, gardener, baily.

A plough-boy, who has never seen any thing but thatched houses, naturally imagines that thatch be- longs to the very nature of a house.]\itt>.

Then came rosy Health from her cottage of thatch, Where never physician had lifted the latch. Smart.

THAUMANTIAS, in mythology, a of Iris, the goddess of the rain-bow ; from her father Thau mas.

THAUMAS, a son of Oceanus and Terra, who married Electra, by whom he had Iris, the Har- pies, &c.

THAUMASIUS. a mountain of Arcadia, the birth-place of Jupiter according to the poets.

TIIAW,t». n., v. «.,&n. i. Sax. fcapan ;Teutonic tliau. To grow liquid after congelation ; melt ; remit frost : to melt what was congealed : the act of doing so : liquefaction of something that has been congealed ; the warmth that liquefies.

My love is thawed.

Which, like a waxen image ‘gainst a fire, Bears no impression of the thing itwas. Shaktpeare.

A man of my kidney, that am as subject to heat as butter ; a man of continual dissolution and thaw.

Id.

I was the prince’s jester, and duller than a great thaw. Id. Much Ado About Nothing.

When thy melted maid His letter at thy pillow hath laid : If thou begin’st to thaw for this, May my name step in. Donnt.

That cold country where discourse doth freeze in the air all winter, and may be heard in the next sum- mer, or at a great thau-.

Willdntt Mathematical Magich. Hardens his stubborn heart, but still as ice More hardened after thav. ‘///(,.;,

It on firm land

7’AatM not, but gathers heap, and ruin seems Ot ancient pile , all else deep snow and ice. Id.

Having let that ice thau of itself, and frozen the liquor t second lime, we could not discern any thing.

Boyle.

When sharp frosts had long constrained the earth, A kindly thaw unlocks it with tulU mm, First the tender blade peeps.

Or, starting from a half year's sleep,

From Hecla view the thawing deep,

Thee, fond nymph ! again 1 woo,

And again thy steps pursue. Grainger.

When thtm-es dissolve the snawy hoord, An' float the jinglin icy-boord, Then water-kelpies haunt the foord,

By your direction. Burns.

THAWING (from thaw), the resolution of ice into its former fluid state by the warmth of the air. See CONGELATION, and FROST.

THAXTED, a market-town and parish in Dunmow hundred, Essex, near the rise of the Chelmer, six miles from Dunmow, and forty- seven north-east of London. The manufacture of cutlery was formerly carried on here to a great extent. The church is a neat and spacious Go- thic building, with a tower and lofty spire, and the Dissenters and Quakers have neat meeting- houses. It was formerly a borough, and much more considerable than at present. Here are alms-houses, a school, and other charities. Market on Friday. Fairs, Monday before Whit- Sunday, and August 10th.

THE, article. Sax. *e, 1 > e ; Belg. de ; Teut. die. The definite article, sometimes used by way name of consequential reference, and often abridged in poetry and in pronunciation.

Your son has paid a soldier's debt : He only lived but till he was a man ; The which no sooner had his prowess confirmed, In the unshrinking station where he fought But like a man he died. Shakspeare. Macbeth.

Who had the especial engines been to rear His fortunes up into the state they were. Dun'.el.

Unhappy slave, and pupil to a bell, Unhappy till the last the kind releasing knell.

The adorning thee with so much art Is but a barb'rous skill :

‘ I is like the pois’ning of a dart, Too apt before to kill. Id.

In this scale gold, in t’ other fame does lie. Id.

He put him in mind of the long pretence he had to be groom of the bed-chamber, for the which he could not chuse but say that he had the queen’s pro- mise. Clarendon.

The fruit

Of that forbidden tree, whose mortal taste Brought death into the world. Milton.

As all the considerable governments among the Alps are commonwealths, so it is a constitution the most adapted of any to the poverty of these coun- tries. Addiion on Italy.

The longer sin hath kept possession of the heart, the harder it will be to drive it out. Duty of Man.

Night shades the groves, and all in silence lie, All but the mournful Philomel and I. Pvpe.

TIIEATINES, a religious order in the Komi-h church, so called from their principal founder, John Peter Caraffa, the l-ishop of Theate, or Chieti, in the kingdom of Naples, and afterwards pope under the name of Paul IV. The names of the other founders were Gaetan, Boniface, and Consiglieri. These four pious men, desiring to reform the ecclesiastical state, laid the foun

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datioii of an order of regular clerks at Rome in th*VII. approved the institution, and permitted the brethren to make three religious vows, to elect a superior every three years, and to draw up statutes for the regulation of the order. They first endea- voured, by their example, to revive among the clergy the poverty of the apostles and first disci- ples of our Saviour, and were the first who as- sumed the title of regular clerks.*

THE’ATRE, n.s. } Fr. theatre; Latin

THEAT’RICAL, adj. ˆtheatrum. A place in

THEAT’RICALLY, adv. J which shows are ex- hibited; a playhouse ; a place built like a theatre with rising seats or steps : the adjective and ad- verb corresponding.

This wise and universal theatre Presents more woful pageants than the scene Wherein we play. Shakspeare. As You Like It.

When the boats came within sixty yards of the pillar, they found themselves all bound, yet so as they might go about, so as they all stood as in a theatre beholding this light. Bacon.

Theatrical forms stickle hard for the p.ize of re- ligion : a distorted countenance is made the mark of an upright heart. Decay of Piety.

Shade above shade, a woody theatre Of stateliest view. Milton.

In the midst of this fair valley stood A native theatre, which, rising flow, By just degrees o'erlooked the ground below.

Dryden

Load some vain church with old theatrick state, Turn arcs of triumph to a garden gate. Pope.

Dauntless her look, her gesture proud, Her voice theatrically loud. Id,

No theatres of oaks around him rise, Whose roots earth's centre touch, whose heads the skies. Harte.

This is sufficiently peevish in a man, who, when he mentions his exile from the college, relates, with great luxuriance, the compensation which the plea- sures of the theatre afford him. Johnson.

So if characters were brought upon the stage with their limbs disjointed by torturing instruments, and the floor covered with clotted blood and scattered brains, our theatric reverie would be destroyed by disgust, and we should leave the playhouse with de- testation. Darwin.

THEATRE. See DRAMA.

THEATRE, in architecture, a building set apart for the purposes of dramatic representation. After their temples, the theatres were, by the Greeks and Romans, considered as the most considerable of their public edifices; and, in order to account for this, it must be borne in mind that their uses were not restricted to the mere exhibition of shows, but that they were applied to other and more important purposes ; they served as places of assembly when the people gathered together on any interesting poli- tical occasion, and hence the walls of the theatre almost as frequently re-echoed with the deliber- ations of the citizens in matters of great public interest, as with the merriment of the masked comedian or the lamentations of bis

tragic coad- jutor.

The Greeks were in the habit of giving Bac- chus the credit of having invented this species of edifice, and tbe theatres were accordingly very often dedicated to him, as was the case with

that most magnificent one at Athens, of which the reader will find, as he proceeds, a succinct description. In the first instance they con- structed, in order to preserve the performers and spectators from the heat of the sun, a sort of huge cabin made of branches of trees ; but this was more easily done when the procession or exhibition occurred in the country. In the towns they erected a scaffold of wood, and Thespis is said to have given his recitations in a chariot or cart. But in process of time, and according to the progression which we may observe in all the arts, the scaffolding became permanent instead of temporary, was surrounded by a wall, and at length shot up into the magnificent theatre, in the construction and decoration of which the extent of Grecian taste and skill was exhausted. In after ages, the Romans followed their exam- ple, if not with equal taste, with still greater splendor and luxury.

Ancient authors have treated of the construc- tion of theatres but obscurely and imperfectly. Vitruvius has given us no account either of their dimensions, or of the number of their principal and constituent parts ; presuming, it may be supposed, that they had been well enough known, or could never have perished ; for example, he does not determine the dimensions of the rows of benches. Among the more modern writers the learned Scaliger has omitted the most essen- tial parts, and the citations of Bulingerus from Athenaus, Hesychius, Eustathius, Suidas, and others, throw but a weak and imperfect light or the real construction of ancient theatres.

An exact description of the theatre of Bacchus at Athens, whose circumference is still visible, and whose ruins are a monument of its ancient magnificence, will give us a true idea of these structures. The famous architect Philos built this theatre in the time of Pericles, above 2000 years ago : it consisted without of three rows of porticoes or galleries, one above the other, and was of a circular form. The diameter was 100 Athenian feet, nearly the same in English mea- sure, for which reason it was called by the Athe- nians Hecatompedon. A part of the area, which comprehended fourteen feet of the diameter, did rot belong precisely to the theatre, being behind the scene. The theatre itself was divided into two principal partitions, one for the spectators, the other for the representators. The parts de- signed for the spectators were the conistra, which the Romans called arena : the rows of benches, the little stairs, and the gallery called circys. The parts appropriated to the actors were the orchestra, the logeon, or

thymele, the prosce- nium, and the scene. In that part of the edifice allotted to the spectators were twenty-four rows of seats or benches ascending gradually one above the other, and proceeding round the co- nistra or arena, in an arch of a circle, to the stage, which the Greeks called proscenion. These benches were distinguished eight and eight, by three corridors or passages, which were called diagoma. They were of the same figure with the rows of the seats, and were contrived for the passage of the spectators from one story to another, without incommoding those who were already placed. For the same convenience

were stairs that passed from one corridor to another across the several rows, and near those siairs there were doors by which the people en- tered from the galleries on the outside, and took their places according to their rank and distinc- tion. The best places were in the middle divi- sion, containing eight rows of seats between the eighth and seventeenth : this division was called bouleuticon, and designed for the magistrates, the other rows were called ephebicon, and were for the citizens, after they were eighteen years of age. The height of each of these rows of benches was about thirteen inches, their breadth about twenty-two inches ; the lowest bench was about four feet hiˆh from the level of the floor : the height and breadth of the corridors and passages was double the height and breadth of the benches. The sides of the stairs passing from the body to the edifice towards the stage were not parallel ; for the space between them grew sharper as they came near the conistra or arena, and ended in the figure of a wedge (whence the Itomans called them cunei), to prevent the falling down of the rain upon those steps that were called pent-houses sent up to carry off the water. Above the uppei corridor there was a gallery called circys, for women, where those who were infamous, or irregular in their lives, were not permitted to enter. This theatre was not near so spacious as that built at Rome by Marcus Scaurus the aedile ; for in that there was room for 79,000 persons, in this there was room for 6000 ; it could not contain less, for the suffrages of the people were taken in it, and by the Athe- nian laws 6000 suffrages were requisite to make a decree of the people authentic.

Thus much for the places appointed for the spectators. As to those which were designed for the actors (which comprehended the orches- tra, the logeon or thymele, the proscenium, and the scene), the orchestra was about four feet from the ground, its figure was an oblong square, thirty-six fefit in length, extending from the stage to the rows of benchesˆ its breadth is not men- tioned in the memoirs we have of this theatre, which were taken upon the spot about 100 years since, by Mons. de la Guillatiere, an ingenious traveller. In wrtain places of it the music, the chorus, and the mimics were

disposed. Among the Romans it was put to a more honorable use, for the emperor and senate had places upon it. Upon the flat of the orchestra, towards the place of the actors, was an elevation or platform called logeon or thymele, which among the Ro- mans was called pulpitum ; it was higher than the orchestra ; its figure was square, being six feet every side, and in this place the principal part of the chorus made their recitations, and in com c interludes the mimics used to perform in it. Tl»e proscenion, or stage, was raised above the logeon. That great architect, Philos, con- trived the edifice in such a manner as that the representations may be seen, and the voices of the actors may be heard with the greatest advan- tage. The proscenion was eighteen feet in lirvadth. and its length extended from one side of the edifice to the opposite side, but not dia- metrically, being eighteen feet distant from the centre.

The scene, properly speaking, was the columns and ornaments of architecture raised from the foundation, and upon the sides of the prosce- nion, for its beauty and decoration. Agatharcus was the first architect who found out the way to adorn scenes by the rules of perspective, and TEschylus assisted him. Parascenion signified the entire space before and behind the scene, and the same name was given to all the avenues and passages from the music room to the place where the actors performed.

The theatre of Regilla, not far from the tem- ple of Theseus in Athens, was covered magni- ficently, having a fair roof of cedar. The Odeon, or theatre of music, was covered likewise ; but no part of the theatre of Bacchus, which we have described, was covered except the pros- cenion and circys. The Athenians, being ex- posed to the weather, came usually with great cloaks, to secure them from the rain or cold; and, for defence against the sun, they had the sciadion, a kind of parasol, which the Romans used also in their theatres by the name of um- brella : but, when a sudden storm arose, the play was interrupted, and the spectators dis- persed. At Athens their plays were always re- presented in the day time, which made the un- roofed theatre much less inconvenient. In that now described, Philos has preserved a just sym- metry of architecture, and showed great judg- ment in assisting the communication of the sounds; for the voice being extenuated in an open and spacious place, where the distant walls, though of marble, could give little or no reper- cussion to make it audible ; he contrived cells in the thickness of the corridors, in which he placed brass vessels supported by wedges of iron, that they might not touch the wall. The voice proceeding from the stage to the corridors, and striking upon the concavity of these vessels, was reverberated with more clearness and force : their number in all was twenty-eight, and they were called echea, because they gave an augmen- tation or an echo to the sound. Outwardly there was a portico, consisting of a double gallery divided by rows of pillars, called the portico of Eumenicus. The floor of this portico was raised a good distance from the

ground, so that from the street they ascended to it by stairs. It was of an oblong square figure, embellished with green pallisadoes, to please the eyes of those who walked into it.

Here it was that their repetitions were made, and proposed for the theatre, while the music and symphony were in the Odeon. ‘ If e > er,’ says a sensible writer, ‘ the present generation, or posterity, would dignify the drama with such noble edifices as were constructed for it by the ancient Greeks and Romans, they should enter into articles w;th the dramatic poets and per- formers, that v.o immodest witticisms be repeat- ed, and no lascivious passions expressed on the stage. If the passion of love is to be described, let it be described with decency, as that of Dido for /Eneas, in the TEneid. Not only the mo- desty of the spectators in 1o be scrupulously respected, but likewise every other virtue : when vice is the subject of the drama, it ought to be represented in an odious light ; the unfortunate

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Mr. Budgel threw himself into the Thames, to do what Cato had done, and Addison had ap- proved. See the bad effects of vice represented as a virtue ! That the rules of virtue and deco- rum be regarded in all respects, the theatres should be removed from the neighbourhood of brothels, or the brothels should be compelled to remove out of the neighbourhood of the the- atres ; then these amusements would become as innocent as they are diverting. In the situation of a theatre, not only the manners of the people are to be considered, but also their health, by having it in a free and open air. In Athens the scene looked upon the castle hill ; Cynosarges, a suburb of Athens, was behind it; the MUSECUS was on the right hand ; and the causeway lead- ing to PynEum, the neighbouring seaport, was on the other side.’

The Olympic Theatre of Vicenza was design- ed and built in 1583 by Palladio, in imitation of the ancient theatres. Its form is semi-ellip- tical, it not being possible from the narrowness of the situation to use a semicircle. This semi- ellipsis is encompassed all round with a frame- work of stairs consisting of fourteen steps of wood for the spectators. Its greater diameter is ninety-seven feet and a half, and its lesser, as far as the stage, is about fifty-seven feet and a half. At the summit of this staircase, or receding gal- leries of stairs, is a corridor of the Corinthian order, which, from the narrowness of the ground, could not be detached from the outer wall all round. Palladio therefore filled up the nine central and the three external intercolumniations, where the columns touched the external wall, with niches and statues. The stage is construct- ed with two tiers of columns, both of the Corin- thian order, and surmounted with a light and well proportioned attic. On the stylobate of the second story are placed statues,

and the in- tercolumniations are enriched with niches and statues. The panels of the attic are ornamented, with bassi and mezzi rilievi of the labors of Her- cules, and the centre panel over the largest of three openings in the proscenium, which is arched, with a representation of an ancient hip- podrome. Over this arch is the following in- scription : —

V1RTVTI AC GEN 10 OLYMPICORVM ACADEMIA THEATRVM HOC

A FVNDAMENTIS EREXIT ANNO M.U.LXXXIIII. PALLADIO ARCUIT.

In the front of the stage are three openings, through which are seen three majestic avenues diverging right and left, on each side of which are magnificent palaces and private dwellings, finishing with triumphal arches, all planned and erected in alto rilievo, foreshortening and dimi- nishing perspectively, by Vincenzo Scarnozzi. The exterior of this theatre is by no means suit- able to its internal beauty, but it was built, not at the expense of the senate or government of Home, but by some private Yicentine gentle- men of the Olympic Academy. — Vide 1'Origine delF Academia Olympica di Vicenza, con una lueve Descrizione del suo Teatro Opera di Otta- MO Bertotti Scarnozzi, Architetto, published at \ icrnza, 1690, by Giovanni Rossi.

The theatre of Parma is commonly supposed to have been the work of Palladio, and finished by Bernini; but neither of them had the smallest share in it. Gio. Battista Magnani, an architect and engineer, and Leonello Spada, a painter, were employed by the duke Ranuccio Farnese to construct and embellish that famous theatre. Its form is semicircular, to which are added two straight sides. Its length from the wall to the front of the stage is about 125 feet ; and its breadth, reckoning from the wall behind the boxes, about ninety-three feet. Around the pit, which is about forty-eight feet broad, is erected on a basement, with balusters between the piers, a gradation of fourteen rows of seats, with two entrances at the sides, and a large ducal balcony in the middle. Each entrance is furnished with a large winding staircase. Over these gradual seats are raised two stately boxes, one Doric, and the other Ionic ; each with a gradation of four rows of seats. The upper decoration of the boxes is sustained by enchased pillars, between which are arches supported by other pillars, smaller and insulated, which causes a confusion of appearance in the architecture, and a great impediment to the view of the spectators who are in the boxes. A worse effect is produced by the two great lateral entrances which are be- tween the seats and the stage, as the two orders with which they are ornamented, instead of unit- ing in the best manner, divide, and rudely clash both with the theatre and with the stage. In the middle of the upper arch of these entrances, on a very high pedestal, is an equestrian statue, which seems determined to rush headlong, to destroy all rules of propriety. Great projec-

tions and unmeaning arches hurt the stage and the orchestra. But the greatest inconvenience is in the front of the stage being excessively narrow, and distant from the seats, whilst with the greatest ease it might have been constructed wider, and much nearer the spectators. From the aforesaid inconvenience, and the above-men- tioned medley figure of the theatre, results this very great evil, that the spectators who are at the sides can see but a very small part of the stage ; in compensation for which they hear surprisingly well, as the structure, whether by design or acci- dent, is such that, a person whispering in one part, another situated at the opposite side dis- tinctly hears him. This great theatre has 110 external decoration ; and, by being such a length of time out of use, is in such a ruinous state as scarcely to be visited without danger. — Vide Capi d'Opera del Teatro antico moderno Ita- liano e straniero, &c. Presso Giacomo Curti, 1789, Venezia.

The theatre of Milan begins from its founda- tion with a curve of a diameter of seventy-two feet, which gradually widens into two straight sides ; whence in the stage the breadth is seventy- seven feet, the front of the stage is sixty-nine feet, and the length of the pit 140 feet which is almost double its breadth. Hence it appears excessively long. The form of this theatre is directly opposite to that of the greatest number of other modern theatres, which all run narrow towards the stage ; whilst this is widest at that part. ?uch a contrivance is ver) favorable for

seeing as much as is possible in so uncouth a form. This theatre is constructed with all com- mon boxes ; nor has it any thing remarkable except that each box has opposite to it a small wardrobe, and between the one and the other is a wide corridor.

The celebrated theatre of Fane was designed about the year 1670, by James Torelli, and erected at the expense of himself and five other Fanesian gentlemen. Its form is what the French call the toilette form, being in the shape of a dressing-glass, eighty-four feet long, and little more than half broad. It has a convenient dou- ble staircase, which leads to the fifth tier of boxes, the last of which forms a lobby with a private gallery at each extremity of the straight sides. There are two columns on each side of the stage, with a niche between each column, where are the statues of Pallas and Minerva, and in the centre is tlie inscription,

THEATRUM FORTUNE.

The theatre at Verona was built by Francesco Galli Bibiena, under the direction of the marquis MafTci, and is situated within the Philharmonic Academy. Its figure is a curve, which gradually enlarges in proportion as it approaches the stage, and the boxes (which are in five tiers) project out more and more as they are distant from the stage; which, although it may have a good effect in looking towards the stage, must have a bad one in viewing the theatre from the stage ; the front of which is rather narrow and ill designed. The orchestra is divided from the auditory, that none of the audience may be disturbed with the excessive noise of the instruments : and the stage is reckoned by the Italians to be placed in a just situation, because they think the actors ought never to be seen sideways. Between the auditory and the stage are doors leading to the pit, according to the custom of the ancients, which is an excellent contrivance ; for the door ought never to be opposite to the stage, because it not only occupies the best place in the audi- tory, but weakens the voice of the actor. Be- sides the exterior roof, this theatre has an inter- nal one of boards, with holes in certain places; which, like the body of a musical instrument, renders the theatre very sonorous. There are commodious staircases at the four angles ; the corridors, lobbies, and stairs are convenient, but the principal entrance is on one side. In the Philharmonic Academy they still preserve a model for a theatre in the ancient Greek and Ro- man manner, which they intended at first to have executed, as it was made expressly for that purpose; but in the act of execution their cou- rage failed them ; and, despite the exertions of Alaffei, and many other celebrated literary and scientific men, with which Verona abounded, fashion prevailed, and the present theatre was executed by Bibiena. Thus Verona was de- prived of an ornament, which would have in- creased its splendor, and exhibited with advan- tage those admirable antiquities which it preserved with so much laudable care.

I! onio has at least a dozen theatres; which one would suppose were excellently designed alter so many monuments of the golden aue of

Augustus, and especially after the theatre of Marcellus. However it ought to have been, the fact is otherwise. The worst theatres in Italy are those of Rome; all irregular, ill shaped, de- fective in construction, and dirty to excess ; yet the modern Romans think they have the most elegant theatres in the world. Its largest theatre is that of the Aliberti, designed and executed by Ferdinand Bibieni, of an irregular and incom- modious curve, with six tiers of arched boxes. The length of the pit is about fifty-five feet, and its greatest breadth fifty-one feet and a half. It has miserable entrances, wretched staircases, im- passable corridors, and the very worst situation in the city.

The theatre of Tordinona was built in the seventeenth century by Carlo Fontana, and re- built in the last under Clement XII. It is of a figure more

approaching a circle than any other. Its greatest diameter is fifty-two feet, and its smallest forty -eight feet. It has six tiers of boxes, the upper tier of which is compressed inthesidr. Of the internal accommodations and external ornaments there is no occasion to make the least mention, it so much resembles all the rest.

The most modern theatre of Rome is that of Argentina, built by the marquis Girolamo Teo- doli. It has six tiers of boxes. Its figure is neither circular nor elliptical, but of that irregu- lar shape called the horse-shoe or lyre. Its greater diameter is fifty-one feet, and its lesser forty-six feet. The situation, stairs, passages, and entrances, are all wretched. Neither of these three large Roman theatres has any theatri- cal front, and they are all built of wood. The rest are in a similar style of inelegance and iri- commodiousness, but smaller.

The theatre royal of Naples, constructed ac- cording to a design of the engineer Brigadier Giorgio Metrano in 1737, is also of the lyre or horse-shoe form, that is, a semicircle, the ex- tremities of which elongate in almost straight lines, but draw nearer to each other in proportion as they advance towards the stage. The greatest diameter of the pit is about seventy-three feet, and the smallest sixty-seven feet. There are six tiers of boxes, with a superb royal box in the middle of the second tier. The building is all of stone ; the stairs are magnificent ; the avenues, vestibules, corridors, and lobbies, spacious. The entrance, separated into three divisions, has some decorations which are neither sufficiently majestic nor appropriate.

The theatre royal of Turin was erected in 1740 by count Benedetto Alfieri, a gentleman of the chamber, and principal architect to the kin;; of Sardinia. It is of an oval figure. The pit as far as the stage is fifty-seven feet in length, and about fifty in breadth. There are six tiers of boxes, divided by partitions, but perhaps too much arched. The royal box in the second tier includes five boxes, ornamented with balustrades, and covered with a superb canopy over the centre, and projects out in a convex form, under which is the principal entiance into the pit. The last tier, or, as they call it, the dovecote (piccio- nara) has a parapet all balustraded, in the front of which is a circular row of seats for servants out of livery ; the left side is for the public ;

and the right is separated for the servants of the court, and those of the ambassadors. At the two extremities, contiguous to the stage, are two boxes for persons in the service of the the- atre, and, excepting these two partitions, the boxes of this last tier are not in the least sepa- rated from the

grand corridor which winds around. Under the orchestra is a concavity with two tubes at the ends, which extends to the height of the stage, in order to improve the sound. The ceiling is arched, and above, is a i\ om for the scene painters ; but the convexity of the ceiling is covered with strong cemented bitumen, to prevent the water from penetrating through, which would damage the paintings underneath. At the extremities are boxes continued round within the cornice, well caulked :md covered with bitumen, and filled with the finest sand, in order to absorb any small quan- tity of water which by accident may fall in, a. very necessary precaution to preserve the painting of the ceiling unhurt. In most of the theatres on the continent the lamp or chan- delier is usually suspended from the middle of the ceiling over the pit, within a large aperture, to the great injury of the principal paintings, the voice of the actors, the view of the boxes, and, above all, whoever is underneath is thus exposed to the dust, dirt, and even to no small danger. To avoid these inconveriiencies, they have con- trived what is not much less awkward, the lights to descend from the middle of the ceiling of the proscenium, which is decorated with two Corinthian columns raised on a plain pedestal. Between the columns are two boxes, one above the other, for the actors ; over the columns are pediments, and over the stage a larger one, all three inelegant, inappropriate, and ill conceived. The entrances, stairs, apartments of various kinds, galleries, lobbies, and corridors, are of a royal magnificence. There is also sufficient space for the machines of decoration, and every conve- nience for introducing quadrupeds on the stage, as well as for fire-works. Wells, drains, maga- zines, and ovens, are not omitted in this well furnished theatre; they have even contrived stoves with tubes communicating to the pit, to warm it when necessary. This considerable theatre has no front belonging to it but what is common with the royal palace to which it is annexed.

The theatre at Bologna, finished in 1763, was designed and built by Antonio Galli Bibiena, the son of Ferdinando. In the inside it has the unhappy shape of the section of a bell cut lengthways. Its length in the pit is sixty-two feet, and its breadth in the stage is about fifty. There are five tiers of boxes, each consisting of twenty-five, besides a circular place round the pit four steps high, fenced with a balustrade. The boxes of the first and second tier are cen- tral, the two above are in flat sides, and those of the fifth are drawn into half moons, and are without balusters. Over the door are four tiers, but very small. The imposts and pilasters which divide the boxes are overloaded with car- touches, scrolls, brackets, and other wretched bizarreries of the Roman school of architecture. The parapets have wretched ill proportioned balustrades and worse projections. The two

frontispieces of the lateral entrances terminate in a line with the supporters of the first story, exactly cutting the columns and the parapet. The other

frontispiece of the entrance in the middle is fastened under the principal box, and e-/en with the impost, but with an internal decoration, whicli is an almost unexampled barbarism in the art. It is pretended by the Bolognese that many disputes, oppositions, and satires, occa- sioned by the choice of this design of Bibiena, have caused alterations very prejudicial to the theatre. The exterior principal front is orna- mented with two orders well divided ; the first of Doric columns insulated, over the capitals of which are arches in a barbarous style, perhaps to render the porticoes which are on the same floor lighter. The second order is of a mixed Ionic, with windows between, and with their pedi- ments, which are also in the windows, within the aforesaid porticoes.

Monsieur Soufflot constructed at Lyons, in 1756, a theatre of an oval figure, the pit of which up to the stage is fifty-four feet in length and forty feet broad, with seats in the circumference and front. There are three tiers of boxes, each continued without partitions, and equally fur- nished with seats. The second tier is more recluse and private than the first, and the third more so than the second. This edifice is well provided with convenient appurtenances, and has a straight front with three tiers of windows, a large balcony in the middle, and a balustrade on the top surmounted with statues.

Theatre of Montpelier. — Montpelier has a theatre in the shape of a bell internally, about forty-four feet long, and thirty feet broad. The pit is surrounded with a portico, on the pillars of which are raised several tiers of boxes with spacious corridors round them, and at the bot- tom furnished with various steps to ascend and enter the apartments, offices, and vestibules ; and the various staircases that are around this theatre form a regular edifice of a good appear- ance on the outside, but nothing to denote its internal use.

The theatre of the opera at Paris, built in

1769 from the designs of Moreau, is a long oval, with four tiers of boxes, without partitions, and there are likewise some boxes between the columns of the stage. The pit is about thirty- nine feet broad, and thirty-two feet long, and has a range of seats in front. The outside is simply decorated, and has a very convenient portico.

Theatre of Versnilks. — In the palace of Ver- sailles M. Gabriel the king's architect erected in

1770 a theatre after the ancient manner, that is, of a sen>icircular figure, with seats all round, encompassed with a gallery. The court occu- pies the pit, in the middle of which the king sits.

*Theatre of Petersburgh. — At Petersburgh, under the empress Elizabeth, was erected within the imperial palace a superb theatre by count Rastelli, a Venetian. The stage is about seventy- two feet long, and the rest of the theatre, which is elliptical, is in length 103 feet. There are five tiers of boxes, each divided into eighteen. The first tier has a balustrade ; the second boxes have arched fronts ; the third, drapery a la to**

lette; the fourth is plain, with flat sides ; and the fifth open, without any divisions. The im- perial gallery, which is in front, was ornamented by Monsieur de la Motte, a French architect, with four columns to support it, and a canopy which extends over all the third tier. The court goes into this gallery to enjoy a sight of the dances, but, to hear the opera better, they go to a box contiguous to the orchestra. The stage is decorated with two columns on each side, and with two flights of stairs to facilitate the commu- nication of the stage with the orchestra and pit. Our own national theatres are, we presume, so well known to the reader, either visually or by description, that it does not seem necessary to go into the subject here. We may, however, observe, in passing, that the interior of Drury Lane theatre has of late years been re-modelled in a very beautiful manner by Mr. Beazley the architect, and now presents one of the most ele- gant as well as compact coups d'oeils of any the- atre in Europe.

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1'Op- tique ou de I'Acoustique, avec un Examen des prmcipaux Theatres de 1'Europe, et une Ana- lyse des Ecrits les plus importans sur cette Ma- tiere, Paris, 1782, 8vo. Vine. Lamberti, la Regolata Construzione de Teatri, Nap, 1787, fol. Franc. Ricati, Delia Contruzione de Teatri, se- condo il Costume d'ltalia, vole a dirse in piccoli Logi, Bass. 1790, 4to. A Treatise on Theatres, including some Experiments on Sound, by G. Saunders, London, 1790, 4to. Details and re- presentations of ancient and modern theatres may be found in Trattato de Teatri antichi e moderni, Ver. 1723, 4to. J. Capi, Opera del Teatro antico e moderno, Italiano e Straniero, Ven. 1789.

( )n the theatres of the ancients, we may con- sult among other works : — Boindin, Discours sur

la Forme et la Construction du Theatre des Anciens ou Ton examine la Situation, les Pro- portions, et les Usages de toutes ses Parties, in the second volume of Memoires de 1'Academie. Ant. Bocchi, Osservazioni sopra un Teatro an- tico, Scoperto in Adria, Venez. 1739, 4to. with plates, and in the third volume of M6moires de rAcade"mie de Cortona. Girol. del. Pozzo, Sopra i Teatri degli antichi. At the commence- ment of the translation of Sophocles, by Thos. Franklin, London, 1766, 8vo., is a Dissertation on ancient Tragedy, in which we find a chapter entitled, On the Construction of the Greek The- atre. We find engravings of the ancient theatres in several books of travels, such for instance, as the Voyage Pittoresque de Naples et de Sicile, by M. Houel, Paris, 1782, fol.

On the theatres of the moderns, more parti cularly, are : G. Montenari, Dicorso del Teatro Olimpico di A. Palladio in Vincenza, Pad. 1733, 1749, 1752, 8vo. Description du Theatre de la Ville de Vicenza en Italic, by A. Palladio, drawn by Patte, Paris, 1779, 4to. The same theatre is found in the Fabriche e disegni, di A: Palla- dio, Vic. 1776—1785, 5. vols. fol. Plante e spaccato del Teatro di Bologna, Bol. 1763, fol. Cas. Morelli, Planta e Spaccato del nuovo Tea- tro d'Imola in Roma, Rome, 1780, fol. Plan de la Salle de 1'Opera de Berlin, built by the baron de Knobelsdorf, Berlin, 1753, oblong fol. De- scription de la nouvelle Salle de Com6die a Breslau, Berlin, 1783, 4to. Parallcle des Plans des plus belles Salles des Spectacles publics d' Europe, by M. Dumont, Paris, 1760. De- scription de la Salle de Spectacle de Bordeaux, by Louis, Paris, 1782, fol. A Description of the Theatre Royal Drury Lane, by B. Wyatt, London, 4to.

THEBJE, the ancient name of Thebes in Boeotia.

THEBAIC (from Thebes or Thebais), of or belonging to Thebes or Thebais.

THEBAIC TINCTURE, a name given to lauda- num, or the tincture of

opium.

THEBAID, a celebrated heroic poem of Sta- tius, the subject of which is the civil war of Thebes between the two brothers Eteocles and Polynices, or Thebes taken by Theseus.

THEBAID, or THEBAIS, in geography, the ancient name of an extensive district in the south of Upper Egypt, so called from Thebes, its chief city. It is the least fertile and the least popu- lous of any country in Egypt. It is the retreat of many Greek Christians, but is chiefly inha- bited by Arabs, who are zealous enemies to the Turks. It is now called Said.

TIIEBAN (from Thebes), of, or belonging to, or sprung from Thebes.

THEBAN LEGION, a legion of Roman soldiers, who suffered martyrdom for Christianity under Dioclesian and Maximian. It was commanded by St. Maurice, and, together with the officers, amounted to 6600 men. This legion received its name from the city of Thebes in Egypt, where it was raised. It was sent by Dioclesian to check the Bagaudse, who had excited some disturb- ances in Gaul. Maurice, having carried li:» troops over the Alps, the empeior Maximian commanded him to employ his utmost exertions

to extirpate Christianity. This proposal was re- ceived with horror both by the commander and by the soldiers. The emperor, enraged at their opposition, commanded the legion to be deci- mated ; and, when they still declared that they would sooner die than do any thing prejudicial to the Christian faith, every tenth man of those who remained was put to death. This perse- verance excited the emperor to still greater cru- elty ; for, when he saw that nothing could make them relinquish their religion, he commanded his troops to surround them, and cut them to pieces. Maurice, the commander of these Christian heroes, and Exuperus and Candidus, officers of the legion, who had chiefly instigated the soldiers to this noble resistance, signalised themselves by their patience and their attach- ment to the doctrines of the Christian religion. They were massacred, it is believed, at Agaune, in Chablais, the 22d September, 286. Notwith- standing many proofs which support this trans- action, Dubordier, Hottinger, Moyle, Burnet, and Mosheim, doubt the fact.

THEBES, an ancient city of Egypt, capital of the district of Thebais, was one of the most renowned cities of the ancient world. It was also called Diospolis, or the city of Jupiter ; and was built, according to some, by

Osiris, accord- ing to others by Busiris. Its length, in Strabo's time, was eighty furlongs, or ten miles ; but this was nothing in comparison to its ancient extent, before it was ruined by Cambyses, which was no less than 420 stadia, or fifty-two miles and a half. The wealth of this city was so great, that, after it had been plundered by the Persians, what was found, on burning the remains of the pillage, amounted to above 300 talents of gold and 2300 of silver.

THEBES was also the name of a celebrated city of ancient Greece. It is supposed to have been built by Cadmus, about the year of the world 2555. This Cadmus, according to the Greeks, was the son of Agenor king of Sidon or of Tyre ; but the Sidonians say he was his cook, and that his wife was a musician at court, with whom he ran away into Greece. The Greek writers tell us that, being commanded by his father to go in search of his daughter Europa, whom Jupiter in the shape of a bull had carried off, and forbid to return without her, he built, or rebuilt, the city of Thebes, after having long sought her in vain. He was at first opposed by the Hyantes and Aones ; the former of whom he defeated in battle, and forced to retire into Locris ; the latter submitted, and were incorporated among his subjects.

Those who endeavour to extract some truth from the multitude of fables in which the early part of the Grecian history is obscured, are of opinion that Cadmus was one of the Canaanites expelled by Joshua; and that he was of the family of the Cadmonites mentioned by Moses and Joshua. He is universally allowed to have introduced the Phoenician letters into Greece, set up the first schools, and introduced brass ; which from him had the name of Cadmean given to it. The government of Thebes continued for a long time monarchical ; and the names of a number of its kings have been transmitted to us,

with some account of their transactions ; but so much obscured by fable that little certain can be determined concerning them. See CREOX, ETEOCLES, LAIUS, CEuiPUS, &c. We shall therefore here only take notice of that period of it when the Thebans emerged from their obscu- rity, and for a time held the sovereignty of Greece. Republic of Thebes until the battle of Leuctra. — Though the Thebans are Tamed in the early period of their history for their martial exploits, yet in process of time they seem to have degene- rated. At the time of the invasion of Xerxes they were the first people in Greece who were gained over to the Persian interest. On account of this misbehaviour they were become very obnoxious to the other states, especially to the Athenians, whose power and renown increased every day, and threatened at last to swallow them up alto- gether. The Thebans, being in no condition to oppose such a formidable power, put themselves under the protection of the Spartans, who, out of jealousy to the Athenians, readily forgave them ; and so grateful were the Thebans for the*

kind- ness shown them at this time, that, during the whole of the Peloponnesian war, Sparta had not a more faithful ally. By these means they not only recovered the government of Boeotia, of which they had been formerly in possession, till deprived of it on account of their siding with the Persians, but their city became one of the first in Greece. By this prosperity the Thebans were so much elated that, when the peace of Antal- cidas came to be signed, they refused to agree to it, as they were thus once more deprived of the government of Bceotia ; so that it was not with- out the utmost difficulty that they were overawed into it by the other states. Not content with forcing them to give up this point, however, the Spartans undertook to change the form of the Theban government, which at this time was a democracy, and accomplished it through the treachery of those who had the care of the citadel. The Thebans continued under the power of the Spartans for four years ; at the end of which term a conspiracy being formed against them by some of the principal people in the city, among whom was a young nobleman named Pelopidas, the Spartans were massacred and driven out, and the citadel regained. During the tumult, Epaminondas, afterwards the celebrated general, with a number of the best citizens, joined the party of Pelopidas; and the latter, having called a general assembly of the Thebans, proclaimed liberty to them, and exhorted them in the strongest manner to fight for their country. This speech was received with the greatest acclamations ; Pelopidas was unanimously proclaimed the pre- server of Thebes, and was charged with the management of the war which was then to be de- clared against Sparta. These transactions so much exasperated the Spartans that they imme- diately sent their kingCleombrotus against them, though it was then the depth of winter. The Athenians in the mean ..'.me, who had hitherto assisted the Thebans, declined any farther con- nexion, lest they should draw upon themselves the resentment of the Spartans. But they were soon after determined to act again on the same side, by an attempt which the Spartan genera'

*Sphodnas had rashly made on the Pyraeum or harbour of Athens. Thus, by means of the Athe- nians, a powerful diversion was made in favor of the Thebans, who gradually recovered all the towns of Boeotia, and at length began to act offensively against their enemies, and made a powerful invasion in Phocis. They had no*v many sharp encounters with them ; which, though they did not amount to decisive battles, yet raised their courage, and depressed that of the Spartans. In the battle of Tanagra the Lacedae- monians were entirely defeated by the Athenians and their allies. Soon after this, Pelopidas, with a body of only 300 Thebans, entirely*

routed and dispersed nearly 1000 Spartans. These successes of the Thebans greatly alarmed the Athenians, who continually sought to oppose their growing power. In this opposition they were joined by the Plataeans, who on this account became ex- tremely obnoxious to the Thebans, so that they at last came to a resolution to surprise their city. This they accomplished, and entirely destroyed it, together with Thespia, another city extremely well affected to Athens. Soon after this the Thebans, encouraged by their success, began to think of enlarging their territories, and of making encroachments on their neighbours, as they saw other states had done before them. When the general treaty for restoring peace to Greece came to be proposed by the Athenians, and was upon the point of being executed by the rest of the states, the Thebans refused to agree to it unless they were comprehended in it under the name of Boeotians. The consequence was that Sparta declared war against them, about the year A. A. C. 371. The Thebans were in no small consterna- tion to see themselves engaged in a war with the powerful Spartans, without any ally to assist them. However they resolved to make the best defence they could ; and put their army, consist- ing of 6000 men, under the command of Epami- nondas ; and at LEUCTRA defeated the Spartans with threat slaughter, as related under that article. Thebes until tlie death of Pelopidas. — The v ictorious general, desirous to improve this great victory, sent a herald, crowned with garlands, to communicate it in form to the Athenians, in hopes that this would be an effectual means to reunite them to the Theban interest. But it proved quite otherwise. Athens, which now looked upon them with a jealous eye, and had then in view the sovereignty of Greece, chose rather, if they could not wholly obtain it, to share it with Sparta, than to let the Thebans into the whole ; and therefore even declined giving their herald audience. However, the Thebans took care to strengthen themselves by alliances; and, besides the Arcadians and Eleans, had got the Phocians, Locrians, Acarnanians, Euboeans, and other states, under their dependence : so that they were now in a condition to act offensively against the Spartans. Accordingly, under pre- tence of assisting the Arcadians, they entered Peleponnesus with a gallant army, with Epami- nondas and Pelopidas at their head. Here they were joined by the Arcadian and other confede- rate forces ; ?o that the whole amounted to 40,000 or 50,000 men, besides great numbers of those vho followed the camp rather for plunder

than fighting, and were computed about 20,000 more. The army was divided into four columns, and moved straight towards Sellasia, the place of their rendezvous, from which they pursued their journey with fire and sword towards Sparta. But here they were repulsed by Agesilaus, who was then returned to that metropolis. To repair, in some measureˆ this disgrace, and at the same time to leave some lasting monument which should

redound as much to his glory as to the mortification of the Spartans, Epaminondas left not their territories till he had restored the pos- terity of the old Messenians to their ancient do- minions, out of which they had been banished nearly 300 years, rebuilt their capital, and left a strong garrison for its defence. He was, however, like to have been stopped in his return by Iphi- crates, whom the Athenians had ent with 12,000 men to intercept him ; but this last loitered so long at Corinth that the Thebans had passed the defiles of Ceuchreae, the chief place where he could have obstructed his retreat had he taken possession of it in proper time. Epaminondas continued his march till he came in full view of the city of Corinth. He found the roads choked up with trees, rocks, stones, and every thing that could render them impassable ; and the Corin- thians well fortified, and resolute on a stout de- fence. But he came so furiously upon them, notwithstanding all these difficulties, that they abandoned all their entrenchments and outworks to the Thebans, and fled into the city. Thither these pursued them sword in hand, and mtide a horrid slaughter of them ; insomuch that Co- rinth must have unavoidably fallen into their hands had their generals pursued these advan- tages ; but whether they were afraid of the Athe- nians falling upon them, or apprehended some dangerous ambush in a country with which they were but indifferently acquainted ; or whether the army was too much weakened through so many fatigues ; or, lastly, whether the coldness of tlie season, it being then the depth of winter, would not permit them to proceed farther, they im- mediately marched towards Bceotia. This gave such a handle to their enemies, that they met with a very mortifying reception at their return to Thebes, where they were both arrested, and clapped up as state prisoners, for having pre- sumed to prolong their command four months longer than the time limited by law, which time took in almost the whole of their expedition from their first entrance into Peloponnesus. However, at last, the judges being ashamed to proceed any farther, they were both honorably acquitted. This prosecution had been chiefly carried on and encouraged by Meneclides, a discontented Theban, and a bold and able speaker, who, by his artful calumnies at the trial, had so far prevailed with the judges as to get Epaminondas deprived of the government of Bceotia for a whole year, though he could not gain the same advantage against Pelopidas, who was then a greater favorite of the people, as being his senior. By this delay the Spartans, with much difficulty, had recovered themselves from their great defeat at Leuctra, and settled their affairs in as good a posture as they could : but, though they had repulsed the Thebnns in

Peloponnesus, yet, from the exploits they had performed there, especially in

the dismembering the whole kingdom of Messenia from them, they had still cause to fear what their forces might do under two such generals ; and had accordingly taken care to strengthen themselves against them, and to provide themselves with a great number of auxiliaries from other states, especially from Athens, with which they had renewed their old treaty, and had agreed that each should have the command five days alternately. Soon after this treaty the Arcadians renewed the war, and took Pallene in Laconia by storm, put the garrison to the sword, and were presently assisted by the \rgives and Eleans, and especially by the Trie- bans, who sent to them 7000 foot and 500 horse under Epammondas. This so alarmed the Athenians that they immediately sent Gobrias with some forces to oppose his passage, and he so behaved himself against the Thebans that they were forced to abandon Peloponnesus a second time. This ill success gave fresh occa- sion to the enemies of Epaminondas to blame his conduct in the highest terms, notwithstanding the singular bravery with wbfcb he and his troops had forced the pass. His friends could not but suspect him of partiality for the Spartans, in not pursuing his advantage over them, and making a greater slaughter of them when he had it in his power; whilst his enemies made it amount to no less than treachery to his country : so that their brave general was once more de- prived of the government of Boeotia, and reduced to the condition of a private man. He did not continue long under this disgrace, before an oc- casion offered to make his services again of such necessity to the state, as to give him an oppor- tunity to retrieve his fame, and wipe off the stain which his enemies had thrown upon him. The Thessalians, who had groaned some time under the tyranny of the usurper Alexander, surnamed the Pheraean, sent an embassy to Thebes to implore their aid and protection ; upon which Pelopidas was immediately sent as ambassador to expostulate with him on their be- hqlf. He was then in Macedon, whence he took the young prince Philip, afterwards the cele- brated Philip II., to protect and educate him ; and, upon his return, marched directly to Phar- salus in Thessaly, to punish the treachery of some mercenaries who had deserted the Thebans in that expedition ; but, when he came thither, he was surprised to be met by the tyrant at the head of a numerous army before that city, whilst his own was but a handful of men. However, whether he supposed, or would be thought to do so, that Alexander came thither to justify himself, ana answer to the complaints alleged against him, he went, with Ismenias his colleague, to him unarmed and unattended, not doubting but his character as ambassador from so powerful a republic, joined to his own character and au- thority, would protect them from insult or vio- lence: but he found himself mistaken; for Alexander had no sooner got them in his hands than he caused them to be seized, and sent prisoners to Pherse. The Thebans, highly re- senting the indignity offered to their ambassa- dors sent immediately an army into Thessaly ;

*but the generals were repulsed with great loss by the Pheraean usurper; and it was owing to Epaminondas, who was among them only as a private sentinel, that they were not totally cut off. For the Thebans, finding themselves in such im- minent danger, which they attributed to the in- capacity of their generals, had immediately re- course to him, whose valor and experience had been so often tried ; and partly by persuasions and intreaties, and partly by threats, obliged him to take the command. This soon gave a different turn to their affairs, and converted their flight into a safe and regular retreat ; for he took the horse and light-armed foot, and plac*ed himself at their head in the rear, and charged the-enemy with such vigor and bravery that he obliged them to desist from their pursuit. However, as the army had suffered such loss before as not to be able to pursue them in their turn, he was obliged to return with them to Thebes, with their pu- sillanimous generals; where the latter were fined 12,000 drachmas each, and the former was re- instated in the command, and sent with a new reinforcement to repair the late dishonor, and prosecute their revenge. The news of his being in full march on this errand greatly alarmed the tyrant ; but Epaminondas, preferring the safety of his imprisoned colleague to all other con- siderations, forbore pushing hostilities to ex- tremes, for fear of provoking the enemy to wreak all his fury on him : to prevent which, he contented himself for a while hovering about with his army, and now and then with such slight skirmishes as should intimidate the tyrant, and bring him the sooner to make some satisfac- tory offers. Alexander, being fully convinced of the superiority of the Theban general, was glad to accept of a truce of thirty days, and to restore Pelopidas and Ismenias to him ; upon which he immediately withdrew his forces, and returned with them to Thebes. By this time Thebes was raised to such a height of reputation and glory as to begin to aim at the sovereignty of Greece. The main obstacle to it was, that the other states grew so jealous of her present greatness, as to enter into the strongest alliances and confedera- cies to prevent its farther growth ; so that not being able now to procure many allies at home, they made no difficulty to seek for them abroad ; and the Lacedaemonians, by leading the van, gave them a plausible pretence to follow their steps, and to procure an alliance with Persia, which at that time was ready to accept of their offers on any terms ; the only question was, which of the three states should be preferred, Sparta, Athens, or Thebes. The Thebans pro- posed to their new confederates to send proper deputies to the Persian court to support their respective interests; which they readily agreed to. These were the Arcadians, Eleans, and Ar- gives; at the head of whose deputation Pelopidas was sent on the behalf of the Thebans ; which the Athenians being apprised of, appointed two on their part. These, being all arrived at the Persian court, began to pursue each their respec- tive interests ; but Pelopidas had by that time gained such credit there, both for his singular address and his extraordinary exploits,*

that he was distinguished in a particular manner from all

ihe other deputies, and was received by the king with the highest marks of honor and esteem, who freely owned himself convinced that the Thebans were the people on whom he could most safely depend ; and, after having greatly- applauded the equity of his demands, ratified and confirmed them with great readiness, to the no small mortification of the other states. The substance of them was, that the liberties for- merly granted to the other towns of Greece should be confirmed ; that Messenia, in particu- lar, should continue free and independent on the jurisdiction of Sparta ; that the Athenians should lay up their "fleet ; and that the Thebans should be looked upon as the ancient and hereditary friends of Persia. The Thebans took advantage of the dissensions which prevailed among the Greeks as a pretence for increasing their forces; and Epamioondas thought it a proper oppor- tunity for his countrymen to make a bold effort to obtain the dominion at sea, as they had ob- tained it in a great measure at land. He proposed it to them in a public assembly, and encouraged their hopes from the experience of the Lace- daemonians, who in Xerxes's time had, with ten ships only at sea, gained the superiority over the Athenians, who had no fewer than 200 ; and added, that it would be a disgrace now to Thebes to suffer two such republics to engross the em- pire of so extensive an element, without putting in at least for their share of it. The people readily came into his proposal, with extraordi- nary applause, and immediately ordered 100 galleys to be equipped ; and in the mean while sent htm to Rhodes, Chios, and Byzantium, to secure those states in their interest, and get what assistance he could from them. His negociation had all the success that could be wished for, notwithstanding the strenuous opposition of the Athenians, and of their admiral Laches, who was sent with a powerful squadron against him. But what more effectually thwarted all his measures was the work that they found for him on land, and the obliging the Thebans to take part in the quarrels that then reigned among their neighbours ; so that whatever projects they bad concerted, they proved abortive at this time. During the absence of that general, and of his colleague Pelopi as, the Orchomenians, being spirited up by some Theban fugitives, had form- ed a design to change the Theban government into an aristocracy ; and 300 horsemen of the former had been actually sent to put it in execu- tion. Their project, however, was timely dis- covered by the vigilance of the magistrates, who caused them to be seized and put immediately to death. They next sent a sufficient force against the city of Orchomenos, with orders to put all the men to death, and to sell the women and children for slaves, which was punctually done; after which they*

razed that noble city to the ground. Pelopidas was then on his way to Thessaly, at the head of a powerful army, whi- ther he had been sent to assist the Thessalians, who still groaned under the tyranny of Alexan- der the Pheraean, and had made several brave efforts to recover their liberty, but had been still overpowered by that usurper. Being joined by the Thessalians, he encamped in the face of the

enemy, though far superior in numbers, and con- sisting of above 20,000 men. A fierce engage- ment soon ensued, in which both sides fought with uncommon bravery. The place where the battle was fought was called Cynocephala, from several little hills on it, between which there lay a large plain. Both sides endeavoured at first to post themselves on these eminences with their foot, whilst Pelopidas ordered his cavalry to charge that of the enemy below ; which they did with such success that they soon put them to the rout, and pursued them over the plain. This obliged the tyrant to gain the tops of the hills, where he greatly annoyed the Thessalians, who endeavoured to force those ascents; so that Pelopidas was obliged to give over his pursuit to come to their relief. This immediately in- spired the Thessalians with fresh courage, who again charged the enemy at several onsets ; and soon threw them into such disorder that they were forced to give way. Pelopidas no sooner perceived the advantage, than he began to look about for Alexander, with a design of engaging him. Having found him out as he was com- manding his right wing, and endeavouring to rally his men, he moved directly to him; and, being got near enough to be heard by him, chal- lenged him to decide the battle by single com- bat. Alexander, instead of accepting the offer, turned about, and, with all the speed he could, ran to screen himself amongst his guards. Upon this, Pelopidas charged him with such furious speed that he obliged him to retire farther, and shelter himself within the thickest ranks ; the sight of which made him attack with fresh vigor, and fight more desperately against him. He tried in vain several times to break through their ranks to reach him, cutting down great num bers of those that came forward to oppose him : but his eagerness at length exposed him so far to the enemy's darts that some of them went quite through his armour, and gave him a des- perate wound or two, while the rest advanced and stabbed him in the breast with their spears. Thebes, to the death of Epaminondas. — It is scarcely possible for words to express the grief and despair which not only his brave Thebans, but likewise the Thessalians and other allies showed at the sight of their slain general : some of the latter, who had perceived the danger he was exposed to, came down the hill with all possible speed to his relief; but, when they per- ceived that they were come too late to save him, both they and the rest of the little army thought on nothing now but to revenge his death. They rallied accordingly, both horse and foot, as quickly as possible, and began to charge the enemy afresh, and with such desperate fury that

they at length gained a complete victory over them, and killed above 3000 of them in their pursuit, besides a much greater number which they had slain on the field of battle, though they still looked upon all these advantages as vastly too small to compensate the loss of their brave general. The news of his death had no sooner reached Thebes, than the whole city went into mourning. However, they sent a reinforcement to the army of 7000 foot and 700 horse, as well to revenge the death of that general, as to inv

prove the victory he had gained over the enemy; by the help of which they fell so furiously on them, that they quickly broke and totally defeated the shattered remains of Alexander's army. Hereupon he was forced to sue for peace, and to accept it on such conditions as the conquerors thought fit to impose. He was at length de- spatched in his bed by his wife Thebe, assisted by her brothers, about seven years after his defeat. His body was afterwards dragged along the streets, trodden under foot, and left a prey to the dogs. All this while the Thebans were watching to improve every commotion that hap- pened, every success they met with, to the forwarding of their then favorite project, of increas- .ug their power, and to give laws to Greece. Their late success in Thessaly, and the rupture between the Arcadians and Mantineans at the same time, about some consecrated money which the former had taken out of the temple of Olym- pia to pay their troops employed against the Eleans, and which the latter called a downright sacrilege, besides other discords in the other states of Greece, gave fresh encouragement to Thebes to set up for arbitress in those disputes ; and so much the more, as those who had em- bezzled the sacred money, and wanted rather to embroil matters than to have them brought to light, sent that republic word that the Arcanians were just upon the point of revolting to the Spartans, and advised them to come and put an immediate stop to it. At the same time they despatched some private directions to a Theban officer at Tegea, to apprehend several of their own people as disturbers of the peace. This was accordingly done, and several eminent per- sons were confined as prisoners of state ; they were soon after discharged, and loud complaints were made against such arbitrary and unjust proceedings. The officer was accused before the Theban senate for having intermeddled in their affairs, and endeavoured to interrupt the good correspondence between the two states. It was even insisted on, by some of the Tegeans, that he should be indicted and proceeded against by his principals ; whilst the more moderate, who foresaw the consequences that were likely to attend such appeals, and that it would infal- libly bring the Thebans upon them, loudly pro- tested against their marching into their

territories, and did all they could to prevent it. The Thebans, however, were become too powerful and ambitious to miss so fair an opportunity of getting once more footing in Peloponnesus ; and Epaminondas was so far from making a secret of their design that he told the Arcadian deputies, in justification of it, that as it was on their account that the Thebans engaged in the war, they had acted treacherously with them in making peace with Athens without their consent. This speech alarmed them greatly ; so that even those who were best affected to the Thebans disliked it ; and all who had the welfare of Pe- loponnesus at heart agreed with the Mantine- ans, that there was no time to be lost to use all proper means to prevent the impending storm. Athens and Sparta were accordingly applied to, and were easily prevailed upon to assist the Mantineans against the Thebans ; and, to pre-

vent all disputes about the command of the army, it was agreed that each state should have it in its own territories. But Epaminondas set off in full march at the head of his Boeotian troops, with some Eubcean auxiliaries, and a body of stout Thessalian horse ; and was joined by the Messenians, Argives, and several other nations, as soon as he had entered Peloponnesus. The confederate array against him had ordered their rendezvous at Mantinea, the place which they concluded would be first attacked, as being the chief seat of those who had revolted from the Thebans. But, whilst they were securing themselves on that side, Epaminondas, who wisely considered how far this confederacy and expedition must have drained Sparta of its main strength, broke up privately from Nemaea, where he had lain for some time encamped, and march- ed all that night to surprise that important capi- tal; but, his project being discovered, the vigi- lant king took care to disconcert it ; so that, though the Theban general made several vigorous assaults on that city, he was so stoutly repulsed, and the Spartans behaved with such intrepid valor, that he was forced to retire and turn his arras against Mantinea, which he judged to be quite defenceless; and indeed it was not only drained of its troops, but likewise of its inhabit- ants, who took that opportunity to gather in their harvest, and were scattered all over the country ; so that he would not have met with any difficulty in gaining the town, had not the Athenian auxiliaries come unexpectedly to its relief, and given him a fresh repulse. These two last defeats greatly exasperated the Theban general ; and what added to his difficulties was, that the time allotted him for his expedition was almost expired. He was moreover got far into the enemy's country, and saw how narrowly they watched all his motions, and how well prepared they were to oppose him. Under all these diffi- culties, he considered that he must immediately resolve upon a decisive battle. In this engage- ment Epaminondas mc.de the wisest disposition of his troops, attacked and fought with the most intrepid courage and conduct, and had opened himself

a way through the Spartan phalanxes, thrown them into the utmost confusion, and made a terrible slaughter of them, insomuch that the field of battle was covered with their wounded and slain ; when in the heat of the fight, having ventured too far, to give them a total overthrow, the enemy rallied again, pouring three volleys of darts at him, some of which he drew out and returned to them, till at length, being covered with wounds, and weakened with the loss of blood, he received a mortal wound from a javelin, and was with great difficulty rescued from the enemy by his brave Thebans, and brought alive, though speechless, into his tent. As soon as he had recovered himself, he asked his friends what was become of his shield ; and, being told that it was safe, he beckoned to have it brought to him. He next enquired which side had gained the victory ; and, being answered the Thebans, he replied, then all is well; and, upon observ ing some of his friends bewailing his untimely death, and his leaving no children, he answered. Yes ; I have left two fair daughters, the victory

of Lenctra, and this of Mantinea, to perpetuate my memory. Soon after this, upon drawing the javelin out of his body, he expired.

Thebes, until its total destruction by Alexander. — The consequence of this great general's fall, and of this bloody fight, in which neither side could boast any great advantage over the other but a great loss of men on both sides, insomuch that Xenopbon makes it a drawn battle, was, that both parties agreed on a cessation of arms, and parted, as it were by consent, to take care of their wounded and slain. The Thebans in- deed thus far gained the greater share of glory, that they renewed the fight, and, after a most desperate contest, gained the victory over those Spartans that opposed them, and rescued the body of their dying general out of their hands. However, an effectual end was put to this bloody war, and a general peace agreed on by all but Sparta; who refused it only because the Messe- tiians were included in it. But as to the The- bans, they had no great reason to boast of this dear bought victory; since their power and glory began to decline from that very time ; so that it might be truly said that it rose and set with their great general. On the death of Epaminon- das, the Thebans relapsed into their former state of inactivity and indolence ; and at last having ventured to oppose Alexander the Great, their city was taken, and the inhabitants slaughtered for several hours, after which the buildings were destroyed. See MACEDON. Thebes was rebuilt by Cassander, but never afterwards made any considerable figure among the states of Greece. About the year 146 B. C. it fell under the power of the Romans, under which it continued till the extinction of their empire by the Turks.

The glory of Thebes belongs to a period prior to the commencement of authentic his- tory. In proportion as Egypt was modernised, her capital was transferred nearer to the Medi- terranean ; a change connected with the conve- nience of trade and subsistence, and perhaps with changes in the physical structure of the valley of the Nile. At the time of the Persian invasion, Memphis, a little above Cairo, had sup- planted Thebes. The Ptolemies transported the seat of empire to Alexandria. In the reign of Ptolemy Philopater, Thebes revolted, and being taken, after a siege of three years, was so plundered and ransacked, that ever after it was scarcely considered an Egyptian city. Yet, under the name of Diospolis, such magnificent descriptions of its monuments were given by Strabo and Diodorus, as caused the fidelity of those writers to be called in question, till the observations of modern travellers confirmed their accounts. Thebes, in the earlier periods of the Christian era, was the residence of two bi- shops : at present its site presents only a few scattered villages, consisting of miserable cot- tages, built in the courts of the temples. The ancient structures, however, still remain, in a state of wonderful preservation, extending for seven or eight miles along the banks of the river.

Almost the whole of this space is covered with magnificent portals, obelisks decorated with the most beautiful sculpture, forests of columns, and long avenues of colossal statues.

The eastern side is distinguished by the temples of Carnac and Luxor, the western by the Mem- nonium, or palace of Memnon, and by the se- pulchres of the kings. The largest of these temples, and of any in Egypt, is that at Carnac. Diodorus describes it as thirteen stadia, or about a mile and a half in circumference, which agrees sufficiently with the observation of Denon, that it may be walked round in half an hour. Not- withstanding its immensity, however, Denon prefers to it, in point of grandeur of execution, those of Edfu and Tentyra. He supposes it to have been constructed at that earlier period, when architectural grandeur was supposed to consist chiefly in magnitude. The obelisks, and some of the ornaments upon the exterior gates, present a chasteness and elegance which appear to him to indicate a later origin. Mr. Hamil- ton, however, appears to estimate this temple more highly, and to consider it as upon the whole the most wonderful of the Egyptian edi- fices. It has twelve principal entrances, each of which is composed of several colossal gateways or moles, besides other buildings attached to them, in themselves larger than most other tem- ples. The sides of some of these moles are equal to the bases of many of the pyramids, and are built like them, sloping inwards, each layer of stone projecting a little beyond the one which is above. One of the gateways is entirely of granite, adorned with the most finished hiero- glyphics. On each side of many of them have been colossal statues of basalt, breccia, and gra- nite, from twenty to thirty feet high, some in an

erect, others in a sitting position. Avenues of sphinxes lead in several directions to the en- trances, and one of them is continued the whole way across the plain to Luxor. The body of the temple (which is preceded by a large court, at whose sides are colonades of thirty columns in length, and through the middle of which are two rows of columns fifty feet high) consists first of a prodigious hall or portico, the roof of which is supported by 134 columns, some twenty-six, others thirty-four feet in circumfer- ence; four beautiful obelisks then mark the en- trance to the shrine, which consists of three apartments, built entirely of granite. The prin- cipal room, which is in the centre, is twenty feet long, sixteen wide, and thirteen high. Three blocks of granite form the roof, which is painted with clusters of gilt stars on a blue ground, and the walls are covered with painted sculptures. Beyond this are other porticoes and galleries, continued to another entrance, distant 2000 feet from that at the western extremity of the tem- ple. The sculptures, of which the most inter- esting are those on the northern wall of the temple, not only display considerable skill, but throw light on the art and system of war in these remote ages. An Egyptian conqueror, with the hawk flying over his head, and his standard marked by the ring and cross, the Egyptian type of divine power, is seen trampling over heaps of slaughtered enemies. The fugitives are vari ously either flying, calling aloud for quarter, or receiving their death wounds. Close to the scene is a party of captives, with the same dresses they wore in the battle, but with their

hair and beards suffered to prow, as a mark of servitude, and employed in felling trees in the midst of a wood. This action takes place amid mountains and precipices, which are represented with more boldness than ingenuity. Another piece represents a battle on the plain, where the force, consisting of chariots and cavalry, is equally put to flight by the hero. These battles represent such a variety of wounds and situa- tions, and the representation is so excellent, both in regard to the disposition of the whole, and the expression of particular parts, that it is sup- posed Homer either did or might have borrowed from them many of those varied images and ideas, which form the ornament of his poems. In other representations, the chief is presenting to his deities, captives and other trophies of his victory. The deities most frequently represented are Osiris Ammon, who seems to be the same with Jupiter ; Priapus, sometimes called Men- des ; Isis, with the head of a lioness ; and Hermes, crowned with the crescent and dark disk of the moon. Two of the porticoes appear to have consisted of columnar statues in the character of Hermes, thirty-eight in number, and the least of them thirty feet high. The nu- merous gateways which form the principal orna-

ments of the Theban temples are supposed to be the remains of the hundred gates commemo- rated by Homer. If the military rendezvous were in the courts of the temples, as may very well be supposed, they might easily send out the number of horsemen and chariots described by the poet. There are still nearly fifty of these gateways remaining, in a greater or less state of preservation, each from 100 to 400 feet in length, eighty feet high, and forty feet deep.

About a mile and a quarter above Carnac are the village and temple of Luxor, the entrance to which probably surpasses every tiling else that Egypt presents. In front are the two finest obelisks in the world, formed of rose colored granite, and rising, as Denon supposes, after allowing for the portion buried in the ground, to the height of 100 feet. They are composed each of a single block from the quarries of Ele- phantine, and are between seven and eight feet square at the base. Behind the obelisks are two colossal statues of the same granite, which, though buried in the ground to the chest, mea- sure twenty-one and twenty-two feet thence to the top of their untres. The propylon or gate- way itself is of the greatest magnificence, 200 feet in length, and the top of it fifty-seven feet above the present level of the soil. But the object which above all attracts the attention of the intelligent spectator consists in the sculp- tures which cover the east wing of the northern front. They contain a representation on a great scale, of a victory gained by one of the ancient kings of Egypt over his Asiatic enemies. The moment chosen for the representation, is that in which the troops of the enemy fly back in con- fusion to their fortified station, which the victo- rious Egyptians are on the point of entering. The number of human figures introduced amounts to 1500, of whom 500 are on foot, and 1000 in chariots. The conqueror is represented of colossal size, in the attitude of discharging Voi. XXII.

an arrow. There is uncommon life and spirit in the attitude of the horses, which are in full gallop, with feathers waving over their heads. Crowds of dead and dying, extended or falling in various attitudes, are seen under the wheels of the car, and under the hoofs and bellies of the horses. On the enemy's side appears every thing that can characterise a host flying in con- fusion ; terror is expressed to the life in theii countenance and attitudes. The dying horses are admirable, whether they appear fainting from loss of blood, or rearing up and plunging in the excess of torture. Part of the fugitives seek safety by plunging into the river, in which are mingled horses, chariots, arms, and men, float- ing or sunk, all expressed in the most faithful manner. The hero is represented as carried by his impetuosity beyond the main body of his own anr.y, and surrounded by enemies, who sink beneath his valor. The Egyptians use the bow and arrow, still the most common arms in Nubia; while the enemy are provided with spears and javelins. In a compartment at the extremity of the west wing of the

gateway, the conqueror appears, after the victory, seated on his throne, while eleven of the principal cap- tive chieftains are lashed together in a row, with a rope about their necks, on the point of being led to execution. The captive monarch himself is fastened to a car, the horses of which are only restrained by the attendant, till the monarch shall mount and drag behind him, in ruthless triumph, the illustrious victim. Several other examples are afforded of that barbarous use of victory which prevailed in those early ages. In all these representations, such spirit is exhi- bited, that had the artist been better acquainted with perspective, he might have rivalled the most splendid productions of classic or modern art. The above gateway leads to a ruined por- tico, of very large dimensions : from this a double row of seven columns, with capitals re- presenting the lotus, leads into a court 160 feet long and 140 wide, terminated on each side by a row of columns, beyond which is another por- tico of thirty-two columns, and then the adytum, or interior apartments of the building. Part of it has here been converted into a Greek church, as appears by the plaster and Christian paint- ings on the walls, and by circular niches and doorways that are built up. There are many plausible reasons for the conjecture that the sculptures in this temple, tomb, or palace, relate to the birth, reign, and death, of some one of the monarchs of Egypt. These, with a small temple at Medmout, which presents nothing re- markable, are the principal monuments of Thebes on the eastern side of the river.

On the western, the mountains here approach very close to the Nile, and the edifices are built along their foot, and sometimes within their re- cesses. At El Gournou, the canals, which di- rected and carried off the overflowings of the Nile, are now so out of repair, that the inha- bitants seek their abode in the caves of the neighbouring hills. About midway between this village and that of Medinet Abu is the edi- fice called the Memnonium, being commonly supposed the palace of Memnon, one of the

early sovereigns of Egypt. Norden has deli- neated it with great care, and considers it emi- nently calculated to give an idea of the grandeur of Egyptian architecture. The capitals of the columns consisted of large blocks of stone, co- vered with hieroglyphics, and encrusted with the most lively colors. This sort of painting has neither shade nor degradation. The figures are encrusted like the cyphers on the dial plates of watches, with this difference, that they cannot be detached. This incrustated matter appears to be more durable than fresco or Mosaic work ; and it is surprising what brilliancy is still re- tained by the gold, ultra marine, and other colors. These indeed appear to be better pre- served here than in the temples of

Carnac and Luxor, and enable the spectator to distinguish the red color and the blue harness of the horses, the blue, green, red, and white of the Egyptian and Bactrian garments, and of the cars of the Egyptians and their adversaries, as well as the fainter blue of the water into which the fugitives have fallen. The sculptures here represent the same subjects as at Luxor, and one wing of the gateway is a complete counterpart of the representation there. Another exhibits, in the most lively manner, the surprise and sack of a town. The victorious troops are entering the houses, laying their hands on the money bags, opening the wine skins, and eagerly swallowing their contents. War chariots and other carriages seem to block up the streets ; some of the vic- tors are contending for the plunder, others throw- ing the helpless inhabitants over the walls. The prisoners are treated in the same barbarous manner, and the captive monarch appears fas- tened to the conqueror's chariot, for the purpose of being dragged, like Hector, round the xvalls. Others represent mystical and religious cere- monies.

At some distance from the Memnonium is the temple of Medinet Abu, inferior only in size and massiveness to that at Carnac, being fully equal to it in the richness and variety of its sculptures. One outward enclosure, or brick wall, encloses three distinct though connected buildings, the principal of which is that usually called the Temple. The great gateway is 150 feet long, and sixty feet high, and conducts into a court which is about 120 feet square. On each side of it runs a colonnade, from the first gate- way to the next, of equal size and richness. The colonnade on one side consists of eight pilas- ters, to each of which is affixed a statue of Hermes, with a mitre. The other colonnade consists of as many columns, each richly sculp- tured. The soffites and walls of these colon- nades are crowded with mystical sculptures, the forms and colors of which are well preserved. The king, who is generally presenting offerings to Isis, Osiris, or Priapus, is in some instances standing alone, dressed in the most magnificent garment, and seemingly honored with the joint characteristics of Isis and Osiris. Other parts represent the initiation of the prince into the sacred mysteries. Elsewhere appears a proces- sion in honor of Priapus, perhaps the original of the Dionysiaca of the Greeks, but winch does not exhibit those Bacchanalian dances, or immo-

dest gestures, by which the latter were disgraced. The bulk of the representations, however, con sists still of battles and victories, with displays of the most shocking cruelty towards the oap- tives.

Besides these two magnificent edifices, there are several others of less importance on this side of the river. The temple at El Ebek, the most northern of all, is remarkable as being con- structed on a very different plan from that of the other Egyptian temples. It has a single row of columns in front, and the rest of the building is distributed into a variety of

comparatively small apartments. About a mile westward from the Memnonium, high among the wilds of the desert, is a small temple of Isis, the paintings and sculptures on which are exceedingly well preserved. From this circumstance, and from some peculiarities in its architecture, it has been conjectured to be of later date than some of the others. Nothing can exceed the dreary barren- ness of the scene in which it is placed. In the interior of the mountains which rise behind these monuments, on the western bank of the Nile, are found the tombs of the kings of Thebes. Strabo enumerates forty, of which Mr. Hamilton found only ten accessible, but the site of several others could be easily determined, the entrances of which had been choked up by the loose stones that had fallen down from the slopes of the mountain. M. Belzoni, however, con- ceives that no number approaching to forty could be found in this place. Entering one of these tombs by a plain door, covered with a few slight hieroglyphics, the traveller is astonished to find himself in a long gallery, twelve feet wide and twenty feet high, adorned with sculp- ture, covered with stucco and paintings. The hie- roglyphical figures are innumerable, elegantly formed, and richly colored. The passage ter- minates in a spacious and lofty apartment, in the centre of which is the sarcophagus, in which the king's body was deposited. The decorations of these sepulchral chambers are uncommonly ebgant, and are covered with fine white stucco. The ceilings are finished with yellow figures upon a blue ground, in a style of excellence which would not disgrace the most sumptuous modern palace ; and the colors, unless in a very few instances, retain all their original brilliancy. The sarcophagi are composed of red or gray granite, circular at one end, and square at the other : they are all empty, and the lids removeu or broken. The innumerable hieroglyphics with which the walls are covered relate to it- ligious mysteries, and are of very difficult inter- pretation. In front of the entrance is always the representation of a globe, in which is a figure of Osiris Ammon. All sorts of birds and other animals, human figures with wings, and rows of painted forms of mummies, are largely introduced. In one of the tombs, Osiris, seated on a high throne, appears to judge the dead. In others are seen rows of captives, many of them with their heads cut off, or their throats cut; while others are lashed to posts, prepur.i- tory to being beheaded. In one of thest is found the representation of the Harpers, first given, though in a flattering manner, in

Travels. Bruce, however, luis the credit of having first drawn the attention of the public to the merits of Egyptian sculpture ami painting.

The sepulchral monuments of the private in- habitants of Thebes, though

they do not display the same pomp as those of the kings, are more instructive, by the picture which they give of the manners and economical pursuits of the ancient Egyptians. They are excavated in the solid rock, chiefly along the sides of the moun- tains; and many of them appear to have served as habitations, though now deserted. In some of those paintings, feasts are represented. Here the company sit on chairs, closely resembling those of Europe, and the wood of which is painted of a mahogany color. Each guest has a lotus flower or nosegay in one hand, and the more distinguished are seated in pairs, on small sofas, distinct from the rest. The servants bring dishes from a table which is placed in the middle. In some parts an agricultural scene is introduced : here men are sometimes represented as yoked to the plough, drawing with their hands thrown back on their shoulders. In reaping, the men cut off the ears, the boys and girls pick them from the ground in small baskets, which the wo- men carry away. At the corner of the field, one of the laborers is taking car2 of the water jars, and cooling the water with a large leaf. In one we see a farm-yard and the stock of a rich land proprietor and breeder of cattle; while, in a neighbouring compartment, bull-fights are pre- tenled. In the same grotto is an Egyptjan hunt, where the proprietor of the estate rides in a car drawn by two horses, exactly resembling the war-chariots, and is armed with bow and arrows, while his servants attend on foot. The moun- tains of the desert before him are crowded with ostriches, stags, wolves, leopards, and porcupines. Fishing and fowling scenes are also described ; in the latter of which decoy birds appear to hare been used. One of these tombs contains the picture of an ornamented farm. Here the pro- prietor appears to have laid out his grounds with considerable taste. There appears a well stocked vineyard, below which the vintners are treading the wine- press ; regular avenues of sycamores ; a large piece of water which surrounds the park ; a smaller one with aquatic plants ; and a rushy bank, typified by the lotus, to supply the lord with water-fowl and fish ; the whole commanded by a very neat summer-house.

Such was our knowledge of these tombs, pre- vious to the researches of M. Belzoni. This in- genious gentleman succeeded in opening several of the tombs, which had been hitherto inacces- sible. They were found, therefore, in a more com- plete state of preservation, and with mummies in the sarcophagi, as well as dispersed through the chambers. But his most important discovery con- sisted in opening one much more extensive and more splendid than any that had been hitherto seen . Its situation was so unpromising that only the resolute determination of M. Belzoni, founded upon symptoms which appeared to him promis- ing, could induce the laborers to undertake it. A magnificent entrance was discovered ; but it eoon led to a deep pit, which obstructed farther advance, and was evidently intended to appear

as the termination; but a breach in the opposite wall showed that there was still a passage; and, by beams laid across the pit, they succeeded in penetrating. A series of apartments were now found, all decorated with painting and sculpture, representing the same subjects as the other tombs, but presenting examples of superior splendor and skill. The plates in M. Belzoni's work afford the best specimens yet conveyed to Europe of Egyptian art. It is evidently rude in many of its features. There is no light and shade, so that every object appears as a flat sur- face; and, when a man's legs are in contact, they appear as one. There is no variety or blending of tints, only four or five simple colors are pre- sented, always of the same degree of intensity. The drawing also is often inaccurate. The beauty consists in the brilliancy of the simple colors, and in the expression of the heads. But the most remarkable object of all consisted of a sarcophagus of the finest alabaster, or rather arag- onite, nine feet five inches long, and three feet five inches wide. Its thickness is only two inches, and it is transparent when a light is placed in the inside. It is minutely sculptured, within and without, with several hundred figures, which do not exceed two inches in height, and appear to represent the whole of the funeral procession and ceremonies relating to the deceased. While writing this, we find it stated that this sarcopha- gus has been successfully removed and is con- veying to Britain. Some of the processions arc marked by the appearance of Jewish, Ethiopian, and Persian captives. The Jews are distin- guished by their physiognomy and complexion, the Ethiopians by their color and ornaments, and the Persians by their dress. This confirms the discovery made by Mr. Young, from the hiero- glyphics, that the drawings in this tomb contain the names of Nichao and Psammuthis his son (usually called Necho and Psammeticus). The former of these is well known to have conquered Jerusalem and Babylon, while the latter made war against the Ethiopians. We may therefore conclude, that in this remarkable tomb we have the cemetery of these two powerful monarchs.

Among the wonders of Thebes its statues must not be forgotten. The chief attention seems to have been drawn to those attached to the Memnonium. The largest of these is one which has been broken off at the waist, and the upper part laid prostrate on the back. It measures six feet ten inches over the front, and sixty-two or sixty-three feet round the shoulders. The face is entirely obliterated, and indeed the labor and exertion that must have been employed in its destruction are most astonishing. Two other colossal statues, about fifty feet high, are also seated on the plain. Antiquaries have eagerly contested which of these was the vocal statue of Memnon reported by so many of the ancients as emitting a musical sound' at sunrise, or when struck. Norden was at the pains to give a blow, but could hear nothing except the ordinary noise produced by concussion upon granite. It appeal's to us evident that the whole was a trick, an opinion which Strabo, who

heard the sound, unequivocally avows, though he did not ascertain the nature of the deception. The at-

tention of travellers lias also been strongly at- tracted by a colossal head of black granite, found lying on the ground close to the Mem- nonium. Norden particularly admires its charm- ing simplicity, and Hamilton considers it as certainly the most beautiful anc' perfect piece of Egyptian sculpture. This head, through the ex- ertions of Messrs. Salt and Belzoni, has been con- veyed to Europe, and is now to be found in the British Museum.

THECLA, a noble and learned lady of Alex- andria, in Egypt, who in the fourth century, transcribed the whole of the Bible in the Greek language, from the original Septnagint copy, then preserved in the Alexandrian Library ; and this ancient copy is still preserved, and constitutes the celebrated Alexandrian MS., so often ap- pealed to by commentators. It was presented to kincr Charles I. by Cyrillus Lucaris, patriarch of Constantinople, in 1628. See SCRIPTURE, sect. VIII.

THEFT, n.s. From thief. The act of steal- ing ; the thing stolen.

If the theft be certainly found in his hand alive, whether ox, ass, or sheep, he shall restore double.

Exodus xxii. 4.

Theft is an unlawful felonious taking away of another man's goods against the owner's knowledge or will. Cotcel.

His thefts were too open ; his filching was like an unskilful singer, he kept not time.

Shakipeare. Merry Wive of Windsor.*

Deceit in trade, a secret theft : extortion, an im- pudent theft. Holyday.

The thefts upon the public can be looked into and punished. Daienant.

THEFT, in English law, or simple larceny, ' is the felloniously taking and carrying away of the personal goods of another.' By the Jewish law it was

only punished with a pecuniary fine, and satisfaction to the party injured ; and in the civil law, till some very late constitutions, we never find the punishment capital. The laws of Draco at Athens punished it with death ; but his laws were said to be written with blood ; and Solon afterwards changed the penalty to a pecu- niary mulct. And so the Attic laws in general continued ; except that once, in a time of dearth, it was made capital to break into a garden and steal figs ; but this law, and the informers against the offence, grew so odious, that from them all malicious informers were styled sycophants ; a name which we have much perverted from its original meaning. The punishment of theft throughout the greatest part of Europe is capital. The Anglo-Saxon laws nominally punished theft with death, if above the value of '2d. : but the criminal was permitted to redeem his life by a pecuniary ransom ; as, among their ancestors the < if rmans, by a stated number of cattle. But, in the ninth year of Henry I., this power of redemp- tion was taken away, and all persons guilty of Inrceny above the value of 12t/. were directed to be hanged ; which law continues in force to this day. See LAW.

THEFT-BOTE (from the Saxon theof, i. e. a thief, and bote, compensatis), the receiving of a man's poods again from a thief, after stolen, or other amends not to prosecute the felon, and

to the intent the thief may escape; which is an offence punishable by fine and imprisonment, &c.

Til El 11, pron. Sax. Seona of them. Of them : the pronoun possessive, from they : theirs is used in construction when any thing comes between the possessive and substantive.

Prayer we always have in our power to bestow, and they never in theirt to refuse. Hooker.

The round world should have shook Lions into civil streets, and citizens into their dens.

Shakspeare.

They gave the same names to their own idols which the Egyptians did to theirs. Raleigh.

Nothing but the name of zeal appears Twixt our best actions and the worst of theirt.

Denham.

The penalty to thy transgression due, And due to theirs, which out of thine

will grow.

“Milton.

Vain are our neighbours’ hopes, and vain their

cares ; The fault is more their language’s than theirt.

Roscommon.

Which established law of theirt seems too strict at first, because it excludes all secret intrigues.

Dryden.

For the Italians, Dante had begun to file their language in verse before Boccace, who likewise re- ceived no little help from his master Petrarch ; but the reformation of their prose was wholly owing to Boccace. Id.

And, reading, wish like theirs our fate and fame.

Pope.

THEISM (from Qtof, God). The doctrine, or belief, that there is but one God. This word is synonymous with deism, the latter being derived from the Latin, the former from the Greek. See DEISM.

THEISS, or TISZA, a river of Hungary, which rises from two springs in the county of Mar- marosch, on the north-east frontier of the kingdom. The two streams called the Black and the White Theiss soon unite, and, after flowing above 100 miles in a western direction, it turns to the south, and either touches or divides ten distinct counties or districts, before flowing into the Danube at Salankamen, below Titul. In this long course, above 500 miles, it receives a great number of rivers.

THEIST (from Gr. Gtoc, God). One who believes in the eternal existence of one God. A word synonymous with Deist. See DLIST. All Christians, Jews, and even Mahometans, are Theists, or Deists, though all Theists are not Christians.

THELIGONUM, in botany, a genus of plants belonging to the class of moncecia, and order of poly and ria ; natural order fifty-third, scabrida? : MALE CAL. bifid : COR. none : the stamina are generally twelve : FEMALE CAL. also bifid : COR none: only one pistil: CAPS, coriaceous, unilo- cular, and monospermous. There is only one species, viz. T. cynocrambe, which is indigenous in the South of Europe.

THELLUSSON (Peter Isaac), a native o Geneva, who settled for many years ns a mer- chant in London, where he accumulated an im- mense fortune, which, at his death in 1798, he left by will to be disposed of as follows : — Above £100,000 to his widow and children, and all the rest to accumulate till a certain period,

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wh»n, if none of his descendants shall then be in life, the whole is to DC devoted to the Sinking Fund, to pay off the national debt, and to be en- tirely at the disposal of the British parliament. It is estimated that, within 120 years, there will be ncne of his posterity in life, and the sum will then have accumulated to £140,000,000 sterling. His descendants applied to the Court of Chan- cery to get this \i!l set aside, and subsequently to the House of Lords, in 1805, but without success. This extraordinary case, however, oc- casioned the passing of the Acts of parliament of the 39th and 40th of Geo. III. cap. 98, re- straining the power of devising property, for the purpose of accumulation, to twenty-one years after the death of the testator. Peter Isaac Tlielluson, the eldest son of the ingenious will-constructor, was created baron Rendlesham, in the Irish peerage, and was succeeded, on his death, in 1808, by his eldest son, John, who died, leaving no male issue, and was succeeded by his brother William, (third lord Rendlesham). So large a portion of the intended accumulation has been expended in litigation, and the esta- blishment at Brodsworth, Yorkshire, has been maintained on so liberal a scale by the trustees, that it is supposed the accumulation will not finally exceed £1,200,000. Many large estates, however, have been purchased by the trustees, and added to those left by the testator.

THEME, n.s. Fr. theme ; Greek 3ˆa. A subject on which one speaks or writes ; an origi- nal root or word ; a short essay.

Whatever near Eurota's happy stream, With laurels crowned, had been Apollo's theme.

Roscommon,

THEMIS, in the mythology, the goddess of justice, but different from Astraa; she was a daughter of Ccelus and Terra, and, according to the poets, was compelled to marry Jupiter, by whom she became mother of the Parcae or Fates, and of Dice, Eunomia, Irene, &c. Her oracle was famous in Attica in the age of Deucalion, who consulted her after the deluge, and was di- rected how to repeople the world. She is repre- sented with a pair of scales in one hand, and a sword in the other. — Lempriere.

THEMIS, the daughter of Ilus, king of Troy, who married Capys, and became mother of An- chises, the father of ./Eneas. — Apollod. iii. c. 12.

THEMISON, a celebrated physician of Laodi- cea, a disciple of Asclepiades, he founded the Methodic sect, with a view to the more easily teaching and practising the art of medicine. See MEDICINE. Themison gave the first account of diacodium, which was prepared of the juice itnd decoction of poppy-heads and honey. He invented a purging medicine called heira.

THEMISTIUS, an ancient Greek orator and philosopher, a native of Paphlagonia, who flou- rished in the fourth century. He had great in- terest and favor with the emperors in his time, and, though a heathen, v/as of a very tolerating spirit. He taught for many years at Constanti- nople, of which city he was made prefect by Julian and Theodosms ; and lived to be very old. More than thirty of his orations are still extant, besides commentaries on several parts of Aris- totle's works.

![] THE

THEMISTOCLES; the renowned Athenian admiral, general, and patriot, who gained the battle of Salamis against the Persians. Beins banished his country, by his ungrateful fellow citizens, he fled to Artaxerxes king of Persia; but, to avoid taking up arms against his country, he slew himself, 464 B. C. See ATTICA.

THEN, adv. Goth, than; Sax. San; Belg. den. At that time; afterward ; immediately after ; at another time; in that case; therefore.

When I tell him he hates flatterers, He says he does ; being then most flattered.

Shakspeare.

If an herb be cut off from the roots in winter, and then the earth be trodden down hard, the roots will become very big in summer.

Bacon's Natural History.

If God's immediate speaking and writing argu- eth precepts, thus spoken or written, to be perpetu- ally moral ; then his not writing of precepts argueth them to be temporary. White.

Whiles then the apostle moves us to unity, and moves us also to an endeavour to it, he bestows upon us as well a discovery as an exhortation, shewing us not only the end, but also the means.

Holy day.

The then bishop of London, Dr. Laud, attended on his majesty through that whole journey.

Clarendon.

If then his providence Out of our evil seek to bring forth good. Milton.

Till then who knew The force of those dire arms. Id.

Now then be all thy weighty cares away, Thy jealousies and fears ; and, while you may, To peace and soft repose give all the day. Dryden.

Had fate so pleased I had been eldest born, And then without a crime the crown had worn. Id.

Thee, then a boy, with my arms I laid. Id.

One while the master is not aware of what is done, and then in other cases it may fall out to be his own act. t L'Estrange.

If all this be so, then man has a natural freedom.

Locke.

THENAR, or TENAR, in anatomy, the muscle that draws the thumb from the fingers, called also abductor brevis pollicis. See ABDUCTOR, and ANATOMY.

THENATH. See TAANATH-SHILOH. THENCE, adv. ~) Contracted, according THENCE'FORTH, >to Minsheu, from there THENCEFOR'WARD.J hence. From that place or time ; for that reason : thenceforth is from that time : thenceforward, onward from that time : ' from thence,' is a barbarism, but too well sup- ported.

And into what hous that ye entre dwilleghe there, and go ye not out fro thence. Wiclif. Luk 9.

There shall be no more thence an infant of days.

Isaiah Ixv.

Thenceforth this land was tributary made T' ambitious Rome. Spenser.

From thence ; from him, whose daughter His tears proclaimed his parting with her ; thence We have crossed. Shakspeare.

Fast by the oracle of God ; I thence Invoke thy aid. Milton.

Not to sit idle with so great a gift Useless, and thence ridiculous, about him.

Id. Agonistes.

There plant eyes, all mist from thence Pu'-c i'.:ul disperse. Afitum

THE S

Wrath shall be no more Thenceforth, but in thy presence joy entire. Id.

Avert

His holy eyes ; resolving from thenceforth To leave them to their own polluted ways. Id.

\Vhen he comes to the Lord's table, every com- municant professes to repent, and promises to lead a new life thencefoncard. Kettlewell.

Surat he took, and thence preventing fame, By quick and painful marches thither came.

Driiden.

Men grow acquainted with these self-evident truths upon their being proposed ; but whosoever does so, finds in himself that he then begins to know a pro- position which he knew not before, and which Jro?n thenceforth he never questions. Locke. .

THEOBALD (Lewis), the son of an attorney at Sittingbourn in Kent, was a well known writer and critic in the early part of the eighteenth century. He engaged in a paper called the Cen- sor, published in Mist's Journal, wherein, by- delivering his opinions with too little reserve concerning some eminent wits, he exposed him- self to their resentment. Upon the publication of Pope's Homer, he praised it in terms of ex- travagant admiration, yet afterwards thought proper to abuse it as earnestly ; for which Pope at first made him the hero of his Dunciad, though he afterwards laid him aside for another. Mr. Theobald not only exposed himself to the lashes of Pope, but waged war with Mr. Dennis, who treated him more roughly, though with less satire. lie nevertheless published an edition of Shaks- peare, in which he corrected, with great pains and ingenuity, many faults that had crept into that poet's writings. This edition is still in great es- teem, being in general preferred to those pub- lished by Pope, Warburton, and Hanmer. He also wrote some plays, and translated others from the ancients.

THEOBROMA, in botany, a genus of plants belonging to the class of polyadelphia, and order of pentandria ; ar.d in the natural system ranging under the thirty-seventh order, columniferae. The calyx is triphyllous; the petals, which are five in number, are vaulted and two-horned ; the nectarium is pentaphyllbus and regular ; the sta- mina grow from the nectarium, each having five anthera. There are three species, viz. 1. T. angusta. 2. T. cacao, or chocolate tree. This tree delights in shady places and deep valleys. It is seldom above twenty feet high. The leaves are oblong, large, and pointed. The flowers spring from the trunk and large branches ; they are small and pale red. The pods are oval and pointed. The seeds or nuts are numerous, and curiously stowed in a white pithy substance. See CHOCOLATE. 3. T. guazuma.

TIIEO'CRACY, n.s. Fr. t/ieocratie ; Greek 9foc and eparcu. Government immediately su- perintended by God.*

The government is neither human nor angelical, but peculiarly theocratical.

Burnetts Theory »/' the Earth.

The characters of the reign of Christ are chiefly justice, peace, and divine presence or conduct, which is called theocraci/. Id.

TIIF. < K'linTS, the father of pastoral poetry, v, a— born at Syracuse in Sicily, and flourished under Hiero, who began his reign about B. C.265.

THE

The compositions of this poet are distinguished among the ancients by the name of Idylliums, in order to express their smallness and variety : they would now be called Miscellanies, or Poems on several occasions. The works of this poet were first published in folio by Aldus Manutius at Venice in 1495. But the best edition was published in 1 770, in 2 vols. 4to, by Mr. Thomas Warton.

THEODATUS, or THEODOTUS, the third king of the Ostrogoths in Italy, was raised to the throne by his aunt Amalasuntha, who married him, but whom the villain ungratefully murdered. See ITALY.

THEODOLITE, a mathematical instrument for taking heights and distances. See GEOMETRY .

THEODORE, king of Corsica, baron Nieu- hoff in the county of La Marc in Westphalia. He had his education in the French service, and afterwards went to Spain ; but, being of an un- settled disposition, he quitted Spain, and travelled into Italy, England, and Holland, in search of some new

adventure. He at last fixed his at- tention on Corsica, and formed the scheme of rendering himself sovereign of that island, lie went to Tunis, where he fell upon means to procure some money and arms; and then went to Leghorn, whence he wrote a letter to the Corsican chiefs Giafferi and Paoli, offering con- siderable assistance to the nation if they would elect him as their sovereign. This letter was con- signed to Count Dominico Rivarola, who acted as Corsican plenipotentiary in Tuscany; and he gave for answer, that, if Theodore brought the assistance he promised to the Corsicans, they would very willingly make him king. Upon this he, without loss of time, set sail, and landed at Tavagnain spring 1736. He had a few attendants with him; and his manners were so engaging, and his offers so plausible, that he was proclaimed king of Corsica before Count Ri varola's despatches arrived to inform the chiefs of the terms upon which he had agreed. Theodore instantly assumed every mark of royal dignity. The Genoese were not a little confounded with this unexpected ad- venturer. They published a violent manifesto against Theodore, treating him with great con- tempt; but at the same time showing they mic alarmed at his appearance. Theodore replied in a manifesto, with all the calmness and dignity of a monarch ; but after being about eight months in Corsica, perceiving that the people began to cool in their affections towards him, he assembled his chiefs, and declared he would keep them no longer in a state of uncertainty, being determined to seek in person the support he had so long ex- pected. He settled an administration during his absence, recommended unity in the strongest terms, and left the island with reciprocal assu- rances of fidelity and affection. He went to Hol- land, where he was so successful as to obtain credit from several rich merchants, particularly Jews, who trusted him with cannon and other warlike stores to a great value, under the charge of a su- percargo. With these he returned to Corsica in 1739; but by this time the French, ns auxiliaries to the Genoese, had become so powerful in the island, that, though Theodore threw in his supply of warlike stores, he did not incline to ventur

f.\s person, the Genoese having set a high price on his head. He therefore again departed; and, after many unavailing attempts to recover the crown, at length retired to England, where he was reduced so low as to be several years before his death a prisoner for debt in the King's Bench. At length, to the honor of some gentle- men of rank, a charitable contribution was set on foot for him in 1753, by which he was released from prison : but the remainder of his life was spent in extreme poverty. Theodore died llth December 1756, and was buried in St. Anne's church yard Westminister. He left a son, the late colonel Frederick, who was an accomplished gentleman.

THEODORE!, a bishop of St. Cyricus in Syria, in the fourth century, and one of the most learned fathers of the church, was born A. D. 386, and was the disciple of Theodorus of Mopsuestes and St. John Chrysostom. Having received holy orders, he was with difficulty per- suaded to accept of the bishopric of St. Cyricus, about A. D. 420. He displayed great frugality in the expenses of his table, dress, and furniture, but spent considerable sums in improving and adorn- ing the city of Cyricus. Yet his zeal was not con- fined to his own church ; he went to preach at An- tioch and the neighbouring towns, where he be- came admired for his eloquence and learning, and had the happiness to convert multitudes of people. He wrote in favor of John of Antioch and the Nestorians, against Cyril's Twelve Anathemas ; he afterwards attacked the opinions of Nestorius, and was deposed in the synod held by the Eu- tychians at Ephesus ; but was again restored by the general council of Chalcedon, in which he was present, in 451. It is thought that he died soon after; though others say that he lived till A. D. 457. There are still extant Theodoret's excellent Commentary on St. Paul's Epistles, and on several other books of the Holy Scriptures. 2. His Ecclesiastical History, from the time of Arius to Theodosius the Younger. 3. History of the Anchorites. 4. Epistles. 5. Discourses on Providence. 6. A treatise entitled De Curandis Gracorum Affectibus; and other works. The best edition is that of Sirmond, in Greek and Latin, in 4 vols. folio.

THEODORICK, the first and greatest monarch of the Ostrogoths in Italy. He had many virtues, shaded with some vices. He defeated Clovis king of France, and Odoacer king of Italy, A. D. 526. See FRANCE, GOTHS, and ITALY.

THEODORICK, or THIERRI, king of Metz; the eldest son of Clovis. See FRANCE.

THEODORUS, bishop of Mopsuestes, a city in Cilicia, a learned prelate of the fifth century. He wrote a Commentary on the Psalms, another On the Twelve minor Prophets ; which, with some other fragments, are extant. He died A. D. 428. But his works were condemned in the fifth general council, as favoring Nestorianism (see NESTORIAXS) and Socinianism.

THEODOSIUS, a celebrated mathematician, who flourished in the times of Cicero and Pom- pey, but the time and place of his death are un-

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known. Theodosius chiefly cultivated that part of geometry which relates to the doctrine of 'the sphere, concerning which he published three books, of which a good English translation was made by Dr. Barrow.

THEODOSICS I., called the Great, was a native of Spain. The valor he had shown, and the great services he had done the empire, made Gratian, attacked by the Goths and Germans, to admit him as a partner in the government. He received the purple in A.D. 379, aged forty-three. See CONSTANTINOPLE.

THEODOTUS, a native of Byzantium, who flourished in the reign of Marcus Aurelius, and at first professed Christianity, but, during the persecution under that emperor, renounced it, and set up a new heresy, called Theodotian, or Theo- dosian. See THEODOSIANS. He was a tanner by profession.

THEOGNIS, an ancient Greek poet of Me- gara in Achaia, who flourished about the fifty- ninth Olympiad, 144 B. C. We have a work of his extant, concerning a summary of precepts and reflections, usually to be found in the col- lections of ihe Greek minor poets.

THEOGONY, from Owe, God, and yovri, genitura, seed or offspring. Hesiod gives us the ancient theogony, in a poem under that title. Among the most ancient writers, Dr. Buraet ob- serves, that theogony and cosmogony signified the same thing. In effect, the generation of the gods of the ancient Persians, fire, water, and earth, is apparently no other than that of the primary elements. See POLYTHEISM.

THEO'LOGY, n. s. ^ Fr. theologie ; Gr.

THEOLO'GIAN, j &o\oyta. Divinity:

THEOLOG'ICAL, adj. I a theologian, theolo-

THEOLOG'ICALLY, adv. f gist, or theologue is

THEOL'OGIST, n. s. j a professor of or one

THE'OLOGCE. J skilled iu divinity :

theological pertaining to divinity : the adverb corresponding.

The whole drift of the scripture of God, what is it but only to teach theology 1 Theology, what is it but the science of things divine 1 Hooker.

The cardinals of Rome, which are theologues, friars, and school-men, call all temporal business, of wars, embassages, shirrery, which is under sheriff- ries. Bacon's Essays.

Some theologians defile places erected only for re- ligion by defending

oppressions. Hayward.

She was most dear to the king in regard of hei knowledge in languages, in theology, and in philoso- phy. Id.

Although some pens have only symbolized the same from the mystery of its colours, yet are there other affections might admit of theological allusions.

Broume.

The oldest writers of theology were of this mind.

Tillotton.

A theologue more by need than genial bent ; Interest in all his actions was discerned. Dryden.

It is no more an order, according to popish theolo- g'uts, than the prima tonsura, they allowing only seven ecclesiastical theologistt. Ayliffe'i Parergon.

They generally are extracts of theological and moral sentences, drawn from ecclesiastical and other authors. S

•24

THEOLOGY.

THEOLOGY, or divinity, has been denned that science which treats of the being and attributes of God, his relations to us, the dispensations of his providence, liis will with respect to our actions, and his purposes with respect to our end. The word was first used to denote the sys- tems of those poets and philosophers who wrote of the genealogy and exploits of the gods of Greece. Hence Orpheus, Museus, Hesiod, Pherecydes, and Pythagoras, were called theologians ; as was Plato, on account of his speculations on the same subject. It was afterwards adopted by the earliest writers of the Christian church, who styled the author of the apocalypse, by way of eminence, 8 OtoXoyos, the divine.

INTRODUCTION. — The Pagan systems are treat- ed of under POLYTHEISM ; and that of the Maho- metans under ALCORAN, and MAHOMETANISM : the only theology of which we have to treat at present is Christian theology, which compre- hends thai which is commonly called natural, and that which is revealed in the Scriptures of the Old and New Testaments. These taken to- gether, and they ought never to be separated, compose a body of science so important, that, in comparison with it, all other sciences sink into insignificance.

Christian theology, we have said, is divided into two great parts, natural and revealed ; the former comprehending that which may be known of God from the creation of the world, even his eternal power and Godhead ; the latter, that which is discovered to man only in the Bible. Concerning the extent of natural theology many opinions have been formed ; but into these dis- putes we mea>. not to enter. It is undeniable that there are some of the principles of theology which may be called natural ; for, though it is probable that the parents of mankind received all their theological knowledge by supernatural means, it is still obvious that some parts of that knowledge must have been capable of a proof purely rational, otherwise not a single religious truth could have been conveyed through the suc ceeding generations of the human race but by the immediate inspiration of each individual. \ e indeed admit many propositions as certainly true upon the sole authority of the Jewish and Christian Scriptures ; but it is self-evident that we could not do either the one or the other, were we not convinced by natural means that God exists, that he is a Being of goodness, justice, and power, and that he inspired with divine wis- dom the penmen

of these sacred volumes.

PART I. OF NATURAL THEOLOGY.

SECT. I.— OF THE BEING AND ATTRIBUTES OF GOD.

The existence of God is the foundation of all religion, and the first principle of the science which is the subject of this article. It is like- vw a principle which must command the assent

of every man who lias any notion of the relation between effects and their causes, and whose cu- riosity has ever been excited by the phenomena of nature. This great and important truth the Scriptures no where undertake to demonstrate ; but they open with the sublimest and strongest mode of confirming it, i. e. by ascribing the en- tire work of creation to the one Only God ; and it may be proved by arguments much more sim- ple than are the first principles of any other science.

We see that the Wman race, and every other species of animals, is at present propagated by the co-operation of two parents ; but has this process continued from eternity ? A moment's reflection will convince us that it has not. Let us take any one man alive, and, to avoid pev- plexity, let us suppose his father and mother dead, and himself the only person at present existing : how came he into the world ? It will be said he was produced mechanically or chemi- cally by the conjunction of I is parents, and that his parents were produced in the same manner by theirs. Let this then be supposed ; it must surely be granted that when this man was born, an addition was made to the series of the hu- man race. But a series which can be enlarged may likewise be diminished ; and, by tracing it backwards, we must at some period, however remote, reach its beginning. There must there- fore have been a first pair of the human race, who were not propagated by the conjunction of parents. How did these come into the world ? Anaximander tells us that the first men and all animals were bred in warm moisture, en- closed in crustaceous skins like crab-fish or lob- sters ; and that when they arrived at a proper age their shelly prisons growing dry, broke, and made way for their liberty. Empedocles that our mother earth at first brought forth vast numbers of legs, and arms, and heads, &c., which, approaching each other, arranging them- selves properly, and being cemented together, started up at once full grown men. Another of these philosophers relates that there first grew up a sort of wombs, which, having their roots in the earth, attracted thence a kind of milk for the nourishment of the foetus, which in process of time broke through the membranes and shifted for itself; whilst the Egyptian fathers of this hopeful school content d

themselves with simply affirming that animals, like vegetables, sprung at first from the bosom of the earth. Surely these sages, or their followers, should have been able to tell us why the earth has not in any climate thts prolific power of putting forth vegetable men or riie parts of men at present. If this universal parent be eternal and self-existent, it must be incapable of decay or the smallest change in any of its qualities : if it be not eternal, we shall be obliged to find a cause for rts existence, or at least for its form a i.wl all its powers. But such a cause may have produced the first human pair, and undoubted!) did produce them, without making them spring

as plants from the soil. Indeed the growth of plants themselves clearly evinces a cause supe- rior to any vegetative power which can be sup- posed inherent in the earth. No plant, from the sturdy oak to the creeping ivy, can be propagated but by seed or slips from the parent stock ; but, when one contemplates the regular process of vegetation, the existence of every plant implies tne prior existence of a parent seed, and the ex- istence of every seed the prior existence of a pa- rent plant. Which then of these, the oak or the acorn, was the first, and whence was its exist- ence derived ? ISot from the earth ; for we have the evidence of universal experience that the eartli never produces a tree but from seed, nor seed but from a tree. There must therefore be some superior power which formed the first seed or the first tree, planted it in the earth, and gave to it those powers of vegetation by which the spe- cies lias been propagated to this day.

Thus clearly do the processes of generation and vegetation indicate a power superior to those which are usually called the powers of nature. The same thing appears no less evident from the 1 iws of attraction and repulsion, which plainly prevail through the whole system of matter, and hold together the stupendous structure. Experi- ment shows that very few particles of the most solid body are in actual contact with each other ; and that there are considerable interstices be- tween the panicles of every elastic fluid is ob- vious to the smallest reflection. Yet the particles of solid bodies strongly cohere, whilst those of elastic fluids repel each other. How are these phenomena accounted for ? To say that the for- mer is the effect of attraction, and the latter of repulsion, is only to say that two individual phenomena are subject to those laws which pre- vail through the whole ot the classes under which they are respectively arranged ; whilst the ques- tion at issue is concerning the origin of the laws themselves, the power which makes the particles of gold cohere, and those of air repel each other. Power without substance is inconceivable ; and, by a law of human

thought, no man can believe a being to operate but where it is in some man- ner or other actually present : but the particles of gold adhere, and the particles of air keep at a distance from each other, by powers exerted where no matter is present. There must there- fore be some substance endowed with posver winch is not material.

Of this substance or Being the power is evi dently immense. The earth and other planets are carried round the sun with a velocity which human imagination can hardly conceive. That this motion is not produced by the agency of these vast bodies on one another, or by the in- terposition of any material fluid, has been shown elsewhere ; and, since it is a law of our best phi- losophy that we are not to multiply substances without necessity, we must infer that the same Being which formed the first animals and vege- tables, endowing them with powers to propagate their respective kinds, is likewise the cause of all the phenomena of nature, such as cohesion, repulsion, elasticity, and motion, not excepting even (he motions of the heavenly bodies them- selves. If this poweiful Beine, who is the pa

rent of vegetable and animal life, and the source of all corporeal motions, be self-existent, intelli- gent, and independent in his actions and volitions, he is an original or first cause, and that Being whom we denominate God. If he be not self-ex- istent and independent, there must be a cause in the order of nature prior and superior to him,which is either itself the first cause, or a link in that series of causes and effects, which, however vast we suppose it, must be traced ultimately to some one Being, who is self-existent, and has in him- self the power of beginning motion, independent of every thing but his own intelligence and vo- lition. In vain the Atheists allege that the series may ascend infinitely, and for that reason have no first mover or cause. An infinite series of successive beings involves an absurdity and con- tradiction.

To such reasoning it has been objected, ‘ Why, if the Author of Nature be a benevolent Being, are we necessarily subject to pain, diseases, and death ? Our reply to this is, Because from these evils Omnipotence itself could not in our present state exempt us, but by a constant series of mi- racles. The world is governed by general laws, without which there could be among men neither arts nor sciences. As long as we have material and solid bodies capable of motion, liable to re- sistance from o;her solid bodies, supported by food, subject to the agency of the air, and divi- sible, they must necessarily be liable to change, it would seem, if not to pain, disease, corruption, and death. Sickness, pain, and the dread of death, certainly now serve the best purposes. Could a man be put to death, or have his limbs broken, without feeling pain, the human race had long ago been extinct. If we felt no un- easiness in a fever, we should be insensible to the disease, and die before we suspected our health to be impaired. The horror

which gene- rally accompanies our fear of death tends to make us careful of life, and prevents us from quitting this world rashly. Thus, from every view that we can take of the works and laws of God, and even from considering the objections which have sometimes been made to them, we are compelled to acknowledge the benevolence of their Author.

The substance or essence of this self-existent, all-powerful, infinitely wise, and perfectly good Being, is to us wholly incomprehensible. That it is not matter, is shown by the process of argu- mentation by which we have proved it to exist ; but what it is we know not. It is sufficient for all the purposes of religion to know that God is somehow or other present to every part of his woiks ; that existence and every possible perfec- tion is essential to him ; and that he wishes the happiness of all his creatures. From these truths we might proceed to prove and illustrate the perpetual superintendance of his providence, both general and particular, over every the mi- nutest part of the universe. See PROVIDENCE.

SECT. II. — OF THE DUTIES AND SANCTIONS OF NATURAL RELIGION.

But from the short view we have taken of the divine perfections, it is evidently our duty to re- verence in our minds the self-existent Being to

whom they belong. He who has considered se- riously the power, the wisdom, and the goodness, displayed in the works of God, must be con- vinced that he has no imperfection ; that his power can accomplish everything which involves not a contradiction ; that his knowledge is in- tuitive, and free from the possibility of error ; and that his goodness extends to all without par- tiality. With silent gratitude and devotion glowing in the breast of the contemplative man, he will be careful not to form even a mental image of that all-perfect Being to whom they are directed; for he knows that God is not material. The man who has any notion of the perfections of the supreme Being will never speak lightly of him, or make use of his name at all but on great and solemn occasions. Whether worship is a fruit of natural religion is a point of dis- pute ; but no doubts can be entertained as to the foundation of moral virtue. Reason clearly perceives it to be the will of our Maker that every individual of the human race should treat every other individual as, in similar circum- stances, he could justly expect to be treated himself. It is thus only that the greatest sum of human happiness can be produced.

There are few questions of greater importance, than ‘ What are the sanctions by which natural religion enforces obedience to her own laws ? ‘ Natural religion, as a system of doctrines influenc- ing the conduct, is exceedingly defective in this point, unless it afford sufficient evidence, intelli- gible to every ordinary capacity, of the immor- tality of the soul, or at least of a future state of rewards and punishments. That it does afford this evidence is strenuously maintained by some deists, and even by many philosophers, who pro- fess Christianity. One great argument made use of to prove that the immortality of the soul is among the doctrines of natural religion, is the universal belief of all ages and nations that men contine to live in some other state, after death has separated their souls from their bodies. Hence it is argued omnium consensus naturae vox est. But there appears not to be any proof of that doctrine being the deduction of human reasoning. The popular belief of Paganism, both ancient and modern, is so fantastic and ab- surd, that it could never have been rationally in- ferred from what nature teaches of God and the soul.

To us who know, by stronger evidence, that the soul is immortal, and that there will be a fu- ture state in which all the obliquities of the pre- sent shall be made straight, the argument drawn from the moral attributes of God, and the un- equal distribution of the good things of this life, appears to have the force of demonstration. Vet none of us will surely pretend to say, that his powers of reasoning are greater than were those of Socrates and Cicero; and therefore the probability is, that, had we been like them des- titute of the light of revelation, we should have been disturbed by the same doubts.

But were the arguments which the light of na- ture affords for the immortality of the human soul as absolutely convincing as any geometrical demonstration — natural religion would still be defective; because it points out no method by

whicli such as have offended God may be cer- tainly restored to his favor. This is the grand theme and object of revealed religion, or theo- logy ; and to this, therefore, we now turn with gratitude. These Scriptures it is now our busi- ness to examine.

PART II.

OF REVEALED THEOLOGY. SECT. I. — OF THE DIVISIONS OF THEOLOGY. Artificial systems of theology are commonly divided into two great parts, the theoretic and the practical ; and these again are subdivided into many inferior branches. Under the theoretic part are sometimes classed —

1 . Dogmatic theology ; which comprehends an entire system of all the dogmas or tenets which a Christian is bound to believe and pro- fess. The truth of these the divine must clearly perceive, and be able to enforce upon his au- dience ; and hence the necessity of studying what is called —

2. The exegesis, or the art of attaining the true sense of the Holy Scriptures ; and,

3. Hermeneutic theology, or the art of inter- preting and explaining the Scriptures to others; an art of which no man can be ignorant who knows how to attain the true sense of them himself.

4. Polemical theology, or controversy ; and,

5. Moral theology, which is distinguished from moral philosophy, or the simple doctrine of ethics, by teaching a much higher degree of moral perfection than the mere light of reason could ever have discovered, and adding new motives to the practice of virtue.

The practical sciences of the divine are —

1. Homiletic, or pastoral theology ; which ~ che-> him to adapt his discourses from the pul- pit to the capacity of his hearers, and to pursue the best methods of guiding them by his doctrine and example in the way of salvation.

2. Cutechetic theology, or the art of teaching youth and ignorant persons the principal points of evangelical doctrine, as well with regard to belief as to practice.

3. Casuistic theology, or the science which de- cides on doubtful cases of moral theology, and that calms the scruples of conscience which arise in the Christian's soul during his journey through the present world. We have mentioned these divi- sions and subdivisions of the science of theology, not because we think them important, but merely that our readers may be at no loss to understand the terms when they meet with them in other works. Of such terms we shall ourselves make no use.

SECT. II. — OF GOD AND nis ATTRIBUTES.

But before we compare the creation of the world, and what the Scripture says of it, with the opinions of the most enlightened ancients on the same subject, it will be proper to attend to the appellation which the Jewish historian at once gives to God ; and enquire what light is thrown upon it by subsequent revelations. The passage in the original is D'nˆN X"O rvcrKna, where it is , emarkable that the Creator is denominated by a noun in the

plural number. This is cer-

tainly a very extraordinary denomination for the ONE supreme and self-existent Being; and what adds to the strangeness of the phraseology is, that the verb with which this plural noun is made to agree is put in the singular number. What now could be the sacred historian's, motive for expressing himself in this manner? His style is in general remarkable for its plainness and grammatical accuracy ; and we believe it would be difficult to find in all his five books a single phrase not relating to the Supreme Being in which there appears such a violation of con- cord. To this it has been replied that Moses uses the plural noun to express in a magnificent way the majesty of God, just as it is customary for kings and earthly potentates, when publish-ing edicts and laws, to call themselves we and us. But there is no evidence on record that such a. mode of speaking was introduced among kings at a period so early as the era of Moses. Let it be observed, too, that whenever this phraseology was introduced among men, the plural noun was in every grammatical tongue joined to a plural verb ; whereas Moses not only puts the noun and the verb in different numbers in the verse under consideration, but afterwards represents the D'nVtf as saying, ' let us make man in our image ; ' and, ' behold the man is become as one of us.' Such phrases as these last were never used by a single man, and therefore cannot have been borrowed from human idioms.

It will not be here contended, that the word O'lVN indicates a plurality of gods. In the opinion, however, of many eminent divines, it denotes, by its junction with the singular verb, a plurality of persons in the one Godhead ; and some few have contended that, by means of this peculiar construction, the Christian doctrine of the Trinity may be proved from the first chapter of the book of Genesis. To this latter opinion we can by no means give our assent. That there are three distinct persons in the one divine nature may be inferred with sufficient evidence, from a multitude of passages in the Old and New Testa- ments diligently compared together ; but it would be rash to rest the proof of so sublime a mystery upon any single text of Holy Scripture, and would certainly be so to rest it upon the text in question. That Moses was acquainted with this doctrine, we, to whom it has been explicitly revealed, may reasonably conclude from his so frequently making a plural name of God to agree with a verb in the singular number: but, had we not possessed the brighter light of the New Tes- tament to guide us, we should never have thought of drawing such an inference. For supposing the word O'nSx to denote clearly a plurality of per- sons, and that it cannot possibly signify any thing else, how could we have known that the number

is neither more nor less than three, had it not been ascertained to us by subsequent revelations ?

There are indeed various passages in the Old Testament of the phraseology of which no ra- tional account can be given, but that they indicate more than one person in the Godhead. Such are those texts already noticed ; ‘ and the Lord God said, let us make man in our image after our

likeness ;’ and ‘ the Lord God said, behold the man is become like one of us.’ To these may be added the following, which are to us perfectly unintelligible upon any other supposition ; ‘ and the Lord God said, let us go down, and there confound their language.’ ‘ If I be a master (in the Hebrew adonim, masters), where is my fear ? ‘ The fear of the Lord (Jehovah) is the begin- ning of wisdom, and the knowledge of the Holy (in the Hebrew holy ones) is understanding.’ ‘ Remember thy Creator (Hebrew thy Creators) in the days of thy youth.’ ‘ And now the Lord God and his spirit hath sent me.’ ‘ Seek ye out of the book of the Lord and read ; for my mouth it hath commanded, and his spirit it hath ga- thered them.’ That these texts imply a plurality of divine persons seems to us incontrovertible.

But how, it will be asked, can three divine persons be but one and the same God ? This is a question which has been often put, but which, we believe, no created being can fully answer. The divine nature and its manner of existence is to us wholly incomprehensible ; and we might with greater reason attempt to weigh the moun- tains in a pair of scales, than by our limited facul- ties to fathom the depths of infinity. The Su- preme Being is present in power to every portion of space, and yet it is demonstrable that in his essence he is not extended. Both these truths, his inextention and omnipresence, are fundamen- tal principles in what is called natural religion ; and when taken together they form, in the opinion of most people, a mystery as incompre- hensible as that of the Trinity in unity. Indeed there is nothing of which it is more difficult for us to form a distinct notion than unity simple, and ahsolutely indivisible ; and we are persuaded that such of our readers as have been accus- tomed to turn their thoughts inwards, and reflect upon the operations of their own minds, will ac- knowledge the difficulty is not much less to them. Though the Trinity in unity, therefore, were no Christian doctrine, mysteries must still be believed ; for they are as inseparable from the religion of nature as from tinat of revelation ; and atheism involves the most incomprehensible of all mysteries, even the beginning of ex- istence without a cause. We must indeed form the best notions that we can of this and of all other mysteries ; for, if we have no notions what- ever of a Trinity in unity, we can neither believe nor disbelieve that doctrine. It is, however, to be remembered, that all our notions of God are more or less analogical ; that they must be ex- pressed in words which, literally interpreted, are applicable only to man; and that

propositions understood in this literal sense may involve an apparent contradiction, from which the truth meant to be expressed by them would be seen to be free, had we direct and adequate conceptions of the divine nature. On this account it is to be wished that men treating of the mystery of the holy Trinity had always expressed them- selves in Scripture language, and never aimed at being wise beyond what is written. In the Scriptures the three persons are denominated by the terms Father, Son, and Holy Ghost, or by God, the Word who is also declared to be God, and the Spirit of God. If each be truly

God, it is obvious that they must all have the same divine nature, just as every man has the same human nature with every other man ; and, if there be but one God, it is equally obvious that they must be of the same individual sub- stance or essence, which no three men can pos- sibly be. In this there is a difficulty ; but, as \ ill be seen by and by, there is no contradiction. The very terms Father and Son imply such a re- lation between the two persons so denominated as that though they are of the same substance, possessed of the s > ame attributes, and equally God, just as a human father and his son are equally men, yet the second must be personally subordinate to the first. In like manner, the Holy Ghost, who is called the Spirit of God, and is said to proceed from the Father, and to be sent by the Son, must be conceived as subordi- nate to both, much in the same way as a SOB is subordinate to his parents, though possessed of equal or even of superior powers. That this is the true doctrine appears to us undeniable from the words of our Saviour himself, who, in a prayer addressed to his Father, styles him, by way of pre-eminence, ‘ the only true God,’ as being the fountain or origin of the Godhead from which the Son and the Holy Ghost derive their true divir.ity. In like manner St. Paul, when opposing the polytheism of the Greeks, says expressly, that ‘ to us there is but one God, the Father, of whom all things, and we in, or for, him ; and one Lord Jesus Christ, by whom are all things, and we by him.’

A comparison has been made use of to enable us to form some notion, however inadequate, how three divine persons can subsist in the same substance, and thereby constitute but one God. Moses informs us that man was made after the image of God. That this relates to the soul more than to the body of man has been granted by all but a few gross anthropomorphites ; but it has been well observed that the soul, though in itself one indivisible and unextended substance, is conceived as consisting of three principal facul- ties, the understanding, the memory, and the will. Of these, though they are all coeval in time, and equally essential to a rational soul, the

understanding is in the order of nature obvi- ously the first, and the memory the second ; for things must be perceived before they can be re- membered ; and they must be remembered and compared together before they can excite volition, from being, some agreeable, and others disagree- able. The memory, therefore, may be said to spring from the understanding, and the will from both ; and as these three faculties are conceived to constitute one soul, so may three divine per- sons, partaking of the same individual nature or essence, constitute one God. These parallels or analogies are by no means brought forward as proofs of the Trinity, of which the evidence is to be gathered wholly from the word of God ; but they may serve perhaps to help our laboring minds to form the justest notions of that adorable mystery which it is possible for us to form in the present state of our existence ; and they seem to rescue the doctrine sufficiently from the charge of contradiction, which has been so often urged against it by Unitarian writers. To the last ana-

logy we are aware it has often been objected that the soul may as well be said to consist of ten or twenty faculties as of three, since the pas- sions are equally essential to it with the under- standing, the memory, and the will, and are as different from one another as these three faculties are. This, however, is probably a mistake ; for the best philosophy seems to teach us that the passions are not innate ; that a man might exist through a long life a stranger to many of them ; and that there are probably no two minds in which are generated all the passions ; but under- standing, memory, and will, are absolutely and equally necessary to every rational being.

To the doctrine of the Trinity many objections have been made, as it implies the divinity of the Son and the Holy Ghost ; of whom the former assumed our nature, and in it died for the re- demption of man. These we shall notice when we come to examine the revelations more peculiarly Christian ; but there is one objection which, as it respects the doctrine in general, may be pro- perly noticed here. It is said that the first Christians borrowed the notion of a Triune God from the later Platonists ; and that we hear not of a Trinity in the church till converts were made from the school of Alexandria. But if this be the case we may properly ask whence had those Platonists the doctrine themselves ? It is not surely so simple or so obvious as to be likely to have occurred to the reasoning mind of a Pa- gan philosopher ; or, if it be, why do Unitarians suppose it to involve a contradiction ? The Pla- tonic and Pythagorean Trinities never could have occurred to the mind of him who, merely from the works of Creation, endeavoured to discover the being and attributes of the Creator; and therefore, as those philosophers travelled into Egypt and the East in quest of knowledge, it ap- pears to us in the highest degree probable that they picked up this mysterious and sublime doc- trine in those regions where it had been handed 'down as a douma from the remotest ages, and where we

know that science was not taught sys- tematically, but detailed in collections of senten- tious maxims and traditionary opinions. If this be so, we cannot doubt but that the Pagan Tri- nities had their origin in some primeval revelation. Nothing else, indeed, can account for the general prevalence of a doctrine so remote from human imagination, and of which we find vestiges in the sacred books of almost every civilised people of antiquity. The corrupt state in which it is viewed in the writings of Plato and others is the natural consequence of its descent through a long course of oral tradition ; and then falling into the hands of men who bent every opinion as much as possible to a conformity with their own speculations. The Trinity of Platonism there- fore, instead of being an objection, lends, in our opinion, no feeble support to the Christian doc- trine, since it affords almost a complete proof of that doctrine's having made part of the first reve- lations communicated to man.

As the one God to whom Moses gives the plu- ral name Elohim thus comprehends three per- sons; let us enquire what power this Triune (•od exerted, when, as the same sacred writer iih- forms us, he created the heavens and the earth.

*That by the heaven and the earth is here meant the whole universe, visible and invisible, is known to every person acquainted with the phraseology of Scripture; and we need inform no man con- versant with English writers that by creation, in its proper sense, is meant bringing into being, or making that to exist which existed not before. It must, however, be acknowledged, that the Hebrew word *n3 does not always imply the production of substance, but very often the form- ing of particular organised bodies out of pre- existing matter. Thus when it is said that ' God created great whales, and every living creature that moveth, which the waters brought forth abundantly after their kind,' and again, that ' he created man male and female ; ' though the word K"O is used on both occasions, we are not to conceive that the bodies of the first human pair, and of these animals, were brought into being from nonentity, but only that they were formed by a proper organization being given to pre-ex- istent matter. But when Moses says, ' In the beginning God created the heaven and the earth,' he cannot be supposed to mean that ' in the be- ginning God only gave form to matter already existing of itself;' for in the very next verse we are assured that, after this act of creation was over, ' the earth was still without form, and void;' or, in other words, in a chaotic state.*

It does not, however, follow from this verse, or from any other passage in

the sacred Scrip- tures, that the whole universe was called into existence at the same instant; neither is it by any means evident that the chaos of our world was brought into being on the first of those six days during which it was gradually reduced into form. From a passage in the book of Job, iu which we are told by God himself that when the ' foundation of the earth was laid, the morning stars sang together, and all the sons of God shouted for joy,' it appears extremely probable that worlds had been created, formed, and inha- bited, long before our earth had any existence. Nor is this opinion at all contrary to what Moses says cf the creation of the stars; for, though they are mentioned in the same verse with the sun and moon, yet the manner in which, according to the original, they are introduced, by no means indicates that all the stars were formed at the same time with the luminaries of our system. Most of them may have been created long be- fore, and some of them since our world was brought into being; for that clause (verse 16) ' he made the stars also,' is in the Hebrew no more than ' and the stars ;' the words he made being inserted by the translators. The whole verse, therefore, ought to be rendered thus : — ' And God made two great lights ; the greater light to rule the day, and the lesser light with the stars to rule the night ; ' where nothing is intimated with respect to the time when the stars were formed, any more than in that verse of the Psalms (cxxxvi. 9) which exhorts us to give thanks to God, who made the moon and stars to rule by n/ght; for his mercy endureth 'forever.' The first verse of the book of Genesis informs us that all things spiritual and corporeal derive their existence from God ; but it is no where said that ali matter was created at the same time ; and the

generations of men aflbrd sufficient evidence of a successive and continual creation of spirits.

That the whole corporeal universe may have been created at once must be granted ; but, if so, we have reason to believe that this earth, with the sun and all the planets of the system, were suffered to remain for ages in a state of chaos, ' without form, and void ;' because it appears from other Scriptures that worlds of intelligent creatures existed, and even that some angels had fallen from a state of happiness, prior to the era of the Mosaic cosmogony. That the sun and the other planets revolving round him we re- formed at the same time with the earth cannot indeed be questioned ; for it is not only ex- tremely probable in itself from the known laws of nature, but is expressly affirmed by the sacred historian, who relates the formation of the sun and moon in the order in which it took place. Into the particulars of his narrative we have no occasion to enter.

How strongly do the works of creation impress upon our minds a conviction of the infinite power and wisdom of their Author ! This was so appa- rent to Cicero, even from the partial and very im- perfect knowledge in

astronomy which his time afforded, that he declared those who could assert the contrary void of all understanding. But if that great master of reason had been acquainted with the modern discoveries in astronomy, which exhibit numberless worlds scattered through space, and each of immense magnitude ; had he known that the sun is placed in the centre of our system, and that, to diversify the seasons, the planets move round him with exquisite regu- larity ; could he have conceived that the distinc- tion between light and darkness is produced by the diurnal rotation of the earth on its own axis, instead of that disproportionate whirling of the whole heavens which the ancient astronomers were forced to suppose ; have he known of the wonderful motions of the comets, and considered how such eccentric bodies had been preserved from falling upon some of the planets in the same system, and the several systems from falling upon each other ; had he taken into the account that there are yet greater things than these, and ' that we have seen but a few of God's works ;' — that virtuous Pagan would have been ready to exclaim, in the words of the Psalmist, ' O Lord, how manifold are thy works ! In wisdom hast thou made them all ; the esrth is full of thy riches.' That creation is the offspring of unmixed goodness has been already shown ; and, from the vast number of cieatures on our earth endowed with life and sense, and a capability of happi- ness, and the infinitely greater number which probably inhabit the planets of this and other systems, we may infer that the goodness of God is as boundless as his power. Surely the author of so much happiness must be essential good- ness ; and we must conclude with St. John that ' God is love.'

These attributes of power, wisdom, and good- ness, so conspicuously displayed in the works of creation, belong in the same supreme degree to each person in the blessed Trinity ; for Moses declares that the heaven and the earth were cre- ated, not by one person, but by the Elohim. The

Xoyoc, indeed, or second person, appears to have been the immediate Creator; for St. John us- —ures us that 'all tilings were made by him, and that without him was not any thing made that was made.' St. Paul expressly affirms that by ihe second person in the blessed Trinity ' were all things created that are in the heaven, and that are in earth, visible and invisible, whether they be thrones, or dominions, or principalities, or powers : all things were created by him and for him ; and he is before all things, and by him all things consist.' — Coloss. iv. 17. Indeed the Hebrew Scriptures, in more places than one, ex- pressly declare that this earth, and of course the whole solar system, was formed as well as cre- ated, not by any inferior being, but by the true God, even Jehovah alone. See Isa. xl.

*12, xliv. 24; Jer. x. 10—13. But, though it be thus evident that the Xoyoc was the immediate creator of the universe, we are not to suppose that it was without the concurrence of the other two per- sons. The Father, who may be said to be the fountain of the Divinity itself, was certainly con- cerned in the creation of the world, and is there- fore in the Apostle's Creed denominated ' the Father Almighty, maker of heaven and earth ;' and that the Holy Ghost, or third person, is like- wise a Creator, we have the express testimony of two inspired writers. ' By the word of the Lord,' says the Psalmist, * were the heavens made, and all the host of them by the breath (Hebrew, spirit) of his mouth.' And Job declares that the ' Spirit of God made him, and that the breath of the Almighty gave him life.' Indeed these three divine persons are so intimately united that what is done by one must be done by all, as they have but one and the same will.*

SECT. III. — OF THE ORIGINAL STATE OF MAN.

We proceed to enquire into the specific nature of the first man. This must be implied in the image of God. Now this image or likeness could not be in his body ; for the infinite and omnipo- tent God is without body, parts, or passions, and therefore such as nothing corporeal can resemble. Some have contended that man is the only crea- ture on this earth who is animated by a principle essentially different from matter ; and hence he is said to have been formed in the divine image, on account of the immateriality of that vital principle which was infused into his body when the ' Lord God breathed into his nostrils the lueath of life, and man became a living soul.' That this account of the animation of the body of man indicates a superiority of the human soul to the vital principle of all other animals, cannot, we think, be questioned ; but, as the word immaterial denotes only a negative notion, the souls of men and brutes, though both imma- terial, may yet be substances essentially different. This being the case, it is plain that the divine image in which man was formed, and by which lie is distinguished from the brutes, cannot con- sist in the mere circumstance of his mind being a substance different from matter, but in some positive quality which distinguishes him from every other creature on this globe.

About this characteristic quality various opi- nions have been formed. Some have supposed

that tlie image of (Jo.l in Adam appeared in that rectitude, righteousness, and holiness, in which lie was made, which were perfect ; his under- standing was free from all error ; his will biassed to that which is good. And this righteousness, say they, was natural, and created with him. They, therefore, call it original righteousness. To this doctrine many objections have been made ; because nothing which is produced in a man without his knowledge and consent can be in him either virtue or vice. Adam was

unques- tionably placed in a state of trial, which proves that he had righteous habits to acquire ; but perfect righteousness is inconsistent with a state of trial. That Adam was not so is plain, as he yielded to the first temptation with which he was assailed.

Since man was made in the image of God, that phrase, whatever.be its precise import, must denote something peculiar, and at the same time essential to human nature ; but the only quality at once natural and peculiar to man is his rea son. It has therefore been concluded that it was the faculty of reason which made the resemblance. To give strength to this argument it is observed that when God says, ' Let us make man in our image,' he immediately adds, ' and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth ;' but as many of the cattle have much greater bodily strength than man, this do- minion could not have been maintained but by the faculty of reason bestowed upon him and withheld from them. Yet it would be little short of idolatry to imagine that God is obliged to compare ideas and notions together ; to advance from particular truths to general propositions ; and to acquire knowledge, as we do, by the tedious processes of inductive and syllogistic rea- soning. There can therefore be no direct image of God either in the soul or in the body of man ; and the phrase seems to import nothing more than those powers or qualities by which man was fitted to exercise dominion over the inferior creation; as if it had been said, ' Let us make man in our image, after our likeness, that they may have dominion,' &c.

That the first man, however, was not left to discover religious truth by the mere efforts of his unassisted reason we think is clear. The in- spired historian says that ' God blessed the seventh day and sanctified it, because that in u he had rested from all his works which he created and made ; ' but Adam could not have understood what was meant by the sanctification of a par- ticular day, or of any thing else, unless he had previously received some religious instruction. There cannot therefore be a doubt but that, as soon as man was made, his Creator communi- cated to him the truths of what is called natural religion, and to these were added the precept to keep holy the sabbath, or set it apart for the pur- poses of contemplation and worship.

Man, therefore, in his natural and original state was a rational and religious being, bound to do 'justice, to love mercy, to walk humbly with his God, and to keep holy the Sabbath day.' These seem to be all the duties which in that state were required of him ; for as soon as he was introduced into the terrestrial paradise, and ad

milled into covenant \vilh Ins Maker, lie was placed in a slate in which other duties were en- joined.

Moses, who in this investigation is our only guide, tells us that the Lord God, after he had formed the first pair, ‘ planted a garden eastward in Eden, and took the man and put him into the garden to dress it and to keep it. And the Lord God,’ continues he, ‘ commanded the man, saying, of every tree of the garden thou mayest freely eat ; but of the tree of the knowledge of good and evil thou shalt not eat of it ; for in the day that thou eatest thereof thou shalt surely die.’ The only law peculiar to his paradisaical stale \as the command not to eat of the fruit of the tree of the knowledge of good and evil. This was a positive precept, not founded in the nature of man, but very proper to be the test of his obedience to the will of his Creator. This was sanctioned by the penalty of death denounced against disobedience ; and the subjects of that ‘,aw must have understood somewhat of the nature of this penalty; but Christian divines have dif- fered widely in opinion respecting the full import of the Hebrew words which our translators have rendered by the phrase ‘thou shalt surely die.’ All however agree that they threatened death, in the common acceptation of the word, or the separation of the soul and body, as one part of the punishment to be incurred by eating the for- bidden fruit; and hence we must infer that, had the forbidden fruit not been eaten, our first parents would never have died, because the penalty of death was denounced against no other transgression. What therefore is said respecting the fruit of the tree of knowledge, implies not only a law, but also, as it has been termed, a covenant, promising to man, upon the observance of one positive precept, immortality or eternal life ; which is not essential to the nature of any created being, and cannot be claimed as the merited reward of the greatest virtue, or the most fervent piety.

This will enable us to dispose of the objections which have been sometimes brought by free- thinking divines against the wisdom and justice of punishing so severely as by death, a breach of a mere positive precept ; which, considered in itself, or as connected with the general principles of moral obligation, appears to be of little im- portance. We have only to reply that, as an exemption from death is not due either to the nature or to the virtue of man, it was wise and just to make it depend upon the observance of a positive precept, to impress upon the minds of our first parents a constant conviction that they were to be preserved immortal, not in the ordi- nary course of divine providence, but by the special grace and favor of God. The same con- sideration will show us the folly of those men who, because the terms of the first covenant, as stated in some systems of theology, agree not with certain philosophical maxims which they have

adopted, are for turning all that is said of the trees of knowledge and of life into figure and allegory. But the other trees which Adam and Eve were permitted to eat were certainly real trees, or they must have perished for want of food. And what rules of interpretation will

authorise us to interpret eating and trees literally in one part of the sentence arid figuratively in the other? A garden in a delightful climate is the habitation, and the fruits produced in that garden the food, prepared for the progenitors of the human race ; and though in the garden actually fitted up for this purpose two trees were re- markably distinguished from the rest, perhaps in situalion and appearance as well as in use, the dislinction was calculated to serve the best of purposes. The one, called the tree of life, of which, while they continued innocenl, they were permitted to eat, served as a sacramental pledge or assurance on the part of God, that as long as they should observe the terms of the covenant their life should be preserved ; the other, of which it was death to taste, was admirably adapted to impress upon their minds the necessity of im- plicit obedience to the Divine will, in whatever manner it might be made known to them.

SECT. IV. — OF THE FALL OF ADAM AND ITS CONSEQUENCES.

From the preceding account of the primeval state of man, it is evident that his continuance in the terrestrial paradise, together with all the privileges which he there enjoyed, were made to depend upon his observance of one positive precept. No other duty was incumbent on him, except perhaps to keep the Sabbath, then first instituted. The punishment was denounced only against eating the fruit of the tree of the knowledge of good and evil. To the word death in that passage divines have affixed many different meanings which we need not enumer- ate, most of them being very absurd, and the meaning of the word is sufficiently obvious. I n any acceptation of the word, it denoted some- thing new to Adam, which he could not under- stand without an explanation of the term ; and therefore it was threatened as the punishment of the only transgression he could commit.

The abstaining from a particular fruit in the midst of a garden abounding with fruits of alt kinds was a precept which at first view appears of easy observation ; and the penalty threatened against the breach of it was, in every sense, awful. The precept, however, was broken not- withstanding that penalty ; whereupon the his- torian tells us that, ‘ lest they should put forth their hand and take also of the tree of life, and eat, and live for ever, the Lord God sent them forth from the garden of Eden, to till the ground whence they were taken.’ Their minds must now have been burdened with the inward sense of guilt, and they must have dreaded the threat- ened death ; of which, however, they had pro- bably no idea.

God, however, did not send them forth thus hopeless and forlorn from the paradise of de- lights which they had so recently forfeited. He determined to punish them for their transgres- sion, but at the same time to give them hopes of recovering more than their lost inheritance. Calling therefore the various offenders before him, and enquiring into their different degrees of guilt, he began with pronouncing judgment on the serpent, in terms which implied that there was still mercy for man. Yet the serpent was

only the instrument of the temptation. We are told that, when the foundations of the earth were laid, the morning stars sang together, and all the sons of God shouted for joy ; and it is at least probable that there would be similar rejoicing when the six days work of creation was finished. If so, Adam and Eve, who were but a little lower than the angels, might be ad- mitted into the chorus, and thus be made ac- quainted with the existence of good and evil spirits. At all events, their gracious and merci- ful Creator would inform them that they had a more powerful enemy than a brute ; that he was a rebellious angel, capable of deceiving them in many ways ; and that they ought therefore to be constantly on their guard against his wiles. They must have known too that they were them- selves animated by something different from matter ; and, when they found they were deceived by the serpent, they might surely, without any remarkable stretch of sagacity, infer that their malignant enemy had actuated the organs of that creature in a manner somewhat similar to that in which their own souls actuated their own bodies. If this be admitted, the degradation of the ser- pent would convince them of the weakness of the tempter when compared with their Creator ; and confirm their hopes, that since he was not able to preserve unhurt his own instrument of mischief, he should not be able finally to prevail against them.

Having thus punished the original instigator to evil, the Almighty Judge turned to the fallen pair, and said to the woman, ‘ I will greatly multiply thy sorrow ; in sorrow shall thou bring forth children ; and thy desire shall be to thy husband, and he shall rule over thee.’ And unto Adam he said, ‘ Because thou hast hearkened unto the voice of thy wife, and hast eaten of the tree of which I commanded thee, saying, thou shall not eat of it ; cursed is the ground for ihy sake ; in sorrow shall thou eat of it all the days of thy life. Thorns also and thistles shall it bring forth unlo thee, and thou shall eat the herb of ihe field. In ihe sweal of thy face shall thou eat bread till thou return unto ‘the ground ; for out of it wast thou taken, for dust thou art, and unto dust shall thou return.’

Here is a terrible denunciation of toil and misery and dealh upon our firsl parents, which has since been continued in a greater or less degree upon all their posterity. Bui they were not left without hope of restoration to some betler state. Had they been furnished with no ground of hope beyond the grave, we cannot believe thai the Righteous Judge of all the earth would have added to the penalty originally threatened. That penally they would doubtless have incurred the very day on which they fell ; but, as they were promised a deliverance from the consequences of their fall, it was proper to train them up by severe discipline for the hap- piness reserved for them in a future state.

They were now conscious of guilt ; doomed to severe labor; liable to sorrow and sickness, disease and death ; miseries which they had brought, nol only upon themselves, but also, as we learn from different passages of the New Testament, upon their unborn posterity to the

end of time. Such is the brief but melancholy account given by Moses, the earliest and most authentic of historians, of that fatal event, which first

Brought death into the world, and all our woe.

Death was certainly introduced by the fall ; for the inspired apostle assures us, that in Adam all die ; and, again, that through the offence of one, many are dead. Many contend lhal it in- cludes death corporeal, spiritual or moral, and elernal ; and that all mankind are subjecled to these three kinds of death, on account of their share in the guilt of the original transgression, which is usually denominated original sin, and considered as the source of all moral evil.

That all men are subjected to death corporeal, in consequence of Adam's transgression, is universally admitted ; but that they are in any sense partakers of his guilt, and on that account subjecled to death spiritual and eternal, has been very strenuously denied. But it would extend this article beyond all due limits lo enler into this controversy. Some few divines of this school are indeed of opinion lhal ihe phrase, ' By one man's disobedience many were made sin- ners,' means nothing more than thai ihe poslerity of Adam, through his sin, derive from him a corrupt nature. But, though this be admitled, the more zealous abettors of the system contend thai il is nol the whole trulh. li is true (say Ihey) lhal all men are made of one man's blood, and lhal blood is tainled with sin ; and so a clean thing cannot be brought out of an unclean. What is born of the flesh is flesh, carnal and corrupl : every man is conceived in sin, and shapen in iniquily ; bul ihen there is a difference between being made sinners and becoming sin- ful. The one respects the guilt, the other the pollution of our nature; the one is previous to the other, and the foundation of it. Men re- ceive a corrupt

nature from their immediate parent ; but they are made sinners, not by any act of their disobedience, bul only by the impu- tation of the sin of Adam.

Such are the consequences of Adam's fall, and such the doctrine of original sin, as main- tained by the more rigid followers of Calvin. That great reformer, however, was not the author of this doctrine. It had been taught so early as in the beginning of the fifth century, by St. Augustine, the celebrated bishop of Hippo, see ALGUSTINK, and the authorily of lhal father had made il more or less prevalent in both the Greek and Roman churches long before ihe Reforma- tion. Calvin was indeed ihe mosl eminenl modern divine by whom il has been held in all ils rigor ; and il constitutes one great part of that theological system, which, from being taughl by him, is now known by ihe name of Calvinism. Those by whom il is embraced maintain il with zeal, as in their opinion forming, together with the other tenels of Iheir masler, ihe only pure system of evangelical truths ; but it hath iin.t with much opposition in some of ihe Lutheran churches, as well as from privale divines in ihe church of England, and from ihe great body of Dutch remonstrants. See CALVINISM, ARMIM- A-, and S\on OK Dour.

T H E O L O G Y

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SECT. V. — HISTORICAL VIKW OF TIIFOI.OI Y

FROM THE FALL OF ADAM TO THE COMSM. < i

CHRIST.

The events treated of in the last section paved '.he way for the coming of Christ, and the preach- ing of the gospel ; and, unless we thoroughly understand the origin of the gospel, we cannot have an adequate conception of its design. By contrasting the first with the secoi.d Adam, St. Paul gives us clearly to understand the great purpose for which Christ came into the world and suffered death upon the cross. The preaching of the gospel, therefore, commenced with the first hint of such a restoration ; and the promise given to Adam and Eve, that ' the seed of the woman should bruise the head of the serpent,' was as truly evangelical as these words of the apostle, by which we are taught that ' this is a faithful saying, and worthy of all acceptation, that Christ Jesus came into the world to save sinners.' 1 Tim. i. 15. The former text, taken by itself, is indeed obscure, and the latter is ex- plicit ; but both belong to the same system, for the Scriptures contain but two covenants or dis- pensations of God to man, in which the whole ace is included.

Christianity, therefore, is indeed very near as aid as the creation ; but its principles were at first obscurely revealed, and afterwards gradually developed under different forms, as mankind be- came able to receive them. All that appears to have been at first revealed to Adam and Eve was, that by some means or other one of their posterity should in time redeem the whole race from the curse of the fall ; or, if they had a distinct view of the means by which that redemption was to be wrought, it was probably communicated to them at the institution of sacrifices. This pro- mise of a future deliverer served to comfort them under their heavy sentence ; and the institution of sacrifices, whilst it impressed upon their minds lively ideas of the punishment due to their transgression, was admirably calculated to prepare both them and their posterity for the great atonement which, in due time, was to take away the sins of the world.*

After the fall, God was graciously pleased to manifest himself to the senses of our first parents, and visibly to conduct them by the angel of his presence in all the rites and duties of religion. This is evident from the different discourses which he held with Cain, as well as from the complaint of that murderer of being hid from his face, and from its being said that ' he went out from the presence of the Lord, and dwelt on the east of Eden.' Nor does it appear that God wholly withdrew his visible presence, and left mankind to their own inventions, till their wick- edness became so very great that his spirit could no longer strive with them. Adam continued 930 years a living monument of the justice and mercy of God ; of his extreme hatred and ab- horrence of sin, as well as of his love and long- suffering towards the sinner. He was very sen- sible how sin had entered into the world, and he could not but apprise his children of its author. He would at the same time inform them of the anity of God, and his dominion over the evil one ; of the means by which he had appointed VOL. XXII. "

liim-iijlf to be worshipbed; and of his promise of future deliverance from the curse of the fall Such information would produce a tolerable idea of the Divine Being, and afford sufficient motives to obey his will. The effects of it, accordingly, were apparent in the righteous family of Seth, who soon distinguished themselves from thepos terity of Cain, and for their eminent piety were honored with the appellation of the sons of God. Of this family sprang- a person :o remarkable for virtue and devotion as to be exempted from Adam's sentence and the common lut of his sons; for after he had walked with God 300 years, and prophecied to his brethren, he was translated, that he should not see death. Oi this miraculous event there can be no doubt but that his contemporaries had some visible demon stration ; and, as the fate of Abel was an argu- ment to their reason, so the translation of Enoch was a proof to their senses of another state of life after the present. See ENOCH.

Notwithstanding this watchful care of God over his fallen creature man, vice, and probably idolatry, spread through the world with a rapid pace. The family of Seth married into that of Cain, and adopted the manners of their new re- lations. Rapine and violence, unbounded lust and impurity of every kind, prevailed univer- sally : and when those giants in wickedness had filled the earth with tyranny, injustice, and op- pression— when the whole race was become en- tirely carnal — God, after raising up another pro- phet to give them frequent warnings of their fate for the space of 120 years, was at length obliged, in mercy to themselves, as well as to the succeed- ing generations of men, to cut them off by a general deluge. See DELUGE.

The sons of Noah were 100 years old when the deluge overwhelmed the earth. They had long conversed with their ancestors of the old world, had frequented the religious assemblies, observed the Sabbath-day, and been instructed by those who had seen Adam. It is therefore impossible that they could be ignorant of the creation of the world, of the fall of man, or of the promise of future deliverance from the consequences of that fall ; or that they could offer their sacrifices, and perform the other rites of trie instituted worship, without looking forward with the eye of faith to that deliverance seen, perhaps obscurely, through their typical oblations.

In this state of things, with the awful remem- brance of the deluge continually present to their minds, religion might for some time be safely propagated by tradition. But when by degrees mankind corrupted that tradition in its most es- sential parts ; when, instead of the one Supremt God, they set up several orders of inferior dt. • ties, and worshipped all the host of heaven; when, at the same time, they were uniting under one head, and forming a universal empire under the patronage of the sun, their chief divinity, God saw it necessary to disperse them into dis- tinct colonies, by causing such discord among them as rendered it impossible for any one spe- cies of idolatry to be at once universally estab- lished.

After this dispersion, there is reason to believe that particular revelations were

wherever men were disposed to regard them. Peleg had his name prophetically given him from the dispersion which was to happen in his days ; and not only his father Heber, but all the heads of families mentioned from Noah to Abraham, are with much plausibility supposed to have had the spirit of prophecy on many occasions. Noah was undoubtedly

both priest and prophet ; and, living till within two years of the birth of Abra- ham, or, according to others, till that patriarch was nearly sixty years old, he would surely be able to keep up a tolerable sense of true religion among such of his descendants as sojourned within the influence of his doctrine and example. His religious son Shem, who lived till after the birth of Isaac, could not but preserve in tolerable purity the faith and worship of the true God among his descendants.

But, though the remains of true religion were thus preserved, God in his infinite wisdom, saw it expedient not only to shorten the lives of men, but also to withdraw his presence from the ge- nerality, who had rendered themselves unwoi-thy of such communications; and to select a par- ticular family, in which his worship might he preserved pure amidst the various corruptions that were overspreading the world. With this view Abraham was called.

Accordingly we find him distinguished among the neighbouring princes, and kings reproved for his sake ; who, being made acquainted with his prophetic character, desired his intercession with God. History tells us of his conversing on the subject of religion with the most learned Egyptians, who appear to have derived from him or some of his descendants the rite of circum- cision, and to have been for a while stopt in their progress towards the last stage of that degrading idolatry which afterwards rendered their national worship the opprobrium of the whole earth. See MYTHOLOGY and POLYTHEISM. We are informed that his name was held in the greatest veneration all over the east ; that the Magians, Sabians, Persians, and Indians, all gloried in him as the great reformer of their respective religions : and it appears extremely probable that not only the Brachmans, but likewise the Hindoo god Brahma, derived their names from the father of the faithful.

The worship of the patriarchs seems to have consisted chiefly of the three kinds of sacrifice (see SACRIFICE) ; to which were doubtless added prayers and praises. Such of them as looked forward to a future redemption, and had any to- lerable notion of the means by which it was to be effected, as Abraham certainly had, must have been sensible that the blood of bulls and of goats could never take away sin, and that their sacri- fices were therefore valuable only when they were offered in faith of that great promise, ‘ which they, having seen it afar off, believed, and were persuaded of it ; and confessed that they were strangers and pilgrims upon earth.’ That such persons looked for a ‘ better country, even a hea- venly one,’ in a future state, is highly probable ; though the precise measure of their knowledge we can only conjecture. They believed in a fu- ture Redeemer according to the promise. The patriarchal worship had the same end in view

with the Christian — the attainment of everlast- ing life in heaven, although the generality of men appear not, in the early a«e of which we now write, to have extended their views beyond the present life.

It is a fact ascertained by profane history, as well as sacred, that the Israelites were once slaves in Egypt, and that they at last got free. Now it has been justly remarked that considering the great power of the Egyptian monarch, their hav- ing obtained their liberty in any other way than in the manner recorded by Moses, would have been a greater miracle than all the ten he re- cords. Upon these ten miraculous exertions of the divine power it has also been justly remark- ed, that most of them were such as to militate directly against the idolatry of Egypt, The (wo first of them were exerted upon their great god, the. river Nile, whose waters were turned into blood, and made to produce noxious swarms of frogs. The murrain upon the cattle was also a visible judgment upon their absurd idolatry and brute worship ; for these cattle were amonˆ their cheif deities. See APIS. The fly, which became a plague, was a god of the Phoenicians ; and the extraordinary thick darkness effectually put to defiance the power of the chief god of Egypt, Osiris, whom they adored as the sun, the foun- tain of light. But the swarm of lice struck even Pharaoh's magicians themselves with sucli asto- nishment that they acknowledged it lobe a work of the Almighty.

The God of Israel having thus magnified him- self over the Egyptians and their gods, and res- cued his people from bondage by such means as must not only have struck terror and astonish- ment into the whole land, but also have spread his name through all the countries which had any communication with that far-famed nation, pro- ceeded to instruct and exercise the Hebrews, for many years in the wilderness ; inculcated upon them the unity of the Godhead ; gave them sta- tutes and judgments more righteous than those of any other nation ; and, by every method con- sistent with the freedom of moral agency, guarded them against the contagion of idolatry and poly- theism.

The Jewish law had two great objects in view; of which the first was to preserve among them the knowledge of the true God, a rational wor- ship springing from that knowledge, and the re- gular practice of moral virtue ; and the second was to fit them for receiving the accomplishment of the great promise made to their ancestors. When the true God first tells them, by their leader Moses, that if they would obey his voice indeed, and keep his covenant, then they should be a peculiar treasure to him above all people : to prevent them from supposing that he shared the earth with the idols of the heathen, and-had from partial fondness chosen them for his por- tion, he immediately adds ' for all the earth if mine.' By this addition he gave them plainly to understand that they were chosen to be hi» peculiar treasure for some purpose of general importance ; and the very first article

of the co- venant which they were to keep was, that they should have no other gods but Him. The Al- mighty thus becoming their king, the govern-

ment of the Israelites was properly a theocracy, in which the two societies, civil and religious, were of course incorporated. They had indeed after their settlement in the promised land at first several temporary judges occasionally raised up ; and afterwards permanent magistrates, called kings, to lead their armies in war, and to give vigor to the administration of justice in peace : but neither those judges nor kings could abro- gate a single law of the original code, or make the smallest addition to it but by the spirit of prophecy. They cannot therefore be considered as supreme magistrates, by whatever title they governed ; for they were to go out and come in at the word of the priests, who were to ask coun- sel for them of the Lord, and with whom they were even associated in all judicial proceedings, as well of a civil as of a spiritual nature. Un- der any other than a theocratic government the Hebrews could not have been kept separate from the nations around them ; or, if they could, that separation would not have answered the great purpose for which it was established. Hence it was that, under the Mosaic dispensation, ido- latry was a crime of state, punishable by the civil magistrate. No mere human a'uthority could have lawfully established it.

It was for the same purpose of guarding them against idolatry, and preventing all undue com- munications with their heathen neighbours, that the ritual law was given. After their repeated apostacies, and impious wishes to mix with the surrounding nations, it was necessary to subject them to a multifarious ritual, of which the cere- monial parts were solemn and splendid, fitted to engage and fix the attention of a people whose hearts were gross; to inspire them with awful reverence, and to withdraw their affections from the pomp and pageantry of those idle supersti- tions which they had so long witnessed in Egypt. To keep them warmly attached to their public worship, that worship was loaded with operose and magnificent rites, and so completely incor- porated with their civil polity as to make the same things at once duties of religion and acts of state. The service of God was indeed so ordered as to be the constant business as well as entertainment of their lives, supplying the place of all other entertainments ; and the sa- crifices which they were commanded to offer on the most solemn occasions were of such ani- mals as the Egyptians and other heathens deemed sacred.

Few precepts in the Jewish law are more fre- quently repeated than that

which prohibits the seething of a kid in its mother's, milk ; among the nations round Judea, the feasting upon a kid boiled in its mother's milk was an essential part of the impious and magical ceremonies celebrat- ed in honor of one of their gods, who was sup- posed to have been suckled by a she goat. Hence in the Samaritan Pentateuch, the text runs thus : — ' Thou shalt not seeth a kid in its mother's milk ; for whoever does so is as one who sacrifices an abominable thing, which offends the God of Jacob.' Another precept, apparently of very little importance, is given in these words : — ' Ye shall not round the corners of your heads, neither shalt thou mar the corners of thy beard.'

But its wisdom is seen at once, when we know that at funerals it was the practice of many of the heathens, in that early period, to round the corners of their heads, and mar their beards, that by throwing the hairs they had cut off upon the dead body, or the funeral pile, they might propitiate the shade of the departed hero ; and that in other nations, particularly in Phoenicia, it was customary to cut off all the hair of their heads except what grew upon the crown, which, with great solemnity, was consecrated either to the sun or to Saturn. The unlearned Christian, if he be a man of reflection, must read with some degree of wonder such laws as these : — ' Thou shalt not sow thy vineyard with divers seeds, lest the fruit of thy seed which thou hast sown and the fruits of thy vineyard be defiled. Thou shalt not plow with an ox and an ass together. Thou shalt not wear a garment of divers sorts, or of woollen and linen together.' But his won- der will cease when he knows that all these were superstitious practices from which the Sabian idolaters of the east expected the greatest advant- ages. Their belief in magic and judicial astro- logy led them to imagine, that by sowing differ- ent kinds of corn among their vines they should propitiate the gods which were afterwards known in Rome by the names of Bacchus and Ceres ; that, by yoking animals so heterogeneous as the ox and the ass in the same plough, they should by a charm secure the favor of the deities who presided over husbandry ; and that a garment composed of linen and woollen, worn under cer- tain conjunctions of the stars, would protect its owner, his flocks, his herds, and his field, from all malign influences, and render him in the highest degree prosperous through the whole course of his life. But magical ceremonies, of which the very essence seems to have consisted in uniting in one group, or jumble things never brought together by nature, were always per- formed to render propitious, good or evil demons (see MAGIC) ; and therefore such ceremonies, however unimportant in themselves, were in that age most wisely prohibited in the Mosaic law. If an accurate examination of the whole Jewish ritual be made in this manner, every precept of it will be found to be directed against some ido- latrous practice of the age in which it was given.

That these laws might operate more powerfully on minds gross and carnal,

they were all enforced by temporal sanctions. This was indeed the natural and even necessary consequence of the theocratic government established in Israel. Nor were temporal rewards and punishments held out only to the nation as a collective body ; they were promised and threatened to every indivi- dual in his private capacity as the certain conse- quences of his obedience or disobedience. Every particular Hebrew was commanded to honor his father and mother, that it might go well with him, and that his days might be prolonged ; whilst he who cursed his father or mother was sure to be put to death. Against every idolater, and even against the wilful transgressor of the ceremonial law, God repeatedly declared he would set his face, and would cut off that man fo m among his people.

From these peculiarities in the Jewish dispen-

sation, some divines have rashly concluded that the ancient Israelites had no hope whatever beyond the grave ; and that in the whole Old Testament there is not a single intimation of a future state. In the earliest periods of their commonwealth, the Israelites could, indeed, only infer, from dif- ferent passages of their sacred books, that there would be a general resurrection of the dead, and a future state of rewards and punishments ; but, from the writings of the prophets, it appears that before the Babylonish captivity that doctrine •nust have been very generally received. See Job xix. 25. In the Psalms, and in the prophe- cies of Isaiah, Daniel, and Ezekiel, there are se- veral texts which seem to prove incoutrovertibly that, at the time when these inspired books were written, every Israelite who could read the Scrip- tut es must have had some hopes of a resurrec- tior from the dead. For example, Isaiah has these remarkable words : — ‘ Thy dead men shall live ; together with my dead body shall they arise. Awake and sing, ye that dwell in the dust; for thy dew is as the dew of herbs, and the earth shall cast out the dead.’ These words are undoubtedly figurative, and were uttered to give the Israelites consolation in very disastrous times. It was indeed a prophecy only of a temporal deliverance; but, as it is expressed in terms relating to the death and resurrection of man, the doctrine of a resurrection must then have been well known, and generally received, or such language would have been altogether un- intelligible. In the book of Ezekiel, xxsvii. 3, there is also a particular description of the re- surrection ; which must have made the hope and belief of it very general among the Jews.

The law had also certainly a spiritual mean- ing to be understood when the fulness of time should come. Every Christian sees a striking resemblance between the sacrifice of the paschal lamb, which delivered the Israelites from the destroying angel in Egypt, and the sacrifice of the Lamb of God, which taketh away the sin of the world. Indeed the whole ritual of sacrifice must have led the more intelligent of them to faith in a future sacrifice ; by which, while the heel of the seed of the woman should be bruised, the head of the serpent should be completely crushed: and as prophets were raised up from time to time, to prepare them for the coming of the Messiah, and to foretel the -nature of his kingdom, there can be no doubt but that those inspired teachers would lay open to them, as far as was expedient, the temporary duration of the Mosaic law, and convince them that it was only the shadow of better things to come.

While the Israelites were thus gradually pre- pared for the coming of the Prince of Peace, we must not suppose that the rest of the world was totally neglected. The dispersion of the ten tribes contributed to spread the knowledge of the true God among the eastern nations. The sub- sequent captivity of the tribes of Judah and Ben- jamin must have confirmed that knowledge in the great empires of Babylon and Persia ; and that particular providence of God, which after- wards led Ptolemy Philadelpbus to tret the Jew- ish Scriptures translated into the Greek language, laid the divine oracles open to the study of

every accomplished scholar. At 'ast, when the arms of Rome had conquered the civilized 'vorld, and rendered Judea a province of the empire ; when learning and philosophy were so universally diffused through the civilized world, that the success of an imposture was impracticable and hopeless ; when the police of the Roman govern ment was such that the intelligence of every thing important was quickly transmitted from the most distant provinces to the capital of the empire; 'when that fulness of time was come, God sent forth his Son, made of a woman, made under the law, to redeem them that were under the law, that we might receive the adoption of sons.'

SECT. VI. — VIEW or THEOLOGY, PECULIARLY CHRISTIAN.

The time fixed by the Jewish prophets for the coming of the Messiah being arrived, ' a mes- senger was sent before his face to prepare his way before him by preaching the baptism of repentance for the remission of sins.' This mes- senger was John the Baptist, a very extraordi- naiy man, and the greatest of all the prophet-;. His birth was miraculous, the scene of his mi- nistry the wilderness, his manners austere, and his preaching upright, without respect of persons. He frankly told his audience he was not the Messiah, that the Messiah would soon appear among them, that ' he was

mightier than himself, and that he would baptise them with the Holy- Ghost and with fire.'

Mightier indeed he was ; for, though born of a woman, the Messiah was not the son of a human father ; and, though living for the first thirty years of his life in obscurity and poverty, he was the lineal descendant of David, and heir to the throne of Israel. But the dignity of his human descent, great as it was, vanishes from consideration when compared with the glory which he had with his Father before the world was. The Jewish dis- pensation was given by the ministry of Moses, and illustrated by subsequent revelations vouch- safed to the prophets ; the immediate author of the Christian religion is the Xoyoc of whom St. John declares that ' he was in the beginning with God, and was God; that all things were made by him ; and that without him was not any thing made that was made.' We have already proved that in the one Godhead there is a Tri- nity of persons ; and that the Xoyoc is one of the three is apparent from these words of the apostle, and from many other passages of sacred Scripture. Thus he is called the Lord of Hosts himself; the first and the last, besides whom there is no God ; the most high God ; God blessed for ever; the mighty God, the everlast- ing Father, Jehovah our righteousness ; and the only wise God our Saviour. This great Being, as the same apostle assures us, was made flesh, and dwelt among men; not that the divine na- ture was or could be changed into humanity; for God is immutable, the same Almighty and in- comprehensible Spirit yesterday, to day, and for ever ; but the Word or second person in the Godhead, assuming a human soul and body into a personal union with himself, dwelt upon earth as a man, veiling his divinity under mortal flesh.

This incarnation of the Son of God is per- haps the greatest mystery of the Christian faith, and that to which ancient and modern heretics have urged the most plausible objections. The doctrine of the Trinity, though expressly scrip- tural, is equally incomprehensible ; but the na- ture of God and his mode of existence must necessarily be incomprehensible by finite beings. And therefore it is a philosophical truth that a revelation, which should contain nothing but comprehensible truths, would be equally incre- dible and useless. As well may we expect a river to contain the ocean as a finite being to comprehend the infinite God. The difficulty is not how two natures so different as the divine and human can be so intimately united as to become one person ; for this union in itself is not more inconceivable than that of the soul and body in one man : but that which at first is apt to stagger the faith of the reflecting Christian is the infinite distance between

the two natures in Christ, and the comparatively small import- ance of the object, for the attainment of which the eternal Son of God is said to have taken upon him our nature.

Much of this difficulty however will vanish to him who considers the ways of Providence, and attends to the meaning of the words in which this mystery is taught. The importance of the object for which the Word condescended to be made flesh, we cannot adequately know. The oracles of truth indeed inform us that Christ Jesus came into the world to save sinners ; but there are passages scattered through the New Tes- tament (Eph. i. 10; Col. i. 19, 20) which indi- cate not obscurely that the influence of his suf- ferings extends toother worlds besides this: and, if so, who can take upon him to say that the quantity of good which they may have produced was not of sufficient importance to move even to this condescension, a Being who is emphatically styled love?

Perhaps the very improper appellation of mo- ther of God, which at an early period of the church was given to the Virgin Mary, may have been one cause of the reluctance with which the incarnation has been admitted ; for such lan- guage, in the proper sense of the words, implies what those by whom it is used cannot possibly believe to be true ; but it is not the language of Scripture. We are there taught that ‘ Christ being in the form of God, thought it no robbery to be equal with God ; but made himself of no reputation, and took upon him the form of a servant, and was made in the likeness of man ;’ that ‘ God sent forth his Son made of a woman, made under the law, to redeem them that were under the law, that we might receive the adop- tion of sons’ (Phil. ii. 6, 7; Gal. iv. 4, 5), and that ‘ the Word who was in the beginning with God, and was God, by whom all things were made, was made flesh, and dwelt among men (who beheld his glory, the glory as of the only begotten of the Father), full of grace and truth ;’ but we are no where taught that, as God, he had a. mother !

While the Jews were instruments of enlight- ening the heathen nations of antiquity, their in- tercourse with those nations made them almost

unavoidably acquainted with the philosophy which was cultivated among the Chaldeans, the Persians, and the Egyptian Greeks ; and, ingrafting many of the opinions derived from those schools upon the doctrines of Moses and the prophets, they corrupted their own religion while they im- proved that of their neighbours. Hence, by the time that Christ came among them, they had made the word of God of none effect through a number of idle fancies which they inculcated on the people as the traditions of the elders ; and, as they had attached themselves to different masters in philosophy, their unauthorised opinions were of course different according to the different sources whence they were drawn. The peculiar tenets of the

Essenes seem to have been a species of mystic Platonism. The Pharisees are thought to have derived their origin from a Jewish phi losopher of the Peripatetic school ; and the re- semblance between the doctrines of the Saddu- cees and the philosophy of Epicurus has escaped no man's observation.

Most of these sects agreed in the expectation of the Messiah, but, unhappily for themselves, expected him to be a great temporal prince. To this mistake several circumstances contributed; some of their prophets had foretold his coming in lofty terms borrowed from the ritual law, and the splendor of earthly monarchs. The neces- sity of casting this veil over those living oracles is evident from the very nature of prophecy. And, at the time when the predictions were made, the Mosaic system had not run out half its course, and was therefore not to be exposed to popular contempt by an information that it was only the harsh rudiment of one more perfect. The Jews had suffered so much from the Chaldeans, the Greeks, and other nations by whom they had been conquered, and were then suffering so much from their masters the Romans, that their carnal minds could think of no deliverance greater than that which should rescue their nation from every foreign yoke. And what men earnestly wish they are very ready to believe.

As our Saviour came for a very different purpose, the first object of his mission was to rectify these notions of his erring countrymen. Accordingly he embraced every opportunity o. inveighing against the false doctrines taught as traditions of the elders ; and, by his knowledge of the secrets of all hearts, he exposed the vil- hypocrisy of those who made a gain of godliness The importance in which Moses held the ritual law, and to which, as the means of preserving its votaries from the contagion of idolatry, it was justly entitled, had led the Jews to consider every ceremony of it as of intrinsic value and perpetual obligation ; but Jesus brought to their recollection God's declared preference of mercy to sacrifice; showed them that the weightier mat- ters of the law, judgment, mercy, and faith, claimed their regard in the first place, and its ceremonial observances only in the second ; and taught them, in conformity with the predictions of their own prophets, that the hour was about to come when the worship of God should not be confined to Jerusalem, but that ' true wor- shippers should every where worship 'he Fat»ei in spirit and in truth.'

By thus restoring the law to its original purity, and in man/ cases extending its sense, the blessed Jesus executed the office of a prophet to the lost sheep

of the house of Israel ; but, had he not been more than an ordinary prophet, he could not have abrogated the most trivial ceremony of it, nor even extended the sense of any of its moral precepts. It was necessary, therefore that Jesus, as he taught some new doctrines, and plainly in- dicated that greater changes would soon be in- troduced, should vindicate his claim to that ex- alted character which alone could authorise him to propose innovations. This he did in the amplest manner, by fulfilling prophecies and working miracles (see MIRACLE) ; so that the unprejudiced part of the people readily acknow- ledged him to be of a truth ‘ that prophet who should come into the world — the Son of God and the King of Israel.’ He did not, however, make any change in the national worship, or assume to himself the smallest civil authority. On the con- trary he chose from the lowest and least corrupted of the people certain followers, whom he treated with the most endearing familiarity for three years, and commissioned at his departure to pro- mulgate such doctrines as, consistently with the order of the divine dispensation, he could not personally preach himself. With these men, during the course of his ministry on earth, he went about continually doing good, healing the sick, casting out devils, raising the dead, reprov- ing vice, preaching righteousness,‘and instructing his countrymen, by the most perfect example which was ever exhibited in the world, of what- soever things are true, or honest, or just, or pure, or lovely, or of good report. The Scribes and Pharisees, however, finding him not that con- queror whom they vainly expected, becoming envious of his reputation among the people, and being filled with rancor against him for detect- ing their hypocritical arts, delivered him up to the Roman governor, who, though convinced of his innocence, yielded to the popular clamor, and crucified him between two thieves, as an enemy to Csesar.

That Christ died for the benefit of the human race is a truth so apparent, from numberless texts, that no man professing Christianity has hitherto called it in question. Very different opinions have been formed indeed concerning the nature and extent of that benefit, and the means by which it is applied ; but that the pas- sion and death of the blessed Jesus were essential parts of his ministry on earth has never been controverted, unless perhaps by those modern Unitarians who have presumed to correct the supposed errors of the apostles and evangelists. That on the cross he made satisfaction to his Father for the sins of the world is the general belief of Christians ; but presumptuous men, aiming at being wise beyond what is written, have started a thousand idle questions concern- ing the necessity of such satisfaction, and the manner in which it was made. We enter not into these debates. The Scriptures have nowhere said what God could or could not do ; and on this subject we can know nothing but what they have taught us. That ‘ we are reconciled to God by the death ofhi> S< >n’ i-

the principal doctrine

of the New Testament ; and, without presum- ing to limit the power, the mercy, or the wisdom of him who created and sustains the universe, we shall endeavour to show that it is a doctrine ‘ worthy of all acceptation.’ In doin;4 this we shall state impartially the opinions which men really pious have held respecting the form or manner in which Christ by his death made satis- faction to God for the sins of the world : and leave our readers to embrace that opinion which shall appear to them most consonant to the ge- neral sense of Sacred Scripture.

The stricter Calvinists, interpreting literal Iv such texts of Scripture as speak of his being made sin for us, of his bearing our sins in his own body on the tree, and of the Lord’s laying on him the iniquity of us all, contend that the sins of the elect were lifted off from them and laid upon Christ by imputation, much in the same way as they think the sin of Adam is im- puted to his posterity. ‘ By bearing the sins of his people,’ says Dr. Gill, ‘ he took them off from them, and took them upon himself, bearing or carrying them as a man bears or carries a bur- den on his shoulders. There was no sin in him inherently, but sin was put upon him by his Divine Father, as the sins of the Israelites were

Eat upon the scape-goat by Aaron.’ — See Gill’s ody of Divinity, vol. ii. b. iii. c. v. The zeal with which this doctrine was taught by some of the reformers, and the impossibility of admitting it, which every reflecting and un- prejudiced mind must feel, was probably one of the causes which drove Socinus and his fol- lowers to the other extreme of denying Christ’s satisfaction altogether, and considering his death as nothing more than that of an ordinary martyr, permitted for the purpose of attesting the truth of his doctrine, and paving the way for his resur- rection, to confirm the great promise of immor- tality. According to these men, forgiveness is freely dispensed to those who repent, by the es- sential goodness of God, without regard to the merit or sufferings of any other being ; and the gospel is said to save from sin, because it is the most perfect lesson of righteousness. The great objection of Crellius to the doctrine of the satis- faction is, that it is a hindrance to piety : for, if Christ has paid the whole debt, he thinks that we must have nothing to do, as nothing more can be required of us. And if it were indeed true that our sins are imputed to Christ, and his righteousness imputed to us, this objection would be insurmountable; for God could not justly exact a double punishment for the same sin, or inflict misery upon those to whom he imputes perfect righteousness. But, as to this imaginary transferring «if virtues and vices from one person to another, the Christian Scriptures give no coun- tenance, so they nowhere call the death of Christ a satisfaction for the sins of men. The term has indeed been long in use among divines, and when properly explained it may be retained without

danger; but, iu treating of this subject, it would perhaps be more prudent to restrict ourselves to the use of Scripture language, as the word satis- faction carries in it the idea of a debt paid and accepted ; whereas Paul says, that ‘ eternal life is the gift of God through Jesus Christ our Lord ;

and that we are justified freely by his grace, through the redemption that is in Jesus Christ, whom God has set forth to be a propitiation through faith in his blood.’

To attain adequate notions of redemption and justification, it will be necessary to look back to the fall, and to remember that, ‘ as by the offence of one, judgment came upon all men to con- demnation ; even so, by the righteousness of one, the free gift came upon all men unto justification of life ;’ that, ‘ as by one man’s disobedience many were made sinners, so by the obedience of one shall many be made righteous ;’ and that, ‘ as in Adam all die, even so in Christ shall all be made alive.’ It is therefore undeniable that whatever we lost in the first Adam is restored to us by the second ; and so they who believe that the punishment denounced against eating the forbidden fruit was death corporal, spiritual, and eternal, must believe that we are redeemed from all these by Christ ; who, having ‘ appeared once in the end of the world to put away sin by the sacrifice of himself, died for us, that whether we wake or sleep we should live together with him.’ If the image of God in which man was created was lost by the breach of the first covenant, it is more than restored to vis ‘ by the mediator of a better covenant, which is established upon better promises ;’ if by the sin of Adam we were utterly indisposed, disabled, and made opposite to all that is spiritually good, and wholly inclined to all evil, and that continually, we are freed from that dreadful curse by ‘ our Saviour Jesus Christ, who gave himself for us, that he might redeem us from all iniquity, and purify to him- self a peculiar people zealous of good works ;’ and if for our share in the first transgression we be justly liable to all punishments in this world and in that which is to come, the apostle assures us, that ‘ when we were enemies we were recon- ciled to God by the death of his Son, because that God was in Christ reconciling the world to him- self, not imputing their trespasses unto them.’ As Jesus is ‘ the Lamb slain in the divine decree from the foundation of the world,’ these beneficial consequences of his death have been extended, by a retrospective view, to all in every age whose names are written in the book of life, though it is absurd to suppose that he literally took their sins upon him, and impious to imagine that he suf- fered under the imputation of sin. Such is the general doctrine of redemption, as it is taught by the more moderate Calvinists and

the more mo- derate Remonstrants ; for moderate Christians of all denominations, though they express them- selves differently, have nearly the same views of the fundamental articles of their common faith.

It is one of the fundamental doctrines of the Calvinistic school that ‘ none are redeemed by Christ, effectually called, justified, adopted, sanc- tified, and saved, but the elect only’ (Confession of Faith, c. iii. sect. 6); and if the notions of redemption which, in the end of the seventeenth century, were very generally embraced, be ad- mitted as just, it will not be easy to overturn the arguments by which that doctrine is sup- ported. It is also farther argued in this school that the doctrine of universal redemption reflects on the wisdom, the justice, and the power of Goˆ and robs him of his glory.

The Scriptures assure us that all men sh •>.’< not be saved; but how can this be if Christ died for all, and the scheme of salvation by his death was formed by infinite wisdom? The Arrainians indeed say that those who fail of sal- vation fail through their own fault in not per- forming the conditions required of them ; but God either knew or knew not that such men would not perform such conditions. If he knew it not his knowledge is limited ; if he did know it, where was his wisdom in providing a scheme of redemption for men to whom he was aware that it would be of no benefit ? This notion of a limited redemption, as they think it more worthy of the sovereignty of God, they believe to be taught by our Saviour himself in John vi. 37 — 40. But the Arminians, on the other hand, contend that it is impious to limit the effects of Christ's death to a chosen few, since it appears from Scripture that, by the decree and intention of his Father, he tasted death for every man, that all, without exception, might through him obtain remission of their sins. ' For God so Joved the world that he gave his only begotten Son, that whosoever believeth in him should not perish but have everlasting life.' In perfect conformity with the doctrine of his divine Mas- ter St. Paul teaches that ' Christ died for all ; that God was in Christ reconciling the world to himself, not imputing their trespasses unto them ;' that ' he will have all men to be saved, and to come unto the knowledge of the truth ;' that ' Christ gave himself a ransom for all ;' and that ' Jesus was made a little lower than the angels, that by the grace of God he should taste death for every man.' The very same thing is taught by St. Peter and St. John. The former says that ' the Lord is not willing that any should perish, but that all should come to re- pentance ;' and the latter that ' Jesus Christ the righteous is the propitiation for our sins ; and not for ours only, but for the whole world.'

Upon these texts the Arminians are willing to rest their doctrine of universal redemption ; though they think that a very strong additional argument for its truth arises from the number- less absurdities which flow

from the contrary opinion. Thus, say they, the apostles were com- manded by our Saviour to ‘ go into all the world and preach the gospel to every creature;’ and all who hear it preached are required to believe it. Lastly, if Christ died not for all, then is it certain that he cannot claim dominion over all in consequence of his death and resurrection ; but St. Paul says expressly that ‘ to this end Christ both died, and rose, and revived, that he might be the Lord both of the dead and living.’ The Arminians, however, acknowledge that though Christ died for all, there are many who will not be saved : for, say they, the death of Christ did not literally pay the debts incurred by sinners, but only obtained for them the gra- cious covenant of the gospel, by which all who believe in him, and sincerely endeavour to work out their own salvation with fear and trembling, are entitled to forgiveness of sins and eternal life.

Among these various opinions respecting the complete object of the death of Christ the seri-

ous reader, divesting himself of prejudice, must search the Scriptures and adopt the theory which he shall find most explicitly taught in that sacred volume ; but as in every system it is admitted mat one purpose for which Christ died was to redeem mankind from the everlasting power of the grave, and bring to light, life, and immor- tality, it is of the utmost importance to know whether that purpose has been fully attained. And as the Scriptures give us no hopes of being rescued from the dominion of death but by a resurrection, some evidence seems necessary to evince that a general resurrection shall actually take place. This we are promised as one great benefit purchased for us by the sufferings of Christ on the cross.

The resurrection of a man from the dead is an event indeed so different from the common course of things, that nothing but the most com- plete evidence can make it an object of rational belief; but, ns the resurrection of Jesus has always been said to have had God for its Author, it is an effect which does not exceed the power of the cause assigned, and is therefore an event possible in itself and capable of proof. It is a deviation from the laws of nature, but it is not contradic- tory to any one of those laws. But that a great number of men and women should deliberately form a plan of ruin and misery to themselves, without a prospect of the smallest advantage ,iither in this world or in the next, is as different «from the common course of things as the resur- •jction from the dead ; and therefore in itself at least as great a miracle : but that they should persist in prosecuting this plan in the midst of torments ; that they should spread themselves over the whole

world, and every where publish a number of falsehoods, without any one of them contradicting the rest; that tru'th should never escape them either in an unguarded moment, or when lingering on the rack, and yet that all their lies should be in perfect agreement with each other; that they should every one of them court sufferings for a person whom they knew to be an impostor; that not one of the number — not even a single woman — should have had so much com passion for a fellow-creature as to rescue him from the flames, by confessing a truth which could injure nobody — not even the suffering deceivers themselves ; all this is not only different from the common course of things, but directly con- trary to the most known laws of nature, and is therefore not miraculous, but may be pronounced impossible. Yet this impossibility we must admit, or acknowledge, that as ' Christ died for our sins, according to the Scriptures, and was buried; so he rose again the third day, accord- ing to the Scriptures ; that he was seen of Ce- phas, then of the twelve; after that of above .500 brethren at once ; after that of James ; then of all the apostles; and that he was last of all seen of St. Paul,' who was converted by the vision, to preach the faith which til! then he had persecuted.'

That our blessed Lord ascended into heaven will hardly be denied by any one who admits that he rose from the dead. The uˆ > nsiou was indeed the natural consequence of the resurrec ii')ii ; and he seems to be represented as sitting

on the right haiul of God, to denote that rega, authority with which he is now invested.

The first conspicuous proof which our blessed Lord gave of being vested with supreme powei; and made head over all things to the church, was on the day of Pentecost. lie had told tlv apostles that he would pray the Father to give them another comforter, even the Spirit of trutn. who should teach them all thingSj and bring &. things to their remembrance : these promises wee amply fulfilled by the gift of tongues, as related in Acts ii. 1 — 13. That those who heard t.f apostles speak so many different languages were, amazed is what we should naturafiy suppose; but that a single individual among them re- mained unconvinced is astonishing; for the gift of tongues is one of the most palpable miracles that ever was wrought. It is likewise one of the best authenticated miracles ; for the Acts of the Apostles was written not more than thirty years after the event took place ; and it is not con- ceivable that, within so short a period, St. Luke, or any man of common sense, would have ap- pealed for the truth of what he recorded to so many inveterate enemies of the Christian name, had he not been aware that the miraculous gift was a fact incontrovertible.

The immediate author of this gift, so necessary to the propagation of the

gospel, was the Spirit of truth, or the Comforter, who is the Holy Ghost. That there are three persons in the one Godhead has been already shown at large in this article ; and that the Holy Ghost is one of these three is evident from the form of baptism insti- tuted by Christ himself. But, as more plausible objections have been urged against his divinity than any that we have met with against that of Christ, it is proper to consider these before we proceed to give an account of the graces which he imparted to the infant church, and of the apostles preaching under his influence. By the Arians the Holy Ghost is considered as a crea- ture ; by the Socinians and modern Unitarians, as they call themselves, the words Holy Ghost are supposed to express, not a person or spiritual subsistence, but merely an energy or operation, a quality or power of the Father, whom alone they acknowledge to be God. If this doctrine can be confuted, the Arian hypothesis will fall to the ground.

The Socinians admit that in the Scriptures many things are spoken of the Holy Ghost which can be properly predicated only of a person; but the inference drawn from this concession they endeavour to invalidate by observing that in Scripture there are likewise expressions in which things are predicated of abstract virtues which can be literally true only of such persons as practise these virtues : as in 1 Cor. xiii. 4, 6, of charity. In like manner, say they, personal actions are attributed to the Holy Ghost, which itself is no person, but only the virtue, power, or efficacy, of God the Father ; because God the Father, who is a person, performs such actions by that power, virtue, or efficacy in himself, which is denominated the Holy Ghost. Thus when we r.-:nl. Acts x. 0, -'0, that ' the Spirit said unto IVter, Uphold three men seek thee,' w

person who spoke these words and sent the three men ; but, because he did so by that virtue in him winch is called the Spirit, therefore the Spirit is said to have spoken the words and sent the men. Again, when ' the Holy Ghost said to those at Antioch, Separate me Barnabas and Saul for the work whereunto I have called them,' Acts xiii. 2, we are to conceive that it was God the Father who commanded the two apostles to be separated for the work to which he had called them ; but, because he had done all this by that power within him which is called the Holy Ghost, therefore his words and actions are attributed to the Holy Ghost, just as long-suffering in men is attributed to charity.

This is plausible, and would have some more force were all the actions which in Scripture are attributed to the Holy Ghost of such a nature, as that they could be supposed to have proceeded from the person of God the Father in conse- quence of any particular power or virtue in him ; but this

is far from being the case. Thus 'the Spirit is said to make intercession for us' (Rom. viii. 26, 27) : but with whom can we suppose God the Father, the fountain of divinity, to in- tercede ? Our Saviour assured his disciples that the Father would, in his name, send to them the Holy Ghost, who is the Comforter (John xiv. 26; xv. 26, &c.); that he would himself send the Comforter unto them from the Father ; that the Comforter should not speak of himself, but speak only of what he should hear ; and that he should receive of Christ's, and show it unto them. But we cannot, without blasphemy and absurdity, suppose that the Father would, in the name of Christ, send himself; that the Son would send the Father from the Father ; that the Father would not speak of himself, but speak only what he heard ; or that either the Father in person, or a quality of the Father, should receive any thing of Christ to show unto the apostles. The sa- gacity of Socinus perceived the force of such ob- jections as these, and therefore he invented another prosopopeia to serve his purpose in the interpretation of those texts to which this one cannot be applied. 'The Spirit of God,' says he, ' may be considered either as a property or power in God, or as the things on which that power is working. When taken in the former sense, the Spirit, where any personal attribute is given to it, means God the Father ; when taken in the latter sense, it means the man on whom the power of the Father is working ; who, as long as he is affected by that power, is therefore called the Spirit of God ;' and he quotes, we think most absurdly, the 10th verse of the 2d chapter of 1 Cor. as a text in which by the Spirit is meant an inspired man who could search all things, yea, even the deep things of God.

The Holy Ghost, as it appears to us, is un- questionably a person ; for, though there are many passages of scripture in which the gifts of the Holy Ghost are called the Holy Ghost, they are so called by a very common figure of speech, in which the effect receives the name of its cause : and since this person is joined with the Father and the Son in the formula of Christian baptism; since they who lied to the Holy Ghost are said to have lied unto God (Acts v. 4) ; since blasphemy against him is a more m.-uious offence than the same sin

against even the Father or the Son ; and since it was by the operation of the Holy Ghost that Jesus Christ was conceived of the Virgin Mary, and even on that account called the Son of God — it follows undeniably that the Holy Ghost is God, of the same substance with the Father and Son. It was this Divine Spirit who, on the day of Pentecost, inspired the apostles with the know- ledge of different languages ; and, as these were given only to enable them to preach the gospel to every creature, it can admit of no doubt but that he, who so amply provided the means of preaching, would take care that the gospel should be preached in purity. Men thus quali- fied were well fitted to declare all the counsel of God. By the word of wisdom,

they communi- cated to the Gentile nations a pure system of re- ligion ; turning them from the vanity of idols to the worship of the living God : by the word of knowledge, they preached the great doctrines of revelation both to Jews and Gentiles, showing them that there is none other name under heaven given unto men whereby they maybe saved, than the name of Jesus Christ, and by their gifts of heal- ing and of miracles, &c., they were enabled to prove unanswerably that their doctrines were di- vine. They taught every where the unity of God, the creation of the world, the fall of man, the necessity of redemption, the divinity of the Redeemer, his sacrifice on the cross to assure mankind of immortality, and the terms of the new covenant into which they had through him been graciously admitted by God.

*Such a view as our limits would admit of we have given of all these doctrines, except that which respects the terms of the gospel covenant ; . but, these being explicitly stated only by St. Paul and St. James, we could not till now investigate them, without violating the order into which, for the sake of perspicuity, we have digested the several parts of this short system. Our Saviour himself has indeed taught with great plainness, the necessity of faith and baptism to the salvation of those who have an opportunity of hearing the gospel preached with power ; and in his sermon on the mouutjwhich is such a lecture of Ethics founded on religion as the Son of God only could have delivered, we learn that *' unless our righteous- ness shall exceed the righteousness of the Scribes and Pharisees, we shall in no case enter into the kingdom of heaven ;' and that even the very first thoughts of vice are highly criminal. St. Paul, however, attributes our justification to the bare act of believing ; for he repeatedly assures us that a man is justified by faith without the deeds of the law;' while St. James, on the other hand, affirms ' that by works a man is justified, and not by faith only.'*

This apparent difference in the language of these two apostles, for we hope to show that it a only apparent, has produced among divines opi- nions really different respecting the justification of Christians ; and the principal of these opinions we shall endeavour to state. But, previous to this, it is proper to ascertain the meaning of the word justification ; for we must say, that, for want of accurate definitions, many theological controver- sies are nothing better than empty logomachies; and perhaps no controversy merits this charge more than that which, in the end of the seven-

teenth century and in the beginning of the eigh- teenth, was so violently agitated concerning the causes, the instruments, and conditions of justi- fication.

The word justification, as used both by St. Paul and St. James, has been very generally con- sidered as a forensic term, expressing the sen- tence of a judge. The most eminent reformed divines of all denominations (Limborch, Bull, Waterland, Warburton, Beveridge, Gill, &c.), and even many of the Romanists themselves, have strenuously contended that this is its genuine sense, when it is distinguished from mere remission of sins, regeneration, and sanc- tification; and, if so, it will signify God's pro- nouncing a person just, either as being perfectly blameless, or as having fulfilled certain condi- tions required of him in the Christian covenant. But that ' there is not a just man upon earth, who doeth good and sinneth not,' we are assured, by the most complete evidence possible, the joint dictates of our own consciences and of divine revelation; and therefore whosoever is pronounced just, by the judge of all the earth, must be so, either because, though not absolutely blameless, he has performed the conditions re- quired of him in the covenant of grace, or be- cause Christ has fulfilled all righteousness in his stead.

If this be the Scripture doctrine of justifica- tion, it must be wholly the act of God, and can- not be the effect either of our faith or of onr virtue. Accordingly, we are said by the apostle to be justified freely by his grace through the re- demption that is in Jesus Christ : whom God hath set forth to be a propitiation through faith in his blood (Rom. iii. 14, 25). The act of jus- tification therefore proceeds from the divine phi- lanthropy, and cannot be performed by the in- strumentality of faith ; for it is not God, but man, who believes; and man is not the justifier of himself. To talk of any kind of instrument of justification, besides the propitiation set forth by God, is indeed to make use of very improper language.

In this sentiment of the illustrious bishop Bull of St. David's, that justification is solely an act of God's grace, some of the most eminent divines both among the Calvinists and Arminians agree. Many, however, treat of justification not only in the active sense, as it is the act of God, for all admit that it is he who justifies ; but likewise in a passive sense, as it means our privilege or pos- session holden of him, when we are said to be justified by his grace. In this view of the sub- ject they may talk, with sufficient propriety, of an instrument of justification, not as the mean by which it is conveyed, but as the medium through which it is received by the true Chris- tian. And hence Drs. Waterland and Warbur- ton, of whom the former was not a thorough Calvinist, and the latter was a professed Ar- minian, strenuously maintain the doctrine of the Westminster Confession, that ' faith receiving and resting on Christ is the alone instrument of justification : though it cannot be alone in the person justified, but must ever be accompanied with all other saving graces, and be a faith which worketh by love. «

Such is the doctrine of Christian justification

as it has been taught by the followers or Calvin, and by some of the most eminent Arminians who flourished in the end of the seventeenth and beginning of the eighteenth century. They appear not, from this view of their opinions, to differ so widely as some of them have wished the world to believe. It is evident that Dr. Waterland, though he rejects some of the distin- guishing tenets of Calvinism ; lays greater stress upon faith in his scheme of justification than Dr. Gill himself: and that they both consider it as the instrument by which the adult Christian must receive the imputed righteousness of Christ. The greater part of modern Arminians, however, exclaim against the imputation of Christ's righteousness, as a doctrine false in itself, and fraught with the most pernicious con- sequences. It is not true, say they, that God exacts of man, or ever did exact of him, an obe- dience absolutely perfect ; for under every dis- pensation man was in a state of discipline ; and had habits of virtue and piety to acquire. Most of them, after bishop Bull, dislike the use of such unscriptural phrases as the instrument of justification, applied either to faith or to works ; and think that by considering God as the sole justifier of man, upon certain conditions, they can more precisely ascertain the distinct pro- vinces of faith and obedience, in the scheme of justification, than either of their brethren of the old school of Arminius, or their rivals of the school of Calvin. But both parties have multi- plied words to no purpose.

Thus graciously has the divine goodness dis- played itself in the restoration of our lost inheri- tance. But it stopped not here. The same bountiful Lord of life, for its further security, imparts to every true believer the strength and light of his Holy Spirit to support faith in work- ing out our salvation. Our blessed Saviour, ' who gave himself for us, that he might redeem us not only from death, but likewise from all ini- quity, and purify to himself a peculiar people zealous of good works,' promised, before he left this world, ' to send to his followers the Holy Ghost or Comforter to abide with them for ever, to guide them into all truth, to bring all things to their remembrance whatsoever he had said unto them,' and, as we leani from other pas- sages of Scripture, to ' work in them both to will and to do of his good pleasure.' How amply this promise was fulfilled to the apostles, we have already seen ; but we are not to suppose that it was restricted to them. As man is designed for a su- pernatural state in heaven, he stands in need of supernatural direction to guide him to that state. ' No man,' says our Saviour, ' can come to me except the Father draw him ; for, as no man knoweth the things of a man save the spirit of a man which is in him, even so none knoweth the things of God but the Spirit of God.' This omniscient Spirit indeed ' searcheth all things, yea, even the deep things of God,' and revealcth them to the sons of men, to enlighten their un- derstandings and purify their hearts. The grace which he sheds abroad is either external and

ge- neral, or internal and particular. The former has been extended to the whole church of God under the patriarchal, Mosaic, and Christian dispensations, in such a revelation of th« divine

*will as was sufficient to instruct men untu eternal life, whether they had a clear view or not of that stupendous plan of redemption, by which the kingdom of heaven was opened to them after the forfeiture of the terrestrial paradise ; for there have been holy prophets ever since the world began ; 'and prophecy came not at any time by the will of man, but holy men of God spake as they were moved by the Holy Ghost.' Hence it is that all Scripture was given by inspiration of God, to teach us every thing which is necessary forus to know and believe; and the Scripture is that work of the Spirit which is extended to the universal church. The same Holy Spirit which thus generally reveals the objects of faith to the church, doth likewise particularly illuminate the minds of individual believers, working in them an assent to that which is taught them from the written word. It was thus that 'the Lord opened the heart of Lydia, that she attended to the things which were spoken by Paul ; ' it is thus that * the word preached doth not profit, if it be not mixed with faith in them who hear it ; ' and it is thus that * God deals to every man the measure of faith;' for ' by grace we are saved, through faith, which is not of ourselves; it is the gift of God.' This illumination of the Spirit was con- \eyed to the apostles ' in a sound from heaven as of a rushing mighty wind,' because it was meant to testify to fhe world that they were i liosen ministers of the gospel ; but the ordinary Christian receives it in the •' still small voice,' because it is conveyed to him only to open his understanding that he may understand the Scrip- tures.*

Another operation of the Spirit on the minds of believers is that which in Scripture is called regeneration ; for ' according to his mercy God saveth us by the washing of regeneration and re- newing of the Holy Ghost, which he sheds on us abundantly through Jesus Christ our Lord.' To those who believe that we derive from Adam a corrupted nature, this particular grace must appear so absolutely necessary, that without it we could have no relish for heaven or heavenly things. ' The natural man,' we are told, « re- ceiveth not the things of the Spirit of God ; for they are foolishness to him : neither can he know them, because they are spiritually discerned.' Indeed, whatever be the powers of our moral faculties, when compared with those of our first father, it is so long before they be completely developed, that we should infallibly be lost, if we were not blessed by a supernatural guide, when reason is incapable of directing our conduct. Our passions and appetites are in their full strength before experience has famished the mind

with materials, by means of which motives may be weighed ; and therefore it would be impossible, during the giddy period of youth, to keep them in due subjection, were we not influenced by di- vine grace. So true is it, that 'except a man be born again of water and of the Holy Ghost, he cannot enter into the kingdom of God.' This change in our dispositions, from an immoderate attachment to earth to a relish for the things of heaven, is in Scripture called ' a renewing of our minds, a new creation, a new man ;' in opposi- tion to our natural disposition, which is called

' the old man, corrupted according to the deceit- ful lusts.'

A third office of the Holy Spirit is to lead, direct, and govern us through all the periods of our lives ; and a fourth, if indeed it can be called a distinct one, to join them to Christ, and make them members of that one body of which he is- the head. 'For by one Spirit are we all baptised into one body ; and as the body is one and hath many members, and all the mem- bers of that one body, being many, are one body, so also is Christ.' It is likewise the office of Che Holy Ghost to give us an earnest of our ever- lasting inheritance, to create in us a sense of the paternal love of God, and thereby to assure us of the adoption of sons. 'As many as are led by the Spirit of God, they are the sons of God ; and, because we are sons, God hath sent forth the spirit of his Son into our hearts.'

As (he gifts of grace are generally annexed to means, or to the proper use of the word and sacra- ments, it is a sixth office of the same Spirit to sanctify such persons as are regularly set apart for the work of the ministry, and ordained to offer up the public prayers of the people ; and to administer Christian ordination. By these and the like means does the Spirit of God sanctify the sons of men; and, in consequence of this sanctification proceeding immediately from his office, he is called the Holy Spirit and the Com- forter. That this is such a provision ' for re- newing us in the spirit of our minds, and enabling us to put on the new man, which, after God, is created in righteousness and true holi- ness,' as, when made known by revelation, ap- pears to have been expedient, may be conceived to have been even necessary, and though reason could hardly have hoped for it, is contradicted by none of of our natural notions either of God or of man.

From this short view of the several dispensa- tions of revealed religion, it is evident that the gospel is not only the best, but the last gift of the kind which man has to expect from his Maker. A new revelation therefore like that of Ma- homet cannot be admitted without rejecting the whole Bible, though the impostor himself every where acknowledges the inspiration of Abraham, of Moses, and of Christ. Nor is greater regard due to the claims of Christian en- thusiasts. Such of these men as pretend to have brought spiritual discoveries to the earth have either forgotten, or never understood,

that in Ihe scriptures of the Old and New Testaments the great scheme of Providence appears to be closed, in full completion of its one regular, entire, and eternal purpose.; that St. Paul has pronounced a curse upon any man or angel from heaven who should preach another gospel than what has been already preached by the apostles and evangelists; that in their writings we are taught every thing which it is our duty to believe or to practise in order to our own salvation ; and that we have the promise of our blessed Lord himself, that the spirit of truth shall remain with us to guide us into all necessary truth, till the great day when he shall come again to judge the world in righte- ousness, and render to every man according to his work?.

THE 44

THEOMANCY (from 0£0C, and juavrtia), prophecy. The gift of prophecy.

THEON, an ancient Greek sophist, who wrote a Treatise on Oratory, entitled Progym- nasmata. It is still extant, and is written with elegance. It was printed at Leyden, in 1726; with a Latin translation.

THEON, an eminent philosopher and mathema- tician of Alexandria, who flourished in the reign of Theodosius the Great, and taught mathematics in a school at Alexandria, which was afterwards kept up by his unparalleled daughter, the learned lady Hypatia, who in spite of her beauty, learning, and other accomplishments, died a martyr to Christianity, in a barbarous pagan mob. See HYPATIA. Theon wrote several works ; particularly, A Commentary on Euclid, which was printed in Greek, at Basil, in 1588, fol., and a Commentary on Aratus; Oxford, 1627, in 4to.

THEOPASCHATITES, a sect of Christian heretics, who flourished in the fifth century, and taught that all the three persons in the Godhead suffered on the cross. They were the followers of Peter Fullo, bishop of Antioch.

THEOPHANES, an ancient Greek historian, born at Mitylene, and an intimate friend of Pompey the Great. He wrote a History of By- zantium, which was printed at Paris, in fol. in

1649.

THEOPHANES (M. Pompeius), son of the pre- ceding, was made governor of Asia, and highly favored by Tiberius.

TIIEOPHANES (George), another Greek histo- rian, born at Constantinople, in the seventh cen- tury, of a noble family, entered into the monas- tic order, and was received with great respect at the seventh general council ; but the emperor Leo, the Armenian, banished him to Samothrace :

where he died in 828. He wrote a Chronicle of the Greek empire, beginning where Syncellus ends, and continued down to the reign of Michael Curopalatus. It was printed at the Louvre, in fol. in 1655.

THEOPHANIA, festivals anciently held at Delphi, in honor of Apollo.

THEOPHILANTHROPISTS, from 0£0c, God, $i\dii, to love, and avQpoiroc, a man ; a sect of deists, who, in September 1 796, published at Paris a sort of catechism or directory for so- cial worship. The sect found a considerable number of adherents during the ferment of the Devolution ; but Buonaparte took from them the use of the parish churches, and we believe the sect is now extinct.

THEOPHILUS, a writer and bishop of the primitive' church, was educated a Heathen, and afterwards converted to Christianity. He was ordained bishop of Antioch A. D. 170; and he governed this church twelve or thirteen years, lie was a vigorous opposer of certain heretics of Ins time, and composed a great number of works ; all of which are lost, except three books to Au- tolycus, a learned Heathen of his acquaintance, who had undertaken to vindicate his own reli- gion against that of the Christians. It is re- markable that this patriarch of Antioch was the first who applied the term Trinity to express the Three Persons in the Godhead.

THE

THEOPHRASTA, in botany, a genus of pi. nits belonging to the class of pentandria and order of monogynia. The corolla is campunu- lated, with divisions and segments obtuse : the capsule unilocular, globular, very large, and many-seeded. There is only one species, T. Americana.

THEOPHRASTUS, a celebrated Greek phi- losopher, the son of Melanthus, was born at Eresus in Lesbos. He was first, the disciple of Leucippus in his own country ; next of the cele- brated Plato at Athens ; and iast of Aristotle. He succeeded Aristotle in the Peripatetic school, and conducted the charge with such high repu- tation that he had about 2000 scholars. He is highly celebrated for his learning and public spirit. He is said to have twice freed his coun- try from the oppression of tyrants, and contri- buted liberally towards defraying the expense attending the public meetings of philosopher^. In the schools he commonly appeared, as Aris- totle had done, in an elegant dress, and was very attentive to the graces of elocution. He lived to the advanced age of 105: some say of 10? Towards the close of his life, he grew exceed- ingly infirm, and was carried to the school on a couch. He expressed great regret on account of the shortness of life ; and complained that nature had given long life to stags and crows, to whom it is of little value, and had denied it to man, who, in a longer duration,

might have been able to attain the summit of science ; but now, as soon as he arrives within sight of it, is taken away. His last advice to his disciples was, that since it is the lot of man to die as soon as he begins to live, they should take more pains to enjoy life as it passes, than to acquire posthumous fame. His funeral was attended by a large body of Athenians. . He wrote many valu- able works, of which all that remain are, several treatises on the Natural History of Plants :UK| Fossils ; Of Winds, Of Tire, &c., an excellent moral treatise, entitled Characters; which he says, in his preface, he composed when he was ninety-nine years of age. It has been repeatedly translated into French, English, &c. To Theo- phrastus we are indebted for preserving the works of Aristotle. See ARISTOTLE.

THEOPHYLACT, THEOPHYLACTUS, a learn- ed Greek father born at Constantinople, about A. D. 1070, or earlier. He became archbishon of Achridia, and metropolitan of all Bulgaria. He wrote Commentaries on the Gospels, the Acts, several of the Epistles, and of the minor Prophets ; also Institutio llegia ; Letters and some historical tracts. His whole works were printed at Paris in fol. 1647: also at Venice, in 4 vols. 1754—1763.

THEOPOLIS, eeocand ™Xtc, a city, q. d. tbe city of God, a name given to Antiooh.

THEOPOMPUS, a celebrated Greek oraUr and historian, was born in the island of Chios, and flourished in the reign of Alexander tlu Great. He was one of the most famous of all the disciples of Isocrates, and won the prize from all the panegyrists whom Artemisia invited to praise Mausolus. He wrote several works whic'r are lost.

THEOTOMPUS, king of Sparta, a binarch of ttw>

family of Proclidae. See SPARTA. He died after a long and successful reign, during which the Messenian war was carried on, about A. A. C. 723.

THEOR'BO, n. s. Fr. tuorbe ; Ital. tiorba. A large lute for playing a thorough bass, used by the Italians.

He wanted nothing but a song. And a well tuned theorbo hung Upon a bough, to ease the pain His tugged ears suffered, with a strain. Butler.

THE'OREM, n. s. ^ Fr. theoreme ; Greek

THEOREMAT'IC, adj. f fowpq/ia. A position

THEOREMAT'ICAL, £laid down as truth;

TUEOREM'IC. J comprised of or relating

to theorems.

Having found this the head theorem of all their discourses, who plead for the change of ecclesiastical government in England, we hold it necessary that the proofs thereof be weighed. Hooker.

The chief points of morality are no less demon- strable than mathematicks ; nor is the subtilty greater in moral theoremt than in mathematical.

More' Divine Dialogues,*

Many observations go to the making up of one theorem, which, like oaks fit for durable buildings, must be of many years growth. Grauiit.

Here are three theorems, that from thence we may draw some conclusions. Drijden's Dufreinoi/.

Theoremick truth, or that which lies in the con- ceptions we have of things, is negative or positive.

Grew.

Her thoughts were theorems, her words a problem, as if she deemed that mystery would ennoble 'em.

Byron.

A THEOREM, mathematically, is a proposition which terminates in theory, and which considers the properties of things already made or done ; or it is a speculative proposition deduced from comparing together several definitions. A theo- rem is something to be proved, and a problem something to be done.

THE'JRIUS, Gr. 0£opioc, i. e. clear-sighted. A surname of Apollo, at Troezene. — Lempr.

THE'ORY, n. s. -\ Fr. theorie ; Greek

THEORET'IC, adj. I Siupia. Speculation ;

THEORET'ICAL, V. scheme ; plan or sys-

THEORET'ICALLY, adv. i tern, yet subsisting

THE'ORIC, n. s. J only in the mind;

not practice : the adjectives and adverb corre- spond : theorie is used by Shakspeare for theory.

If they had been themselves to execute their own theory in this church, they would have seen, being nearer. Hooker.

When he speaks,

The air, a chartered libertine, is still ; And the mute wonder lurketh in men's ears, To steal his sweet and honied sentences : So that the act and practick part of life Must be the mistress to this theurique. Shakspeare.

The bookish theorick Wherein the toged consuls can propose As masterly as he ; meer prattle without practice Is all his soldiership. Id. Othello.

In making gold, the means hitherto propounded to effect it are in the practice full of errour, and in the theory full of unsound imagination.

liacon's Xatural History.

The theorical part of the inquiry being interwoven with the historical conjectures, the philosophy of co- lours will be promoted by indisputable experiments.

Boyle on Culiw.*

For theoretical learning and sciences there is no- thing yet complete. Burnet's Theory of tfte Earth.

Practice alone divides the world into virtuous and vicious ; but as to the theory and speculation of vir- tue and vice, mankind are much the same.

Suuth't Sermons.

The greatest theorists have given the preference to such a government as that which obtains in this kingdom. " Addtson.

True Christianity depends on fact Religion is not theory, but act. Harte.

THEOSOPHISTS, from Qfoc, God and ooˆia, wisdom, a fanatical sect of philosophers, who rose about the end of the sixteenth century, and pretended to derive all their knowledge from di- vine illumination. They ascribed this to the singular manifestation of divine benevolence, that they

were able to make such a use of the element of fire, in the chemical art, as enabled them to discover the essential principles of bodies. Hence they were also called Fire-Phi- losophers. One of their chief leaders and orna- ments was the celebrated Paracelsus, from whom they were called Paracelsists.

THEOXENIA, a festival held annually in all the cities of Greece, but chiefly at Athens, in ho- nor of all the gods.

THERAMENES, a celebrated Athenian ge- neral, patriot, and philosopher. He defeated the Megarians, and suppressed a tumult in Athens ; but the Athenians being at last completely sub- jugated by the Spartans, who demolished their walls and subjected them to thirty tyrants, all under Spartan influence, except Theramenes, who was the only one of the thirty that stood up for his country. The rest abused their power in the most cruel and arbitrary manner. But Theramenes's patriotic opposition to these xty- rants only ended in his own death. It is said that when he drank the bowl of poison, he drank to the health of Critias, his accuser, but along with that compliment he imprecated a curse on the tyrant, which was soon after fulfilled.

THERAPEUTˆ,, a term that has been va- riously applied to those that are occupied wholly in the service of religion. A Jewish sect was so called from the extraordinary purity of its re- ligious worship. With a kind of religious phrenzy, they placed their whole felicity in the contemplation of the Divine nature ; and, detach- ing themselves wholly from secular affairs, transferred their property to their relations or friends, and withdrew into solitary places. How long this sect continued is uncertain ; but it is not improbable that, after the appearance of Christianity in Esrypt, it soon became extinct.

THERAPEUTIC, adj. Gr. dtpairtvTifof. Curative; teaching or endeavouring the cure of diseases.

The practice and thrapeutick is distributed into the conservative, preservative, and curative.

ffarvey.

Therapeutich or curative physick restoreth the patient into sanity, and taketh away diseases ac- tually affecting. Browne.

Medicine is justly distributed into prophylactick, or the art of preserving health ; and therapevtick, or the art of restoring it. Watts.

TIIERAPNE, an ancient town of Laconia, on the west bank of the Eurotas, where Apollo

THE

Goth, thar ; Sax. fcaep. ; Dan. der ; Belg. door. In that place ; opposed to here ; and, in composition, >often meaning that, as therefrom means from that (i. e. place), and this with the extracts will explain the principal compound?

had a temple called Phcebeum ; near Lacedaemon. Castor and Pollux were born in it, and hence i. .-.lied Therapnaei.

THERAPNE, a daughter of Lelex, king of Spar- ta, who gave name to the above town.

*THERAUD, an extensive district and town of Hindostan. The town contains nearly 3000 houses, and is surrounded by a wall and dry *1urh, both in bad repair. The palace and tem- I it- are lofty buildings; but the houses are sel- •Jv»c more than one story high. The only water to u" found is drawn from wells, which are sixty feet deep, and is brackish. The whole district is very dry and barren. The regular revenues of the chief are said to be only 20,000 rupees per annum.*

THERE, adv.

THEREABOUT,

THERE'A BOUTS,

THEREAFTER,

THEREAT',

THEREBY',

THERE'FORE,

THEREFROM',

THEREIN',

THEREINTO',

THEREOF',

THEREON',

THEREOUT',

THERETO',

THEREUNTO',

THEREUNDER',

THEREUPON')

THEREWITH',

THEREWITHAL'.

Be ye therefore very courageous to do all that is written in the law, that ye turn not aside therefrom, to the right hand or to the left. Jot. xxiii. 6.

Wide is the gate, and broad is the way that lead- eth to destruction, and many go in thereat.

Matt. vii. 13.

We have forsaken all and followed thee, what shall we have therefore? Id. xix. 27.

Peter called to mind the word that Jesus said ; and when he thought thereon he wept.

Afar xiv. 72.*

As they were much perplexed thereabout, two men stood by. Luke xxiv. 4.

Let not them that are in the countries enter there- into. Luke.

Therewith at last he forced him to untie One of his grasping feet, him to defend thereby.

Spenser.

His hideous tail then hurled he about, And therewithal enwrapt the nimble thighs Of his froth-foamy steed. Id.

Thereout a strange beast with seven heads arose, That towns and castles under her breast did cour.

Id.

Next thereunto did grow a goodly tree, That whereby we reason, live, and be. Id.

Considering how the case doth stand with this present age, full of tongue and weak of brain, be- hold we yield to the stream thereof. Hooker. • Every errour is a stain to the beauty of nature ; for which cause it blusheth thereat, but glorieth in the contrary. Id.

Some parts of our liturgy consist in the reading of the word of God, and the proclaiming of his law, that the people may thereby learn what their duties are towards him. Id.

4r> THE

Germany had stricken off that which appeared corrupt in the doctrine of the church of Rome, but seemed in discipline still to retain therewith very great conformity. Id.

Grace having not in one thing shewed itself, nor for some few days, but in such sort so long con- tinued, our manifold sins striving to the contrary, what can we less thereupon conclude, than that God would at least-wise, by tract of time, teach the world, that the thing which he blesseth cannot but be of him? Id.

For reformation of errour there were that thought it a part of Christian charity to instruct them. Id. Is it in regard then of sermons only, that, appre- hending the gospel of Christ, we yield thereunto our unfeigned assent as to a thing infallibly true 1 Id. Therein our letters do not well agree. Shakspeare. This is the last parley we will admit ; Therefore to our best mercy give yourselves. Id.

You shall bereave yourself Of my good purposes, and put your children To that destruction which I'll guard them from, If thereon you rely. Id. Antimy and Cleopatra.

To see thee fight, to see thee traverse, to see thec here, to see thee there. Id. Merry Wives.

Well, give her that ring, and give therewithal That letter. Id. Two Gentlemen of Verona.

If they come to sojourn at my house, I'll not be there. Id. King Lear.

He hopes to find you forward, And thereupon he sends you this good news.

Sftahtpeare.

One speech I loved, 'twas ˆneas's tale to Dido , and thereabout of it especially, where he speaks of Priam's slaughter. LI. H,imlet.

Those which come nearer unto reason find a para- dise under the equinoctial line, judging that thereun- der might be found most pleasure, and the greatest fertility. Raleigh.

The matter is of that nature, that I find myself unable to serve you therein as you desire. ftacon.

Though we shall have occasion to speak of this, we will now make some entrance thereinto. Id.

All things without, which round about we see, We seek to know, and have therewith to do.

Davies.

Between the twelfth of king John, and thirty-sixth of king Edward the third, containing one hundred and fifty yeais or thereabouts, there was a continual bordering war. Id.

Though grants of extraordinary liberties made by a king to his subjects do no more diminish his great- ness than when one torch lighteth another, yet many times inconveniencies do arise thereupon.

Id. on Ireland.

Being come to the height, they were thereby brought to an absolute necessity. Id.

Within ourselves, we strangers are thereto.

Daoies.

When you can draw the head indifferently well, proportion the body thereafter. Peachun.

Some three months since, or thereabout, She found me out. Suckling.

There have been that have delivered themselves from their ills by their good fortune or virtue. Id.

Dare to be true ; nothing can need a lie ; A fault which needs it must grow two thereby.

Herbert.

There are delivered in holy scripture many weighty arguments for this doctrine. White.

In human actions there are no degrees described, but a latitude is indulged. Bithop Taylor.

Therewithal the execrable act On their late murthered king they aggravate.

T H E II M O M E T E R.

47

\Vhat might his force have done being brought

thereto, When that already gave so much to do 1 Id.

There cannot in nature be a strength so great, as to make the least moveable to pass in an instant, or all together, through the least place.

Digbyon the Soul.

Tis vain to think that lasting which must end ; Aud when 'tis past not any part remains Thereof but the reward which virtue gains.

Denham.

Darkness there might well seem twilight here.

Milton.

Find a house to lodge a hundred and fifty persons, whereof twenty or thereabouts may be attendants.

Id.

If food were now before thee set, Wouldst thou not eat 1 thereafter as I like The giver. W-

All the earth

To thee and to thy race I give ; as lords Possess it, and all things that therein live. Id.

A. larger form of speech were safer than that which punctually prefixeth a constant day thereto.

Browne.

That it is the appointment of God, might be argu- ment enough to persuade us thereunto. Tillotsoit.

Your fury hardens me, A guard there ; seize her. Dryden'i Aurengzebe.

After having well examined them, we shall therein find many charms. Dryden's Ditjresnoy.

Children are chid for having failed in good man- ners, and have thereupon reproofs and precepts heaped upon them. Locke.

The leaves that spring therefrom grow white.

Mortimer.

He blushes, therefore he is guilty. Spectator.

If the paper be placed beyond the focus, and then the red colour at the lens be alternately intercepted and let pass, the violet on the paper will not suffer any change thereby. Aeicto/i.

Exiled by thee from earth to deepest hell, In brazen bonds shall barbarous discord dwell ; Gigantic pride, pale terror, gloomy care, And mad ambition shall attend her there. Pope.

Solon finding the people engaged in two violent factions, of the poor and the rich, and in great con- fusion thereupon, made due provisions for settling the balance of power. Sirift.

The wrestlers sprinkled dust on their bodies to give better hold : the glory therefore was greater to conquer without powder. Wett's Pindar.

THERESIENSTADT, or MARIES THERE- SIENSTADT, a large town of the south of Hun- gary, in the palatinate of Bacs. In fact it is an assemblage of Tillages, consisting of perhaps 3000 cottages, inhabited by 22,000 inmates, partly of Servian, partly of Rascian descent. They depend for their support chiefly on the extensive town lands, the total extent of which is said to be 340 square miles. The town is open, but has large barracks, a Catholic church for the Servians, a Greek for the Rascians, and a Franciscan monastery for Catholics; these complete the list of its public buildings. The- resienstadt has a pretty active traffic in cattle, horses, wool, and hides.

THERI'ACAL, adj. Gr. Sqpcaxa ; Lat. the- riaca. Medicinal ; physical.

The virtuous bezoar is taken from the beast that feedeth upon the mountains where there are theriacat herbs. Bacon.

TIIERM.E, hot baths or bagnios. Luxury and extravagance were in nothing carried to such heights as in the thermae of the Roman em- perors.

Ammian complains that they were built to such an extent as to equal whole pro- vinces ; from which Valesius would abate, by reading piscinae instead of provinciae. And yet, after all, the remains of some still standing are sufficient testimonies for Ammian 's censure ; and the accounts transmitted of their ornaments and furniture, such as being laid with precious stones (Seneca), set round with seats of solid silver (Pliny), with pipes and cisterns of the same me- tal (Statius), add to, rather than take from, the censure. The most remarkable bagnios were those of Dioclesian and Caracalla at Rome, great part of which remain at this day ; the lofty arches, stately pillars, variety of foreign marble, curious vaulting of the roofs, great number of spacious apartments, all attract the curiosity of the traveller. They had also their summer and winter baths. See BATHING.

THERMS SLLINUNTI.S, an ancient town of Sicily, near Selinus, famous for its hot baths ; now called Sciacca. See SCIACCA.

THERIVLEUS SINUS, a bay of Macedon, on the coast of Therma or Thessalonica, afterwards called Sinus Macedonicus. — Strabo.

THERMIDOR, the eleventh month in the Revolutionary French calendar. It begins on the 19th July, and ends on the 17th August.

THERMODON, a river of ancient Boeotia, near Tanagra, called also Haemon. — Strabo 1 1 .

THERMODON or THERMODOON, a river of Cap- padocia in the country of the Amazons ; running into the Euxine Sea, near Themiscyra. It is now called Termeh.

THERMOM'ETER, n.s. > Fr. thermome.

THERMOMET/RICAL, adj. J tre ; Gr. StpfnoG and psTpov. An instrument for measuring the heat of the air, or of any matter : relating to the measure of heat.

The greatest heat is about two in the afternoon, when the sun is past the meridian, as is evident from the thermometer, or observations of the weather-glass.

Browne.

His heat raises the liquor in the thermometrical tubes. Cheque.

THERMOMETER. This instrument was in- vented about the beginning of the seventeenth cen- tury ; but, like many other useful inventions, it has been found impossible to ascertain to whom the honor of it belongs.

Boerhaave ascribes it to Cornelius Drebbel of Alcmaer, his own countryman. Fulgenzio attributes it to his master Paul Sarpi, the great oracle of the Venetian re- public ; and Viviani gives the honor of it to Ga- lilaeo. But all these are posthumous claims. Sanctorio claims this honor to himself; and his assertion is corroborated by Borelli and Mal- pighi, of the Florentine academy, whose par- tiality is not to be suspected in favor of a member of the Patavinian school. Perhaps the best way to reconcile these different claims would be to suppose that the thermometer was really invented by different persons about the same time.

A common thermometer consists of a tube terminated at one end by a bulb, and closed at the other. 1 he bulb and part of the tube are

filled with a proper liquid, generally mercury, and a scale is applied, graduated into equal parts. Whenever this instrument is applied to bodies of the same temperature, the mercury being simi- larly expanded, indicates the same degree of heat.

In dividing the scale of a thprmoriieter, the two fixed points usually resorted to are the freezing aiid boiling of water, which always takes place at the same temperature, when under the same atmospheric pressure. The interme- diate part of the scale is divided into any con- venient number of degrees ; and it is obvious that all thermometers, thus constructed, will in- dicate the same degree of heat when exposed to the same temperature. In the centigrade ther- mometer this space is divided into 100°; the freezing of water being marked 0°, the boiling point 100°. In this country we use Fahrenheit's scale, of which the Oc is placed at 32° below the freezing of water, which, therefore, is marked 32°, and the boiling point 212°, the intermediate space being divided into 180°. Another scale is Reaumur's, the freezing point is 0°, the boiling point 80°. These are the principal thermometers used in Europe. It may be proper to state that the spirit of wine thermometer is usually em- ployed for very low temperatures, as mercury may be frozen in the atmosphere ; whilst mer- cury, on the contrary, is best calculated for high temperatures, as its point of ebullition is little short of a red heat.

The Royal Society, fully apprised of the im- portance of adjusting the fixed point of ther- mometers, appointed a committee of seven gentlemen to consider of the best method for this purpose; and their report is published in the Phil. Trans, vol. LXVII., part ii., article 37. They observed that, though the boiling point be placed so much higher on some of the ther- mometers

now made than on others, yet this does not produce any considerable error in the observations of the weather, at least in this cli- mate ; for an error of 1° 30', in the position of the boiling point, will make an error only of half a degree in the position of 92°, and of not more than a quarter of a degree in the point of 62°. It is only in nice experiments, or in trying the heat of hot liquors, that this error in the boiling point can be of much importance. In adjusting the freezing as well as the boiling point, the quicksilver in the tube ought to be kept of the same heat as that in the ball. When the freezing point is placed at a considerable distance from the ball, the pounded ice should be piled to such a height above the ball that the error which can arise, from the quicksilver in the remaining part of the tube not being heated equally with that in the ball, shall be very small, or the observed point must be corrected on that account accord- ing to the following table: —

Heat of Air.

Correction.

42°

•00087

.52

•00174

62

•00261

72

•00348 –

82

•00435

The correction in this table is expressed in 1000th parts of the distance between the freez- ing point and the surface of the ice : e. g. if the freezing point stands seven inches above the surface of the ice, and the heat of the room is 62°, the point of 32° should be placed 7 x 00261 , or 018 of an inch lower than the observed point. A diagonal scale will facilitate this correction. The committee observe that, in trying the heat of liquors, care should be taken that the quicksilver in the tube of the thermometer be

heated to the same degree as that in the ball : or, if this cannot be done conveniently, the observed heat should be corrected on that account ; for the manner of doing which, and a table calculated for this pur pose, we must refer to their excellent report in the Phil. Trans., vol. LXVII., part ii., article 37. With regard to the choice of tubes, they ought to be exactly cylindrical. But, though the diameter should vary a little, it is easy to manage that matter in the manner proposed by the abbe Nollet, by making a small portion of the quick- silver, e.g. as much as fills up an inch or half an inch, slide backward and forward in the tube; and thus to find the proportions of all its ine- qualities, and thence to adjust the divisions to a scale of the most perfect equality. The capil- lary tubes are preferable to others, because they require smaller bulbs, and they are also more sensible, and less brittle. The most convenient size for common experiments has the internal diameter about the fortieth or fiftieth of an inch, about nine inches long, and made of thin glass that the rise and fall of the mercury may be better seen. The next thing to be considered is of what number of degrees or divisions the scale ought to consist, and from what point it ought to commence. As the number of the divisions of the scale is an arbitrary matter, the scales which have been employed differ much from one another in this circumstance. Fahrenheit has made 180° between the freezing and boiling water point. Amontons made 73°, and sir Isaac Newton only 34°. There is, however, one gene- ral maxim, which ought to be observed : that such an arithmetical number should be chosen as can easily be divided and subdivided, and that the number of divisions should be so great that there shall seldom be occasion for fractions. The number eighty, chosen by Reaumur, answers extremely well in this respect, because it can be divided by several figures without leaving a remainder; but it is too small a number: the consequence of which is that the degrees are placed at too great a distance from one another, and fractions must therefore be often employed. We think therefore that 160 would have been a more convenient number. Fahrenheit's number 180 is large enough; but, when divided, its quotient soon becomes an odd number. As to the point at which the scale ought to commence, various opinions have been entertained. If we knew the beginning or lowest degree of heat, all philosophers would agree that the lowest point of the thermometer ought to be fixed there; but we know neither the lowest nor the highest degrees of heat; we observe only the intermediate parts. All that we can do then is to begin it at some invariable point, to which thermometers made in different places may easily be adjusted.

sible, too, it ought to be a point at which a natural well known body

receives some re- markable change from (he effects of heat or cold. Fahrenheit begau his scale at the point at which snow and salt congeal. Kirwan proposes the freezing point of mercury. Sir Isaac Newton, Hales, and Reaumur, adopted the freezing point of water. The objection to Fahrenheit's lowest point is that it commences at an artificial cold never known in nature, and to which we cannot refer our feelings; for it is what few can ever ex- perience. There would be several great advan- tages gained, we allow, by adopting the freezing point of mercury. It is the lowest degree of cold to which mercury can be applied as a mea- sure; and it would render unnecessary the use of the sijns plus and minus, and the extension of the scale below 0. But we object to it that it is not a point well known ; for few, comparatively speaking, who use thermometers, can have an opportunity of seeing mercury congealed. As to the other advantage to be gained by adopting the freezing point of mercury, namely the aboli- tion of negative numbers, we do not think it would counterbalance the advantage to be en- joyed by using a well known point. Besides, it may be asked, Is there not a propriety in using negative numbers to express the degree of cold, which is a negative thing ? Heat and cold we can only judee of by our feelinas : the point then at which the scale should commence ought to be a point which can form to us a standard of heat and cold ; a point familiar to us, from being one of the most remarkable that occurs in nature, and therefore a point to which we can with nx>st clearness and precision refer in our minds on all occasions. This is the freezing point of water chosen by sir Isaac Newton, which of all the general changes produced in nature by cold is the roost remarkable. It is therefore the most convenient point for the thermometers to be used in the temperate and frigid zones ; we may say over the globe, for even in the hottest countries of the torrid zone many of the mountains are perpetually covered with snow.

The principal thermometric scales in Europe are, as we have already stated, Fahrenheit s, which commences at the temperature produced by mixing snow and salt, and which is 32° below the freezing of water, so that the latter point is marked 32°, and the boiling point 212°, the in- termediate space being divided into 172°; Reau- mur's, in which the zero is the freezing point, and 80° the boiling point ; and the centigrade, in which the space between the freezing and boil- ing of water is divided into 100°.

Each degree of Fahrenheit's scale is equal to four-ninths of a degree on Reaumur's ; if, there- fore, the number of degrees on Fahrenheit's scale, above or below the freezing of water, be multiplied by four, and divided by nine, the quotient will be the corresponding degree of Reaumur. Fahrenheit, Reaumur.

68° — 32° = 36 X 4 = 144 H- 9 = 16°. 212° — 32° — 180 X 4 = 720 7 9 = 80°.

To reduce the degrees of Reaumur to those of Fahrenheit, they are to be multiplied by nine, and divided by four. VOL. XXII,

Reaumur. Fahrenheit.

16° x 9 = 144 i 4 = 36 + 32° = 68. 80° x 9 = 720 ~-r 4 = 180 + 32° = 212.

Every degree of Fahrenheit is equal to five- ninths of a degree on the centigrade scale ; the reduction, therefore, is as follows : — Fahrenheit. Centigrade.

212° — 32 = 180 x 5 = 900-r- 9 = 100°.

Centigrade. Fahrenheit.

100 X 9 = 900 : 5 = 180 X 32 = 212°.

M. Bellani has proved, by reference to direct experiment, that a mercurial thermometer made in the usual manner, and the freezing point of water marked on it from experiment, if it be laid aside awhile, and again plunged in melting ice, the mercury will stand higher than before ; and that if it be put aside again, and then again tried, the mercury will be higher still, until, at the end of a certain time, a year or so, the effect of elevation will cease.

It was found, from numerous experiments, that the result was not influenced by the various qua- lities of the glass used in the instrument ; by the more or less perfect exclusion of air from the bulb or tube ; by the constant horizontal, per- pendicular, or inverted position of the instru- ment ; by the open or closed extremity ; by the longer or shorter time of remaining in the ice; or by the compression of the surrounding ice. Neither was it found to be peculiar to mercurial thermometers, but was exhibited by alcohol ther- mometers, though in a less degree.

M. Bellani at last ascertained that the effect was due to a gradual and slow contraction of the glass after having been highly heated, which con- traction, as long as it continued, diminished the bulk of the instrument, and consequently forced the fluid into the tube. This effect he illustrates in the following manner : — Take a Florence flask, or any similar thin glass vessel, such as a matrass with a long narrow neck, shortly after it has come from the glass furnace, it not having been annealed in the oven ; introduce shot or sand into it till it almost sinks in water, seal it herme- tically, and draw out one part of the neck until not more than a line in diameter, that part being about an inch in length ; fasten a small basin on the top of the neck with wax, and then, putting the instrument in water of a certain temperature, 40° Fahrenheit, for instance, put weights in the cup till the

surface of the water is at the middle of the narrow part of the neck ; then lay the instru- ment aside for some days, or better still some weeks or months, and, after that time, again immerse it in the same water at the same temperature and pressure, and with the same weight ; the instru- ment will now sink lower than before, in conse- quence of its diminished bulk from gradual con- traction of the glass.

It was found that, although the effect was great- est after the glass had been rendered soft by heat, yet that it occurred also when the elevation of temperature had not extended nearly to the soft- ening of the glass, and indeed more or less upon every rise of temperature. Hence two kinds of irregularity in thermometers arise from the same cause. The one is manifested soon after the for- mation of the instrument, increases to a certain

degree, and then remains stationary : this may be rectified by elevating the scale of the instrument the required quantity. The other takes place at every change of temperature ; it is small and scarcely perceptible, with small changes of tem- perature, but by considerable changes becomes very evident and important.

Singular consequences sometimes result from the influence of these changes. If two liquids be taken of different temperatures, a greater differ- ence will be found between them, by trying the hot fluid, and then the cold fluid by the same thermometer, than what will appear to exist by trying the cold fluid first. Again, if a new ther- mometer be graduated by an old one preserved as a standard, although it may be made to agree with it, yet, after a while, the two will not ac- cord ; and if two old thermometers be taken that do agree, and the one be heated whilst the other remains unused, they will no longer indicate the same temperatures.

The reason now becomes evident, why alcohol thermometers are so much less affected in this manner than those filled with mercury. Alcohol expands several times more than mercury, so that an instrument constructed with it having a tube of the same diameter, and degrees of the same size, will require a bulb several times less than if .mercury had been used. Hence, as the elevation is in proportion to the capacity of the bulb, in- dependent of the liquid it contains, the alcohol thermometer will exhibit a much smaller effect than the mercurial instrument.

MM. A. de la Rive and F. Marcet have also investigated the elevation of the mercury in ther- mometers, which is due to the cause pointed out by Mr. Flaugergues, namely, the continued pres- sure of the air on its external surface: and by opening the top of the thermometer, by submit- ting the instrument to condensed or rare atmo- spheres, and by comparison with thermometers otherwise constructed, have abundantly proved the effect due to this power. These philosophers had occasion also to remark some curious effects due to the absorption and evolution of heat, by the expansion and condensation of gases, which however we cannot at this time further attend to, than by copying the conclusions at the end of the memoir.

1 . That atmospheric pressure exerts an influence on the bulk of thermometer bulbs. 2. Thnt in experiments, where this effect may influence the results, it is better to use thermometers open at the top. 3. That certainly cold is produced in making a vacuum by the air-pump, but in smaller quantity than was supposed. 4. That when gases enter an exhausted vessel, there is nt first a production of cold, and then of heat. 5. That various modifications may render the cold pro- duced at the moment of the entrance of air into a vacuum more intense.

*Sig. Hellani has undertaken a series of experi- ments, to determine whether the air or vapor, the last portions of which are *bund to remain so ob- stinately in barometers and thermometers, is in- troduced with the mercury, or is a portion of that which originally occupied the tube before the in- troduction of the metal. The conclusion he comes to is, that it is always a portion of that*

which previously adhered to the glass, and th;:t mercury is utterly incapable of absorbing eithe« air or moisture. The extraordinary way in which air and water is held as it were in a film over glass is insisted upon, and reference made to many authors in proof of it. The following, how- ever, are more interesting, as being some of the facts he advances to prove that the mercury never contains either of these substances. Fill a baro- meter tube and boil it very carefully ; then pre- pare a kind of funnel made of a small capillary tube, which will reach through the mercury in the barometer tube to the closed end, and is enlarged at top; let it be recently made, so as to bp dry, and introduce it into the barometer tube ; pre- pare some mercury by agitating it in a bottle with water and air, then drying its surface with bibulous paper, and afterwards passing it through paper cones three or four times into dry vessels ; pour a little of this mercury into the funnel tube, and with a horse-hair or fine wire remove the air, so that the column may be continuous; then pour in so much of this prepared mercury a will fully displace the mercury that was boiled in the tube ; afterwards remove the funnel tube, and put the barometer to its proper use. It will be found to stand exactly at the same height as before in the same*

circumstances ; and if the mercury be now boiled in the tube, none of those bubbles will appear which arose on the first boiling; care being taken throughout that the inner surface of the tube has not been exposed to the air.

Perhaps an easier mode of making the same experiment is to make the barometer terminate at top in a bulb, which will hold more mercury than is required to fill the tube : then when it is boiled it need only be placed upright in a basin of common mercury, and, when inclined, the mer- cury will enter and replace that which was boiled in the instrument; the results will be as above.

An experiment proving the same thing may be made still more easily thus: fill a mercurial ther- mometer and boil it well ; then heat it till nearly all the mercury is expelled, but preserve its open extremity under common mercury : the latter metal will enter as the instrument cools, and behave in every respect as the well-boiled mer- cury did.

If a bulb of a thermometer be suddenly squeezed between the finger and the thumb, tho mercury will rise in the stem several degrees, and will again sink as quickly after the pressure is removed. To prevent any derangement from communication of heat, the hand may be covered with a thick glove. This is a very important fact, and it maybe shown in a less exceptionable way : — let a mercurial thermometer, with a large bulb and a long stem, be first held upright, and then immediately inverted ; between these two positions the column of mercury will descend through a visible space: thus proving that a va- riable pressure in the atmosphere, tr mercury, will produce anomalies in the thermometer.

Mr. Breguet's thermometer consists of slips of two metals, unequally expanded by heat, twisted into a spiral : to the extremity of the spiml is fixed an index, which moves round a graduated circle, pointing out the temperature.

It is obvious that, when the spiral is heated, the index will move in one direction, and in another when the spiral is cooled, because it will twist or untwist itself according to the changes of tempe- rature to which it is subjected. The two metals employed are silver and platinum ; and in order to render the extreme points more fixed, and to prevent sudden starts, a slip of gold, the expan- sibility of which is intermediate between that of silver and platinu:n, is soldered between these two metals. Ttiis

thermometer is more delicate than any mercurial thermometer whatever. It is even more delicate than an air thermometer. This spiral thermometer, and a mercurial one, were placed together under the receiver of an air pump. The temperature at the time of the ex- periment was 66‘2°. The mercurial thermometer, when the air was pumped out, sunk 3-6°; but the spiral thermometer fell 41-4°, and descended to 24-8° Fahrenheit.

The differential thermometer, invented by pro- fessor Leslie, consists of two tubes, each termi- nating in a small bulb of similar dimensions; a small portion of dark-colored fluid, formed of sulphuric acid tinged with carmine, having pre- viously been introduced into one of the balls. The instrument is then fixed on a stand, and fur- nished with a graduated scale. When the co- lumn is equally pressed in opposite directions, the fluid will point at zero, and whatever heat may be applied to the whole instrument, provided both bulbs receive it in an equal degree, the fluid must remain at rest. But, if the one ball receives the slightest excess of temperature, the air which it contains will be proportionally ex- panded, and the column will be depressed with a force equal to the difference between the tempe- rature of the two balls.

A self- registering thermometer is a most im- portant instrument, and, as such, must not be passed unnoticed. It is employed to indicate the extreme changes that occur in the tempera- ture of the air. Dr. Rutherford employed two thermometers. The one which marks the mini- mum is filled with alcohol ; and the other, which indicates the maxirrum, is filled with quicksilver ; and they are both attached to the same frame, or, what is still better, affixed to se- parate frames, placed nearly horizontal, or rather elevated about five degrees, to prevent the sepa- ration of the thread of liquid. The tubes have bores from the twenty-fifth to the fifteenth part of an inch wide, and include a minute tapered or conical piece of ivory, or of white or blue enamel, about half an inch long. This mark, having in either thermometer its base turned towards the bulbs, is drawn to the lowest point by the alcohol, which again freely passes it ; but it is always pushed forward to the highest limit by the mercury, which afterwards leaves it.

Mr. Crichton has contrived a self-registering thermometer, somewhat similar to that of M. Breguet ; consisting of two oblong slips of steel and zinc, firmly fixed together by their faces; so that the greater expansion or contraction of the zinc over those of the steel, by the same varia- tions of temperature, causes a flexure of the com- pound bar. As this is secured to a board at one end, the whole flexure is exercised at the other,

on the short arm of a lever index, the free ex- tremity of which moves along a graduated arc. The instrument is originally adjusted on a good mercurial thermometer ; and the movements of the arm are registered by two fine

wires, which are pushed before it, and left at the maximum devia- tion to the right or left of the last observed po- sition or temperature.

M. Fourier has invented a new instrument which he calls a thermometer of contact. It con- sists of a conical vessel constructed of very thin iron, with the exception of the bottom, which is made of thin pliable skin ; it is filled with mer- cury and has a thermometer, the bulb of which is immersed entirely in the mercury, and the scale has degrees of such magnitude that they may be divided into tenths. The skin must be preserved perfectly clean and never be over- heated ; it is better than any other similarly flex- ible substance, because of its superior conducting power. This instrument is to be accompanied by a support consisting of a block of marble ; and any substance operated upon is to be in sheets or reduced to thin plates. When an ex- periment is to be made, the sheet, cloth, or thin plate, is to be placed upon the marble, both being at the temperature of the room; the coni- cal vessel, with its contents, is to be heated on a stove or other hot body, until about 46° or 47° C.; and then being removed, at the moment it has fallen to 45°, it is to be placed on the substance to be tried ; the time wh«n it arrives at 40° is to be exactly noted by a watch, and then the tem- perature noted minute by minute for five minutes. If the experiment be repeated with the same sub- stance on another part of the marble, exactly the same results will be obtained, provided the tem- perature of the place has not changed. If the experiments are to be made on rigid plates, then these are not to be placed directly upon thr marble, but upon a mercurial cushion, made by confining mercury under a surface of skin.

If the substance first tried be replaced by an- other, and then the fall of temperature in a given time be noted, the variation will be found veiy sensible, however slight the difference between the substances; the addition of a single sheet of the finest paper makes a great difference in the effect. The slightest difference in the nature of xthe stuff is immediately indicated. If a piece of linen cloth be replaced by flannel, or by woollen cloth, or a thin piece of woollen cloth by a thick piece, not only are the differences produced very evident, but they can be obtained over and over again with the utmost constancy, care being taken that the pressure of the mercury upon the skin, and therefore upon the substance, be the same in all cases.

The same instrument also indicates the heat of contact of bodies. In such cases, after being heated as before-mentioned, it is to be placed on a thick mass of the substance to be tried, and the fall of temperature in a given time noted as before: striking effects were thus ob- tained. Being first applied to iron at the tem- perature of 8° C., and then upon a mass of stone, the difference at the end of the second minut«> was 5°. The differences are much greater when iron is compared with brick or wood. Although

the conducting powers thus obtained for different substances are only approximations, yet there are many bodies, as bricks, stones, wood, clothing, &c., for which these are quite sufficient.

Another still more delicate method of ascer- taining the conducting power of bodies is then described, but it is also more difficult. Two vessels are used ; the lower one is maintained at a constant temperature, as 100° C. ; upon that is placed the substance to be tried, and upon that again the upper vessel. The lower part of the upper vessel is enclosed, and constitutes the bulb of an air thermometer ; the upper part is retained at the temperature of ice ; the air there- fore in the thermometer is cooled by the ice and warmed by the lower heated vessel ; the latter producing an effect greater or smaller according to the nature of the substance between it and the air-vessel; the temperature of the air and the in- dication upon the scale connected with it soon becomes permanent, and, as it is higher or lower, indicates the greater or less conducting power of the interposed substance. When the experi- ments are carefully made they accord with those of the former instrument, but are more delicate. By means of these instruments M. Fourier was able to ascertain that many substances when put together, conducted heat differently, accord- ing to the order in which they were placed. Two pieces of cloth being put between the in- strument and the marble, the order of substances traversed by the heat was skin, cloth — cloth, marble. After observing the effect a thin plate of copper was placed between the cloth and the marble; the fall of temperature was then slower than before; the copper was then placed between the pieces of cloth, and the cooling was as if no copper were present; then placing the copper beneath the skin of the instrument and above the cloth, so that the order was skin, copper, cloth, cloth, marble, the temperature diminished more rapidly than if no copper had been there : thus the interposition of the metal facilitated the transmission of heat from the skin to the cloth, but diminished the transmission from the cloth to the marble.

The chevalier Landriani has described in the Giomale di Fisica, &c., a method contrived and adopted by himself in the construction of very delicate thermometers ; and, from his experience, he is induced to consider instruments made in his way much superior to the common mercurial thermometer.

The form of the instrument is nearly that of the common thermometer ; but

the tube is of ex- treme fineness, a quarter of a grain of mercury occupying in it a length of three, four, and even five inches. In order to'blow a ball at the end of such a tube, it is found necessary to attach a condensing syringe to it, the elastic gum bottle not being sufficient for the purpose; and in forcing in the air when the end of the glass has been heated to produce the ball, great care must be taken that no moisture or oil enter the tube, as the smallest particle completely closes up its minute passage.

The ball and tube are then filled with alcohol .n the usual manner; and, after this is done, the lx>re of the tube is to be expanded into two small

bulbs near to each other, and to what is to be the top of the instrument, or the instrument may be reversed ; the ball may be considered the top, and the other extremity being turned round, may have the two bulbs blown on it so as to resemble a common form of the barometer ; this being done, alcohol is to be introduced, until not only the ball and tube, but the lower bulb, and part of the upper are filled with it.

In these thermometers, one object was to avoid the injurious effect occasioned by the adhesion of the surface of the fluid in the tube with the glass ; the surface of the fluid is therefore not regarded as any indication of the state of the instrument ; it is always in the upper bulb, and is very little altered by any alteration of temperature ; but a point is taken in the column of alcohol in the tube, by which to make observations, and this point is marked by a small cylinder of mercury ; and in addition to the advantage thus obtained, of perfect freedom of motion, the column which, before from its minuteness was with difficulty visible, becomes readily distinguishable at the necessary point. The mercury is readily intro- duced into the tube of the instrument by warming it, and then introducing its extremity into the metal on cooling ; it passes first into the bulbs, and may then be placed in any required part of what is to be the scale, and this being done the instrument is to be closed and graduated

In this way thermometers have been made so delicately that with a ball of three lines and a half in diameter each degree, (of Reaumur) has been ten and twelve inches in length, which ex- tension allows of a division to the four hundredth and even the six hundredth part of a degree, without affecting the accuracy of the instrument. In graduating it the principal points may be taken from a mercurial thermometer, and the division into equal parts adopted for the others.

Landriani enumerates some of the advantages this instrument has over common mercurial ther- mometers. It is more readily constructed, the adhesion of the mercury to the glass being ob- viated, and even the adhesion of the surface of the alcohol being of no consequence. Its ma-

terial, the alcohol, has more fluidity and expan- sibility than mercury. In mercurial instruments the weight of the metal endangers the bulb, which being necessarily thin, is liable to accidents in a much greater degree than when filled with alco- hol. Another important defect to which mer- curial thermometers are liable, and from which these are very nearly free, is the expansion of the ball at the extremity by the weight of the column of mercury in the tube ; and this column varying with the temperature, and its pressure by posi- tion, errors of a very changeable nature are in- troduced. Thus, with a mercurial thermometer having a ball of four or five lines in diameter, and degrees of four or five lines in length, the temperature indicated is not the same in a ver- tical and in a horizontal position.

Landriani proposes also the use of his instru- ment in determining fractions of degrees which cannot be observed by the common thermometer. This is done by graduating the instrument into degrees according to common thermometers, but not affixing numbers to them ; and then by di>-

placing tlie mercury from part to part, the scale may be made to commence at any given degree. If the mercury be made to descend into the ball of the instrument, or to rise into the bulb, and the instrument be placed horizontally, the tem- perature of the whole n:ay then be brought to any required point ; and that done, by placing the thermometer vertically with the ball upwards or downwards as required, the mercury is made to enter the tube, and passes over degrees gra- duated upwards or downwards from the tem- perature to which the whole instrument was brought.

M. Landriani, in a succeeding number of the Giornale di Fisica, has proposed these thermo- meters to be used in meteorological observations as self-registering thermometers, and they appear very applicable to this purpose. They are to be constructed as before described, except that be- sides the cylinder of mercury, which is the indi- cator of temperature, there is to be another portion of mercury within, either the ball or the first bulb, as the instrument is to measure the extreme point of heat or of cold.

The use is as follows : — Supposing it put by, the indicating cylinder of mercury will, of course, be somewhere in the stem, and the other portion of metal should be in the ball ; if it be required to mark the lowest degree of cold during the night, it is to be placed upright with the ball upwards, and the point where the indicator stands noted ; the mercury in the ball will rest just over the orifice of the tube, and will enter it on any descent of the column beneath; if the tempera- ture diminishes, however, that column will

ascend, the spirit in the ball contracting ; but, whenever it begins to expand again, the mercury in the ball will descend, dividing the alcohol tibove and below it. When the instrument is next observed, therefore, nothing more is required to ascertain the extreme cold of the night than to mark the numbers of degrees between the two cylinders of mercury, and these, subtracted from the numbers of degrees between the indicator, and the ball or the mercury at the first observa- tion, give the degrees of cold.

In ascertaining the extreme heat, M. Landriani proposed to use another thermometer with the hall downward, when the first bulb will become the receptacle for the registering portion of mer- cury, and the difference between the two columns of alcohol included between the indicator and the bulb at the first observation, and the indicator and registering mercury at the second, will give the extreme heat of the instrument between the two observations.

It would be easy, however, to make one in- strument answer both purposes, and one which M. Landriani depicts is very fit for them; the ball is above, and the tube is bent just above the bulbs, so that they shall also stand perpendicu- larly and rising upwards from the tube. If then a small portion of mercury be appropriated to the ball, and another to the first bulb, the former will indicate the lowest temperature in the ab- sence of the observer, and the latter the highest, the indicator of course always being present.

The thermometers above described are very limited in their extent; they indeed point out to

the lowest degrees of heat which are commonly observed even in cold climates, but they by no means reach to those degrees of heat which are very familiar to us. The mercurial thermometer extends no farther than to 600 of Fahrenheit's scale, the heat of boiling mercury ; but we are sure that the heat of solid bodies, when heated to ignition, or till they emit light, far exceeds the heat of boiling mercury. To remedy this defect, Sir Isaac Newton, whose genius overcame those obstacles which ordinary minds could not ap- proach, attempted by an ingenious experiment to extend the scale to any degree required. Having heated a mass of iron red hot, and ex- posed it to the cold air, he observed the time which elapsed till it became cold, or of the same temperature with the air; and, when the heat so far decreased that he could apply some known measure (as a thermometer) to it, he ob- served the degrees of heat lost in given times, and thence drew the general conclusion, that the quantities of heat lost in given small spaces are always proportional to the heat remaining in the body, reckoning the heat to be the excess by which it is warmer than the ambient air. So that taking the number of minutes which it took to cool after it came to a determined point in an arithmetical progression, the decrements of the heat of iron

would be continually proportional. Having by this proportion found out the decre- ments of heat in a given time, after it came to a known point, it was easy, by carrying upwards the same proportion to the beginning of its cool- ing, to determine the greatest heat which the body had acquired. This proportion of Sir Isaac's was found by Dr. Marline to be somewhat inac- curate. The heat of a cooling body does not de- crease exactly in proportion to that which the body retains. As the result of many observa- tions, he found that two kinds of proportion took place, an arithmetical as well as the geome- trical proportion which Sir Isaac Newton had adopted ; namely, that the decrements of heat were partly proportional to the times (that is, that quantities of heat are lost in equal times), as well as partly in proportion to the remaining heat ; and that if these two are added together the rule will be sufficiently accurate. By the geo- metrical proportion which Sir Isaac Newton adopted, heˆ discovered the heat of metals red hot or in fusion.

The method above-mentioned, so successfully pursued by Sir Isaac, was sufficient to form a scale of high degrees of heat, but was not con- venient for practical purposes. Accordingly the ingenious Mr. Josiah Wedgwood, who is well known for his great improvement in the art of pottery, applied himself in order to discover a thermometer which might be easily managed. After many experiments recorded in the Philo- sophical Transactions, but which it is unneces- sary to detail here, he invented a thermometer which marks with much precision the different degrees of ignition, from a dull red heat visible in the dark to the heat of an air furnace. This thermometer is extremely simple. It consists of two rulers fixed upon a smooth flat plate, a little farther asunder at the one end than the other, leaving an open longitudinal space between them

THERMOMETER.

Small pieces of alum and clay mixed together are made of such a size as just to enter at the wide end ; they are then heated in the fire along with the body whose heat we wish to determine. The fire, according to the degree of heat it con- tains, diminishes or contracts the earthy body, so that, when applied to the wide end of the gage, it will slide on towards the narrow end, less or more according to the degree of heat to which it has been exposed.

Mr. Wedgwood found that ten cwt. of the porcelain clay of Cornwall required all the earth that was afforded by five cwt. of alum. But, as the clay or alum differs in quality, the proportion will also differ. There can now, however, be no difficulty in making thermometers of this kind, as common clay answers the purpose very well, and alum earth can easily be procured. Those who wish to see a more particular account of this subject

may peruse Mr. Wedgwood's papers in the Philosophical Transactions for 1782, 1784, and 1786. As Mr. Wedgwood's thermometer begins at the lowest degree of ignition, and Fah- renheit's goes no higher than the boiling point of mercury, Mr. Wedgwood continued to fill up the interval of the scale by using a piece of silver instead of his common thermometer pieces ; and in this way he has founa that 130° of Fah- renheit are equal to one of his. He has ac- cordingly, by observing this proportion, continued Fahrenheit's scale to the top of his own. We are now, therefore, enabled to give a scale of heat from the highest degree of heat produced by an air furnace to the greatest degree of cold hitherto known, which was produced at Hudson's Bay in December 1784, by a mixture of vitriolic acid and snow. Of the remarkable degrees be- tween these extreme points we shall lay before our readers

Fahren- Wedg-

A SCALE. heit's wood's

scale, scale.

Extremity of Wedgwood's scale 32277° 240° Greatest heat of his small air-fur- nace 21877 160

Cast iron melts .... 17977 130 Greatest heat of a common smith's

forge 17327 125

Welding heat of iron, greatest 13427 95

least 12777 90

Fine gold melts .... 5237 32 Fine silver melts . . – 4717 28 Swedish copper melts . . 4587 27 Brass melts .... 3807 21 Heat by which enamel colors are

burnt on .... 1857 6 Red-heat fully visible in day-light 1077 0 Red-heat fully visible in the dark 947 1 MERCURY BOILS, also linseed and

other expressed oils . . £00 Oil of turpentine boils . . 560 Sulphuric acid boils . . • 546 Lead melts .... .540 Bismuth melts 460

Tin melts 408

Sulphur melts .... 244 Nitrous acid boils . . . 242 Cows' milk boils . . . 213

BOILS '212

Fahrenheit's

scale.

Brandy boils . . . .190 Alcohol boils . . . .174 Serum of blood and white of eggs

harden . . . . .156 Bees' wax melts . . . .142 Heat of the air near Senegal some- times 11]

Hens hatch eggs about . 108

Heat of birds from . . . 103 to 1 1 1 Heat of domestic quadrupeds from 100 to 103 Heat of the human bo ly . . 92 to 99 Heat of a swarm of bees . . 97 Heat of the ocean under the equator 80 Butter melts .... 74 Sulphuric acid of the specific gra- vity of 1 780 freezes at . 45 Oil of olives begins to congeal . 43 Heat of hedgehogs and marmots

in a torpid state . . . 39J WATER FREEZES and snow melts J2

Milk freezes .... 30 Common vinegar freezes . . 28 Human blood freezes ... 25 Strong wines freeze ... 20 A mixture of one part of alcohol

and three parts of water freezes 7

A mixture of snow and salt freezes 0 to 4

Brandy, or a mixture of equal parts

of alcohol and water freezes — 7

Spirit of wine in Reaumur's ther- mometer froze at Torneo . . — 34 MERCURY FREEZES . . . — 39 or 40 Cold produced by Mr. Macnab at Hudson's Bay by a mixture of sulphuric acid and snow . . — 69

THERMOPYLAE, in ancient geography, a narrow pass or defile, between the Sinus Maliacus on the east, and steep mountains, reaching to Oeta, made dreadful by impassable woods, on the west; leading from Thessaly to Locris and Boeotia. These mountains divide Greece in the middle, in the same manner as the Appennines do Italy; forming one continued ridge from Leu- cate on the west to the sea on the east, with thickets and rocks interspersed ; so that persons even prepared for travelling, much less an army encumbered with baggage, cannot easily find a commodious passage. In the valley verging towards the Sinus Maliacus the road is only sixty paces broad ; the only military way for an army to pass if not obstructed by an enemy ; and therefore the place is called Pylae, and by others, on account of its hot water, Thermopylae. It is famous for the brave stand made by Leo- nidas and 300 Spartans against the whole army of Persia ; and also for the Amphyctiones, the common council or states-general of Greece, assembling there twice a year, in spring and au- tumn.

THER'MOSCOPE, n. s. Fr. thermoscope ; Gr. Sippoe and oKoiriw. An instrument by which the degrees of heat are discovered ; a thermo- meter.

By the trial of the thertnoicope , fishes have more beat than the element which they swim in.

Arbuthiwt on AUmenlt,

THE

THERMUM, an ancient town of ˆEtolia, on the Evenus. Polyb. 5.

THERO, or THERON, tyrant of Agrigentum, but no tyrant in the modern sense. See AGRI- CENTUM, CARTHAGE, and SYRACUSE.

THERSANDER, a son of Polynices, and grandson of CEdipus, king of Thebes. He went with the Greeks to the Trojan war, and was killed by Telephus. Virg. TEn. v.

THESEA, in antiquity, feasts celebrated by the Athenians in honor of Theseus, consisting of sports and games, with mirth and banquets. Such as were poor and unable to contribute to them were entertained at the public expense.

THESEIDjE, a name given the Athenians from Theseus. Virg. Georg. ii. 212.

THESEUS, a famous heroof antiquity, ranked among the demi-gods. He was the son of .ZRgeus king of Athens. He threw Sciron, a cruel robber, down a precipice ; fastened Procrustes tyrant of Attica to a bending pine, which, being let loose, tore him asunder; killed the Minotaur kept in the labyrinth by king Minos, in Crete; and by the assistance of that prince's daughter, Ariadne, who gave him a clue, escaped out of that laby- rinth, and sailed with his deliverer to the isle of Naxos, where he had the ingratitude to leave her. Theseus afterwards overcame the Centaurs, sub- dued the Thebans, and defeated the Amazons. He assisted his friend Pirithous in his expedition to hell to carry off Proserpine ; but was impri- soned by Pluto, till he was released by Hercules, lie also established the Isthmean games, in honor of Neptune : united the twelve cities of \ttica ; and founded a republic there, 1236 B. C. Some time after, taking a voyage into Epirus, he was seized by Aldonius king of the Molossians ; meanwhile Menestheus rendered himself master of Athens. But at length Theseus being released from prison, retired to Scyros, where king Lyco- medes caused him to be thrown from the top of a rock. Theseus had several wives ; the first of whom was the beautiful Helena ; the second Hyppolyte, queen of the Amazons, by whom he had Hippolytus ; and the last Phaedra, sister to Ariadne, who punished him for his infidelity to her sister, by her incestuous passion for his son Hippolytus. See ./EGEUS, ARIADNE, HIPPOLY- Tt's, and MINOS.

THE'SIS, n.s. Fr. these ; Gr. &««£. A po- sition ; something laid down, affirmatively or negatively.

The truth of what you here lay down, J5y some example should be shewn. An honest but a simple pair, "Uay seive to make this thesis clear. Prior.

THESIUM, base fluellin, in botany, a genus of plants belonging to the class of pentandria, and order of monogynia. The calyx is mono- phyllous, with the stamina inserted into it : there is only one seed, which is inferior. There are seventeen species, one of which is a British plant, viz. T. linophyllum,

or bastard toad flax. It has a foliaceous panicle, with linear leaves, and flowers in June and July.

THESPIA, an ancient town of Breotia, de- stroyed by the Thebans. See THEBES.

THESPIS, a famous Greek tragic poet, and the first representer of tragedy at Athens. He carried

his troop from village to village in a waggon, from which they performed their pieces. Alcestis was the first tragedy they performed at Athens, 536 B. C. See THEATRE.

THESPIUS, king of Thespia, in Bceotia,who had fifty daughters, all of whom Hercules got with child, of sons each, in one night.

TIIESPROTIA, an ancient country of Epirus, on the sea-coast, on the west of Ambracia ; fa- mous for its oracle of Dodona. It was seated between the Acheron and the Cocytus. Homer

THESSALONICA, the daughter of Philip II. king of Macedon, and sister of Alexander the Great. She was married to Cassander, and bore him three sons, Philip IV7., Antipater, and Alex- ander V., but she was murdered by her son Antipater. See MACEDON.

THESSALONICA, a city of Macedonia, so named from the above princess, being anciently called Therma. It was once very powerful, and early received the Christian faith. It is a city of im- portance, and now called Salonichi.

THESSALUS, a son of Hercules and Cal- liope, the daughter of Euryphilus, who settled in Thessaly and gave name to it. Also a celebrated physician of Lydia, who flourished at Rome, in the reign of Nero.

THESSALY, a country of Greece, whose boundaries have been different at different pe- riods. It was bounded on the south by the southern parts of Greece, or Gratia Propria ; east by the TEgean ; north by Macedonia and Mygdonia ; and west by Illyricum and Epirus. It was generally divided into four provinces, Thessaliotis, Pelasgiotis, Istiseotis, and Phthiotis, to which some add Magnesia. It has been se- verally called ./Emonia, Pelasgicum, Argos, Hel- las, Argeia, Dryopis, Pelasgia, Pyrrhsea. &c. The name of Thessaly is derived from Thessalus, its first monarch. Thessaly is famous for a deluge which happened there in the age of Deucalion. Its mountains and cities are also celebrated, such as Olympus, Pelion, Ossa, Larissa, &c.

The Argonauts were partly natives of Thessaly. The inhabitants of the country passed for a treacherous nation, so that false money was called Thessalian coin, and a perfidious action a Thessalian deceit. Thessaly was originally governed by kings till it became subject to the Macedonian monarchs. The cavalry was uni- versally esteemed, and the people were super- stitious and addicted to the study of magic. Lucan. 6. T. 438, &c. ; Dionys. 219 ; Cart. 3. c. 2; ˆElian, V. H. 3. c. 1 ; Paus. 4. c. 36. 1. 10. c.l; Mela, 2. c. 3; Justin 7. c. 6; Diod. 4. Thessaly is now called Janna, a province of Eu- ropean Turkey, bounded by Macedonia on the north, by the Archipelago on the east, by Achaia or Livadia on the south, and by Epirus on the west.

THESTIA, a town of ˆEtolia, between the Evenus and Achelous — Polyb. 5.

THETIS, in Pagan mythology, the wife of Oceanus, and the mother of Nereus and Doris, who were married to each other; and from this marriage sprung the nymphs of the earth and sea. Among the sea nymphs there was one named Thetis the Younger, who excelled all the rest in beauty, and for \vhnm .fupiter conceived

such a passion, that he resolved to espouse her : but being informed by the destinies, that she would bring forth a son who would rise above his father, he married her to Peleus. To their nuptials all the gods and goddesses were invited except Discord, who, to be revenged for this con- tempt, threw a golden apple into the assembly, on which was engraven, For the fairest. Juno, Pallas, and Venus, disputed for this apple ; but Paris, being chosen to decide the difference, ad- iudged it to Venus. From this marriage of The- tis and Peleus sprung Achilles.

THETFORD, a market town of Norfolk and Suffolk, situated in a pleasant open country on the Ouse, at its confluence with the Thet. The greater part of the town is in Norfolk, but part in Suffolk. The principal street, named Bridge Street, is in the road from London to Norwich.

Thetford was once a place of great note, and the ruins of ecclesiastical and other buildings strongly remind the visitor of ancient splendor. It had at one period twenty churches, and eight monasteries, besides other religious and charita- ble foundations; in consequence of which it obtained the epithets of Hierapolis and Mona- chopolis. But of these the names only of some remain, and of others only bare dilapidated walls. Three of the churches are preserved, St. Peter's and St. Cuthbert's on the Norfolk side of the town, and St. Mary the Less on the Suf- folk side. St. Peter's, commonly called the black church, from its being built chiefly of flint, consists of a

chancel, nave, two aisles, and a tower; the latter was rebuilt in 1789. The battlements on the south side, and the buttresses are decorated with ornaments, and large letters, inlaid in the flint-work. Some of the walls remain, with buttresses, windows, &c., of the ancient nunnery. This was founded by Uvius, the first abbot of St. Edmund's Bury, in the reign of king Canute. The conventual church was lately converted into a barn. Of the priory or abbey founded by Roger Bigod, for monks of the Cluniac order, in the year 1104, the ancient gateway, with parts of the church, &c., still remain. The monastery was suppressed in the year 1.540. It had been the burial place of several noble families, who had borne the title of earls of Norfolk, and also contained numer- ous monuments of the Bigods, Mowbrays, and Howards. After the dissolution, many of the mortuary remains were removed to Framiingham.

The site of St. Austin's priory is known by the name of the Friar's Close. Of the monas- tery of St. Sepulchre, which was founded in the year 1139, by William, earl of Warren and Surrey, there are also some remains ; but here again the church has been converted in a barn. The site is called Canons. Of four other reli- gious houses no vestiges remain. At the eastern extremity of the town are some considerable remains of fortifications, with lofty banks and deep ditches. They seem to have been the work of the early kings of East Anglia ; there is also a Norman keep. The mount is about 100 feet in height, and the circumference at the base 984. Its slope is extremely steep. East of the mount is a lar_'« area or parade. The principal build- ing in the modern town is the guildhall, where

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the Lent assizes for the county are held. The old guildhall or council-house being in a dila- pidated condition, the present council-chamber and apartment for the juries were erected by Sir Joseph Williamson, knight, one of the prin- cipal secretaries of state to king Charles II. The grammar-school is on the Suffolk side of the river, near St. Mary's church, and was founded by king James I. in consequence of a bequest by Sir Richard Fulmerstone, in 1566. The town also contains a county jail, bridewell, workhouse, a hospital sufficiently endowed for the maintenance of a preacher, a school-master, usher, &c. ; and various alms-houses and other charitable donations. The Ouse is navigable up to the town.

Thetford is a very ancient burgh ; but its charter of incorporation, by which it is still governed, was granted by queen Elizabeth in 1573. The corporation consists of a mayor, ten aldermen, twenty common council-men, a recorder, town-clerk, sword-bearer, and two Serjeants at mace. The town sends two mem- bers to parliament, and has been honored with the presence of many of our sovereigns, parti- cularly Henry I. and Henry II.

Several charters, granted by the former, bear date at Thetford. King James I. made this one of his hunting seats ; and the palace is still known by the name of the king's house. During the heptarchy, Thetford formed the metropolis of the kingdom of the East Angles, and in the twelfth century was the see of a bishop. It had then also a mint, which has produced a great number of Anglo-Saxon coins. The chief ma- gistrate found here at the Norman conquest was styled a consul. In the vicinity is a mineral spring. Various extraneous fossils are also found here. The celebrated Thomas Paine was born here. Market on Saturday and two an- nual fairs. Twenty-nine miles south-west of Norwich, and eighty N. N. E. of London.

THEVENOT (Melchisedec), librarian to the king of France, and a celebrated writer of tra- vels, was born at Paris in 1621. ' He laid down rules, and invented an instrument, for finding the longitude, and the declination of the needle, and assisted at a conclave held on the death of pope Innocent X., and was the French envoy at Genoa. He died in October 1 692, aged seventy- one. His Travels into the Levant, &c., were published in English, in 1681, fol.; and in French at Paris, in 1663, fol. He wrote also L'Art de Nager, the Art of Swimming, 12mo. 1696.

THEVENOT (John), another celebrated travel- ver, who travelled in Asia, and published an ac- count of his travels, in 3 vols. 4to. and in 5 vols. 12mo. He died in 1667.

THEURGY, in ancient seperstition, was that sacred part of magic sometimes called white ma- gic, or the white art, in opposition to necromancy, or the black art. The word is formed from e«of, God, and tpyov, work ; q. d. the art of doing divine things, or things which God alone can do : or the power of working extraordinary and supernatural things, by invoking the names of God, saints, angels, &c. Accordingly, those who have written of magic in seneral, divide it into three parts : the first whereof is railed thour-

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gy, as operating by divine or celestial means; the second, natural magic, performed by the powers of nature ; and the third, comprehending necromancy, sorcery, and witchcraft or magic, performed by the assistance of daemons or de- parted men. See MAGIC.

THEW, n. s.) Sax. Seap. Quality; man- THEW'ED, adj. $ ners ; customs ; habit of life ; behaviour: in Shakspeare, it seems to signify brawn or bulk :

thewed is accustomed ; edu- cated. Obsolete.

Home report these happy news, For well yee worthy been for worth and gentle then-es.

Spenser.

But he was wise, and wary of her will, And ever held his hand upon his heart ;

Yet would not seem so rude, and thewed in ill, As to despise so courteous seeming part. Id.

Nature crescent does not grow alone In thews and bulk ; but, as this temple waxes, The inward service of the mind and soul {jrows wide withal. Shakspeare. Hamlet.

Will you tell me how to chuse a man ? Care I for the limbs, the theu-s, the stature, bulk, and big sem- blance of a man? give me the spirit, master Shallow.

Shakspeare.

THEY. Sax. 351. Pronoun, in the oblique case them, the plural of he or she ; this or that : used also indefinitely like the Fr. on dit. The men ; the women ; the persons. Themselves is the re- ciprocal pronoun.

Whatsoever evil befalleth in that, themselves have made themselves worthy to suffer it. Hooker.

They are in a most warlike preparation.

Shakspeare. Coriolanus. Why do you keep alone 1 Of sorriest fancies your companions making, Using those thoughts, which should indeed have

died With them they think on. Id. Macbeth.

They eat on beds of silk and gold, At ivory tables, or wood sold Dearer than it. Ben Jonson's Catiline.

The materials of them were not from any herb.

Wilkins.

Such things as in themselves are equally true and certain, may not yet be capable of the same kind or degree of evidence as to us. Id.

They open to themselves at length the way. Milton. There, as they say, perpetual night is found In silence brooding on the unhappy ground.

Dryden.

Tis remarkable that they Talk most who have the least to say. Prior.

The flowers she wore along the, day, Andev'ry nymph and shepherd said,

That in her hair they looked more gay Than growing in their native bed. Id.

Waken children out of sleep with a low call, and give them kind usage till they come perfectly to them- telvei. Locke.

THICK, adj., adv. & n. s.^\ Sax.fcicce; Belg. THICK'EN, v. a. & r. n. \ dick ; Isl. thickur ;

THICK'ET. n. s. THICK'LY, adv. THICK'NESS, n.s. THKK'SCULLED, adj. THICK'SET, THICK'SKIN, n. s.

Danishs!//c,-Teut. (did:. Not thin; / dense ; coarse ; I gross ; not rare ; ' or clear ; close : J hence frequent :

as an adverb frequently ; fast ; closely ; to a great depth : as a noun substantive the thickest part ; a thicket: to thicken is to make thick or close ; condense ; strengthen ; make closer : to

grow thick, concrete or close : the adverb and noun substantive following correspond with thick, adjective : thicksculled is dull ; stupid : thickset, closely planted : thickskin, a coarse gross or stupid man.

Thou art waxen fat ; thou art grown thick, co- vered with fatness. Deut. xxxii. 15. My little finger shall be thicker than his loins.

1 Kings xii. The people were gathered thick together.

Luke xi. 29

It brought them to a hollow cave, Amid the thickest woods. Spenser.

Achimetes having with a mine suddenly blown up a great part of the wall of the Spanish station, in the thick of the dust and smoak presently entered his men. Knolles.

The shallowest thickskin of that barren sort, Who Pyramus presented in their sport, Forsook his scene, and entered in a brake.

Shakspeare.

Tis a shrewd doubt, though it be but a dream , And this may help to thicken other proofs, That do demonstrate thinly. Id. Othello.

Why hast thou lost the fresh blood in thy cheeks And given my treasures and my rights of thee To thick-eyed musing and cursed melancholy 1

S/iakspeare.

Speaking thick, which nature made his blemish, Became the accents of the valiant, To seem like him. Id. Henry IV.

God caused the wind to blow, to dry up the abun- dant slime of the earth, make the land more firm, and cleanse the air of thick vapours and unwhole- some mists. R leigh.

Poll a tree, and cover it some thickness with clay on the top, and see what it will put forth.

Bacon's Natural History.

It tasted a little of the wax, which in a pome- granate, or some such ifo'c/ c-coated fruit, it would not.

Bacon.

Mists and rotten fogs Hang in the gloomy thicks, and make unsteadfast

bogs. Urayton.

Favours came thick upon him, liker main showers than sprinkling drops ; he was knighted, made gen- tleman of the king's bedchamber, and an annual pension given him. Wotton.

This being once a week, came too thick and too often about. Spelman.

'Tis some disaster, Or else he would not send so thick.

Denham's Sophy.

Through perils both of wind and limb, Through thick and thin she followed him. Hudibras.

His pills as thick as handgranados flew, And where they fell as certainly they slew.

Rnscommon.

Mending cracked receivers, having thickly overlaid them with diachylon, we could not perceive leaks.

Boyle.

In the darkened room, against the hole at which the light entered, I could easily see through the whole thicknfss of mv hand "the motions of a body placed beyond it. Id.

A person found in himself, being at some times subject to a thickness of hearing, the like effect.

Holder.

A fermentation makes all the wine in the vessel thick or foul ; but, when that is past, it grows clear of itself. Temple.

They're pleased to hear their thick-sculled judges

cry, \VclI moved ! oh finely said ! Dryden.

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His eye-balls glare with fire, suffused with blood, Kis neck shoots up a thickset thorny wood ; His bristled back a trench impaled appears, And stands erected like a field of spears. Id.

When first the down appears upon his chin, For a small sum to swear through thick and thin.

Id.

I hear the trampling of thick beating feet ; This way they move. Id. Don Sebastian.

The press of people thickens to the court, The impatient crowd devouring the report.

Dry den.

Not thicker billows beat the Libyan main, Nor thicker harvests on rich

Hermus rise, Than stand these troops. Id. JEneid.

They came thick and threefold for a time, till one experienced stager discovered the plot.

L'Estrange's Fables.

Within a thicket I reposed ; and found Let fall from heaven a sleep interminate. Chapman.

How often, from the steep Of echoing hill, or thicket, have we heard Celestial voices, to the midnight air, Sole, or responsive, each to other's note, Singing their great Creator. Milton.

Now Leda's twins

Their trembling lances brandished at the foe ; Nor had they missed, but he to thickets fled Concealed from aiming spears, not pervious to the

steed. Dryden.

I've known young Juba rise before the sun, To beat the thicket where the tyger slept, Or seek the lion in his dreadful haunts.

Additon's Cato. TLIICKNESSE (Philip), born in 1720, was

„. . . . , , e$- , the son of a clergyman, and entered in the array

7/uf/c-leaved weeds amongst the grass will need u j • ., «r ^ •

more drying than ordinary g°rass. whe.

Mortimer' Husbandry. on hls return to Eng'ana »c obtained a captain's*

Bring it near some fAicA-headed tree. Mortimer. commission. He then married a lady of French The world is so thickset with the numerous produc- extraction, expecting an ample fortune ; but his lions of the creatures, that besides the apparent views were disappointed, and becoming a wi- beauty of things viewed by all, there are those secret dower, entered again into matrimony with lady graces in every part of nature, which some few alone Elizabeth Touchet, heiress of the ancient barony

of Audley. Her fortune enabled him to purchase the lieutenant governorship of Landguard Fort ; but the union involved him in family disputes, and contributed by no means to his happiness. About 1761 Mr. Thicknesse lost his second consort;

have the skill to discern. Grew.

He saw the crowd thickening, and desired to know how many there were. Taller.

A little plat of ground thick sown is better than a great field which lies fallow. Norris's Miscellanies.

Encumbered in the mud, their oars divide, With heavy strokes, the thick unwieldy tide.

A dd'uon.

The combat thickens, like the storm that flies From westward when the showery scuds arise, Or pattering hail comes pouring on the main, When Jupiter descends in hardened rain. Id.

and, on her only son succeeding to the title and estate of his mother, a disagreement took place between him and his father, who laid his grievances before the public in a pamphlet entitled Queries to Lord Audley, 8vo. He seems to have indulged what Dr. Johnson calls, ' the

Objects of pain or pleasure do not lie thick enough triumph of hope over experience,' with regard

together in life, to keep the soul in constant action.

Id.

The banks of the river and the thickness of the shades drew into them all the birds of the country.

Id.

Water stopt gives birth To grass and plants, and thickens into earth.

Prior.

to matrimony. The year after he became a wi- dower, he married the daughter of Mr. Ford, a solicitor, who long survived him. See the next article. By this lady he had several children, the difficulty of providing for whom induced him to retire first to Wales, and afterwards to the continent. Having travelled through France, Italy,

Waters evaporated and mounted up into the air, an(l Spain, he returned home, and resided again

in Wales, and at Bath. Shortly after the be- ginning of the Revolution in France, Mr. Thick- nesse went abroad, intending to settle in Italy •' but he died of apoplexy while travelling near Boulogne, in 1792- Among his numerous ana

thicken and cool it. Woodward's Natural History.

The white of an egg gradually dissolves by heat exceeding a little the heat of a human body ; a greater degree of heat will thicken it into a white, dark-coloured, dry, viscous mass.

Arbuthnrt on Aliments. eccentric works are Man-midwifery analysed,

To warm milk pour spints of nitre, the milk pre- and the Tendency of that practice detecte/ and

sently after will become thicker than it was. Id. ˆi 1-AC At AV • r

*Diseases imagined to come from the thick**, of "P ' IP' if Q YeariSrˆUr"ey , T**

blood, come oftln from the contrary cause. Id. Irance and Part°f uSPain' 1777» 2 vols' 8v,°- •

If you apply it thick spread, it will eat to the TThe ne,w Pros,e •• Guide > 1778′ 8vo- lhe*

bone." Wiseman. Valetudinarian s Bath Guide, or the Means of

What you write is printed in large letters; other- obtaining long Life and Health, 1780, 8vo. ; A

wise, between the weakness of my eyes and thickness Year's Journey through the Pays Bas and Aus-

of hearing, I should lose the greatest pleasure. trian Netherlands, 1786, 8vo. ; A Sketch of the

Swift. Life of Thomas Gainsborough, 1788, 8vo. ; and

THICK'ET, n. t. Sax. fciccetu. A close Memoirs and Anecdotes of Philip Thicknesse,

knot or tuft of trees ; a close wood or copse. late Lieutenant Governor of Landguard Fort,

I drew you hither and unfortunately father to George Touchet,

Into the chiefest thicket of the park. Shakspeare. Baron Audley, 1788, 2 vols. 8vo.

Chus, or any of his, could not in haste creep THICKNESSE (Mrs Anne), an authoress of

through those desart regions, which the length of considerable accomplishments, was born in the

one hundred and thirty years after the flood had for- Temple, February 22, 1737. Her talents and

tified with thickets, and permitted every bush and personal attractions having early introduced her

briar, reed and tree, to join themselves into one main into the world of fashion, she gave three con-

body and forest. Raleigh. certs at the opera-house on her own acoou..t,

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having left her father's house abruptly, in conse- quence of his endeavouring to force her into marriage. By this step she is said to have rea- lized £1500, and, acquiring the patronage of lady Betty Thicknesse, became domesticated in her family. On the death of this lady, governor Thicknesse offered her his hand, which she ac- cepted, and above 300 persons were present at the wedding. During a union of thirty years, she accompanied her husband on various jour- neys to the continent ; and was with him at his death, in 1792, which look place in his carriage. The French Revolution had no\v commenced, and Mrs. Thicknesse, with several other English ladies, was imprisoned, and narrowly escaped the guillotine ; Robespierre having sent an order for their execution. On her liberation she re- turned to England, and ended a long life at her house in the Edgeware Road, January 20, 1824. She was the personal friend of many of the wits of the last generation. Her principal works are Biographical Sketches of Literary Females of the French Nation, 3 vols. 12mo. 1778, and a novel entitled The School of Fashion, 2 vols. 8vo.

1800.

THIEF, n.s. ~\ Sax. «eip; Belgic

THIEF'CATCHER, diti'; Goth, and Swed.

THIEF'LEADER, | tuif. It was anciently

THIEVE, v. n. ˆwritten thieof, and so

THIEV'ERY, n. s. appears to have been

THIEV'ISH, adj. of two syllables. —

THIEY'ISHLY, adv. J Johnson. One who takes vhat belongs to another : the thief steals by secrecy, and the robber by violence ; but these senses are confounded: the thiefcatcher and leader both mean one whose business it is to take or catch thieves : to thieve is to steal ; prac- tise theft : thievery, the practice of stealing ; and (obsolete) that which is stolen : thievish, in- clined to thieve; dishonest; secret: the adverb corresponding.

This he said because he was a thief, and had the bag. John.

They lay not to live by their worke, But thievishly loiter and lurke. Tusser.

Ne how to 'scape great punishment and shame, For their false treason and vile thievery. Spejuer.

Do villany, do, since you profess to do 't, Like workmen ; I'll example you with thievery.

Shakspeare.

Injurious time now, with a robber's haste, Crams his rich thievery up he knows not how. Id.

What, would'st thou have me go and beg my

food?

Or with a base and boisterous sword enforce A thievish living on the common road ? Id.

Four and twenty times the pilot's glass Hath told the thievish minutes how they pass. Id.

Take heed, have open eyes ; for thieves do foot by night. Id.

Their burning lamps the storm ensuing show, The oil sparkles, thieves about the snuff do grow.

Mty.

O thievish night,

Why shouldst thou, but for some felonious end, In thy dark lanthorn thus close up the stars, That nature hung in heaven, and filled their lamps With everlasting oil, to give due light To the misled and lonely traveller I Milton.

He makes it a help unto thievery : for thieves, hav- ing a design upon a house, make a fire at the four

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corners thereof, and cast therein the fragments of leadslone, which raið fume.

Browne's Vulgai Erraurs.

Can you think I owe a thief my life, Because he took it not by lawless force ? Am I obliged by that to assist his rapines, And to maintain his murders 1 Dryden.

A wolf passed by as the thief-leader were dragging a fox to execution. L' Estrange.*

Amongst the Spartans, thievery was a practice morally good and honest. South.

The thieviih god suspected him, and took The hinds aside, and thus in whispers spoke : Discover not the theft. Addison.

THIELIN (John Philip), an eminent painter of flowers, born at Mechlin in 1618. He was a nobleman of considerable fortune, and was em- ployed by the king of Spain. He had three daughters, who inherited his genius, and died in

1667.

THIELT, a considerable town of West Flan- ders, situated at the foot of au eminence, with a castle. It has manufactures of linen and lace, soap, leather, and hats. It is to the benefits of inland navigation, and the fertility of the neigh- bourhood, that is owing the density of the popu- lation ; for here is no provincial capital, and no government establishments of consequence. In- habitants 9800. Eighteen miles W.S.W. of Ghent.

THIERRI L, or THEODORIC I., king of France, the third son of Clovis II. ; was de- throned by Childeric, but recovered his throne, and died in 1791. See FRANCE.

THIERRI II., or THIERRY II., the son of Da- gobert III., was educated in a

monastery ; but was raised to the throne of France by Charles Martel, in 720. He died in 737. See FRANCE. THIERS (John Baptist), a learned divine of the Sorbonne, born at Chartres, in 1686. After being a professor in the university of Paris, he was made bishop of Champrond, in Chartres. He wrote 1. A Treatise on Superstitions respect- ing the Sacraments ; 2. De Festorum immuni- tione liber ; 3. A history of Perukes ; and other curious tracts.

THIERS, a considerable town of France, in the department of the Puy de Dome, Auvergne, situated on the declivity of a hill, watered by the Durolle. The buildings in the outskirts hare a pleasing appearance, being painted in fresco in the Italian style ; but the interior presents nothing but dark, crowded, and crooked streets, bor- dered with ill-built houses. There is not a single public square or interesting building to attract attention. It is, however, a place of considerable activity in manufactures. The principal brancli is hardware, and particularly cutlery, which em- ploys, here and in the neighbourhood, upwards of 9000 hands. These articles are sent to Spain, Italy, and the Levant, to an annual value of £60,000 or £80,000. Thiers has likewise exten- sive tanneries and paper manufactories ; the latter, to the extent of about 12,000 cwt. annually, is sent in great part to Paris. Population 11,000. Twenty-two miles east of Riom, and twenty-five east by north of Clermont.

THIGH, 7?. .?. Saxon Seop ; Isl thieo ; Belg. die. Defined in the article fromQuincy.

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He touched the hollow of his thigh, and it was out of joint. Gen. xxxii. 25.

The ihigh includes all between the buttocks and the knee. The thigh bone is the longest of all the bones in the body ; its fibres arc clo-e and hard ; it has a cavity in its middle ; it is a little convex and round on its foreside, but a little hollow, with a long and small ridge on its backside. Quinry.

The tk-sh dissolved, and left the thigh-bone bare.

Wiseman.

THILK, pronoun. Saxon Sile. That same. Obsolete.

I love thilk lass : alas, why do I love ? She deigns not my good will, but doth reprove, And of my rural niusick holdeth scorn.

Spenser' i Pastoralt.

THILL, n. s.) Sax. fcille, a piece of timber

THILL'ER. \ cut. The shafts of a waggon; the arms of wood between which the last horse is placed • duller, the last horse.

Whose bridle and saddle, whitlether and nail, With collars and harneiss for thiller and all.

Tutxer.

What a beard hast thou got ! thou hast got more hair on thy chin, than Dobbin my thill horse has on his tail. Shakspeare.

More easily a waggon may be drawn in rough ways, if the fore wheels were as high as the hinder wheels, and if the thills were fixed under the axis.

Mortimer.

THIM'BLE, n.t. Supposed by Minshieu to be corrupted from thumb bell. The Danish Jinger btel is of the same signification. A metal cover by which the fingers are secured from the needle in sewing.

Your ladies and pale visaged maids, Like Amazons, come tripping after drums ; Their thimbles into armed gantlets change, Their needles to lances. Shahspeare. King John.

Examine Venus and the Moon, Who stole a thimble or a spoon. Hudibrtu.

Veins thaj run perpendicular to the horizon have valves sticking to their sides like so many thimble ; which, when the blood presses back, stop its pas- sage, but are compressed by the forward motion of the blood. Cheyne.*

THIMBLE MAKING. This art is said to have been brought from Holland, in 1695, by Mr. John Lofting, a Dutchman, who set up a workshop at Islington, and practised it with success. The most common and useful thimbles are made of shruff, or old hammered brass, the best being too dear and the ordinary too brittle. This the manufac- turers melt and cast in a sort of sand, with which and red ochre are made mould and cores, and in them they usually cast six gross at a cast, and about six or seven of these casts in a day. They are cast in double rows, and, when cold, taken out and cut off with greasy shears. Then boys take out the cores from the inside with a pointed piece of iron, which cores were made by them, every core having a nail with a broad head in it, which head keeps it from the mould, and makes the hollow to cast it in. This done, they are put into a barrel as they do shot, and turned round with a horse, till they rub the sand one from another. Thus far the foundry, in which are employed six persons :

first, the founder and two men make the moulds ready. Secondly, two boys make cores, for each thimbleo ne. Thirdly,

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one that blow the bellows. From hence they are carried to the mill to be turned. First, the inside, which works with an instrument to the bottom, while its hold lasts, and flies back when let loose. Secondly, the outside, which, with a coarser engine, called a rough turning, is made pretty smooth at one stroke; and afterwards with a finer engine both the side and bottom are at one stroke made very smooth. Then some saw- dust or filings of horn combs are put half way into each thimble, and upon it an iron punch, and then, with one blow against a studded steed, the hollow of the bottom is made. After this, with an engine, the sides have the hollow made, and in this engine is their chief secret, and they can work off with it thirty or forty gross in a day. This done, they are again polished on the inside. Then the rim, whether a single or double one, is turned at one stroke, and all these turnings are performed with five men and three boys. After this, they are again turned in the barrel with saw-dust or bran, to scour them very bright, and so they are complete thimbles. Thus finished, 'they are sorted, and put six together one in another; and six of these half dozens are wrap- ped up in a blue paper ; and four of these papers, making a gross, are wrapped up in another paper, and tied with a packthread, which makes them almost a square, and are sold by the first maker by the gross.

THIME, n.s. Fr. t hym ; Latin thym us. A fragrant herb from which the bees are supposed to draw honey. This should be written thyme.

Fair marigolds, and bees' alluring thyme.

Spenser.

THIN, adj., ««.,&* Sax. *mn; Isl. thun-*

THIM'LY, adv. [v. j. > nvr ; Belgic dunn ; Swe-

THIN'NESS, n. s. j dish tvnn. Small ; rare ;

lean ; attenuated ; not thick or dense ; not

coarse: used as an adverb for not thickly: to

make rare or thin ; attenuate : the adverb and

noun substantive correspond.

Seven thin ears, blasted with the east wind sprung up. Gen. xli. 6.

Beat gold into thin plates, and cut it into wires.

Exodus.

The hope of the ungodly is like thin froth, that is blown away with the wind. Wisdom, v. 14.

In the day, when the air is more thin, the sound pierceth better ; but when the air is more thick, as in the night, the sound spendeth and spreadeth abroad less. Bacon.

Spain is thin sown of people, by reason of the sterility of the soil, and the natives being exhausted in such vast territories as they possess. Id.

Tickling is most in the soles, arm-holes, and sides, because of the thinnts of the skin. Id.*

The bill against root and branch never passed, till both houses were sufficiently thinned and overawed .

Atnˆ Charles.

No breach, hut an expansion, Like gold to airy thinnett beat. Donne.

Remove the swelling epithets, thick laid As varnish on a harlot's cheek ; the rest Thin sown with aught of profit or delight. Milttm.

It is commonly opinioned that the earth was thinly inhabited before the flood.

Browne's 1'vlne.r ' -r«wr»

lie pleased the thin and bashful audit nee Of our well-meaning, frugal ancestors. Rotcomma.*

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The waters of Boristhenes are so thin and light, that they swim upon the top of the stream of the river Hypanis. More.

Thou art weak, and full of art is he ; Else how could he that host seduce to sin, Whose fall has left the heavenly nation thin ?

Dry den. The buzzard

Invites the feathered Nimrods of his race To hide the thinness of their flock from sight, And altogether make a seeming goodly flight. Id.

Our walls are thinly manned ; our best men slain ; The rest an heartless number, spent with watching.

Id. I hear the groans of ghosts ;

Thin, hollow sounds, and lamentable screams.

Id.

Tftm-leaved arbute hazle grafts receives, And planes huge apples bear, that bore but leaves.

Id.

T' unload the branches, or the leaves to thin, That suck the vital moisture of the vine. Id.

A slim

A country gentlewoman, if it be like to rain, goes not abroad thin clad. Locke.

Those pleasures that spring from honour, the mind can nauseate, and quickly feel the thinness of a po- pular breath. Smth.

In country villages pope Leo the seventh indulged a practice, through the thinness of the inhabitants, which opened away for pluralities.

Ayliffe's Parergtm. Already Caesar

Has ravaged more than half the globe ; and sees Mankind grown thin by his destructive sword.

Addison.

Tis Caesar's sword has made Rome's senate little, And thinned its ranks. Id. Cato.

Ferrara is very large, but extremely thin of people.

Addison.

Transparent substances, as glass, water, air, &c., when made very thin by being blown into bubbles, or otherwise formed into plates, do exhibit various colours, according to their various thinness, although at a greater thickness they appear very clear and co- lourless. Newton's Opticks.

The vapours, by the solar heat Thinned and exhaled, rise to their airy seat.

Blackmore.

Such depend upon a strong projectile motion of the blood, and too great thinness and delicacy of the vessels. Arbuthnot.

The serum of the blood is neither acid nor alka- line ; oil of vitriol thickens, and oil of tartar thins it a little. Id.

To warm new milk, pour any alkali ; the liquor will remain at rest, though it appear somewhat thinner. Id.

Sick with the love of fame, what throngs pour in, Unpeople court, and leave the senate thin ! Young.

THING, n. s. Saxon $1115 ; Belgic ding.

Whatever is; any kind of matter; an affair:

used in contempt; and particularly 'of persons: a general word.

The remnant of the meat-offering is a thing most holy. /.< r. ii. 3.

The great master he found busy in packing up his things against his departure.

Knolles's History of the Turks.

Do not you chide ! I have a thing for you.

You have a thing for me ! It is a common thing —

—Ha!

— To have a foolish wife. Sluiltspeare. CtheVn.

See, sons, what things you are ! how quickly na- ture

Falls to revolt, when gold becomes her object ! For this the foolish over-

careful fathers Have broke their sleeps with thought, their brains with care. Shakspeare. Henri] IV.

When a thing is capable of good proof in any kind, men ought to rest satisfied in the best evidence for it which that kind of things will bear, and beyond which better would not be expected, supposing it were true. Wilkins.

Wicked men, who understand any thing of wis- dom, may see the imprudence of worldly and irreli- gious courses. Tillutson.

I should blush to own so rude a thing, As 'tis to shun the brother of my king. Dryden.

A thing by neither man nor woman prized, And scarcely known enough to be despised. Id.

Says the master You devour the same things that they would have eaten, mice and all. L'Estrange.

Princes, when they come to know the true state of things, are not unwilling to prevent their own ruin.

Duvenant.

The poor thing sighed, and, with a blessing ex- pressed with the utmost vehemence, turned from me.

Addison.

Never any thing was so unbred as that odious man. Congreve.

I'll be this abject thing no more. Love, give me back my heart again. Granville.

I have a thing in prose, begun about twenty-eight years ago, and almost finished : it will make a four shilling volume. Swift.

THINK, v. n. & v. a.} Pret. thought. Sax.

THINK'ER, n. s. >fcencean ; Goth.t/iank-

THINK'ING. Jgan; Belgic dencken.

To have ideas ; to reason ; cogitate ; to perform any mental operation ; judge; conclude ; intend ; imagine; consider; doubt: as a verb active, to believe ; imagine ; esteem : a thinker is one who thinks : thinking,

cogitation ; imagination ; judgment.

Let them marry to whom they think best ; only to their father's tribe shall they marry.

Numb, xxxvi. 6.

Me thinheth that the running of the foremost is like that of Ahimaaz. 2 Samuel, xviii. 27.

Think upon me, my God, for good, according to all that I have done. Nehemiah, v. 19.

He thought scorn to lay hands on Mordecai alone.

Esther, iii.

Charity thinketh no evil. 1 Cor. xiii. 5.

Me thought I saw the grave where Laura lay.

Sidney.

Thou thought' it to help me, and such thanks I

give, As one near death to those that wish him live.

Shakspeare.

Edmund, I think, is gone. In pity of his misery to dispatch His nighted life. Shakspeare. King Lear.

He put it by once ; but, to my thinking, he would fain have had it. Id. Julius Ceestir.

I fear we shall not f n 1 This long-desired king such as was thought.

Daniel.

He thought not much to clothe his enemies.

Milton.

Nor think superfluous others aid. Id.

If we consider our infinite obligations to God, we have no reason to think much to sacrifice to him our dearest interest in this world. Tillotson.

Till t

You pine, you languish, love to be alone, Think much, speak little, and in speaking sigh.

Dry den .

No body is made any thing by hearing of rules, or laying them up in his memory; practice must settle the habit : you may as well hope to make a good musician by a lecture on the art of musick, as a coherent thinker, or strict reasoner by a set of rules.

Locke.

Thinking, in the propriety of the English tongue, signifies that sort of operation of the mind about its ideas, wherein the mind is active ; where it, with some degree of voluntary attention, considers any thing. Id.

The opinions of others, whom we know and think well of, are no ground of assent. Id.

Those who love to live in gardens, have never thought of contriving a winter garden. Spectator.

We may not be startled at the breaking of the ex- terior earth ; for the face of nature hath provoked men to think of and observe such a thing.

Burnet's Theory of the Earth. I was a man, to my thinking, very likely to get a rich widow. Addison.

His experience of a good prince must give great sa- tisfaction to every thinking man. Id. Freeholder.

Any one may think with himself, how then can any thing live in Mercury and Saturn ?

Bentley's Sermon. Still the work was not complete, When Venus thought on a deceit.*

Swift's Miscellany.

If your general acquaintance be among ladies, provided they have no ill reputation, you think you are safe. Swift.

If a man had an ill-favoured nose, deep thinkers would impute the cause to the prejudice of his edu- cation. Id.

Can it be thought that I have kept the gospel terms of salvation, without ever so much as intending, in any serious and deliberate manner, either to know them or keep them 1 Law.

THIONVILLE, a town in the north-east of France, on the Moselle, the capital of anarron- (iissement, has a fine wooden bridge, defended by a horn-work, and is of considerable strength. Its population, amounting to 5500, manufacture stockings, hats, and other small articles; but derive their chief subsistence from the expendi- ture of the garrison. Seventeen miles north of Metz, and twenty-two south of Luxemburg. THIRD, adj. J Sax. SruVea. The first THIRD'LY, adv.] after the second ; the ordi- nal of three : in the third place.

This is the third time : I hope good luck lies in odd numbers. Shakspeare.

First, metals are more durable than plants ; se- condly, they are more solid ; thirdly, they are wholly suhterrany. Bacon.

Such clamours are like the feigned quarrels of combined cheats, to delude some third person.

Decay of Pieti/.

Divide the natural day into twenty-four equal

parts, an hour into sixty minutes, a minute into sixty

seconds, a second into sixty thirds. Holder on Time.

The protestant subjects of the abbey make up a

third of its people. Addison.

THIRLBY (Styan), LL. D., a learned English critic, born in 1692. lie wrote a Defence of the Trinity, and other works, and edited Jus- tin's Works, in fol. 1723. He died in 1753.

TIIIRSK, a borough and market-town of the North Rifling of York. Eight miles S.S. E. of

> Tin

Northallerton, and 223 north by west of London, lying on each side the small river Codbeck, over which there are two stone bridges. One part is called the Old, the other the New Town. The church is a fine old building, erected out of the ruins of its castle, destroyed by Henry II., and the Quakers and Methodists have chapels here. In the town are several

excellent charity schools. It is a borough by prescription, and sends one member to parliament, chosen by the burgage- holders of that part called Old Thirsk. The re- turning officer is the bailiff. This town has a bank. Market on Monday. Fairs, first Monday before Lent, April 5th, August 5th, October 29th, and first Tuesday after St. Andrew's day for cattle, cheese, linens, pedlary, &c. It is a curacy.

THIRST, n.s., v. n., &. v. a. ˆ Saxon fcyrtpe ; THIRST' i NESS, n. s. >Belgic durst •

THIRST'V, adj. j Swedish torst.

The pain suffered for want of drink ; want of drink : hence eagerness ; vehement desire : to feel want of drink; have vehement desire; to want to drink : the state of being thirsty ; suffer- ing want of drink.

My soul thirtieth for the living God. Pi. xlii. 2. Give me a little water to drink, for I am thinly.

Judges iv.

They shall not hunger nor thirst. Isaiah, xlix. 10. The people thinted there for water. Kxod. xvii. 3. Thy brother's blood the thirsty earth hath drank, Broached with the steely point of Clifford's lance.

Shakspeare.

Not hope of praise, nor thirst of worldly good, Enticed us to follow this emprize. Fairfax.

Next they will want a sucking and soaking thinti- ness, or a fiery appetite to drink in the lime. Wottim.

But fearless they pursue, nor can the flood Quench their dire thirst ; alas ! they thirtt for blood.

Denham. Thou hast allayed the thirst I had of knowledge.

Milton.

The rapid current, through veins Of porous earth with kindly thirst up drawn, Hose a fresh fountain. Id.

They as they thirsted scoop the brimming stream.

Id.

Thus accursed, In midst of water I complain of thirst. Dryden.

Till a man hungers and thirsts after righteousness, till he feels an unensiness in the want of it, his will will not be determined to any action in pursuit of this confessed greater good. Locke.

Unworthy was thy fate, To fall beneath a base assassin's stab, Whom all the thirsty instruments of death Had in the field of battle sought in vain. Route

Untamed and fierce the tiger still remains ; For the kind gifts of water and of food, He seeks his keeper's flesh, and thiritt his blood.

Prior.

Thirst and hunger denote the state of spittle and liquor of the stomach. Thirst is the sign of an acri- mony commonly alkalescent or muriatick.

Arhuthiwt on Aliments. Say, is't thy bounty, or thy thirst of praise ?

Granville.

This is an active and ardent thirst after happiness, or after a full beatifying object. Cheyne.

But furious thirsting thus for gore, The sons of men shall ne'er approach thy shore.

Pope

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For forty years

I've lived an anchorite in prayers and tears : Von spring, which bubbles from the mountain's side, Has all the luxury of thirst supplied. Harte.

THIRTEEN, adj.) Saxon Sjxeotme. Ten

THIRTEENTH'. } and three.

Speaking at the one end, I heard in return the voice thirteen times. Bacon s Natural History.

If she could prove a thirteenth task for him Who twelve achieved, the work

would me beseem. Beawnont't Psyche.

The thirteenth part difference bringeth the business out to such a pass, that every woman may have a husband. Grautit.

*THIRTY, adj. > Sax. «r"«&so*a. Thrice*

THIR'TTETH. $ ten : the tenth thrice told ; the ordinal of thirty.

I have slept fifteen years. — Ay, and the time seems thirty unto me.

Shakspeare.

Henry shall espouse the lady Margaret ere the thirtieth of May next ensuing. Id.

A thirtieth part of the sun's revolution. Hale.

More will wonder at so short an age, To find a blank beyond the thirtieth page. DryJen.

The Claudian aqueduct ran thirty-eight miles.

Addison.

THIS, pronoun. Sax. Sip That which is present ; what is now mentioned ; the next fu- ture ; opposed to that and the other.

This same shall comfort us concerning our toil.

Gen. v. 29.

Let not the Lord be angry, and I will speak yet but this once : peradventure ten shall be found there. Id. xviii. 32.

Bardolph and Nim had more valour than this, yet they were both hanged ; and so would this be, if he durst steal. Shakspeare.

Come a little nearer this way. Id.

Their judgment in this we may not, and in that we need not follow. Hooker.

Sure there are poets that did never dream Upon Parnassus, nor did taste the stream Of Helicon ; we therefore may suppose Those made not poets, but the poets those. Denham.

Neither their sighs nor tears are true, Those idly blow, these idly fall, Nothing like to ours at all,

But sighs and tears have sexes too. Coieley.

According as the small parts of matter are con- nected together after this or that determinate manner, a body of this or that denomination is produced.

Boyle.

This is not the place for a large reduction. Hale.

I have not wept this forty years ; but now My mother comes afresh unto my eyes. Dryden.

By this the vessel half her course had run. Id.

Consider the arguments which the author had to write this, or to design the other, before you arraign him. Id.

Did we for these barbarians plant and sow ? On these, on these our happy fields bestow 1 Id.

Do we not often hear of this or that young heir ? are not his riches and his lewdnesses talked of toge- ther ? South.

With endless pain this man pursues What, if he gained, he could not use : And t'other fondly hopes to see What never was, nor e'er shall be. Prior.

More rain falls in June and July than in Decem- ber and January ; but it makes a much greater shew upon the earth in these mouths than in those, because it lies longer upon it. Woodward's Natural History.

THI

There is a very great inequality among men us 10 their internal endowments, and their external condi- tions, in this life. Calamy's Sermons

The fibres of this muscle act as those of others.

Cheyne.

As when two winds with rival force contend, This way and that, the wavering sails they bend, While freezing Boreas and. black Eurus blow, Now here, now there, the reeling vessel throw.

Pope.

THISTLE, n. s.) Saxon Sij-tel ; Belgic

THIST'LY, adv. $ diestel, A prickly weed, growing in corn fields : the adverb correspond- ing.

Hateful docks, rough thistles, kecksies, burs.

Shakspeare.

Get you some carduus benedictus, and lay it to

your heart, — There thou prick'st her with a thistle. Id

THISTLE, ORDER OF THE, or order of St. An- drew, a military order of knighthood in Scot- land, the rise and institution of which is variously related by different authors. Lesley, bishop of Ross, reports, that the night before the battle between Athelstan, king of Northumberland, and Hungus, king of the Picts, a bright cross, in form of that whereon St. Andrew (the tutelar saint of Scotland) suffered martyrdom, appeared to Hun- gus; who, having gained the victory, ever after bore the figure of that cross on his banners. Others assert that Achaius, king of Scotland, first instituted this order, after having made the famous league offensive and defensive with Char- lemagne, king of France; while some refer the beginning of this order to Charles VI I., of France. The chief and principal ensign is a gold collar, composed of thistles and sprigs of rue inter- linked with amulets of gold, having pendant thereto the image of St. Andrew with his cross, and the motto, NEMO ME IMPUNE LACESSIT. The ordinary or common ensign worn by the knights is a star of four silver points, and over them a green circle bordered and lettered with gold, containing the said motto, and in the centre is a thistle ; all which is embroidered on their left breast, and worn with the collar, with a green riband over the left shoulder, and brought un- der the right arm ; pendant thereto is the image of St. Andrew with his cross, in a purple robe, within an oval of gold-enamelled vert, with the former motto ; but sometimes they wear, encircled in the same manner, a thistle crowned. About the time of the Reformation this order was dropped, till James II. of Great Britain resumed it by creating eight knights. The Revolution unsettled it again; and it lay neglected, till queen Anne, in 1703, restored it to the primitive design, of twelve knights.

TI1ISTLEWOOD (Arthur), memorable for the part he took in the political commotions which agitated England, immediately after the restoration of regal government in France. He was the son of a Lincolnshire farmer, and was born in 1772. Having obtained a lieutenant's commission in the supplementary militia, in 1797, he succeeded in obtaining the hand of a young lady of good fortune. Unfortunately for Thistlewood's future

destinies, he lost his wife, only eighteen months after their union; and re- moving to Lincoln, and thence to London, he

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abandoned himself to riot, gambling, and dissi. pation in all its forms. During this ill-spent portion of his life, he made occasional visits to America and France, whence in all probability he imbibed those political notions that led to his future disgrace. After the peace of America lie settled in England, having contracted a second rn.irn.ige ; but he had now become a pro'fessed gambler, and associated with the lowest and most abandoned wretches. He took part in the Spa-fields riots, behaved in the most outrageous manner towards lord Sidmouth, and was de- tained in prison in consequence, for a con- siderable time. On his liberation he gave way to the suggestions of rage and vengeance, and became the prime mover in what has since been denominated the Cato- street conspiracy, the de- sign of which was the assassination of his majesty's ministers. This absurd project was interrupted a little before the intended moment of its execution, and Thistlewood and his asso- ciates, being tried, and found guilty of high trea- son, underwent the sentence of the law on the 1st of May, 1820.

THITHER, (i'h\ ) Sax. »r»eji To that

THI'THERW!!!). \ place : it is opposed to hither: toward tlr.it rl,:ce.*

THLAPSI, bastard cress or mithridate mus- tard, in botany, a genus of plants belonging to the class of tetradynamia, and order of siliculosa ; and in the natural system ranging under the thirty-ninth order siliquosa. The pod is emar- pnated, obcordate, and polyspermous ; the valves are boat-shaped, and marginato-carinated. There are twelve species, of which six only grow in Britain.

THOAS, a son of Bacchus and Ariadne; made king of Lemnos by Rhadamanthus. He afterwards resigned it to his daughter Hypsipyle, .vho saved his life when the Lemnian women xilled all the men. See HYPSIPYLE.

THOMAS (Christian), was born at Leipsic in 1655. He was professor of jurisprudence, irst at Berlin, and afterwards at Hull. He died at Hull in 1748. He was author of an Intro- duction to Puffendorf, and many other works on logic, morals, and jurisprudence, in which he advanced a variety of dogmas contrary to received opinions.

THOMAS (Elizabeth), an ingenious English lady, born in 1675, and distinguished by the title of Corinna in Pope's Dunciad, because she had communicated some of that irritable poet's letters to Curll the bookseller. Her poems and letters are entertaining, and were published in 2 vols. fol.

THOMAS (St.), a considerable island of the Gulf of Guinea, off the coast of Africa, being about 100 miles west from the mouth of the Rio Gabon. It appears to be about forty miles in length and thirty in breadth, and is immediately under the line. The excess both of heat and moisture renders it extremely pernicious to Eu- ropean residents, who seldom exceed the age of fifty : the season which they call winter occurs twice in the year, and would rather be called midsummer with us, occurring when the sun, in passing from one tropic to another, is immedi- ately vertical.

The first colony sent thither by the Portuguese all fell a sacrifice to the pestilential air. They have since had the precaution to cause those who repair thither to make some stay in Guinea or Angola, by which means they are seasoned to the climate. The Dutch took possession of it in 1641 ; but were soon induced to abandon it. The greater part is exceedingly fertile, and in the centre is a very lofty mountain, covered with extensive forests. The chief article raised is sugar. On the eastern part of the island, facing the continent, is the town of Povoacon, consist- ing of 700 houses, and defended by several forts. High duties are exacted from all vessels e\< e'H Portuguese ; and the port, not being situated on any of the great maritime routes, is not much frequented. The water, however, is excellent, and the live stock and hogs plentiful. Long. 6° 25′ E., lat. 0° 5′ to 0° 50′ N.

THOMAS (St.), the principal of the Virgin is- lands in the West Indies, is eighteen miles in circumference, and belongs to the Brandenburgers and Danes, the former being under protection of the latter. It abounds with potatoes, millet, manioc, and most sorts of fruit and herbage, es- pecially sugar and tobacco, but is extremely in- fested with mosquitoes and other troublesome vermin. Here are excellent kids, and all sorts of wild fowl ; but provisions are dear. Dam- pier calls it a free port, and a receptacle or .sanc- tuary for privateers ; and indeed the Danish monarch's ports, from his being generally a neu- tral prince, are open to the shipping of all na- tions. Here is a safe and commodious harbour, with two natural mounds upon it, calculated, us it were, for placing two batteries for the defence of its entrance. The British held this island fo a short time during the late wars ; when its ex- ports were valued at 800,000, imports 300,000.

THOMAS (SAN), a celebrated city of Guiana, on the right bank of the Orinoco, about 244 miles west of its mouth. The streets are on a line and paved ; and the houses are for the most part built, as in the Caraccas, of lime and sand with terraces on the top, where they sleep in seasons of the

greatest heat. Storms are freqjient in August, September, and October. They have no earthquakes, but sometimes a wind that does not last long, which blows with the violence of a hurricane, and which terminates in rain. It is of a hot temperature and very unhealthy. Long. 63° 55′ W., lat. 8° 7′ N.

THOMASIUS (James), a learned German, born of a good family, at Leipsic, who became professor of eloquence at Leipsic, and among his pupils was the celebrated Leibnitz. His chief works are, The Origin of Philosophical and Ecclesiastical History, and several learned Dissertations, in 11 vols. 8vo.

THOMAS'S DAY (St.), a festival of the church, observed on December, 21, in commemoration of St. Thomas the apostle.

THOMAS'S DAY (St.), OF CANTERBURY, a fes- tival of the Romish church, observed on Decem ber 29, in memory of Thomas Becket archbishop of Canterbury, who was murdered, or, as the Romanists say, martyred, in the reign of king Henry II. See BECKKT.

THOMPSON (Sir Benjamin), count of Hum-

ford, distinguished by his zeal in the promotion of various branches of practical science, was born at the village of Rumford, in New Eng- land, in the year 1752 ; and, with the assistance afforded him by a professor of natural philo- sophy in the American university of Cambridge, acquired in early life such a degree of know- ledge as enabled him to give instruction to others. By an advantageous marriage, while he was young, his advancement was accelerated, so that he obtained the rank of a major in the mi- litia of his native district. When the war broke out, between the mother country and her colo- nies, he took part with the former, and rendered himself useful to several of the British generals. In process of time he repaired to England, and recommending himself to lord George Germaine, the chief minister in the American de- partment, obtained aplace in his office. Towards the close of the war, the same nobleman, with a view of securing for him a provision, sent him to New York, where he raised a regiment of dragoons, and, by being appointed lieutenant- colonel, became entitled to half-pay. Upon his return to England, his majesty, in 1784, conferred upon him the honor of knighthood ; and for some time he was one of the under secre- taries of state. Soon after he made a tour to the continent, and being warmly recommended by the prince of Deux-Ponts, afterward king of Bavaria, to the reigning elector-palatine, and duke of Bavaria, he was admitted into his ser- vice, and occupied an eminent station. He had thus an opportunity of effecting many important and useful reforms, both

civil and military. His attention was at first directed to the suppression of mendicity, which prevailed not only at Mu- nich, the capital, but through the whole country, to an extent that rendered the abolition of it a very difficult undertaking. He formed however a plan for employing all mendicants ; and hav- ing provided a building for their reception, and materials for their labor, sallied forth into the streets of the city on the 1st of January 1790, (New year's day being set apart for giving alms in Bavaria), accompanied by the field officers of the garrison and the magistrates of the city ; and, arresting with his own hand the first beggar that came in his way, his attendants followed his example, so that before night not a single beggar was to be seen in the whole metropolis. Those arrested were conducted to the town hall, where their names were inscribed, and then ordered to repair to the workhouse, where they would find employment, and a sufficiency of wholesome food. In consequence of these vigorous mea- sures, the evil was redressed, and the mendi- cants were led to prefer industry to idleness, and decency to filth and rags. He also introduced into Bavaria the culture of potatoes. For these ser- vices Sir Benjamin was decorated by the Bava- rian sovereign with several orders, promoted to the rank of lieutenant general, and created a count by the title of his native place, Rumford. During his abode at Munich, he commenced his experiments upon fire places, the economy of fuel, and the convenience of cooking ; and also :iis plans for a cheaper and more nutritive mode of feeding the poor. Having in 1799 quitted VOL. XXII.

Bavaria, he resided for some time in this court try, pursuing a variety of experiments on the nature and application of heat, and the con- struction of fire places. He also promoted science by liberally exciting emulation in others. For the latter purpose, he transferred, on a visit to this country in 1796, to the Royal Society of London, of which he was a member, £1000, three per cent, stock, the interest of which was to be applied every second year as a premium to the author of the most important discovery on the subjects r»f heat and light in any part of Europe during the two preceding years. He also suggested the plan, and assisted in the form- ation of the Royal Institution.*

In 1802 he fixed his residence at Paris, where he married the widow of the celebrated Lavoi- sier ; but this connexion, proving unhappy, was terminated by a separation. The count after- wards retired to a country house at Auteuil, about four miles from Paris, and, preferring the climate of France, obtained permission from the king of Bavaria to continue there, and to enjoy his pension of £1200 a year. He died of a slow fever in August 1814, in his sixty-third year.

THOMSON (James), a British poet, the son of a Scottish divine, was born in the shire of Roxburgh, in 1700, and educated in the univer- sity of Edinburgh, with a view to the ministry. But he relinquished his views of engaging in the sacred function, and repaired to London, in consequence of some engagement which he had received from a lady of quality there, a friend of his mother. The reception he met with, wherever he was introduced, emboldened him to risk the publication of his excellent poem on Winter. This piece was published in 1726 ; and, from the universal applause it met with, Mr. Thomson's acquaintance was courted by people of the first taste and fashion. But the chief ad- vantage which it procured him was the acquaint- ance of Dr. Rundle, afterwards bishop of Derry, who introduced him to the late lord chancellor Talbot ; and some years after, when the eldest son of that nobleman was to make his tour on the continent, Mr. Thomson was chosen as his tutor. The expectations which his Winter had raised were fully satisfied by the successive publications of the other seasons ; of Summer in 1727; of Spring in 1728; and of Autumn, in a 4to edition of his works in 1730. Besides the Seasons, and his tragedy of Sophonisba, written and acted with applause in 1729, he had, in 1727, published his poem to the Memory of Sir Isaac Newton, with an account of his chief discoveries. That same year, the resentment of our merchants for the interruption of their trade by the Spaniards in America, running very high. Mr. Thomson zealously took part in it, and wrote his Britannia, to rouse the nation to re- venge. With the honorable Charles Talbot our author visited most of the courts in Europe, and returned with his views greatly enlarged. On his return to England with Mr. Talbot (who soou after died), the chancellor made him his secre- tary of briefs ; a place suiting his retired indo- lent way of life, and equal to all his wants. From this office he was removed, when death, not long after, deprived him of his patron. 11 =

then found himself reduced to a state of preca- rious dependence.

Thomson having had, we are told, the misfor- tune to be arrested, the report of his distress reached the ears of Quin, the comedian, who sought him in a spunging house, in Holborn, and being admitted into the room, was, after some civilities on both sides, invited by Thom- son to sit down. Quin then told him that he was come to sup with him, and had already or- dered supper to be provided, which he hoped he would excuse. Mr.

Thomson made the proper reply, and the discourse turned on subjects of literature. When supper was over and the glass had gone briskly round, Quin observed that is was time to enter upon business. On which Mr. Thomson, imagining that he was come about some affairs relating to the drama, declared that he was ready to serve him to the utmost of his capacity in any thing he should command. 'Sir, said Quin, ' you mistake my meaning ; 'I am in your debt, I owe you £100 ; and I am come to pay you.' Thomson replied, that as he was a gentleman whom he had never offended, he wondered he should come to insult him in his misfortunes. Quin, in return, ex- pressed his detestation of such ungenerous be- haviour, adding, 'I say I owe you £100; and there it is,' laying a bank note of that value be- fore him. Thomson, filled with astonishment, begged he would explain himself. ' Why,' re- plied Quin, { I'll tell you. Soon after I had read your Seasons, I took it in my head, that, as J hafl something to leave behind me when I died, I would make my will ; and, among the rest of my legatees, I set down the author of the Seasons £100; but this day, hearing that you were in this house, I thought I might as well have the pleasure of being my own executor.' Mr. Thomson expressed his acknowledgment, and the sum instantly procured his discharge.

But the profits arising from his works were not inconsiderable ; his tragedy of Agamem- non, acted in the year 1738, yielded a good sum ; but his chief dependence was upon the prince of Wales, who settled on him a handsome allowance, and honored him with many marks of particular favor. Notwithstanding this, how- ever, he was refused a licence for his tragedy of Edward and Eleonora, which he had prepared for the stage in 1736. Thomson's next perform- ance was the Masque of Alfred, written in 1740 jointly with Mr. Mallet, by the command of the prince of Wales, for the entertainment of his royal highness's court at Clifden. The last work he published was The Castle of Indolence, his tragedy of Coriolanus being only prepared for the theatre, when he died, August 27, 1748, in consequence of a cold he causht on the Thames. The distinguishing qualities of his mind and heart appear best in his writings. It is not known that through his whole life he ever gave any person a moment's pain, either by his writings or otherwise ; nor wrote, as it has been ruly said of him —

' A line which, dying, he could wish to blot.'

*His testamentary executors were lord Lyttleton *nd Mr. Mitchell. By their united interesti,*

the orphan play of Coriolanus was brought on the stage to the best advantage ; from the profits of which, and the sale of MSS. and other effects, a handsome sum was remitted to his sisters. His remains were deposited in the church of Richmond, under a plain stone, long without an

inscription. A handsome monument was erected to him in Westminster Abbey in 1762, the charge of which was defrayed by the profits aris- ing from a splendid edition of all his works in 4to. ; Mr. Millar the bookseller, who had pur- chased all Mr. Thomson's copies, giving up his property on this occasion. A monument has also been erected to him at the place of his birth. THONG, n. s. Sax. iS/iang, fcrtonj. A strap, or string of leather.

The Tuscan king

Laid by the lance, and took him to the sling ; Thrice whirled the thung about his head, and threw The heated lead half melted as it flew.

Dryden'i JEneid.

The ancient cestus only consisted of so many large thongs about the hand, without any lead at the end. AddisLtit.

THOR, the eldest and bravest of the sons of Odin and Frea, was, after his parents, the most distinguished deity of the Saxons and Danes. They believed that Thor reigned over all the aerial regions, which composed his immense palace, consisting of 540 halls ; that he launched the thunder, pointed the lightning, and directed the meteors, winds, and storms. Our THURS- DAY still bears his name. See POLYTHEISM.

THORA'CIC, adj. From thorax. Be- longing to the breast.

The chyle grows gray in the thoracick duct.

Arbulhnot.

THO'RAL, adj. Lat. tfiona. Relating tc the bed.

The punishment for adultery, according to the Roman law, was sometimes made by a thoral separa- tion. Ayliffe.

THORDA, or THOREXBCRG, a county and town of Transylvania, in the province belonging to the Magyars or Hungarians. It lies nearly in the centre of the principality, having the county of Clausenburg to the north, and that of Weissenburg to the south. The area of the county is 1850 square miles; its population nearly 100,000. It is very hilly, but has plea- sant valleys producing wine, watered by the Maros. It has little corn land, but here are several productive mines of salt and iron. It has also extensive forests. Thorda, or Thoren- burg, the capital is situated near the river Aran- jos, and divided by a smaller stream, called the Salzbach, into two parts, called Old and New Thorda. It contains about 8000 inhabitants.

THORN, n.j. ˆ Saxon fconn ; Gothic

THORN'BACK, fthuurn. A prickly tree;

THORN'Y, adj. j a difficult point : a sea- fish : the adverb corresponding with thorn.

Thorn and thistles shall it bring forth.*

Gen. \i. 18.

The most upright is sharper than a thorn hedge.

Aficah vii. 4.

By how many thorny and hard ways they are come thereunto, by how many civil broils.

Spenser on Ireland

THO

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No dislike against the person Of our good queen, but the sharp ihorny points Of my alleged reasons drive this forward.

Shakspeare.

Not winding ivy, nor the glorious bay ; He wore, sweet head ! a thorny diadem. Randolph. Flowers of all hue, and without thorn the rose.

Milton.

The wiser madmen did for virtue toil A

The guilt of empire ; all its thorna and cares Be onlv mine. Southern's Spartan Dame.

Stiff opposition, and perplexed debate, And thorny care, and rank and stinging hate.

Young.

THORN, a considerable town of West Prussia, in the government of Marienwerder, on the Vistula, about ninety miles from the mouth of the river, over which it has a very long wooden bridge. It consists of the old

and new towns, separated from each other by a wall and ditch ; but, as both are surrounded by a mound and moat, Thorn was formerly considered a place of strength. The manufactures are woollens, linen, hats, leather, gloves, starch ; and the chief exports corn and wood. Its best edifices are of old date. The town was begun under the Teu- tonic knights in 1231, and, when the govern- ment of these knights became oppressive, Thorn set the first example of throwing off the yoke, and putting herself as a free town under the protection of Poland. It enjoyed a consider- able share of prosperity until the eighteenth century; but in 1708 and 1710 it was ravaged by the plague, and in 1724 occurred a violent dispute between the Protestant and Catholic inhabitants. In 1793 it was taken possession of by a Prussian garrison: in 1806 it suffered from the invasion of the French, and remained in their hands until the disastrous retreat from Moscow. The well known Ccpernicuswas born here in 1472. Population 8000. Ninety-two miles south of Dantzic, and 113 W.N. W. of Warsaw.

THORNBURY, a market-town of Glouces- tershire, situate on a rivulet that falls into the Severn, two miles distant; being eleven miles north of Bristol, and 121 from London. The town is in alow situation, consists of three streets, in the form of a Roman Y, about half a mile in length ; but the church is spacious, in the form of a cathedral, and has a high tower. Here is a free school and four almshouses. The town is a borough by prescription, governed by a mayor, twelve aldermen, and two constables; and here are the remains of a magnificent palace, begun by the great duke of Buckingham, in 1511, but the completion of that, and a navigable canal to the Severn, was prevented by his attainder. Se- veral rooms, annexed to the walls of the castle, are intended as barracks for soldiers. Market on Saturday. Fairs, Easter Monday, 15th of August, and Monday before St. Thomas's day.

THORNDIKE (Herbert), B. D., a learned English divine of the seventeenth century. He was educated at Trinity college, Cambridge, where he graduated. In 1613 he was elected master of Trinity College ; but was soon after ejected for his loyalty. In 1660 he obtained a prebend in Westminster Abbey. He wrote, 1.

Epilogus, a Latin treatise in defence of the Church of England, folio ; 2. A Treatise on Weights and Measures ; 3. A tract On Chu ch Censures. lie also assisted Walton in the Po- lyglot Bible. He died in 1672.

THORN E, a market-town, West Riding of York, seven miles south by east of Snaith, and 161 north of London. This town is tolerably well built, and the streets are paved : but it is situate in a very damp and marshy soil,

being entirely surrounded by the rivers Don, Aire, Ouse, and another small river which divides it from the Isle of Axholme, in Lincolnshire These rivers communicating with each other, and with the Stainforth and Headley canal, pass the end of the town, and contribute greatly to the increase of its trade. Besides a neat church, it contains chapels for Methodists, and one for Quakers. Many vessels are built here for the port of Hull. Market on Wednesday.

THORNEY, a parish in the Isle of Ely, Cam- bridge, six miles north by west of March, and eighty-six from London ; formerly called Thor- ney Abbey; and previously Ankridge. Market on Tuesday, and two annual fairs.

THORNHILL (Sir James), an eminent Eng- lish painter, was born in Dorsetshire in 1676, of an ancient family ; but was constrained to apply to some profession, his father having been obliged to sell his family estate. On his arrival in Lon- don he applied to his uncle, the famous Dr. Sydenham, who enabled him to proceed in the study of the art of painting, and the genius of Thornhill made ample amends for the insuffi- ciency of his instructor. He gradually rose to the highest reputation ; and his performances in the dome of St. Paul's church at London, in the hospital at Greenwich, and at Hampton-court, are such public proofs of his merit as will con- vey his name to posterity with great honor. He lived in general esteem ; enriched himself by the excellence of his works ; was appointed state painter to queen Anne, from whom he received the honor of knighthood; had the singular satis- faction to repurchase his family estate ; and \;is elected member of parliament. He died in 1732. THORNTON (Bonnel), A. M. and M. B., an English poet, born in Maiden-lane, London, in 1724, was the son of an apothecary ; and, being educated at Westminster school, was elected to Christ Church, Oxford, in 1743. The first work in which he was concerned was, The Student, or Oxford and Cambridge Miscellany, which ap- peared in monthly numbers ; and was collected in 2 vols. 8vo. in 1748. Smart was the chief conductor of the work; but Thornton, and other wits of both universities, assisted in it. He took his degrees in 1750 and 1754. In 1754 he undertook The Connoisseur, in conjunction with Coleman, which they continued weekly to the 30th September, 1756. To the Public Advertiser, then in high reputation, he was a frequent con- tributor. In 1766 he published a translation of Plautus in blank verse, in 2 vols. These vo- lumes contain seven plays, of which the Captive was translated by Mr. Warner, who afterwards completed all that Thornton left unfinished. Thornton published, in 1767, The Battle of the Wi'js, on the disputes then subsisting between

the fellows and licentiates. lie died, of the gout in his stomach, May 9, 1768, nged forty- four. He wrote the papers in the Adventurer marked A ; An Ode to St. Cecilia's Day, The Oxford Barber; with many detached essays in the public papers.

THORNTON (Thomas, col.), a noted sports- man and bon vivant, lieutenant-colonel of the West York militia, prince de Chambord and marquis de Pont in France, in which country he had purchased estates. He was born in Lon- don, and educated at the Charter House, whence he proceeded to Glasgow, and, on inheriting his patrimonial estate of Thornville Royal, distin- guished himself by his attachment to field sports, and especially falconry. At the peace of Amiens he proceeded to France, where he afterwards set- tled, for the purpose of examining the state of sporting in that country, and gave the result of his observations to the world in a work entitled A Sporting Tour through France, 1806, 2 vols. 4to. Previously to the appearance of this he had printed, in 1804, A Sporting Tour through the North of England and the Highlands of Scotland, 4to. He was also the author of a small work entitled A Vindication of Colonel Thorn- ton's Conduct in his Transactions with Mr. Bur- ton, 8vo., 1806*. He died at Paris early in the summer of 1823.

THaROUGH, prepos. & adj.^\ Sax. *unah.

THO'ROUGHFARE, n. *. Through ex-

THO'ROUGHLY, adv. ^tended into

THO'ROUGHPACED, adj. Ttwo syllables.

THO'ROOCHSPED, | By way of

THO'ROUGHSTITCH. J making pas-

sage or penetration; by means of: as an adjec- tive complete ; perfect ; full ; passing through : a thoroughfare is a passage through ; the power of passing : thoroughly, completely ; fully : thoroughpaced, perfect in what is undertaken ; complete : thoroughsped is of similar import : thoroughstitch, completely ; fully.

The Irish horseboys, in the thorough reformation of that realm, should be cut off. Spenser.

Mark Antony will follow Thorough the hazards of this untrod state, With all true faith. Shaktpeart. Juliu Conor,*

Look into this business thoroughly. Shakspeare.

Let all three sides be a double house, without thorough lights on the sides. Bacott.

He did not desire a thorough engagement till he had time to reform some, whom he resolved never more to trust. Clarendon.

Hell, and this world, one realm, one continent Of easy thoroughfare. JUUton'i Partite Lett.

We can never be grieved for their miseries who are thoroughly wicked, and have thereby justly called their calamities on themselves.

Dryden'i Dvfreinoy.

The courts are filled with a tumultuous din Of crowds, or issuing forth, or entering in : A thoroughfare of news ; where some devise Things never heard ; some mingle truth with lies.

Drydrn.

A thorouah translator must be a thorough poet.

Id.

The ungrateful person is a monster, which is all throat and belly ; a kind of thoroughfare, or common shore Tor the good things of the world to pass into.

Rfiiith.

Perseverance aloue can carry us

L' Estrange.

One would think that every member of the com- munity who embraces with vehemence- the principles of either party, had thoroughly sifted and examined them. Addiion.

They had forgotten their solemn vows as tho- roughly as if they had never made them. Atterburtt.

When it was proposed to repeal the test clause, the ablest of those who

were reckoned the most stanch and thoroughpaced Whigs fell off at the first mention of it. Swift.

Our thoroughsped republick of Whigs, which con- tains the bulk of all hopers, pretenders, and profes- sors, are most highly useful to princes. Id.

A thorough practice of subjecting ourselves to the wants of others, would extinguish in us pride.

Id.

How can I call a general disregard and a thorough neglect of all religious improvements a frailty or imperfection, when it was as much in my power to have been exact, and careful, and diligent ? Law.

THOROUGH- WAX, in botany. See Bi i>-

LEURCM.

THOTH, or THEUT (called by the Phoenicians Taaut, by the Greeks Hermes, and by the Ro- mans Mercury), was a Phoenician of very supe- rior talents, and one of the civilizers of mankind. He was prime mini-ter to Osiris, whom, after his death, he deified ; and he was himself deified by his countrymen the Egyptians.

THOU, pronoun & v. a. Sax. fcu ; Teut. and Dan. du ; Goth, ther, tu, in the oblique cases singular thee, Sax. fce. in the plural ye, Sax. je, in the oblique cases plural you, Sax. cop. The second pronoun personal : to thou is to treat with familiarity. You is now commonly used for the nominative plural.

Is this a dagger which I see before me, The handle tow'rd my hand ! Come let me clutch

thee.

I have thee not, and yet I see thre still. Art thou not, fatal vision, sensible To feeling as to sight ? Shabspeare. Macbeth.

Taunt him with the licence of ink ; if thuu thou'tt him some thrice, it shall not be amiss.

Shakspeare.

Poet and saint, to thee alone were given The two most sacred names of earth and heaven.

Cove ley.

Thou, if there be a thou in this base town, Who dares with angry Eupolis to fiown ; Who at enormous villainy turns pale, And steers against it with a full-blown sail.

Dryiien. For though in dreadful whirls we hung

High on the broken wave, I know thou wert not slow to hear,

Nor impotent to save. Addium.

THOUGH, con;. Sax. fceap; Goth, thauh. Notwithstanding that; although.

In the vine were three branches; and it was as though it budded. Gtnesit xl. 10.

Not that I so affirm, though so it seem. Milton.

The sound of love makes your soft heart afraid, And guard itself, though but a child invade.

Waller.

You shall not quit Cydaria foe me : Tis dangerous though to treat me in this sort, And to refuse my offers, though in sport. Dryden.

I can desire to perceive those things that God hat prepared for those that love him, though they be such

THO

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THR

as eye hath not seen, ear heard, nor hath it entered into the heart of man to conceive. Locke.

Though the name of abstracted ideas is attributed to universal ideas, yet this abstraction is not great.

Watts' Lugick.*

*THOUGHT, n. *. "j The pret. and*

THOUGHT'FUL, adj. part. pass.ofTniNK,

THOUGHT'FULNESS, n.s. \ which see. The act THOIGHT'LESS, adj.) > of thinking : idea ; THOUGHT'LESSLY, adv. sentiment; imagi- THOUGHT'LESSNESS, n. s. nation; opinion; THOI-GHT'SICK, adj. J contemplation ; de- sign : the derivatives all strictly correspond.

Let us return, lest he leave caring for the asses, and take thought for us. 1 Samuel is.. 5.

He that is ready to slip, is a lamp despised in the thought of him that is at ease. Job xii. 5.

The thoughts 1 think towards you are thoughts of peace, and not evil. Jeremiah xxix. 11.

In restless hurries thoughtlessly they live, At substance oft unmoved, for shadows grieve.

Gar.

His face was a thought longer than the exact sym- melrians would allow. Sidney.

If our own be but equal, the law of common in- dulgence alloweth us to think them at the least half a thought the better^ because they are our own.

Hooker.

I told him what I thought. Shakspeare. Othello.

Who is so gross

That cannot see this palpable device 1 Yet who so bold, but says, he sees it not ? Bad is the world ; and all will come to nought, When such ill dealings must be seen in thought.

Shakspeare.

Heaven's face doth glow With tristful visage; and, as 'gainst the doom Is thouyhttick at the act. Id. Hamlet.

Hawis was put in trouble, and died with thought and anguish before his business came to an end.

Bacon's Henry VII. For our instruction to impart Things above earthly thought. Milton.

A needle pierced through a globe of cork, cut away by degrees, will swim

under water, yet not sink unto the bottom : if the cork be a thought too light to sink under the surface, the water may be attenuated with spirits of wine. Browne.

Pride, of all others the most dangerous fault, Proceeds from want of sense, or want of thought.

Roscommon.

His goodly fabrick fills the eye, And seems designed for thoughtless majesty : Thoughtless as monarch oaks that shade the plain, And spread in solemn state supinely reign.

Dryden.

Thought, if translated truly, cannot be lost in another language ; but the words that convey it to our apprehension, which are the image and ornament of that thought, may be so ill chosen as to make it appear unhandsome. Id.

On these he mused within his thoughtful mind, And then resolved what Faunus had divined. Id.

The thoughts of a soul that perish in thinking.

Locke.

Thoughtful of gain, T all the live-long day Consume in meditation deep. Phillips.

Are my friends embarked ? Can any thing be thought of for their service 1 Whilst I yet live, let me not live in vain. Addison.

One may often find as much tlwught on the reverse of a medal as in a canto of Spenser.

,/d. On Medult.

And cards are dealt, and chessboards brought, To ease the pain of coward thought. Prior

In aweful pomp, and melancholy state, See settled Reason on the judgment-seat ; Around her crowd Distrust, and Doubt, and Fear, And thoughtful Foresight, and tormenting Care.

Prior.

It is something peculiarly shocking to see gray hairs without remorse for the past, and thoughtless of the future. Rogers.

While the nervous fibres preserve their due tension and firmness, and the spirits are transmitted to them (com the brain, endowed with due strength, swiftness, and vivacity, and suffered to attend their duty, with- out the avocations of thoughtful nest and intense con- templation, the concoction of the meats is well per- formed. Blackmore.

Wrar, horrid war, your thoughtful walks invades, And steel now glitters in the muses' shades. Pope.

One only couplet fraught With some unmeaning thing they call a thought.

Id.

My giddiness seized me ; and, though I now totter, yet I think I am a thought better. Swift.

THOUINIA, in botany, a genus of plants belonging to the class of diandria and order of monogynia. The corolla is quadripetalous ; the calyx quadripartite, and the antherae sessile. There is only one species discovered, T. nutaus.

THOU'SAND, adj. or n.s.) Sax. «uren» ;

THOUSANDTH, adj. J Belg. dnysend.

The number of ten hundred : a great number : the ordinal of a thousand.

So fair, and thousand, thousand times more fair She seemed, when she presented was to sight.

Spenser.

He that will divide a minute into a thousand parts, and break but a part of a thoutandth part in the af- fairs of love, it may be said of him, that Cupid hath clapt him o' th' shoulder, but I'll warrant him heart whole. Shakspeare. As You Like It.

About three thousand years ago, navigation of the world for remote voyages was greater than at this day. Bacon.

For harbour at a thousand doors they knocked, Not one of all the thousand but was locked.

Druden.

Such is the poet's lot : what luckier fate Does on the works of grave historians wait ? More time they spend, in greater toils engage, Their volumes swell beyond the thousandth page.

Id.

Though he regulates himself by justice, he finds a thousand occasions for generosity and compassion. Additon's Spectator.

The French hugonots are many thousand witnesses to the contrary ; and I wish they deserved the thou- tandth part of the good treatment they have received. Swijt'i Miscellanies.

How many thousands pronounce boldly on the affairs of the publick, whom God nor men never qua- lified for such judgment. Watts.

THRACE, a country very frequently men- tioned by the Greek and Latin writers, deriving its name, according to Josephus, fromTiras, one of the sons of Japhet. It was bounded on the north by Mount Haemus; on the south by the JEgean Sea ; on the west by Macedon and the river Strymon ; and on the east by the Euxine Sea, the Hellespont, and the Propontif. The Thracian Chersonesus is a peninsula enclosed on the south l>y the /Egean Sea, on the west by the

gulf of Melas, and on the east by the Helles- pont ; being joined on the north to the continent by a neck of land about thirty-seven furlongs broad. The inland parts of Thrace are very cold and barren, the snow lying on the mountains the greatest part of the year ; but the maritime pro- vinces are productive of all sorts of grain and necessaries of life ; and withal so pleasant that Mela compares them to the most fruitful and agreeable countries of Asia. The ancient Thra- cians were deemed a brave and warlike nation, bat of a cruel and savage temper ; being, accord- ing to the Greek writers, strangers to all humanity and good nature. It was to the Thracians, how- ever, that the Greeks were chiefly indebted for the polite arts that flourished among them ; for Orpheus, Linus, Musseus, Thamyris, and Eu- molpus, all Thracians, were the first, as Eusta- thius informs us, who charmed the inhabitants of Greece with their eloquence and melody, and persuaded them to exchange their fierceness for a sociable life and peaceful manners ; nay, a great part of Greece was anciently peopled by the Thracians. Tereus, a Thracian, governed at Daulis in Phocis. See PHILOMELA. From thence a body of Thracians passed over to Eu- beea, and possessed themselves of that island. Of the same nation were the Aones, Tembices, and the Hyanthians, who made themselves mas- ters of

Boeotia ; and great part of Attica itself was inhabited by Thracians, under the command of the celebrated Eumolpus. Thrace was an- ciently divided into a number of petty states, which were first subdued by Philip II. of Mace- don. On the decline of the Macedonian empire, the country fell under the power of the Romans. It contjnued under subjection to them till the irruption of the Turks, in whose hands it still remains.

*THRALL, 71. s. & v. a.) Sax. *jia?l A slave ;*

THRAL'DOM, «. s. Ji one who is in the

power of another : to enslave : not in use : thral- dom is, slavery ; servitude.

This country, in a great part desolate, groaneth under the Turkish thraldom. Sandyt.

How far am I inferior to thee in the state of the mind ! and yet know I that all the heavens cannot bring me to such thraldom. Sidney.

No thralls like them that inward bondage have.

Id.

Hut sith she will the conquest challenge need, Let her accept me as her faithful thrall. Spenser.

Let me be a slave t' atcliieve the maid, Whose sudden sight hath thralled my wounded eye.

Shahtpeare. He swore with sobs, That he would labour my delivery. — Why so he doth, when lie delivers you From this earth's thraldom to the joys of heaven.

Id.

I know I'm one of Nalu:e's little kings ; Vet to the least and vilest thii.jjs am tin-all. Daiict.

Her men took land,

And first brought forth < • ii, and all

That richly furnish it; he still in thrall Of all -subduing sleepe. Chapman.

Statesmen purge vice with vice, and may corrode The bad with baa, a spider wilb a toad. For so ill thrall nut them, but they tame ill, And make*

her Jo much good against l.n will.

THR

The author of nature is not thralled to the laws of nature. Drummond.

That we may so suffice his vengeful ire, Or do him mightier service, as his thralls By right of war, whate'er his business be. Milton .

And laid about him, till his nose From thrall of ring and cord broke loose. Httdibras.

He shall rule, and she in thraldom live. Dry den.

They tell us we are all born slaves ; life and thraldom we entered into together, and can never be quit of the one till we part with the other. Locke.

THRAPSTON, a town of England, in the county of Northampton, with a market on Tues- day, seated on the river Nen, which is navigable hence up to Northampton, and down to the sea by Wisbeach. There is a bridge here over the river. Two miles distant is Drayton, the seat of his grace the duke of Dorset; and four miles hence lies Lilford Hall, the seat of lord Lilford. Eight miles north of Higham Ferrers, and se venty-five N. N. W. of London. Distance to Peterborough twenty-one miles, to Stamford twenty-two, to Huntingdon seventeen, to North- ampton twenty-two. Long. 0° 15′ W., lat. 52° 26'. N.

THRASH, v. a. & v. n.) Sax. Sartpcan ; Teut. THRASH'ER, n. s. ydreschen ; Belg. ders-

TIIRASH'IXCFLOOR.) chen. To beat corn from the chatf ; to beat ; drub : as a verb neuter, to labor ; drudge : a thrasher is, he who thrashes : thrashingfloor, the place where this operation is performed. Written variously thrash or thresh, but thrash is more agreeable to etymology. Gideon threthed wheat to hide it. Judges viii. 11. Here be oxen for burnt sacrifice, and threshing in- struments for wood. 2 Samuel xxiv. 22. First ihrath the corn, then after burn the straw.

Slwkspeare.

Our soldiers, like a lazy thrasher with a flail, Fell gently down, as if

Id

Thou scurvy valiant ass ! thou art here but to thrash Trojans, and thou art bought and sold among those of any wit like a Barbarian slave.

Id. Troilus and Cressida. In the sun your golden grain display, And thraih it out, and winnow it by day. Driiden.

I rather would be Mevius, thresh for rhimes Like his, the scorn and scandal of the times, Than that Philippick fatally divine, Which is inscribed the second, should be mine. Id.

In vain the hinds the threshing-floor prepare, And exercise their flails in empty air. . Id.

The careful ploughman doubting stands, Lest on the threshing-Jtoor his sheaves prove chart'.

Mi

Gideon was taken from thresliing, as well as C'iu- cinnatus from the plough, to command armies.

Locke on Kducatimt.

Not barely the plowman's pains, the reaper'.-, and threthtr's toil, and the baker's sweat, is to be counted into the bread \ve eat : the labour of those employed abeut the utensils must all be charged. Locke.

This is to preserve the ends of the bones from an incalcscency, which they being hard bodies would contract from a swift motion ; such as that of running or threshing. If ay.

Out of your clover well dried in the sun, after the first threshing, get what seed you can. Mortimer.

Here too the thresher, brandishing his flail, Ik-speaks a master.

T H R A S II I N G.

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THRASHING is the act of beating out corn or other produce from the straw. The flail was the only implement formerly used ; but it is now become much too tedious and expensi\e, as well as liable to many other objections, and always, besides leaving many in the ear, bruises a great many seeds. It has been attempted to avoid these inconveniences by proper machines pro- vided with a number of flails, or other parts an- swering the same purpose, made to move by the power of water, wind, steam, or horses.

A flail which was used by the Romans, called baculus, fustis, or pertica,

was probably nothing more than a cudgel or pole. The thrashing machine, which was called tribula, or tribulurn, and sometimes traba, was a kind of sledge made of boards joined together, and loaded with stone or iron. Horses were yoked to this machine, and a man was seated upon it to drive them over the sheaves of corn. In the greatest part of France the flail is used for thrashing; but in the southern districts it is generally performed, as in the east, by the feet of animals : animals are also used for the same purpose in Spain, Italy, the Morea, and the Canaries. In hot climates the grains do not adhere so firmly to the stalk as in cold countries, and therefore animals are so frequently employed. The operation is per- formed in this manner : — The sheaves, after being opened, are spread in such a manner that the ears of the corn are laid as much uppermost as possible, and a man, standing in the centre, holds the halters of the cattle, which are made to trot round as in a manege ; whilst other men with forks shake the straw up from time to time, and the cattle are trotted over it again and again till they have beaten out all the grain.

The first machine attempted in modern times was invented at Edinburgh, about 1732, by Michael Menzies. It consisted of a number of instruments like flails, fixed in a moveable beam, and inclined to it at an angle of 10°. On each side of the beam in which the flails were fixed, floors or benches were placed for spreading the sheaves on. The flails were moved back- wards and forwards upon the benches by means of a crank fixed on the end of an axle, which made about thirty revolutions in a minute. The second thrashing machine was invented by Mr. Michael Stirling, a farmer in the parish of Dun- blane, Perthshire. In 1753, under the pretence of amusing his children, he formed in miniature a water mill, in which two iron springs, made to rise and fall alternately, represented the motion of two flails, by which a few stalks of corn put under them might be speedily thrashed. This plan he executed on a scale sufficiently large within two years after, making the springs about ten feet long, each of which had one end firmly screwed into a solid plank, and the other termi- nated in a round batoon of solid iron, two feet Ion.; and above an inch in diameter. Under these the sheaves were conveyed gradually for- ward in a narrow channel or trough, by passing between two indented horizontal cylinders, simi- lar to those now used in most of the thrashing mills in that part of the country, and called feeders. In this manner the thrashing was exe- cuted completely, and with considerable rapidiiy ;

but as t'n i operation was performed on a low floor, and no method contrived for carrying off the straw, the accumulation of it produced such confusion, and the removal of it was attended with such danger, that this scheme was very soon entirely abandoned.

.Mr. Stirling, therefore, laying aside the iron springs with the feeders, and

all the apparatus adapted to them, he retained only an outer or water wheel, with an inner or cog wheel moving on the same axle ; to this inner wheel, which had forty-eight teeth or cogs, he applied a verti- cal trundle or pinion, with notches, the axle of which passed through a floor above the wheel, and having its upper pivot secured in a beam six feet above that floor : at the distance of three feet three inches above the floor, two straight pieces of squared wood, each four feet long, passed through the axle of the trundle at right angles, forming four arms, to be moved round horizontally. To these extremities of the arms were fixed four iron plates, each twenty inches long, and eight broad at the end next the arms, but tapering towards a point at the other end. This large horizontal fly, constituting four thrashes, was enclosed within a woodea cylin- drical box three feet and a half high and eight feet in diameter. On the top of the box was an opening or port (two or three ports were made at first, but one was found sufficient) eight inches wide, and extending from the circumference a foot and a half towards its centre, through which the corn sheaves descended, being first opened and laid one by one on a board with two ledrres gently declining towards the port ; on which board they were moderately pressed down with a boy's hand, to prevent them from being foo hastily drawn in by the repeated strokes of the thrashers. Within the box was an inclined plane, along which the straw and grain fell down into a wide wire riddle two feet square, placed im – mediately under a hole of nearly the same size. The riddle received a jerk at every revolution of the spindle from a knob placed on the side of it, and was instantly thrust backward by a small spring pressing it in the opposite direction. The short straw, with the grain and chaft" which passed through the wide riddle, fell immediately into an oblong straight riddle, which hung with one end raised and the other depressed, and was moved by a contrivance equally simple with the other; and, having no ledge at the lower end, the long chaff which could not pass througli the riddle dropped thence to the ground ; while the grain and most of the chaff falling through the riddle into a pair of common barn-fanners that stood under it on the ground floor, the strong grain, the weak, and the chaff, were all separated with great exactness. The fanners were moved by a rope or band running circuitously in a shallow niche cut on the circumference of the cocr-wheel. The straw collected gradually in the bottom of the box over the wide riddle, and through an opening two feet and a half wide, and as much in the height, left in that side of the box nearest the brink of the upper floor, was drawn down to the ground with a rake by the person or persons employed to form it into sheavei or rolls.

A third thrashing-mill was invented in 1772 jy two persons nearly about

the same time, and upon the same principles. Mr. Alderton who lived near Alnwick, and Mr. Smart, at Wark in Northumberland. The operation was performed by rubbing. The sheaves were carried round between an indented drum of about six feet di- ameter, and a number of indented rollers arranged round the circumference of the drum, and attached to it by means of springs ; so that, while the drum revolved, the fluted rollers rubbed the corn off from the straw by rubbing against the Outings of the drum. But, as a considerable quantity of the grain was bruised in passing be- tween the rollers, the machine was soon laid aside.

In 1776 an attempt was made by Mr. Andrew Meikle, an ingenious millwright in the parish of Tyningham, East Lothian, to construct a new machine upon the principles which had been adopted by Mr. Menzies. This consisted in making joints in the flails, which Mr. Menzies had formed without any. But this machine, after much labor and expense, was soon laid aside, on account of the difficulty of keeping it in re- pair, and the small quantity of work performed, which did not exceed one boll or six Winchester bushels of barley per hour. Some time after this Mr. Francis Kinloch, junior, of Gilmerton, having visited the machine invented in Nor- thumberland, attempted an improvement upon it. He enclosed the drum in a fluted cover ; and, instead of making the drum itself fluted, he fixed upon the outside of it four fluted pieces of wood, which, by means of springs, could be raised a little above the circumference of the drum, so as to press agaiust the fluted covering, and thus rub off the ears of corn as the sheaves passed round between the drum and the fluted covering. But not finding this machine to answer his ex- pectations (for it bruised the grain in the same manner as the Northumberland machine did), he sent it to Mr. Meikle, that he might, if possible, rectify its errors. Mr. Meikle, who had long directed his thoughts to this subject, applied himself with much ardor and perseverance to the improvement and correction of this machine ; and, after spending a good deal of time upon it, found it was constructed upon principles so erro- neous, that to improve it was impracticable.

At length Mr. Meikle's own genius led him to a model, different in principle from the machines which had already been constructed. This was made in 1785 ; and in 1786 the first thrashing machine on the same principles was erected near Alloa, in Stirlingshire, by Mr. George Meikle, the son of the inventor. This machine, in its most improved state, is very simple ; yet Mr. Louden, at this distance of time, says, ' none has been found to answer the purpose of sepa- rating the grain from the straw so well.'

The two-horse thrashing machine of this gen- tleman, with the new invented yoking apparatus, is the smallest size of horse engine which is made, l-'rorn the limbers, or hanging pieces by which the cattle draw when working this machine, pro- ceed the chains or ropes to which the horses iire yoked, being

united by an iron frame, placed upon a lever, having liberty to turn on a bolt;

one end of each of two single ropes is fixed lo this iron frame, and upon their other ends are fixed small blocks; in each of which is placed a running sheeve ; and over these sheeves pass double ropes or chains. One horse is yoked to these chains at the one arm, and the other at the other, so that the chains or ropes by which they draw, being connected by the blocks, and the sheeves having liberty to move either way, if one of the horses relax, immediately the other presses the collar to his shoulders. For instance, if the horse yoked to the chains at one arm were to relax, then the one yoked at the other would in- stantly take up his rope, and pull the collar hard to his shoulders, so that the lazy horse mus» either exert himself, or be drawn backward ; until the hooks to which he is yoked rest on the limbers. Thus each horse spurs up his fellow, they being both connected by the ropes and sheeves ; their exertions are united so as to form one power applied to the machine, instead of two powers, independent of one another. By this means the draught will always press the collars equally upon the horses' shoulders, and though they are working in a circle, yet the strains of the draught must press fair, or equal, on their shoulders, without twisting their body to either side. This advantage cannot be obtained in the common way of yoking horses in a thrash- ing machine.

THRASON'ICAL, adj. From Thraso, a boaster in old comedy. Boastful ; bragging. Obsolete.

His humour is lofty, his discourse peremptory, his general behaviour vain, ridiculous, and thrasonical.

Shakspeare.

THRASYBULUS, a renowned Athenian general and patriot, the deliverer of his country from the yoke of the thirty tyrants. He flourished about 294 B. C.

THRASYMACHUS, a Carthaginian, who was the pupil of Isocrates and Plato, and became a public teacher at Athens ; but. failing of the success he had expected, he hanged himself. — Juv. vii. 204.

THRASYMEDES, a son of Nestor, king of Pylos, by Anaxibia, daughter of Bias ; one of the Grecian chiefs who went against Troy. — Hygin. Paus. ii. c. 26.

THRASYMENUS, in ancient geography, a lake of Etruria, near Perusium, and not far from the Tiber. A bloody battle was fought near its banks, between the Carthaginians under Hanni- bal, and the Romans under

Flaminius, A. U. C. 217, in which Hannibal was completely victori- ous, 15,000 Romans being killed, and 15,000 taken prisoners, while 10,000 fled mostly wounded. — Liv. Polyb., Strabo, 5. This lake is now called the lake of Perugia.

*THREAD, n. s. & v. a. ˆ Sax. *nae» ; Belg.*

THREAD'BARE, adj. Idraed; Teut. dret.

THREAD'EN. 3 A small line, cord,

or twist; the rudiment of cloth; uniform course or tenor : to thread is, to pass through with a thread; to pierce: threadbare is, worn to the threads ; trite : threaden, made of thread.

Threadhare coat, and cobbled shoes he ware.

Spenser

THR

73

THR

Let not Bardolph's vital thread be cut With edge of penny cord and vile reproach.

Shakspeare. Thus out of season threading dark-eyed night. Id.

Being prest to the war,

Even when the nave of the state was touched, They would not thread the gates. Id. Coriolantu.

Behold the threaden sails, Borne with th' invisible and creeping wind, Draw the huge bottoms through the furrowed sea.

Shakspeare.

Though need urged me never so, He not receive a thread, but naked go. Chapman.

If he understood trade, he would not have men- tioned this threadbare and exploded project.

Child on Tiade.

Though the slender thread of dyed silk looked on single seem devoid of redness, yet when numbers of these threads are brought together, their colour be- <-omes notorious. Boyle.

Will any freedom here from you be borne, A V hose deaths are threadbare, and whose cloaks are

torn ? Dryden's Juvenal.

The art of pleasing is the skill of cutting to a thread betwixt flattery and ill-manners. L'Estrange.

The eagerness and trembling of the fancy doth not always regularly follow the same even thread or discourse, but strikes upon some other thing that hath relation to it. Burnet.

He who sat at a table with a sword hanging over his head but by one single thread or hair, surely had enough to check his appetite. South.

The gout being a disease of the nervous parts, makes it so hard to cure ; diseases are so as they are more remote in the thread of the motion of the fluids.

Arbuthiiot.

The largest crooked needle, with a ligature of the size of that I have threaded it with, in taking up the spermatick vessels. Sharp's Suryery.

Many writers of moral discourses run into state topics and threadbare quotations, not handling their subject fully and closely. Swift.

A Thracian slave the,'porter's place maintained, Sworn foe to threadbare suppliants, and with pride His master's presence, nay, his name, denied. Harte. THREAT, or ˆ Saxon fcnearian;

THREAT'EN, v. a. \ Isl. thr&tta. To me-

THREAT'ENER, n. s. [nace ; denounce evil ; THREATENING, [terrify, or attempt to

THREAT'EN INGLY, adv. \ terrify : the deriva- THREAT'FUL, adj. J tives all correspond- ing.

That it spread no further, straitly threaten them that they speak henceforth to no man in this name.

Actt, iv. 18.

Like as a warlike brigandine applide To fight, lays forth her threatful pikes afore, The engines which in them sad death do hide.

Spenser.

Be stirring as the time ; be fire with fire ; Threaten the threatener and outface the brow Of bragging horrour. Shaktpeare. King John.

There is no terror, Cassius, in your threats.

Shalapeare.

The honour that thus flames in your fair eyes, Before I speak, too threateningly replies. Id.

What, threat you me with telling of the king ? Tell him, and spare not. Id. Richard II.

The emperor perceiving that his threats were little regarded, regarded little to threaten any more.

Huuward. Do not believe Those rigid threats of death : ye shall not die.

MUton.

The fruit, it gives you life To knowledge by the threat'ner. Id. Paradite Last.

The void profound

Wide gaping, and with utter loss of being Threatens him. Milton.

Void or fear, He threatened with his long protended spear.

Dry den.

.•Eneas their assault undaunted did abide, And thus to Lausus loud with friendly threatening

cried. Id. Virgil.

This day black omens threat the brightest fair That e'er deserved a watchful spirit's care. Pope.

How impossible would it be for a master, that thus interceded with God for his servants, to use any un- kind threateuings towards them, to damn and curse them as dogs and scoundrels, and treat them only as the dregs of the creation ! Law.

THREATENING LETTERS. Knowingly to send any letter without a name, or with a fictitious name, demanding money, or any other valuable thing, or threatening, without any demand, to kill or fire the/ house of any person, is made felony without benefit of clergy. And sending letters, threatening to accuse any person of a crime punishable with death, transportation, pillory, or other infamous punishment, with a view to extort from him any money or other valuable chattels, is punishable, by stat. 30 Geo. II. c. 24, at the discretion of the court, with fine, imprisonment, pillory, whipping, or transporta- tion for seven years.

*THREE, adj. "I Sax. *rue ; Goth, tltriae :*

THREE'FOLD, Welsh and Erse, tri;

THREEPENCE, n. s. Latin tres. Two and one;

THREE'PENNY, adj. f-any small number : the

THREE'PILED, I derivatives will be ex-

THREE'SCORE, | plained by the extracts :

THRICE, adv. J three piled means piled

one on another.

A three-fold cord is not easily broken.

I.cclus. iv. 12.

Thrice he assayed it from his foot to draw, And thrice in vain to draw it did assay, It booted nought to think, to rob him of his prey.

Spenter.

Prove this a prosperous day, the i/iree-nooked

world Shall bear the olive freely.

Shaksj>eare. Antony and CUopatra.

Away, thou r7iree-inched fool ; I am no beast.

Shaktpeare.

A base, proud, shallow, beggarly, fAree-suited, filthy, worsted-stocking knave. Id. King Lear.

A threepence bowed would hire me, Old as I am, to queen it. Id. Henry VIII.

Threepiled hyperboles ; spruce affectation.

Shakspfare.

Threescore and ten I can remember well. Id.

Thrice within this hour I saw him down ; thrice up again and fighting. Id.

Thrice noble lord, Itt me intreat of you To pardon me. Id. Taming of the Shrew.

By a threefold justice the world hath been governed from the beginning : by a justice natural, by which the parents and elders of families governed their children, in which the obedience was called natural piety : again, by a justice divine, drawn from the laws of God ; and the obedience was called con- science ; and lastly, by a justice civil, begotten by both the former ; and the obedience to this we call duty. Raleigh.

THR

If you speak three words, it will three times re- port you the whole three words.

Bacon's Natural llutorif.

Thrice did he knock his' iron teeth ; thrice howl, And into fr6wns his wrathful forehead rowl.

Cowley.

(Jreat Atreus' sons, Tydides fixed above, With tAree-aged Nestor. Creech's Munilius.

Their lives before the flood were abbreviated after, and contracted into hundreds and threescores.

Browne.

By chace our long-lived fathers earned their food ; Toil strung the nerves and purified the blood : But we their sons, a pampered race of men, Are dwindled down to threescore years and ten.

Dryden . Jove hurls the three-forked thunder from above.

Addison.

Laying a caustick, I made an escar the compass of a threepence, and gave vent to the matter.

Wiseman's Surgery.

A strait needle, such as glovers use, with a three- edged point, useful in sewing up dead bodies.

Sharp. These three and three with osier bands we tied.

Pope.

A threefold offering to his altar bring, A bull, a ram, a boar. Id. Odyssey.

THREE RIVERS, DISTRICT OF, one of the divi- sions of Lower Canada, lies between those of Montreal and Quebec, and is bounded on the south by part of the line of 45° N. lat., and the ridge of mountains stretching to the north east ; northward its limit is indefinite, or it may be presumed to have only the province boundary for its limit in that direction. Its breadth on the north side of the St. Lawrence, from the seigniory of Berthier to that of St. Anne, is fifty- two miles and a half; hut on the south side, from Sorel to Deschaillors, not more than fifty miles and a half. It contains the county of St. Maurice, and the greater part of Buckingham, forty seigniories and fiefs, thirty-two whole town- ships, part of eleven others that are divided by the district lines, thirty-two that are projected only, and twenty-two parishes. In the townships 824,679 acres have been granted in free and common soccage. The cultivated part of the seigniories may be taken at a little more than one-third; but the townships fall short of the same proportion.

THREE RIVERS, a town of Lower Canada, situated on the north-west side of the river St. Maurice, at its confluence with the St. Lawrence. It derives its name from the entrance into the former river, being separated, by two islands lying at the mouth, into three channels. The town plot covers nearly 400 acres, forming a front of rather more than 1300 yards on the bank of the St. Lawrence. It stands on an exceedingly light and sandy soil, which extends also over the en- virons. The shops and warehouses are numerous, wherein may be had British goods of all denomi- nations, and several inns afford to travellers respectable accommodations. The principal public buildings are the Ursuline Convent, Pro- testant and Catholic churches, the court-house, jail, and barracks.

THRENODY, or the Muses Thenodie, an ancient poem by Mr. James Adamson, containing many historical notices of Perth, and other places

in Scotland. It was republished, with learned historical notes, by the late Mr. James Cant, in

1775.

TURK PSIPPAS, a son of Hercules by Pa- nope. Apollod.

THRESHOLD, n.s. Sax. Snej-cpab ; Goth. threshold. The ground or step under the door ; entrance ; gate.

Fair marching forth in honourable wise, Him at the threshold met she well did enterprise.

Spenter.

Many men, that stumble at the threshold, Are well foretold that danger lurks within.

Siiakspeare. Not better

*Than still at hell's dark threshold t' have sat watch, Unnamed, undreaded, and thyself half-starved **

.Wilton.

There sought the queen's apartment, stood before The peacefold threshold, and besieged the door.

Dry den.

THRID, v. a. Corrupted from THREAD, which see. To slide through a narrow passage.

Some thrid the mazy ringlets of her hair, Some hang upon the pendents of her ear. Pope.

THRILL, v. a. & v. n. Saxon Syfilian ; Swe- dish drilla. To pierce ; bore; penetrate; drill: hence the quality of piercing : feel a piercing sensation ; pain with such a sensation.

The cruel word her tender heart so thrilled, That sudden cold did run through every vein,

And stormy horrour all her senses filled With dying fit, that down she fell for pain.

Speiuer.

He pierced through his chaffed chest With thrilling point of deadly iron brand, And lanced his lordly heart. Id.

The knight his thrillant spear again assayed In his brass-plated body to emboss. Id.

A servant, that he bred, thrilled with remorse, Opposed against the act ; bending his sword To his great master. Shakspeare. King Lear.

A taint cold fear thrills through my veins, That almost freezes up the heat of life. Sliaktpeare.

Nature, that heard such sound,

Beneath the hollow round Of Cynthia's seat, the airy region thrilling,

Now was almost won,

To think her part was done. Miltun.

A sudden horror chill

Ran through each nerve, and thrilled in every vein.

Add-on.

THRINAX, small Jamaica fan-palm, in botany, a genus of plants belonging to the natural class of palmae. and order of stabellifolia'. The calyx is sexdentate ; there is no corolla ; there are six stamina ; the stigma is emarginate, and the berry monospermous. This plant was brought from Jamaica to Kew garden by Dr. W:illiam Wright.

THRIPS, in entomology, a genus of insects belonging to the order of hemiptera. The ros- trum is obscure, or so small as to be scarcely perceptible. The antennae are filiform and as long as the thorax. The body is slender, and of equal thickness in its whole length. The abdo- men is reflexible, or bent upwards. The four wings are extended, incumbent upon the back of the insect, narrow in proportion to their length, and cross one another at the same distance from their base. The tarsi of the feet are composed of only two articulations. There are eleven

species mentioned by Gmelin ; of which three are natives of Britain, viz. T. pasciata, junipe- rana, and physapus.

THRIVE, v. n. “) Gothic t/iriv, thrifa. THRI’VER, n. s. j Pret. throve, and some- THRIFT, times less properly

THRIF’TILY, adv. ˆthrived, part, thriven. THRIF’TINESS, n.s. I To prosper; grow rich; THRIFT’LESS, adj. \ advance in any thing THRIF’TY. J desired : one who pros-

pers : thrift is profit; gain ; state of prospering ; and, by an easy transition, parsimony ; frugality : the derivatives that follow all correspond.

The better thou thrivest, the gladder am I.

Tusser.

Though some men do, as do they would, Let thrifty do, as do they should. Id.

He came out with all his clowns, horst upon such cart jades, and so furnished, as I thought with my- self, if that were thrift, I wished none of my friends or subjects ever to thrive. Sidney.

They by vices thrive, Sail on smooth seas, and at their port arrive.

Sandys.

If any other place you have, Which asks small pains, but thriftinest to save.

Spenser.

They in idle pomp and wanton play Consumed had their goods and thriftless hours, And thrown themselves into these heavy stowers

Id.

The rest unable to serve any longer, or willing to fall to thrift, prove very good husbands.

Id. on Ireland.

If lord Percy thrive not, ere the king, Dismiss his power, he means to visit us.

Shakspearc.

He shall spend mine honour with his shame, As thriftless sons their scraping fathers’ gold. Id.

1 have five hundred crowns, The thrifty hire I saved under your father. Id.

Should the poor be flattered ? No ; let the candied tongue lick absurd pomp, And crook the pregnant hinges of the knee, Where thrift may follow fawning. Id. Hamlet.

Out of the present sparing and untimely thrift, there grow many future inconveniences, and con- tinual charge in repairing and re-edifying such im- perfect slight-built vessels. Raleigh.

It grew amongst bushes, where commonly plants do not thrive. Bacon's Natural History.

Some are censured for keeping their own, whom tenderness how to get honestly te.icheth to spend discreetly ; whereas such need no great ih'iftiness in preserving their own, who assume more liberty in exacting from others. IVotton.

He had so well improved that little stock his fa- ther left, as he was like to prove a thriver in the end.

Hay ward.

A careful shepherd not only turns flock into a common pasture, but with particular advertence ob- serves the thriving of every one. Decay of Piety.

O son ! why sit we here, each other viewing Idly, while Satan, our great author, thrives In other worlds, and happier seats provides For us, his offspring dear ? Milton's Paradise Lost.

Thus heaven, though all-sufficient, shows a thrift In his o?coDomy, and bounds his gift. Dryden.

Experienced age in deep despair was lost, To see the rebel thrive, th loyal crost. Id.

The thriven calves in meads their food foisake, And render their sweet souls before the plenteous rack. Id. Virgil.

THR

*Seldom a thriving man turns his land into money to make the greater advantage. Locke**

Growth is of the very nature of some things : to be and to thrive is all one with them ; and they know no middle season between their spring and their fall.

South.

Such a care hath always been taken of the city charities, that they have thriven and prospered grad- ually from their infancy down to this very day.

Atterbury's Sermons.

A little hope — but I have none. On air the poor camelions thrive : Denied even that, my love can live. Granville.

In the fat age of pleasure, wealth, and ease. Sprung the rank weed, and thrived with large in- crease. Pope's Essay on Criticism.

Croinartie after fourscore went to his country- house to live thriftily, and save up money to spend at London. Swift.

Lest he should neglect his studies Like a young heir, the thrifty goddess, For fear young master should be spoiled, Would use him like a younger child. Id.

Diligence and humility is the way to thrive in the riches of the understanding, as well as in gold.

Watls's Logick.

THROAT, n.s. Sax. Snore, fcrtora; Belg. strote ; Teut. trossel. The forepart or passage of the neck.

These bred up amongst the Englishmen, when they become kern, are made more fit to cut their throats. Spenser.

The gold I give thee will I melt, and pour Down thy ill-uttering throat. Sha.kvpec.rf.

A trumpeter that was made prisoner, when the soldiers were about to cut his throat, says, Why should you kill a man that kills nobody ?

L'Eslrange.

Her honour and her courage tried, Calm and intrepid in the very throat Of sulphurous war, on Tenier's dreadful field.

Thomson.

Larissa's gutturals convulsed his throat ; He smoothed his voice to the Bizantine note.

Harte.

THROB, v. n. & n. s. Gr. 3opw/3av, Minshieu and Junius ; formed in imitation of the sound — Skinner. Johnson adds (not very probably) perhaps contracted from throw up. To heave the breasts with strong emotion; beat; palpitate: the beat or stroke of palpitation.

She sighed from bottom of her wounded breast. And after many bitter throbs did throw, Wjth lips full pale, and faultering tongue opprest.

Spenser. Here may his head live on my throbbing breast.

Shakspeare.

How that warmed me ! How my throbbing heart Leapt to the image of my father's joy, When you should strain me in your folding arms !

Smith .

Thou talkest like one who never felt The impatient throbs and longings of a soul That pants and reaches after distant good.

Addison's Cat'j.

In the depending orifice there was a throbbing of the arterial blood, as in an aneurism, the blood being choaked in by the contused flesh.

Wiseman's Surgery.

THROE, n. s. & r.a. Sax. fcpopian, to suf- fer. Also written throw. The pain of child- birth; any extreme pain, struggle, or effort: to to put into agonies, (obsolete).

THR

O man ! have mind of that most bitter tkror, For as the tree does fall so lies it ever low. Spenser.

To ease them of their griefs, Their fears of hostile strokes, their aches, losses, Their pangs of love, with other incident throes, That nature's fragile vessel doth sustain In life's uncertain voyage, I will do Some kindness to them. Shakspeare. Timon.

My womb pregnant and now excessive grown, Prodigious motion felt and rueful throes. Milton.

His perswasive and practical tract, which was ex- ceeding agreeable to his

desires, cost him most throes and pangs of birth. Fell.

Not knowing 'twas my labour, I complain Of sudden shootings, and of grinding pain, x.iy throes come thicker, and my cries increased.

Dry den.

THRONE, n. s. & v. a. Lat. thronus ; Greek Spovoc- A roya! seat ; the seat of a king, or of a bishop of the established church : to place on such a seat.

Boundless intemperance hath been The' untimely emptying of the happy throne; And fall of many kings. Shakspeare. Macbeth.

They have, as who have not, whom their great

stars '1'hrr.ntd and set high 1 Shakxpeare.

The' eternal Father from his throne beheld Their multitude. Milton.

True image of the father, whether throned in the bosom of bliss, and light of light, Conceiving or remote from heaven, enshrined In fleshy tabernacle and human form. Id.

Stonelienge, once, thought a temple, you have

found A ihrone where kings were crowned. Dryden.

\Ve have now upon the throne a king willing and able to correct the abuses of the age. Davenant.

Bishops preached on the steps of the altar stand- ing, having not as yet assumed the state of a throne.

Aylijfe's Parergon. He throned in glass, and named it Caroline.

Pope.

THRONIUM, an ancient town of Phocis, seated at the mouth of the Boagrius, where that river falls into the Sinus Maliacus. Liv. 36, c. 20 ; Strabo, ix. ; Plin. IT. c. 7.

THRONG, n. s., v. n., & v. a. Saxon fcpan-r, from fcninjan, to press. A crowd ; a multitude pressing against each other: to crowd : to op- press or incommode with crowding. The multitude throng thee and press thee.

Luke viii. 45.

Let us on heaps go offer up our lives : Vn'-j are enow yet living in the field, To smother up the English in our throngs.

Shakspeare.

I'll say tliou hast gold : I'hou wilt be thronged too shortly. Id.

A throng

Of thick short sobs in thundering vollies float, And roul themselves over her lubrick throat In panting murmurs. Crashaw.

All access was thronged, the gates Thick swarmed. Milton.

This book, the image of his mind, Will make his name not hard to find. 1 wish the throng of great and good Made it less easily understood. Waller.

With studious thought observed the' illustrious

throng,

In nature's order as they passed a?ong ; J lieir names, their fates.

?e; THR

His mother could not longer bear the agitations of so many passions as thronged upon her, but fell upon his neck, crying out, My son ! Ta'lt-r.

THROSTLE, n. s. Saxon £j oj-tle. The thrush ; a small singing bird.

The throttle with his note so true, The wren witli little quill. Shakspenre.

The black-bird and throstel with their melodious voices bid welcome to the cheerful spring.

Walton's Anyier.

THROTTLE, n. s. & v. a. From throat. The windpipe: to seize by the throat; choke; suf- focate.

I have seen them shiver and look pale, Make periods in the midst of sentences, Throttle their practised accents in their fears, And, in conclusion, dumbly have broke off.

Shakspeare.

As when Antasus in Irassa strove With Jove's Alcides, and oft foiled still rose, Receiving from his mother earth new strength, Fresh from his fall and fiercer grapple joined, Throttled at length in the air, expired and fell.

WQlott.

At the upper extreme it hath no larinx or throttle to qualify the sound. Browne's Vulgar Erroiux.

The throttling quinsy 'tis my star appoints And rheumatism I send to rack the joints. Dryden.

Throttle thyself with an ell of strong tape, For thou hast not a groat to atone for a rape.

Swiff.

THROUGH, prep. & adv.ˆ Saxon «upp ; THROUGH'BRED, adj. \ Goth, thro, tfiair ;

THROUGH'LIGHTED, I Belg. door; Teut.

THROUGH'LY, adv. \durch. From end

THROUGH'OTJT, prep. &aTHKOCGH'PACED, adj. J the whole mass or compass ; by transmission ; by means or agency of: as an adverb, from one end or side to the other ; to the end : the compounds are of ob- vious meaning, and (except throughout) not often used.

By much slothfulness the building decayeth, and through idleness of the hands the house droppeth through. Ecclus. x.

Thus it fareth even clean throughout the whole controversy, about that discipline which is so ear- nestly urged. Hooker.

The sight so throughly him dismayed, That nought but death before his eyes he saw.

Spenter. The strong through pleasure soonest falls, the weak

through smart. Id.

You will not make this a general rule to debar such from preaching the gospel, as have through in- firmity fallen. U'hitgifl.

You'd be so lean that blasts of January Would blow you through and through. Shakspeare.

Inquire how metal may be tinged through and through, and with what, and into what colours.

Bacon.

Rice must be throughly boiled in respect of its hardness. 1

There followed after the defeat an avoiding of all Spanish forces throughout Ireland. Id.

For bed then next they were. All throughly satisfied with compleat cheare.

Chapman.

O for a clap of thunder, as loud As to be heard throughout the universe, To tell the world the fact, and to applaud it !

Ben Jon inn. That the best pieces be placed where are the fewest

lights; therefore not only rooms windowed on both ends, called '.hrmighlighted, but with two or more windows on the same side, are enemies to this art. Wotton's Architecture.

Subdue it, and throughout dominion hold Over fish of the sea, and fowl of the air. Milton.

Pointed satire runs him through and through.

Oldham.

He hath been so successful with common heads, that he hath led their belief through all the works of nature. Browne.

He is very dextrous in puzzling others, if they be not throughpaced speculators in those great theories.

More.

Though it be somewhat singular for men truly and throughly to live up to the principles of their religion, yet singularity in this is a singular commendation. Tillotion.

No less wisdom than what made the world can throughly understand so vast a design. Id.

Through these hands this science has passed with great applause. Temple.

His youth and age All of a piece throughout, and all divine. Dryden.

A simplicity shines through all he writes. Id.

Some through ambition, or through thirst of gold, Have slain their brothers, and their country sold.

Id.

To understand the mind of him that writ is to read the whole letter through, from one end to the other. Locke.

A through-bred soldier weighs all present circum- stances and all possible contingents.

Crete's Cosmologia.

Every man brings such a degree of this light into the world with him, that though it cannot bring him to heaven, yet it will carry him so far that if he fol- lows it faithfully he shall meet with another light, which shall carry him quite through. South.

To him, to him 'tis given, Passion, and care, and anguish to destroy : Through him soft peace, and plenitude of joy, Perpetual o'er the world redeemed shall flow.

Prior.

The same thing happened when I removed the prism out of the sun's light, and looking through it upon the hole shining by the light of the clouds be yond it. Newton.

Impartially inquire how we harvc behaved our- selves throughout the course of this long war.

After bur u.

Material things are presented only through their senses ; they have a real influx on these, and all real knowledge of material things is conveyed into the understanding through these senses.

Cheyne's Philosophical Principles.

THROW, v. a.,v. n., & n. s.) fret, threw ;

THROW'ER, n. s. J part. pass.

thrown. Sax. fcriapan. To fling; cast; to send to a distant place by a projectile force: toss: cast ; taking about, away, by, down, off, out, and up, as prepositions : the noun substantive corre- sponding.

Shimei threw stones at him, and cast dust.

2 Sam. xvi. 13.

A poor widow threw in two mites, which make a farthing. Mark xii. 42.

Now unto despair I 'gin to grow, And mean for better wind about to throw. Speiuer.

She throws out thrilling shrieks, and shrieking cries.

Id.

Preianes thrcir down upon the Turks fire and scalding oil. Knolles't History of thr Turin.

1 THR

Learn more than thou trowest, Set less than thou throweit. Shakspeard. King Lea:-

To arms ; for I hare thrown A brave defiance in king Henry's teeth.

Id. Hairy V.

Throw out our eyes for brave Othello, Even till we make the aerial blue An indistinct regard. Id. Othel :< .

If Hercules and Lichas play at dice Which is the better man, the greater throw May turn by fortune from the weaker hand, So is Alcides beaten by his page. Shakspeare.

Fate, against thy better disposition, Hath made thy person for the throwtr out Of my poor babe. Id. Winter '» Tale.

The top he tore

From off a huge rocke ; and so right a throw Made at our ship, that just before the prow It overflew and tell. Chapman.

It can but shew

Like one of J uno's disguises ; and. When things succeed, be thrown by, or let fall.

Ben Jonson.

Calumniate stoutly ; tor, '.hough we wipe away with never so much care the dirt thrown at us, there will be left some sulliage behind.

Decay of Piety.

In time of temptation be not busy to dispute, but rely upon the conclusion, and throw yourself upon God, and contend not with him but in prayer.

Taylor's Holu Living.

He that will throw avan a good book because not gilded, is more curious to please his eye than under- standing. Taylor.

His majesty departed to his chamber, and threw himself upon "his bed, lamenting with much passion, and abundance of tears, the loss of an excellent servant. Clarendon.

He fell

From heaven, they fabled, thrown by angry Jove Sheer o'er the crystal battlements. Milton.

Bad games are thrown up too soon, Until they're never to be won. Hudibra.*

He warns them to avoid the courts and camps, Where dilatory Fortune plays the jilt With the brave, noble, honest, gallant man, To throw herself away on fools and knaves. Otway.

A man had better throw away his care upon any thing else than upon a garden on wet or moisl ground. Temple.

Ariosto, in his yoyage of Astolpho to the moon , has a fine allegory of two swans, who, when time had thrown the writings of many poets into the river of oblivion, were ever in a readiness to secure the best, and bear them aloft into the temple of im- mortality. Dryden.

To threats the stubborn sinner oft is hard, Wrapped in his crimes, against the storm prepaied ; But, when the milder beams of mercy play, He melts, and throws his cumb'rous cloak awav.

Id.

'Twould be better

Could you provoke him to give you the occasion, And then to throw him off. Id. Sftanish Fryar.

He that begins to have any doubt of his tenets, received without examination, ought, in reference to that question, to throw wholly by all his former no- tions. Locke.

If the sinner shall not only wrestle with this angel, but throw him too, and win so complete a victory over his conscience, that all these considerations shall be able to strike no terror into his mind, he is toe strong for grace. South.

If they err finally, it is like a man's missing his cast when he throws dice for his life ; his being, his

THH

I'appiness, and all is involved in the errour of one i/irinr. Id.

Can there be any reason why the household of God alone should throw off all that orderly de- pendence and duty by which all other houses are best governed 1 Sprat.

The air-pump, barometer, and quadrant, were thrturn out to those busy spirits, as tubs and barrels are to a whale, that he may let the ship sail on, while he diverts himself with those innocent amuse- ments. Addison's Spectator.

The only means for bringing France to our con- ditions is to throw in multitudes upon them, and overpower them with numbers.

Id. State of the War.

Poor youth ! how canst thou throw him from thee? Lucia, thou knowest not half the love he bears thee.

A ddison .

The well-meaning man should rather consider what opportunities he has of doing good to his country, than throw uwuy his time in deciding the rights of princes. Id.

Must one rash word, the' infirmity of age, Throw down the merit of my better years? This the reward of a whole life of service 1 1

K\(>erienced gamesters throw up their cards when iheyknow the game is in the enemy's hand, without unnecessary vexation in playing it out.

Id. freeholder.

The Sirenum Scopuli are sharp rocks that stand nlwjut a stone's throw from the south side of the island. Addison.

Your youth admires

The throw and swellings of a Roman soul ; Cato's bold flights, the extravagance of virtue. Id.*

Life we must not part with foolishly : it must not be thrown up in a pet, nor sacrificed to a quarrel.

Collier.

The salts and oils in the animal body, as soon as they putrefy, are thrown iff, or produce mortal dis- tempers. Arbulhnot.

Judge of the cause by the substances the patient throws up. Id.

She threw away her money upon roaring bullies that went about the streets.

Id. History of John Bull.

Suppose any particular order of the alphabet to be assigned, and the twenty-four letters cast at a ven- ture, so as to fall in a line ; it is many million of millions odds to one against any single throw that the assigned order will not be cast. Betitley'i Sermons.

When Ajax strives some rock's vast weight to

throw, 1'he line too labours, and the words move slow.

Pope.

The oddness of the proposition taught others to reflect a little ; and the bill was thrown out. Swift.

There is no need to throw words of contempt on s'ich a practice ; the very description of it carries re- proof. Watts.

The island Inarime contains, within the compass of eighteen miles, a wonderful variety of hills, vales, rocks, fruitful plains, and bairen mountains, all thrnii-ii together in a most romantick confusion.

Berkley tn Pupe.

The world, where lucky throws to blockheads fall. Knaves know the game, and honest men pay all.

Young .

'I'll 'HIM, K. s. & v. n. Isl. thraum, the end of any thing. Tho ends of weavers' threads; any coarse yarn : to grate ; play coarsely.

() fates, come, come, (.'ut thread and thrum, Quail, crush, conclude and quell. Shaluyeurr.

78 THE

All TOOSS hath here and there little stalks, besides the low thrum. Bacun's Natural History.

Blunderbusses, planted in every loop-hole, go oft constantly at the squeaking of a fiddle and the thrum- ming of a guitar. Dryden's Spanish Fryar.

Would our thrum capped ancestor's find fault For want of sugar-tongs, or spoons for salt ? King.

*THRUSH, n. s. > Sax. *nirc; Lat. turdus.*

THRTJS'TLE.) A small singing-bird.

Of singing-birds they have linnets, goldfinches, blackbirds, and thrushes.

Carew's Surrey of Cornu'ull.

Pain, and a fine thrush, have been severally en- deavouring to call off my attention ; but both in vain.

Pope.

No thrnttles shrill the bramble bush forsake ; No chirping lark the welkin sheen invokes. Gait.

THRUST, v. a., v.n., & n.s. Lat. tnisito. To push any thing into matter, or between close bodies; to compress; impel; urge; obtrude: as a verb neuter, make a hostile push ; squeeze in ; intrude : a thrust is a hostile push or attack.

When the ass saw the angel, she thrust herself unto the wall, and crusht Balaam's foot.

Numbers xxii. 25.

He thrust the fleece together, and wringed the dew out of it. Judges, vi. 38.

She caught him by the feet ; but Gehazicame near to thrust her away. 2 Kings iv. 27.

Thrust in thy sickle, and reap. Rev. xiv. 15.

Zelmane, hearkening to no more, began with sue h witty fury to pursue him with blows and thrusts, that nature and virtue commanded him to look to Ins safety. Sidney.

They should not only not be thrust out, but al.i) have estates and grants of their lands new made to them. Spenier

The miserable men which shrunk from the work were again beaten forward, and presently slain, and fresh men still thrust on.

Knolles's History of the Turks.

When the king comes, offer him no violence, Unless he seek to thiust you out by force.

Shakspeate.

We make guilty of our disasters the sun, the moon, and stars, as if we were villains on necessity, and all that we are evil in by a divine thrusting on.

Id. King 1 ei.tr.

That thrust had been mine enemy indeed, But that my coat is better than thou knowest.

Shakspeare. I go to meet

The noble Brutus, ill rusting this report Into his ears. Id. Julius Ceesar.

Rich, then lord chancellor, a man of quick and lively delivery of speech, but as of mean biith so prone to thrust forwards the ruin of great persons, in this manner spake. Haifward.

Young, old, thru>t there, In mighty concourse. Chapman' Odyssey.*

There is one thrust at your pure, pretended me- chanism. More s Divine Dialogues.

To justify his threat, he thrusts aside The crowd of centaurs, and redeems the bride.

Dry den.

Polites Pyrrhus with his lance pursues, And often reaches, and his thrusti renews. Id.

I'll be a Spartan while I live on earth ; But, when in heaven, I'll stand next Hercules, And thrust between my father and the god. Id.

Should he not do as rationally, who took physick from any one who had taken on himself the name of physician, or thrust himself into that employment ?

Lock$.

Not all,

Who like intruders thrust into their ser. c ‘, Participate their sacred influence. Rowe.

THR YALLIS, in botany, a genus of plants be- longing to the class of decandria, and order of monogynia ; and in the natural method ranging under the thirty-eighth order, tricoccae. The calyx is quinquepartite ; there are five petals, and the capsule is tricoccous. There is only one species known, viz. T. Brasiliensis, a native of Brasil.

THRYFAL’LOW, v. a. Thrice and fallow. To give the third ploughing in summer.

Thryfallow betime for destroying of weed, Let thistle and docke fall a blooming and seed.

Tusser.

THRYON, an ancient town of Messenia, near the banks of the Alpbeus. Horn. II. ii. •Strabo viii.

THRYUS, an ancient town of Peloponnesus, near Elis. Lempr.

TIIUANUS (Jacobus Augustus), or James Augustus Dr. Thou, youngest son of the presi- dent de Thou, was born in 1553; and, having finished his studies and travels, was made presi- dent a-Mortier, and took possession thereof in 1595. He was employed in several important offices of state, and in reforming the university of Paris; which he discharged with so much prudence that he was esteemed the Cato of his age, and the ornament of France. He wrote the history of his own time, in Latin, from 1543 to 1G08, in 138 books; a work, both for subject and style, worthy of the ancients. He also left Memoirs of his own Life, besides poems ; and died at Paris, 1617.

THUCLES, the leader of the first Greek co- lony who settled in Sicily. See SICILY.

THUCYDIDES, a celebrated Greek historian, born at Athens 471 years B. C. He was the son of Olorus, and grandson of Miltiades, who was

descended from Miltiades the famous Athenian general, who married the king of Thrace's daughter. See MILTIADES. He was educated in philosophy and eloquence. His master in the former was Anaxagoras, in the latter Anti- phon ; one, by his description in the eighth book of his History, for power of speech almost a miracle, and feared by the people on that ac- count/ Suidas and Photius mention that when Herodotus related his history in public, a cus- tom then common and many ages after, Thu- cydides felt such a pang of emulation, that he shed tears ; Herodotus himself noticed it, and congratulated his father on having a son who showed so early an affection to the Muses. He- rodotus was then twenty-nine years of aee, Thu- cydides about sixteen. When the Peloponne- sian war broke out, Thucydides, thinking it would prove a subject worthy of his labor, im- mediately began to keep a journal. This ex- plains the reason why he has attended rcore to chronological order than to unity of design. During the war he was sent by his countrymen to relieve Amphipolis ; but the quick march of Brasidas, the Lacedaemonian general, defeated his operations ; and Thucydides. being thus un- successful, was banished from Athens, in the eighth year of this celebrated war; but during

his banish.rent, the general bˆan to write an impartial history of me import nit events which had happened during his administration, and which still continued to agitate the stiles of Greece. This famous history is continue 1 only to the twenty-first year of the war, and t'te re- maining part of the time till the demolition of the walls of Athens, was described by Theopom- pus and Xenophon. Thucydides wrote in the Attic dialect, which has most vigor, purity, ele- gance, and euergy. Thucydides died at Athens, where he had been recalled from his exile about 411 years B. C. The best edition of his works are those of Oxford, in fol. 1696, and of Duker, Amst. 1731, also fol.

THUJA, in botany, the arbor vita-, or tree of life, a genus of plants, belonging to the class of monodelphia, and order of monoecia; and in the natural system ranging under the fifty-first order conifera. There are four species, viz. 1. T. apylla ; 2. T. dolabrata ; but the most remarkable are, 3. T. occidentalis, the common arbor vitae, grows naturally in Canada, Siberia, and other northern countries. In some of the English gardens a few of these trees grow to a large size. 4. T. orientalis, the Chinese arbor vitae, growing naturally in the northern parts of China, where it rises to a considerable height. The branches grow closer together, and are much better adorn- ed with leaves, which are of a brighter green co- lor, so make a much better appearance than the last species, and, being very hardy, is esteemed preferable to most of the evergreen trees with small leaves, for ornaments in gardens. The branches cross each other at right angles ; the leaves are flat ; but the single divisions of the leaves are slender, and the scales are smaller and lie closer over each other than those of the other.

The cones are also much larger, and of a beauti- ful gray color : their scales end in acute inflexed points. These trees are propagated by seeds, layers or cuttings.

THUILLIER (Vincet), a learned French writer, born at Coucy, in 1685. He translated Polybius ; and wrote a letter on the Bull Unigeni- tus. He died in 1786, aged 101.

THUISTO, a hero and deity of the ancient Germans. — Tacitus. Perhaps the same with Tuisco.

THULE, or THYLJE, in ancient geography, an island in the most northern part of the German Ocean. Its situation was never accurately as- certained by the ancients : hence its present name is unknown by modern historians. Some suppose that it is the island now called Iceland, or part of Greenland, and others that it was Foula

THUMB, n s. Sax. £uma. The short strong finger answering to the other four.

Here I have a pilot's thumb, Wrecked as homeward he did come.

Shakspeare. Macbeth .

When he is dead you will wear him in thumb rings, as the Turks did Scanderbeg. Diyden.

The hand is divided into four fingers bending for- wards, and one opposite bending backwards, called the thumb, to join with them severally or united, whereby it is fitted to lay hold of objects.

Ray on tlie Creation.

Every man in Turkey is of some trade ; Sultan Achmet was a maker of ivory rings, which the Tuiki

war upon their thumbs when they shoot their arrows.

Browne.

THUMMIM. See TRIM.

THUM P, n. t., v. «., & v. n. Ital. thombo. A hard heavy dead dull blow : to

beat with such blows : to fall with such a blow.

Those bastard Britons, whom our fathers Have in their land beaten, bobbed, and thumped.

Shakipeare.

And blundering still with smarting rump, He gave the knight's steed such a thump As made him reel. Hudibras.

Before, behind, the blows are dealt ; around Their hollow sides the rattling thump resound.*

Dry Hen.

The watchman gave so great a thump at my door, that I awaked at the knock. Taller.

Their thump and bruises might turn to account, if they could beat each other into good manners.*

Additon.

A watchman at midnight thumps with his pole.

Steift.

THUNBERGIA, in botany, a genus of plants belonging to the class of didynamia, and order of angiospermia. The calyx is double ; the exterior one is diphyllous, and the interior one multipar- tite. The capsule is globose, beaked, and bilo- cular. There is only one species known, viz. T. Capensis, a native of the Cape of Good Hope. THUN'DER.n.s-.r.n.,ˆ Saxon Sun&eri, THUN'DERBOLT, [&«. a. fcuneri; Swed. dun- THUN'DERCLAP, der; Belg. dander;

THUN'DERER, ˆFr. tonnerre. The

THUN'DEROCS, adj. f noise made by the THUN'DERSHOWER, n. t. THON'DERSTONE, THUN'DERSTRIKE, v. a. for both this and the lightning, or the entire electric storm ; any loud or overpowering noise : to make such a noise ; make thunder : as a verb active, to emit with noise or violence; to intimi- date by noise : a thunderbolt, commonly means lightning; the bolts that fall from heaven ; fulmi- nation ; denunciation : thunderclap, the explo- sion that produces thunder : thunderer, he who thunders: thunderous, producing thunder: the other compounds are of obvious meaning.

So soon as some few notable examples had thun- derfd a duty into the subject's hearts, he soon shewed no baseness of suspicion. Sidney.

I remained as a man thnndfrttrickm, not daring, cay not able, to behold that power. Id.

So fierce he laid about him, and dealt blows, On either side, that neither mail could hold Ne shield defend the thunder of his throws.

Spenter.

The kindly bird that bears Jove's thunderclap, One day did scorn the simple scarabee,

Proud of his highest service, and good hap, That made all other fowls his thralls to be. Id.

His dreadful name late through all Spain did

thunder,

And Hercules' two pillars standing neai Did make to quake and fear. la.

If I had a thunderbolt in mine eye, I can tell who ihould down. Shakipeare.

How dare you, ghosts, Accuse the thunderer, whose bolt you know, ˆky-planted, batters all rebelling coasts 1 ' Id.

Fear no more ttie lightning flash, Nor the all-dreaded thuxderttone. Id. Cymbeline.*

explosion of electric fire in the clouds ; it is sometimes used

Feare from our hearts tooke The very life : to be so thunderslrooke With such a voice. Chapman.

Let the lightning of this thunderbolt, which hatb been so severe a punishment to one, be a terrour tu all. K>ng Chartet.

He severely threatens such with the thunderbolt of excommunication. Hakeu.Ul on Providence.

My heart does beat, As if 'twere forging thunderbolts for Jove. Denham.

His dreadful voice no more Would thunder in my ears. Milton.

The thunder,

Wringed with red lightning and impetuous rase, Perhaps bath spent his shafts, and ceases now Tb bellow through the vast and boundless deep. Id.

Look in and see each blissful deity, How he before the thunderous throne doth lie. A/- With the voice divine

Nigh thunderstruck, the' exalted man, to whom Such high attest was given, a while surveyed \N ith wonder. Id. Paradue Reyaine '.

Had the old Creeks discovered your abode, Crete had n't been the cradle of their god ; On that small island they had looked with scorn. And in Great Britain thought the thunderer born.

Waller.

The conceit is long in delivering, and at last, it comes like a thuiidersJunrer, full of sulphur and darkness, with a terrible crack. Stiliiiigjlert.

When suddenly the thunderclap was heard, It took us unprepared, and out of guard. Druilru.

When the bold Typheus Forced great Jove from his own heaven to fly, The lesser gods, that shared his prosperous state, All suffered in the exiled thunderer'i fate. LI.

Who can omit the Gracchi, who declare The Scipio's worth, those thunderbolts of war ? Id.

Oracles severe

Were daily thundered in our general's ear That by his daughter's blood we must appease Diana's kindled wrath. Id.

Here will we face this storm of insolence. Nor fear the noisy thunder ; let it roll, Then burst, and spend at once its idle rage. Kowe.

An archdeacon, as being a prelate, may thunder out an ecclesiastical censure. Ayliffe.

The most remarkable piece in Antonine's pillar is Jupiter Pluvius sending down rain on the fainting army of Marcus Aurelius, and thunderbolt on his enemies ; which is the greatest confirmation of the story of the Christian legion. Addison.*

Tis said that thunderstruck Enceladus Lies stretched sup Id.

In thundersh,

Derham' Physico-Theolt^ij- Like a black sheet the whelming billow spread, Burst o'er the float, and thundered on his head.*

Pope.

THUNDER is the noise occasioned by the ex- plosion of a flash of lightning, echoed back from the inequalities on the surface of the earth, in like manner as the noise of a cannon is echoed, and in particular circumstances forms a rolling lengthened sound.

ft is universally allowed that the elevation ot the electricity in different parts of the atmosphere is the cause of thunder, and, after what has been said on this subject in our article ELECTRICITY (see Index), it remains only to mention the theory by which some philosophers explain the

reason why rains are sometimes attended with trified as soon as they are separated. When thunder and sometimes not. In this part of glass is rubbed upon glass, no attraction nor re- Great Britain, and for a considerable way along pulsion can be perceived, nor is any sign of the eastern coast, although thunder may happen electricity observed on bodies brought near to it, at any time of the year, yet July is that in which yet a very bright electric light always appears on it may almost certainly be expected. Its dura- the glasses, and a phosphoreal smell is felt ; tion is of very uncertain continuance ; sometimes which shows that though the electricity does only a few peals will be heard at any particular not fly out through the air, in the usual way, yet place during the whole season; at other times the fluid within the glass is agitated; and there the storm will return at the interval of three or is little reason to doubt, that any conducting four days for five or six weeks, or longer; not body enclosed within the substance of the glass that we have violent thunder in this country di- would be electrified also. The vapors therefore, rectly vertical in any one place so frequently in which are the conducting substances in the atmo- any year, but in many seasons it will be percep- sphere, become immediately electrified in conse-

tible that thunder clouds are formed in the neighbourhood even at these short intervals.

quence of the pressure above-mentioned, and all the phenomena described under the various arti-

Hence it appears that during this particular cles already referred to take place. In like man- period there must be some natural cause operat- ner, by the struggle of two other winds as well ing for the production of this phenomenon, as those of the east and west, may a thunder storm which does not take place at other times. This be produced ; but it is always necessary that the cannot be the mere heat of the weather; for we resistance of the air to tin- motion of the clouds have often a long tract of hot weather without should be very great, and Dearly equal all round, any thunder; and besides, though not common, For if the vapor should get off to a side, no thunder is sometimes heard in winter. As thunder would take place ; the electricity would therefore the heat of the weather is common to then be carried off as fast as it was collected, and the whole summer, whether there be thunder or rain only would be the consequence, by reason not, we must look for the causes of it in those of the electrified vapors parting with their latent phenomena which are peculiar to July, August, heat. In fact, we very often observe, that in the and September. Now it is generally observed, time of rain the clouds evidently move across in the above-mentioned tract of country, that the wind, and the nearer their motion is to a di- from April an east or south-east wind generally reel opposition, the heavier will the rain be; takes place,and continues with little interruption while, on the other hand, if they move briskly till towards the end of June. At that time, before the wind, let the direction be what it will, sometimes sooner and sometimes later, a west the atmosphere soon clears up. wind takes place ; but, as the causes producing That rattling in the noise of thunder, which the east wind are not removed, the latter opposes makes it seem as if it passed through arches, or the west wind with its whole force. At the place were variously broken, is probably owing to the of meeting there is naturally a most vehement pres- sound being excited among clouds hanging over sure of the atmosphere, and friction of its parts one another, and the agitated air passing irregu- against one another; a calm ensues, and the vapors larly between them. The explosion, if high in brought by both winds begin to collect and form the air and remote from us, will do no mischief; dark clouds, which can have little motion either but when near, it may destroy trees, animals, &c. way, because they are pressed almost equally on This proximity or small distance may be esti- all sides. For the most part, however, the west mated nearly by the interval of time between wind prevails, and what little motion the clouds seeing the flash of lightning and hearing the re- have is towards the east, whence the common re- port of the thunder, estimating the distance after mark in this country, that 'thunder clouds move the rate of 1142 feet per second, or three seconds against the wind'. But this is by no means uni- and two-thirds to the mile. Dr. Wallis observes versally true ; for if the west wind happens to that commonly the difference between the two be excited by any temporary cause before its is about seven seconds, which, at the rate above-

natural period when it should take place, the mentioned, gives the distance almost two miles, vast wind will often get the better of it; and the But sometimes it comes in a second or two, olouds, even although thunder is produced, will which argues the explosion very near us, or even move westward. Yet in either case the motion among us. And in such cases, the Doctor as- is so slow, that the most superficial observers sures us, he has sometimes foretold the mischiefs cannot help taking notice of a considerable re- that happened.

sistance in the atmosphere. That when two The following general observations are made streams of air are thus driven against each other, out from a comparison of a vast variety of more the space where they meet must become highly particular ones made in different places : l.The electrified, is as plain as that an electric globe air is almost always electrical, especially in the must be excited when friction is applied. It is day time and dry weather ; and the electricity is

true, as the substances here to be excited are both electrics per se, it may be objected that no electricity could be produced ; for we cannot ex- cite one electric by rubbing it with another. Yet it is observed that glass may be electrified by blowing strongly upon it, or by the explosion of cannon ; and even when glass is strongly

generally positive. It does not become negative- unless by winds from places where it rains, snows, or is foggy. 2. The moisture of the air is the constant conductor of its electricity in clear weather. 3. When dark or wet weather clears up the electricity is always negative. If it has been very moist, and dries very fast, the

pressed upon glass, both pieces become elec- electricity is very intense, and diminishes when Vor.. XXII.

the air attains its greatest dryness ; and may con- tinue long stationary by a supply of air in a drying state from distant places. 4. If, while the sky overcasts in the zenith, only a high cloud is formed, without any secondary clouds under it, and if this cloud is not the extension of an- other which rains in some remote place, the electricity (if any) is always positive. 5. If the clouds, while gathering, are shaped like locks of wool, and are in a state of motion among each other; or if the general cloud is forming far aloft, and stretches down like descending smoke, frequently a positive electricity prevails, more intense as the changes in the atmosphere are

quicker; and its intensity predicts the great .quantity of snow or rain which is to follow. 6. When an extensive, thin, level, cloud forms and darkens the sky, we have strong positive elec- tricity. 7. Low thick fogs, rising into dry air, carry up so much electricity as to produce sparks at the apparatus. If the fog continues round the apparatus without rising, the electricity fails. 8. When, in clear weather, a cloud passes over the apparatus, low and tardy in its progress, and far from any other, the positive electricity gra- dually diminishes and returns when the cloud has gone over. 9. When many white clouds gather over head, continually uniting with and parting from each other, and thus form a body of great extent, the positive electricity increases.

10. In the morning, when the hygrometer indi- cates dryness equal to that of the preceding day, positive electricity obtains even before sunrise.

*11. As the sun gets up, this electricity increases; more remarkably if the dryness increases. It diminishes in the evening. 12. The mid-day electricity, of days equally dry, is proportioned to the heat. 13. Winds always lessen the elec- tricity of a clear day, especially if damp; there- fore they do not electrify the air by friction on solid bodies. 14. In cold seasons, with a clear sky and little wind, a considerable electricity arises after sunset, at dew falling. The same happens in temperate and warm weather. If, in the same circumstances, the general dryness of the air is less, the electricity is also less. 15. The electricity of dew, like that of rain, depends on its quantity. This electricity of dew may be imitated by electrifying the air of a close room (not too dry) and filling a bottle with very cold water, and setting it in the upper part of the room. As the damp condenses on its sides, an electrometer will snow very vivid electricity. Such a collection of observations, to be fit for inference, requires very nice discrimination. It is frequently difficult to discover electricity in damp air, though it is then generally strongest ; because the insulation of the apparatus is hurt by the dampness. To make the observation with accuracy requires a portable apparatus, whose insulation can be made good at all times. With such apparatus we shall never miss ob- serving electricity in fogs or durintr snow. There is a very curious phenomenon which may be frequently observea in Edinburgh and other towns similarly situated. In a clear day of May an easterly wind frequently brings a fog with it, *hich advances from the sea in a dense body ; and when it comes up the High Street it chills*

the body exceedingly, while it does not greatly affect the thermometer. Immediately before its gaining the street, one feels like a tickling on the face as if a cobweb had fallen on it, and natu- rally puts up his hand and rubs his face. We have never found this to fail, and have often been amused with seeing every person rubbing his face in his turn. The same thing was ob- served at St. Petersburgh in a summer's evening when a low

fog came on about ten o'clock.

For the most part before thunder the wind is gentle or it is calm. A low dense cloud begins in a part previously clear: this increases fast in size; but this is only upwards, and in an ardieil form, like great bags of cotton. The lower sur- face of the cloud is commonly level, as if it rested on a glass plane. Soon after appear num- berless small ragged clouds, like flakes of cotton teazled out. These are moving about in various uncertain directions, and continually changing their ragged shape. This change, however, is generally by augmentation. Whatever occasions the precipitation of the dissolved water seems to gain ground. As these clouds move about, they approach each other and then stretch out their ragged arms towards each other. This is not by an augmentation but by a real bending of these tatters towards the other cloud. They seldom come into contact ; but, after coming very near in some parts, they as plainly recede, either in whole or by bending their arms away from each other. But, during this confused motion, the whole mass of small clouds approaches the great one above it; and when near it, the clouds of the lower mass frequently coalesce with each other before they finally coalesce with the upper cloud ; but as frequently the upper cloud increases with- out them. Its lower surface, from being level and smooth, now becomes ragged, and its tatters stretch down towards the others, and long arms are extended towards the ground. The hea- vens now darken apace, the whole mass sinks down ; wind arises, and frequently shifts in squalls ; small clouds are now moving swiftly in various directions ; lightning now darts from cloud to cloud. A spark is sometimes seen co- existent through a vast horizontal extent, of a crooked shape, and of different brilliancy in its different parts. Lightning strikes between the clouds and the earth — frequently in two places at once. A continuation of these shapes rarefies the cloud, and in time it dissipates. This is ac- companied by heavy rain or hail, and then the upper part of the clouds is high and thin. 1 hiring this progress of the storm the thunder rod is strongly electrified, chiefly when the principal cloud is over head. The state of the electricity frequently changes from positive to negative — almost every flash, however distant, occasions a sudden start of the electroscope, and then a change of the electricity. When the cloud is more uni- form, the electricity is so too. The question now is, In what manner does the air acquire this elec- tricity ? How come its different parts to be in different states, and to retain this difference for a length of time? and how is the electric equili brium restored? But upon these subjects we need add nothing to what is already said undELECTRICITY. The electric equilibrium i»-. in-

deed restored with surprising rapidity and to a great extent. Yet we know that air is a very imperfect conductor, and transmits electricity to small distances only, and very slowly. But air is rendered electrical in a great variety of ways. All operations which excite electricity in other bodies have the same effect on air. It is elec- trified by friction. When blown on any body, such as glass, &c., that body exhibits electricity by a sensible electroscope. We therefore con- clude that the air has acquired the opposite elec- tricity from this rubber. A glass vessel, ex- hausted of air and broken in the dark, gives a loud crack and a very sensible flash of light. An air gun, discharged (without a ball) in the dark, does the same. Blowing on an electric with a pair of bellows never fails to excite it. In short the facts to this purpose are numberless. Most of these and other phenomena are taken notice of under ELECTRICITY. These facts are also to be found among many experiments of M. Saussure. We see some of the effects very distinctly in several phenomena of thunder and lightning. Thus the great eruptions of ./Etna and Vesuvius are always accompanied by forked lightnings, which are seen darting among the volumes of emitted smoke and steam. Here is a very copi- ous conversion of water into elastic steam ; and here also it is most reasonable to expect a copi- ous decomposition of water by the iron and coaly matters, which are exposed to the joint action of fire and water. These two electricities will be opposite; or when not opposite will not be equal ; in either of which cases we have vast masses of steam in states fit for flashing into each other. The simple solution of water in air pro- duces electricity. And this is the chief opera- tion in nature connected with the state of the atmosphere. It is thus that the watery vapors from all bodies, and particularly the copious ex- udation of plants, disappear in our atmosphere. There can be no doubt but that the opposite electricity will be produced by the precipitation of this vapor ; that is, by the formation of clouds in clear air. Lastly, we know that the tourma- lin, and many of the columnar crystals, are ren- dered electrical by merely heating and cooling. When water is precipitated, and forms a cloud, it is reasonable to expect that it will have the electricity of the air from which it is precipitated. This may be various, but is in general negative ; for the heat by which the air was enabled to dis- solve the water made it negative. But if it be cooled so fast as to precipitate it in the form of rain, or snow, or hail, we may expect positive electricity. Accordingly, in summer, hail show- ers always show strong positive electricity ; so does snow when falling dry. Here, then, are copious sources of atmospheric electricity. The masses of air thus differently constituted are evi- dently disposed in strata. The clouds are seen to be so. \Vhen the wind, or stratum in motion, does not push all the quiescent air before it, it generally gets over it, and then flows along its upper side, and, by a partial mixing, produces a fleecy cloud. This is the state of the atmosphere, consisting of strata of clear air many hundred yards thick, separated from each other by thin fleeces of clouds. This is no

fancy ; for we ac-

tually see the sky separated by :,trata of clouds at a great distance from each other. And we se

is by no means a frequent case that a discharge is made into the earth. The air intervening be- tween the earth and the lowest coating is com- monly very much confused in consequence of the hills and dales, which, by altering the cur- rents of the winds, toss up the inferior parts and mix them with those above. This generally keeps the earth pretty much in the same electrical state as the lowest stratum of clouds. There are, however, many melancholy instances of the vio- lent effects of thunder storms on the earth.

THUNDERBOLT. When lightning acts with extraordinary violence, and breaks or shatters any thing, it is called a thunderbolt, which the vulgar, to fit it for such effects, suppose to be a hard body, and even a stone. When we con- sider the known effects of electrical explosions, and those produced by lightning, we shall be at no loss to account for the extraordinary opera- tions vulgarly ascribed to thunderbolts. As stones and bricks, struck by lightning, are often found in a vitrified state, we may reasonably suppose, with Beccaria, that some stones in the earth hav- ing been struck in this manner gave occasion to the vulgar opinion of the thunderbolt.

THUNDERSTORM, a storm of lightning and thunder, generally attended with hail, rain, and wind.

THURGOVIA, or THURGAU, a canton in the north-east of Switzerland, adjoining the lake of Constance and the course of the Thur. Its ex- tent is 350 square miles. The surface is in part level, and the hills, where they occur, do not exceed a height of 2500 feet above the lake. The products are wheat, barley, oats, rye, flax, hemp, and vines, and the pastures are extensive. Apple trees abound ; occupying in various places orchards, and in one quarter an extensive forest. Cotton and silk are both manufactured ; but the staple article is linen, which was introduced so far back as the thirteenth century. The canton is divided into eight bailiwics. Population 77,000, of whom one-fourth only are Catholics, the others Calvinists.

THURIA, an ancient town of the Morea, in Messenia, towards the eastern frontier, the ruins of which are still extensive, covering a hill at the foot of the ridge of Taygetus.

THUII.E, THURII, or THURIUM, an ancient town of Italy, in Lucania,

built by a colony of Athenians near the ruins of Sybaris, A. A. C. 444. Among these colonists were Herodotus the his- torian and Lysias. Strab. vi. Mela ii. 4.

THI;RI.E, a town of Messenia. — Paus.

TIIURIFICAT1ON, n. ». Lat. tkuris and facto. The act of fuming with incense; the act of burning incense.

The several acts of worship which were required to be performed to images are processions, genuflec- tions, thurifications. deosculations, and oblations.

THU

THURINGI. the ancient inhabitants of Thu- ringia. They were a tribe of the Catti, or, ac- cording to others, of the Vandals. They are mentioned by Tacitus, and were very numerous.

TIH RINGIA, in ancient geography, the country of the ancient Thuringi, was formerly a kingdom, afterwards a county, then a landgra- vate, and was governed by its own princes for

many ages till 1124, when it devolved to the marquis of Misuia, and, with that country, after- wards to the duke of Saxony.

THURIXGIA FOREST, a hilly and woody tract of country in the interior of Germany, ex- tending through a number of petty principalities, Eisenach, Gotha, Weimar, Coburg, &c. It is a part of the ancient Hercynian forest, has a length of about seventy miles, and varies in breadth from nine to sixteen, covering an area of about 1000 square miles. It is thinly peopled, con- taining only hamlets or small villages. It is, however, rich in metals, particularly iron. Its highest peaks vary in height from 2000 to 280O feet. It is covered with wood in every direc- tion, and gives rise to a number of streams which flow into the adjacent plain, and finally into the Maine, the Weser, and the Elbe.

THURLOE (John), an English statesman under Oliver Cromwell, was born at Abbot's Roding in Essex in 1616, of which parish his father was rector, and was educated to the study of the law. In 1648 he was made receiver of the cursitory fines. When Oliver Cromwell assumed the protectorship he became secretary of state ; in 1655 he had the care and charge both of foreign and inland postage ; and was af- terwards sworn a member of the privy-council. He was continued in the same offices under Richard Cromwell, and until measures were taken for the restoration, when he made an offer of his services to that end, which, however, was not

accepted. May 15th, 1660, he was com- mitted to the custody of the serjeant at arms on a charge of high treason ; but being soon released he retired to Great Milton in Oxfordshire; and, though he was afterwards often solicited by Charles II. to engage in the administration of public business, he declined the offers. He died in 1668; and was a man of an amiable private character, who in the highest of his power exer- cised all possible moderation towards persons of every party. The most authentic testimony of his abilities is his vast collection of state papers, in 7 vols. folio.

THURLOW (Edward), lord high chancelloi of Great Britain, was born in 1758, at Ashfield, Norfolk, and, after passing some time at Cam- bridge, came to London to study the law. He was called to the bar in 1758, and raised himself to notice by his manly opposition to Sir Fletcher Norton. In the Douglas cause he displayed such ability that the public attention was turned towards him as formed to reach the highest sta- tions in his profession. In 1770 he was ap- pointed solicitor general, and the next year at- torney general. In June 1778 he was created a peer, and the day following nominated lord high chancellor. This office he resigned in 1783, but, on the re-admission of Mr. Pitt into the cabinet, he again was promoted to the seals, and kept them till 1793. After that time he lived in re- tirement, and died, after an illness of two days, at Brighthelmstone, 12th September, 1806. His character as a lawyer is fixed on the firm basis of his extensive knowledge, quick penetration, correct judgment, and undeviating integrity. Though overbearing in his manners, he was zea- lously attached to his party, inflexible in his opi- nions, and loyal in his conduct

THURROCK-GRAYS, a market-town in Clifford hundred, Essex, near the Thames, at the bottom of St. Clement's Reach, twenty-one miles east of London. It consists chiefly of one irre- gular street, in which is the market-house, over which is the room where the petty sessions are held ; the church is an ancient building, in the form of a cross. Market on Thursday, well sup- plied with corn, which is sold by samples. Fair 23d of May.

THUS, adv. Sax. Sup. In this manner ; in this wise; to this degree or quantity.

I have sinned against the Lord, and thui and thus have I done. Joshua vii. 23.

It cannot be that they who speak thus should thus judge. Hooker.

The knight him calling, asked who he was 1 Who lifting up his head him answered thus. Spenser.

To be thus is nothing ; But to be safely thus. Shahspeare. Macbeth.

A counsellor of state in Spain said to his master, I will tell your majesty thus much for your comfort, your majesty hath but two enemies ; whereof the one is all the world, and the other your own ministers.

Bacon.

The Romans used a like wise endeavour, and whiles in a higher, in a wiser strain, making concord a deity ; thus seeking peace, not by an oath, but by prayer. Holi/day.

That the principle that sets on work these organs is nothing else but the modification of matter, thus or (has posited, is false. Judge Hale.

lie said, Thus far extend, thus far thy bounds.

Milton.

No man reasonably pretends to know thus much, but he must pretend to know all things. Tillotson.

Beware, I warn thee yet, to tell thy griefs In terms becoming majesty to hear ; I warn thee thus, because I know thy temper Is insolent. Dri/den's Don Sebastian.

Thus much concerning the first earth, and its pro- duction and form. Burntt's Theory.

This you must do to inherit life ; and if you have come up thus far, firmly persevere in it. Wake.

THUS, frankincense, a solid brittle resin, brought to us in little globes or masses, of a brownish or yellowish color on the outside, in- ternally whitish or variegated with whitish specks. It is supposed to be the produce of the pine that yields the common turpentine, and to concrete upon the surface of the terebinthinate juice soon after it has issued from the tree. See INCENSE.

TIIUSCIA, an ancient name of Etruria, whence Tuscany, one of its modern names, is derived.

THWACK, v. a. & n. s. Sax. Saccian. To strike with something blunt and heavy; to thresh ;.to bang ; to belabor : a heavy hard blow. A ludicrous

word.

He. shall not stay ; \V11 thwack him hence with distaffs. Shahspeare.

But Talgol first with a hard thwack Twice bruised his head, and twice his back.

Hudibras.

They place several pots of rice, with cudgels in the neighbourhood of each pot ; the monkeys de- scend from the trees, take up the arms, and belabour one another with a storm of thwacks.

Addison's Freeholder.

*Nick fell foul upon John Bull, to snatch the f i:d;*el he had in his hand, that he might thwack Lewis with it. Arbuthnot.*

THY

These long fellows, as sightly as they are, should find their jackets well thwacked. Id,

THWART, adj., v. a., & v. n. Sax. Spyji ; Belg. dwars. Transverse ; cross to something else : the verbs corresponding.

Some sixteen months and longer might have staid, If crooked fortune had not thwarted me. S.'m&iwr-e.

Lesser had been

The. thwartirf of your dispositions, if You had not showed how you were disposed Ere they lack power to cross you. Id. Coriolanus.

This else to several spheres thou must ascribe, Moved contrary with thwart obliquities. Milton.

Swift as a shooting star In autumn thwarts the night. Id. Paradise Lout.

The rays both good and bad, of equal power, Each thwarting other made a mingled hour.

Dryden.

It is easy to be imagined what reception any propo- sition shall find, that shall at all thuart with these internal oracles. Locke.

The understanding and will then never disagreed ; for the proposals of the one never thwarted the in- clinations of the other. South.

In vain did I the godlike youth deplore : The more I begged, they thwarted me the more.

Addison.

Neptune atoned, his wrath shall now refrain, Or thwart the synod of the gods in vain.

Pope's Ofiyfaeij.

Yon stream of light, a thousand ways Upward and downward thwarting and convolved.

Thomson .

By thwarting passions tost, by cares opprest, He found the tempest pictured in his breast.

Youny.

TsiV, prim. \ Sax. $in. Of thee; belong- THYSELF. S ing to thee ; relating to thee ; the possessive of TIIOU, which see. Thyself is the reciprocal pronoun.

Come high or low, Thyself and office deftly show.

S/takspeiire. Macbeth. It must and shall be so ; content thyself.

Shukspeare.

Whatever God did say, Is all thy clear and smooth uninterrupted way.

Couiley.

These are thy works, parent of good ! Milton. These goods thyself can on thyself bestow.

Dryden.

THYA, a town of Phocis near Delphi. THYA, a name of Cybele. See OPS. THYADES, a name of the Bacchanals. THYAM1S, a river of Epirus. Paus. i.e. 11. THYATIRA, an ancient city of Asia Minor in Lydia; originally called Pelopia, formerly very flourishing (Liv. 37, c. 8. and 44), and fa- mous in the apostolic age for its early reception of Christianity. Rev. ii. 18,

THYBARNI, an ancient nation of Asia, near Sardis. Diod. 17.

THYESTES, the son of Pelops and brother of Atreus, whose wife he debauched ; which was followed by a series of horrid crimes. See ./ EGISTHUS, ATREUS, CLYTEMNESTRA, PEI.O- PEIA, &c.

THYMBRA, an ancient town of Lydia near Sardis, famous for a battle fought between Cyrus king of Persia and Crcesus king of Lydia, in which the hitter was defeated See CRtrsi s» and CYF.I -.

THYMBRA, in botany, mountain hyssop, a ge- nus of plants of the .class didynamia and order gymnospermia; and in the natural method rank- ing in the order of verticillatae.

THYMBRA, a district of Tioas where there was a temple of Apollo; whence

THYMBR.EUS, a surname of Apollo.

THYMBRIS, a nymph, the mother of Pan.

THYMBRIUS, a river of Troas running into the Scamander through Thymbra.

THYME, n. s. Fr. thym ; Lat. thymus. A plant. See TUYMUS

No more, my goats, shall 1 behold you climb The sleepy cliffs, or crop the flowery thyme.

Dryden.

THYMIATHIS, a river of Epirus. Strab. 7.

THYMOCHARES, an Athenian general who was defeated by the Spartans.

THYMCETES, a Trojan prince, the son of Laomedon king of Troy, whose wife and son having been killed by order of king Priam, he, in revenge, advised the Troj.ms to admit the wooden horse of the Greeks, by which Troy was destroyed. Virg. /En. ii. 32.

TIIYMOTES, another Trojan prince, son of Hicetaon and grandson of Laomedon, who ac- companied ./Eneas into Italy, where he was killed by Turnus. JEn. x. 123.

THYMCETES, king of Attica, the son of Oxyn- thus, the last king of the family of Theseus. He was deposed because he refused to fight Xanthus king of Boeotia about A. A. C. 1128.

THYMUS, in anatomy. See Ax ATOMY, In- dex.

THYMCS, thyme, in botany; a genus of plants belonging to the class of didynamia and order of gymnospermia; and in the natural system rang- ing under the forty-second order verticillatze. The calyx is bilabiate, and its throat closed with soft hairs. There are eleven species, of which two only are natives of Britain ; viz. l.T. acinas, wild basil, has flowers growing in whirls on sin- gle footstalks ; the stalks are erect and branched ; the leaves acute and serrated. 2. T. serpyllum, or mother of thyme, has pale red flowers growing on round heads, terminal; the stalks are pro- cumbent, and the leaves plane, obtuse, and ci- liated at the base. 3. T. vulgaris, common garden thyme, is a native of France, Spain, and Italy.

1IIYNI, or Bihyni, an ancient people of Bi- thynia.

THYODAMAS, or THEODAMAS, a king of Mysia killed by Hercules.

THYRE, a town of Messenia famous for a battle fought between the Argives and Spartans.

THYREA, an island on the coast of Pelopon- nesus near Hermione. — Herod, vi. 76.

THYRSAO ET./E, an ancient nation of Sarraa- tia, who lived chiefly by hunting. — Plin. iv., c. 12.

THYRSUS, in antiquity, the sceptre of Bac- chus, and wherewith they furnished the menades in their Bacchanalia. The Thyrsi were spears made wholly of wood, entwined with leaves and twigs of the vine and ivy.

THYRSUS, in botany, a mode of flowering re- sembling the cone of a pine. It is, says Linna-us a pauu'lo contracted into an oval or egg-shaped form. The lower foot stalks, which are longer,

extend horizontally, whilst the upj>er ones are shorter and mount vertically. Lilac aud butler- bur furnish examples.

THYRSUS, in geography, a river of Sardinia, now called Onstagni.

THYSIUS (Anthony), a celebrated philologist, born at Harderwick, in

Holland, in 1603. He became professor of poetry and rhetoric, and librarian to the university of Leyden. He pul>- lished 1. Compendium Historian Bataviese; 2. Exercitationes Miscellanese; and several accurate editions of the classics cum notis variorum.

THYSSOS, an ancient town of Macedon, near mount Athos.

THY US, a satrap of Paphlagonia, who revolted from Artaxerxes II., and was seized by Datames. — Corn. Nep. in Dat.

TI'AR, n. s.) Fr. tiare ; Lat. tiara. A

TIA'RA. J dress for the head ; a diadem.

His back was turned, hut not his brightness hid ; Of beaming sunny rays a golden tiur Circled his head. Milton's Paradise Lost.

This royal robe and this imra wore Old Priam, and this golden sceptre bore In full assemblies. Drifdens ˆneid

Fairer she seemed, distinguished from the rest, And better mien disclosed, as better drest ; A bright tiara round her forehead tied, To juster bounds confined its rising pride. Prior

A tiar wreathed her head with many a fold, Her waist was circled with a zone of gold. Pope.

TIARA is the name of the pope's triple crown. The tiara and keys are the badges of the papal dignity ; the tiara of his civil rank, and the keys of his jurisdiction ; for as soon as the pope is dead his arms are represented with the tiara alone, without the keys. The ancient tiara was a round high cap. John XXIII. first encompassed it with a crown. Boniface VIII. added a second crown; and Benedict XII. a third.

IT All ELLA, in botany, a genus of the digy- nia order and decandria class of plants ; natural order thirteenth, succulents; : CAL. quinquepar- tite; COR. pentapetalous, and inserted into the calyx ; the petals are entire : CAPS, unilocular and bivalve, the one valve being less than the other. There are two species, viz., 1. T. cordi- folia, with heart-shaped leaves; and 2. T. trifo- lia, the three-leaved tiarella.

TIARINI (Alexander), a celebrated painter, born at Bologna, in 1577: he painted historical pieces and portraits in a fine style. He died in

1668.

TIASA, a river of Laconia ; so named from a nymph, the daughter of Eurotus. — Paus. lii c. 18.

TIBBOO, a semi-barbarous people of (tut nil Africa, whose country is on the south of Fezzan and north of Borneo. The people of Fezzan do not in general consider it safe to travel the desert along with them ; and the Rock Tibbo, in parti- cular, who inhabit a mountainous district, situ- ated to the south-east of Fezzan, are rude and ferocious.

TIBER, a river of Italy, celebrated in the annals of the ‘ Eternal Empire,’ rises from the Apennines near the eastern confines of Tuscany, and flows from north to south, till it passes Rome, and enters the sea below that city. As

it traverses the imperial city, a late traveller ob- serves— ‘ though choaked and shallowed by the debris of its banks, and the crumbling edifices of successive centuries, broad, deep, and unruf fled by the ruins which it conceals, it is still the yellow muddy Tiber of the Augustan age, finely corresponding in tone and color with the dusky ruins that nod on its shores.’ It receives the Chiano from the west, with the Nera and the Velino from the east and south-east.

TIBERIADES, in Roman mythology, the nymphs of the Tiber.

TIBERIAS, in ancient geography, the last town of Galilee, situated on the south side of the lake Tiberias ; built by Herod the Tetrarch, named in honor of the emperor Tiberius ; thirty stadia from Hippus. Jerome says its an- cient name was Chennereth. It is now called TABARIA, which see.

TIBERIAS, LAKE, or SEA OF. See GENNESA- RETH.

TIBERINUS, a king of Alba, who was drown- ed in the Albula ; on which its name was changed to Tiber. See ROME.

TIBERIUS I (Claudius Nero), the third em- peror of Rome, and one of the greatest monsters that ever reigned in it. He was the step-son, colleague, and successor of Augustus. See ROME. TIBERIUS II. was a Thracian by birth, and rose by his merit to the highest offices in the state ; and at last Justin II. associated him as his colleague in the eastern empire, A. D. 574. On the death of Justin, in 578, he became sole em- peror ; and reigned with great justice and mo- deration. He defeated the Persians, and died in

TIBERIUS (Claudius), was also the name of the emperors Claudius and Nero.

TIBESIS, a river of ancient Scythia, rising from mount Haemus, and falling into the Ister. — Ilerod. iv. 49.

TIBET, TIBBET, or THIBET, a part of Inde- pendent Tartary, extending from the source of the Indus to the borders of China, and from Hindostan to the deserts of Gobi. Its length, from east to west, is about 1500 miles; the breadth unequal, and in many parts unknown. The native name is Pue, or Puekachim ; Pue signifying northern, and Koachim snow ; an ap- pellation given on account of the coldness of the climate.

The distinguishing feature of this country is its great and general elevation. It includes the great range of Himmaleh, or Himalaya moun- tains (the abode of snow), theheightofwho.se loity summits has never been correctly deter- mined ; but Mr. Colebrooke considers the evi- dence sufficient to warrant his asserting (1816) that the peaks of the Himmaleh chain greatly exceeded those of the Andes. The part west of the Indus is denominated Hindoo Coosh, but the most elevated points are east of that river. From the north-east of Cashmere the chain bends to the south, and is still more stupendous. It crosses the sources of nearly all the rivers that water the south and south-east parts of Asia; but, on the north-east of Hindostan, it becomes less continuous, and is traversed by several rivers, among which are the Gunduck,

the Teesta, the Burram pooler, ana others. East of this it penetrates into an unexplored region, and is supposed to terminate on the shores of the Chinese Sea. While it forms the great bulwark of the table-land, its elevation is enormous, but it declines in altitude towards the east. On the northern side, the descent to the plains of Tibet is small in comparison with the altitude of the vast southern ramparts that overlook Gangetic Hindostan. See HIMALAYA.

Captain Turner crossed a part of this chain in 1783, when sent from the supreme government of India on an embassy to the Teshoo Lama. This officer traversed one of the passes above Bootan, and 700 or 800 miles east of the place where the chain is intersected by the Sutledge. His mission also required him to cross a great part of the Plateau of Southern Tartary, to which, in this eastern region, as well as in the more western parts, the descent is inconsiderable compared with that on the opposite side. AH the passes are either in the beds, or on the banks of the rivers that wind through the ravines and chasms of the chain. These statements apply

particularly to the southern side of the great range. Little is known respecting the interior, beyond its being a region of mountains and deserts, intersected by fertile valleys, and watered by the germs of those noble streams that ulti- mately roll their spacious floods into the southern and eastern ocean. The political division of the country is of course involved in equal mystery; and though the following provinces are known (the two former towards the east, and the latter in the south-west), they are separated by large intervening and unexplored regions. These ter- ritorial divisions are, 1. Lassa; 2. Teshoo Loom- boo ; 3. District of Undes ; 4. Lahdack.

North of the great frontier chain another rises, scarcely of inferior height. The space between these is distinctly marked for about 200 miles by the course of the Sutledge, and, though varied by smaller ridges, is in general between thirty and forty miles in width. Behind the inner range the Tartaric plain inclines towards the north, as the rivers begin to flow in that direc- tion. In the north-west part of the Calais mountains is an elevated summit covered with perpetual snow, and represented by Hindoo superstition as the principal throne of theii divinity, Siva, who, they must think, delights in the perfection of cold, to have chosen such an abode.

Several lakes of Tibet are much venerated by the Hindoos, and are objects of frequent pil- grimages, particularly two near the source of the Sutledge. They think them holy, but a more rational observer is at a loss to account for this supposed sanctity, unless from the sterility of the soil, the severity of the climate, and the diffi- culty of access; for whatever smooths the way to an object of veneration, lessens its purity in the view of superstition. The most celebrated is the Manasarovara, which is principally sur- rounded by steep rocks. It is of an oblong shape, about fifteen miles long, and nearly twelve broad. The waters are clear and of a greenish hue ; but, as the heat of the sun while near the meridian, and the cold constantly ema-

nating from the vast masses of snow that clothe the adjacent summits, maintain a perpetual con- flict in this elevated region, they are almost con- tinually agitated. When Mr. Moorcroft saw it in August, the mountain torrents by which it is fed were most of them dry, and the water was supposed to be at the lowest ; but there was no appearance of its ever rising more than a few feet above that level, which would still be far within its banks, as they rose in many places to nearly 300 feet almost perpendicularly. On the ledges of these steep acclivities, several huts made of loose stones were placed. They were only accessible by ladders, and

apparently in- habited by religious devotees. Numerous flocks of aquatic birds resort to this lake at certain seasons, when its surface is almost covered with them, and thousands are bred in its vicinity. The Manasarovara is not merely looked upon as sacred by the Hindoos, but by the Undes and Chinese Tartars, who consider it as a religious duty to carry the ashes of their relations and mingle them with its waters. Another of these sacred lakes is Ilawan's Hrad, about ten or twelve miles west of Manasarovara ; but it is thought to be less holy, and has consequently been less frequented. It is formed of two branches, the one stretching east, and the other south, enclosing a projecting part of the moun- tain between them. It is much larger than the Manasarovara, and its waters at a distance ap- pear of an indigo blue. Great part of its shores is covered with long grass, and the river Sutledge issues from its western extremity.

Other lakes are found among the mountains of Tibet, and, though often much larger than those already described, are held less sacred. One of the most singular is Lake Palte, near the northern base of the Himmaleh chain. It is an extensive moat, about two leagues broad, surrounding an island nearly forty leagues in circumference. Lake Terkiri is situated beyond a chain of moun- tains that stretches from east to west in lat. 31° or 32°. It is the largest known lake in Tibet, and is about eighty English miles long, and from thirty to forty broad. Lake Pouca also extends through a space of forty or fifty miles at a short distance north-west of Terkiri, but is narrow in proportion.

In the temperature and return of the seasons a singular uniformity prevails. The spring is from March to May ; but in this season, which is extremely dry on the south side of the Him- maleh mountains, thunder storms and showers occasionally occur in Tibet. From June to Sep- tember more heavy and continued rain falls, while the rivers are swelled, and the mountain streams become torrents. From October to March the sky is seldom obscured by a cloud ; and for three months the cold is extremely in- tense, particularly in the southern parts, where the temperature is most influenced by the snowy mountains, which rise, like a screen of perpetual congelation, between them and the heated atmosphere of the Gangetic plains. In the middle of September, 1783, the thermometer at Tuena fell below the freezing point. Near these mountains fish and meat are frozen in the autumn, and thus preserved through the winter.

The air is then extremely dry, and produces the same effect as the scorching winds of Hindostan. Every thing appears parched. Vegetation is dried even to brittleness, and crumbles into dust. This severity obliges the scanty population to seek refuge in the valleys, which, in favorable situations, and particularly near the banks of the rivers, are cultivated, and yield slight crops of barley, pease, and wheat ; but the last is so "'scarce as

seldom to be used by the lower classes. Many parts, however, afford pasturage for nu- merous flocks and herds. In most other places the country is a mere desert, composed of naked hills of clay, strewed with the shivered fragments of rocks split by the intensity of the frost, or covered with deep beds of fine sand, from which every particle of moisture is exhausted by the dry ness of the atmosphere.

Contrasted with Bootan, and other districts on the south of the great chain, the number of quadrupeds here is astonishing. Flocks, droves, and herds, are numerous. Beasts of prey, game, and wild fowls, are every where met with. Among the most remarkable of the domestic animals is the grunting ox, or yak, of Tartary, frequently called the bushy-tailed bull. It is covered with a thick coat of long wooly hair, which gives it a bulky appearance, though it is not larger than many of the English cattle. The ox is noted for its tail of fine bushy hair, so much valued in Hindostan, where they are uni- versally used as chowries for driving away flies, as well as for ornamental purposes. They are fed on the short herbage that grows on the mountains and the bleak plains ; but are never employed in agriculture, though sometimes used as beasts of burden. Tents are also covered with felt made of their hair. The other cattle are of the same kind as those of Hindostan. The musk-deer is also a peculiar animal belonging to this elevated region, and appears to delight in its intense cold. It is about as large as a middle- sized hog, which it resembles in shape ; and is covered with a thick coat of hair. The musk is secreted in a small pouch under its belly, and is only found in the male. Nature has supplied most of the animals of southern Tartary with an abundant covering to shield them from the se- verity and changes of the atmosphere incident to those high regions. The sheep has a lu ;i\ v fleece of fine wool, and the common goal a covering of downy fur under its long shaggy hair. The cow is also clothed in the same man- ner ; and the shawl-goat is of a peculiar species, frequently of a light fawn color. It is about the size of a small sheep; and the substance of which the shawls are made is the soft downy covering next the skin, the delicacy of which is preserved by an outer coat of shaggy hair. Numerous flocks of sheep are bred in Tibet, and their flesh forms a great part of the animal food of its in- habitants. They are also used as beasts of bur- den, and whole flocks are sometimes seen in motion, loaded with grain or salt, each carrying from twelve to twenty pounds. The skins of the lambs are highly valued in many parts for lining vests and making turbans. The hare qf Tibet is also distinguished for the quantity and fineness of its fur ; and the bharal winch par-

*takes of the nature both of the deer and the sheep, has a coating of fine fur under its outward covering of brittle hair, common to the deer species. The horses are larger than those of Bootan ; but the mule is much used in the com- merce of the country. Both these animals, to- gether with asses, are found wild. The dog /esembles the Nepaul mastiff, and is stout and rerocious. Other wild animals al*o abound in the unfrequented parts of the country.*

Major Latter commanding in the Sikkim ter- ritories, on the borders of the great Himmaleh range, lately procured a curious Tibetan manu- script, containing the names of different animals; and, in the class of those whose hoofs are di- vided, there was an animal called the one-horned tso'po. 'Upon enquiring what kind of an ani- mal it was,' says major L., ' to our astonishment, the person who brought me the manuscript, de- scribed exactly the unicorn of the ancients ; saying that it was a native of the interior of Ti- bet, about the size of a tatoo (a horse from twelve to thirteen hands high), fierce, and ex- tremely wild, seldom if ever caught alive, but frequently shot ; and that the flesh was used for food. The person who gave me the information has repeatedly seen these animals, and eaten the flesh of them. They go together in large herds, like our wild buffaloes, and are very frequently to be met with on the borders of the great desert, about a month's journey from Lassa, in that part of the country inhabited by the wandering Tar- tars.'— Fraser's Tour.

Gold is found in several places ; but is only worked on a small scale for the Chinese govern- . ment, or by such persons as enter into a contract with it for that privilege. These contracts are limited to the number of workmen that will an- nually produce the government about 400lbs. of the refined metal. Silver and iron seem not to be procured, and the scarcity of fuel is an insur- mountable obstacle to mining of all kinds. Cin- nabar, containing a large quantity of quicksilver, is found, and might be worked with great advan- tage if fuel were attainable. Nitre is sponta- neously produced in great abundance in many parts, and marbles, with other valuable fossils, are hidden in the bosoms of the mountains. Tincal is likewise one of the peculiar minerals of this upper region of the globe ; and Mr. Saunders, who accompanied captain Turner on his embassy, observes, ' The lake whence tincal and rock-salt are collected is about fifteen days' journey from Theshoo-Loomboo, and to the northward of it. It is encompassed on all sides by rocky hills, without any brooks or rivulets near at hand ; but its waters are supplied by springs, which, being saltish to the taste, are not used by the natives. The tincal is deposited or formed in the bed of the lake, and those who go to collect it, dig it up in large masses, which they afterwards break into small pieces for the conve- nience of carriage, and expose it to the air to dry. Although tincal has been collected from this lake for a great length of time, the quantity is not perceptibly diminished, and as

the cavities made by digging it soon wear out, or fill up, it is an opinion with the people that the formation of iresh tincal is going on The> never have yet met

with it in dry ground, or high situations, but it is foiind in the shallowest depths, and on the bor- ders of the lakes ; which, deepening gradually from the edges towards the centre, contain too much water to admit of searching for the tincal conveniently; but from the deepest parts they bring rock-salt, which is not to be found in shal- lows or near the bank.'

„ The modern capital of Tibet is Lassa : the residence of the Dalai Lama. It is about forty- five days' journey from Pekin, and 220 English miles from the north-east borders of Bengal. He is supposed to be an incarnation of the deity. Here also resides the Chinese tazin, or viceroy, whose authority extends about 650 miles furtTier to the west.

Teshoo Loomboo, the residence of the Teshoo Lama, is situated south-east of Lassa, and about 180 miles from the northern extremity of Ben- gal. This place is properly a large monastery, comprising 300 or 400 nouses, inhabited by Gy- longs, or monks, besides the palace of the sove- reign pontiff, with numerous temples and mauso- lea. The buildings are of stone, and two or three stories high, with flat roofs and parapet walls, \hen Teshoo Loomboo was visited by captain Turner, the establishment of the monas- tery included 3700 monks, who were engaged in the daily services of the Goomba, or temple. Their stated times of devotion are sun-rise, noon, and sun-set; and their religious ceremonies are superintended by fcur lamas or high-priests, chosen from among their own body. From Te- shoo Loomboo roads diverge to Bootan, Bengal, Cashmere, China, and other quarters. Most of the other places in Tibet are either forts or villages.

Much of the trade of Tibet is carried on with China. Caravans, consisting of 500 or 600 men, travel between the two countries. They trans- port their goods chiefly on cattle and mules, but a few horses are sometimes employed. The Chi- nese merchants carry tea, various kinds of wrought silks, a little European broad-cloth, silver, China-ware, pearls, and coral, besides European cutlery, and a few other articles. From Lassa they return with the coarse cloth made in the country (its sole manufacture), gold, and va- rious other commodities imported from Bengal. A commercial intercourse is also maintained with Assam. The merchants meet on the confines of the two countries, and chiefly exchange silver and salt, on the one part, for rice, silks, cloth, and iron, on the other. The principal exports from Tibet to Hindostan, by way of Nepaul, are musk, cow-tails, and sable-skins, which are the produce of the country, with tea and other things previously received from China. Gold is also sent from Tibet, but, as there is always much secrecy observed in dealing in that metal in the east, the

amount cannot be ascertained. Tincal is likewise exported to Hindostan. In addition to the produce and manufactures of India, seve- ral European goods, with otter-skins, pearls, coral, and some other things, are sent across the mountains. A commercial intercourse is like- wise maintained between Tibet and Cashmere ; •whence the Tibetans receive shawls, saffron, an-1 dried fruits, in exchange for silver, tea, ,-i.«i shawl wool.

Tibet has been subject to the Chinese, for more than 100 years, and the orders of the em- peror are therefore enforced by the raja, naib or deputy, an officer who administers the tempo- ral affairs. He is, like the supreme pontiff, a mysterious being, and subject to similar trans- migrations, and his identity is ascertained in the same manner. He is justly considered the civil ruler of the state, under the restrictions arising from the Chinese Tazin, on the one hand, and the permanent laws and customs of the realm on the other. In the. discharge of these duties the rajah is assisted by a council consisting of four shuhbehs, or viziers, who are always natives. When a vacancy occurs in this council it is filled up by the rajah and the remaining members, but the nomination must first be confirmed by the Chinese tazin, and ultimately by the empe- ror, with whom the real appointment, therefore, virtually rests. A series of officers fill up the inferior departments of the state. — The laws have long been composed, and have a great analogy to those of China.

The religion is Buddhism, the lamas or priests of which are monks, who profess to renounce the pleasures of the world, and devote them- selves wholly to exercises of religion. They re- ject the distinction of caste,- and admit proselytes of any nation into their order. They consider themselves as the followers of Sakya Gamba, an incarnation of the deity, who removed from Hindostan to Lassa, about eighteen centuries ago, and has resided there ever since in the per- son of the dalai lama. There are also several other lamas in Tibet, who are considered as different incarnations of Buddha, particularly the teshoo lama who is the spiritual guide of the Chinese emperor. The dalai lama is considered by his followers as an incarnation of the deity, manifested iu a human form, and, when one body dies, he is supposed, after a certain period, to enter into another, and manifest himself afresh to his priests. He never appears in public but once a year, when he goes to worship in the great temple. He pays no attention to domestic concerns, and the Chinese tazin spares him the trouble of attending to the temporal affairs of the government, further than giving his sanction to any important measure that may be transacted oy the Chinese functionary. His life seems, therefore, to be passed in a kind of dosing apa-

thy, and, when he dies, his body is exposed to the air till it becomes dry. It is then inshrined in a case of highly-wrought silver, and placed in the temple as an object of worship. Thus the religion of Tibet differs in some essential parti- culars from that of the Hindoos. The people are divided into two distinct classes, the duty of the one being to transact the business of the world, and that of the other to maintain an in- tercourse with heaven. The Brahmins acknow- ledge no superior ; but at the head of the Tibetan •m is placed the Lama, immortal and imma- culate ; who is not only the vicegerent of the deity, but the centre of the civil authority. A regular gradation is also maintained through the whole order of the ey longs, from the highest to the youngest noviciate.

The language of Tibet consists chiefly of nasal

and guttural sounds. The characters of the al- phabet are of two kinds, the one sacred, and the other employed in common concerns. The man- ner of writing is from left to right. The g) longs go through a regular course of education, and are the principal instructors of youth. The most celebrated school in Tibet is at Laprung, and is frequented by students from the adjoining countries. The course of education occupies twelve years, which are passed in the study of logic, astronomy, philosophy, medicine, and the- ology. Captain Turner found them acquainted with the satellites of Jupiter, and Saturn's ring, but their astronomy is merely subservient to as- trology. Their sacred alphabet is allowed to have been borrowed from the Sanscrit. Print- ing has long been known among them ; but it is chiefly confined to the multiplication of religious tracts, and is not done by moveable types, but by blocks, or set forms. Though this art has been known from a remote period, the preva- lence of superstition, or the want of invention, has prevented any improvement from taking place.

The inhabitants are more robust and less swarthy than the Hindoos. A late traveller re- presents them of a mild and gentle disposition. The men are stout, and the women of brown ruddy complexion ; both deriving health and vigor from the cool breezes of their native moun- tains. Warm clothing is constantly worn, and is made of a coarse woollen cloth in summer, and of fox or sheep skins, in winter. The loose robes and trowsers of the higher classes, in the neighbourhood of Lassa, are in the warm season frequently made of European broad cloth, and in winter the upper garments of the affluent are lined with sable and other furs. The dress of the religious orders consists of a vest of woollen cloth, with sleeves of a deep garnet color. They also wear a large mantle, with a kind of philibeg, and wide boots, made of hides, and lined with either fur or cloth. The priests of the two orders are distinguished by their dress; those over whom the Dalai lama presides wearing a red cap, while those who belong to the Teshoo lama have a yellow one. Mutton is their chief food, which they prefer raw.

*They make great use of tea ; but are represent**! as moderate in all their appetites and passions ; while humanity and gentleness are leading characteristics in their dispositions. Abdul Russool describes them as an industrious, contented, mild race of men, sluggish in their intellect, and phlegmatic in their amorous propensities. A genuine Tibe- tan begins the day by public worship (every village containing a temple), and he then pursues his occupations till the evening, which is spent in recreation. Although the Tibetans do not ex- pose themselves to the cruel penances of tin Hindoos, yet, like them, they consider pilgri- mages to certain places highly meritorious. The same places are also venerated by popular super- stition on the heights of Tartary,as on the plains of Bengal. Allahabad, Benares, Durjodum, Saugor island, and Juggernauth, are all resorted to by the natives of Tibet, as well as by the Hindoos; but the two latter places are the most frequented. When a pilgrimage cannot be per-*

formed by an individual, much merit is attached to having it accomplished by proxy. The most celebrated place within their own dominions is the peak of Chumularee, one of the highest points of the Ilimmaleh chain, and to which the Brahminical Hindoos, as well as the Buddhists, resort to pay their adorations to its snow- clad summit. — Such, indeed, is the strength of super- stition among the savage and semi-barbarous tribes, that almost every singular object, and every rare phenomenon of nature, whether it be a snowy mountain, a hot spring, a curious lake, or a majestic volcano, is converted into an object of adoration.

Marriage is not contracted till the female is of full age, and it is then arranged by the pa- rents of the parties, or rather by the young man and the parents of the female, who, being selected by the eldest of a family, becomes equally the wife of all the other brothers, without respect to age or numbers ; and a female is allowed to transfer her person and property from one man to another, without incurring any reproach for making the first advances. Property descends from father to son, and, when a person dies with- out issue, it goes to the eldest brother, or his sons ; but, when these fa I, to his wife and daughters.

TIBULA, an ancient town of Sardinia, now called Lango.

TIBULLUS (Aulus Albius), a Roman knight, and a celebrated Latin poet, was born at Home, 43 B.C. lie was the friend of Horace, Ovid, Macer, and other great men in the reign of Au- gustus. He accompanied Messala Corvinus in his expedition against Corcyra : but, falling sick, he quitted the

profession of arms, and returned to Rome, where he died before the year 17; when Ovid expressed his grief in a fine elegy. Tibullus wrote four books of elegies, which are still extant. The best edition of Tibullus is that Notis Variorum et Vulpii, 4to., Patavii, 1749.

TIBUR, an ancient town of Latium, pleasantly situated on the Anio. Here Horace had his villa ; and here Adrian built a villa called Tibur- tina, inscribed with the names of the provinces ; near which Zenobia had a house. — Treb. Pollio. Hither Augustus often retreated. — Suet. An- ciently it was the utmost place of banishment. — Ovid. It had a temple of Hercules ; with a library. — A. Gell. Now called Tivoli.

TIC-DOLOUREUX,a remarkable disease of the nerves. Dr. Hamilton gives the following interesting account of it, which is by much the best that has hitherto appeared in this country : —

Mrs. H , of Stockwell, Surrey, aged

seventy-four, a mother of children, of a spare habit, placid disposition, and for her age much disposed to activity, was about thirteen years ago, for the first time, seized with pain of the face. This pain at its commencement was very moderate, but in its progress became violent : at length it acquired a degree of acuteness which neither words can describe, nor the imagination easily conceive. The seat of this extreme pain was somewhat limited, being confined to the ala nasi and a small portion of the upper lip, on the right side. The pain was not of the con- tinued obtuse kind, like that of chronic rheu- enatism, but, on the contrary, rather transient,

exceedingly acute and lancinating during its at- tack. The periods of its recurrence were inde- finite, and in the intervals of which she was generally in a state of perfect ease. There was a striking uniformity both in the origin and di- rection of the pain : it always began in the ala nasi and upper lip, and darted upwards towards the orbit ; but, when the attack was more com- monly violent, then indeed it extended toother parts, and a sensation of a similar kind, though much less in degree, was frequently perceived in the cheek towards the ear; the same sensa- tion was also observed on the fleshy and bony palate, on the gums and teeth of the upper jaw, and sometimes on the fauces. She seemed par- ticularly disposed to this pain in severe or windy weather. Yet she was not altogether free from it in the milder season. It was most frequently excited by the more obvious occasional causes, such as speaking, coughing, taking food, blowing the nose, &c. Though sometimes it would re- turn from causes less apparent. The duration of each pain seldom exceeded half a minute; but more frequently it was somewhat less. Sometimes she had not more than five or six of these pains in the space of a day, at others nearly twice that number

in an hour. They varied sensibly in their degree of violence ; some- times so moderate as only to suspend the move- ment of the upper lip, but more commonly so pungent as to extort screams expressive of in- tense agony. Besides the suspension of the motion of the lips, a very opposite effect fre- quently took place, viz. a tremulous movement, during which it was sometimes drawn a little upward. Notwithstanding there were such ex- treme pains, neither swelling nor discoloration could be perceived, except such as were occa- sioned from time to time by external applica- tions. These were the general symptoms. The patient was in the north of England when she was first attacked with this complaint ; and, having availed herself of such assistance as was at hand without relief, she consulted Dr. Haigh- ton by letter. As the case was drawn up by herself, though not without some appearance of accuracy, yet he did not conceive her statement of facts sufficiently perspicuous whereon to found an opinion. He therefore desired the case might be written out by some practitioner; but, ima- gining herself as capable of describing her own feelings as any other, she sent another account somewhat more correct than the former.

From this statement Dr. Haighton began to suspect the complaint to be of the nervous kind; but at thf same time considered it only in the vague sense in which we are too apt to use that term. That practitioner must have been either very fortunate, or his practice very circum- scribed, who has not, in various instances, ex- perienced the inefficacy of medicine in this class of diseases. However, the extreme agony in the present case made it highly expedient to at- tempt something: for relief; and, despairing to obtain a permanent advantage from the use of any thing which then occurred to him, Dr. Haighton recommended for the present an atten- tion only to the urgency of symptoms by the application of the linimentum ammoniac, of such

a strength and such frequency of repetition as might produce the ordinary effects of rubifa- cient medicines, or, on the inefficacy of this, the exhibition of tincture of opium both internally and externally ; likewise electricity in such form as the patient could best bear. In case the above plan had moderated the violence of the attack, he added in reserve to recommend a free use of bark and chalybeates, and aided by wine, and a more nutritive diet than she had been ac- customed to, with a view of strengthening the system, and, if possible, to defend it against future attacks ; but unfortunately he had to deal with a patient somewhat unmanageable in this respect, being very averse to good living. Some time after this he was informed there had been an evident amendment in a way that seemed to

imply a spontaneous termination of the disease, rather than an abatement of symptoms from the power of medicine; he was told that the advan- tage obtained from the local applications was so very equivocal, that the amendment was attri- buted more to the mild turn the season took at that time than to the meHical treatment which had been adopted. He heard very little more of this case for the space of two years, at the expiration of which she came to reside in the vicinity of London. From her account, it seems that she had several returns of her complaint, but none so violent as the first attack. A few months after her arrival she had a slight return. She was placed upon an insulated chair, and several very strong electrical sparks were drawn from the part by means of a very powerful ma- chine. It produced a redness, together with a slight vesication, and moderated the pain for several days. After that time it was frequently restrained by the same means : but at length it returned with a degree of violence unknown in any former attack, and upon trying electricity in the form of sparks, as before, it was so far from procuring a remission of symptoms, that it seemed to aggravate rather than appease. Un- der such extreme irritation Dr. Ilaighton ceased to draw sparks ; but, considering that some little advantage had been gained by electricity on a former trial, he used it in a milder form, viz. in •what has been called the aura, which differs from the former mode in being drawn off silently, by means of a pointed conductor, but no visible effect ensued.

It was only at this period that he begun to form a just idea of the disease. The following circumstance gave rise to it : — While she was endeavouring to describe her feelings, which she attempted in a very inarticulate manner, she stopped suddenly, and, upon looking at the part affected, Dr. Haighton perceived a tremulous motion of the upper lip, by which it was drawn upwards precisely at that part where the mus- culus levator labii superions proprius is insert- ed ; and from recollecting a well known fact, that a nerve under irritation from stimulating causes produces motion in the muscular parts to which it is distributed, it immediately oc- curred to him that the suborbitar branches of the fifth pair of nerves, which are known to sup- ply these parts, must be the seal of the present disease.

In order, therefore, to reduce (as far as pos- sible) to a certainty, what hitherto was only matter of surmise, he waited for the next exa- cerbation, which took place in a few minutes, and by making, at this time, rather a forcible pressure upon the integuments covering the su- borbitar foramen, the pain instantly abated. He repeated this several times, and uniformly with the same effect. As the conjecture relative to the seat of this disease seemed to gain consider- able support from this experiment, it \v;is thought essential to take a more minute survey of the symptoms, particularly as bem'j; seated in those parts which seemed affected in a secondary or sympathetic way. It appears, from the history of this case, that the extreme

pain was seated in the ala nasi and upper lip, on the right side ; but, when it darted with more than common vio- lence, it affected other parts, as the ear, by ex- tending itself along the course of the cheek, by means of communicating branches belonging to the portia dura of the seventh pair, which pair begin to spread on the side of the face as soon as it emerges from behind the condyles of the lower jaw. It attacked also the palate, gums, and teeth of the upper jaw, but no part of the lower; sometimes the fauces; but the part which seemed affected next in degree to the original seat was immediately behind the denies incisivi.

From comparing this assemblage of symp- toms with the distribution of the second or su- perior maxillary portion of the fifth pair of nerves, he was struck with the coincidence, and at the same time was persuaded, as has been al- ready hinted, that the original disease was in those branches of the nerve transmitted by the suborbitar foramen, and distributed to the ala nasi and upper lip ; and that the darting pains extending to the teeth, inside of the gums, ami palate, arose from communicating filaments be- tween the suborbitar and palatine branches. These communications not only complicated the case, but also placed the prospect of a cure at a great distance, from the various channels by which the pain could be conveyed from the part primarily affected to the sensorium. But, as a temporary advantage had been frequently gained by pressure of the suborbitar nerves against the bone, the entire division of them seemed eli- gible; and it was proposed to the patient as an ultimate expedient. The proposal, however, car- ried with it some difficulties. It was new to her. It could not ensure success, and, in this distraction of circumstances, the mind of the patient might have remained suspended in doubt, had not the insupportable urgency of pain com- pelled her to assent.

*Having permission to operate, Dr. Haighton began to consider the circumstances of this nerve more attentively, and as the intention was to effect a complete division of its filaments, by an incision of a moderate length, the means con- ducive to that end became important subjects of regard. It xvas essential therefore to acquire a knowledge concerning the precise s*at of the (I stribution of this branch of the fifth pair of nerves, the mode of its transition, and exit from the suborbitar foramen, together with a cleat and*

correct idea respecting the seat of the foramen itself. Besides which, it was

not altogether ex- \raneous to attend to such contiguous parts as might, either from necessity or accident, be wounded in the operation. This nerve is trans- mitted by the suborbitar foramen, in a way very different from that which the common form of expression on this occasion would lead us to imagine. We usually speak of it as one branch, under the name of suborbitar; but in reality it ought to be considered as a series of branches, for it divides before its exit, and is afterwards distributed in a radiated manner to the circum- jacent parts, viz. the levator labii superioris pro- prius, the inferior part of the orbicularis palpe- brarum, to the muscles and integuments of the nose and upper lip. From this radiated distri- bution, it must necessarily happen that the branches of this nerve are spread over an exten- sive surface at their termination, though con- tracted into a small compass at their exit from the foramen. It was therefore considered a mat- ter of importance to fix upon a proper part for the operation, in order that its branches, by lying in a small space, might be more conveniently divided.

In its passage through the suborbitar foramen, it is accompanied by a branch of the internal maxillary artery, which from its contiguity must necessarily be divided. These are covered by the levator labii superioris proprius, and the common integuments. As the branches of this nerve lie close to each other at the orifice of the foramen, that part seems the most convenient for their division, because an incision of a moderate length will generally include them all.

The next consideration was to determine the exact situation of the foramen. This at first seems very easy, but in reality is not so, because in different skulls the distance of it from the orbit differs considerably, and there does not appear any mode of determining this more pro- bably than by attempting to form a standard from the measurement of a considerable number of skulls.

The space between the inferior edge of the orbit and the superior part of ihe foramen in thirty skulls was therefore measured, and the distance found to be as follows : —

In two skulls, $ of an inch. In 16 . . . i In 8 . . . fc In 3 . . .4 In 1 ... A

As the distance in sixteen skulls out of thirty was one-quarter of an inch, that is considered as the medium distance from the superior part of the foramen ; and, if we allow one-eighth below its inferior part, we consider half an inch from the lower edge of the orbit a proper place for performing the operation.

Having endeavoured to establish a rule for determining its distance from the orbit, it may be proper to ascertain its situation with respect to a line

drawn from the inferior part of the in- ternal angular process of the os frontis, obliquely across the orbit, to the centre of the os malae. The measurement of this line in thirty .skulls

did not vary more than one-eighth of an inch and it was found that a line drawn downward, perpendicular to this oblique line, at the dis- tance of seven-eighths of an inch from the in- ternal angle of the eye, passed across from the suborbitar foramen. By this rule Dr. Haighton was able to form a standard of the situation of this foramen in a living subject.

These preliminary circumstances being set- tled, the operation becomes exceedingly simple, and consists in an incision of three-quarters of an inch in length, carried obliquely downwards, the centre of which must correspond with the foramen, only one-quarter of an inch below it. The incision must be made down to the bone, otherwise we cannot be certain of dividing the nerves, as they are situated very deep. And as there are some irregularities on the surface ot the maxillary bone at this part from muscular attachment, as well as a furrow which is some- times continued from the foramen downwards, a small pointed knife will be preferable to any other, as it will enable the operator to divide with more certainty such nervous filaments as may be seated in these depressions. The facial vein frequently passes over the foramen, and conceals it; from which it is liable to be divided in the operation. If this really happens, or it any of the suborbitar branches of the internal maxillary artery should bleed with freedom, a compress may be made with advantage, as they are seated near the bone.

The wound, beins dressed superficially, will probably heal by the first intention. In the manner just described, Dr. Haighton performed the operation, and the event has justly satisfied its propriety ; it immediately put an end to the pain, and the incision healed in a few days. The patient, who lived many years after the opera- tion, ever contemplated that event with the highest satisfaction.

It i» worthy of remark that the sensation and action of that side of the lip, though evidently diminished, were not altogether lost, as might have been predicted. The inconvenience was only temporary: we may therefore suppose a reunion of the nerves had taken place, but with this fortunate effect, that no disposition to the return of the disease through the new formed part has yet appeared.

TICE, v. a. From entice. To draw ; to allure.

Lovely enchanting language, sugar-cane, Honey of roses, whither wilt thou flj ?

Hath some food lover ticed thee to thy bane ? And wilt thou leave the church, and love a sty ?

Herbert.

TICHFIELD, a market-town of England, m Hampshire, seated on a rivulet of the same name, that runs into the Southampton water. In this town was an ancient nbbey, founded by Peter de Rupibus, bishop of Winchester, anno 1230, and dedicated to the Virgin. The ecclesiastical foun- dation was of the order of Premonstatian canons. In this abbey it was said the marriage of king Henry VI. with the princess Margaret of Anjou was celebrated. The abbey and lands were given by Henry V'UI. to Sir Thomas Wriothesley, treasurer to that monarch ; who, being afterwards

created earl of Southampton, erected on the scite a splendid castellated mansion with lofty towers and a noble gateway ; the ruins of which, now overgrown with ivy, form a beautiful object in the rich landscape. The ruins of the once noble hall are also still worthy of attention. Here it was that the unfortunate Charles lay concealed (through the loyalty of the earl of Southampton), after his flight from Hampton Court, 1647. The site is now in possession of the Delme family, and some years ago a most choice collection of paintings, the property of Peter Delme, esq , at- tracted much notice, and drew many visitors to the place. After his decease they were sold by Mr. Christie in Pall Mall, and realised a large sum of money; a pair of Poussains being sold for 1600 guineas. The church is a spacious fabric, the workmanship of different ages. Tiie south side is the most ancient. There is also a charity school here. The town, though small, is inhabited by many respectable families. Popu- lation about 4000. Market day Saturday. Fairs March 5th, May 14th, September 25th, and De- cember 3d. The country in the environs is highly variegated with hill and dale, and in a state of the highest cultivation.

TICHIUS, the top of mount (Eta.— Liv. 36,

2. 16.

TICIDA, a poet of the Augustan age, who wrote epigrams ; mentioned by Ovid, Trist. ii.

433.

TICINO, or TESSIN, a considerable district and canton in the south of Switzerland, situated between the central cantons and the frontier of Lombardy. It was formerly called the Italian bailiwics, and inhabited by Italians, governed by temporary deputies from the respective cantons until 1815, when it was formed into an inde- pendent canton, divided into the eight following districts : —

Mendrisio	*12,000*
Lugano	*26,700*
Pallemagia	*6,000*
Locarno	*17,400*
Bellinzona	*8,000*
Riviera	*3,000*
Blegno	*6,300*
Levantina	*9,600*
Total	*89,000*

The area of the whole 1130 square miles. The soil is fertile, and the climate mild. No country is better watered, or more remarkable for beautiful scenery. The inhabitants, how- ever, are said to be indolent, and unacquainted with manufactures, the men generally emigrat- ing, like the

Savoyards, to large towns in Italy or France, and leaving to the women the care, not only of the cattle, but of tillage. The moun- tains are covered with forests of chestnuts, the fruit of which, joined to the maize of the val- leys, forms the chief food of the inhabitants. There is here less snow and more rain than in the central cantons of Switzerland. Wine is cultivated and exported in small quantities; figs, almonds, and mulbrrries, all succeed ; and the quantity of silk made here is large. The cattle are remarkably small. In the mountains

are found the chamois, white hare«, wolves, and even bears. The exports (chiefly to Italy) comprise silk, fruits, cheese, skins, marble, crys- tals, timber, and straw hats.

TICINUM, an ancient name of Pavia.

TICINUS, a river of Italy, in Insubria, rising in mount Adula, traversing the lake Verbanus to the south and falling into the Po near Ticinum. Between this river and the Po, Hannibal gained his first victory over the Romans under P. Scipio. It is now called TEFIXO, which see.

TICK, n s. Contracted from ticket, a tally on which debts are scored. Score ; trust.

\Vould the fountain of your mind were clear again, that 1 might water an ass at it ! 1 had rather be a tick la a sheep, than such a valiant ignorance. Shalmpeure. Triulua and Cressida.

If thou hast the heart to try it, I'll lend thee back thyself au hile, And once more for that carcase vile Fight upon tick. Hmlibraf.

\ hen the money is got into hands that have brought all that they have need of, whoever needs any thing else must go on tick, or barter for it.

The money went to the lawyers ; council \on't tick. Arbiitliimt.

You would see him in the kitchen weighing the beef and butter, paying ready money, that the maids might not run a tick at the market.

Id. History o/ Juhn Bull.

TICK ELL (Thomas), an English poet, son of the rev. Richard Tickell, born in 1686, at Bride- kirk in Cumberland. He was fellow of Queen's College, Oxford, and addressed to Mr. Addison verses on his opera of Rosomond. Addison, be- ing made secretary of state, appointed him his under secretary ; and Mr. Craggs continued him in his post. In 1724 Mr. Tickell was appointed secretary to the lords justices in Ireland, which he held for life.

He wrote some poems, which met with a favorable reception. He died in

1740.

TICKELL (Richard), an English poet and poli- tical writer. He published two very popular poems, entitled, 1. The Project; and, 2. The Wreath of Fashion. But his most admired piece was a pamphlet, entitled Anticipation, which came out just two days before the meeting of parliament, in 1779; and in which he imitated the style and sentiments of the leading members of both houses with wonderful precision. He also adapted the Gentle Shepherd to the English stage ; and wrote The Carnival of Venice, a comic opera. lie died in 1793.

TICK'ET, n. s. Fr. etiquet . A token of any right or debt, upon the delivery of which admis- sion is granted, or a claim acknowledged.

There should be a paymaster appointed, of special trust, which should pay every man according to his captain's ticket, and the account of the clerk of his band. Sptnser.

In a lottery with one prize a single ticket is only enriched, and the rest are all blanks.

Collier on Enry.

Let fops or fortune fly which way they will, Disdains all loss of tickets or codille. Pope.

TICKHILL, a market-tdwn, West Riding of York, five miles south of Doncaster, and l.r> <"> north by west of London. The town is large

but straggling, and has a spacious and handsome church. It gives name to a jurisdiction of very great extent, and to which many manors owe suit and service. About half a mile from the town is Possington Well, a medicinal bath, now of little repute. To the east is a large piece of water, curiously diversified with rocks and ruins; under one of the rocks is the mouth of a cavern, said to have had communication with a monas- tery that stood near. Market on Friday.

TIC'KLE,v.a.,t;.n.,&aTICK LISH, adj. i titillate ; to affect

with a prurient sensation by slight touches ; please slightly : to feel

titillation : as an adjective, tottering; unfixed; unstable: ticklish is easily-tickled ; tottering ; uncertain ; nice; fastidious.

Daraetas, that of all manners of stile could best conceive of golden eloquence, being withal tickled by Mnsidorus's praise, had his brain so turned that he became slave to that which he that sued to be his servant offered to give him. Sidney.

He with secret joy therefore Did tickle inwardly in every vein, And his false heart, fraught with all treason's store, Was filled with hope his purpose to obtain.

Spenser.

When the last O'Neal began to stand upon some tickle terms, this fellow, called baron of Dungannon, was set up to beard him. Id. mi Ireland.

The state of Normandy Stands on a tickle point now they are gone.

Siiakspeare.

Expectation tickling skittish spirits, Sets all on hazard. Id.

Such a nature,

Tickled with good success, disdains the shadow Which it treads on at noon. Id. Coriolanvt.

Dissembling courtesy ! How fine this tyrant Can tickle where she wounds. Id. Cymbeline.

The mind is moved in great vehemency only by tickling some parts of the body. Bacon.

Ireland was a ticklish and unsettled state, more easy to receive distempers and mutations than Eng- land was. Id.

It is a good thing to laugh at any rate ; and, if a straw can tickle a man, it is an instrument of happi- ness. Dryden.

I cannot rule my spleen ;

My scorn rebels, and tickles me within. Id.

A drunkard the habitual thirst after his cups drives to the tavern, though he has in his view the loss of health, and perhaps of the joys of another life, the least of which is such a good as he confesses is far greater than the

tickling of his palate with a glass of wine. Locke.

Did it stand upon so ticklish and tottering a foun- dation as some men's fancy hath placed it, it would be no wonder should it frequently vary.

Woodward's Natural History. How shall our author hope a gentle fate, Who dares most impudently not translate? It had been civil, in these ticklish times, To fetch his fools and knaves from foreign climes.

Stoift.

TICONDEROGA, a township of the United States, in Essex county, New York, on the west side of the south end of LakeChamplain, and at the north end of Lake George, twelve miles south of Crown Point, and ninety-five north of Albany. It has a valuable mine of iron ore.

TICONDEROGA, a fort of the United States, built by the French in 1756, in Essex county,

New York. It is famous in the history of the American wars, and situated on an eminence on the west shore of Lake Cbamplain, just north of the entrance of the outlet from Lake George into Lake Champlain. Fifteen miles south of Crown Point, and twenty-four north of Whitehall. Long. 73° 62′ W., lat. 43° 50′ N. It is now in ruins.

TIDE, n. s., v.a., &) Sax. tyi, ; Belg. and TIDEWAITER. [v. n. $ Isl. tijd. Time; season; while ; alternate ebb and flow of the sea ; stream ; course ; concurrence ; commotion : to tide is, to drive with the stream : as a verb neuter to pour a flood : a tide-waiter, a custom-house officer, who watches the landing of goods.

There they alight, in hope themselves to hide From the fierce heat, and rest their weary limbs a tide. Spenser.

What hath this day deserved, That it in golden letter should be set Among the high tides in the kalendar 1

Shakspeare. King John. Thou art the ruins of the noblest man That ever lived in the tide of times. Shakspeare.

As in the tides of people once up, there want not stirring winds to make them more rough, so this peo- ple did light upon two ringleaders.

Bacon's Henry VII.

At new-year's tide following, the king chose him master of the horse.

Wotlon.

The rapid currents drive Towards the retreating sea their furious tide.

Milton.

But let not all the gold which Tagus hides, And pays the sea in tributary tides, Be bribe sufficient to corrupt thy breast, Or violate with dreams thy peaceful rest. Dryden.

Their images, the relicks of the wreck, Torn from the naked poop, are tided back By the wild waves, and rudely thrown ashore. Id.

That motion of the water called tides, is a rising and falling of the sea : the cause is the attraction of the moon, &c. Locke.

Continual tide

Flows from the exhilarating fount. Phillips.

When from his dint the foe still backward shrunk, Wading within the Ouse, he dealt his blows, And sent them, rolling, to the tiding Humber. Id.

Employments will be in the hands of Englishmen ; nothing left for Irishmen but vicarages and tidewaiters' places. Su-ijt.

TIDES. On the shores of the ocean, and in bays, creeks, and harbours, which communicate freely with the ocean, the waters rise up above this mean height twice a day, and as often sink below it, forming what is called a flood and an ebb, a high and a low water. The whole interval be- tween high and low water is called a tide ; the water is said to flow and to ebb, and the rising is called the flood tide, and the falling is called the ebb tide. This rise and fall of the waters is va- riable in quantity. At Plymouth, for instance, it is sometimes twenty-one feet between the great- est and least depth of the water in one day, and sometimes only twelve feet. These different heights of tide succeed each other in a regular series, diminishing from the greatest to the least, and then increasing from the least to the greatest. The greatest is called a spring tide, and the least is called a neap tide. This series is completed in about fifteen days. More careful observation shows that two series are completed in the ex-

act time of a lunation. For the spring tide in any place is observed to

happen precisely at a certain interval of time (generally between two and three days) after new or full moon, and the neap tide at a certain interval after half moon ; or, to be more accurate, the spring tide always happens when the moon has got a certain number of degrees east of the line of conjunction and opposition, and the neap tide happens when she is a certain number of degrees from her first or last quadrature. Thus the whole series of tides appear to be regulated by the moon. Hi^h water happens at new and full moon when the moon has a certain determined position with respect to the meridian of the place of observa- tion, preceding or following the moon's southing a certain interval of time ; which is constant with respect to that place, but very different in dif- ferent places. The time of high water in any place appears to be regulated by the moon ; for the interval between the time of high water and the moon's southing never changes above three- quarters of an hour, whereas the interval between the time of high water and noon changes six hours in the course of a fortnight. The interval between two succeeding high waters is variable. It is least of all about new and full moon, and greatest when the moon is in her quadratures. As two high waters happen every day, we may call the double of their interval a tide day, as we call the diurnal revolution of the moon a lunar day. The tide day is shortest about new and full moon, being then about 24h. 37′ ; about the time of the moon's quadratures it is 25h. 27'. These values are taken from a mean of many ob- servations made at Barbadoes by Dr. Maskelyne. The tides in similar circumstances are greatest when the moon is at her smallest distance from the earth, or in her perigee, and, gradually dimi- nishing, are smallest when she is in her apogee. The same remark is made with respect to the sun's distance ; and the greatest tides are observed during the winter months of Europe. The tides in any part of the ocean increase as the moon, by changing her declination, approaches the zenith of that place. The tides which happen while the moon is above the horizon, are greater than the tides of the same day when the moon is be- low the horizon. There is also a kind of rest or cessation of about half an hour between the flux and reflux; during which time the water is at its greatest height, called high water. The flux is made by the motion of the water of the sea from the equator towards the poles : which, in its progress, striking against the coasts in its way, and meeting with opposition from them, swells, and where it can find passage, as in flats, rivers, &c., rises up and runs into the land. This mo- tion follows, in some measure, the course of the moon ; as it loses or comes later every day by about three-quarters of an hour, or, more precise- ly, by forty-eight minutes; and by so much is the motion of the moon slower than that of the sun. It is always highest and greatest in full moons, particularly those of the equinoxes. In tome parts, as at Mount St. Michael, it rises kighty or ninety feet, though in the open sea it never risos above a foot or two; and in some places, as about the Morea, there is no flux at

all. It runs up some rivers above 120 miles. I p the river Thames it only goes eighty, viz., near to Kingston in Surrey. Above London bridge the water flows four hours and ebbs eight; and, below the bridge, flows five hours and ebbs seven.

Homer is the earliest profane author who speaks of the tides ; but (in the twelfth book of the Odyssey) only takes notice of the tides of Charybdis, which rise and retire thrice in every day. Herodotus and Diodorus Siculus speak more distinctly of the tides in the Red Sea. Py- theas of Marseilles is the first who says any thing of their cause. According to Strabohe had been in Britain, where he must have observed the tides of the ocean. Plutarch says expressly that Py- theas ascribed them to the moon. It is surpris- ing that Aristotle says so little about (he tides. The army of Alexander, his pupil, were startled at their first appearance to them near the Persian Gulph : and we should have thought that Aris- totle would be well informed of all that had been observed there. But there are only three pas- sages concerning them in all Aristotle's writings, and they are very trivial. In one place he speaks of great tides observed in the north of Europe; in another, he mentions their having been as- cribed by some to the moon ; and in a third, he says thai the tide in a great sea exceeds that in a small one.

The conquest and the commerce of the Ro- mans gave them more acquaintance with tides. Caesar speaks of them in the fourth book of his Gallic War. Strabo, after Posidonius, classes the phenomena into daily, monthly, and Annual. He observes that the sea rises as the moon gets near the meridian, whether above or below the horizon, and falls again as she rises or falls ; also, that the tides increase at the time of new and full moon, and are greatest at the summer solstice. Pliny explains the phenomena at some length: and says that both the sun and moon are their cause, dragging the waters along with them (book ii., c. 97). Seneca (Nat. Quest, lii. 28) speaks of the tides with correctness; and Macrobius (Somn. Scip. i. 6) gives a very accurate descrip- tion of their motions. Such phenomena, however, could not but exercise human curiosity as to their cause. Plutarch (Plaut. Phil. iii. 17), Galileo (Syst. Mund. Dial. 4), Riccioli in his Ainu ii. p. 374, and Gassendi, ii. p. 27, have collects! most of the notions of their predecessors on the- subject; but they are of so little importance that they do not deserve our notice. Kepler speaks more like a philosopher. — De Stella Mar- tis, and Epit. Astron. p. 555. He says that all bodies attract each other, and that the waters of the ocean would all go to the moon were they not retained by the attraction of the earth ; and then goes on to explain their elevation under the moon and on the opposite side, because the earth is less attracted by the moon than the nearer waters, but more than the waters which are more remote.

The honor of a complete explanation of the tides was reserved to Sir Isaac

Newton. He laid hold of this class of phenomena as the most in- contestible proof of universal gravitation, and has given a most beautiful and synoptical view of the

TIDES.

•whole subject; contenting himself, however, with merely exhibiting the chief consequences of the general principle, and applying it to the phe- nomena with singular address. But the wide steps taken by this great philosopher, in his inves- tigation, leave ordinary readers frequently at fault: many of his assumptions require the greatest mathematical knowledge to satisfy us of their truth. The academy of Paris, therefore, proposed to illustrate this among other parts of the principles of natural philosophy, and pub- lished the theory of the tides as a prize problem. This produced three excellent dissertations by M'Laurin, Dan. Bernoulli, and Euler. Aided by these, and chiefly by the second, we shall here give a physical theory, and accommodate it to the purposes of navigation, by giving the rules of calculation. It is an unexpected fact that every particle of matter in the solar system is ac- tually deflected toward every other particle ; and that the deflection of a particle of matter toward any distant sphere is proportional to the quantity of matter in that sphere directly, and to the square of the distance of the particle from the centre of that sphere inversely ; and, having found that the heaviness of a piece of terrestrial matter is nothing but the supposed opponent to the force which we exert in carrying this piece of matter, we conceive it as possessing a property, or distinguishing quality, manifested by its being gravis or heavy. This is heaviness or gravity; and the manifestation of this quality, or the event in which it is seen, whether it be directly falling, or deflecting in a parabolic curve, or stretching a coiled spring, or breaking a rope, or simply pressing on its support, is gravitatio, gravitation; and the body is said to gravitate. When all ob- stacles are removed from the body, as when we cut the string by which a stone is hung, it moves directly downwards, tendit ad terram. By some metaphysical process, this nisus ad motum has been called a tendency in our language, and is used to signify the energy of any active quality in those cases where its simplest and most imme- diate manifestation is prevented by some obsta- cle. The stretching the string in a direction perpendicular to the horizon, is a full manifesta- tion of this tendency. This tendency, this energy of its heaviness, is therefore named by the word which distinguishes the quality railed gravitation. But Sir Isaac Newton discovered that this de- flection of a heavy body differs in no respect from that general deflection observed in all the bodies of the solar system. For sixteen feet, which is the deflection of a stone in one second, has the very same proportion to one-tenth of an inch, which is the

simultaneous deflection of the moon, that the square of the moon's distance from the centre of the earth has to the square of the stone's distance from it, namely, that of 3600 to one. Thus we are enabled to compare all the effects of the mutual tendencies of the heavenly bodies with the tendency of gravity, wliose effects and measures are familiar to us. If the earth were a sphere, covered to a great depth with water, the water would fonr a concentric spherical shell ; for the gravitation of every particle of its surface would then oe directed to the centre, and would be equal. The curvature of its surface, VOL. XXII.

therefore, would be every where the same, that is, it would be the uniform curvature of a sphere.

The waters of the ocean have their equilibrium disturbed by the unequal gravitation of their different particles to the sun or to the moon ; and this equilibrium cannot be restored till the waters come in from all parts, and rise up around the line joining the centres of the earth and of the luminary. The spherical ocean must acquire the form of a prolate spheroid generated by the revolution of an ellipse round its transverse axis. The waters will be highest in that place which has the luminary in its zenith, and in the anti-podes to that place ; and they will be most de- pressed in all those places which have the lumi- nary in their horizon. Mr. Ferguson, in his Astronomy, assigns another cause of this ar- rangement, viz. the difference of the centrifugal forces of the different particles of water, while the earth is turning round the common centre of gravity of the earth and moon. This, however, is a mistake. It would be just if the earth and moon were attached to the ends of a rod, and the earth kept always the same face toward the moon. It is evident that its absolute quantity may be discovered by our knowledge of the proportion of the disturbing force to the force of gravity. Now this proportion is known ; for the proportion of the gravitation of the earth's centre to the sun or moon, to the force of gravity at the earth's surface, is known; and the proportion of the gravitation of the earth's centre to the lumi- nary, to the difference of the gravitations of the centre and of the surface, is also known, being very nearly in the proportion of the distance of the luminary to twice the radius of the earth. We must therefore take the subject more gene- rally, and show the proportion and directions of gravity in every point of the spheroid. We need not, however, again demonstrate that the gravitation of a particle placed any where without a perfect spherical shell, or a sphere consisting of concentric spherical shells, either of uniform density or of densities varying according to some function of the radius, is the same as if the whole matter of the shell or sphere were col- lected in the centre. We need only remind the reader of some consequences of this theorem which are of continual use in the present investi- gation. 1. The gravitation to a sphere is pro- portional to its quantity of matter directly, and to the square of the distance of its centre

from the gravitating particle inversely. 2. If the spheres be homogeneous, and of the same density, the gravitations of particles placed on their sur- faces, or at distances which are proportional to their diameters, are as the radii ; for the quanti- ties of matter are as the cubes of the radii, and the attractions are inversely as the squares of the radii; and therefore the whole gravitations areas

-j, or as r. 3. A particle placed within a sphere

has no tendency to the matter of the shell which lies without it, because its tendency to any part is balanced by an opposite tendency to the op- posite part. Therefore, 4. A particle placed any where within a .homogeneous sphere gravi- tates to its centre with a force proportional to its distance from it. It is a much more difficult

problem to determine the gravitation of particles to a spheroid. To do this in general terms, and for every situation of the particle, would require a train of propositions which our limits will by no means admit. The ratio of the axes may be obtained and ascertained by knowing the ratio of the gravitation at the pole to that of the equa- tor. See SPHERE, SPHEROID, and PROJECTION OF THE SPHERE. The gravitation of the moon to the earth is to the disturbing force of the sun as 178,725 to 1 very nearly. The lunar gravita- tion is increased as she approaches the earth in the reciprocal duplicate ratio of the distances. The disturbing force of the sun diminishes in the simple ratio of the distances ; therefore the weight of a body on the surface of the earth is to the disturbing force of the sun on the same body, in a ratio compounded of the ratio of 178,725 to 1, the ratio of 3600 to 1, and the ratio of 60 to 1 ; that is, in the ratio of 38,604,600 to 1. If the mean radius of the earth be 20934500 feet, the difference of the axis, or the elevation of the pole of the watery spheroid produced by the gravita- tion to the sun, will be ˆ X §8iS}t$ feet, or very nearly twenty-four inches and a half. This is the tide produced by the sun on a homogeneous fluid sphere. It needs no proof that if the earth consists of a solid nucleus of the same density with the water, the form of the solar tide will be the same. But, if the density of the nucleus be different, the form of the tide will be different, and will depend both on the density and on the figure of the nucleus. If the nucleus be of the same form as the surrounding fluid, the whole will still maintain its form with the same propor- tion of the axis. If the nucleus be spherical, its action on the surrounding fluid will be the

same as if all the matter of the nucleus, by which it exceeds an equal bulk of the fluid, were collected at the centre. In this case the ocean cannot maintain the same form ; for the action of this central body, being proportional to the square of the distance inversely, will augment the gravity of the equatorial fluid more than it augments that of the circumpolar fluid; and the ocean, which was in equilibrio, by supposition, must now become more protuberant at the poles. It may, however, be again balanced in an elliptical form when it has acquired a just proportion of the axes. The process for determining this is tedious, but precisely similar to the preceding. In the dissertations by Clairault and Boscovich on the Figure of the Earth, this curious problem is treated in the most complete manner. The earth is not a sphere, but swelled out at the equator by the diurnal rotation. But the change of form is so very small, in proportion to the whole bulk, that it cannot sensibly affect the change of form afterwards induced by the sun on the waters of the ocean. For the disturbing force of the sun would produce a certain pro- tuberance on a fluid sphere ; and this protuber- ance depends on the ratio of the disturbing force to the force of gravity at the surface of this sphere. If the gravity be changed in any pro- portion, the protuberance will change in the !>ame proportion. Therefore, if the body be a ipheroid, the protuberance produced at any point by the sun will increase or diminish in the

same proportion that the gravity at this point h&s been changed by the change of form. Now the change of gravity, even at the pole of the ter- restrial spheroid, is extremely small in com- parison with the whole gravity. Therefore the change produced on the spheroid will not sensi- bly differ from that produced on the sphere; and the elevations of the waters above the sur- face, which they would have assumed indepen- dent of the sun's action, will be the same on the spheroid as on the sphere. For the same reason, the moon will change the surface already changed by the sun in the same manner as she would have changed the surface of the undisturbed ocean. Therefore the change produced by both these luminaries in any place will be the same when acting together as when acting separately ; and it will be equal to the sum, or the difference of their separate changes, according as these would have been in the same or in opposite di- rections. The difference between a solar day and a tide day is called the priming or the retar- dation of the tides. This is evidently equal to the time of the earth's describing in its rotation an angle equal to the motion of the high water in a day from the sun. The smallest of these re- tardations is to the greatest as the difference of the disturbing forces to their sum. Of all the phenomena of the tides, this seems liable to the fewest and most inconsiderable derangements from local and accidental circumstances. It therefore affords the best means for determining the proportion of the disturbing forces. By a comparison of a great number of observations made

by Dr. Maskelyne at St. Helena and at Barbaaoes, places situated in the open sea, it appears that the shortest tide-day is 24h. 37% atid the longest is 25h. 27'. This gives M — S : M + S — 37 : 87, and S : M = 2 : 4-96; which differs only 1 part in 124 from the proportion of 2 to 5, which Daniel Bernoulli collected from a variety of different observations. We shall therefore adopt the proportion of 2 to 5 as abundantly exact. It also agrees exactly with the phenomena of the nutation of the earth's axis and the precession of the equinoxes. It follows that while the moon moves uniformly from 56° 47′ W. elongation to 56° 47′ E., or from 123° 13′ E. to 123° 13′ W., the tide-day is shorter than the lunar-day ; and, while she moves from 56° 47′ E. to 123° 13', or from 123° 13′ W. to 56° 47', the tide-day is longer than the lunar-day. The time of high-water, when the sun and moon are in the equator, is never more than forty- seven minutes different from that of the moon's southing (f or — a certain fixed quantity, to be determined once for all by observation). There is now no difficulty in determining the hour of high-water corresponding to any position of the sun and moon in the equator. The following table of Bernoulli's exhibits these times for every tenth degree of the moon's elongation from the sun. The first or leading column is the moon's elongation from the sun, or from the point of opposition, at the time of high-water. The second is the minutes of time between the moon's southing and the place of high-water. The marks — and 4- distinguish whether the high-water is before or after the moon's southing.

The third is the hour and minute of high-water. The two remaining columns express the heights of the tides and their dailv variations.

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The tide is the height of high-water above low- water. This is the interesting circumstance in practice. Many circumstances render it almost impossible

to say what is the elevation of high- water above the natural surface of the ocean. In many places the surface at low water is above the natural surface of the ocean. This is the case in rivers at a great distance from their mouths. This may appear absurd, and is cer- tainly very paradoxical ; but a little attention to the motion of running waters will explain this completely. Whatever checks the motion of water in a canal must raise its surface. Water in a canal runs only in consequence of the declivity of this surface ; therefore a flood tide coming to the mouth of a river checks the cur- rent of its waters, and they accumulate at the mouth. This checks the current farther up, and therefore the waters accumulate there also; and this checking of the stream, and consequent rising of the waters, is gradually communicated up the river to a great distance. The water rises every where, though its surface still has a slope. In the mean time the flood tide at the mouth passes by, and an ebb succeeds. This must accelerate even the ordinary course of the river. It will more remarkably accelerate the river now raised above its ordinary level, be- cause the declivity at the mouth will be so much greater. Therefore the waters near the mouth by accelerating will sink in their channel, and increase the declivity of the canal beyond them. This will accelerate the waters beyond them ; and thus a stream more rapid than ordinary will be produced along the whole river, and the waters will sink below their ordinary level. Thus there will be an ebb below the ordinary surface as well as a flood above it, however

sloping that surface may be. Hence we cannot tell what is the natural surface of the ocean by any observations made in a river, even though near its mouth. Yet even in rivers we have regular tides, subjected to all the varieties de- duced from this theory. But the geometrical construction of this problem not only explains all the interesting circumstances of the tides, but also points them out, almost without em- ploying the judgment, and exhibits to the eye the gradual progress of each phenomenon. But on these we cannot enlarge. On the whole, the solar force does not vary much, and may be re- tained as constant without any great error. But the change of the moon's force has great effects on the tides both as to their time and their quan- tity. I. As to their time. 1. The tide day fol- lowing a spring tide is 24h. 27′ when the moon is in perigee, but 24h. 33′ when she is in apogee. See APOGEE and PERIGEE. 2. The tide day following neap tide is 25h. 15', and 23h 40′ in these two situations of the moon. o. The greatest interval of time between high water and the moon's southing is 39′ and 61'; the angle j/ being 9° 45′ in the first case, and 15° 15′ in the second. II. As to their heights. 1. If the moon is in perigee when new or full, the spring tide will be eight feet instead of seven, which corresponds to her mean distance. The very next spring tide happens when she is near her apogee, and will be six feet instead of seven. The neap tides happen when she is at her mean distance, and will therefore be three feet. But, if the

moon be at her mean distance when new or full, the two succeeding spring tides will be regular, or seven feet, and one of the neap tides will be four feet and the other only two feet.

Mr. Bernoulli gives the following table of the time of high water for the chief situations of the moon, viz. her perigee, mean distance, and apogee : — It may be had by interpolation for all intermediate positions with as great accuracy as can be hoped for in phenomena which are sub- ject to such a complication of disturbances.

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27J

170

9J

11J

14

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The first column contains the moon's elongation from the sun. The columns P, M, A, contain the minutes of time which elapse between the moon's southing and high water, according as she is in perigee, at her mean distance, or in apogee. The sign — indicates the priority, and + the posteriority, of high water to the moon's southing.

The reader will probably be making some com- parison in his own mind of the deductions from this theory with the actual state of things. He will find some considerable resemblances ; but he will also find such great differences as will make him very doubtful of its justness. In very few places does the high water happen within three-fourths of an hour of the moon's southing, as the theory leads him to expect ; and in no place whatever does the spring tide fall on the day of new and full moon, nor the neap tide on the day of her quadrature. These always happen two or three days later. By comparing the difference of high water and the moon's southing in different places, he will hardly find any connecting principle. This shows evidently that the cause of this irregularity is local, and that the

justness of the theory is not affected by it. By considering the phenomena in a naviga- ble river, he will learn the real cause of the de- viation. A flood tide arrives at the mouth of a river. The true theoretical tide differs in no respect from a wave. Suppose a spring tide actually formed on a fluid sphere, and the sun and moon then annihilated. The elevation must sink, pressing the under waters aside, and caus- ing them to rise where they were depressed. The motion will not stop when the surface comes to a level ; for the waters arrived at that position with a motion continually accelerated. They will therefore pass this position as a pen- dulum passes the perpendicular, and will rise as far on the other side, forming a high water where it was low water, and a low water where it was high water ; and this would go on for ever, oscillating in a time which mathematicians can determine, if it were not for the viscidity, or something like friction, of the waters. If the sphere is not fluid to the centre, the motion of this wave will be different. The elevated waters cannot sink without diffusing themselves like- wise, a«:d occasioning a great horizontal motion in order to fill up the hollow at the place of low water. This motion will be greatest about half way between the places of high and low water. The shallower we suppose the ocean the greater must this horizontal motion be. The resistance of the bottom (though perfectly smooth and even) will greatly retard all the way to the sur- face. Still, however, it will move till all be level, and will even move a little farther and produce a small flood and ebb where the ebb and flood had been. Then a contrary motion will obtain ; and, after a few oscillations, which can be calculated, it will be insensible. If the bottom of the ocean (which we still suppose to cover the whole earth) be uneven, with long extended valleys running in various directions, and with elevations reaching near the surface, it is evident that this must occasion great irregula- •ities in the motion of the undermost water;,

both in respect of velocity and direction, and even occasion small inequalities on the surface, as we see in a river with a rugged bottom and rapid current. The deviations of the under currents will drag with them the contiguous in- cumbent waters, and thus occasion great super- ficial irregularities. Now a flood, arriving at the mouth of a river, must act precisely as this great wave does. It must be propagated up the river (or along it, even though perfectly level) in a certain time, and we shall have high water at all the different places in succession. This is dis- tinctly seen in all rivers. It is high water at the mouth of the Thames at three o'clock, and later as we go up the river, till at London Bridge we have not high water till three o'clock in the morning, at which time it is again high water at the Nore. But in the mean time there has been low water at the Nore, and high water about half way to London ; and, while the high water is proceeding to London, it is ebbing at this in- termediate place, and is low water there when it is high water at London and at the Nore. Did the tide

extend as far beyond London as London is from the Nore, we should have three high waters with two low waters interposed. The most remarkable instance of this kind is the Maragnon or Amazon river in South America. It appears, by the observations of Condamine and others, that between Para at the mouth of the river, and the conflux of the Madera and Maragnon, there are seven co-existent high waters, with six low waters between them. Nothing can more evidently show that the tides in these places are nothing but the propagation of a wave. The velocity of its superficial motion, and the distance to which it will insen- sibly go, must depend on many circumstances. A deep Channel and gentle acclivity will allow it to proceed much farther up the river, and the distance between the successive summits will be greater than when the channel is shallow and steep. If we apply the ingenious theory of Chevalier Buat, we may tell both the velocity of the motion and the interval of the successive high waters. It may be imitated in artificial canals, and experiments of this kind would be very instructive. We have said enough at pre- sent for our purpose of explaining the irregu- larity of the times of high water in different places, with respect to the moon's southing. But we now see clearly, that something of the same kind must happen in all great arms of the sea which are of an oblong shape, and commu- nicate by one end with the open ocean. The general tide in this ocean must proceed along this channel, and the high water will happen on its shores in succession. This also is distinctly seen. The tide in the Atlantic Ocean produces iuˆli water at new and full moon, at a later and later hour along the south coast uf Great Britain in proportion as we proceed from Scilly Islands to Dover. In the same manner it is later and later as we come along the east coast from Ork- ney to Dover. Yet even in this progress there are considerable irregularities owing to the sinuo- sities of the shores, deep indented bays, pro- minent capes, and extensive ridges and valleys lu the channel. A similar progress is observed

along the coasts of Spain and France, the tide advancing gradually from the south, turning round cape Finnisterre, running along the north coast of Spain, and along the west and north coasts of France. The attentive consideration of these facts will not only satisfy us with re- spect to this difficulty, but will enable us to trace a principle of connexion amidst all the irregularities that we observe. And if we note the difference between the time of high water of spring tide as given by theory for any place, and the observed time of high water, we shall find this interval to be very nearly constant through the whole series of tides during a lunation. Suppose this interval to be forty hours. We shall find every other phenomenon succeed after the same interval. And, if we suppose the moon to be in the place

where she was forty hours before, the observation will agree pretty well ivith the theory, as to the succession of tides, the length of tide day, the retardations of the tides, and their gradual diminution from spring to neap tide. We say pretty well ; for there still remain seve- ral small irregularities, different in different places, and not following any observable law. These are therefore local, and owing to local causes, as we shall point out. There is also a general deviation of the theory from the real series of tides. The neap tides, and those ad- joining, happen a little earlier than the corrected theory points out. Thus at Brest (where more numerous and accurate observations have been made than at any other place in Europe), when the moon changes precisely at noon, it is high water at 3 h. 38'. When the moon enters her second quarter, at noon, it is high water at 8h. 40', instead of 9h. 48', which theory assigns. Something similar, and within a very few minutes equal to this, is observed in every place on the sea-coast. This is therefore something gene- ral, and indicates a real defect in the theory. But this arises from the same cause with the other general deviation, viz. that the greatest and least tides do not happen on the days of full and half moon, but a certain time after. We shall attempt to explain this. We set out with the supposition that the water acquired in an instant the elevation competent to its equilibrium. But this is not true. No motion is instantaneous, however great the force; and every motion, and change of motion, produced by a sensible or finite force, increases from nothing to a sensible quantity by infinitely small degrees. Time elapses before the body can acquire any sensible velo- city ; and, in order to acquire the same sensible velocity by the action of different forces acting similarly, a time must elapse inversely propor- tional to the force. An infinitely small force re- quires a finite time for communicating even an infinitely small velocity ; and a finite force, in an infinitely small time, communicates only an infinitely small velocity ; and, if there be any kind of motion which changes by insensible degrees, it requires a finite force to prevent this change. Thus a bucket of water, hanging by a cord lapped round a light and easily moveable cylinder, will nin down with a motion uniformly accelerated; but this motion will be prevented by hanging ;;n fijnal bucket on the other side, so as to act with a

finite force. This force prevents only infinitely small accelerations. It is therefore an infinitesi- mal of the first order, and may be restored in an instant, or the continuation of the depression prevented by a certain finite force. The weight of the rope makes it hang in an oblong curve, just as the force of the moon raises the waters of the ocean. Turn the rollers slowly, and the rope unwinding at one side, and winding up on the other side of the roller, will continue to form the same curve ; but turn the roller the other way very briskly, and the rope will now hang in a curve considerably from the perpendicular ; so that the force of gravity may in an instant undo

the infinitely small elevation produced by the turning. This phenomenon has puzzled many persons not unaccustomed to such discussions. But another view of this matter leads to the same conclusion. There can be no doubt that the interval between high and low water is not sufficient for producing all the accumulation necessary for equilibrium in an ocean so very shallow. The horizontal motion necessary for gathering together so much water along a shallow sea would be prodigious. Therefore it never attains its full height; and when the waters, al- ready raised to a certain degree, have passed the situation immediately under the moon, they are still under the action of accumulating forces, al- though these forces are now diminished. They will continue rising, till they have so far passed the moon that their situation subjects them to depressing forces. If they have acquired this situation with an accelerated motion, they will rise still farther by their inherent motion, till the depressing forces have destroyed all their ac- celeration, and then they will begin to sink again. It is in this way that the nutation of the earth's axis produces the greatest inclination, not when the inclining forces are greatest, but three months after. It is thus that the warmest time of the day is a considerable while after noon, and that the warmest season is considerably after midsummer. The warmth increases till the mo- mentary waste of heat exceeds the momentary supply. Hence we conclude that it may be de- monstrated that, in a sphere fluid to the centre, the time of high water cannot be less, and may be more, than three lunar hours after the moon's southing. As the depth of the ocean di- minishes, this interval also diminishes. It is perhaps impossible to assign the distance at which the summit of the ocean may be kept while the earth turns round its axis. We can only see that it must be less when the accumu- lating force is greater, and therefore less in spring tides than in neap tides; but the difference may be insensible. All this depends on circumstances with which we are little acquainted ; many of these circumstances are local : and the situation of the summit of the ocean, with respect to the moon, may be different in different places. Nor have we been able to determine theoretically what will be the height of the summit. It will certainly be less than the height necessary for perfect equilibrium. The result of all this rea- soning is, that we must always suppose the sum- mit of the tide is at a certain distance east of the place assigned by the theory. Mr. R< rnoulli

concludes, from a very copious comparison of observations at different places, that the place of high water is about 20° to the eastward of the place assigned by the theory. Therefore the table formerly given will correspond w ith observation, if the leading column of the moon's elongation from the sun be altered accordingly. We insert it again in this

place, with this alteration, and add three columns for the times of high water. Thus changed it will be of great use. We have now an explanation of the acceleration of the neap tides, which should happen six hours later than the spring tides. They are in fact tides cor- responding to positions of the moon, which are 20° more, and not the real spring and neap tides. These do not happen till two days after ; and, if the really greatest and least tides be observed, the least will be found six hours later than the first.

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11

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W

High Water before or after Moon's Southing.

Time of High Water.

Perig.

M. D.

Apog.

Perig.

M.Dist

Apog.

0

18 a.

22 a.

27}

0-18

0-22

0-27}

10

9} a.

Hi

14

0-49}

0-51}

0-54

20

0 a.

0

0

1-20

1-20

1-20

30

9} b.

11} b.

14 b.

1-50}

1-48

1-46

- 40

18 b.

22

37}

2-22

2-18

2-12

50

26

*31**

39}

3-54

2-48

2-40

60

33

40

50

3-27

3-20

3-10

70

37}

45

56

4-02}

3-55

3-44

80

*38**

46}

58

4-41}

4-33

4-22

90

33}

40}

50}

5-26}

5-19

5-09

100

22

25

31

6-19

6-15

6-09

110

0

0

0

7-20

7-20

7-20

120

22 a.

25 a.

31 a.

8-21

8-25

8-31

130

33} a.

40}

50}

9-13}

9-20

9-30

140

38 }

46}

58

9-58}

10-06

10-18

150

37}

45

56

10-37}

10-45

10-56

160

33

40

50

11-13

11-20

11-30

170

26

31}

29}

11-46

11-51

11-59

180

18

22

27}

0-18

0-22

0-27

This table is general ; and exhibits the times of high water, and their difference from those of the moon's southing, in the open sea, free from all local obstructions. If therefore the time of high water in any place on the earth's equator (for we have hitherto considered no other) be different from this table (supposed correct), we must attri- bute the difference to the

distinguishing circum- stances of the situation. Thus every place on the equator should have high water on the day that the moon, situated at her mean distance, changes precisely at noon, at 22′ P. M., because the moon passes the meridian along with the sun by supposition. Therefore, to make use of this

table, we must take the difference between th» first number of the column, entitled time of higu water, from the time of high water at full ana change peculiar to any place, and add this to all the other numbers of that column. This adapts the table to the given place. Thus, to know the time of high water at Leith when the moon is 50° east of the sun, at her mean distance from the earth, take 22′ from 4 h. 30', there remains 4-08. Add this to 2 h. 48', and we have 6 h. 56′ for the hour of high water. (The hour of high water at new and full moon for Edinburgh is marked 4h. 30′ in Maskelyne's tables, but we do not pretend to give it as the exact determination. This would require a series of accurate observations). It is by no means an easy matter to ascertain the time of high water with precision. It changes so very slowly, that we may easily mistake the exact minute. The best method is to have a pipe with a small hole near its bottom, and a float with a long graduated rod. The water gets in by the small hole, and raises the float, and the small ness of the hole prevents the sudden and irregular starts which waves would occasion. Instead of observing the moment of high water, observe the height of the rod about half an hour before, and wait after high water till the rod comes again to that height : take the middle be- tween them. The water rises sensibly half an hour before the top of the tide, and quickly changes the height of the rod, so that we cannot make a great mistake in the time. Bernoulli has made a very careful comparison of the theory thus corrected, with the great collection of observations preserved in the Depot de la Marin. at Brest and Rochefort (see Cassini Mem. Acad. Paris, 1734) ; and finds the coincidence very great, and far exceeded any rule which he had ever seen. Indeed we have no rules but what are purely empirical, or which suppose a uniform progression of the tides. The heights of the tides are much more affected by local circumstances than the regular series of their times. The regu- lar spring tide should be to the neap tide in the same proportion in all places ; but nothing is more different than this proportion. In some places the spring tide is not double the neap tide, and in other places it is more than quadruple. This prevented Bernoulli from attempting to fix the proportion by means of the height of the tides. Newton had, however, done it by the tides at Bristol, and made the lunar force almost five times greater than the solar force. But this was very ill-founded, for the reason now given. Yet Bernoulli saw that in all places the tides gradually decreased by a similar law with the theoretical tides, and has given a very ingenious method of accommodating the theory to any tides which may be observed. The result

cannot be far from the truth. The following table is calculated for the three chief distances of thr moon from the earth : —

TIDES.

103

*©

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*c < *$*

Height of the Tide.

Moon in Perig.

Moon in M. D.

Moon in Apog.

0

0-99 A + 0-15 B

0-88 A + 0-12 B

0-79 A -f 0 08 B

10

1-10 A + 0-04 B

0-97 A + 0-03 B

0-87 A + 0-02 B

20

1-14 A + 0-00 B

1-00 A + 0-00 B

0-90 A + 0-00 B

30

1-10 A + 0-04 B

0-97 A + 0-03 B

0-87 A + 0-02 B

40

0-99 A + 0-15 B

0-88 A + 0-12 B

0-79 A + 0-08 B

so

0-85 A + 0-32 B

0-75 A + 0-25 B

0-68 A 4- 0-18 B

60

0-67 A + 0-53 B

0-J9 A + 0-41 B

0-53 A + o-2!) B

70

0-46 A + 0-7.5 B

0-41 A -f 0-59 B

0-37 A + 0-41 B

80

0-28 A + 0-96 B

0-25 A + 0-75 B

0 23 A + 0-53 B

90

0-13 A + 1-13 B

0-12 A + 0-88 B

0-11 A + 0-62 B

100

0-03 A + 1-24 B

0-03 A + 0-97 B

0-03 A + 0-68 B

110

0-00 A + 1-28 B

0-00 A + 1-00 B

0-00 A -f 0-70 B

120

0-03 A + 1-24 B

0-03 A 4- °‘97 B

0-03 A -f 0-68 B

130

0-13 A + M3 B

0-12 A 4- °‘88 B

0-11 A f 0-62 B

140

0-28 A + 0-96 B

0-25 A + 0 75 B

0-23 A f 0-53 B

1.50

0-46 A + 0-75 B

0-41 A 4- °‘59 B

0-37 A + 0-41 B

160

0-67 A -f 0-53 B

0-59 A + 0-41 B

053 A 4- 0-29 B

170

0-85 A + 0-32 B

0-75 A + 0 25 B

0-68 A 4- 0-18 B

180

0-99 A + 0-15 B

0-88 A + 0-12 B

0-79 A + 0 08 B

This table is corrected from the retardation arising from the inertia of the waters. Thus, when the moon is 20° from the sun, the mean distance tide is 1-00 A -f 0-00 B, which is the theoretical tide corresponding to conjunction or opposition.

We have now given in sufficient detail the phenomena of the tides along the equator, when the sun and moon are both in the equator, show- ing both their times and their magnitude. When we recollect that all the sections of an ob- long spheroid by a plane passing through an equatorial diameter are ellipses, and that the compound tide is a combination of two such spheroids, we perceive that every section of it through the centre, and perpendicular to the plane in which the sun and moon are situated, is also an ellipse, whose shorter axis is the equato- rial diameter of a spring tide. This is the great- est depression in all situations of the luminaries; and the points of greatest depression are the lower poles of every compound tide. When the luminaries are in the equator, these lower poles coincide with the poles of the earth. The equa- tor, therefore, of every compound tide is also an ellipse, the whole circumference of which is lower than any other section of this tide, and gives the place of low water in every part of the earth. In

like manner, the section through the four poles, upper and lower, gives the place of high water. These two sections are terrestrial meridians or hour circles, when the luminaries are in the equator. Hence it follows that all that we have already said as to the times of high and !ow water may be applied to every place on the surface of the earth, when the sun and moon are in the equator. But the heights of tide will diminish as we recede from the equator. The heights must be reduced in the proportion of radius to the cosine of the latitude of the place. But in every other situation of the sun and moon all the circumstances vary exceedingly. It is true tha. the determinatior of the elevation of*

the waters in any place whatever is equally easy. The difficulty is to exhibit for that place a con- nected view of the whole tide, with the hours of flood and ebb, and the difference between high and low water. This is not indeed difficult ; but the process by the ordinary rules of spheri- cal trigonometry is tedious. When the sun and moon are not near conjunction or opposition, the shape of the ocean resembles a turnip, which is flat and not round in its broadest part. Be- fore we can determine with precision the differ- ent phenomena in connexion, we must ascertain the position or attitude of this turnip; making on the surface of the earth both its elliptical equa- tors. One of these is the plane passing through the sun and moon, and the other is perpendicu- lar to it, and marks the place of low water. And we must mark in like manner its first meridian, which passes through all the four poles, and marks on the surface of the earth the place of high water. The position of the greatest section of this compound spheroid is often much inclin- ed to the earth's equator ; nay, sometimes is at right angles to it when the moon has the same right ascension with the sun, but a different de- clination. In these cases the ebb tide on the equator is the greatest possible ; for the lower poles of the compound spheroid are in the equa- tor. Such situations occasion a very compli- cated calculus. We must therefore cc "' our- selves with a good approximation. &.»< first, with respect to trte times of high water. It will be sufficient to conceive the sun and moon as always in one plane, viz. the ecliptic. The or- bits of the sun and moon are never more inclin- ed than 5° 30. This will make very little dif- ference ; for, when the luminaries are so situated that the great circle through them is much in- clined to the equator, they are then very near to each other, and the form of the spheroid is little different from what it would be if they were really in conjunction or opposition. It will*

therefore be sufficient to consider the moon in three different situations. 1. In the equator. The point of highest water is never farther from the moon

than 15°, when she is in apogee and the sun in perigee. Therefore, to have the time of high water, multiply the numbers of the columns which express the difference of high water and the moon's southing by •£&, and the products give the real difference. It is more difficult to find the time of low water ; and we must either go through the whole trigonometrical process or content ourselves with a less perfect approximation. The trigonometrical process is not indeed difficult. But it will be abundant- ly exact to consider the tide as accompanying the mcon only. Hence the two tides of one lu- nar day may be considerably different, and it is proper to distinguish them by different names, as a superior tide which happens when the moon is above the horizon during high water, and the inferior tide. From this construction we may learn in general, 1. When the moon has no de- clination, the durations and also the heights of the superior and inferior tides are equal in all parts of the world. 2. When the moon has de- clination, the duration and also the height of a superior tide at any place is greater than that of the inferior ; or is less than it, according as the moon's declination and the latitude of the place are of the same or opposite names. This is a very important circumstance. It frequently happens that the inferior tide is found the great- est when it should be the least ; which is parti- cularly the case at the Nore. This shows, with- out further reasoning, that the tide at the Nore is only a branch of the regular tide. The regular tide comes in between Scotland and the conti- nent ; and, after travelling along the coast, reaches the Thames, while the regular tide is just coming in again between Scotland and the continent. 3. If the moon's declination is equal to the co-lati- tude of the place, or exceeds it, there will be only one tide in a lunar day. It will be a supe- rior or inferior tide, according as the declination of the moon and the latitude of the place are of the same or opposite kinds. Thus the difference of the durations of the superior and inferior tides of the same day increase both with the moon's declination and with the latitude of the place. The heights of the tides are affected no less re- markably by the different situations of the moon, and of the place of observation. Therefore at high water, which by the theory is in the place directly under the moon, the height of the tide is as the square of the cosine of the moon's ze- nith or nadir distance. Hence we derive a con- struction which solves all questions relating to the height of the tides with great facility, free from all the intricacy and ambiguities of the al- gebraic analysis employed by Bernoulli. 1. The greatest tides happen when t!i« moon is in the zenith or nadir of the place of observation. 2. When the moon is in the equator, the 'supe- rior and inferior tides have equal height. 3. If •he place of observation is in the equator, the in- ferior and superior tides are again equal, what- ever is the moon's declination. 4. The superior tides are greater or less than the inferior tides according as the latitude and declination are of

the same or of opposite names. 5. If the co-la- titude be equal to the

declination, or less than it, there will be no inferior tide, or no superior tide, according as the latitude of the place, and decli- nation of the moon, are of the same or opposite names ; and the low water of its only tide is the summit of the inferior tide. 6. At the pole there is no daily tide; but there are two monthly tides, and it is low water when the moon is in. the equator. N. B. The moon's declination never exceeds 30°. Therefore cos. 2 M Q is al- ways a positive quantity, and never less than half, which is the cosine of (30°. While the la- titude is less than 45°, cos. 2 lat. is also a posi- tive quantity. When it is precisely 45° the co- sine of its double is o ; and, when it is greater than 45°, the cosine of its double is negative. Hence we see, 1. That the medium tides are equally affected by the northern and southern declinations of the moon. 2. If the latitude of the place is 45°, the medium tide is always £ M. This is the reason why the tides along the coasts of France and Spain are so little affected by the declination of the moon. 3. If the lati- tude is less than 45°, the mean tides increase as the moon's declination diminishes. All that we have now said may be said of the solar tide. Also the same things hold true of spring tides. But to ascertain the effects of declination and latitude on other tides, we must make a much more complicated construction, even though we suppose both luminaries in the ecliptic. For in this case the two depressed poles of the watery spheroid are not in the poles of the earth ; and therefore the sections of the ocean, made by meridians, are by no means ellipses. The inaccuracies are not so great in intermediate tides, and respect chiefly the time of high water and the height of low water. The exact computation is very tedious and peculiar, so that it is hardly possible to give any account of a regular progress of phenomena ; and all we can do is, to ascertain the precise heights of detached points. For which reasons we must content ourselves with the construction already given. It is the exact geometrical ex- pression of Bernoulli's analysis, and its conse- quences now related contain all that he has in- vestigated. Thus have we obtained a general, though not very accurate, view of the phenomena which must take place in different latitudes and in different declinations of the sun and moon, provided that the physical theory which deter- mines the form and position of the watery sphe- roid be just. We have only to compute, by a very simple process of spherical trigonometry, the place of the pole of this spheroid. If we were to compare this theory with observation, without further consideration, we should still find it unfavorable, partly in respect of the heights of the tides, and more remarkably in re- spect of the time of low water. We must again consider the effects of the inertia of the waters, and recollect that a regular theoretical tide differs very little in its progress from the motion of a wave. Even along the free ocean, its motion much resembles that of any other wave. All waves are propagated by an oscillatory motion of the waters, precisely similar to that of a pen- dulum. It is well known that if a jicndulum

receive a small impulse in the time of every .de- scent, its vibrations may be increased to infinity. Did the successive actions of the sun or moon, just keep time with the natural propagation of the tides as the natural oscillations of the wa- ters, the tides would also augment to infinity ; but there is an infinite odds against this exact ad- justment. It is much more probable that the action of to-day interrupts or checks the oscilla- tion produced by yesterday's action, and that the motion which we perceive in this day's tide is what remains and is compounded with the action of to-day. This being the case, we should ex- pect that the nature of any tide will depend much on the nature of the preceding tide. There- lore we should expect that the superior and infe- rior tides of the same day will be more nearly equal than the theory determines. The whole rourse of observation confirms this. In latitude 45°, the superior and inferior tides of one day may differ in the proportion of two and a half to one, and the tides corresponding to the greatest and least declinations of the moon may differ nearly as much. But the difference of superior and inferior tides, as thev occur in the list of Observations at Rochefort, is not the third part of this, and the changes made by the moon's de- clination is not above one-half. Therefore we shall come much nearer the true measure of a spring tide, by taking the arithmetical mean, than by taking either the superior or inferior. We should expect less deviation from the theory in the gradual diminution of the tides from spring tide to neap tide, and in the gradual changes of the medium tide by the declination of the moon ; because the successive changes are very small ; and when they change in time, that is, diminish after having for some time augmented, the change is by insensible degrees. This is most accurate- ly confirmed by observation. The vast collec- tion made by Cassini of the observations at Brest being examined by Bernoulli, and the me- dium of the two tides in one day being taken for the tide of that day, he found a considerable agreement between them. He found no less agreement in the changes of the medium tides by the moon's declination. In like manner, the changes produced by the different distances of the moon from the earth, were found abundantly conformable to the theory, although not so exact as the other. This difference or inferiority is easily accounted for : When the moon changes in her mean distance, one of the neap tides is uncommonly small, and therefore the successive diminutions are very great, and one tide sensibly affects another. The same circumstance operates when she changes in apogee, by reason of a very large spring tide. And the changes correspond- ing both to the sun's distance from the earth and his declination agreed almost exactly. All these things considered together, we have abundant reason to conclude that not only the theory itself is just in principle (which no intelligent natural- ist

can doubt), but also that the data which are assumed in the appellation are properly chosen ; that is. that the proportion of two to five is very nearly the true proportion of the mean solar and lunar forces. If we now compute the medium tide for any place in succession, from spring tide

to : cap tide, and, still more, if we compute the series of times ot their occurrence, we shall find as great an agreement as can be desired. Not but that there are many irregularities ; but these are evidently so anomalous that we can ascribe them to nothing but circumstances which are purely local. We have been considering the tides of an ocean completely to cover the earth. How may those be determined which happen in a small and confined sea, such as the Caspian or the BlackSea? The determination in this case is very simple. As no supply of water is supposed to come into the basin, it is susceptible of a tide only by sinking at one end and rising at the other. It is evident that there will be high water, or the greatest possible rise, when the bason comes to that position where the tangent is most of all inclined to the diameter, and therefore three lu- nar hours after the moon's southing; at the same time it will be low water at the other end. It is plain that the rise and fall must be exceedingly small, and that there will be no change in the middle. The tides of this kind in the Caspian Sea, in lat. 45°, whose extent in longitude does not exceed 8°, are not above seven inches ; a quantity so small that a slight breeze of wind is sufficient to check it, and even to produce a rise of the waters in the opposite direction. We have not learnt that tides have been observed in this sea. The tide should be much greater, though still very small, in the Mediterranean Sea. Accord- ingly, tides are observed there, but still more re- markably in the Adriatic. We do not know that tides have been observed in the great lakes of North America. These tides, though small, should be very regular. It would be low water on one side of the shore z when it is high water on the other side of this partition. If the tides in the Euxine and Caspian seas, or in the American lakes which are near each other, could be ob- served, this phenomenon would appear, and would be one of the prettiest examples of univer- sal gravitation that can be conceived. Some- thing like it is to be seen at Gibraltar. It is high water on the east side of the rock about ten o'clock at full and change, and it is high water on the west side, not a mile distant, at twelve. This difference is perhaps the chief cause of the singular current which is observed in the mouth of the Straits. There are three currents observed at the same time, which change their directions . every twelve hours. The small tide of the Me- diterranean proceeds along the Barbary shore, which is very uniform all the way from Egypt, with tolerable regularity. But along the north side, where it is greatly obstructed by Italy, the islands, and the east coast of Spain, it sets very irregularly ; and the perceptible high water on the Spanish coast differs four hours from that on the south coast. Thus one tide ranges round Europa Point, and

another along the shore near Ceuta, and there is a third current in the middle different from both. Its general direction is from the Atlantic Ocean into the Mediterranean Sea, but it sometimes comes out when the ebb tide in the Atlantic is considerable. Suppose the moon over the middle of the Mediterranean. The sur- face of the sea will be level, ami it will be half tides at both ends, and therefore within the

Straits of Gibraltar But without the Straits it "s within half an r.our of high water. Therefore there will be a current setting in from the Atlan- tic. About three hours and a half after, it is high water within, and half ebb without. The current now sets out from the Mediterranean : three hours later, it is low water without the Straits and half ebb within ; therefore the current has been setting out all this time: three hours later, it is half flood without the Straits and low water within, and the current is again setting in, &c. Were the earth fluid to the centre, the only sensible motion of the waters would be up and down, like the waves on the open ocean, which are not brushed along by strong gales. But the shallowness of the channel makes a horizontal motion necessary, that water may be supplied to form the accumulation of the tide. When this is formed on a flat shelving coast, the water must flow in and out, on the flat and sands, while it rises and falls. These horizontal motions must be creatly modified by the channel or bed along which they move. When the channel contracts along the line of flowing water, the wave, as it moves up the channel, and is checked by the narrowing shores, must be reflected back, and teep a top of the waters still flowing in under- neath. Thus it may rise higher in these narrow seas than in the open ocean. This may serve to explain a little the great tides which happen on some coasts, such as the coast of Normandy. At St. Malo the flood frequently rises fifty feet. But we cannot give any thing like a full or satis- factory account of these singularities. In the Bay of Fundy, and particularly at Annapolis Royal, the water sometimes rises above 100 feet. This seems quite inexplicable by any force of the sun and moon, which cannot raise the waters of the free ocean more than eight feet. These great floods are unquestionably owing to the proper timing of certain oscillations or currents adjoin- ing, by which they unite, and form one of great force. Such violent motions of water are often seen on a small scale in the motions of brooks and rivers ; but we are too little acquainted with hydraulics to explain them with any precision. We have seen that there is an oscillation of wa- ters formed under the sun and moon, and that in consequence of the rotation of the earth, the inertia, and the want of perfect fluidity of the waters, and obstructions in the channel, this ac- cumulation never reaches the place where it would finally settle if the earth

did not turn round its axis. The consequence of this must be a general current of the waters from east to west. This may be seen in another way. The moon in her orbit round the earth has her gravity to the earth diminished by the sun's disturbing force, and therefore moves in an orbit less incurvated than she should describe independent of the sun's action. She therefore employs a longer time. If the moon were so near the earth as almost to touch it, the same thing would happen. There- fore, suppose the moon turning round the earth, almost in contact with the equator, with her na- tural undisturbed periodical time, and that the earth is revolving round its axis in the same time, the moon would remain continually above the same spot of the earth's surface (suppose the

city of Quito), and a spectator in another place would see the moon always covering the same spot. Now let the sun act. This will not affect the rotation of the earth, because the action on one part is exactly balanced by the action on an- other. But it will affect the moon. It will move slower round the earth's centre, and at a greater distance. It will be left behind by the city of Quito, which it formerly covered. And as the earth moves round from west to east, the moon, moving more slowly, will have a motion to the west with respect to Quito. In like man- ner, every particle of water has its gravity dimi- nished, and its diurnal motion retarded ; and hence arises a general motion or current from east to west This is very distinctly perceived in the Atlantic and Pacific oceans. It comes round the Cape of Good Hope, ranges along the coast of Africa, and then sets directly over to America, where it meets a similar stream which comes in by the north of Europe. Meeting the shores of America, it is deflected both to the south along the coast of Brasil, and to the north along the North American shores, where it forms •what is called the Gulf Stream (see AMERICA), because it comes from the Gulf of Mexico. This motion is indeed very slow, this being sufficient for the accumulation of seven or eight feet on the deep ocean ; but it is not altogether insensible. We may expect differences in the appearances on the west shores of Europe and Africa, and on the west coast of America, from the appearances on the east coasts of America and of Asia ; for the general current obstructs the waters from the west- ern shores, and sends them to the eastern shores. Also when we compare the wide opening of the northern extremity of the Atlantic Ocean with the narrow opening between Kamtschatka and America, we should expect differences between the appearances on the western coasts of Europe and America. The observations made during the circumnavigations of captain Cook and others show a remarkable difference. All along the western coast of North America the inferior tide is very trifling, and often is not perceived. In the very same manner, the disturbing forces of the sun and moon form a tide in the fluid air which surrounds this globe, consisting of an elevation and depression, which move gradually from east to west.

Neither does this tide ever attain that position with respect to the disturbing planets which it would do were the earth at rest on its axis. Hence arises a motion of the whole air from east to west, and this is the principal cause of the trade winds. They are a little accelerated by being heated, and therefore expanding. They expand more to the west than to the east, because the air expands on that side into air which is now cooling and contracting. These winds very evi- dently follow the sun's motion, tending more to the south or north as he goes south or north. Were this motion considerably affected by the expansion of heated air, we should find the air Kither coming northward and southward from the torrid zone, in consequence of its expansion in that climate. We repeat it, it is almost solely produced by the aerial tide, and is necessary for the very formation of this tide. We cannot per- ceive the accumulation. It cannot affect the ba-

rometer, as many think, because, though the air becomes deeper, it becomes deeper only because it is made lighter by the gravitation of the sun. Instead of pressing more on the cistern of the barometer, we imagine that it presses less ; be- cause, like the ocean, it never attains the height to which it tends. It remains always too low for equilibrium, and therefore it should press witli less force on the cistern of a barometer. There is an appearance precisely similar to this in the planet Jupiter, lie is surrounded by an atmo- sphere which is arranged in zones or belts, pro- bably owing to climate differences of the different latitudes, by which each seems to have a different kind of sky. Something like this will appear to a spectator in the moon looking at this earth. The general weather and appearance of the sky is considerably different in the torrid and tem- perate zones. Jupiter's belts are not of a con- stant shape and color ; but there often appear large spots or tracts of clouds, which retain their shape during several revolutions of Jupiter round his axis. To judge of his rotation by one of these, we should say that he turns round in 9'55. There is also a brighter spot which is frequently seen, occupying one certain situation on the body of Jupiter. This is surely adherent to his body, and is either a bright colored country, or perhaps a tract of clouds hovering over some volcano. This spot turns round in 9'51|. And thus there is a general current in his atmosphere from east to west. Both the motion of the air and of the water tend to diminish the rotation of the earth round its axis ; for they move slower than the earth, because they are retarded by the luminaries. They must communicate this retar- dation to the earth, and must take from it a quantity of motion precisely equal to what they want, in order to make up

the equilibrated tide. In all probability this retardation is compensated by other causes ; for no retardation can be ob- served. This would have altered the length of the year since the time of Hipparchus, giving, it a smaller number of days. We see causes of compensation. The continual washing down of soil from the elevated parts of the earth must produce this effect, by communicating to the valley on which it is brought to rest, the excess of diurnal velocity which it had on the mountain top.

TIDEMAN (Philip), an eminent painter born at Hamburg, in 1657. He studied under Lai- resse, and painted subjects of allegory and fabu- lous history with great propriety. Hedied in 1705.

TIDESWELL, a market-town in High Peak hundred, Derby, five miles east by north from Buxton, and 160 N. N. W. of London. The town is but indifferently built, but the church is large and tolerably well constructed. It has also a free-school. The name of this town is derived from its ebbing and flowing well, reck- oned one of the wonders of Derbyshire. Market on Wednesday. Fairs May 3d, October 18th, and first Wednesday in September.

TIDI, a river of England, in the county of Cornwall, which joins the Lynker.

TI'DINGS, n.s. Sax. titan, to happen ; Isl. tuicndc. News ; an account of something that has happened; incidents related.

When her eyes she on the dwarf had set, And saw the signs that deadly tidings spake, She fell to ground for sorrowful regret. bpentei .

1 shall make my master glad with these tidings.

SltaltS] > eare. They win

Great numbers of each nation to receive, \ ith joy, the tidings brought from heaven. Milton.

Portius, thy looks speak somewhat of importance : What tidings dost thou bring? methinks I see Unusual gladness sparkling in thy eyes. Addison.

The messenger of these glad tidings, by whom this covenant of mercy was proposed and ratified, was the eternal Son of his bosom. llogert.

TIDORE, one of the Molucca isles, about twenty-one miles in circumference, is three leagues south of Ternate. The people are prin- cipally Mahometans, and there are said to be twenty-five mosques on the island. This island was first visited by the Spaniards under Magel- lan, November 8th, 1521, who were kindly re- ceived, and obtained permission

to build a fac- tory. At that period cloves were plentiful here. After visiting the neighbouring islands, Matchian and Batchian, they returned to Europe. In 1527 the Portuguese succeeded in driving them from the island. In 1607 the Dutch arrived in these seas and soon managed to drive out the Portuguese, from which time till its capture by the English it had remained in their hands. The king possesses great part of the south-east por- tion of Gilolo, in which are three towns of some trade ; viz. Patany, Maba, and Weda; he like- wise claims the islands of Waygiou, Mysol, and Batanta. There is a great trade here with New Guinea, Gilolo, and with the northern islands ; and the Chinese are much interested in it. Long. 127° 25′ E., lat. 0° 45′ N.

,TI'DY, adj. Isl. tidt. Seasonable; neat; ready.

If weather be faire and ndie, thy grain Make speedilie carriage, for fear of a raine. Tusser.

Thou whoreson tidy Bartholomew boar-pig, when wilt thou leave fighting? Shakspeare. Henry IV.

Whenever by yon barley- mow 1 pass, Before my eyes will trip the tidy lass.

Gay't Partorak.

TIE, v. a. & n. s. Sax. tian, rijan. To bind ; fasten with a knot; knit; hold: hence to con- strain ; oblige ; hinder; obstruct : a knot; fasten- ing; obligation.

Tie the kine to the cart, and bring their calves home from them. 1 Samuel vi. 7.

Although they profess they agree with us touching a prescript form of prayer to be used in the church, they have declared that it shall not be prescribed as a thing whereunto they will tie their ministers.

Hooker.

Thousands of men and women, tied together in chains, were, by the cruel Turks, enforced to run as fast as their horses. Knolles't History.

It is the cowish terrour of his spirit, That dares not undertake ; he'll not feel wrongs Which lie him to an answer.

Shakspeare. King Lear.

The rebels, that had shaken off the great yoke of obedience, had likewise cast away the lesser tie of respect. Bacon.

In bond of virtuous love together tied, Together served they, and together died. Fairfax,

No forest, cave, or savage den, Holds more pe-nicious beasts than men

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Vows, oaths, and contracts, they devise,

And tell us they are sacred tie." Waller.*

Cannot God make any of the appropriate acts of worship to become due only to himself! cannot he tie us to perform them to him ? Stillingjieet.

Not tied to rules of policy, you find Revenge less sweet than a forgiving mind. Dryden.

No one seems less tied up to a form of words.

Locke.

The intermediate ideas tie the extremes so firmly together, and the probability is so clear, that assent necessarily follows it Id.

We do not tit this knot with an intention to puz- zle the argument ; but the harder it is tied, we shall feel the pleasure more sensibly when we come to loose it- Burnet.

Honour and good-nature may tie up his hands ; but, as these would be very much strengthened by reason and principle, so without them they are only instincts. Addison.

They have no uneasy expectations of what is to come, but are ever tied down to the present mo- ment. Atlerbury.

A healthy man ought not to tie himself up to strict rules, nor to abstain from any sort of food in common use- Arbuthnot.

The well-swola ties an equal homage claim. And either shoulder has its share of fame. Young.

TIED EM ANN (Dieteric), a modern German philosopher of eminence, was born April 3d, 1748, at Bremervorde, in Bremen, of which place his father was a burgomaster. He was intended for the study of divinity, but early gave the preference to a more general pursuit of science and literature. In 1772 he published his Es- say on the Origin of Languages, (Riga) and in 1776 his System of the Stoic Philosophy. This work, much admired by the celebrated Heyne, procured him the professorships of the Greek and Latin languages in the Collegium Carolinum at Cassel. In 1786 he published his Investi- gation of Man, 3 vols. 8vo., and in 1780 The First Philosopher of Greece. In 1786 he was removed with the other teachers of the college to Murpurg,and appointed professor of philosophy, in which capacity he sustained a high reputation. His latest performance was a translation of De- non's Travels in Egypt He died May 24th, 1803, in the fifty-fifth year of his age. Besides the works already enumerated he was also author of a work entitled The Spirit of Speculative Philosophy.

TIER, n.t. Old Fr. liere, tieire ; lal. tiro; Beig. tuyer. A row ; rank.

Fornovius, in his choler, discharged a tier of great ordnance amongst the thickest of them. Knnlles.

TIERCE, n.t. Fr. tiers, tiercier. A vessel holding the third part of a pipe.

Go now deny bis tierce. Ben J onion.

Wit. like tierce claret, when 't begins to pall, Neglected lies, and 's of no use at all ; Pot in its full perfection of decay Turns vinegar, and comes again in play. Dorset.

TlKHM-.Y (Ueorge;, &on of a merchant of London, born in 1761, was educated at Cam- bridge, and designed for the bar, to which he was called. His father had some connexion with the East India company; and the first publication of Mr. Tierney (1787) was the Heal Situation of the East India Company. Mr. Tierney now engaged in political life, and \as

*sent down by a noble duke as candidate for Colchester, when he stood a severe contest at a trreat expense, which his patron refused to pay. The loss therefore fell heavily on Tierney. In 1796, he was nominated by the popular party to oppose Mr. Thelluson, for the borough of Southwark ; and, although defeated on the poll, yet. on a petition to the house of commons, he removed his opponent by the Treating Act ; and, on the next return, as his competitor WK legally disqualified, Mr. Tierney was declared duly elected. As soon as he was in the hou*e, lie entered warmly into the measures of the \hiˆ. He soon proved himself an able speaker, and long ranked as one of the first in the house. During a debate in the year 1 798,*

some words spoken in the house were the occa- s.on of a duel between him and Mr. Pitt, in which, however, neither party was wounded. NVhen Mr. Addington became minister, in 1802, he made Mr. Tierney treasuier of the navy. In 1806, under the Grenville administration, Mr. Tierney was made president of the board ot control, but went out of office early in the fol- lowing year, on the resignation of the ministry. He then lost his seat for Southwark, but after- wards sat for different places; in 1806 for Ath- lone, in 1809 for Bandon Bridge, in 1813 for Appleby, and in 1818, 1820 and 1826. here- presented the proprietor of Knaiesborough. In 1827, Mr. Canning invited him to the master- ship of the mint, from which he retired, with lord Goderich, in 1828. His death took place Jan. 23, 1830.

TIFLRNUM, three ancient towns of Italy : I . called also Metaurense, near the Metaurus, m I'mbria: 2. called Samniticum, in the coun- try of the Sammtes : and 3. called Tiberinum, seated on the Tiber. Liv. x. c. 14. Plin. iii. 14.

TIFERNUS, a mountain and river of Italy, in the country of the ancient Sammtes. Liv. x. c. 30. Mela li. c. 4.

TIFF, n. s. A low word, I suppose, without etymology. — Johnson. Liquor; drink; a pet.

*TIFFANY, n. *. Old Fr. ti/er, to dress up. — Nkinner. Very thin silk.*

TIGELLINUS, a Roman courtier, infamous for his intrigues at the court of Nero, who pro- moted him to the highest honors ; but being at last detected in a conspiracy against Nero, he was ordered to kill himself, A.D. 68. Tac. HIM. i. 72.

TIGELLIUS, a Sardinian, who became a favorite of Julius Casar, Antony, and Cleopa- tra, by his buffoonery, mimicry, and fine voice ; but Horace represents him as a despicable cha- racter. 1 Sat. ii. 3, &c.

*TIGER, n. *. Fr. tiyre ; Lat. tigrit. A I'uTce beast of the leonine kind.*

TIGHT, adj. } Sax. ticht; Belg. dicfit.

TISHT'EN, «. a. / Tense ; close ; not loose :

TIGHT'LY, adv. £ hence neat : to tighten is

*TIGHI'MESS, n. *. 3 to make strait or ti JH : fie adverb and noun substantive agree with the a ijective.*

Every joint WM well grooved ; and the door

TiGRAMMANES, an ancient name of the *ians. See PHRYGIA.

TIGRANES I., a famous king of Armenia, who conquered Cappadocia and Syria, and reigned for some years in prosperity ; but having afterwards married Cleopatra, a daughter of Mi- thridates VII. king of Pontus, he joined him against the Romans and beheaded a Roman am- bassador; but was soon after obliged to fly from his dominions by Lucullus, who pursued and defeated him near mount Taurus. He was af- terwards defeated by Pompey, who, however, allowed him to retain Armenia, Syria, and some other parts of his dominions, for a bribe of 60,000 talents. He died in Armenia.

TIGRANES II., a son of the preceding, re- volted against his father and fled to the Romans who made him king of Stophene, but having af- terwards insulted Pompey he was sent in chains to Rome where he died. This was also the name of other four kings of the same family.

TIGRANOCERTA, the capital of ancient Armenia, built by Tigranes I. during the Mithri- datic war, on a hill between the sources of the Tigris and mount Taurus. Lucullus took it not without difficulty, but found immense riches in it, particularly 8000 talents in money. Tac. Ann. v. 15, c. 4.

TIGRE, an extensive province of Abyssinia, which has communicated its name to almost all the north-eastern districts of that country. It is chiefly composed of very steep and lofty moun- tains, interspersed with fertile valleys and exten- sive plains. The Tacazze in general forms its western boundary, while on the east it reaches in part to the sea, whence, however, it is sepa- rated by a salt and sandy plain, traversed by several tribes of Arabs. This province contains Masuah, the port by which all the rort-i-ˆn trade of Abyssinia is carried on. Of late, since Am- hara and Gondar have fallen into the possession of the Galla, the authority of the original sove- reigns of Abyssinia is almost confined to Tigre. Adowa is the capital.

TIGRIS (Persic, ttir, an arrow, from the ra- pidity of its course), a large and celebrated river of Western Asia, flowing along the frontier of the Turkish and Persian empires ; jises in the mountains of Armenia, about fifty miles to the north of Diarbekir, and fifteen to the east of the Euphrates. These two great rivers then sepa- rate, and flowing parallel to

each other, but at a considerable distance, enclose the province of Algesira. At Bagdad they approach within less than thirty miles, but again separate, forming the rich district of Irak Arabi. This river, famed in antiquity for the many great cities built upon its banks, can boast, in modern times, of Bagdad, with the secondary names of Mosul and Diarbe- kir. Above Bagdad it is navigable only for very small vessels.

TIGRIS, in zoology. See FELIS.

TIGURINI, an ancient warlike nation of Helvetia who inhabited the countries or cantons now called Switz, Zurich, Schauffhausen, and St. Gall. Caes. de B. Gall. Their capital was Tigurum.

TIKE, n. s. Fr. tu/ue ; Swed. tik. The louse of dogs or sheep. See TICK.

Avant, you curs ! Hound or spaniel, brache or lym, Or bobtail tike, or trundle tail.

Shakspeare. King Lear,

Lice and tikes are bred by the sweat close kept, and somewhat arefied by the hair.

Bacon i Natural History.

TILBURY, EAST, a parish in Barnstable hun- dred, Essex, near the Thames, and in the marshes of that angle of land formed by the winding of the Thames from the Hope to Gravesend Reach. It is three miles from Grays-Thurrock, and twenty-eight east by south of London; contain- ing thirty-five houses and 254 inhabitants. Se veral caverns of great magnitude are here dug in the cliffs. The fort is situate close to the banks of the Thames, opposite Gravesend. It is a re- gular fortification, built by Henry VIII. as a block-house. The esplanade is large, and the bastions the largest in England ; they are faced with brick, and are surrounded with a double ditch or moat, the innermost being 180 feet broad, and has a good counterscarp. On the landside are two small redoubts ; but the chief strength of this fort on the land side is its being able to lay the whole level under water. On the side next the river is a strong curtain, having a gate in the middle called the Water-gate, and the ditch pallisaded. At the place intended for the water bastion, and which by the plan should have run out into the river so as to command both the curtains, stands a high tower, erected by queen Eliazbeth, called the Block-house. Before this curtain is a platform instead of a counter- scarp, mounted, in time of war, with 106 can- nons, from twenty-four to forty-six pounders, besides which there are smaller pieces placed between them and the bastions and curtains ; the interior of the fort contains all the necessary apartments for the garrison :

but it is chiefly used as a depot for recruits.

TILBDRY, WEST, is a parish adjoining the above, where are some remains of queen Eliza beth's camp, formed here in 1588.

TILE, n. s. & v. a. i Sax. njle ; Belg. tegel;

TI'LER, n. s. > French tuile ; Ital. tegola.

TI'LING. 3 Thin plates of baked clay

used to cover houses : to cover with tiles : the tiler is he whose trade it is: tiling, the covering so made.

They went upon the house-top, and let him down through the tiling with his couch before Jesus.

l.ukev. 19.

Moss groweth chiefly upon ridges of houses tiled or thatched. Bacon's Natural History.

A Flemish tiler, falling from the top of a house upon a Spaniard, killed him ; the next of the blood prosecuted his death ; and, when he was offered pecuniary recompense, nothing would serve him but lex talionis : whereupon the judge said to him, he should go up to the top of the house, and then fall down upon the tiler. Id. Apophthegm.

The rafters of my body, bone, Being still with you, the muscle, sinew, and vein, Which tile this house, w.ll come again. Donne. In at the window lie climbs, or o'er the tilet.

Mill,™.

Worse than all the clattering t'dei, and worse Than thousand padders, way the poet's curse.

Druden.

Tile pins made of oak, or fir, they drive into holes made in the plain tiles, to hang them upon their lathing. Moron.

Sonnets or elegies to Chloris Might raise a house above two stories ; A lyric ode would slate ; a catch "Vould tile ; an epigram would thatch.

Swift's Miscellanies.

TILIA, lime or linden tree, in botany, a genus of plants belonging to the class- of polyandria and order of monogynia; and in the natural system ranging under the columniferae. The calyx is quinquepartite ; the corolla pentapeta- lous ; the berry is dry, globose, quinquelocular, quinquevalve, and opening at the base. There are four species; viz. 1. T. Alba, the white lime fee. 2. T. Americana, the American linden tree, grows plentifully in America. 3. T. Eu- ropaea, the European or common lime tree, is generally supposed to be a native of Britain ; but Mr. Coxe says that Mr. Pennant told him that it was imported into England before 1652. The leaves are heart-shaped, with the apex pro- duced, and serrated on the edges; the flowers grow in a thin umbel, from three to nine toge- ther, of a whitish color and a fragrant smell, very grateful to bees. The wood is light, smooth, and of a spongy texture, used for making lasts and tables for shoemakers, &c. Ropes and bandages are made of ttie bark, and mats and rustic garments of the inner rind, in Carniola and some other countries. The lime tree con- tains a gummy juice, which being repeatedly boiled and clarified produces a substance like sugar. 4. T. purescens.

*TILL, n. *. Sax. fcil. A money-box in a shop.*

They break up counters, doors, and titli, And leave the empty chests in view. Swift.

TILL, prep. & conj. Sax. nl. To the time of: to the time when ; to the degree that.

Meditate so Jong till you make some act of prayer to God, or glorification of him. Taulnr.

To this strange pitch their high assertions flew, Till Nature's self scarce looked on them as two.

Cowle.y.

Unhappy slave, and pupil to a bell, Unhappy till the last, the kind releasing knell. Id. Pleasure not known till now. Milton.

Woods and rocks had ears To rapture, till the savage clamour diowned Both harp and voice. /•/.

The unity of place we neither find in Aristotle, Horace, or any who have

written of it, till in our age the French poets first made it a precept of the stage.

J >ry den. Goddess, spread thy reign till Isis' ciders reel.

Pope.

TILL, v. «.. "^ Sax. tyhan ; Goth. til.

TILL'ABLE, adj. toil. To cultivate; hus- TILL'AOE, n. «. [band : commonly used of TILL'F.R, f the husbandry of the

TILL'MAN, (plough: the derivatives

TILTH, adj. & n. s. J corresponding. Abel was a keeper of sheep, but Cain was a tiller of the ground. Ci-iifnii iv. 2.

Good shepherd, good tilmun, good Jark, a id good

Gil, Makes husband and huswife their coffers to fill

Turner.

Bourn, bound of !.ind, tilth, vineyard, none; No use of metal, corn, or w.ne, or :ii"

AdbpM e, Tempen. Her plenteous womb*

ExDresseth its full tilth and husbandry. Shukspeare. Give the fallow lands their seasons and their

tilth- Drutiton.

Tillage will enable the kingdom for corn for the natives, and to spare for exportation. llacan.

The tillable fields are so hilly that the oxen c:m hardly take sure footing.

Carew'i Suriey of Cornwall.

They bring in sea-sand partly after their nearness to the places, and partly by the good husbandry ot the tiller. Cartw.

Send him from the garden forth, to till The ground whence he was taken.

Milton's Paradise Lost.

Incite them to improve the tillage of their coun- try, to recover the bad soil,

and to remedy the waste. Milton.

He beheld a field,

Part arable and tilth ; whereon were sheaves New reaped. Id. Paradise Lost.

Bid the laborious hind,

Whose hardened hands did long in tillage toil, Neglect the promised harvest of the soil. Druden.

Search her cabinet, and thou shall find Each tiller there with love epistles lined.

Id. Jiuenal. The worm that gnaws the ripening fruit, sad

guest !

Canker or locust hurtful to infest The blade : while husks elude the tiller's care, And eminence of want distinguishes the year.

That there was tillage, Moses intimates ; but whe- ther bestowed on all, or only upon some parts of that earth, as also what sort of tillage that was, is not expressed. H'< > <-

The husbandman tilleth the ground, is employed in an honest business that is necessary in life, and very capable of being made an acceptable service unto God. Lair.

TILLJEA, in botany, a genus of plants belong- ing to the class of tetrandria, the order of tetra- gynia, and in the natural system ranging under the thirteenth order, succulentae. The calyx lias three or four divisions; the petals are three or four, and equal ; the capsules three or four, and polyspermous. There are four species, of which one only, T. muscosa, or procumbent tillzea, is a native of England, and is not mentioned among the Scottish plants. It has prostrate stems, al- most erect, generally red, ana grow longer after flowering. The parts of fructification are always three. The leaves grow in pairs and are fleshy. It is found on dry heaths in Norfolk and Suffolk, and flowers in May and June.

TILLANDSIA, the large barren wild pine of the West Indies, a genus of the monogynia order, belonging to the hexandria class of plants. It is called caragatua by father Plumier? and is a parasitic plant, and ought perhaps, in strict pro- priety, to be denominated an aquatic.

TILLEMANS (Peter), a celebrated landscape painter, born at Antwerp. He came to England in 1708, and was much employed by the nobi- lity and gentry. He died in 1734.

TILLER OF A SHIP, a strong piece of wood fastened in the head of the rudder, and in small •hips and boats called the helm.

TILLl (John) count of, an illustrious general >,orr. at Brussels and educated under the Jesuits. Ho displayed great courage in Hungary in a battle with the Turks; and, in 1620, commanded .he troops under duke Maximilian at the battle of Prague. He showed equal skill and humanity in the various German wars that followed; but .vas at last defeated by Gustavus Adolphus, and mortally wounded in defending the passage of the Lech. He died at Ingoldstadt in 1652.

TILLI (Michael Angelo), F. R. S., a learned physician and botanist, born at Florence in 1655 and educated at Pisa. He was made physician to the grand duke, professor of medicine in the university of Pisa, superintendent of the botanic garden, and F. R. S. of London. His chief work is Catalogus Horti Pisani, in fol. 1723. He died at Florence in 1740, ased eighty-five.

TILLOCH (Alexander), LL.D., was the son of a tobacconist of Glasgow, who filled one of the municipal magistracies in that city, where 1 1 is son was born February 28th, 1759. He was intended by his father to follow his own busi- ness, but a strong bias towards mechanical an 1 scientific pursuits soon diverted his attention from commercial pursuits. In 1736 a jeweller of Edinburgh, named Ged, having, though un- acquainted with the tradition respecting Vander Mey, devised the art of printing from plates, and actually produced an edition of Sallust so print- ed, it was reserved, however, for Dr. Tilloch to revive and bring it an important step forward. See PRINTING. In 1787 Dr. Tilloch came to London, and two years afterwards purchased a principal share of the Star evening paper, which he continued to edit till within four years of his death. In 1797 the public attention being then directed to schemes for the prevention of forgery, he submitted to the Bank of England a plan re- specting which he had been previously in com- munication with the French government, for producing a note beyond the reach of imitation : this proposal was declined, and in 1820 Dr. Tilloch petitioned parliament on the subject, but without any practical result. In June 1797 he projected and established the

Philosophical Ma- gazine ; and only fifteen days before his death he had obtained a patent for an improvement on the steam-engine. Amidst his other avocations he also found leisure to apply himself to theolo- gical studies, the fruits of which appeared in a Dissertation on the Apocalypse, published in 1823, besides a variety of detached essays col- lected under the title Biblicus. The last work which he was engaged to superintend was the Mechanics' Oracle, published in numbers at the Caxton press. In his religious opinions Dr. Tilloch was a dissenter from the established church, and preached to a congregation who as- sembled in the Curtain Road. His death took place at his house in Barnsbury Street, Islington, January 26th, 1825.

TILLOTSON (John), a celebrated archbishop of Canterbury, the son of Robert Tillotson of Sowerby, in Halifax, Yorkshire, clothier; was born there in 1630. He studied in Clare Hall, Cambridge; and in 1656 became tutor to the son of Edmund Prideaux, esq., of Ford Abbey. He was next curate to Dr. Hacket, vicar of Ches-

hunt, Hertfordshire. In 1663 he was appointed rector of Ketton in Suffolk; in 1664 preacher to Lincoln's Inn. He was greatly admired in Lon- don by all the divines of the city. In 1666 he took the degree of D. D. at Cambridge; in 1669 was made prebendary of Canterbury ; in 1672 was admitted dean of that cathedral; and three years after was made a prebendary of St. Paul's, London. In 1679 he converted Charles earl of Shrewsbury from popery; yet, in 1670, he refused to sign the clergy's address to Charles II. on the bill of exclusion. In 1689 he was installed dean of St. Paul's; made clerk of the closet to Wil- liam and Mary; and appointed a commissioner to prepare matters to be laid before the convo- cation, for a comprehension of all Protestants ; but this attempt was frustrated by the bigotry of some members. In 1691 he was consecrated archbishop of Canterbury. In 1694 he was seized with a palsy, of which he died in his sixty- fifth year. One folio volume of his sermons was published in his life time. Those which came abroad after his death, from his chaplain Dr. Barker, made two volumes in folio, the copy ot which was sold for £2500, and this was the only legacy he left to his family, his extensive charity having consumed his yearly revenues as con- stantly as they came in. But kinˆ William gave two grants to his widow, amounting to £600 a year. He wrote some other works, and also published Dr. Barrow's works, and Dr. Wilkin's Treatise on the Principles and Duties of Natural Religion, with a volume of Sermons.

TIL'LYFALLY, adv.) A trifling word, used TIL'LY VALLEY. $ formerly when any

thing said was rejected as impertinent.

Am not I consanguineous ? am not I of her blood 1

t'dlei/rallev, lady. .V/m/tspeore. Twelfth Xight.

Tillefalltt, Sir John, never tell me ; your ancient swaggerer comes not in my doors. Id. Henry IV.

TILSIT, a handsome town of Prussian Li- thuania, fifty-six miles E. N. E. of Konigsberg. It stands on the banks of the Tilse, a small stream separating the town from the castle, and the Nie- man, a great river which flows past the town by the north, and over which it has a bridge of boats. The chief articles of trade are corn, wax, salt, salted provisions, hats, and leather. The town gives name to a district which extends from it to the great maritime inlet of the Curische- HaflT, a level and fertile tract, noted for its ex- ports of barley, butter, and cheese. The castle is /said to have been built in 1289, though the place received the title of town only in 1552. Its chief title to historical notice is from the tieaty of peace concluded here on July 1st, 1807, between France and Prussia, a treaty which thre%v the whole weight of Russian influence during several years into the scale of Buonaparte. Inhabitants 9000. Fifty miles S. S. E. of Memel. Long. 21° 56′ 15′ E., lat. 55° 4′ 30′ N.

TILT,n.j.,«.a.,&t7. n. \ Sax. ryh>. A tent ;

TILT'ER, n. s. J any support of cover-

ing over head ; a boat's covering ; a military game in a place often surrounded with tents and en- closed : hence a thrust ; inclination forward : to tilt is to cover, ns with awning; to point as in the above game ; to thrust ; to mil in tilts ; rush

as in combat ; fall on one side : a tilter is one who tilts.

It is a small vessel, like in proportion to a Graves- end ri/t-boat. Sandy.*

Images representing the forms of Hercules, Apollo, and Diana, he placed in the u/r-yard at Constanti- nople. K nolle.*

His study is his ti/t-yard, and his loves Are brazen images of canonized saints.

Shatupeare. Henry IV.

A puisny tilter, that spurs his horse on one side, breaks his staff like a noble goose.

Id. As You Like It.

Friends all but even now ; and then, but now — Swords out and tilting one at other's breasts, In opposition bloody. Id. Othello.

The roof of linnen Intended for a shelter !

But the rain mad? an ass Of tilt and canvass, And the snow which you know is a melter.

Denham.

The floating vessel swam Uplifted ; and secure with beaked prow Rode tilting o'er the waves. Milton's Paradise Lost.

He used the only antique philters, Derived from old heroick tillers. Hudibrat.

Scowering the watch grows out-of-fashion wit : Now we set up for tilting in the pit, Where 'tis agreed by bullies, chicken-hearted, To fright the ladies first, and tlieu be parted.

Dry den.

The spousals of Hippolite the queen, What tilts and tourneys at the feast were seen. Id.

Ajax interposed

His sevenfold shield, and screened Laertes' son, When the insulting Trojans urged him sore With tilted spears. Philipt.

Now norrid slaughter reigns : Sons against fathers tilt the fatal lance, Careless of duty, and their native grounds Distain with kindred blood. Id.

As the trunk of the body is kept from tilting for- ward by the muscles of the back, so from falling backward by those of the belly. Grew't Cosmologia.

His majesty seldom dismissed the foreigner till he had entertained him with the slaughter of two or three of his liege subjects, whom he very dextrously put to death with the tilt of his lance.

Addison't Freeholder.

Tn tilts and tournaments the valiant strove By glorious deeds to purchase Kmma's love. Prior.

Some say the spirits tilt so violently that they make holes where they strike. Collier.

The rowing crew,

To tempt a fare, clothe all their tilt in blue. Guy. It war you chuse, and blood must needs be spilt*

here, Let me alone to match your tilter. Granville.

Satire's my weapon, but I'm too discreet To run a muck, and tilt at all I meet. Pope.

The fleet swift tilting o'er the surges flew, Till Grecian cliffs appeared. Id. Odyueii.

, the wife of Agis I. king of Spana, who was debauched by Alcibiades, by whom she had a son ; who was rejected from the succession to the throne, although Agis declared him legi- timate on his death-bed. Plut. in Ag.

T1M/EUS, the son of Andromachus, an an- cient historian of Sicily, born at Taurominium, who flourished about A. A. C. 262, in the time <-,f Agathocles. He wrote a history of Sicily, and of the wars of Pyrrhus, and other works, which

were much esteemed, but his works are lost. He was banished by Agathocles ; and died aged ninety-six.

TiMjEUS, a famous Pythagorean philosopher, was born at Locris in Italy, and lived before Plato. There is still extant a small treatise of his on Nature and the Soul of the world, written in the Doric dialect.

Ti MJU;S, a Greek sophist and lexicographer, who wrote Lexicon vocum Platonicarum.

TIMAGENES, a Greek historian of Alex- andria, who flourished about A. A. C. 54. He was brought to Rome by Gabinius, and sold as a slave to Sylla's son. His abilities procured him his liberty, and gained the favor of Augustus, which he returned by impertinence; on which the emperor dismissed him ; and he in revenge burnt the admired history he had written of his reign. Plut.

TIMANTHES, a famous painter of Sicyon, who lived in the reign of Philip II. of Macedon. His painting of the sacrifice of Iphigenia was much and justly admired, wherein he represented all the spectators in extreme grief, but covered the face of Agamemnon, as esteeming the father's grief impossible to be expressed by the pencil. This pajnting carried off the prize from Parrha- sius. His Ajax enraged for the loss of Achilles's arms was also much admired.

TIM'BER, n.s.,v. n.,tcvu.) Sax. eymhruun, TIM'BERED, adj. Mo build. Wood

TIM'BERSOW, n.s. 7 tit for building;

the main trunk of a tree ; materials : to light on. a tree : to furnish with timber : timbered is built ; contrived : timbersow, a kind of wood- louse or worm.

I learned of lighter timber cotes to frame, Such as might save my slicnp and me from shame.

SfHmr, \Ve take

From every tree, lop, bark, and part o' the' timber; And, though we leave it with a root thus hack't, The air will drink the sap. Shakspeare.

Such dispositions are the very errors of human nature ; and yet they are the fittest timber to niako politicks of, like to knee timber, that is good for ships to be tossed, but not for houses that shall stand firm.

ll

Divers creatures, though they be loathsome to take, are of this kind : as earth-worms, timbersows, snails.

Id.

He left the succession to his second son ; not be- cause he thought him the best timbered to support it.

*W*to*.*

Many heads that undertake learning were never squared nor timbered for it.

Browne's Vulgar Errour. The straw was laid below, Of chips and serewood was the second row; The third ot greens, and timber newly felled.*

Drt/ilen.

The one took up in a thicket of brush-wood, and the other timbered upon a tree hard by. 1,'Estranyr. Upon these walls they plant quick and timbei trees, which thrive exceedingly.

Mortimer's Husbandry. Who set the twigs, shall he remember, That is in haste to sell the timber? Awl what shall of thy woods remain, Kxcept tlir box that threw the main ? Prior. There are hardly any countries that are destitute of limber of their own growth. Woodward.

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TIMBER-MEASURING. To find the superficial content of a plank, multiply the length by the breadth, and the product will be the required content.

Example. — The content of a board whose length is 5ft. 7in. and breadth 1ft. lOin., is in decimals, 10ft. 2′ 10".

To find the solid content of squared timber, multiply the mean breadth by the mean thick- ness, and the product again by the length, and the result will be the solidity required.

Example. — The length of a piece of timber is 20-38 feet, and the ends unequal squares, the side of ihe greater of which is 19£ inches, and that of the less 9$ inches, what is the solidity ?

29 29 1

20-38 X ~ X — X — r- = 29-756. Ans.

Note. — If the tree tapers regularly from one end to the other, the breadth and thickness taken in the middle will be the mean breadth and thickness; but, if it does not taper regularly, let several dimensions be taken, and their sum. di- vided by the number of them, will give the mean dimensions.

This is the method generally used in practice, but in many cases it gives very erroneous results.

The true method of finding the solidity is this : to the sum of the areas of the two ends, add four times the area of the middle section between them, and the sum multiplied by one- sixth of the length will give the solidity.

Thus, in the last example, the true soli- /1531 7lH3 , 29l2x 20-38*

d)ty 1S (96- +96 +4>2l)X — = 30-76 feet.

To find the solidity of round timber, multiply the square of one-fifth of the girt by double the length, and the product will be the solidity nearly.

Example. — The solidity of a round tree whose mean girt is eight feet, and length twenty-four f . 8 8 48 feet, is – x – X — = 123 feet nearly. o 5 1

If c = the circumference, and / = the length,

c2 / then by this rule = the content of the tree,

*12*5*

whereas its content computed as a cylinder is

c2/ c3/

.,, .,- •, which differs from — – by only about

12-5664 12‘5 ‘

j— part of the whole, and the rule is therefore

sufficiently exact for practice.

Ordinary measurers generally multiply tne square of the greater girt by the length for the solidity ; but this rule is so erroneous (giving the result too small by about one-fourth of the whole) that it ought to be abolished.

When trees have bark on, an allowance is ge- nerally made by deducting from the girt what is judged sufficient to reduce it to such a circum- ference as it would have without its bark. In jak this allowance is about one-tenth or one- twelfth of the girt, but for elm, beech, &c., whose bark is thinner, the deduction ought to be less. Branches whose girt is less than two feet are cut ofij they not being accounted timber.

TIM’BREL, n. s. Fr. timbre ; Lat. tympanum. A kind of musical instrument played by pulsation. Voi. XXII.

The damsels they delight When they their timbrels smite, And thereunto dance and carrol sweet.

Spenser’s Epithat,

Praise with timbrel, organs, flutes ; Praise with violins and lutes. Sandys's Paraphrase. For her, through Egypt's fruitful clime leiiowned, Let weeping Nilus hear the timbrel sound.*

Pope's Staliut. TIME, n.s.&v.a ") Sax. tima; Erse. tym.

TIME'FUL, adj. TIME'LESSS,

The measure of dura- tion; interval; season;

TIME'LY, adj. & adv. ˆ life ; age ; opportunity; TIME'PLEASER,M.S. (particular time; musical TIME'SERVER, measure : to adapt to

TIME'SERVING, the time; regulate as to

TIM'OUS, adj.) time, musically or other-

wise : timeful is seasonable; early: timeless, unseasonable ; untimely : timely, seasonable ; soon; early: timeserving, base compliance with present interest : timeserver, he who so complies: timepleaser, one who complies with the passing times.

When that company died, what time the fire de- voured two hundred and fifty men. Numbers.

They were cut down out of time, whose foundation was overflown with a flood. Job xxii. 16.

To every thing there is a season, and a time to every purpose. Ecdus. iii. 1.

Daniel desired that he would give him time, and that he would shew him the interpretation.

Daniel ii. 16.

They shall be given into his hand until a time and timei. Id. vii. 25.

He found nothing but leaves on it ; for the time o figs was not yet. Mark xi. 13.

Knowing the time, that it is high time to awake out of sleep. Romans xiii. 11.

Comets, importing change of times and states, Brandish your crystal tresses ia the sky. Skakspeare.

He was a thing of blood, whose every motion Was timed with dying cries.

Id.

A pack of sorrows, which would press you down, If unprevented, to your timeless grave. Id.

Come what come may, Time and the hour runs through the roughest day.

Shahrpwe.

Scandal, the suppliants for the people, call then. Timepleasers, flatterers, foes to nobleness. Id.

The beds i' the east are soft, and thanks to you, That called me timelier than my purpose hither. Id.

Happy were 1 in my timely death, Could all my travels warrant me they live. la.

If this arch politician find in his pupils any re- morse, any feeling of God's future judgments, he persuades them that God hath so great need of souls that he will accept them at any time, and upon any condition ; interrupting, by his vigilant endeavours, all offer of timeful return towards God.

Raleigh.

By a wise and timous inquisition, the peccant hu- mours and humourists must be discovered, purged, or cut off. Bacon.

Pomanders, and knots of powders, you may have continually in your hand ; whereas perfumes you can. take but at time. LI. Natural History**

There is no greater wisdom than well to time the beginnings and onsets of things. Bacon.

If a law be enacted to continue for a certain time, when that lime is elapsed, the law ceaseth without any farther abrogation. White.

It is hard to believe that where his most nurrerous miracles were afforded, tbey should all want the a

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vantage of the congruous timingt, to give them their due weight and efficacy. Hammond.

Many times 1 have read of the like attempts begun, but never of any finished. Heylin.

On their exalted wings, To the celestial orbs they climb, And with the harmonious spheres keep time.

Denham. The earl lost no time, but marched day and night.

Clarendon.

She intended to stay till delivered ; for she was within one month of her time. Id.

All the prophets in their age, the time Of great Messiah sing. Milton.*

Lest heat should hinder us, his timely care Hath unbesought provided. Id.

The worst on me must light, when time shall be.

Id.

Four times he crossed the car of night. Id.

Nor will polished amber, although it send forth a gross exhalement, be found a long time defective upon the exactest scale. Browne's Vulgar Errours.

A. great devourer of his time was his agency for men of quality. Fell.

You, by the help of tune and time, Can make that song which was but rhyme. Waller.

This 'tis to have a virtue out of season : Mercy is good, but kings mistake its timing.

Dry den.

The way to please being to imitate nature, the poets and the painters, in ancient times, and in the best ages, have studied her. Id. Dufrestwy.

I'll to my charge, And show my duty by my timely care. Dryden.

A time will come, when my maturer muse In Caesar's wars a nobler theme shall chuse. Id.

Short were her marriage joys ; for in the prime Of youth her lord expired before his time. Id.

The timing of things is a main point in the dis- patch of all affairs. L' Estrange.

In time the mind reflects on its own operations about the ideas got by sensation, and thereby stores itself with a new set of ideas, ideas of reflection.

Locke. Time is one thing, and infinite duration is another.

Grew.

If any reply, that the times and manners of men will not bear such a practice, that is an answer from the mouth of a professed time-server. South.

If such, by trimming and timeserving, which are but two words for the same thing, abandon the church of England, this will produce confusion. Id.

To the same purpose old Epopeus spoke, Who overlooked the oars, and timed the stroke.

Addison.

These reservoirs of snow they cut, distributing them to several shops, that from time to time supply Naples. Id.

Heroes who overcome, or die, Have their hearts hung extremely high ; The strings of which in battle's heat Against their very corselets beat ; Keep time with their own trumpet's measure, And yield them most excessive pleasure. Prior.

Timely advised, the coming evil shun ; Better not do the deed, than weep it done. Id.

I would ask any man that means to repent at his death, how he knows he shall have an hour's time for it. Duty of Man.

If they acknowledge repentance and a more strict obedience to be one time or other necessary, they imagine it is time enough yet to set about these du- ties. Rogers.

One imagines that the terrestrial matter which is showered along with rain enlarges the bulk of the

earth, and that it will in time bury all things under ground. Woodward.

The time will come when we shall be forced to bring our evil ways to remembrance, and then con- sideration will do us little good. Calamy'i Sermons.

Every single particle would have a sphere of void space around it many hundred thousand million mil- lion times bigger than the dimensions of that particle.

Bentley.

Nor fits it to prolong the heavenly feast Timekss, indecent, but retire to rest. Pope.

I have resolved to take time, and, in spite of all misfortunes, to write to you, at intervals, a long letter. Swift.

All ways of holy living, all instances and all kinds of virtue, lie open to those who are masters of themselves, their time, and their fortunes. Law.

TIME, in music, is an affection of sound, by which it is said to be long or short, with regard to its continuance in the same tone or degree of tune. Musical time is distinguished into common or duple time, and triple time.

Common time, double time, or duple, is when the notes are in a duple duration of each other, viz. a semibreve equal to two minims, a minim to two crotchets, a crotchet to two quavers, &c. It is of two kinds. The first when every bar or measure is equal to a semibreve, or its value in any combination of notes of a less quantity. The second is where every bar is equal to a minim, or its value in less notes. The move- ments of this kind of measure are various, but there are three common distinctions : the first slow, denoted at the beginning of the line by the mark

C ; the second brisk, marked thus /T* ; and the*

third very brisk, thus marked j)«

TIME, TRIPLE is when the durations of the notes are triple of each other ; that is, when the semibreve is equal to three minims, the minim to three crotchets, &c., and it is marked T. See Music.

' TIME is also a measure of duration, by which soldiers regulate the cadence of a march ; as ORDINARY, QUICK, and QUICKEST time or step, which see.

Double quick TIME, a measure now adopted to accelerate the movement of troops.

TIME, in manoeuvring, the necessary interval betwixt each motion in the manual exercise ; as well as in every movement of the army, or of any body of men.

TIME, in fencing. There are three kinds of time ; that of the sword, that of the foot, and that of the whole body. All the times that are perceived out of their measure are only to be considered as appels or feints to deceive and amuse the antagonist.

TIME, THRUST, in fencing, a thrust, given upon any opening which may occur by an inaccurate or wide motion of your adversary, when changing his guard, &c.

TIM'ID, adj. \ Fr. timide ; Lat. li

TIMID'ITY, n. s. I midus. Fearful ; faint- TIM'OROUS, adj. ,- hearted ; wanting cou-

TIM'OROUSLY, adv. irage; wanting boid- TIM'OROUSNESS, n. s. J ness: the derivatives a!!, correspond.

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We would have had you heard The traitor speak, and tunvraiislu confe.-s The manner and the purpose of his treasons.

Shakspeare.

Prepossessed heads will ever doubt it, and timorous beliefs will never dare to try it. Browne.

The hare figured pusillanimity and timidity from its temper. Id-

Though they had ideas enough to distinguish gold from a stone, and metal from wood, yet they but ti- maroialv ventured on such terms which should pretend to signify their real essences. Locke.

With easy smiles, dispelled the silent fear, That durst not tell me what I died to hear. Prior.

Let dastard souls be timorously wise : But tell them Pyrrhus knows not how to form Far-faucied ills, and dangers out of sight.

A. Philips.

Poor is the triumph o'er the timid hare. Thamson.

The clergy, through the timorousness of many among them, were refused to be heard by their council.

Stcift.

TIMISCOUATA, a lake of Canada, in Corn- wallis county, twenty-two miles in length, by an average breadth of three-quarters of a mile, is encompassed in all directions by lofty mountains covered with thick wood . Several large rivers lend the aid of their streams to swell the waters of this secluded expanse. To this lake there is a portage from the St. Lawrence, by means of which the communication is carried on between Quebec and Halifax, a distance of 627 miles.

TIMMISKAMAIN LAKE, a lake of Lower Canada, about thirty miles long, and ten broad, having several small islands. Its waters empty into the Utawas River, by a narrow channel, thirty miles north of Nepissing Lake. The In- dians named Timmiscamaings reside round this lake.

TIMOCHARES, a celebrated astronomer of Alexandria, who flourished about A. A. C. 294. He and Aristillus attempted to determine the places of the stars, and to trace the course of the planets.

TIMOCLEA, a Theban lady, sister of Thea- genes, who was killed at Cheronea. One of Alex- ander's soldiers attempted to ravish her, when, under pretence of showing him a treasure hid in a draw well, she tumbled him into it. Alexander commended her virtue, and prohibited his soldiers from hurting the Theban ladies. Plut

TIMOCREON, a comic poet of Rhodes, who gained prizes at Olympia ; about 476 B. C.

TLMOLEON, a celebrated Corinthian general, who restored the Syracusans to their liberty, and drove the Carthaginians out of Sicily. See SY- RACUSE.

TIMON, the misanthrope, or the manhater, a famous Athenian, who lived about 420 B. C. We have many sayings of his spleen recorded, but no facts of his life.

TIMON, the sceptic, was a Phliasian, a dis- ciple of Pyrrho, and lived in the time of Ptolemy Philadelphus. He took little pains to invite dis- ciples to his school. He was fond of rural retire- ment; and was much addicted to wine. The fragments of his satyrical poem Silli are in the Poesis Philosophicaof Stephens. Timon lived to the age of ninety.

TIMOPHEEVA, a town of Russia, in Irkut-

skoi, on the Him ; thirty-two miles north-west of Yerchomansk.

TIMOR, the god of Fear. See FEAR and PAVOR.

TIMOR, the largest of the Molucca islands, in the eastern seas. Its extent is more conside- rable than the charts represent, being little less than 250 miles in a north-eastern direction, by from thirty to sixty in breadth.' The interior is a chain of mountains, some of which nearly equal the peak of Teneriffe in elevation ; whilst the shores on the south-east side are represented to be exceedingly low, and over-run with man- groves. Gold is said to be contained in the mountains, and to be washed down the streams ; but the natives are jealous of Europeans gaining any knowledge of it. At a former period, when forty men were sent by the Dutch to make search for it, they were cut off. The produce of this island is chiefly sandal-wood and wax. Cap- tain Flinders, when he visited this island in 1803, only saw two European residents at Coepang, besides the soldiers and the governor. The original inhabitants of Timor, who are black, but whose hair is not woolly, inhabit the moun- tainous parts, to which they appear to have been driven by the Malays, who are mostly in posses- sion of the sea coast. There were formerly se- veral Portuguese establishments on the north side of the island, of which Diely and Leffow remained ; but these had all gradually declined, and the governor of Diely was then said to be the sole white Portuguese resident on the island.

TIMOTHEUS, one of the most celebrated poet musicians of antiquity, was born at Miletus, an Ionian city of Caria, 346 years B. C. He was contemporary with Philip II. of Macedon and Euripides ; and not only excelled in lyric and dithyrambic poetry, but in his performance upon the cithala. Pausanias says he perfected that instrument by the addition of four new strings to the seven it had before ; but Suidas says it had nine before, and that Timotheus only added two. See LYRE. A senatus consultum is preserved at full length in Boethius, whereby the kings and the ephori of Sparta passed censure on Timotheus for adding these strings : and obliged him to cut them all, leaving only seven tones ; and banished him from the city. Suidas attri- butes to him nineteen nomes, or canticles, in hexameters ; thirty-six proems, or preludes ; eighteen dithyrambics ; twenty-one hymns; the poem in praise of Diana; one panegyric; three tragedies, the Persians,

Phinidas, and Laertes ; to which must be added, Niobe, and a poem on the birth of Bacchus. Stephen of Byzantium makes him author of eighteen books of nomes, or airs, for the cithara, to 8000 verses, and of 1000 IlpoEt/iuz, or preludes, for the nomes of the flutes. Timotheus died in Macedonia, according to Sui- das, aged ninety-seven ; though the Marbles say at ninety ; and Stephen of Byzantium fixes his death in the fourth year of the 105th Olympiad, two years before the birth of Alexander the Great ; whence it appears that this Timotheus was not the famous player on the flute so much esteemed by that prince, and of whom we have no authen- tic account.

TiMOTiitvs, or TIMOTHY, an eminent evange-

,ist of the apostolic age, born at Lystra, in Asia. His father was a Greek, but his mother Eunice and his grandmother Lois were Jewesses, and educated him in the true religion. He became an early convert, and a great favorite of St. Paul ; whom he accompanied to Philippi, Thessalonica, and Berea. The Episcopalians and Papists say he was the first bishop of Ephesus ; but this is con- tested by the Presbyterians. See SCOTLAND. He was stoned to death A. D. 97.

TIMOTHY, FIRST AMD SECOND EPISTLES TO, two canonical books of the New Testament, writ- ten by St. Paul. See SCRIPTURE.

TIMOTHY, or TIMOTHY GRASS, in botany. See RURAL ECONOMY.

TIMOXENA, the wife of Plutarch.

TIMUR BEG. See TAMERLANE.

TIN, n. s. Sax. tin ; Belg. ten ; Swed. term. One of the primitive metals, called by the chemists Jupiter.

Quicksilver, lead, iron, and (in, have opacity or blackness. Peacham.

The cover may be tinned over only by nailing of single tin plates over it. Mortimer.

To keep the earth from getting into the vessel, he employed a plate of iron tinned over and perforated.

Boyle.

Tin ore sometimes holds about one-sixth of tin.

Woodward.

New tinning a saucepan is chargeable. Swift.

TIN is a metal of a yellowish-white color, .considerably harder than lead, scarcely at all so- norous, very malleable, though not very tena- cious. Under the hammer it is extended into leaves, called tin-foil, which are about ˆth of an inch thick, and might easily be beaten to less than half that thickness, if the purposes of trade required it. The process for making tin-foil consists simply in hammering out a number of plates of this metal, laid together upon a smooth block or plate of iron. The smallest sheets are the thinnest. Its specific gravity is 7-29. It melts at about the 442° of Fahrenheit's thermo- meter ; and by a continuance of the heat it is slowly converted into a white powder by oxida- tion. Like lead it is brittle when heated almost to fusion, and exhibits a grained or fibrous tex- ture, if broken by the blow of a hammer ; it may also be granulated by agitation at the time of its transition form the fluid to the solid state. The oxide of tin resists fusion more strongly than that of any other metal ; from which property it is useful to form an opaque white enamel when mixed with pure glass in fusion. The bright- ness of its surface when scraped, soon goes off by exposure to the air ; but it is not subject to rust or corrosion by exposure to the weather. To obtain pure tin, the metal should be boiled in nitric acid, and the oxide which falls down •reduced by heat in contact with charcoal, in a covered crucible.

There are two definite combinations of tin and oxygen. The first or protoxide is gray ; the second or peroxide is white. The first is formed by heating tin in the air, or by dissolving tin in muriatic acid, and adding water of potash to the solution whilst recent, and before it has been ex- posed to air. The precipitate, after being heated 10 whiteness to expel the water of the hydrate, i«

the pure protoxide. It is convertible into the peroxide by being boiled with dilute nitric acid, dried and ignited. According to Sir. H. Davy, the protoxide contains 13-5 per cent, of oxygen. Supposing it to consist of a prime equivalent of each constituent, that of tin would be 7-333. From the analysis of Berzelius and Gay Lussac, the peroxide is composed of 100 metal + 27-2 oxygen ; and, if we regard it as containing 2 primes of the latter principle to one of metal, the prime of this will be 7-353. The mean may be taken at 7'35.

There are also two chlorides of tin. When tin is burned in chlorine, a very volatile clear liquor is formed, a non-conductor of electricity, and which, when mixed with a little water, be- comes a solid crystalline substance, a true mu- riate of tin, containing the peroxide of the metal. This, which has been called the liquor of Liba- vius, may be also procured by heating together tin-filings and corrosive sublimate, or an amal- gam of tin and corrosive sublimate. It consists, according to the analysis of Dr. John Davy, of 2 primes of chlorine =9 + 1 of tin = 7'35. The other compound of tin and chlorine is a gray semitransparent crystalline solid. It may be procured by heating together an amalgam of tin and calomel. It dissolves in water, and forms a solution, which rapidly absorbs oxygen from the air, with deposition of peroxide of tin. It consists of, Chlorine, 4-.5 Tin, 7-35

There are two sulphurets of tin. One maybe made by fusing tin and sulphur together. It is of a bluish co.or, and lamellated texture. It consists of 7-35 tin + 2 sulphur. The other sulphuret, or the bisulphuret, is made by heating together the peroxide of tin and sulphur. It is of a beautiful gold color, and appears in fine flakes. It was formerly called aurum musivun. According to Dr. John Davy, it consists of

1 prime tin = 7-35

2 sulphur = 4-00.

The salts of tin are characterised by the fol- lowing general properties : — 1. Ferroprussiate of potash gives a white precipitate. 2. Ilydrosul- phuret of potash a brown black with the pro- toxide, and a golden yellow with the peroxide.

3. Galls do not affect the solutions of these salts.

4. Corrosive sublimate occasions a black preci- pitate with the protoxide salts, a white with the peroxide. 5. A plate of lead frequently throws down metallic tin, or its oxide, from the saline solutions. 6. Muriate of gold gives, with the protoxide solutions, the purple precipitate of Cassius. 7. Muriate of platinum occasions an orange precipitate with the protoxide salts.

Concentrated sulphuric acid, assisted by heat, dissolves half its weight of tin, at the same time that sulphurous gas escapes in great plenty. By the addition of water, an oxide of tin is preci- pitated. Sulphuric acid, slight y diluted, like- wise acts upon this metal ; but, if much water be present, the solution does not take place. In the sulphuric solution of tin there is an actual formation or extrication of sulphur, which ren- ders the fluid of a brown color, while it continues heated, but subsides by cooling. The tin is

likewise precipitated in the form of a white oxide, by a continuance of the heat, or by long standing without heat. This solution affords needle-formed crystals by cooling.

Nitric acid and tin combine together very ra- pidly without the assistance of heat. Most of the metal falls down in the form of a while oxide, extremely difficult of reduction ; and the small portion of tin which remains suspended does not afford crystals, but falls down, for the most part, upon the application of heat to in- spissate the fluid. The strong action of the nitric acid upon tin produces a singular phenomenon, which is happily accounted for by the modern discoveries in chemistry. M. de Morveau has observed that, in a solution of tin by the nitric acid, no elastic fluid is disengaged, but ammonia is formed. This alkali must have been pro- duced by the nitrogen of that part of the nitric acid which was employed in affording oxygen to oxidise the tin.

The muriatic acid dissolves tin very readily at the same time that it becomes of a darker color, and ceases to emit fumes. A slight effervescence takes place with the disengagement of a faetid inflammable gas. Muriatic acid suspends half its weight of tin, and does not let it fall by re- pose. It affords permanent crystals by evapora- tion. If the tin contain arsenic, it remains undissolved at the bottom of the fluid. Recent muriate of tin is a very delicate test of mercury. M. Chenevix says, if a single drop of a saturated solution of neutralised nitrate, or muriate of mer- cury, V>e put into 500 grains of water, a few drops of solution of muriate of tin will render it a little turbid, and of a smoke-gray. He adds, that the effect is perceptible, if ten times as much water be added.

Aqua regia, consisting of two parts nitric and one muriatic acid, combines with tin with effer- vescence, and the development of much heat. In order to obtain a permanent solution of tin, in this acid, it is necessary to add the metal by Mnall portions at a time ; so that the one portion may be entirely dissolved before the next piece is added. Aqua regia in this manner dissolves half its weight of tin. The solution is of a red- dish-brown, and in many instances assumes the form of a concrete gelatinous substance. The addition of water sometimes produces the con- crete form in this solution, which is then of an opal color, on account of the oxide of tin dif- fused through its substance.

The uncertainty attending these experiments with the solution of tin in aqua regia, seems to depend upon the want of a sufficient degree of accuracy in ascertaining the specific gravities of the two acids which are mixed, the quantities of each, and of the tin, together with that of the water

added. It is probable that the spon- taneous assumption of the concrete state depends upon water imbibed from the atmosphere. The :-olut,on of tin in aqua regia is used by dyers to heighten the colors of cochineal, lac-dye, and Mune other red tinctures, from crimson to a bright scarlet, in the dyeing of woollens. The acetic acid scarcely acts upon tin. The opera- tion of other acids upon this metal has hp.-ri lutle enquired into. Phosphate, fluate, an-l !•<•>-

rate of tin, have been formed by precipitating the muriate with the respective neutral salts.

If the crystals of the saline combination of copper with the nitric acid be grossly powdered, moistened, and rolled up in tin-foil, the salt deliquesces, nitrous fumes are emitted, the mass becomes hot, and suddenly takes fire. In this experiment the rapid transition of the nitric acid to the tin is supposed to produce or de- velope heat enough to set fire to the nitric salts . but by what particular changes of capacity has not been shown.

If small pieces of phosphorus be thrown on tin in fusion, it will take up from fifteen to twenty per cent., and form a silvery white phos- phuret of a foliated texture, and soft enough to be cut with a knife, though but little malleable. This phosphuret may be formed likewise by fusing tin filings with concrete phosphoric acid.

Tin unites with bismuth by fusion, and be – comes harder and more brittle in proportion to the quantity of that metal added. With nicke. it forms a white brilliant mass. It cannot easily be united in the direct way with arsenic, on ac- count of the volatility of this metal ; but, by heating it with the combination of the arsenical acid and potash, the salt is partly decomposed : and the tin, combining with the acid, becomes converted into a brilliant brittle compound, of a plaited texture-. It has been said that all tin contains arsenic; and that the crackling noise which is heard upon bending pieces of tin, is produced by this impurity; but, from ths expe- riment of Bayen, this appears not to be the fact. Cobalt unites with tin by fusion ; and forms a grained mixture of a color slightly inclining to violet. Zinc unites very well with tin, increasing its hardness, and diminishing its ductility, in pro- portion as the quantity of zinc is greater.

This is one of the principal additions used in making pewter, which consists for the most part of tin. The best pewter does not contain above one-twentieth part of admixture, which consists of zinc, copper, bismuth, or such other metallic substances as experience has shown to be most conducive to the improvement of its haruness and color. The inferior sorts of pewter, more especially those used abroad, contain much lead, have a bluish color, and are soft. The tin usually met with in commerce, in this

country, has no ad- mixture to impair its purity, except such as /nay accidentally elude the workmen at the mines. But the tin met with in foreign countries is so much debased by the dealers in that article, es- pecially the Dutch, that pewter and tin are con- sidered abroad as the same substance.

Antimony forms a very brittle hard mixture with tin ; the specific gravity of which is less than would have been deduced by computation from the specific gravities and quantities of each, se- parately taken. Tungsten, fused with twice iU weight of tin, affords a brown spongy mass, which is somewhat ductile.

The uses of tin are very numerous, and so well known, that they scarcely need be pointed out. Several of them have been already mentioned. The tinning of iron and copper, the silvering of lookinjr-classps, and the fabrication of a gˆat vanetv of vessels and utensils for tioineMic and

other uses, are among the advantages derived from tliis metal.

TIN, CHEMICAL PROPERTIES OF. See CHE- MISTRY, Index.

TIN, MEDICAL PROPERTIES OF. See MEDI- < INE, Index.

TIN, ORES or. See METALLURGY and MI- NERALOGY.

TIN, TRADE IN. An advantageous commerce has been lately opened between Cornwall and the East Indies and China. In 1791 about 3000 tons of tin were raised in Cornwall; of which 2200 tons were sold in the European market for £72 each, and 800 tons carried to India and China at £62 per ton. See CORNWALL.

TIN-PLATE WORKING. — On the affinity which there is between tin and iron is founded the art of forming what is commonly called tin-plates, which is, properly, tinned iron, or as it is de- nominated in Scotland, and also on the conti- nent, white iron. The process in manufacturing these plates is simply this : thin plates of mallea- ble iron, thoroughly cleared from all rust or oxide, are dipped into a vessel of melted tin, the surface of which fluid metal is protected from oxidisement by the air, by a thin layer of melted tallow ; the tin unites with the iron at each sur- face, but whether the two metals actually com- bine is riot yet ascertained. The iron thus acquires a white color, is rendered less liable to rust, and its ductility is scarcely at all impaired ; hence the plates can be easily bent, and, from the

alloy of tin at the surface, can be also easily worked. Iron-plates when tinned over, and which are very thin, have been denominated latten. Of the manufacture of these we have an account in the Philosophical Transactions of the Royal Society, from which we shall extract some particulars.

Plates of iron, being prepared of a proper thickness, are smoothed by rusting them in an acid liquor, as common water made eager with rye ; with this liquor they fill certain troughs, and then put in the plates, which they turn once or twice a day that they may be equally rusted over; after this they are taken out and well scoured with sand, and, to prevent their rusting again, are immediately plunged into pure water, in which they are to be left till the instant they are to be tinned or blanched, the manner of doing which is this : they flux the tin in a large iron crucible, which has the figure of an oblong pyramid with four faces, of which two opposite ones are less than the two others. The crucible is heated only from below, its upper part being luted with the furnace all round. The crucible is always deeper, than the plates which are to be tinned are long ; they always put them in down- right, and the tin ought to swim over them ; to this purpose artificers of different trades prepare plates of different shapes, though M. Reaumur thinks them all exceptionable. But the Germans use no sort of preparation of the iron to make it receive the tin, more than the keeping it always steeped in water till the time only when the tin i- melted in the crucible; they cover it with a of a sort of suet, which is usually two Miches thick, and the plate must pnss through t'l.s before it can come to the melted tin. The

first use of this covering is to kt?ep the tin from burning; for, if any part should take fire, the suet would soon moisten it and reduce it to its primitive state again. The blanchers say this suet is a compounded matter ; it is indeed of a black color, but M. Reaumur supposed that to be only an artifice to make it a secret, and that it is only colored with soot or the smoke of a chimney ; but he found it true so far that the common unprepared suet was not sufficient; for, after several attempts, there was always some- thing wanting to render the success of the opera- tion certain. The whole secret of blanching, therefore, was found to lie in the preparation of this suet, and this he discovered at length to consist in the first frying and burning it. This simple operation not only gives it the color, but puts it into a condition to give the iron a dispo- sition to be tinned, which it does surprisingly. The melted tin must also have a certain degree of heat ; for, if it is not hot enough, it will not stick to the iron ; and, if it is too hot, it will cover it with too thin a coat, and the plates will have several colors, as red, blue, and purple, and upon the whole have a cast of yellow. To prevent this, by knowing when the fire has a proper degree of heat, they might try with small pieces of iron ; but in general use teaches them to know the degree, and they put in the iron when the tin is at a different

standard of heat, according as they would give it a thicker or a thinner coat. Sometimes also they give the plates a double layer, as they would have them very thickly covered. This they do by dipping them into the tin, when very hot, the first time, and when less hot the second. The tin which is to give the second coat must be fresh covered with suet, and that with the common suet, not the prepared. Tin-plates are often manufactured in a different way : the iron in bars, or plates, is cased over with tin, and then drawn out by means of rolling-mills. In 1681 tin-plates were made in England by a person named Andrew Yarranton, who was sent into Bohemia to learn the art, but it was not brought into perfection for more than fifty years ; and, since the middle of the last century, it has been carried on in these islands in so perfect a manner that scarcely any have been imported from the continent. Our plates are of a finer gloss, or coat, than those made beyond sea, the latter being chiefly hammered, but ours, according to the plan of which we are now speaking, are always drawn out by the rolling-mill.

The tin-plate worker, a trade well known in London, and all large towns, receives his tin- plate in sheets, and it is his business to form them into all the various articles of domestic use, which are known to every body. The prin- cipal instruments that he makes use of are a large pair of fixed shears, to cut the tin to the proper size and shape, a polished anvil, and hammers of various kinds, some of which are highly polished on the face. The joints of his work are made with solder, which lie makes him- self, and which is a composition of equal parts of tin and lead that the workman causes to unite with the tin-plaii', or tinned iron, l>y means of rr>s in. The two principal wholesale houses in

London are those of Jones and Taylor, in Tot- tenham Court Road, and of Howard and Co. in Old Street Road. These, and other wholesale traders, have constantly travellers in various parts of the kingdom ; and, as they cannot carry the articles of their trade in saddle-bags, like many other manufacturers, they take with them drawings of all works of taste in their line of business.

Tin, in blocks, resembles silver, but it is of a darker hue ; it is also much softer, less elastic and sonorous, than any other metal excepting lead : it is most readily extended, and melts with a lower heat than all other metals. When tin is made very hot, it will break with a blow. In the state of ore it is

found mixed with arsenic. The chief tin-mines in the known world are those of Cornwall ; and it is a fact well ascertained that the Phoenicians visited these islands, for the purpose of getting tin from our ancestors, several centuries before the Christian era. In tracing the history of the Cornwall mines, we find that they produced very little in the reign of king John; but the right, at that period, was wholly vested in the sovereign, as earl of Cornwall. Their value has fluctuated at different periods ; of late years they have produced to the value of £150,000 or £200,000. The duke of Cornwall, for the time being, receives 4s. upon every cwt. of what is called coined white tin, which some- times amount to £10,000 or £12,000 a-year : the proprietors of the soil have one-sixth, and the rest goes to the adventurers in the mine, who are at the whole charge of working. As the tin is to be thus divided, or rather its real value ascer- tained, it is stamped and worked at the mill, and it is then carried, under the name of block- tin, to the melting-house, where it is run into blocks, and thence carried to the coinage towns. The coinage towns are Leskard, Lestwithiel, Truro, Helston, and Penzance, being the most convenient parts of the county for the miners.

TINA, an island in the Grecian Archipelago, anciently called Tinos : one of the Cyclades, on the west of Nicaria ; seventeen miles long, and eight broad. It is defended by a fort seated on a rock. It is a bishop's see of the Roman church, though there are also 200 Greek priests. It has about 5000 troops. The chief commodity is silk : about 16,000 Ibs. are produced annually ; and they make silk stockings and gloves, which are universally admired. St. Nicolo is the capi- tal. Long. 25° 24′ E., lat. 37° 30′ N.
TIN'CAL, n. s. A mineral. The tincal of the Persians seems to be the chryso- calla of the ancients, and what our borax is made of.

Woodward.

TINCAL. Crude borax, as it is imported from the East Indies, in yellow greasy crystals, .s called tincal.

TINDAL (Dr. Matthew), a famous English writer, the son of the Rev. John Tindal of Beer- Ferres in Devonshire, born about 1657. lie studied at Lincoln College, Oxford, and was afterwards elected fellow of All Souls. In 1685 he took the degree of LL. D., and in the reign of James II. declared himself a Roman Catholic ; but soon renounced that religion. After the Re- volution he published several pamphlets in favor

of government, the liberty of the press, &c. His Rights of the Christian Church Asserted, oc- casioned his having a violent contest with the high- church clergy ; and his treatise Christianity as old as the Creation, published in 1730, made much noise, and was answered by several writers,

particularly by Dr. Conybeare, Mr. Forster, and Dr. Lelaud. Dr. Tindal died at London in August 1733. He left in MS. a se- cond volume of his Christianity as old as the Creation ; the preface to which has been published.

TINDALE (William). See TYNDALE.

TINCT, v. a. & n. s. > Fr. teint ; Lat.

TINC'TURE, n. s. & v. u. $ tinctus. To stain ; color ; spot ; dye : a color or spot : tincture is synonymous, both as a verb and noun substan- tive, and more in modern use.

That great med'cine hath With his tinct gilded thee. Shakspeare.

We have artificial wells made in imitation of the natural, as tincted upon vitriol, sulphur, and steel.

Bacon.

Some bodies have a more departible nature than others in colouration ; for a small quantity of saffron will tinct more than a very great quantity of wine.

Id.

The first scent of a vessel lasts, and the tinct the wool first appears of. Ben Jonsan.

The sight must be sweetly deceived by an insensi- ble passage from bright colors to dimmer, whicli Italian artizans call the middle tinctures. Wotton.

Those who have preserved an innocence, would not suffer the whiter parts of their soul to be dis- coloured or tincted by the reflection of one sin.

Decay of Piety.

Tis the fate of princes, that no knowledge Come pure to them, but, passing through the eyes And ears of other men, it takes a tincture From every channel. Denham.

Hence the morning planet gilds her horn. By tincture or reflection they augment Their small peculiar. Milton.

Some were tincted blue, some red, others yellow.

Browne.

I distilled some of the tincted liquor, and all that came over was as limpid as rock water. Boyle.

In tincture drawn from vegetables, the superfluous spirit of wine distilled off, leaves the extract of the vegetable. Id.*

To begin the practice of an art with a light tincture of the rules, is to expose ourselves to the scorn of those who are judges. Vryden.

That beloved thing engrosses him, and, like a coloured glass before his eyes, casts its own colour and tincture upon all the images of things. South.

Few in the next generation who will not write and read, and have an early tincture of religion.

Addison.

The bright sun compacts the precious stone, Imparting radiant lustre like his own : He tincturet rubies widi their rosy hue, And on the sapphire spreads a heavenly blue.

Blackmore.

Early were our minds tinctured with a distinguish- ing sense of good and evil ; early were the seeds of a divine love, and holy fear of offending, sown in our hearts. Atterbury.

All manners take a tincture from our own, Or come discoloured through our passions shown.

Pope.

Ha\ e a care, lest some darling science so far pre- vail over your mind, as to give a sovereign tincture

to all your other studies, and discolour all your ideas. »”»’•

A little black paint will tincture and spoil twenty gay colors. Watts.

Of evening tinct

The purple-streaming amethyst is thine. Tliomson. TIN'DER, n. s. > Saxon tynsjie, ten&rtft ; TIN'DERBOX.] Danish tender. See TIXE. A substance used for kindling fire ; any thing eminently inflammable : a box to hold tinder.

Strike on the tinder, ho ! Give me a taper. Sliaktpeare.

Where sparks and fire do meet with tinder, Those sparks more fire will still engender.

Suckling.

To these shameless pastimes were their youth ad- mitted, thereby adding, as it were, fire to tinder.

HakewiU.

That worthy patriot, once the bellows And tinderboi of all his fellows. Hudibrai.

He might even as well have employed his time in catching moles, making lanterns and tinderboits.

Atterbiiry.

Whoever our trade with England would hinder, To inflame both the nations do plainly conspire ;

Because Irish linen will soon turn to tinder, And wool it is greasy, and quickly takes fire.

Swift.

TINE, n.s. Sax. tim>e>; Isl. and Goth, tinne. The tooth of a harrow ; spike of a fork.

The tragical effect, Vouchsafe, O thou the mournfuFst muse of nine,

That wont'st the tragick stage for to direct, In funeral complaints and wailful tine. Spenser.

In the southern parts of England they destroy moles by traps that fall on them, and strike sharp tines or teeth through them. Mortimer.

TINE, v. a. Sax. tynan. To kindle; to light ; to set on fire. Obsolete.

Strifeful Atin in their stubborn mind Coals of contention and hot vengeance

fined.

Speruer. The clouds

Justling or pushed with winds, rude in their shock, Tine the slant lightning ; whose thwart flame driven

down. Kindles the gummy bark of fir. Milton.

The priest with holy hands was seen to tine The cloven wood, and pour the ruddy wine.

Dryden.

TINE, v. n. Belg. teen. To rage; smart; fight. Obsolete.

Eden stained with blood of many a band Of Scots and English both, that lined on his strand.

Spcnter.

TINEH, orTniNEH, an ancient city in Lower Egypt, situated on the Pelusiac branch of the Nile. This branch is now reduced to little more than a channel of mud, traversing a smooth, barren, and naked plain ; and the castle of Tineh, which appears to have been built about the time of the conquest of Selim, is falling to ruins. Long. 32° 30′ E., lat. 30° 55′ N.

TINELLI (Tiberius), an eminent historical and portrait painter, born at Venice in 1586. Louis XII. conferred on him the order of St. Michael. He died in 1638.

TINGE, v. a. > Lat. tingo. To impregnate

TIN'GENT, adj. J or imbue with a color or taste : Ihe adjective corresponding.

This wood, by the tincture it afforded, appeared

to have its coloured part genuine ; but, as for the white part, it appears much less enriched with the tingent property. Boyle.

Sir Roger is something of an humourist ; and his virtues, as well as imperfections, are tinged by a cer- tain extravagance, which makes them particularly his. Spectator.

She lays some useful bile aside, To tinge the chyle's insipid tide ; Else we should want both gibe and satire, And all be burst with pure good -nature.

Prior.

If the eye be tinged with any colour, as in the jaun- dice, so as to tinge pictures in the bottom of the eye with that colour, all objects appear tinged with the same colour. Xnctait.

The infusions of rhubarb and saffron tinge the uiine with a high yellow. Arbuthnot.

TINGIS, an ancient sea-port town of Mauri- tania Tingitana, said to have been built by the giant Anuens. Sertorius the Roman general took it, and Plutarch says he opened the tomb of the founder, and found in it a skeleton sixty cu- bits long. It is now called Tangier.

TINGITANA, in ancient geography, a district of Mauritania, which comprehended a consider- able part of Fez and Morocco. It was so named from Tingis its capital.

TIN'GLE, v.n. Sax. nnclan; Belg. tingelen. To feel a sharp pain, as after the stagnation of blood ; to feel a sound, or the continuance of a sound, in the ears. This is, perhaps, rather tinkle.

The ears of them that hear it shall tingle. Bible.

When our ear tingleth, we usually say that some body is talking of us ; which is an ancient conceit.*

Browne.

In a palsy, sometimes the sensation of feeling is either totally abolished, or dull with a sense of tingling. Arbuthnot.

They suck pollution through their tingling veins.

Ticket.

The pale boy senator yet tingling stands. Pope.

TINIAN, one of the Ladrone islands, in the North Pacific, about forty-two miles in circum- ference, was discovered by the crew of a Ma- nilla ship, which was cast away here in the year 1638. The author of Anson's Voyage gives a pleasing description of this island, as found by the crew of the Centurion, in the year 1742 ; and we are indebted to him for the first descrip- tion of it. The want of any proper roadstead exposes vessels touching at this island to great danger: the seas are often tremendous, and are increased by the rapidity of the tides, which oc- casion such a hollow

and overgrown sea that Anson mentions they were in continual apprehension of being pooped by it, though they were in a sixty gun ship. Byron visited this island in 17C5. Tinian was visited in 1767 by captain Wallis; in 1787 by captain Portlock; in 1788 by captain Sever, and afterwards by other navi- gators, all of whom confirm the account given of it by commodore Byron.

TIN'KER, n. x. From link, a small noise, because their way of proclaiming their trade is to beat a kettle, or because in their work th

Am not I old Sly's son, by education a card- maker, and now by present profession a tinker ?

My copper medals by the pound May be with learned justice weighed ; To turn the balance, Otho's head May be thrown in ; and, for the mettle, The coin may mend a tinker's kettle. Prior.

TIN'KLE, v. n. Fr. tinier ; Goth, tinga ; Lat. tinnio. To make a sharp quick noise; to clink : to hear a low, quick noise (improper).

The daughters of Zion are haughty, and walk with stretched out necks, making a tinkling with their feet. Isaiah.

His feeble hand a javelin threw, Which, fluttering, seemed to loiter as it flew , Just, and but barely, to the mark it held, And faintly tinkled on the brazen shield. Dryden.

With deeper brown the gtove was overspread, A sudden honor seized his giddy head, And his ears tinkled, and the colour fled. Id.

The wandering streams that shine between the hills, The grots that echo to the tinkling rills. Pope.

The sprightly horse Moves to the musick of his tinkling bells. Dodsley.

TINNEVELLY, an extensive district of the south of India, province of the Carnatic, 150 miles in length by fifty in breadth, occupying the south-east extremity of the peninsula, and separated from Ceylon by the gulf of Manaar.

TINNING, the covering or lining of any thing with melted tin, or with tin reduced to a very fine leaf. Kettles, sauce-pans, and other kitchen utensils, which are usually made of copper, are tinned, if of new copper, should first be cleaned or scoured with salt and sulphuric acid diluted \ith water. This,

however, is not always done; some workmen contenting themselves with scour- ing it with sand perfectly dry, or with scales of iron. Powdered rosin is then strewed over it ; and, when the vessel or utensil is considerably heated, melted tin is poured into it, and rubbed with flax coiled hard over the surface to be coated. This tin may be either pure, such as that known by Ihe name of grain tin ; or a composition consist- ing of two parts of tin and one of lead. For very obvious reasons, we should certainly prefer the pure tin ; but the generality of workmen give the preference to the composition, because the surface coated with it appears more brilliant. The tin is not always put into the vessel in a liquid state ; ior some workmen strew it in small pieces over the surface to be coated, and then heat the vessel till the tin melt, when they rub it as formerly. In tinning old vessels, which have been tinned before, the process is somewhat different. In these cases the surface is first scraped with an in- strument proper for the purpose, or scoured with the scales of iron, from a blacksmith's shop; it is then strewed over with sal ammoniac in pow- der, instead of rosin, or an infusion of sal ammo- niac in stale urine is boiled in it till the urine be evaporated, and it is then tinned with pure tin ; the composition of tin and lead being in this case never used. The tin, while liquid, is rubbed into the surface with a piece of sal ammoniac, instead of a bundle of flax. When iron vessels are to be tinned, they are first cleaned with mu- riatic acid, after which the process is the same as in the tinning of old copper.

TINNING OF COPPER. To prevent the poison- ous effects of copper, culinary vessels made of

TIN

tnat metal are usually covered with tin on the inside. In preparing them for this operation, the vessels are first scraped clean and bright. They are next rubbed with sal ammoniac, to clean them more completely. They are then heated and sprinkled with powdered rosin, which prevents the surface of the copper from being oxidated or calcined. The melted tin is then poured on, and spread about. It is, however, justly complained, that one single tinning of cop- per vessels is not sufficient to preserve them from the action of the air, moisture, and saline sub- stances ; because these vessels, even when well tinned, are observed to be liable to rust. This may be remedied by a thicker covering of tin. A manufacture of this kind was some years ago established at Edinburgh. The method is to make the surface of the copper very rough, upon a rough faced anvil, or by a machine contrived on purpose, and the tin put upon it in this state ; after which the copper, with the tin on it, is hammered quite smooth. It was objected to this invention and real improvement, even by the celebrated Fourcroy himself, that the degree of heat, often superior to that of boiling water, to which such vessels arc exposed, would melt the tin, and leave the copper uncovered. But this

objection is void of foundation ; for tin will not melt with any degree of heat while it is covered by water. To prevent every such consequence, some propose an alloy of silver or platinum ; but the proposal is not necessary, and besides would prove too expensive for culinary vessels. Vessels that are only lined with a single covering of tin require a very small quantity of that metal, a vessel of nine inches diameter, and three inches and a quarter deep, requiring no more than the surprising small quantity of twenty-one grains of tin to cover it perfectly. Only, in using these vessels, care should be taken to allow no corro- sive or solvent liquid to remain long in them after using ; and, when any particle of the tin begins to wear off, the vessel should be tinned all over anew, which will cost a mere trifle.

TINNITUS AURIUM, a noise in the ears like the continued sound of bells, very common in many disorders, particularly in nervous fevers.

TIN'SEL, n. s. & v. a. Fr. etincclle. A kind of shining cloth ; any thing shining and of small value : to decorate with cheap and showy orna- ments.

It 's but a night-gown in respect of yours ; cloth of gold and cuts, underborne with a bluish tinsel.

Shaktpeare. A tinsel vail her amber locks did shrowd,

That strove to cover what it could not hide.

Fairfax.

Hence, you fantastick postillers in song, My text defeats your art, 'tis nature's tongue, Scorns all her tinsoiled metaphors of pelf, Illustrated by nothing but herself. Cleaveland.

By Thetis' tinsel slippered feet, And the songs of syrens sweet. Milton.

For favours cheap and common who would strive? Yet scattered here and there I some behold, \Vho can discern the tinsel from the gold. Drydeti.

If the man will too curiously examine the super- ficial tinsel good, he undeceives himself to his own cost. jVjin ii.

Ye (in.se/ insects, whom a court maintains, That count your beauties only by your stains,

Spin all your cobwebs o'er the eyes of day,

The muse's wing shall brush you all away. ('ape.

She, tinsei'd o'er in robes of varying hues. With self-applause her wild creation vwws : Sees momentary monsters rise and fall, Aud with her own fool's colours gilds them all. Id.

TINT, «. s. Fr. teinte ; Ital. tinta. A dye ; color.

Whether thy hand strike out some fresh design, "Where life awakes, and dawns at every line ; Or blend in beauteous tint the coloured mass, And from the canvass call the mimick face. Pope.

The virtues of most men will only blow, Like coy auriculas, in Alpine snow ; Transplant them to the equinoctial line, Their vigour sickens, and their tintt decline. Harte.

Though it be allowed that elaborate harmony of colouring, a brilliancy of tints, a soft and gradual transition from one to another, present not to the eye what an harmonious concert of musick does to the ear ; it must be remembered that painting is not merely a gratification of sight. Reynolds.

TINTERN, Wexford, Ireland, is eighty-fi-e miles from Dublin. William Mareschal, earl of Pembroke, built here, on the sea-shore, in con- sequence of his vow when in danger of ship- wreck, an abbey, founded in 1200, and which received monks from Tintern, in Monmouth- shire.

TINTO, a river of the south of Spain, in Seville, which runs into the Atlantic, to the west of the Guadalquivir, near the town of Moguer. It derives its name from the color of its water, which, in the early part of its course, is yellow, and so bitter that no animal except goats will drink it. It is of a petrifying quality, and har- dens and conglutinates the stones in its bed. This singular effect arises probably from a metal- lic infusion received at or near its source; for it disappears after its stream has been increased by other rivers. At its mouth it forms a considerable bay, about seven miles in breadth ; and large vessels sail up as far as San Juan del Puerto, about twelve miles inland.

TINTORETTO (James Robusti), a celebrated painter, born at Venice in 1512. He was the disciple of Titian, who, fearing he would become a powerful rival, dismissed him. His son and daughter were also good artists. He died in

1594.

TI'NY, adj. Dan. tint, tynd. Perhaps a di- minutive of thin. Little; small; puny.

Any pretty little (my kickshaws. Shohpeare.

But ah ! I fear thy little fancy roves, On little females, and on little loves ; Thy pigmy childien and thy tiny spouse, 1'he baby playthings that adorn thy house. Swift.

TIOGA, a county of the United States, in New York, bounded north by an angle of Steu- ben county, and by Seneca and Cayuga coun- ties, east by Brooroe county, south by the state of Pennsylvania, and west by Steuben county. Its form is nearly that of a square, twenty-six by thirty-four miles; the area is 892 miles, or 571,306 acres. The surface is considerably broken and hilly, and some parts may even aspire to the mountain character; though in general it falls far below it. The agriculture is improving and productive, and population is ncreasing. Chief town, Spencer.

TIP, n. s. & v. a. Belg. tip, tipken; Isl. ana Swed. tip. Top ; end ; point ; extremity : to furnish with a top ; to end ; to top.

The tip no jewel needs to wear, The tip is jewel of the ear. Sidney.

They touch the beard with the tip of their tongue, and wet it. Bacon.

Thrice upon thy ringer's tip, Thrice upon thy rubied lip. Milton.

In his hand a reed Stood waving, tipped with fire. Id.

With truncheon tipped with iron head, The warriour to the lists he led. Hudibras.

She writes love letters to the youth in grace, Nay, tipt the wink before the cuckold's face.

Dryden .

The pert jackanapes tipped me the wink, and put out his tongue at his grandfather. Tatler.

All the pleasure dwells upon the tip of his tongue.

South.

How would the old king smile To see you weigh the paws, when tipped with gold. And throw the shaggy spoils about your shoulders !

Addiwn.

She has fifty private amours, which nobody yet knows any thing of but herself, and thirty clandes- tine marriages, that hare not been touched by the tip of the tongue. Id.

I no longer look upon lord Plausible as ridiculous, for admiring a lady's fine tip of an ear and pretty elbow. Pope.

Quartos, octavos, shape the lessening pyre, And last a little Ajax tips, the spire. Id.

A third rogue tips me by the elbow. Swift.

When I saw the keeper frown, Tipping him with half a crown, Now, said I, we are alone, Name your heroes one by one. Id.

Tipt with jet, Fair ermines spotless as the snows they press.

Thomson.

TIPERA, called by the Mahometans Roshena- bad, an extensive district of Bengal, is situated on the eastern side of the Brahmapootra or Megna River, and between 22° and 24° of N. lat. On the eastern quarter it is divided from Ava, or the Birman dominions, by a range of mountains and impervious woods, abounding with wild elephants and other ferocious animals. The district is supposed to contain nearly 7000 square miles ; but of this space a very considerable portion is wild and uncultivated, inhabited only by a scanty population, of an uncivilised race, denominated Rookies.

TIPPERARY, a county in the province of Munster and kingdom of Ireland, bounded on the north by the King's county, and on the east by Queen's county and county of Kilkenny, on the south by Waterford, and on the west by the river Shannon and by a part of Limerick county. Its greatest length is about sixty-six miles, and greatest breadth about forty; but this return is not to be depended on, the county map, by Neville Bath, being confessedly incorrect. It contains above 800,000 English acres, only three-fourths of which are at present subject to county rates, according to the return of the treasurer in 1824. This county is divided into eleven baronies, three corporations, and 154 parishes. The baronies are Iffa and OfTa East, Ifla and Ofta West, Middlethird, Clanwilliam, Slievardagh,*

Kilnemanagh, Eliogarty, Skerrin, Owney and Arra, Lower Ormond and Upper Ormond. The corporate towns are Clonmel (which continues to return a representative to parliament), Cashel, and Fethard. There is no record specifying the number of acres in these corporate towns. The chief towns of Tipperary are Templemore, Clon- mel, Carrick-on-Suir, Caher, Clogheen, Roscrea, Fethard, Nenagh, and Newport. The population of the entire county amounts to about 347,000, and the number of habitations to 55,000. The benefits of education appear to be extended to the poor of this district on a very liberal scale. Of the schools established by public and private bounty only fifty aie retained upon authority; these afford education, and support in part, to about 4500 children. Besides which there are, in Tipperary town, a school on Sir E. Smith's foundation, unattended ; and schools upon pri- vate foundations, supported by Mr. Foster, lord Ormond, lord Glenyall, James Hewitt, esq., Massey Dawson, esq., lord Dunally, Mrs. Lan- nigan, Mr. Grady, count Dalton, and other be- nevolent persons. From Templenore, Belough, and Johnstown schools, no return of the pupils is yet supplied. From all which it is manifest that the poor enjoy the benefits of education very extensively in this county. A useful branch of practical education, spinning, is taught at public schools, established for the purpose, in Caher arid Fethard. The surface of Tipperary is varied, consisting of much bog, a great range of moun- tain, and extensive districts of singularly fertile low land. There are here about 40,000 acres of reclaimable bog, all lying in the neighbourhood of limestone gravel. The Galtee mountains, which encumber this county, rise to a height of 2500 feet above sea level, and extend in length above twenty miles ; while, to the north of Gal- timore, the loftiest of this range, lies the district called the Golden Vale, so famous for its natural fertility. The nature of this county, in general, resting, as the flat lands here do, upon a lime- stone base of the latest formation, peculiarly adapts it to pasturage. Besides the Galtee range there are the Sliebh-na-man mountains in the south-east ; the Knock-rude-down, between Tipperary and Waterford ; the Sliebh-na-musts ; the Keeper, and the Sliebh-bloom ranges, in the last of which is the famous gap, or pass, called the Devil's Pit. The silver mines in this dis- trict are not now worked (see article IRELAND for an account of their present state, and proba- ble benefit of working them). Between the river Nore and the town of Cashel lies the county known to geologists as the Tipperary coal district. In this region, as in all in the southern division of Ireland, stone coal only is raised. There are no manufactures here, agricultural pursuits alone engaging the inhabitants. For all produce of this description the chief outlet is the port of Watevford, with which the chief towns commu- nicate, by means of the navigable river called the Suir. The proposed rail-way, on an extensive scale, connecting Limerick and

Waterford, and branching to Carrick-on-Suir, will open the inte- rior of the county to both these places of exporta- tion. The Suir is the only river of any magni- tude in the county, but the Shannon washes the

county for a gteat part on the west. Tipperary was anciently divrded into two great districts, the northern arid more mountainous, called Ormond (a palatinate subject to the noble house of Or- mond) ; the southern, called Holy Cross, tribu- tary to the famous abbey of that name. This large county abounds in interesting remains of antiquity, both military and ecclesiastical. Among the former are, the castle of Ardfinnan, built by king John, the old castle called Nenagh Round, and the singular building at Roscrea. But the monastic ruins of Tipperary are not exceeded by those even of Great Britain. The many graceful and ancient structures in the extensive pile on the rock of Cashel are not more picturesque in situation, standing on the summit of a lofty and precipitous rock, than they are interesting to the learned antiquarian. Here stands, grouped with the cathedral, with square and round towers, of unknown date, the curious chapel erected by Cormac Mac Culinan, king. and archbishop of Cashel, in the year 901. It is stone roofed, and in excellent preservation. The exquisite work- manship still existing in Holy Cross abbey, seven miles from Cashel, is deserving of notice from the antiquarian, the tourist, and the architect. And the scenery of Athassel Abbey is exquisitely soft and beautiful. The county of Tipperary, then, may be represented as one of the largest, most fertile, and most interesting in the kingdom. Education is here widely diffused. Coals exist in abundance. Mineral productions, doubtless, may be found in the great mountain ranges which occupy so much of the surface, the scenery of whose glens is particularly beautiful. The an- cients too have contributed to augment the intent of Tipperary scenery by the numerous graceful structures they hare erected here, which, while they give beauty to the scenery, are accompanied by feelings of historic dignity creditable to the sanctity, hospitality, and munificence of the an- cient inhabitants.

TIPPERARY a town in the county of the same name, in the province of Munster, and kingdom of Ireland, 1.10 miles from the city of Dublin. Here is a poor school of Sir Erasmus Smith's foundation, which, in 1821, was unattended. It is a post and market-town, and holds three fairs in each. year. The population amounts to 6000 souls. The ruins of an ancient monastery are extant here, supposed to have been founded in the reign of Henry III. for eremites of the Augus- tinean order. In 1329 this place was burned by the famous Breyne O'Breyn. Tipperary is a rec- tory in the diocese of Emly.

TIP'PET, n. s. Sax. taepper. Something worn about the neck.

His turban was white, with a small red cross on the top : he had also a

tippet of fine linen. Bacon.

TIP'PLE, v. a., v. n., & n. s.-\ Old. Teut.

*TIP'PLED, adj. * tepel, a dug,*

TIPPLER, n. s. i or a frequenta-

TIP'SY, adj. 3 live of TOPE.

To drink luxuriously ; waste life over the cup ;

get drunk frequently : drink ; liquor : tippled

and tipsy mean overpowered by drink ; drunk.

Let us grant it is not amiss to sit, And keep the turn of tippling with a slave, To reel the streets at noon. Shakspeare.

The not of Ine tipty oacchatinh. Tearing the Tliracian singer in their rage. Id.

While his canting drone-pipe scanned The mystick figures of her hand, He tipple palmestry, and dines On all her fortune-telling lines. Cieaieland.*

Welcome joy and feast, Midnight shout and revelry, Tipty dance and jollity. Milton.

To a short meal he made a tedious grace, Before the barley-pudding conies in place ; Then bids fall on ; himself for saving charges A peeled sliced onion eats, and tipple verjuice.*

Dryden.

Merry, we sail from the east, Half tippled at a rainbow feast. Id.

While the tipple was paid for, all went merrily on.

L'Estraiige.

If a slumber baply does invade, My weary limbs, my fancy still awake, Thoughtful of drink, and eager, in a dream, Tipples imaginary pots of ale.

Philipi.

TJPPOO SAHEB, sovereign of Mysore, was the son and successor of Hyder Ally, and maintained the independence of his states against the great Mogul, by the assistance of the French, during the war with America. When the French Revo- lution deprived him of his European allies, he had to contend with the English, who defeated him in several battles, until in 1792 he was com- pelled by marquis Cornwallis to sue for peace, which was granted on his payment of a large sum of money, ceding part of his territories, and giving up his two gons to the British general as hostages. His fierce and haughty disposition, however, led to a revival of the war in 1799; it was terminated by the capture of Seringapatam, by an English force under general Harris, in the defence of which capital the sultan lost his life. Tippoo was personally brave, but rash and pre- sumptuous, although possibly no qualities would long have preserved his dominion.

TIPSTAFF, n. s. Tip and staff. An officer with a staff tipped with metal. The staff itself so tipt.

One had in his hand a tipttaff of a yellow cane, tipped at both ends with blue. Bacon.

TIPTOE, n. s. Tip and toe. The end of the toe.

Where the fond ape himself uprearing high, 17 pon his tiptoe stalketh stately by. Spenser.*

He that outlives this day, and comes safe home, Will stand a tiptoe when this day is named, And rouse him at the name of Crispian.

Skakspeare.

Night's candles are burnt out, and jocund day Stands tiptoe on the misty mountains' tops. Id.

Religion stands tiptoe in our land, Ready to pass to the American strand. Herbert.

Ten ruddy wildings in the wood I found, And stood on tiptoet from the ground. Dryden.

TIPULA, the crane-fly, a genus of insects be- longing to the order of diptera. The mouth is a prolongation of the head ; the upper jaw is arched. They have two palpi, which are curved, and longer than the head. The proboscis is short, and bends inwards. Gmelin enumerates 123 species, of which fourteen are British. They are divided into two families. 1. Those

with wines displayed. 2. Those with wings incumbent, and wl.ich in form resemble a gnat. This two-winged • is often taken for the gnat, which it re-

sembles, but has not its mischievous instinct, nor its murderous proboscis. The larger tipulre

TIHABOSCHI (Jerome), a celebrated Italian writer, born at Bergamo, in 1731. He was a Jesuit, and became professor of oratory at Milan, and librarian to the duke of Modena, who en- nobled him. He wrote, 1. Memoirs of the Order of Homilies. 2. History of the Writers of Mo- dena, in 6 vols. 4to. 3. History of Italian Li- terature, from the age of Augustus, 13 vols. 4to. He died in 1794.

TIRAQUEAU, or TIRAQUELLUS (Andrew), a French lawyer of the sixteenth century. He was a counsellor in the parliament of Paris, and labored much to banish chicanery from the law. He was much employed by Francis I. and Henry II. in important affairs, and approved himself a man of integrity. His works make 7 vols. folio. He died in 1574.

TIRAS, a son of Japhet, the founder of Thrace.

TIRE, n. s. & v. a. -\ Saxon tine; Belgic

TIRE'WOMAN, n. s. f tuyr ; Fr. tours, a head-

Tr'RixoHousE, t dress. Sometimes

TI'RINGROOM, J written tier, and used

for rank ; row; a head-dress; furniture; appa- ratus : to tire is to dress the head : the com- pounds seem to explain themselves.

Jezebel painted her face, and tired her head.

2 King.*

On her head she wore a tire of gold, Adorned with jeras and ouches. Spen $er.

Here is her picture : let me see ; If I had such a tire, this face of mine Were full as lovely as this is of hers. Sliahtpeare.

This green plot shall be our stage, this hawthorn brake our tirinyhouse. Id.

Your lowest tire of ordnance must lie four foot clear above water, when all loading is in, or else those, your best pieces, will be of small use at sea, in any grown weather that makes the billows to rise.

Itdlrigh.

Stood ranked of seraphim another row In posture to displode their second tire Of thunder.

.Man's life's a tragedy , his mother's womb, From which he enters, is the tiringroom ; This spacious earth the theatre, and the stage That country which he lives in ; passions, rage, Fully, and vice, are actors. ' H'otton.

The judge of torments, and the king of tears, Now fills a burnished throne of quenchless fire,

And for his old fair robes of light he wears A gloomy mantle of dark flame ; the tire

That crowns his hated head, on high appears.

Crathaw.

Why should they not value themselves for this outside fashionableness of the tirewoman's making, when th«ir parents have so early instructed them to do so 1 Locke.

When they first peep forth of the ground, they shew their whole tire of leaves, then flowers, next seeds. Woodward.

In all those wars there were few tiremes, most of them being of one tire of oars of fifty banks.

Arbuthnot.

When the fury took her stand on high, A hiss from all the snaky tire went round. Pope.

TIRE, w. a.) Saxon tiriian. To fa-

TIRE'DNESS, n. x. £ tigue ; make weary ; harass ;

TIRE'POME, adj. J often taking out (intensive): tiredness, is the state of being tired ; weari- ness : tiresome; wearisome; tedious.

Often a few that are stiff do tire out a greater num- ber that are moderate. Bacon.

It is not through the tiredness of the age of the earth, but through our own negligence, that it hath not satisfied us bountifully. Haheuill.

Tired with toil, all hopes of safety past, From prayers to wishes he descends at last. Dryden.

Saint George's woilh Enkindles like desire of high exploits Immediate sieges, and the tire of war, Howl in thy eager mind. Philips.

Since the inculcating precept upon precept will prove tiresome to the reader, the poet must sometimes relieve the subject with a pleasant and pertinant di- gression. Addison.

A lonely way

The cheerless Albion wandered half a day ; Tired out, at length a spreading stream he spy'd.

Tickel.

TIRE, in the sea language, is a row of cannon placed along a ship's side, either above upon deck, or below, distinguished by the epithets of upper and lower tires.

TIRESIAS, a soothsayer of antiquity, was the son of Everes and Chariclo. Minerva, being accidentally seen by him as she was bathing, deprived him of his sight ; but gave him after- wards superior endowments. Others say that Juno struck him stone-blind for deciding a case, between Jupiter and her, to her dissatisfaction ; for which Jupiter gave him the faculty of divina- tion. He was the most celebrated prophet in the Grecian annals. Ulysses was ordered by Circe to consult him in the shades.

TIRHOOT, an extensive district of Hindos- tan, province of Bahar, situated principally be- tween 27° and 28° N. lat. Although not hilly, the surface of this district is more elevated, the soil drier, and the climate healthier, than Bengal. It is, generally speaking, well cultivated, and very productive of grain, sugar, indigo, tobacco, opium, and saltpetre ; and of late years the breed- ing of horses and cattle has received much en- couragement from government.

TIRLEMONT, or TIENEN, an inland town or the Netherlands, in the province of South Bra- bant, on the small river Geete, is tolerably built, and has considerable manufactures of woollens ; also breweries and distilleries.

It is said to have been more populous and thriving; in modern times, it is known chiefly as the scene of military encounters between the French and Austrians; first in November 1792, when the latter were worsted; and afterwards in March 1793, when (on the 16th) they again sustained a check, but took a signal revenge two days after, at the de- cisive battle of Neerwinden. Population 8000. Twenty-five miles east of Brussels.

TISjEUM, a mountain of Thessaly Pol.

TISAMENES, a son of Orestes and Hermione who succeeded to the thrones of Argos and Sparta, but was expelled by the Heraclidae in the third year of his reign. He retired to Achaia, and was killed in a battle with the lonians. — Pans. 3.

TISAMENES, king of Thebes, the son of Ther- sandes, grandson of Polynices, and great-grandson of (Edipus.

TISDRA, a town of Africa.— Cses. Afr. 76.

TISI PHONE, in the mythology, daughter of Acheron and Nox, one of the three Furies who executed divine vengeance on the wicked ir- Tartarus. She was represented with a whip in her hand, and serpents, instead of hair, on her head.

TISRI, or TIZRI. in chronology, the first He- brew month of the civil year, and the seventh of the ecclesiastical or sacred year. It answered to part of our September and October.

TISSA, an ancient town of Sicily, now called Randazzo. — Sil. Ital. Cic.

TISSOT (Dr.), an eminent Swiss physician, the author of many useful works. He distin- guished himself early by writing in favor of Inoculation. He died in 1797.

TIS'SUE, n. s. & v. a. Sax. rij-an ; Fr. tissue. Cloth interwoven with gold or silver, or figured colors : to interweave in this way ; variegate.

The chariot was covered with cloth of gold tisstied upon blue. Bacon.

They have been always frank of their blessings to countenance any great action ; and then, according as it should prosper, to tissue upon it some pretence or other. Wotton.

Mercy will sit between, Throned in celestial sheen, \Vith_radiant feet the tissue clouds down steering.

Milton.

In their glittering tissues emblazed Holy memorials, acts of zeal and love, Recorded eminent. Id.

A robe of tissue, stiff with golden wire ; An upper vest, once Helen's rich attire ; From Argos by the famed adultress brought, With golden flowers and winding foliage wrought.

Dryden .

TIT, n.s. Teut. tyt, a small bird. A small horse ; generally in contempt.

No storing of pasture with baggagely tit, With ragged, with aged, and evil at hit. Tuner,

Thou might'st have ta'en example From what thou read'st in story ; Being as worthy to sit On an ambling tit As thy predecessor Dory. Deitliam.

TIT

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TIT

A willing tit, that will venture her corps with you.

Dry den.

\Vnat does this envious tit, but away to her father with a tale 1 L'Ettrange.

TITˆIA, in the mythology, the mother of the Titans. Some confound her with Terra, or Cy- bele.

TITAN, in fabulous history, the son of Coelus and Terra, and the eldest brother of Saturn, suffered the latter to enjoy the crown on con- dition that he shouhi bring up none of his male issue, by which means the crown would at length revert to him ; but Jupiter being spared by the address of Rhea, Saturn's wife, Titan and his children were so enraged at seeing their hopes frustrated that they took up arms to revenge the injury ; and not only defeated Saturn, but kept him and his wife prisoners till he was delivered by Jupiter, who defeated the Titans; when, from the blood of these Titans slain in the battle, proceeded serpents, scorpions, and all venomous reptiles. See SATURN, and MYTHOLOGY.

TITANIA, a title of Pyrrha, as grand-daughter of Titan ; also of Diana. — Ovid.

TITANIC ACID, in chemistry. By fusing powdered rutilite with thrice its weight of carbo- nate of potash, dissolving the compound in muriatic acid, precipitating by caustic ammonia, digesting the precipitate for a certain time with hydrosulphuret of ammonia, and then di- gesting the solid matter left in weak muriatic acid, Mr. Rose obtains a perfectly white oxide of titanium, which is not attacked by acids, but which becomes red by touching moistened litmus. As it acts with alkalies precisely as an acid, Mr. Rose calls it titanic acid. It is said to consist of titanium . 66 '05 oxygen . 33-95 ;

*whence if, like the other metallic acids, this be supposed to contain three atoms of oxygen, the atomic weight of the metal will be 5*83, or pos- sibly 6.*

Acid titanate of potash consists of, titanic acid .... 82-33) potash 17-77

Acid titanate of soda,

titanic acid .... 83-151 soda 16-85 \ "

Sulpho-titanic acid consists of,

titanic acid .... 76-67 } sulphuric acid . . . 7-67 > 100. water 15-66)

Oxalo-titanic acid of— titanic acid 74-1 ; oxalic acid 10 4 ; water 15-5.

Sulphuret of titanium consists of titanium 49-17; sulphur 50-83.

Protochloride of titanium consists of titanium 6 ; chlorine 3'6.

Perchloride of titanium consists of titanium 6-66; chlorine 7'94. Annales de Chim. xxiii. 353. Annals of Phil. N. S. &c.

TITANIDES, the sons of Titan ; the giants who warred against the gods.

TITANITES. This name has been given to certain ores of titanium containing that metal in ihe state of oxide. See the folio win£ article.

TITANIUM. The Rev. Mr. Gregor dis- covered in a kind of ferruginous sand, found in

100.

the vale of Menachz-i. in Cornwall, what he supposed to be the oxide of a new metal, but was unable to reduce. Klaproih, afterward analyzing what was called the red schorl of Hungary, found it to be the pure oxide of a new metal, which he named titanium, and the same with the menachanite

of Mr. Gregor. Since that, oxide of titanium has been discovered in several fossils.

We do not know that titanium has been com- pletely reduced, except by Lampadius, who ef- fected it by means of charcoal only. The oxide he employed was obtained from the decomposi- tion of gallate of titanium by fixed alkali. The metal was of a dark copper color, with much metallic brilliancy, brittle, and in small scales considerably elastic. It tarnishes in the air, and is easily oxidised by heat. It then acquires a bluish aspect. It detonates with nitre, and is highly infusible. All the dense acids act upon it with considerable energy. According to Yau- quelin, it is volatilised by intense heat.

Certain small cubes occasionally observed in iron slag had generally been regarded as py- ritical ; but, upon minute inspection, Dr. Wollas- ton observed that neither their color, crystallisa- tion, nor hardness, were those of pyrites. The crystals are striated. Purified from iron by muriatic acid, they are insoluble in muriatic, nitric, nitro-muriatic, and sulphuric acids. Their perfect solution may be effected by the com- bined action of nitre and borax, since the latter dissolves the oxide as fast as it is formed, and presents a succession of clear surfaces for fresh oxidation. But, as these salts do not unite by fusion, the addition of soda, as a medium of union, shortens the process. The fused mass be- comes opaque on cooling by the deposition of a white oxide, which may either be previously freed of the salts by boiling water, and then dis- solved in muriatic acid, or the whole mass may be at once dissolved together. In either case alkalies precipitate from the solution of a white oxide, which is not soluble by excess of alkali either pure or carbonated. By evaporating the muriatic solution of the oxide to dryness, at the heat of boiling water, it is freed of any redundant acid, and the muriate which remains is perfectly soluble in water, and in a state most favorable for exhibiting the characteristic properties of the metal. Infusion of galls gives the well known red color of gallate of titanium. Th« color oc- casioned by prussiate of potash is also red, dif- fering from prussiate of copper, by inclining to orange instead of purple, while the color of prus- siate of uranium is rather brown than red.

The above crystals are perfect conductors of electricity. Titanium shows no affinity for iron ; and it seems equally indisposed to unite with every other metal that Dr. Wollaston tried. The specific gravity of the metallic titanium is 5-3 ; and it is so hard as to scratch agate. Dr. Wollaslon, in Philosophical Transactions, for

1823.

M. Rose obtained oxide of titanium by fusing powdered rutilite with thrice

its weight of car- bonate of potash, dissolving the compound in muriatic acid, precipitating by caustic ammonia, digesting the precipitate for a certain time with

hydrosulplmret of ammonia, and finally digest- ancient division of this country into families by ing the solid matter left in weak muriatic acid, tens : the tithingman being a kind of constable

responsible for their good behaviour : a tithing is also used for the tithe or priest's part.

which leaves the oxide of titanium pure. In this way only, as yet, can the iron be removed. The pure oxide remains perfectly white when heated and cooled, and is then untouched by acids. Fused with carbonate of potash, and then treated with muriatic acid, it sometimes gelatinises, though not so strongly as silica. It becomes red by touching moist litmus, and with alkalies acts precisely as an acid. It has there- fore been called by M. Hose titanic acid. There are no salts with base of titanic acid ; those that have been taken for such resulted from the pre- sence of alkali in the titanic acid.

The native red oxide is insoluble in the sul- phuric, nitric, muriatic, and nitro-muriatic acids : but, if it be fused with six parts of carbonate of potash, the oxide is dissolved with efferves- cence. The sulphuric solution when evaporated becomes gelatinous ; the nitric affords rhom- boidal crystals by spontaneous evaporation, but is rendered turbid by ebullition ; the muriatic becomes gelatinous, or flocculent, by heat, and transparent crystals form in it when cooled ; but, if it be boiled, oxygenised muriatic acid gas is evolved, and awhile oxide thrown down. Phos- phoric and arsenic acids take it from the others, and form with it a white precipitate. These precipitates are soluble in muriatic acid, but in no other.

The solutions of titanium give white preci- pitates with the alkalies, or their carbonates ; tincture of galls gives a brownish-red, and prus- siate of potash a brownish yellow. If the prus- siate produce a green precipitate, this, according to Lowitz, is owing to the presence of iron. Zinc immersed in the solutions changes their color from yellow to violet, and ultimately to an in- digo ; tin produces in them a pale red tint, which deepens to a bright purple red. Hydrosulphuret of potash throws down a brownish-red precipi- tate, but they are not decomposed by sulphuieted hydrogen.

By exposing phosphate of titanium, mixed with charcoal and borax, to a

violent heat, in a double crucible luted, M. Chenevix obtained a pale white phosphuret, with some lustre, brittle

of a granular texture, and not very fusible. The oxides of iron and titanium, exposed to heat with a little oil and charcoal, produce an alloy of a gray color, intermixed with brilliant metal- lic particles of a golden yellow. Oxide of tita- nium was used to give a brown or yellow color in painting on porcelain, before its nature was known ; but it was found difficult to obtain from it a uniform > tint, probably from its not being in a state of purity.

TITBIT, n. s. Properly tidbit ; tid, tender, and bit. — Johnson. Nice bit ; nice food.

John pampered esquire South with titbilt till he grew wanton. Arbuthnot.

TITCHFIELD. See TICHFIELD.

TITHE, n. s., v. a., &-\ Sax. t&ofca, tenth.

TITHE'ABLE, adj. [v. n. {The tenth part ; the

TI'THING, n. s. lPart legally assigned

TI'THINGMAN. 3 to the maintenance of

the clergy ; any small part or portion : titheable

is subject to the payment of tithes : tithing, an

When thou hast made an end of tithing all the tithes of thine increase, the third year, the year of tithiny, give unto the Levite, stranger, fatherless, and widow. Deuteronomy.

For lambe. pig, and calf, and for other the like, Tithe so as thy cattle the lord do not strike. Tusser.

Though vicar be bad, or the parson be evil, Go not for thy tithiny thyself to the devil. Id.

His hundred is not at his command farther than his prince's service ; and also every tithingman may controul him. Spenser.

When I come to the tithing of them, I will tithe them one with another, and will make an Irishman the tithingman. Id.

Since the first sword was drawn about this question, Ev'ry tithe soul

‘mongst many thousand dismes Hath been as dear as Helen. Shakspeare.

]5y decimation and a tithed death, If thy revenges hunger for that food Which nature loaths, take thou the destined tenth.

Id.

Many have made witty invectives against usury ; they say, that it is a pity the devil should have God’s part, which is the tithe. Bacon.

Offensive wars for religion are seldom to be ap- proved, unless they have some mixture of civil tithes,

Id.

The popish priest shall, .on taking the oath of alle- giance to his majesty, be entitled to a tenth part or tithe of all things titheable in Ireland belonging to the papists, within their respective parishes. Swift.

TITHES, in ecclesiastical law, are defined to be the tenth part of the increase, yearly arising and renewing from the profits of lands, the stock upon lands, and the personal industry of the in- habitants : the first species being usually called predial, as of corn, grass, hops, and wood ; the second mixed, as of wool, milk, pigs, &c., con- sisting of natural products, but nurtured and preserved in part by the care of man ; and of these the tenth must be paid in gross ; the third personal, as of manual occupations, trades, fisheries, and the like; and of these only the tenth part of the clear gains and profits is due.

We cannot ascertain the time when tithes were first introduced. The first mention of them, in

any written English law, is a constitutional de- cree, made in a synod held A. D. 786, wherein the payment of tithes in general is strongly enjoined. This decree, which at first bound not the laity, was effectually confirmed by two kingdoms of the heptarchy, in their parliamentary conventions of estates, respectively consisting of the kings of Mercia and Northumberland, the bishops, dukes, senators, and people. The next authentic men- tion of them is in the fcedus Edwardi et Guth- runi ; or the laws agreed upon between king Guthrun the Dane, and Alfred and his son Ed- ward the elder, kings of England, about A. D. 900. There we find the payment of tithes en- joined, and a penalty added upon non-obser- vance : which law is seconded by the laws of Athelstan, about A. D. 930. Upon their first introduction, though every man was obliged to pay tithes in general, yet he might give them to what priests he pleased ; which were called ar- bitrary consecrations of tithes ; or he might pay

them into the hands of the bishop, who dis- tributed among his diocesan clergy the revenues of the church, which were then in common. But, when dioceses were divided into parishes, the tithes of each parish were allotted to its own particular minister; first by common consent or the appointments of lords of manors, and after- terwards by the written law of the land. Arbi- trary consecrations of tithes took place again af- terwards, and were in general use till the time of king John. But they were prohibited by pope Innocent III., about A. D. 1209, in a decretal epistle sent to the archb.shop. This epistle, says Sir Edward Coke, bound not the lay subjects of this realm ; but, being reasonable and just, it was allowed of, and so become lex terrae.

Lands and their occupiers may be exempted from the payment of tithes, either in part or to- tally; 1st, By a real composition; or 2d, By custom or prescription. I. A real composition is when an agreement is made between the owner of the lands and the parson or vicar, with the consent of the ordinary and the patron, that such lands shall for the future be discharged from payment of tithes, by reason of some land or other real recompense given to the parson in lieu and satisfaction thereof. This was permitted by law, because it was supposed that the clergy would be no losers by such composition ; since the consent of the ordinary, whose duty it is to take care of the church in general, and of the patron, whose interest it is to protect that par- ticular church, were both made necessary to ren- der the composition effectual : and hence have arisen all such compositions as exist at this day by force of the common law. But experience showing that even this caution was ineffectual, and the possessions of the church being by this and other means every day diminished, the dis- abling statute 13 Eliz. c. 10 was made; which prevents, among other spiritual persons, all par- sons and vicars from making any conveyances of the estates of their churches, other than for three lives of twenty-one years. So that now, by this statute, no real composition made since the 13 Eliz. is good for any longer term than three lives of twenty-one years, though made by con- sent of the patron and ordinary : which has in- deed effectually demolished this kind of traffic ; such compositions being now rarely heard of, unless by authority of parliament. II. A dis- charge by custom or prescription is, where time out of mind such persons or such lands have been either partially or totally discharged from the payment of tithes. And this immemorial usage is binding upon all parties ; as it is in its nature an evidence of universal consent and ac- quiescence, and with reason supposes a real composition to have been formerly made. This custom or prescription is either de modo deci- mandi, or de non decimando. A modus deci- mandi, commonly called

by the simple name of a modus only, is where there is by custom a particular manner of tithing allowed, different from the general law of taking tithes in kind, which are the actual tenth part of the annual increase. This is sometimes a pecuniary compensation, as twopence an acre for the tithe of land; some- times it is a compensation in work and labor, as

that the parson shall have only the twelfth cock of hay, and not the tenth, in consideration of the owner's making it for him : sometimes, in lieu of a large quantity of crude or imperfect tithe, the parson shall have a less quantity when ar- rived at greater maturity, as a couple of fowls in lieu of tithe-eggs, and the like. Any means, in short, whereby the general law of tithing is altered, and a new method of taking them is in- troduced, is called a modus decimandi, or spe- cial manner of tithing. A prescription de non decimando is a claim to be entirely discharged of tithes, and to pay no compensation in lieu ut them. Thus the king by his prerogative is discharged from all tithes. So a vicar shall pay no tithes to the rector, nor the rector to the vicar for ecclesia decimas non solvit ecclesiae. But these personal privileges (not arising from or being annexed to the land) are personally con- fined to both the king and the clergy ; for their tenant or lessee shall pay tithes, though in their own occupation their lands are not generally tithable. And, generally speaking, it is an es- tablished rule, that in lay hands, modus de non decimando non valet. But spiritual persons or corporations, as monasteries, abbots, bishops, and the like, were always capable of having their lands totally discharged of tithes by various ways, as, 1. By real composition. 2. By the pope's bull of exemption. 3. By unity of pos- session ; as when the rectory of a parish, and lands in the same parish, both belonged to a re- ligious house, those lands are discharged of tithes by this unity of possession. 4. By prescription ; having never been liable to tithes, by being al- ways in spiritual hands. 5. By virtue of their order ; as the knights templars, Cistercians, and others, whose lands were privileged by the pope with a discharge of tithes. Though, upon the dissolution of abbeys, by Henry VIII., most of these exemptions from tithes would have fallen with them, and the lands become tithable again, had they not been supported and upheld by the statute 31 Henry VIII. c. 13, which enacts that all persons who should come to the possession of the lands of any abbey then dissolved, should hold them free and discharged of tithes, in as large and ample a manner as the abbeys them- selves formerly held them. And from this origi- nal have sprung all the lands which being in lay hands do at present claim to be tithe-free ; for if a man can show his lands to have been such abbey-lands, and also immemorially discharged of tithes by any of the means before-mentioned, this is now a good prescription de non deci- mando. But he must show both these requi- sites ; for abbey-lands, without a special ground of discharge, are not discharged of course ; neither will any prescription de non decimando avail in total

discharge of tithes, unless it relates to such abbey-lands.

Dr. Smith observes (Natvre and Causes ol the Wealth of Nations, vol. iii.j that tithes, as well as other similar taxes on tl.'e produce of the land, are in reality iaxe? noon the rent, and, under the appearance cf equality, are very un- equal taxes ; a certain portion of the produce being in different situations equivalent to a very different portion of the rent. In some very rich

TIT

•a:ids the produce is so great that the one-half of it is fully sufficient to replace to the farmer his capital employed in cultivation, together with the ordinary profits of farming-stock in the neighbourhood. The other half, or, what comes to the same thing, the value of the other hair, .ie could afford to pay as rent to the landlord, if there was no tithe. But, if a tenth of the pro- duce is taken from him in the way of tithe, he must require an abatement of the fifih part of his rent, otherwise he cannot get back his capi- tal with the ordinary profit. In this case the rent of the landlord, instead of amounting to a half, or five-tenths of the whole produce, will amount only to four-tenths of it. In poorer lands, on the contrary, the produce is sometimes so small, and the expense of cultivation so great, that it requires four fifths of the whole produce to replace to the farmer his capital with the ordi- nary profit. In this case, though there was no tithe, the rent of the landlord could amount to no more than one-fifth or two-tenths of the whole produce. But if the farmer pays one-tenth of the produce in the way of tithe, he must require an equal abate- ment of the rent of the landlord, which will thus be reduced to one-tenth only of the whole pro- duce. Upon the rent of rich lands, the tithe may sometimes be a tax of no more than one- fifth part, or four shillings in the pound ; whereas, upon that of poorer lands, it may sometimes be a tax of one-half, or of ten shillings in the pound. It is a great discouragement to the improvement of land, that a tenth part of the clear produce, without any deduction for the advanced expense of raising that produce, should be alienated from the cultivator of the land to any other person whatever. The improvements of the landlord and the cultivation of the farmer are both checked by this unequal tax upon the rent. The one cannot venture to make the most important, which are generally the most expensive improve- ments ; nor the other to raise the most valuable, which are generally too the most expensive crops ; when the church, which lays out no part of the expense, is to share so very largely in the profit. When, instead either of a certain por- tion of the produce of land, or of the price of a certain portion, a certain sum of money is to be paid in full compensation for all tax or tithe; the tax becomes, in this case, exactly of the same nature with the land-tax of England. It neither rises nor falls with the rent of the land. It neither

encourages nor discourages improvement. The tithe in the greater part of those parishes •which pay what is called a modus in lieu of all other tithes is a tax of this kind. Some have proposed, as a better method for raising a reve- nue for the clergy, to lay an equivalent tax upon all estates, cultivated or not cultivated. It is well known, and has often been lamented, even by the clergy themselves, that this method of raising a revenue for their subsistence, is a con- tinual source of dispute between the clergy and their parishioners, and contributes to obstruct the usefulness of their ministry. In Holland, and some other Protestant countries, the civil magistrates have adopted what some have thought a better plan, by allowing their ministers a fixed stipend, paid out of the public funds. In effect, Vor.. XXII.

for the first 300 years after Christ, no mention i made in all ecclesiastical history of any such thing as tithes ; though, in that time, altars and oblations had been recalled, and the church had miserably judaised in many other things. The churchmen confessedly lived all that time on free-will offerings : nor could the defect of pay- ing tithes be owing to this, that there were wanting civil magistrates to enjoin it ; since Christians, having lands, might have given out of them what they pleased ; and the first Chris- tian emperors, who did all things by advice of the bishops, supplied what was wanting to the clergy, not out of tithes, which were never pro- posed, but out of their own imperial revenues.*

TITHING. Anciently no man was suffered to abide in England above forty days, unless he were enrolled in some tithing. — One of the prin- cipal inhabitants of the tithing was annually ap- pointed to preside over the rest, being called the tithing-man, the head-borough, and in some coun- tries the horse-holder, or borough's calder, being supposed the discreetest man in the borough town, or tithing. The distribution of England into tithings and hundreds is owing to king Al- fred.

TITHING-MEN are a kind of petty constables, elected by parishes, and sworn into their offices in the court-leet, and sometimes by justices of the peace, &c.

TITHONUS, in fabulous history, the son of Laomedon king of Troy, was beloved by Aurora, who carried him to Delos, thence to Ethiopia, and at last to heaven, where she prevailed on the Destinies to bestow upon him the gift of immor- tality ; but forgot to add that of youth. At last Tithonus grew so old that he was obliged to be rocked to sleep like an infant; when Aurora transformed him into a grasshopper ; which re- news its youth by casting its skin, and in its chirping retains the loquacity of old age.

TITIAN, or TITIAKO (Vecelli), the most uni- versal genius for painting of all the Lombard school, the best colorist of all the moderns, and the most eminent for histories, portraits, and landscapes, was born at Cadore, in Friuli, in the late state of Venice, in 1477, or in 1480 accord- ing to Vasari and Sandrart. His parents sent him at ten years of age to one of his uncles at Venice, who, finding that he had an inclination to painting, put him to the school of John Bel- lino. But as soon as Titian had seen the works of Giorgione, he preferred his manner and be- came his disciple ; and he followed him in his practice so successfully that several of the paint- ings of Titian were taken for the performances of Giorgione; and this success inspired that ar- tist with such invincible jealousy that he broke off their connexion for ever. The reputation of Titian rose rapidly; every new work contributed to extend his fame through all Europe ; and he was considered as the principal ornament of the age. Charles V. enriched him by repeated bounties, conferred on him the honor of knighthood, and sat for his portrait several times. The excel- lence of Titian was not so remarkably apparent in the historical compositions which he painted, as in his portraits and landscapes, which sp?m to be superior to all competition ; and even i< > tins

day many of them preserve their original beauty, being as much the admiration of the present age as they have deservedly been of the ages past. It would prove almost an endless task to enu- merate the variety of works executed by this illus- trious artist, at Rome, Venice, Bologna, and Florence, in other cities of Italy, in England, Spain, Germany, and France. He was of so happy a constitution, that he was never ill till 1576, when he died of the plague, at ninety-nine years of age. His disciples were Paul Veronese, James Tintoret, James de Porte Bassano, and his sons.

TITICACA, a lake of South America, in the viceroyalty of Buenos Ayres. It is situated in the plains that lie between the two Cordilleras, in the north-western part of the province of Los Charcas, and is the most considerable of all the lakes of South America. Its figure is irregular, but inclining to oval, and its principal direction north-west and south-east. In circumference it is about 240 miles, and in some parts from seventy to eighty fathoms in depth. It is navi- gated by ships, but is subject to storms and tre- mendous gusts of wind descending from the mountains. The first ship that the Spaniards built upon it was immediately driven on shore, and destroyed by a violent squall ; and this was considered as so ominous that

many years elaps- ed before another was constructed. Ten or twelve rivers, and a number of small streams, empty themselves into it.

TITICACA, a large island in the above lake. It is three leagues long, one wide, and five in cir- cumference, and about one mile from the shore. It was mountainous and uncultivated, but was greatly improved by the Incas. The soil is fer- tile, and the climate mild.

TITILLATE, v. n. I Lat. titillo. To tickle :

TITILLA'TION, n. s. S the act of tickling or state of being tickled.

Tickling causeth laughter ; the cause may be the emission of the spirits, and so of the breath, by a flight from tit Hint inn. Bacon.

The delights which result from these nobler enter- tainments, our cool thoughts need not be ashamed of, and which are dogged by no such sad sequels as are the products of those titillations that reach no higher than the senses. Glanville.

In sweets, the acid particles seem so attenuated in the oil as only to produce a small and grateful titil- lation. Arbnthnot.

Just where the breath of life his nostrils drew, A charge of snuff the wily virgin threw ; The gnomes direct to cv'ry atom just The pungent grains of titillating dust. Pope.

TITIUS (Septimius), a poet of the Augustan age, famous for his lyric and tragic poems, which are celebrated by Horace (i. ep. 3. v. 9) ; but now lost.

TITLARK, n. «. From TIT, which see. A small bird.

The smaller birds do the like in their seasons ; as the laverock, titlark, and linnet. Walton.

TITLARK, in ornithology. See ALAUDA. TITLE, n. s. ft v. a. } Old Fr. titelle ; Lat. TI'TLELESS, adj. > lilulus. A general head Ti'i LEPAGE, n. a. y comprising particulars : hence a statement of right; right; appellation,

name ; honor ; first page of a book : as a verb active, to entitle; call: titleless, without a title, titlepage, the page containing the title of a book.

Let the title of a man's right be called into ques- tion ; are we not bold to rely and build upon the judgment of such as are famous for their skill in the laws 1 Hooker.

To leave his wife, to leave his babes, His mansion, and his titles, in a place

From whence himself does fly 1 Shaktpeare.

This man's brow, like to a title leaf, Foretels the nature of a tragic volume. Id.

He was a kind of nothing, titleless, Till he had forged himself a name o' the fire Of burning Rome. Id.

Three draw the experiments of the former four into titles and tables for the better drawing of observa- tions ; these we call compilers. Bawii.

Man over men

He made not lord : such title to himself Reserving. Milttm.

To these, that sober race of men, whose lives. Religious titled them the sons of God, Shall yield up all their virtue, all their fame, Ignobly ! Id.

Among the many preferences that the laws of Eng- land have above others, I shall single out two parti- cular titles, which give a handsome specimen of their excellencies above other laws in other parts or titles of the same. Hale.

If there were no laws to protect them there were no living in this world for good men ; and in effect there would be no laws, if it were a sin in them to try a title, or right themselves by them. Kettleworth.

To revenge their common injuries, though you had an undoubted title by your birth, you had a greater by your courage. Dr\ideii.

We should have been pleased to have seen our own names at the bottom of the titlepage. Id.

Is a man impoverished by purchase ? it is because he paid his money for a lye . and took a bad title for a good. South.

Conti would have kept his title to Orange.

Ad&ton.

Our adversaries encourage a writer who cannot furnish out so much as a title page with propriety.

Swift.

O the discretion of a girl ! she will be a slave to any thing that has not a title to make her one.

Southern.

Others with wishful eyes on glory look, When they have got their picture towards a book; Or pompous title, like a gaudy sign Meant to betray dull sots to wretched wine. Youny.

TITLE, in law, denotes any right which a per- son has to the possession of a thing, or an au- thentic instrument whereby he can prove his right. See the articles RIGHT, PROPERTY, &c.

Titles were not so common among the ancient Greeks or Romans as they are in modern times. Till the reign of Constantine, the title of Illus- trious was never given except to those who were distinguished in arms or letters : but at length it became hereditary in the families of princes, and every son of a prince was illustrious. The title of highness was formerly only given to kings. The kings of England, before the reign of Henry VIII., were addressed by the title of your grace. That monarch first assumed the title of highness, and afterwards that of majesty. The title of majesty was first given him by Francis 1., in their interview in 1520. Charles V. was the first

king of Spain who assumed the same title. Princes, nobles, and clergy, generally have one title derived from their territories and estates, and another derived from their rank or from some other remarkable circumstance. The pope has the title of holiness. A cardinal is entitled eminent, or most eminent. An archbishop is addressed his grace, and most Reverend ; a bi- shop has the title of his Lordship, and Right Reverend. Inferior clergymen are Reverend. To an emperor is given the title of Imperial Ma- jesty ; to kings, that of Majesty ; to the princes of Great Britain, Royal Highness ; to those of Spain and Portugal, Infant ; to electors, Elec- toral Highness ; to the princes of Italy and Ger- many, Highness ; to the ci-devant Doge of Ve- nice, Most Serene Prince ; to the grand master of Malta, Eminence ; to nuncios, and ambassa- dors of crowned heads, Excellency ; to dukes, Grace; to marquisses, earls, and barons, Lord- ship. The emperor of China, among his titles, takes that of Tien Su, < Son of Heaven.' The Orientals, it is observed, are exceedingly fond of titles ; the simple governor of Schiras, for in- stance, after a pompous enumeration of qualities, lordships, &c., adds the titles of Flower of Cour- tesy, Nutmeg of Consolation, and Rose of De- light.

TITLE TO THE CROWX, in the British Consti- tution. See SUCCESSION.

TITLEY (Walter), esq., born about 1 700, was educated at Westminster, where he was patron- ised by bishop Atterbury, who made him tutor to his son, and kept him in his family, till the time of the reported plot in 1722. He after- wards studied at Trinity College, Cambridge. He was sent envoy to Copenhagen, where he died after a long residence, much esteemed for his amiable qualities. He published several pieces, rather elegant than scientific.

TITMOUSE, or TIT, n.s. See TIT. A smnll species of birds.

The nightingale is sovereign of song, Before him sits the tit mouse silent by,

And I unfit to thrust in skilful throng, Should Colin make judge of my foolerie. Sj > enter.

The titmouse and the pecker's hungry brood, And Progne with her bosom stained in blood.

Dryden.

TITORMUS, a shepherd of ˆ.tolia, famous for his prodigious strength. He was contempo- rary with Milo of Crotona, whom he excelled, as he lifted on his shoulders a large rock which Milo could with difficulty move. — ./ Elian. 12, 22 ; Herod, vi. 127.

TITTER, v. n. Formed, I suppose, from the sound. — Johnson. To laugh with restraint : laugh without much noise.

From wheat go and rake out the titters or tine ; If care be not forth, it will rise again fine. Tusser.

In flowed at once a gay embroidered race, And tittering pushed the pedants off the place.

Pope.

TITTLE, n. s. Diminutive of tit. A small particle ; point ; dot.

In the particular which concerned the church, the Scots would never depart from a tittle.

Clarendon.

*Angels themselves disdaining *" approach thy temple, give thee in command*

What to the smillest little thou shall sav

To thy adorers. Milton.

They thought God and themselves linked in si- fast a covenant, that, although they ne-er performed their part, God was yet bound to make good every tittle of his. ~ South.

You are not advanced one tittle towards the proof of what you intend. Waterland.

Ned Fashion hath been bred about court, and un- derstands to a tittle all the punctilios of a drawing- room. Swift.

TITTLETATTLK, n. s. A word formed from tattle by a ludicrous reduplication. Idle talk ; prattle ; gabble.

You are full in your tittletatlings of Cupid : here is Cupid, and there is Cupid : I will tell you now what a good old woman told me. Sidney.

As the foe drew near With love, and joy, and life and dear ; Our don, who knew this tittletattlt, Did, sure as trumpet, call to battle. Prior.

For every idle tittletattle that went aoout, Jack was suspected for the author. Arbuthnot.

TITULAR, adj. ˆ Fr. titulaire, from

TITULAR'ITY, n. s. J-Lat. titulus. Nomi- TIT'ULARY, adj. & n. s. j nal ; having or con- ferring only the title : the derivatives corres- ponding.

They would deliver up the kingdom to the king of England to shadow their rebellion, and to be titular and painted head of those arms. Bacon.

The malecontents of his kingdom have not been base nor titulary impostors, but of an higher nature.

Id.

Thrones, virtues, powers, If these magnifick titles yet remain, Not merely titular. Milton.

Julius, Augustus, and Tiberius, with great humi- lity received the name of Imperator ; but their suc- cessors retain the same even in its titularity.

Brnwae. Both Valerius and Austin were titular bishops.

Avliffe.

The persons deputed for the celebration of these masses were neither titularies nor perpetual curates, but persons entirely conductitious. Id.

TITURIUS, a lieutenant of Julius Caesar, in Gaul, who was killed by Ambiorix. — Caes. de B. G. v. 29, &c.

TITUS, a praenomen in very general use among the ancient Romans, which seems to have been first introduced among them by king

TITUS (Tatius), the colleague of Romulus. See ROME.

TITUS, in church history, a celebrated evange- list, a Greek by birth, and a convert of St. Paul, who wrote a letter to him, which is still extant. See SCRIPTURE.

TITUS VESPASIANUS, the Roman emperor, the son of Vespasian ; of whom it is related that, not being able to recollect any remarkable good ac- tion he had done on a certain day, he exclaimed, ' I have lost a day.'

Though Rome labored un- der various public calamities during his reign, such was his equitable and mild administration that he constantly preserved his popularity. He was a great lover of learning, and composed se- veral poems. He reigned but two years, and it is thought Domitian his Brother poisoned him, A. D. 81, aged forty-one. See ROME. TITYRUS, a large mountain of Crete.

TITYUS, in the mythology, a famous giant, the son of Jupiter by Elara, the daughter of Or- chomenos, who died in travail of him, from his vast size. Tityus attempted to ravish Latona, but she called to her aid her children, Apollo and Diana, who with their arrows killed the monster. His corpse covered nine acres ; and in Tartarus he was condemned to have his liver continually gnawed by serpents and vultures. — Apollod. Horn. &.c.

TIVERTON, a neat incorporated borough town of England, in Devonshire, with a consi- derable market on Tuesday, and a lesser one on Saturday. It is most agreeably situated between the conflux of two rivers, the Exe and the Low- man. Over the former it has an elegant stone bridge, and on the opposite side of the town ter- minates the grand Western Canal. St. Peter's church, first built in 1073, is a fine edifice, ad- joining which is the castle, the ancient seat of the earls of Devon. The new church is a much later building, besides which it has several other places of worship, and three well endowed alms- houses. In the centre of the town is a spacious market-place. It has a noble grammar school, founded in 1604, by Peter Blundell, and a most extensive lace manufactory. The town has been nearly destroved by fire at different times ; it has about 10,000 inhabitants, and lies fourteen miles N.N.E. of Exeter, and 176 west by south of London, and sends two members to parliament.

T1VOKEA, a low and sandy island of the South Pacific, of an elliptic form, eighteen miles in its longest diameter. There is a lagoon in the centre, which is entered from the south-west end of the island. Trees and shrubs are numerous, but the soil is extremely scanty, consisting of a very thin covering of mould, over a low coral foundation. The inhabitants are stout made, of a dark brown, and puncture or tattoo themselves with the figures of fishes. Their language ap- proaches the Otaheitan dialect, but is more gut- tural. Their arms are clubs and spears. Long. 144° 56′ W., lat. 14° 28′

S.

TIVOLJ (the ancient Tibur), a large town of Central Italy, about eighteen miles east by north of Rome. It is situated on an eminence shel- tered on one side by Monte Castali and a circu- lar range of the Sabine mountains, while on the other it commandc an extensive and delightful prospect over the Campagna di Roma. The sides of the hill are covered with olives and fruit trees ; but its great attraction consists, as in for- mer ages, in the falls of the Teverone (the ancient Anio), which glides gently through the town, till it reaches the brink of a rock over which it pre- cipitates itself nearly 100 feet in one mass, and then rushes through a chasm of the rock into a cavern. On the summit stands a beautiful tem- ple of the Corinthian order, supposed to have been dedicated to Vesta in the Augustan age. Its form is circular, and its proportions very ac- curate ; but, of its eighteen colums, there remaiu only ten, with their entablatures. Near it are the remains of another temple, consisting now of only four pillars, and forming part of the wall of a modern church. At Tivoli are also the re- mains of several Roman villas, in particular of ih- Vil a Adriana, remarkable for its extent and

magnificence. The town has a population of nearly 14,000, and contains a cathedra? and several churches. The neighbourhood affords quarries of excellent stone. Not far distant is the remarkable little lake of Solfatara.

TIV'V, adj. A word expressing speed, from tantivy, the note of a hunting-horn.

la a bright moon-shine while winds whistle loud Tivy, fin/, tiry, we mount and we fly, All rocking in a downy white cloud : And lest our leap from the sky should prove too far, \Ve slide on the back of a new-falling star.

Dryden.

TLATELOLCO, an ancient kingdom of Mexi- co, which was conquered, and annexed to the Mexican empire, by Montezuma I.

TLAXCALLA, or TLASCALLA, a government of Mexico, in the intendancy of Puebla de los Angeles. It is about 354 miles in length, and from forty to fifty broad, containing upwards of 50,000 inhabitants. The capital, of the same name, stands on the bank of a small river which runs into the Pacific Ocean, and, though it was once an immense place, does not now contain more than 3400 inhabitants.

TLEMSAN, or TREMECEN, the most westerly of the three provinces into which Algiers is di- vided. On the north it has the Mediterranean, on the east the province of Titterie, on the west the river Mulluvia separating it from Fez, while on the south a continuation of the chain of Atlas divides it

from the Bled el Jereede. Besides the capital it contains the important sea-port of Oran.

TLEMSAN, or TREMECEX, a city of Algiers, capital of the above province, was once an im- portant place, and the metropolis of a kingdom ; but in 1670, on occasion of a revolt of the in- habitants, Hassan, then dey of Algiers, laid it in ruins ; so that there does not now remain above one-sixth part of the old city: when entire, it might have been four miles in circuit. It is placed on a rising ground, below some rocky precipices, whence issue a number of springs, and it contains several Roman remains. It is twenty-two miles W. S. W. of Algiers, and fifty S. S. W. of Oran.

TLEPOLEMUS, the son of Hercules, by As- tyochia, bom at Argos. Having accidentally killed Licymnius, he fled from Argos to Rhodes, where, by order of the oracle, he was chosen king of the island. He afterwards went to the Trojan war with nine ships ; but was killed by Sarpedon. Games were instituted at Rhodes in honor of him.

TMARUS, a mountain of Epirus, in Thes- protia. — Strab. Plin.

TMESIS, in Latin grammar, a figure, whereby a compound word is divided, and one or more words thrown in between the first and last parts of it : as, Septem subjecta trioni gens (Virg.), for septentrioni. Qux meo cunque animo, &c. (Cic.), for Quaecunque.

TMOLUS, a king of Lydia, the first husband of queen Omphale, the son of Sipylus, and Chthonia, after whom a mountain of Lydia was so named.

TO, adv. & prep Sax. to : Belg. toe, te : Goth. ta ; Arab, and her. ia A carticle noting a*

second verb as the object of a first ; noting there- fore intention ; consequence ; futurity ; motion : as a preposition it is opposed lofrom, and has often the sense of at, with towards, unto, as far as ; before day it denotes the present day ; be- fore night, the present or next coming night ; be- fore morrow, the next coming morrow ; to and fro — to and again — mean, backwards and for- wards ; the other modifications will appear suffi- ciently from the extracts.

Twenty to one offend more in writing too much than too little ; even as

twenty to one fall into sick- ness rather by overmuch fulness than by any lack.

Ascham.

With that she to him afresh, and surely would have put out his eyes. Sidney.

Enoch, whose days were, though many in respect of ours, yet scarce as three to nine, in comparison of theirs with whom he lived. Hooker.

The lawless sword his children's blood shall shed, Increased for slaughter, born to beg their bread.

Sandys.

We ready are to try our fortunes To the last man. Shakspeare.

Tybalt fled ;

But by and by comes back to Romeo, And to 't they go like lightning. Id.

To you, my noble lord of Westmoreland, 1 pledge your grace. Id.

Take you some company, and away to horse, fd.

I trust, I may not trust thee ; for thy word Is but the vain breath of a common man : Believe me, I do not believe thee, man ; I have a king's oath to the contrary. Id.

Banquo, thy soul's flight, If it find heaven, must find it out to night. fd.

To morrow, and to morrow, and fo morrow, Creeps in this petty pace from day to day ; And all our yesterdays have lighted fools The way to dusky death. Id,

Factions carried too high are much to the preju- dice of the authority of princes. Bacon.

With a funnel filling bottles ; to their capacity they will all be full. Ben Jvnson.

Dismay bindeth and looseth souls condemned to

woe; And sends the devils on errands to and fro.

Fairfar.

From the beginning to the end all is due to super- natural grace. Hammond.

The rabbins subtilely distinguish between our duty to God, and to our parents. Holyday.

To day is ours, why do we fear ? To day is ours, we have it here ; Let's banish bus'ness, banish sorrow, To the gods belongs to morrow. Cowley.

Wisdom he has, and to his wisdom courage ; Temper to that, and unto all success. Denham.

By the disorder in the retreat, great numbers were rrowded to death. Clarendon.

The spirits perverse With easy intercourse pass to and fro, To tempt or punish mortals. Milton.

Thus they with sacred thought Moved on in silence to soft pipes. Id.

To day they chased the boar. Otway.

Ingenious to their ruin, every age Improves the act and instruments of rage. Waller.

This weather-glass was so placed in the cavity of a small receiver, that only the slender part of the pipe, fo the height of four inches, remained exposed :» ihe open air. Boyle.

There is no fool to the sinner, who every moment cultures his soul. Tilhtson.

This lawfulness of judicial process appears from these legal courts erected to minister to it in the apostle's days. Kettleuortlt.

To prevent the aspersion of the Roman majesty, the offender was whipt fo death. Dryden.

Urged by despair, again I go to try The fate of arms, resolved in fight to die. Id.

Now, to you, Raymond : can you guess no reason Why I repose such confidence in you? Id.

To morrow will deliver all her charms Into my arms, and make her mine for ever. Id.

Some Americans, otherwise of quick parts, could not count to one

thousand, nor had any distinct idea of it, though they could reckon very well to twenty.

Locke.

Had the methods of education been directed to their right end, this so necessary could not have been neglected. Id.

I'll to the woods, among the happier brutes : Come, let 's away. Smith.

The winds in distant regions blow, Moving the world of waters to and fro. Addison.

When an ambassador is dispatched to any foreign state, he shall be allowed to the value of a shilling a day. Id.

A British king obliges himself by oath to execute justice in mercy, and not to exercise either to the total exclusion of the other. Id.

The effects of such a division are pernicious fo the last degree, not only with regard to those advantages which they give the common enemy, but to those private evils which they produce in every particular.

Spectator.

For what to morrow shall disclose, May spoil what you to night propose : England may change, or Cloe stray ; Love and life are for to day. Prior.

Masses of marble, originally beat off from the strata of the neighbouring rocks, rolled to and again till they were rounded to the form of pebbles.

Woodward.

This ought rather to be called a full purpose of committing sin to day, than a resolution of leaving it to morrow. Calamy.

Coffee exhales in roasting to the abatement of near one fourth of its weight. Arbuthnot.

Dress it not till the seventh day, and then move the joint fo and fro. Witanan.

Still a greater difficulty upon translators rises from the peculiarities every language hath fo itself.

Felton.

It is not blood and bones that can be conscious of their own hardness and redness ; and we are still to seek for something else in our frame that receives those impressions. Bentlty.

I have done my utmost to lead my life so plea- santly as to forget all misfortunes. Pofie.

Supposing them to have an equal share, the odds will be three fo one on their side. Swift.

It must be confessed, to the reproach of human na- I ture, that this is but too just a picture of itself.

Broome.

The mind, when turned adrift, no rules to guide, Drives at the mercy of the wind and tide ; Fancy and passion toss it fo and fro, A while torment, and then quite sink in woe.

Young.

TOAD, n. s. ~\ Sax. tafce. A well-known TOAD'STONE, > animal, accounted venomous TOAD'STOOL. j without reason : loadstone is a

concretion found in the toad's head : toadstool,

a fungus resembling the mushroom.

The grisly todettwl, grown there mought I see, And loathing paddocks lording on the same.

Spenser.

Sweet are the uses of adversity, Which, like the load, ugly and venomous, Bears yet a precious jewel in its head. Shakspeare.

In the great plague there were seen, in divers ditches about London, many toads that had tails three inches long, whereas toads usually have no tails. Bacon.

Another imperfect plant, like a mushroom, but sometimes as broad as a

hat, called toadstool, is not esculent. Id.

The toadstone, presumed to be found in the head of that animal, is not a thing impossible. Browne.

In hollow caverns vermin make abode, The hissing serpent, and the swelling load. Dryden.

TOAD, in zoology. See RAN A. TOAD-FISH. See LOPHIL-S. TOAD-FLAX, in botany. See ANTIRRHINUM. TOAD-STONE, in the old mineraloey, a genus of argillaceous earths, examined by Dr. Wither- ing. He describes it as of a dark brownish gray color; its texture granular; neither effervescing with acids, nor striking fire with steel. The cavities of it are filled with crystallised spar, and in a strong heat it is fusible per se; 100 parts of it contain from 56 to 63-5 of siliceous earth, nearly 15 of argillaceous earth, 7‘5 of calcareous earth, and 16 of oxidated iron. Dr. Kirwan observes that the toad-stone is not much differ- ent from basaltes, only that it is softer ; it con- tains also a smaller proportion of iron, and a larger one of siliceous earth.

Whitehurst, in his Theory of the Earth, has given a particular account of the Derbyshire toad-stone ; and has stated the number of beds, and the thickness of each, with that of the moun- tain lime-stone, with which it alternates, as under : —

First lime-stone . 50 yards. First toad-stone . 16 Second lime-stone . 50 Second toad-stone . 46 Third lime-stone . 60 Third toad-stone . 22 Fourth lime-stone . not cut through. It appears, however, that the thickness and extent of the toad-stone beds are by no means so regular as those of the other strata, in the same district.

In some situations, one or more of the beds will become very thin, or be entirely wanting; in other situations, a single bed will be found 01 vast thickness : and masses of this substance, which cannot be referred to any of the three beds, will be found interposed in the lime-stone strata. In some instances, particularly near Ashover, nodules of lime-stone may be seen im- bedded in toad-stone. Farey’s Derbyshire Report, vol. i. p. 276. The most remarkable phenome- non which the beds of toad-stone present in Derbyshire, is the complete separation of the metallic veins which they occasion.

TOAST, r. a. Sin. t) Lat. torreo, tnstum. TOASTER, n. i. S To dry or heat at the

fire; to name when a health is drunk, which .Mr. Thomson derives from Sax. toarrer, to conse- crate : uny tiling so dried ; a person so named : a

toaster, he who toasts.

You are both as -ncumatick as two drieti toasts ; you cannot one bear with another's infirmities.

Sliakspeare.

Every third day take a small toatt of manchet, dipped in oil of sweet almonds new drawn, and sprinkled with loaf sugar. Bacon.

The earth whereof the grass is soon parched with the sun, and toasted, is commonly forced earth. Id.

To allure mice I find no other magick than to draw out a piece of toasted cheese. Browne.

I shall likewise mark out every toast, the club in which she was elected, and the number of votes that were on her side. Addison.

Several popish gentlemen toasted many loyal healths. id.

We'll try the empire you so long have boasted : And, if we are not praised, we'll not be toasted.

Prior.

We simple toasters take delight To see our women's teeth look white ; And every saucy ill-bred fellow Sneers at a mouth profoundly yellow. Id.

Say, why are beauties praised, and honoured most, The wise man's passion, and the vain man's toast? Why decked with all that land and sea afford, Why angels called, and angel-like adored ? F

Some squire, perhaps, you take delight to rack ; Whose game is whisk, whose treat a toast in sack.

Id.

TOB, a small district in the south-east of Sy- ria, to which Jephthah retired, when expelled from his native country by his brethren. Jud. xi. 3, 5.

TOBAC'CO, n. s. From Tobaco or Tobago, in America. — Johnson. Rather from tabaca, the American name of the tube used in smoking. A plant. See below.

It is a planet now I see ;

And, if I err not, by his proper

Figure, that's like a to6acco-stopper. Hudibras.

Bread or tobacco may be neglected ; but reason at first recommends their trial, and custom makes them pleasant. Locke.

Salts are to be drained out of the clay by \vau r, before it be fit for the making fofaeco-pipes or bricks.

Woodward

The flower of the tobacco consists of one leaf, is funnel-shaped, and divided at the top into five deep segments, which expand like a star ; the ovary be- comes an oblong roundish membraneous fruit, which is divided into two cells by an intermediate partition, and is filled with small roundish seeds. Miller.

TOBACCO, in botany. See NICOTIANA.

TOBACCO. The following directions are given by Dr. Barham for raising, and cultivating, and curing, tobacco in Jamaica: — Let the ground or woodland for planting tobacco be well burned, as the greater the quantity of wood-ashes the bet- ter. The spot must be well strewed with ashes, laid smooth and light ; then blow the seed from the palm of the hand gently on the bed, and cover it with palm or plantain leaves. When the plants are about four inches high, draw them and plant them out about three feet asunder ; and, when they become as high as one's knee, cut or pluck off the top ; and, if there are more than twelve leaves on the plant, take off the overplus, and leave the rest entire. The plant should now be daily attended to, to destroy the caterpillars that infest it ; as also to take off every sprout or sucker that puts out at the ioints. in order to throw the whole vegetable nourishment into the

large leaves. When the edges and points of the leaves begin to turn yellow, cut down the stalks about 10 A. M. on a fine day, and see that the dew is fully off the plant, and do not continue this work after 2 P. M. As fast as it is cut, let it be carried into the tobacco-house, which must be so close as to shut out all air (on this much depends), and hung up on lines tied across for the purpose of drying. When the stalks begin to turn brownish, take them off the lines, and put them in a large binn, and lay on them heavy weights for twelve days ; then take them out, and strip off the leaves, and

put them again into the binn, and let them be well pressed, and so as no air gains admission for a month. Take them out; tie them in bundles about sixty leaves in each, which are called monocoes, and are ready for sale. But let them always be kept close till they are to be disposed of. Let the curing house be well built, and very close and warm : if a boarded building, it will not be amiss, in a wet situation, to cover the whole out- side with thatch and plantain trash, to keep off the damps ; for this will preserve the fine volatile oil in the leaves. No smoke is to be made use of- or admitted into the curing-house.

Since the introduction of tobacco into Europe, 1560, various medical properties have been as- cribed to it by Stahl and other German physi- cians ; but the manner in which of late years it lias been spoken of, by the generality of writers on materia medica, has occasioned it to be al- most wholly dismissed from modern practice, at least from internal use : but Dr. Fowler made a series of experiments, whence he infers that to- bacco, under proper regulations, may be admin- istered internally, not only as a safe but as an efficacious remedy, especially as a diuretic in cases of dropsy and dysury. He speaks also of the use of tobacco in injections ; an ounce of the infusion in a pint of water-gruel at a time, and repeated in cases of obstinate constipation, as the case may require. In the dry belly- ach, in the West Indies, injections of the smoke of tobacco have long been employed with the hap- piest effects. After all, the internal use of to- bacco should be very limited, and can only be safe in the hands of a skilful and attentive prac- titioner.

Tobacco is sometimes used externally in un- guents for destroying cutaneous insects, cleans- ing old ulcers, &c. Beaten into a mash, with vinegar or brandy, it has sometimes proved ser- viceable for removing hard tumors of the hypo- chondres : an account is given in the' Edinburgh Essays of two cases of this kind cured by it. The most common uses of this plant, however, are either as a sternutatory when taken by way of snuff, as a masticatory by chewing it in the mouth, or as effluvia by smoking it. Before pipes were invented, it was usually smoked in segars, and they are still in use among some of the south- ern nations. The method of preparing these is at once simple and expeditious. A leaf of to- bacco being formed into a small twisted roll, somewhat larger than the stem of a pipe, and about eight inches long, the smoke is conveyed inrough the winding folds which prevent it from expanding, as through a tube ; so that one end

of it bebig lighted, and the other applied to the mouth, it is in this form used without much in- convenience. But, in process of time, pij>is being invented, they were found more commodi- ous vehicles for the smoke, and are now in general use. In the countries of which tobacco is a na- tive, it is considered by the Indians as ihe most valuable offering that can be made to

the beings they worship. They use it in all their civil and religious ceremonies. When once the spiral wreaths of its smoke ascend from the feathered pipe of peace, the compact that has been just made is considered as sacred and inviolable. Tobacco is made up into rolls by the inhabitants of the interior parts of America, by means of u machine called a tobacco-wheel. With this ma- chine they spin the leaves, after they are cured, into a twist of any size they think fit; and, hav- ing folded it into rolls of about twenty pound:, each, they lay it by for use. In this state it will keep for several years, and be continually im- proving, as italways grows milder. The Illinois usually form it into carrots ; which is done by laying a number of leaves, when cured, on each other after the ribs have been taken out, and roll- ing them round with packthread, till they become cemented together. These rolls commonly mea- sure about eighteen or twenty inches in length, and nine round in the middle part. Tobacco forms a very considerable article in commerce.

TOBACCO WORM, in entomology, an insect which often proves destructive to that plant. This animal is of the horned species. In what manner it is produced and propagated is un- known : but it is not discernible till the plants have attained about half their height; and then appears to be nearly as large as a gnat. Soon after this it lengthens into a worm ; and by de- grees increases in magnitude to the bigness of a man's finger. In shape it is regular from its head toils tail, without any diminution at either extremity. It is indented or ribbed round at equal distances, nearly a quarter of an inch from each other ; and having at every one of these di- visions a pair of feet or claws, by which it fastens itself to the plant. Its mouth, like that of the caterpillar, is placed under the fore-part of the head. On the top of the head, between the eyes, grows a horn about half an inch long, and greatly resembling a thorn ; the extreme part of which is of a brown color, a firm texture, and the extre- mity sharp pointed. It is easily crushed ; being only, to appearance, a collection of green juice enclosed in a membraneous covering, without the internal parts of an animated being. The color of its skin is in general green, interspersed with several spots of a yellowish white ; and the whole covered with a short hair scarcely to be discerned. These worms are found the most predominant during the end of July and beginn- ing of August, when the plant must be particu- larly attended to, and every leaf carefully search- ed. As soon as a wound is discovered, and it will be soon perceptible, care must be taken to destroy the worm which will be found near it, and from its unsubstantial texture may easily be crushed ; but the best method is to pull it away by the horn and then crush it.
TOIiACro-PIPE Fisu. See FISTULA

TOB

TOBAGO, one of the Caribe* islands of the West Indies, is twenty-seven leagues distant from Grenada, and seventeen from Trinidad. It is eleven leagues long north-east and south- west, and three leagues broad. Its surface is less irregular than in most of the other islands, and the acclivities less abrupt. The soil is in general light and sandy, but fertile, and sufficiently watered by springs. Nearly in the cen- tre of the island is a hill, whose reddish black color denotes the ancient existence of a volcano. Its vicinity to the continent secures it from the devastation of hurricanes. The climate is also more temperate than that of most of the other islands. The principal place is at Man of War's Bay, on the north-east side of the island ; the best harbour in the West Indies having depth for the largest ships close to the shore.

The population of the island was —

1777. 1788. 1805.

Whites . . 400 1,400 9CO

Free people of color . — 1,050 700

Slaves v . . 8,000 10,539 14,883

8,400

The productions in

1777.

Quintals. Francs. Sugar . 20,000 800,000 Cotton . 8,000 1,200,000 Indigo . . 120 96,000 Coffee, and sun- ˆ dries J Carried off by) foreigners S

12,989 16,483

1788.

Quintals. Franc-. 20,250 754.00J 12,320 2,464,01V,

45 42,000

159 29,000

. — 402,000

2,096,000 3,691,000

The official value of the imports from and ex- ports to the island —

Imports. Exports.

1809 . £226,824 £70,585

1810 . 201,169 70,787 •

Principal exports to England of the island produce —

Sugar. Rum. Cotton.

act galls. Ibi.

1809 . 130,122 525,327 . 48,791

1810 . 124,208 337,433 11,818

Little Tobago Island is a great rock, two miles long and one broad, near the north-east end of Tobago.

TOBIN (John), an English dramatic poet, was a native of Salisbury, born in 1770, and educated for the law by his father, a West India merchant. With this view, after the usual pe- riod spent in preparatory study at Southampton and Bristol, he placed him in a conveyancer's office in the metropolis, where he served his time, and was admitted an attorney of the court of king's bench. His predilection soon induced him, however, to direct his attention towards writing for the stage, when the critics of the green-room rejected all his pieces, with the ex- ception of a farce, really deficient in merit ; nor was t till some time after his decease, which took place aiC'ork, in 1P.04, that accident having brought his piaj of tl;e Honeymoon before the public, the

popularity it acquired induced the managers to bring out another of his pieces, the Curfew. A deli- cate state of health, which had long threatened the most serious consequences, terminated at length in a consumption, which carried him off in 1804, after embarking for the West Indies. He was buried at Cork.

TOBIT, one of the books of the Apocrypha. It is stuffed with superstition. One Tobias, or Tobit, whose story it contains, is supposed to have been the author.

TOBOL, a considerable river of Russia, which rises near the southern extremity of the Oral mountains. The first considerable stream which it

receives is the Oui or Ouk on the left, after which it becomes navigable. It afterwards receives the Iset, the Toura, and the Tauda, and finally joins the Irtysch, near Tobolsk, after a course of nearly 400 miles. The shores are gene- rally flat and liable to inundation.

TOBOLSK, the name of one of the two great governments of Asiatic Russia, forming the western part of that immense territory : the eas- tern being Irkoutsk. On the west the chain of the Orals separates this government from that of European Russia ; on the north it is bounded by a vast extent of the Northern Ocean, broken into many deep bays, and extending from the mouth of the Obi to that of the Olenek; on the south, a frontier, consisting partly of mountains, and partly of desert plains, separates it from Chinese and Independent Tartary ; while on the east a varying line divides it from Irkoutsk. This go- vernment includes the vast tracts watered by the Obi, the Irtysch, and the Yenisei ; and within its bounds is contained most of the cultivated part of Asiatic Russia. See RUSSIA. In respect to mineral wealth, few regions can rival the moun- tains of the western and southern frontier. The Orals, through a great part of their line, produce iron and copper abundantly: and the forges of Ca- tharinenburg are perhaps the most extensive in the old world. In the southern chain are the celebrated forges of Kolivan, now, however, sur- passed by those of Barnaoul, which derive from the neighbouring mountains of Schlangenberg an inexhaustible supply of various minerals, in- cluding a considerable quantity of gold and sil- ver. The widely extended forests and wastes of this region afford also ample opportunities of hunting, and the northern districts are covered with animals, rendered valuable by their furs. The sable has now, however, by the eagerness with which it has been pursued, been almost ex- tirpated.

TOBOLSK, a large city, the capital of the government of the same name, and of Asiatic Russia, is situated on the river Irtysch, close to its junction with the Tobol. When, in 1587, the Russians first took possession of this country they built a mere ostrog, or wooden fort, here, with the view of keeping the natives in subjec- tion; but, in 1643, this being burnt to the ground they erected the present city. It is composed of the High and the Low town, the former built on an elevated ridge, running parallel to the Irtysch, at a little distance, while the latter fills the level space between it and the river. The high town or city, properly so called, contains the residence

«f the governor, the tribunals, public offices, and magazine of foreign merchandise. These, with two churches and a convent, are all the edifices composed of stone ; the rest are of wood. The buildings being white, and the cupolas gilded, cause them, in this situation, to make a very fine appearance. Here was formerly a kremlin, built of stone and flanked with towers ; but it is now gone to ruin : to the south of it is the great market square, enclosed by stone buildings, forming two stories of merchant shops. While this part of Tobolsk, from its height, is exempt from inun- dations, the inhabitants have the inconvenience of not being able to procure water unless by going to the foot of the hill. The low town, on the contrary, is plentifully supplied with water, but seldom a year passes without its being over- flowed. With the exception of a convent it is built entirely of wood. Connected with it is a large suburb inhabited by the Tartars, the ori- ginal inhabitants of the country at the time of the conquest. The largest colony ever transported hither consisted of the Swedish officers made prisoners at the battle of Pultawa, and no cir- cumstance ever tended more to the civilisation of a remote quarter of the world. In their lei- sure they cultivated carefully the arts and stu- dies with which they were conversant; and many of them recommended themselves to the natives by opening schools. Those, indeed, whose for- tunes were limited found many advantages here. Provisions and all the necessaries of life are so excessively cheap that, in Gmelin's time, it was reckoned a man might live comfortably, in the middling rank, for less than two pounds a year; while the neighbouring woods and rivers afford- ed the finest hunting and fishing. The present style, both of tast« and society, is approaching to a level with the rest of Europe ; and Kotzebue had the satisfaction, during his exile, of seeing his own plays acted in the theatre here. Dr. Clarke conceives that the society there is now as good as in any Russian city. The merchants from Europe arrive hfcre in spring with their commodities destined for China ; and at the end of summer the boats appear returning with their cargoes to be transported to Moscow and Peters- burg. The merchants from Tartary and Bucha- ria arrive in the beginning of winter, spend that season at Tobolsk, and return in spring. All the furs collected as tribute from the immense deserts traversed by the wandering tribes are brought to Tobolsk. Large magazines are pro- vided for depositing them. The population is stated at 16,269.

TOCUYO, a town of South America, in the government of the Caraccas, and province of Venezuela, situated near the source of a river of its name. It is built in a valley formed by two mountains. Its division and construction are very regular, the streets on a line, and sufficiently wide. The wheat obtained here is esteemed the best in the province, and furnishes the consumption of many towns of the interior. They estimate the flour which is annually exported from Tocuyo to Barquisimeto, Guanara, St.

Philip, and Ca- raccas, at from 8000 to 10,000 quintals. Here they also fabricate from the wool of their sheep coverlids and other cloths, which they send or

carry as far as Maracaibo and Carthagena. They have also tanneries and taweries, and, like the inhabitants of Carora, work up as many as they can of the raw materials and sell the rest. An- other species of commerce, exceedingly lucrative to the citizens of Tocuyo, is the sale of salt from the salt ponds of Coro. Their activity maintains them in the exclusive vent of this article of the first necessity. Inhabitants 10,200. 270 miles south-west of Caraccas, and sixty north of Truxillo.

TOD, n. s. Germ, totte haar, a lock of hair. — Skinner. A bush ; a thick shrub (obsolete) : a certain weight of wool, twenty-eight pounds.

Within the ivie tod There shrouded was the little god ; I heard a busy bustling. Spenter.

Every eleven wether todi, every tod yields a pound and odd shillings. Shaktpeare.

TODD (Hugh), an English historian and di- vine, born in Cumberland about 1660, and edu- cated at Queen's College, Oxford. He published, 1. The Description of Sweden; 2. The Life of Phocion. He left in MS., 1. Notitia Ecclesise Cathedralis Carliolensis; 2. Notitia Prioratus de Wedderhall, &c.; 3. A History of the Diocese of Carlile, &c. He died after 1708.

TODUS, the tody, in ornithology, a genus belonging to the order of picae. The beak is slender, depressed, broad, and the base beset with bristles. The nostrils are small and oval. The toes are placed three before and one behind ; the middle are greatly connected to the outer. There are fifteen species according to Dr. La- tham. ' Birds of this genus (he says) inhabit the warmer parts of America. They vary consi- derably in their bills as to breadth, but all of them have a certain flatness, or depression, which is peculiar.'

TOE, n. s. Sax. ra ; Belg. toon ; Goth to, tow, a claw. The divided extremities of the feet ; the fingers of the feet.

Come, all you spirits,

And fill me, from the crown to the' toe, topful Of direst cruelty. Shahspeare.

Sport, that wrinkled Care derides, And Laughter, holding both his sides,

Come, and trip it, as you go, On the light fantastick toe. MilUm

Last to enjoy her sense of feeling, A thousand little nerves she sends Quite to our toes, and fingers' ends. Prior.

TOFORE', adv. Sax. toponan. Before. Ob- solete.

It is an epilogue, to make plain Some obscure precedence that hath to/ore been sain

Shakspeare.

So shall they depart the manor with the corn and the bacon tofore him that hath won it. Spectator.

TOGA, "in Roman antiquity, a wide woollen gown or mantle which seems to have been of a semicircular form, without sleeves, differing both in richness and largeness according to the cir- cumstances of the wearer, and used only in pub- lic. It was the distinguishing mark of a Roman ; hence the jus togae, or privilege of a Roman citi- zen ; i. e. the right of wearing a Roman habit, and of taking fire and water through the Roman empire.

TOGATA GALLIA,! name given to Cisalpine

Caul by the Romans, or that part of Gaul which lay in Italy on this side of the Alps as to Rome; because the people wore togae or gowns like the Romans. See GALLIA.

TO'GED, adj. Latin togutta. Gowned; dressed in gowns.

The bookish theorick, Wherein the toged consuls can propose As masterly as he ; mere prattle, without practice, Is all his soldiership. Shaksi>eare.

TOGETH'ER, adv. Sax. rosseSene. In company ; without intermission ; in continuity. We turned o'er many books together. Shakspeare.

That king joined humanity and policy together.

Bacon.

She lodgeth heat and cold, and moist and dry, And life and death, and

peace and war together.

Dairies.

Some tree's broad leaves together sewed, And girded on our loins, may cover round. Milton.

The Portuguese expected his return for almost an age together after the battle. Dryden.

"Take the bad together with the good. Id.

They had a great debate concerning the punish- ment of one of their admirals, which lasted a month together. Add/ion.

The subject is his confederacy with Henry the Kighth, and the wars they made together upon France.

Id.

TOIL, v. «., t-. n., & n. s. \ Saxon tihan ;

TOIL'SOME, adj. \ I Belg. tuylen. To

labor; originally to labor in tillage. See TILL. As a verb active, to labor at ; weary : as a noun substantive labor ; fatigue; any thing laboriously or artfully contrived : toilsome is wearisome ; laborious.

They live to their great, both toil and grief, where the blasphemies of Aiiaus are renewed. Hooker. v He had so placed his horsemen and footmen in the woods, that he shut up the Christians as it were in a toil. Knolles.

This Percy was the man nearest my soul ; Who, like a brother, toiled in my affairs, And laid his love and life under my foot.

Shakspeare.

He, toiled with works of war, retired himself To Italy. Id.

She looks like sleep, As she would catch another Antony In her strong toil of grace. Id.

The law of the fourth commandment was not ngreeable to the state of innocency ; for in that happy state there was no toilsome labour for man or beast. White.

All great spirits

I'e-u great and sudden change with such impatience As a Numidian lion, when first caught, I'.ndures the toil that holds him. Deiiham.

Not to irksome toil, but to delight He made us. Milton.

Toiled out my uncouth passage, forced to ride The untractable abyss. /'/•

This, were it toiUome, yet with thee were sweet.

Id.

Fantastick honour, thou hast framed a toil Thvself. to make thy love thy virtue's spoil.

Dryden.

Others ill-fated are condemned to roil Their tedious life, and mourn their purpose hlnMnl With fruitless act.

Absent or dead, still let a friend be dear. A sigh the absent claims, the dead ;i tc.\i .

Recal those nights that closed 'hv Uil>t>«i< Still hear thy Parnel in his living l,iys>. lie views the main that ever toU below.*

Tlionituti.

The love of praise, howe'er concealed by art, Reigns more or less, and glows in every heart ; The proud to gain it toils and toils endure, The modest shun it, but to make it sure. Youny.

TOI'LET, n. s. Fr. toilette. A dressing- table.

The merchant from the exchange returns in peace, And the long labours of the toilet cease. Pope.

TOKAY WINE. There are four sorts of wine made from the same grapes, distinguished at Tokay by the names of essence, auspruch, mass- lach, and the common wine. The essence is made by picking out the half-dried and shrivelled grapes and putting them into a perforated vessel, where they remain as long as any juice runs off by the mere pressure of their own weight. This is put into small casks. The auspruch is made by pouring the expressed juice of the grapes from which the former had been picked, out on those that yielded the essence, and treading them with the feet. The liquor thus obtained stands for a day or two to ferment, and then is poured into small casks, which are kept in the air for about a month, and afterwards put into casks. The same process is repeated on the addition of

more juice to the grapes which have already un- dergone the two former pressures, and they are now wrung with the hands ; and thus is had the masslach. The fourth kind is made by taking all the grapes together at first and submitting them to the greatest pressure ; this is chiefly prepared by the peasants. The essence is thick, and very sweet and luscious; it is chiefly used to mix with the other kinds. The auspruch is the wine commonly exported, and which in foreign coun- tries is called Tokay. The goodness of it is de- termined by the following rules: — The color should neither be reddish nor very pale, but a light sil- ver; in trying it, the palate and tip of the tongue should be wetted without swallowing it, and if it manifest any acrimony to the tongue it is not good ; but the taste ought to be soft and mild ; when poured out it should form globules in the glass, and have an oily appearance : when genuine the strongest is always of the best quality ; when swallowed it should have an earthy astringent taste in the mouth, which is called the taste of the root. All Tokay wine has an aromatic taste, which distinguishes it from every other species of wine. It keeps to any age, and improves by time, but is never good till about three years old. It is the best way to transport it in casks; for when it is on the seas it ferments three times every season, and thus refines itself. \Vhen in bottles there must be an empty space left be- tween the wine and the cork, otherwise it would burst the bottle. A little oil is put upon the Mirface, and a piece of bladder tied over the cork. The bottles are always laid on their sides in sand. — Philosophical Transactions, vol. Ixiii. part ii. p. 292, \c.

TO'KEN, n. s. & v.a. Sax. tacn ; Goth. tukn. A sign; mark; memorial; proof: to make known.

Shew me a token for good, that they which hate me may see it. Psalms.

What in time proceeds, May token to the future our past deeds. Shakspeare.

Here is a letter from queen Hecuba, A token from her daughter, my fair love. Id.

Pigwiggen gladly would commend Some token to queen Mab to send, Were worthy of her wearing. Drayton.

They have not the least token or shew of the arts and industry of China. tfeiilin.

Wheresoever you see ingratitude, you may as in- fallibly conclude that there is a growing stock of ill- nature in that breast, as you may know that man to have the plague upon whom you see the tokens.

& > ttth.

TO LAND (John) was born near Londonderry in Ireland, 1670, and educated in the Popish re- ligion, but at sixteen years of age he turned Pro- testant. He studied three years at the university of Glasgow; was created M.A. in that of Edin- burgh; and completed his studies at Leyden, where he resided two years. He then went to Oxford, where he published a Dissertation to prove the received history of the tragical death of Attilius Regulus to be a fable. See REGCLIS. He next undertook to show that there are no mysteries in the Christian religion. He pub- lished it in 1696 at London, under the title •of Christianity not Mysterious. This book gave great offence, and was attacked by several wri- ters. He afterwards wrote in favor of the Hano- verian succession, and many other pieces. In 1707 he went into Germany, visited several courts, and, in 1710, was introduced to prince Eugene, who gave him several marks of his ge- nerosity. Upon his return to England he was for some time supported by the liberality of the earl of Oxford, and kept a country-house at Epsom ; but soon losing his lordship's favor he published several pamphlets against that minis- ter's measures. During the four last years of his life lie lived at Putney, but spent most of the winter in London. He died at London in 1722. His private character was not amiable. His posthumous works, 2 vols. 8vo., were published in 1726, with an account of his life and writings, i y M. Des Maizeaux.

TOLE, v. a. Goth. telu. To train; draw by degrees.

Whatever you observe him to be more frighted at than he should, tote him on by insensible degrees, till at last he masters the difficulty. Locke.

TOLEDO, a province in the central part of Spain, in New Castile, situated chiefly to the south of the Tagus. Its area (according to An- tdlon) is 9210 square miles ; its population 371,000. The surface consists partly of moun- tain tracts, partly of elevated and extensive plains, the soil of which, however, is frequently sandy or chalky, so that spring water is scarce, and hardly a tree is met with to enliven the pros- pect or afford a shade. This province is tra- versed by the Sierra de Guadaloupe, Del Rubial de Yevenes, and de Billuer-sca ; from these, and from more distant mountains, flow several rivers, as the Alberche and the Algodar. The Tagus traverses at the northern, and the Guadiana ap- proaches the southern, part of the province. The temperature varies: in the plains the summer is

hot; and this province, protected as it is on the south by lofty mountains, does not altogether escape the solano, or hot African wind. The scarcity of water is a great obstacle to the exten- sion of tillage, and, if the corn produced be equal, or sometimes more than equal, to the con- sumption, it is owing to the thinness of the po- pulation. Br.t.the pasturage is good, and the flocks of sheep are numerous. Vines, silk, honey, wax, fruits, and fine wool, are the products of this province. The manufactures are trifling. The province is divided into five districts.

TOLEDO, an ancient city of New Castile, Spain, the see of an archbishop, is situated on the sides and top of a steep hill, bathed by the Tagus on the north and west sides, in the midst of a nar- row valley surrounded by lofty mountains. The environs are unproductive, and the surrounding hills present a monotonous assemblage of rocks-, while, by concentrating the sun's rays, they ren- der the heat in summer excessive. The houses are crowded, the streets narrow and steep.

The chief attraction in Toledo is its public edifices, some of which have greaU beauty and grandeur. The Alcazar is a large structure on the top of a hill, built with solidity and deco- rated with statues. Its central gate, its vestibule, its court, its subterranean apartments, are all entitled to admiration ; but, being no longer wanted as a princely residence, it has been con- verted into a factory or working establishment for the lower orders. The cathedral is of great antiquity, having been founded, it is said, in the year 630, and having served as a mosque to the Moors. It was rebuilt in 1227, and is a Gothic building, which, from its magnitude, would be magnificent were not its front too low and its interior so much subdivided. The wealth of the archbishop of Toledo was formerly proverbial, his income having been said to exceed £100,000 a-year. There are in Toledo a number of churches, hospitals, monasteries, and convents. The hos- pital of St. Cruz is an elegant building of the fifteenth century; that of St. John, built in the sixteenth, is equally rich and in a better situa- tion. Of Roman monuments there are here the remains of a circus, an aqueduct, and a road. The walls, though ruinous, are of less remote date, being Moorish : the university was sup- pressed in 1807.

Woollens, linen, and silks, are manufactured here ; and the Toledo swords, so noted through- out Spain till excluded a century ago from fashionable dress by French swords, are now made in a large building on the banks of the Tagus. The secret of tempering them is said to be still preserved, and they fetch a very high price. The Gothic kings fixed their residence here in the year 567. In 711 the town was taken by the Moors, and became the abode, first of a viceroy, eventually of an independent prince. It was in the year 1085 that this ancient capital fell into the hands of the Christians, and became anew the residence of their kings. It was be- sieged by the

Moors, without success, in 1109, 1114, and 1127. At a subsequent date it was less fortunate, having been besieged and taken in 1467 and in 1641. Great part of the town was burned on each occasion, which, with the

removal of the government to Madrid, has been the cause of its decline. Toledo was formerly the seat of several meetings of the cortes, and of a number of national church councils. Forty miles S. S. W. of Madrid, and 290 east by north of Lisbon.

TOLENTINO, a town in the state of the church, Italy, situated on a rising ground, watered by the river Chiento. It contains nearly 4000 inhabitants, and is remarkable for a treaty of peace concluded here between Buonaparte and the papal court in February 1797; also for some par- tial actions between the Austrians and Neapolitans in the beginning of May, 1815. Thirty miles S. S. W. of Ancona, and ninety-two N. N. E. of Rome.

TOL'ERABLE, adj. { Fr. tolerable; I.at.

TOL'ERABLY, adv. S tolerabilis. Support- able; that may be endured or supported : the adverb corresponding.

It shall be more tolerable for Sodom in the day of judgment than for that city. Matthew.

Yourselves, who have sought them, ye so excuse, as that ye would have men to think ye judge them not allowable, but tolerable only, and to be borne with, for the furtherance of your purposes, till the corrupt estate of the church may be better formed.

Hooker.

Cold and heat scarce tolerable. Milton.

There is nothing of difficulty in the external per- formance, but what hypocrisy can make tolerable to itself. Tillotson.

The reader may be assured of a tolerable transla- tion. Dry den.

The person to whom this head belonged laughed frequently, and on particular occasions had acquitted himself tolerably at a ball. Spectator.

Sometimes are found in these laxer strata bodies that are still tolerably firm. Woodward.

Princes have it in their power to keep a majority on their side by any tolerable administration, till provoked by continual oppressions. Swift.

TOL'ERATE, v. a.y Lat. tolero; Fr. tolerer. TOLERA'TION, n. $. > To allow so as not to TOI.'ERANCE. 3 hinder ; to suffer ; pass

uncensured : the noun substantives both corres- ponding.

Inasmuch as they did resolve to remove only such things of that kind as the church might best spare, retaining the residue ; their whole counsel is, in this point, utterly condemned, as having either proceeded trorn the blindness of those times, or from negli- gence, or from desire of honour and glory, or from an erroneous opinion that such things might be tole- rated for a while. Hooker.

Diogenes one frosty morning came into the mar- ket-place shaking, to shew his tolerance ; many of the people came about him, pitying him. Plato passing by, and knowing he did it to be seen, said, If you pity him indeed, let him alone to himself. Bacon.

There wants nothing but consideration of our own eternal weal, a tolerance or endurance of being made happy here, and blessed eternally. Hammond.

We shall tolerate flying horses, harpies, and sa- tyrs ; for these are poetical fancies, whose shaded moralities require their substantial falsities.

Browne.

Crying should not be tr-lerated in children.

Locke.

I shall not speak against the indulgence and tole- ~ation granted to these men. South.

We are fully convinced thst we shall always tole- rate them, but not that they will tolerate us. Swift.

Men should not tolerate themselves one minute in any known sin. Decay of Piety.

TOLERATION, in religion, is either civil or ec- clesiastical. Civil toleration is an impunity and safety granted by the state to every sect that does not maintain doctrines inconsistent with the pub- lic peace; and ecclesiastical

toleration is the al- lowance wliich the church grants to its members to differ in c.v:t,nn opinions not reputed funda- mental.

TOLL, n. s. & v. n. Sax. toll ; Belg. tol ; Teut. zol ; Welsh toll, from Goth, tala, to divide out. A portion ; an excise of goods ; a payment for permission to pass; a fee : to pay such a fee or tax ; also to take it.

The meale the more yeeldeth if servant be true, And miller that totteth takes none but his due.

Tusser.

I will buy me a son-in-law in a fair, and toll for him ; for this, I'll none of him. Shakspeare.

Empson and Dudley the people esteemed as his horse leeches, bold men, that took toll of their mas ter's grist. Bacon.

Toll, in law, has two significations : first, a liberty to buy and sell within the precincts of a manor, which seems to import as much as a fair or market ; se- condly, a tribute or custom paid for passage.

Cowell.

Where, when, by whom, and what y' were sold

for, And in the open market tolled for ? Hudibrai.

The same Prusias joined with the Rhodians against the Byzantines, and stopped them from levying the toll upon their trade into the Euxine.

Arbuthnot.

TOLL, v. a. & v. n. Sax. ta plawan ; Goth. ta loa. To ring a bell; sound as a bell.

The first bringer of unwelcome news Hath but a losing office ; and his tongue Sounds ever after as a sullen bell, Remembered tolling a departed friend. Shakspeare.

Toll, toll,

Gentle bell, for the soul Of the pure ones. Denham.

When any one dies, then by tolling or ringing of a bell the same is known to the searchers. Graunt.

Our going to church at the tolling of a bell, only tells us the time when we ought to go to worship^ '^J Stilling/bet.

God.

You love to hear of some prodigious tale, The bell that tolled alone, or Irish whale. Dryden.

With horns and trumpets now to madness swell. Now sink in sorrows with a tolling bell. /'. > / > ?.

TOLL, v. a. Lat. tollo. To take or invite away; annul; vacate.

The adventitious moisture which hangeth loose in a body, tietrayeth and tolleth forth the innate and radical moisture along with it. Bacon.

An appeal from sentence of excommunication docs not suspend it, but then devolves it to a superior judge, and lulls the presumption in favour of a sentence. Ayliffe.

A TOLL is a tax or custom paid for liberty to vend goods in a market or fair, or for keeping toads in proper repair. The first appointment of a toll on highways of which we read took place in 1346. See ROAD.

TOLL'BOOTII, v. a. To imprison in a toll- booth.

To hese what did he give ? why a hen, That they might tollbouth Oxford men.

Bishop Corbet.

TOLLET, an ingenious and learned English lady, born in 1694. She was well skilled in Latin, French, and Italian, as well as in his- tory and mathematics. She wrote several poems, and a dramatic piece entitled Susanna, or Inno- cence Preserved.

TOLLIUS (Alexander), a learned Dutch cri- tic, born at Ingra in the province of Utrecht. He published an elegant edition of Appian.

TOLLIUS (Cornelius), brother of the preceding, was also a learned critic, and became secretary to Isaac Vossius, and afterwards professor of Greek

and rhetoric at Harderwyck. He pub- lished an edition of Palaephatus, and a work en- titled De Infelicitate Literatorum.

TOLLIUS (James), M. D., brother to Cornelius and Alexander, was born at Ingra in Utrecht, and studied ph}sic. He became a physician and professor of rhetoric and Greek at Brandenburg. He published elegant editions of, 1. Ausonius, cum notis variorum, 1671 ; 2. Longinus de Sub- limitate, 1694. He died in 1696.

TOLM1DES, an Athenian general, who was defeated and killed in a battle with the Thebans in Boeotia, A. A. C. 447.— Polysen. 7.

TOLOSA, in ancient geography, a town of Gallia Narbonensis, which became a Roman colony under Augustus. There was in it a rich temple of Minerva which Caepio the Roman consul plundered, but being ever afterwards un- fortunate, aurum Tolosanum became proverbial. Caes. de B. G. It is now called Toulouse.

*TOLU, BALSAM or. This substance is soluble in the alkalies, like the rest of the balsams. When dissolved in the smallest possible quantity of lixivium of potash, it completely loses its own odor and assumes a fragrant smell, somewhat resembling that of the clove pink. ' This smell ' Mr. Hatchett observes, ' is not fugitive, for it is still retained by a solution which was prepared in June, and has remained in an open glass during four months.' \ hen digested in sulphuric acid a considerable quantity of pure benzoic acid sub- limes. \ hen the solution of it in this acid is evaporated to dryness, and the residuum treated *«ith alcohol, a portion of artificial tannin is ob- tained : the residual charcoal amounts to 0-54 of the original balsam. Mr. Hatchett found that it dissolved in nitric acid, with nearly the same phenomena as the resins ; but it assumed the smell of bitter almonds, which led him to sus- pect the formation of prussic acid. During the solution in nitric acid a portion of benzoic acid sublimes. By repeated digestions it is convert- ed into artificial tannin. It is totally soluble in alcohol, from which water separates the whole of it, except the benzoic acid.*

TOLUIFERA, the balsam of Tolu tree, a ge- nus of plants belonging to the class of decandria and order of monogynia. There is only one spe- cies, viz. T. balsamum. This tree grows to a considerable height; it sends off numerous large branches, and is covered with rough, thick, gray- ish bark ; the leaves are elliptical or ovate, entire, pointed, alternate, of a light green color, and stand jpon short strong foot-stalks; the flowers

are numerous, and produced in lateral racemi; the calyx is bell-shaped, divided at the brim into five teeth, which are nearly equal, but one is

projected to a greater distance than the others; the petals are inserted into the receptacle, of which four are equal, linear, and a little longer than the calyx; the fifth is much the largest, in- versely heart-shaped, and its unguis is of the length of the calyx ; the ten filaments are very short, and furnished with long antherae ; the ger- men is oblong; there is no style; the stigma is pointed; the fruit is a round berry. The balsam is obtained by making incisions in the bark of the tree, and is collected into spoons, which are made of black wax, from which it is poured into proper vessels. This balsam is of a reddish yel- low color, transparent, in consistence thick and tenacious; by age it grows so hard and brittle that it may be rubbed into a powder between the finger and thumb. Its smell is extremely fragrant, somewhat resembling that of lemons; its taste is warm and sweetish, and on being chewed it adheres to the teeth. Thrown into the fire it immediately liquifies, takes flame, and disperses its agreeable odour. Though it does not dissolve in water, yet if boiled in it for two. or three hours in a covered vessel, the water receives its odoriferous smell ; water also suffers a similar impregnation from the balsam by dis- tillation. With the assistance of mucilage it unites with water so as to form a milky solution. It dissolves entirely in spirit of wine, and easily mixes with distilled oils, but less easily with expressed oils. Distilled without addition it produces not only an empyreumatic oil of a pale dark color, but sometimes a small portion of a saline matter, similar to that of the flowers of benzoin. This balsam possesses the same general virtues with the balsam of Gilead and that of Peru; it is, however, less heating and stimulating, and may therefore be employed with more safety. It has been chiefly used as a pectoral, and is said to be an efficacious corroborant in gleets and seminal weaknesses. It is directed by the Pharmacopoeias in the syrupus tolutanus, tinctura tolutana, and syrupus balsamicus. See PHARMACY, Index.

TOLUTATION, n. s. Lat. toluto. The act of pacing or ambling.

They move per latera, that is. two legs of one side together, which is tolutation or ambling. Browne.

They rode ; but authors having not Determined whether pace or trot, That is to say, whether tolutation, As they do term ‘t, or succussation, We leave it. Iltidibrm.

TOMB, n. s. 8c v. a. 1 Fr. tombe, loml>euii ;

TOMB’LESS, adj. 3 low Lat. tumba. A mo- nument in which the dead are enclosed

Methinks I see thee, now thou art below, As one dead in the bottom of a tomb. Shaks]>ei:e.

Lay these bones in an unworthy urn, Tombleu, with no remembrance over them. Id.

Time is drawn upon tombs an old man bald, winged, with a sithe and an hour-g-dss. Peacham.

Souls of boys were MZM,

And youths that tombed before their yarenS vert.

Xfoc.

*The secret wound with which I bleed Shall lie wrapt up, even >n my he *K ;*

TOM

But QJ my fomi-stone thou shall read My answer to thy dubious verse. Prior.

Poor heart ! she slumbers in her silent tomb : Let her possess in peace that uarrow room.

Dryden.

TOMB includes both the grave or sepulchre wherein a defunct is interred, and the monument erected to preserve his memory. The word is formed from the Greek rtyt/3oc, tumulus, a sepul- chre; or, according to Menage, from the Latin tumba, which signifies the same.

In many nations it has been customary to burn the bodies of the dead ; and to collect the ashes with pious care into an urn, which was depo- sited in a tomb or sepulchre. See BURIAL. Among many nations it has also been the prac- tice to lay the dead body in a tomb without con- suming it, after having wrapped it up decently and sometimes placing it in a coffin. The tombs of the Jews were generally hollow places hewn out of a rock. The Egyptians also buried their dead in caves called catacombs. See CATA- COMB. The pyramids, as some think, were also employed for the same purpose. Sometimes also after embalming their dead they placed them in niches in some magnificent apartment in their houses.

A tomb of the Persians is a circular building, open at top, about fifty-five feet diameter and twenty-five feet in height, filled to within five feet of the top, excepting a well of fifteen feet diameter in the centre. The part so filled is terraced, with a slight declivity toward the well. Two circular grooves three inches deep are raised round the well ; the first at the distance of

four, the second at ten, feet from the well. Grooves of the like depth or height, and four feet distant from each other at the outer part of the outer circle, are carried straight from the wall to the well, communicating with the circular ones, for the purpose of carrying off the water, &c. The tomb is thus divided into three circles of parti- tions; the outer about seven feet by four; the middle six by three; the inner four by two; the cnitsr for the men, the middle for the women, the inner for the children; in which the bodies are n-pectively placed, wrapped loosely in a piece of cloth, and left to be devoured by the vultures, which is very soon done. The friends of the deceased come at the proper time and throw the bones into the well. The entrance is closed by an iron door, four feet square, on the eastern side, as high up as the terrace, to which a road is raised. Upon the wall, above the door, an additional wall is raised to prevent people from looking into the tomb, which the Persees are particularly careful to prevent. A Persian in- scription is on a stone inserted over the door. From the bottom of the wall subterraneous pas- sages lead to receive the bones, &c., and prevent the well from filling.

Of the ancient sepulchres found in Russia and Siberia some are perfect tumuli raised to an enormous height, while others are almost level with the ground. Some of them are encom- |iu»>fd \ith a square wall of large quarry stones placed in an erect position ; others are covered ••iily vith a small heap of stones, or they are tu- muli adorned with stones at top. Some are

mured with brick within and vaulted ov(i ; others are no more than pits or common gra\rs In some the eartli is excavated several fathoms deep; others, and especially those which are topped by a lofty tumulus,"are only dug of a sufficient deptli for covering the carcase. Urns are never met with here ; but sometimes what remained of the bodies after the combustion, and even whole carcasses, are found wrapped up in thin plates of gold.

The Moors hold it an irreverent thing to bury their dead in mosques. The burial grounds of all Mahometans are mostly without the city, and they inter the dead at the hour set apart for prayer. Their tombs are exceedingly simple, and have no pretensions to architectural ele- gance. Among the northern nations it was cus- tomary to bury their dead under heaps of stones called cairns, or under barrows. The inhabit- ants of Tibet, it is said, neither bury nor burn their dead, but expose them on the tops of the mountains.

TOMBAC, sometimes called white copper, is in fact a white alloy of copper with arsenic, commonly brittle, though, if the quantity of ar- senic be small,

it is both ductile and malleable in a certain degree.

TOM'BOY, M. x. Tom, a diminutive ol Tho- mas, and boy. A mean fellow; sometimes a wild coarse girl.

A lady

Fastened to an ernpery, to be partnered \ ith tomboys, hired with that self-exhibition \Vhich your own coflfers yield ! Shakspeare

TOMBUCTOO, a large city of Central Africa, which has for many centuries been theemporiurn of the interior trade of that continent. This circumstance, ever since the rise of discovery and commercial enterprise, has excited in Europe an eager desire to visit and establish an inter- course with it. Although, however, it be reach- ed by native caravans from every extremity of the continent, all attempts made during 300 years by European merchants and travellers have been until very lately completely baffled. Being un- able, therefore, to furnish any connected or fully authenticated description, we have nothing left but to collect into one view the detached notices which have been received.

Leo Africanus, in 1500, is the first who gives a description of this city, which, as a merchant, he had visited twice; and though his account be now antiquated, yet, being the first which has ever been given by an intelligent eye-witness, it is still of some value. Tombuctoo is said to have been founded in the year of the Hegira 610 (1215 A. D.), by a king called Mense Suleiman. Under his successor, named Izchia, Tombuctoo had extended its dominion over all the neighbour- ing states, of which the principal were Ghinea (ir (ienni, Cassina, Guber, Zanfara, and Cano. In his time also it seems to have acquired that commercial prosperity for which it has ever since been distinguished. The city contained many shops of artizans and merchants, and par- ticularly numerous manufacturers of cotton cloth. There were in it many persons of great opulence, particularly foreign merchants, two of whom were reckoned so considerable by their wealth,

ihat the king had given them his daughters in marriage. The surrounding country abounded both in grain and in pasture for cattle, whence a copious supply of milk and butter was afforded ; yet neither garden nor orchard, he says, was cul- tivated round the city. Salt was the article of which the scarcity was most felt, there being none except what was brought from Tegazza, at the. distance of 500 miles, and sold at an enor- mous price.

The king possessed an ample trea- sure, and held a very splendid and well-regulat- ed court. When he went abroad, in state, he was mounted upon camels ; but in war he and his nobles rode always on horseback. Great care was taken to keep his stud in good condi- tion ; and, as all horses of good quality were im- ported from Barbary, the merchants who bought them were obliged to give the king the first choice, and received from him a handsome price. The army consisted of 3000 cavalry, and a nu- merous infantry, many of whom used poisoned arrows. The king honored greatly letters and learned men ; he gave ample salaries to judges, doctors, and priests, and paid such large prices for MSS. brought from Barbary, that these were reckoned among the most profitable articles of trade. The houses of the ordinary inhabitants appear to have been built in a somewhat humble style. They were in the form of bells; the walls composed of stakes or hurdles, and the roofs of interwoven reeds. Stone, however, had been used in the construction of the principal mosque, and of the royal palace, the latter of which was de- signed by an artist from Granada. The city wan extremely exposed to fire ; and Leo, in one of his visits, had seen half of it consumed by a sin- gle conflagration. Water was supplied from numerous wells ; besides which, the waters of the Niger, when they overflowed, were conveyed through the town by sluices. The inhabitants were mild, courteous, and eay; and a great part of the night was often consumed in dancing and singing. The Jews, however, were the object of .1 most rigorous persecution. Such is the de- scription given of Tombuctoo, during the period, probably, of its greatest glory.

It of course attracted the notice of the Portu- guese when they carried their career of discovery along the western coast of Asia. They are even said to have sent embassies to the king ; though it may be doubted, from the geographical posi- tion assigned, whether some other place was not here mistaken for Tombucloo. It is, however, accurately described by Di Barros, as situated three leagues to the north of the Niger, ;ts a creat mart for gold, and resorted to by merchants from Cairo, Tunis, Morocco, Fez, and all the king- doms of northern Africa.

The French now directed their exertions to pe- netrate into the interior of Africa, from the Se- negal, then generally believed to be the same riverwith the Niger. From the native merchants, who came through Bambarra, they learned the existence of the lake Dibbie, under the name of Maberia : of the well watered territory of Ghin- gala (Jinbala of Park) ; and the position of Tombuctoo on the river beyond it. A large ca- ravan of white men, with fire-arms, justly conjec- tured to be the Moors from Barbary, were slated

to arrive annually for the purposes of trade. It was added that large barks with masts had been seen in the river near Tombuctoo. These were erroneously supposed to belong to the Tripoli merchants ; but, from Mr.

Jackson's account, were probably those of a people inhabiting the banks of the Niger, farther to the eastward. But no French mission, either military or explora- tory, ever extended beyond the banks of the Se- negal ; consequently none attained the frontier of Bambarra.

The first British efforts in this direction were made by the Gambia, then supposed to be also a branch of the Niger ; but Jobson and Stihhs could not reach higher than the neighbourhood ofTenda; and their reports went only to dis- courage the idea of penetrating into the interior by this channel. All former achievements, how- ever, were eclipsed by those of Park, who pene- trated (see qur article AFRICA) nearly 1000 miles- beyond all the former limits of French or Eng- lish discovery ; but the pressure of disasters compelled him to stop considerably short of Tombuctoo. He learned that a kingdom of this, name lay beyond that of Masina, which extended along the lake Dibbie, and bordered on the east- ern frontier of Bambarra. The city lay about a day's journey to tho north of the Niger ; while its port, Cabra, was situated at the point of junction between the two branches of that river which is- sue out of the lake Dibbie. The government was stated to be in the hands of the Moors, who were more intolerent there than in any other country. A respectable negro told Mr. Park that, when he first visited Tombuctoo, the landlord with whom he lodged conducted him to his hut, on the floor of which there was a mat and a rope, and thus ad- dressed him : — ' If you ate a Mussulman you are my friend ; sit down : but if you are a kafir, you are my slave, and with this rope I will lead you to market.' The king of Tombuctoo was named Abu Abrahima. It is stated, by Mr. Cahill from Rabat, and by Mr. Jackson from Mogodore, that some years after Park's journey, the king of Bambarra conquered Tombuctoo, and established there a negro govermii^t. The Moors, however, were not only permitted to re- side and carry on their trade, but the infernal police of the city was left in their hands. All religions are tolerated except the Jewish. Tom- buctoo is described by Mr. Jackson as twelve miles in circumference, situated in a plain, en- circled by sandy eminences. It is not surround- ed by walls. The houses are spacious, built in a quadrangular form, but have no upper rooms, and even no windows, being entirely lighted from the doors, which are wide and lofty. The profits on the trade to Tombuctoo were said to be so great, that 5000 dollars, invested in European commodities at Mogodore or Fez, would, in a year or two, produce a return of 20,000.

Tombuctoo appears to Adams to stand on nearly the same extent of ground as Lisbon, though the population is probably much less, as the houses are built in a very scattered manner. The king and all his principal officers were negro, and Tombuctoo appeared to Adams com- pletely a negro city. No Moors were allowed to reside, or even to enter it, unless in small parties.

Instead of an intolerant exclusion of every othf-r re- ligion except the Mahometan, lie saw no mosques, nor any appearance of the rites of that religion being practised. This circumstance, which con- trasts so singularly with Park's account, may, however, be connected with the revolutions which from other quarters we find stated to have taken place in the destinies of Tombucloo. A further explanation may perhaps be found in the statement of Riley, that there was a separate city to which the Moors were confined. Adams does not describe the pomp of Tombuctoo in very lofty terms. The king's palace consists merely of a square space, enclosed by a mud wall, anil containing eight small apartments on the ground floor. The houses of the chief citi- zens were built of wooden cases filled with day and sand, and had only one story. The huts of the poorer class consisted merely of branches of trees bent in a circle, covered with a matting of palmeto and overlaid with earth. The king and queen wore dresses of blue nan- keen, profusely ornamented with gold and ivory. These ornaments were much sought for by the people in general, but were not combined with much cleanliness, since a change of dress once in the week was considered a luxury of the great. The food consisted chiefly of maize, ground into flour, and boiled into a thick mess, over which goat's milk was then poured, forming what is called kouskous. Persons of all ranks sat round and ate it with their fingers, without spoon, knife, or fork, according to the universal practice of Africa.

Adams further describes Tombuctoo as situated immediately upon a river called the Mar Zarah, about three-quarters of a mile wide, and flowing, as he firmly believes, to the south-west. About two miles south of the town it passes between high mountains, where its breadth is contracted to half a mile. This cannot be the Niger itself, but a tributary to it, and the opposite direction in which it flows is probably one source of the contradictory statements as to the course of that great river. Adams, however, whose observations were exceedingly limited, does not appear to have known any thing of the Niger. The Mar Zarah was navigated by canoes composed of fig trees hollowed out. They set out occasionally by ten or twenty at a time for slaves and mer- chandize. The hunting of slaves appears to be reduced to a regular system. About once a month a party of armed men, consisting of 100, and sometimes as many as 500, marched out with this object. They went to the countries in the south and south-west, and, after a few weeks absence, used to bring in considerable numbers. The slaves thus procured, along with gold dust, ivory, gum, cowries, ostrich feathers, and goat skins, are exchanged with the Moors for tobacco, tar, gunpowder, blue nankeens, blankets, earthen jars, and some silks. A more recent account is contained

in the narrative of Riley, an American captain, who in 1815 suffered shipwreck on the coast of the Sahara. His information is entirely derived from Sidi Hamet, an African merchant, by whom he was purchased and brought to Mogodore. According to him Tombuctoo is a large town, six times as populous as Mogodore.

The population is entirely negro, and no Moo. is allowed to enter, unless fifty at a time unarmed from each caravan. He slated, however, what seems to have entirely escaped the notice of Adams, that there was a distinct town, divided from the other by a strong partition wall, which formed the residence of those Mussulmen who were permitted to remain at Tombuctoo. A strong wall, composed of stone mixed with clay, surrounds the city, which is entered by four gates that are shut during the night. The palace is extensive, lofty, and composed of the same materials as the wall. Most of the habitations are built of reeds, though there are also a num- ber of stone houses. A small river runs close to the tosvn ; but at the distance of an hour's, ride of a camel is the great river called Zohbib, evidently the Joliba of Park.

A still later account of Tombuctoo is that collected by captain Lyon during his residence in Fezzan. From the description given to him by the merchants, it did not appear so large a town as had been supposed ; and some repre- sented it as not more extensive than Mourzouk. It is walled, the houses very low, and, with the exception of one or two small streets, built irre- gularly. Many of the habitations are mere huts, composeil of mats. The immense population whicli some hare ascribed to it is accounted for by supposing that they included the Kafilas, who arrived there in great numbers, and, being often obliged to remain during the rainy season, erected temporary huts. Cabra its port \;is described as rather a collection of store houst-< than a town. The Nile, or Goulbi (Joliba there very broad ; and, though in the dry season it may be forded by a camel, after the rams n becomes deep, rapid, and dangerous. The km-: is hereditary, but has little power. The trade consists in gold (brought from Jenne), cotton cloths, leather, and arms manufactured in Tom- buctoo and the neighbouring villages. There exists to the south a nation of Jews, who, from their color and difference in customs from the Moors, have sometimes been supposed to be Christians. Tombuctoo has a language peculiar to itself.

We have now only to add that major Laing, having previously distinguished himself by his researches hn the western coast of AFRICA (se that article), penetrated across the desert from Tripoli to Tombuctoo, where he spent two months ; that he wrote from this place a letter to his relations, and spoke of being busy in search- ing the records of the town. Previously to that he had been attacked and desperately wounded in the desert by the Tuaricks ; shortly after the sheik was commanded by the Foulahs to expel him, and he*

was murdered in the neighbourhood.

It is impossible even now to fix the precise position of Tombuctoo. Our maps usually place it in about long. 1° 20′ E., lat. 17° N.; o'r about 1100 miles in the interior, from the mouth of the Senega..

TOME, n. ». Fr. tome ; Gr. ropoc. One vo- lume of many; a book.

All those venerable books of scripture, all those sacred tumei and volumes of holy wnl. are with sue absolute perfection framed. Hookn .*

TOM EX, in botany, a genus of plants of the class tetrandria and in the order of monogynia, and in the natural method ranking under the forty-third order, durnosae. They have flowers tetrapetalous and complete, having both calyx and corolla.

TOMISA, a country between Cappadocia and mount Taurus. — Strabo.

TOMOS, or TOM is, the capital of Lower Mvesia, seated on the Euxine Sea ; thirty-six miles from the mouth of the Danube. It was tounded by a colony of Milesians, A. A. C. 633, and is famous for having been the place to which Ovid was banished by Augustus.— Strabo 7.

TOMPION, a sort of bung or cork used to stop the mouth of a cannon. At sea this is care- fully encircled with tallow or putty, to prevent the penetration of the water into the bore, where- by the powder contained in the chamber might be damaged or rendered unfit for service.

TOMPION (Thomas), an English watchmaker of extraordinary merit, who flourished at London in the seventeenth century.

TOMSK, a considerable city of Asiatic Rus- sia, and the capital of a large district, is situated on the right bank of the Tom, about twenty-five miles from its junction with the Obi : originally a mere wooden fort. Having been consumed, by a conflagration, it was rebuilt on a larger scale, but most irregular manner, in 1648. The ground itself is broken into heights and hollows ; and in the old part of the town the streets are very narrow and winding. The kremlin, a for- tress of the seventeenth century, is now almost entirely in ruins. Within its circuit, however, are the cathedral church, tribunals, treasury, and the magazines of furs collected as tribute. The

principal edifice in the rest of the city is the church of the resurrection ; there are also two convents, one of monks, and the othei of nuns. The greater part of the inhabitants subsist by commerce, for which the place is very advanta- geously situated. It is the centre of the trade in brandy or whisky, which is brought hither from the distilleries on the Tobol and the Iset, and thence distributed to the countries eastward. Prevalent as intoxication is in Siberia, Pallas never saw a town where it was so general as here. Besides Russians, the place contains a ureat number of TartarrBucharian, and Kalmuck merchants. The population is stated at 1 1,000. The government which it comprehends contains a great part of the countries situated on the Obi, and most of those on the Yenisei. Long. 84° 10′ K., lat. 56° 30′ N.

TOMTIT, n. s. See TITMOUSE. A titmouse ; a small bird.

You would fancy him a giant when you looked upon him, and a tomtit when you shut your eyes.

Spectator.

TON, n.s. Fr. tonne. See TUN. A measure or weight.

Spain was very weak at home, or very slow to move, when they suffered a small fleet of English to fire, sink, and carry away, ten thousand ion of their great shipping. Bacon.

T.-x, in fashionable language, the fashion, the etiquette. It is used both as an adjective and as a noun substantive. VOL. XXII.

TONE, M.S. French ton; Lat. (onus. Note; sound ; accent; tension.

Sounds called tones are ever equal. Bvcon.

In their motions harmony divine So smooths her charming tones, that God’s own ear Listens delighted. Milton.

Made children, with your tones to run for’t, As bad as bloody-bones or Lunsford. lludibrat.

Falamon replies, Eager his tone, and ardent were his eyes. Dryden.

Each has a little soul he calls his own, And each enunciates with a human tone. Ifarte.

Drinking too great quantities of this decoction may weaken the lone of the stomach. Arbuthnot.

TONE, or TUNE, in music, is a property of sound, whereby it comes under the relation of grave and acute ; or the degree of elevation any sound has from the degree of swiftness of the vibrations of the parts of the sonorous body. The variety of tones in human voices arises partly from the dimensions of the windpipe, which, like a flute, the longer and narrower it is the sharper the tone it gives; but principally from the head of the larynx or knot of the throat ; the tone of the voice being more or less grave as the rima or cleft thereof is more or less open.

TONE is taken in four different senses among the ancients : 1. For any sound ; 2. For a cer- tain interval, as when it is said the difference between the diapente and diatessaron is a tone ; 3. For a certain focus or compass of the voice, in which sense they used the Dorian, Phrygian, and Lydian tones ; 4. For tension, as when they speak of an acute, grave, or middle tone.

TONE is particularly used in music for a cer- tain degree or interval of tune, whereby a sound may be either raised or lowered from one ex- treme of a concord to the other, so as still to produce true melody.

TONG, n. s. I Sax. tans ; Belg. tang. The TONGS. $ catch of a buckle. Usually

written tongue; but, as it has the same origin;:! with tongs, it should therefore have the same or- thography.—Johnson. Tongs are the name of a well known instrument to take hold with, part.- cularly of coals for the fire.

Their hilts were burnished gold, and handle

strong, Of mother pearl, and buckled with a golden long.

Spenser.

Another did the dying brands repair With iron tangt, and sprinkled oft the same With liquid waves. '•'•

They turn the glowing mass with crooked long ; The fiery work proceeds. Dryden.*

Get a pair of tongt like a smith's tongi. stronger and toothed. Mm- timer.

TONGATABOO is about sixty miles in cir- cuit ; oblong, though broadest at the cust end, and having its greatest length from east to west It is low but fruitful, except near the beach where coral rocks appear abore the surface. Beneath the mould, which is about fifteen inches deep, is a red loam of four or five inches ; next a very strong blue clay in small quantities ; and in

some places a black earth which emits a very fragrant smell resembling bergamot, but it soon evaporates. The air is pure and wholesome, and the plantations, in the midst of which the

principal houses are placed, very neatly enclosed. At a distance the surface seems entirely clothed with trees of various sizes. Above the rest the tall cocoa-palms always raise their tufted heads ; and are a Tery considerable ornament to the country. The boogu, which is a species of fig, with narrow pointed leaves, is the largest tree of the island. Of cultivated fruits, the principal are plaintains, of which they have fifteen differ- ent sorts or varieties ; bread-fruit, two sorts of the fruit known at Otaheite under the name of jambo and eevee, the latter a kind of plum ; and a vast number of shaddocks in a natural state. The roots are yams, of which there are two sorts ; one black, and so large that it often weighs twenty or thirty pounds ; the other white and long, seldom weighing a pound ; a large root called kappe ; one not unlike our white potatoes, called mawhaha ; the taro, or coccos of other places ; and another named jeejee. There is also found here a new species of Jesuits' bark, likely, it is said, to equal that of Peru. The only quadrupeds, besides hogs, are a few rats, and some dogs which are not natives of the place, but produced from some left by captain Cook in 1 773, and by others from Fejee. The cattle left by captain Cook were all destroyed after he left the island. The horse and the mare having been gored by the bull, gave the natives an idea of his furious temper, and put them in terror. To prevent any accident, therefore, they destroyed him, with the cow and three yrung ones, which they informed the missionaries from the ship Duff, were all they had produced. Fowls of a large breed are domesticated here. Amongst the birds are parrots of an indifferent green on the back and wings, the tail bluish, and the rest of a sooty or chocolate brown ; parro-

The inhabitants go unarmed, but have spears barbed in a dangerous manner, and their clubs veiy curiously carved. Their canoes are vari- ously constructed; those used for the ordinary purposes of ferrying and fishing are small, but dexterously managed ; and their war-boats, which possess much regularity of form, are very large and commodious. One of these was launched during the short period of the Union's stay, and was reported to be capable of carrying 300 men. According to the accounts of the

missionaries, the people possess many excellent qualities. The manners of the lower classes, however, are licentious, and captain Tumbull represents the inhabitants in a very unfavorable light.

This island was discovered on the 27th of January, 1643, by Tasman, a Dutch navigator: the inhabitants came unarmed on board his shios, and exchanged hogs, fowls, and fruits, for Euro- pean articles, which they also pilfered freely; but in other respects they behaved in the most courteous manner. It has since been visited by Cook in 1773; Perouse in 1777; Edwards in 1787; Messrs. D'Entrecasteaux and Huon in 1791; and by the missionary ship Duff. Seve- ral missionaries were at that time left here, but this mission did not succeed ; and in the course of the war which broke out, the missionaries were in danger of their lives. Three of them were murdered at the instigation, according to Mariner who lived on the island, of one Mor- gan, a felon who had escaped from Botany Bay. Long, of the middle of the island, 175° W., lat. 21° 11′ S.

TONG-TCHOUEN, a city of China, of the first rank, in Sechuen. Being on the Tartar frontier, it is strongly fortified, is called a mili- tary city, and the profession of a soldier de- scends from father to son. Besides their pay, they have land assigned them around the city. Long. 103° 2′ E., lat. 26° 20′ N.

TONGUE, n. s., v. a., & ˆ Sax. runj ; Belg. TONG'UED, adj. [v.n.f tonghe ; Goth, and TONGUE'IESS, >Swed. lunga. The

TONGUE'PAD, n. s. i instrument of

TONGUK'TIED, adj. J speech or of lick-

ing ; speech ; fluency ; language ; mere words ; any thing of the shape of the animal tongue : to hold the tongue is to be silent : to tongue, to chide ; scold : and, as a verb neuter, to talk ; prate : tonguepad is a great talker : tonguetied is having an impediment in the speech : the other adjectives explain themselves.

The Lord shall bring a nation against thee, whose tongue thou shall not understand. Deuteronomy.

The Lord shall destroy the tongue of the Egyptian sea. Isaiah.

Let us not love in word, neither in tongue, but in deed and in truth. 1 John.

My conscience hath a thousand several tnngues, And every tongue brings in a several tale, And every tale condemns me for a villain.

Shakspeare.

But that her tender shame Will not proclaim against her maiden loss. How might she tongue me ! Id.*

Tis still a dream ; or else such stuff, as madmen Tongue, and brain not. Id.

That blood, like sacrificing Abel's, cries, Even from the tongutless caverns of the earth, , To me, for justice. Id.

Love ana tonguetied simplicity, In least speak most to my capacity. Id.

He said ; and silence all their tonguts contained.

Chapman .

So brave a knight was Tydeus, of whom a sonne

is sprong,

Inferiour far re in martial! deeds, though higher in his tongue. Id.

Tongued like the night-crow. Donne.

So well he understood the most and best Of tongue that Babel sent into the west ; Spoke them so truly, that he had, you'd swear, Nol ouly lived, but been born every where. Cowley

Who with the tongue of angels can relate ?

WltOll.

With wonderous gifts endued, To speak, all tongues, and do all miracles. Id.

They who have short tongues, or are tongue-tied, are apt to fall short of the appulse of the tongue to the teeth, and oftener place it on the gums, and say t and d instead of th and dk ; as moder for mother.

Holder.

Tongue-va.lia.nt hero, vaunter of thy might, In threats the foremost, but the lag in fight.

Dry Jen.

Parrots, imitating human tongue, And singing.birds in silver cages hung. Id.

Tis seldom seen that senators so young Know when to speak, and when to hold their tongue.

Id.

.Much tongue and much judgment seldom go toge- ther ; for talking and thinking are two quite different faculties. L' Estrange.

Though they have those sounds ready at their tongue's end, yet there are no determined ideas.

Locke.

She who was a celebrated wit at London is, in that dull part of the world, called a tongue-pad.

Tatler.

Whilst I live I must not hold my tor>gne, And languish out old age in his displeasure.

Addison. He spared the blushes of the tongiietied dame.

Tickel.

I should make but a poor pretence to true learning, if I had not clear ideas under the words my tongue could pronounce. Wafts.

An acquaintance with the various tongues is nothing but a relief against the mischiefs which the building of Babel introduced. Id.

TONIC, in medicine, tending to strengthen the part, or to restore its tone and functions.

Toxic, in music, signifies a certain degree of tension, or the sound produced by a vocal string in a given degree of tension, or by any sonorous body when put in vibration.

TONIC, says Rousseau, is likewise the name given by Aristoxenus to one of the three kinds of chromatic music, whose divisions he explains, and which was the ordinary chromatic of the Greeks, proceeding by two semitones in succes- sion, and afterwards a third minor.

TON'ICAL, adj.) Fr. tonique. Gr. rtivta.

TON'IC. J Being extended ; being

elastic.

Station is no rest, but one kind of motion, relating unto that which physicians, from Galen, do name extensive or tonicai. Browne.

TON'NAGE, n.s. From ton. A custom or impost due for merchandise, brought or carried in tons from or to other nations, after a certain rate in every ton.

Tonnage and poundage upon merchandises were collected, refused to be settled by act of parliament.

Clarendon.

TONNAGE AND POUNDAGE, an ancient duty on wine and other goods, the origin of which seems to have been this : — About the twenty-first of Edward III. complaint was made that merchants were robbed and murdered on the seas. The king thereupon, with the consent of the peers, levied a duty of two shillings on every ton of wine, and one shilling in the pound on all goods im- ported ; which was treated as illegal by the com- mons. About twenty-five years after, the kins:, when the knights of shires were returned home,

obtained a like grant from the citizens and bur- gesses, and the year after it was regularly grant- ed in parliament. These duties were diminished sometimes, and sometimes increased ; at length they seem to have been fixed at three shillings tonnage and one shilling poundage. They were at first usually granted only for a stated term of years, as for two years in 5 Richard II. ; but in Henry VI. 's time they were granted him for life by a statute in the thirty-first year of his reign ; and again to Edward IV. for the term of his life also ; since which time they were regularly granted to all his successors for life, sometimes at the first, sometimes at other subsequent parlia- ments, till the reign of Charles I., when these imposts were imprudently and unconstitutionally levied, without consent of parliament, for fifteen years, which was one of the causes of the un- happy discontents. At the Restoration this duty was granted to king Charles II. for life, and so it was to his two immediate successors ; but now, by three several statutes, 9 Anne, c. 6 ; 1 Geo. I. c. 12 ; and 3 Geo. I. c. 7, it is made perpe- tual, and mortgaged for the debt of the public.

TONNERRE, MONT, a large mountain in the west of Germany, on the left bank of the Rhine, ten miles from Worms, and twenty-five from Mentz. It is

nearly 2300 feet above the level of the Rhine, and has, about half way up its side, the village of Donnersfeld. The Frencli gave the name of this mountain to a department which comprehended the greater part of the electorate of Mentz, the Lower Palatinate, the bishoprics of Spires and Worms, with several counties and lordships. Its extent was 2700 square miles ; its population 430,000. At the congress of Vienna, it was divided between Aus- tria and Hesse-Darmstadt.

TONNERRE, a town in the department of the Yonne, France, situated on the Armenfon. It contains manufactures of glass, pottery, and hats ; and has also a traffic in the wine of the vicinity, known by the name of Y'in de Ton- nerre. It is still surrounded with a rampart, and has a population of 4400. Twenty miles east by north of Auxerre.

TONORU, an ancient city of the south of India, province of Mysore. Some parts of the fortification still remain. It is, however, most celebrated for its magnificent reservoir, formed by a lofty mound, between two mountains. Tip po Sultan cut down part of the mound, in order to destroy this monument of antiquity; but it has since been repaired.

TONSBERG, a town of Norway, in the pro- vince of Aggerhuus, situated on a bay of the Baltic, and said to be the most ancient town in the kingdom. It now contains only about 200 wooden houses : but its harbour, though difficult of access, is capable of receiving large vessels. Its trade consists chiefly in the export of timber. In 1536 it was laid in ashes by the Swedes, and has never recovered this disaster. Forty-two miles south of Christiania.

TON'SIL, n.t. Fr. tontiUe; Lat. tansillt. Defined below.

Tonsils or almonds are two round glands placed on the sides of the basis of the tongue, under the com- mon membrane of the fauces, with which they a-e

covered , each of them hath a large oval sinus, which opens into the fauces, and in it there are a great num- ber of lesser ones, which discharge themselves through the great sinus, of a mucous and slippery matter, iufc the fauces, larynx, and oesophagus, for the moisten- ing and lubricating these parts. Quinry.

TONSTALL (Cuthbert), a learned English prelate, born in 1476. He studied at Oxford, Cambridge, and Padua; and was the best ma- thematician of his age. He was made bishop of London in 1522; in 1523 lord privy seal ; and in 1530 bishop of Durham. But in 1559 he was ejected by queen Elizabeth, and died in prison that year. He published some tracts on religion ; and a treatise, De Arte Supputandi, London, 1522, 4to.

TON'SURE, n. s. Fr. tonsure ; Lat. tonsura. The act of clipping the hair ; state of being shorn.

The vestals, after having received the tonsure, suf- fered their hair to come again, being here full grown, and gathered under the veil. Addison.

TONSURE, in ecclesiastical history, a particular manner of shaving or clipping the hair of eccle- siastics or monks. The ancient tonsure was only cutting the hair to a moderate degree, for the sake of decency and gravity ; but the Romans make the candidate kneel before the bishop, who cuts the hair in five different parts of the head, viz. before, behind, on each side, and on the crown.

TONTINE, a loan given for life annuities with benefit of survivorship ; so called from the inventor Laurence Tonti, a Neapolitan. He pro- posed his scheme in 1653 to reconcile the people to cardinal Mazarine's government, by amusing them with the hope of becoming suddenly rich. He obtained the consent of the court, but the parliament would not register the edict. He made attempts afterwards, but without success. It was not till Louis XIV. was distressed by the league of Augsburg, and by his own immense expenses, that he had recourse to the plans of Tonti. By an edict in 1689 he created a Ton- tine royale of 1,400,000 livres annual rent, divided into fourteen classes. The actions were 300 livres a piece, and the proprietors were to receive £10 per cent, with benefit of survivorship in every class. This scheme was executed but very imperfectly. A few years after, another tontine was erected upon nearly the same tenns, but this was never above half full. They both •subsisted in 1726, when the French king united the thirteenth class of the first tontine with the fourteenth of the second ; all the actions of which were possessed by Charlotte Bonnemay, widow of Louis Barbier, a surgeon of Paris, who died at the age of ninety-six. This gentlewoman had ventured 300 livres in each tontine ; and in the last year of her life she had for her annuity 73,500 livres, or about £3600 a year, for about £30. The nature of the tontine is tins : — There is an annuity, after a certain rain of interest, granted to a number of people, divided into classes, according to their respective ages; so that annually the whole fund of each class is divided among the survivors of that class ; till at la>t it falls to one, and, upon the extinction of that lif^, reverts to the power by which the ton-

tine was erected, and which becomes thereby security for the due payment of the annuities.

TOO, adv. Sax. to ; Belg. te. Over and above; overmuch. It is vised to augment the signification of an adjective or adverb; some- times doubled ; likewise ; also.

See what a scourge is laid upon your hate ; And I, for winking at your discords too, Have lost a brace of kinsmen.

Shakupeare. Romeo and Juiitt.

Oh, that this coo too solid flesh would melt !

Shakspeart.

Sometimes it would be full, and then, Oh ! too too soon decrease again ; Eclipsed sometimes, that 'twould so fall, There would appear no hope at all. Suckling.

Your father 's rough and stern, His will too strong to bend, ton proud to learn.

Coicley.

Let on my cup no wars be found, Let those incite to quarrels too, Which wine itself enough can do. Oldham.

It is too much to build a doctrine of so mighty consequence upon so obscure a place of scripture.

Locke.

Groundless prejudices and weaknesses of con- science, instead of tenderness, mislead too many others, too many, otherwise good men.

Sprat's Sermon.*

The arriving to such a disposition of mind as shall make a man take pleasure in other men's sins is evident from the text, and from experience too. South.

Let those eyes that view The daring crime behold the vengeance too. Pope.

These ridiculous stories abide with us too long, and too far influence the weaker part of mankind. Watts.

TOOBOUAI ISLAND, one of the Society islands, in the South Pacific. See SOCIETY ISLANDS.

TOOFOA, one of the Friendly islands, vi- sible from Annamooka, by means of its height, and a volcano, which almost constantly emitted smoke, and sometimes threw up stones. Its shores are steep, and covered with black sand. The rocks are hollow, and in some places of a columnar form. The mountain, except in spots that appear to have been recently burned, is covered with verdure, shrubs, and trees. The coast is about five leagues in circuit. To the north-east of this island, and about two miles distant, is another of much less extent, but of thrice its height, which is called Kao ; it is a mountainous rock of a conical form. Both these were discovered by Tasman, and have been seen by every subsequent navigator of this group.

TOOK, the preterite, and sometimes the par- ticiplt passive of take.

Thy soldiers,

All levied in my name, have in my name Took their discharge. Shakfpeare. King Lear.

Suddenly the thunder-clap Tank us unprepared. Dryden.

He is God in his friendship as well as in his nature, and therefore we sinful creatures arc not took upon advantages, nor consumed in our provocations.

i's Sermoiu.

Leaving Polybus, I took my way To Cyrrha's temple. /'ope's Statin.-.

The riders would leap them over my hand ; and one of the emperor's hunUmen, upon a larˆe courser, tovk my foot, shoe and all.

TOO

14!)

TOO

TOOKE (Andrew), M. A., a learned divine and teacher, born at London in 1673. He was educated at the Charter House, whence he re- moved to Clare Hall, Cambridge. He became master of the Charter House, and professor of geometry at Gresham College. He published Pomey's Pantheon in English, but without ac- knowledging the author. He died in 1731.

TOOKE (George), an English poet, born in 1595. He served as captain of volunteers in the expedition against Cadiz in 1625, and published the

particulars in a poem. He also wrote Can- zonets to the memory of his wife. He died in

1675.

TOOKE (John Home) was educated at the Eton school, and the freedom of his remarks is said to have rendered him obnoxious, even at that early period, to his superiors. He afterwards removed to St. John's College, Cambridge, where he also created himself enemies by similar liberality (perhaps licentiousness) of opinion. At the usual period he appears to have taken orders in the established church ; and, while curate of Brentford, espoused the cause of V. ilkes with great warmth and success. Soon after, he set on foot a subscription for the relief of the widows, orphans, and aged parents of the Americans, whom he described as murdered at Lexington by the king's troops. He was prose- cuted for his advertisement on this subject, found guilty of a libel, and committed to prison. He is said to have been the chief cause of obtaining the regular publication of the speeches in parliament. Mr. Tooke now appears to have sided, in his political views, neither with the opposition nor the ministry. He treated both parties occasionally with almost equal keenness of satire. In the year 1794 he was brought to trial for high treason, and acquitted. He was afterwards returned to parliament by the city of Westminster, when his right to sit was challenged by lord Temple, on account of his being in holy orders. It was not found easy to decide the question. Mr. Tooke was therefore allowed to keep his seat during that parliament, and a declaratory act was passed to prevent the clergy from sitting in the House of Commons in future. He lived for many years at Wimbledon, and died at an advanced age. Sir Francis Burdett was his latest friend and pupil, and is understood to have acted by Mr. Tooke's advice in resisting the warrant of the speaker of the House of Commons to commit him to the tower — a resistance which cost several lives. . Mr. Tooke was a man of fine talents and considerable literature. His diver- sions of Purley h-.ive deservedly raised his fame as a philosophical grammarian ; though it will probably be now generally allowed that he carried his etymological decisions to an extravagant length.

TOOKE (William), F. R. S., a native of Islington, born 1744, was bred a printer; but, having obtained ordination, went out to Russia as chaplain to the English factory at Cronstadt, \hich situation he subsequently exchanged for one of a similar description at St. Petersburgh. He is known as the author of a History of Rus- Ma ; a Life of tlie Empress Catharine II.; A View of the Russian Empire ; a miscellany en-

titled Varieties of Literature, 8vo. 2 vols. ; and as the translator of Lucian (in two quarto vols.) and the sermons of Zollikoffer. His death took place in England in 1820.

TOOL, n.s. Sax. tol, tool. Any instrument of manual operation ; hence a hireling ; a time- server.

In mulberries the sap is towards the bark only, in- to which if you cut a little, it will come forth ; but, if you pierce it deeper with a tool, it will be dcy.

Bacon.

They found in many of their mines more gold than earth ; a metal which the Americans, not re- garding, greedily exchanged for hammers, knives, axes, and the like tools of iron. f/tulun.

Armed with such gard'ning tools as art, yet rude, Guiltless of tire had formed. Hilton's Paradise Lmt.

The ancients had some secret to harden the edgˆs of their tools. Adduon.

He'd choose

To talk with wits in dirty shoes ; And scorn the tools with stars and garters, So often seen caressing Chartres. Swift.

TOORMOOZ, TIRMOZ, or TERMED, a city of independent Tartary, to the north of the Oxus. near its junction with the Hissaur. It is de- scribed as a place of considerable importance, and celebrated in history for the siege laid to it by Genghis Khan, in 1221. After eleven days, that conqueror took and destroyed it ; but it was rebuilt in the following century. Fifty miles north of Bulkh.

TOOT, v. n. Saxon, totan, contracted from ropetan, to know or examine. To pry ; peep ; search narrowly and slily. Obsolete.

I cast to go a shooting, Long wandering up and down the land, With bow and bolts on either hand,

For birds and bushes tooting. Spenser'i Pastorals.

This writer should wear a tooting horn. Howel.

TOOTH.n.s.&tj.a.ˆ Plural teeth. Sax.

TOOTU'ACH, n. s. tofc; Swed. Dan. Belg.

I and Goth, land ; Lat. (ˆ dens, dentis. The small ' bones used in masti- cation : hence taste ;

TOOTH'DRAWER, TOOTH'LESS, adj. TOOTH'PICK, n. s. TOOTH'PICKER, TOOTH'SOME, adj. TOOTH'SOMEXESS.

palate; any prong or j tine; the cog or catch of a wheel : ' to the teeth' is an open opposition : ' to cast in the teeth,' to insult openly : ' in spite of the teeth,' in spite of threats (which show the teeth) : ' tooth and nail' is with the utmost vio- lence : to tooth is to furnish with teeth; indent; lock together : toothsome is palatable ; agreeable to the taste : the other derivatives are of obvious meaning.

The priest's servant came while the flesh was in seething, with a flesh hook of three teeth.

1 Sam. ii. 13.

If toothpicks of the lentisc be wanting, of a quill then make a toothpick. Sandys.

\ wise body's part it were not to put out his fire, because his fond and foolish neighbour, from whom he borrowed wherewith to kindle it, might fast him therewith in the teeth, saying, Were it not for me thou wouldst freeze, and not be abie to heat thyself.

looker.

Avant, you curs! Be thy mouth or black or white, Tooth Ihnt poisons if it hi'.,1.

e. .\ing Ln-,

TOO

Desert deserves with characters of brass A forted residence against the tooth of time, And razure of oblivion. Shakspeare.

It warms the very sickness in my heart, That I shall live and tell him to his teeth, Thus diddest thou. Id. Hamlet.

The guiltiness of my mind drove the grossness of the foppery into a received belief, in despite of the teeth of all rhime and reason, that they were fairies.

Shakspeare.

There never yet was the philosopher That could endure the toathach patiently, However at their ease they talked like gods. Id. He that sleeps feels not the tooth-ach.

Id. Cymbeline. I have the tooth-ach. — What, sigh for the tooth-ach ! Which is but an humour or a worm. Shakspeare.

I will fetch you a toothpicker from the farthest inch of Asia. Id. Much Ado About Nothing.

Some are good to be eaten while young, but nothing toothsome as they grow old. Carew.

Nature with Scots as tooth-drawer hath dealt, Who use to string their teeth upon their belt.*

Cleaveland.

Preserve my woods, whereof, if this course hold, there will hardly be found in some places enough to make a toothpick. Havel's England's Tean.

One was grown desperate with the toothach.

Temple.

These are not dishes for thy dainty tooth ; What, hast thou got an ulcer in thy mouth ? Why stand'st thou picking 1 Druden.

Then saws were toothed, and sounding axes made.

Id.

The way to our horses lies back again by the house, and then we shall meet 'em full in the teeth.

Id.

Deep-dinted wrinkles on her cheek she draws, Sunk are her eyes, and toothless are her jaws. Id.

A lion and bear were at tooth and nail which should carry off a fawn. L' Estrange.

The only way is not to grumble at the lot they must bear in spite of their teeth. Id.

They are fed with flesh minced small, having not only a sharp head and snout, but a narrow and tuiithliKi snout. lt.ni,

In clocks, though the screws and tetlh be never so smooth, yet, if they be not oiled, will hardly move, though you clog them with never so much

weight j but, apply a little oil, they whirl about very swiftly with the tenth part of the force. Id.

The teeth alone among the bones continue to grow in length during a man's whole life, as appears by the unsightly length of one tooth when its opposite happens to be pulled out. /

Lentisc is a beautiful ever-green, and makes the best toothpickers. Mortimer' Husbandry.*

Get a pair of tongs like a smith's tongs, stronger, and toothed at the end. Id.

It is common to tooth in the stretching course two inches with the stretdier only.

Moron's Mechanical Eirrcises. The point hooked down like that of an eagle ; and both the edges toothed, as in the Indian crow.

Grew' Mvueum.*

I made an instrument in fashion of a comb, whose teeth, being in number sixteen, were about an inch and an half broad, and the intervals of the teeth about two inches wide. > "' Optickt.*

When the teeth are to be dislocated, a tooth-drawer is consulted. Wiseman' Surgery.*

When the law shews her teeth, but dare not bile, And South-Sea treasures are not brought to liulii.

"/•

TOP,7i.s.,arf/.,i;.tt.,&t;.a.~) Sax. top; Swed. TOPGAL'LANT,/J. s. Dun. Belg. and

TOPHEAV'Y, adj. Welsh top; Teut.

TOP'KNOT, n. s. topt. The highest

TOP'LESS, adj. part of a thing ;

TOP'MAN, n. s. highest place or

TOP'MOST, adj. ^ rank : hence crowr

TOP’PING, r”of the head ; sur

TOP’PINGLY, adv. face ; and hence,

TOP’PLE, v. n. perhaps, the toy

TOP’PHOUD, adj. so called, from its

TOP’ROUND, resemblance to the

TOI-‘SAIL, 7i. s. fruit of the tir, a

TOPSYTUR’VY, adv. J high tree : as an

adjective, lying on or at the top : to top is to rise aloft ; be eminent or conspicuous ; excel : as a verb active, to tip ; cover or defend on the tip ; rise above ; rise to the uppermost part of; trans- cend ; crop : the topgallant is the highest sail : hence any thing elevated or splendid : topknot, a knot worn on the top of the head : topping and toppingly both mean fine; Tjoble ; gallant: to topple, to fall down ; tumble : topproud, proud in a high degree: topsail, a high sail: topsyturvy, as Skinner thinks, from ‘ top in turf, bottom upwards (Thomson, top-side, and Goth, twervis, as the Swed. say twancis, re- versed) : the other compounds do not seem to require explanation.

These toppinglie ghests be in number but ten, As welcome to dairie as beares among men. Tusser.

All suddenly was turned topsyturvy, the noble lord Eftsoons was blamed, the wretched people pitied, and new counsels plotted. Spenser on Ireland.

Contarenus, meeting with the Turk’s gallies, which would not vail their trails, fiercely assailed them.

Knolles.

If we without his help can make a head To push against the kingdom ; with his help We shall o’erturn it topsyturvy down.

Shakspeare. Henry IV. Though bladed corn be lodged, and trees blown

down ; Though castles topple on their warders’ heads.

Sliaks] > ea.re.

The wisest aunt telling the saddest tale, Sometime for three foot stool mistaketh me ; Then slip I from her quite, down topples six. LI.

This top-prond fellow, By intelligence I do know To be corrupt and treasonous. Id.

Since 1 pluckt geese, played truant, and whipt top, I knew not what it was to be beaten till lately.

Id.

Let 's lake ihe instant by the forward top; For we are old, and on our quickest decrees The' inaudible and noiseless foot of time Steals, ere we can effect them. Id.

Tis a per'lous boy,

Bold, quick, ingenious, forward, capable ; He's all the mother's from the top to toe.

Shakt) > tare.

He wears upon his baby brow the round And top of sovereignty. Id. Macbeth.

Tis wonderful

What may be wrought out of their discontent ; Now that their souls are topful of offence.

Shahspeare.

So far he topped my thought, That I in forgery of shapes and tricks Come short of what he did. /••/.

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TOP

i'lants tliat draw much nourishment from the earth, hurt all things that grow by them, especially such trees as spread their roots near the top of the ground. Itacon's Natural History,

He sent abroad his voice. Which Pallas far off echoed ; who did betwixt them

hoise Shrill tumult to a topless height. Chapman's Iliad.

Wave woundeth wave again, and billow billow

gores, And topsyturvy so fly tumbling to the shores.

Drayton.

A roof should not be too heavy nor too light ; but of the two extremes a house topheavy is the worst. Wotton't Architecture.

One poor roof, made of poles meeting at the top, and covered with the bark of trees. Heylin.

Here Sodom's towers raise their proud tops on

high ; The towers as well as men outbrave the sky.

Cuwley.

If aught obstruct thy course, yet stand not still But wind about till thou hast topped the hill.

Denham.

Thou nor on the top of old Olympus dwell'st.

Milton.

The glorious temple reared Her pile, far off appearing like a mount Of alabaster, topped with golden spires. Id.

Here is a mount, whose tˆppe seems to despise The farre inferiour vale that underlies : Who, like a great man raised aloft by fate, Measures his height by others' mean estate. Browne.

For as whipped tops, and bandied balls, The learned hold, are animals •, So horses they affirm to be Mere engines made by geometry. Hudibras.

To him the fairest nymphs do show Like moving mountains topt with snow. Waller.

Till a considerable part of the air was drawn out of the receiver, the tube continued topful of water as at first. Boyle.

That government which takes in the consent of the greatest number of the people, may justly be said to have the broadest bottom ; and, if it terminate in the authority of one single person, it may be said to have the narrowest top, and so makes the firmest py- ramid. Temple.

As young striplings whip the top for sport, On the smooth pavement of an empty court, The wooden engine flies and whirls about, Admired with clamours of the beardless rout.

Dry den.

But write thy best and fop, and in each line Sir Formal's oratory will be thine. Id.

Topheavy drones, and always looking down, As over-ballasted within the crown, Muttering betwixt their lips some mystick thing.

Id.

A swarm of bees,

Unknown from whence they took their airy flight, Upon the topmost branch in clouds alight.

Id. ALneid.

Strike, strike the topsail ; let the main sheet fly, And furl your sails. Id. Fables.

This arrogance amounts to the pride of an ass in his trappings ; when 'tis but his master's taking away Ins topknot to make an ass of him again.

L'Estrange.

A gourd planted by a large pine, climbing by the boughs twined about them, till it topped and covered the tree. id.

I dare appeal to the consciences of topgallant sparks. /<;.

Take a boy from the top of a grammar school, and

one of the same age bred in his father's family, and bring them into good company together, and then see which of the two will have the more manly car- riage. Locke on Education.

The thoughts of the mind are uninterruptedly em- ployed by the determinations of the will, influenced by that topping uneasiness while it lasts. Locke.

The top stones laid in clay are kept together.

Mortimer.

Top the bank with the bottom of the ditch. Id.

Top your rose trees a little with your knife near a leaf bud. Eielyn's Kalendar.

The pitsaw enters the one end of the stuff, the topman at the top, and the pitman under him, the topman observing to guide the saw exactly in the line. Moxon'i Mechanical Exercises.

The topping fellow I take to be the ancestor of the fine fellow. Tatler.

Zeal being the top and perfection of so many re- ligious affections, the causes of it must be most emi- nent. Sprat.

God told man what was good, but the devil sur- named it evil, and thereby turned the world topsyturvy, and brought a new chaos upon the whole creation.

South.

Men piled on men with active leaps arise, And build the breathing fabrick to the skies ; A sprightly youth, above the topmost row, Points the tall pyramid, and crowns the show.

AdHison.

There are other churches in the town, and two or three palaces, which are of a more modern make, and built with a good fancy; I was shown the little Notre Dame ; that is handsomely designed, and topped with a cupola. Id.

I am, cries the envious, of the same nature with the rest : why then should such a man top me ? Where there is equality of kind, there should be no distinction of privilege. Collier.

Those long ridges of lofty and topping mountains which run east and west, stop the evagation of the vapours to the north and south in hot countries.

Derham't Physico- Theology.

So up the steepy hill with pain The weighty stone is rowled in vain ; Which having touched the top recoils, And leaves the labourer to renew his toils. Granville.

Marine bodies are found upon hills, and at the bottom only such as have fallen down from their tops. Woodrcard.

Still humming on their drowsy course they keep, And lashed so long, like

topi, are lashed asleep.

Pope.

The top of my ambition is to contribute to that work. Id.

As to stiff gales topheavy pines bow low Their heads, and lift them as they cease to blow.

Id.

Man is but a topsyturvy creature ; his head where his heels should be, grovelling on the earth. Sirift.

Fill the largest tankard-cup topful. Id.

One was ingenious in his thoughts, and bright in his language ; but so topful of himself, that he let it spill on all the company. Watt on the Mind.*

The buds made our food are called heads or tops, as cabbage heads. Id.

A top may be used with propriety in a similitude by a Virgil, when the sun may be dishonoured by a Masvius. Broome.

TOP, in ship-building, a sort of platform sur- rounding the lower mast-head, from which it projects on all sides like a scaffold. The prin- cipal intention of the top is to extend the top- mast shrouds, so as to form a greater anˆle with

the mast, and thereby give an additional support to tiie latter. It is sustained by certain timbers fixed across the hounds or shoulders of the mast, and called the trestle-trees and cross-trees. Be- sides the use above-mentioned, the top is other- wise extremely convenient to contain the mate- rials necessary fo/ extending the small sails, and for fixing or repairing the rigging and machinery with more facility and expedition. In ships of war it is used as a kind of redoubt, and is ac- cordingly fortified for attack or defence ; being furnished with swivels, musketry, and other fire- arms, and guarded by a thick fence of corded hammocks. Finally it is employed as a place for looking out, either in the day or night.

TO'PARCH, n. t. Gr. roWc and apXi;. The principal man in a place.

They are not to be conceived potent monarchs, but toparchs, or kings of narrow territories.

Browne's 1'ulgar Errours.

TO'PAZ, n. s. Fr. topcac ; low Lat. topazius. A yellow gem.

Can blazing carbuncles with her compare ? The tophaz sent from scorched Meroe ? Or pearls presented by the Indian sea ?

Sandys' Parageon. The golden stone is the yellow topaz.*

Bacon's Natural History. With light's own smile the yellow topaz burns.

Thomson.

TOPAZ, in mineralogy, a gem called by the ancients chrysolite, as being of a gold color ; but now ranked as only a variety of the sapphire. See MINERALOGY. The finest topazes in the world are found in the East Indies ; but they are very rare there of any great size ; the great Mogul, however, possesses one which is said to weigh 157 carats, and to be worth more than £20,000. The topazes of Peru are next in beauty and in value. The European are princi- pally found in Silesia and Bohemia, and are generally full of cracks and flaws, and of a brownish yellow. Very beautiful stones of this kind are found in Arran and Cairngorm, in Scotland.

According to professor Jameson, this mineral species contains three sub-species, common topaz, schorlite, and physalite.

Common topaz. — Color wine-yellow. In gra- nular concretions, disseminated and crystallised. Its primitive form is an oblique prism of 124° 22'. The following are secondary forms. An oblique four-sided prism, acuminated by four planes ; the same, with the acute lateral edges bevelled ; the same, with a double acumination ; and several other modifications, for which con- sult Jameson's Min. vol. I. p. 75. The lateral planes are longitudinally streaked. Splendent and vitreous. Cleavage perfect and perpendi- cular to the axis of the prism. Fracture, small conchoidal. Transparent. Refracts double. Harder than quartz, or emerald ; but softer than corundum. Easily frangible. Specific gravity 3-4 to 3'6. Saxon topaz in a gentle heat be- comes white, but a strong heat deprives it of lustre and transparency. The Brasilian, on the contrary, by exposure to a high temperature, liurns rose-red, and in a still higher violet-blue. Befoie the blowpipe it is infusible. Tte topaz

of Brasil, Siberia, Muda in Asia-Minor, and Saxony, when heated, exhibit at one extremity positive, and at the other negative, electricity. It also

becomes electrical by friction ; and re- tains its electricity very long. Its constituents are : —

Bras. Top. Sax. T. . Sax. T

. 58-38 57-45 59 . 34-01 34-24 33 7-79 7-75 5

Alumina Silica . . Fluoric acid

100-18

Berzelius.

99-44 99

Klapr. Klapr.

Topaz forms an essential constituent of a par- ticular mountain rock, which is an aggregate of topaz, quartz, and schorl, and is named topaz- rock. Topaz occurs in drusy cavities in granite. It has been also discovered in nests, in transition clay-slate ; and it is found in rolled pieces in al- luvial soil. It occurs in large crystals, and rolled masses, in an alluvial soil, in the granite and gneiss districts of Mar and Cairngorm, in the upper parts of Aberdeenshire ; and in veins, along with tin-stone, in clay-slate at St. Anne's, Cornwall. On the continent it appeal's most abundantly in topaz- rock at Sohneckenstein. — Jameson.

TOPAZ, in geography, an island in the Red Sea, so named, according to Pliny, from roira£w, tc seek, being often surrounded with fog, and difficult to find. It was famous for topazes. See Plin. lib. xxxvii. c. 8.

TOPAZOLITE is a variety of precious garnet found at Mussa in Piedmont.

TOPE,r. n. FT. toper; Teut. topjf, an earthen pot; Belg. tnppen, to be mad. Skinner prefers the latter etymology. To drink hard ; drink to excess.

If you tape in form and treat, Tis the sour sauce to the sweet meat, The fine you pay for being great. Dryden.

TOPE, in ichthyology, a species of squalus.

TOPHA'CEOUS, adj. Lat. tophus. Gritty ; stony.

Acids mixed with them precipitate a tophaceout chalky matter, but not a cheesy substance.

Atterbury.

TOTIIET, n. s. Heb. nSn, a drum. Hell : a scriptural name.

The pleasant valley of Hinnom, Tephtt thence And black Gehenna called, the type of hell.

Milt

Fire and darkness are here mingled with all other ingredients that make that Tophet prepared of old.

linniet.

TOPHUS, in medicine, a chalky or stony concretion in any part of the body, as the blad- der, kidney, &c., but especially the joints.

TOPIC, n. j. } Fr. iopitjuc ; Gr. rowoc.

TOP'ICAL, adj. ' Principle of persuasion ;

TOP'ICALLY," «

Topical or probable arguments, either from conse- quence of scripture, or from human reason, ought not to be admitted or credited against the consentient testimony and authority of the ancient catholick churcl. White.

What then shall be retaiiion ? shall it be more than a topical sin, found indeed under some monar- chical medicines'! Holyday.

Contumacious persons, who are not to be fixed by any principles, whom no topickt can work upon.

IVilhins.

Evidences of fact can be no more than topical and probable. Hales Origin of Mankind.

An argument from authority is but a weaker kind of proof ; it being but a topical probation, and an in- artificial argument, depending on naked asseveration.

Rrowne.

This topically applied becomes a phsnigmus, or rubifying medicine, and is of such fiery parts, that they have of themselves conceived fire and burnt a house. Id. Vu'gar 1'rrours.

I might dilate on the difficulties, the temper of the people, the power, arts, and interest of the con- trary party ; but those are invidious topklis, too green in remembrance. Dryden.

Let them argue over all the tnpicks of divine goodness and human weakness, and whatsoever other pretences sinking sinners catch at to save themselves by, yet how trifling must be their plea !

South's Sermons.

In the cure of strumas, the topicks ought to be discutient. Wiseman's Surgery.

The principal branches of preaching are, to tell the people wnat is their duty, and then convince them that it is so : the topickt for both r.re brought from scripture and reason. Swift.

All arts and sciences have some general subjects, called topicks, or common places ; because middle terms are borrowed, and arguments derived from them for the proof of their various propositions.

Watts's Logick.

TOPICS, in oratory. See ORATORY.

TOPICS, or TOPICAL MEDICINES, are the same with the external ones, or those applied outwardly to some diseased and painful parts ; such are plasters, cataplasms, unguents, &c.

TOPLADY (Augustus Montague), M. A., a late celebrated English divine, born at Farnham, inSurrey,in 1735 ; and educated at Westminster and Dublin. He became vicar of Broadhem- bury, Devonshire; but removed to London for his health, where he died in 1778. He wrote Historic Proof of the Doctrinal Calvinism of the Church of England ; and other works, in 6 vols. 8vo.

TOP-MAST, the second division of a mast, or that part which stands between the upper and lower pieces. See MAST.

TOPOG'RAPHY, n. s. Fr. topographic ; Gr. roTroc and ypaˆw. Description of particular places.

That philosophy gives the exactest topography of the extramundane spaces. Glanville's Scepsis.

The topography of Sulmo in the Latin makes but an awkward figure in the version. Cromwell.

TOPSAILS are certain large sails extended across the top-masts by the topsail-yard above, and by the yard attached to the lower mast be- neath; being fastened to the former by robands, and to the latter by means of two great blocks fixed on its extremities, through which the top- sail sheets are inserted, passing thence to two other blocks fixed on the inner part of the yard close by the mast ; and from these latter the sheets lead downwards to the deck, where they may be slackened or extended at pleasure. See SAIL.

TOPSI1AM, a sea-port and market-town parish of VV'onford hundred, Devon, nearly sur- rounded by the rivers Clyst and Exe, three miles and a half S. S. E. from Exeter, and 1 70 south-west from London. The town consists of several good streets, the houses are well built, and here is a very long and commodious quay. The southern extremity, called the Strand, is the most agreeable, as the river flows within a short distance of the houses, which have a beautiful view. The church stands near the centre of the town. This town is considered as the port of Exeter, as all large vessels here take in and dis- charge their cargoes. It is also the station of the officers of the customs and excise. The road be- tween this town and Exeter is remarkably plea- sant, and is made more so by the many agreeable seats that are scattered near it. High water at full and change, half past six o'clock. Market on Saturday. Fair, St. Margaret's-day.

TOPSHAM, a considerable township of theUnited States, in Lincoln county, Maine, on the north side of the Androscoggin, opposite Brunswick, nineteen miles west of Wiscasset, and 140 north- east of Boston.

TOR, an ancient town of Arabia, near the head of the Red Sea. It was once of great im- portance, and a great part of the merchandise conveyed to Syria and India was landed here. Since Suez became the emporium of the Red Sea, Tor has sunk into insignificance; and only the vessels which are prevented by strong northerly winds from reaching Suez unlade their cargoes at Tor. The harbour is formed by a reef of coral rocks, and to the northward by a low point of land, on which is placed a beacon. The monks of Sinai have a convent here, to which they sometimes retire ; and here is found the best water on the Red Sea, but no other re- freshments can be got nearer than Sinai. The coast is remarkable for the variety of madrepore and other species of coral.

TORBAY, a commodious bay on the coast of Devon, five miles north-east

of Dartmouth, near a village called Brixham. It is formed by two capes, that on the east called Bob's-nose, and that on the west Berry-head ; it is about twelve miles in circumference. This is the general rendezvous of the royal nary against westerly winds. Near this bay is a remarkable place called Kent's Hold, consisting of many large caverns, entered by subterraneous passages, through one of which runs a rivulet of water. High water at full and change, at a quarter past six o'clock. Berry-head flag-staff, lat.50° 44′ N., long. 28° 14′ W.

TORCELLO, a large town of Austrian Italy, in the delegation and Lagunes of Venice, si- tuated on an island of the same name. It has a population of 9000, partly employed in manu- factures ; but the climate is extremely unhealthy. It is the see of a bishop, the cathedral being the only building of consequence. Seven miles north of Venice.

TORCH, n.s. ˆ Fr torche; Ital. torcia ;

TORCH'BEARER, ˆlow Latin intortit'auu. A

TORCH' r.n, I wax light ; flambeau : a tor-

*TORCH'I.K.UT. * cher is one that gives light; and the other derivatives correspond.*

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He did in a genteel manner chastise their negli- gence, with making them, for that night, the tarch- bearert. Sidney.

Basilius knew, by the wasting of the torches, that the night also was far wasted. Id.

Here lies the dusky torch of Mortimer, Choaked with ambition of the meaner sort.

Shakspeare.

Ere the horses of the sun shall bring Their fiery torcher his diurnal ring. Id.

When the Emperor Charles had clasped Germany almost in his fist, he was forced to go from Isburg, and, as if in a mask, by torchlight, to quit every foot he had gotten. Bacon.

If thou like a child didst fear before, Being in the dark, where thou didst nothing see ; Now I have brought thee torchlight, fear no more.

Daiies.

They light the nuptial torch, and bid invoke Hymen. Milton.

Never was known a night of such distraction ; Noise so confused and dreadful ; torches gliding Like meteors by each other in the streets. Dryden.

When men of infamy to grandeur soar, They light a torch to shew their shame the more.

Young.

TORDESILLAS, a well-built town in the north-west of Spain, in the province of Leon, on the right bank of the Douro, over which there is a very fine bridge. Inhabitants 4000. Here is an hospital and several churches, and a royal residence of old date, the retreat of the mother of Che emperor Charles V. Twenty-five miles W.S.W. of Valladolid.

TORDYLIUM, hart-wort, in botany, a genus of plants belonging to the class of pentandria, and order of digynia ; and in the natural system arranged under the forty-fifth order, umbellatae. The corollets are radiated, and all hermaphro- dite ; the fruit is roundish, and crenated on the margin ; the involucra long and undivided. There are seven species, of which two are British ; viz. 1. T. nodosum, or knotted parsley, has simple sessile umbels, the external seeds being rough. It grows in the borders of corn- fields, and in dry stony places. 2. T. officinale, officinal hart-wort, has partial involucra as long as the flowers ; leaflets oval and jagged ; the seeds are large and flat, and their edges notched.

TORELLI (Joseph), was born at Verona in 1721. He received the degree of LL. D. Being in possession of a considerable fortune, he was enabled to devote himself entirely to literature. Though he did not practise as a lawyer, he did not relinquish the study of law. He acquired the Hebrew, Greek, Latin, and Italian languages; also French, Spanish, anrˆ English. In fact his acquirements in every branch of learning and sciences were only equalled by his virtues. He died in 17B1. He was author of twenty different works on various subjects.

TORFJEUS (Thermodus), a native of Iceland, of considerable learning and abilities, born in 1639. He became historiographer to the king of Denmark. He wrote the History of Norway ; containing also the annals of the northern parts of Scotland, from the year 850 to 1205. He died in 1720, aged eighty-one.

TORGAU. a 'town of Prussian Saxony, in the government of Merseburg, on the Elbe, forty-six

miles north-west of Dresden, and sixty-five south by west of Berlin. Its fortifications, formerly limited to the castle of Hastenfels, embrace, since 1810, the town itself, which is now a place of great strength. The inhabitants (about 4500) are manufacturers of woollens, leather, and soap. Here is an hospital, and a church, of which the most remarkable monument is that of Catherine Bora, the wife of Luther. Corn, hops, and to a small extent, vines, are cultivated in the neigh- bourhood. Torgau has been the scene of several sanguinary conflicts, the most remarkable of which was a victory obtained here on the 1 1th of November, 1760, over the Austrians, by Frede- rick II. of Prussia.

TORIES, a political faction in Britain, op- posed to the Whigs. This name was first given to a set of banditti in Ireland, whose summons to surrender was expressed by the Irish word Toree, i. e. Give me. It was thence transferred to the adherents of Charles I. by his enemies, under the pretence that he favored the rebels in Ireland. His partisans, to be even with the re- publicans, gave them the name of Whigs, from a word which signifies whey, in derision of their poor fare. The Tories, or cavaliers, as they were also called, had then principally in view the political interests of the king, the crown, and the church of England ; and the round-heads, or Whigs, proposed chiefly the maintaining of the rights and interests of the people, and of Protestantism. This is the most popular account; and yet it is certain the names Whig and Tory were but little known till about the middle of the reign of Charles II. M. de Cize relates that it was in the year 1678 that the whole nation was first observed to be divided into Whigs and Tories ; and that on occasion of the famous de- position of Titus Gates, who accused the Catho- lics of having conspired against the king and the state, the appellation of Whig was given to such as believed the plot real, and Tory to those who held it fictitious.

*TORINI, an ancient nation of Scythia. TORMENT, v. a. } Fr. ourmentter. To put TOR'MENT, n. *. > lo pain ; harass ; excruci- TORMEST'OR, n. s. J ate ; tease : torment is also any thing that gives pain or misery ; penal anguish : a tormentor, the inflicter of such pain*

Art thou come to torment us before the time ?

Mnttlien , viii.

They brought unto him all sick people that were taken with divers diseases and tormenit, and he healed them. Matthew.

He called to me for succour, desiring me at least to kill him, to deliver him from those tormentxrs.

Sidney.

No prisoners there, enforced by torments, cry ; But fearless by their old tormentors lie.

*Sandy's Parap>»< *e.*

No sleep close up that deadly eye of thine, Unless it be while some tormenting dream Affrights thee with a hell of ugly devils.

Shaktji

I am glad to be constrained to utter what Torments me to conceal. Id. Cymklint.

The more I see

Pleasures about me, so much more I feel Tot men! within n e. Mi ,, ;..

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Evils on me light

At once, by my foreknowledge gaining birth Abortive, to torment me ere their being. Id.

They soaring on main wing Tormented all the air. Id.

Let his tormentor, conscience, find him out. Id.

Iladst thou full power to kill, Or measure out his iormtntt by thy will ; Yet what couldst thou, tormentor, hope to gain ? Thy loss continues unrepaid by pain.

Driidens Jmenul.

Not sharp revenge, nor hell itself, can find A fiercer torment than a guilty mind, Which day and night doth dreadfully accuse, Condemns the wretch and still the charge renews.

Dry den.

The commandments of God being conformable to the dictates of right reason, man's judgment con- demns him. when he violates any of them ; and so the sinner becomes his own tormentor.

Smith's Sermons.

The ancient martyrs passed through such new inventions and varieties of pain as tired their tormen- tort. Addison.

TORMENTIL, n. s. Fr. tormentille; Latin tormentilla. Septfoil. A plant.

The root of turmentil has been used for tanning of leather, and accounted the best astringent in the whole vegetable kingdom. Miller.

Refresh the spirits externally by some epithemata of balm, bugloss, with the powder of the roots of inrmeiitit. Wiieman.

TOUMENTILLA, tormentil, in botany, a genus of plants belonging to the class of icosan- di ia, and order of polygyma ; and in the natural system ranging under the thirty-fifth order, sin- ticosae. The calyx is octofid ; the petals are four ; the seeds round, naked, and affixed to a juiceless receptacle. There are two species, both indigenous, viz. 1. T. erecta, common tormentil, or septfoil, has a stalk somewhat erect, and ses- sile leaves. The roots consist of thick tubercles, an inch or more in diameter, replete with a red juice of an astringent quality. They are used in most of the western isles, and in the Orkneys, for tanning. A decoction of these roots in milk is also frequently administered by the inhabitants of the same islands in diarrhoeas and dysenteries with good success ; but perhaps it would be most proper not to give it in dysenteries till the mor- bid matter be first evacuated. A spirituous ex- tract of the plant stands recommended in the sea-scurvy, to strengthen the gums and fasten the teeth. Linnaeus informs us that the Laplanders paint their leather of a red color with the juice of the roots. 2. T. repens, creeping tormentil, has reddish stalks, slender and creeping. The leaves are sharply serrated, grow on short foot- stalks, and are five lobed. The flowers are numerous and yellow, blossom in July, and are frequent in woods and barren pastures.

TORNA'DO, n. s. Spanish tornado. A hur- ricane; a whirlwind.

Nimble coruscations strike the eye, And bold tornadot bluster in the sky. Garth.

Hark ! He answers ; wild tornadaa Strewing yonder sea with wrecks. Cowper.

TORO, the name of three districts of the north of Spain, at a considerable distance from each other. They are termed respectively the

partidos or divisions of Toro, Carrion, and Rey- nosa ; the first situated on the Douro, near the province of Valladolid ; the second to the north, on the river Carrion ; the third farther to the north, in the mountains of Biscay, between Burgos and Santillanos. Of the rivers, the largest are the Douro, here in the middle of its course ; and the Carrion flowing into it from the moun- tains of Biscay. The Reynosa district is tra- versed by the Ebro, which is there a slender stream. The exports of these districts are wine, uool, and cattle. Their manufactures are strictly domestic.

Touo, a city in the north-west of Spain, in the province of Leon, the chief place of the preced- ing district.

TOROPEZ, a considerable town of European Russia, in the government of Pskov, on the river Oropa, and lake Solomino. It has a cathedral and thirteen parish churches, two monasteries, many tanneries, and a good carrying trade. Po- pulation between 7000 and 8000. Toropez is 156 miles south-east of Pskov, and 245 south of St. Petersburgh.

TOR'POR, n.s. -\ Latin torpor. Dullness;

TOR'PEST, adj. j numbness ; inability to

TOR'PID, Vmove; dullness of sensa-

TOR'PIDNESS, n. s. i tion : the other two noun

TOR'PITUDE. J substantives are also of this meaning : the two adjectives mean, benumbed ; motionless.

"Motion discusses the torpor of solid bodies, which, beside their motion of gravity, have in them a natu- ral appetite not to move at all.

Bacon' t A'at ural History.

Though the object about which it is exercised be poor, little, and low ; yet a man hath this advantage by the exercise of this faculty about it, that it keeps it from rest and torpidnest, it enlargeth and habituates it for a due improvement even about nobler objects. Hate's Origin of Mankind.

Without heat all things would be torpid, and without motion. Ray on the Creation.

A comprehensive expedient to assist the frail and torpent memory through

so multifarious an employ- ment. Evelyn.

Some, in their most perfect state, subsist in a kind of torp:titde or sleeping state. Derham.

The sun awakes the torpid sap.

Thomson's Spring.

TORRE DEL GRECO, a considerable town of Italy, at the foot of Vesuvius. It contains a po- pulation of 16,000, employed for the most part in fishing, navigation, and the culture of the vine. It was destroyed by an eruption of Mount Vesuvius in 1794, and still presents, in its scattered houses, half-buried churches, and streets almost choked up with lava, a striking picture of the ravages of the volcano. The depth of the lava is in some places twenty-five feet. Nine miles E. S. E. of Naples.

TORRE VELHA, a fort of Portugal, at the mouth of the Tagus, on the south side. It serves along with the Torre de Belem, on the opposite side of the Tagus, to protect tbe harbour of Lis- bon, three miles west by south of Lisbon. All along the coast of Spain, from the straits of Gibral- tar to the extremity of Catalonia are a number of small forts called Torre, intended as a defence against the Barbary pirates.

TOR'REFY, v.a. I Fr. torrefier; Latin

TORREFAC'TION, n.i. J torrefacio. To dry by the fire : the noun substantive corresponding.

If it have not a sufficient insolation, it looketh pale ; if it be sunned too long, it suffereth torrtfuc- tion. Browne.

The Africans are more peculiarly scorched and torrefied from the sun by addition of dryness from the toil. Id.

*When torrefied sulphur makes bodies black, why does torrefaction make sulphur itself black *

Boyle on Colours.

Another clister is composed of two heminse of white wine, half a lieminae

of honey, Egyptian nitre torrefied, a quadrant. Arbuthnot.

TORREFACTION, in chemistry and metallurgy, is the roasting or scorching of a body by fire, to discharge a part either unnecessary or hurtful in another operation. Sulphur and most metals are thus discharged from their ores before they are wrought See METALLURGY.

TOK'RENT, n. s. & adj. Fr. torrent; Lat. torrens. A sudden, violent, or rapid stream : rolling in a rapid stream.

The near in blood Forsake me like the torrent of a flood.

, Sandm on Job.

Not far from Caucasus are certain steep-falling inrrenti, which wash down many grains of gold, as in many other parts of the world ; and the people there inhabiting, use to set many fleeces of wool in these descents of waters, in which the grains of gold' remain, and the water passeth through, which Strabo witnesseth to be true. Raleigh.

The memory of those who, out of duty and con- science, opposed that torrent which did overwhelm them, should not lose the recompense due to their virtue. Clarendon.

Fierce Phlegeton, Whose waves of torrent fire inflame with rage.

Milton.

When shrivelled herbs on withering stems decay, The wary ploughman, on the mountain's brow, V'ndams his watery stores, huge torrent! flow, Tempering the thirsty fever of the field.

Dryden't Georgicks.

Will no kind flood, no friendly rain, Disguise the marshal's plain disgrace ;

No torrent swell the low Mohayne ? The world will say he durst not pass. Prior.*

Erasmus, that great injured name, Stemmed the wild torrent of a barb'rous age. Pope.

TORRES VEDBAS, an old town of Portu- guese Estremadura. It has four churches, four convents, an hospital, a castle, and 2300 inhabi- tants. The adjacent country is mountainous, pro- duces good fruit and wine, and has become cele- brated in history from the lines erected in its neighbourhood by lord Wellington in 1810. Twenty-6ve miles N. N. W. of Lisbon.

TORRICELLI (Evangel iste), an illustrious Italian mathematician and philosopher, born at Faenza in 1608. lie studied under father Bene- dict Castelli, professor of mathematics at Rome. Having read Galileo's dialogues, he composed a treatise on motion on his principles, which brought him acquainted with Galileo, who took him home as an assistant ; but Galileo died in three months after. He became professor of mathematics in Florence, and greatly improved the art of making telescopes and microscopes ; but he is best known for finding out a method

of ascertaining the weight of the atmosphere by quicksilver; the barometer being called, from him, the Torricellian tube. He published Opera Geometrica, 4to., 1644; and died in 1647.

TORRICELLIAN. Of or belonging to, or discovered or invented by, Torricelli.

TORRICELLIAN EXPERIMENT, a famous expe- riment made by Torricelli, by which he demon- strated the pressure of the atmosphere in oppo- sition to the doctrines of suction, &c., finding that pressure able to support only a certain length of mercury, or any other fluid in an in- verted glass tube. See BAROMETER.

TORRICELLIAN VACUUM. See PNEUMATICS.

TOR'RID, adj. Fr. torride ; Lat. iorridus. Parched ; dried with heat ; applied particularly to the zone of the earth between the tropics.

Galen's commentators mention a twofold dryness ; the one concomitated with a heat, which they call a torrid tabes ; the other with a coldness when the parts are consumed through extinction of their native heat. H aneii on Consumption.*

This with ton-id heat And vapours as the Libyan air adust, Began to parch that temperate clime.

•i'5 Paradise Lost. Columbus first

Found a temperate in a torrid zone ; The feverish air fanned by a cooling breeze.

Dryden .

Those who amidst the torrid regions live, May they not gales unknown to us receive? See daily showers rejoice the thirsty earth, And bless the flowery buds succeeding birth ? Prior.

The TORRID ZONE, in geography, is that part of our globe of earth which lies between the two temperate zones, or the tropics of Can- cer and Capricorn ; and is so called from the excessive heat of the climate, the inhabitants having the sun vertical to them twice a year; notwithstanding which there are some high mountains in this zone, whose tops are always covered with snow. The torrid zone extends quite round the globe, and comprehends a space of 47° of lat. See GEOGRAPHY.

*TORRINGTON, a populous town of Eng- land, in Devonshire, famous for its manufacture of gloves. It is governed by a mayor and body corporate. It has one church and three dissent- ing places of worship, a market on Saturday, and relics of an ancient castle. It formerly sent two members to parliament. It is seated on the river Torridge, over which it has a fine stone bridge of four arches; ten miles south-west o. Barnstaple, and 194 W. S.W. of London. An ingeniously constructed canal has been lately formed through the munificence of baron lord Rolle, of Stevenstone, near Torrington, for the conveyance of merchandise from Bideford. TOR'SEL, n. *. } Fr. tone. Any thing TOR'TUOUS, adj. >of a twisted form : twist- TORTUOS'ITY', n. s. j ed ; wreathed : hence mis- chievous ; crooked in purpose or plans : the noun substantive following corresponding.*

Ne ought he cared whom he endamaged By tortuous wrong, or whom bereaved of right.

Knots by the conflux of meeting sap Infect the sound pine, and divert his grain Tortive and errant from his course of growth.

Shaktpeaic.

TOR

So varied he, and of his tortumis train (Juried many a wanton wreath. Milton,

These the midwife contriveth unto a knot close unto the body of the infant, from whence ensueth that tortuosity, or complicated nodosity, called the navel. Browne's Vulgar Errours.

Aqueous vapours, like a dry wind, pass through so long and tortuous a pipe of lead. Boyle.

When you lay any timber on brickwork, as torsrls for mantle trees to lie on, or lintels over windows, lay them in loam. Moron's Mechanical Exercises.

TORT, re. s. 3 Fr. tort; low Lat. tor turn.

TOR'TION. $ Mischief; injury ; calamity : tor- ment; pain. Obsolete.

He dreadless bad them come to court, For no wild beasts should do them any tort. Spenser.

All purgers have a raw spirit or wind, which is the principal cause of tortion in the stomach and belly. Bacon.

Your disobedience and ill managing Of actions, lost for want of due support, Refer I justly to a further spring, Spring of sed'ition, strife, oppression, tort. Fairfax.

TORTOISE, n. s. Fr. tortue. An animal covered with a hard shell : an ancient position into which soldiers threw themselves and their shields.

In his needy shop a tortoise hung, An alligator stuft. Shahspeare.

Their targets in a tortoise cast, the foes Secure advancing to the turrets rose.

Dry den's JEneid.

A living tortoise being turned upon its back, not

being able to make use of its paws for the returning

of itself, because they could only bend towards the

belly, it could help itself only by its neck and head.

Ray on the Creation.

TORTOISE, in zoology. See TESTUDO.

TORTOISESHELL, the shell, or rather scales, of the testaceous animal called a tortoise ; used in inlaying, and in various other works, as for snuff-boxes, combs, &c. It is the under shell alone that is used ; to separate it, they make a little fire beneath it, and, as soon as ever it is warm, the under shell becomes easily separable with the point of a knife, and is taken off in laminae or leaves ; of which there are thirteen, eight of them flat, and five a little bent. Of the flat ones there are four large ones, sometimes a foot long, and seven inches broad. The best tortoise-shell is thick, clear, transparent, of the color of antimony, sprinkled with brown and white. When used in marquetry, &c., the workmen give it what color they please by means of colored leaves, which they put under- neath it.

Tortoise-shell and horn become soft in a moderate heat, as that of boiling

water, so as to be pressed in a mould into any form, the shell or horn being previously cut into plates of a proper size. Two plates are likewise united into one by heating and pressing them ; the edges being thoroughly cleaned, and made to fit close to one another. The tortoise-shell is heated by applying a hot iron above and beneath the juncture, with the interposition of a wet cloth to prevent the shell from being scorched. Both tortoise-shells and horns may be stained of a variety of colors by means of the coloring drugs commonly used in dyeing, and by certain metallic solutions.

TORTOSA, a considerable town in the north- east of Spain, in the province of Catalonia, on the left bank of the Ebro. It is the v of a bishop, las a population of 11,000, id is di vided into the Old and New Towns, both surrounded with walls. The adjacent country is pleasant and fertile, and the trade not inconsider- able. The town is of great antiquity, was called Dordosaby the Romans, received municipal pri- vileges from Scipio, and was more than once the scene of conflicts between the Spaniards and the Moors. In 1649 and 1810 this town was taken by the French. Ninety-three miles south-east of Saragossa, and ninety-two west by south of Barcelona.

TORTOSA, a sea-port of Syria, formerly called Orthosia, supposed to be built about the fifth or sixth century. By the historians of the crusades, it is frequently mentioned as a place of great strength, and to this the remains of the ancient walls bear testimony. Nothing now remains of it, except a church, which bears marks of great magnificence. It is 1 30 feet long, ninety-three broad, and sixty-one high. Its walls, arches, and pillars, are of a species of marble, and still so entire that it might at little expense be restored to its former beauty. But when Maundrell visited the place, it was used as a stall for cattle ; and he could not see it without wading up to the knees in mire. Thirty-five miles north of Tripoli. Long. 35° 58′ E., lat. 34° 55′ N.

TORIOSA, CAPE, a promontory of Spain, on the coast of Catalonia. Long. 0° 47′ E., lat. 40° 40′ N.

TORTUE, a river of America, which runs into the Wabash. Long. 87° 55′ W., lat. 39° 30′ N.

TORTUE, LA, a small river of Lower Canada, which falls into the St. Lawrence from the south, about four miles above Montreal. It is not navigable for boats to a greater distance than half a league from its mouth, and that only during the freshes of the spring.

TORTUES, a river of the United States, in Louisiana, which runs into the Missouri. Long. 94° 24′ W., lat. 38° 26′ N.

TORTUGA SALADA, an island of the Car- ribean Sea, about thirty-six miles in circumfe- rence. The east end is full of rugged and broken rocks ; at the south-east is an indifferent good road for shipping, much frequented in peaceable times ; and at the east end is a large salt-pond. Near the west extremity of the island, on the south side, is a small harbour, and some fresh water. The turtles or tortoises come into the sandy bays here to lay their eggs, and hence the island has its name. It is uninhabited, and ninety-five miles E. N. E. of the port of La Guaira.

TORTUGA, an island of the North Atlantic Ocean, about six miles from the north coast of the island of Hispaniola. It is about sixty miles in circumference, and is surrounded by rocks on the north and west sides. It is fertile in to- bacco, palms, sandal wood, resin, China root, aloes, sugar, indigo, cotton, and all sorts of tro- pical fruits, but scarce of water. Long. 72° 44′ W., lat. 20° 4′ N.

*TORTURE, n *. l Fr. torture ; Lat. tor-*

TOU'TIRF.R. \ Iwa. Torments judicially

TOS

inflicted; pain by which confession is extorted, v. >;iiilt is pmmhed : he who inflicts them.

liipparchus, my enfranchised bondman, He may at pleasure whip, or hang, or torture.

Shakspeare.

I play the torturer by small and small, To lengthen out the worst that must be spoken.

Id.

When king Edward the second was amongst his torturers, the more to disgrace his face, they shaved him, and washed him with cold water; the king said, Well, yet I will have warm water ; and so shed abundance of tears. Bacon's Apophthegms.

The bow tortttreth the string continually, and thereby holdeth it in a continual trepidation.

Id. Natural History.

The scourge inexorable and the torturing hour Call us to penance. Milton.

Hecate

Then led me trembling through those dire abodes, And taught the tortures of the' avenging gods.

Dryden .

Still must I cherish the dear, sad remembrance, At once to torture and to please my soul.

Addiitm's Caio.

TORTURE was never permitted among: the Romans except in the examination of slaves. To the disgrace of the professors of Christianity, torture was long practised by those who called themselves Catholics, against those whom they termed heretics. See ACT OF FAITH, and IN- QUISITION. By the law of England, torture was at one period employed to compel those crimi- nals who stood obstinately mute when brought to trial, and refused to plead guilty or not guilty; but it is now abolished.

TOR'VOUS, adj. Latin torvus. Sour of as- pect; stern ; severe of countenance. Not used.

That torvous sour look produced by anger, and that gay and pleasing countenance accompanying love.

Derham.

*TO'RY, n. *. A cant term, derived from an Frisli word signifying a savage, or rather a collec- tor of tithes or taxes. One who adheres to the side of jvower and authority ; or, as Dr. Johnson says, to the ancient constitution of the state, and ilie apostolical hierarchy of the church of Eng- land : opposed to a whig.*

Hie knight is more a tory in the country than the town, because it more advances his interest.

Addison.

This protestant zealot, this English divine, In church and in state was of principles sound ;

Was truer than steel to the Hanover line, And grieved that a tory should live above ground.

Swift.

TORY (Geoffry), a native of Bourges, who was professor of philosophy at Paris; but after- wards commenced printer, and greatly improved the art. He wrote a book On the Proportion and Distance of Letters ; which proved very useful. He also published a translation of Horus Apollo's Hieroglyphics. He died in 1550.

TORYISM, the principles of the lories.

TOSCANELLA (Paul), a most celebrated Italian astronomer of the fifteenth

century, who erected in the cathedral of Florence the famous tmomon, which is still reckoned the best in Europe, and of which F. Ximenes gave a parti- cular description. He died in 1490.

TOSS, v. «.,)'. n. , & n. s. Fr. tnsser; Belgic ''(.«(.')• ; S\ve;l. ilitaxit ; (Jr. StiLffM, to dance. Meric Casauboo Germ, town, to make a noise. Skin- ner. Pret. tossed or tost ; part. puss, tossed or tost. To throw with the hand, as a ball at play , to agitate or lift suddenly and violently: to fling; to be in violent commotion : the act of tossing.*

The getting of treasures by a lying tongue is a va- nity totted to and fro. Pnnierbs xxi. (i.

She did love the knight of the red cross, For whose dear sake so many troubles her did toss.

Spenser.

That scholar should come to a better knowledge in the Latin tongue, than most do that spend foin years in tossing all the rules of grammar in commo:i schools. Ascham.

Your mind is tossing on the sea, There where your argosies Do overpeer the petty traffickers. S.-iakspeare.

Back do I toss these treasons to thy head. Id.

Things will have their first or second agitation ; if they be not tossed upon the arguments of counsel, they will be tossed upon the waves of fortune, anil be full of inconstancy, doing and undoing.

Bacon's I's&iys.

Galen tells us of a woman patient of his whom he found very weak in bed, continually tossing and tum- bling from one side to another, and totally deprived of her rest. Httrrrt/.

Dire was the tossing ! deep the groans ! despair Tended the sick, busiest from couch to couch.

Milton.

Calm region once, And full of peace, now tost and turbulent. Id.

To toss and fling, and to be restless, only frets and enrages our pain. Tillotson.

Behold how they toss their torches on high, How they point to the Persian abodes. Dryden .

His various modes from various fathers follow ; One taught the toss, and one the new French wallow : His sword-knot this, his cravat that designed. Id.

Tie at each lower corner a handful of hops with a piece of packthread to make a tossel, by which you may conveniently lift the bag when full.

Mortimer's Husbandry.

The discus that is to be seen in the hand of the celebrated Castor at Don Livio's is perfectly round ; nor has it any thing like a sling fastened to it, to add force to the toss. Addison.

TOSTATUS (Alphonsus), a learned Spanish prelate, born in 1414. lie was educated at Salamanca, and became bishop of Avila. He wrote Commentaries on Eusebius, 5 vols. fol., and on the Scriptures. He died in 1454, aged forty.

TOTAL, adj. > Latin totus ; French total.

To'TALLY,«dft>. i Whole; complete; full; un- divided : the adveib corresponding.

The sound interpreters ex pound this image of (Jml of natural reason ; which, if it be totally or mostly defaced, the right of government doth cease.

Bacon's Holy War.

The obdurate sinner, that hath long hardened his own heart against God, thereby provokes him to- tally to withdraw all inward grace from him.

Hammond. Either to undergo

Myself the total crime ; or to accuse My other self, the partner of my life.

Milton's Paratlite Lost. If all the pains that, for thy Britain's sake, My past has took, or future life may take,

TOU

Be grateful to my queen ; permit my prayer,

And with this gift reward my tutal care. Prior.

Charity doth not end with this world, but goes along with us into the next, where it will be per- fected : but faith and hope shall then totally fail ; the one being changed into sight, the other into enjoy- ment. Atterbury's Sermojis.

TOT ANA, a town of Mercia, Spain, situated on the great road leading from Andalusia into Valencia. It is an inland place, and contains 8200 inhabitants, who are proverbially unenter- prising and indolent. Fifteen miles E. N. E. of L.orca.

TOTNES, a borough and market-town in Cole- ridge hundred, Devonshire, on the river Dart, over which there is a bridge, about twelve miles from the sea and 195 miles from London. The '.own is about three-quarters of a mile in length, and commands a fine view of the surrounding country. The church is a spacious building, having a lofty tower above ninety-feet high. It has a manufacture of woollen cloth, which is ra- pidly increasing; but the chief employment of the inhabitants is in the fishery. The town was formerly defended by a strong castle, and sur- rounded by walls, the ruins of which are still observable. The parish contains a town-hall, and a school-house, and is a borough by pre- scrip?:on, the corporation consisting of fourteen luirgn. masters, whereof one is mayor, who, with his predecessor and the. recorder, are justices of the peace; besides twenty common council- men, &c. It returns two members to parliament, who are chosen by the freemen of the borough, with a respect to residence therein, the number of voters being about 320. The river Dart, which produces excellent trout, is here very broad, and the tide flows twelve feet at the bridge. A part of the Roman fosse-way, which passed here, is still visible. Market on Saturday, and a monthly market for cattle. Fairs Easter-Tues- day, May 1, July 25, and October 28.

TOTTER, v. n. Sax. tealtriian ; Belg. tafe- ren, to stagger. To shake so as to threaten a fall.

As a bowing wall shall ye be, and as a tottering fence. Psalms.

Siker thy head very tottie is, So on thy corbe shoulder it leans amisse.

Spenser's Pastorals.

What news, in this our tottering state? — It is a reeling world indeed, my

lord, And I believe will never stand upright. Shakspeare.

The foes already have possessed the wall, Troy nods from high, and totters to her fall.

Dry den. TOUCAN, in ornithology. See RHAM-

PHASTOS.

TOUCAN, or American goose, is one of the constellations of the southern hemisphere, con- sisting of nine small stars. TOUCH, v. a., v. n., & n. s."\ Fr. toucher ; TOUCH'HOLE, n. s. I Ital. toccare;

TOUCH'INESS, | Span, tocer ;

TOUCH'IXG, prep. ! Lat. t ingo. To

TOUCH'INGLY, adv. j perceive by

Torru'sTONE, n. s. feeling; handle

TOICH'WOOD, J or strike slight-

Tort H'V, adj. Jly; reach; at-

tain: try; affect; interfere with ; impel; move;

melt ; influence, taking up in the active form : as a verb neuter, to be in a stale of contact; take effect on ; fasten on. taking at, on, upon : touch, noun substantive, is the act or sense of touching; test; examination; proof; slight stroke; linea- ment ; feature ; passion ; relation ; power of ex- citation ; hurt ; censure : a touchhole is the hole through which the powder in a gun is lighted, as it were, by a touch : touchiness, testiness ; peevishness of temper: touching, with respect or regard to : touchingly, affectingly ; in a moving manner : touchstone, a stone by which metals are tried ; any test : touchwood, rotten or dry wood, used to catch fire from a flint: touchy is, testy; peevish; easily provoked.

He brake the withs as a thread of tow is broken when it toucheth the fire. Judges xvi. 9.

Touch kept is commended, yet credit to keepe Is pay and dispatch him, yer ever ye sleepe. Tusser.

The touch of the cold water made a pretty kind of shrugging come over her body, like the twinkling of the fairest among the fixed stars. Sidney,

He so light was at legerdemain, That what he touched came not to light again.

Spenser.

Touching things which belong to discipline, the church hath authority to make canons and decrees, even as we read in the apostles' times it did.

Hooker.

He which without our nature could no't on earth suffer for the world, doth now also, by means thereof, both make intercession to God for sinners, and exer- cise dominion over all men, with a true natural, and a sensible touch of mercy. Id.

Is not this their rule of such sufficiency, that wa should use it as a touchstone to try the orders of the church? /(/.

Madam, I have a touch of your condition, That cannot brook the accent of reproof. Shakspeare.

He loves us not He wants the natural touch. Id.

With one virtuous touch Th' arch-chemick sun produces precious things.

Milton.

Nor wanted power to mitigate and swage, With solemn touches, troubled thoughts. Id.

They touched their golden harps, and praised. Id.

No decree of mine,

To touch with lighest moment of impulse His free will. Id.

Quoth Hudibras, thou offerest much, But art not able to keep tauch. Hudibras.

Words so debased and hard, no stone Was hard enough to touch them on. Id.

To make white powder, the powder of rotten wil- lows is best ; spunk, or touchwood prepared, might make it russet. Browne.

I keep toueh both with my promise to Philopolis, and with my own usual frugality in these kind of col- lations. More.

This coming still nearer to an aspiration, a touch of it may perhaps be an ingredient in the rough gut- tural pronunciation of the Welsh and Irish.

Holder's Elements of Speech. Never give the least touch with your pencil, till you have well examined your design, Dryden.

A son was copied from his voice so much, The very same in every little touch. Id.

Time is the surest judge of truth : I am not vain enough to think I have left no faults in this, which that tvuchstflne will not discover. Id. Spanish Fryar.

He was not to expect that so perfidious a creature should keep touch with him. L'Estrange.

160

T O U C H.

Money serves for the touchstone of common honesty.

'i.

The fifth sense is touch, a sense over the whole body. I^ocke.

Its face must be very flat and smooth, and so hard that a file will not touch it, as smiths say, when a file will not eat, or race it. Moxon's Mec'ian. Ejter.

Socrates chose rather to die, than renounce or con- ceal his judgment touching the unity of the Godhead.

South.

This last fable shows how touchingty the poet ar- gues in love affairs. Garth.

Our kings no sooner fall out, but their mints make war upon one another ; one meets sometimes with very nice touches of raillery. Addison on Medals.

It is impossible to make observations in art or science, which have not been touched upon by others.

Id. Spectator.

The tender fire was touched with what he said, And flung the blaze of glories from his head. And bid the youth advance. Id. Chid.

Though its error may be such, As Knags and Burgess cannot hit,

It yet may feel the nicer touch Of Wicherley's or Congreve's wit. Prior.

You are upon a touchy point, and therefore tieat so nice a subject with proportionable caution. .

Collier

If he intends to deal clearly, why does he make the touchstone faulty, and the standard uncertain 1

Collier.

I was sensibly touched with that kind impression.

Congreve.

You are so touchy, and take thing so hotly, 1 am sure there must be some mistake in this.*

Arhuthnnt's History of John Bull.

One dip the pencil, and one touch the lyre. Pope.

The spider's touch how exquisitely fine ! Feels at each thread, and lives along the line. Id.

He gave the little wealth he had To build a house for fools and mad ; To shew, by one satirick touch, No nation wanted it so much. Swift.

Print my preface in such a form as, in the book, sellers phrase, will make a sixpenny touch. Id.

Nature affords at least a glimmering light : The lines, though touched but faintly, are drawn right. Pope.

The TOUCH is improperly used for the sense of feeling. See ANATOMY.

TOUCH. Tactus. In Magendie's Physiology are the following illustrations of this subject : — ' By touch we are enabled to know the proper- ties of bodies ; and as it is less subject to decep- tion than the other senses, enabling us in certain cases to clear up errors into which the others have led us, it has been considered the first, and the most excellent of all the senses ; but several of the advantages which have been attributed to it by physiologists and metaphysicians should be considerably limited. We ought to distinguish tact from touch. Tact is, with some few excep- tions,

generally diffused through all our organs, and particularly over the cutaneous and mucous surfaces. It exists in all animals; whilst touch is exerted evidently only by parts that are intend- ed particularly for this use. It does not exist in all animals, and it is nothing else but tact united to muscular contractions directed by the will. In the exercise of tact we may be considered as passive, whilst we are essentially active in the exercise of touch.

Phyniau properties < >f liuilits which employ t'/t -.cti,», . >/' fi'uJi. — Almost all the physical prup-r- ties of bodies are susceptible of acting upon the organs of touch; form, dimensions, different de- grees of consistence, weight, temperature, loco- motion, vibration, &c., are all so many circum- stances that are exactly appreciated by the touch. The organs destined to touch do not alone exer- cise this function ; so that in this respect the touch differs much from the other senses. As in most cases it is the skin which receives the tac- tile impressions produced by the bodies which surround us, it is necessary to say something of its structure. The skin forms the envelope of the body; it is lost in the mucous membranes at the entrance of all the cavities ; but it is impro- per to say that these membranes are a continua- tion of it. The skin is formed principally by the cutis vera, a fibrous layer of various thickness, according to the part which it covers ; it adheres by a cellular tissue, more or less firm, at other times by fibrous attachments. The cutis is al- most always separated from the subjacent parts by a layer of a greater or less thickness, which is of use in the exercise of touch.

The external side of the cutis vera is covered by the epidermis, a solid matter secreted by the skin. We ought not to consider the epidermis as a membrane ; it is a homogeneous layer, adhe- rent by its internal face to the chorion, and full of a great number of holes, of which the one sort are for the passage of the hair, and the other for that of cutaneous perspiration ; they serve at the same time for the absorption which takes place by the skin. These last are called the pores of the skin. It is necessary to notice, with regard to the epidermis, that it is void of feeling; that it possesses none of the properties of life ; that it is not subject to putrefaction ; that it wears and is renewed continually; that its thickness augments or lessens as it may be necessary: it is even said to be proof to the action of the digestive organs.

The connexion of the epidermis to the cutis vera is very close ; and yet it cannot be doubted that there is a particular layer between these two parts, in which certain particular phenomena take place. The organisation of this layer is yet little known. Malpighi believed it to be formed of a particular mucus, the existence of which has been long admitted, and which bore the name of the corpus mucosum of Malpighi. Other authors have considered it, more justly, as a vascular network. Gall makes it similar to the gray

mat- ter which is seen in many parts of the brain. (Jantier, in examining attentively the external surface of the true skin, has noticed some small reddish projections, disposed in pairs; they are easily perceived when the skin is laid bare by a blister. These little bodies are regularly dis- posed upon the palm of the hand, and on the sole of tne foot. They are sensible, and are reproduced when they have been torn out. They appear to be essentially vascular. These bodies, without being understood, have been lonsr called the papillae of the skin. The epidermis is pierced by little holes opposite their tops, through which small drops of sweat are seen to issue, when the skin is exposed loan elevated temperature. The skin contains a great number of sebaceous

follicles ; it receives a great number of vesseU and nerves, particularly at »he points where the sense of touch is more immediately exercised. The mode in which the nerves are terminated in the skin is totally unknown; all that has been said of the cutaneous nervous papillae is entirely Hypothetical. The exercise of tact and of touch is facilitated by the thinness of the cutis vera, by a gentle elevation of temperature, by an abundant cutaneous perspiration, as well as by a certain thickness and flexibility of the epidermis ; when the contrary dispositions exist, the tact and the touch are always more or less imperfect.

Mechanism of tact. — The mechanism of tact is extremely simple ; it is sufficient that bodies be in contact with the skin to furnish us with data, more or less exact, of their tactile proper- ties. By tact we judge particularly of the tem- perature. When bodies deprive us of caloric, we call them cold ; when they yield it to us, we say they are hot ; and, according to the quantity of caloric which they give or take, we determine their different degrees of heat or cold. The no- tions that we have of temperature are, neverthe- less, far from being exactly in relation to the quantity of caloric that bodies yield to us, or take from us ; we join with it unawares a com- parison with the temperature of the atmosphere, in such a manner that a body colder than ours, but hotter than the atmosphere, appears hot, though it really deprive us of caloric when we touch it. On this account, places which have a uniform temperature, such as cellars or wells, appear cold in summer, and hot in winter. The capacity also of bodies for caloric has a great in- fluence upon us with regard to temperature ; as an example of this we have only to notice the great difference of sensation produced by iron and wood, though the temperature of both be the same.

A body which is sufficiently hot to cause a chemical decomposition of our

organs produces the sensation of burning. A body whose tem- perature is so low as to absorb quickly a great portion of the caloric of any part, produces a sensation of the same sort nearly : this ruay be proved in touching frozen mercury. The bodies which have a chemical action upon the epider- mis, those that dissolve it, as the caustic alkalies, and concentrated acids, produce an impression which is easy to be recognised, and by which these bodies may be known. Every part of the skin is not endowed with the same sensibility ; so that the same body, applied to different points of the skin in succession, will produce a series of different impressions. The mucous membranes possess great delicacy of tact. Every one knows the great sensibility of the lips, the tongue, of the conjunctiva, the pituitary membrane, of the mucous membrane, of the trachea, of the urethra, of the vagina, &c. The first contact of bodies,which are not destined naturally to touch these mem- branes, is painful at first, but this soon wears off.

Mechanism of touch. — In man the hand is the principal organ of touch ; all the most suitable circumstances are united in it. The epidermis is thin, smooth, flexible ; the cutaneous perspi- ration abundant, as well as the oily secretion. The vascular eminences are more numerous there than any where else. The cutis vtra has but little thickness; it receives a great number

of vessels and nerves; it adheres to the subjacent aponeuˆoses by fibrous adhesions; and it is sus- tained by a highly elastic cellular tissue. The extremities of the fingers possess all these pro- perties in the highest degree , the motions of the hand are very numerous, and performed with fa- cility, and it may be applied with ease to any body of whatsoever form. As long as the hand remains immoveable at the surface of a body, it acts only as an organ of tact. To exercise touch, it must move, either by passing over the surface, to examine form, dimensions, 8cc., or to press it for the purpose of determining its consistence, elasticity, &c.

We use the whole hand to touch a body of considerable dimensions; if, on the contrary, a body is very small, we employ only the points of the fingers. This delicacy of touch in the fingers has eiven man a great advantage over the animals. His touch is so delicate that it has been considered the source of his intelligence. From the highest antiquity the touch has been con- sidered of more importance than any of the other senses; it has been supposed the cause of human reason. This idea has continued to our times ; it has been even remarkably extended in the writings of Condillac, of Bufion, and other mo- dern physiologists. Buffbn, in particular, gave such an importance to the touch, that he thought one man had little more ability than another, but only in so far as he had been in the habit of making use of his hands. He said it would be well to allow children the free use of their

hands from the moment of their birth. The touch does not really possess any prerogative over the other senses ; and if, in certain cases, it assists the eyt or the ear, it receives aid from them in others, and there is no reason to believe that it excites ideas in the brain of a higher order than those which are produced by the action of the other senses.

Of internal sensations. — All the organs, as well as the skin, possess the faculty of transmitting impressions to the brain, when they are touched by exterior bodies, or when they are compressed, bruised, &c. It may be said that they generally possess tact. There must be an exception made of the bones, the tendons, the aponeu roses, the liga- ments, &e., which in a healthy state are insensi- ble, and may be cut, burned, torn, without any thing being felt bj the brain. This important fact was not known to the ancients ; they considered all the white parts as nervous, and attributed to them all those properties which we now know belong only to the nerves. These useful results, which have had a great influence upon the recent progress, of surgery, we owe to Holler and his disciples.

All the organs are capable of transmitting spontaneously a great number of impressions to the brain without the intervention of any external cause. They are of three sorts. The first kind take place when it is necessary for the organs to act; they are called wants, instinctive desires. Such are hunger, thirst, the necessity of making water, of respiration; the venereal impulse, &c. The second sort take place during the action of the organs ; they are frequently obscure, some- times very violent. The impressions which accompany the different excretions, as oi the

semen, the urine, are of this number. Such are also the impressions which inform us of our mo- tions, of the periods of digestion : even thought seems to belong to this kind of impression. The third kind of internal sensations are developed when the organs have acted. To this kind belongs the feeling of fatigue, which is variable in the different sorts of functions. The impressions which are felt in sickness ought to be added to these three sorts ; these are much more numerous than the others. The study of them is absolutely necessary to the physician. All those sensations which proceed from within, and which have no dependence upon the action of exterior bodies, have been collectively denominated internal sen- sations, or

feelings.'

TOUCH-ME-NOT, in botany. See I. M PA- TIENTS and MOMORDICA.

TOUCH-NEEDLE, among assayers, refiners, &c., was little bars of gold, silver, and copper, combined together in all the different proportions and degrees of mixture ; the use of which was to discover the degree of purity of any piece of gold or silver, by comparing the mark it leaves on the touch-stone with those of the bars. The metals usually tried by the touch-stone are gold, silver, and copper, either pure, or mixed with one another in different degrees and proportions, by fusion. But it is now quite unnecessary to describe either the touch-needle or the method of using it ; as no dealer in gold and silver will now trust to such an uncertain test, when he can ascertain the value with much more ease, expe- dition, and accuracy, by taking an assay of the mass. See ASSAYING.

The TOUCH-STONE is a black, smooth, glossy stone, formerly much used to examine the purity of metals. The ancients called it lapis Lydius, the Lydian stone, from the name of the country whence it was originally brought. See LYDIUS. Any piece of pebble or black flint will answer the purpose of the best lapis Lydius of Asia. Even a piece of glass made rough with emery is used with success to distinguish true gold from such as is counterfeit ; both by the metal- lic color and the test of aquafortis. The true touch-stone is of a black color, and is met with in several parts of Sweden. See MINERALOGY.

TOUGH, adj. \ Sax.toh; Belg. laid.

TOUGH'EN,V. a.&u. n. > Yielding to flexure or

*TOUGH'NESS, n. *. j extension without frac- ture; not brittle; stiff: to make or grow tough : state of being tough.*

O sides, you are too tough '. Will you yet hold? Shaktpeure.

I confess me knit to thy deserving with cables of perdurable toughness. Id. Othello.

Of bodies some are fragile, and some are (out/A, and not fragile. Baeon't Natural History.

To make an induration with toughneu, and less fragility, decoct bodies in water for three days ; but they must be such into which the water will not enter.

1,1.

A well-tempered sword is bent at will, But keeps the native toughnea of the steel. Dryden.

The bow he drew. And almost joined the horns of the tough eugh. Id.

Hops off the kiln lay three weeks to cool, give, and tfvglen, else they will break to powder. Mortimer's Huihu

In the first st;; <_e the viscosity or tmtghntK of the fluids should be laken oft" by diluents.

Arbuthwit on Diet.

TOUL, a town in the department of tlie Meurthe, France, situated on the Moselle, and surrounded by a chain of hills, covered with vineyards. Its old walls were destroyed in 1700, and the place considerably enlarged and im- proved by the construction of a new rampart. The principal square is the Place du Dauphin. The cathedral is a fine edifice of the seventeenth century, and the building, once the bishop's pa- lace, the hospital, arsenal, and barracks, have each some interest. A handsome stone bridge over the Moselle was built by Louis XIV. Here are, on a small scale, manufactures of pottery and stockings. Population about 7000. Four- teen miles west of Nancy, and forty S. S. W. of Melz.

TOULON, a noble sea-port of the south-east of France, is situated in the department of the Var, on a bay of the Mediterranean. The outer or greater road of the harbour is bounded by the peninsula on the south ; its entrance is a mile and a half broad and is defended by many forts on both shores. The inner road is a fine basin, entered between two promontories a quarter of a mile from each other, and both covered witli batteries : the depth in the basin is six to four fa- thcms. The town, divided into the Old and New, is built at the foot of a ridge of lofty, and in general arid mountains. Its environs yield vines, figs, and other products of a warm lati- tude. Its form, including the ports, is oval, the longest side lying parallel to the sea.

The old town is ill built, but contains one long straight street called the Rue aux Arbres, shaded with trees. The New Town is better built, con- taining the public structures of Louis XIV.; several straight streets, and a square, called the champ de Cataille, used for exercising the garri- son. Toulon has no river; but several streams, descending from – the neighbouring mountains, supply the fountains of the town. The principal public buildings are the hotel de ville, the hotel de 1'intendance, and the churches and hospitals.

The arsenal, situated along the side of the new port, is a large edifice, well filled with arms and naval stores. Here are docks for ship-building, store-

houses for timber ; manufactures of canvas, cordage, ship-anchors, &c. The dry dock, for the repair of ships of war, is also an interesting object. The galley slaves, formerly employed in the harbour of Marseilles, have been for some time removed, and kept at work at Toulon. The trade of this place is limited to the products of the vicinity, such as wine, oil, silk, and fruit of different kinds; and the manufactures to soap, glass, hats, and caps. The tunny fishery is ex- tensive. The population is about 22,000, exclu- sive of the workmen of the arsenal, and the slaves. The port has long been the scene of the equip- ment of naval expeditions ; but the most re- markable event in its history is the occupation of the town and harbour by the British, in tin; autumn of 1793; the subsequent siege by the republican troops; and the precipitate abandon- ment of the place by the British 'on 10th Dec. 1793), after burning and carrying off about half

the squadron contained in die port. Buonaparte commanded on this occasion part of the besieg- ing artillery, and directed it with great judgment. The republicans, on obtaining possession of the place, exercised great cruelties towards those of the inhabitants who had, or were suspected to have, participated in delivering it to the English. Thirty miles south-east of Marseilles, 220 south by east of Lyons, and 480 S. S. E. of Paris.

TOULOUSE, a large town in the south of France, the former capital of Upper Languedoc, now of the department of the Upper Garonne, situated on the right bank of the Garonne. The Garonne here is navigable, and as wide as the Seine at Paris. The situation of Toulouse (near the junction of the great canal of Languedoc) is altogether very advantageous for trade ; but this part of France is backward, and inferior both in population and activity to the northern departments. The buildings are almost all of brick ; even the town walls are of that material ; but there is much vacant ground there enclosed, and the population of Toulouse, about 50,000, ranks it only in the third class of cities. Of the streets, a few are tolerably broad. The squares are very small, so that the chief embellishments of the place consist in the public promenades, river, quays, and bridge over the Garonne, a fine structu'e, 810 feet in length, and seventy- two in breadth. It was built in the middle of the seventeenth century.

Toulouse was a Roman station, and afterwards, in the sixth century, the capital of the Goths. It has a cathedral, handsome, though irregular; and a number of churches, among which that of the Cordeliers is noted for its

cavern, that of St. Sa- turnin for its relics. The hotel de ville retains the ancient name of Capitol, from which the magistrates are called capitouls, and is large ; its facade forms the side of the square called Place Royale. In one of its halls are the busts of all the eminent natives of Toulouse since the time of the Romans. The other buildings worth notice are, the residence of the archbishop, the hospital, mint, and exchange. In antiquities, Toulouse presents only the remains of an amphitheatre, and of an aqueduct. It has a university, a cen- tral school, a society of arts and sciences, an aca- demy of inscriptions and belles lettres, museum, a public library, botanical garden, and observa- tory.

The manufactures consist of silks, woollens, leather, linen, pottery, copper-works, and a can- non foundry ; the whole, however, on a small scale. The town contains an insurance company for indemnifying the agriculturist for loss from hail storms. Toulouse is, and has been long, the see of an archbishop, the residence of a number of noblesse or provincial gentry, and the seat of a prefecture. In an historical sense it acquired an unfortunate title to notice, by an obstinate battle fought on the 10th of April, 1814, between the Bri- tish under lord Weilington, and the French under Soult, neither commander having been apprised of the abdication of Buonaparte. The British troops were successful, but suffered much, their loss in killed and wounded being from 4000 to 5000 men. The climate of Toulouse is warm : the environs produce maize, wheat,.vines, and

other fruits of a southern latitude. 150 miles south-east of Bourdeaux, and 420 south by west of Paris.

TOUP (Jonathan), a learned divine and dis- tinguished critic, was born at St. Ives, in Corn- wall, in 1713, being the son of the curate. He was entered of Exeter College, Oxford, where he graduated B. A. ; but took his degree of M. A. at Pembroke-hall, Cambridge, in 1756, having previously been presented to the rectory of St. Martin's, Cornwall. In 1760 he was made known to the learned world by a first part of his Emendationes in Suidam ; the second of which appeared in 1764, and the third in 1766. This work, which displays great erudition, rather dog- matically recommended him to a kindred spi- rit, bishop VVarburton, who became his corres- pondent and patron. In 1767 he published Epi.stola Critica, addressed to that prelate : in 1772 appeared hisCurae posteriores sive Appen- dicula Notarum atque Emendationum in Theo- crilum, Oxonii nuperrime publicatum, 4to. The interest of Warburton now procured him a pre- sentation to a prebend in the church of Exeter and in 1776 another to the vicarage of St. Merryn In 1715 he printed Appendicula Notarum in Suidam; and in 1778 his edition of Longinus He continued to reside at his living of St. Mar- tin's until his death, in January 1785, in his seventy-third year. He was kind and beneficent. we are told, in private life ; in the opinion of Dr. Burney he is to

be regarded as one of the seven pre-eminent scholars of the eighteenth century.

TOUPET, n.s. Fr. toupet. A curl; an arti- ficial lock of hair.

Remember second-hand toupeis and repaired ruffles.

Swift. .

TOUR, n.s. Fr. tour. Ramble; roving jour- ney; turn; revolution: Milton seems to use it in another French sense for tower.

The bird of Jove stooped from his airy tour, Two birds of gayest plume before him drove.

I made the (our of all the king's palaces.

Additon

First Ptolemy his scheme ccelestial wrought, And of machines a wild provision brought ; Orbs centrick and eccentrick he prepares, Cycles and epicycles, solid spheres In order placed, and with bright globes inlaid, To solve the tours by heavenly bodies made.

BUtckmore.

Were it permitted, he 'd make the tour of the whole system of the sun.

Arbuthnot and Pope's Jtfarliniu Scriblerus.

TOUR (Henry de la viscount Turenne), a cele- brated French general, was the second son of Henry de la Tour, duke of Bouillon, aud was born at Sedan m 1611. He made his first cam- paigns in Holland, under Maurice and Frederic Henry princes of Orange, who were his uncles by the mother's side. In 1634 he marched with his regiment into Lorraine; and, having con- tributed to the taking of La Mothe, was, though very young, made mareschal de camp. In 163G he took Saverne, and in 1637 the castles of Hir- son and Sole. He continued to distinguish himself in several sieges and battles, and in

1644 was made marshal of France ; but was defeated at the battle of Mariendal in 1645. However, he gained the battle of Nortsingen three months after ; restored the elector of Treves to his dominions, and in 1646 made the famous junction of the French army with that of Swe- den commanded by general Wrangle, which obliged the duke of Bavaria to demand a peace. But that duke breaking the treaty, he was de- feated by Turenne at the battle of Zumarshausen, and in 1648 driven entirely out of his domi- nions. During the civil wars in France he sided with the princes, and was defeated at the battle of Rhetal in 1650; but soon after was restored to the favor of the king, who in 1652 gave him the command of his army. He acquired great honor at the battles of Jergeau, Gren, and the suburbs of St. Anthony, and by the retreat he made before the army commanded by the princes at Ville Neuve St. George. In 1654 he made the Spaniards raise the siege of Arras; in 1655 he took Conde, St. Gutlian, and several other places ; gained the famous battle of Dunes ; and made himself master of Dunkirk, Oude- narde, and almost all Flanders : this obliged the Spaniards to conclude the peace of the Pyre- nees in 1660. These important services occa- sioned his being made marshal general of the king's armies. The war being renewed with Spain in 1667, Turenne commanded in Flanders ; and took so many places that in 1668 the Spaniards were obliged to sue for peace. He commanded the French army in the war against the Dutch in 1672 ; took forty towns in twenty- two days ; pursued the elector of Brandenburgh even to Berlin ; gained the battles of Slintsheim, Ladenburg, Ensheim, Mulhausen, and Tur- keim ; and obliged the imperial army of 70,000 men to repass the Rhine. By this campaign he acquired immortal honor. He passed the Rhine to give battle to general Montecuculi, whom he followed as far as Saspach ; but, mounting upon an eminence to discover the enemy's camp, he was killed by a cannon ball in 1675.

TOURMALINE, in mineralogy, a name tha has been given to a species of stone, found in Ceylon, Brasil, the Tyrol, &c., of a dark brown or yellowish, and sometimes of a green, blue, and even red color : that of the Tyrol by reflect- ed light is of a blackish brown, but by refracted light yellowish, or in thin pieces green ; mostly crystallised in polygon prisms, but sometimes amorphous. The thickest parts are opaque ; the thin more or less transparent. It possesses pe- culiar electrical qualities.

Rhomboidal tourmaline is divided into two sub-species, schorl and tourmaline.

Tourmaline. — Colors green and brown. In prismatic concretions, rolled pieces, but generally crystallised. Primitive form, a rhomboid of 133° 26". It occurs in an equiangular three-sided prism, flatly acuminated on the extremities with three planes. The lateral edges are frequently bevelled, and

thus a nine-sided prism is formed : when the edges of the bevelment are truncated, a twelve-sided prism is formed ; and, when the bevelling planes increase so much that the origi- nal faces of the prism disappear, an equiangular •ix-sided prism is formed. Sometimes the prism

is nearly wanting, when a double three-side^ pyramid is formed. The lateral planes are ge- nerally cylindrical convex, and deeply longitudi- nally streaked. Crystals imbedded. Splendent, vitreous. Cleavage threefold. Fracture con choidal. Opaque to transparent. Refracts double. When viewed perpendicular to the axis of the crystal it is more or less transparent ; but in the direction of the axis, even when the length of the prism is less than the thickness, it is opaque. As hard as quartz. Easily frangible. Sp. gr. 3-0 to 3-2. By friction it yields vitreous electricity ; by heating, vitreous at one end, and resinous at the other. The brown and hyacinth- red varieties have these properties in the greatest degree. The ancients called it lyncurium. Before the blowpipe, it melts into a grayish- white vesicular enamel. Its constituents are, silica 42, alumina 40, soda 10, oxide of manga- nese with a little iron 7, loss 1. — Vauquelin. It occurs in gneiss, mica-slate, talc-slate, &c. The red occurs in Siberia, Ava, and Ceylon. — Jameson.

TOUR'NAMENT, n. s. ; Low Lat. tourna-

TOUR'SEY. Amentum. Tilt; just;

military sport.

An elfin born of noble state, Well could he tourney, and in lists debate. Spenter.

For justs, tourneys, and barriers, the glories of them are the chariots wherein challengers make their entry. Bacon .

They might, under the pretence

Of tilts and tournaments,

Provide them horse and armour for defence.

DanleL

With cruel tournament the squadrons join : Where cattle pastured late, now scattered lies With carcases, and arms, the' insanguined field.

Milton.

Whence came all those justs, tiltings, and tourna- ment, so much in use in these parts ?*

Temple' t Mitctllanies.

He lived with all the pomp he could devise, At tilts and tournaments obtained the prize, But found no favour in his lady's eyes. Drjfdeii.

The TOURNAMENT, a martial sport or exercise of ancient cavaliers, is derived from the French word tourner, i. e. to turn round, because to be expert in these exercises, much agility both ot horse and man was requisite ; and they often rode round a ring in imitation of the ancient Circi. The first tournaments were only courses on horseback, wherein the cavaliers tilted at each other with canes in the manner of lances ; and were distinguished from justs, which were courses or careers, accompanied with attacks and com- bats, with blunted lances and swords. See JUST. The prince who published the tournament, used to send a king at arms, with a safe conduct, and a sword, to all the princes, knights, &c., signify- ing that he intended a tournament and a clash- ing of swords, in the presence of ladies and dam- sels; which was the usual formula of invitation. They first engaged man against man, then troop ' against troop ; and, after the combat, the jndges allotted the prize to the best cavalier and man- ager of his sword ; who was accordingly con- ducted in pomp to the lady of the tournament ; where, after thanking her very reverendly, he saluted her and her attendants. These tourna-

merits made the principal diversion of the thir- teenth and fourteenth century. Munster says, it was Henry the Fowler, duke of Saxony, and afterwards emperor, who died in 936, tha. first introduced them; but it appears, from the Chro- nicle of Tours, that the first patron of this famous sport, at least in France, was one Geoffry, lord of Preuilli, about A. D. 1066. Instances of them occur among the English in the reign of king Stephen, about A. D. 1140: but they were not much in use till the time of Richard I., about 1149; after which period these diversions were performed with extraordinary magnificence in the Tilt-yard near St. James's, Smithfield, &c. At last, however, they were found to be productive of bad effects, and the occasions of several fatal misfortunes ; as in the instance of Henry II. of France, and of the tilt exhibited at Chalons, which, from the numbers killed on both sides, was called the little war of Chalons. These*

and other inconveniences resulting from these pas- times, first led the popes and finally the princes of Europe to discourage and suppress them.

TOURNAY, a large old town of the Nether- lands, on the frontier of French Flanders, and chief place of a district in the province of Hainault. It was the Civitas Navitorum of the Romans. Inhabitants 22,000.

TOURNEFORT (Joseph Pitton de), a famous French botanist, born at Aix in Provence in 1636. He quitted the study of theology for that of natural history, and his fame as a botanist procured him in 1683 the employment of bo- tanic professor in the king's garden : by the king's order, he travelled into Spain, Portugal, Holland, and England, where he made prodi- gious collections of plants. In 1700, in obe- dience to another order, he travelled over the isles of the Archipelago, upon the coasts of the Black Sea, in Bithynia, Pontus, Cappadocia, Armenia, and Georgia ; on his return he was made professor of physic in the College Royal, and died in 1708. He wrote Elements of Botany, both in French and Latin ; A Voyage into the Levant, &c.

TOURNEFORTIA, a genus of plants, in the class pentandria, and order of monogynia ; rank- ing in the natural method under the forty-first order, asperifolia.

TOUR'NIQUET, n. s. Fr. tourniquet. A bandage used in amputations.

If the orifice does not readily appear, loosen the tourniquet, and the effusion of blood will direct you to it. Sharp.

The TOURNIQUET is an instrument formed with screws for compressing any part of the body with rollers, &c., for the stopping of he- morrhages. See SURGERY.

TOURS, a considerable town of France, t!ie capital of the department of the Indre and Loire. It is situated in a delightful plain, on the south or left batik of the Loire, a little above the spot where that river is joined by the Cher. The city is of an oblong form, and parallel to the course of the Loire : part of the houses are low: but another part very different, having been rebuilt in a beautiful manner, and partly by aid from government, after a fire that took place in the early part of the veign of Louis

XVI. This part includes the Rue Neuve, or Rue Royale, a street of great elegance : tne houses in it are built of stone, and on a uniform plan, which in .. continental town is rare. This street is in a line with the bridge over the Loire, 1400 feet in length, and forty-five in breadth. It consists of fourteen arches, each of seventy- five feet in width, and ranked among the finest bridges in Europe. At some distance, but in the same line, is the bridge over

the Cher ; and as the great walk called the Mail extends in a line with the bridges and the Rue Neuve, no- thing can be finer than the entrance into Tours, from the north or south. The approach is by long avenues bordered with trees, and the length of the whole avenues, street, and bridges, full five miles. The hotel de ville and the theatre are good provincial buildings ; the other public structures are the residence of the archbishop, the hotel de 1'intendance, the Jesuits' College, the Benedictine abbey. Here are also a race course, a botanical garden, and museum. The principal manufacture is silk, introduced here earlier than in any other town of France, by workmen brought from Italy in the fifteenth cen- tury. Their number increased in the course of the sixteenth to 20,000 ; but the competition of Lyons, situated in a climate more favorable to the silkworm, was not to be withstood, and the persons employed on the silk manufacture in Tours and its neighbourhood does not now ex- ceed a third of the number mentioned. The other manufactures of the place are woollens and leather : some wine and brandy are made in the neighbourhood ; but altogether the trade of the town, notwithstanding the vicinity of two navigable rivers, is inconsiderable. Tours is seventy miles east of Angus, and 145 S. S. W. of Paris.

TOUSE, v. a. Of the same origin as taw, tease, lose. To pull; tear; drag: whence touser, or towzer, the name of a mastiff.

As a bear whom angry curs have touted, Having off shaked them and escaped their hands, Becomes more fell, and all that him withstands Treads down and overthrows. Spenter.

Take him hence ; to the' rack with him : we'll towze you joint by joint, but we will know his pur- pose. Shakipeare. She tosses, tumbles, strikes, turns, touses>, spurns,

and sprauls,

Casting with furious limbs her holders to the walls.

Dray ton.

To towze such things as flutter, To honest Bounce is bread and butter. Swift.

TOW, n. s. Sax. rop. Flax or hemp beaten and combed into a filamentous substance.

Tow twisted round the handle of an instrument makes it easier to be held. Sharp.

Tow, v. a. Sax. reon, teohan, to lead ; Belg. toghcn. To draw by a rope, particularly through the water.

Thou knewest too well

My heart was to thy rudder tied by the' string, And thou shouldst tow me after.

Shakspeare. Antony and Cleopatra.

The seamen towed, and I shoved, till we arrived.

Swift.

TOW

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TOW

TOW'ARD,/>re/>. $tadv.~\ Sax. topartˆ. In TOW'AUDS, / a direction to; near

TOW'ARDLINESS n, s. >to; with tendency TOW'ARDLY, adv. i to ; near : towardli-

TOW'ARDXESS, n. s. J ness and toward- ness both mean docility : towardly, docile ; com- pliant.

He set his face toward the wilderness.

Numbers xxiv. 1.

We brought them to as great peace between them- selves as love towards us for having made the peace.

Sidney.

What might be toward, that this sweaty haste Doth make the night joint labourer with the day.

Shakspeare.

The beauty and towardliness of these children moved their brethren to envy.

Raleigh' History of the World.*

Some young towardly noblemen or gentlemen were usually sent as assistants or attendants.

Bacon's Advice to Villiers.

This was the first alarm England received towards any trouble, after it had enjoyed for so many years the most uninterrupted prosperity. Clarendon.

His heart relented ton-aids her. Milton.

Parents will not throw away the towardtiess of a child, and the expence of education, upon a profes- sion, the labour of which is increased, and the re- wards are vanished. South.

By our law no good is to be left undone towards all, not the good of the tongue, the hand, the heart.

Id.

I am toward nine years older since I left you.*

Swift.

TOWCESTER, an ancient market-town of Northamptonshire, situated on the Walling Street Road, sixty miles N.N. W. of London, eight miles and a half south-west of Northampton, and ten miles and a half north from Buckingham, to which last town a new turnpike road through Whittlebury forest was made in 1824. Towces- ter was formerly a Roman station, and many Roman coins continue to be found there in the gardens and fields. It lies on the banks of the river Tove, which runs into the Ouse near Stony Stratford. The market is held on Tuesday. Fairs May 12th, and October 29th.

TOWEL, n. s. Fr. tauaille ; Ital. towglio. A cloth on which the hands are wiped.

They with their fine soft grassy towel stand, To wipe away the drops and moisture from the hand.*

Drnyton.

The attendants water for their hands supply, And, having washed, with silken tun-tin dry.*

Dnidfn't /F.ncid.

His arm must be kept up with a napkin or ti>wel.

Wiseman.

TOWER, n.s.&t;. n.) Sax. ton; Fr tour; TOW'ERY, adj. S Ital. torre; Lat. turris.

A high building ; a building raised above the main edifice; fortress; high head-dress; high flight : to tower is to fly or soar hi;;h : towery, furnished with towers.

Let us build us a city and a timer, whose top may reach unto heaven. Genesis xi. 4.

A strong tower from the enemy. Psalms.

On the' other side an high rock towered still.

Spenser.

1'iiu-fi anil li-.itt'ements it sce» Bosomed in high turtted trees. Milton.*

No marvel

He them beholding, soon Comes down to see their city, ere the tower Obstruct heaven towert. Miitan.

Circular base of rising folds, that toicertd Fold above fold, a surging maze. Id.

My lord protector's hawks do touxr so well.

S/iaitspeare.

Lay trains of amorous intrigues In towers, and curls, and perriwigs. Hndibras.

TOWER HAMLETS, a borough of England, in the county of Middlesex, comprising the liberty of the Tower of London, and the Tower divi- sion of the Hundred of Ossulston. It possesses a population of 359,864 souls, and was ad- mitted to a participation in the elective fran- chise by a clause in the Reform bill. It sends two members to parliament. The returning officer is appointed by the sheriff of Middlesex.

TOWERS (Joseph), LL.D., an English dis- senting divine, born in Southwark, in 1737, and bred a printer, under Coadbey; after which he commenced bookseller in London ; but soon after engaged in the ministry among the Presby- terian Dissenters; and in 1764 became pastor of a congregation in Highgate. In 1 778 he was chosen one of the ministers of

Newington Green, along with the celebrated Dr. Price. In 1779 he received his degree from Edinburgh. He published, 1. British Biography, in 7 volsJ8vo.;

2. Observations on Hume's History of England ;

3. The Life and Reign of Frederick III. of Prussia, in 2 vols. 8vo. ; 4. A Vindication of Locke ; 5. Several Sermons and Political Tracts His son, alter passing through many vici.-snudcs, died in a pauper asylum in 1831

TOWN, n. s. 1 Sax. tun, tman, shut ; Belg. TOWN'CLERK, tuyn. Any walled collection TOWX'HOUSE, [of houses; any place where a TOWX'SHIP, f market is held ; the inhabitants TOWNS'MAN, I of a town; the capital: the TOWX'TALK. J compounds correspond. She let them down by a cord ; for her house was upon the town wall. Joshua ii. 15.

Into whatsoever city or town ye enter, enquire who in it is worthy, and there abide. Matt. x. 11.

The toicnclerk appeased the people. Acts six. 35. Speak the speech trippingly on the tongue , but if you mouth it, as many of our players do, I had as lieve the town crier had spoke the lines.

Shakspeare. Hamlet.

I am but a poor petitioner of our whole township.

Shultspeure.

Here come the townsmen on procession, Before your highness to present the man. Id.

In the time of king Henry the sixth, in a fight be- tween the earls of Orroond and Desmond, almost all the townsmen of Kilkenny were slain.

Darifs on Ireland.

To the clear spring cold Artxa went ; To which the whole tfirne for their water sent.

Chairman.

They inarched to Newcastle, which, being de- fended only by the townsmen, was given up to them.

Clarendon. Before him towns, and rural works between.

Milton.

I left him at the gate firm to your interest, T' admit the townxmeu at their first appearance.

Dryden.

If you tell the secret, in twelve hours it shall bs tmtmtuth. I.' Estrange.

When Alexandria was besieged and won, He passed the trenches first, and stormed the town.

Betterton.

A tnunhouse built at one end will front the church that stands at the other. Addison on Italy.

He all at once let down, Stuns with his giddy larum half the town. Pope.

A virgin whom her mother's care Drags from the town to wholesome country air. Id.

My friend this insult sees,

And flies from towns to woods, from men to trees.

Broome.

There is some new dress or new diversion just come to town. Law.

TOWNSON (Thomas), D.D., a learned di- vine born in Essex, in 1715, was educated at Magdalen College, Oxford, of which he became fellow. After several inferior promotions, he was appointed archdeacon of Richmond, and published, 1. Discourses on the Gospels; 2. Answer to the Confessional ; and, 3. A Discourse on the Evangelical History. His works have been collected and published in 2 vols. 8vo., with a Life of the Author, who died in 1792.

TOXANDRI, an ancient people of Gallia Belgica. — Plin. v. c. 7.

TOXARIDIA, a festival held at Athens, in honor of

TOXARIS, a Scythian hero.

T()XICODENDROX,inbotany. See RHUS.

TOXICOLOGY, (from rofaov, properly the poison which the ancients put upon arrows and spears) ; the science of poisons and antidotes. The works of r rank and Orfila are distinguished in this branch, also Buchner's and Witting's. See POISONS.

TOY, n. s. & v. n.~\ Sax. teojan ; Goth.

TOY'ISH, adj. I teya, to play, sport. A

TOY'ISHNESS, > trifle ; thing of no valne;

TOY'MAN, I petty commodity ; plav-

TOY'SHOP. J thing ; folly ; play ; odd

tale or fancy : to trifle ; play : toyish is sportive ; trifling; wanton: the noun substantive follow- ing corresponding : toyman, a seller of toys : toy-shop, his olace of sale.

Shall that which hath always received this con- struction be now disguised with a toy of novelty 1

Hooker.

' I'is a cockle, or a walnut shell, A knack, a toy, a trick, a baby's cap. Shakspeare.

The very place puts toys of desperation, Without more motive, into every brain, That looks so many fathoms to the sea, And hears it roar beneath. Id. Hamlet.

High and noble things I slightly may not tell, Nor light and idle toys my lines may vain'.y swell.

Dra if ton.

They exchange for knives, glasses, and such toyt, great abundance of gold and pearl. Abbot.

Because of old

Thou thyself doat'dst on womankind, admiring Their shape, their colour, and attractive grace, None are, thou think'st, but taken with such toys.

Milton.

So said he, and forbore not glance or toy Of amorous intent. Id.

\ our society will discredit that tnuishness of wan- ton fancy that plays tricks with words, and frolicks with the caprices of frothy imagination. Glanville

() virtue ! virtue ! what art thou become, That men should leave thee for that fou, a woman ?

Dry den.

Fans, silks, ribbans, laces, and gewgaws, lay sc thick together, that the heart was nothing else but a toyshop. Addison.

In Delia's hand this toy is fatal found, Nor could that fabled dart more surely wound.

Pope.

We smile at florists, we despise their joy, And think their hearts enamoured of a toy. Young.

But what in oddness can be more sublime, Than S , the foremost toyman of his lime ? Id.

TOZE, v. a. See TOWSE and TEASE. To pull by violence or importunity.

Think'st thou, for that I insinuate, or toze from thee thy business, I am therefore no courtier ?

Shakspeare.

TOZZETH (John Targioni), botanist, born at Florence in 1712. He studied physic at Pisa, and became keeper of the botanic garden at Flo- rence. He wrote several works in Latin and Italian, on botany ; one upon the Utility of Plants in the Practice of Physic. He died at Florence in 1783.

TOZZIA, in botany, a genus of plants of the class didynamia, and order of angiospermia ; and ranking in the natural method under the fortietn order, personate.

TRACE, n. s. & v. a. } Fr. trace, tracer,

TRA'CER, n. s. S Span, trazur ; Lat.

tractus; Ital. traccia. Mark left by any thing passing; footsteps; harness for a beast of bur- den : to trace is to follow hy footsteps, or re- maining marks ; to mark out ; follow ; waU over : the noun substantive following corre- sponds.

Men, as they trace. Both feet and face one way are wont to lead.

Spenser.

Her waggon spokes made of long spinners' legs ; The cover, of the wings of grasshoppers ; The traces of the smallest spider's web. Shakspeare.

We do trace this alley up and down. Id.

Ambassadors should not be held the tracers of a plot of such malice. Howel.

That servile path thou nobly dost decline, Of tracing word by word, and line by line.

Denham.

These as a line their long dimension drew, Streaking the ground with sinuous trace. Milton.

The laboured ox In his loose traces from the furrow came. Id.

They do but trace over the paths beaten by the an- cients, or comment, critick, or flourish upon them.

Temple.

The people of these countries are reported to have lived like the beasts among them, without any traces of order, laws, or religion. Id.

He allows the soul power to trace images on the brain, and perceive them. Locke.

To this haste of the mind,, a not due tracing of the arguments to their true foundation is owing. Id.

You may trace the deluge quite round the globe in profane history ; and every one of these people have a tale to tell concerning the restauration.

Burned Theory.

The shady empire shall retain no trace Of war or blood, but in the sylvan

chace. Pope.

Twelve young mules, New to the plough, unpractised in the trace.

Id. Odyfsey.

His pen can trace out a true quotation. bwijt.

TRACHAS, a town of Latium. Ovid.

TUACHELIUM, in botany, umbelliferous

throatwort, a genus of plants in the class pen- tandria, and order of monogynia ; ranking in the natural mathod under the twenty-ninth order, campanaceae.

TRACHINIA, a country of Thessaly.in Phthi- otis. Trachis was the capital.

TRACHINUS, in ichthyology, the weever, a genus of fishes belonging to the order of jugu- lares. There is but one species, viz. T. draco, or common weever. It grows to the length of twelve inches, but is commonly found much less ; the irides are yellow ; the under jaw is longer than the upper, and slopes very much to- wards the belly ; the teeth are small ; the back is straight, the sides are flat, the belly is promi- nent, the lateral line straight : the covers of the gills are armed with a very strong spine : the first dorsal fin consists of five very strong spines, which, as well as the intervening membranes, are tinged with black ; this fin, when quiescent, is lodged in a small hollow : the second consists of several soft rays, commences just at the end of the first, and continues almost to the tail: the pectoral fins are broad and angular ; the ventral tins small ; the vent is placed remarkably for- ward, very near the throat : the anal fin extends to a small distance from the tail, is a little hol- lowed in the middle, but not so much as to be called forked : the sides are marked lengthwise with two or three dirty yellow lines, and trans- versely by numbers of small ones; the belly silvery. The wounds inflicted by its spines are exceedingly painful, attended with a violent burning and most pungent shooting, and some- times with an inflammation that will extend from the arm to the shoulder. The remedy used by some fishermen is the sea sand, with which they rub the place affected for a considerable time. At Scarborough, stale urine warmed is used with success. An instance is mentioned of a person who was reduced to great danger by a wound from this fish, and who was cured by the appli- cation of sweet oil, and taking opium and Venice treacle. This fish buries

itself in the sands, leav- ing only its nose out, and if trodden on imme- diately strikes with great force. Notwithstanding this noxious property of the spines, it is exceed- ingly good meat.

TRACK, n. $. kv.a. J Old Fr. trac ; Ital.

TRAC'KLESS, adj. S trnccia. Mark left

upon the way by the foot or otherwise; trace; road : to trace ; follow by the footsteps : track- less, untrodden ; unmarked l>y roads or foot- steps.

As shepherd's cur that in dark evening's shade I lath tracked forth some savage beastis treade.

Spenser.

With track oblique sidelong he works his way.

Milton.

He was not only a professed imitator of Horace, but a learned plagiary in all the others ; you track him every where in their snow. Dryden.

Hung by the neck and hair, and dragged around, The hostile spear yet sticking in his wound, With tracks of blood inscribed the dusty ground. Id.

Behold Torquatus the same track pursue, And next the two devoted Decii view. Id. Mne\d.

Consider the exterior frame of the globe, if we may find any traces or footsteps of wisdom in its consti- tution. Benttey.

Lost in trackless fields of shining day,

Unable to discern the way, Which Nassau's virtue only could explore.

Prior.

Following the track of Satan. Milton.

TRACT, n. s. ~] Lat. tractns. Any

kind of extended sub- stance; any thing pro-

TRAC'TABLE, adj. TRAC'TABLENESS, n. s.

}>tracted ; continuity ;

course ; process ; treatise; discourse: tractable is easily

TRAC'TATE,

TRAC'TILE, adj.

TRACTIL'ITY, n. s.

TRAC'TION.

guided into a course ; manageable ; the noun substantive corresponding: tractate is a treatise; discourse ; book : tractile, capable of bein^ drawn out into length ; ductile : tractility and traction corresponding.

For moderation of those affections growing from the very natural bitterness and gall of adversity, the scripture much allegeth contrary fruit, which afflic- tion likewise hath, whensoever it falleth on them that are tractable, the grace of God's holy spirit con- curring therewith. Hooker.

Tractable obedience is a slave To each incensed will. Shakspeare. Henry VII.

The tract of every thing Would by a good discourser, lose some life Which action's self was tongue to. Id. Henry VIII.

The weary sun hath made a golden set, And, by the bright tract of his fiery car, Gives signal of a goodly day to-morrow.

Shakspeare.

Only there are some traces which, by high moun- tains, are barred from air and fresh wind. Raleigh.

The consistences of bodies are very divers ; fragile, tough ; flexible, inflexible ; tractile, or to be drawn forth in length, intractile. Bacon's Natural Hi>tt>ni.

Many divines of our own nation, in sermons and written tractates of the sabbath, and in their expo- sitions of the fourth commandment, maintain the foresaid position. ll'hite.

The myrtle flourished! still ; and wonderful it is that for so long a tract of time she should still con- tinue fresh. Hoicel.

If a strict hand be kept over children from the be- ginning, they will in that age be tractable, and quietly submit. Locke.

Monte Circelo, by Homer called Insula -'Eea, is a very high mountain joined to the main land by a narrow tract of earth. Addison.

Silver, whose ductility and tractility are much in- feriour to those of gold, was drawn out to so slender a wire, that a single grain amounted to twenty-seven feet. Derham.

The church clergy at that time writ the best col- lection of tracts against popery that ever appeared .

Swift.

TRA CTRIX, in geometry, a curve line; called also CATENARIA : which see.

*TRADE, n.s., «.n.&v.«O Italian frtil/n ,• TRA'DED, adj. Span. t-*to ; Lat.*

TRADE'FUL, | tracto. Traffic;

TRA'DER, n. s. J > commerce ; ex-

TRADES'FOLK, I change of goods

TRADES'MAN. I for other goods,

TRADE'WINP. J or for money; em-

ployment, manual or mercantile; custom ; habit : to trade is to traffic ; deal commercially ; act mercenarily ; have a tradewind : sell or ex- change commercially : tradewind, the monsoon, a periodical tropical wind : traded is accustomed ; practised : tradeful, commercial : a trader and

tradesman, one who is employed in trade: the former, however, is applied to merchants, not the latter : tradesfolk, people employed in trade.

They were thy merchants : they traded the per- sons of men and vessels of brass in thy market.

Ezekiel, xxvii. 13.

He commanded these servants to be called, to know how much every man

had gained by trading.

Luke, xix. 15.

Appoint to every one that is not able to live of his freehold a certain trade of life ; the which trade he shall be bound to follow. Spenser on Ireland.

Ye tradeful merchants, that with weary toil Do seek most precious things to make your gain,

And both the Indies of their treasure spoil, What needeth you to seek so far in vain 1 Spenser.

Pilgrims are going to Canterbury with rich offer- ings, and traders riding to London with fat purses. Shahspeare. Henry IV.

I'll mountebank their loves, and come home be- loved Of all tlie trades in Rome. Id, Coriolanus.

I'll live by the awl, 1 meddle with no tradesmen's matters. Id.

Eyes and ears,

Two traded pilots 'twixt the dangerous shores Of will and judgment. Id. Troilus and Cretsida.

Whosoever commands the sea, commands the trade ; whosoever commands the trade of the world, commands the riches of the world, and consequently the world itself. Raleigh.

Call some of young years to train them up in that trade, and so fit them for weighty affairs. Bacon.

Order a trade thither and thence so as some few merchants and tradesmen, under colour of furnishing the colony with necessaries, may not grind them.

Id.

They on the trading flood ply toward the pole.

Milton.

Comfortable is the trade-wind to the equatorial parts, without which life would be both short and grievous. Cheyne.

The emperor Pertinax applied himself in his youth :o a gainful trade; his father, judging him fit for a better employment, had a mind to turn his

educa- tion another way ; the son was obstinate in pursuing so profitable a trade, a sort of merchandise of wood. Arbuthnot on Coins.

His were the projects of perpetuum mobiles, and of increasing the trade-wind by vast plantations of reeds. Arbuthnot.

M. Jourdon would not be thought a tradesman, but ordered some silk to be measured out to his part- ner's friends : now I give up my shop. Prior.

Boastful and rough, your first son is a squire ; The next a tradetman, meek, and much a liar.

Pope's Epigram.*

That day traders sum up the accounts of the week. Swift.

Domesticks in "a gentleman's family have more opportunities of improving their minds than the or- dinary tradesmen. Id.

By his advice victuallers and tradesfolk would soon get all the money of the kingdom into their hands.

Id.

Penitens was a busy notable tradesman, very pros- perous in his dealings, but died in the thirty-fifth year of his age. Law.

TRADESCANT (John), an ingenious natu- ralist, said to have been a native of Flanders, who established the first museum in this country, at South Lambeth, about the end of the reign of Klizabeth. It was sold to Elias Ashmole, and deposited at Oxford.

TRADESCANT (John), the son and giandson of the preceding, were also eminent botanists, anti- quaries, and collectors of antiquities, plants, fossils, &c., but no particular memoir is pre- served of any of the three, except what is re- corded on their monument in Laonbeth church- yard.

TRADESCANTIA, in botany, Virginian spi- der-wort, a genus of plants, in the class hexan- dria, and in the order of monogynia ; ranking in the natural method under the sixth order, en- satae.

TRADE- WINDS (so called from their favouring commerce) ; easterly winds which constantly prevail, with slight variations, in certain regions within the tropics. It is a common notion, that the north-east trade-wind blows exactly from the north-east point nearly to the equator, when it gradually becomes more and more easterly, till at length it blows due east;

and so with the south- east trade. This notion is, however, erroneous. The trade-winds in the Atlantic and Pacific oceans, extend to about 28° of latitude each side of the equator ; so that a ship, after passing 30°, may expect to enter them every day. But, on first entering them, they will be found to blow from the east, or even a little southerly, and as you advance, to draw round gradually to north- east, and even north, at the southern limit of the north-east trade, where it is commonly repre- sented as being due east. This limit varies with the position of the sun, reaching, when the sun has a southern declination, to within three or four degrees north latitude, and, as the sun ac- quires a more northern declination, receding ten or twelve degrees from the equator. At this point, the mariner enters the region of calms and variables, as they are called, where the wind has a more or less southerly direction, and sometimes blows freshly from the south- south-west. This re- gion varies from 150 to 550 miles, and is subject to heavy rains. On passing this range, the south- east trade begins, and displays the same pheno- mena as the north-east. To the north and south of the north-east, and south-east trades, westerly winds will be found generally to prevail, though less regular in the northern than in the southern hemisphere ; and it has been remarked that the average of the passages made by the Liverpool packets from New York out, for a period of six years, was twenty-three days, andjfrom Liyerpool to New York, that is, from east to west, thirty- eight days.

TRADITION, n. s. TRADITIONAL, adj. TRADI'TION ALLY, adv. TRADITIONARY, adj. TBA'DITIVE.

French tradition , [Latin traditio. The >act or practice of delivering accounts I from mouth to

mouth ; unwritten communication from age to age ; anything so communicated ; traditional and traditionary mean delivered by tradition : traditire, transmissible in that way : the adverb corresponding with traditional, which is also (im- properly) used for observant of traditions. TRADUCE', v. a. \ Lat. traduco ; Fr. tra TRADUCE'MENT, n. s. (duire . To censure ; con- TRADU'CIBLE, adj. fdemn; represent as TRADUC'TION, n. s. "blameablc; calumniate;

also, retaining the Latin sense of duco more strictly, to lead out ; propagate ; continue : tra- ducement we only find used in the former senses :

traducible is such as may be derived : traduc- tion, derivation from one of the same kind ; transmission ; tradition.

The best stratagem that Satan hath, who knoweth his kingdom to be no one way more shaken than by the publick devout prayers of God's church, is by traducing the form and manner of them, to bring them into contempt. Hooker.

TRAFALGAR, a cape of Spain, on the coast of Andalusia, at the entrance of the straits of Gibraltar, opposite to Cape Esparte, on the coast of Africa; off which, on the 21st of October, 1805, the British fleet, commanded by lord Nel- son, obtained the memorable victory over the combined fleets of France and Spain, which cost his country his valuable life.

TRAF'FIC, n. J. & v. n. \ Fr. trafique ; Ital.

TRAFFICKER, n. s. S trajfico ; Span, tra- figar. Commerce; merchandizing; large trade. It was formerly used of foreign commerce in dis- tinction from trade : he who conducts traffic.

You'll see a draggled damsel From Billingsgate her fishy traffiek bear. Gay.

Fr. tragedie; Lat. tragtedia. A drama- tic representation of a serious act on : any S-mournful or dread- I ful event: a trage- I dian is a writer or I actor of tragedy :

TRA'GEDY, n. «.

TRAGE'DIAN,

TRA'GIC, ndj.

TRA'GICAL,

TRA'GICALLY, adv.

TRA'GICALNESS, n. s.

TRAGICOM'EDY, n. $.

TRAGICOMICAL, adj.

TRAGICOM'ICALLY, adv.) tragic, tragical, and tragically, follow both the particular and general sense of tragedy ; tragicomedy is a drama com- posed of serious and comical events, with which sense the adjective and adverb following cor- respond.

TRAGEDY (from the Greek and Latin traga- dia). The Greek word is derived from rpayoc, and if$i\, a song. It is an old, but not, there- fore, less absurd opinion, says Adelung, in his Wo rlerbuch, that the first part of the word rpayoc signifies, in this composition, a he goat, and the whole, a song in honor of Bacchus, sung at the sacrifice of a he goat, or a play for which the poet received a he goat — a derivation occasioned by its being generally known that rpoyof sig- nifies a he goat, while it is not so commonly known that it also signifies melancholy, of which the Latin tragiau is a clear proof; otherwise that word would have signified yoatish. Ilesy- chius explains ccrpayw^u, explicitly, by airot- PW£H, aroOpqm, he weeps. In the ancient Up- per German, the word trego signifies grief; in Lower Saxon, tra"ge is weary, sad: and in Swed- ish traga means to mourn, and triage, grief: all of which are connected with the Greek rpayucoc or rpayoc. Tragedy, therefore, properly sig- nifies a melancholy song, as comedy signifies a gay one. But that rpayoc in Greek signifies both a he goat and melancholy, is as accidental as that ram, in English, means a male sheep, and also to drive down. So far Mr. Adelun?. The invention of tragedy, in its first rude form, i< escribed to Thespis, who lived in the lime of colon. According to Herodotus, the people of*

Sicyon introduced tragic choruses before the times of Thespis, first in honor of Bacchus, then of Adrastus: to them, therefore, the invention of the Greek tragedy is generally ascribed ; its de- velopment is due to /Eschylus. As Aristotle found it, he described it as a dramatic poem, which has for its object to purify by terror and pity, awakened by the poetical imitation of an action. To understand this oft-repeated expla- nation, we must examine the meaning of purify- ing passions by means of passions. The arti- ficial production of those passions which affect us disagreeably, cannot well have any effect in purifying the soul, except by strengthening the mind, and exercising it in governing the passions in general. For such a purpose, indeed, a state of mind seems proper, in which man feels at the same time the influence of strong emotions, and the power to free himself from their influence at pleasure. Into this state tragedy strives to bring us. It aims to awaken in us those passions which rest on sympathy, (and which, therefore, impede our inward freedom less than the purely selfish ones), by an artificial appearance, by truth of conception without reality of action, and whilst it does not hide the want of reality, it leaves us the feeling of ability to free ourselves from the influence of the scene at pleasure, even if it were only by the consciousness that the whole is but appearance. Who could calmly witness the performance of a tragedy if he really thought, but for a moment, the sufferings repre- sented on the stage were real ? The poet strives to operate upon us by the liveliness of his crea- tions, and thus to arouse within us those powers which counteract the passions. As the exercise of these powers is the object in view, he must avoid carrying the

sympathetic emotion so far, that we can escape the pain only by a complete destruction of the illusion ; because, as soon as we take this means, that exercise of the moral faculty ceases. We must be able to suffer the conception of being in the situation of the actors, even when we see them perish, by feeling in ourselves the existence of those powers, of which they, for the moment, seem to be deprived. From this point of view, the definition of Aris- totle is perhaps to be reconciled with what has been said, in modern times, on the essence of tragedy. Even dramatic writers have confounded the melancholy with the tragic ; but it may be de- duced from what has been said, that the essence of tragedy does not depend on the melancholy end, on the tears extorted, but on the greatness and elevation of the chief idea contained in the fable, and which it illustrates as by a living example. Whilst we pity the suffering depicted, we must be able to delight in the nobleness of its cause, as, otherwise, no feeling is excited in us but a purely painful one, from which we can only es- cape by the idea that the whole spectacle is an illusion. Many theories have been started to explain what is properly the tragical in tragedy, some very obscure, others less so ; as, that the tragical is founded on the struggle of human freedom with necessity, of the will with fate, &c. Bui the comic, the true comic, is, in many cases, nothing else. This struggle belongs to tiie drama in general.

TRA

An anthem to their god Dionysus, whilst the goat stood at his altar to be sacrificed, was called the goat-song or tragedy.

Rymer's Tragedies of the Last Age. Bid them dress their bloody altars With every circumstance of tragick pomp. Rowe.

The tale of this song is a pretty tragical story ; and pleases, because it is a copy of nature.

Addisun.

The whole art of the tragi-comical farce lies in interweaving the several kinds of the drama, so that they cannot be distinguished.

Guv' What d' ye call it ?*

Like bold Phaetons, we despise all benefits of the father of light, unless we may guide his chariot ; and we moralize the fable as well in the tragicalness of the event, as in the insolence of the undertaking.

Decay of Piety.

TRAGIA, in botany, a genus of plants, in the class of moncecia, and order

of triandria, ranking according to the natural method, in the eighteenth order, tricoccje.

TRAGOPOGON, goat's beard, in botany, a genus of plants belonging to the class of synge- nesia, and to the order of polygamia sequalis ; and in the natural system ranging under the fourth order, compositae. The receptacle is naked, the calyx simple, and the pappus plumose. There are fourteen species; of which two are British. 1. T. porrifolium, the purple goat's beard, has the calyx longer than the radius of the floret ; the flowers are large, purple, single, and terminal ; and the leaves long, pointed, and bluish. The root is long, thick, and esculent. Tt grows in meadows, and is cultivated in gar- dens under the name of salsafy. 2. T. pratense, the yellow goat's beard, has its calyxes equal with the florets, and its leaves entire, long, nar- row, sessile, and grassy. In fair weather this plant opens at sun rising, and shuts between nine and ten in the morning. The roots are conical and esculent, and are sometimes boiled and served up at table like asparagus. It grows on meadows.

TRAGURIUM, an ancient town of Dalmatia, on the sea coast.

TRAGUS, a river of ancient Arcadia, running into the Alpheus.

TRAJAN (Marcus Ulpius), a celebrated Roman emperor, who gained many victories over the Parthians and Germans, pushing the empire to its utmost extent on the east and north sides. He died at Selinunte, a city of Cilicia, which from him was called Trajanopolis. See PAR- TIIIA, and ROME.

TRAJANOPOLI, a considerable town of Eu- ropean Turkey, in Romania, situated on the right bunk of the Maritza, the ancient Hebrus, about thirty miles from its mouth. It is the see of a Greek archbishop, and contains about 15,000 inhabitants.

TRAJANOPOLIS, an ancient town of Thrace. — 2. A name given to Selinus, where Trajan died.

TI'AJAN'S COLUMN, a famous historical co- lumn erected in Rome, in honor of the emperor Trajan. It is of the Tuscan order, though some- what irregular: its height is eight diameters, and its pedestal Corinthian : it was built in a large square called Forum Romanum. Its base con-

sists of twelve stones of an enormous size, and is raised on a focle, or foot, of eight steps ; with- inside is a staircase illuminated with forty-foui

windows. It is 140 feet high, which is thirty- five feet short of the Antonine column, but the workmanship of the former is much more va- lued. It is adorned from top to bottom with basso relievos, representing the great actions of the emperor against the Dacians.

TRAJECT', v. a. & «. s. (Latin trajectus.

TRAJEC'TION, n. s. j To cast through ;

throw ; used by Shakspeare, as a noun substan- tive, for a ferry : trajection is the act of darting through.

What notes and garments he doth give thee, Bring to the traject, to the common ferry, Which trades to Venice.

Shahspeare. Merchant of Venice.

The (rejections of such an object more sharply pierce the martyred soul of John, than afterwards did the nails the crucified body of Peter.

Browne's Vulgar Errours.

Later astronomers have observed the free motion of such comets as have, by a tnijectimi through the aether, wandered through the celestial or interstellar part of the universe. Boyle.

If there are different kinds of aether, they have a different degree of rarity ; by which it becomes so fit a medium for trajecting the light of all celestial bodies. Grew's Cnsmnlogia.

If the sun's light be trajected through three or more cross prisms successively, those rays which in the first prism are refracted more than others, are in all the following prisms refracted more than others in the same proportion. Newton.

TRAJECTORY, a term often used, generally for the path of any body, moving either in a void, or in a medium that resists its motion ; or even for any curve passing through a given number of points.

TRAJECTUS RHENT, the name given by the Romans to the town and province now called Utrecht.

TRAIL, v. a., v.n., & n. s. Fr. trniller ; Belg. traglen. To hunt by the track ; draw or drag along : be drawn out : the ' noun substantive means track ; scents followed : any thing drawn out in length or drawn behind.

When his brother saw the red blood trail Adown so fast, and all his armour

steepe, For very felness loud he ‘gan to weep. Spenser.

And round about her work she did empale With a fair border wrought of sundry flowers. Enwoven With an ivy winding trail.

Id. Muiitpiitmct.

Beat thou the drum, that it speak mournfully ; Trail your steel pikes. Shakspeare. Coriolanus.

How cheerfully on the false trait they cry ! Oh, this is counter, you false Danish dogs.

Shakspeare.

Swift men of foot, whose broad-set backs their trailing hair did hide. Chapman.

Because they shall not trail me through their

streets Like a wild beast, I am content to go.

Milton. Agonisiet.

Since the flames pursued the trailing smoke, He knew his boon was granted.

Vryden’s Knight’ Tale.*

Faintly he staggered through the hissing throng And hung his head and trailed his legs along.

Dryden,

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When lightning shoots in glittering trails along, It shines, ‘tis true, and gilds the gloomy night ; But when it strikes, ‘tis fatal. Rowe’s Royal Convert.

A sudden star it shot through liquid air, And drew behind a radiant trail of hair. Pope.

Thrice happy poet, who may trail Thy house about thee like a snail. Swift.

TRAIN, v. a. & n. s. > Fr. trainer ; Ital. TRAJN'BAND, n.s. J trainare,ofLat.trahino, traho. To draw along ; allure ; entice ; educate ; exercise : as a noun substantive, series ; flowing part of a robe ; procession ; tail of a bird ; retinue ; artifice ; stratagem ; the line of powder leading to a mine : trainbands, a kind of militia.

Abram armed his trained servants born in his house, and pursued. Gen. xiv. 14.

A place for exercise and training up of youth in the fashion of the heathen. 2 Mac. iv. 9.

He cast by treaty and by train Her to persuade. Spenser.*

A thousand pounds a year, for pure respect ! That promises more thousands : honour's train Is longer than his fore skirts.

S/iaktpeare. Henry VIII. My train are men of choice and rarest parts, That in the most exact regard support The worships of their names. Shakspeare.

For that cause I trained thee to my house. Id.

If but twelve French

Were there in arms, they would be as a call To train ten thousand English to their side. Id.

Costly followers are not to be liked, lest, while a roan makes his train longer, he makes his wings shorter. Bacon.

Call some of young years to train them up in that trade, and so fit them for weighty affairs. Id.

Their general did with due care provide, To save his men from ambush and from train.

Fairfax.

The bird guideth her body with her train, and the ship is steered with the rudder. Haketmll.

This moved the king, To lay to draw him in by any train.

Daniel's Civil War.

With an army abundantly supplied with a train of artillery, and all other provisions necessary, the king advanced towards Scotland. Clarendon.

He directed the train-bands, which consisted of the most substantial householders, to attend. Id.

The other, whose gay train Adorns him coloured with the florid hue Of rainbows and starry eyes. Milton.

Spirits trained up in feast and song. Id.

Now to my charms

And to my wily trains! I shall ere long He well stocked with as fair a herd as grazed About my mother Circe. Id.

Contracting their body, and being forced to draw in their fore parts to establish the hinder in the eleva- tion of the train ; if the fore parts do part and incline to the ground, the hinder grow too weak, and suffer the train to fall. Browne.

A council of war was called, wherein we agreed to retreat : but, before we could give the word, the train- bandi, taking advantage of our delay, fled first.

Additon.

He would put a check to the fury of war, that a •top might be put to those sins which are of its train.

Smallridge.

If things were once in this train, if virtue were es- tablished as necessary to reputation, and vice not only loaded with infamy, but made the infallible ruin of all men's pretensions, our duty would take root in our nature. Swift.

The author of your beings can by a glance of the eye, or a word speaking, enlighten your mind, and conduct you to a train of happy sentiments. Watts.

TRAIPSE, v. a. See TRAPE. A low word. To walk in a careless or sluttish manner.

Two slip-shod muses traipse along, In lofty madness, meditating song. Pope.

TRAIT, n. s. Fr. trait ; Ital. t ratio ; Lat. trac- tus. A stroke ; touch. Scarcely English : yet of late very common.

The harmonizing tints and softer traits Elusive shun the crude observer's gaze, And justly to discriminate demand A practised pencil and a master

hand.

Whyte's Poems.

By this single trait Homer marks an essential dif- ference between the Iliad and Odyssey ; that in the former the people perished by the folly of their kings ; in this, by their own folly.

Broome's Notes on the Odyssey.

TRAITOR, n. ». \ Fr. traitre; Lat. tra TRAI'TORLY, adj. I ditor. One who being TRAI'TOROUS, adj. > trusted betrays : trai- TRAJ'TOROUSLY,«TRAI'TKESS, n.s. J traitor; and the deriva- tives strictly correspond.

The law laid that grievous punishment upon trai- tor, to forfeit all their lands to the prince, that men might be terrified from committing treasons.*

Spenser on Ireland.

Good duke Humphry traiterously is murthered By Suffolk. Shakspeare. Henry VI.

If you flatter him, you are a great traitor to him.

Bacon.

Thou bitter sweet! whom I had laid Next me, me traiterously hast betrayed ; And unsuspected half invisibly At once fled into him, and stayed with me. Donne.

Fontinius knows not you, While you stand out upon these traitorous terms.

Ben Jomnn. What news with him, that traitorous wight ?

Daniel.

They had traitorously endeavoured to subvert the fundamental laws, deprive the king of his regal power, and to place on his subjects a tyrannical power. Clarendon.

I, what I am, by what I was, o'ercome : Traitress, restore my beauty and my charms, Nor steal my conquest with my proper arms.

Drydeii.

By the dire fury of a traitress wife, Ends the sad evening of a stormy life.

Pope's Odyssey.

There is no difference, in point of morality, whether a man calls me traitor in one word, or says I am one hired to betray my religion, and sell my country. Swift.

TRAITORS' ISLAND, an island in the Pacific Ocean, discovered by Le Maire and Schouten, in 1616, and so called from an attempt made by the natives to seize the vessel. It is low, with a hill in the centre, and divided by a channel 300 yards wide, from the island of Kootahe. Both these islands were visited by captain Wallis in 1767, who called them Keppel's and Boscawen's Islands: and afterwards by Perouse in 1787. The inhabitants strictly resemble the others of the Friendly Islands. Long. 173° 48′ W., lat. 15° 55′ N.

TRALATI'TIOUSLY, adv. Of Lat. trans- latus. Metaphorically ; not literally ; not accord- ing to the first intention of the word.

Language properly is that of the tongue directed to the ear by speaking ; written language is trata- titiouily so called, because it is made to represent to the eye the same words which are pronounced.

Holder's Elements of Speech.

TRALIN'EATE, v. n. Trans and line. To deviate from any direction.

If you tralineate from your father's mind, What are you else but of a bastard kind ? Do then as your progenitors have done. And by their virtues prove yourself their son.

Dry den.

TRALLES, an ancient people of Illyricum.

TRALLIAN (Alexander), a Greek writer on physic, a native of Tralles in Lydia, who lived about the middle of the sixth century. He was the first who opened the jugular vein, and used cantharides as a blister for the gout.

TRAM'MEL, n. s. & v. a. Fr. tramuil ; Lat. trama, tragula. A net in which birds or fish are caught ; any kind of net or shackles : to catch ; in- tercept.

If the assassination

Could trammel up the consequence, and catch With its surcease success. Shakspeare. Macbeth.

The trammel differeth not much from the shape of the bunt, and serveth to such use as the wear and haking. Carew.

I may go shufflingly at first, for I was never before walked in trammels ; yet I shall druge at constancy, till I have worn off the hitching in my pace.

Dryden's Spanish Fryar.

TRAMMELS, in mechanics, are also an instru- ment used by artificers for drawing ovals upon boards, &c. One part of it consists of a cross with two grooves at right angles ; the other is a beam carrying two pins, which slide in those grooves, and also the describing pencil.

TRAM'PLE, v. a. & v. n. Dan. trampe. To tread under foot with pride, contempt, or eleva- tion : tread in contempt.

Cast not your pearls before swine, lest they tram- ple them under their feet. Matt. vii. 6.

My strength shall trample thee as mire. Milton.

Your country gods I scorn, And trample on their ignominious altars. Rowe.

Diogenes trampled on Plato's pride with greater of his own. Government of the Tongue.

TRANCE, n. s. > Fr. transe; Lat. transit™.

TRAN'CED, adj. S An ecstacy; a state in which the soul is rap't into visions of future or distant things. See TRANSE. The adjective corres- ponds.

Gynecia had been in such a trance of musing that Zelmane was fighting with the lion before she knew of any lioa's coming. Sidney.

Rapt with joy resembling heavenly madness, My soul was ravisht quite as in a trance.

Spenser's Sonnets.

That Taliessen, once which made the rivers dance, And in his rapture raised the mountains from their

trance. Drayton.

Abstract as in a trance, methought I saw. Milton.

TRAN'GRAM, n.s. A cant word. An odd intricately contrived thing.

What's the meaning of all these trangranu and gimcracks ? what arc you going about, jumping over

my master's hedges, and running your lines cross his grounds 1 Arbuthnot.

TRANI, a considerable town of Naples, pro- vince of Bari, situated on the Adriatic, is better built than most towns in this part of Italy. Thirty-five miles south of Adrianople, has a fine cathedral and good harbour. Inhabitants 14,000.

TRAN'NEL,«.s. Perhaps from trennel. A sharp pin.

With a small trannel of iron, or a large nail grounded to a sharp point, they mark the brick.

Moxon's Mechanical Exercises.

TRAN'QUIL, adj.) Fr. tranqmlle ; Latin

TRANQUii/LiTY,rc. s. J trunquillus. Quiet ; peaceful ; undisturbed : state of being so.

Leave off,

To let a weary wretch from her due rest, And trouble dying souls tranquillity. Speax, .

1 had been happy,

So I had nothing known. Oh now, for ever Farewel the tranquil mind ! farewel content !

Shakspearr.

You can scarce imagine any hero passing from one stage of life to another with so much tranquil- lity, so easy a transition, and so laudable a behaviour.

Pope.

TRANS, a Latin preposition, signifying be- yond, or on the farther side ;

makes part of many English words, conveying some idea of that kind, either local or metaphorical. It also made part of the ancient names of many countries, distant from Rome, and opposed Cis, on this side ; as Transalpine, beyond the Alps; Transpadane, beyond the Po, &c.

TRANSACT, v. a.) Latin transact™. To

TRANSAC'TION, n. s. \ manage ; negociate ; con- duct a treaty or affairs; perform; do: the noun substantive corresponding.

It is not the purpose of this discourse to set do wn the particular transactions of this treaty. Clarendon.

It cannot be expected they should mention par- ticulars which were transacted among some few of the disciples only, as the transfiguratioa and the agony. Addison.

TRANSALPINA GALLIA. See GALLIA.

TRANSALPINE, trans and Alpes. Beyond the Alps.

*TRANSANIMATION, n. *. Trans and anlma. Conveyance of the soul from one body to another.*

If the transanimation of Pythagoras were true, that the souls of men transmigrate into species answering their former natures, some men cannot escape that very brood whose sire Satan entered.

Browne'$ Vulyar Errottr.

TRANSCEND', v. a. & v. n. ˆ Lat. transcendo TRANSCEND'ENCE, n. s. \ To pass; over-

TRANSCEND'ENCY. 1 pass ; outgo;

TRANSCEND'ENT, adj. [excel : as a verb

TRANSCENDENT'AL, | neuter, to climb;

TRANSCENDENT'LY. adv. J exceed thought : transcendence and transcendency, excellence; exaggeration; excessive elevation : transcendent is excellent ; surpassing : the adverb correspond- ing : transcendental, supereminent; also general, pervading many particulars.

*It is true greatness to have in one the frailty of a man, and the security of a God ; this would have done better in poesy, where transcendencies are more allowed. Bacon's Essays**

It is a dangerous opinion to such popes as shall irunscend their limits and become tyrannical.

Bacon.

To judge herself, she must herself transcend, As greater circles comprehend the less. Davies.

Thou, whose strong hand, with so trtauctoiderit

worth, Holds high the reign of fair Parthenope. Craslutio.

The consistence of grace and free will, in this sense, is no such transcending mystery, and 1 think there is no text in scripture that sounds any thing towards making it so. Hammond.

These are they

Deserve their greatness and unenvied stand, Since what they act transcends what they command.

Denham.

If thou beest he — But 0 ! how fallen, how changed From him who in the happy realms of light, ('loathed with trantcendent brightness, didst outshine Myriads, though bright ! Milton.

This glorious piece transcends what he could think ; So much his blood is nobler than his ink. Waller.

High though her wit, yet humble was her mind As if she could not, or she would not find How much her worth transcended all her kind.

Dryden,

Though the Deity perceiveth not pleasure nor pain as we do ; yet he must have a perfect and transcend- ental perception of these, and of all other things.

Grew's Cwmolagia,

The law of Christianity is eminently and tnmscen- dently called the word of truth. Smith's Sermons.

Oh charming princess ! oh transcendent maid !

Philip.*

TRANSCENDENTAL CURVE, in the higher geo- metry, is such a one as cannot be denned by any algebraical equation ; or of which, when it is °xpressed by an equation, one of the terms is a variable quantity.

These are the same with what Descartes, and, after his example, several others, call me- chanical curves, and which they would have ex- cluded out of geometry ; but Sir Isaac Newton and M. Leibnitz are of another opinion : for, in effect, in the construction of geometrical pro- blems, one curve is not to be preferred to an- other, as it is denned by a more simple equation, but as it is more easily described than that other. And some of these transcendental or mechanical curves are found of greater use than all the al- gebraical ones together, except the circle. Leib- nitz, in the Acta Eruditor, Lips., gives us a kind of transcendental equations, by which these transcendental curves are actually denned, and which are of an indefinite degree ; that is, are not always the same, in all the points of the curve.

Whereas therefore algebraists use to assume some general letters or numbers of the quantities sought, in these transcendental problems, Leib- nitz assumes general or indefinite equations for the lines sought; e. gr. putting x and y for the absciss and ordinate, the equation he uses for a line sought isa + bx+cy + ex-- yfx x + g y y, &c., = 0. By the help of which in- definite equation, which in reality is finite, for it n.ay always be determined how far soever it is necessary to raise it, he seeks the tangent ; and, comparing that which results with the given property of tangents, he finds the value of the assumed letters u,l>, c, and thus defines the equa-

tions < f the liiiL' si.ught. If the comparison above-mentioned do not proceed, he pronounces the line sought not to be an algebraical, but a transcendental one.

This supposed he goes on f.o find the species of transcendency; for some transcendentats de- pend on the general division or section of a ratio, or upon the logarithms, others upon the arcs of a circle, and others on more indefinite and compound enquiries. Here, therefore, he- sides the symbols x and y, he 'assumes a third, as v, which denotes the transcendental quantity ; and of these three forms a general equation of the line sought, from which he finds the tangent according to the differential method, which suc- ceeds even in transcendental quantities. What he finds he compares with the

given properties of the tangent, and so discovers not onty the value of a, b, c, &c , but also the particular na- ture of the transcendental quantity. And though it may sometimes happen that the several trari- scendentals are so to be made use of, and these of different natures^ too, one from another; also, though there be transcendents, or transcenden- tals, and a progression of these in mfinitum ; yet we may be satisfied with the most easy and useful one, and for the most part may have re- course to some peculiar artifices for shortening the calculus, and reducing the problem to as simple terms as may be.

In order to manage transcendental problems (wherever the business of tangents or quadra- tures occurs) by a calculus, there is hardly any that can be imagined shorter, more advantageous, or universal, than the differential calculus or analysis of indivisibles and infinites.

*By this method we may explain the nature of transcendental lines by an equation; e. g. Let a be the arc of a circle, and * the versed*

s d x

sine ; then will a = : and if the

V 2 x — xx ordinate of the cycloid be y, then will y =

s d x

\/1x — xx -| — — — , which equation

\/ 2 x — x x

perfectly expresses the relation between the or- dinate y and the absciss x ; and from it all the properties of the cycloid may be demonstrated. Thus is the analytical calculus extended to those lines which have hitherto been excluded, for no other cause but that they were thought incapable of it.

Among geometricians transcendental quanti- ties are indeterminate ones ; or such as cannot be expressed or fixed to any constant equation. Such is a transcendental curve, or the like. Leib- nitz has a dissertation in the Acta Erud. Lips, in which he endeavours to show the origin of such quantities; viz. why some problems are neither plain, solid, nor sur-solid, nor of any certain degree, but do transcend all algebraical equations. He also shows how it may be de- monstrated, without calculus, that an algebraic quadratrix for the circle or hyperbola is impos- sible : for, if such a quadratrix could be found, it would follow that, by means of it, any angle, ratio, or logarithm, might be divided in a given proportion of one right line to another, and this by one universal construction; and consequently

the problem of the section of an angle, or the invention of any number of mean proportionals, would be of a certain finite degree. Whereas the different degrees of algebraical equations, and therefore the problem, understood in gene- ral of any number of parts of an angle, or mean proportionals, is of an indefinite degree, and transcends all algebraical equations.

TRANS'COLATE, v. a.' Latin trans and cob. To strain through a sieve or colander ; to suffer to pass, as through a strainer.

The lungs are, unless pervious like a spunge, unfit to imbibe and transcolate the air. Hanxy.

TRANSCRIBE', v. a. -x Fr. transcrire ;

TRANSCRIBER, n. s. I Lat. transcribo. To

TRANSCRIPT, \ copy ; write from

TRANSCIUP'TION, i an exemplar: the

TRANSCRIPT'IVELY, adv. / derivatives corre- sponding.

The most rigid exactors of mere outward purity do but transcribe the folly of him who pumps the leak.

Decay of Piety.

The corruptions that have crept into it by many transcriptions was the cause of so great difference.

Brereicood.

He was the original of all those inventions, from which others did but transcribe copies. Clarendon.

The Grecian learning was but a transcript of the Chaldean and Egyptian ; and the Roman of the Grecian. Gtaniil/e.

.\ ot a few, transcriptively subscribing their names to other men's endeavours, trantcribe all they have written. Btowne.

The decalogue of Moses was but a transcript, not an original. South' s Sermons.

A coin is in no danger of having its characters altered by copiers and transcribers. Addison.

If we imitate their repentance, as we transcribe their faults, we shall be received with the same mercy. Rogers.

Writings have been corrupted by little and little, by unskilful transcriber. Waterland.*

TRANSCRIPT denotes particularly a copy of an act or instrument inserted in the body of another.

TRANSCUR', v. n. I Latin transcurro. To

TRANSCUR'SION, n.s. $ run or rove to and fto : the noun substantive corresponding.

By fixing the mind on one object, it doth not spa- tiate and tramcur. Bacon.

In a great whale, the sense and the affections of any one part of the body instantly make a trant- curtion throughout the whole. Id. Ka:vral History.

I have briefly run over tramcurtions, as if my pen had been posting with them.

Wotton't Life of Buckingham.

*TRANSE, «. *. Fr. transe. See TRANCE. A temporary absence of the soul; an ecstacy.*

Abstract as in a transe, methought 1 saw, Though sleeping, where I lay, and saw the shape Still glorious before whom awake I stood. Milton.

TUANSELE.MENTA'TION, n.s. Trans and element. Change of one element into another.

llain we allow ; but if they suppose any other transelementation, it neither agrees with Moses's phi- losophy nor St. Peter's.

Burnet's Theory of the Earth.

TRANSEX'ION, n. s. Lat. trans and sexvt. Change from one sex to another.

It much impeacheth the iterated traruarum of hares, .(that be true which soir.e physicians affirm, that

transmutation of sexes was only so in opinion, ai.il that those transfeminated persons were really men at first. Browne's Vulgar ErruiL.i.

TRANSFER, v. a. Fr. transferor; Lat. trans- fero. To convey ; make over from one to another; remove; transport; taking both to and upon.

He that transfers the laws of the Lacedemonians to the people of Athens, should find a great absurdity and inconvenience. Sinter's State of Jrelanu.

Was 't not enough you took my crown away, But cruelly you must my love betray 1 I was well pleased to have transferred my right, And better changed your claim of lawless might.

Dryden.

This was one perverse effect of their sitting at ease under their vines and fig-trees, that they forgot from whence that ease came, and transferred all the honour of it upon themselves. Atterbury's Sermons.

By reading we learn not only the actions and the sentiments of distant nations, but transfer to our- selves the knowledge and improvements of the most learned men. Watts.

TRANSFIG'URE, v. a. i Fr. transfigurer ;

TKASSFIGURA'TION, n.s. $ Latin trans and figura. To change form or appearance : change of form.

In kinds wh '.e the discrimination of sexes is ob- scure, these transformations are more common, and in some without ccmmixture; as in caterpillars or silkworms, wherein there is a visible and triple trant- figuration. Browne's Vulgar Errours.

1 am the more zealous to transfigure your love into devotion, because I have observed your passion to have been extremely impatient of confinement.

Boyle.

The nuptial right his outrage strait attends, The dower desired is his transfigured, friends : The incantation backward she repeats, Inverts her rod, and what she did defeats. Garth.

TRANSFIX', v. a. Lat. tramfna. To pierce through.

Amongst these mighty men were women mixed ; The bold Semiramis, whose sides transfixed With son's own blade, her foul reproaches spoke.

Spenter.

With linked thunderbolts Transfix us to the bottom of this gulph.

Hilton's Paradise Lost. Diana's dan In an unhappy chace transfixed her heart.

*Dry den' * Homer. Till fate shall with a single dart Transfix the pair it cannot part. Fenton.*

TRANSFORM', v. a. & v. n. > Fr. tramfor-

TRANSFORMA'TION, n. s. $ mer ; Latin

trans and forma. To metamorphose ; change with regard to external form: the noun substan- tive corresponding.

She demanded of him, whether the goddess of those woods had such a power to transform every body. Sidney.

Love is blind, and lovers cannot see The pretty follies that themselves commit ; For if they could Cupid himself would blush To see me thus transformed to a boy. Shaksveare.

Something you have heard Of Hamlet's transformation ; so I call it, Since not the exterior, nor the inward man, Resembles that it was. Id. H.tmlt.t.

As is the fable of the lady fair, Which for her lust was turnrl ;nto a cow ;

When thirsty to a stream she did repair, And saw herselt transformed ; > he wist not how.

Davies.

His hair transforms to down, his fingers meet In skinny films, and shape his oary feet. Addison.

The mensuration of all manner of curves, and their mutual transformation,

are not worth the labour of those who design either of the three learned profes- sions. Watts.

TRANSFORMATION, in geometry, is the chang- ing or reducing of a figure, or of a body, into another of the same area, or of the same solidity, but of a different form. As to transform or re- duce a triangle to a square, or a pyramid to a parallelopipedon.

TRANSFORMATION OF EQUATIONS, in algebra, is the changing equations into others of a differ- ent form, but of equal value. This operation is often necessary to prepare equations for a more easy solution.

TRANSFRETATION, n. s. Lat. trans and fretum. Passage over the sea.

Since the last transfretation of king Richard the Second, the crown of England never sent over num- bers of men sufficient to defend the small territory. Davies art Ireland.

TRANSFUSE', v. a. J Lat. trmuftum. To TRANSFU'SION, n. s. $ pour out of one into another: the noun substantive corresponding.

Poesy is of so subtile a spirit, that in the pouring out of one language into another it will all evapo- rate ; and, if a new spirit be not added in the trans- fusion, there will remain nothing but a caput mortuum.

Den/tarn.

The crooked part of the pipe was placed in a box, to prevent the loss of the quicksilver that might fall aside in the transfusion from the vessel into the pipe.

Boyle.

Something must be lost in all transfusion, that is, in all translations, but the sense will remain.

Dr i/den.

Where the juices are in a morbid state, if one could suppose all the unsound juices taken away and sound juices immediately transfused, the sound juices would grow morbid. Arbuthnot.

What noise have we had about transplantation of diseases, and transfusion of blood '.

Baker on Learning.

TRANSFUSION OF BLOOD, an operation by which the blood of one animal was conveyed into the veins of another, and by which it was some time ago imagined the age of animals would be renewed, and immortality, or the next thing to it, conferred on those who had under- gone it. In the Philosophical Transactions we have an account of the success of various trans- fusions practised at London, Paris, Italy, &c. Sir Edmund King transfused forty-nine ounces of blood out of a calf into a sheep ; the sheep, after the operation, appearing as well and as strong as before. M. Denis transfused the blood of three calves into three dogs, which all conti- nued brisk, and eat as well as before. The same person transfused the blood of four wethers into a horse twenty-six years old, which thence received much strength, and a more than ordinary appetite. Soon after this operation was intro- duced at Paris, viz. in 1667 and 1668, M. Denis performed it on five human subjects, two of whom recovered of disorders under which they labored; one being in perfect health, suffered

uo inconvenience from it ; and two persons who were ill. and submitted to the operation, died ; in consequence of which the magistrates issued a sentence, prohibiting the transfusion on human bodies under pain of imprisonment. Mr. John Hunter made many ingenious experiments to determine the effects of transfusing blood, some of which are sufficient to attract attention. But whether such experiments can ever be made with safety on the human body is a point not easily determined. They might be allowed in desperate cases, proceeding from a corruption ot the blood, from poison, &c., as in hydrophobia.

TRANSGRESS', v. a. & v. n. \ Fr. trum-

*TRANSGRESS'ION, n. *. tgresser ; Lat.*

TRANSORESS'IVE, adj l transgressus.

TRANSGRESS'OR. J To pass over;

pass beyond ; violate : offend by violating a law : the adjective and noun substantives corresponding.

Achan transgressed in the thing accursed.

1 Chron. ii. 7.

He upbraideth us with our offending the law, and objecteth to our infamy the transgressing of our education. Wisdom.*

Let no man doubt but that every thing is well done, because the world is ruled by so good a guide as transgresseth not his own law, than which no

thing can be more absolute, perfect, and just.

Hooker.

1 would not marry her, though she were endowed with all Adam had left him before he transgressed.

Shakspeare.

— Wilt thou make a trust a transgression 1 The transgression is in the stealer.

Id. Much Ado About Nothing.

He intended the discipline of the church should be applied to the greatest and most splendid fr«»i.«/”<'>- sers, as well as to the punishment of meaner offend- ers, (.‘lurendon.

Ill worthy I, such title should belong To me transgressor! who, for thee ordained A help, became thy snare. Milton’s Paradise Lost.

Shall I abuse this consecrated gift Of strength, again returning with my hair After my great transgression : so requite Favour renewed, and add a greater sin ? Milton.

Long stood the noble youth oppressed with awe, And stupid at the wonderous things he saw, Surpassing common faith, transgressing nature’s law.

Drydr.*

All accusation still is founded upon some law ; for where there is no law there can be no transgres- simt ; and, where there can be no transgression, there ought to be no accusation. Soitth’s Sermons.

TRANSIENT, adj.) Lat. transient. Soon TRAN’SIENTLY, adv. > past; short; momen- TRAN’SIENTNESS,«. s.) tary ; not lasting : the adverb and noun substantive corresponding.

It were to be wished that all words of this sort, as they resemble the wind in fury and irapetuousness. so they might do also in transientness and sudden ex- piration. Decay of Piety.

How soon hath thy prediction, seer blest ! Measured this transient world, the race of time, Till time stands fixed. Milton.

He that rides post through a country, may, from the transient view, tell

how in general the parts lie.

Locke.

Love, hitherto a transient guest, Ne'er held possession in his breast. Swift.

TRANSIL'IENCE, n. s.) Latin transUui TRANSII/IK.V i $ Leap from tiling >.&

thing.

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By unadvised triinsilifnct/ leaping from the effect lo its remotest cause, we observe not the connection of more immediate causalities. Glanville's Scepsis.

TRANSIT OF THE PLANETS. See ASTRONOMY.

TRANSITION, n. s. Lat. transitio. Re- moval ; passage from one to another.

Heat and cold have a virtual transition without communication of substance, but moisture not.

Bacon's Natural History.

He with transition sweet new speech resumes.

Milton .

As for the mutation of sexes, and trantition into one another, we cannot deny it in hares, it being ob- servable in man. Browne's Vulgar Errours.

Covetousness was none of his faults, but described as a veil over the true meaning of the poet, which was to satirize his prodigality and voluptuousness, to which he makes a transition. Dryden.

TRANS'ITIVE, adj. Lat. transitims. Hav- ing the power of passing.

One cause of cold is the contact of cold bodies ; for cold is active and transitive into bodies adjacent, as well as heat. Bacon's Natural Hlttory.

A verb transitive is that which signifies an action, conceived as having an

effect upon some object ; as ferio terram, I strike the earth.

Clarke's Latin Grammar.

TRANSITIVE, in grammar, an epithet applied to such verbs as signify an action which passes from the subject that does it, to or upon an an- other subject that receives it. Under the head of verbs transitive come what we usually call verbs active and passive ; other verbs, whose ac- tion does not pass out of themselves, are called neuters.

TRANSITORY, adj. Fr. transitoire ; Latin (ransitorius, from transeo. Continuing but a short time ; speedily vanishing.

0 Lord, comfort and succour all them who in this transitory life are in trouble. Common Prayer.

Religion prefers those pleasures which flow from the presence of God evermore, infinitely before the transitory pleasures of this world.

Tillotson's Sermons .

TRANSLATE', v. a. &v.n.-\ O!d French TRANSLATION, n.s. ttranslater ; Lat.

TRANSLA'TOR, I translatus. To

TRANSLA'TORV, adj. ./transport; re-

move; transfer from one to another; change; interpret or render in another language ; ex- plain : a translation follows all these senses : a translator is one who turns any thing into an- other language : translatory is transferring.

1 will trantlatt the kingdom from the house of Saul, and set up the throne of David.

2 Sam. iii. 10.

By faith Enoch was translated, that he should not see death. Hebrewt xi. 5.

Since our father is translated unto the gods, our will is, that they that are in our realm live quietly.

2 Mac. xi. 23.

Of translations, the better I acknowledge that which cometh nearer to the very letter of the very original verity. Hooker.

Happy is your grace,

That can translate the stubbornness of fortune Into so quiet and so sweet a style.

Shakspeare. As You Like It. If part of the people be somewhat in the election, you cannot make them nulls or cyphers in the pri- vation or translation. Bacon s H'ar with Spain. VOL. XXII.

Lucian affirms the souls . of usurers, after their death, to be meterapsychosed, or translated into the bodies of asses, there to remain for poor men to take their pennyworths out of their bones and sides with the cudgel and spur. Peacham.

The king, the next time the bishop of London came to him, entertained him with this compellation, My lord's grace of Canterbury, you are very wel- come ; and gave order for all the necessary forms for the translatiuii. Clarendon.

As there are apoplexies from inveterate gouts, the regimen must be to translate the morbifick matter upon the extremities of the body. Arbuthnot.

Perverse mankind ! whose wills, created free, Charge all their woes on absolute decree ; All to the dooming gods their guilt translate, And follies are miscalled the crimes of fate. Pope.

Xo translation our own country ever yet produced, hath come up to that of the Old and New Testament ; and I am persuaded that the translators of the Bible were masters of an English stile much fitter for that work than any we see in our present writings, the which is owing to the simplicity that runs through the whole. Su-ift.

To go to heaven is to be trantiated to that king- dom you have longed for ; to enjoy the glories of eternity. Wake.

TRANSLATION of a book out of one language into another. The principles of translation have been clearly and accurately laid down by Dr. Campbell in his invaluable Preliminary Disser- tations to his excellent translations of the gospels. The fundamental rules which he establishes are three: 1. That the translation should give a complete transcript of the ideas of the original. 2. That the style and manner of the original should be preserved in the translation. 3. That the translation should have all the ease of origi- nal composition. The rules deducible from these general laws are explained and illustrated with much judgment and taste, in a late Essay on the Principles of Translation, by Mr. Tytler.

TRANSLOCATION, n. s. Latin trans and locus. Removal of things reciprocally to each other's places.

There happened certain translocations at the de- luge, the matter constituting animal and vegetable substances being dissolved, and mineral matter sub- stituted in its place, and thereby like trunslocation of metals in some springs. Woodward.

TRANSLU'CENT, adj. > Latin trans and

TRANSLU'CID. $ lucens, or lucidus.

Transparent; diaphanous; clear; giving a pas- sage to the light.

In anger the spirits ascend and wai eager ; which is seen in the eves, because they are iranttudd.

Bac-n.

Wherever fountain or fresh current flowed Against the eastern ray, translucent, pure, \itli touch atherial of heaven's fiery rod, I drank. Milton.

The golden ewer a maid obsequious brings. Replenished from the cool translucent springs.

Pope's Odtissey.

TRANSMARINE', adj. Latin transmarimtt Lying on the other side of the sea ; found be- yond sea.

She might have made herself mistress of Timau- ranit, hei next transmarine neighbour.

Hou-el't Vocul Form. N

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TRANSMEW', r. a. Latin transmuto ; Fr. transmuer. To transmute ; to transform ; to me- tamorphose ; to change. Obsolete.

When him list the rascal routs appall, Men into stones therewith he could transmew, And stones to dust, and dust to nought at all.

Spenser.

TRANSMIGRANT, adj.} Latin transmi- TRANS'MIGRATE, v. n. £grans. Passing TRANSMIGRATION, n. s.) into another coun- try or state : to

pass from one country to another : the noun substantive corresponding.

Besides an union in sovereignty, or a conjunction in pacts, there are other implicit confederations, that of colonies or transmigrants towards their mother na- tion. Bacon's Holy War.

Their souls may transmigrate into each other.

Howel.

Easing their passage hence, for intercourse Of transmigrate, as their lot shall lead. Miltm.

If Pythagoras's transanimation were true, that the souls of men transmigrate into species answering their former natures, some men must live over many serpents. Browne's Vulgar Errours.

Regard

The port of Luna, says our learned bard ; Who, in a drunken dream, beheld his soul The fifth within the trantmigrating roll. Dry den.

TRANSMIGRATION, in a large sense, is the re- moval or translation of a whole people into ano- ther country, by the power of a conqueror.

TRANSMIGRATION is particularly used for the passage of the soul out of one body into another. See METEMPSYCHOSIS, MYTHOLOGY, and PYTHA- GORAS.

TRANSMIT, v. a.) Lat. transmitto ; Fr.

TRANSMIS'SIVE, adj. > transmettre. To send

TRAXSMIT'TAL, n. s. j from one person or place to another: the derivatives both corre- spond.

By means of writing, former ages transmit the memorials of ancient times and things to posterity.

Hale.

If there were any such notable transmission of a colony hither out of Spain, the very chronicles of Spain would not have omitted so memorable a thing. Spenser on Ireland.

In the transmitsion of the sea-water into the pits, the water riseth ; but, in the transmission of the water through the vessels, it falleth. Bacon.

Languages of countries are lost by transmission of colonies of a different language.

Hale't Origin of Mankind.

The uvea has a musculous power, and can dilate and contract that round hole m it called the pupil, for the better moderating the traiumiuion of light.

More.

He sent orders to bis friend in Spain to sell his estate, and transmit the inoney to him. Add-on.

And still the sire inculcates to his son Transmiuivf lessons of the king's renown. Prior.

TRANSMUTE', v. n. ˆ Lat. transmuto;

TRANSMU'TABLC, adj. ˆFr. transmuer. To

TRANSMUTA'TION, n.. 'change from one na- ture or substance to another : the derivatives cor- responding.*

Am not I old Sly's son, by birth a pedlar, by edu- cation a card-maker, by irantmutation a bear herd ?

Shakspeare.

Suidas thinks that by the golden fleece was meant a gulden book of parchment, which is of sheep's skin,

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and therefore called golden, because it was taught therein how other metals might be transmuted.

Raleigh.

The conversion into a body merely new, and which was not before, as silver to gold, or iron to copper, is better called, for distinction sake, transmutation.

Bacon.

It is no easy matter to demonstrate that air is so much as convertible into water ; how trarumutable it is unto flesh may be of deeper doubt.

Browne's Vulgar Errours.

Thai metals may be transmuted one into another, I am not satisfied of the fact. Ray on the Creation.

The fluids and solids of an animal body are easily tranfmutable into one another. Arbuthnot on Aliment.*

The supposed change of worms into flies is no real t ransmutation ; but most of those members, which at last become visible to the eye, are existent at the be- ginning artificially complicated together.

Bentley't Sermon.*

TRANSMUTATION OF METALS, in alchemy, de- notes the act of changing imperfect metals into gold or silver. This is also called the grand operation ; and they say it is to be effected by the philosopher's stone. Alchemists suppose that all metals are composed of the same prin- ciples ; and that the imperfect metals do not differ from gold and silver, but because their principles are not so well combined, or because they contain heterogeneous matters. We have then only these, two faults to remedy, which, as they say, may be done by proper coction,and by separating the pure from the impure. But we would advise those making such experiments to determine previously, if metals have each a pe- culiar earth, or only one common to them all. In the second place, if it should be demonstrated that the earthy principle is the same in all metals, and if that be demonstrated as clearly a> the identity of the inflammable principle in metals, they must then determine whether these two be the only principles in metals, whether the mercurial principle exists, and whether it be essential to all metals or to some only, and \vhat is the proportion of these two or three principles in the several metallic substances. These facts must be ascertained previous to asserting the possibility of transmutation.

TRANSOM, among builders, denotes the piece that is framed across a double light window.

TRANSOMS, in a ship, certain beams or timbers extended across the sternpost of a ship, to fortify her afterpart, and give it the figure most suitable to the service for which she is calculated. See SHIP-BUILDING.

TRANSPARENT, adj. » Fr. transparent;

*TRANSPA'RENCY, n. *. J Lat. trans and appti- reo. Pervious to the light ; clear ; pellucid : the noun substantive corresponds.*

Nor shines the silver moon one half so bright, Through the transparent bosom of the deep.

As doth thy face through tears of mine give light : Thou shin'st in every tear that I do weep.

Skakfpeare.

Each thought was visible that rolled within, As through a crystal case the figured hours are seen ; And heaven did this transparent veil provide. Because she had no guilty thought to hide. Dryden.

Her bosom appeared all of chrystal, and so won- derfully transparent that 1 saw every thought in her heart. Addison.

Another cause is the greater transparency of the vessels, occasioned by the thinness and delicacy of their coats. Arbuthnot.

TRANSPICUOUS, adj. Lat. trans and spe- cio. Transparent ; pervious to the sight.

What if that light,

Sent from her through the wide transpicuous air, To the terrestrial moon be as a star ? Milton.

Now thy wine's transpicuous, purged from all Its earthy gross, yet let it feed awhile On the fat refuse. Phillips.

TRANSPIERCE', v. n. Fr. transpercer ; trans and pierce. To penetrate ; make way through; permeate.

A mind, which through each part infused doth

pass,

Fashions and works, and wholly doth transpierce All this great body of the universe. Raleigh.

TRANSPIRATION, n.s. } Fr. transpiia-

TRANSPIP.E', v. n. J tion. Emission

in vapor or otherwise : to be emitted ; to escape from secrecy into notice.

That a bullet dipped in oil, by preventing the transpiration of air, will carry farther, and pierce deeper, my experience cannot discern.

Browne's Vulgar Errours.

The nuts fresh got are full of a soft pulpy matter, which in time transpires and passes through the shell.

Woodward.

The transpiration of the obstructed fluids is ima- gined to be one of the ways that an inflammation is .amoved. Sharp.

TRANSPLACE', v. a. Trans and place. To remove ; put into a new place.

It was transplaced from the left side of the Vatican unto a more eminent place.

Witkins's Mathematical Magick.

TRANSPLANT', v. a. f Lat. trans and

TRANSPLANTA'TION, n.s. \ planto ; Fr. trans- planter. To remove and plant, or settle, in a new place: the noun substantive corresponding.

If any transplant themselves into plantations abroad, who are schismaticks or outlaws, such are not fit to lay the foundation of a new colony.

Bacon's Advice to Villiers.

He prospered at the rate of his own wishes, being transplanted out of his

cold barren diocese of Saint David's into a warmer climate. Clarendon.

Of light the greater part he took Transplanted from her cloudy shrine, and placed In the sun's orb. Milton.

The noblest fruits transplanted in our isle, \ith early hope and fragrant blossoms smile.

Roscommon.

Salopian acres flourish with a growth Peculiar, stiled the Ottley ; be thou first This apple to transplant. Phillips.

This appears a replication to what Menelaus had offered concerning the transplantation of Ulysses to Sparta. Broome.

What noise have we had for some years about transplantation of diseases, and transfusion of blood !

Baker.

TRANSPORT', v. a. \ Lat. trans and porto ;

TRANS' PORT, n. s. / Fr. transporter. To

TRAMSPORT'ANCE, V. convey by carriage from

TRANSPORTATION, i place to place : hence to

TRANSPORTER. J carry into banishment;

to hurry by violence of passion ; put in ec-

stacy as a noun substantive, conveyance from

place to place ; vessel of conveyance ; rapture ;

ecstacy ; felon sentenced to be transported : the two noun substantives following correspond.

I came hither to trantpnrt the tidings. Shakspeare.

O, be thou my Charon,

And give me swift transportance to those fields, Where I may wallow in the lily beds Proposed for the deserver ! Id. Troilus and Cressida.

Cottingen and Porter had been sent before to pro- vide a vessel for their

transportation, Wotton.

The pilchard merchant may reap a speedy benefit by dispatching, saving, and selling to the transporters.

Carew.

Those on whom Christ bestowed miraculous cures were so transported with them, that their gratitude supplanted their obedience. Decay of Piety.

They laugh as if transported with some fit Of passion. Milton.

I shew him once transported by the violence of a sudden passion. Drijden.

Nor dares his transport vessel cross the waves, With such whose bones are not composed in graves.

Id.

Some were not so solicitous to provide against thfe plague, as to know whether we had it from the ma- lignity of our own air, or by transportation. Id.

A truly pious mind receives a temporal blessing with gratitude, a spiritual one with ecstacy and transport. fiouth.

Some spoke of the men of war only, and others added the transports. Arbuthnot on Coins.

We return after being transported, and are tea times greater rogues than before. Swift.

TRANSPOSE',!;. a.) Fr. transpuser; Lat.

TRANSPOSITION, n.s. $ transposition. To put each in the place of other; hence put out of place : the noun substantive corresponding.

That which you are my thoughts cannot transpose; Angels are bright still, though the brightest fell.

Shakspeare.

The letters of Elizabetha regina transposed thus, Anglise Hera, beasti, signify, O England's sovereign ! thou hast made us happy. Camden's Remains.

Transpose the propositions, making the medius ter- minus the predicate of

the first, and the subject of the second. Locke.

TRANSPOSITION, in grammar, a disturbing or dislocating the words of a sentence, or a chang- ing their natural order of construction, to please the ear by rendering the contexture more smooth, easy, and harmonious.

TRANSSHAPE', v.a. Trans and shape. To transform ; to bring into another shape.

Said I, he hath the tongues ; that I believe, said she ; for he swore a thing to me on Monday night, which he forswore on Tuesday morning ; there's a double tongue : tkus did she transshape thy particular virtues. Shakspeare. Much Ado About Nothing.

TRANS-TIBERINA, a part of the city of Rome, on the farther side of the Tiber. Mount Vatican was in that part of the city.— Mart. 1. ep. 109.

TRANSUBSTANTIATE, r. a.) Fr. tran- TRANSUBSTANTIA'TJON, n. s. J substantier. To change to another substance : the act of doing so ; the dogma of the church of Rome, or a change of this kind after the consecration of the eucharist.

0 self-traitor, I do bring The spider love, which transubstantiates all, And can convert manna to gall. Donne.

Nor seemingly, but with keen dispatch Of real hunger, and connective heat To transubstantiate ; what redounds, transpires Through spirits with ease. Milton.

TRANSUBSTANTIATION, in theology, is the supposed conversion or change of the substance of the bread and wine, in the eucharist, into the body and blood of Jesus Christ ; which the Ro- mish church suppose to be wrought by the con- secration of the priest. It is known to all our readers that this doctrine of transubstantiation was one cause of the breach between the church of Rome and those various societies which call themselves reformed churches. The notion of a real and substantial change of the bread and wine into the body and blood of our Lord is rejected by every reformer as a change contradictory and impossible, and fraught with the most unscrip- tural, not to say idolatrous, consequences ; and volumes have been written by protestants to ex- pose the weakness of those

arguments which have so often been urged in its support.

TRANS UDE'jf.n. J Lat. trans and sudo.

TRANSUDA'TION,»I.. i To pass through in va- por : the act of doing so.*

Purulent fumes cannot be transmitted throughout the body before the maturation of an aposthem, nor after, unless the humour break ; because they cannot transude through the bag of an aposthem.

Harvey on Consumption.

The drops proceeded not from the transudaiiim of the liquors within the glass. Boyle.

TRANSVERSALIS, in anatomy, a name given to several muscles. See ANATOMY.

TRANSVERSE', adj. Si v. a. \ Lat. trans

TRANSVER'SAL, adj. (versus. Being

THANSVER'SALLY, adv. t in a cross di-

TRANSVERSE'LY, adv. 3 rection : to

change ; overturn : transversal is running cross- wise : the adverb corresponding, and transversely with transverse.

Nothing can be believed to be religion by any people but what they think to be divine ; that is, sent immediately from God: and they can think nothing to be so that is in the power of man to alter or transverse. Lesley.

There are divers subtile enquiries and demonstra- tions concerning the several proportions of swiftness and distance in an arrow shot vertically, horizontally, or tranwrsullii. WiUtins.

His violent touch Fled and pursued transverse the resonant fugue.

Milton.

At Stonehenge the stones lie transversely upon each other. Stillingfleet.

In all the fibres of an animal there is a contractile power ; for, if a fibre be cut transversely, both the ends shrink, and make the wound gape.

Arbuthnot on Aliments.

TRANSVERSE denotes something that goes across another from corner to corner : thus bends and bars in heraldry are transverse pieces or bearings ; the diagonals of a parallelogram or a square are transverse lines.

TRANSYLVANIA, an important province of the Austrian empire, bounded by Hungary north and west, and European Turkey east and south, lies between 22° 46 and 26° 3′ of E. long, and between 45° 33′ and 47° 37′ of N. lat. Its form is oblong : its territorial extent about 23,700 square miles; and population upwards of

1,600,000. It has, like Hungary, its civil and military divisions : the former consisting of three large districts or provinces, called, from the early settlers, the lands of the Hungarians, the Saxons, and the Szeklers. The land of the Hungarians was divided into counties, and the others into districts, called in Latin Sedes. Joseph II. abo- lished this distinction, and introduced that of the three circles of Hermanstadt, Fogaras, and Clausenburg. The old division has been restored since his death. The chief towns are Cronstadt, Clausenburg (the capital), Hermanstadt, Maros Vasarhely, Vasarhely, Udvarhely, and Schces- burt(.

The Carpathians surround Transylvania on the east, the south, and partly on the north; and the greatest part of it consists of alternate moun- tains and valleys. Many of these contain a number of caverns, presenting a wide field of examination for the botanist and geologist, but are often of appalling height and steepness. The south presents hills of little elevation, intermixed with plains, interrupted by marshes and small lakes. These eminences are commonly covered with vineyards; the higher elevations with fo- rests ; but almost all contain mines. The prin- cipal rivers of Transylvania are the Maros, the Samos, and the Aluta; and the Aranyos, the Lapos, the Sajo, and the two Kokels, of inferior size. All these have their source within the country, and their direction is in general from east to west. The lakes, like those of Switzer- land, Scotland, and other countries where the water is enclosed by mountains, are of great depth. The climate of Transylvania is cold, al- though in summer the valleys are hot, but sub- ject to sudden changes, and to great cold at night. On the whole, this province is healthy, though not unfrequently visited by the plague. In the mountains are found marble, jasper, por- phyry, slate, lime-stone, coal, sulphur, petro- leum, and rock salt. The number of salt works, great and small, is about 112; the quantity of salt produced from 30,000 to 40,000 tons a year. This country has also mines of iron, copper, lead, silver, and even gold, though the quantity wrought of any of these metals appears compa- ratively small. That of iron is from 3000 to 4000 tons annually ; but that of copper and lead is each below 200 tons. In the mountains are dug up occasionally precious stones, such as to- pazes, chrysolites, garnets, opals, &c., and mi- neral springs are frequent.

This country was formerly covered with fo- rests, and the culture of the principality bears great marks of backwardness. The soil is in general well adapted to improvement; but go averse are the habits of a part of. the population (the Hungarians and Szeklers) from tillage, and so antiquated in the practice, that many good tracts remain neglected, and the traveller pro- ceeds mile after mile without meeting a habita- tion or a tree. Wheat, oats, barley, and other corn of our climate, succeed in Transylvania ; but for maize or vines there is hardly sufficient heat. Orchards are not neglected ; and potatoes have of late been brought into cultivation ; but hay and all artificial grasses are unknown ; the cattle having none but natural herbage. The

horse?, '.hough small, are spirited ; the oxen are reckoned equal to those of Hungary ; and of both these an annual export takes place. Buf- faloes are frequently used for labor. The sheep are numerous ; and, in the last and present age, attempts have been made to improve the wool, oy the introduction of Merinos, as well as by sending flocks to pass the winter in Walachia and Moldavia. The mountains and forests abound in game of all kinds ; in bears, wolves, eagles, and vultures ; in the lower grounds, tor- toises, lizards, and snakes appear.

Woollens are wrought at particular places, such as Cronstadt and llermanstadt; and fabrics of cotton have been established : the blue stuff used in the dress of women, and formerly brought from Turkey, is now made at home, and hats, of coarse quality, are manufactured; as to glass, Transylvania is now no longer dependent on Bohemia. The exports of the country are tim- ber, metals, and a few of the manufactures men- tioned : the imports, wool, cotton, skins, and a variety of manufactured articles. Here are no canals, and hardly any navigable rivers. A few great roads have been of late finished at the pub- lic expense. The only merchants in the country are Greeks and Armenians.

The Szeklers occupy the mountains, and have been from time immemorial the guardians of the frontiers : they bear a considerable resemblance to the Highlanders of Scotland. Settlers from Germany were first introduced in the middle of the twelfth century, having been brought origi- nally from Flanders and the south of Germany, and being subsequently reinforced by Protestant emigrants from the Austrian states. The name of Saxon is given to them merely because in a remote age all Germans were styled Saxons by their neighbours. They are in general careful and industrious. Their habitations are neater than those of the rude tribes around them. The

language they speak is a dialect of German. These three nations possess the chief political privileges ; in particular that of sitting at the national diet. But in point of number they are greatly surpassed by the descendants of the Wa- lachians, who form half the population of the principality. Like the Slowacs in Hungary, or the Irish peasantry, the Walachian cottagers find, in the midst of filth and poverty, the means of rearing families. They are employed chiefly as common laborers, as shepherds, or as wag- goners. The arrival of their ancestors in this country took place about four centuries ago. Exclusive of these are several minor tribes in Transylvania ; Bulgarians, who are less ignorant than the Walachians; Servians, whose arrival in the principality dates from the fifteenth century, and who in religion are Lutherans or Calvinists ; and Poles, inhabiting the districts of Clausen- burˆ-, whose forefathers settled there in the se- venteenth century, being Unitarians, and obliged on that account to leave Poland. Here are also Bo- hemian sectaries, chiefly Hernhutters or Anabap- tists ; Armenians, noted for their frugality and mer- cantile habits ; Greeks, who are also merchants, but who live in a somewhat more liberal style. Last come the gypsies, part of whom are, ai in other countries, beggars and fortune tellers;

while others have a fixed residence, and are em- ployed in tillage or in the rearing of cattle. The languages of Transylvania are chiefly German and Walachian ; the latter Latin with a mixture of German and Sclavonic : the Magyars speak Hungarian : on the part of government the offi- cial language is Latin, but orders are issued also in Hungarian and German.

The followers of the Greek church, comprising the Walachians, Greeks, Bulgarians, and even Gypsies, are by far the most numerous. Next come the Catholics, among whom are ranked the Hungarians and most of the Szeklers. The Catho- lics, the Protestants, and Unitarians, are the sects possessing political privileges; for the Greek and the other creeds are only tolerated. The relative numbers are computed as follows : —

Greek church . . 917,000 Catholics . . . 340,000 Calvinists . . . 190,000 Lutherans . . . 158,000 Unitarians . . . 45,000 Jews 2,000

Education has as yet made little progress; but there has been established at Clausenburg an academy, on a plan somewhat similar to the German universities : the large or central schools throughout the principality are only eight in number; the gymnasia or grammar schools only seven. Here, as in Hungary, there are village schools appropriated to the different sects; and at the town of Balasfulva the Greeks have a gymnasium, where the pupils are instructed at the public expense. The Greeks have also two central schools. Printing and book-selling are carried on hereto a very limited extent; and the whole country can boast only of three great pub- lic

libraries.

Transylvania bears the title of a grand princi- pality of the Austrian empire, and has an execu- tive administration in the hands of the governor and twelve counsellors, forming conjunctly a council of state, corresponding with the Aulic chancery at Vienna. Subordinate to these are the district governors, corresponding to the pre- fets in France, and in some measure to our lords lieutenant. Justice is administered by courts stationed permanently in particular towns : ap- peals are allowed to the governor and council of state for the province. The military force con- sists of two regiments of foot, two of cavalry, and one of Szekler hussars, exclusively of four militia regiments on the frontier. The com- mander-in-chief resides at Hermanstadt. The revenue of the province, about £500,000, arises from custom duties, on a per centage on the pro- duce of the mines, the monopoly of salt, the de- mesnes of the crown, and local imposts.

This principality was known to the Romans by the title of Dacia Consularis Mediterranea, and conquered by Trajan, who settled a colony here. On the irruption of the northern hordes, it became subject successively to the Goths, the Huns, the Alans, the Sclavi, the Avari, and fi- nally to the Magyars. During some time it was ruled by a prince of its own, but it fell under the power of the kings of Hungary, and was go- verned by a deputy, having the title of prince,

or waiwode, a title commonly translated palatine. In 1541 Transylvania was separated from Hun- gary, and remained an independent province till 1699, when its last prince gave it up to Austria. The name of Transylvania is derived from the Hungarians, who called the woody country to the east of the Theyss, Silagy, or Sylvania, and the territory to the east of these woods Terra ul- tra Sylvas partes Transylvance, or Transylvanen- ses. Erdely, the name given to this country, in common Hungarian, has the same signification.

TRAP, v. a. From TRAPPING. To adorn; decorate.

The steed that bore him

Was trapped with polished steel, all shining bright, And covered with the achievements of the knight.

Spenser,

Lord Lucius presented to you four milk-white horses trapt in silver. Shalapeare. Timon of Athens.

Steeds with scarlet trapped. Cowley.

TRAP, n. s. & v. a. \ Sax. tnappe ; French

TRAPDOOR, n. s. \ trape ; Ital. trappola. A snare or ambush ; stratagem ; a play with ball and stick : to ensnare ; a door opening and shutt- ing unexpectedly.

And lurking closely, in await now lay, How he might any in his trap betray. Spenter.

My brain, more busy than the labouring spider, Weaves tedious snares to trap mine enemies.

Shaktpeare.

Die as thou shouldest, but do not die impatiently, and like a fox catched in a trap.

Taylor's Holy Living.

He seems a trap for charity to lay, And cons by night his lesson for the day. Dryden.

The trap springs, and catches the ape by the fingers.

L'Ettrange.

Unruly boys learn to wrangle at trap, or rook at span-farthing. Locke on Education.

The arteries which carry from the heart to the seve- ral parts have valves which open outward like trap- ttoors, and give the blood a free passage. Ray.

He thai of feeble nerves and joints complains, From nine-pins, coits, and from trap-ball abstains.

King.

TRA PA, in botany, water caltrops, a genus of plants in the class tetrandria, and in the order of monogynia ; ranking, according to the

natural method, in the order which Linnaeus left doubtful.

TRA PAN I, the ancient Drepanum, a well built town of Sicily, in the Val di Mazzara, si- tuated on a tongue of land projecting into the sea, and forming a large and commodious har- bour. It is a place of importance, both as a na- val, military, and commercial position. Its nu- merous churches, convents, and other public buildings, are in a style of considerable elegance. The harbour is good, and was an object of im- portance at so remote a period as the first and second Punic wars. It is capable of receiving vessels of 300 tons close to the quay. Trapani, possessed of these advantages, has long been one of the most commercial towns in Sicily. Its exports consist chiefly of salt, soda, coral, and alabaster. Population 20,000.

TRAPES, n. s. From TRAPE. An idle slatternly woman.

From door to door I'd sooner whine and beg, Than marry such a trapei.

Gay's What d' Ye CM It.

TRAPE'ZIUM, n. j. Gr. rpairi&ov; Pr, trapese. A quadrilateral figure, whose four sides are not equal, and none of its sides pa- rallel.

Two of the lateral trapezia are as broad.

Woodward.

TRAPEZUNTIUS (George), a learned au- thor, born in Crete, about 1306. He was one of those learned men, to whom we are indebted for the revival of science in Europe ; by intro- ducing the knowledge of the Greek language into the West. He translated many of the Greek authors into Latin ; and was also author of se- veral works of his own. He died at Rome in

1485.

TRAPEZUS, a city of Pontus, with a har- bour on the Euxine Sea, built by the people of Sinope. It became famous under the emperors of the East, and was for some time their capital. It is now called Trebisond.

TRAPP (Dr. Joseph), an English divine, born at Cherington in Gloucestershire, where his fa- ther was rector in 1579. He was the first per- son chosen to the professorship of poetry found- ed at Oxford by Dr. Birkhead ; and published his lectures under the title of Praelectiones Poe- ticz. He obtained the living of Christ-church in Newgate Street, and St. Leonard's Foster- lane, London ; but his very high-church princi- ples obstructed his farther preferment, lie pub- lished several occasional poems,

a tragedy called Abramule, translated Milton's Paradise Lost into Latin verse, and died in 1747. Also a Pre- servative against Unsettled notions, in several sermons.

TRAPP, in mineralogy, the obsolete name of a species of silica. It was the lapis Lydius, or touchstone of the ancients. See MINERALOGY.

TRAPP E, a celebrated monastery of France, in the department of Orne, seated in a large valley surrounded by mountains. The monks were famed in the days of superstition for their austerity ; and keeping a perpetual silence !

TRAPPINGS, n. s. Fr. drup, cloth.— Min- shieu. Ornaments appendant to a saddle ; dress ; embellishments.

These indeed seem,

But I have that within which passeth shew ; These but the trappmgi and the suits of woe.

Shuktpeare

Caparisons and steeds, Bases and tinsel trappings, gorgeous knights At joust and tournament. Milton.

The points of honour poets may produce, Trapping! of life, for ornament, not use. Dryden.

He has fair words, rich trappings, and large pro- mises ; but works only for his master. L'Ettrange.

TRASH, n. s. & v. a. > Swed. trasa ; Isld.

TRASHY, adj. J tros. Any thing

worthless ; dross ; dregs ; a worthless person : to crop ; top ; humble : trashy is vile ; worth- less.

Lay hands upon these traitors and their truth.

Shakspeare.

Being once perfected how to grant suits, How to deny them ; whom t' advance, and whom To trash for overtopping. Id. Tempest.

I suspect this truth To be a party in this injury. Id.

More than ten Hollensheds, or Halls, or Stows, Of trivial household trash he knows ; he knows When the queen frowned or smiled. Donne.

A judicious reader will discover in his closet that trashy stuff, whose glittering deceived him in the ac- tion. Dryden.

O that instead of trash thou 'dst taken steel.

Garth.

Weak foolish man ! will heaven reward us there 'With the same trash mad mortals wish for here?

Pope.

TllA'VAIL, v. n. & n. s. Fr. travailler. To labor: toil; be in labor; suffer the pains of childbirth ; to harass ; tire ; labor ; toil ; ex- treme fatigue : the labor of childbirth.

In the time of her travail, twins were in her.

Generis xxxviii.

Such impotent persons as are unable for strong truvail, are yet able to drive cattle to -and fro to their pasture. Spenser.

As every thing of price, so this doth require tra- vail. Hooker.

To procure easy travails of women, the intention- is to bring down the child, but not too fast.

Bacon' Natural History.*

As if all these troubled had not been sufficient to travail the realm, a great division fell among the no- bility. Haijicard.

A gleam of light turned thitherward in haste His travelled steps. Milton.

His heart is in continual labour : it travails with the obligation, and is in pangs till it be delivered. Smith's Sermons.

TRAVANCOR, orTiRUVANconu, a province at the south-western extremity of Hindostan, si- tuated between 8° and 10° N. lat. To the north it is bounded by the territories of the Cochin Rajah ; on the south and west by the sea ; and on the east it is separated from Tinnevelly by a range of lofty hills covered with jungle. In length it may be estimated at 140 miles by forty the average breadth. The face of the country in this province, in the vicinity of the mountains, exhibits a varied scene of hill and dale and wind- ing streams. These waters flow from the hills, and preserve the valleys in perpetual verdure. The grandeur of the scene is much enhanced by the lofty forests with which the mountains are covered, producing pepper, cardamonis, cassia, frankincense, and other aromatic gums. In the woods at the bottom of the hills are many ele- phants, buffaloes, and tigers of the largest size. Monkeys and apes are very numerous, and herd together in flocks. The agriculture and produc- tions well adapted to its more favorable cli- mate and superior soil, differ materially from the cultivation and crops of the Carnatic. Pepper, of which from 5000 to 10,000 candies may be produced annually, and valued at 485,000 ru- pees. For this valuable article the Travancor government only pay the cultivator thirty rupees per candy. Betel nut is also monopolised by government, which makes advances to the culti- vator and resells it at a great profit. Cocoa-nut trees are very numerous.

The timber forests of Travancor are in general farmed, the revenue to government varying ac- cording to circumstances. Among the other ar- ticles of monopoly are ginger, farmed for 25,000 rupees per annum ; coir, 30,000 rupees ; turme-

ric 10,000 rupees: and koprah, or dried cocoa- nut kernels, 20,000 rupees per annum. Tobacco for the consumption of the province is generally brought from Ceylon, the average quantity being 4000 bales, each of which costs the Travancor government sixty rupees, and is afterwards resold at 220 rupees per bale: 1500 candies of cotton are also annually imported from Surat, upon which the government levy a duty of forty-five rupees per candy. The government receives from the purchase of cardamoms 100 rupees upon every candy, besides full reimbursement of all expenses attending the original advance to the cultivator, and the charges of transportation. In the interior the Travancor duties are exacted on the transit of all articles, and the payment at one place scarcely ever exempts the trader from a re- petition at another, passes being unknown except ibr some articles that are already farmed. Among other commodities produced in the country, and taxed by the government, are cassia buds, mace, long nutmegs, wild saffron, narwally, coculus in- dicus, bees' wax, elephants' teeth, and sandal wood. The sea customs of Travancor are farm- ed, and realise on an average about one lack of rupees per annum.

Besides those above stated, there are various other sources of revenue to the Travancor go- vernment, such as taxes on Christian festivals, and upon nets and fishermen; but the most im- portant is a capitation tax on all males from six- teen to sixty, with the exception of Nairs, Mop- lays, and artificers. This operates as a tax on the soil, and compensates to the government the light assessment on the grain produce. The landholder is bound for all the cultivators on his estate, and each person is assessed three fanams. The number paying has been estimated at 250,000 persons. The sum total of all these exactions has been conjectured to amount to twenty lacks of rupees annually, which is exclusive of the wet cultivation as mentioned above, and from the de- tail here presented some idea may be formed of the fiscal regulations under a genuine Hindoo government. Pepper, the great staple of Tra- vancor, has fallen so greatly in value as to be al- most unsaleable ; what formerly brought 220 rupees per candy has gradually fallen to little above sixty rupees. The East India Company have in consequence commuted their subsidy, which used to be paid in pepper, for one in money.

The old subsidy amounted to . . 381,456 The new subsidy to 401,655

i Rupees 783,111

The principal sea-ports in this province are Anjengo, Coulan, Aibecca, and Coleshy. Strong currents run along the coast which frequently carry ships, bound round Cape Comorin, a con- siderable distance to the westward. The rajah's usual place of residence is Trivandapatara. TRA'VEL, v. n., v. a. & n. s. ˆ Supposed TRA'VELLER, n. s. > originally the

TRA'VELTAINTED, adj.) same with tra-

vail : to make journeys by sea or land : written by Hooker for travail ; pass ; journey over ; a journey ; act of passing from place to place ; labor ; toil ; labor in childbirth (written for tra-

vail) : travels is used for an account of events or for observations made in travelling : a traveller is a wayfarer, one who journeys ; travel tainted, harassed ; fatigued with travel.

In the forest shall ye lodge, O ye travelling com- panies of Dedanim. Isaiah xxi. 13.

A little ease to these my torments give, Before I go where all in silence mourn, From whose dark shores no travellers return.

Sandys.

Farewell, monsieur traveller ; look you lisp and wear strange suits, and disable all the benefits of your own country. Shakspeare.

Time travels in divers paces with divers persons : I'll tell you who time ambles withal, who time trots withal. . Id.

I have foundered nine score and odd posts ; and here, travettainted as I am, have, in my pure and im- maculate valour, taken Sir John Coleville.

Id. Henry IV.

If we labour to maintain truth and reason, let not any think that we travel about a matter not needful.

Hooker.

Travel in the younger sort is a part of education ; in the elder a part of experience. Bacon' Ettays.*

These travellers for cloaths, or for a meale, At all adventurers, any lye will tell. Chapman.

He wars with a retiring enemy, With much more travail than with victory. Daniel.

Thither to arrive, I travel this profound. Milton.

In my travel I had been near their setting out in Thessaly, and at the place of their landing in Car- niola. Brotcne'* Travel*.*

Love had cut him short, Confined within the purlieus of his court. Three miles he went, nor farther could retreat, His travels ended at his country-seat. Dryden.

Thy mother well deserves that short delight, The nauseous qualms of ten long months and traiel to requite. Id. Virgil.

They are travellers newly arrived in a strange country, we should therefore not mislead them.

Locke.

A man not enlightened by travel or reflexion, grows as fond of arbitrary power, to which he hath been used, as of barren countries, in which he has been born and bred. Addison.

TRAV'ERS, adv. } French trovers.

*TRAV'ERSE, adv., prep., > Athwart ; across (not adj., n. *., v. a. & v. n. t used) : tra\erse is cross-wise ; athwart : through crosswise : lying across any thing thus laid or built : any thing that thwarts or crosses : as a verb active, to thwart ; oppose ; cross ; wander over ; survey : to use in fencing a particular opposing posture.*

He swears brave oaths, and breaks them bravely, quite traven, athwart the heart of his lovtr.

Shaks/>eare.

To see thee fight, to see thee traverse, to see thee here, to see thee there. Id. Merry Wives.

Myself, and such

As slept within the shadow of your power. Have wandered with our travent arms, and breathed Our sufferance vainly. Id. Timon of A then.*

Bring water from some hanging grounds in long furrows; and from those drawing it traterie to spread. Bacon.

The ridges of the fallow field lay traverie.

Hayward.

This ticatise has, since the first conception thereof, b«en often travfr.ˆd with other thoughts. l'tt>n.

He through the armed files Darts his experienced eye, and soon traverse The whole battalion views their order due. Milton.

A just and lively picture of human nature in its actions, passions, ana traverses of fortune. Dryden.

He sees no defect in himself, but is satisfied that he should have carried on his designs well enough, had it not been for unlucky traverses not in his power. Iˆcke.

My purpose is to traverse the nature, principles, and properties, of this detestable vice, ingratitude.

South.

The lion, smarting with the hunter's spear, Though deeply wounded, no way yet dismayed, In sullen fury traverses the plain, To find the vent'rous foe. Prior.

What seas you traversed, and what fields you fought ! POJK.

TRAVERSARI (Ambrose), a learned Italian monk, born at Camaldoni, near Florence, in 1386. He acted as interpreter between the Greeks and Italians. His translation of Diogenes Laertius, dedicated to Cosmo de Medicis, has been often printed.

TRAVERSE, in navigation, implies a compound course, or an assemblage of various courses, lying at different angles with the meridian. See NAVIGATION.

TRAVERSE, in gunnery, is the turning a piece of ordnance about, as upon a centre, to make it point in any particular direction.

TRAVERSE, in fortification, denotes a trench with a little parapet, sometimes two, one on each side, to serve as a cover from the enemy, that might come in flank.

TRAVERSE, in a wet foss, is a sort of gallery, made by throwing saucissons, joists fascines, stones, earth, &c., into the foss, opposite the place where the miner is to be put, in order to fill up the ditch, and make a passage over it.

TRAVERSE also denotes a wall of earth, or stone, raised across a work, to stop the shot from rolling along it. It also sometimes signifies any retrenchment of line fortified with fascines, barrels, or bags of earth, or gabions.

TRAVERSE BOARD, in navigation, a thin cir- cular piece of board, marked with all the points of the compass, and having eight holes bored in each, and eight small pegs hanging from the centre of the board. It is used to determine the different courses run by a ship during the period of the watch, and to ascertain the distance of each course.

TRAVERSING, in fencing, is the change of ground made by moving to right or left round the circle of defence.

TRAVERSING PLATFORM, in artillery, is a me- thod of mounting guns, introduced some years back for the defence of the coast, and generally for all sea batteries, as affording greater facility of traversing the gun, so as to

follow, without loss of time, any quick moving object on the water. In this system the gun is mounted on a common garrison carriage; but instead of this carriage being placed and working on a fixed platform, as formerly, it works and recoils on a moveable platform ; or, as it may be more properly termed, a rail-way moving round a cen- tre in its front on rollers, the axes of which produced would intersect in this centre of

motion; so that this platform, with the carriage and gun upon it, may be traversed with consi- derable ease in any direction. The length of the skids, or rail-way, on which the upper carriage recoils is sixteen feet, and the hinder part is somewhat higher than the front, so that by runn- ing up hill the recoil is reduced, and the facility of running the gun out again much increased.

The late Sir William Congreve brought for- ward an improvement upon the traversing plat- form, by which the upper carriage is dispensed with ; the necessary height for firing over the parapet being given by the lower carriage, or, as it is called, the platform itself. In this construc- tion the gun recoils on trucks which work upon its trunnions, and which are allowed to turn as the gun runs out,but are palled by a strong catch concealed in the trunnion, which prevents their turning when the gun recoils ; the elevation be- ing regulated by a small cast iron cradle also at- tached to the trunnions. This construction not only very much reduces the expense of the tra- versing platform, by saving the upper carriage, but gives much greater ease in working the gun ; for by palling the trucks the recoil is diminished, and by getting rid of the weight of the upper carriage the men have little more to move than the gun, instead of having in addition to it a heavy carriage also to run out. There is also a very important advantage attending this improve- ment, namely, the reduction of vulnerable space for the enemy's shot to strike ; for not only is the length of the skids or platform itself reduced, but all the surface of the upper carriage is en- tirely done away with, at the same time that, by the diminution of the general weight, it is evident that it requires less labor to traverse the platform as well as to fight the gun. This system of mount- ing guns, by putting the trucks upon the trunnions, and placing those trucks immediately on the skids of the traversing platform, has been offered by Sir William Congreve as being particularly well adapted to the arming of the Martello Towers, which have been deemed too small for the num- ber of guns originally intended, namely, one long gun and two short ones. The diameter of the interior of the top of these towers is twenty- six feet: it occurred to Sir William Congreve that his method of putting the trucks upon the trunnions

of the gun brings the gun so near to the skids of the platform, that a platform so con- structed might be laid upon the upper surface of the parapet of a martello tower, without expos- ing more or even so much surface as at present, where the platform is kept within the parapet; for the muzzle of the gun would be no higher in one case than in the other. On this principle, therefore, Sir William Congreve proposed to take four feet all round the tower for the ends of his platform to work upon, which would at once virtu- ally make a tower of twenty-six feet in diameter equal to one of thirty-four feet ; that is to say, it actually gives the area of a circle of thirty-four feet diameter for the guns to work in, instead of one of only twenty-six feet ; and thus would af- ford abundant area for the three guns originally intended. But this is not all ; for by this plan there is actually less of the space in the area within the parapet occupied l>y the three inprov-

ed traversing platforms than by one on the old construction : the latter completely occupies a space of sixteen feet in length by five in breadth; whereas all the skids of Sir W. Congrere's three platforms, are above the men's heads, so that they may pass freely to and fro in all directions under them, having every where six feet six inches headway ; nor is there any part of these platforms that takes up any of the space of the area, except two perpendicular legs of eight inches square to each platform, on which the rear of the platforms is supported. To these advan- tages are to be added the greater facility, as above explained, of working the gun, and also that the muzzle is by these means thrown forward beyond the parapet, which gives a power of greater de- pression, and prevents the possibility of accident to the parapet from the explosion of the gun when depressed.

There is another most important improvement in the practice of fortification, which Sir Wil- liam's traversing platform has given rise to, and which was first matured with the assistance of captain Lefebure of the engineers, and brought before the committee of that corps upwards of two years since : it is the inversion of the em- brasures of casemated defences, that is to say, the presenting of the small aperture of the embrasure to the enemy instead of the large one. Thus, in an embrasure of this description, which Sir Wm. Congreve has constructed, he can fight a twenty- four pounder through an aperture only one foot six inches wide, and one foot ten inches high, preserving all the thickness of masonry entire, and allowing the piece a field or scope of 30° with the ordinary power of elevation and depres- sion ; to obtain all which on the common prin- ciple requires an exterior aperture of six feet high and six feet wide. Now the whole of this de- pends on the extraordinary compactness of the platform and its piece of ordnance, as mounted by putting trucks on the trunnions of the gun, or on the trunnion oolt of the carronade, and to the greatly increased facility of working either, especially the latter, which the trucks afford ; for by these means the gun or carronade, instead of being obliged, as in the common

mode, to be worked in the body of the casemate, is here ac- tually worked in the thickness of the wall itself; so that in the carronade, as well as in the gun, the muzzle is actually protruded through the embra- sure and is fired in free space : whence result all the following important comparative advan- tages :—

The common embrasure acts as a widely ex- tended funnel to lead the enemy's shot into the body of the casemate, and is particularly objec- tiona'ble on this account as to grape shot, and presents a large line of edge to be chipped and ruined by the enemy's shot. In the inverted embrasure the shot, whether round or grape, must strike a space of eighteen inches by two, and twenty inches to enter ; a very small quan- tity of grape shot therefore can take effect, and a proportionably less line of edge is presented to be destroyed by round shot.

In the common embrasure the explosion < f firinir the gun takes place within the arch, from which not only is the masonry constantly shaken

by firing a few rounds, but the noise and smoke rebound into the body of the casemate greatly to the annoyance of the men. In the inverted em- brasure, the muzzle when fired being projected into free space, no accident or jar can possibly happen to the masonry from the explosion : nor does the smoke or the report return into the casemate as above.

Another advantage is, that such an embrasure may be close to the bottom of the ditch without danger of being stormed, and that in fact it re- quires no prevention against such attack, as when the gun is in its place a man cannot possibly force himself in. Nor does there in fact appear any drawback to these obvious advantages ; for the loading and firing goes on with the same ra- pidity or even greater than in the common mode ; the gun or carronade necessarily recoiling, when fired, far enough to be loaded with perfect ease, and allowing, by the application of the trucks as already explained, of being run out again with even greater facility than by any other construction hitherto devised ; insomuch that the heavier the nature of ordnance the greater is the compara- tive advantage.

Sir William Congreve has applied this same principle of gun and carronade carriage very suc- cessfully to naval purposes, several ships having already been armed on his plan. The following are the advantages proposed by it on shipboard. 1st, Sir William Congreve has contrived, in the application of the principles of his traversing platform to the sea service, to give all the ad-

vantages of quick pointing, and of the diminu- tion of labor in a space not exceeding that occu- pied by the common gun carriage, insomuch that the heavy guns in a line-of-battle ship will not lequire more than half the ordinary number of men to fight them, without taking up more room than is now required for the common carriage. 2dly, A gun mounted on this principle will recoil much more smoothly, and without jumping as the common gun carriage does when fired ; not only because it is confined to the port sill and cannot rise, but because the plane on which it recoils is so much nearer the axis of the piece ; for, as Sir William Congreve has demonstrated, the jumping of the common carriage is owing to the height of the gun above the plane of the deck on which it recoils ; this height acting as a lever to tip the carriage over backwards when the gun is fired, and so producing a double motion in the recoil, first raising the fore trucks and then the hind ones off the deck ; all which he proves to be obviated by putting the trucks on which the gun recoils on its own trunnions, and thereby getting rid of the lever which produces the mis- chief. 3dly, The actual weight of the sea ser- vice gun carriage is reduced by this mode of mounting ship guns. 4thly, The new carriage presents considerably less vulnerable surface than the common carriage, and consequently less is to be feared from splinters ; nor has the new carriage the same liability to rot the decks, as the air circulates freely underneath it, instead of its causing a continual dampness as is the case with the present carriage ; seamen will feel the force of this property. Sthly, By this construction the muzzle of a short gun may be run out as far as

that of the long gun can be with the common carriage. 6thly, This carriage allows of very greatly more training than a common carriage, owing to the comparative difference of breadth and to its working on a fixed centre ; thus it may be traversed 90°. This is a most important point gained ; and yet, Tthly, it does not require, to give this power of training, a port so wide as the com- mon port by nine inches of a side, which is ob- viously of great consequence both to the strength of the ship and the security of the men at the guns against musquetry and grape shot. 8thly, The span of this carriage is so much less than that of the common carriage that four of them, if required, might be put in the space of three common carriages, leaving the same inter- vals, yet it cannot be overset as it works on a fixed centre. Othly, This carriage may be hous- ed fore and aft so as not to take up more than two feet from the breadth of the deck, or in bad weather it may be secured athwart ship without occupying more room than the common carriage. It is however capable of better security, and may be housed so as to take off all strain whatever from the side of the ship, and to prevent the pos- sibility of its stirring, as it allows of direct lash- ings to ring bolts on the deck, which the com- mon carriage will not any how admit of, and must therefore always have some motion in a gale of wind. Lastly,

Notwithstanding all these points, which would appear to be the result of a complicated machine, the construction of this car- riage is so simple that it is actually easier repaired at sea than a common carriage, and is even less perishable : in fine, it requires nothing but com- mon square scantling and the work of any ship carpenter. Sir William Congreve has published an account of this important improvement in mount- ing heavy artillery, with a series of plates explana- tory of the different modes of construction and advantages, and we understand that he has a pa- tent for the invention.

TRAVESTRYjin literature, a name given to a humorous translation of any author.

TRAVIS (George), M. A. a learned English divine, born at Roy ton, in Lancashire ; educated at Manchester, and St John's College, Cam- bridge. He became vicar of Eastham, rector of Hanley in Cheshire, and archdeacon of Chester. He wrote Letters to Mr. Gibbon, in which he defended the authenticity of the controverted passage in 1 John v. 7. He died in 1797.

TRAUMATIC, of;. Gr. rpaw/iariicoc. Vul- nerary ; useful to wounds.

I deterged and disposed the ulcer to incarrq and to do so I put the patient into a traumatick decoction. Wittman't Surgery.

TRAUNVIERTEL (i. e. quarter of the Traun), a district of Upper Austria, along the Traun, and extending from the Danube to the borders of Styria. It has a territorial extent of 1955 square miles, with 170,000 inhabitants. The northern part is level and fertile, but the south full of lofty mountains. This part of the Traun abounds with salt and other mines. In 1809 the western part of this district was ceded to Havana, but was restored to Austria ii. 1815.

TRAY, n. s. Swedish tray. A shallow wooden vessel in which meat or fish is earned.

TREASON.

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No more her care shall fill the hollow truy, To fat the guzzling hogs with floods of whey. Gay.

TRAZ oz MONIES, a large province of the north-east of Portugal, extending in a form nearly square, having to the south the course of the Douro, to the north Spanish Galicia. Its territorial extent is about 5500 square miles, equal to four of our average counties ; its popu- lation, much more thinly spread, hardly exceeds

350,000.

TREACII'EROUS, adj. -ˆ French trichcrie.

TREACH'EROUSLY, adv. /Faithless; perfidi-

TREACH'ERY, n. s. '^ ous ; guilty of de-

TREA'CHETOR, n. s. i serting or betray-

TREA'CHOUR. J ing : the adverb

and noun substantive corresponding : treachetor or treachour, is an obsolete synonyme of traitor.

He bad the lion to be remitted Unto his seat, and those same treacherous vile He punished for their presumptuous guile. Spenter.

Good Claudius with him in battle fought, In which the king was by a treachetovr Disguised slain. Id.

Thou hast slain

The flower of Europe for his chivalry, And treacherously hast thou vanquished him.

Sliakspeare.

I treated, trusted you, and thought you mine ; When in requital of my best endeavours, You treacherously practised to undo me, Seduced my only child and stole her. Oticay.

They bid him strike, to appease the ghost Of his poor father treacherously lost.

Dryden's Juvenal.

Desire in rapture gazed awhile, And saw the treacherous goddess smile. Swift.

TREA'CLE, n.. s. Fr. triacle ; Belg. triackle. A medicine made up of many ingredients: a syrup.

The physician that has observed the medicinal virtues of treacle, without knowing the nature of each of the sixty odd ingredients, may cure many patients with it. Boyle.

Treacle water has much of an acid in it. Flayer.

TREAD, v. n., v. a., & "1 Pret . trod ; part.

TREAD'ER, n. s. [n.s. Spass. trodden. Saxon

TREAD'LE. r tne1 > an ; Belg. tre-

dcn; Gothic trudan. To set the foot; trample; walk in form or state; copulate, as birds: as a verb active, to walk on, press, or beat under- foot ; crush ; put in action by the foot : a tread is a footing ; step with the foot; way : treader, he who treads : treadle, part of a machine on which the feet act; the sperm of a cock.

Thou shall tread upon their high places.

Deut. xxxiii. 29. Thou

M ust, as a foreign recreant, be led With manacles along our street, or else Triumphantly tread on thy country's ruin, And bear the palm. Sfiahspeare. Coriolanut.

If the streets were paved with thine eyes, Her feet were much too dainty for such tread.

Shuhspeare.

When shepherds pipe on oaten straws ; When turtles tread. Id.

Would 1 had never i-od this English earth, Or felt the flatteries that grow upon it ! Id.

Full of briars is this working world. — They are but burs, if we walk not in the trodden paths, our very petticoats will catch them.

l

t distance between the treading or coupling, laying of the egg 1 Bacon's Natural History.

What and the

The quaint mazes in the wanton green, For want of tread, are undislinguishable. Milton.

Ye that stately tread, or lowly creep. Id.

Whether it is not made out of the germe, or trea- dle of the egg, seemeth of lesser doubt.

Browne's Vulgar Errours.

The dancer on the rope, with doubtful tread, Gets wherewithal to clothe and buy him bread.

Dry den.

TREADMILL, an instrument of punish- ment, lately introduced into England and Ame- rica, consisting of a large wheel, about twenty or twenty-five feet wide, with steps on its ex- ternal surface, upon which the criminals are placed. Their weight sets the wheel in motion, and they maintain themselves in an upright pos- ture by means of a horizontal bar fixed above them, of which they keep hold. The power thus obtained may be applied to the same purpose as water power, steam, &c. The exercise is very fatiguing, and the prisoners are relieved at short intervals of time.

TREA'SON, n. s. } French trahison. An of-

TREA'SONABLE, adj. £ fence committed against

TREASONOUS.) the dignity and majesty

of a commonwealth : see below : the adjective corresponding.

Athaliah cried, Treason, treason.

2 Kingt, xi. 14.

He made the overture of thy treasons to us.

Shakspeare.

Him by proofs as clear as founts in July I know to be corrupt and treasonous.

Id. Henry V III.

This being a treason against God, by a commerce with his enemy. Holyday.

Most men's heads had been intoxicated with imaginations of plots and treasonable practices.

Clarendon.

Were it a draught for Juno when she banquets, I would not taste thy treasonous offer. Milton.

Man disobeying,

Disloyal breaks his fealty, and sftis Against the high supremacy of heaven : To expiate his treason hath nought left. Id.

A credit to run ten millions in debt without par- liamentary security is dangerous, illegal, and per- haps treasonable. Swift.

TREASON, a general appellation, made use of by the law, to denote not only offences against the king and government, but also that accumu- lation of guilt which arises whenever a superior reposes a confidence in a subject or inferior, be- tween whom and himself there subsists a natural, a civil, or even a spiritual relation ; and the in- ferior so abuses that confidence, so forgets the obligations of duty, subjection, and allegiance, as to destroy the life of any such superior or lord. Hence treason is of two kinds, high and petty.

TREASON HIGH, or TREASON PARAMOUNT (which is equivalent to the crimen laesse majesta- tis of the Romans), is an offence committed against the security of the king or kingdom, whether by imagination, word, or deed. The stat. 25 Edw. III. c. 2, defines what offences should be hold to be treason ; and it compre- hends all kinds of high treason under seven branches. ‘ 1. When a man doth compass or

imagine the death of our lord the king, of our lady his queen, or of their eldest son and heir,’ the stat. requires that the accused ‘ be thereof upon sufficient proof attainted of some open act by men of his own condition.’ Thus, to provide weapons or ammunition for the purpose of kill- ing the king, is held to be a palpable overt act of treason in imagining his death. To conspire to imprison the king by force, and move towards it by assembling company, is an overt act of compassing the king’s death. It seems clearly to be agreed that by the common law and the stat. of Edw. III. words spoken amount only to a high misdemeanor, and no treason. If the words be set down in writing, it argues more de- liberate intention ; and it has been held that writing is an overt act of treason. But, even in this case, the bare words are not the treason, but the deliberate act of writing them. 2. ‘ If a man do violate the king’s companion, or the king’s eldest daughter unmarried, or the wife of the king’s eldest son and heir.’ By the king’s com- panion is meant his wife ; and by violation is understood carnal knowledge,

*as well without force as with it. 3. The third species of treason is, ‘ if a man do levy war against our lord the king in his realm.’ And this may be done by taking arms, not only to dethrone the king, but under pretence to reform religion, or the laws, or to remove evil counsellors, or other grievances whether real or pretended. 4. ‘ If a man be ad- herent to the king’s enemies in his realm, giving to them aid and comfort in the realm or elsewhere.’ he is also declared guilty of high treason. 5. * If a man counterfeit the king’s great or privy seal,’ this is also high treason. But if a man takes wax bearing the impression of the great seal off from one patent and fixes it to another, this is held to be only an abuse of the seal, and not a counterfeiting of it. 6. ‘ If a man counter- feit the king’s money ; and if a man bring false money into the realm counterfeit to the money of England, knowing the money to be false, to merchandise and make payment withal.’ But gold and silver money only are held to be within this statute. It is held that uttering counterfeit money without importing it, is not within the statute. 7. ‘ If a man slay the chancellor, trea- surer, or the king’s justices of the one bench or the other, justices in eyre, or justices of assize, and all other justices assigned to hear and de- termine, being in their places doing their office.’ But this statute extends only to the actual killing of them ; and not to wounding or a bare attempt to kill them. The barons of the exchequer, as such, are not within the protection of this act ; but the lord keeper or commissioners ofthegieat seal now seem-to be within it, by virtue of the stats. 5 Eliz. c. 18, and 1 VV. and M. c. 21. The new treasons, created since the slat. 1 M. c. 1, and not comprehended under the de- scription of stat. 25 Edw. III., may be comprised under three heads. The first species relates to Papists; the second to falsifying the coin or other royal signatures, as falsely forging the sign manual, privy signet, or privy seal, which shall be deemed high treason. — 1 M. stat. ii. c. 6. The third new species of high treason is such as w.i< created for the security of the Protestant*

succession in the house of Hanover. For this purpose, after the act of settlement was made, it was enacted by stat. 13 and 14 W. III. c. 3, that the pretended prince of Wales, assuming the title of king James III., should be attainted of high treason ; and it was made high treason for any of the king’s subjects to hold correspon- dence with him or any person employed by him, or to remit money for his use. And, by 17 Geo. II. c. 39, it is enacted, that if any of the sons of the pretender shall land or attempt tc land in this kingdom, or be found in the king- dom or any of its dominions, he shall be ad- judged atta.nted of high treason ; and corres- ponding with them, or remitting money to their use, is made high treason. By I Ann. stat. 2, c. 17, the offence of hindering the next in suc- cession from succeeding to the crown, is high treason ; and, by 6 Ann. c. 7, if any person shall maliciously, advisedly, and directly, by writing or printing, maintain that

any other person hath any right to the crown of this realm, otherwise than according to the act of settlement, or that the kings of this realm with the authority of par- liament are not able to make laws to bind the crown and its descent; such person shall be guilty of high treason. The punishment of hijh treason in general is very solemn and terrible. 1 . That the offender be drawn to the gallows, and not be carried or walk ; though usually (by connivance, at length ripened by humanity into law) a sledge or hurdle is allowed, to preserve the offender from the torment of being dragged on the ground or pavement. 2. That he be hanged by the neck, and then cut down alive. 3. That his entrails be taken out, and burned while he is yet alive. 4. That his head be cut off. 5. That his body be divided into four parts. 6. That his head and quarters be at the king's disposal. The king may, and often doth, dis- charge all the punishment except beheading, especially where any of noble blood are attainted. But where beheading is no part of the judgment, as in murder or other felonies, it hath been said that the king cannot change the judgment. In the case of coining, the punishment is milder for male offenders; being only to be drawn and hanged by the neck till dead. But, in treasons of every kind, the punishment of women is the same, being different, and perhaps more terrible than that of men. Their sentence, until of late years, was to be drawn to the gallows, and there to be burned alive. This barbarous punishment, to the disgrace of the law of England, was ac- tually inflicted upon a poor woman, at London, so late as the year 1786. The woman fainted when led to the place of suffering. This circumstance

excited the humanity of Martin, esq. M. P.

to bring in a bill for its abolition, which passed both houses during the winter sessions in 1788, See ATTAINDER, FORFEITURE, and CORRUPTION OF BLOOD.

TREASON, PETTY, or PETIT, according to the stat. 25 Edw. III. c. 2, may happen three ways: by a servant killing his master, a wife her hus- band, or an ecclesiastical person (either secular or re-jular) his superior, to whom he owes faith and obedience. vVhatever has been said w;th ct to wilful murder is also applicable to tiie

crime of petit treason, which is uo other than murder in its most odious degree ; except that the trial shall be as in cases of high treason, before the

improvements therein made by the statutes of William III. But a person indicted of petit treason may be acquitted thereof, and found guilty of manslaughter or murder. The punish- ment of petit treason in a man is to be drawn and hanged, and, in a woman, to be drawn and burned : the idea of which latter punishment seems to have been handed down to us from the laws of the ancient Druids, which condemned a woman to be burned for murdering her husband. Per- sons guilty of petit treason were first debarred the benefit of clergy by stat. 12 Henry VII. c. 7, which lias since been extended to their aiders, abettors, and counsellors, by stat. 23 Henry VIII. c. 1, and 5, and 5 P. and M. c. 4.

TREA'SURE, n.s.&v.a.-v French trcsor ; TREA'SUIIEHOUSE, n. s. j Latin thesaurus. TREASURER, \ Wealth hoarded ;

TREA'SURERSHIP, i riches in store :

TREA'SURY. J treasurehouse,

the place of this deposit : treasurer, a depositary of treasure : treasureship, his office or dignity : treasury, a place devoted to the storing or regu- lating treasures : used for the treasure itself by Shakspeare.

Let there be any grief or disease incident to the soul of men, for which there is not in this treasure- home a present comfortable remedy to be found.

Hooker.

An inventory, importing The several parcels of his pjate, his treasure, Rich stuffs. Shakspeare. Henry V/IL

Thou silver treasurehouse, Tell me once more, what title dost thou bear ?

Sha/upeare.

This is my treasurer, let him speak That I have reserved nothing.

Id. Antony and Cleopatra.

Before the invention of laws, private affections in supreme rulers made their own fancies both their treasurers and hangmen, weighing in this balance good and evil. Raleigh.

He used his laws as well for collecting of treasure, as for correcting of manners. Bacon.

He preferred a base fellow, who was a suitor for the treasurer ship, before the most worthy. Hahewill. The state of the treasury the king best knows.

Temple.

Gold is treasure as well as silver, because not de- caying, and never sinking much in value. Locke.

No, my remembrance treasures honest thoughts, And holds not things like thee ; I scorn thy friend- ship. Rowe. TREASURER, LORD HIGH, OF GREAT BRITAIN, or first commissioner of the treasury, when in commission, has under his charge and govern- ment all the king's revenue which is kept in the exchequer. Hs holds his place during the king's pleasure ; being instituted by the delivery of a white staff to him. He has the check of all the officers employed in collecting the customs and royal revenues ; and in his gift and disposition are all the offices of the customs in the several ports of the kingdom ; escheators in every county are nominated by him ; he also makes leases of the lands belonging to the crown.

TREASURER OF THE HOUSEHOLD is an officer who, in the absence of the lord steward, has

power, with the comptroller and other officers of the green-cloth and the steward of the marshalsea, to hear and determine treasons, felonies, and other crimes committed within the king's palace. See HOUSEHOLD. There is also a treasurer be- longing to the establishment of her majesty's household, &c.

TREASURE-TROVE, in law, derived from the French word trover, to find, called in Latin thesaurus inventus, is where any money or coin, gold, silver, plate, or bullion, is found hidden in the earth or other private place, the owner thereof being unknown ; in which case the treasure be- longs to the king : but if he that hid it be known, or afterwards found out, the owner, and not the king, is entitled to it.

The TREASURY is the place in which the reve- nues of a prince are received, preserved, and dis- bursed. In England the treasury is a part of the exchequer ; by some called the lower exche- quer. The officers of his majesty's treasury, or the lower exchequer, are the lords commissioners, one of whom is chancellor, two joint secretaries, private secretary to the first lord, two chamber- lains, an auditor, four, tellers, a clerk of the pells, ushers of the receipt, a tally-cutter, &c. See CHANCELLOR, TELLER, &c.

TREAT, v. a., v. n. & n. S.N Fr. t-aiter ; Lat.

TREAT'ABLE, adj. j tructo. To nego-

TREAT'ISE, n. s. \ ciate ; settle ; dis-

TREAT'MENT, i course on ; ma-

TREAT'Y. J nage ; entertain :

the verb neuter and noun substantive correspond : treatable is, moderate ; manageable : treatise, % discourse ; tract : treatment, usage : treaty, negociation ; act of treating ; supplication ; peti- tion; compact made.

The king treated with them. 2 Mac. xiii. 22.

A virtuous mind should rather wish to depart this world with a kind of treatable dissolution, than he suddenly cut off in a moment ; rather to be taken than snatched away. Hooker.

The time has been, my fell of hair Would at a dismal treatise rouze, and stir As life were in 't. Sliakspeare.

I must

To the young man send humble treaties, dog, And palter in the shift of lowness. Id.

Of love they treat till the' evening star appeared.

Milton.

The heats or the colds of seasons are less treatable than with us. Temple.

To treat the peace, a hundred senators Shall be commissioned. Dryden's JEneid.

This is the ceremony of my fate : A parting treat, and I'm to die in state. Drt/den.

Scarce an humour or character which they have not used ; all comes wasted to us : and, were they to entertain this age, they could not now make such plenteous treatment. Id.

Absence, what the poets call death in love, has given occasion to beautiful complaints in those au- thors who have treated of this passion in verse.

Addison's Spectator. Echion then

Lets fall the guiltless weapon from his hand, And with the rest a peaceful treaty makes. Jd. Ovid.

If we do not please, at least we treat. Priur.

He pretends a great concern for his country, and insight into matters ; now such professions, when recommended by a treat, dispose an audience to heai reason. Collie,-

W:hat tender maid but must a victim fall For one man's treat, but for another's ball ! Pope.

You, Master Dean, frequent the great, Inform us, will the emperor treat? Swift.

TREBATIUS TESTAS (Caius), a writer of the Augustan age, who was banished by Caesar as a parlizan of Pompey, but was afterwards reconciled to him. He was eminent for his integrity. He wrote on civil law, and some good poems, and other tracts. — Hor. 2 Sat.

TREBELLIUS POLLIO, a Latin historian, who flourished about A. D. 305. He wrote the Lives of the Roman Emperors ; the beginning of this work is lost ; but part of the life of Valerian,

All his malice served but to bring forth Infinite goodness, grace, and mercy shewn On man by him seduced ; but on himself Treble confusion, wrath, and vengeance poured.

Milton.

A lofty tower, and strong on every side With treble walls. Dryden's .l-'.iicid.

His javelin sent,

The shield gave way ; through treble plates it went Of solid brass, of linnen trebly rolled. Id.

Whoever annually runs out, as the debt doubles and trebles upon him, so doth his inability to pay it.

Swift.

TRE'BLE, n. s.) Of uncertain etymology. A TRE'BLENESS. ji sharp sound : state of being

the reigns of the two Gallieni, and the reigns of treble.

the thirty tyrants, are extant. The treble cutteth the air so sharp, as it

returneth

TREBIA, or TREBBIA, a river in the north of too swift to make the sound equal ; and therefore a

Italy, in the duchy of Parma, which rises among mean or tenor is the sweetest. Bacon.

the Appennines and falls into the Po above Pia-

just proportion of the air percussed towards

been between the embouchure of the Trebia and Piacenza. Its banks were the scene also of san- guinary fighting in June 1 799, between the French under Macdonald and the Russians under Su- warrow, in which the latter were victorious.

TREBIGH, or TURBIGH, a hamlet of Eng- land, in Cornwall, four miles and a half W. S. W. of Collington.

TREBIGNE. See TSCHERBENIDSCHE.

TRIPOLI.

*cenza. Though not large it is a rapid and im- *he baseness or treblenea of tones is a great secret*

petuous stream. It gave name to the second >n sounds.

victory which signalised Hannibal's invasion of ™C ˆV'l Ambles underneath thy r

T , ', r u- u • j.t. At thy well-sharpened thumb, from shore

ˆiˆSˆˆSiˆˆK!} The •• squeak for fear, the bases roar.*

TREBLE, in music, the highest or most acute of the four parts in symphony, or that which is heard the clearest and shrillest in a concert.

TREE, n. s. Sax. tneo ; Isl. trie ; Dan. tree. A vegetable with woody stem and branches ; any thing branched out: treen is the old plural. Who can bid the tree unfix his earth-bound root ?

thakspeare.

Well run greenhood, got between ElEBILIS, the ancient name of Tripoli. See Under the sand!bag he was seen ;

IIPOLI. Lowting low like a forester green,

TREBISOND, an ancient city of Asia Minor He knows his tackle and his treen. Ben Jonson. on the coast of the Black Sea. It is mentioned Vain are their hopes who fancy to inherit,

by Xenophon under the appellation of Trapezus, By trees of pedigrees, or fame or merit ;

as forming the termination of the retreat of the Though plodding heralds through each branch may 10,000, and is stated to have been then a po- trace

pulous colony of the Sinopians, situated in the Old captains and dictators of their race. Dryden. country of the Colchians. It continued a free . Trees sfhoot UP in °ne ereat. sten\ and at a g°°d

and independent city till it fell under the domi- dlstaiT from the, ˆ sP'ea , lnto branches -:

nion of the kings of Pontus. After the capture g°°seber»es are shrubs > and oaks ™ '««•

of Constantinople by the Latins in 1203 Trebis- ond became, under Alexis Comnenus, the seat of an empire extending from the mouth of the Phasis to that of the Halys. It surrendered, however, to Mahomet II. The city is of an ob- long shape, occupying a slope gently rising from the sea. On the east and west it is defended by

TREE GERMANDER, in botany. SeeTEUCRitiM. TREE Moss, a species of lichen. TREE OF LIFE, or lignum vitae, in botany. See GUAIACUM.

TREE PRIMROSE, in botany. SeeOENOTHERA. TREE TREFOIL. See CYTISUS. TREES. All trees may be divided into two

two deep ravines, connected by a ditch cut in classes, timber and fruit- trees; the first including

the rock, and along the skirts of which run the all those trees -which are used in machinery,

ancient ramparts of the city, which are built of ship-building, &c., or, in general, for purposes

stone, and in general very lofty. Trebisond is of utility ; and the second comprehending those

said to contain a population of 15,000 souls, trees valued only, or chiefly, for their fruit. It

The trade considerable ; the principal exports silk and cotton stuffs manufactured by the inha- bitants, fruit, and wine. The imports sugar, cof- fee, and woollen cloths, from Constantinople ; corn, salt, and iron, from the Crimea and Mingrelia. TRE'BLE, adj., v. a. &) Fr. triple ; Lat. tri- TRE'BLY, adv. [v. n. S plus, triplex. Three-

is not necessary to form a third class to include trees used for fuel, as all timber is used for this purpose where it is abundant. For the botanical classification of trees and plants in general, see BOTANY.

Few experiments have been made to deter- mine what the additions are which a tree receives

fold; triple: to multiply by three: become annually in different periods of its age. Mr.

threefold : thrice told. Barker has drawn up a table to point out the

She conceived, and treb'ling the due time, growth of three kinds of trees, oaks, ashes, and

Brought forth this monstrous mass. Spenser. ell»s ; wn > ch may be seen in the Philosophical

> ' me I see, Transactions for 1788. His conclusions are

That twofold balls and treble sceptres carry. these :— ' I find the growth of oak and ash to be

Shakfpeare. nearly the same. The common growth of an oak

TREES.

or an ash is about an inch in girth in a year ; some thriving ones will grow an inch and a half. Great trees grow more timber in a year than small ones ; for, if the annual growth be an inch, a coat of one-sixth of an inch is laid on all around, and the timber added to the body every year is its length multiplied into the thickness of the coat and into the girth, and therefore the thicker the tree is the more timber is added.' The following table shows the growth of seven- teen kinds of trees for three years. The trees grew at Cavenham in Suffolk.

July 1785. July 1786. July 1787.

No. Ft. In. Ft. In. Ft. In.

l.Oak . . . . 010J— Olli — 1 OJ

2. Larch ... 1 OJ — 1 3 — 1 4

3. Scots fir . . . 1 3i — 1 5i — 1 7f

4. Spruce fir . . 0 5f — 0 6£ — 0 7J

5. Spanish chestnut 0 7^ — 0 7J — 0 8

6. Elm . . . . 2 7i — 2 9 —2 11

7. Pinaster . . . 2 3§ — 2 4J — 2 7£

8. Larch . . . 1 5J — 1 6 — I 7

9. Weymouth pine 05 — 0 6 — 0 7|

10. Acacia . . . 1 2| — 1 5| — 1 6J

11. Beech . . . 0 6 — 0 6£ — 0 7i*

12. Plane occidental 0 6J — 0 7f — 0 8|

13. Lombardy poplar 1 8 — 2 0—2 3|

14. Black poplar' . 1 2i — 1 4J — 1 5f

15. Willow . . . 2 91 — 3 2—3 3

16. Silver fir . . 0 7J — 0 8J — 0 9£

17. Lime . . . . 1 8£ — 1 10f — 2 0

Heat is so essential to the growth of trees that as we go from the place within the polar circles where vegetation begins, and advance to the equator, we find the trees increase in size remarkably. Greenland, Iceland, and other places in the same latitude, yield no trees at all ; and the shrubs which they produce are dwarfish; whereas, in warm climates, they often grow to an immense size. The largest tree in Europe, mentioned by travellers, is a chestnut on Mount ./Etna. It is certain that trees acquire a very great size in volcanic countries. Besides the multitude of fine groves in the neighbourhood of Albano in Italy, there are many detached oaks twenty feet in circumference, and many elms of the same size, especially in the romantic way to Estello, called the Galleria. In travelling by the side of

the lake of Bolsenna the road leads us through an immense number of oaks, spread upon beau- tiful hills. Some yews have been found in Britain sixty feet round. Palms in Jamaica at- tain the height of 200 feet ; and some of the pines in Norfolk Island are 280 feet high.

The goodness of timber not only depends on the soil and situation in which it stands, but likewise on the season in which it is felled. In this people disagree very much ; some are for having it felled as soon as its fruit is ripe, others in the spring, and many in the autumn. But, as the sap and moisture of timber is certainly the cause that it perishes much sooner than it other- wise would do, it seems evident that timber should be felled when there is the least sap in it, viz. from the time that the leaves begin to fall, till the trees begin to bud. This work usually com- mences about the end of April in England, be- cause the bark then rises most freely ; for, where

a quantity of timber is to be felled, the statute requires it to be done then, for the advantage of tanning. The ancients chiefly regarded the age of the moon in felling their timber ; their rule was to fell it in the wane, or four days after the new moon, or sometimes in the last 'quarter. Pliny advises it to be in the very instant of the change ; which happening to be in the last day of the winter solstice, the timber, says he, will be incorruptible. Timber should likewise be cut when of a proper age ; for when it is either too young or too old it will not be so durable as when cut at a proper age. It is said that oak should not be cut under sixty years old, nor above 200. Timber, however, should be cut in its prime, when almost fully grown, and before it begins to decay ; and this will be sooner or later according to the dryness or moistness of the soil where the timber grows, as also according to the bigness of the trees ; for there are no fixed rules in felling of timber : experience and judgment must direct here as in most other cases.

The chevalier de Blenenberg of Prague, we are told, has discovered a method of effectually preserving trees in blossom from the fatal effects of those frosts which sometimes in the spring destroy the most promising hopes of a plentiful crop of fruit. His method is extremely simple. He surrounds the trunk of the tree in blossom with a wisp of straw or hemp. The end of this he sinks, by means of a stone tied to it, in a vessel of spring water, at a little distance from the tree. One vessel will conveniently serve two trees ; or the cord may be lengthened so as to surround several, before its end is plunged into the water. It is necessary that the vessel be placed in an open situation, and by no means shaded by the branches of the neighbouring trees, that the frost may produce all its effect on the water, by means of the cord communicating with it. This precaution is particularly neces- sary for those trees the flowers of which appear nearly at the same time as the leaves ; which trees are peculiarly exposed to the ravages of the frost. The proofsNof its efficacy, which he had an opportunity of observing in the

spring of 1787, were remarkably striking. Seven apricot espaliers in his garden began to blossom in March. Fearing that they would suffer from the late frosts, he surrounded them with cords as above directed. In effect, pretty sharp frosts took place six or eight nights ; the apricot-trees in the neighbouring gardens were all frozen, and none of them produced any fruit, whilst each of the chevalier's produced fruit in abundance, which came to the greatest perfection.

After trees are cut down, great attention is necessary in the seasoning of timber. Some advise the planks of timber to be laid for a few days in some pool or running stream, in order to extract the sap, and afterwards to dry them in the sun or air. By this, it is said, they will be prevented from either chopping, casting, or cleaving ; but against shrinking there is no re- medy. Some again are for burying them in the earth, others in a heat ; and some for scorching and seasoning them in fire, especiafry piles, posts, &c., which are to stand in water or earth. The Venetians first found out the method of season-

ing by fire ; which is done after this manner : — They put the piece to be seasoned into a strong and violent flame; in this they continually turn 't round by means of an engine, and take it out when it is every where covered with a black coaly crust ; the internal part of the wood is thereby so hardened that neither earth nor water can damage it for a long time afterwards. Dr. Plott says it is found, by long experience, that the trunk or body of the trees, when barked in the spring, and left standing naked all the summer exposed to the sun and wind, are so dried and hardened, that the sappy part in a manner be- comes as firm and durable as the heart itself. This is confirmed by M. Buffon, who, in 1738, presented to the Royal Academy of Sciences at Paris a memoir, entitled An easy Method of Increasing the Solidity, Strength, and Duration of Timber ; for which purpose, he observes, ' no- thing more is necessary than to strip the tree en- tirely of its bark during the season of the rising of the sap, and to leave it to dry completely before it be cut down.' By many experiments, particularly described in that essay, it appears that the tree should not be felled till the third year after it has been stripped of the bark ; that it is then perfectly dry, and the sap becomes almost as strong as the rest of the timber, and stronger than the heart of any other oak iree which has not been so stripped ; and the whole of the timber stronger, heavier, and harder ; from which he thinks it fair to conclude that it is also more durable. ' It would no longer,' he adds, ' be necessary, if this method were practised, to cut off the sap ; the whole of the tree might be used as timber ; one of forty years'

growth would serve all the purposes for which one of sixty years is now required ; and this practice would have the double advantage of increasing the quantity, as well as the strength and solidity, of the timber.' After the planks of timber have been well sea- soned and fixed in their places, care is to be taken to defend or preserve them ; to which the smear- ing them with linseed oil, tar, or the like olea- ginous matter, contributes much. The ancients, particularly Hesiod and Virgil, advise the smoke drying of all instruments made of wood, by hanging them up in the chimneys where wood fires are used. The Dutch preserve their gates, portcullices, draw bridges, sluices, &c., by coat- ing them over with a mixture of pitch and tar, whereon they strew small pieces of cockle and other shells, beaten almost to powder, and mixed with sea-sand, which incrusts and arms them wonderfully against all assaults of wind and weather. When timber is felled before the s^p is perfectly at rest, it is very subject to worms ; but, to prevent and cure this, Mr. Evelyn recom- mends the following remedy as the most ap- proved : Put common sulphur into a cucurbit with as much aquafortis as will cover it three fingers' deep ; distil it to dryness, which is per- formed by two or three rectifications. Lay the sulphur that remains at bottom, being of a blackish or sand red color, on a marble, or put it in a glass, and it will dissolve into an oil ; with this oil anoint the timber which is infected with worms. This, he says, will not only jnc- vent worms, but preserve all kinds of woods, and

many other things, as ropes, nets, and masts, from putrefaction, either in water, air, or snow. An experiment to determine the comparative durability of different kinds of timber, when ex- posed to the weather, was made by a nobleman in Norfolk ; of which an account is given by Sir Thomas Beevor. This nobleman, in 1774, ordered three posts, forming two sjdes of a qua- drangle, to be fixed in the earth on a rising ground in his park. Into these posts were mor- tised planks an inch and a half thick, cut out of trees from thirty to forty-five years' growth. These, afte standing ten years, were examined, and found in the following state and condition : The cedar was perfectly sound ; larch, the heart sound, but the sap quite decayed ; spruce fir sound ; silver fir in decay ; Scots fir much de- cayed ; pinlaster quite rotten ; chestnut perfectly sound ; abele sound ; beech sound ; walnut in decay ; sycamore much decayed ; birch quite rotten. Sir Thomas Beevor justly remarks that the trees ought to have been of the same age ; and Mr. Arthur Young adds, they ought to have been cut out of the same plantation.*

The immense quantity of timber consumed of late years in ship-building and for other pur- poses has diminished in a very great degree the quantity produced in this country. On t!ii> ac- count many gentlemen who wish well to their country, alarmed with the fear of a scarcity, have strongly recommended it to government to pay some attention to the cultivation and preservation of timber. The-price of wood has risen in pro- portion to the

demand and to its diminution. At the conquest woods were valued, not by tiie quantity of timber which they contained, but the number of swine which the acorns could support. In 1608 oak in the forests was sold at 10s. per load, and fire-wood for 2s. per load. In 1663 or 1665, in navy contracts, from £2 to £2 15s. 6d. per load was given. In 1756 it rose to £4 5s. per load, and 3s. in addition, because no tops are received. Plank four inch sold in 1796 for £7 a load, three inch £4 ; which prices were thr same in 1792. The expenditure of valuable timber is now so great as to give reason to fear that the forests of this country will soon be en- tirely dismantled unless something is done to raise fresh supplies. The building of a seventy gun ship, it is suid, would take forty acres of timber. This calculation appears exces but seems to be no exaggeration. According to the prevailing opinion of experienced surveyor-; it will require a good soil and good management to produce forty trees on an acre, which, in 100 years, may, at an average, be computed at two loads each. Reckoning, therefore, two loads at £8 16s., one acre will be worth £350, and con- sequently forty acres will only be worth £l 4,200. Now a seventy gun ship is generally supposed to cost £70,000; and, as ships do not lust mrwiy years, the navy continually require new shi| that the forests must be stripped in a century or two, unless young trees are planted to supplv their place. No doubt we depend greatly on Russia, Sweden, Norway, and America, for sup- plying us with timber; and while these countrin> take our manufactures in exchange we have IM. •ii to complain. Still, however, we ouglil

not to neglect the cultivation of what •< of so much importance to our existence as a nation ; for it may often be impossible in time of war to obtain timber from foreign countries. TRE'FOIL, n. s. Lat. trifolium. A plant.

Hope, by the ancients, was drawn in the form of a sweet and beautiful child standing upon tiptoes, and A trefoil or three-leaved grass in her hand.

Peacham on Drawing. Some sow trefoil or rye-grass with their clover.

Mortimer.

TREFOIL, in botany. See TRIFOLIUM.

TREFOIL, BEAN, a species of cyticus.

TREFOIL, BIRD'S FOOT. See LOTUS.

TREFOIL, MARSH. See MENYANTHES.

TREFOIL, MOON, a species of medicago.

TREFOIL, SHRUB. See PTELEA.

TREFOIL, SHRUB, OF MONTPELIER. See LOTUS.

TREFOIL, SNAIL. See MEDICAGO.

TREFOIL, STINKING BEAN. See ANAGYRIS.

TREFOIL, THORNY, a species of fagonia.

TREFOIL, TREE. See CYTISUS.

TREGONY, a post and market town in the nundred of Powder, distant 248 miles nearly W.S.VV. from London, and seventy-five south- west from Exeter. It is an ancient town, situated on the banks of the river Fal, and is supposed to have been the first settlement on this brand) of the harbour, and the Cenio of the Romans, by whom also the harbour was named Genius. Some small vestiges of Roman works may s'.ill be found. It sent two members to parliament in the reign of Henry I., and, after long disuse, re- covered its ancient privileges in 1559. The right of election was vested in the townsmen, who were potwallers : it was disfranchised in 1832. It appears that the town was anciently governed by a portreeve; but, in 1620, James I. granted it a charter of incorporation by the style of the ' mayor, corporation, and eight capital burgesses,' the senior of whom is a justice of the peace. The houses are chiefly disposed in one long street. The old town was seated on the low ground at the bottom of the hill on which the present one is built. The market-day is Saturday. Fairs are held here on Shrove-Tuesday, the 3d of May, the 25th of July, the 1st of September, and the 6th of November. Inhabitants 1127.

TRE'ILLAGE, n. s. Fr. Ireillage. Defined below.

Treillaye is a contexture of pales to support espal- liers, making a distinct inclosure of any part of a garden. Trevoux.

TREM'BLE, v. n. \ Fr. trembler; Lat.

TREM'CLIXGLY, adv. S trerno. To shake as with fear or cold ; shiver ; quake ; quiver ; totter : the adverb corresponding.

AN inds make a noise unequally, and sometimes, when vehement, tremble

at the height of their blast.

Bacon .

\ hen he heard the king he fell into such a trem- bling that he could hardly speak. Clarendon. Sinai's grey top shall tremble. Milton. Frighted Turnus trembled as he spoke.

Dry den's JEneid.

We cannot imagine a mass of water to have stood upon the middle of the earth like one great drop, or a trembling jelly, and all the places about it dry.

Burnet. VOL. XXII.

Ye powers, revenge your violated altars, That they who with unhallowed hands approach May tremble. Eowe. .

TREMELL'A, m botany, a genus of plants belonging to the class of cryptogamia, and natural order of algae. It is a gelatinous membranous substance ; the parts of the fructification scarcely visible. There are eleven species, of which the five following are indigenous : — 1 . T. hemisphae- rica, the sea tremella, is scattered among con- servae, fuci, &c. 2. T. lichenoides, the trans- parent tremella, is erect, plane, the margin curled, lacinulated, and brown. It grows on heaths and in woods, &c. 3. T. nostoc, the jelly rain tre- mella, is found in pastures and by the sides of gravel walks in gardens after rains ; not uncom- mon in spring, summer, and autumn. It is a membranaceous, pellucid, and gelatinous sub- stance, without any visible root ; of a yellowish dull green color ; assuming various forms, either round, angular, plaited, or folded together irre- gularly, like the intestines, an inch or two or more in diameter ; soft to the touch when moist ; but thin, membranaceous, and brittle when dry ; and of a black fuscous color. The ancient alchemists called this vegetable the flowers of heaven, and imagined that from it they could procure the universal menstruum ; but all their researches ended in discovering that by distilla- tion it yielded some phlegm, volatile salt, and empyreumatic oil. 4. T. purpurea, the purple tremella, is globular, sessile, solitary, and smooth. It grows on ditch banks about London. 5. T. verrucosa, the warty tremella, is tubercular, solid, wrinkled, roundish, and resembling a bladder ; it is of a blackish yellow. It grows on stones in rivulets.

TREMELLIUS (Emanuel), a Jew born at Ferrara in 1510. He was a great master of the Hebrew tongue ; and was converted to Christi- anity by the celebrated Peter Martyr. After travelling to Germany and England he was made professor of Hebrew, first at Heidelberg, and then at Sedan, where lie

died in 1580. He translated the Hebrew Bible and Syriac Testament into Latin ; in the former he was assisted by Junius, who also corrected the second edition in 1587.

TREMEN'DOUS, adj. Latin tremaulus. Dreadful ; horrible ; astonishingly terrible.

There stands an altar where the priest celebrates some mysteries sacred and tremendous. Taller.

In that portal should the chief appear, Each hand tremendous with a brazen spear.

Pope's

TREMOLITE. This sub-species of straight- edged augite is divided into three kinds; the asbestous, common, and glassy.

1. Asbestous tremolite. — Color grayish-white. Massive, and in fibrous concretions. Shining, pearly. Fragments splintery. Translucent on the edges. Rather easily frangible. Soft. Ra- ther sectile. When struck gently, or rubbed in. the dark, it emits a pale reddish light; when pounded and thrown on coals a greenish light. Before the blowpipe it melts into a white opaque mass. It occurs most frequently in granular foliated limestone, or in dolomite. It is found in the former in Glentilt and Glr neUr : in lite

latter in Aberdeenshire and Irolmkill ; and in basalt in the castle rock of Edinburgh.

2. Common tremolite. — Color white. Massive, in distinct prismatic concretions, and crystallised in a very oblique four-sided prism, truncated or bevelled on the lateral edges ; in an extremely oblique four-sided prism, perfect or variously modified by bevelment or truncation. The late- ral planes are longitudinally streaked. Vitreous or pearly. Cleavage double oblique angular, of 124° 50 and 55° 50'. Fracture uneven or con- choidal. Translucent. As hard as hornblende. Rather brittle. Specific gravity 2-9 to 3-2. It melts with much difficulty and ebullition into an opaque glass. Its constituents are, silica 50, magnesia 25, lime 18, carbonic acid and water

5. — Laugier. It occurs with the preceding.

3. Glassy tremolite. — Color grayish, greenish, yellowish, and reddish-white. Massive, in dis- tinct concretions, and frequently crystallised in long acicular crystals. Shining, between vitre- ous and pearly. Translucent. As hard as horn- blende. Very brittle. Specific gravity 2-863. It is phosphurescent in a low degree. Infusible. Its constituents are, silica 35-5, lime 26‘5, magnesia 16P5, water and carbonic acid 23. — Laugier. It occurs with the preceding. — Jameson.

TREM’OR, n. s.) Latin tremor, tremulus. TKE’MULOUS, adj.] The state of trembling : fearful ; quivering.

The tender tremulous Christian is easily distracted and amazed by them. Decay of Piety.

He fell into an universal tremour of all his joints, that when going his legs trembled under him.

Harvey.

Sometimes contrary tremours fall at one and the same time upon different points in the bottom of the eye. Newton.

By its styptick and stimulating quality it affects the nerves, occasioning tremours.

Arbuthnot on Aliments. As thus the’ effulgence tremulous I drink, The lambent lightnings shoot across the sky.

Thomson.

TRENCH, v. a. & n. s. Fr. trencher, of Lat. trunco. To cut; cut into pits or ditches: a pit or d itch : applied particularly to these modes of defence in fortification.

Safe in a ditch he bides, With twenty trenched gashes on his head.

Sliakspeare.

The citizens of Corioli have issued forth, And given to Lartius and to Marcius battle : 1 saw our party to the irenthet driven, And then I came away. Id. Coriolanui.

Pioneers, with spades and pickaxe armed, Forerun the royal camp to trench a field. Miltmi.

When you have got your water up to the highest part of the land, make a small trench to carry some of the water in, keeping it always upon a level.

Mortimer's Hutbandry. Trench the ground, and make it ready for the

spring. Kn-lyii .

First draw thy faulchion, and on every side Trench the black earth a cubit long and wide. Pope.

TRENCHARD (John), a political writer, born in Somersetshire in 1669. He studied the law, but never practised it. Being elected M. P. for Taunton, in his native county, he wrote several political pamphlets, and, in conjunction witli Mr. Gordon, Cato's Letters, and the Independent

Whig. He died in 1723; and his friend Gordoi married his widow.

TREN'CHANT, adj. Fr. trenchant. Cutting sharp.

He fiercely took his trenchant blade in hand, With which he struck so furious and so fell. That nothing seemed the puissance could withstand

Spenser.

Against a vanquished foe their swords Were sharp and trenchant, not their words.

Hudibras.

TRENCH'ER, n. s. Fr. trenchoir. A piec of wood on which meat is cut at table : hcnc ttye table; food.

No more I'll scrape trencher, nor wash dish.

Sh akspeare . Tempes t .

When we find our dogs, we set the dish or trencht on the, ground. More's Antidote against Atheism.

Their homely fare dispatched ; the hungry band Invade their trenchers next, and soon devour.

Dry den.

Many a child may have the idea of a squai trencher, or round plate, before he has any idea i infinite. iMcke.

TRENCH'ERFLY, n. s. Trencher and fl; One that haunts tables ; a parasite.

He found all people came to him promiscuousl; and he tried which of them were friends, and whi(only trenche~flies and spungers. ' L' Estrange,

TRENCH'ERMAN, n. s. Trencher and mai A cook. Obsolete.

Palladius assured him that he had already bee more fed to his liking than he could be by the ski fullest trenchermen of Media. Sidney

You had musty victuals, and he hath holp to e it : he's a very valiant trencherman ; he hath an e: cellent stomach. Shakspeare

TRENCH'ERMATE, n. s. Trencher ar mate. A table companion ; a parasite.

Because that judicious learning of the ancient sag doth not in this case serve the turn, these trcnclu' mates frame to themselves a way more pleasant ; new method they have of turning things that are s rious into mockery, an art of contradiction by way scorn. Hooker

TRENCK (Francis baron), a Prussian nobl man, who, by some trivial piece of imprudenc had given such offence to Frederick the Gret king of Prussia, that he was kept, by the iniquitoi power of that despot, under a tedious, cruel, ar solitary confinement for above forty years, witho ever being brought to trial or confronted wi his accusers. From this cruel imprisonment 1 at last effected his escape, and published a ve interesting memoir of his life, sufferings, and i nocence. But, while this narrative interested tl feelings of every humane reader in Europe favor of the author, he took refuge in France, e pecting to enjoy that liberty and equality whi< the French democrates professed to hold out all mankind. Instead of this, the revolutiona tribunal of the French republic proved mo savage than the despot of Prussia, and condemn to the guillotine a man whose life of protract misfortune ought to have pleaded in his fav< even if he had been convicted of somethi really criminal, of which there never was a; shadow of evidence. This unfortunate bar completed his career in August 1794.

TRENT.

TREND, v. n. It seems a corruption of tend. To tend ; lie in any particular direction.

The scouts to several parts divide their way, To learn the natives names, their towns, explore The coasts and trendings of the crooked shore.

Dry den.

TRENT, a city of the Tyrol, Austria, on the Adige, not far from the borders of Italy. It stands in a delightful valley among the Alps, but its climate is subject to great extremes. Though surrounded with walls, it is not capable of sustaining a siege Its population is about 10,000, employed partly in the manufacture of silk, partly in the culture of vines and tobacco. The public buildings are the residence, or, a? it is termed, the palace of the archbishop : the cathe- dral is a Gothic structure not remarkable for its size or beauty ; but its organ, as well as that of the other principal church, St. Maria Maggiore, is admired. The Romans, who conquered it from the Galli Cenomani, called it Tridentum. The bishopric was included among the secula- risations of 1802, given at first to the grand duke of Tuscany, and afterwards to Bavaria, but restored, after 1815, to Austria. It is eighty-five miles south of Inspruck.

TUENT, COUNCIL OF. This reckons, among Roman Catholic divines, as the eighteenth or last general council, and sat, including interrup- tions, eighteen years. Its decisions are implicitly received as the standard of faith, morals, and discipline, in the Catholic church. It confirms, \inder an anathema, the canons of preceding councils, and defines, with greater precision, whatever had been left only generally affirmed, or indistinctly defined. From the rank and im- portance of this council we offer the following analysis of its proceedings, as well calculated to gratify the curiosity of the reader at a time when reference to its canons is become both necessary and interesting. It must be remembered that while the ecclesiastics of the church of Rome are sworn to maintain generally whatever has been delivered, defined, and declared by the sacred canons and oecumenical councils, yet are they specially (praecipue) bound to observe what has been so done by the council of Trent (usque ad extremum vitse spiritum) to the last gasp of life.

The council first assembled A. D. 1545, and continued, with interruptions, caused by suspen- sion, removal to Bononia, &c., to the end of the year 1563; thus completing a period of eighteen years, during which it was under the direction of Paul III., Julius III., and Pius IV. ; twenty-five bishops, headed by the papal legates, and some ecclesiastics of inferior rank, principally Italians. At its opening session, after due regard had been paid to the solemnities of religion, one of the first points agitated related to the title of the council, when it was agreed to call it a General Council of the Church. The first session pre- sents nothing else worthy of observation. Pend- :ng its existence, the papal legates received their •ecret instructions from Rome to attend exclu- sively to points of doctrine, and not to touch on the subject of reform until these were disposed of; but, lest the rights or prerogatives of the holy see should be endangered, in imitation of his

predecessors Mnrtin V. and John XXIII., the pope sent them a brief to

adjourn, dissolve, or translate, the council according to the exigency of the case.

In the second session the French prelates re- newed the application made in the former about the addition of the words ‘ Universam ecclesiam representans.’ This gave rise to a debate which terminated in a resolution that oecumenical should only be added to the title already given to the council by the pope! Twenty-eight members only attended this session, including the archbi- shop of Armagh. The rule laid down by them is curious enough, considering that it was for the regulation of an episcopal assembly claiming to be legitimately convened under the guidance of the Holy Spirit. ‘ In delivering his opinion no one ought to vociferate with indecent language, or to create confusion by tumult; no one con- tend with false, vain, or obstinate contention; so that the hearers be not offended, nor the discri- mination of a correct judgment be perverted by perturbation of mind.’

In the third session the council decreed that a confession of faith should be prepared. There being so few present at the passing of this order, they decreed that their future decisions should be sanctioned by the fullest attendance possible, in order that matters of such high importance should not be hurried over in their meetings.

In the fourth session forty-eight bishops and five cardinals proceeded to establish tradition on the same footing with the canonical Scriptures. Their words are ‘ pari pietate ac reverentia. sus- cipit et veneratur.’ And they pronounced the Latin vulgate, including the Apocrypha, free from error, while, at the very moment, they or- dered a more correct edition to be prepared.

The fifth and sixth sessions were chiefly spent in extracting from Luther’s and Zuinglius’s writ- ings (from those of the former principally) cer- tain propositions touching the canonicity of Scripture, justification, imputed righteousness, original sin, predestination, merit of congruitv, and the number of the sacraments, which they condemned in consecutive order. On these points grave debates arose, but such as are uninteresting at the present time. Other doctrinal questions came next under discussion, and would have been quietly carried with the pope’s full concur- rence, but the imperial no less than the Spanish bishops were not content to stop there. They earnestly pressed the removal of old grievances, and that the church should be reformed in its head and members; measures which constituted the chief grounds for assembling the council of Constance in the early part of the preceding century. The papal prelates, acting under the express orders of Paul, as obstinately resisted any attempt at change. This led him to encou- rage a report which had been industriously spread by his

physicians of a purple fever having broken out in Trent; as it afforded him a pretext for transferring the council to Bologna, a town in the papal states, and consequently beyond th,ˆ reach of the emperor's influence. On the ad- journment taking place, the imperialists and Spaniards remained in Trent remonstrating loud- ly against it, and alleging that the removal of the

council was a virtual suspension of its functions, if not a total dissolution. But, as remonstrance was vain, they contented themselves with making arrangements for their future proceedings, with- out performing any synodal act whatever; at the same time assuming a title ' Sancta synod us iu quocunque sit loco' declaratory of their compe- tence to deliberate on the affairs of the church. The legates, at the head of their own party, but with loftier pretensions, styled themselves — ' Sancta synodus Bononiensis !'

Seventh and eighth sessions. As the time of the seventh and eighth sessions had been wasted in going through the necessary forms for trans- ferring the council to Bologna, so the ninth ses- sion was spent in giving it confirmation after it bad assembled there.

The tenth session, which reckons as the second at Bologna, scarcely deserves that name. How- ever, during the residence in that town of the few bishops in the papal interest, some very im- portant occurrences took place. The promise exacted by the emperor from the protestant princes at the second session to submit to the council may be reckoned as one. Although this was a false step on their part, yet it fortunately produced no bad consequence to their cause. Another was the struggle which took place be- tween the pope and the emperor about the resto- ration of the council to Trent. A third was the protest of the emperor against the council of Bologna, and against the illegality of its transla- tion from Trent. And, lastly, the imperial edict at the second diet of Augsburg, under the title of the Interim, providing a code of ecclesiastical laws until the long-wished for decision of a council could be obtained. Opposition was made to the establishment of this edict, which, to the disgrace of the existing pope and council, defined the faith of the emperor s German sub- jects agreeably to his will and pleasure. Julius III., immediately after his elevation to the pope- lorn, being pressed by the emperor to bring back the council to Trent, issued his bull for that purpose. Nothing more can be said of the re- sumed meeting at Trent than that it was opened with the accustomed forms. The

bishops pre- sent did not much exceed sixty, which was the greatest number that had yet attended. But this gave Julius little uneasiness, being too great a votary of pleasure to feel any concern about the affairs of either church or council.

The eleventh and twelfth sessions were trifled away with obtaining the assent of the bishops, of whom there were sixty-four only in attendance, a small increase since the tenth session, to the re- opening of the council at Trent. The seizure of Parma, by Henry II. of France, gave rise to a quarrel between him and the pope, during which Henry not only did not send his prelates to the council, but ordered those who were at Rome to return home. Although neither would yield, the firmness of the king caused the pope to lower his tone and to moderate his language. In the mean time, the emperor was urgent with the Protestants, that they should appear, by their representatives, at Trent. With the fate of Huss before their eyes they could not but feel alarmed at the proposal. They, however, intimated that

they were willing to comply, provided they had a bona fide guarantee for their safety, and that, as the imperial safe conduct did not appear suf- ficient, one resembling that drawn up at the council of Basil should be procured ; they further required that both the past and future decrees of the council should be regulated agreeably to the holy Scriptures. To a requisition of this nature the council gave assent, so far as related to the safe conduct ; but totally objected to any other than an unconditional submission on their part. And when they drew up a passport, it was in such vague and indefinite language that the emperor insisted on more unequivocal words being adopted. Care, however, was taken to attach to the safe conduct a clause which, by li- miting it to the existing occasion, showed the council to be too much influenced by feelings, such as those that consigned Huss and Jerome of Prague to the stake. Some puerile discus- sions now ensued about impanation, transubslan- tiation, the worship of the host, arid the like ; during which the fathers liberally imputed ab- surdities and contradictions to each other. The twelfth session closed with a discussion on the questions relating to the withholding the cup from the laity, and the communion of children. But nothing was then definitively settled on these points ; lest, as the emperor said, it should offend the Protestants and prevent the appearance of their deputies.

In the thirteenth session the council lays down the doctrine of transubstantiation so authorita- tively, that the person who presumes to deny that the body and blood, together with the soul and divinity of Christ, are actually — (' vere, realiter, et substantialiter') present in the Eucharist, in- curs the anathema of the church. It farther de- clares ' that the whole substance of the bread is changed into the substance of Christ's body, and the whole substance of the wine into the substance of his blood.' Another

anathema is pronounced against those who deny this total change of both species. Other anathemas were levelled at the deniers of either containing the whole body of Christ, or that his body did not remain after com- munion ; or that the Eucharist only wrought for- giveness of sins ; or that the host should not re- ceive the worship of Latnae and be carried about in procession ; or that it should not be carried to the sick ; or that Christ is not really (corponili- ter) eaten. Twelve anathemas in all were the sanction given to the maintenance of this doctrine. The Protestants commented severely onthe pal- pable contradictions which presented themselves in the language of the first, second, and fourth, articles, — observing that, while the council de- clared the impossibility of suitably expressing the manner of Christ's real presence in the sacrament, it pronounced that manner to be convenienter, pro- pne, et aptissime, called transubstantiation ! The council reserved some points connected with ttie corporeal presence and the doctrine of penance for future consideration ; and, suo matu granted the plenary safe conduct to all who appeared before them. Ambassadors from some of the Prottrs- tant princes appeared at this session with confes- sions of faith ; but, having refused to present them in the name of the pope, the matter was referred

to Rome for advice. In the answer returned to the legates they were directed not to give up the etiquette of presentation, as to do so would be to compromise the papal dignity ; otherwise to get rid of their present difficulties by breaking off all intercourse with the opposite party. The Protestant divines consequently persevered in their refusal to attend the council ; the reserved clause of granting security, as much as is in its power, having filled them with doubt and dis- trust in the sincerity of its professions.

The doctrines of penance and extreme unction were decreed in the fourteenth session, as was some modification of episcopal jurisdiction, which now bore somewhat of a reforming aspect. The presiding legate exerted all his influence to prevent the decree on these heads from being printed, or circulated, but in vain, as Germany got hold of the MSS., and the press soon sup- plied it with subject matter for censorial criticism. At this time the Protestants made fresh applica- tion for a safe conduct which should satisfy their scruples ; and although the proposal was at first indignantly rejected, and indeed finally resulted n nothing, it elicited a document far more ample and explanatory than any former one. The Protestants, as might be expected, felt increased disgust at what was going on ; while de Ranch in, a popish writer, declares that good Romanists

abhorred it. The pope pressed his legates to dissolve the council with all possible despatch, but added, that even its suspension would be a relief to him ; and this relief he now experienced at first for two, but afterwards continued for ten years.

There were but few prelates present at the six- teenth session ; yet with these few was Paul obliged, after much trifling and delay, to reassemble the council. No attempt was made at reform dur- ing this session; while the death of Julius put off the hopes of any thing of the kind taking place to a future day. Marcellus II., having occupied the papal chair only for a few days, left it vacant for Paul IV., who next succeeded. One of Paul's earliest acts was to strengthen his own interest, by adding several new members to the college of cardinals. At the opening of the se- venteenth session, being the first of the third convocation at Trent, the indices expurgatorii, came first under the review of the council. It was then alleged that the reigning emperors, during the first four general councils, prohibited the heretical works of their time to be read; that Martin V. condemned Wickliffe's works; that Leo prohibited Luther's writings ; and why, therefore, should not the Tridentine fathers, with these precedents before their eyes, imitate their example ?

Were it not to direct the reader's attention to the frivolous occupations in which the Triden- tine fathers could engage during some of the sessions, the intervening ones, from the four- teenth to the twenty-first, might be passed over in this sketch. The most prominent feature of the eighteenth was the disputation which took place at it, between the Portuguese and Hunga- rian ambassadors about precedence ! The nine- teenth session commenced with a furious contest between the pope and the council, which after- wards settled into a disunion amongst its mem-

bers. The presentation of a remonstrance 'J> iln; council, by the French ambassadors, was the only business transacted in it.

The twentieth session. The points relating to communion in both kinds, and the communion of children, which were left undecided at a former session, were now brought forward before eighty- eight bishops. The debate concluded, as might be expected, with a resolution, that he who com- municated in one kind derived as much benefit as he who received in both. With the progress of affairs at Trent the pope was now not at all pleased ; while his foreign relations kept him in constant perplexity. The ambassadors of the French and German princes now went hand in hand in their demand of the restoration of the cup to the laity, and in repeating their protesta- tions against the dispensations granted for non- residence by the pope. This conduct of the ambassadors, and the report which had got abroad, that the French required divine service to be performed in their

native tongue, that priests should marry, and that images should be removed from places of public worship, were a source of fresh trouble to the papal party. But when they heard the council called the pope's council, and not that of the universal church, and saw a hostile spirit manifesting itself towards them, they began to think of withdrawing from Trent altogether. Some of the bolder spirits kept up the debate on the use of the cup ; and with it the session closed.

During the twenty-first session the controversy about residence was revived, with no better suc- cess than before. The pope being alarmed, lest a prime source of his revenue should be cut off, were the power of granting dispensations for non-residence withdrawn from him, directed the legates to soothe the opposition as much as possi- ble ; to discuss every subject fully and freely, but by all means to suppress the question about residence; and above all to endeavour to break up the council. On the question of half com- munion, they came to a decision : ' That although our Redeemer instituted the sacrament in two kinds, and gave it to his apostles ; that it must, nevertheless, be allowed that the whole and entire Christ, and a true sacrament is received even under one kind only.' Therefore, that the faithful are not bound, as by a divine ordinance to receive the eucharist under both kinds. During the dis- cussions both before, and at this session, great li- berty was taken with the pope's authority. Some of the leading bishops were even for subjecting him to that of the council. But the legates, with con- summate skill, shielded him from such a degra- dation. Some minor regulations about the union and division of parishes, &c., were made ; but the session closed without the slightest attemp' at reform.

The twenty-second session. Before this ses- sion commenced, a congregation was formed, by «hich subjects, afterwards to be submitted to the council, were entertained. The first pro- posed was the doctrine of the mass.

Nine canons were decreed, with an anathema to each, establishing the necessity of a perpetual sacrifice, and setting forth, that the sacrifice of the mass was propitiatory ; ' not only for the sins of the living, but also for those who are de-

ceased in Christ, and are not yet fully purged.' The remainder of the twenty-second session exhibited the violence of party, beyond any for- mer example, on the subject of the divine right of residence. After the question was brought forward again and again, it ultimately gave way to a symptom of reform, which now manifested itself. The French bishops endeavoured to*

re- vive the decree of the council of Constance, and to reject the authority of the pope; while Lai- nez, the general of the Jesuits, as obstinately de- fended it. Pius perceiving that the storm was gathering thick, and lowering over his head, feigned a desire to comply with the general feeling. He published reforming decrees; but they of course left untouched the power and privileges of the holy see. The French bishops, however, continued importunate ; they memo- rialed both pope and council for a redress of grievances under thirty-four heads ; including celibacy of the clergy, divine service in the vul- gar tongue, and half communion ; if they failed in their object, it was now to be ascribed to the firmness of the pontiff. He had the merit on this occasion, at least, of acting with manly candor, in boldly and publicly rejecting their petition. He did so, he said, on the ground, that, if concession were once made, reformation would begin.

Twenty-third and twenty-fourth sessions. In the first of these, holy orders were decreed to be a sacrament. A decree of reformation, consist- ing of several articles, was likewise passed on the subject of residence ; but even that did not reach the root of the evil, as the questions relat- ing to the institution of bishops, and the autho- rity of the pope, were omitted. After decreeing marriage to be one of the seven sacraments, the council employed itself, in its twenty-fourth ses- sion, on frivolous questions relating to clandes- tine marriages, and the reformation of monaste- ries and nunneries : the duties of canonries, chapters, &c. The council was now precipitating fast to its termination, being composed princi- pally of the Spanish and Italian bishops, after the retreat of the German and French ones, the latter of whom returned at the end of the last session. The pope having fallen sick, a resolu- tion was come to by the council to require his immediate confirmation of its decrees.

The twenty fifth or last session. The con cluding session of the council was full of tumult and discord, occasioned by the desire of the dallican bishops to make the episcopacy inde- pendent of the pope. They again maintained that it was established by divine right ; while the legates contended that it was an emanation from

- *Before the sacrifice of the mass passed into a decree, one Ataide, a Portuguese bishop, contended that the arguments from Scripture in support of this doctrine were inconclusive, it being vain to seek in Scripture what Scripture did not contain ; and, con- sequently, that those who built on any other foun- dation than tradition, built a castlo in the air, and strengthened the cause of the heretics ! The observa- tion, it would appear, was not thrown away, as the Tri- dentine fathers abstained from making any appeal to mi ; hnt contented themsi-lx<-s with declaring •he mass «.obe a doctrine which accorded with apos- tolic tradition — -jujrta iu«i tradilioncm.*

the chief bishop, who, as Christ's vicar, was au- thorized to regulate it according to his pleasure. This doctrine found in the Jesuit Lainez particularly a warm supporter. But the pope and his partisans wearied into a compliance with their wishes those who held out longest against them; such as the cardinal of Lorraine, and those French bishops who remained with him at Trent. The balance of 40,000 crowns due to the French monarch, and paid him by the pope at this criti- cal period, contributed not a little, it has been thought, to this result.

Some difference of opinion having arisen on the article of purgatory, it was ultimately re- moved by the decision, that since the mass taught, that that sacrifice was expiatory for the dead, ' not yet fully purged of their sins,' the doc- trine of purgatory was sufficiently settled. In the same decree, the holy bodies of martyrs and saints were held up as objects of respect, and the images of Christ, and the virgin Mary, of honor and veneration. Indulgences, the traffic in which was one of the prime causes of the Reformation, were handled with even less caution, the fathers having maintained that the church always possessed and exercised the power to confer them. As a few days only remained to dispose of other important points, which called for serious deliberation, such as related to fasts and meats, the Index Expurgatorius, the Missal, Breviary, Ceremonial, and the composition of a Catechism ; they were referred to the pope, with a request that he would supply the wants and wishes of the universal church in these matters. In the last chapter, which professed to be on general reformation, duels were prohibited under a severe penalty.

One observation alone remains to be made, in conclusion, that neither was the church (in ca- pite, vel in membris) reformed, nor justice done to the Protestants. The German Protestant divines, it is true, appeared manfully at Trent. They appealed to the ambassadors, and pre- sented the legates with their Confession of Faith. But they were dismissed in silence, and Uieir Confession, instead of being read to the coun- cil, was thrown aside ; and yet this is doing jus- tice to the Protestants ! Can this be what is called, by a Romish bishop of the present day, a dispassionate examination of the Protestant cause by the council of Trent ?

TREN'TALS, n. s. Fr. t rente..

Trentals or trig-intals were a number of masses, to the tale of thirty, said on the same account, accord- ing to a certain order instituted by Saint Gregory. Ayliffie't 1'areryon.

TRENTON, a town of the United States, the capital of New Jersey, in Hunterdon county, is situated on the east bank of the Delaware, oppo- site the falls. It has city privileges, and contains a handsome state-house, a jail,

two banks, an academy, two large cotton manufactories, and four houses of public worship, one for Episco- palians, one for Presbyterians, one for Metho- dists, and one for Friends; and between the city and Lamberton, which joins it on the south, there are two other houses of worship, one for Roman Catholics and one for Baptists. The city, together witli Lamberton, contains at pre-

sent about 600 houses, a number of which are elegant : the river is navigable as far as this place for sloops; but above the falls it is not navigable except for boats, which carry from 500 to 1000 bushels of wheat. At the foot of the falls there is a covered bridge across the river. Population 3003. Ten miles south-west of Princeton, thirty north-east of Philadelphia, and sixty south-west of New York.

TREPAN', n. s. & v. a. A snare; a strata- gem by which any one is ensnared : to ensnare. Skinner says that some English ships in queen Elizabeth's reign being invited, with great show of friendship, into Trapani, a part of Sicily, were there detained, and thence the word originated.

But what a thoughtless animal is man, How very active in his own trepan ! Roscommon.

Can there be any thing of friendship in snares, hooks, and trepans ? South.

Those are but trepanned who are called to govern, being invested with authority, but bereaved of power, which is nothing else but to mock and betray them into a splendid and magisterial way of being ridicu- lous. Id.

TREPA'N, n. s.) Fr. trepan. An instru-

TUEI'IIINE'. j ment by which chirurgeons cut round pieces out of the skull : trephine is a small trepan managed by one hand.

A putrid matter flowed forth her nostrils, of the same smell with that in trepanning the bone.

Wiseman's Surgery.

I shewed a trepan and trephine, and gave them li- berty to try both upon a skull. Id.

Few recovered of those that were trepanned.

Arbuthnot.

TREPIDATION, n.s. l^i.trepidatio. The state of trembling, quivering, or terror.

The bow tortureth the string continually, and holdeth it in a continual trepidation.

Bacon's Natural History.

Moving of the' earth brings harms and fears, Men reckon what it did and meant ;

But trepidation of the spheres, Though greater far, is innocent. Donne.

His first action of note was in the battle of Le- panto ; where the success of that great day, in such trepidation of the state, made every man meritorious.

Wotton.

They pass the planets seven, and pass the fixed, And that crystalline sphere whose balance weighs The trepidation talked, and that first moved. Milton.

TRES'PASS, v. n. & n. s. } Fr. trespasser.

TRES'PASSER, n. s. j To transgress ; of-

fend : the noun substantives corresponding.

If they shall confess their trespass, which they trespassed against me, I will remember my covenant.

Leviticus xxvi. 43. Your purposed low correction Is such, as basest and the meanest wretches For pilferings, and most common trespass, Are punished with. Shakspeare. King Lear.

If I come upon another's ground without his li- cence, or the licence of the law, I am a trespasser, lor which the owner may have an action of trespass against me. Wotton.

Will God incense his ire For such a petty trespass ? Milton.

They not only contradict the general design and particular expresses of the gospel, but trespass against all logick. Norris.

Their morals and oeconomy

:\!ost perfectly they made agree :

Each virtue kept its proper bound,

Nor trespassed on the other's ground. Prior.

TRESS'ES, n. s.) Without a singular. Fr.

TRESS'ED, adj.) tresse ; Ital. treccia. A knot or curl of hair : knotted or curled.

Nor this nor that so much doth make me mourn, But for the lad, whom long I loved so dear, Now loves a lass that all his love doth scorn, He, plunged in pain, his tressed locks doth tear.

Spenser.

Hung be the heavens with black, yield day to

night !

Comets, importing change of times and states, Brandish your crystal tresses in the sky !

Shakspeare. Her swelling breast Naked met his, under the flowing gold Of her loose tresses hid. Milton.

Fair tresses man's imperial race ensnare, And beauty draws us with a single hair. Pope.

TRESTLE-TREES, in ship-building, two strong bars of timber fixed horizontally on the opposite sides of the lower mast head, to support the frame of the top and the weight of the top mast. See MAST.

TRET, in commerce, is commonly four pounds, in every 104 Ibs. weight.

TREVERIS, Treviris, or Augusta Treviro- rum, in ancient geography, a town of Gallia Belgica, the capital of the Treveri ; now called Treves.

TREVES, or TRIERS, perhaps the most an- cient, and one of the most celebrated, cities in Germany, the capital formerly of an electorate and archbishopric, now of a Prussian government in the province of the Lower Rhine. Its situa- tion is picturesque, in the centre of a large valley lying along the Moselle, and open to the north- west and south-east, but confined on the other sides by two gentle eminences covered with vines. The length

of the town is nearly a mile and a half; but as in this space there is a number of gardens the population is under 12,000. The streets are tolerably wide. The chief buildings are the elector's palace, now turned into bar- racks, and the church of Notre Dame, built about the year 1240, and affording a fine specimen of Gothic architecture. Another church, that of St. Simeon, is said to occupy the site of the building used by the Gauls for their public meetings, and by the Romans for a capitol or town-house. The cathedral is remarkable only for its altars, its marble gallery, and the uncommon size of the stones with which it is built. The environs of the town abound with gardens, and present pros- pects not unworthy of a comparison with Swit- zerland.

The Romans found a town on this site, and the inhabitants, whom they called Treviri, some- what more improved than their rude neighbours. Under the name of Augusta Trevirorum it be- came one of their chief stations, and the capital of Gallia Belgica. After Constantine it was the residence of the prefect of all the Gauls, until the repeated inroads of the Germans necessitated the removal of the seat of administration to Aries. It was frequently a royal residence under the Franks, was subsequently received into the Ger- man empire, and continued during mnny centu- ries un-!er an ecclesiastical government. It te-

mained in the hands of the French during twenty years, from 1794 to 1814.

Few towns are richer in Roman antiquities : the remains of the baths are extensive; but of the circus and amphitheatre there are hardly any traces. The piers of the bridge on the Moselle are the work of either the Romans or Gauls. The corn market at the west end of the town, adjacent to the river, is evidently a Roman work. The university was founded in 1454, and greatly extended in 1722. After 1794 it was converted by the French into a central school, to which its Prussian possessors have lately given the name of gymnasium. Its classes are held in a pile of building of great size, in one of the wings of which is a library. There is here, under the di- rection of a society, a good collection of antiques and natural curiosities. Twenty-two miles E.N.E. of Luxemberg, and seventy west by south of Mentz.

TREVES, a small town in the west of France, department of the Maine and Loire, situated on the Ix>ire, about nine miles north-west of Saumur.

TREVETHIN, a parish of England, in Monmouthshire, six miles and a half W. N. W. of Usk. Population 2423.

TREVI, a small town in the central part of Italy, in the states of the church, situated on a mountain in the delegation of Spoleto. It was anciently called Mutuscae,and afterwards Tribula.

TREVICO, a small inland town of Italy, in the central part of the kingdom of Naples, in the Principato Ultra, with 2500 inhabitants.

TREVIERES, a small town in the north of France, department of Calvados, with 1000 in- habitants. This is a pasturage district, and ex- ports large quantities of excellent butter. Nine miles west of Bayeux, and twenty-six north- west of Caen.

TREVISANI (Francis), an eminent Italian painter, born at Trieste, in 1656. He married a noble Venetian lady, and settled at Rome, where lie acquired great fame, for history and land- scapes. He died in 1746.

TREVISI (Jerome), a celebrated Italian painter of history and portraitsˆ bom at Treviso, in 1508. He became painter to Henry VIII. king of England ; who appointed him engineer at the siege of Boulogne, where he was killed, in 1544.

TREVISO, a well built town of Austrian Italy, capital of the delegation of the same name, situated on the rivers Sile and Piavesella, at their confluence. It is the see of a bishop, and con- tains 12,000 inhabitants.

TREVOUX, an ancient town of France, in the department of the Ain, and ci-devant pro- vince of Bresse. It has an hospital, and a print- ing office, famous for printing the Jesuit Lite- rary Journals, entitled Memoires de Trevoux ; and the Dictionnaire Universel. Trevoux is seated on the Saone, twelve miles north of Lyons, and 188 south by east of Paris. Long. 4° 51′ E., lat. 45° 57′ N.

TREY, n. i. Fr. trois ; Lat. tres. A three at cards.

White-handed mistress one sweet word with thee. — Honey, milk, and sugar, there is three.

— Nay then, two treys; metheglin, wort, and malm-

sey. Shaltspeare. Love's Labour Loit.

TRI'ABLE, adj. From try. Capable of trial, judicially or otherwise ; possible to be ex- perimented.

For the ruore easy understanding ‘ of the experi- ments triable by our engine, 1 insinuated that notion, by which all of them will prove explicable. Bottle.

No one should be admitted to a bishop’s chancel- lorship without good knowledge in the civil and canon laws, since divers causes triable in the spiritual court are of weight. A vlitf’e.

TRI’AL, ».s. From try. Test; examination; judicial process or examination ; temptation test of virtue; state of being tried.

Others had trial of cruel mockings and scourgings .

Hebrews

He hath resisted law,

And therefore law shall scorn him further trial Than the severity of publick power.

Shakspeare. Coriolanus

Good shepherd, tell this youth what ‘tis to love.

— It is to be all made of sighs and tears ; It is to be made all of faith and service,

All humbleness, all patience and impatience ; All purity, all trial, all observance.

Id. As You Like It.

Skilful gardeners make trial of the seeds by putting them into water gently boiled ; and, if good, they wil.1 sprout within half an hour.

Bacon’ t Natural Hist.‘iy.

Trial is used in law for the examination of all causes, civil or criminal, according to the laws of our realm : the trial is the issue, which is tried upon the inditement, not the inditement itself. COUP//.

There is a mixed kind of evidence relating both to the senses and understanding, depending upon our own observation and repeated trial of the issues and events of actions or things, called experience.*

Lest our trial, when least sought, May rind us both perhaps far less prepared, The willinger I go. Milttm’s Parailise Lott.

They shall come upon their trial, have all their actions strictly examined. Nelson.

Every station is exposed to some trials, either temptations that provoke our appetites, or disquiet our fears. liogers.

TRIAL, in law,' the examination of a cause according to the laws of the land before a proper judge; or it is the manner and order observed in the hearing and determining of causes. Trials are either civil or criminal.

TRIALS, CIVIL. The species of trials in civil cases are seven : — By record ; by inspection, or examination ; by certificate ; by witnesses ; by wager of battel ; by wager of law ; and by jury. The first six are only had in certain special or eccentrical cases, where the trial by jury would not be so proper or effectual. See LAW.

TRIALLIS, in botany, a genus of plants, of the class decandria, and order of monogynia, ranking in the natural method under the thirty- eighth order, tricoccae.

TRIANDRIA (from rpttc, three, avijp, a man or husband), the name of the third class in Lin- nacus's sexual system, consisting of plants with hermaphrodite flowers, which have three stamina or male organs. See BOTANY.

TRI'ANGLK, n.t. Ji Fr. triangle.; Lat. tri-

TKIAN'GULAR, adj. $ angulum. A figure of three angles : having three angles.

The frame thereof seemed partly circular, And part triangular : O work divine ! These two the first and last proportions are.

Spenser.

The three angles of a triangle are equal to two right ones. Locke.

Though a round figure be most capacious for the honey, and convenient for the bee ; yet did she not chuse that, because there must have been triangular spaces left void. Huy-

TRIANGLE, in geometry, a figure of three sides and three angles.

TRIANGILAR COMPASSES are such as have three legs or feet, by which any triangle, or three points, may be taken off at once.

TRIANTHEMA, in botany, horse purslane; a genus of plants, of the class decandria, and order of monogynia, and in the natural method ranking in the thirteenth order, succulents.

TIIIARII, the most honorable order of Ro- man soldiers, who wore excused from the ordi- nary watches ; yet, when placed opposite to the equites, they were obliged to have an eye over them.

TRIBALLI, a people of Thrace, or Lower Mcelia. They were conquered by Philip II. of Macedon, and afterwards warred against the Ro- mans.

TRIBE, n. s. Lat. tribus, said to be from trev, British ; b and v being labials of promis- cuous use in the ancient British. Trev from tir ef', his lands, is supposed by Mr. Rowland to be Celtic, and used before the Romans had any thing to do with the British government. ' This no- tion,' says Dr. Johnson, ' will not be much re- commended, when it is told that he derives centuriae from trev, supposing it be the same with our centrev, importing a hundred trevs or tribes.' A distinct body of people as divided by liimily, fortune, or any other characteristic.

If the heads of the tribes can be taken off, and the misled multitude will see their error, such ex- tent of mercy is honourable.

Bacon's Advice to VUlien.

I ha' been writing all this night unto all the tribes A:,d centuries lor their voices, to help Catiline In his election. Ben Jonson.

Who now shall rear you to the sun, or rank Your tribes, and water from the' ambrosial fount ?

Milton.

Folly and vice are easy to describe. The common subjects of our scribbling tribt.

Roscommon.

Teach straggling mountaineers, for publick good, To rank in tribes, and quit the savage wood, Houses to build. Tate.

I congratulate my country upon the increase of this happy tribe of men,

since, by the present par- liament, the race of freeholders is spreading into the remotest corners. Addison.

TRIBULATION, n. s. Fr. tribulation. Per- secution; distress; vexation.

Tribulation being present causeth sorrow, and being imminent breedeth fear. Hooker.

The just shall dwell, And, after all their tribulation long, See golden days fruitful of golden deeds. Milton.*

Our church taught us to pray, that God would, not only in all time of our tribulation, but in all time of our wealth, deliver us. Atterbury.

TR1B1 I.UM, in antiquity. See THRASHING.

TRIBULUS, in botany, caltrops; a genus o> plants in the class decandria, and order of mo- nogynia ; and, in the natural method, ranking under the fourteenth order, gruinales.

TRIBU'NAL,n.s. Lat. and Fr. tribunal. The seat of a judge.

I' th' market place, on a tribunal silvered, Cleopatra and himself in chairs of gold \eie publickly enthroned.

Shakspeare. Antony and Cleopatra Summoning arch-angels to proclaim Thy dread tribunal. Milton.

There is a necessity of standing at his tribunal, who is infinitely wise and just. Grew's Cosmologia.

He, who for our sakes stood before an earthly tri- bunal, might therefore be constituted judge of the whole world. Nelson.

TRI'BUNE, n. s. ^ Lat. tribun, tribunus.

TRIBUXI'TIAL, adj. >An officer of Rome

TRIBUN I'TIOUS. j chosen by the people: relating to or becoming a tribune.

These are the tribunes of the people, The tongues o' the common mouth : I do despise them. Shakspeare.

Let them not come in multitudes, or in a trihunitimis manner ; for that is to clamour counsels, not to in- form. Bacon.

Oh happy ages of our ancestors ! Beneath the kings and tribunitial powers,

One jail did all their criminals restrain.

Dryden's Juvenal:

A TRIBUNE, among the ancient Romans, was a magistrate chosen out of the commons, to pro- tect them against the oppressions of the great, and to defend the liberty of the people against the attempts of the senate and consuls. The tribunes of the people were first established A. U. C. 259. The first design of their creation was to shelter the people from the cruelty of usurers, and to engage them to quit the Avpn- tine Mount, whither they had retired in displea- sure. Their number at first was but two ; but the next year, under the consulate of A. Posthu- mius Aruncius and Cassius Viscellinus, there were three more added : and this number of five was afterwards increased by L. Trebonius to ten.

TRIBUNE, MILITARY, an officer in the Roman army, comroander-in-chief over a body of forces, particularly the division of a legion ; much the same with our colonel.

TRIB'UTE, n. $. > Fr. fribut ; Lat.

TRIB'UTAR-V, adj & n. s. \ tributum. Payment made in acknowledgment ; subjection : paying such acknowledgment ; paid in tribute : he who pays tribute.

All the people therein shall be tributaries unto thee, and serve thee. Dent. xx. 11.

They that received tribute money said, Doth not your master pay tribute ? Matthew xvii. 2.

Thenceforth this land was tributary made To ambitious Rome, and did their rule obey, Till Arthur all that reckoning did defray : Yet oft the Briton kings against them strongly

swayed. Spenser.

Whilst Malvern, king of hills, fair Severn over- looks, Attended on in state with tributary brooks.

Drayton. She receives As tribute warmth and light. MUttm.

The two great empires of the world I know ; And, since the earth none

larger does afford, This Charles is some poor tributary lord. Dryden.

O'er Judah's king ten thousand tyrants reign, Legions of lust, and various powers of ill Insult the master's tributary will. Prior.

Around his throne the sea-born brothers stood, That swell with tributary urns his flood. Pope.

TRICE, n. s. Fr. trait, corrupted by pro- nunciation. A short time; an instant; a stroke; used familiarly.

If they get never so great spoil at any time, the same they waste in a trice, as naturally delighting in spoil, though it do themselves no good. Spetiser.

He could raise scruples dark and nice, And after solve them in a trice. Hudibras.

It seems incredible at first, that all the blood in our bodies should circulate in a trice, in a very few minutes : but it would be more surprising if we knew the short periods of the great circulation of water. Benttey't Sermont.

So when the war had raised a storm, I've seen a snake in human form, All stained with infamy and vice, Leap from the dunghill in a trice. Swift.

A man shall make his fortune in a trice, If blessed with pliant, though but slender sense, Feigned modesty, and real impudence. • Young.

TRICHECUS, the walrus, a genus of aqua- tic animals, belonging to the class of mammalia, and order of bruta. This genus has no fore teeth, when full grown ; has two great tusks in the upper jaw, which point downwards ; has grinders on each side in both jaws, which are composed of furrowed bones. The body is oblong; the lips are doubled; and the hind legs are stretched backwards, and, as it were, bound together, forming a kind of tail fitted for swim- ming. There are three species ; viz. 1 . T. dagon, the In Jinn walrus, is distinguished by the tusks, which extend out of the mouth from the upper jaw, being placed near each other. It inhabits the sea lying between the Cape of Good Hope and the Philippine Islands. This animal, so tar as can be known, resembles the morse very much; the head is, however, more lengthened and narrower ; the nostrils large, and placed higher ; there are two tusks in the under jaw, but those in the upper jaw are placed near each other, bent outwards, and resemble cutting teeth, only that they are nearly six inches long ; there are four grinders on each side in the upper jaw, and three in the lower ; these last are distant from the tusks, and are broader than those of the morse ; the female has two teats on the breast ; the chin has a bristly beard ; the ears are short ; the feet broad ; and the legs so short that the belly trails on the ground. When full grown, the

animal is six ells in length ; the male being rather larger than the female, which has breasts like a woman : it feeds on a green sea moss or weed, which grows near the shore. The figure, manners, and history, of this animal, are very imperfectly known ; but we are informed that its flesh eats like beef. 2. T. manatus, fish tailed walrus, manati, or sea cow, has no tusks, and no hind feet. Of this species there are two varieties ; viz. i. T. manatus australis, or laman tin ; inhabits the African and American seas, particularly near the mouths of rivers, which

they frequently enter, seldom going far from the shore. The lamantin varies in size from eight to seventeen feet long, is six or seven in circum- ference, and from 500 to 800 Ibs. weight; the skin is of a dark or black ash color ; there are nine square shaped grinders on each side in each jaw, which are covered with a glassy crust of enamel ; the back bone has fifty joints or verte- bra : it is a thick clumsy animal, having no pro- perly distinct neck, as the body continues almost of an equal thickness to the head. The female has two teats placed near the arm pits. These varieties differ considerably in size. This ani- mal is often tamed by the native inhabitants of America ; and it delights in music ; hence it is probably the delphinus or dolphin of the an- cients; and some believe that what has been written concerning mermaids and sirens must be referred to this animal. It has a voracious appetite, and is perpetually eating ; it is mono- gamous, or lives in families of one male, one female, a half grown, and a very small young one. It copulates in the spring. When pas- turing on the aquatic plants, the back is often above water; and, as the skin is full of a species of louse, numbers of sea fowls perch on them, to pick out the insects. They bellow like bulls ; their sight is very weak, but their hearing ex- tremely acute ; the fore feet are palmated and fin-shaped, almost like those of a sea turtle; and, instead of hind feet, they have a horizontal tail ; they have no external ears : the nostrils are distinct, and at a distance from each other ; the females have two teats about the breast ; the upper lip is full of sharp, prickly, rigid bristles. This animal has great affinity to the whale and seal tribes. The flesh is very good eating, ii. T. manatus borealis, the whale-tailed manati, inhabits the north-west coast of America, the north-east of Asia, and the islands which lie be- tween these two coasts. This animal very often enters the mouths "t the rivers; is sometimes twenty-three feet long, and weighs 8000 Ibs. ; the skin, while wet, is of a brown color, but be- comes black when dry. Instead of grinders, this species has, on each side of its jaw, a large rug- ged bone. The back bone has sixty vertebra or joints ; the body is very clumsy, and much deformed; its circumference at the shoulders is twelve feet, at the belly twenty, and near the tail only four ; the ".eck is nearly seven feet round, and the head only thirty-one inches. They live perpetually in the water, and frequent the edges of the shores ; and in calm weather swim in droves near the mouths of rivers ; in the time of the flood

they come so near the land that a person may stroke them with his hand ; if hurt, they swim out to sea, but presently re- turn again. The females oblige the young to swim before them, while the other old ones sur- round, and, as it were, guard them on all sides. The affection between the male and female is very great ; for, if she is attacked, he will defend her to the utmost; and, if she is killed, will fol- low her corpse to the very shore, and swim for some days near the place it has been landed at. They copulate in the spring, in the same man- ner as the human kind. Steller thinks they go with young about a year; it is certain that they

bring but one young at a time. They are vastly voracious and gluttonous ; and feed not only on the fuci that grow in the sea, but such as are flung on the edges of the shore. During their meals, they are so intent on their food that any one may go among them and choose which he likes best. Peter Martyr gives an instance of one that lived in a lake of Ilispaniola for twenty- five years, and was so tame as to come to the edge of the shore on being called ; and would even perform the part of a ferry, and carry seve- ral people at a time on its back to the opposite shore. Their back and their sides are generally above water. They continue in the Kamtschat- chan and American seas the whole year ; but in winter are very lean, so that one may count their ribs. They are taken by harpoons fastened to a strong chord ; and, after they are struck, it re- quires the united force of thirty men to draw them on shore. Sometimes, when they are trans- fixed, they will lay hold of the rocks with their paws, and stick so fast as to leave the skin behind before they can be forced off. When a manati is struck, its companions swim to its assistance ; some will attempt to overturn the boat by get- ting under it ; others will press down the rope, in order to break it ; and others will strike at the harpoon with their tails, with a view of get- ting it out, in which they often succeed. They have not any voice; but make a noise by hard breathing like the snorting of a horse. The skin is very thick, black, and full of inequalities, like the bark of oak, and so hard as scarcely to be cut with an axe, and has no hair on it; beneath is a thick blubber, which tastes like oil of al- monds. The flesh is coarser than beef, and will not soon putrefy. The young ones taste like veal. The skin is used for shoes, and for cover- ing the sides of boats. 3. T. rosmarus, the morse, or sea horse, has a round head; small mouth ; very thick lips, covered above and be- low with pellucid bristles as thick as straw ; small fiery eyes; two small orifices instead of ears; short neck ; body thick in the middle, tapering towards the tail ; skin thick, wrinkled, with short brownish hairs thinly dispersed ; legs short, five toes on each, all connected by webs, and small nails on each ; the hind feet are very broad ; each leg loosely

articulated ; the hind legs gene rally extended on a line with the body ; the tail is very short; penis long; length of the animal from nose to tail sometimes eighteen feet, and ten or twelve round in the thickest part ; the teeth have been sometimes found of the weight of thirty pounds each. Teeth of this size are only found on the coast of the Icy Sea, where the animals are seldom molested, and have time to attain their full growth. They inhabit the coast of Spitzbergen, Nova Zembla, Hudson's Bay, and the Gulf of St. Lawrence; and the Icy Sea, as far as Cape Tschuktschi. They are gregarious ; in some places appearing in herds of hundreds. They are shy, and avoid places which are much haunted by mankind ; but are very fierce. If wounded in the water, they at- tempt to sink the boat, either by rising under it, or by striking their great teeth into the sides ; they roar very loud, and will follow the boat till :t gets out of sight. Numbers of them are often

seen sleeping on an island of ice ; if awaked, they fling themselves with great impetuosity into the sea ; at which time it is dangerous to ap- proach the ice, lest they should tumble into the boat and overset it. They do not go upon the land till the coast is clear of ice. They are kill- ed for the sake of their oil, one walrus producing about half a ton. The knowledge of this chase is of great antiquity ; Octher the Norwegian, about A. D. 890, made a report of it to king Alfred, having, as he says, made the voyage beyond Norway, for the more commoditie of fishing of horse whales, which have in their teeth bones of great price and excellency, whereof he brought some at his return unto the king. In fact, it was in the northern world, in early tim

TRICHILIA, in botany, a genus of plants, in the class decandria, and order of monogynia ; and in the natural method ranking in the twenty- third order, trihilatae.

TRICHINOPOLY, a fortified town in the Southern Carnatic, situated on the south side of the Cavery, 107 miles south-east from Pondi- cherry. The country round Trichinopoly, al- though not so highly cultivated as Tanjore, is rendered productive of rice by the vicinity of that branch of the Cavery named the Colerooh. The size and situation of the city, the abundance of subsistence in the neighbourhood, and the long residence of Mahommed Ali's second son Ameer ul Omrah, rendered Trichinopoly the favorite re- sidence of the Mahometans in the Southern Car- natic. On the adjacent island of Seringham are two magnificent pagodas, which have long com- manded the veneration of the Hindoos. This city was the capital of a Hindoo principality until 1736, when Chunda Saheb acquired it by treachery, but lost it to the Mahrattas in 1741. From these depredators it was taken in 1743 by Nizam ul Muluck, who, on his departure to the Deccan, delegated Anwar ud Deen to adminis- ter the affairs of the Carnatic; and on his death, in 1 749, it devolved by inheritance to his

second son the nabob Mahommed Ali. It in conse- quence sustained a memorable siege by the French and their allies, which lasted from 1751 until 1755, in the course of which the most brilliant exploits were performed on both sides; but the extraordinary military talents displayed by Law- rence, Clive, Kilpatrick, Dalton, and other offi- cers, and the heroic valor of the British grena- diers, preserved the city and established the British candidate on the throne of the Carnatic. At present Trichinopoly is the capital of one of

the districts, into which the territory under the Madras presidency has been subdivided ; but up to 1812 had not been permanently assessed for the revenue. Travelling distance from Madras 268 miles ; from Seringapatam 205.

TRICHOMANES, in botany, a genus of plants belonging to the class of cryptogamia, and order of silices. The parts of fructification are solitary, and terminated by a style like a bristle, on the very edge of the leaf. There are thirteen species ; of which two are natives of Britain, the pixidiferum and tunbrigense. l.T. pixidi- ferum, the cup trichomanes, has sub-bipinnated leaves, the pinnae being alternate, close-lobed, and linear. It is found among stones in wet grounds in England. 2. T. Tunbrigense, the Tunbridge trichomanes, has pinnated leaves, the pinnae being; oblong, dichotomous, decurrent, and deniated. It is found in the fissures of moist rocks In Wales, and in many rocky places in Scotland.

TRICHOTOMY, n. s. Gr. rpiXoro/««. Di- vision into three parts.

Some disturb the order of nature by dichotemies, trichotomies, sevens, twelves ; let the subject, with the design you have in view, determine the number of parts into which you divide it. Watts.

TRICHOSANTHES, in botany, serpent cu- cumber, a genus of plants belonging to the class of mono3cia, and order of syngenesia ; and in the natural system ranging under the thirty-fourth order, cucurbitaceae. There are four species ; only one of which is cultivated in the British gardens. T. anguina, the snake-gourd, which is a native of China, an annual, and of the cu- cumber tribe.

TRICHOSTEMA, in botany, a genus of plants, in the class didynamia, and in the order of gym- nospermia; and in the natural method ranking in the

forty-second order, verticillatas.

*TRICK', n. s., v. a., & v. n.-\ Sax. trmjan; TRICK'ER, n. *. / Belgic treck.*

TRICK'ING, \ A sly fraud, or

TRICK'ISU, od/. i artifice ; juggle ;

TRICK'SY. J antick ; habit :

to trick is to cheat ; impose upon ; also (Goth. traga, draga) to dress ; decorate : as a verb neuter live by fraud : a tricker, ot trigger, is the catch of a gun-lock. See TRIGGER. Tricking, dress ; ornament : trickish, artful ; knavish ; wan- ton : tricksy means pretty ; attractive.

Their heads are trickt with tassels and flowers.

Sandys.

Gather the lowest, and leaving the top, Shall teach thee a trie for to double thy crop.*

Timer. The trick of that voice I well remember.

Shuhtpeare.

Suspicion shall be stuck full of eyes : For treason is but trusted like a fox, Who ne'er so tame, so cherished and locked up, Will have a wild trick of his ancestors. Id.

The fool hath planted in his memory An army of good words : and I do know A many fools that stand in better place, Garnished like him, that for a tricksy word Defy the matter. Id. Merchant of Venice.

Horridly trickt

With blood of fathers, mothers, daughters, sons, Baked and impasted with the parching fires.

Shukspeare.

Sir Thomas Moore said, that a trick of law had no less power than the wheel of fortune, to lift men up, or cast them down. Raleigh.

And trick them up in knotted curls anew.

Drayton.

They turned the imposture upon the king, and gave out that to defeat the true inheritor lie had tricked up a boy in the likeness of Edward Plantagenet. Bacon'i Henry VII.

This pillar is but a medley, or a mass of all the precedent ornaments, making a new kind by stealth ; and though the most richly tricked, yet the poorest in this, that he is a borrower of all his beauty.

T(niton's Architecture. So sinks the day-star in the ocean bed, And yet anon repairs his drooping head,

And tricks his beams, and with new-spangled ore Flames in the forehead of the morning sky.

Milton. As a goose

In death contracts his talons close ; So did the knight, and with one claw The tricker of his pistol draw. Httdibrat.

Pulling aside the tricker, we observed that the force of the spring of the lock was not sensibly abated by the absence of the air. Boyle.

I entertain you with somewhat more worthy than the stale exploded trick of fulsome panegy ricks.

Drytien.

Love is an airy good opinion makes, That trickt and dresses up the gaudy dream. Id.

Thus they jog on, still tricking, never thriving, And murdering plays, which still they call reviving.

Id.

People lavish it profusely in tricking up their chil- dren in fine cloaths, and yet starve their minds.

Locke.

A reverend prelate stopped his coach and six, To laugh a little at our Andrew's tricks. Prior.

It is impossible that the whole world should thus conspire to cheat themselves, to put a delusion on mankind, and trick themselves into belief.

Stephens's Sermons.

All he says is in a loose, flippery, and trickish way of reasoning. l\>)>e.

And now, as oft in some distempered state, On one nice trick depends the general fate. Id.

TRIC'KLE, v. n. Dan. and Swed. trilla ; Teut. trieflan — Thomson. To fall in drops; rill in a slender stream.

He, pricked with pride, Forth spurred fast ; adown his courser's side The red blood, trickling, stained the way. Spenter.

Some noises help sleep ; as, the blowing of the wind, and trickling of water, as moving in the spirits a gentle attention, which stilleth the discursive motion. Bacon.

He lay stretched along, his eyes fixt upward, And ever and anon a silent tear Stole down and trickled from his hoary head.

Dryden.

The emblems of honour wrought on the front in the brittle materials abovementioned, trickled away under the first impressions of the heat.

Addiion's Freeholder.

How fluent nonsense trickles from his tongue.

Pope.

TRICOCC7E, rftif, three, and icoiceoc, a grain, the name of the thirty-eighth order in Linnaeus's fragments of a natural method, consisting of plants with a single three-cornered capsule, having three cells, or internal divisions, each containing a single seed. See POTANY.

TRICORII, an ancient nation of Caul, wh

inhabited the country since called Dauphine. Liv. 2 I.e. 31.

TRIDAX, in botany, trailing star wort of Vera Cruz, a genus of plants in the class of syngenesia, and order of polygamia superflua ; and, according to the natural method, ranking in the thirty-second order, papilionaceae. It

is a native of Vera Cruz, and has flowers in the form of butterflies.

TRI'DENT, n. s. Fr. trident; Lat. tridens. A three-forked sceptre of Neptune.

His nature is too noble for the world : He would not flatter Neptune for his trident.

Shaktpeare.

Canst thou with fisgigs pierce him to the quick 1 Or in his skull thy barbed trident stick ?

Sandys on Job.

He lets them wear their saphire crowns, And wield their little tridenti. Milton.

TRIDENTUM, an ancient town of Gallia Cisalpina, now called Trent. See TRENT.

TRIEN'NIAL, adj. Fr. triennal; Lat. trien- nis. Lasting three years.

I passed the bill for triennial parliaments.

King Charles.

Richard the Third, though he came in by blood, yet the short time of his triennial reign he was with- out any, and proved one of my best lawgivers.

Howel' England'* Tear*.*

TRIENNIAL PARLIAMENTS were established at the revolution in 1688; but were abolished, and the septennial parliaments enacted, upon the extinction of the rebellion in 1715.

TRI ENS, in antiquity, a copper money of the value of one-third of an as, which on one side bore a Janus's head, and on the other a water-rat.

TRIENTALIS, chickweed winter-green, in botany, a genus of plants belonging to the class of heptandria, and order of monogynia ; and in the natural system ranging under the twentieth order, rotaceae. The calyx is heptaphyllous ; the corolla is equal and plane, and is divided into seven segments ; the berry is unilocular and dry. There is only one species, viz. : — T. Europaea, which is indigenous, and the only genus of heptandria that is so. The stalk is single, five or six inches hieh, terminated with five, six, or seven oval pointed leaves ; from the centre of which arise on long foot- stalks commonly two white starry flowers, each gene- rally consisting of

seven oval and equal petals, succeeded by a globular dry berry, covered with a thin white rind, having one cell, and contain- ing several angular seeds.

TRI'ER. From try. One who tries experi- mentally ; test.

You were used

To say, extremity was the trier of spirits ; That common chances common men could bear.

Shakspeare.

Courts of justice are bound to take notice of acts of parliament, and whether they are truly pleaded or not ; and therefore they are the triers of them. Hale.

The ingenious trier of the German experiment found that their glass vessel was lighter when the air had been drawn out than before, by an ounce and very near a third. Boyle.*

There should be certain trier or examiners ap- pointed by the state to inspect the genius of every particular boy. Specials.*

TRIESTE, a province of the Austrian empire containing the southern half of the kingdom of Illyria, and bordering on the Adratic, Croatia, and the government of Laybach. Its territorial extent is 5020 square miles, and its population 540,000. The majority are Sclavonians, but there are among them many Italians, Germans, and Jews. The surface is for the most parl hilly, and the soil is, with the exception of some very fertile valleys, chalky, dry, stony, and re- quires a very toilsome cultivation. The Save forms the northern boundary. The products of this province are Tines, olives, silk, and in general the fruits of the south of Europe. The sheep are commonly of a good breed ; but of corn, the quantity raised is not large. The coast affords extensive fisheries, and the climate admits of making salt by evaporating the water of the sea. The province is divided into the four circles of Trieste, Goritz, Fiume, and Carlstadt.

TRIESTE, a circle of the government of the same name, in Illyria. It contains 1440 square miles, with 176,000 inhabitants, and is divided into the four arrondissements of Trieste, Duins, Capo d'Istria, and Rovigno.

TRIESTE, a large and thriving sea-port of Austria, the capital of a district in the Illyrian territory. It is situated near the north-west ex- tremity of the gulf of Venice, and is divided into the Old and New Town. The former stands on a hill, with a castle on the top; the New Town called also

Theresienstadt, is on level ground, intersected by a canal, and built with neatness and regularity. The population, at present about 40,000, is on the increase. Trieste has good streets, and a number of commodious buildings, but few that are large or striking, except the cathe- dral, the church that formerly belonged to the Jesuits, and the theatre : the cathedral is an ancient, the theatre a modern building. This is almost the only sea-port for a very large tract of the south of Germany, the Illyrian provinces, and part of the Sclavonian ; in short, for the long tract of Austrian territory extending from Tyrol to Transylvania. Venice, though entitled since 1814 to all the privileges of an Austrian sea-port, does not, from its distance, interfere with its trade; while Fiume is a small place, less ad- vantageously situated. Among the exports from Trieste are the produce of the mines of Idria, and even of Hungary ; linen, tobacco, woollens from different parts of the Austrian dominions ; also printed cottons from Switzerland. The im- ports consist of cotton, wool, hides, raisins, silks, rice, oil from the Levant; wheat chiefly from Odessa; sugar, coffee, and othertropical products from the West Indies and Brasil. The trade of the Adriatic is conducted in barks of twenty, thirty, or forty tons : these and much larger ves- sels enter with ease the inlet, in the form of a canal, which leads from the sea into the town, and has on each side quays for vessels to load and unload. The harbour dues at Trieste are in- considerable. Each of the trading nations of Europe has a consul here. The quantity of goods conveyed by land to and from Trieste is very considerable ; this conveyance is tedious, but not expensive. Ship-building is carried on with activity, and the sugar refining, the

making of white lead, soap, leather, paper, and At some distance from the town are salt- works, or pools for the reception of sea-water, which in the Summer months is evaporated by the heat of the sun. Coal is obtained at a few :niles distance. Trieste is built near the site of the Roman Tergeste ; and there are some re- mains of the aqueduct, partly subterranean, which brought water to it from a distance of six miles. This town fell into the possession of Austria in 1382. In the fifteenth century it was a small place without trade; in 1719 it was made a free port by the Austrian govern- ment; in 1753 the harbour was enlarged, and a mole formed to shelter it from the south : it is open, however, to the Bora, an impetuous north- east wind, which, did it not blow off the land, would be dangerous to the shipping. The ter- ritory belonging to the town comprises 170 square miles, and a population of nealy 9000. Trieste belonged to France during five

years, from 1809 to 1814. 212 miles S. S. W. of Vienna, and sixty-nine E. N. E. of Venice.

TRI'FALLOW, v. a. Lat. ires and Sax. jrealja, a harrow. To plow land the third time before sowing.

The beginning of August is the time of trifaUmo- i'tg, or last plowing before they sow their wheat.

Mortimer.

TR I FISTULARY, adj. Lat. tres and fistula. Having three pipes.

Many of that species whose trijutulary bill or crany we have beheld. Browne's Vulgar Errours.

TRI'FLE, v. n., v.a., &~\ Belgic, tryfelen.

TRI'FLER, n. s. [n. s. ˆTo act or talk with-

TRI'FLING, adj. i out weight or dig-

TRI'FLINGLY, adv. 3nity; act or talk with levity or folly ; mock ; be of no importance : to make unimportant (obsolete) : a thing of no moment : a trifler is one who acts with levity or folly : the adjective and adverb following cor- respond with trifle.

Tis hard for every trifling debt of two shillings to be driven to law. Spenser.

When they say that we ought to abrogate such popish ceremonies as are unprofitable, or else might have other more profitable in their stead, they trifle and they beat the air about nothing which toucheth us. Hooker.

Do not believe,

That, from the sense of all civility, I thus would play and trifle with your reverence.

Shakspeare.

The instruments of darkness tell us truths ; Win us with honest trifle , to betray us In deep consequence. Id. Macbeth.*

Threescore and ten I can remember well, Within the volume of which time I've seen Hours dreadful and things strange ; but this sore night

Hath trifled former knowings. Id.

A man cannot tell whether Apollos or Albert Durer were the more triflers, whereon the one would make a personage by geometrical proportions, the other by taking the best parts out of divers faces to make one excellent. Baccm.

Old Chaucer doth of Topas tell, Mad Rabelais of Pantagiuel, A later third of Dowsabell,

With such poor trijies playing.

Drayton'i Nymphuid.

Those who arc carried away with the spontaneous current of their own thoughts, must never hunioui their minds in being thus triflingly busy. Locke.

To a soul supported with an assurance of the di- vine favor, the honours or afflictions of this life will be equally trifling and contemptible.

Triflers not ev'n in trifles can excel ; Rogers.

'Tis solid bodies only polish well.

Brunetta's wise in actions great and rare, But scorns on trifles to bestow her care : Thus ev'ry hour Brunetta is to blame, Because the occasion is beneath her aim. Think nought a trifle, though it small appear ; Small sands the mountain, moments make the year And trifles life. Your care to trifles give, Or you may die before you truly live. Id.

Whatever raises a levity of mind, a trifling spirit, renders the soul incapable of seeing, apprehending, and relishing the doctrines of piety. l.au-.

TRIFO'LIATE, adj. Lat. trcs and folium. Having three leaves.

Trifoliate cytisus restrained its boughs For humble sheep to crop, and goats to brouze.

Harte.

TRIFO LINUS, a mountain of Italy in Cam- pania, famous for its vines. — Plin. 14. c. 7.

TRIFOLJUM, trefoil, or clover, in botany, a genus of plants belonging to the class of diadel- phia, and order of decandria, and in the natural system ranging under the thirty-second order, papilionaceae. The flowers are generally in round heads: the pod is scarcely longer than the calyx, univalve, not opening, deciduous. The leaves are three together. According

to Murray's edition of Linnaeus there are forty-six species; of which serenteen are natives of Bri- tain. See Lightfoot's Flora Scotica, Berkenhout's Synopsis, and Withering's Botanical Arrange- ments. The most remarkable are these : — 1 . T. alpestre, long-leaved purple trefoil, or mountain clover, is thus characterised by Mr. Afzelius. The spikes are dense; the corollas somewhat equal ; the stipulas are bristly and divergent ; the leaflets lanceolated ; the stalks stiff, straight, and very simple. It grows in dry, mountainous, woody places, in Hungary, Austria, and Bohe- mia, &c., but is not said by Mr. Afzelius to be a native of Britain. 2. T. medium, according to Mr. Afzelius, has been confounded with the species pratense and alpestre ; but it is to be distinguished from them by having loose spikes, corollas somewhat equal, stipulas subulate and connivent, and stalks flexuous and branched. It is found in dry elevated situations, especially among shrubs, or in woods where the soil is chalky or clay, in England, Scotland, Sweden, Denmark, &c. 3. T. meliloti ofncinalis, the melilot, has naked racemous pods, dispermous, wrinkly, and acute, with an erect stalk. It grows in corn-fields and by the way sides, but not common. The stalk is erect, firm, striated, branched, and two or three feet high ; the leaves ternate, smooth, obtusely oval, and ser- rated ; the flowers are small, yellow, pendulous, and prow in long close spikes at the tops of the branches ; the pod is very short, turgid, trans- versely wrinkled, pendulous, and contains either one or two seeds. The plant has a very pecu- liar strong scent, and disagreeable bitter, acrid, taste, but such, however, as is not disagreeable

to cattle. The flowers are sweet-scented. It. has generally been esteemed emollient and digestive, and been used in fomentations and cataplasms, particularly in the plaster employed in dressing blisters ; but is now laid aside, as its quality is found to be rather acrid and irritating than emollient or resolvent. It communicates a most loathsome flavor to wheat and other grains, so as to render it unfit for making bread. 4. T. pratense, purple or red clover, is distin- guished by dense spikes, unequal corollas, by bearded stipulas, ascending stalks, and by the calyx having four equal teeth. This is the botanical description of this species given by Mr. Afzelius, who, in the Linnaean Transactions, vol. I., lias been at much pains to remove three species of the trifolium from the confusion in which they have been long involved ; namely, the pratense, medium, and alpestre. The red clover is common in meadows and pastures, and is the species which is generally cultivated as food for cattle. It abounds in every part of Europe, in North

America, and even in Siberia. It delights most in rich, moist, and sunny places; yet flourishes in dry, barren, and shady places. For an account of the mode of cultivating it, see RURAL ECONOMY. 5. T. repens, white creep- ing trefoil, or Dutch clover, has a creeping stalk, its flower gathered into an umbellar head, and its pods tetraspermous. It is very common in fields and pastures. It is well known to be excellent fodder for cattle ; and the leaves are a good rustic hygrometer, as they are always relaxed and flaccid in dry weather, but erect in moist or rainy.

TIU'FORM, adj. Lat. triformis. Having a triple shape.

The moon her monthly round Still ending, still renewing through mid heaven, With borrowed light her countenance triform Hence fills, and empties, to enlighten the earth.

Milton.

TRIFURCATED (from tres and furca, a fork), having three prongs.

TRIGA, in antiquity, a kind of car or chariot drawn by three horses ; whence the name.

TRIG'GER. n.s. Derived by Junius from Fr. trigue, and Lat. intricare. See THICKER. A catch to hold the wheel on steep ground. The catch of a gun-lock.

The pulling the trigger of the gun with which the murder is committed, has no natural connection with those ideas that make up the complex one, murder.

Locke.

TRIGINTALS, n. s. Lat. triginta. Thirty.

Trentals or trigintals were a number of masses to the tale of thirty, instituted by Saint Gregory.

Ay life.

TRIGLA, in ichthyology, a genus of fishes belonging to the order of thoracici. The head is loricated with rough lines, and there are seven rays in the membranes of the gills. There are eleven species, of which the principal are these : 1. T. cuculus, the red gurnard. 2. T. gurnar

dus, or gray gurnard. 3. T. hirundo, the sap- pharine gurnard. 4. T. lyra, or the piper.

TRIGLOCHIN, in botany, a genus of plants belonging to the class of hexandria, and order of tngynia ; and in the natural system ranging under the fifth order, tripelatoideae. The calyx is triphyllous; the petals are three; there is no style ; the capsule opens at the base. There are three species ; of which two are British, viz. : — 1 . T. maritimum, or sea spiked grass, has ovate sexlocular capsules; the stalk is short; the spike long, and flowers purplish. It is frequent on the sea coasts. 2. T. palustre, arrow-headed grass, has an oblong trilocular capsule. The stalk is simple, eight or ten inches high ; the leaves long and narrow ; the flowers are green- ish, and grow at the end of a long spike. It is frequent in moist ground. Linnaeus says that cattle eat these two species with avidity.

TRI'GLYPH, n. s. In architecture. A mem- ber of the frize of the Dorick order set directly over every pillar, and in certain spaces in the intercolumniations.

The Dorick order has now and then a sober gar- nishments of lions' heads in the cornice, and of try- gluphs and metopes always in the frize. Walton.

TRI'GON, n. s. Gr. rpeywvov. A triangle. A term in astrology.

The ordinary height of a man ninety-six digits, the ancient Egyptians estimated to be equal to that mystical cubit among them stiled passus Ibidis, or the trigon that the Ibis makes at every step, consist- ing of three latera, each thirty-two digits.

Hale'i Origin of Mankind.

A spar of a yellow hue shot into numerous trigonal pointed shoots of various sizes, found growing to one side of a perpendicular fissure of a stratum of free- stone. Woodward.

TRIGONELLA, fenugreek, in botany, a genus of plants belonging 'to the class of dia- delphia, and order of decandria; and in the natural system arranged under the thirty-second order, papilionacese. The vexillum and aleae are nearly equal and patent, resembling a tripe- talous corolla. There are twelve species ; of which the most remarkable is, T. fanum graecum, or fenugreek, a native of Montpelier in France. Fenugreek is an annual plant, which rises with a hollow, branching, herbaceous stalk, afoot and a half long, garnished with trifoliate leaves, placed alternately, whose lobes are oblong, oval, indented on their edges, and have broad furrow- ed foot-stalks. Fenugreek seeds have a strong disagreeable smell, and an unctuous farinaceous taste, accompanied with a slight bitterishness. The principal use of these seeds is in cataplasms and fomentations, for softening, maturating, and discussing tumors ; and in emollient and carmi- native glysters.

TRIGONOM'ETRY, n. s. Gr. rpiywvoc and /itrpo. See next page.

Trigonometry is the art of measuring triangles, or of calculating the sides of a triangle sought, and this is plain or spherical. 'farrw.

TRIGONOMETRY.

TRIGONOMETRY is that branch of mathematical science by which, if certain parts of triangles are given, the others may be computed.

Every triangle has six parts, three sides and three angles ; and it is requisite that three of these be given, to find the other three. In sphe- rical trigonometry, the given parts may be of any kind, either all sides or all angles, or part the one, and part the other. But in plane trigono- metry, at least one of the given parts must be a side ; as from the angles alone only the proportions of the sides, not their actual lengths, can be de- termined.

The sides and angles of triangles being quan- tities of different kinds, they cannot be directly compared with each other ; but the relation be- tween the sides and the magnitudes of the an- gles may be found by comparing the sides with certain lines drawn in and about a circle, on which lines the arcs of the circle which measure the angles of the triangles depend. These lines are called chords, sines, tangents, and secants. The ancients, Menelaus, Hipparchus, &c., per- formed their trigonometrical computations by means of the chords ; and the sines, as well as the common theorems relating to them, were in- troduced into trigonometry by the Moors and Arabians, from whom this art, with several other branches of science, passed into Europe^ Since the fifteenth century, the Europeans have in- troduced the use of tangents, secants, &c., with the theorems relating to them.

Few circumstances have contributed more to the improvement of this science than a simple suggestion respecting the notation, first made and adopted in practice by Euler. It is nothing more than denoting the angles of a triangle by the first three capital letters of the alphabet, A, B, and C, and the sides opposite those angles by the corresponding small letters o, b, and c ; for in any theorem for the resolution of a prob- lem in trigonometry, the relation between the parts is at once perceived.

Thus, in the common formulae, cos. A =

cos. a — cos. b . cos. c . .

, it is seen at once that a

sin. b . sin. c

is the side opposite the angle A, and that l> and c are the sides containing that angle.

We have above given the original signification of the term trigonometry ; but, in the modern acceptation of the term, it may be considered as the science by which we may determine the po- sitions and dimensions of different parts of space, by means of the previous knowledge of some of those parts. The formulae of trigonometry have also been applied to the solution of problems in which quantity, not magnitude, is the only consideration ; as in the solution of the irreduci- ble case of cubic equations ; and of physical as- tronomy, trigonomical formulae may be said to form the language.

Definitions.— I. If two lines meet in the cen- tre o» a circle, the arc of the circumference in- tercepted between them is called the measure of

the angle, which they contain ; by which is meant merely that the intercepted arc is the same part of the circumference of the circle that the angle is of four right angles. Thus, in fig. 1, TRIGONOMETRY, A B is the same part of the cir cumference A B D F E A that the angle A C B is of four right angles.

2. If the circumference of a circle be divided into 360 equal parts, each of these parts is called a degree of the circle; if a degree be divided into sixty equal parts, each of these parts is call- ed a minute; and, if a minute be divided into sixty equal parts, each of these parts is called a second, &c. ; and whatever number of degrees, minutes, seconds, &c., are contained in any arc of a circle, the angle at the centre measured by that arc is said to contain the same number of degrees, minutes, seconds, &c.

3. Degrees, minutes, seconds, &c., are usually denoted by the marks ° ”” &c. ; thus 18° -4′ 27′ signifies eighteen degrees, four minutes, and twenty-seven seconds.

4. Two arcs whose sum is equal to a semicir- cle, or two angles whose sum is equal to two right angles, are called supplements of each other.

5. The difference between an arc and a quad- rant, or between an angle and a right angle, is called the complement of that arc or that angle.

6. A perpendicular let fall from one extremity of an arc upon the diameter which passes through the other extremity, is called the sine of that arc.

7. The versed sine of an arc is that portion of the diameter intercepted between the sine and the circumference.

8. The tangent of an arc is a perpendicular to the diameter at one extremity of an arc, meeting the diameter produced which passes through the other extremity.

9. The secant of an arc is the line drawn from the centre to the termination of the tan-, gent.

10. The sine, tangent, secant, &c., of the com- plement of an arc are usually termed the cosine, cotangent, cosecant, &c., of that arc.

To illustrate the above definitions, let A B (fig. 2) be the arc of a circle described with the radius AC, and let A E be a quadrant; from B draw B D perpendicular to the diameter A A’; and parallel to it draw AT, meeting CT in T; let G B and E M be drawn parallel to A A’, the latter meeting; C T produced in M. Then B A is the supplement of B E A’, and B E A’ is the supplement of B A ; B A is the complement of B E. and B E is the complement of B A or of B E A’, the angles B C A and B C A’ are supple- ments of each other ; and B C E is the comple- ment of B C A or of B C A’. — B D is the sine, D A the versed sine, A T the tangent, and C T the secant of the arc A B, or of the angle A C B to the radius AC. G B is the sine, EG the versed sine, E M the tangent, and C M the se- cant of the arc E B ;

which arc being the com- plement of A B, G B, or its equal C D, is called

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A/.V/.V.

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K L MM O

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7 X “/ \ / »A-*— \ »-^ > “^

the cosine, E G the coversed sine, E M the co- tangent, and C M the cosecant of the arc A B, or of the angle AC B to the radius A C.

These expressions are thus abbreviated : — For the sine of an arc as A B is put sin. A B

cosine

tangent

cotangent

secant

cosecant

AB AB AB AB AB

. cos. A B . tan. AB . cot. A B . sec. A B . cosec.AB,&c.

From the preceding definition we may deduce the following obvious consequences : —

1. When an arc vanishes, its sine and tangent vanish also ; and its secant and cosine are each equal to the radius.

2. The sine and the versed sine of a quadrant are each equal to the radius, its cosine vanishes, and its secant and tangent are infinite.

3. The versed sine of an arc and its cosine are together equal to the radius.

4. The chord of an arc is twice the sine of half the arc.

5. Of any arc less than a quadrant, the arc is less than its tangent, the chord less than the arc, and the sine less than the chord. For the sector C A B is less than the triangle CAT; and, by

C A

mensuration, the sector C A B = — x arc

At

C A

A B, and the triangle C A T = .AT;

C A C A

whence x A B is less than – — . A T, and

consequently A B is less than AT. In a similar way it may be shown that the chord A B is less than the arc A B, and the sine B D less than the chord A B.

6. An arc and its supplement have the same sine, tangent, and secant.

7. The radius, tangent, and secant, constitute a right angled triangle = C AT the cosine, radius, and sine, constitute a similar right angled trian- gle ; as do also the cotangent, radius, and co- secant.

Hence C D2 + B D2 = C B2; or cos.2 + sin 2 = rad2 ; C A2 + AT2 = C T2 ; or rad.: + tan.2 = sec.2; CE2+ EM2— CM2; or rad.2 + cot.1 ~ cosec.; cos.2 — rad.2 — sin.2n rad. + sin. • rad. — sin.; sin.2 — rad.2 — cos.2: = rad. + cos. • rad — cos.*

And, by similar triangles, we have C D : D B : : CA : AT, or cos. : sin. : : rad. : tan., or tan. —

rad. • sin. sin.

— – — , when radius is unity. Simi-

cos. cos.

rad. • cos. cos.

larly we have cot. r= : — ˆ, when ra-

sm. sin.

dius is unity.

Again, C D : C B : : C A : C T, or cos. : rad. : : rad. : sect. ; whence cos. sect. — rad.2, or cos. — rad.2 1

when radius is unity; and sect. —

-= ; when radius is unity. Similarly we

have sin. cosect. = rad.2; VOL. XXIJ

rad.2 cosect.

1 rad.1

, when radius is unity: cosect. ——. —

cosect. sin.

= — — , when radius is unity, sin.

Again, AT:AC::CE:EM; or tan. : rad. : : rad. : cot. ; whence tan. • cot. = rad2; tan. =

rad.2 1 rad.2

= , when radius is unity ; cot. =

cot. cot. tan.

= , when radius is unity.

tan.

8. If M and N represent any two arcs, we have, from what has just been shown, cos. M • sect. M = cos. N • sect. N; sin. M • cosect. M = sin. N • cosect. N ; and tan. M • cot. M. = tan. N-cot. N. Whence cos. M : cos. N : : sect. N : sect. M ; sin. M : sin. N : : cosect. N : co- sect. M ; and tan. M : tan. N : cot. N : cot. M.

9. The sine, tangent, &c., of an arc which is the measure of any given angle as A B C, fig. 3, &c. is to the sine of any other arc by which the same angle ABC may be measured, as the radius of the first arc to the radius of the

second. For let A C and M N each measure the angle B ; C D being the sine, D A the versed sine, A E the tangent, and B E the secant of the arc A C ; N O the sine, O M the versed sine, M P the tangent, and B P the secant of the arc M N. Then by similar triangles we have C D : N O : : rad. B C : rad. B N ; A E : M P or B E : B P : : rad. B A : rad. B M ; and B C : B D : : B N : BO ; or BA:BD::BM:BO; hence BA:BA — BD::BM:BM — BO; or BA:AD::B M : M O ; or B A : BM : : A D : M O.

10. In trigonometrical investigations it is often convenient to consider the radius as unity, for the sake of simplifying the expressions. But such expressions may easily be adapted to anj other radius. For if BC in the figure under consideration be represented by R, B N by unity, and D C = sin. to radius R, we have B C (R) :

CD (sin.) ::

= ˆ. Hence,

any formula which has been investigated on thc> supposition that radius is unity, may be adapted to another radius R by substituting for sin., tan.,

&c., in the given expression,

sin. tan. ~ˆ-, -rr

, &c., and

then reducing the expression to its most simple form.

The numerical values of th« sines, tangents, &c., of every arc computated to any radius will exhibit the ratio of the sines, tangents, &c., cor- responding to any other radius. A table con- taining such numbers is called a table of natural sines, tangents, &c. ; and a table exhibiting the logarithms of those numbers is called a table of logarithmic sines, tangents, &c. Tables of natu. ral sines, &c., are generally computed to radim unity ; and tables of logarithmic sine?, &c., arg generally computed to the radius whose logarithm is 10, that the logarithm of the smallest sine likely to be required in computation, may have a positive, not a negative index ; or that the cor- responding natural sine may not be fractional.

The logarithm of radius in such tables bein<; 10, the logarithm of rad.2 is 20, of rad.1 30, &c.. the 'ogarithmic sine and cosine of any arc is les»

than 10, but the logarithmic tangents, secants, cotangents, and cosecants admit of all possible values.

ON THE SIGNS OF TRIGONOMETRICAL QUAN- TITIES.

When geometrical quantities that are measured from a given point or line are considered analyti- cally, they are considered as positive or negative, and are accordingly designated as + or — , ac- cording as they lie on the same side or on op- posite sides of the same point or line. Thus in rig 2, the sines are estimated from the di- ameter A A', and in the semicircle A E A' they are considered as + ; but, as in the other semi- circle AEfA they fall on the other side of the diameter AA', they are then considered as — . The cosines, being estimated from the centre C, are considered as + in the first quadrant A E ; but as in the second quadrant E A', and the third A E', they fall on the other side of the centre C' they are then considered as — ; and again in the fourth quadrant E'A they become + > as in the

sin.

first quadrant. As tan. = , tan. is 4- in the

cos.

first and third, and — in the second and fourth quadrants ; and, as cot. ~ the tan. and co-

tan.

1

tan. have the same sine ; and us sect. =

j COS.'

and cosect. = — — , the sect, and cos. have the sin.

same sine, and the cosecant and sine have the same sign.

PROP. I.— The chord of 60° and the tangent of 45° are each equal to the radius; the sine of 30°, the versed sine of 60°, and the cosine of 60° ; are each equal to half the radius ; and the secant of 60° is double the radius.

*Let *D, fig. 4, be the centre of a circle, AB an arc of 60°, and AC an arc of 45°; join AB, B D, and from B draw BE perpendi- cular to A D, and from D draw D G H perpen- dicular to A B, and it will bisect both the chord A B and the arc A C B. Draw the tangent AG meeting the secants DBG and D C F in G and F. Now, as the angle B D A is 60°, the sum of the two equal*

angles D A B and D B A is 120° ; therefore each of these angles is 60°, and conse- quently the triangle A B D is equilateral : whence A B, the chord of 60° is equal to the radius. And as, in the equilateral triangle A B D, the perpendicular B E bisects A D, and the perpen- dicular DG H bisects both the chord A B and the arc AH C B, D E the cosine of 60°, E A the versed sine of 60°, and B C the sine of 30°, are each equal to half the radius. And by similar triangles DE:DB::DA:DG; whence, as D B = 2 D E, D G = 2 D A, or the secant of 60° is double the radius.

Again as the angle DAF is a right angle, and "the angle A D F is half a right angle, the

(I.) Hence F L, sin. A + B = sin. A • cos. B D O, sin. A— B — sin. A • cos. B cos. B

angle A F D must also be half a right angle ; and therefore A D and A F are equal, or the tangent of 45° is equal to the radius.

PROP. II. — The secant of an arc is equa. .o the sum of its tangent and the tangent of half its complement.

Let A B, fig. 5, be any arc, A D its tangent, and C D its secant ; produce A D till D E is equal to D C ; join C E, and draw D H a perpendicular on C E. Then as the right angled triangles C A E and D H E have the common angle E and the right angles C A E and D H E equal ; the remaining angle A C E in the one is equal to the remaining angle E D H in the other. But the triangle E D C being isosceles, the angle D is bisected by the perpendicular DH ; there- fore the angle A C E is equal to half A D C, or to half the complement, of AC D. Hence A D the tangent of A CD, and AE'the tangent of half its complement, are equal to C D its se- cant.

PROP. III.— If A represent the greater and B the less of two arcs, it is proposed to investigate the relations between the sines and cosines of those arcs and the sines and cosines of their sums.

Let K, fig. 6, be the centre of the circle, CE the greater arc A, and EF or ED the less arc B ; join F, D, and K, E, which will bi- sect. F D in H and cut it at right angles. Draw FL, H M, EN, and D O perpendicular to KC and G H, ID parallel to KC. Then the tri- angles F G H and H I D are obviously identical, G F and H I being equal ; and G H, I D, LM, and M O are also equal. If from the right angles FH K and GH M the common part GHK be taken, the angles F H G and K H M will remain equal ; and as the angles at G and M are also equal, being right angles, the angles II K M and H F G are equal, and consequently the tri- angle F G H, which is identical with the triangle HID, is similar to K H M, which again is evi- dently similar to

K E N.

Now E N is the sine, and K N the cosine of the greater arc A, F H the sine and K H the cosine of the less arc B ; F L the sine and KL the cosine of the sum of the arcs A + B ; DO the sine and K O the cosine of the difference of the arcs A — B. And LF= HM + CF; DO = HM- HI = HM- OF; KL = KM-GH,and KO = K M + I D = K M + G H.

From the properties of similar triangles we have K E : E N : : K H : H M ; or rad. : sin. A : : cos. B : H M ; whence if radius be unity H M = sin. A. cos. B. And K E : K N : : F 1 1 : F G ; or rad. : cos. A : : sin. B : F G ; whence F G = cos. A sin. B. And K E : K N : : K H : K M ; or rad. : cos. A : : cos. B : K M ; whence K M = cos. A cos. B. Lastly, K E : E N : : F H : H G; or rad. : sin. A : : sin. B : II Gf whence H G = sin. A sin. B. + cos. A • sin. B. — cos. A • sin. B.

K L, cos. A + B — cos. A K O, cos. A — B =. cos. A

By taking the sum and the difference of the last two, we have —

— sin. A • sin. B. cos. B -f sin. A • sin. B.

first two of these four equations, and also of the

TRIGONOMETRY. 2il

(II.) sin. A + li + sin. A -— B — 2 sin. A • cos. B. sin. A + B — sin. A — B zr 2 cos. A • sin. B. cos. A+B + cos. A — B rz 2 cos. A • cos. B. cos. A — B — cos. A + B = 2 sin. A • sin. B.

On the four equations which we have now obtained it may be remarked that A is half the sum of A + B and A — ~B, and that B is half the difference of A + B and A — B; if therefore in- stead of A + B we were to put A', and instead of A — B we were to put B', we must put for A in the same equations – – — ,and for B – – – ,and the equations would then stand in this form:

A' + B' A' — B'

(III.) sin. A' + sin. B' = 2 sin. – – — ' cos. – – –

A' + B' A' — B'

sin. A — sin. B' :r: 2 cos. – – – • sin.

cos. A + oos. B' = 2 cos.

.

A' + F A' — F

•

., , . A' + B' . A' — F cos. F — cos. A — 2 sin. — • sin. — .

If in these last expressions the arc B' were to be considered as evanescent, we should have

(I\ .) o*u. **. = «, ... 0 >.«-. 0 f A ± B

• whence sin A ± B~ 2 sin. • cos.

A' A'"\

V .) sin. A' = 2 sin. — – • cos. — i

A- A- r

sin. A = 2 cos. — -sin. —\

, A' A' / 1 + cos. A

1 + cos. A = 2 cos.J — ; whence cos. — – = 'v

— At 2i

1 — cos. A' = 2 sin." — ; whence sin. ^L = \/ 1 — cos- A

n " n

2 2

A + B A + B ft . A — B

(V.) Again, sin. A f sin. B • sin. A— sin. B = 2 sin. — ' cos- — ^~ ' 2 sin-

A— B

cos- ^ = = s'n- A + B • sin. A — B. Whence sin A — B : sin. A — sin. B : : sin. A + sin.

B : sin. A + B.

(VI.) By dividing the first equation (III.) by the third we have

. A+B A— B A+B . 2 sin. – — – — • cos. — – — tan. — •-— sin. A + sin. B 2 2 2

sin. A — sin. B ~~ A + B A — B ~ A— B 9cos — y • sin. — – — tan. —

Proceeding in the same way we have

A + B A — B A+B

. _ 2 sin. — – — • cos. — – — tan. —

sin. A + sin. B 2 2 2

cos. A + cos. B ~ A+B A — B~ rad.

2 • cos. • cos. •

2 2

A+B A— B A— B

• n . • -n 2 Sin. 'COS. COt.

sin. A + sin. B 2 2

cos.B — cos. A ~ A + B A — B"

2 sin. • sin. — – —

«j A + B A— B

sin. A — sin. B_ 2 2

cos.B + cos.A~ A + B A — B =

2 cos. • cos.

2 2

2 A + B. • A— B sin. A — sin. B 2 >1D' 2

cos. B — cos. B = " A + B ATTB :

2 sin. -sin.

•2 2

«c A + B. A— B

cos. A + cos. B 2 :°S' 2

cos. B — cos. A ~ A + B A^TB =

2 sin. — -; — • sin.

22 2

P2

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(VII.) If B, in each of these expressions, vanish, we have

sin. A tan. } A

From the first equation the identical expression – — – — — j

sin. A tan. | A

A

tan. — ,

. sin. A 2 rad.

From the second

1 j cos. A rad. A

A tan. — — o

cot. —

_. .... sin. A 2 rad.

From the third

1 — cos. A rad. A tan.

From the fourth the same expression as from the second • = T-

1 + cos. A rad.

sin. A

From the fifth the same expression as from the third

1 — cos. A

A , A

. cot. — cot. — _. , . , 1 + cos. A 2 2 rad.**

From the sixth — = -= — — – = •

1 — cos. A A rad3 . A

tan. — – tan. —*

(VIII.) Transposing the first and second equations (II.) we have

sin. A + M = 2 sin. A • cos. B — sin. A — B sin. A + B = 2 cos. A • sin. B + sin. A — B'

and recollecting that it has been shown in proposition I. that sin. 30° and cos. 60° are each half radius ; if we consider A in the first of these equations as 30°, and in the second as 60°, the for- mula will become

IX. sin. 30° + B = cos. B — sin. 30° — B sin. 60° + B = sin. B + sin. 60° — B' (X.) If in the first two equations (III.) A be considered = 90° , they will become

1 + sin. B = 2 sin. 45° + — • cos. 45° — — = 2 sin. 45° + — = 2 cos.* 45° — ~*

1 — sin. B = 2 cos. 45° + — • sin. 45° — — = 2 cos. 45° + — = 2 sin.* 45° — -.*

XL Hence

= tan. 45° + – = cot.* 45° –*

2 sin. 45° + – sin.* 45° +*

I — cos. A

PROP. IV. — A representing the greater, and B the less of two arcs, it is proposed to investigate the relation between the tangents of those arcs and the tangents of their sura and their difference.

sin. A + B tan. A -f B (I.) By formula 1, proposition III., we have — – =

COS* A. ^ 13

sin. A . cos. B cos. A . sin. B

sin. A . cos. B + cos. A . sin. B _ cos. A . cos. B cos. A . cos. B _ tan. A + tan. B cos. A . cos. B — sin. A . sin. B cos. A . cos. B _ sin. A . sin. B 1 — tan. A . tan. B

cos. A . cos. B cos. A . cos. B sin. A — B tan. A — 1! tan. A — tan. B and similarly we have CO,.A_B= ^J = l + tan. A . tan B Hence' radlUS bc'n*

tan. A ± tan. B unity, we have tan. A ± – l _ ^ A ^ g-

(II.) If in this expression A — 45°, then tan. A = rad. (proposition I.), and we have tan, . _ 1 + tan. B 45'^B= -ten-B.

It t , t', t', &c., be the tangents of the arcs A, B, C, &c., then, considering A -f B as one arc, tan. A + B + tan. C

1 — tf t + f + t" — tf t'

(III.) Hence tan. A + B + C = -f+~t = i — (t tf + t f + f f)' A°d 'f A "*" B

^—j—Tf*'

-f C •=. 180°, which is the case when A, B, and C are the angles of a plane triangle ; then, since tan. 180° =: 0, the theorem gives t + t' + f = 1 1′ t" ; (IV) or when radius is unity, the sum of the tangents of three arcs, which together make 180°, is equal to the continued product of those tangents.

PROP. V. — From the sine and cosine of any given arc A, it is proposed to investigate expres- sions for the sines and cosines of its multiples.

In formula 1, proposition III., we have sin- A + B — sin. A . cos. B + cos. A . sin. B. If in this expression B be taken successively = A, 2 A, 3 A, &c., we shall find (I.) sin. 2 A rz 2 sin. A . cos. A.

sin. 3 A ~ sin. A . cos. 2 A + cos. A . sin. 2 A. sin. 4 A iz sin. A . cos. 3 A + cos. A . sin. 3 A, &c.

Again, in the same proposition, we have cos. A + B = cos. A . cos. B — sin. A . sin. B, and substituting for B, A, 2 A, 3 A, &c., in succession, we have

(II.) cos. 2 A = cos.* A — sin.s A = 2 cos.* A — 1 = 1 — 2 sin.* A.

cos. 3 A ~ cos. A . cos. 2 A — sin. A . sin. 2 A.

cos. 4 A — cos. A . cos. 3 A — sin. A . sin 3 A, &c.

Again, by formula 8, proposition III,

sin. A + B ~ 2 sin. A . cos. B — sin. A — B. If in this formula B ~ n — 1 . A, it becomes (III.) sin. n A — 2 cos. A . sin. n — 1 .A — sin. n — 2 . A.

By adding together the third and fourth expressions, formula 2, proposition III., aud transposing we have cos. A + B — 2 cos. A . cos. B — cos. A — B. Here let B — n — 1 .A, and the formula becomes

(IV.) cos. n A — 2 cos. A . cos. n — 1 A — cos. n — 2 . A.

If in formula 1 and 2 of this proposition we substitute *J 1 — cos. * for sin., and «/ 1 — sin. * for cos., the expressions will stand thus: (V.) sin. A -rr. s.

sin. 2 A — 2 s ˆ 1 — s* sin. 3 A = 3 s — 4s3. sin. 4 A — 4* — 8s* . *J~\ — ?, &c. And

(VI.) cos. A = c.

cos. 2 A = 2 c* — 1.

cos. 3 A = 4 c* — 3c.

cos. 4 A = 8 c* — 8 c» + 1, &c.

A class of very elegant and curious formulae may be deduced from the last class by means of a particular substitution.

2

(VII.) Make 2 cos. A = s + – ; then 2 cos. 2 A = 2 . (2 cos. **A — 1)** = **2 (– . z + 1 — l)** = » + -7, and a like substitution for 2 cos. 3 A, 2 cos. 4 A, &c., will give 2 cos. 3 A = ** + ~ 2 cos. 4 A = i* + — , &c.

From the application of imaginary quantities, By a similar deduction we find 2 >/ — 1 .

some trigonometrical formulae mav be deduced, . 1

which are of great importance as instruments of sin< TO A — j- – – —. Hence cos. A + ˆ — 1 •

investigation. _, \

Adopting the above substitution, we have cos. sin- A = T, cos. A — ˆ — 1 sin. A = — , and

A = l-. x + 1, whencesin. A = ˆ/l-cos.‘A cos’ mA + ^^ sin’ ™ A = *”• cos’ m A ,~—{ t • — V — 1 . sin. m A = — ; therefore, (cos. A

= T — -x ;or2N/— 1 .sin A=r . , . . –

2 T x + v/ — ” sin. A) ” = cos. n/ A + v’ — 1

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sin. m A, and (cos. A — v/ — 1 . sin. A) ” — cos. m A — *J — 1 . sin. m A.

Expanding these expressions, and adding them,

m . m — 1 we have cos. m A = cos. “A

cos.” A. sin.

m .m — 1.7« — 2.»n — 3

2.3.4

. cos. ~ A . sin. * A — &c.

If we subtract them, we have sin, m A =

cos. •”* A . sin. A

m . m — 1 . m — 2

2~73

..

PROP. VI. — It is proposed to express the powers of the sine and cosine of an arc in terms of the cosines and sines of the multiple arc.

Expressions of the kind which we have here proposed to investigate are of

the greatest im- portance in all mathematical investigations con- nected with physical astronomy.

*As 2 cos. A = x + -, 2″ . cos. ” A = (x ˆ \ * = (by expanding the binomial) x”*

formula required for the solution of the different cases of right angled plane triangles : — Let ABC (fig. 7,) be a plane triangle, right-angled at B; round A as a centre with any radius, A D, describe the arc D G ; and from G and D draw G F and D E perpendicular to A B. Then G F will be the sine of the angle A, A F its cosine, D E its tangent, and A E its se- cant ; and, as the angle C is the complement of A, the sine, tangent, and secant, of one of these angles will be the cosine, coangent, and cosecant respectively, of the other. Now, by the properties of right angled triangles A C = y/ A Ba + BC2, A B — y/ (A C + B C) . (A C — B C), and B C = V (AC + A’B) . (AC — A B).

Again, by similar triangles A C : C B : : A G : G F, that is : : rad. : sin. A ; hence A C . sin. A

or- j.u r T>f- AC. sin. A =i B C rad ; therefore B C n

&c.

n~ 1

rr») +» &c., by collecting into pairs the terms equally distant from the middle term of the series. But 2 cos. n A = «” + —

Hence 2′ . cos. • A = 2 . < cos. nA + n. cos. n — 2 . A + n . — – — . cos. n — 4 A +, &c.

AC cos. C. . _, BCrad. -,and A C ~

Or 2 “-‘ cos. ” A = cos. nA + n. cos. n — 2

n — 1

A + n . — – — . cos. n — 4 . A — , &c.

As examples of the formula If n = 2, 2. cos. JAzz cos. 2 A + 1

n = 3, 2. cos. JA= cos. 3 A + 3 cos. A n= 4, 2s cos. 4A z= cos. 4 A - f 4 cos. 2 A -f 3 nr=5, 24.cos.4Az:cos. 5A-r-5cos. 3A+10 cos. A, &c.*

*To obtain a general form for sin. “A; in the expression for cos. *A, substitute q — A, (q signifying a right angle) ; then 2 “•’ cos. ” q — A —*

cos. n q— n A + n . cos. n — 2 (q— A) + n .

_ cos. n — 4 . q — A, and by reduction we have ± 2 “” sin.‘A— sin. n A — n. sin. n — 2 . A + n . sin. n — 4 . A — , &c.

As examples of this form — If n — 2 ; 2 sin. ***A = — cos. 2 A 4. 1 n = 3; 2*** *sin. 3A = — sin. 3 A + 3 sin. A n = 4 ; 2* sin. 4A = cos. 4 A — 4 cos. 2 A + 3 n = 5;2’sin.*A = sin. 5 A — 5sin. 3 A + 10 tin. A,&c.*

The three preceding propositions contain a condensed view of what, in modern mathematics, has been termed the arithmetic of sines.

PROP. VII. — It is proposed to investigate the

rad. BC.sec. C

rad. AC. sin. C

sin. A

And similarly A B =

rad. BCcosecA

rad. AC cos. A

AB

rad. cosect C

>andAC =

rad.

AB-rad_AB .sec. A cos. A rad.

rad.

Again, A B : BC : : AD : D E,that is : : rad. : tan. A ; therefore A B • tan. A = BC rad. ; hence

BCrad. BC.cot.A BC-jtan.C AB=- r- = , = ; ;and

BC =

tan. A ABtan.A

rad. ABcotC

rad.

rad. rad.

PROP. VIII. — It is proposed to investigate the formulae required in the solution of the different cases of oblique-angled plane triangles.

Formula 1.— A B . sin. A = C B . sin. C (figs. 8 and 9). For let BD, in each figure, be a perpendicular from B on the base A C, or A C produced. Then, by the last proposition, in Ihe right-angled triangle C B D • C B . sin C = BDrad.,andAB-sin. BAD = BD . rad.; therefore A B . sin. B A D = C B sin. C ; and, sin. BAD (fig. 8) = sin. B AC; whence ge- nerally A B . sin. A = B C sin. C. Hence C B : B A : : sin. A : sin. C.

Formula 2. — In the same figures AD : D C : : tan. A B D : tan. D B C, or : : cot. A: cot. C. For (prop. VII .) B D . tan. A B D = A D rad., and B D . tan. D B C = C D, rad. and therefore A D • rad. : C D rad. : : BD : tan. A B D : B D .tan. DBC'; hence AD:CD::tan A.BD : tan. DBC;or : : cot. A : cot. C.

Formula 3. — In any triangle a A, B C (fig.

10), in which A B and C represent the

angles, and a. b, and r, the sides opposite those

A + B A-B.

angles, a + b : a — b : : tan. — – — : tan. — – —

For formula 1 of this proposition a : b : : sin. A: sin. B ; therefore « 4 b : a — b : : sin. A f sin. B : sin. A — sin. B : : (formula 1, prop. III.) tan. A + B A — B

— :tan-~2—

Formula 4. — In any triangle, as A B C (fig. 9), if B D be a perpendicular, let fall from the vertex upon the longest side, then AC: A B + B C : : A B — B C : A D — D C. I or

by geometry A D + D C -AD — DC=AB+ Forcra — b : :sin.C :sin.A — sin.B::sin.A+ B

BC-AB — BC; and, asAD + DC = AC, j A —sin B • • 2 sin A ± -?- cos A + B- we have AC : AB + BC ::AB-BC : ^•°S>— ~:

An— nrˆ A + B

— 2 cos. ‘

Formula 5.— In any triangle, as A B C (fig. 22 2

C A— B . A— B C A— B

10), c : a + o : : sm. — : cos. — – — . sin. – : : cos. — – : sin. — — – .

*2 *> 222*

For c : a + b : : sin. C : sin. A + sin. B. But Formula 7. — In any plane triangle, as

_ A + B A + B ABC (figs. 8 and 9), cos. C A B =

sin.Cr=sin.A+ B=2sin. — — , cos. — — C A1 + A B — C B* ,. ..*

z • – «, /-. A – i-ˆK» radius being unity. For

(formula 4, prop. III.), and sin. A + sin- B = 2 L A . A B

A + B A-B/f „, infig.8,CB»r=CA’ + AB’+2CA.AD;

sm. — ~ . cos. — — (formula 3, prop. ILL) ; and A D = A B . cos. B A D = — A B . cos.

A + B A + B CAB, whenceCB’= CA”+ DB» — 2CA

therefore c : a + b : : 2 sin. – – . cos. – — : . A B . cos. A ; and consequently cos. A —

2 2 r A» j. A R _ r R2*

*A + B A-B A+B *° . R. Again, in fig. 9, C A» +*

2 sin. — — — . cos. – : : cos. — ;- — : 2 C A . A B

AB»=CB + 2CA.AD; andAD = AB.*

cos. Azi£ ; and, as cos. A + B : sin. -, the cos. A ; therefore C A’ + A B = C B* + 2 C A .*

2 2 2 A B • cos. A ; therefore cos. A =:

proportion becomes c : a + b : : sin. – : cos. . .A + ~ – , or, calling the sides oppo

- “J \ˆ> A • A. iJ

A — B site tne angles A, B, and C, respectively a, b, and c,

2 and observing that the cosine of an obtuse angle

Formula 6.— In any triangle, as ABC is negative, we have universally cos. A r=

(fig. 10), c : a— b : : cos. — -: sin. — ˆ_. + “7°, radius being unity.

i i £ D C

Formula 8.— In any triangle, as ABC (fig. 10), if – – beputˆS, then cos.

A ˆ /rad. ‘.S.S-a _ , . . v , . .P + c’-a1 2bc

— =-V • ; • F°r> by tne last formula cos. A:r — , and 1 = — — 7—

2 be 26c 2bc

, f , A 2 b e , 6J + c» – a” b + cf – a» , A

therefore 1 + cos. A = 2 cos. 2 — = . H r-;— = — —7 ; or, cos. ” — =

22 Ac 2 Ac 26c 2

b + c+a.b + c — a b+c + a.b + c — a f> + c + a . b + c + a _

2 2~ _ 2 2 fl S .S — a

4 6 c 6c fee ˆ~ fcg • • • to ra’

R’S.“SˆT A /rad’.S.S— a

aius unity z: ; to radius K ; whence cos. — = \/ r .

3 b c 2 be

Formula 9. — In any triangle, sin. A = \/ – — ; adopting the same notation employed in the last formula.

.A 2bc 63 + eJ— a1 al — (P+c* — 2bc’ a* — bˆ~c* For 1 — cos. A = 2 sm. * — =

= – – – – – – -.

226c 2 be 1 b c 2 be

a + b + e a + 6 +

-

.A a + b — c .a — b + c .

whence sin.*— = — — – = – 1 – – – — – – – ,to 2 4bc be be

,. R*S — fr.S — c A /rad.s.S — b .S -c radius unity; = to radius R, whence sin. — = ╲/ r

D C it DC

Examples of the application of the formulae for the solution of right angled plane triangles. 1. In a plane right angled triangle, as ABC', fig. 11, given AC 480, and £_ A 53′ 8', required AB and BC.

By Prop. VII. AB = A C ' J°s' A, and BC = AC ' 'in' A; these equations solved logarith

n> 1{

nucally give

Log. AC, 480, 2-681241 Log. AC, 488, 2-681241 Log. cos. A 53° 8′ 9-778119 Log. ?in. A, 53° 8', 9-903108

12-459360 12-584349

Rad. 10 Rad. 10

A B 287-98 lo-7. 2-459360 BC 384 01 log 2-584349

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2. Given AB, 1214, and L A, 51° 40′ 30', to find AC and BC.

A B • tan. A _ A B • sec. A

By Prop. VII. we have BC — – ˆ – , and AC — – — – – , whence

Log. AB, 1214, 3-084219 tan. A 51° 407 30″ 10-102119

Had.

BC 1535-8 log. 3-186338

-

Log. AB, 1214, 3-084219 Sec. A 51° 40′ 30″ 10207523

13-291748

Rad. 10

AC 1957-7 log. 3-291742

3. Given AB 63-4, and AC 85-72, to find the other parts.

By Prop. VII. AC • cos. A = AB • R, whence cos. A := Af,\R, and BC = A B

orBC =

(AC + AB) • (AC — AB) • — Log. AB 63-4, 1-802089

Rad. . .. . lO-

ll -802089 Log. AC 85-72 1-933082

A,42°18‘4’log.cos. 9-869007 whence C = 47° 41′ 56.*

Or

A C 85-72 B C 63-4

AC

A B 63-4

tan. A, 42° 18′ 4′

Rad. BC 57-69 log.

R

1-802089 9-959025

11-761104 10′

1-761104

*And L C =r compt. L A = 47° 41′ 56**

169-12 log. 2-173536 22-32 log. 1-348694

2)3-522230

BC 57-69 log. 1-761115 4. Given A B 8372-1, and B C 694-73, to find the other parts.

B C • R By Proposition VII. AB-tan.AzzBC-R, whence tan A rr ; and by the same pro-

. _ AB • sec. A position AC —

p

Hence

BC 694-73 log. 2-841816 Rad. . . 10-

A B 8372-1 log. 3-922834 sect. A 4° 44′ 37′ 10-001490

12-841816

A B 8372-1 log. 3-922834 • —

A 4° 44′ 37′ log. tan. 8-918978 whence £_ C 85° 15′ 23.

Rad.

13-924324 10-

A C 8400-9 log. 3-924324

Examples of the application of the formulae for the solution of oblique angled plane triangles. 1. In a triangle, as ABC, fig. 10, given AB, 376, L A 48° 3’, and £_ B 40° 14’, to find the other points.

The angle C, being the supplement of the sum of A and B, is 91° 43*. And by Formula 1, Prop. VIII., A B • sin. B = AC • sin. C and AB • sin. A = BC • sin. C,

AB-sin. B A B • sin. B • cosect. C’ AB • sin. A

whence AC — – : — ˆ – = – ˆi – ; and B C zz

sin. C A B • sin. A • cosec. C’

ˆi R*

-

in. C

R«

Log. AB, 376, 2-575188 sin. B 40° 14′ 9-810167 cosec. C 91° 43′ 10-000195

R1

Lv. A B, 376, 2-575188 sin. A 48° 3′ 9-871414

cosec. C 91° 43 10-000195*

*R**

22-446797 20-

*A C 242-97 log. 2-385550 B C 279*77 log. 2-446797*

2. In a triangle ABC, fig. 12, are given BC 2943, AC 2314, and £ B opposite the less of the given sides, — 139024, to find the other parts.

This example belongs to what has been denominated the ambiguous case in oblique angled triangles. For a circle described from C, with the radius CA, will cut the base again in A', and both the triangles BCA and BC A' answer to the given data; and this conclusion agrees also with

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that obtained from the formula for finding A, which is sin. A — – — — – ; whence the result

AC

may be the angle A or its supplement; or, in the figure, the result may be the angle A, or its sup-

plement BA'C.

Log. BC, 2943 3-468790 The supplement of the sum of B and A is BCA — 86″

sin. B 39° 24′ 9-802589 46″ 14'; and the supplement of the sum of B and BA'C is

— – R r A'— 1,40 o*' AK" n A -a A BC • sin. BCA • cosec. A 13-271379 5 andBA

Log. AC, 2314 3-364363 BC . sin. BCA

and B A =

--- — – .

L A 53° 49′ 46″ sin. 9-907016

L BA'C 126° 10 14″

Log. B C, 2943, 3-468790 Log. B C, 2943, 3-468790

sin. B C A 86° 46′ 14″ 9'999310 sin. BCA' 14° 25′ 46* 9-396526

cosec. A 53° 49′ 46″ 10-092984 cosec. BA'C 126° 10′ 14″ 10-092984

22-958300

ll» 20 R* 20

B A 3639-8 log. 3-561084 B A' 908-45 log. 2-958300

3. In a triangle, as ABC, fig. 9, given AC 2847, BC 979-3, and the angle C included by those sides = 57° 21′ 10", to find the othpr parts.

From B demit BD a perp. on AC; then CD = – '—^- – , prop. VII ; and A D =

r

CA — CD.

Then, Formula 2, proposition VIII., C D : D A : : cot. C : cot. A, or cot. A = DA_ cot-^ ;

^

Sin. \~/ COSCC. A.

Log. BC 979-3 2-990916 cos. C57°"2l' 10′ 9.731963

Log. A D 2318-708 cot. C 57° 21′ 10′

Log. C D 528-298

cot. A 19° 34′ 35′ C 57 21 10

3-365245 9-806647

12-722879

Rad. 10

13-171892 2-722879

Log. 2-722879

CD 528-298 AC 2847-

10-449013

76 55 45

180

AD 2318-702

103 4 15 L ABC Log. BC 979-3 2-990916

sin. C 57° 21′ 10 9-925316*

cosec A 19° 34′ 35′ 9-525127

Rad.J

A B 276-286 Log. 2-441 359

The angles may be found more elegantly and conveniently by means of formula 3, Prop. VIII. For as the angle C is given, its supplement or the sum of the angles A and B is given ; consequently

— is given, and by the formula referred toAC + CB : A C — CB :: tan. ; tan.

B — A (AC — CB) tan. ˆ-~ A 4- B B — A A + B , B — A. -•— = _ _ 2 , and A = — — , and B = _ +

ACTCB Now 180°-ˆ021‘10′ = 61° 19′ 25″ = A ± 2?, AC + BC = 3826-3 and AC – BC =

1867-7. Hence.

Log. 1867-7 3-271307

A + B .,o , e. 10-262053. Hence A — 19° 24′ 35’, and B 103° 4′ 15’, as before, tan. — – — 61 19 25

13-533360

Log. 3826-3 3-582779

A— B — : —

2 41° 44′ 50′ tan. 9-950581

4. Given A C (fig. 9), = = 4287, AB, 3758, and BC 2819, to find the angles. We shall, for the sake of exemplifying the use of different formulae, find each angle by a different process.

By Formula 4, Prop. VIII, we have A C : AB + BC:AB— BC:AD — DC’, whence

AD — DC AB + BC • AB — BC

2AC

, and C D =

AC

AD— DC

, and cos. C —

CD- rad. CB ‘

Now AB+ BC— 6577, AB — BC = 939, and2AC = 8574, whence

Log. 6577 Log. 939

Log. 8574

3-818028 2-972666

6-790694 3-933183

Log. C D 1423-24 3-153278 Rad. . , 10

AD — DC

720-26 Log. 2-857511

13-153278

Log. C B 2819 3-450095

C 59° 40′ 37′ cos. 9-703183

whence C D = 1423-24- Putting S for half the sum of the three sides, and denoting the sides opposite the angles A, B,

and C, oy o, b, and c respectively, we have by Form. 8, Prop. VIII., cos. — —

-S • S—

and by Form. 9, Prop. VIII., sin. -— — ∨

Now Sir 5432, S — a — 2613, S — A— 1145, and S— c 1674. Log. b 4287 3-632153 Log. a 2819

Log. c 3758 3-574957

7-207110

Rad. 2 20-

Log. S 5432 3-734960 Log. S — 02613 3-417139

Log. c 3758

3-450095 3-574957

7-025052

27-152099 7-207111

2)19-944988

Rad. 2. 20- Log. S— 02613 3-417139 Log. S— el 674 3-223755

26-640894 7-025052

2) 19-615842

A B

— – 20° 10′ 39″ cos. 9-972494 — 39° 52′ 2″ sin. 9-807921

2 2

A 40 21 18

Promiscuous examples of the application of trigonometrical formulae to the determination of heights and distances.

1. Wanting to determine the height AB of a tower (fig. 13), I measured from its base AE a distance of 230 yards, and then found its angle of elevation B D C = 28° 47’, required its height, allowing five feet for the height of the instrument ?

B79 58

BA =

BC • sin. BCA. rad.

DC • sin. D • cosect DBC sin. BCA rad.»

. _ B C • cos. BCA 148-305, and AC =.

DC • sin. D

rad. cosect DBC- cos. BCA

Here B C =

DC • tan. BDC

rad.

=. 126-36

yards ; whence B A = B C + 5 feet := 128-08 yards.

2. Being desirous of ascertaining the height of a steeple BA (fig. 14), at D, I took its angle of elevation 16° 4’, and measuring directly towards it, 263 feet to C, I found its angle of elevation B C A = 30° .29’, required its height and its distance from C ?

Here the angle DBCzz BCA— BD C n i-io ov nn, nr_PC-sin.D-cosectDBC

14 25 ; and BC~ TI >

rad.2

rad.»

251-94.

3. At D (fig. 15), I took BDC the angle of elevation of a light-house on the top of a hill ;z 43° 24', and measuring directly towards it 180 yards, to C, I took again the angle of ele- vation B C E of its top, 63° 12', and A C E the elevation of its bottom 49° 14', required the height of the tower, and also the height of the hill on which it stood ?

Here, as in the last example, we have DBC— BCE— BDC = 19° 48', and BE DC • sin. D • cos. DBC • sin. D C E

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326-03, and by Form. 2, Prop. VIII., E B : E A : : tan. BC E : tan. ACE, whence E A rr E B • tan. A C E _ tan. BCE

E B • tan. ACE • cot. B C E

*— — _ 191*41,*

*rad.**

andABr=BE — AE=: 134-62.

4. To determine the distance of a tower on the opposite side of a river, (see fig. 16) an officer measured a base A B of 346 yards, and at A found the angle C A B 67° 14', and at B the angle C BA = 48° 28', what are the distances of C, the tower, from A and B, the extremities of the measured base ?

*The angle A C B being the supplement of the sum of A and B is 64° 18'. Hence AC = AB • sin. B • cosectC nd BC_*

AB

rad.3 sin. A • cosectC

*rad.**

= 334-0

5. To find the distance between a house and a mill, neither of which I could get near, I measured a base A B (fig. 17), rz 820 yards ; at A I

observed the angle D A B z= 80° 28', and C A B — 40° 43' ; and at B I observed the angle C B A= 100° 12', and D B A = 52° 46', required the distance CD?

The angle A D B being the supplement of the sum of DAB and ABD is 46° 46'; and the angle A C B being the supplement of the sum of C A B and C B A is 39° 5′ ; also the angle D A C, which is the difference of D A B and C A B, or 39° 5'.

. ˆ AB • sin. ABD- cosect ADB

Now A D =. 5 zz

rad. 2

896-093; and AC =

AB • sin. BAC • cosect ACB

7. In a tower besieged there are three steeples, A, B, and C (fig. 19), with the distances of which from each other, the besiegers are ac- quainted from a map of the place ; A B is 700, BC 560, and AC 1000 yards. Now the be- siegers wishing to plant a battery at D are de- sirous of knowing whether from thence the town can be attacked with effect. The angle C D B was found to be 12° 15', and the angle B D A 15° 35'; required the distance of D from each of the objects A, B, and C.

On AC let a segment of a circle be described to contain the sum of the angles C D B and A D B ; and on B A imagine the segment of a circle to be described, containing the angle A D B, the intersection of these circles D, as is obvious from the principles of geometry, will be the position of the battery.

Join B D and let it meet the circumference in E, then the angle C E A, which is the supple- ment of C D A, is 152° 10', and the angle C A E = the angle C D E = 12° 15', and E C A = E D A = 15° 35'. Hence C E =

C A • sin. C A E • cosect. C E A rad.2

= 454-438; and

calling B C, a, A C, b, and A B, c ; and putting S for — — , we have, formula 8, proposition

= 848-444;

.

and

rad. 2

ADC + ACD_ 180° — CAD _

2 “~ 2 ” ~”

27′ 30’; and by Form. 3, Prop. VIII., tan. ADCcQ ACD

A D tn DC- tan.

ADC +ACD

VIII, cos. J = V rad- S ‘ S-c,*

21° 19′ 53”; whence A C B = 42° 39′ 46”, and consequently BCE=ACB — ECA = 27°4′ 46”. Then in the triangle B C E we have B C = 560, C E = 454-438, and the angle B C E = 27° 4′ 46”, to find the angle C B E, which, by operations already sufficiently exemplified, is found = 50° 50′ 54”. Now in the triangle C B D, wehave given the angle C D B = 12° 1 5′ and the angle C B E = 50° 50′ 54’, and consequently the angle BC D = 116° 54′ 6”; and the side B C being given, we have B D =

B C • sin. BCD- cosect. C D B

— = 2353-7 and

*rad.**

CB- sin. CBD • cos. CDB

rad.a

AD + DC

whence A D C =: 66° 3′ 29’, and A C D = 74C 51′ 31’; and CD =

A D • sin. D A C • cosect ACD – — – = 585-26. rad.s

6. To determine the distance AB (fig. 18), between the extreme points of the entrance of a harbour, the distance of each from a point C inland, and the angle ACB were mea- sured ; A C =. 896 yards, B C = 1014, and the angle C 28° 44’, required the distance A B ?

— 4° 24’!’; 2046-7; and hence DA is readily found =

2061-6.

= , 30 33,

AC+ BC

A = 89° 11′ 32’, and B = 62° 4′ 28′ ; and A B = AC • sin. C- cosect B rad.s

ON SPHERICAL TRIGONOMETRY.

PROP. I. — In any right angled spherical tri- angle, the rectangle of radius, and the sine of either of the sides containing the right angle, is equal to the rectangle of the tangent of the other side, and the cotangent of the angle opposite to that side.

Let ABC (fig. 20), be a spherical tri- angle, right angled at B; and let D be the centre of the sphere. From B, in the plane BAD, draw B E perpendicular to D A, and from E in the plane ACD draw E F also per- pendicular to D A, meeting D C produced in F, and join F B. Then as A D is perpendicular to E F and E B at their point of meeting, it is per- pendicular to the plane E B F, and therefore the plane B D A, which passes through A D, is also perpendicular to the plane B E F. Now, as the angle A B C is a right angle, the plane B D C is

perpendicular to the plane BAD. See GEOME- TRY, SPHERICAL. Therefore as the two planes, E B F and DBF, are perpendicular to the same plane AB D, their line of common section BF is also perpendicular to the plane A B D, and therefore perpendicular to B D and B E, which it meets in that plane. B F is therefore the tan- gent of the arc B C, B E the sine of B E, and the angle B E F, the ‘angle made by the planes C D A and B D A, is the same as the spherical angle BAG. Now, in the right angled plane triangle EBF, BE rad. = BF, cot. BEF; or rad. sin. A B = tan. B C • cot. B A C.

PROP. II. — In any right angled spherical tri- angle, the rectangle of’ radius and the sine of either of the sides containing the right angle is equal to the rectangle of the sine of the angle opposite that side, and the sine of the side oppo- site the rectangle.

From C (fig. 20,) in the plane of CD A, draw C G perpendicular to A D, and from G in the plane B D A draw G H perpendi- cular to D A meeting D B in H, and join C H. Then it may be shown, as in the last proportion, that

C II G is a right angled plane triangle, C G the sine of C A, C H the sine of B C, and the

C G • sin. C G H ; or rad. sin. B C = sin. A C • sin. A.

PROP. III. — In any right angled spherical tri- angle, as ABC (fig. 21), the following equations obtain : —

1. Rad. sin. A B = fan. B C • cot. A.

2. Rad. sin. A B = sin. A C • sin. C.

3. Rad. sin. BC = tan. A B • cot. C.

4. Rad. sin. B C = sin. A C • sin. A.

5. Rad. cos. AC = cot. A • cot. C.

6. Rad. cos. A C = cos. A B • cos. B C.

7. Rad. cos. A = tan. A B • cot. A C.

8. Rad. cos. A = cos. B C • sin. C.

9. Rad. cos. C = tan. B C • cot. A C. 10. Rad. cos. C = cos. A B • sin. A.

The first four of these equations have been proved in the two preceding propositions. To show the truth of the others, let D F be the great circle of which A is the pole, and produce B C till it meet D F in F; produce AC and AB also till they meet D F in E. Then, by spherical geometry, F is the pole of A B, B D the com- plement of A B, in the measure of F, and D E, the compliment of E F, is the measure of A, C F is the complement of C B, C E the complement of A C, the angle F C E is equal to the vertical angle A C B, and the angles A E and D are right angles. Now by propositions I. and II.,

angle C G H is equal to the spherical angle BAG. Now in the plane triangle C G H, C H, rad. =

Rad. sin. C E = tan. E F • cot. E C F ; or rad. cos. A C = cot. A C B • cot. A ; fifth equation. Rad. sin. C E = sin. C F • sin. F ; or rad. cos. A C = cos. B C • cos. A B ; sixth equation. Rad. sin. E F = tan. E C • cot. F ; or rad. cos. A = cot. A C • tan. A B ; seventh equation. Rad. sin. E F = sin. F C • sin. F C E ; or rad. cos. A = cos. RC • sin. C ; eighth equation.

By taking C as the pole of a great circle, and producing BC and AC and completing the figure as above, the ninth and tenth equations may be deduced in the same manner as the seventh and eighth have been.

Napier, the inventor of logarithms, devised a very simple expedient for recollecting these ten equations. He called A B, B C, the comple- ment of A, the complement of C, and the com- plement of AC, the five circular parts of a spherical triangle, the right angle not being con- sidered. In every case two of these parts will be given to find a third, and of these three parts that which has either one of the others imme- diately adjoining to it, on each side, or is sepa- rated from both of them, by one of the two remaining parts, is called the middle part ; and the other two are called adjoining or opposite extremes, according as they are adjacent to or separated from the middle part. Thus when complement A is the middle part, A B and com- plement AC are adjoining extremes, and BC and complement C opposite extremes ; when B C is the middle part, A B and complement C are adjoining, and complement A C and comple- ment A opposite extremes; when complement A C is the middle part, complement A and com- plement C are adjoining, and A B and B C op- posite extremes.

With these explanations Napier's rules are

1 . The rectangle of radius and the sine of the middle part is equal to the rectangle of the tan- gents of the adjoining extremes.

2. The rectangle of radius and the sine of the middle part is equal to the rectangle of the courses of the opposite extreme.

Suppose, for example, that A B, B C, and £_ A, were the three parts concerned in the formation of an equation. Here A B is the middle part, and B C and the complement of A are adjoining extremes, and by rule first

Rad. sin. A B = tan. B C • tan. comp. A = tan. BC • cot. A, which agrees with the first equation.

Again, let A C, AB, and B C, be the three parts concerned, two of them given and one re- quired. Here the complement of AC will be the middle part, and A B, and B C, which are separated from it, one by A and the other by C, will be the opposite extremes. And by the second rule rad. sin. complement A C = cos. A B • cos. B C ; or rad. cos. A C = cos. A B • cos. B C, which agrees with the sixth equation.

PROP. IV. — In any spherical triangle, as ABC, (figs. 22 and 23), the following pro- portions obtain, A D and D B being the segments of the base made by a perpendicular from the ver- tical angle.

1. Sin. AC : sin. B C : : sin. B : sin A.

2. Cos. AD : cos. DB : : cos. AC : cos. BC.

3. Sin. AD : sin. D B : : cot. A : cot. B.

4. Tan. A D : tan. D B : : tan. A C D : tan. DCB.

5. Cos. A : cos. B : : sin. A C D : sin. BCD

6. Cos. A C D : cos. BCD:: cot. A C : cot. BC.

For, by proposition II., rad. sin. C D nsin, A C, sin. A ; and rad. sin. CD — sin. B C, sin. B, therefore sin. A C, sin. A = sin. B C, sin. B ; and consequently sin. A C : sin. 3 C : : sin. B : sin. A. And, by equation 6th, proposition III., rad. cos. A C=cos. A D, cos. D C, and rad. cos.

B C ~ cos. B D, cos. D C ; whence rad. cos. AC : rad. cos. B C ; ; cos. A D • cos. D C : cos. B D • cos. D C, or cos. A C : cos. B C ; I cos. A D : cos. B D. By proposition I. rad. sin. A Dntan. D C • cot. A, and rad. sin. B D — tan. D C • cot. B ; whence rad. sin. A D : rad. sin. B D ; : tan. D C • cot. A : tan. D C • cot. B; and consequently sin. A D : sin. B D ; '. cot. A : cot. B. By proposition II. rad. sin. DC ~ tan. AD- cot. A CD, and rad. sin.DCzrtan. DB • cot. D C B ; therefore tan. AD- cot. A C D = tan, D B • cot. D C B ; whence tan. A D : tan. D B ; : cot. D C B : cot. AC D ; ; tan. AC D : tan. D C B ; see 8th deduction from the definitions in Plane Trigonometry.

By equation 8th, proposition III., rad. cos. A = cos. DC • sin. A CD, and rad. cos. B = cos. D C • sin. BCD, whence rad. cos. A : rad. cos. B::cos.DC-sin.ACD:cos.DC-sin. BCD, or cos. A : cos. B ; I sin. A C D ; sin. BCD.

By equation 7th, proposition III., rad. cos. ACD = tan. DC • cot. AC, and rad. cos. DC B = tan. D C -.cot. B C. whence rad. cos. A C D : rad. cos. B C D : : tan. D C • cot. A C ; tan. D C • cot.BC; or cos. AC Dicos.BCD;: cot. AC : cot.BC.

PROP. V. — In any spherical triangle, as A BC, figs. 22 and 23, if C D be a perpendicular from C upon A B, or AB produced, tan.

*BD-fAD BDttAD BC-f-AC — • tan. — *—*

-= tan.

tan.

BCiwAC

For let BC = a,AC = fr, B D = m, and A D = n ; then by proportion 2d, proposition IV. cos. a : cos. b '.'. cos. m : cos. n ; whence cos. a + cos. b ; cos. a cc cos. b \ ' cos. m + cos. n : cos. m c/2 cos. n ; or formula 6th, proposition III. plane trigono-

a+b ac/jfr m + n

metry, cot. — — – : tan. — — : 1 cot.

tan.

m c« n

at/j b

ot« b

tan.

whence cot.

, or tan.

2

a + b .

2

77i + n

cot.

tan.

2

m can

tan.

and consequently tan.

tan.

:: tan. m + n

For let D be the centre of the sphere, A E the tangent, and D E the secant of the arc b, A F the tangent, and D F the secant of the arc C ; then the plane angle E A F is the spherical angle C A B, and the plane angle E D F is measured by the arc a. Join E F; then, by form. 7th, proposition VIII., plane trigonometry, E Fazi E D+D F* — 2 ED- DFcos.D,and EFJ — EA! + AFa— 2 EA- AF • cos. A; whence EDJ + D F» — 2 ED • D F cos. D = E A'+AF»— 2 E A • A F • cos. A, or ED»+2 F'— E A'+A Fs=2 rad.«= 2 ED DF- cos. D — 2EA- AF- cos. A; or EA- AF-cos.A = ED-DF-cos.D — rad.*;*

. E D • D F • cos. D rad.s

or cos. A = – – – . — . – EA- AF E A- AF

*_ sec. b • sec. c • cos. a rad.**

*tan. b • tan. c rad. *• cos, a cos. b • cos. c*

tan. b • tan. c cos. a—cos, b • cos.c

sin. fr-sin.c sin. fr- sin. c sin. b • sin. c'

PROP. VII. — In a spherical triangle, as ABC, fig. 25, if it be any of the angles, and

— – — be put = S ; then cos. •—-=

i. S • sin. S — b • cos. fr • cos. c rad.»

and sin.

sin. S — b • sin. S — c • cos. b • cos. c

rad. For by prop. V. cos. A =*

sin. b • sin. c

cos. a — cos.fr cos./- sin. fr • sin. c

, whence 1 cos. a — cos. b • cos. c

cos. A =

22 2

mean a+fr acafr

tan. _ = tan.— -tan. ~.

By this proposition any oblique angled spheri- cal triangle, whose sides are given, may be di- vided into two right-angled triangles, in each of which the hypothenuses and aside are given ; for

the equation determines half the difference

of the segments of the given base, in fig. 22 ; or — — half the sum of the segments, the difference

of which is the given base in fig. 23.

PROP. VI. — In any spherical triangle, as ABC, fig. 24, if radius be unity, cos. A — cos. a — cos.fr • cos.c sin. fr • sin. c

For the second expression we have 1 — cos. A =

and unity =

sin. fr • sin. c

sin. fr • sin. c sin. fr • sin. c

cos. a — (cos. fr • cos.c — sin.i • sin. c)

sin. 6 • sin. c cos. a — cos. fr+c

sin. fr • sin. c

*But form. 4th, proposition III., plane trigono- metry, 1 + cos. A = 2 cos. * — , and form. 3d of*

the same proposition, cos. a — cos. fr + c = 2 sin.

a+b+c . b+c—a a+b+c . • sin. ~ 2 sin. • sin.

2

a+b+c

2 2

— a — 2 sin S • sin. S — a, whence cos.' sin.S • sin.S — a

2 sin. fr • sin. c sin. S- sin. S — a – I

:

sin. b • sin. c

sin. S • sin. S — a • cos . b

rad.3

to radius unity =

i

, to radius R, =

;. c

— ; whence

&_ + /sin.S • sin. S — a • cos, fr • cos, c 1~ rad?

sin. b' sin. c cos.a — cos.fc'cos.e

sin. b • sin. c

sm. b • sin. c

cos.fr • ccs. c + sin.fr -sin. c — cos. a cos.fe — c— cosˆo

sin. 6 • sin. c " sin. fr • sin. c

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« + 6 — c a — b + c "2 sin. • sin. — — • cosect. o cosect. c

rad.' '1+6+c . d + b+c

Or sin » ~ = S1"' 2 C ' Sm' — 2~~ ~ ' cosect' fr ' cosect- c

rad.9

sin. S — b • sin. S — c • cosect. b . cosect. c A

p— ; whence sin. • — ~

rad. 2

*../sin. S — 6 • sin. S — c • cosect. 6 • cosect. c rad.**

PROP. VIII. — In any spherical triangle, as ABC, fig. 25, if a be any of the sides, cos a — cos. A + cos. B-cos. C sin. B • sin. C

t , . , cos. a' — cos. b' • cos. c'

ror by proposition \ . cos. A — : — — — : ; and, by spherical geometry, if A', B ,

C, be the angles, and a, b', e, the sides of the supplemental triangle, then cos. A' — cos. 180° — a, r=— cos. a, cos. a'— cos. 180° — A= — cos. A, cos. 6'= cos. 180°— B = — cos. B, cos. c = cos. 180°— C = — cos. C, sin. 6′ = sin. 180°— B=sin. B, and sin. c' =sin. 180° — C=sin. C ; whence — cos.a = — cos. A — cos. B • cos. C _ cos. A + cos. B • cos. C

sin. B • sin. C sin. B • sin. C

PROP. VIII. — In any spherical triangle, as ABC, fig. 25, if a be any of the sides, and

S = A+B+C then cos Ji _ v/cos.S^B • cos. S— "C • cosect. B • cosect. C.

2 2 v ji

rad.a ^

For in the expression for sin. — , proposition VI., if the supplements of the arcs in the supple- mental triangle be substituted, becomes when reduced cos. — =

s.S— B • cos. S— C • cosect. B • cosect. C. rad.3

PROF. IX. — In any spherical triangle, as ABC, fig. 25, cos. U— — • tan. — — — cos

n— b C a+b A— B . a—b t C

• cot. — -> and sin. • tan. — – — =sm.— —- •cot.——.

2 if* 2222

For equation 1, proposition IV., sin. A : sin. B : : sin. a : sin. b ; whence sin. A ± sin. B : sin

sin. A ± sin B sin. a ± sin. b „

B : : sin. a •+ sin. b ; sin. 6 ; or — — = = : — r • Uut proposition V . cos. A =

sin. B sin. b

cos.a — cos.fc-cos.c cos. 6 — cos. a- cos. c , ~ cos. c — cos.a-cos.6

: — 7 — : • — , cos. B = — — : : , and cos. C= : : — . From

sin. 6 • sin. c sin. a • sin. c sin. a • sin. b

the last of these expressions cos. c = sin. a • sin. b • cos. C + cos. a • cos. b, which, substituted for cos. c in the expression for cos. A, we have

cos. a — cos. b • sin. b • sin. a • cos. C — cos. a • cos. * b

cos.A= : — r ; —

sin. 6 • sin. c

cos.a • 1 — cos.* b — cos. b- sin. 6 • cos. C • sin. a cos. a • sin.* 6 — cos. 6 • sin. b cos.a • cos. C • sin. a sin. b • sin. e sin. 6 • sin. c

cos.a-sin.i — cos. b • sin. a • cos. C , cos.fc'sin.a — cos. a • sin. b • cos. C

= : ; and similarly cos. B= : ;

sin. c sin. c

(cos. a • sin. b + cos. b • sin. a) 1 — cos. C

whence cos. A + cos. B = = :

sin. c

Q

sin. « + b • 2 sin. * —

sin. c.

sin. A + sin. B sin. a 4 sin. b ,

Resuming now the expression ^- „ = F T , we have sin. A ± sm. B = sm.a

sin. B sin. 6

sin. a + sin. b

. sin. B sin. A + sin. B ^r sin. c- sin. B

•± sin. b' r, whence : n=:n • — rr • » C * = — r =

sin. 6 cos. A + cos. B 2 • sin.a + 6- sin. * •— sin.fr

. a + b a — b

*n.a+Mn.6 A+B ’”~ C

~ -^ ‘ sin. C, or tan. — -— = — .— -pr r, ‘ 2 sin. — • cos

. . — r-. .,C 2 . a+b u+b C 2

2 sin. a + 6- sin. *— 2 • sin. — — • cos. -sin.” —

2 222

TRIGONOMETRY.

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a — b

2_

T+V

cot. — ; whence cos.

A+B a—b

tan. =cos. — – —

C’

cot. ~,

By a similar process we obtain

sin

.A — sin. B

-sin. b

^_T C’

2 . sin. a + b . sin. »•£

cos.A+cos. B sm.^ v n A-

2

._ sin. M

2 sin.

— b

a + b

2 cot.|

sin. *M; whence sin. — =(sin. — — – . + Z \ I

\ / . a + b . ,,\

1 . I sin. – oj sin. M I = sin.

+ M) . sin. / •• ‘oQ M)

4 . sin.

— 6

2

cot.

a_ +b

2

whence sin.

for- mula 5, proposition III., plane trigonometry ; whence

. c

sin — =

a + b

tan.

a + b

A — B

a — b

•=. sin. . cot. — .

2 22

These two equations, which are very useful in finding the angles of a triangle when two sides and the included angle are given, are known by the name of Napier's Analogies, when they are converted into propositions.

a + 6 a — 6 C

Thus, cos. — ~— I cos. — –

cot.—.

tan.

+ B

'

, .

and sin.

a + b .a — b C

2 -Sm — 2~~::COt>7 :

A — B.. A + B A — B tan. — — .Whence A = — 1 — ,

and B =

A+B A—B

2 2

Substituting for a, b, C, A and B, their values in the supplemental triangles we should obtain, A + B 4 _ a + 6 _ A — B c

2 ~C

tan.

and sin.

A + B

a — 6

-

2

A—B

tan.-

tan.

PROP. X. — In any triangle, 25, if sin. a sin. 6 . cos.

ABC

fig.

as

2 C

— be put =

*sin. * M, then sin. — =*

-

r or as cos. C =

cos. C — cos. a . cos. b

, cos. c =

: – : — -. sin. a . sin. 6

. a . cos. b + sin. a . sin. b . sin. C = cos. cos. b + sin. a

S-A-

2 V-

Hence

sin. b . cos. -—

Before proceeding to exemplify the use of the preceding formulae, it may be well to recapitu- late the rules demonstrated in spherical geome- try for

determining whether the parts of right angled spherical triangles are obtuse or acute.

1 . The sides about the right angle are of the same affection as their opposite angles, and the oblique angles are of the same affection as their opposite sides.

2. When the sides including the right angle are of the same affection, that is both obtuse, or both acute, the side opposite the right angle is acute; but when the sides including the right angle are of different affections, that is, when one of them is acute and the other obtuse, the side opposite the right angle is obtuse.

3. When the oblique angles are of the same af- fection, the side opposite the right angle is acute ; but, when the oblique angles are of different affec- tions, the side opposite the right angle is obtuse.

4. When a side and its adjoining angle are of the same affection, the side opposite the right angle is acute; but, when a side and its adjoining angle are of different affections, the side oppo- site the right angle is obtuse.

To these we may add a property of oblique angled triangles which has also been proved in spherical geometry.

When the perpendicular falls within the triangle, the angles at the base are of the same af- fection ; but, when it falls without the triangle, the angles at the base are not of the same affection.

Examples. — 1. In the spherical triangle ABC (fig. 26), right angled at B, given AB 10° 39′ 40′ rad. /. A 23° 27′ 42′ to find the other parts.

To find A C we have by equation 7, proposi- tion III., rad. cos. A = cot. AC . tan. AB; . _ R.cos. A cot. AB. cos. A

whence cot. A C = —5 = 5 .

tan. A B R

To find B C we have by equation 1, propcsiCon III., rad. sin. AB = tan. BC. cot. A; whence

_. „ rad. sin. A B tan. A . sin. A B

tan. B C = r = -j .

cot. A rad.

And to find /. C, we have by equation 10, pro- position III., rad. • cos. C = cos. A B • sin. A; cos. AB . sin. A

whence cos. C = -j .

rad.

And, as A B is acute, /. C is acute ; and as £_ A is acute, BC is acute; and, as AB and L A, are of the same affection, AC is acute.

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A B, 10° 39′ 40’, «ot. 10-725267 A B, 10° 39′ 40’, sin. 9-267171 A B, cos. 9-992438

L A, 23 27 42, cos. 9-962524 £_ A, 23 27 42, tan. 9-637507 {_ A, sin. 9‘60003t

20-687791 15-904678

rad. 10- rad. 10- rad.

A C 11° 35′ 46′ cot. 10-687791 B C 4° 35′ 26′ tan. 8-904678 C 66° 58′ 1′ cos. 9-592469

2. In the right angled spherical triangle ABC . „ cos. AB . cos. BC _,

(fig. 26), given AB 151° 23′ 9’, and BC 16° ‘ rad.

35 14′ to find the other parts. /. A, we have equation 1, prop. III., rad. sin.

Here C, being of the same affection as AB, A B = tan. B C . cot. A; whence cot. A = is obtuse ; and A, being of the same affection as

B C, is acute ; and, as A B and B C are of dtffer- rad” • sm” A B _ cot. B C . sin. A B . ent affections, A C is obtuse. tan. B C rad.

To find A C, we have equation 6, prop. III. jafj CQt Q _ cot. AB . sin. BC rad. cos. AC = cos. AB • cos. BC; whence rad.

A B, 151° 23′ 9′ cos. 9-943427 A B, sin 9-680253 AB, cot. 10-263174

BC, 16 35 14 cos. 6‘981540 BCcot. 10-525974 BC, sin. 9-455568

19-924967 20-206227 19-718742

rad. 10- rad. 10- 10-

AC, 147° 16′ 51 ‘cos. 9-924967 L A 31° 52′ 50′ cot. 9-206227 {_ C 117° 37′ 21′ cot. 9-718742

3. In the right angled spherical triangle cosect. C . sin. A B

ABC (fig. 26), given AB 29° 12′ 50’, and its rad. ~ » and hence A C

opposite angle C, 37° 26′ 21’, to find the other 13″ or 126° 35′ 47”.

Darts- To find B C, we hare rad. sin. B C = tan.

If C A and C B were produced till they met, AR r , nr tan. A B. cot. C

there would then be two right angled triangles, ‘ rad.

with a common side A B, corresponding to the and hence BC = 46° 55′ 2”, or 133° 4′ 58”. given data, and the parts to be determined To find /. A, we have rad. . cos. C =. cos. might be A C, B C, and /_ B A C, or their sup- rad. . cos. C

plements. A B • sin- A ‘> whence sin. A — — — =

COS A D*

To find A C, we have rad. sin. AB := sin A C, sec. A B . cos. C

rad s i A R ; and hence /- A — 65 27

C, A -, rau. sin. A D raj

, whence sin. AC = -. — ˆ = „„„. ”’ 0 . .

sm. C 58 ‘, or 114° 32 2’.

4. In any spherical triangle, as A B C (fig. 22), given AC 80° 19, A B 120° 47’, and /. A 51° 30’, to find the other parts.*

Let C D be a perpendicular from C on A B ; then rad. . cos. A C = cot. A cot. A C D, whence

. _, _ rad. . cos. A C tan. A . cos. A C

cot. A C D = = -j , and AC D is acute, because AC and the angle

cot. A rad.

A are acute. Again, rad ros. A = cot. AC, tan. AD, whence tan. A D = — ——7-7; — =

cot. A C

tan. AC . cos. A

— , and A D is acute, as A is of the same affection as A C D. rau.

AC 80° 19′ cos. 9-225833 AC tan. 10-767935

£ A 51° 30′ tan. 10-099395 /. A cos. 9-794150

19-325228 20-562085

rad. 10- rad. 10-

ACD 78° y 36″ cot. 9-325228 AD 74° 40′ 17″ tan. 10-562085

A B 120 47 0

BD 46 6 43

Now, tan. A D ; tan. BD :: tan. A C D : tan. BCD; whence Jan. B C D =

tan. BD.tan.ACDcot. AD _ ., _ ,

•r ; and cos. AD ; cos. B D ;; cos. AC :cos. BC; whence cos. BC =

rad.

cos. B D . cos. A C . sec. A D

: and sin. A D : sin. B D : ; cot. A ‘. cot. B ; whence cot. B =r

rad/

«in. B D . cot. A . cosect A I)

»-• . t ; see tne equations in prop. IV.

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Moreover as /. A is acute, D C is acute, and therefore /. B is acute ; and, as D B is also acute, D C B and B C are acute.

A D 74 40 17 cot. 9-437919 A D 74 40 17 sec. 10-577812 AD 74 40 17 cos. 10-015731

BD46 6 43 tan. 10-016861 B D 46 6 43 cos. 9-840891 BD46 6 43 sin. 9-857752

ACD78 3 36 tan. 10-674772 AC 80 19 0 cos. 9-225833 /. A 51 30 0 cot. 9”900605

30-129552 29-644536 29‘774088

rad.1 20- rad.3 20- rad.7 20-

B C D 53 25 18 tan. 10‘129552 B C 63 49 34 cos. 9-644536 B 59 16 20 cot 9-774088 A C D 78 3 36

— Or the angles may be found thus : —

ACB131 28 54

By Napier’s analogies, Prop. IX., we have,

b + c b—c A b + c b—c A

B + c sect’ T~ ‘ cos- T ‘ COL 1 B-C cosecl ~T • sin” T • cot< T

**”•— a” =• SdT ;*ndtan._ /del>*

-ti 100° 33′ sec. 10-737327 — ~ cosect 10-007404

2

20° 14′ cos. 9-972338 – sin. 9-538880

£ 25° 45′ cot. 10-316544 Y cot. 10-316644

31-026309 29-862928

rad.1 20- rad.* 20-

— i— 95° 22′ 37′ tan. 11-026309 ˆ 36° 6′ 17″ tan. 9-862928

2 2

Hence C = – — f- ˆ = 131° 28′ 54”, and B 59° 16′ 20”.— Here B ˆ C is ol.tust, because – being obtuse its secant is negative, and ——being acute its cosine is positive, and

— – being acute its cotangent is positive ; whence the cotangent of — – — is negative, and conse-

B 4 C *

quently — – — is obtuse.

The side B C may be found independently of the angles, thus : —

/~. ; : ~*A

V’ sin. b . sin c . cos. —- p

By Prop. X. if sin M = – — – – , then sin. — = _ rad.” 2

/ . /b + c r\ . /b oj c V sin. (£ + ‘*) sm (—%—

b 80° 19′ sin. 9-993768

c 120° 47′ sin. 9-934048 b-*-? 100° 33″ 0

2

- 25° 45’, 2 cos. 19-909158 M 50 58 59

39-836974 — ˆ-M + 156 31 59 sin. 9-690128 20> b + c

2)19-836974

0) M 44 34 1 sin. 9-846177

2

M 55° 58′ 59′ sin, 9-918487 2)19-446305

BC 31° 54′ 47″ sin. 9-723152

2

BC 63 49 34

5. In any spherical triangle, as AB C, fig. 25, given A = 130° 5′ 22”, B = 34° 26′ “, ***an*** *< the adjacent side C = 81° 6′ 12”, to find the other parts.*

A+B A — B c

*a+b sect. ˆ. cos. - · tan. – fl_*

Here, tan. ~Z- = — — ; and tan. -— =

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sin. A . sin. C . cosect. a rad.»

*O ‘ * A (TJ*

A + B 81 15 44 sec.’ 10-818406 — J — cosect. 10-005070

2 A R

A~B 48 49 38 cos. 9-818445 – sin 9-876638

2 •

— 25 33 6 tan 9-679503 ˆ- tan. 9-679503

*2 **

30-316354 a — fc 20° 0′ 22’tan. 9-56121

*rad. * 20- 2*

a + b 64° 14′ 6′ tan. 10-316354

2

Hence a = 84° 14′ 28”, and o = 44° 13′ 44”.

A 130 5 22 sin. 9-883684 c 51 6 12 sin. 9-891135 a 84 14 28 cosect 10-002197

29-777015

rad.8 20-

C 36 45 28 sin. 9777015

6. In any triangle, as A B C, fig. 25, given a = 80° 5′ 4”, b = 70° 10′ 30”, and theangle A = 33° 15′ 7 ‘, to find the other parts.

_. sin. A . sin. b . cosect. a From equation 1, prop. III., sin. B = – — – ,and, by proposition IX., cot.

, and tan. -=

lan.l±_’.co,i±B.sect.A-_B

C 2 o 2

-

j , · _ _ _ _

rad- 2 rad.’

A=3°315 V sin. 9-739035 a+ b ‘ a+b

b 70 10 30 sin. 9-973466 -3— 75 7 47 cos. 9-409310 ± 75 7 47 tan. 10-575896

a 80 5 4 cosect. 10-006536 A t B A4-B

— — J— 3224 52 tan. 9-802755 —I— 32 24 52 cos. 9-926442

*29-719037 _ , **

rad. 20- i_ 4 57 17 sect. 10-00 1626 -— – 050 15 sect 10-000046*

B 31 34 38 sin. 9-719037

29-213691 30-502384

rad. » 20- rad. a 20-

r L 72 32 30-5 tan 10-502384

_ 80 42 38Jcot. 9-213691 2

C 161 25 17

7. In any triangle, as A B C fig. 22, given A B (c) 74° 51′ 50’, AC (6) 37° 47′ 18”,and B C (o) 50′ 54′ 32 , to find the angles.

We shall find each of the angles by a different process, to exemplify the application of different formulae.

BC+AC BCcnAC BD+AD tan. – – – . tan. – – – . cot. – — – -.BDwAD 2 2

By Prop. IV., tan. – – – = – y; – ; and 2 rad. •

.^ AB B DOT AD cot. AC .tan. AD B

AD = — — – – ; and cos. A = – T-J – . By proposition VI. cos. — =

in. S. sin. S — b . cosect. a . cosect. c . C /sin.S — a.sin.S — b . cosect. a . cosect. b

^

.

*where S = * + b + C.*

2

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BC-f-AC

2

B C m A C

2

BD + AD

BD — AD

37

55 tan. 0-090124 37 tan. 9-060702 55 cot. 10-116088

29-166914

rad. 2 20-

8 21 18 tan. 9-169914

o / /,

AC 37 47 18 cot. 10-110501 A D 29 4 37 tan. 9-745126

19-855627

rad. 10-

A 44 10 41 cos. 9-855627

AD = 29 4 37

o / ,

81 46 JO sin. 9-995516

•b 43 59 32 sm. 9‘841710

50 54 32 cosect. 10-110058

74 51 50 cosect. 10-015334

39-962618

rad. 3 20-

2)19-992618

B

— 16 41 22J cos. 9-981309 •2

B 33 22 45

On THE AREAS OF SPHERICAL TRIANGLES AND

POLYGONS.

PROP. I.— In every spherical triangle, as two right angles is to the excess of the three angles I the triangle above two right angles, so is a great circle of the sphere to the area of the tri- angle.

Let ABC, fig. 27, be a spherical triangle Complete one of its sides, as BC, into the circle BCEF, which may be supposed to bound the upper hemisphere. Also prolong A B, AC, at both ends till they form semicircles esti- mated from each angle, that is, till B A E, B A D

*r nt-‘ anj tC D> be each a semicircle; then ! and BFE are semicircles also; and consequently, the triangle A EF on the anterior lemisphere is equal to the triangle B C D in the opposite hemisphere. Putting m m’ to represent the surfaces of these triangles, p for that of the triangle B A F, q for that of CAE. and a for that of the pressed triangle A B C :’ tk&, . and m ˆtogether (or their *taai a and *. together) msue ar fta surface of a spherical lune compre- hended between the two semicircles ACD D, inclined in the angle A ; « and p together make up the base included between the semicir- cles C A F, C B F, making the angle C ; a and 9 together make up the base included between the semicircles B C E, B A E, making the angle ; and the surface of each of these lunes is to t the hemisphere as the angle made by the comprehending circle is to two right angles If*

*S— a 30 52 18 sin. S — b 43 59 32 sin. a 50 54 32 cosect. * 37 47 18 cosect.*

rad.

9-710216

9-841710

10-110058

10-212719

39-874703 20-

2)19-874703

59 57 32 sin. 9-937351

2

C 119 55 4

therefore S be put for the surface of -the hemis phere, and R for two right angles.

R:A R:B R:C

whence a = S

S ; a + m

S ; a + q

S : a + p

A + B + C.

-It

2R

Hence the excess of the three angles of a spherical triangle above two right angles, termed technically the spherical excess, furnishes a cor- rect measure of the mean of the triangle.

PROP. II.— In every spherical polygon, as two right angles is to the excess of the sum of its angles above the product of two right angles by two less than the number of its angles, so is a great circle of the sphere to the area of the po- lygon.

For, if the polygon be conceived to be divided

into as many triangles as it has sides, by great

«?-!« &«T froit the angles to a point within*

the poljgon, forming at that point the vertical

angles of all the triangles; then, by proposition I., a

the area of aay one tiiangle = S . A+B + C~R

therefore putting P for the sum of all the angles of the polygon, n for their number ; and observ- ing that the sum of all the vertical angles of its constituent triangle is evidently equal to fou, right angles, we have the area of the poly

gon = S

P— n — 2 .R 2 R

TRI

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TRI

TRIGYNIA (from rpitf, three, and yvvij, a woman), in botany, an order of plants under various genera in the Linnaean system, compre- hending such species as have three pistils, or female parts. See BOTANY, Index.

TRIHILATvE (from tres, three, and hilum, an external mark on the seed), the twenty-third class in Linnaeus's Fragments of a natural me- thod, consisting of plants with three seeds, which are marked with an external cicatrix or scar, where they are fastened within the fruit. See BOTANY, Index.

TRILL, n.t., v. a., & v. n. Ital. trillo. Qua- ver ; tremulousness of ruusick : to utter qua- vering : to trickle.

Did your letters pierce the queen to any demon- stration of grief 1

— Aye ! she took 'em ; read 'em in my presence ; And now and then an ample tear trilled down Her delicate cheek. Shakspeare. King Lear.

Am I called upon the grave debate, To judge of trilling notes and tripping feet ?

Dry den.

Long has a race of heroes filled the stage, That rant by note, and through the gamut rage ; In songs and airs express their martial fire, Combat in trills, and in a fugue expire. Addison.

Through the soft silence of the listning night, The sober-suited songstress trills her lay. Thomson.

TRILLIUM, in botany, herb Paris jf Ame rica, or herb true-love of Canada, a genus of plants belonging to the class of hexandria, and in the order of trigynia, and, in the natural me- thod, ranking in the eleventh order Sarmentosae. It has a three-leaved spreading empalement, and three oval petals ; it has six awl-shaped stamina, terminated by oblong summits, and a roundish germen, with three recurved styles, crowned by male stigmata ; the germen becomes a roundish berry, with three cells, filled with roundish seeds. There are three species, all natives of America ; one of them is called three-leaved nightshade.

TRIM, adj., v. a. v. n. & n. s.ˆ Saxon je-

TRIM'LY, ado.

TRIM'MER, n. s.

TRIM'MING.

dressed up. Used in modern times with slight contempt : the adverb corresponding with the adjective : as a verb active to deck or fit out ; shave;

clip; adjust; balance: as a verb neuter to balance; fluctuate between two parties : a trimmer is one who so fluctuates ; a turncoat ; also a piece of wood inserted : trimming is an appendage to dress.

Mephibosheth had neither dressed his feet, nor trimmed his beard. 2 Sam. xix. 24.

The mother, if of the household of our lady, will have her son cunning and bold, in making him to live trimly. Atcham.

If one paine in cottage doth take, When t' other (rim bowers do make.

Taster's Husbandry. Her yellow golden hair Was trimly woven, and in tresses wrought.

Speiiter.

Our youth got me to play the woman's part, And I was trimmed in Julia's gown. Shakspeare.

A trim exploit, a manly enterprize, To conjure tears up in a poor maid's eyes With yorr derision.

Id. Midsummer Night't Dream.

IVCU Ul^lUMKlUt-1.

s.\ Saxon j& (tpymmefc, ^ completed. J Nice ; smug;

I found ner trimming up the diadem On her dead mistress. Id. Antony and Cleopatnt.

They come like sacrifices in their trim, And to the fire-eyed maid of smoaky war, All hot, and bleeding, will we offer them.

Shaktpeare.

Pennyroyal and orpin they use in the country to trim their houses, binding it with a lath against a wall. Bacon.

Yet are the men more loose than they ! More kembed, and bathed, and rubbed, and trimm«4. More sleek, more soft, and slacker limbed.

Ben Joruon.

Two arts attend architecture, like her principal gentlewomen, to dress and trim her, picture and sculpture. Wotton.

The Dorick order has, in comparison of those that follow, a more masculine aspect, and little trimmer than the Tuscan that went before, save a sober gar- nishment now and then of lion's heads in the cor- nice, and of tryglyphs and metopes always in the frize. Id. Architect.

The barber may trim religion as he pleases.

Howtl.

Clip and trim those tender strings like a beard.

Browne.

Dost thou not blush to live so like a beast, So trim, so dissolute, so loosely drest ?

])ryden's Persius.

He who would hear what every fool could say, Would never fix his thought, but trim his time away.

Dniden.

The same bat taken after by a weazel begged for mercy : No, says the weazel, no mercy to a mouse : Well, says t'other, but you may see by my wing that I am a bird ; and so the bat 'scaped in both by olayitg the trimmer. L' Estrange.*

/Vim off the small superfluous branches.

JUortimer.

Before they pin up the frame of ground-plates, they must fit in the summer and the girders, and all the joists and the trimmers for the stair-case.

Moxons Mechanical Exercises.

If such by trimming and time-serving, which are but two words for the same thing, betray the church by nauseating her pious orders, this will produce confusion. South.

Judgment without vivacity of imagination is too heavy, and like a dress without fancy ; and the last without the first is too gay, and but all trimming.

Garth't Preface to Ovid.

Sir Roger put his coachman to trim the boat.

S i ice tutor.

To blast the living, gave the dead their due, And wreaths herself had tainted, trimmed anew.

Tickel.

Eacn muse in Leo's golden days Starts from hei trance, and trim her withered bays.*

Pope.

To confound his hated coin, All parties and religions join, Whigs, tories, trimmers. Swift.

O'er globes, and sceptres, now, on thrones it swells, Now, trim the midnight lamp in college cells.*

Ymtng.

TRIMMER (Sarah), a modern literary lady, was the daughter of Mr. Joshua Kirby, who held the situation of clerk of the works at Kew Palace, and was himself a draughtsman and instructor to some of the then younger branches of the royal family. This daughter was born about the com- mencement of 1741 at Ipswich, and was early initiated in classical as well as English literature. She married Mr. Trimmer in the year 1762

by whom she had twelve children. She was dis- tinguished through life as an active and benevo- lent instructress of youth, for whose use she pro- duced a variety of ingenious tracts, several of which have been adopted by the Society for Pro- moting Christian Knowledge. Her death took place in the winter of 1810.

TRINACRIA, TRIXACRIS, ancient names of Sicily from its triangular form.

TRI'NAL, adj. I^t. trinus. Threefold.

Like many an angel's voice, Singing before the eternal Majesty, In their trinal triplicity on high.

That far-beaming blaze of majesty, Wherewith he wont at heavea's high

council table To sit the midst of trinal unity, He laid aside. 3Iillm.

TRINCOMALEE, a town, fortress, and fine harbour of Ceylon, situated on the north-east side of the island. The town is of greater extent than Columbo, but contains less population and fewer houses. The fort is strong and commands the principal bays, particularly the entrance to the harbour. It has also a citadel called Fort Osten- burgh erected on a cliff which projects into the sea, and which cannot be attacked till after the capture of the lower fort. Within the bay the shores are so bold, and the waters so deep, that vessels may moor alongside; but unfortunately the tides do not rise sufficiently high to admit of wet docks, and the men of war are obliged to take out all their guns, 8cc., in order to careen. The great expectations that were formed of this place by the British government have, however, not been realised : for although the naval de- partment, stores, 8cc., have been transferred thi- ther from Madras, owing to the barren and un- productive nature of the surrounding territory, but few inhabitants have been collected, and pro- visions are scarce. The first Europeans who possessed themselves of this place were the Por- tuguese. It was taken from them by the Dutch, with whom it remained till the year 1782, when it was captured by the British ; but, a very ina- dequate garrison having been left to defend it, it was taken with ease by the French admiral Suf- frein, who restored it to the Dutch. In the year 1795 it was again taken by the British, after a sie.e of three weeks ; and has ever since remained in our possession. Long. 81° 23′ E., lat. 8° 31′ N.

TRINE, n. s. & v. a. Yr. trine; Lat. trinus. An aspect of planets placed in three angles of a trigon, in which they are supposed by astrologers to be eminently benign : to put in a trine aspect.

To the other five,

Their planetary motions, and aspects. In sextile, square, and trine and opposite, Of noxious efficacy. Hilton s Paradise Lott.

This advantage age from youth has won. As not to be outridden, though outrun ; By fortune he has now to Venus trined, And with stern Mars in Capricorn was joined.

Dryden.

From Aries right-ways draw a line, to end In the same round, and let that line subtend An equal triangle ; now since the lines Must thiee times touch the round, and meet three

signs, Where'er they meet in angles those are trine.*

Creech.

TRING, a market-town in Dacorum hundred, Herts, on the border of Bucks, near the Braun- ston canal, four miles from Wendover, and thirty-one and a half from London. This is an exceed- ingly neat town, and contains many handsome buildings. The church is a Gothic structure, with a square tower; the chancel contains many handsome and ancient monuments. Here is a charity-school for teaching and clothing twenty boys. At a village called Little Tring, in this parish, rises one of the heads of the Thames. The Roman road which passes here, called the Ickneld way, is extremely bad during the winter season. Market on Friday is well supplied with corn. Fairs June 25th and September 29th. It is a curacy, united with Long Marston. in the patronage of Christ Church College, Oxford.

TRINGA, the sandpaper, a genus of birds be- longing to the order of grallse. The bill is some- what tapering, and of the length of the head ; the nostrils are small ; the toes four, divided, the hind toe being frequently raised from the ground. According to Dr. Latham there are forty-five species, of which eighteen are British.

TRINIDAD, an island of the Atlantic oppo- site the coast of Cumana, from which it is sepa- rated by the gulf of Paria, which varies in its breadth, being on an average about seventy-five miles. At its southern and northern extremities, however, Trinidad approaches to within ten or eleven miles of America. The island is of an irregular square form, having two points stretch- ing to the west from its north and south corners. According to the latest surveys its longest lines are from Cape Galera on the north-east to Point Ycaque, or Icacque, on the south-west, seventy- nine miles, and from CapeGaleota on the south- east to Cape Blanca on the north, fifty-six miles.

Trinidad is the most fertile and beautiful of all the Leeward islands, abounding in the finest woods, of large dimensions, fit for ship-building as well as ornamental purposes. The red cedar is found in all parts. Many trees brought from India and Otaheite also flourish here. Cinnamon is becoming abundant, and is already sold in the markets, and the clove is found to thrive. Its sugar is excellent, and there is more land applic- able for its culture in Trinidad we are told than in Jamaica. But cocoa, from not being subject to the demand of great capitals, bids fair to be the principal staple. The greatest part of the island is excellently adapted for this tree; and it has been found that it will bear its fruit, or pod, much sooner than generally was believed. Na- ture has furnished for it a tree called the bois immortelle, or, by the Spaniards, la madre del cacao, in English, mother of the cocoa. It is planted at equal distances amongst the cocoa, and in the driest weather collects the dews, moistens, shades, and nourishes it. The cocoa once bearing continues to do so for many years. Coffee is excellent

in its quality, bat only plant- ed on small properties, and does not add much to the revenue. The indigo is equal to the Gua- timala, from which probably it was originally brought. Tobacco also grows here, and is of a su perior quality ; and the grape-vines which have been brought from the south of France, or from

Spain, equal m flavor their parent stocks. In many quarters of the island quarries of lime- stone, resembling, in some degree, marble, abound. Bricks and articles of pottery are likewise burnt. Of late tanneries have been established, and a substitute for hemp in making white rope has been discovered, and proved of use to the plant- ers. On extensive wild savannahs quantities of cattle, horses, and mules, are fed in common, but might be extended to exportation, and the woods abound with game. Trinidad is situated out of the parallel rf hurricanes, which have never as yet shifted so far to the south ; although, on the 12th of August, 1810, a very violent in- dication happened ; it luckily lasted only a few hours, blowing only from the south-west. Shocks of earthquakes have been felt, but very slight, and not of such consequence as to cause alarm.

Dr. Nugent, in the Geological Transactions, has thus described the great natural curiosity of this island, the pitch lake : —

‘ \e ascended the hill, which was entirely composed of this rock, to the plantation, where we procured a negro guide, who conducted us through a wood about three-quarters of a mile. We now perceived a strong sulphureous and pitchy smell, like that of burning coal, and soon after had a view of the lake, which at first sight ap- peared to be an expanse of still water, frequently interrupted by clumps of dwarf trees or islets of rushes and shrubs ; but, on a nearer approach, we found it to be in reality an extensive plain of mineral pitch, with frequent crevices and chasms filled with water. The singularity of the scene was altogether so great, that it was some time before I could recover from my surprise so as to investigate it minutely. The surface of the lake is of the color of ashes, and at this season was not polished or smooth so as to be slippery; the hardness or consistence was such as to bear any weight; and it was not adhesive, though it par- tially received the impression of the foot ; it bore us without any tremulous motion whatever, and several head of cattle were browsing on it in per- fect security. In the dry season, however, the surface is much more yielding, and must be in a state approaching to fluidity, as is shown by pieces of recent wood and other substances being enveloped in it. Even large branches of trees, whicli were a foot above the level, had in some way

become enveloped in the bituminous matter. The inslertices or chasms are very numerous, ramifying and joining in every direction ; and in the wet season, being filled with water, present the only obstacle to walking over the surface. These cavities are generally deep in proportion to their width, some being only a few inches in depth, others several feet, and many almost un- fathomable : the water in them is good and un- contaminated by the pitch ; the people of the neighbourhood derive their supply from this source, and refresh themselves by bathing in it ; fish are caught in it, and particularly a very good species of mullet. The arrangement of the chasms is very singular ; the sides, which of course are formed of the pitch, are invariably shelving from the surface, so ad nearly to meet at the bottom, but then they bulge out towards each other with a considerable degree of con-

vexity. This may be supposed to arise from th. tendency in the pitch slowly to coalesce when- ever softened by the intensity of the sun's rays. These crevices are known occasionally to close up entirely, and we saw many marks or seams from this cause. How these crevices originate it may not be so easy to explain. One of our party suggested that the whole mass of pitch might be supported by the water which made its way through accidental rents ; but in the solid state it is of greater specific gravity than water, for several bits thrown into one of the pools im- mediately sank. The lake (I call it so because I think the common name appropriate enough) contains many islets covered with long grass and shrubs, which are the haunts of birds of the most exquisite plumage, as the pools are of snipe and plover. Alligators are also said to abound here ; but it was not our lot to encounter any of these animals. It is not easy to state precisely the ex- tent of this great collection of pitch ; the line between it and the neighbouring soil is not al- ways well defined, and indeed it appears to form the substratum of the surrounding tract of land. We may say, however, that it is bounded on the nortli and west sides by the sea, on the south by the rocky eminence of porcelain jasper before mentioned, and on the east by the usual argilla- ceous soil of the country ; the main body may perhaps be estimated at three miles in circum- ference ; the depth cannot be ascertained, and no subjacent rock or soil can be discovered. Where the bitumen is slightly covered by soil there are plantations of cassava, plantains, and pine-apples, the last of which grow with luxuriance and ;it- tain to great perfection. There are three or four French and one English sugar estates in the im- mediate neighbourhood : our opinion of the soil did not, however, coincide with that of Mr. An- derson, who, in the account he gave some years ago, thought it very fertile.*

' It is worthy of remark that the main body of the pitch, which may properly be called the lake, is situated higher than the adjoining land, and that you descend by a gentle slope to the sea, where the pitch is much

contaminated by the sand of the beach. During the dry season, as 1 have before remarked, this pitch is much soft- ened, so that different bodies have been known slowly to sink into it. If a quantity be cut out, the cavity left will be shortly filled up ; and I have heard it related that when the Spaniards under- took formerly to prepare the pitch for economi- cal purposes, and had imprudently' erected their cauldrons on the very lake, they completely xank in the course of a night so as to defeat their in- tentions. Numberless proofs are given of its being at times in this softened state : the negro houses of the vicinage, for instance, built by driving posts in the earth, frequently are twisted or sunk on one side. In many places it seems to have actually overflown like lava, and presents the wrinkled appearance which a sluggish sub- stance would exhibit in motion.'

Afterwards he says — ' I was at Antigua in 1809, wlu'M ;i transport arrived laden with this piich for the use of the dock-yard at English Harbour: it had evidently been hastily collected with little c;ire or zeal from the beach, and was

of course much contaminated with sand and other foreign substances. The best way would probably be to have it properly prepared on the spot, and brought to the state in which it may be serviceable, previously to its exportation. I have frequently seen it used to pay the bottoms of small vessels, for which it is particularly well adapted, as it preserves them from the numerous tribes of worms so abundant in tropical countries. There seems indeed no reason why it should not, when duly prepared and attenuated, be applica- ble to all the purposes of the petroleum of Zante, a well-known article of commerce in the Adriatic, or that of the district in Burmah, where 400,000 hogsheads are said to be collected annually.'

The north side of the island is a ridge of hilly mountains, which end at Toco, or Point Galera, and seem formerly to have been a continuation of the Parian mountains. From the ridges or summits of these hills abundance of the finest and clearest streams issue on both sides, and •contribute on the south side to form the river Caroni, which is considerable, and can be navi- gated by flats and canoes some distance into the interior of the island. Another ridge of hills commences at L'Ebranche on the east side, and runs in a south-west course, called the Monserrat Hills ; the rivers or streams from which are dis- tinguished by a yellow clayish color. A canal has been traced by order of government by lieu- tenant-colonel Rutherford, then surveyor-general, from the mouth of the Caroni to L'Ebranche, across the island, and passing through the valley which lies between these two ridges,

which, if ever completed, must produce incalculable ad- vantages to the colony. The mornings and even- ings in Trinidad are delightful, and the nights invariably cool and refreshing. Upon the whole the island is undoubtedly fully as healthy as any part of the new world. The climate is less moist than that of Guiana, and not so dry as that of Cumana. The winter or rainy season begins there in June and ends in October, as in all the islands of the Carribean Sea. But there is very little rain, sometimes none, in June, though the return of the heat is invariable from the end of May. With November begins the delightful season ; it is then that the east and north-easterly winds blow ; those currents of air come from the cold regions of North America, probably because the laws of equilibrium require that the cold and dense air of the north should fill the place left for it by the dilatation of the hot and light air of the tropics. During this spring the thermometer is usually, in the day time, at 80° Fahrenheit, and during the night it falls to 60°, and sometimes even to 50° in tolerably elevated spots.

Trinidad, discovered by Columbus on the 3lst of July, 1498, was not, however, taken possession of by the Spaniards till the year 1588, when their establishment was preceded by the almost total destruction of the Indians. Most of those who escaped found a slower and more horrible fate in the works of the mines. Some, however, owed their lives to the paternal and courage- ous care of the apostle of the new world, the virtuous Las Casas. The labors of the Indians Mion fertilised the land for the benefit of their conquerors, and some negroes were afterwards

taken there and united in the work of the natives. Sir Walter Raleigh, who visited Trinidad in 1593, relates that the inhabitants then cultivated excellent tobacco and the sugar cane. The Spa- niards assured him that the rivers were full of gold dust. The full importance of this colony, however, was not discovered till 1783, when an edict was issued permitting all foreigners pro- fessing the Roman Catholic religion to establish themselves in this colony. It protected, at the same time, for a period of five years, all new in- habitants from debts contracted in the countries they had quitted. In consequence crowds of new colonists crowded from Europe, and from the British and French possessions. The inha- bitants increased so rapidly, that, though in 1783 the whole amounted only to 2763, they were es- timated six years afterwards at

2,151 whites 4,467 people of color 10,100 negroes 2,200 Indians

Total 18,918

This soon changed the face of the island ; and where a short time before only some miserable huts of fishermen covered with palm leaves were seen, there arose, in the short space of four years, a town regularly built, which,

by the size and convenience of its port, and the industry of its inhabitants, became one of the most commercial in the new world, justly meriting the name of Port Spain from the mother country. On the other hand the disturbances which broke out in the French colonies at the beginning of the revolu- tion, and the violence of various parties, alter- nately conquerors and conquered, brought a great number of proprietors from Martinico, Guada- loupe, and St. Lucia, to this island, as also many of the ancient French inhabitants of Grenada and Tobago ; and the governor of the island, don Josef Chacon, took a wise advantage of these events. He received with equal attention all those who brought thither their industry and their capital, without troubling himself about their opinions , and by this conduct soon carried the prosperity of the colony to the highest pitch. In 1797 it capitulated to a British force under the command of sir Ralph Abercrombie. From this period till the peace of Amiens in 1802 the population in- creased from 18,918 to 24,239 inhabitants; the produce of sugar had also greatly increased, be- ing almost doubled. In 1783 the tonnage of the vessels employed in the commerce of Trinidad was only 150 tons; in 1802 sixty vessels were employed whose tonnage amounted to 60,000 tons. The emigration which took place from St. Domingo and the British colonies to Trini- dad, after the peace of Amiens, had increased its population in 1807 to 31,000, of which 21,000 were slaves. Trinidad has since this period re- mained in the hands of the British. The north- east point of the island is in long. 60° 55′ 25′ W.. lat. 10° 51′ N.

TRIXIDAD, a city of the island of Cuba, situate on the south side of the island and on the shore of a river of the same name, with a celebrated port. Its natives, who are much given to sea-

faring, are good mariners. The English pillaged it in 1704; and a severe hurricane was felt here on the 14th of October, 1812 : the houses which had fallen, and were reduced to a tottering con- dition, amounted to 500. In the country some breeding pens had lost upwards of 500 head of cattle ; many of the vessels which were at anchor in the harbour of Casilda were driven on shore and others sunk. This city lies in long. 80° 6″ \V.. lat. 21° 42′ N.

TRINITARIANS, ORDER OF, an order insti- tuted at Rome, A. D. 1198. The founders were John de Mathaand Felix de Valois. The pope per- mitted them to establish this order for the deli' yerance of captives who groaned under the tyranny of the infidels : he gave them as a habit a white _ro\vn ornamented with a red and blue cross. This order possessed at one time about 250 con- vents in thirteen different provinces. There was formerly the province of England, where this order had forty-three houses ; that of

Scotland, where it had nine ; and that of Ireland, where it had fifty-two.

*TRIN'ITY, n. *. Fr. triniti; Lat. trinitas. The ineffable union of the Three Persons in the Godhead. See THEOLOGY.*

Touching the picture of the Trinity, I hold it blasphemous and utterly unlawful. Peacham.

In my whole essay there is not any thing like an objection against the Trinity. Locke.

TRINITY SUNDAY, a festival observed on the Sunday next after Whisunday in honor of the holy Trinity. The observation of this festival was first enjoined in the council of Aries, A. D.

1260.

TRINITY, or TRINIDADO, a river of Mexico, which takes its rise in Louisiana, in long. 99° W., lat. 34° N., enters the province of San Luis Potosi, and discharges itself into Galvestan's Bay, in lat. 29° 30′ N. It has a meandering course of 350 miles in length.

TRINITY, or LA TRINITE, a sea-port town of the island of Martinico. The harbour is formed on the southeast side by the Point Caravelle, which is two leagues in length ; and on the other side by a very high hill, about 350 or 400 paces in length, which only joins to the mainland by an isthmus not above 200 feet broad. The east side, opposite to the bottom of this bay, is •topped up by a chain of rocks, which appear Ifcvel with the water when the ebb tide is spent. The town here is a thriving place.

TRIN'KET, n. t. This Skinner derives from Fr. trinquet; Ital. trinchetto, a topsail. Dr. Johnson imagines it to be corrupted from tiicket, some petty finery or decoration. Toys ; ornaments of dress ; superfluities of decoration.

What husbandlie husbands, except they be fooles, But handsom have storehouse for trinkets and tooles ?

Tuuer.

Beauty and use can so well agree together, that of all the trinkets wherewith they are attired, there is not one but serves to some necessary purpose.

Sidney.

They throng who should buy first, as if my trinkets, had been hallowed.

Shaktpeare. Winter' Tale.*

Let her but have three wrinkles in her face, Soon will you hear the saucy steward say, t'ack up with all your trinkets and away.

Go with all your servants and trinkets about you.

L' Estrange.

She was not hung about with toys and trinkets, tweezer-cases, pocket-glasses. Arbvihnot.

How Johnny wheedled, threatened, fawned, Pill Phyllis all her trinkets pawned. &'{/<•*

TRIOFOLAR, adj. Lat. triobolaris. Vile ; mean; worthless.

Turn your libel into verse, and then it may pass current amongst the balladmongers for a triobclar ballad. Cheyne.

TRINOMALEE, a town and fortress of the Camatic. During the wars of the last century this place was often taken and retaken by the contending parties. In its vicinity the British defeated, in the year 1 767, the combined armies of the Nizam and Hyder Aly. It is situated on a mountain, and contains a celebrated Hindoo temple. Long. 79° 10′ E., lat. 12° 16′ N.

TRIOCALA, or TRIOCLA, an ancient town iu the south of Sicily.— Sil. Ital. 14. v. 271.

TRICECIA, in botany, the third order of plant; in the class polygamia, comprehending those sin- gular plants which have the polygamy on three distinct plants. It contains two genera, the ficus and ceratonia.

TRIONES, in astronomy, a sort of constel- lation or assemblage of seven stars in the Ursa Major, popularly called Charles's Wain. From the septera triones the north pole takes the denomination septentrio.

TRIOFTERIS, in botany, a genus of plant belonging to the class decandria, and the order trigynia, ranking in the natural method in the twenty-third order trihilata?.*

TRIOSTEUM, fever-root, or false ipecacuana, a genus of plants belonging to the class of pen- tandria and the order of monogynia, ranking in the natural method under the forty-eighth order, aggregate.

TRIP,T.o.,».»i.,&n. ».} Fr. treper ; Belg

TRIP'PING, adj. &. n. t. ftrippen; Span, trt-

TRIP'PIXGLY, adv. jpar. To supplant; throw by striking the feet from the ground by a sudden motion ; strike from under the body ; catch ; detect : to fall by losing foot-hold ; fail ; stumble ; run lightly : a stroke ; catch ; stumble ; failure ; short journey : tripping, adjective, light ; agile ; nimble : as a noun substantive, light dance : the adverb corresponding.

Saint Jerome, who pardons not over-easily his ad- versaries, if any where they chance to trip, presseth him as thereby making all sorts of men God's ene- mies. Hooker.

Speak the speech trippingly on the tongue : but if you mouth it, as many of our players do, I had as lieve the town-crier had spoke my lines.

Shaksptare. Hamlet. He conjunct Tripped me behind. Shakspeare.

Be you contented,

To have a son set your decrees at nougnt, To trip the course of law, and blunt the sword That guards the peace and safely of your person. Id.

O thou dissembling cub ! what wilt thou be When time hath sowed a grizzle on thy cafe'? Or will not else thy craft so quickly grow, That thine own (rip shall be thine overthrow?

Id.

*He throws his arm, and with a long-drawn dash Blends all together ; then distinctly (rip**

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From this to that ; then quick returning skips, And snatches this again, and pauses there.

Crasfiaw.

The words of Hobbes's defence trip up the heels of his cause ; I had once resolved. To resolve presup- poseth deliberation, but what deliberation can there be of that which is inevitably determined by causes without ourselves

? Brumhall.

Back, shepherds, back, enough your play,

Here be without duck or nod,

Other trippings to be trod,

Of lighter toes. Milton.

On old Lycaeus, or Cyllene hoar,

Trip no more in twilight ranks ; Though Erymanth your loss deplore,

A better soil shall give ye thanks. Id. Arcades.

Virgil is so exact in every word that none can be changed but for a worse : he pretends sometimes to trip, but it is to make you think him in danger when most secure. Dryden.

Stay, nymph, he cried, I follow not a foe ; Thus from the lion trips the trembling doe. Id.

Well thou dost to hide from common sight Thy close intrigues, too bad to bear the light :

Nor doubt I but the silver-footed dame Tripping from sea on such an errand came. Id.

I may have the idea of a man's drinking till his longue trips, yet not know that it is called drunken- ness. Locke.

Many, having used their utmost diligence to secure a retention of the things committed to the memory, cannot certainly know where it will trip and fail them. South.

Will shines in mixed company, making his real ignorance appear a seeming one : our club has caught him tripping, at which times they never spare him. Addison's Spectator.

It was a noble time when trips and Cornish hugs could make a man immortal. Id. on Medals.

In Britain's isles, as Heylin notes, The ladies trip in petticoats. Prior.

I took a trip to London on the death of the queen.

Pope.

Each seeming trip, and each digressive start, Displays their case the more, and deep-planned art.

Harte.

TRIP'ARTITE, adj. Fr. tripartite ; Lat. tri- partitm. Divided into three parts; having three corresponding copies; relating to three parties.

Our indentures tripartite are drawn.

Shakspeare. Henry IV.

TRIPE, n.s. Fr. tripe ; Ital. and Span, trip- pa. The intestines ; the guts.

How say you to a fat tripe finely broiled ? • — 1 like it well. Shakspeare.

In private draw your poultry, clean your tripe.

King.

TRIPELA, in mineralogy, a peculiar species of Tripoli, found by Homberg most proper for making moulds for pastes.

TRIPETALOIDETE, in botany, the fifth order of plants, in Linnaeus's system of a natural method. See BOTANY, Index.

TRIPLARIS, in botany, a genus of plants belonging to the class of triandria and in the order of monogynia.

TRIFLE, adj. & v. a.\ Fr. triple ; Lat. tr i

TRIP'LET, n. s. I plex, triplus. Three-

TRIP'LICATE, adj. Vfold; consisting of

TRIPLJCA'TION, n. s. i three conjoined: to

TRIPLIC'ITY. ./ treble : triplet is three

of a kind ; three verses rhyming together : tripli- cate, made thrice as much : triplication, the act of

tripling : iriplicity, trebleness ; state of being threefold.

To what purpose should words serve, when nature hath more to declare than groans and strong cries ; more than streams of bloody sweat ; more

than his doubled and tripled prayers can express. Hooker

See in him

The triple pillar of the world transformed Into a strumpet's stool.

Shakspeare. Antony and Cleopatra. It was a dangerous triplicity to a monarchy, to have the arms of a foreigner, the discontents of sub- jects, and the title of a pretender, to meet.

Bacon's Henry VII. O night and shades,

How are ye joined with bell in triple knot. Against the' unarmed weakness of one virgin, Alone and helpless ! Milton.

Since the margin of the visible horizon in the heavenly globe is parallel with that of the earthly, accounted but one hundred and twenty miles diame- ter ; sense must needs measure the azimuths, or ver- tical circles, by triplication of the same diameter 01 one hundred and twenty. Glanville.

Thrice happy pair! so near allied

In royal blood and virtue too : Now love has you together tied.

May none this triple knot undo ! Waller.

I frequently make use of triplet rhymes, because they bound the sense, making the last verse of the triplet a pindarick. Dryden.

All the parts, in height, length, and breadth, bear a duplicate or triplicate proportion one to another.

Grew.

We have taken this as a moderate measure betwixt the highest and lowest; but, if we had taken only a triple proportion, it would have been sufficient.

J'.wnst.

Triplicate ratio, in geometry, is the ratio of cubes to each other ; which ought to be distinguished from tripple. Harrit.

If these halfpence should gain admittance, in no long space of time his limited quantity would be tripled upon us. Swift.

Out bounced the mastiff of the triple head ; Away the hare with double swiftness fled. Id.

Affect not duplicities nor triplicities, nor any cer- tain number of parts in your division of things.

Watts't Logick.

TRIP'MADAM, n. s. An herb.

Tripmadam is used in salads.

Mortimer's Husbandry.

TRI'POD, n. s. Lat. tripus. A seat with three feet, such as that from which the priestess of Apollo delivered oracles.

Two tripods cast in antick mould, With two great talents of the finest gold.

Dryden't JEneiu.

The TRIPOD, in antiquity, was a famed sacred seat or stool, supported by three feet, whereon the priests and sybils were placed to render ora- cles. It was on the tripod that the gods were said to inspire the Pythia with that divine fury •and enthusiasm wherewith she was seized at the delivery of her predictions.

M.Spanheim observes, that on Roman medals the tripod expresses some priesthood, or sacer- dotal dignity. A tripod, with a raven and a dolphin, is also the symbol of the duumvirv, de- puted for keeping of the sybilline oracles, and for consulting them on occasion.

TRIPOLI, tlie most easterly of the Barbary states on the northern coast of Africa, consists chiefly of a line of coast extending about 800 miles in length, or from Cape Razatin in 11° 38′ E long, to Port Bomba in 32° 20′ E. long. Its interior boundaries are, on the east the desert of Barca, on the south Fezzan, on the west Tunis and part of the Bled el Jereede, or country of dates. For a few miles inland this country is almost through- out of exuberant fertility ; beyond this limit, the productive qualities of the soil entirely disappear, and the interior is occupied either with deserts of sand, or with the mountainous districts of Garian and Mesulata. The Tripolitan territory includes the country colonised by the Greeks and celebrated by them under the name of Cy- rene. In the great bay, called now the Gulf of Sidra, are the quicksands so dreaded by the an- cients, under the appellation of Syrtes. From this point the Greeks derived their knowledge of

the African desert, and its savage inhabitants, called then the Nasamones and Lotophagi. Cy- rcne formed the eastern boundary of the Cartha- ginian dominion, and, under the last Ptolemy, surnamed Apion, was converted into a Roman province. It was early subjected to the power of the Saracens, and shared the vicissitudes of their dynasties on the Barbary coast: in the reign of Charles V. it was occupied for a short time by the knights of Malta, who, however were driven out by Sinan Bashaw, the lieutenant of Solyman, and Dragut Rais, the celebrated corsair. It continued under the dependence of the Ottoman Porte, and was governed by Tuiks till 1713, when Hamet Bashaw, a native of Ca ramania, disowned the sultan's authority, and erected Tripoli into an independent state. Of late a remarkable revolution has taken place, in consequence of the sovereign reposing his con- fidence in negro troops. Through their means Yussuf Pacha raised himself, through the murder of his brother, to the supreme power, which he stained with every species of crime, and gave to the administration a barbarous character, which it had not before exhibited. Yet he has stu- diously cultivated the alliance of Britain, and has afforded to its subjects ample opportunities of exploring the interior.

The tract along the coast produces every ar- ticle peculiar to the finest tropical climates. The exportation of corn micjht be considerable, did not the Tripoline government follow the absurd policy of prohibiting it unless by the bashaw, merely for his own profit. The same law ap- plies to horses and mules, the breed of which is cultivated with great care. Bullocks, sheep, and poultry, are reared in immense quantities ; and, animal food being little consumed, afford a con- siderable object of exportation. The beef is small, but very good; the mutton inferior; but the lamb exquisite. The date tree forms the staple of the interior and sandy tracts. In the same districts is found the lotus. A consider- able quantity of raw silk was formerly exported; but its cultivation has latterly been neglected. The cassob, unknown in Europe, yields iu Tri- poli a nutritious flour, which forms an important part of the popular diet.

The basis of the population consists of a mixed

race of Moors, Arabs, and Turks, who seldom exceed the middle size. The Moors have a fair complexion ; while that of the Arabs is dark and sallow. They are all remarkable for regular and athletic forms; and a cripple or deformed person is scarcely to be seen. They chiefly inhabit the towns ; or carry on cultivation in the immediate vicinity. Jews, renegadoes, and negroes, are also numerous. Some remains are still found of an extraordinary race, called by the ancients the Psylli, to whom was ascribed the power of curing the bites of serpents, and other extraordinary attributes. They are seen in the towns, rushing into the street in a state of apparent frenzy, half naked and foaming at the mouth ; and revered by the

natives as saints. Captain Lyon found by experience that their feats, in taking up ser- pents uninjured, could be imitated without much difficulty. In the mountains of Garian there is a race of Arabs, who, according to a custom there prevalent from remote antiquity, live in caves under ground. A populous mountain might be passed over by the traveller without suspecting that it contained a single inhabitant.

Along the whole coast, and in many parts of the interior, are found fine specimens of classic architecture. The spots most remarkable in this respect that have been hitherto observed are Pto- lometa (formerly Ptolemais), and still more Lebi- da,theLeptisMagnaofthe ancients. The remains of the latter are about three miles in length, and two in breadth, and consist of gateways, walls, on immense number of pillars, some of the very finest granite, and numerous inscribed marbles. Some specimens have been lately conveyed to this country.

TRIPOLI, a considerable city, capital of the foregoing territory, is built in a low situation on a neck of land projecting into the sea. It is of great extent, though, a large portion of the space enclosed within its walls being unoccupied, the population does not exceed 25,000. The caravanseras, mosques, houses of the foreign consuls, and of the higher ranks of the natives, are mostly of stone, and regularly whitewashed twice a-year. The lower kind of houses are of earth, small stones, and mortar; the height never exceeds one story ; aud they are built in a square form, with acourt in the centre. The roofs, being flat, serve as an agreeable promenade, and as a receptacle for the rain water, which is conveyed by pipes to cisterns below. The better sort of houses are two stories high. With the exception of those belonging to the foreign consuls, they have no windows to the street. The bazaars or market places, which occupy a considerable portion of the city, are kept in excellent order. There is one very elegant mosque : the public baths, of which there are only two, and the cara- vanseras, are also very spacious and convenient. The chief monument of antiquity is a superb triumphal arch, built of fine marble, ornamented with several bas reliefs, inscriptions, &c., and erected in the reign of Pius Antoninus. The Greater part of this beautiful monument is buried in the earth, and the upper part is unfortunately mutilated. The police of the town is excellent : a number of people arc also kept for the express purpose of sweeping the town. The harbour

formed by a reef of rocks, running in an eastern direction from the northern extremity of the town, affords the greatest shelter during the

prevalence of a north-easterly gale, the only wind injurious to Tripoli. Though not very spacious, it is per- fectly safe throughout the year, and, besides merchant vessels, will admit small frigates, not drawing above eighteen feet. Tripoli is sur- rounded by a high wall, flanked by six bastions, and has two gates, one on the south, and the other on the east ; the batteries are mounted al- together with about fifty pieces of cannon. The castle is an irregular, extensive square pile : when viewed from the port, it has a very respect- able appearance. The ramparts are high, and well supplied with brass cannon. The Ameri- cans in 1804 were unable to make any impres- sion upon this place.

The western quarter of the town is inhabited by a greau number of Moorish families, who, excluded from all offices of honor and profit, devote themselves entirely to trade. No jewels or gold dust are purchased by the prince, how- ever, without some Jew having previously im- ported them. The providing of dress and other supplies for the harem is the province of Jew- esses. Others apply themselves to handicraft, and particularly the manufacture of gold and silver lace.

The bashaw is nominally the subject of the Porte, from which, at the entrance of his reign, he must receive confirmation ; but the authority of that power is in fact so little regarded that he does not hesitate to carry on a system of piracy against its vessels. The principal officers of state are the bey or generalissimo, which place is now rilled by the bashaw's eldest son ; the aga, who commands the Turkish troops, reduced at present to a very small number; the kaya, or grand judge ; the kadi, or religious judge ; the kaids, or governors of the provinces ; the first admiral and vice-admiral, the former of whom, now named Murat Rais, was originally a Scotsman of the name of Peter Lysle. The jealousy of the sovereign leads him to confer the offices of state almost exclusively upon foreigners and rene- gadoes, on whom, too, he usually bestows his daughters.

The trade of Tripoli is chiefly carried on with Malta, Tunis, and the Levant. The vessels em- ployed in it are mostly Maltese and Ottoman. The exports are wool of excellent quality; senna, and several other drugs, madder roots, barilla, hides, goat and sheep skins dressed, salt, sal na- tron, ostrich feathers, gold dust, ivory, gum, dried fruit and dates, lotus berries, cassob, saffron, bullocks, sheep, and poultry. The imports are doths of every quality and color, sugar, tea, coffee, spices of all sorts, woollen and Man- chester stuffs, damasks, silks of various colors and descriptions, gold and silver tissues, laces and threads, cochineal, indigo, iron, hardware of all kinds, small wines, spirits, capillaire, gun- powder, cannon, muskets, pistols, sword blades, naval stores of every description, planks and beams for building ships and houses; common looking-glasses, toys, cotton threads, and Tunisian caps. Tripoli is also the centre of a considerable

portion of that caravan trade which is characte-

ristic of Africa. Long. 13° 18′ E., lat. 32°54'N.

TRIPOLI, a sea-port of Syria, capital of a pa- chalic of the same name, is situated at the foot of Mount Lebanon, and along the edge of a small triangular plain, which extends between it and the sea, terminating in a flat promontory, on which is situated the place of anchorage. Here is a small town called La Marina, at which the vessels unlade their cargoes, and which forms the port of Tripoli. There is properly no harbour, but a mere road, defended against the action of the sea by lines of small islands, or rather shoals, called the Rabbit and Pigeon Islands. The an- chorage is by no means safe or convenient, and south and south-east winds are sometimes tem- pestuous and dangerous. Along the sea are the remains of six or seven square towers, by which it was formerly defended. The town itself is about three-quarters of a mile long, by 300 yards broad : it is traversed by the small river Kadisha. The only fortification consists of the citadel, si- tuated at the south side of the town, on the banks of the Kadisha. It is an old Saracen building, in a wretched state, and now wholly useless. The plain is entirely covered with trees, chiefly mulberry, planted in regular order, and serving for the production of silk. Between July and September, epidemic fevers constantly rage here ; and health itself resembles a state of convalescence. Tripoli enjoyed a considerable trade previous to tire late war, which seriously injured it. Silk is largely exported, both raw, and in the form of handkerchiefs manufactured in the place. Soap is also made for exportation. The pachalic contains a great part of the ancient Phoenicia, and consists of the declivity of Leba- non, with the plain interposed between it and the Mediterranean. It is in general well watered, and covered with rich verdure, exhibiting exten- sive groves of mulberry, orange, lemon, and other fruit trees. The mountainous districts, inhabited by the independent tribes of the Maro- nites and Ansarians, are better cultivated than the plains. For some time past, this pachalic has been generally included either under that of Acre, or that of Damascus. Long. 35° 44′ E., lat. 34° 26′ N.

TRIPOLI, in mineralogy. Color yellowish-gray. Massive. Fracture fine or coarse earthy. Opaque. Soft. Rather easily frangible. Meagre. Does not adhere to the tongue. Specific gravity 2-2. Infusible. Its constituents are, silica 81, alu- mina 1-5, oxide of iron 8, sulphuric acid 3-45, water 4-.j5. — Bucholz. Of the rottenstone, silica 4, alumina 86, carbon 10.— Phillips. It occurs in beds in coal-fields, with secondary limestone, and under basalt. It is found at Bakewell, in Derbyshire, where it is called rottenstone. It is used for polishing stones, metals, and glasses. The tripoli of Corfu is reckoned the most valuable.

TRIPOLIZZA, a town of Greece, in the Mo- rea, in a narrow valley, at the foot of Mount Me- nalus, twenty-two miles S. S. W. of Argos, and thirty N. N. VV. of the ruins of Sparta. It is said to ha ve been built of the remains of several towns, Megalopolis, Tegea, Mantinaea, and Pallantium, without, however, occupying the site of any of these places, which were at a considerable dis- tan-.i' from cadi other. See GREECE.

TRIP'OLY, n.s. From tripoli. A sharp cutting sand.

In polishing glass with putty, or tripoly, it is not to be imagined that those substances can by grating and fretting the glass bring all its least particles to an accurate polish. Newton.

TRI'POS, n. s. A tripod. See TRIPOD.

Welcome all that lead or follow, To the oracle of Apollo ; Here he speaks out of his pottle, Or the tripos, his tower bottle. Ben Jonson.

Crazed fool, who wouldst be thought an oracle, Come down from off the tripos, and speak plain.

Druden.

TRIPSACUM, in botany, a genus of plants belonging to the class monoacia and order of tri- andha ; and ranking, according to the natural system, in the fourth order, gramina. " TR1PTOTE, n.s. Lat. triptoton.

Triptote is a noun used but in three cases.

Clarke.

TRIPU'DIARY, adj. Lat. tripudium. Per- formed by dancing.

Claudius Pulchur underwent the like success when he continued the tripudiary augurations.

Browne's Vulgar Erroun.

TRIQUETROUS, among botanists, expresses a fruit or leaf that has three sides or faces all flat.

TRISECTION is a term chiefly used in geo- metry for the division of an angle into three equal parts. The trisection of an angle, geome- trically, is one of those great problems whose solution has been so much sought for by mathe- maticians for 2000 years past; being, in this respect, on a footing with the famous quadrature of the circle and the duplicature of the cube.

TRISSINO (John George), an Italian poet born at Vicenzo in 1478. His tragedy of So- phinisba was acted at Rome by order of pope Leo, and received great applause. His chief vrork is a poem on Italy Delivered from the (Joths. He died in 1550. His works were printed at Verona in 2 vols. folio, 1729.

TRISTAN D'ACUNHA, the largest of three islands in the South Atlantic Ocean, about 1500 miles from any land either to the west or north, very lofty, and about fifteen miles in circumfer- ence. It has been described by sir Erasmus (iower, and the author of the Authentic Ac- count of the Embassy of China, as rising per- pendicularly from the sea towards the north to a height apparently of 1000 feet or more. A level then commences, forming what among sea- men is termed table land, and extending towards the centre of the island ; whence a conical moun- tain rises, not unlike in appearance to the Peak of Teneriffe, as seen from the bay of Santa Cruz. When circumstances require particular despatch, it is practicable to come from England to Tristan tl'Aciinha without stopping in the way, and afterwards to the end of the voyage to India or China, these islands are situated in that part of the southern hemisphere in the neighbourhood of which, a continent, to balance the quantity of land in the northern hemisphere, was once ex- pected to be found ; but where it has since been discovered that there is none. The spot where the Lion anchored was determined by good

meridional observations, and by accurate time- pieces, to be in long. 15° 40′ W., lat. 37° S.

TRISTFUL, adj. Lat. trial is. Sad ; melan- choly ; gloomy ; sorrowful. A bad word.

Heaven's face doth glow

With tristful visage : and, as 'gainst the doom, Is thoughtsick at the act. Shakspeare. Hamlei.

TRI'SULC, n. s. Lat. trisulcus. A thing of three points.

Consider the threefold effect of Jupiter's tr'uulc, to burn, discuss, and terel > rate.

Browne's Vulgar Errourt.

TRITE, adj. Lat. tritiis. Worn out; stale ; common ; not new.

These duties cannot but appear of infinite con- cern when we reflect how uncertain our time is ; this may be thought so trite and obvious a reflection, that none can want to be reminded of it.

Rogers's Sermon.*

She gives her tongue no moment's rest, In phrases battered, stale, and trite, Which modern ladies call polite. Swift

TRITICUM, wheat, in botany, a genus of plants belonging to the class of triandria and order of digynia, and in the natural system ranging under the fourth order, gramina. The calyx is bivalve, solitary, and generally contain- ing three florets; the corolla is bivalve, one valve being bluntish, the other acute. There are four- teen species. For the cultivation of wheat see RURAL ECONOMY. Linnaeus comprehends the different kinds of wheat cultivated at present un- der six species; viz. aestivum, hybernum, turgi- dum, colonicum, spelta, and monococcum. Other botanists, however, add eight species to those of Linnaeus, and thus enumerate fourteen species in all, beside varieties, which the improvements of cultivation have increased very much.

TRITON, in the mythology, a sea-god, the son of Neptune and Amphitrite. He could calm the ocean in the greatest storms. He is repre- sented as blowing a shell, his body above the waste like that of a man, but below a dolphin. He was Neptune's trumpeter and messenger.

TRITON, in zoology, a genus belonging to the order of vermes mollusca. The body is oblong ; the tongue is spiral; it has tentacula,six on each side, the hindmost ones having claws like a crab. There is but one species, found in holes of rocks about the shore.

TRITONE, in music, an imperfect concord ; an interval of three tones. See Music.

TRITON ES, a numerous tribe of inferior sea deities who dragged Neptune's chariot. They were half men, half fishes.

TRITONIS, a lake of Africa.— Paus. 9. c. 33.

TRITONON, a town of Doris.— Liv. 28. c. 7.

TRITURABLE, adj. Fr. tritvrable. Pos- sible to be pounded or comminuted.

It is not only triturable and reducible to powder by contrition, but will not subsist in a violent fire.

Bra-rut-.

He affirmeth that a pumice stone powdered is lighter than one entire ; that abatement can hardly be avoided in trituratitm. Id. Vulgar Erronr.*

TRIVENTUM, an ancient »-wn of Italy be- longing to the Sammies, now cai.fcd Trivento.

Till' VET, w. s. See TREVFT. Any tnmg supported by three feet.

The best at horse -race he ordained a lady for his

prize, Generally praiseful ; t'air and young, and skilled in

housewiferies

Of all kind fitting ; and withal a (rivet, that en- closed Twenty-two measures. Chapman's Iliad.

The trivet table of a foot was lame ; A blot which prudent Baucis overcame, Who thrusts beneath the limping leg a sherd.

Dryden.

TRIVIA, a surname of Diana, as she presided over all places where three roads met. — Virg.

TRIVIvE ANTRUM, a place in Aricia where the goddess Egeria met with Numa.

TRIVIAL, adj. ˆ Fr. trivial ; Lat. trivia-

TRIV'IALLY, adv. >lis. Light ; trifling ; vul-

TRIV'IALNESS, n.s. J gar; worthless; vile: the adverb and noun substantive corresponding.

This argues conscience in your grace, But the respects thereof are nice and

trivial. All circumstances well considered.

Shakspeare. Richard III.

Money is not the sinews of war, as is trivially said, where the sinews of men's arms, in effeminate people, fail. Bacon.

Be subjects great, and worth a poet's voice, For men of sense despise a trivial choice.

Roscommon .

This way of measuring felicities was so natural to him that it would occur even in the most trivial in- stances. Fell.

See, yon mad fools, who, for some trivial right, For love, or for mistaken honour, fight. Dryden.

Were they only some slight and trivial indiscre- tions, to which the example of the world exposed UF it might perhaps not much concern our religion.

Rogen.

In every work regard the writer's end ; And if the means be just, the conduct true, Applause, in spite of trivial faults, is due. Pope.

TRIVIAL NAME, in botany, zoology, &c., is that by which the species of a plant or animal is distinguished from every other species.

TRIVICARY, an ancient city of the south of India, province of the Carnatic, but of which very little remains. Hyder Aly gave the finish- ing blow to its destruction in the year 1781. It is now only remarkable for the petrifactions in its neighbourhood. One of these is described as of a tree sixty feet in length : the pieces of this, when polished, resemble agate, and will strike fire like a flint. It is supposed to. have been a tamarind, which is one of the hardest woods known by mechanics. The ruins are situated on the north side of the Villenoor River. Long. 79° 43′ E., lat. 12° 3′ N.

TRIUMFETTA, in botany, a genus of plants in the class dodecandria and order of monogy- nia, and in the natural method ranking in the thirty-seventh order, columniferae.

TRI'UMPH, n.s. & IMI.-V Fr. triomphe ;

TRU M'PHAL, adj. & n.s. i Latin triwnphus.

TRIUMPHANT, adj. \ Pomp with which

TRIUMPHANTLY, adv. la victory is pub-

TRI'UMPHER, n. s. J licly celebrated ;

victory ; conquest : to celebrate a victory : hence to obtain one; glory over : the derivatives all correspond.

The triumphing of the wicVed is short, and the joy of the hypocrite is but for a moment. Job xx. 5.

This great commander sought many times to per- suade Solyman 10 tbrbear to use his forces any far- ther against the Christians, over whom he had suf- ficiently triumphed, and turn them upon the Per. sians. Knolles's Hittorii >

Hence will I drag thee headlong by the heels Unto a dunghill, which shall be thy grave , And there cut off thy most ungracious head, Which I will bear in triumph to the king.

Sliaktpeatf.

flow ill beseeming is it in thy sex To triumph like an Amazonian trull ! Id.

Captives bound to a triumphant car. Id.

These words become your lips, as they pass through;

them,

And enter in our ears, like great triumphers In their applauding gates. Id. Timim of Athent.

In ancient times the triumphs of the generals from victory, and the great donatives upon disband- ing the armies, were things able toenflame all men's courage. Bacon.

He left only triumphal garments to the general.

Id.

August was dedicated to Augustus by the senate, because in the same month he was the first time created consul, and thrice triumpher in Rome.

Peacham on Drawing.

Great triumph and rejoicing was in heaven.

Milton.

Our grand foe,

Who now triumphs, and in the excess of joy Sole reigning holds the tyranny of heaven. Id.

Ye so near heaven's door, Tr'umphal with triumphal act hath met. /

lie to his crew, that sat consulting, brought Joyless triumphals of his hoped success. Id.

Your victory, alas ! begets my fears ; Can vou not then triumph without my tears ?

Dryden.

Ic was drawn as a triumphant chariot, which at the same time both follows and triumphs.

Souths &rm<»ij.

There fix thy faith, and triumph o'er the world ; For who can help, or who can save besides? Rotce.

Steel could the works of mortal pride confound, And hew triumphal arches to the ground. Pope.

Lest we should for honour take The drunken quarrel of a rake ; Or think it seated in a scar, Or on a proud triumphal car. Swift.

If fools admire, or whining coxcombs toast, The vain coquets the trifling triumphs boast Logie.

.4 TRIUMPH, in Roman antiquity, was a public and solemn honor conferred by the Romans on a victorious general by allowing him a magnifi- cent procession through the city.

TRIUMPH, THE GREATER, called also curulis, or simply the triumph, was decreed by the senate to a general upon the conquering of a province or gaining a signal victory. The general was clad in a rich purple robe, interwoven with figures of gold, setting forth his great exploits ; his bus- kins were beset with pearl ; and he wore a crown, which at first was only laurel but afterwards gold ; in one hand he bore a branch of laurel, and in the other a truncheon. He was carried in a magnificent chariot, adorned with ivory and plates of gold, usually drawn by two white horses, though sometimes by other animals, as that of Pompey, when he triumphed over

Africa by elephants; that of Marc Antony by lions; that of Heliogabalus by tigers; that of Aurelian by deer, &c. His children were at Ins feet, and

sometimes or the chariot horses. At the victor's back walked a slave, who railed on him, and re- proached him with all his crimes and vices with impunity. The procession was led up by the musicians, who played triumphal pieces in praise of the general; these were followed by young men, who led the victims to the sacrifice, with their horns gilded and their heads adorned with ribands and garlands; next came the carts and waggons loaded with all the spoils taken from the enemy, with their horses, chariots, &c. ; these were followed by the kings, princes, and gene- rals, who had been taken captives, loaded with chains; after these appeared' the triumphal cha- riot, before which, as it passed, they all along strewed flowers, and the people with loud accla- mations called out lo triumphe '. The chariot was followed by the senate, by such citizens as had been set at liberty or ransomed ; and the procession was closed by the priests and their officers and utensils with a white ox led along for the chief victim. In this order they pro- ceeded through the triumphal gate, along the Via Sacra, to the capitol, where the victims were slain. In the mean time all the temples were open, and all the altars loaded with offerings and incense; games and combats were celebrated in the public places, and rejoicings appeared every where.

TRIUMVIR, one of three persons who govern absolutely and with equal authority in a state. It is chiefly applied to the Roman government : Caesar, Pompey, and Crassus, were the first tri- umvirs who divided the government among them. There were also other officers so called ; as the triumviri, or tresviri capitales, who were the keepers of the public gaolj they punished malefactors, for which purpose they kept eight lictors under them.

*TRIUM'VIRATE, n. *. > Lat. triumviratus,*

TRIUM'VIRI. J or triumviri. A

coalition or concurrence of three men.

Lepidus of the triumvirate Should be deposed.

Shakspeare. Antony and Cleopatra.

The triumviri, the three corner cap of society.

Shakrpeare.

During that triumvirate of kings, Henry the Eighth of England, Francis the First of France, and Charles the Fifth, emperor of Germany, none of the three could win a palm of ground but the other two would balance it. Bacon's Ettays.

With these the Piercies them confederate, And, as three heads, conjoin in one intent,

And, instituting a triumvirate, Do part the land in triple government.

Daniel's Civil War.

From distant regions fortune sends An odd triumvirate of friends. Swift.

TRIUMVIRORUM INSULA (the island of the triumvirs), an island in the Rhine at its junc- tion with the Po, where the triumvirs Antony, Octavius, and Lepidus, met to divide the Ro- man empire after the death of Csesar. — Dion. 46. c. 55.

TRIUNE', adj. Lat. tres and unus. At once three and one.

We read in scripture of a triune deity, of God made flesh in the womb of a virgin, and crucified by the Jewt. Burnet.

TRO'CAR, n. s. Fr. trocar, corrupted from trois quart. A chirurgical instrument

The handle of the trocar is of wood, the canula of silver, and the perforator of steel. Sharp's Surgery.

TROCHE, in pharmacy, a sort of medicine made of glutinous substances into little cakes and afterwards exsiccated. See PHARMACY, Index.

TROCHEE (Lat. trochaeus, Fr. trochee, Gr. TpoY.atoc),a foot used in Latin poetry consisting of a long and short syllable.

TROCHIL'ICKS,n. s. Gr. rpoy.iXiov, a wheel. The science of rotatory motion.

It is requisite that we rightly understand some principles in trochilicks, or the art of wheel instru- ments ; as chiefly, the relation betwixt the parts of a wheel, and those of a balance, the several propor- tions in the semidiameter of a wheel being answer- able to the sides of a balance.

U'ilkins's Deed.

There succeeded new inventions and horologies, composed by trochilicks, or the artifice of wheels, whereof some are kept ia motion by weight, others without. Browne.

TROCHILUS, the humming bird, a genus of birds belonging to the order of picae. The ros- trum is subulate, filiform, and longer than the head, the apex being tubular; the upper mandi- ble sheaths the lower. The tongue is filiform and tubulous, the tsvo threads coalescing; the feet are slender and fit for walking ; the tail has ten feathers. There are sixty-five species, none of which are natives of Britain. They are all remarkable for the- beauty of their colors, and most of them for the smallness of their size, though some are eight or nine inches long. They are divided into two families, viz. those with crooked bills, and those with straight bills.

*TROCHISCH', n. *. Fr. trochisque ; Latin trochiscus ; Gr. rpoxtoxoc- A kind of tablet or lozenge.*

The trochisks of vipers, so much magnified, and the flesh of snakes some ways co milled and corrected.

Bacon .

TROG'LODYTE, n. s. Gr. rpwyXoˆrtjc- One who inhabits caves of the earth.

Procure me a troglodyte footman, who can catch a rot at his full speed. Arbuthnot and Pope.

The TROGLODYTES, or TROGLODYTE, were an ancient people of Ethiopia, said to have lived in caves under ground. Their country \;IN called Troglodytria.

TROGLODYTES, in zoology. See SIMIA.

TROGUS POMPEIIˆ, a Latin universal nisto- rian to the time of Augustus Caesar, of whom we have an abridgment by Justin, flourished about 41 B. C.

TROJA, the capital ci;y of Troas, but some consider it to be a country of which Ilium was the capital. It was built on a small eminence near mount Ida. Dardanus the first king of the country built it and called it Dardania, and from Tros, his grandson, it was called Troja, and from Ilus, Ilium. It is supposed to have stood on the site of the modern village Bounarbachi, about txvelve miles from the sea, on an eminence, at the termination of a

spacious plain.

TRO JAN I LUDI, games instituted by TEneas in honor of Anchises, celebrated at Rome.

TROJANS, the people of Troy.

TROILUS,a son of Priam and Hecuba, killed by Achilles during the Trojan \var.

TROITSK, a town of Asiatic Russia, in the government of Orenbourg, surrounded with wooden fortifications, forming a square, flanked with towers, and encompassed by a ditch and glacis. The place is an emporium for the trade with the Asiatic tribes, particularly the Kirghises of the Lesser Horde, who are particularly rich in cattle, and is carried on in the exchange, a large square, built on the opposite side of the Oui or Ouk, which passes by the city. Long. 55° 30′ E., lat. 54° 15′ N.

TROITSK, a town of Asiatic Russia, about ninety miles to the west of the former. The in- habitants, amounting to upwards of 3000, are entirely employed in cultivation.

TROLL, v a. & v. n. Fr. trailer ; Belg. trollen, to roll. To move circularly ; drive about : roll ; turn round.

With the phant'sies of hey troll, Troll about the bridal bowl, And divide the broad-bread cake, Round about the bride's stake.

Ben Jonson's Underwood.

Nor drain I ponds the golden carp to take, Nor trole for pikes, dispeoplers of the lake. Gay.

How pleasant, on the banks of Styx, To troll it in a coach and six ' Swift.

TROLLIUS, globe ranunculus, or lucken gowan, in botany, a genus of plants belonging to the class of polyandria and order of polyga- mia, and in the natural system ranging under the twenty-sixth order, multisiliquae. The calyx is wanting; there are about fourteen petals; the capsules are very numerous, ovate, and mono- spermous. There are two species; viz. 1. T. Asiaticus. 2. T. Europaeus, or European globe ranunculus, a British plant.

TROMMIUS (Abraham), a Protestant divine, born at Groningen in 1633. He published a Greek Concordance of the Old Testament in 2 vols. folio, 1718. He died in 1719.

TROMP (Martin Happertz Van), a celebrated Dutch admiral, born at the Beill in Holland. He raised himself by his merit after having dis- tinguished himself on many occasions, especially at the famous engagement near Gibraltar in 1607. He was declared admiral of Holland, and de- feated a large Spanish fleet in 1 630, and gained thirty-two other victories at sea, but was killed when under deck in an engagement with the English in 1653.

TRONA, in natural history, the name given in Africa to the native carbonate of soda, found at Sukena, near Fezzan.

TRONAGE, an ancient customary duty or toll for weighing of wool. According to Fleta trona is a beam to weigh with, mentioned in the stat. Westm. 2, cap. 25. And tronage was used for the weighing wool in a staple or public mart by a common trona or beam, which, for the tronage of wool in London, was fixed at Leaden Hall. The mayor and commonalty of London are or- dained keepers of the beams and weights for weighing merchants' commodities, with power to assign clerks and porters, &c., of the great beam and balance ; which weighing of goods and wares is called tronage; and no stranger shall

buy any goods in London before they are weighed at the king's beam on pain of forfeiture.

TRONCHIN (Theodore), M. I)., born at Ge- neva in 1709; and educated at Cambridge and Leyden, under Boerhaave. He settled at Am- sterdam, next at Geneva, finally at Paris, where he died in 1781. He wrote in the Encyclo- pedic, and two treatises de Nympha, and De Colica Pictonum.

TROOP, n. s. & 1 French troupe ; Italian

TROOP'ER. [t>. n. J troppa ; Belgic troopc ; Swed. trop ; low Latin Iroppa. A company; a number of people collected together; body of soldiers: to march in a body; in company; or, perhaps, in haste : a trooper is a horse soldier.

Saw you not a blessed troop Invite me to a banquet, whose bright faces Cast thousand beams upon me like the sun 1

Sliakipeare.

1 do not, as an enemy to peace, Troop in their throngs of military men, But

rather shew awhile like fearful war. Id.

Yonder shines Aurora's harbinger, At whose approach ghosts, wandering here and

there, Troop home to churchyards. Id.

The dry streets flowed with men, That trooped up to the king's capacious court.

(hupman. They anon

With hundreds, and with thousands trooping came Attended. Milton's Paradise Lost.

Armies at the call of trumpet Troop to their standard. Id.

/Eneas seeks his absent foe, And sends his slaughtered troops to shades below.

Dry den.

As the mind, by putting together the repeated ideas of unity, makes the collective mode of any number, as a score or a gross ; so by putting together several particular substances, it makes collective ideas of substances, as a troop, an army. Locke.

Custom makes us think well of any thing : what can be more indecent than for any to wear boots but trooper and travellers ? yet not many years since it was all the fashion. Grew.*

TROOP, in cavalry, a certain number of men on horseback who form a component part of a squadron. It is the same, with respect to forma- tion, as company in the infantry. When a troop dismounts, and acts on foot, it is still called a troop.

TROOP, a certain beat of the drum. See DRUM.

TROOPS, HEAVY, Fr. troupes d'ordonnance, horse soldiers heavily armed and accoutred for the purpose of acting together in line, 8cc. The Life Guards come under this description.

TROOPS, LIGHT, Fr. troupes legeres, hussars, light horse, mounted riflemen, and light infantry, are so called, in opposition to cavalry or heavy horse, grenadiers and battalion men. Skirmish- ing is solely the business of light horse, who, according to count Turpin, should be constantly exposed as the forlorn hope of the army, or as troops whose duty it is to be

continually watch- ful for its repose and security.

When the light horse compose an advanced camp, the men should keep their horses con- stantly saddled; it being only an indulgence to allow those off duty to have their horses un-

saddled. It is very true that a camp of cavalry cannot be managed after the same manner ; but then cavalry is seldom so situated as to be at- tacked, or to attack every day, which is the real business of light horse. They should serve as vedets to the whole army, in order to prevent the enemy from approaching it ; whereas cavalry should never be employed but in the greatest operations, and on occasions which are to decide the fate of a campaign. Light troops, according to the same writer, are employed to gain intelli- gence concerning the enemy, to learn whether he hath decamped, whether he hath built any bridges, and other things of the same nature, of which the general must necessarily be informed, and should have a day fixed for this return. There are other detachments, which should be sent out under in- telligent officers, and which should never lose sight of the enemy, in order to send in daily in- telligence, to attack small convoys and baggage, to pick up marauders, and harass the advanced guards. There should not be any time fixed for the return of these detachments, neither should they be confined to particular places ; they should, however, return to the camp at the ex- piration of eight or ten days at farthest. The inconvenience arising from confining these de- tachments to a particular time would perhaps be, that the very day appointed for their return would be that on which they might have the fairest opportunity of learning inte!!;gtnce of the enemy; consequently their being forced to re turn would defeat the objects for which they were sent out. See page 122, vol. ii., of Count Turpin's Art of War. In addition to tins vama- ble work major James recommends the perusal of the following, which treat more or less of light troops : — Baron Gross's Duty of Officers in the Field ; Duty of officers commanding Detach- ments, by Lieutenant-Colonel John Ormsby Vandeleur ; and a small Treatise on the Duty of Hussars, translated by Mr. Rose, junior. Like- wise a very well written treatise entitled In- structions concernant le Service de 1'Infanterie tegere en Campagne ; also Guide de 1'Officier en Campagne. The former production is by the Royal Military College at Sandhurst.

Light troops are sometimes called irregulars, as they almost constantly act

in detached and loose bodies. The tirailleurs, tyroliens, yagers, sharp-shooters, the chasseurs a cheval et a pied, and voltigeurs, to which the French owed much during the whole course of their stupendous re-volution, are of this description. General Money observes, in page 8 of a small pamphlet ad- dressed to the late Secretary at War, ‘ that what was called in this country advancing en masse, by the French, was nothing more than very large bodies of irregulars (or light troops), which covered the country, in the front of their armies, like an inundation. To their irregulars, and to their light artillery, are the French indebted for most of the victories they have gained.’ He adds, ‘ that the troops styled in France chasseurs, are, more or less, to be met with in every service in Europe, except the British. The Austrians have many regiments of them ; the Prussians have them attached, in a certain proportion, to each corps; but the French, seeing the good tf-

fect of these irregulars, have brought them more into the field than all the combined powers to- gether. These troops are peculiarly useful in enclosed countries, and must, of course, be highly essential in Great Britain. Upon this principle four regiments of lanciers have been recently formed.

TROPvEA, an ancient town of the Brutii, in Italy.

TROP.SOLUM, in botany, Indian cress, a genus of plants, in the class of octandria, and order of monogynia; ranking, according to the natural method, in the twenty-third order, trihi- latae.

TROPE, n. s. I French trope ; Lat. tropus ;

TROP’ICAL, adj. } Gr. rpoirof. A change of a word from its original signification ; as the clouds foretel rain, for foreshow : the adjective corre-sponds.

For rhetorick he could not ope His mouth, but out there flew a trope. IluJibras.

A strict and literal acceptation of a loose and tro- pical expression was a second ground.

Browne’s Vulgar Errours.

If this licence be included in a single word, it ad- mits of trope i if in a sentence of figures. Dryden.*

The words are tropical or figurative, and import an. hyperbole, which is a way of expressing things be- yond what really and naturally they are in them- selves. South.

The foundation of all parables is some analogy or similitude between the tropical or illusive part of the parable, and the thing intended by it.

Id. Sermoiu.

THOPE. See FIGURE, and ORATORY.

TROPHIS, in botany, a genus of plants, in the class dioecia, and order of tetrandria; and in the natural method ranking in the sixteenth order, calciflorse. This genus, as well as the other genera of the class dicecia, affords the most decisive evidence of the truth of the sexual system, by bearing their male and female flow- ers on distinct plants.

TROPHONIUS, in fabulous history, a cele- brated architect, the son of Erginus, king of Orchomenos, in Bceotia. He built the temple of Apollo at Delphi, with the assistance of his brother Agamedes ; and, when he demanded a reward for his labor from the god, he was told by the priestess to wait eight days, and to spend that interval in cheerfulness and pleasure. But at the end of this period, Trophonius and his brother were found dead in bed. — Lempr.

TROPHONIUS'S CAVE, or ORACLE, a cave near Libadia, in Bceotia, between Helican and Chac- ronea (Strabo) ; so called from Trophonius, an enthusiastic diviner; who, descending into this cave, pretended to give answers and pronounce oracles; and was hence called Jupiter Tropho- nius. This cave was seated on a mountain above a grove, was formed by art, and sur- rounded with a wall. The descent was by a moveable ladder. A swarm of bees are said to have first led to it. Such as went down to this cave were said never after to smile. See ORACLE, and MYSTERIES.

TRO'PHY, n. s. $ Latin tropxum, troplunan

TRO'PHIED, adj I Something shown or trea- sured up in proof of victory • adorned with tro- phies.

What trophy then shall I most fit devise, In which I may record the memory

Of my love's conquest, peerless beauty's prize Adorned with honour, love, and chastity 1 Spenser.

To have borne

His bruised helmet and his bended sword Before him through the city, he forbids ; Giving all trophy, signal, and ostent, Quite from himself to God. Shakspeare. Henry I".

In ancient times, the trophies erected upon the place of the victory, the triumphs of the generals upon their return, the great donatives upon the dis-banding of the armies, were things able to inflame all men's courage. Bacon' Kmuiys.*

Around the posts hung helmets, darts, and spears, And captive chariots, axes, shields, and bars, And broken beaks of ships, the trophies of their wars.

Drydeii.

Some greedy minion, or imperious wife, The trophy'd arches, story'd halls invade, And haunt their slumbers in the pompous shade.

Pope.

Set up each senseless wretch for nature's boast, On whom praise shines, as trophies on a post. Young. TRO'PIC, n. s. j Fr. tropique ; Latir tro-TROI-'ICAL, adj. S pints. The line at which the sun turns back, of which the north has the tropic of Cancer, and the south the tropic of Capricorn : belonging to the tropics.

I'nder the tropick is our language spoke, And part of Flanders hath received our yoke.

Walter.

Since on every sea, on ev'ry coast, Your men have been distressed, your navy tost, Seven times the sun has either troj>ick viewed, The winter banished, and the spring renewed.

Dryden. The pine apple is one of the tropical fruits.

Salmon.

TROPOL'OGY, n.s. Gr. rpoVocand Xoyof. A rhetorical mode of speech including tropes, or a change of some word from the original meaning. Xot attaining the deuterology and second intention of words, they omit their superconsequences, co- herences, figures, or tropologies, and are not persuaded beyond their literalities. Browne's Vulgar Errours.

TRUS'SEUS, n.s. Fr. trousses. Breeches j'hose. See TKOLSE.

You rode like a kern of Ireland ; your French hose off, and in your strait trotters, fihakspeare. Henry V. TROPPAU, or OPPAW, the capital of Austrian Silesia, once the residence of a regency, and still the seat of a high court of justice. It stands at the confluence of the Oppa and Mohe, surrounded \vith a wall, and has two public squares. It contains the ancient palace of the princes, three churches, several convents, a college, and a mu- seum. Population 10,000, who manufacture soap and woollens. There was a great fire here in 1758. Eighty-seven miles south-east of Breslau.

TROPPAU, a fertile principality of Silesia, bounded on the north by Oppeln, on the east by Ratibor and Teschen, and on the south and west by Moravia, was erected into a principality in 1254. At the peace of Berlin, in 1742, the part to the north of the Oppa was ceded to Prussia ; the remainder is subject to Austria, and belongs in property to prince Lichtenstein.

TROS, in fabulous history, the fifth kinir of Troy, the son of Erichthonius, and grandson of Dardantis. and from whom it was named Troja. VOL. XXII

He married Callirrhoe, the daughter of Scatnan- der, by whom he had Ilus, Assaracus, and Gany- medes. See GANYMEDES.

TROSSULUM, an ancient town of Etruria, which was taken by a body of Roman knights, without the assistance of the soldiers, and who were hence called Trossuli. — Plin. 32. 2. Sen. ep. 86, 87.

*TR( )T, v. n. & n. *. Fr. trotter ; Belg. trotten. To move with a high jolting pace; walk fast: the pace in question ; au old woman, in con- tempt.*

Poor Tom, that hath made him proud of heart, to ride on a bay troitiny horse, over four-inched bridges, to course his own shadow for a traitor.

Sliakrpeure. King Lear. Whom doth time irot withal ? — He trots hard with a young maid, between the contract of her marriage and the day it is solemnized : if the interim be but a sevennight, time's pace is so hard that it seems the length of seven years.

1,1. A," You Like It.

Give him gold enough, and marry him to an old trot with ne'er a tooth in her head : why, nothing comes amiss, so money comes withal.

Id. Taming of the Shrew. His honesty is not

So loose or easy, that a ruffling wind Can blow away, or glittering look it blind :

Who rides his sure and even trot, While the world now rides by, now lags behind.

Herbert.

Here lieth one who did most truly prove That he could never die while he could move ; So hung his destiny, never to rot While he might still jog on and keep his trut.

Milton.

The virtuoso's saddle will amble when the world is upon the hardest trot. Dryden.

How now, bold-face ! cries an old trot; sirrah, we eat our own hens, and what you eat you steal.

L'Estrange.

Take a gentle trotting horse, and come up and see your old friends. Dennis.

TROTH, 72. s.) Sax.tneo. Belief ; faith ; TROTH'LESS, adj. £ fidelity ; truth : trothless is TROTH'PLIGIIT. j faithless : troth plight, be trothed ; affianced.*

Saint Withold met the night-mare, Bid her light and her troth plight. Shakspeare.

This, your son in law,

Is trot/iplight to your daughter. Jd. Winter's Tale. Thrall to the faithless waves and trulhleis sky.

Fairfax.

Stephen assails the realm, obtains the crown, Such tumults raising as torment them both : The afflicted state, divided in their troth

And partial faith, most miserable grown, Endures the while. Daniel't Civil War.

In troth, thou 'rt able to instruct grey hairs, And teach the wily African

deceit. Addison's Catu.

TROTTER (Mrs. Catharine), an accomplished and celebrated writer, was the daughter of cap- tain Trotter, n native of Scotland, and an officer in the navy of Charles II. She was born at London in 1679. In her seventeenth year she produced a tragedy called Agues du Castra, which was acted in 1695. This was followed by Fatal Friendship, a tragedy, 1698. Love at a Loss, a comedy, 1701. The Unhappy Peni- tent, a tragedy, (instavus Vasa, a tragedy, 1703 , acted at the Hay-Market in 1706. She uuL-

lished also a defence of her conversion from popery, and different treatises on moral and metaphysical subjects. She married Mr. Cock- burne, a clergyman of the church of Scotland, 1708, and died in 1749. Her works were pub- lished in 1751, in 2 vols. 8vo.

TROUBADOURS, poets who flourished in Provence during the twelfth century. They wrote poems on love and gallantry ; on the illus- trious characters and remarkable events of the times ; satires which were chiefly directed against the clergy and monks; and a few di- datic pieces. The troubadours were great favor- ites in different courts, diffused a taste for their language and for poetry over Europe, which was about that time sunk in ignorance and rudeness ; they disappeared in the fourteenth century. A history of the troubadours, in 3 vols. 12mo., was begun by M. de Saintc Palaie, and finished by the abb6 Miilot.

TROUB'LE,v.a. &n. O FT. troubler. To TROUB'LER, n. s. disturb ; perplex ;

TROUB'LESTATE, grieve ; tease ; ha-

TROUB'LESOME, adj. J>rass ; engage over- TROUB'LESOMELY, adv. much ; busy : the TROUB'LESOMENESS, n. s. noun substantive TROUB'LOUS, adj. • . J corresponding: a troubler and troublestate is a disturber, par- ticularly of the public : troublesome and trou- blous, uneasy ; vexatious ; tumultuous ; confused : the adverb and noun substantive corresponding.

Martha, thou art careful, and troubled about many things. Luke x. 41.

An angel went down into the pool and troubled the water ; whosoever first after the troubling stepped in was made whole. John v. 4.

He was sore troubled in mind, and much dis- tressed. 1 Mac.

It would not trouble me to be slain for thee, but much it torments me to be slain by thee. Sidney.

All this could not make us accuse her, though it made us almost pine away for spight to lose any of our time in so troublesome an idleness. Id.

No other noise, nor people's troublous cries, As still are wont t' annoy the walled town, Might there be heard. Spenser.

Unhappy falls that hard necessity, Quoth he, the troubler of my happy peace,

And vowed foe of my felicity. Id.

She of late is lightened of her womb, That her to see should be but troublesome. Id.

An hour before the worshipped sun Peered through the golden window of the east, A troubled mind drew me to walk abroad.

Shakspeare. Heaven knows

By what bye-paths and indirect crooked ways I met this crown ; and I myself know well How troublesome it sat upon my head : To thee it shall descend with better quiet. Id.

Then, masters, look to see a troublous world. Id.

Heavens hurl down their indignation On thee, thou troubler of the poor world's peace !

Id.

Double, double, toil and trouble, Fire burn, and cauldron bubble. Id. Macbeth.

The best temper of minds desireth good name and true honor ; the lighter, popularity and applause ; the more depraved, subjection and tyranny ; as is seen in great conquerors and troublert of the world, and more in arch-heretics. Bacon.

,ceas are troubled when they do revoke Their flowing waves into themselves

again. Davits.

Those fair baits these trouble-states still use, Pretence of common good, the king's ill course, Must be cast forth. Daniel's Civil War.

He had credit enough with his master to provide for his own interest, and troubled not himself for that of others. Clarendon.

Be not dismayed nor troubled at these tidings.

Milton.

They eased the putting off These troublesome disguises which we wear. Id.

But think not here to troubk holy rest. Id.

They all his host derided, while they stood, A while in trouble. Id

He knowing well that nation must decline, Whose chief support and sinews are of coin, Our nation's solid virtue did oppose To the rich troubles of the world's repose. Waller.

He must be very wise that can forbear being trou- bled at things very troublesome. Tillolson.

Though it is in vain to be troubled for that which I cannot chuse, yet I cannot chuse but be afflicted.

Id.

Thy force alone their fury can restrain, And smooth the waves, or swell the troubled main.

Dryden.

Though men will not be so troubksomely critical as to correct others in the use of words ; yet, where truth is concerned, it can be no fault to desire their explication. Locke.

Never trouble yourself about those faults which age will cure. Id. on Education.

It is not bare agitation, but the sediment at the bottom, that troubles and defiles the water. South.

Though our passage through this world be rough and troublesome, yet the trouble will be but short, and the rest and contentment at the end will be an

ample recompence. Atterbury.

The sword justly drawn by us can scarce safely be sheathed, till the power of the great troubler of our peace be pared, as to be under no apprehensions for the future. Id.

Two or three troublesome old nurses never let me have a quiet night's rest with knocking me up.

Arbuthnot.

My mother will never be troublesome to me. Pope.

TROUEE [Fr.], an opening; a gap. This word is applied to any passage, which is made through an abatis, wood or hedge ; also to the impression of cavalry, when it breaks the line, &c. Les cinq troupes en champagne, the prin- cipal openings through which an enemy can pe- netrate into France in the province of Cham- pagne. The duke of Brunswick, in 1792, took possession of these openings ; and the Prussian and Austrian armies passed through them in 1814 and 1815.

TROUGH, w.. Saxon tru>J5> rn.oh; Belgic track ; Dan. trou. Any thing hollowed and open longitudinally on the upper side.*

The bloody boar,

That spoiled your summer fields and fruitful vines, Swills your warm blood like wash, and makes his

trough In your cmbowelled bosoms.

Sliakspear. Richard Iff.*

They had no ships but big troughs, which they call canoes. Abbot's Description of the World.

That also is accounted virgin quicksilver, which, having no need to pass the fire, is separated by water first in a sieve, and afterwards in a long trough.

Browne's Travels.

Some log, perhaps, upon the water swam, An useless dnft, which rudely cut within,

And hollowed, first a floating trough became, And cross some rivulet passage did begin. Drvden.

The water dissolves the particles of salt mixed, in the stone, and is conveyed by long troughs and canals from the mines to Hall, where it is received in vast cisterns, and boiled off. Addison.

TROUL, v. n. Belg. trollen, to roll. See TROLL. To move volubly.

Let us be jocund. Will you troul the catch You taught me while-ere 1 Shakspeare. Tempest.

Bred only, and completed, to the taste Of lustful appetence ; to sing, to dance, To dress, and troul the tongue, and roll the eye.

Mittm.

TROUNCE, v. a. Derived by Skinner from Fr. tronc or tronson, a club. To punish by an indictment or information.

More probable, and like to hold, Than hand, or seal, or breaking gold ; For which so many, that renounced Their plighted contracts, have been trounced.

Hudibras.

If you talk of peaching, I' 11 peach first ; I '11 trounce you for offering to corrupt my honesty.

Drvden's Spanish Fryar.

TROUSE, n. s.) Fr. trousse ; Erse truish.

TROU'SERS. } Breeches ; hose. SeeTiios- SERS.

The leather quilted jack serves under his shirt of mail, and to cover his trouse on horseback.

Spemer on Ireland.

The unsightliness and pain in the leg may be helped by wearing a laced stocking ; a laced trnuse will do as much for the thigh. Wiseman's Surgery.

TROUT, n. s. Sax. tjuiht; Lat. trocta, tru- ta, trutta. A delicate spotted fish, inhabiting brooks and quick streams.

Here comes the trout that must be caught with tickling. Shakspeare.

The pond will keep trout and salmon in their sea- sonable plight, but not in their reddish grain.

Carew.

Worse than the anarchy at sea, Where fishes on each other prey ; Where every trout can make as high rants O'er his inferiours as our tyrants. Swiff.

TROW, v. n. Saxon tjteofcian ; Belg. and Dan. troe. To think; imagine; conceive.

What handsomeness, trow you, can be observed in that speech, which is made one knows not to whom ? Sidney.

Is there any reasonable man, trow you, but will judge it meeter that our ceremonies of Christian reli- gion should be Popish, than Turkish or Heathenish?

Hooker.

Lend less than thou owest, Learn more than thou trowest.

Shakspeare. King Liar. To-morrow next We will for Ireland ; and 'tis time, I trow.

Shakspeare.

TROVVBRIDGE, in Wiltshire, a considera- ble market town, twenty-eight miles north-west from Salisbury, and ninety-eight miles west by south from London. It is irregularly built ; none of the streets seem to have been formed according to any predetermined plan. The population is about 10,000, the principal of whom are employed in the manufacture of ker-

seymeres and broad cloths. There are about 2000 acres of land in the parish, which contains a parish church, a chapel of ease, also eight dissenting chapels of various denominations. Trowbridge is not an incorporated town; the government Is vested in the county members, who hold alternate petty sessions here and at Bradford . There are also two other courts an- nually held here, viz. a court leet and a court baron, belonging to the lord of the manor.

TROWEL, n. s. Fr. tnielle ; Lat. trulla. A tool to take up the mortar with, and spread it on the bricks, &c.

How shall I answer you ' — As wit and fortune will. — Or as the destinies decree. — Well said, that was laid on with a troiˆ

Shakspeare.

The most accurate engravings or embossments seem such rude, bungling, deformed works, as if they had been done with a mattock, or a trowel.

Wilkim.

This was dexterous at his trowel, That was bred to kill a cow well. Swift.

TROY, an ancient city of Phrygia, the de- struction of which affords the subject of Homer's Iliad. It had eight kings ; though some enu- merate only six; viz. 1. Scamander, the founder; 2. Teucer his son ; 3. Dardanus his son-in-law ; 4. Erichthonius his son ; 5. Tros ; 6. Ilus his son ; 7. Laomedon, in whose reign Troy was taken and sacked by Hercules ; and 8. Priam, under whom it was destroyed. Of all the wars of antiquity that of Troy is the most famous, particularly immortalised in the Iliad and the jEneid. Much discussion has taken place among the learned as to the reality of the events and the seat of the place. We may refer parti- cularly to Bryant and Chevalier. The latter published a description of the plan of Troy in the second volume of the Transactions of the Royal Society of Edinburgh. He fixes the site of the place and the various scenes described by Homer. He describes particularly the tombs of Esyetes, Ilus, Ajax, Hector, Achilles, Patroc- lus, aud Antilochus. The dissertation was translated and enriched with large notes and illustrations by Mr. Dalzel, Greek professor in the university of Edinburgh. Various English travellers have more recently visited those inter- esting scenes of classic times, and several publi- cations of note have appeared, particularly by Sir W. Cell, occasioning much diversity of opinion, and much learned discussion on ques- tions now only interesting from their classical celebrity. Long. 26° 30′ E., lat. 39° 4C/ N.

TROY WEIGHT', n. s. { From Fr. Troies

TROY. J See TROVES. A kind

of weight by which gold and silver are weighed, consisting of these denominations : a pound — 12 ounces; ounce = 20 pennyweights; penny- weight i= 24 grains. See WEIGHTS.

The Romans left their ounce in Britain, now our averdupois ounce, for our troy ounce we had else- where. Arbuthnot.

TROY-WEIGHT, one of the most ancient of the different kinds used in Britain. The ounce of this weight was brought from Grand Cairo in Egypt about the time of the crusades into

Europe, and first adopted in Troyes, a city of France, whence the name.

TROYES, a large town in Champagne, France, the capital of the department of the Aube. It is situated between two fine meadows on the Seine, which is here comparatively small, and divided into several channels, of great con- venience for manufacturing purposes, but not navigable. The water is unfit for drinking, but excellent for bleaching, dyeing, &c. The town is surrounded with a wall, but ill-built, the chief material being wood : the manufactures are con- siderable in cotton and cotton stockings. Wool- len, linen, leather, and thread are also made here on a smaller scale.

Troyes is an ancient place, having been noted in the middle ages for its fairs, where merchan- dise was sold by Troyes or Troy weight. Its chief edifices are churches ; particularly the ca- thedral. The castle was long the residence of the counts of Champagne : its public mall, or walk, extending along the ramparts, is of great length. Here are also a hotel de ville, a lycee or central school, public library, and society of arts. In the campaign of 1814 this town was entered by the allies on the 7th of February ; retaken by Buonaparte on the 23d of that mouth ; and fi- nally re-occupied by the allies on the 4th of March. It is the seat of an archbishop, and of the administration of the department of the Aube. Pope Urban IV. was a native of Troyes. Forty-two miles north-east of Auxerre, seventy south of Rheims, and 100 south-east of Paris.

TRU'ANT, n, s., adj., & v. n. (Old Fr. tru-

TRUANT'SHIP, n. s. i and; Belg.

treuwant, a vagabond. An idler ; one who wan- ders idly about, neglecting his duty or employ- ment. To play the truant is, in schools, to stay from school without leave : idle; wandering from business ; lazy : to idle at a distance from duty ; to loiter ; to be lazy : idleness ; negligence.

The master should not chide with him if the child hath done his diligence, and used no truantship.

Ascham.

For my part, I may speak it to my shame, I have a truant been to chivalry. Shakspeare.

Though myself have been an idle truant, Omitting the sweet benefit of time, ‘

To clothe mine age with angel-like perfection, Yet hath Sir Protheus made fair advantage of his days. Id. Two Gentlemen of Verona.

What keeps you from Wertemberg ? — A truant disposition, good my lord. Id. Hamlet.

He made a blushing cital of himself, And chid his truant youth with such a grace, As if he mastered there a double spirit, Of teaching, and of learning instantly. Shakspeare.

Tis double wrong to truant with your bed, And let her read it in thy looks at board. Id.

Providence would only initiate mankind into the knowledge of her treasures, leaving the rest to our industry, that we might not live like idle loiterers and truanti. More.

TRUCE, n.s. Old Fr.

Men shall be lovers of their own selves, without natural affection, truce breakers. 2 Tim. ill. 3.

They pray in vain to have sin pardoned, which seek not also to prevent sin by prayer, even every particular sin, by prayer ngainst all sin, except men

can name some transgression wherewith we ought to have truce. Hooker.

This token serveth for a flag of truce Betwixt ourselves and all our followers.

Shaktpeare. There he may find

Truce to his restless thoughts, and entertain The irksome hours. Milton.

Sicknesses, which in the latter years of his life gave him but short and seldom truce. Fell.

Shadwell till death true dulness would maintain ; And in his father’s right, and realm’s defence, Ne’er would have peace with wit, nor truce with

sense. Dryden.

TRUCK, v.a. &n.s.} Fr. troc ; Danish TRUCKLE, v. n. £ trxc ; Belg. trek. To

TRUCK'LEBED, n. s. J give in exchange; ex- change ; traffic ; barter : also a low carriage for goods : and hence probably is derived trucklebed, which is one bed run under another ; and truckle, to creep; yield; be in subjection, or inferi- ority.

There's his chamber, his house, his castle, his standing bed and trucklebed.

Shakspeare. Merry Wives of Windsor. Shall our nation be in bondage thus Unto a land that truckles under us 1 Cleaveland.

If he that is in battle slain Be in the bed of honour lain ; He that is beaten may be said To lie in honour's trucklebed. Hudibras.

For which so many a legal cuckold Has been run down in courts, and truckled. Id. Love is covetous ; I must have all of you ; heart for heart is an equal true. Dryden.*

It is no less requisite to maintain a truck in moral offices, than in the common business of commerce.

L'Estrange.

The Indians truck gold for glasses. Id.

Men may be stiff and obstinate upon a wrong ground, and ply and truckle too upon as false a foundation. Id.

Religion itself is forced to truckle to worldly po- licy. AV/v.

I see nothing left us, but to true and barter our goods, like the wild Indians, with each other.*

Swift.

To raise his post or fill his coffers, Perhaps he might have truckled down, Like other brethren of his gown. Id.

TRU'CULENT, adj. Lat. truculentus. Sa- vage ; barbarous.

Pestilential seminaries, according to their grossness or subtility, cause more or less truculent plagues, some of such malignity that they enecate in two hours. Harvey on the Playue.

A barbarous Scythia, where the savage and trucu- lent inhabitants transfer

themselves from place to place in waggons, as they can find pasture, and live upon milk, and flesh roasted in the sun at the pomels of their saddles. Ray .

TRUDGE, v.n. Goth, trudga. To travel laboriously; jog or march heavily on.

No man is secure but night-walking heralds, That trudge between the king and mistress Shore.

Shakspeare.

No sooner was he fit to trudge, But both made ready to dislodge. Hudibras.

Away they trudged together, and about midnight got to their journey's end. L'Estrange.

And trudged to Rome upon my naked feet.

Dryden.

TRUE, adj. ") Saxon tneopa,

TRUE'BORN, j tpupa; Gothic tru ;

TRUE'BRED, Teut. treu. Accord-

TRUE'HEARTED, [ing to truth ; real ;

TRUE'LOVEKNOT, n. s. f exact ; faithful; ho- TRUE'NESS, I nest; sincere; right-

TRUE'PEXNY, I ful : the three follow-

TRU'LY, adv. j ing adjectives corres-

ponding : trueloveknots are lines drawn through each other as emblems of affection : truepenny, an honest fellow : truly and trueness correspond with true.

A true witness delivereth souls. Proverbs.

The darkness is past, and the true light now

sliineth. 1 John.

They thought they might doit, not only willingly, because they loved him ; and truly, because such indeed was the mind of the people ; but safely, be- cause she who ruled the king was agreed thereto.

Sidney.

Of those he chose the falsest two, And fittest for to forge true seeming lies. Spenier.

No untruth can avail the patron long ; for things most truly are most behovefully spoken. Hooker. Teeth hadst thou in thy head when thou wast

born ;

And, if the rest be true which I have heard, Thou earnest into the world with thy legs forward.

Shakspeare.

So young, and so untender ?

— So young, my lord, and true. Id.

Two of them I know to be as tniebred cowards as ever turned back. Id.

1 have known no honester or truehearted man : fare thee well. Id.

Sayest thou so ? art thou there, truepenny ? Come on. Id.

Let him that is a trueborn gentleman, And stands upon the honour of his birth, From off this briar pluck a white rose with me. Id. The even carriage between two factions proceedeth not always of moderation, but of a tmeness to a man's self, with end to make use of both.

Bacon's Essays.

1 have not undertaken it out ot any wanton plea- sure in mine own pen ; nor trulti without often pon- dering with myself beforehand what censures I might incur. Wotton.

Unbind the charms that in slight fables lie, And teach that truth is truest poesy. Cmole\i.

Wisdom alone is truly fair. Milton.

Among unequals what society Can sort ? What harmony or true delight? Id.

They seize the sceptre ; Then lose it to a stranger, that the true A nointcd King Messiah might be bora liarred of his right. Id.

I'll carve your name on barks of trees With truelii-eknots, and flourishes, » hat shall infuse eternal spring. Hudibrat,

The first great work Is, that yourself may to yourself be true.

Roscommnn .

Such as are efficaciously called, justified, and sanctified, while they live, are truly holy, and, when hey die, are perfectly holy. Pearton.

When this fire is kindled, both sides inflame it : all egard of merit is lost in persons employed, and -ese only chosen that are true to the party.

Temple.

Bauble do you call him ? he's a substantial true- bred beast, bravely forehanded.

Dry den's Don Sebastian. If rll those great painters, who have left us such

fair platforms, had rigorously observed it, they had made things more regularly true, but withal very unpleasing. Id. Dufresnoy.

True to the king her principles are found.

Dry den.

Right reason is nothing else but the mind of man judging of things truly, and as they are in them- selves. South. He drew

A circle regularly true. Prior.

Religion, as it is the most valuable thing in the world, so it gives the truest value to them who pro- mote the practice of it by their example and autho- rity. Atterbury.

True to his charge, the bard preserved her long In honour's limits ; such the power of song. Pope.

TRUFFLE, n.s. French truffle, truffe.

In Italy, the usual method for the finding of t-ujftet or subterraneous mushrooms, called by the Italians tartufali, and in Latin tubera terra?, is by tying a cord to the hind leg of a pig, and driving him, observing where he begins to root. Ray.*

TRULL, n. s. Italian trulla. A low whore ; a strumpet.

I'm sure I scared the dauphin and his trull.

Shakrpeare. A trull who sits By the town-wall, and for her living knits.

Dry den.

TRUMBULL (Sir William), an English statesman, born in Berkshire in 1636. He went ambassador to France, and was some time secre- tary of state. He is known in literature chiefly as the early patron and correspondent of Pope. He died in 1710.

TRUMP, n. s. -\ Saxon rnompa ;

TRI M'PET, n. s. & v. a. I Belgic and old Fr.

TRUM'PETER, n. s. f trompe ; Ital. trom-

TRI M'PETTOXGUED, adj. i ba. An instru-

TRUM'PETLIKE. J ment of warlike

music : the card so called is perhaps from a cor- ruption of TRIUMPH, which see. A trumpet is also used for a trumpeter, or one who blows a trumpet ; as are both words for one who cele- brates, or loudly praises, or publishes any thing : trumpettongued is vociferous ; loud ; clamo- rous : trumpetlike is resembling a trumpet.

Whilst any trump did sound, or drum struck up, His sword did ne'er leaving striking in the field.

Shakxpeare. Trumpeters,

With brazen din blast you the city's ear, Make mingle with our rattling tabourines. Id.

What's the business,

That such a hideous trumpet calls to parley The sleepers of the house ? Id.

This Duncan's virtues

Will plead, like angels, trumpet -tongued, against The deep damnation of his taking off.

Id. Macbeth. Why so tart a favour To trumpet such good tidings ? Sluiktpeare.

They went with sound of trumpet ; for they did nothing but publish and trumpet all the reproaches they could devise against the Irish.

Bacon' War vnth Spain.*

Where there is an opinion to be created of virtue or greatness, these men are good trumpeters.

Id. Essays.

A breast of brasse, avoyce Infract and trump-like. Chapman.

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As they returned, a herald and trumpeter from the Scots overtook them. Hayward.

As disperst soldiers, at the trumpet's call, Haste to their colours all. Cowley.

He wisely desired that a trumpet might be first sent for a pass. Clarendon.

He blew

His trumpet, heard in Oreb since perhaps When God descended, and perhaps once more To sound at general doom. The' angelick blast Filled all the regions. Milton.

The last loud trumpet's wonderous sound Shall through the rending tombs rebound, And wake the nations under ground. Roscommon.

Things of deep sense we may in prose unfold But they move more in lofty numbers told ; By the loud trumpet which our courage aids We learn that sound, as well as sense, persuades.

Waller. I heard

The neighing coursers and the soldiers cry, And sounding trumps that seemed to tear the sky.

Dryden.

The trumpet's loud clangor Excites us to arms,

With shrill notes of anger, And mortal alarms. id.

We are now put upon our last trump ; the fox is earthed, but I shall send my two terriers in after him. Id.

That great politician was pleased to have the greatest wit of those times in his interests, and to be the trumpet of his praises. Id.

Every man is the maker of his own fortune, and must be in some measure the trumpet of his fame.

Tatler.

How came so many thousands to fight, and die in the same rebellion 1 why were they deceived into it by those spiritual trumpetert, who followed them with continual alarms of damnation if they did not ven- ture life, fortune, and all, in that which those impos- tors called the cause of God ? South.

Among our forefathers, the enemy, when there was a king in the field, demanded by a trumpet in what part he resided, that they might avoid firing upon the royal pavilion. Addison.

An army of trumpeters would give as great a strength as this confederacy of tongue warriors, who, like those military musicians, content themselves vith animating their friends to battle.

Id. Freeholder. Let the loud trumpet sound, Till the roofs all around

The shrill echoes rebound. Pope.

Now her heart with pleasure jumps, She scarce remembers what is trumps. Swift .

When the archangel's trump shall blow, And souls to bodies join.

What crowds shall wish their lives below Had been as short as thine ! Wesley.

TRUM'PERY, n. s. Fr. tromperie, a cheat. Something fallaciously splendid, or of less value than it seems ; falsehood ; trifles.

The trumpery in my house bring hither, For state to catch these thieves.

Shakspeare. Tempest.

Breaking into parts the story of the creation, and delivering it over in a mystical sense, wrapping it up mixed with other their own trumpery, they have sought to obscure the truth thereof.

Raleigh's Historu of the World. Embrios and idiots, eremits and friars, White, black, and grey, with all their irnm/>«ri/.

Milton.

Another cavity of the head was stuffed with billet- doux, pricked dances, and other trumpery of the same nature. Addison.

The TRUMPET is used chiefly in war, among the cavalry, to direct them in the service. Some Greek historians ascribe the invention to the Tyrrhenians ; but others, with greater probabi- lity, to the Egyptians. The trumpet was not ir use among the Greeks at the time of the Trojar war; though it was in common use in the time of Homer. According to Potter (Arch. Grwc vol. ii.cap. 9), before the invention of trumpets, the first signals of battle in primitive wars were lighted torches ; to these succeeded shells of fishes, which were sounded like trumpets.

That the speaking trumpet was well known to the ancient Greeks, the trumpet of Alexander, and the whispering caverns of Dionysius, will not allow us to doubt. It is also certain, from Beritaria's History of the Jesuits, that this in- strument was in use in Peru in the sixteenth century. About the middle of the last century, Alhanasius Kircher, in different works, threw out many useful and scientific hints on the con- struction of speaking trumpets (see ACOUSTICS, and KIRCHER); which for some time did not attract much notice. About the year 1670, Sir Samuel Morland exhibited some instruments which he called stentorophonic horns, which conveyed articulate sounds to a surprising dis- tance, and he proposed a question to the Royal Society, respecting the best form for a speaking trumpet, vindicating at the same time that of his own instrument, which was conical,

suddenly spreading at the mouth. The subject attracted attention on the continent, and a Mr. Gassegrain proposed a conoid, formed by the revolution of a hyperbola round its assymptote, as the best form. A Mr. Hase of Wirtemberg, on the other hand, proposed a parabolic conoid, having the mouth of the speaker placed in the focus. Which form is the best ? is a question that in- volves some profound mathematical considera- tions. Mr. Lambert of Berlin reasons in the following manner in favor of the conical shape,, which is universally adopted : — Sound naturally spreads in all directions; but we know that echoes or reflected sounds proceed almost strictly in certain limited directions. If there- fore we contrive a trumpet in such a way that the lines of echo shall be confined within a cer- tain space, it is reasonable to suppose that the sound will become more audible, in proportion as this diffusion is prevented. Therefore, if we can oblige a sound, which in the open air would have diffused itself over a hemisphere, to keep within a cone of 120°, we should expect it to be twice as audible within this cone. This will be accomplished by making the reflexions such that the lines of reflected sound shall be con- fined within this cone. We here suppose that nothing is lost in the reflexion.

The construction of a speaking trumpet is a problem, certainly, of some nicety ; and, as the trials are always made at some considerable dis- tance, it may frequently happen that a trumpet, which is not heard at one mile's distance, may be made very audible two miles off by cutting off a piece at its wide end. We shall find the parabolic

conoid the preferable shape for an acoustic trumpet ; because, the sounds coming into the in- strument in a direction parallel to the axis, they are reflected so as to pass through the focus. The parabolic conoid must therefore be cut through the focus, that the sounds may not go out again by the subsequent reflections ; and they must be received into a cylindrical pipe of one-third of an inch in diameter. Therefore the parameter of this parabola is one-sixth of an inch, and the focus is one-twelfth of an inch from the vertex. This determines the whole instrument ; for they are all portions of one parabolic conoid. Sup- pose that the instrument is required to approxi- mate the sound twelve times, as in the example of the conical instrument: the ordinate at the mouth must be twelve times the sixth of an inch, or two inches ; and the mouth diameter is four inches, as in the conical instrument. In trumpets for assisting the hearing, all reverberations of the trumpet must be avoided. It must be made thick, of the least elastic

materials, and covered with cloth externally. For all reverberation lasts for a short time, and produces new sounds which mix with those that are coming in. We must also observe that no acoustic trumpet can separate those sounds to which we listen, from others that are made in the same direction. All are received by it, and magnified in the same proportion. This is frequently a very great in- convenience. There is also another imperfection, which we imagine cannot be removed, namely, an odd confusion, which cannot be called indis- tinctness, but a feeling as if we were in the midst of an echoing room. The cause seems to be this : hearing gives us some perception of the direction of the sounding object, not indeed very precise, but sufficiently so for most purposes. In all instruments which we have described for con- stipating sounds, the last reflections are made in directions very much inclined to the axis, and inclined in many different degrees. Therefore they have the appearance of coming from dif- ferent quarters ; and, instead of the perception of a single speaker, we have that of a sounding sur- face of great extent. We do not know any method of preventing this, and at the same time increasing the sound.

TRUMPET, MARINE, is a musical instrument consisting of three tables, which form its trian- gular body. It has a very long neck with one single string, very thick, mounted on a bridge, which is firm on one side, but tremulous on the other. It is struck by a bow with one hand, and with the other the string is pressed or stopped on the neck by the thumb. It is the trembling of the bridge when struck, that makes it imitate the sound of a trumpet ; which it does to that perfection that it is scarcely possible to distin- guish the one from the other. And this is what has piven it the denomination of marine trumpet, though, in propriety, it be a kind of monochord. Of the six divisions on the neck of the instru- ment, the first makes a fifth with the open chord, the second an octave, and so on for the rest, cor- responding with the intervals of the military trumpet.

THU'NCHEON, n.s.&l Fr. fronton. A TRUN'CHEONEER. [v. a. S short staff; club ;

cudgel : to beat with a truncheon : one armed with a truncheon.

With his truncheon he so rudely stroke Cymocles twice, that twice him forced his foot re- voke. Spenser.

The hand of Mars Beckoned with fiery truncheon may retire.

Shakspeare.

Captain ! thou abominable cheater ! If captains were of my mind, they would truncheon you out of taking their names upon you before you

earned them.

Id.

I mist the meteor once, and hit that woman, who cried out, Chibs ! when I might see from far some forty truncheoneert draw to her succour.

Id. Henry VIII.

The English slew divers of them with plummets of lead tied to a truncheon or staff by a cord.

Haifward. One with a broken truncheon deals his blows.

Dry den.

TRUN'DLE, v. n. > Sax. rjienbl, a bowl ; TRUN'DLE-TAIL, n.s. } Picard. Fr. trondeler. To roll ; bowl along : a trundle-tail is a round tail.

Avant, you curs ! Hound or spaniel, brache or lym, Or bobtail like, or trundle-tail.

Shakspeare. King Lear.

In the four first it is heaved up by several spon- dees intermixed with proper breathing places, and at last trundles down in a continued line of dactyls. Addison's Spectator.

A TRUNDLE is a carriage with low wheels, on which heavy and cumbersome burdens are drawn.

TRUNK, n. s. } Fr. tronc ; Lat. truncus.

TRUXK'ED, adj. >The body of a tree ; hence

TRUNK'HOSE, n. s. jof an animal; the main body of any thing ; a chest for clothes ; a long tube : to trunk is, to lop ; maim ; truncate : trunked, having a trunk : trunkhose, large breeches of former times.

Large streams of blood out of the trunhed stock Forth gushed, like water streams from riven rock.

Spenser.

The charm and venom which they drunk Their blood with secret filth infected hath, Being diffused through the senseless trunk. Id.

He was

The ivy, which had hid my princely trunk, And suckt my verdure out on't. Shakspeare.

Neither press, coffer, chest, trunk, well, vault, but he hath an abstract for the remembrance of such places. Id-

la rolls of parchment trunks, the mouth being laid to the one end and the ear to the other, the sound is heard much farther than in the open air.

Bacons Natural Hillary.

She is thick set with strong and well trunhed trees. Hoicel.

About the mossy trunk I wound me soon ; For high from ground the branches would require Thy utmost reach. Milton's Paradite Lost.

Leviathan that at his gills Draws in, and at his trunk spouts out a sea.

Milton.

Some odd fantastick lord would fain Carry in trunks, and all my drudgery do. Dryden.

When elephant 'gainst elephant did rear His trunk, and castles justled in the air, My sword thy way to victory had shown. Id.

Where a young man learned to dance, there hap- pened to stand an old trunk in the room ; the idea

of which had so mixed itself with the turns of all his dances, that though he could dance excellently well, yet it was only whilst that trunk was there. Locke.

The large trunks of the veins discharge the re- fluent blood into the next adjacent trunk, and so on to the heart. Ray.

The short trunk-hose shall show thy foot and knee Licentious, and to common eye-sight free ; And with a bolder stride, and looser air, Mingled with men, a man thou must appear.

Prior.

Some of the largest trees have seeds no bigger than some diminutive plants, and yet every seed is a per- fect plant, with a trunk, branches, and leaves, in- closed in a shell. Bentley.

Your poem sunk.

And sent in quires to line a trunk : If still you be disposed to rhyme, Go try your hand a second time. Swift.

TRUNK, in botany, that part of the herb which arises immediately from the root, and is termi- nated by fructification ; the leaves, buds, and auxiliary parts of the herb, not entering in its description. See BOTANY, Index.

*TRURO, a borough and market-town, in the hundred of Powder; distant 255 miles W. S. W. from London ; eighty-two south-west from Exe- ter ; and fifty-three nearly west from Devonport. It contains 400 houses, and about 3000 inhabit- ants, in what is strictly named the borough, which extends over the whole parish of St. Mary's; and the neighbouring streets or suburbs, in the parishes of St. Clement and Kenwyn, contain nearly double that number. Although the town is of no very remote antiquity, yet its central situation with respect to the commerce and chief productions of the country, its im- proved and improving state, the handsome ap- pearance of several of its streets and buildings, its increased population, and the similarity of its local regulations to those of the principal cities of the kingdom, justly entitle it to be con- sidered as the metropolis of the county. — It is situated in a deep dell, at the conflux of the two small rivers Kenwyn and St. Allen, which direct their streams on each side of the town, and at the bottom unite with a branch of Falrnouth har- bour, commonly called Truro Creek or River. — At every spring tide the collected waters form a fine lake, two miles in length, and of sufficient depth to be navigable for vessels of upwards of 100 tons burden ; which advantageous situation has, without doubt, been the principal cause of the rapid improvement of the town. Truro re- turns two members to parliament. This privi- ledge was conferred in the twenty-third year of Kdward I., and the right of election was vested in the mayor, four aldermen, and twenty capital burgesses. The trade of Truro consists princi- pally in exporting tin and copper ore ; the for- mer to the Mediterranean, and the latter to Wales. Coals are brought here by vessels from the principality, and timber (used chiefly in the mines) by ships from Norway. On the great road to Falmouth (rising with gentle acclivity on a considerable hill) an elegant new street, called Lemon Street, has been formed, in which suffi- cient attentioti has been paid to space and con- venience. The houses are built on a regular *cale, and faced with granite. Hie town consists of*

about twelve streets, through the principal of which run the roads to St. Austell, on the east ; to Falmouth, on the south; to Redruth, on the west; and to Bodmin, on the north. The town, being nearly surrounded by water, is connected with its suburbs by short stone bridges, which derive their names from the direction in which they lie, as the east-bridge, the west-bridge, &c. The public buildings areas follow : — the church, a spacious and handsome fabric, of that elegant kind of architecture which flourished in England about the time of Henry VII. It stands near the centre of the town in an open space called the Cross. The town-hall, which stands over the principal entrance of the market, is a plain, sub- stantial building of stone, consisting of two large airy rooms, in which the magisterial business of the town is transacted, and the Easter quarter sessions for the county, as well as the petty ses- sions for the western division of the hundred, are held. The coinage-hall is an ancient heavy structure, standing at the east end of Boscawen Street, in which the process of coining the tin is carried on every quarter, and where the parlia- ments of the lord-warden of the stanneries, and the courts of his vice-warden, are held for the ad- judication of all matters connected with the tin trade. The building has lately been repaired and much improved in its appearance by the late John Vivian, esq., of Truro, then vice-war- den, who succeeded to that office on the resigna- tion of John Thomas, esq., of Chiverton, in this neighbourhood. The vice-warden's courts are held regularly on the first Tuesday in every month, but the parliaments are very unusually assembled. The theatre, which stands in the High Cross, possesses no exterior beauty, but is so judiciously contrived within as to be either perfectly adapted for scenic representations, or easily converted into an elegant ball room con- nected with which are card rooms, and apart- ments for refreshments. The county infirmary stands on an eminence at the south-west part of the town, and is in the parish of Kenwyn. It is a plain and spacious stone building, well si- tuated with respect to airiness and other conve- niences. It was erected by public donations in the year 1799, and is supported by voluntary contributions. The market, which is also of modem erection, is compact and convenient, al- though rather too small for the increasing popu- lation of the town. The market days are Wed- nesdays and Saturdays, on the latter of which it is abundantly supplied with butchers' meat, poultry, fish, vegetables, and other edibles. Fairs are held here on the Wednesday in Mid- Lent, Wednesday in \ hitsun-week, the 19th of November, and the 8th of December. Meeting houses for Independents, Baptists, Methodists, and other sects of dissenters, are in different parts of the town, some of which have Sunday-schools attached to them.

TRU'SION, n. s. Latin t-itdo. The act of thrusting or pushing.

By attraction we do not understand drawing, pumping, sucking, which is really pulsion and tru- tion. Bentley.

*TRUSLER (Dr. John), a literary compiler, born in London in 1735, and brought up in on**

t>f the humblest lines of physic, contrived to get into holy orders, and for some time officiated as a curate. At length, in 1771, lie hit upon the more profitable scheme of composing abridg- ments of popular sermons, printed in imitation of manuscript. He next established a bookselling concern upon an extensive scale, and by business and the success of his numerous compilations for youth, &c., realised a handsome fortune. He died at Englefield-green, where he had purchased an estate, in 1820. The best of his compilations are his Hogarth Moralised, and a Compendium of Chronology.

TRUSS, n. s. & v. a. Fr. trousse. A bandage by which ruptures are restrained from lapsing; any thing closely wrapped or thrust together; a bundle : to pack close together.

All as a poor pedler he did wend, Bearing a truts of trifles at his back, As belles and babies, and glasses in his packe.

Spenser.

What in most English writers useth to be loose and untight, in this author is well grounded, finely t'ramed, and strongly trussed up together. Id.

Some of them send the scriptures before, truss up bag and baggage, make themselves in a readiness, that they may fly from city to city. Hooker.

You might have trussed him and all his apparel into an eel-skin. Shakspeare. Henry IV.

The rebels first won the plain at the hill's foot by assault, and then the even ground on the top, by carrying up great trusses of hay before them, to dead their shot. Carew.

An ass was wishing for a mouthful of fresh grass to knap upon, in exchange for a heartless truss of straw. L'Estrange.

The fair one devoured a truss of sallet, and drank a full bottle to her share. Addison. Spectator.

A hernia would succeed, and the patient be put to the trouble of wearing a truss.

Wiseman's Surgery.

TRUSS, in a ship, a machine employed to pull a yard home to its respective mast, and retain it (irmly in that position.

A Tnrss OF HAY contains fifty-six pounds, or half a bund red weight : thirty-six trusses make a load.

TRUST, n. s., v. a., & ˆ Goth, and Runic TRUSTEE', n. s. [v. n. \ traust ; Swedish and TRIST'ER, jˆTeut. trost. Confi-

TRUST'INESS, j dence ; reliance ;

TRUST'LESS, adj. | credit ; confident

THUST'Y. J opinion ; deposit ;

state of having something confided to one : the verb corresponds : a trustee is one entrusted : a truster, he who trusts : trustiness, and the adjec- tives following correspond.

The Lord is a buckler to all that trust in him.

2 Samuel, xxii.

He removeth away the speech of the trutty, and takelh away the understanding of the aged.

Job, xii. 26.

I trust to come unto you, and speak face to face.

2 John.

When he saw no power might prevail, His trusty sword he called to his aid. Spenser.

1 beheld this fickle trustless state Of vain world's glory flirting to and fro. Id.

I serve him truly, that will put me in trust.

Shakspeare. Kii g Lear.

This trusty servant Shall pass between us. Id.

Nor shall you do mine ear that violence, To make it truster of your own report Against yourself. Id. Hamlet.

Well you may fear too far — — Safer than trust too far. Shakspeare.

What a fool is honesty ! and trust iis sworn bro- ther, a very simple gentleman. Id.

Even such is time, who takes on trust Our youth, our joys, our all we have,

And pays us but with age and dust. Raleigh. They cannot see all with their own eyes ; they must commit many great trutts to their ministers.

Racon.

I'd be torn in pieces ere I'd trust a woman With wind. Ben Jonson.

Having made choice of such a confessor that you may trust your soul with, sincerely open your heart to him, and look upon him only as he is a trustee from God, commissioned by him as his ministerial deputy, to hear, judge, and absolve you.

Taylor's Guide to a Penitent. Being transplanted out of his cold barren diocese he was left in that great trust with the king.

Clarendon.

Expect no more from servants than is just; Reward them well, if they observe their trust.

Denham.

Fooled by thee to trust thee from my side. Milton. His trust was with the Eternal to be deemed Equal in strength. Id.

Whom I trusted to be my friend, all I had was in his power, and by God's blessing I was never de- ceived in my trust. Ftll.

In my wretched case 't will be more just Not to have promised, than deceive your trust.

Dry den. Guyomar his trusty slave has sent.

/

V\ horn with your power and fortune, Sir, you trust, JVow to suspect is vain. Vryden.

You are not the trustees of the public liberty ; and, if you have not right to petition in a crowd, much less to intermeddle in the management of affairs.

Id.

The simplicity of the goat shews us what an ho- nest man is to trust to that keeps a knave company.

L'Estrange.

Most take things upon trust, and misemploy their assent by lazily enslaving their minds to the dictates of others. Locke.

If the good qualities which lie dispersed among other creatures, innocence in a sheep, trustiness in a dog, are singly so commendable, how excellent is the mind which ennobles them into virtues !

Grew's CosmoLigia.

These prodigious treasures, which flowed into him, he buried under ground by the hands of his most trust v slaves. Addison.

My misfortunes may be of use to credulous minds, never to put too much trust in deceitful men. Swift.

TRUTH, n. s. Saxon tjieopfca, i. e. true- hood. Reality; veracity; conformity of notion or words to things ; constancy ; fidelity ; right opinion ; exactitude : used by way of concession, as in the first example from Scripture.

Of a truth. Lord, the kings of Assyria have de- stroyed the nations. 2 A'i/ ios, xix. 17.

She said, truth, Lord : yet the dogs cat of the crumbs which fall. Mutt. xv. 27.

In truth, what should any prayer, framed to the ministers's hand, require, but only so to be read as

b.rlKKt'lll '. Hooker

The money I tender for him in the court ; If this will not suffice, it must appear That malice bears down truth. Shahpeare.

So young and true, — Let it be BO, thy truth then be thy dower. Id.

All tntthi are equal, veritas non recipit magis ac minus. Wilkins.

Persuasive words, impregned With reason to her seeming and with truth.

Milton.

That men are pubescent at the year of twice seven, is accounted a punctual truth. Browne.

Truth is the joining or separating of signs, as the things signified agree or disagree. Locke.

Ploughs to go true depend much upon the truth of the iron-work . Mortimer's Husbandry.

But, self-devoted from the prime of youth To life sequestered, and ascetic truth, With fasting mortified, worn out with tears, And bent beneath the load of seventy years.

Harte.

There are innumerable trutht with which we are wholly unacquainted. Beattie.

The thoughts of past pleasure and truth, The best of all blessings below.

TRUTH, a term used in opposition to falsehood, and applied to propositions which answer or ac- cord to the nature and reality of the thing whereof something is affirmed or denied. See META- PHYSICS.

TRUTINATION, n. s. Latin trutina. The act of weighing ; examination by the scale.

Men may mistake if they distinguish not the sense of levity unto themselves, and in regard of the scale or decision of trutination.

Browne's Vulgar Errour;. TRUXILLO, a city of the Carraccas, iu Colombia, was formerly very splendid and flou- rishing, being founded in 1570. In the first cen- tury of its foundation, it had edifices that would have been deemed splendid in Europe; and drew hither a number of Spaniards: but in

1678 the buccaneer, Francis Gramont, entered Venezuela, with a handful of men, attacked and completely sacked and destroyed this wealthy city, killing or putting to flight its inhabitants, and reducing its superb edifices to ashes. The ruins of many still remain. Since this period Truxillo has never revived to the same extent of prosperity. The salubrity of the air, and the fertility of the soil, have, however, drawn together about 7600 inhabitants.

TRUXILLO, a town of Guatimala, Central America, situated between two rivers of good water, on a hill near the sea in Truxillo Bay. This sea-port has very often been ravaged by the Dutch and British. It is at present a place of little account, though made, by some writers, the capital. It is ninety miles north of Valladolid. TRUXILLO, the most northern intendancy of Peru, bounded by the river Tumhez and Guaya- quil on the north-west ; Jaen de Bracamoros on the north-east; the Lauricocha or Tunguraguaon the north ; the Rio Guallaga and Pampas del Sacramento on the east; the Pacific on the west ; and the province of Tarma on the south ; containing within its limits seven jurisdictions ; viz., Sana, Piuru, Truxillo, Caxamarca, Cha- chopoyas, Llulia, and Chiloas and Pataz. TRi'xiLLO,adepartment in the above intendancy,

which is bounded on the west by the Pacific Ocean, on the south by the river Sana, on the north by the province of Caxamarca, and on the east by that of Guamachuco. It extends twenty- leagues along the coast and as many into the interior.

TRUXILLO, the chief town of the above depart- ment and province, pleasantly situated, and sur- rounded with gardens,groves,and delightful walks. It \vas founded in 1535, by Pizarro, on the banks of a small river, at the distance of half a lengue from the sea. The houses, chiefly of brick, have a very neat appearance. An intendant, and the bishop of Truxillo, reside here. The inhabitants amount to 5800, and consisted very lately of rich Spaniards, some Indians, mestizoes, and mulattoes. Truxillo is surrounded with a low brick wall, flanked by fifteen bastions ; and car- ries on its commerce by means of its port of Guanchaco, which is about two leagues to the northward, and the only good harbour on the coast from Callao to Tumbez. 480 miles south of Quito, and 268 N. N. W. of Lima.

TRY, v. a. & v. n. Saxon t jiypian ; Fr. trier ; Swed. trygga. To examine ; make experiment of; assay; examine; bring to a decision or test ; act on as a test ; purify : as a verb neuter, to endeavour ; attempt.

Doth not the ear try words, and the mouth taste meat ? Job.

The trying of your faith worketh patience.

Jamet, i. 3.

Some among you have beheld me fighting, Come try upon yourselves what you have seen me.

Shakspeare .

The fire seven times tried this ; Seven times tried that judgment is, Which did never chuse amiss. Id.

He first deceased, she for a little tried To live without him, liked it not, and died.

Wottmt.

They open to themselves at length the way Up hither, under long obedience 'ried. Miltmi.

Some to far Oaxis shall be sold, Or try the Lybian heat, or Scythian cold. Dryde

Id. Don Sebastian.

To ease her cares, the force of sleep she tries ! Still wakes her mind, though slumbers seal her eyes.

Swift.

TRYPHIODORUS, an ancient Greek poet, who lived between the reigns of Severus and Anastasius. None of his numerous writings have come down to us but an epic poem, of which there are several editions, and Italian and English versions.

TSCHERKASK, the capital of the Don Cos- sacks, in the south-east of European Russia. The town now called Old Tscherkask is situated on the right bank of the Aksai, a branch of the Don, and is surrounded on every side by marshes ; a site probably chosen on account of the diffi- culty of approaching it. It is overflowed every year, from the beginning of April to the end of June, the ground floors of the houses being un- der water during all the time. This drawback led to a removal, after the peace of 1814, of the capital to New Tscherkask, situated at the con- fluence of the Aksai and Turlov, at a distance of

five miles. The streets in the new town are wide and straight ; but the houses, merely wooden huts, thinly spread ; so that, though the town extends a league and a half, the population amounts at present to only 5000. That of Old Tscherkask, formerly 15,000, is at present re- duced to 10,000. The old town has a particular slobode or quarter assigned to its Tartar inha- bitants, and is situated forty miles east by north of Azoph, and 250 E. S.E. of Ekaterinoslav.

TSCHUVASCHES, a tribe of Finnish origin, spread over several provinces of Russia, viz. those of Kasan, Simbirsk, Orenbourg, Niznei- Novgorod, and Viatka, in Europe, and Tomsk in Asia. Their number is full 106,000, of whom about 23,000, settled in the government of Kasan, have embraced Christianity and become agricul- turists, the rest are wandering Pagans. They are all extremely indolent and dirty, but a simple inoffensive race. In taking an oath, their only form is holding a little bread and salt in their hands to say, ‘ May these fail me if I lie.’

TSONG-MING, an island near the coast of China, in the Eastern Seas, near the mouth of the Yang-tse-kiang River, about fifty miles in length, and fifteen in breadth. It was formerly a place of banishment for criminals, who were joined by some poor Chinese families, and they divided the lands amongst them. The country is divided by an infinite number of canals with high banks. The island contains only one city of the third rank, surrounded with high walls, and a ditch.

TUAM, a large and well built town of Ireland, in Galway, consisting of four main streets, which diverge nearly at right angles from the market-house. Here is also an elegant maM, and a spa- cious archiepiscopal palace. The cathedral, si- tuated at the western extremity of the town, is a neat but not very extensive edifice, adorned with a lofty spire and steeple. The linen manufacture is extending here. An abbey is said to have been founded at Tuam in 487. Here are other religious edifices. But Tuam, with all its churches, was consumed by fire in 1244. It was a borough previous to the union with Great Britain, and sent two members to the Irish par- liament. Seventeen miles N. N. E. of Galway, and ninety-three south-west of Dublin.

TUARIC K, a numerous tribe of Central Africa, occupying all the territory to the west and south of Soudan, as far as the country on the Niger. They are described by captain Lyon as the finest and tallest race of men he ever saw; having an imposing air of pride and independence ; and their skin generally white, except in those parts that are exposed to the climate. The most re- markable feature in their costume consists in a piece of glazed

cotton cloth, generally blue, with \vhich they cover their faces as high as the eyes, and which hangs down on the breast below the chin. The beard is generally clipped very close. They wear blue turbans, surmounted by high red caps ; while the body is generally covered with a loose shirt of blue cotton. The merchants add to their dress a kaftan or cloak of bright red cloth or very pay ˆilk and cotton striped, which they procure from the Tripolinc traders. They wield the sword, dagger, and spear, very dexterously.

They generally also carry a long gun, and ar? considered sure marksmen. They are also gooc. horsemen. It was amongst this tribe that major Laing was so desperately wounded, just before he reached Tombuctoo.

TUB, n. s. Belgic tubbe, tobbe. A large open vessel of wood.

Season the slaves For tubs and baths, bring down the rose-cheekeu

youth To the' «u6-fast, and the diet. Shakspeare. Timon.

In the East Indies, if you set a tub of water open in a room where cloves are kept, it will be drawn dry in twenty-four hours. Bacon's Katural History.

They letch their precepts from the Cynick tub.

Milton.

Skilful coopers hoop their tula, With Lydian and with Phrygian dubs. Hudibras.

TUBE, n. s. Fr. tube ; Lat. tubus. A pipe; siphon ; long hollow body.

A spot like which astronomer Through his glazed optick tube yet never saw.

Milton.

There bellowing engines with their fiery tufas Dispersed aethereal forms, and-down they fell.

Roscommon.

This bears up part of it out at the surface of the earth, the rest through the tubes and vessels of the vegetables thereon. Woodward's Natural History.

TU'BERCLE, n.s. Fr. tubercule; Lat. tu- berculum. A small swelling or excrescence on the body ; a pimple.

By what degrees the tubercles arise, How slow, or quick, they ripen into size. Sewcll.

A consumption of the lungs, without an ulcera- tion, arrives through a schirrosity, or a crude tuber- cle. Harvey.

TUBERCLES, among physicians, denote little tumors which suppurate and discharge pus ; and are often found iu the lungs, especially of con- sumptive persons. See MEDICINE, Index.

TU'BEROSE, n. s. From TUBEROUS, see below. A flower.

The stalks of tuberose run up four foot high, more or less ; the common way of planting them is in pots in March, in good earth. Mortimer's Husbandry.

Eternal spring, with smiling verdure, here Warms the mild air, and crowns the youthful year ; The tuberose ever breathes, and violets blow.

Garth.

TU'BEROUS, adj. Fr. tubereux ; Lat. tuber. Having prominent knots or excrescences.

Parts of tuberous haematite shew several varieties in the crusts, striature, and constitution of the body.

Wood'Mtrd.

Lat. tubulus. A small

*E, n. *.) Lai*

i, adj. > pipe, or fistular body : the •ED. j adject

TU'BULE, n. s.

TU'BULAR,

TU'BULATED. ') adjective corresponding.

He hath a tubular or pipe-like snout, resembling that of the hippocampus, or horse-fish.

Grew'f Museeum.

As the ludus Helmontii, and the other nodules, have in them sea-shells that

were incorporated with them during the time of their formation at the deluge, so these stones had then incorporated with them testaceous tubules, related to the siphunculi, or rather the vermiculi marini. Woodward on Fossils.

The teeth of vipers are tubulated for the convey- ance of the poison into the wound they make ; but their hollowness doth not reach to the top of the tooth. Derham's Physico-Thfology

*TUCK, n. *., v. a., & v.n.) Fr. estoc ; Itai.*

*TUCK'ER, n. *. } stocco ; We.sh*

twfca, a knife. A long narrow sword ; long narrow fold or net : to gather into a narrow com- pass ; enclose : and as a verb neuter contract : tucker is a kind of tuck worn on the bosom.

If he by chance escape your venomed tuck, Our purpose may hold there. Shakipeare. Hamlet.

The luck is narrower meshed, and therefore scarce lawful with a long bunt in the midst. Carew.

These being primed, with force he laboured To free 's sword from retentive scabbard ; And after many a painful pluck, from rusty durance he bailed tuck. Hudibras.

.Make his bed after different fashions, that he may not feel every little change, who is not to have his maid always to lay all things in print, and tuck him in warm. Locke on Education.

The following age of females first tucked, up their garments to the elbows, and exposed their arms to the air. Additon.

A female ornament by some called a tucker, and by others the neck-piece, being a slip of fine linen or muslin, used to run in a small kind of ruffle round the uppermost verge of the stays. Id. Guardian.

Dick adept ! tuck back thy hair, And I will pour into thy ear. Prior.

An ulcer discharging a nasty thin ichor, the edges tuck in, and growing

skinned and hard, give it the name of a callous ulcer. Sharp' Surgery.*

TUCKER (Abraham), esq., published 9 vols. on Metaphysics, under the assumed name of Search. He died at his estate of Dorking, in Surrey, in 1775.

TUCKER (Josiah), D. D., a celebrated English divine, born at Laugharne, in Caermarthenshire, in 1711 ; and educated at St. John's College, Oxford, where he graduated in 1759. He be- came rector of St. Stephen's in Bristol, and pre- bendary of the cathedral. In 1768 he was made dean. He was an able writer on political, com- mercial, and theological subjects. His chief work is his treatise on Civil Government against Locke, 8vo., 1781. He died in 1799.

TUCK'ETSONANCE,n.«. From tuck. Ital. 'occo, a musical key. The sound of the tucket. An ancient instrument of music.

Let the trumpets sound The tucketsonance and the note to mount.

Sltakspeare. Henry V.

TUCUMAN, a province and government of Buenos Ayres, bounded on the north-east by Chichas and Lipes in Charcas ; north-west and west by Atacama ; west and south-west by Cuyo or Cujo; south-east by the Pampas or territories inhabited by the Aucaes, Huarcas, or Pampas, pihuenches, Puelches, Uncos, and other uncon- c/uered tribes which wander over the plains and mountains adjacent to Chili ; on the south-east 't has the jurisdiction of Sante Fe, in Buenos Ayres ; and on the east it has the uncultivated Llanos de Manso, and the country of Chacos or Chaco Gualamba. Its extent is from lat. 22° to 33° 10′ S. ; its length 370 leagues; and its breadth 190 leagues from east to west. The climate is hot in those parts farthest from the main chain and branches of the Andes; but in general the seasons are regular, and the soil pro- lific and good.

The Spaniards conquered this country after subjugating Peru ; and Diego de Roxas was the first discoverer in 1543; but it was not subdued till the president Pedro de la Gasca sent Juan Nunezde Padro, in 1549, to establish settlements in Tucma or Tucuman. The inhabitants prov- ing of a mild and peaceable nature, the expedi- tion was unattended with any bloodshed, and four cities were immediately founded, namely, Santiago del Estero, San Miguel del Tucuman, Nuestra Senora de Talavera, and Cordova de la Nueva Andalucia ; but these being found insuf- ficient in so large a territory, Rioja, Santa, and Jujui or Xuxui, were soon afterwards added.

TUCUMAN, or SAN MIGUEL DE TUCUMAX, the capital of the above

province, is situated in a pleasant plain, though much in want of water. Here is a Jesuit's college, a cathedral, and aeon- vent of Franciscans. It has a trade in mules ; but its principal traffic consists in oxen for the travelling waggons, and in the waggons themselves. There are also some unworked silver mines in its neighbourhood. San Miguel is the see of a bishop who resides at Cordova. The bishopric is that of Tucuman, and was erected in 1570. It was founded in 1685, but placed in a different situation from its present, on account of an in- undation which swept away the church and houses. 1170 miles in a direct line from Lima, 462 south of La Plata, and 200 east of Copiapo.

TUDELA, a town in Navarre, Spain, at the confluence of the Queilos and Ebro. It is the second city in the province, and a bishop's see, having a fine bridge and most beautiful walks ; but the interior is spoiled by the narrowness of the streets. The adjacent country is fertile in corn, fruit, hemp, and pasturage : and the canal of Arragon begins about two miles from this place. Tudela was in 131 4 the scene of a defeat of the inhabitants of Navarre by the Castilians, and in 1808 of a more serious overthrow of the Spaniards by the French. Population 7300. Forty-five miles south of Pampeluna.

TVER, one of the central governments of Eu- ropean Russia, between those of Moscow and Novgorod, and extending from 56° to 58° 40′ N. lat., and from 32° 20′ to 39° of E. long. It has a superficial extent of 24,100 square miles, with about 1,000,000 inhabitants, partly of Rus- sian, and partly of Finnish descent. The rivers are constantly frozen over from the beginning of December to the end of March. These are pretty numerous : the principal are the Wolga, the Dwina, the Msta, the Tvertza, the Mologa, and the Meduevitza, none of which are of large size in this government. The chief lakes are the Seliger, the Wolga, and the Dvinez. Besides, there is a large canal for the internal communi- cation called Vischnei-Yolotschok.

TVER, a city of European Russia, the capital of a government, and an archbishop's see, stands on the great road from St. Petersburg to Moscow, at the confluence of the Tvertza, the Wolga, and the Tmaka, which divide the town into four parts, united by three bridges, the one over the Wolga being of boats, that it may be removed during winter. Tver has been repeatedly ravaged by fire, particularly in 1763, when only a few houses ut re saved. The principal streets are broad

and perfectly straight ; they all proceed from an open space in the centre of the town in the form of an octagon. The houses of the principal streets are of brick stuccoed white, and have an elegant appearance. There are also several handsome squares. The chief public buildings are an old Gothic cathedral, a palace, the courts of justice, the government-offices, and the hos- pital. The manufactures comprise linen, wax, lea- ther, candles, and hardware. The population of the town is about 20,000. Its origin is traced back to 1240: its annexation to the Russian do- minions took place in 1490. 100 miles N.N. W. of Moscow, and 300 south-east of St. Petersburg.

TUFA, a stone consisting of volcanic ashes concreted together with various other species of stone. It is of various colors, blackish gray, bluish gray, and yellow ; every color having a different mixture and solidity ; but all of them have the bad quality of mouldering down on long exposure to the weather. The yellow kind resists the air less than any other.

TUFT, n. s. & v.a. } Fr. tuffe ; Swed. toft.

TUFT'ED, adj. > A bunch of threads, rib-

TCFT'Y. 5 bands, leaves, &c. joined

together ; a cluster : to tuft is to adorn with a tuft : the adjective corresponding.

Going a little aside into the wood, where many times before she delighted to walk, her eyes were sa- luted with a tuft of trees so close set together, as with the shade the moon gave through it, it might breed a fearful kind of devotion to look upon it.

Sidney. My house is at the tuft of olives hard by.

Shakspeare.

Upon sweet brier, a fine tuft, or brush of moss of divers colours, you shall ever find full of white worms.

Bacon.

An island lie

Girt with the unmeasured sea : and is so nie, That in the midst I saw the smoke arise, Through tufts of trees. Chapman.

With high woods the hills were crowned ; With tufts the valleys, and each fountain side With borders 'long the rivers.

Milton's Paradise Lost. Towers and battlements it sees, Bosomed high in tufted trees, Where perhaps some beauty lies, The cynosure of neighbouring eyes. Milton.

It is notorious for its goatish smell, and tuft not unlike the beard of that animal.*

More againtt Atheiim.

A tuft of daisies on a flowery lea. Dryden.

The male among birds often appears in a crest, comb, a tuft of feathers, or a natural little plume, erected like a pinnacle on the top of the head.

Add'uon's Spectator. Sit beneath the shade

Of solemn oaks, that tuft the swelling mounts, Thrown graceful round. Thomson.

'Midst the desert fruitful fields arise, That, crowned with tufted trees and springing corn, Like verdant isles the sable waste adorn. Pope.

TUFTAF'FETY, n. s. From tufted and taf- fety A villous kind of silk.

His cloaths were strange, though coarse ; and

black, though bare :

Sleeveless his jerkin was, and it had been Velvet •, but it was now, so much ground was seen, Become tufftnffetu. Donne.

TUG, v. a., v. n., & ;j. s. Sax. reijan, teojan. To pull with continueˆ strength or effort : to draw; pluck: as a verb neuter, contend; struggle: a pull of this kind. The meaner sort will lug lustily at one oar. Sandys.

His face is black and full of blood, His hands abroad displayed, as one that graspt And tugged for life. Hhaks/ > eare. Henry 17.

Priest, beware thy beard ; I mean to tug it, and to cuff you soundly. Id.

Go now with some daring drug, Bait thy disease, and while they tug, Thou, to maintain the cruel strife, Spend the dear treasure of thy life. Craihaw.

No more tug one another thus, nor moil your- selves; receive

Prise equal ; conquests crown ye both : the lists to others leave. Chapman's Iliad.

These two massy pillars With horrible confusion to and fro He lugged, he shook, till down they came, and drew Upon the heads of all that sat beneath The whole roof after them, with burst of thunder.

Milton.

Take pains the genuine meaning to explore, There sweat, there strain, tug the laborious oar.

Roscommon. Downward by the feet he drew

The trembling dastard : at the tug he falls, Vast ruins come along, rent from the smoking walls,

Dryden.

We have been tugging a great while against the stream, and have almost weathered our point; a stretch or two more will do the work.

Addison on the War.

They long wrestled and strenuously tugged for their liberty, with a no less magnanimous than con- stant pertinacy. Howe.

TCG, Fr. a Turkish term for tail; a sort of standard called so by the Turks. It consists of a horse's tail, which is fixed to a long pole, or half pike, by means of a gold button. The origin of this standard is curious. It is said that the Christians having given battle to the Turks, the latter were broken, and in the midst of their confusion lost their grand standard. The Turk- ish general, being extremely agitated at the un- toward circumstances which happened, most especially by the loss of the great standard, cut off a horse's tail with a sabre, fixed it' to a half pike, and, holding it in his hand, rode furiously towards the fugitives, and exclaimed, Here is the great standard ! let those who love me follow me into action ! This produced the desired effect. The Turks rallied with redoubled courage, rush- ed into the thickest of the enemy, and not only gained the victory, but recovered their standard.

Other writers assert that 6000 Turks, having been taken prisoners during a general engage- ment, contrived to escape from their guard, or escort, and afterwards fought so gallantly that they gained another battle ; that, in order to re- cognize one another, they cut off a horse's tail which they carried as a standard ; that when they joined the Ottoman army they still made use of the tug or tail ; that the Turks, in conse- quence of the victory which was obtained under this new standard, looked upon it as a happy omen : and that since that period they have al- ways fought under it, as

their banner and the signal of success. Whatever may have been the origin, it is certain that when the grand seignior

takes tho field in person, seven of these tails are always carried before him ; and, when he is in camp, they are planted in front of his tent.

The grand vizier is entitled to three of these tails. The three principal bashaws of the empire (viz. those of Bagdad, Grand Cairo, and Buda), have the grand signior's permission to use this mark of distinction throughout the whole extent of their jurisdiction. Those bashaws that are not viziers have the privilege of having two tails. The Beys, who are subordinate to the bashaws, have only one.

In the bas-relievo which is under the tomb- stone of John Cassimir, king of Poland, in the abbey church of St. German des pres de Paris, that monarch is represented at the head of his cavalry, with a horse's tail, or tug, for his standard.

TUISCO, or TUISTON, a celebrated hero and god of the ancient Germans, the Mars or god of war among the Saxons, from whom our Tuesday is named.

TUITION, n. s. Lat. tuitio, from tueor. Guar- dianship ; superintendent care ; care of a guardian or tutor.

A folly for a man of wisdom to put himself under the tuition of a beast. Sidney.

They forcibly endeavour to cast the churches, under my care and tuition, into the moulds they have fashioned to their designs. King Charles.

If government depends upon religion, this shews the pestileotial design of those that attempt to dis- join the civil and ecclesiastical interests, setting the latter wholly out of the tuition of the former.

Soutli's Sermons.

When so much true life is put into them, freely talk with them about what most delights them, that they may perceive that those under whose tui- tion they are, are not enemies to their satisfaction.

Locke.

TULA, a government or province in the in- terior of Russia, to the south of Moscow. It extends from 52° to 55° of N. lat., and has a sur- face of nearly 12,000 square miles, with a popu- lation of 950,000. Like others of the provinces of European Russia, it may be called a great un- dulating plain. The climate is healthy, the soil in general of a middling quality.

TULA, a large town of European Russia, the capital of a government, is situated at the con- fluence of the Tulpa and the Upa. This place, the population of which now approaches to 40,000, is called the Sheffield of Russia, and is one of the few towns in the empire that can oe termed a place of activity. Here is a cannon foundry, a manufacture of arms for government, viz. muskets, bayonets, swords, &c. ; and in the town there are about 600 workshops of smiths and others, for making fire arms and cutlery for private use. The ore is supplied in abundance from the vicinity. Tula was founded in the be- ginning of the sixteenth century, but the mines were not discovered till long afterwards ; and it was not till 1717 that the government manufac- ture was established by Peter I. This place was made a bishop's see in 1799. The river Don has its rise in the lake of Ivanou, at a short dis- tance. 115 miles south of Moscow, and 487 south-east of St. Petersburg.

TULDEN (Theodore Van), a celebrated Dutch painter, born at Bois-le-Duc, in 1607. He painted historical and ludicrous subjects. He died in 1676.

TU'LIP, n. s. Fr. tulipe ; Lat. tuhoa. A flower.

The tulip opens with the rising, and shuts with the setting sun. llukew'M.

Why tulips of one colour produce some of another, and, running through all, still escape a blue.

Browne's Vulgar Erronrs.

TULIP TREE. See LIRIODENDRON.

TULIPA, the tulip, in botany (see BOTANY, Index), a genus of plants belonging to the class of hexandria, and order of monogynia ; and in the natural system ranging under the tenth order, coronariae. The corolla is hexapetalous and campanulated, and there is no style. The species of this genus are four, viz. 1. T. biflora, the double-flowered tulip. 2. T. breyniana, the Cape tulip, a native of the Cape of Good Hope- 3. T. gesneriana, Gesner's Turkey tulip of Cap- padocia, or common garden tulip, having a large, oblong, tunicated, solid, bulbous root, covered with a brown skin, sending up long oval, spear- shaped leaves ; an upright round

stalk, from half a foot to a yard high, garnished with a few leaves, and its top crowned with a large bell- shaped erect hexapetalous flower, of almost all colors and variegations in the different varieties. It is a native of the Levant. The principal part should be planted in autumn, and the rest to- wards Christmas, and in January or February. Of this species the varieties may be divided into two principal classes, viz. 1. Early or dwarf spring tulips (praecocea), 2. Late-flowering tall tulips (serotina). 4. T. sylvestris, or wild Euro- pean tulip, or Italian yellow tulip, a native of the south of Europe, has an oblong bulbous root, sending up long narrow spear-shaped leaves ; and a slender stalk, supporting at top a small yellow flower, nodding on one side, having acute petals.

TULIPOMANIA (from tulipa, and p.avuz, madness), the name given to a kind of gambling traffic in tulip roots, which prevailed in Holland and the Netherlands during part of the seven- teenth century. It was carried on to such an enormous extent that one root has been sold for 4600 florins, together with a new carriage, two gray horses, and a complete harness. The tulips, however, were seldom delivered. A nobleman bespoke of a merchant a tulip root, to be de- livered in six months, at the price of 1000 florins. During these six months the price of that species of tulip must have risen or fallen, or remained as it was. But, instead of demanding his tulip then, he paid or received the difference of price. This singular species of gaming could, from its nature, only go to a limited extent. The value of tulip roots began to fall. The sellers were then anxious to deliver the roots in natura, but the buyers would not receive them. The conse- quence was that tulips very speedily fell to their intrinsic value, and the gambling was at an end.
*TULL (Jethro), an Oxfordshire gentleman, who projected a new method of culture to raise repeated crops of wheat from the same lana without the necessity of manure; the principle**

of which he published in A Treatise on Horse- hoeing Husbandry.

TULLE, a considerable town in the south- west of France, capital of the department of the Correze, stands at the confluence of the Correze and Solane, partly on the declivity, and partly at the foot of a mountain, surrounded by heights and precipices. It has crooked and angular streets, and no public buildings except its churches and hos- pital. Its population of 9000 is employed partly in the manufacture of woollen stuffs and paper, partly in preparing for sale brandy, chocolate, and liquors. It is the seat of

the different branches of the departmental administration, and the see of a bishop. Forty-two miles south-east of Limoges.

TUM'BLE, v. n., v. a., &} Fr. tomber ; Belg.

TCM'BLER, n. s. [n. s. > tommelen ; Italian

TUM'BREL. j tombolare. To fall ;

come down violently ; fall in great quantities ;

roll about : to turn over ; throw down or about :

a fall : a tumbler is one who exhibits feats of

tumbling with the body : tumbrel, a dung cart.

I saw at the bottom of one tree a gentleman bound with many garters hand and foot, so as well he might tumble and toss. Sidney.

Glo'ster stumbled, and in falling struck me Into the tumbling billows of the main.

Shakipeare. Richard HI. Though the treasure Of nature's germins tumble all together, Answer me. Shakspeare.

When it came to the ears of Maximilian, and tumbling it over and over in his thoughts, that he should at one blow be defeated of the marriage of his daughter and his own, he lost all patience.

Bacon's Henry VII.

What strange agility and activeness do common tumblers and dancers on the rope attain to by ex- ercise ! IVitkins.

King Lycurgus, while he fought in vain His friends to free, was tumbled on the plain.

Dryden.

My corps is in a tumbril laid, among The filth and ordure, and inclosed with dung; That cart arrest, and raise a common cry, For sacred hunger of my gold I die. Id.

A country fellow got an unlucky tumble from a tree : why, says a passenger, I could have taught you a way to climb, and never hurt yourself with a fall.

L'Estrange.

If a greater force than his holds him fast, or tum- bles him down, he is no longer free. Locke.

He sometimes rode in an open tumbril. Taller.

Reform our sense, and teach the men t'obey ; They'll leave their tumbling, if you lead the way.

Rnwt.

Sisyphus lifts his stone up the hill ; which carried to the top, it immediately tumbles to the bottom.

Adtlison.

To stand or walk, to rise or tumble, As matter and as motion jumble. PriVr.

They tumbled all their little quivers o'er, To chuse propitious shafts. Id.

A man by tumbling his thoughtst and forming them into expressions, gives them a new fermenta- tion, which works them into a finer body.

Collier on Pride.

What shall I do with this beastly tumbril? go lie down and sleep, you sot. Congreve.

Nic bounced up with a spring equal to that of the nimblest tumblers or rope-dancers. Arbuthnot.

Never by tumbler through the hoops was sho-vn Such skill in passing all, and touching none. Pane TUMBLE-DUNG, in entomology. See SCA-

RAB^EUS.

TUMBREL is also a kind of carriage with two wheels, used in artillery to carry the tools of the pioneers, &c., or the monev of an army.

TU'MEFY, v. a. > "Lai. tumefucio. To

TUMEFAC'TION, n. s. > swell ; to make to swell : swelling.

A consumption actually begun is, when some parts of the lungs are knotted and tumefed.

Btackmore.

A fleshy excrescence, exceeding hard and tume- fied, supposed to demand extirpation.

Sharp's Surgery.

I applied three small causticks triangular about the tumefied joint. Wiseman's Surgeri/.

The common signs and effects of weak fibres are paleness, a weak pulse, tumefactions in the whole body. Arbuthnot.

TU'MID, adj. ˆ Latin tumidus. Swell-

TU'MOROOS, > ing ; puffed up ; protuber-

TU'MOR, n. s. J ant ; pompous : this is also the meaning of tumid : tumor (noun substantive) is a morbid swelling; affected pomp.

According to their subject, these stiles vary : for that which is high and lofty, declaring excellent matter, becomes vast and tumerous, speaking of petty and inferior things. Ben Jonsou.

His limbs were rather sturdy than dainty, sublime and almost tumorous in his looks and gestures.

Wotton.

His stile was rich of phrase, but seldom in bold metaphors ; and so far from the tumour, that it rather wants a little elevation. Id.

So high as heaved the tumid hills, so low Down sunk a hollow bottom broad and deep, Capacious bed of waters. Milton.

Though such expressions may seem tumid and as- piring ; yet cannot I scruple to use seeming hyper- boles in mentioning felicities, which make the highest hyperboles but seeming ones. Boyle.

It is not the power of tumour and bold looks upon the passions of the multitude. L'Estrange.

Having dissected this swelling vice, and seen what it is that feeds the tumour, if the disease be pride, the abating that is the most natural remedy. Government of the Tongue.

Tumour is a disease, in which the parts recede from their natural state by

an undue increase of their bigness. Wiseman.

TU'MULATE, v. n. Latin tumido. To swell. This seems to be the sense here, but I suspect the word to be wrong. — Johnson.

Urinous spirits, or volatile alkalies, are such ene- mies to acid, that as soon as they are put together, they tumuUite and grow hot, and continue to fight till they have disarmed or mortified each other.

Bovle.

TU'MULT, n. s. "I Fr. tumulte ; 'Lat.

TUMUL'TUARINESS, tumultus. A promis-

TUMUL'TUAR, adj. icuous commotion :*

THMULTUA'TIOS, n. s. f stir : violence ; a

TUMUL'TUOUS, adj. I multitude in commo-

TUMUL'TUOUSLY, adv. J tion : tumultuariness is violence ; turbulence : tumultuary, disorderly ; promiscuous : tumultuation, agitation ; confu- sion : the adjective and adverb correspond with tumult.

The winds began to speak louder, and, as in a tu multuous kingdom, to think themselves the fittest in- struments of commandment. . ney.

Many civil broils, and tumultuous rebellions, they rairly overcame, by reason of the continual presence ol" their king, whose onlv person oftentimes contains .he unruly people from a thousand evil occasions. Spenser's State of Ireland.

Furiously running in upon him, with tumultuous speech, he violently raught from his head his rich cap of sables. Knolles.

What stir is this ? what tumults in the heavens 1 Whence cometh this alarum and this noise 1

Shakspeare.

Nought rests forme in this tumultuous strife, But to make open proclamation. Id.

It was done by edict, not tumultuously ; the sword was not put into the people's hand.

Bacon's Hot 11 War.

My followers were at that time no way proportion- able to hazard a tumultuary conflict. King Claries.

The tumultuariness of the people, or the factious- ness of presbyters, gave occasion to invent new mo- dels. Id.

The strong rebuff of some tumultuous cloud Hurried him aloft. Milton.

Is it likely that the divided atoms should keep the same ranks in such a variety of tumultuary agitations in that liquid medium ? GlanciUe's Scepsis.

That in the sound the contiguous air receives many strokes from the particles of the liquor, seems proba- ble by the sudden and eager tumultuation of its parts.

Btylt.

A tumult is improved into a rebellion, and a go- vernment overturned by it. L'Estrange.

This piece of poetry, what can be nobler than the .dea it gives us of the Supreme Being thus raising a tumult among the elements, and recovering them out of their confusion, thus troubling and becalming na- ture, Addison's Spectator.

The vital blood, that had forsook my heart, Returns again in such tumultuous tides, It quite overcomes me. Id. Cato.

Men who live without religion, live always in a t'lmnltuiirii and restless state. Atterbury.

With ireful taunts each other they oppose, Till in loud tumult all the Greeks arose. Pope.

TUN, n. s. & v. a. } Saxon tunne ; Belgic TTN'NAGE, n. $. > tonne; French tonne, ton- TUNN'ED, adj. jneau, A large cask ; large quantity ; a drunkard ; a large weight ; large space in a ship : to tun is to put in casks : tun- rage is the contents of a vessel measured in tuns.

I have ever followed thee with hate, Drawn tun of blood out of thy country's breast.*

Shaksptare.

If in the must, or wort, while it worketh, before it be tunned, the burrage stay a time, and be often changed with fresh, it will make a sovereign drink for melancholy. Boron.

So fenced about with rocks and lets, that, without knowledge of the passages, a boat of ten tuns can- cot be brought into the haven. Heytyu.

As when a spark Light on a heap of powder, laid Fit for the tun, some magazine to store Against a rumoured war. Milton.*

Here's a tun of midnight work to come. Og from a treason-tavern rolling home. Drydtn.

A tun about was every pillar there ; A polished mirrour shone not half so clear. /(/.

The consideration of the riches of the ancients ?eads to that of their trade, and to inquire into the oulk and tnnnnge of their shipping. Arbuihnnt.

Tru, a large vessel or cask, of an oblong form, liggest in the middle, and diminishing towards

its two ends, girt about with hoops, and used for stowing several kinds of merchandise for conve- nience of carriage, as brandy, oil, sugar, skins, hats, &c.

TUN is also the name of a measure. A tun of \ine is four hogsheads; of timber a square of forty solid feet; and of coals twenty hundred- weight.

TCN, or TON, is also a certain weight whereby the burden of ships, &c., are estimated.

TUN BRIDGE, a market-town of Kent in a branch of the Medway, five miles and a half S. S. E. from Seven Oaks, and thirty south-east by south from London. Tunbriclge consist chiefly of one long street. The town is now in a flourishing state, and once returned members to parliament. The church is a handsome modern structure. The ruins of its former magnificent cas- tle, the scene of many events recorded in British history, are still to be seen. Tunbridge is famous for its grammar school, founded by Sir Andrew Judd, lord mayor of London, in 1551. Many of the masters of this seminary have been distin- guished ; it is governed by three constables ; one

for the town, and two others for the hamlets of Southborough and Helden, which is a part of the town. Markets on Friday, and on the first Tuesday in every month for cattle. Fairs, Ash- Wednesday and July 5th.

TUNBRIDGE-WELLS,atown and chapelry, or rather a series of scattered villages, situate in the parishes of Speldhurst, Tunbridge, and Frant, in the hundred of Washlingstone, lathe of Ayles- ford, Kent, six miles south of Tunbridge, and thirty-six from London. It may be divided into four parts ; viz. Mount-Ephraim, Mount-Plea- sant, Mount-Sion, and the Wells, and is nearly two miles in length by one in breadth : it is daily growing into reputation and respectability. Mount Ephraim was once the most fashionable quarter, and had its assembly rooms, tavern, \r., but it is now chiefly occupied as lodging-houses. The part called the Wells is the centre of busi- ness and amusement, as it is here the springs, the library, the upper and lower parades, the theatre, the orchestra, the chapels, and the market-place, are situate. The upper parade, being the prin- cipal one, is paved with Furbeck stone; from it the lower parade is divided by a range of palli- sadoes. A portico, supported by wooden Tus- can pillars, runs the whole length of the princi- pal walk ; adjoining the chapel is a large and commodious charity-school for boys and girls, on the Madras system, and there are chapels for various classes of dissenters. The principal trade here, like that of Spa in Germany, is in the manufacture and sale of toys, made of cherry- tree, sycamore, &c. ; and the Tunbridge turnery- ware finds a considerable sale in most parts of the kingdom. The celebrated springs of Tun- bridge were first discovered in 1606 by Dudley, Lord North, who had retired into the neighbour- hood in the last stage of a consumption, and having been perfectly restored to health, by the use of the waters, the place acquired a celebrity which has ever since been gradually increasing. The new bath house is a handsome edifice, and the water supplied extremely clear ; the season begins in April and ends in November.

I. s., v. a., &-v

E, adj. [y. n.j

*T *

Dutch toon ; Swed. ton ; Italian tuono ; Fr. tone ; Latin tonus. A

-

i diversity of notes put J together ;

TUNE, n. s., v. a., TU'NABLE, TUNE'FUL, TUNE' LESS,

TC'NER, n. s. J together ; sound ; note ;

harmony ; order : to put into tune ; sing harmo- niously ; put into order: to form one sound to another ; utter harmony : the adjectives and tuner correspond.

When in hand my tuneless harp I take Then do I moie augment my foes despight.

Spenter.

A cry more tuneable \Vas never halloo'd to, nor cheered with horn.

Sftakipeare.

The pox of such antick, lisping, affected phanta- sies, these new tuners of accents. Id.

Came he to sing a raven's note, Whose dismal tune bereft my vital powers 1 Id.

Such a noise arose

As the shrouds make at sea in a stiff tempest, As loud, and to as many tunes. Id.

Distressed Lear, in his better tune, remembers what we are come about. Id.

Tunes and airs have in themselves some affinity with the affections : as merry tunes, doleful tunes, solemn tunes, tunes inclining men's minds to pity, warlike tunes ; so that tune have a predisposition to the motion of the spirits. Bacon.*

The winds were hushed, no leaf so small At all was seen to stir ;

Whilst tuning to the water's fall, The small birds sang to her. Drayton's Cynthia.

A continual parliament I thought would but keep the common weal in tune, by preserving laws in their due execution and vigour. King Charles.

Swallow, what dost thou With thy tuneless serenade 1 Cowley.

Hard are the ways of truth, and rough to walk ; Smooth on the tongue discoursed, pleasing to the'

ear, And tunable as sylvan pipe or song. Milton.

Fountains, and ye that warble as ye flow, Melodious murmurs, warbling lune his praise. Id.

All sounds on fret or stop Tempered soft tunings intermixed with voice. Id.

1 saw a pleasant grove, With chant of tuneful birds resounding love. Id.

All tunable sounds, whereof the human voice is one, are made by a regular vibration of the sonorous body and undulation of the air, proportionable to the acuteness or gravity of the tone. Holder.

That sweet song you sung one starry night, The tune I still retain, but not the words. Dryden. Earth smiles with flowers renewing, laughs the

sky, And birds to lays of love their tuneful notes apply.

Id.

A child will learn three times as much when he is in tune, as he will with double the time and pains, when he goes awkwardly, or is dragged unwillingly to it. Locke.

Several lines in Virgil are not altogether tunable to a modern ear. Garth's Preface to Ovid.

For thy own glory sing our sov'reign's praise, God of verses and of days ! Let all thy tuneful sons adorn Their lasting works with William's name. Prior. The disposition in the fiddle to play tunes.

Arbiithnot and Pope. Leave such to tune their own dull rhymes, and

know What's roundly smooth, and languishingly slow.

P«p. VOL. XXII.*

Poets themselves must fall, like those they sung, Deaf the praised ear, and mute the tuneful tongue.

Id.

TUNGSTEN, one of the metals, discovered and ascertained as distinct from earths, stones, and all other minerals, by the industry of modern chemists.

There is a mineral, says Dr. Thomson, found in Sweden of an opaque white color, and great weight, from which last circumstance it got the name of tungsten or ponderous stone. Scheele analysed it in 1781, and found it was composed of lime and a peculiar earthy-like substance, which he called from its properties tungstic acid. Bergman conjectured that the basis of this acid is a metal ; and this conjecture was soon after confirmed by the experiments of Messrs. D' Elhuyarts, who obtained the same substance from a mineral of a brownish black color, called by the Germans wolfram, which is sometimes found in tin mines. This mineral they found to con- tain $j of tungstic acid : the rest of it consisted of manganese, iron, and tin. This acid substance they mixed with charcoal powder, and beat vio- lently in a crucible. On opening the crucible, after it had cooled, they found in it a but- ton of metal of a dark brown color, which crumbled to powder between the fingers. On viewing it with a glass they found it to consist of a congeries of metallic globules, some of which were as large as a pin's head. The metal thus obtained is called tungsten. The manner in which it was produced is evident : tungstic acid is composed of oxygen and tungsten ; the oxygen combined with the carbon and left the metal in a state of purity. Tungsten, called by the Ger- man chemists scheelium, is of a grayish white color, and has a good deal of brilliancy. It is one of the hardest of the metals ; for Vauquelin and Hecht could scarcely make any impression upon it with a file. It seems also to be brittle. Its specific gravity, according to the D'Elhuyarts, is 17-6 : but this is doubtful, without farther ex- periments. It requires for fusion a temperature of at least 170° Wedg. It seems to have the property of crystallising on cooling like all the other metals ; for the imperfect button procured by Vauquelin contained a great number of small crystals. It is not attracted by the magnet. When heated in an open vessel it gradually absorbs oxygen, and is converted into an oxide. Tung- sten is capable of combining with two different proportions of oxygen, and of forming two dif- ferent oxides, the black and the yellow. The Elhuyarts alone, continues our author, attempted to combine tungsten with other metals. They mixed 100 grains of the metals to be employed •with fifty grains of the yellow oxide of tungsten, and a quantity of charcoal, and heated the mix- ture in a crucible. The result of their experi- ments is as follows : — 1. With gold and platinum the tungsten did not combine. 2. With silver it formed a button of a whitish brosvn color, something spongy, which with a few strokes of a hammer extended easily, but on continuing them it split in pieces. The button weighed 142 grains. 3. With copper it gave a button of a copperish red, which approached to a dark brown, was spongy, and pretty ductile, and weighed 133 grains. 4. With crude or cast iron, of a white

quality, it gave a perfect button, the fracture of There are two oxides of tungstenum, the brown which was compact, and of a whitish brown and the yellow, or tungstic acid. The brown color; it was hard, harsh, and weighed 137 grains, oxide is formed by transmitting hydrogen gas

5. With lead it formed a button of a dull dark brown, with very little lustre, spongy, very due-

over tungstic acid, in an ignited glass tube. It has a flea-brown color, and, when heated in the

tile, and splitting into leaves when hammered ; air, it takes fire and burns like tinder, passing

it weighed 127 grains. 6. The button formed with tin was of a lighter brown than the last, very spongy, somewhat ductile, and weighed 138 grains. 7. That with antimony was of a dark brown color, shining, something spongy, harsh, and broke in pieces easily ; k weighed 108 grains. 8. That of bismuth presented a fracture which, when seen in one light, was of a dark brown color, with the lustre of a metal, and in

into TUNGSTIC ACID; which see. The brown oxide consists of Tungstenum 100 Oxygen 16-6 — Berzel.

Hence if we regard it as composed of two primes oxygen + 1 metal, its composition will be

Tungstenum 12-05 100-

Oxygen 2-00 16‘6

another appeared like earth without any lustre; H thradd ime ht bab, fa but in both cases one could discover _an infinity 12.Q5 3 = ˆ Qf J Jd h / f h

12-05 +

metal 12.

But from Berzelius’s experiments tungstate of lime seems to consist of

Lime 24-12

3-55

-

of little holes over the whole mass. This button was pretty hard harsh, and weighed sixty-eight

w1 • J? ˆT ˆ f ˆ a ?n bluish brown color and earthy aspect : on

examining the internal part of it with a lens, it

resembled impure dross of iron ; it weighed 107

grains. Phosphorus is capable of combining The difference indeed is not great.

with tungsten ; but none of the properties of the Sir H. Davy found that tungstenum burns

phosphuret have been ascertained. with a deep red light when heated in chlorine,

TUNGSTENUM (heavy stone), in mineralogy, and forms an orange-colored volatile substance, was a name given by the Swedes to a mineral which affords the yellow oxide of tungstenum which Scheele found to contain a peculiar metal, and muriatic acid when decomposed by water. as he supposed, in the state of an acid united Scheele supposed the white powder obtained with lime. The same metallic substance was after by digesting the ore in an acid, adding ammonia wards found by the don D'Elhuyarts united with to the residuum and neutralising it by nitric iron and manganese in wolfram. From the first acid, to be pure acid of tungsten. In fact it has of these the oxide may be obtained by digesting a sour taste, reddens litmus, forms neutral crys- its powder in thrice its weight of nitric acid ; tallisable salts with alkalies, and is soluble in washing the yellow powder that remains, and twenty parts of boiling water. It appears, how- digesting it in ammonia, by which a portion of ever, to be a triple salt, composed of nitric acid, it is dissolved. These alternate digestions are to ammonia, and oxide of tungsten, from which the be repeated, and the tungstic oxide precipitated oxide may be obtained in a yellow powder, by from the ammoniacal solutions by nitric acid, boiling with a pure concentrated acid. In this The precipitate is to be washed with water, and state it contains about twenty per cent, of oxy- exposed to a moderate heat, to expel any am- gen ; part of which may be expelled by a red monia that may adhere to it. Or the mixture heat, when it assumes a green color. may be evaporated to a dry mass, which is to be Tungsten is insoluble in the acids, and its calcined under a muffle to dissipate the nitrate oxide is nearly the same. It appears to be ca- of ammonia. From wolfram it may be obtained pable of uniting with most other metals, but not by the same process, after the iron and manga- with sulphur. Guyton found that the oxide gives nese have been dissolved by muriatic acid. great permanence to vegetable colors.

The Spanish chemists reduced the oxide of TDNCSTIC ACID, in chemistry, a new acid ex- tungsten to the metallic state by exposing it, tracteJ from the new metal called tungsten. Of this moistened with oil, in a crucible lined with char- acid Dr. Thomson gives the following account in coal, lo an intense heat. After two hours a piece his System of Chemistry, vol. ii. p. 87, 88 : — ' The of metal weighing forty grains, but slightly ag- substance called tungstic acid by Scheele and glutinated, was found at the bottom of the cru- Bergman was discovered by Scheele in 1781. cible. Some have attempted its reduction in This philosopher obtained it from tungstat of

vain, but Guyton, Ruprecht, and Messrs. Aikin lime, by treating it with nitric acid and with am- and Allen, have been more successful. The lat- monia alternately. The acid dissolves the lime, ter gentlemen produced it from the ammoniuret. and the ammonia combines with the tungstic From 240 grains of this substance, in acicular acid. The ammoniacal solution, when saturated crystals, exposed for two hours to a powerful with nitric or muriatic acid, deposits a white wind-furnace in a crucible lined with charcoal, powder, which is the tungstic acid of Scheele. they obtained a slightly cohering mass of round- This powder has an acid taste, it reddens vege- isli grains, about the size of a pin's head, with a table blues, and is soluble in twenty parts of very brilliant metallic lustre, and weighing in the boiling water.' But the D'Elhuyarts have de- whole 161 grains. Tungsten is said to be of a monstrated that this pretended acid is a coin-

grayish-white or iron color, with considerable brilliancy, very hard and brittle. Its specific

pound of yellow oxide of tungsten, the alkali employed to dissolve it, and the acid used to pre-

gravity don D'Elhuyarts found to be 17'6; Messrs, cipitate it. Thus, when prepared according to

Aken and Allen above 17-22.

the above process, it is a compound of yellow

oxide, ammonia, and nitric acid. Their conclu- sions have been more lately confirmed by the experiments of Vauquelin and Hecht. This substance must therefore be erased from the list of acids, and placed among the sa'ts. The real acid of tungsten is a yellow powder ; the method of procuring which and its properties are thus described by Dr. Thomson, vol. i. p. 215 : — The black oxide of tungsten, which contains the smallest proportion of oxygen, may be obtained by heating the yellow oxide for some hours in a covered crucible. The yellow oxide, known also by the name of tungstic acid, is found native in wolfram, and may be obtained from it by boiling three parts of muriatic acid in one part of wol- fram. The acid is to be decanted in about half an hour, and allowed to settle. A yellow powder gradually precipitates. This powder is to be dissolved in ammonia, the solution is to be eva- porated to dryness, and the mass kept for some time in a red heat. It is then yellow oxide in a state of purity. This oxide has no taste. It is insoluble in water, but remains long suspended in that liquid,

forming a kind of yellow milk, which has no action on vegetable colors. When heated in a platinum spoon it becomes dark green ; but before the blowpipe on charcoal it acquires a black color. It is composed of eighty parts of tungsten and thirty of oxygen. Its specific gravity is 6′ 12. See CHEMISTRY.

TUNGUSES, a wandering native race of Asiatic Russia, who cover nearly the whole south-eastern portion of that territory. They are first found on the banks of the Yenisei, whence they extend all the way eastward to the sea of Okhotsk. In the more southerly districts, how- ever, they are mixed with the Mongols and Bu- rats. Although a few also reach to the borders of the northern ocean, yet in general they give place there to the Yakoutes and Samoyedes. To the west of the Yenisei a few are mixed with the Tartars and Ostiaks ; but in general the pro- vince of Irkoutsk proper is that of which they may be considered as the denizens. The Tun- guses are of a middle size, of a robust constitu- tion, and endowed with the greatest agility. Their countenance bears a considerable resem- blance to that of the Mongols, though it is larger and still more flattened.

TU'NIC, n. s. I Fr. 4unique ; Lat. tunica.

TU'NICLE. i Part of the Roman dress; any natural covering or integument : this last is also the sense of tunicle.

The dropsy of the tunica vaginalis is owing to a preternatural discharge of that water continually se- parating on the internal surface of the tunic.

Shakspeare.

Lohocks and syrups abate and demulce the hoarseness of a cough, by mollifying the ruggedness of the intern tunich of the gullet.

Harvey on Consumption.

The humours and tunicles are purely transparent, let in the light and colour unsoiled. Ray-

Their fruit is locked up all winter in their gems and well fenced with neat and close tunicki.

Derham's Physica- Theology.

One single grain of wheat, barley, or rye, shall contain four or five distinct plants under one common tunicle ; a very convincing argument of the provi- dence of God.

The tunichs of the Romans, which answer to oui waistcoats, were without ornaments, and with very short sleeves. Arbuthnot on Cohu.

TUNICA, a kind of waistcoat or under gar- ment in use among the Romans. They wore it within doors by itself, and abroad under the gown. The common people could not afford the toga, and so went in their tunics ; whence Horace calls them populus tunicatus.

TUNICA, in anatomy, is applied to the mem- branes which invest the vessels, and divers others of the less solid parts of the body ; thus the in- testines are formed of five tunics or coats.

TUNICA ARACHOIDES. See ANATOMY, Index.

TUNING OF KEYED INSTRUMENTS. The method of tuning any instrument by means of the mono- chord is as follows : First you must tune the C of the monochord to the concert pitch by means of a tuning fork ; next you are to put the middle C of your instrument in perfect unison with the C of the monochord : then move the sliding fret to the next division on the scale, and proceed in the same manner with all the several notes and half notes within the compass of an octave. When this is done with accuracy, the other keys are all to be tuned, by comparing them with the octave which is already tempered. The mono- chord is here supposed to be made to the pitch of C ; but this may be varied at the will of the constructor.

TUNIS, a territory of Northern Africa, one of the most powerful of the Barbary states, con- sists chiefly of a large peninsula, stretching into the Mediterranean in a north-easterly direction, and coming within less than 100 miles of the coast of Sicily. Beginning at Cape Jerbi, the frontier point of Tripoli, the coast extends north- erly with a slight declination to the east ; but after turning Cape Bon, its general direction is easterly, with a slight declination to the south. It terminates at Cape Roux, in lat. 37° N., and the whole extent is about 500 miles. The culti- vated part reaches from 200 to 250 miles into the interior, till it terminates with the chain of Atlas and the vast dry plains of the Bled el Jereede. There are few countries more highly favored as to naturaL beauty. It is watered by the river Mejerdah, celebrated by the ancients under the name of Bagrada, and which contains on its banks many towns and large villages, with from 5000 to 15,000 inhabitants. Its banks, and the country to the eastward, are the best cultivated parts of the regency. That on the west side, being exposed to the inroads of the Algerines, is more thinly inhabited.

The tracts to the south called Bled el Jereede, or the country of dates, though not presenting the same rich aspect as those on the sea coast, yield

in plenty not only the date, but grain of different kinds, and contain a number of large villages. The4inhabitants are almost exclusively governed by chiefs of their own, the Tunisians merely sending once a year a flying column to collect the tribute, rather in the form of military exaction than of voluntary gift. The mountains near Tunis contain mines of silver, copper, and lead ; and there is one of quicksilver near Porto Tarina ; but these sources of national wealth are not turned to any account.

This territory, from the manner in which it projects into the Mediterranean, is peculiarly favorable for carrying on the trade of that sea, and comes also into closer contact with the Eu- ropean powers than any other of the Barbary states. Upon these advantages were founded the rise of Carthage, the first commercial state of antiquity. ‘ The dreadful imprecations of their eternal enemy the Romans (says an able jour- nalist) have been strictly fulfilled against this devoted city. In vain does the inquisitive tra- veller seek in the neighbourhood of Tunis for the triple wall with its lofty towers, whose capacious chambers contained stalls for 300 elephants, and stables for 4000 horses, with lodgings for a nu- merous army — in vain does he look for those safe harbours and sheltered receptacles — for those 2000 ships of war and 3000 transports jvhich carried Hamilcar and his warriors against Syra- cuse : a few remains of the public cisterns and the common sewers are all that are left to point out the spot where Carthage, with its 700,000 inhabitants, once stood.’ Though Carthage, how- ever, was razed to the ground, the Romans made its territory the centre of their African dominion, and covered it with magnificent monuments of their taste and wealth. In the irruption of the barbarous nations upon Rome the Vandals were the first who seized upon Africa, where Genseric erected a powerful piratical dominion, whose fleets on one occasion took and sacked the capital of the Roman empire. All other occupants, however, were destined to give way before the torrent of Saracen conquest. Sidi Occuba, a lieutenant of the caliph Othman, conquered all this part of Africa and erected it into a kingdom, of which Kairwan, or Cairoan, was the capital. After many revolutions, in the end of the twelfth century, the dynasty of the Almohades was esta- blished in Morocco, and Tunis was governed by a viceroy. Under Charles V. this city was the theatre of contention between the troops of that emperor and Barbarossa the celebrated pirate. The Spanish expedition was completely success- ful; and a treaty was concluded, stipulating for a general liberation of the captives, and for a free intercourse between Tunis and the European states. This continued till 1574, when the expe- dition sent by Selim, under Sinan Basha, drove the Spanish garrison out of the Goletta and an- nexed Tunis to the Turkish

empire. It was governed for some time by its viceroys, called deys ; but the people, or rather the soldiery, soon acquired the privilege of electing their own dey ; and that officer may now be considered entirely independent of the porte. The chief danger of the Tunisian state arises at present from the Algerines.

TUNIS, a large city of Barbary, capital of the foregoing territory, is situated at the bottom of a bay, about ten miles south-west from the site of the ancient Carthage, of which it may properly be considered as the successor. It is situated on a plain, surrounded on all sides, except the east, by considerable heights, but so encircled by lakes and marshes that it might be expected to be very unhealthy ; yet from some cause not fully ascertained this effect does not take place, ˆ•e city is large, being supposed to contain

12,000 houses, and 130,000 inhabitants. Of these 30,000 are Jews and about 1500 Christians, of whom 1000 consider themselves the subjects of France ; the rest, with the exception of the consuls and their suite, are Tabarca families who were driven out when the Genoese republic be- came annexed to France. Tunis is built in the most irregular manner, and the streets so ex- tremely narrow and filthy that they can with difficulty be passed. Though large sums have been spent in the construction of forts, and in surrounding the city with a high wall, it is by no means a strong place. The citadel, called El Gaspa, begun by Charles V. and finished by John of Austria, is much out of repair, and com- manded by the neighbouring heights; there is also a rising ground on the north of the town, which commands both it and the fortified palace of the bey two miles west. There is one great mosque and a number of smaller ones; and near the centre of the city a piazza of vast extent, said formerly to have contained 3000 shops for the sale of woollen and linen manufactures. The finest present structure is the new palace of the bey, in the Gothic or Saracenic style ; neither pains nor expense have been spared in its deco- ration. The houses belonging to European con- suls are all insulated habitations, and rather resemble prisons than the abodes of those who are to represent the dignity of great nations. The Moorish houses are only one story high, with flat roofs, and cisterns for the purpose of collect- ing the rain water. The city, however, is well supplied from a neighbouring spring, which is conveyed into it by a fine aqueduct built in the time of Charles V. There are a few colleges and schools, it being customary here, as in other parts of Barbary, to instruct all the youth in the knowledge of reading, writing, and the koran ; and the police was never so well regulated as at present. About ten years ago it was scarcely possible for a Christian to walk the streets with- out being insulted.

Six miles westward is the Goletta, the cele- brated harbour and citadel of

Tunis, and the great naval and commercial depot of the state. A basin has been formed here sufficiently spa- cious to receive all its vessels of war and mer- chant ships ; and considerable quantities of timber are brought from Tabarca. The Goletta is strongly fortified towards the sea, but is com- manded by a hill to the north, at the distance of not more than 3500 yards. A large lake, sepa- rated from the sea by a very narrow isthmus, extends from Tunis to the Goletta.

The bey of Tunis enjoys the same absolute power as the other Barbary sovereigns. Although Tunis had almost entirely thrown off its depend- ence on the Porte, yet the troops by which its despotic power was supported consisted of Turk- ish recruits, whom they were allowed to draw from the different ports of the Levant ; when the treatment of these becoming severe the number could not be kept up by voluntary enlistment, and they are obliged to have recourse to artifice and kidnapping. A general revolt therefore took place among the Turkish soldiers to the number of 6000; and, having seized the citadel of El Gaspa, they would probably have maintained

themselves, had it not been for Mr. Egan, a young British officer, who organised and led on the troops of the bey, and at length compelled tl>e insurgents to fly or surrender. Since that time the Turks have enjoyed very little of the confidence of the government. Grain, the ex- portation of which in the other states on this coast is absurdly prohibited, forms here the principal staple. It cannot be exported without licence from the bey, and the payment of duties to the amount on wheat of twenty-two piastres and a half (£l 10s.) on the caffees (equal to two English quarters), and half that amount on bar- ley. A temporary rise is sometimes capriciously made; but the French merchants, by bribing the bey's officers, contrive to ship a much greater quantity of corn than is named in the licence. The Tunisians also heap all their measures. The principal port for shipping grain is Biserta. Olive oil is the next staple. It pays two pias- tres and a half (3s. 4d.) per metal of forty English pounds. The principal ports for ship- ping it are Tunis, Soliman, and Susa, the last of which is the best. The Tunisian oil does not be- come rancid so soon as the Italian oils, and they have an excellent mode of packing it. Wool and soap are also exported in large quantities. A con- siderable quantity of sponge is collected on the shore, between Sfax and Jerbi, which, though in- ferior to that of the Black Sea, finds always a ready market in the Mediterranean. It may be ob- tained at from 30s. to £2 2s. per cwt. The cara- vans from Tombuctoo, which arrive in June, furnish the Tunisian merchants with gold dust, ivory, and ostrich

feathers : the other imports consist of all kinds of European manufactures, colonial produce, and East India cottons. The species of British goods chiefly demanded is that species of woollens called scarlet long ells, which the caravans carry in large quantities into cen- tral Africa. France, however, when the inter- course is open, has obtained a preference in the Tunisian trade, though it often secures the sale of its manufactures by giving them the name of Londras. The best time to send a cargo to Tunis, especially of woollens, is in September or Oc- tober. Provisions, particularly beef and flour, may be had good. Long. 10° 20′ E., lat. 36° 44‘“N.

TUNIS, BAY OF, a bay of the Mediterranean, comprehending a coast of 120 miles, in the inte- rior part of which is the city of Tunis. It is bounded on the east by Cape Bon, and on the west by Cape Farinas. It is one of the safest in the Mediterranean.

TUN’NEL, «.«. & v. a. From TUN, i.e. a tube to fill a tun with. The shaft of a chimney ; sage for smoke or liquid ; a funnel : to tunnel is to form like a tunnel ; to reticulate.

It was a vault ybuilt for great dispence, With many ranges reared along the wall, And one great chimney, whose long tunnel thence The smoak forth threw. S/>enser.

For the help of the hearing, make an instrument like a tunnel, the narrow part of the bigness of the hole of the ear, and the broader end much larger.

Bacon.

The water being rarified, and by rarification re- solved into wind, will force np the smoke, which

otherwise might linger in the tunnel, and oftentimes reverse. Wotttm’s Architecture.

The phalznae tribe inhabit the tunnelled, convolved leaves. Derham’s Physico- Theology.

TUNNELS, for the conveyance of water and passengers, are not of so modern a date as is generally supposed ; though but little public in- terest was excited by any work of this kind prior to the commencement of the great under- taking at Rotherithe. The earliest tunnel for the purpose of internal navigation was executed by M. Riguet, in the reign of Louis XIV. The object was to forward a public work, beneficial in its tendency, the canal of Languedoc, by conveying it through a mountain near Bezieres. This required no inconsiderable art and labor : it is cut into a lofty arcade, and lined with free- stone the greatest part of the way. Towards the ends it

is only hewn through the rock, the substance of which is of a soft sulphureous na- ture.

The first excavated in this country was by the ingenious Mr. Brindley, on the duke of Bridge- water's navigation near Manchester. The next was the justly celebrated tunnel of Harecastle Hill, in Staffordshire, excavated also by Mr. Brindley. The plan and execution were mas- terly and admirably suited to the purpose. It passes more than seventy yards below the sur- face of the earth, and is carried through a va- riety of strata, quicksands, &c. ; its length is 2880 yards. The object was to pass a canal through it from the Trent to the Mersey; this has since been called the Grand Trunk.

Another work of prodigious difficulty, and a great exemplification of ingenuity, was the tunnel of Sapperton. Much ability appears in the execution of this design. The tunnel here was carried through two miles of solid rock ; its ex- treme length is two miles and three-quarters. By conveying an inland navigation through it, the river Thames and Severn were united.

In the Great Drift, or tunnel, about four miles above Newcastle, the art of excavation may be considered as having ascended to the highest state of improvement. This was finished in 1797, and is three miles and a quarter in length ; a great part is perforated through a hard rock of whinstone, nearly equal in density to the hardest flint. It reaches from the banks of the river Tyne to near Kenton.

The underground communication between Rochester and Gravesend is especially worthy of attention. The canal is 7 miles in length, and has been twenty-five years in progress. The sections of this tunnel are of different curva- tures, part being parabolic and part circular; the crown of the arches all coinciding. The intrados of the vaulting presents a surface con- sisting partly of brick, and partly of chalk, in alternate lengths, of various dimension, accord- ing to the strength of the material, which ap- pears to have required support more in some places than in others. The width at the spring- ing is about thirty feet; out of which a com- modious towing path six feet wide is reserved, leaving about twenty-four feet water-way. The crown of the arch is about fifteen feet above the surface of the towing path. The latter i»

guarded by a strong oak rail, bolted to cast iron supports, which are firmly

connected with stone bearers, bedded in the chalk. The width of the water-way will not allow barges to pass each other ; they are, therefore, only allowed to enter either end at certain periods, so as to prevent the possibility of an encounter : at one end, for instance, all barges arriving at the tunnel, during a period of one hour, are permitted to enter, and another hour is allowed for the passage ; during which period of two hours all barges ar- riving at the other end remain stationary, and then take their turn, while those which may now arrive at the opposite end are detained for a similar period of two hours; and so on alter- nately. The whole length of the tunnel is rather more than two miles and a quarter; and at mid-day there is light sufficient in the middle of its length to read large print, a circumstance owing very much to the reflective power of the chalk ; against which the light, striking by al- ternate angles of incidence and reflection, is conveyed to so considerable a distance. The difference between the brick and the chalk sur- faces, in this respect, is striking observable as you traverse the tunnel ; the former absorbing, and the latter reflecting, the light. The tunnel is perfectly dry throughout, excepting one part at the Frindsbury end, where the water drips through in small quantities. The reflection of the chalk on the clear surface of the water (more distinctly visible as you approach either end), apparently doubling the magnitude, and the en- tire absence of every sound but that of the slow and measured footsteps of the quadrupeds em- ployed in towing the craft, stealing on the ear at a distance, and becoming gradually louder and louder as it reverberates through the tunnel, combine to produce an emotion of sublimity which enhances, not a little, the interest with which this work will be contemplated by the in- telligent passenger.

The tunnel at Rotherhithe was commenced in 1825. The preparations for constructing the shaft consisted of a circle of piles of large scant- ling, bounding a very stout timber curb, shod with iron (on the under side) and securely bolted together. This timber curb was three feet six inches wide, and fifty feet in diameter, forming the base for a circular brick structure, which was three feet in thickness, and was built up forty feet in height. The brick work was set in Ro- man cement, and was well secured by horizontal band hoops, let in the courses at short intervals from each other, and was bound vertically by means of forty-eight iron ties, the aggregate strength of which was more than sufficient to carry the whole structure, although its weight would exceed 1000 tons. When the structure was completed to the height of forty feet, the interior was excavated, and it sunk by degrees, and by its own weight, to the depth of about thirty-four feet, but would not go lower, owing to the outside friction. It then became neces- sary to build up from the bottom of the shaft, as the further excavation was being effected, in order to unite the whole with the structure al- ready sunk, and by this means an admirable piece of workmanship was accomplished.

The tunnel, when completed will be about 1300 feet in length, and consist of two arches, in order that there may be no obstruction to car- riages ; but, the estimated expense having consi- derably exceeded the sum originally proposed, the whole work is remaining in abeyance till fresh funds are provided.

TUN'NY, n. s. Ital. tonnen; La., tliynnus. A sea-fish.

Some fish are boiled and preserved fresh in vine- gar, as tunny and turbot. Carew.

TUNQUIN, or TONQUIN, a large kingdom of Eastern Asia, bordering on the Chinese pro- vinces of Quangsee and Yunan, and separating that empire from Cochin-China and Cambodia. It surrounds a gulf of the Chinese Sea, at the mouth of which is the island of Hainan. The frontier to the north and west consists of moun- tains of considerable height, the breezes from which, and from the sea, preserve always a to- lerable degree of coolness. The central part of the country consists of a vast plain, traversed by numerous rivers, chiefly tributaries to the great one called Saigong, which flows through the whole breadth of Tunquin, and on which all the principal towns are situated. The rains which fall between April and August cause these rivers to overflow and inundate a great part of the country. The plains, thus covered with copious moisture, yield ample crops of rice and other tropical productions. Some parts of them are rescued from the sea and rendered capable of cultivation by artificial barriers. Rice is almost the only grain cultivated ; but potatoes, yams, and other roots, furnish a large share of the popular subsistence. The usual tropical fruits abound ; and the orange of Tunquin is said to be the best in the world. The tea tree is almost as common as in China.

Tunquin, originally a portion of China, was detached from that empire in 1368. The patriarchal forms of government were, however, still observed, and were administered by Man- darins, among whom letters formed the chief road to distinction. By degrees, however, the commander of the forces having rendered his orfice heriditary, succeeded in attracting all the power to his own person, and left to the original dynasty only an empty shadow of royalty. Of late years the government of Tunquin, having been involved in war with that of Cochin-China, has been entirely subdued, so that with Cambo- dia and all the countries between Siam and China, it is united under one empire.

The trade of Tunquin is not considerable, and scarcely any part of it is carried on by the natives themselves, but almost the whole by merchants from China and Siam. The attempts made by European merchants to establish an intercourse have been transient and unsuccess- ful. The chief

commodities to be obtained here are silks and lacquered ware. The silks are both raw and wrought, their pelongs, gauzes, &c., being very beautiful and cheap, while the lacquered ware is considered scarcely inferior to that of Japan. Gold may also be procured in consideinble quantity. Minor articles of ex- port are, earthenware, druus, Chinese paper, dyeing woods, musk, rhubarb, torloiseshell,

ginger, and cassia. The native merchants being very poor, Europeans on their arrival must advance a third or a half of the future cargo, and must wait till it is brought down from the country. No customs are charged, but a Man- darin comes on board, examines the vessel, and takes whatever he pleases at his own price. The little broad cloth accepted of must be red, black, grass-green, or blue. They take also pepper, saltpetre, ginghams, chintz, guns, and some few other commodities. The price of silver varies. according to the quantity in the market; and, though theirs is frequently alloyed, they will not admit any deduction on that account.

TUNSTALL (James), D. D., a learned Eng- lish divine born in 1710, and educated at St. John's College, Cambridge. He became rector of Stwimer, in Essex, in 1739, and public orator of the university in 1741. He wrote Acade- mica, or, Discourses upon Natural and Revealed Religion, and several other works ; and died in

1772.

TUR'BAN, n. s. ~\ Fr. turban ; Pers. tur- TUR'BANT, (^ band ; Turk, tulpan. The

TUR'BAND, i cover worn by the Turks

TUR'BANED, adj. J on their heads : turbanded is wearing a turban.

Gates of monarchs

Arched so high, that giants may jet through, And keep their impious turbans on, without Good-morrow to the sun. Shahspeare.

A turbaned turk

That beat a Venetian, and traduced the state, I took by the throat. Id.

His hat was in the form of a turban, not so huge as the Turkish turbans. Bacon.

From utmost Indian isle, Taprobane, I see the Turk nodding with his turbant. Hou-el. Dusk faces with white silken turbans wreathed.

Milton.

Some, for the pride of Turkish courts designed, For folded turbans finest Holland bear. Dry den.

TURBAN, the head-dress of the eastern na- tions. It consists of two parts, a cap and sash of fine linen or taffety, artfully wound in divers plaits about the cap. The cap has no brim, is pretty flat, though roundish at top and quilted with cotton; but does not cover the ears. The sash of the Turk's turban is white linen ; that of the Persians red woollen. These are the distin- guishing marks of their different religions; Sophi king of Persia, being of the sect of Ali, was the first who assumed the red color to distinguish himself from the Turks, who are of the sect of Omar, and whom the Persian esteem heretics.

TURBETIi MINERAL, yellow-deutosulphate of mercury.

TUR'BID,adj. Lat. turbidus. Thick; muddy; not clear.

Though lees make the liquid turbid, yet they re- fine the spirits. Bacon.

The brazen instruments of death discharge Horrible flames, and turbid streaming clouds Of smoke sulphureous ; intermixed with these Large globous irons fly. Philipi.

The ordinary springs, which were before clear, fresh, and limpid, become thick and turbid, as long as the earthquake lasts.

Woodward't Natural History.

TURBIDO (Francis), an eminent Italian painter, born at Verona in 1500. lie studied

under Giorgione and Veronese. He painted in oil and in fresco. His best piece is a transfigu- ration. He died in 1581.

TUR'BINATED, adj. Latin turbinatus. Twisted ; spiral ; passing from narrower to wider.

Let mechanism here produce a spink and turbi nated motion of the whole moved body, without an external director. Bentley.

TUR'BITH, n. s. Lat. turpethus. Yellow mercury precipitate.

I sent him twelve grains of turbith mineral, and purged it off with a bitter draught. I repeated the turbith once in three days ; and the ulcers shelled soon off. Wiseman's Surgery.

TURBITH MINERAL. See CHEMISTRY. TURBO, the wreath, in zoology, a genus ot insects belonging to the order of vermes tastacea. The animal is of the snail kind; the shell con- sists of one spiral solid valve, and the aperture is orbicular. There are 116 species, of which the most remarkable are, 1. T. clathrus, or barbed wreath, has a taper shell of three spires, distin- guished by elevated divisions running from the aperture to the apex. There is a variety pellucid, with very thin edges. It is analogous to that curious and expensive shell the wentle Imp. 2. T. littoreus, or periwinkle. They are abundant on most rocks far above low-water mark.

TUR'BOT, n. s. Fr. and Belg. turbot. A de- licate fish. Some fish are preserved fresh in vinegar, as turbot.

Carew.

Of fishes you shall find in arms the whale, the salmon, the turbot. Peacham.

Nor oysters of the Lucrine lake My sober appetite would wish, Nor turbot. Dryden.

TURBOT, in ichthyology. See PLEURO-

NECTES

TUR'BULENCE, n.s. } Fr. turbulence;

TUR'BULENCY, S Latin turbulcntiu.

TUR'BULENT, adj. J Tumult ; confusion ;

disorder: the adjective corresponding.

I have dreamed

Of bloody turbulence ; and this whole night Hath nothing been but forms of slaughter.

Shakspeare.

Oft-times noxious where they light On man, beast, plant, wasteful and

turbulent, Like turbulencies in the affairs of men, Over whose heads they roar, and seem to point : They oft fore-signify and threaten ill. Milton.

I come to calm thy turbulence of mind, If reason will resume her sovereign sway. Dryden.

Nor need we tell what anxious cares attend The turbulent mirth of wine, nor all the kinds Of maladies that lead to death's grim cave, Wrought by intemperance. Id.

Men of ambitious and turbulent spirits, that were dissatisfied with privacy, were allowed to engage in matters of state. Bentley.

You think this turbulence of blood From stagnating preserves the flood, Which thus fermenting by degrees, Exalts the spirits, sinks the lees. Swift.

TURC./E, or TUKCI (Mela), supposed to be the Tusci of Ptolemy, whom he places between Caucasus and the Monies Ceraunii. The name is said to denote, ' to desolate or lay waste.' Herodotus places them among the wild or bar-

barous nations of the north. There is a very rapid river called Turk running into the Caspian Sea, from which some suppose the Turks to take their name. They made no figure in the world till towards the seventh century ; about the be- ginning of which they sallied forth from the Portac Caspise, laid waste Persia, and joined the Romans against Chosroes king of Persia: In 1042 they subdued the Persians, in whose pay they served, and from whom they derived the Mahometan religion ; and afterwards pouring forth overran Syria, Cappadocia, and the other countries of the Hither Asia, under distinct heads or princes, whom Ottoman subduing united the whole power in himself, which to this day continues in his family, and who fixed his seat of empire at Prusa in Bithynia. His successors subdued all Greece, and at length took Constantinople in 1453, which put a period to the .Roman empire in the east, under Con- stantine XIII. There is a standing tradition among the Turks that their empire will at length be overturned by the Franks or Christians.

TURCOMANIA, a province of Asiatic Tur- key, comprehending the ancient kingdom of Armenia, or that part of Armenia which belongs to the Turks.

TURCOMANS, or TRUCKMEN, a Nomadic Tartar race, who fill with their hordes many dis- tricts of Western Asia. Their native seat seems to be east of the Caspian, in the vast plains between it and the Aral. Being conquered by the Kalmucs, at the beginning of the last century, they took refuge in the

Russian governments of Astracan, Oufa, and Orenbourg, and have continued to reside there ever since 1770, when the body of the nation threw off the Kalmuc yoke. They live in tents of felt, and have no fuel but twigs and dried cow Hung. Their food consists in horse flesh and sour milk. They are particularly dexterous in the use of the bow and arrow, arms which they take great delight in ornamenting. They wear also very rich sabres. They are all Mahometans, and are polite, friend- ly, and communicative.

TURF, n. s. & v. a. Sax. tynj:; Belg. and Swed. torf. A clod covered with grass ; a part of the surface of the ground : to cover with turf.

Where was this lane 1

— Close by the battle, ditched, and walled with turf.

Shatupeare.

Turf and peats are cheap fuels, and last long.

Bacon.

Could that divide you from near ushering guides ! — They left me weary on a grassy turf. Milton.

Each place some monument of thee should bear ; I with green turfs would grateful altars raise.

Dry den.

Their bucklers ring around, Their trampling turns the turf, and shakes the solid

E round. Id. JEneid.

ice of the bank next the sea is turfed.

Mortimer.

His flock daily crops

Their verdant dinner from the mossy turf, Sufficient. Phillips.

The ambassador every morning religiously saluted .1 turf of earth dug out of his own native soil, to re- mind him that all the day he was to think of his country. Additon.

Yet shall thy grave with rising flowers be drest, And the green turf' lie lightly on thy breast. Pope.

TURDUS, the thrush, a genus of birds be- longing to the order of passeres: The bill is straightish, bending towards the point, and slightly notched near the end of the upper man- dible. The nostrils are oval, naked, or half covered with a membrane; the corners of the mouth are furnished with a few slender hairs, and the tongue is slightly jagged at the end. There are 136 species, of which seven are Bri- tish; viz. all the following, except the poly- glottus : —

1 . T. iliacus, the redwing ; a very near resem- blance to the throstle but less. 2. T. merula, the blackbird, when it has attained its full age is of a fine deep black, and the bill of a bright yellow ; the edges of the eyelids yellow. When young the bill is dusky and the plumage of a rusty black, so that they are not to be distinguished from the females ; but at the age of one year they attain their proper color. This species is of a very retired and solitary nature; frequents hedges and thickets, in which it builds earlier than any other bird. It lays four or five eggs of a bluish- green color, marked with irregular dusky spots. The note of the male is extremely fine, but too loud for any place except the woods; it begins to sing early in the spring, continues its music part of the summer, desists in the moulting sea- son, but resumes it for some time in September and the first winter months. 3. T. musicus, the throstle, in length nine inches, in breadth thir- teen and a half. In color it so nearly resembles the missel (No. 8.) that no other remark need to be added but that it is less, and that the inner coverts of the wings are yellow. 4. T. pilaris, the fieldfare, is in length ten inches, in breadth seventeen. 5. T. polyglottus, or the mocking thrush, a na- tive of America. 6. T. roseus, a native of Great Britain. 7. T. torquatus, or ring- ouzel, supe- rior in size to the blackbird ; the length L eleven inches, breadth seventeen. 8. T. viscivonis, the missel, the largest of the genus. Its length is eleven inches, its breadth sixteen and a half. The bill is shorter and thicker than that of other thrushes; dusky, except the base of the lower mandible, which is yellov. The irides are hazel. Head, back, and lesser coverts of the wings, are of a deep olive brown. The lower part of the back is tinged with yellow.

TUR'GID, adj. Lat. turgidus. Swelling; bloated ; filling more room than before.

The spirits embroiled with the malignity, and drowned in the blood turgid

and tumified by the fe- brile fermentation, are by phlebotomy relieved.

Harvey on Consumptions.

The instant turgescence is not to be taken off, but by medicines of higher natures.

Browne' t Vulgar Erroun.

A bladder, moderately filled with air, and strongly tied, held near the fire, grew turgid and hard ; and, brought nearer, suddenly broke with vehement noise.

Hoyle.

Disburthen thou thy sapless wood Of its rich progeny ; the turgid fruit Abounds with mellow liquor. Philipi.

Those (hannels, turgid with the obstructed tide, Stretch their small holes, and make their meshe> wide. tUacknwre.

Some have a violent and turgid manner of talking and thinking ; whatsoever they judge of is with a tincture of this vanity. Watts' t Logick.

Where humours are turgent, it is necessary not only to purge them, but also to strengthen the in- fested parts. Government of the Tongue.

The forerunners of an apoplexy are dulness, slow- ness of speech, vertigos, weakness, wateriness and turgidity of the eyes. Arbuthnot on Diet.

The clusters clear, White o'er the turgent film the living dew.

Thomson.

TURGOT (Anne Robert James), the famous financier, was born at Paris May 10, 1727, of a very ancient Norman family. His father was long provost of the merchants. M. Turgot, at the age of twenty-three, took his degree, and was elected prior of the Sorbonne, and afterwards master of requests. About this period he wrote some articles for the Encyclopedic. In 1761 he was appointed intendant of Limoges, in which office he did much good. At the death of Louis XV. the public voice called M. Turgot to the

first offices of government, as a man who united the experience resulting from habits of business to all the improvement which study can procure. After presiding in the marine department a short time he was, August 24th, 1774, appointed comp- troller-general of the finances. During his dis- charge of this important office the beneficial ob- jects he accomplished are almost incredible. In the more immediate department of financier he found the public borrowing at five and a half per cent, and reduced the rate to four. He lessened the public engagements 84,000,000. He found (the revenue 19,000,000 deficient, and left a sur- ' plus of 3,500,000. His merits, however, only served to inflame the envy of courtiers. He was obliged to resign within twenty months. In re- tirement his intellectual attainments effectually prevented the intrusion of ennui. He died March 20, 1781.

TURIN, a large city of Piedmont, the capi- tal of the Sardinian monarchy, stands in a beau- tiful plain, on the west bank of the Po, which here receives the waters of the Dora Ripuaria, and flows with a copious stream at a short dis- tance from the walls. The country is luxuriant ; on one side beyond the river rises a beautiful range of hills ; on the other a plain strewed with villas and gardens, extends as far as the base of the Alps. The town is of an oblong form, and includes, with the ramparts, a circuit of about four miles. Its citadel and other fortifications placed it at one time in the rank of the strongest places in Europe ; but they were demolished by the French after the battle of Marengo. The streets are in general wide and straight, inter- secting each other at right angles, and running in direct lines from one extremity of the city to the other ; several of them hare at the sides arcades or piazzas ; the whole kept clean by means of streams of clear running water. The principal square, the Piazza Reale, is near the centre of the town, and ranks, both for its size and beauty, among the most elegant squares of F.nrope. On one of its sides stands the royal palace : in the centre is the structure creeled by the dukes of Savoy, and commonly called the

Castello Reale. On three of the sides of the square are arcades. The piazza di St. Carolo, though smaller, is also entitled to notice.

Perhaps the finest of the streets is the di Po, which stretches from the central square called the Piazza Reale, to the banks of the river. It is straight, broad, and bordered on each side with arcades. The Contrada di Dora Grande extends from the opposite side of the central square; it is equally straight as the Strada di Po, and considerably longer, but neither so spacious nor so handsome. The houses are in general built of brick, and the best are plastered in front with stucco. Like most towns which have been rebuilt, Turin has an old quarter, but it is very inconsiderable. It is called Torino Vecchio ; and its streets, though less wide and handsome than those

of the new town, are in general regular. Of the public walks the most frequented are the royal gardens, and the terrace on the pther side of the river. The Rondo, extend- ing between the city walls and the banks of the Po, is also resorted to as an evening walk ; while the Valentina, another promenade along the Po, about a mile from the town, is little visited.

The cathedral is an old Gothic edifice, re- markable for nothing but its marble cupola. The church of Corpus Domini is loaded with ornaments. Other churches claim attention only from their size, their pillars, or the variety of marble employed in their construction. The royal palace consists of three wings, surrounded by a court. Its extent is great, but in other respects it resembles the mansion of a rich indi- vidual, being of brick covered with tiles. Its interior, however, is not without magnificence, and the galleries contain a number of fine paint- ings, Italian and Flemish. The Castello Reale, situated in the midst of the square, has an elegant facade of the Corinthian order. The university contains a court surrounded with arcades, covered with inscriptions and antique bas reliefs. The ar- senal has a large room for containing arms, and work -shops of some extent for the manufacture of fire-arms. The town contains other buildings of large size, but disfigured in general by misplaced ornaments and grotesque architecture. The opera, or principal theatre, may be compared to Drury-Lane. In hospitals Turin is richly endowed ; the principal one affording both employment and support to its inmates, with education to the children. The city gates, four in number, were demolished by the French. In the vicinity, about a mile beyond the eastern ramparts, is the ancient Queen's chateau, situated at the foot of a hill. At a greater distance, about five miles from the city, stands the royal mausoleum and church, on the summit of a mountain.

TUR'KEY, n. t. Lat. gallina turcica. A large domestic fowl, supposed to be brought from Turkey.

Here h • comes swelling like a twkey-coc\t.

Shakspeare.

The turfey-cock hath swelling gills, the hen less.

Bacon.

So speeds the wily fox, Who lately filched the turkey's callow care. Gay.

Modern TURRET embraces a multiplicity of ancient states, in Europe, Asia, and Africa, and receives its name from the Turks or Turkumans, a wandering horde, by whom it was conquer- ed, and is at present possessed. With all the fury of Moslem conquerors, they over-ran some of the finest countries in the west of Asia and the east of Europe, and laid the foundation of their empire amidst the wreck of some of the finest monuments of ancient greatness and wis- dom.

TURKEY IN EUROPE occupies the south-east portion of that continent, extending from about 36° 20′ to 45° 40′ N. lat., where Moldavia and Walachia form a projecting point, as far as 48°. It is chiefly comprised between 16° and 30° of E. long., and is bounded by the Russian and Austrian dominions on the north; by the Black Sea, Propontis, the Hellespont, and the Archi- pelago, on the east ; by the Mediterranean on the south ; and by the same sea, the Adriatic, and the Austrian territories, on the west. Its shape, exclusively of the north-eastern projec- tion, is that of a triangle with very crooked and indented sides, of which the northern may be considered as the base, and the southern extre- mity of the Morea the vertex. Estimated at 45° of lat., the base will be nearly 080 English miles in length, and the least distance from the south- ern point to this line 570 miles ; but from the northern extremity of Moldavia to the southern point of the Morea the distance is 870 miles. It has therefore about 195,000 English square miles of superficial extent, the population of which has been variously estimated ; the mean is about 8,000,000, or nearly forty-one persons to each square mile.

European Turkey may be divided into north- ern and southern. The latter contains ancient Greece, and forms a peninsula bounded on the west by the Adriatic, on the south by the Me- diterranean, and on the east by the Archipelago, while it borders upon Romelia, Servia, and Bul- garia on the other side. These are subdivided into provinces, which, with their chief towns and their inhabitants, are,

NORTHERN DIVISION.

Provinces.	*Chief Towns.*	*Population.*
Moldavia .	*Yassi*	*40,000*
Walachia .	*Bucharest*	*80,000*
Croatia . .	*Bihatsh*	*6,000*
Dalmatia .	*Mostar*	*9,000*
Bosnia . .	*Bosna-Serajo ....*	*12,000*

Servia . . Belgrade 25,000

Bulgaria. . Sophia 70,000

Ilomelia . . Constantinople 400,000

SOUTHERN DIVISION.

Macedonia . Salonica 60,000

Albania . . loannina 30,000

Livadia . . Setines (ancient Athens) 10,000

The Morea . Misitra 5,000

The shores of this heterogeneous empire are indented by numerous gulfs and bays, which se-

ver them into peninsulas, promontories, and capes. The gulf of Lepanto, in. the Ionian Sea, is the chief inlet on the west, and peninsulates the southern part of Greece or the Morea ; for Greece is yet nominally Turkish. On the east- ern coast of this celebrated country the gulfs of Coron, Napoli, and Athens, present themselves. The large gulf of Salonica makes a deep opening into ancient Macedonia, while several others indent the upper part of the Archipelago. The most noted cape is that of Matapan, which forms the southern point of the European continent. Besides this, Cape St. Angelo, Cape Colonni south of Athens, and Cape Europa, near the en- trance of the Dardanelles, from which some au- thors have derived the name of Europe, are all distinguished points. Having passed the Darda- nelles, the sea of Marmora forms a part of the southern boundary. The Hellespont then inter- sects the isthmus between that sea and the Eux- ine, which thence forms a large convex sweep to the mouth of the Danube, and washes the eastern limits of these dominions. The boun- dary then follows that river to the influx of the Pruth, which it ascends north-west to the con- fines of Moldavia. There winding to the south, it reaches the Carpathian chain, and with it de- scends to the Danube, which with the Save then divide the Austrian from the Turkish territories to the western limits of Croatia, where, suddenly turning to the south, it joins the Adriatic. Many parts of the coast are composed of rocky promontories and inaccessible precipices, but others form inlets, creeks, and excellent harbours.

Long mountain ranges intersect this division of Turkey in various directions, and their lateral branches, with several detached hills and groups, diversify many of the other districts. These ele- vations, which often pierce the clouds, and are co- vered with perpetual snow, are separated by

beau- tiful valleys and plains, and sometimes by ex- tensive tracts of level country, watered by noble rivers, and smiling with spontaneous vegetation. The description which Mr. Thornton gives of two of the northern provinces may be applied to many other parts. 'The attention of the travel- ler is wholly absorbed in contemplating the beauty of the varied landscape, and the fertility of the soil which is improved by a rich though very inadequate cultivation. I have traversed both principalities in every direction, and re- trace with the greatest pleasure the impressions left on my memory by their grand and romantic scenery; the torrents rushing down the preci- pices and winding through the valleys, the de- lightful fragrance of the lime flower, and the herbs crushed by the browzing flock, the solitary hut of the shepherd on the brow of the mountain, the mountain itself rising far above the clouds, covered over its whole surface, except the snowy region, with the finest vegetable earth, and every where adorned witli Infty and majestic forests.'

*The long chain which traverses Turkey from east to west bears at different parts the name**

of Gliubotin, Argentaro, Despoto Dag, Teckiri Dag, and Balkan. The eastern half is the an- cient Haemus. This great range is connected with the Carpathians by a chain which, running northward, separates Servia from Bulgaria. On the south side it sends out secondary ranges, which traverse Albania, and extend through the whole of Greece, containing a number of names familiar to classical readers, such as Ossa, Pelion, Olympus, Parnassus, Oeta, Helicon, Pindus, and Taygetus. The Thracian mountains of Rhodope belong to the great chain.

The chief rivers in the north of Turkey, after the Danube, are the Pruth, Sereth, and Aluta, which How into that great receptacle from the north ; the Morava and the Save, which join it from the west and south. Other rivers, inferior to these, but of considerable size, run northward from the Hxmus ridge into the Danube. On the south side of that great range the outlet is the Archipelago ; and the principal rivers the Ma- rizza and the Vardar, the Hebrus and the Stry- mon of the ancients. Of the rivers in the west of Turkey, the principal are the Drino, the Na- renta, the Yieza ; in Albania, the largest is the Achelous. The lakes in Turkey are not consi- derable : the principal are those of Rosoura in Moldavia, Scutari in Albania, Ochrida between that country and Macedon, and Copais in Boeo- tia, which still emits the proverbial fogs of that country. The gulfs and bays are extremely nu- merous.

The products of Greece, and the maritime dis- tricts of Turkey in Europe, are sufficiently known ; but with the mineralogy and botany of the interior we are perhaps less acquainted than with those of the wilds of America. When ex- plored, they will probably be found rich in both vegetable and animal products — in quarries of marble, mines of iron, salt, sulphur, alum, nitre. Chestnuts, apples, pears, are found only in the northern provinces. The southern produce oranges, raisins, olives, figs, and almonds. The grape succeeds in almost every part of the em- pire, and wheat, maize, rice, cotton, silk, and tobacco, are all indigenous.

Among the animals, the horses of Thessaly have long been famous ; and those of Walachia improve by a mixture with Tartar breeds. Cattle and horses are reared in almost every part of the empire. The goat is a useful animal in the mountains, and the ass and mule are like those of Italy. Bees abound in a wild state. In game no country is more abundant.

The government, we need hardly say, is de- spotic, the power of the sultan being unchecked by any representative body, though virtually re- strained by the ordinances of the Koran, and the decisions of the ulema and mufti. He is farther restricted by certain usages which have the force of law, and an infraction of which might prompt to insurrection. But neither these ordinances nor usages protect the property of public indivi- duals. To this the sultan is heir in the eye of the law, and may exercise his power over their lives and properties without any dread of dis- content. The grand vizier, or prime minister, is by his office commander of the forces : when in the field, his functions at court are discharged

by a caimacan or deputy. The divan was for- merly composed of six pachas; but Selim III. changed its constitution, and it is now limited to the mufti, the vizier, and the kioga bey, who is the lieutenant of the vizier. The other minis- ters are the reis effendi, whose office corresponds in part to that of the chancellor, in part to that of the secretary for foreign affairs, in Britain. The finance minister is called tefterdar; the mas- ter of the ordnance tschelebi : the latter is also receiver general of the taxes. The minister of marine is styled terrcena emini ; the secretary of state tschiaus bacchi. To these are added, in meetings of council, two persons who have held respectively the stations of reis effendi and tef- terdar. On extraordinary occasions the capitan pacha and the kiaya of the sultana validi, or queen mother, are called in.

The pachas who are governors of provinces, by a strange mixture of powers, act as farmers- general of the revenue, and a pacha of the first class, or, as he is termed, of three tails, has the right to punish capitally any subordinate functionary. A pacha of two tails must in such a case go through the form of a trial. The lieute- nant or deputy of the pacha is styled

mutzelin. A waywode is merely the governor of a provin- cial town, or of one of the districts which do not belong to a pachalic, but form an appa- nage of some member of the reigning family. The sangiac beys are the governors of districts under the pachas. The chief check to their power is from the ulema, whose station is in the capital, and who explain both the political and religious part of the law.

Though Turkey has hardly any hereditary no- bility, the emirs and scheriffs who can trace their genealogy to Mahomet, like the descendants of the celebrated viziers, Ibrahim Khan Oglou, and Achmed Kiuprili, enjoy certain privileges. Christians and Jews are regarded as inimical persons, to be governed by coercion. VVala- chians, Moldavians, and Servians, are considered tributary allies. The governors of these provinces are princes of the Greek religion, dependent on the Porte.

The imans or priests are a body altogether in- ferior to, and distinct from, the ulema, their duty being merely to perform public worship ; but every law promulgated by the sultan, every de duration of war, must be sanctioned by a fetva, or act of approbation, from the mufti, who, in addition to other functions, has that of presenting annually to the sultan a list of persons to fill the two high judicial stations of kadileskar of Europe, and kadileskar of Asia. These officers remain in place only a year. The stambol effendi is chief judge at Constantinople. The mullahs are an intermediate order between the kadis and the kadileskar. The grand vizier is the official head of the administration of justice ; but transmits questions to the regular courts. An appeal from a lower to a higher jurisdiction is unknown in this country : the kadi passes a sentence of fine, imprisonment, and even of death, without any restraint but an apprehension of complaint to his superiors. In many cases a decision is obtained only by bribery, and in others presents to the judges are made from time to time, to ward oft

the injury that would attend upon justice. To counteract this oppressive system, the inhabitants of towns generally form themselves into an asso- ciation, which makes a point of attending in court in the case of any suit carried on for or against its members, and of not withdrawing until the witnesses are examined. The people have also the right of naming certain officers called in the towns ayams, in the villages kiayas, who, in a case of grievance, are authorised to call together the principal inhabitants. Christians and Jews are also incorporated, but remain more at the mercy of the executive branch than their Turkish fellow subjects.

The religion of the Turks is that of the Maho- metan sect of Omar, and the rule of faith the Koran. Their fasts are frequent and rigorous. The ablutions are also very frequent, being prompted by the warmth of the climate, and enjoined by the creed as necessary after a variety of occupations. Polygamy, though permitted, is seldom practised ; but the rich keep concubines. The population seems to receive little or no pe- riodical increase.

The personal appearance of the Turks is fine and striking: dark eyes, an aquiline nose, limbs in general well proportioned, are set off to ad- vantage by a dress which forms a medium be- tween the strait cloth ing of Europe and the flow- ing robes of Asia. Their gait is slow and stately, their mode of speaking clear and deliberate, and their whole air solemn and manly. Their character presents a curious mixture of good and bad ; temperate in eating and drinking, and simple in dress, and full of veneration for their laws and usages, no country presents more frequent ex- amples of insurrection, and the indulgence of violent passions. Their religious tenets inspire them with contempt for those of a different creed ; their despotic government with a blind submis- sion to their superiors; and, on the other hand, they are hospitable, in a high degree courageous, and exempt in general from artifice and adula- tion. The lower ranks are almost devoid of education. The lawyer must be skilled in the Koran ; the divine learned in the law. Hence the compound functions of the ulema ; hence also the mixed education of youths intended for these professions. They are sent from the com- mon schools, or mektebis, to the medresses or colleges established at the imperial mosques of Constantinople and Adrianople, where they find teachers ignorant of the rudiments of science, but familiar with the Koran, and with the laws deduced from the sacred volume. The youths undergo examinations, and receive degrees, such as sochta (student), muderri (head of a school), naib (secretary to a judge), kadi (judge), mullah (high judge), kiabe inolaki (judge of Mecca), istarnbol effendi (magistrate of Constantinople), kadilaskar (military judge). Astronomy is here a fanciful system of judicial astrology ; chemis- try, a.ehemy ; and their grammar, rhetoric, and metaphysics, all equally remote from rational principles. Libraries and booksellers' shops are found hardly any where but in Constantinople, and their chief contents are oriental manuscripts. Statuary and painting are forbidden by their faith : with navigation, engineering, fortification,

or the art of casting iron, the Turks are also very imperfectly acquainted : nothing can be more awkward than their wheel carriages; and even the arts of embroidery and carpet weaving, in which they have had most success, discover little progressive improvement.

The public revenue of Turkey, derived partly from a capitation tax on

Christians and Jews, partly from duties on tobacco and other articles of consumption, is about £3,000,000 sterling, and the objects to which it is applied are the army, the navy, the fortifications, and the house- hold of the sultan. The army is composed of a variety of troops ; first of a kind of feudal corps, commanded by agas, who have the investiture of certain fiefs called Timars and Zaim, held on condition of bringing into the field a specified number of horse and foot. The spahis are in general the sons of rich Turks, the expectants of the vacant charges of the agas. The Jar.issi- ries, a corps originally formed of Christians and prisoners of war, of late consisted entirely of Mahometans. The delibaches and selictars are corps attached to a particular pacha, who, when in the field, act as irregular.

Of their military character, the following ac- count has been given by a modern French writer : — ' The Turks are a nation that is natu – rally warlike, whose armies are commanded by experienced generals, and are composed of bold and executive soldiers. They owe their know ledge of war, and their experience in tactics, to three national causes, two of which do credit to their intellects. In the first place they become inured to arms, from being bred to the profes- sion from their earliest infancy ; in the second, they are promoted upon the sole ground of merit, and by an uninterrupted gradation of rank ; and in the third, they possess all the opportunities ot learning the military art that constant practice and habitual warfare can afford. They are natu- rally robust, and constitutionally courageous, full of activity, and not at all enervated by the debaucheries of Europe, or the effeminacy of the east. Their predilection for war and enterprise grows out of the recollection of past victories, and is strengthened by the two most powerful incentives to human daring, viz. reward and pu- nishment; the first of which is extremely attrac- tive, because it is very great; and the other equally deterring, because it is rigorous in the extreme. Add to these the strong influence of a religion, which holds out everlasting happiness, and seats near Mahomet in heaven, to all who die fighting for their country on tVe field of battle ; and which further teaches them most implicitly to believe that every Turk bears in- scribed upon his forehead his fatal moment, with the kind of death he must submit to, and that nothing human can alter his destiny. When any thing is to be carried into execution, the order they receive is absolute, free from every species of intervention or control, arid emanating from one independent authority. The power which is entrusted to their generals (like that of the Ro- mans to their dictators) is brief and comprehen- sive, viz. — Promote the interests of your country, or your sovereign.' See Essai sur la Science de la Uuerre, torn. i. p. 207.

The Turkish navy is inconsiderable, and sel- dom, even in time of war, amounts to fifteen or sixteen sail of the line. Their principal dock- yards are at Mitylerre, Stanchio, Sinope, and Constantinople. Their vessels are navigated chiefly by Greeks or Algerines, the Turks serving only as gunners.

Alstedius and other chronologists, indeed, trace the origin of the Turkish empire from an earlier period; viz. from the rise of Mahomet's impos- ture, A. D. 621. See MAHOMET and SARACENS. But though their power and their conquests ra- pidly increased after that period, yet Ottoman, or Othman, is generally ranked as their first em- peror, and the commencement of his reian placed in A. D. 1297. From him Turkey is often styled the Ottoman empire. After conquering Syria, Cappadocia, and the greater part of Asia, he died A. U. 1 326, in the twenty-ninth year of his reign, and was succeeded by his son Orchan, who took Barsa and made it the seat of his empire. He died in the thirty-first year of his reign, A. D. 1357, and was succeeded by his son Amurath I. He reigned also thirty-one years, according to Alstedius, and was succeeded, A. D. 1388, by his son Bajazet I., who was taken prisoner by Tamerlane. After an interregnum of six years he was succeeded by his son Soliman I., A. D. 1 403, who was murdered in his seventh year, A. D. 1410, by his brother Moses, who reigned only three years, and was succeeded by his brother Mohammed I., A. D. 1413. Mohammed, or Mahomet I., transferred the seat of empire to Adrianople ; and, after a glorious reign of eight years, died in 1421, and was succeeded by his son Amurath II., who, after having reigned thirty- one years, died in 1452, and was succeeded by Mahomet II., surnamed the Great, of whose reiˆn we now proceed to give the history.

In 1453 the Turks made themselves masters of Constantinople, which from that time became the capital of their empire. Mahomet II., then sultan, treated the inhabitants with the greatest cruelty. In 1454 he entered Servia at the head of 20,000 men, and obliged the inhabitants to pay him an annual tribute of 40,000 ducats. On his return to Adrianople, Mahomet repeopled the towns and villages about Constantinople with 4000 men and women whom he had taken; and going to that city built a palace eight stadia in compass. Next year a fleet was sent against the islands of Rhodes and Chios ; but the attempt on both proved unsuccessful ; however, the is- land Cos was reduced and some other places; after which the sultan, turning his arms towards Hungary, laid seige to Belgrade, which the cele- brated John Hunniades obliged him to raise with considerable loss. He next set about the entire conquest of the Morea. The Grecian princes, amon

At this time, however, the sultan chose rather to support the Greeks than to let the country fall into the hands of such barbarians ; and, having defeated the Albanians, was content to accept of a tribute from the Greeks. But the danger was no sooner over than the Grecian princes revolted anew

; upon which Mahomet entering the coun- try with a powerful army, prince Thomas, with his family, fled to Italy ; while Demetrius thought it most eligible to submit to the sultan, by whom he was carried away with many of the most con- siderable persons of Lacedaemon, Achaia, &c., where Turkish governors were appointed. 2000 families were also carried away from the Morea in order to be settled at Constantinople, and 2000 young men to be enrolled among the sul- tan's troops. Many cities at this time fell into the hands of the Turks, among which the princi- pal were Corinth and Athens. The Greeks, however, still made some faint struggles, but all in vain ; for, by the year 1459, the whole coun- try was subdued, excepting some maritime places held by the Venetians; and prince Thomas was obliged finally to take up his abode at Rome, where he was lodged in the pope's palace and had a pension of 3000 livres a year allowed him. Mahomet now pursued his good fortune, and, having made war on the emperor of Trebizond, he subdued his dominions and put him to death. His career, however, was for some time stopped by Scanderbeg, the Epirote. This prince had already defeated an army of 12,000 Turkish horse, of whom only 5000 escaped the slaughter, and dispersed another, with the loss < >. their ge- neral and 4120 men killed on the spot. Encou- raged by this success he laid siege to Belgrade which was now in the hands of the Turks ; but, through the treachery of his scouts, his army was defeated, and 5000 of his men killed ; upon which one of his generals, named Moses, went over to the Turks. Scanderbeg, not at all dis- pirited by this misfortune, prosecuted the war with the utmost vigor. His first enterprise was against his perfidious general Moses, who had been immediately put at the head of an array by the sultan. This army was by Scanderbeg to- tally destroyed, excepting about 4000 men ; upon which Moses fell into such disgrace with the Turks that he returned to his old master, who forgave his treachery, and restored him to all his former posts. The bad success of Moses did not prevent Amesa, the. nephew of Scanderbeg, from following his example. Mahomet received him kindly, and sent him with Ishak, bashaw of Constantinople, whom he entrusted with an army of 50,000 men against his uncle. Scan- derbeg, with only 6000 men, retired towards Lyssa, a maritime city of the Venetians. The Turks pursued contrary to the advice of Amesa ; and, being surprised by Scanderbeg, were ut- terly defeated with the loss of their camp, 20,000, or, according to others, 30,000 men killed on the spot, and the treacherous Amesa taken prisoner. With the like good fortune Scan- derbeg defeated three other Turkish armies, one of 20,000, another of 30,000, and the third of 18,000 men. On this Mahomet sent against him an old experienced commander at the head of 40,000 chosen troops ; but as he

likewise was able to achieve nothing, the sultan thought proper to conclude a peace with Scan- derbeg in 1461. Mahomet, being thus freed from such a troublesome enemy, completed the con- quest of the Greek islands ; subdued Walachia, Bosnia, and Illyria, extending his empire nearly to the confines of Italy. But, as it was easy to see that no conquests would satisfy the Turkish ambition, the Venetians, who found themselves ill treated by their warlike neighbours, entered into an alliance with the Hungarians to repress the overgrown power of the Tu-«cs, and prevent the western parts of the wo' d from being to- tally overrun by them ; and into this alliance Scanderbeg was soon drawn, notwithstanding his treaty with Mahomet already mentioned. The Hungarians invaded the Turkish dominions on the west side, defeated some troops, and carried off 20,000 slaves ; the Venetians invaded the Morea, where they made some conquests, but were soon obliged to abandon them : however they recovered the island of Lemnos ; but, being defeated in two engagements at land, they were obliged to solicit assistance from France, Ger- many, and Spain. Having obtained consider- able supplies from those parts, they again entered the Morea ; but, meeting with still worse success than before, they applied for assistance to Mat- thias the son of John Hunniades king of Hun- gary. Matthias willingly made another incur- sion into the Turkish dominions, ravaged Servia, and carried off a vast number of prisoners with a great booty. In the mean time, Mahomet, fearing lest Scanderbeg should be declared gene- ralissimo of the Christian forces, sent to him, desiring a renewal of the league between them. But, this being refused, the war was renewed with the utmost vigor. Many Turkish armies were sent against this hero; but they were ut- terly defeated and dispersed, till 1466, when by his death the sultan was freed from the most for- midable enemy he had ever encountered. See SCANDERBEG. The death of Scanderbeg was followed by the entire reduction of Epirus and Albania. The Venetians in 1469 defeated the Turks in a pitched battle ; but were driven out of Negropont, at that time the strongest city in Kurope, after which they entered into an alli- ance with Ferdinand king of Naples, Louis king of Cyprus, and the grand master of Rhodes, at the same time that they sent ambassadors to I'zun Hassan king of Persia, in order to per- suade him to attack the Turkish dominions on the east side. Mahomet did not lose his cou- rage at the number of his enemies ; but, having defeated the Persians, reduced the Venetians to such distress that they were obliged to conclude a treaty in 1479. In 1481 the war was renewed, and the city of Rhodes besieged, but without success ; however, the city of Cephalonia was taken from the Venetians, Italy invaded, and the city of Otranto taken. This was the last of the exploits of Mahomet II., who died this year of the gout, and was succeeded by his son Baja- ret. II.

Under this prince a war commenced with the .Mamelukes of Egypt; which,

under his suc- cessor Selim I., ended in the total subjection of that country. See EGYPT. Bajazet, however,

greatly facilitated Selim's conquest by the re- duction of Circassia, whence the Mamelukes drew their principal resources. Caramania and Croatia were totally reduced ; the cities of Le- panto, Modon, and Durazzo, taken by the Turks, though the Venetians recovered Cephalonia ; Syria on the east, and Moldavia on the west, were invaded and ravaged by the victorious ar- mies of the sultan; till at last a peace was con- cluded with the European powers in 1503. The year 1509 is remarkable for a dreadful earth- quake at Constantinople, which overturned a great number of houses, and destroyed 13,OOO people ; being also followed by an epidemic distemper, which carried off great numbers. About this time also the sultan, finding the in- firmities of old age drawing on, and being desi- rous of passing the remainder of his days in quiet, resolved to resign the throne to his eldest son Achmet. But having engaged in this affair with too great precipitation, and before he had gained over the grandees, his second son Selim, whom he had made governor of Trebizond, has- tily crossing the Euxine Sea, dethroned and put to death his father, in 1512.

This monster, who had not scrupled to sacri- fice his father to his ambition, did not hesitate at establishing himself upon the throne by the death of his brother also. Accordingly, as Achmed, knowing he could be no where safe, resolved to stand on his defence, Selim with a powerful army marched against him ; and, hav- ing defeated the few forces of his brother, took him prisoner and put him to death. Having thus secured himself, he marched against the Persians, whom he overthrew in a great battle : after which he took the city of Tauris ; made some other conquests ; and, having secured tran- quillity on the east side of his dominions, turned his arms against Sultan Gauri of Egypt. His farther designs of conquest were frustrated by his death, which happened in 1519.

Selim was succeeded by his son Soliman II., surnamed the Magnificent, who proved no less ambitious and warlike than his father. Having defeated and killed the governor of Damascus, who had rebelled against him, he attacked the European princes with a design to extend his dominions as far to the westward as he possessed to the eastward of his capital. In 1520 he set out with a great army to conquer Hungary. The city of Belgrade was immediately invested, and in a short time taken. Rhodes also, being attacked by a great force by sea and land, was obliged to submit, after a most desperate resi>t- ance (see RHODES, and SOLIMAX II.), and Soli- man entered the city in triumph on Christmas day 1522. His conquests for some time were stopped by a rebellion in Egypt; but, this being soon quashed, the war with Hungary was re- newed in 1525. King Louis, having rashly en- gaged the Turkish army of 200,000 men with only 25,000, was

utterly defeated, himself drowned in a ditch, and his whole army, excepting a few horse, cut in pieces. This defeat was followed by the surrender of Buda, which, how- ever, the Hungarians retook in 1528; but in 1529 it was again taken by the Turks, and soon after both the Moldavian submitted to their

jurisdiction. The city of Vienna was then in- vested ; but, after being reduced to the greatest straits, the sultan was obliged to abandon the siege by the corning on of the autumnal rains ; which, however, he did not without barbarously massacring all his prisoners. The raising the siege of Vienna was followed by an entire re- pulse of the Turks from the German territories ; on which Soliman, resolving to extend his domi- nions on the east, subdued the country of Geor-

the war was carried on in Hungary with little advantage on either side ; but under his suc- cessor, Amurath III., the Turks met with several severe checks from the Germans. Amurath III., reigned twenty years. In 1594 Mahomet III. having succeeded his father Amurath, murdered his nineteen brethren to secure himself on the throne ; and caused ten of his father's wives and concubines to be thrown into the sea, lest any of them should prove with child. The em-

gia, and made himself master of the city of peror Rodolph II., having entered into a confe- Bagdad ; at the same time that his admiral, the deracy against him with the princes of Transy»-

celebrated Barbarossa, ravaged the coasts of Italy, and took the cities of Biserta and Tunis in Africa. But in 1536 he was obliged to re-

vania, Walachia, and Moldavia, defeated the Turks and their Tartar auxiliaries in several en- gagements, and took many cities ; while so

tire before Charles V. of Spain, who retook the grievous a famine and plague raged in Hungary,

city of Tunis. Soliman, to revenge this dis- grace, suspended for a time the war in Persia, to turn all his forces against Italy : but while this country was in danger of being totally over- whelmed, a Venetian captain having rashly taken and sunk some Turkish vessels, Soliman changed

that of 85,000 Tartars who had entered the coun- try the year before, scarcely 8000 remained alive. This was followed by new misfortunes ; so

that in 1595 the Turks were entirely driven out of Transylvania, Moldavia, and Walachia.

Mahomet III. was succeeded by his son

his design of attacking Italy into that of chas- Achmet I., who died in 1617, leaving two sons,

tising the Venetians. However, after some tri- fling encounters, a peace was concluded in 1540. This year the war was renewed in Hungary ; the transactions were very unfortunate for the Chris- tians, and ended in the entire reduction of the kingdom to a Turkish province. The kingdom of France, being oppressed by its enemies, en- tered into an alliance with Soliman, who was

Othman II. and Amurath IV. : yet the throne was seized by his brother Mustapha I., who was deposed for heresy in 1623, and strangled in prison by the Janissaries in 1621. In 1621, under Othman II., the Turks first engaged in a war with Poland ; but a peace was concluded the same year; the chief article of which was, that the Poles should have a free trade in the

now grown so powerful that the whole Euro- Turkish dominions, and that for this their mer-

pean powers seemed scarcely able to resist him. However, in 1565, he was baffled by the knights of Malta ; and in 1566 an end was put to his ambition and his conquests by death.

chants should pay 10,000 sequins. The Turk- ish affairs continued much in the same way till 1673, when a dreadful war broke out with Ger- many, Russia, and Poland, whose army was at

Soliman was succeeded by his son Selim II., that time commanded by the celebrated John

surnamed Mest, or The Drunken. Under him the empire at first lost nothing of its lustre; but in 1571 the maritime power of the Turks was almost entirely destroyed at Lepanto, where one of the most remarkable sea engagements men- tioned in history took place. The Christian fleet was commanded by Doria the Venetian admiral ; and consisted of upwards of 209 galleys and large ships, besides smaller craft ; and the Turkish

Sobieski. The year before, hostilities had com- menced, on account of the Poles having en- deavoured to detach the Cossacks from their allegiance to the sultan. At this time the Turks were successful, through the dissensions which reigned among the Poles ; and the latter were obliged to pay an

annual tribute of 20,000 rix dollars, and to deliver up forty-eight towns and villages in the territory of Kamanieck. How-

fleet consisted of 335 sail. The number of ever, the articles of this treaty were never exe-

Turks slain were supposed about 32,000, besides 3500 prisoners. The galleys taken amounted to 1 6 1 . Forty more were sunk or burnt; and of galliots, with other small vessels, about sixty were taken. Notwithstanding the prodigious loss sustained by the Turks on this occasion, the confederates reaped but little advantage from this victory; and next year Kilij Ali Pasha, who had succeed- ed to the post of high admiral, fitted out a fleet of 250 galleys, with which he ravaged the coasts of Christendom wherever he came, and main- tained his ground so well that the confederates could never gain the least advantage over him. The Turkish power from this time, however, be- gan to decline. The progress of civilisation being much more quick among the western na-

cuted; for, in 1673, the states of Poland sent a letter to Kyoprili Achmed Pasha, the vizier, informing him that they considered as null the conditions of the treaty, being concluded with- out their consent, and that they would rather suffer death than submit to the infamy of paying one farthing by way of tribute. On this the sultan, Mohammed IV., who had succeeded in 1649, after the murder of his father, Ibrahim I, determined to take a severe revenge on theit perfidy, set out with a great army ; but was en- tirely defeated with the loss of 20,000 men killed on the spot, all the baggage, 25,000 waggon loads of provisions and ammunition, and 2000 purses of money. Soon after this victory John was proclaimed king of Poland ; but his sub-

tions, and their improvements in the art of war jects, jealous of his glory, refused to support

very considerable, the Turks found it not only impossible to extend their dominion over Ger- many, but even a matter of some difficulty to

him properly in prosecuting his advantage ; so that, four years after, a treaty was concluded, by which the Poles for ever resigned their preten-

withstand the power of the western princes, sions to Kaminieck and to the dominion of the During the remainder 'of the reign of Selim II, Cossacks in Podolia.

But, though peace was thus made with Po- hands ; that the boundary of the eastern part land, the war was carried on very unsuccessfully of Hungary, belonging to the emperor, should

be a right line drawn from the mouth of the Maros towards the banks of the river Teisse to the mouth of the Bossut, where it falls into the Saave; that towards the south, the Saave should part the Turkish from the Imperial limits,

with Russia. In 1678 an army of the Tartars was entirely cut in pieces or taken near the city of Cherin ; which so intimidated another army of 40,000 Turks, who had waited for the arrival of the auxiliaries, that they threw away their arms, and fled without stopping till they had crossed the Bog. This defeat inclined the sul-

till it receives the Unna; and that no new castles besides Belgrade and Peterwaradin should be

tan to peace; but, the negociations proving in- erected, or old ones fortified, any where within

effectual, he in 1679 again sent a powerful army of 80,000 Turks, 30,000 Tartars, and 4000 Cos- sacks, under the command of the vizier, to retrieve his lost honor. This army, however, succeeded little better than the former ; for the vizier was defeated in several engagements ; and

these boundaries. The Russian ambassador made a truce only for two years, upon the foot- ing of each party possessing what he had taken. The Poles made a truce on the like terms with the sultan ; namely, that they should have Ka- minieck, Podolia, and Ukrania, restored to them

at last put to death on account of the bad sue- in the same extent as possessed by them before cess of the war. In 1684 the Venetians again sultan Mohammed's first expedition into Poland ; declared war, while the Poles and Germans con- and on the other hand resign Soczava, Nemoz,

and Soraka, in Moldavia, to the Turks. The Venetians obtained these conditions : — that all the Morea, as far as Hexamilos, should belong

tinued their hostilities with the utmost violence. The Turks were forced to yield to the superior fortune and valor of their adversaries ; they

were defeated in a great number of engage- to them ; and that the firm land, with Naupac-

ments, and lost many places of importance. In 1687 Mahomet IV. was

deposed by the Janissa- ries, and succeeded by his brother Soliman III., an indolent prince who died in 1691. Maho- met IV. died in prison in 1693, and was suc- ceeded by his brother Achmet II., who died in 1695, and was succeeded by his nephew Mus-

tum (or Lepanto), Prevesa, and the castle of Romania which had been demolished, should be restored to the Turks ; that the bay of Corinth should be common to both, and the Venetians possess Lenkade with the adjacent islands. The yearly tribute paid by the islands in the Archi- pelago to the Venetians was to be abolished;

tapha II. who defeated the imperialists at Te- and Zakinth to be declared free from the like

'- – "- burden by the Turks. In Dalmatia, Knin, Cing, Kiklut, Verlika, Duare, and Vergoraz, were to be left to the republic, and fixed as the bounda- ries of their dominions on that side. The Ragu- sians were to continue free, and the Venetians to retain the castles of Castelnuovo and Risano, with what they possessed in the neighbourhood. Both parties were allowed to fortify their bor- ders with new fortresses; or to repair those which were decayed, excepting Naupactum, Prevesa, and the castle of Romania.

From the conclusion of the peace of Carlo-

meswar, and made war with success against the Venetians, Poles, and Russians; but was de- posed and died in 1703. He was succeeded by his brother Achmet III., who was deposed in 1730, and succeeded by his nephew Mahomet /., the son of Mustapha II. But to return to public affairs. Turkish affairs seemed to be totally going to wreck ; when, in 1688, they •vere retrieved by the new vizier Achmed Kyoprili, a man of great skill and experience in war, as well as of the most upright character. Having roused the enthusiasm of the people,

they flocked in great numbers to his standard; witz to 1769, nothing remarkable occurs in the

after which, having reformed many abuses both in the civil and military 'departments, he led them against the enemy. The good effects of his reformation were evident. Great numbers of the enemy were cut off, and almost all the important places taken which had been lost before ; when in 1691 he was defeated and killed by the Germans at Islankamen. After his death the Turkish affairs again fell into disorder ; and, though the utmost efforts were used by succeed- ing viziers, no progress could be made ; and in

Turkish history, excepting that Mustapha III.r the son of Achmet III., succeeded his father in 1757. He was a weak prince, and drained the treasury. But the Turks recovered the Morea from the Venetians by the treaty of Passarowitz. See VENICE. Their war with the Russians under Peter the Great has been taken notice of under the article RUSSIA; and those afterwards with PERSIA, under that article. None of these indeed were of any great consequence ; but in 1769 a war commenced with Russia, which

1697 a prodigious overthrow was given them by threatened the Ottoman empire with destruction,

prince Eugene at Zenta.

and which has given it such a severe check as it

At last, in 1698, all parties being weary of can scarcely recover. The origin of this war is

such an expensive and ruinous war, a pacifica- given under the article POLAND; and, during

tion took place at Carlowitz, but on different the course of it, an almost uninterrupted train of

lerms with the different nations who had been at success attended the Russian arms. About the

war with the Turks. The emperor made a truce end of March, 1769, a body of Russian troops

for twenty-five years, upon condition that all made themselves masters of the important fortress

Transylvania should be resigned to him; the city of Temeswar was to be restored to the Turks, and the navigation of the Teisse and Maros rivers free to both nations ; that the

of Asoph, at the mouth of the Don.

In the end of April prince Gallitzin, com- mander-in-chief of the Russian army on the frontiers of Poland, passed the Niester, hoping

country between the Danube and the Teisse, to take the fortress of Choczim by surprise; but called Bachback, remain in the emperor's being disappointed he was obliged to return.

Wear the beginning of July, however, lie again passed that river, and on the 13th attacked and defeated the van of the grand vizier's army, consisting of about 50,000 or 60,000 men. Of the fugitives 13,000 entered Choczim; which was next day invested by the Russians: but they were at last obliged to raise the siege and repass the Niester ; which they could not effect without considerable loss. In the mean time both the Ottoman and Russian courts were displeased with the conduct of their generals. The Turkish grand vizier was deprived of his command, and afterwards beheaded ; and was succeeded by Moldovani Aga Pacha, a man of a bold and enterprising spirit. On his first taking the com- nnnd of the army, finding it impossible to sub- sist where he was, he attempted to force a passage over the Niester; but, being three times repulsed with 'jjreat loss, lie made a precipitate retreat towards Bender, at the same time draw- ing the tioops out of Choczim, which the Rus- sians immediately took possession of. Prince Gallitzin was now superseded by general Romanzow, who took the command of the army on the 29th of September. Soon after his arrival he received news of the success of general Elmpt, who, with a body of 10,000 men, had reduced the province of Yassy. He invested Bender, but, finding the season of the year too far advanced, he soon withdrew his troops, and put them into winter quarters. This first campaign had proved so unpropitious to the Turkish affairs, that the court would gladly have concluded a peace if they could have ob- tained it upon honorable terms ; but the Russians insisting upon the entire cession of Moldavia and Walachia, as a preliminary article, the nego- ciations came to nothing. A new campaign was therefore resolved on ; and this proved still more unsuccessful than before. The grand Russian army under general Romanzow passed the Niester in May 1770; and, having assembled at Choczim on the 3d of June, marched towards Pruth; at the same time their second army, commanded by general Panin, arrived before Bender. The plan of operation was, that the latter should form the siege of Bender, and Romanzow should cover it. On the 18th of July, general Romanzow attacked an army of 80,000 Turks and Tartars commanded by the khan of Crimea, and strongly intrenched on an almost inaccessible mountain, forced their in- trenchments, and obliged them to flee in the utmost confusion, leaving an immense quantity of ammunition and provisions, &c., in their camp ; which they totally abandoned to the victors. After this victory, the Russian general pushed on towards the Danube : and on the 2d of August attacked another Turkish army, com- manded by the grand vizier in person, and totally defeated it, making himself master of their camp, ammunition, 143 pieces of cannon, and above 7000 carriages, loaded with provisions. The loss of the Turks on this occasion was not

reckoned less than 40,000 men, and some ac- counts raised it to 60,000. During the course of this summer, also, the fortress of Kilia Nova, at the most northerly mouth of the Danube, surrendered by capitulation ; and likewise that VOL. XXII.

of Ackerman, or Bialogorod, near the mouth ot the Niester. Bender was taken by storm on the 27th of November, and the Russians, enraged at the obstinate resistance they met with, made a terrible slaughter of their enemies. It was computed that 30,000 Turks perished on this occasion.

The fortress of Brailow, situated on the north side of the Danube, was invested on the 26th of September, and the garrison were so much intimidated by the taking of Bender, that they abandoned the place, and most of them were drowned in crossing the river. During this campaign, it was reckoned that the Russians took 1000 pieces of cannon from their enemies. — This year also a Russian fleet of sixteen or eighteen ships entered the Mediterranean, ami landed a body of troops on the Morea. Theso being joined by the Greeks, committed great cruelties on the Turks, and made themsthe- masters of almost the whole country. At lasi, however, the Porte, notwithstanding their had success in other parts, found means to send a force into the Morea sufficient to overpower the Russians. The Greeks now suffered in their turn ; and the Russians, hearing that a Turkish fleet had passed the Dardanelles, abandoned the Morea, and sailed to meet their antagonists. A battle ensued, in which the Turks were defeated; and having imprudently retired into a neighbour ing harbour, they were next day entirely des- troyed by the Russian fire ships, except one ship of sixty-four guns, which was taken. This fleet consisted of fifteen ships of the line, from ninety- six to sixty guns, three large frigates, and seven large armed vessels, besides galleys. After this victory, the Russian fleet blocked up the mouth of the Dardanelles, interrupted the Turkish trade, prevented the carrying of provisions to Constantinople by sea, and raised contributions from most of the islands in the Archipelago.

In 1771 matters did not at first go on so suc- cessfully on the part of the Russians. On the side of the Danube, they were obliged to keep on the defensive. Another army, under prince Dolgorucki, had better success; they reduced the whole peninsular of Crim Tartary in less than a month, though defended by an army of 50,000 men. — During these transactions the Turks made themselves masters of the fortress of Giorgiow ; which enabled them to become so formidable on the side of Walachia, that prince Repnin durst not attack them. Upon his refusal to do so, he was deprived of his command; which was given to general Essen. On the 17th of August, !».• attacked the Turkish intrenchments ; but, after a desperate engagement of four hours, was de- feated with the loss of upwards of 3000 men. This was the only engagement of any conse- quence in which the Turks had proved

victorious since the beginning of the war ; and, after it, their usual bad fortune attended them. In con- sequence of their victory, they determined to winter on the north side of the Danube, which would have been of the utmost service to them ; and with which view they considerably reinforced their army in Walachia. But general Roman- zow, by a train of masterly dispositions, not only thwarted all their schemes, but surprised

them on their own side of the river. They had divided their army into two great bodies, which were stationed in the nearest and most iinpor-1 tant posts on the Turkish side of the Danube. On the 20th of October, one of these bodies was surprised at Tuliza by general Weisman, and another at Maczin by general Milarodowits. The event was the same in both places. The in- trenchments were forced, the Turks totally routed, and their artillery, stores, and magazines, taken, together with their towns and castles. Next day general Weisman attacked the ˆrand vizier himself, with the like success. The in- trenchments were forced, a vast quantity of ar- tillery taken, and likewise the town and castle of Babadagh ; while the vizier, with the remains of his army, fled thirty miles to seek refuge at Mount Hemus. A few days afterwards general Essen defeated another body of Turks, and re- took the fortress of Giorgiow, driving the enemy totally out of Walachia. The Russian fleet this year spread ruin and d eolation through the de- fenceless islands of tlu.< Archipelago and the coasts of Asia, striking terror into the city of Constantinople itself. A dreadful pestilence raged this year in the Turkish army ; and in au- tumn broke out at Moscow, where it destroyed vast numbers.

The affairs of the Turks were now in such a desperate condition, that they very eagerly sued for peace. The only conditions on which this could be obtained, however, were, that the Cri- mea, Budziac Tartary, and all that vast tract of country on the coast of the Black Sea, as far as the north shore of the Danube, should continue for ever under the dominion of Russia ; that the Russians should enjoy an unlimited freedom of navigation on the Black Sea, together with the possession of the city of Asoph, on the mouth of the Don; and that a sum of money should be paid them by way of indemnification for the expences of the war. These terms, however, were rejected ; and the negotiations, which con- tinued through the whole year 1772, at last came to nothing. The commissioners on both sides retired from Bucharest, the place where the con- gress was held, on the 22d of March 1773.

For some time a desultory kind of war was carried on between detachments from the two armies. But as this was very prejudicial to the Russians, who could not be so easily recruited as the Turks, about the middle of June, Roraan- zow prepared for passing the Danube with the grand Russian army, consisting of 87,000 men : which, however, he did »»t accomplish till the 24th ; when he marched with his army, in large divisions, towards the city of Silistria. lie was terribly harassed on his march by large bodies of the Turkish cavalry, of whom the gund vizier nad detached 27,000 for this purpose. At last, nowever, they arrived before the city, w,,,ch was strongly fortified, and defended by a body of troops consisting of about 24,000 men. On the 2'»th of June, this body was defeated by gene- ral Weisman, who commanded the van of the Russian army, and forced to retire into Silistria. The grand vizier then detached 50,000 men to the relief of the place : upon this the Russians fuund it necessary to retreat; which was not ac-

complished without very great difficulty and loss. In this retreat general Weisman was killed, and the array left all their magazines behind them.

Many other severe conflicts happened this campaign, which proved less glorious to the Russians than any of the former ones. In 1774, however, their arms were attended with better success. On the llth of January 1774, the sul- tan Mustapha III. died in his seventeenth year, and was succeeded by his brother Achmet IV. the present sultan, although he left four sons, whom Achmet, with more than usual humanity, only kept in confinement. Romanzow's army was reinforced by 40,000 men ; and, on the night between the 16th and 17th of June, passed the Danube in spite of all opposition. A continued series of engagements then happened between the Russian generals and different bodies of the Turks. In these the latter were always defeated ; and at last became so much dispirited, that a body of 40,000, or, according to some accounts, of 70,000 Turks, fled at the first sight of a body of their enemies greatly inferior in number, leaving behind them all their tents and baggage, with a fine train of brass artillery. From this time, disorder, mutiny, and dismay, seized all the Turkish armies, and they absolutely refused to face their enemies, and the ministei's of state were obliged to furnish them with vessels for their transportation into Asia. According to some accounts, no fewer than 140,000 of the Turkish troops deserted in this manner. Even in the grand vizier's camp, at Schunla, matters went on in the same manner. He was aban doned by his whole cavalry ; his European and Asiatic troops quarrelled, and cut one another to pieces before his face; and, in short, the vast army he commanded was reduced almost to nothing. The Russian general did not fail to take advantage of these misfortunes. He placed the different divisions of his army in such advan- tageous situations, that 'ie totally cut ofif all com- munication between the Turkish camp and every mean of subsistence. The

unfortunate vizier, therefore, was obliged at last to submit to the terms which Romanzow dictated to him. The principal articles were, the independency of the Crimea; the absolute cession of Kilburn, Ker- che, and Jenickal, and all the country betvvci n the Bog and the Nieper; a free navigation in all the Turkish seas, in which was included the pas- sage through the Dardanelles, with all the privi- leges and immunities which were granted to the most favored nations. Russia gave up all the conquests, except Asoph and Taganrock. There were, besides, several stipulations in favor of the inhabitants of Moldavia and Walachin, and fne Greek islands which were restored by Russia.

Soon after this period an extraordinary alarm was excited at the Porte by the sudden appear- ance of a new prophet in Upper Asia. This man, whose name was Sheik Mansour, pretended that he was predoomed by the eternal and im- imitabie decrees of Heaven to fill up the mea- of divine revelation to mankind; and tl.at, as he was to be the last, so he was the greatest of the prophets. The scene of his min- istry was in the wide and desolate regions on the

borders of the Caspian Sea; and though the first rumor of his proceedings represented him as at the head of a multitude of armed enthusiasts, ready to overturn the established government and religion of Mahomet, it was soon discovered that all the military fury of his zeal was directed aguinst the Christians. He had even influence enough to form a combination of all the nations of Caucasean Tartars against the Russians, which was certainly of some service to the Turks in that war which the empress Catherine was now meditating against them. In the mean time, while this war was impending, the most formida- ble rebellion broke out in Egypt, the granary of the Turkish empire (see EGYPT); but it was, after a long, bloody, and dangerous war, almost suppressed by the wise conduct and intrepid bravery of Hassan Bey, the Captain Pacha or grand admiral, who, at the age of seventy, fought with all the ardor of youth, and all the skill of the most consummate general. That veteran, however, was recalled before he was able to carry all his patriotic designs into execution, that he might aid the divan with his counsel, in the critical situation into which the empire was brought by the claims of the court of Russia. The result of the deliberation was a precipitate declaration of war against that court, contrary to the better judgment of the old Pacha. The war commenced in autumn 1787, and the hoardes of Tartars which were first brought into the field, headed by the new prophet, were every where defeated by the superior discipline of the Rus- sian troops commanded by prince Potemkin. Some enterprizes

which were undertaken by the Turks against the island of Tamen and the Cri- mea were attended with as little success as the attempts of the Tartars ; while the emperor Joseph declared to the Porte that he would as- sist his ally the empress of Russia with an army of 80,000 men. Four Austrian armies were ac- cordingly assembled ; one at Carlstadt in Croatia, under general de Vins; another at Peterwaradin in Hungary, under general Langlois; a third on the borders of Lithuania, under general Febris ; and the fourth in the Buccovine, under the prince of Saxe Cobourg. Two other generals, ten lieutenant-generals, and thirty major-generals, were all ordered to prepare for active service in the frontier armies. If any thing had been yet wanting to show the fixed determination of the court of Vienna, the sending general Alvinzt to act in and observe the conduct of the Russian armies during the war, and the receiving a Rus- sian officer of equal rank to act the same part in the Austrian, would have been alone a sufficient explanation. The war between the Turks and Austrians was carried on with various success. At first the advantage was evidently on the side of the Ottomans, and Joseph II. acquired no warlike renown. His declared purpose was to get possession of Belgrade ; from which, however, his enemies repulsed him with disgrace. The prince of Saxe-Cobourg in his department of the war displayed indeed prodigies of valor; but, being opposed to a superior force, he was long obliged to act only on the defensive. At length, being joined by a body of Russian forces under general Soltikow, preparations were made for

commencing in form the siege of Choczim, which was surrendered to the allied armies on Michaelmas day 1788, after a defence which would have done honor to the ablest general in Europe. Still, however, success seemed to lean to the Turks. The grand vizier made a sudden incursion into the Bannat, and spread conster- nation and dismay to the very gates of Vienna. The Austrian affairs seemed approaching to a very alarming crisis. The first campaign of an invasive war had already produced an impression on the territory of the invader.

In this situation of affairs Marshal Laudohn was with some difficulty drawn from his retire- ment to take the command of the army in Cro- atia; and under his auspices fortune began to smile on the Austrian arms. He quickly re- duced Dubecza and Nevi, though they were both defended with the most obstinate bravery. He then sat down before Turkish Gradisca ; but, the autumnal rains coming on with such violence that the Save overflowed its banks, he was com- pelled to raise the siege. During this period the war in the Bannat raged with the utmost violence ; torrents of blood were shed, and much desperate valor, and many brave actions performed on both sides, while a great part of that unfortunate country suffered all the desolation that fire and sword could inflict. The inhabitants were ob- jects of commiseration; but the injustice with which the emperor

had commenced the war made his personal losses be considered as ihe just reward of his conduct. Hitherto the Rus- sians had hardly entered into the war; but at last they began to act with vigor both by sea and land. They experienced however a very general coldness with respect to their claims, pretensions, and designs, in almost all the courts of Europe. The court of London prohibited British seamen from entering into foreign service, and declared its resolution to observe the strictest neutrality. The united provinces of Holland pursued the same line of conduct. In the mean time a vast Russian army, estimated at 150,000 men ap- peared on the banks of the Bog, adjoining to the confines of Poland, Turkey, Tartary, and on the way to the Black Sea, under prince Potemkin and general llomanzow ; assisted by prince Rep- pin, general Soltikow, and other commanders. This great force was supported by a train of 137 pieces of artillery, besides a vast park of heavy battering cannon and mortars, destined for the siege of Oczakow ; and furnished with an ex- uberance of powder, balls, shells, and military machines. After the most obstinate defence Oc- zakow was taken on the seventeenth of December 1788, and the govenor basha graced the triumph- ant return of prince Potemkin to Petersburgh. In the mean time Russia found herself attacked by a new and formidable enemy in the Swedish monarch, of whose exploits we have given an account elsewhere (See SWEDEN); and by his interferenceher conquests were certainly retarded.

Marshal Laudohn renewed his attempts upon Gradisca as soon as the season would permit, and after a brave defence it fell into his hands. This with some other successes roused the em- peror from his inactivity, and made him seriously determined upon the attack which he had long

meditated upon Belgrade. The enterprize was entrusted to Laudohn, who, with that good for- tune which seemed constantly to attend him, made himself master of the place in less than a month. The rest of the campaign was little else than, a succession of the most important suc- cesses ; and a circumstance that did not a little contribute to this was the system adopted by the Austrians and Russians, of suffering the Turkish troops to march out of the several places they garrisoned without molestation. Accordingly, while one detachment of general Laudohn's forces took possession of Czernitz in Walachia, another made itself master of Cladova in Servia. Bucharest, the capital of the former of these provinces, fell without opposition into the hands of prince Cobourg ; while Akerman on the Black

Sea was reduced by the Russians ; and Bender surrendered to prince Potemkin, not without suspicion of sinister practices, on the 13th of NoTember. In 1790 the emperor Joseph II. died, and his successor Leopold II. showed a desire for peace. After the reduction of Orsova, therefore, which happened on the 16th of April 1790, the war was carried on with languor on the part of Austria ; and in June a conference was agreed upon at Reichenbach, at which the ministers of Prussia, Austria, England, and the United Provinces assisted, and at which also an envoy from Poland was occasionally present. After a negociation, which continued till the 17th of August, it was agreed that a peace should be concluded between the king of Hungary and the Ottoman Porte ; that the basis of this treaty should be a general surrender of all the conquests made by the former, retaining only Choczim as a security till the Porte should accede to the terms of the agreement, when it was also to be restored. Catherine was thus deprived of an ally, but still she continued the war. On the 22d of December 1790 the fortress of Ismail was taken by storm by general Suwarrow ; and it is said that the siege and the capture did not cost the Rus- sians fewer than 10,000 men. The most shocking part of the transaction is, that the garrison (whose bravery merited, and would have received from a generous foe the highest honors) were massacred in cold blood by the merciless Russians, to the amount of, by their own account, upwards of 30,000 men ; and the place was given up to the unrestrained fury of the brutal soldiery. After this bloody scene, the Russians went into winter quarters; the vizier retired towards Constantino- ple, and on his return fell a sacrifice to the san- guinary policy which has long disgraced the Ot- toman counsels.

The campaign of 1791 opened on the part of Russik with the taking of Maczin, on the 4th of April, by prince Gallitzin ; and in a subsequent victory on the 12th by the same general, in the neighbourhood of Brailow, the Turks lost not fewer than 4000 men and upwards of 100 officers, besides many pieces of cannon. On the 14th the Russian arms experienced a check, by which they lost about 700 men, and were obliged to re- linquish the intention of besieging Brailow. After reinforcing this place, the vizier proceeded to the banks of the Danube nrar Silistris ; and, .by a bridge which he threw across the river, his

advanced posts were enabled to make incursions on the opposite side. The ability of the vizier and the valor of the Turks were however exerted in vain against the discipline and experience of European armies. In June 15,000 Turks were defeated by a party of cavalry under general KuUisow. On the 3rd of July the fortress of Anape was taken by general Gudowitch, and the garrison, of 6000 men, made prisoners. This event was followed, on the 9th of the same month, by a signal victory which prince Repnin obtained near Maczin over a body of 70,000, the flower of the Turkish army. The Ottomans left up- wards of 4000 dead upon the field of battle, and lost

their entire camp equipage, colors, and thirty pieces of cannon. The Russians are said to h;iv. lost only 150 men killed, and between 200 and 300 wounded. At last peace was restored be- tween the Porte and Russia, principally through the mediation of Great Britain and the northern powers. Catherine II. confined her views at length to the possession of Oczakow, with the district extending from the Bog to the Neister, and even then providing for the free navigation of the latter river. These terms, considering the ill success of the war, cannot be accounted very disadvantageous to the Porte, who has lost a for- tress more useful for the purpose of annoying Russia than for defending their own territories ; but certainly of considerable importance to Russia, which by this cession, has secured the peaceable enjoyment of the Crimea, the inhabi- tants of which are certainly highly indebted to the late empress, for the measures she adopted for their improvement and civilisation, by the establishment of schools, academies, &c. See TARTARY.

Nothing very important either to Turkey or the world has occurred in the history of this em- pire since the peace with Russia which we have mentioned. The Porte has been alternately at war with Great Britain and with France ; but in neither contest has she acquired either honor or territory. The Turks declared war against tin- Russians on the 30th of December, 1806, urged thereto by French intrigue; and our famous 1 "\ administration attempted what they probably meant as a diversion in favor of the Russians. After Buonaparte compelled the feeble emperor Alexander to ratify the treaty of Tilsit, he en- couraged for his own purposes the war bet\ Russia and Turkey ; in which however nothing decisive on either side occurred, and which v\;is happily ended before the tyrant's grand attack on Russia.

The only remarkable fact therefore with re- spect to Turkey which we have still to record is the revolution which placed Mustapha IV. on the Ottoman throne. In the spring of the year 1807 a spirit of revolt appeared among the janizaries in the grand vizier's camp, and in garrison at the Dardanelles. On the 25th of May the troops in garrison in the various castles of the Dardanelles, accounted for their insubordination by objecting to the European uniform, the new tactics, &c. Hali Aga, com- mandant of Madischiabarna on the Asiatic shore. was put to death. Indsche Bey, commandant of the entrance of the Black .ˆca, escaped t:.e.

same fate only by flight. The Ileis effendi coming at that time to inspect that post, the jani- zaries accused him as one of the patrons ot the nizam

geded. He attempted to escape ; but he and his attendants were all sacrificed. He was particularly disliked, as he had promised to raise the pay of the janizaries on condition of their submitting to the new discipline, and this pro- mise was never performed. Other circumstances contributed to excite and increase their rage, and they determined with vigor and foresight to over- throw all their enemies. The sultan Selim for a time determined to defend himself, and troops and ammunition, &c.,were brought to the serag- lio. Soon after, the Mufti, the Seimen basche, &c., joined the revolted janizaries. A formal oouncil was held, in which it was proposed to request the grand seignior to abolish the new dis- cipline, &c. Selim thought he should be able to stop the insurrection, by sending the heads of Mahmad, Tersana Emin, Haggai Ibrahim, &c., to the Emeldan, where the janizaries were in force. In this, however, he was disappointed. The janizaries were more enraged than ever. They admired and lamented Mahmad effendi, and demanded the head of the Reis effendi, then in the grand vizier's camp. The janizaries searched every where for those ministers who had countenanced and promoted the adoption of the European discipline, and fourteen of them they found and massacred. At this time Selim sent a letter in his own hand, abolishing forever, and execrating the nizam geded ; but this the re- volted troops would not now accept. The de- position of the grand seignior was determined on. Mustapha IV. born 7th of September, 1799, eldest son of sultan Achmet IV. set aside in 1789, was called to the throne. The solemn in- vitation to Mustapha to ascend the throne was made on the 29th of May. The ceremony of investing him with the sabre of the Prophet took place on the 3d of June. According to the ancient and approved custom of this barbarous empire, Selim, the deprived sultan, was put to death by his own nephews, that he might not disturb the tranquillity of the new sovereign Mustapha IV. ; at whose feet it is said he threw himself, and kissed the border of his garment, after which he submitted to his fate with the feel- ings of a true Mussulman.

With the wars of the French revolution the Turks cautiously avoided interfering, until forced to take up arms by the invasion of Egypt in 1798. This contest was closed by the aid of Britain, but the j ower of the Porte was again threatened by a war with Russia, which com- menced in 1809, and terminated in 1812, by the cession to Russia of Bessarabia and of part of Moldavia. A fresh war however broke out

' t-tween the powers in 1828. The Turks, in this case, behaved with undaunted bravery, and disputed every inch of ground, till the enemy had actually arrived at Adrianople, where a treaty of peace was signed, September 14th, 1829, the conditions of which were highly favorable to Russia.

TIRKEY IN ASIA. — Since the taking of Con- stantinople Turkey has been regarded as a European state ; yet still the centre of its power may be considered as placed in Asia Minor and Syria. Amid the falling fortunes of the empire, its dominions in Asia, however, have been greatly circumscribed. Its boundary to the eastward is formed by a varying line among the mountains of Armenia and Kurdistan, and the river courses of the Euphrates and Tigris. This tract has often afforded the debateable ground between Persia and Turkey, in which the rulers of each, accord- ing as fortune favored them, pushed forward their own frontier, and drove back that of the other. At present it has become nearly indepen- dent. Bagdad and Bassora scarcely own the supremacy of the Porte. Western Arabia might at one time be considered almost as a Turkish province, including the holy cities of Mecca and Medina, and the ports on the Red Sea as far as Mocha. But the growth of Wahabite power has put a complete period to her empire in Arabia. She cannot now even send an armed caravan to Mecca. Asiatic Turkey is therefore reduced to Asia Minor and Syria, including Palestine. The population of this territory is estimated at 10,000,000, occupying a surface of 470,400 square miles. The character and policy of the government is the same as that of Turkey in Eu- rope ; and as the countries which compose Asiatic Turkey bear littl£ resemblance to each other, ex- cept in the common circumstance of being united under this barbarous empire, their topographical details are best given under separate heads.

In AFRICA, during the height of the Ottoman power, its dominion was nearly as extensive as in the other two quarters of the globe. Not only Esrypt, but the Barbary states of Tripoli, Tunis, and Algiers, were tributary to it, and the ports on the Red Sea also, as far as Masuah, were in the hands of the Turks. At present, however, this power can scarcely be said to have any foot- ing on this continent. Britain indeed drove the French out of Egypt, and Mahommed Ali, ap- pointed pacha of that country, succeeded in an • nihilating the power of the Mamelukes. He himself, however, has now set up an independent government, and, though all the other parts of Africa acknowledge a nominal supremacy, they are in point of fact independent : and will be found therefore described as independent states.

TUR'KOIS, n.s. Fr. turquoise, from turkey. A blue stone, formerly numbered among pre- cious stones, but discovered to be a bone im- pregnated with cupreous particles.

Those bony bodies found among copper ores are tinged with green or blue : the turcois stone, as it is commonly stiled by lapidaries, is part of a bone so t njrˆd. Wiwdictird.

TURK'S ISLANDˆ, a cluster of small islands among the Bahamas, the

largest situated in long. 71° 0′ W., lat. 21° 20′ N. They belong to the British, and are the most south-east of all the Bahama Islands. There is an anchorage, but no harbour.

Tl'RM, n.s. Lat, turma . A troop. Not in use.

Legions and cohorts, turns of horse and wings.

Mtlton.

TURMERIC (terra merita), curcuma longa, is a root brought to us from the East Indies. Bertholet had an opportunity of examining some turmeric that came from Tobago, which was su- perior to that which is met with in commerce, both in the size of roots and the abundance of the "coloring particles. This substance is very rich in color, and there is no other which gives a yellow color of such brightness ; but it pos- sesses no durability, nor can mordants give it a sufficient desree. Common salt and sal ammo- niac are those which fix the color best, but they render it deeper and make it incline to brown : some recommend a small quantity of muriatic acid. The root must be reduced to powder to be fit for use. It is sometimes employed to give the yellows made with weld a gold cast, and to .give an orange tinge to scarlet ; but the shade the t'trrneric imparts soon disappears in the air. Mr. (Juchliche gives two processes for fixing the color of turmeric on silk. The first consists in aluming in the cold for twelve hours a pound of silk in a solution of two ounces of alum, and dyeing it hot, but without boiling, in a bath com- posed of two ounces of turmeric and a quart (measure) of acetocitric acid, mixed with three quarts of water. The second process consists in extracting the coloring particles from the turmeric by acetocitric acid, in the way described for Brasil wood, and in dyeing the silk aluraed as already mentioned in this liquor, either cold or only moderately warm. The liquor is rendered more durable by this than by the former process. The first parcel immersed acquires a gold yel- low ; the color of the second and third parcels is lighter, but of the same kind ; that of the fourth is a straw color. Mr. Guchliche employs the same process to extract fine and durable colors from fustic, broom, and French berries ; he prepares the wool by a slight aluming, to which he adds a little muriatic acid. He seems to content himself in these cases with vinegar or some other vegetable acid, instead of his aceto- citric acid, for the extraction of the color ; he directs that a very small quantity of solution of tin should be put into the dye-bath.

TUR'MOIL, n. t. & v. a. Derived by Skin- ner from Fr. tremouille, a mill-hopper ; more probably derived from moil to labor. — Johnson. Trouble; disturbance ; harassing uneasiness: to weary, trouble ; harass.

It is her fatal misfortune, above all other countries, to be miserably tossed and turmoiled with these storms of affliction. Spenser.

He seeks, with torment and turmoil, To force me live, and will not let me die. Id.

Blinded greatness ever in turmoil, Still seeking happy life, makes life a toil. Daniel.

Having newly left those grammatic shallows, where they stuck unreasonably to learn a few words, on the sudden are transported to be tost and turmciled with their unballasted wits in fathomless and unquiet deeps of controversy. Milton.

Haughty Juno, who with endless broil Did earth, and heaven, and Jove himself turmoil, At length atoned, her friendly power shall join.

Dryden.

TUR

TURN,;, a., v. n., & n.j.^ Saxon turman;*

TURN'BENCH, n. s. \ Goth, torna ; Lat.

TV RN 'COAT,

TIRN'ER,

TL-RN'ING,

Tr RX'INGNESS,

TURN'PIKE,

TURN'SICK, adj.

torno ; Gr. ropvow. To revolve ; bring ! a lower side up- wards, or the in- side out ; trans- form ; shape ; bend ; form in a J lathe by moving

round ; change ; alter ; reverse ; translate ; trans- fer ; betake ; also (metaphorically) to infatuate ; make mad ; agitate in mind ; taking away, back, off, over, to, as prepositions : as a verb neuter to move round ; change posture ; move from place to place ; deviate ; alter ; be changed ; change sides or mind ; depend on ; taking away and off as prepo- sitions: a turn is a winding; meander; change; course ; occasion ; convenience : ' by turns' is by course, or one after the other : turnbench is a kind of lathe :

turncoat, a name of reproach for a rene- gade : .turner, he whose trade is turning : turning, in a general sense, is winding ; flexure : the in- elegant noun substantive corresponding : turn- pike, a gate (once formed of turning bars armed with pikes) that obstructs the road : turnsick, vertiginous ; giddy : turnspit, man or dog that turns a spit : turnstile, a turnpike in a foot- path. ,

My lords, (urn in, into your servant's house.

Gen. xix. 2.

Turn from thy fierce wrath. Exodus xxxii. 12.

1 will send my fear before thee, and make all thine enemies (urn their backs unto thee.

Id. xxiii. 27.

God will (urn thy captivity, and have compassion upon thee. Deuteronomy xxx.

Turn the council of Ahitophel into foolishness.

2 Samuel xv.

Disdain uot me, although I be not fair : Doth beauty keep which never sun can burn, Nor storms do (urn ? Sidney.

So nature formed him, to all turningneu of sleights ; that, though no man had less goodness, no man could better find the places whence arguments might grow of goodness. Id.

Diogenes' dish did never serve his master for more turns, notwithstanding that he made ii his dish, cup, cap. measure, and water-pot, than a mantle doth an Irishman. Spenser.

An admirable facility musick hath to express and represent to the mind, more inwardly than any other sensible mean, the very standing, rising, and falling ; the very steps and inflections every way ; the tuna and varieties of all passions whereunto the mind is subject. Hooker.

They turned weak people and children unable for service out of the city.

Knollti'i History of the Turks.

Quick wits are more quick to enter speedily, than able to pierce far ; like sharp tools, whose edges be • very soon turned. Ascham.

She would have made Hercules (urn the spit, ye and have cleft his club to make the fire too.'*

Shalupeare. '

You weigh equally, a feather will (urn the scale.

Id.

He called roe sot ; A nd told me I had turned the wrong side out. Id.

Some dear friend dead ; else nothing in the world Could (urn so much the constitution Of any constant man. Id. Merchant of 1'enict.

TUR

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TUR

Rather turn this day out of the wee : This day of shame. Shakfpeare.*

Oh, world, thy slippery turns ! friends now fast

sworn,

On a dissension of a doit break out To bitterest enmity. Id.

Courtesy itself must turn to disdain, if you come in her presence. — Then is courtesy a turncoat. Id.

The cause of the imagination that things turn round is, for that the spirits themselves (urn, being compressed by the vapour of the wine ; for every liquid body, upon compression, turneth, as we see in water. Bacon's Natural History.

Cygnets from grey (urn white ; hawks from brown turn more white. Id.

Pompey turned upon him, and bade him be quiet.

Bacon.

The state of Christendom might by this have a turn. Id.

If a man see another turn swiftly and long : or if he look upon wheels that turn, himself waxeth turn- sick. Id.

Apollo, angry at the sight, from top of Tliom cride ; Turne head, ye well-

rod peeres of Troy. Chapman.

Lend this virgin aid :

Thanks are half lost when good turns are delayed.

Fairfax.

Such a light and mettled dance Saw you never ;

And by lead-men for the nonce, That turn round like grindlestones. Ben Jonson.

Impatience turns an ague into a fever, a fever to the plague, fear into despair, anger into rage, loss into madness, and sorrow to amazement.

Taylor's Rule of Living Holy.

A storm of sad mischance will turn into some- thing that is good, if we list to make it so. Taylor.

His turn will come to laugh at you again.

Denham.

Neither will this shift serve the turn. Wilkins.

The sun Was bid (urn reins from the equinoctial road.

Milton.

The gate on golden hinges turning. Id.

Nature wrought so, that seeing me she turned.

Id.

This turn hath made amends ! thou hast fulfilled Thy words, Creator, bounteous ! Id.

I ran with headlong haste Through paths and turnings often trod by day. Id.

When to advance, or stand, or turn the sway Of battle. Id.

The vast abyss I'p from the bottom turned by furious winds. Id.

His gentle dumb expression turned at length The eye of Eve to mark his

play. Id.

They, by their skill in palmistry, Will quickly read his destiny ; And make him glad to read his lesson, Or take a turn for it at the session. Butler.

He now was grown deformed and poor, And fit to be turned out of door. Hudibrat.

A turnstile is more certain Than, in events of war, dame Fortune. Id.

The report, and much more the sight of a luxu- rious feeder, would turn his stomach. Fell.

Oil of vitriol and petroleum, a drachm of each, will turn into a mouldy substance. Boyle.

God will make these evils the occasion of a greater good, by turning them to advantage in this world, or increase of our happiness in the next. Tillotson.

Sheep, and great cattle, it seems indifferent which of these two were most turned to. Temple.

These are certain commodities, and yield the rea-

diest a. any that are turned in this kingdom, as they never fail of a price abroad. Id.

Nor box nor limes without their use are made, Smooth-grained and proper for the turner'i trade.

Dry den.

The turn of words, in which Ovid excels all poets, is sometimes a fault or sometimes a beauty, as they are used properly or improperly. Id.

Fortune confounds the wise, And, when they least expect it, turns the dice. Id.

If 1 had taken to the church, I should have had more sense than to have turned myself out of my benefice by writing libels on my parishioners.

Id. Preface to hi Pallet.*

He said, and, turning short with speedy pace, Casts back a scornful glance, and quits the place.

Dryden .

They turn viragos too ; the wrestler's toil They try. Id.

The spiteful stars have shed their venom down, And now the peaceful planets take their turn. Id.

Some malicious natures place their delight in do- ing ill (urns. L' Estrange.

A man, though he (urn his eyes towards an ob- ject, yet he may chuse whether he will curiously survey it. Locke.*

'Twould be hard to imagine that God would (urn him out of paradise, to till the ground, and at the same time advance him to a throne. Id.

The understanding (urns inwards on itself, and reflects on its own operations. Id.

An English gentleman should be well versed in the history of England, that he may observe the se- veral (urns of state, and how produced. Id.

The whole lathe is made strong, because the mat- ter it («rn», being metal, is heavier than wood, and with forcible coming about, would, if the lathe were slight, make it tremble, and so spoil the work.

Moxon's Mechanical Exercises.

Small work in metal is turned in an iron lathe called a turnbench, which they screw in a vice, and, having fitted their work upon a small iron axle, with a drill barrel, fitted upon a square shank, at the end of the axis, next the left hand, they with a drill-bow, and drill-string, carry it about. Moxon.

Some turners, to shew their dexterity in turning, turn long and slender pieces of ivory, as small as an hay-stalk. Id.

His whole person is finely turned, and speaks him a man of quality. Taller.

They who are conscious of their guilt, and appre- hensive that the justice of the nation should take notice of their theft and rapine, will try to give all things a false turn, and to fill every place with false suggestions. Davenant.

Shrewd (urns strike deeper than ill words. South.

Alas ! she raves ; her brain, I fear, is turned.

Rowe.

When the hen has laid her eggs so that she can cover them, what care does she take in turning them frequently that all parts may partake of the vital warmth ! Addison.

There is not a more melancholy object than a man who has his head turned with religious enthusiasm.

Id.

However improper he might have been for studies of a higher nature, he was perfectly well turned for trade. Id.

My thoughts are turned on peace. Already have our quarrels filled the world With widows and with orphans. Id, Cato.

Christianity directs our actions so, as every thing we do may (urn to account at the great day.

Id. Spectator.

After a turbulent and noisy course among the

rocks, the Teverne falls into the valley, and after tiany turns and windings glides peaceably into the 'riber. Addison.

\Vit doth not consist so much in advancing things new, as in giving things known an agreeable turn.

Id. Spectator.

\ young man of a sprightly turn in conversation had an inordinate desire of appearing fashionable.

Spectator.

The three first stanzas are rendered word for word with the original, not only with the same ele- gance, but the same short turn of expression peculiar to the sapphick ode. Addison.

He turned his parts rather to books and conversa- tion, than to politicks. Prior.

A man must guard, if he intends to keep fair with the world, and turn the penny.

Collier of Popularity.

Every one has a fair turn to be as great as he pleases. (.'oilier.

Luther's conscience, by his instigations, turns these very reasonings upon him. Atterburu.

Though they held the power of the civil sword un- lawful, whilst they were to be governed by it, yet they esteemed it very lawful when it came to their turn to govern. /

A saline constitution of the fluids is acid, alka- line, or muriatic : of these in their turn.*

Arbuthnot.

The gates are shut, and the turnpikes locked. Id.

The ancle-bone is apt to turn out on either side, by reason of the relaxation of the tendons upon the least walking. Wiseman.

If we repent seriously, submit contentedly, and serve him faithfully, afflictions shall (urn to our ad- \antage. Wake.

The choler of a hog turned syrup of violets green.

Flayer.

The first platfoim of the poem, which reduces into one important action all the particulars upon which it turns. Pope.

The rage of thirst and hunger now supprest, The monarch turn him to his royal guest.*

Id. Odyssey.

The bard, whom pilfered pastorals renown ; \Yho turns a Persian tale for half a crown, Just writes to make his barrenness appear. Pope.

This beastly line quite turn my stomach. Id.*

Kastern priests in giddy circles run, And turn their heads to imitate the sun. Id.

Thus a wise taylor is not pinching, But tuna at every seam an inch in. Swift.

The nymph will have her turn to be The tutor, and the pupil he. /•/.

Books give the same turn to our thoughts and rea- soning that good company does to our conversation.

Id. Miscellanies.

Rather than let a good fire be wanting, enliven it with the butter that happens to turn to oil. Id.

The very turn of voice, the good pronunciation, and the alluring manner which some teachers have attained, will engage the attention. Watts.

Turn these ideas about in your mind, and take :i view of them on all sides. Id.

His cares all turn upon A sty an ax, Whom he has lodged within the citadel. A. Philips.

For want of due improvement, these useful inven- tions have not turned to any great account.

Baker' t Reflections on learning.

TURNEBUS (Adrian), an eminent critic, born in 1512. His father was a Scotch officer whose name was Turnhull, which Adrian varied to Turncbe, in Latin Turnebus. He acquired so extensive a reputation by liis learning that he

had great offers made him from Italy, Germany and England ; but he preferred poverty in France to riches any where else. He taught polite literature first at Toulouse; but, in 1547, went to be Greek professor at Paris; in 1552 he took upon him the care of the royal Greek press for three years, when he quitted it on being ad- mitted into the number of royal professors. He died in 1565; and his works, which are all in Latin, were printed at Strasburg in 1 vol. folio,

1600.

TURNER (William), M. D., a celebrated physician and divine in the sixteenth century, born at Morpeth, in Northumberland, and edu- cated at Cambridge where he became a Protes- tant, travelled over England to preach the re- formed faith, for which bishop Gardiner put him in prison. On his release he went to Italy, and graduated at Ferrara. On the accession of Ed- ward VI. he returned, and was made dean of Wells. When Mary succeeded he again went abroad, and did not return till after her death. Queen Elizabeth restored him to his preferments. lie wrote a Treatise on the Baths of England and Germany; a Complete Herbal, or History of Plants, folio ; Historia de Naturis Herbarum, Scholiis et Notis Vallata, 8vo. ; and some other botanical works. He died in 1568.

TURNER (Francis), son of the above, was edu- cated at Winchester and at New College, Oxford. He became prebendary of St. Paul's, dean of Windsor, and bishop of Rochester in 1683, and in 1C84 bishop of Ely. He was one of the seven bishops whom James VII. sent to the tower; yet he was deprived of his bishopric at the revolu- tion for refusing to take the oaths. lie pub- lished some sermons, several sacred poems, and the life of Mr. Nicholas Ferrar. He died in

1700.

TURNERITE, a rare mineral in small crys- tals of a yellowish-brown, or brownish-yellow color. Brilliant. Primary form an oblique rhombic prism. Scratches fluor, but yields to the knife. Powder grayish-white. It contains alumina, lime, magnesia, and a very little iron. It has been found only on Mount Sorel in Dau- phiny.

TURNI1OUT, an inland "town of the Ne- therlands, the chief ptece of a

district in the province of Antwerp. It is well built; ha-. canal conveyance ; and its principal industry consists in manufacture of ticking. It has a traffic also in the produce of the neighbourhood, and sever.il extensive bleaching establishments. In 1596 prince Maurice of Nassau, at the head of a detachment, defeated here a considerable body of Spaniards; and in October 1789 an action took place here between the Austrian troops and the insurgents of Brabant. Popula- tion 10,000. Twenty-four miles east by north of Antwerp.

TURNING is the art of forming hard bodies, as wood, ivory, iron, into a round or oval shup« by means of a machine called a lathe. Tins art was well known to the ancients, and seems to have been carried by them to a very great decree of perfection; at least Pliny :md other authors tell us that those precious v.ises, enriched with figures in half relief which still adorn our cabi-

nets, were turned on the lathe. Turning is per- formed by the lathe, of which there are various kinds, and several instruments, as gouges, chisels, drills, formers, screw tales, used for cutting what is to be turned into its proper form as the lathe turns round.

The operation differs very essentially from most others, in the circumstance that the mat- ter to be operated upon is put in motion by the machine, and is wrought by means of edged tools presented to it, and held fast ; whilst, in most others, the work is fixed, and the tool put in motion by the workman.

In turning, the work is caused to revolve upon a stationary straight line, as an axis, while an edge tool, set steady to the outside of the sub- stance in a circumvolution thereof, cuts off all the parts which lie farther off the axis, and makes the outside of that substance concentric to tlie axis. In this case any section of the work, made perpendicularly to the axis, will be of a cir- cular figure ; but there are methods of turning ellipses, and various other curves, which are known by the name of engine turning.

When compared with many other mechanical operations, the art of turning may be considered as perfect in the accuracy and expedition of the work, which is produced, and that independently of any extraordinary skill or dexterity of the workman : the lathe is therefore resorted to by mechanics to perform every work it is capable of, and these are so numerous as to demand, in pre- ference to other mechanic operations, a minute detail.

Lathes are made in a great variety of forms, and put in motion by different

means ; they are called centre lathes where the work is supported at both ends ; mandrel, spindle, or chuck lathes when the work is fixed at the projecting extre- mity of a spindle. From different methods of putting them in motion, they are called pole lathes, and hand wheel-lathes, or foot wheel- lathes ; for very powerful works they are turned by horses, steam engines, or water mills. The lathes used by wood turners are generally made of wood, in a simple form, and are called bed- lathes, the same kind will serve for turning iron, or steel, but the best work in metal is always done in iron lathes, which are usually made with a triangular bar, and are called bar-lathes. Small ones, for the use of watch-makers, are called turn-benches, and turns, but there is in fact no proper distinction between these and the centre-lathes, except in regard to size, and that they are made of iron instead of wood.

The pole-lathe is now so little used as to make a particular description unnecessary, we may, there- fore, proceed at once to that arrangement in which a bar forms the connecting link between the centres. The triangle bar lathe is shown at fig. 1, plate Tt RXING. Fig. 2 is an end view of that part which is above the bench or frame. A A represents the upper surface of a very thick and solid mahogany bench, upon which the whole is fixed, and the foot-wheel is situated beneath it, if convenient, to apply it in this manner; the puppets, ar.d other parts of the lathe, are all fitted upon a strong triangular bar G, made of cast iron, planed and ground perfectly straight and true ; it is supported by standards a b and c,

fixed to ll.e bench by •-crews, as shown in t':o figure. Upon this bar the puppets H, I, and K, are fitted with the most perfect accuracy, and H, which is called the back puppet, can be fas- tened upon any part of the bar, by a screw e be- neath it; the other two puppets are likewise furnished with screws beneath, to fasten the bar to them: but these two are supported u pendently of the bar, being connected togctln-r by a thick plate of metal D, screwed to their lower surfaces, and this is fixed on the standards a and b, so as to form an insulated frame, a K b I and D, containing the mandril or spindle L. The puppet K has a steel pivot with a hole in the end to receive the pointed end of the man- dril L, a screwˆis placed behind to force it up. and another at the top, to fasten it when ad- justed, so that the neck of the mandril will exactly fit, withor.t shake, into the steel collar which is fixed in the upper end of the puppet I. The back puppet H has a hole bored through it, exactly in the line of the spindle, to receive a cylindrical steel pin n, which has a sharp conical point to support the end of a long piece of work : a screw /H is placed behind to force it up and keep the work always tight, and a screw z fastens the pin in its place.

The rest of the lathe is thus made : — A brass piece o < >, called the saddle, is fitted upon the sides of the bar ; upon this a steel slider p is fixed,

having a tube Y to receive the shank of the rest T, with a screw to fasten it at any height; the slider p has a dove-tailed groove in its lower surface for the reception of dove-tails, formed at the upper ends of two steel bars; the two bars are united by a horizontal piece beneath the bar, the whole being made of one piece, bent like a staple or fork, and its two arms, 1 and 2, fitted in mortises cut through the saddle; by this means, a single screw, 4, tapped through the ho- rizontal piece, and the point pressing on the under side of the bar, will fasten the rest, drawing the slider p down upon the saddle, by the two dovetails, and, at the same time, drawing the saddle down fast upon the bar.

The mandril L is made hollow nearly through, and, at the open end, is cut with a female screw, for the reception of male screws upon the various chucks, which fit to the lathe. This is a better method than the common way of a male screw on the mandril, because of the care with which the male screws for the chucks can be cut m brass, and the convenience of putting long work up the hollow mandril. This lathe has all the parts of the wooden lathe, but is far more con- venient, because of the ease with which the puppet and rest can be shifted and fixed by only the finger and thumb, and yet the whole is much stronger, the puppets being so low from the bar ; and another advantage is the accuracy w.th which the back centre-point n always keeps in a line with the mandril, which is indispensable for good turning; also the puppets being so slender, the operator has better access to the work than between clumsy wooden puppets, and which are not so strong as the small metal ones.

The process of turning may now be briefly examined. A piece of wood being chosen i< by means of the saw, axe, and chisel, reduce 1 to a cylindrical form, and by the rasp or draw

knife it is made tolerably correct ; a chuck is then selected which has a hole in it nearly the size of the piece of wood. The diameter of this being taken in the outside end of the calli- pers, the chuck is screwed into the mandril, the rest fixed in a convenient position, and the hole in the chuck turned out by the right side tool, to the size measured by the inside end of the calli- pers. The hole should be rather conical, and the wood, being rasped to the same figure, is driven in fast by a hammer. By turning the mandril slowly round, it will be seen if the wood is fixed straight in a line with it, and if not a blow or two of the hammer properly directed will rectify it. The rest is set with its edge pa- rallel to the outside of the piece of wood, and it is roughly turned by the gouge to a cylinder. To do this the gouge is held very

firmly down «pon the rest, taking its handle in the right hand and placing the fingers of the left in the hollow part near the work ; the odge is presented to the work in such a direction that the tool is nearly a tangent to the surface of the cylinder. In this &tate it cuts best, and must be held very iirmiy to prevent the edge being depressed by the motion of the work ; for, if it does, it will take hold too deep and tear the work. This tool is applied first to one end of the work and gradually advanced to the other, turning the work true all the way, and reducing it till the callipers determine it to be near the intended diameter. The chisel is now employed to smooth the cylinder; its handle is held in the right hand, whilst the left grasps the blade and keeps it steady upon the rest, holding the edge a little inclined over the work, so that one side of the flat part of the blade lays on the rest, and the other side is elevated that the plane of the blade, and consequently the edge, is not horizontal but inclined thereto ; so that one corner of the edge of the chisel is elevated upon the work, then the bottom or near the bottom of the edge of the chisel cu»s away a shaving off the work, and this is the only way in which it will cut ; for, if the edge of the chisel is held parallel to the axis of the cylinder, it acts across the length of the grain of the wood, scraping away the fibres one by one without cutting, and leaves the surface very rough. Some chisels have their edges in- clined, for the convenience of holding them pro- perly before the work. The work, being thus reduced to a rough cylinder, must have its end made exactly flat ; to do this the thin side of the cliisel is laid upon the rest, so that the plane of the edge may stand exactly upright ; the hand is depressed that the lower corner of the edj;e will rise against the work and cut a deep circle into it near the end, and being steadily advanced cuts to the centre, separating a thin round chip and leaving the end quite flat. The cutting corner of the chisel must be directed exactly perpendicular to the length of the work in ad- vancing it, otherwise the end will be either con- cave or convex, and care must be taken to keep the plane of the edge truly upright, and hold it very fine, for there is danger of the work draw- ing the chisel into the end of it with a deep = 1 cut like a screw, and tearing it out of the -.'•ick.

The gouge and chisel are only used for turning soft wood, such as alder, sallow, beech, &c. ; but if the material to be turned be hard wood, as ebony, lignum vitae, or ivory, bone, &c., the same mode of chucking is employed, but the tools and the manner of holding them is dif- ferent. The hard wood tools are made with a stronger and more obtuse edge, for a fine keen edge would be carried away by the work when hard. In turning soft woud, as before men- tioned, the edge of the chisel is at a considerable distance from the rest, and inclined upwards at such an angle as would cut off the ˆre.iu-st chip. But in hard wood tlie rest is raised nearly to a level with the axis, so that the upper flat surface of the tool points to the centre of the work to I e turned ; it is to be held down as firmly as pos- sible to the

rest, and advanced to the work at in- tervals whenever it ceases to cut, by having removed all the projections of the work without the circle it describes by its revolution.

The tools used for turning brass, or cast iron, are made from bars of steel ; for, as those who turn metal are usually general mechanics, they make the tools themselves, and adapted for any particular occasion they require; the principal tools are gravers, square tools, pointed tools, round tools, and hooks. The graver is made like those used by engravers, from a square steel bar, cut off by an oblique plane at the end, which makes a lozenge or diamond face, and produces two inclined edges at two of the flat sides of the bar; these two are inclined opposite ways, so that the graver serves either for left or right-hand work by only turning it one quarter round to bring up another side. The point formed by the acute angle in which the two inclined edges meet is best adapted for cutting of any other form, and is exceedingly strong ; the flat sides give it an excellent bearing upon the rest ; another convenience of the graver is the ease with which it is sharpened, which is an object in turning hard metal, when it is so fre- quently necessary ; it only requires to be held on the grind-stone in the proper angle, to grind the diamond face away, and thus make sharp edges with the two flat sides. Gravers, and all to >1- for metal, are hardened and tempered to a light straw color, so as to leave them very hard ; cast steel is the best material. The graver is used to rough the work, its point being used to cut grooves all over the surface till it is true, and then the welved edge of the graver, or else a square or round tool, makes it smooth and a proper figure. It is necessary in beginning to turn with a small sharp point ; for the resistance to any kind of edge would, in beginning, be so great as to tear every thing in pieces. Square tools are made like a narrow chisel, except that they are very thick, and the angle of the edge very obtuse; the upper surface, which is flat, is, in turning, made to point to the centre of the work. Hound tools are like the former, except that the edges are made round for forming hollow mouldings, &c.

The pointed tool has two inclined edges form- point which cut grooves in any piece of 'work ; or its edges may be used to turn shoulders cither ri«ht or left.

Drills of various sizes to bore holes in chuck work; they are fixed in handles.

Right and left side tools, such as before de- scribed.

Heel tools are used for turning wrought iron, steel, or copper ; they are made with edges of all the shapes above-mentioned, but the end where the edge is formed is bent, so that when it is presented to the work, in its proper direction, the handle is inclined upwards, in such a posi- tion, that the end of it \viil lay on the turner's shoulder, and he holds it do\Mi iirrn with both his hands, the heel of the tool being supported on the rest. The metals above-mentioned are of a fibrous texture, and turn away in a connected shaving, the tools are therefore presented in the direction of a tangent to the work, the same as for soft wood ; but as the drift of the work would force the tool endways, if held in the same man- ner as the chisel, it is necessary to have a heel, or angle, which is placed immediately upon the rest, then the long handle serves to guide and fix it, and by elevating the end the edge cuts deeper.

Cast iron is turned by hook tools ; their edges are formed in various ways, but very obtuse, being nearly a right angle : in turning they are held in such a position that a line bisecting the angle of the edge is made to point nearly to the centre ; but as the work is usually large, and the metal very hard, some contrivance is requisite to keep the tool up to the work, they are therefore made with a hook which has the edge at the end of it ; the hook part is laid over the rest, in the same manner as a crow bar is used to draw out a spike or nail, and then, by raising or de- pressing the end of the handle, the edge is caused to approach or recede from the work with any required force, by only a moderate power applied at the end of the long handle ; cannons, and other heavy cast iron work, are turned in this manner.

The eccentric chuck and slide-rest are very essential parts of a good turning lathe, and, as both these instruments have been materially im- proved by Mr. Ibbertson, we cannot do better than furnish our readers with an account of that gentleman's apparatus as constructed by Messrs. Holtzapfel and Deyerlein.

Fig. 3, plate TURNING, represents the chuck in its most simple form, but which is abundantly sufficient to show its nature and construction, and by means of which we may produce any of the eccentric figures in this work. Fig. 3 is a front view, and fig. 4 is a side view : the letters in each figure refer to the same parts in each view, we shall, therefore, rather more minutely describe fig. 3.

AAA is a plate of brass, or metal, of suffici- ent substance to be firm and solid, on which plate two slides of steel are affixed by the screws B, B, B, B ; the holes which admit the screws are made a little oval, to enable the slides to move nearer or further apart if necessary. C, C, C, C, are four pieces of metal firmly fixed to plate A, and having a screw in each which

presses on the sides B, B. D D is a plate of metal or brass, sliding between B, B, B, B, in a dove-tail, and must be made to fit very accurately when . the slides arc-

parallel to each other, and is moved between the slides by^means of a screw I, working in a slit made in the plate A; and which screw regulates the eccentricity, as it moves the plate D either nearer or further from the centre of the chuck. E is a circular plate of metal, whose edge is cut into teeth, and which is capable of being turned round its centre, and is held in r.ny posi- tion by the catch G which falls in between the teeth, and is held in its place by a spring K. On the centre of the wheel E, is affixed a screw F, as shown more plainly in fie. 4, whose threads correspond with the screw of the mandril of the lathe, for the purpose of fixing any chuck, on which is fastened the substance on which we are working.

O, fig. 4, is a solid piece of metal, which screws on the lathe, and on which the plate A is fastened (A, fig. 4), by a rim enclosing the plate A, fig. 3 and fixed by screws, or, as sometimes is the case, A and O are in one solid piece.

Fig. 5 is a view of the slide rest, looking down on it, and fig. 6 is an elevation ; the letters in both figures refer to the same parts in each. Thus, A A represents the bed of the lathe; B, B, are two pieces of brass, or metal, affixed by the screws, as shown in the figure, to a bed of cast iron ; C is a plate of iron, sliding between the two pieces B, B, in a dove-tail, having a nut and screw, moved by a handle, as shown at H, by which it is drawn nearer or farther out; D is an- other piece of metal affixed to C, and at right angles to it, having a groove or channel through it to admit the screw K, which has a nut, to which the piece of metal E is fixed ; I, I, are two pieces to fix the tool F, by means of the two screws I, I ; on the axis of the handle G is a graduated circular plate, which turns with it, and, being affixed to the screw K, moves the plate E and tool F according to the diameter of the circle re- quired. In fig. C, L is the stand to which the plate B is affixed, and, by means of the nut N, is raised or depressed at pleasure, between the standard MM in- a dove-tail. The whole is kept firm in its place by means of the nut and screw O, underneath the bed of the lathe. • We may now illustrate the use and application of the eccentric chuck and slide-rest. Screw the chuck C in the mandril of the lathe, and bring the centre F of the slide D D to correspond to the centre of the plate A ; then on the screw F fix whatever you wish to turn, and make the face perfectly level in the common way : then fix your slide-rest firm on the bench of your lathe, by means of the screw O, and elevate A, by means of the nut N, till the point of your tool F shall be of the same height as the centre of the chuck : by means of the handle G, make the centre of your tool cor- respond to the centre of your work very accu- rately, and let the plate C be

at the end of the plate B, close to the screw H ; then, by means of the screws at 1, 1, fix your tool so that its point shall just touch your work. Your instrument being thus accurately adjusted, you may proceed to the operation of describing any eccentric circle. And here it may be noted that the several screws I, fig. 3, in the eccentric chuck, and those at K and II, are best made with the same tool, anil of a determined number of threads to the

inch, then they will all move equally, and deter- mine with precision the eccentricity and diame- ter of the circles, and also the depth to which you v.ish to cut them by your tool.

One example will now be sufficient to explain the application; and, for the sake of being as perspicuous as possible, we will suppose the several regulating screws to be such that one turn shall move the plates and tool forward one- tenth of an inch. Now, suppose it is required to describe a circle whose eccentricity shall be half an inch, and radius one inch, and also that the depth to which we wish to cut it be the hundredth part of an inch, we must proceed as follows : turn the screw I of the chuck forwards five turns, which will be ˆ or half an inch for the ec- centricity, the screw of the rest G ten turns, which will make the radius one inch ; then set your lathe in motion, and turn the screw II of the rest gradually one-tenth of a turn, and you will have described the circle required.

It now only remains to describe how we are to produce a series of eccentric circles about a com- mon centre : this is easily performed by means of the toothed wheel E, which is commonly di- vided ii:to ninety-six parts or teeth. Or we may employ three times ninety-six, or 288 teeth ; and hence we can describe, round the common cen- tre, t!ie like number of circles, or any number from unity to 288. Thus, if it be required to draw 288 eccentric circles round the centre F, we must for every circle move the wheel E for- ward one tooth, till the whole be completed. Asrain, if we wish forty-eight eccentric circles round the common centre, we must divide 288, the whole number of the teeth, by forty-eight, which u'ives six, that is to produce forty-eight eccentric circles, we must, for every circle, move the wheel forward six teeth, and thus we may draw any number of circles equidistant from each other, round the centre F; with this limitation, that it must be such a number as will divide 288 without a remainder ; for if there be a remainder the circles will not cjose or meet exactly, but will leave a space unoccupied.

We shall conclude this article with a number of receipts which every turner ought to be ac- quainted with.

1 . The method of moulding boxes both of shell and horn. — In the first place form a proper mould, which must consist of two pieces; viz. of a circle about half an inch thick, which should slope a little in order to draw out the moulded shell the more easily ; and a ring fitted to the outside of the circle, so that both together make the shape of a box. These two pieces being adjusted it is necessary to round the shell to be moulded of such a size that, when moulded, it will be a little higher than the ring of the mould that there may be no deficiency. The mould is then to be put into a press on a plate of iron exactly under the screw of the press ; put then the shell upon tl.e circle of the mould, so that its centre also is ex- actly opposite to the screw of the press; tin n take a piece of wo -d formed into a truncated cone, and not so thick as the diameter of the « ircte of the mould, nor so deep as the ritiu : then put a plate of iron above the tone, and screw

whole is well fixed ; then plunge the who'ie into a cauldron of boiling water placed above a fire. In eight or ten minutes the shell or horn will begin to soften ; screw the press a little firmer that the wooden cone may sink into the softened shell : repeat this from time to time till the cone is quite sunk in the mould ; then take ou? th« press and plunge it into cold water. When it is cold take the box now formed out of the mould and put into the inside of it a new mould of tin exactly of the form you wish the inside of the box to be; do the same with the outside, put it again into the press and plunge it into boiling water ; screw the press gradually till the box be fashioned as you desire.

2. Method of preparing green wood so that it will not split in the turning. — Having cut your wood into pieces of a proper size, put it into a vessel full of a ley made with wood ashes. Boil it there about an hour; then, taking the cauldron off the fire, allow the ley to cool ; then take out the wood and dry it in the shade.

3. Method of giving an ebony-black to hard and fine woods. — After forming the wood into the destined figure rub it with aquafortis a little diluted. Small threads of wood will rise in the drying, which you will rub off with pumice-stone. Repeat this process again, and then rub the wood with the following composition: — Put into a glazed earthen vessel a pint of strong vii

two ounces of fine iron filings, and half a pound of pounded galls, and allow them to infuse for three or four hours on hot cinders. At the end of this time augment the fire, and pour into the vessel four ounces of copperas (sulphate of iron) and a chopin of water, having half an ounce of borax

and as much indigo dissolved in it ; and make the whole boil till the froth rises. Rub several layers of this upon your wood, and, when it is dry, polish it with leather on which you have put a little tripoli.

4. Method of giving to plum tree the color uf brazil wood.— ˆSlake some lime with urine, and bedaub the wood over with it while it is hot : allow it to dry ; then take off the coat of lime and rub it with chamois skin well oiled. Or steep your wood in water, having a quantity of alum dissolved in it : then, having allowed Bra- zil wood to dissolve in water five or six hours, steep your wood in it, kept lukewarm during .1 night ; and when it is dry, rub it, as before di- rected, with chamois skin wejl oiled.

5. Method of giving ajine black color to wood. — Steep your wood for two or three days in luke- warm water in which a little alum has been dis- solved ; then put a handful of logwood, cut small, into a pint of water, and boil it down to less than half a pint. If you then add a little indigo, the color will be more beautiful. Spread a layer of this liquor quite hot on your wood with a pencil, which will give it a violet color. When it is dry, spread on another layer ; dry it

n and give it a third : then boil verdigris at discretion in its own vinegar, and spread a layer of it on your wood : when it is dry, rub it with a brush, and then with oiled chamois skin. This cives a fine black, and imitates perfectly the co- lor of ebony.

i> Mtthod ofcietmitg and u-liittning bones bi-

fore using them.— Having taken off with a saw the useless ends of the bones, make a strong ley of ashes and quick lime, and into a. pailful of this ley put four ounces of alum, and boil the bones in it for an hour; then take the vessel containing the ley off the fire and let it cool; then take out the bones and dry them in the shade.

7. Method of soldering shells. — Clean the two sides of the shells whicli you wish to join toge- ther; then, having joined them, wrap them up in linen folded double and well moistened ; then heat two plates of iron pretty hot, that they may keep their heat for some time ; and putting your shells rolled up between them under a press, which you must screw very tight, leave them there till the whole is cold, and they will be sol- dered. If you do not succeed the first time, re- peat the process.

8. Method of moulding shells. — Put six pints of water into a kettle ; add to it an ounce of olive or other oil ; make the water boil ; then put in your shell, and it will grow soft. Take it out and put it into a mould under a press, and it will take the figure you want. This must be done quickly ; for, if the shell cool ever so little, the process will fail. It will not require much pressure.

9. Method of tinging bones and ivory red. — Boil shavings of scarlet in water. When it begins to boil, throw in a quarter of a pound of ashes made from the dregs of wine, which will extract the color : then throw in a little rock alum to clear it, and pass the water through a linen cloth. Steep your ivory or bone in aquafortis, and put it into the water. If you wish to leave white spots, cover the places destined for them with wax.

10. To tinge ivory black. — Steep the ivory five or six days in water of galls with ashes made with dried dregs of wine and arsenic ; then give it two or three layers of the same black with which plum-tree is blackened, in order to imi- tate ebony. Or dissolve silver in aquafortis, and put into it a little rose water. Rub the ivory with this, and allow it to dry in the sun.

1 1 . Method of hardening wood to make pulleys. — After finishing the pul'ey, boil it seven or eight minutes in olive oil, and it will become as hard as copper.

12. To make Chinese varnish. — Take of gum lac in grains four ounces ; put it into a strong bottle with a pound of good spirit of wine, and add about the bulk of a hazel nut of camphor. Allow them to mix in summer in the sun, or in winter on hot embers for twenty-four hours, shaking the bottle from time to time. Pass the whole through a fine cloth, and throw away what remains upon it. Then let it settle fcr twenty- four hours, and you will find a clear part in the upper part of the bottle, which you must separate gently and put into another vial, and the remains will serve for the first layers.

TUR'NIP, n. s. Swedish tar, delicate ; and Latin nappus, a root. — Thomson. A while es- culent root.

November is drawn with bunches of parsnips and turnips in his right hand. Peacham nn Drawing.

The goddess rose amid the inmost round. With withered turnip-tops her temples crowned.

Gay.

Tarnipi hide their swelling heads below.

Id. Pastoralt.

TURNIP-ROOTED CABBAGE, a valuable plant recommended by Sir Thomas Beevor, in the Bath Society's Papers, for rearing and fattening young bullocks and wedders. See his method of cultivating them, under RURAL ECONOMY.

TURON BAY, a fine bay of Cochin-China, which receives the river on which is situated Taifo, the capital and principal seat of the com – merce of that country. The country situated upon Turon Bay is remarkably fertile and beau- tiful. Cape Turon, in long. 108° 15′ E., lat. 16° 5′ N., forms its eastern extremity, and, with Tu- ron Island, situated six miles to the north, makes an excellent harbour.

TUR'PENTINE, n. s. Italian turpentina ; Latin terebinthina. The gum exuded by the pine, the juniper, and other trees of that kind.

As the turpentine tree I stretched out my branches.

Ecclut.

Vertgrease grinded with turpentine, put into a pot, and as you use it warm it.

Peacliam on Drawing.

TURPENTINE is a transparent viscous substance, flowing either naturally or by incision from se- veral unctuous or resinous trees ; as the terebin- thus, pine, larch, fir, &c. See PINUS, CHEMISTRY, and MATERIA MEDICA.

TURPENTINE TREE. See PISTACIA.

TURPETH, the cortical part of the root of a Species of convolvulus, brought from' the East Indies. It is accounted a pretty strong cathar- tic ; but it is very uncertain in its strength, for sometimes a dose from a scruple to a dram purges violently, while at other times a much greater dose produces very little effect. See CON- VOLVULUS.

TURPIN DE CRISSE (Lancelot), count, an eminent French military writer, of a noble family in Beauce, was born about 1715. He obtained a company in 1734, and ten years after a regiment of hussars, at the head of which he displayed his valor in the wars of Italy and Germany. At one time he quitted the army and retreated to the abbey of LaTrappe ; but, repent- ing of the step, he returned to his post, and not long after married the daughter of general Low- endhal. His leisure was dedicated to study, and in 1754 he

published, in concert with Castilhon, Les Amusements Philosophiques et Litteraires de deux Amis. Beinsr called to active service, in 1757, he distinguished himself as a skilful tactician, and was appointed marechal-de-camp in 1761, and in 1771 a commander of the order of St. Louis. After seventeen campaigns he ob- tained the rank of lieutenant-general in 1780 ; and the next year was made governor of the fort of Scarpe at Douai. His name appeared on the list of lieutenant-generals in 1792; and all that is known of his subsequent history is, that he died in Germany. He was a member of the academies of Berlin, of Nanci,and of Marseilles ; and published the following works : — Essai sur 1'Arl de la Guerre; Paris, 1754, 2 vols. 4to., of which there are English, Russian, and German translations. Commentaires snr les Memoires de Montecuculi ; 1769, 3 vols. 4to. Com- mentaire sur les Institutions de Vegcce ; Mon

Urgrs 1770, 3 vols. 4to : and Les Cor.-.ni.-ntaires de Cesar, avec ties Notes Historiques, Critiques, et Militaires; Moiitargis, 1785, 3 vols. 8vo., reprinted at Amsterdam in 1787.

TUR'PITUDE, n. s. French turpitude; Lat. turpitudo, turpis. Gross deformity of words, thoughts, or actions; inherent vileness ; badness.

How wouldst thou have paid My better service, when my turpitude Thou thus dost crown with gold 1 Skuksj>eare.

Decency imports a certain measure of one thing to another; the preservation of which is properly that rule by which every thing ought to act ; and, conse- quently the violation of it implies a turpitude or in-decency. £wJA.

TURQUOIS, MINERAL, or calaite. Colors smalt blue and apple green. Massive, dissemi- nated, and imitative. Dull. Fracture conchoidal cr uneven. Opaque. Harder than felspar, but softer than quartz. Streak white. Specific gra- vity 2-86 to 3-0. Its constituents are alumina 73, oxide of copper 4-5, water 18, oxide of iron 4. — John. It occurs in veins in clay-iron-stone, and in small pieces in alluvial clay. It has been found only in the neighbourhood of Nichabour in the Khorassan, in Persia. It is very highly prised as an ornamental stone in Persia and the neighbouring countries. Malchite yields a green streak, but that . of calaite is white. Bone tur- quois is phosphate of lime colored with oxide of copper.

TUR'QUOISE, n.. s. See TURKOIS.

One shewed me a ring, he had of your daughter

for a monkey.

— Out upon her ! it was my turquoise ; I had it when I was a bachelor. Shafupeare. Merchant of Venice.

TURRˆEA, in botany, a genus of plants in the class of decandria and order of monogynia; ranking, in the natural method, under the forty- ninth order composite.

TUR'RET, n. s. { Latin turns. A small

TUU'RETED, adj. i eminence raised above the rest of the building ; a little tower : turreted, with a turret or turrets.

Discourse, I pr'ythee, on this turret's top.

Shakspeare.

Take a turreted lamp of tin, in the form of a square ; the height of the turret being thrice as much as the length of the lower part, whereupon the lamp standeth. Bacon's Natural History.

All things well ordered, he withdrew with speed Up to a turnt high, two ports between, That so he might be near at every need, And overlook the lands and furrows green.

Fairfax.

Make Windsor hills in lofty numbers rise, And lift her turrets nearer to the skies. Pope.

*TURRETIN (Francis), minister and profes- sor of divinity at Geneva, his native place, was born in 1623. Having studied at Geneva, Ley- den, Saumar, Montauban, and Nismes, with great success, he was admitted into the ministry in 1648, and served at the same time the French and Italian churches at Geneva. Two years after he was offered the professorship of philo- sophy, which he refused ; but accepted the invi- tation of the church at Lyons. He was recalled to Geneva a year after, being wanted to give lec- *ures in divinity ; which he began in 1653. He was sent to Holland in 1661, to procure money*

for the city of Geneva. He had in that journey all the success he could wish ; and gained such a character that he was strongly importuned by the

Walloon churches at the Hague and at Ley- den to enter into their service. On his return he resumed the functions of his place, and con- tinued there till his death. He died in 1687, with the character of a man of great merit ; elo- quent, judicious, laborious, learned, and zealous for orthodoxy. His works were published by hi« son, in 3 and in 4 vols. 4to.

TURRETIN (John Alphonsus), son of the above, was born at Geneva, in 1671 ; and became the h'rst professor of ecclesiastical history, in that re- public. He wrote an Abridgment of Ecclesias- tical History ; Sermons, and other works. He died at Geneva, 1737.

TURRITIS, tower mustard, or wall cress, in botany, a genus of plants belonging to the class of tetradynamia, and to the order of siliquo- sa ; and in the natural system ranging under the thirty-ninth order, siliquosae. The siliqua is very long and angulated ; the calyx connivent and erect; the corolla is also erect. There are three species ; two of which are natives of Great Britain; viz. 1. T. glabra, and 2. T. hirsuta.

TURSHEEZ, a considerable city of Korassan, Persia, on the borders of the Great Salt Desert. The old city (Sultanabad) is small ; but to this a new one has been added, in which the governor resides. Both together contain about 20,000 in- habitants, among which are 100 Hindoo families. The trade arises chiefly from the importation of indigo and other drugs from the westward ; wool, cloth, and wee from Herat. The chief export is iron. Between this and Herat the country is in general wild, mountainous, and uncultivated. 160 miles W. N. W. of Herat.

TURTLE, n. s. J Saxon tunrle; Fr. tor-

TUR'TLEDOVE. $torelle; Italian tortwllii. A species of dove : also a kind of tortoise.

Take me an heifer and a turtledove. Gen. xv. 9. • When shepherds pipe on oaten straws, And merry larks are ploughmen's clocks ; When turtles tread.

Shakspeare. Leve's Labour Lost. We'll teach him to know turtles from jays.

Shakspeare.

Galen proposed the blood of turtle dropt warm from their wings. Wiseman.*

TURTLE, in icthyology. See TESTUDO.

TURTLE, AMERICAN, a machine invented by Mr. David Bushnell, of Saybrook, in Connecti- cut, for sub-marine navigation. The Catamarans, so

pompously submitted, and so expensively at tended to, by the late Mr. Pitt, as being the or; ginal invention of Mr. Fulton, were direct imitations, or rather copies, of the Americaiv turtle. It is a decked boat, and several persons are said to have gone under water many leagues. The difficulty is to provide the persons in the boat with fresh air for respiration, and this is contrived by having a reservoir of air, of amiable dimensions to the size of the boat, and the number of persons in it. By means of a condensing pump, the air in this reservoir is condensed about 400 times ; and by a spring the air is let out at intervals, as circumstances re- quire ; the impure air being rectified by carboni

acid neutralised with chalk. Within the boat are flaps, like those of a rundle, to move the boat, two rudders, one vertical the other hori- zontal, and a pump to empty the hold or air- reservoir. The persons within can, at pleasure, come to the top of the water ; and, to injure an enemy's vessel, the boat is steered to the ship, and a machine filled with combustibles is fixed to it, which is set on fire by a cock let off by a spring, after a certain time, during which the persons within the boat have provided for their safety. It does not appear that any vessel has as yet suffered by this invention. Experiments have been made, particularly by the French, but the difficulties of carrying them into execution in real practice are too great to afford any cause of alarm to our navy.

TURTLE-DOVE, in ornithology. See COLVMH.V.

TUSCAN EARTH, a yellowish kind of bole dug in many parts of Italy, particularly about Florence, where there is a stratum of it eiˆht or ten feet thick, at the depth of five or six feet from the surface. It is supposed to have an as- tringent property.

TUSCAN ORDER, in architecture. See ARCHI- TECTURE.

TUSCANY is a grand duchy of the upper part of Italy, half encompassed by the states of the church. It is bounded on the west by the Mediterranean, and on the north-west by the small principality of Lucca, except a detached part which borders on the south of Parma, between the states of Modena and those of Sardinia. It lies chiefly between 42° and 44° of lat., and resembles a heart in shape, with its point towards the south. Its greatest length is about 130 miles, and its extreme breadth rather more than 100, comprising a surface of 9270 square miles, and a population of 1,170,000, which is about 126 persons to each square mile.

This state formed a part of the late French empire, but was restored by the congress at Vienna, with the addition of the state of Presidii, and that part of the island of Elba which belonged to the king of Sicily before the year 1801, toge- ther with the principality of Piombino. Much of this duchy, which includes a great part of the ancient Etruria, is mountainous. The Appennines intersect it and spread their ramifications over all the eastern and southern districts. The Marem- ma stretches through a great part of the south- western regions ; but here the efforts of art and the labors of cultivation have greatly diminished the influence of the Mai Aria, and rendered this part of the unhealthy tract much superior to that in the papal states. Tuscany presents many- picturesque and beautiful scenes, smiling with the blushing fruits of Pomona, and the waving treasures of Ceres. The two principal rivers of Tuscany are the Arno and the Ombronne ; the former intersects the country from east to west, and enters the Mediterranean near the northern, extremity of the coast ; the latter flows towards the south, and terminates in the same sea. The soil is often very fertile, yielding abundance of various kinds of grain, with oranges, lemons, olives, grapes, mulberries, and the different fruits common to other parts of Italy. Minerals are also obtained in the mountains of Tuscany,

\iih several precious stones not common to- other parts. Among these have been mentioned amethysts, jaspers, cornelians, crystal, lapis lazuli, and chalcedony, with abundance of mar- ble and alabaster. Quicksilver is also one of its products. Mineral waters have been discovered, and those of Pisa have long been celebrated.

The capital is Florence, not only one of the principal cities of Italy, but one of the hand- somest in Europe. It stands in a beautiful plain watered by the Arno, and derives its name from the multiplicity of elegant flowers that bloom in its vicinity. Many natural curiosities exist among the elevated ridges of the Appen- nines, among which the following deserves to be mentioned. Near Pietra Mala, at the foot of mount Candida, is a fire perpetually issuing from the ground. Mr. Williams says, when he visited the spot, it rose in lambent flames among loose earth and stones, depositing a carbonaceous matter, volatilized, and lying like soot, without peculiar smell. When the wind blew, the flames were noisy like a bonfire, but in a calm they were silent. The extent was then about eleven feet, and the height about the same number of inches. Mr. Eustace states their length at 14O feet.

The chief culture in Tuscany is by the spade, the corn fields being so much intersected by rows of vines, by olives, and other fruit trees, that a plough can with difficulty be guided. A liberal application of manual labor insures a large return ; but the cultivators are almost all poor. The system of metairie is general among them, the landlord engaging to supply the imple-

ments and other farming stock, while the tenant contributes his labor, along with half the cost of the seed and manure. Under this system a tenant has no inducement to make any permanent im- provement ; and, being in general too poor to hire laborers, is often too late with particular operations, such as the pruning of the vine, or the dressing of the olive; and the result is a penury of furniture, a wretched habitation, and a total absence of com- fort. Still the inhabitants discover considerable ingenuity in irrigating the ground, and carrying cultivation along the acclivities of their hills and mountains.

Modern Tuscany is not conspicuous in manu- factures. Its principal article is silk, made into a variety of articles — ribbons, stockings, gloves, as well as light and heavy stuffs ; next come linen, and on a smaller scale woollens, straw hats, perfumed essences, and liquors. Leghorn is a port of considerable activity ; the channel for the export of much produce, and for the im- port of a variety of goods from the Levant and the north of Europe ; but Pisa has fallen from its former prosperity, and Florence and Sienna trade only with the interior.

Tuscany is divided into the three provinces of Florence, Pisa, and Sienna. The form of the government is monarchical ; the title of the sovereign, archduke of Austria and grand duke of Tuscany; his appellation, imperial highness; his power, though exercised with mildness, is restricted by no representative body, or written authority. The executive is managed by the cabinet and a council of state. In taxation the principle is to burden property, but to be sparing

of the working classes. 'Die revenue is about £600,000. The church establishment consists of three archbishops and sixteen bishops, whose incomes, and still more those of the inferior clergy, are very limited. The military force, ex- clusive of the volunteers or militia, does not amount to 3000 men ; its navy is very insig- nificant.

In religion the Tuscans, with a slight ex- ception (Jews to the number of 16,000), are Ca- tholics, hut exempt from several of the defects and bad habits of their Italian countrymen. They speak their language with considerable purity, and possess scientific institutions, which rank high among provincial academies.

To readers of ancient history Tuscany will be known under the names of

Etturia and Tyrrhenia. Its territory, early peopled, contained twelve towns of note, in the ages which followed the foundation of Rome. About the year of ttome 474, after the conquest of the Volsci, .T.qui, and other small tribes, but before the more hazardous contests with Pyrrhus and the Carthaginians, the Romans completed the subjugation of Etruria. It remained in their possession between 700 and 800 years, until overrun by the barbarians. Held :U first as a duchy and fief of Lombardy, it was afterwards restored to independence; but, I – «anis the beginning of the thirteenth century, tiie continued divisions which agitated it led first to a change in the form of government, and eventually to the ascendency of the Medici fa- mily, which long ruled with the title of grand duke, but became extinct in 1737. Their place was filled by the duke of Lorraine. That prince, :he husband of Maria Theresa, becoming after- wards emperor of Germany, vested the grand duchy in his second son. From him it descended to the grand duke Ferdinand, brother of Francis II. of Austria In the wars of the French revolution the policy of Tuscany was to avoid any active participation in the contest. This did not, however, long exempt the country from change. By the treaty of Luneville (February 1801) the grand duchy of Tuscany received the title of kingdom of Etruria, and was transferred to the hereditary prince of Parma : in the sub- sequent incorporations of Buonaparte it was de- clared an integral part of the French empire, as we have spen.

TUSCULANUM, a villa belonging to Cicero, near Tusculum, where he wrote his Questiones Tusculans. Formerly the villa of Sylla ; now called Grotta Ferrata.

TUSH, inter}. Gothic that; Dan. lyt. An expiession of contempt.

Tuth, say they, how should God perceive it? is •here knowledge in the Most High? Psalm, Ixxiii.

Sir Thomas More found fault with his lady's con- tinual chiding ; saying, the consideration of the time, for it was Lent, should restrain her. Tuth, tiuh. my lord, said she, look, here is one step to heaven-ward, shewing him a friar's girdle. I fear roe, quoth Sir Thomas, 'bis one step will not bring you up a step higher. Camden'i Remain.*

Tush, never tell me : I take it much unkindly That thou, lago, who hast had my purse As if the strings were thine, shouldst know of this.

Shaktptare.

ˆ.ii.s. ˆ Sax. ryxap; old Frisu k Ti -K'tn, ti(/i.ˆ >fwfan The long teetli ot Ti -K'Y. i i pugnacious animal ; tl,e

fan.'; holding tooth : furnished with tusks.

Some creatures have over-long or out-growing teeth, called fangs, or tusfci ; as boars and pikes.

Bacon.

Into the naked woods he goes, And seeks the tusky boar to rear. Dryden.

Of those beasts no one was horned and tusked too ; the superfluous blood not sufficing to feed both.

Grew. The boar depended upon his tusk. 1,' Estrange.*

A monstrous boar \Vhetting his tusks, and churning hideous foam.

Smith.

TUSSILAGO, colt's foot, in botany, a genus of plants, belonging to the class syngenesia, and order of polygamia superflua ; and in the natural system ranging under the forty-ninth order, composite. The receptacle is naked ; the pap- pus simple ; the scales of the calyx equal, of the same height as the disk, and somewhat membra- naceous. There are twelve species; three of wh;ch are indigenous in Britain.

ˆUCK, n. s. Diminutive of tuzz. A tuft of ?rass or twigs.

The first is remarkable for the several tnssncks or bunches of thorns, wherewith it is armed round.

Grew.

TUT, inrcr/. The same with tush. A parti- cle noting contempt.

Tut, tut ! grace me no grace, nor uncle me no ancle. Shakspeare.

Tut, tut ! here's a mannerly forbearance. Id.

TUTANA, or TOTANA, a considerable town o» the province of Murcia, Spain, on the great road by which that province communicates with An- dalusia. It contains 8000 inhabitants ; the houses are low and mean ; and the public buildings confined to a church, a monastery, and an hospital. The surrounding country is natu- rally fertile, but in a great measure uncultivated, the inhabitants being thinly scattered and devoid of activity. Eighteen miles E. N. E. of Lorca.

TU'TANAG, n.s. Chin, tutunage. Spelter.

Tutanage is the Chinese name for spelter, which we erroneously apply to the metal of which canisters are made, that are brought over with tlie tea from China ; it being a roarse pewter made with the lead carried from F.ngland, and tin got in the kingdom of Quintang. Woodicard.

TUTF.XAG. Tiiis name is given in India to the metal zinc. It is sometimes applied to de- note a white metallic compound, brought from China, called also Chinese copper, the art of making which is not known in Europe. It is very tough, strong, malleable, may be easily cast, hammered, and polished ; and the better kinds of it, when well manufactured, are very white, and not more disposed to tarnish than silver is. Three ingredients of this compound may be dis- covered by analysis ; namely, copper, zinc, and iron. Some of the Chinese white copper is said to be merely copper and arsenic.

TUTENAGO.tn ore of zinc, containing com- monly from sixty to ninety per cent, of zinc, the remainder iron, and a small proportion of clay ˆ MINERALOGY.

TUTELAR, adj.\ Lat. tutela. Having the TL'TELARY, £ charge or guardianship of

TU'TELAGE, n. s. j any person or thin? ; state of being under a guardian : guardianship.

He acco-upled the ambassage with an article in the nature of a request, that the French king might, ac- cording unto his right of seignory or tutelage, dis- pose of the marriage of the young duchess of Bri- tany. Bacon.

The tutelage whereof, as those past worlds did

please, ˆome to Minerva gave, and some to Hercules.

Dray ton.

According to the traditions of the magicians, the 'utelary spirits will not remove at common appella- tions, but at the proper names of things whereunto they are protectors. Browne.

If one in the possession of lands die, and leave a minor to succeed him, his tutelage belongeth to the king. Drummond.

Temperance, that virtue without pride, and for- tune without envy, that gives indolence of body, with an equality of mind ; the best guardian of youth and support of old age , the precept of reason, as well as religion, and physician of the soul as well as the body ; the tutelar goddess of health, and uni- versal medicine of life. Temple.

These tutelar genii who presided over the several people committed to their charge, were watchful over them. Druilen.

Ye tutelar gods, who guard this royal fabric !

Rou:e.

TUTOR, n.s. &v. a.} Lat. tutor; Fr. tu-

TU'TORAGE, n. s. fteur. One who has

TU'TORESS. J the care of another's

learning and morals ; a teacher or instructor : to

instruct; treat with superiority or haughtiness:

tutoress is the feminine noun substantive : tutorage,

the authority or solemnity of a tutor.

When nobles are the tailors' tutor ; No hereticks burnt but wenches suitors. Shakspeare.*

He cannot be a perfect man, jVot being tried and tutored in the world. Id.

The cock has his spurs, and he strikes his feet inward with singular strength and order ; yet he does aot this by any syllogistical method, but is merely tutored by instinct. Hale.

Fidelia shall be your tutoress. Moore's Foundling.

His body thus adorned, he next designed With liberal arts to cultivate his mind : He sought a lutur of his own accord, And studied lessons he before abhorred. Dryden.

I take a review of my little boys mounted upon hobby-horses, and of little girls tutoring their babies.

Addison .

A primitive Christian, that coming to a friend to teach him a psalm, began, I said I will look to my ways, that I offend not with my tongue : upon which he stopt his tutor, saying, This is enough, if I learn it. Government of the Tongue.

No science is so speedily learned by the noblest genius without a tutor. Watts.

And, what still more his staggering virtue tried, His mother, tuturea of that virtue, died. Harte.

TUTOR, in the civil law, is one chosen to look to the persons and estates of children, left by their fathers and mothers in their minority. The different kinds of tutory established among the Romans, and the powers and duties of tutors, are described in Inst. Leg. l. T. XIII. sect 1. and 2, to which the reader is referred. See also the article GUARDIAK. VOL. XXII.

TUTSBURY, a parish of Staffordshire, on the Don River over which is a neat stone-bridge, has an ancient castle, belonging to the earls of Derby, which was formerly one of the most noted in England. The church is a large massive building. In the town are several chapels for dissenters, and an excellent free-school. A mar- ket was once held here, but is discontinued. The chief business of the place is wool-combing, and a cotton manufactory. Fairs, February 14th, August 15th, and December 1st. Six miles north by west of Burton and 134 from London.

TUTTY, an argillaceous ore of zinc, found in Persia, formed on cylindrical moulds into tubu- lous pieces, like the bark of a tree, and baked to a moderate hardness ; generally of a brownish color, and full of small protuberances on the outside, smooth and yellowish within, some times whitish, and sometimes with a bluish cast. Like other argillaceous bodies, it becomes harder in a strong fire ; and after the zinc has been re- vived and dissipated by inflammable additions, or extracted by acids, the remaining earthy mat- ter affords an aluminous salt, with sulphuric acids. Tutty is celebrated as an ophthalmic, and frequently employed as such in unguents and collyria. See PHARMACY.

TUY, an ancient town of Galicia, Spain, the chief place of a district, stands on the summit of a rising ground, at the foot of which flows the Minho. It has always been fortified, and is con- sidered one of the keys of the kingdom on the side of Portugal, standing within cannon-shot of Valenca. It has good ramparts and a citadel : its streets are regular and neatly pared, and the environs and public walks are pleasant. It has little trade,

except contraband intercourse with Portugal : but is a bishop's see, and has an au- dienza or court for the administration of civil affairs. The militia of Galicia has its rendezvous here. Inhabitants 4000.

TUY, a river of the Caraccas, in the province of Venezuela, which falls into the ocean thirty leagues east of the port of Guaira.

TUZ, n. s. Welch tusz. A lock or tuft of hair.

With odorous oil thy head and hair are sleek : And then thou kempest the tusses on thy cheek ; Of these thy barbers take a costly care. Dryden. TWAIN, adj. Sax. tpˆen, batpa, both, twain. Two. An old word, not now used but ludi- crously.

'Tis not the trial of a woman's war, The bitter clamour of two eager tongues, Can arbitrate this cause betwixt us twain.

Shaktpeare.

Of my condition take no care ; It fits not ; thou and I long since are twain. Milton

When old winter split the rocks in twain, He stripped the bear's-foot of its leafy growth.

Dryden.

TWANG, v. n., v. a., n. s., &) A word form- TWANGL'ING, adj. [inter}. S ed from the sound. To sound with a quick sharp noise : to make to sound thus : the sound made : as an interjection it marks some quick sharp sound : twangling is contemptibly noisy.

A swaggering accent sharply twanged off, gives manhood approbation. Shakspeare. Tuvlfth Xiaht.

She did call me rascal, fidler, And tu-angling jack, with twenty such vile terms.

Shultspeare.

They by the sound and twang of nose. If all be sound within, disclose.

Butler's Uudibras.

His quiver o'er his shoulders Phoebus threw, » His bow twanyed, and his arrows rattled as they flew.

Dryden.

The twanging bows

Send showers of shafts, that on their barbed points Alternate ruin bear. Hi///>s.

If he be but a person in vogue with the multitude he can make popular, rambling, incoherent stuff, seasoned with twang and tautology, pass for high rhetorick. South.

There 's one, the best in all my quiver, Twang ! through his very heart and liver. Prior. He has such a tu-ang in his discourse, and un- graceful way of speaking through his nose, that one can hardly understand him. Arbuthnot.

So swells each wind-pipe ; ass intones to ass, Harmonic twang of leather, horn, and brass. Pope. Sounds the tough horn, and twangs the quivering

string. Id.

TWANK, v. n. Corrupted from twang. To make to sound.

A freeman of London has the privilege of dis- turbing a whole street with ticanking of a brass kettle.

Addison.

TWAS. Contracted from it was. If he asks who bid thee, say 'twas I. Dryden. TWATTLE, v. n. Teut. schwatze.n. To prate ; to gabble ; to chatter.

It is not for every twattling gossip to undertake.

L' Estrange. TWAY. For TWAIN.

Gyon's angry blade so fierce did play On the' other's helmet, which as Titan shone, That quite it clove his plumed crest in tway.

Spenter.

TVVEAG, v. a. &) Written tweag by Skin- TWEAK. [n. s. J ner, but tweak by other writers. Germ, twacken. To pinch; squeeze be- twixt the fingers : a

squeeze ; a state of perplexity.

Who calls me villain, breaks my pate across, Tweaks me by the nose. Shakspeare.

To rouse him from lethargick dump, He tweaked his nose. Butler.

This put the old fellow in a rare ttreugue.

Arbuthnot. Look in their face, they tweaked your nose.

Swift.

TW EDDELL (John), an accomplished travel- ler, was born June 1st, 1769, at Threepwood, near Hexham in Northumberland, of which county his father, Francis Tweddell, esq., was a magistrate. He was educated at Harforth school, Yorkshire, under Dr. Parr, and lastly at Trinity College, Cambridge, where he obtained a fellowship in 1792. Distinguished very much at the university, several of his compositions were published by him in 1794, under the title of Prolusiones Juveniles. On quitting Cambridge, he became a student of the Middle Temple, but subsequently resolved to travel. After remaining abroad nearly four years, having explored Switzer- land, the north of Europe, and various parts of the east, he died prematurely at Athens on the 25th of July 1799. As it was known that he had Bowiacd large materials for publication, the reamed looked anxiously for them ; b/it, although nis manuscripts were oflicially placed in the

custody of the British ambassadoi at Constanti- nople, none of them ever came to the hands of his friends ! A volume of his Remains, consist- ing of a selection from his letters, a republica- tion of his Prolusiones Juveniles, and a memoir appeared in 1815, edited by his brother, the Rev. Robert Tweddell.

TWEED, a river of Scotland, which rises in the south-west corner of the county of Peebles, from Tweed swell, 1500 feet above the level of the sea, near where the counties of Peebles, Dumfrii >. and Lanark join. It takes a course nearly north- east, and is then joined by the Lyne about three, and the Manor about two miles above Peebles, where it is further increased by Eddlestone water, by the Leithan, near Inverleithan, and the Quair on the opposite side; when, runnin- nearly east, its stream is augmented by the Ki trick three miles below Selkirk, the Gala one. mile and a half below Galashiels, the Leader at Drygrange-bridge, and the Teviot at Kelso. A few miles below Kelso it leaves Roxburghshire, and forms for many miles the boundary between England and Scotland, until it falls into the German Ocean at the town of Berwick-upon- Tweed. During this part of its course, it receives, four miles below Kelso, the Eden, the Till at Tillmouth, and the

Whittadder about five or six miles from its mouth. The Tweed abounds with trout and salmon : it is a celebrated pastoral stream, and gives name to many beautiful Scot- tish melodies.

TWEE'DLE, t;. a. Belg. tevedelen, from vedel, a violin. — Thomson. To handle lightly. Used of awkward fiddling.

A fidler brought in with him a body of lusty young fellows, whom he had tweedled into the service.

Addison.

TWEEZ'ERS, n. s. Fr. etuy. Nippers, or small pincers, to pluck off hairs.

*There heroes' wits are kept in ponderous vases, And beaus' in snuff-boxes and lu*e*er-cases. I'ope.*

TWELVE, adj. -\ Saxon tpelp. Two

TWELVE'MONTH, n. s. I and ten ; twice six : a

TWELVE'PENNY, adj. V twelvemonth is a year,

TWELFTH. i as consisting of twelve

TWELFTH'TTDE, n. $. J months : tˆelvepenny, sold for a shilling: twelfth is the ordinal of twelve : twelfthtide, the twelfth day after Christ- mas.

He found Elisha plowing with twelve yoke of oxen, and he with the twelfth. 1 Kings xix. 9.

Plough-monday, next after that twelfthtide, Bids out with the plough. Tuber's Husbandry.

Thou has beat me out tu-elee several times.

Shaksjteare. Coriolanus.

I shall laugh at this a tuelvemonth hence.

flhoJb]

I would wish no other revenge, from this rhyming judge of the twelvepenny gallery. Dnidcii.

On his left hand tu-elit reverend owls did fly : So Romulus, 'tis sung, by Tyber's brook, Presage of sway from twice six vultures took. Id.

Supposing, according to the standard, five shillings were to weigh an ounce, wanting about sixteen grains, whereof one twelfth were copper, and eleven twelfths silver, it is plain here the quantity ot gives tlie value. Locke.

In the space of about a twehemn iih 1 have run OLI. of a whole thousand pound upon her.*

rwi

Not twice a twelvemonth you appear in print.

Pope.

TWELFTH DAY, the festival of the Epiphany, or the manifestation of Christ to the Gentiles; so called, as being the twelfth day, exclusive, from the nativity or Christmas day.

TWENTY, adj. l Sax. tpentij. Twice ten ;

TWEX'TIETH. $ any great number: the or- dinal of twenty.

Maximilian, upon m-enty respects, could not have been the man. Bacon's Henry VI f.

This year,

The twentieth from the firing the capitol, As fatal too to Rome, by all predictions.

Ben Jon son.

Why was not I the twentieth by descent From a long restive race of droning kings ?

Dryim.

At least nineteen in twenty of these perplexing words might be changed into easy ones. Swift.

The TWENTY-FOUR PERGINNAS, is a consi- derable district of Bengal, adjoining the southern limit of Calcutta, and was the first territory of any extent the British possessed in Bengal, being ceded to them by the nabob Jaffier Ali Khan, immediately after the revolution of 1757. It contains above 880 square miles, and constitutes one of the Bengal collectorships. It has a judi- cial establishment of its own, the European members of which reside in Calcutta ; and is subordinate to a court of appeal at Calcutta. Fulta and Beninpore are the principal towns.

TWICE, adv. Sax. rpi3i ; Belg. twees. Two times ; doubly.*

TWICKENHAM, a populous village on tne Thames, about ten and a half miles from London. Retween Richmond bridge and this village is a rural walk, on the border of the river ; and pro- bably no promenade of a similar extent, in any part of England, presents a display of scenery so soft and so highly cultivated. The margin ot the Thames is lined with stately dwellings, whose ornamental grounds descend to the water's edge ; among which is the residence of Pope. The house was not large, but Pope took great delight in embellishing the grounds. The weeping willow, planted by him, perished in 1801, and another has been planted on the spot. Here he translated a part of the Iliad, and wrote the Dunciad, the Essay on Man, the Epistles, &c., and hence are dated the greater number ot his letters ; here, also, be died. His villa was taken down by baroness Howe, in 1807, and a new dwelling erected about 100 yards from the site. His grotto has been stripped of its most curious spars and minerals, by persons desirous of procuring memorials of the poet. Strawberry hill (Walpole's villa), and its fine collection ol rirtii, are entire. In the church of Twickenham Pope and his parents are interred.

TWID'DLE, v. a. Commonly written '! OLE, which see. To touch lightly. A low word TWIG, n. j. » Sax. tpij, tpiˆja ; Behic TWIC'GEN, adj. } twyg. A small shoot of a branch ; a switch, tough and long : made of twigs.

TWl'LIGHT, n. s.Stadj. Sax. tpeoneleoht ; Belg, tweelicht. The faint light before sunrise, and after sunset ; obscure light or view ; not clearly illuminated or seen ; done by twilight.

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Her twilights were more clear than our mid-day.

A faint weak love of virtue, and of good, Reflects from her on them, which understood Her worth ; and though she have shut in all day, The ticilight of her memory doth stay. Id.

He that saw hell in 's melancholy dream, And, in the twiliyht of his pliancy's theme, Scared from his sins, repented in a fright. Had he viewed Scotland, had turned proselyte.

Cifareland.

Ambrosial night, with clouds exhaled From that high mount of God, whence light and

shade Spring both, the face of brightest heaven had

changed To grateful twilight. Miitons Paradise Lost.

When the sun begins to fling His flaring beams, me, goddess, bring To arched walks of tu-ilight groves. Milton.

Trip no more in twilight ranks. Id.

When the sun was down, They just arrived by twilight at a town. Dryden.

In the greatest part of our concernment he has af- forded us only the twilight of probability, suitable to our state of mediocrity. Locke.

O'er the twilight groves, and dusky caves, Long-sounding isles, and intermingled graves, Black Melancholy sits, and round her throws A death-like silence, and a dread repose. Pope.

TWILIGHT is that light, whether in the morn- ing before sun-rise, or in the evening after sun- set, supposed to begin and end when the least stars that can be seen by the naked eye cease or begin to appear. See ASTRONOMY, Index. TWIN, n. s. & v. n. } Sax. tpmn ; Belgic TWIS'LIKG, n. s. s tiveelingen. Children TWIN'NER. 3 born at a birth. Seldom

used in the singular : the sign of the zodiac called Gemini : to be born at the same birth ; be paired or suited : a twinling is a twin-lamb : twinner, a breeder of twins.

Ewes yeerley by twinning rich maisters do make, The lambe of sucb (winners for breeders go take.

Tuner.

Tu-inlingt increase bring. Id. Huibandry.

O how inscrutable '. his equity Twin with his power. Sandy i.*

In bestowing

He was most princely : ever witness for him Those twins of learning, Tpswich and Oxford.

Shakspeare.

Our sins lay on the king ; he must bear all, O hard condition, and twinborn with greatness! Id.

He that is approved in this offence, Though he had twinned with me both at a birth, Shall lose me. Id. Othello.

They came twins from the womb, and still they live As if they would go twin too to the grave. Otiray.*

The divided dam

Runs to the summons of her hungry lamb ; But, when the twin cries halves, she quits the first.

Cltateland.

No weight of birth did on one side prevail, Two twins less even lie in Nature's scale. Coicley. If that moment of the time of birth be of such moment, whence proceedeth the great difference of the constitutions of twins, which, though together born, have strange and contrary fortunes?

Drummond.

Fair Leda's twins, in time to stars decreed, One fought on foot, one curb'd the fiery steed.

Dryden. U 2

TWI

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TWI

Had there been the same likeness in all men, as sometimes in twins, it would have given occasion to confusion. Grew.

When now no more the alternate twins are fiied, Short is the doubtful empire of the night.

Thornton.

TWINE, v.a.,v.n. & n.s. Saxon tpman; Belg. twynan. To twist or complicate so as to unite, or form one body or substance out of two or more : to unite itself; convolve ; wind : a twisted thread ; convolution.

Thou shall make an hanging of blue, and fine twined linen, wrought with needlework.

Erodut zxvi. 36.

Friends now fast sworn, who twine in love (Inseparable, shall, within this hour, On a dissention of a doit, break out To bitterest enmity. Shaktpeare.

O friends !

Some one abides within here, that commends The place to us, and breathes a voice divine : As she some web wrought, or her spindles twine, She cherish t with her song. Chapman.

By original lapse, true liberty Is lost, which always with right reason dwells, Twined, and from her hath no dividual being.

Milton.

Welcome joy and feast, Braid your locks with rosy twine, Dropping odours, dropping wine. Id.

Everlasting hate

The vine to ivy bears, but with am'rous twine Clasps the tall elm. Philips.

As rivers, though they bend and fit-in, Still to the sea their course incline. Swifl.*

The deer rustles through the twitting brake.

Thornton.

*TWINGE, v. a. & n. *. Teut twingen ; Dan. twinge. To torment with sudden and sharp pain ; pinch : a tweak or pinch.*

When a man is past his sense, There's no way to reduce him thence, But twinging him by the ears and nose, Or laying on of heavy blows. Hudibras.

The wickedness of this old villain startles me, and gives me a twinge for my own sin, though far short of his. Dry den.

How can you fawn upon a master that gives you so many blows and twinges by the ears ?

L'Eitrange.

TWINK, n. «. •) Saxon tpmchan.

TWIN'KLE, c. n. &n.s. >The motion of the

*TWINK'LING, n. *. Jeye: to twinkle is to sparkle ; flash irregularly ; shine with intermitted light; quiver: a sparkling intermitting light; motion of the eye ; a space as short as such mo- tion.*

.Money can thy wants at will supply : all Urn meet,

Shields, steeds, and arms, and

ings for thee Speruer.

It can pourvey in twinkling of an eye. Suddenly, with twinkle of her eye, The damsel broke his misintended dart. Id.

She hung about my neck, and kiss on kiss She vied so fast, protesting oath on oath, That in a fit-in she won me to her love.*

Stiuktpeare.

At first I did adore a twinkling star, Rut now I worship a celestial sun. Id.

His eyes will twinkle, and his tongue will roll, As though he beckoned and called back his soul.

Donne. Some their forked tails stretch forth on high,

And tear the twinkling stars from trembling sky.

Fairfax.

God comprises all the good we value in the crea- tures, as the sun doth the light that twinkles in the stars . Boyle.

1 come, I come ; the least twinkle had brought me to thee. Dryden'i Don Sebastian.

The star of love, That twinklet you to fair Almeyda's bed. Dryden.

The action, passion, and manners of so many per- sons in a picture, are to be discerned in the twinkling of an eye, if the sight could travel over so many dif- ferent objects all at once. Id. The owl fell a moping and twinkling. L Estrange.

These stars do not twinkle when viewed through telescopes which have large apertures. Newton.

TWIRL, v. a., v.n., & n. t. From whirl. To turn or move round quickly ; revolve with quickness; rotation; circular motion ; twist.

Wool and raw silk by moisture incorporate with other thread : especially if there be a little wreath- ing, as appeareth by the twisting and twirling about of spindles. Bacon.

Dextrous damsels ticirl the sprinkling -mop. Gay.

See ruddy maids,

Some taught with dextrous hand to twirl the wheel.

Dodsley.

The twirl on this is different from that of the others ; this being an heterostropha, the twirls turn- ing from the right hand to the left.

Woodward on Fotsils.

TWISS (Richard), an English tourist, after a journey to Scotland, went successively to Hol- land, the Netherlands, France, Switzerland, Italy, Germany, and Bohemia. He spent several years in travelling through these countries, and returned to England in 1770 : two years after he took a voyage to Portugal and Spain, and ir\ 1775 went to Ireland. At the period of the Re- volution he revisited France, and returning home devoted the latter part of his life to literature and the arts, particularly music. His works are Travels through Spain and Portugal in 1772 and 1773; 1775, 4to., translated into French and German ; ATour in Ireland in 1775 ; 1776, 8vo. ; in which the freedom of the author's animadver- sions provoked the wrath of the Hibernians, and occasioned the publication of An Heroic Epistle from Donna Teresa Pinna y Ruiz of Murcia to R. Twiss, with Notes by Himself; Dublin, 1776, 8vo. : Anecdotes of the Game of Chess ; A Trip to Paris in July and August 1792 ; 1793, 8vo. ; and Miscellanies; 1805, 2 vols, 8vo. He died at an advanced age in 1821.

TWIT, v. a. Saxon e'epitan. To sneer ; flout; reproach.

When approaching the stormy stowers We mought with our shoulders bear off the sharp

showers,

And sooth to saine, nought seemeth sike strife, That shepherds so twiten each other's life. Spenter.

When I protest true loyalty to her. She twits me with my falsehood to my friend.

Shakspeare.

This these scoffers twitted the Christians with.

Tillotton.

,-Esop minds men of their errors, without twitting them for what's amiss. I. 'Estrange.

Galen bled his patients, till by fainting they could bear no longer ; for which he was twitted in his own tinio. Raker.

TWITCH, v. a. & n. s.) Sax. rpiccian. To TWITCH'GRASS, n. s. \ vellicate ; pluck with a quick motion ; snatch : a quick pull ; a con- traction of fibres : a plant.

He rose, and twitchtd his mantle blue. To-moirow to fresh woods, and pastures new.

Hilton.

But Hudibras gave him a twitch .As quick as lightning in the breech. Hudibra. Twitched by the sleeve, he mouths it more and more. Dryden.*

With a furious leap

She sprung from bed, disturbed in her mind, And (eared at every step a twitching spright behind.

Id.

The lion gave one hearty twitch, and got his feet out of the trap, but left his claws behind. Id.

I'lcitchgnns is a weed that keeps some land loose, hollow, and draws away the virtue of the ground.

Mortimer.

Mighty physical their fear is ; For, soon as noise of combat near is, Their heart, descending to their breeches, Must give their stomachs cruel twitches. Prior.

Other confed'rate pairs Contract the fibres, and the twitch produce, Which gently pushes on the grateful food To the wide stomach, by its hollow road.

Blackmore.

A fit of the stone is the cure, from the inflamma- tion and pain occasioning convulsive twitchet.

Sharp. Thrice they twitched the diamond in her ear.

Pope.

TWITE. See FRINGILLA. TWITTER, v. n. & n. s. To make a sharp tremulous intermitted nose ; be suddenly im- pulsed : any sudden disorder, or passion.

The ancient errant knights Won all their ladies hearts in fights, And cut whole giants into fritters, To put them into amorous twitters. Hudibras.

This must be done ; Swallows twitter on the chimney-tops. Dryden.

The moon was in a heavy twitter, that her cloaths never fitted her. L'Estrange.

A widow which had a twittering towards a second husband, took a gossiping companion to manage the job. Id.

They twitter chearful, till the vernal months Invite them back. Thomson.

TWITTLETWATTLE, n.s. A ludicrous re- duplication of twattle. Tattle ; gabble. A vile word.

Tnsipid twittletwattLes, frothy jests, and jingling witticisms, inure us to a misunderstanding of things.

Id.

TWIXT. A contraction of betwixt.

Twilight, short arbiter 'twixt day and night.

Milton.

T\N 1ST, v. a., v. n., & ^ Saxon jetpif-an ;

TWIS'TER, n. s. [n. s. S Belg. twisten. To form by complication or convolution : be con- torted or involved : any thing made in this way : the agent or instrument of twisting.

Do but despair

And, if thou want'st a cord, the smallest thread That ever spider twisted

from her womb Will strangle thee. Shakrpeare.

When avarice twists itself, not only with the prac- tice of men, but the doctrines of the church ; when ecclesiastics dispute for money, the mischief seems fatal. Decay of Piety.

Through these labyrinths, not my grov'ling wit, But thy silk twist let down from heaven to me,

Did both conduct and teach me, how by it To climb to thee. Herbert.

To reprove discontent, the ancients feigned that in hell stood a man twisting a rope of hay ; and still he twitted on, suffering an ass to eat up all that was finished. Taylor.

All know how prodigal Of thy great soul thou art, longing to twitt Bays with that ivy which so early kist Thy youthful temples. Waller.

About his chin the tuist He tied, and soon the strangled soul dismissed.

Dryden.

Winding a thin string about the work hazards its breaking, by the fretting of the several twitts against one another. Moxon's Mechanical Exercises.

There are pillars of smoke twisted about with wreaths of flame. Burnet's Theory of the Earth.

Minerva nursed him Within a twist of twining osiers laid. Addisoti.

For well you twist the secret chains that bind With gentle force the captivated mind. Lyttleton.

In an ileus, commonly called the twitting of the guts, is a circumvolution or insertion of one part of the gut within the other. Arbntlimtt on Aliments.

Either double it into a pyraraidical, or twist it into a serpentine form. Pope.

When a twister a twitting will twist him a twitt, For the twisting of his twist he three twines doth in •

twist ;

But if one of the twines of the twitt do untwist. The twine that untwisteth untwisteth the twitl. Untwirling the twine that untwisteth between, He twirls with his twister the two in a twine ; Then twice having twisted the twines of the twine, He twitcheth the twine he had twined in twain. The twain that,

in twining before in the twine, As twins were intwisted, he now doth untwine, Twixt the the twain intertwisting a twine more be- tween,

He twirling his twister, makes a twist of the twine.

Wallii.

TWO, adj. -

Two' EDGED,

TWO'FOLD,

TWO'HANDED,

TWO'LEGGED,

PSax. tpu ; Goth. twai. One and one : two edged and the other compounds seem to explain themselves.

TWOP'ENCE, n. s.

TWO'SHAPED. J

A proselyte you make twofold more the child ot hell than yourselves. Matt, xxiii. 15.

Through mirksom air her ready way she makes, Her twofold team, of which two black as pitch. And two were brown, yet each to each unlike Did softly swim away. Faerie Queene.

Our prayer against sudden death importeth a two- fold desire, that death when it cometh may give us some convenient respite ; or, if that be denied us of God, yet we may have wisdom to provide always be- fore-hand. Hooker.

You all shew like gilt twopence to me.*

Shakspeare.

O thou ! the earthly author of my blood, Whose youthful spirit, in me regenerate, Doth now with twofold vigour lift me up. To reach at victory above my head, Add proof unto mine armour. /

Between two hawks, which flies the higher pitch ; Between two dogs, which hath the deeper mouth ; Between two blades, which bears the better temper ; Between two horses, which doth bear him best ; Between two girls, which

hath the merriest eye, I have some shallow spirit ofjudginc.it. Id.

TYK

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TYN

Fifteen chambers were to lodge us two and too together. Bacon,

Her register was a tuw-leaved book of record, one page containing the names of her living, and the other of her deceased members. Ayliffe.

With huge ttcjhanded sway, Brandished aloft, the horrid edge came down, Wide wasting. Mlltun't Paradise Lori.

Next to the raven's age, the Pylian king Was longest lived of any two-legged thing. Dryrien.

Time and place, taken for distinguishable portions of space and duration, have each of them a tvofold acceptation. Locke.

A rational animal better described man's essence than a two-legged animal, with broad nails and with- out feathers. Id.

The two-thaped Ericthonius had his birth Without a mother, from the teeming earth. Addison.

Ewes, that erst brought forth but single lambs. Now dropped their twofold burdens. Prior.

Clarissa drew, with tempting grace, A ttMtdged weapon from her shining case. Pope.

TWOPENCE HERB, a species of lysitnachia.

TYCHIUS, an artist of Hyle in Bceotia, who made Hector's seven-fold shield. — Horn. II. 7.

TYDE, a town of Hispania Tanaconensis — Sil. It. 3.

TYDEUS, a celebrated hero, the son of (Ene- us, king of Calydon. Having killed a friend, by accident, he fled to Adrastus king of Argos, and married his daughter Deithyle, by whom he had the famous Diomedes. Adrastus, wishing to re- store his son-in-law Polynices to the throne of Thebes, sent Tydeus against Eteocles, whom he challenged to single combat and defeated. He again went against Thebes in the war of the Epi- goni, and

was mortally wounded by Melaiiip- pus; but would have been cured by Minerva, who came on purpose, had he aot offended the goddess by using the body of Menalippus barba- rously.— Horn. II. 4.

TYE, n. t. See TIE. A knot ; bond or obli- gation.

Lay your

Command upon me ; to the which my duties Are with a most indissoluble tye For ever knit. Shakspeare.

I have no tye upon you to be true. But that which loosened yours, my love to you.

Dryde.*

Honour's a sacred tye, the law of kings, The noble mind's distinguishing perfection, That aids and strengthens virtue where it meets her, A nd imitates her actions where she is not ; ' It ought not to be sported with. Adduon.

Lend me aid, I now conjure thee, lend, By the soft tye and sacred name of friend. Pop.*

TYE (Christopher), Mas. D., a celebrated English musician, born in Westminster, in the reign of Henry VIII. He was admitted Dr. in music at Cambridge, in 1545. Dr. Tye be- came instructor in that science to king Edward \ I., and organist of the Chapel Royal, under queen Elizabeth. He composed a great number of Anthems.

T\ (• KR, in zoology. See J AT. See 1

TY(;EII-W()LF. SeeC.v

TV K K, »j. i. See TIKE. Tyke in Scottish still denotes a Hop, or one as contemptible and vile as a dog; and thence pernaps comes league.

Base tyke, callest thou me host ? now, By this hand, I swear I scorn the term. Shaktpeare,

TYKE, in zoology. See CANIS.

TYLE, or TILE, in building, a sort of thin laminated brick, used on the roofs of houses ; or, more properly, a kind of fat clayey earth, knead- ed ana moulded of a just thickness, dried and burnt in a kiln like brick, and used in the cover- ing and paving of houses.

TYM'BAL, n. s. Fr. tymbal. A kind of ket- tle drum.

Yet, gracious charity ! indulgent guest ! Were not thy power exerted in my breast, My speeches would send up unheeded prayer : The scorn of life would be but wild despair : A tymbal'i sound were better than my voice, My faith were form, my eloquence were noise.

Prior.

TTMPAN, among printers, a double frame belonging to the press, covered with parchment, on which the blank sheets are laid in order to be printed off. See PRINTING.

TYM'PANUM, n. s. Lat. tympanum. A drum ; a part of the ear, so called from its re- semblance to a drum.

The three little bones in meatu auditorio, by finn- ing the tympanum, are a great help to the hearing.

Wueman.

TYMPANUM, in mechanics, a kind of wheel placed round an axis or cylindrical beam, on the top of which are two levers or fixed staves for the more easily turning the axis in order to raise a weight required. The tympanum is much the same with the peritrochium ; but that the cylin- der of the axis of the peritrochium is much shorter and less than the cylinder of the tympa- num.

TYMPANUM, in anatomy. See ANATOMY, Index.

TYM'PANY, n. t. Lat. tympanum. A kind of obstructed flatulence that swells the body like a drum ; the wind dropsy.

He does not shew us Rome great suddenly, As if the empire were a tumpanv ; But gives it natural growth, tells how and why The little body grew so large and high. Suckling.

Others, that affect A lofty stile, swell to a tvmpany. Rotcommon.

Nor let thy mountain-belly make pretence Of likeness ; thine 's a tympany of sense. A tun of man in thy large bulk is writ, But sure thou 'rt but a kilderkin of wit. Dryden.

The air is so rarified in this kind of dropsical tu- mour, as makes it hard and tight like a drum, and from thence it is called a tympany. Arbuthnot.

TYNDALE (William), a zealous English re- former, and memorable for

having made the first English version of the Bible, was born on the borders of Wales before 1500. He was first of Magdalene-hall, Oxford. Afterwards he re- moved to Cambridge, and thence went to live with a gentleman in Gloucestershire as tutor to his children. There he showed himself so zea- lous for the doctrines of the Reformation that he >rced to leave the place. He then went to (jerroany, where he translated the New Testa- ment and the Pentateuch. These, being sent to .nd. made a great noise there; and the clergy procured a royal proclamation, prohibit- ing the buying or reading such translations. But

not satisfied with this, the clergy sent one Philips to insinuate himself into his company, and under the pretext of friendship betray him into custody. He was sent to the castle of Filford, about eighteen miles from Antwerp; and though the English merchants at Antwerp did what they could to procure his release, and letters were also sent from lord Cromwell and others out of England, yet Philips bestirred himself so heartily, that he was tried and condemned to die. He was first strangled by the hangman, and then burned near Filford castle, in 1536. While he was tying to the stake, he cried with a fervent and loud voice, ‘ Lord, open the king of Eng- land’s eyes.’

TYNDARID/E, an ancient people of Colchis.

TYNDARIS, a town of Colchis on the Phasis.

TYNDARUS, king of Sparta, the husband of Leda, and father of Castor and Clytemnestra.

TYNE, NORTH, a river which rises on the border of Scotland, and Tyne (South), an- other river which rises on the border of Cumber- land. These unite their streams at Hexham, thence dividing the counties of Durham and Northumberland, and passing Newcastle, fall into the German Ocean at Tynemouth. The Tyne forms the noble river of Newcastle, and is there navigable for vessels of 300 tons burden.

TYNEMOUTH, a borough and bathing towr in Northumberland, situated at the mouth of the Tyne, 9 miles E. of Newcastle, and 286 N. by W. from London. The town of Tynemouth was erected into a borough by the Reform bill, and sends one member to parliament. The houses are in general well built, and some of them are even elegant; during the bathing season it is a place of fashionable resort, and all the inns and lodging-houses are filled with com- pany. Tynemoutli, as- a bathing place, possesses many

attractions. The walks, particularly that in the castle yard amidst the romantic ruins of Tynemouth priory, present many delightful and pleasing views. In the year 1807 there were erected very commodious and elegant baths.

TY'NY, adj. Dan. tynd. Small.

He that has a little tynv wit, Must make content with his fortunes fit.

Shahtpeare.

TYPE, n. j. & w.a. 'v Fr. type; Lat. typus ;

TYP'IC, adj. j Gr. rv-irof. Emblem ;

TYP'ICAL, vmark or prefiguration of

TYP'ICALLY, adv. i something ; a stamp:

TYP'IFY, v. a. J to prefigure ; to show in

emblem ; which is also the meaning of typify :

typic, typical and typically follow this sense.

Clean renouncing

The faith they have in tennis, and tall stockings, Short bolstered breeches, and those types of travel, And understanding again the honest men.

Shaktpeare.

He ratified ceremonial and positive laws, in respect t>f their spiritual use and signification, and by fulfil- ling al! things typed and prefigured by them .

}Vhiie.

The resurrection of Christ hath the power of a pattern to us, and is so typified in baptism, as an en- gagement to rise to newness of life. Hammond.

Informing them by types And shadows of that destined seed to bruise The serpent, by what means he shall achieve Ma::kir; Is deliverance. Stilton.

The Apostle shews the Christian religion to be in truth and substance what the Jewish was only in type and shadow. Tillotson.

Hence that many coursers ran, Hand-in-hand, a goodly train, To bless the great Eliza's reign ; And in the tujiic glory show What fuller bliss Maria shall bestow. Id.

The Levitical priesthood was only typical of the Christian ; which is so much more holy and honour- able than that, as the institution of Christ is more excellent than that of Moses. Aiterburtf.

TYPE (TVTTOC), in theology, an impression, image, or representation of some model, which is termed the antitype. In this sense the word occurs often in the writings of divines.

*Types are to be regarded, therefore, not as mere conformities, or analogies, which the nature of things holds forth between them; nor arbitrary images arising merely from the casual resem- blance of things ; but there is required a particu- lar institution of God to make a type, and a par- ticular declaration of his that it is so. Gale di- vides types into historical and prophetical. The first are those used by the ancient prophets in their agitations and visions : the second, those in which things done, or ceremonies instituted in the Old Testament, prefigure Christ, or things relating to him in the New Testament. Or they are things which happened and were done in ancient time, and are recorded in the Old Testa- ment, and which are found afterwards to describe or represent something which befell our Lord, and which relates to him and his gospel. E. gr. Under the law, a lamb was offered for a sin- offering, and thus an atonement was made for transgressions. John the Baptist calls Christ ' the lamb of God who taketh away the sins of the world,' and St. Peter tells Christians that they are redeemed * by the blood of Christ, as of a lamb.' Hence we infer and conclude that the lamb was a type of Christ ; and, upon consider- ing it, we find that it has all that can be required to constitute a type; for it is in many respects a very just and lively representation of Christ. The lamb died for no offence of his own, but for the sins of others ; so did Christ : the lamb could not commit sin by his nature, nor Christ by his perfection : the lamb was without bodily spot or blemish ; Christ was holy and undented : a lamb is meek and patient; such was the afflicted and much injured Son of God.*

These types are useful to persons who have already received Christianity upon other and stronger evidence, as they show the beautiful harmony and correspondence between the Old and New Testament ; but they seem not proper proofs to satisfy and convince doubters: who will say perhaps, with the schoolmen, ' theologia symbolica non est argumentativa.' It should also be observed that unless we have the autho- rity of Scripture we cannot conclude with cer- tainty that this or that person, or this or that thincr mentioned in the Old Testament, is a type of Christ, on account of the

resemblance which we may perceive between them : but we may admit it as probable.

The ancient fathers, as well as the modern critics, have been greatly divided about the na- ture and use of the types and typical represen- tations in the Old Testament ; and it is this

makes one of the great difficulties in understand- ing the ancient prophecies, and in reconciling the New and Old Testament. There is no deny- ing but that there were some types which the divine wisdom instituted to be the shadows and figures of things to come ; but various writers run into an excess on this subject ; some looking for types in every thing, like Origen, who dis- covered mysteries in the very cauldrons of the tabernacle. A prudent man should be contented with the more sensible and obvious ones.

In reference to this subject, an able author maintains, that not the fathers only but St. Paul himself, was of the opinion, ‘ that Christianity was all contained in the Old Testament, and was implied in the Jewish history and law ; both which are to be reputed types and shadows of Christianity.’ In order to which, he quotes Hebrews, viii. 5, x. 1, and Colos. ii. 16, 17. He adds ‘ that the ritual laws of Moses, being in their own nature no other than types and shadows of future good things, are to be con- sidered as having the effect of prophecies.’ This is likewise the sense of Whiston and others ; but the same author even quotes our Saviour speak- ing in behalf of this typical reasoning in that passage, Matthew xi. 13, where he affirms that ‘ the law prophecies ; and that he came to fulfil the law as well as the gospel.’ — Matthew v. 17 ; Disc, of the Grounds, &c.

But it has been with some reason observed, had the ancients, with the modern retainers of this typical system, expressly designed to have exposed Christianity, they could not have done it more effectually than by thus making every thing types and prophecies. Not that he denies the reality of such things as types. It is mani- fest there were many under the Old Testament ; such were Zechanah’s slaves, beauty, and bands, c. xi. 7, 10, 14: such was Hosea’s adulterous wife, chap. i. 2 ; and such were his children, v. 4, 6. The prophets designed by these to pre- figure future events ; but in these instances the reader is at once, by the declaration of the pro- phet, made to understand as much, and not left to his own conjectures about them after the events are over. In effect, all that is urged from Scripture for the typical or allegorical interpre- tations of the Jewish law,

history, ceremonies, &c., it is asserted, may be set aside, without any violence to the Sacred Text, which may be ex- plained on more natural and intelligible princi- ples, and more consistently with grammar.

The word rvwof literally denotes no more than a copy or impression of any thing; and ac- cordingly, in our translation, we find it some- times rendered by print, sometimes by figure, sometimes by fashion, and sometimes by form. Hence also the word is figuratively applied to denote a moral pattern ; in which sense it signi- fies no more than example and similitude.

Again, the word avrirviroc, antitype, in Scrip- ture, signifies any thing formed according to a model or pattern ; and thus, in the Epistle to the Hebrews, the tabernacle, and holy of holies, being made according to the pattern shown to Moses, are said to be antitypes, or figures, of the true holy places. In tin; like sense, St. Peter, king of the flood and the ark, by which eight persons were saved, calls baptism an antitvpe to

them ; by which he expresses no more than similitude of circumstances.

The other words used in Scripture to imply 9 future event, prefigured by some foregoing act, are, viroSuypa, rendered by imitation and ex- ample ; and

1. That to argue from types is only to argue from examples or similitudes ; and, consequently, that all inferences drawn from such reasonings are no farther conclusive than reasonings from similitudes are. The intent of similitudes is only to help to convey some ideas more clearly or strongly ; so that to deduce consequences from a simile, or infer any thing from other parts of the simile, than what are plainly similar, is absurd.

2. That it cannot be proved that the ceremonies of the Mosaic law were ever designed to prefigure any future events in the state of the Messiah's kingdom. No such declared prefigurations are mentioned in the writings of the Old Testament, whatever notions prevailed among the writers who immediately followed. It is granted that the apostles argued from the rites in the Mosaic institution ; but this appears to have only been by way of illustration and analogy.

There is certainly a general likeness in all the dispensations of Providence; an analogy of things in the natural as well as the moral world, from which it is easy arguing by way of parity, and it is very just and usual so to do; but that one of these dispensations was therefore given to presignify another that was future can never be proved, unless it be expressly declared. It is in the same way of similitude, he maintains, we are to understand St. Paul, where he says ' that Christ our passover is sacrificed for us.' And thus we

are to understand John the Baptist, when he calls our Saviour the ‘ Lamb of God.’ There was this similitude of circumstance, that Christ was slain on the same day with the paschal lamb ; that he died about the same time of the day when the priests began their hillel ; that not a bone of the one or the other was broken. And that, as the paschal lamb was without blemish, so was Christ without sin. From these, and other circumstances, the apostle applied the term pass- over to Christ. Thus, also, we are to account for what St. Paul calls the baptism of the child- ren of Israel in the cloud, and in the sea ; and for the comparison betwixt the high-priest enter ing the holy place every year, and Christ enter- ing into heaven. See Sykes’s Essay on the truvh of the Christian Religion, 1725.

TYI-K, in medicine, is used to denote the order observed in the intension and remission of fevers, pulses, &c.

TYPHA, cat’s tail, or reed mace, in botany, a genus of plants belonging to the class of monoecia, and order of triandria; and in the natural system ranging under the third order, calamaria-. Thf amentum of the male flower is cylindrical ; the calyx is tripetalous, but scarcely distinguishable ; there is no corolla.

TVl’lKKl’S, in the Grecian mythology, a giant, the son of Tartarus and Terra, who had 100 heads like those of a dragon, flames of I’m? came from his mouth, and he uttered the inoit

infernal yells. But of all the deities Minerva alone stood undaunted at him : she trusted to her arms, and still more to her wisdom, for suffi- cient defence against all the fiery darts of Ty- phceu?. — Ovid Met. v. Hyg. Fab.

TYPOG’RAPHY, n. s. FT. typographic; Lat. typvgraphia. Emblematical, figurative, or hieroglyphical representation : the art of printing.

Those diminutive and pamphlet treatises daily pub- lished amongst us, are pieces containing rather typo- graphy than verity. Browne’s Vulgar Errours.

TYPOGRAPHY. Under the article PRINTING was given the history of this important art, and of those improvements to which the ingenuity of modern times had effected in its mode of ope- ration. It only remains under this article to describe a printing machine invented by Mr. Napier ; who is now employed upon others calculated for still greater speed, but which are not sufficiently perfect for description.

Mr. Napier's name is well known as a most successful inventor as well as manufacturer of printing machines, both for newspaper and book printing. Plate II., PRINTING, represents a perspective view of his Nay-peer machine for book work, by which steam power is superseded, the nv tion being given by two men turning a fly-wheel, which acts as the impelling power. There are some peculiar and important novelties connected with this machine which must not be overlooked. Tlie first consists in a most ingeni- ous contrivance for taking hold of the sheet from the supplying board, retaining it while re- ceiving the first-side impression, and releasing it at the precise moment that the corresponding apparatus in the other cylinder executes the same movement for the impression of the reite- ration. This beautiful mechanism is contained in the interior of the impression cylinders, which have openings along their circumference, through which the gripers perform their operations. Upon their action depends that important desideratum of press-work, accurate register, or the backing of the pages on the paper.

Three or more pairs of these gripers, working upon the same axis, are employed in each cylin- der. At the moment the first or white paper impression cylinder a/rives at the proper position (the upper limb of each pair having been pre- viously opened to relieve the former sheet, and the boy having by this time laid on another sheet to the appointed gauge), they again instantly close upon the advanced edge of the paper with- out the velocity of the machine being in the least interrupted for that purpose. The sheet is by this means wrapped closely round the periphery of the cylinder, and there retained while it re- ceives the impression on one side, after which, and upon the arrival of the cylinders, or rather the gripers contained in the cylinders, at their proper position, that is, where the cylinders pre- sent a tangent to each other, and whilst passing this point, the gripers contained in the second cylinder take hold of the sheet close by the others, whilst they at the same instant release their hold, and the sheet is, in like manner, con- veyed round the second cylinder to be perfected, or receive the impression on the other side: the instant this is effected, the pripers again let go their iiol-.l, ami the sheet, printed perfect, or on

both sides, is discharged from the machine to the receiving board, by the action of one or more pulleys and fine cords, so that one sheet is going into the machine and another coming out at the same instant, as may be seen in the engraving.

Yet, notwithstanding the beauty and accuracy of this movement, the part of all others that re- flects the highest credit upon the mechanical skill of the inventor is the rising and falling of the impression cylinders ; for it is principally owing to this singular contrivance, that he has been enabled so wonderfully to compress and sim- plify his machine as to bring it within the capa- bility of so small a power to produce so much work, viz., 1200

perfect sheets per hour; it is this which admits of the cylinders being made of the size represented, and placed so close to each other as to be enabled to turn the sheet, and perfect, without the intervention or assistance of any other cylinders; for no sooner has the first cylinder given its impression than it instantly rises up, to avoid coming in contact with either of the forms, until it is again its turn to impress or print; while at the same instant the second cylinder descends for the purpose of giving the second impression. Thus the cylinders are al- ternately rising and falling during the whole progress of working; and it may be curious to observe that when down they art firmly held in their positions while they give the impression, and until their time arrives to be disengaged, and rise again ; these cylinders are easily ad- justed to any required degree of pressure, and that even without interrupting the progress of the machine ; and the inking apparatus, of which there is a set for either form, is provided with various important contrivances which fully an- swer every purpose required in that indispensable part of the operation of printing ; this machine occupies but very little space, about five feet by ten, or not more square feet than a common press, bank, and ink-stand ; but, although thus compact, it contains a vast quantity of extremely curious mechanism.

Mr. Napier's newspaper machines are con- structed with one or two cylinders, according to the speed required, from 1000 to 2800 in the hour ; but, these being upon the same general principle as the above, we think it unneccessary to give any further drawing or description of them. Hut, before concluding the subject of Napier's printing machines, we would briefly state that he has lately secured a patent for two additional, one for newspaper printing, and the other for fine book work ; each of which pos- sesses a most unusual degree of novelty and (should he prove correct) a no less degree of merit ; the first is intended to print by the power of two men at the extraordinary and incredible rate of 5000 per hour, and the greatest marvel is all from one printing cylinder and surface ; the second is a flat surface machine in which both power and resistance are made equally useful, a thing we believe unthought of before, therefore two impressions are taken at the same instant and with the same expense of time and power as is necessary to take one ; this machine is intended to print at the rate of 800 or 1000 sheets on both sides per hour by the easy labor of one man.

TYRA, or TYRAS, a liver of European Sar- matia, which runs into the Euxine Sea, between the Danube and the Borysthenes; now called Dniester.

Ovid.

TYRANNION, a celebrated grammarian in Porapey's time, was a native of Amisns in Pon- tus. He was the scholar of Dionysius of Thrace at Rhodes. He fell into the hands of Lucullas, when that general defeated Mithridates \11. and seized his dominions. This captivity of Tyrannion was no disadvantage to him, as it pro- cured him an opportunity of being illustrious at Rome and raising a fortune. He spent it, among other things, in making a library of above 30,000 volumes. He died very old, being worn out with the gout. His care in collecting books con- tributed very much to the preservation of Aris- .otle's works.

TY'RANT, n. s ˆ Greek rvpavvof,

TYR'ANNESS, n. s. Jem.

Sax. top ; Lat. ty-

rannus ; Goth, tur,

thor ; Swed. toin ;

ˆDanish taarn, all

signify elevation ; strength ; empire An absolute mo- narch governing im-

TTRAN'NIC, adj.

TYRAN'NICAL,

TYRAN'NICALLY, adv.

TYRAN'MCIDE, n. s.

TYR'ASNISE, v. n.

TYU'ANNOUS, adj.

TYR'ANNY, n. s.

periously ; cruel, despotick, or severe master : tyranness is the feminine : tyrannic, tyrannical, and tyrannous, like or befitting a tyrant; the adverb corresponding: tyrannicide, the act oi killing a tyrant: tyrannise is to play the tyrant : tyranny, absolute, imperious power or govern- ment ; rigorous and cruel command ; incle- mency.

It is strange to see the unmanlike cruel'ty of mankind, who, not content

with their tyrannous am- bition to have brought the others virtuous patience under them, think their masterhood nothing without doing injury to them. Sidney.

Love to a yielding heart is a king, but to a resist- ing is a tyrant. Id.

They were, by law of that proud tyranness, Provoked with wrath and envy's false surmise.

Spenser.

Lately grown into a loathing and detestation of the unjust and tyrannous rule of Harold, an usurper.

Id.

While we trust in the mercy of God through Christ Jesus, fear will not be able to tyrannise over us. Hooker.

I would not be the villain that thou think'st For the whole space that's within the tyrant's grasp, And the rich east to boot. Shalupeare. Macbeth.

Charge him home that he affects Tijrannick power. Id. Coriolanut.

'Tis excellent

To have a giant's strength ; but it is tyrannous To use it like a giant. Shaktpeare.

Fear you his tyrannous passion more, alas ! Than the queen's life ? Id.

Domitian had been tyrannical ; and in his tiim: many noble houses were overthrown by false accusa- tions. Bacon.

Suspicions dispose kings to tyranny, and husbands to jealousy. Id.

Slit hath recourse

To tears and prayers, again she feels the smart • 'f afresh wound from the tiiranuick dart, llcuham. 1 lie house of woe, and dungeon of our tyrant.

' Mitttm.

Subdue and quell, o'er all the earth, Brute violence, and proud tyrannic power. Id.*

Consider those grand agents and lieutenants c.' the devil, by whom he

scourges and plagues the world under him, to wit, tyrant ; and was there ever any tyrant who was not also false and perfidious?*

South.

Thou mean'st to kill a tyrant not a king. Dryden.

Our sects a more tyrunnick power assume, And would for scorpions change the rods of Rome.

Roscommon.

The cities fell often under tyrannies, which spring naturally out of popular governments. Temple.

He does violence to his own faculties, turanniita over his own mind, and usurps the prerogative that belongs to truth alone, which is, to command by iu own authority. Locke.

When tyrant custom had not shackled man, But free to follow nature was the mode. Thornton.

TYRANT, among the ancients, denoted simply a king or monarch ; but the ill use which many invested with that character made of it has altered the import of the word, and tyrant now carries with it the idea of an unjust or cruel prince, who invades the people's liberty, and rules in a more despotic manner than the laws of nature or of the country allow.

TYRE, n. s. Properly tire. See TIRE.

I have seen her beset and bedecked all over with emeralds and pearls, ranged in rows above the ti/re of her head. Hakewtll.

TYRE, a celebrated ancient city of Asia, on the coast of Syria. It was built, according to some writers, 2760 years before the Christian era. There were two cities of that name ; the one called Palaetyrus, situated on the continent ; and the other the city of Tyre, built on an island about half a mile from the shore. It was about nineteen miles in circumference, including Palae- tyrus ; the town on the island was about four miles round. The buildings of Tyre were very magnificent; the walls were 150 feet high, and broad in proportion. This city was at one period the most famous commercial city in the world. It resisted Nebuchadnezzar king of Babylon for thirteen years; at the end of which, wi'aried with endless efforts, the inhabitants re- solved to place the sea between them and their enemy, and passed accordingly into the island. The new city stood out against Alexander the Great for seven months ; and before he could take it he was

obliged to fill up the strait which separated the island from the continent. See MACK DON. It was repaired afterwards by Adrian, and became the metropolis of the pro- vince. It afterwards fell into the hands of the Arabs; and after being taken by Baldwin II., king of Jerusalem, it was destroyed by the sultan of Kzypt in 1289, and abandoned, never more to rise from its ruins. An excellent account of its situation and modern state may be found in Yolney's Travels, vol. ii. It now consists of a small village, composed of wretched huts, con- taining about fifty or sixty poor families. Its harbour is now almost choked up. It is called Sour or Tsour by the Orientals. See St it.

Tii;t, or SOUR, a sea-port of Syria, occu- pying the site of the most celebrated commercial city of antiquity, the ancient Tyre. This was first built on the continent; but, being taken,

and in a great measure destroyed, by the kings of Assyria, a new city was founded on an is- land at a little distance. In the time of the Romans, Tyre old and new, including the sub- urbs, were stated to have a circumference of nineteen miles. During the first centuries it was distinguished for its zeal in the cause of Christianity, and was made the first archbishop- ric under the patriarchate of Jerusalem. Dur- ing the crusades, it became the subject of fre- quent contest. For some centuries this once magnificent place has presented to the traveller only the aspect of a ruined village. It appears to be beginning somewhat to revive. The pea- santry are coming down from the neighbouring mountains, to carry on the trade for which it affords opportunity : it contains, however, at most 200 inhabited houses, two-thirds of which are occupied by the people called Mutualis, while the rest consist of Greek Catholics. There are twelve Maronite families, but not a single Jew. The chief staple is tobacco, sent to Cairo and Damietta, where it is sold at from £20 to £24 a cantar. To the same places are sent char- coal, a number of dried figs, and large faggots of wood. There is a large pottery and a fishery, which together are farmed for 1400 piastres (about £115). Mr. Turner does not mention the corn, of which, in Pococke's time, great quantities are said to have been exported to Malta. The old walls may still be traced, form- ing an irregular square of about a mile. In many places they are mended with large co- lumns of red and gray granite, and two or three rusty old cannon are mounted upon them. On the south and east they are thirty feet high ; but on the west the sand reaches almost to their top. At the south-west and south-east corners are re- mains of ancient niches. The only gate is one of wood on the eastern side ; while on the

north, part of the wall is broken down, to allow a passage. The harbour will now admit only boats, stretching eighty feet along the shore, and 150 along banks that run into the sea. Near the walls, at the east end, are the ruins of two square Arab towers, one thirty-five, and the other sixty feet hisrh, which Pococke supposes to have served as reservoirs of water from the aqueduct, and for its distribution over the city. He observed remains of a thick wall from one to the other, which probably belonged to the aqueduct itself. The houses are all built from ruins. Without the walls are ruins of a very large church, built of hewn stone, in the Syrian style ; also very perfect remains of several build- ings to the north, which probably belong to the archiepiscopal palace. There are remains of several other churches. At Seyd Mr. Turner picked up a medal of ancient Tyre. Long. 35° •20′ E., lat. 33° 10′ N.

TYRNAU, or Nagy-Szombath, a town in the vst'st of Hungary, on the Tyrna. It stands in a fertile but rather unhealthy district : it has been the seat of the chapter of Gran since 1543, and contains so many churches and monasteries that it has got the name of Little Rome. It is the scat of the court of appeal for the circle on the north of the Danube, and contained the national university until its removal to Buda in 1777.

Here are held eight annual fairs, which are well attended. Inhabitants 5000. Twenty-five mile» N.N.E. of Presburg.

TYRIAN DYE. See MUREX, and PURPURA.

TY'RO, n. s. Properly tiro as in the Latin. One not yet master of his art ; one in his rudi- ments.

There stands a structure on a rising hill, A\ here tyros take their freedom out to kill.

Garth' Dispeniani.*

TYRO, in fabulous history, a daughter of Sal- moneus, king of Elis, who. being harshly treated by her step-mother Sidero, was removed by her uncle Cretheus to the banks of the Enipeus ; where Neptune, assuming the form of that river- god, had two sons by her, the celebrated Pelias and Neleus, who, being exposed, were preserved by shepherds, and avenged their mother's injuries on Sidero. She afterwards married her uncle Cretheus, by whom she had yEson, Amythaon, and Pheres. Horn. Od. 11, 234.

TYROL, a province of the Austrian empire, bounded by Bavaria, Salzburg, Carinthia, Aus- trian Italy, and Switzerland, and lying between Long. 10° 2′ and 12°^20′ E., and lat. 45° 46′ and 47° 46′ N. Its form approaches to the circular, but its boundary is marked by frequent projections. Its area is

about 11,000 square miles, and its population about 720,000, thinly scattered. It is divided into seven districts or circles, viz.

Circles. Chief Towns.

The Lower Innthal, Schwatz,

The Upper Innthal, Imbst.

The Pusterthal, Brunecken.

The Vorarlberg, Bregenz.

The Adige. Botzen.

Italian Confines of Trent.

Italian Confines of Roveredo. The capital is Inspruck.

The Tyrol is the most mountainous of all the countries of Europe. A chain of primitive formation, containing mountains of the greatest height (the Orteles of 14,000 feet, the Glokner of 12,000, and the less elevated, but still lofty mass of Mount Brenner), traverses its whole extent, entering from Switzerland on the west, and terminating in the east, at the Kahlenberg, near Vienna. On each side of this is a secon- dary chain, one of which separates Tyrol from Bavaria, the other from Italy. These divide Tyrol into more than twenty valleys, the rafcst remarkable of which are the three which con- tain the large rivers of the Inn, the Eysach, and the Adige. The Adige in the south of Tyrol, like the Rhone in the south of Switzerland, is the recipient of all the mountain streams on one side of the country ; while the Inn, having, like the Rhine, a longer course, and a greater vo- lume of water, absorbs all those in the central and northern parts of the country. No country has a more romantic road than that over Mount Brenner along the Adige. It is indeed some- times attended with danger, from the rapid in- crease of the mountain streams, or from the falls of rocks, or snow after thaws ; but accidents are rare.

The climate of the Tyrol is of course cold, not only in winter, but in spring • but in sum-

mer the valleys are hot, particularly when open to the south. The most

pleasant season is au- tumn.

Most of the minerals from gold to coal are found here ; but the only mines that have heen worked with advantage are those of salt, iron, copper, and calamine. Mineral springs are also abundant. The Tyrolese raise corn and vege- tables in spots of very difficult access, but the quantity produced is inadequate to their wants, which are supplied by the import of corn in ex- change for the wine and silk raised in the south- ern valleys, and of the cattle exported from the smaller vales of the north. The farther products are flax, hemp, and tobacco. Among the wild animals is the chamois, marraotte, and Alpine goat.

During winter the women spin flax, knit caps and stockings, or weave baskets and straw hats. The men are employed in making wooden uten- sils or-toys, and in some places in the singular occupation of training canary birds for sale. The streams from the mountains are made to tarn a number of wheels, which drive the ma- chinery necessary for their labors. They asso- ciate less in towns, or even in villages, than is common in less mountainous countries: hence the limited population of their low towns.

In a country which so much resembles Wales, and the Highlands of Scotland, it is natural to anticipate a similar emigration in the summer season. Suabia and Bavaria are the chief out- lets of the Tyrolese. The young men go there to sell their petty wares, or to act as shepherds • luring summer; others go to a much greater distance.

The inhabitants of the southern confines of Tyrol partake of the character of their Italian neighbours. It is after passing Trent, and pene- « rating into the heart of the Alpine territory, that the traveller finds himself among a people religiously attached to their ancient usages, to domestic affections, and to the unostentatious manners and frugal mode of living of their forefathers. The dress of the peasantry is here peculiar: its principal embellishment consists in a straw hat ornamented with ribbons and nosegays : that of the women, far from elegant, and even ridiculous in the eye of a foreigner, is composed of a gown both thick and short, of stockings with cross stripes, and of a cap taper- ing like a sugar-loaf. There necessarily prevails a considerable diversity of language. That of the north of Tyrol is the Bavarian dialect of German ; that of the south is also German, but mixed with a number of words which are obso- lete in that country. In particular villages, fo- reign languages are understood, in consequence of the inhabitants having directed their emigra- tion to the countries where they are spoken : thus, in the village of Greden, Portuguese is spoken with considerable accuracy. The music of the Tyrolese has a very simple and frequently plaintive character, and every parish has its haunted spot. The sides of the bridges and fronts of the houses are covered with

images and other objects of devotion.

The Tyrol has a representative body on the plan of oui German ancestors, composed of four oiders, the clergy, nobility, deputies of the

towns, and deputies of the peasants. ?io new tax can be imposed without the consent of this body ; and, when it is granted, the sovereign is bound to make an explicit acknowledgment that the states might have refused it. In addition there exists a permanent deputation and tribunal, in which the peasantry are represented. The only imposts are a land tax payable indiscri- minately by all classes, and a charge on the higher classes, consisting of a per centage on pensions, tithes, and rents. The militia duty is light, the time of muster and exercise not ex- ceeding forty days in the year. A desire, or rather a tenacity, of personal independence, is a conspicuous feature in the character of the Tyro- lese. Though fond of the chase, and excellent marksmen, they are averse to compulsory ser- vice in the field. The Austrian cabinet in vair. endeavoured in 1785 to enforce a conscription In the defence of their country, however, they display the greatest alacrity.

The Tyrol formed in early ages a part of the ancient lihoetia, a country which, fro its diffi- culty of access, and the independent spirit of its inhabitants, so long offered resistance to the Romans. In the disorders that followed the downfall of the Roman empire, it became di- vided into a number of petty lordships, which all acknowledged the supremacy of the ancient princes and dukes of Bavaria. On the fall of the house of Guelf, the Tyrolese became imme- diate subjects of the empire, and the petty lord- ships were some time after absorbed under two heads, the dukes of Meran, and the counts of Tyrol. These families being united by marriage the whole country was governed after 1288 by z single sovereign ; and the last of the race, Mar- garet Maultasche, presented the succession to the dukes of Austria, who were her nearest n- lations. In their hands Tyrol has since re- mained.*

TYRONE (the ancient Tir-yn-fail) is a county in the province of Ulster and kingdom of Ireland : it is bounded on the north by Londonderry county ; on the south by Monaghan county ; on the east by Lough-Neagh and a part of Antrim ; and on the west and south-west by parts of Donegal and Fermanagh. Its area measures fifty-four miles irnlength by forty-two in breadth. It is divided into four baronies, viz. Clogher, Dutigannon, Omagh, and Strahane ; thirty-five parishes ; has one borough town, Dunganncn, and returns, in all, three members to the imperial parliament. The chief towns are Ballygawley, Fintona, Five-mile-town, Dungannon, Moy, Caledon, Aughnacloy, Armagh (the assize town of the county), Dromore, Newtown Stewart, Claudy, and Strahane, besides the city of Clogher,

where the bishop of this rich see resides. Ballygawley is remarkable for its manufacture of excellent gloves, and near it is an ancient castle, the scene of the narrative of the Spectre that appeared to the lady of Sir Tristram Beresford. At Dun- gannon is a richly endowed classical school, and in its vicinity the linen manufacture flourishes happily. Caledon gives title of viscount to the family of Alexander, and Strahane is a flourish- ing little town.

Thsre are about sixty schools in this «:.: ;nty, supported either wholly or in part by charitable

funds. Sir Erasmus Smyth's charities, the Lon- dpn Hibernian Society, Lady Caledon's bounty, Sunday School Society, and parochial contribu- tions, are their chief, though not their only sources of support. Tyrone anciently gave the title of earl to the illustrious house of O'Neal ; but, after the attainder of the chieftain called the Great O'Neal, the family of Le Poer enjoyed that dignity : the title is now merged in the houses of the Beresfords, marquisses of Water- ford. The face of this county, though not pic- turesque, is a good deal varied. The mountains of Curragh, Longfield, and Mounterlony, are prominent features ; and the rivers of the Black- water, Lookstown, and Cannon, while they suf- ficiently irrigate, afford some pleasing scenery. This latter is called, as it passes along towards the sea, the Mourne and the Toyle. There are besides many streams, but they are tributary to the rivers enumerated. Bog also, as in almost all counties in Ireland, is found in this, amounting to about 4000 acres in the part already surveyed. South-west of Lough-Neagh is ' School land bog,' which might be drained by a deep cut commu- nicating with the navigable rivers Bann and Blackwater. la the same manner the bogs of Newton Glens and Duncrow might be converted into profitable land. Few counties in Ireland present greater difficulties to the practical geolo- gist or miner than Tyrone; limestone, ironstone, and sulphureous coal, exist here in abundance : but so numerous are the dislocations, slips, or faults, as they are called, so well known to prac- tical men, that shafts are sunk or levels driven at very great hazard of ultimate loss. The Tyrone colliery, at Coal Island, however, is at full work. A navigation extends from Coal Island to the Blackwater, a distance of three miles, and thence by a short cut across the isthmus of Maghuy into Lough-Neagh, by which the bar of the river Blackwater, on which there are but twenty-two inches of water in summer time, is avoided. From the colliery basin a rail- way is carried to the mines. The success of

this undertaking will of course justify speculations in other parts of the Tyrone coal district ; this will lead to a more accurate geological knowledge of the district, and hence the working of coal mines here will be a work of greater profit and more certainty.

TYRRHENI, the ancient inhabitants of Etruria.

TYRRHENIAN SEA, TYRRHENUM MARE, that part of the Mediterranean which washes the coast of Etruria.

TYRTˆEUS, an Athenian general and musi- cian. He was called to the assistance of the Lacedaemonians in the second war with the Mes- senians, about 685 B.C.; and a memorable vic- tory which they obtained over that people is attributed to the animating sound of a new mili- tary flute or clarion, invented and played upon by Tyrtaeus. Fragments of his poetry, in elegiac verse, are preserved in Stobaeus, Lycurgus Oral, in Fulvius Ursinus, and in the Oxford edition of Eleg. et Lyric Frag, et Scholia, 1759. Ea £v £o/i(i/a, &c.

TYRWHITT (Thomas), a learned writer, born in 1730, and educated at Eton and Queen's Col-

lege, Oxford. In 1755 he was elected a fellow of Merton, which he afterwards resigned. In 1761 he became clerk of the House of Commons. He published an edition of Aristotle's Poetics, and also of Chaucer. He also wrote Notes OD Shakspeare, &c. He died in 1786.

TYSILIO, a Welsh poet, historian, and divine, who flourished in the end of the sixth and be- ginning of the seventh century. He wrote a Chronicle of Britain ; from which Geoffry of Monmouth compiled his Fabulous History of Britain.

TYSON (Edward), M. D. and F. R. S., a learned physician, born at Bristol, in 1650, and educated at Magdalen Hall, Oxford, where he studied physic, and graduated. He settled in London, and became F. R. S. He wrote many useful papers in the Society's Transactions, was appointed physician to Bethlehem and Bridewell, and published Phocoena, or the Anatomy of a Porpoise; 4to. Ephemeridis Vita, or the Natu- ral History and Anatomy of the Ephemeris. Orang Outang, or the Anatomy of a Pigmy, com- pared with that of a Monkey, an Ape, and a Man; 4to. He died suddenly, in 1708.

TYTLER (William), esq., an able writer, was born at Edinburgh in 1711. He was the son of Mr. Alexander Tytler, a writer. He was edu- cated at the High School and the university of Edinburgh. In 1747 he was admitted into the Society of Writers to the Signet, and he honor- ably exercised this

profession till his death in 1792. He was the author of an Historical Enquiry into the Evidence against Queen Mary, and Dissertation on her Marriage with the Earl of Bothwell ; in which works he vindicated her character. He collected the Poetical remains of James I., King of Scotland ; and wrote a Hisser- tation of Scottish Music ; Observations on the Vision, a poem ; and a treatise on the Fashionable Amusements in Edinburgh during the last Cen tury.

TYTLER (Alexander Fraser), lord Woodhouse- lee, son of the former. This elegant and accom- plished scholar died suddenly at Edinburgh on the 5th of January 1813. He formerly held the important situation of deputy judge advocate for Scotland, and professor of universal history in the university of Edinburgh. He published a Trea- tise on Military Law; and Elements of General History, in 2 vols. 8vo., which has run through several editions. He published also a very valu- able Essay on Translation, in 1 vol. 8vo., and An Historical and Critical Essay on the Life and Character of Petrarch, 8vo. He was appointed a senator of the College of Justice in 1802, and, accord ing to the custom of the Scottish judges, as- sumed the title of lord Woodhouselee. He was made a commissioner of justiciary in 1811. He was a respectable and upright judge, and parti- cularly distinguished as a polite scholar and an elegant writer. His Memoir of the Life of Lord Kames, 2 vols. 4to., and his Critical Essay on the Life of Petrarch, will long perpetuate his name. TZETZES (John), grammarian, was born at Constantinople in the twelfth century. He wrote Commentaries upon Lycrophon's Cassanora, and a work entitled Chiliades. His works were printed at Oxford, by Potter, in 1697, folio.

U & V.

V Has two powers expressed in modern English by two characters, V consonant, and U vowel, which ought to be considered as two letters; but, as they were long confounded while the two uses were annexed to one form, the old custom still continues to be followed. U, the vowel has two sounds ; one clear, expressed at other times by eu, as obtuse ; the other close, as approaching to the Italian u, or English oo, as obtund. V, the consonant, has a sound nearly approaching to those of b and f. With 6 it is by the Spaniards and Gascons always confound- ed, and in the Runic alphabet is expressed by the same character with J\ distinguished only by a diacritical point. Its sound in English is uni- form. It is never mute.

U, u, V, or v, is used, 1. As a letter ; 2. As a numeral ; and 3. As an abbreviation. I. As a letter it is the twentieth of our alphabet, and the fifth vowel. It is formed in the voice by a round configuration of the lips, and a greater extrusion of the under one than in forming the letter o, and the tongue is also more canulated. The sound is short in crust, must, tun, tub ; but is lengthened by a final e, as in tune, tube, Stc. In some words it is rather acute than long ; as in brute, flute, lute, &c. It is mostly long in polysyllables ; as in union, curious, &c., but in some words it is obscure, as in nature, venture, &c. This letter, in the form of V or v, is properly a consonant, and as such is placed before all the vowels ; as in vacant, venal, vibrate, &c. Though the letters v and v had always two sounds, they had only the form v till the beginning of the fourth cen- tury, when the other form was introduced, the inconvenience of expressing two different sounds by the same letter having been observed long be- fore. II. As a numeral V stands for five ; and with a dash added at top, thus V, it signifies 5000. III. As an abbreviation, among the Ro- mans V. A. stood for veterani assignati ; V. B. viro bono; V. B. A. viri boni arbitratu ; V. B. F. vir bonae fidei ; V. C. vir consularis ; V. C. C. F. vale, conjux charissune, feliciter ; V. D. D. voto dedicatur ; V. G. verbi gratia ; Vir. Ve. virgo vestal is ; VL. videlicet; V. N. quinto nonarum. VA'CANT, adj.) Fr. vacant ; Lat. vacans. VA'CANCY, n. t. S Empty ; unfilled ; void : hence at leisure ; disengaged : the noun substan- tive corresponding.

They were content to bribe them with the nomina- tion of some bishops, and disposal of the revenues of some churches during the racanciei. /.,•-./.

They which have the government scatter the army abroad, and p. ace them in villages to take their victuals of them, at such vacant times as they lie not in the camp. Spenttr.

How is 't,

That thus you bend your eye on vacancy, And with the incorporal air do hold discourse 1

Shaktftfare. llamUt.

When alone, or in company, they sit still without

doing any thing, I like it worse ; for all dispositions

to idleness or vacuum, even before they are habits,

•re dangerous. Wnitim.

Religion is the interest of all ; but philosophy of

those only that are at leisure, and vacant from Uw» affairs of the world. .Un/v's Divine Dialoguet.

Why should the air so impetuously rush into the cavity of the receiver, if there were before no vacant room to receive it. Boyle.

If, sometimes, each other's eyes we meet, Those little vacancies from toil arc sweet. Drydeit.

In the vacancy of a bishop, the guardian of the spiritualities was summoned to parliament in the bishop's room. AyUJfe.

Others, when they allowed the throne racant, thought the succession should immediately go to the next heir. Sicift.

The reader finds a wide vacancy, and knows no how to transport his thoughts to the next particu lar, for want of some connecting idea.

Watts's Logick.

VACATE, v. a. > Lat. vuco. To annul- VACA'TION, n. s. } make void ; make of no au- thority ; make vacant : the noun substantive corresponding.

As these clerks want not their full task of labour during the open term, so there is for them whereupon to be occupied in the vacation only.

Bacon's Office of Alienation.

That after-act vacating the authority of the pre- cedent, tells the world that some remorse touched even Stafford's most implacable enemies.

King Cltarlet.

Vacation is all that time which passes between term and term at London. Cowell.

He vacates my revenge ; For, while he trusts me, 'twere so base a part To fawn, and yet betray. Dryden.

The necessity of observing the Jewish sabbath was vacated by the apostolical institution of the Lord's day. Nel$on.

VACCA BERLINGHIERI (Francis), M. D., a native of Ponsacco, near Pisa, studied in the university of that city, and afterwards became professor of surgery. When the Brunonian theory of medicine (see JOHN BROWN) began to prevail in Italy, he attacked it in his Meditazioni ' sull' Uomo malato e sulla nuova Dottrma di Brown, 1795, 8vo., and was offered the

chair of clinical medicine at Pavia, in 1796 ; but his at- tachment to his native country induced him to refuse it. He died October 6th, 1812.

*VAC'ILLANCY, n. *. > Fr. vacillant ; Lat. VACILLA'TIOK. J vacillans, vacillo. A*

state of wavering ; fluctuation ; inconsistency : vacillation is the word in modern use.

I deny that all mutability implies imperfection, though some does, as that vacillancy in human souls, and such mutations as are found in corporeal matter. Divine Dialogues.

The muscles keep the body upright, and prevent its falling, by readily assisting against every vacil- tation. Derham.

VACCINATION, variola vaccina, or the cow-pox. Any pustulous disease affecting the cow may be called the cow-pox : whether it arises from an over-distension of the udder, in consequence of neglect in milking, from the sting of an insect, or from any other cause. But the species which claims particular attention is that which was recommended to the world by Dr

Jenner, in the year 1798, as a substitute for the small-pox. This, which originates from the grease in the horse's heel, is called the genuine cow-pox; all other kinds are spurious. For proof that the vaccine fluid, fraught with such unspeakable benefits to mankind, derives its origin from this humble source, the reader may consult the works of Dr. Jenner; the Medical and Physical Journal ; and a treatise on the sub- ject by Dr. Loy, of which an analysis is given in the Annals of Medicine for the year 1801; and Mr. Ring's work on t'his disease, which con- tains the whole mass of evidence that has ap- peared concerning it.

calculation, is probably the reason why it was not before introduced into practice. It may be doubted whether the public would ever have adopted the practice had not this fallacy been detected by Dr. Jenner.

To him also we are indebted for anothei dis- covery of the first importance, namely, that the pustule, excited in the human subject by vaccine inatter, yields a fluid of a similar nature with that which was inserted. This experiment, so essential to the general propagation of the prac- tice, and so happy in its result, was never before attempted. It was reserved to crown the labors of Dr. Jenner. A considerable number of in-

The genuine cow-pox appears, in the form of stances are on record to prove that farriers and

vesicles, on the teats of the cow. They are of a blue color, approaching to livid. These vesicles are elevated at the margin, and depressed at the centre. They are surrounded with inflammation. The fluid they contain is limpid. The animals are indisposed; and the secretion of milk is lessened. Solutions of the sulphates of zinc and copper are a speedy remedy for these pustules ; otherwise they degenerate into ulcers, which are extremely troublesome. It must, however, be recollected that much of the obstinacy attending these cases is owing to the friction of the pus- tules in consequence of milking. It is probable that a solution of the superacetate of lead would be preferable to irritating applications. Similar effects are produced in the hands of the milkers, attended with febrile symptoms, and sometimes with tumors. Other parts, where the cuticle is abraded, or which are naturally destitute of that defence, are also liable to the same affection, provided active matter is applied. It even ap- pears that, in some instances, pustules have been produced by the application of vaccine virus to the sound cuticle. One case of this kind may be found in a letter from Dr. Fowler, of Salisbury,

others, who receive infection from the heel of a horse, are either partly or totally deprived of the susceptibility of the small-pox. When Dr. Jen- ner first published an account of his discoveries, this point was enveloped in some degree of ob- scurity. He then conceived that the matter of grease was an imperfect preservative against the small-pox. This opinion was founded on the following circumstance : — It had been remarked that farriers either wholly escaped the small-pox, or had that distemper in a milder manner than other people. This, however, is easily recon- cileable to reason, if we only suppose that in some cases the infection is communicated when the virus possesses all its prophylactic virtue ; and in others when its specific quality is in some measure lost.

This variation in the effects produced by the virus of the horse, inclined Dr. Jenner to believe that it was modified, and underwent some pe- culiar alteration, in the teats of the cow. He now concludes that it is perfect when it excites the genuine disease in the cow ; yet a con- siderable advantage is derived from its being transferred to the latter animal, the nipples of

to Dr. Pearson, published in the first work of which furnish a more obvious and a more abun-

Dr. Pearson on this subject. dant source of this inestimable fluid than its

The spurious cow-pox is white ; another cri- original element the horse. This theory, that the

terion is, that both in the brute animal and in preservative against variolous contagion is per-

the human subject, when infected with the feet when it issues from the fountain-head, and

casual cow-pox, the sores occasioned by the comes immediately from the hands of Nature, is

genuine species are more difficult to heal than consonant with reason, and consistent with

those which are occasioned by the spurious kind, analogy. Thus one obstacle more to the univer-

It is of the utmost importance to distinguish the sal adoption of the practice is removed,

genuine from the spurious sort, which is also, in But the chief point which has been contro-

some degree, infectious ; since a want of such verted respecting vaccine inoculation is the per-

discrimination would cause an idea of security manency of its effect. Instances have been known

against the small-pox, which might prove de- where persons have escaped the small-pox for a

lusive. Dr. Jenner has elucidated another number of years, and yet have ultimately proved

point of the first importance relative to the not insusceptible of its infection. When such

genuine cow-pox itself. It had frequently been persons had previously undergone the vaccine

observed that, when this disorder prevailed in a disease, their apparent security was erroneously

farm, some of the persons who contracted it by ascribed to that cause ; but we have not even a

milking were rendered insusceptible of the shadow of proof that the cow-pox possesses in

small-pox, while others continued liable to that the least degree the property of a temporary

infection. This is owing to the different periods prophylactic, since it appears not even to retard

at which the disease was excited in the human subject ; one person, who caught the disease while the virus was in an active state, is rendered secure from variolus contagion; while another, who received the infection of the cow-pox when

the eruption of the small-pox where previous in- fection has been received. By this remark, it is not meant to be asserted that it never supersedes or modifies the small-pox; for we have great reason to believe that such beneficial effects often

it had undergone a decomposition, is still sus- flow from vaccination ; but, where an eruption ceptible of the small-pox. This uncertainty of of the small-pox actually takes place after vaccine the prevention, the value of which is beyond all inoculation, the two diseases frequently co-exist,

without retarding each other in the smallest degree. It is therefore contrary to all reason and analogy to consider the cow-pox as a mere temporary preservative : it is to be regarded, as we think, as a permanent security against that terrible disease.

A number of cases are recorded by Dr. Jenner, and other authors who have written on this sub- ject, in which persons who have received the cow-pox by casual infection, twenty, thirty, forty, and fifty years before, still continued insusceptible of variolous contagion, in whatever form it was applied. As the cow-pox destroys the susceptibility of the small-pox, so the small- pox destroys that of the cow-pox. To this general rule, however, a few exceptions are said to have occurred. Certain it is that a pustule has now and then been excited by the insertion of vaccine virus in those who have had the .small-pox, and that this pustule has been known to yield the genuine virus ; but it is not equally certain that the pustule has been perfect in all respects. Possibly it may have been defective in point of size or duration, in respect to its areola, or the limpidity of its contents. That such a pustule has, in some instances, yielded effectual virus, is admitted ; but this is no more than what has often happened in cases where persons who have had the small-pox are a second time submitted to that infection in the same form.

The artificial cow-pox in the human subject is much milder than the casual disease ; and in- comparably milder than the small-pox, even under the form of inoculation. It neither re- quires medicine nor regimen ; it may be practised at any season of the year ; and, not being infec- tious by effluvia, one person may be inoculated without endangering the life of another. This affection produces no pustulous eruptions. When such attend vaccine inoculation, they are owing to some adventitious cause, such as the small-pox, which it is well known may co-exist with the cow-pox. The vaccine vesicle is confined to the parts where matter is inserted ; it is, there- fore, entirely a local and an inoculated disease. Nevertheless, it is certain that eruptions of other kinds, in some instances, attend vaccine inocula- tion ; such as a nettle-rash, or an eruption resembling a tooth-rash, but rather larger than what is commonly called by that name.

Among other singularities attending the cow- pox, the mildness of the disease, under the form of inoculation, has been urged as an argument against the practice, the cause appearing, to ordinary comprehensions, inadequate to the effect. This, it must be allowed, is the best apology that can be offered for scepticism on that point ; but it will weigh but little when put into the scale against actual observation, and incontrovertible fact. The efficacy of the cow- pox, as a safe-guard against the small-pox, rests perhaps on more extensive evidence, and a more solid foundation, than any other axiom in the whole circle of medical science. That the cow- pox is not infectious by effluvia is naturally concluded from its never being communicated from one person to another in the dairies ; where the disease is casual, and appears under its worst

form. The same inference may be drawn from its never spreading in a family, when only t>ne person is inoculated at a time. To confirm this proposition more fully, the vaccine pustules have been ruptured, and persons who have never had the disorder have been suffered to inhale the effluvia several times a day, but to no purpose. This is no more than might be expected, in an affection where the pustulous appearance or. the surface of the body is nearly local. As to the constitutional indisposition, it is seldom con- siderable, unless there is a complication of this with some other distemper ; and, whenever any unfavorable symptoms appear, they may in general be traced to some other cause. \Ve have indeed great reason to believe that no ill consequence ever arises from the cow-pox itself, unless from ignorance or neglect.

But, notwithstanding the symptoms are mild, they frequently occur at a very early period. A drowsiness, which is one of the most common attendants of the disease, is often remarked by the parents themselves, within forty-eight hours after the matter is inserted. In a majority of cases a slight increase of heat is perceptible, together with an acceleration of the

pulse, and other signs of pyrexia ; but not in such a degree as to alarm the most timorous mother. Sometimes the patient is restless at nights; and now and then a case is met with in which vomiting occurs ; but in many cases no constitutional in- disposition can be perceived. Even then, the cow-pox has never failed to prove an effectual" preservative against the small-pox, provided the pustule has been perfect. This being the grand criterion of the security of the patient, too mi- nute an attention cannot be paid to its rise, progress, and decline. The best mode of inocu- lating is by making a very small oblique puncture in the arm, near the insertion of the deltoid muscle, with the point of a lancet charged with fluid matter. In order to render infection more certain, the instrument may be charged again, and wiped upon the puncture.

In places where the patient is likely to be exposed to variolous contagion, it is advisable to inoculate in more places than one ; but, unless there is danger of catching the small-pox, it is better not to make more than one puncture in each arm, lest too much inflammation should ensue. The vaccine fluid may be taken for inoculation as soon as a vesicle appears ; but, if the vesicle is punctured at a very early period, it is more apt to be injured. When virus is wanting for inoculating a considerable number, it is better to let the pustule remain untouched till about the eighth day, by which time it has in general acquired a reasonable magnitude. After that day, if the pustule has made the usual progress, the matter begins to lose its virtue; but it may in general be used with safety, though with less certainty of producing infection, till the areola begins to be extensive.

The first sign of infection commonly appears on the third day. A small red spot, rather ele- vated, may be perceived at the place where the puncture was made. Sometimes, however, the mark of infection, having succeeded, is not visi- ble till a much later period. It may be retarded,

or even entirely prevented, by any other disorder, such as dentition, or any complaint attended with fever, or by extreme cold. Another frequent cause of a slow progress in the pustule, or a total failure of success, is debility. Sometimes it is impossible to discover any sign of infection for above a fortnight. In this respect the cow-pox is subject to the same laws, and liable to the same variation, as the small-pox.

When a considerable inflammation appears within two or three days after inoculation, there is reason to suspect that infection has not taken place ; and, if suppuration ensues, that suspicion ought in general to stand

confirmed. Now and then, however, it happens that, after the spurious pustule, or, more properly speaking, the phlegmon, has run its course, which is within a few days, a vesicle begins to appear, bearing every charac- teristic of the genuine vaccine disease, and yield- ing a limpid and efficient virus for future inocu- lations. In this case the patient is as perfectly secured from all danger of the small-pox as if no festering of the puncture had preceded. The occurrence of such a case, though rare, is worthy to be recorded ; because some practitioners have concluded a spurious pustule to be a certain proof of failure. The areola commonly begins to be extensive on the ninth day, and to decline about the eleventh or twelfth. At this period also the pustule begins to dry ; the first sign of which is a brown spot in the centre. In propor- tion as tins increases the surrounding efflorescence decreases, till at length nothing remains but a circular scab, of a dark-brown mahogany color, approaching to black. Sometimes it resembles the section of a tamarind stone; and it often retains the depression in the centre, which characterises this disease before exsiccation takes place.

Instances have been known where the vaccine pustule, though regular, and perfect in all other respects, has been totally destitute of areola ; at least where neither the medical practitioner, on visiting the patient, nor the attendants, have remarked any appearance of that sympton. In these cases the patient has proved as insuscepti- ble of variolous infection as if the surrounding efflorescence had covered the whole arm. It must, however, be confessed that we have no proof of the non-existence of an areola in these cases. It might have been trivial ; it might have been transient ; yet it misht have been effectual. There is, however, greater reason to believe that the surrounding efflorescence, though usually a concomitant circumstance, is not an essential requisite to the vaccine disease. If by any accident the vesicle is ruptured, suppuration often ensues. In this case more attention than ordinary ought to be paid to the progress, and to all the phenomena of the local affection ; both on account of the uncertainty of success in the pustule, as a prophylactic, and the greater probability of tedious ulceration.

If there is room for the least doubt of the suf- ficiency of the first inoculation, a second ought lo be performed without delay. This, if un- necessary, is seldom attended with inconvenience, ˆnd never with danger. Either no effect is pro- duced, or a slight festerine, which terminates in

a few days. An exception occurs, but rarely, where a spurious, or perhaps even a genuine pustule, takes place in those persons who are known to have had the cow-pox or the small- pox already ; but this cannot be the least cause of alarm to any one who knows the benign character of the distemper. Various topical applications, both stimulant and sedative, have

been recom- mended, in order to allay the violence of inflam- mation. If the operation for the insertion or matter is not unnecessarily severe, nor the pustule irritated by friction, or pressure, or other violence, no such applications are necessary. Nevertheless, if either the anxiety of the professional man, or the importunity of a tender parent, should de- mand a deviation from this general rule, any ot the following remedies may be had recourse to. The pustule may be touched with very diluted sulphuric acid ; which should be permitted to remain on the part half a minute, and then be washed off with a sponge dipped in cold water. This has been ignorantly, or artfully, called an escharotic ; but any one who tries the application will soon discover that its operation is mild and harmless. To avoid cavil and misrepresentation, it is better to apply a saturnine lotion ; com- presses, dipped in such a lotion, may be applied at any time when inflammation runs high, and renewed as occasion requires.

If the pustule should chance to be broken, a drop of the liquor plumbi acetatis, undiluted, may be applied as an exsiccant ; but, if ulceration threatens to become obstinate or extensive, a mild cataplasm is the best resource. In case the ulceration is only superficial, and not attended with immoderate inflammation, a bit of any adhesive plaster, spread on linen, will prove the most convenient dressing, and seldom fails of success. It will, in general, be unnecessary to renew it oftener than every other day. These minute observations no one will despise, unless there be any person so ignorant as not to know that the care of the arm is almost the whole duty of the medical practitioner in vaccine inoculation ; and that nothing disgusts the public so much against the practice as a sore arm, and the ill consequences which, from a neglect of that symptom, too often ensue. When fluid virus cannot be procured, it is necessary to be cautious how it is preserved in a dry state. The most improper mode is that of keeping it on a lancet ; for the metal quickly rusts, and the vaccine matter becomes decomposed. This method, however, is as likely to succeed as any, when the matter is not to be kept above two or three days. If the virus be taken on glass, care roust be taken not to dilute it much ; otherwise it will probably fail.

Cotton thread is a very commodious vehicle. If it is intended to be sent to any considerable distance, it ought to be repeatedly dipped in the virus. No particular caution is necessary with regard to the exclusion of air ; nevertheless, as it can be done with so little trouble, and is more satisfactory to those who receive the matter, it is better to comply with the practice. On this account it may be enclored in a glass tube, or in a tobacco-pipe sealed at each end, or between two square bits of glass, \hich may, if necessary

be also charged with the matter, and wrapped in gold-beater's skin. Nothing is more destructive to the efficacy of cow-pox matter than heat : on this account it must not be dried near the fire, nor kept in a warm place. The advantage of inserting it in a fluid state is so great that it is to be wished every practitioner would endeavour to keep a constant supply for his own use, by inoculating his patients in succession, at such periods as are most likely to answer that pur- pose.

VACCINIUM, the whortle-berry, or bilberry, in botany, a genus of plants of the class of octan- dria, and order of monogynia ; and arranged in the natural system under the eighteenth order, bicornes. The calyx is superior; the corolla monopetalous ; the filaments inserted into the receptacle; the berry quadrilocular and poly- spermous. There are fifteen species, the most remarkable of which are, 1. V. myrtillus, black whorts, whortle berries, or bilberries, growing in woods and on heaths abundantly. 2. V. oxy- coccus, cran-berry, moss-berry, or moor-berry, frequent on peat bogs in the Lowlands, but not so common in the Highlands, of Scotland. 3. V. vitis idsea, red whortle berries, frequent in dry places, in heaths, woods, and on mountains. The berries have an acid cooling quality, useful to quench the thirst in fevers. 4. V. uliginosum, the great bilberry bush, found in low moist grounds, and almost at the summits of theHigh- land mountains. The leaves are full of veins, smooth and glaucous, especially on the under side ; the berries are eatable, but not so much esteemed as the preceding.

VACUNTˆE, an ancient people of Mauritania. See MAURITANIANS.

VAC'UUM, n. S.A Lat. vacuum. Space un-

VAC'UIST, /occupied by matter: va-

VACU*ITY, Acuity has also this sense,

VAC'UOUS, adj.) and is applied metaphori- cally to inanity of mind or character: a vacuist is a philosopher who holds in a vacuum opposed to a plenist : vacuous, empty ; unfilled.

In filling up vacuities, turning out shadows and ceremonies, by explicit prescription of substantial duties, which those shadows did obscurely represent. Hammond's Fundamental*.

Boundless the deep, because I AM who fill Infinitude : nor vacuout the space.

Milton's Paradise Lfltt.

Redeeming still at night these families of the day.

Fell.

Those spaces, which the vaevuts would have to be empty, because they are manifestly devoid of air, the plenists do not prove replenished with subtile matter.

Boyle.

God, who alone can answer all our longings, and fill every vacuity of our soul, should entirely possess our heart. Roger.*

Hunger is such a state of vacuity as to require a fresh supply of aliment. Arbuthnot.

Our enquiries about racuum, or space and atoms, will shew us some good practical lessons. Watts.

VACUUM, in philosophy, denotes a space empty or devoid of all matter or body. It has been a matter of much dispute among philoso- phers whether there be in nature a perfect vacuum, or space void of all matter ; but, if bailies consist of material solid atoms, it is evi-

dent that there must be vacuities, er motion would be impossible. See METAPHYSICS. We can even produce something very near a vacuum in the receiver of an air pump, and in the Torri- cellian tube. See PNEUMATICS. And it is doubt- ful whether the particles of the densest bodies known be in perfect contact.

VACUUM BOYLEANUM is the approach to a real vacuum, to which we can arrive by means of the air-pump.

VACUUM TORRICELLIAN is the most complete vacuum which we can make by means of the torricellian tube. See BAROMETER, and PNEU- MATICS.

VADE, v . n. Lat. vado. To vanish ; pass away. — Spenser. A word useful in poetry, but not received.

Be ever gloried here thy sovereign name, That thou mayest smile on all which thou hast

made,

Whose frown alone can shake this earthly frame, And at whose touch the hills in smoak shall rade.

Wotton.

VADIUM, a pledge in law, is either vivum or mortuum.

VADIUM MORTUUM, or dead pledge. Se» MORTGAGE.

VADIUM VIVUM, or living pledge, is when a man borrows a sum (suppose £200) of another, and grants him an estate, as of £20 per annum, to hold till the rents and profits shall repay the sum so borrowed. This is an estate conditioned to be void as soon as such sum is raised. And in this case the land or pledge is said to be living: it subsists, and survives the debt; and, immediately on the discharge of that, results back to the borrower.

*VAG'ABOND, adj. & n. *. Fr. vagabond ; low Lat. vagabundus. Wandering without any settled habitation ; wanting a home : the noun substantive corresponding.*

Let them pronounce the steep Tarpeian death Vagabond exile : yet I would not buy Their mercy at the price of one fair wort

ShaJapeare. Coriolantu.

We call those people wanderers and vagabond, that have no dwelling-place.*

Raleigh' Hittory of the World. Their prayers by envious winds Blown vagabond or frustrate. Milton.*

A vagabond debtor may be cited in whatever place or jurisdiction he is found. Ayltffe't Parergon. Vagabond is a person without a home. Watts.

*VAGA'RY, n. *. Lat. vagus. A wild freak; a capricious frolick.*

They changed their minds, Flew off, and into strange vagaries fell, As they would dance. Milton's Paradise Lott.

VAGINA, in anatomy, a canal reaching from the external orifice, or os pudendi, of women, to the uterus.

VAGINA properly signifies a sheath or scabbard, and is used in architecture for the part of a ter- minus, because resembling a sheath, out of which the statue seems to issue.

VA'GOUS, adj. Lat. vagus ; Fr. vague. Wan- dering ; unsettled. Not in use.

Such as were born and begot of a single woman, through a tagous lust, were called Sporii. Ayli/e.

VAGRANTS.

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VA'GRANT, adj. & M. s. Lat. vagor ; Ital. vagare. VVandering ; unsettled ; vagabond : the noun substantive corresponding.

Do not oppose popular mistakes and surmises, or vagrant and fictitious stories.

More's Divine Dialogues.

Take good heed what men will think and say ; That beauteous Emma vagrant courses took, Her father's house and civil life forsook. Prior.

You'll not the progress of your atoms stay, Nor to collect the vagrants find a way. Blackmore.

Ye vagrants of the sky, To right or left unheeded take your way. Pope.

VAGKANTS, in law. Some of the ancient statutes contain very severe regulations respect- ing vagrancy. By stat. 22 Hen. VIII., c. 12, a vagrant, after being whipped, was to take an oath to return to the place where he was born, or where he had last dwelt before the punish- ment, for the space of three years ; and there labor as a true man ought to do. By stat. 27 Hen. VIII., c. 25, persons found a second time in a state of vagrancy were not only to be whipped, but to have the upper part of the gristle of the right ear clean cut off; for a third offence, the punishment was death. By 1 Edw. VI., c. 3, a vagabond was to be marked with a hot iron on the breast with V., and adjudged to be a slave for two years to the person who took him. This act was repealed by stats. 3, 4, Edw. VI. c. 16, which restored the provisions of 22 Hen. VIII. c. 13, with some additions. By stats. 14 Eliz. c. 5, 18 Eliz. c. 3, provisions were made for the punishment of vagabonds by whipping, gaoling, boring the ears, and death for a second offence.

Now, under stat. 17 Geo. II. c. 5, vagrants are divided into three classes, viz. : idle and disorderly persons ; rogues and vagabonds ; and incorrigible rogues ; and are thus described and particularised at full length : — They who threaten to run away and leave their wives or children to the parish ; or unlawfully return to a parish whence they have been legally removed ; or, not having wherewith to maintain themselves, live idle, and refuse to work for the usual wages; and all persons going from door to door, or placing themselves in the streets, &c., to beg in the parishes where they

dwell, shall be deemed idle and disorderly persons. All persons going about as patent-gatherers, or gatherers of alms, under pretence of losses by fire, &c., or as col- lectors for prisons, &c. ; all fencers and bear- wards ; all common players of interludes ; and persons, who for hire, gain, or reward, act, represent, or perform, or cause to be acted, &c., any interlude, tragedy, comedy, opera, play, farce, or other entertainment of the stage, or any part therein, not being authorised by law; all minstrels, jugglers ; all persons pretending to be gypsies, or wandering in the habit or form of Egyptians, or pretending to have skill in phy- siognomy, palmistry, or other crafty science, or to tell fortunes, or using any subtle craft to de- ceive and impose on a person ; or playing or betting at any unlawful games or plays ; and all persons who run away and leave their wives and children, whereby they become chargeable to any parish ; all pedlars not duly licensed ; all persons war.derng abroad and lodging in ale-

houses, barns, out-houses, or in the open air, not giving a good account of themselves; and all persons wandering abroad and begging, pre- tending to be soldiers, mariners, or pretending to go to work in harvest, not having proper cer° tificates ; and all other persons wandering abroad and begging; and all persons going from door to door, or placing themselves in streets, &c., to beg in the parishes where they dwell, who, being apprehended for the same, shall resist or escapeˆ shall be deemed rogues and vagabonds. All end-gatherers offending against the stat. 13 Geo. 1. c. 23, being convicted; all persons appre- hended as rogues and vagabonds, and escaping, or refusing to go before a justice, or to be examined upon oath before such justice, or refusing to be conveyed by pass ; or giving a false account of themselves after warning of the punishment ; and all rogues or vagabonds break- ing or escaping out of any house of correction ; and all persons who, having been punished a rogues and vagabonds, shall again commit any of the said offences ; and offenders against this act having children with them (and such chil- dren being put out apprentices or servants pur- suant to this act), being again found with the same children, shall be deemed incorrigible rogues.*

The punishment of idle and disorderly per- sons is commitment to the house of correction, there to be kept to hard labor, not exceeding a month.

Rogues and vagabonds are to be publicly whipt or sent to the house of correction until the next sessions, or any less time; and, after such whip- ping or commitment, may be passed to their last legal settlement or place of birth ; or, if, under fourteen, and having a father or mother living, to the place of abode of such father and mother. And if committed until the next ses- sions, and adjudged a rogue or vagabond, the justices may order them to be kept in the house of correction to hard labor, not exceeding six months.

A person adjudged at the sessions a rogue or vagabond, or incorrigible rogue, may be kept in the house of correction to hard labor, such rogue for not more than six months, and such incor- rigible rogue not exceeding two years, nor less than six months; and during the confinement either of them may be corrected by whipping, at such times and places as the justices shall think fit, and may then be passed as aforesaid ; and if a male, and above the age of twelve years, the justices, before his discharge, may send him to be employed in the king's service, either by sea or land. If, before the expiration of his confinement, he shall escape from the house of correction, or offend again in the like manner, he shall be deemed to be guilty of felony, and transported for any time not exceeding seven years. See 5 East's Rep. 339. If the sessions under this section order a rogue to be whipped, and then sent into his majesty's service, but omit to adjudicate whether the service .shall be by sea or by land, the conviction shall be quashed as to that part, though valid as to the former. 5 East's Rep. 339. Any person may apprehend and carry before a justice persons

going about from door to door, or placing them- selves in streets, highways, or passages, to beg alms in the parishes where they dwell.

By stat. 59 Geo. III. c. 12, §§ 33, 34, poor persons born in Scotland, Ireland, Man, Jersey, or Guernsey, may be removed, although they have not committed any act of vagrancy ; and, although they may have committed such act, without being whipped or imprisoned under 3-2 Geo. III. c. 45. It is suggested as an import- ant question, whether a single-woman removed under 35 Geo. III. c. 101, as actually chargea- ble on account of being with child, is punisha- ble as a vagrant for returning after her delivery? And an opinion is given by a very competent judge that she is not. See note to stat. 17 Geo. II. c. 5, Evans's Collection of Statutes, Part VI. class 38, nu. 2.

VAGUE, adj. Fr. vague ; Lat. vagus. Wan- dering; vagrant; vagabond.

Gray encouraged his men to set upon the vague villains, good neither to live peaceably, nor to fight.

Haiitcard.

The perception of being, or not being, belongs no more to these vague ideas, signified by the terms whatsoever and thing, thau it does to any other ideas.

Locke.

VAIL,n.., v. a., & v. n. Fr. voile. Frequently written veil, from Lat. velum, and the verb veil, from the verb velo. A curtain ; a cover thrown over any thing to be concealed : hence a part of female dress : to vail is to cover; conceal ; let fall; sink in fear ; lower in token of respect: as a verb neuter to yield ; give place.*

While they supposed to lie hid in their secret sins, they were scattered under a dark vail of forgetful- ness. Wisdom.

That furious Scot

'Can vail his stomach, and did grace the shame Of those that turned their backs. Shakspeare.

The virgin 'gan her beavoir vale, And thanked him first, and thus began her tale.

Fairfax.

They stiffly refused to rail their bonnets, which is reckoned intolerable contempt by seafarers.

Carew.

They had not the ceremony of veiling the bonnet IQ salutations ; for, in medals, they still have it on their heads. Addison.

VAILLANT (John Foy), a physician and great medalist, was born at Beauvais in 1632. Through the minister Colbert he travelled into Italy, Greece, Egypt, and Persia, to collect me- dals for the royal cabinet ; and returned with so many as made the king's cabinet superior to any in Europe. Once, when in danger of being taken by an Algerine pirate, he hid some valuable coins in his stomach ' From this curious cabinet he did not recover them without much difficulty. When Louis XIV. gave a new form to the aca- demy of inscriptions, in 1701, Mr. Vaillant was first made associate, and then pensionary. He wrote several works relating to ancient coins, and died in 1706.

VAIN, adj. \ Fr. tain ; Lat. va

VAIN'LT, adv. I nut. Fruitless; inef-

*V M N 'NESS, n. *. ^. fectual ; empty ; puffed VAINGLO'RIOCS, adj. [up with praise or self- VAINCLORV, n.s. J conceit ; false: the ad – *erb and*

noun substantive corresponding : vain-

glorious is self-conceited or puffed up ; unreal glory : the noun substantive corresponding. Vain-glorioui man, when fluttering wind don

blow, In his light wings is lifted up to sky Spenser.

Let no man speak again To alter this ; for counsel is but vain. Shabtpeart.

I hate ingratitude more in a man, Than lying, vainness, babbling. Id.

Our cannon's malice vainly shall be spent Against the invulnerable clouds of heaven. Id.

Expose every blast of ˆain-glarv, every idle thought, to be chastened by the rod of spiritual discipline.

Taylor.

Strength to glory aspires Vain-glorious, and through infamy seeks fame.

Milton.

Both all things tain, and all who in vain things Build their fond hopes of glory, or lasting fame. Or happiness. Id. Paradise Lest.

Nor vainly hope to be invulnerable. Milton.

This his arrogant and twin glorious expression wit nessed. Hale.

Vain is the force of man, To crush the pillars which the pile sustain.

Dryden.

Strong Halys stands in vain ; weak Phlegys flies.

Id.

No folly like vain-glorii ; nor any thing more ri- diculous than for a vain man to be still boasting of himself. L'Ettrange.

The philosophers of old did in vain enquire, whe- ther sumraum bonuru consisted in riches, bodily de- lights, virtue, or contemplation. Locke. Load some vain church with old theatrick state.

Pope.

A monarch's sword when mad vain-glory draws, Not Waller's wreath can

hide the nation's scar. Id. To be vain is rather a mark of humility than pride. Vain men delight in telling what honours have been done them, what great company they have kept, and the like ; by which they plainly confess that these honours were more than their due, and such as their friends would not believe, if they had not been told : whereas a man truly proud thinks the honours below his merit, and scorns to boast. Swift.

Humility teaches us to think neither vainly nor vauntingly of ourselves. Delanu.

VAL DE PEXXAS, a town in the province of La Mancha, Spain, contains about 8000 inhabit- ants, who manufacture woollen stuffs and soap ; but their principal employment is agriculture. In the neighbourhood is produced excellent wine; and very good saffron : the bread made here is also of particular excellence. Ninety miles S. S. E. of Toledo, and 1 13 south of Madrid.

VAILLANT (Francis le), a modern traveller, born at Parimaribo in Dutch Guiana (S. A.) in 1753. His father, a merchant from Metz, exer- cised the functions of consul. In 1777 circum- stances drew the son to Paris, and, having exa- mined the cabinets of natural history, he con- ceived an irresistible desire to visit the countries whence the curiosities proceeded. Africa be- came the first object of his attention ; and he arrived in March 1781 at the Cape of Good Hope. Between that period and July 1784 he made repeated excursions into Caffraria, and re- turning to Europe in January 1785 employed himself in drawing up an account of his travels. Being imprisoned on suspicion, in 1793, he owed his life to the fall of Robespierre. He was not.

however, a politician : possessed of a considerable estate at La Noue near Sezanne ; he passed a ureat deal of his time in hunting, and devoted the remainder to the composition of his works, lie died in his retreat, November 22d, 1824, having published Voyage dans l'Inte"rieur de 1'Afrique par le Cap de Bonne Espe"rance, Paris, 1700, 2 vols. 8vo. ; and Second V7oyage dans I'lnte'rieur de 1'Afrique, 1796, 3 vols. 8vo., both which have been translated into English and se- veral other languages. He was also the author of Histoire Naturelle des Oiseaux d'Afrique, 1796 — 1812, 6 vols. folio, two more volumes to complete the work being left in MS.; Histoire Naturelle des Perroquets, 1801-5, 2 vols. folio; Histoire Naturelle des

Oiseaux de Paradis, 1801 — 6, folio ; Histoire Naturelle des Cotingas et des Todiers, 1804, folio; Histoire Naturelle des Calaos, 1804, folio. The figures which accom- pany his works are considered accurate.

VALAIS, a canton in the south of Switzer- land, oounded by Uri, Bern, and Friburg, and in another direction by Savoy and the lake of Ge- neva. It lies in the direction of north-east and south-west, and is of an oblong form, its length being about 100 miles, and its medium breadth from twenty-five to thirty. Its extent is comput- ed at 1850 square miles, but its scattered popu- lation does not exceed 14,000. It is watered by the Rhone, and bordered on the north, as on the south, by the loftiest mountains in Europe. No country exhibits a greater diversity in its produc- tions ; harvest in the valley is finished by the end of May, while in other districts its activity is greatest in September and October. The scenery exhibits an equally striking contrast.

The religion of the Valais is Catholic ; the language of the mountainous parts German ; and that of the low ground a dialect of French. The manners are those of a simple, ill educated, superstitious people ; strangers to activity and to the arts. The rearing of cattle is the only employ- ment of consequence. This petty community was formerly an independent republic in alli- ance with Switzerland ; it formed, under Buona- parte, a department of the French empire ; and was declared one of the cantons of Switzerland by the congress of Vienna. The capital is the town of Sion.

VAL'ANCE, n. s. & v. a. J From Valencia, VAL'LANCY, adj. S whence the use of

them came. — Skinner. The fringes or drapery hanging round the tester and stead of a bed : to decorate with drapery : valiancy is flowing like drapery.

Old friend, thy face is valtmced since I saw thee last ; comest thou to beard me ? Shahspeare.

My house

Is richly furnished with plate and gold ; Valance of Venice, gold in needlework. Id.

But you, loud Sirs, who through your curls look

big, Critick in plume, and white valiancy wig. Dryden.

Thrust the ralaiice of the bed, that it may be full in sight. Swift.

VALANTIA, in botany, cross-wort, a genus of plants in the order monoecia, of the class poly- jrarriia, and in the natural system arranged under ibe forty-first order, the aspeiifoliae. There is

scarcely any calyx ; the corolla is monopetalous, flat, four-parted, the stamina four, with small antherae ; the hermaphrodite flowers have a pistillum with a large germen, a bifid style, the length of the calyx, and one seed ; the pistilla of the male flowers are hardly discernible. There are eight species, one of which, viz. V. cruciata, is a native of Britain ; the stalks are square, the whole plant hairy, the leaves oval and verticillate, four in a whirl ; the flowers are yellow, and grow on short peduncles out of the alae of the leaves. The root, like those of the galiums, to which it is related, will dye red. It is astringent, and was once used as a vulnerary.

VALCKENAER (Louis Caspar) a celebrated critic, was born in 1715, at Leeuwarden, in Friseland. He studied at Franeker and at Ley- den, after which he became co rector of the gymnasium of Campen. In 1741 he was called to the chair of Greek literature at Franeker, to which in 1775 was joined that of Greek antiqui ties. In 1766 he removed to Leyden, as professor of Greek antiquities and history. He arrived at great reputation. Among his principal pub- lications may be mentioned Euripidis Phcenissae, with collections of MSS. scholia, critical obser- vations, &c., Franeker, 1755, 4to; Euripidis Hippolytus, et Diatribe in deperditas Euripidas Tragcedias, Leyden, 1768, 4to. ; Theocriti X Id) Ilia, cum Notis ; ejusd. Adoniazusie, uberio- ribus Adnotationibus instructs, 1773, 8vo. ; Callimachi Elegiarum Fragmenta, cum Elegia, Catulli Callimachea, 1799, 8vo. ; Observationes Academics, quibus Via munitur ad origines Gracas investigandas, Lexicorumque Defectus resarciendos, Utrecht, 1790, 8vo., edited by Everard Scheidius; Two Discourses of St. John Chrysostom ; and Specimen Adnotationum cri- ticarum in locaquaedam Novi Fcederis, Leyden, 1782, 8vo. In 1809 were printed at Leipsic, L. C. Valckenarii Opuscula Philologica, Critica et Oratoria, nunc primum conjuncture edita.. His death took place March 15th, 1785.

VALCKENAER (John), son of the preceding, studied jurisprudence, and became professor of that science at Franeker. In 1787, having join- ed the patriotic party against the house of Orange, he was made professor of law at Utrecht, in the room of Tydeman ; but on the restoration o. the stadtholder was obliged to take refuge in France. He returned at the invasion of Hol- land by the French in 1795, when he published a periodical paper, entitled The Advocate of Batavian Liberty. He was then appointed to the chair of jurisprudence at Leyden, on which, occasion he delivered a discourse De Officio Civis Batavi in Republicˆ turbata. After being employed on a diplomatic mission to Prussia, he was chosen a member of the legislative body of the republic, and subsequently sent by the

Batavian directory ambassador to Spain. He returned and went a second time, in 1799, as minister plenipotentiary. Coming home in 1801 he resumed his place in the academical senate, and became a member of the administration of Rhinland. He was also a member of the Dutch Institute. In 1810 Valckenaer was sent to Pa- ris to endeavour to prevent the incorporation ot Holland with the French empire ; ana. returning

unsuccessful, afterwards took no part in public affairs He died January 19th, 1820, leaving several learned dissertations on juridical topics.

VALDIYIA, a province of Chili, situated in the midst of the country occupied by the Arau- canians, which comprehends a tract of about seventy leagues in length. It lies upon the sea- coast, on both sides of the river Valdivia, and on the south is bounded by the country of the Guinchi or Cunchi, who are in possession of its southern part. It is about twelve leagues long and six broad, and abounds with valuable timber, and very fine gold dust. •

VALDIVIA, the capital of the above province, is a celebrated city and fortress, situated on the southern shore of the river of its name, at three leagues distance from the sea. This city was founded in 1551 by Pedro de Valdivia, who gave it his name, and obtained immense sums of gold from the vicinity. Its wealth allured many thither, and it became, even at its commence- ment, one of the most populous cities in the kingdom. In 1590 it was surprised at night by the celebrated Pallimachu with 4000 men, who killed the greater part of the garrison, consisting of 800 soldiers, and, having burned the city, car- ried off 1,000,000 in gold, and a great number of prisoners. The Spaniards rebuilt it, and for- tified it so strongly that it resisted all the attempts of the Araucanians It was, however, taken in the year 1640 by the Dutch. The Spaniards, who had fitted out a considerable fleet to retake it, finding it on their arrival abandoned, repaired and fortified it again, adding four strong cas- tles or forts upon both sides of the river towards the sea, and another on the north. The harbour is situated in a bay formed by the river, and is the safest, the strongest from its natural posi- tion, and the most capacious of any of the ports in the South Sea. The island of Manzera, situ- ated just in the mouth, forms two passages bor- dered by steep mountains, and strongly fortified. The town contains a college built by the Jesuits, several convents, a parochial church, and a royal hospital. 183 miles south of Conception. Long. 80° 5′ W., lat. 40° 5′

S.

VALDIVIA, a river of Chili, has its rise east- ward in the Andes, and runs into the Pacific. The territory abounds in all kinds of cattle and birds, and timber ; and not less in mines of gold, of as rich quality as that of Carabaya in Peru.

VALE, n. s. Fr. vai ; Lat. vallis. A low ground ; a valley ; a place between two hills : a poetical word.

In Ida vale : who knows not Ida vale ? An hundred shepherds woned. Spenter.

Met in the vale of Arde. Shahspeare. Henry VIII.

Anchises, in a flowery vale, Reviewed his mustered race, and took the tale.

Dry den.

In those fair valet by nature formed to please, Where Guadalquiver serpentines with ease. Harte.

VALE, n. t. Either from avail, or Lat. vale, farewell. Money presented to servants.

His revenue, besides valet, amounted to thirty pounds. Swift.

*VALEDICTION, n. *. Lat. valcdito. A farewel.*

A valediction forbidding to weep. Donne.

VALENC E, an old town of France, the capital of the department of the Drome, situated on the declivity of a small hill, on the left bank of the Rhone. The cathedral is a building of consi- derable antiquity, but neither it nor the episcopal palace has any claim to attention in point of architecture. The case is otherwise with the Go thic fayade of an old castle at this place, which is said to be one of the finest specimens of that style in France. In the citadel pope Pius VI., after being driven from Rome by the French govern- ment, died in 1799. Valence possessed little remarkable in antiquities, except some inscrip- tions and a military column. Like most other provincial towns of France, it has a public walk and a library. Its population amounts to 8000 ; the manufactures comprise silk, cotton, and lea- ther, on a small scale. Olives grow in the neighbourhood, and the town has a number of oil mills. Valence was occupied by the royalists in April 1815, after the return of Buonaparte from Elba, but soon relinquished by them. Forty-two miles south-west of Grenoble, and fifty-five south by east

of Lyons.

VALENCIA, a large eastern province of Spain, extending in an oblong form from north to south, with the sea on one side and the Castilian provinces on the other. It lies between lat. 37° 52′ and 40° 50′ N., and is in length no less than 250 miles, but its breadth seldom exceeds fifty. Its area is about 8000 square miles : its popula- tion is stated by Antillon and others at nearly

1,200,000.

It contains a number of mountains, has seve- ral plains, and fertile valleys. The plain adja- cent to the capital is above eighty miles in length. This province is watered by the Xucar, the Segura, and theGuadalaviar; the Murviedro, the Palencia, the Mejares, and others of less size, all flowing from the mountains of the interior to the Mediterranean. The temperature is mild the thermometer in winter varying from 40° to 60°, in summer from 70° to 80°.

In minerals, with the exception of iron, this province is not rich. In vegetable products the case is otherwise, and more justice is done to the fertility of the soil by the industry of the pea- santry than in other parts of Spain ; but irriga- tion is here, as in the south of France, an indis- pensable requisite. The white wine of Alicant is in high repute. Flax, hemp, and rice, are likewise reared. In manufactures the Valen- cians have made very little progress, being con- tent to import their linens, hardware, and finer woollens, groceries, and salt fish.

The language in the towns is that of the rest of Spain, but the peasantry have a dialect simi- lar to the Provencal spoken in Catalonia.

Iv.irly invaded by the Carthaginians, this pro- vince was soon after conquered by the Romans, and at a subsequent date by the Goths and Moors, the latter establishing a kingdom of Va- lexcia in 713, and retaining it under several vi- cissitudes of fortune, until 1238, when it was definitely united to that of Arragon. It after- wards formed a component part of the Spanish monarchy, but continued to preserve its repre- sentative body and its privileges, till the early part of the eighteenth century.

VALEBCIA, a large city in the east of Spain, the capital of the above

province, is situated only two miles from the sea, in an open plain, on the banks of the Guadalaviar. The vicinity of Valencia has been called La Huerta, or the Garden, from the richness of its soil, and the variety of its fruits.

Valencia, once a place of strength, is still sur- rounded by a rampart, and made a considerable resistance to the French in 1811. Its citadel is small and ill fortified, and does uot even com- mand the town. The population is about 80,000 in the city, and between 15,000 and 18,000 in

Caraccas, and province of Venezuela, situated half a league west of the lake of the same name, in a beautiful plain, where the air is pure and the soil fertile. The houses are in general low and irregular, though some of the streets are broad and well built. The parish church, and a hand- some square in which it stands, form the prin- cipal ornaments. Population 8000.

VALENCIA, a beautiful lake of the Caraccas, of South America, and province of Venezuela, which stretches thirteen leagues and a half from E. N. E. to W. S. W., and its greatest breadth is four. It lies at the distance of one league from

the villages and environs. It has several of the Valencia, and is situated in a valley surrounded

narrow lanes that are characteristic of many towns in the south of Europe: the want of

with mountains, excepting on the west. The waters of twenty rivers are discharged into it

chimneys, another feature of a warm country, is without any visible outlet. It is the more diffi-

fouud in many of the buildings. Of the differ- cult to account for its having no visible passage

ent public walks, the chief is that which extends for discharge, as it receives rivers on all sides,

along the banks of the river^- Valencia is the which proves it to be a perfect basin. But this

see of an archbishop, and contains a number of lake has been diminishing; for twenty years,

churches and convents, with several hospitals. VALENCIENNES, a fortified town of French

Few towns contain so large a number of public Flanders, on the Scheldt, which becomes here

buildings, so little remarkable for elegance, navigable. The form of the town is circular;

The ancient palace, called El Real, is now the the streets narrow and crooked, and its houses in

residence of the captain-general : the cathedral general ill built. There are, however, several

a large but irregular Gothic building. The objects deserving of attention, as the church of

other remarkable structures are a Moorish Notre Dame, the public square, town hall, and

mosque; a church built for Christian worship in artillery house: the manufactures of lace, &c.

the time of the Goths ; and the college of PioQuin- The population is about 17,000. Twenty-seven

to, the convent of the Carmelites, the lodge or miles south-east of Lisle.

place of meeting for the commercial court, the VALENS, an Arabian philosopher, founder

custom-house, the college of the patriarch, &c., of a sect of heretics in the second century, called

all modern buildings. Among the antiquities Valesians.

are some Roman inscriptions, with fragments of statues.

The university was founded in 1470 on an

extensive scale, but the course of study is obso- VAL'ENTINE n s. lete. They have here an academy of painting, St Valentine's day. and reckon several eminent artists among their number; here are also two public libraries. Of manufactures, the only extensive one is of silk ; but there are, on a small scale, fabrics of leather,

VALENS (Flavius), emperor of the east, a great patron of the Arians ; killed by the Goths A. D. 379. See CONSTANTINOPLE, and ROME.

A sweetheart chosen on

Now all nature seemed in love, And birds had drawn their valentines. Wotton.

VALENTINE, the founder of the sect of Vajen-

woollens, cordage, and lace. The maritime tinians, was born in Egypt, and educated in trade of the place is carried on by lighters, which Alexandria; but, beingdisappointed of a bishopric, load and unload vessels at the village of Grao. he set up his heresy, which resembles that of the As a resort for invalids from the north of Europe, Gnostics. He died in A. D. 160. Valencia has a claim to rank with Lisbon, Nice, VALENTINIAN I., emperor of the west, a Pisa, and other well frequented towns. renowned warrior, but a tyrant over his subjects.

Valencia was probably the Valentia Edetano- See ROME.

rum of the Romans. On the invasion of the VALENTINIAN II., emperor of the west, a prince Goths, it fell, with the rest of CONSTANTINOPLE, and ROME. ency of the king of Castile. It devolved on his VALENTINIAN III., the son of Constantius by death to his widow, a heroine, who sustained in Pulcheria, daughter of Arcadius; succeeded A. D. it a long siege against the Moors in the year 423, in his sixth year, and prospered while his 1100. It was occupied by the Moors until mother Pulcheria governed. But became a tyrant 1238, when it was finally retaken by the king of afterwards, and was murdered A. D. 454. Arragon. In a much later contest, Valencia VALENTINIANS, in church history, a sect declared against the French, and baffled the first of Christian heretics, who sprung up in the attempts made on it by marshal Moncey ; but in second century, and were so called from their the end o'f 1811 it was attacked by Suchet, and, leader Valentinus. The Valentinians were only after a vigorous siege and bombardment, it sur- a branch of the Gnostics, who realised or per- rendered in January 1812. 170 miles E. S. E. of sonified the Platonic ideas concerning the Deity, Madrid. whom they called Pleroma or Plenitude. Their

VALENCIA, a city of South America, in the system was this: the first principle is Bythos, i.e.

Depth, which remained many ages unknown, having with it Ennoe or

Thought, and Sige or Silence ; from these sprung the Nous or Intelli- gence, which is the only son, equal to and alone capable of comprehending the Bythos; the sister of Nous they called Aletheia or Truth ; and these constituted the first quaternity of aeons, which were the source and original of all the rest ; for Nous and Aletheia produced the World and Life ; and from these two proceeded Man and the Church. But, besides these eight principal xons, there were twenty two more ; the last of which, called Sophia, being desirous to arrive at the knowledge of Bythos, gave herself a great deal of uneasiness, which created in her Anger and Fear, of which was born Matter. But the Horos or Bounder stopped her, preserved her in the Pleroma, and restored her to Perfection. Sophia then produced the Christ and the Holy Spirit, which brought the aeons to their last per fection, and made every one of them contribute their utmost to form the Saviour. Her Enthy- mese or Thought, dwelling near the Pleroma, perfected by the Christ, produced every thing that is in the world by its divers passions. The Christ sent into it the Saviour, accompanied with angels, who delivered it from its passions, without annihilating it; thence was formed cor- poreal matter.

VALENT1NUS. See VALENTINE.

VALERIAN, or VALERIANUS (Publius Lici- nius), emperor of Rome, was taken captive, and cruelly treated by Sapor I. king of Persia. See ROME.

VALERIAN, VALERIANA, in botany, a genus of plants belonging to the class triandria, and order monogynia ; and in the natural system arranged under the forty-eighth order, aggregatae. There is hardly any calyx ; the corolla is mono- petalous, gibbous at the base, situated above the germen ; there is only one seed. There are twenty-one species, only four of which are na- tives of Britain; viz. 1. V. dioecia, the dioecious valerian. 2. V. locusta, the locust valerian. 3. V. officinalis, the officinal valerian, alone is use- "ul. The root of this plant is perennial ; the stalk is upright, smooth, channelled, round, branched, and rises from two to four feet in height; the leaves on the stem are placed in pairs upon short broad sheaths ; they are com- posed of several lance-shaped, partially dentated, veined, smooth pinnae, with an odd one at the end, which is the largest: the floral leaves are spear-shaped, and pointed ; the flowers are small, of a white or purplish color, and terminate the stem on branches in large bunches. It flowers in June, and commonly grows about hedges and woods. It is supposed to be the $« of Dioscorides and Galen, by whom it is mentioned as an aro- matic and diuretic. It is said by several authors to be efficacious in epilepsy. Bergius states its virtues to be antispasmodic, diaphoretic, emme- nagogue, diuretic, anthelmintic. The root in substance is most effectual, and is usually given in powder from a scruple to a drachm; its un- pleasant flavor may be concealed by a small ad- dition of mace. A tincture of valerian in proof

spirit and in volatile spirit are ordered in the London pharmacopoeia. Cats are very fond of

the smell of this root, and seem to be intoxicated by it. 4. V. rubra, the red valerian.

VALERIANUS. See VALERIAN.

VALERIUS MAXIMUS, a Latin historian, sprung from the families of the Valerii and Fabii, whereby he united the names of Valerius and Maximus. He studied polite literature, and afterwards followed Sextus Pompey to the wars. At his return he composed an account of the actions and remarkable sayings of the Romans and other great men; and dedicated that work to the emperor Tiberius. Many of the learned think that this is the same that is now extant, and bears the name of Valerius Maximus ; but others maintain that what we have now is only an abridgment of the work written by this Cele- brated historian, and that this abridgment was made by one Nepotian of Africa.

VALERIUS PUBLICOLA, a celebrated Roman, named Poplicola or Publicola, from his popular acts. See ROME.

VALESIANS, a sect of heretics in the second century, founded by Valens, who were all volun- tary eunuchs, and rejected the law and the pro- phets. They were condemned by the council of Achaia, A. D. 240.

VALESIUS (Henricus), or Henry de Valois, a learned critic, born at Paris in 1603. He was bred to the law, but dropt it, and became histo- riographer to the king, who gave him a pension, as did also the French clergy, for publishing an edition of the ancient church historians. This work was published at Amsterdam in 3 vols. folio, and at Cambridge in 1689. He died blind, in 1726.

VALESIUS (Adrianus), brother to Henry, was also historiographer royal, and published a work entitled Gesta Francorum, in 3 vols. folio. He died in 1692.

VAL'ET, n. s. French valet. A waiting ser- vant.

Giving cast clothes to be worn by valeti has a very ill effect upon little minds. Addiam.

VALETTA, LA, the capital of Malta, stands on the east side of the island, in long. 14° 30 45′ E., lat. 35° 53′ 4″ N. It consists of five parts, which are distinguished by particular names, and are often considered as separate towns ; 1st. Citta Nuova, or La Valetta properly so called, built in 1566,

and named after the ce- lebrated grand master La Valetta, who commanded the long siege against the Turks the year before. This quarter, though the last built, soon exceeded all the others in size, and gave name to the whole. It is situated on the side of a hill which runs out into the sea, forming a pe- ninsula ; and, besides its own fortifications, is de- fended by the castles of St. Elmo, Ricazoli, and Floriani. 2d. Citta Vittoriosa, situated on a small tongue of land between two harbours called Marza and Marza Murzet, with a fort at the extremity, which defends the entrance into both. 3d. Senylea, or the isle of St. Michael, is also situated on a peninsula, and is separated from Citta Vittoriosa by a canal called Porto delle Galere. 4th, Barmola, a small place of about 700 houses, situated in front of Senylea, and surrounded by, 5th, Cottonera, which forms a kind of suburb to it. This last contains the

castle of Santa Margaretha. Of these, Citta Nuova, Barmola, and Cottouera, contain in all about 23,000 inhabitants; Citta Vittoriosa about 4000, and Senylea between 4000 and 5000.

Malta abounds in churches; and its capital contains no fewer than twenty, exclusive of the cathedral. The other public buildings are the residence of the grand master, now occupied by the governor of the island; the house in which the knights of the seven different nations com- posing the order of Malta had their respective halls of meeting ; next to these come the town-ouse, the Castellanea, where the courts of jus .ice are held, the arsenal, and a building situated in Citta Vittoriosa, formerly occupied by the Inquisition. The Jesuits' college, formerly taught by that order, is still a seminary, and serves for the education of Catholic clergy ; but |>;irt of the building is converted to very different purposes ; an exchange and small theatre. La Valetia contains two libraries ; that of the knights, an old collection, comprising 40,000 volumes, chiefly of Greek, Latin, French, and Italian works ; the other a subscription library for later publications, established by the English in Malta, and as yet on a very limited scale.

The hospital of St. John formerly received between 400 and 500 patients, without distinc- tion of religion or nation ; and it was a fact, un- exampled in any institution of the kind, that every article of food was served on silver. The French, when pressed in 1800, by the hardships of blockade, seized on these, and the building was afterwards given by the British government to the medical department of the civil staff. It now forms a

medical depot for the British garri- sons in Sicily and the Ionian isles. La V'aletta contains also three hospitals, one for foundlings, another for orphans, and a third called the Mad- dalena.

On the south side of Citta Nuova is one of the finest bays in the world. The entrance is hardly a quarter of a mile wide, and is commanded on each side by very strong batteries. It is also fronted by a quadruple battery, the tiers of which rise one above the other, the lowest being on a level with the water. In the centre is a small island, on which are a lazaretto and a castle. The trade of La Valetta is considerable, partly as an entrepot for intercourse with the Barbary ports, partly as an intermediate station for the Ionian isles and the Levant. Since 1817 it has been, like Gibraltar, entitled to carry on mercan- tile intercourse with the East Indies.

VALETTE (Peter de), the brave grand master of Malta, who defended it against the whole power of the Turks for four months.

VALETUDINA'RIAN, adj. & J Fr valetu-

*V*I.F.TU'DIXARY, adj. [n. s. S (Urn/ire ; La- tin vaUtudo. Weakly; sickly; infirm of health. This both adjectives signify, and the noun sub- stantive corresponds.*

Physic, by purging noxious humours, prevents sickness in the healthy, or recourse thereof in the laletudinury. Browne.

Some patients have been liable to this symptom, and reduced by it to a valetudinaty and very unequal state of health. Blackmore.

Shifting from the warmer vnllies to the colder hills,

or from the hills to the vaJes, is a great benefit to the valetudinarian, feeble part of mankind.

Derham.

VALHALLA (scandin, i. e. the hall of those who died by violence), in the mythology of the ancient Saxons, Scandinavians, Danes, Swedes, &c., the paradise of Odin, where, after death, the souls of warriors were believed to be feasted by Odin, seated on a throne, and served by the Valkyriae, &c.

VAL'IANT, adj. -\ Fr. vailtant. Stout ;

*VAL'IANTLY, adv. * personally puissant ;*

VAL'IANTNESS, n. s. ˆbrave: applied both to

VAL'LIAKCE. J persons and actions :

the adverb and noun substantives correspond- ing- Only be thou valiant for me, and fight the Lord's battles. 1 Samuel, xviii. 17.

With stiff force he shook his mortal lance. To let him weet his doughty valiance. Spenter.

Achimetes, having won the top of the walls, by ihe. valiant ness of the defendants was forced to retire.

Knollet.

It was the duty of a good soldier valiantly to with- stand his enemies, and not to be troubled with any evil hap. fd.

Thy valiantnest was mine ; thon suck'dst it from me. Shaktpeare.

Hale, a very raliant fencer, undertook to teach that science in a book, and was laughed at.

Walton.

The church of Antioch might meet at that time to celebrate the memory of such a valiant combat and martyr of Christ. Kclton.

VAL'ID, adj. j French valide ; Latin va-

VAUD'ITY, n. s. > lidu$. Strong ; powerful ;

efficacious; prevalent: the noun substantive

corresponding, and also used for value by Shaks-

peare.

To thee and thine

Remain this ample third of our fair kingdom ; No less in space, validity, and pleasure, Than that conferred on Goneril. Shakspeart.

A difference in their sentiments, as to particular questions, is no valid argument against the general truth believed by them, but rather a clearer and more solid proof of it. Stephens.

You are persuaded of the validity of that famous verse —

Tis expectation makes a blessing dear. Pope.

VALKI, a considerable town of European Russia, situated on the river Mscha, in the southern province or government called Slobodsk Ukraine. It is the chief place of a circle, has five churches, and about 9300 inhabitants. Twenty-seven miles west by south of Charkov.

VALLA (George), M. D., born at Placentia, was professor of belles lettres at Venice, where he died in 1460. He wrote De Expetendis et Fugiendis rebus, 2 vols. folio.

VALLA (Lawrence), a learned Italian, bora at Placentia in 1415. He retrenched the Latin language from its Gothic barbarisms. He wa« apprehended and condemned to be burnt fc- heresy, but was saved by Alphonsus king 01 Naples ; after which pope Nicholas V. called him to Rome, and gave him a pension. He died there in 1465. His works are, 1. On the Elegance of the Latin Language, folio ; and at Cambridge, 8vo. 2. Life of Ferdinand V., king of Arragon,

4to. 3. Notes on the New Testament. 4. Trea- tise on Falsehood and Truth. 5. Fables. And, 6. Translations of Thucydides, Herodotus, and Homer's Iliad.

VALLADOLI D, an inland province of Spain, forming part of the kingdom of Leon, and lying between 41° 10', and 42° 40′ of N. lat. It con- sists of several scattered tracts, the two largest of which lie in the west and south-east of Leon. The area of the whole is 3400 square miles; the population about 190,000. This province lies in general high, and is sandy and barren ; y«t there is no want of water, it being traversed by the Duero, which is joined by the Pisuerga, the Esla, the Arlanpon, and other rivers. The climate is cold, moist, and uncomfortable. It is divided into twenty-two districts.

VALLADOLID, an ancient city in the interior of Spain, in Leon, situated on the banks of the Es- gueva, which divides it into two, and of the larger stream of the Pisuerga. The former flows from the east, the latter from the north. Philip II. was a native of Yalladolid, and made it the occasional residence of his court. The streets are dirty, and many of the houses in decay: there are, however, two squares, one of which, the Plaza Mayor, contains some good buildings. The cathedral has never been finished. The

monastery of San BenUo is a handsome building ; and the church of St. Paul contains some good sculptures. The town has six gates, one large bridge, and a number of small ones ; several churches and hospitals. Its population does not amount to 20,000. 100 miles N. N. W. of Madrid.

VALLADOLID, one of the twelve intendancies into which Mexico is divided. At the period of the Spanish conquest, this intendancy made a part of the kingdom of Mechoacan, which ex- tended from the Rio de Zacatula to the Port de la Navidad, and from the mountains of Xala and Colima to the river of Lerma and the lake of Chapala. The capital of Mechoacan, which, like the republics of Tlaxcallan, Huexocingo, and Cholollan, was always independent of the Mex- ican empire, was Tzintzontzan, a town situated on the banks of a rery romantic lake. The in- tendancy of Valladolid is bounded on the north by the Ilio de Lerma, which, farther east, takes the name of the Rio Grande de Santiago. On the east and north-east it joins the intendancy of Mexico, on the north the intendancy of Gua- iKixuato, and on the west that of Guadalaxara.

VALLADOLIP, or Mechoacan, an episcopal city of Mexico, capital of the intendancy of Valla- dolid. It is situated on a river well stored with fish, near the west side of a lake, about 120 miles west of Mexico. It is a large place, and enjoys a delicious climate. It contains 18,000 inhabi- tants.

VAI.LE (Peter Del La), a famous traveller, born at Rome in 1586. He travelled into Tur- key, Egypt, Syria, Persia, and India; and on his return published his voyages in fifty-four letters, at Rome, 1662, in 4 vols. He died in 1662. His work was translated into French, and ynblished in 8 vols. 12mo.

VALLE DE MM/I. EL, a town of Mexico, in the province of San Luis Potosi, situated

near the Panuco. The houses have an aii of neatness, and are well constructed : it has a large square, with extensive and well built edi- fices, and some handsome churches. It is a place of important trade.

VALLEA, in botany, a genus of plants in the class of polyandria, and order of monogynia.

YAL'LEY, n. s. French vaUee ; Latin rallm. A low ground; a hollow between hills.

Live with me, and be my love ; And we will all the pleasure prove That hills and rallies yield. Uuleigh.

Sweet interchange of hill and valley. Milton.

I have been ready to freeze on the top of a hill, and in an hour's time after have suffered as great in- convenience from the heat of the valley.

Ermine's Trawls.

Vallies are the intervals betwixt mountains.

VALLISNERI (Anthony), M. D., an eminent Italian botanist, born in Tuscany, in 1661. He studied under Malpighi, and became physician. He died in 1730: his works were printed at Ve- nice, in 3 vols. 4to., 1733.

\ ALLISNERIA, a genus of plants of the class of dicecia, and in the order of diandria ; ranking in the natural method, under the first and very numerous order, palmae.

VALOGNES, a town of Normandy, France, in the department of La Manche. It is situated in a valley on the small river Merderet, about eight miles from the sea. It has 7000 inhabi- tants, is tolerably built, and contains an hospital, with several churches. Several Roman relics have been found. Valognes had a castle demo- lished in 1789. Ten miles south east of Cher- burg, and thirty-two north-west of St. Lo.

V ALOIS, a small district and duchy in the north of France, now forming the eastern part of the department of the Oise. It gives name to the house of Valois, which possessed the throne of France previous to the Bourbons, during the fourteenth, fifteenth, and sixteenth centuries.

VAL'OR, n. s. -\ French valeur; Latin

VAL'OROUS, adj. > valor. — Ainsworth. Per-

VAL'OROUSLY, adv. j sonal bravery ; strength ; prowess ; stoutness : both the adjective and ad verb (rarely used) corresponding.

The famous warriors of the antique world Used trophies to erect in stately wise,

In which they would the records have enrolled Of their great deeds and ou/ ornu emprise. Spenter.*

Captain Jamy is a marvellous tatorutu gentleman.

Here I contest As hotly and as nobly with thy love, As ever in ambitious strength I did Contend against thy valour. Id. Coriolanvt.

An innate valour appeared in him when he put himself upon the soldier's defence, as he received the mortal stab. Howel.

For contemplation he, and valour formed ; For softness sue, and sweet attractive grace.

Hilton.

Valour gives awe, and promises protection to thosa who want heart or strength to defend themselves. This makes the authority of men among women ; and iliat of a master-buck in a numerous bird.

Temple's Misctllanic.*

VALPARAISO, a city and port of Chili, in Quillota, situated on a bay in the South Pacific Ocean. It was formerly a small village, with a few warehouses ; but in process of time the ex- cellence of the harbour drew many foreign vessels to it. Its situation is convenient for the purposes of building, as it stands at the foot of a mountain, so near to its cliffs that many houses are erected in the breaches and on the acclivi- ties. Valparaiso has a church, a convent of Franciscans, and one of Augustins, but very few monks. The ships from Peru all touch here, and take in wheat, tallow, Cordovan leather, cordage, and dried fruits ; many of these vessels making three trips to Lima during the summer, which lasts from November until June.

VALSALVA (Anthony Marie), M. D., a phy- sician, born at Imola, in Italy, in 1666. He became professor of anatomy at Bologna, and wrote a treatise on the Human Ear, in 4to. Dis- sertationes Anatomicae, 2 vols. 4\o. Ven. 1749. He died in 1723.

VALTELINE, a lordship of Austrian Italy, in the government of Milan, now forming part of the delegation or district of Sondrio. Its su- perficial extent is about 1270 square miles; its population about 81,000. It consists of a long valley, traversed by the Adda, extending from east to west, and surrounded by the Alps in all directions, except to the westward, where it opens to the lake of Como. The pastures are extensive, and silk is cultivated to a considerable amount. Their chief town is Sondrio.

VALVASOR, an ancient title of dignity among the Anglo-Saxons ; the next below a thane or peer. They were called in Latin vice-domini, or vice-lords ; and their ladies vidames. They are mentioned by the ancient English lawyers as viri magnse dignitatis, gentlemen of high dignity. Sir Edward

Coke speaks highly of them : yet they are now so totally out of use, that antiquarians are net agreed respecting their origin, their of- fice, or the extent of their powers.

VAL'UE, n. s., v. a., & v, n. ") Fr. value ; VAL'UABLE, adj. I Latin valor.

VALCA'TION, n. s. ! Price ; worth ;

VALUA'TOR, [high rate ; just

VALUELESS, adj. price : to value

VAL'IT.U, n. s. j is to rate; ap-

praise ; reckon at; rate highly: also to be worth: valuable is precious; of great value; worthy: valuation, the act of fixing value, or the value fixed : valuator and valuer, he who fixes it : va- lueless, worthless.

If he be poorer than thy estimation, the priest shall value him. Leviticus xxvii. 8.

It cannot be valued with the gold of Ophir.

Job, xxviii. 16.

She ordered all things, resisting the wisdom of the wisest, by making the possessor thereof miserable ; valuing the folly of the most foolish, by making their success prosperous. Sidney.

The king must take it ill, So slightly valued in his messenger.

Shakspeare. King Lear. A counterfeit

Resembling majesty j which, touched and tried, Proves valueless. Id. King John.

The peace between the French and us not values The cost that did conclude it. Id. Henry VIII.

No reason I, since of your lives you set So slight a ca/!/a(ion, should reserve My cracked one to more care. Id. Cumbeiine.

Take out of men's minds false raluatiuns, and it would leave the minds of a number of men poor shrunken things. Kucon.

Some value themselves to their country by jealou- sies of the crown. 7Vm/;/c.

He sent him money ; it was with this obliging tes- timony, that his design was not to pay him the mine of his pictures, because they were above any price.

Dry dm.

Caesar is well acquainted with your virtues. And therefore sets this value on your life. Addison.

Some of the finest treatises in dialogue, many very valued pieces of French, Italian, and English appear.

Id.

A just account of that valuable person, whose re- mains lie before us. F. Atterbury.

The writers expressed not the valuation of the de- narius, without regard to its present valuation.

Arbuthnot on Coin .

To him your orchard's early fruits are due, A pleasing offering, when 'tis made by you ; He values these. Pope.

What valuators will the bishops make use of '.

Su-ift.

The value of several circumstances in story, lessens very much by distance of time ; though some minute circumstances are very valuable. Id. Thoughts.

VALVE, n. s. Lat. valva. A folding door ; any thing that opens and shuts over the mouth of a vessel.

This air, by the opening of the valve, and forcing up the sucker, may be driven out. Boyle.

Swift through the valves the visionary fair Repassed. P ape's Odyss y.

Opening their valvei, self-moved on either side, The adamantine doors expanded wide : When death commands they close, when death com- mands divide. Harte. VALVE, in hydraulics, pneumatics, &c., is a kind of lid or cover of a tube or vessel, so con- trived as to open one way, but which, the more forcibly it is pressed the other way, the closer it shuts the aperture ; so that it either admits the entrance of a fluid into the tube or

vessel, and prevents its return; or admits its escape, and prevents its re-entrance.

VALVE, in anatomy, a thin membrane applied on several cavities and vessels of the body, to afford a passage to certain humors going one way, and prevent their reflux towards the place whence they came.

VALVERDA (John de), M.D., a Spanish physician, who attended cardinal Tolido, to Rome. He wrote a treatise on Anatomy, Ven. 1589 ; and a tract De Animi et Corporis Sani- tate Tuenda, 1553.

VAMP, v.

If you wish

To vamp a body with a dangerous physick, That's sure of death without.

Shakspeare. Coriolanvs. This opinion had been vamped up by Cardan.

Eentley. I had never much hopes of your vampt play.

Swift.

VAN

31(5

VAN

VAMPYRE, a species of bat. See VESPER-

TILIO.

VAMPYRE is also the name of an imaginary being who is believed by the Morlacks to fre- quent churchyards, and to suck the blood of in- fants, &c.

VAN, n. s. ~) Fr. avant, avant-garde.

\ \MGUARD, or > The front of an army ; the

VANGUARD. 3 first line.

The king's vanl-gnani maintained fight against the whole power of the enemies. Bacon.

The martial Idomen, who bravely stood before la mint-guard of his troops, and marcht, for strength a savage bore. Chapman.

Before each can prick forth the airy knights.

N'dton.

The foe he had surveyed, Arranged, as t' him they did appear, With can, main battle, wings and rear. Hudibrat.

Van to van the foremost squadrons meet, The midmost battles hastening up behind. Dryden.

VAN, v. a. & n. s. Lat. vannm ; a fan or wing. To fan ; winnow : a fan, or wing. Obsolete. The corn which in vanning lieth lowest is the best.

Bacon.

His sail-broad cans

He spreads for flight ; and in the surging smoke Up-lifted spurns the ground. Milton'i Paradise Lott.

His disabled wing unstrung ; He wheeled in air, and stretched his vans in vain ; His van$ no longer could his flight sustain. Dryden.

The other token of their ignorance of the sea was an oar ; they call it a corn van.

Brooms on the Odyssey.

VAN DIEMEN'S LAND, an island in the Southern Ocean, separated from New Holland by Bass's Straits. The country was first disco- vered by Tasman in 1633. In 1773 it was visited by captain Fuineaux, and by captain Cook in 1777 ; since which period it has been visited by different navigators. Among others Bruny D Entrecasteaux, the French rear-admiral, made the coast of Van Uiemen's Land in 1792, and afterwards revisited it in 1793. This coast was afterwards visited by lieutenants Bass and Flinders, who made a more ample survey of it, and also of the coasts of New Holland. Since this period the several colonies have been sent from the original establishment made by the British at Port Jackson to this island. In 1804 llobart's Town was founded, about nine miles up the Derwent; and another settlement, namely, Launceston, was founded about thirty miles from the mouth of Port Dalrymple, and 130 miles in a straight line from llobart's Town. Swan River is a settlement of this island.

Van Diemen's Land, situated between 40° 42′ and 43° 43′ S. lat., and between 145° 31′ and 148° 22′ E. long., has not so repulsive appear- ance from the coast as New Holland. Many fine tracts are found on the borders

of the sea, and the interior is almost invariably possessed of a soil admirably adapted to all the purposes of cultivation. This island abounds in streams : on the summits of many of the mountains there are large lakes, some of which are the sources of considerable rivers. Of these the Derwent, , lluon, Tamar, and Swan rivers, rank in the first class. There is perhaps no island in the world of the same lize which can boast of so many

fine harbours : the best are the Denvent, Port Uavy, Macquarie harbour, Port Dalrymple, and Oyster Bay ; the first is on its southern side, the second and third on its western, the fourth on its northern, and the fifth on its eastern ; so that it has excellent harbours in every direction. Be- tween the animals and vegetables found here and in New Holland there is almost a perfect resem- blance.

The British colonies have of late received a great accession of settlers from Great Britain. According to the last accounts, they were gra- dually improving, and assuming more and more the appearance of a civilised community. From an account of a tour of inspection, by governor Macquarie, it appears that in July, 1821, the po- pulation of the island amounted to 6372, exclu- sive of the civil and military officers ; and that it contained 28,838 head of horned cattle, 182,468 sheep, 421 horses, and 10,683 acres of land in cultivation.

VANAKEN (Joseph), a Flemish painter, born at Antwerp. He excelled in painting satin, vel vet, lace, and embroidery. He died in 1749.

VANBRUGH (Sir John), a celebrated Eng- lish dramatic writer and architect, descended of a family in Cheshire which came from France. He was born about the middle of the reign of Charles II., and received a liberal education. His first comedy, called the Relapse, or Virtue in Danger, was acted in 1697 with great ap- plause ; which gave him such encouragement that he wrote eleven more comedies. He was appointed Clarencieux king at arms, which he afterwards disposed of. In 1716 he was ap pointed surveyor of the works at Greenwich hos- pital ; he was likewise made comptroller general of his majesty's works, and surveyor of all the gardens and waters. He was an able architect ; but his performances in that way are esteemed heavy. Under his direction were raised Blen- heim House in Oxfordshire, Claremont in Surrey, and his own house at Whitehall. He died of a quinsey in 1726.

VANCOUVER (Captain George), of the royal navy, wrote an account of a Voyage of Disco- very into the North Pacific Ocean, and Round the World, in 1790—1795. He died 10th of May, 1798.

VANDALE (Anthony), M. D., a learned phy- sician, born in Holland, in

1638. He wrote A Treatise on Oracles, which was answered by se- veral writers, and abridged by Fo»itenelle ; also a work on the Origin of Idolatry ; also a Dis- sertation on Aristeas, and the Septuagint Version. He died at Haerlem, in 1708.

VANDALS, a brave and numerous, but bar- barous people of F.urope, who, along with the Goths, Ileruli, Suevi, Alani, and Burgundians, emigrated in large bodies from their respective native countries, and spreading fire, sword, and desolation, every where, overthrew the Roman empire, in the fifth century. They were several times, however, successfully opposed byStilicho. See ROME. From the similarity of their name to that of the two countries above described, they seem to have originally come from Lower Saxony and Poir.erania. Others make then) a tribe of the Sarmatians, or Sdavor.ians.

VANDELLIA, in botany, a genus of plants belonging to the class didynamia and order angi- ospermia. The calyx is subquadrifid ; the co- rolla ringent ; the two exterior filaments proceed from the disc of the lip of the corolla ; the an- thera: are connected ; the capsule is unilocular and polyspermous. There is only one species known, viz. V. diffusa.

VANDER-LINDEN (Henry), professor of divinity at Franeker, was born in 1546; and suffered much for his attachment to the Reforma- tion : in favor of which he wrote. He died in!614. VANDER-LINDEN (John Antonides), grandson of the preceding, was born at Enckhuysen in 1609, and educated at Leyden. He graduated at Franeker in 1630,and in 1639 was made pro- fessor of physic in that university. In 1640 he went to that of Leyden. He wrote many me- dical works, and died in 1664.

VANDERMEER (John), a famous Dutch painter, who excelled in sea pieces : he was drowned in 1691, aued sixty four.

\A.\DER-MEULEN (Anthony Francis), a Flemish painter, born at Brussels in 1634. He painted the battles of Louis XIV., and married a daughter of the famous Le Brun. He died at Paris in 1690.

VANDERMONDE (Charles Augustus), M. D., a native of Macao, in China, born in 1772. He became an eminent physician, and was appointed censor royal at Paris, where he died in 1762. His chief works are, 1. Essai sur la Maniere de Perfectionner 1′ Espece Hu- main, 2 vols. 12mo.; 2.

Dictionnaire de Sante ; 3. Dissertation Anatomique.

VAXDERMONDI:, a late celebrated French ma- thematician, born at Paris in 1735, famous for his love of science, and infamous for joining the Terrorists. He died in 1795.

VANDERVELDE (Adrian), an eminent painter, bora at Amsterdam, in 1639. His works are rare and highly valued. He died in 1672.

VANDERVELDE (Isaiah), an eminent painter; his battles are esteemed. He died at Leyden in

1630.

VANDERVELDE (John), brother to the above, an eminent engraver.

VANDERVELDE (William), brother to Isaiah, and born at Leyden, was also eminent in paint- ing sea fights. He came over to London, got a pension, and died in 1693.

VANDERVELDE (William), son of the above,

excelled his father, and died in London, in 1797.

VANDERVENNE (Adrian), a painter born

at Delft, in 1589. He excelled in scenes of

humor.

VANDYCK (Sir Anthony), a celebrated painter, born at Antwerp in 1599. After giving several early proofs of his excellent genius, he became the disciple of the illustrious Rubens. From this celebrated master he received not only instruction in his art, but was by his generosity enabled to go to Rome. Having staid a short time there, he removed to Venice, where he at- tained the beautiful coloring of Titian, Paul \ eronese, and the Venetian school, which ap- peared from the many excellent pictures he drew at Genoa After having spent a few years abroad, he returned to Flanders, with so noble,*

so easy, and natural a manner of painling, that Titian himself was hardly his superior ; and no other master could equal him in portraits. He then went to England, when his superior genius soon brought him into great reputation ; and, above all, he excelled in portraits, which he drew with an inconceivable facility, and for which he charged a very high price. For some of them he received 400 guineas a-piece. He soon founu himself

loaded with honors and riches. He married a daughter of lord Ruthven, earl ot Gowry. His house was so frequented by per- sons of the greatest quality that it rather re- sembled the court of a prince than the lodgings of a painter. He died in 1641, and was buried in St. Paul's. It was said he left £40,000.

VANDYCK (Philip), another emiment painter, born at Amsterdam, in 1680. He died in 1752. VANE, n. s. Belg. vaene. A plate hung on a pin to turn with the wind.

A man she would spell backward ; If tall, a lance ill headed : If speaking, why a vane blown with all winds.

Sliakspearf.

VANE (Sir Henry), son of Sir Henry Vane, secretary of state to Charles I., was born in 1612, and educated at Magdalen Hall, Oxford. He then went to Geneva, where he became a re- publican ; which led to a quarrel with his father, who was a rigid loyalist. He then sailed to New England, whence he returned in 1637, and dur- ing the civil war took an active part against the king. He, however, boldly opposed Crom- well's usurpation, for which Oliver imprisoned him. In 1662 he was tried and beheaded for high treason. He wrote some books, in the spirit of the times.

VANE, a thin slip of bunting hung to the mast- head, or some other conspicuous place in the ship, to show the direction of the wind. It is commonly sewed upon a wooden frame called the stock, which contains two holes whereby tc slip over the spindle, upon which it turns round as the wind changes.

VANIERE (James), a French Jesuit, a Latin poet, born in 1664. He wrote an admired poem, entitled Predium Rusticum; Paris, 1736, 12mo. He died at Toulouse, in 1739.

VANIL'LA, n. s. Fr. vanille. A plant. Tht fruit of those plants is used to scent chocolate. — Miller.

When mixed with mmillios, or spices, chocolate acquires the good and bad qualities of aromatic oils. Arbuthiiot on Aliment.*

VAN'ISH, v. n. Fr. evanouir ; Lat. i-unesca. To lose perceptible existence ; pass away ; pass from sight.

High honour is not only gotten and born by pain and danger, but must be nursed by the like, or else vomisheth as soon as it appears to the world. Sidney.

*Whither are they ranithed ? — Into the air ; and wbat seemed corporal Melted as breath into the wind. Shukspf*re.*

All these delights will vanish. Milton.

That spirit of religion and seriousness, by which we had distinguished ourselves, vaniihtd all at once, and a spirit of infidelity and prophaneness started up. Atterbtry.

He cut the cleaving sky, And in a moment vanished from her e\e. /•/*.*

VAN'ITY. n. s. Fr. vanitc ; Lat. vanitus. Emptiness ; uncertainty ; inanity ; fruitless de- sire or endeavour; empty pleasure; ostentation.

Vanity of vanities all is vanity. Ecct.

1'aiiitti possesseth many, who are desirous to know the certainty of things to come. Sidney.

The ground-work thereof is true, however they, through vanity, whilst they would not seem to be ig- norant, do thereupon build many forged histories of their own antiquity. Spenser.

I must

Bestow upon the eyes of this young couple Some vanity of mine art. Shakspeare. Tempest.

To use long discourse against those things which are both against scripture and reason, might rightly be judged a vanity in the answerer not much inferior to that of the inventor.

Hateigh's Hittory of the World.

Cast not her serious wit on idle things ; Make her free will slave to vanity. Davies.

Sin with vanity had rilled the works of men.

Milton.

Can you add guilt to vanity, and take A pride to hear the conquests which you make ?

Dry den.

But that they equal, if not surpass them in the ranity of their desires. South.

Think not, when woman's transient breath is fled, That all her vanities at once are dead ; Succeeding vanities she still regards, And, though she plays no more, o'erlooks the cards.

Pope.

Tis an old maxim in the schools, That vanity's the food of fools ; Yet now and then your men of wit Will condescend to take a bit. Swift's Miscellany.

The corruption of the world indulges women in great vanity ; and mankind seem to consider them in no other view than as so many painted idols, that are to allure and gratify their passions. Law.

VAN LAF.R (Peter), painter, better known -by his mock name of BAMBOCCIO, which see. He painted inns, shops, cattle, &c. He died in 1673.

VANLOO (Charles Andrew), painter, was born at Nice in 1705, and studied under his bro- ther John. After visiting Italy, he became painter to the king, chevalier of St. Michael, and member of the Academy of painting. He died in 1765.

VANLOO (John Baptist), painter, born at Aix in 1684, and died there in 1746.

VANMANDER (Charles), painter, was born near Courtray in 1548. His principal pictures are Adam and Eve, and the Deluge. He died in 1606.

VANNES, a considerable town in the north-west of France, the see of a bishop, and the chief place of the department of the Morbihan. It is advant- ageously situated at the bottom of a bay interspersed with islets, about two miles and a half from the sea. It contains a population of nearly 11,000; but is in general far from well built. Vannes has two suburbs separated from it by a wall and ditch. The only public buildings are the cathe- dral, the hospital, the old castle, and the churches. The port admits only small vessels. The envi- rons are pleasant. In 1800 the royalists under Georges were defeated here, by the republicans under Brune. Sixty miles south-west of Rennes, and seventy west by north of Nantes.

VAN'QUISH, >;. a.) Fr. vuincre. To con- IT., n. s. f quer; overcome; sub-

due ; confute in argument : the noun substantive corresponding.

Were 't not a shame, that, whilst you live at jar, The fearful French, whom you late vanquished, Should make a start o'er seas, and vanquish you ?

Slialupcare.

He would pawn his fortunes To hopeless restitution, so he might Be called your vanauisher. LI.

They subdued and vanquished the rebels in all en- counters. Clarendon.

The gods the victor, Cato the vanquished chose : But you have done what Cato could not do, To chuse the vanquished, and restore him too.

Dri/dcn.

This bold assertion has been fully vanqmdied in a late reply to the bishop of Meaux's treatise.

F. Attertiury.

Troy's vanquisher, and great Achilles' son.

A. Phillip.*

VAN-SWIETEN (Gerard), a celebrated phy- sician, was born May 7th, 1700, at Leyden. After studying at Louvain he returned to Ley- den, and became the pupil of Boerhaave. In 1725 he took his doctor's degree, and published an inaugural thesis on the Structure of the Arte- ries. He afterwards employed himself in Com- mentaria in H. Boerhaavii Aphorismis de Cog- noscendis et Curandis Morbis, of which the first volume appeared in 1741. Soon after he was appointed to a medical professorship at Leyden ; but objections arising on the score of his religion, being a Catholic, he was obliged to resign. The empress Maria Theresa indemnified him by in- viting him to Vienna, where, in 1745 he was made a professor in the university, and after- wards first physician to the empress and a baron of the empire. He was also imperial librarian, and director-general of the study of medicine in Austria. He completed his work on the Apho- risms of Boerhaave by the publication of the fifth volume in 1772. These commentaries have been translated into French and English. He enjoyed the highest reputation till his death at Schoenbrunn, June 18th, 1772. He was the author of a treatise on the Diseases of the Army ; and of a work on Epidemics, the latter of which was published posthumously, by pro- fessor

Stoll, 1782, 2 vols. 8vo.

VANTAGE, n. s. From advantage. Gain ; profit.

What great vantage do we get by the trade of a pastor ? Sidney.

We yet of present peril be afraid ; For needless tear did never vantage none. Spenter.

Be assured, Madam, 'twill be done With his next vantage. Shakspeare. Cymbeline.

With the vantage of mine own excuse, Hath he excepted most against my love.

Shakspeare.

He had them at vantage, being tired and harassed with a long march. Bacon.

The pardoned person must not think to stand upon the same vantage of ground with the innocent.

South.

VANT'BRASS, n. j. Fr. avunt bras. Armor for the arm.

I'll hide my silver beard in a gold beaver, And in my ninth race put this withered brawn.

Shakspeare. Put on vantbrau, and greves, and gauntlet. Milton

VAP'ID, adj. Lat. vapidus. Dead ; having the spirit evaporated ; spiritless ; maukish ; flat.

Thy vines let feed a-while On the fat refuse ; lest, too soon disjoined, From spritely it to sharp or vapid change. Philips.

The effects of a vapid and viscous constitution of blood, are stagnation, aerimonv, and putrefaction.

Arbuthnot.

VA'POR, n. s., v. n., &~\ Fr. vapeur ; Lat.

VA'PORER, n. s. [v. a. 9 vapor. Any 'thing

VA'PORISH, adj. fexhalable ; any thing

VA'POROUS. J that mingles with the

air; fume; steam; wind; vain imagination: to vapor is, to pass off in fume or steam ; bully ; brag : also to effuse ; scatter in vapor : the deri- vatives all correspond.

It proceeded from the nature of the vapourish place.

Sandys.

The vaporous night approaches. Shakspeare.

Swift running waters vapour not so much as stand- ing waters. Bacons Natural History.

Opium loseth some of its poisonous quality, if vapoured out, and mingled with spirit of wine.

Bacon.

If the mother eat much beans, or such vaporous food, it endangereth the child to become lunatick.

Id.

Jove a dreadful storm called forth Against our navy ; covered shore and all \V ith gloomy vapours. Chapman.

Break off this last lamenting kiss, Which sucks two souls, and vapours both away.

Donne.

He'd laugh to see one throw his heart away, Another sighing vapour forth his soul, A third to melt himself in tears. f Ben Jonson,

These are all the mighty powers You vainly boast, to cry down ours; And what in real value 's wanting, Supply with vapouring and ranting. Hudibras.

That I might not be vapoured down by insigni- ficant testimonies, I used the name of your society to annihilate all such arguments. Glanville.

Some more subtile corporeal element may so equally bear against the parts of a little vaporous moisture, as to form it into round drops.

More against Atheism.

The rooming is the best, because the imagination is not clouded by the vapours of meat. Dryden.

To this we must ascribe the spleen, so frequent in studious men, as well as the vapours, to which the other sex are so often subject.

Addiion's Spectator.

For the imposthume, the vapour of vinegar, and any thing which creates a cough, are proper.

Arbuthnot on Diet.

A little tube, jetting out from the extremity of an artery, may carry off these vaporous steams of the blood Cheyne.

Pallas grew vapourish once and odd ; She would not do the least right thing. Pope.

VAPOR, in philosophy, the particles of bodies rarefied by heat, and thus rendered specifically lighter than the atmosphere, in which they rise to a considerable height. See EVAPORATION, DAMP, GAS, &c. Many kinds of vapor are un- friendly to animal life, but the most noxious are those which arise from metallic substances. In the smelting and refining of lead, a white vapor arises, which, falling upon the grass in the neigh- bourhood, imparts a poisonous quality to it, so that the cattle which feed there will die ; and in

like manner stagnant waters impregnated wit?i this vapor will kill fisli. In some places the earth exhales vapor of a very noxious quality : such as the Grotto del Cani, ami other places in Italy, where a mephitic vapor constantly hovers over the surface of the ground, proving instantly fatal to such animals as are immersed in it. In some parts of the world there have been in- stances of people killed, and almost torn to pieces, by a vapor suddenly bursting out of the earth under their feet. Of the aqueous vapor raised from the earth by the sun's heat are formed the clouds ; but though these are commonly at no great distance from the earth, we cannot thence determine the height to which the vapors ascend. See METEOROLOGY.

VAPOR-BATH, in chemistry, a term applied to a chemist's bath or heat, wherein a body is placed so as to receive the fumes of boiling'wa- ter. It consists of two vessels, disposed over one another in such manner as that the vapor raised from the water contained in the lower heats the matter enclosed in the upper. It is very com- modious for the distilling of odoriferous waters, and the drawing of spirit of wine.

VAPOR-BATH, in medicine, is used when a sick person is made to receive the vapors arising from some liquid matter placed over a fire. Va- por-baths are very commonly used in Russia and other northern countries, not for any me- dical purpose, but as a luxury. Males and fe- males are described as going promiscuously into close rooms or stoves heated to a very high de- gree with steam ; and, after luxuriating for some time under the hands of the attendants who rub them down, they rush out into the air, or even plunge into cold water.

VAR, a department of France, forming the south-east extremity of the kingdom, and bor- dered by the country of Nice on the east, by the Mediterranean on the south, and by a part of the Alpi on the north. Branches of these mountains extend into the north and north-east divisions of this department1; so that it is in general rugged and uneven, the only extensive levels being along the coast. The rivers descending from these mountains are the Var, Verdon, Esterou, and Artubi, along with a number of smaller streams. The climate varies, being in some parts bleak even in this southern latitude, in others mild and warm ; but in several districts of the low ground the air is infected by vapors from stagnant water. The corn raised is not equal to the consumption ; imports are paid for by wine, brandy, and vinegar, all of which ate made in quantities from the grape. The pas- tures are good only in particular spots. The animals chiefly reared are sheep, goats, and asses ; and the sheep are sent in summer, like the merinos in Spain, to mountain pasture. Honey and wax are exported. Of minerals, in whatever variety they may exist, hardly any have been worked except coals. The manufac- tures are of insignificant amount ; the chief article is silk. The fisheries along the coast are considerable.

This department has an extent of about 2900 square miles, and a population of 285,000. It is on the whole a backward part of France.

The commcn language is a dialect, composed of French with a mixture of Italian. It is subject for judicial proceedings to the ro\al court of Aix, and is divided into four arrondissements, viz. Toulon, Brignolles, Grasse, and

Draguignan. The last, though a small place, is, from its cen- tral situation, the capital of the department. It was at St. Tropez, in this department, that Buona- parte embarked for Elba, in May, 1814, and at Cannes, near its eastern extremity, that he re- landed on the 1st of March following.

VARESE, an inland town of Austrian Italy, in the Milanese, situated on the river Verbano, near a lake called Varese. It has 7000 inhabit- ants, who cultivate, manufacture, and trade in silk. It is twenty-seven miles W. N. W. of Milan, and has in its vicinity a number of villas, and an elegant modern palace situated on an eminence, surrounded by pleasant gardens and fountains. The lake of Varese is a fine expanse of water.

VARIABLE, in geometry and analytics, is a term applied by mathematicians to such quan- tities as are considered in a variable or change- able state, either increasing or decreasing. Thus the abscisses and ordinates of an ellipsis, or other curve line, are variable quantities ; be- cause these vary or change their magnitude toge- ther, the one at the same time with the other. But some quantities may be variable by them- selves alone, or while those connected with them are constant : as the abscisses of a parallelogram, whose ordinates may be considered as all equal, and therefore constant: also the diameter of a circle, and the parameter of a conic section, are constant, while their abscisses are variable. See FLUXIONS.

VARIATION OF THE COMPASS is the deviation of the magnetic or mariner's needle from the meridian or true north and south line. On the continent it is called the declination of the mag- netic needle, which is a better term. At the pe- riod when the polarity of the magnet was first observed in Europe, whether originally, or as imported from China, the magnetic direction, both in Europe and in China, was nearly in the plane of the meridian. It was therefore an in- estimable present to the mariner, giving him a sure direction in his course through the pathless ocean. But by the time that the European na- vigators had engaged in their adventurous voy- ages to far distant shores, the deviation of the compass needle from the meridian was very sen- sible even in Europe ; and it is somewhat sur- prising that the Dutch and Portuguese navigators did not observe it on their own coasts. The son of Columbus positively says that it was observed by his father in his first voyage to America. It is certain that Gonzales Oviedo and Sebastion Cabot observed it in their voyages. But the de- viation of the compass from the meridian was not then allowed by mathematicians. Pedro de Medina at Valladolid, in his Arte de Naviggar, published in 1545, positively denies the varia- tion of the compass. But, so soon after as 1556, Martin Cortez, in a treatise of navigation, treated it as a thing completely established, and gives rules and instruments for discovering its quan- tity. About the year 1.080 Norman published

liis 'iscoveryof the dip of the needle, and speaks largely of the horizontal deviation from the plane of the meridian, and attributes it to the attrac tion of a point, not in the heavens, but in the earth, and describes methods by which he hoped to find its place. To the third, and all subse- quent editions of Norman's book (called the new attractive), was subjoined a dissertation by Mr. Uorroughs, on the variation of the compass, in which are recorded the quantity of this devia- tion in many places ; and he laments the obstacle which it causes to navigation by its total uncer- tainty previous to observation. Observations were made from time to time, and published in the subsequent treatises on navigation. But in 1635 the mariners were thrown into a new and great perplexity, by the publication of a Dis- course Mathematical on the Variation of the Magnetical Needle, by Mr. Henry Gillebrand, Gresham professor of astronomy. He had com- pared the variations observed at London by Bur- roughs, Gunter, and himself, and found that the north end of the mariner's needle was gradually drawing more to the westward, and it has been found to deviate more and more to the west- ward ever since, as may be seen from the fol- lowing little table in Waddington's Navigation.

London.

1576 Norman . . 11° 15′ E. 1580 Burrough . . 11 17 1622 Gunter . . 6 12

1634 Gillebrand . 45.

1662 . • . 00

16«6 Sellers . . 0 34 W.

1670 ' . . . 2 06

1672 ... 2 30

1700 ... 9 40

1720 . . . 13 —

1740 . . . 16 10

1760 . . . 19 30

1774 .... 22 20

1778 Philosophical Trans. 22 11

The celebrated Halley recommended the mat- ter in the most earnest manner to the attention of government; and, after much solicitation, ob-

tained a ship to be sent on a voyage of discoverj for this very purpose. In this vessel he re- peatedly traversed the Atlantic Ocean, and went as far as 50° S. lut. See his speculations on this subject in the Philosophical Transactions, 1683 and 1692. Having collected a prodigious number of observations made by others, and compared them with his own, he published in 1700 a synoptical account of them in a very in- genious form of a sea chart, where the ocean was crossed by a number of lines passing through those planes where the compass had the same deviation. Thus, in every point of one line there was no variation in 1700; in every point of another line the compass had 20° of east va- riation ; and in every point of a third line it had 20° of west variation. These lines have since been called Halleyan lines, or curves. This chart was surely very valuable ; yet the author himself pointed out objections to it. He stated that the change of variation was very different in different places, and in the same place at dif- frn-nt times; and confessed that he had not dib-

covered any general principle by which these changes could be connected. But the chart was of immense use; although it become gradually less valuable, and in 1745 was exceedingly erro- neous. This made Messrs. Mountain and Dod- son, fellows of the Royal Society, apply to the admiralty and to the great trading companies for permission to inspect their records, and to ex- tract from them the observations of the variations made by their officers. They got all the assist- ance they could demand ; and, after having com- pared above 50,000 observations, they composed new variation charts, fitted for 1745 and 1756.

Cortes ascribed the variation of the needle to the attraction of an eccentric point, and Bond thought this point was placed not in the heavens, but in the earth. This notion made the basis of the famous Theory of Magnetism of Dr. Gilbert of Colchester, published about A. D. 1600: he asserted that the earth was a great magnet, and that all the phenomena of the mariner's compass were the effects of this magnetism. He showed at least that these phenomena were precisely such as would result from such a constitution of the earth ; that is, that the positions of the mariner's needle in different parts of the earth were pre- cisely the same with those of a small magnet similarly situated with respect to a very large one. Although he had made more magnetic ex- periments than all that had gone before him put together, still the niagnetical phenomena were but little known till long after. But Gilbert's theory (for so it must be truly esteemed) of the magnetical phenomena is now completely con- firmed.

Dr. Halley first imagined that the north pole of the great magnet or load- stone which was included in the bowels of the earth was not far from Baffin's Bay. and its south pole in the Indian Ocean south-west from New Zealand. But he could not find any positions of these two poles which would give the needle that par- ticular position which it was observed to assume in different parts of the world ; and he con- cluded that the great terrestrial loadstone had four irregular poles (a thing not unfrequent in natu- ral loadstones, and easily producible at pleasure), two of which are stronger, and two weaker. When the compass is at a great distance from the two north poles, it is affected so as to be directed nearly in a plane passing through the strongest. But if we approach it much more to the weakest, the greater vicinity will compensate for the smaller absolute force of the weak pole, and occasion considerable irregularities. Dr. Hal- ley endeavours to account for the change of varia- tion by supposing this internal magnet not to ad- here to the external shell which we inhabit, but to form a nucleus or kernel detached from it on all sides, and to he so poised as to revolve freely round an axis, of which we hoped to discover the position by observation of the compass. The philosopher will find nothing in this inge- nious hypothesis inconsistent with our know- ledge of nature. Dr. Halley imagined that the nucleus revolved from east to west round the same axis with the earth. Thus the poles of the magnet would change their positions relatively to the earth's" surface, and this would change VOL. XXIT.

the direction of the compass needle. The great Euler undertook to ascertain the position of the needle in every part of the earth. But he found the four poles would engage him in an analysis which would be excessively intricate, and has contented himself with computine for two only; observing, that this supposition agrees so well with observation, that it is highly probable that this is the real constitution of the terrestrial mag- net, and that the coincidence would have been perfect if he had hit on the due positions of the two poles. He places one of them in lat 76° N-, and long. 96° \V. from Teneriffe. The south pole is placed in lat. 58° S., and long. 158° W. from Teneriffe. These are their situa- tions for 1757. Euler has annexed to his dis- sertation on the thirteenth volume Mem. R. A. Berlin, a chart of Halleyan curves suited to these assumptions, and fitted to the year 1757. Since then, another large variation chart has been published fitted to a late period ; but it is unac- companied by authorities.

The daily variation of the compass was first observed by Mr. George Graham in 1722 (Phi- losophical Transactions, No. 383), and reported to the Royal Society of London. It usually moves (at least in Europe) to the westward from 8 A. M. till 2 P. M., and then gradually returns to its former situation. The diurnal variations are seldom less than 0° 5', and often much greater. Mr. Graham mentions (Philosophical Transactions,

No. 428) some observations by a captain Hume in a voyage to America, where he found the variation greatest in the afternoon. This being a general phenomenon has also attract- ed the attention of philosophers. The most de- tailed accounts of it to be met with are those of Mr. Canton, in Philosophical Transactions, vol. li., part 1, p. 399, and those of Van Swinden, in his Treatise on Electricity and Magnetism. From the observations of Mr. Canton, it appears that, although there be great irregularities in this diurnal change of position of the mariner's needle, there is a certain average which is kept up with considerable steadiness. The following was the average of greatest daily change of po- sition in the different months of the year, observ- ed iu his house, Spital Square, in 1759. January 7′ 8′ May 13'—' Sep. 11′ 43′ February 8 58 June 13 21 Oct. 10 36 March 11 27 July 13 14 Nov. 8 9 April 12 26 August 12 19 Dec. 6 58

Mr. Canton attempts to account for these changes of position, by observing that the force of a magnet is weakened by heat. A small tnaeri' t being placed near a compass needle, E. N. E. from it, so as to make it deflect 45° from the natu- ral position, the magnet was covered with a brass vessel, into which hot water was poured. The needle gradually receded from the magnet three- fourths of a degree, and returned gradually to its place as the water cooled. This is confirmed by uniform experience. The purls of the earth to the eastward are first heated in the morning, and therefore the force of the earth is weakened, and the needle is made to move to the westward. But, as the sun warms the western side of the earth in the afternoon, the motion of thf needle

must take the contrary direction. But this way Df explaining, by a change in the force of the earth, supposes that the changing cause is acting in opposition to some other force. We do not know of any such. The force, whatever it is, seems simply to produce its own effect, in de- ranging the needle from the direction of terres- trial magnetism. If /Epinus's theory of mag- netic action be admitted, viz. that a bar of steel has magnetism induced on it by propelling the quiescent and mutually repelling particles of magnetic fluid to one end, or attracting them to the other, we may suppose that the sun acts on the earth as a magnet acts on a piece of soft iron, and in the morning propels the fluid in the north-west parts. • The needle directs itself to this constipated fluid, and therefore it points to the eastward of the magnetic north in the after- noon. And (to abide by the same theory) this

induced magnetism will be somewhat greater when the earth is warmer; and therefore the diurnal variation will be greatest in summer. This change of position of the constipated fluid must be supposed to bear a very small ratio to the whole fluid, which is naturally supposed to be constipated in one pole of the great magnet, in order to give it magnetism. Thus we shall have the diurnal variation a very small quantity. This is departing, however, from the principle of Mr. Canton's explanation ; and indeed we can- not see how the weakening the general force of the terrestrial magnet should make any change in the needle in respect to its direction ; nor does it appear probable that the change of tem- perature produced by the sun will penetrate deep enough to produce any sensible effect on the magnetism. And, if this be the cause, we think that the derangements of the needle should vary as the thermometer varies, which is not true. The other method of explaining is much better, if ˆEpinus's theory of magnetic attrac- tion and repulsion be just; and we may suppose that it is only the secondary magnetism (i.e. that of the magnetisable minerals) that is sensibly affected by the heat ; this will account very well for the greater mobility of the fluid in summer than in winter. A great objection to either of these explanations is the prodigious diversity of the diurnal variations in different places. This is so very great that we can hardly ascribe the diurnal variations to any change in the magnet- ism of the primitive terrestrial magnet, and must rather look for its cause in local circum- stances. This conclusion becomes more pro- bable, when we learn that the deviation from the meridian and the deviation from the horizontal line are not affected at the same time. Van Swinden ascribes them solely to changes pro- duced on the needles themselves. If their mag- netism be greatly deranged by the sun's position, it may throw the magnetic centre away from the centre cf the needle's motion, and thus may produce a very small change of position. But, if this be the cause, we should expect differences in different needles. Van Swinden. says that there are such, and that they are very great ; but as he has not specified them, we cannot draw any conclusion.

The aurura borealis is observed (in Europe)

to disturb the needle exceedingly, sometimes drawing it several degrees from its position. It is always observed to increase its deviation from the meridian, that is, an aurora borealis makes the needle point more westerly. This disturb- ance sometimes amounts to six or seven degrees, and is generally observed to be greatest when the aurora borealis is most remarkable. This is a very curious phenomenon, and we have not been able to find any connexion between this meteor and the position of a magnetic needle. It is to be observed, that a needle of copper or wood, or any substance besides iron, is not af- fected. We long thought it an electric pheno- mena, and that the needle was affected as any other body balanced in the same manner would be; but a copper needle would then be affected.

Indeed it may still be doubted whether the aurora borealis be an electric phenomenon. They are very frequent and remarkable in Sweden ; and yet Bergman says that he never observed any electric symptoms about them, thougn in the mean time the magnetic needle was greatly affected. We see the needle frequently disturbed both from its general annual position, and from the change made on it by the diurnal variation. This is probably the effect of aurora boreales which are invisible, either on account of thick weather or day-light. Van Swinden says he seldom or never failed to observe aurorae bore- ales immediately after any anomalous motion of the needle ; and concluded that there had been one at the time, though he could not see it. Since no needle but a magnetic one is affected by the aurora borealis, we may conclude that there is some natural connexion between this meteor and magnetism. This should farther in- cite us to observe the circumstance formerly mentioned, viz. that the south end of the dipping needle points to that part of the heavens where the rays of the aurora appear to converge. We wish that this were diligently observed in places which have very different variation and dip of the mariner's needle. For the diurnal and this irregular variation, consult the Dissertations of Celsius and of Hiorter, in the Memoirs of Stock- holm; Wargentin, Philosophical Transactions, vol. 48. Braun (Comment Petropol. Novi, T. V. VII. IX.); Graham and Canton. See also MAGNETISM.

VARIATION OF CURVATURE, in geometry, is used for that inequality or change which takes place in the curvature of all curves except the circle, by which their curvature is more or less in different parts of them ; and this variation con- stitutes the quality of the curvature of any line.

VAR'ICOUS, adj.) Latin varir, varicosus.

VAR'IX, n. s.) Diseased with dilatation :

a dilatation of the vein.

There are instances of one vein only being vurt- cou$, which may be destroyed by tying it above and below the dilatation. Sharpe.

In ulcers of the legs, accompanied with mrices or dilatations of the veins, the narir can only be assisted by the bandage. Id.

VARICOUS, or VARICOSE. See SURGERY.

VA11I ETY, orV'A u i I.TAS, in botany, is a change in some less essential part or quality ; as color, size, pubescence, or age. Externally; by the

plaiting or interweaving of the branches ; by bundling or uniting of several stalks into one broad flat one ; by the greater breadth, or nar- rowness, or curling of leaves ; by becoming awnless, or smooth, or hirsute. Internally ; by becoming mutilated in the corolla; or having one larger than ordinary ; by luxuriancy, multi- plication, or fulness ; by becoming proliferous, or crested ; by bearing bulbs instead of seeds ; or being viviparous. The usual causes of varia- tion are, climate, soil, exposure, heat, cold, winds, and culture; and often disease; hence morbus, in botany, is synonymous with varietas.

VARIGNON (Peter de), mathematician, born at Caen, in 1654. He was geometrician to the academy of Sciences at Paris, and professor of mathematics in the college of Mazarin. He wrote a treatise on mechanics, &c., and died in

1722.

VARILLAS (Antony), historian, born at Gueretin 1624. He wrote a History of France, Anecdotes of Florence, &c., and died in 1696.

VARINAS, a province of the Caraccas, bounded on the north by the provinces of Mara- caibo and Venezuela, east by the plains cf Caraccas and the Orinoco, west by Merida and New Granada, and soutli by Juan de los Llanos, or Casanare. This province was formed in the year 1787, by separating the southern districts of Venezuela and Maracaibo, when it was also constituted a distinct government. The chief products are tobacco, cattle, sugar, coffee, cot- ton, indigo, and all the fruits of the torrid zone. \ annas is intersected by numerous large and .Kivigable rivers, which occasionally inundate and fertilise its plains. Of these the Apure, the Portuguesa, the Guanarito, the Bocono, Guana- palo, the Arauca, the Capanaparo, the Sinaruco, and the Meta are the most noted.

VARINAS, the capital of the above province, is situated about 300 miles south-east of Carac- cas. It is a neat little place.

VARINI, a people of Germany. — Tacit, de Ger. 40.

VARIOL./E, the small-pox. See MEDICINE, Index.

VARIOLA, in medicine (Lat. varius, because it disfigures the skin), the small-pox. A genus of disease in the class pyrexiae, and order exan- themata, of Cullen. It is distinguishable by synocha, eruption of red pimples on the third day, which on the eighth day contain pus, and afterwards by drying fall off in crusts. This very contagious disease is supposed to have

been introduced into Europe from Arabia, where there arises a fever, that is succeeded by a num- ber of little inflammations in the skin, which proceed to suppuration, of which the matter formed is capable of communicating the dis- order. It makes its attack on people of all ages, but the young of both sexes are most liable to it; and, though it will prevail at all seasons, it is most prevalent in the spring and summer.

The red small-pox is distinguished into the distinct and confluent, implying that in the former the eruptions are perfectly separate from each other, and that in the latter they run much into one another. Both species are produced

either by breathing air impregnated with the effluvia avising from the bodies of those who labor under the disease, or by the intro- duction of a small quantity of the variolous matter into the habit by inoculation ; and it is probable that the difference of the small-pox is not owing to any difference in the contagion, but depends on the state of the person to whom it is applied, or on certain circumstances concurring with the application of it.

Four different states or stages are observed in the small pox : first the febrile ; second the eruptive; third the maturative ; and fourth that of the declination or scabbing.

When the disease has arisen naturally, and is of the distinct kind, the eruption is commonly preceded by a redness in the eyes, soreness in the throat, pains in the head, back, and loins, weariness and faintness, alternate fits of chillim ~ and heat, thirst, nausea, inclination to vomit, nud a quick pulse. In some instances these symp toms prevail in a high degree, and in other; they are very moderate and trifling. In very young children, starlings and convulsions are apt to take place a short time previous to the appearance of the eruption, always giving great alarm to those not conversant with the frequency of the occurrence.

About the third or fourth day from the first seizure, the eruption shows itself in little red spots on the face, neck, and breast, and these continue to increase in number and size for three or four longer, at the end of which time they are to be observed dispersed over several parts of the body. If the pustules are not numerous the febrile symptoms will generally go off on the appearance of the eruption, or then will become very moderate.

It sometimes happens that a number of little spots of an erysipelatous nature are interspersed amongst the pustules ; but these generally go in again, as soon as the suppuration commences, which is usually about the fifth or sixth day, at which period, a small vesicle containing an almost

colorless fluid may be observed upon the top of each pimple. Should the pustules be perfectly distinct and separate from each other, the suppu- ration will probably be completed about the eighth or ninth day, and they will then be filled with a thick yellow matter; but, should they run much into each other, it will not be com- pleted till some days later.

When the pustules are very thick and numerous on the face, it is apt about this time to become much swelled, and the eye-lids to be closed up, previous to which there usually arises a hoarse- ness and difficulty of swallowing, accompanied with a considerable discharge of viscid saliva. About the eleventh day the swelling of the face usually subsides, together with the affection of the fauces, and is succeeded by the same in the hands and feet, after which the pustules break, and discharge their contents ; and then, becom- ing dry, they fall in crusts, leaving the skin which they Covered of a brown-red color, which ap- pearance continues for many days. In those cases where the pustules are large, and are late in becoming dry and falling off, they are very apt to leave pits behind them ; but where they

are small, suppurate quickly, and are few in number, they neither leave any marks behind them, nor do they occasion much affection of the system.

In the confluent small,pox, the fever which precedes the eruption is much more violent than in the distinct, being attended usually with great anxiety, heat, thirst, nausea, vomiting, and a frequent and contracted pulse, and often with coma or delirium. In infants, convulsive fits are apt to occur, which either prove fatal before any eruption appears, or they usher in a malig nant species of the disease. The eruption usually makes its appearance about the third day, being frequently preceded or attended with a rosy efflorescence, similar to what takes place in the measles; but the fever, although it suffers some slight remission on the coming out of the eruption, doss not go off as in the distinct kind ; on the contrary, it becomes increased after the fifth or sixth day, and continues considerable throughout the remainder of the disease.

As the eruption advances, the face, being thickly beset with pustules, becomes very much swelled, the eye-lids are closed up, so as to de- prive the patient of sight, and a gentle salivation ensues, which, towards the eleventh day, is so viscid as to be spit up with great difficulty. In children a

diarrhoea usually attends this stage of the disease instead of a salivation, which is to be met with only in adults. The vesicles on the top of the pimples are to be perceived sooner in the confluent small-pox than in the distinct ; but they never rise to an eminence, being usually flatted in ; neither do they arrive to proper sup- puration, as the fluid contained in them, instead of becoming yellow, turns to a brown color. About the tenth or eleventh day, the swelling of the face usually subsides, and then the hands and feet begin to puff up and swell, and about the same time the vesicles break, and pour out a liquor that forms into brown or black crusts, which, upon falling off, leave deep pits behind them, that continue for life ; and, where the pus- tules have run much into each other, they then disfigure and scar the face very considerably.

Sometimes it happens that a putrescency of the fluids takes place at an early period of the disease, and shows itself in livid spots inter- spersed among the pustules, and by a discharge of blood by urine, stool, and from various parts of the body.

In the confluent small-pox, the fever, which perhaps had suffered some slight remission from the time the eruption made its appearance to that of maturation, is often renewed with consi- derable violence at this last-mentioned period, which is what is called the secondary fever, and this is the most dangerous stage of the disease. It has been observed, even amongst the vulgar, that the small-pox is apt to appear immediately before or after the prevalence of the measles. Another curious observation has been made relating to the symptoms of the?e complaints, namely, that if, while a patient labors under the small-pox, lie is seized with the measles, the course of the former is retarded till the eruption of the measles is finished. The measles appear for instance on the second day of the eruption of

small-pox ; the progress of this ceases till the measles terminate by desquamation, and then it goes on in the usual way. Several cases are, however, recorded in the Medical and Physical Journal, as likewise in the third volume of the Medical Commentaries, in which a concurrence of the small-pox and measles took place without the progress of the former being retarded. The distinct small-pox is not attended with danger, except when it attacks pregnant women, or approaches nearly in its nature to that of the confluent; but this last is always accompanied with considerable risk, the degree of which is ever in proportion to the violence and perma- nence of the fever, the number of pustules on the face, and the disposition to putrescency which prevails. When there is a great tendency this way, the disease usually proves fatal between the eighth and eleventh day, but in some cases death is protracted till the fourteenth or six- teenth. The confluent small-pox, although it may not prove immediately mortal, is very apt to induce various morbid affections.

Both kinds of small-pox leave behind them a predisposition to inflammatory complaints, par- ticularly to ophthalmia and visceral inflamma tions, but more especially of the thorax ; and they not unfrequently excite scrofula into actioi, which might otherwise have lain dormant in the system.

The treatment of small-pox will differ materi- ally according to the species of the disease. In the distinct, ushered in by synochal pyrexia, it may be occasionally proper in persons of a mid- dle age, good constitution, and plethoric habit, to begin by taking away a moderate quantity of blood; the exhibition of an emetic will be gene- rally advisable, provided there be no material tenderness of the stomach ; the bowels must then be cleared, antimonial and other diaphore- tics employed, and the antiphlogistic regimen strictly enforced. It is particularly useful in this disease during the eruptive fever to expose the patient freely to cold air, as taught by the celebrated Sydenham ; and even the cold affu- sion may be proper where there is much heat and redness of the skin, unless the lungs be weak. After the eruption has come out, the symptoms are usually so much mitigated that little medical interference is necessary. But the confluent small-pox requires more management ; after evacuating the primae via, and employing other means to moderate the fever in the beginning, the severalremedies adapted to su pport the strength and counteract the septic tendency, must be resort- ed to as the disease advances. The chief points of difference are, that bark may be more freely given to promote the process of suppuration, and opium to relieve the irritation in the skin ; when the eruption has come out it will be gene- rally proper to direct a full dose of this remedy every night to procure rest, using proper pre- cautions to obviate its confining the bowels, or determining to the head. Where alarming con- vulsions occur also, opium is the medicine chiefly to be relied upon, taking care subsequently to remove any source of irritation from the primEB vise. Sometimes the tepid bath may be useful under these circumstances, and favor the ap-

pearance of the eruption, where the skin is pale and cold, the pulse weak, &c. Where at a more advanced period the pustules flatten, and alarm- ing symptoms follow, the most powerful cordial and antispasmodic remedies must be tried, as the confectio opii, aether, wine, &c. For the relief of the brain, or other important part par- ticularly affected, local means may be used as :n typhus. To prevent the eyes being injured, a cooling lotion may be applied, and blisters behind the ears, or even leeches to the temples.

*VARIOLA VACCINA, or Cow-Pox, the name commonly given to a very singular disease which has occupied a great share of the attention of medical men. It has been many years pre- valent in some of the great dairy counties in England, particularly Glouces'ershire ; and it has been long understood by the farmers and others in these counties, that it for ever exempts all persons who have been infected with it from the contagion of small-pox. Dr. Jenner was the first person who made this fact practically cer- tain, by introducing the vaccine innoculation. The following is an abstract of his account of the distemper ; — 'There is a disease to which the horse is frequently subject. The farriers have termed it the grease. It is an inflammation and swelling in the heel, discharging matter. In the dairy county of Gloucestershire a great number of cows are kept, and the office of milking is performed indiscriminately by men and maid servants. One of the former having been ap- pointed to apply dressings to the heels of a horse affected with the grease, incautiously bears his part in milking the cows with some particles of the in- fectious matter adhering to his fingers. When this is the case, it commonly happens that a disease is communicated to the cows, and from the cows to the dairy maids, which spreads through the farm until most of the cattle and domestics feel its unpleasant consequences. This disease has obtained the name of the cow-pox. It appears on the nipples of the cows in the form of irre- gular pustules. At their first appearance they are commonly of a palish blue, or rather of a color somewhat approaching to livid, and are surrounded by an erysipelatous inflammation. These pustules, unless a timely remedy be ap- plied, frequently degenerate into phagedenic ulcers, which prove extremely troublesome. The animals become indisposed, and the secre- tion of milk is much lessened.' That this disease originates with the horse has been disputed ; but, as the fact is by no means ascertained, the arguments on both sides are of minor import- ance. The great question to be determined is, •whether this disease, when communicated to the human subject, prevents the possibility of future infection from small-pox; and, happily, the weight of evidence arising from the experience of several years' universal practice, leaves little reason to doubt that it does, although some medi- cal men of eminence persist in a contrary opi- nion. The following remarks will be of use to the practitioner. It is of the utmost consequence that the matter employed should be the eenuine * accine virus. Dr. Jenner points out the follow- ing particulars as sources of a spurious cow-pox : 1. That arising from pustules on the nipples or*

udder of the cow, which pustules contain no specific virus. 2. From matter, although ori- ginally possessing the specific virus, which has suffered a decomposition, either from putrefaction, or any other cause less obvious to the senses. 3. From matter taken from an ulcer in an advanced stage, though the ulcei arose from a true cow- pox. 4. From matter produced on

the human skin from the contact of some peculiar morbid matter degenerated by a horse. Many have remarked that inoculation with the vaccine matter is more apt to fail in communicating the infection than with variolous matter, especially if it be suffered to dry upon the lancet before it is used. Care should therefore be taken to moisten it a considerable time before it is used. Danger may arise from mistaking the local effects of the vaccine disease for its effects upon the constitution. To guard practitioners against this error, Dr. Woodville makes the following remarks : — ‘ When a considerable tumor and an extensive redness takes place at the inoculated part, within two or three days after the infectious matter has been applied, the failure of inocula- tion may be considered as certain, as where neither redness nor tumor is the consequence. This rapid and premature advancement of the inflammation will always be sufficient to prevent the inoculator from mistaking such cases for those of efficient inoculation. But there are other circumstances under which I have found the inoculation to be equally ineffectual, and which, as being more likely to deceive the inoculator, require his utmost circumspection and discrimi- nation. I here allude to cases in which it hap- pens that though the local affection does not exhibit much more inflammation than is usual, yet neither vesicle nor pustule supervenes; and in which, about the sixth or seventh day, it rapidly advances into an irregular suppuration, producing a festering or crustaceous sore. Care, however, should be taken to distinguish this case from that in which the inoculated part assumes a pustular form, though it continues for one or two days only, when the same appearances fol- low as those above described ; for I have expe- rienced the latter inoculation to be as effectual as where the tumor has proceeded in the most regular manner. The efflorescence at the inocu- lated part, which seldom intervenes before the eighth, or later than the eleventh day, is to be regarded as an indication that the whole system is affected ; and, if the patient has not felt any indisposition on or before its approach, he may be assured that there will not be any afterwards. When efflorescence does not commence till the eleventh day, it is almost always attended with more indisposition than when it occurs on the eighth or ninth day. The efflorescence is more frequent in young infants than in children ad- vanced to three or four years of age ; and the former have the efflorescence and the disease more favorably than the latter, insomuch that by far the greater part of them have no perceptible illness, and require no medicines. On the other hand, in adults the cow-pox frequently produces head-ache, pain of the limbs, and other febrile symptoms, for two or three days, which are greatly relieved by a brisk purgative.’

VARNISH.

V AR’LET, n. $.) Old Fr. varld, now valet.

VAU'LETRY.) Anciently a servant or foot- man ; a mean fellow ; a scoundrel : varletry is, a crowd of low people ; a rabble.

Such lords ill example do give, Where cartels and drabs so may live.

Tusser's Husbandry.

VARNA, a town of European Turkey, in Bulgaria ; 112 miles north-east of Adrianople, and 144 north of Constantinople; Ion. 27° 59′ E. ; lat. 43° 7′ N. ; population, 16,000. It has an old castle, twelve mosques, two Greek churches, the most commodious port in Bulgaria, and a large trade with Constantinople. It is situated on a gulf or bay of the Black sea, lo which it gives name, at the mouth of the river Varna. In 1444, Ladislaus, king of Hungary, was defeated and slain by Amurath I., sultan of the Turks, near this town. In 1783, Varna re- sisted the attacks of the Russians, but admitted the army of the autocrat on October 11, 1828.

VAR'NISH, n. s. & v. a. Fr. vcrnis ; Lat- n;«i.r. A matter laid upon wood, metal, or other bodies, to make them shine : hence cover ; palliative of a fault : to cover or decorate with something shining; to palliate : a varnisher corresponds.

O vanity ! • To set a pearl in steel so meanly varnished. Sidney.

We'll put on those shall praise your excellence, And set a double varniih on the same. Sliahtpeare.

The fame of Cicero had not borne her age so well, \(it had not been joined with some vanity. Like unto varnuh, that makes ceilings not only shine, but last. Bacon.

They varniih all their errors, and secure The ills they act, and all the world endure.

Denham.

Specious deeds on earth, which glory excites ; Or close ambition varnished o'er with zeal. Milton.

An oil obtained of common oil may probably be of good use to surgeons and varnisher. Boyle.*

Mis manly heart was still above Dissembled hate, or varnished love. Dryden.

.Men espouse the well-endowed opinions in fashion, and then seek

arguments to make good their beauty, or ruiitisk over and cover their deformity.

Locke's Works.

Speak the plzin truth, and vantith not your crimes !

I'hilipt.

Cato's voice was ne'er employed To clear the guilty, add to varnish crimes. Addison.

Modest dulness lurks in thoughts disguise ; Thou varniiher of fools, and cheat of all the wise.

Pope.

VARNISH, a clear limpid fluid, capable of Hardening without losing its transparency, used by painters, gilders, Sic., to give a lustre to their works, to preserve them and defend them from the air. A coat of varnish ought to possess the following properties: — 1. It must exclude the action of the air ; because wood and metals are varnished to defend them from decay and rust. 2. It must resist water; 'for otherwise the effect of the varnish could not be permanent. 3. It ought not to alter such colors as are intended to be preserved by these moans. Resins are used as the basis of varnish. Resins may be dis- solved by throe agents. 1. By fixed oil. 2. Hy volatile oil. 3. By alcohol. And accord- ingly we have three kinds of varnish : the fat or

oil varnish, essential varnish, ar.d spirit varnish- Before a resin is dissolved in a fixed oil, it is necessary to render the oil drying. For this purpose the oil is boiled with metallic oxides ; in which operation the mucilage of the oil com- bines with the metal, while the oil itself unites with the oxygen of the oxide. To accelerate the drying of this varnish, it is necessary to add oil of turpentine. The essential varnishes con- sist of a solution of resin in oil of turpentine. The varnish being applied, the essential flies off and leaves the resin. This is used only for paintings. When resins are dissolved in alcohol, the varnish dries very speedily, and is subject to crack ; but this fault is corrected by adding a small quantity of turpentine to the mixture, which renders it brighter, and less brittle when dry.

The following are the ingredients in different varnishes : — For toilet-boxes, cases, fans, $c. — Dissolve two ounces of gum mastich, and eii;ht ounces of gum sandarach, in a quart of alcohol; then add four ounces of Venice turpentine. For wainscots, cane-chairs, iron-chairs, grates. — Dis- solve, in a quart of alcohol, eight ounces of gum sandarach, two ounces of seed lac, four ounces of resin ; then add six ounces of Venice turpen- tine. Forjiddles,

&c. — Put four ounces of gum sandarach, two ounces of lac, two ounces of gum mastich, one ounce of gum elemi, into a quart of alcohol, and hang them over a slow fire till they are dissolved ; then add two ounces of turpen- tine. To employ vermilion for painting njuiptt^fs. — Dissolve in a quart of alcohol six ounces of sandarach, three ounces of gum lac, and four ounces of resin ; afterwards add six ounces of turpentine. Gold-colored varnish. — Pound se- parately four ounces of stick lac, four ounces of gamboge, four ounces of dragon's blood, four ounces of anotta, and one ounce of saffron : put each of them separately into a quart of alcohol, and expose them for five days in a narrow- mouthed bottle to the sun, or in a very warm room, shaking them frequently. When all are mejted mix them together. In order to make silver imitate gold exactly when covered with this varnish, the quantity of ingredients must be somewhat greater. The method of gilding sil- ver-leaf, Sic., with this varnish, is as follows : — The silver-leaf being fixed on the subject in the same manner as gold leaf, by the interposition of proper glutinous matters, the varnish is spread upon the piece with a brush or pencil. The first coat being dry, the piece is again and again washed over with the varnish till the color ap- pears sufficiently deep. What is called gilt lea- ther, and many picture frames, have no other than this counterfeit gilding. For plain frames thick tin-foil may be used instead of silver. The tin-leaf, fixed on the piece with glue, is to be burnished, then polished with emery and a fine linen cloth, and afterwards with putty applied in the same manner : being then lacquered over with varnish five or six times, it looks very nearly like burnished gold. The same varnish, made with a less proportion of the coloring ma- terials, is applied also on works of brass. Oil rurnishes. — Gum, copal, and amber, are the sub- stances principally employed in oil varnishes ;

as they possess solidity and transparency. — The copal is used for varnishing light, the amber for dark colors. It is best to dissolve them before mixing them with the oil. They should be melt- ed in a pot on the fire ; and are in a proper state for receiving the oil when they give no resist- ance to the iron spatula, and when they run off from it drop by drop. When the oil is well mixed with the copal or amber, take it off the fire ; and, when it is pretty cool, pour in a greater quantity of the essence of turpentine than the oil that was used. After the varnish is made it should be passed through a linen cloth. Oil varnishes become thick by keeping; but, when they are to be used, it is only necessary to pour in a little essence of turpentine, and to put them for a little on the fire. The following are the most useful oil varnishes : — White copal var- nishes.— On sixteen ounces of melted copal pour four, six, or eiaht, ounces of linseed oil, boiled and quite free from grease. When

they are well mixed take them oft" the fire, and when pretty cool pour in sixteen ounces of the essence of Venice turpentine. Amber varnish is made in the same way. For coaches and iron work. — This varnish is composed of two ounces of bitu- men of Palestine, two ounces of resin, with am- ber melted separately, and afterwards mixed ; six ounces of oil are then added, and afterwards the turpentine, as directed above. — Golden colored varnish may be made also by substituting linseed oil for alcohol. Essential oil varnishes. — They ?re for pictures. They are usually made of gum mastich and turpentine dissolved together in some essential oil, and are applied cold to the picture. Varnish for glass. — Pulverise a quan- tity of gum adragant, and let it dissolve for twenty-four hours in the white of eggs well beat up; then rub it gently on the glass with a brush. Lac-varnishes, or lacquers, consist of different resins in a state of so.ution, of which the most common are mastich, sandarach, lac, benzoin, copal, amber, and asphaltum. The menstrua are either expressed or essential oils, as also alcohol. For a lac-varnish of the first kind, the common painter's varnish is to be united by gently boiling it with some more mastich or colophony, and then diluted again with a little more oil of turpentine. The latter addition promotes both the glossy appearance and drying of the varnish. Of this sort is the amber-var- nish. To make this varnish, half a pound of amber is kept over a gentle fire in a covered iron pot, in the lid of which there is a small hole, till it is observed to become soft, and to be melted together into one mass. As soon as this is perceived, the vessel is taken from off the fire, and suffered to cool a little ; when a pound of good painter's varnish is added to it, and the whole suffered to boil up again over the fire, keeping it continually stirring. After this it is again removed from the fire ; and, when it is become somewhat cool, a pound of oil of tur- pentine is to be gradually mixed with it. Should the varnish when it is cool happen to be yet too thick, it may be attenuated with more oil of tur- pentine. This varnish has always a dark brown color, because the amber is previously half burned in this operation ; but, if it be required

of a bright color, amber powder must be dis- solved in transparent painter's varnish in Papin's machine by a gentle fire.

As an instance of the second sort of lac-var- nishes, with ethereal oils alone, may be adduced the varnish made with oil of turpentine. For making this, mastich alone is dissolved in oil of turpentine by a very gentle digesting heat, in close glass vessels. This is the varnish used for the modern transparencies employed as window blinds, fire-screens, and for other purposes. These are commonly prints, colored on both sides, and afterwards coated with this varnish on those parts that are intended to be transparent. Sometimes fine thin calico, or Irish linen, is used for this purpose ; but it requires to be primed with a solution of isinglass, before the color is laid on.

Copal may be dissolved in genuine Chio tur- pentine, according to Mr. Sheldrake, by adding it in powder to the turpentine previously melted, and stirring till the whole is fused. Oil of tur- pentine may then be added to dilute it suffici- ently. Or the copal in powder may be put into a long-necked mattrass with twelve parts of oil of turpentine, and digested several days on a sand-heat, frequently shaking it. This may be diluted with one fourth or one-fifth of alcohol. Metallic vessels or instruments covered with two or three coats of this and dried in an oven each time, may be washed with boiling water, or even exposed to a still greater heat, without injury to the varnish.

A varnish of the consistence of thin turpen- tine is obtained for aerostatic machines, by the digestion of one part of elastic unm, or caout- chouc, cut into small pieces, in thirty-two parts of rectified oil of turpentine. Previously to its being used, however, it must be passed through a linen cloth, in order that the undissolved parts may be left behind.

The third sort of lac-varnishes consists in the spirit-varnish The most solid resins yield the most durable varnishes ; but a varnish must never be expected to be harder than the resin naturally is of which it is made. Hence it is tiie height of absurdity to suppose that there are any incombustible varnishes, since there is no such thing as an incombustible resin. But the most solid resins by themselves produce brittle varnishes ; therefore something of a softer sub- stance must always be mixed with them whereby this brittleness is diminished. For this purpose gum-elemi, turpentine, or balsam of copavia, are employed in proper proportions. For the solution of these bodies the strongest alcohol ousjht to be used, which may very properly in- deed be distilled over alkali, but must not have stood upon alkali. The utmost simplicity in composition, with respect to the number of the ingredients in a formula, is the result of the greatest skill in the art ; hence it is no wonder that the greatest part of the formulas and reci- pes that we meet with, are composed without any principle at all.*

In conformity to these rules, a fine colorless tarnish may be obtained, by d -solving eight ounces of gum-sandarach and two oui ces o Venice turpentine in thirty-two c M.CCS if alco-*

hoi by a gentle heat. Five ounces of shell-lac and one of turpentine, dissolved in thirty-two ounces of alcohol by a very gentle heat, give a harder varnish, but of a reddish cast. To these the solution of copal is undoubtedly preferable in many respects. This is effected by triturating an

ounce of powder of gum-copal which has been well dried by a gentle herrt with a drachm of camphor, and, while these are mixing together, adding by degrees four ounces of the strongest alcohol, without any digestion.

Between this and the gold-varnish there is only this difference, that some substances that com- municate a yellow tinge are to be added to the latter. The most ancient description of two sorts of it, one of which was prepared with oil, and the other with alcohol, is to be found in Alexius Pedemontanus De i Secreti, Lucca, of which the first edition was published in the year 1557. But it is better prepared, and more du- rable, when made after the following prescrip- tion : — Take two ounces of shell-lac, of arnatto and turmeric of each one ounce, and thirty grains of fine dragon's-blood, and make an extract with twenty ounces of alcohol in a gentle heat.

UU-varnishes are commonly mixed immediately with the colors, but lac or lacquer-varnishes are laid on by themselves upon a burnished colored ground ; when they are intended to be laid upon naked wood, a ground should be first given them of strong size, either alone or with some earthy color, mixed up with it by levigation. The gold lacquer is simply rubbed over brass, tin, or silver, to give them a gold color.

Before a resin is dissolved in a fixed oil, it is necessary to render the oil drying. For this purpose the oil is boiled with metallic oxides, m which operation the mucilage of the oil com- bines with the metal, while the oil itself unites with the oxygen of the oxide. To accelerate the drying of this varnish, it is necessary to add oil of turpentine.

The essential varnishes consist of a solution of resin in oil of turpentine. The varnish being applied, the essential oil flies off, and leaves the resin. This is used only for paintings. When resins are dissolved in alcohol, the varnish dries very speedily, and is subject to crack ; but this fault is corrected by adding a small quantity of turpentine to the mixture, which renders it brighter, and less brittle when dry. The colored resins or gums, such as gamboge, dragon's-blood, &c., are used to color varnishes. To give lustre to the varnish after it is laid on, it is rubbed with pounded pumice-stone and water ; which being dried with a cloth, the work is afterward rubbed with an oiled rag and tripoli. The surface is last of all cleaned with soft linen cloths, cleared of all greasiness with powder of starch, and rubbed bright with the palm of the hand.

Varnishes before they are used should be care- fully kept from dust. When used they should be lifted lightly with a brush and spread upon a ground altogether free from dirt and moisture. The substance after being varnished should be exposed to the heat of the sun, or placed in a warm room covered with a glass case. Oil var- nishes require more heat than alcohol

varnishes. The varnish should be put on very quickly, mak-

ing great strokes with the pencil or brush, laking care that these strokes never cross one another ; it should be spread equally, and never thicker than a leaf of paper : a second coat should not be put on till the first is quite dry. If the var- nish, after being put on, becomes dull and un- even, it must be taken off entirely and new var- nish put on. When wainscoat is to be varnish- ed it is first painted of a wooden color. This color is made by infusing in water either red or yellow ochre (according to the color wished for), terra ombria (a kind of ochre), and white lead ; into this as much as necessary is put of parch- ment paste. Two thin coats of this are to be put on, and, after they are quite dry, the varnish. Varnishes are polished with pumice-stone and tripoli earth. The pumice-stone must be reduced to an impalpable powder, and put upon a piece of serge moistened with water; with this the varnished substance is to be rubbed lightly and equally. The tripoli must also be reduced to a very fine powder, and put upon a clean woollen cloth moistened with olive oil, with which the polishing is to be performed. The varnish is then to be wiped with soft linen, and, when quite dry, cleaned with starch or Spanish white, and rubbed with the palm of the hand or with a linen cloth. To recover colors or varnish, and to take off the dirt and filth which may adhere to them, a ley is used made of potash and the ashes of lees of wine. Take forty eight ounces of pot ash and sixteen of the above-mentioned ashes, and put them into six quarts of water, and the ley is made : instead of the ashes an equal quan- tity of potash would probably do as well. Te clean dirty colors, dilute some of this ley with four times its quantity of water, and rub the pic- ture with it ; then wash it with river water, and when dry give it a coat or two of varnish. In order to take off a varnish, wash it with the above- mentioned ley, then with water, and then lift it off the substance on which it was with any iron instrument.

The Chinese varnish is not a composition, but a resin which exudes from a tree called in China tsi-chu, ‘ varnish tree.’ This tree grows in seve- ral provinces of the southern parts of China. They do not procure varnish from the tsi-chu until its trunk is nearly five inches in diameter, which size it seldom attains to before seven or eight years. This liquor distils only in the night- time and during the summer season. To cause the gum to flow, they make several rows of inci- sions round the trunk, the number of which is proportioned to the vigor of the tree. Shells are inserted into the incisions for the purpose of re- ceiving the liquor distilled from them. They are made towards evening, and next morning they collect the varnish which has fallen into the shells ; the following evening they are again in- serted, and this operation is continued until the end of the summer. 1000 trees yield almost in one night twenty pounds of varnish. While the varnish distils it exhales a malignant vapor, the bad effects of which can only be prevented by preservatives and great precaution. The merchant who employs the

workmen is obliged to keep by him a larue vase filled with rape-on, in which a certain quantity of those fleshy fila

ments have been boiled that are found in hog's- lard, and which do not melt. When the work- men are going to fix the shells to the trees they carry some of this oil along with them, and rub their face and hands with it, which they do with ereater care when they collect in the morning the varnish that has distilled during night. After eating they wash their whole bodies with warm water, in which the bark of the chestnut-tree, fir wood, crystallised saltpetre, and some other drugs, have been boiled. When they are at work near the trees they put upon their heads a small cloth bag in which there are two holes, and cover the fore-part of their bodies with a kind of apron made of doe-skin, which is suspended from their necks with strings, and tied round them with a girdle. They also wear boots, and have coverings on their arms made of the same kind of skin. The laborer who should attempt to collect varnish, without using this precaution, would soon be punished for his rashness, and the most dreadful effects would ensue. The dis- order shows itself by tetters which become of a bright red color, and spread in a very short time ; the body afterwards swells, and the skin bursts and appears covered with a universal leprosy.

Besides the lustre and beauty which that

varnish gives to many of the Chinese manufac- tures, it has also the property of preserving the wood upon which it is laid, especially if no other matter be mixed with it. It prevents it from being hurt either by dampness or worms. There are two methods of laying on the varnish ; the simplest is, when it is immediately laid on the wood. The work is first polished, and then daubed over with a kind of oil which the Chinese call long yeou. When this oil is dry it receives two or three coats of varnish, which remain so transparent that all the shades and veins of the wood may be seen through them. If the artist is desirous of entirely concealing the substance on which they are laid, nothing is necessary but to add a few more coats ; these give the work a shining surface, the smoothness of which equals that of the most beautiful ice. When the work is dry, various figures are painted upon it in gold and silver, such as flowers, birds, trees, temples, dragons, 8cc. A new coat of varnish is then sometimes laid over these figures, which preserves them, and adds much to their splendor. The second method requires more preparation. The Chinese workmen fix to the wood by means

of glue a kind of pasteboard, composed of paper, hemp, lime, and other ingredients, well beaten, that the varnish may incorporate with them. Of this they make a ground perfectly smooth and solid, over which the varnish is laid in thin coats that are left to dry one after the other. It often happens that, the lustre of varnished tables and other pieces of furniture is insensibly destroyed by tea and warm liquors. ' The secret of restoring to varnish its shining black colors,' says a Chi- nese author, ' i.. to expose it for one night to a white hoar frost, or to cover it some time with snow.' For a method of imitating Chinese var nish, see TURNING.

VARNISH, in numismatography, signifies the colors antique medals have acquired in the earth. The beauty which na'ure alone is able to give to

medals, and art has never yet attained to coun- terfeit, enhances the value of them. Some arc blue, like the turquoise; others a bright vermi- lion color ; and others a shining brown, vastly finer than Brasil figures. But the most usual varnish is a beautiful green, which hangs to the finest strokes without effacing them, more' ac- curately than the finest enamel does on metals. No metal but brass is susceptible of this; for the green rust that gathers on silver always spoils it, and it must be got off with vinegar or lemon juice. Falsifiers of medals have a false or mo- dern varnish which they use on their counter- feits, to give them the appearance or air of being antique. But this may be discovered by its softness.

VARNISH, in pottery, signifies a sort of shin- ing coat, wherewith potter's-ware, delft-ware, china-ware, &c., are covered, which gives them a smoothness and lustre. Melted lead is gene- rally used for the first, and smalt for the second. See GLAZING.

VAR RO (Marcus Terentius), a Roman writer, was born B. C. 110. He served under Pom- pey against the pirates, and obtained a naval crown. He wrote a treatise on the Latin lan- guage, and another De Re Rustica, which are extant, with some fragments of Menippean sa- tires. They were printed at Venice in the year 1474, fol., and Rome 1537, 8vo. He died B. C. 29.

VARRO (Attacinus), the Gaul, a Latin poet of the age of Csesar, was born in Narbonne. He wrote a poem de Bello Sequanico, and translated into Latin the Argonautics of Apollon us. Only some fragments remain.

VARRONIA, in botany, a genus of plants belonging to the class of pentandria, and to the order of monogynia ; and arranged in the natu- ral system under the forty-first order, asperifolia. The corolla is quinquefid ; the fruit a drupa, with a quadrilocular kernel. There are six spe- cies ; none of which are natives of Britain.

VARUS (Quintilius), a Roman proconsul, commander of the armies in Germany. He killed himself A. D. 10, on his army being cut to pieces by the enemy, under Arminius.

VA RY, v. a., v. n., & “) French varier ; Lat.

vanor. To change ; make unlike itself; di- versify ; make of dif- i ferent kinds : as a verb j» neuter, to be change- able; alter; appear in different forms or co- lors ; deviate; disa- gree : as a noun sub- J stantive (not used)

VA’RIABLE, adj. [n. $.

VA’RIABLY, adv.

VA’RIABLENESS, n. s.

VA’RIANCE,

VARIA’TION,

VA’RIEGATE, v. a.

VARIEGA’TION, n.s.

VARI’ETY,

VA’RIOUS, adj.

VA’RIOUSLY, adv.

change ; deviation : variable is, changeable ; mu- table ; shifting: the adverb and noun substantive following correspond : variance is, disagreement ; discord : variation, change ; mutation ; successive change ; difference ; verbal inflexion : to variegate is, to diversify ; make various : the noun substan- tive corresponding : variety, change ; dissimili- tude ; intermixture of different kinds, colors, or general appearances ; many and different kinds : various is, several; different; unfixed; change- able : the adverb corresponding.

I am come to set a man at variance against his father. Matthew.

Such smiling rogues as these sooth every passion : Renege, affirm, and turn their halcyon beaks, With every gale and wiry of their masters.

Stiakspeare. Sir Walter Blunt,

Stained with the variation of each soil Betwixt that Holmedon and this seat of ours. Id.

Darkling stands The varying shore o' the world.

Id. Antony and Cleopatra. O swear not by the' inconstant moon, That monthly changes in her circled orb, Lest that thy love prove likewise tunable.

Shakspeare.

The inclosed warmth which the earth hath in itself, stirred up by the heat of the sun, assisteth nature in the speedier procreation of those varieties which the earth bringeth forth.

Raleigh's Hittory of the World.

Having been variously tossed by fortune, directed his course to a safe harbour. Bacon.

He had a strange interchanging of large and un- expected pardons, with several executions ; which could not be imputed to any inconstancy, but to a principle he had set unto himself, that he would vary, and try both ways in turn. Id.

After much oarwlion of opinions, the prisoner was acquitted of treason, but by most voices found guilty of felony. Hayward.

Vast crowds of vanquished nations march along. Various in arms, in habit, and in tongue. Drayton.

A cause of law, by violent course, Was, from a variance, now a war become. Daniel.

The master's hand, which to the life can trace The airs, the lines, the features of the face, May, with a free and bolder stroke, express A varied posture, or a flattering dress. Denham.

His heart I know how variable, and vain, Self-left. Milton's Paradise Lost.

Let your ceaseless change Vary to our great Creator still new praise. Milton.

Herbs sudden flowered, Opening their various colours. Id.

All sorts are here that all the' earth yields ; Variety without end. Id. Puradite Lost.

If we admit a variation from the state of his crea- tion, that variation must be necessarily after an eter- nal duration, and therefore within the compass of time. Hale.

God hath divided the genius of men according to the different affairs of the world ; and varied their inclinations, according to the variety of actions to be performed. Browne.

He observed the variation of our English from the original, and made an entire translation of the whole for his private use. Felt.

\'e are to vary the customs according to the time and country where the scene of action lies. Dryden.

Those carton squadrons, variously designed ; Each vessel freighted with a several load. Id.*

I may seem sometimes to have varied from his sense ; but the greatest variations may be fairly de- duced from him. Id.

The names of mixed modes want standards in na- ture whereby to adjust their signification ; therefore they are very variant and doubtful. Locke.

The crime consists in violating the law, and vary- ing from the right rule of reason. Id.

Plant your choice tulips in natural earth, some- what impoverished with very fine sand ; else they will soon lose their variegations. Evelyn' Kalendar.*

Set not any one doctrine of the gospel at variance with others, which are all admirably consistent. Sprat.

Variety is nothing else but a continued novelty.

Sour A.

You are not solicitous about the variableness of the weather, or the change of seasons. Atldiswt.

U hile fear and anger, with alternate grace, Pant in her breast, and vary in her face. Id. Cato.

If the sun's light consisted of but one sort of rays, there would be but one colour in the whol-: nor would it be possible to produce any new colour by reflections or refractions ; and by consequence that the variety of colours depends upon the composition of light.

The shells are filled with a white spar, which variegates and adds to the beauty of the stone.

Woodward on Fc.sfils.

They had fountains of variegated marble in their rooms. Arbuthnot.

There is but one common matter, which is diversi- fied by accidents ; and the same numerical quantity, by variations of texture, may constitute successively all kinds of body. Bentley.

Who are they that set the first and second articles at variance with each other, when for fourteen centu- ries, and more, they have agreed most amicably together? Waterland.

That each from other differs, first confess ; Next, that he varies from himself no less. Pope.

Ladies like rai legated tulips show ; Tis to the changes half the charms we owe : Such happy spots the nice admirers take, Fine by defect, and delicately weak. id.

Will the falcon, stooping from above, Smit with her varying plumage, spare the dove ? Admires the jay the insect's gilded wings? Or hears the hawk when Philomela sings ? Id.

If the learned would not sometimes submit to the ignorant, the old to the weaknesses of the young, there would be nothing but everlasting variance in the world. Su-ift.

The rules of grammar, and useful examples of the «yiriaf»0n of words, and the peculiar form of speech, are often appointed to be repeated.

Watts on the Mind. Many' bleed, By shameful variance betwixt man and man.

Thomson.

He now only wants more time to do that variety of good which his soul thirsts after. Law.

Censurers subject themselves to the charge of variableness in judgment.

Ctaritsa.

VASARI (George), painter and architect, born at Arezzo in 1514. He studied under Del Sarto and Michael Angelo, and wrote the Lives of celebrated Painters, Sculptors, and Architects, 3 vols. 4to. lie died at Florence, 1578. The Treatise on Painting, Florence, 1619, 4to., was written by a nephew of his.

VASCONES, an ancient people of Spain, on the Pyrennees.

VAS'CULAR, adj. Lat. vasculuni. Consist- ing of vessels ; full of vessels.

Nutrition of the solids is performed by the circu- lating liquid in the smallest vascular solids.

Arbitthni't on Aliments.

*VASE, n. *. Fr. vase ; Lat. vasa. A vessel ; generally a vessel rather for show than use.*

The toilet stands unveiled, Each silver vote in mystick order laid. I'ope.

VASE, a term frequently used for ancient ves- sel dug from under ground, or otherwise found and preserved in the cabinets of the curious. In architecture, the appellation vase is also given t»*

tnose ornaments placed on corniches, fochles, or pedestals, representing the vessels of the ancients, particularly those used in sacrifice, as incense pots, flower-pots, &c.

VAS'S AL, n. s.) Fr. vassal ; Ital. vassallo. VAS'SALAGE. J One who holds of a superior lord ; a dependant; servant ; slave : the state of a vassal.

Such as they thought fit for labour they received as vassals; but imparted not the benefit of laws, but every one made his will a law unto his own vassal. Spenser's Stale of Ireland. He renounced the vassalage Of Rome again. Spenser.

She cannot content the lord with performance of his discipline, that hath at her side a vassal, whom Satan hath made his vicegerent, to cross whatsoever the faithful should do. Hooker.

I am his fortune's fossa/, and I send him The greatness he has got.

Shakspeare. Antony and Cleopatra. All my powers do their bestowing lose, Like vassalage at unawares encountering The eye of majesty. Id. Troilus and Cressida.

The mind hath not reason to remember that pas- sions ought to be her vassals, not her masters.

Raleigh.

The common people were free subjects to the king, not slaves and vassals to their pretended lords.

Daviet.

Let us not then pursue, By force impossible, by leave obtained Unacceptable, though in heaven our state Of splendid vassalage. Milton's Paradise Lost.

Cursed vassalage,

First idolized till love's hot fire be o'er, Then slaves to those who courted us before.

Dryden.

As all his vassals eagerly desired ; With mind averse, he rather underwent His people's will, than gave his own consent. Id.

The vassals are invited to bring in their complaints to the viceroy, who imprisons and chastises their masters. AJdison.

.Every petty prince, vassal to the emperor, can coin what money he pleaseth. Swift's View of Ireland.

VASSAL, in our ancient customs, signified a tenant or feudatory person, who vowed fidelity and homage to a lord, on account of some land, &c., held of him in fee ; also a slave or servant, and especially a domestic of a prince. See FEUDAL SYSTEM.

VAST, adj. &n. s."\ Fr. vast e ; Lat. vastus.

VASTA'TION, n. s. I Large ; great ; wild : an

VASTID'ITY, [empty waste : vastation and

VAST'LY, adv. [vastidity (both unusual)

VAST'NESS, n. s. \ signify waste ; depopula-

VAST'Y, adj. J tion ; wildness : vastly and

vastness correspond with the adjective vast :

vasty is enormously great ; immense.

Perpetual durance,

Through all the world's vastidity. Shakspeare. I can call spirits from the vasty deep. Id.

They shook hands, as over a cost ; and embraced, as from the ends of opposed winds. Id.

The vicious language is vast and gaping, swelling and irregular ; when it contends to be high, full of rock, mountain, and pointedness. Ben Jonton.

So bore the ship aloft her fiery bound, About whom rusht the billowes, blacke and caste.

Chapman.

What the parliament meant to attempt with those vast numbers of men, every day levied. Clarendon.

This wild-fire made the saddesi castations, in lh« many fatal outrages which these eager contentions occasion. Decay of Pitty.

They may, and do, vastly differ in their manners, institutions, customs ; but yet all of them agree in having some deity to worship. Wilkint.

Through the vast of heaven it sounded. Milton.

Behemoth, biggest born of earth, upheaved His vastness. Milton's Paradise Lost.

She by the rocks compelled to stay behind, Is by the vastness of her bulk confined. Waller.

Holland's resolving upon its own defence, without our share in the war, would leave us to enjoy the trade of the world, and thereby grow vastly both in strength and treasures. Temple.

Ariosto observed not moderation in the vastness of his draught. Dryden.

It is vastly the concern of government and of themselves too, whether they be morally good or bad.

South.

Hence we may discover the cause of the vastness of the ocean. Bentley.

The watery vast, Secure of storms, your royal brother past. Pope.

That is an ample and capacious mind, which takes in vast and sublime ideas without pain. Watts.

His open stores, Though vast, were little to his ample heart.

Thornton.

VAT, n. s. Sax. pat ; Belg. vat. A vessel in which liquors are kept in the immature state.

Plumpy Bacchus with pink eyen, In thy vats our cares be drowned. Shakspeare.

Let him produce his vats and tubs in opposition to hoaps of arms and standards. Addison.

Wouldst thou thy vat with generous juice should*

froth, Respect thy orchats. Philips.

VATABLES (Francis), professor of Hebrew in the Royal college of Paris, was born in Pi- cardy. His knowledge of Hebrew astonished the most learned Jews. He wrote notes on the Bible, which were condemned by the faculty of theology, at Paris, yet are highly esteemed. The last edition was in 2 vols. fol. 1729. He died in 1547.

VATICAN, a magnificent palace of the pope, in Rome, which consists of several thousand rooms ; but the parts of it most admired are the grand staircase, the pope's apartment, and espe- cially the library, which is one of the richest in the world, botb in printed books and manu- scripts.

VATICANUS, the hill at Rome on which the palace of the pope stands.

VAT'ICIDE, n. s. Lat. votes and (ado. A murderer of poets.

The caitiff vaticide conceived a prayer. Pojte.

VATI'CINATE, v. n. Lat. vaticinor. To prophesy ; to practise prediction.

The most admired of all prophane prophets, whose predictions have been so much cried up, did vaticinatt here. Howel.

MATTEL (N.), a writer on the law of nations, was born at Neufchatel, and died in 1770, at Brussels.

VAVASOUR, n. s. Fr. vcvuseur. One who himself holding of a superior lord has others holding under him.

Names have been taken of civil honours, as king, knight, valvasor, or wiwisor, squire. Cumden.

VAVASSOR (Francis), a Jesuit, was born in 1605. He taught rhetoric and theology at Paris, where he died in 1681. He wrote two Latin poems on the Burlesque, and epigrams, and a life of Jesus.

VAU BAN (Sebastian le Prestre), lord of, a celebrated engineer. He displayed his know- ledge of fortification in the course of many sieges, and his services were rewarded with the first military honors. He was made governor of Lisle in 1(568, commissary general of the fortifi- cations of France in 1678, governor of the ma- ritime parts of Flanders in 1689, and a marshal of France in 1703. He died in 1707. He wrote, 1. The French Engineer, 8vo. 2. Treatise on the Attack and Defence of places. 8vo. 3. Es- says on Fortification, 12mo. 4. Political Testa- ment of M. Vauban.

VAUCLUSE, a department of France, in Provence, bounded on the south by the depart- ment of the Mouths of the Rhone. Its extent is about 1400 square miles; its population about 210,000. The surface in the north-east is tra- versed by branches of the Alps, some of which, such as Monts Ventoux, Lure, Leberon, Bluys, &c., rise to a considerable elevation : the west part consists of a broad valley extending along the Rhone. It is also watered by the Durance. The soil is rich in the low grounds; in the moun- tains stony and unproductive. The climate is suitable to the culture of silk, olives, and vines, maize and wheat. The manufactures consist of silk, and, on a small scale, linen, leather, and paper. The department belongs to the diocese of Avignon, and to the jurisdiction of the royal court of Nismes. It is divided into four arron- dissements, viz. Avignon the capital, Orange, Carpentras, and Apt.

\ AICLUSE, the remarkable fountain in the south-east of France, which gives name to the above department, issues from an immense ca- vern, overhung and surrounded by huge rocks and mountains, and is remarkable chiefly for the quantity of water discharged. This forms at once a river, the Sorgues, capable of driving mills anH bearing boats. In summer, and during dry seasons, the pure and limpid water issues tranquilly from the cavern by subterraneous chan- nels ; but in spring, and after heavy falls of rain, they overflow the basin and precipitate them- selves among the rocks in a number of beautiful cascades. This fountain is celebrated for the loves of Petrarch and Laura, whose residence was in the vicinity.

VAUD, PAYS DE, a canton in the west of Switzerland, bounded on the west by France, and on the south by the lake of Geneva ; on the north it includes part of the lake of Neufchatel. Its superficial extent is nearly 1500 square miles, and its population about 150,000. It is in gene- ral less mountainous than other parts of Swit- zerland, consisting of beautiful valleys and plain-, intersected by small hills, appropriated to the culture of corn and vines, i he climate, com- paratively mild in the west of the canton, be- comes colder towards the east: part of the arable pround is applied to the culture of hemp and flax, other districts to pasturage, plantations, &<\ The mineral products are iron, salt, coal, le;u',

and gypsum. The chief exports wine, cattle, leather, and cheese. The inhabitants are strict Calvinists, and remarkable for the careful edu- cation of their youth. Geneva is in its vicinity; and its chief town, Lausanne, is a seminary for theological study. At another of its towns, Yver- dun, is the well known institution of Pestalozzi. The current language is French. After the de- cline of the Roman empire the Pays de Ynud formed a part of the kingdom of Burgundy, and was afterwards annexed to Savoy. It was con- quered from the last by the Swiss, and was an- nexed to that country as a dependency of the canton of Berne; but was acknowledged as a separate canton in 1803 and 1814.

VAUDOIS, YALDEXSES, or WALDEXSES, in ecclesiastical history, a name given to a sect of reformers. The origin of this famous sect, ac- cording to Mosheim, was as follows : — Peter, an opulent merchant of Lyons, surnamed Valden- sis, or Valdisius, from Vaux or Waldrum, a town in the marquisate of Lyons, being struck with the glaring contradiction between the doctrines of the pontiffs and the truths of the Gospel, abandoned his mercantile vocation, distributed his riches among the poor (whence the VValdenses were called poor men of Lyons), and, forming an as- sociation with other pious men who had adopted his sentiments and his turn of devotion, he began in the year 1 180 to assume the quality of a pub- lic teacher. Soon after the archbishop of Lyons, and others, vigorously opposed him, but without success; for the number of his followers daily increased.

They formed religious assemblies, first in France, and afterwards in Lombardy, whence they propagated their sect throughout the other provinces of Europe with incredible rapidity, and with such invincible fortitude that the most cruel inventions of merciless persecu- tion could not damp their zeal, nor entirely ruin their cause. They did not attempt to introduce new doctrines into the church. They only wanted to reduce the form of ecclesiastical go- vernment, and the manners both of the clergy and people, to that amiable simplicity and pri- mitive sanctity that characterised the apostolic ages. They denied the supremacy of the Roman pontiff, and maintained that the rulers and mi- nisters of the church were obliged, by their vocation, to imitate the poverty of the apostles. They considered every Christian as, in a certain measure, qualified and authorised to instruct, exhort, and confirm the brethren in their Chris- tian course, and demanded the restoration of tin- ancient penitential discipline of the church, i. e. the expiation of transgressions by prayer, fasting, and alms, which the new.jnvented doctrine of indulgences had almost totally abolished. They at she same time affirmed that every pious Christian was qualified and entitled to prescribe to the penitent the kind or degree of satisfaction or expiation that their transgressions required ; that confession made to priests was by no means necessary ; and that the power of delivering sin- ners from the guilt and punishment of their offences belonged to God alone. They looked upon the prayers and other ceremonies that were instituted in behalf of the dead as vain, useless, and absurd, and denied the existence of departed

souls in an intermediate state of purification ; affirming that they were, immediately upon their separation from their body, received into heaven, or thrust down to hell. Their rules of practice were extremely austere. They prohibited all wars, and suits of law, and all attempts towards the acquisition of wealth, the inflicting of capital punishments, self-defence against unjust vio- lence, and oaths of all kinds. During the greatest part of the seventeenth century, those of them who lived in the valleys of Piedmont, and who had embraced the doctrine, discipline, and wor- ship of the church of Geneva, were oppressed and persecuted, in the most barbarous and inhu- man manner, by the ministers of Rome. This persecution was carried on with peculiar marks of rage and enormity in the years 1655, 1656, and 1696, and seemed to portend nothing less than the total extinction of that unhappy nation. See WALDENSES.

VAUGELAS (Claude Favre), lord de, was born at Bourg, in Bresse, in 1585. He was Chamberlain to the duke of Orleans,. and mem- ber of the French academy. He contributed to the Encyclopedie ; and wrote Remarks on the French language, and a translation of Quintus Curtius. He died poor in 1650.

VAUGHAN (Sir John), chief justice of the common pleas under Charles II. He died in 1674, and his reports were published posthu- mously.

VAULT, n. s., v. a., & v. n.~\ Fr. voulte ; VAULT'AGE, n. s. flt»l.t»tta; low

VAULT'ED, adj. i Lat. valuta. A

VAULT'Y. J continued arch ;

cellar ; cave ; burying-place : to cover with such an arch ; to leap ; jump : vaultage is cellarage of the above description : vaulted, arched continu- ously : vaulty, arched ; concave.

The sileat vaults of death, unknown to light, And hell itself, lie naked to his sight. Sandys.

O, you are men of stone, Had I your tongues and eyes, I'd use them so That heaven's vault should crack.

Shakspeare. King Lear. Hath nature given them eyes To see this vaulted arch, and the rich cope Of sea and land, which can distinguish 'twixt The fiery orbs above, and the twinned stones Upon the humbled beach 1 Id. Cumbeline.

Vaulting ambition, which o'erleaps itself, And falls on the other. Id. Macbeth.

If I could win a lady by vaulting into my saddle with myaimour on, 1 should quickly leap into a wife.

Shakspeure.

He'll call you to so hot an answer for it. That caves and womby vaultages of France Shall chide your trespass, and return your mock In second accent to his ordnance. Id. Henry V.

1 will kiss thy detestable bones, And put my eye-balls in thy vaulty brows, And ring these fingers with thy household worms.

Shakfpeare.

. Over-head the dismal hiss Of fiery darts in flaming vollies flew ; And flying vaulted either host with fire. Milton. Leaning on his lance, he vaulted on a tree.

Dryden.

The word signifies an orb or sphere. And this •hews us both the form of the Mosaical abyss, which was included within this vault ; and the form of the

habitable earth, which was the outward surface of this vault, or the cover of the abyss.

Burnet't Theory of the Earth,

Lucdn vaulted upon Pegasus with all the heal a:id intrepidity of youth. Addisou.

It" a man should leap a garret, or vault down the monument, would he leave the memory of a hero behind him ? Collier on Duelling.

Restore the lock ! she cries, and all around Restore the lock ! the vaulted roofs rebound. Pope,

Whether your fruitful fancy lies To banish rats that haunt our vaults. Swift.

VAUNT, v. a., v. n., & n. s ~\ Fr. vaster.

VAUNT'ER, n. t. f To boast ; dis-

VAUNT'FUL, adj. lp'ay with os-

VAUNT'INGLY, adv. J tentation : play

the braggart : a vain boast ; ostentation : the de- rivatives correspond.

The illusions of magick were put down, and their vaunting in wisdom reproved with disgrace.

Wisdom xvii. 7.

Not any damsel which her vaunteth most In skilful knitting of soft silken twine. Spenier.

Sir John Perrot bent his course not to that point, but rather quite contrary, in scorn, and in vain vaunt of his own counsels. Id.

Some feign

To menage steeds, as did this muntcr ; but in vain.

Id.

You say, you are a better soldier ; Let it appear so ; make your vaunting true.

Slinkrpeure.

I heard thee say, and vanntingly thou spak'st it. That thou wert cause of noble Gloster's death. Id.

So spake the apostate angel, though in pain ; Vaunting aloud, but racked with deep despair.

Milton.

My vanquisher, spoiled of his vaunted spoil. Id.

Tongue-valiant hero ! vaunter of thy might ! In threats the foremost, but the last in fight.

DryJen.

Pride, which prompts a man to vaunt and over- value what he is, does incline him to disvalue what ho has. Government of the Tongue.

Such vauntf as his, who can with patience read, Who thus describes his hero when he's dead 1

GrunviUe.

VAUNT, n. s.) Fr. avant, avantmur. The

VAUNT'MDRE. { first part : false wall ; a work raised before the main wall.

Our play Leaps o'er the vaunt and firstlings. Shaktpeare.

With another engine, named the warwolfe, he pierced with one stone, and cut as even as a thread, two vauntmuret. Camden's Remains.

This warlike captain daily attempting the vanmurei, in the end by force obtained the same ; and, so pos- sessed of the place, desperately kept it till greater help came running in ; who, with wonderful expedi- tion, clapt up a strong covering betwixt the wall and the vanmure hnnllet.

VA'WARD, n. s. Van and ward. Forepart. Obsolete.

He desired nothing more than to have confirmed his authonty in the minds of the vulgar, by the present and ready attendance of the uai/ood.

Knolless History of the Turks.

Since we have the vaward of the day, My love shall hear the musick of my hounds.

Shakspearf, Marcius

Their bands i' th' vaward are the Antiates Of their best trust. Id. CViu/ awu.

UCA

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VEC

UBAY, a considerable river of Peru, has its source in a lake formed by the river Parapiti, or Apere, in the territory of Isoso, and runs to the north and N. N. W. more than seventy leagues. It crosses the country of the Chiquitos Indians, and the province of Los Moxos in Quito, which it enters much increased by the waters it has received from that of Itenes, opposite the en- trenchment of Santa Rosa. This river is also called Magdalena San Miguel, and formerly Los Chiquitos. Its mouth is in hit. II3 57′ S.

UBEDA, a large inland town of Spain, in Andalusia, in the province of Jaen. All kinds of fruit, grapes, olives, and, above all, figs of ex- cellent quality, and a good breed of horses, are found in the vicinity. The population amounts to 16,000, of whom part weave common woollen stuffs; but manufactures do not thrive in general in Andalusia, and Ubeda has the disadvantage of standing on no great road. Like most towns in Spain it contains a number of religious houses, having eleven churches, great and small, several monasteries, and a large hospital. Thirty miles north-east of Jaen, and fifty-eight N.N.E. ot Granada.

UB1CATION, n. s. \ Lat. ubi. Local re- UBI'ETY. $ lation ; whereness. A

scholastic term.

Relations, vbicationt, duration, the vulgar philo- sophy admits to be something ; and yet to enquire in what place they are were gross. GlanoUle.

UBIQUITARIANS, formed from ubique, ‘ every where,’ in ecclesiastical history, a sect of Lutherans which rose and spread itself in Germany ; and whose distinguishing doctrine was, that the body of Jesus Christ is every where, or in every place. Brentius, one of the earliest re- formers, is said to have first broached this error, in 1560.

*UBIQ’UITY, «. *. > Latin ubique.*

UBIQ’CITARY, adj. & n. s. J Omnipresence; existence at the same time in all places : exist- ing every where : one who exists every where.

In the one there is attributed to God death, whereof divine nature is not capable ; in the other. ubiquity unto man, which human nature admitteth npt. Hooker.

Pern she hight, A solem wight, As you should meet, ID any street,

In that ubiquity. Ben Jonson.

To conclude, either Aquinas is false, or the Papists

For wealth and an ubiquitary commerce, none can exceed her. Hoicet.

Could they think that to be infinite and immense, the ubiquity of which they could thrust into a corner of their closet? &mth.

UCAVAI.K, a large river of South America, enters the Amazons in lat. 4° 25′ S. Near its supposed sources this noble stream is called the Apurimac, and rises to the south of the moun- tains of Cailloma, between lat. 16° and 17° S., near the city of Arequipa, where it is joined by the Monigote, or Panguana, and is so deep that on entering the province of Canes a rope bridge becomes necessary. Eight miles below this bridge it passes through the Andes, amid awful precipices, and is joined by the Pampas orChar-

(ii-. in hit. 13° 10′ S., from the west. The Vil- cainayo, nearly equal in size to the Apurimac, here fulls into it at lat. 1‘2° 15′ S., and the Rio Jauja, of Mantaro, in lat. 12° 6′ S. At the junc- tion of this stream with the Apurimac the current which had before run from Dorth-west changes to the north-east. The Perene at 11° 13’, and the Ynambari, or Paucartambo, at 10° 45’, aug- ment its waters ; after which, from hence to lat. 8° 26′ S., it receives forty large streams, but none so considerable as the Beni, whose sources lie in the province of Sicasica, in lat. 19° S. At its confluence with this river the Apurimac is called the Grand Para, and is two miles in width ; at lat. 8°26’S. the Pachitea throws in its \MUT-. Northward of this the Piachiz joins it, and here the river changes from north to north-east. At lat. 7° 35′ S. the Aguaytra falls into it, and in lat. 7° S. the Manoa, or

Cuxniabatay, the Sa- riacu at lat. 6° 45′ S.., and the Tapiclii at lat. 5° S. The stream has now borne for some time the name of Ucayale, and proceeding under this appellation, with an immense volume, it receives, at lat. 4° 55′ S., the Tunguragua, Lauricocha, or False Maranon. The Ucayale, or True Maranon, is navigable at all seasons; it was explored in 1794 by father Girval, who ascended it from St. Regis to the river Pachitea, and found its cur- rent gentle, abounding with fish, and its banks crowned with superb forests stored with wild animals. The native tribes on its shores were generally of a pacific nature ; and in the course of 300 leagues he found 132 islands. From the confluence of the Ucayale and Tunguragua the river decidedly receives the name of AMAZONS, or MAR ANON, which see.

UD'DER, n.s. Sax. u-&en ; Belg.twfer; Lat. uber. The breast or dugs of a cow, or other large animal.

A lioness, with udders all drawn dry, Lay couching head on ground. Shakspeare.

Sithence the cow

Produced an ampler store of milk ; the she-goat, Not without pain, dragged her distended udder.

Prior. .Marian soft could stroke the uddered cow. Gay.

UDINA, a delegation or district of Austrian Italy, in the government of Venice, comprising the former Venetian Friuli, with the exception of the eastern part and a portion of sea coast in- cluded in the government of Trieste. It has a superficial extent of 2900 square miles, and a s population of nearly 270,000. The capital, Udina, is situated in the middle of an extensive plain, on the banks of the Lisonzo, and the canal of Roja. It is about nineteen miles from the sea, and covers a considerable space of ground, having a circuit of four miles ; but its popula- tion is not in proportion, hardly exceeding 17,000. It contains a cathedral, with several churches and convents.

\ HAL, n. s. Old Fr. veel, a calf, veelcr, vesler, to bring forth acaif; Lat. vitcllus. The flesh of a calf killed for the table.

Wouldst thou with mighty beef augment thy meal. Seek Leadenhall ; St. James's sends ihee veal. Gay.

\ I '.(Tl<)N, n. t. •) Lat. c, r/i,, rcctito, vec ITA'IION, > tura. The act r>f carrying,

Three things one nation selleth unto another ; the commodity as nature yieldeth it, the manufacture, and the vecture or carriage. Bacon's Essays.

Enervated lords are softly lolling in their chariots ; a species of vectitation seldom used amongst the an- tients. Arbiitliiint.

VEDAS, the sacred books of the Hindoos, be- Jeved to be revealed by God, and called immor- tal. They are considered as the fountain of all knowledge, human and divine, and have been said to be four in number. The rigveda consists of five sections ; the yajurveda of eighty-five; the samaveda of 1000 ; and the at' harvaveda of nine ; with 1100 sac'ha's,or branches, in various divisions and subdivisions. The vedas in truth are infinite, but have been long reduced to this number and order : the principal part of them is that which explains the duties of man in a me- thodical arrangement ; and in the fourth is a system of divine ordinances. From these are reduced the four upavedas, the first of which was delivered to mankind by Brahma, Indra, Dhanvvantari, and five other deities ; and corn- prises the theory of disorders and medicines, with the practical methods of curing diseases. The second consists of music, invented for the purpose of raising the mind, by devotion, to the felicity of the divine nature ; the third treats of ln<2 fabrication and use of arms ; and the fourth of sixty-four mechanical arts.

VEDETTE, in war, a sentinel on horseback, with his horse's head towards the place whence any danger is to be feared, and his carabine ad- vanced, with the butt end against his right thigh. When the enemy has encamped, there are ve- dettes posted at all the avenues, and on all the rising grounds, to watch for its security.

VEER, v.n. &cv. a. Fr. virer. To turn about: turn ; change ; vary ; let out sail.

1 see the haven nigh at hand, To which I mean my weary course to bend ;

Veer the main sheet, and bear up with the land.

Spenser.

As it is a great point of art, when our matter re- quires it, to enlarge and veer out all sail; so, to take it in and contract it, is of no less praise when

the ar- gument doth ask it. Ben Jonson.

Nigh river's mouth, where wind Veers oft, as oft he steers and shifts her sail.

Milton.

If a wild uncertainty prevail, And turn your veering heart with every gale ; You lose the fruit of all your former care, For the sad prospect of a just despair. Roscommon.

A -head the master pilot steers, And, as he leads, the following navy veers.

Dry den.

It is a double misfortune to a nation given to change, when they have a sovereign that is prone to fall in with all the turns and veerings of the people. Addison's Freeholder.

The wind veered about to north-west. Derham. To VEER AND HULL, to pull a rope tight, by drawing it in and slackening it alternately, till the body to which it is applied acquires an addi- tional motion, like the increased vibrations of a pendulum, so that the rope is straitened to a greater tension with more facility and despatch. This method is particularly used in hauling the bowlines. The wind is said to veer and haul wnen it alters its direction, and becomes more or

less fair. Tl us it is s-.iid to veer aft a-ul to haul forward.

VEERING, or WEARING, the operation by which a ship, in changing her course from one board to the other, turns her stern to windward. Hence it is used in opposition to tacking, wherein the head is turned to the wind, and the stern to leeward. See SEAMANSHIP.

V EGA (Lopes Felix de), a Spanish poet, was born at Madrid of a noble family, in 15G2. He became secretary to the duke of Alva, and after- wards served on board the armada, destined for the invasion of England. After having lost two wives, he entered into orders. Pope Urban VII. created him D. D., and bestowed on him the cross of the order of Malta, and a place in the apostolic exchequer. He died in 1635. His principal performances are comedies, which were acted with great success, and procured him a considerable fortune. His invention was so fer- tile that he sometimes wrote a comedy in a single day. He wrote several poems ; – all his works make twenty-five volumes. VEG'ETATE, v. n. ˆ Lat. vcgeto. To VEGETABIL'ITY, n. s. grow as plants; shoot VEG'ETABLE, n.s.&adj. \ out; grow without VEGETA'TIOX, n. s. ˆsensation: vegeta-

bility is vegetable nature ; growth like

VEG'ETATIVE, adj.

VEGETE',

VEG'ETIVE, adj. & n. s.J a vegetable (which has been defined as that which has growth with- out sensation); a plant: as an adjective, belong- ing to or resembling a plant : vegetation is vegetable growth : vegetative, having the growth of vegetables, or power to produce growth in plants: vegete is an obsolete word for vigorous; active : vegetive for vegetable.

Nor rent off, but cut off ripe bean with a knife, For hindering stalke of hir vegetive life. Titsser.

Hence vegetivet receive their fragrant birth, And clothe the naked bosom of the earth. Sandyi.

Plants, though beneath the excellency of creatures endued with sense, yet exceed them in the faculty of vegetation and of fertility. Hooker.

Creatures vegetative and growing have their seeds in themselves. Raleigh's History of the World.

The nature of plants doth consist in having a vege- tative soul, by which they receive nourishment and growth, and are enabled to multiply their kind.

WiOani.

Amidst them stood the tree of life, High eminent, blooming ambrosial fruit Of vegetable gold. Milton's Paradise Lotc.

The coagulating spirits of salts, and lapidifical juice of the sea, entering the parts of the plant, overcome its regetability, and convert it unto a lapideous sub- stance. Browne.

The tree still panted in the' unfinished part, Not wholly vegetive ; and heaved her heart.

Dryden.

In vegetables it is the shape, and in. bodies not propagated by seed it is the colour, we most fix on.

Locke.

These pulsations I attribute to a plastick na?v.re, or vital principle, as the legetation of plants must also be. Rtiu.

The soul was vegete, quick, and lively ; full of the youthfulness and spriteliness of youth. Simth.

The vegetable world, each plant and tree,

From the fair cedar on the craggy brow

To creeping moss. Priitr

The exterior surface consisted of a terrestrial matter proper for the nourishment of plants, being little en- taogled with mere mineral matter, that was unfit for vegetation. Woodward.

That vegetative terrestrial hath been ever the stand- ing fund out of which is derived the matter of all animal and vegetable bodies. Id. Natural History.

Let brutes, and vegetables that cannot think, So far as drought and nature urges, drink. Wall.

The faculties in age must be less tegete and nimble than in youth. Wallis.

See dying vegetables life sustain : See life dissolving vegetate again. Pope.

The sun, deep-darting to the dark retreat Of vegetation, sets the steaming power At large. Thomson' Swing.*

Other animated substances are called vegetables, which have within themselves the principle of another sort of life and growth, and of various productions of leaves, flowers, and fruit, such as we see in plants, herbs, trees. Watts.

VEGETABLES. The principles of which vege- tables are composed, if we pursue their analysis chemically as far as our limits will allow, are chiefly, says Dr. Ure, carbon, hydrogen, and oxygen. Nitrogen is a constituent principle of several, but for the most part in small quantity. Potash, soda, lime, magnesia, silex, alumina, sulphur, phosphorus, iron, manganese, and mu- riatic acid, have likewise been reckoned in the number; but some of these occur only occasion- ally, and chiefly in very small quantities ; and are scarcely more entitled to be considered as belonging to them than gold,

or some other sub- stances, that have been occasionally procured from their decomposition.

The following are the principal products of vegetation : —

1. Sugar. — Crystallises. Soluble in water and alcohol. Taste sweet. Soluble in nitric acid, and yields oxalic acid.

2. Sarcocol. — Does not crystallise. Soluble in water and alcohol. Taste bitter sweet. Solu- ble in nitric acid, and yields oxalic acid.

3. Asparagin. — Crystallises. Taste cooling and nauseous. Soluble in hot water. Insoluble in alcohol. Soluble in nitric acid, and converted into bitter principle and artificial tannin.

4. Gum. — Does not crystallise. Taste insipid. Soluble in water, and forms mucilage. Inso- luble in alcohol. Precipitated by silicated pot- ash. Soluble in nitric acid, and forms mucous and oxalic acids.

5. Ulmin. — Does not crystallise. Taste in- sipid. Soluble in water, and does not form mucilage. Precipitated by nitric and oxymu- riatic acids in the state of resin. Insoluble in alcohol.

6. Inulin. — A white powder. Insoluble in cold water. Soluble in boiling water, but pre- cipitates unaltered after the solution cools. In- soluble in alcohol. Soluble in nitric acid, and yields oxalic acid.

7. Starch. — A white powder. Taste insipid. Insoluble in cold water. Soluble in hot water; opaque and glutinous. Precipitated by an infu- .IDII of nutgalls ; precipitate redissolvtd by a heat of 120°. Insoluble in alcohol. Soluble in dilute nitric acid, and precipitated by alco hol. With nitric acid yields oxalic acid and a waxy matter.

8. Iwiigo. — A blue powder. Taste insipid. Insoluble in water, alcohol, ether. Soluble in sulphuric acid. Soluble in nitric acid, and con- verted into bitter principle and artificial tannin.

9. Gluten.— Forms a ductile elastic mass with water. Partially soluble in water ; precipitated by infusion of nutgalls and oxygenised muriatic acid. Soluble in acetic acid and muriatic acid. Insoluble in alcohol. By fermentation becomes viscid and adhesive, and then assumes the pro- perties of cheese. Soluble in nitric acid, and yields oxalic acid.

10. Albumen. — Soluble in cold water. Coa- gulated by heat, and becomes insoluble. Inso- luble in alcohol. Precipitated by infusion of nutgalls. Soluble in nitric acid. Soon putrefies.

11. Fibrin. — Tasteless. Insoluble in water and alcohol. Soluble in diluted alkalies, and in nitric acid. Soon putrefies.

12. Gelatin.— Insipid. Soluble in water. Does not coagulate when heated. Precipitated by in- fusion of galls.

13. Bitter principle. — Color yellow or brown. Taste bitter. Equally soluble in water and al- cohol. Soluble iu nitric acid. Precipitated by nitrate of silver.

14. Extractive. — Soluble in water and alco- hol. Insoluble in ether. Precipitated by oxy- genised muriatic acid, muriate of tin, and mu- riate of alumina ; but not by gelatin. Dyes fawn color.

15. Tannin. — Taste astringent. Soluble in water and in alcohol of 0-810. Precipitated by gelatin, muriate of alumina, and muriate of tin.

16. Fixed oils. — No smell. Insoluble in water and alcohol. Forms soaps with alkalies. Coa- gulated by earthy and metallic salts.

17. Wax. — Insoluble in water. Soluble in alcohol, ether, and oils. Forms soap with alka- lies. Fusible.

18. Volatile oil. — Strong smell. Insoluble in water. Soluble in alcohol. Liquid. Volatile. Oily. By nitric acid inflamed, and converted into resinous substances.

19. Camphor. — Strong odor. Crystallises. Very little soluble in water. Soluble in alcohol, oils', acids. Insoluble in alkalies. Burns with a clear flame, and volatilises before melting.

20. Birdlime. — Viscid. Taste insipid. Inso- luble in water. Partially soluble in alcohol. Very soluble in ether. Solution green.

21. Resiiu. — Solid. Melt when heated. In- soluble in water. Soluble in alcohol, ether, and alkalies. Soluble in acetic acid. By nitric acid converted into artificial tannin.

22. Guaiacum. — Possesses the character of resins, but dissolves in nitric acid, and yields oxalic acid and no tannin.

23. Balsams. — Possess the characters of the re- sins, but have a strong smell ; when heated ben- zoic acid sublimes. It sublimes also when they are dissolved in sulphuric acid. By nitric acid converted into artificial tannin.

24. Caoutchouc. Very elastic. Insoluble in water and alcohol. When steeped

in ether, re- duced to a pulp, which adheres to every thing. Fusible and remains liquid. Very combustible.

25. Gum ritins. Form milky solutions with water, transnarent with alcohol. Soluble in

VKH 3::

alkalis. With nitric acid converted into tannin. Strong smell. Brittle, opaque, infusible.

26. Cotton. — Composed of fibres. Tasteless. Very combustible. Insoluble in water, alcohol, and ether. Soluble in alkalies. Yields oxalic acid to nitric acid.

27. Suber. — Burns bright, and swells. Con- verted by nitric acid into suberic acid and wax. Partially soluble in water and alcohol.

28. Wood. — Composed of fibres. Tasteless. Insoluble in water r.nd alcohol. Soluble in weak alkaline lixivium. Precipitated by acids. Leaves much charcoal when distilled in a red heat. Soluble in nitric acid, and yields oxalic acid. To the preceding we may add, ernetin. fungin, hematin, nicotin, pollenin ; the new ve- getable alkalies, aconita, atropia, brucia, cicuta, datura, delphia, hyosciama, morphia, picrotoxia, strychnia, veratria, &c. &c.

VEGETATION, SALINE. Chaptal has given us a good memoir on this subject, in the Journal de Physique for October 1788, entitled Observa- tions on the Influence of the Air and Light upon the Vegetation of Salts. In the operations in' the large way, of his manufactory of medical and chemical products, he often observed that salts, particularly the metallic, vegetated on the side most exposed to the light ; and the frequency of ihe effect induced him to make some direct ex- periments on the subject. For this purpose he look several capsules of glass, and covered the half of each, as well above as below, with black silk. At the same time, he prepared solutions of almost all the earthy, alkaline, or metallic compound salts in distilled water, at the tempe- rature of the atmosphere. These capsules were placed on tables in a well closed chamber, which had no chimney, and of which the doors and windows were carefully stopped up, in order that the evaporation might not be hastened by any agitation of the air. Reflected light, by which I understand the light from the clouds, was admitted through a small aperture in one of the window-shutters. By this management, as well as the disposition of the capsules, one-half of each of their respective cavities received light from the aperture, and the other was almost per- fectly in darkness. The solutions were then carefully poured

into the capsules by means of a funnel resting on the middle of the bottom, so that the border of the fluid was neat and uniform, without any irregularity or drop of the fluid fall- ing on the bfcre surface of the glass.

Upwards of 200 experiments were made, with variations of the principal trials, so as to leave no doubt with regard to the constancy of the results. The most remarkable fact is, that the vegetation took place only on those surfaces which were illuminated. This phenomenon was so striking, in most of the solutions, that in the space of a few days, and frequently even within one single day, the salt was elevated several lines above the liquor upon the enlightened surface, while there did not appear the smallest crust or edge on the dark part. Nothing could be more interesting than to observe this vegetation, projecting fre- quently more than an inch, and marking the line of distinction between the illuminated and dark parts of the vessel. The sulphates of iron, of VOL. XXII.

zinc, and other metals, more especially presented this appearance. It was generally observed that the vegetation was strongest toward the most enlightened part.

This phenomenon may be rendered still more interesting, by directing the vegetation at plea- sure towards the diffprent pans of the vessel. For this purpose, nothing more is required than to cover the several parts in succession. For the vegetation always takes place in the enlight- ened parts, and quickly ceases in that which i; covered.

When the same solution has stood for several days, the insensible evaporation gradually de- presses its surface, and a crust or edge of salt is left in the obscure part. But the salt never rises, or at least very imperfectly, above the liquor, and cannot be compared with the true vegeta- tion. When salts are suffered to vegetate in this manner, the spontaneous evaporation of the fluid affords very few crystals. All the saline matter extends itself on the sides of the vessel.

VEGETIUS (Flavins Renatus), lived in the fourth century. He wrote Military Institutions which were printed at Paris in 1762, 12mo., and a Treatise on the Veterinary art, which is in the Rei Rustics Scriptores, Leipsic, 2 vols. 4to.

VEGLIA, an island in the Adriatic, at the north-west corner of the gulf of Quarnero, now belonging to Austria, and included in the go- vernment of Trieste, circle of Fiume. Its area is about 210 square miles; its population about

10,000.

VEHEMENT, adj.} Fr. vrhcmc nt ; Lat.

VE'HEMENTLY, adv. f vehement. Violent;

VE'HEMENCE, n. s. £ forcible; ardent: the

*VE'HEMENCY. * adverb and noun sub-*

stantives corresponding.

Think ye are men ; deem it not impossible for you to err : sift impartially your own hearts, whether it be force of reason, or vehemency of affection, which hath bred, and still doth feed, these opinions in you.

Hooker.

By their vehement instigation, In this just suit come I to move your grace.

Shafapeare.

Would it apply well to the vehemence of your affec- tion that I should win what you would enjoy ? Id.

A strong imagination hath more force upon light and subtile motions than upon motions vehement or ponderous. RICOH.

The extremity of the condition produced some earnestness and veliemency of expression more than ordinary. Clarendon.

This pure cause would kindle my rapt spirits To such a flame of sacred vehemence, That dumb things would be moved to sympathize.

Milton . I find

In all things else delight indeed ; but such

As, used or not, works in the mind no change,

Nor vehement desire. Id. Paradite Lott.

The Christian religion inculcates kindness more vehemently, and forbids malice and hatred more strictly, than any religion did before. Tillotson.

He hurries on his action with variety of events, and ends it in less compass than two months. This vehemence of his is most suitable to my temper.

Dryden.

Gold will endure a vehement fire for a long tim«, without any change. (/'»«•.*

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VE1

Marcus is orer-warm ; his fond complaints Have so much earnestness and passion in them, 1 leave him with a secret kind of horror, And tremble at his vehemence of temper.

Addison's Cato.

VE'HICLE, n. s. Lat. vehiculum. That in which any thing is carried.

That the meat" descends by one passage, the drink, or moistening vehicle, by another, is a popular tenet.

Browne.

The gaiety of a diverting word serves as a vehic'e to convey the force and meaning of a thing.

L'Ettrange.

Evil spirits might very properly appear in vehicle of flame, to terrify and surpriie. Addison's Guardian.*

VEHICLE, in pharmacy, is any liquid serving to dilute some medicine, in order that it may be administered more commodiously to the patient. VEIENTES, the inhabitants of Veii. VEII, in ancient geography, a city of Etruria, long the powerful rival of Rome, distant about twelve miles to the north-west, taken after a siege of ten years by Camillus, six years before the taking of Rome by the Gauls ; and thither the Romans, after the burning of their city, had thoughts of removing ; but were dissuaded from it by Camillus. — Livy. It remained standing after the Punic war ; and a colony was there settled, and its territory assigned to the soldiers. But after that it declined so gradually as not to leave a single trace standing. It was famous for the slaughter of the 300 Fabii on the Cremera. — Ovid. The spot on which it stood lies near Jsola, in St. Peter's patrimony. — Holstenius.

VEIL,t>.n.&n.. Lat. veto. See VAIL. To cover with a veil, and particularly with any thing which conceals the face : the covering used.*

To feed his fiery lustful eye, He snatched the veil that hung her face before.

Spenter.

1 will pluck the borrowed ieil of modesty from the so seeming Mrs. Page ; divulge Page himself for a secure and wilful Acteon. Shakspeare. Merry Wivet.

Her face was veiled ; yet, to my fancied sight, Love, sweetness, goodness, in her person shined.

Milton. I descry,

From yonder blazing cloud that veils the hill, One of the heavenly host. Id.

The famous painter could allow no place For private sorrow in a prince's face : Yet, that his piece might not exceed belief, He cast a reil upon supposed grief. \'aller.

Knock on my heart ; for thou hast skill to find If it sound solid, or I filled with wind ; And through the veil of words thou viewest the naked*

mind. Dryden.

The ill-natured man exposes those failings in hu- man nature which the other would cast a veil over.

Adduon.

As veils transparent cover, but not hide, Such metaphors appear when right applied. When through the phrase we plainly see the sense, Troth with such obvious meanings will dispense.

Granville.

She accepts the hero, and the dame Wraps in her reil, and frees from sense of shame.

I'-,; .

VEIL. In the Romish churches, in time of Lent, they have veils or curtains over the altar, crucifix, images of saints, &c. A veil of crape is worn on the head by nuns, as a badge of their

VEL

profession; the novices wear white veils, but those who have made the vows

black ones. See Ni N.

VEIN, n. “) Fr. veine ; Lat. vena. A blood

VEIN’ED, a vessel. See ANATOMY. The

VEIN’Y. j course of metal in a mine; any hollow tube or cavity ; streak ; mark ; and, me- taphorically, the turn or direction of the mind or thoughts ; favorable movement ; humor : veined and veiny mean furnished with, or full of, veins.

There is a win for the silver. Job xxviii. 1.

When I did first impart my love to you, I freely told you all the wealth I had Ran in my reins ; I was a gentleman. Shaksjteare.

Certainly he that hath a satirical rein, as he maketh others afraid of his wit, so lie had need to be afraid of others. Bacon.

Artizans have not only their growths and perfec- tions, but likewise their veins and times.

\ iitton’s Architecture.

Part hidden veins digged up, nor hath this earth Entrails-unlike, of mineral and stone. Milton.

Horror chill Ran through his veins, and all his joints relaxed.

Id.

They among themselves in pleasant rein Stood scoffing. Id. Paradise Lost.

My usual nin. Oldham.

The vein I have had of running into speculations of this kind, upon a greater scene of trade, has cost me this present service. Temple.

\Vt_- ought to attempt no more than what is in the compass of our genius, and according to our vein .

Dry den,

Speaksst thou in earnest or in jesting win? Id.

The currier struck the usurer upon the right win.

L' Estrange.

The root of an old white thorn will make very fine boxes and combs, and many of them are very finely reined. Mortimer's Husbandry.

Let the glass of the prisms be free from veins, and their sides be accurately plane, and well polished, without those numberless waves or curls, wliici. usually arise from sand-holes. Newton's Optichs.

It is in men as in soils, where sometimes there is a vein of gold, which the owner knows not of.

Suift'i Thoughts.

Effulgent, hence the veiny marble shines.

Thomson.

VEIN, among miners, is that space which is bounded with woughs, and contains ore, spar, canck, clay, chirt, croil, brownhen, pitcher-ˆhirt, cur (which philosophers call the mother of me- tals), and sometimes soil of all colors. When it bears ore, it is called a quick vein ; when no ore, a dead vein. i

VELARIUS, in antiquity, an officer in the court of the Roman emperors, being a kind of usher, whose post was behind the curtain in the prince's apartment, as that of the chancellor's was at the entry of the balustrade ; and that of the ostiarii at the door. The velarii had a supe- rior of the same denomination, who commanded them.

VELASQUEZ (Don Diego, de Silva), painter, born at Seville in 1594. Philip IV. appointed him his first painter, and knighted him with a pension. He died at Madrid in 1660.

VELEZ (Michael), a modern Hungarian poet of Csokonakilla, died in 1806. He was the au- thor of an heroi-comic poem, in four books, en- titled Dorothea, or the Triumph of the Ladies at

the Carnival, published in 1804. In the pre- face he treats of the nature of heroic poetry, a branch of literature which had scarcely occupied the attention of any previous Hungarian writer. He also published, in 1805, a

collection of songs, which obtained great popularity.

VELEZ, a small city of New Granada, in the province of Tunja, on the river Saarez, at the foot of a ridge of mountains. The streets are so swampy as to be at times impassable ; but the temperature, though hot, is rendered moderate by the frequency of the tempests. The city con- tains a very handsome church, besides two con- vents and 2500 inhabitants. It is close to a vol- cano, and has excellent mines of gold, which are, however, not worked. Sixty-eight miles north of Santa Fe, and twenty-five north-west of Tunja.

VELEZ EL BLANCO, a small town of the south- east of Spain, in the province of Granada, on the borders of Murcia, four miles N. N. W. of Yelez el Rubio.

VELEZ MALAGA, a considerable town in the south of Spain, in Granada, fourteen miles north- east of the present city of Malaga. The town, two miles distant from the sea, takes its name from the river Velez, which passes its walls, flowing southward from the Sierra or chain of mountains separating Granada from Andalusia. Nothing can surpass the beauty of the country, with its groves and its mountain streams. The population of the town amounted to 16,000 till 1804, when nearly half that number were carried off by the dreadful fever which ravaged Cadiz, Malaga, and other parts of the south of Spain.*

VELEZ EL RUBIO, an inland town in the pro- vince of Granada, Spain, but situated within a few miles of that of Murcia. It stands on the great road leading from Andalusia into that pro- vince by Lorca, on the Guadalentin, a river run- ning from west to east, in a district that is hilly rather than mountainous. Its population amounts to 7000. Twenty-two miles west by south of Lorca.

VELIOCASSI, an ancient people of Gaul.

VELITES, in the Roman army, a kind of an- cient soldiery, who were armed lightly with a javelin, a cask, cuirass, and shield.

VELLA, in botany, Spanish cress, a genus of plants, of the class of tetradynamia, and order of siliculosa; ranking according to the natural method in the thirty-ninth order, siliquosae.

VELLE'ITY, n. s. Fr. velleite ; Lat. velleitas, velle. A degree of desire.

Vetleittj is the school term used to signify the low- est degree of desire. Locke.

The wishing of a thing is not properly the willing of it ; but it is that which is called by the schools an imperfect velleitv, and imports no more than an idle, unoperative complacency in, and desire of the end, without any consideration of the means.

South.

VELLEIUS PATERCTJLUS. See PATERCULUS.

VELLETRI, a considerable but irregular town in the States of the Church and delegation of Rome, built on the declivity of Mount Arti- niisio. Its population amounts to about 12,000 aud it contains several detached buildings en- titled to notice, such a the Palazzo Ginetti, with*

its elegant front, nnd the Palazzo Borgio, with its fine collection of paintings and antiques. The town-house is also a eood building, and se- veral of the fountains are handsome. The prin- cipal square contains a bronze statue of pope Urban VIII. by Bernini. Yelletri, originally a town of the Volsci, became at an early period a Roman colony ; and, being the seat of the Octa- vian family, had the honor of giving birth to Augustus. It is twenty miles south-east of Rome.

VEL'LICATE, v. a.) Latin vellico. To

VELLICA'TJOX, n.s. j twitch ; pluck; act by stimulation: the noun substantive correspond- ing.

Those smells are all strong, and do pull and ce'li- cate the sense. Bacon.

All purges have a kind of twitching udwtfiM- tion, besides the griping, which cometh of wind.

Id.

Convulsions arising from something vctlicatiny a nerve in its extremity, are not very dangerous.

Arbuthnot.

There must be a particular motion and vetlicatinn imprest upon the nerves, else the sensation of heat will not be produced. Watts on the Mind.

VELLORE, or YEI.UR, a district in the Car- natic, bounded on the west by the Eaf'ern Ghauts, aud at present comprehended in tht \;- cot collectorship. A greater degree of verdure prevails here than is usually seen in the Carnatic, cwmg probably to a subterraneous supply of water. During

the dry season the whole of the rice land is irrigated by means of canals, which are either dug across the dry channel of rivers, below the surface of which there is always mois- ture found, or it is conducted from places ;n which subterranean streams have been discovered. In some parts of this district, near the Palar River, indigo is cultivated.

VELLORE, a town and fortress in the Carnatic, the capital of a district of the same name. Lat. 12° 55′ N., long. 79° 13′ E. The walls of the fort are built of very large stones, and have bas- tions and round towers at short distances. A fausse bray lines the wall between them, and with its embattled rampart and small overhang- ing square towers produces a very handsome effect. A deep and wide ditch, cut chiefly out of the solid rock, surrounds the whole fort, ex- cept at one entrance, where there was a cause- way according to the Hindostan system ; and, in addition to the usual defence, the ditch contains alligators of a very large size. This fortress is so completely commanded from the hills, that a six- pounder can throw a shot over it ; but the con- quest of Mysore has rendered it now of little comparative consequence. On the 10th of July, 1 806, a most atrocious revolt and massacre took place ; in which, from extensive evidence taken immediately after the event, it was proved the family of Tippoo, particularly the eldest, Moiz ud Been, took an open and active part. The insurgents were subdued, and mostly put to the sword by colonel Gillespie and a party of the nineteenth dragoons; and, to prevent the recur- rence of a similar calamity, the instigators were removed to Bengal. Travelling distance from Madras eighty-eight miles, west by south ; from Seringapatam 202 miles.

ZJ

YEN

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YEN

Fr. velin ; Lat. velamen, or The skin of a calf dressed

VEL'LUM, n. s. low Lat. vitulinum. for the writer.

The skull was very thin, yielding to the least pressure of my finger, as a piece of vellum.

Wiseman.

VELO'CITY, n. s. Fr. velocUi ; Lat. velo- citas. Speed ; swiftness ; quick motion.

Had the velocities of the several planets been greater or less than they are now, at the same dis- tances from the sun ; or had their distances from the sun, or the quantity of the sun's matter, and conse- quently his attractive power, been greater or less than they are now, with the same velocities, they would not have revolved in concentric circles, but moved in hyperbolas, or parabolas, or in ellipses, very eccentric. Bentley't Sermons.

VELOCITY, in mechanics, swiftness ; that affec- tion of motion whereby a moveable is disposed to run over a certain space in a certain time. It is also called celerity, and is always proportional to the space moved. Huygens, Leibnitz, Ber- nouilli, Wolfius,and the foreign mathematicians, hold that the momenta or forces of fallen bodies, at the end of their falls, are as the squares of their velocities to the quantity of matter ; the English mathematicians, on the contrary, maintain them to be as the velocities themselves to the quantity of matter. See QUANTITY.

*VEL'VET, n. *., adj., &) Fr. velours ; Ital.*

VELUKE', «. s. [v. n. S veluto ; Lat. villas.

Silk with a short fur or pile upon it : made of

velvet ; soft ; delicate ; to paint velvet : velure is

an old synonyme.

As worldlings do, giving thy sum of more To that which had too much. Then being alone, I eft and abandoned of his velvet friends ; "f is right, quoth he : thus misery do part The flux of company. Shakspeare.

His horse with one girt, six times pieced, and a woman's crupper of velure, pieced with packthread.

Id.

This was moulded on a porringer, Aye/widish. Id. Taming of the Shrew .

Verditure, ground with a weak gum arabic water, is the palest green that is, but good to reliet upon black in any drapery. Peacham on Drawing.

Clad in white velvet all their troop they led, With each an oaken chaplet on bis head. Dryden.

The different ranging the superficial parts of bo- dies, as of velvet, watered silk, we think probably is nothing but the different refraction of their insensible parU. Locke.

Such blessings nature pours, O'erstocked mankind enjoy but half her stores ; In distant wilds, by human eyes unseen, She rears her flowers, and spreads her velvet green.

Young.

VELVET, a rich kind of stuff, all silk, covered ' on the outside with a close, short, fine, soft shag, the other side being a very strong close tissue. The nap or shap, called also the velveting, of this stuff, is formed of part of the threads of the warp, which the workman puts on a long narrow channelled ruler or neHle, which he afterwards cuts by drawing a sharp steel tool along the channel ot the needle to the ends of the warp. The principal and best manufactories of velvet are in France and Italy.

VENAISSIN, a district of France, betweon Provence and Dauphiny. Philippe le Ilardi,

kins; of France, ceded it to pope Gregory X. in 1273, and it remained in the hands of the popes until 1793, when it was incorporated with France, and now forms part of the department of Vaucluse.

VE'NAL, adj.) Fr. venal; Lat. venalis.

YENAL'ITY, n. s. ji Mercenary; prostitute: the noun substantive corresponding.

It is unreasonable to affirm that the cool renal blood should be heated so high in the interval of two pulses. Ray.

This verse be thine, my friend, nor thou refuse This, from no venal or ungrateful muse. Pope.

VENANGO, a county of the United States, in Pennsylvania, bounded north by Crawford and Warren counties, east by Jefferson county, south by Armstrong and Butler counties, and west by Mercer county. Chief town, Franklin. It is watered by the Allegany, and but thinly settled.

VENATION, n. «. Lat. venatio. The act or practice of hunting.

The manner of their venation we shall find to be otherways than by sawing away of trees. Browne.

VEND, v. a. ~\ Fr. veiidre; Lat. vendo.

VENDEE', n.s. f To sell; offer to sale: the

VEND'ER, I vendee or vender is he who

VEND'IBLE, adj. J sells: vendible, marketable ; saleable.

Silence only is commendable In a neat's tongue dried, and a maid not vendible.

Shxkspeare.

This so profitable and vendible a merchandize risetli not to a proportionable enhancement with other less beneficial commodities. Caret/-.

He had a great parcel of glasses packed up, which, not having the occasion he expected to vend and make use of, lay by him. Boyle.

Where the consumption of commodity is, the venders seat themselves. Graunt.

Those make the most noise, who have the least to sell, which is very observable'in the venders of card- matches. Addison.

If a vicar sows his glebe, or if he sells his corn, and the vendee cuts it, he must pay the tithes to the parson. Ayliffe.

VEHDEE, a department in itie west of France, comprising a part of Poitou, and bounded i on the east by the department of the Two Sevres, and on the west by the Atlantic. Its extent is 2600 square miles, almost entirely level, the de- partment containing no eminence whose eleva- tion exceeds 450 feet. It is divided into three parts; the wood, the marsh, and the plain. But the first is sufficiently fertile in corn, wine, and pasture. The marsh, comprising the part conti- guous to the coast, though naturally sterile, has become one of the best cultivated ami fertile parts of France. The plain, formed of the tongue of land comprised between the woody part and the northern limit of the department, is also fertile, and fit for various kinds of culture. The princi pal rivers are the two Sevres, the Vendee, and the Autise. The exports consist of corn, cattle, bay salt, and, in a smaller

degree, of wool and hides. The department is divided into the three arron- dissements of Bourbon Vendee (the chief town), Sables d'Olonne, and Fontenay.

VENDITATION, n. s. Lat. vendito, vcndi- tatio. Boastful display.

*Some, by a cunning protestation agairtst all read**

ing, and venditutian of their own naturals, think to' divert the sagacity of their readers from themselves, and cool the scent of their own fox-like thefts ; when yet they are so rank as a man may find whole pages together usurped from on eauthor. Ben Jonton. VENDOME (Louis Joseph), duke of, a cele- brated French general, was born in 1654. In 1697 he took Barcelona. In 1702 he superseded Ville- roy in Italy, and gained several victories over the imperialists. In 1765 he defeated prince Eugene at Cassano, and was on the point of taking Tu- – rin, when he was sent to Flanders, and there de- feated by Marlborough. He then went to Spain, restored Philip to his capital, and took the Eng- lish army under lord Stanhope prisoners. He died inSpain in 1712.

VENDOME, a town in the central part of France, the capital of the department of the Loir and Cher, situated on the right bank of the Loir. Inhabitants 8000.

VENEERING, VANEERING, or FINEERING, a kind of marquetry, or inlaying, whereby se- veral thin slices or leaves of fine wood, of dif- ferent kinds, are applied and fastened on a ground of some common wood. There are two kinds of inlaying; the one, which is the more ordinary, is only making compartments of dif- ferent woods ; the other requires much more art, and represents flowers, birds, and the like figures. The first kind is what we properly call veneer- ing, for the latter see MARQUETRY. The wood intended for veneering is first sawed out into slices or leaves, about a Irne thick. To saw them, the blocks or planks are placed upright in a kin>l of vice or sawing press. These slices are afterwards cut into slips, and fashioned accord- ing to the design proposed ; then the joints being carefully adjusted, and the pieces brought down to their proper thickness, with several planes for the purpose, they are glued down on a ground or block of dry wood. The pieces thus joined and glued, the work, if small, is put in a press ; if large, it is laid on the bench, covered with a board, and pressed down with poles, or pieces of wood, one end whereof reaches to the

ceiling of the room, and the other bears on the boards. When the glue is quite dry, they take it out of the press and finish it ; first with little j;lanes, then with divers scrapers, some whereof resemble rasps, which take off dents, &c., left by the planes. When sufficiently scraped, the work is polished with sealskin, wax, and a brush and polisher of shave-grass; which is the last operation.

VENEFIC'IAL, adj. \ Lat. veneficium. Act-

VEXEFJC'IOUSLY, adv. S ing by poison; be- witching : the adverb corresponding.

The magical virtues of misselto, and conceived efficacy unto venejifial intentions, seemeth a Pagan relique derived from the ancient Druides.

Browne's Vulgar Errours.

Lest witches should draw or prick their names therein, and veneficiously mischief their persons, they broke the shell. Id.

VEN'ENATE, v. a.) Lat. veneno. To poi- VENENA'TION, n. s. \ son; infect with poison : thr noun substantive corresponding.

These miasms entering the body, are not so ener- gic as to venenate the entire mass of blood in an in- stant. Harvey.

This venenalion shoots from the ey«; km! this way a basilisk may impoison.

Browne's Vulgar Eircun.

By giving this in fevers after calcination, whereby the venenate parts are carried off.

Woodward on Fossilr.

Fr. veneneux; Lat. vene- tm. Poisonous ; venom-

VENENE', adj.

VENENOSE'. ous. Unusual.

Dry air opens the surface of the earth to disincar- cerate venene bodies, or to attract or evacate them hence. Harvey.

Malpighi, in his treatise of galls, under which he comprehends all preternatural and morbose tumours of plants, demonstrates, that all such tumours, where any insects are found, are raised up by some venenuse

liquor, which, together With their eggs, sucli insects shed upon the leaves. Ray.

VEN'ERABLE, adj.-} Fr. venerable ; Lat.

VEN'ERABLY, adv. i venerabilit. To be re-

VEN'ERATE, v. a. v garded with awe ; to be

VENERA'TION, n. s. i treated with reverence :

VEN'ER ATOR. J the adverb correspond-

ing : to venerate is to reverence, regard, or treat wi.h awe : the noun substantives both corre- spond.

As by the ministry of saints, it pleased God there to shew some rare effect of his power ; or in regard of death, which those saints have suffered for the tes- timony of Jesus Christ, did thereby make the places where they died venerable. Hooker.

When baseness is exalted, do not bate The place its honour for the person's sake :

The shrine is that which thou dost venerate, And not the beast that bears it on its back. Herbert.

If the state of things, as they now appear, involve a repugnancy to an eternal existence, the arguments must be conclusive to those great priests and venna- turs of nature. Hale.

Ye lamps of heaven ! he said, and lifted high His hands, now free ; thou venerable sky ! Inviolable powers, adored with dread, Be all of you adjured. Dryden'i Miteid.

The lords and ladies here approaching paid Their homage, with a low obeisance made, And seemed to venerate the sacred shade. Dryden.

Theology is the compression of all other knowledge directed to its true end, i. e. the honour and venera- tion of the Creator, and the happiness of mankind.

Locke

We find a secret awe and veneration for one who moves above us in a regular and illustrious course of virtue. Additon.

Even the peasant dares these rights to scan, And learn to venerate himself as man. Goldsmith.

A good clergyman must love and venerate the gos- pel that he teaches, and prefer it to all other learning.

Claritsa.

VENE'REAL, adj. j Latin venereus. Re- VENE'REOXJS, Mating to love, or to

VEN'ERY, n. t. j sexual pleasures ; con- sisting of copper, called venus by chymists : lustful : the pleasures of the bed.

These are no venereal signs, Vengeance is in my heart, death in my band.

ˆtiahtpeart

Then sworn with pride into the snare 1 fell, Of fair fallacious looks, venereal trains, Softened with pleasure, and voluptuous life.

Mt/ron.

Blue vitriol, how venereal and unsophisticated soever, rubbed upon the wetted blade of a knife wiJi not impart its latent color. Boyle.

Contentment, without the pleasure of lawful venery, is continence ; of unlawful, chastity.

Crew's Cosmologia.

They are averse to venereal pleasure. Addison.

Venereal distempers confirmed by frequent relapses, where the transient satisfaction is overbalanced by a sad variety of tragical sufferings that attend it, often produce a downright consumption of the lungs.

Blackmore.

The male is lesser than the female, and very ve- nerous. Derham.

VENEREAL, in medicine, belonging to venery ; as the lues venerea, &c. See MEDICINE, Index.

VENERONI (John), was born at Verdun. He taught Italian at Paris ; and, to pass for a Florentine, he changed his name to Vigneron. He was the author of an Italian grammar, dic- tionary, &c.

VEN'ERY. n. s. Fr. venerie, vener, from Lat. vennr. The sport of hunting.

To the woods she goes to serve her turn, And seek her spouse, that from her still does fly. And follows other game and venery. Spenser.

The Norman demolished many churches and chapels in New Forest, to make it fitter for his plea- sure and venery. Howel.

VENESECTION, n. s. Lat. vena and sectio. Blood-letting ; the act of opening a vein ; phle- botomy.

If the inflammation be sudden, after evacuation by lenient purgatives, or clyster and venexciion, have recourse to anodynes. Wiieman't Surgery.

VENESECTION. See SURGERY.

VKNETI, a people of Italy, in Cisalpine Gaul, near the mouths of the Po. They were (Jpsctndrd from a nation of Paphlagonia, who sotted there under Autenor, some time after the Trojan war.

VENETIAN BOLE, a fine red earth used in painting, and called in the color shops Venetian red. It is dug in Carinthia.

VENETIANO (Dominic), a Venetian painter, who introduced oil painting into Italy, but com- municating the secret to Castagno, he was mur- dered by him, that he might have the secret to himself.

VENEV, a town of the interior of European Russia, in the government of Tula, on the river Venevka. It contains 2400 inhabitants, and has, on a small scale, manufactures of silk. Thirty miles east of Tula.

*VE'NEY, n. *. Fr. venez. About; a turn at fencing.*

I bruised my shin with playing at sword and dag- ger, three veneys for a dish of stewed prunes.

Shakspeare.

VENEZUELA, a province of the Caraccas, Colombia, bounded on the north by the Carib- bean Sea, on the west by Maracaibo and Varinas, and south

by the great plains of Varinas and the Orinoco. It was named Venezuela from the towns inhabited by Indians which were seen by the Spaniards, on the lake of Maracaibo, having a resemblance to Venice. The soil is fertile, and yields in abundance all the tropical products. Its most noted commercial article is cacao, infe- rior to none in America; vanilla, maize, indigo, cotton, su'jar, tobacco, and coffee, are a few of the richest objects of cultivation ; wild cochineal, dye woods, medicinal drug", gum-;, resins, lialsams,

sarsaparilla, sassafras, liquorice, squills, storax, cassia, and aloes, heie find that climate the most favorable to their growth ; and the immense plains in the interior feed multitudes of cattle, horses, and mules, and in the valleys and moun- tains sheep and deer are numerous. All kinds of game are found. On the coast and in .he plains a scorching heat prevails, often accom- panied with deluges of rain. The mountains, which form a part of the great branch extending from the west to the gulf of Paria, divide the lands of the coast from the plains of the valley or' the Orinoco. Their surface is rent in every direction, by the force of subterranean convul- sions, and it is on these mountains that the cli- mate is so singularly altered that a traveller may observe the fruits of the tropics luxuriating at a short distance from those of Europe. To the south of this chain, the llanos or plains, which stretch to the Orinoco, are inhabited solely by herds of cattle, tended by mulattoes, who are as nearly in a slate of nature as the beasts they/ guard. On the plains the rainy season com- mences in April, and continues till November. The lakes of Venezuela are not numerous, for we can hardly give that appellation to the sheets of water produced by the periodical swell of the Orinoco, or the rains. The lake of Valencia is an extensive sheet of water, and the rivers of Ve- nezuela are more numerous than in any other part of New Spain. Every valley has its stream. The principal of these, which run from the mountains of Caraccas and Coro into the Canl>- bean Sea, are the Guiges, Tocuyo, Aroa, Yara- cuy, and the Tuy. The rivers which rise on the southern side of the chain, and flow to the Ori- noco, are the <}uurico, which receives some o(the branches of the Apure, and then, following a course parallel to that river, enters the Orinoco a short distance eastward of it. The islands formed by the junctions of the Apure and Gua- rico are the Isla de Blanco, Isladel Apurito, and the Isla de las Garzitas. The Guanco, which is a very fine river, is joined, near its confluence with the Orinoco, by the Rio Maneapra, which flows through the plains of Calabozo. Most of these swell in the month of April, and continue to overflow their banks during three or four months, covering the lowlands. They abound in alligators and fish.

*VENGE, v. a. \ Fr. venger. To avenge; VEN'GEABLE, adj. (punish: vengeable is re • VEN'GEANCE, n. *. f vengeful ; spiteful ; both \ i x.i'i i i , utlj. J are unusual words: ven- geance is punishment ; retribution ; and*

hence perhaps, as a species of power, vehemence, ardor: vengeful is vindictive ; retributive ; spite- ful.

I>et me see thy vengeance on them. Jer. xi. 20. A thrilliant dart he threw,

Headed with ire and vengeable despite. Speruer. The right conceit which they had, that to perjury nee is due, was not without good effect as touching their lives, who feared the wilful violation of oaths. Hooker.

All the stored vengeance of heaven fall On her in grateful top! Sltakspeare. King Lear.*

\ ou are above,

You justices, that these our nether crimes So speedily can venge.

VENICE.

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Resolutions of future reforming do not always satisfy thy justice, nor prevent thy vengeance for former miscarriages. King Charles.

Asmodeus the fishy fume Drove, though enamoured, from {ne spouse Of Tobit's son, and with a vengeance sent From .Medea post to Egypt, there fa»t bound.

Milton.

Doubt not but God Hath wiselier armed his vengeful ire. Id.

But what a vengeance makes thee fly From me too. as thine enemy ? Hudibrat.

Jove's and.Latona'sson his wrath expressed, In vengeance of his violated priest. Dryden.

The chorus interceded with heaven for the innocent, and implored its vengeance on the criminal.

Additon'i Spectator.

Dissembling for her sake his rising cares, And with wise silence pondering vengeful wars.

Prior.

Hound him a crowd of threatening furies stands, With instruments of vengeance in their hands.

Harte.

VE'NIABLE, adj. (Fr. veniel; Lat. venia.

VE'XIAL. i Pardonable; susceptible

of pardon; excusable; permitted.

If they do nothing, 'tis a venial slip. Shahspeare.

Permitting him the while Venial discourse unblamed. Milton's Paradite Lost.

More veniable is a dependence upon potable gold, whereof Paracelsus, who died himself at forty-seven, gloried that he could make other men immortal.

Browne's Vulgar Errouri.

What horrour will invade the mind, When the strict judge, who would be kind, Shall have few venial faults to find ! Roscommon.

\liile good men are employed in extirpating mortal sins, I should rally the world out of indecen- cies and ci!nial transgressions. Addison.

VENICE, a celebrated city of Italy, situated near the northern extremity of the Adriatic, is built on a collection of small islands, separated from the mainland by shallows of a depth of three, four, five, or six feet, and has hence a sin- gular appearance from a distance. Its domes and spires, and public buildings, appear to the spectator, particularly in approaching by sea, al- most to float on the surface of the waves. This appearance is particularly striking at night.

The length of the city is somewhat above two miles, its breadth a mile and a half, its circuit six miles. It is divided into two parts by a canal, which winds through its whole length in a serpentine form. This canal is above 100 feet in width, and is crossed on one part by a bridge of a single arch, the celebrated Rialto. Every part almost of the town is intersected by smaller canals navigated by gondolas. The gondolas are five feet in width and twenty in length. The usual hire of one is a shilling an hour; but it is customary among fashionable families to keep a gondola. Venice is separated for the purpose of police into six parts, of which the most eastern adjoins the castle, and bears the name ofSestiere ile Castello ; the Sestiere de St. Marco lies more towards the centre of the city, and that of Cana-

reggio comprises the north-west division. These three are to the north of the great canal ; the re- maining quarters are situated to the south of it. That of St. Paolo is in the south-east ; that of St Croce in the west, including several small

gardens ; and lastly, that of Dorso Duro forms the most southern division of the city, bordering on the Canale della Giudeca.

In regard to the streets it will hardly be cre- dited that their breadth is in general only four, five, or six feet ; in many places still less. The only exception is the street called the Merceria, situated near the centre of the town, and con- taining shops of all kinds; but even of that the breadth varies only from twelve to twenty feet. The only open place entitled to the name of square is the Piazza di San Marco, an oblong of 280 feet in length by nearly 100 iu breadth, bor- dered by several handsome buildings. The prin- cipal are the churches of St. Marco and Gemi- mano ; the palace formerly occupied by the doge, and the buildings, called Procureria, fronted in the Grecian style. This small but elegant square is bordered by arcades containing elegant shops and coffee-rooms. It forms the central point of the gaiety and amusements of the city. The Piazetta is a smaller opening, leading from the square of St. Marco to the sea, and having on the one side the palace of the doge, on the other the public library with its pillars of gra- nite. To ride either in a carnage or on horse- back is wholly out of the question in Venice. Accordingly the streets, or rather lanes, are paved not with round stones but flags, or marble slabs, having small sewers for carrying off the filth : the ordinary dwellings are of brick covered with wood and provided with balconies. Personal accommodation, and in a great measure the en- joyment of good air, are sacrificed, in the inte- rior, that space may be found for magnificent statues and works of art. The general height is three or four stories. The larger houses are com- monly of a square form, with an inside court containing a cistern, into which water flows from the roof; and, after being filtrated, serves for domestic purposes. Such houses have in general one door to a canal, and another to a street. A number of them are built of marble.

The church of St. Martin, Mark, or Marco, the most entitled to notice of any in Venice, stands at one end of the Piazza di St. Marco, and is so loaded with ornaments as to bear some re- semblance to an eastern pagoda. It is partly of stone, partly of marble, and surrounded with a portico of no less than 288 pillars of marble, porphyry, or other valuable materials. Its in- side is ornamented with the spoils of Constan- tinople, and displays a profusion of marble, ala- baster, emeralds, &c. Its mosaics are surpassed only by those of St. Peter at Rome; and its paintings are numerous and splendid. On the portico facing the piazza the Venetians once more see the bronze horses which, during eigh- teen years (from 1797

to 1815), crowned the triumphal arch in the Place du Carousel at Paris. The church of Santa Maria della Salute, the work of Palladio, is an elegant structure, open to the great canal, and built of marble, with a moderate share of ornament. The church il Redemptore is also an elegant building. The cathedral of Venice, dedicated to St. Peter, stands on an island at the eastern end of the city, and is built of Istrian marble. The church of St. Geonria is remarkable for its front of marble

and its cupola; that of St. Giovanni and St. Paolo is a large Gothic edifice, surmounted by a cupola, and is the Westminster Abbey of Ve- nice, covering the tombs of many of its doges and defenders.

The former palace of the doges, the place of assemblage for the senate and different councils of state during the republic, is a vast ancient fabric in the Gothic style. Its lofty apartments are ornamented with paintings by the first mas- ters ; its court and stair-cases with elegant sta- tues. Of the other palaces or mansions of the great families the most conspicuous are those of Goiniani, Tiopolo, Balbi, Cornaro, &c. The arsenal is a commodious and even magnificent building, situated on an island near the eastern end ef the city, and defended by a rampart. Before its gates are two great pillars, with the two gigantic lions in granite which stood for- merly on the Pircous at Athens.

The Itia'.to consists of one great marble arch, of ninety feet span, ascended at each end by a flight of steps. Its height would afford the pas- senger a beautiful view of the city were not the prospect impeded by a row of shops which cross it at each side. The public library stands in a fine marble structure near the square of St. Mark. Adjoining is the mint, an elegant building with arcades. On the great canal, not far from the Rialto, stands the Fondaco di Tedeschi, long a depot for German merchandise, now the council- house. Of theatres Venice has no less than eight great and small ; but several of them are open only during the carnival.

To say nothing of political causes, since the discovery of the passage to India by the cape of Good Hope, the trade from Venice to the east has naturally diminished : at present the mer- cantile transactions of this city are less active than those of Trieste, and are chiefly confined to intercourse with the Levant; to the import of hardware, linen, and other manufactures from the north of Europe ; of East and West India goods direct or through the medium of Malta ; and, finally, of salt fish from Newfoundland or England. Vessels arriving at Venice, after sur- mounting the intricacy of the

approach, find a spacious and commodious harbour, containing four separate quays or landing places ; but most of the shipping lie near the mouth of the great canal, or along the shore westward from that spot.

The manufactures of Venice comprise woollens, serges, canvas, and ropes ; gold and silver stuffs, velvet, and silk stockings, and lace made chieflj on the adjacent island of Murano. Venice con- tains petty manufactures of false pearls and other precious stones, ornamental glass works, jewel- lery, and wax work. Printing is carried on here more extensively than in any other town in Italy; and books are supplied by wholesale to the Grecian islands, Constantinople, Spain, and Portugal.

Venice is, however, the seat of an academy of the fine arts, of an athenaeum, or seminary form- ing a medium between a great school and a university ; and it contains one of the five sec- ti'nisof the imperial institute for the kingdom of !:.-'v. It also contains a navigation school, and

a female establishment called the conservato : the Rio de Pieta, where education is given gratuit- ously to more than 100 young women. The public library is extensive, and there are a num- ber of private collections of curiosities. At some distance from the town, on the small island of Lazarus, there is a seminary of Armenians, who have an extensive library and printing office ; who educate young Armenians, and publish a newspaper, circulated, under certain restrictions, in their own country.

The characteristics of the climate of Venice are a summer heat much greater than that of England ; a winter not of great length but sharp, particularly during the prevalence of a north- west wind. Rains are frequent in Venice; and there being no springs nor wells, the inhabitants are chiefly supplied with water collected in cis- terns. On the other hand Venice is not an ex- pensive city ; the abundance and cheapness of its markets exhibit a striking proof of the ease of supplying a city by water. Its population does not at present exceed 120,000.

It was founded about A. D. 451 or 452 ; when Attila having destroyed the cities of Aquileia, Verona, Mantua, Trevigio, &c.,such of the inhabi- tants as escaped the slaughter fled to the islands on their coast, and there took up their residence. Historians are profuse in their commendations of the virtue of the Venetians during the infancy of their city. . Nothing, remarkable, however, occurs in the history of Venice for some time, excepting the change of government from the consular to the tribunitial form, which happened about thirty years after the building of the city. The republic first began to be of consequence after the destruction of Padua by the Lombards. About this time they were become masters of a fleet and a body of land forces. They engaged in a quarrel with the Lombards, and

soon after distinguished themselves against the Istrian pi- rates, who had committed depredations on their coasts ; and the Tergestines or inhabitants of Trieste, who had suddenly carried off a number of the citizens of Venice. The city very soon arrived at a high pitch of affluence and power. In the war carried on by Justinian with the Goths in Italy, the Venetians gave considerable assistance to Narses the Roman general, who ex- pressed his gratitude by several rich presents, and by building two fine churches dedicated to the saints Theodore and Germinian ; the oldest public buildings, beside St. Mark's and St. Peter's, in Venice. From the time of Justinian to A. D. 697, historians are silent with regard to the Venetian affairs. A great revolution then took place in the government ; the tribunes, having abused their power, were abolished ; and in their stead was elected a doge or duke, in whom was vested the supreme authority. He was to represent the honor and majesty of the state ; to have respect and distinction paid him beyond what the tribunes, or even the consuls, enjoyed : he was to assemble and preside at the great coun- cil ; to have a casting vote in all disputed points ; to nominate to all offices, places, and preferments ; and, lastly, to enjoy the same au- thority in the church as in the state. Paul Anafestus Paoluccio was the first doire. lie

died in 717. This form of government was changed in 737, and a supreme magistrate chosen, with the title of master of the horse or ge- neral of the forces. His power was to continue only for a year, the shortness of its duration being thought a security against the abuse of it. But in five years afterwards the doges were restored, and John Fabritio, the fourth and last master of the horse, was deposed, and his eyes put out. Under the doges, the power and wealth of the Venetian republic continued to increase. In 764 the Heracleans and Jesulans, subjects to the republic, having formed some designs against the state, put themselves under the protection of Charlemagne. That conque- ror, not finding it convenient to give them pre- sent assistance, settled them in Malamocco, un- til lie could give them more effectual succor. The Venetians, however, disregarding the pro- tection of that powerful monarch, attacked and instantly drove them out of Malamocco. In- censed at this, Charlemagne ordered his son Pepin to declare war against the republic. This was done ; but the blow was for some time di- verted by Astolphus king of the Lombards, who, committing great devastations in the territories of the pope, obliged Pepin to come to the assist- ance of his holiness. However, after having afforded the necessary succor to the pope, Pepin prosecuted the war with Venice. Upon which the Venetians declared themselves a free and in- dependent state. But in 804 the war was re- newed with the utmost fury. Pepin having

quarrelled with Nicephorus the Greek emperor, and finding Obelerio the Venetian doge inclined to fuvor his adversary, he determined to exterminate the very name of the republic. After having laid waste the surrounding province, he led his army directly to Venice, blocking the city up at the same time by his fleet. The Ve- netians united and gave the chief command to Valentin, as Obelerio was supposed too nearly allied to Pepin to fight with that good-will and cheerfulness the service of his country required. The Venetians, notwithstanding the most obsti- nate defence, were at length reduced to that part of the city south of the Rialto. While Pepin was preparing to lay a bridge over the canal, they resolved, as a last effort, to attack his fleet. Em- barking all the troops they could spare, they succeeded in driving the enemy's fleet aground, and the greater part of their troops perished in attempting to escape ; the ships were all, to a few, either taken or destroyed. During this ac- tion at sea, Pepin, having thrown a bridge over the Rialto, was attacked on every side by the Venetians from their boats and others who had posted themselves on the bridge. The battle was long, bloody, and doubtful, until the Vene- tians succeeded in breaking down the bridge; when, all communication being cut off with the troops on shore, the French were to a man either killed or drowned. Pepin was so struck with the intrcpedity of the Venetians, that he raised the siege, abandoned the enterprise, and con- cluded a peace with the republic. He afterwards came to Venice to intercede for Obelerio ; but, the populace being persuaded that he had acted treacherously, Pepin was no sooner gone than

they tore him and his wife to pieces, though she was Pepin's sister. In 839 the Venetians en- gaged in an alliance offensive and defensive against the Saracens, with Michael III., the Greek emperor. A fleet of sixty galleys was immediately equipped, who joined the Gre- cian fleet and engaged the enemy ; but during the heat of the engagement, the Greeks having basely deserted their allies, th Venetians were so completely defeated that scarcely a single vessel remained to carry the news of their mis- fortune to Venice. This defeat threw the city into the utmost consternation, as it was not doubted that the Saracens would immediately lay siege to the capital ; instead of which they turned their arms against Ancona, which they pillaged and destroyed. The Narentines, how- ever, a piratical people, no sooner heard of the defeat of the Venetians, than they laid waste the coasts of Dalmatia, and ravaged the country for a considerable way ; at the same time that the city was distracted by internal dissensions and tumults, in one of which the doge was murdered. It was not till the year 881 that the Venetian affairs were thoroughly re-established. By the prudent and vigorous administration of Orso Participate the power of the Saracens was checked, the Narentines utterly defeated, and peace and domestic tranquillity restored. From this time the republic continued to flourish ; and*

in 903 her reputation for arms became famous all over the world by a great victory gained over the Hunns, who had invaded Italy, defeated Berengarius, and threatened the country with total destruction. For a long time after, we meet with no remarkable transactions in the Venetian history ; but in general the republic increased in wealth and power by its indefatiga- ble application to maritime affairs and to com- merce. About the year 1040 it was ordained that no prince should associate a colleague with him in the supreme prower. In 1084 the re- public was, by the emperor of Constantinople, invested with the sovereignty of Dalmatia and Croatia, which, however, had been held long before by right of conquest. As soon as the crusade was preached up, the Venetians fitted out a fleet of 200 sail against the infidels ; but, before this armament was in a condition to put to sea, war broke out with Pisa. The doge Vitalis Michael took upon him the command of the fleet, when, after having defeated the Pisans in a bloody action at sea, he set sail for Smyrna, and thence to Ascalon, at that time besieged by the Christians. To his valor was owing the con- quest of this city, as well as those of Caipha and Tiberias ; but, before he had time to push his good fortune further, he was recalled on account of an invasion hy the Normans of Dalmatia. Here he was equally successful: the Normans were every where defeated ; and Michael returned home loaded with booty ; but died soon after to the great grief of all his subjects. He was suc- ceeded by Ordelapho Faliero, under whom the Venetians assisted Baldwin in the siege of Pto- Innais, and were the chief instruments of its conquest ; and Baldwin, in recompense for the services of the republic, invested her with the sovereignty of that city, which he endowed with

many extraordinary privileges, to render his pre- sent more valuable. This good fortune, however, was overbalanced by a rebellion in Dalmatia and Croatia. The former was reduced ; but, in a battle with the Croatians, the doge was killed, and his army entirely defeated ; by which disas- ter the Venetians were so much dispirited, that they made a peace on the best terms they could, giving up all thoughts of Croatia for the time.

Under the government of Dominico Micheli, who succeeded Ordelapho, the pope's nuncio ar- rived at Venice, and excited such a spirit of en- thusiasm among all ranks and degrees of men, that they strove whose names should be first en- rolled for the holy war. The doge, having fitted out a fleet of sixty galleys, sailed with it to Joppa, which the Saracens were then besieging. The garrison was reduced to the last extremity when the Venetian fleet arrived, surprised, and defeated that of the enemy with great slaughter ; soon after which the Saracens raised the siege with

*precipitation. Tyre was next besieged, and soon was obliged to capitulate; on which occa- sion, as well as on the taking of Ascalon, the Venetians shared two-thirds of the spoils. But in the mean time the emperor of Constantinople, jealous of the increasing power and wealth of the republic, resolved to make an attack upon Venice, now weakened by the absence of the doge and such a powerful fleet. But the senate, having timely notice of the emperor's intentions, recalled the doge, who instantly obeyed the sum- mons. Stopping at Rhodes, in his way home, to refresh and water the fleet, the inhabitants refused to furnish him with the necessaries he demanded. Incensed at this denial, he levelled their city with the ground : and thence sailing to Chios, he laid waste and destroyed the country, carrying off the body of St. Isidore, in those days accounted an inestimable treasure. After this he seized on the islands of Samos, Lesbos, Andros, and all those in the Archipelago belonging to the empe- ror; and having reduced Zara, Spolatra, and Trahu, places in Dalmatia which had revolted during his absence, he returned in triumph to Venice, where he was received with great joy. The Venetians now became very formidable throughout all Europe. The Sicilians, Paduans, with the states of Verona and Ferrara, felt the weight of their power; and in 1173 they ven- tured to oppose Frederic Barbarossa, emperor of Germany. The occasion of this quarrel was, that pope Alexander had taken shelter in Venice to avoid the resentment of Barbarossa, who had conceived an implacable aversion against him, and threatened destruction to their city if they did not give him up. On this terrible menace, it was agreed to equip a fleet, and repel the attacks of such a formidable and haughty enemy. But, before the armament could be prepared, Otho, the emperor's son, arrived before the city with a fleet of seventy-five galleys. The * doge Sebastiano Ziani sailed out with the few vessels he had got equipped, to give the enemy battle. The fleets met off the coasts of Istria, and a terrible engagement ensued, in which the imperial fleet was totally defeated, Otho himself taken prisoner, and forty-eight of his ships de- stroyed. On the doge's return, the pope went*

out to meet him, and presented him with a ring, saying, ' Take this, Ziani, and give it to the sea, as a testimony of your dominion of it. Let your successors annually perform the same cere- mony, that posterity may know that your valor has purchased this prerogative, and subjected this element to you, even as a husband subjecteth his wife.' Otho was treated with the respect due to his rank; and soon conceived a great friendship for Ziani. At last, being permitted to visit the imperial court on his parole, he not only prevailed on his father to make peace with the Venetians, but even to visit their city, so famed for its commerce and naval power. He was received with all possible respect, and on his de- parture attended to Ancona by the doge, the se- nate, and the whole body of the nobility. During this journey he was reconciled to the pope ; and both agreed to pay the highest honors

to the doge and republic. In the beginning of the thirteenth century, the Venetians, now be- come exceeding powerful and opulent, by the commerce which they carried on with the richest countries of the world, were invited by young Alexis, son to the emperor of Constantinople, to his father's assistance, who had been deposed by a rebellious faction. In conjunction with the French, they undertook to restore him ; and easily succeeded. But the old emperor dying soon after, his son was elected in his room, and a few days after murdered by his subjects ; on which the empire was seized by Myrtillus, a man of mean birth, who had been raised by the favor of old Alexis. As the allied army of French and Venetians was encamped without the city, Myrtillus resolved immediately to drive them out of his dominions, and for this purpose at- tempted to surprise their camp ; but, being re- pulsed, he shut himself up in the city, with a resolution to stand a siege. The allies assaulted it with so much vigor that the usurper was obliged to fly; and, though the citizens held out after his departure, they were obliged in less than three months to capitulate. This proved a source of greater acquisition to Venice than all that had yet happened. All the chief offices of the city were filled up with Venetians, in recompense for their services; the allies entered Thrace and sub- dued it ; Candia, and all the Greek islands, also fell under the dominion of the republic. In the mean time the Genoese, by their successful appli- cation to commerce, having raised themselves in such a manner as to be capable of rivalling the Venetians, a long series of wars took place be- tween the republics ; in which the Venetians ge- nerally had the advantage, though sometimes they met with terrible overthrows. These ex- pensive and bloody quarrels undoubtedly weak- ened the republic, notwithstanding its successes. In 1348, however, the Genoese were obliged to implore the protection of Visconti, duke of Milan, to support them against their implacable enemies the Venetians. Soon after this, in 1352, the latter were utterly defeated, with such loss, that it was thought the city itself must have fallen into the hands of the Genoese, had they known how to improve their victory. This was in a short time followed by a peace ; but from this time the power of the republic began to decline. Con-

tioual wars with the states of Italy, with the Hungarians, and their own rebellious subjects, kept the Venetians employed, so that they had no leisure to oppose the Turks, whose rapid ad- vances ought to have alarmed all Europe. After the destruction of the eastern empire, the Turks came more immediately to interfere with the re- public. The consequences are related under the article TURKEY.

Whatever valor might be shown by the Vene- tians, or whatever successes

they might boast of, it is certain that the Turks ultimately prevailed ; so that for some time it seemed scarcely possible to resist them. What contributed also greatly to the decline of the republic was the discovery of a passage to the East Indies by the Cape of Good Hope, in 1497. To this time the greatest part of the East India goods imported into Eu- rope passed through the hands of the Venetians ; but, as soon as the above-mentioned discovery took place, the carriage by the way of Alexan- dria almost entirely ceased. Still, however, the Venetian power was strong ; and in the begin- ning of the sixteenth century they maintained a war against almost the whole power of France, Germany, and Italy ; but soon after we find them entering into an alliance with some Italian states and Henry IV. of France, against the emperor. These wars, however, produced no consequences of any great moment; and in 1573 tranquillity was restored by the conclusion of a peace with the Turks. Nothing of consequence happened in the affairs of the Venetian republic till 1645, when the Turks made a sudden and unexpected descent on the island of Candia. The senate of Venice did not display their usual vigilance on this occasion. They had seen the immense war- like preparations going forward, and yet allowed themselves to be amused by the grand seignior's declaring war against Malta, and pretending that the armament was intended against that island. The troops landed without opposition ; and the town of Canea was taken, after an obstinate de- fence. This news, being brought to Venice, ex- cited a universal indignation against the Turks; and the senate resolved to defend to the utmost this valuable part of the empire. Extraordinary ways and means of raising money were fallen upon ; among others it was proposed to sell the rank of nobility. Four citizens offered 100,000 ducats each for this honor; and, notwithstanding some opposition, this measure was at last carried. Eighty families were admitted into the grand council, and to the honor and privileges of the nobility. The siege of Candia, the capital of the island of that name, is, in some respects, more memorable than that of any town which history has recorded. It lasted twenty-four years. The amazing efforts made by the republic of Venice astonished all Europe ; their courage interested the gallant spirits of every nation : volunteers from every country came to Candia to exercise their valor, to acquire knowledge in the military art, and assist a brave people whom they ad- mired. During this famous siege the Venetians gained many important victories over the Turkish fleet. Sometimes they were driven from the walls of Candia, and the Turkish garrison of Cunea was even besieged by the Venetian fleets.

Great slaughter was made of the Turkish armies; but new armies were soon found to supply their place. Mahomet IV., impatient at the length of this siege, came to Negropont, that he might have more frequent opportunities of hearing from the vizier, who carried on the siege. This war cost the lives

of 200,000 Turks. Candia capitulated in 1668. The conditions were honorably fulfilled. Morsini, the Venetian general, marched out of the rubbish of this well-disputed city with the honors of war. The expense of such a tedious war greatly exhausted the resources of Venice, which could not now repair them so quickly as formerly, when she enjoyed the rich monopoly of the Asiatic trade. This republic remained in a state of tranquillity, endeavouring, by the arts, of peace, and cultivation of that commerce which she still retained, to fill her empty exchequer, till she was drawn into a new war, in 1683, by the insolence of the Ottoman court. The Vene- tians had for some time endeavoured, by negoci- ation and many conciliatory representations, to accommodate matters with the Turks ; and, though the haughty conduct of their enemies afforded small hopes of success, yet such was their aversion to war that they still balanced, whether to bear those insults or repel them by arms ; when they were brought to decision by an event which gave (he greatest joy to Venice, and astonished all Europe. This was the great vic- tory gained over the Turkish army before the walls of Vienna, by Sobieski, king of Poland. In this new war their late general Morsini again had the command of the fleets and armies of the republic, and sustained the great reputation he had acquired in Candia. He conquered the Morea, which was ceded formally to Venice, with some other acquisitions, at the peace of Carlowitz, in 1699. During the war of the suc- cession the state of Venice observed a strict neutrality. They considered that dispute as un- connected with their interests, taking care, how- ever, to keep on foot an army on their frontiers in Italy, of sufficient force to make them respect- ed by the contending powers. But, soon after the peace of Utrecht, the Venetians were again attacked by their old enemies the Turks ; who, beholding the great European powers exhausted by their late efforts, and unable to assist the re- public, thought this the favorable moment for recovering the Morea, which had been so lately taken from them. The Turks obtained their ob- ject ; and at the peace of Passarowitz, which ter- minated this unsuccessful war, the Venetian state yielded up the Morea ; the grand seignior, on his part, restoring to them the small islands of Cerigo and Cerigotto, with some places which his troops had taken during the course of the war in Dalmatia.

In the storms which followed the French re- volution, and which brought Buonaparte with his army into the Venetian territory, the republic observed a cautious neutrality, and allowed its continental provinces to be overrun without re- sistance, at one time by the French, at another by the Austrians: but this caution could not secure the independence of . the state; it was overturned in 1797, when it suited France to throw the city and territory oi Venice into the

scale in the treaty of Campio Formio. They remained subject to Austria till 1805, when, after the disaster of Austerlitz, they were annexed to the French kingdom of Italy; but in 1814 re- turned definitively under the power of Austria. 150 miles east of Milan, and 246 north of Rome.

VENIRE FACIAS, in law, is a judicial writ lying where two parties plead and come to issue, directed to the sheriff, to cause twelve men of the same neighbourhood, to meet and try the same, and to say the truth upon the issue taken.

VEN'ISON, n. s. French venaison. Game ; beast of chase; the flesh of deer. Chapman writes it venzon.

Shall we kill us venison ? And yet it irks me the poor dappled fools Should have their round haunches gored.

Shakspeare. To our venzon's store We added wine, till we could wish no more.

Chapman.

In the records of Ireland, no mention is made of any park, though there be vert and venison within this land. Davies's History of Ireland.

He for the feast prepared In equal portions with the venison shared. Dryden.

VENIUS (Otho), a celebrated Dutch painter, was born at Leyden, in 1556. He was the first, after Polydore Caravaggio, who reduced the claro-obscura to a principle of the art of painting. He died at Brussels 1634. He had also the honor of breeding up the famous Rubens in his art.

VEN'OM, n. s. ˆ Fr. vcnin. Poison:

VEN'OMOUS, adj. >the adjective and adverb

VEN'OMOTJSLY, adv. J corresponding.

The barbarians saw the venomous beast hang on his hand. Acts xxviii. 4.

Your eyes, which hitherto have borne in them The fatal balls of murthering basilisks : The venom of such looks we fairly hope Have lost their quality. Shakspeare. Henry V.

Thy tears are salter than a younger man's, And venomous to thy eyes. Id. Coriolanut.

A posterity not unlike their majority of mis- chievous progenitors j a venomous and destructive progeny. Browne.

Like some tall tree, the monster of the wood, O'ershadowing all that under him would grow, He sheds his venom on the plants below. Dryden.

His praise of foes is venomously nice ; So touched, it turns a virtue to a vice. Id.

This falsity was broached by Cochleus, a venom- ous writer ; one careless of truth or falsehood.

Addiion.

VENT, n.s. & v. a. Fr.fente. A small aper- ture ; hole ; spiracle ; passage at which any thing is let out ; the act of opening ; emission ; dis- . charge ; also (Fr. vente) sale : to vent is to let out; give way to; utter; emit; report; sell.

On her breast

There is a vent of blood, and something blown ; The like is on her arm.

S/iiikspeare. Antony and Cleopatra. Revoke thy doom,

Or, whilst I can vent clamour from my throat, I'll tell thee thou dost evil. Id. King Lear.

Therefore did those nations vent such spice, sweet gums, aud pearls, us their own countries yielded.

llaleigh.

This profitable merchandise not rising to a pro- portional enhancement with other less beneficial com- modities, they impute to the owners not venting and venturing the same. Carew,

It failed by late setting out, and some contrariety of weather, whereby the particular design took vent befoie hand. Wotton.

When men are young, and have little else to do, they might vent the overflowings of their fancy that way. Denhain.

Had, like grief, been dewed in tears, Without the vsnt of words. Milton.

They at once their reeds Put forth, and to a narrow cent applied With nicest touch. Id. Paradise Lost.

By this war there is no vent for any commodity but of wool. Temple's Miscellany.

Lab'ring still, with endless discontent,

The queen of heaven did thus her fury vent.

Dryden.

Land- floods are a great improvement of land, where a vent can be had. Mortimer's Husbandry.

The farmer's cades mature, Now call for vent ; his lands exhaust, permit T' indulge a-while. . Philips.

The smothered fondness burns within him : When most it swells and labours for a vent, The sense of honour and desire of fame Drive the big passion back into his heaTrt.

Addisun's Cato.

Scarce any countries that are much annoyed with earthquakes, that have not one of these fiery vents. disgorging that fire, whereby it gains an exit.

Woodward.

He drew off a thousand copies of a treatise, which not one in threescore can understand, can hardly ex- ceed the vent of that number. Pope's Letters.

To draw any drink, be not at the trouble of opening a vent ; or, if you take out the vent, stay not to put it in. Swift.

VENTA ICENORUM, an ancient city of South Britain, now called Castor. The ruins of its walls contain a square of thirty acres, and exhibit four gates and towns. Urns, coins, &c., are dug up in it.

VENTAN'NA, n.s. Span, ventanna. A win- dow.

What after passed

Was far from the ventanna, where I sate ;

But you were near, and can the truth relate.

Dryden.

VENTER, n. s. Lat. venter. Any cavity of the body, applied to the head, breast, and abdo- men, which are called by anatomists the three venters : a womb ; mother.

A has issue B a son, and C a daughter, by one venter; and D a son by another venter. If JJ pur- chases in fee, and dies without issue, it shall descend to the sister, and not to the brother of the half blood

Hate.

VENTER INSPICIENDO, is a writ to search a woman that saith she is with child, and thereby witholdeth lands from the next heir; the trial whereof is by a jury of women.

VENTIDUCT, n. s. Lat. ventus and ductus. A passage for the wind.

Having been informed of divers ventiducts, I wish I had the good fortune, when I was at Rome, to take notice of these organs. Boyle.

VENTILATE, v. a. } Lat. ventilo. To fan VENTILA'TION, n.s. >with wind: hence to VEN'TILATOR.) drive out foul air; ami,

VENTILATION.

metaphorically, to examine ; discuss : ventilation is the act of ventilating, or state of being venti- lated ; vent; utterance: ventilator, an instrument of ventilation.

To his secretary, Doctor Mason, whom he let lie in a pallet near him, for natural ventilation of his thoughts, he would break out into bitter eruptions. Wotton's Buckingham.

Procure the blood a free course, ventilation, and transpiration, by suitable and ecphractic purges.

Harvey.

The soil, worn with too frequent culture, must lie fallow till it has recruited its exhausted salts, and again enriched itself by the ventillations of the air.

Addhon.

Nor is the right of the party, nor the judicial pro- cess in right of that party,

so far perempted, but that 'ie same may be begun again, and ventilated de novo.

Ayti/e.

Miners, by perflations with large bellows, letting down tubes, and sinking new shafts, give free passage to the air, which ventilate and cools the mines.*

Woodward.

VENTILATOR, a machine by which the noxious air of any close place, as an hospital, gaol, ship, chamber, &c., may be discharged and changed for fresh. The noxious qualities of bad air have been long known ; and no one has taken greater pains to set the mischief arising from foul air in a proper light than Dr. Hales ; who also pro- posed an easy and effectual remedy by the use of his ventilators; his account of which was read to the Royal Society in May 1741. In the No- vember following M.Triewald, military architect to the king of Sweden, informed Dr. Mortimer, secretary to the Royal Society, that he had in the preceding spring invented a machine for the use of the king's men of war, to draw out the bad air from under the decks, the least of which ex- hausted 36,172 cubic feet of air in an hour, or at the rate of 21,732 tons in twenty-four hours. In 1742 he sent one of them, formed for a sixty gun ship to France ; which was approved of by the Royal Academy of Sciences at Paris; and the king of France ordered all the men of war to be furnished with these ventilators.

VENTILATION. The purity of the atmos- phere is a subject of considerable importance, and one that should form a part of the medical police of a commercial country. In the crowded manufacturing- cities of Great Britain we find steam engine furnaces continually pouring forth their deleterious vapors so as to darken and pol- lute the surrounding atmosphere.

The process of ventilation that is going on naturally in the higher regions of the air, as well as the forced ventilation in common buildings, has been fully examined under the articles PNEU- MATICS and SPECIFIC GRAVITY, and it remains for us now to illustrate the most perfect species of under-ground ventilation that has yet been suggested. It was originally proposed by Mr. John Taylor of mining celebrity.

Next in importance to the means employed for draining underground works for water may be reckoned those which are intended to afford a supply of pure air, sufficient to enable the work- men to continue their operations with ease and safety to themselves, and to keep up undimin- ished the artificial light upon which they depend.

It is well known, indeed, to nil \slio are poeti- cally engaged in concerns of this kind, that men are frequently obliged to persevere in their labor where a candle will scarcely burn, and where not only their own health materially suffers in the end, but their employers are put to consider- able additional expense by the unavoidable hin- derance and the waste of candles and other ma- terials.

We mean to confine the following remarks to such mines as are worked upon metalliferous veins. We find, then, that a single shaft, not communicating by levels to another, can hardly be sunk to any considerable depth, nor can a level (or, as the foreign miners call it, a gallery) be driven horizontally to any great distance without some contrivance being had recourse to for procuring currents of air to make up the de- ficiency of oxigen, which is so rapidly consumed by respiration and combustion in situations like these, where otherwise the whole remains in nearly a stagnant condition.

We are here unacquainted with the rapid pro- duction of those gases, which occasionally in the collieries are the cause of such dreadful ef- fects ; such as hydrogen gas, or the fire-damp, carbonic acid, or the choke-damp ; the inconve- nience we experience takes place gradually as we recede from the openings to the atmosphere, and seems to arise solely from the causes before assigned, though it is found to come on more rapidly in certain situations than in others.

The most obvious remedy, and that which is most frequently resorted to, is the opening a communication either to some other part of the mine, or to the surface itself, and as soon as this is done the ventilation is found to be com- plete, by the currents which immediately take place, often with considerable force, from the different degrees of temperature in the subter- ranean and upper atmospheres ; and these cur- rents may be observed to change their directions as the temperatures alternate.

The great objection to this mode of curing the evil is the enormous expense, with which it is most commonly attended. In driving a long level, or tunnel, for instance, it may happen to be at a great depth under the surface, and the intervening rock of great hardness ; in such a case every shaft which must be sunk upon it for air alone, where not required (as often they might not) to draw up the waste, would cost se- veral hundred pounds; or in sinking a shaft it may be necessary, at an expense not much less, to drive a level to it from some other for this purpose alone.

To avoid this, recourse has been had to divid- ing the shaft or level into two distinct parts, com- municating near the part inter. ded to be venti- lated, so that a current may be produced in opposite directions on each side the

partition ; and this, where room is to be spared for it, is often effectual to a certain extent. It is found however to have its limits at no very great dist- ance, and the current at best is but a feeble one, from the nearly equal states of heat in the air on each side. The only scheme beside these has hitherto been to force down a volume of purer air, through a system of pipes placed for the

purpose, and a variety of contrivances have been devised for effecting this ; most of them are so old that they may be found described in Agri- cola's work De Re Metallica. The most com- mon are by bellows worked by hand ; by boxes or cylinders of various forms placed on the sur- face with a large opening against the wind, and a smaller one communicating with the air-pipes by a cylinder and piston working in it, which, when driven by a sufficient force, has great power ; but the cheapest and most effectual scheme for this purpose, where circumstances will admit of its being applied, is one adopted some time since in the tunnel of the Tavistock canal. It v by applying the fall of a stream of water for this purpose, and it has been long known that a blast of considerable strength may be obtained in this manner, which has the ad- vantage of being constant and self-acting. The stream being turned down a perpendicular co- lumn of pipes, and dashing in at a vessel so con- trived as to let off the water one way, with an opening at another part for the air, which, being pressed into it by the falling water, may be con- veyed in any direction, and will pass through air-pipes with a strong current, which will he found efficacious in ventilating mines in many instances, as it has likewise, in some cases, been sufficient for urging the intensity of fires for the purposes of the forge. It is easily procured where a sufficient fall is to be had, and the perpendi- cular column can be so fixed as that the water from the bottom may pass off, while the air is forced into a pipe branching from the air-vessel, and which is to be continued to the part of the mine where the supply of fresh air is required.*

We have found, however, that the forcing into vitiated air a mixture of that which is purer, even when the best means are used, though a measure which affords relief, is not in bad cases a complete remedy; and where the operation depends on manual labor, or any means that are not unremitted in their action, it becomes quite ineffectual. The foul air, charged with the smoke of gunpowder used in blasting, and which it strongly retains, is certainly meliorated by the mixture of pure air, but is not removed. W liile the blast continues, some of it is driven into the other parts of the mine ; but when the influx of pure air ceases it returns again, or if during the

influx of pure air a fresh volume of smoke be produced by explosions, which are con- stantly taking place, it is not until some time afterward that it becomes sufficiently attenuated for the workmen to resume their stations with comfort.

A consideration of these circumstances led an ingenious engineer to think that the usual ope- ration of all ventilating engines ought to be re- versed, to afford all the advantages that could be desired ; that, instead of using the machines which serve as condensers, exhausters should be adopted ; and thus, instead of forcing pure air into that in a vitiated state, a complete remedy could only be had by pumping out all that was impure as fast as it became so.

Many modes of doing this suggested them- selves to Mr. Taylor by the alteration of the ma- chines commonly applied, and by producing an

ascending stream of air through pipes by a fur- nace constructed for the purpose. The latter mode would however have been here expensive in fuel, as well as in attendance; and the others required power to overcome the friction of pis- tons, and so on, or considerable accuracy in con- struction.

Mr. Taylor at last erected a machine which, while it is so simple in construction, and re- quires so small an expense of power, is so com- plete in its operation, and its parts are so little liable to be injured by wear, that nothing more can be desired, where such a one is applied. This en- gine bears a considerable resemblance to Mr. Pepys's gazometer ; and the machine may be as well placed at the bottom of the shaft as at the top, and that in either case it is proper to fix it upon a floor, which may prevent the return of the foul air into the mine, after being discharged from the exhauster ; this floor may be furnished wall a trap door to be opened occasionally for the passage of buckets through it. The exhaust- ing-cylinder is made of cast-iron, open at the bottom and suspended over the air-pipe, im- mersed some way in the water. It is furnished with a wooden top, in which is an opening fitted with a valve likewise opening upwards. The exhausting cylinder has its motion up and down given to it by a bob connected to any engine by an horizontal rod, and the weight of the cylin- der is balanced, if necessary, by a counterpoise.

FIG. 1, PLATE III. of Mining presents a sec- tional view of the apparatus in which C is the water tank, F, the exhauster furnished with a valve at F, and supported at the the top by the arm G. Motion is communicated by the rod II, the exhausting vessel being balanced by the weight I. The pipe B, is brought from the bottom of the mine by the shaft A.

The quantity of air exhausted is calculated of ,course from the area of the

bore of the cylinder and the length of the stroke.

The dimensions which Mr. Taylor has found sufficient for large works are as follows: — The bore of the exhausting cylinder two feet. The length six feet, so as to afford a stroke of four feet. The pipes which conduct the air to such an engine ought not to be less than six-inch bore. The best rate of working is from two to three strokes a minute; but, if required to go much faster, it will be proper to adapt a capa- cious air-vessel to the pipes near the machine, which wjll equalise the current pressing through them.

A small engine to pump out two gallons at a stroke, which would be sufficient in many cases, could be worked by a power equal to raising a very few pounds weight, as the whole machine may be put into complete equilibrium before it begins to work, and there is hardly any other friction to overcome but that of the air passing through the pipes.

The end of the tunnel of the Tavistock canal, which it was Mr. Taylor's object to ventilate, was driven into the hill to a distance of nearly 300 yards from any opening to the surface, and being at a depth of 120 yards, and all in hard schistus rock, air-shafts would have been attend- ed with an enormous expense ; so that the tun-

nel being a long one, it was most desirable to sink as few as possible, and of course at consi- derable distances from each other.

Within a very short time after the engine be- gan to work, the superiority of its action over those formerly employed was abundantly evident. The whole extent of the tunnel, which had been uninterruptedly clouded with smoke for some months before, and which the air that was forced in never could drive out, now became speedily so clear that the day light and even objects at its mouth were distinctly seen from its farthest end. After blowing up the rock, the miners could instantly return to the place where they were employed, unimpeded by the smoke, of which no appearance would remain underground in a very few minutes, while it might be seen to be discharged in gusts from the valve at the top of the shaft. The constant current into the pipe at the same time effectually prevented the accu- mulation of air unfit for respiration. The influx of air, from the level into the mouth of the pipe, rushes with such force as instantly to extinguish the flame of a large candle ; and any substance, applied so as to stop the orifice, is held tight by the outward pressure.

Two similar engines have been since con- structed for other parts of the

same tunnel, and have in every respect answered the purpose for which they were designed. The original one is worked by the small stream of water, by means of a light overshot wheel twelve feet in diameter, and about six inches in breast. — The two others are attached to the great overshot-wheel, which pumps the water from the shafts which are sink- ing upon the line, and, as their friction is compa- ratively nothing, this may be done in any case, with so little waste of power for this purpose as not to be an object of consideration, even if the power be derived from more expensive means.

The size of the exhauster may always be pro- portioned to the demand for air, and, by a due consideration of this circumstance, this engine may be effectually adapted not only to mines and collieries, but also to manufactories, work- houses, hospitals, prisons, ships, and so on. Thus, if it were required to ventilate a shaft of a mine, or a single level, which is most frequently the casp where three men are at work at one time, and we allow that those three men vitiate each twenty-seven cubic inches and a half of air per minute (as determined by the experiments of Messrs. Allen and Pepys) ; and allowing, far- ther, that their candles vitiate as much as the men, there will be six times twenty-seven cubic inches and a half of air to be drawn out in a minute, equal to 165. Now a cylinder five inches in diameter, working with a stroke of nine inches, will effect this by one stroke in a minute, though it would certainly be advisable to make it larger.

Mr. Vallance's late patent for ventilating houses, is entitled to a place iii our present arti- cle. The specification of this patent, after expa- tiating at considerable length upon the dangerous consequences to the health of individuals, as well as the unpleasant sensations produced by the extreme heat of crowded rooms, and also upon she present ineffectual modes of ventilating

places intended for public assemblage, proposes the following methods to be resorted to under existing circumstances, viz. in the first instance, simply for the supply of pure air, to inject it in its natural state, by means of a pump from the atmosphere into the crowded room; secondly, for alleviating the extreme heat by cooling the air, before it is conveyed into the room ; and, thirdly, when it may be necessary for warming the place, to keat the air previously to its being injected.

For this purpose it is designed to erect a con- densing or injecting air pump, or large bellows, in some convenient part of an adjacent building, from winch a pipe is laid, conducting the air round the room, behind the skirting board ; which pipe is to have minute openings to allow the passage of air in small streams, so as not to an- noy the company. In the event of the natural state of the atmosphere being too warm to afford the necessary

cool refreshment, it is proposed that the air, thus injected, should be condensed in pipes or other vessels, and deprived of part of its caloric (matter of heat). Several modes are proposed to effect this, one of which is to force it through cold water, or through pipes surrounded with cold water. When the tempera- ture of the atmosphere is too cold, the air is proposed to be passed through hot water or heated pipes.

The pump or bellows to be employed for this purpose must be large, as the quantity of air re- quired to be injected is calculated at one entire foot for each person present per minute. The piston of the pump is proposed to be worked by a contrivance similar to the pile driving machi- nery, with a weight of about 1000 Ibs. The windows and all other parts are intended to be rendered air-tight by luting; the only exit passage, or ventilator, is to be an aperture in the ceiling, from which a pipe is to lead to a cistern or reservoir without the building, making a water-valve, through which the air is to make its escape when sufficiently condensed by the pumping before mentioned.

A new ana oeautiful mode of ventilation, as adopted in some large buildings, is shown in the plate IV. Mttullauet, fig 1., G G is a section of the upper part of the roof, and the heat of the chandelier suspended beneath, causes a con- tinual upward current of air, which, ascending by the pipe 6, finds its way above the roof. The horizontal pipes e and f are continued to those remote parts of the building which would be inaccessible to the ordinary ventilating processes. The air being rarefied in the ascending pipe, carries with it those ponions of air in the neigh- bourhood of the other pipes, and by this means it is most effectually withdrawn. The venti- tilation being rendered completely effectual by a new supply from bpneath.

\ 1 NTKICLE, n.s. Fr. ventric ule ; Lat. ren- triculus. The stomach; a small cavity in the body, and particularly of the heart.

Knowest thou how blood, which to the heart doth

flow, Uoth from one ventride to the other go ? Dtmne.

Whether 1 will or not, while I live, my heart beats, and my ventricle digests what is in it. Hale.

The heart, being a muscular part, the sides are composed of two orders of fibres running spirally from base to top, contrarily one to the other; and, so being drawn or contracted, constringe the ventri- cle, and strongly force*

out the blood. Ray.

The mixture of blood and chyle, after its circula- tion through the lungs, being brought back into the left ventricle of the heart, is drove again by the heart into the aorta, through the whole arterial sys.em.

Arbuthnot.

VENTRILOQUISM, VENTRILOQUUS, com- pounded of venter, belly, and loquor, I speak, gastriloquus, or engastrimythus, is a term ap- plied to persons who speak inwardly ; having a peculiar art of forming speech, by drawing the air into the lungs; so that the voice, proceeding out of the thorax, to a by-stander seems to come from some distance, or from some other person. Some traces of the art of ventriloquism are to be found in the writings of the ancients ; but many more are to be discovered there, if we adopt the abbe" de la Chapelle's opinion, that the responses of many of the ancient oracles were actually delivered by persons possessing this quality, so very capable of being applied to the purposes of priestcraft and delusion. La Cha- pelle having heard many surprising circumstances related concerning one M. St. Gille, a grocer at St. Germain-en-Laye, near Paris, whose powers as a ventriloquist had given occasion to many sin- uular and diverting scenes, formed the resolution of seeing him. Being seated with him on the opposite side of a fire in a parlor on the ground- floor, and very attentively observing him, the abbe, after half an hour's conversation with M. St. Gille, heard himself called, on a sudden, by his name and title, in a voice that seemed to come from the roof of a house at a distance; ;md, whilst he was pointing to the house from which the voice had appeared to him to proceed, he was yet more surprised by hearing the words ' it was not from that quarter,' apparently in the same kind of voice as before, but which now seemed to issue from under the earth, at one of the corners of the room. In short, this factitious voice played, as it were, every where about him, and seemed to proceed from any quarter, or distance, from which the operator chose to trans- mit it to him. To the abbe", though conscious that the voice proceeded from the mouth of M. St. Gille, he appeared absolutely mute, while he was exercising this talent ; nor could any change in his countenance be discovered. But he ob- served that M. St. Gille presented only the pro- file of his face to him, while he was speaking as a ventriloquist. On another occasion, M. St. Gille sought for shelter from a storm in a neigh- bouring convent ; and finding the community in t mourning, and enquiring the cause, he was told that one of their body much esteemed by them had lately died. Sume of the religious attended him to the church, and, showing him the tomb of their deceased brother, spoke very feelingly of the scanty honors that had been bestowed on his memory ; when suddenly a voice was heard, ap- parently proceeding from the roof of the choir, lamenting the situation of the defunct in purga- tory, and

reproaching the brotherhood wild UK ir want < >(zeal on his account. The wholr com-

munity being afterwards convened into the church, the voice from the roof rene%ved its la- mentations and reproaches, and the whole con- vent fell on their faces, and vowed a solemn re- paration. Accordingly they first chaunted a de profundis in full choir, during the intervals of which the ghost occasionally expressed the com- fort he received from their pious exercises and ejaculations in his behalf. The prior, when this religious service was concluded, entered into a serious conversation with M. St. Gille, and in- veighed against the incredulity of our modern sceptics, and pretended philosophers, on the ar- ticle of ghosts and apparitions ; and St. Gille found it difficult to convince the fathers that the whole was a deception.

Other instances of M. St. Gille's talents arc related in the Le Ventriloque of M. de la Cha- pelle; and the abbe", in the course of his enqui- ries, was informed that the baron de Mengen, a German nobleman, possessed this art in a very high degree. He also relates, from Brodeau, a learned critic in the sixteenth century, two singu- lar feats performed by a capital ventriloquist in his time, called Louis Brabant, valet de chambre to Francis I. Louis had fallen in love with a beautiful and rich heiress, but was rejected by the parents as a low unsuitable match. However, the father dying, he visits the widow ; and, on his fi.bt appearance in the house, she hears herself ac costed in a voice resembling that of her dead hus- band, and which seemed to proceed from above. ' Give my daughter in marriage to Louis Bia- bant, who is a man of great fortune and excellent character ; I now endure the inexpressible tor- ments of purgatory, for having refused her to him; obey this admonition, and I shall be soon delivered ; you will provide a worthy husband for your daughter, and procure everlasting repose to the soul of your poor husband.' The dread summons, which had no appearance of proceed- ing from Louis, whose countenance exhibited no change, and whose lips were close and motionless, was instantly complied with; but the deceiver, in order to mend his finances for the accom- plishment of the marriage-contract, applies to one Cornu, an old and rich banker at Lyons, who had accumulated immense wealth by usury and extortion, and was haunted by remorse of conscience. After some conversation on demons and spectres, the pains of purgatory, &c., during an interval of silence, a voice is heard like that of the banker's deceased father, complaining of his dreadful situation in purgatory, and calling upon him to rescue him from thence, by putting into the hands of Louis Brabant, then with him, ;i large sum for the redemption of Christians in slavery with the Turks; threatening him at the same time with eternal damnation, if he did not thus expiate his own sins. Upon a second in- terview, in which his ears were saluted with tl-e complaints and groans of his father, and of all

his deceased relations, imploring him for tt.e love of God, and in the name of every saint in the calendar, to have mercy on his own soul and others, Cornu obeyed the heavenly voice, and gave Louis 10,000 crowns, with which he re- turned to Paris, and married his mistress !'

From baron de Mengen's account of himself

and the observations made of M. de la Chapelle in his frequent examinations of St. Gille, it seems that the factitious voice produced by a ventrilo- quist does not (as the etymology of the word imports) proceed from the belly, but is formed in the inner parts of the mouth and throat. The art, according to this author, does not depend on a particular structure or organization of these parts, but may be acquired by almost any ar- dently desirous of attaining it, and determined to persevere in repeated trials. The judgments we form concerning the situation and distance of bodies, by means of the senses mutually assisting and correcting each other, seem to be entirely founded on experience; and we pass from the sign to the thing signified by it immediately, or at least without any intermediate steps percepti- ble to ourselves. Hence it follows that if a man, though in the same room with another, can by any peculiar modification of the organs of speech produce a sound which in raininess, tone, body, and every other sensible quality, perfectly re- sembles a sound delivered from the roof of an opposite house, the ear will naturally, without examination, refer it to that situation and dis- tance ; the sound which the person hears being only a sign, which from infancy he has been ac- customed, by experience, to associate with the idea of a person speaking from a house-top. A deception of this kind is practised with success on the organ, and other musical instruments. Rolandus, in his Aglossostomographia, mentions, that if the mediastinum, which is naturally a single membrane, be divided into two parts, the speech will seem to come out of the breast ; so that the by- standers will fancy the person pos- sessed.

Mr. Gough, in the Manchester Memoirs, vol. v. part 2, p. 622, London 1802, investigates the method whereby men judge by the ear of the position of sonorous bodies relative to their own persons. This author observes in general that a sudden change of direction in sound, our know- ledge of which, he conceives, does not depend on the impulse in the ear, but on other facts, will be perceived, when the original communication is interrupted, provided there be a sensible echo. This circumstance will be

acknowledged by any person who has had occasion to walk along a valley, intercepted with buildings, at the time that a peel of bells was ringing in it. The sound of the bells, instead of arriving constantly at the ears of a person so situated, in its true direction, is frequently reflected in a short time from two or three different places. These deceptions are in many cases so much diversified by the succes- sive interpositions of fresh objects, that the steeple appears, in the hearer's judgment, to perform the part of an expert ventriloquist on a theatre, the extent of which is adapted to its own powers, and not to those of the human voice. The simi- larity of effect which connects this phenomenon with ventriloquism convinced the author, when- ever he heard it, that what we know^to be the cause in one instance is also the cause in the other, viz. that the echo readies the ear, while the original sound is intercepted by accident in the case of the bells, but by art in the case of the ventriloquist.

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It is the business of a ventriloquist to a:ii'i~> his admirers with tricks resembling the foregoing delusion ; and it will be readily granted that in> has a subtle sense, highly corrected by experi- ence, to manage, on which account the judgment must be cheated as well as the ear. This can only be accomplished by making the pulses, constituting his words, strike the heads of his hearers, not in the right lines that join their per- sons and his. He must therefore know how to disguise the true direction of his voice, because the artifice will give him an opportunity to sub- stitute almost any echo he chooses in the place of it. But the superior part of the human body h;i> been already proved to form an extensive seat of sound, from every point of which the pulses are repelled as if they diverged from a common centre. This is the reason why people, who speak in the usual way, cannot conceal the di- rection of their voices, which in reality fly ofT towards all points at the same instant. The ven- triloquist, therefore, by some means or other, acquires the difficult habit of contracting the field of sound within the compass of his lips, which enables him to confine the real path of his voice to narrow limits. For he who is master of the art has nothing to do but to place his mouth obliquely to the company, and to dart his words, if the expression nrav be used, against an oppos- ing object, whence they will be reflected imme- diately so as to strike the ears of the audience from an unexpected quarter, in consequence of which the reflector will appear to be the speaker. Nature seems to fix no bounds to this kind of deception, only care must be taken not to let the path of the direct pulses pass too near the head of the person who is to be played upon; but the divergency of the pulses make him perceive the voice itself.

VENTURE, n. s., v. n., & v. a.^\ Fr. avan- VEN'TURESOME, adj. I litre. A ha-

VEX'TURESOMELY, adv. ! zard;under-

VEN'TUROUS, adj. f taking of

VEN'TVROLSLY, adv. | chance or

VEX'TUROUSXESS, n. s. J danger;

hap ; stake ; ' at a venture' is at hazard ; without consideration : to venture is, to dare ; run a ha- zard, taking at and on as prepositions : also as a verb active to put to hazard : venturous and venturesome mean, daring ; bold ; fearless of hazards : the adverbs and noun substantive fol lowing corresporfd.

You have made but an estimate of those lands m a venture, so as it should be hard to build any cer- tainty of charge upon it. Spenter.

My venture are not in one bottom trusted, Nor to one place.*
Shakt]>eare. Merchant of Venice. That slander is found a truth now ; and held fo

certain, The king will venture at it. Sluikspeare.

A man were better rise in his suit ; for he that would have rexlurerl at first to have lost the suitor, will not in the conclusion lose both the suitor and his own former favour. Bacon.

The king resolved with all speed to assail the rebels, and yet with that providence and surety as should leave little to venture or fortune. Id.

Siege was laid to the fort by the Lord Grey, then deputy, with a smaller number than those were within the fort ; rentnroutly indeed ; but haste was

made to attack them before the rebels came in to them.

Id.

Charles was guided by mean men, who would make it their master-piece of favour to give ven- turous counsels, which no great or wise man would.

Id.

Thrice happy you, that look as from the shore, And have no venture in the wreck to see. Daniel.

He paused not ; but with venturous arm He plucked, he tasted. Milton's Paradise Lost.

A bargain at a venture made Between two partners in a trade. Hudibras.

I never yet the tragic strain essayed, Deterred by that inimitable maid : And, when I venture at the comic stile, Thy scornful lady seems to mock my toil. Waller.

Her coming into a place, where the walls and ceilings were whited over, much offended her sight, and made her repent her venturousnrtt.

Boyle on Colours.

The venturous humour of our mariners costs this island many brave lives every year. Temple.

I am so overjoyed, I can scarce believe I am at liberty ; like a bird that has often beaten her wing in vain against her cage, dare hardly venture out, though she see it open. Dryden.

Here was no scampering away at a venture, without fear or wit. L' Estrange.

When infinite happiness is put in one scale, against infinite misery in the other ; if the worst that comes to the pious man, if he mistakes, be the best that the wicked can attain to, if he be in the right, who can, without madness, run the venture?

Ltd,*

Though they had ideas enough to distinguish gold from a stone, yet they but timorously ventured on such terms as aurietas and saxietas. Id.

If Ahab be designed for death, though a soldier in the enemy's army draws a bow at a venture, yet the sure unerring directions of providence shall carry it in a direct course to his- ear. South.

Ongen, mentioning their being cast out of Jerusa- lem, ventures to assure them that they would never be re-established, since they had committed that horrid crime against the Saviour of the world.

Addison on the Christian Religion.

Turco-Papismus I would desire him to read, before he ventures at capping of characters.

Atterbury.

Savage pirates seek, through seas unknown, The lives of others, venturous of their own. Pope.

VENUE, in law, vicinetum or visnetum, a neighbouring place, locus quern vicini habitant : the place whence a jury are to come for trial of causes. F. N.B.I 15.

The want of a venue is only curable by such a plea as admits the fact, for the trial whereof it was required to lay a Venue. 3 Salk. 381. Where the action could only have arisen in a particular county it is local, and the venue (by original) must be laid in that country (or where several facts material to an action, in< its nature local, arise in different counties, the venue must be laid in one or other of those counties); for, if it be laid elsewhere, the defendant may demur to the declaration ; or the plaintiff, on the gene- ral issue, will be nonsuited at the trial. Where the action might have arisen in any county, it is transitory, and the plaintiff may in general lay the venue wherever he pleases ; subject to its being changed by the court, if not laid in the very county where the action arose. Thus, in an action upon a lease for rent, &c., founded on the

privity of estate, as in debt by the assignee or devisee of the lessor against the lessee ; or by the lessor, or his personal representatives, against the assignee of the lessee ; or against the executor of the lessee, in the debet and detinet ; or in covenant, by the grantee of the reversion against the assignee of the lessee ; the action is local, and the venue must be laid in the county where the estate lies. But in an action upon a lease for rent, &c., founded on the privity of contract ; as in debt by the lessor against the lessee, or his executor in the detinet only ; or in covenant, by the lessor or grantee of the reversion against the lessee, the action is transitory, and the venue may be laid in any county, at the option of the plaintiff. Tidd's Pract. K. B.

There are, however, some actions of a transi- tory nature wherein the venue must be laid in the county where the facts which are the ground of the action were committed, and not elsewhere. Such are all actions upon penal statutes, stats. 31 Eliz. c. 5, sect. 2 : 21 Jac. I. c. 4, sect. 2. For the general effect of these acts, as connected with each other, see Barber v. Tilson, 2 Maul, and Selw. 429. ; and that the stat. 31 Eliz. ex- tends to

penal actions, given by subsequent sta- tutes, 9 East's Rep. 296.

VENUS, in mythology, the goddess of love and beauty. Cicero mentions two other deities of this name. Venus, styled Urania and Celes- tis ; and the Venus Pand'emos or Popularis, the wife of Vulcan, and the goddess of wanton and effeminate love. To the first the Pagans ascribed no attributes but such as were agreeable to the strictest chastity and virtue; and of this deity they admitted no corporeal resemblance, she be- ing only represented by the form of a globe, ending conically. Her sacrifices were termed nephalia, on account of their sobriety. To her honey and wine were offered, and no animal ex- cept the heifer; and on her altars the wood of figs, vines, or mulberries, were not suffered to be burnt. The Romans dedicated a temple to this goddess, to whom they gave the name of Verticordia ; because she turned the hearts of lewd women, and inspired modesty and vir- tue. But the most famous of these goddesses is the wife of Vulcan ; who is represented as springing from the froth raised by the genitals of Saturn, when cut off by Jupiter and thrown into the sea. As soon as she was formed, she was laid in a beautiful shell embellished with pearl, and wafted by gentle zephyrs to the isle of Cytherea, whence she sailed to Cyprus. At her landing, flowers rose beneath her feet ; she was received by the Hours, who braided her hair with golden fillets; and then wafted her to heaven, where her charms appeared so attractive that most of the gods desired her in marriage; but Vulcan, by the advice of Jupiter, gained posses- sion by putting poppies into her nectar. As Venus was the goddess of lov« and pleasure, the poets have been lavish in the description of her beauties ; end the painters and statuaries have endeavoured to give her the most lovely form ; and her son Cupid is her inseparable companion. She was honored as the mother of Hymen, Cupid, ./Eneas, and the graces, and was passion ately fond of Adonis and Anchises. This god-

dess was principally worshipped at Paphos and Cyprus ; and the sacrifices offered to her were white goats and swine, with libations of wine, milk, and honey. Her victims were crowned with flowers or wreaths of myrtle.

VENUS, in astronomy. See ASTRONOMY and PNEUMATICS.

VENUS, in zoology, a genus cf insects belong- ing to the order of verities testacea. This animal is a tethys: the shell is bivalve ; the hinge with three teeth near each other, one placed longitu- dinally and bent inwards. There

are many spe- cies; of which the most remarkable is, V. mer- cenaria, or the commercial, with a strong, thick, weighty shell, covered with a brown epidermis ; pure white within ; slightly striated transversely. Circumference above eleven inches. These are called in North America clams. They differ from other species only in having a purple tinge within. Wampum or Indian money is made of them.

VENUS'S COMB. See SCANDIX.

VEXUS'S FLY-TRAP. SeeDioxaiA MUSCIPULA.

V'EXUS'S LOOKIXG GLASS. See CAMPANULA.

VENUS'S NAVEL-WORT. See CYXOGLOSSUM.

A;EPRECUL/E, diminutive from vepres, a briar or bramble ; the thirty-first order in Lin- naeus's Fragments of a Natural Method. See BOTANY.

VERA CRUZ, a province of Mexico, situated under the burning sun of the tropics, and extend- ing along the Mexican Gulf, from the Rio Bara- deras (or de los Lagartos) to the great river of Panuco, which rises in the metalliferous moun- tains of San Luis Potosi. Hence this intendancy includes a very considerable part of the eastern coast of New Spain. Its length, from the bay of Terminos near the island of Carmen, to the small port of Tampico, is 210 leagues ; while its breadth is only in general from twenty-five to twenty-eight leagues. It is bounded on the east by the peninsula of Merida ; on the west by the intendanciesof Oaxaca, Puebla, and Mexico ; and on the north by the colony of New Santander.

The admirable order with which different tribe of vegetables rise above one another by strata, as it were, is nowhere more perceptible than in ascending from the port of Vera Cruz to the table-land of Perote ; and the inferior limit of oaks warns the colonist who inhabits the central table-land how far he may descend towards the coast, without dread of the mortal disease of the yellow fever.*

The province is enriched by nature with the most precious productions. In the ever-green forests, at the foot of the Cordillera, grows the tree of which the odoriferous fruit is employed for perfuming chocolate. The myrtle is produced in the forests which extend towards the river of Baraderas, in the eastern part of the intendancy of Vera Cruz. The cocoa of Acayucan would be in request if the natives were to apply them- selves more assiduously to the cultivation of co- coa trees. On the eastern and southern declivi- ties of the Pic d'Orizaba, in the valleys which extend towards the small town of Cordoba, to- bacco of an excellent quality is cultivated, which yielded an annual revenue to the crown of Spain, previous to the late distractions of

the country,

of more than 18,000,000 of francs. The ssimilax, of which the root is the true sarsaparilla, grows in the humid and umbrageous ravines of the Cordillera. The cotton of the coast of Vtra Cruz is celebrated foi its fineness and whiteness. The sugar cane yields nearly as much sugar as in the island of Cuba, and more than in the plantations of St. Domingo. Hence sugar and cotton plantations have been multiplying in thu province of Vera Cruz, especially since the fatal events at St. Domingo, which have given a great stimulus to industry in these parts of America.

The intendancy contains within its limits two colossal summits, of which one, the volcano of Orizaba, is, after the Popocatepetl, the most ele- vated mountain of New Spain. The other sum- mit, the Coffre de Perote, according to the mea- surement of Humboldt, is nearly 1312 feet higher than the Peak of Teneriffe. It serves as a signal to the sailors who put in at Vera Cruz. The small volcano of Tuxtla is situated four leagues from the coast, south-east from the port of Vera Cruz, near the Indian village of Santiago de Tuxtla. There was a very considerable eruption of this volcano on the 2d of March 1793, during which the roofs of the houses of Oaxaca, Vera Cruz, and Perote, were covered with volcanic ashes. At Perote, which is 170 miles distant, in a straight line from the volcano of Tuxtla, the subterrane- ous noises resembled heavy discharges of ar- tillery. In the northern part of the intendancy of Vera Cruz, at two leagues distance from the great Indian village of Papantla, there is a py- ramidal edifice of great antiquity. It remained unknown to the first conquerors, being situated in the midst of a thick forest, and concealed by the Indians, who held it in great veneration It is constructed of immense stones of a porphyritical shape. Mortar is distinguishable in the seams. The edifice, however, is not so remarkable for its size, as for its symmetry, the polish of the stones, and the great regularity of their cut. The base is an exact square, each side being eighty- two feet in length. The perpendicular height appears not to be more than from fifty-two to sixty-five feet. This monument, like all the other Mexican monuments, is composed of seve- ral stages. Six are still distinguishable, and a seventh appears to be concealed by the vegeta- tion with which the sides of the pyramid are covered. A great stair of fifty-seven steps con- ducts to the top, where the human victims were sacrificed. On each side is a small stair. The facing of the stones is adorned with hieroglyphics, in which serpents and crocodiles, carved in relievo, are discernible. Each story contains a great number of square niches, symmetrically distributed. In the first story there are twenty- four on each side, in the second twenty, and in the third sixteen. The number of these niches in the body of the pyramid is 366, and there are twelve in the stairs towards the east. The intendancy of Vera Cruz has no mines of any importance. Those of Zomelahuacan, near Ja- lucujo, are almost abandoned. According to the

latest enumeration, Vera Cruz contains 156,000 inhabitants. The extent of its surface is 4JL41 square leagues, and there are thirty-eight inhab- itants to each league.

VERA CRUZ, the principal sea-port of Mexico, fronts the sea in a semicircle, and is enclosed with a simple wall or parapet, six feet high and three feet broad, surmounted by a wooden palli- sade in great decay. On the shore, to the south- east and north-west, are two redoubts, with some cannon to defend the port, which is not commodious, being merely a bad anchorage among shallows. Opposite, at the distance of 400 fathoms, is an islet, on which stands the castle of St. Juan d'Ulloa, fortified with 300 pieces of cannon. From forty to sixty ships of war, or 100 merchantmen might anchor here, in from four to ten fathoms ; but the northerly winds are terrible, and often drive vessels on shore. In the rainy season the marshes on the north are haunted by alligators, from seven to eight feet in length, and so strong as to be able to draw an ox under the water. Vera Cruz is the centre of European and West India commerce, receiving also great quantities of East Indian produce, by way of Acapulco, from the Philip- pines. The city is regularly built ; its streets are broad and straight, and it is inhabited by well informed merchants. Its interior police has been improved during these few years. It is situated in an arid plain, without running water, and on which the north winds, which blow with dreadful impetuosity from October till April, have formed hills of moving land. These downs change their form and situation every year. They are from twenty-six to thirty-eight feet in height, and contribute very much, by the reverberation of the sun's rays, and by the high temperature which they acquire during the summer months, to in- crease the suffocating heat. The town being also surrounded with a high wall, there is little or no circulation of air. Between the city arid the Aroyo Gavilan, in the midst of the sandy downs, are marshy grounds, covered with mangles and other brushwood ; while the stagnant water of several small lakes occasions intermittent fevers among the natives. All the edifices are con- structed of materials drawn from the bottom of the ocean ; for no rock is to be procured in the environs of the city, although a good freestone has been lately brought from Campeachy. Water is found, on digging the sandy soil at the depth of nine feet and a half; but this water proceeds from the filtration of the marshes formed in the downs. It is rain water which has been in con- tact with the

roots of vegetables, and is of a very bad quality. People in easy circumstances drink rain water, collected in cisterns ; and the want of good water has for centuries past been regarded as one principal cause of the diseases of the inhab- itants : in 1764 a project was formed for conduct- ing part of the fine river of Xamapa to the port of Vera Cruz. Before surveying the ground, a dike or embankment was formed above the vil- lage of Xamapa, at an expense of £60,000; a stone aqueduct was next constructed, for a length of about 2000 feet ; yet, notwithstanding these exertions and expense, the waters of the Xamapa are still more than twelve miles distant from the town. In the present state of things, the construction of this aqueduct is estimated to cost from £208,000 to £250,000 ; and it is only put off because it has been calculated that ten

public cisterns placed without the precincts of the city, would not altogether cost above £30,000, while they would be sufficient for a population of 16,000 souls, if each cistern con- tained a volume of water of 23,661 cubic feet. The habitual population of Vera Cruz, without including the militia and sea-faring people, is 16,000. It is 150 miles E. S. E. of Puebla.

VERA PAZ, a town and province of Gua- timala, South America, bounded north by Chiapa and Yucatan, east by Honduras and the city and gulf of that name, south by Guatimala, and on the west by the same and Chiapa. It is about 120 miles in length, and seventy-four in extreme breadth. The country is rough and broken, but about half of the province is of a mild and benign temperature, and the other half hot, and abound- ing in mosquitoes. The rains here continue nine months in the year, and the province abounds in vegetable productions and cattle, and has many mountains covered with trees, and vast caverns, in which many rivers laving the province lose themselves. On its mountains and forests are large trees of excellent kinds of wood, imparting a balmy fragrance to the surrounding air ; and amongst these we must note in particular the liquid amber of a thick and rough wood, and various kinds of balsams, and dragon plants, from which is extracted the gum called dragon's blood. Here are canes of 100 feet long, and of great thickness. The woods are thronged with animals and wild beasts : the largest of these is the danta, as big as a calf, though somewhat short, and thicker set in all its joints, which on the whole resemble those of the elephant. This animal is ferocious and terrible when irritated, and with its tusks destroys every thing it meets in its course, not excepting trees of considerable strength. Here are likewise lions, tigers, bears of an enormous size, cats, and mountain goats, monkeys of various kinds, wild boars, porcupines, squirrels, and a variety of other animals.

The trade of the province consists chiefly in drugs, cotton, cacao, honey, wool, &c. ; and from its situation on the gulf of Honduras, might be rendered much more flourishing than it is. The gulf of Dolce or Dulce, a

sort of large lake, but which communicates with the sea by means of the gulf of Amatique, lies on the eastern and southern part of Vera Paz, and seems placed there by nature to facilitate the commerce of the government of Guatimala.

VERA PAZ, the chief town of the above pro- vince, is situated on the Rio Coban, which falls into the gulf or lake of Dulce. 600 miles south- east of Mexico.

VERAC'ITY, n. $. Lat. verax. Moral truth ; physical truth ; consistency or honesty of report.

When they submitted to the most ignominious and cruel deaths, rather than retract their testimony, there was no reason to doubt the veracity of those facts which they related. Adtliton.

VERAGUA, a province of Terra Firma, in South America, bounded on the north by the Caribbean Sea ; east by the province of Darien in South America, which is separated from Ve- ragua by the ridge of Canatagua ; on the west by Costa Rica; and on the south by the great Pa- cific Ocean. Veragua is a mountainous, rugged

country, covered with vast forests, beautifully in- terspersed with luxuriant and fertile valleys, wherein are found various estates and grazing farms, well stocked with cattle, from the abund- ance of excellent pastures.

VEHAGUA, ST. JAGO DE, the capital of the above province, is a handsome town, in a moist and warm climate, surrounded by a small dis- trict, which produces Indian corn, a root called yucca, of which they make bread, and plantains. Cattle and hogs are here also very numerous. The Indians in the vicinity dye their cottons, manufactured by themselves, with the juice of shell fish found in -the bay of Salinas, in Costa Rica, and on the coast of Veragua, affording a rich and delicate purple. With this juice, and with gold, which they find in the hills, they carry on a trade with Panama and Guatimala.

VERATRIA, a new vegetable alkali, dis- covered lately by MM. Pelletier and Caventou, in the veratrum sabatilla or cevadilla, the vera- trum album or white hellebore, and the colchi- cum autumnale or meadow saffron. The seeds of cevadilla, after being freed from an unctuous and acrid matter by ether, were digested in boil- ing alcohol. As this infusion cooled, a little wax was deposited ; and the liquid being eva- porated to an extract, redissolved in water, and again concentrated by evaporation, parted with its coloring matter. Acetate of lead was now poured into the solution, and an abundant

yel- low precipitate fell, leaving the fluid nearly colorless. The excess of lead was thrown down by sulphurated hydrogen, and the filtered liquor, being concentrated by evaporation, was treated with magnesia, and again filtered. The precipi- tate, boiled in alcohol, gave a solution, which, on evaporation, left a pulverulent matter, extremely bitter, and with decidedly alkaline characters. It was at first yellow, but by solution in alcohol, and precipitation by water, was obtained in a fine white powder. The precipitate by the ace- tate of lead gave, on examination, gallic acid ; and hence it is concluded that the new alkali existed in the seed as a gallate.

\ eratria was found in the other plants above- mentioned. It is white, pulverulent, has no odor, but excites violent sneezing. It is very acrid, but not bitter. It produces violent vomit- ing in very small doses, and, according to some (.xperiments, a few grains may cause death. It i< very little soluble in cold water. Boiling \vater dissolves about ˆ part, and becomes acrid to the taste. It is very soluble in alcohol, and rather less soluble in ether. It fuses at 122° Fahrenheit, and then appears like wax. On cooling it becomes an amber-colored translucent muss. Heated more highly, it swells, decom- poses, and burns. Decomposed by oxide of copper, it gave no trace of azote. It acts on test papers like an alkali, and forms salts uncrystal- lisable by evaporation. The salts appear like a gum. The supersulphate only seems to pre- sent crystals. Strong solutions of these salts are partially decomposed by water. Veratria falls down, and the solution becomes acid. The bi- s.ulphate appears to consist of

Veratria 93-723 100

Sulphuric acid 6-227 6-6441

7 VER

The muriate is composed of

Veratria 95-8606 100

Muriatic acid 4-1394 4‘318l

Iodine and chlorine produce with veratria an iodale, hydriodate, chloride, and muriate.

VERATRUM, in botany, a genus of plants of the class of polygamia and order of mono?cia, and in the natural system arranged under the tenth order, coronarise. There is no calyx ; the corolla has six petals; there are six stamina; the hermaphrodite flowers have three pistils and three capsules. There are three species, none of which are natives of Britain. The most import- ant is the V. album, or white hellebore, a per- ennial root,

about an inch thick, externally brown, internally white, and beset with many strong fibres ; the stalk thick, strong, upright, hairy, and usually rises four feet in height ; the leaves numerous, large, oval, entire, and of a yellowish green color, and surrounding the stem at its base : the flowers are greenish, and appear from June to August in very long, branched, terminal spikes. Every part of this plant is ex- tremely acrid and poisonous. The ancients, though sufficiently acquainted with its virulency were not deterred from employing it internally in several diseases, especially those of a chronic and obstinate kind, as mania, melancholia, ele- phantiasis, &c. Yeratrum has likewise been found useful in epilepsy and other convulsive complaints ; but the diseases in which its effi- cacy seems least equivocal are those of the skin. VERB, n. s. Fr. verbe ; Lat. verbum. A part of speech signifying existence, or some modifi- cation thereof.

Men usually talk of a noun and a verb.

Shaktpeare.

It was such a denial or confession of him as would appear in preaching : but this is managed in words and verbul profession. South.

VERB, in grammar. See GRAMMAR. VER'BAL, adj. ~) Fr. verbal ; Lat. verbalis. VERBAL'ITY, n. s. > Spoken ; oral; not written; VER'BALLY, adv. j full of words ; merely lite- ral ; relating to a verb : the adverb and noun substantive correspond.

Made she no verbal quests ?

— Yes ; once or twice she heaved the name of father Pantingly forth, as if it prest her heart. Stiakspeare.

1 am sorry

You put me to forget a lady's manners, By being so verbal. Id.

\ hosoever offers at verbal translation, shall have the misfortune of that young traveller, who lost his own language abroad, and brought home no other instead of it. Denham.

If young African for fame His wasted country freed from Punick rage, The deed becomes unpraised, the man at least , And loses, though but verbal, his reward. Miltm,

Sometimes he will seem to be charmed with words of holy scripture, and to flv from the letter and dead verbality, who must only start at the life and animated materials thereof.

Browne's 1'ulgar Errentri.

Being at first out of the way to science, in the progiess of their inquiries they must lose them- selves, and the truth, in a verbal labyrinth.

GlanmiU.

Tis almost impossible to translate verbally, and well, at the same time. Dryden.

The manner of our denying the deity of Christ, here prohibited, was by words and oral expressions rsrbally to deny it. South's Sermons.

Neglect the rules each verbal critick lays, For not to know some trifles is a praise. Pope.

VERBASCUM, in botany, mullein or cow's lungwort, a genus of plants of the class of pen- tandria and order of monogynia, and in the na- tural system arranged under the twenty-eighth order, luridae. The corolla is rotated and rather unequal ; the capsule is monolocular and bi- valved. There are twelve species, six of which are natives of Britain. 1. V. nigrum, or black mullein, having a stem beset with hairs beauti- fully branched ; the blossoms yellow with purple tips. The flowers are grateful to bees. Swine eat it ; sheep are not fond of it, but cows, horses, and goats, refuse it. The other British species are the lychnitis, nigrum, blattasi, and virgatum. 2. V. thapsus, or great mullein, having a single stem, simple and erect, covered with leaves, about six feet high. Leaves large, broad, white, woolly on both sides, sessile, decurrent. Flowers ter- minal, in a long spike, sessile, yellow. Catar- rhal coughs and diarrhoeas are the complaints for which it has been internally prescribed. Dr. Home tried it in both, but it was only in the latter disease that this plant succeeded.

VERBATIM, adv. Lat. verbatim. Word for word.

Think not, although in writing I preferred The manner of thy vile outrageous crimes, That therefore I have forged, ot am not able Verbatim to rehearse the method of my pen.

Shakipeare.

See the transcripts of both charters verbatim in Mat. Paris. Hale.

VERBENA, in botany, vervain, a genus of the class of diandria and order of monogynia, and in the natural system arranged under the fortieth order, personatae. There are seventeen species, only one of which is a native of Britain, viz. V. officinalis, or common vervain, which grows on the road sides near towns and villages. The leaves have many jagged clefts ; the blossoms are pale blue. It manifests a slight degree of astringency, and was formerly much in vogue as a deobstment, but is now disregarded. Mr. Millar says that it is never found above a quar- ter of a mile from a house ; whence the common people in England call it Simpler's Joy, because wherever it is found it is a certain sign of a house being near. Sheep eat it ; cows, horses, and goats, -efuse it.

VERBERATION, n. «. Fr. verberatim. Blows ; beating.

Riding or walking against great winds is a great exercise, the effects of which are redness and inflam- mation ; all the effects of a soft press or verberation.

Arbuthnot.

VERBESINA, in botany, naked-headed hemp agrimony, a genus of plants of the class of syn- genesia and order of polygamia superflua, and in the natural method ranking under the forty-ninth order, compositae.

VERBOSE', adj.) Lat. verbotus. Exube- VrnBos'rrY, n. .». i rant in words ; prolix; te- dious by multiplicity of words: the noun sub- stantive corresponding.

He draweth out the thread of his verbosity Finer than the staple of his argument. Sliakrpeare.

They ought to be brief, and not too verbote in their way of speaking ; and to propound the matter of their argument in a mild and gentle manner.

Ayliffe't Parergon. Let envy,

Ill-judging and verbote, from Lethe's lake Draw tuns unmeasurable. Prior.

Homer is guilty of verbosity, and of a tedious prolix manner of speaking : he is the greatest talker of all antiquity. Erowiie.

VER'DANT, adj. Fr. verdoiant ; Lat. viri- dans. Green.

Each odorous bushy shrub Fenced up the verdant wall. Milton.

VERDE, CAPE, a cape of Africa, stretching out into the Atlantic, and forming the most westerly point of that continent : the soil here is arid, upon a bottom of hard sand, whence, how- ever, spring a considerable number of those im- mense trees called Baobabs, which give to the peninsula a verdant appearance, whence its name is derived. On the northern coast are two mountains of sand, which rise to the height of about 600 feet, with summits in the form of domes : these form a useful guide to mariners.

VERDE, ISLANDS OF CAPE, a groupe situated in the Atlantic, about eighty miles west of the above cape. It consists of ten islands, of which the largest are St. Jago, St. Antonio, and St. Nicholas ; the small Mayo, Bonavista, Sal, St. Vincent, St. Lucia, Brava, and Fogo. The large islands rise in the interior into very lofty moun- tains, from which they derive a copious supply of water. Fogo also, as its name expresses, is composed of a very formidable volcano. The rest of the smaller inlands, though rocky, are destitute of very considerable elevations, and are thus at once deprived of good water, and ren- dered highly unproductive. Even the most fer- tile districts of this little archipelago cannot rival the rich soil of Madeira and the Canaries. The only product for which its arid and stony soil is well adapted is that of cotton, which, be- ing manufactured by the natives into a species of coarse cloth, not only supplies the inhabitants with dress, but is exported in considerable quan- tity to Africa. A peculiarly excellent breed of mules and asses is also found here, and the best parts of the islands are fruitful in Indian corn. Poultry also thrive, and turtle are caught plenti- fully on the shores. But the most valuable pro- duct of the islands is sea salt, for the formation of which Mayo is peculiarly well adapted. On the western side is a great saline, or pond sepa- rated from the sea by a sand-bank, with an open- ing which admits the water at spring tides. The water, introduced by one tide, is congealed and formed into salt before the influx of another : it is then collected in heaps, and kept ready for ex- portation. The dry season, from November till May, is the period suited for this operation. The Americans lade here many cargoes of salt ; and a good deal is also sent to the opposite coast of Africa. The Cape de Verde Islands ever since their discovery have been subject to Portugal ; but have never proved of any great value. The original settlers went o'lt in consi-

derable numbers ; but they suffered severely from drought and bad seasons, and many of them returned to Portugal. At present, the Portuguese

Inhabitants are few, and very poor ; and the ne- gro and mulatto natives have become in a great measure independent. A governor-general, how- ever, resides on the island of St. Jago, at Porto Praya, to which he has removed from Ribeira Grande, his former residence.

VER'DICT, n. s. Lat. verum dictum. The determination of a jury declared to the judge ; declaration; decision.

Before the jury go together, 'tis all to nothing what the verdict shall be. Spenser.

Deceived greatly they are, who think that all they whose names are cited amongst the favourers of this cause are on any such verdict agreed. Hooker.

They have a longing desire to overcome, and to have the verdict pass for them, be it right or wrong.

Kettlewell.

These were enormities condemned by the most natural verdict of common humanity ; and so very gross and foul that no man could pretend ignorance avoided. Soutli.

A very likely matter, indeed, that the emperor should ask the Arians whether they would be tried by the verdict of those who had before condemned the Arians by name. Wu.terla.nd.

VER'DIGRISE, n. s. Fr. vert de gris, the hoary green. — Peacham. The rust of brass, which in time, being consumed and eaten with tallow, turneth into green.

Brass turned into green is called verdigrise.

Bacon.

VEUDIGRISE, or the acetite of copper, is much used by painters as a green color. It is chiefly manufactured at Montpelier, the vines of Languedoc being very convenient for this pur- pose. See CHEMISTRY. A solution or erosion of copper, and consequently of verdegrise, may be prepared by employing vinegar instead of wine. But it would not have the unctuosity of ordinary verdegrise, which quality is necessary in painting. Good verdigrise must be prepared by means of a vinous acid, or solvent half acid and half spirituous. Accordingly the success of the operation 'depends chiefly on the degree of fermentation to which the wine employed has been carried ; for this fermentation must not have been so far advanced that no sensibly

vinous or spirituous parts remained in the liquor. Ver- digrise is employed externally for deterging foul ulcers, and as an escharotic. It is rarely or never given internally.

VER'DITER, n. s. Fr. verd de terre. Chalk made green.

Verditure, ground with a weak gum arable water, is the faintest and palest green. Peacham.

VERDITER, or VERDATER, is a preparation of copper sometimes used by the painters, &c., for a blue, but more usually mixed with a yellow for a green color. See CHEMISTRY and COLOR- MAKING.

Dr. Merret says that verditer is prepared in the following manner : — A quantity of whiting is put into a tub, and upon this the solution of the copper is poured. The mixture is to be stirred every day for some hours together, till the liquor loses its color. The liquor is then to be poured off, and more solution of copper is to be

added. This is to be repeated till the whiting has acquired the proper color. Then it is to be spread on large pieces of chalk, and dried in the sun. It appears from M. Pelletier's analysis that 100 grains of the very best verditer contain of carbonic acid 30, of water 3J, of pure lime 7, of oxygen 9f , and of pure copper 50. The au- thor remarks that the verditers of inferior quality contain more chalk and less copper.

VERDUN, a town in the north-east of France, department of the Meuse, and traversed by that river. The population somewhat exceeds 9000 ; and the town is divided into three parts, the Upper, Lower, and New town. The first forms the larger portion, and stands on an eminence sloping towards the Meuse. The whole is strongly fortified, and has a citadel situated on an emi- mence, bathed by the river. Verdun is the see of a bishop, and stands thirty-five miles west of Metz, and fifty-five north-west of Nancy.

VER'DURE, n.s. (Fr. verdure. Green;

VER'DUROUS, adj. S green color : hence grass; pasturage : the adjective means covered or decked with green.

Its verdure clad Her universal face with pleasant green. Milton.

Higher than their tops The verdurous wall of paradise up-sprung : Which to our general sire gave prospect large, /rf.

Let twisted olive bind those laurels fast, Whose verdure must for ever last. Prior.

VERE (sir Francis), an English general, was the second son of Geoffrey de Vere, a branch of the ancient family of that name, earls of Oxford, born in 1554. About the age of thirty-one he embarked with the troops sent by queen Eliza- beth, under the earl of Leicester, to assist the states of Holland ; in which service his courage became immediately conspicuous ; but his gal- lant behaviour in the defence of Bergen-op-Zoom in 1588, when besieged by the prince of Parma, established his reputation. After the siege was raised he was knighted by lord Willoughby, who had succeeded Leicester. He continued in the service of the states till 1595; in 1593 he was elected member of parliament for Leominster. The famous expedition against Cadiz being re- solved upon, sir Francis was called home, and appointed to a principal command under the earl of Essex. The success is well known. In 1597 he was in Holland at the battle of Turn- hout, of which he has given a particular descrip- tion in his Commentaries. In the same year he embarked with the earl of Essex in the expedi- tion to the Azores ; and, at his return, was ap- pointed governor of the Briel in Holland, with the command of the English troops in the service of the states. In 1600 he was one of the three generals at the battle of Nieuport, and the vic- tory was universally ascribed to his conduct and resolution. But the last and most glorious achieve- ment of his life was his gallant defence of Ostend, with about 1600 men, against an army of 12,000, from July, 1601, until March, 1602, when he resigned the government and returned to Hol- land. He died in 1608 in the fifty-fourth year of his ace. His Commentaries were printed at Cambridge, 1657, folio.

\ i ui; (sir Horace), brother of the above, was

born in 1565. He was created a peer bythe title of lord Vere.

VEREMUND, a native of Spain, who was archdeacon of St. Andrew's in Scotland in the middle of the eleventh century. He wrote a history of Scotland from its origin to the year 1060, and dedicated it to king Malcolm III.

VERGE, n. s. > Fr. verge ; Lat. virgn. A

VER'GER. 5 rod. carried as an emblem of

authority ; the mace of a dean : verger, he who carries the mace.

I can tip the verger with half a crown, and get into the best seat. Farquhar.

Suppose him now a dean compleat, Devoutly lolling in his seat ; The silver verge, with decent pride, Stuck, underneath his cushion side. Swift.

VERGE, n. s. & v. n. Lat. virgo. The brink ; border; edge; compass; that which compasses; see below for both its legal meanings : to verge is, to tend ; bend ; press toward, particularly down- wards.

Would the inclusive verge Of golden metal, that must round my brow, Were red-hot steel to sear me to the brain !

Shakspeare. You are old :

Nature in you stands on the very verge Of her confine. Id. King Lear.

Verge is the compass about the king's court, bounding the jurisdiction of the lord steward of the king's household, and of the coroner of the king's house, and which seems to have been twelve miles round. Verge hath also another signification, and is used for a stick, or rod, whereby one is admitted tenant, and, holding it in his hand, sweareth fealty to the lord of the manor ; who, for that reason, is called tenant by the verge. Cowell.

Serve they as a flowery verge to bind The fluid skirts of that same watery cloud, Lest it again dissolve, and shower the earth.

Milton.

They serve indifferently for vowels in respect of the aperture, and for consonants in respect of the pene-appulse ; and so much the more verging either way, according to the respective occasions.

Holder.

Let Fortune empty her whole quiver on me, I have a soul, that, like an ample shield, Can take in all, and verge enough for more.

Dryden.

'^very thing great, within the verge of nature, or out of it, has a proper part assigned it in this poem.

Adduon.

Such are indicated, when the juices of a human body verge to putrefaction. Arbuthnot.

1 hen let him chuse a damsel young and fair, To bless his age, and bring a worthy heir To sooth his care, and, free from noise and strife, Conduct him gently to the verge of life. Pope.

The nearer I find myself verging to that period of life, which is' to be labour and sorrow, the more I prop myself upon those few supports that are left.

VER'IFY, v.a.) Fr. verifier. To jus- VERIFICA'TION, n. i. M'fy against charge of falsehood ; confirm ; prove true : the noun sub- stantive corresponding.

What seemeth to have been uttered concerning sermons, and their efficacy or necessity, in regard "I divine matter, must consequently be verified in >•.!. ilry other kinds of teaching, if the matter be the san-e in al.. //outer.

This is verified by a number of examples, that whatsoever is gained by an abusive treaty ought to be restored. Bacon.

So shall thou best fulfil, best verify The prophets old, who sung thy endless reign.

Milton.

In verification of this we will mention a phenome- non of our engine. Boyle.

Though you may mistake a year ; Though your prognosticks run too fast, They must I e verified at last. Swift.

VER'ILY, adv. From very. In truth ; cer- tainly.

Verily 'tis better to be lowly born Than to be perked up in a glistering grief.

Shakspeare.

It was verity thought that, had it not been for four great disfavourers of that voyage, the enterprise had succeeded. Bacon.

By repealing the sacramental test, we are verily persuaded the consequence will be an entire alteration of religion among us. Swift on the Sacramental Tett.

VERISIMIL'ITUDE,n.s.ˆ Lat. verisimUi- VERISIMIL'ITY. ˆ tudo. Proba-

VERISIM'ILAR, adj. i bility ; likelihood;

*VERISIM'ILOUS. * resemblance of*

truth : the adjectives correspond.

Many erroneous doctrines of pontificians are, in our days, wholly supported by versimilotu and proba- ble reasons. White.

A noble nation, upon whom, if not such verities, at least such verrimilities of fortitude were placed.

Broicne.

Veriimilitude and opinion are an easy purchase ; but true knowledge is dear and difficult. Like a point, it requires an acuteness to its discovery : while vfrsimilitude, like the expanded superficies, is obvious, sensible, and affords a large and easy field for loose enquiry. Glimrille.

The plot, the wit, the characters, the passions, are exalted as hieh as the imagination of the poet ca i carry them, with proportion to venimility.

Dryden on Dramatich Poetry. VER'ITY, n. s. \ Fr. write; Lat. veritux. VER'ITABLE, adj. £ Truth; consonance to the VER'ITABLY, adv. J reality of things : ven; is true ; agreeable to fact : the adverb corres ponding.

Wherefore should any man think, but that reading itself is one of the ordinary means whereby it pleaseth God, of his gracious goodness, to instil that celestial verity, which, being but so received, is nevertheless effectual to save souls ? Hooker.

I saw their weapons drawn ; there was a noise ; That 's verity. Shaksi>eure.

*Indeed ! is 't true ? — Most veritable ; therefore look to *t well. Id.*

Must virtue be preserved by a lie ? Virt-ue and truth do ever best agree ;

By this it seems to be a verity, Since the effects so good and virtuous be. Dan,'.

The presage of the year succeeding, made from in- sects in oak apples, is I doubt too indistinct, nor veritable from event. /inm ne's Vulgar Errours.

The precipitancy of disputation, and the stir ami noise of passions that usually attend it, must needs be prejudicial to verity ; its calm insinuations can no more be heard in such a bustle than a whistle among a crowd of sailors in a storm. Glanville.

It is a proposition of eternal verity, that none can govern while he is despisrd. We may as well ima- gine that there may be a king without

majesty, a su- preme without sovereignty. Smith.

VER'JUICE, n. s. Fr. verjus ; Lat. verisjus. Acid liquor expressed from crab-apples.

The barley -pudding comes in place : Then bids fall on ; himself, for saving charges, A peeled sliced onion eats, and tipples verjuice.

Dryden.

Hang a dog upon a crab-tree, and he'll never love verjuice. L'Estrange.

The native verjuice of the crab, derived Through the' infixed graff, a grateful mixture forms Of tart and sweet. Philips.

VERJUICE is obtained from grapes or apples when unfit for wine or cider, or from sweet ones while yet acid and unripe. Its chief use is in sauces, ragouts, &c.; it is also an ingredient in some medicinal compositions, and is used by the wax-chandlers to purify their wax.

VERMES, worms, in zoology, the sixth class of the Linnean system, thus classically charac- terised : — Of slow motion, soft substance, able to increase their bulk, and restore parts which have been destroyed, extremely tenacious of life, and the inhabitants of moist places. Many of them are without distinct head, and most of them with- out feet ; they are principally distinguished by their tentacles or feelers. They are divided into the five orders of intestina, mollusca, testacea, zoophyta, and infusoria ; for which see ZOOLOGY.

VERMICEL'LI, «. s. Ital. vermicelli. A paste rolled and broken in the form of worms. With oysters, eggs, and vermicelli,

She let him almost burst his belly. Prior.

VERMICELLI, or VERMICHELI.Y, a compo- sition of flour, cheese, yolks of egars, sugar, and saffron, reduced to a paste and formed into long slender pieces like worms, by forcing it with a piston through a number of little holes. It was first brought from Italy where it is in great vogue ; it is chiefly used in soups and pottages.

VKKMICTLAR, «

VERMICULA'TION, n.s. £ Acting like a worm ;

VER'MICULE.) continued from one

part to another of the same body : the noun sub- stantive corresponds : a vermicule is a little worm or grub.

My heart moves naturally by the motion of palpi- tation ; ray guts by the motion of vermiculation.

Hooker.

By the vermicular motion of the intestines, the grosser parts are derived downwards, while the finer are squeezed into the narrow orifices of the lacteal vessels. Cheyne.

I saw the shining oak-ball ichneumon strike its terebra into an oak-apple, to lay its eggs therein : and hence are many vermicules seen towards the out- side of these apples. Derham.

VERMIFUGE is a medicine which expels worms from the intestines. Dr. Haemmerlin of Ulm has lately recommended as a very powerful and safe vermifuge the coralline of Corsica, and says that it has been so 'used in that island with complete success from time immemorial. It is a fucus adhering to the rocks washed by the sea, and sometimes to the stones and shells thrown upon the shore. In the system of plants of Linnaeus it belongs to the class cryptogamia. Its most common names are sea rock moss, the Grecian herb, lemithochorton, and the coralline of Corsica.

VER'MIL, n. s. j Tr. vermeil; vcrmil-

VERMIL'ION,«.S. &y.a. $ Ion. The cochineal • a grub of a particular plant; factitious or native cinnabar ; sulphur mixed with mercury ; any fine red color : to vermilion is to dye red.

How the red roses flush up in her cheeks, Ard the pure snow with goodly rermil stain, Like crimson dyed in grain ! " Spemer.

There grew a goodly tree him fair beside, Loaden with fruit and apples rosie red,

As they in pure vermiltion had been dyed, Whereof great virtues over all were read. Id.

The imperfect metals are subject to rust, except mercury, which is made into vermillion by solution or calcination. ' Bacon.

Simple colours are strong and sensible, though they are clear as vermiltion. Drvden's Dufresnoy.

A sprightly red vermillions all her face, And her eyes languish with unusual grace.

Granville.

VERMILION is a very bright and beautiful red color, composed of quicksilver and sulphur, in great esteem among the ancients under the name of minium; but what goes by the name of minium amongst us is a preparation of lead, known also by the name of red-lead. See CHE-MISTRY.

VER'MIN,n.s. ˆ Fr. vermin; Lat. ver-

VERMINA'TION, £mis. Any noxious ani-

VER'MINOI-S, adj. J mal. Used commonly for. small creatures ; and, in contempt, of human beings: vermination is the generation of vermin: verminous, abounding in vermin.

What is your study ? — How to prevent the fiend, and to kill vermin.

Shaktpeare.

The head of a wolf, dried and hanged up in a dove-house, will scare away vermin, such as weazels and polecats. Bacon.

A wasting of, children's flesh depends upon some obstruction of the entrails, or verminous disposition of the body. Haney.

The stars determine

You are my prisoners, base vermin. Hudibrai.

Redi discarding anomalous generation, tried ex- periments relating to the termination of serpents and flesh. Derham.

He that has so little wit To nourish vermin, may be bit. Swift.

Great injuries these vermin, mice, and rats, do in the field. Mortimer's Husbandry.

VERMIN is a collective name, including all kinds of little animals and insects which are hurtful or troublesome to mankind, beasts, or fruits, &c., as worms, lice, fleas, caterpillars, ants, flies, &c.

VERMIFAROUS, adj. Lat. vermit and pario. Producing worms.

Hereby they confound the generation of vermi- parout animals with oviparous.

Browne's Vulgar Errvitrs.

VERMONT, one of the United States of South America, bounded north by Lower Can- ada, east by the Connecticut, which separates it from New Hampshire, south by Massachusetts, and west by New York. Long. 71° 33′ to 73° 26′ W., lat. 42° 44′ to 45° N.; 157 miles Ion, and ninety broad on the north line, and forty on the south; containing 10,212 square miles. Ponu- lation, in 1780, 85,589; in 1800, 154,46d ; and*

in 1810,217,895. The number of militia in 1817 amounted to 20,903.

The counties, number of towns, population, and chief towns are exhibited in the following table :—

Counties. Towns.

Addison 23

Bennington 18

Caledonia 18

Pop. Chief Towns.

19,993 j MlddlebuT f \ ergennes

*i <; RQQ * Bennington 15,893 ˆ Manchester*

S Danville

i Peacham Chittenden 16 14,684 Burlington Essex 19 3,087 Guildhall

Franklin 19 16,427 St. Albans

Grand Isle 5 3,445 North Hero

f Chelsea Orange 18 22,085 2 Newbury

t Randolph

Orleans 23 5,838 Irasburg

Rutland 27 29,487 Rutland

Washington 15 10,372 Montpelier

f Newfane Windham 23 26,760 } Brattleborough

C Manchester . i V\ oodstock Windsor 23 34,877? Windsor

C Royal ton.

Montpelier is the seat of government. The other most considerable towns are Burlington, Middlebury, Windsor, Brattleborough, and Ben- nington. There is no bank at present in this state.

There are two colleges in Vermont, one at Burlington and the other at Middlebury; and academies have been established at Addison, Ar- lington, Bennington, Brandon, Burlington, Cas- tleton, Cavendish, Chester, Fairfield, Middlebury, Montpelier, Norwich, Peacham, Randolph, Roy- alton, Shaftsbury, Shoreham, St. Albans, and Windsor. Common schools are supported throughout the state. The principal denomina- tions of Christians in Vermont are Congrega- tionalists, who had, in 1818, seventy-five minis- ters and a much larger number of congregations; Baptists, who had, in 1817, 112 congregations. There are also some Methodists, Episcopalians, Friends, Universalists, &c.

The legislative power is vested in a house of representatives. Every town has the right to send one representative. The executive power is vested in a governor, lieutenant-governor, and twelve counsellors. All these officers, together with the representatives, are chosen annually on the first Tuesday in September. The legislature meets on the second Thursday in October. Judges and other officers are appointed for one year.

The west bank of Connecticut River forms the eastern boundary of Vermont. The most consi- derable rivers within the state are Lamoile, Onion, Otter Creek, Misisque, Deerfield, White, Black, and Pasumsic.

The face of the country is generally uneven, and a great part of it is mountainous. The Green Mountains (in Latin Ver Mons), from which the state takes its name, extend through the whole length of the state nearly north and soutli, and

are from ten to fifteen miles wide, intersected by valleys. They lie principally on the east side of Bennington, Rutland, and Addison counties. In Chittenden county they appear to divide, the highest chain continuing a

northern course through Chittenden county, while the Height of Land, so called from its not being broken through by any river, owing to its uniform elevation, strikes ofl to the nonh-east as far as Cabot. The west- ern range presents much the loftiest summits, but has inequalities which afford a passage for Onion and Lamoile rivers. The highest summits of the Green Mountains in Vermont are Killing- ton Peak, Camel's Rump, and Mansfield Moun- tains. Ascutney is a noted mountain on the east side of the state, south of Windsor.

A large proportion of the soil in this state is fertile, and fitted to the various purposes of agriculture. It is generally deep, of a dark color, rich, moist, warm, loamy, and seldom parched with drought. The low lands on the interval are thought the best : bordering on these is usually a strip one or two miles wide, comparatively poor; beyond which, the land recovers a fertility nearly equal to that on the rivers. Much of the land among the Green Mountains is excellent for grazing, and here are found many fine farms.

Wheat is extensively cultivated, particularly on the west side of the mountains. Barley, rye, oats, peas, and flax, flourish in all parts of the state. Corn thrives best on the intervals, but is also raised in abundance on the uplands. The exports of Vermont consist of pot and pearl ashes, beef, pork, butter, cheese, flax, live cattle, &c. The trade is chiefly with Boston, Hartford, New York, and Montreal.

Iron ore of good quality is found in several places. There are quarries of marble at Middle- bury, Bennington, Arlington, Shaftsbury, Pitts- ford, and Swanton. Porcelain earth is found at Monkton. There are also some lead and cop- pera mines. There are twelve paper mills in the state. Among the most considerable manu- facturing towns are Middlebury, Bennington, Brattleborough, Burlington, and Montpelier. Large quantities of maple sugar are made in this state for home consumption, and some for exportation.*

The climate is healthy, but subject to great extremes of heat and cold. Winter in its seve- rity commences about the 1st of December, and continues to about the middle of March. During this season the weather is generally fair, and the cold more uniform and steady than in the other New England states. An extraordinary cave was discovered in the town of Plymouth in this state in 1818.

VERNACULAR, adj. Lat. vernacultu. Na- tive; of one's own country.

Which instances do evidently bring a consump- tion under the notion of a vernacular disease to Eng- land. Harvey.

The histories of all our former wars are trans- mitted to us in our vernacular idiom. Addium.

\ KK'NAL, adj.) Lat. vcrnus. Belonging VER'NANT. J to the spring.

With the year

"iis return ; but not to me returns, Or sight of cernal bloom, or summer's rose. Milttn.

VER

363

VER

Else had the spring Perpetual smiled on earth with oernant flowers. Id.

VERNIER SCALED scale excellently adapted for the graduation of mathematical instruments, thus called from its inventor Peter Vernier, a person of distinction in the Tranche Comte. Vernier's method is derived from the following principle: — If two equal right lines, or circular arcs, A, B, are so divided that the number of equal divisions in B is one less than the number of equal divisions of A, then will the excess of one division of B above one division of A be compounded of the ratios of one of A to A, and one of B to B.

For let A contain 11 pans, then one of A to A

is as 1 to 11, or— . Let B contain 10 parts, then one of B to B is as 1 to 10, or — . Now —

11—10

11

Or

- - -

~" ioxTT

10×11

if B contains n parts, and A contains n + 1 parts ; then – is one part of B, and — —

is one nart of A. And – • n

1 1

The most commodious divisions, and their aliquot parts, into which the degrees on the circular limb of an instrument may be supposed 10 be divided on the radius of that instrument.

Let R be the radius of a circle in inches, and a degree to be divided into n parts, each being

— th part of an inch. P

Now the circumference of a circle, in parts of its diameter 2 R inches is 3,1415926 X 2 R inches.

Ther. 360°: 3,1415926 X 2R • • 1°: 3‘1415926

360

X 2 R ‘nches.

O: 001745329 x R is the length of 1° in inches.

Or, 0-01745329 x R X p is the length of 1° in jBth parts of an inch.

But, as every degree contains n times such parts, therefore n r = 0-01745329 X R X p.

The most commodious perceptible division is

-th or — th of an inch.

o 1U

Example. — Suppose an instrument of thirty inches radius, into how many convenient parts may each degree be divided ? how many of these parts are to go to the breadth of the vernier? and to what parts of a degree may an observation be made by that instrument? Now 0-01745 X R zz 0-5236 inches, the length of each degree; and, if p be supposed about one-eighth of an inch for one division, then 0-5236 x p — 4-188 shows the number of such parts in a degree. But, as this number must be an integer, let it be 4, each being 15’; and let the breadth of the vernier con- tain 31 of those parts, or 7f°, and be divided imo 30 parts.

*Here « zr * – i; then! xl- of*

a degree, or 30', which is the least part of a de- gree that instrument can show.

Tf 1 , 1 1 1 60

If n •=. -, and wj — —; then – x — —

5′ 36′ 5 36 5 x 36

of a minute, or 20'.

The following table, taken as examples in the instruments commonly made from three inches to eight feet radius, shows the divisions of the limb to nearest tenths of inches, so as to be an aliquot of 60's, and what parts of a degree may be estimated by the vernier, it being divided into such equal parts, and containing such degrees, as their columns show.

Radical inches.

Parts in adeg.

Parts in

vernier.

Breadth of vernier.

Parts observed.

3

1

15

15J

4′ 0′

6

I

20

20J

3 0

9

2

20

10J

1 30

12

2

24

12|

1 15

15

3

20

6f

1 0

18

3

30

ioj

0 40

21

4

30

7i

0 30

24

4

36

9f

0 25

30

5

30

n

0 20

36

6

30

*5**

0 20

42

8

30

H

0 15

48

9

40

4|

0 10

60

10

36

0 10

72

12

30

*2**

0 10

84

15

40

23

0 6

96

15

60

4

0 4

By altering the number of divisions, either in the degrees or in the vernier, or in both, an angle can be observed to a different degree of accu- racy. Thus, to a radius of 30 inches, if a de- gree be divided into 12 parts, each being 5', and the breadth of the vernier be 21 such parts,

or 1}°, and divided into 20 parts, then — x .— = 15: or taking the*

breadth of the ver-

1° 2lo

nier 2°, and divided into 30 parts ; then — X !• 1 1 “1

where the breadth of the vernier is 4J°.

VERNON (Edward), a celebrated English admiral of great bravery, born in Westminster in 1684. He acquired great fame by his exploits in the Spanish West Indies. He bombarded Car- thagena and took Porto Bello in 1739. He died in 1757 at an advanced age.

VERONA, a province of Austrian Italy, in the government of Venice, with a superficial ex- tent of 1330 square miles, and a population of 285,000. It is watered by the Adige, and, though mountainous, has an agreeable climate and fertile soil. The principal productions are corn, wine, oil, flax, and silk. The mountains contain quarries of beautiful marble.

VERONA, a city of Austrian Italy, the capital of the preceding delegation or province, stands in a pleasant and picturesque situation, partly on the border of a large plain. In that direction are the rich tracts extending along the banks of

the Mincio and the Po ; to the nortli the Ty- rolese Alps, the first step to the ascent of which may be said to take place in this city.

The form of the city is irregular, the modern buildings extending considerably beyond the old walls. Its circuit is about six miles. It retains its fortification of a moat and earthen mound, and has also two castles on high ground, with a third on the plain ; but it is not at present capa- ble of standing a siege. The Adige is crossed by four different bridges which connect the respec- tive divisions of the city. They are all of stone; and one, the bridge of the Castello Vecchio, has an arch somewhat resembling the Rialto of Ve- nice. Verona has five gates, of which one called Porta del Paglio is of elegant architecture.

The streets are mostly narrow and dirty ; others, however, are spacious and well paved; in particular that which leads to the Mantua gate, and the Corso, or street where horse-races are held. The houses, though built in

general in an antique style, are of good appearance from the quantity of marble employed in their construc- tion. The best buildings are in the principal square. Verona also contains a cathedral and a number of churches, noted for their paintings or architecture. The latter forms the characteristic of the church of St. Zeno, remarkable for its fa- £ade, its vast portal, and the rows of columns, each of a single piece of marble, which support its roof. The town-house has on the outside niches containing busts of statues of the distin- guished natives of Verona — Pliny the elder, Vi- truvius, Cutullus, and Cornelius Nepos. The royal palace has never been completed. The Palazzo Bevilacqua, said to be the oldest build- ing in Verona, is a stately edifice going fast to decay. Opposite to it is the Palazzo Cannosia, admired for its front.

Of all the monuments of Verona the most in- teresting is the Roman amphitheatre in the spa- cious square called the Piazza del Bra. This is one of the most magnificant remains of Roman architecture that exists. The arena, situated in the centre, and of an oval form, is 220 feet in length, in breadth 130. The seats rise in suc- cessive ranges from the arena to a height corre- sponding to the top of the second row of out- ward arches. These seats, as well as the different passages, the stair-cases, and galleries of commu- nication, remain entire. The number of ranges of seats is forty-five; that of spectators which mieht be contained within them about 22,000 ; the outward circumference of the amphitheatre 1290 feet. The whole consists of vast blocks of marble, and forms a solid mass resting on a double row of vault-., which, in former ages, were appropriated to trie custody of the lions, tygers, and other wild beasts. The Academia Phil-ar- monica, founded by the celebrated Maffei, and the Philoli, are both remarkable for a number of ancient monuments, not only in Greek and Latin, but in the Punic and Egyptian languages.

Verona is the seat of one of the five sections of the imperial and royal institute of Austrian Italy. It contains, besides, a lyceum or great school, a gymnasium or classical school, an aca- •lerny of painting, a public library, and several I r.vHfe collections. The population is about

45,000. Its principal manufacture is that of silk. The lesser manufactures are woollens, lea- ther, gloves, and shoes.

Julius Caesar established a colony here. On the decline of the empire, Verona experienced the fate of the other towns in the north of Italy. It was taken by Charlemagne in 774 ; became subsequently a free town ; fell, in the course of time, under the sway of leading families ; and, in 1405, was united to the territorial possessions of Venice. With these it enjoyed many ages of peace and tranquillity until the year 1796, when Italy was invaded by the French. It was then added to the kingdom of Italy. In 1814 it again

fell into the hands of Austria. Twenty miles north-east of Mantua, sixty west of Venice, and ninety east of Milan.

VERONICA, in botany, a genus of plants of the class of diandria and order monogynia, ar- ranged in the natural system under the fortieth order, personatae. There are forty species, fif- teen are natives of Britain, only two of which have been applied to any use. 1. V. becca- bunga, or common brook-lime, the flowers of which are blue, in loose lateral spikes ; leaves sessile, oval, opposite, thick, notched. It was formerly considered as of much use externally in wounds and ulcers ; but, if it have any peculiar efficacy, it is to be derived from its antiscorbutic virtue. To derive advantage from it the juice ought to be used in large quantities, or the fresh plant eaten as food. 2. V. ofticinalis, common male speed-well, or fluellin, a native of Britain, growing on heaths and barren grounds. The blossoms are blue, the leaves elliptical, serrated, and hairy. The leaves have a small degree of astringency. Cows, sheep, goats, and horses, eat it ; swine refuse it.

VERRIIEYEN (Philip), M.D., an eminent anatomist, born in Holland in 1648. He la- bored as a farmer till his twenty-second year, when he studied physic at the university of Lou- vain, where he graduated and became a pro- fessor. He died in 1710. He published, 1. De Corporis Humani Anatomia, 2 vols. 4to ; 2. De Febribus, 8vo.

VERRMEYEN (John Cornelius), an eminent painter at Haerlem in 1500. He was employed by Charles V. He died at Brussels, in 1 559, aged fifty-nine.

VERRNET, an eminent French painter, born at Avignon in 1712. lie died in 1789.

VERROCHIO (Andrew), a painter and sta- tuary, born at Florence in 1432. He discovered the art of taking casts in plaster from the faces of the dead or the living. He executed some fine statues in bronze. He died in 1488.

VERSAILLES, a celebrated town of France, twelve miles west by south of Paris, and long the residence of the court. In 1660 it was little more than a village, with a hunting lodge for the royal family, when Louis XIV., desirous of re- siding out of Paris, began to erect a splendid palace. No expense was spared by him or his successors to render it the most magnificent resi- dence in Europe; and though uninhabited since 1789 it retains almost all its beauty. The situa- tion of the palace is on a rising giound ; its front aii'i wings are of polished stone, ornamented wife

statues, and a colonnade of the Doric order is in the centre. The great hall is above 220 feet in length, with costly decorations in marble, painting, and gilding. The other apartments are of correspond- ing size and elegance. This beautiful structure is approached by three great avenues, each lined with a double row of trees, and leading respec- tively from Paris, St. Cloud, and Sceaux. No city or royal residence can boast a greater dis- play of reservoirs, fountains, and canals. The spacious park and gardens, situated behind the palace, contain parterres, jets d'eau, cascades, and thickets, in pleasant variety ; also a magni- ficent orangery. At some distance, in a retired spot, are the Two Trianons, which may be termed royal residences in miniature; seats' to which the king and queen retired when desirous to lay aside their rank and state. The expense thus incurred amounted, from first to last, to many millions sterling; for the attractions of Ver- sailles are principally those of art. The town contains about 30,000 inhabitants. The market- places and squares are larger than is common in France ; and the avenues leading to the palace divide the town into two parts, of which the one situated to the left is called the Old, the other the New Town. The latter contains the princi- pal church and the greater proportion of elegant buildings. The removal of the royal residence in 1789 was a great blow to the prosperity of Versailles. A manufacture of fire-arms has been established here. Clocks and watches are also made ; and the spinning and weaving of cotton, as well as the bleaching of linen, are carried on on a small scale ; and since 1814 the chief be- nefit to the place has arisen from the visits and residence of English families. Versailles has a cathedral, with eight churches, a high school, several pnvate seminaries of education, a valua- ble library, a cabinet of natural history, and a botanical garden. It is the chief place of a de- partment (Seine and Oise), and has three annual fairs, viz. in May, August, and October.

VERSCHURING (Henry), a painter born at Gorcum, of which he was chosen magistrate. He was drowned in 1699, aged sixty-eight.

VER'SAL, adj. A cant word for universal. Total ; whole.

Some, for brevity, Have cast the versal world's nativity. Hudibras.

VERSATILE, adj. Lat. versatilis. That may be turned round.

One color to us standing in one place hath a con- trary aspect in another ; as in those versatile represen- tations in the neck of a dove, and folds of scarlet.

GlanvMe.

The adventurous pilot in a single year Learned his state cock-boat dexterously to steer ; Venatile, and sharp-piercing like a screw, Made good the old passage, and still forced a new.

Harte.

ˆ ERSE, n. t. & v. a. "] French vers; Latin VERS'ED, part. adj. versus. A line con-

\ ERSE'MAN, n. s. \ sisting of a certain

VERSIFICA'TION, V-succession of sounds,

VERSIFICA'TOR, and syllables ; poetry ;

VER'SIFIER, | metrical language;

VER'SIFY, v.n. & v. a.J and (Fr. i-erset) a sec- tion or paragraph of a book : to verse is to tell in

verse or poetically, (disused): to be versed is to be skilled in; acquainted with: a verseman is a poet ; writer of verse : versification, the art or practice of making verses : versify, to make verses, or relate in verse : versifier and versifica- tor corresponding.

You would wonder to hear how soon even chil- dren begin to vrrsify. Sidney.

To follow rather the Goths in rhyming, than the Greeks in true versifying, were even to eat acorns with swine, when we may freely eat wheat bread among men. Aschum.

Thou hast by moonlight at her window sung, With feigning voice, verses of feigning love.

Shakipeiire.

In the shape of Corin sate all day, Playing on pipes of corn, and verting love. Id.

Unintermixed with fictions fantasies, I'll versify the truth, not poetize. Daniel.

She might be ignorant of their nations, who was not versed in their names, as not being present at the general survey of animals, when Adam assigned

unto every one a name concordant unto its nature.

Browne' i Vulgar Errours.

Some object to his versification ; which is, in poetry, what colouring is in painting, beautiful ornament. But if the proportions are just, though the colours should happen to be rough, the piece may be of in- estimable value. Glanville.

This versed in death, the infernal knight relates, And then for proof fulfilled their common fates.

Drydtn.

Statius, the best versiftcator next Virgil, knew not how to design after him. Id.

Donne alone had your talent, but was not happy to arrive at your versification. Id.

Thus far the questions proceed upon the con- struction of the first earth ; in the following verses they proceed upon the demolition of that earth.

Burnet.

Whilst she did her various power dispose ; Virtue was taught in verse, and Athens' glory rose.

Prior.

The god of us versemen, you know, child, the sun.

Id.

In Job and the Psalms we shall find more suli- lime ideas, more elevated language, than in any of the heathen versifiers of Greece or Rome.

Watts on the Mind.

From limbs of this great Hercules are framed Whole groupes of pigmies, who are versemen named.

Harte.

VERSIFICATION. If the utility of the whole art of poetry may be reduced, as we think with Temple it may, to 'the hindering some men from becoming very bad poets,' we have the les:> to regret that our limits impose the

necessity of being very brief on this topic in this place. ‘ What the hints given in the article QUANTITY will not supply to our readers, as to the classical languages, must be matter of a deeper enquiry than we can here institute : we shall confine ourselves to a few familiar illustrations of the principles of English versification.

All the different feet used in English poetry may be reduced to eight kinds, four of two and four of three syllables ; as,

Dissyllabic feet.

1. An iambus, u – ; as, betray, consist.

2. A trochee, – o ; as, e”xt6rt, gu’iltless,

3. A spondee, – – •- as, the pale moon.

4. A pyrric, o o ; as, on the tall tree.

Trisyllabic Feet.

5. An anapaest, u o – ; as, acquiesce, contrSvtvie.

6. A dactyl, – oi»; as, labfiurgr, possible.

7. An amphibrac.u – o ; as, domestic, delightful.

8. A tribrach, u ou ; as, conquerable, numgr&ble.

The trochee, iambus, dactyl, and anapaest, have been called principal feet ; as those of which verse may be wholly or chiefly formed. The others are denominated secondary, because their use in English versification is merely to diver- sify rhythm or to improve the verse.

1. IAMBIC VERSE. — The shortest form of the English iambic consists of an iambus and an additional short syllable. It is only found in stanzas, and has been called the Iambic Mono- meter Catalectic : the following are instances —

Assailing, Availing, Rglentlng, Repenting.

2. The iambic monometer acatalectic con- tains an iambic metre, or two iambic feet ; as,

raptur'd ears The" monarch hears.

3. The iambic monometer hypercatalectic is the same as the former, with an additional short syllable, as,

vpon 9 mountain Beside a fountain.

4. The iambic dimeter brachycatalectic con- sists of three iambic feet ; being one foot less than the iambic dimeter; as,

Though In the' utm&st peak

A while we do remain, Amongst the mountains bleak,

Exposed to sleet and rain.

5. The iambic dimeter catalectic is one syl- lable less than the iambic dimeter ; as,

Our hearts no longer languish.

6. The iambic dimeter acatalectic contains exactly two iambic metres, or four feet ; as,

The spacious firmament 5n high With all the blue ethereal sky.*

7. The iambic trimeter brachycatalectic, or heroic measure, contains one foot (or two syl- lables) less than the iambic trimeter ; as,

Defer not till to morrow to be wise ; To-morrow's sun to thee may never rise.*

In its pure state this verse consists of five iambic feet only. But not only this, but most of the English common measures admit, for the sake of variety, of the occasional introduction of the trochee, dactyl, anapaest, &c.

8. An iambic trimeter acatalectic, or Alexan- drine verse, consists of six iambic feet ; as,

Especial audience craves, Sffended with the

throng. Drayton.

The Alexandrine verse is only used in modern times (and too often) to diversify the heroic measure; as,

A needless Alexandrine ends the song Which like a wounded snake drags

his slow length along.

9. The iambic tetrameter brachycatalectic consists of one foot less than four iambic metres, t. e. of seven iambuses ; as,

And as the mind of such i man, that haili &

long way gone, And either knoweth not his way, or else would

let alone. Chapman.

It is usual now to break this verse into a lyric measure, or into two verses, consisting alter- nately of eight and six syllables ; as,

When all thy mercies, 6 my God,

My rising soul surveys. Transported with the view, I'm lost In wonder, joy, and praise.

II. TROCUAIC VERSE. — The shortest trochaic verse in the English language consists of one trochee and a long syllable, and is called the trochaic monometer catalectic ; as,

other joys

Are but toys.

2. The trochaic monometer acatalectic con- sists of one trochaic metre, or two trochaic feet ; as,

In the grassy Meeidow verdant.

3. The trochaic monometer hypercatalectic contains one syllable more than the exact tro- chaic monometer; as,

Happy farming age, Healthy, blithe and sage.

4. A trochaic dimeter brachycatalectic con- tains two syllables, or one foot less than two trochaic metres ; i. e. three trochees ; as,

Bloom ye summer roses !

5. A trochaic dimeter catalectic consists of one syllable less than two trochaic metres ; or of three trochees with an additional lone syl- lable; as,

Fairest piece Sf well-formed earth.

6. The trochaic dimeter acatalectic contains two trochaic metres, or four trochaic feet ; as,

Round iis shine the sun-beams brighter.

7. A trochaic dimeter hypercatalectic contains a long syllable more than the last verse ; as,

See yon clouds that now disperse and clear.

8. A trochaic trimeter brachycatalectic, seldom employed, contains five trochaic feet, and, of course, one foot less than three trochaic metres ; as,

All that walk on foot, 6r ride In chariots.

9. The trochaic trimeter acatalectic contains six trochees, or three trochaic metres; as,

On & mountain stretched beneath a hoary willow Lay a shepherd swain, and viewed the rolling billow.

III. ANAP.CSTIC VERSE. — In dactylic and ana- psestic measure one foot forms a metre, but in every other case two feet form a metre. 1. Tht anapaestic monometer acatalectic contains, with- out redundance or defect, one anapaestic foot ;

a»*

Now again They remain.

But, by laying the stress of the voice on the first syllable, we reduce the verse into trochaic rhythm ; the simplest form of our regular ana- paestic verse is the

2. Anapaestic dimeter acatalectic, or verse of two anapas'.ic feet :

For n5 art could avail.

3. The anapaestic dimeter hypercataiectic con- tains two anapaestic feet, with an additional short syllable ; as,

In the” cave | of the moun- j tain.

4. The anapaestic trimeter acatalectic three anapaestic feet; as,

6 ye” woods, spread your branches apace ; To your deepest recesses I fly.

5. The anapaestic tetrameter acatalectic con- sists of four anapaestic feet ; as,

May I govern my passions with absolute sway ; And grow wiser and better as life wears away.

6. The anapaestic tetrameter hypercataiectic adds to the end of the last verse a short syl- lable : as,

on the” top | of that hill | set the” sun] now ascend- | -Ing.*

OF THE C.SSURA. — In heroic verse the caesura may take place on the fourth syllable; as, Child of the sun”, refulgent summer comes.

2. Or on the fifth ; as,

He comes attended” by the sultry hours.

3. Or on the sixth ; as,

But should he hide his face”, th’ astonish’d sun.

4. Or, two caesuras may divide a verse into three portions ; as,

Some love to stray” ; there lodg’d”, amus’d, and fed.

5. Some lines admirably admit that subdivi- sion of the caesural pause which may be called a demi caesura ; as,

Warms’ in the sun” refreshes’ in the breeze, Glows’ in the stars” and blossoms’ in the trees.

VER’SION, n. s. Fr. version; Lat. versio. Change; transformation; change of direction; translation.

Comets are rather gazed upon, than wisely ob- served in their effects ; that is, what kind of comet, for magnitude, colour, version of the beams, pro- duceth what kind of effects. Bacon.

Springs, the antients thought to be made by the version of air into water Id. Natural History.

This exact propriety of Virgil I particularly re- garded ; but must confess that I have not been able to make him appear wholly like himself. For where the original is close, no vertion can reach it in the same compass. Dry den.

It will be as easy, nay much easier, to invent •some pretence or other against the reading, vertion, or construction. Waterland.

VERSTEGAN (Richard), an English anti- quary, born in London, of Flemish parents, and educated at Oxford. He went to Antwerp, and wrote on the Antiquities of the Renowned Eng- lish Nation. London, 1634, 8vo., and 1674. He also wrote, Regal Governments of England, &c. He died in 1625.

VERT, n. s. Fr.,rert. Green.

Vert, in the laws of the forest, signifies every thing that grows, and bears a green leaf within the forest, that may cover and hide a deer. (‘oieell.

1 find no mention in all the records of Ireland of a park or free warren, notwithstanding the great plenty of vert and venison. Sir John Davies.

VERT, in heraldry, the term for a green color. It is called vert in the blazon of the coats of

all under the degree of nobles : but in coats of nobility it is called emerald ; and in those of kings venus. In engraving it is expressed by diagonals, or lines drawn athwart from right 10 left, from the dexter chief corner to the sinister base.

VERTEBRE, n. s. > Fr. vertebre ; Latin

VEK’TEBRAL, adj.) vertebra. Ajointofthe back : relating to the spine.

The carotid, vertebral and splenick arteries, are not only variously contorted, but iiere and there dilated, to moderate the motion of the blood.

Ray on the Creation.

The several vertebres are so elegantly compacted together, that they are as strong as if they were but one bone. Ray.

VERTEX, n. s. Lat. vertex. Zenith ; the point over head ; hence the top of any thing.

‘1 hese keep the vertex ; but betwixt the bear And shining zodiack, where the planets err, A thousand figured constellations roll. Creech.

Mountains especially bound with different species of vegetables ; every vertex or eminence affording new kinds. Derham.

VERTICAL, adj. ˆ Fr. vertical, from Lat.

VERTICALLY, adv. ˆvertex. Placed in the

VERTICAL'ITY, n. s. > zenith : the adverb and noun substantive corresponding.

Unto them the sun is vertical twice a-year ; making two distinct summers in the different points of the verticality. Brou-ne's Vulgar Errrurs.

From these laws, all the rules of bodies ascending or descending in vertical lines may be deduced.

Cheyne. 'Tis raging noon ; and vertical the sun

Darts on the head direct his forceful rays.

Thomson.

VERTIC'ILLATE, adj. Lat. verticillum. Defined below.

Verticillate plants are such as have their flowers in- termixt with small leaves growing in a kind of whirls about the joints of a stalk, as pennyroyal, horehound, &c. Quincn.

VERTICILLATE, a class in Ray's and Bo- erhaave's Methods, consisting of herbaceous ve- getables, having four naked seeds, and the flowers placed in whorls round the stalk. The term is synonymous to the labiati,or lip-flowers of Tour- nefort ; and is exemplified in mint, thyme, and savory. Verticillatae is also the name of the forty-second order in Linnaeus's Fragments of a Natural Method, consisting of plants of the above description.

VERTICILLUS, a mode of flowering, in which the flowers are produced in rings at each joint of the stem, with very short foot-stalks. The term is exemplified in mint, hore-hound, and the other plants of the natural order of ver- ticillatae.

VERTICITY, ».. Lut. vertex. The power of turning ; circumvolution ; rotation.*

Those stars do not peculiarly "lance on us, but carry a common regard unto all countries, unto whom their verticity is also common.

Browne's Vulgar Errours.

We believe the verticity of the needle, without a certificate from the days of old. (ilanville.

Whether they be globules, or whether they have a verticity about their own centers, that produce the idea of whiteness in us, the more particles of light

are reflected from a body, the whiter does the body appear. Locke.

VERTICITY is that property of tlie loadstone whereby it turns or directs itself to one parti- cular point.

VERTIGINOUS, adj. Lat. vertigmosus. Turning round ; rotatory.

This vertiginous motion gives day and night suc- cessively over the whole earth, and makes it habitable all around. Bentleu.

These extinguish candles, make the workmen faint and rertiginous ; and, when very great, suffocate and kill them. Woodward.

VERTIGO, n.s. Lat. vertigo. A giddiness; a sense of turning in the head.

Vertigo is the appearance of visible objects, that are without motion, as if they turned round, attended with a fear of falling, and a dimness of sight

Quincy.

The foierunners of an apoplexy are dulness, ver- tigos, tremblings. Arbuthnot,

That old vertigo in his head Will never leave him till he 's dead. Suift.

VERTOT D'ABOEUF (Rene Aubert de), a celebrated historian, was born of a noble family in Normandy, in 1655. At sixteen years of age he became Franciscan friar ; afterwards he entered into the order of the Praemonstratenses, in which he had several benefices ; and at length was a secular ecclesiastic. He became secretary to the duchess of Orleans, member of the Aca- demy of Inscriptions, and historiographer of Malta. He died at Paris in 1735. His prin- t ipal works are, 1 . The History of the Revo- .ution of Sweden. 2. The Revolutions of Por- tugal. 3. The

Revolutions of the Romans. 4. The History of Malta. These works are translated into most of the languages of Europe.

VERTUE (George), a celebrated engraver, born in London, in 1684. His engravings are mostly portraits. He wrote a History of Painters, which was published by Horace Walpole, in 3 vols. 4to. He died in 1757.

VERTUMNUS, in mythology, a god who pre- sided over gardens and orchards, honored among the Etruscans, from whom the worship of this deity was transmitted to the Roinaji?. Ovid has described the various forms assumed by this deity, in order to obtain the lo\;e of Pomona.

VER'VAIN,n.».) Fr. verveint ; Lat. ver-

VER'VINE. $ vena. A plant.

She night-shade strows to work him ill, Therewith the vervain, and her dill, I hat hindreth witches of their will. Drayton.

Some scattering pot-herbs here and there he found, \ hich, cultivated with his daily care, And bruised with vervain, were his frugal fare.

Dry den,

VERVAIN, in botany. See VERBENA.

VEKUL./E, a town of Italy, possessed by the Hernici.

\ l.RUMONTANUM, in anatomy, a small eminence near the passages where the semen is discharged into the urethra.

VKRUS (Lucius ./Elius Aurelius Cejonius), emperor of Rome, the son of jElius by Domitia Lucilla, was adopted by Marcus Aurelius as his colleague; and was sent into Syria, out of which lie drove the Partisans, for which he had a tri-

umph. See PARTHIA. He died in his thirty- ninth year. He was a prince of dissolute man- ners.

VE'RY, adj. & adv. Fr. veray, or vrai ; Ital. vera; Lat. verus ; whence old English veray. It has its degrees verier and veriest. True ; real ; complete; more exact: it notes things empliati- cally or eminently : as an adverb, in a great or high degree.

In very deed, as the Lord liveth. 1 Sam. xxv. 34 That bold challenge was thought very stranee.

Lesley.

Why do I pity him, That with his ceiy heart despiseth me 1 Shalupeare.

Was not my love The eerier wag o' the' two ! Id.

We can contain ourselves, Were he the veriest antick in the world. id.

Women are as roses, whose fair flower Being once displayed, doth fall that u-ry hour. !d.

Those who had drunk of Circe's cup were turned into very beasts. Davies.

There, where very desolation dwells, By grots and caverns shagged with horrid shades, She may pass on. Milton.

0 that in very deed we might behold it !

Dryden and Lee.

The cocks beat the partridge, which she laid to heart ; but, finding these very cocks cutting one another, she comforted herself. L' Estrange.

In a seeing age, the very knowledge of former times passes but for ignorance in a belter dress.

South. The Greek orator was very famous for this. Addisan.

The pictures of our great grandmothers in queen Elizabeth's time are cloathed down to the very wrists, and up to their very chin. Id. Guardian.

VES'ICATE, v. a. Lat. vesica. To blister.

*1 saw the cuticular vesicated, and shining with a burning heat. M*t>m*

I applied some vinegar prepared with litharge, de- fending the vesication with pledgets. Id. Surgery.

VESICATORIUM, a blister, an application of an acrid nature made to any part of the body, in order to draw a flux of humors to that part, and thus elevate the scarf-skin into a blister.

VES'IC'LE, n. s. Lat. vcsiculu. A small cu- ticle1 filled or inflated.

Nor is the humour contained in smaller veins, but in a vesicle, or little bladder.

Brandies Vulgar r.rr.mrs.

The lungs arc made up of such air pipes and I.M- cla, interwoven with blood-vessels, to purify, fer- ment, or supply the sanguineous mass with nitro- aerial particles. Ran.

A muscle is a bundle of vesicular threads, or of solid filaments, involved in one common membrane.

Cheyne.

VES PA, the wasp, a genus of insects belong- ing to the order of hymenoptera. The month consists of two jaws without any proboscis : the superior wings are plaited; the eyes are lunar: and there is a sharp sting in the tail. There are 159 species : three of which are natives of Bri- tain, viz.

1 \ . coarctata, the small wasp, has black an- tennae, yellowish at the base ; the head is black with a yellow spot between th» antenna, and an- other at the base of the upper lip. Each seg- ment of the abdomen is bordered with vellow It is about half an inch long.

2. V. crabo, the hornet, has tawny antennae ; the segments of the abdomen arc black on the anterior part, and yellow on the posterior, with two black spots on each. Its lenutli is an inch; it builds in hollow trees. Its cakes or combs are composed of a substance like coar.se paper, or rusty parchment. It is very voracious, de- vouring other insects, and even bees.

3. V. vulgaris, the common wasp. The male has seven yellow segments on the abdomen, with a black triangle on each : — The head is yellow, and the antennae long. The upper lip of the female is yellow, the antennae short; there are six segments of the abdomen with two lateral black spots on each. M. Reaumur and Dr. Derham agree in distinguishing three sorts; viz. the queens or females, the males, and the com- mon laboring wasps, called mules, or neuters, which, according to Reaumur, are neither males

nor females, and consequently barren. The queens, of which there is a great number, are much longer in the body, and larger than any other wasp : they have a large heavy belly, cor- responding in size to the prodigious quantity of eggs with which they are charged5. The males are less than the queens, but longer and larger than the common wasps, which are the smallest of the species : they have no stings, with which both the queens and common wasps are fur- nished. There are in one nest 200 or 300 males, and as many females : but their number de- pends on the size of the nest. See ENTOMOLOGY.

VESPASIAN, the tenth emperor of Rome ; remarkable for his clemency and other virtues. See ROME.

VESPASIAN (Titus). See ROME, and TITUS.

VES'PER, n. s. Lzt. vesper. The evening star ; the evening ; an evening prayer.

These signs are black Vesper's pageants.

Shakspeare.

VESPERTILIO, the bat, a genus of quadru- peds, belonging to the order of primates. All the teeth are erect, pointed, near each other ; and the first four are equal. The fore feet have the toes connected by a membrane expanded into a kind of wings by which the creature is enabled to fly. There are twenty-eight species, of which four are natives of Britain. The most remarkable are, 1. V. murinus, common bat, has a tail : the lips and nose are simple ; and the ears are smaller than the head- It inhabits Europe, and is found in Britain. This animal flies only during the night, living chiefly on moths : when it lights on the ground, it is un- able to rise again till it has crawled to some height : it remains torpid during winter, revives in the beginning of the spring, and comes abroad in the dusk of the evening. This species is two inches and a half long, when full grown, and about nfne inches in extent ; the fur is of a mouse color, tinged with reddish; it generally skims near the ground, with an uneven jerking flight ; and often, seeking for gnats and other aquatic insects, flies close by the surface of water. They breed in summer, and are preyed on by owls. Bats are very voracious. They have been subjected to some cruel experiments, by the abbe Spallanzani and M. de Jurine; from which it appears, 1st, That the eyes of the bat VOL. XXII.

are not indispensably necessary to it for finding its way ; 2d, That the organ of hearing appears to supply that of sight in the discovery of bo- dies, and to furnish these animals with different sensations to direct their flight

and enable them to avoid those objects that may present them- selves.

2. V. noctulis, have the nose slightly bilo- bated ; ears small and rounded ; on the chin a minute verruca ; hair reddish ash color : length of the rump two inches eight-tenths; tail one inch seven-tenths ; extent of wings thirteen inches; inhabits Great Britain and France; hVs high. A gentleman informed .Mr. Pennant, that he saw taken, under the eaves of Queen's Col- lege, Cambridge, in one night, 185 of these ani- mals; the second night sixty - three; the third night two ; and that each that was measured hud fifteen inches extent of wings.

3. V. spectrum, or spectre, with a long noso ; larˆe teeth ; long, broad, and upright ears : at the end of the nose a long conic erect mem- brane, bending at the end, and flexible; hair on the body cinereous, and pretty long: wings full of ramified fibres ; the membrane extends from hind leg to hind leg ; no tail ; but from the rump extend three tendons, terminating at the edge of the membrane. They inhabit South America; live in the palm trees; grow very fat; called vampyre, by M. de Buffon, who supposes it to be the species that suck human blood.

4. V. vampyrus, the vampire, or Ternate bat, with large canine teeth; four cutting teeth above, the same below ; sharp black nose; large naked ears ; the tongue is pointed, terminated by sharp aculeated papillae ; talons very crooked, strong, and compressed siJewise ; no tail; the mem- brane divided behind quite to the rump; head of a dark ferruginous color; on the neck, shoul- der, and under side, of a much lighter and brighter red ; on the back the hair shorter, dusky, and smooth; the membranes of the wings dusky. They vary in color ; some being entirely of a reddish brown, others dusky. These monsters inhabit Guinea, Madagascar, and all the islands thence to the remotest in the Indian Ocean. They fly in flocks, and perfectly obscure the air with their numbers. They live on fruits ; and are so fond of the juice of the palm tree that they will intoxicate themselves with it till they drop. Many are of an enormous size : Beck- man measured one whose extent from tip to ti|i of the wings was five feet four inches ; arid Dampier another, which extended farther tliau he could reach with outstretched arms. Thek bodies are from the size of a pullet to that of a dove : their cry is dreadful, their smell rank, their bite, resistance, and fierceness great, when taken. The ancients had some knowledge of these animals. Herodotus mentions certain winged wild beasts like bats, that molested the Arabs who collected the cassia, to such a degree that they were obliged to cover their faces, all but their eyes, with skins. It is very probable, as Buffon remarks, it was from such relation that poets formed their fictions of harpies. Lin- naeus gives this species the title of vampyre; conjecturing it to be the kind which draws blood from people in their sleep, which however Buf-*

fon denies; ascribing that faculty only to the spectrum.

*\ KS'SEL, n. *. & v. a. Fr. cassette ; Ital. va cello ; Lat. vas. Any thing containing liquids : hence a thing wateMight, as a ship or boat ; any thing containing ; any capacity : to vessel is to put into a vessel.*

For Banquo's issue hare I filled my mind ; Put rancours in the vessel of my peace, Only for them. Shukspeare. Macbeth.

The sous and nephews of Noah, who peopled the isles, had vessels to transport themselves.

Raleigh's Essays.

Take earth, and vessel it ; and in that set the seed.

Bacon.

The Phoenicians first invented open vessels, and the Egyptians ships with decks. Heylyn.

The vessel is represented as stranded. The figure before it seems to lift it off the shallows.

Addison on Medals.

If the rigid doctrines be found apt to cool all those men's love of God, who have not the confidence to believe themselves of the number of the few chosen vessels, and to beget security and presump- tion in others who have conquered those difficulties.

Hammond. I have my fill Of knowledge, what this vessel can contain. Milton.

If you have two vessels to fill, and you empty one to fill the other, there still remains one vessel empty.

Burnel.

From storms of rage, and dangerous rocks of

pride,

Let thy strong hand this little vessel guide ; It was thy hand that made it : through the tide Impetuous of this life let thy command Direct my course and bring me safe to land. Prior.

Another cause of a wasting ulcer in the lungs is the disruption of a vessel, whence the blood issues into the cavities and interstices of the lungs, and thence is expectorated by a cough. Blackmore.

Of these elements are constituted the smallest fibres ; of those fibres the vessels ; of those vessels the organs of the body. Arbuthnot on Aliments.

Now secure the painted vessel glides ; The sun-beams trembling on the floating tides.

Pope.

VESSEL is a general name given to the dif- ferent sorts of ships which are navigated on the ocean, or in canals and rivers. It is, however, more particularly applied to those of the smaller kind, furnished with one or two masts. See SHIP.

VEST, n. s. & v. a. Lat. vestis. An outer snrment : to dress ; deck ; invest ; place in pos- session.

The militia their commissioners positively re- quired to be entirely vetted in the parliament.

Clarendon. Over his lucid arms A military vest of purple flowed.

Milton's Paradise Lost.

Just Simeon and prophetic Anna spoke, Before the altar and the vested priest. Milton.

The verdant fields with those of heaven may vie, With either vested, and a purple sky. Drydtn.

To settle men's consciences, it is necessary that they know the person who by right is vested with jx>wer over them. Locke.

Empire and dominion were vested in him, for the good and behoof of others. Id.

When the queen in royal habit's drest, Old mystick emblems grace the imperial vest. Smith.

Had I been vested with the monarch's power, Thou must have sighed, unlucky youth ! in vain.

Prior.

Light! Nature's resplendent robe ; Without whose vesting beauty all were wrapt In gloom. Thomson.

VESTA, in pagan worship, the same witn Cybele. See CYBELE, and OPS. Also the god- dess of Fire, the daughter of Saturn and Cybele, and the sister of Ceres. She was so much in love with chastity, that on Jupiter's ascending the throne, and offering to grant whatever she asked, she only desired the preservation of her virginity, which she obtained. Vesta was not represented in her temple by any image.

VES'TAL, n. s. & adj. Lat. vestalis. A virgin consecrated to Vesta ; a pure virgin : per- taining to or denoting a virgin.

Women are not

In their best fortunes strong; but want will perjure The ne'er touched vestal. Shakspeare.

Her vestal livery is but sick and green, And none but fools do wear it. Id.

How happy is the blameless i-estal's lot ! The world forgetting, by the world forgot. Pope.

The VESTALS, among the ancient Romans, were priestesses of the goddess Vesta, and had the perpetual fire committed to their charge; they were at first only four in number, but af- terwards increased to six ; and it does not ap- pear that their number ever exceeded six ; among whom was one superior to the rest, and called vestalis maxima. The vestals were chosen from six to ten years of age, and obliged to strict continency for thirty years ; the first ten of which were employed in learning the ceremonies of religion, the next ten in the performance of them, and the ten last in teaching them to the younger vestals. The habit of the vestals con- sisted of a head dress, called infula, which sat close to the head, and whence hung certain laces called vittje; a kind of surplice made of white linen, and over it a purple mantle with a long train to it.

VESTALIA, in Roman antiquity, a festival celebrated in honor of the goddess Vesta, on the fifth of the ides of June ; i. e. on the ninth of the

month.

VESTIGE, n. $. Lat. vestigium. Footstep , mark left behind in passing.

The truth passes so slightly through men's imagi- nations, that they must use great subtilty to track its vestiges . Harvey.

VESTMENT, n. s. Lat. vestimentum. Gar- ment ; part of dress.

Were it not better that the love which men bear unto God should make the least things, that are em- ployed in his service, amiable, than that their over- scrupulous dislike of so mean a thing as a vestment should from the very service of God withdraw their hearts and affections 7 Hooker.

The sculptors could not give vestments suitable to the quality of the persons represented. Dryden.

Heaven then would seem thy image and reflect Those sable vestments and that bright aspect.

Waller.

VESTRY, n. t. Fr. vestiaire ; Lat. vcsti- arium. A room appendant to the church, in which sacerdotal garments and consecrated things are repoited : parochial assembly commonly con- vened in the vestry. See next page.

VESUVIUS.

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They create new senators, vestry elders, without any commandment of the word. White.

The common-council are chosen every year, so many for every parish, by the vestry and common convention of the people of that parish. Clarendon.

Bold Amycus from the robbed vestry brings The chalices of heaven, and holy things Of precious weight. Dryden.

Go with me where paltry constables will not sum- mon us to vestries. Blount to Pope.

VESTRY is also a meeting consisting of the minister, church-wardens, and chief men of most parishes, who make a parish vestry. By custom there are select vestries, being a certain number of persons chosen to have the government of the parish, make rates, and take the accounts of church-wardens, &c.

By stat. 58 Geo. III. c. 69 (amended by stat. 59 Geo. III.c. 85) for the regulation of parish vestries, it is enacted that three days' notice shall be given of the holding of all vestries by publi- cation in the church on a Sunday, and affixing a notice on the church door. That if the rector, vicar, or perpetual curate, is not present at the vestry, a chairman shall be elected by the persons present ; that, in cases of equality of votes, the chairman shall have the casting vote, in addition to his vote as a vestryman ; that votes shall be proportioned to the amount of the poors' rate upon the parties voting, not exceeding six votes ; the parties not having neglected or refused to pay the rates when called on. That the minutes of the proceedings shall be entered in the parish- books, and signed by the chairman, and such vestrymen as choose so to do ; and that such books shall be carefully kept, &c. Provision is made for vestries regulated by special acts, &c. By the act 59 Geo. III. persons rated to the poor, though not inhabitants, and the clerks, &c. of corporations, are allowed to attend and vote. A vestry was called to consider about building a work-house, where it was agreed to, and to borrow money for that purpose : and that who- ever should be bound for it, should be indemni- fied by the parish This order was confirmed by another, and both signed by the vicar and several of the inhabitants. £300, being the sum agreed upon, was borrowed of A., to whom B. gave bond for it. An order of vestry was made for raising the money ; but, upon appeal at the quarter-sessions by some new parishioners, was quashed. B. was sued on the bond, and paid the money, and then brought a bill for relief. And the master of the rolls decreed him his prin- cipal, interest, and costs at law, and in chancery ; and that the defendants the vicar, churchwardens, and overseers of the poor, call a vestry to make a rate for payment ; and, if the inhabitants re- fuse payment, the plaintiff to be at liberty to ap- ply to the court : And said that he did not see why the court might not as well compel those who are not parties, to pay the rate, as order te- nants, though not parties to pay the rates; and, because the defendants had put in a fair answer, their costs were decreed to be raised by the same rate ; but said, that if those who had appealed to the quarter-sessions had been before the court, they should have paid all the costs. — 2 P. Wms. 332. See 21 Vin. Abr. p. 448.

Select vestries. — In large and populous pa- rishes, especially in and about the metropolis, a custom has obtained of yearly choosing a select number of the chief and most respectable pa- rishioners to represent and manage the concerns of the parish for that year ; and this has been held to be a good and reasonable custom. It seems also to have been held a good and reason- able custom to choose a certain number of pa rishioners as a select vestry ; and that as often as any of the members die, the rtst shall choose one other tit and able parishioner of the same parish to fill up the vacancy of him so deceased; but this can only be supported upon the basis of

prescription, and constant immemorial usage. The custom, however, differing in different parishes as to the election, government, and proceedings of select vestries, it is enacted by the stat. 10 Ann. c. 11, sec. 20, for building fifty new churches in or near London and Westmin- ster, that the commissioners shall appoint a con- venient number of sufficient inhabitants to be vestrymen ; and from time to time, upon the death, removal, or other voidance of any such vestryman, the rest, or majority of them, may choose another. In several local and personal acts, the legislature has described the persons of whom a select vestry shall respectively consist.

VESTURE, n. s. Old Fr. vesture; Ital. vestura. Garment ; robe ; dress.

What, weep you when you but behold Our Caesar's vesture wounded 1 Shatupea.re.

Her breasts half hid, and half were laid to show ; Her envious vestvre greedy sight repelling. Fairfax.

Rocks, precipices, and gulfs, apparalled with a vetture of plants. Bent ley.

Here ruddy brass, and gold refulgent blazed ; There polished chests embroidered vestures graced.

Poj > e.

VESUVIAN, in mineralogy, white garnet of Vesuvius. See MINERALOGY.

VESUVIUS, a volcanic mountain in the south of Italy, about eight miles S. S. E. of Na- ples, celebrated for its eruptions. It rises in a gentle swell from the bay of Naples, to an ele- vation of nearly 3700 feet. The view from the summit is very beautiful, including Naples, with its bay, its islands, and its promontories, as well as the delightful scenery of the Campagua Fe- lice. To the west the prospect loses itself in the immensity of the sea; to the east it extends far into the interior, and is only bounded by the Appennines. The summit of the mountain is in the form of a cone, and consists of masses of burned earth, ashes, and sand, thrown out in the course of ages by the volcano. It is steep and difficult of ascent from the looseness of the materials. The crater is extensive, nearly a mile and a half in circumference, but has not above 350 feet of depth or descent from the ridge. Its sides or interior surface has been progressively formed of ashes and cinders, intermixed with some rocks and dried lava. The lower part of the crater is a level spot, of nearly three-quarters of a mile in circumference, composed of a sort of crust of brown burned earth, and containing several orifices like funnels, not large, but emitt- ing a thin vapor.

The first of these eruptions recorded in history took place in the year 79 : at which time the two

cities of Pompeii and Herculaneum were entirely ouried under the stones and ashes thrown out. Incredible mischief was also done to the neigh- bouring country, and numbers of people lost their lives, among whom was Pliny the elder. It is the opinion of the best judges, however, that this eruption was by no means the first that had ever happened. The very streets of those cities which were at that time overwhelmed are unquestionably paved with lava. Since that time thirty different eruptions have been recorded, some of which have been extremely violent. In 1538 a mountain, three miles in circumference and a quarter of a mile in perpendicular height, was thrown up in the course of one night. la

1766 Sir William Hamilton began to observe the phenomena of this mountain ; and since that time the public has been favored with more ex- act and authentic accounts of the rarious changes which have taken place in Vesuvius than what were to be had before. The first great eruption taken notice of by this gentleman was that of 1767, which, though very violent, was mild in comparison with that of 1538. From 1767 Ve- suvius never ceased for ten years to send forth smoke, nor were there many months in which it did not throw out stones, scoriae, and cinders ; which, increasing to a certain degree, were usu- ally followed by lava ; so that from the year

1767 to 1779 there were nine eruptions, some of them very considerable. In the month of August that year, however, an eruption took place, which, for its extraordinary and terrible appearance, may be reckoned among the most remarkable of any recorded concerning this or any other volcano. During the whole of July the mountain continued in a state of fermenta- tion. Subterraneous explosions and rumbling noises were heard ; quantities of smoke were thrown up with great violence, sometimes with red-hot stones, scoriae, and ashes ; and towards the end of the month these symptoms increased to such a degree as to exhibit, in the night, the most beautiful fire-works. On Thursday 5th August the volcano appeared most violently agi- tated ; a white and sulphureous smoke issued continually and impetuously from its crater, one puff seeming to impel another ; so that a mass of them was soon accumulated, to appearance, four times the height and size of the volcano it- self. These clouds of smoke were exceedingly white, resembling an immense accumulation of bales of the whitest cotton.

In the midst of this very white smoke, vast quantities of stones, scoriae, and ashes were thrown up to the height of 2000 feet ; and a quantity of liquid lava, seemingly very heavy, was lifted up just high enough to clear the rim of the crater, and take its way down the sides of the mountain. This lava, having run violently for some hours, suddenly ceased, just before it had reached the cultivated parts of the mountain, nearly four miles from the spot whence it issued. The heat all this day was in- tolerable at the towns of Somma and Ottaiano ; and was sensibly felt at Palma and Lauri, which are much farther off. Reddish ashes fell so thick on the two former that the air was dark- ened so that objects could not be distinguished at the distance of ten feet. Long filaments of a

vitritied matter, like spun glass, were mixed and fell with these ashes ; several birds in cages were suffocated, and the leaves of the trees in the neighbourhood of Somma were covered with white and very corrosive salt. About twelve at night on the 7th, the fermentation of the mountain seemed greatly to increase. Our author was watching the motions of the volcano from the mole at Naples, which has a full view of it. Se- veral glorious picturesque effects had been ob- served from the reflection of the deep red fire within the crater of Vesuvius, and which mounted high amongst those huge clouds on the top of it : when a summer storm, called in that country a tropea, came on suddenly, and blended its heavy watery clouds with the sulphureous and mineral ones, which were already like so many other mountains piled up on the top of the volcano. At this moment a fountain of fire was shot up to an incredible height, casting so bright a light that the smallest objects were clearly distinguish- able at any place within six miles or more of Vesuvius. The black stormy clouds, passing swiftly over, and at times covering the whole or a part of the bright column of fire, at other times clearing away and giving a full view of it, with the various tints produced by its reverberated light on the white clouds above, in contrast with the pale flashes of forked lightning that attended the tropea, forming such a scene as no power of art can express. One of the king's game keepers, who was out in the fields near Ottaiano while this storm was at its height, was surprised to find the drops of rain scald his face and hands : a phenomenon probably occasioned by the clouds having acquired a great degree of heat in passing through the above-mentioned column of fire. On the 8th the mountain was quiet till towards six P. M., when a great smoke began to gather over its crater ; and about an hour after a rumb- ling subterraneous noise was heard in the neighbourhood of the volcano ; the usual throws of red-hot stones and scoriae began and increased every instant. The crater, viewed through a telescope, seemed much enlarged by the violence of last night's explosions, and the little mountain on the top was entirely gone. About nine a most violent report was heard at Portici and its neighbourhood, which shook the houses to such a degree as made

the inhabitants run out into the streets. Many windows were broken, and walls cracked by the concussion of the air on this occasion, though the noise was but faintly heard at Naples. In an instant a fountain of li- quid transparent fire began to rise, and, gradually increasing, arrived at last at the amazing height of 10,000 feet and upwards. Puffs of smoke, as black as can possibly be imagined, succeeded one another hastily, and accompanied the red-hot, transparent, and liquid lava, interrupting its splendid brightness, here and there, by patches of the darkest hue. Within these puffs of smoke, at the very moment of emission, a bright but pale electrical fire vras observed playing briskly about in zig-zag lines. The wind was south- west, and, though gentle, was sufficient to carry these puffs of smoke out of the column of fire : and a 'collection of them by degrees formed a black and extensive curtain behind it ; in other

parts of the sky it was perfectly clear, and the stars bright. The fiery fountain, of such im- mense magnitude, on the dark ground just men- tioned, made the finest contrast imaginable ; and the blaze of it reflected from the surface of the sea, which was at that time perfectly smooth, added greatly to this sublime view. The lava, mixed with stones and scoriae, having risen to the amazing height already mentioned, was partly directed by the wind towards Ottaiano, and partly falling, still red-hot and liquid, upon the top cf Vesuvius, covered its whole cone, part of that of the summit of Somma, and the valley be- tween them. The falling matter, being nearly as inflamed and vivid as that which was conti- nually issuing fresh from the crater, formed with it one complete body of fire, which could not be less than two miles and a half in breadth, and of the extraordinary height above-mentioned, cast a heat to the distance of at least six miles round. The brushwood on the mountain of Somma was soon in a blaze, and the flame of it being of a different color from the deep red of the matter thrown out by the volcano, and from the silvery blue of the electrical fire, still added to the con- trast of this most extraordinary scene. The black cloud, increasing greatly, once bent to- wards Naples, and threatened the city with speedy destruction ; for it was charged with electrical fire, which kept constantly darting about in bright zig-zag lines. This fire, how- ever, rarely quitted the cloud, but usually re- turned to the great column of fire whence it pro- ceeded ; though once or twice it was seen to fall on the top of Somma, and set fire to some dry grass and bushes. Fortunately the wind carried back the cloud just as it reached the city, and had begun to occasion great alarm. The co- lumn of fire, however, still continued, and dif- fused such a strong light, that the most minute objects could be discerned at the distance often miles or more from the mountain. Mr.

Morris informed our author that at Sorrento, which is twelve miles distant from Vesuvius, he read the title page of a book by that volcanic light. All this time th^e miserable inhabitants of Ottaiano were involved in the utmost distress and danger by the showers of stones which fell upon them, and which, had the eruption continued for a longer time, would most certainly have reduced their town to the same situation with Ilerculane- um and Pompeii. The mountain of Somma, at the foot of which the town of Ottaiano is situated, hides Vesuvius from the view of its inhabitants ; so that, till the eruption became considerable, it was not visible to them. On Sunday night, when the noise increased and the fire began to appear above the mountain of Somma, many of the inhabitants flew to the churches, and others were preparing to quit the town, when a sudden and violent report was heard ; soon after which ".py found themselves involved in a thick cloud of smoke and ashes ; a horrid clashing noise was heard in the air, and presently fell a vast shower of stones and large pieces of scoriae, some of which were of the diameter of seven or eight feet, which must have weighed more than lOOlbs. before they were broken, as some of the frag- ments which Sir Wiliian Hamilton found in the

streets still weighed upwards of sixty pounds. When these large vitrified masses either struck against one another in the air, or fell on the ground, they broke in many pieces, and covered a large space of ground with vivid sparks of fire, which communicated their heat to every thing that was combustible. These masses were formed of the liquid lava ; the exterior parts of which were become black and porous by cooling in their fall through such a vast space ; whilst the interior parts, less exposed, retained an ex- treme heat, and were perfectly red. In an instant the town and country about it were on fire in many parts ; for there were several straw huts in the vineyards which had been erected for the watch- men of the grapes, all of which were burnt. A great magazine of wood in the heart of the town was all in a blaze ; and had there been much wind the flames must have spread universally, and all the inhabitants would have been burnt in their houses; for it was inpossible for them to stir out. Some, who attempted it with pillows, tables, chairs, the tops of wine casks, &c., on their heads, were either knocked down or soon driven back to their close quarters under arches and in the cellars of their houses. Many were wounded, but only two persons died of their wounds. To add to the horror of the scene, incessant volcanic lightning was whisking about the black cloud that surrounded them, and the sulphureous smell and heat would scarcely allow them to draw their breath. In this dreadful situation they remained about twenty-five minutes, when the volcanic storm ceased all at once, and Vesuvius remained sullen and silent. Some time after the eruption had ceased the air continued greatly impregnated with electrical matter. The duke of Cottosiano told our author that having, about half an

hour after the great eruption had ceased, held a Ley- den bottle, armed with a pointed wire, out at his window at Naples, it soon became considerably charged. But, whilst the eruption was in force, its appearance was too alarming to allow one to think of such experiments. He was informed also by the prince of Monte Mileto that his son, the duke of Populi, who was at Monte Mileto the 8th of August, had been alarmed by the shower of cinders that fell there ; some of which he had sent to Naples weighing two ounces ; and that stones of an ounce weight had fallen upon an estate of his ten miles farther off. Monte Mileto is about thirty miles from the volcano. The abbe Cagliani also related that his sister, a nun in the convent of Manfredonia, had written to enquire after him, imagining that Naples must have been destroyed, when they, at so great a distance, had been alarmed by a shower of ashes which fell on the city at 11 P. M. so much as to open all the churches and go to prayers. As the ereat eruption happened at nine, these ashes must have travelled 100 miles in two hours. Nothing could be more dismal than the appearance of Ottaiano after this eruption. The houses were unroofed, half buried under the black scoriae and ashes ; all the windows towards the mountain were broken, and some of the houses themselves burnt ; the streets choked up with ashes in some narrow places not less than four feet thick ; and a few of the inhabitants who had just returned

were employed in clearing them away, and piling them up in hillocks, to get at their ruined houses. The palace of the prince of Ottaiauo is situated on an eminence above the town, and nearer the mountain. The steps leading up to it were deeply covered with volcanic matter ; the roof was totally destroyed, and the windows broken ; but the house itself, being strongly built, had not suffered much. An incredible number of fragments of lava were thrown out during the eruption, some of which were of immense magnitude. The largest measured by Sir William Hamilton was 108 feet in circumference, and seventeen in height. This was thrown at least a quarter of a mile clear of the mouth of the vol- cano. Another, sixty-six feet in circumference, and nineteen in height, being nearly of a sphe- rical figure, was thrown out at the same time, and lay near the former. This last had the marks of being rounded, nay almost polished, by continual rolling in torrents or on the sea shore. Our author conjectures that it might be a spherical volcanic salt, such as that of forty-five feet in circum- ference mentioned by M. de St. Fond in his Treatise of Extinguished Volcanoes. A third of sixteen feet in height, and ninety-two in circum- ference, was thrown much farther, and lay in the valley between Vesuvius and the Hermitage. It appeared also, from the large fragments that surrounded this

mass, that it had been much larger while in the air. Vesuvius continued to emit smoke for a considerable time after this great eruption, so that our author was apprehensive that another would soon ensue ; but from that time nothing comparable to the above has taken place. From the time of this great eruption to 1786 our author kept an exact diary of the operations of Vesuvius, with drawings, showing, by the quantity of smoke, the degree of fermentation within the volcano. The operations of the subterraneous fire, however, appear to be very ca- pricious and uncertain. One day there will be the appearance of a violent fermentation, and the next every thing will be calmed ; but, when- ever there has been a considerable ejection of scoriae and cinders, it has been a constant obser- vation that the lava soon made its appearance, either by boiling over the crater or forcing its way through the crevices in the conical part of the mountain. In the year 1794 there was a very tremendous eruption, and the mischief done was very considerable ; the lava covered and totally destroyed 5000 acres of rich vineyards and cul- tivated land, and drove the inhabitants of Torre del Greco from the town, a great part of the houses being either burned or so injured as to be uninhabitable. The damage done in the vine- yards by the ashes was also immense. The writer of this was on the top of Vesuvius in the month of May 1802 ; the mountain was perfectly quiet, with smoke issuing from a few crevices like the smoke of a small fire. The effects of the eruption in 1794 were very visible, especially in Torre del Greco. A very violent eruption has been mentioned in the papers about two years ago, but we have no authentic description either of its nature or of its effects. Sir William Hamil- ton observes that the inhabitants of Naples in general pay so little attention to the operations

of this volcano that many cf its eruptions pass unnoticed by at least two-thirds of them. At the same time we know from undoubted evidence and enquiry on the spo/, that, during a violent eruption which seems to threaten danger to the city, the Neapolitans carry their clamors and their superstition to almost an incredible height; going in troops to their churches, and particularly ad- dressing themselves to their tutelar saint, Janu- arius. It is very probable, however, that the moment the danger is over they forget it. It is remarkable to observe with what readiness and sang froid they inhabit the towns and villas on the brow of the mountain, and how quickly they return to spots which have suffered the most severely. Torre del Greco exhibited in 1802 the appearance of a ruined town ; but the inhabit- ants were living in it in perfect security ; a church had been completely overwhelmed, i. e. covered with lava, leaving about the height of two moderate stories of the steeple visible. To this they were at that time adding a new church, which was nearly completed. We were assured upon the spot that, in the eruption 1794, the lava flowed down slowly like a river into the sea ; that when it was opposed by walls or houses it

accumulated and covered them, unless it found an easy vent elsewhere. It was added, and we firmly believe it, that the accumulated mass of liquid rock continued hot fora full twelvemonth. The inhabitants are not much alarmed by a stream of lava, which moves slowly, from which they can always remove themselves, and carry off their moveable property ; the great danger consists in the clouds of burning ashes, which fly to a great distance, and the fall of which can neither be anticipated nor avoided. In 1794 we were told that one night an immense mass of matter issued with prodigious force from the crater, and rose to a great perpendicular height ; it for the most part fell down into the crater again, leaving a considerable hollow, which in 1802 was already covered with a slight vegetable mould.

The Italian geologist Breislak has given an in- teresting description of the eruption of 1794 ; the most important particulars of which we shall select.

The present cone of Vesuvius, he says, is trun- cated, so as to form an inclined plane, sloping from the north-east to the south-west. The circumfer- ence of the summit, which forms the brim of the cauldron, is about 3000 feet ; and at the bottom is distinguished an oblong plain, the greatest di- ameter of which is from east to west. Having since ascended several times to the top of the cone, I percei\ed that its depth had gradually diminished, and that the bottom •of the crater became higher daily, owing to the different matter which falls down, especially from the almost perpendicular sides on the east and north. One can at this time easily scan the extent and depth of its mouth, but occasionally it is much encum- bered, and sometimes totally clogged. In 1753 the bottom of the funnel rose so considerably, that it presented a vast plain only twenty-three feet beneath the brim, and in the midst of this plain was another cone from eighty to ninety feet high, with a small crater, from which the erup-

tions proceeded. Braccini has left us a curious description of the state of Vesuvius, after a long period of rest, and before the grand eruption of 1631. The whole of it, or at least the greater part of it, had become accessible. Having him- self descended into the crater, he says, he found it covered with plants and trees, and that a road down it was practicable for the space of a mile ; at this depth a very deep cavern was seen, which having passed, the way was again open for two miles by a very steep but at the same time very safe road, owing to the trees growing near to each other. At length a large plain presented itself, surrounded by a number of grottoes and caverns, which might be entered, but which the party were deterred from on account of their darkness. This plain, which was not

accessible otherwise than by a very rapid slope, nearly three miles in length, must assuredly have been much beneath the level of the sea. When the volcano is at rest, vapors are seen to arise from the cauldron's brim, or from the interior of its sides, which are very perceptible. When the mouth of Vesuvius is observed from any distance, and during the prevalence of moisture in the atmosphere, a mass of vapor seems to rise from it which mingles with the clouds.

The western portion of Somma must be con- sidered as connected with the cone of Vesuvius by a hill of smaller eminence, denominated Monte Cantaroni, on which is the hermitage del Salvatore. This hill is intersected by three valleys, that deserve to be examined with attention, on ac- count of the quantity of primitive substances which the volcano has thrown thither during old erup- tions. The northern valley is that termed La Fossa di Pharaone, near the plain, and Vallone della Ve- tiana, in its more elevated part, where the cur- rent of lava flowed in 1785. This vale, hollowed by rains, is the only interval between mount Somma and mount Cantaroni. South of this vale are two others, nearly parallel, the first called Rio Cupo, the second Fossa Grande, which, taking a direction from east to west, emerge in the plain of St. Jorio. Its northern side, nearly perpendicular, rises to a considerable height above the valley, and being composed only of cemented fragments of porous lava, called ca- pillo, of masses of spongy lava, and other sub- stances of an adhesive quality, is subject fre- quently to crumble and fall in large quantities. Along the whole extent of the southern side, at its upper part, is seen an ancient current of lava, which at first sight appears to be several strata of lava imposed one on the other, but which a little attention shows is but one current, in which horizontal chasms hare been occasioned by re- frigeration, and into which the wind has since introduced a slight quantity of vegetable earth. This lava is hard and compact ; it contains but few fragments of augite or pyroxene, and seems to be an assemblage of leucites, the superficial crystalline lustre of which having been impaired, by decomposition, makes it resemble variolite in its exterior. Many detached masses of this cur- rent have fallen to the bottom of the valley. Each fall of matter brings down calcareous stones, mica, and mixtures of felspar and vesuvian. The lava of 1767, which threatened the villages of

La Barra and St. Jorio, discharged itself into this valley, which it filled to a certain height, and afterwards flowed further, spreading itself to the plain. As it is already covered by the crum- blings from the flank, in order to examine it, the enquirer must repair to the plain of St. Jorio, in the neighbourhood of the chapel of St. Vito. Its grain is crystallised but fine, and oftentimes so close as to be nearly equal to petro-silex, or horn stone. It contains many small crystals of py- roxene and fragments of leucite, which is rarely found in its perfect form of crystallisation. The lava of La

Scala passes beneath the garden of La Fa-vorita. It is of the io!or of ashes, whitish, and of a crystallised grain. It contains many crystals of pyroxene, few of leucite, and small pieces of felspar, in groups in its cavities. This lava, where it is hewn on the sea-shore near La Cavalleria, is worthy of attention. Under a uniform bed, from fifteen to twenty feet in thick- ness, the lava is found divided into strata of from three to four feet : these divisions are formed by parallel and horizontal lines ; and, where thes« are dug down to, the lava is found to have sepa- rated itself spontaneously into beds. Below them are large prisms, commonly hexagonal, which are disjoined with great ease : in some places these prisms, instead of the lower, are found in the upper part of the current. The same tendency to a basaltic conformation, which is noticed in the lava of La Scala, is observed again in the neighbouring current of Calastro. This, after passing through a defile below Valle- longa, spreads to a broad front on reaching the sea. What most deserves observation in the lava here are the small crystallisations it presents, which seem to be the olivine of Werner. It is moreover of a deeper color than the lava of Scala, more porous, and like that, contains many crystals of augite and fragments of felspar. Next to this lava is found that of the eruption of 1794. Of the different eruptions of Vesuvius, this is the most recent, and was one of the most considerable.

Vesuvius had continued tranquil for a long time. On the 12th of June, 1794, towards eleven in the evening, a very violent shock of an earthquake was felt, which induced many of the inhabitants of Naples to leave their houses for the night. The tranquillity of the mountain did not, however, appear disturbed, either on the 13th, 14th, or 15th, nor did it exhibit any symp tom of an approaching eruption ; but towards nine in the evening of the last day many symp- toms were manifested. The houses about the mountain experienced violent shocks, which gradually increased in force: a very powerful one was felt at ten o'clock in Naples and its en- virons. At this instant, on the western base of the cone, at the spot called La Pedamentina, and from the midst of ancient torrents, a new mouth disgorged a stream of lava. This opening was 2375 feet in length, and 237 in breadth. Scarcely had the stream of lava begun to flow, before four conical hills, each having its small crater (the third alone excepted, which had two distinct mouths), arose out of the stream itself. From these different mouths stones were darted into the air with great noise, and in a state so highly

ignited that they resembled real flames ; the ex- plosions indeed were so quickly repeated that they seemed but one, and formed a continued sheet

of fire in the air, which received no other interruption than what was occasioned by the inferiority of force of some of the ejections. They sometimes vomited substances, I may say, in a fluid state, for they expanded in the air like a soft paste, so that one may imagine they were either a part of the running lava, or masses of old lava fused and projected. Some of these hills were contiguous one to the other; and it seems as if the force by which they were pro- duced had met with obstruction to the disgorge- mentof the substances at one point, and conse- quently effected several issues in the same line. The lava flowed in one body for some time, and at intervals flashes of light arose from the surface of it, produced by jets of hydrogenous gas, which disengaged itself from the lava, precisely in the same manner as the teases expand from the surface of a fluid. Its first direction was towards I'ortici and Resina, so that the inhabitants of Torre del Greco already bewailed the fate of their neighbours, and began their thanksgivings to the Almighty for their escape. Collected together in the church, they were still singing hymns of joy, and expressing their gratitude, when a voice an- nounced to them the fatal news of their altered destiny. The stream of lava, on flowing down a declivity it met in its way, divided itself into i hree branches ; one bearing towards Sta Maria de Pngliano, traversed a space of 2063 feet ; Jin- other, directing its course towards Resina, flowed to the distance of 3181 feet ; while the remainder of the stream, falling into the valley of Malomo, (lowed towards La Torre. On reaching the cha- pel of Bolzano, it formed a branch towards the south-east, which terminated in the territory of Aniello Tirone, after having run the length of 1490 feet; the residue of the lava pursuing its course flowed upon Torre, presenting a front from 1200 to 1500 feet in breadth, and filling several deep ravines.

On reaching the first houses of the town, the un divided according to the different slopes of the streets, and the degrees of opposition pre- sented by the buildings. An idea may easily be formed of the accidents consequent on such a flood of fire ; accidents which bear relation to the site of the manufactories, the thickness of the walls, and the manner in which they were as- sailed by the lava. Had not the mass of the stream suffered a diminution from the different divergencies noticed, not a single house would have been left standing in Torre del Greco. The lava, after a serpentine course through the town, at length reached the sea-shore. The con- tact with the water diminished the speed of its course: still the current flowed into the sea in a body 1127 feet in breadth, and advanced into it a. distance of 362 feet. Its entrance into the sea was not marked by any singular phenomenon ; it began to issue from the volcano at ten at night, and reached the sea-slum- l>y four in the morn- ing, continuing a very slow pnjˆressive move- it into the sea throughout the whole of the Kith, and the following night. The main stream, from t'.ie point where it issued from

the volcano to that at which it skipi •: d iti the sea, measured

12,961 feet. Its breadth varied greatly; in some places it scarcely exceeded 322 feet, but in the plain it spread to 11 11 ; and at a medium, without risk of any great error, it may be com- puted to have been 725 feet broad. In thickness also it differed according to the depth of the hol- lows it filled; in the plain it was constantly from twenty-four to thirty-two feet thick: and, if its mean thickness be reckoned at the latter number of feet, it may possibly be nearest the truth. According to these data, the mass of molten matter is 1,869,627 cubic fathoms. During the eruption the convulsion of the mountain was so great that even the houses in Naples were shaken by it. Still it was not constantly alike. At the be- ginning the trembling was continual, and accom- panied by a hollow noise, similar to that occasioned by a piver falling into a subterranean cavern. The lava, at the time of its being disgorged, from the impetuous and uninterrupted manner in which it was ejected, by striking against the walls of the vent occasioned a continual oscillation of the mountain. Towards the middle of the night this vibratory motion ceased, and was succeeded by distinct shocks. The fluid mass, diminished in quantity, now pressed less violently against the walls of the aperture, and no longer issued in a continual and gushing stream, but only at intervals, when the interior fermentation elevated the boiling matter above the mouth. About four in the morning the shocks began to be less nu- merous, and the intervals beeween them ren- dered their force and duration more perceptible. One might compare them to the thunder heard in Italy during storms in summer, the loudest claps of which are succeeded by rumbling sounds, which gradually die away.

While I was making my observations on this grand eruption at the foot of Vesuvius, its sum- mit was tranquil, and no phenomena were visible about its crater. I passed the night at sea, be- tween Calastro and La Torre, to have a nearer view of this great operation of nature, and to prove the trutK of the opinion generally received, that great eruptions are accompanied by extraor- dinary phenomena in the sea. A more grand spectacle there could not be. On one of thosn serene and brilliant nights, known only in the delightful climate of Naples, a majestic stream of fire, 11,868 feet in length, and 1483 in breadth, was seen at the foot of Vesuvius ; its reflected surface formed in the atmosphere a broad and brilliant aurora borealis, regularly spread and ter- minated at its upper part by a thick and dark border of smoke, which, diluting itself in the air, covered the disc of the moon, the shining silvery liulit of which was enfeebled and obscured. The sea again reflected the illuminated sky, the sur- face of it corresponding with this portion of the atmosphere appearing as red as fire. At the source of this river of fire inflamed matter was incessantly spouted out to a prodigious elevation, which, as it diverged on all sides, resembled an im- mense fire-work. On the sea-shore, finally, the mournful spectacle of the

conflagration of La Torre completed the picture. The vast clouds of thick black smoke which rose from the town, the flames which occasionally crowned the sum- mits of the houses, tlio ruins of thr: buildings, the noise of the fall ing palaces and houses, the

rumbling of the volcano, — these were the prin- cipal incidents of this horrible, yet sublime scene. The ruins of Pompeia, buried beneath heaps of drosses and powders, did not certainly present a spectacle near so striking. To these objects, so powerfully calculated to fix the senses, was added another, which forcibly touched the heart ; this was a doleful group of fifteen thou- sand persons, bewailing the destruction of their city and property, who had had but a moment's notice to flee and abandon their homes for ever, and were reduced to become wanderers, and de- pendent on the world for refuge.

About dawn the summit of Vesuvius ceased to be visible: it was covered with a thick cloud, frequently furrowed with lightning. This cloud gradually spread itself, and in a little time over- shadowed the gulf, the city of Naples, and its vicinage. It was formed of a large quantity of that fine sand called ashes, and prevented all sight of the fire of the volcano. The sun, as it appeared above the horizon, presented a still more dismal picture. From the abundance of ashes in the air, it seemed more pale than during the strongest eclipse: and a black scarf appeared to be spread over the whole of the gulf and the country. At the extremity of the horizon, towards the west, the day was more' clear, while the liˆht at Naples was fainter than twilight; and, with Pliny the younger, one might have said, 'Jam dies alibi illic nox omnibus nigrior densiorque.'

During this mournful night the air was per- fectly unagitated, and the sea calm : it was not disturbed even in the slightest degree, at least in the gulf of Naples. The slightest action of the volcano on it would have been perceptible at the base of the mountain, and I was within a distinct view of this part of the sea ; but Us influence on that element was absolutely null.

While one current of lava flowed over the western flank of Vesuvius, spreading ruin and desolation, another fell down its eastern slope, from an opening of inferior height, and a greater distance from the summit. This current was not visible at Naples: all that was perceived of it was a great light in the atmosphere, produced by reflection from the rolling fire. At first it took an eastern direction, turned afterwards to the south, and descended to the spot called Cognolo. There it fortunately found the valley of

So'rienta, sixty-five feet wide, 121 deep, and 1627 long. This valley the lava filled ; b'ut, as the volcano still continued to emit fresh matter, the current after- wards spread into the plain of Forte, near to Pozzelle, where it divided into three branches ; one proceeded towards Bosco, another towards Mauro, and the third to the plain of Mulara. The length of this current of lava was not less than an Italian mile; but, as it flowed constantly over old lavas, it did but little harm, merely laying waste and occupying a small extent of vineyard. From the spot where it diverged from its first direction, it projected a small branch in a continued line : falling to this point over a very rapid slope, the speed with which it flowed must have been considerable: and a portion of its mass preserving its first impulse, naturally fell

in this small stream, in which were four mouths in the shape of an inverted cone, the base of which is in the surface of the lava. This stream terminates in a small and regular hill of a coni- cal figure, on the summit of which are two mouths in form of inverted cones. The dimen- sions of this second current are nearly half those of the first ; consequently the mass of the whole is adequate to 2,804,440 cubic fathoms.

The coincidence and perfect resemblance of these two currents of lava sufficiently prove that they had but one common origin, and but one cauldron in which the matter was fused of which they were composed. How great then must that recipient be in which such an enormous mass could be contained ! And what powerful ex- ertion of strength must have been required to break through the mountain in such opposite di- rections! The lava, agitated by the expansion of elastic fluids, made its first efforts to liberate itself on the eastern flank, and found a passage ; but the resistance it met with from the mountain no doubt occasioned its reflux or rebound against its opposite flank. The western current, taking its departure from a more elevated mouth, more quickly terminated its course; but the cauldron chiefly emptied itself by the eastern opening. The lava issued from it very slowly, compared with the celerity with which that flowed which proceeded from the eastern mouth, because it was no longer driven forward, or compressed by the total mass, which was already greatly di- minished.

On the morning of the 16th the lava ceased to flow over the western side, and the mouth of the volcano began to resume activity. The whole of its cone was covered with a very thick rain of ashes or powders, which totally hid it from sight, so that nothing could be distinguished on Vesuvius, which was wholly inaccessible. In this state it continued four days, during which many shocks of earthquakes were felt, and loud claps of thunder were heard. Thunders raged in every part of the adjacent country, and the flashes of lightning, by which they were accom- panied at intervals, for an instant allowed a view of the mountain through the darkness in which it

was involved by the rain of powders. This darkness was so prodigiously great that at Ca- serto, and other places ten or twelve miles from Vesuvius, it was impossible to walk the streets at mid-day without torches, and that circumstance was renewed which is related by Pliny on the occasion of the eruption in the time of Titus, 'faces multae, variaque lumina solvebant obscuri- tatem.' It is utterly impossible to determine with precision the quantity of ashes or powders that fell in the course of these days, as it was different in different places, according to the di- rection of the wind; it is, however, computed, on the base of observations at different places, that fourteen inches and six lines in depth fell on an area the radius of which is three miles, the summit of Vesuvius being the centre.

After the eruption of 1794 the cone lost much of its elevation ; a portion of it, after being shaken and even raised by the convulsion, sinking down into the crater and almost filling up the cavity. The fire raging in the hollow of the

mountain, having thus lost its upward vent, burst through the side and poured out the lava, which rolled down the declivity all the way to the sea, burning up the cultivated ground, and covering with a fluid which afterwards became solid and hard the chief part of the town of Torre del Greco. The total number of great eruptions on record is above thirty, reckoning from the celebrated one of A. D. 79, which proved destructive to Herculaneum. One of the latest, though not most formidable eruptions, took place in the end of the summer of 1819. The mountain had discharged almost daily small quantities of fire and lava ; but on the 27th of July a thick smoke, accompanied by flames, and the discharge of red hot stones, rose from the crater. The shocks succeeded each other, and seemed to cause a trembling on the summit of the mountain. Next day, the crisis took place : one side of the crater was suddenly rent with a dreadful crash, and its highest point, with the chief part of its south-west side, fell in. From the breach thus opened there burst forth a great stream of lava; and this is at present (1829) the principal opening, although eruptions take place sometimes above, and sometimes below it, ac- cording to the pressure of the melted substance in the interior of the crater. The permanent effect of this last eruption has been to lower the height of the summit.

VETCH, n. 1. 1 Lat. vicia. A plant with a VETCH' Y, adj. \ papilionaceous flower, pro-

ducing a legume : made of or abounding in vetches.

If to my cottage thou wilt resort, There mayest thou ligge in a vetch y bed. Till fairer fortune shew forth his head. Speraer.

Where vetches, pulse, and tares have stood, And stalks of lupines grew. Dryden.

An ervum is a sort of vetch, or small pea.

Arhuthnot.

VETCH, in botany. See VICIA, and RURAL, ECONOMY.

\ i it it TARE. See TARGIONIA.

VETCHLING, in botany. See LATEYRUS.

*VETERAN, n. *. & adj. Lat. vettranus. An old soldier; a man long practised in any thing : long experienced.*

The Arians, for the credit of their faction, took the eldest, the best experienced, the most wary, and the longest practised veterans they had amongst them.

Hooker.

There was a mighty strong army of land-forces, to the number of fifty thousand veteran soldiers.

Bacon.

The British youth shall hail thy wise command, Thy tempered ardour, and thy veteran skill.

Thomson.

VETERINARIAN, n. s. Lat. veterinarius. One skilled in the diseases of cattle.

That a horse has no gall is not only swallowed by common farriers, but also received by good vete- rinarians, and some who have laudably discoursed upon horses. Browne.

VETERINARY ART

VETERINARY ART, from veterinarius, the name by which a farrier was known in the time of Columella. This term seems itself deduced from veterinus, a term applied by Pliny to the horse, in allusion we presume to

the staid and steady disposition of that noble animal when properly reduced to the hand, and which, like the evocati or veterans of the. Romans, is every way worthy of our trust and confidence.

PART I. OF VETERINARY SURGERY.

In conformity to the general usage we may adopt the denomination surgery, in ?. more ex- tˆn-led sense, to denote the curative treatment oi all those diseases which are incident to horses, since the mere adminislering of a ball requires a certain adroitness in the manual operation; and we have for the sake of convenience attempted a classification of the diseases of the horse, which will answer the purpose of an index.

The laying a foundation for an arrangement of cabal line maladies, besides habituating the mind to the logic of method, admonishes the practical reader to renew his observations and to cultivate a more intimate acquaintance with the respective situations and tendencies of disorders ; for experience has taught us that nothing has a greater influence in sharpening our perceptive faculties than the carrying of a rational outline of a treatise of this kind in the head. Nor ought we to forget another species of utility

which the formality of an arrangement possesses, which is, that it helps those who are otherwise unfurnished with a test to discover how far the writer himself is able to fulfil his engagements with the reader.

Had our limits permitted us we should have been glad to preface this article with a history of this valuable animal, by illustrating and discuss- ing the merits of those elegant observations which are to be found in the writings of Xeno- phon, Varro, Virgil, Columella, &c., and by means of which it would have appeared that, though the chirurgical treatment of disorders has shared in the modern improvements, yet the ancient methods of studying, training, and hu- moring the disposition of the horse were as choice and excellent as the diction in which they are described.

SECT. I. — CLASSIFICATION OF THE DERANGE- MENTS iy THE SOLIDS AND FLUIDS OF A HORSE'S BODY.

Order I. — SOLIDS.

Alterations in the arrangement of the mole- cules which compose an organ, or as they are otherwise called changes of continuity. The essential character of a genus is derived from the nature of the texture which is effected.

Genera I. — BONES.

Species 1 . Bone spavin, an osseous enlarge- ment upon the inner side of the hock.

2. King nonf, bony excrescences about the pastei n.

3. Splints, bony protuberances upon the fore- leg, near the knee-joint.

4. Spring halt, lameness arising from diseased vertebrae.

5. Poll evil, an abscess arising from an in- flammation in the synorical surface of the first vertebra of the neck and adject ligaments.

6. Fistula of the u-ithcrs, a deep seated abscess, arising from an inflammation in the spinous pro- cesses of the dorsal vertebrae.

7. Sore mouth, sore in the lower jaw between the tusk and the first grinder.

8. Anchylosis, a preternatural apophysis of bony matter upon a joint.

9. Enostosis, superfluous formation of bony substance unlimited in its situation.

Genus II — LIGAMENTS AND TENDONS. Species 1. Take-quarter, a change in the tex- ture and color of the hoof, arising from an in- jury of the coronary ligament.

2. Strain of the hip joint, injury in the round ligament of the hip joint.

3. Breaking down, a disruption of the great suspensary ligament of the leg, or of the ligaments of the pastern.

4. Wind-gulls, distended bursse mucosae.

5. Curb, swelling on the back part of the hock.

6. Shoulder strain, rupture of the membranes about the shoulder-joint.

7. Strain in the back sinews, a rupture of the membranes which form the lower boundary of the synovial cavity on the back part of the fore leg.

8. Strain of the fetlock jo int, swelling of that joint with lameness corresponding in degree.

9. Strai7i of the coffin joint, with scarcely any lameness.

10. Strain in the loins.

11. Bug spavin, rupture of the bnrsae mucosse on the inside of the hock.

12. Thorough-pin, rupture of the bursae mu- cosae on the outside of the hock.

13. Strain of the knee joint.

14. Bursal swell ings of the elbows and knees.

Genus III. — CELLULAR FISSUE. Species 1. Quitton, an ulcer produced by an injury on the coronet.

2. Capelet, a swelling upon the point of the hock.

3. Saddle or harness galls, warbles, navel gaTls, &c.

4. Bruises by violent and continued pressure.

5. Acute general Rheumatism, inflammation of the muscular system.

6. Rheumatic affection in the hock joint, with a morbid irritated state of the stomach.

7. Chest founder, rheumatic affection of the muscles of the chest, fore-leg, and diaphragm.

8. Acute founder, or chill, a general stiffness of the muscular system.

Genus IV. — INTEGUMENTS, SKIN.

Species 1. Surfeit, pimples changing into scabs.

2. Hide bound, skin from a deficiency of nu- tritive juices becoming rigid.

3. Mange, incessant itching and a desquama- tion of the cuticle.

4. Mullenders, a scabby eruption upon the flexure of the knee joint.

5. Tallenders, a scabby eruption upon the flexure of the hock joint.

6. Cracks in the heels.

7. Croicn scab, a scabby eruption upon the coronet, followed by loss of hair.

8. Hut tails, a scabby eruption upon the back part of the leg, entering in

lines from the foot lock upwards.

9. Treads, superficial injuries in the heels.

10. Grease, a discharge of faetid matter from the heels.

1 1. Broken knees.

INTEGUMENTS, FOOT.

12. Sand cracks, a fracture in the weaicest part of the hoof.

13. Gravelling, formation of matter occasion- ed by the interposing of gravel between the sole and the crust.

14. Corns, ruptures of the sensible sole and laminse which occasion the blood to penetrate into the pores of the horn.

15. Bruise of the sole.

16. Over-reaching, over-lashing, over-stopping, injuries in the heel, higher and nether attaint.

17. Thrush, frog becoming rotten from long standing in filthy litter.

1 8. Canker, neglected thrush extending to the laminated surface and coffin bone.

19. Pomiced feet, an internal thickening of the hoof.

20. Groggy feet, reeling, occasioned by weak joints.

21. Sit fasts, dead skin upon the back Genus V. — ABSORBENT SYSTEM.

Species 1. Farcy, inflammation of the lym- phatic glands, exhibiting small tumors on the inside of the legs, lips, face, &c.

2. Glanders, ulceration of the lymphatic glands affecting the conglomerate.

3. Lampas, symptomatic swelling in the mouth.

4. Bags or washes, swellings just within the corners of the mouth.

Genus VI. — CONGLOMERATE GLANDS.

Inflammation of the tonsils terminating in an abscess under the jaws.

I '/ITS or ives, swelling of the parotid gland.

Glanders, swelling of the glands under the jaw and a gluey discharge from the nostrils. Genus VII. — SANGUIFEROUS SYSTEM.

Blood spavin, varix or enlargement of the saphena vein, on the inside of the hock. Genus VIII. — INTERNAL MEMBRANES.

Species. Hernia (tpvoc, a bud), a rupture of the peritonaeum.

Genus IX. — BRAIN AND NERVOUS SYSTEM.

Species 1. Epilepsy, spasmodic contraction of the nerves.

2. Spasms, twitchings of the muscles.

3. Stringhalt, irritation of a nerve occasioned by mechanical obstruction.

4. Titanus, spasmodic contractions of the muscles of the lower jaw.

Order II. — DISEASES ORIGINATING IN AN AL- TERATION OF THE FLUIDS OF A HORSE'S BODY.

Genus I. SANGUIFEROUS SYSTEM. — Inflamma- tion occasioned by an unusual quantity of blood determined to any particular part or organ, or in a general excess of the red fluid.

Species 1. Synochus (ovvtxu, contrain, allud- ing, we presume, to the general superabundance of constringing sensation of annufarcled blood vessel), blood in the system.

2. Phrenitis (ˆp»jv, diaphragm, by a meta- phor, the mind which divides or discriminates), inflammation of the brain.

3. Peripneumonia (irtpt, about, and irvtvpuv}, inflammation of the lungs.

4. Pleuritis (irXtvpa, side, membrane which lines the chest or thorax), inflammation of the pleura.

5. Influenza and catarrhus (icartppta, to flow downwards), inflammation of membranes occa- MOned by the acrimony of the humors.

6. Gastritis (yaorjjp, genitive yaorpoc, the belly), inflammation of the stomach.

7. Peritonitis (iripirovuov, web which encloses the bowels, from irepiTttvta, extend round about), inflammation of the peritoneum.

8. Entcritts (tvrtpa, inwards), inflammation of the coats of the intestines.

9. Splenitix (atrXtfv, the spleen), inflammation of the spleen.

10. lie pa tills (j/Trap tjTraroc, the liver), inflam- mation of the liver.

1 1 . Nephritis (vtpof, a kidney), inflammation of the kidneys and bladder.

12. Oohthalmia (oˆSaXˆoc, the eye) inflamma- tion of the eyes.

*1 3. Pxorophthalmia (i//opa, a scab, and o03oX- /*oc), inflammation of that part of the conjunc- tiva which lines the eyelids.*

14. Podilis (irovf iroSof, the foot), inflamma- tion of the foot.

15. Anticore, painful swelling about the breast and belly.

Genus II. — ABSORBENT SYSTEM Species 1. Annsarca (ava, upon,

2. Hydrakus (vdup, water, tXxoc, an ulcer), water farcy. Accumated water producing nice- ration.

3. Ascites (acnroc, a leathern bottle, from a fancied resemblance which the body bears to that vessel), water in the cavity of the abdomen.

4. Hydrothorax (vSwp, Swpal, the chest), wa- ter in the cavity of the chest.

5. Hydropericardium, water within the bag which contains the heart.

6. Hydrocepkaha (vtwp, Kuf>a\ti, head), water within the meninges of the brain.

7. Hydrocnemia (vlup, Kvijpi), leg), dropsy of the legs.

8. Diarrhaa (Sia, through, ptw, flow) unna- tural dffluxion of fluid down the intestinal canal.

0. Dysentcria, defluxion acrimious, so as to

produce an inflammation in the inner coat of the intestine.

10. Tympanitis (rvfnravov, a timbrel or drum). wiirly colic. Air generated in the alimentary by an excess of fermenting juices.

1 1 . Hydrospanis (vSwp, moisture, oiravtc, want), dry gripes.

12. Scolecia (IT:W\»J£, a worm), worms. Pu- trefactive tendency in juices generating worms.*

13. Icterus, jaundice. Inactive st;ite of the absorbent vessels of the liver.

SECT. II. — DETAILS.

Order I. Genus I. — DISEASES OF THE BONES.

Species 1. Bone-spavin is a hard tumor or ex- crescence formed on the inside of the hock ; it sometimes occurs on the lower part of the hock, at others it is more deeply seated in the centre of the joint; the latter is by far the most pain- ful. Cure. — Firing, and blistering immediately after.

2. Ring-bone. The term ring-bones is given to hard swellings extending round the fore part of the foot in the form of a ring, on the lower part of the pastern near the coronet ; they occa- sionally appear a little above the coronet only on each side, they are then termed splinters of a ring-bone. The causes of these affections are various; they are produced by strains, blows, and other causes, which occasion a diminution of synovia, when the great and little pastern bones enter rnore closely into contact with each other, producing stiffness of the joint. The for- mer as frequently arises from a blow as any other cause, the latter from a stub ; they are said to be occasionally hereditary. Cure. — Firing the only remedy likely to do good.

3. Splints. Hard excrescences which form on the shank bone of the horse are termed splints ; they vary in size and shape, and are sometimes so large as to press against the back sinew, caus- ing stiffness, and in some instances decided lame- ness. Those of a smaller kind are seldom of much importance, unless situated on or near the joint. The treatment in all these cases requires but little variation. The horse will be very lame on the first appearance of these excrescences and for some time previous, requiring judgment on the part of the practitioner to ascertain the cause. Gentle treatment must be had recourse to in the first instance, and the following blister will be found efficacious : — Take Spanish flies, euphor- bium, of each two drachms and a half; Egyptia- cum, strong vinegar, of each two ounces; spirit of turpentine, water of pure ammonia, of each ten drachms ; oil of thyme one ounce. Mix and put into a bottle, shaking previous to using. Lameness from a splint may sometimes be re- moved by placing a pledget of old linen, wet with goulard or saturnine lotion, on it, and con- fining it with a bandage kept constantly wet. I have seen a good effect from diluted vinegar also. Saturnine lotion. — Super-acetate of lead one ounce, vinegar four ounces, water one pint. Mix.

4. String-halt. The string-halt, Mr. White observes, has been properly

enough named blind

spavin. It is thought by the French to be of the same nature as bone spavin, the bony ex- crescence being concealed, or on the outside of the small tarsal bones, and out of sight. If any remedy is thought necessary for this, firing should be preferred ; but this will generally be found to fail. A few years ago, says Mr. White, I had the pleasure of spending a day with the late Dr. Jenner at Berkeley, when he informed me that strinu-halt depended upon a disease of the spine, and showed me several vertebrae which afforded a proof of it. From what I have since observed I am satisfied that this is the case. Firing and all other operations must therefore be useless.

5. Poll-evil. This disease derives its name from its situation, which is between the poll bone and the first vertebra of the neck, and is pro duced by a mangy horse rubbing his head under the manger, and sometimes lifting it up sud- denly when frightened ; also by hanging back upon his halter. Repeated injuries of this kind produce at length inflammation of the first ver- tebra of the neck, and the matter that forms in consequence being

6. Fistula of the withers, or winding ulcer. The above-named injury, although it derives its origin from the severe pressure of the fore part of the saddle, and, if taken in time, would be easily cured, is, from neglect and repeated bruises, extended to a dangerous inflammation of the spinous parts of the joints of the back bone. The result is that an internal abscess is formed, and searches in various directions in- wards, until at last it appears on the surface in form of a violent inflamed ulcer. In this ad- vanced stage of the disease a moderate incision must be made to allow the suppurated matter to pass off. If upon examination the seat of the disease cannot be discovered, tents of tow, steeped in solution of blue vitriol, must be forced into the wound as far as possible ; and, in about a week, when the coat or core of the pipes or channels has been removed, the probe must be used in order to determine the winding direction of those pipes, and the extremity of the diseased part. When it is found that the pipes are not destroyed, and the seat of the wound is ascer- tained, if it appears from the feel of the probe that the bare bone is sensible to its touch ; in such case the bone should be well scraped, and afterwards a few dressings of Friar's balsam, or tincture of myrrh, will effect a speedy and per- fect cure. In some cases, where the caustic application has, in the first instance, destroyed

those pipes, any further operation of scraping the bone will be unnecessary, and the wound may be perfectly healed by dressings of Friar's balsam, or

tincture of myrrh, and sprinkling a little of the following powder on the part before dressing it every second day: — Take white vi- triol and burnt alum of each three drachms; white lead, yellow rosin, bole arnaoniac, of each one ounce and a half. Mix well together.

7. Sore mouth. During the time that horses are breaking they are often hurt in the mouth by the pressure of the bit, especially in that part where it bears when they are put upon the bit, as it is termed ; that is, when their noses are reined in towards the chest. The bit then bears on the under jaw between the tush and the first grinder. The bone in this part being thinly covered with gum is often bruised and inflamed ; and being neglected, or rather the pressure being still continued, it be- comes carious, and a troublesome sore or sinus is the consequence. This sore, in feeding, be- comes filled with masticated hay, which being discovered is supposed to be the cause of the sore; and, as common hay cannot be supposed to be capable of such an effect, it is attributed to what the grooms term squirrel-tail grass, that is wild barley.

8. Anchylosis. This is a deposition of bony matter thrown out in the joints, and arising from hurts and bad treatment of punctures of the joints ; every joint is liable to it. The effect is to render the joint completely stiff and useless. We can do nothing to remove it, but a great deal to prevent it.

9. Exostosis. This is an excess of bone, a super-abundance of osseous matter being thrown out to various sizes. Pressure and blistering, in the first instances, will be proper to try ; further applications are useless.

Genera II. — LIGAMENTS AND TENDONS AND CONNECTING M EMBRANES AS BY CONSEQUENCE TISSCE CELLULAR.

Species. 1 . False quarter. When the coro- nary ligament has been much injured by treads or other contused wounds, it sometimes forms horn of a lighter color than the rest of the hoof, and less perfect, often leaving a fissure or seam fro:n the top to the bottom. Sometimes the whole quarter is imperfect, and incapable of bearing pressure ; therefore in such cases a bar shoe is necessary, by means of which, when the false quarter is kept properly pared down, it will be at some distance from the surface of the shoe, and thus be always free from pressure.

2. Strain of the hip joint, femur, hurdle bone, whirl bone, or round bone. Injuries of this kind are frequently brought on by negligence in riding or driving, and sometimes from a sudden slip of the animal's hind feet on a bad road or pavement, whereby he is thrown upon his side ; in some cases the head of the bone or cup of the joint may be affected ; in other cases the thigh and hip joint are so severely injured that violent inflammation and

lameness of the parts ensue. When the strain has been of a slight nature it may not be perceptible at first, further than a tenderness in leaning on the limb affected when in exercise ; but, if he has been left to stan-1 for

a. short time in the stable, and he be taken out, the lameness will be obvious. In this case the horse must be kept quiet in stable for some time after- Wards, until by repose he gradually recovers his strength. In severe strains a strong blister should be applied to the part, and if necessary it would be expedient also to fire the limb injured, and of course bleed and purge.

3. Breaking down. This accident often occurs in racing, and sometimes in hunting, but very rarely upon the road. A strain in the back sinews is sometimes called by this name ; but, when a horse breaks down, the fetlock joint, when he rests on that leg, absolutely bears upon the ground. This accident is supposed to de- pend on a rupture of the great suspensory liga- ment of the leg ; but sometimes it is occasioned by a rupture of the ligaments of the pastern, and a consequent dislocation of the small with the large pasterns. If we examine the tendons and ligament, on the back part of the shank, we shall find that the great flexor, or perforans tendon, is supported by a strong ligament, nearly as large as itself, which proceeds from the back part of the knee, or from the upper and posterior part of the great metacarpal or canon bone. About three or four inches down it joins the perforans tendon, and becomes intimately mixed with it. If this part is examined it will clearly appear that a rupture of the suspensory ligament of the fetlock joint would not bring the horse down upon his fetlock joint unless this suspensory ligament of the perforans tendon were to give way also.

4. Windgallt. The term windgall is given popularly to swellings situated on the joints, and which are enlargements of the bursae mucosae, or mucous bags, with which every joint is furnished, to contain a lubricating oil. These enlargements are termed, according to their situation, bog spavin, thorough pin, capped hock or capulet, windgalls of the knee joint and of the elbow. The diseased enlargement of the bursae mucosae arises from hard work, and, if we attempt a cure, this must be discontinued. Horses once affected in this way are always liable to a return if worked hard again. Let it be particularly remembered that this tumor is never to be opened : the worst of consequences would follow such a step. Pres- sure by flannel bandages and pads, placed be- tween the folds, upon the tumor, and continued a considerable time, with strict rest, will often cure, and should be first tried

in all cases. Then, if not successful, blister the part; or perhaps firing it would be better, as the marks of the iron leave a contraction in the skin, which acts as a bandage perpetually. In using pressure by bandage and pads, a solution of sal ammoniac and vinegar should be poured upon it occasionally, so as to wet the bandage through. Goulard water may be used in the same manner.

5. Curb or strain of the hock. This disease was formerly considered as a kind of exostosis, but now it is properly admitted under the head of strains. The back part of the hind leg is the seat of this disease, arising from the articulation of the same bones which are affected in spavin, and is succeeded by the formation of a consi- derable tumor a little below the hock. It is

generally the consequence of a strain, accompa- nied with inflammation ; the coagulahle lymph which is thrown out is often left, and causes a hardness to remain. If the affection be observed in its early stage, those applications which are used m strains of the back sinews will generally effect a cure. Should the pain and substance however continue ten or twelve days after having had recourse to this treatment, a more powerful plan must be pursued. When this is the case cut the hair close, and use the following blister- ing spirit : — Take euphorbium, Spanish flies powdered, of each two drachms ; oil of thyme, spirit of turpentine, pure ammonia water, of each one ounce ; vinegar, egyptiacum, of each two ounces. Let them be put into a bottle, and well shaken before they are used. Let the part affected be well rubbed with the hand for six or seven mornings following. After which turn the ani- mal out to grass for five or six weeks ; if at this period the curb should not be entirely removed, the blistering spirit should be again resorted to.

6. Shoulder strain. Strains of the shoulder appear trifling in some cases at first, and lame- ness is not observable until the horse cools ; in strains of a severe or desperate nature the animal can hardly lay his foot to the ground, and stands upon three legs. In all slight cases copious bleeding, and confinement to the stable, in a spacious stall, so that he can move about, will be sufficient ; but in severe strains it will be necessary, besides bleeding, to introduce a rowel to the chest, and if that be not effectual in re- moving the strain, the shoulder must be blistered, or the same embrocation as prescribed for strain of the loins should be well rubbed into the chest and shoulder. Send him out to graze in a well enclosed field, and he will gradually recover.

7. Strain in the backsineivs, or clap. This acci- dent may happen in either fore or hind legs, and may be either a simple extension of the tendons, or accompanied with some degree of laceration of the cellular substance or

ligaments. It occurs generally from down-leaps, false steps, or sudden attempts at recovering the feet from a slip. There are frequently hard lumps remaining after the inflammation abates and the strain is recovered, which arise from the coagulaj)le lymph being thrown out in the accident and ultimately be- coming callous. These lumps are early felt ; they are not of very great consequence, but in general a slight lameness accompanies them, which goes off when the animal trots a little and becomes warm ; but, if the horse be much worked, the lameness returns from the constant action upon the parts. The treatment will he in the first instance nearly the same as in other strains ; next bleeding, purging, and cold appli- cations to the injured limb, with a moist diet. Cold poultices should be applied every morning and night, which should enwrap the limb from above the knee joint downwards. The best poultice is — linseed cake six ounces, bran (suffi- ciently wetted) three pints ; mix. It will be more beneficial to look to the horse's constitution, and lessen the action of the blood vessels ac- cording to the strength and irritability of the ani- mal, than to depend on local remedies. When the inflammatory stage has gone by it will be

then right to use rabbing with liniments and oils, such as camphorated liniment, soap, and spirits, &c., and to bandage the limb. If this plan do not quite remove the swelling in a fort- night, a blister must be applied ; and, when healed, the horse turned out to grass. It may be a long time before a perfect cure can be estab- lished, and the only hope is in repeated blisters at the interval of a month between each. When, however, full trial be given to this, firing may be resorted to.

8. Strain of the fetlock joint. The symptoms of this injury are similar to those of strain in the back sinews ; the fetlock joint appears swollen and inflamed, attended by lameness. The horse must be copiously bled, and kept tranquil in a roomy stall ; in slight cases this will be sufficient. A few emollient poultices, in bad cases, will be necessary, and the body should be kept cool by moderate aperients. Firing the limb is frequently practised by veterinarians as a sure preventive against the recurrence of the injury; this opera- tion also tends to strengthen the joint. After a rest of about a fortnight, in the stable, he may be turned out to grass in an enclosed field, when he will gradually recover.

9. Strain of the coffin joint. Those accidents are more difficult to ascertain at first than strains in any other part of the horse, as the lameness is hardly perceptible for some time after the in- jury has been received. In gentle exercise the coffin joint is excited to little or no action ; but in a quick pace

a tenderness and slight lameness will be observable. Unless remedies be applied in proper time, strains in the coffin joint are the most difficult to cure. The animal should be bled freely, his bowels kept cool by moderate purgatives, and the foot, from the fetlock joint down, should be well poulticed every morning and night with Goulard water and linseed meal. He should be kept quiet, and the poultice con- tinued for a week or ten days, and longer if the case require it. After this he may be turned out to grass until the joint is restored to its original strength and flexibility.

10. Strain iti the loins. The symptoms of this strain are either a partial stiffness of the back, and an involuntary yielding of the horse to any weight placed upon him, or, in very bad cases, general lameness ensues. The animal should, as soon as possible after the accident, be freely bled, which, together with rest, may be sufficient in slight injuries ; but, if otherwise, in addition to bleeding, even to faintness, the following em- brocation should be applied to the loins ; viz. — Liquor ammonia of two ounces, oil of turpentine one ounce, olive oil three ounces. A fresh sheep skin, with the fleshy side in, should be laid across the strained parts.

11. Bog spaviji. This is a swelling on the in- side of the hock, rather towards the fore part : the large vein, which is so conspicuous on the inside of the leg, passing over it. It depends either upon a distension or rupture of the mem- branes which form the sy no vial cavity, or bursa mucosa, through which the great flexor tendon passes. The swelling is soft and yielding to the pressure of the finger, bnt rises again as soon as the pressure is removed. Sometimes, however,

there is a swelling on the outside of the hock also, and in that case the fluid or synovia which the swelling contains may be forced from one to the other. Only remedy, firing and sufficien rest, but not always necessary.*

12. Thorough pin. Of the same nature, and requires the same treatment, as bog spavin.

13. Strain of the knee joint. There is a cor- respondence between the knee joint of the horsp and the human wrist, and the stifle joint with the human knee. Wiien toe knee joint is strained it is mostly acompanied by that common acciden. called broken knees, and is in consequence dis- tinguished with difficulty. Bleeding and res* must, however, be employed here, as, should the case turn out to be simply a broken knee, bleed- ing will be found extremely serviceable.*

14. Bur sal swellings of the elbows and knees The elbows frequently are affected by such swellings, often occasioned by the shoes in lying down when the horse sleeps with his fore legs doubled under him. Sometimes

there is a hard tumor formed by the same cause ; in this case the tumor might be dissected out safely. The swellings on the knee occur seldom, and are of no consequence.

Genera III. — CELLULAR TISSUE.

Species 1. Quitter. This injury arises when a horse, in frosty weather, endeavours to recover himself from falling on his side, which causes the animal to step in a most violent manner on the inside foot ; it also is occasioned by punctures, &c. Quitter is, properly, a degenerative and ulcerative state of it, generally attended with pipes, and the inner parts seldom escape injury. In such cases the winding and extent of the pipes should be ascertained by the probe. Then prepare a piece of light brown paper, cut into small pieces, and grease them with a light sur- face of lard ; after this get some corrosive subli- mate, finely powdered, and sprinkle it over them ; then roll them round, and twist them at each end, and pass them, by the aid of the probe, one after the other successively, to the extremity of the pipe, until it is completely stuffed ; after this lay on a small pledget of tow, and bandage the part. In about a week remove the bandage, when the core will be extracted, and an exten- sive open sore will be visible. By this process the extent of the wound will be ascertained. Tents of tow or lint should be then steeped in solution of blue vitriol, and lodged in the bottom of the wound ; when the carious parts are suffi- ciently corroded, apply a few dressings of tinc- ture of myrrh, or Friar's balsam, and in a very short time the animal will be in an advanced state of convalescence.

2. Capellet, or capped hock. There are par- ticular swellings which horses are subject to, ot a wenny nature, which grow on the heel of the hock, and on the point of the elbow, and are called by the French and Italians capellets : they arise often from bruises and other accidents ; and, when this is the case, should be treated with vinegar and other repellers ; but, when they grow gradually on boih heels or elbows, we may then suspect the blood and juices in fault; that some of ihe vessels are broke and juices extrava-

sated ; in this case the suppuration should be promoted by rubbing the p.irt with nursh-mal- low ointment, and, when matter is formed, the skin should be opened with a lancet in some dependent part towards one side, to avoid a scar : the dressings may be turpentine, honey, and tincture of myrrh. The relaxed skin may be bathed with equal parts of spirit of wine and vinegar,

to which an eighth part of oil of vitriol may be added. The contents of these tumors are various, sometimes watery, at others suety, or like thick paste ; which, if care be not taken to digest out properly with the cyst, will frequently collect again : was it not for the disfigurement, the shortest method would be to extirpate them with a knife, which, if artfully executed, and the skin properly preserved, would leave very little deformity. When these tumors proceed from an indisposition of the blood they are best let alone, especially those of the watery kind, which will often wear off insensibly without any appli- cations ; but, when they are likely to prove tedious, endeavour to disperse them by bathing with repellers, and have recourse to rowels, purges, and diuretic medicines, to carry off the superfluous juices, and correct the blood. And experience and observation, which were said to be api

3. Saddle or harness galls, warbles, navel galls, tfC. These may be considered as bruises, and when it can be done should be poulticed, until the swelling has been dispersed or has suppu- rated. If the matter lias not sufficient vent, the opening may be enlarged, or the sinus laid open if there is any. It must then be dressed with digestive ointment, and, when it has been re- duced to the state of a clear open sore, the cure may be finished by the astringent paste.

4. Hruises by violent or continued pressure. These injuries may happen in various ways, by kicks, by bites, in leaping over hedges or gates, by kicking against stalls, and many other ways. Various names have been applied to such inju- ries, according to the manner in which they are indicted ; but there is no occasion for such dis- tinctions ; they are all bruises or contused wounds, and require to be poulticed or fomented ; the horse should immediately be bled freely, and his bowels opened by a dose of physic. The diet also should be attended to, allowing only a very moderate quantity at first of grass, or bran mashes. In all these cases poultices are by far the best remedy, until the inflammation is com- pletely subdued ; and when the situation of the part will not admit of a poultice, which is sel- dom the case, then fomentations of warm water only, almost constantly applied, are the best sub- stitute. When inflammation has quite ceased, which may be known by an abatement of the pain and swelling, and by the appearance of white matter, the poultice may be discontinued, and then the wound should be carefully dressed to the bottom with a tent of tow, dipped in melted digestive ointment. The cavity is not to be filled with the tent, but it must be intro

duced to the bottom, and then the wound will heal as it ought; whereas, if it be dressed super- ficially, or only syringed, it will often close over at the surface and tlie wound appear healed, while the matter is spreading and doing mischief at the bottom. There ;ire four obstacles to the complete

healing of wounds which sometime? occur, and these are, when the wound has been complicated with an injury of a bone, a ligament, a cartilage, or a tendon. In any of these cases the fleshy parts and skin will generally heal readily, and the wound will appear nearly or quite healed, except a small or minute orifice from which a little matter oozes ; and this orifice is not perceptible, being covered with spongy flesh, until a probe is introduced ; it will then be found that there is a sinus running down to the bottom of the original wound, and there the probe will be resisted by the diseased bone, liga- ment, cartilage, or tendon. The bone may be easily distinguished by the sensation conveyed to the hand through the probe; and when this is felt a free opening should be made if the situa- tion of the wound will admit of it, and the dis- eased surface scraped off. A tent of Friar's balsam should then be introduced, and continued until it is cured. If the first scrapkig Ijas not been freely performed, a second may be neces- sary. Sometimes sinuses, or pipes as they are termed, remain after the inflammation of wounds has subsided. If these are superficial, running under the surface, or nearly horizontally, they require to be laid open, and then they he;il readily. Sometimes they run obliquely inward, or perpendicularly, and then require to be dressed at first with stimulating or even caustic tents, of solution of blue vitriol ; and these must be re- peated until the sides of the sinus have sloughed off, and the very bottom of the wound can be distinctly felt. In all complicated ulcers of thiˆ kind, where the sinus runs in a winding or crooked direction, or where there are two or more sinuses, the caustic tents must be repeated until they are brought to the state of one simple sore, the bottom of which can be distinctly felt ; and, if the bottom happen to be bone, it must be scraped freely and dressed with Friar's bal- sam. A good method of destroying such sinuses is to take some corrosive sublimate, or finely pulverised blue vitriol, and fold it up in a loni; narrow slip of thin whity-brown paper ; this being neatly folded may be twisted at each end and may thus be conveniently introduced ink1 the sinuses, and forced to the very bottom with a strong probe. Several small parcels of this kind may be made and forced in one after an- other, until all the sinuses are completely filled By these means a large core or slough will be brought out in four or five days ; and if the sinuses are not then so destroyed that the bottom can be ascertained, the same dressing must be repeated.

5. Acute rheumatism. Acute general rheu- matism, or rheumatic fever, is inflammation of the muscular system, and has been already noticed under the head Founder, or Chill. There is, however, a different kind of rheumatic affec- tion I have sometimes nut with, in which the – are affected ; generally, 1 believe, the hock

{‘oint; but probably the other joints are equally iable to this affection. It is sometimes accom- panied with a morbidly irritable state of the stomach and bowels, and, if a strong or eved a common purgative is given in such a case, there will be danger of its producing inflammation of these parts. The same irritable state of the stomach and bowels is sometimes observable also in chills, as they are termed, and when the hind leg is suddenly attacked with inflammation and swelling, after violent shivering and fever. In all such cases, though physic is often necessary, that is, when the bowels are in a costive state, yet it is likely to do great harm unless in a moderate dose, and guarded with cordials or opium. The following ball may be given on such occasions : it must be observed, however, that copious bleeding is the essential remedy, and must pre- cede every other. Purgative with, opium, or cordial cathartic : — Barbadoes aloes four to five drachms, ginger one drachm, hard soap three drachms ; syrup enough to form the ball. The affected parts may be fomented and rubbed with some stimulating liniment or embrocation.

6. Rheumatic affection in the hock-joint, accom- panied by an irritable state of the stomach. In this, and every other case in which the constitu- tion is any way affected, the affection ought first to be removed by an attention to the general health of the animal, and we may fairly expect that, as soon as the constitutional debility is healed, the local disease will disappear ; and we take this opportunity strenuously to recommend the observation now made to such of our rea- ders as may have the care of this noble creature confided to their charge ; for the primary proce- dure of first considering whether the topical malady was not occasioned by the disordered functions of the system, has been many years established with respect to the human constitution, and has been one essential means of securing to surgery its modern name.

7. Chest founder, or flying lameness. Some modern practitioners have disputed the existence of this disease, and the ancients attributed the lameness arising from it to some disorder in the foot ; there is, however, little doubt but it is rheumatism. There is an affection of the muscles of respiration, some of which support the body, and advance the fore legs. There is also an affection of the diaphragm ; from which, as well as the increase of the disease, after considerable exercise, with every appearance of the lungs partaking of the attack, obtained for it the name of bastard peripneumony. In this disorder the muscles of the shoulder and chest are of a dimi- nished size, with a contracted motion of the fore legs, and weakness of all the supporting muscles. The feet will almost always be found affected in horses laboring under chest-founder, from their partaking in the rheumatic affection ; but often disease of the foot is mistaken for chest-founder : however, examining the foot will often decide, and if no apparent cause of lameness appears then, and yet the horse suddenly becomes stiff

and lame after heats, swimming, &c., we may con- clude it is rheumatism. All that it is necessary lo say on it is, that horses so affected are fit only for very moderate work in harness; for the mus-

cles of respiration, and of the shoulder, are ?o affected as to render them quite unsafe for the saddle. It is to be regretted that such horses are frequently used in stage-coaches and post- chaises, and urged to exertions far beyond their powers. Horses laboring under this disorder have generally been possessed of great spirit and power, and will, if fed high, and urged by the whip, appear to go on with spirit for a short time, but after standing they suffer great pain, and terminate their short career by a miserable death. The animal should not be exposed to cold, and should be covered with a rug in the stable. He should be kept regular by aloetic and antimonial balls, and often have a warm mash, with nitre. 1'erhaps the mustard seed might be given with advantage ; and blister 01. the chest, which we think better than rowels.

8. Acute founder, or chill. This disorder is brought on by excessive exertion, and a conse- quent exhaustion of nervous power, and not merely by a chill or suddenly cooling the animal, as it is supposed to be. This excessive exertion of the muscular system brings on a peculiar state of inflammation in the whole body ; so that not only the muscles of the loins and hind parts, but every other muscle, and even the heart and capillary arteries, participate in the affection. The kidneys often partake of the affection, the horse voiding high-colored urine, sometimes mixed w ith blood : this happens only in bad cases, and then the kidneys are often inflamed ; and the pulse is quick, and accelerated by the slightest exercise. The inner surface of the eye-lids are always very red. The horse should be imme- diately bled until he becomes faint ; the bowels should be emptied with clysters, and the stable should be made as cool as possible.

Genus IV. — INTEGUMENTS.

Species 1. Surfeit. This word, derived from super over and above or excess, and jio to be made, applies to the notion which was enter- tained that the malady arose out of a supera- bundance of humors produced by over feeding. There are different causes which produce sur- feits, but they mostly arise from bad food. When the coat of a horse is of a dirty color, and stares, he is said to labor under a surfeit. The skin is covered with scurf and scabs; these return, al- though rubbed off. Sometimes the surfeit ap- pears on the skin of the horse in small lumps, like peas or beans ; this is often occasioned by his drinking much cold water when unusually heated. This kind of surfeit will be cured ef- fectually by a gentle purge and

bleeding. In some cases the scabs appear covering the whole of the body and limbs ; at times moist, and at others dry. The irritation is generally so great, as to cause the horse to chafe himself, produc- ing rawness in many parts, and degenerating into mange- In the first instance, it will be re- quisite to give him a dose or two of mercurial physic. Should his condition be good, and able to bear it, he may subsequently take the following balls, which will produce a gentle purging and perspiration on the skin, and lead to beneficial results : —

Take crocus of antimony, flour of sulphur

nitre, Venice soap, Barbadoes aloes, of each in fine powder, four ounces ; precipitated sulphur of antimony one ounce. Let them be mixed, add a sufficient quantity of honey or treacle, and liquorice powder, and make them into a mass fit for balls. The weight of each ball should be one ounce and a half.

2. Hide-bound. When a horse's hide or skin sticks to his ribs, as it were, and cannot be drawn out or moved, as in the healthy state, he is said to be hide-bound. It indicates great weakness and poverty, and sometimes a diseased state of the mesenteric vessels, and consumption. It is generally occasioned by ill usage, and bad or insufficient food, and can only be removed by proper feeding and good treatment. A good piece of grass is the best remedy, especially in the early part of summer.

3. Mange. This is a well known disease, highly contagious. It however as frequently arises from debility as from contagion. The horse first begins to rub and scratch ; the hair, then, at various parts, falls off, leaving bare patches ; and, if the disease be suffered to con- tinue, the animal pines away amazingly. The cure of mange is simple : common sulphur ointment rubbed well in, all over the animal, once a day, will cure it in a week. The following remedies are also effectual : —

Lotion. — Take of tobacco and white helle- bore, three ounces; and boil in two quarts of water to three pints ; then add an equal portion of lime water. Wash the horse all over with this every day.

Ointment. — Arsenic one drachm, sulphur eight ounces, lard a pound, train oil sufficient to im- prove its consistence. In curing the mange, the horse should have a purging ball first, and then in a day or two a dose of

nitre and cream of tartar. His food should be green if it can be obtained, or, if not, turnips, carrots, or speared corn.

4. Mallendert. This is a scurfy eruption at the back part of the knee, or bending of the joint. The affection, if allowed to remain, de- generates into a disagreeable discharge. By washing the parts with soap and water, and dry- ing them with a soft cloth or sponge, and then anointing with the following ointment once a day, the disease will be removed : — Take of mer- curial ointment an ounce, sulphate of zinc a scruple. Mix.

5. Sallfndcrs. This is the same disease as mallenders, only that it affects the inside of the hock joint. Its treatment is precisely the same.

6. Crackt in the heels. These are frequently occurring, especially in saddle horses, even when properly treated, except in one particular, and that an important one, for it is occasioned en- tirely by the foolish practice of trimming out the heels. This renders them liable to injuries in travelling on gravelly or muddy roads, or indeed in any kind of road, as loose stones can- not be avoided. In this way small bruises take place in the bend of the pastern, the skin is in- flamed, and an ulcer or crack follows. These cracks are very painful, and often cause lame- ness : from improper treatment they often prove

very obstinate. An emollient poultice should be first applied, and continued for a few days, or until the inflammation has completely sub- sided. The crack or ulcer, as well as all the hollow part of the pastern or heel, should be covered with the following paste, which is to remain two or three days, and then to be washed off and repeated. When the crack is perfectly healed or dried 'up by this astringent paste, a little sallad oil or fresh hog's lard is often ne- cessary to supple the part. In obstinate cases it is necessary to keep the horse perfectly at rest until the crack is healed, and sometimes to apply the following ointment, spread on a pledget of tow, and confined by a bandage : — Take of litharge plaster two ounces, best sallad oil one ounce. Melt slowly ; and when removed from the fire, continue stirring until it is cold. Three of these dressings will generally cure the disorder. During this treatment the horse must not be taken out for exercise, but be turned loose into a cool box or out-house, where he may move himself about gently. As he takes no exercise during this time, he should be fed with bran mashes, and have only very little hay, as his bowels would otherwise be loaded with excrement, and much mischief might thereby be done. Though the disease is entirely local, it may not be amiss to give half an ounce of nitre once or twice a day in his mash. Horses that are constantly kept trimmed out in the heels often lose the hair from the part by the constant friction of the dirt of the roads ; and, besides the deformity this occasions, they are still more liable to those painful cracks. I have

lately, Mr. White observes, found the fol- lowing treatment successful : — If the cracks are very painful, poultice for one day and night, then wash them three times a day with the fol- lowing lotion, for one or two days, after this apply the astringent ointment, which generally heals them in a short time. Lotion. — Super- acetate of lead and sulphate of zinc, of each two drachms, water eight ounces. Mix.

7. Crown scab, of the same nature as the mal- lender, and may be cured by the same means : it generally leaves a blemish consisting in the loss of hair.

8. Rat-tails, an affection of the same kind essentially as the preceding, but under a dif- ferent formality, the eruption appearing in lines or wheals, which from their shape have received the fanciful denomination of rat-tails.

9. Treads. Waggon horses, especially in mangy stables, have often an itching about tin; heels, which causes them to injure themselves, sometimes severely, in endeavouring to rub or scratch the part with their own feet. It is thus that they tread on the coronet or heel, and some- times cause quittor. The injury, however, is seldom so severe as this, and may be soon cured by poulticing for a few days, and dressing the part afterwards with the tar ointment. It is always better to lay up the horse, and poultice him, than to put him immediately to work, as is commonly done, because the disease appears trifling: they are almost always obliged to do it at last, and then a much longer time is re- quired for the cure. Treads have been noticed

in this place because crown scab and rat tails are a mangy kind of complaint, and often occa- sion the accident. Horses that have this itching of the heels and legs, if carefully examined, will sometimes be found to have lice in the skin. The legs should be well rubbed with mange ointment, and some sulphur or alterative powder rnay be given them inwardly.

10. Grease, so termed from the similitude which the discharge bears to that animal secretion called by the same name. This very frequent disease is a discharge from the skin of the part immediately above the hoof, sometimes attended with cracks and swellings extending higher up. It is caused by weakness of the parts, occa- sioned by long standing in a stable, or by cold from repeated washing of the legs without rub- bing them dry, or from moisture constantly under the feet. Grease may be sometimes owing to constitutional debility, particularly in young horses, brought on suddenly by changes in their diet, See., and the want of exercise. The hind legs are oftener attacked than the fore ; per- haps, because they are usually not so

well rubbed and dried ; and, perhaps, from the stretch which is kept upon them in stalls which slant downwards. Although a horse may be fat, and apparently in good condition, still the disease may be caused by this very fulness, pro- ducing a partial debility in the feet. Grease may be either a simple discharge,' or be con- nected with cracks and swelled legs. The treat- ment, therefore, must be adapted to the different degrees of the complaint. In the first instance, when the complaint is mild, the feet should be bathed in warm water, and, having been dried, tlip following astringent lotion should be applied, by tying a rag wetted with it on the parts, and repeating the application twice a day, with gentle exercise, and green foot! if possible, mashes, opening medicines, and nitre : — T&ke of sulphate of zinc two drachms, decoction of oak bark a pint. Mix. If cracks begin to show themselves, with an ichorous discharge of a thin and greenish nature, we must not use the above lotion, but first poultice the parts with warm linseed poultice or mashed turnips, bathing the parts occasionally with warm water. These ap- plications are to be continued for eight or ten days, until a healthy discharge comes on, when the above astringent may be safely applied.

If, however, the cracks become large, and swelling of the legs follow, the above poulticing and fomenting plan must be mainly assisted by constitutional means, such as occasional diu- retic balls and alterative medicines; and the following may be used after the astringent lotion is tried : — Take of verdigrise half an ounce, pre- pared calamine stone one ounce, chalk powdered two drachms, tar a quarter of a pound. Mix. Anoint the parts daily with this. Confirmed grease, notwithstanding all our efforts, will often follow; and this is when the cracks become ulcers and discharge a foul and peculiarly stink- ing fluid ; horny or thick nobs will also form, called by the farriers grapes. Then we must, in addition to warm fomentations, use the fer- menting ooultice, which is flour moistened and leavened into a state of fermentation by yeast.

This will be found to correct the discharge in a few days. The discharge, however, ought not to be too suddenly dried up when the complaint has gone to such lengths, but rowels or setons should be applied in the thighs, and allowed to discharge several days first. Then the following astringents may be applied to dry up the dis- charge : — Take equal parts of verdigrise, white vitriol, alum, and sugar of lead,, half an ounce. Dissolve them in half a pint of water, or of oil of vitriol half an ounce, water half a pint. Mix. Or of corrosive sublimate two drachms, dissolved in a little spirit of wine, and added to half a pint of water. When the discharge is stopped, and the disease apparently removed, let the horse be turned to grass, or into a straw-yard ; and, in a week or two, fire the parts, so as to cause the skin to contract, and so establish a permanent pressure on the parts.

11. Broken knees. These like the preceding are contused wounds, but generally of a more serious nature, not only on account of the ble- mish, but likewise from the violence with which they are inflicted. Whenever there is a flap of skin it should be immediately cut off. A poul- tice is the best remedy for the first three or four days, or a week, and, when the inflammation has been thus subdued, the white astringent paste should be applied as prescribed at the end of this article. When the wound is completely skinned over, a little hoof or tar ointment may be applied daily to promote the growth of hair ; the ointment may be softened, if thought neces- sary, by a little oil of olives, or colored red or black by means of bole or lamp black.

12. Sand crack. This complaint is most ge- neral among horses whose hoofs are of a dry and fragile substance, on which account the horn at the upper part of the inner quarter is liable to break and crack. These sand cracks in most cases affect the sensible portions of the foot. The crsck or cleft should, in the first in- stance, be opened with a drawing knife, and all the hollow portions of the horn, as far as they extend under the crust, should be thoroughly cut out; also every portion of horn detached from the sensible parts must be cut off. Some tow steeped in a solution of blue vitriol should then be applied, and the hollow parts afterwards with tar ointment. When the foot appears lame and inflamed, it must be poulticed for about seven or eight days; after this it would be well to send the animal to grass for a month, when a small portion of new hoof will be seen growing above the sand crack. The whole of the crack should be laid over with tar ointment, and the part where the crack appears should be reduced as much as possible by the use of the rasp. By attention to these instructions, sand cracks are not unfrequently cured, without much trou- ble. When the animal is taken out from grass, the soles must be pared thin, the foot stuffed with tar ointment, and a wide easy shoe put on. In some time after, when the horse improves, a smaller shoe can be substituted in its stead. If the feet be unusually hot, apply wet cloths con- stantly to them until the heat be removed. The frog should be kept well pared or rasped, and overlaid with tar ointment, which should also

be applied to the coronet and the heels of the frog, if dry or cracked. In very bad cases of sand crack, the cautery, or burning iron, is some- times used successfully ; a blister on the coronet above the sand crack has also produced beneficial results.

*13. Gravelling. This complaint is caused by the introduction of gravel or dirt at the heel, be- tween the crust and sole, whereby suppuration ensues either above or beneath the sole, and not unfrequently breaks out on the coronet. The heel must be pared away, and every portion of horn detached from the sensible parts must be cut * off. The dirt or gravel must be completely removed by the application of tents of tow dipped in warm water. Should the parts appear inflamed, poultices must be laid on. When the inflammation ceases, tents of tow or lint, steeped in a solution of blue vitriol, should be introduced, and afterwards the cure may be completed by Friar's balsam and tar ointment. Until the sole and heel are firmly joined together, a bar-shoe must be kept on the injured foot.*

14. Com. In nine cases out of ten, this af- flicting and frequently dangerous complaint is solely attributable to the gross neglect or igno- rance of the smith in shoeing horses carelessly or improperly. All sporting gentlemen and dealers in horses should, therefore, be particular as to the capacity of the farrier before they sub- mit their horses for his shoeing operation. Corns are produced from the heel of the shoe, either by pressing immediately on the sole, which may be too slight to bear it, or by pressing the heel of the case or crust (as it is termed) internally. The sensible sole and thin coats become bruised, and the blood passes into the pores of the horn, which may be perceptible (when the shoe is taken off and the sole is scraped) from its livid appearance. This bruised portion, as well as that around it, cannot possibly bear the impres- sion of a shoe from the soreness and inflam- mation attending the wound ; therefore, a suffi- cient quantity of the sole, crust, and bar must be pared off, so that, when the bar-shoe is put on, it shall be at least three-quarters of an inch sepa- rate from the surface. The shoe should be taken off occasionally, and the parts pared off, accord- ing as their growth increases. In most cases of this kind, it will be necessary to reduce the hard substance on the heel by well rasping it, other- wise the frog is perpetually exposed to the severe pressure of the bar-shoe. If the feet feel unna- turally hot, wet cloths or poultices should be applied constantly, until the heat is removed. Some ignorant horse-doctors cut out the corn only, so that the bar and crust are left to form a juncture with the heel of' the shoe; but even if the shoe were made so as to bear off the quarter it would avail little, for, in the course of exer- cise, the horse's weight must press upon the shoe, and consequently injure the affected part. Inattention to a proper mode of treatment, in the first instance, is the cause of so many fine animals being left upon three legs durinir the whole period of their lives. The only remedy, in thi» extreme stage of corns, is the application jf emollient poultices, and a complete excision*

of the diseased horn. When all inflammatory symptoms have subsided, the sensible portions should be dressed with a solution of caustic or blue vitriol, and finish with the tar ointment. However, this may be considered the only

effec- tual remedy ˆn desperate stages of the com- plaint, a little timely care on its first appearance would prevent the fatal results which must ine- vitably ensue to the animal when it is long neg- lected. In those advanced stages of the dis- order, notwithstanding the remedies proposed, the sensible portions of the foot will ever be in a tender state ; therefore, the protection of the bar-shoe, as already directed, is absolutely ne- cessary, and should be constantly used. The animal will find great relief in being allowed to expatiate in meadow without shoes, provided the tender heel be first pared down as has been already inculcated.

15. Bruises of the sole. The sole may be bruised either from its being naturally flat and thin, or from being made so by the smith, and this he does from a desire of doing what he be- lieves to be right ; that is, to make the bottutr of the foot concave when there is not sufficient horn to admit of its being made so, \vithrmr making it so thin as to be incapable of resisinu the blows to which it must of necessity be ex- posed. It may also happen from a careless of the drawing knife, that is, by cutting away too much at once ; in doing which they some- times wound the sole, or leave a small part so thinly covered that not only the sensible sole, but even the coffin bone, become bruised, which cannot fail to happen when a foot has been thus pared. When this happens matter will form under the horny sole, and when this has been let out, and all the hollow horn removed, the horse will appear relieved ; but sometimes the pain will continue, from there being maf.er deeper than this ; that is, between the sensible sole and the coffin bone ; this being let out, and all the surrounding horn thinned away, the foot should be wrapped up in a bran poultice . the following day the poultice will perhaps be un- necessary, and it may then be found that a small part of the coffin bone is bare, which may he distinctly felt when it is probed. This bare part of the bone should be scraped with a suitable instrument, and afterwards dressed with the tinc- ture of myrrh : this will in the course of a short time effect a cure. Before the horse is put to work the sole should be hardened ; and this may be done by keeping it stopped with tar ointment. Tar ointment, tar and hog's lard equal parts ; to be melted together, and when removed from the fire to be kept stirring until it is cold.

16. Over-reaching, over-lashing, or over-step- ping. These in old books of farriery were termed according to their situation in the heel, or above the fetlock joint, the higher and the nether attaint ; from the French atteint. These accidents sometimes happen from the toe of the hind foot being too long, and not squared off as I have advised. It may also occur from bad riding, in pulling up a horse badly, and making him gallop false, as it is termed. Whenever tl'o wound is such as to leave a flap of skin, \he-

then it be upwards, downwards, or sideways, it should be immediately cut off as close as pos- sible; a re-union of the parts can never happen, and by leaving the flap, and attempting to effect the re-union of the parts, there would be thick- ening and a greater blemish, and its removal would be found necessary at last. This may be considered as a contused wound, and to all such wounds I think a poultice the best remedy. This probably will be doubted by surgeons ; but in horse surgery it will be found the best prac- tice. When the inflammation has been com- pletely subdued, by this poultice, the astringent paste may be applied, and nothing more done for two days, when it is to be soaked and wash- ed off, and a similar dressing laid on. Three or four of these dressings will generally effect a cure. Astringent paste, finely powdered alum and pipe-clay, in equal proportions ; water enough to give it the consistence of cream. When the wound is perfectly healed, a little sal- lad oil or hog's lard may be necessary to soften the cicatrix.

17. Thrush. In this disease the frog is ulcer- ated, causing a discharge of foetid matter from the cleft or division. It is not always productive of lameness, particularly where the hind feet are affected, which is always the result of neg- ligence, in allowing the horse to stand in his dung. The horny frog becomes soft and rotten, and the acrid matter penetrating through it in- flames the sensible frog, and, instead of horn be- ing secreted for its defence, a foetid and acrimo- nious matter is discharged. Contraction in the heels will sometimes produce thrushes in the fore feet, but it is more generally the conse- quence of want of elasticity and increased thickness of the hoof. The treatment of thrush must depend on the cause by which it is pro- duced. That in the hind feet will be cured by proper washing and removing the filth, which occasions it; when however it has gone so far as to produce ulceration of the sensible frog, it must then be dressed with a solution of blue vitriol or "bxymel of verdigrise, after cleansing the frog thoroughly with tow. One dressing will be sufficient to effect a cure. The tar oint- ment ordered in narrow heels should be applied hot, to promote the regeneration of horn. Thrush in the fore feet must be treated differently. The cause must be first removed, which is an in- creased quantity of blood thrown into the frog, from the compression which the sensible foot undergoes from the contraction of the htels. In this case, the animal surfers pain from his in- effectual efforts to expand the inela:>tic and in- flexible heel; this causes him to lift (he frog, and go chiefly on the toe. Thus it is that stumb- ling and falling are so common in this disease. By attempting to stop this kind of thrush with those preparations commonly useJ, the lame- ness is often increased. All that is necessary here is to rasp the quarters and heels of the hoof, attenuate the soles, and cover the frog with tar ointment ; the foot should then be wrapped in •in emollient poultice. Slight cases will

be ef- fectually relieved by this treatment. Should however the thrush remain, after these applica- tions, anply the following mixture: — Take tar

four ounces, white v-itriol half an ounce, alum in powder two ounces ; mix them, and add gradu- ally sulphuric acid three drachms. It is neces- sary to describe a third kind of thrush, which is, in point of fact, nothing less than the com- mencement of canker; it is not so common as those already treated on. This species of thrush may be always removed by carefully cutting away from the frog all the horn that is detached from the sensible frog, and afterwards applying Egyptiacum with a few drops of oil of vitriol. The part affected should be kept clean with a sponge and warm water; and, when the ulcers are healed, the regeneration of horn must be as- sisted by applying the hoof ointment used in narrow heels.

18. Canker. This obstinate and often incu- rable disease first makes its appearance in the frog, spreading thence to the surrounding parts, and at times affecting the coffin bone. In the first place it is necessary to pare the foot down, carefully removing every particle of horn which may conceal any part affected. This must be repeated each time the foot is examined, which should be daily. All the putrified flesh must be removed with the knife, taking care not to go deeper than the decayed part, otherwise the coffin bone will be in danger of injury. When this is properly done, let the shoe be fixed with two or three nails only on each side ; and, if it it is necessary to stop the bleeding, lay over the incised part a handful of salt, and secure it with pledgets of tow. This application must be re- moved the following day, and the hoof examined, to ascertain whether or not it presses upon any tender part ; if so, pare it thin, or, if thought necessary, remove it. Take corrosive sublimate two scruples, muriatic acxl two drachms, Friar's balsam, compound tincture of myrrh, of each two ounces. Mix them, and put into a bottle. Let this tincture be applied over the whole of the diseased part, after which, take pledgets of tow and dip in the following mixture, applying them all over the affected parts: — Take white vitriol, blue vitriol in powder, of each two drachms, alum in powder half an ounce, Egyp- tiacum four ounces, sulphuric acid twenty drops. Mix well. Spread pledgets of tow with this mixture, as before stated, and fill up the vacancy over them with other pledgets spread with the tar mixture ordered in thrush : this is the best method of effecting a cure. The foot must be dressed every day, and should any fungus make its appearance, it will be easily removed by touching it with lunar caustic, or sprinkling over it a little powdered verdigrise. The cure is ren- dered more difficult in these cases where the horse loses his hoof, which sometimes occuis, and always occasions great inconvenience in dressing. If the hoof is in such a state as to prevent the shoe being fastened to it, the dress- ings must be secured by a boot made for the purpose. The quantity of cloths or rags which are generally applied often produce such heat in the foot as to increase the

injury, every pre- caution must therefore be taken to prevent the hoof separating from the foot, and the following astringent lotion should be applied once or twice a day : — Take sugar of lead, mite vitriol, of each

half an ounce, alum five drachms, vinegar nine ounces, water four ounces. Mix, and put into a bottle. This lotion must be applied to the foot and instep as high as the fetlock joint, previous to its being dressed, and some of it may be poured round the fetlock joint, or at the edge of the cloths so as to be allowed to find its way down at any other part of the day. By pursuing this plan the hoof will often be preserved from entire separation. It is necessary to give two or three of the following balls : — Take calo- mel one drachm, ginger two drachms, red nitrate of quicksilver finely powdered one scruple, cas- til« soap two drachms, add a sufficient quantity of syrup to make a ball. One of these balls should be given every third night, and worked off the following morning with a common purg- ing ball ; by this treatment the blood will be cooled and improved, and the disease checked. In about three weeks after he has taken the last ball, it will be necessary to give him two or three mild alterative balls every second night. By pursuing this plan of treatment with attention, a cure may be effected in the most serious cases.

19. Pomiced feet are the consequence of in- flammation. It is a thickening internally, which displaces the coffin bone so as to make it bear on the sole. A pomiced foot is flat or convex en the sole, ana fallen in on the front of the hoof. We can only palliate the disease.

20. Groggy feet, indebted for this very fan- ciful denomination to the ruling motion, which weakness of the joint imparts to the segments of the limb below. This is a diseased softening of the joint and ligaments. Blistering and en- tire rest only are useful here.

21. Sitfasts. These appear like dark colored scabs on the back, but are really dead hard skin, and cannot be removed until they have been poulticed a few days. Then they may be sepa- rated by means of a pair of pliers; but it re- quires some force to remove them, and generally a few strokes with the knife. When this has been done the cure may be completed with the astringent paste, applied once in two days, and the scab removed previously to each application. A little sallad oil may be necessary to soften the cicatrix after the wound is healed.

Genus V. — ABSORBENT SYSTEM.

Species 1 . Farcy, or Farcin, terminates, if not prevented in glanders, and may be either consti- tutional or local. This disease is, contrary to the opinion of some, extremely contagious ; and when caught in this way is generally commu- nicated to the horse by the rubbing of some parts of his body against the manger where a glandered horse has stood, or, perhaps, being touched with a currycomb that had glanderous matter upon it, or from the diseased horse biting or scratching another or himself; in short, by any means that brings the matter of a glandered horse in contact with a sound one. It is well known that a single drop of that poisonous matter is sufficient to produce both farcy and glanders : however, farcy is much more fre- quently caused by bad living and hard work than by contagion: and, if it proceed in its

urse, it terminates I and death.

Farcy has been, by the old farriers, thought t>i be a disease of the veins ; but it is now f'ulU proved to be a disease of the absorbent or lym- phatic vessels; and farcy buds, as they are call- ed, are the enlarged glands of that system in which the virus is acting, and are what, in tin: human system, are called buboes : like them, they are difficult to heal when once ulcerated. The ulceration of these farcy buds are termed farcy pipes, in the language of farriery. There are two kinds of farcy, one which commences in the surface of the body, and is termed the button, or bred farcy ; the other commences in the hind legs, and sometimes in the fore. The swellings called farcy buds are not so apt to be found near or over the joints, but between them, and they may be distinguished from those tu- rnors called surfeit, by not b< >ing so diffused, or so broad and flat, and by not being on the out- side of the limb, or on the body, where surfeit tumors appear most commonly. Farcy buds are knotty, and when on the legs are to be found inside. Farcied limbs become swelled ; but they differ from the swelling of mere debility in this, namely, that exercise and rubbing will re- move the latter, but in farcy it cannot be re- moved, and there are knotty tumors to be felt, and an evident enlargement of what might be thought the veins, but what, in reality, are the absorbent vessels. The tumors of farcy, if al- lowed to go on, break and degenerate into foul ulcers, the matter of which is contagious. Bad cases of grease will become farcy, if neglected. Lameness sometimes attacks one leg, and then suddenly changes to the other. For the cure of this disease diluted sulphuric acid, as recom- mended by Mr. Rydge, who also recommends Mr. Blane's prescription. Six ounces of the expressed juice of goose-grass, six ounces of the decoction of hemp seed, and six ounces of the essence of spruce.

2, Glanders. The transition is ready from a highly inflamed state to ulcerating condition, whence we can account for the mutation of the farcy into glanders. The general symptoms of glanders are, a discharge, mostly

from the left nostril, seldom from the right, and sometimes from both. This running, at first, is inconsider- able, and in substance resembles the white of an egg. The membrane within the nostril is unusually red; the swelling of the glands or kernels under the jaw, and between the parts of the lower jaw, is almost invariably observ- able on the same side as the infected nostril. In other respects, the animal exhibits every ap- pearance of soundness, as regard its appetite, condition, spirits, &c. The urine is generally crude and transparent. Glanders are not unfre- quently accompanied by a cutaneous disease, of a scorbutic character, called farcin or farcy. Glanders may be divided into two stages ; namely, the acute, or rapid violent stage, and the chronic, or slow mild stage. The acute glan- ders are frequently accompanied by acute farcy ; in that case, larˆe painful tumors in various parts, ulcers about the face, neck, or lipy ap- pear; also inflammation and ulceration of the fore or hind legs, testicles, and sheath. In short, when the disease has arri\M nt this frightful

stage, all hopes of cure are gone, and it would be an act of humanity to destroy the suffering animal at once, and rtd him of his torture. It would also be the wisest plan, in order to pre- vent farther contagion among other horses. Chronic glanders are of an opposite character, and, in the early stages, so mild in their pro- gress, that the health, condition, or appetite of the horse is not at all affected. If the animal be well kept, and moderately worked, he may continue a useful servant to his owner many years. The symptoms of chronic glanders, in their advanced stages, are ulcers inside the nos- trils, which if too high up to be visible, may be known to exist from the suppurated running that drops from the nose ; sometimes it exudes in such quantities, and is of so sticky and thick a substance, that it adheres to the orifice of the nostrils and upper lip, so as frequently to impede free nasal respiration, and cause the animal to snuffle and snore. Sometimes the matter has a sanguineous appearance, and if the animal be over-worked, in this advanced stage of the dis- order, he will often bleed profusely from the nose. If in the mild or early stage of chronic glanders blood flow from the nose, or the matter have a foul smell, it is a sure signal of the se- cond stage coming on ; consequently, the run- ning flows more copiously, and becomes more offensive , the glands under the jaw increase in size and hardness, and adhere close to the jaw bone. Matter appears also in the inner corners of the eyes. The horse falls off in condition, has a constant inclination to stool, cousjhs vio- lently, and in a short time death closes the suf- ferings of the poor animal.

3. Lampas. La Fosse was the first person who pointed out the absurdity of

cauterising this swelling, since it accompanies the cutting of the grinding teeth, and merely points out to us that something ought to be done to humor a stomach rendered delicate by sympathising with the mouth.

4. Bags or washes.

Genus VI. — CONGLOMERATE GLANDS.

Species 1. Strangles is a disease affecting the kernels and other glands of the neck. General fever, swelling of glands, under and within the lower jaw, cough, drought, and loss of appetite ; sometimes there is very little general fever, and the glands swell, suppurate, and burst, without much notice ; generally, however, the disease is mistaken for the distemper. It is distinguished from this by the swellings, which are hot, more tender, and larger, than in the distemper. A similar case, in each treatment, is proper; but it is advantageous to bring the swellings to a head in strangles as soon as possible ; for this purpose use strong, hot, stimulating poultices. In the distemper, we must use a liniment of hartshorn, vinegar, and oil : if we are in doubt, therefore, we must use only warm fomentations ; this re- moves tightness and irritability, without occa- sioning suppuration. Sometimes, in strangles, there is a discharge from the nose, before the kernels come to a head — this is called the bastard strangles. When the fever is considerable, we must not Heed, unless upon a great emergency ;

that is, when the pulse is hard and quick, the flanks heave, the legs cold, the cough painful, and the nostrils red ; if the throat be sore, stimulate it, but do not blister ; apply constantly a nose- bag, with a warm mash in it, frequently changed ; rub the swellings with an ointment, made of equal parts of suet and turpentine ; do this twice a day, and keep on a warm poultice ; if necessary, shave the hair off the kernels. When the swellings burst internally, nature must effect the cure,: the horse must have light food, and mild exercise. When there is a proper point to the abscess, open it with a lancet, and press out the matter gently ; then keep the wound open with a piece of lint, covered with lard, and con- tinue the poultice for a day or two.

2. Vives. The parotid or great salivary gland, situated close under the ear, becomes inflamed and swollen, and, if the vein should have re- ceived glanderous poison, the inflammation may reach the heart, when the rapid destruction of the horse must be the consequence. If the excre- tory passage or duct of the parotid gland be only affected, there is no danger ; it is merely neces- sary to let the matter flow off from the orifice, and not prevent its current ; the secreting powers of the gland, and the gland itself, will be at last an- nihilated without any injurious effects to the animal.

Genus VII. — SANGUIFEROVS SYSTEM.

Blood spavin. This disease consists in an en- largement of the saphena vein, which passes over the bog spavin, and often accompanies that disease. The remedy employed by farriers is to make an incision in the skin, and pass some thread, by means of a crooked needle, under the vein below the dilated part. In one case, after the vein had been securely tied, and the wound in the skin stitched up, the horse was turned to grass; sometimes with a strengthening plaster or charge placed all over the joint.

Genus VIII. — INTERNAL MEMBRANES.

Hernia. When we can push back the gut it is called reducible hernia ; but, when we cannot, it is called irreducible ; and, if the gut becomes obstructed, it is called strangulated. It is only in the last that we can be of any real use ; and that is, to prevent immediate death, by reducing the gut into the abdomen ; for nothing can re- move the common affection of reducible hernia but pressure, and this cannot be permanently applied with horses. Our services can only be required in strangulated hernia. To reduce this, the horse must be thrown down with hobbles and secured ; the legs are then to be placed so as to relax the muscles of the belly, and then the arrr gently introduced into the anus, when, by cau- tious pressure, the gut may be brought back into the abdomen ; however, this will not happen often, and if it do not on the first trial, recourse must be had to a clyster of tobacco smoke and cold application to the tumor; but time must not be wasted with such remedies, and the operation must be resorted to in the following manner : an opening is to be made cautiously into the -external integuments, so as not to wound the gut itself, which would be fatal. Thf

finger Is then to be passed up the opening alonˆ the spermatic cord, and so as to feel where the stricture or tightness is ; and then a blunt pointed bistoury is to be steadily passed on the finger, so as to divide the stricture, which, when done, will allow the gut to pass back immediately. When this is performed, close the wound, and apply such compress and bandage as will prevent the return of the gut.

Genus IX. — NERVOUS SYSTEM.

Epilepsy. — The symptoms of this disorder are as follows : — The horse at first stops suddenly, shakes his head, and looks frightened ; he then proceeds as before. The symptoms increase in proportion to the violence of the attack, and he perhaps falls, suddenly becoming violently con- vulsed,

during which convulsions he passes his urine and dung involuntarily. After a few minutes he recovers his senses, and appears as well as before the fit. The cure consists in purging the animal every second day gently by calomel and aloes, and then turning out to grass for a couple of months or more, bleeding him once a month.

Spastnt. If a twitching or spasm take place, in any of the muscles, it must be treated with gen- tle frictions with a brush, opening the bowels, and then administering opium liberally. The best form to give this powerful, and at present only antispasmodic, in veterinary medicine is as follows : — Take infusion of bark a quart, of tincture of opium half an ounce. Mix.

Stringhalt. This is a spasmodic affecti< n of the hind leg or legs well known; there is little inconvenience arising from it, and it is out of the power of the veterinary art to remove it. Mr. Blane gives the best opinion \as to its imme- diate cause, which is, ' that some nervous twig in its passage meets with continual irritation, probably from mechanical obstruction over an exostosis or ligamentous enlargement ; or from some pressure, as nipped between two tendons,' &c. &c. When the affection is in both hind legs it is not so remarkable, as the animal ap- pears only to lift them a little higher and more suddenly than others.

Tetanus or Locked Jaw. This melancholy disease may originate from various causes, viz : bungling operations in gelding, nicking, or dock- ing, worms (called bots) in the entrails of the horse, over-working, wounds in the feet, &,c. The principal antidotes at present used in the removal of this disorder by veterinarians are camphor and opium, which are injected into the stomach by clysters, if the medicine cannot be passed down by the moufli; the animal may also be supplied with nutritious clysters, until the jaws expand sufficiently to enable him to swallow his food. Wilkinson, who seems to have .effected many successful cures in locked jaw, proposes the following treatment: — In the first place he recommends an emollient clyster Hint a purgative; unless the pulsation be very quick, he does not approve of blood-letting. The jaws and every other part spasmodically affected should be thoroughly well rubbed with liquid ammonia, mustard, olive-oil, and oil of turpentine, mixed up together. Thou all the

parts so affected should be covered with fresh sheep-skins, the fleshy sides of the skin to be kept inside ; they must be changed as frequently as is requisite, in order to keep the parts in con- tinued perspiration. When the purgative has operated, a drench, composed of asafoetida, camphor, and opium, about one drachm each, is given ; and, at the same time, he serves the horse with a clyster of similar medicines, with the addition of a decoction of rue. Should the horse not improve, but appear costive, Mr. \V. recommends the purgative and emollient clyster to be repeated, and the

opiate to be discon- tinued, until the purgative has fully operated

Order II. Genus I. — SANGUIFEBOUS SYSTEM.

Species 1. Synochus, that kind of fever which depends upon excess of blood, is generally pro- duced by taking up a horse from grass, and put- ting him suddenly into a warm stable upon oats and hay ; or by feeding a horse high and giving him little or no exercise. Fever thus produced is always to bu cured by early and copious bleed- ing, that is, by bleeding until faintness is pro- duced ; for which purpose it is generally neces- sary to take off from one to two gallons, and sometimes more. Medicine is of no use in this disorder, unless it is caused by an acrimonious state of the blood and humors, and then it will be useful.

2. Phrenitis, mad staggers. The leading symp- toms of this disease are, unusual drowsiness, loss of appetite, and an inflamed appearance under the eye-lids. As the disorder advances the animal becomes suddenly ferocious,endeavours to bite and destroy any other horse near, or any being who at- empts to approach him. After those convulsive elbrts he sometimes lies down ; and, when re- c «vered from exhaustion, rises up suddenly, and resumes his furious operations. This desperate disease originates sometimes from worms in the stomach, called botts ; and, in other cases, from too much confinement in the stable, and high feeding. The horse should be immediately se- cured in this violent stage of the disorder ; the two jugular veins should be opened, and, as in the case of inflammatory fever, the animal should be bled even to fainting ; and, if convulsive symptoms should again appear, the operation must be repeated. When the animal is thus rendered quiescent, he should be served with a few emollient clysters, and one or two purgative doses. As soon as his strength is sufficiently re- cruited, give him occasional bran mashes, and green herbage in small proportions. In some time after (if the weather be favorable) send him to grass on a light wholesome pasture. The re- medies to be relied upon most are repeated bleedings and purging.

3. Peripneumonia, rot, or rising of the lights. Pleurisy, bronchitis, peripneumony, the rot, or rising of the lights, is of frequent occurrence, and is one of the most destructive diseases which the horse is subject to. As such, therefore, it merits our peculiar attention. The lungs are of a delicate texture, and it is necessary for the certain existence of the animal functions that the

lungs should perform their duties without being impeded by tlisea-e. When inflammation has attacked the lungs, we must immediately resort to the most prompt and efficacious remedies. Among these, bleeding certainly is the most use- ful; and, on some occasions, the practitioner has carried it to an extent almost incredible. The first symptoms are invariably those of fever, com- mon to all inflammatory complaints; then are loss of appetite, cold shiverings, restlessness, de- pressed head, beating flanks, and difficulty of breathing. This last symptom increases in extent, in proportion to the advance of the disease, which may be known by the following symp- toms : — Very quick and difficult breathing, vio- lent working of the flanks, restlessness, expanded nostrils, for the admission of a greater quantity of air, head depressed, and inclining to the part affected, expressing pain and trouble. The horse seldom attempts to lie down during this sick- ness, but sometimes the animal falls suddenly and dies. His extremities are generally cold, but the body is suffering under a strong fever, attended with a dry short cough, and a discharge at the nostrils ; the mouth is dry and parched, and the pulse which, at first, is generally strong and hard, but which is afterwards more oppressed, rises when you take blood. In some cases there is more difficulty in breathing than in others : this depends upon the extent of the disease ; the horse finds he breathes more at ease when stand- ing than when lying down. This difficulty of breathing arises from the lungs containing too much blood, which lessens the size of the air cells, and, beyond doubt, diminishes '.heir num- ber. From this cause, the horse, so often av, \ic breathes, cannot admit so much air into his lungs as is sufficient to enable them to perform their functions : hence he breathes more frequently. The quantity of blood in the lungs is greater, and circulates slower than when in health ; thereby, its free return from the head and neck is checked, and the eyes and membrane of the nose are frequently red and inflamed, while the veins of the neck project with over distension. The next thing to be done is to cool the body, act upon the kidneys, and purge the bowels. The following plan is an excellent one : — Take James's powder two drachms, prepared kali half

an ounce, nitre half an ounce, Castile soap two drachms, confection of roses half an ounce; beat them into a ball. Give this ball immediately after bleeding, and, while the inflammation con- tinues, repeat it two or three times a day. Six hours after bleeding, give him the purging drink, recommended under the head of Fever, which see. Let this be repeated every morning until the bowels be freely opened. You may assist the operation of the purging drink materially, by using the following clyster: — Take thin water gruel four quarts, nitre one ounce, Glauber's salts four ounces, linseed oil half a pint. Dis- solve the salts in the gruel, and give it to the horse when lukewarm. Observe the general rules which I have laid down previous to the exhibition of a clyster. You may inject, as above,

once a day until the medicines operate : you may also employ blistering to great advantage. The use of the following, rubbed well in, and

extensively over the chest, until it is well bliv tered, will be found serviceable : — Take Egypti- acum two ounces, vinegar two ounces, hartshorn two ounces, turpentine one ounce, oil of origa- num one ounce, euphorbium two drachms, Span- ish flies two drachms. Put them in a bottle, and shake them well for use.

4. Pleuritis. Symptoms and mode of treat- ment precisely the same as those of the last.

5. Catarrhus influenza. Distemper. This dis- ease is generally caused by sudden transitions from heat to cold, where the animal, in a state of excessive perspiration, and overcome by great exertion, is immerged in cold water, or (as is too frequently the abused practice) drenched with buckets full, by way of refreshing the horse. The general symptoms are severe cougli or ca- tarrh, excessive drowsiness, moisture from the eyes and nostrils, quick pulse and breathing, quinsey in the throat, universal debility, &c- The best remedy is immediate and free bleeding; then turn out the animal to a well enclosed and sheltered pasture, where, ifl due process of time, with the assistance of wholesome grass, and good air, the disease will be effectually removed. If the horse cannot conveniently be stirred from the stable, he should be fed on light bran mashes, and very small portions of the very best of hay ; if grass could be obtained, it would be much better. The best medicine is nitrate of r>ota«s (nitre), to he given in three doses ; the first in the morning ; the second at one o'clock in the after- noon, and the third at night, in the quantity of half an ounce to each dose. Clysters should also be served sufficiently frequent to keep the body in a free and cool state. The above regi- men and treatment should be continued until the animal be in a state of perfect convalescence ; then very small proportions of oats, well bruised and wetted, may at intervals be allowed him.

6. Gastritis;. Stomach staggers. The stomach is sometimes, when in a diseased state, affected by acute inflammation, from receiving into it poisonous or highly stimulating substances. However, this is not a case of very frequent oc- currence. Botts are supposed to produce some- times a species of chronic inflammation in the stomach. The principal indications of acute stomachic inflammation are general heaviness,

quick breathing and pulsation, legs and ears chilly, &c. If an over quantity of arsenic, blue vitriol, or corrosive sublimate, be received in the stomach, the best antidotes against their poison- ous effects are liver of sulphur; a solution of soap, with an infusion of flax seed ; a solution of gum arabic, or arrow-root boiled, is also recom- mended. If acute inflammation ensue

from the action of violent stimulants, such as an excessive dose of nitrate of potass, linseed infusion is con- sidered the best anti-stiniulant. The animal should also he bled. If the stomach be inflamed by botts, doses of olive or castor oil should be given, and clysters of oil and warm water be thrown up. As the disease abates his regimen of diet should be very temperate, nutritive masher of bran, and a small portion of bruised oats ; also green herbage, as grass, &c., are the best diet.

7. Peritonitis. This disorder proceeds from tlio quick removal of a horse into a close stable >

having previously enjoyed the benefit of good grass, air, and free exercise ; it may also originate from excessive high feeding, in order expedi- tiously to restore a horse to flesh that has been in a debilitated and emaciated state ; it may like- wise arise from an injudicious use of corrosive sublimate in the attempt to drive a cutaneous disorder into the bowels. This class of the dis- ease is discoverable by the following indications : excessive lowness of spirits, unusual lassitude, slight dysenteric affection, restless in the stall, breathing and pulsation quick, appetite reduced, film of the eye inflamed and red, and, if proper remedies be not at this critical stage of the dis- order immediately applied, the pulsation be- comes rapid, and violent dysentery ensues, ac- companied by severe costiveness, the horse stools but little at a time, and his urine is of a deep red color; at last the poor animal, overcome by cruel torture, dies distracted and exhausted. The first remedy in this case is, spontaneous leeding, even to fainting ; doses of castor oil should also be given every alternate hour, and clysters of warm water and castor should also be thrown up, until a copious discharge has freed the bowels, and removed the dysenteric action.

8. Enteritis. Molten grease. Inflammation of the intestinal canal proceeds sometimes from suddenly over-working a horse in very full con- dition, and heretofore not used to much exercise ; it may also be produced by severely working a horse just taken into stables from grass. This disease is frequently called molten grease, in consequence of the slimy matter apparent in the excrement of the animal, which some veterina- rians suppose may be the fat thus converted into slime. A liquid blister on the belly, after the bowels are free, often checks the disease.

9. SpU'tiitit. Inflammation of the spleen. The symptoms are the same with inflammations of other intestines ; but as the horse cannot point to the part where he feels pain, and as there is no external appearance of disease over

the region of the spleen, it would be only leading our readers astray to affect a particular description of this disease.

10. Hepatitis, or inflammation of the liver. When the liver becomes the seat of active in- flammation, the symptoms are nearly the same with those of enteritis, or inflammation of the in- testines, except that the pain is not so intense on pressing the belly with the hand ; the extremi- ties are cold, the flank heaves, the pulse hard and wiry, and the mouth, nostrils, and eyes, are tinged somewhat with a yellow color. In pro- portion to the violence of the disease the horse's strength fails, and in some cases he can scarcely stand. The bowels mav be either very costive or the reverse, as this will depend upon whether the inflammation stimulates the liver to throw off a great deal of bile, or to prevent it from its office almost entirely; in the former case, foetid black purging takes place, and in the latter, costiveness and extreme yellowness of the nostrils and mouth. There is great thirst in this disease, and the skin is mostly dry. In the early stages of the complaint bleeding must often be resorted to, after which the following purgative must be

given, so as to clear out well the intestinal canal. Take of castor oil eight ounces, gruel half a pint.

11. Nephritis. This disorder may arise from peritonitis (inflammation of the bowels), excessive over exercise, or from drawing weighty loads be- yond the animal's physical strength, whereby the loins become seriously affected. The horse, in such cases, should be bled copiously, until the inflammatory appearances subside. A warm embrocation should be applied to the diseased parts, composed of oil of turpentine, hartshorn and olive oil. The best embrocation, however is the following : — Oil of turpentine one ounce, liquor of ammonia two ounces, olive oil four ounces, spirits of camphor one ounce.

12. Ophthalmia. When the complaint is the result of external injury, use a little of the fol- lowing eye-water : — Take Goulard's extract one ounce, rose water one quart, shake together in a bottle. In all cases of inflammation of the eyes a purging ball must be given, first with a mash, and then on using the following eye-water : — Of sulphate zinc three drachms, of common water one pint. Mix and wash a little into the eye. This is the best possible collyrium for all sore eyes ; the eyelids must be well bathed with this water three or four times a day, fine linen rag must be used, and when you wish you can easily separate the lids and draw the rag over.

13. Psorophthalmia. A dim cloud over the eye, swollen and inflamed eye- lids ; generally closed, the globe of the eye red and dull, in- creased

sensibility, and a disposition to avoid light ; if the eye-lids be separated, the membrane is seen covering a great portion of the eye, in order to protect it from the light, and to supply the office of the eye-lids, a hot burning humor runs from the eye, irritates the cheek and destroy the hair in its course ; sometimes the surface of the eye, from an infusion of lymph, appears quite opaque. The vessels in the white of the eye are much inflamed, and contain red blood, so are the smaller, the vessels of the apple of the eye; hence the defect in the vision of the horse. First blind the horse, and then bathe the eye three or four times a day with the eye-water, give him a mash of scalded bran twice a day for a few days, and then give him the following ball : — Take Tartar emetic one drachm, James's powder one drachm, calomel half a drachm, Castile soap twodrachms. Make this into a ball, give it to the horse at night, and the following purge next morning fasting. Take of Barbadoes tar six or sever drachms, Castile soap two drachms, powderet' ginger half an ounce, oil of juniper half ' drachm, nitre two drachms. Make a ball witl buckthorn syrup : two hours after you give this, give him a mash and warm water, and physic hin moderately every five or six days for two or three times.

14. Poditii. Founder of the foot. All vete rinary practitioners of eminence and experience have universally admitted that it is impossible, at least up to the present time, to effect a radical cure for this too general and fatal disease.

15. Anticore. The chief remedies for this in. frequent disease are bleeding and purging, wit fomentations.*

Genus II. — ABSORBENT SYSTEM. Species 1. Anasarca. Young horses, while teething, are very frequently exposed to this disease; the torture they endure at this period prevents them from chewing their food suffi- ciently, whence arise various affections of the stomach, which produce general dropsy. The

the operation of tapping will be necessary. This is done by puncturing the cavity through the ribs, near their cartilaginous ends ; and between the seventh and eighth, or eighth and ninth ribs, will be the best place to puncture. The skin must be divided by a scalpel, and the trochar pushed in and rather backwards, and close to the

animal exhibits, in such cases, general drowsi- anterior edge of the rib, to avoid wounding the

ness, inability to ejcercise or eat; the sheath, artery. The canula is then to be left in until

belly, and chest appear much swollen. Atlengtl\ the water be drawn off, and taken out quickly,

the whole surface of the body becomes affected, so as to admit as little air as possible. A dres-

and, on pressing with the knuckles or fingers on sing of sticking plaster is then to be put on.

the animal, the impression remains a little time, and then fills up. Horses, aged, and hard worked, when turned into bad grazing and damp grounds, are much exposed to this disease. The horse should be taken in, and a few diuretic and

5. Hy draper icardium. Dropsy of the peri- cardium. This disease is formally mentioned by writers ; but it appears that we never can either ascertain positively that such disease is present, or do any thing more for its relief than

purging balls should be given ; he should be re- to keep the horse regular and quiet, administer-

gularly exercised, in order to create a sudorific and diuretic action. If these remedies prevail, let his regimen consist of warm bran-mashes,

ing occasional physic and diuretic balls. The nature of the disease is a superabundant increase of the lubricating fluid, which the pericardium,

and small portions of the best hay; and, when or bag, in which the heart is enclosed, secretes.

his bowels are well opened, the following tonic It is mostly fatal.

draught should be given every morning : — of ale 6. Hydrocephalus. Water of the brain. This

two pints, tincture of opium two drachms, tine- disorder may arise fro™i a plethoric habit, a de- termination of blood to the head, a debility of the brain in performing its natural functions, or from water lodged in the cavity or cavities of the brain. The symptoms vary according to the early or advanced stages of the disease ; the

ture of muriate of iron three drachms. Mix.

2. Hydrelcus. Water farcy. This is only another name for the foregoing disease, when ulcers are the consequence of the dropsy. The treatment in every respect is the same. Farriers

call every partial dropsical affection water farcy ; horse appears heavy, drooping, and stupefied;

but those affections have nothing to do with the disease called farcy.

3. Ascites. Dropsy of the belly. This dis- ease often accompanies general dropsy. The

he often suddenly rears up, staggers about, be- comes violently convulsed, and then lies down exhausted. Hydrocephalus is, in nineteen cases out of twenty, considered incurable by our most

seat of it is the cavity of the abdomen, imme- experienced veterinarians. However, if attended

diately within the lining membrane, called the to carefully at first, the animal may survive for

peritoneum. The treatment is the same as that years. When the first symptoms are apparent,

of general dropsy, with the exception that, when bleed profusely: if the horse be of a plethoric

the belly becomes much distended, tapping is necessary ; and this is done by puncturing in the centre of the abdomen, half way between the navel and sheath. Diuretics, purgatives, good

habit, and used to high feeding and little exercise, let purgative doses be given; and, if so consti- pated as to render their operation insufficient let clysters of castor or olive oil, with warm

living, with gentle exercise, will often cure this water, be served until the bowels are free, and

disease. all appearance of inflammatory action ceases.

4. Hydrolltorax. Dropsy of the chest is 7. Hydrocnemia. Dropsy of the legs. To

xisually the consequence of inflammation of the remove swelled legs requires great attention,

lungs, or pleurisy. When the pleura, which is The animal must be physicked, and a diuretic

that membrane immediately enclosing the lungs, ball administered every second day. The legs

has been suffering from inflammation, a debility must be hand-rubbed every day, and the horse

remains after the inflammatory action subsides, walked about morning and evening, and the fluid which its surface naturally secretes 8. Diarrhea. Looseness. Most animals are

for the necessary purpose of lubrication is so afflicted with this disease more frequently than

increased, as to accumulate within the cavity of the horse, yet veterinary surgeons who are in

the chest to the extent often of many gallons, and that in no very great space of time. The symptoms are, great difficulty of breathing, en-

very extensive practice know that confirmed cases are not unfrequent. It will be produced either from an increased secretion of bile, or

largement of the sides, of the chest and belly, from impaired action in the absorbent vessels, loss of appetite, the animal becomes thin and which prevents their taking up those fluid parti- haggard, restless, and cannot lie down but for a cles that enter into combination with the dung, short time, and sometimes not at all. So like The appearance of the stools is generally liquid, are the symptoms to inflammation of the lungs and they come from him in small quantities at and pleurisy, that the veterinarian must form his every slight movement that he makes. In the cure decision from the history of the disease. The of this disease apply a fresh sheepskin over the disease may be first treated by medicine, such as loins, keeping the body of the horse modeˆtely

opening the bowels occasionally, using diuretic halls daily, with a drachm of calomel every se- cond night, and proper diet ; but, when the bad symptoms appear rather to increase than decrease,

warm by covering it with a rug, and exhibiting the following drink twice a day until the purging ceases : — take aniseeds and carraway seeds powdered, of each one ounce, prepared

chalk two ounces, fine opium half a drachm ; mix in a pint of linseed gruel, and administer. Should the purging continue three or four days after this drink has been given, it will he ne- cessary to give the following astringent medicine three or four times a day :— Take of powdered ginger, dover's powder, of each two drachms ; prepared chalk in powder, pomegranate shell powdered, of each one ounce ; tincture of catechu one drachm and a half. Let these be mixed in one pint of warm gruel, and administer twice a day.

9. Dysenteria. Moulten grease. This dis- tressing complaint was formerly described by veterinarians as a melting down of the fat oc- casioned by excessive heat, and a discharge of that fat by the anus, accompanied by

purging; even now farriers believe it to be the same thing, nay some modern writers have thought it such ! No man acquainted with the physiology of the horse can for a moment entertain so absurd an idea. The fact is, the disease is a constriction of parts of the intestines, accompanied with chronic inflammation of the inner coat, discharg- ing a foetid matter and sloughing away in films, and in severe cases blood is discharged. The disease differs widely from the diarrhoea both in nature and treatment, and therefore requires skill in the practitioner to distinguish, as the treatment which applies to diarrhoea, if adopted in dysen- tery, must kill the animal. Chalk, opium, and other astringents are necessary and salutary in the treatment of the former, but poison in the latter. The symptoms very clearly mark the difference in both diseases; in diarrhoea there is nothing but an excessive purging ; but in dysen- tery there is a discharge of matter apparently mixed with fat, and often blood, generally ac companied with costiveness — little or no dung is discharged. Fever sometimes accompanies these symptoms, and sometimes the disease de- generates into inflammation of the bowels. The first thing to be done is to bleed the horse, then, the same day, administer the following: — Castor oil four ounces, gruel two pints, ipecacuanha one drachm. Mix.

10. Tympanitis. Windy colic. This is ge- nerally produced by too much juicy food, as clover and different grasses, new corn, or new hay ; or by eating too much after great fatigue ; or by checked perspiration, from whatever cause that may happen. The health of the bowels is disturbed, and they are distended in some parts and contracted in others. The symptoms are rest- lessness of the horse ; he rises with rapidity and lies down again ; he stamps with his fore hoofs and strikes his belly with his hind feet, and he ejects all food. When violent, it occasions convulsions; his limbs are extended as in death, and his eyes are turned up ; his extremities are alternately hot and cold ; sweating and shivering tits succeed each other ; he cannot stool, and his head is frequently turned towards his flanks ; he falls suddenly down, and rolls over on his back. The best plan of treatment is the following : — Take oil of turpentine, sweet spirits of nitre, oil of junipers, and laudanum, of each half an ••mice ; mix in a phial. Carraway seeds and ginger powdered, of eacli one ounce. Mix the

powders in a pint of warm peppermint water, and add the contents of the phial, and give the whole immediately. If he should not be better in two hours, repeat this, and remo\efo»jr quarts of blood, this will assist in removing the spasms ; but if he be restless two hours after bleeding, give him the following drink and clyster:— Take castor oil one pound, prepared kali half an ounce, ginger one ounce. Mix in a pintoi warm gruel, and give it immediately. This clyster and drink generally si.cceed in procuring an evacua- tion through the bowels ; but, if twelve hours after using them that effect be not produced, you must repeat them.

1 1 . Hydrospanis. Dry gripes is a dangerous and distressing disorder. It is first discovered by the horse frequently straining to dung. The rectum and the end of the intestines are over- loaded and pressed to the fundament ; this causes constant endeavours to expel the contents. The tail of the horse has a quick and frequent mo- tion, and he frequently tries to stool, which he can only partially effect, as the dung presses on the neck of the bladder. The disease seldom requires more than the clysters I have mentioned to afford relief, or the following: — Take warm gruel four quarts ; then dissolve a handful of common salts, two ounces of Epsom salts, and half a pound of treacle, sweet oil half a pint. Mix them well and use.

12. Scolecia. Worms.

a Botts. 'I he bolts are distinguished from all other species of worms by their shape and length ; they are of an oval form, and their length varies from half an inch to one inch; in shape and general appearance they resemble casks in mi- niature ; the basis of their color is red, always presenting, however, a dark brown or yellow hue. Botts are frequently found in great numbers, re- sembling solid masses, and adhering firmly to the internal coat of the stomach, by means of two strong curveted fangs, situated at the smaller end, and by a series of very short feet, arranged on each side of the belly ; the body of the bott is composed of ten or twelve circular hoops or joints, and the mouth is generally supposed to be placed at the smaller end, between the two fangs already mentioned.

ft Kound worms. In shape, and other circum- stances, the round worm differs materially from the bott ; its color is usually white ; its appear- ance much resembles that of the common earth- worm ; its length aveiages from eight to ten inches ; and it is generally found infesting the small intestines.

1 Ascaridcs. Ascarides differ in every respect from the preceding species of v orms ; they gene- rate exclusively in the larger intestines, and, al- though they keep the horse in a poor condition, they scarcely ever prove fatal ; and then only w-|ien the constitution of the animal has been much decayed. Both 'the ascandes and the round worm are frequently voided with tin- dung. The treatment of all three species of worms is now pretty well understood. It is similar in each case, and, by paying a due anil prompt application to the following line of treat- ment, a cure may be easily and speedily effected : Take calu iwl one d rachm, casti le soap one d rachm ,

Mix this into a mass with syrup of buckthorn, and give it to the horse at

night. In the morn- ing it will be necessary to administer either the following purging drink or ball, as may be pre- ferred : — Take Barbadoes aloes, according to the age and strength of the horse, from three to six drachms, worm seed in powder half an ounce, powdered gentian half an ounce, powdered carraway seeds one ounce. Mix these, and administer it in a pint of strong decoction of wormwood. This drink must be repeated in four or five days time, but the mercurial ball must be omitted after the first exhibition.

13. Icterus. Jaundice. As the horse has no

venly and ineffectual manner ; that is by means of large syringes. The best apparatus is a pew- ter pipe, about fourteen inches long, and an inch in bore; they may be purchased at Mr. Long's^ veterinary instrument maker, Holborn, London. To this pipe a large pig's or bullock's bladder should be firmly tied. An opening clyster is made by mixing a handful or two of salt with four or five quarts of warm water: to this a little hog's lard or sweet oil should be added. Lin- seed tea, or thin gruel, with £ little treacle or su- gar, makes a good emollient clyster. And an anodyne or opiate clyster is made by dissolving from one to three or four drams of crude opium

gall bladder, but a simple duct, by which the in three or four pints of warm water. This last

bile is passed from the liver to the intestinal canal, the diseases of the biliary system are not frequent. Jaundice seldom or ever arises as a disease in itself, but very often as symptomatic of other complaints. The symptoms are a yel- lowish tinge on the inner surface of the eye-lids, eve-balls, nostrils, and mouth, costiveness, dry

kind of clyster is employed in locked jaw, espe- cially when it is found impossible to give medi- cine by the mouth. In this case nourishment must be given also in clysters. Nourishing clys- ters are made of broth, milk, rich gruel, and sugar. It was observed by Gibson that when nourishing clysters are given in locked jaw, they

and hard dung, with debility, loss of appetite, are sucked upwards by the bowels, and absorbed thirst, and high-colored urine. The object to into the blood. He sustained a horse a consider- attain, in the cure of jaundice, is to promote a able time in this way.

good secretion of bile and urine: for this pur- 3. Fomentations. Fomentations are commonly pose, calomel and aloes, in the following propor- made by boiling wormwood, chamomile flowers, lions, must be given every other day : — Take of bay leaves, rue, and elder flowers or

leaves in calomel one drachm, of aloes two drachms. Beat water. Hemlock and poppy heads are used for up into a ball, with a little mucilage of gum anodyne fomentations. \Vann water, probably, arable. When this operates, it need not be re- answers as good a purpose as any thing. In peated ; but, if it do not, a dose of salts and painful swellings, where there is great tension of gruel must be administered to assist its opera- the skin, a little sallad oil may be a useful addi- tion. On the s-acceeding day give the follow- tion as a relaxant, or some fresh hog's lard, ing: — Take of squill pill a drachm, of nitre half Fomentations should not be used so hot as to a drachm, of calomel a scruple. Make into give pain, but should be continued for a consi- a ball with a little soap. Continue the al- derable time, and frequently repeated; on this ternate uses of the above medicines, assisted ind ,ed their efficacy greatly depends ; and on by mashes, warm ale, &c., until the dung be- this account the emollient poultice is always pre- comes of a healthy appearance, and the yellow- ferable when the situation of the inflamed part is

such as will admit of its being applied ; for a poultice, when properly made and applied, may be considered as a continual fomentation.

4. Poulticing. The cheapest poultice, and perhaps as good a one as any, is made by pour- ing boiling water on a quarter of a peck of bran, so as to make a very thin mash ; some linseed powder is then to be stirred into it, and a little hog's lard. When linseed powder cannot be had, some oatmeal or flour may be substituted

ness abates, which will be in a few days, unless other diseases are connected with jaundice. Let the horse be walked about twice a day, and co- vered in the stable during the cure.

PART II. CHIRURGICAL OPERATIONS.

1. Bleeding. The great vein of the neck is decidedly the best to bleed from in all cases re- quiring general blood-letting. The operation,

for it. Boiled turnips make a good poultice,

although simple, is frequently done in a most and may be improved by the addition of a little

clumsy manner, and serious injuries often fol- low the improper use of the fleam. We prefer a lancet in most cases ; but, if the fleam be used,

linseed powder. Poultices are generally too small, and confined, and too dry. They should be considered as a means of keeping water, rou-

let the operator gently rise the vein, by pressing cilage, and oil constantly in contact with the in-

his finger softly upon it, and, at the part imme- diately above where the vessel divides into two tranches, open it by a well-directed stroke. Opening the temporal artery, in affections of the head and eyes, is an operation of great import- ance, and often relieves when other bleedings fail. Bleeding ir/the toe, as it is called, is topi-

flamed part ; it will then be evident that if they are not constantly moist in every part they cannot answer this purpose.

5. Blistering. Before a blister is applied, the hair must be cut off from the part as closely as possible : this may be much more easily and ef- fectually done by means of shears than scissars.

cal, and therefore is of great use in affections of The blistering ointment is then to be well rubbed

the foot; and so, perhaps, bleeding from the veins of the thigh may be found beneficial, as a topical remedy.

2. Clustering. This useful and innocent mode of exhibiting medicine is too much neglected, and when employed is frequently done in a slo-

into the part with the hand ; and, after this has been continued about ten minutes, some of the ointment may be smeared on the part. In blister- ing the legs, the tender part of the heel, under the fetlock joint, is to be avoided, and it may be better to rub a little hogV lard on it in order to

defend it from any of the blisters that may acci- dentally run down from the leg. When the legs are blistered, all the litter should be removed from the stall, and the horse's head should be carefully secured to prevent his rubbing the blistered parts with his nose.

6. Firing. The instrument to be used for this operation is called the firing-iron ; it should have an edge as thin as a blunt adze. Before the iron is used, the hair should be cut off from the part to be operated upon as closely as possible. The instrument should never penetrate the skin, but merely the outward surface of it, or cuticle, leav- ing a brown mark, which, if properly done, will exude a fluid soon after the operation. If the back sinew or fetlock joint is to be operated upon, the uppermost leg is to be

secured and kept straight by webbing fastened from the knee to the hind leg above the hock, and another piece of the same material passed round the pastern, and securely held by an assistant. The under leg should be secured similarly. In ope- rating on the hind leg, it will of course be the under one, and it should be taken out of the hobble ; it should be drawn out by an assistant, and held by a piece of webbing. In firing the back sinew, or pastern, of the hind leg, the leg must be drawn towards the fore leg, or shoulder, by two pieces, one passed round the pastern, and the other round the hock, both fastened to a collar placed round about the horse's neck. In sprains it may be secured in a similar manner. When the operation is over, the parts fired should be rubbed with blistering ointment ; the horse may be then put into a loose box, with a cradle on his neck, and may be turned out to grass in a fortnight, if the disorder do not appear to warrant a different treatment.

7. Rowelling. Rowels are a kind of drain, and as good as setons. They are produced by an incision in the skin when it is loose, and about an inch long. The incision done, an instrument, called a cornet, which is the tip of a horn, is to be introduced, or else the finger, and the skin separated from the flesh for an inch round. A round pieceof leather, with a hole in the middle, is to be introduced into the opening, first having been covered with tow and smeared with simple ointment — basilicon or hog's lard. The opening is then to be stopped up or plugged with tow, and left there until matter forms, which will be in four or five days. The rowel is then to be removed, cleaned, and replaced ; which is to be done every day after, as long as it is necessary to keep the wound open for a discharge.

8. Setons. A seton is put in by passing an instrument, called a seton needle, through the skin, armed with lamp-cotton, or tape, or threads. The object is to promote a discharge of matter from any particular place, and keep up an irrita- tion there. A seton is easier done, and altogether a more useful operation than the rowel. The lamp cotton, or tape, is to be drawn a little out every day, so as to let the new part of it be in contact with the wound.

9. Docking. Docking, when done early ; that is, when the colt is a mere sucker, may be per- formed with any common knife, and tied up with a common string, to prevent bleeding; but,

if the operation be deferred until the horse be ful. grown, a docking knife is to be used. The hair is to be cut closely off the part of the tail to be cut, and the instrument's edge so placed as to come over the hollow between any of the rings or bones of the tail — a simple motion completes the operation. Some sear the tail with a hot iron after the operation ; but if a strong twine be tied on the part above the incision, and before the operation, there will be nothing to warrant searing.

10. Nicking. As this operation is seldom performed, we shall not occupy any space in de- scribing a modus operand! of fanciful cruelty.

11. Castration. The best time to castrate is when the animal is about one year old. The horse is to be thrown down upon the left side, and the right hind leg drawn to the shoulder by means of a strong piece of web passed round it in a noose. The testicle is then to be grasped by the operator in his left hand, and pressed gently, so as to render the skin upon it tense. An incision should then be made through the outer skin, and about three inches in length. Having done this, the knife is to be gently used till the vaginal sac is cut through, which will be known by the issuing of water from it. One of the blades of a pair of scissors is then to be intro- duced, and the vaginal sac cut up as far as the external incision. The testicle will now protrude and contract, but in a little time the cord will relax, when it is to be placed in the clams, leav- ing the testicles and upper portion, called the epididymis, outside them. The clams are to be made tight, so as to prevent the possibility of the slipping up of the cord after it is cut. This being done, the cord is to be cut with a nearly red-hot firing iron. This is all the searing that will be necessary, and the clams are then to be taken, when the other testicle is to be operated upon in the same manner. No dressing is ne- cessary, and but little if any bleeding will follow. Too much searing often causes bleeding, the very thing it is meant to prevent. It is quite enough to cut off the testicles with a hot iron without further searing. When the operation is finished, the horse should be turned into a box, and in about ten days he will be well, and may be worked with- out danger. The swelling which occurs after is of no consequence, it will go away ; however, if it be considerable, physic should be given.

12. Cropping, an operation seldom per- formed.

13. Nerve operation. The horse having been secured upon his side, an incision, about three inches above the most prominent part of the fet- lock joint, that is the most prominent part when viewed sideways, and just within the back sinew. The incision is to be made quite through the skin to the cellular substance, and the instrument should be sharp, so that the first stroke of it may be sufficient to make the incision, and thus be the less painful to the animal as well as more creditable to the operator ; however, care must be taken not to carry the incision down to the cellular substance, which will appear on opening the skin. This must then care- fully be dissected away, and the nerve will ap- pear, and immediately behind it a vein of a

bluish color. A crooked needle, armed with a small ligature, or twine, is now to be carefully passed under the nerve from within outward, and the operator must not touch the vein with the point, lest it be wounded, and so embarrass him with the blood which must consequently flow. To avoid this the needle should be a little blunt at the point. When this is done, the needle is to be removed from the twine, and, the nerve having been gently drawn out by the ligature, the cellular substance underneath it is to be cautiously dissected away, taking care not to wound in the slightest degree the nerve itself. A curved bistoury is now to be passed under the nerve, as high up as can be admitted, and at one steady, clean, and well-directed cut, it is to be divided. The bistoury must be as sharp as possible, and the cut to be drawn, and not by pressing the blade directly upwards, as the least laceration of the nerve is dangerous, as well as unnecessarily painful to the animal. The operation itself, of dividing the nerve, gives excessive and sudden pain, which causes the horse to struggle vio- lently ; this must be guarded against ; but when the division is complete the pain is over. The .nferior portion of the nerve, or that which re- •naains next the hoof, is to be drawn out by for- ceps, and cut out to the extent of from half an inch to an inch. The skin should then be closed, and one stitch applied, which concludes the ope- -ation. No dressing or bandage is necessary, and the wound will heal in about three weeks. It will be advisable to turn the horse out to grass a little before the wound is healed, and he should be kept there for about a fortnight, or three weeks, or perhaps more.

14. Bronchotomy. In cases where suffocation is likely to ensue from the windpipe, or trachea, being obstructed, this operation becomes neces- sary. It is done by first making a longitudinal incision through the skin, so as to lay the trachea bare: when with sharp scissors cut out a little square portion of the cartilage, so that the ani- mal can breathe through the opening, until the cause of suffocation is removed. The aperture is to be kept open by a pipe, or large cut at both ends. This operation has been performed for the relief of roaring, but the desired success has never followed it.

1 5. (Esophagotomy. This operation is useful in cases where a large ball, or an apple, or accu- mulation of bran, &c., may occasion choking. It is done by laying bare the oesophagus, at the left side, immediately over the tumor; then cutting it, and removing the obstruction. Care must be taken to keep clear of the arteries in the incision.

PART III.

(TRVjE HABENDI.— OFFICES TENDING TO- WARDS THE HEALTH AND PRESERVATION OF THE ANIMAL.

1. Shoeing. When a foot deviates from the sound form, the shoe must be formed accordingly. If the sole is in any degree flat and thin, the wide hollow shoe is absolutely necessary. If the heels are tender, and have corns, the bar shoe is the best that can be applied ; and the tender heel ii eluding part of the quarter, crust as well as

sole, should be so pared down as to be at the «. stanc«» 01 a quarter of an inch or more from the corresponding part of the shoe. In preparing the foot for the shoe, the loose parts only of the sole may be removed with the drawing knife ; the ragged parts of the frog should be cut away, as they may serve to harbour dirt or gravel. If the toe of the frog is very hard and more pro- minent than the other parts, it should be pared down moderately. The heel of the shoe should have a perfectly flat and level bearing upon the junction of the bar and crust, which should be rasped to a flat surface for receiving it. The shoe should never extend beyond this part. The whole bottom of the foot, indeed, should be rasped so as to be perfectly flat and level all around, so that, when the horse stands on a plane surface, every part of the crust should bear on that surface. The shoe should be made level also on both surfaces, by the same criterion, and then it must of necessity be fitted to the foot. When this is the case, there will not be that mo- tion in the shoe in travelling by which so many shining surfaces are often worn in it, and by which the nails are loosened, and if they are made of indifferent iron, or badly made, often broken.

2. Stabling. Loftiness is very desirable in a stable. It should never be less than twelve feel high, and the best method of ventilation is by means of a chimney or square opening in the ceiling, communicating with the open air, or it may be made in the form of a dome or cupola, which would be more ornamental. The chim- ney need not be open at the top so as to admit the rain, but should be roofed, and have lateral openings by means of weather-boards, as they are termed. As to the admission of air into the stable, the usual moans provided for that pur- pose are quite sufficient ; that is, by windows. The best floor for a stable, by far, is hard brick ; and, next to that, limestone not less than one foot square.

3. Feeding. In the usual way of feeding and treating horses, no attention is paid to the state of the stomach when they are put to work, but frequently they are put into a chaise, or coach, or ridden off at a quick rate with their stomachs loaded with food ; the consequence of this has often been gripes, inflammation of the bowels, and even sudden death. The hay, as well as the corn, should, if possible, be divided into four portions, and each portion, both of oats and hay, should be wetted with water: this will facilitate mastication and swallowing, and likewise diges- tion; a horse thus fed will so quickly digest that he will always be fit for his labor. The largest portion, both of oats and hay, should be given at night ; and the next in

quantity to this, early in the morning ; the other two portions in the forenoon and the afternoon, or about twelve and four. But this must of course depend upon the kind of work a horse is employed in, and must be regulated accordingly. Horses that have been accustomed to an unlimited allowance of hay will often eat their litter when put upon a pro- per diet, but this must be prevented by a muzzle.

4. Exercise. The horse was evidently de- signed for exercise, and for the use of man. Hit

vast muscular power, and the impenetrable de- fence attached to his feet, were certainly not given for his own use only. If kept in a stable without exercise, his muscular power declines, his digestive organs become diseased, and so do the organs of respiration. The hoofs grow, and there is no wear ; for the little that may be worn off, merely by the pressure of his own weight when standing still, is prevented by the shoes. The toe being thus elongated, the back sinews are often strained; the foot becomes hot and in- flamed, its horny covering contracts ; the frogs become rotten, and incapable of performing the office for which they were designed ; in short, the whole body becomes diseased. Exercise then, it is evident, is essential to his health, and even his existence ; and every part of his struc- ture and economy appear to demonstrate that he was intended for the service of man. His powers, however, are limited, and so should his exertions be : but it is a fact, which must be re- gretted by all considerate persons, that the im- moderate work in which he is often employed, so far from being salutary, or proportionate toh.s strength, as undoubtedly it was designed by his Creator that it should he, is injurious, and even destructive in a very considerable degree. And what greatly aggravates the mischief is, the early and premature age at which he is commonly employed.

5. Training. When a horse is brought in for training he should be fed with hay and oats, and if greedy of water or hay, or if he appears in- clined to eat his litter, he should be limited in hay and water, and be muzzled the last thing at night. For the first week he should have walk- ing and gentle trotting exercise for an hour or two every morning. The stable should be kept clean and cool. The second week his exercise may be increased a little, and so may his oats. Should he appear, however, rather dull, the membrane of his eyes rather red or yellow on lifting the eye lid, and the dung hard in small knobs and shining or slimy, it will be advisable to bleed moderately and give a mild dose of physic, for which he should be prepared by giv- ing two or three bran mashes a day, for two days. The fourth week

he may be worked mode- rately, and, if wanted for hunting, he should be put into a canter or hand-gallop once a day ; and after this it will be necessary to increase his pace twice or three times a week, so as to make him sweat freely ; taking care that he is walked for some time afterward, that he may become rather cool before he returns to the stable, when he must be well dressed, fed, and watered, have a good bed placed under him, and be left to his repose. When a horse has been brought up from rich pasture he is generally loaded with fat, and requires a great deal of walking exercise and careful feeding. He may be trotted gently, however, after the second -week, but will not be for a quicker pace for a month at least. During this time he should have two or three doses of mild physic, and when first taken up such horses generally require to be bled.

The art of training this high mettled creature, and rendering him subservient to the use of man, was once in such repute that nnrocapaf, or

horse breaker, was thought to be a title worthy of knii;s and heroes, and so unaccountable was tint appearance of the first men who were seen on horseback in the isles of the Gentiles, or the posterity of Javan, that some imagined the body of the horse and his rider to be mutually incorporated. But in such admiration was this art sometimes held, that the elder poets and bards seem inclined to ascribe its discovery to a superhuman agency ; and with these sentiments J-.schylus introduces Promethus boasting that among useful inventions he had taughi mortal to render horses obedient to the yoke, and to be- come a sort of vicarious successors to m*

irpuroc tv vyolot Kvw i Sov\tvovra, fffvpaoiv

vtp uof.i»r riyayov QiXqvio ia r»}c i'irtpv\6vrov

6. Soiling, feeding a horse with cut herbage.

Anatomical structure of the foot. The hoof i— a secretion from the living part of the foot, not wholly from the coronet, but from the living sui face which it covers, named by Mr. Coleman the laminated substance of the foot ; and, by others, the elastic processes or membranes of the foot. As the quantity of horn necessary for the defence of the sensible foot is considerable, a large quantity of blood is distributed to it for the purpose, and is supplied by two large arte- ries which pass down on each side of the pas- tern ; these give off considerable branches to the frog, cartilages, and coronary ring; but the trunk of the artery enters in at the posterior and inferior part of the coffin bone, and divides into eight branches within the bone, which pass out at the circumference, or angle of the toe, and give off innumerable branches about the inferior part of the laminated substance, especially about the toe. The lateral cartilages are two elastic bodies

attached to the coffin bone, at its upper part, and proceeding backward, like expanded wings, terminate at the extremity of the heel ; they assist in expanding the heels and quarters. The navicular, or nut bone, is placed behind the coffin bone, and is attached to it as well as to the small pastern bone, and affords a synovial or slippery surface for the flexor tendon to move upon. This part with the coffin bone forms the coffin joint.

The small pastern articulates with the coffin bone and the nut bone below, and with the great pastern above : these are all the bones com- prehended in a description of the foot. The cof- fin bone, however, is the only one which deserves particular notice, and that on account of the peculiarity of its structure. It is completely cellular throughout, and has more blood within it than any one bone in the body, though not far from being the smallest of the whole. The great flexor tendon is inserted into the bottom of the coffin bone, and the extensor tendon on its front and upper part. Thus the sensible foot is com- posed of the pastern, the navicula, and the coffin bone; the lateral cartilages, thft sensible frog and sole, and the laminated sul-stance ; at the

tipper part of which there is a kind of cartilaginous ring which has been named by Mr. Coleman the coronary ligament, and by Mr. Bracey Clark the coronary frog band. This coronary ring, instead of terminating at the heels, is continued into the frog, and from this connexion and its situation over the lateral cartilages, it must be subject to the same motion which these parts have. When the frog then is exposed to that pressure for which it was evidently designed, it expands and con- tracts, and in so doing communicates a similar motion to the cartilages, the coronary ring, and the heels and quarters of the hoof.

VEVAY, a post township of the United States, and capital of Switzerland county, Indiana, on the Ohio, eight miles above the mouth of the Kentucky, and distant from Cincinnati, Louisville, and Lex- ington, about forty-five miles. Just below this place are the celebrated Swiss vineyards, where the culture of the vine has been introduced with good success. The settlement, called New Switzerland, was commenced in 1805, by some emigrants from Pays de Vaud. The country at the back of Vevay is hilly, but fertile.

VEX, v. a. & v. n. -\ Lat. vexo. To plague ; VEXA'TION, n. s. (torment; harass: to fret; VEXATIOUS, adj. i be uneasy : vexation is the VEXA

TIOUSLY, adv. J act of troubling, or state of being vexed : the adjective and ad verb correspond. When she pressed him daily, so that his soul was vexed unto death, he told her all his heart.

Judget xvi. 16. Do you think

The king will suffer but the little finger Of this man to be vexed ? Shakspeare. Henry VIII.

Your children were vexation to your youth ; But mine shall be a comfort to your age. Shakspeare.

Albeit, the party grieved thereby may have some reason to complain of an untrue charge, yet may he not well call it an unjust relation. Bacon.

Ulysses gave good care, and fed And drunke his wine, and veil and ravished His food for mere vexation. Chapman.

He leads a vexatious life, who in his noblest actions is so gored with scruples, that he dares not make a step without the authority of another. Digby.

Passions too violent, instead of heightening our plea- sures, afford us nothing but vexation and pain. Temple.

Still may the dog the wandering troops constrain Of airy ghosts, and vex the guilty train ! Dryden.

Consider him maintaining his usurped title by con- tinual vexations wars against the kings of Judah.

South.

Veratiou thought still found my flying mind, Nor bound by limits, nor to place confined ; Haunted iny nights, and terrified my days. Prior.*

Ranged on the banks, beneath our equal oars, White curl the waves, and the vexed ocean roars. Pope. VEXILLARII, in antiquity, signals. See SIGNAL.

VEXILLUM, in botany. The upper petal of a pea bloom, or butter-fly shaped flower, which is generally larger than any of the others.

VEZZANA, a small town of the Austrian states in the south of Tyrol, near Trent.

UFFCULME, or UFFCOLUMB, a market-town in Bampton hundred, on the

river Columb, Devon- shire, three miles north-east of Collumpton, and 160 from London. Market on Monday and Wednes- day. Fairs, Wednesday before Good Friday, July 6th, and August 12th.

UG'LY, adj. $ Sax. oja, terror, fear; Goth. UG'LINESS, n. s. i vggia. Originally written VOL. XX!!.— PARTS.

ougly. Offensive to the sight; deformed: loail. some ; hateful : the noun substantive corresponds.

All that else seemed fair and fresh in sight, Was turned now to dreadful ugliness. Spenser.

O, I have passed a miserable night, So full of ugly sights of ghastly dreams. Shakspeare

Was this the cottage, and the safe abode Thou told'st me of? What grim aspects are these. These uˆ/u-headed monsters ? Milton.

She takes her topicks from the advantages of old age and ugliness. Dryden.

VIACHA, a settlement of Peru, in the province of Pacages.

VIADANA, a small town of Austrian Italy twenty miles S. S. W. of Mantua.

VIADRUS, an ancient name of the Oder. Sec SUEVUS.

VI'AL, w. s. & v. a. Gr.

Take thou this vial, being then in bed, And this distilled liquor drink thou off. Shakspeare.

Another lamp burnt in an old marble sepulchre be- longing to some of the antient Romans inclosed in a glass vial. Wiikuu.

This she with precious vialled liquors heals ; For which the shepherds, at the festivals, Carol her goodness loud in rustick lays. Milton.

Chemical waters, that are each transparent, when separate, ferment into a thick troubled liquor, when mixed in the same vial. Additon.

ViALDucLAiRBOis(HonoreSebastien), latedirec- tor of the school of naval engineers, and chief of the maritime artillery at Brest, was a native of Paris, and, after having been a lieutenant in the navy, in 1754 entered the army, and served till 1777, when he resumed his former profession. The talents which he displayed in the construction of vessels procured him in

1793 the post of engineer con- structor-in-chief. He had some other appointments previously to that of director of the school of en- gineers at Brest, which he held from 1801 till 1810, when his great age and infirm health obliged him to retire from the service. He died in 1816, aged eighty-three. He published Essai Geometrique et Pratique sur 1'Architecture Navale. Brest, 1776, 2 torn. 8vo. ; Traite Elementaire de la Construc- tion des Vaisseaux, Paris,1787 — 1805,2 vols. 4to.; and a translation of an English work on Ship- Building. He was also a principal contributor to the Encyclopedic Methodique.

VIANA, a town of Portugal, province of Entre Douro e Minho, on the north side of the river Lima, not far from its mouth, contains 8000 inha- bitants, whose chief employments are navigation, fishing, and the sale of wine. They carry on also some trade in corn, oil, and fruit. Forty-two miles north of Oporto.

VI'AND, n. s. Fr. viande ; Ital. vianda. Food ; meat dressed.

The belly only like a gulf remained,

I' th' midst of the body idle and unactive, Still cupboarding the viand. Shaktpeare.

These are not fruits forbidden ; no interdict Defends the touching of these viand pure ; Their taste no knowledge works, at least of evil.*

Milton.

From some sorts of food less pleasant to the taste, persons in health, and in no necessity of using &uc-> viands, had better to abstain. Ray.

VIATICUM, in Roman antiquity, an appellation given to all officers of any of the magistrates, as lictors, accensi, scribes, criers.

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VIATRA. a government or province of Euro- j>ean Russia, bounded on the north-east by the government of Perm, and on the south by that of Kasan. It extends from 56° to 61° N. lat. ; and has an area of 47,000 square miles. The capital is of the same name. 420 miles E. N. E. of Mos- cow.

VI'BRATE, v. a. & v. n. J Latin vibro. To

VIBRA'TION, n. i. S move to and fro with

quick motion ; make to quiver : to quiver ; play

up and down or to and fro : vibration, the act of

doing so, or state of being moved in this way.

Breath vocalized, that is, vibrated or undulated, may differently affect the lips, and impress a swift tremu- lous motion, which breath passing smooth doth not.

Holder.

The air compressed by the fall and weight of the quicksilver, would repel it a little upwards, and make it vibrate a little up and down. Royle.

Do not all fixed bodies, when heated beyond a cer- tain degree, emit light, and shine ? And is not this emission performed by the vibrating motions of their parts ? Newton.

The whisper that to greatness still too near, Perhaps, yet vibrates on his sovereign's ear. Pope.

VIBRATION, in mechanics, a regular reciprocal motion of a body, as a pendulum.

VIBURNUM, in botany, a genus of plants of the class pentandria, order trigynia ; and in the na- tural system arranged under the forty-third order, dumosae. The calyx is quinquepartile and above ; the corolla divided into five laciniae ; the fruit a monospermous berry. There are nineteen spe- cies, three of which are natives of Britain. 1. V. lantana, common viburnum, wayfaring, or pliant meally tree, rises with a woody stem, branching twenty feet high, having very pliant shoots covered with a lightish-brown bark ; large heart-shaped, veined, serrated leaves, white and hoary underneath; and the branches terminated by umbels of white flowers, succeeded by bunches of red berries, &c. 2. V. opulus, or gelder rose ; consisting of two varieties, one with flat flowers, the other globular. The former grows eighteen or twenty feet high, branching opposite, of an irregular growth, and covered with a whitish bark ; large lobated or three- lobed leaves on glandulose foot-stalks, and large flat umbels of white flowers at the ends of the Branches, succeeded by red berries. The latter grows fifteen or eighteen feet high, branching like the other, garnished with large lobated, or tliree-lobed leaves, on glandular foot-stalks ; and large globular umbels of white

flowers at the ends of the branches in great abundance. This tree, when in bloom, exhibits a singularly fine appearance : the flowers, though small, are collected numerously into large globular umbels round like a ball ; hence it is sometimes called snow-ball tree. 3. V. tinus, com- mon laurustinus, or evergreen viburnum ; grows eight or ten feet high or more, branching numerously from the bottom upwards, assuming a close bushy growth, with the branches somewhat hairy and glandulous ; very closely garnished with oval, wholly entire leaves, of a strong green color, placed in pairs opposite ; and whitish and red flowers collect- ed numerously in large u/nbellate clusters all over the plant, at the sides and ends of the branches, from January until March or April, exhibiting a most beautiful appearance. There are many varietu-i.

VICA POT A, a goddess at Rome, who presided over victory.

VIC'AR, n. s. ~\ Lat. vicarius. The incum

VIC'ARAGE, \ bent of an appropriated or

VICA'RIOUS, adj. j impropriated benefice ; a sub- stitute or representative : a vicarage is the benefice of a vicar: vicarious, deputed, delegated, repre- sentative.

Procure the vicar

To stay for me at church, 'twixt twelve and one, To give our hearts united ceremony. Shahspeare.

The soul in the body is but a subordinate efficient, and vicarious and instrumental in the hands of the Almighty, being but his substitute in this regiment of the body. Hale.

An archbishop may not only excommunicate and in- terdict his suffragans, but his wear-general may do the same. Ayliffe.

This gentleman lived in his vicarage to a good old age, and having never deserted his flock died vicar of Bray. Swift.

VICAR, a person appointed as deputy to another, to perform his functions in his absence and under his authority. In the canon law it denotes a priest of a parish, the predial tithes whereof are im- propriated or appropriated ; that is, belong either to a chapter, religious house, &c., or to a layman who receives them, and only allows the vicar the small tithes, or a convenient salary. See PARSON.

VICARS (John), writer of some virulent pam- phlets against the royalists in

the civil wars, was born at London, and educated at Oxford. He be- came usher of the school in Christ's Hospital. He died in 1652.

VICARY (Thomas), the first anatomical writer in English, was sergeant surgeon to Henry VIII., Edward VI., Mary 1., and Elizabeth, and chief surgeon of St. Bartholomew's hospital. His book is entitled A Treasure for Englishmen, containing the Anatomy of Man's Bodie, published in 1548.

VICE, n. s. ˆ Lat. vitium. Depravity; wick-

V ICED, adj. Redness; a course of action oppo-

Vic'ious.) site to virtue ; inordinate life ; of- fence ; fault ; the fool of old shows : viced is used by Shakspeare for vicious, corrupted ; depraved.

Be as a planetary plague, when Jove Will o'er some high viced city hang his poison In the sick air. Shakspeare.

No vice, so simple, but assumes Some mark of virtue on its outward parts. Id.

I'll be with you again In a trice, like to the old vice,

Your need to sustain ;

Who with dagger of lath, in his rage and his wrath, Cries, Ah, ha ! to the devil. Id.

No spirit more gross to love Vice for itself. Milton.

He heard the heavy curse. Servants of servants on his viciout race. Id.

I cannot blame him for inveighing so sharply against the vices of the clergy in his age. Dryden.

The foundation of error will lie in wrong measures of probability ; as the foundation of vice in wrong mea- sures of good. Locke.

VICE, n. t. & v. a. Fr. vis ; Belg. vijs. A screw, or press operating by screws; hence gripe, grasp : to draw by a kind of violence ; to gripe.

With all confidence he swears, As he had seen 't or been an instrument To vice you to it, that you have touched his queen Forbiddenly. Shakspeare.

He found that marbles taught him percussion ; bottle- screws, the vice ; whirligigs, the axis in peritrociiio. Arbnthnot ci Pop.*

VICE, in smithery and other arts ronverstnt in

iretals, a machine or instrument serving to hold fast any tiling they are at work upon, whether it is to be beaten, filed, or rivetted.

\ ICE, in ethics, is ordinarily denned an elective habit, denoting either an excess or defect from the just medium wherein virtue is placed.

\ ICE is also used in the composition of divers words to denote the relation of something that comes instead or in the place of another; as vice-admiral, vice-chancellor, &c., are officers who take place in the absence of admirals, &c.

VIC EAD'MIRAL, n. s.) Lat. vice (very com-

VICEAD'MIRALTY. $ monly used in com-

position for one qui vicem gerit who performs in his stead the office of a superior) and admiral. The second commander of a fleet : the station or office of a viceadmiral.

The foremost of the fleet was the admiral ; the rear- admiral was Cara Mahoraetes, an arch pirate. The viceadmiral in the middle of the fleet, with a great squadron of galleys, struck sail directly. Knolles.

The viceadmiraity is exercised by Mr. Trevanion.

Careic.

VICEAG'ENT, n. 5. Vice and agent. One who acts in the place of another.

A vassal Satan hath made his viceugent, to cross whatever the faithful ought to do. Hooker.

VICEGE'RENT, n. s.) Latin vicem gerens.

VJCEGE'RENCY. J A lieutenant ; one who

is intrusted with the power of the superior, by whom he is deputed : his quality, station, or office.

Whom send I to judge thee 1 Whom but thee, Vicegerent Son ! To thee I have transferred All judgment, whether in heaven, or earth, or hell.

Milton.

Employ it in unfeigned piety towards God, in un- shaken duty to his vicegerent ; in hearty obedience to his church. Sprat.

The authority of conscience stands founded upon its vicegerency and deputation under God. South.

YICENZA, a town and province of Austrian Italy, in the government of Venice. It is a fertile and well cultivated country, containing, on a super- ficial extent of less than 1000 square miles, above 310,000 inhabitants. The capital has 25,000 in- habitants.

VICE'ROY, n. s. } French viceroi. He who

VICEROY'ALTY. $ governs in place of a king with regal authority : the office of a viceroy.

Shall I, for lucre of the rest unvanquished, Detract so much from that prerogative, As to be called but viceroy of the whole 1 Shakrpeare.

These parts furnish our viceroyalties for the gran- dees ; but in war are incumbrances to the kingdom.

Addison.

VI'CETY, n. s. A nice thing, says Johnson, is called in vulgar language point vice, from the Fr. point devise, or point de vice ; whence the barbar- ous word vicety may be derived. Nicety ; exact- ness. A word not used. Here is the fruit of Pem,

Grafted upon Stub his stem ,

With the peakish nicety,

And old Sherewood's vicety. Ben Jonson.

*VIC I A, in botany, a genus of plants of the class diadelphia, and order of decandria ; natural order thirty-second, papilionaceae. The stigma is bearded transversely on the lower side. There are twenty species, seven of which are natives of Britain. The most important of these are, 1. V. cracca, tufted vetch. It has astern branched, three or four ft*t long. Leaves pinnated ; pinnae generally ten*

or twelve pair, lance-shaped, downy. Stipulae en tire. Flowers purple, numerous, pendulous, in im- bricated spikes. It is also reckoned an excellent fodder for cattle. 2- V. faba, or common garden bean. It is a native of Egypt. It is too well known to require description. 3. V. saliva, common vetch, or tare. The stalks are round, weak, branched, about two feet long. Pinnae five or seven pair, a little hairy, notched at the end. Stipulae dentated. Flowers light and dark purple, on short pedicles, generally two together ; pods erect; seeds black. It is known to be an excellent fodder for horses.

VICINAL, adj. } T t . . v VIC'INE, {, ˆ mcmut- Near;ne.gh-

VICIN'ITY, n. s. $ bounn& : state of beinS near' The position of things is such, that there is a vicinity between agents and patients, that the one incessantly invades the other. Hale.

Opening other vicine passages might obliterate anv attack ; as the making of one hole in the yielding mud defaces the print of another near it. Gianville.

Gravity alone must have carried them downwards to the vicinity of the sun. Benttru.

The abundance and vicinity of country seats. Su-ifi.

VICIS'SITUDE, n.s. Lat. vicissitude. Regu- lar change; return of the same things in the same succession ; revolution.

It makes through heaven Grateful vicissitude, like day and night. .Miiton.

The rays of light are alternately disposed to be re- flected or refracted for many vicissitude. ffewton.*

During the course of the war, did the vicissitudes of good and bad fortune affect us with humility or thank- fulness. Atterbury.

VICTIM, n. s. Lat. victima. A sacrifice; some- thing slain for a sacrifice; something destroyed.

All that were authors of so black a deed, Be sacrificed as victims to his ghost. Denham.

Clitumnus waves, for triumphs after war, The victim ox, and snowy sheep prepare. Addison.*

Behold where age's wretched victim lies ! See his head trembling, and his

half-closed eyes.

Prior.

VICTOR, n.s. -\ Lat. victor. Conqueror;

VICTO'RIOUS, adj. i vanquisher; he that gains

VICTORIOUSLY, adv. > advantage in any contest.

VIC'TORY, n. t. i Seldom used with a geni-

*VIC'TRESS. * t» e ; we say the conqueror*

of kingdoms, not the victor of kingdoms; and

never but wi:h regard to some single action or

person : as we never say, Caesar was in general a

great victor, but that he was victor at Pharsalia :

the adjective and adverb correspond : a victory is

a conquest; triumph; success in battle: victress, a

female conqueror.

Although the victor, we submit to Caesar.

Shakspeare.

Now are our brows bound with victorious wreaths ; Our bruised arms hung up for monuments. Id.

I'll lead thy daughter to a conqueror's bed ; And she shall be sole victress ; Caesar's Caesar. Id.

Victory doth more often fall by error of the vanquish- ed, than by the valour of the victorious. Hayward.

That grace will carry us, if we do not wilfully betray our succours, victoriously through all difficulties,

Hammona,

Their hearts at last the vanquished re-assume, And now the victors fall. Denham.

Then to the heaven of heavens he shall ascend, With victory, triumphing o'er his foes. Jfiftw.*

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VIENNA.

Say where and when

Their fight ; what stroke shall bruise the victor's heel.

Id.

In lore, the licton from the vanquished fly , They fly that wound, and they pursue that die.

Waller.

Lose not a thought on me, I'm out of danger ; Heaven will not leave me in the victor's hand. Addi&m.

Sudden these honors shall be snatched away, And curst for ever this victirriout day. Pope.

VICTORINA, a matron, who led the Roman armies against the emperor Gallienus. See ROME.

VICTOR1NUS. See STRIGELIUS.

VICTORIUS (Benedict), physician, was born at Faenza, about 1481. He was professor at Bo- logna, and died about 1560. He wrote De Morbo Gallico, 8vo., and some other works.

VICTORIUS (Lionel), a medical professor at Bo- logna; wrote on Infantile Diseases, 8vo. ; and died 1520.

VICTORIUS (Peter), a commentator on the an- cients, was bom at Florence, 1499, where he was professor of rhetoric, and member of the senate. He died 1585.

VICTORY, in mythology, is represented by He- siod as the daughter of Styx and Pallas ; and Varro calls her the daughter of heaven and earth. The Romans erected a temple to her, where they prayed for success to their arms. They painted her in the form of a woman clad in cloth of gold. In some medals she is represented flying in the air, holding a laurel crown in

one hand, and a palm in the other ; but in others she stands on a globe.

VICTUAL, n. i. & } Fr. vie twilUs ; barb. Lat.

VICT'PALS, [r. a. > victulus, of Lat. vitalis. Pro-

VICT'UALLER. 3 vision of food ; stores for the support of life ; meat ; sustenance : to victual is to store with provisions : victualler, one who provides them.

He was not able to keep that place three days for lack of i-ictitab. Knolles.

A huge great flagon full I bore, And, in a good large knapsacke, victles store.

Chapman.

They planted their artillery against the haven, to im- peach supply of victuals; yet the English victuallers surceased not to bring all things necessary. Hayward.

He landed in these islands, to furnish himself with victuals and fresh water. Abbot.

VIDA, the ancient name of Cremona.

VIDA (Mark Jerome), bishop of Alva, in Mont- serrat, and one of the most excellent Latin poets that have appeared since the Augustine age, was born at Cremona in 1470. He was made bishop of Alva in 1552. He wrote hymns, eclogues and poems, in Latin ; and in prose, dialogues, synod- ical constitutions, letters, and other pieces. He died in 1566, soon after his being made bishop of Cremona. The best edition of his poems is that of Oxford, 3 vols. 8vo.

VIE, v. a. & v.n. Fr. vier. To show or prac- tise in competition ; rival : contest ; strive for su- periority.

She hung about my neck, and kiss and kiss She vied so fast, That in a twink she won me to her love. Shaktpeort.

1 hey vie power and expence with those that are too high. L'Estrangt.

The wool, when shaded with Ancona's dye, May with the proudest Tyrian purple vie. Addinm.

Now voices over voices rise ; While each to be the loudest lies. Swift.

VIENNA, Germ. Wien, the capital of the Aus- trian empire, is situated in the province of Lower Austria, on the right bank of the Danube, which is here slow and majestic in its course, forming a number of islands and windings. It is joined by the Wien and Alser, two streams, small but rapid, which flow through the town. Vienna is subject to occasional inundations from each of these rivers.

The city, or original part, forms a town distinct from the suburbs, of a circular shape, hardly a mile in any direction, and not above three miles in cir- cuit. Between it and the suburbs is an open space, also circular, and of the width of somewhat more than half a mile, the computed range of cannon in a remote age. The suburbs, consisting formerly of a succession of scattered villages, are now so con- nected as to form a continuous whole, surrounded on the outside by a wall which embraces a circuit of no less than twelve miles. The ramparts have long been used for public walks.

The houses of the city in general built of brick, slated, and most of the streets are paved with ye- nite, a little raised above the causeway. In the suburbs the houses are not so high, the streets are wider, and many of the buildings good. In gene- ral the best houses are those which front the city. Some of the streets here are not paved : but are all well lighted at night ; and in the city there are large subterranean sewers, which discharge them- selves into the Danube. Vienna has eight small and irregular squares. The best is that called Am Hof, on account of its vicinity to the court. The Graben is rather a wide street than a square, and stands nearly in the centre of the city. The Joseph Platz contains a good equestrian statue of the em- peror Joseph II., and has various good buildings.

At the western extremity is situated the imperial palace, a square edifice of vast extent ; but, having been buiit at different periods, the appearance of the exterior is very irregular. The interior is highly interesting, on account of the valuable collections which it contains. The riding academy here is said to be one of the largest in Europe ; but it is surpassed by an assembly- room called the hall of Apollo, which is capable of containing 10,000 peo- ple. The Belvidere, a palace built by prince Eu- gene, is in one of the suburbs. The imperial mews are capable of containing more than 400 horses ; the arsenal has an immense collection of arms, and many curious ornaments, of iron. All these edi- fices belong either to government or the imperial family.

Of the churches the whole number is twenty-nine, besides fourteen monasteries, and three convents. The ancient Gothic cathedral is dedicated to St. Stephen, and dates from 1270. The interior is elegant and simple, containing several fine monu ments, particularly that erected to prince Eugene. Its tower is of enormous height. The church ot St Peter is in the

Italian style. In that of the Au- gustinians, the ceremonies connected with the im- perial family are performed ; and it contains per- haps the most interesting monument in Vienna— that erected to the archduchess Maria Christina, by her husband, considered a master-piece of Ca nova's.

The great hospital, eqnal in extent to any in Paris or London, receives often 10,000 patients in the course of a year : there are separate hospitals for soldiers, Jews, foundlings, orphans, and aged persons. Several of these charitable establishments

are ser\ed by nuns. The lying-in hospitals are also on a liberal plan, and under good management.

Vienna has manufactures of silks, ribbons, gloves, lace, paper, earthen- ware, instruments, philosophi- cal and musical; maps, engravings, coaches, and carriages in general. In these, and a variety of other branches, a transfer of manufacture would be made to towns of greater salubrity and cheaper labor, did the country possess canal carriage, or even good roads. Those leading to Vienna are few compared to the approaches of London or Paris.

Vienna is tlie emporium of all tlie commerce of the Austrian states ; the place for exchange opera- tions, for extensive sales and purchases, for loans and contracts; in short, it is the London of Aus- tria, without any thing like an equal repartition of business to provincial towns. Yet the number of wholesale mercantile houses hardly exceeds 200. There is here an exchange, a bank chartered so lately as 1817, and an establishment on the plan of the Lombard or pawn bank of Hamburgh and other continental cities.

The university dates from 1237, and was under the management of the Jesuits, till the celebrated Von Swieten prevailed on the court, in the middle of the eighteenth century, to take it out of their hands. A botanical garden was now established ; medical men were sent to the most celebrated se- minaries in Europe, to observe the state of the science ; a military hospital and an anatomical theatre were founded ; and at a subsequent date a veterinary school. In consequence Vienna is by far the first medical school in Germany. The uni- versity of Vienna also has public classes for philo- Mijjhv, classical languages, literature, law, theology, without, however, surpassing in these departments the seminaries of Gottingen, Leipsic, and Halle. Tlie total number of professors is fifty-four ; that of assistants

eighteen. Vienna has likewise a se- minary for the oriental languages, an academy of fine arts, and an institution formed in 1770 for the reception of specimens of manufacture. Greek li- terature is also cultivated here : books are printed in Romaic, and a correspondence kept up with several schools in Greece. The military institu- tions are a school of cadets; and, since 1816, a polytechnic school for engineers, civil and military. Vienna contains five schools or seminaries for training teaciiers for provincial towns and villages.

The imperial library is very extensive ; and is said to consist of 12,000 MSS., and 300,000 print- ed volumes. Next to this comes the library of the university, computed at 90,000 volumes; the im- perial collection of medals and coins is reckoned the most complete in Europe.

The principal amusements of the people are the public walks and theatres. Of the latter, there are no less than five ; two in the city, which belong to the court, and three in the suburbs ; but all below mediocrity. The public walks are much better calculated to afford gratification. The Prater is an immense park on the east side of the town, be- longing to the court, but thrown open to the public. A number of slightly built coffee-houses are erected along the walks ; and parties are formed on the grass for taking coffee. The Augarten is another place of public resort to the north of the Prater, and separated from it only by an iron-railing. The Urigitten-Au is another agreeable walk ; but both are much less frequented than the Prater.

Corn, meat, and vine, are supplied in a great

measure from Hungary ; vegetables from the district around the capital. For fuel, the inhabitants use partly wood, partly coals and turf. The water drank in Vienna is not in general good ; and is of- ten found to disagree with strangers. Nor is the climate equally healthy with that of Londoner Paris. It is extremely variable, intense heat being not unfrequently followed by piercing cold. The po- pulation has been progressive for a century past ; and the total number at present is not below

270,000.

Under the name of Vindobona, Vienna was long the head quarters of a Roman legion, and after- wards fell successively into the hands of the Goths and Huns. In 791 Charlemagne attached it to his dominions : at that time, and for more than two centuries after, it was of inconsiderable extent; the church of St. Stephen, which is now nearly in its centre, having been erected in 1144, outside of the walls. The town continued, however, to increase. The most remarkable incidents in its history are its capture in 1484 by the Hungarians, under their king Mathias, who resided in it till his

death. In 1529 the Turks, supported by Hungarian insur- gents, ventured to approach this capital, and de- stroyed the suburbs. In 1619 the insurgents, sup- ported by a party in Austria, succeeded in penetrating into the city ; but a different result took place on an attempt made in 1625 by Tors- tenson, a Swedish general, commanding a mixed army of his countrymen and of German Protestants. The attack most generally known to the readers of history was that of 1683, made by a Turkish army, supported by disaffected chiefs in Hungary, but repulsed under the governor of Sobieski. In 1741, though pressed by the Bavarians on the west, and the French and Prussians on the north, Vienna was preserved ; and an increase of the army, with financial supplies from England, soon changed the aspect of affairs. In the present age it was threat- ened by Buonaparte in 1 797, and occupied by him in 180,'; and 1809. On both occasions proper discipline was observed by the invaders, and little injury done. Vienna suffered from the ravages of the plague, first in 1679, and afterwards in 1713. 630 miles east of Paris, and 896 south-east of London.

VIENNE, a river of France, which rises in the Limousin, and, flowing northward, joins the Loire, in the department of the Indre and Loire, two miles above Saumur. It gives name to two de- partments, and is navigable at some distance above its influx into the Loire.

VIENNE, a department of France, formed of the ancient province of Upper Poitou, and bounded on the north by the department of the Indre and Loire, on the south by that of the Charente. It has a superficial extent of 2800 square miles, and a population of 252,000, all Catholics, with the ex- ception of about 13,000 Protestants. The surface is for the most part level. The principal rivers are the Vienne, the Charente, the Dive, the Clain, and the Creuse. The principal productions are corn, pulse, potatoes, hemp, flax, and wine. Agricul- ture is very backward.

VIENNE, UPPER, a department in the west of France, including the greatest part of the Limousin, and traversed by the river Vienne, which flows northward to the Loire. It has a superficial extent of 2230 square miles, and a population of 240,000 This department is mountainous, produces com- paratively little corn, but has extensive pasturages

in which are reared quantities of horses, oxen, asses, and mules. Its forests are extensive, its game abundant. Its mineral products are marble, mines of

coal, iron, lead, and antimony. The depart- ment is divided into the four arrondissements of Limoges (the capital), Bella, Roche-chouart, and St. Yriex. Limoges is the seat of a bishop, and of a provincial court of the first class.

VIENNE, a town in the south-east of France, on the right bank of the Rhone, eighteen miles south of Lyons ; contains several public buildings, a ca- thedral, which is a fine Gothic edifice, erected on an eminence, and two good churches. The popu- lation is about 10,300 ; the manufactures, woollen, linen, hard-ware, leather, and colored paper. Vienne has various antiquities, among which are a square building, similar to that at Nimes, and supposed to have been a Roman temple ; a pedes- tal and entablature, surmounted by a pyramidal top, probably the tomb of some distinguished Roman. There are here also the remains of a theatre and amphitheatre, and several traces of aqueducts; arcades supposed to have belonged to a triumphal arch ; and, on the opposite bank of the Rhone, the piles of an ancient Roman bridge. It is mention- ed by Caesar as a place of consequence.

VIETA (Francis), a mathematician, born at Fontenay in 1540. He was the first who used let- ters in algebra to designate known quantities. He also made corrections on the calendar, and improve- ments in geometry. He died in 1603. His works were published, Paris, 1646, 1 vol. folio.

VIEW, v. a. & n.s. ˆ Fr. veu from veoir, or

VIEW'LESS, adj. S voir. To survey ; ex- amine ; perceive by the eye: a prospect; survey; examination by the eye ; appearance ; act or power of seeing ; sight ; mental survey ; intention ; de- sign ; hope : viewless is unseen, undiscernible.

Go, and view the country. Juˆhua.

To be imprisoned in the viewlest winds, And blown with restless violence about The pendant world. Shaktpeure.

Vast and indefinite views, which drown all apprehen- sions of the uttermost objects, are condemned by good authors. Walton.

Each stair mysteriously was meant, nor stood There always, but drawn up to heaven sometimes Viewleu. Milton.

They here with eyes aghast Viewed first their lamentable lot. Id.

Some safer resolution I've in view. Id.

The walls of Pluto's palace are in view. Dryden.

Time never will renew, While we too far the pleasing path pursue, Surveying nature with too nice a view. Id.

With a view to commerce, in returning from his ex- pedition against the Parthians, he passed through

fjVP" Arbuthnot.

Fisher, the Jesuit, in the year 1626, seconded the cardinal in the same plea, and upon the same views.

Waterlaad.

Cut wide news through mountain to the plain, You Ml wish your hill a sheltered hill again. Pope.

Whene'er we view some well-proportioned dome, No single parts unequally surprize ; All come united to the' admiring eyes. Id.

Light-bounding from the earth, at once they rise ; Their feet half viewless quiver in the skies. Id.

VIG'lL, n. $. \ Lat. vigilia. Watch ; de

VIK'ILANCE, I votions performed in the

VIG'ILANCY, ^customary hours of rest; a

VIO'ILAXT, adj. i fast or religious service be-

V i G'I LASTLY, air. J fore a holiday: vigilance is

forbearance of sleep; watchfulness ; guard; circu spect care : the adverb corresponding.

He that outlives this day, and sees old age, \Vill yearly on the vigil feast his neighbours. And say, to-morrow is St. Crispian. Shaktpeare.

No post is free, no place, That guard and most unusual vigilance Does not attend my taking. Id.

Thus, in peace, either of the kings so vigilantly ob- served every motion of the others, as if they had lived upon the alarm. Hayward.

In this their military care, there were few remarkable occasions under the

duke, saving his continual vigilancy, and voluntary hazard of his person. Wotton.

So they in heaven their odes and viyili tuned.

MiMb.

Though Venus and her son should spare Her rebel heart, and never teach her care ; Yet Hymen may perforce her vigils keep, And for another's joy suspend her sleep. Waller.

Shrines ! where their vigilt pale-eyed virgins keep, And pitying saints, whose statues learn to weep.

Pope.

And that which on the Baptist's vigil sends To nymphs and swains the vision of their friends.

Harte.

VIGIL, in church history, is the eve or next day before any solemn feast ; because then Christians were wont to watch, fast, and pray, in their churches.

VIGILS OF PLANTS, a term under which some botanists comprehend the precise time of the day in which the flowers of different plants open, expand, and shut. A flower which opens in Senegal at six will not open at the same season in France and England till eight or nine, nor in Sweden till ten. Linne" distinguishes by the general name of solar (flores solares), all those flowers which observe a determinate time in opening and shutting. These flowers are again divided from certain circum- stances, into three species, or kinds : 1. Equinoctial flowers (flores equinoctiales) are such as open and shut, at all seasons, at a certain fixed or deter- minate hour. 2. Tropical flowers (flores tropici) are such whose hour of opening is not fixed at all seasons, but accelerated or retarded according as the length of the day is increased or diminished. 3. Meteorous flowers (flores meteorici) are such whose hour of expansion depends upon the dry or humid state of the air, and the greater or less pres- sure of the atmosphere. Of this kind is the Si- berian sow thistle, which shuts at night if the en- suing day is to be clear and serene, and opens if it is to be cloudy and rainy. In like manner the African marigold, which in dry serene weather opens at six or seven in the morning, and shuts at four o'clock in the afternoon, is a sure indica- tion that rain will fall during the course of the day, when it continues shut after seven.

VIGILIUS, an African prelate, and polemical writer, who flourished about A. D. 484. His works were printed at Dijon, 1665, 4to.

VIGNOLE (James Baroggio), architect, was born at Vignola, in 1507. He died at Rome, 1573. He wrote a treatise on the five orders of architecture, 3 vols. 4to.

VIG'OR, n. s. -\ Latin vigor. Force;

VIG'OROUS, adj. f strength ; energy ; mental

VIGOROUSLY, adv. £ force: the adjective, ad-

*Vir/oROUSNESS,n.«. * verb, and noun substantive following correspond.*

He hath given excellent sufferance and vigoroutnea to the sufferers, arming them with strange courage.

heroical fortitude, invincible resolution, and glorious patience. Taylor.

Pernicious fire withered all their strength, And of their wonted vigour left them drained. Milton.

Famed for his valour young ; At sea successful, vigorous, and strong ! Waller.

The vigour of this arm was never vain : Witness these heaps of slaughter. Dryden.

Though the beginnings of confederacies have been always vigorous and successful, their progress has been generally feeble, and event unfortunate. Davenant.

If the fire burns bright and vigorously, it is no matter by what means it was at first kindled. South.

Their appetite is not dulled by being gratified, but re- ttt.-E« always fresh and vigorotu. Atterbury.

VILE, adj. ~\ Fr. vil ; Lat. vilis. Base; VI'LED, adj. I mean ; worthless ; despicable ; VILE'LY, adv. \ sordid : viled, abusive ; defama- VILL'NESS,

n.s. i tory : vilely, basely; meanly: VIL'IFY, v. a. J the noun substantive corres- ponding : to vilify is to debase ; degrade ; defame. Our case were miserable, if that wherewith we most endeavour to please God were in his sight so vile and despicable as men's disdainful speech would make it.

Hooker.

I disdaining scorned, and craved death, Rather than I would be so vile esteemed. Stiakspeart. The Volscians vilely yielded the town. Id.

He granted life to all except one, who had used viled speeches against king Edward. Hayward.

Tomalin could not abide To hear his sovereign vilified. Drayton.

That sinful creature man elected is, And in our place the heavens possess he must ; Vile man, begot of clay, and born of dust. FHI//KT.

Reflect on the essential vilcness of matter, and its im- potence to conserve its own being. Creech.

Restored by thee, vile as I am, to place Of new acceptance. Milton.

Considering the vileness of the clay, I wondered that no tribune of that age durst ever venture to ask the potter, What dost thou make? Swift.

How can I

Forget my Hector, treated with dishonour, Deprived of funeral rites, and vilely dragged, A bloody corse, about the walls of Troy. A. Philips.

The displeasure of their friend those may expect who would put in practice all methods to vilify his person.

Addison.

UILKENS (James Albert), divine and naturalist, was born atWierum, nearGroningen, in 1772, and was passed through his academical studies at Gronin- gen with reputation. In 1795 he took the degree of M. D. On proceeding doctor in philosophy, he supported an ingenious thesis On the Nature of the Atmosphere ; and afterwards produced an Elementary Treatise on Physics, for which he ob- tained the prize offered by a learned society. This work became very popular. His Discourse on the Perfections of the Creator considered in the Crea- ture, 4 vols. 8vo., is another valuable piece, as also are his Memoir on the Utility of Insects.; and his Manual of Technology. In 1815 he was chosen to the newly established chair of Rural

Economy at Groningen, and in 1819 published a treatise on that subject. He died in 1825, having written se- veral other works.

VILL, n. s. Fr. ville ; Lat. villa. A village; a small collection of houses. Little in use.

This book gives an account of the manureable lands in every manor, town, or vill. Hale.

VIL'LA, n. s. Lat. villa. A country seat. The antient Romans lay the foundations of their w/«w and palaces within the borders of the sea. Addison.

All vast possessions ; just the same the case, Whether you call them villa, park, or chace. Pope.

At six hours distance from Bizantium's wails. Where Bosphorus into the Euxine falls, In a gay district, called the Elysian vale, A furnished villa stands, proposed for sale. Harte.

VILLA FRANCA, an old town on the southern coast of the island of St. Michael, one of the Azores. It is founded on lava, and partly destroyed by- earthquakes ; prior to which it was the principal town of the Azores. It now contains only 2000 inhabitants ; and the commerce has been transferr- ed to Ponte del Jada.

VILLA FRANCA, a town of Italy, in Piedmont, the resort of consumptive invalids. It has a spaci- ous and secure harbour, and a dock for the royal galleys. Its trade, however, is limited. Popula- tion 2200. Two miles east of Nice.

VILLA FRANCA, another town of Piedmont, con- tains nearly 7000 inhabitants, and is situated in a fertile plain on the banks of the Po. Twenty miles south by west of Turin.

VILLA REAL, a town of Spain, in Valencia, on the Mijares, near the Mediterranean. It has 7000 inhabitants, who manufacture woollens and silks. The vicinity is favorable to the culture of the vine and mulberry tree. Thirty-five miles north by east of Valencia, and twenty east of Segorbe.

VILLA RICA, a town of Brasil, the capital of the province of Minas Geraes, is situated on the side of a large mountain. Most of the streets range in steps, as it were, from the base to the summit, and are crossed by others which lead up the acclivity. The town is divided into two parishes, and con" tains about 20,000 inhabitants, white and black. The climate is delightful. The greatest heats pre- vail in January : thunder storms are

common, but by no means violent, and the sun is sometimes clouded by dews and mist, so dense as not to sub- side until the forenoon is far advanced. As there is scarcely a piece of level ground, even ten yards square, on the whole side of the mountain, the de- fect has been remedied by cutting spaces one above another at regular distances, and supporting them by low walls, the top of one being on a level with the base of that next above it. An easy flight of steps leads from one to the other. These terraces are covered with a profusion of the most delicate flowers. The market of Villa Rica was, according to Mr. Mawe, but ill provided ; pulse and vege- tables for the table were scarce : even grass was an article in great demand, and milk was as dear as in London. Poultry sold at frorn,3s. 6d. to 4s. 6d. per couple. Beef of a tolerable kind, but by no means good, might be had at IJrf. per pound. Pork was very fine. Tallow was exceedingly dear; but English manufactures were in abundance. It owes its origin to the rage for discovering gold mines ; and at present is much declined from its former consequence.

VIL'LAGE, n.s.\ Fr. village. A small col Vi L' LAGER, f lection of houses in the coun-

VIL'LAGERY, itry» less than a town: an VILLAT'IC, adj. 'inhabitant of a village: a district or collection of villages: villatic is belong- ing to villages.

The country villages were burnt down to the ground.

Knolles.

The early village cock Hath twice done salutation to the morn. Shaksveure.

Brutus had rather be a villager, Than to repute himself a son of Rome Under such hard conditions. /

Robin Goodfellow, are you not he That fright the maidens of the villugery 1 Id.

When once her eye

Hath met the virtue of this magick dust, I shall appear some harmless villager; Whom thrift keeps up about his country geer. Milton.

Next in order ranged

Of tame villatic fowl. Id.

If there are conveniences of life, which common use reaches not, it is not reason to reject them because «very villager doth not know them. Locke.

VIL'LAIN, n. s. ~) Fr. vilain ; low Lat. vil- VIL'LANAGE, { lanus. One who held by a

VIL'LANIZE, v.a. [base tenure: hence, in VIL'L ANGUS, adj. \ modern times, a low man Vii,'LANOUSLY,fldt>. | from whatever cause; a VIL'LANY, n. s.) wicked wretch : villanage, the state or tenure of a villain ; servitude ; base- ness; infamy: villanize, to debase; degrade; de- fame: villanous, base; vile; sorry; wicked: the adverb following corresponds : villany is wicked- ness ; baseness ; a wicked action.

We were prevented by a dozen armed knights, or rather villains, who, using this time of their extreme feebleness, all together set upon them. Sidney.

They exercise most bitter tyranny Upon the parts brought into their bondage : .No wretchedness is like to sinful villanasff. Spenser.

O villain! villain! his very opinion in the letter. Ab- horred villain! unnatural, detested, brutish villain!

fihakijieare.

We shall lose our time, And all be turned to barnacles or apes, With foreheads villanou low. Id.*

The Irish inhabiting the lands fully conquered, being in condition of slaves and villains, did render a greater revenue than if they had been made the king's free sub- jects. Davies.

Upon every such surrender and grant there was but one freeholder, which was the lord himself ; all the rest were but tenants in villanage, and were not fit to be sworn in juries. Id.

Such villaniei roused Horace into wrath ;

And 'tis more noble to pursue his path

Than an old tale. Dryden.

No villany, no flagitious action, was ever yet com- mitted, but a lie was first or last the principal engine to effect it. \iutk.

Calm thinking villains, whom no faith could fix ; Of crooked counsels and dark politicks. Pope.

VILLAIN, or VILLEIN, in our ancient customs, denotes a man of servile or base condition, viz. a bond-man or servant.

VILLALPANDUS (John Baptist), Jesuit, who died in 1608. lie wrote a comment on Ezekiel, 3vols. folio, 1596, and an Exposition of St. Paul's Epistles.

VILLARET (Claude), born at Paris 1715. He was first an actor, then became an author. He continued Velley's History of France, and wrote a treatise on Acting, and a tract On the Mind of Voltaire. He died in 1766.

VILLARS (Lewis Hector), peer and marshal of France, and grandee of Spain, was born at Mou- lins in 1653. After distinguishing himself on va- rious occasions in the army, he was made marshal-

In 1733 he was sent into Italy, where he took Pisighitone, and died at Turin 1734.

VILLENAGE, in law. The folk-land, or es- tates held in villenage, was a species of tenure not strictly feudal, Norman, or Saxon ; but mixed and compounded of them all; and which also, on account of the heriots that usually attend it, may seem to have somewhat Danish in its composition. Under the Saxon government there were, as Sir William Temple speaks, a sort of people in a con- dition of downright servitude, used and employed in the most servile works, and belonging, both they, their children, and effects, to the lord of the soil, like the rest of the cattle or stock upon it. These seem to have been those who held what was called the folk-land, from which they were re- moveable at the lord's pleasure. On the arrival of the Normans here, it seems not improbable, that they, who were strangers to any other than a feudal state, might give some sparks of enfranchise- ment to such wretched persons as fell to their share, by admitting them, as well as others, to the oath of fealty ; which conferred a right of protection, and raised the tenant to a kind of estate superior to downright slavery, but inferior to every other con- dition. This they called villenage, and the tenants villeins. These villeins, belonging principally to the lords of manors, were either villeins regardant, that is, annexed to the manor or land ; or else they were in gross, or at large, that is, annexed to the person of the lord, and transferable by deed from one owner to another. They could not leave their lord without his permission ; but if they ran away, or were purloined from him, might be claimed and recovered by action, like beasts or other chattels. They held indeed small portions of land by way of sustaining themselves and families ; but it was at the mere will of the lord,

who might dispossess them whenever he pleased ; and it was upon villein services, that is to carry out dung, to hedge and ditch the lord's demesnes, and any other the meanest offices : and their services were not only base but uncertain both as to their time and quantity. A villein could acquire no property, either in lands or goods; if he purchased either, the lord might seize them to his own use; unless he contrived to dispose of them again before the lord had seized them. In many places also a fine was payable to the lord, if the villein presumed to marry nis daughter to any one without leave from the lord, and, by the common law, the lord might also bring an action against the husband for damages for thus purloining his property. For the children of vil- leins were also in the same state of bondage with their parents ; whence they were called in Latin nativi, which gave rise to the female appellation of a villein, who was called a neife. In case of a marriage between a freeman and a neife, or a vil- lein and a free woman, the issue followed the condition of the father, being free if he was free, and villein if he was villein ; contrary to the maxim of the civil law, that partus sequitur ventrem. But no bastard could be born a villein, because by another maxim of our law he is nullius filius ; and as he can gain nothing by inheritance, it were hard that he should lose his natural freedom by it. The law, however, protected the persons of villeins against atrocious injuries of the lord : for he might not kill or maim his villein ; though he might beat him with impunity. Villeins might be enfranchised by manumission. In process of time they gained

considerable ground on their lords; and in particular strengthened the tenure of their estates to that de- gree that they came to have in them an interest in many places full as good, in others better than their lords. For the good-nature and benevolence of many lords of manors having, time out of mind, permitted their villeins and their children to enjoy their possessions without interruption, in a regular course of descent, the common law, of which cus- tom is the life, now gave them title to prescribe against their lords ; and, on performance of the same services, to hold their lands, in spite of any determination of the lord's will. For though in general they are still said to hold their estates at the will of the lord, yet it is such a will as is agree- able to the custom of the manor ; which customs are preserved and evidenced by the rolls of the se- veral courts baron in which they are entered, or kept on foot by the constant immemorial usage of the several manors in which the lands lie. And as such tenants had nothing to show for their estates but these customs, and admissions in pursuance of them entered on these rolls, or the copies of such entries witnessed by the steward, they now began to be called tenants by copy of court roll, and

their tenure itself a copyhold.

VILLENAGE, PRIVILEGED, a species of tenure otherwise called villein soccage. See TENURE. Ancient demesne consists of those lands or manors which, though now perhaps granted out to private subjects, were actually in the hands of the crown in the time of Edward the Confessor or William the Conqueror, and so appear to have been, by the great survey in the exchequer, called doomsday book. The tenants of these lands, under the crown, were not all of the same order or degree. Some of them, as Britton testifies, continued for a long time pure and absolute villeins, dependent on the will of the lord ; and common copyholders in only a few points. Others were in a great mea- sure enfranchised by the royal favor ; being only bound in respect of their lands to perform some of the better sort of villein services; but those deter- minate and certain ; as, to plough the king's land for so many days, to supply his court with such a quantity of provisions, and the like ; all of which are now changed into pecuniary rents ; and in con- sideration hereof they had many immunities and privileges granted to them ; as, to try the right of their property in a peculiar court of their own, called a court of ancient demesne, by a peculiar process denominated a writ of right close; not to pay toll or taxes ; not to contribute to the expenses of knights of the shire ; not to be put on juries, and the like. These tenants, therefore, though their tenure be absolutely copyhold, yet have an interest equivalent to a freehold : for though their services were of a base and villeinous original, yet the tenants were esteemed in all other respects to be highly privileged villeins ; and especially for that their services were fixed and determinate, and that they could not be compelled (like pure vil- leins) to relinquish those tenements at the lord's will, or to hold them against their own : et ideo (says Bracton) dicuntur hberi. Lands holding by this tenure are therefore a species of copyhold, and as such preserved and exempted from the operation of the statute of Charles II. Yet they differ from common copyholds, principally in the privileges before mentioned : as also they differ from free- Jioldr-rs by one especial mark and tincture of

villenage, noted by Bracton, and remaining to this day, viz. that they cannot be conveyed from man te man by the getieral common law conveyances of feoffment, and the rest ; but must pass by surrender to the lord or his steward, in the manner of com- mon copyholds ; yet with this difference, that, in the surrenders of these lands in ancient demesne, it is not used to say, ' to hold at the will of their lord,' in their copies ; but only, ' to hold according to the custom of the manor.'

VILLENEUVE, novel writer, was the widow of a French lieutenant- colonel. Her novels are numerous. She died in 1755.

VILLERS (Charles Francois Dominique de), a modern French writer, was a

native of Belchen in Lorraine, where he was born 1764. In the earlier part of his life he served as a lieutenant of artillery, but on the breaking out of the revolution emigrated, and joined the Royalist force under the prince de Conde. After this he retired to Lubec, and devoted himself to literary pursuits. Villers obtained the prize given by the institute for an Essay on the Influence of the Reformation ; and was at length invited to fill the professor's chair in philosophy at Gottingen. This situation, when the French influence predominated, he was compelled to resign, but received a pension. During the oc- cupation of Hanover by the troops of that nation, under Davoust, the excesses committed by the soldiery induced him to address a letter to Fanny Beauharnois, with the hope of procuring, through her interest, some mitigation of these evils; but the only effect was to draw on its author the personal hatred of the French commander. He also addressed to the Institute two reports on the state of ancient literature, and on the history of Germany. The Swedish government made him a chevalier of the order of the polar star. Villers died in the spring of 1815.

YILLIERS (George), duke of Buckingham, was born at Brookesby, 1592. He became a very great favorite of James I., who advanced him to his dignity of duke, and made him a knight of the garter, lord high admiral, and master of the horse, and gave him the disposal of all places in church and state. He retained the same place in the favor of Charles I., but the people detested him. He took the command of an expedition for the relief of Rochelle, instead of which he made a descent on the Isle of Rhe, and lost the greater part of his troops. A new expedition was planned, but he was stabbed by a lieutenant Fellon, when at Portsmouth ready to embark, 23d of August 1628.

VILLIERS (George), duke of Buckingham, son of the preceding, was born in 1627. He was educated at Cambridge, and, on the breaking out of the civil wars, served the king with great zeal, till the ruin of the royal cause, when he went abroad. He afterwards accompanied Charles II. to Scotland, and was with him at the battle of Worcester, when he had the good fortune to escape. By marrying the daughter of lord Fairfax, he recovered a principal part of his estate before the Restoration, when he was made a lord of the bed-chamber, member of the privy-council, and master of the horse. But, entering into a conspiracy against the king, he lost his places. He afterwards recovered the royal favor, and was sent ambassador to France. He died in 1688. He wrote tne celebrated comedy of the Rehearsal, and some uoems. His morals were very dissipa'?d.

VIL'LOUS, adj. Lat. villotus. Shaggy; rough; furry.

The liquor of the stomach, which with fasting grows sharp, and the quick sensation of the inward vitlous coat of the stomach, seem to be the cause of the sense of hunger. Arbuthnot.

VIMIN'EOUS, adj. Lat. vimintu. Made of twigs.

As in the hive's vimineous dome Ten thousand bees enjoy their home ; Each does his studious action vary, To go and come, to fetch and carry. Prior.

VINCA, in botany, a genus of the monogynia order, and pentandria class of plants ; natural order thirtieth, contorts : COR. twisted ; there are two erect follicles : SEEDS naked. There are five spe- cies ; only two of which are natives of Britain. 1. V. major, great periwinkle. It has a woody, erect stem ; leaves broader and sharper pointed ; pedicles of the flowers straight, and calyx as long as the tube; otherwise like the next. 2. V. minor, small periwinkle, has a woody, creeping, slender, crooked stem ; leaves long, oval, entire, pointed, opposite, glossy. Flowers single, on long curved pedicles from the alae of the leaves, which are large and blue.

VINCE (Rev. Samuel), A. M., F. R. S., late Plu- mian professor of astronomy and experimental philosophy at Cambridge, was of humble Suffolk parentage ; but the munificence of Mr. Tilney, of Ilarleston, enabling him to enter himself of Caius College in 1775, he distinguished himself by gain- ing one of Smith's mathematical prizes, and became the senior wrangler of his year. In 1796, then a fellow of Sidney Sussex College, he was elected to the professorship, which he afterwards filled in so distinguished a manner, and which he held till his death in 1821. His works are a treatise on the Elements of Conic Sections, 8vo. 1781; another on Practical Astronomy, 4to., 1790; Plan of a Course of Lectures on Natural Philosophy, 8vo., 1793; The Principles of Fluxions, 2 vols., 8vo., 1795 ; The Principles of Hydrostatics, 8vo., 1796, 1800 ; A Complete System of Astronomy, 2 vols., 4to., 1797-1799 : 3 vols., 4to., with additions, 1814; A Vindication of Christianity against the objections of Hume, in two discourses, preached before the University, 1798-1809; A Treatise on Trigonometry, the nature and use of Logarithms, Sec., 8vo., 1800; A Confutation of Atheism, from the Laws of the Heavenly Bodies, 8vo., 1806 ; and On the Hypotheses accounting for Gravitation from Mechanical Principles, 8vo., 1806. He was, at the time of his decease, rector of Kirkby Bedon, vicar of South Creak (both in Norfolk), and arch- deacon of Bedford.

VINCENNES, a town and castle of France, near the confluence of the Seine and Marne, about three miles east of Paris. The castle was built in a remote age, as a country residence of the royal family. It continued a palace during three centuries; but, since Louis XIV. removed the court of Versailles, has been used as a state prison. It is surrounded by a deep ditch, and has nine towers, of great height and solidity. The largest, called the dungeon, is surrounded by a separate ditch of forty feet in depth. It was here that the unfortunate duke d'Enghien was murdered on 21st March 1804. Adjoining to the castle is a fine park, and a forest called the Bois de Yin-

cennes, a favorite resort of the Parisians. Popula- tion 1800.

VINCENNES, a post town of the United States, and capital of Knox county, Indiana, on the east bank of the Wabash, 100 miles from its junction with the Ohio, in a direct line, and nearly 200 miles by the course of the river.

VINCENT (Thomas), a divine who continued to preach regularly during the plague. He died in 1671. He wrote God's Terrible Voice in the City by Plague and Fire, an Explanation of the Cate- chism, and other religious books.

VINCENT (Nathaniel), a non-conformist, wrote the Conversion of a Sinner, and the Day of Grace, 8vo. ; several sermons and other pious books. He died in 1697.

VINCENT (William), D. D., master of West- minster School, was born in London in 1739. He was educated at Westminster, and Trinity College, Cambridge, where he obtained a fellowship. In 1762 he became an usher, and nine years after suc- ceeded to the office of second master, at Westmin- ster. He now took the degree of D. D., and was appointed chaplain in ordinary to the king. In 1778 he became vicar of Longdon, in Worcester- shire ; but soon after resigned his benefice for the rectory of Allhallows, Thames Street, in London. In 1788 he became head master at Westminster, where he continued to preside till 1801, when he was made a prebend ; and two years after he suc- ceeded to the deanery of Westminster, on the pro- motion of Dr. Horsley to the see of St. Asaph. As an author dean Vincent is principally known on account of his commentary on Arrian's Voyage of Nearchus ; and his Periplus of the Erythrean Sea, repuhlished together under the title of The Com- merce and Navigation of the Ancients in the Indian Ocean, 1807, 2 vols., 4to. The Voyage of Near- chus was translated into French by Billecocq, Paris, 1800. Dr. Vincent died in December 1815. He published also The Conjugation of the Greek Verb, and the Greek Verb Analysed ; A Defence of Public Education ; and a

Charity Sermon. A volume of his Discourses, with his life, was pub- lished posthumously.

VINCENT (St.), an island of the West Indies, is twenty-three miles long, and eighteen broad containing 84,000 acres, of which nearly one hal consist of mountains incapable of improvement. The island is sufficiently watered by twenty small rivers, turning sugar mills. It is divided into five parishes, with one town, named Kingston, on the south-west, and three insignificant villages. The population in 1787 was 1450 whites and 11,853 negroes. In the same year the exports of the island sold for £186,450 in England. They were composed of coffee 634 cwt., cotton 761,880 Ibs., sugar 65,000 cwt., rum 88,000 galls., and cocoa 143 cwt. The peace establishment of the island is a regiment of regular infantry, and a company of artillery, besides a Negro corps, raised in the island, and a militia of two regiments, serving without pay. The governor's salary is £2000.

VINCENT, CAPE ST., the south-west point of Portugal, noted for the naval victory gained off it on 14th February 1797, by Sir John Jervis. Long. 8° 58′ 39″ W., lat. 37° 2′ 54″ N.

VINCENT (St.), BAY, a bay on the north coast of Terra del Fuego, a little to the east of cape St. Vincent.

VINCENTIUS, one of the Christian Fathers

VINEGAR.

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A.D. 434. His works are best edited by Balu- lius, Paris, 1699.

VINCI (Leonard), Da, was born in the castle of Vinci near Florence in 1445. Verochio was his master, whom he soon excelled, as he did all the painters of his time. At Milan he founded his ce- lebrated school of painting. He was also an excel- lent architect, and constructed the famous aqueduct which supplies Milan with water. From that place he went to Florence, where he labored with Michael Angelo, in ornamenting the grand council chamber. At the invitation of Francis I. he visited the French court, where he died in the arms of that monarch, in 1520. He composed a great number of discourses on curious subjects; but none of them have been published but his Treatise on the Art of Painting.

VIN'CIBLE, adj. Lat. vinco. Conquerable; supe table.

He, not vincible in spirit, and well assured that short- ness of provision

would in a short time draw the sedi- tious to shorter limits, drew his sword. Haytcard.

VINCULUM, in algebra, a character in form of a line, or stroke drawn over a factor, divisor, or dividend, when compounded of several letters or quantities, to connect them, and shows that they are to be multiplied or divided, &c., together by the other term. Thus d x a + b — c shows that d is to be multiplied into a + b — c.

VINDALIUS, a writer in the age of Augustus, who wrote ten books on agriculture.

VINDELICI, an ancient people of Germany, between the head of the Rhine and the Danube ; Vindelicia, their country, forms now part of Su- abia, and Bavaria, and Augsburg was their chief town, Augusta Vindelicorum.

VINDE'MIATE, v. n. Lat. vindemia. To gather the vintage.

Now vindemiate, and take your bees towards the ex- piration of this month. Evelyn.

\ INDEX (Julius), a governor of Gaul, who revolted against Nero, and on being defeated slew himself.

VIN'DICATE.u. a.} Lzl.vindico. Tojustify;

\ INDICA'TIOX, n. s. I support; maintain; clear;

A IXDIC'ATIVE, adj. '^protect from censure;

YIN'DICATOR, n.s. \ avenge : vindication, vin-

VINDIC'ATORY, adj. | dicative, vindicator, and

VIXDIC'TIVE. J vindicatory, follow all

these senses : vindictive means given to revenge; malicious ; and is only used in this sense.

He, in heat of action, Is more vindicative than jealous love. Shahspeare.

Public revenges are for the most part fortunate ; but in private revenges it is not so. Vindicative persons live the life of witches, who, as they are mischievous, so end they unfortunate. Bacon.

The afflictions of Job were no vindicatory punish- ments to take vengeance of his sins, but probatory chas- tisements to make trial of his graces.

Bramhall.

The fruits of adusted clioler, and the evaporations of a vidicative spirit. Howel.

I may assert eternal providence, And vindicate the ways of God to man. Milton.

The more numerous the offenders are, the more his justice is concerned to vindicate the affront. Tillotson.

Suits are not reparative. but vindictive, when they are commenced against insolvent persons. Kettlewell.

Augustus was of a nature too vindictive to have con- tented himself with so small a revenge. Dryden.

Assemble ours, and all the Theban race. To vindicate on Athens thy disgrace. Id.

Distinguish betwixt a passion purely rindicatiif, and

those counsels where divine justice avenges the inno- cent. L'Estrange.

Do not too many believe no zeal to be spiritual but what is censw

Where the respondent denies any proposition, the opponent must directly vindicate and confirm that propo- sition ; i. e. he must make that proposition the con- clusion of his next syllogism. Watts.

VINE, n.s. \ Lat. vinea. The plant that

VINE'YARD, /bears the grape: the field or

VI'KOUS, adj. \ ground where vines grow : vi-

VINT'AGE, n.s. i nous is consisting, or having the

VIKT'NER. j qualities, of wine : vintage, the annual produce of vines, or the season for gathering it : vintner, a seller of wine.

The captain left of the poor to be ein«-dressers.

2 Kings.

The vine-fTOf elm, the poplar never dry. Spenser.

Let us not live in France ; let us quit all, And give our vineyardt to a barbarous people. Shaksp.

The vintner may draw what religion he pleases.

Howell.

The best wines are in the driest vintages. Bac«n.

Our first success in war makes Bacchus crown, And half the vintage of the year our own. Waller.

The motion of the oily drops may be in part due to some partial solution made by the vinous spirit. Boyle. Water will imbibe

The small remains of spirit, and acquire

A vinous flavour. Philip.*

Depending vines the shelving cavern screen, With purple clusters blushing through the green.

Pope.

The vintntr, by mixing poison with his wines, de- stroys more lives than any malignant disease. Swift.

VINE, in botany. See VITIS.

*VIN'EGAR, n. *. Fr. vinaigre. Wine, or vi- nous liquor, grown sour; any thing acid or acrid, literally or metaphorically.*

Some laugh like parrots at a bag-piper, And others of such vinegar aspect That they'll not shew their teeth in way of smile.

Shakspeare.

Vinegar is made by setting the vessels of wine against the hot sun ; and therefore vinegar will not burn, much of the finer parts being exhaled. Bacon.

Heaven's blest beam turns vinegar more sour. Pope.

VINEGAR, acetum, an agreeable acid and pene- trating liquor, prepared from wine, cyder, beer, and other liquors ; of considerable use, both as a medicine and a sauce. The word is French, vinai- gre; formed from vin, 'wine;' and aigre, 'sour'. See ACETUM, and CHEMISTRY. Wine and other vinous liquors are changed into vinegar by the ace- tous fermentation, which is nothing more than the acidification or oxygenation of wine, produced in the open air by means of the absorption of oxygen. Vinegar is com posed of hydrogen and carbon united together in proportions not yet ascertained, and changed into the acid state by oxygen. As vinegai is an acid, we might conclude from analogy that it contains oxygen; but this is put beyond doubt by direct experiments. In the first place, we cannot change wine into vinegar without the contact of air containing oxygen; secondly, this process is ac- companied by a diminution of the air in which it is carried on from the absorption of its oxygen ; and, thirdly, wine may be changed into vinegar by any other means of oxydation. Independent of tht proofs which these facts furnish of the acetous acid being produced by the oxygenation of wine, an ex periment made by Chaptal gives a distinct view of

what takes place in the process. He impregnated some water with about its own bulk of carbonic acid gas, procured from beer vats in fermentation ;

and placed this water in a cellar, in vessels com- municating with the air, and in a short time the whole was converted into acetous acid. This carlionic acid gas, procured from beer vats in fermen- tation, is not perfectly pure, but contains a great quantity of alcohol in solution ; wherefore water im- pregnated with it contains all the materials necessary for forming the acetous acid. The alcohol furnishes hydrogen and one portion of carbon; the carbonic furnishes oxygen, and the rest of the carbon ; and the air of the atmosphere furnishes the rest of the oxygen necessary for changing the mixture into acetous acid. From this observation it follows that nothing but hydrogen is wanting to convert carbonic acid into acetous acid; or, more generally, that by means of hydrogen, and according to the degree of oxydation, carbonic acid may be changed into all the vegetable acids : and, on the contrary, that, by depriving any of the vegetable acids of their hydrogen, they may be converted into carbonic acid.

A process still frequently used in making vinegar consists in fixing two casks in a warm room or plac?, to which two false bottoms of basket-work are fixed at a certain distance, upon which the refuse of grapes and vine twigs are placed. One of these tuns is filled with wine, and the other only half filled. The fermentation begins in this last; and, when it is in full action, it is checked by filling the cask up with wine out of the other. The fermenta- tion then takes place in the last mentioned cask, that remained half filled ; and this is checked in the same manner by pouring back the same quantity of liquid out of the other : and in this way the process is continued till the vinegar is made, which is usually in about fifteen days. When the fermentation developes itself, the liquid becomes heated and turbid ; a great number of filaments are seen in it; it emits a lively smell ; and much air is absorbed, according to the observation of the abbe" Rozier. A large quantity of lees is formed, which subsides when the vinegar becomes clear. This lees is very analogous to the fibrous matter. Vinegar is purified by distillation. The first portions which pass over are weak ; but soon afterwards the acetous acid rises, and is stronger the later it comes over in the distillation. This fluid is called distilled vinegar; and is thus cleared of its coloring principle, and the lees, which are always more or less abundant. Vinegar may likewise be concentrated by exposing it to the frost. The superabundant water freezes, and leaves the acid more condensed.

Take however a middling sort of beer, indifferently well hopped; into which, when it has worked well and grown fine, put some rape, or husks of graces, usually brought home for that purpose ; mash them together in a tub : then, letting the rape settle, draw off the liquid part, put it into a cask, and set it in the sun as hot as may be ; the bung being only covered with a tile, or slate-stone : and in about thirty or forty days it will become a good vinegar, and may pass in use as well as that made of wine if it be refined, and kept from turning musty. Or thus: — To every gallon of spring-water

add three pounds of Malaga raisins; which put into an earthen jar, and place them where they may have the hottest sun from May till Michaelmas ; then pressing all wt-il tun the liquorup in a very strong iron-hooped !, to prevent its bursting: it will appear very

thick and muddy when newly pressed : but wilS refine in the vessel, and be as clear as wine. Thus let it remain untouched for three months oefbre it is drawn off, and it will prove excellent vinegar.

Met hud of making cyder into vinegar. — The cydei (the meanest of which will serve the purpose) is first to be drawn off fine into another vessel, and a quantity of the must of apples to be added : the whole is set in the sun, if there be conveniency for it ; and at a week or nine days end it may be drawn off.

Method of making wine into vinegar. — Any sort of vinous liquor being mixed with its own feces, flowers, or ferment, and its tartar first reduced to powder ; or else with the acid and austere stalks of the vegetable whence the wine was obtained, which hold a large proportion of tartar ; and the wholebeing kept frequently stirring in a vessel which has for- merly held vinegar, or set in a warm place full of the steams of the same, will begin to ferment anew, conceive heat, grow sour by degrees, and soon after turn into vinegar. The remote subjects of acetous fermentation are the same with those of vinous; but the immediate subjects of it are all kinds of vegetable juices, after they have once undergone that fermentation which reduces them to wine; for it is absolutely impossible to make vinegar of must, the crude juice of grapes, and other ripe fruitc, with- out the previous assistance of vinous fermentation. The proper ferments for this operation, whereby vinegar is prepared, are, l.The faeces of all acid wines. 2. The lees of vinegar. 3. Pulverized tartar, especially that of Rhenish wine, or the cream or crystals thereof. 4. Vinegar itself. 5. A wooden vessel well drenched with vinegar, or one that has long been employed to contain it. 6. Wine that has often been mixed with its own faeces. 7. The twigs of vines, and the stalks of grapes, currants, cherries, or other vegetables of an acid austere taste. 8. Bakers' leven, after it has turned acid. 9. All manner of ferments, compounded of thflse already mentioned.

Acetic acid is the chemical name of the same acid which, in a very dilute and somewhat impure state, is called vinegar.

This acid, says Dr. Ure, is found combined with potash in the juices of a great many plants ; par- ticularly the sambucus nigra, phcenix dactilifera, galium verum, and rhus typhinus. Sweat, urine, and even fresh milk contain it. It is frequently generated in the stomachs of dyspeptic patients. Almost all dry vegetable substances, and some animal, subjected in close

vessels to a red heat, yield it copiously. It is the result likewise of a spontaneous fermentation, to which liquid vege- table and animal matters are liable. Strong acids. as the sulphuric and nitric, develope the acetic by their action on vegetables. It was long supposed, on the authority of Boerhaave, that the fermenta- tion which forms vinegar is uniformly preceded by the vinous. This is a mistake. Cabbages sour ii. water, making sour crout; starch in starch-maker sour waters ; and dough itself, without any previous production of wine.*

The varieties of acetic acids known in commerce are four: — 1. Wine vinegar; 2. Malt vinegar; 3. Supar vinegar ; 4. \Vood vinegar. We shall de- scribe first the mode of making these commercial articles, and then that of extracting the absolute acetic acid of the chemist, either from these vine- gars, or directly from chemical compounds,

which it is a constituent. The following is the plan of making vinegar at present practised in Paris : — The wine destined for vinegar is mixed in a large tun with a quantity of wine lees, and the whole being transferred into cloth sacks, placed within a large iron-bound vat, the liquid matter is extruded through the sacks by superincumbent pressure. What passes through is put into large casks, set upright, having a small aperture in their top. In these it is exposed to the heat of the sun in summer, or to that of a stove in winter. Fer- mentation supervenes in a few days. If the heat should then rise too high, it is lowered by cool air and the addition of fresh wine. In the skilful regu- lation of the fermentative temperature consists the art of making good wine vinegar. In summer the process is generally completed in a fortnight : in winter double the time is requisite. The vinegar is then run off into barrels, which contain several chips of birch-wood. In about a fortnight it is found to be clarified, and is then fit for the market. It must be kept in close casks.

The manufacturers at Orleans prefer wine of a year old for making vinegar. But if by age the wine has lost its extractive matter, it does not readily undergo the acetous fermentation. In this case acetification, as the French term the process, may be determined by adding slips of vines, bunches of grapes, or green woods. It has been asserted that alcohol, added to fermentable liquor, does not increase the product of vinegar. But this is a mistake. Stahl observed, long ago, that if we moisten roses or lilies with alcohol, and place them in vessels in which they are stirred from time to time, vinegar will be formed. He also informs us, if after abstracting the citric acid from lemon juice by crabs' eyes (carbonate of lime), we add a

little alcohol to the supernatant liquid, and place the mixture in a proper temperature, vinegar will be formed.

Chaptal says that two pounds of weak spirits, specific gravity 0-985, mixed with 300 grains of beer yeast, and a little starch water, produced extremely strong vinegar. The acid was developed on the fifth day. The same quantity of starch and yeast, without the spirit, fermented more slowly, and yielded a weaker vinegar. A slight motion is found to favor the formation of vinegar, and to en- danger its decomposition after it is made. Chaptal ascribes to agitation the operation of thunder ; though it is well known that, when the atmosphere is highly electrified, beer is apt to become suddenly sour, without the concussion of a thunder-storm. In cellars exposed to the vibrations occasioned by the rattling of carriages, vinegar does not keep well. The lees, which had been deposited by means of isinglass and repose, are thus jumbled into the liquor, and make the fermentation recommence. Almost all the vinegar of the north of France being prepared at Orleans, the manufacture of that place has acquired such celebrity as to render their pro- cess worthy of a separate consideration.

The Orleans casks contain nearly 400 pints of wine- Those which have been already used are preferred. They are placed in three rows, one over another, and in the top have an aperture of two inches diameter, kept always open. The wine for acetification is kept in adjoining casks, containing beech shavings, to which the lees adhere. The wine thus clarified is drawn off to make vinegar. 100 pints of good vinegar, boiling hot, are first

poured into each cask, and left there for eight days. Ten pints of wine are mixed in, every eight days, till the vessels are full. The vinegar is allowed U> remain in this state fifteen days before it is exposed to sale.

The used casks, called mothers, are never emptied more than half, but are successively filled again, to acetify new portions of wine. In order to judge if the mother works, the vinegar makers plunge a spatula into the liquid ; and, according to the quantity of froth which the spaiula shows, they add more or less wine. In summer the at- mospheric heat is sufficient. In winter stove heated to about 75° Fahrenheit maintain the requi- site temperature in the manufactory.*

In some country districts the people keep in a place where the temperature is mild and equable a vinegar cask, into which they pour such wine as they wish to acetify ; and it is always preserved full by replacing the vinegar drawn off by new wine. To establish this household manufacture it is only necessary to buy at first a small cask of good vinegar.

At Gand a vinegar from beer is made, in which the following proportions of

grain are found to be most advantageous : —

1880 Paris pounds of malted barley. 700 .... wheat. 500 .... buck wheat. These grains are ground, mixed, and boiled, alongf with twenty-seven casks-full of river water, for three hours. Eighteen casks of good beer for vine- gar are obtained. By a subsequent decoction more fermentable liquid is extracted, which is mixed with the former. The whole brewing yields 3000 English quarts.

In this country vinegar is usually made from malt. By mashing with hot water, 100 gallons of wort are extracted in less than two hours from one boll of malt. When the liquor has fallen to the temperature of 75° Fahrenheit, four gallons of th barm of beer are added. After thirty-six hours it is racked off into casks, which are laid on their sides, and exposed, with their bung holes loosely covered, to the influence of the sun in summer; but in winter they are arranged in a stove-room. lu three months this vinegar is ready for the manufac- ture of sugar of lead. To make vinegar for domes- tic use, however, the process is somewhat different- The above liquor is racked off into casks placed upright, having a false cover pierced with holes fixed at about a foot from their bottom. On this a considerable quantity of rape, or the refuse from the makers of British wine, or otherwise a quantity of low priced raisins, is laid. The liquor is turned into another barrel every twenty-four hours, in which time it has begun to grow warm. Sometimes, indeed, the vinegar is fully fermented, as above, without the rape, which is added towards the end, to communicate flavor.

Good vinegar may be made from a weak syrup, consisting of eighteen ounces of sugar to every gallon of water. The yeast and rape are to be here used as above described. \Vhenever the vinegar (from the taste and flavor) is considered to be complete, it ought to be decanted into tight bar- rels or bottles, and well secured from access of air. A momentary ebullition before it is bottled is found favorable to its preservation. In a large manufactory of malt vinegar, a considerable reve- nue is derived from the sale of yeast to the bakers

Vinegar obtained by the preceding methods has more or less of a brown color, and a peculiar but rather grateful smell. By distillation in glass vessels, the coloring matter, which resides in a mucilage, is separated, but the fragrant odor is generally replaced by an empyreumatic one. The be

A crude vinegar has been long prepared for the calico printers, by subjecting wood in iron retorts to a strong red heat. The following arrangement of apparatus has been found to ans\ver well. A series of cast-iron cylinders, about four feet diame- ter and six feet long, are built horizontally in brick work, so that the flame of one furnace may play round about two cylinders. Both ends project a little from the brick work. One of them has a disc of cast-iron well fitted and firmly bolted to it, from the centre of which disc an iron tube about six inches diameter proceeds, and enters at a right angle the main tube of refrigeration. The diame- ter of this tube may be from nine to fourteen inches, according to the number of cylinders. The other end of the cylinder is called the mouth of the retort. This is closed by a disc of iron, smeared round its edge with clay-lute, and secured in its place by wedges. The charge of wood for such a cylinder is about 8 cwt. The hard woods, oak, ash, birch, and beech, are alone used. Fir does not answer. The heat is kept up during the day time, and the furnace is allowed to cool during the night. Next morning the door is opened, the charcoal removed, and a new charge of wood is introduced. The average product of crude vinegar called pyrolignous acid is thirty-five gallons. It is much contaminated with tar; is of a deep brown color; and has a specific gravity of 1-025. Its total weight is therefore about 300 Ibs. But the residuary charcoal is found to weigh no more than one-fifth of the wood employed. Hence nearly one half of the ponderable matter of the wood is dissipated in incondensable gases. Count Rum- ford states that the charcoal is equal in weight to more than four-tenths of the wood from which it is made. The count's error seems to have arisen from the slight heat of an oven to which his wood was exposed in a glass cylinder. The result now given is the experience of an eminent manufactur- ng chemist at Glasgow. The crude pyrolignous acid is rectified by a second distillation in a copper still, in the body of which about twenty gallons of viscid tarry matter are left from every 100. It has now become a transparent brown vinegar, having a considerable empyreumatic smell, and a specific gravity of 1'013. Its acid powers are superior to those of the best household vinegar, in the propor- tion of 3 to 2. By redistillation, saturation with quicklime, evaporation of the liquid acetate to dryness, and gentle torrefaction, the empyreumatic matter is so completely dissipated, that on decom- posing the calcareous salt by sulphuric acid, a «'ure, perfectly colorless, and grateful vinegar rises

in distillation. Its strength will be proportional to the concentration of the decomposing acid.

The acetic acid of the chemist may be prepared in the following modes: — 1. Two parts of fused acetate of potash with one of the strongest oil of vitriol yield, by slow distillation from a glass retort into a refrigerated receiver, concentrated acetic acid. A small portion of sulphurous acid,

which contaminates it, may be removed by redistillation from a little acetate of lead. 2. Or four parts of good sugar of lead, with one part of sulphuric acid treated in the same way, afford a slightly weaker acetic acid. 3. Gently calcined sulphate of iron, or green vitriol, mixed with sugar of lead in the proportion of one of the former to two and a half of the latter, and carefully distilled from a porcelain retort into a cooled receiver, may be also considered a good economical process. Or with- out distillation, if 100 parts of well dried acetate of lime be cautiously added to sixty parts of strong sulphuric acid diluted with five parts of water, and digested for twenty-four hours and strained, a good acetic acid, sufficiently strong for every ordinary purpose, will be obtained.

The distillation of acetate of copper or of lead per se, has also been employed for obtaining strong acid. Here, however, the product is mixed with a portion of the fragrant pyro-acetic spirit, which it is troublesome to get rid of. Undoubtedly the best process for the strong acid is that first de- scribed, and the cheapest the second or third. When of the utmost possible strength its specific gravity is 1-062. At the temperature of 50° Fah- renheit it assumes the solid form, crystallising in oblong rhomboidal plates. It has an extremely pungent odor, affecting the nostrils and eyes even

Kinfully when its vapor is incautiously snuffed up. t taste is eminently acid and acrid. It excoriates and inflames the skin.

The purified wood vinegar, which is used for pickles and culinary purposes, has commonly a specific gravity of about 1-009 ; when it is equiva- lent in acid strength to good wine or malt vinegar of 1-014. It contains about one-twentieth of its weight of absolute acetic acid, and nineteen-Uven- tieths of water. An excise duty of four-pence is levied on every gallon of vinegar of the above strength. This, however, is not estimated directly by its specific gravity, but by the specific gravity which results from its saturation with quicklime. The decimal number of the specific gravity of the calcareous acetate is nearly double that of the pure wood vinegar. Thus 1-009 in vinegar becomes 1-018 in liquid acetate. But the vinegar of fer- mentation — T014 will become only T023 in acetate, from which, if 0-005 be subtracted for mucilage or extractive, the remainder will agree with the density of the acetate from wood. A glass hydrometer of Fahrenheit's construction is used for finding the specific gravities. It consists of a globe about three inches diameter, having a little ballast ball drawn out beneath, and a stem above of about three inches long, containing a slip of paper with a transverse line in the middle, and surmounted with a little cup for receiving weights or poises. The experiments on which this instru- ment, called an acetometer, is constructed, hav«- been detailed in the sixth volume of the Journal ot Science. They do not differ essentially from those of Mollerat. The following points were determined by this chemist : — The

acid of specific gravity 1-063

requires two and a half times its weight of crystal- lised subcarbonate of soda for saturation, whence M. Thenard regards it as a compound of eleven of water, and eighty-nine of real acid in 100 parts. Combined with water, in the proportion of 100 to 112-2, it does not change its density, but it then remains liquid several degrees below the freezing point of water. By diluting it with a smaller quantity of water, its specific gravity aug- ments, a circumstance peculiar to this acid. It is 1-079, or at its maximum, when the water forms one-third of the weight of the acid. — Ann. de Chimie, torn. 66.

The following table is giren by Messrs. Taylor, as the basis of their acetometer : —

Revenue proof acid, called by the manufacturer No. 24.

sp. gr. 1-0085 contains real acid in 100, 5

1-0170 10

1-0257 15

1-0320 20

1-0470 '. . . 30

1-0580 . . .40

An acetic acid of very considerable strength may also be prepared by saturating perfectly dry char- coal with common vinegar, and then distilling. The water easily comes off and is separated at first ; but a stronger heat is required to expel the acid. Or by exposing vinegar to very cold air, or to freezing mixtures, its water separates in the state of ice, the interstices of which are occupied by a strong acetic acid, which may be procured by draining. The acetic acid, or radical vinegar of the apothecaries, in which they dissolve a little camphor or fragrant essential oil, has a specific gravity of about 1-070. It contains fully one part of water to two of the crystallised acid. The pungent smelling salt consists of sulphate of potash moistened with that acid. Acetic acid acts on tin, iron, zinc, copper, and nickel ; and it com- bines readily with the oxides of many other metals, by mixing a solution of their sulphates with that of an acetate

of lead.

This acid, as it exists in the acetates of barytes and of lead, has been analysed by MM. Gay Lus- sac and Thenard, and also by Berzelius.

Gay Lussac found 50-224 carbon, 5-629 hydro- gen, and 44-147 oxygen ; or in other terras 50‘224 carbon, 46‘911 of water or its elementary constituents, and 2-863 oxygen in excess. Berzelius, — 46-83 carbon, 6-33 hydrogen, and 46-82 oxyeen in 100 parts.

By saturating known weights of bases with acetic acid, and ascertaining the quantity of ace- tates obtained after cautious evaporation to dryness, Berzelius obtained with lime (3‘56) 6-5 for the prime equivalent of acetic acid, and with yellow oxide of lead 6-432. Recent researches, which will be published in a detailed form, induce me to fix the prime of acetic acid at 7-0.

Acetic acid dissolves resins, gum resins, cam phor, and essential oils. Its odor is employed in medicine to relieve nervous headache, fainting fits, or sickness occasioned by crowded rooms. In a slightly dilute state, its application has been found to check hemorrhagy from the nostrils. Its anti-contagious powers are now little trusted to. It is very largely used in calico printing. Moderately rectified pyrolignous acid has been recommended for the preservation of animal food ; but the em- pyreumatic taint it communicates to bodies im-

mersed in it is not quite leincved by their subse quent ebullition in water.

Acetic acid and common vinegar are sometimes fraudulently mixed with sulphuric acid to give them strength. This adulteration may be detected by the addition of a little chalk, short of their sa- turation. With pure vinegar the calcareous base forms a limpid solution, but with sulphuric acid a white insoluble gypsum. Muriate of barytes is a still nicer test. British fermented vinegars are allowed by law to contain a little sulphuric acid, but the quantity is frequently exceeded. Copper is discovered in vinegars by supersaturating them with ammonia, when a fine blue color is produced ; and lead by sulphate of soda, hydrosulphurets, and sulphuretted hydrogen. None of these should produce any change on genuine vinegar.

Acetic acid dissolves deutoxide of barium with- out effervescence. By precipitating the barytes with sulphuric acid, there remains an oxygenised acid, which, being saturated with potash, and heated, allows a great quantity of oxygen gas to escape. There is disgengaged at the same time a notable quantity of carbonic acid gas. This shows that the oxygen, when assisted by heat, unites in part with the carbon, and doubtless likewise with

the hydrogen of the acid. It is in fact acetic deutoxide of hydrogen.

Salts consisting of the several bases, united in definite proportions to acetic acid, are called ace- tates. They are characterised by the pungent smell of vinegar, which they exhale on the effusion of sul- phuric acid; and by their yielding on distilla- tion in a moderate red heat a very light, odorous, and combustible liquid called pyro-acetic spirit. They are all soluble in water ; many of them so much so as to be uncrystallisable. About thirty dif- ferent acetates have been formed, of which only a very few have been applied to the uses of life.

The acetic acid unites with all the alkalies and most of the earths, and with these bases it forms compounds, some of which are crystallisable. The salts it forms are distinguished by their great solu- bility : their decomposition by fire, which carbonises them ; the spontaneous alteration of their solution ; and their decomposition by a great number of acids, which extricate from them the acetic acid in a con- centrated state. It unites likewise with most of the metallic oxides.

With barytes, the saline mass, by spontaneous evaporation, crystallises in fine transparent prisma- tic needles, of a bitterish acid taste, which do not deliquesce when exposed to the air, but rather effloresce.

With potash this acid unites, and forms a deli- quescent salt scarcely crystallisable, called formerly foliated earth of tartar, and regenerated tartar. The solution of this salt, even in closely stopped ves- sels, is spontaneously decomposed.

With soda it forms a crystallisable salt, which does not deliquesce.

The salt formed by dissolving chalk or other calcareous earth in distilled vinegar, has a sharp bitter taste, and appears in the form of silky crys- tals. The acetate of strontian has a sweet taste, is very soluble, and is easily decomposed by a strong heat.

*The salt formed by uniting vinegar with ammonia, anciently called spirit of mindererus, is generally in a liquid state, and is commonly believed not to be crystallisable. It nevertheless *v.ay be reduced into the form of small needle-shaped crystals, when*

this liquor is evaporated to the consistence of a syrup.

With magnesia the acetic acid forms a viscid saline mass, which does not shoot into crystals, but re- mains deliquescent, has a taste sweetish at first, and afterwards bitter, and is soluble in spirit of wine.

Glucine is readily dissolved by acetic acid. This solution, as Vauquelin informs us, does not crys- tallise ; but is reduced by evaporation to a gummy substance, which slowly becomes dry and brittle ; retaining a kind of ductility for a long time. It has a saccharine and pretty strongly astringent taste, in which tlial of vinegar however is distin- guishable.

Yttria dissolves readily in acetic acid, and the solution yields by evaporation crystals of acetate of yttria. These have commonly the font of thick six-sided plates, and are not altered by exposure to the air.

Acetate of alumina is commonly made by adding gradually to a boiling solution of alum in water a solution of acetate of lead, till no further precipi- tate ensues. The sulphate of lead having subsided, decant the supernatant liquor, evaporate, and the acetate of alumina may be obtained in small needle-shaped crystals, having a strong styptic and acetous taste. This salt is of great use in dyeing and calico-printing.

Acetate of zircone may be formed by pouring acetic acid on newly precipitated zircone. It has an astringent taste.' It does not crystallise ; but, when evaporated to dryness, forms a powder, which does not attract moisture from the air. It is very soluble both in water and alcohol ; and is not so easily decomposed by heat as nitrate of zir- cone. M. Vauquelin has found that acetic acid taay be combined with volatile oils.

Vinegar dissolves the true gums, and partly the gum resins, by means of digestion.

VINERY, in horticulture, a sort of garden erec- tion generally consisting of a wall twelve or four- teen feet in height, extending from east to west, furnished with stoves and proper flues, with roof and lights of glass, covering a border of some ex- tent, as ten feet or more in width. \Vhen vines are to be forced early, upright glasses, two and a half or three feet in height, are often employed in front to support the roof, and to admit sun and light to the border, which is frequently occupied with low-growing vegetables ; but, when they are not wanted early, a low wall will answer equally well. In forcing vines, the following dimensions are supposed to form an improved vinery : — The wall twelve feet high, the breadth ten feet, and the height of the upright wall in front three feet, where the roof will form an angle of about forty-three de- urees ;)vhich experience has

shown to be a suitable j.itch. These buildings may also be constructed on a plan somewhat similar to that of a single- pitted pine-stove, having the back wall fourteen feet high ; the roof slanting, and covering an ex- tent of about sixteen feet, with a flue running from east to west near the front wall. This is well suited, not only for grapes, but early crops of melons, strawberries, &c.

\ here there are peach-houses, the glass frames may be employed for the vinery, when constructed with this intention, and good grapes may be ob- tained from vines trained against walls about six feet high, by means of melon-frame glasses, where

small slanting roof is made proper to receive them.

But a small degree of fire-heat is of great advantage, and might be applied either by a flued wall, the flue running through the house, or by cast-iron pipes for the purpose.

These sorts of houses, Mr. Nicol remarks, vary exceedingly in their construction ; and, although some lay great stress on this article (and there are extremes which ought not to be followed),, he is convinced the failure of success in the production of the grape is much less a consequence of bad construction in the house, than in the preparation of the border, the choice of the kinds, and the ge- neral management. It has fallen to his lot to have the construction and management of three several and differently constructed grape-houses in the same garden, under his care for years, which have equally and uniformly produced excellent crop. This, in his opinion, is a proof of the necessity of a greater niceness in the formation of the border being observed, than in the construction of the house ; the fire-place and flues excepted, which should always be particularly attended to. He also thinks that the scite of a vinery is an object of such consequence to the welfare of the plant, and successful cultivation and production of well-fla- voured fruit, that the greatest care should be taken in the choice of it. A gentle hill, having a south aspect, and considerable declivity that way, the soil a strong brown loam of two feet, over a bottom of dry sand, gravel, or soft clay, is, he thinks, the most desirable, and would be the least expensive of all situations. In this case the border requires no pavins or draining; and admits of a proper mix- ture of sandy lo;»m, vegetable mould, marie, and dung, by the removal of two feet of the natural bottom, with the natural soil, to form a border, perfectly adapted to the growth of the vine, in the following proportion, viz. one half strong brown loam, a quarter light sandy loam, an eighth vegeta- ble mould of decayed tree-leaves, and an eighth stable-dung; to which add about a fiftieth part ot* shell-marie. This is the composition of the vine- borders at Wemyss Castle, none of which are less than four feet deep, and one (owing to the acciden-*

tal situation of the house) is six.

VIO (Thomas de). See CAJETAN.

VTOL, n.s. I Fr. violle; Ital. viola. A stringed

VIOLIN'. J instrument of music : a fiddle.

Praise with timbrels, organs, flutes ;

Praise with violins and lutes. Sandyi.

My tongue's use is to me no more Than an unstringed viol, or a harp. Shakrpeare.

Loud o'er the rest Cremona's trump doth sound ; Me softer airs befit, and softer strings Of lute or viol, still more apt for mournful things.

ifillon.

Sharp violin proclaim Their jealous pangs and desperation,*

For the fair disdainful dame. Dryden.

VIOLA, in botany, a genus of plants of the class syngenesia, order monogynia; in the natural system arranged under the twenty-ninth order, campana- ceae. The calyx is pentaphyllous ; the corolla five petaled, irregular, with a nectarium behind, horn- shaped ; the capsule is above the germen, three- valved, monolocular. There are twenty-eight spe- cies; six of which are natives of Britain. The most important are, 1 . V. odorata, purple sweet violet, has leaves heart-shaped, notched: the flowers deep purple, single; creeping scions. The flowers of this p'ant, taken in the quantity of a dram or two, are said to be gently purgative or laxative, ?nd, ac-

cording to Bergius and some others, they possess an anodyne and pectoral quality. 2. V. palustris, marsh violet. The leaves are smooth, reniform, two or three on each foot-stalk ; flowers pale blue, small, inodorous. An infusion of the flowers is an ex- cellent test of the presence of acids and alkalies. 3. V. tricolor, pansies, heart's-ease, or three faces under a hood. The stems are diffuse, procumbent, triangular ; the leaves oblong, cut at the

edges ; stipulse dentated ; the flowers purple, yellow and light blue ; inodorous.

VTOLATE, v. a. ˆ Latin violo. To injure ;

VIOLA'TION, n. s. | hurt; infringe; break in

VIOLA'TOR, I upon ; ravage ; ravish ; de-

VI'OLENCE, f flour : the next two noun

VI'OLEKT, adj. I substantives follow these

VIOLENTLY, adv. J senses : violence is, force ; strength ; force employed in outrage ; attack ; as- sault ; injury ; eagerness ; vehemence : the adjec- tive and adverb corresponding.

Those offences which are by their special qualities breaches of supernatural laws, do also, for that they are generally evil, violate in general that principle of reason, which willeth universally to fly from evil.

Hooker.

We might he reckoned fierce andviolent, to tear away that, which, if our mouths did condemn, our consciences would storm and repine thereat. Id.

Some violent hands were laid on Humphry's life.

Shakspeare. Some of violated vows 'Twixt the souls of friend and friend. Id.

Angelo is an adulterous thief, An hypocrite, a virgin violator. Id.

A noise did scare me from the tomb ; And she, too desperate, would not go with me ; But, as it seems, did violence on herself. Id.

Flame burneth more violently towards the sides than in the midst. Bacon.

Ancient privileges must not, without great necessities, he revoked, nor forfeitures be exacted violently, nor penal laws urged rigorously. Taylor.

Grieved at his heart, when looking down he saw The whole earth filled with violence ; and all flesh Corrupting each their way. Stilton.

Forbid to violate the sacred fruit. Id.

Conqueror death discovers them scarce men ; Violent or shameful death

their due reward. Id.

I would violate my own arm rather than a church.

Browne.

Kindness for man, and pity for his fate, May mix with bliss, and yet not violate. Dryden.

We cannot, without offering violence to all records, divine and human, deny an universal deluge. Burnet.

The posture we find them in, according to his doctrine, must be looked upon as unnatural and violent; and no violent state can be perpetual. Id.

May such places, built for divine worship, derive a blessing upon the head of the builders, as lasting as the curse that never fails to rest upon the sacrilegious viola- tert of them ! South.

VI'OLET, n. ». Fr. vioktte; Lat. viola. A flower.

When daisies pied, and violet blue, Do paint the meadows much bedight. Shaksjxare.*

Sweet echo, sweetest nymph, that liv'st unseen J3y slow Meander's margent green, And in the cio/et-embroidered vale. Milton.

VIOLET, in botany. See VIOLA.

VIOLET CRAB, in zoology. See CANCER.

VIOLIN, or FIDDLE, a musical instrument,

mounted with four strings or guts, and struck or

played with a bow. The style and sound of the

violin i» the gayest and piost sprightly of all other

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instruments ; and hence it is of all others the fittest for dancing. Yet there are ways of touching it which render it grave, soft, languishing, and fit for church or chamber music. It generally makes the treble or highest parts in concerts. Its har- mony is from fifth to fifth. Its play is composed of bass, counter-tenor, tenor, and treble ; to which may be added a fifth part; each part has four fifths, which rise to a greater seventeenth. See Music.

VIOLONCELLO, of the Italians, is properly our fifth violin ; which is a little bass violin, half the size of the common bass violin, and the strings bigger and longer in proportion; consequently its sound is an octave lower than our bass violin ; which has a noble effect in concerts.

VI'PER, n. s. I Lat. vipera. A serpent : hav-

VI'PEROUS, adj. \ ing the qualities of a viper.

A viper came out of the heat, and fastened on his hand. Acts.

He'll gall of asps with thirsty lip suck in ; The viper's deadly teeth shall pierce his skin. Sandys.

\Ve are peremptory to dispatch This vip'rous traitor. Shakipeare.

Some vip'rous critick may bereave Th' opinion of thy worth for some defect. Daniel.

Piper-catchers have a remedy, in which they place such great confidence as to be no more afraid of the bite of a viper than of a common puncture. This is no other than axungia viperina, presently rubbed into the wound. Derham.

VIPER, in zoology. See COLUBER, POISON, and SERPENT.

VIPER'S BUGLOSS, n. s. Lat. echium. A plant.

Each flower is succeeded by four seeds, which are in form of a viper't head. Miller.

VIPER'S BUGLOSS. See ECHIUM.

VIPER'S GRASS. See SCORZONERA.

VIRA'GO, n. s. Lat. virago. A female warrior ; a woman with the qualities of a man ; a brawling or violent woman.

Melpomene is represented like a viiago, or manly lady, with a rnajestick and grave countenance. Peach.

To arms ! to arms ! the fierce virago cries, And swift as lightning to the combat flies. Pope.

VIRECTA, in botany, a genus of plants of the class pentandria, and order of monogynia.

VIR'ELAY, n. s. Fr. virelay, virelai. A sort of little ancient French poem, consisting only of two rhymes and short verses with stops. Not used.

The band of flutes began to play To which a lady sung a virelay : And still at every close she would repeat The burden of the song, The daisy is so sweet. Dryd.

VI'RENT, adj. Lat. virens. Green; not faded.

In these, yet fresh and virent, they carve out the figures of men and women. Browne.

VIRGE, n.s. Lat. virga; better VERGE, which see, from Fr. verge. A dean's mace.

Suppose him now a dean compleat, Devoutly lolling in his seat ; The silver virge, with decent pride. Stuck underneath his cushion side. Stcift.

VIRGIL, or PUBLIUS VIRGILIUS MARO, prince of the Latin poets, was born at Andes, near Man- tua, about seventy years B. C. His first years were spent at Cremona, whence he removed to Rome, when his country was partitioned out among the soldiers after the battle of Philippi. There, by means of his friend Maecenas, he was introduced to Augustus, who restored to him his estate. On this occasion he wrote his first Eclogue; and, on completing the Bucolics, he wrote the Georgics.

After these were finished, and had been read by Augustus, he began the jEneid at the request of the emperor. The poet was engaged eleven years on this immortal work, but died without revising it at Brundusium, B.C. 19, in the fifty-second year of his age. He left the greatest part of his property to Maecenas, Tucca, and Augustus. His remains were interred on a spot in the road leading from Naples to Puteoli. He was of a remarkably timorous disposition. The best editions of Virgil are Baskerville's 4to., Birmingham, 1757; the Vari- orum, 8vo., 1661 : and Glasgow, 12mo. 1758. This poet has been well translated into English by Dry- den, Pitt, and Warton.

VIRGIL (Polydore), an historian, born at Urbino in Italy, was sent in the beginning of the sixteenth

the most part desert and barren, and extend sixty miles in length, and

upwards of thirty-six in breadth ; but they are every way dangerous to navigators, though there is a basin in the midst of them of eighteen or twenty miles in length, and nine or twelve in breadth, in which ships may anchor, and be sheltered and landlocked from all winds, which is called the Bay of Sir Francis Drake, from his having passed through them to St. Do- mingo. The English and Danes divide most of them ; but the Spaniards claim those near Porto Rico.

VIRGINIA, one cf the United States of North America, is bounded north by Pennsylvania and Maryland ; north-east by Maryland, from which it is separated by the Potomac ; east by the Atlantic;

century by pope Alexander VI., as sub-collector of south by North Carolina and Tennessee ; west by

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the Papal tax called Peter pence, into this kingdom. Having gained the favor of Henry VIII., he was pre- ferred step by step to the archdeaconry of Wells. By order of that sovereign he wrote a History of England in Latin, more elegant than faithful. Polydore continued in England during the whole reign of Henry VIII., and part of that of Edward VI. In 1 550 he requested leave to revisit his native country. He was accordingly dismissed with a present of 300 crowns, and the privilege of holding his preferments to the end of his life. He died at Urbino in the year 1555. He wrote also, 1. De Kerum Inventoribus ; of which an English transla- tion was published by Langley in 1663. 2. De Prodigiis et Sortibus. 3. Episcoporum Angliae Catalogus, MS. 4. De Vita Perfecta, Basil, 1546, 1553, 8vo. 5. Epistols Erudite ; and some other works.

*VIR’GIN, n. *., adj., & v. n. ~\ Fr. vierge ; \ IR’GINAL, adj., n. *., & v. n. >Lat. virgo. A VIROIN’ITY, n *. j maid; a woman*

unacquainted with man; any thing pure or un- touched ; the sign Virgo in the zodiac : as an adjective, befitting or like a virgin : to virgin is used by Shakspeare for to play the virgin : virginal is, maiden ; becoming or pertaining to a virgin : as a noun substantive, a musical instrument : to strike or pat. as on the musical instrument so called : vir- ginity is, maidenhead ; state of being unacquainted with m^n.

On the earth more fair was never seen, Of chastity and honour virginal. Faerie Queene.

This aspect of mine hath feared the valiant ; The best regarded virgint of our cliroe Have loved it too. Shakspeare.

What says the silver with her virgin hue ? Id.

A kiss

Long as my exile, sweet as my revenge, J carried from thee, my dear : and my true lip Harth riryiiird it e'er since. Id.

Still tirginaUing upon thy palm. /,/.

Purity is a special part of this superstructure, restrain- ing of all desires of the flesh within the known limits of conjugal or virginal chastity. Hammond.

Natural virginity of itself is not a state more accept- able to God ; bat that which is chosen in order to the conveniences of religion, and separation from worldly incunibrances. Taylor.

With ease a brother overcame The formal decencies of virgin shame. Con- fey.

Likest to Ceres in her prime, ˆ rt rfn/in of Proserpina from Jove. Milton.

VIRGIN ISLANDS, a cluster of islands in the West Indies, situated to the east of Porto Rico. They are upwards of twenty in number, but for

Kentucky ; and north-west by Ohio. It is 370 miles long, and 290, where widest, broad ; contain- ing about 64,000 square miles. The number o. the militia, in 1817, amounted to 84,010.

The counties, population in 1810, and chief towns, are exhibited HI the following table

Counties.

Accomack

Albermarle

Amelia

Amherst

Augusta

Bath

Bedford

Berkeley

Botetourt

Brooke

Brunswick

Buckingham

Campbell

Caroline

Charles City

Charlotte

Chesterfield

Cumberland

Culpeper Cabell

Dinwiddie

Elizabeth City

Essex

Fauquier

Fairfax

Fluvanna

Frederick

Franklin

Gloucester

Goochland

Grayson

Greenbrier

Greensville

Giles

Halifax

Hampshire

Hanover

Hardy

Harrison

Henrico

Henry

Isle of Wight

.lames City

Jefferson

Kenhawa

King and Queen

Population.

Chief Towns.

15,743

Drummondt'wn

18,268

Charlottesville

10,594

10,548

New Glasgow

14,308

Staunton

4,837

Warm Springs

16,148

Liberty

11,479

Martinsburg

13,301

Fincastle

5,843

Wellsbu/g

15,411

20,0.59

New Canton

11,001

Lynchburg

17,544

Port Royal

5,186

13,161

Marysville

9,979

Manchester

9,992

Cartersvill

18,967

Fairfax

2,717

12,524

Petersburg

3,608

Hampton

9,376

Tappahannock

22,689

Warrentown

13,111

Centreville

4,775

Columbia

22,574

Winchester

10,724

Rocky Mount

10,427

10,203

1,'.'41

Greensville

5,914

Lewisburg

6,858

Ilicksford

3,745

22,133 9,784

15,082 5,525 9,958 9,945 5,611 9,185 9,094

1 1,851 3,866

10,988

South Boston

Romney

Hanover

Moorfields

Clarksburg

Richmond

Martinsville

Smithfield

Williamsburg

Charlestown

Charlestown

Dunkirk

VIRGINIA.

419

Counties.

Population.

Chief Towns.

King George

6,454

King V\ illiani

9,285

Delaware

Lancaster

5,592

Kilmarnock

Lee

4,694

Jonesville

Loudoun

21,338

Leesburg

Louisa

1 1 ,900

Lunenburg

12,265

Hungary

Madison

8,381

-Madison

Matthews

4,227

Mecklinburg

18,453

St. Tammany

Middlesex

4,414

Urbanna

Monongalia

12,793

Morgantown

Monroe

5,444

1 niontown

Montgomery

8,409

Cliristiaiisburg

Mason

1,991

Point Pleasant

Nansemond

10,324

Suffolk

Nelson

9,684

New Kent

6,478

Cumberland

Nicholas

Norfolk county

13,679

Norfolk

Northampton

7,474

Northumberland

8,308

Bridgetown

Nottaway

9,278

Ohio

8,175

Wheeling

Orange

12,323

Slannarclsville

Patrick

4,695

Pendleton

6,239

Franklin

Pittsylvania

17,172

Danville

Powhatan

8,073

Preston

Prince Edward

12,409

Jamestown

Princess Anne

9,498

Kempsville

Prince William

11,311

Hay market

Prince George

8,050

Randolph

2,854

Beverly

Richmond

6,214

Rockbridge

10,318

Lexington

Rockingham

12,753

Russell

5,316

Franklin

Shenandoali

13,646

Woodstock

Southampton

13,497

Jerusalem

Spotsylvania

13,296

Fredericksbun:

Stafford

9,830

Falmouth

Surry

6,855

Cobham

Sussex

11,362

Tazewell

3,007

Jeffersonville

Tyler

Warwick

1,885

Washington

12,136

Abingdon

Westmoreland

8,102

Leeds

Wood

3,036

Newport

Wvthe

8,356

Evansham

York

5,187

York

Richmond City

9,735

Norfolk Borough

9,193

Petersburg

r% ‘ i ! .

5,668

Richmond is the metropolis of the state. The other most considerable towns are Norfolk, Peters- burg, Lynchburg, Fredericksburg, Winchester, Portsmouth, Williamsburg, Staunton, and Wheel- ing. The bank of Virginia was established at Richmond in 1804, with branches at Norfolk, Pe- tersburg, Fredericksburg, and Lynchburg. The Farmers’ Bank of Virginia was established in 1812, at Richmond, with branches at the same places, and at Winchester in addition. The western bank of Virginia was established in 1817, at Wheeling. with permission to establish branches at Welb- burg, Morgantown, and Clarksburg. The bank of the valley in Virginia was established in 1817, at

Winchester, with permission to establish a branch at some one of the counties of Jefferson, Berkley, Hampshire, or Hardy.

Four colleges have been established in this state ; William and Mary College, at Williamsburg ; Washington College, at Lexington; Hampden Sid- ney College, in Prince Edward county; and Central College, at Charlottesville. There are academies at Abingdon, Clarksburg, Danville, Lynchburg, New London, Martinsburg, Norfolk, Petersburg, Staunton, Winchester, Dinwiddie C. H., Glouces- ter C. H., near Halifax C. II., in Albermarle county, also Potomac Academy in Prince George county, llappahannock Academy in Caroline county, and Rumford Academy in King William county. The literary fund of \ irginia, which con- sists of moneys received from the Un.ted States, tor military expenses during the late war, and fines, penalties, forfeitures, escheats, &c., amounted in stock and funds, December 10th, 1817, to 90,380,831 dollars ; the interest of which, accord- ing to the president and directors, in their report to the general assembly, would be 61,534,49 dol- lars per annum. Of this sum 45,000 dollars are appropriated, by the act of the legislature, to the support of primary schools, and 15,000 dollars to the university which has been projected, and which, it is expected, will soon be established.

The denominations of Christians in Virginia, are Baptists, who according to the Baptist Report, in 1817, had 314 congregations; Presbyterians, who had in 1818, forty-one ordained ministers, and seve- ral licentiates: Episcopalians, who had in 1817 thirty-four ministers; Friends, who had in

1812 thirty-three meetings. There are also many Metho- dists, some Lutherans, Roman Catholics, Jews, &c.

The legislature is composed of a senate and house of representatives. The senate consists of twenty four members, chosen for four years, by districts, one-fourth being chosen etery year. The repre- sentatives are chosen annually, two from each county, and one from several cities and boroughs. The governor is chosen annually by a joint ballot of both houses, and can hold the office but three years in seven. The principal rivers are the Poto- mac, Shenandoah, Rappahannock, Matapony, Pa- munky, York, James, Rivanna, Appomatox, Eliza- beth, Nottaway, Meherrin, Staunton, Kenhawa, O- hio, Sandy, Monongahela, and Cheat. The staple productions are wheat and tobacco. The exports of the state, for the year ending September 20th, 1817, amounted to 5,621.442 dollars; and the value of the manufactures, in 1810, was estimated at 15,263, 473 dollars.

The state of Virginia may be divided into four zones, essentially differing from one another. The first extending from the sea-coast to the termination of tide at Fredericksburg, Richmond, &c., is low and flat, sometimes fenny, sometimes sandy, and on the margin of rivers composed of a rich loam covered with a luxuriant and even rank vegetation. This part is unhealthy in the months of August, September, and October. The next division ex- tends from the head of tide-water to the Blue Ridge. The surface near the tide-water is level ; higher up the rivers it becomes swelling; and near the mountains it is often abrupt and broken. The soil is divided into sections of very unequal quality, parallel to each other, and extending throughout the state. The parallel of Chesterfield, Henrico, Hanover, &c., is a thin, sandy, and, except on the

rivers, an unproductive soil. That of Goochland, Cumberland, prince Edward, Halifax, &c., is gene- rally fertile. Fluvanna, Buckingham, Campbell, Pittsylvania, again, are poor; and Culpeper, Orange, Albermarle, Bedford, &c., a rich, though frequently a stony, broken soil, on a substratum of tenacious and red colored clay. The population of this section, especially near the mountain, is more robust and healthy than that of any other part of the slate. The scenery of the upper part is highly picturesque and romantic. There is a vein of limestone running through*

Albermarle, Orange, &c. Pit coal of a good quality is found within twenty miles above Richmond, on James river. The third division is the valley between the Blue Ridge, and North and Allephany mountains ; a valley which extends, with little interruption, from the Potomac, across the state, to North Carolina, and Tennessee, narrower, but of greater length, than either of t!ie pre- ceding divisions. The soil is a mould formed on a bed of limestone. The surface of the valley is sometimes broken by sharp and solitary mountains detached from the general chain, the sides of which, nearly bare, or but thinly covered with blasted pines, form disagreeable objects in the landscape. The bed of the valley i fertile, producing good crops of In- dian corn, wheat, rye, oats, buck wheat, hemp, flax, timothy, and clover. The farms are smaller than in the lower parts of Virginia, and the cultivation is better. Here are few slaves. — This valley has inexhaustible mines of excellent iron ore. Chalk is found in Botetourt county. The fourth division extends from the Alleghany mountains to the river Ohio; a country wild and broken, in some parts fertile, but generally lean or barren; but having mines of iron, lead, coal, salt, &c. — The soil of a great proportion of the county of Randolph, and the adjacent counties in the north-west part of the state, is of an excellent quality, producing large crops of grain. The surface is uneven and hilly. The county is well watered, is excellent for graz- ing, and has a very healthy climate.*

There are many mineral springs in Virginia. The hot and warm springs of Bath county, the sweet springs of Monroe county, the sulphur springs of Greenbrier and of Montgomery counties, and the baths of Berkley county, are much fre- quented.— The most remarkable curiosities are the Natural Bridge, the passage of the Potomac at Harper's Ferry, the cataract of Falling Spring, and several caves.

VIRGO, in astronomy, one of the signs or con- stellations of the zodiac. See ASTRONOMY.

VIRIATI1US, a shepherd of Lusitania, who, from heading a gang of robbers, came to command a powerful army. He made war against the Ro- mans for fourteen years with success. Many gene- rals, and Pompey himself, were beaten. Csepio being sent against him, meanly bribed his servants to murder him.

\ 1U1DOMARUS, a young man of great power among the Jtdui. Csesar greatly honored him, but he fought at last against the Romans.

VIR'ILE, adj. > Fr. virilite ; I^tin virilitat.

VIRIL'ITY, n.t. \ Manly; belonging to man- hood : manhood ; character of man.

The lady made generous advances to the borders of

tiriHtu. Rambler.

I t.e great climacter.cal was past, before they begat cn-ldren, or gave any testimony of their virility ; for none begat children before the age of sixty-five. Broume.

VIRIPLACA, a goddess among the Romans, who presided over the peace of families.

VIRMIL'ION, n. s. Properly VERMILION, which see. A red color.

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VIRTUE, n.i. "| Latin virtus. Power; VIR'TUELESS, adj. efficacy; excellence; va- ViR'tfous, lor; particularly moral

VIR'TVOUSLY, adv. ! power or excellence: VIR'TUOUSXESS, n. s. [Milton speaks of an order VIR'TUAL, adj. I of angelic beings under

Yrn'TUALLY, adv. I this name: the adjectives, VIR'TUATE, v. a. J adverb, and noun sub- stantive following, follow each of these senses : virtual means having real, though unseen or unac- knowledged, efficacy : the adverb corresponding : virtuate, to make efficacious (not used).

Jesus, knowing that virtue had gone out of him, turned him about. Mark.

Many other adventures are intermeddled ; as the love of Britomert, and virtuousness of Belphaebe ; and the lasciviousness of Helenora. Speiuer.

Out of his hand That virtuous steel he rudely snatched away. Id.

In sum, they taught the world no less virtuowlu how to die, than they had done before how to live. Hooker.

Trust to thy single virtue ; for thy soldiers Took their discharge. Shakspeare,

All blest secrets,

All you unpublished virtues of the earth, Be aidant and remediate. Id.

They that mean virtuously, and yet do so, The devil their ciriu< > tempts not, they tempt heaven.

Id.

In Belmont is a lady, And she is fair, and fairer than that word, Of wondrous virtue. Id.*

Some observe that there is a virtuous bezoar, and an- other without rirt ue ; the virtuous is taken from the beast that feedeth where there are theriacal herbs -, and that without virtue, from those that feed where no such herbs are. Bacon.

Heat and cold have a virtual transition, without communication of substance. Id.

Before her gates, hill -wolves and lions lay , Which, with her virtutnu drugs, so tame she made. That wolf, nor lion, would one man invade. Chapman.

She moves the body, which she doth possess ; Yet no part toucheth, but by virtue's touch. Daiies.

Some would make those glorious creatures virtueless.

Hakewill.

They are virtually contained in other words still con- tinued. Hammond.

Not from gray hairs authority doth flow, Nor from bald heads, nor from a wrinkled brow ; But our past life, when virtuoutly spent, Must to our age those happy fruits present. Dtnhum.

He owned the virtuous ring and glass. Milton.

Thrones, dominations, princedoms, virtues, powers.

Id.

What she wills to do or say, Is wisest, virtuvuittt , discreetest, best. Id.

Every kind that lives, Fomented by his virtual power and wanned. Id.

Neither an actual or virtual intention of the mind, but only that which may be gathered from the outward actf. StHHngfleet.

Nor love is always of a vicious kind, But oft to virtuous acts inflames the mind. I)r\jdfn.

The ladies sought around For virtuous herbs. Id.

The coffeeman has a little daughter four years old, who has been virtuously

educated. Addisim.

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If there's a power above us. And that there is, all nature cries aloud Through all her works, he must delight ia virtue, And that which he delights in must be happy. Id.

Remember all his virtues, And shew mankind that goodness is your care. Id.

They are not sure by virtue of syllogism, that the conclusion certainly follows from the premises. LocAe.

This they shall attain, partly in virtue of the promise made by God : and partly in virtue of piety.

Atterbury.

Virtue only makes our bliss below. Pope.

A winged virtue through the' etherial sky From orb to orb unwearied dost thou fly. Ticket.

Religion, virtue, truth, whate'er we call A blessing — freedom is the pledge of all. Cowper.

'Tis to the virtues of such men, man owes His portion in the good that heaven bestows. Id.

VIRTUE, in ethics, a term used in various sig- nifications. In general it denotes the power, or the perfection of any thing, whether natural or super-natural, animate or inanimate, essential or accessory. But, in its more proper or restrained sense, virtue signifies a habit, which improves and perfects the possessor and his actions. See MORAL PHI- LOSOPHY.

VlllTL'O'SO, n. s. Ital. virtuoso. A man skilled in antique or natural curiosities ; or in the fine arts.

Methinks those generous virtuosi dwell in a higher region than other mortals. Glimiille.

I'irtucao, the Italians call a man who loves the noble arts and is a critick in

them. And, amongst our French painters, the word vertueur is understood in the same signification. Dryden.

This building was beheld with admiration bv the virtuosi of that time. Taller.

Showers of rain are now met with in every water- work ; and the virtuosos of France covered a little vault with artificial snow. Addison.

VIR'ULENT, adj. j Fr. virulent; Lat. viru-

VIK'I LENCE, n. s. > lentus. Poisonous ; venom-

VIK'UI.ENCV. } ous : hence malignant ; bit-

ter of spirit : the noun substantive corresponding.

Disputes in religion are managed with virulency and bitterness. Decay of Piety.

It instils into their minds the utmost virulence, in- stead of that charity which is the perfection and orna- ment of religion. Addison.

Viiu-Lr,NT,a term applied to any thing that yields a virus ; that is a contagious or malignant pus.

VIS'AGE, n. s. French visage ; Ital. visaggio. Face; countenance; look.

His visage was so marred more than any man's.

Julia I:.

Phebe doth behold Her silver risape in the watery glass, Decking with liquid peal the bladed grass. Sha/tspeare.

Uith hostile frown, And ritage all inflamed, first thus began. Milton.

Love and beauty still that visage grace ; Death cannot fright 'em from their wonted place.

Waller.

VISCERA, in anatomy, a term signifying the same with entrails ; including the heart, liver, lungs, spleen, intestines, and other inward parts of the body. See ANATOMY, Index.

VIS'CID, adj. -\ Lat. viscidtis. Viscid and

VISCID'ITY, n. j. (^ viscous mean glutinous; te-

VISCOS'ITY,. inacicus: the noun substan-

Vis'cous, adj. J lives corresponding.

Holly is of so eticoui a juice as they make birdlime of the bark. Bacon.

A tenuous emanation, or continued effluvium, aflei some distance, retraceth unto itself, as is observable in drops of syrups and seminal viscosities. Browne.

The air, being mixed with the animal fl ids, deter- mines their condition as to rarity, density, v.scosity, te- nuity. Arbuthnut.

Catharticks of mercurials precipitate the viscidities by their stypticity. Flayer.

VISCONTI (John Baptist Anthony), an Italian antiquary, born at Vernazza, in 1722, was educated at Rome by an uncle, a painter, and who designed his nephew for that profession. But the latter pre- ferred the study of antiquities, and purchased the office of apostolic notary. Becoming connected with the celebrated Winckelmann, he succeeded him, in 1768, in the station of prefect or commissary of antiquities; and Clement XIV., on his elevation to the papacy, having formed the design of founding a new museum in the Vatican, the execution of the plan was entrusted to Visconti. Among the relics of former ages brought to light was the tomb of the Scipios, relative to which Visconti published Letters and Notices in the Roman Anthology ; he was the author also of some other archaeological memoirs. His death took place September 2, 1784. He was appointed editor of the Museum Pio-Cle- mentinum, but the text accompanying the engrav- ings of that work was written by his son.

VISCONTI (Ennius Quirinius), eldest son of the preceding, was born at Rome, November 1, 1751, and studied under his father. At three years and a half old he was able to read Greek and Latin, in which he sustained at this period a public exami- nation. His subsequent progress was not less re- markable; in 1764 he translated from Greek into Italian verse the Hecuba of Euripides. He studied the canon and Roman law, and in 1771 took the degree of doctor : soon after he was made a papal chamberlain and sub- librarian of the Vati- can. Having however formed an attachment to a lady, whom he wished to marry, he refused to enter into holy orders ; in consequence of which he was through the interference of his father deprived of his post. A reconciliation, however, subsequently took place.

VI'SCOUNT, n. s. (Latin vicecomes. A title

VI'SCOUNTESS. 1 of nobility : the lady of a viscount.

Viscount signifies as much as sheriff; between which two words there is no other difference, but that the one comes from our conquerors the Normans, and the other from our ancestors the Saxons. Viscount also signifies a degree of nobility next to an earl, which is an old name of office, but a new one of dignity, never heard of among us till Henry VI. his days. Coicell.

VISCOUNT (Vice Comes), was anciently an officer under an earl, to whom, during his attendance at court, he acted as deputy to look after the affairs of the county. Now a viscount is created by patent as an earl is; his title is Right Honorable his mantle is two doublings and a half of plain fn- and his coronet has only a row of pearls close to the circle.

VISCUM, in botany, a genus of plants of the class diaecia, order tetrandria, and in the natural system arranged under the forty-eighth order, ag- grepatae. The male calyx is quadripartite ; the an therae adhere to the calyx ; the female calyx consist of four leaves; there is no style; the stigma is obtuse. There is .no corolla ; the fruit is a berry with one seed. There are nine species; only one of which is a native of Britain, viz. V. aloun., w*

common misseltoe. It is a shrub, growing on the bark of several trees, particularly the oak; the leaves are conjugate and elliptical, the stem forked ; the flowers whitish in the alae of the leaves. This plant was reckoned sacked among the Druids. See DRUIDS.

V1SHNOU, that person in the triad of the Brahmins who is considered as the preserver of the universe. Brahma is the creator and Siva the destroyer; and these two, with Yishuou, united in some inexplicable manner, constitute Brahme, or the supreme god of the Hindoos. See POLYTHE- ISM, and MYTHOLOGY.

VISIBLE, adj. & «. s. } Fr. visible ; Lat. vi-

\ IS'IBLY, adv. fsibilis. Perceptible or

VISIBILITY, n.s. J discovered by the eye ;

apparent; open: perceptibility by the eye: visi- bly corresponds with the adjective : visibility is the state or quality of being visible ; conspicuousness.

Visibles work upon a looking-glass, which is like the pupil of the eye ; and audibles upon the places of echo, which resemble the cavern of the ear. Bacon.

The factions at court were greater, or more vitiblt than before. Clarendon.

On this mount he appeared ; under this tree Stood visible ; and I Here with him at this fountain talked. Milton.

They produced this as an instance against the per- petual visibility of the church, and he brings it to prove that it ceased to be a true church. Stillingjteet.

A long series of ancestors shews the native lustre with great advantage ; but, if he degenerate from his line, the least spot is visible on ermine. Dryden.

In these, the visibility and example of our virtues will chiefly consist. Roger.*

VISIER, an officer or dignitary in the Ottoman empire, whereof there are two kinds ; one called by the Turks vizier-azem, that is, grand visier, is the prime minister of state in the whole empire. He commands the army in chief, and presides in the divan or great council. Next to him are six other subordinate visiers, called visiers of the bench; who officiate as his counsellors or accessors in the divan.

VISION, n. s. ˆ Fr. vuion ; Latin

VIS'IONARY, adj. & n.t. Svisio. Sight; the fa-

Vis'iomsT,n.« Jculty of seeing: an

unusual or supernatural appearance; a spectre; dream ; something shown in a dream : visionary is imaginary ; affected by phantoms or mere imagina- tions ; a person apt to be so affected is termed a visionary or visionist.

The day seems long, but night is odious ; No sleep, but dreams ; no dreams, but visions strange.

Sidney.

Last night the very gods shewed me a tision.

Shakspeart.

This account exceeded all the noctambuli or vition- ariet I have met with. Turner.

Vition in the next life is the perfecting of faith in this ; or faith here is turned into vuion there, as hope into enjoying. Hammond.

Him God vouchsafed To call by vision from his father's house. Milton.

His dream returns ; his friend appears again ; The murderer's come ; now help, or I am slain ! T was but a vision still, and vision are but vain.*

Dryden.

The idea of any thing in our mind no more proves the existence of that thing, than the visions of a dream make a true history. Locke.

*Pictures, propagated by motion along the fibres of the optick nerves into the brain, are the cause of vi- **""• Newton.*

No more these scenes my meditation aid, Or lull to rest the visionary maid. Pope,

The lovely visionary gave him perpetual uneasiness

Feniale Quixote.

VISION, in optics, the act of seeing or perceiving external objects by means of tiie o»\;>.n of sight, the eye. See ANATOMY, and MF.TAI-HYSICS.

VIS'IT, v. a., v.n., fc n. s.^ Fr. visiter ; Lat.

VIS'ITABLE, adj. I visito. To go to

VIS'ITANT, n. ?. j see ; salute, par

VISITA'TIOS,) ticularly with a pre

VISITATORIAL, adj. i sent ; survey witli

VIS'ITER, n. s. authority ; send

VIS'ITOR. J good or evil ju-

dicially : as a verb neuter keep up intercourse of a domestic or personal nature : the act of going to see or visiting: visitable is liable to be visited : vi- sitant, the person visiting: visitation, the act or object of visiting; communication; judicial in- fliction : visitatorial, belonging to a judicial

visita- tion : visiter or visitor, he who comes to see an- other; he who inspects or surveys judicially.

Samson visited his wife with a kid. Judqes.

When God visiteth, what shall I answer him ? Job.

Thou shall be visited of the Lord with thunder.

Isaiah.

The most comfortable visitations God hath sent men from above, hath taken especially the times of prayer as their most natural opportunities. Hooker.

You must go cwit the lady that lies in. — I visit her with my prayers ; but I cannot go thither. Shakspeare.

What would you with the princess ;

Nothing but peace and gentle v'uitation. Id.

Here's ado to lock up honesty and honour from the access of gentle visitors. I .

The visiters expelled the orthodox ; they, without scruple or shame, possessed themselves of their colleges.

Wot ton.

That which tliou dost not understand when thou readest, thou shall understand in the day of thy v'uita- tion. Taylor.

Consumptives of this degree entertain their visiters with strange rambling discourses of their intent of going here and there. Harvey.

One visit begins an acquaintance ; and, when the visitant comes again, he is no more a stranger. South.

To him you must your sickly state refer ; Your charter claims him as your visiier. Garth.

All hospitals built since the Reformation arecisifoW by the king or lord chancellor. Ayliffe.*

Some will have it, that an archdeacon does of com- mon right execute their visitatorial power.

/((‘. Parergan.

Virgins vi>ited by angel powers. Pope.

Whatever abuses have crept into the universities, might be reformed by strict injunctions to the visitor and heads of houses. Swift.*

In a designed or accidental visit, let some one take a book, which may be agreeable, and read in it.

Watts.

The devil visits idle men with his temptations ; God vititt industrious men with his favours. Mat. Henry.

VrsiVE, adj. Fr. visif; Lat. vista. Formed in the act of seeing.

This happens when the axis of the virive cones, dif- fused from the object, fall not upon the same plane but that which is conveyed into one eye is more de- pressed or elevated than that which enters the other. Brou-ne’s Vulgar Errottrs.

VISNEA, in botany, a genus of plants in the class of dodecandria, and order of tngynia.

VIS’NOMY, n. ». Corrupted from physiogno- my. Face ; countenance. Not in use

Twelve gods do sit around in royal state And Jove in midst with awful mail

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To judge the strife between them stirred late : Kach of the gods by his like visnomy Each to be known, but Jove above them all, By his great looks and power imperial. Spemer.

VISON, in zoology. See MUSTELA.

VIS’OR, n. s. 1 Fr. visiere. This word is va-

VIS’OKED, adj. $ riously written, visard, visar, vi- sor, vizard, vizor. I prefer visor, as nearest the Latin visas, and concurring with visage, a kindred word. — Johnson. A mask used to disfigure and disguise. See

VIZARD. Visored is marked ; dis- guised.

This loutish clown is such that you never saw so ill- favoured at-isar ; his behaviour such, that he is beyond the degree of ridiculous. Sidney.

But that thy face is, mor-like, unchanging, Made impudent with use of evil deeds, I would essay, proud queen, to make thee blush.

Shakfpeare.

Hence with thy brewed enchantments, foul deceiver ! Hast thou betrayed my credulous innocence With visured falsehood and base forgery ? Milton.

The Cyclops, a people of Sicily, remarkable for cruelty, might, perhaps, in their wars use a head piece, or vizor. Broome.

UJST, NORTH, one of the western islands of Scotland, iu Inverness-shire, between Harris on the north and Jienbecula on th« south ; from which last it is separated by a narrow channel, which is dry at low water. It is of a very irregular form ; of about twenty miles long, and from twelve to eighteen miles broad. That part of the coast which is washed by the Atlantic is inaccessible, except in very calm weather. On the east coast, however, it lias several safe harbours, but here the ground is hilly and barren. The west and north parts are low and level. The cultivated parts are pleasant and fertile. The lakes abound with trouts, and are frequented by flocks of wild fowls. About 2000 black cattle and 1500 or 1600 Small horses are pastured on the hills. About 1200 tons of kelp are made annually. The island belongs to lord M 'Donald.

I'I-T, SOUTH, another of the Hebrides, in Inver- ness-shire, lies between Bˆrry on the south and Benbecula on the north ; thirty-two miles long, and from nine to ten broad. The surface and soil are similar to those of North Uist. The number of sheep is 7000, of horses 1000, and of black cattle 700 : 1100 tons of kelp are made. These islands belong to M'Donald of Clanranald and M'Donald of Boisdale.

VISTA, n. s. Ital. vista. View; piospect through an avenue.

In St. Peter's, when a man stands under the dome, if he looks upwards, he is astonished at the spacious hollow of the cupola, that makes one of the beautifulest t-ista that the eye can pass through. Additon.*

The finished garden to the view Its riftat opens, and its alleys green. Thon.sm.

VISTl'LA, a river of Poland, rises in Austrian Silesia, at the foot of the

Carpathians, and, flowing eastward, enters Poland at the southern frontier, passing the ancient capital Cracow; and, after bath- ing the walls of Sandomir, it receives the San. Its course, now northward, brings it, after traversing a considerable tract of country, to Warsaw ; at some distance from which it receives the Bug, a river almost equal to itself in magnitude, and bringing; with it the waters of the south-east and north of Poland. The Vistula, now become one of the great rivers of Europe, holds a northward course, inclin-

ing to the west, passes the towns of Plock and Culm ; and after flowing several hundred miles, with a wide channel, and undiminished volume, divides, like the Rhine, into two branches, of which one, called the Nogat, and another the Old Vistula, flow eastwards to the Frische Haff, while the largest stream preserves the name of Vistula, and, turning to the westward, falls into the Baltic at Dantzic. Flowing generally through a level country the Vistula is navigable many hundred miles, beginning so far up as Cracow.

VIS'UAL, adj. Fr. visuel. Used in sight; ex- ercising, or instrumental to, sight.

An eye thrust forth so as it hangs a pretty distance by the v'mial nerve, hath been without any power of sight ; and yet, after being replaced, recovered sight.

Bacon.

Then purged with euphrasy and rue The vitua.1 nerve ; for he had much to see. Milton.

VITAL, adj. -\ Lat. vitalis. Contributing

VITAL'ITV, n. s. f or necessary to life; contain-

VI'TALLY, adv. f ing or being the seat of life;

VI'TALS. n. s. J essential ; likely to live (un- usual) : vitality is, living power: the adverb agrees with the adjective : and vitals mean parts essential to life.

Let not Bardolph's vital thread be cut With edge of penny cord, and vile reproach. Shaksp.

Know, griefs vital part Consists m nature not in art. Bishop Corbet.

On the watery calm ,

His brooding wings the spirit of God outspreads ; And vital virtue infused, and vital warmtn Throughout the fluid mass. Milton.

The silent, slow, consuming fires, Which on my inmost vitals prey, And melt my very soul away. Philips.

On the rock a scanty measure place Of vital flax, and turn the wheel apace. Dryden.

For the security of species produced only by seed, providence hath endued all seed with a lasting vitality, that if by any accident it happen not to germinate the first year, it will continue its fecundity twenty or thirty years. Ray.

The dart flew on, and pierced a vital part. Pope. _

VITAL, in physiology, an appellation given to whatever ministers principally to the constituting or maintaining life in the bodies of animals; thus the heart, lungs, and brain, are called vital parts ; and the operations of these parts, by which the life of animals is maintained, are called vital functions.

VITALIANO (Donati), naturalist, was born in Padua, 1717, wrote Saggio della floria naturale dell' Adriatico in 1750. His Sardinian majesty appointed him professor of botany and natural history at Turin. He sent him to visit Egypt, Syria, Palestine, Arabia, and the East Indies, to make observations and to collect the rarest produc- tions of nature. The greatest part of this journey he performed; but died at Bassora in 1763. He left in MS. two volumes in folio.

VITEL'LARY, n. s. Lat. vitellus. The place where the yolk of the egg swims in the white.

A greater difficulty in the doctrine of eggs is, how the sperm of the cock attaineth into every egg ; since the vitellary or place of the yolk is very high. Browne.

VITELLUS, emperor of Rome. See ROME.

VITELLTJS, the yolk of an egg. See EGG.

VITEPSK, a government of the north-west of European Russia, lying to the east of Courland, and south of Livonia, between long. 26° 30′ and 31° 50′ E., liit. .55° 3′ and 57° N. Its territorial extent

is about 20,000 square miles, and its population nearly 750,000, partly Poles, Lithuanians, and Lettonians; partly also Russians, Germans, and Jews. The surface is generally flat. Hemp and flax are raised ; and, the pastures being generally good, cattle are reared and exported. There is also some traffic in the article of honey and bees' wax. This province contains several lakes. Its chief rivers are the Dwina, the Ula, and the Viteba.

VITEPSK, a city of European Russia, and the capital of the government of the same name, stands on the Dwina, at the influx of the Viteba, which divides it into two parts. The town is surrounded by a wall, but made no regular defence in the cam- paign of 1812, having been alternately occupied by French and Russians. Population 13,000. 322 miles south of Petersburgh, and 297 west of Mos- cow.

VITERBO, a considerable town in the States of the Church, the capital of a delegation of the same name, is situated at the foot of a high mountain. This is supposed to have been the ancient Volturna, or capital of the Etruria ; by others to have been built by the Lombards. It is surrounded with a wall, and has a number of round towers. Its streets are broad and well paved, its market-place neat, and several of the principal buildings con- structed with taste. About half a mile from the town is a small lake, called Bulicame, the waters of which emit a sulphureous smell, and appear to be in a state of continual agitation. Population 10,000. Twenty-seven miles N.N.E. of Civita Vecchia, and thirty- eight N. N.W. of Rome.

VITEX, in botany, the agnus castus, or chaste tree, a genus of plants in the class of didynamia, and order of angiospermia ; ranking, by the na- tural system, in the thirty- ninth order, personatae.

VITIATE, v. a. > Lat. vitio. To deprave ;

*VITIA'TION, n. *. i spoil ; make less pure: the noun substantive corresponding.*

The foresaid extenuation of the body is imputed to the blood's litiution by malign putrid vapors smoking throughout the vessels. Harvey on Consumption.

The organs of speech are managed by so many mus- cles, that speech is not easily destroyed, though often somewhat vitiated as to some particular letters. Holder.

The sun in his garden gives him the purity of visible objects, and of true nature before she was vitiated by luxury. Evelyn's Kalendar.

This undistinguished complaisance will vitiate the taste of the readers, and

misguide many of them in their judgments, where to approve and where to censure.

Garth.

ˆ VITILITIGATION, n. t. From vitilitigate. Contention ; cavillation.

I'll force you, by right ratiocination, To leave your vitUitigation. Hudibrat.

VITIOUS, adj. -\ Fr. vicieux ; Lat. vitiosus.

VI'TIOUSLY, adv. f Corrupt ; wicked ; opposite

VI'TIOUSXESS, n.t. lio virtuous; and used both

VITIOS'ITY. 'of persons and practices :

all the derivatives correspond.

When we in our vitioutneti grow hard, The wise gods seal our eyes. Shakspeare.

Witness the' irreverent son Of him who built the ark ; who, for the shame Done to his father, heard his heavy curse, ' Servant of servants,' on his vitinui race. Milton.

Here, from the ritious air and sickly skies, A plague did on the dumb creation rise. Drydtii.

What makes a governor justly despised is i-itiuunteu N»d ill morals. Virtue must tip the preacher's tongue nd the ruler's sceptre u ith authority. South.

VIT

No troops abroad are so ill disciplined us the Eng- glish ; which cannot well be otherwise, while the com- mon soldiers have before their eyes the nitwits exampla of their leaders. Swift.

VITIS, in botany, a genus of the class pentan- dria, order monogynia; and in the natural system arranged under the fortieth order, personatae. The petals cohere at the top, and are withered ; the fruit is a berry with five seeds. There are eleven species, the most important of which is V. vinifera, or the common vine, which has naked, lobed, si- nuated leaves. There are many varieties, all pro- pagated either from layers or cuttings, the former of which is greatly practised in England, but the latter is much preferable. In choosing the cuttings you should always take such shoots of the last year's growth as are strong and well ripened ; these should be cut from the

old vine, just below the place where they were produced, taking a knot, or piece of the two years' wood, to each, which should be pruned smooth; then you should cut off the upper part of the shoots, so as to leave the cutting about sixteen inches long. When the cuttings are made, if they are not then planted, they should be placed with their lower part in the ground, in a dry soil, lay ing some litter upon their upper parts to prevent them from drying : in this situation they may remain till the beginning of April; when they should be taken out and washed from the filth they have contracted; and, if very dry, should stand with their lower parts in the water six or eiwht hours, which will distend their vessels, and dispose them for taking root. If the ground be strong, and inclined to wet, open a trench where the cuttings are to be planted, which should be filled with lime rubbish, the better to drain off the moisture: then raise the borders with fresh light earth about two feet thick, so that it may be at least a foot above the level of the ground : then open the holes at about six feet distance fiom each other, putting one good strong cutting into each hole, which should be laid a little sloping that their tops may incline to the wall ; but it must be put in so deep as that the uppermost eye may be levtl with the surface of the ground. Having placed the cut- ting in the ground, fill up the hole gently, pressing down the earth close about it, and raise a little hill just upon the top of the cutting, to cover the upper eye quite over, which will prevent it from drying. Nothing more is necessary but to keep the ground clear from weeds until the cuttings begin to shoot ; at which time look after them care- fully, and rub off any small shoots, fastening tho first main shoot to the wall, continue to look over these once in three weeks during the summer, con- stantly rubbing off lateral shoots which are pro- duced. The Michaelmas following, if the cuttings have produced strong shoots, prune them down to two eyes. In the spring, after the cold weather is past, gently dig up the borders to loosen the earth ; but be very careful in doing this not to injure the roots ; also raise the earth up to the stems of the plants, so as to cover the old wood, but not so deep as to cover either of the eyes of the last year's wood. After this they will require no farther care until they begin to shoot ; then rub off all weak dangling shoots, leaving no more than the two pro- duced from the two eyes of the last year's wood, which should be fastened to the wall. From this time till the vines have done shooting, look them over once in three weeks or a month, rub off all

lateral shoots as they are produced, and fasten the main shoots to the wall as they are extended in length; about the middle or latter end of July it will

be proper to nip off the tops of these two shoots, which will strengthen their lower eyes. As soon as the leaves begin to drop in autumn, prune these young vines again, leaving three buds to each of the shoots, provided they are strong: otherwise it is better to shorten them down to two eyes if they are good ; for it is a very wrong practice to leave much wood upon young vines, or to leave their shoots too long, which greatly weakens the roots ; then fasten them to the wall, spreading them out horizontal each way, that there may be room to train the new shoots the following summer, and in the spring the borders must be digged as before. The uses of the fruit of the vine for making wine, &c., are well known. The vine was introduced by the Romans into Britain, and appears formerly to have been very common. From the name of vineyard yet adhering to the ruinous sites of our castles and monasteries, there seems to have been few in the country but what had a vineyard belonging to them. The county of Gloucester is particularly mentioned by Maimsbury, in the twelfth century, as excelling all the rest of the kingdom in the number and goodness of its vineyards. In the earlier periods the Isle of Ely was expressly de- nominated the Isle of Vines by the Normans. Vineyards are frequently noticed in the descrip- tive accounts of Doomsday Book ; and those of England are even mentioned by Bede as early as the commencement of the eighth century. Dooms- day book exhibits a particular proof that wine was made in England during the period preceding the conquest. And after the conquest the bishop of Ely appears to have received at least three or four tuns of wine annually, as tythes, from the produce of the vineyards in his diocese; and to have made frequent reservations in his leases of a certain quantity of wine for rent. A plot of land in Lon- don, which now forms East Smithfield and some adjoining streets, was withheld from the religious house within Aldgate by four successive constables of the Tower, in the reigns of William II., Henry I., and Stephen, and made by them into a vine- yard. In the old accounts of rectorial and vicarial revenues, and in the old registers of ecclesiastical suits concerning them, the tythe of wine is an ar- ticle that frequently occurs in Kent, Surrey, and other counties. And the wines of Gloucestershire, within a century after the conquest, were little inferior to the French in sweetness. The beautiful region of Gaul, which had not a single vine in the days of Caesar, had numbers so early as the time of Strabo. The south of it was particularly stocked with them ; and they had even extended them- selves into the interior parts of the country : but the grapes of the latter did not ripen kindly. France was famous for its vineyards in the reign of Vespasian, and even exported its wines into Italy. The province of Narbonne was then covered with vines; and the wine-merchants of the country were remarkable for all the knavish dexterity of our modern brewers, tinging it with smoke, coloring it, as it was suspected, with herbs and noxious dyes, and even adulterating the taste and appear- ance with aloes. And as our first vines would be transplanted from Gaul, so

most probably were those of the Allobroges in Franche Compte. These vere peculiarly fitted for cold countries. They

ripened even in the frosts of advancing winter. And they were of the same color, and seem to have been of the same species, as the black Muscadines of the present day, which have lately been tried in the island, and found to be fittest for tiie climate. These were certainly brought into Britain a little after vines had been carried over all the kingdoms of Gaul, and about the middle of the third century, when the numerous plantations had gradually spread over the face of the latter, and must natu- rally have continued their progress into the former. The Romans, even nearly to the days of Lucullus, were very seldom able to regale themselves with wine. Very little was then raised in the compass of Italy. And the foreign wines were so dear that they were rarely produced at an entertainment; and, when they were, each guest was indulged only with a single draught. But in the seventh century of Home, as their conquests augmented the decree r>f their wealth, and enlarged the sphere of their luxury, wines became the object of parti- cular attention. Many vaults were constructed, and good stocks of liquor deposited in them. And this naturally gave encouragement to the wines of the country. The Falernian rose immediately into great repute ; and a variety of others, that of Flo- rence among the rest, succeeded it about the close of the century. And the more westerly parts of the European continent were at once subjected to the arms, and enriched with the vines, of Italy.

VITREOUS, adj. French, vitre ; Lat. vitreus. Glassy; consisting of or resembling glass.

The hole answers to the pupil of the eye ; the crys- talline humour to the lenticular glass; the dark room to the cavity containing the vitreous humour, and the white paper to the retina. Ray on the Creation.

When the phlegm is too viscous, or separates into too great a quantity, it brings the blood into a morbid state : this viscous phlegm seems to be the vitreous pe- tuitu of the ancients. Arbuthnot.

VITREOUS HUMOR OF THE EYE. See ANATOMY.

VITREOUS SPAR. See CHEMISTRY.

VITRIFY, v.a. & v.n. \ Fr. vitrifier ; Lat.

VITRIF'ICATE, v. a. yvitrum and facia. To

VITRIFICA'TION, n. s. J change into glass ; be- come glass or glassy : vitrificate has also the former signification, and vitrification corresponds.

We have metals vitrificated, and other materials, be- sides those of which you make glass. Bacon.

Metals will vitrify : and perhaps some portion of the glass of metal vitrified, mixed in the pot of ordinary glass metal, will make the whole mass more tough. Id.

Upon the knowledge of the different ways of making minerals and metals capable of vitrification, depends the art of making counterfeit or fictitious gems. Boyle.

Chymists make vessels of animal substances calcined, which will not vitrify in the fire ; for all earth which hath any salt or oil in it will turn to glass. Arbuihnot.

VITRIFICATION, in chemistry. See CHEMISTRY and GLASS-MAKING.

VITRIOL, n. s. ˆ Fr. vitriol; Lat. vitriolum.

VIT'RIOLATE, adj. I A sulphuric acid with an

VIT'RIOLATED, \earthyormetallicbase. See

VITRIOL'IC, i CHEMISTRY and SULPHURIC

VITRI'OI.OUS. J ACID. Vjtriolateorvitriolated is impregnated with vitriol : vitriolic or vitriolous, resembling or containing vitriol.

Iron may be dissolved by any tart, salt, or vitriolated water. Bacon.

Copperose of Mars, by some called salt of steel, made by the spirits of vitriol or sulphur, will, after ab- lution, be attracted by the loadstone ; and therefore

whether those shooting salts partake but little of steel, and be not rather the vitriolous spirits fixed unto salt by the effluvium or odour of steel, is not without good ijucstion. Browne.

The water having dissolved the imperfectly calcined body, the vitriolate corpuscles swimming in the liquor, by their occursions constituted little masses of vitriol, which gave the water they impregnated a fair vltriolote

colour. Eflyle.

These salts have somewhat of a nitrous taste, but mixed with a smatch of a litriolic. Grew.

I rubbed it with the ci/rioi-stone. Wiseman.

VITRIOLIC ACID. See SULPHURIC ACID and CHEMISTRY.

VITRUVIUS POLLO (Marcus), a very cele- brated Roman architect, was, according to the com- mon opinion, born at Verona, and lived in the reign of Augustus. His treatise on architecture is oxtant, of which there are several English transla- tions.

VITRY, or VITRY LE FRANCOIS, a town of France, in Champagne, has a bridge over the Marne, which here becomes navigable for barges. Its trade is in corn, wood, and the cotton and other manufactures of the town. Vitry is surrounded by a wall, and, though built chiefly of wood, has a pleasant appearance ; its largest square being neat and regular, and its principal church built in the Italian style. The addition of Le Francois to its name is derived from Francis I., in whose reign it was built. It was the scene of important military operations in 1814. Population 7000. Twenty miles south-east of Chalons.

VITTORIA, a town of Spain, the chief place of Alava, stands partly on the slope of a hill, at the entrance of a beautiful valley, watered by the Za- dora. It is surrounded by a wall, but is a scattered place. Here are, however, a few streets of tole- rable width, and a square, with a fountain in the centre. The principal churches are those of the Carmelites and the Dominicans. Its trade con- sists chiefly in the transit between Castile and the northern provinces. This town, or rather neigh- bourhood, was the scene of a general engagement on 21st of June 1813, in which the French, under Jourdan, were defeated by lord Wellington. Popu- lation 6500. Twenty-seven miles south of Bilbao.

VITUPERATION, n.s. Latin, vituperatio. Blame ; censure.

Such a writing ought to be clean, and free from any cavil or vituperation of rasure. Ayliffe.

VIVA'CIOUS, adj. \ Latin vivax. Long-

VIVA'CIOUSNESS, n. s. > lived; lively; sprightly:

VIVAC'ITY. f the noun substantives

corresponding.

They are esteemed very hot in operation, and will, in a convenient air, survive some days the loss of their heads and hearts ; so vigorous is their rivacitii. lioi/le.

lie had a great vivacity in his countenance. Dryiien.

\ IVE, adj Fr. vif; Lat. vivu$. Lively ; forci- ble ; pressing. Obsolete.

By a vive and forcible persuasion, he moved him to a war upon Flanders. Bacon.

\ I'VENCY, n. s. Lat. vivo. Manner of sup- porting or continuing life or vegetation.

Although not in a distinct and indisputable way of viveiicy, or answering in all points the property of plants, yet in inferior and descending constitutions they are determined by seminalities. /in

VIYKRKA, the weasel, a genus of quadrupeds belonging to the order of fene. They have six fore-teeth, the intermediate <;nes being shorter, "ml

more than three grinders, and the claws are ex- serted. There are twenty-seven species, the prin- cipal of which are, 1. V. ichneumon, with the tail tapering to a point, and the toes distant from each other ; inhabits Egypt, Barbary, India, and its islands. It is there a most useful animal, being an inveterate enemy to the serpents and other noxious reptiles which infest the torrid zone, and is at pre- sent domesticated and kept in houses in India and in Egypt, and grows very tame. It sits up like a squirrel, and eats with its fore feet, catching any Miing that is flung to it. Rumphius observes how skilfully it seizes the serpents by the throat so as to avoid receiving any injury ; and Lucan beau- tifully describes the same address of this animal in conquering the Egyptian asp. 2. V. vulpecula, or stifling weasel, has a short slender nose ; short ears and legs; black body, full of hair; the t»il long, of a black and white color; length from nose to tail about eighteen inches. It inhabits Mexico, and perhaps other parts of America. This and some other species are remarkable for the pestife- rous, suffocating, and most faetid vapor they emit from behind when attacked, pursued, or frightened ; it is their only means of defence. Some turn their tail to their enemy and keep them at a distance by a frequent crepitus; and others ejaculate their urine, tainted with the horrid effluvia, to the dis- tance of eighteen feet. The pursuers are stopped with the terrible stench. Should any of this liquor fall into the eyes it almost occasions blindness; if on the clothes the smell will remain for several days in spite of all washing; they must even be buried in fresh soil in order to be sweetened. Dogs that are

*not true bred run back as soon as they perceive the smell ; those that have been used to it will kill the animal ; but are often obliged to relieve themselves by thrusting their noses into the ground. There is no bearing the company of a dog that has killed one for several days. Pro- fessor Kalm was one night in great danger of being suffocated by one that was pursued into a house where he slept; and it affected the cattle so that they bellowed through pain. Another, which was killed by a maidservant in a cellar, so affected her with the stench that she lay ill for several days ; and all the provisions that were in the place were so tainted that the owner was obi i. MM I to throw them away. Notwithstanding this the flesh is reckoned good meat, and not unlike that of a pig; but it must be skinned as soon as killed and the bladder taken carefully out. It breeds in hollow trees, or holes under ground, or in clefts of rocks ; climbs trees with great agility ; kills poultry ; eats eggs and young birds. 3. V. zibetha, or civet cat, has short rounded ears ; the back and sides cinereous, tinged with yellow, marked with large dusky spots disposed in rows; the hair coarse; that on the top of the body longest standing up like a mane; the tail sometimes wholly black; sometimes spotted near the base; length, from nose to tail, about two feet three inches; the tail four- teen inches ; the body pretty thick. It inhabits India, the Philippine Isles, Guinea, Ethiopia, and Madagascar. The famous drug mu*k, or civet, which is produced from an aperture between tin/ privities and the anus, in both sexes, is secreta>\ from certain glands. The persons who keep them procure the musk by scraping the inside of tt"s bag, twice a week, with an iron spatula, and ge' about ?. draclnn each time; but it is seldom sold*

pure, being generally mixed with suet or oil to make it more weighty. The males yield the most, especially when they are previously irritated. They are fed, when young, with pap made of millet, with a little flesh or fish ; when old with raw flesh. In a wild state they prey on fowl. The?1 animals seem not to be known to the ancients ; it is probable the drug was brought without their know- ing its origin.

VIVES, n. s. A distemper among horses. 1'ives is much like the strangles ; and the chief dif- ference is, that for the most part the strangles happen to colts and young horses while they are at grass.

Farrier's Dictionary.

VIVID, adj. ˆ Lat. vividus. Lively; quick,; VIV'IDLY, adv. 'striking; sprightly: the ad \ IVID'NESS, n. s. j verb and noun substantive corresponding.

The liquor, retaining its former vivid color, was grown clear again. Boyle.

In the moon we can. with excellent telescopes, dis- cern many hills and vallies, whereof some are more and some less vividly illustrated ; and others have a fainter, others a deeper shade. Id.

Body is a fit workhouse for sprightly, vivid faculties to exercise and exert themselves in. South.

To make these experiments the more manifest, such bodies ought to be chosen as have the fullest and most vivid colors, and two of those bodies compared together.

Newton .

Where the genius is bright, and the imagination vivid, the power of memory may lose its improvement.

Watts.

VIVIFY, u. a. ~\ Fr. mvifier ; Lat. vivus VIVIF'IC, adj. > undfacio. To make alive ;

VIVIFICA'TION, n. s. j animate; endue with life: the adjective and noun substantive corresponding. If that motion be in a certain order there followeth vmfication and figuration. Bacon.

Sitting on eggs doth vivify, not nourish. Id.

Gut-worms, as soon as vivijied, creep into the sto- mach for nutriment. Harvey on Consumptions.

Without the sun's salutary and viviftc beams, all mo- tion would cease, and nothing be left but darkness and death. Ray.

VIVIPAROUS, adj. Lat. vivus and pario. Bringing forth the young alive: opposed to ovipa- rous.

Their species might continue, though they had been riviparoiti ; yet it would have brought their individuals to very small numbers. Mure.

If birds had been viviparous, the burthen of their womb had been so great and heavy, that their wings would have failed them. Kay.

VIX'EN, n.s. Sax. pixen ; Belg.J'eeAs. Lite- rally a she-fox ; a scolding, quarrelsome woman.

Vixen, or fixen, is the name of a she-fox : otherwise applied to a woman whose nature and condition is thereby compared to a she-fox. Versteyan.

O ! when she's angry, she is keen and shrewd ; She was a vixen when she went to school ; And, though she be but little, she is fierce. Shaksp.

See a pack of spaniels, called lovers, in a hot pursuit of a two-legged vixen, who only flies the whole loud pack, to be singled out by one. Wucherley.-

VIZ, adv. Lat. i-idtlictt, by contraction. To wit; that is.

That which so oft by sundry writers, Has been applied to almost all fighters, More justly may be ascribed to this, Thau any other warrior, <•/:. None ever acted botli parts bolder, Both of a chieftain and a soldier. Iludtli

Let this be done relatively, vit. one thing greater < >i stronger, casting the rest behind, and rendering it less sensible by its opposition. DryJen.

V1ZAGAPATAM, a town on the sea- coast of the Northern Circars, Hindostan, the capital of a district of the same name. Lat. 17° 42′ N., long. 83° 28′ E. A river coming from the north, and turning short eastward to the sea, forms an arm of land one mile and a half in length, and 600 yards in breadth, nearly in the middle of which the fort is placed. The town is inconsiderable, the Euro- peans generally residing at Watloor, a village to the north of this harbour. During the ebb the surf is here considerable; and as European boats, for want of Massulah craft, are obliged frequently to go in, they should keep close to a steep hill, named tht Dolphin's Nose, to escape being upset. The sur- rounding country is mountainous, and many of the hills wild, and destitute of vegetation. At Sema- chellum, near to this place, is a Hindoo temple of great fame and sanctity. The principal trading towns of this district are Vizagapatam and Bimli- patam.

VIZ'ARD, n. s. & v. a. Fr. visiere. See VISOR. A mask used for disguise : to mask.

Degree being vizarded, The unworthiest shews as fairly in the mask. Blinks.

A lie is like a vizard, that may cover the face indeed, but can never become it. Hiiuth.

Ye shall know them by their fruits, not by their well or ill living ; for they put on the vizard of seeming sanc- tity. Atterhury.

VIZ'IER, n. s. Properly wazir. The prime minister of the Turkish empire. See VISIER. He made him vizier, which is chief of all the bassas.

Knollei History of the Turks. This grand vizier presuming to invest The chief imperial city of the west ; With the first charge compelled in haste to rise, His treasure, tents, and cannon, left a prize. Waller.*

The UKRAINE is a former division of Russian Poland, which uow forms the four governments of Kiev, Podolia, Poltava, and Charkov. It is situated between 48° and 52° of lat. N., corresponding to the parallels of the north of France and central part of England, but with a very different tempera- ture. Wheat, oats, barley, and other products of our latitude, are raised with comparatively little labor, and the pastures are in many parts of great luxuriance. Fruits also are abundant, and the kermes, or Polish cochineal. The forests consist of oak, larch, and other valuable trees. The inha- bitants, called Malo Russians, are said by Dr. Clarke to be less ignorant and backward than their eastern neighbours, but they are certainly doomed to great poverty. The chief town is Kiev, once the capital of the Russian dominions.

This province, situated between Russia and Po- land, was the scene of repeated invasions, of which that by Charles XII. of Sweden, in 1709, terminated in the fatal battle of Poltava. The great natural feature of the country is the Dnieper, which inter- sects it in a winding direction from north to south, and affords a channel for the conveyance of pro- ducts to the Black Sea.

VLADIMIR, a town and government of Euro- pean Russia. The government contains 19,500 square miles, and 1,000,000 inhabitants. The town stands on the river Kliasma, the capital of a government or province, and a bishop's see. Population TOOO. 1 12 miles east by north of Mos- cow, and .500 south-east of St. Petersburg

UL'CER, n. s. -\ Fr. ulcere ; Latin

ULCERATE, v. a. &. v. n. ' tilcus. A continued ULCERA'TION, n. s. t sore; not a new

UL'CEROUS, adj. 'wound: to ulcerate

is to disease with, or turn into ulcers : ulceration th« act of doing so ; the ulcer formed ; a sore : ulcerous, afflicted with sores. See below.

My ulcers swell, Corrupt and smell. Sandys's Paraphrase.

Strangely visited people, All swoln and ulcerous, he cures. Shakspeare.

Some depend upon the intemperarnent of the part ulcerated ; others upon the continual afflux of laceratire humours. Harvey.

An ulcerous disposition of the lungs, and an ulcer of the lungs, may be appositely termed causes of a pulmo- nique consumption. Id.

Intestine stone and nicer, colick pangs. Milton. An acrid and purulent matter, mixeth with the blood in such as have their lungs ulcerated.

Arbuthnot on Aliments.

ULCER (ulcus, eris, n. ; from tXicot, a sore), a purulent solution of continuity of the soft parts of an animal body. Ulcers may arise from a variety of causes, as all those which produce inflammation, from wounds, specific irritations of the absorbents, from scurvy, cancer, the venereal or scrofulous virus, &c. The proximate or immediate cause is an increased action of the absorbents, and a specific action of the arteries, by which a fluid is separated from the blood upon the ulcerated surface. They are variously denominated ; the following is the most frequent division : —

1. The simple ulcer, which takes place generally from a superficial wound.

2. The sinuous, that runs under the integuments, and the orifice of which is narrow, but not callous.

3. The fistulous ulcer, or fistula, a deep ulcer with a narrow and callous orifice.

4. The fungous ulcer, the surface of which is covered with fungous flesh.

5. The gangrenous, which is livid, faetid, and gangrenous.

6. The scorbutic, which depends on a scorbutic acrimony.

7. The venereal, arising from the venereal dis- ease.

8. The cancerous ulcer, or open cancer.

9. The carious ulcer, depending upon a carious bone.

1 0. The inveterate ulcer, which is of long con- tinuance, and resists the ordinary applications.

11. The scrofulous ulcer, known by its having arisen from indolent tumors, by discharging a viscid, xluey matter, and by its indolent nature.

ULEABORG, an extensive province, situated to the north of Finland, and extending along the south coast of the gulf of Bothnia. After being long subject to Sweden, it forms, since 1809, a circle of the Russian province or government of Abo ; but it extends also into Lapland, occupying ihe country between 63° 30′ and 67° of N. lat.

ULEX, in botany, a genus of plants of the class of diadelphia, and order of decandria; and in the natural system arranged under the thirty-second order, papilionacac. The calyx consists of two leaves quinquedentate : pod almost covered by the calyx. There are two species, one of which, U. Europaus, the furze, gorse, or whin, is a native of Britain ; it is too well known to need description. Its uses, however, are many ; as a fuel where wood and coals ure scarce; and as hedge-wood upon

light barren land : its use as horse provender too seems to be fully proved, though not yet established. See FENCE.

ULIETEA, one of the Society Islands, in the South Pacific Ocean, wholly surrounded by reefs, interspersed with small islands, and forming several harbours. See SOCIETY ISLANDS.

ULIGINOUS, adj. Lat. uliginosus. Slimy ; muddy.

The uliginous lacteous matter, taken notice of in the coral fishings upon the coast of Italy, was only a col- lection of the coralline particles. Woodward.

ULM, a considerable town and bishop's see of Wirtemberg, is .ituated on the banks of the Da nube, where it receives the small river Blau, which flows through the town. It mostly consists of crooked streets, and of houses in the old German style, with a height of roof out of all proportion to the walls. Some of the streets, however, have well paved path-ways. Here is a large Gothic church, or minster, about 416 feet in length, and 160 in breadth ; and several other churches are entitled to notice ; as are the town-house, arsenal, theatre, barracks, and hospital. The prevailing religion is the Lutheran. Inhabitants 15,000. Forty-four miles south-east of Stutgard.

ULMIN, in mineralogy, a name Dr. Thomson has given to a very singular substance lately exa- mined by Klaproth. It differs essentially from every other known body, and must therefore con- stitute a new and peculiar

vegetable principle. It exuded spontaneously from the trunk of a species of elm, which Klaproth conjectures to be the ulmus nigra, and was sent to him from Palermo in 1802. 1. In its external characters it resembles gum. It was solid, hard, of a black color, and had consi- derable lustre. Its powder was brown. It dis- solved readily in the mouth, and was insipid. 2. It dissolved speedily in a small quantity of water. The solution was transpurent, of a blackish-brown color, and, even when very much concentrated by evaporation, was not in the least mucilaginous or ropy : nor did it answer as a paste. In this re- spect ulmin differs essentially from gum. 3. It was completely insoluble both in alcohol and ether. When alcohol was poured into the aqueous solu- tion, the greater part of the ulmin precipitated in light brown flakes. The remainder was obtained by evaporation, and was not sensibly soluble in alcohol. The alcohol by this treatment acquired a sharpish taste. 4. When a few drops of nitric acid were added to the aqueous solution, it became gelatinous, lost its blackish-brown color, and a light brown substance precipitated. The whole solution was slowly evaporated to dryn^ss, and the reddish- brown powder which remained was treated with alcohol. The alcohol assumed a golden yellow color ; and, when evaporated, left a light brown, bitter, and sharp resinous substance. 5. Oxyinu- riatic acid produced precisely the same effects as nitric. Thus it appears that ulmin, by the addition of a little oxygen, is converted into a resinous sub- stance. In this new state it is insoluble in water. This property is very singular. Hitherto the vo- latile oils were the only substances known to as- sume the form of resins. That a substance soluble in water should assume the resinous form with such facility is very remarkable. 6. I Imin when burnt emitted little smoke or flame, and left a spongy but firm charcoal, which, when burnt in the open air, left only a little carbonate of potash behind.

ULMUS, in botany, a genus of plants belonging to the class of pentandria, and order of digynia; arranged in the natural system under the fifty-third order, scabridae. The calyx is quinquefid; there is no corolla. The fruit is a dry, compressed, membranaceous berry. There are three species; one of which is a native of Britain. 1. U. cam- pestris, common elm. The leaves are rough, oval, pointed, doubly serrated, unequal at the base. Bark of the trunk cracked and wrinkled. Fruit membranous. 2. U. montana, the wych elm, or witch hazel, is generally reckoned a variety of this species. All the sorts of elm may be propagated either by layers or suckers taken from the roots of the old trees. The elm delights in a stiff strong soil. It is observable,

however, that here it grows comparatively slow. In light land, especially if it be rich, its growth is very rapid ; but its wood is light, porous, and of little value, compared with lhat which grows upon strong land ; which is of a closer stronger texture, and, at the heart, will have the color, and almost the heaviness and the hardness of iron.

ULSTER, a province of Ireland, containing the northern counties of Donegal, Londonderry, An- tiini, Tyrone, Fermanagh, Monaghan, Armagh, Down, and Cavan.

ULSTER, a county of the United States, in New York, bounded north by Greene county, east by Hudson, south by Orange county, south-west by Sullivan county, and north-west by Delaware county. The surface is broken by the Catskill mountains, but well watered, the Hudson forming the eastern boundary, and the small streams being numerous. This county produces marble of a su- perior fineness and hardness. Limestone, slate, marl, and iron-ore ; lead, native alum, plumbago, coal, peat, and a variety of pigments. A large proportion of the houses are of a blue lime-stone, abundant here. The early inhabitants of this county were German and Dutch families ; and it was settled at a very early period of our history. In 1662 Kingston had a minister; and the county records commence about that time.

ULSWATER, a lake of Westmoreland and Cum- berland, ten miles north of Ambleside, and four- teen south-west of Penrith. Its length is about eight miles, and it is of a sufficient depth to breed char ; and abounds with a variety of other fish. Trout of upwards of thirty pounds weight are said to have been taken in it. One of the amusements on this lake consists in the firing of guns, or small cannon, in certain situations. The report is rever- berated among the adjacent rocks and caverns, with every variety of sound.

ULTIMATE, adj. } Lat. ultimtu. Intended

ULTIMATELY, adv. >in the last resort; last in a

ULTIM'ITY, n. s. j train of consequences : the adverb and noun substantive correspond.

Alteration of one body into another, from crudity to perfect concoction, is the ultimity of that process.

Bacon.

Many actions apt to procure fame are not conducive to this our ultimate happiness. Addison.

The ultimate allotment of God to men is really a consequence of their own voluntary choice, in doing good or evil. Rogers's Sermons.

ULTRAMARINE', n. s. & adj. Lat. ultra and nun mus. A fine blue color used in painting ; be- yond the sea; foreign.

Others, notwithstanding they are brown, cease not to be soft and faint, as the blue of ultramarine. Dryden.

ULV A, in botany, laver, a genus of plants of the

class of cryptogamia, nnd order of algae. The fructification is enclosed in a diaphanous membrane. There are seventeen species : twelve of which are British plants. They are all sessile, and without roots, and grow in ditches and on stones along the sea coast. None of them are applied to any parti- cular use different from the rest of the algae, except perhaps the U. umbilicalis, which in England is pickled with salt and preserved in jars, and after- wards stewed and eaten with oil and lemon juice. This species called in English the navel laver, is flat, orbicular, sessile, and coriaceous.

ULUA, JUAN DE, an island and fort of Mexico, in the bay of Vera Cruz; the fort is very strong, and is supplied with an excellent light-house.

ULVERSTONE, a market-town in Lonsdale hundred, Lancashire, situate near the Leven, eigh- teen miles N. N. W. of Lancaster, and 270 N. N. VV. of London. The streets are spacious and clean, and the town rapidly increasing. By means of a canal, lately cut, vessels of 250 tons can approach the town, by which a considerable traffic is carried on in the exportation of iron-ore, limestone, and corn; in the neighbourhood are several furnaces and smelting houses. The church stands in a field, at a small distance from the town, and is a white building with a square tower, containing three bells. Here is a small theatre, an assembly-room, and a public library. Market on Monday. Fairs, Holy- Thursday, and Thursday after the 23d of October.

ULUG BEIG, a Persian prince and learned as- tronomer, was descended from the famous Tamer- lane, and reigned at Samarcand about forty years ; after which he was murdered by his own son in 1449. His catalogue of the fixed stars, rectified for the year 1434, was published at Oxford by Mr. Hyde, in 1665, with learned notes. Mr. Hudson printed in the English Geography Ulug Beig's Tables of the Longitude and Latitude of Places; and Mr. Greaves published in Latin his Astrono- mical Epochas, at London, in 1650. See ASTRO- NOMY.

ULYSSES, king of Ithaca, the son of Laertes, and father of Telemachus, and one of those heroes who contributed most to the taking of Troy. After

the destruction of that city, he wandered for ten years ; and at last returned to Ithaca, where, with the assistance of Telemachus, he killed Antinous and other princes who intended to marry his wife Penelope, and seize his dominions. He at length resigned the kingdom to his son Telemachus ; and was killed by Telegonus, his son by Circe, who did not know him. See CIRCE. The hero is the sub- ject of the Odyssey.

UMBELLA, an umbel, in botany, a species of receptacle ; or rather a mode of flowering, in which a number of slender foot-stalks proceed from the same centre, and rise to an equal height, so as to form an even and generally round surface at top. See BOTANY.

UMBELLAT7E, the name of a class in Ray's and Tournefort's methods, consisting of plants whose flowers grow in umbels, with five petals that are often unequal, and two naked seeds that are joined at top and separated below. They consti- tute the forty-fifth order of Linnseus's Fragments of a Natural Method. See BOTANY, Index.

UMBELLIFEROUS PLANTS are such as have their tops branched and spread out like an umbrella.

UM'BER, n. s. \ Lat. umbra. A dark or sad

UM'BERED, adj. S color: umbered is shaded; clouded.

I'Ml'.

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UN

I'll put my-elf in poor and mean attire, And with a kind of umber smirch my face. Mufc..

From camp to camp, through the foul womb of

night,

Fire answers fire ; and through their paly flames Each battle sees the others umbered face. Id.

Umber is very sensible and earthy ; there is nothing but pure black which can dispute with it. Drtiden.

The umbers, ochres, and minerals found in the fis- sures, are much finer than those found in the strata.

Wood icard.

UMBER, or UMBRE, in natural history, a fossil brown or blackish substance, used in painting ; so called from Ombria, the ancient name of the duchy of Spoleto in Italy, whence it was first obtained ; diluted with water, it serves to make a dark brown color, usually called with us a hair color. Dr. Hill and Mr. da Costa consider it as an earth of the ochre kind. It is found in Egypt, Italy, Spain, and Germany ; in Cyprus also it is found in large quantities; but what is brought into England is principally from different parts of the Turkish do- minions. But it might be found in considerable plenty also in England and Ireland, if properly looked after, several large masses of it having been thrown up in digging on Mendip hills in Somerset- shire, and in the county of Wexford in Ireland : it is also sometimes found in the veins of lead ore both in Derbyshire and Flintshire.

UMBILICAL, adj. Fr. umbilicale ; Lat. um- bilicus. Belonging to the navel.

Birds are nourished by umbilical veins, and the navel is manifest a day or two after exclusion.

Broume't Vulgar Errnurt.

In a calf, the umbilical vessels terminate in certain bodies divided into a multitude of carneous papilla;, re- ceived into so many sockets of the cotyledons growing on the womb. R"y-

UMBILICAL, among anatomists, something re- lating to the umbilicus or navel.

UMBILICAL CORD, or the navel-string, the hol- low ligament by which an embryo communicates with the mother, and draws nourishment from her. This must be carefully cut by the midwife or accoucheur, after parturition, as negligence or in- attention to this is often the cause of fatal ruptures. See MIDWIFERY.

*UM'BO,n. *. Lat. umbo. The pointed boss, or prominent part of a buckler.*

Thy words together tied in small hanks, Close as the Macedonian phalanx ; Or like the umbo of the Romans, \Vhich fiercest foes could break by no means. Swift.

UM'BRAGE, n. J. } Fr. ombrage; Lat. UMBRA'GEOUS, adj. > umbra. Shade ; skreen UMBRA'CEOUSNESS, n. s. j of trees; shadow; dark appearance : hence suspicion ; offence ; anger ; revenge : the adjective and noun substantive follow chiefly the literal sense.

Although he went on with the war, yet it should be but with his sword in his hand, to bend the stiffness of the other party to accept of peace: and so the king should take no umbrage of his arming and prosecution.

Bacon. Walk daily in a pleasant, airy, and unbragrmif garden.

Harvey.

The rest are umbrages quickly dispelled ; the astro- loger subjects liberty to the motions of heaven.

Bramliall against Hobbei. O, might I here

In solitude live savage ; in some glade Obscured, where highest woods, impenetrable

To star or sun-light, spread their uinkraye broad. And brown as evening ! Milton' i l'u>-adiie Lott.

The stealing shower is scarce to patter heard Beneath the umbrageous multitude of leaves.

Thomson.

1'M'BREL, n. s.) Latin umbra. A skreen

UMBREL'LA. S used to keep off the sun or rain.

I can carry your umbrella, and fan your ladyship.

Drytifn.

Good housewives,

Defended by the umbrella's oily shed, Safe through the wet on clinking pattens tread. Guv.

UMBRIATICO, a town of Italy, in the south- west of the kingdom of Naples, in Calabria Citra. situated near the river Lipuda, about six miles from the coast of the gulf of Tarento. It is the see of a bishop, and is said to contain between 9000 and 10,000 inhabitants. Thirty-five miles east of Cosenza, and forty-two N. N. W. of Squillace.

UMBROS'ITY, n. s. Lat. umbresus. Shadi- ness ; exclusion of light.

Oiled paper becometh more transparent, and admits the visible rays with much less umbrositu.

Browne's Vulgar Errmtrt.

UMMERAPOORA, the capital of the Birman empire, stands on the shores of a romantic lake, seven miles in length, by one and a half in breadth, and at a short distance from the left bank of the Irrawuddy. It is fortified and regularly laid out as an exact square. The streets are wide, and in- tersect each other at right angles. In the centre stands the royal palace, which consists of a number of wooden buildings of various forms, having domes covered with gilt copper, and the whole surround- ed by an enclosure of teak planks, having four gates. It may be half a mile in circumference. The city is divided into four distinct quarters, each of which is governed by its own officer ; and no town in Europe can boast of a better police. The circumference of the city is about two miles.

UM'PIRE, n. s. Minshieu after Skinner de- rives this word from Fr. un ptre, a father. Mr. Thomson suggests the Ital. nomo part, or Lat. homo par. An arbitrator ; one who, as a common friend, decides disputes: sometimes taken simply for a judge; the referee of arbitrators.

Just death, kind umpire of men's miseries, With sweet enlargeuieat doth dismiss me hence.

Shafctpeare.

But as swayne unkent fed on the plaines, And made the echo umpire of my straines. Browne .

Among those persons, going to law was utterly a fault, being ordinarily on such accounts as were too light for the hearing of courts and umpires. KettUuell

UN, a Saxon privative or negative particle an- swering to Lat. in ; Gr. q; Belg. on ; and Dan. i/;i ; is placed almost at will before adjectives and ad- verbs. All the instances of this kind cannot be inserted; we preserve, after Johnson, a number sufficient to explain it. He says, 'in and un may be thus distinguished : to words merely English we prefix un, as unfit ; to words bormwed in tl. positive sense, but made negative by ourselves, prefix vn, as generous, ungenerous. When v borrow both words, we retain the Latin or Fren in, as elegant, inelegant; politic, impolitic. B€ fore substantives, if they have the English termina- tion ness, it is proper "to prefix u/i/as unfitness, ungraciousness. If they have the Latin or French terminations in ;itde, ice, or ence, and for the most

part if they end in ty, the negative in is put before ihem, as unapt, unaptness, inaptitude; unjust, in- justice ; imprudence ; unfaithful, unfaithfulness, infidelity'. We take the liberty, in this extensive collection of compounds, to be generally content with one or two good illustrations.

UNABASH'ED, adj. From abashed. Not shamed ; not confused by modesty.

Earless on high, stood unabashed Defoe, And Tutchin flagrant from the scourge below. Pope.

UNA'BLE, adj. From able. Not having ability. With to before a verb, and^/ br before a noun.

The Amalekites set on them, supposing that they had baen weary, and unable to resist.

Raleigh's History of the World. The prince, unable to conceal his pain,

Gazed on the fair, And sighed, and looked, and sighed again. Dryden.

UNABOL'ISHED, adj. From abolished. Not repealed ; remaining in force.

The number of needless laws unabolithed, doth weaken the force of them that are necessary. Hooker.

UNACCEPTABLE, adj. From acceptable. Not pleasing; not such as is well received.

The marquis was at that time very unacceptable to his countrymen. Clarendon.

Every method for deterring others from the like prac- tices for the future must be unacceptable and displeas- ing to the friends of the guilty. Addison. . UNACCES'SIBLENESS, n. s. From accessi- bleness. State of not being to be attained or ap- proached.

Many excellent things are in nature, which, by reason of the remoteness from us, and unaccessibleness to them, are not within any of our faculties to reprehend. Hale.

UNACCOMMODATED, adj. From accom- modated. Unfurnished with external convenience.

Unaccommodated man is no more than such a poor, bare, forked animal as thou art. Shakspeure.

rXACCOM'PANIED,a#. From accompanied. Not Ettended

Seldom one accident, prosperous or adverse, cometh unaccompanied with the like. Hayward.

UNACCOMPLISHED, adj. From accom- plished. Unfinished; incomplete.

Beware of death : thou canst not die unperjured, And leave an unaccomplished love behind. Thy vows are mine. Drijden.

UNACCOUNTABLE, adj. From accountable. Not explicable; not to be solved by reason; not reducible to rule; not subject.

I shall note difficulties, which are not usually ob- served, though unaccountable. Glanville.

There has been an unaccountable disposition of late, to fetch the fashion from the French. Addison.

The Chinese are an unaccountable people, strangely compounded of knowledge and ignorance.

Baker's Peflections on Learuin".

UNAC'CURATE, adj. From accurate. Not exact. Inaccurate is more usual.

Galileo used an ujiaccurate way, defined the air to be in weight to water but as one to four hundred. Boyle.

^ UNACCUSTOMED, adj. From accustomed. Not used ; not habituated ; new ; taking to.

I was chastised as a bullock unaccustomed to the yoke.

Jer. xxxi.

I'll send one to Mantua, Where that same banished runagate doth live, Shall give him such an unaccustomed dram, That be shall soon keep Tibalt company. Shakspeare.

The necessity of air, to the most of animals unaccus- tomed to the want of it, may best be judged of by the following experiments. Boyle.

An old word ought never to be affired to tin :n,ao- ciMomed idea, without just and evident necessity.

H'rtMs'} Laaick.

UNACKNOWL'EDGED, adj. From acknow- ledge. Not owned.

The fear of what was to come from an unknown, at least an unacknowledged successor to the crown, clouded much of that prosperity. Clarendon.

UNACQUAINTED, adj.) From acquainted.

UNACQUAINT'ANCE, n. s. J Not known ; or usual ; not familiarly known : the noun substan- tive corresponding.

She greatly grew amazed at the sight, And the unacquainted light began to fear. Spenser.

Festus, an infidel a Roman, one whose ears were •unacquainted with such matter, heard him, but could not reach unto that whereof he spake. Hooker.

Where else

Shall I inform my unacquainted feet, In the blind mazes of this tangled world ? Milton.

The first is an utter unacquaintance with his master's designs, in these words : the servant knoweth not what his master doth. South.

UNACTIVE, adj. From active. Not brisk; not lively; not busy. Inactive is mere usual.

Silly people commend tame unactive children, because they make no noise, nor give them any trouble. Locke.

UNACTUATED, adj. Not actuated.

The peripatetick matter is a mere unactuated power.

Glanville.

UNADMIR'ED, adj. Not regarded with honor.

Oh ! had I rather unadmired remained In some lone isle, or distant northern land, Where the gilt chariot never marks the way ! Pope.

UNADOR'ED, adj. Not worshipped.

Nor was his name unheard, or unadored, In ancient Greece. Milton.

UNADORN'ED, adj. Not decorated ; not em- bellished.

But hoary winter, unadorned and bare, Dwells in the dire retreat, and freezes there. Addison.

UNADVEN'TUROUS, adj. Not adventurous.

The wisest, unexperienced, will be ever Timorous and loth, with novice modesty Irresolute, unhardy, unadienturous. Milton.

UNADVIS'ED, adj. > From advised. Im-

UNADVI'SEDLY, adv. J prudent; indiscreet; with- out thought : the adverb corresponding.

A strange kind of speech unto Christian ears ; and such as, I hope, they themselves do acknowledge unad- visedly uttered. Hooker.

Madam, I have unadvised Delivered you a paper that I should not. Shakspeare.

UNADULTERATED, adj. Genuine; not spoiled by spurious mixtures.

I have only discovered one of those channels, by which the history of our Saviour might be conveyed pure and unadulterated. Addison.

UNAFFECTED, adj. Real ; open; not hypo- critical; not moved.

Men divinely taught, and better teaching The solid rules of civil government, In their majestic, unaffected stile, Than all the oratory of Greece and Rome. Milton.

They bore the king

To lie in solemn state, a publick sight : Groans, cries, and bowlings fill the crouded place. And unaffected sorrow sat on every face. Dryden.

UNAFFLICTED, adj. Free from trouble.

My unajfticted mind doth feed On no unholy thoughts for benefit. Danitl.

UNAGREE'ABLE, adj. Inconsistent ; unsuit- able.

Advent'rous work! yet to thy power and mine Not unagreeable, to foun'l a patli Over this main, from hell to that new world. J/iltcn.

UNAID'ED, adj. Not assisted ; not helped.

The congregated college have concluded, That labouring art can never ransom nature From her unaidahlf estate. S'takspeare.

Their beloved earl of manchester appeared now as . napplicable to their purposes as the other. Clarendon.

UNAIM'ING, adj. Having no particular direc- ti< n.

The noisy culverin, o'ercharged. lets fly, And bursts, unaiming, in the rended sky ; Such frantick flights are like a madman's dream. And nature suffers in the wild extreme. Granville.

UNAKING, adj. Not feeling or causing pain.

Shew them the' unakiny scars which 1 would hide, As if 1 had received them for the hire Of their breath only. Shakspeare.

UNA'LI ENABLE, adj. Not to be transferred.

Hereditary right should be kept sacred, not from any unalifnable right in a particular family, but to avoid the consequences that usually attend the ambition of com- petitors. Su-ift.

UNALLAYED', adj. Not impaired by bad mixtures.

Unalloyed satisfactions are joys too heavenly to fall to many men's shares on earth. Boyle.

UNALLIED', adj. Having no common nature or relation, not congenial.

He is compounded of two very different ingredients, spirit and matter ; but how such unallied and dispro- portioned substances should act upon each other, no man's learning yet could tell him. Collier on Pride.

*UNALTERED, adj. *\ Not changed ; not INALTERABLE, (changeable: the de-*

l NAL'TERABLY, adv. £ rivatives correspond- UXAL'TERABLENESS, n. s.) ing. It was thought in him an unpardonable offence to alter any thing ; in us intolerable, that we suffer any thing to remain unaltered. Hooker.

The fixt unalterable laws,

Settling the same effect on the same cause. Creech. Retain unalterably firm his love intire.

Stilton' Paradise Lost.*

This happens from the unalterablenets of the corpus- cles which constitute and compose those bodies.

Woodward.

UNAMA'ZED, adj. Not astonished ; free from as 01 i-timent.

I li . • _•. at the voice much marvelling ; at length No • – aztd, she thus in answer spake. Mtltcm.*

UNAMBITIOUS, adj. Free from ambition.

My humble muse, in unambitiimt strains, I aints the green forests, and the flowery plains.

(Np.

I am one of those unambitiw people, who will love von forty years he? ce. Id.

UNA\ll.\ i ' BLE, adj. Lat. inemendabilis. Not to b< > changed for the better.

He is the same man ; so is every one here that you know : mankind is unamendable. 1'npe.

UNA'MIABLE, adj. Not raising love.

*Nor are .ti- >.i..s i.namiuble, win se tops '. o heaven i*pire. /'A,*

Those w in represent religion in an unamia'>lr light • TC like the spies sent by Most-, to make a discovery of :t.e land of promise, when, by their reports, they dis- « < uraged the people from entering upon it.

•n't Spectator.

UNAN'ALYSED, adj. Not resolved into sim-] c parts.

ome large crystals of refined and vnanalys d ni're <»j , eared to have each of them six flat sides. Boyle.

I' N A N 'C II ( ) K K I), adj. Not anchored .

A oort tliere is, inclosed on either side, Where ships may rest, unanc hored and untied. Pope.

UNANEL'ED, adj. Un and knell. Without the bell rung. A very doubtful illustration fol- lows.

Thus was I, sleeping, by a brother's hand Cut off, even in the blossoms of my sin, Unhouseled, unanointed, tinaneted. Shakspeare.

VNAN'IMATED, adj. Not enlivened ; not vi- vified.

Look on those half lines as the imperfect products of a hasty muse : like the frogs in the Nile, part kin- dled into life, and part a lump of uninformed unant- mated matter. Dryden.

UNAN'IMOUS, adj.- French unanime ; Lat.*

UNANIMOUSLY, adv. ˆunuimis. Being of one

UNAXIM'ITY, n.s. j mind ; agreeing in de- sign or opinion : the adverb and noun substantive correspond.

They wont to meet So oft in festivals of joy, and love Unanimous, as sons of one great sire, Hymning the eternal Father. Milton's Parodist

An honest party of men, acting with unanimity, are of infinitely greater consequence than the same party aiming at the same end by different views. Addiso.*

This particular is unanimously reported bv all the ancient Christian authors. Id.

UNANOINTED, adj. Not anointed : hence, according to the Romish practice, not prepared for death by extreme unction.

Thus was I, sleeping, by a brother's hand Cut off, even in the blossom of my sin, Unhouseled, unanointed, unaneled. Sl.aLrpeare.

UNANSWERABLE, adj.) Not to be re- UNAN'SWERABLY, adv. S fated: the abverb UNANSWERED, adj. j corresponding: un-

answered, not replied to ; not confuted.

*All these reasons, they say, have r,*en brought, and were hitherto never answered ; besides a number ot merriments and jests unanswered likewise. Hooker.*

This is a manifest and unanswerable argument.

Ralfigh.

UNAPPALL'ED, adj. Not daunted ; not im- pressed by fear.

Infernal ghosts Environed tbee ; some howled, some yelled, some

shrieked ;

Some bent at thee their fiery darts ; while thou Satest uuappalled in calm and sinless peace. Miltim.

As a lion, unappalled with fear. Springs on the toils, and rushes on the spear. Dryden.

UNAPPAR'ELLED, adj. Not dressed; not clothed.

Till our souls be unajiparelled

Of bodies, they from bliss are banished. Donne.

UNAtTA'RF.NT, adj. Obscure ; not visible.

Thy potent voice he hears. And longer will delay to bear thee tell His generation, end the rising birth Of nature, from the unapparent deep. Miltvn.

*UNAPPEASE'ABLE, adj.) Not to be paci- Ux APPEASED'. i fied ; implacable**

not pacified.

Sacrifice his flesh. That so the shadows be not unappeased. Shoksftea-e.

o lliou art implacable ; more deaf To prayers than winds to seas ; yet winds to seas Are reconciled at length, and seas to shore. Thy anger, unappeasable, still rages, Eternal tempest never to be calmed.

INAPPLICABLE, adj. From apply. Such as cannot be applied.

Gratitude, by being confined to the few, has a very narrow province to work on, being acknowledged to be ˆinapplicable, and so consequently ineffectual to all others. Hammond.

The singling out, and laying in order those interme- diate ideas, that demonstratively shew the equality or inequality of unapplicabte quantities, has produced dis- coveries. Locke.

UNAPPREHEND'ED, adj. Not understood.

They of whom God is altogether un apprehended are but few in number, and, for grossness of wit, such that they hardly seem to hold the place of human being.

UNAPPREHENSIVE, adj. From appre- hend. Not intelligent ; not ready of conception.

The same temper of mind makes a man unappre- liensive and insensible of any misery suffered by others.

South.

UNAPPROACH'ED, adj. Inaccessible.

God is light,

And never but in unapproached light Dwelt from eternity. Milton's Paradise Lost.

UNAPPROVED', adj. From approve. Not approved.

Evi! into the mind

May come and go so unapproved, and leave No spot behind. Milton.

UNAPT', adj. } From apt. Dull ; not ap-

UNAPT'LY', adv. £ prehensive ; not ready : the

UNAPT'NESS, n. s. j adverb and noun substantive corresponding.

*Men's apparel is commonly made according to their conditions, and their conditions are often governed by .heir garments ; for the person that is gowned is by nis gown put in mind of gravity, and also restrained :*rom lightness by the very unaptness of his weed.*

Spenser.

A longing after sensua, pleasures is a dissolution of the spirit of a man, and makes it loose, soft, and wan- dering, unapt for noble, wise, or spiritual employments.

Taylor.

He swims on his back ; and the shape of his back seems to favour it, being very like the bottom of a boat ; nor do his hinder legs unaptly resemble a pair of oars.

Grew.

UNAR'GUED, adj. From argue. Not dis- puted ; not censured.

What thou bid'st,| Unargued I obey ; so God ordains. Milto'i.

Not that this work lived in the hands of foes, Unargued then, and yet hath fame from those.

Ben Jonson.

UNARM', v. a.) From arm. To disarm ; to

UNARMED', adj. \ strip of armor, or of arms : without armor or weapons.

Unarm, unarm, and do not fiijht to-day. Shakspeare.

He all unarmed

Shall chace thee with the terror of his voice From thy demoniack holds, possession foul ; Thee and thy legions, yelling they shall fly, And beg to hide them in a herd of swine. Milton.

UNARRAIGNED', adj. Not brought to a trial.

As lawful lord, and king by just descent, Should here be judged, unheard, and unarraigned.

Daniel.

UNARRAYED', adj. Not dressed.

As if this infant world yet unarrayed, Naked and bare, in Nature's lap were laid. Dryden.

UNARTFUL, adj.) Having no art, or cun- UNART'FULLY, adv.) ning: the adverb corres- ponding.

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A chearful sweetness in his looks he has, And innocence unartful in his face. Dryden.

In the report, although it be not unartfully drawn, and is perfectly in the spirit of a pleader, there is no great skill required to detect the many mistakes.

Swift's Miscellanies.

UNARTIFI'CIALLY, adv. Contrarily to art. Not a feather is unartificially made, misplaced, re- dundant, or defective. Derhant's Physico-Theology. UNASK'ED, adj. Not courted or sought by entreaty.

\ ith what eagerness, what circumstance, Unasked, thou takest such pains to tell me only My son's the better man. Denham's Sjphy.

How, or why

Should all conspire to cheat us with a lye ? Unasked their pains, ungrateful their advice Starving their gain, and martyrdom their price.

Dryden.

UNASPI RING, adj. Not ambitious. To be modest and unaspiring, in honour preferring one another. Rogers.

UNASSAILABLE, adj. Exempt from assault.

In the number I do but know one, That unassailable holds on his rank, Unshaked of motion. Shakspeare.

UN ASSAILED', adj. Not attacked; not as- saulted.

I believe

That he, the supreme good, t' whom all things ill Are but as slavish officers of vengeance, Would send a glist'ring guardian, if need were, To keep ray life and honour unassorted. Milton.

UNASSAYED', adj. Unattemptcd.

What is faith, love, virtue, unassayed Alone, without exterior help sustained ? Milton.

UNASSISTED, adj. { Not helped : giving no UNASSIST'ING. $ help.

With these I went, a brother of the war ; Nor idle stood, with unassisting hands. Dryden.

What unassisted reason could not discover, that God has set clearly before us in the revelation of the gospel.

Rogers.

UNASSUMING, o$. Not arrogant. Unassuming worth in secret lived, And died neglected. Thomson's Winter.

UNASSUR'ED, adj. Not confident; not fit to be trusted.

The doubts and dangers, the delays and woes, The feigned friends, the unassured foes, Do make a lover's life a wretch's hell. Spenser.

UNATON'ED, adj. Not expiated. Could you afford him such a bribe as that, A brother's blood yet unatoned 1 Rmce.

UNATTAINABLE, adj. \ Not to be gained UNATTAIN'ABLENESS, n. s. S °r obtained ; being out of reach : stale of being so.

Praise and prayer are God's due worship ; which are unattainable by our discourse, simply considered, with- out the benefit of divine revelation. Dryden.

Desire is stopped by the opinion of the impossibility, or unaltainableness, of the good proposed. Locke.

UNATTEMFTED, adj. Untried; not assayed. He left no means unattempted of destroying his son.

Sidney.

Shall we be discouraged from any attempt of doing good, by the possibility of our failing in it? How many of the best things would, at this rate, have been left unattempted ! Atterbury.

UNATTENDED, adj.) Having no retinue, UN ATTENDING. J or attendants ; unac-

companied : not attending Your constancy Hath left you unattended. Shakspeare. Macbeth.

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111 is lost tbat praise, That is addressed to unattending ears. Milton.

(INATTENTIVE, adj. Not regarding. Inat- tentive is better.

Man's nature is so unattentite to good, that there can scarce be too many monitors.

Government of the Tongue.

UNAVAILABLE, adj. Useless ; vain with re- spect to any purpose.

Supine he tumbles on the crimson sands. Before his helpless friends and native bands, And spreads for aid his unavailing hands. Pope.

*UNAVOID'ABLE, adj.ˆ Inevitable; not to UNAVOIDABLY, adv. f be shunned or miss- UNAVOID'ABLENESS, n. s. fed: the adverb and UNAVOID'ED, adj. * noun substantive cor-*

responding: unavoided is also inevitable.

Rare poems ask rare friends ; Yet satyrs, since the most of mankind be Their unavoided subject, fewest see. Ben Jonson.

How can we conceive it subject to material impres- sions ! and yet the importunity of pain, and unavoid- ableness of sensations, strongly persuade that we are so.

Glanville.

The most perfect administration must unavoidably produce opposition from multitudes who are made happy by it. Add'uon.

UNAUTHORISED, adj. Not supported by authority; not commissioned. , To kiss in private ? — An unauthorized kiss. Shakspeare. Othello.

It is for you to ravage seas and land, Unauthorized by my supreme command. Dryden.

UNAWARE', adv.) From aware, or wary.

UNAWARES'. J Without thought ; without

previous meditation : unexpectedly.

Let destruction come upon him at unau-ares, and let his net that he hath hid catch himself. Psalm xzxv. 8.

Take heed lest you fall unaware into that inconve- nience you formerly found fault with. Spenser.*

Firm we subsist ; yet possible to swerve, And fall into deception unaware. Stilton.

UNAW'ED, adj. Unrestrained by fear or reve- rence.

Unforced by punishment, unawed by fear, His words were simple, and his soul sincere. Dryden.

UNBACK'ED, adj. Not tamed ; not taught to bear a rider ; not countenanced or supported.

Then I beat my tabor ;

At which, like unbacked colts, they pricked their ears, Advanced their eyelids, lifted up their noses, As they smelt musick. Shakspeare. Tempest.

Let the weight of thine own infamy Fall on thee unsupported, and unbacked. Daniel.

UN BAL'ANC ED, adj. Not poised ; not in equi- poise.

Let eaith unbalanced from her orbit fly, Planets and suns run lawless through the sky. Pope.

UNBALTASTED, adj. Not kept steady by oallast ; unsteady.

They having but newly left those grammatick flats, where they struck unreasonably, to learn a few words with lamentable construction ; and now on the sudden transported under another climate, to be tost and tur- moiled with their unballasted wits in fathomless and un- quiet deeps of controversy, do, for the most part, grow into hatred of learning. Milton.

UNBAND'ED, adj. From band. Wanting a string, or band.

Your hose should be ungartered, your bonnet un- bnnded, and every thing demonstrating a careless deso- lation. Shakfptare.

UNBAR', v. a. From bar. To open, by re- moving the bars ; to unbolt.

'Tis not secure, this place or that to guard, If any other entrance stand unbarred. Denham.

UNBARB'ED, n. s. Lat. barba, the beard. Unshaven.

Must I go shew them my unbarbed sconce 1 Must my base tongue give to my noble heart A lie? Shakspeare. Coriolanut. '

UNBARK'ED, adj. From bark. Decorticated; stripped of the bark.

A branch of a tree, unbarked some space at the bottom, and so set in the ground, hath grown. Bacon.

UNBASH'FUL, adj. Impudent ; shameless. Nor did I with unbashful forehead woo

The means of weakness and debility. Shakspeare.

UNBATHED', adj. From bath. Not wet.

Fierce Pasimond, their passage to prevent, Thrust full on Cymon's back in his descent : The blade returned unbathed, and to the handle bent.

Drijden.

UNBATTERED, adj. Not injured by blows.

I cannot strike at wretched kernes, whose arms Are hired to bear their staves : or thou, Macbeth j Or else my sword, with an unbattered edge, I sheath again undeeded. Shakrpeare. '

UN BAY', v. a. To set open ; to free from the restraint of mounds.

I ought now to loose the reins of my affections, to un- bay the current of my passion, and love on without boundary or measure. fforris'i Mitcellany.

UNBEAR'ING, adj. Bringing no fruit. He with his pruning hook disjoins Unbearing branches from their head, And grafts more happy in their stead. Dryden.

UNBEATEN, adj. Not treated with blows; untrodden.

We must tread unbeaten paths, and make a way where we do not find one ; but it shall be always with a light in our hand. Bacon.*

His mare was truer than his chronicle ; For she had rode five miles unspurred, unbeaten, And then at last turned tail towards Neweaton.

Bp. Ctrbet.

UNBECOMING, adj.) Indecent ; unsuitable ; UNBECOM'INGNESS, n.s.) indecorous : the nour. substantive corresponding.

No thought of flight, None of retreat, no unbecoming deed That argued fear. Milton's Paradise Lott.

If words are sometimes to be used, they ought to be grave, kind, and sober, representing the ill or unbe- comingness of the fault. Locke.

UN BED', v. a. To raise from a bed. Kels unbed themselves, and stir at the noise of thun- der. Walton's Angler.

UNBEFITTING, adj. Not becoming; not suitable.

*Love is full of unbefitting strains, All wanton as a child, skipping in vain. Shak*peare.*

He might several times have made peace with his dis- contented subjects, upon terms not at all unbefitting his dignity or interest ; but he rather chose -to sacrifice the whole alliance to his private passion. Swift

UNBEGET', v. n. To deprive of existence. Wishes each minute he could unbeget Those rebel sons who dare t' usurp his seat. Dryden. UNBEGOT, adj. J From begot. Not begot- UNBECOT'TEN. j ten ; without generation; eternal.

In thy power

It lies yet, ere conception, to prevent The race unblest, to being yet unbeget Milton.

Why should he attribute the same honour to matter, which is subject to corruption, as to the eternal, unbe- gotttn, and immutable God? Stillingfleet.

UNBEGUILE', v. a. To undeceive; to set free from the influence of deceit.

Then unbeguile thyself, and know with me That angels, though on earth employed they be, Are still in heaven. Donne.

Their comeliness unbeguiled the vulgar of the odd opinion the loyalists had formerly infused into them by their concionatory invectives. Howel't Vocal Forest.

UNBEHELD', adj. Unseen; not discoverable to the sight.

These then, though unbeheld in deep of night, Sh'ne not in vain. Milton.

UNBELIEF', n. s. -\ Incredulity ; infidelity ;

UNBELIEVE', v. a. (irreligion: to unbeliere is

UNBELIEV'ER, n. s. £to discredit: unbeliever,

*UNBELIEV'ING, adj. * one who does not, or will not, believe : unbelieving, incredulous ; not willing to believe.*

Where professed unbelief is, there can be no visible church of Christ ; there may be where sound belief wanteth. Hooker.

So great a prince and favourite so suddenly meta- morphosed into travellers with no greater tram, was enough to make any man unbelieve his five senses.

Wottan's Buckingham. 'Tis not vain or fabulous.

What the sage poets, taught by the" heavenly muse, Storied of old in high immortal verse, Of dire chimaeras, and enchanted isles, And rifted rocks, whose entrance leads to hell ; For such there be ; but unbelief is blind. Milton.

In the New Testament religion is usually expressed by faith in God and

Christ, and the love of them. Hence it is that true Christians are so frequently called believers, and wicked and ungodly men unbelievers.

Tillotson.

This wrought the greatest confusion in the unbelieving Jews, and the greatest conviction in the Gentiles.

Addison.

UNBELOV'ED, adj. Not loved.

Whoe'er you are, not unbeloved by heaven, Since on our friendly shore youi shops are driven.

Dryden.

UNBENir, v. a. To fiee from flexure ; relax ; remit.

You unbend your noble strength, to think So brain-sickly of things. Shakspeare. Macbeth.

Not so when swift Camilla scours the plain, Flies o'er the unbending corn, and skims along the main. Pope.

Ye noble few, who here unbending stand Beneath life's pressures, yet a little while, And all your woes are past. Thornton.

UNBEN'EFICED, adj. Not preferred to a be- nefice.

More vacant pulpits would more converts make ; All would have latitude enough to take ; The rest unbeneficed your sects maintain. Dryden.

UNBENEV'OLENT, adj. Not kind.

A religion, which not only forbids, but by its natural influence sweetens all bitterness and asperity of temper, and corrects that selfish narrowness of spirit which in- clines men to a fierce unbenevolent behaviour. Roger.*

UNBENIGHTED, adj. Never visited by dark- ness.

Beyond the polar circles ; to them day Had unbenightf.d shone, while the low sun, To recompense his distance, in their sight Had rounded still the horizon. Milton.

UNBENIGN', adj. Malignant ; malevolent.

To the' other five Their planetary motions, and aspects,

In sextile, square, and trine, and opposite,

Of noxious efficacy ; and when to join

In synod unbenign. Afilto.*

UNBESEEMING, adj. Unbecoming.

No emotion of passion transported me by the indig- nity of his carriage, to do or say any thing unbeseeming myself. King Charles.

Far be the spirit of the chase from them ; Uncomely courage, imbeseeming skill. Thomsoti.

UNBESOUGHT, adj. Not entreated.

Lest heat should injure us, his timely care Hath, unbesoughi , provided; and his hands Cloathed us unworthy ; pitying while he judged. Mil.

UNBESTOWED', adj. Not given; not dis- posed of.

He had now but one son and one daughter unbesiowed.

Bacon.

UNBETRAY'ED, adj. Not betrayed.

Many being privy to the fact, How hard is it to keep it unbetrayed! Daniel.

UNBEWAIL'ED, adj. Not lamented.

Let determined things to destiny Hold unbetoailed their way. Shakspeare.

UNBI'ASS, v. a. ˆ To free from external mo-

UNBI'ASSEDLY, adv. i tivc or prejudice : the ad- verb corresponds.

I hive sought the true meaning ; and have unbiassed – ly embraced what, upon a fair enquiry, appeared so to me. Locke.

The standing evidences of the gospel, every time they are considered, gain upon sincere, unbiassed minds.

Atterbury.

UNHID", «$. • Uninyited

UNBIDDEN. J

Unbidden guests Are often welcomest when they are gone. Shaksp.

Thorns also and thistles it shall bring thee forth Unhid. Milton.

UNBIG'OTTED, adj. Free from bigotry.

Erasmus, who was an unbigotted Roman Catholic, was so much transported with this passage of Socrates, that he could scarce forbear looking upon him as a saint, and desiring him to pray for him. Addison.

UNBIND', v. a. From bind. To loose ; untie.

His own woe's author, whose bound it finds, As did P^rocJes, and it wilfully unbinds. Spfi;ser.

On the sixth instant it was thought fit to unbind his head. Tatler.

UNBISH'OP, v.a. From bishop. To deprive of episcopal orders.

I cannot look upon Titus as so far unbishoped yet, but that he still exhibits to us all the essentials of jurisdic- tion. South.

UNBITTED, adj. From bit. Unbridled ; un- restrained.

We have reason to cool our raging motions, our car- nal stings, our unbilled lusts ; whereof I take this love to be a sect or cyon.

UNBLAM'ABLE, adj.

UNBLAM'ABLY, adv.

UNBLAM'ED, adj. ing • 'inblamed is, unrmpeached ; not charged with fault.

Ye

1 The, ii. 10.*

Much more could I say concerning this unblamable inequality of fines and rates. Bacon.

Shall spend your days in joy unblamen, and dwell Long time in peace. Mdton.

UNBLEM'ISHED, adj. Free from turpitude- free from reproach ; free fron'

deformity.

Under this stone lies virtue, yo'»to.. Unblemished p"> bitv, and truth. Waller

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Shakspeare. I Not culpable; not chargeable with fault : I the adverb corespond-

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They appointed, out of these new converts, mt n of the best sense, and of the most unblemished lives, to preside over these several assemblies. Addison.

UNBLENCHELY, adj. Not disgraced ; not in- jured by any soil.

There, where very desolation dwells, She may pass on with unblenched majesty ; Be it not done in pride, or in presumption. Milton.

UNBLEND'ED, adj. Not mingled.

None can boast a knowledge depurate from defile- ment, within this atmosphere of flesh ; it dwells no where in unblended proportions on this side the empy- reum. Glanville.

UNBLEST, adj. Excluded from benediction ; accursed ; unhappy.

It is a shameful and unblessed thing, to take the scum of people, and wicked, condemned men, to be the people with whom you plant. Bacon.

What is true passion, if unhlest it dies? And where is Emma's joy, if Henry flies 1 Prior.

UNBLOODT, adj. Not stained with blood ; not cruel ; not shedding blood.

Who finds the partridge in the pnttock's nest, But may imagine how the bird was dead, Although the kite soar with unblooded beak. Shaksp.

UNBLOWN', adj. Having the bud yet unex- panded.

Ah ! my poor princes ! Ah ! my tender babes ! My unblown flowers, new-

appearing sweets. Shaksp.

UNBLUNTED, adj. Not becoming obtuse.

A sword, whose weight without a blow might slay ; Able, unblunted, to cut hosts away. Con-ley.

UNBOD'IED, adj. Incorporeal; immaterial; freed from the body.

She hath the bonds broke of eternal night ; Her soul unbodied of the burdenous corpse. Spenter.

If we could conceive of things as angels and unbodied spirits do, without involving them in those clouds lan- guage throws upon them, we should seldom be in dan- ger of such mistakes as are perpetually committed.

Watts't Logic h.

UNBOIL'ED, adj. Not sodden.

A quarter of a pint of rice unboiled will arise to a pint boiled. Bacon.

UNBOLT, v. a. To set open ; to unbar.

I'll call my uncle down ; He shall unbolt the gates. Shakspeare.

I will tread this unbolted villain into mortar, and daub the walls of a jakes with him. Id.

UNBON'NETTED, adj. Wanting a hat or bonnet.

This night, wherein The lion and the belly-pinched wolf Keep their fur dry, nnbonnetted he runs, And bids what will, take all. Shakspeare.

UNBOOKISH, adj. Not studious of books ; uneducated.

As he shall smile Othello shall go mad ; And his unbookish jealousy must construe Poor Cassio's smiles, gestures, and light behaviour, Quite in the wrong. Shakspeare. Othello.

UNBORN', adj. Not yet brought into life ; fu- ture ; being to come.

Some unborn sonow, ripe in fortune's womb, Is coming toward me. Shakspeare. Richard II.

To what wretched state reserved ! Better end here unborn ! Why is life given To be thus wasted from us ? Milton.

UNBOR'ROWED,a < #. Genuine ; native ; one's own.

In substances, especially those which the common anu unborrowed names of any language are applied to, sonife remarkable, sensible qualities serve to distinguish one from another. Locke.

UND', adj. \ Loose ; not tied ; want ND'ED, fing a cover: without

*ND'EDLY, adv. i limit; infinite; the ad- ND'EDNESS^. s. * verb and noun substan-*

UNBOS'OM, v. a. To reveal in confidence.

The gentle neighbourhood of grove and spring Would soon unbosom all their echoes mild. Milton.

Do we unbosom all our secrets to him, and hide nothing that passeth in the depth of our hearts from him ?

Atterbury.

UNBOTTOMED, adj. Without bottom ; bot tomless.

This is a special act of Christian hope, to be thus unbottomed of ourselves, and fastened upon God, with a full reliance, trust, and dependance on his mercy.

Hammond.

The dark, unbottomed, infinite abyss. Milton.

UNBOUGHT, adj. Obtained without money.

The unbought dainties of the poor. Dryd. Horace.

UNBOUND', adj. ^ Loose ; not tied ; want-

UNBOUND'ED,

UNBOUND'EDLY,

UNBOUND'EDNESS, tive correspond witli unbounded.

He was a man Of an unbounded stomach, ever ranking Himself with princes. Shukspeare.

Some from their chains the faithful dogs unbound.

Dryden.

The wide, the unbounded prospect lies before me ; But shadows, clouds, and darkness rest upon it.

Addison.

He that has complex ideas, without particular names for them, would be in no better case than a bookseller who had volumes that lay unbound, and without titles ; which he could make known to others, only by shewing the loose sheets. Locke.

Finitude, applied to created things, imports the pro- portions of the several properties of these things to one another. Infinitude the unboundedness of these degrees of properties. Cheyne.

UNBOWED, adj. Not bent.

He knits his brow, and shews an angry eye, And passeth by with stiff, unbowed knee, Disdaining duty that to us belongs.

Shaksp. Henry VI.

UNBOW'EL, v. a. To exenterate ; eviscerate.

In this chapter I'll unbowel the state of the question.

HakewiU.

UNBRACE', v. a. To loose ; relax ; untie.

Hamlet, with his doublet all unbraced ; No hat upon his head, his stockings loose. Shaktp.

Wasting years, that wither human race, Exhaust thy spirits, and thy arms unbi-aic.

Pope't Iliad.

UNBREATHED', adj. Not exercised.

They now have toiled their unbreathed memories With this same plea against our nuptials. Shaksp.

They spake not a word ; But like. dumb statues, or unbreathing stones, Stared each on other and looked deadly pale. Id.

UNBRED', adj. Not instructed in civility ; ill educated ; not taught ; taking to.

A warriour dame, Unbred to spinning, in the loom unskilled. Dryden.

Children learn from unbred or debauched servants, untoward ly tricks. Locke on Education.

UNBREECHED', adj. Having no breeches; boyish.

Looking on my boy's face, methought I did recoil Twenty-three years, and saw myself unbreeched, In my green velvet coat. Sfiahpeare. Winter1! Tale.

UNBRIB'ED, adj. Not influenced by money or gifts; not hired.

To succour the distressed ; Unbribed by love, unterrified by threats. A. Philip.*

UNBRI'DLED, adj. Licentious; not re- strained.

To what licence Dares thy unbridled boldness run itself? Ben Jonton.

We have considered religious zeal, which transgresses in unbridled excess. Sprat's Sermons,

UNBROKE', adj.) From break. Not vio-

UNBRO'KEX. J lated, subdued, or weakened.

God pardon all oaths that are broke to me ; God keep all vows unbroke, are made to thee. Shaksp.

He first broke peace in heaven, and faith, till then Unbroken, Milton,

A lonely cow, Unworn with yokes, unbroken to the plow. Addison.

UNBROTHERLIKE, adj. \ 111 suiting with USBRO'THERLY. J the character of a

brother.

Victor's unbrotherlike heat towards the eastern churches fomented that

difference about Easter into a schism. Decay of Piety.

UNBRUIS'ED, adj. Not bruised ; not hurt.

Care keeps his watch in ev'ry old man's eye : And, where care lodgeth, sleep will never lie ; But where unbruised youth, with unstuft brain, Doth couch his limbs, there golden sleep doth reign.

Shakspeare.

UNBUCK'LE, v. a. To loose from buckles.

His starry helm unbuckled, showed him prime In manhood, where youth ended. Milton.

All unbuckling the rich mail they wore, Laid their bright arms along the sable shore. Pope.

UNBUILD', v. a.) To raze ; destroy : not

UNBUILT', adj. $ built.

This is the way to kindle not to quench ; T' unbuild the city, and to lay all flat. Shakspeare.

Built walls you shun, unbuilt you see. Dryden.

UNBUR'IED, adj. Not interred ; not honored with funeral rites.

The moss, which groweth upon the skull of a dead man unburied, will staunch blood potently. Bacon.

The wandering ghosts ,

Of kings unburied on the wasted coasts. Pope.

UNBURN'ED, adj. \ Not consumed, wasted,

UN BURNT', £or injured by fire: not

UNBURN'ING.) burning.

Burnt wine is more hard and astringent than wine un- burnt. Bacon.

What we have said of the unburning fire called light, streaming from the flame of a candle, may easily be ap- plied to all other light deprived of sensible heat.

Digby.

IX BURTHEN, v. a. To rid of a load; throw off; disclose that which is metaphorically a burden to the mind.

W e'll shake all cares and business from our age, Conferring them on younger strengths ; while we I'liliitrdened crawl tow'rd death. Shakspeare

Sharp Buckingham unburtheni with his tongue The envious load that lies upon his heart. Id.

UNBUTTON, v. a. To loose any thing but- toned.

Thou art fat-witted with drinking old sack, and un- buttoning thee after supper. Shaktpeare.

Many catch cold on the breast, 'by leaving their doublets unbuttoned. Hareey on Consumption.

UNCAL'CINED, adj. Free from calcination.

A saline substance, subtler than sal ammoniac, car- ried up with it uncalcined gold in the form of subtile ex- halations. Boyle.

UNCALL'ED, adj. Not summoned ; not de- manded.

Basilius had servants, who, though they came not uncalled, yet at call were ready- " Sidney.

He. bolder now, uncalled before her stood. .Vilttn.

UNCALM', v. a. To disturb. A harsh word.

*What strange disquiet has uncalmed your breast, Inhuman fair, to rob the dead of rest * Druden.*

UNCAN'CELLED, adj. Not erased ; not abro- gated.

I only mourn my yet uncancelled score ; You put me past the power of paying more. Dryden.

UNCA'PABLE, adj. FT. incapable; Lai. mca- pax. Not capable ; not susceptible. More fre- quently incapable.

Thou art come to answer A stony adversary, an inhuman wretch, Uncapable of pity, void and empty From any dram of mercy. Shakspeare.

UNCASE', v. a. To disengage from covering; flay; strip.

See Pompey is uncasing for the combat. Shaktpeare.

All men him uncased 'gan deride. Hubberd.

UNCAUGHT, adj. Not yet caught.

His bosom glows with treasures yet uncaught. Gay.

UNCAU'TIOUS, adj. Not wary ; heedless.

Unforeseen, they say, is unprepared : Uncautiout Arcite thought himself alone. Dryden.

UNCEL'EBRATED, adj. Not solemnised.

Thus was the first day, ev'n and morn ; Nor passed uncelebrated, nor unsung By the celestial choirs. Milton.

UNCEN'SURED, adj. Exempt from public reproach.

How difficult must it be for any ruler to live uncen- sured, where every one of the community is thus quali- fied for modelling the constitution ? Additon.

Fear most to tax an honorable fool, Whose right it is uncensured to be dull. Pope.

UNCERTAIN, adj.\ Fr. mortem ; Lat. in

UNCER'TAINED, tccrtus. Doubtful; not

UNCERTAINLY, adv. £ certainly known; unset-

UNCER'TAINTY, n. s. J tied : made uncertain: the adverb and noun substantive corresponding.

As the form of our public service is not voluntary, so neither are the parts thereof uncertain ; but they are all set down in such order, and with such choice, as hath in the wisdom of the church seemed best. Hooker.

You common cry of curs, whose breath I hate, Here then remain with your uncertainty ; Let ev'ry feeble rumour shake your hearts. Shaktpeare.

They that are past all hope of good, are past All fear of ill : and yet, if he be dead, Speak softly, or uncertainly. Denham.

God's omniscience is a light shining into every dark corner, stedfastly grasping the greatest and most slip- pery uncertainties. South.

UNCHAIN', v. a. To free from chains.

Minerva thus, to Perseus lent her shield Secure of conquest, sent him to the field : The hero acted what the queen ordained ; So was his fame complete, and Andromede unchained.

Prior.

UNCHANG'ED, adj. \ Not altered : not UNCHANGEABLE, / to be changed : un

UNCHANGE'ABLENESS, n. s. > changeableness and UNCHANGEABLY, adv. \ unchangeably cor- UNCHANG'ING, adj. ' responding : un-

changing is also without alteration or change. But that thy face is vizor-like, unchanging,

Made impudent with use of evil deeds,

I would essay, proud queen, to make thee blush. Sha'x. More safe I sing with mortal voice ; uncfanged

To hoarse, or mute. Milton.

Dismiss thy fear,

And heaven's unchanged decrees attentive hear ;

More powerful gods have torn thee from my side. Dry All truth is unchangeably the same ; that proposition,

which is true at any time, being so for ever. SvuA

UNCHARGE', v. a. To retract an accusation.

Even his mother shall vncharge the practice, And call it accident. Shakspeare. Hamlet.

UNCHARITABLE, adj.~) Contrary to cna-

UNCHAR'ITABLY, adv. > rity or universal

*UNCHAR'ITABLENESS, n. *. 3 love : the adverb and noun substantive correspond.*

I do not mean the cutting off all that nation with the sword ; which, tar be it from me that I should ever think so desperately, 01 wish so uncharitably. Spenser.

Uncharitable zeal our reason whets, And double edges on our passion sets. Denham.

Heaven and hell are the proper regions of mercy and uncharitabtenea. Atttrbury.

UNCHA'RY, adj. Not wary ; not frugal.

I've said too much unto a heart of stone, And laid my honour too unchary out. Shahtpeare.

UNCHASTE', adj. (Lewd ; libidinous ; not

UNCHAST'ITY, n. s. I continent; not chaste ; not pure : the noun substantive corresponding.

One, that in divers places I had heard before blazed, as the most impudently unchatte woman of all Asia.

Sidney.

Lust, by unchaste looks, Lets in defilement to the inward parts. Milton.

That generation was more particularly addicted to intemperance, sensuality, and unchattity. Woodward.

UNCHECK'ED, adj. Unrestrained; not hin- dered.

What news on the Ryalto 1

— Why, yet it lives there unchecked, that Anthonio hath a ship of rich lading wrecked.

Shakspfare. Merchant of Venice. Apt the mind, or fancy, is to rove Unchecked, and of her roving is DO end. Milton.

UNCHEER'FULNESS, n. s. Melancholy, gloominess of temper.

*Many, by a natural uncheerfu*nett of heart, love to indulge this uncomfortable way of life.*

Addison's Spectator.

UNCHEW'ED, adj. Not masticated.

His fills his famished maw, his mouth runs o'er With unchewed morsels, while he churns the gore.

Dry den.

UNCHILD, v.a. To deprive of children. A very ' unimitable' word, like many others of these negatives.*

He hath widowed and unchilded many a one, Which to this hour bewail the injury. Shafupeare.

UNCHRISTENED, adj. Not christened.

A murderer's banes in gibbet aims ; Twa span-lang, wee, unchristened bairns ; A thief, new-cutted frae a rape, Wi' his last gasp his gab did gape. Burnt.

UNCHRISTIAN, o/f;.) Contrary to the

UNCHRIS'TIANNESS, n. t. S laws of Christianity ; infidel : state or quality of being contrary to Chris- tianity.

The unchriitianneu of those denials might arise from a displeasure to see me prefer my own divines before their ministers. Ki»x Charles.

It's uncharitable, unchristian, and inhuman, to pass a peremptory sentence of condemnation upon a tried friend, where there is any room left for a more favoura- ble judgment. L' Estrange.

UNCIR'CUMCISED, adj. 3 Not circumcised;

UNCIRCUIICI'SJON, n. «. 5 not a Jew : state of being uncircumcised.

God, that gives the law that a Jew shall be circum- cised, thereby constitutes nncircumcirion an obliquity ; which, had he not given that law, had never been such.

Hammond. The uncireumc/itrf smiled grimly with disdain. Cou-tey.

UNCIR'CUMSCRIBED, idj. I'nlounded; unlimited.

Though I, uncircumicribed myself, retire, And put not forth my goodness. Milton't Par. Lort.

Where the power is uncircumscribed, the obedience ought to be unlimited. Addison.

UNCIR'CUMSPECT, adj. Not cautious ; not vigilant.

Their uncircumtpect simplicity had been used, espe- cially in matters of religion. Haiju-ard.

UNCIVIL, adj. 1 Fr. incivil ; Lat. incivilis.

UNCIVILLY, adv. $ Unpolite; not agreeable to rules of complaisance.

Your undutifnl, uncivil, and uncharitable dealing in this your book, hath detected you. Whitgift.

Somewhat in it he would not have done, or desired undone, when he broke forth as desperately, as before he had done uncivilly. Browne's Vulgar Errourt.

My friends are so unreasonable, that they would have me be uncivil to him. Spectator.

UNCIVILIZED, adj. Not reclaimed from barbarity.

Several, who have been polished in France, make use of the most coarse, uncivilised words in our language.

Addison.

UNCLAR'IFIED, adj. Not purged ; not puri- fied.

One ounce of whey unclarified ; one ounce of oil of vitriol, make no apparent alteration. Bacon.

UNCLASF, v. a. To open what is shut with clasps.

Prayer can unclasp the girdles of the north, saying to a mountain of ice, Be thou removed hence, and cast into the sea. Taylor's Worthy Communicant.

UNCLAS'SIC, adj. "Not classic.

Angel of dulness, sent to scatter round Her ruagick charms o'er all

unclassick ground. Pope.

UN'CLE, n. s. Fr. oncle. The father's or mo- ther's brother.

Hamlet punishes his uncle rather for his own death, than the murther of his father. Shalupeare llluitrated.

UNCLEAN', adj. -\ Foul; dirty; filthy;

UNCLEAN'LY, adv. I morally polluted ; lewd ;

UNCLEAN'LINESS, n. s. > unchaste : the adverb

UNCLE A N'N ESS, iand other derivatives

UNCLEANS'ED, adj. J correspond.

I will save you from all your unckannesses.

Ezek. xxxvi. 29.

Adultery of the heart, consisting of inordinate and unclean affections. Pertim.

Civet is of a baser birth than tar ; The very uncleanly flux of a cat. Shalupeare.

Pond earth is a good compost, if the pond have been \onguncleansed; so the water be not too hungry.

Bacon's Natural History.

This profane liberty and uncleanlinesi the archbishop resolved to reform. Clarendon.

UNCLENCH', v. a. To open the closed hand.

The hero so his enterprize recalls ; His fist uncleiichei, and the weapon falls. Garth .

UNCLEW, t;. a. From clew. To undo.

If I should pay you for 't as 'tis extolled, It would unclew me quite. Shahtpeare. Timiin.

UNCLIPFED, adj. Whole ; not cut.

As soon as there began a distinction between clipped and undipped money,

bullion arose. Locke.

UNCLOTHE', v. a. To strip ; make naked.

The boughs and branches are never uncloathed and left naked. Raleigh' i History of the World.

Poor orphans' minds are left as uncloathed and naked altogether as their bodies. Atterbury.

I'NCLOG', v. a- To disencumber; exonerate.

Could I meet 'em

But once a-day, it would unclog my heart Of what lies heavy to it. Shakspeare.

Then air, because unclog'd in empty space, I'lies after fire, and claims the second place. Dryden.

UNCLOISTER, v.a. To set at large.

Why did I not, uncluttered from the womb, Take my next lodging in a tomb 1 Norrit.

UNCLOSE',!;. a. To open.

The king's army would, through those undated parts, have done them little harm. Clarendon.

Soon as thy letters trembling I unclose, That well-known name awakens all my woes. Pope.

UNCLOUD'ED. adj. \ Both adjectives mean

UNCLOUD'EDNESS, n. s. Sfree from clouds ; clear

UNCLOVD'Y, adj. J from obscurity; not

darkened : and the aoun substantive corresponds.

True virtues, with unclouded light, All great, all royal, shine divinely bright.

Roscommon.

Now night in silent state begins to rise, And twinkling orbs bestrow the uncloudy skies ; Her borrowed lustre growing Cynthia lends. Gay.

UNCLUTCH', v. a. To open.

If the terrors of the Lord could not melt his bowels, •unclutch his griping hand, or disseize him of his prey ; yet sure it must discourage him from grasping of heaven too. Decay of Piety.

To UNCOIF, v. a. To pull the cap off.

Yonder are two apple-women scolding, and just ready to vncoif one another. Arbuthnot to Pope.

UNCOIL', v. a. To open from being coiled or wrapped.

The spiral air-vessels are like threads of cobweb, a little uncoiled. Derham's Physico-Theology.

UNCOIN'ED, adj. Not coined ; not impressed or prejudiced in mind.

While thou liv'st, Kate, take a fellow of plain, un- coined constancy. Shakspeare. Henry V.

An ounce of coined standard silver must be of equal value to an ounce of uncoined standard silver. Locke.

UNCOLLECT/ED, adj. Not collected; not recollected.

Asham'd, confused, I started from my bed, And to my soul yet uncollected said, Into thyself, fond Solomon ! return ; Reflect again, and thou again shall mourn. Prior.

UNCOL'ORED, adj. Not stained or tinged with any color, or die.

Out of things uncoloured and transparent, we can re- present unto you all several colours. Bacon.

Whether to deck with clouds the uncoloured sky, Or wet the thirsty earth with falling showers ; Rising or falling, still advance his praise. Milton.

UNCOMB'ED, adj. Not adjusted by the comb.

They might perceive his head To be unarmed, and curled, uncombed hairs Upstarting stiff. Spenter.

Their locks are beds of uncombed snakes, that wind About their shady brows in wanton rings. Crashaw.

UNCOME'LY, adj. \ Not comely; wanting

UNCOME'LINESS, n. s. S grace: the noun substan- tive corresponds.

Though he thought inqaisitiveness an uncomely guest, he could not but ask who she was. Sidney.

He praised women's modesty, and gave orderly well- behaved reproof to all uncomeliness. Shakspeare.

Uncomely courage, unbeseeming skill. Thornton.

UNCOM'FORTABLE, adj. i Affording no

UNCOM'FORTABLY, adv. > comfort ; gloomy;

UNCOM'FORTABLESESS, n. s. J dismal: the ad- verb and noun substantive corresponding.

He much complaineth of his own uncomfortable exile, wherein he sustained many most grievous indignities,

and endured the want of sundry, both pleasures and honours, before enjoyed. Hooker.

Christmas is in the most dead, uncomfortable time of the year, when the poor people would suffer very much, if they had not good cheer to support them. Addison. '

UNCOMMAND'ED, adj. Not commanded.

It is easy to see what judgment is to be passed upon all those affected, imcommanded, absurd austerities of the Romish profession. South.

UNCOM'MON, adj.) Not frequent; rare:

UNCOM'MONNESS, n. s. J rareness.

Some of them are uncommon, but such as the reader must assent to, when he sees them explained.

Addison.

Our admiration of the antiquities about Naples and Rome, does not so

much arise out of their greatness as uncommonness. Id.

UNCOMMU'NICATED, adj. Not communi- cated.

Whatsoever is natural to deity, the same remaineth in Christ uncommunicated unto his manhood ; and what- soever natural to manhood, his deity thereof is incapa- ble. Hooker.

UNCOMPACT, adj. Not compact; not closely cohering.

These rivers were not streams of running matter ; for how could a liquid, that lay hardening by degrees, settle in such a furrowed, uncompact surface ?

Addison.

UNCOM'PANIED, adj. Having no com- panion.

Thence she fled, uncompanied, unsought. Fairfax.

UNCOMPAS'SIONATE, adj. Having no pity.

Hero and Leander were drowned in the vncompassion- ate surges. Sandy's Journey.

If thou in strength all mortals dost exceed ; In uncompatsionate anger do not so. Milton.

UNCOMPEL'LED, adj. Free from compul- sion.

The amorous needle, once joined to the loadstone, would never, uncompeUed, forsake the iochanting mi- neral. Boyle.

UNCOMPLAISANT, adj. Not civil; not obliging.*

A natural roughness makes a man uncomplaisant to others, so that he has no deference for their inclinations.

Locke.

UNCOM PLEAT', adj. Not perfect ; not finished.

Various incidents do not make different fables, but are only the uncompleat and unfinished parts of the same fable. Pope.

UNCOM POUNEKED, adj. Simple; not mixed.

The substance of the faith was comprised in that «m- compounded style, but was afterwards prudently en- larged, for the repelling heretical invaders.

Hammond' i Fvndamtntali.

Hardness may be reckoned the property of all un- compounded matter. Neu-ton't Optichs.

UNCOMPREHEN'SIVE, adj. Unable to comprehend. In Shakspeare it seems to signify incomprehensible.

The providence, that's in a watchful state, Knows almost every grain of Pluto's gold ; Finds bottom in the incomprehenrive deep. Shakspeare.

UNCOMPRESSED', adj. Free from com- pression.

We might be furnished with a reply, by setting down the differing weight of our receiver, when emptied, and when full of vncompretfed air. Botilt

UNCONCEI'VED, adj. •) Not thought ; not UMCONCEIV'ABLE, > imagined: not to be

UNCONCEIV'ABLENESS,»I.S. J imagined : incom- prehensibility.

Vast is my theme, yet uncnnceived, and brings Untoward words, scarce loosened yet from things.

Creech.

The unconceivableness of something they find in one, throws men violently into the contrary hypothesis, though altogether as unintelligible. Locke.

UNCONCERN', n. $. \ Both noun suh

UNCONCERN'ED, adj. I stantives signify neg-

UNCONCERN'EDLT, adv. > ligence ; want of in-

UNCONCERN'EDNESS, n. s. i terest; freedom from

UNCONCERN'ING, adj. j anxiety or perturba- tion : unconcerned, having, or feeling no interest or anxiety : the adverb corresponding : unconcern- ing is uninteresting.

Things impossible in their nature, or unccmcerning to us, cannot beget it. Decay of Piety.

You called me into all your joys, and gave me An equal share ; and in this depth of misery Can I be unconcerned 1 Denham's Sophy.

Death was denounced, that frightful sound, Which even the best can hardly bear : He took the summons, void of fear,

And unconcernedly cast his eyes around, As if to find and dare the griesly challenger. Dryden.

This science of medals, which is charged with so many unconcerning parts of knowledge, and built on such mean materials, appears ridiculous to those that have not examined it. Additon on Medals.

UNCONCLU'DENT, adj. i Not decisive ;

UNCONCLU'DING. J inferring no plain

or certain conclusion or consequence. Our arguments are inevident and unconcludent. Hale.

Either may be much more probably maintained than hitherto, as against the unaccurateness and the uncon- cludingness of the analytical experiments vulgarly re- lied on. Boyle.

He makes his understanding only the warehouse of other men's false and unconcluding reasonings, rather than a repository of truth for his own use. Locke.

UNCONCOCTED, adj. Not digested; not matured.

We swallow cherry stones, but void them ttnconcoc- ted- Browne's Vulgar Errourt.

Did she extend the gloomy clouds on high, Where all the amasing fireworks of the sky In unconcocted seeds fermenting lie. Blackmore.

UNCONDEMNED', adj. Not condemned.

It was a familiar and uncondemned practice, amongst the Greeks and Romans, to expose, without pity, their innocent infants. Locke.

UNCONDITIONAL, adj. Absolute; not limited by any terms.

O pass not, Lord ! an absolute decree, Or bind thy sentence unconditional ;

But in thy sentence our remorse foresee. And, in that foresight, this thy doom recal. Dryden.

Our Saviour left a power in his church to absolve men from their sins ; but this was not an absolute and unconditional power. Ayliffe's Parergon.

UNCONFINED', adj. \ Free from restraint;

UNCONFIN'ABT.E. i unlimited: not to be

limited or confined.

You rogue ! you stand upon your honour ! why, thou unoonfinuble baseness, it is as much as I can do to keep mine honour. Shah. Merry Wive of Wiiuitor.*

If that which men esteem their happiness, were, like the light, the same sufficient and uncimfined good, whe- ther ten thousand enjoy the benefit of it, or but one, we should see men's good will and kind endeavours would be as universal. Spectator.

Blest with a taste exact, yet unconfined ; A knowledge both of books and human kind. Pope. '

UNCONFIRMED, adj. Not fortified by re- solution ; not strengthened ; raw ; weak.

The unexpected speech

The king had made upon the new-raised force, In the unconfirmed troops much fear did breed.

Daniel.

He would have resigned To him his heavenly office, nor was long His witness unconfirmed. Milton's Par. Regained. UNCONFORM', adj.) Unlike; dissimilar; UNCONFORM'ABLE, > not conforming : the UNCONFORMITY, n. s. Jnoun substantive cor- responding.

Unto those general rules, they know we do not de- fend, that we may hold any thing unconformable .

Hooker.

Not unconform to other shining globes. Milton. The moral goodness or evil of men's actions, which consists in their conformity or unconformity to right rea- son must be eternal, necessary, and unchangeable.

South.

UNCONFUS'ED, adj. } Distinct; free from UNCONFUS'EDLY, adv.) confusion. It is more distinct and unconfused than the sensitive memory. Hale.

Every one finds that he knows when any idea is in his understanding, and that, when more than one are there, he knows them, distinctly anduncon//

UNCONFUTABLE, adj. Irrefragable; not to be convicted of error.

One political argument they boasted of as unconfut- able, that from the marriages of ccclesiasticks would en- sue poverty in many of the children, and thence a dis- grace and burden to the church. Sprat.

UNCONGEAL'ED, adj. Not concreted by cold.

By exposing wine, after four months digestion in horse-dung, unto the extremity of cold, the aqueous parts will freeze, but the spirit retire, and be found un- congealed in the centre. Browne.

UNCON'JUGAL, adj. Not consistent with matrimonial faith ; not befitting a wife or husband.

My name

To all posterity may stand defamed ; With malediction mentioned, and the blot Of falsehood most unconjugal traduced. Milton.

UNCONNECTED, adj. Not coherent; not joined by proper transitions or dependence of parts.

Those who contemplate only the fragments broken off from any science, dispersed in short unconnected dis- courses, can never survey an entire body of truth.

Watts.

UNCONNI'VING, adj. Not forbearing penal notice.

To that hideous place not so confined, By rigour unconniring ; but that oft, Leaving my dolorous prison, I enjoy Large liberty, to round this globe of earth. Milton.

UNCON'QUERABLE, adj. } Not to be sub- UNCON'QUERABLY, adv. >dued ; insuper- UNCON'QUERED, adj. j able ; invincible :

the adverb corresponding : unconquered is not sub- dued ; not overcome.

These brothers had a-while served the king of Pon- tus ; and in all his affairs, especially of war, whereunto they were only apt, they had shewed as unconquered courage, so a rude faithfulness. Sidney

Louis was darting his thunder on the Alps, and causing his enemies to feel the force of his nncanquera.- ble arms.

The herds of Iphyclus, detained in wrong ; Wild, furious herds, unconquerably strong. Pope.

UNCONSCIONABLE, adj. } Exceeding the

UNCON'SCIONABLY, adv. $ limits of just ex-

pectation ; not guided by moderation or by con- science; enormous; vast: the adverb corresponding.

His giantship is gone somewhat 'crest-fall'n, Ste Iking with less unconscionable strides ; And lower looks, but in a sultry chase. Milton.

This is a common vice ; though all things here Are sold, and sold unconscionably dear. Dri/den.

UNCON'SECRATED, adj. Not sacred; not

dedicated.

The sin of Israel had even vn consecrated and profaned that sacred edifice, and robbed it of its only defence.

South.

UNCONSENT'ED, adj. Not yielded.

We should extend it even to the weaknesses of our natures, to our proneness to evil : for however these, uncoiisented to, will not be imputed to

us, yet are they matter of sorrow. Wake.

\ >. CONSIDERED, adj. Not considered; not attended to.

Love yourself ; and, in that love, Not unconsidered leave your honour. Shakspeare.

UNCON'SONANT, adj. Incongruous ; unfit ; inconsistent.

It seemeth a thing unconsonant, that the world should honour any other as the Saviour, but him whom it honoureth as the Creator of the world. Hooker.

UNCON'STANT, adj. FT. inconstant; Lat. in- constans. Fickle; not steady; changeable. In- constant is more usual.

More unconttant than the wind ; who woos Even now the frozen bosom of the north ; And, being angered, puff's away from thence, Turning his face to the dew-dropping south. Sliaksp.

UNCONSTRAIN'ED, adj. } Not compelled or

UNCONSTRAIN'EDLY, adv. ; restrained : the ad-

UNCOXSTRAINT', n. s. j verb correspond,

ing : freedom from constraint ; ease.

These be the miseries which our first parents brought upon all mankind, unto whom God, in his creation, gave a free and unconstrained will. Raleigh.

Such a patron has frankly, generously, and uncon- §trainedly relieved me. South.

Mr. Dryden writ more like a scholar ; and, though the greatest master of poetry, he wanted that easiness, that air of freedom and unconstraint, which is more sen- sibly to be perceived than described. Felton.

UNCONSULTING, adj. Latin inconsultus. Heady ; rash ; improvident.

It was the fair Zelmane, Plexirtus's daughter, whom unconsulting affection, unfortunately born to mewards, had made borrow so much of her natural modesty, as to leave her more decent raiments. Sidney.

UNCONSUM'ED, adj. Not wasted; not de- stroyed by any wasting power.

Hope never comes,

That comes to all, but torture without end Still urges, and a fiery deluge fed With ever-burning sulphur unconsumed. Milton.

UNCONSUM'MATE, adj. Not consummated.

Acron came to the sight,

Who left his spouse betrothed, and unconsummate Night. Dryden.

UNCONTEMN'ED, adj. Not despised.

Which of the peers

Have uncontemned gone by him, or at least Stood not neglected ? Shakspeare.

UNCONTENTED, «

r.scoNTEXT'iNGNts-, ?;. .c. s not satisfied : want of power to satisfy. Obsolete.

The decreed uncontentingness of all other goods, is richly repaired by its being but an aptness to prove a rise to our love's settling in God. Boylt.

Permit me, chief, To lead this uncontented gift away. Dryden.

UNCON'TROVERTED, adj. Not disputed; not liable to debate.

One reason of the uncontroierted certainty of mathe- matical science is, because 'tis built upon clear and set- tled significations of names. Glanville.

INCONTROL'LABLE, adj.} Resistless;

UNCONTROL'LABLY, adv. f powerful beyond

UNCONTROLLED, adj. ^ opposition; ir-

UNCOXTKOL'EDLY, adv. Jrefragable: the

adverb corresponding: uncontroled is unresieted; unopposed ; unrefuted : the adverb agreeing.

That Julius Caesar was so born is an uncontrouled report. Hayward.

Mankind avert killing, and being killed ; but, when the phantasm honour has once possessed the mind, no reluctance of humanity is able to make

head against it ; but it commands uncontroutedly. Decay of Piety.

Gaza mourns,

And all that band them to resist His itncnntroulable intent. Milton.

Uiicontroulably, and under general consent, many opi- nions are passant, which, upon due examination, admit of doubt. Browne.

UNCONVERS'ABLE, adj. Not suitable to conversation ; not social.

Faith and devotion are traduced and ridiculed, as morose unconversable qualities. Rogers.

UNCONVERTED, «#. Not converted: not persuaded of the truth of Christianity.

Salvation belongeth unto none, but such as call upon the name of our Lord Jesus Christ ; which nations as yet unconverted neither do, nor possibly can do, till they believe. Hooker.

The apostle reminds the Ephesians of the guilt and misery of their former unconverted estate, when aliens from the commonwealth of Israel. Rogers.

UNCONVINCED, adj. Not convinced.

A way not to be introduced into the seminaries of those who are to propagate religion, or philosophy, amongst the ignorant and unconvinced. Locke.

UNCORRECTED, adj Inaccurate ; not po- lished to exactness.

I have written this too hastily and too loosely: it comes out from the first draught, and uncorrected.

Drifden.

UNCORRUPT, adj.) Honest; upright; not

UNCORRUPT'ED, > tainted with wickedness;

LTNcoRRUPT'NESs,n.s.) not influenced by iniqui- tous interest : the derivatives correspond.

In doctrine, shew uncorruptnea, gravity, sincerity.

Tit tit ii. 7.

The pleasures of sin, and this world's vanities, arc censured with uncorrvpt judgment. Hooker.

Such a hero never springs, But from the uncorrupted blood of kings. Roscoaunon.

UNCOVER, t;. a. To divest of a covering ; shew openly.

After you are up, uncover your bed, and open the curtains to air it. tiarrey.

He covered ; but his robe Uncovered more : so rose the Danite strong, Shorn of his strength. Milton.

There will certainly come some day or other, to un- cover every soul of us. Pope' Letters.*

UNCOUN'SELLABLE, adv. Not to be advised.

It would have been uncounstllaMe to have matched, and have left such an enemy at their backs. Clarendon.

UNCOUNTABLE, adj. Innumerable.

Those uncountable glorious bodies were not set in the firmament for no other end than to adorn it. Raleigh.

UNCOUNTERFEIT, adj. Genuine; not spu- rious.

True zeal is not any one single affection of the soul, but a strong mixture of many holy affections, filling the heart with all pious intentions ; all, not only uncounter- feit, but most fervent. Sprat.

UNCOU'PLE, v. a. To loose dogs from their couples.

The land on which they fought, the' appointed place, In which the' uncoupled hounds began the chase.

Dry den.

UNCOURTEOUS, adj. ~\ Uncivil ; unpolite :

UNCOURT'EOUSLY, adv. (this both the aHjec-

UNCOURT'LINESS, n. s. t lives signify : and the

UNCOURT'LY, adj. 3 adverb and noun sub-

stantive correspond.

In behaviour some will say, ever sad, surely sober, and somewhat giving to musing, but never uncourtemu.

Sidney.

Though somewhat merrily, yet uncourteously he railed

An amphitheatre,

On its publick shows, unpeopled Rome, And held uncrouded nations in its womb. Addistm.

UNCROWN', v.a. To deprive of a crown; deprive of sovereignty.

*He hath done me wrong ; And therefore I'll uncrown him ere *t be long. Shaft.*

Ye powers !

See a sacred king uncrowned ; See your offspring, Albion, bound. Dryden't Alb.

UNCTION, n. s. ~\ Fr. onction. The act

UNCTCOS'ITY, ˆ of anointing ; the ungu-

UNC'TUOUS, adj. i ent or ointment used ;

UNC'TUOUSNESS, n. j. Jany thing softening or

lenitive : unctuous is oily ; fat ; clammy : unctu-

osity and unctuousness mean fatness ; oiliness ;

greasiness.

The unction of the tabernacle, the table, the laver, the altar of God, with all the instruments appertaining thereunto, made them for ever holy. Hooker.

Dry up thy harrowed veins, and plough-torn leas, Whereof ingrateful man, with liq'rish draughts,

upon England, objecting extreme beggary and mere And morsels unctuous, greases his pure mind,

barbarousness unto it. Atcham. That from it all consideration slips. Shakspeare.

The Quaker presented an address, which, notwith- Their extreme unction, administered as the dying*

standing the uncourtlmeu of their phrases, the sense man's viaticum, which St. James mentioned as the

was very honest. Add (ton. ceremony of his recovery, may be added.

The lord treasurer, not entering into those refinements

of paying the publick money upon private considerations, hath been so uncourtly as to stop it. Swift.

UNCOUTH', of;. ") Saxon uncu. Odd; UNCOUTH'LY, adv. > strange; unusual: the ad- UNCOUTH'NESS, n. $. J verb and noun substantive corresponding.*

A very uncouth sight was to behold, How he did fashion his untoward pace For as he forward moved his footing old, So backward still was turned his wrinkled face. Spat. To deny himself in the lesser instances, that so when the greater come, they may not have the disadvantage of uncouthnest, and perfect strangeness, to enhance their difficulty, must be acknowledged reasonable.

Decay of Piety.

Venetians do not more uncouthly ride, Than did their rubber state mankind bestride. Dryd. UNCREATE', v. a.) To annihilate; reduce UNCREAT'ED, adj. J to nothing : not yet cre- ated ; not produced by creation.

Tempt me with such affrights no more, Lest what I made I uncreale. Carew.

How hast thou disturbed

Heaven's blessed peace, and into nature brought Misery, uncreated till the crime Of thy rebellion 1 Milton.

The next paragraph proves that the idea we have of Cod is God himself; it

being something, as he says, uncreated. Locke.

UNCRED'ITABLENESS, n.t. Want of re- putation.

To all other dissuasives, we may add this of the un- crediiableneu : the best that can be said is, that they use wit foolishly, whereof the one part devours the other. Decay of Piety.

UNCROPP'ED, adj. Not cropped; not ga- thered.

Thy abundance wants Partakers, and nncrnpped falls to the ground. Milton.

UNCROSSED, adj. Uncancelled.

Such gain the cap of him, that makes them fine, Yet keeps his book uncroued. Shaktpeare. Cymbelinr.

UNCROUtfED, adj. of room.

Hammond's Fundamentals. A wandering fire,

Compact of unctuous vapour, which the night Condenses, and the cold environs round, Kindled through agitation to a flame.

Milton's Parodist Lost.

Fuliginous exhalations contain an unctuosity in them, and arise from the matter of fuel.

Broil-Tie's Vulgar Errours.

A great degree of unctuousness is not necessary to the production of the like effects. Boyle.

UNCTION, in matters of religion, is used for the character conferred on sacred things by anointing them with oil. Unctions were very frequent among the Hebrews. They anointed both their kings and high priests at the ceremony of their inauguration. They also anointed the sacred vessels of the taber- nacle and temple, to sanctify and consecrate them to the service of God. The unction of kings is supposed to be a ceremony introduced very late among the Christian princes. It is said that none of the emperors were ever anointed before Justi- nian or Justin. The emperors of Germany took the practice from those of the eastern empire : king Pepin of France was the first who received the unction. In the ancient Christian church, unction always accompanied the ceremonies of baptism and confirmation. Extreme unction, or the anointing persons in the article of death, was also practised

by Christians at a very early period, in compliance with the precept of St. James, chap, v., 14th and 15th verses ; and this extreme unction the Romish church has advanced to the dignity of a sacrament. It is administered to none but such as are affected with some mortal disease, or in a decrepit age. It is refused to impenitent persons, as also to crimi- nals. The parts to be anointed are, the eyes, the ears, the nostrils, the mouth, the hands, the feet, and the reins. The laity are anointed in the palms of the hands, but priests on the back of it; because the palms of their hands have been already con- secrated by ordination. The oil with which the sick person is anointed represents the grace of God,

Not straitened by want which is poured down into the soul, and the prayer used at the time of anointing expresses the remis

sion of sins thereby granted to the sick person, for the prayer is this : ‘ By this holy unction, and his own most pious mercy, may the Almighty God forgive thee whatever sins thou hast committed by the sight,’ when the eyes are anointed ; by the hearing, when the ears are anointed ; and so of the other senses.

UNCUL’LED, adj. Not gathered.

A sweaty reaper from his tillage brought First fruits, the green ear, and the yellow sheaf, Unculled, as came to hand. Milton’s Paradise Lost.

UNCUL’PABLE, adj. Not blameable.

Those canons do bind, as they are edicts of nature ; which the Jews observing as yet unwritten, and there- by framing such church orders, as in their law were not Erescribed, are notwithstanding in that respect unculpa- le. Hooker.

UNCUL’TIVATED, adj. Lat. incultus. Not cultivated ; not improved by tillage.

The first tragedians found that serious stile Too grave for their uncultivated age. Rocommon.

UNCUM’BERED, adj. Not burdened; not embarrassed.

Lord of yourself, vncumbered with a wife. Dryden.

UNCURB'ABLE, adj. That cannot be curbed or checked. Not used.

So much uncurbable her garboiles, Caesar, Made out of her impatience, which not wanted Shrewdness of policy. Shakspeare. Antony and Cleo.

UNCURB'ED, adj. Licentious ; not re- strained.

With frank, and with uncurbed plainness, Tell us the Dauphin's mind. Shakspeare. Henry V.

UNCURL', v. a. & v. n. To loose from ring- lets, or convolutions : free from ringlets.

My fleece of woolly hair now uncurls, Even as an adder, when she doth unroll To do some fatal execution. Shak. Titus Andronicus.

Alike in feature both, and garb appear ; With honest faces, though uncurled hair. Dryden.

The furies sink upon their iron beds, And snakes uncurled hang listening round their heads.

Pope.

UNCUR'RENT, adj. Not current ; not pass- ing in common payment.

Your voice, like a piece of uncurrent gold, is not cracked wilhin the ring. Shakspeare. Hamlet.

UNCURSE', v. a. > To free from any exe-

UNCURST/, adj. Deration; not execrated.

Uncvrse their souls ; their peace is made With head, and not with hands. Shak. Richard II.

Sir John Hotham unreproached, unthreatened, un- cursed by any language or secret imprecation of mine, no', long after pays his own and his eldest son's heads.

King Cliarlei.

Heaven sure has kept this spot of earth uncurst, To shew how all things were created first. Waller.

UNCUT, adj. Not cut.

We must resign ! heaven his great soul doth claim, In storms as loud as his immortal fame ; His dying groans, his last breath shake our isle, And trees uncut fall for his funeral pile. Waller.

A nail uncut, and head'uncombed she loves ; And would draw on jack-boots as soon as gloves.

Young.

UNDAM', v. a. To open ; free from the re- straint of mounds.

When the fiery suns too fiercely play, And shrivelled herbs on withering stems decay ; The wary ploughman, on the mountain's brow, Undarw his watery stores. Dryden't Georgicks.

UNDAM' AGED, adj. Not made worse; not impaired.

Plants will frequent changes try, Undamaged, and their marriageable arms Conjoin with others. Phillip},

UNDAUNTED, adj. } Unsubdued by fear ;

UNDAUNT'EDLY, adv. > not depressed : the ad-

UNDAUNTED'NESS, n.s. j verb and noun substan- tive corresponding.

Bring forth men children only ; For thy undaunted metal should compose Nothing but maks. Shakspeare. Macbeth.

It shall bid his soul go out of his body undauntedly, and lift up its head with confidence before saints and angels. South.

The art of war, which they admired in him, and his undauntednest under dangers, were such virtues as these islanders were not used to. Pope.

UNDAZ'ZLED, adj. Not dimmed, or confused by splendor.

Here matter new to gaze the devil met Undazzled. Milton's Paradise Lost.

As undazzled and untroubled eyes, as eagles can be supposed to cast on glow-worms, when they have been newly gazing on the sun. Boyle.

UNDEAF', v. a. To free from deafness.

Though Richard my life's counsel would not hear, My death's sad tale may

yet undeaf his ear. Shuksp.

UNDEBAUCH'ED, adj. Not corrupted by debauchery.

When the world was buxom, fresh, and young, Her sons were undebauched, and therefore strong.

Dryden.

UNDECAY'ED, adj.) Not diminished, or

UNDECAY'ING. } impaired.

How fierce in fight, with courage undecayed ! Judge if such warriours want immortal aid. Dryden.

If, in the melancholy shades below, The flames of friends and lovers cease to grow ; Yet mine shall sacred last ; mine undecayed Turn on through life, and animate my shade. Pope.

UNDECEIVE', v. a. } To set free from the

UNDECEIV'ABLE, adj. > influence of a fallacy:

UNDECEIV'ED. j the adjectives both cor-

responding.

All men will try, and hope to write as well, And not without much pains be undeceived. Roscom.

It serves for more certain computation, by how much it is a larger and more comprehensive period, and under a more undeceivabte calculation. Holder on Time.

So far as truth gets round in the world, so far sin loses it. Christ saves the world by undeceiving it.

South.

UNDECEMVIR, a magistrate among the an- cient Athenians, who had ten other colleagues or associates joined with him in the same commission. They took care of the apprehending of criminals, secured them in the hands of justice, and, when they were condemned, took them again into cus- tody, that the sentence might be executed on them. They were chosen by the tribes, each tribe naming its own ; and as the number of the tribes after Calisthenes was but ten, which made ten members, a scribe or notary was added, which made the number eleven.

UNDECl'DED, adj.) Not determined ; not

UNDECI'SIVE. f settled : not conclusive.

For one thing, which we have left to the order of the church, they had twenty which were undecided by the express word of God. Hooker.

Two nations differing about the antiquity of their language, made appeal to an undecisive experiment, when they agreed upon the trial of a child brought up among the wild inhabitants of the desert.

Aristotle has left undecided the duration of the ac- tiot Dryden.

UNDECK', v.a. To deprive of ornaments.

I find myself a traitor ; For I have given here my soul's consent, T' undeck the pompous body of a king. Shakspeare. Eve has undecked, save with herself.

Milton's Paradite Lost.

UNDECLIN'ED, adj. Not grammatically va- ried by termination ; not deviating.

In his track my wary feet have slept ; His underlined ways precisely kept. Sandy't Par.

UNDEU'ICATED, adj. Not consecrated or devoted ; not inscribed to a patron.

I should let this book come forth undedicated, were it not that I look upon this dedication as a duty.

Boyle.

UNDEEEKED, adj. Not signalised by action. My sword, with an unbattered edge, I sheath again undeeded. Shaktpeare. Macbeth.

UNDEFAC'ED,a$. Not deprived of its form ; not disfigured.

Those arms, which for nine centuries had braved The wrath of time, on antick stone engraved ; Now torn by mortars, stand yet undefaced, On nobler trophies by thy valour raised. Granville.

UNDEFI'ED, adj. Not set at defiance; not challenged.

False traitor, thou broken hast The law of arms, to strike foe undefied. Spenter.

UNDEFIL'ED, adj. Not polluted ; not vitiated ; not corrupted.

Whose bed is undefied, and chaste, pronounced.

Milton.

Her Arethusian stream remains unsoiled, Unmixed with foreign filth, and undejiled; Her wit was more than man, her innocence a child.

Dryden.

UNDEFIN'ABLE,fl#-J Not to be circura- UNDEFIN'ED. \ scribed or defined :

not circumscribed, or explained by a definition.

Why simple ideas are indefinable is, that the several terms of a definition signifying several ideas, they can all, by no means, represent an idea, which has no composition at all. Locke.

There is no such way to give defence to absurd doc- trines, as to guard them round with legions of obscure, doubtful, undefined words. /".

UNDEFORM'ED, adj. Not deformed; not disfigured.

The sight of so many gallant fellows, with all the pomp and glare of war, yet undeformed by battles, may possibly invite your curiosity. Pope.

UNDELIB'ERATED, adj. Not carefully con- sidered.

The prince's undeliberated throwing himself into that engagement, transported him with passion. Clarendon. UNDELIGHrED, adj. > Not pleased or af- UMDELIGHT'FUL. ? fected with pleasure.

He could not think of involving himself in the same undelightful condition of life. Clarendon.

The fiend

Saw undelignted all delight ; all kind Of living creatures, new to sight. Milton.

UNDEMOL'ISHED, adj. Not razed; not thrown down.

She undemoliihed stood, and even till now Perhaps had stood. Philipt.

They stood by, and suffered Dunkirk to lie widemo- liihrd. . Swift.

UNDEMON'STRABLE, adj. Not capable of fuller evidence.

Out of the precepts of the law of nature, as of cer- tain common and undemonstrable principles, man's rea-

son doth necessarily proceed unto certain more particu- lar determinations. Booker. UNDENI'ABLE, adj. t Such as cannot be UNDENI'ABLY, adv. J gainsaid; the adverb corresponds.

That age which my grey hairs make seem more than it is, hath not diminished in me the power to protect an undeniable verity. Sidney.

It is undeniably founded in the express affirmations of holy writ. Hammond.

UNDEPLOR'ED, adj. Not lamented. Rise, wretched widow ! rise ; nor undeplored Permit my ghost to pass the Stygian ford ; But rise prepared to mourn thy perished lord.

Dryden.

UNDEPRAV'ED, adj. Not corrupted. Knowledge dwelt in our undepraved natures, as light in the sun ; it is now hidden in us like sparks in a flint. Glanville.

UNDEPRIV'ED, adj. Not divested. He, undeprived, his benefice forsook. Dryden.

UN'DER, prep. Sax. unt>en; Goth., Swed., Danish, and Teut. under; Belg- onder. In a state of subjection or pupilage to ; below; beneath; in a less degree than ; for or with less than ; by the show of; in a state of oppression by; in a state of being liable to, or limited, or affected, or protected, by.

Ye purpose to keep under the children of Judah for bond-men and bond- women. 2 Chron. xxviii. 10.

Under this head may come in the several contests and wars betwixt popes and the secular princes.

Lesley.

As they went under sail by him, they held up their hands and made their prayers. Sidney.

Medicines take effect sometimes under, and sometimes above, the natural proportion of their virtue. Hooker.

There is none but he, Whose being I do fear, and under him My genius rebuked, as Antony's was by Caesar. Shakt.

I will fight

Against my cankered country with the spleen Of all the under fiends. Id. Coriolanus.

Fruit put in bottles, and the bottles let down into wells under water, will keep long. Bacon's Nat. Mitt.

To those that live.

Under thy care good rules and patterns give. Denham. Be gathered now ye waters under heaven. Milton. After all, they have not been able to give any consi- derable comfort to the mind, under any of the great pressures of this life. Tillotsm.

When good Saturn, banished from above, Was driven to hell, the world was under Jove.

Dryden.

Every man is put under a necessity, by his constitu- tion, as an intelligent being, to be determined by his own judgment, what is best for him to do ; else he would be under the determination of some other than himself, which is want of liberty. Locke.

We are thrifty enough not to part with any thing serviceable to our bodies, under a good consideration ; but make little account of what is most beneficial to •mr soul. nay.*

If it stood al ways wider this form, it would have been under fire, if it had not been under water. Unmet.

Man, once fallen, was nothing but a total pollution, and not to be reformed by any thing under a new crea- tion. South.

It was too great an honour for any man under a duke. Adiliton.

Morpheus is represented by the ancient statuaries under the figure of a boy asleep, with a bundle of poppy in his hand. Id.

Women and children did not shew the least signs of complaint, under the extremity of torture. Collier.

UND

Things of another world are under the disadvantage of being distant, and therefore operate but faintly.

Atterbury.

Mr. Duke may be mentioned under the double capa- city of a poet and a divine. Felton on the i'laisicks.

The prince and princess must be under no less amazement. Pope.

There are several hundred parishes in England under twenty pounds a-year, and many un

This faction, under the name of Puritan, became very turbulent during the reign of Elizabeth. Id.

'Tis hard to bind any syllogism so close upon the mind, as not to be evaded under some plausible distinc- tion. Baker.

UNDERACTION, n. s. Subordinate action ; action not essential to the main story.

The least episodes or underactions, interwoven in it, are parts necessary, or convenient to carry on the main design. Dryden.

UNDERBEAR', v. a. Under and bear. To support ; endure.

What reverence he did throw away on slaves ! Wooing poor craftsmen with the craft of smiles, And patient underbearing of his fortune. Shnktpeare.

UNDERCLERK', n. s. Under and clerk. A clerk subordinate to the principal clerk.

Coleby, one of his under-swearers, was tried for rob- bing the treasury, where he was an underderk. Swift.

UNDERDO', v. n. Under and do. To act be- low one's abilities.

You overact, when you should underdo ; A little call yourself again, and think. Ben Jonson.

Nature much oftener overdoes than underdoes : you shall find twenty eggs with two yolks, for one that bath none. Grew.

UNDERF ACTION, n. s. Under and faction. Subordinate faction ; subdivision of a faction.

Christianity loses by contests of underfactions.

Decay of Piety.

UNDERFEL'LOW, n. s. Under and fellow. A mean man ; a sorry wretch.

They carried him to a house of a principal officer, who with no more civility, though with much more bu- siness than those underfellowt had shewed, in captious manner put interrogatories unto him. Sidney.

UNDERFILLING, n. s. Under and fill. Lower part of an edifice.

To found our habitation firmly, first examine the bed of earth upon which we will build, and then the under- Jillingi, or substructions, as the ancients called it.

Wolton.

UNDERFONG', v. a. Under and Sax. panjan. To take in hand. Obsolete.

Thou, Menalcas, that by tlry treachery Didst underfong my lady to wexe so light, Shouldst well be known for such thy villany. Spenser.

UNDERFUR'NISH, v.a. Under and furnish. To supply with less than enough.

Can we suppose God would underfurniih man for the State he designed him, and not afford him a soul large enough to pursue his happiness ? Collier.

UNDERGIRD', v. a. Under and gird. To bind below; to round the bottom.

When they had taken it up, they used helps, under- girding the ship. Acts xxvii. 17.

UNDERGO', v. a. Under and go. To suffer ; sustain; endure evil ; pass through : to be subject to.

I have moved certain Romans To undergo with me an enterprize Of honourable, dangerous consequence. Shakspeare.

Claudio undergoes my challenge ; and either I must shortly hear from him, or I will subscribe him a coward.

Id

Such they were, who might presume to' have done Much for the king and honour of the state, Having the chiefest actions undeigone. lJuniel.

With mind averse, he rather underwent His people's will, then gave his own consent. Dryden.

Bread put into the stomach of a dying man will un- dergo the alteration that is merely the effect of heat.

A r but knot.

UNDERGROUND, n. s. Under and ground. Subterraneous space.

They have promised to shew your highness A spirit raised from depth of underground. Shaktpeare.

Washed by streams

From underground, the liquid ore he drains Into fit molds prepared. Milton.

*UNDERGROWTH', n. *. Under and growth. That which grows under the tall wood.*

So thick entwined,

As one continued brake, the undergrowth Of shrubs, and tangling bushes, had perplexed All path of man, or beast, that passed that way. Milt.

UNDERHAND', adv. & adj. Under and hand. By means not apparent ; secretly.

She underhand dealt with the principal men of that country, that they should persuade the king to make Plangus his associate. Sidney.

It looks as if I had desired him underhand to write so ill against me ; but I have not bribed him to do me this sen-ice. Dryden.

Wood is still working underhand to force his half- pence upon us. Swift.

I should take it as a very great favour, from some of my underhand detractors, if they would break all mea- sures with me. Addison.

UNDERIV'ED, adj. From derived. Not bor- rowed.

The ideas it is busied about should be, sometimes at least, those more

congenial ones, which it had in itself, undented from the body. Locke.

*UNDERLA'BORER, n. *. Under and laborer. A subordinate workman.*

About the carriage of one stone for Amasis, the dis- tance of twenty days journey, for three years were em- ployed two thousand chosen men, governors, besides many underlabourert. Wilkin.*

*UNDERLEAF', n. *. Under and leaf. A spe- cies of apple.*

The underleaf, whose cyder is best at two years, is a plentiful bearer. Mortimer.

UNDERLINE', v. a. Under and line. To mar with lines below the words ; influence secretly.*

By mere chance in appearance, though underlined with a providence, they had a full sight of the infanta.

Wotton.

UN'DERLING, n. s. From under. An infe- rior agent ; a sorry mean fellow.

The great men, by ambition never satisfied, grew factious ; and the underlingi, glad indeed to be uttder- lings to them they hated least, to preserve them from such they hated most. Sidney.

O'er all his brethren he shall reign as king, Yet every one shall make him underling. Milton.

UNDERMINE', v. a. Under and mine. To dig cavities under any thing, so that it may fall, or be blown up ; to sap.

Making the king's sword strike whom they hated, the king's purse reward whom they loved ; and, which is worst of all, making the royal countenance serve to undermine the royal sovereignly. Sidney.

They, knowing Eleanor's aspiring humour. Have hired me to undermine the duchess. Shakspeare.

The father secure, Ventures his filial virtue Against whate'er may tempt, whate'er seduce, Allure or terrifv. or undermine. Milton.

UND

He should be warned who are like to undermine him, ind who to serve him. Locke.

UN'DEKMOST, adj. This is a kind of super- lative, anomalously formed from under. Lowest in place.

Using oil of almonds, we drew up with the under- most stone a much greater weight. Boyle.

It happens well for the party that is undermost when a work of this nature falls into the hands of those who content themselves to attack their principles, without •xposing their persons. Addison.

UNDERNEATH', adv. fit prep. Compounded from under and neath, of which we still retain the comparative nether, hut in adverbial sense use be- neath. In the lower place ; below : under ; beneath.

What is, hath been ; what hath been, shall ensue ; And nothing underneath the sun is new. Sandy.*

Pray God she prove not masculine ere long If underneath the standard of the French She carry armour, as she hath begun. Shakspeare.

Underneath this stone doth lie As much beauty as could die ; Which in life did harbour give To more virtue than could live. Ben Jonton.

The monster caught in open day, Inclosed, and in despair to fly away, Howls horrible from underneath. Dryden.

UNDEROF'FICER, n. t. Under and officer. An inferior officer; one in subordinate authority.

This certificate of excommunication by bishops, of all others, is most in use ; and would be more so, were it not for the manifold abuses about its execution com- mitted by underofficers. Ayliffe. UNDERDO' ATORY, adj. Not derogatory. Of our happiness the apostle gives a negative de- scription ; and, to create in us apprehensions undero- gatory from what we shall possess, exalts them above all that we can fancy. Boyle.

UN'DERPART, n.s. Under and part. Su- bordinate or unessential part.

The English will not bear a thorough tragedy, but are pleased that it should be lightened with underparti of mirth. Dryden.

UNDERPETTICOAT, n. s. Under and pet- ticoat. The petticoat worn next

the body.

They go to bed as tired with doing nothing, as I after quilting a whole under-petticoat. Spectator.

UNDERPIN', v. a. Under and pin. To prop; to support.

Victors, to secure themselves against disputes of that kind, underpin their acquest jure belli.

*UN'DERPLOT, n. *. Under and plot. A concealed plot.*

In a tragt-comedy, there is to be but one main de- sign ; and though there be an underplot, yet it is sub- servient to the chief fable. Dryden.

The husband is so misled by tricks, and so lost in a crooked intrigue, that he still suspects an underplot.

Additon.

UNDERPRAISE', v. a. Under and praise. To praise below desert.

In underpraiting thy deserts, Here find the first deficiency of our tongue. Dryden.

UNDERPRIZE', v. a. Under and prize. To value at less than the worth.

How far

The substance of my praise doth wrong this shadow In underprising it ; so far this shadow Doth limp behind the substance. Sliaktpeare.

UNDERPROP, v. a. Under and prop. To support ; to sustain.

Here am I left to underprop the lord, Who weak with age, cannot support himself. Shak.

Thou that art used t' attend the royal throne, And underprop the head that bears the crown. Pent. UNDERPROPORTIONED, adj. Under and proportion. Having too little proportion.

To be haughty, and to make scanty and underpro~ portioned returns of civility, plainly tells people, they must be very mannerly. Collier on Pride.

UNDERPUL'LER, n.s. Under and puller. Inferior or subordinate puller.

TLe mystery of seconds and thirds is such a master- piece, that no

description can reach. These underpul- lers in destruction are such implicit mortals as are not to be matched. Collier.

UNDERRATE', n.t. From the verb. A price less than is usual.

To give all will befit thee well, But not at underrate! to sell. Couley.

The useless brute is from Newmarket brought, And at an underrate in Smithful bought, To turn a mill. Dryden.

UNDERSAY', v.n. Under and say. To say by way of derogation or contradiction. Obso- lete.

They say, they con to heaven the highway j But 1 dare undersay, They never set foot on that same trode, But balke their right way, and strain abroad. Spenser.

UNDERSECRETARY, n. $. Under and sec- retary. An inferior or subordinate secretary.

The Jews have a tradition that Elias sits in heaven, and keeps a register of all men's actions, good or bad. He hath his undersecretaries for the several nations, that take minutes of all that passes. Bacon.

UNDERSELL', v. a. Under and sell. To de- feat, by selling for less ; to sell cheaper than an- other.

Their stock being rated at six in the hundred, they may, with great gain, undersell us, our stock being rated at ten. Child's Discourie of Trade.

UNDERSER'VANT, n.s. Under and servant. A servant of the lower class.

Besides the nerves, the bones, as undertenants, with the muscles, are employed to raise him up.

Grew' Cosmologia.*

UNDERSET, v. a. ˆ Under and set. To UNDERSET'TING, n. s. Sprop; to support: a UNDERSET'TER. J support or prop.

The four corners thereof had undersvtters.

\ Kings vii. 30.

The merchant-adventurers, being a strong company, and well underset with rich men, and good order, held out bravely. Bacon't Henry VII.

Their underletting!, or pedestals, are, in height, a third part of the column. Wotton't Architecture.

UNDERSHER'IFF, n. s. Under and sheriff. The deputy of the sheriff.

The cardinals of Rome call all temporal business, of wars and embassages, shirreria, which is um.Vr- iherijfriet ; as if they were but matters for umler- iheriffi and catchpoles ; though many times those un- dertheriffriet do more good than their high speculations.

Bacon.

UNDERSHOT, part. adj. Under and shoot. Moved by water passing under it.

The imprisoned water payeth the ransom of driving an undershot wheel for his enlargement.

Carew's Survey of Cornwall. UNDERSONG', n. t. Under and song. Chorus; burthen of a song.

So ended she ; and all the rest around To her redoubled that her undersong. Speiuer

The challenge to Damstas shall belong ; Menalcas shall sustain his undersong : Each in his turn your tuneful numbers bring. Dry.

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UND

UNDERSTAND', v. a. & t;. n. \ Sax.

UNDERSTAND'ING, n.s. & adj Spran'nanjGoih.

UNDERSTANO'INGLY, adv. j understands Pret. understood. To conceive with adequate ideas ; to have full knowledge of; comprehend ; interpret ; suppose to mean : as a verb neuter to have the use of intellectual faculties ; to have learning: the noun substantive corresponding: understanding is knowing ; skilful : understand- ingly, with knowledge.

I named them as they passed, and understood Their nature, with such knowledge God endued My sudden apprehension. Milton.

Sundays may be uitderstandingly spent in theology.

Id.

Amorous intent, well understood Of Eve, whose eye darted contagious fire. Id.

His sin might have been greater in that respect : but that it was not so to be understood appears by the oppo- sition. Stillingjieet.

\Vhen did his pen on learning fix a brand, Or rail at arts he did not understand ? Dry den.

The most learned interpreters understood the words of sin, and not of Abel. Locke.

He hopes you will your foreign taste command, To bear for once with what you understand. Addiion.

The present physician is a very understanding man.

Id.

UN'DERSTRAPPER, n. s. Under and strap. A petty fellow ; an inferior agent.

Every understrapper perked up, and expected a regi- ment, or his son must be a major. Swift.

UNDERTAKE', v. a. & i>. n.) Under and UNDERTAKER, n. s. > take. Pret. un-

UNDERTAK'ING. jdertook; part.

pass, undertaken. To attempt ; engage in or with; assume; have the charge of; venture; hazard; promise : the noun substantives both correspond : an undertaker is also used particularly for one who engages to build, or to conduct a funeral. O Lord, 1 am oppressed, undertake for me.

Isaiah xxxviii. 34. The task he undertakes Is numbering sands, and drinking oceans dry.

His name and credit shall you undertake, And in my house you shall be friendly lodged. To the waterside I must conduct your grace, Then give my charge up to Sir Nicholas Vaux, Who undertake you to your end. Id. Henry VIII.*

Shah. Id.

. ~\ Under and > value. To rate

UNDERVALUE, v. a. 8c n. 5.

UNDERVAL'UER, n. t.

UNDERVALUATION. j low or lightly ;

treat as of little worth : little worth ; low price : one who so rates things or persons : undervalua- tion is a rate not equal to worth.

Her name is Portia, nothing undervalued To Cato's daughter. Shakspeare.

There is often failing by an undervaluation ; for in divers children their ingenerate powers are of slow dis- closure. Wotton.

An undervaluer of money was Sir Henry Wotton.

Walton.

I write not this with the least intention to undervalue the other parts of poetry. Dryden.

Schooling Luther, an undervaluing term, would make one think that Erasmus had a mean opinion of him.

Atlerburv.

UN'DERWOOD, B.S. Under and wood, the low trees that grow among the timber.

W hen you fell underwood, sow haws and sloes.

Mortimer.

UN'DERWORK,.n. «. ,V – . «.) Under and

UN'DERWORKMAN, n. s. J work. Subor-

dinate business ; petty affairs : to work at a low price or by scanty means: an inferior or subordi- nate workman.

Nor would they hire under-workmen to employ their parts and learning to disarm Uitlr mother of all.

Letley.

Thou from loving England art so far, That thou hast underwrought its

lawful king, To cut off the sequence of posterity. Shakspeare.

Those that are proper for war, fill up the laborious part of life, and carry on the underwork of the nation.

Adtuon.

UNDERWRITE', v. a. Under and write. To write under something else.

What addition and change I have made, I have here underwritten. Sanderson.

UNDESCRIB'ED, adj. Not described. They urge, that God left nothing in his word unde- scribed, whether it concerned the worship of God, or outward polity. Hooker.

UNDESERVED, adj.\ Not. merited; not UNDESERVEDLY, ddv. (obtained by merit, or UNDESER'VER, n. ». {default : the adverb and UNDESERV'ING, adj. J other derivatives cor respond.

This victory obtained with great, and truly not un-

Mighty men they are called ; which sheweth a deserved, honour to the two princes, the whole estates, strength surpassing others : and men of renown, that with one consent, gave the crown to Musidorus. is, of great undertaking and adventurous actions.

Raleigh's History of the World.

Antrim was naturally a great undertaker. Clar.

I undertook alone to wing the abyss. Milton.

Sidney.

I was carried to mislike, then to hate ; lastly, to destroy this son, undeserving of destruction. Id.

He which speaketh no more than edifieth is vnde-

If this seem too great an undertaking for the humour servedly reprehended for much speaking. Hooker.

of our age, then such a sum of money ought to be You see how men of merit are sought after; the un- ready for taking off all such pieces of cloth as shall be deserver may sleep, when the man of action is called on.

brought in. Temple.

Fiercer than cannon, and than rocks more hard, The English undertake the unequal war. Dryden.

If the curious search the hills after rains, I dare un- dertake they will not lose their labour.

Woodward's Natural History. While rival undertakers hover round, And with his spade the sexton marks the ground.

Young.

UNDERTENANT, n. s. Under and tenant. A secondary tenant ; one who holds from him that holds from the owner.

Settle and secure the undertenants; to the end there may be a repose and establishment of every subject's estate, lord and tenant. Duties.

Shakspeare.

It exerts itself promiscuously towards the deserving and the undeserving, if it relieves alike the idle and the indigent. Addison.

UNDESIGN'ED, adj. » Not intended; not UNDESICN'ING. J purposed : not acting

with set purpose, or with f aud.

He looks upon friendship, gratitude, and sense of ho- nour, as terras to impose upon weak, undesigning minds.

South.

Where you conduct find, Use and convenience ; will you not agree. That such effects could not be undesigned, Nor could proceed but from a knowing mind ?

Blacfonan.

UNO

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UNDESIR'ABLE, adj.-) Not to be wished;

USDESIR'ED, > not pleasing: notwish-

UKOESIE'JXC. Jed: not wishing.

To add what wants

In female sex, the more to draw his love, And render me more equal ; and peihaps, A thing not undtsirahte, some time Superior ; for inferior, who is free ? Milton.

O goddess-mother, give me back to fate ; Your gift was undetired, and came too late. Dryden.

The baits of gifts and money to despise, And look on wealth with undesiring eyes : When thou canst truly call these virtues thine, Be wise, and free, by heaven's consent and mine. Id.

UNDESTROY'ABLE, adj. Indestructible ; not susceptive of destruction. Not in use.

Common glass, once made, so far resists the violence of the tire, that most chymists think it a body more tutdtftroyabte than gold itself. Boyle.

The essences of those species are preserved whole and undestroyed, whatever changes happen to any, or all of the individuals. Locke.

UNDETER'MINATE, adj.- UNDETERMINABLE, UXDETER'MINATENESS, n.s. UNDKTERIIINA'TION, UNDETER'MINED, adj.

Not settled ; not decided ; contin- . gent ; indetermi- nate : undetermi- nateness and un-

determination correspond : undeterminable, impos- sible to be decided : undetermined, unsettled ; undecided.

On either side the fight was fierce, and surely unde- terminable without the death of one of the chiefs.

Wottm.

Extended wide In circuit, undetermined, square or round. Milton.

It is difficult to conceive that any such thing should be as matter, undetermined by something called form.

Hale.

He is not left barely to the undetermination, incer- tainty and unsteadiness of the operation of his faculties, without a certain, secret, predisposition of

them to what is right. Id.

Fluid, slippery, and undeterminaje it is of itself.

Mm,

The idea of a free agent is undeterninateneu to one part before he has made choice. Id.

UNDEVOTED, adj. Not devoted.

The lords Say and Brooke, two popular men, and most undeleted to the church, positively refused to make any such protestation. Clarendon.

UNDIA'PHANOUS, adj. Not pellucid; not transparent.

When the materials of glass, melted with calcined tin, have composed a mass undiaphanout and white, this white enamel is the basis of all concretes that gold smiths employ in enamelling. Boyle on Colours.*

UNDIGEST'ED, adj. Not concocted; not subdued by the stomach.

Ambition, the disease of virtue, bred Like surfeits from an undigested fulness, -Meets death in that which is the means of life.

Dtnham.

Meat remaining in the stomach undigttted, dejection of appetite, wind coming upwards, are signs of a phleg- matick constitution. Arbuthnot.

UNDIGHT, preterite. Put off. It is ques- tionable whether it have a present tense. Obsolete.

From her fair head her fillets she undight, And laid her stole aside. Spenter.

UNDIMIN'ISHED, adj. Not impaired; not lessened.

I still account myself widiminiihed of my largest con- cessions. King Chalet.

Sergius, who a bail cause bravely tried, All of a piece, and undimmiihed died. Dryden.

The deathless muse, with undiminithed rays, Through distant times the lovely dame conveys.

Additon.

UN DINTED, adj. Not impressed by a blow.

I must rid all the sˆa of pirates : this 'greed upon, To part with unhackt edges, and bear back Our barge undinted. Shaksp. Antony and Cleopatra.

V N DIPPED, adj. L'n and dip. Not dipped ; not plunged.

I think thee

Impenetrably good ; but. like Achilles, Thou hadst a soft Egyptian heel undipped And that has made thee mortal. Dryatn.

UNDIRECTED, adj. Not directed.

Could atoms, which, with undirected flight, Roamed through the void, and ranged the realms of

night,

Of reason destitute, without inten , In order march ? Blackmore on the Creation.

UNDISCERN'ED, adj.- UNDISCERN'EDLY, adv. UNDISCERN'IBLE, adj. UNDISCERN'IBLV, adv. UNDISCERN'ING, adj.

Not observed ; not discovered; not des- cried : the adverb fol- lowing corresponds: undiscernible, not to

be discovered or descried : the adverb correspond- ing: undiscerning is injudicious; not capable ot' distinguishing.

I should be guiltier than my guiltiness, To think I should be undiscernible, \N hen I perceive your grace. Shakspeare.

His long experience informed him well of the state of England ; but of foreign transactions he was entirely unducerning and ignorant. Clarendon.

Our profession, though it leadeth us into many truths unducerned by others, yet doth disturb their communi- cations. Brcnaie's Fu/gar Errourt.

Some associated particles of salt-petre, by lurking wdiscernedlii in the fixed nitre, had escaped the ana- lyzing violence of the fire. Biyle.

Many secret indispositions will undiscemiUy steal upon the soul, and it will require time and close appli- cation to recover it to the spiritualities of religion.

South.

UNDIS'CIPLINED, adj. Not subdued to re- gularity and order.

A gallant man had rather fight to great disadvantages in the field, in an orderly way, than skutfle with an cu- duciplined rabble. king Charles.

Divided from those climes where art prevails, l.'ndiseiplined by prucrpts of the wise, Our inborn passions will not brook controul ; We follow nature. Pki'.-n.

UNDISCORrriNG, adj. Not disagreeing ; not janing in music.

We on earth, with unditeording voice. May rightly answer that melodious noise ; As once we did, till disproportioned sin Jarred against nature's chime. Milton.

UNDISCOVERED, adj. i Not seen; not

UNDISCOV'FRABLE.] descried; not found

out : not to be found out.

Coming into the falling of a way, which led us into a place, of each side whereof men might easily keep them- selves unditcovered, I was encompassed suddenly by a great troop of enemies. Sidney.

Tim glides with undiscovered haste ; The future but a length behind the past. Dryden.*

He was to make up his accounts, and by an easy, unditcinerable cheat, he could provide against the im- pending distress. Rogert.

UNDISCREET, adj. Not wise ; imprudent.

If thou he among the unditcreet, obterve the time.

Ecclui

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UNDISGUISED, adj. Open; artless; plain; exposed to view.

If thou art Venus, Disguised in habit, undisguised in shape ;

0 help us captives from our chains t" escape. Dryden. If once they can dare to appear openly and undis-

guistd, when they can turn the ridicule upon seriousness and piety, the contagion spreads like a pestilence.

Rogers.

UNDISHON'ORED, adj. Not dishonored.

Keep then fair league and truce with thy true bed :

1 live distained, thou undishonoured. Stiakspeare.

UNDISMAY'ED, adj. Not discouraged; not depressed with fear.

Though oft repulsed, again They rally undismayed. Phili]is.

He aimed a blow against his undismayed adversary.

Arbuthiiot.

UNDISOBLIG'ING, adj. Inoffensive.

All this he would have expatiated upon, with con- nexions of the discourses, and the most easy, undisoblig- ing transitions. Broome.

UNDISPERS'ED, adj. Not scattered.

We have all the redolence of the perfumes we burn upon his altars ; the smoke doth vanish ere it can reach the sky , and, whilst it is unditpened, it but clouds it.

Boyle.

UNDISPOS'ED, adj. Not bestowed.

The employments were Ml undisposed of, to keep alive the hopes of impatient candidates. Swift.

UNDISPUTED, adj. Incontrovertible; evi- dent.

You, by an undisputed title, are the king of poets.

Dryden .

That virtue and vice tend to make those men happy or miserable, who severally practise them, is a proposi- tion of undoubted, and by me undisputed, truth.

Atterburu.

UNDISSEM'BLED, adj. Openly declared ; honest.

Yet are the sons of a clergy, whose undissembled and unlimited veneration for the holy scriptures hath not hindered them from paying an inleriour, but profound regard, to the best interpreters of it, the primitive wri- ters. Atierbury.

UNDIS'SIPATED, adj. Not scattered ; not dispersed.

Such little primary masses as our proposition men- tions may remain undissipated . Boyle.

UNDISSOLV'ING, adj. Never melting.

Not cold Scythia's undissctving snows Nor the parched Lybian sands thy husband bore, But mild Parthenope. Addisnn.

UNDISTEM'PERED, adj. Free from disease, or perturbation.

Some such laws may be considered, in some parlia- ment that shall be at leisure from the urgency of more pressing affairs, and shall be cool and unduiempered.

Temple.

UNDISTIN'GUISHED, adj.) Not marked so

UNDJSTIX'GUISUABLE, >as to be known

UNDISTIN'GUISHING.) from each other:

not to be clearly seen : not seeing or discriminating clearly.

These things seem small and nndistinguishable, Like far of? mountains turned into clouds. Shaktpeare.

Sleep to those empty lid.5 Ts grown a stranger : and day and night As undistinguished by my sleep as sight. Denham.

Tis longer since the creation of angels than of the world, by seven hundred years : whereby we would niark out so much of that undistinguished

duration' as we suppose would have admitted seven hundred annual revolutions of the sun. Locke.

Vol. \.l

No idea can be undisttnguishable from another from which it ought to be different. /j.

Undistinguishing complaisance will vitiate the taste of the readers. Garth.

Not

UNDISTRACTED, adj.

perplexed

UNDISTRAC'TF.DLY, adv. Sby contrariety o'

UNDISTRAC'TKDNESS, n. s. j thoughts or desires •. the adverb and noun substantive corresponding.

When Knoch had walked with God, he was so far from being tired with that lasting assiduity, that he ad- mitted him to a more immediate and more undistracted communion with himself. fttiy/e.

St. Paul tells us that there is difference betwixt mar- ried and single persons ; the affections of the latter being at liberty to devote themselves more un

The strange confusions of this nation disturb that calmness of mind, and undistractednesi of thoughts. Id.

UNDISTU RB'ED, adj.) Free from perturba –

UNDISTURB'EDLY, adv. \ tion ; calm; tranquil; placid : the adverb corresponding.

To our high raised phantasy present That undisturbed song of pure content. Milton.

Our minds are so weak, that they have need of all the assistances that can be procured to lay before them undisturbedly the thread and coherence of any discourse.

Locke.

A state where our imitation of God shall end in the undisturbed fruition of him to all eternity. Atierbury.

UNDIVI'DED, adj.) Unbroken ; whole; noi

UNDIVI'DABLE. J parted : not to be parted

or divided.

The best actors in the world for tragedy, pastoral, scene undiv'idable, or poem unlimited. Hhuhspeare.

Love is not divided between God and God's enemy • we must love God with all our heart ; that is, give him a whole and undivided affection. Taylor.

UNDIVULG'ED, adj. Secret; not promul- gated.

Let the great gods

Find out their enemies now. Tremble, thou wretch, That hast within thee undlvulged crimes Unwhipped of justice. Shaktpeare.

UNDO', v.a. ˆ Pret. undid; part.

UNDO'ING, adj. & n. s. £pr.t$s. undone. From do.

UNDONE', adj. j To ruin ; bring to destruc-

tion; loose; unravel; reveal: undoing is ruining; destructive : also the destruction or ruin incurred : undone, not done or performed ; ruined.

They false and fearful do their hands undo; Brother, his brother ; friend doth friend forsake. Sidney.

To the utter urtdoing of some, many things by strict- ness of law may be done, which equity and honest meaning forbiddeth. Hooker.

Do you smell a fault? — I cannot wish the fault un- done, the issue of it being so proper. Sliaktptare.

We seem ambitious God's whole work t' undo; Of nothing he made us, and we strive, too, To bring ourselves to nothing back. Donne.

Where, with like haste, through several ways they

run, Some to undo, and some to be undone. Denham.

Were men so dull, they could not see That Lyce painted ; should they flee, Like simple birds, into a net So grossly woven and ill-set ; Her own teeth would undo the knot, And let all go that she had got. Waller.

The great and undoing mischief which befalls men, is by their being misrepresented. South.

Now will this woman, with a single glance, Undo what I 've been labouring aU this while. Adduon.

False lustre could diz. le my poor daughter to her undoing. Id. Guardian,

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UNDOUBTED, •$.) Indubitable; indi-

UNDOUBT'EDLY, fl'.f. ˆputable; unquestion-

UNDOI'BT'IXG, adj. 1 able : the adverb corres- ponding : undoubting, admitting no doubt.

Some fauh undoubtedly there is in the very rescmUamv of idolaters. Hook.r.

His fact, till now, came to an undoubted proof.

Shaktpeare.

They to whom all this is revealed, and received with an undoubting faith, if they do not presently set about so easy and so happy a task, must acknowledge themselves in the number of the blind. Hammond.

Thou, Spirit, who led'st this glorious eremite Into the desert, his victorious field, Against the spiritual foe, and brought'st !i-m thence, By proof the' undoubted Son of God inspire. Milton.

UNDRAWN", adj. Not pulled by any external force.

Forth rushed

The chariot of paternal deity

Flashing thick flames, and wheel within wheel undrawn; Itself instinct with spirit, but convoyed By four cherubic shapes MUton'i Paradite Lost.

UNDREAD'ED, adj. Not feared.

Better far,

Than still at hell's dark threshold t' have sat watch, Unnamed, undreaded, and thyself half-starved. Milton.

UNDREAMED, adj. Not thought on.

A coarse more promising, Than a wild dedication of yourselves To unpath'd waters, undreamed shores ; most certain To miseries enough. Shaktpeare. Winter1 Tale.*

UNDRESS', v. a. &n..) From dress. To*

UNDRESS'EB, adj. J divest of clothes ;

strip; divest of ornaments; a loose or negligent dress : the adjective corresponding, and also sig- nifying not prepared or cultivated.

Undrett you, and come now to bod. Shaktpeare.

Reform her into ease, And put her in undreu to make her please. Dryden.

Thy vineyard lies half pruned ami half undressed. Id.

UNDRI'ED, adj. Not dried.

*Four pounds of undried hops, thorough ripe, will make one of dry. Mortimer' t B**ba*dry.*

Their titles in the field were dried : Witness the fresh laments and funeral tears undried.

Dryden.

UNDRI'VEN, adj. not impelled any way.

As wintry winds contending in the sky, With equal force of lungs their titles try : The double rack of heaven, Stands without motion, and the tide undrittn. Dryden.

UNDROSS'Y, adj. free from recrement. Of heaven's undreuy gold, the gods' array Refulgent, flashed intolerable day. Pope' Homer f*

UNDU'BITABLE, adj. Not admitting doubt ; unquestionable.

Let that principle, that all is matter, and that there is nothing else, be received for certain and undubitable, and it will be easy to be seen what consequences it will lead ns into. Locke.

UNDU'E, adj. > Fr. indue. Not right ; not

UMDU'LT, adv. i legal ; contrary to duty ; the ad- verb corresponding.

That proceeding being at that time taxed for rigorous and undue, in matter and manner, makes it very proba- ble there was some greater matter against her. Bacon.

Men unduly exercise their seal against persons ; not pnly against e>il persons, bat against those that are the most venerabl',. Sprat' Sermon*.*

He will not prostitute his power to mean and undue ends, nor tioop to little and low arts of conning the people A tier Lury.

UNE

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f driv

i forward ; make to

e backward nn-l

rXDULA'TIOS, n.S.

I'N'DULARY, adj.

UN'DVLATORY.) play as waves : to

play, or curl, like waves : the noun substantive cor- responds : undulary anil undulatory mean movin . in the manner of waves.

The blasts and undulary breaths thereof maintain no eir course. Browne.

leeches will move both ways ; and so «nl most of those animals whose bodies consist of round ,unl annulary fibres, and move by nndulntion, that is, like the waves of the sea. f ..

Breath vocalized, i. e. vibrated ami umlulated, may in a different manner affect the lips, or tongue, or palate, and impress a swift, tremulous motion, which i>reat:i alone passing smooth doth not. Hoi ler.

A constant undulatory motion is perceived by lo through telescopes. Arbuthnot on Air.

Through undulating air the sounds are sent, And spread o'er all the fluid

element. Pope.

UNDUTEOUS, adj. Not performing duty; irreverent ; disobedient.

This deceit loses the name of craft, Of disobedience, or undutrous title. Shaktpeare.

In Latium safe he lay. From his unduleoui son, and his usurping swav.

Uryd-n.

UNDUTIFUL, adj. } Not obedient; nu

UNDU'TIFULLY, adv. > reverent: the adverb

UNDU'TIFULNESS, n. 5.) and noun substantive correspond.

England thinks it no great policy to have that realm planted with English, lest they should grow so unduti- ful as the Irish, and become more dangerous.

Spenser's Ireland.

Forbidding undutifulnest to superiors, sedition and rebellion against magistracy. Ti lutˆn.

The fish had long in Caesar's ponds been fed, And from its lord undutifully fled. Drydtn't Juvenal.

UNDY'ING, adj. Not destroyed ; not perish- ing ; immortal.

Driven down To chains of darkness, and the undying worm

Milton.

UNEARN'ED, adj. Not obtained by labor or merit.

Our work is brought to little, though begun Early, and the hour of supper comes unearned.

Milttm.

UNEARTH'ED, adj. \ Driven from a den in UNEARTH'LY. S the ground : not of the

earth.

The sacrifice

How ceremonious, solemn, and unearthly It was i' th offering ! Shakspeare. \'iitter'i Tale.*

The robber of the fold Is from his craggy winding haunts unearthed.

Thornton.

UNEA'SY, adj. > Painful ; giving disturb- UNEA'SINESS, n. $. J auce; disturbed ; constrain- ed ; peevish: the noun substantive corresponding.

Happy low ! lie down ; Uneasy lies the head tint wears a crown.

Shaksjieare.

On a tottering pinnacle the standing is utieasu-, and the fall deadly. Decay of Piety.

Some servile imitators Prescribe at first such strict, untaiy rules, As they must ever slavishly observe. Roscvmmon.

The roul, uneasy and confined from home, P.ests and expatiates in a life to come. Pope.

UN EATEN, adj. Not devoured .

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Though they had but two horses left uneaten, they had never suffered a summons to be sent to them.

Clarendon.

UNEATI1', adv. From eath. Saxon eat5, easy. Not easily. Out of use.

A roaring, hideous sound, That all the air with terror filled wide, And seemed uneath to shake the stedfast ground.

Speruer.

UNED'IFYING, adj. Not improving in good life.

Our practical divinity is as sound and affecting as that of our popish neighbours is flat and unedifying.

Atterbury.

UNELECT'ED, adj. Not chosen.

Putting him to rage,

You should have ta'en the advantage of his choler, And passed him unelected. Sliakspeuri. Coriolanus.

UNEL'IGIBLE, adj. Not proper to be chosen.

Both extremes, above or below the proportion of our character are dangerous ; and 'tis hard to determine which is most uneligible, Rogert.

UNEMPLOYED, adj. Not busy ; at leisure ; idle.

Other creatures all day long Rove idle, unemployed, and less need rest-. Milton.

Pales unhonoured, Ceres unemployed, Were all forgot. Dryden.

Men soured with poverty, and unemployed, easily give into any prospect of change. A&dison.

UNEMPTIABLE, adj. Not to be emptied; inexhaustible. Obsolete.

Whatsoever men or angels know, it is as a drop of that unemptiable fountain of wisdom which hath di- versely imparted her treasures. Hooher.

UNENDOWED, adj. Not invested; not graced.

A man rather unadorned with any parts of quickness, and unendowed with any notable virtues, -than notorious for any defect of understanding. Clarendon.

Aspiring, factious, fierce and loud, With grace and learning unendowed. Swift.

UNENGAG'ED, adj. Not engaged; not ap- propriated.

When we have sunk the only unengaged revenues left, our incumbrances must remain perpetual. Swift.

UNENJOY'ED, adj. Not obtained; not pos- sessed .

The more we have, the meaner is our store ; The unenjoi/ing, craving wretch is poor. Creec'i.

Each day's a mistress unenjoued before ; Like travellers, we 're pleased with seeing more.

Dryden.

UNENLARG'ED, adj. Not enlarged ; narrow ; contracted.

Vnenlarged souls are disgusted with the wonders which the microscope has discovered concerning the shape of little animals, which equal not a pepper-corn.

Watts.

UNENLIGHTENED, adj. Not illuminated.

Moral virtue, natural reason, unenlightened by reve- lation, prescribes. Atterbury.

UNENSLAV'ED, adj. Free; not enthralled.

By thee She sits a sov'reign, unenslaved and free. Addisan.

UNENTERTAIN'ING, adj. Giving no de- light ; giving no entertainment.

It was not unentertaining to observe by what degrees I ceased to be a witty writer. Pope.

UNENTOMB'ED, adj. Unburied; uninterred.

Think'st thou unentombed to cross the floods 1

Dryden.

UNEN'VIED, adj. Exempt from envy.

The fortune which nobody sees makes a man happy and unenmed. Bacon.

This loss.

Thus far at least recovered, hath imi"h more Kstablished in a safe, unencied throne, Yielded with full consent. .

UNE'QUAL, adj.-\ lAt.in

UNI/QUALABLE, for equal; inferior; partial ;

UNE'QUALLED, i ill matched : unequable is

UNE'QUAI.LY, adv. J diverse; different from it- self: the other adjective and adverb follow the sense of unequal.

There sits deformity to mock my body ; To shape my legs of an unequal size. Shaltspeare.

Among unequuls, what society 1 Milton.

Dorinda came, divested of the scorn, Which the unequalled maid so long had worn.

Rotcommon.

Christ's love to God is filial and unequalable. Boyle.

March and September, the two equinoxes, are the most unsettled and unnjuable of seasons. Bentleii.

When we view some well-proportioned dome, No single parts unequally surprize ; All comes united to the' admiring eyes. Pope

UNEQUITABLE, adj. Not equitable; not just.

We force him to stand to those measures which we think too unequitable to press upon a murderer.

Decay of Piety.

UNEQUIVOCAL, adj. Not equivocal.

This conceit is erroneous, making putrefactive gene- rations correspondent unto seminal productions, and conceiving unequivocal effects, and univocal conformity unto the efficient. Browne.

UN ER'ltABLENESS, n. s. Incapacity of error.

The many innovations of that church witness the danger of presuming upon the unerra bleness of a guide.

Decay of Piety.

UNER'RING, adj. f Latin inerrans. Com-

UNER'RINCLY, adv. $ mitting no mistake; capa- ble of no mistake : the adverb corresponding.

The king a mortal shaft lets fly From his unerring hand. Denham.

Is this the' unerring power ? the ghost replied ; Nor Phoebus flattered ; nor his answers lied. Dryden.

The irresistible infirmities of our nature make a perfect and unerring obedience impossible. Rogers.

\Vhat those figures are, which should be mechani- cally adapted to fall so unerringly into regular compo- sitions, is beyond our faculties to conceive. Gianvilte.

UNESCHEW'ABLE, adj. Inevitable; una- voidable ; not to be escaped. Not in use.

He gave the mayor sufficient warning to shift for safety, if an uneschewable destiny had not altered him.

Carew.

UNESPI'ED, adj. Not seen; undiscovered; undescried.

Treachery, guile, and deceit, are things which may for a while, but do not long, go unespied. Hooker.

Nearer to view his prey, and unetpied To mark what of their state he more might learn. Mil.

UNESSENTIAL, adj. Not being of the last importance ; not constituting essence.

The void profound Of unessential night receives him next. Milton.

Tillotson was moved rather with pity than indigna- tion, towards the persons of those who differed from him in the unessential parts of Christianity. Addison.

UNE'VEN, adj. > Unequal in surface; not

UNE'VENNESS, n.$.) level; not suitable: the noun substantive corresponding.

Some said that it was best to fight with the Turks iu that uneven, mountain country, where the Turk's chief strength consisting in the multitude of his horsemei should stand him in small stead. Kiioltet

The Hebrew verse consists of uneven feet. Pfaeham

Edward II., though an unfortunate prince, and by reason of the troubles and uuevtnneff of his reign, the .•ery law itself had many interruptions ; yet it held ks current in that state his father had left it in. Hale.

UNEV'ITABLE, adj. Lat. incvifabilis;. Yr. in- evitable. Inevitable ; not to be escaped.

So jealous is she of my love to her dnughter, that I never yet begin to open my mouth to the unevitable Phi- loclea, but that her unwished presence gave my tale a conclusion before it had a beginning. Sidney.

UN EXACTED, adj. Not exacted; not taken by force.

All was common, and the fruitful earth Was free, to give her uneiacted birth. Dryden.

UNEXAM'INED, adj. Not enquired; not tried ; not discussed.

They utter all they think, with a violence and indis- position, unexamined, without relation to person, place, or fitness. Ben J onion.

The most pompous seeming knowledge, that is built on the nneiainined prejudices of sense, stands not.

Glanville.

UNEXAM'PLED, adj. Not known by any precedent or example.

Charles returned with unexampled loss from Algiers.

Raleigh.

O unexampled love ! Love no where to be found less than divine. Milton.

I tune my pipe afresh, each night and day, Thy unexampled goodness to extol. Philipi.

UNEXCEPTIONABLE,ˆ. Not liable to any objection.

Personal prejudices should not hinder us from pur- suing, with joint hands and hearts, the unexceptionable design of this pious institution. Atterbnry,

UNEXCIS'ED, adj. Not subject to the pay- ment of excise.

And beggars taste thee ttnercited by kings. Browne.

UNEXCOG'ITABLE, adj. Not to be found out.

Wherein can man resemble his unexcogitable power and perfectness ! Raleigh.

UNEX'ECUTED, adj. Not performed; not done. Leave unexecuted your own renowned knowledge. Shak.

UN EXEMPT, adj. Not free by peculiar privi- lege.

You invert the covenants of her trust, And harshly deal, like an ill borrower, With that which you received on other terms, Scorning the unexempt condition By which all mortal frailty must subsist. Milton.

UNEXEM'PLIFIED, adj. Not made known by instance or example.

Those wonders a generation returned with so unex- emplified an ingratitude, that it is not the least of his wonders, that he would vouchsafe to work any of them.

Boyle.

UNEX'ERCISED, mdj. Not practised ; not ex- perienced.

Messapus, with his ardour, warms A heartless train, imexercued in arms. Dryden.

Abstract ideas are not so obvious to the yet unexer- eised mind as particular ones. , Locke.

UNEXHAUSTED, adj. Lat. uuxhauitut. Not spent; not drained to the bottom.

What avail her unexhausted stores, While proud oppression in hervallies reigns'? Adduvn.

UNEXPAND'ED, adj. Not spread out.

Every foetus bears a secret hoard ; With sleeping, unexpanded issue stored. Blackmure.

UNEXPECTED, adj.) Not thought on; UNEXPECTEDLY, adv. ˆsudden; not provided UNEXPECT'F.DN ESS ». v 1 against : the adverb and noun

substantive corresponding.

Have wisdom to provide alwavs beforehand, that those evils overtake us not, which death unexpected doth use to bring upon careless men ; and although it be sudden in itself, nevertheless, in regard of our prepared minds, it may not be sudden. Hooker.

O unexpected stroke ! worse than of death ! .Must I thus leave thee, paradise ! Milton.

Oft he seems to hide his face, But unexpectedly returns. Id.

UNEXPE'DIENT, adj. Inconvenient; not fit.

Musick would not be unejrpedient after meat, to assist and cherish nature in her first concoction, and send their minds back to study in good tune. Miiton.

UNEXPERIENCED, <«#. Not versed; not acquainted by trial or practice.

Long use may strengthen men against many such in- conveniences, which, to unexperienced persons, may prove very hazardous. ll'ilkint.

These reproaches are the extravagant speeches of those unexperienced in the things they speak against.

T Motion.

The smallest accident intervening, often p-oduces such changes, that a wise man is just as much in doubt of events, as the most ignorant and uneiperienced.

Su-ift.

UNEXPERT, adj. Lat. inexptrtus. Wanting skill or knowledge.

Receive the partner of my inmost soul : Him you will find in letters, and in laws, Not ujierpert. Prior.

UNEXPLOR'ED, adj. Not searched out.

Oh ! say what stranger cause, yet unexplored, Could make a gentle belle reject a lord 1 Pope.

Under thy friendly conduct will I fly To regions unexplored. Drydtn.

UNEXPOS'ED, adj. Not laid open to censure.

They will endeavour to diminish the honour of the best treatise, rather than suffer the little mistakes of the author to pass unesposed. H'uttt.

UNEXPRES'SIBLE, adj. Ineffable ; not to be uttered.

What unexpreuible comfort does overflow the pious soul, from a conscience of its own innocency ! Tmun.

UNEXPRES'SI VE, adj. Not having the power of uttering or expressing ; inexpressible; unuttera- ble. Not used.

With nectar pure his ouzy locks he laves, And hears the unerprestive, nuptial song, In the blest kingdoms, meek, of joy and love. Milton.

UNEXTEND'ED, adj. Occupying no assigna- ble space ; having no dimensions.

How inconceivable is it that a spiritual, i. e, an un- extended substance, should represent to the mind an ex- tended one, as a triangle ! Livke.

UNEXTIN'GUISHABLE, adj. Fr. inertin- guabt. Unquenchable ; not to be put out.

Pain of unextinguithuble firo Must exercise us, without hope of end. Miltim.

What native, unextinguithahte beauty, must be im- pressed through the whole, which the defoedation of so many parts by a bad printer, and a worse editor, could not hinder from shining forth ! Beniley.

UNEXTIN'GUISHED, adj. Lat. mextiactus. Not quenched ; not put out.

E'en o'er your cold, your ever sacred urn, His constant flame shall unertinguiified burn.

Lyttleton.

An ardent thirst of honour ; a soul unsatisfied with all it has done, and an unextinguished desire of doing more. Dryden.

UNFAD'ED, adj. Not withered.

For her the' unfading rose of Eden blooms. And wings of seraphs shed divine perfumes. Pope.

UNF

UN FAILING, adj. Certain ; not missing.

Nothing the united voice of all history proclaims so loud, as the certain, unfailing curse, that has pursued, and overtook sacrilege. South.

UNFA'IR, adj. Disingenuous; subdolous ; not honest.

You come, like an unfair merchant, to charge me with being- in your debt. bwift.

UNFAITH'FUL, adj. » Perfidious; treacher-

UNFAITH'FULLY, adv. £ous; impious : the ad-

UNFAITH'FULNESS, n. s. J verb and noun substan- tive agree in sense.

If you break one jot of your promise, I will think you the most atheistical break-promise, and the most unworthy, that may be chosen out of the gross band of the unfaithful. Shakspeare.

There is danger of being unfaithfully counselled ; and more for the good of them that counsel, than for him that is counselled. Bacon.

As the obscurity of what some writers deliver makes it very difficult to be understood ; so the unfaithfulness of too many others makes it unfit to be relied on.

Boyle.

UNFAL'LOWED, adj. Not fallowed.

The' unf allowed glebe Yearly o'ercomes the granaries with stores Of golden wheat. Philips.

UNFAMILIAR, adj. Unaccustomed; such as is not common.

The matters which we handle, seem, by reason of newness, dark, intricate, unfamiliar. Hooker.

Chaucer's uncouth, or rather unfamiliar language, deters many readers. Wartoni Spenser.

UNFASHIONABLE, adj.~\ Not modish ; not

UXFASH'IONED, adj. 'according to the

UKFASH'IONABLY, adv. i reigning custom :

*UNFASH'IONABLENESS, n. s. * unfashioned is, un- formed, imperfect : the adverb and noun substan- tive correspond with unfashionable.*

Deformed, unfinished, sent before my time Into this breathing world, scarce half made up ; And that so lamely and utifashionably, That dogs bark at me. Shakspeare. Richard III.

A lifeless lump, unfashioned and unframed, Of jarring seeds, and justly Chaos named. Dryden.

Natural iinfashionablenet is much better than apish, affected postures. Locke.*

A man writes good sense, but lie has not a happy maauer of expression. Perhaps he uses obsolete and unfashionable language. Watts's Logick.

UNFASTEN, v. a. To loose ; unfix.

He had no sooner unfastened his hold, but that a wave forcibly spoiled his weaker hand of hold. Sidney.

UNFATHERED, adj. Fatherless ; having no father.

They do observe 1'nfathtred heirs, and loathly births of nature.

Shakspeare.

UNFATHOMABLE, adj. { Not to be sound- UXFA'THOMABLY,

The Titan race He singed with lightning, rowl within the vnfathomtd

space. Dryden.

A thousand parts of our bodies may be diversified in all the dimensions of solid bodies ; which overwhelms the fancy in a new abyss of unfathomable number.

Bentley's Sermons.

Covered pits, unfathomably deep. Thornton.

UNFATIGUED', adj. Unwearied; untired.

Over dank, and dry,

They journey toilsome, unfatigued with length Of march. ” Philips.

UNFAVORABLY, adv. Unkindly; unpro- pitiously.

Bacon speaks not unfavourably of this. Clanville.

UNFEAR’ED, adj. Not affrighted ; not ter- rified. Not in use.

Just men,

Though heaven should speak with all his wrath at once, That with his breath the hinges of the world Did crack, we should stand upright and unf eared.

Ben, Jonton.

UNFEATHERED, adj. Implumous; naked of feathers.

The mother nightingale laments alone ; Whose nest some prying churl had found, and thence By stealth conveyed the’ unfeathered innocence.

Dryden.

UNFEATURED, adj. Deformed; wanting regularity of features.

Visage rough. Deformed, tmfeatured, and a skin of buff. Druden.

UNFED’, adj. Not supplied with food.

Each bone might through his body well be read. And every sinew seen, through his long fast ; For nought he cared, his carcass long unfed. Spenter.

A grisly foaming wolf, unfed, Met me unarmed, yet trembling fled. Roscommon.

UNFEED’, adj. Unpaid.

It is like the breath of an unfeed lawyer ; you gave me nothing for ‘t. Shaktpeare. King Lear.

UNFEELING, adj. Insensible; void of mental sensibility.

Dull, unfeeling, barren ignorance, Is made my gaoler to attend on me. Shakspeare.

Unlucky Welsted ! thy unfeeling master, The more thou ticklest, gripes his

fist the faster. Pope.

UNFEIGN'ED, adj. (Not counterfeited ; not

USFEIGN'EDLY, adv. J hypocritical; real; sin- cere : the adverb corresponding.

He pardoneth all them that truly repent, and un- feignediii believe his holy gospel. Common Prayer.

Prince dauphin, can you love this lady 1 — I love her most uiifeignedly. Shaktpeare.

Sorrow unfeigned, humiliation meek. Milton.

UN FELT, adj. Not felt ; not perceived.

All my treasury

Is but yet unfelt thanks, which, more enriched, Shall be your love and labour's recorapence. Shaksp.

Her looks, from that time, infused Sweetness into my heart, unfelt before Milton.

UNFENCED', adj. Naked of fortification.

I'd play incessantly upon these jades ; Even till unfeneed desolation Leave them as naked as the vulgar air. Shakspeare.

UNFERMENTED, adj. Not fermented.

All such vegetables must be nnfermented ; for fermen- tation changes their nature. Arbuthnot.

UNFERTILE, adj. Not fruitful; not pro- lifick.

Peace is not such a dry tree, such a sapless unfertile thing, but that it might fructify and increase.

Decay of Piety.

UNFETTER, v.a To unchain; to free from shackles.

I 'af utter me with speed : I see you troubled that I bleed. Dryden.

This most useful principle may be unfettered, and restored to its native

freedom of exercise. Adaison.

UNFIGURED, adj. Representing no animal form.

In unf, en red paintings the noblest is the imitation of marbles, and of architecture, as arches, freezes.

Wot Ion.

UNFIL'LED,

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Come not to table, but when thy need invites thec ; and, if thou beest in health, leave something of thy ap- petite unfilled. Taylor.

The throne of my forefathers Still stands unfilled. Addison't Cato.

UNFIL'IAL, adj. Unsuitable to a son.

You offer him a wrong, Something unfilial. Shakspeare.

Teach the people that to hope for heaven is a mer- cenary, legal, and therefore vnfiiiat, affection. Boi/fe.

UNFINISHED, adj. Incomplete ; not brought to an end ; imperfect.

It is for that such outward ornament Was lavished on their sex, that inward gifts Were left for haste unfinished. Milton.

I did dedicate to you a very unfinished piece.

Dr tjden.

UNFIRM', <«$. Weak; feeble. Obsolete.

Our fancies are more giddy and uiifirm Than women's are. Sfutkspeare. Twelfth Night.

Take the time, while staggering yet they stand, With feet unjirm, and prepossess the strand. Dryden.

UNFIT', adj. &v.a.-\ Improper; unsuitable:

UNFIT'LY, adv. (which unfitting also means:

UNFIT'NESS, n. s. (the verb active means to

UNFIT'TIXG, adj. ˆ disqualify : unfitly and un- fitness correspond.

Unfit he was for any worldly thing, And eke unable once to stir or go. Sjienser.

Others, reading to the church those books which the apostles wrote, are neither untruly nor unfitly said to preach. Hooker.

In setting down the form of common prayer, there was no need that the book should mention either the learning of a fit, or the unjitiiess of an ignorant minister.

Id.

Although monosyllables, so rife in our tongue, are unfit ing for verses, yet are they most fit for expressing briefly the first conceits of the mind. Camden.

A genius that can hardly take in the connection of three propositions, is utterly unfit for speculative stu- dies. Watti.

UNFIX', v. a. To loosen ; make less fast.

Who can impress the forest, bid the tree Unfit his earth-bound root? Shakspeare.

Stiff with eternal ice, and hid in snow, The mountain stands ; nor can the rising sun Unfix her frosts, and teach them how to run. Dryden.

Her lovely looks a sprightly mind disclose, Quick as her eyes, and as unfixed as those. Pope.

UWPLEDGEiy, adj. that has not yet the full furniture of feathers ; young.

The friends thou hast, and their adoption tried, Grapple them to thy soul with hooks of steel : But do not dull thy palm with entertainment Of each new-hatched, wijkilged comrade. Shahtpeare.

Unfledged actors learn to laugh and cry. Dryden.

UNFLESH'ED, adj. Not fleshed ; not seasoned to blood ; raw.

Nature his limbs only for war made fit ; With some less foe thy unjleihed

valour try. Cowley.

As a generous unfleshed hound, that hears From far the hunter's horn and chearful cry, So will I haste. Druden't Cleomenet.

UNFOIL'ED, adj. Unsubdued ; not put to the worst.

The usurped powers thought themselves secure in the strength of an unfoiled army of twenty thousand men, and in a revenue proportionable. Temple.

UNFOLD, v. a. To expand ; spread ; open ; tell ; declare ; discover.*

Unfold the passion of my love ; Surprize hur with discourse of my dear faith. Shah.

Ship and men unfold That to this isle convaid you. Chapman.

1 saw on him rising

Out of the water, heaven above the clouds I ' n fold her crystal doors ; thence on his head A perfect dove descend. Milton.

VX'e are the inhabitants of the earth, and endowed with understanding ; doth it then properly belong to us, to examine and unfold the works of God ?

Burnet.

UN FOOL', v. a. To restore from folly.

Have you any way to unfool me again 1 Shakspeare.

UNFORBID', adj. ˆ Not prohibited :

I MORBID'DEN, > state of not being

UNFORBIO'DENNESS, n. s.J prohibited.

If unforbid thou mayest unfold What we, not to explore the secrets, ask Of his eternal empire. Milton's Paradise Lost.

The bravery you are so severe to is no where ex- pressly prohibited in scripture ; and this unforhiddcn- ness they think sufficient to evince that the sumptu- ousness you condemn is not in its own nature sinful.

Boyle.

A good man not only forbears those gratifications which are forbidden by reason and religion, but even restrains himself in unforbidden instances. Atterbury.

UNFORCED', adj. } Not compelled ; not

UNIOU'CIBLE. ' J constrained ; not accom- plished by force : unforcible is wanting strength or force.

The same reason which causeth to yield that they are of some force in the one, will constrain to acknow- ledge that they are not in the other altogether unforci- °k- Hooker.

This gentle and unforced accord of Hamlet Sits smiling to my heart. Shakspeare. Hamlet.

No more can impure man retain and move In that pure region of a worthy love, Than earthly substance can, unforced, aspire, And leave his nature, to conveise with fire. Donne.

UNFOREBOD'ING, adj. Giving no omens. Unnumbered birds glide through the aerial way, Vagrants of air, and unforeboding stray. I'ope.

UN FOREKNOWN', adj. Not foreseen by prescience.

It had no less proved certain, unforeknown. Milton.

UNFORESEEN', adj. Not known before it happened.

Unforeseen, they say, is unprepared. Dryden.

UNFORE'SKINNED, udj. Circumcised.

Won by a Philistine from the unforeskinned race.

Milton.

UNFOR'FEITED, adj. Not forfeited.

This was the ancient, and is yet the unforfeited glory of our religion. Roger't Sermmm.

UNFORGIVING, adj. Relentless; implaca- ble.

The sow with her broad snout for rooting up The intrusted seed, was judged to spoil the crop ; The covetous churl, of unforgiving kind, The offender to the bloody priest resigned. Dryden.

UNFOH(i< >TTEN, adj. Not lost to memory.

The thankful remembrance of so great a benefit re- ceived, shall for ever remain unfoiyotten. Knollei.

UNFORM'ED, adj. Not modified into regular shape.

All putrefaction, being a dissolution of the first form, is a mere confusion, and unformed mixture of the parts.

Bacon.

The same boldness discovers itself in the several ad- ventures he meets with during his passage through the regions of unformed matter. Spectator.

UNFORSA'KEN, adj. Not deserted.

They extend no farther to any sort of sins continued

in or unforiaken, than as they are reconcileable with sincere endeavours to forsake them.

Hammond's Fundamentals.

UNFORTIFIED, adj. Not secured by walls or bulwarks.

It shews a will most incorrect to heaven ; A heart unfortified, a mind impatient ; An understanding simple, and unschooled. Shaktp.

Their weak heads, like towns unfortified, 'Twixt sense and nonsense daily change their side.

Pope.

UNFORTUNATE, adj. } Not successful ; un-

UNFOR'TUXATELY, adv. > prosperous; wanting

UNFOR'TUJJATEXESS, n- s.j luck; unhappy: the adverb and noun substantive corresponding.

Unconsulting affection unfortunately born to rae- wards, made Zelmane

borrow so much of her natural modesty, as to leave her more decent raiments.

Sidney.

O me, the only subject of the destinies displeasure, whose greatest fortunateness is more unfortunate than my sister's greatest unfortumiteness. Id.

Vindictive persons live the life of witches, who, as they are mischievous, end unfortunate. Bacon.

She kept her countenance when the lid, removed, Disclosed the heart unfortunately loved. Dry den.

UNFOUGHT, adj. Un and fought. Not fought.

They used such diligence in taking the passages, that it was not possible they should escape unfought with. Knotlet.

UNFOUL'ED, adj. Unpolluted; uncorrupted ; not soiled.

The humour and tunicles are purely transparent, to let in light unfouled and unsophisticated by any tinc- ture. More.

UNFOUNEK, adj. Not found ; not met with.

Somewhat in her excelling all her kind, Kxcited a desire till then unknown ; Somewhat unfound or found in her alone. Dryden.

UNFRAM'ABLE, adj. Not to be moulded. Not used.

The cause of their disposition so unframable unto societies, wherein they live, is for that they discern not ai ight what force these laws ought to have.

Hooker.

UNFRAMED', adj. Not formed ; not fashiou- ed.

A lifeless lump, unfashioned, and unframed, Of jarring seeds, and justly chaos named. Dryden.

INFRE'QUENT, adj. } Uncommon ; not

UNFREQUENT'ED, > happening often ;

UNFRE'QUENTLY, adv.) rarely visited : the adverb follows the sense of

unfrequent. Many unfrequented plots there are, Fitted by kind for rape and villainy. Shaktpeare.

They, like Judas, desire death, and not unfrequently pursue it. Brou-ne't Vulgar Erroun.

How well your cool and unfrequented shade Suits with the chaste retirements of a maid !

Roscomnwn.

With what caution does the hen provide herself a nest in places unfrequented, and free from noise !

Addison.

UNFRIEND'ED, adj. } Wanting friends;

UNFRIEXD'EDLY, adv. > uncountenanced ; un-

UNFRIEND'LIKESS, n. s. J supported : unfriendly is unkindly ; not like a friend : and the noun sub- stantive corresponds.

These parts to a stranger, Unguided and unfriended, often prove Rough and unhospitable. Sttukspeare. Twelfth ffight.

You might be apt to look upon such disappointments

as the effects of an unfriendlinett in nature or fortune to your particular attempt. Route.

This fear is not that servile dread, which flies from God as an hostile unfriendly being, delighting in the misery of his creatures. Rogers.

UNFRO'ZEN, adj. Not congealed to ice.

Though the more aqueous part will, by the loss o(their motion, be turned into ice, yet the more subtile parts remain unfrozen. Boyle.

UNFRUITFUL, adj. Not prolific; not fer- tile.

Lay down some general rules for the knowing ol fruitful and unfruitful soils. Mortimer's Husbandry.

Ah ! hopeless, lasting flames ! like those that burn To light the dead, and warm the unfruitful urn.

Pope.

UNFULFILLED, adj. Not fulfilled.

Fierce desire, Still unfulfilled with pain of longing, pines. Milton.

UNFURL', v. a. To expand ; unfold; open.

The next motion is that of unfurling the fan, in which are several little flirts and vibrations. Addison.

Her ships anchored, and her sails unfurled In either Indies. Prior

UNFUR'NISH, v.a. To deprive ; to strip; to divest ; leave naked.

Thy speeches

Will bring me to consider that which may Cnfnmish me of reason. Shaktpeare.

It derogates not more from the goodness of God, that he has given us minds unfumithed with those ideas of himself, than that he hath sent us into the world with bodies unclothed. Locke.

I live in the corner of a vast unfurnished house.

Swift.

UNGAIN', adj. > Saxon, unjenj. Awkward ; UNGAIN'LY. } uncouth.

An ungainly strut in their walk. Swift.

UNGALL'ED, adj. Unhurt; unwounded. Let the stricken deer go weep,

The hart ungalled play ; For some must watch, while some must sleep ;

So runs the world away. Shaktpeare. Hamlet. UNGARTERED, adj. Being without garters. You chid at Sir Protheus for going ungartered.

Shakspeare.

UNGATHERED, adj. Not cropped; not picked .

We wondered why she kept her fruit so long : For whom so late the ungathered apples hung. Dryden. UNGEN'ERATED, adj. Unbegotten; having no beginning.

Millions of souls must have been ungenerated, and have had no being.

Raleigh.

UNGEN'ERATIVE, adj. Begetting nothing. He is a motion ungenerative, that 's infallible.

Shaktpeare.

UNGEN'EROUS, adj. Not noble ; not inge- nuous ; not liberal.

The victor never will impose on Cato Ungenerou terms. His enemies confess The virtues of humanity ate Caesar's. Add.ton.*

To look into letters already opened or dropped is held an ungenerous act. Pope.

I NGE'NIAL, adj. Not kind or favorable to nature.

The northern shires have a more cloudy ungenial air than any part of Ireland. Su-ift to Pope.

Sullen seas that wash the ungenial pole. Thomson.

UNGENTLE, adj. j Harsh; rugged: tl e

UNGEK'ILY, adv. J adverb and noun sub-

I NGF.N'TLENESS, n. s. J slanlive correspond.

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Reward not thy sheepe. when ye take off his cote, With twitches and patches as broad as a groat : Let not such ungeitttenets happen to thine. Tiiffer. Why speaks my father so nn gently . Shakspeaie.

He is Vicious, ungentle, foolishly blunt, unkind. Id.

Love, to thee I sacrifice All my ungentle thoughts. Denham's Sophy.

UNGENTLEMANLY, adj. Illiberal ; not be- coming a gentleman.

The demeanor of those under Waller was much more ungentiemanly and barbarous. Clarendon.

This he contradicts in the almanack published for the present year, and in

an ungentlemanly manner. Swift.

UNGER (John Frederick), secretary to the duke of Brunswick, was born in 1716, and died at Brunswick in 1781. He published a tract On the Nature of the Electric Fluid, which was crowned by the Academy of Sciences at Berlin in 1745 ; and a work On the Price of Corn, on its Sale, on its Variations, and on the influence which it has on the most important Affairs of Human Life, Gottin- gen, 1752. linger invented in 1749 a self-acting machine for noting down any tune as it is played on the harpsichord ; and an artist of Berlin exe- cuted this piece of mechanism, of which a description was inserted in the Memoirs of the Academy of Berlin for 1771 . The author himself published at Brunswick, in 1774, a Circumstantial Description of his Invention, and of the Manner in which he discovered it, 4to.

UNG EOM ETHICAL, adj. Not agreeable to the laws of geometry.

All the attempts before Sir Isaac Newton, to explain the regular appearances of nature, were ungeometrical, and all of them inconsistent and unintelligible.

Cheyne.

UNGHVAR, a palatinate in the north-east of Hungary, adjacent to Poland, and bounded on the west and south by the palatinate of Semplin. It is watered by the rivers Ungh, Laborza, and La- torza, and in the north contains a portion of the Caryathian mountains, called Beszked. Its area is 1270 square miles; its population about 80,000. The capital oF the same name stands on the Ungh, and contains about 5000 inhabitants.

UNGILD'ED, ad), Not overlaid with gold.

You, who each day can theatres behold, Like Nero's palace, shining all with gold, Our mean utigiUled stage will scorn. Dryden.

UNGIRD', v. a. To loose any thing bound with a girdle.

The man ungirded his camels, and gave them straw and provender. Genesis, xxix. 32.

One tender foot was bare, the other shod ;

Her robe ungirt. Waller.

UNGIV'ING, adj. Not bringing gifts.

In vain at shrines the' ungiving suppliant stands ; This 'tis to make a vow

with empty hands. Dryden.

UNGLO'RIFIED, adj. Not honored; not ex- altt-d with praise and adoration.

Lest God should be any way unglorified , the greatest

Cart of our daily service consisteth, according to the I- ' 'I apostle's own precise rule, in much variety of psalms and hymns. Hooker.

UNGLOVKI), adj. Having the hand naked.

When we were come near to his chair, he stood up, holding forth his hand ungloved, and in posture of bles- sing- Bacon.

UNGLUE', r. a. To loose any thing cemented.

Small rains relax and unyltte the earth, to give vent to inflamed htomi. Jlan-fy on the Plague.

She stretches, gapes, unglues her eyes, And asks if it be time to rise. Swift.

UNGOD', v. a. \ To divest of divinity : UNGOD'LY, adj. ˆ ungodly is wicked ; averse UNGOD'LILY, adv. I from God and his 'aws: UUGOD'HXESS, n. s. J the adverb and noun sub stantive corresponding.

\Vere we awakened by this tyranny, T' ungod this child again, it could not be 1 should love her, who loves not me. Donne.

His just, avenging ire Had driven out the vngmllii from his sight. And the habitations of the just. Milton.

How grossly do many of us contradict the plain pre- cepts of the gospel by our ungodliness and worldly lusts ! Tillotson.

Thus men ungodded may to places rise, And sects may be preferred without disguise. Dryden.

UNGOR'ED, adj. Unwounded ; unhurt.

1 stand aloof, and will no reconcilement ; 'Till, by some elder musters of known honour, 1 have a voice and precedent of peace, To keep my name ungored. Shakspeare. Hamlet.

UNGORG'ED, adj. Not filled ; not sated.

The hell-hounds, as ungorged with flesh and blood, 1'ursue their prey.

Dryden.

UNGOT', adj. Not gained ; not acquired ; not begotten.

His loins yet full of ungot princes ; all His glory in the bud. Waller.

UNGOV'ERNED, adj. i Being without go-

UNGOV'ERNABLE.] vernment; unre-

strained ; licentious : not to be ruled ; wild.

The estate is yet wigoverned. Shaksp.

Themselves they vilified To serve ungoverned appetite. Milton.

He was free from any rough, ungovernable passions, which hurry men on to say and do very offensive things.

Atterbury.

UNGRACE'FUL, adj. } Wanting elegance or

UNGRACE'FULNES3,n.«. > beauty : the noun sub-

UNGRA'CJOUS, adj. J stantive corresponds : ungracious is, offensive ; unpieasing ; hence hate- ful ; wicked ; odious.

He, catching hold of her ungracious tongue, Thereon an iron lock did fasten firm and strong.

Spenser.

They did not except against the persons of any, though several were most ungracious to them.

Clarendon.

Raphael answered heaven, Nor are thy lips ungraceful, sire of men. Milton.

To the gods alone

Our future offspring, and our wives are known : The audacious strumpet and ungracious son. Dryden.

To attempt the putting another genius upon him, will be labour in vain ; and what is so plaistered on will have always hanging to it an ungracefulneis of con- straint. Locke.

UNGRANTED, adj. Not given ; not yielded ; not bestowed.

This only from your goodness let me gain, And this ungranted, all rewards are vain. Dryden.

UNGRATE'FUL, adj. \ Making no returns,

rx(;RATF/FULLY, advl f or making ill returns

UNGRATEFULNESS, n. s. Jfor kindness: the ad- verb and noun substantive corresponding.

Can I, without the detestable stain of ungratefulness abstain from loving him, who, far exceeding the beau- tifuliiess of his shape with the beautifulness of hi» mind, is rontent so to abase himself as to become Da- jnetas's servant for my sake 1 Sidney.

Most when driven by winds, the flaming storm

Nor will the withered stock be green again ; Bit the wild olive shoots, and shades the' ungrateful plain. Dryden.

We often receive the benefit of our prayers when yet we ungratefully charge heaven with denying our petitions. Wake.

UNGRAVE'LY, adv. Without seriousness.

His present portance Gibingly, and ungravetti, he did fashion. Shalt^irare.

UNGROUND'ED, adj. Having no founda- tion.

Ignorance, with an indifferency for truth, is nearer to it than opinion with ungrounded inclination, which is the great source of errour. Locke.

UNGRUDGINGLY, adv. Without ill-will; willingly; heartily; cheerfully.

If, when all his art and time is spent, He say 'twill ne'er b$ found, yet be content ! Eeceive from him the doom ungrudgingly, Because he is the mouth of destiny. Donne.

UNGUARD'ED, adj. Undefended; careless; negligent.

All the evils that proceed from an untied tongue, and an unguarded, unlimited will, we put upon the accounts of drunkenness. Tntil< >r.

Proud, art thou met? Thy hope was to have

reached

The throne of God unguarded, and his side Abandoned. Miltun's Paradise Lost.

It was intended only to divert a few young ladies, of good sense and good humour enough to laugh not only at their sex's little unguarded follies, but at their own. Pope.

UN'GUENT, »i. s. Lat. unguentum. Oint- ment.

Pre-occupation of mind ever requireth preface of speech, like a fomentation to make the unguent enter.

Baron. With unguents smooth the lucid marble shone. Pope.

UNGUESS'ED, adj. Not attained by conjec- ture.

He me sent, for cause to me unguessed. Spenser.

UNGUID'ED, adj. Not directed ; not regu- lated.

They resolve all into the accidental, tinguided mo- tions of blind matter. Locke.

UNHAB'ITABLE, adj. Fr. inhabitable; Lat. nhabitabllis. Not capable to support inhabitants ; uninhabitable.

Though the course of the sun be curbed between the i opicks, yet are not those parts directly subject to his jierpendicular beams unhabitable, or extremely hot.

Ray.

UNIIACK'ED, adj. Not cut; not hewn; not notched.

With a blessed and unvexed retire, W:ith unbacked swords, and helmets all unbruised, We will bear home that lusty blood again. Shah.

UNHAL'LOW, v. a. } To deprive of holi-

UNHAL LOWED, adj. I ness ; profane; dese- crate : unholy ; profane.

Perhaps the fact

Is not so heinous now, foi etas ted fruit, Profaned first by the serpent, by him first, Made common, and unhallou-ed, ere our taste. Milton.

Nor shall presume to violate these bands, Or touch thy person with iinhalltneed hands. J)riide>i.

The vanity unhallows the virtue. L'Kstrange.

UNHAND', v. a. > To loose from the hand :

UNHAND'LED, adj. S not handled ; not touched.

Flill am I called. Unhand me, gentlemen. Shak.

A race of youthful and unhandled colts, Fe'rliing mad bounds. Id. Merchant of Venice.

L'uhaitd a»en, traitors. Denharn's Sojihy.

UNHAND'SOME, «

UUHAND'SOMELY, adv. > beautiful; disingenu-

UNHAND'SOMEKESS, n. s. j ous : the adverb and noun substantive corresponding.

1 was glad I had done so good a deed for a gentle- woman not unhandsome, whom before I had in like sort helped. Sidney.

The ruined churches are so unhandsomely patched and thatched, that men do even shun the places for the uncomeliness thereof. Sinter.

Be not troublesome to thyself, or to others, by un- lumdsomentss or uncleanness. Taylor.

UNHANG'ED, adj. Not put to death by the gallows.

There live not three good men unhanged in England.

Shakspeare.

UNHAP, n. s. Misluck ; ill fortune.

She visited that place, where first she was so happy as to see the cause of her unhap. • Kidney.'

UNHAP'PIED. This word seems a participle from unbappy, which yet is never used as a verb Made unhappy.

You have misled a prince, A happy gentleman in blood and lineament. By you unhappied, and disfigured clean. Shakspeare.

UNHAP PINESS, o.s.-j Misery; infelicity;

UNHAP'PILY, adv. > misfortune; mischie-

UNHAP'PY, adj.) vous trick : the deriva-

tives correspond.

You hold a fair assembly ; you do well, lord, You are a churchman, or I'll tell you, cardinal, 1 should judge now most unhappily. Shakspeare.

She hath often dreamed of unhappinett, and waked herself with laughing. Id.

1 unweeting have offended, Unhappily deceived. Milton '> Paradise Loit.

Desire of wandering this unhappy morn. Milton.

The real foundation of our unhappiness would be laid in our reason, and we should be more miserable than the beasts, by how much we have a quieter apprehen- sion. Tillotton.

UNHAR'BOURED, adj. Affording no shelter.

Tis chastity :

She that has that is clad in compleat steel ; And, like a quivered nymph, with arrows keen, May trace huge forests, and unharboured heaths. Infamous hills, and sandy perilous wilds. Milton.

UNHAR'DENED, adj. I Not confirmed or

UNHAR'DY.] made hard ; feeble :

tender; timorous.

Messengers Of strong prevailment in unhardened youth. Shakspeare.

The wisest, unexperienced, will be ever Timorous and loth, with novice modesty; Irresolute, unhardv, unadventurous. Milton.

UNHARM/ED, adj. \ Unhurt; not injured :

UNHARM'FUL. \ innoxious ; innocent.

Themselves uuharmful, let them live unharmed Their jaws disabled, and their claws disarmed. Druil.

Though great light be insufferable to our eyes, yet the highest degree of darkness does not disease them ; for, causing no disorderly motion, it leaves that curious or- gan tin/iarmed. Locke.

UNHARMO'NIOUS, adj. Not symmetrical; disproportionate.

Those pure, immortal elements, that know No gross, no unhtirmoniniis mixture foul, Eject him, tainted now, and purge him off. Milton.

His thoughts are improper to his subject, his expres- sions unworthy of his thoughts, or the turn of both is unharmonioiis. Druden.

UNHAR'NESS, v. a. To loose from traces.

The sweating steers unharnessed from the yoke, Bring back the crooked plough. Dryden.

UNHATCH'ED, adj. Not disclosed from the eggs ; not brought to light.

Some unhatched practice Hath puddled his clear spirit. Shakspeare.

UNHAZ'ARDED, adj. Not adventured ; not put in danger.

Here I should still enjoy thee day and night, Whole to myself, unhazarded abroad, Fearless at home. Mi/ion' Agonistes.*

UNHEALTHFUL, adj. } Sickly; wanting

UNHEAL'THY. } health.

The diseases which make years unhealthful, are spotted fevers, and the unhealthful season is the autumn.

Graunt.

No body would have a child crammed at breakfast, who would not have him dull and unhealthy. Locke.

UNHEARD', adj. Not perceived by the ear ; unknown ; taking of as a preposition.

For the noise of drums and timbrels loud, Their children's cries unheard. Milton.

What pangs I feel, unpitied and unheard! Dryden.

Free from hopes or fears, in humble ease, Unheard of may I live, and die in peace ! Granville.

UN HEART', v.a. To discourage ; depress.

To bite his lip, And hum at good Cominius, much unhearts me.

Shakspeare.

UNHEATED, adj. Not made hot. Neither salts, nor the distilled spirits of them, can penetrate the narrow pores of unheated glass. Boyle.

UNHEED'ED, adj.-\ Disregarded; not thought

UNHEED'FUL, ˆworthy of notice; escaping

UNHEED'ING, i notice : unheedful is not

UNHEED'Y. 'cautious; negligent; pre-

cipitate : the meaning also of the other adjectives.

Nor hath love's mind of any judgment taste : Wings, and no eyes, figure unheedy haste. Shaksp.

He of his fatal guile gave proof unheeded. Milton.

I have not often seen him ; if I did, He passed unmarked by my unheeding eyes. Dryden.

The triumph ceased — tears gushed from every eye, The world's great victor passed unheeded by. Pope.

UNHELFED,ad;. } Unassisted; having no

UNHELP'FOL. $ auxiliary; unsupported:

affording no support.

I bewail good Glo'ster's case With sad, unhelpful tears. Shahspeare. Henry VII.

Unhelped I am, who pitied the distressed, And, none oppressing, am by all oppressed. Dryden.

UNHEWN', part. adj. Not hewn.

In occasions of merriment, this rough-cast, unhewn poetry, was instead of stage-plays. Dryden.

UNHINGE', v. a. To throw from the hinges; displace by violence.

Rather than not accomplish my revenge, , Just or unjust, I would the world unhinge. Waller.

For want of cement, ribs of rock, disjoined Without an earthquake, from, their base would start, And hills unhinged from their deep roots depart.

Blachmort.

UNHO'LY, adj. (Profane ; not hallowed :

UNHO'LI NESS, w.s. I the noun substantive corres- ponding.

Dotir it follow that all things now in the church are tm/io/i/ which the Lord hath not himself precisely insti- tuted? Hooker.

Too foul and manifest was the unholineu of obtruding upon men remission of sins for money. Kaleigh.

UNHON'ORED, adj. Not regarded with vene- ration ; not celebrated.

Pales unhonoured, Ceres unemployed, Were all forgot. Dryden.

Grieved that a visitant so long should wait Unmarked, unhonoured, at a monarch's gate. Po/v.

UNHOOP', v. a. To divest of hoops.

Unhoap the fair sex, and cure this fashionable tym- pany got among them. Addison.

UNHOPED', adj.) Not expected ; greater than

UNHOPED' FOR, >hope had promised: such as

UNHOPE'FUL. j leaves no room for hope.

Benedict is not the unhopefullest husband that I know : thus far I can praise him ; he is of approved valor. Shakspeare.

I thought the rousing style I wrote in might prove no unhopeful way to procure somewhat considerable from those great masters of chymical arcana. Bnule.

Heaven has inspired me with a sudden thought, Whence your unhoped for safety may be wrought.

Dryden.

UNHORSE', v. a. To beat from a horse ; throw from the saddle.

The emperor rescued a noble gentleman, whom, un- hnrted and sore wounded, the enemy was ready to have slain. Knolles.

On a fourth he flies, and him unhorses too. Daniel.

UNHOS'PITABLE, adj. Lat. inhospitalis. Af- fording no kindness or entertainment to strangers; cruel ; barbarous.

The cruel nation, covetous of prey, Stained with my blood the' unhospitable coast. Dryd.

UNHOS'TILE, adj. Not belonging to an enemy.

The high-prancing steeds Spurn their dismounted riders ; they expire Indignant, by unhostile wounds destroyed. Philips.

.UNHOUSE', v. a. To drive from habitation.

Call the creatures,

Whose naked natures live in all the spight Of wreakful heaven ; whose bare, unhoused trunks, To the conflicting elements exposed, Answer mere nature. Shakspeare. Timon.

Death unawares, with his cold, kind embrace, Unhoused the virgin soul from her fair biding place.

Milton.

UNHOU'SELLED, adj. Having not the sacra- ment.

Thus was I sleeping, by a brother's hand, Of life, of crown, of queen, at once dispatched ; Cut off even in the blossoms of my sin, Unhoutelled, unanointed, unanelled. Shakspeare.

UNHUM'BLED, adj. Not humbled; not touched with shame or confusion.

Should I of these the liberty regard, Who freed, as to their ancient patrimony, Uiihiimhled, unrepented, unrefortned, Headlong would tollow ? Milton.

UNHURT, adj. } Free from harm: in-

UNHURT'FUL, £ noxious; harmless: the

UNHURT'FULLY,arft;. J adverb corresponding.

You hope the duke will return no more, or you ima- gine me too unhurtful an opposite. Stmkfpeare.

Of fifteen hundred, eight hundred were slain in the field •, and, of the remaining seven hundred, two men only came off unhurt. liacon's War with Spain.

Flames unhurtful, hovering, dance in air. Blackmore.

We laugh at others as innocently and as unhurtfully as at ourselves. Pope to Swift.

U'N ICORN, n t. Lat. untcornu, units and cornu. A beast, or bird, real or fabulous, that has only one horn.

\Vi-rt thou the unicorn, pride and wrath would con- found thee. Shakspeare. Timon.

Some uniatrns we will allow even among insects, as those nasicornous beetles described by MufFetus.

- *Brovne.*

Of the unicorn bird, the principal marks are thise ; headed and footed like the dunghill cock, tailed like a

UNI

goose, horned on his forehead, with some likeness :w the unicorn is pictured ; spurred on his wings, bigger than t swan. (ireu-.

The UNICORN is thought to be the same with the rhinoceros. See RHINOCEROS. Sparmann informs us that the figure of the unicorn described by the ancients has been found delineated by the Snese Hottentots on the plain surface of a rock in Caf- fraria ; and therefore conjectures that such an ani- mal either does exist at present in the internal parts of Africa, or at least once did so. Father , Lobo affirms that he has seen it. UNICORN FISH. See MONODON.

UNIMPORTANT, adj. Not momentous ; not pompous or assuming.

A free, unimportant, natural, easy manner ; diverting others just as we diverted ourselves. Pope to Swift.

UN'IMPORTUNED, adj. Not solicited; not teased to compliance.

Who ever ran

To danger nnimportuned, he was then No better than a sanguine, virtuous man. Donne.

UNIMPROVED, adj. I Not made better

UNIMPROV'ABLENESS, n. s. $ or more knowing : state of being unimproved.

Young Fortinbras,

U'NIFORM, adj. \ Lat. units and forma. Of unimproved mettle hot and full. Shaktpeare.

UNIFOR'MITY, n.s. £ Keeping its tenor; similar This must be imputed to their ignorance and unim- U'NIFORMLY, adv.) to itself; conformable to one provableneu in knowledge, being generally without lite-

rule: the noun substantive and adverb correspond.

The only doubt is about the manner of their unity, how far churches are bound to be uniform in their cere- monies, and what way they ought to take for that pur- pose. Hooker.

Queen Elizabeth was remarkable for that steadiness and uniformity which ran through all her actions.

Addison.

The capillamenta of the nerves are each of them solid and uniform •, and the vibrating motion of the aethereal medium may be propagated along them from one end to the other uniformly, and without interruption.

Newton's Opticks.

UNIFORMITY, regularity, a similitude or resem- blance between the parts of a whole. Such is that we meet with in figures of many sides, and angles respectively equal, and answerable to each other. A late ingenious author makes beauty to consist in uniformity, joined or combined with variety. Where the uniformity is equal, in two objects, the

rature. Hammond.

Shallow, unimproved intellects are confident preten— ders to certainty. Glanville.

UNINCREAS'ABLE, adj. Admitting no in- crease.

That love, which ought to be appropriated to God, results chiefly from an altogether, or almost vnincreai- abie elevation and vastness of affection. Boyle.

UNINDIFTERENT, adj. Partial; leaning to a side.

His opinion touching the catholick church was as tmindifferent, as, touching our church, the opinion of them that favour this pretended reformation is.

Hooker.

UNINDUSTRIOUS, adj. Not diligent; not laborious.

Pride we cannot think so sluttish or uninduttrious an agent, as not to find out expedients for its purpose.

Deem) of Piety.

UNINFLAM'ED, adj. Not set on fire.

When weak bodies come to be inflamed, they gather

beauty, he contends, is as the variety ; and, where a much greater heat than others have unwjiamed. the variety is equal, the beauty is as the uniformity.

UNIFORMITY is particularly used for one and the same form of pul'lic prayers, and administration of sacraments and other rites, &c., of the church of England, prescribed by the famous stat. 1, Eliz. and 13 and 14, Car. II. cap. 4, called the Act of Uniformity. See LITURGY.

UNIGENITUS. See JANSENISTS.

UNIMAG'INABLE,a$.) Not to be imagined

UNIMAG'INABLY, adv. S by the fancy; not to be conceived : the adverb corresponds.

Things to their thought So unimaginable, as hate in heaven. Milton.

Little commissures, where they adhere, may not be porous enough to be pervious to the unimaginably subtle corpuscles that make up the beams of light. Boyle.

UNIM'ITABLE, adj. Fr. inimitable; Lat. in- imitabilis. Not to be imitated.

Both these are nnimi table. Burnet.

UNIJNIMOR'TAL, adj. Not immortal ; mortal.

They betook them several ways, Both to destroy, or unimmortal make All kinds. Milton.

UNIMPAIR'ABLE, adj. \ Not liable to waste UNIMPAIRED. J or diminution : not

wasted.

Bacon.

The uninflammable spirit of iuch concretes may be pretended to be but a mixture of phlegm and salt.

Boyle.

UNINFORM'ED, adj Untaught; unin- structed.

No uninformed minds can represent virtue so noble to us, that we necessarily add splendour to her. Pupr.

UNINGEN'UOUS, adj. Illiberal; disinge- nuous.

Did men know how to distinguish between reports and certainties, this

stratagem would be as unskilful as it is uningenuous. Decay of Pietu.

UNINHABITABLE, adj.) Unfit to be in

UNINHAB'ITABLENESS, n. s. > habited : state of

UNINHAB'ITED, adj. J being so: not in-

habited.

The whole island is now uninhabited. Sandy.*

Divers radicated opinions, such as that of the MHI'M- habitablenest of the torrid zone, of the solidity of the celestial part of the world, are generally grown out of request. Boyle.

UNINSURED, adj. Unhurt; suffering" no harm.

Then in full age, and hoary holiness, Retire, great teacher ! to thy promised bliss , Untouched thy tomb, uninjured be thy dust.

If the superior be unimpairable, it is a strong pre- As thy own fame among the future just ! Prior.

sumption that the inferiors are likewise unimpaired.

Hukeirill.

If our silver and gold diminishes, our public credit Obscure the place, and unintcribed the stone, continues unimpaired. Addiion. Oh fact accurst '

UNIMPLOR'ED, adj. Not solicited.

If answerable stile I can obtain Of my celestial patroness, who deigns Her nightly visitation iinimplitred. Milton,

UNINSCRIB'ED, adj. Having no inscription. Make sacred Charles's tomb for ever known ;

P'l.*

UNINSPIR'ED, adj. Not having received "su- pernatural instruction or illumination.

Thus all the truths that men, uniiupired, are enlight- ened with, came into their minds. L< >cAe.

UNINSTRUCTED, adj. » Not taught ; not

UNINSTRUC'TIVE. > helped by instruc-

tion: not conferring instruction.

That fool intrudes, raw in this great affair, And uttinst meted how to stem the tide. Dryden.

Were not men of abilities thus communicative, their wisdom would be in a great measure useless, and their experience uninttructire. Addison.

IJN INTELLIGENT, adj. Not knowing; not skilful ; not having any consciousness.

We will give you sleepy drinks, that your senses may be unintelligent of your insufficience. Shaktpeare.

The obvious products of unintelligent nature.

Bentlev.

UNINTELLIGIBLE, adj. \ Not such as can

UNINTELLIGIBLY, adv. > be understood : in

UNINTELLIGIBIL'ITY, n.s. j a manner not to be understood : quality of not being understood.

Credit the unintelligibility of this union and motion.

Glanmlle.

Sound is not unintelligibly explained by a vibrating motion communicated to the medium. Locke.

UNINTENTIONAL, adj. Not designed ; hap- pening without design.

Besides the unintentional deficiencies of my style. I have purposely transgressed the laws of oratory, in making my periods over-long. Boyle.

UNINTERESTED, adj. > Not having in-

UNIX'TERESSED. J terest.

The greatest part of an audience is always uninter- ftsed, though seldom knowing. Dryden.

UNINTERM1TTED, adj. Continued; not interrupted.

This motion of the heavenly bodies seems to be partly continued and tin intermitted, as that motion of the first moveable partly interpolated and interrupted. Hate's Origin of Mankind.

UNINTERMIX'ED, adj. Not mingled.

l.'nintermired with fictious fantasies, I verify the truth, not poetize. Daniel.

UNINTERRUPTED, adj.) Not broken ; not

UNINTERRUPTEDLY, adv. { interrupted.

Thy constant quiet fills my peaceful breast With uninixt joy, uninterrupted rest. Koscommon.

A successive augmentation uninterruptedly conti- nued, iu an actual existence of believing, and congre- gations in all ages unto the end of the world. Pearnm.

UNINTRENCII'ED, adj. Not intrenched.

It had been cowardice in the Trojans, not to have attempted any thing against an army that lay unfor- tified and itnintrenched. Pope

UNINVESTIGABLE, adj. Not to be searched out.

The number of the works of this visible world, being itniiifestigable by us. afford us a demonstrative proof of the unlimited extent of the Creator's skill. Ray.

I N 1 N VITED, adj. Not asked.

His honest friends, at thirsty hour of dusk, Come uninvited. Philips

UNJOINTED, adj. Disjoined ; separated.

I hear the sound of words ; their sense the air Dissolves unjointed ere it reach my ear. Milton.

They are all three immovable or unjointed, of the thickness of a little pin.

Gr'ew'i Mutenm.

U'NION, n. t. Lat. unio. The act of joining two or more, so as to make them one ; concord ; a pearl : see the extract from Sliakspeare.

The king shall drink to Hamlet's better breath ; And iu the cup an union shall he throw Richer than that which four successive kings In Denmark's crown have worn. Miakfpeare.

One kingdom, joy, and union without end. Milton.

t'NIP'AROt'S, adj. Lat. itnus and purio. Bring- ing one at a birth.

Others make good the paucity of their breed with the duration of their days, whereof there want not ex- amples in animals uniparma. Browne.

U'NISON, adj. & n. s. Lat. unus and sonus. Sounding alone: a sound the same with another; a string of such a sound: a single unvaried note.

Sounds intermixed with voice Choral, or unison. Hilton's Paradise Lost.

When moved matter meets with any thing like that from which it received its primary impress, it will in like manner move it, as in musical strings tuned unisons. Glanville.

Diversified 'midst unison of chime, Freer than air, yet manacled with rhyme. Harte.

U'NIT, n.s. Lat. unus, unit us . One; the least number, or root of numbers.

If any atom should be moved mechanically, without attraction, 'tis above a hundred million millions odds to an unit, that it would not strike upon any other atom, but glide through an empty interval without con- tact. , Bentley.

Unit are the integral parts of any large number.*

Wattt.

UNITARIANS, in ecclesiastical history, a name sometimes given to those wlio confine the plory and attribute of divinity to the Father of our Lord Jesus Christ. See ASTITRIMTARIANS, a denomi- nation of this sect which we consider far more just.

UNITAS FRATRUM, or United Brethren, in ec- clesiastical history. The church of the United Brethren took its rise in Moravia during the four- teenth century ; but is said by the brethren to have derived its origin from

the Greek church in the ninth century, when, by the instrumentality of Methodius and Cyrillus, two Greek monks, the kings of Bulgaria and Moravia being converted to the faith, were, together with their subjects, united in communion with the Greek church. Methodius was the first bishop ; and for their use Cyrillus translated the Scriptures into the Sclayonian lan- guage. Though they consider episcopal ordination as necessary to qualify the servants of the church for their respective functions, they allow to their bishops no elevation of rank or pre-eminent autho- rity ; their church having from its first establish- ment been governed by synods, consisting of deputies from all the congregations ; and by other subordinate bodies, which they call conferences. In questions of importance, or of which the con- sequences cannot be foreseen, recourse is had to the lot, which is never made use of but after mature deliberation and fervent prayer. In their opinion, episcopal consecration does not confer any power to preside over one or more congregations ; and a bishop can discharge no office but by the appoint- ment of a synod, or of the elders conference of the unity. Presbyters among them can perform every function of the bishop, except ordination; for he confirms, by the laying on of hands on young persons when they first become candidates for the communion. Deacons are assistants to the presbyters much in the same way as in the church of England ; and in the brethren's churches dea- conesses are retained, for the purpose of privately admonishing their own sex, and visiting them in their sickness ; but. though they are solemnly blessed to this office, they are not permitted to teach in public, and far less to administer the sa- crament. They have also seniores civiles, or lay- elders, in contradistinction to spiritual elders or bishops, who are appointed to watch over the con- stitution and discipline of the unity of tntr brethren ;

over the observance of the laws of the country in which congregations or missions are established; and over the privileges granted to the brethren by the governments un'ier which they live. They do not consider a regular course of literary education as at all necessary to qualify persons for admission into orders, provided they possess a thorough knowledge of the word of God, which they call solid Christian experience, and a well regulated zeal to serve God and their neighbours. On Sun- day, besides the public prayers, which are either read from a liturgy or pronounced extempore by the minister, one or two sermons are preached in every church or chapel ; and after the morning service an exhortation is given to the children. Previous to the holy communion, which is administered on

some Sunday once a-month, and likewise on Maunday Thursday, each person who intends to communi- cate converses with one of the elders on the state of his soul, expressing his desire to partake of the sacrament. The celebration of the communion is generally preceded by a love feast, which is also kept on other solemn occasions. On Maunday Thursday, before communion, the brethren have a solemn foot-washing ; and at this, and we suppose at other times, they greet one another with the kiss of charity. These ceremonies they consider as re- ligious rites, and authorised through all ases of the church by our Saviour himself and his two apostles St. Peter and St. Paul. (John xii. 14 ; 1 Peter v. 14 ; Romans xvi. 16.) Our limits will not per- mit us to give a systematic view of the doctrinal tenets of the brethren. Though they acknowledge no other standard of truth than the sacred Scrip- tures, they adhere to the Augsburgh confession, and speak respectfully of the thirty-nine articles of the church of England. They believe that the kingdom of Christ is not confined to any particular party^ community, or church ; and they consider themselves, though united in one body or visible church, as spiritually joined in the bond of Chris- tian love to all who are taught of God, and belong to the universal church of Christ, however much they may differ in forms, which they deem non- essentials. A full account of this society of Chris- tians will be found in Crantz's Ancient and Modern History of the Protestant Church of the United Brethren, printed in London in 1780 ; and in a work entitled An Exposition of Christian Doctrine as taught in the Protestant Church of the United Brethren, London, 1784.

No sect has exhibited greater wisdom and per- severance in their attempts to convert and civilise the heathen. Their numbers did not exceed 600 when they first began their attempt to convert the hea- then ; and, in the period of eight or nine years, they sent missionaries to Greenland, to St. Tho- mas's, to St. Croix, to Surinam, to the Rio de Berbice, to the Indians of North America, to the negroes of South Carolina, to Lapland, to Tartary, to Algiers, to Guinea, to the Cape of Good Hope, and to the island of Ceylon. We cannot follow Dr. Brown through his details of these missions, which he has derived from the well-known works of Crantz, and the periodical accounts. In Green- land, where they had lately three settlements, viz. at New Hernhuth, Lichtenlels, and Lichtenau, the number of Christians, in the year 1810, was 998; but it appears to be diminishing, not so much from their defection to paganism, as from a general de- crease in the population of this inhospitable region.

In St. Thomas's, where their number in 1812, was 2285, and St. Croix, where they have three congregations, consisting in 1812 of 8443 persons, they have been favored by the ruling powers, and have been very successful ; in Jamaica, their un- dertaking has been viewed with jealousy, and they have made little progress ; while in Antigua they have established the most

flourishing of all their missions, . and reckon 11,824 members of their different congregations. Their efforts on the con- tinent of America, both North and South, have been almost uniformly unprosperous ; at Berbˆce the settlement was broken up in 1763 by a rebellion of the negroes ; at Hope, on the river Corentyn, in Surinam, after several partial calamities, they were dispersed in 1808, in consequence of the burning of their settlement; and at Bambey and Paramaribo their establishments appear to be on the point of dissolution. The missions to North America have been almost without exception disas- trous. However, they have five settlements among the Indians. Their late missions, excepting the one that went to the Cape, appear to have been under- taken without much prudence, and attended with little success. In the year 1812, according to an estimate by Mr. Latrobe, they had thirty-three set- tlements among the heathen, under whose care were 27,000 converts.

UNITE', v. a. & v. n.ˆ Lat. unitus. To join

U.M'TEDLY, adv. two or more into one;

UNI'TER, n. s. [make to agree or adhere :

UNI'TION, j as a verb neuter to join

U'NITIVE, adj. \ in action ; concur ; co-

V.MTY, n. s. J-alesce: unitedly is with

union : uniter, he who unites : unition the act or

power of uniting: unitive, having that power:

unity, the state of being one ; concord; agreement;

principle of union.

The force which wont in two to be dispersed. In one alone right hand he now unites. Spenter.

To the avoiding of dissension, it availeth much, that there be amongst them an unity, as well in ceremonies as in doctrine. Hooker.

In the lawful name of marrying, To give our hearts united ceremony. Shaktpeare.

Take unity then out of the world, and it dissolves into a chaos. Holyday.

The king proposed nothing more than to unite his kingdom in one form of

worship. Clarendon.

Unity of possession is a joint possession of two rights by several titles. For example, I take a lease of land from one upon a certain rent ; afterwards I buy the fee-simple. This is an unity of possession.

CM.

Suppose an uniter of a middle constitution, that should partake of some of the qualities of both.

Olanville.

Charity is of a fastening and uniting nature.

Pearson.

The unitiet of time, place, and action, are exactly observed. Dryden't Preface to All for Lave.

That can be nothing else but the vnitice way of re- ligion, which consists of the contemplation and love of God. Jforris.

As long as any different substance keeps off the unition, hope not to cure a wound. Witeman's Surgeiy.

UNITED PROVINCES, or United Netherlands, called also, during the changes produced by the French Revolution, the Batavian Republic, consisted of the seven provinces of Holland, Zealand, Friesland, Groningen, Overyssel, Zutphen, and Utrecht. They composed the greatest part of the ancient Batavia, whose inhabitants were formerly

so much renowned for their valor. Under the Romans they were exempt from imposts and taxes, in consequence of bearing the honorable title of allies of the republic. For their modern state, see NETHERLANDS.

UNITED STATES of NORTH AMERICA. See AME- RICA, NORTH.

UNITY, in poetry. Aristotle laid it down as a rule, that there are three unities to be observed, viz. the unity of action, of time, and of place.

UNJUDG'ED, adj. Not judicially determined. Causes unjudged disgrace the loaded file, And sleeping laws the king's neglect revile. Prior.

UNIVER'SAL, adj. & n. s.} Lat. unh-ersalis.

UNIVERSALITY, n. s. (General; extend-

UNIVER'SALLY, adv. £ing to all; total;

U'NIVERSE, n. s.) not particular : the

noun substantive and adverb correspond : the uni- verse is the general system of things ; all nature.

Those offences which are breaches of supernatural laws, violate in general that principle of reason, which willeth vniverialty to fly from evil. Hooker.

All sorrowed : if all the world could have seen 't, the woe had been universal. Shakspeare.

Creeping murmur, and the poring dark, Fills the wide vessel of the universe. Id.

To what end had the angel been set to keep the en- trance into paradise after Adam's expulsion, if the iMwertal had been paradise ? Raleigh.

From things particular She doth abstract the univertal kinds. Duties.

This Catholicism, or second affection of the church, consisteth generally in tiniverulity. as embracing all sorts of persons, as to be disseminated through all na- tions, as comprehending all ages, as containing all necessary and saving truths, as obliging all conditions of men to all kind of obedience, as curing all diseases, and planting all graces in the souls of men. Peanon.

*UNIVER'SITY, n. *. Lat. universitas. A school, where all the arts and faculties are taught.*

While I play the good husband at home, my son and servants spend all at the univertitv.

Shahpeare. Taming of the Shrew.

Thtuniversitiet, especially Aberdeen, flourished under many excellent scholars, and very learned men.

Clarendon .

UNIVERSITY is the name of a corporation formed for the education of youth in the liberal arts and sciences, and authorised to admit such as have studied in it to certain degrees in different facul- ties, which not only serve

as certifica es of profi- ciency in science, but also confer on those who obtain them considerable privileges within the university, as well as some rank in the state without it. Universities generally comprehend within them one or more colleges ; but this is not always the case ; for the university of St. Andrew's was in being before either of its colleges was founded, and it would continue in being with all its pri- vileges though both its colleges were levelled \Mtli the dust. In every university with which we are acquainted, there are four faculties, viz. theology, law, physic, and the arts and sciences, compre- hending mathematics, natural and moral philosophy, &c. ; and in Oxford, Cambridge, and some other universities, music is considered as a fifth faculty. Universities, in their present form, and with their present privileges, are institutions comparatively modern. They sprang from the convents of regu- lar clergy, or from the chapters of cathedrals in the church of Rome, where young men were educated far holy orders, in that dark period when the clergy

possessed all the little erudition which was left in Europe. These convents were seminaries of learn- ing probably from their first institution; and we know with certainty, that in Old Aberdeen there was a monastery in which youth were instructed in theology, the canon law, a-.id the school philoso- phy, at least 200 years before the university and King's College were founded. These universities have long been considered as lay corporations ; but, as a proof that they had the ecclesiastical origin which we have assigned to them, it will be sufficient to observe, that the pope arrogated to himself the right of vesting them with all their privileges ; and that, prior to the reformation, every university in Ku- rope conferred its degrees in all the faculties by au thority derived from a papal bull. The most ancient universities in Europe are those of Oxford, Cam- bridge, Paris, Salamanca, and Bologna; and, in the two English universities, the first founded colleges are those of University, Baliol, and Merton, in the former, and St. Peter's in the latier. Oxford and Cambridge, however, were universities ; or, as they were then called, studies, some hundreds of years before colleges or schools were built in them ; for the former flourished as a seminary of learning in the reign of Alfred the Great, and the other, could we believe its partial partizans, at a period still earlier. The universities of Scotland are four, St. Andrew's, Glasgow, Aberdeen, and Edinburgh. In Ireland there is but one university, viz. that of Dublin, founded by queen Elizabeth, and very richly endowed.

UNIVERSITY OF LONDON. This, at the period at which we close our work, may be called still an infant institution; but it has urged some strong claims to public regard, and proceeded with great credit through its earlier sessions. Our plates con- tain a view of the buildings.

We cannot better state its origin, and our own sentiments respecting it, than

in the words of the Edinburgh Reviewer : —

*• We regard the event of a new university being founded, but more especially in the capital of the British empire, as, in every point of view, among the most important to which these times, so fruitful in improvement, have given birth. Its influence upon the advancement of knowledge and the pro- gress of the species would be very great, were it even to be established upon the same principles which have been adopted in the old collegiate in- stitutions of England. It would at least be a va*t addition to the means of literary and scientific edu- cation possessed by that country, and it would in some degree enable her to keep pace with the rapid progress of her population, in her public provisions for their instruction. The fact that Oxford and Cambridge teach no more than from 3000 to 4000 young men, out of at least 200 times that number of an age fit for instruction, is of itself quite suffi- cient to demonstrate the deplorable want of the higher branches of education among our southern neighbours. The population of Scotland is not above a sixth part of that of England, and yet there are more students attending our universities.*

‘ We have the most entire persuasion that the plan of sending young men of eighteen or nineteen to live together for the three most critical years of their lives, at a distance from their parents or guardians, subject to no effectual or useful con- trol, and suffered to drink, dice, and wench, as they please, to read what they please, and asso-

ciate with whom they please, provided only they are punctual in attendance at chapel for five mi- nutes in a morning, and regular in wearing the proper vestments, and showing themselves at the hour of grace before meat — is one of the most ex- travasant follies that ever entered into the minds of men, and would have been deemed too absurd a caricature of human improvidence had it been only known in some page of Gulliver’s Travels, and not grown silently into an English habit. The Scotch plan of uniting domestic habits and parental su- perintendance with college study seems to us incal- culably better adapted to form both learned and good men, and is amply sufficient to account for the superiority of our youth in sober, prudent, and virtuous habits, as well as proficiency in their stu- dies.’

Adverting to the practical measures adopted, this writer continues —

‘ The first step taken, and most wisely taken, by the promoters of this measure was to form a union of all the different interests which were

concerned in its success; and accordingly those liberal church- men who desired to see a university founded on general grounds readily joined with the various denominations of Dissenters, who, being excluded from the benefits of the ancient establishments, have no means of educating their youth except through a new foundation.- As it was resolved to embrace all the branches of learning in the projected scheme, a great difficulty immediately arose as to theology and the kindred studies of ecclesiastical his- tory and biblical criticism. If, on the one hand, these were excluded, the course of study seemed to be imperfect, and in a very important branch; be- side the certainty of cavil arising among the adver- saries of improvement, who would not fail to urge the omission as an intentional slight put upon sacred literature, — perhaps to raise an outcry as if all religion was purposely excluded through indif- ference or disrespect. If, on the other hand, they were admitted, how could various opinions be so far consulted as to find teachers whose doctrines every sect might receive? How could a Catholic and Protestant, or a Churchman and Dissenter, attend the same course of theological lectures, or listen to the same historical account of the coun- cils, the pope, the reformation, the Puritans, and the restoration? The reluctance to omit all theo- logical literature was, however, so great that a com- promise was at first propounded and nearly re- solved upon. Three classes were to be taught — theology by a member of the church of England, ecclesiastical history by a member of the church of Scotland, and biblical criticism by a member of one of the Dissenting denominations. We mention this as a signal proof of the extraordinary indispo- sition to omit these important classes : for a very little consideration was sufficient, of course, to show the impracticability of any such arrangement, and to prove that theology cannot possibly be taught except in one of two sorts of universities — either where all the students are of one religious persuasion, or where religious belief is a matter of perfect indifference to all. Now as the new scheme was intended to comprehend every denomination of believers, and as a deep sense of the importance of religion, was the prevailing sentiment of its pro- moters, in so much indeed that the exclusion of Dissenters from the old establishments, which w:is one moving cause of the new institution, had only

been effected by their own conscientious regard for their religious principles, it was quite plain that no system of theological instruction could be adopted at all. The whole other sciences, however, might be taught; and it was clearly not because of the little value set upon the one excepted, but pre- cisely because of its paramount importance overall human learning, which precluded alike both com- promise and indifference, that this one was of ne- cessity excluded.

‘ Can it be pretended that the subscription of the Articles communicates a knowledge of their dog- mas? That subscription, on the contrary, supposes

or ought to suppose such a knowledge to have been previously acquired. Will it be said that the at- tendance at chapel for a few minutes daily effects the extrusion of the old man — the hearer half asleep, just risen from the bed he is just going to re-occupy, and the reader in such haste that he nas been known repeatedly to boast of being able to give any man distance as far as the Creed and beat him ? (The bet was, " I'll give any of you to Pontius Pilate, and the odds, and beat him !" Our universities reckon such things quite regular — and they abhor all saints!) We venture to assert, without the least fear of being contradicted by the fact or the reason, that there is absolutely no reli- gion taught, and no attention to its observances in- culcated, by the mere existence of divinity lectures and the compliance with certain outward forms; and that whatever is learnt or imbibed of this sort at either university is through the operation of pri- vate instruction, and consequently may be just as well learnt, and as fully imbibed, by the students of the London University, under the tuition of their parents and spiritual instructors.

' It appears that this question, as to which the religious differences of the supporters of the plan offered so many impediments, being once settled in a manner generally satisfactory, and according with the soundest principles of universal toleration, no further difficulty was experienced, and the sketch of the proposed plan was submitted on the 1 st of July, 1825, to a public meeting. This is said to have been one of the most numerous, possibly the most numerous, ever assembled in the city of Lon- don. The lord mayor presided ; and was sup- porjed both by the most eminent promoters of the plan, and by the greatest names in the city for respectability and wealth. The proceedings were marked by the greatest unanimity and enthusiasm, and under these very favorable auspices this most important scheme has been ushered, into the world. We shall shortly sketch the outlines of it as far as they are yet determined.

' We shall begin with the constitution of the pro- prietary body, or what may be termed the political, as contradistinguished from the literary portion of the plan. The funds required are to be raised by shares of £100 each, and subscriptions or dona- tions of £50. The whole cost, on a very liberal estimate, has been calculated at £200,000, and it is proposed to have 3000 shares, so as not to call for more than 66 per cent, on each share, and leave the rest as a reserve for extension of the plan, or other unforeseen contingencies. Each share is to have the privilege of sending one pupil to the university, and to receive also an interest not exceed- ing four per cent. Each shareholde. is to have a vote at all general meetings, and in the election of the di- rectors, or council of management and proicies are to

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b* allowed. Each contributor of £50 by way of gift is to have all the privileges of a shareholder for life only, and inalienably ; but is to receive no interest. The executive government is to be vested in a council of twenty-one, composed of a chan- cellor and vice-chancellor, to be chosen, the former for life, the latter for two years, and nineteen coun- cillors, of whom four are to go out annually, and to be ineligible for one year alter. This council is to choose all the professors, to superintend them, and suspend and remove; in short to exercise all the functions of visitors. The whole circle of the sciences and of literature, except theology, is to be taught by the various professors. These branches it is unnecessary to enumerate. The professors are to be divided into two colleges, one of literature, and the other of science and the useful arts ; and each college is to have a principal elected by the professors from their own body, and for life. Every thing relative to academical discipline is to be un- der the control of these learned persons. The sala- ries of the professors are to be very moderate, in order that their emoluments may depend upon their classes; the students all paying such fees as the council shall fix; the salaries are also to be fixed by the council. Beside the fees to the professors, the students are to pay five guineas yearly to the general fund, and one guinea to the library. Out of the general fund the interest to the shareholders is to be paid; and as this is not to exceed £4 a share, and as each share will send one pupil, it is plain there can never he wanting an ample fund for paying the interest.'

A chapel, where divine service is performed ac- cording to the rules of the established church, has been recently opened near the university ; and the Dissenters have advertised a similar establishment for the benefit of their youth.

February 25th, 1829, the proprietors met in the theatre of the institution to receive the first annual report of its progress. Lord Milton was in the chair; and the report stated that the receipts of the year amounted to £59,813 12s. Its expenditure was £47,568 14*. 3d. Receipts from students £1902 5(. Wd. The report calculated the annual current expenses of the university at £5500, which would be produced by 11,000 students. At this period there were 557 in the university. May 23d the prizes and honors of the medical classes (which opened in October 1828) were distributed at the university by the marquis of Lansdown. Of 182 students of these classes sixty-five had com- peted for prizes and honors, and fifty-two obtained them.

UNIVERSITY COURTS in England. The two universities enjoy the sole

jurisdiction, in exclusion of the king's courts, over all civil actions and suits whatsoever, where a scholar or privileged person is one of the parlies ; excepting in such cases where the right of freehold is concerned. And then by the university charter they are at liberty to try and de- termine, either according to the common law of the land, or according to their own local customs, at their discretion ; which has generally led them to carry on their process in a course much conformed to the civil law. This privilege, so far as it relates to civil causes, is exercised at Oxford in the chan- cellor's court; the judge of which is the vice-chan- cellor, his deputy, or assessor. From his sentence ••>n appeal lies to delegates appointed by the con- gregation; from thence to other delegates of the

house of convocation ; and, if they all three concur in the same sentence, it is final, at least by the statutes of the university, according to the rule of the civil law. But, if there be any discordance or variation in any of the three sentences, an appeal lies in the last resort to judges, delegates appointed by the crown, under the great seal in chancery. As to the jurisdiction of the university courts in crimi- nal matters, the chancellor's court at Oxford, and probably also that of Cambridge, hath authority to try all offences or misdemeanors under the degree of treason, felony, or mayhem ; and the trial of treason, felony, and mayhem, by a particular char- ter, is committed to the university jurisdiction in another court, namely, the court of the lord high steward of the university. The process of the trial is this: the high steward issues one precept to the sheriff of the county, who thereupon returns a panel of eighteen freeholders ; and another precept to the bedells of the university, who thereupon re- turn a panel of eighteen matriculated laymen, laicos piivilegio universitatis gaudentes ; and by a jury formed de medietate, half of freeholders, and half of matriculated persons, is the indictment to be tried ; and that in the guildhall of the city of Ox- ford. And if execution be necessary to be awarded, in consequence of finding the party guilty, the sheriff of the county must execute the university process ; to which he is annually bound by an oath.

UNIV'OCAL, adj.) Lat. univocus. Having

UNIV'OCALLY, adv. J one meaning; certain; re- gular : the adverb corresponds.

How is sin univocalty distinguished into venial and mortal, if the venial be not sin ! Hall.

Univocal words are such as signify but one idea, or but one sort of thing ; equivocal words are such as sig- nify two or more different ideas, or different sorts of ob- jects. ir<;f.'s.

UNJOY'OUS, adj. Not gay ; not cheerful. Morn, late rising o'er the drooping world,

Lifts her pale eye unjoyous. Thomson's Winter.

UNJUST', adj. ~\ Fr. injuste ; Lat. /«-

UNJUSTIFI'ABLE, I Justus, iniquitous; con- UNJUSTIFI'ABLENESS, > trary to equity or justice : UNJUSTIFI'ABLY, adv. I unjustly corresponds: UXJUST'LY. j unjustifiable is not be

justified or vindicated : the noun substantive and

adverbs corresponding.

He that is vnjutt in the least, is unjutt alto in much.

Luke xvi. The Piercies,

Finding his usurpation most unjutt, Endeavoured my advancement to the throne. Shaksp.

He wished them to consider of the illegality of alt those commissions, and of the unjustijiablenets of all the proceedings which had been by virtue of them.

Clarendon. The unjust the just hath slain. Milton.

If aught against my life Thy country sought of thee, it sought unjuttly. Id.

When it is unlawful upon the unjustijiableness of the ground, we sin in it till we put and end to it.

Kettlewell.

He who was so unjust as to do his brother an injury, will scarce be so just to condemn himself for it.

Locke.

If these reproaches, which aim only at ostentation of wit, be so unjustifiable, what shall we say to those that are drawn, that are founded in malice ?

Gove-nment of the Tonga e. UNKEMPT, adj. Not combed. Obsolete.

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Theuot, to that I chose thou dost me tempt ; But ah ! too well I wot my humble vain. And how my rhimes been rugged and unkempt.

Spenser.

UNKEN'NEL, v. a. To drive from his hole.

Search, seek, find out. I warrant we'll unkennel the fox. Let me stop this way first. So, now, uncape.

Shaktpeare.

I warrant you, colonel, we'll unkennel him. Dryden.

UNKENT, udj. Un and ken to know/ Un- known. Obsolete.

Go, little book, thyself present, As child whose parent is unkent, To him, that is the president Of nobleness and chivalrie. Spenier.

UNKEPT, adj. Not kept; not retained; un- observed.

Many things kept generally heretofore, are now in like sort generally vnkept, and abolished, every where.

Hooker.

UNKIND', adj. \ Not favorable; not

UNKIND'LY, adj. & adv. > benevolent: unkindly,

UNKISU'NESS, n. s. J as an adjective, is un- natural ; unfavorable ; malignant : as an adverb, it, as well as unkindness, agrees with unkind.

They, with their filthiness, Polluted this same gentle soil long time, That their own mother loathed their beastliness, And 'gan abhor her brood's unkindly crime, All were they born of her own native slime. Spenser.

In nature there's no blemish but the mind ; None can be called deformed, but the unkind. Shaksp.

Take no unkindness of his hasty words. Id.

The herd unkindly wise, Or chaces him from thence, or from him flies.

Denham.

Eve — As one who loves, and some unkindness meets, With swee:, austere composure, thus replied. Milton.

If we unkindly part, \Vill not the poor fond creature break her heart 1

Dry den.

UNKING', v. a. To deprive of royalty.

It takes the force of law : how then, my lord ! If as they would unking my father now, To make you way. Southern.

UNKISS'ED, adj. Not kissed.

Foul words are but foul wind, and foul wind is but' foul breath, and foul breath is noisome ; therefore I will depart unkist. Shaktpeare.

UNKLE, n. s. Fr. oncle. The brother of a fa- ther or mother. See UNCLE.

The English power is near, led on by Malcolm, His nnhle Siward, and the good Macduff. Sliakspeare,

UNKNIGHTLY, adj. Unbecoming a knight.

"With six hours hard riding through wild places, I overgot them a little before night, near an old ill- favoured castle, the place where I perceived they meant to perform their unknightly errand. Sidney.

UNKNIT', v. a. To unweave; separate ; open.

Would he had continued to his country As he began, and not unknit himself The noble knot he made ! Shakspeare. Coriclannt.

I'nkiiit that threat'ning, unkind brow. Shakspeare. UNKNOW, v. a. \ To cease to know : un UNKNOW'ABLE, adj. i knowable, is not to be UNKNOW'ING, % known: unknowing, ig-

UNKNOW'INGLY, adv. I norant ; not practised : UNKNOWN', adj. J the adverb correspond- ing : unknown, not known in nature or degree.

Let me speak to the yet unknowing world, How these things came about. Shakspeare. Hamlet.

I am yet Unknown to woman ; never was forsworn. Shakspeare.

Here may I always on this downy grass, Unknown, unseen, my easy minutes pass ! Rosccmmon. VOL. XXII.

*His hounds, unknowing of his change, pursue The chace, and their mistaken master slew. IVv«i *.*

The beauty I behold has struck me dead : Unknowingly she strikes, and kills by chance. Id.

It's already known ; Oh ! can you keep it from yourselves, unknow it?

Smith.

At fear of death, that saddens all With terrors round, can reason hold her thrown ; Despise the known, nor tremble at the' unknown >.

Pope. Distinguish well between knowables and unknowable!.

Watts.

UNLA'BORED, adj. Not produced by labor, or art; spontaneous.

Unlaboured harvests shall the fields adorn, And clustered grapes shall blush on every thorn.

Drvden.

UNLACE', v. a. To loose any thing fastened with strings.

Can I forget, when they in prison placing her, With swelling heart, in spite, and due disdainfulness, She lay for dead, till I helped with unlacing her ?

Sidney.

You unlace your reputation, And spend your rich opinion for the name Of a night-brawler. Shaktpeare. Othello.

The helmet from my brow unlaced. Pope's Odyssey. UNLADE', v. a. To remove from the vessel which carries.

We landed at Tyre ; for there the ship was to unlade her burden. Acts xxi. 3.

He's a foolish seaman, That, when his ship is sinking, will not Unlade his hopes into another bottom. Denham.

UNLAID', adj. Not placed ; not fixed; noi stilled or quieted.

No evil thing that walks by night, Blue, meagre hag, or stubborn unlaid ghos. Hath hurtful power o'er true virginity. Jl/i/.'on.

UNLAMENT'ED, adj. Not deplored.

After six years spent iu outward opulency, and in- ward murmur that it was not greater, he died vnla- mented by any. Clarendon.

UNLATCH', v. a. To open by lifting up the latch.

My worthy wife

The door unlatched ; and, with repeated calls, Invites her former lord within my walls. Drydeti.

UNLAWFUL, adj. ˆ Contrary to, or not

UNLAWFULLY, adv. > permitted by law ; the

UNLAWFULNESS, n.s. j derivatives correspond- ing.

It is an unlauful thing for a Jew to come unto one of another nation. Acts, x. 28.

I had rather my brother die by the law, than my son snould be unlawfully born. – Shakspeare.

He that gains all that he can lawfully this year, next year will be tempted to gain something unlawfully.

Taylor

The original reason of the unlawfulnea of lying is. that it carries with it an act of injustice, and a violation of the rights of him to whom we were obliged to signify our minds. South.

UNLEARN', v. a. ~\ To forget; disuse what

UNI.EARN'ED, adj. >has been learned: un-

UN LEARNED' LY, adv. J learned is ignorant; un- instructed ; not befitting a learned man : the ad- verb corresponding.

I will prove those verses to be very unlearned, neither savouring of poetry, wit, or invention. Shaktpeare.

The government of the tongue is a piece of morality which sober nature

dictates, which yet our greatest scholars have unlearnt. Decay of Picti;.

He, in his epistle, plainly affirmeth, they think un- learnedly who are of another belief.

Browne' Vulgar Errours.*

Some at the bar with subtilty defend The cause of an ttnlearned, noble friend, Dryden.

A wickea man is not only obliged to learn to do well, bat unlearn nis former life. Rogers.

UNLEAVENED, adj. Not fermented ; not mixed w;th fermenting matter.

They bated unleavened cakes of the dough, for it was not lea'vened. Exodus, ii. 39.

UNLEI'SUREDNESS, n. s. Business; want of time; want of leisure. Not in use.

My essay touching the scripture having been written partly in England, partly in another kingdom, it were strange if there did not appear much unevenness, and if it did not betray the unteisurednest of the wandering author. Boyle.

UNLESS', conjunct. Except; if not; suppos- ing that not.

Let us not say. we keep the commandments of the one, when we break the commandments of the other ; for, unlets we obser-e both, we obey neither. Hooker.

What hidden strength, Unlets the strength of heaven, if you mean that ?

Milton. No poet ever sweetly sung,

Unlest he were, like Phoebus, young ;

Nor ever nymph inspired to rhyme,

Unless, like Venus, in her prime. Swift.

UNLES'SONED, adj. Not taught.

The full sum of me t% an unlctsoned girl, unschooled, unpractised ;

Happy in this, she is not yet so old But she may learn. Shaktpeare.

UNLETTERED, adj. Unlearned ; untaught.

When the apostles of our Lord were ordained to alter the laws of heathenish religion, St. Paul ezcepted, the rest were unschooled and unlettered men. Hooktr.

UNLEV'ELLED, adj. Not laid even.

All unlevelled the gay garden lies. Tichell.

UNLIBID'iNOUS, adj. Not lustful; pure from carnality.

In those hearts

Love unlibidinous reigned ; nor jealousy Was understood, the injured lover's hell. Miltrm.

UNLICENSED, adj. Having no regular per- mission.

Ask what boldness brought him hither Unlicensed. Milton's Parad'ae Lost.

Warn the thoughtless, self-confiding train, No more unlicensed thus to brave the main. Pope.

UNLICK'ED, adj. Shapeless; not formed: from the opinion that the bear licks her young to shape.

The bloody bear, an independent beast, Unlicked to form, in groans her hate exprest. Drvden.

UNLIGHTED, adj. Not kindled ; not set on fire.

The sacred wood which on the altar lay, Untouched, unlightetl glows. Prior.

UNLIGHT'SOME, adj. Dark; gloomy; want- ing light.

First the sun,

A mighty sphere ! he framed, unlighttome first, Though of ethereal mould.

Milton.

UNLIKE', adj. -\ Dissimilar ; having

UNLIKE'LIHOOD, n.i. /no resemblance: un-

UKLIKE'LINESS, \ likelihood and unlike-

UHLIKE'LY, adj. & adv. i liness mean improba-

Usn HE'NESS, n. t. J bilily : unlikely is im- probable ; unpromising ; improbably : unlikeness, dissimilitude.

Effects are miraculous and strange, when they grow by unlikely means. Hooker.

Make not impossible that which but seems unlike.

Shaktprare.

Imitation pleases, because it affords matter for en. quiring into the truth or falsehood of imitation, by comparing its likeness or unlikenest with the original.

Dryden.

The work was carried on, amidst all the unlikelihoods and discouraging circumstances imaginable ; the builders holding the sword in one hand, to defend the trowel working with the other. South.

UNLIM'ITABLE,of;.ˆ Admittingno bounds;

UNLIM'ITED, Shaving no bounds or

UNLIM'ITEDLY, adv. J limits : the adverb cor- responding.

Many ascribe too unlimitedly to the force of a good meaning, to think that it is able to bear the stress of whatsoever commissions they shall lay upon it.

Decay of Piety.

It is some pleasure to a finite understanding, to view unlimited excellencies, which have no bounds, though it cannot comprehend them. Tillotion.

He tells us 'tis unlimited zndunlimitable. Locke.

UNLIN'EAL, adj. Not coming in the order of succession.

They put a barren sceptre in my gripe, Thence to be wrenched with an unltneal hand, No son of mine succeeding. Shahspeare. Macbeth.

UNLINK', v. a. To untwist ; open.

About his neck

A green and gilded snake had wreathed itself ; Who with her head, nimble in threats, approached The opening of his mouth ; but suddenly, Seeing Orlando, it unlinked itself. Shakspeare.

UNLTQUIFIED, adj. Unmelted; undis- solved.

These huge, unwieldly lumps, remained in the melted matter rigid and unliquijied, floating in it like cakes of ice in a river. Addiwn on Italy.

UNLOAD', v. a. To disburden; exonerate; free from load.

Like an ass, whose back with ingots bows, Thou bearest thy heavy riches but a journey, And death unloadeth thee. Shakspeare.

Nor can my tongue unload my heart's great burthen.

Id.

Some to unload the fertile branches run. Pope.

UNLOCK', t>. a. To open what is shut with a lock, or other fastening ; to open generally.

I have seen her unlock her closet, take forth paper.

Shakspeare.

I yielded, and unlocked her all my heart, Who, with a grain of manhood well resolved, Might easily have shook off all her snares. Mildm.

UNLOOK'ED, adj.) Unexpected ; not fore-

UNLOOK'ED FOR. $ seen.

Whatsoever is new is mlooked for ; and ever it mends some, and pares others. Bacon.

Nor Fame I slight, nor for her favours call ; She comes unlocked for, if she

comes at all. Pope.

UNLOOSE', v.a. & v.n. To loose ; to fall in pieces. 'A word perhaps barbarous and unsrrain- matical, the particle prefixed implying negation ; so that to unloose is, properly, to bind.' — Johnson.

The latchet of his shoes I am not worthy to stoop down and unloose. Mark i. 7.

York, unloose your long imprisoned thoughts, And let thy tongue be equal with thy heart. Shak.

UNLOV'ED, adj. ˆ w .

UNLOVE'L.NESs/n.,. f . , Not ˆ : unam.a-

UMOV'.NG,ˆ: Jbleness: unkind.

As love does not always reflect itself, Zelmane, though reason there was to love Palladius, yet could

not ever persuade her heart to yield with that pain to Palladius, as they feel, that feel unlored love.

Sidney.

The old man, growing only in age and affection, followed his suit with all means of unhonest servants, large promises, and each thing else that might help to countervail his own unloveliness. Id.

Thou, blest with a goodly son, Didst yield consent to disinherit him ; Which argued thee a most unloving father. Shakspeare.

UNLUCK'Y, adj.) Unfortunate ; unhappy ;

UNLUCK'ILY, adv. J miserable; mischievous: the adverb corresponding.

His friendship is counterfeit, seldome to trust ; His doings unluokie, and ever unjust. Tuner.

Then shall I you recount a rueful case, Said he ; the which with this

unlucky eye I late beheld. Spenser.

Things have fallen out so unluckily, That we have had no time to move our daughter.

Shaktpeare.

There was a lad, the unluckiest of his crew, Was still contriving something bad, but new. King.

UNLUS'TROUS, adj. Wanting splendor; wanting lustre.

Should I join gripes with hands Made hard with hourly falsehood, as with labour ; Then glad myself with peeping in an eye, Base and unlustrous as the smoaky light That 's fed with stinking tallow. Shakspeare.

UNLUTE', v. a. To separate vessels closed with chemical cement.

Our antimony, thus handled, affordeth us an ounce of sulphur, of so sulphureous a smell, that, upon the unluling the vessels, it infected the room with a scarce supportable stink. Boyle.

UNMADE', adj. Not yet formed ; not created ; deprived of being or qualities.

Thou wast begot in Demogorgon's hall, And sawest the secrets of the world unmade. Spenser.

The first earth was perfectly unmade again, taken all to pieces, and framed a-new.' Woodward.

UNMAIM'ED, adj. Not deprived of any es- sential part.

An interpreter should give his author entire and nn- maimed ; the diction and the versification only are his proper province. Pope's Preface to the Iliad.

UNMAKE', v. a.) To deprive of former

UNMAKE'ABLE, adj.] qtialities before possessed. To deprive of form or being. See UNMADE. The adjective corresponds.

They've made themselves, and their fitness now Does unmake you. Shaks/ ieare. Macbeth.

If the principles of b»dies are unalterable, they are also unmakable by any but a divine power. Grew.

UNMAN', v. a. To deprive of the constituent qualities of a human being; to break the spirit; deject.

What, quite unmanned in folly 1 Shakspeare.

Her clamours pierce the Trojan's ears, Unman their courage, and augment their fears.

Dryden.

UNMANAGEABLE, adj. > Not manageable ;

UNMAN'AGED. $ not easily govern-

ed ; not broken in, or tutored.

Like colts, or unmanaged horses, we start at dead bones and lifeless blocks. Taylor.

They'll judge every thing by models of their own, and thus are rendered unmanageable by any authority but that of absolute dominion. GlanmUe.

Savage princes flash out sometimes into an irregular greatness of thought, and betray, in their actions, an unguided force, and unmanaged virtue. Felton.

UNMAN'LIKE, adj. } Unbecoming a human

UNMAN'LY. 5 being.

It is strange to see the unmanlike cruelty of man- kind. ' Sidney.

New customs, Though never so ridiculous, Nay, let them be unmanly, yet are followed. Shahtp.

My servitude, ignoble, Unmanly, ignominious, infamous. Milton's Agonistes.

UNMAN'NERED, adj. } Rude; brutal;

UNMAN'NERLY, adj. & adv. > uncivil : all thede-

UNMAN'NERLINF.SS, n. s. j rivatives corre- sponding.

He called them untaught knaves, unmannerly, To bring a slovenly unhandsome corse Betwixt the wind and his nobility. Shakspeare.

Forgive me, If I have used myself unmannerly. Id.

You have a slanderous, beastly, unwashed tongue In your rude mouth, and savouring yourself, Unmannered lord. Ben Jonson't Catiline.

A sort of unmannerliness is apt to grow up with young people, if not early restrained ; and that is a forwaid- ness to interrupt others speaking. Locke on Education.

UNMANUR'ED, adj. Not cultivated.

The land,

In antique times, was savage wilderness ; Unpeopled, unmanured, unproved, unpraised. Spenser.

UNMARK'ED, adj. Not observed; not re- garded.

I got a time, unmarked by any, to steal away, I cared not whither, so I might escape them. Sidney.

Unmarked, unhonoured at a monarch's gate. Pope.

UNMAR'RIED, adj. Having no husband, or no wife.

Unmarried men are best friends, best masters, best servants, but not always best subjects ; for they are light to run away. Bacon.

Husbands and wives, boys and unmarried maids.

Dryden.

UNMASK', v. a. To strip of a mask, or of any disguise.

My husband bids me ; now I will unmask. This is that face was worth the looking on. Shaksp.

With full cups they had unmasked his soul. Ruscom.

O, I am yet to learn a statesman's art ; My kindness and my hate unmasked I wear, For friends to trust, and enemies to fear. Dryden.

UNMAS'TERED, adj. i Not subdued : not

UNMASTERABLE. 5 conquerable.

The faetor is unmasterable by the natural heat of man ; not to be dulcified

by concoction, beyond unsavoury condition. Browne's Vulgar Errours.

He cannot his unmastered grief sustain, But yields to rage, to madness, and disdain. Dryden.

UNMATCH'ED, adj.) Matchless ; having no

UN MATCH ABLE. S match, or equal : not to

be matched.

England breeds very valiant creatures ; their mastiffs are of unmatchahle courage. Shakspeare.

That glorious day, which TWO such navies saw, As each, unmatched, might to the world give law. Dry.

UNMEAN'ING, adj. 1 Expressing no mean-

*U N MEANT'. * ing ; having no meaning :*

not meant.

The flying spear was after Ilus sent : But Rhsetus happened on a death unmeant. Dryden.

With round, unmeaning face. Pope.

UNMEA'SURED, adj.) Immense ; infinite :

UNMEA'SURABLE. S not to be measured.

Common mother! thou

Whose womb vnmeasurable, and infinite breast Teems and feeds all. Shakspeare. Timon.

Lo«t to the world, in vast, unmeasured space.

Blackmail.

UNMED'DLED WITH, adj. Not touched ; no« altered.

The flood-gate is opened and closed for six days, continuing other ten days unmeddled with. Carew.

UNM ED'ITATED, adj. Not formed by previous thought.

Neither various style, Nor holy rapture, wanted they, to praise Their Maker, in fit strains pronounced, or sung Unmeditated. Milton's Paradite Lost.

UNMEET', adj. Not fit; not proper; not worthy.

Madam was young, unmeet the rule of sway. Spent.

Alack ! my hand is sworn Ne'er to pluck thee from thy thorn ; Vow, alack ! for youth unmeet, Youth so apt to pluck a sweet. Shakspeare.

Its fellowship unmeet for thee, 3ood reason was thou freely should'st dislike. Milton.

UNMEL'LOWED, adj. Not fully ripened.

His years but young, but his experience old ; His head unmellowed, but his judgment ripe. Shaksp.

UNMELT'ED, adj. Undissolved by heat.

Snow on /I'.tna does unmelted lie, Whence rowling flames and scattered cinders fly.

Waller.

UNMENTIONED, adj. Not told ; not named.

They left not any error in government unmentioned or unexpressed, with the sharpest and most pathetical ex- pressions. Clarendon.

Oh let me here sink down Into my grave, vnmentioned and unmourned. Southern.

UNMER'CHANTABLE,a#. Unsaleable; not vendible.

They feed on salt, unmerchantable pilchard. Carew.

UNMER'ClFUL,a#. > Cruel; severe; in-

UNMEE'CIFULLY, adv. J clement; exorbitant: the adverb coi responds.

A little warm fellow fell most unmercifully upon his Gallick majesty. Addison.

For the humbling of this unmerciful pride in the eagle, Providence has found out a way. L'Estrange.

Whatsoever doctrine represents God as unjust and unmerciful, cannot be from God, because it subverts the very foundation of religion. Rogers.

*UNMER'CIFULNESS, n. *. Inclemency; cruelty ; want of tenderness.*

Consider the rules of friendship, let justice turn into vnmercifulness. Taylor' Rule of Living Holy.*

UNMERITED, adj. Not deserved; not ob- tained otherwise than by favor.

A tottering pinnacle unmerited greatness is.

Government of the Tongue.

This day, in whom all nations shall be blest, Favour unmerited by me, who sought Forbidden knowledge by forbidden means. Milton.

UNMILK'ED, adj. Not milked. The.ewes still folded with distended thighs, Unmilked, lay bleating in distressful cries. Pope.

UNMIND'ED, adj.) Not heeded; not re-

UNMIND'FUL. J garded : not heedful or re-

gardful.

Worldly wights in place Leave off their work, unmindful of this law, To gaze on them. Spenter.

He was

A poor, unminHed outlaw, sneaking home; My father gave him welcome to the shore. Shakapeare.

He after Eve seduced, unminded, slunk Into the wood. Milton.

I shall let you see that I am not unmindful of the things you would have me lemember. Buyle.

*UNMIN'GLE, v. a. } To separate thing**

UNMIN'GLEABLE,ˆ;. >mixed : not to be mixed:

UNMIN'GLED.) pure ; not mixed.

As easy mayest thou fall A drop of water in the breaking gulph. And take unmingled thence your drop again, Without addition or diminishing. Shakspeare.

It will unmingle the wine from the water; the wine ascending, and water descending. Bacon.

Springs on high hills are pure and unmingled. Id.

The unmingleable liquors retain their distinct surfaces.

Boyle.

UNMI'RY, ad}. Not fouled with dirt.

Pass, with safe, unmiry feet, Where the raised pavement leads athwart the street

UNMITIGATED, adj. Not softened.

With publick accusation, uncovered slander, unmiti- gated rancour. Shakspeare.

UNMIX'ED,«d;. } Not mingled with any

UNMIXT'. i thing; pure; not corrupted

by additions.

Thy commandment all alone shall live Within the book and volume of my brain, Unmired with baser matter. Shakspeare.

It exhibits a mixture of new conceits and old ; whereas the instauration gives the new, unmixed otherwise than, with some little aspersion of the old. Bacon.

UNMOAN'ED, adj. Not lamented. Fatherless distress was left unmanned; Your widow dolours likewise be unwept. Shakiyenre.

UNMOIST', adj. i K .

UNMOIST ENED. I Not wet: not made vvet”

The incident light that meets with a grosser liquor will have its beams more or less interruptedly reflected than they would be if the body had been unmoistened.

Boyle.

Volatile Hermes, fluid and unmoitt, Mounts on the wings of air. Philipt.

UNMOLESTED, adj. Free from disturbance ; free from external troubles.

Cleopatra was read o’er, While Scot, and Wake, and twenty more, That teach one to deny one’s self, Stood unmolested on the shelf. Prior

UNMOOR’, v. a. To loose from land, by taking up the anchors.

Soon as the British ships unmoor, And jolly long-boat rows to shore. Prior.

We with the rising morn our ships unmoored, And brought our captives and our stores aboard. Pope.

UNMOR’ALIZED,o$. Untutored by morality.

This is censured as the mark of a dissolute and un- moralized temper. Norris.

UNMORTGAGED, adj. Not mortgaged.

Is there one God unsworn tb my destruction? The least unmortgaged hope ? for, if there be, Methinks I cannot fall. Dryden’i All for Love,

UNMOR’TIFIED, adj. Not subdued by sorrow and severities.

If our conscience reproach us with unmortifted sin, our hope is the hope of an hypocrite. Rogers.

UNMOVED, adj.ˆ Not put out of one place

UNMOV’ABLE, >into another: not having

UNMOV’ING. J motion : not to be moved.

Vipers that do fly The light, oft under unmoved stalls do lie. May.

Among innumerable false, unmoved, Unshaken, unseduced. Milton.

Nor winds, nor winter’s rage, o’erthrows His bulky body, but unmoved he

grows. Dryden.

The celestial bodies, without impulse, had continued unactive, unmoving heaps of matter. Cheyne.

UNMOULD', v. a. To change as to the form.

Its pleasing poison The visage quite transforms of him that

And the inglorious likeness of a beast Fixes instead, unmoulding reason's mintage, Charactered in the face. Milton.

UNMOURN'ED, adj. Not lamented ; not de- plored.

O let me here sink down Into my grave unmentioned and unmourned. Southern.

UNMUF'FLE, v. a. To put off a covering from the face.

Unmuffle, ye faint stars ! Millon.

UNMU'SICAL, adj. Not harmonious; not pleasing by sound.

Let argument bear no unmusical sound, Nor jars interpose, sacred friendship to grieve.

Ben Jan son.

UNMUZ'ZLE, v. a. To loose from a muzzle.

Now unmuzzle your wisdom. Shahsjxare.

Have you not set mine honour at the stake, And baited it with all the' unmuzzled thoughts Thy tyrannous heait can think 1 Id.

UNNA, a large river in the north-west of European Turkey, which rises the mountains of Herzegovina, flows through Bosnia, along the border of Croatia, and falls into the Save at Usz- ticza. It is navigable for a considerable distance.'

UNNA'MED, adj. Not mentioned.

Author of evil, unknown till thy revolt, Unnamed in heaven. Milton's Paradise Lost.

UNNAT'URAL, adj. } Contrary to the laws

UNNAT'URALNESS, n.s. £ of nature; contrary to

UNNAT'URALLY, adv. j common instincts : the adverb and noun substantive corresponding.

The God which is ';he God of nature doth never teach itnnaturalness. Sidney.

Her offence

Must be of such unnatural degree, That monsters it. Shaktpearc. King Lear.

'T's irreverent and unnatural to scoff at the infirmities of old age. L' Estrange.

All the world have been frighted with an apparition of their own fancy, or they have most unnaturally con- spired to cozen themselves. Tillotson.

UNNAVIGABLE, adj. Not to be navigated.

Pindar's unnavigable song Like a swift stream from mountains pours along.

Cowley.

Some who the depths of eloquence have found, In that unnarigable stream were drowned. Dryden.

UNNECESSARY, adj.) Needless; not want-

UNNE'CESSARILY, adv. Sed; useless: the ad-

UNNE'CESSARINESS, n. s. J verb and noun sub- stantive corresponding.

The doing of things unnecessary is many times the cause why the most necessary are not done. Hooktr.

Unnecessary coinage, as well as unnecessary revival of words, runs into affectation ; a fault to be avoided on either hand. Dryden.

These are such extremes as afford no middle for in- dustry to exist, hope being equally out-dated by the desperateness or unneceuarineis of an undertaking.

Decay of Piety.

Tis highly imprudent, in the greatest of men, un- necetsarily to provoke the meanest. L' Estrange.

UNNEIGH'BOURLY, adj. & adv. Not kind ; not suitable to the duties of a neighbour : with mutual mischief or with unkindness.

These two Christian armies might combine The blood of malice in a vein of league, And not to spend it so unneighbimrly. Shakspeare.

Parnassus is but a barren mountain, and its. inhabi- tants make it more so by their unneighbourly deportment.

Garth.

UNNERVE', v.a. \ To weaken ; enfeeble:

USNLKVAIEU', adj. J weak ; enfeebled.

UNO

Pyrrhus at Priam drives, in rage strikes wide ; But with the whiff and wind of his fell sword The unnerved father falls. Shafupeare. Hamlet.

The precepts arc often so minute and full of circum- stances that they weaken and unnerve his verse.

Addiion.

Scaliger calls them fine and lively in Musaeus ; but abject, unneriatf, and unharmonious in Homer.

Broome.

UNNETH', adj. ˆ From un and Sax. eafc, eas) .

UNNETHES'. J Scarcely ; hardly. Obsolete.

Diggon, I am so stiffe and stanke. That unneth 1 may stand any more ; And how the western wind b'loweth sore, Beating the withered leaf from the tree. Speiuer.

UNNO'BLE, adj. Mean; ignominious; ig- noble.

I have offended reputation ; A most unnoble swerving. Shakipeare.

UNNOTED, adj. Not observed ; not regarded ; not heeded.

They may jest, Till their own scorn return to them unnoted. Shaksp.

A shameful fate now hides my hopeless head, Unwept, unnoted, and for ever dead. Pope's Odyssey.

UNNUM'BERED, adj. Innumerable.

The skies are painted with unnumbered sparks ; They are all fire, and every one doth shine. Shaksp.

Our bodies are but the anvils of pain and diseases, and our minds the hives of unnumbered cares and pas) sions. Raleigh.

UNOBEY'ED, adj. Not obeyed.

Not leave Unworshipped, unobeyed, the throne supreme. Milton.

UNOBJECFED, adj. Not charged as a fault, or contrary argument.

What will he leave unobjected to Luther, when he makes it his crime that he defied the devil ? Atterbury.

UNOBNOX'IOUS, adj. Not liable; not ex- posed to any hurt.

So unobnoxiou now, she hath buried both ; For none to death sins, that to sin is loth. Donne.*

In fight they stood Unwearied, mobnoxious to be pained. Milton.

UNOBSE'QUIOUSNESS, n. s. Incompliance; disobedience.

They make one man's particular failings confining laws to others ; and convey them as such to their suc- ceeders, who are bold to misname all unobtequiousnets to their incogitancy, presumption. Browne.

UNOBSER'VED, adj.} Not regarded; not UNOBSER'V ABLE, f attended to ; not heed-

UNOBSER'VANT, ted; not minded: not

UNOBSER'VING. Jto be observed; not

perceptible : inattentive : unheedful.

*The motion in the minute parts of any solid body, which is the principal cause of violent motion, though unobserved, passeth without sound. Bacot**

They the Son of God, our Saviour meek, Sung victor ; and from heavenly feast refreshed, Brought on his way with joy : he unobserved, Home to his mother's house private returned. Milton.

The unobservant multitude may have some general, confused apprehensions of a beauty, that gilds the out- side frame of the universe. GlanviUe.

A piece of glass reduced to powder, the same which, when entire, freely transmitted the beams of light, acquiring by contusion a multitude of minute surface, reflects, in a confused manner, little and singly unob- servable images of the lucid body, that from a diapha- nous it degenerates into a white body. Boytt.*

His similitudes are not placed, as our vnobterving critirks tell us, in the heat of any action; but com- monly in its declining. Itryde.*

UNO

JNOBSTRUCTED, adj.) raising any obstacle.

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UNP

UNOBSTRUC'TIVE.

Not hindered ; not stopped : not

Unobstructed matter flies away, Ranges the void, and knows not where to stay.

Blackmore.

Why should he halt at either station 1 why Not forward run in unobitructive sky? Id.

UNOBTAIN'ED, adj. Not gained ; not ac- quired.

As the will doth now work upon that object by de- sire, which is motion towards the end, as yet unvb- tained ; so likewise, upon the same hereafter received, it shall work also by love. Hooker.

UNOB'VIOUS, adj. Not readily occurring.

Of all the metals, not any so constantly discloseth its vnobviout colour, as copper. Boyle on \Colour.*

UNOC'CUPIED, adj. Unpossessed.

If we shall discover further to the north pole,, we shall find all that tract not to be vain, useless, or unoc- cupied . Roy.

UNOFFENDING, adj. Harmless; innocent; faultless.

If those holy and unoffending spirits, the angels, tell their faces before the throne of his majesty ; with what awe should we, sinful dust and ashes, approach that infinite Power we have so grievously offended.

Rogers.

UNOF'FERED, adj. Not proposed to ac- ceptance.

For the sad business of Ireland he could not express a greater sense, there being nothing left on his part unoffered or undone. Clarendon.

UNOIL', v. a. To free from oil.

A tight maid, ere he for wine can ask, Guesses his meaning, and unoils the flask. Dryden.

UNOTENING, adj. Not opening. Benighted wanderers, the forest o'er, Curse the saved candle, and unopening door. Pope.

UNOPERATIVE, adj. Producing no effects.

The wishing of a thing is not properly the willing of it, but an imperfect velleity ; and imports no more than »n idle, unoperative complacency in the end, with a di- rect abhorrence of the means. South.

UNOPPO'SED, adj. Not encountered by any hostility or obstruction.

Proud, art thou met 1 thy hope was to have reached The height of thy aspiring, unoppoted, The throne of God unguarded. Milton't Paradise Lost.

UNOR'DERLY, adj. Disordered ; irregular.

Since some ceremonies must be used, every ruu» would have his own fashion ; whereof what other ,.ould be the issue, but infinite distraction and unorderly con- fusion in the church ! Sanderson.

UNOR'DINARY, adj. Uncommon; unusual. Not used.

I do not know how they cun be excused from murder, who kill monstrous bi<.iS, because of an unordinary shape, without knowing whether they

have a rational soul or no. Locke.

UNORGANIZED, adj. Having no parts in- strumental to the nourishment of the rest.

It is impossible for any organ to regulate itself: much less may we refer this regulation to the animal rpints, an unorganized fluid. Grew' Comologia.*

UNORIGINAL, adj. I Having no birth | un-

UNORI'GINATED. i generated.

T. toiled out my uncouth passage, forced to ride The' untractable abyss, plunged in the womb Of unoriginal night, and chaos wild. Mitt. Par. Lost.

UNORTHODOX, adj. Not holding pure doc- trine.

A fat benefice became a crime against its incumbent ; and he was sure to be unorthodox that was worth the plundering. Decay of Piety.

UNOW'ED, adj. Having no owner.

England now is left

To tug and scramble, and to part by the teeth The unowed interest of proud, swelling state. Shaksp.

UNOWN'ED, adj. Not acknowledged; noT claimed.

O happy, unowned youths ! your limbs can bear The scorching dog-star, and the winter's air ; While the rich infant, nursed with care and pain, Thirsts with each heat, and coughs with every rain.

Gay.

UNPACK', v. a. J To disburden ; exonerate;

UNPACK'ED, adj. J open : not packed ; not col- lected with art or skill.

I, the son of a dear father murthered, Must, like a whore, unpack my heart with words.

Shakspeare. The knight

Resolved to leave him to the fury Of justice, and an ttnpacktd jury. Hudibras.

He had a great parcel of glasses packed up, which when he had unpacked, a great many cracked of them- selves. Boyle.

UNPAID', adj. Not discharged ; sometimes takings/or.

Richer, than doing nothing for a bauble ; Prouder, than rustling in unpaid for silk. Shakspeare.

Receive from us knee tribute not unpaid. Milton.

How often are relations neglected, and tradesmen unpaid, for the support of this vanity ! Collier.

What can atone, oh ever-injured shade ! Thy fate unpitied, and thy rites unpaid ? Pope.

UNPAIN'ED, adj. \ Suffering no pain : giving

UNPAIN'FUL. 1 no pain.

Too unequal work we find, Against unequal arms to fight in pain ; Against unpained. impassive. Milton Paradise Lett.*

That is generally called hard which will put us to pain sooner than change figure ; and tha to ft, which changes the situation of its parts upon an easy and unpainful touch. Locke.*

UNPAL'ATABLE, adj. Nauseous ; disgusting.

The man who laughed but once to see an ass Mumbling to make the cross-grained thistles pass, Alight laugh agair to see a jury chaw The prickles of unpalatable law. Dryien.

UNPAR'AGONED, adj. Unequalled; un- malcJ.cd.

Either your unparagoned mistress is dead, or she's out-prized by a trifle. Shaktpeare. Cymbtline.

UNPAR'ALLELED, adj. Not matched; not to be matched.

O fact unparalleled ! Philips.

The father burst out again in tears, upon receiving this instance of an unparalleled fidelity from one. who he thought had given herself up to the possession of another. Additcm.

UN PAR'DONABLE, adj.\ Fr. impardonabte.*

UNPAR'DONABLY, adv. f Irremissible: be-

UNPAR'DONED, adj. fyond forgiveness:

UNP/R'DONING / not forgiven : not

forgiving or placable.

It was thought in him an unpardonable offence to alter any thing ; in us as intolerable, that we suffer any thing to remain unaltered. hooker.

The kinder the master, the more unpardonable is the traitor. L'Ettrange.

Luther's conscience turns these reasonings upon him, and infers that Luther must have been unpardonably wicked in using masses for fifteen years. Alterbury.

Curse ont he unpardoning prince, whom te; rs can draw To no remorse ; who rules by lion's law. Dryden.

How know we that our souls shall not this night be required, laden with those unpardoned sins for which we proposed to repent to-morrow 1 Rogers.

UNPARLIAMENTARY, adj. I Contrary to

UNPARLIAMEXT'ARINESS, n. s. J the rules of parliament : the noun substantive corresponding.

Sensible he was of that disrespect , reprehending them for the unparliamenlarintis of their remonstrance in print. Clarendon.

The secret of all this unprecedented proceeding in their masters they must not impute to their freedom in debate, but to that unparliamentary abuse, of setting individuals upon their shoulders, who were hated by God and man. Swift.

UNPART/ED, adj. Undivided ; not separated.

Too little it eludes the dazzled sight, Becomes mixed blackness, or uuparted light. Prior.

UNPARTIAL, adj.) Equal ; honest : the ad-

UNPAR'TIALLY, adv. $ verb corresponding. Not in use.

Deem it not impossible for you to err ; sift impar- tially your own hearts, whether it be force of reason, or vehemency of affection, which hath bred these opi- nions in you. Hooker.

Clear evidence of truth, after a serious and impartial examination. Sanderson.

UNPASS'ABLE, adj. Admitting no passage; not current.

They are vast and unpayable mountains, which the labour and curiosity of no mortal has ever yet known.

Temple.

Making a new standard for money, must make all money, which is lighter than that standard, impassable.

Locke.

UNPAS'SIONATE, adj. } Free from passion ;

UNPAS'SIONATED, > calm ; impartial : the

UNPAS'SIONATELY, adv. j adverb correspond- ing.

He attended the king into Scotland, and was sworn a counsellor in that kingdom ; where, as I have been instructed by unpassionute men, he did carry himself with singular sweetness. U'otton.

Make us unpassionately to see the light of reason and religion. Kins; Charles.

UNPATH'ED, adj. Untracked ; unmarked by passage.

A course more promising Than a wild dedication of yourselves To unpathed waters, undreamed shores ; most certain To miseries enough. Shakspeure.

UNPAWN'ED, adj. Not given to pledge.

He rolled his eyes, that witnessed huge dismay, Where yet, impawned, much learned lumber lay.

Pope.

UNPAY', v. a. To undo. A kˆw ludicrous word.

Pay her the debt you owe her, and vnpay the villany you have done her : the one you may do with sterling money, and the other with current repentance.

Shakspeare.

UNPEACE'ABLE, adj. Quarrelsome ; inclined to disturb the tranquillity of others.

The design is to restrain men from things which make them miserable to themselves, unpeaceable and trouble- some to the world. TiUotson.

I'M PEG', v. a. To open any thing closed with a peg.

Unpeg the basket on the house's top ; Let the birds fly. Shakspeare. Hamlet.

UNPEN'SIONED, adj. Not kept in depend- ance by a pension.

Could -pensioned Boileau lash in honest strai Flatterers and bigots, even in Louis' reign ; And I not strip the gilding off a knave, U nplaced, unpensione d, no man's heir or slave ? Pope.

UNPEO'PLE, v. a. To depopulate ; to dep.-iv of inhabitants.

The land

In antique times was savage wilderness, Unpeopled, unmanured. Spenser.

He must be thirty-five years old, a doctor of the fa culty, and eminent for his religion and honesty ; tha his rashness and ignoranc may not unpeople the com- monwealth. Aildison.*

UNPERCEIV'ED, adj.) Not observed ; not

UNPERCEIV'EDLY, adv. J heeded ; not sensibly discovered : the adverb corresponds.

The ashes, wind unperceived shakes off. Bacon.

Some oleaginous particles, unperceivedly associated themselves to it. Boyle.

Thus daily changing by degrees, I '11 waste, Still quitting ground, by vnperceived decay, And steal myself from life, and melt away. Dryden.

UNPERFORM'ED, adj. Undone ; not done. A good law without execution is like an unperformed promise. Taylor's Rule of Holy Living.

UNPE'RISHABLE,od;. Lasting to perpetuity; exempt from decay.

We are secured to reap in another world everlasting, imperishable felicities. Hammond.

UNPER'JURED, adj. Free from perjury.

Beware of death ; thou canst not die unperjured, And leave an unaccomplished love behind, Thy vows are mine. Dryden.

UNPERPLEX'ED, adj. Disentangled; not embarrassed.

In learning, little should be proposed to the mind at once ; and, that being fully mastered, proceed to the next adjoining part, yet unknown, simple, unperplexed proposition. Locke.

UNPERSPI'RABLE, adj. Not to be admitted through the pores of the skin.

Bile is the most unpertpirable of animal fluids.

Arbuthnot.

UNPERSUA'DABLE, adj. Inexorable; not to be persuaded.

He, finding his sister's unpersuadable melancholy through the love of Amphialus, had for a time left her court. Sidney.

UNPET'RIFIED, adj. Not turned to stone.

In many concreted plants, some parts remain unpe- trijied ; that is, the quick and livelier parts remain as wood, and were never yet converted. Browne.

UNPHILOSOPH'ICAL, adj.} Unbecoming

UNPHILOSOPH'ICALLY, adv. f philosophy or a

UNPHILOSOPH'ICALNESS, n. s. 1 philosopher:

UNPHILOS'OPHIZE, v. a. J the adverb and

noun substantive corresponding : to unphiloso- phize is, to degrade from the character of a philo- sopher. (A bad coinage of Pope's.)

They forget that he is the first cause of all things, and discourse most unphilotophically, absurdly, and un- suitably to the nature of an infinite being , whose in- fluence must set the wheel a-going.

I could dispense with the unphilosophicalneu of this their hypothesis, were it not unchristian. Norrit.

It became him who created them to set them in order : and, if he did so, it is nnphilotophical to s-eek foi any other origin of the world. Newton.

Our passions, our interests flow in upon us, and un- philntophise us into mere mortals. rope.

UNPIERCED', adj. Not penetrated; not

pierced.

The unvierctd shade imbrowned the noontide bower? ,

Milton.

True Witney broad-cloth, with its shag unshorn, L'npierced is in the lasting tempest worn. Gay.

UNPIL'LARED, adj. Deprived of pillars

See the cirque falls ! the unpillared temple nods ! Streets paved with heroes, Tiber choaked with gods !

Pope.

UNPIL'LOWED, adj. Wanting a pillow.

Perhaps some cold bank is her bolster now, Or 'gainst the rugged bark of some broad elm Leans her unpillowed head, fraught with sad fears.

A Milton.

UNPIN , v. a. To open what is shut or fastened with a pin.

Unpin that spangled breast- plate which you wear, That the eyes of busy fools may be stopt there.

Donne.

UNPIN RED*, adj. Not marked with eyelet- holes.

Gabriel's pumps were all unpinked i' the heel.

Shaksp.

UNPIT'IED, adj. ~\ Not compassionated ;

UNPIT'IFULLY, adv. >not regarded with sympa-

UNPIT'YING, adj. j thetic sorrow: unmerci- fully : having no mercy.

Richard yet lives ; but at hand, at hand Insues his piteous and unpitied end. Sfuilupeare.

He beat nun most pitifully.

— Nay, that he did not ; he beat him most unpitifully.

Id.

May he live long scorned, and unpitied fall, And want a mourner at his funeral ! Bishop Corbet.

To shame, to chains, or to a certain grave, Lead on, unpitywg guides, behold your slave.

Glanville.

UNPLACED', adj. Having no place of de- pendance.

Unplaced, unpensioned. Pope.

UNPLAGUED', adj. Not tormented.

Ladies, that have your feet Unplagued with corns, we'll have a bout with you.

Shaksp.

UNPLANTED, adj. Not planted; spontane- ous.

Figs there implanted through the fields do grow, Such as fierce Cato did the Romans show. Waller.

UNPLAU'SIBLE, adj. Not plausible; not such as has a fair appearance.

There was a mention of granting five subsidies ; and that meeting being, upon very unpopular and implau- sible reasons, immediately dissolved, those five subsidies were exacted, as if an act had passed to that purpose.

Clarendon.

UNPLAU'SIVE, adj. Not approving.

Tis like he'll question me, Why luch vnplautive eyes are bent on him. Shaksp.

UNPLEA'SANT, adj. } Not delighting ; trou-

UNPLEA'SANTLY, adv. £blesome; uneasy: the

UNPLEASANTNESS, «. s. j adverb and noun sub- stantive corresponding.

O sweet Portia !

Here are a few of the unpleasant' st words That ever blotted paper. Shalup.

Many people cannot at all endure the air of London, not only for its unpleasantness, but for the suffocations which it causes. Graunt.

We cannot boast of good-breeding, and the art of life ; but yet we don't live

unpleasantly in primitive simplicity and good humour. Pope.

UNPLEASED', adj. \ Not pleased ; not de-

UNPLEAS'ING. 5 lighted ; offensive; dis-

gusting.

Me rather had, my heart might feel your love, 7 ban my nnpleaied eye feel your courtesy. Sfiahsp.

It all those great painters, who have left us such fair platforms, had rigorously observed it in their figures, they had Tnade things more regularly true, but withal ver. iinplei>i,,

UNPLl'ANT, adj. Not easily bent ; not con- forming to the will.

The chisel hath more glory than the pencil ; that, being so hard an instrument, and working upon so wn- pliant stuff, can yet leave strokes of so gentle appear- ance. Wotton.

UN PLOW ED', adj. Not plowed.

Good sound land, that hath lain long unploired.

Mortimer.

UNPLUME', v. a To strip of plumes ; to de- grade.

In the most ordinary phenomena in nature, we shall find enough to shame confidence, and unplume dogma- tizing. Glanville.

UNPOETICAL, adj. } Not such as becomes

UXPOET'IC. t a poet.

Nor, for an epithet that fails, Bite off your unpoetick nails, Unjust ! why should you, in such veins, Reward your fingers for your brains ? B. Corbet.

UNPOL'ISHED, adj. \ Fr. impoli ; Lat. im-

UNPOLITE'. $ politus. Not elegant ;

not refined ; not civil : not smoothed ; not bright- ened by attrition.

Finding new words,

Such as of old wise bards employed to make Unpolished men their wild

retreats forsake. Waller.

He affirms it to have been the ancient customs of all the Greeks, to set up •unpolished stones, instead of images, to the honour of the gods. Stillingjieet.

Discourses for the pulpit should be cast into a plain method, and the reasons ranged under the words, first, secondly, and thirdly ; however, they may be now fan- cied to sound impolite, or unfashionable.

Watts on the Mind.

UNPOLLUTED, adj. Lat. impollutus. Not corrupted; not defiled.

Lay her i' the earth ; And from her fair and unpolluted flesh May violets spring. Shahtp. Hamlet,

Though unpolluted yet with actual ill, She half commits, who sins but in her will. Dryden.

UNPOPULAR, adj. Not fitted to please the people.

The practises of these men, under the covert of feigned zeal, made the appearance of sincere devotion ridiculous and unpopular. Addifon's Freeholder.

UN PORTABLE, adj. Un and portable. Not to be carried.

Had their cables of iron chains had any great length, they had been importable ; and, being short, the ships must have sunk at an anchor in any stream of weather or counter tide. Raleigh.

UNPOSSESS'ED, adj. Not had ; not held ; net enjoyed.

Thou unpotsessing bastard, dost thou think That I would stand against thee ? Shaksp.

The cruel something unpouested Corrodes and leavens all the rest. Prior.

UNPRACTICABLE, adj. Not feasible.

I tried such of the things that came into my thoughts as were not in that place and time impracticable.

Boyle.

UNPRACTISED, adj. Not skilful by use and experience ; raw; being in the

state of a novice.

The full sum of me Is an unlessoned girl, unschooled, unpractiied.

Shaksp.

Unpractised, unprepared, and still to seek. Milton.

UNPRAIS'ED, adj. Not celebrated; not praised.

If the young African for fame His wasted country freed from Punick rage,

The deed becomes unpraised, the man at least,

And loses, though but verbal, his reward. 3lilion.

Nor pass unpraised the vest and veil divine, Which wandering foliage and rich flowers entwine.

Dry den.

UNPRECA'RIOUS, adj. Not dependant on another.

The stars which grace the high expansion bright, By their own beams, and unprecarious light, At a vast distance from each other lie. Blackmore.

UNPRECEDENTED, adj. Not justifiable by any example.

The seciet of all this unprecedented proceeding in their masters, they must not impute to freedom. Sicift.

UNPREDICT, v. a. To retract prediction.

Means I must use, thou say'st prediction else Will iinpredict, and fail me of the throne. Milton.

\ \ I'RKFER'RED, adj. Not advanced.

To make a scholar, keep him under while he is young, or tin preferred. Collier on Pride.

UNPREG'NANT, adj. Not prolific; not quick of wit.

This deed unshapes me quite, makes me unpregnant, And dull to all proceedings. Shakip.

UNPREJU'DICATE, adj. Not prepossessed oy any settled notions.

A pure mind in a chaste body is the mother of wis- dom, sincere principles, and unprejudicate understand- ing. Taylor.

UNPREJUDICED, adj. Free from prejudice, or prepossession.

The meaning of them may be so plain, as that any unprejudiced and reasonable man may certainly under- stand them. Tillotian.

UNPRELATICAL, adj. Unsuitable to a pre- late.

The archbishop of York, by such unprelatical igno- minious arguments, in plain terms advised him to pass that act. Clarendon.

UNPREMEDITATED, adj. Not prepared in the mind before-hand.

The slow of speech make unpremeditated harangues, or converse readily in languages that they are but little acquainted with. Addlson.

UNPREPARED', adj.) Not fitted by pre-

UNPREPAR'EDNESS, n. s. S vious measures: the noun substantive corresponds.

I believe my innocency, and unpreparedness to as- sert my rights and honour, make me the most guilty in their esteem, who would not so easily have declared a war against me if I had first assaulted them.

King Charlet.

To come unprepared before him is an argument that we do not esteem God. Duppa't Rules for Devotion.

Fields are full of eyes and woods have ears ; For this the wise are ever on their guard, For unforeseen, they say, is unprepared. Dryden.

UNPREPOSSESSED', adj. Not prepossessed ; not preoccupied by notions.

The unprepcssessed on the one hand, and the well- disposed on the other, are affected with a due fear of these things. South.

It finds the mind naked, and unprepossessed with any former notions, and so easily and insensibly gains upon the assent. /

UNPRESSED', adj. Not pressed ; not forced.

Have I my pillow left unpreued in Rome 1 Shaksp.

They left not any error in government untnentioned, or impressed with the sharpest and most pathetical ex- piessions. Clarendon.

UNPRETENDING, adj. Not claiming any distinctions.

Bad writers are not ridiculed, because ridicule ought to be a pleasure, but to undeceive and vindicate the honest and unpretending part of mankind from imposi- tion. popem UNPREVAIL'ING, adj. Being of no force. Throw to earth this unprevailing woe.

Shaksp. Hamlet.

UNPREVENTTD, adj. Not previously bin- dered or preceded.

A pack of sorrows, which would press you down, If unprevented, to your timeless grave. Shaksp.

Thy grace

Comes unprevented, unimplored, unsought. Milton UNPRINCE'LY, adj. Unsuitable to a prince. I could not have given my enemies greater advan- tages, than by so unprincely an inconstancy.

A'itjo Charlet.

UNPRINCIPLED, adj. Not settled in tenets or opinions ; wicked.

Others betake them to state affairs, with souls so un- principled in virtue and true generous breeding, that flattery and court shifts, and tyrannous aphorisms, ap- pear to them the highest points of wisdom.

.Milton on Education. UNPRINTED, adj. Not printed. Defer it, till you have finished these that are yet mi- printed. ptvt.

UNPRIS'ABLE, adj. Not valued; not of es- timation.

A baubling vessel was he captain of, For shallow draught and bulk unprisable. Shaksp. UNPRIS'ONED, adj. Set free from confine- ment.

Several desires led parts away, Water declined with earth, the air did stay ; Fire rose, and each from other but untied, Themselves unpritoned were and purified. Donne. UNPRIZED', adj. Not valued. Not all the dukes of waterish Burgundy Can buy this unprized, precious maid of me. Sftaksr.

UNPROCLAIMELY, adj. Not notified by a public declaration.

The Syrian king, who to surprize One man, assassin-like had levied war, War unproclaimed . Milton,' » Paradise Lost'

UNPROFANED', adj. Not violated. Unspoiled shall be her arms, and unprofaned Her holy limbs with any human hand ; And in a marble tomb laid in her native land.

Drvden.

*UNPROFITABLE, adj. ˆ Useless ; serving UNPROF'ITABLY, adv. £ no purpose: the ad- UNPROF'ITABLENESS, n. s. * verb and noun sub- stantive corresponding.*

Should he reason with unprofitable talk 1 Job xv. 3. I should not now unprofitable spend Myself in words, or catch at empty hope, By airy ways for solid certainties. Ben Jonion. ˆ

It is better to fall honourably, than to survive in an unprofitable and ung.orious life. L' Estrange.

We are so persuaded of the unprofitableness of your science, that you can but leave us where you find us ; but, if you succeed, you increase the number of your party. Addison.

UNPROPITED, adj. Having no gain. Be clamorous, and leap all civil bounds, Rather than make unprojited return. Shaltrprart.

UNPROLIF'IC, adj. Barren; not productive. Great rains drown many insects, and render their eggs unprolijiik, or destroy them. Hale.

UNPROM'ISING, adj. Giving no promise oˆ excellence; having no appearance of value.

If he be natura41y listless and dreaming, this unpro- mising disposition is none of the easiest to be dealt with.

UNPRONOUNCED, adj. Not uttered; not spoken.

Mad'st imperfect words, with childish trips, Unpronounced, slide through

my infant lips. Milton.

UN PROPITIOUS, adj. Not favorable ; inaus- picious.

Twas when the dog-star's nnpropitioui ray Smote ev'ry brain, and withered ev'ry bay, Sick was the sun. Pope.

UN PROPORTION ED, adj. Not suited to something else.

Give thy thoughts no tongue. Nor any improper tinned thought his act. Shakspeare.

UNPROPOS'ED, adj. Not proposed.

The means are unproposed. Dryden.

UNPROPFED, adj. Not supported ; not up- held.

He lives at random, carelessly diffused, With languished head nnpropped, as one past hope, Abandoned, and by himself given over.

Milton' i Agonistes.

UNPROS'PEROUS, adj. $ Latin improsper.

UNPROS'PEROUSLY, adv. J Unfortunate ; not prosperous : the adverb corresponding.

When a prince rights justly, and yet unprotpernusly, if he could see all those reasons for which God hath so ordered it, he would think it the most reasonable thing in the world. Taylor.

The winter had been very unprotperous and unsuc- cessful to the king. Clarendon.

UNPROTECTED, adj. Not protected; not supported ; not defended.

By woeful experience, they both did learn, that to forsake the true God of heaven, is to fall into all such evils upon the face of the earth, as men, either destitute of grace divine may commit, or, unprotected from above, endure. Hooker.

UNPROVED, adj. Not tried ; not known by trial, or by argument.

There I found a fresh unproved knight, Whose manly hands imbrued in guilty blood Had never been. Faerif Queene.

There is much of what should be demonstrated left unproved by tfiose chymical experiments. Boyle.

UNPROVIDE', v. a. To divest of resolution or qualifications ; to unfurnish.

I'll not expostulate with her, lest Her beauty unprovide my mind again. Shakspeare.

Tears, for a stroke foreseen, afford relief : But, unprovided for a sudden blow, Like Niobe we marble grow, And petrify with grief. Dryden.

UNPROVOK'ED, adj.) Not provoked : in-

UNPROVOK'ING. $ offensive.

The teeming earth, yet guiltless of the plough, And unprovoked did fruitful stores allow. Dryden.

Let them forbear all open and secret methods of en- couraging a rebellion so destructive, and so unprovoked.

Addisim.

I stabbed him a stranger, unproeoking, inoffensive.

Fteetwood.

UNPRUN'ED, adj. Not cut; not lopped.

The whole land is full of weeds ; Her fruit-trees all unpruned. Shakspeare.

UNPUBXIC, adj. Private ; not generally known, or seen.

Virgins must be retired and unpuhlic : for all freedom of society is a violence done to virginity, not in its na- tural, but in its moral capacity ; that is, it loses part of its severity and strictness, by publishing that person, whose work is religion, whose thoughts must dwell in heaven. Taylor.

UNPUB'LISHED, adj. Secret; unknown.

Apply your care wholly to those which are unpub- lished. Pope.

I NPUN'ISHED, adj. Fr. impuni. Not pu- nished ; suffered to continue in impunity.

Divine justice will not let oppression go unpunished.

L' Estrange.

UNPUR'CHASED, adj. Unbought.

UnpitTchased plenty our full tables loads, And part of what they lent return to our gods.

Denhai.*

UNPURG'ED, adj. Not purged; unpurified.

In her visage round those spots, unpurged, Vapours not yet into her substance turned. Milton.

UNPU'RIFIED, adj. Not freed from recre- ment ; not cleansed from sin.

Our sinful nation, having been long in the furnace, is now come out, but unpurified. Decay of Piety.

UNPUR'POSED, adj. Not designed ; not in- tentional.

Do it,

Or thy precedent services are all

But accidents ttn purposed. Shakspeare.

UNPURSUED, adj. Not pursued. All night the dreadless angel unpursued Through heaven's wide champain held his way.

" Milton.

UNPUTRIFIED, adj. Not corrupted by rot- tenness.

Meat and drink last longer unputrified-, or unsoured, in winter than in summer. Bacon.

No animal unputrified, being burnt, yields any alka- line salt ; but putrified yields a volatile alkali.

Arbuthnot.

UNQUALIFIED, adj. 1 Not fit : to disqua-

UNQUAL'IFY, v. a. S l»fy-

Till he has denudated himself of all these incum- brances, he is utterly unqualified for these agonies.

Decay of Piety.

Arbitrary power so diminishes the basis of the fe- male figure, as to unqualify a woman for an evening walk. Addiion.

Deafness unqualifies me for all company. Swift.

UNQUAR'RELLABLE, adj. Such as cannot be impugned.

There arise unto the examination such satisfactory and unquarrelable reasons as may confirm the causes generally received. Browne's Vulgar Errours.

UNQUEEN' v. a. To divest of the dignity of queen.

Embalm me,

Then lay me forth ; although unquesned, yet like A queen, and daughter to a king, inter me.

Shakrpeure.

UNQUENCH'ABLE, adj. 1 Unextinguish- UNQUENCH'ABLENESS, n. t. Vable : unextin- UNQUENCH'ED, adj. J guishableness :un-

extinguished.

We represent wildfires burning in water and un- quenchable. Bncon. \ e have heats of dungs, and of lime nnquenched. Id. 1 was amazed to see the unquenchablenet of this fire.*

H^ewiU.

Our love of Cod, OUT unquenchable desires to promote our well-grounded hopes to enjoy his glory, should take the chief place in our zeal. Sprat.

UNQUESTIONED, adj.) Not doubted ; pa ss UNQOE 'TIONABLE, >ed without doubt:

*U*iQUEs'TioNABLY,a*

Wli.it were his ma 1 s ?

— A lean cheek, which you have not • an unquet- t onable s; irit, which you li .ve not. i-lithpeare

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The duke's carriage was surely noble throughout ; of unquestionable courage in himself, and rather fearful of fame than danger. Walton.

It did not please the gods, who instruct the people ; And their unquestioned pleasures must be served.

Ben Jonion.

She muttering prayers, as holy rites she meant, Through the divided crowd unquestioned went. Dryden.

If the fathers were unquestionably of the household of faith, and all to do good to them; then certainly their children cannot be strangers in this household. Spratt.

UNQUICK', adj. l Motionless ; not alive ; not

UNQUICK'ENED. j animated.

His senses droop, his steady eyes unquick; And much he ails, and yet he is not sick. Daniel.

Every foetus bears a secret hoard, With sleeping, unexpanded issue stored ; Which numerous, but unqnickened progeny Clasped and enwrapped within each other lie.

Rlachmore.

UNQUI'ET, adj. * Fr. inguiet ; Latin, in

UNQUI'ETLY, adv. ˆquietus. Moved with per-

UNQUI'ETNESS, n. s. 3 petual agitation; not calm ; not still : the derivatives corresponding.

From grammatick flats and shallows they are on the sudden transported to be tossed and turmoiled with their unballasted wits, in fathomless and unquiet depths of controversy. Milton.

Who's there besides foul weather 1 — One minded like the weather, most Unquiet ly. Shakspeare.

Thou, like a violent noise, cam'st rushing in, And mak'st them wake and

start to new unquietness.

Denham.

UNRACK'ED, adj. Not poured from the lees.

Rack the one vessel from the lees, and pour the lees of the racked vessel into the unracked vessel. Bacon.

UNRAK'ED, adj. Not thrown together and co- vered. Used only of fires.

Cricket, to Windsor chimnies shall thou leap : Where fires thou find'st unrated, and hearths unswept, There pinch the maids. Shakspeare. Merry Wives.

UNRAN'SACKED, adj. Not pillaged.

He gave that rich city for a prey unto his soldiers, who left neither house nor corner thereof unransacked.

Knolles.

UNRAN'SOMED, adj. Not set free by pay- ment for liberty.

1'nransomed here receive the spotless fair, Accept the hecatomb the Greeks prepare. Pope's Iliad.

UNRAVEL, t;. a. To disentangle ; extricate ; clear.

He has unravelled the studied cheats of great arti- ficers. Fell.

There unravel all This dark design, this mystery of fate. Addison.

UNRA'ZORED, adj. Unshaven.

As smooth as Hebe's their unrazored lips. Milton.

UNREACH'ED, adj. Not attained.

Labour with unequal force to climb That lofty hill, unreached by former time. Dryden.

UNREAD', adj. Not read ; not publicly pro- nounced : unlearned.

These books are safer and better to be left publicly unread. Hooter.

Uncertain whose the narrower span, The clown unread, or half-read gentleman. Dryden.

UNREAD'Y, adj. ˆ Not prepared ; not fit : UXREAI/INESS, n. s. S the noun substantive cor- responds.

This impreparation and unreadiness when they find in us, they turn it to the soothing up of themselves in that accursed fancy. Hooker.

How now, my lords T what all unready so ?

Shakspeare.

UNRE'AL, adj. Unsubstantial ; having only appearance.

Hence terrible shadow ! Unreal mock'ry, hence ! Shakspeare. Macbeth.

1 with pain

Voyaged the unreal vast unbounded deep Of horrible confusion. Milton t Paradise Lost.

UNREASONABLE, adj.) Exorbitant ; claim-

UNREA'SOXABLENESS, n. s. J ing or insi&ti iˆ on more than is fit : the noun substantive correspond- ing.

No reason known to us ; but that there is no reason thereof, I judge most un reasonable to imagine. Hooker.

The unreasonableness of their propositions is not more evident, than that they are not the joint desires of the major number. K"g Charles.*

It is unreasonable for men to be judges in their own cases ; self-love will make men partial to themselves and their friends. Locke.

She entertained many unreasonable prejudices against him, before she was acquainted with his personal worth. Addison.

UNREAVE', v. a. Now unravel ; from un, and reave, or ravel. To unwind ; to disentangle.

Penelope, for her Ulysses' sake, Devised a web her wooers to deceive ;

In which the work that she all day did make, The same at night she did unreave. Spenser.

UNREBAT'ED, adj. Not blunted. A number of fencers try it out with unrebated swords.

Hakewill.

UNREBUK'ABLE, adj. Obnoxious to no censure.

Keep this commandment without spot, unrebnkable, until the appearing of Christ. 1 Tim. vi. 14.

UNRECEIV'ED, adj. Not received. Where the signs and sacraments of his grace are not, through contempt, unreceired, or received with contempt, they really give what they promise, and are w.i.it they signify. ./.• her.

UNRECLAIM'ED, adj. Not tamed. A savageness of unreclaimed blood, Of general assault. Shakspeare. Hamlet.

This is the most favourable treatment a sinner can hope for, who continues unreclaimed by the goodness of God. Rogers.

UNRE'CONCILED, adj. \ Not reconciled: USRECONCILE'ABLE. } not to be recon-

ciled.

Let me lament,

That our stars, unreconcileable, should have divided Our equalness to this. Shaktpeare.

He had many infirmities and sins, unreconcileabU with perfect righteousness. Hammond.

UNRECORD'ED, adj. Not kept in remem- brance by public monuments.

Unrecorded left through many an age, Worthy t' have not remained so long unsung. Milton.

The great Antilocus ! a name Not unrecorded in the rolls of fame. Pope's Odyssey.

UNRECOUNTED, adj. Not told; not re- lated.

This is yet but young, and may be left To some vears unrecounted. Shakspeare.

UNRECRUITABLE, adj. Incapable of re- pairing the deficiencies of an army.

Empty and unrecruitable colonels of twenty men in a company. Milton on

Ltlucation.

UN RECUR'ING, adj. Irremediable.

I found her straying in the park, Sn-king to hide herself; as doth the deer, I t hath received some unrecuring wo u:i!. Shakfp.

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UNREDUCED, adj. Not reduced.

*The earl divided all the rest of the Irish countries, *L*reduce*

UN REFORM' ED, adj. > Not amended; not

I x REFORM' ABLE. 3 corrected: not to be*

Altered or corrected.

This general revolt, when overcome, produced a general reformation of the Irishry, which ever before had been unreformed. Ditcies's Ireland.

The rule of faith is alone unmoveable and unrefarm- able. Hammond's Fundamentals.

UNREFRACT'ED, adj. Not refracted.

The sun's circular image is made by an unrefracted beam of light. nn's Optics.

UNREFRESH'ED, adj. Not cheered ; not re- lieved.

Its symptoms are a spontaneous lassitude, being un- refrethed by sleep. Arbuthnot.

UNREGARD'ED, adj. Not heeded ; not re- spected ; neglected.

We ever by his might Had thrown to ground the unregarded right. Spenser.

Dost see, how unregarded now That piece of beauty passes ?

There was a time when I did vow To that alone ; but mark the fate of faces. Suckling.

UNREGEN'ERATE, adj. Not brought to a new life.

This is not to be understood promiscuously of all men, unrerjtrerate persons as well as regenerate.

Stephens.

UNREGISTERED, adj. Not recorded.

Hotter hours,

Unregistered in vulgar fame, you have Luxuriously picked out. Shakspeare.

UNREIN'ED, adj. Not restrained by the bridle.

Lest from my flying steed unreined, as once Bellerophon, though from a lower clime Dismounted, on the Aleian field I fall. Milton.

UNRELENTING, adj. Hard ; cruel ; feeling no pity.

These are the realms of unrelenting fate ; And awful Rhadamanthus rules the state. Dryden.

UNRELIEVED, adj. \ Not succored : not

UNRELIEV'ABLE. } to be relieved.

The uneasiness of unrelieved thirst is not lessened by continuance, but grows the more unsupportable.

Royle.

As no degree of distress is unrelieiable by his power, to no extremity of it is inconsistent with his compas- sion. /'/.

UNREMARKABLE, adj. Not capable of being observed.

Our understanding, to make a complete notion, must add something else to this fleeting and unremarkable superficies, that may bring it to our acquaintance.

Digby.

UNREME'DIABLE, adj. Admitting no re- medy.

He so handled it, that it ratker seemed he had more come into a defence of an unremediable mischief already committed, than that they had done it at

first by his consent. Sidney.

UNREMEM'BEKED, adj.^ Not retained in UNREMEM'BERING, J the mind : not re-

*UNREMEM'BRANCE, n. *. J membering : for- getful ness.*

I cannot pass unremembered their manner of disguis- ing the shafts of chimneys in vanous fashions, whereof the noblest is the pyramidal. Wuttan.

That, itnremembering of its former pain, The soul may suffer mortal flesh again. Dryden.

Some words are negative in their original language, but seem positive, because the negation is unknown ; as amnesty, an unremembrance, or general pardon.

Watts' Logiek.*

UNRKMOV'F.D, adj. } Not taken away; not

UNREMOV'ABLE, f to be removed : thead-

UNREMOV'ABLY, adv. •'verb corresponding.

His discontents are unremoveably coupled to his na- ture. S/iukspeare.

It is impossible, where this opinion is imbibed and unrenwved, to found any convincing argument.

Hammond.

UNREPAID', adj. Not recompensed ; not compensated.

Hadst thou full power To measure out his torments by thy will ; Yet what couldst thou, tormentor, hope to gain ; Thy loss continues, UN repaid by pain. Dryden.

UNREPEALED', adj. Not revoked ; not abro- gated.

When you are pinched with any unrepealed act of parliament, you declare you will not be obliged by it.

Dryden.

UNREPENTED, adj.f Not expiated by pe-

UNREPENT'ING, /nitential sorrow: not

UNREPENT'ANT. 3 penitent or repenting.

They are no fit supplicants to seek his mercy, in the behalf of others, whose own unrepented sins provoked his just indignation. Hooker.

My unprepared and unrepenting breath Was snatched away by the swift hand of death.

Itoscommon.

UNREPIN1NG,cK//. Not peevishly complaining

Barefoot as she trod the flinty pavement, Her footsteps all along were marked with blood ; Yet silent on she passed, and unrepining. Rove.

UNREPLEN'ISHED, adj. Not filled.

Some air ictreated thither? kept the mercury out of the unrrpleniihed space. Boyle.

UNREPRIEV'ABLE, adj. Not to be respited from penal death.

Within me is a hell ; and there the poison Is, as a fiend, confined, to tyrannise In vnreprieeable condemned blood. Shakspeare.

UNREPROACH'ED, adj. Not upbraided; not censured.

Sir John Hotham, unreproached, uncursed by any imprecation of mine, pays his head. King Charlet.

UNREPROV'ED, adj. i Not censured : not

UKREPROV'ABLE. J to be censured.

You hath he reconciled, to present you holy, un- blameable, and unreprovabLe in his sight. Colon, i. 22.

Christians have their churches, and unreproved exer- cise of religion. Sandys.

UNREPUG'NANT, adj. Not opposite.

When Scripture doth yield us natural laws, what particular order is thereunto most agreeable ; when positive, which way to make laws vnrepitgnant unto them. Hooker.

UNREFUTABLE, adj. Not creditable.

When we see wise men examples of duty, we are convinced that piety is no luireptitable qualification, and that we are not to be ashamed of our virtue. Rogers.

UN REQUESTED, adj. Not asked.

With what security can our ambassadors go, tmrv- quttted of the Turkish emperor, without his safe con- duct ? knoll.*

UNREQUITABLE, adj. Not to be retaliated or repaid.

So unrequitable is God's love, and so insolvent are we, that that love vastly improves the benefit, by which alone we might have pretended to some ability of retri- bution. Boyle.

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UNRESENTED, adj. Not regarded with anger.

The failings of these holy persons passed not unresei.. • ed by God ; and the same Scripture which informs us of the sin, records the punishment. Rogers.

UNRESERV ED, adj. ˆ Not reserved ; not

UNRESERV'EDLY, adv. > limited by any private

UNRESERV'EDNESS, n.s. J convenience : the ad- verb and noun substantive correspond.

I am not to embrace absolutely and unreservedly the opinion of Aristotle. Bovle.

The piety our heavenly Father will accept must con- sist in an entire unreserved obedience to his commands.

Rogers.

UNRESISTED, adj.) Not opposed : not dis-

UNRESIST'ING. } posed to resist.

Those gods, whose unresisted might Hath sent me to these regions void of light. Dryden.

The sheep was sacrificed on no pretence, But meek and unresisting

innocence : ‘ A patient useful creature. Id.

UNRESOLV ED’, adj. > Not determined ; hav-

UNRESOLV’ING. J ing made no resolution :

sometimes with of.

On the western coast Rideth a puissant navy : to our shores Throng many doubtful, hollow-hearted friends, Unarmed, and unresolved to beat them back. Shaksp.

Turnus, unresolved of flight,

Moves tardy back, and just recedes from fight. Dr\id. She her arms about her vnresolting husband threw. Id.

IRRESPECTIVE, adj. Inattentive; taking Sttle notice.

I will converse with iron-witted fools, .And unrespective boys ; none are for roe That look into me with considerate eyes. Shahspeare.

UNRESTORED’, adj. Not restored; not cleared from an attainder.

The son of an unrestored traitor has no pretence to the quality of his ancestors. Collier.

UNRESTRAIN’ED, adj. Not confined ; not hindered.

The taverns he daily doth frequent, With unreitrained, loose companions. Shakspeare.

UNRETRACT’ED, adj. Not revoked ; not re- called.

Nothing but plain malevolence can justify disunion ; malevolence shewn in a single outward act, unretracted, or in habitual ill-nature. Collier.

UNREVEALED’, adj. Not told; not dis- covered.

Dear, fatal name ! rest ever unreveakd; Nor pass these lips, in holy silence sealed. Pope.

UNREVENGED’, adj. Not revenged.

So might we die, not envying them that live ; So would we die, not unrevenged all. Fairfax.

Great Pompey's shade complains thafwe are slow, And Scipio's ghost walks unrevenged amongst us.

Addison.

UN REVERSED', adj. Not revoked; not re- pealed.

She hath offered to the doom, AY Inch unreversed stands in effectual force, A sea of melting tears. Shakspeare.

UNREVOK'ED, adj. Not recalled.

Hear my decree, which unrevohed shall stand. Milt.

UNREWARD'ED, adj. Not rewarded ; not recompensed.

Providence takes care that good offices may not pass unrewarded. L'Estrange.

UNRID'DLE, v. a. To solve an enigma; ex- plain a problem.

A reverse often clears up the passage of an old poet, as the poet often serves to unriddle the reverse. Addit.

UNRIG', v. a. To strip of tackle.

Jihodes is the sovereign of the sea no more ; Their ships unrigged, and spent their naval store.

Dryden.

UNRIGHTEOUS, adj.) Urjust; wicked;

UNRIGHT'EOUSLY, adv. £ sinful; bad: the de-

UNRIGHT'EOUSNESS, n. s. J rivatives correspond.

J.et the wicked man forsake his way, and the unrigh- teous man his thoughts, and let him return unto the Lord. Isaiah Iv.

YVithin a month !

Ere yet the salt of most unrighteoii tears Had left the flushing in her galled eyes, She married — Oh most wicked soeeei.! Shakspeare*

All unrighteousness, says he, ib sin , but every trans- gression of the law is

unrighteousness, saith Austin upon this place. Hall.

UNRIGHT'FUL, adj. Not rightful ; not just.

Thou, which knowest the way To plant unrightful kings, wilt know again To pluck him headlong from the usurped throne.

Shakspeare.

UNRING', v. a. To deprive of a ring.

Be forced to impeach a broken hedge, And pigs unringed at vis. franc, pledge. Hudibras.

UNRIP, v. a. This word is improper, there being no difference between rip and unrip, and the negative particle is therefore of no force ; yet it is well authorised. To cut open.

He could not now, with his honour, so unrip, and put a lye upon all that he had said and done before, as to deliver him up. Bacon' Henry VII.*

\e are angry with searchers when they break open trunks, and unrip packs, and open sealed letters.

Taylor.

UNRI'PE, adj. ˆ Immature ; not fully con-

UNRI'PENED, £cocted; not ripened: state

UNRI'PENESS, n. s. J of being unripe.

YVho hath not heard of the valiant, wise, and just Dorilaus, whose unripe death doth yet, so many years since, draw tears from virtuous eyes ? Sidney.

In this northern tract, our hoarser throats Utter unripe and ill-constrained notes. Waller.

Were you with these, you'd soon forget The pale, unripened beauties of the north. Addison.

UNRIVALL'ED, adj. Having no competitor.

Honour forbid ! at whose unrivalled shrine Ease, pleasure, virtue, all our sex resign. Pope.

UNROL', v. a. To open what is rolled or con- volved.

Time has unrolled her glories to the last, And now closed up the volume. Dryden.

UNROMANTIC, adj. Contrary to romance.

It is a base unromantic spirit not to wait on you.

Swift.

UNROOF, v. a. To strip off the roof or co- vering of houses.

The rabble should have first unroofed the city, Ere so prevailed with me. Shaktpeart. Coriolanut.

UNROOSTED, adj. Driven from the roost.

Thou dotard ! thou art woman-tired, unrootted, By thy old dame Partlet here. ShaJupeare.

UNROOT, v. a. To tear from the roots; extirpate ; eradicate.

Unroot the forest oaks, and bear away Flocks, folds, and trees, an undistinguished prey.

Dryden.

UNROUND'ED, adj. Not shaped ; not cut to a round.

Those unfiled pistolets, That more than cannon-shot avails or lets ; Which, negligently left unrounded, look Like many-angled figures in the book Of some dread conjurer. Donne.

UNROY'AL, adj. Unpnncely ; not royal.

By the advice of his envious counsellors, he sent them with unroyal reproaches to Musidorus and Pyro- cles, as if they had done tsaiterously. Sidney.

UNRUFFLE, v. n.) To cease from commo-

UNRUF'FLED, adj. $ tion or agitation : calm ; tranquil.

Where'er he guides his finny coursers, The waves wirufl.e, and the sea subsides. Dryden.

Vent all thy passion, and I'll stand its shock Calm and unrujfied as a summer's sea. When, not a breath of wind flies o'er its surface

Addison.

UNRU'LED, adj. ^ Not directed by any su-

UNRU'LINESS, n. s. Sperior power: ungoverna-

UNRU'LY, adj. 3 hie : state of being un- governable.

The tongue is an unruly evil, full of deadly poison.

James iii.

The realm was left, like a ship in a storm, amidst all the raging surges, unruled and undirected of any.

Spenser.

By the negligence of some who were hardly to be commanded, and by the unrulineu of others who with- out leave were gone ashore, so fair an occasion of vic- tory was neglected. Knolles.

UNSAFE', adj.) Not secure ; hazardous ;

UNSAFELY',

If they would not be drawn to seem his adversaries, yet others should be taught how unsafe it was to con- tinue his friends. Hooker.

As no man can walk, so neither can he think, un- easily or unsafely, but in using, as his legs, so his thoughts, amiss ; which a virtuous man never doth.

Grew.

UNSAID', adj. Not uttered ; not mentioned.

Chanticleer shall wish his words unsaid. Dryden.

UNSALT'ED, adj. Not pickled or seasoned with salt.

The muriatick scurvy, induced by too great quantity of sea-salt, and

common among mariners, is cured by a diet of fresh uniaUed things, and watery liquor acidu- lated. Arbuihnot.

UNSALUT'ED, adj. Lat. insalutatus. Not sa- luted.

Gods ! I prate ;

And the most noble mother of the world Leave untainted. Shaktpeare.

UNSANCTIFIED, adj. Unholy ; not conse- crated ; not pious.

Her obsequies have been so far enlarged As we have warrantry ; her death was doubtful ; And, but that great Command o'erswaysthe order, She should in ground unianctijied have lodged Till the last trump. Sbahtpeare.

UNSATIABLE, adj. Lat. insatiabtlis. Not to be satisfied ; greedy without bounds.

Unsatiable in their longing to do all manner • f good to all the creatures of God, but especially men. Hooker.

UNSATISFACTORY, adj. t Not giving sa-

UNSATISFAC'TORINF.SS, n. s. i tisfaction : not clearing the difficulty : the noun substantive cor- responding.

That which most deters me from such tnals is their untatisfactorinen, though they should succeed. Boyle.

Latria to the cross, is point blank against the defini- tion of the council of Nice ; and it is an un$atirfactory answer to say, they only were against latria given to images for themselves. Stillingjket.

UNSATISFIED, adj. ~\ Not contented ; not

UNSAyisFiEDNESS, n.s. Vpltascd : state of being

UNSATISFYING, adj. J not pleased: not con- tenting.

Though he were unsatisfied in getting, Yet in bestowing he was most princely. Shahspeare.

Between my own umatiffifilneu in conscience and a necessity of satisfying the importunities of some, I was persuaded to choose rather what was safe, than what seemed just. h > "g Charles.

Nor is fame only unsatisfying in itself, but the desire of it lays us open to

many accidental troubles. Atldis.

UNSA'VORY, adj.) Tasteless; insipid;

UNSA'VORINESS, n s. \ having a bad taste : taste- lessness ; vileness of taste.

Can that which is unsavoury be eaten without salt? or is there any taste in the white of an egg? Job vi. 6.

Unsavoury news ; but how made he escape ? Sliaksp.

If we concede a national unsavouriness in any people, yet shall we find the Jews less subject hereto than any.

Browne.

UNSAY', v. a. To retract ; recant.

Call you me fair ? that fair again unsay ; •Demetrius loves you, fair. Shahspeare.

Say and unsay, feign, flatter, or abjure. Milton.

UNSCA'LY, adj. Having no scales.

The jointed lobster, and unscaly soale. Gay.

UNSCAR'RED, adj. Not marked with wounds.

And must she die for this ? O let her live : So she may live unscarred from bleeding slaughter, I will confess she was not Edward's daughter. Shaksp.

UNSCHOLAST1C, adj. { Not bred to litera-

UNSCHOOLED'. S tare or in the schools.

When the apostles were ordained to alter the laws of heathenish religion, they were, St. Paul excepted, un- schooled and unlettered men. Hooker

Notwithstanding these learned disputants, it was to the unscholastick statesmen that the world owed their peace and liberties. Locke.

UNSCORCHED', adj. Not touched by fire.

His hand, Not sensible of fire, remained unscorched. Sltaktpeare.

UNSCOURED', adj. Not cleaned by rubbing.

The' enrolled penalties,

Which have, like unsecured armour, hung by the' wall, And none of them been worn. Shahspeare

UNSCRATCHED', adj. Not torn.

I with much expedient march Have brought a counter-check before your gates, To save unscratclted your city's threatened cheeks.

Shakspeare.

UNSCREENED', adj. Not covered; not pro- tected.

Those balls of burnished brass, the tops of churches are adorned with, derive their glittering brightness from their being exposed, unscreened, to the sun's refulgent beams. Boyle.

UNSCRIPTURAL, adj. Not defensible by Scripture.

The doctrine delivered in my sermon was neither new nor untcriptural, nor in itself false. Atterbiiry.

UNSEAL', v. a. To open any thing sealed.

Your oaths Are words, and poor conditions but unsealed. Shaksp.

This new glare of light, Cast sudden on his face, unsealed his sight. Dryden.

UNSEAM', v. a. To rip ; cut open.

He ne'er shook hands, nor bid farewell to him, Till he unseamed him from the nape to the' chops, And fixed his head upon our battlements. Shahspeare.

UNSEARCH'ABLE, adj. & n. s. \ Inscruta-

UNSEARCH'ABLENESS, n. s. \ ble; not to

be explored : that which is so: state of being so.

The untearchableneii of God's ways should be a bridle to restrain presumption, and not a sanctuary for spirits of error. Bram

Jobdiscourseth of the secrets of nature, and unsturch- ablc perfections of the works of (iotl. Tilbhon,

It is a vast hindrance to the enrichment of our un- aerstandings, if we spend too much of our time among infinite: and unsearchable. Watts.*

UNSEASONED, adj. \ Untimely; ill

UNSEASONABLE, (timed. Out of use.

UNSEASONABLY, adv. £ Unseasonable is of

UNSEA'SONABLENESS, n. s. J similar signification, and the adverb and noun substantive correspond.

Is is then a very unseasonable time to plead law, when swords are in the hands of the vulgar. Spenser.

Some things it asketh unseasonably, when they need not to be prayed for ; as deliverance from thunder and tempest when no danger is nigh. Hooktr.

I think myself in a better plight for a lender than you are ; the which has something emboldened me to this unseasoned intrusion. Shalupeare.

The moral goodness, unfitness. and unseatonableness of moral or natural actions falls not within the verge of a brutal faculty. Hate's Origin of Mankind.

UNSEC'ONDED, adj. Not supported. Strange and unseconded shapes of worms succeeded.

Browne.

UNSE'CRET, v.a. .To disclose ; to divulge. He that consultcth what he should do, should not de- clare what he will do : but let princes beware .hat the unsecreting of their affairs comes not from themselves.

Kacon. UNSECURE', adj. Not safe.

Love, though most sure,

Vet always to itself seems unsecure. Denham.

UNSEDU'CED, adj. Not drawn to ill. Among innumerable false, unmoved,

Unshaken, unreduced, unterrified. Milton.

UNSEEM', v. n.

Not to seem. Not in

UNSEEM'LY, of;. &adv. >use. Unseemly means

UNSEEM'LINESS, n.s. J unbecoming; indecent: indecently ; unbecomingly : the noun substantive corresponds.

Charity doth not behave itself unseemly, seeketh not her own. 1 Cor. xiii. 5.

Adultery of the tongue, consisting in corrupt, dis- honest, and unseemly speeches. Perkins.

All as before his sight whom we fear, and whose presence to offend with any the least unseemliness we would be surely as loth as they who most reprehend or deride that we do. Hooker.

You wrong the reputation of your name, In so unseeming to confess receipt Of that which hath so faithfully been paid. Shakspeare.

Her gifts

Were such, as under government well seemed ; Unseemly to bear rule. Milton' Paradise Lost.*

I wish every unteemly idea and wanton expression had been banished from amongst them. Watts.

UNSEEN', adj. > Not seen ; not discovered ;

UNSEE'ING. $ not discoverable : unseeing is without vision.

T should have scratched out your unseeing eyes, To make my master out of love with thee. Sltakspeare.

Millions of spiritual creatures walk the earth Unseen, both when we wake, and when we sleep.

Milton.

UNSELF'JSH, adj. Not addicted to private interest.

The most interested cannot purpose any thing so much to their own

advantage, notwithstanding which the inclination is nevertheless unselfish. Spectator.

UNSENT, adj. Not sent ; unsenl for, not called by letter or messenger.

If a physician should go from house to house vnsent far, and enquire what woman hath a cancer, or what man a fistula, he would be as unwelcome as the- disease itself. Taylor.

Somewhat of weighty consequence brings you here so often, and untentfor. Dryden.

UNSEPARABLE, adj. (Not to be parted or

UNSEP'AIIATED. J divided: not parted.

Oh world, thy slippery turns ! Friends now fast

sworn,

Who twine as 'twere in love Unseparable, shall, within this hour, Break oat to bitterest enmity. Shakspeare.

There seek the Theban bard ; To whom Persephone entire and whole Gave to retain the' unseparated soul. Pope's Odyssey.

UNSERVICEABLE, adj.) Useless; bring-

UNSER'VICEABLY, adv. J ing no advantage or convenience : the adverb corresponding.

It can be no unteroiceuble design to religion, to unde- ceive men in so important a point. Rogers.

It does not enlarge the dimensions of the globe, or lie idly and unserviceably there. Woodward.

UNSET, adj. Not set ; not placed.

They urge that God left nothing in his word un- described, nothing uniet down ; and therefore charged them strictly to keep themselves to that without any alteration. Hooker.

UNSETTLE, v. a. ˆ To make uncertain or

UNSETTLED, adj. £ unfixed: unfixed: state

LTNSET/TLEDNESS,n. s. 3 of being unfixed.

David supposed that it could not stand wjth the duty which he owed unto God, to set himself in an house of cedar trees, and to behold the ark of the Lord's cove- nant unsettled. Hooker.

A solemn air, and the best comforter To an unsettled fancy, cure thy brains. Shaktpeare.

Unsettled virtue stormy may appear ; Honour, like mine, serenely is severe. Drydtn.

The unsettledtiess of my condition has hitherto put a stop to my thoughts concerning it. Id.

UNS EVER ED, adj. Not parted.

Their bands, though slack, no dissolution fear ; The untevered parts the greatest pressure bear ; Though loose, and fit to flow, they still cohere. Black.

UNSEX , v. a. To make otherwise than the sex commonly is.

All your spirits

That lead on mortal thoughts, vntex me here, And fill me, from the crown to the toe, top full Of direst cruelty. Shakspeare. Macbeth.

UNSHAD'OWED, adj. Not clouded; not darkened.

He alone sees all things with an unthadowed, com- prehensive vision,- who eminently is all. Glanville.

UNSHA'KEN, adj. \ Not agitated; not

UNSHA'KABLE. Amoved: not to be moved.

Your isle stands,

As Neptune's park, ribbed and paled in With rocks unshakeable, and roaring waters. Shaksp

I know but one

That unassailable holds on his rank, Unshaked of motion. Id. Julius Ctetar.

Ill thou wast shrouded then, O patient Son of God ! yet only stood'st

Unthakrn. Milton's Paradise Regained.

UNSHACK'LE, v. a. To loose from bonds.

A laudable freedom of thought unshackles their minds from the narrow prejudice of education, and opens their eyes to a more extensive view of the public good. Addison.*

UNSHAM'ED, adj. Not shamed.

The brave man seeks not popular applause ; I'nshamed, though foiled, he does the best he can : Force is of brutes, but honour is of man. Dryden.

UNSHAP'EN, adj. Mishapen ; deformed.

This unshapen earth we now inhabit, is the form it was found in when the waters had retired. Burnet.

UNSHAR'ED, adj. Not partaken ; not had in common.

*Bliss, as thou hast part, to me is bliss ; Tedious unthared with thee, and odious noon. Milton**

UNSHEATH', v. a. To draw from the scab- hard.

Executioner, unsheath thy sword. Shakupearc.

UNSHED', adj. Not spilt.

To blood unshed the rivers must be turned. Milton.

UNSHELTERED, adj. Wanting a screen; wanting protection.

He is breeding that worm, which will smite this gourd, and leave him unsheltered to that scorching wrath of God, which will make the improvement of Jonah's passionate wish, that God would take away his life, his most rational desire. Decay of Piety.

UNSHIELD'ED, adj. Not guarded by the shield.

He tried a tough, well-chosen spear ; Though Cygnus then did no defence

provide, But scornful offered his unshielded side. Dryden.

UNSHIP, v. a. To take out of a ship.*

At the Cape we landed for fresh water ; but, disco- vering a leak, we unshipped our goods, and watered there. Swift.

UNSHOCK'ED, adj. Not disgusted; not of- fended.

Thy spotless thoughts unthocked the priest may hear.

Tickell.

UNSHOD', adj. From unshoed. Having no shoes.

Withhold thy foot from being unshod. Jer. ii.

The king's army, naked and unshod, would, through those inclosed parts, have done them little harm.

Clarendon.

UNSHORN', adj. Not clipped.

This strength diffused

No less through all my sinews, joints, and bones, Than thine, while I preserved these locks unshorn, The pledge of my unviolated vow. Milton.

Straight as a line in beauteous order stood, Of oaks unshorn, a venerable wood. Dryden.

UNSHOT, part. adj. Not hit by shot.

He that on her his bold hand lays, With Cupid's pointed arrow plays ; They, with a touch, they are so keen, Wound as unshot, and she unseen. Waller:

UNSHOUT, v. a. To annihilate or retract a shout.

Umhout the noise that banished Marcius ; Repeal him, with the welcome of his mother. Shaksp.

UNSHOW'ERED, adj. Not watered by show- ers.

Nor is Osiris seen In Memphian grove or green, Trampling the unthowered grass with lowings loud.

Milton.

UNSHRINKING, adj. Not recoiling; not shunning danger or pain.

*Your son, my lord, has paid a soldier's debt, He only lived but till he was a man ; The which no sooner had his prowess confirmed *n the unshrinking station where he fought, But like a man he died. Shalai>eare. Macbeth.*

UNSHUNNABLE, adj. Inevitable.

Tit the plague of great ones, Prerogalived are they less than the base ; Tis destiny unshnnnablg like death. Shakspeare.

UNSIFTED, adj. Not parted by a sieve.

Affection ! puli ! you speak like a green girl, Unsifted in such perilous circumstances. Shuktpeare.

UNSIGHT, adj. ~\ Not seeing; a low

UNSIGHTED, (word, used only with

UNSICHI'I.Y, adj. /unseen : probably form-

UPSTI.II I'l IM ss, n. s. J ed by corruption of un- sighted, which means invisible: unsightly is disa- greeable to the sight : the noun substantive corre- t ponding.

On my knees 1 beg

That you'll vouchsafe me raiment, bed, and food. — Good Sir, no more : these are unsightly tricks. Shak.*

Beauties that from worth arise Are like the grace of deities, Still present with us, though unsighted. Suckling.

They'll say, our busiuess to reform The church and state, is but a worm For to subscribe, unsight, unseen, To an unknown church discipline. Hndibras.

The vnsightliness in the legs may be helped by wear- ing a laced stocking. Witeman's Surgery.

UNSINCERE', adj.) Latin iiisincerus. Not

UNSINCER'ITY, n. s. \ hearty ; not faithful ; not genuine : the noun substantive corresponds.

I have so often met with chymical preparations which I have found unsincere, that 1 dare scarce trust any. Boyle.

A spirit of sea-salt may, without any untincerity, be so prepared as to dissolve crude gold. Id.

Myrrha was joyed the welcome news to hear ; But, clogged with guilt, the joy was unsincere.

Dryden.

UNSIN'EW, v. a. To deprive of strength.

Nor are the nerves of his compacted strength Stretched and dissolved into vnsinewed length.

Denhum.

The affected purity of the French has unsinen-ed their heroick verse. Druden.

UNSING'ED, adj. Not scorched ; not touche'l by fire.

By the command of Domitian when cast into a caul- dron of burning oil, he came out nnsinged. Browne.

Three men passed through a fiery furnace, untouched unsinged. Stephen's Sermons.

UNSINK'ING, adj. Not sinking.

Auxur feels the cool refreshing breeze Blown off the sea, and all the dewy strand Lies covered with a smooth, unsinkiny sand. Addison.

UNSIN'NING, adj. • Impeccable.

A perfect unsinning obedience, free from particular acts of transgresssion. Rogers.

UNSKAN'NED, adj. Not measured; not com- puted.

This tiger-footed rage when it shall find The harm of unshanned swiftness, will, too late, Tie leaden pounds to 's heels. Shakspeare.

UNSKIL'LED, adj. \ Wanting skill ; want

UNSKIL'FUL, \}n% knowledge : with

UNSKIL'FULLY, adv. tin before a noun, and

UNSKIL'FULNESS, n. s. J to before a verb : un- skilful is wanting art or knowledge : the adverb and noun substantive corresponding.

The sweetness of her countenance did give such a grace to what she did, that it did make handsome the unhandsomeness, and make the eye force the mind to believe that there was a praise in that unskilfullnett.

Sidney.

This overdone, or come tardy off, though it make the umkilful laugh, cannot but make the judicious grieve.

Shaksjieare.

You speak unskilfully ; or, if your knowledge bo more, it is much darkened in your malice. Id

Unskilled in hellebore, if them shouldst try To mix it, and mistake the quantity, The rules of physick would against thee cry. Dryden.

UNSLAIN', adj. Not killed.

If there were any who felt a pity of so great a fall, and had yet any sparks of unslain duty left in them towards me, yet durst they not shew it. Sidney.

UNSLAK'ED,flrf/. Not quenched.

Her desires new roused, And yet unslaked, will kindle in her fancy, And make her eager to renew the feast. Dryden.

Wheat steeped in brine, drawing the brine from it. they mix with unslached lime beat to powder, and so •OW it. Mortimer.

UNSLEEPING, adj. Ever wakeful.

And roseate dews disposed All but the unsleeping eyes of God to rest. Milion.

UNSMIRCH'ED, adj. Unpolluted ; not stained.

That drop of blood that's calm proclaims me bas- tard ;

Cries cuckold to my father ; brands the harlot Even here, between the chaste and unsmirchtd brow Of my true mother. Shakspeare. HamUt.

UNSMOK'ED, adj. Not smoked.

His antient pipe in sable died, And half unsmoked, lay by his side. Swift.

UNSMOOTH', adj. Rough; not even; not level. Not used.

Those blossoms, and those drooping gums That he bestrown, unsightly, zndnuirmooth, Ask riddance, if we mean to tread with ease. Wilton

UNSO'CIABLE, adj. { Lat. insociabilis. Not

UNSO'CIABLY, adv. J kind ; not suitable to society : the adverb corresponding.

By how much the more we are accompanied with plenty, by so much the more greedily is our end desired, whom, when time hath made unsociable to others, we become a burden to ourselves. Raleigh.

These are pleased with nothing that is not unsociable sour, ill-natured, and troublesome. L'Estrange.

UNSOIL'ED, adj. Not polluted ; not tainted ; not stained.

The humours are transparent, to let in the light, un- •oiled and unsophisticated by any inward tincture.

Ray.

UNSOLD', adj. Not exchanged for money

Mopsus the sage, who future things foretold ; And t' other seer, yet by his wife unsold. Dryden.

Adieu, my children ! better thus expire Unstalled, untold; thus glorious mount in fire. Pope.

UNSOL'DIERLIKE, adj. Unbecoming a sol- dier.

Perhaps they had sentinels waking while they slept ; but even this would be unsoldierlihe in our age.

Broome.

UNSOL'ID, adj. Fluid ; not coherent.

The extension of body is nothing but the cohesion of solid, separable, move able parts : and the extension of space, the continuity of umolid, inseparable, and un- moveahle parts. Locke.

I N SOLVED, adj. Not explicated.

Why may not a sincere searcher of truth, by labour and prayer, find out the solution of those perplexities which have hitherto been unsolved ? Watts.

UNSOPHISTICATED, adj. Not adulterated ; not counterfeit.

If authors will not keep close to truth by unvaried terms, and plain, unsophiiticated arguments ; yet it con- cerns readers not to be imposed on by fallacies. Locke.

I N SORTED, adj. Not distributed by proper separation.

Their ideas, ever indifferent and repugnant, lie in the brain unsorted, and thrown together without order.

Watts.

UNSOUGHT, adj. Had without seeking ; not explored.

Mad man, that does seek Occasion of wrath, and cause of strife, She comes unsought, and shunned follows eke. Spenser.

Hopeless to find, yet loth to leave unsought, Or that, or any place that harbours men. Shakspeare.

Her virtue, and the conscience of her worth, That would be woo'd, and not untaught be won.

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UNSOUND', adj. ^ Sickly : wanting health;

UNSOUXD'EU, >not true; not solid; not

UN SOUND' \ ESS, n. s. j orthodox ; unsounded it

untried ; not tried by the plummet : unsoundness

corresponds with unsound.

Their vain humours, fed With fruitless follies and unsound delights. Spenser.

If this be uiituund, wherein doth the point of un- soundnen lie? Hooker.

Glo'ster is Uniounded yet, and full of deep deceit. Shaktpeare.

Intemperate youth

Ends in an age imperfect, and unsound. Dunham. UNSOU R'ED, adj. Not made sour. Meat and drink last longer unputrified and unsoured in winter than in summer. Bacon.

Secure these golden early joys. That youth unsoured with sorrow bears. Dryden.

UNSOWN', adj. Not propagated by scattering seed.

Mushrooms come up hastily in a night, and yet are wisown. Bacon.

The flowers unsairn in fields and meadows reigned. And western winds immortal spring maintained.

Drydeii.

UNSPAR'ED, adj. ˆ Not spared : not spar- UNSPAR'IXG. J ing.

Whatever thing The scythe of time mows down, devour untpared.

Milton.

She gathers tribute large, and on the board Heaps with untparittf/ hand. Id.

UNSPEAK', v.a. ˆ To retract; recant: un- UNSPEAK'ABLE, adj. >speakable is not to be UNSPEAK'ABLY, adv. j told or uttered : the adverb corresponding.

A thing, which uttered with true devotion and zeal of heart, afforded) to God himself that glory, that aid to the weakest sort of men, to the most perfect that solid comfort, which is unspeakable. Hooker.

I put myself to thy direction, and Unspeak mine own detraction ; here abjure The taints and blames I laid upon myself. Shaktpeare. When nature is in her dissolution, and presents us with nothing but bleak and barren prospects, there is something unspeakably chearfu) in a spot of ground which is covered with trees, that smile amidst all the rigours of winter.

Spectator.

UNSPE'CIFIED, adj. Not particularly men- tioned.

Were it not requisite that it should be concealed, it had not passed unspecified. Brcncne.

UNSPEC'ULATIVE, adj. Not theoretical. Some unspeculatice men may not have the skill to ex- amine their assertions. Government of the Tongue. UNSPED% adj. Not despatched; not per- formed.

Venutus withdraws Unsped the service of the common cause. Garth

UNSPENT, adj. Not wasted ; not diminished ; not weakened ; not exhausted.

The sound, inclosed within the sides of the bell cometh forth at the holes unspent and more strong.

Bacon.

UNSPHERE', v. a. To remove from its orb You put me off with limber vows ; but I, Though you would seek t' unsphere the stars with oaths. Should yet say, Sir, no going. Shakspeare.

Unsiihere

The spirit of Plato, to unfold What worlds or what vast regions hold The immortal mind. Jfiitom.

UNSPIED', adj. Not searched ; not explored. With narrow search I must walk round This garden, and no corner leave urupied. IfliUon.

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UNSPILT, adj. Not shed.

That blood which thou and thy great grandsire shed, And all that since these sister nations bled, Had been unsjnlt, had happy Edward known, That all the blood he spilt had been his own. Denham.

UNSPI KIT, v. a. To dispirit ; depress, deject.

Denmark has continued ever since weak and unsjn- rited, bent only upon safety. Temple.

Could it be in the power of any temporal loss, so much to discompose and unspirit my soul 1 Norris.

UNSPOIL'ED, adj. Not plundered or pil- laged.

All the way that they fled, for very despight, in their return they utterly wasted whatsoever they had before left unspoiled. Spenser's Slate of Ireland.

Bathurst, yet unspoiled by wealth. Pope.

UNSPOTTED, adj. Not marked with stain or spot.

Pure religion and undenled is this, to visit the father- less and widows in their affliction, and to keep himself unspotted from the world. James i. 27.

A heart unspotted is not easily daunted. Shaksp.

Vindicate the honour of religion, by a pure and ««- spatted obedience to its precepts. Rogers.

UNSQUAR'ED, adj. Not formed ; irregular.

When he speaks,

Tis like a chime a-rnending, with terms unsquared, Which, from the tongue of roaring Typhon dropt, Would seem hyperboles. Shakspeare.

UNST, the most northern of the Shetland Isles, constituting a parish. It is of an irregu- lar oblong figure, twelve miles long, and four broad. The surface is hilly. The chief hill is Vallafield, which extends the whole length of the island along its west coast. Crossfield crosses it in the middle. The soil is fertile, though the culture is bad. Fine rock crystals are found in it, also jaspers and topazes. Large caves are in it 300 feet under ground.

UNSTA'BLE, adj. Lat. instabilis. Not fixed ; not fast.

A double-minded man is unstable in all his ways.

Jama i. 8.

A popular state, not founded on the general interests of the people, is of all

others the most uncertain, un- stable, and subject to the most easy changes. Temple.

UNSTAID', adj.) Not cool ; not prudent ;

UNSTAID'NESS, n.s. J not settled into discretion: the noun substantive corresponding.

Wo to that land, Which gasps beneath a child's unstaid command !

Sandy t.

The oft changing of his colour, with a kind of shak- ing unstaidneis over all his body, he might see in his countenance some great determination mixed with fear.

SUMjf,

UNSTAIN'ED, adj. Not stained ; not dyed ; not dishonoured.

Pure and unstained religion ought to be the highest of all cares appertaining to publick regimen. Hooker.

I will do it without fear or doubt, To live an unstained wife to my sweet love. Shaksp. Her people guiltless, and her fields unstained.

Roscommon . UNSTATE', v. a. To put out of dignity.

High-battled Csesar will

(Instate his happiness, and be staged to the shew Against a sworder. Shakspeare.

I would unstate myself, to be in a due resolution.

Id.

UNSTATUTABLE, adj. Contrary to statute. That plea did not avail, although the lea»e were no- toriously unstatutable, the rent reserved being not a seventh part of the real value. Swift.

UNSTAUNCH'ED, adj. Not stopped; not stayed.

With the issuing blood Stifle the villain, whose unstaunched thirst York and young Rutland could not satisfy. Shakro.

UNSTEADTAST, adj. Not fixed; not fast, not resolute.

I'll read you matter, As full of peril and advent'rous spirit, As to o'erwalk a current, roaring loud, On the unsteadfast footing of a spear. Sliakspeare.

UNSTEAD'Y, adj. ˆ Inconstant ; irresolute :

UNSTEADILY, adv. >the adverb and noun sub-

UNSTEAD'INESS, n. s. j stantive corresponding.

And her unsteady hand hath often placed Men in high power, but seldom holds them fast.

Denham.

He that uses his words loosely and unsteadily will not be minded, or not understood. Locke.

A prince of this character will instruct us, by his example, to fix the unsteadiness of our politicks.

Addison.

UNSTEEP'ED, adj. Not soaked.

Other wheat was sown unsteeped, but watered twice a day. Bacon's Natural History.

UNSTING', v. a. To disarm of a sting.

He has disarmed his afflictions, unstiing his miseries ; and, though he has not the proper happiness of the world, yet he has the greatest that is to be enjoyed in it. South' Sermons.*

UNSTINTED, adj. Not limited.

In the works of nature is unstinted goodness shewn us by their Author. Skelttm.

UNSTIR'RED, adj. Not stirred ; not agitated.

Such seeming milks suffered to stand unstirred, let fall to the bottom a resinous substance. Boyle.

UNSTITCH', v. a. To open by picking the stitches.

Cato well observes, though in the phrase of a taylor, friendship ought not to be unripped, but unstitched.

Collier.

UNSTOOPING, adj. Not bending; not yielding.

Such neighbour nearness to our sacred blood Should nothing privilege him, nor partial ize The unstooping firmness of my upright soul. Shakip.

UNSTOP, v. a. To free from stop or obstruc- tion ; to open.

The eyes of the blind shall be opened, and the ears of the deaf unstopped. Isaiah xxxv. 5.

Such white fumes have been afforded, by unstopping a liquor diaphanous and red. Boyle.

UNSTRAIN'ED, adj. Easy ; not forced.

By an easy and unstrained derivation, it implies the breath of God. Hahewill on Providence.

UNSTRAITENED, adj. Not contracted.

The eternal wisdom, from which we derive our beings, enriched us with all these ennoblements that were suitable to the measures of an unstraiirned goodness, and the capacity of such a creature. G lam Me.

UNSTRENGTH'ENED, adj. Not supported ; not assisted.

The church of God is neither of capacity so weak, nor so unstrengthened with authority from above, but that her laws may exact obedience at the hands of her own children. Hooker.

UNSTRING', v. a. To relax any thing strung; to deprive of strings.

My tongue's use is to me no more Than an unstringed viol or harp. Shakspeare.

His idle horn on fragrant myrtles hung ; His arrows scattered, and his bow unstrung. Smith.

UNSTRUCK', adj. Not moved ; not affected.

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Over dank and dry,

They journey toilsome, unfatigued with length Of march, unttrvck with horror «t the sight Of Alpine ridges bleak. Philips.

UN STUDIED, adj. Not premeditated; not labored.

In your conversation I could observe a clearness of notion expressed in ready and unstudied words.

Dryden.

UNSTUFF'ED, adj. Unfilled ; not crowded.

Care keeps his watch in every old man's eye ; And, where care lodgeth, sleep will never lie; But, where unbruised youth with unttuft brain Doth couch his limbs, there golden sleep doth reign.

Shakspeare.

UNSUBSTANTIAL, adj. Not solid ; not pal- pable or real.

Welcome, thou unsubstantial air that I embrace !

Shaktpeare.

If empty unsubstantial beings may be ever made use of on this occasion, there were never any more nicely imagined and employed. Adiiumi.

1T.\SUCCEED'ED, adj. Not succeeded.

Unjust equal o'er equals to let reign ; One over all, with unmcceeded power. Hilton.

UNSUCCESSFUL, adj.^ Not having the

UNSUCCESSFULLY, adv. > wished event; not

UKSUCCESS'IVE, adj. 3 fortunate: the adverb corresponding : unsuccessive is not proceeding by regular flux.

Oh the sad fate of unsuccessful sin! You see yon heads without : there's worse within.

Cleaveland.

Admonitions, fraternal or paternal, then more pub- lick reprehensions, and, upon the unsuccessfulness of all these milder mendicaments, the censures of the church.

Hammond.

My counsels may.be unsuccessful, but my prayers Shall wait on all your actions. Denham.

We cannot sum up the unsuccessive and stable direc- tion of God. Browne.

UNSUCK'ED, adj. Not having the breasts drawn.

Unsucked of lamb or kid, that tend their play. Ma.*

UNSUF'FERABLE, adj. Not supportable ; not to be endured.

The irksome deformities, whereby, through endless and senseless effusions of indigested prayers, they often- times disgrace, in most unsufferable manner, the worthi- est part of Christian duty towards God. Hooker. That glorious form, that light unsufferable. Milton.

UNSUFFI'CIENCE, n. s. } Fr. insuffisance.

UNSUFFI'CIEXT, adj. $ Inability to answer

the end proposed : the adjective corresponding.

The error and unmjfirience of the arguments doth make it on the contrary side against them. Hooker.

Malebranche having shewed the difficulties of the other ways, and how unsuffcient they are to give a sa- tisfactory account of the ideas we have, erects this, of seeing all things in God, upon their ruin, as the true.

Locke.

UNSUG'ARED, adj. Not sweetened with sugar.

Try it with sugar put into water formerly sugared, and into other water untugared. Bacon.

UNSUITABLE, adj. ˆ Not congruous; not

UNSUIT'ABLENESS, n. s. J- equal; not proportion-

UNSUIT'ING, adj.) ate : the noun substan-

tive corresponding: unsuiting is not fitting or be- coming.

Virginity, like an old courtier, wears her cap out of fashion ; richly suited, but unsuitable, just like the brooch and the toothpick, which we wear not now.

Hard recompence, unsuitable return For so much good. Miltim.

The unsuitablcness of one man's aspect to another man's fancy has raised such an aversion, as has ˆin- duced a perfect hatred of him. South.

Leave thy joys, unsuiting such an age, To a fresh comer, and resign the stage. Dryden.

UNSUL'LIED, adj. Not fouled; not disgraced; pure.

My maiden honour yet is pure As the unsullied liilv. Shaktpeare.

To royal authority a most dutiful observance has ever been the proper, unsullied honour of your church. Sprat.

UNSUNG', adj. Not celebrated in verse; not recited in verse.

Thus was the first day even and morn. Nor passed uncelebrated nor unsung By the celestial choirs. Milton.

There is a liberty Unsung by poets and by senators unpraised. Cowpcr.

UNSUNNED', adj. No. exposed to the sun.

I thought her as chaste as unsunned snow. Sliaiun.

UNSUPER'FLUOUS, adj. Not more than enough.

Nature's full blessings would be well dispensed In untuperfluous, even proportion, And she no whit encumbered with her store. Milton.

UNSUPPLANTED, adj. Not forced or throw n from under that which supports it.

Gladsome they quaff, yet not encroach on night. Season of rest ; but well bedewed repair Each to his home with unsupplanted feet. Philipt.

UNSUPPLIED', adj. Not supplied ; not ac- commodated with something necessary.

Prodigal in every other grant, Her sire left unsupplied her only want. Dryden.

UNSUPPORTED, adj. j Not sustained ; not

UNSUPPORT'ABLE, > held up : intolerable :

UNSUPPORT'ABLY, adv. j the adverb corre- sponding.

Them she upstays

Gently with myrtle band ; mindless the while Herself, though fairest unsupported flower. Miltmi.

The uneasiness of unrelieved thirst by continuance grows the more unsupportable. B'-yie.

For a man to do a thing, while his conscience assures him that he shall be infinitely, unsupportably miserable, is certainly unnatural. Sotttli.

UNSURE, adj. Not fixed ; not certain.

The men he pressed but late To hard assays unfit, unsure at need, Yet armed to point in well attempted plate. Fairfa.r.

The king, supposing his estate to be most safe, when indeed most unsure, advanced many to new honours.

Hauward.

UNSURMOUNTABLE, adj. Fr. msurmont- able. Insuperable ; not to be overcome.

What safety is it, for avoiding seeming absurdities, and unsvrmountable rubs, in one opinion, to take refuge in the contrary, which is built on something altogether as inexplicaole 1 Locke.

UNSUSCEPTIBLE, ad;. Incapable; i lia- ble to admit.

She, a goddess died in grain, Was unsusceptible of stain. Sirtjt.

UNSUSPECT, adj.) Not considered as likely

UNSCSPECT'ED, >to do or mean ill : unsus-

UXSUSPECT'ING. J pecting is not suspicious.

Here is the head of that ignoble traitor, The dangerous and unnupected Hastings. Shakspeare.

Author unnspect Friendly to man, far from deceit or guile. Milton.

When Albion sends her eager sons to war, Pleased, in the general's sight, the host lie down Sudden before some unsuspecting town. JVw.

UNSUSPI'CIOUS, adj. Having no suspicion

The easy queen received my faint address With eager hope and unsuspicious faith. Smith.

UNSUSTAINED', adj. Not supported; not held up.

Its head, though gay, Hang drooping, unsuttained. Milton.

All maintained between the wave and sky, Beneath my feet the whirling

billows fly. Pope .

UNSWATHE', v. a. To free from folds or con- volutions of bandage.

In the morning an old woman came to unsvathe me.

Addison.

UNSWAY'ABLE, adj. \ Not to be governed UNSWAYED. i or influenced by an-

other : not wielded.

He bowed his nature, never known before But to be rough, unsu-ayable, and free. Shaktpeare.

Is the chair empty 1 is the sword unntayed ? Is the king dead I the empire unpossessed 1 Id.

UNSWEAR', v. n. Not to swear ; recant. The ape was glad to end the strife so light, And thereto swore ; for who would not oft swear, . And oft wincear, a diadem to bear ? Spenser.

UNSV/EAT, v. a.) To ease after fatigue; UXSWEAT'ING, adj. \ cool : not sweating. The interim of unsweating themselves regularly, and convenient rest before meat, may, with profit and de- light, be taken up with solemn musick. Milton.

In frost and snow, if you complain of heat. They rub the unnoeating brow, and swear they sweat.

Dryden.

UNSWEET, adj. Not sweet; disagreeable.

Long were to tell the troublous storms that toss

The private state, and make the life unsweet. Spenser.

UNSWEPT, adj. Not brushed away; not cleaned by sweeping.

What custom wills in all things, should we do't,

The dust of antique time would lie unsu-ept. Shaksp.

UNSWORN', adj. Not bound by an oalh.

You are yet vnncorn ;

When you have vowed, you must not speak with men. UNTAINTED, adj. Not sullied ; not polluted. Sweet prince, the' untainted virtue of your years Hath not yet dived into the world's deceit. Shak$peare. Ireland's untainted loyalty remained. Roscommon. UNTAK'EN, adj. Not taken. Until this day remaineth the vail untaken away.

2 Cor. iii.

The English searched the rivers in such sort, as they left few ships unspoiled or untaken. Hayward.

UNTALK'ED OF, adj. Not mentioned in the world.

No happiness can be, where is no rest ; The' unknown, untalked of man is only blest. Dryd. UNTAM'ED, adj.) Not subdued; not sup- UNTAME'ABLF.. 5 pressed; not softened by culture : not to be subdued.

A people \ciy stubborn and untamed ; or, if ever tamed, yet lately have quite shooken off their yoke, and broken the bonds of their obedience. Spenter.

He is swifter than any other bull, and untameable.

Grew.

UNTAN'GLE, v. a. To loose from intricacy or convolution.

Ill give thee up my bow and dart ; Untangle but this cruel chain,

And freely let me fly again. Prior.

UNTASTED, adj. (Not tasted ; not tried by UMTAST'ING. • J the palate : not perceiving any taste.

Cydonian oil,

Whotc balmy juice glides o'er the' untatting tongue.

Smith.

UNT

If he chance to find A new repast, or an untaited spring, Blesses his stars, and thinks it luxury. Additt.*

UNTEAC H', v. a. } To make to quit or forget USTEACH'ABLE, not to be taught: not ac-

tually taught or cultivated.

That elder-berries are poison, as we are taught by tradition, experience will unteach us. Broirnr.

Taught, or untaught, the dunce is still the same ; Yet still the wretched master beais the blame. Dryd.

UNTEM'PERED, adj. Not tempered.

One built up a wall, and others daubed it with «»»- tempered mortar. Ezekiel xiii. 10.

UNTEMPT'ED, adj. Not embarrassed by temptation.

In temptation dispute not, but rely upon God ; and contend not with him but in prayer, and with the help of a prudent untempted guide. Taylor.

UNTEN'ABLE, adj. Not to be held in posses- sion ; not capable of- defence.

He produced a warrant, that, the town being untena- ble, he should retire. Clarendon.

UNTEN'ANTED, adj. Having no tenant.

The country seems to be full stocked with cattle, no ground being untenanted. Temple.

UNTEND'ED, adj. Not having any attendance.

They fall unblest, untended, and unmourned.

Thomson.

UNTEN'DER, adj. Wanting softness ; wanting affection.

So young, and so untender? — So young, my lord, and true. Shakspeare.

UNTEN'DER ED, adj. Not offered.

Cassibelan granted Rome a tribute, Yearly three thousand pounds ; which by thee lately Is left vntendered. Shakspeare. Ci/mbeline.

UNTENT, v. a. To bring out of a tent. Will he not, upon our fair request,

Untettt his person, and share the air with us!

Stiaktpeare.

UNTENT'ED, adj. From tent. Having no medicaments applied.

Blasts and fogs upon thee ! The' vntented woundings of a father's curse Pierce every sense about thee ! Shakspeare.

UNTER'RIFIED, adj. Not affrighted; not struck with fear.

To succour the distrest ; Unbribed by love, unterrifitd by threats ; These are exploits worthy Achilles' son. A. Philips.

UNTERWALDEN, a small canton in the centre of Switzerland, to the east of Bern, and south of Lucerne. It contains only 300 square miles, with 22,000 inhabitants ; and consists of four valleys covered with meadows and pasture lands, and sur- rounded by lofty mountains, which form part of the Alps, rising to various heights, from 3000 to 10,000 feet : two cf these, the Tilths and Surenes, are covered with glaciers and perpetual snow. In other parts, lakes, rocks, and caverns, are the characteristics of this romantic country. The can- ton is divided into two parts by an extensive forest ; and its chief towns, or rather villages, are Sarnen and Stanz. The eastern part has a favorable exposure, a mild temperature, and excellent pastures. The exports consist of cattle, hides, cheese, butter, tallow ; the imports of corn, wine, and manufac- tures.

UNTHANK'ED, adj. \ Not repaid with ac

UNTHANK'FI L, ˆknowledgmentof kind-

UNTHANK'FfLLY.adv. t ness : ungrateful: the

UNTHANK'FULNEbS,n.s. 3 adverb and noun sub- stantive corresponding.

The casting away of things profitable for sustenance is an unthankful abuse of the fruits. Hooker.

Immoderate favours breed first unthankfulnets, and afterwards hate. Hayward.

If all the world

Should in a pet of temperance feed on pulse, Drink the clear stream, and nothing wear but freeze, The' All-giver would be unthanked, would be unpraised.

Milton.

I judged it requisite to say something, to prevent my being thought to have unthankfully taken one of the chief passages of my discourse from a book to which I was utterly a stranger. Boyle.

Forced from her presence, and condemned to live : Unwelcome freedom, and unthanked reprieve. Dryden.

The unthankful stand reckoned among the most enor- mous sinners ; which evinces the virtue opposite to un- thankfulnest to bear the same place in the rank of duties.

South.

UNTHAW'ED, adj. Not dissolved after frost.

Your wine locked up, Or fish denied, the river yet unthawed. Pope.

UNTHINK', v.a. \ To recal or dismiss a

UNTHIXK'ING, adj. } thought: unthinking is, thoughtless ; unreflecting.

Unthink your speaking, and say so no more. Shakt] >.

Gray-headed infant, and in vain grown old ! Art thou to learn, that in another's gold Lie charms resistless! that all laugh to find Unthinking plainness so o'erspread thy mind. Creech.

UNTHOR'N Y, adj. Not obstructed by prickles.

It were some extenuation of the curse, if in sudore vultus tui were confinable unto corporal exercitations, and there still remained a paradise, or unthorny place of knowledge. Browne.

UNTHREAD', v. a. To loose.

He with his bare wand can unthread thy joints, And crumble all thy sinews. Milton.

UNTHREAT'ENED, adj. Not menaced.

Sir John Hotham was unreproached, and unthreatened, by any language of mine. King Charles.

UNTHRIFT', n. s. & adj. \ An extravagant ; a

UNTHRIFT'Y, adj. £ prodigal. Obsolete.

UNTHRIFT'ISESS, n.s.) The adjective means, as well as unthrifty, profuse; wasteful; prodigal: and the noun substantive corresponds.

The castle I found of good strength, having a great mote round about it , the work of a noble gentleman, of whose unthrifty son he had bought it. Sidney.

My rights and royalties

Pluckt from my arms perforce, and given away To upstart unthrifts. Shakspeare.

In such a night

Did Jessica steal from the wealthy Jew, And, with an unthrift love, did run from Venice. Id.

The third sort are the poor by idleness or unthrifti- iitfs, as riotous spenders, vagabonds, loiterers.

Hayicard.

Our attainments cannot be overlarge, and yet we manage a narrow fortune very unthriftity. Collier.

UNTHRIV'ING, adj. Not thriving; not pros- pering.

Let all who thus unhappily employ their inventive faculty, consider how unthriving a trade it is finally like to prove ; that their false accusations of others will rebound in true ones on themselves.

Government of the Tongue.

I NTH RONE', v.a. To pull down from a throne.

Him to unthrone we then May hope, when everlasting fate shall yield To fickle chance, and chaos judge the strife. Miltcn.

UNTIE', v.a. To unbind ; free from bond.*

Though you untie the winds, and let them fight Against the churches ; though the yesty waves Confound and swallow navigation up. Shaktpeare.

All the evils of an untied tongue we put upon the ac- counts of drunkenness. Taylor.

Her hair

Untied, and, ignorant of artful aid, Adown her shoulders loosely lay displayed. Prior

UNTIL', adv. & prep. To the time or place that : to.

The sceptre shall not depart from Judah, nor a law- giver from between his feet, until Shiloh come.

Genetit xlix. 10.

His sons were priests of the tribe of Dan until the day of the captivity. Judge.*

So soon as he from far descried Those glistering arms, that heaven with light did fill, He roused himself full blithe, and hastened them until.

Spenser.

Treasons are acted

As soon as thought ; though they are never believed Until they come to act. Denham.

In open prospect nothing bounds our eye, Until the earth seems joined unto the sky. Dryden.

UNTILL'ED, adj. Not cultivated.

Lands lain long unfilled contract a sour juice, which causes the land to run to unprofitable trumpery.

Mortimer.

The soil untilled a ready harvest yields ; With wheat and barley wave the golden fields. Pope.

UNTIM'BERED, adj. Not furnished with tim ber; weak.

Where 's then the saucy boat, Whose weak untimbered sides but even now

Co-rivalled greatness 1 or to harbour fled, Or made a toast for Neptune ? Shaktpeare.

UNTIME'LY, adj. & adv. Happening before the natural time : before that time.

He only fair, and what he fair hath made ; All other fair, like flowers, untimely fade. Spenser.

Boundless intemperance hath been The' untimely emptying of the happy throne. Shaktp.

Matrons and maids With tears lament the knight's untimely fate. Dryden

Such were the notes thy once-loved poet sung, Till death untimely stopped his tuneful tongue, Oh just beheld and lost ! Pope.

UNTING'ED,a$. Not stained; not discolored.

It appears what beams are untinged, and which paint the primary or secondary iris. Boule on Colours.

Your inattention I cannot pardon ; Pope has the same defect, neither is Bolingbroke untinged with it.

Sir;> > to Cay.

UNTIR'ED, adj. \ Not made weary : inde-

UNTIR'ABLE. J fatigable.

A most incomparable man, breathed as it were To an untirable and continuate goodness. Shakspeart.

See great Marcellus ! how untired in toils He moves with manly grace, how rich with regal spoils !

Dryden.

UNTITLED, adj. Un and title. Having no title.

O nation miserable !

With an tin titled tyrant, bloody sceptered ; When shall thou see thy wholesome days again?

Shakspeare.

UNTO, prep. It was the old word for to ; now obsolete. To. See To.

O continue thy loving kindness untt> them!

J'.-u/m xxxvi.

U\T

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UNT

She, oy aer wicked arts and wi.y skill. Unwares me wrought unto her wicked will. Spenser.

It was their heart untruly to attribute such great power unto false gods. Hooker.

TOLD', adj. Not related.

Better a thousand such as I, Their grief untold, should pine and die ; Than her bright morning, overcast With sullen clouds, should be defaced. Waller.

Obscene words are very indecent to be heard : for that reason, such a tale shall be left untoil by me.

Dry den.

UNTOUCH'ED, adj. Not touched ; not reached or affected.

They, like persons wholly untouched with his agonies, and amoved with his passionate entreaties, sleep away all concern for him or themselves. Sidney.

Achilles, though dipt in Styx, yet, having his heel untouched by that water, was slain in that part.

Browne's Vulgar Erronrs.

Three men passed through a fiery furnace untouched, unsinged. Stephen's Sermons.

UNTOW'ARD, adj. > Froward ; perverse ;

UNTOW'AIIDLV, adj. &, adv. S vexatious; not easily guided, or taught : the adjective and adverb corres- pond.

Have to my window ; and, if she be froward, Then hast thou taught

Hortensio to be uniou-ard.

ShoJupeare.

The ladies prove adverse, And more untotcard to be won, Than by Caligula the moon. Hudibras.

He that provides for this short life, but takes no care for eternity, acts as untmcardly and as crossly to the reason of things as can be. Tillotson.

He explained them very untowardly. Id.

They learn from unbred or debauched servants, un- tou-ardly tricks and vices. Locke on Education.

UNTRACED', adj. { Not marked by any foot-

UXTRACE'ABLE. $ steps: not to be traced.

Nor wonder if, advantaged in my flight By taking wing from thy auspicious height, Through untraced wavs and airy paths I fly, More boundless in my fancy than my eye. Denham.

The workings of Providence are secret and uiitrace- able, by which it disposes of the lives of men.

South's Sermons.

UNTRACTABLE, adj. 1 Fr. inimitable ; Lat.

UNTRACYABLEXESS, n.s. } intractabilis. Not yielding to common measures and management ; not governable : the noun substantive corresponding.

I forced to ride the untractahle abyss. Milton.

If any father have a son thus perverse and untract- able, 1 know not what more he can do but pray for him.

Locke.

The great difference in men's intellectuals arises from a defect in the organs of the body particularly adapted to think ; or in the dulness or untractabtenest of those faculties, for want of use. Id.

UNTRAD'ING, adj. Not engaged in com- merce.

Men leave estates to their children in land, as not so liable to casualties as money in untrading and unskilful hands. Locke

TRAINED, adj. Not educated; not dis- ciplined.*

My wit untrained in any kind of art. SftaJupfare.

The king's forces charged lively, and they again as stoutly received the charge ; but being an untrained multitude, without any soldier or guide, they were soon put to flight. Hauward.

NTRANSFERHABLB, adj. Incapable of oeing given from one to another. In parliament there is a rare co-ordination of power,

though the sovereignty remain still entire and unfraru- ferrable in the prince. Hovxl.

UNTRANSPA'RENT, adj. Not diaphanous; opaque.

Though held against the light, they appeared of a transparent yellow; yet, looked on with one's back turned to the light, they exhibited an untrantparent blue. B<)ijle on Colours.

UNTRAY'ELLED, adj. Never trodden by pas- sengers ; having never travelled.

We find no open track or constant manuduction in this labyrinth, but are ofttimes fain to wander in Ame- rica and untraeelled parts. Browne.

An untmvelled Englishman cannot relish all the beau- ties of Italian pictures ; because the postures expressed in them are often such as are peculiar to that country.

Addiwil.

UNTREAD', v. a. } To tread back; to go

UNTROD', adj. > back in the same steps : not

UNTROD'DEN. J passed or trodden.

We will untread the steps of damned flight. And, like a bated and retired flood, Leaving our rankness and irregular course, Stoop low within those bounds we have o'erlooked.

Shakfptare.

The way he came not having marked; return Was difficult, by human steps untrod. Stilton.

A garland made of such new bays, And sought in such untrodden ways, As no man's temples e'er did crown. Waller.

UNTREA'SURED, adj. Not laid up ; not re- posited.

Her attendants

Saw her a-bed, and in the morning early They found the bed untreasured of their mistress.

Shaktpeare.

UNTREATABLE, adj. Not treatable; not practicable.

Men are of so untreatable a temper, that nothing can be obtained of them. Decay of Piety.

UNTRI'ED, adj. Not yet attempted or expe- rienced.

That she no ways nor means may leave untried, Thus to her sister she herself applied. Denham.

Never more

Mean I to try, what rash untried I sought, The pain of absence from thy sight. Milton.

UNTRIUMPH'ABLE, adj. Which allows no triumph.

What towns, what garrisons might you, With hazard of this blood subdue ; Which now y' are bent to throw away In vain, vntriumphable fray ? Hudibras.

UNTROL'LED, adj. Not bowled ; not rolled along.

Hard fate ! untrolled is now the charming dye ; The playhouse and the park unvisited must lie. Dryd.

UNTROUBXED, adj. Not disturbed by care, sorrow, or guilt.

Would they think with how small allowance Untroubled nature doth herself suffice, Such superfluities they would despise. Spenter.

The equal distribution of the spirits in the liquor with the tangible parts,

ever represented! bodies clear and untroubled. Hooker.

UNTRUE', adj. I False; contrary to reality;

UNTRU'LT, adv. J not faithful : the adverb cor- responds.

By what construction shall any man make those comparisons true, holding that distinction untrue ?

Hooker.

On these mountains it is generally received that the ark rested, but untruly. Ralfigh.

UNTRUSTINESS, n. i. Unfaithfulness.

Secretary Peter, under pretence of gravity, covered much untrustiness of heart. Hayward.

UNTRUTH', n. s. Falsehood ; contrariety to reality or veracity.

He who is perfect, and abhors untruth, With heavenly influence inspires my youth. Sandys.

I would

So my untruth had not provoked him to it, The king had cut off my head with my brother's.

Shakspeare.

There is little hope for common justice, in this dis- pute, from a man who lays the foundations of his rea- sonings in so notorious an untruth. Atterbury. UNTUNE', v. a. (To make incapable of har- UNTUN'ABLE, adj. $ mony : inharmonious.

O you kind gods !

Cure this great breach in his abused nature ; The untuned and jarring senses, O wind up, Of this child-changed father ! Shakspeare.

The trumpet shall be heard on high, }

The dead shall live, the living die, And musick shall untune the sky. Dryden. j

His harsh untunable pipe is no more fit than a raven's to join with the musick of a choir. Taller.

UNTURN'ED, adj. Not turned. New crimes invented, left unturned no stone, To make my guilt appear, and hide his own. Dryden. UNTUTORED, adj. Uninstructed ; untaught. Thy mother took into her blameful bed Some stern untutored churl ; and noble stock Was graft with crab-tree slip, whose fruit thou art

Shakspeare.

UNTWINE', v. a. To open what is held toge- ther by convolution.

Divers worthy gentlemen of England, all the syren songs of Italy could never untwine from the mast of God's word. Ascham.

But since the sisters did so soon untwine So fair a thread, I'll strive to piece the line. Waller. UNTWIST, v. a. To separate any things in volved in each other.

Untwisting his deceitful clew, He 'gan to weave a web of wicked guile. Spenser.

The interest of prince and people is so enfolded in a mutual embrace, mat they cannot be untwisted without pulling a limb off. Taylor.

UNTY', v.a. See UNTIE. To loose. Unlaced her stays, her night-gown isunty'd, And what she has of head-dress is aside. Young.

UN VAIL', v. a. To uncover; to strip of a veil. This word is unvail or unveil, according to its etymology. See VAIL and VEIL.

Troy revived, her mourning face uncailed. Denham. UNVAL'UED. adj.) Not prized; neglected : UNVAL'UABLE. $ above price.

He may not, as unvalued persons do, Carve for himself; for on his choice depend The safety and the health of the whole state. Shaksp.

Secure the innocence of children, by imparting to them the unvaluable blessing of a virtuous and pious education. Atterbury.

UNVAN'QUISHED,a#. Not conquered ; not overcome.

Shall I, for lucre of the rest unvanquished , Detract so much from that prerogative, As to be called but viceroy of the whole ? Shakspeare.

Victory doth more often fall by error of the unvan- ifuishcd, than by the valour of the victorious.

• Hayirard. They rise unvanquished. 'Milton.

UNVA'RIED, adj. > Not changed ; not diver-

UNVAR'IABLE. $ sified : not to be changed.

The two great hinges of morality stand fixt and un-

tariable as the two poles : whatever is naturally condu-

cive to the common interest, is good ; and whatever nas a contrary influence, is evil. \orm.

They ring round the same unvaried chimes, With sure returns of still expected rhymes. Pope.

UN VAR'NISHED, adj. Not overlaid with var- nish ; not adorned.

I will a round unvarnished tale deliver, Of my whole course of love ; what drugs, what

charms,

I won his daughter with. Shakspeare.

UNVA'RYING. adj. Not liable to change. We cannot keep by us any standing, unvarying mea- sure of duration, which consists in a constant fleeting succession, as we can of certain lengths of extension, as inches marked out in permanent parcels of matter.

Locke.

I'.\ T.IL', v. a.) See VAIL and VEIL. To UNVEIL'EDLY, adv. j uncover; divest of a veil ; disclose: plainly.

The moon, Apparent queen, unveiled her peerless light. Milton.

Not knowing what use you will make of what has been unveiledly communicated to you, I was unwilling that some things, which had cost me pains, should fall into any man's hands that scorns to purchase knowledge with pains. Boyle.

To the limpid stream direct thy way, When the gay morn unveils her smiling ray. Pope. UNVENTILATED, adj. Not fanned by the wind.

This, animals, to succour life, demand ; Nor should the air unventilated stand ; The idle deep corrupted would contain Blue deaths. Blackmort.

UNVER'ITABLE, adj. Not true. All these proceeded upon unveritable grounds.

Browne.

UNVERSED', adj. Unacquainted ; unskilled Not eastern monarchs, on their nuptial day, In dazzling gold and purple shine so gay As the bright natives of the unlaboured field, Unversed in spinning, and in looms unskilled.

Blackmore. UNVEX'ED, adj. Untroubled; undisturbed.

With a blest and unreit retire, With unbacked swords, and helmets all unbruised, WTe will bear home that lusty blood again. Shaksp. Unvered with thoughts of wants which may betide ; Or for to morrow's dinner to provide. Dryden.

UNVI'OLATED, adj. Not injured; not broken.

Herein you war against your reputation, And draw within the compass of suspect , The unviolated honour of your wife. Shakspeare.

He, with singular constancy, preserved his duty and fidelity to his majesty unviolated. Clarentlnn.

UNVIRTUOUS, adj. Wanting virtue.

If they can find in their hearts that the poor, vncir- tuons, fat knight shall be any further afflicted, we two will be the ministers. Shakspeare.

UNVIS'ITED, adj. Not resorted to.

In some wild zone

Dwell, not unvitited of heaven's fair light, Secure. Milton.

The playhouse and the park uniisited must lie.

Dryden.

UNU'NIFORM, adj. Wanting uniformity.

Such an ununiform piety is in many so exactly ap- portioned to Satan's interest, that he has no cause to wish the change of his tenure. Decay cf Piety.

UNVOY'AGEABLE, adj. Not to be passed over or voyaged.

Not this unvovageable gulph oSscure, Detain fiom following thy illust-ioiis track. Milton.

UNW

UNURGED', adj. Not incited , not pressed.

The time was once, when thou unurged would'st vow, That never words were musick to thine ear Unless I spake. Shakspeare.

UNUSED', adj. Not put to use; unemployed; not accustomed.

She whose husband about that time died, forgetting the absent Plangus, or, at least, not hoping of him to attain so aspiring a purpose, left no art unwed, which might keep the line from breaking, whereat the fish was already taken. Sidney.

One whose eyes,

Albeit unused to the melting mood, Dropt tears as fast as the Arabian trees Their medicinal gum. Shakspeare.

UNUSE'FUi,, adj. Useless; serrving no pur- pose.

I was persuaded, by experience, that it might not be oe unuteful in the capacities it was intended for.

Glanville.

adj. } adv. > IS, n. $. J

Not common ; not fre- quent ; rare : the adverb and noun substantive cor-

UNU'SUAL, adj.

UNU'SUALLY, c

UNU'SUALNESS, responding.

With this unusual and strange course they went on, till God, in whose heaviest worldly judgments I nothing doubt but that there may lie hidden mercy, gave them over to their own inventions. Hooker.

It is the unuttuilnefs of the time, not the appearance, that surprises Alcinous. Broome.

UNUTTERABLE, adj. Ineffable; inexpres- sible.

Sighs now breathed Unutterable : which the spirit of prayer Inspired, and winged for heaven with speedier flight Than loudest oratory. Milton.

UNVUL'N ERABLE,a$. Exempt from wound ; not vulnerable.

The god of soldiers inform

Thy thoughts with nobleness, that thou mayest prove To shame unvulnerable, and stick i' the wars Like a great sea mark, standing every flaw ! Shakip.

UNWAK'ENED, adj. Not roused from sleep.

The more.

His wonder was, to find unwakened Eve With tresses discomposed. Milton.

UNWAL'LED, adj. Having no walls.

He came to Tauris, a great and rich city, but un- walled, and of no strength. Knolles.

UN WARES', adv. Unexpectedly ; before any caution, or expectation. Obsolete.

The Deity

Hath given so many other sighes and cares To my attendant state, that well unicares You might be hurt for me. Chapman.

If I had not unwarily engaged myself for the present publishing it, I should have kept it till I had looked over it. Digty.

By such principles, they renounce their legal claim to liberty and property, and unwarily submit to what they really abhor. Freeholder.

UNWAR'LIKE, adj. Not fit for war ; not used to war ; not military.

Avert unwanike Indians from his Rome, Triumph abroad, secure our peace at home. Dryden.

UNWARN'ED, adj. Not cautioned ; not made wary.

May hypocrites,

That slily speak one thing, another think, Drink on unwarned, till by inchanting cups Infatuate, they their wily thoughts disclose ! Philips.

UNWARRANTED, adj.-\ Not ascertained;

UNWARRANTABLE, > uncertain; not de-

UNWAR'RANTABLY, adv. J fensible ; not al- lowed : the adverb corresponding.

I'he subjects of this kingdom believe it is not legal for them to be enforced to go beyond the seas, without their own consent, upon hope of an unwarranted con- quest ; but, to resist an invading enemy, the subject must be commanded out of the counties where they in- habit. Bacon.

He who does an unwarrantable action through a false information, which he ought not to have believed, can- not in reason make the guilt of one sin the excuse of another. South.

A true and humble sense of your own unworthiness will not suffer you to rise up to that confidence which some men unwarrantably pretend to, nay, unwarranta- bly require of others. Wake.

UNWA'RY, adj. ˆ Wanting caution ; im

UNWA'RILY, adv. > prudent; hasty; precipi-

UNWA'RINESS, n. s. J tate : the adverb and noun substantive corresponding.

All in the open hall amazed stood, At suddenness of that unwary sight, And wondered at his breathless hasty mood. Spenser.

Propositions about religion are insinuated into the uinrurii as well as unbiassed understandings of chil- dren, and riveted there by long custom. Locke.

The same temper which inclines us to a desire of fame, naturally betrays us

into such slips and umrari- nesses, as are not incident to men of a contrary dispo- sition. Spectator.

UNWASH'ED, adj. (Not washed; not

UNWASH'EN. } cleansed by washing.

To eat with unwashen hands defileth not a man.

Matt. xv.

Another lean unwashed artificer Cuts off his tale, and talks of Arthur's death. Shah.

UNWASTED, adj.) Not consumed ; not di-

UXWAST'ING. J minished : not decaying

or lessening.

Why have those rocks so long unwasted stood, Since, lavish of their stock, they through the flood Have, ages past, their melting crystal spread, And with their spoils the liquid regions fed ! Blackm.

Purest love's imieasting treasure ; Constant faith, fair hope, long leisure ; Sacred Hymen ! these are thine. Pope.

UNWAY'ED, adj. Not used to travel; not. seasoned in the road.

Beasts that have been rid off their legs are as much for a man's use as colts that are unwayed, and will not go at all. Suckling.

UNWEAK'ENED, adj. Not weakened.

By reason of the exsuction of some air out of the glass, the elastical power of the remaining air was very much debilitated, in comparison of the nmrfukeni'd pressure of the external air. Boyle.

UNWEA'PONED, adj. Not furnished with offensive arms.

As the beasts are armed with fierce teeth, paws, horns, and other bodily instruments of much advan- tage against unweaponed men ; so hath reason taught man to strengthen his hands witli such offensive anus as no creature else can well avoid. Raleigh.

UNWEA'RY, v. a. ~\ To refresh after weari-

UNWEA'RIABLE, adj. £ness: not to be tired or

UNWEA'RIED. 3 wearied: not fatigued.

Desire to resemble him in goodness, maketh them unwfarinble. Hooker.

Godlike his unwearied bounty flows ; First loves to do, then loves the good he does.

Denham.

*Their bloody task unwearied still they ply. Walte**

It unwearies and refreshes more than any thing, after too great labour. Temple.

UNWED', adj. Unmarried.

This servitude makes you to keep united. Shaksp.

UNWEDGE'ABLE, adj. Not to be cloven.

Merciful heaven ;

Thou rather with thy sharp and sulph'rous bolt Split'st the unicedgeable and gnarled oak, Than the soft myrtle. Shakspeare.

UNWEED'ED, adj. Not cleared from weeds.

Fie! 'tis an unweeded garden,

That grows to seed ; things rank, and gross in nature, Possess it merely. Shalupeure.

UNWEEP'ED, adj. Not lamented. Ncfw un- wept.

He must not float upon his watry bier Unwept, and welter on the parching wind, Without the meed of some melodious tear. Milton.

UNWEET'ING, adj. Ignorant ; unknowing. Obsolete.

Her seeming dead he found with feigned fear, As all unweeting of that well

she knew ;

And pained himself with bus.y care to rear Her out of careless swoon. Spemer.

UNWEIGH'ED, adj. } Not examined by the

UXWEIGH'ING. J balance; not considered:

inconsiderate.

Solomon left all the vessels unweighed, because they were exceeding many. 1 Kings vii.

Wise? why, no question but he was — a very super- ficial, ignorant, unweighing fellow. Shahspeare.

Daughter, what words have passed thy lips wn-

u-eighed ?

Deem not unjustly by my doom opprest, Of human race the wisest and the best. Pope.

UNWEL'COME, adj. Not pleasing; not grateful ; not well received.

Such welcome and unwelcome things at once 'Tis hard to reconcile. Sliakspeare.

Unwelcome freedom, and unthanked reprieve !

Dry den.

UNWEPT, adj. Not lamented ; not bemoaned.

We, but the slaves that mount you to the throne A base, ignoble crowd, without a name ; Unwept, unworthy of the funeral flame ; By duty bound to forfeit each his life. Dryden.

UN WET, adj. Not moist.

Once I meant to meet

My fate with face unmoved, and eyes unwet; Yet, since I have thee here in narrow room, My tears shall set thee first afloat within thy tomb.

Dryden.

UNWHIPT, adj. Not punished: not cor- rected with the rod.

Once I caught him in a lie ; And then, unwhipt, he had the sense to cry. Pope.

UN WHOLE/SOME, adj. Insalubrious; mis- chievous to health ; tainted.

We'll use this unwholesome humidity ; this gross, watry pumpion : we'll teach him to know turtles from jays. Shaksjeare.

The discovery of the disposition of the air is good for the prognosticks of wholesome and unwholesome years.

Bacon.

I'NWIELDT, adj. ~\ Unmanageable; not

UxwiEi.n'iLY, adv. > easily moving or moved ;

Ujiwm.r/iNESs, n. s. j ponderous : the adverb and noun substantive correspond.

To what a cumbersome unwieldintfs, And burdenous corpulence, my love had grown, But that 1 made it teed upon That which love worst endures discretion ! Donne.

An ague, meeting many humours in a fat unwieldy body of fifty-eight years old, in four or five fits carried him out of the world. Clarendon.

UNWIL'LING, adj.) Loath; not con-

UXWIL'LINGLY, adv. > tented ; not inclined:

UXWIL'LINGNESS, n. s. j the adverb and noun substantive corresponding.

Obedience, with professed unwillingness to obey, is no better than manifest disobedience. Hooker.

If thou dost find him tractable, Encourage him, and tell him all our reasons : If he be leaden, icy, cold, unwilling, Be thou so too. Shakspeare.

A feast the people hold to Dagon, and forbid Laborious works, unwillingly this rest Their superstition yields. Milton.

There is in most people a reluctance and unwilling- ness to be forgotten. We observe, even among the vulgar, how fond they are to have an inscription over their grave. Swift.

UNWIND', v. a. & v. n. Fret, and part. pass. unwound. To separate any thing convolved ; to untwist : be untwisted or admit evolution.

All his subjects having by some years learned so to hope for good and fear harm, only from her, that it should have needed a stronger virtue than his, to have unwound so deeply an entered vice. Sidney.

As you unwind her love from him, Lest it should ravel, and be good to none, Bottom it on me. Shakspeare.

Put the bottoms into clean scalding water, and they will easily unwind. Mortimer.

UNWIPED', adj. Not cleaned by rubbing.

Their hands and faces were all badged with blood, So were their daggers, which unwiped we found Upon their pillows. Shakspeare.

UNWISE', adj.) Weak ; defective in wis-

UXWISE LY, cdv.] dom : the adverb correspond- ing.

O good, but most unu-ise patricians ! why. You grave, but reckless senators, have you thus Given Hydra here to chuse an officer ? Shakspeare.

Unwisely we the wiser east Pity, supposing them oppressed With tyrant's force. Waller.

This the Greek say, this. the barbarians; the wise and the unwise. Tillottun.

UN WISH, v. a. To wish that which is not to be.

My liege, would you and I alone, Without more help, could fight this royal battle. — Why now thou hast unwished five thousand men ; Which likes'me better than to wish us one. Shaksp.

To desire there were no God, were plainly to unwith their own being, which must be annihilated in the sub- straction of that essence which substantially supporteth them. Browne.

While heaping unwished wealth I distant roam, The best of brothers at his natal home, By the dire fury of a traitress wife. Ends the sad evening of a stormy life. Pope.

UNWIT, v. a. To deprive of understanding. Not us d.*

Friends all but now ; even now In quarter, and in terms like bride and

groom Divesting them for bed ; and then but now, As if some planet had unfitted men. Swords out, and tilting one at other's breast. Shahnfi.

UNWITHDRAW'ING, adj. Continually li- beral.

Wherefore did Nature pour her bounties forth, With such a full and unu- itlidrairing hand, Covering the earth with odours, fruits, and flocks?

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UN WITHSTOOD', adj. Not opposed.

Cressy plains,

And Agincourt, deep tinged with blood, confess What the Silures vigour unwithstood Could do in rigid fight. Philips.

UN \V ITN ESS ED, adj. Wanting testimony ; wanting notice.

Lest their zeal to the cause should any way be un- icitnetvd. Hooker.

UNWITTINGLY, adv. Properly unweetingly, from unweeting. \ithoutknowledge; without consciousness.

In these fatal things it falls out that the high-work- ing powers make second causes unwittingly accessary to their determinations. Sidney.

Those things are termed most properly natural agents, which keep the law of their kind unwittingly, as the heavens and elements of the world, which can do no otherwise than they do. Hooker.

UNWONT'ED, adj. Uncommon; unusual; rare ; unaccustomed.

His sad, dull eyes, sunk deep in hollow pits, Could not endure the' unwonted sun to view. Spenter.

0 how oft shall he

On faith and changed gods complain ; and seas,

Hough with black winds and storms,

Unwonted shall admire. Milton.

Every unwonted meteor is portentous, and some di- vine prognostick. GlanviUe.

UNWORK'ING, adj. Living without labor.

Lazy and unicorking shopkeepers in this being worse than gamesters, do not only keep so much of the money of a country in their hands, but make the publick pay them for it. Locke.

UNWOR'SIIIPPED, adj. Not adored.

He resolved to leave Unworthipped, unobeyed, the throne supreme. Milton.

*UNWOR'THY, adj. } Not deserving (whe- UNWOR'THILY, adv. >ther good or bad); not UNWOR'THINESS, n. *. j suitable ; unbecoming : the adverb and noun substantive correspond.*

Tell me, Philoclea, did you ever see such a shep- herd ? did you ever hear of such a prince? and then tell me if a small or unworthy assault have conquered me ? Siiliiey.

Every particular accident, not unworthy the remem- brance, for brevity I wittingly pass over. Knolles. Are there unworthy men chosen to offices? Whitgifte,

1 vowed, base knight, To tear the garter from thy craven leg, Which I have done, because unworthily

Thou wast installed. Shak$ptare. Henry VI.

Degree being vizarded, The' unuorthieit shews as fairly in the mask. Shaktp.

I feared to find you in another place ; But, since you're here, my jealousy grows less : You will be kind to my unworthiness. Dryden.

Care is taken to intersperse additions in such a man- ner that scarce any book can be brought, without pur- chasing something unworthy of the author. Swift.

UNWOUND', part. pats, and pret. of unwind. Untwisted.

Thatchers tie with wilhs, but oW pitched ropes un- wound are more lasting. Mortimer' Husbandry.*

UNWOUNP'ED, adj. Not wounded.

Oh blest with temper ! She who can love a sister's charms, or hear Sighs for a daughter with unu-aunded ear. Pope.

UNWREATH', v. a. To untwine.

The beards of wild oats, and of divers other wild plants, continually wreath and unwreath themselves, according to the temperature of the ambient air.

UNWRITING, adj. Not assuming the cha. racter of an author.

The peace of the honest unwriting subject was daily molested. Arbnthnot.

UNWRITTEN, adj. Not written; not con- veyed by writing; oral ; traditional.

A rule of right unwritten, but delivered by tradition from one to another. Spenser.

As to his understanding, they bring him in void of all notion, a rude, unwritten blank ; making him to be created as much an infant, as others are born. South.

UN WROUGHT', adj. Not labored ; not ma- nufactured.

Yet thy moist clay is pliant to command ; Unwrought and easy to the potter's hand : Now take the mold, now bend thy mind to feel The first sharp motions of the forming wheel. Dryden.

UNWRUNG', adj. Not pinched.

We that have free souls, it touches us not ; let the galled jade winch, our withers are unwrung. Shakip.

UNYIELD'ED, adj. Not given up.

O'erpowered at length, they force him to the ground, Unyielded as he was, and to the pillar bound. Dryden.

UNYOKE', v. a.) To loose from the yoke : UNYOKED', adj. f having never worn a yoke.

Our army is dispersed already : Like youthful steers unyoked, they took their course East, west, north, south. Shakspeare. Henry IV.

Seven bullocks yet unyoked for Phoebus chuse, And for Diana seven

unspotted ewes. Dryden.

UNZONED', adj. Not bound with a girdle. Easy her motion seemed, serene her air ; Full, though unzoned, her bosom. Priff.

VOCAB'ULARY, n. s. Fr. vocabulairet Latin vocabularium. A dictionary ; a lexicon ; a word- book.

Some have delivered the polity of spirits, and that they stand in awe of conjurations, which signify no- thing, not only in the dictionary of man, but in the subtiler vocabulary of Satan. Browne.

Among other books, we should be furnished with vocabularies and dictionaries of several sorts. Watts.

VO'CAL, adj. ~\ French vocal ; Latin vocalit.

VocAi/iTY,n. s. f Having a voice; uttered or

VO'CALIZE, v. a. I formed by the voice : vocality

VO'CALLY, adv. J is power of utterance; capa- bility of being uttered by the voice : to vocalize is to form into voice : vocally is in words ; articu- lately.

They which require the abrogation of instrumental musick, approving nevertheless the use of vocal melody to remain, must shew some reason. Hooker.

Witness if I be silent morn or eve, To hill, or valley, fountain, or fresh shade, .Made vocal by my song, and taught his praise.

Milton.

Although it is as natural to mankind to express their desires vocally, as it is for brutes to use their natural vocal signs ; yet the forming of languages into this or that fashion is a business of institution. Hale.

L and R being in extremes, one of roughness, the other of smoothness and freeness of tocalily, are not easy in tract of vocal speech to be pronounced spiritally.

Holder.

It is one thing to give an impulse to breath alone ; another thing to cocalite that breath, i. e. in its passage through the larynx to give it the sound of human voice. Id.

Wemnon, though stone, was counted vocal; But 'twas the god, mean while, that spoke all Home oft has heard a cross haranguing, \ ith prompting priest behind the hanging. Prior.

VOCATION, n. s. Fr. vocation ; Lat. vocatio. Calling; summons; calling by the will of God.

He would think his service greatly rewarded, if he might obtain by that means to live in the sight of his prince, and yet practice his own chosen vocation.

Sidney.

They which thus were in God eternally, by their in- tended admission to life, have, by vocation or adoption, God actually now in them. Huokur.

God has furnished men with faculties sufficient to direct them in the way they should take, if they will seriously employ them, when their ordinary vacations allow them the leisure. Locke.

VOCIFERATION, n. s.) Lat. voclfero. Cla-

VOCIF'EROUS, adj. \ mor ; outcry : the

adjective corresponding.

Thrice three vociferout heralds rose to check the rout.

Chapman,

The lungs, kept too long upon the stretch by vocife- ration, or loud singing, may produce the same effect.

Arbuthnot.

Several templars, and others of the more vociferous kind of critics, went with a resolution to hiss, and con- fess they were forced to laugh. Pope.

VOETIUS (Gisbert), an eminent divine of the sixteenth century, was professor of divinity of the Oriental tongues at Utrecht, where he was also minister. He assisted at the synod of Dort ; and died 1676, aged eighty-

seven. He wrote a great number of works ; and was the declared enemy of Des Cartes and his philosophy. His followers are called Voetians.

VOETIUS (Daniel and Paul), sons of the above, also wrote several works.

VOETIUS (John), LL. D., the son of Paul, was professor of law at Herborn ; he wrote a commen- .ary on the pandects, which is esteemed, and other works on law.

VOGUE, n. s. Fr. vogue, from voguer ; Italian voga. Fashion ; mode.

Use may revive the obsoletest words, And banish those that now are most in vogue.

Roscommon.

In the vogue of the world, it passes for an exploit of honour, for kings to run away with whole countries that they have no pretence to. L'Estrange.

No periodical writer, who always maintains his gra- vity, and does not sometimes sacrifice to the Graces, must expect to keep in vogue for any time. Addison.

VOICE, 7i. s., v. a., & ˆ Fr. voix ; Latin vocis.

VOIC'EB, adj. [v. n. S Sound emitted by the mouth, or breath; vote; suffrage; expression of opinion : to voice is to murmur ;. report; vote : to clamor : voiced, furnished with a voice ; voted.

The state was betrayed by the multitude and corrup- tion of voices. Knolles.

Are you all resolved to give your voices f But that's no matter, the greater part carries it.

Shaktpeare.

Is this the Athenian minion, whom the world Voiced so regardfully 1 Jit.

Stir not questions of jurisdiction ; and rather assume thy right in silence, than voice it with claims. Bacon.

It was voiced that the king purposed to put to death Edward Plantagenet, prisoner in the Tower ; whereat there was great murmur. Id. Henry Vll.

I assay to see

The works of men ; or heare mortalitie Expire a voice. Chapman.

Some laws ordain, and some attend the choice, Of holy senates, and elect by voice. Dvyden.

It is not the gift of every person to harangue the multitude, to voice it loud and high. South.

O Marcus, I am warmed ; my heart Leaps at the trumpet's voice, and burns for glory.

Adduon.

A VOICE is a, sound produced in the throat and mouth of an animal, by an apparatus of instruments of that purpose. Voices are either articulate or inarticulate. 1. Articulate voices are those whereof several conspire together to form some assemblage or little system of sounds : such are the voices expressing the letters of an alphabet, numbers of which joined together form words. 2. Inarticulate voices are such as are not organised, or assembled into words; such is the barking of dogs, the bray- ing of asses, the hissing of serpents, the singing of birds, &,c. The formation of the human voice, with all the varieties thereof observed in speech, music, &c., makes a very curious article of enquiry ; and the apparatus and organism of the parts of administering thereto is something exceedingly surprising. Those parts are the trachea or wind- pipe, through which the air passes and repasses into the lungs; the larynx, which is a short cylindrical canal at the head of the trachea ; and glottis, which is a little oval cleft or chink left between two semi- circular membranes stretched horizontally within- side the larynx ; which membranes, though capable of joining close together, do generally leavean inter- val, either greater or less, between them, called the glottis. For a particular description of each part, see ANATOMY.

VOICE, in grammar, a circumstance in verbs whereby they become to be considered as either active or passive, i. e. either expressing an action impressed on another subject, as, I beat ; or, re- ceiving it from another, as, I am beaten.

VOID, adj., n. s., v. a , &ˆ Fr. vuide. Empty ;

VOID'ABLE, adj. [v.n.t

VOID'ANCE, n. s.

VOID'ER,

VOID'NESS.

empty ; annul ; emit : to be, or receive what is, emitted: voidable is such as

may be annulled : voidance, the act of emptying ; ejection from a be- nefice : voider, a basket to carry off broken meat : voidness, emptiness; vacuity; nullity.

The earth was without form and void, and darkness was upon the face of the deep. Genesis, i. 2.

My word shall not return void unto me. Is. Iv. 11.

If it be void, and to no purpose, that the names of men are so frequent in their books, what did move them to bring them in ? Hooker.

If they will fight with us, bid them come down, Or void the field. Sliakspeare. Henry V.

How in our voiding lobby hast thou stood, And duly waited for my coming forth? Id. Hen. VI.

This custom made their whole government void, as an engine built against human society, worthy to be fired and pulled down. Bacon.

Excrements smell ill to the same creature that vuideth them. Id.

Towards this passage, somewhat darker than the chamber which he voided, this assassinate gave him, with a back blow, a deep wound into his left side.

Wutton't Buckingham.

If thereby you understand their nakedness and void- ness of all mixed bodies, good divines are of opinion that the work of the creation was not in itself distin- guished by days. Haheuill.

A voider for the nonce, I wrong the devil should I pick their bones. Cicnvrland.

*It was become a practice, upon any specious pre- tences, to void the security that was at any *ime given for money so borrowed. Clarendon.*

vacant ; vain ; un-

. occupied : an empty

space or vacancy : to

void is to quit ; leave

.passing through the air ; lively ; passing 1 off by evaporation :

By the use of emulsions, and frequent emollient in- jections, his urine voided more easily. IFweman.

With what power

Were first the unwieldy planets launched along The' illimitable void ? Thornton.

VOITURE, n. $. Fr. voititre. Carriage; trans- portation by carriage. Not in use. They ought to use exercise by witure or carriage.

Arbuthiwl.

VO'LANT, adj. Fr. volant ; Lat. volans. Fly- ing ; passing through the air : nimble.

The volant, or flying automata, are such mechanical contrivances as have a self-motion, whereby they are carried aloft in the air like birds. \Vilkins.

Mis volant touch

Instinct through all proportions, low and high, Fled, and pursued transverse the resonant fugue. Milt.

VOL' ATI LE, adj. & n. s. \ Fr. volatile ; Lat.

VOL'ATILENESS, n. t. j volatilis. Flying ;

VOLATILITY,

VOLATILIZA'TIOX,

VOL'ATILIZE, v. a.

a winged animal : the three substantives following correspond : to volatilize is, to make volatile ; sub- tilize.

The caterpillar towards the end of summer waxeth volatile, and turneth to a butterfly. Bacon.

Of volatility the utmost degree is, when it will fly away without returning.

Id.

In vain, though by their powerful art they bind Volatile Hermes. Milton.

The animal spirits cannot, by reason of their subtilty and volatiteness, be discovered to the sense. Hale.

The air conveys the heat of the sun, maintains fires, and serves for the flight of volatile. Browne.*

Chemists have, by a variety of ways, attempted in vain the volatilization of the salt of tartar. Boyle.

When arsenick with soap gives a regulus, and with mercury sublimate a volatile fusible salt, like butter of antimony ; doth not this show that arsenick, which is a substance totally volatile, is compounded of fixed and volatile parts. Newton.

Spirituous liquors are so far from attenuating, volati- lizing, and rendering perspirable the animal fluids, that they rather condense them. Arbuthnot.

VOLATILE, in physics, is commonly used to de- note a mixed body whose integrant parts are easily dissipated by fire or heat ; but it is more properly used for bodies whose parts are easily separated from each other and dispersed in air.

VOLATILE ALKALI, called in the new Frencli nomenclature ammonia, one of the three alkaline salts. See ALKALI.

*VOLCA'NO, n. *. Ital. from Vulcan. A burn- ing mountain.*

Navigators tell us there is a burning mountain in an island, and many wlcanot and fiery hills. Browne.

Subterraneous minerals ferment, and cause earth- quakes, and cause furious eruptions of votcanos, tumble down broken rocks. Bentley.

Why want we then encomiums on the storm, Or famine, or volcanot ? They perform Their mighty deeds ; they hero-like can slay, And spread their ample deserts in a day. Young.

VOLCANO, is a name given to burning moun- tains, or to vents for subterranean fires. The num- ber of volcanoes with which we are at present acquainted is very considerable ; and it is remark- able that all the volcanoes with which we are ac- quainted, four or five perhaps excepted, are situated at a small distance from the sea. Most of them have been

burning from time immemorial; some few, however, have burst out in our time. Volca-

noes all occupy the tops of mountains ; we find none of them in plains ; some of them, indeed, which are situated in the ocean, do not rise much above the surface; but even these volcanoes seem to be the apices of mountains, the greater part of winch are covered by the sea. The substances ejected by volcanoes are fixed and inflammable air, water, ashes, pumice-stones, stones that have undergone no fusion, and lava. The phenomena which take place during the eruptions of volcanoes have been so fully described under the articles /ETNA, HECLA, ICELAND, and VESUVIUS, that a repetition of this kind here will not be expected. All that remains, there- fore, is to mention some of the opinions of philo- sophers concerning the causes of volcanoes. The most elaborate theory, perhaps, that has yet ap- peared is that of M. Houel.

According to him water is necessary for the for- mation of volcanoes. All volcanoes are near the sea; they are even extinguished when the sea re- tires from them ; for we can still perceive the cra- ters of volcanoes in several lofty inland mountains, which discover what they have been formerly. He supposes that a long series of ages was necessary for the formation of a volcano, and that they were all formed under the surface of the sea. The first explosion which laid open the foundations of the deep would possibly be preceded by an earthquake. The waters would be parted by a vast globe of burning air, which would issue forth with a tre- mendous noise, opening at the same time a large and wide vent for the immense flame that was to f6llow ; and which, as it issued from the bottom of the sea, would be spread over its surface by the first gusts of wind which followed. A fire which was to burn through thousands of yeans could not be faint or feeble when it was first lighted up. Its first eruptions therefore have undoubtedly been very violent, and the ejected matter very copious. For a long series of ages it would continue to discharge torrents of lava from the bosom of its native earth, and its first crater would be composed of the fragments of the same earth. Thus, according to our author, the foundations of the burning mountain would be laid in the bottom of the sea; and even then it would have a hollow cup or crater on the top, similar to that which is to be found on all volcanoes at present. But the question now very naturally occurs, by what means was the internal fire pre- served from extinction by the waters of the ocean, which must thus have been incumbent upon it? To this he replies that ‘ the fire, having disposed the substances in fusion to make an eruption, next laid open the earth, and emitted as much matter as it could discharge, with force sufficient to overcome the resistance of the column of water which would oppose its ascent ; but, as the strength of the fire diminished, the matter discharged was no longer expelled beyond the mouth, but, by accumulating there, soon

closed up the orifice. Thus only small orifices would be left, sufficient for giving vent to the vapors of the volcano, and from which only small bubbles of air could ascend to the surface of the water, until new circumstances, such as origin- ally gave occasion to the eruption of the volcano, again took place in the bowels of the earth, and produced new eruptions either through the same or other mouths. The appearance of ihe sea over the new formed volcano, in its state of tranquillity, would then be similar to what it is betwixt the islands of Basilizzo and Pariaria. Columns of air

bubbles are there ascending at the depth of more than thirty feet, and burst on their arriving at the surface. This air would continue to disengage it- self with little disturbance as long as it issued forth only in small quantity, until, at the very instant of explosion, when prodigious quantities, generated m the burning focus, would make their way all at once; and the same phenomena which originally took place would again make their appearance.' A volcano, while under water, cannot act precisely as it does in the open air. Its eruptions, though equally strong, cannot extend to so great a distance. The lava accumulates in greater quantity round the crater; the sands, ashes, and pozzolano, are not carried away by the winds, but are deposited around its edges, and prevent the marine substances which are driven that way by the waters from entering. Thus they agglomerate with these bodies, and thus a pyramidal mount is formed of all the materials together. In this manner Mr. Houel supposes that the mountain was gradually raised out of the sea by the accumulation of lava, &c., at every erup- tion, and that the cavern of the volcano was gradu- ally enlarged, being driven down into the bottom of the cavern by the continued action of the stones which the volcano is constantly throwing up ; (hat it was there fused, and at last thrown out at the top of the mountain to accumulate on its sides. Mr. Houel's opinion about the volcanic fire we shall give in his own words : — ' We cannot form any idea of fire subsisting alone, without any pabulum, and unconnected with any other principle. We never behold it but in conjunction with some other body, which nourishes and is consumed by it. The matter in fusion, which issues from the focus, is but the incombustible part of that which nourishes the fire, and into the bosom of which that active prin- ciple penetrates in search of pabulum. But, as the fire acts only in proportion to the facility with which it can dissolve and evaporate, I am of opi- nion that it is only the bottom of the volcano on which it acts; and that its action extends no far- ther than to keep these substances which it has melted in a constant state of ebullition. That fu- sible matter being discharged from the mouth of the volcano, and hardening as it is gradually cooled oy the action of the air,

produces that species of stones which are distinguished by the name of lavas. This lava, even when in the focus, and in a state of fluidity, must also possess a certain degree of solidity, on account of the gravity and density of its particles. It therefore opposes the fire with a degree of resistance which irritates it, and requires, to put it into a state of ebullition, a power propor- tioned to the bulk of the mass. That quantity of matter, when dissolved by the action of the fire, must constantly resemble any other thick substance in a state of ebullition. Small explosions are pro- duced in various parts over the surface of every such substance while in a state of ebullition ; and, by the bursting of these bubbles, a areat number of small particles are scattered around. This is the very process carried on in the focus of a volcano, though on a scale immensely more large ; and the vast explosions there produced expel every body which lies in their way with the utmost violence ; nor is there any piece of lava which falls down from the upper part of the arch of weight sufficient to resist this violent centrifugal force. No estimate can be made of the power of these explosions but by observing the obstacles they overcome, and what

enormous bodies are raised up and thrown to an immense height and distance. Such vast pieces of lava are to be seen on the top of Vesuvius and Li- pan, that the projectile force by which they have been thrown out appears altogether incredible. No person can harbour the least suspicion of their having been laid there by any human power ; and the appearance of them demonstrates that they have been ejected from the bottom of the volcano not in a state of fusion, but coherent and solid. A piece of lava lies on the top of ,Etnaof more than a cubic fathom in bulk, and whose weight therefore cannot be less than sixteen tons. What an amazing force then must it have required not only to raise this enormous mass from the volcanic focus, but to make it describe a parabola of about a league in diameter after it had come out of the crater ! When we con sider how much the volcanic focus is sunk below the base of the mountain, that the mountain itself is 10,000 feet high, and that consequently there must have been a power sufficient to raise such a mass 12,000 feet perpendicular, the boldest imagination must be lost in amazement. This may serve to give us some idea of the nature of that power which operates in the foci of volcanoes ; a power which is unknown and inconceivable, and may justly be reckoned among the mysteries of nature.' The pa- bulum, by which the internal life is supported, Mr. Houel thinks to be substances contained in the moun- tain itself, together with bitumen, sulphur, and other inflammable materials, which may from time to time flow into the focus of the volcano in a melted state through subterranean ducts, and the explosions he ascribes to water making its way in the same man- ner. The water is converted into steam, which fills the cavern and pushes the melted lava out at the crater: this opinion is corroborated by the copious smoke

which always precedes an eruption. But. combined with the water, there is always a quan- tity of other substances whose effects precede, ac- company, or follow the eruptions, and produce all the various phenomena which they display. The eruption of water from /Etna in the year 1775 pro- ceeded undoubtedly from this cause. The sea, or some of the reservoirs in JEtna or the adpceni mountains, by some means discharged a vast quan- tity of water into the focus of the volcano. That water was instantly resolved into vapor, which pre- sently filled the whole cavern, and issued from the mouth of the crater. As soon as it made its way into the open atmosphere it was condensed again into water, which streamed down the sides of the mountain in a dreadful and destructive torrent. Thus we have given a view of Mr. Houel's theory, according to which volcanoes originally began at the bottom of the sea; and not only the mountain, but all the adjoining country was formed by suc- cessive eruptions. It is rather a theory of moun- tains raised by subterranean heat than of volcanoes, and does not attempt to explain the origin of the fire, which is the principal difficulty; neither does his theory account for the immense height to which matters are sometimes thrown during eruptions. This indeed it is impossible to account for without supposing that the resistance of the air is dimi- nished. The excessive opposition of the atmosphere to bodies moving with very great degrees of velocity has been taken notice of under the article PROJEC- TILES. If it has so much effect then upon solid and round globe of iron, what ought it to be on irregular masses of rori or streams of liquid hra1*

Nevertheless in the great eruption of Vesuvius, in 1779, Sir William Hamilton informs us that •» vast stream of lava was projected to the height of at least 10,000 feet above the top of the mountain. Had the air resisted this liquid matter as it does a cannon-ball, it must have been dashed in pieces al- most as soon as it issued from the crater. Either the extreme heat of the lava, therefore, or some other cause, must have contributed very much to diminish, or rather in a manner to annihilate, the resistance of the atmosphere at that time. As for the lighter materials, though they may be supposed to be carried to a vast distance by the wind, after being projected to a great height in the air, it is inconceivable how their motion was not suddenly stopped, and they scattered all around the top of the volcano by the violence of the blast. Sub- stances of this kind, when quietly carried up with smoke, will indeed fly to a great distance; for we are assured that the ashes of the great fire at Lon- don, in 1666, were carried by the wind to the dis- tance of sixteen miles. It is therefore the less in- credible that those of the great eruption of Vesuvius, in 1779, should be carried to the distance

of 100 miles, as we are informed was the case. To ac- count for the volcanic fire Dr. Woodward and others have had recourse to the hypothesis of a central fire, to which the volcanoes are only so many chimneys or spiracles. Dr. Hutton, in his theory of the earth, adopts the same opinion ; but, as it did not imme- diately concern the subject of which he treated, he evades any question concerning its origin by de- claring himself satisfied of its existence without any enquiry into its origin. Others, as Dr. Lister, have had recourse to the well known experiment of the fermentation of sulphur and iron, which will take fire when mixed in considerable quantity and moist- ened with water. Pyrites, therefore, which are a natural mixture of these two substances, it is sup- posed, may naturally give rise to volcanoes. In- stances are indeed adduced which undeniably prove that these substances will spontaneously take fire when thrown together in large heaps. Beds of pyrites, therefore, taking fire in the earth by means of a fermentation occasioned by water, are now generally supposed to be the cause of volcanoes ; and the observation that volcanoes are generally near the sea is thought to confirm this hypothesis. When the matter is properly considered, however, it must be evident that neither of these hypotheses can answer the purpose. The central fire of Dr. Woodward and others is a cause too magnificent even for volcanoes. If any such fire is supposed, we must imagine a burning globe in the centre of the earth, whose heat is sufficient to vitrify the most solid and refractory terrestrial substances. Rut of what dimensions are we to suppose this globe ? Is it one, two, three, four, or more thou- sands of miles in diameter ? Very large indeed it must be; for we could scarcely suppose that stones could be projected even from the depth of 500 miles into the air. But even this supposition is inadmissible; for, as the fire of volcanoes is at times exceedingly augmented from some cause or other, were this cause general, as it must be in case of a burning central globe, the whole number of volcanoes existing on tarth would be in a state of eruption at once. Besides if we were to sup- pose a burning globe of 7000 miles in diameter to suffer the least dilatation throughout its vast bulk, which must be the undoubted consequence of an

augmentation of heat irom any unknown ranjej all the volcanoes in the world would not be suffi- cient to give vent to it, though they should spout forth incessant cataracts of lava for centuries toge- ther. A dissolution of the whole globe must there- fore undoubtedly take place ; and, though \ve should lessen the diameter of our burning globe oy 1000 miles, our difficulties will be as far from being re- moved as before. Wre must have recourse then to some operation by which we know that nature can kindle and extinguish fires occasionally ; and, if we can suppose such an operation to take place in the bowels of the earth, we may then reasonably conclude that we have discovered A cause adequate to the production of volcanoes. Such a cause, however, cannot be pyrites, sulphur, or nitre, in

any quantity, under the surface of the earth. It is impossible that beds of pyrites can remain for thousands of years under the same part of the surface of the earth, be occasionally inflamed and ejected, and afterwards undergo a renovation, to enable them to go through a similar operation. Kitre is never found in a fossil state; nor can it be inflamed in such a manner as to make any con- siderable explosion without a thorough mixture with sulphur and charcoal; neither would all the quantity which we can suppose to exist under the base of any mountain in the world, be sufficient to give force to one of those dreadful volleys which are discharged by volcanoes a hundred times in a day. Besides, neither pyrites nor sulphur can be inflamed without access of air; which cannot take place in the bowels of the earth ; for it must be remembered, that the first question is concerning the means by which the fire was originally kind- led. Most writers, however, seem to overlook this difficulty, and to be solicitous only about the im- mediate cause of the explosive force, which is generally ascribed to a steam of one kind or other. Mr. Houel in general calls it (he force of fire, or of steam ; though he does not enter very particularly into its nature. Mr. Whitehurst says that it is the force of ‘ fire and water, which is the pri- mary agent in all such operations of nature.’ He also gives a figure, showing how, by means of con- fined steam, a jet, either of hot water or of liquid fire, may be produced. But this applies only to a particular case, which we cannot suppose always to happen ; but volcanoes are constantly attended with explosions; nay, so great is the tendency of volcanic matters to this violent operation, that many stones have been observed to burst in the air like bombs, after they were thrown out of the volcano ; and Mr. Houel even informs us that such have burst three times during their flight. Water therefore cannot be always the cause of volcanic explosions. When thrown upon melted lead, salts, or especially copper, it explodes indeed with vast force. With the last mentioned nu-tal it is peculiarly and incredibly violent ; insomuch, that it is said that furnaces have been burst, and build- ings thrown down, by the mere circumstance of some of the workmen spitting among the melted metal; and Mr. Whitehurst calculates the force of aqueous steam, when thus suddenly and violently healed, to be no less than twenty-eight times r than inflamed gunpowder. Many philo- rs attempt to account for the origin and con- tinuance of volcanoes by the agency of the electric fluid; but their theory is so ill supported by facts, that we think it superfluous to take up room with

it. It is certain that volcanoes exhibit many elec- trical appearances, and that great quantities of the electrical fluid are discharged at every eruption. But our knowledge of electricity is still too limited to draw any certain

conclusion from these appear- ances.

Naturalists contend that all the southern islands have been volcanised ; and they are seen daily to be formed by the action of these subterraneous fires. The black color of the stones, their spongy texture, the other products of fire, and the identity of these substances with those of the volcanoes at present burning, are all in favor of the opinion that their origin was the same. When the decomposition of the pyrites is advanced, and the vapors and elastic fluids can no longer be contained in the bowels of the earth, the ground is shaken, and exhibits the phenomenon of earthquakes. Mephitic vapors are multiplied on the surface of the ground, and dread- ful hollow noises are heard. In Iceland the rivers and springs are swallowed up ; a thick smoke, mixed with sparks and lightning, is then disen- gaged from the crater ; and naturalists have ob- served, when the smoke of Vesuvius takes the form of a pine, the eruption is near at hand.

To these preludes, which show the internal agi- tation to be great, and that obstacles oppose the issue of the volcanic matters, succeeds 'an eruption of stones and other products, which the lava drives before it ; and, lastly, appears a river of lava, which flows out, and spreads itself down the side of the mountain. At this period the calm is restored in the bowels of the earth, and the eruption continues without earthquakes. The violent efforts of the in- cluded matter sometimes cause the sides of the mountain to open ; and this is the cause which has successively formed the smaller mountains that surround volcanoes. Montenuevo, which is 180 feet high, and 3000 in breadth, was formed in a night. This crisis is sometimes succeeded by an eruption of ashes, which darkens the air. These ashes are the last result of the alteration of the coals ; and the matter which is first thrown out is that which the heat has half vitrified. In the year 1767 the ashes of Vesuvius were carried twenty leagues out to sea, and the streets of Naples were covered with them. The report of Dion, concern- ing the eruption of Vesuvius in the reign of Titus, wherein the ashes were carried into Africa, Egypt, and Syria, seems to be fabulous.

M. de Saussure observes that the soil of Rome is of this character, and that the famous catacombs are all made in the volcanic ashes. It must be ad- mitted, however, that the force with which all these products are thrown is astonishing. In the year 1769 a stone twelve feet high, and four in circum- ference, was thrown to the distance of a quarter of a mile from the crater: and in the year 1771 Sir William Hamilton observed stones of an enormous size, which employed eleven seconds in falling. This indicates an elevation of nearly 2000 feet.

The eruption of volcanoes is frequently aqueous; the water which is confined, and favors the decompo- sition of the pyrites, is sometimes

strongly thrown out. Sea salt is found among the ejected matter, and likewise sal ammoniac. In the year 1630 a torrent of boiling water, mixed with lava, destroyed Portici and Torre del Greco. Sir W. Hamilton saw boiling water ejected. The springs of boiling water in Iceland, and all the hot springs which abound at the surface of the globe, owe their heat

only to the decomposition of pyrites. Some erup- tions are of a muddy substance; and these form the tufTa and the pouzzolano. The eruption which buried Herculaneum is of this kind. Sir W. Hamil- ton found an antique head, the impression of which was well enough preserved to answer the purpose of a mould. Herculaneura, at the least depth, is seventy feet under the surface of the ground, and in many places 120.

The pouzzolano is of various colors. It is usually reddish, sometimes gray, white, or green : it frequently consists of pumice-stone in powder; but sometimes it is formed of oxided clay. 100 parts of red pouzzolano afforded Bergmannsilex 55, alumina 20, lime 5, iron 20. When the lava is once thrown out of the crater, it rolls in large rivers down the side of the mountain to a certain dis- tance, which forms the currents of lava, the vol- canic causeways, &c. The surface of the lava cools, and forms a solid crust, under which the liquid lava flows. After the eruption, this crust sometimes re- mains, and forms hollow galleries, which Messrs. Hamilton and Ferber have visited : it is in these hollow places that the sal ammoniac, the muriate of soda, and other substances, sublime. A lava may be turned out of its course by opposing banks or dykes against it: this was done in 1669 to save Ca- tania ; and Sir William Hamilton proposed it to the king of Naples to preserve Portici.

The currents of lava sometimes remain several years in cooling. Sir William Hamilton observed, in 1769, that the lava which flowed in 1766 was still smoking in some places. Lava is sometimes swelled up and porous. The lightest is called pumice-stone.

The substances thrown out by volcanoes are not altered by fire. They eject native substances, such as quartz, crystals of amethyst, agate, gypsum, amianthus, felspar, mica, shells, schorl, &c. The fire of volcanoes is seldom strong enough to vitrify the matters it throws out. We know only of the yellowish capillary and flexible glass thrown out by the volcanoes of the island of Bourbon, on the 14th of May 1766 (M. Commerson), and the lapis gallinaceus ejected by Hecla. Mr. Egolfrigouson, who is employed by the observatory at Copenhagen, has settled in Iceland, where he uses a mirror of a telescope which he has made out of the black agate of Iceland. The slow operation of time decom- poses lavas, and their remains are very proper for vegetation. The fertile island of Sicily has been every where volcanised. Chaptal observed several ancient volcanoes at present

cultivated ; and the line which separates the other earths from the volcanic earth constitutes the limit of vegetation. The ground over the ruins of Pompeii is highly culti- vated. Sir William Hamilton considers subterranean fires as the great vehicle used by nature to extract virgin earth out of the bowels of the globe, and repair the exhausted surface.

The decomposition of lava is very slow. Strata of vegetable earth, and pure lava, are occasionally found applied one ovei the other; which denote eruptions made at distances of time very remote from each other, since in some instances it appears to have required nearly 2000 years before lava was fit to receive the plough. In this respect, however, lavas differ very widely, so that our reasoning from them must at best be very vague. An argument has been drawn from this phenomenon to prove the antiquity of the globe; but the silence of the most

ancient authors concerning the volcanoes of the kingdom of France, of which we find such frequent rraces, indicates that these volcanoes have been ex- tinguished from time immemorial ; a circumstance which carries their existence to a very distant period. Beside this, several thousand years of con- nected observations have not afforded any remarka- ble change in Vesuvius or ./Etna : nevertheless these enormous mountains are all volcanised, and conse- quently formed of strata applied one upon the other. The prodigy becomes much more striking, when \ve observe that all the surrounding country, to very great distances, has been thrown out of the bowels of the earth.

'The height of Vesuvius above the level of the sea is 3659 feet; its circumference 34,444. The height of ;Etna is 10,036 feet; and its circumference

180,000.

The various volcanic products are applicable to several uses. 1. Pouzzolano is of admirable use for building in the water : when mixed with lime it speedily fixes itself; and water does not soften it, for it becomes continually harder and harder. Chaptal has proved that oxided ochres afford the same advantage for this purpose : they are made into balls, and baked in a potter's furnace in the usual manner. The experiments made at Sette, by the commissary of the province, prove that they may be substituted with the greatest advantage in- stead of the pouzzolano of Italy. 2. Lava is like- wise

susceptible of vitrification ; and in this state it may be blown into opaque bottles of the greatest lightness, which Chaptal says he has done at Ere- pian and at Alais. The very hard lava, mixed in equal parts with wood- ashes and soda, produced, he says, an excellent green glass. The bottles made of it were only half the weight of common bottles, and much stronger, as was proved by Chaptal's ex- periments, and those which M. Joly de Fleury or- dered to be made under his administration. 3. Pumice stone likewise has its uses ; it is more especially used to polish most bodies which are somewhat hard. It is employed in the mass or in powder, according to the intended purpose. Some- times, after levigation, it is mixed with water to render it softer.

VOLCANO, an island of the Mediterranean, be- longing to Sicily, the most southern of the Lipari group, lies between Lipari and the Sicilian coast, being separated from the former by a narrow chan- nel. It consists of a single volcanic mountain, of rather more than half a mile in height, which descends by successive gradations till its circum- ference at the base is about twelve miles. A bright cloud seems to rest on it at night, produced by the smoke and vapor emitted from all parts of it. It is oral.

VOLE, n. i. Fr. volt. A deal at cards, that draws the whole tricks.

Past six, and not a living soul ! I might by this have won a vole. Swift.

VOL'ERY, n. ».) Fr. volerie ; Lat. volito. A

VOLITA'TION. J flight of birds : the act or pouer of flight.

An old boy, at his first appearance, is sure to draw on him the eyes and chirping of the whole town votery; amongst which, there will not be wanting some birds of prey, that will presently be on the wing for him. Locke.

Birds and flying animals are almost erect, advancing th? head and breast in their progression, and only prone ia the act of volitation. Browne.

VOLHYNIA, an extensive government of Kussn, lying to the east of the kingdom of Poland, betweea the governments of Grodno and Podolia. Its ter- ritorial extent is 29,300 square miles, am! its popu- lation about 1,200,000, little more than halt' the number of Scotland on a surface of filial extent. While Poland was entire, Volhym.i f->nn<-d a pio- vince of that kingdom, which bordered with Hie Ukraine on the south-east. The >oil is generally chalky, but in some places marshy, and in many a rich vegetable mould. The climate is in general temperate. Its produce consists iu \hcat, mullet and rye. Its pasturages are extensive.

Volhynia has often been exposed to the evils of invasion. In 1618 the Tartars made an incursion into it, carried off a great booty in cattle and other property, and led a number of the inhabitants into slavery. Since 1793 it has been in the possession of Russia. Its chief town Xytomiers.

VOLITION, n. s.) Lat. miitio. The act of

VOL'ITIVE, adj. } willing; the power of choice exerted : having the pov.vr to will.

To say that we cannot tell whether we have libertv, because we do not understand the manner ot ' vclitimi, is all one as to say that we cannot tell whether we see or hear, because we do not understand the manner of sensation. IVilkins.

They not only perfect the intellectual faculty, but the volitive, making the man not only more knowing, but more wise and better.

There is as much difference between the approbation of the judgment, and the actual volitions of the will, as between a man's viewing a desirable thing with his eye, and reaching after it with his hand. buutli.

VOLKAMKR1A, in botany, a genus of plants, in the class of didynamia, and order of angiosper- mia ; ranking according to the natural method in the fortieth order, personatae.

VOLKOF (Theodore), a Russian actor, born at Jaroslaf, in 1729. By frequenting the German theatre, he became fond of the stage. He set up a private one, wherein he performed with his bro- thers ; which coming to the ears of the empress, Elizabeth, she invited him to Petersburg!), and took him and his company into her service, whereby he soon made a fortune, and left a large estate. He died in 1763, aged only thirty-four.

VOL'LEY, n. s. & v. n. \ Fr. voice. A flight of

VOL'LIED, adj. J shot; a burst ; sudden

emission : to lhro\ out : vollied is discharged in a volley.

A fine volley of words, gentlemen, and quickly shot

off. .S/u//. .

The holding every man shall beat as loud As his strong sides can volley. Id.

From the wood a volley of shot slew two of his com- pany. Raltiyh.

I stood

Thy fiercest, when in battle to thy aid The blasting vnllied thunder made all speed. Milton.

Distrustful sense with modest caution speaks ; It still looks home, and short excursions makes; But rattling nonsense in lull rallies breaks. /V/.. .

VOLNEY (Constantine Francis CnassebcEuf), count de, a modern French writer, was born at Craon in Britanny, in 1755. tie no sooner became master of a small patrimonial estate than he con- verted it into money, and embarked for the Levant. He travelled through various parts of Egypt and Syria ; and, after a residence for some time in a Maronite convent on Mount Libanus, returned to France in about three years. The fruits of his en- quiries appeared in his Voyage en Syrie et e:i Egypte,

2 voJs. 8vo., which was translated into English, Dutch, and German. Taking up his residence at Auteuil, near Paris, he now became connected with some of the most eminent of his literary con- temporaries ; and on the convocation of the States- general, in 1789, was elected a deputy from the Tiers Etat of Anjou. He frequently appeared with advantage as a public speaker. In 1791 he pub- lished his Iluines, ou Meditations sur les Revolu- tions des Kmpires. On the conclusion of the ses- sions ot the National Assembly, he accompanied M. Pozzo di B ir.ro to Corsica, where he had pro- jected some agricultural improvements, and made attempts to establish in that island the cultivation of the sugar cane, indigo, and other tropical plants. Returning to Paris, after ten months' imprison- ment, the fall of Robespierre restored him to liberty. In November 1794 he was appointed professor of history at the Normal School, and the course of lectures on the philosophy of history which he de- livered added considerably to his reputation. In 1795 he made a voyage to the United States of America, where he experienced a flattering recep- tion, and Volney would probably have settled in America, had not the prospect of a war with !•' ranee induced him to return home. After the elevation of Buonaparte to the consulship, he was nominated a senator ; and is said to have been offered the office of second consul. In the senate he co- operated with Lanjuinais, Cabanais, Destutt de Tracy, Coliaud, Garat, and others, whose influence was constantly exerted in the cause of freedom. After the return of the king, Volney, by a decree of the 4th of June, 1814, was designated a

member of the chamber of peers, where he always appeared among the ardent defenders of the rights of the na- tion. His death took place, after a short illness, at Paris, April 24th, 1820. Besides the works mentioned, he published Simplification des Langues Orientates, ou Methode nouvelle et facile d'ap- prendre les Langues Arabe, Persane, et Turque, avec les Caractbres Europeens, 1795, 8vo. ; Ta- bleau du Climat et du Sol de 1'Amerique, 1803, 2 vols. 8vo., with a Vocabulary of the Language of the Miamis ; Rapport fait a 1'Academie Celtique sur I'Ouvrage Russe de M. le Professor Pallas, Vocabulaires compares des Langues de toute la Terre, 1805, 4to. ; Supplement a 1'Herodole de Larcher, ou Chronologic d'llerodote conforme a son Texte, 1808, 2 vols. 8vo.; Questions de Statistique a 1'Usage des Voyageurs, 1813, 8vo. ; Recherches nouvelles sur 1'Ilistoire Ancienne, 1814 — 15, 3 vols. 8vo. Volney was a member of the Institute from its foundation ; and he belonged to the Asiatic Society of Calcutta, and to several European literary associations. — Biog. Nouv. des Contemp. Biog Univ.

\ OLO, an ancient town of European Turkey, in Thessaly, situated on the gulf of Volo. Its po- pulation amounts to nearly 5000. Its harbour is large, and resorted to by vessels from Egypt, Can- dia, Smyrna, &c. In 1685 it was taken and partly destroyed by the Venetians. Thirty-eight miles north-west of Larissa.

VOLOGDA, a province of European Russia, lying to the south of that of Archangel, and to the east of those of Novgorod and Olonetz. It extends from long. 38° 20'^ to 49° 20′ E., and from lat. 58° 30′ to 65° N., being one of the largest but worst peopled governments of the empire ; for, while its territorial extent is 149,000 square miles, VOL. XXII.

its population probably does not amount to 654,000. To the north we have all the severity of the frozen zone; the trees losing their leaves in August, and the rivers being frozen over from the end of October to the middle of April. In the south there are large tracts occupied by forests, lakes, and morasses. Mountains are rare, and, though agriculture is followed, the severity and changeable state of the weather render it precarious. The produce of the pasture grounds, of the chase and fishing, tend to make up for this uncertainty. The government is divided into ten circles. The town of this name is a bishop's see, and has 11,000 inhabitants.

VOLONES, in Roman antiquity, slaves who, in the Punic war voluntarily offered their service to the state, when they were admitted to citizenship, as none but freemen could be soldiers.

VOLTA (Alexander), an Italian philosopher, distinguished for his discoveries in Galvanic elec- tricity, was descended of a noble family, and

born at Como in 1745. In 1769 he addressed to father Beccaria a dissertation De Vi attractiva Ignis Elec- trici ; and in 1774 was appointed professor of natural philosophy at Pavia. He was in this situa- tion when the discoveries of Galrani were pub- lished. Volta immediately turned his attention to the subject of Galvanism, and to his researches is due the discovery of what has been termed the principle of electro-motion, or the excitement of electricity by the contact of heterogeneous sub- stances, as exhibited in the phenomena of the Vol- taic pile. Volta addressed to the Royal Society of London, in 1792, an account of his observations, and in 1794 he was presented with the Copleian medal. In 1801 Buonaparte invited our professor to Paris, where he exhibited his discoveries to the members of the institute. He was subsequently deputy from the University of Pavia to the con- sulta of Lyons, and then a member of the college of the Dotti, a senator, and at length a count. He died March 6th, 1826. A complete edition of his works appeared at Florence in 1816, 5 vols. 8vo.

VOLTA, a considerable river of Guinea, in Wes- tern Africa, the boundary between the Gold and Slave coasts. It overflows its banks, and the channel is obstructed with rocks and sand-banks, which will not admit ships of burden.

VOLTAIRE (Francis Arouet de), a celebrated French author, born at Paris, February 20th, 1694. His father, Francis Arouet, was ancien notaire au Chatelet, and treasurer of the chamber of accounts. He was an exceeding weakly child. In his ear- liest years he displayed a ready wit and a sprightly imagination ; and, as he said of himself, made verses before he was out of his cradle. The fa- mous Ninon De L'Enclos, to whom this ingenious boy was introduced, left him a legacy of 200O livres to buy him a library. Having been sent to the equity schools, on his quitting college, he was so disgusted with the dryness of the law, that he devoted himself entirely to the muses. He had early imbibed a turn for satire ; and, for some phi- lippics against the government, was imprisoned almost a year in the Bastile. He had before this period produced the tragedy of CEdipus, which was represented in 1718 with great success; and the duke of Orleans, happening to see it performed, was so delighted, that he obtained his release from prison. He began his Henriade before he was eighteen. Several copies of this poem having gol

abroad, while it was only a sketch, an edition of it was published with many chasms, undei the title of The League. Instead of fame and friends, the author gained only enemies and mortification, by this first edition. The bigots took fire at it, and the poet was considered as highly criminal for praising admiral Coligny and queen Elizabeth. Endeavours were even made to get the piece sup- pressed ; but this design proved abortive. His chagrin, on this occasion, first inspired him with the thought of visiting England, to finish the work, and republish it in a land of liberty. He was right ; for king George I., and more particularly the princess of Wales, afterwards queen of Eng- land, raised an immense subscription for him. Their liberality laid the foundation of his fortune ; for on his return to France, in 1728, he put his money into a lottery and was fortunate. His Let- tres Philosophiques, abounding in bold expressions and indecent witticisms against religion, having been burnt by a decree of the parliament of Paris, and a warrant being issued for apprehending the author in 1733, Voltaire withdrew; and was shel- tered by the marchioness du Chatelet, in her castle of Cirey, on the borders of Champagne and Lor- raine, who entered with him on the study of the system of Leibnitz, and the Principia of Newton. A gallery was built, in which Voltaire formed a good collection of natural history, and made an infinite number of experiments on light and elec- tricity. He labored in the mean time on his Ele- ments of the Newtonian Philosophy, then totally unknown in France, and which the numerous ad- mirers of Des Cartes were very little desirous should be known. In the midst of these philo- sophic pursuits he produced the tragedy of Alzira. He was now in the meridian of hisaee and genius, as was evident from the tragedy of Mahomet, first acted in 1741 ; but it was represented to the pro- curcur-general as a performance offensive to reli- gion, and the author, by order of cardinal Fleury, withdrew it from the stage. Merope, played two years after, 1743, gave an idea of a species of tra- gedy of which few models had existed. He now became a favorite at court, through the interest of Madam d'Etoile, afterwards marchioness of Pom- padour. He was appointed a gentleman of the bed-chamber in ordinary, and historiographer of France. He had frequently attempted to gain ad- mittance into the Academy of Sciences, but could not obtain his wish till 1746, when he was the first who broke through the absurd custom of filling an inaugural speech with the fulsome adulation of llichelieu ; an example soon followed by other aca- demicians. From the satires occasioned by this innovation he felt so much uneasiness, that he was glad to retire with the marchioness du Chatelet to Luneville, in the neighbourhood of king Stanis- laus. The marchioness dying, in 1749, Voltaire returned to Paris, where his stay was but short. The king of Prussia now gave Voltaire an invi- tation to live with him, which he accepted Towards the end of August 1750. On his arrival at Berlin, he was- immediately presented with the Order of Merit, the key of chamberlain, and a pension of 20,000 livres. These, however, he did not

long rnjoy. He did not take sufficient pains to live we',1 with Maupertuis, whose intrigues effected his lisgrace. He now settled near Geneva; but afterwards, being obliged to quit that republic, he pur- chased the castle of Ferney in France, about a

league from the lake of Geneva. It was here that he undertook the defence of the celebrated family of Calas ; and it was not long before he had a second opportunity of vindicating the innocence of another condemned family of the name of Sir- ven. In 1774 he had the third time an opportunity of employing that zeal which he had dis- played in the fatal catastrophe of the families of Calas and Sirven. In this retreat M. Voltaire continued long to enjoy the pleasures of rural life. Wearied at length, however, with his situation, or yielding to the importunities of friends, he came to Paris about the beginning of 1778, where he wrote a new tragedy called Irene. By this time his understanding seems to have been impaired, and he ridiculously suffered himself to be crowned in public with laurel, in testimony of his great poe- tical merit. He did not long survive this farce: for having over-heated himself with receiving vi- sits, and exhausted his spirits by supplying a per- petual fund of conversation, he was first seized with a spitting of blood ; and at last, becoming restless in the night time, he was obliged to use a soporific medicine. Of this he unluckily one night took so large a dose, that he slept thirty-six hours, and expired a very short time after awakening from it.

VOL'UBLE, adj. > Lat. volubilis. Formed

VOLUBIL'ITY, n. s. } so as to roll easily ; rolling; nimble ; active, applied to the tongue and its nim- bleness ; fluent of words : the noun substantive corresponds.

Then celestial fears should forget their wonted mo- tions, and by irregular volubility turn themselves any way, as it might happen. Hooker"

If voluble and sharp discourse be marred, Unkindness blunts it more than marble hard. Shuksp.

This less voluble earth, By shorter flight to the' east, had left him there. Milt.

He had all the French assurance, cunning, and volu- bility of tongue. Addison.

These, with a voluble and flippant tongue, become mere echoes. Watts.

Volubility, or aptness to roll, is the property of a bowl, and is derived from its roundness. Id.

VOLUMNA, AND VOLUMNIJS, in the mythology, two deities of the ancient Etrurians and Romans, who presided over the will and complaisance. They were invoked at marriages to preserve concord between thp parties.

VOLUMN/E FANUM, a temple of Etruria, sa- cred to the above deities ; where the Roman states assembled to make treaties. Viterbo now stands on the spot.

VOL'UME, n. s.) Lat. volumen. Some

VOLU'MINOUS, adj. Mhimj rolled or convolv-

VOLU'MINOUSLY, adv. Jed; as much as seems convolved at once; a book, (because anciently formed into a roll or rolls) : the adjective and ad- verb correspond with both senses.

(juyon all this while his book did read, Ne yet has ended ; for it was a great

And ample volume, that doth far exceed My leisure, so long leaves here to repeat. Spenitr.

Threescore and ten I can remember well ; Within the volume of which time I've seen Hours dreadful, and things strange. Sliti/tspeare.

He did not bear contradiction without much passion, and was too vuluminoui in discourse. Clarendon.

The serpent rolled voluminous anJ vast. Milton.

There is pleasure in doing something new, though never so little, without pestering the world with rulu- minous transcriptions. d'r

Unopposed they either lose their force, Or wind in volumes to their former course. Dryden.

I shall not now enlarge on the wrong judgments whereby men mislead themselves. This would make a volume. Locke.

The most severe reader makes allowances for many rests and nodding-

places in a voluminous writer. Sped.

The controversies are hotly managed by the divided schools, and voluminously every where handled. Gran.

VOLUMNIA, the wife of Coriolanus.

VOLUMNIUS, an Etrurian, who wrote tra- gedies.

VOLUMXIUS, a friend of M. Brutus, who was with him when he killed himself, and wrote the particulars : quoted by Plutarch.

VOL'UNTARY, adj & n. s. \ Fr. tolontaire ;

VOL'UNTARILY, adv. \ Latin voluntarius.

Acting without compulsion ; by choice, or willing ; purposed ; done by design : a volunteer ; a piece of music played at will : the adverb corresponding.

To be agents voluntarily in our own destruction, is against God and nature. Hooker.

God did not work as a necessary, but a voluntary agent ; intending before- hand, and decreeing with himself, that which did outwardly proceed from him.

Id.

The lottery of my destiny Bars me the right of voluntary chusing. Shakspeare.

All the unsettled humours of the land ; Rash, inconsiderate, fiery votuntariet. Id.

Aids came in partly upon missives, and partly volun- taries from all parts. Bacon.

Whistling winds like organs played, Until their voluntarirt made The wakened earth in odours rise, To be her morning sacrifice. Cleaveland.

Thoughts which voluntary move Harmonious numbers. Milton.

Voluntary forbearance denotes the forbearance of an action, consequent to an order of the mind. Locke.

'By a voluntary before the first lesson, we are pre- pared for admission of

those divine truths, which we are shortly to receive. Spectator.

VOLUNTARY, in music, a piece played by a mu- sician extempore, according to his fancy. This is often used before he begins to set himself to play any particular composition, to try the instrument, and to lead him into the key of the piece he in- tends to perform.

VOLUNTEER, n. s. & v. n. Fr. volontaire. A soldier, who enters into the service of his own accord: to go voluntarily for a soldier.

Leave off these wagers, for in conscience speaking, The city needs not your new tricks for breaking : And if you gallants lose, to all appealing, You'll want an equipage for volunteering. Diyden.

Congreve, and the author of the Relapse, being the principals in the dispute, I satisfy them ; as for the volunteers, they will find themselves affected with the misfortune of their friends. Collier.

VOLUNTEERS, persons who, either for the service of their prince, or out of the esteem they have for their general, serve in the army without being en- listed, to gain honor and preferment, by exposing themselves in the service. Such are the volunteers who have been long known in the army : but the present age has witnessed whole regiments of vo- lunteers arming themselves for a still more laud- able purpose. In 1794 large bodies of citizens in the different cities and towns of Great Britain formed themselves into regiments for the preserva- tion of internal peace, and the defence of their country from foreign attack. At the peace, in 1801, they mostly laid down their military habits; but,

when \%ar was again declared in 1803, and the de- termination of Buonaparte to invade this island was announced, the inhabitants rose as one man ; and ministers spoke of nearly 500,000 volunteers being in arms.

VOLUPTUOUS, adj.^ Fr. volupt ueui ; Lat.

VOLUP'TUARY, n.s. tvoluptuosvs. Given to

VOLUP'TUOUSLY, adv. £ excess of pleasure ; lux-

*VOLUP'TUOUSNESS, n. s. * urious : the adverb and*

noun substantive corresponding : a voluptuary is a

man devoted to pleasure and luxury.

He them dectives ; deceived in his deceit : Made drunk with drugs of dear

voluptuou receipt.*

Spenser.

Had I a dozen sons, I had rather eleven died nobly for their country, than one voluptuously surfeit out of action. Sliakspeare.

Here, where still evening is, not noon nor night ; W here no voluptuousness, yet all delight. Donne.

You may be free, unless Your other lord forbids, voluptuousneu. Dryden.

Does not the voluptuary understand, in all the liber- ties of a loose and a lewd conversation, that he runs the risk of body and soul 1 L'Ettrange.

VOLUSIANUS, a Roman emperor, associated by his father Gallus, and murdered along with him. See ROME.

VOLUSIUS, a poet of Patavia, who wrote the Annals of Rome in verse.

VOLUTA, in natural history, a genus of ani- mals belonging to the class and order of vermes testacea. There are 144 species. The animals are of the slug kind; the shell is unilocular and spiral; the aperture narrow and without a beak ; the colu- mell? plaited.

VOLUTE', n.s. Fr. volute. An architeoiural member of a column.

It is said there is an lonick pillar in the Santa Maria Transtevere, where the marks of the compass are still to be seen on the volute ; and that Palladio learnt from thence the working of that difficult problem.

Addison.

VOM'ICA, n. s. Latin vomica. An encysted tumor on the lungs.

If the ulcer is not broke, it is commonly called a vomica, attended with the same symptoms as an empy- ema : because the vomica, communicating with the ves- sels of the lungs, must necessarily void some of the putrid matter, and taint the blood. Arbuthnot.

VOM'lT,v. n.,v.a., & A Latin vomo,vomito. To

VOMI'TION, n.s. [n. s. ^ castup the contentsofthe

VOM'ITIVE, adj. I stomach : throw up from

VOM'ITORY. 3 the stomach ; or with

violence : the matter thrown up ; a medicine that

causes vomiting : vomition is the act or power of

vomiting : vomitive and vomitory, causing vomits :

emetic.

The fish vomited out Jonah upon the dry land.

Jonah ii.

He shall cast up the wealth by him devoured. Like vomit from his yawning entrails poured. Sandyt.

As though some world unknown, By pampered nature's store too prodigally fed, And surfeiting therewith, her surcrease vomited.

Drauton.

Since regul us of stibium, or glass of antimony, will communicate to water or wine a purging or vomitory operation, yet the body itself, after iterated infusions, abates not virtue or weight. Brou-ne'i Vulgar Errouri.

From this vitriolous quality, mercurius dulcis, and vitriol vomitive, occasion black injections. Id.

How many have saved their lives, oy spewing up

their debauch ! Whereas, if the stomach had wanted the faculty of romition, tliev had inevitably died.

Grew' Cosmology.*

This vomit may be repeated often, if it be found suc- cessful. Blackmore.

VOMITING. That internal sensation which an- nounces the necessity of vomiting is called nausea ; it consists of a general uneasiness, with a feeling of dizziness in the head, or in the epigastric region : the lower lip trembles,

and the saliva flows in abundance. Instantly, and involuntarily, convulsive contractions of the abdominal muscles, and at the same time of the diaphragm, succeed to this state ; the first are not very intense, but those tnat follow are more so ; they at last become such, that the matters contained in the stomach surmount the re- sistance of the cardia, and are thus darted, as it were, into the oesophagus and mouth ; the same effect is produced many times in succession ; it ceases for a time, and begins again after some in- terval. At the instant that the matters driven from the stomach traverse the pharynx and the mouth, the glottis shuts, the velum of the palate rises, and becomes horizontal, as in deglutition ; nevertheless, every time that one vomits, a certain quantity of liquid is introduced either into the larynx, or the nasal canals.

Vomiting was long believed to depend upon the rapid convulsive contraction of the stomach ; but it has been shown, by a series of experiments, that in the process, this viscus is nearly passive ; and that the true agents of vomiting are, on the one hand, the diaphragm, and, on the other, the large abdominal muscles. In the ordinary state, the dia- phragm and the muscles of the abdomen co-operate in vomiting ; but each of them can, nevertheless, produce it separately. Thus, an animal still vo- mits, though the diaphragm has been rendered immoveable by cutting the diaphragmatic nerves ; it vomits the same, though the whole abdominal muscles have been taken away by the knife, with the precaution of leaving the linea alba and the pentonseum untouched.

YOPISCUS (Flavius), a Roman historian who flourished about A. D. 303, and wrote the lives of the emperors Aurelian, Tacitus, Florianus, Probus, Firmus, Carus, Carinus, &c. He is one of the six historians whose works are extant, and printed under the title of HistoriBE Augusta Scriptores; but he excels the rest in elegance.

VORA'CIOUS, adj. ~\ Fr. voruce; Lat. vorax.

VORA'CIOUSLY, adv. f Greedy to eat; ravenous :

*VORACIOUSNESS, n. *. i the adverb and noun*

VORAC ITY. J substantives correspond-

ing.

Creatures by their voracity pernicious, have com- monly fewer young. Derham't Pkytico- Theology.

So voracious is this humour grown, that it draws in every thing to feed it. Government of the Tongue.

VORARLBERG, a mountainous district of Aus- tria, bordering on Switzerland, the lake of Con- stance, and Bavaria. It takes its name from a great mountain called Arlberg, which separates it from Tyrol, and forms one of the branches of the Alps. The Vorarlberg consisted of a number of petty lordships, all ceded to Bavaria at the peace of Presburg in 1806, but restored after the fall of Buonaparte. It now forms a circle of Tyrol, but aas still its separate states. Its area is about 940 square miles ; its population 85,000. The chief jown Bregenz.

YORMAR (Isaac), a learned German, who w;u employed as an imperial plenipotentiary in nego- ciating the peace of Westphalia. He wrote Me- moirs of Public Affairs, and died in 1662.

VORONEZ, a province and town of the inte- rior of European Russia, bounded on the east by the country of the Don Cossacks, and lying be- tween lat. 48° and 54° N. as area is 31,000 square miles ; but its population hardly amounts to

800,000.

VORTEX, n. s.) Lat. vortex. In the plural

YOR'TICAL, adj. $ vortices. Any thing whirled round : having a whirling motion.

Conflicting passions, loud, impetuous, strong, Wrapt in their vortex, hurry him along; And luckily one striking feature caught, A semblance stamps, though charged with many a fault.

White' Poems.*

If many contiguous vortices of molten pitch were each of them as large as those which some suppose to re- volve about the sun and fixed stars, yet these, and all their parts, would by their tenacity and stiffness com- municate their motion to one another. \eu-ton.

It is not a magnetical power, nor the effect of a tor- tiral motion ; those common attempts towards the ex- plication of gravity. Bentley's Sermons.

VORTEX, in meteorology, a whirlwind, or sudden, rapid, and violent motion of the air in gyres or circles. Vortex is also used for an eddy or whirl- pool ; or a body of water in certain seas or rivers, which run rapidly around, forming a sort of cavity in the middle.

VORTEX, in the Cartesian philosophy, is a sys- tem or collection of particles of matter moving the same way, and round the same axis.

The VORTICES OF DES CARTES are now justly exploded ; but, being the fiction of a very superior mind, they are still an object of curiosity, as being the foundation of a great philosophical romance. According to him, the whole of infinite space was full of matter; for he said matter and extension were the same, and consequently there could be no void. This immensity of matter he supposed to be divided into an infinite number of very small cubes ; all of which, being whirled about upon their own centres, necessarily gave occasion to the production of two different elements. The first consisted of those angular parts which, having been necessarily rubbed ofl, and grinded yet smaller by their mutual friction, constituted the most subtle and moveable part of matter. The second con- sisted of those little globules that were formed by rubbing off the first. The interstices betwixt these globules of the second element were filled up by the particles of the first. But in the infinite collisions, which must occur in an infinite space filled with matter, and alt in motion, it must necessarily happen that many of the giobules of the second element should be broken and grinded down into the first. Such Des Cartes supposed was the cause of the original formation and conse- quent motions of the planetary system. \ hen a solid body is turned round its centre, those parts of it which are nearest, and those which are remotest from the centre, complete their revolutions in one and the same time. But it is otherwise with the revolutions of a fluid : the parts of it which are nearest the centre complete their revolutions in a shorter time than those which are remoter. The planets, therefore, all floating in that immense tide of aether which is continually belting in from west

to east round the body of the sun, complete their revolutions in a longer or a shorter time, according to their nearness or distance from him. It is surely sufficient, however, to demolish this goodly fabric, barely to ask how an absolute infinity of matter can be divided into cubes, or any thing else? how there can possibly be interstices in a perfect plenum ? or how in such a plenum any portion of matter can be thrust frcm its place.

VOSGES, a chain of mountains in the east of France, extending from north to south, in a line nearly parallel to the course of the Rhine, from Bale to Spires. This chain may be termed a con- tinuation of the Jura ; for it begins nearly where the latter end, and is separated from them only by a valley. The length of the main chain is about 1-20 miles.

VOSGES, a department of the north-east of Trance, formed of a part of Lorraine, and adjoining ihe departments of the Meurthe and Upper Saone. Its extent, equal to two of our average sized coun- ties, is about 2400 square miles ; its population somewhat above 334,000. The surface is rugged, und here are the sources of several large rivers, as the Meuse, the Moselle, the Meurthe, and the Saone. The smaller streams and mountain tor- rents are numerous, as are the mineral waters, of which the best known are those of Plombieres. In the mountains the soil is often stony : in the plains < halky and sandy. The climate is cold ; the pro- ducts oats, barley, rye, potatoes, flax, and hemp. In the more fertile tracts wheat, and, in situations of favorable exposure, vines ; the summer heat being great. The mineral products are iron, lead, copper, and, in a few situations, silver, marble, and potters'earth. This department is divided into five arrondissements. Its capital is Epinal. The population, chiefly agriculturists, is far from dense. The cheapness of provisions, and conse quently of labor, has led to the introduction of linen and cotton cioth manufactures, the spinning of yarn, and the making of lace. These articles furnish, along with cattle, butter, cheese, glass, earthen-ware, and timber, the chief exports.

YOSS (John Henry), a German poet and critic, was born at Sommersdorf in 1751. Educated at the school of Neu Brandenburg he attracted some notice by his poems, inserted in the Almanac of the Muses, of Gottingen, in 1770, and procured the means of studying in the university at that place. A literary society having been formed, called The Friends of Gottingen, he became one of the mem- bers, amonˆ whom were count Stolberg, Holly, Buruer, Klopstock, &c. In 1775 Vos engaged in the publication of the Almanac of the Muses, or Anthology (Blumenlese) of Gottingen, which he conducted till 1800. In 1778′ he was nominated rector of the college of Ottendorf, Hanover, whence he removed to occupy a similar office at Eutin in the duchy of Oldenburg. He remained there twenty-three years; and, in 180.% the grand duke of Baden invited him to Heidelberg, where he remained till his death, March 29th, 1826. Voss translated the works of Homer, 1793; Virgil, 1799; Horace, 1806; Hesiod and the pseudo-Orpheus, 1306; Theocritus, Bion, and Moschus, 1808; Ti- bullus and Lygdamus, 1810; Aristophanes, 1821 ; Aratus, 1824; and extracts from the Metamor- phoses of Ovid, 1798. His original writings com- prise Letters on Mythology, Idylls, and other poems, besides numerous papers in periodical works. He*

was also engaged in various literary controversies with Heyne, count Stolberg, Creuzer, and others of his learned contemporaries.

VOSSIUS (John Gerard), one of the most learned and laborious writers of the seventeenth century, was of a considerable family in tlie Aeth- erlands ; and was born in 1577, in the Palatinate, near Heidelberg, at a place where

his father, John Vossius, was minister. He became well skilled in politic literature, history, and sacred and profane antiquities, and was made director of the college of Dort. He was at length made professor of eloquence and chronology at Leyden, whence he was called in 1633 to Amsterdam, to fill the chair of a professor of history. He died in 1649. He wrote many learned works, of which a complete edition has been printed at Amsterdam, in nine vols. folio.

Vossrus (Dionysius), a son of the above, born at Dort in 1612. He was very learned in the ori- ental history, and published a Latin translation of Maimonides on Idolatry, with notes : and other tracts. He died at Amsterdam, in 1633.

Vossius (Isaac), a man of great parts and learn ing, brother to Dionysius, was born at Leyden in 1618. He had no other tutor but his father, and employed his whole life in studying : his merit re- commended him to a correspondence with queen Christina of Sweden ; he made several journeys into Sweden by her order, and had the honor to teach her the Greek. In 1670 he came over to England, where king Charles made him canon of Windsor. He appears indeed by his publications, which are neither so useful nor so numerous as his father's, to have been a most credulous man, while he afforded many circumstances to bring his re- ligious faith in question. He died at Windsor castle in 1688. He was LL.D.

Vossius (Gerard), a Romish divine, a relation of the. preceding, was boru in 1609. He published the works of Gregonus Thaumaturgus ; Ephrena Syrus, and some tracts of John Chrysostom, and Theodoret, with Latin versions and notes.

VOSTITZA, a district of the Morea, in Achaia, extending along the coast of the gulf of Lepanto. Its chief town of the same name, occupying the site of the ancient .&gium, was lately a flourishing sea-port containing 800 houses; but, on the 23d of August, 1817, it was destroyed, in a great measure, by an earthquake along with a number of the neigh- bouring villages. Its port was tolerably good, and served as a place to export cheese, raisins, and other products to Patras and the neighbouring isles. Twenty-five miles east of Patras, and forty north west of Corinth.

VOTARY, n. s. Sc adj.) Lat. devotut. < >i

VO'TARIST, n. s. J- devoted, as by a vov

*VO'TARESS. J to any particular se**

vice : this both the first two noun substantives sig nify ; and votaress is the feminine : votary, as an adjective, means consequent on a vow.

Like a sad votaress, beautiful in tears. Child of unfeigned contrition she appears. Whyte.

I wish a more strict restraint Upon the sisterhood, the votariitt of St. Clare.

Shaktpeare.

Wherefore waste I time to counsel thee? Thou art a votary to fond desire. Id.

Superstition is now so well advanced, that men of the first blood are as firm as butchers by occupation ; and tvifnrv ri-solution is made equipollent to custom even in niutier of blood. r>acon.

vow

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VOY

What force have pious vows 1 the queen of love His sister sends, her vot'reti from above. Pope.

VOTE, n. s. & v. a.) Lat. votum. Suffrage;

VO'TER, n.s. \ voice given and num-

bered : to choose or give by suffrage : he who votes.

He that joins instruction with delight, Profit with pleasure, carries all the C»IM. Roscommnn.

How many have no other ground for their tenets, than the supposed honesty or learning of those of the same profession ! as if truth were to be established by the vote of the multitude. Locke.

Elections growing chargsable, the voten, that is, the bulk of the common people, have been universally se- duced into bribery, perjury, drunkenness, malice, and slander. Swift.

The final determination arises from the majority of opinions or votes in the assembly, because they ought 1o be swayed by the superior weight of reason. \Vatts.

VOTIVE, adj. Lai. votivus. Given by vow.

Such in Isis's temple you may find, On vntive tablets to the life pourtrayed.

DryJen.

VOUCH, v. a., v. n., & n. s. -\ Norman French

VOUCH'ER, n. s. (voucher ; from Lat.

VOUCHSAFE', v. a. & v. n. ivocatio. To call

*VOUCHSAFE'MENT, n. j. * to witness; ob-*

est ; declare ; warrant ; to bear witness : warrant ; attestation : a voucher is one who gives testimony; any kind of testimony : to vouchsafe is to grant by way of condescension : to deign; yield : the noun substantive corresponding.

Do I not see Zelmane, who does not think a thought which is not first weighed by wisdom and virtue t doth not she vouchmfe to love me with like ardour ? Sidney.

Vouchsafe, divine perfection of a woman, Of t'aese supposed crimes to give me leave By circumstance but to acquit myself. Shukspeare.

You do not give the cheer ; the feast is sold That is not often vouched, while 'tis making, Tis given with welcome. Id.

Better to starve.

Than crave the hire which first we do deserve : Why in this wolvish gown should I stand here, To beg of Hob and Dick, that do appear, Their needless voucher 1 Id.

*What praise couldst thou bestow on a deserving woman indeed 1 one that, in the authority of her merit, did justly put on the couch of *ery malice itself.*

Id.

But if the sense of touch seem such delight Beyond all other, think the same vouchsafed To cattle and each beast. Milton.

The infinite superiority of God's nature places a vast disparity betwixt his greatest communicated vouchiafe- mentt, and his boundless, and therefore to his creatures incommunicable, perfections. Jiunle.

The stamp is a mark, and a public voucher, that a piece of such denomination is of such a weight, and of such a fineness, i. e. has so much silver in it.

Locke.

All the great writers of that age stand up together at vouchert for one another's reputation. Spectator.

VOW, n. »., v. a., & v. n.) Fr. vau ; Lat. vo-

VOW'FELLOW, n. s. \ turn. A promise

made to a divine power; or an act of devotion, by which some part of life, or of possessions, is con- secrated to a particular purpose : to consecrate in this way: to make solemn vows or promises of this kind : a vowfellow is one bound by the same vow.

IW and pray unto the Lord. Ptalm Ixxvi.

'lo .Master Haney, upon some special consideration, I haveoou-«rf this my labour. S/ienter.

David often totceth unto God the sacrifice of praise and thanksgiving in the congregation. Honker.

Who are the votaries That are vowfetlowi with this virtuous king ?

The gods are deaf to hot and peevish vows ; They are polluted offerings. Id

Whoever sees these irreligious men, With burden of a sickness, weak and faint,

I5ut hears them talking of religion then, And vowing of their soul to every saint. Dames.

If you take that vow and that wish to be all one, you are mistaken ; a wish is a far lower degree than avow.

Huintnund.

Those, who wear the woodbine on their brow, Were knights of love, who never broke their vow ; Firm to their plighted faith. Dryden.

Vow, in religion. The use of vows is found in most religions. They make up a considerable part of the Pagan worship, being made either in consequence of some deliverance, under some pressing necessity, or for the success of some enterprize. Among the Jews, all vows were to be voluntary, and, made by persons wholly in their own power ; and if such person made a vow in any thing lawful and possible, he was obliged to fulfil it. If he appointed no particular time for accomplishing his vow, he was bound to do it instantly, lest by delay he should prove less able, or be unwilling, to execute his promise. Among the Romanists, a person is constituted a religious by taking three vows; that of poverty, chastity, and obedience.

Vows, among the Romans, signified sacrifices, offerings, presents, and prayers, made for the Cse- sars and emperors, particularly for their prosperity and the continuance of their empire. These were made at first every five years, then every fifteen, and afterwards every twenty, and were called quin- quennalia, decennalia, and vincennalia.

VOWEL, n.s. Fr. voytlle; Lat. vocalis. A letter which can be uttered by itself.

I distinguish letters into vowels and con o: ant-.

Holde .

Virgil makes the two vowels meet without an elision.

Broome.

VOX, in law, vocem non habere, a phrase used by Bracton and Fleta for an infamous person ; one who is not admitted to be a witness.

VOX HVMANA, Lat., voix humaine. Fr., in mu sic, a stop in the organ, thus named from its being an imitation of the human voice. It is a reed stop, in unison with the open diapason, or a short metal pipe, of a wide globular form, at the top resembling a human mouth. This is a celebrated stop in the famous organ at Uaerlein.

VOY'AGE, n. s., v. n., & v. a.) Fr. voyage. A

VOY'AGER, n. s. J travel by sea ;

course ; attempt ; the practice of travelling (obso- lete) : to voyage is to travel by sea: to pass o~ver: a voyager, a traveller by sea.

Guyon forward 'gan his voyage make, With his black palmer, that him guided still. Spenser.

If you make your voyage upon her, and prevail, I am no further your enemy. Shalupeare.

All nations have interknowledge of one another, by voyage into foreign parts, or strangers that come to '.hem. J{iicv7i.

Disdain not in thy constant travelling To do as other mtyagers, and make Some turns into less creeks, ana wisely take Fresh water at the Heliconian spring. Donne,

I with pain

Voyaged the unreal, vast, unbounded dee,) Of horrible confusion. Milton.

This great man acted like an able .pilot in a long . contented to sit in the cabin whtn the winds

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UPL

were allayed, but ready to resume the helm when the storm arose. Prior.

UP, adv., interj., & prep. Sax. up; Belg. and Dan. op ; Goth, and Swed. upp. Aloft ; on high ; erect; climbing; exalted; in a state of being raised or increase : ' up and down ' is, disorderly ; back- ward and forward : taking with and to as prepo- sitions : as an interjection arise ! rouse ! as a pre- position, from a lower to a higher position.

As soon as the sun is up, set upon the city.

Judges ix.

Those that were up themselves kept others low, Those that were low themselves held others hard, Ne suffered them to rise or greater grow. Spenser.

Up grisly ghosts ; and up, my rueful rime ; Matter of mirth now shall thou have no more. Id.

From those two brethren, admire the wonderful changes of wordly things ; now up, now down, as if the life of man were not of much more certainty than a stage play. Knolles.

The gentle archbishop of York is up With well-appointed powers. Shukspeare. Henry VI.

In going up a hill, the knees will be most weary ; in going down, the thighs : for that, in lifting the feet, when a man goeth up the hill, the weight of the body beareth most upon the knees, and, in going down, upon the thighs. Bacon.

Strait the rumour flew Up to the city ; which heard, up they drew By daies first breake. Chapman.

But up, and enter now into full bliss. Milton.

Thou hast fired me ; my soul's up in arms, And mans each part about me. Dryden.

As a boar was whetting his teeth, up comes a fox to him. L' Estrange.

Upon his first rising, a general whisper ran among the country people, that Sir Roger was up. Additnn.

UPBEAR', v. a. Prefer, upbore; part. pass. upborn. Up and bear. To sustain aloft; support in elevation.

Vital powers 'gan wax both weak and wan, For want of food and sleep ; which two upbear, Like weighty pillars, this frail life of man. Spenser.

Upborn with indefatigable wings. Milton.

UPBRAID', v. a. > Sax. up3&brice'Ban,up-

UPBRAID'INGLY, adv. J j;ebnet>an. To charge contemptuously with any thing disgraceful. It has commonly with, sometimes of, before the thing imputed ; sometimes it has only an accusative of the thing, as in Milton : the adverb corresponds.

If any lack wisdom, let him ask of God, that giveth liberally, and upbraideth not. James i. 5.

Vain man ! how long wilt thou thy God upbraid 1 And, like the roaring of a furious wind, Thus vent the vile distemper of thy mind 7 Sandy.*

There also was that mighty monarch laid, Low under all, yet above all in

pride ;

That name of native sire did foul upbraid, And would, as Amrnon's son, be magnified. Spenser.

If you refuse your aid, yet do not Upbraid us with our distress. Shakspeare.

I have too long born Your blunt uvbraidings, and your bitter scoffs. Id.

He that knowingly commits an ill, has the upbraid' •ngt of his own conscience. Decay of Piety.

UPBROUGHT, part. pass, of upbring. Edu- cated ; nurtured.

Divinely wrought, And of the brood of angels, heavenly born,

And with the crew of blessed' saints upbroiight, Each of which did her with her gifts adorn. S/>enser.

UPCAST, adj. & n. s. Participle from to cast up. The verb to upcast is not in use. Thrown upwards ; a term of bowling ; a throw.

Was there ever man had such luck 1 when I kissed the jack, upon an upcutt to be hit away ! Shakspeare.

Beasts with upcatt eyes forsake their shade, And gaze as if I were to be obeyed. Dryden.

UPGATHER, v. a. Up and gathsr. To con- tract.

Himself he close upgathered more and more Into his den, that his deceitful train By his there being might not be bewiaid, Ne any noise, ne any question made. Sf-enter.

UPHAND', adj. Up and hand. Lifted by the hand. .

The uphand sledge is used by underworkmen, when the work is not of the largest, yet requires help to batter. They use it with both their hands before them, and seldom lift their hammer higher than their head.

Moron.

UPHILL', adj. Up and hill. Difficult; like the labor of climbing a hill.

What an uphill labour must it be to a learner, who has those first rudiments to master at twenty years of age, which others are taught at ten. Clarissa.

UPHOARD', v. a. Up and hoard. To trea- sure ; store.

Heaps of huge words vphoarded hideously With horrid sound though having little sense,

They think to be chief praise of poetry. S/>enser.

If thou hast uphoarded in thy life Extorted treasure in the womb of earth, Speak of it. Shaktpeare.

UPHOLD', v. a. \ Fret, upheld ; part. pass.

UPHOLD'EE, n. s. i upholden. Up and hold. To lift on high ; support ; sustain ; continue : the noun substantive corresponding : it is used also particularly for an undertaker.

Divers, although peradvenlure not willing to be yoked with elderships, yet were contented to uphold opposition against bishops, not without greater hurt to the course of their whole proceedings. Hook.*

While life upholds this arm, This arms upholds the house of Lancaster. Sliakspeare.

Many younger brothers have neither lands nor means to uphold themselves. Raleigh.

There is due from the judge to the advocate some commendation where causes are fair pleaded ; for that upholds in the client the reputation of his counsel, and beats down in him the conceit of his cause. Bacon.

He who reigns

Monarch in heaven, till then, as one secure, Sat on his throne, upheld by old repute. Milton.

The company of upholders have a right upon the bodies of the subjects. Arbuthnot.

Suppose then Atlas ne'er so wise : Yet, when the weight of kingdoms lies Too long upon his single shoulders. Sink down he must, or find upholders. Sicift.

UPHOL'STERER, n. s. A corruption of up- holder. One who furnishes houses ; or who fits u;o apartments with beds and furniture.

If a corner of the hanging wants a single nail, send for the upholsterer. Swift.

Mere wax as yet, vou fashion him with ease. Your barber, cook, upholsterer. Pope.

UPLAND, n. s. & adj.) Up and land. Higher UPLAND'ISH, adj. t ground ; higher in situ-

ation; rude; uncultivated : uplandish has also the latter signification.

Lion-like, uplandish, and mere wild, Slave to his pride ; and all his nerves being naturally

compiled Of eminent strength ; stalks out and preys upon a silly

sheep. Chapman' Iliad.*

Those in Cornwall do no more by nature than other elsewhere by choice, conceive themselves an estranged*

UPO

•ociety from the upland dwellers, and carry an emula- tion against them. Carew't Surrey of Cornwall.

Sometimes with secure delight The upland hamlets will invite. Milton.

UPLAND, a province of Middle Sweden, bound- ed by the gulf of Bothnia, the Baltic, the lake of Malar, and \Vestmannland. It consists of an ex- tensive plain, a little above the level of the sea, and in general fertile, having an area of 500 English square miles, with a population of 230,000. It is watered by a number of rivers, some of which are navigable. Upland contains very extensive forests, also some of the best iron mines in Sweden. Be- sides Stockholm (the capital of the kingdom) it contains Upsal, and several other towns.

UPLAY', v. a. Up and lay. To hoard ; to lay up.

We are but farmers of ourselves ; yet may, If we can stock ourselves and thrive, uplay Much, much good treasure, for the great rent-day.

Donne.

UPLIFT', v. a. Up and lift. To raise aloft.

Mechanick slaves,

With greasy aprons, rules and hammers, shall Uplift us to the view. Shakspeare.

Together both, with next t' almighty arm Uplifted imminent, one stroke they aimed. Milton.

Songs, sonnets, epigrams, the winds uplift, And whisk them back to Evans, Young, and Swift.

Pope.

UP'MOST, adj. An irregular superlative formed from up. Highest ; topmost.

Away ! ye skura,

That still rise upmott when the nation boils ; That have but just enough of sense to know t

The master's voice, when rated to depart. Dryden.

UPON', prep. Up and on. Is in many of its significations now contracted into on, especially in poetry. Its meaning is very multifarious ; for it is applied both to place, which seems its original sig- nification ; to time, which seems its secondary meaning ; and to intellectual or corporeal opera- tions. It always retains an intimation, more or less obscure, of some substratum, something precedent, or some subject. It is not easy to reduce it to any general idea. .

The Philistines be upon thee, Sampson. Judges.

We have borrowed money for the king's tribute, and that upon our lands and upon our vineyards. Neheminh.

Blood that is upon the altar. Bible.

How? that I should murder her ? Upon the love, and truth, and vows, which T Have made to thy command ! — I, her ! — her blood !

Shaktpearf.

He made a great difference between people that did rebel upon wantonness, and them that did rebel upon want. Baron.

The enemy lodged themselves at Aldermaston, and those from Js'ewberry and Reading in two other villages upon the river Kennet, over which he was to pass.

Clarendon.

No man, who had a mind to do wrong, would be awed from doing it by a

law that is always to be a iword in a scabbard, and must never be pleaded against him. or executed upon him. Kettlf worth.

Upon this, I remember a strain of refined civility, that when any woman went to see another of equal birth, the worked at her own work in the other's house.

Temple.

If we would neither impose upon ourselves, nor others, v •• must lay aside that fallacious method of censuring by the lump. Burnet.

This advantage we loit upon the invention of fire-arms.

Additon.

UPR

Constantia he looked upon as given away to his rival upon the day on which their marriage was to be solem- nized. Id.

The design was discovered by a person as much noted for his skill in gaming as in politicks, upon the base mercenary end of getting money by wagers. Swift.

UP'PER, adj.) A comparative from up. Su-

UP'PERMOST. J perior in place or dignity; higher: highest in place or dignity.

The like corrupt and unreasonable custom prevailed far, and got the upper hand of right reason with the greatest part. Hooker.

The waters, called the waters above the heavens, are but the clouds, and waters engendered in the uppermost air. Raleigh.

Our knight did bear no less a pack Of his own buttocks on his back ; Which now had almost got the upper Hand of his head, for want of crupper. Hudibras.

In all things follow nature, not painting clouds in the bottom of your piece, and waters in the uppermost parts.

Dryden.

The understanding was then clear, and the soul's upper region lofty and serene, free from the vapours of the inferior affections. South's Sermons.

UPPINGIIAM, a market-town in Martinsley hundred, Rutlandshire, seven miles soutli of Oak- ham, and eighty-nine north by west of London. The town, consisting principally of one street, stands on an eminence, whence it is supposed to have derived its name. The houses are well built, and the streets clean and neat ; it has a good hospital and free-school, both erected in 1584. The church is an ancient Gothic structure, containing many monuments, some of which are very elegant and of great antiquity. At a place called the Brand are annual horse-races. Market on Wednesday Fairs March 7th and July 7th, for horses, cattle and cloth.

UPRAISE', v. a. Up and raise. To raise up; to exalt.

This would interrupt his joy In our confusion, and our joy upraise In his disturbance. Milton's Paradise Lost.

UPREAR', v. a. Up and rear. To rear on high Heaven-born Charity ! thy blessings shed ; Bid meagre Want uprear her sickly head. Guy.

UPRIGHT, adj. & n. s.) Up and risht. This

UP'BICHTLY, adv. £word, with its deriva-

UP'RIGHTNESS, n. s.) lives, is in prose ac-

cented on the first syllable ; but in poetry seems to be accented indifferently on the first or second. Straight up; perpendicularly erect: hence honest; not declining from moral right : as a noun substan- tive (ill supported) it seems to mean elevation ; or- thography : the adverb and noun substantive cor- respond with the adjective.

They are upright as the palm-tree. Jeremiah x.

Men by nature apter to rage than deceit ; not greatly ambitious, more than to be well and uprightly dealt with. Sidney.

Such neighbour nearness should not partialize The' unstooping firmness of my upright soul. Shaksp.

In the morning, taking of somewhat of easy digestion, as milk, furthers nourishment : but this should be done sitting upright, that the milk may pass more speedily to the stomach. Bacon' t Natural Hittory.

1'rinces in judgment, and their delegate judges, must judge the causes of all persons uprightly and impartially, without any personal consideration. Taylor.

You have the orthography, or upright, of this ground- plat, and the explanation thereof, with a scale oi feel and inches. Moxon.

The hypocrite bends his principles and practice to the fashion of a corrupt world ; but the truly upright man is inflexible in his •uprightness, and unalterable in his purpose. Atterbury.

UPRISE', v.n. Up and rise. To rise from de- cumbiture.

Thou knowest my down sitting and mine uprising.

I'salm cxxxix.

Uprose Sir Guyon. S/ienser.

NVas that the king that spurred his horse so hard Against the steep uprising of the hill 1 Shakspeare.

Uprose the virgin with the morning light, Obedient to the vision of the night. Pope.

U P'ROAll, n. s. & v. a. Belg. oprocr. Accented on the first syllable in prose; in verse, indifferently on either. Tumult ; bustle ; disturbance ; confu- sion : to throw into confusion. Obsolete.

The Jews, which believed not, set all the city on an tip-cxir. Acts xvii. 5.

Had I power, I should Pour the sweet milk of concord into hell, ('pi-oar the universal peace, confound All unity on earth. Shakspeare.

h were well if his holiness had not set the world in zn uproar, by nourishing of war. Raleigh.

Others, with vast Typhxan rage more fell. Rend up both rocks and hills, and ride the air In whirlwind : hell scarce holds the wild uproar. Mil.

UPROOT, v.a. Up and root. To tear up by the root.

Orpheus could lead the savage race, And trees uprooted left their place, Sequacious of the lyre. Dryden .

I "I'ROUSE', v. a. Up and rouse. To waken from sleep ; to excite to action.

Thou art uproused by some distemperature. S/iofap.

UPSAL, an old town of Sweden, tfte see of an archbishop, in a district of the same name, province of Upland, is situated on the river Sala, which divides it into two parts. Most of the private houses are of wood; but the public buildings are of stone or brick. The cathedral is larue, and was erected in the thirteenth century on the model of Notre Dame at Paris. The university was founded in the fifteenth century, and the number of students nt present exceeds 1000. It can boast of Linnteus, Celsus, and a number of distinguished professors; has a valuable library founded by Gustavus Adolphus, and an observatory, botanical garden, cabi- nets of natural history and mineralogy, &c. The royal castle and gardens, and the residence of the archbishop, aie also worth notice. This town was long the residence of the Swedish monarchs, who once bore the title of kings of Upsal. The ceremony of the election and sanction given by the people took place in a neighbouring plain, where are still shown the stones on which were inscribed the name of the sovereign, and tbe year of his ac- cession. The coronation of the kings of Sweden is still performed here. Population about 5000. Thirty-five miles north of Stockholm.

UP'SHOT, n.s. Up and shot. Conclusion; end ; last amount or event.

With this he kindleth his ambitious spighte To like desire and praise of noble fame, The only upshot whereto he doth aim. llu^berd.

I cannot pursue with any safety this sport to the «/>- that. Shaksi»\iri'.

Upon the upshot, afflictions are but the methods of a nerciful Providence,, to force us upon the only means of setting matters ri^lit. L' Estrange.

UPSIDF. DOWN. adverbial form of speech.

In his lap a mass of coin he told. And turned upside doirn, to feed his eye And covetous desire with his huge treasure. Spenser.

The flood did not so turn upside down the face of the earth, as thereby it was made past knowledge, after the waters were decreased. Raleigh.

UP'SPRING, n. i. Up and spring. This word seems to signify upstart ; a man suddenly exalted. Not used.

The king doth wake to-night, and takes his rouse ; Keeps wassel, and the swaggering upspring reels.

Shalapetire .

UPSTAND', v. n. Up and stand. To be erected.

Sea-calves unwonted to fresh rivers fly ; The water snakes with scales upstanding die. Man.

UPSTART, v. n. & n. s. Up and start. To spring up suddenly: one suddenly raised or start- ing up.

He upstarted brave

Out of the well, wherein he drenched lay, As eagle fresh out of the ocean wave. Spenter.

Mushrooms have two strange properties; the one, that they yield so delicious a meat ; the other, that they come up so hastily, even in a night, and yet they are unsown : and therefore such as are upstarts in state, they call in reproach mushrooms. Bacon.

Inordinate desires,

And upstart passions, catch the governmen. From reason. Milton.

UPSTAY', v. a. Up and stay. To sustain : support.

Them she upt'ays

Gently with myrtle band : mindless the while Herself, though fairest unsupported flower. Miltim.

UPSWARM', r. a. Up and swarm. To raise in a swarm. Out of use.

You've taken up the subjects of my father, And both against the voice of heaven and him Have here upsicarmeil them. Shaktpenre.

UPTAKE', v. a. Up and take. To take into tbe hands.

He hearkened to his reason and the child Upiaking, to the palmer gave to bear. Spenser.

UPTON (James), was born at Taunton, and edu- cated at Exeter College, Oxon, became rector of Rissington, and prebendary of Rochester He pub- lished Epictetus, 2 vols. 4to; Spenser's Faerie Queen, and Observations on Shakspeare, 8vo.

UPTON-ON-SEVERN, a market-town in Per- shore hundred,

Worcestershire, on the banks of the Severn, ten miles south of Worcester, and 109J from London. The town is neat and well built. The church an extremely neat building, with a square tower; erected in 1758. This place carries on a considerable traffic, by barges, on the Severn, over which it has a stone bridge of six arches. Here are two banking houses, and a good charity- school for girls. Market on Thursday. Fairs first Thursday after Midlent, Thursday in Whitsun- week and before St. Matthew's day, and Sep- tember.

UPTRAIN', v. a. Up and train. To bring up ; to educate. Not used.

King Lear in happy peace long reigned, But had no issue male him to succeed,

But three fair daughters, which were well untrained In all that seemed lit for kingly seed. Sntnser.

UPTURN', v. a. Up and turn. To throw up; to furrow.

So scented the grim feature, and upturned His nostrils wide into the murky air. Milton.

Pevond all marks, with many a giddy round Down rushing, it upturns a hill of ground. Pope.

UPUPA, in ornithology, a genus belonging to the order of pics. The beak is arcuated, convex, and something blunt ; the tongue is obtuse, trian- gular, entire, and very short ; and the feet are fitted for walking. There are ten species ; one of which, the epops, hoopoe, or dung bird, is frequently seen in Britain. It may be readily distinguished from all others that visit this island by its beautiful crest, which it can erect or depress at pleasure. It is in length fifteen inches ; the bill is black, two inches and a half long, slender, and incurvated ; the irides are hazel : the crest consists of a double row of feathers, the highest about two inches long; the tips are black, their lower part of a pale orange color ; the neck is of a pale reddish brown ; the breast and belly white ; the lesser coverts of the wings are of a light brown ; the back, scapulars, and wings, crossed with broad bars of white and black ; the rump is white ; the tail consists of only ten feathers, white marked with black, in form of a crescent, the horns pointing towards the end of the feathers. The legs are short and black ; the exterior toe is closely united at

the bottom to the middle toe. According to Linnaeus, it takes its name from its note, which has a sound similar to the word ; or it may be de- rived from the French huppe, or crested : it breeds in hollow trees, and lays two ash-colored eggs : it feeds on insects, which it picks out of ordure of all kinds. Dr. Pallas affirms that it breeds in prefer- ence in putrid carcases ; and that he had seen the nest of one in the privy of an uninhabited house in the suburbs of Tzaritsyn.

UPWARD, adj.,n.s., & J Up and Saxon

UP'WARDS, adv. [adv. \ pearib. Directed to a higher part ; the top or highest part ; towards a higher place or position ; more than ; toward the source of a stream.

Looking inward, we are stricken dumb ; looking up- ward, we speak and prevail. Hooker.

I have been your wife in this obedience Upward of twenty years ; and have been blest With many children by you. Shuktpeare. Henry VIII.

Dagon, sea-monster ! upward man, And downward fish. Milton.

A man on a cliff is at liberty to leap twenty yurds downwards into the sea, not because he has power to do the contrary action, which is to leap twenty yards upwards, for that he cannot do ; but he is therefore free, because he has a power to leap, or not to leap. Lochs.

Be Homer's works your study ;

Thence form your judgment, thence your notions bring, And trace the muses upuard to their spring. Pope.

UPWIND', v. a. Pret. & part. pats, upwound. Up and wind. To convolve.

As she lay upon the dirty ground, Her huge long tail her den all overspread, Yet was in knots and many boughts upwound. Spenser.

UK, in ancient geography, a town of Mesopota- mia, situated between the Tigris and Nisibis; taken by some for Ur of the Chaldees, the residence of Abraham. What seems to confirm this is, that from Ur to Haran, the other residence of the pa- triarch, the road lies directly for Palestine. And it is no objection that Ur is said to be in Mesopota- mia, because the parts next the Tigris were occu- pied by the Chaldeans, as seems to be confirmed from Acts vii. 2, 4. It is called Orche by Strabo, Orchoe by Ptolemy. The Chaldean philosophers had a kind of university in it, for teaching astrono- my, astrology, magic, 8cc.

URANIA, one of the nine Muses. She pre- sided over Astronomy. She was the mother of Hy-

men the god of marriage, and of the poet Linus. She is represented by painters as very young, dressed in an azure-colored robe powdered with stars, ant1 crowned with stars, and holding a globe in hei hands, with mathematical and astronomical instru- ments around her.

URANIA, a name of Venus, as a celestial goddess.

URAMA, in astronomy. See HERSCHEL.

URANIUM, uranite. This metal was disco- vered by Klaproth in the year 1789. It exists combined with sulphur, and a portion of iron, lead, and silex, in the mineral termed pechblende, or oxide of uranium. Combined with carbonic acid it forms the chalcolite, or green mica ; and mixed with oxide of iron it constitutes the uranitic ochre. It is always found in the state of an oxide, with a greater or smaller portion of iron, or mineralised with sulphur and copper. The ores of uranium are of a blackish color, inclining to a dark iron gray, and of a moderate splendor : they are of a close texture, and, when broken, present a somewhat uneven, and, in the smallest particles, a conchoidal surface. They arefound in the mines of Saxony.

Uranium exhibits a mass of small metallic glo- bules, agglutinated together. Its color is a deep gray on the outside; in the inside it is a pale brown It is very porous ; and is so soft that it may be scraped with a knife. It has but little lustre. Its specific gravity is between eight and nine. It is more difficult to be fused than even manganese. When intensely heated with phosphate of soda and ammonia, or glacial phosphoric acid, it fuses with them into a grass-green glass. With soda or borax it melts only into a gray, opaque, scoriaceous bead. It is soluble in sulphuric, nitric, and muriatic acids. It combines with sulphur and phosphorus, and al- loys with mercury. It has not yet been combined with other combustible bodies. It decomposes the nitric acid and becomes converted into a yellow oxide. The action of uranium alone upon water, &c., is still unknown, probably on account of its extreme scarcity.

In order to obtain uranium the pechblende is first freed from sulphur by heat, and cleared from the adhering impurities as carefully as possible. It is then digested to nitric acid ; the metallic matter that it contains is thus completely dissolved, while part of the sulphur remains undissolved, and part of it is dissipated under the form of sulphureted hydrogen gas. The solution is then precipitated by a carbonated alkali. The precipitate has a lemon- yellow color when it is pure. This yellow carbo- nate is made into a

paste with oil and exposed to a violent heat, beddea in a crucible well lined with charcoal.

Klaproth obtained a metallic globule twenty- eight grains in weight by forming a ball of fifty grains of the yellow carbonate with a little wax, and by exposing this ball in a crucible lined with charcoal to a heat equal to 170° of Wedgewood's pyrometer. Richter obtained in a single experi- ment 100 grains of this metal, which seemed to be free from all admixture. There are probably two oxides of uranium, the protoxide, which is a grayish black, and the peroxide which i yellow.*

URANOS. See URANUS.

URANOSCOPUS, in ichthyology, a genus of fishes belonging to the order of jugulares. The head is large, rough, and depressed, the upper jaw being shorter than the under one ; there are six dentated rays in the membrane of the -gills; and

URC

tiie anus is in the middle of the body. There are two species ; one of which is found in the Medi- terranean Sea.

VRANTSCHIA, a district of European Turkey, in Moldavia, containing twelve villages and about 2000 farms.

URBAN I. (pope) succeeded Calixtus I. A.D. 223. He was beheaded during the persecution under Severus, in 230.

URBAN II. succeeded Victor III. in 1088, and promoted the great crusade. He died in 1099.

URBAN III. succeeded Lucius III. in 1185. He had great disputes with the emperor Frederick Barbarossa, and died in 1187.

URBAN IV. succeeded Alexander IV. in 1261. He was haughty and superstitious. He died in

1264.

URBAN V. succeeded Innocent VI. in 1362. He removed the papal seat from Avignon to Rome; but died on a visit to Avignon in 1370.

URBAN VI. was elected in 1378. His severity was so great, that a party of the cardinals chose Robert of Geneva as antipope, by the name of Clement VII. Urban persecuted his opponents vii>lently, but died in 1389.

URBAN VII. succeeded pope Sixtus V. in 1590, but died the same year, twelve days after his elec- tion.

URBAN VIII. succeeded pope Gregory XV. in 1623, and died in 1644.

URBAN IX., Barberini of Florence, was elected in 1633. He condemned the Jansenists ; was a man of genius, and very learned. His Latin poems were published at Paris in folio ; and his Italian poems at Rome in 1640, 12mo. He died in 1649.

URBAN'ITY, n. s. Fr. urbanite, ; Latin urba- nittis. Civility; elegance ; politeness; merriment; facetiousness.

A. rustical severity banishes all urbanity, whose harmless condition is consistent with religion. Browne.

Moral doctrine, and urbanity, or well-mannered wit, constitute the Roman satire. Dryden.

URBINO, a town in the states of the church, Italy, the capital cf the delegation of this name, is situated on a mountain, is the see of an archbishop, the seat of a university, and contains a population of 4800. It has likewise a college and an institution under the singular name of Academia Assurditorum ; but bein;i situated at a distance from any great road it is seldom visited. Its only remarkable edifice is the ducal palace. It was the birth-place of Ra- phael. Forty miles north by west of Ancona, and fifty south by east of Ravenna.

URCJEUS (Anthony Codrus), a learned Italian, born in 1446. His works, consisting of Letters, Speeches, and Poems, were published after his death. Being disgusted with the world, by various misfortunes, he retired into a wood, where he died in 1500.

VHCEOLA, a lately discovered genus of the pentandria class, and monogynia order of plants, and belonging to the thirtieth natural order, or class called contorts, by Linnaeus in his natural method. The genus is thus characterised by Dr. Roxburgh : — Calyx beneath five-toothed ; coral one-petaled, pitcher-shaped, with its contracted mouth five-toothed ; nectary entire, surrounding the germs ; follicles two, round, drupacious ; seeds numerous, immersed in pulp. There is but one known species, which the same eminent botanist

URE

describes thus: — U. elastica; shrubby, twining, leaves opposite, oblong, panicles terminal, is a native of Sumatra, Prince of Wales's Island, and the

Malay countries. Stem woody, climbing over trees, &c., to a very great extent; young shoots twining, and a little hairy ; bark of the old woody parts thick, dark-colored, considerably uneven, a little scabrous, on which are found several species of moss, particularly large patches of lichen ; the wood is white, light, and porous. Leaves opposite, short petiolated, horizontal, ovate, oblong, pointed, entire, a little scabrous, with a few scattered white hairs on the under side. Stipulusnone. Panicles terminal, brachiate, very raraous. Flowers numer- ous, minute, of a dull greenish color, and hairy on the outside. Bracts lanceolate, one at each div'- sion and subdivision of the panicle. Calyx peri- anth, one-leaved, five-toothed, permanent. Corol one-petaled, pitcher-shaped, hairy mouth much contracted, five-toothed, divisions erect, acute, nectary entire, cylindric, embracing the lower two- thirds of the germs. Stamens, filaments five, very short from the base of the corol. Anthers arrow- shaped, converging, bearing their pollen in two grooves on the inside near the apex; between these grooves and the insertions of the filaments they are covered with white soft hairs. Pistil, germs two; above the nectary they are very hairy round the margins of their truncated tops. Style single, shorter than the stamens. Stigma ovate, with a circular band, dividing it into two portions of dif- ferent colors. Per. Follicles two, round, laterally compressed into the shape of a turmp, wrinkled, leathery, about three inches in their greatest dia- meters, one-celled, two-valved. Seeds very nu- merous, reniform, immersed in firm fleshy pulp. From wounds made in the bark of this plant there oozes a milky fluid, which, on exposure to the air, separates into an elastic coagulum, and watery liquid, apparently of no use after the separation takes place. This coagulum is not only like the American caoutchouc or Indian rubber, but pos- sesses the same properties. See CAOUTCHOUC. The chemical properties of this vegetable milk, while fresh, were found by Mr. Howison, late sur- geon on Prince of Wales's Island, surprisingly to resemble those of animal milk.

UR'CHIN, n. s. Arm. heureuchin ; Lat. erina- ceus. A hedge-hog ; any little troublesome thing or person.

Thus in the glebe the deadly nightshade grows. Flaunts in the sun, and mingles with the rose, The specious bane the prowling urchin spies ; Touch ! touch it not ! He gorges it, and dies. Whyte. Urchins shall, for that vast of night that they may

work,

All exercise on thee. Shahsptnrt.

Pleased Cupid heard, and checked his mother's

pride : And who's blind now, mamma? the urchin cried.

Prior.

UREA, a new salt lately discovered, of which Dr Thomson gives the following account: — 'Urea may be obtained by the following process: — Eva- porate by a gentle heat a quantity of human urine, voided six or eight hours after a meal, till it be reduced to the consistence of a thick syrup. In this state, when put by to cool, it concretes into a crystalline mass. Pour at different times upon this mass four times its weight of alcohol, and apply a gentle heat. A great part of the mass will

be dissolved, and there will remain only a num- ber of saline substances. Pour the alcohol solu- tion into a retort, and distil by the heat of a sand-bath, till the liquid, after boiling some time, is reduced to the consistence of a thick syrup. The whole of the alcohol is now separated, and what remains in the retort crystallises as it cools. These crystals consist of the substance called urea. It was first described by Rouelle the younger in 1773, undes the name of the saponaceous extract of urine. He mentioned several of its properties ; but very little was known of it till Fourcroy and Vauquelin published their experiments on it in 1799. These celebrated chemists have named it urea, which has been generally adopted. Urea obtained thus has the form of crystalline plates crossing each other in different directions. Its color is yellowish white. It has a fetid smell, somewhat resembling gnrlic or arsenic : its taste is strong and acrid, resembling that of ammoniacal salts. It is very viscid and difficult to cut, and has a good deal of resemblance to thick honey. When exposed to the open air, it very soon attracts moisture, and is converted into a thick brown liquid. It is extremely soluble in water; and during its evolution a considerable degree of cold is produced. Alcohol dissolves it with facility, but scarcely in so large a proportion as water. The alcohol solution yields crystals much more readily on evaporation than the solu- tion in water. When nitric acid is dropped into a concentrated solution of urea in water, a great number of bright pearl-colored crystals are de- posited, composed of urea and nitric acid. No other acid produces this singular effect. The con- centrated solution of urea in water is brown ; but it becomes yellow when diluted with a large quan- tity of water. The infusion of nutgalls gives it a yellowish brown color, but causes no precipitate. Neither does the infusion of tan produce any pre- cipitate. When heat is applied to nrea it very soon

melts, swells up, and evaporates with an in- supportably fetid odor. When distilled there comes over first benzoic acid ; then carbonate of ammonia in crystals ; some carbonated hydrogen gas ; with traces of Prussic acid and oil ; and there remains a large residuum, composed of char- coal, muriate of ammonia, and muriate of soda. The distillation is accompanied with an almost jnsupportably fetid alliaceous odor: 288 parts of urea yield by distillation 200 parts of carbonate of ammonia, ten parts of carbonated hydrogen gas, seven parts of charcoal, and sixty-eight parts of henzoic acid, muriate of soda, and muriate of am- monia. The three last ingredients Fourcroy and Vauquelin consider as foreign substances, separated from the urine by the alcohol at the same time with the urea. Hence it follows that 100 parts of urea, when distilled, yield 92-027 carbonate of ammonia; 4-608 carbonated hydrogen gas ; and 3-225 char- coal. Now 200 parts of carbonate of ammonia, according to Fourcroy and Vauquelin, are com- posed of eighty-six ammonia, ninety carbonic acid gas, and twenty-four water. Hence it follows that 100 parts of urea are composed of 39-5 oxygen, 32-5 azote, 14-7 carbon, 13‘3 hydrogen. But it can scarcely be doubted that the water, which was found in the carbonate of ammonia, existed ready formed in the urea before the distillation. When the solution of urea in water is kept in a boiling heat, and new water is added as it evaporates, the urea is gradually decomposed, a very great quan-

tity of carbonate of ammonia is disengaged, ace- tous acid is formed, and some charcoal precipitates. As analysed by Protit and Berard the following arc ilf constituents : —

Per Cent. Per Cent. Per Atom. Hydrogen 10-80 6-66 2 — 2-5 Carbon . 19-40 19‘99 1 — 7-5 Oxygen . 26-40 26-66 1 = lO’O Azote . . 43-40 4o~66 1 = 17-,’.

100-00 100-00

37-?

Uric, or lithic acid, is a substance quite distinct from urea in its composition.

VREDEN, a town of Prussian Wrestphalia, on the small river Brehkels, and the confines of Zut- phen. Population 2000. Thirty miles W. S. W. of Munster.

URENA, in botany, Indian mallow, a genus of plants in the class of monodelphia, and order of polyandria; ranking acccording to the natural method in the thirty-sixth order, pomaceae.

U’RETHRA, n. s. French uretre ; (Jr. «piy5pa. The passage of the urine.

Caruncles are loose flesh arising in the«m/ira.

\Vitennm.

URGE, v. a. & v. n.~\ Latin urgei). To incite ;

UR'GENCY, n. s. fpush; press by motives ;

UR'GENT, «

UR'GER, n. s. J verb neuter to press for-

ward : urgency is pressure : urgent, cogent; pres- sing : the adverb and noun substantive correspond

in

The Egyptians were urgent upon the people, that they might send them out in haste. E.codui, xii.33.

He urged sore,

With piercing words and pitiful implore, Him hasty to arise. Spenser.

Urge the necessity and state of times, And be not peevish. Shakspeare. Richard 111.

This ever hath been that true cause of more wars than upon all other occasions, though it least partakes of the urgent necessity of state. lialeigh.

The heathens had but uncertain apprehensions of what urge men most powerfully to forsake their sins.*

Tilltitstiii.

This urges me to fight, and fires my hand. Dryden.

Man ! and for ever ? wretch ! what wouldst thou

have ? Heir urges heir, like wave impelling wave. Pope.

Being for some hours extremely pressed by the ne- cessities of nature, I was under great difficulties be- tween urgency and shame. (inllnci's Travels.

1RGEL, a strong town of Spain, in Catalonia, on the river Segre. It is a bishop's see, and has 3200 inhabitants, with manufactures of linen and cotton. There is a vitriol mine in tlie neighbour- hood. Seventy-eight miles

N. N. W. of Barcelona, and 296 E. N. E. of Madrid.

URGEWON'DER, n.s. A sort of grain.

Thisb?rley is called by some nrgeu-onder. Mortimer.

URGUNGE, or URGHENZ, the name given to an extensive tract of territory on the Lower Oxus, near its junction with the Aral, and between that lake and the Caspian. It consists of an immense tract of desert, traversed "by wandering and predatory hordes; but a few spots maintain a population col- lected into fortified towns. The principal of these bears the name of the region, and is about four miles in circuit, surrounded by walls of earth. One long street, covered above, forms a market, at which the little trade of the surrounding country is carried on.

URI, a canton in the central part of Switzerland, bounded on the north by Unterwalden, and on the east by the country of the Grisons. Its superficial extent is 640 square m.les, but its population does not exceed 14,000, being thinly scattered amidst bleak and barren mountains, some of which attain an elevation of 8000, 9000, or 10,000 feet. This canton is traversed in all its extent by the Ileuss : it contains a number of small lakes and mountain streams. The temperature necessarily varies with the degree of elevation. The road from Germany to Italy passing through this canton gives it the benefit of some transit trade. The canton is divided into the districts of Uri and Urseren; its govern- ment is democratic, and public business is trans- acted at the petty town of Altorf. The inhabitants are Catholics.

U'llIM, ;j. s. See below.

He in ccelestial panoply all armed, Of radiant urim, work divinely wrought. Miltim.

Urim and thummim were something in Aaron's breast-plate ; but what, criticks and commentators are by no means agreed. The word urim signiBes light, and thummim perfection. Xetc ton's Notes on Milton.

URIM AND THUMMIM, among the ancient He- brews, a certain oracular manner of consulting God, whicH was done by the high priest dressed in his robes, and having on his pectoral or breast- plate. Various have been the

sentiments of com- mentators concerning the urim and thummim. Josephus and several others maintain that it meant the precious stones set in the high priest's breast- plate, which, by extraordinary lustre, made known the will of God to those who consulted him. Spencer believes that the urim and thummim were two little golden figures shut up in the pectoral as in a purse, which gave responses with an articulate voice. In short there are as many opinions con- cerning the urim and thummim as there are parti- cular authors that wrote about them. The safest opinion according to Broughton seems to be, that the words urim and thummim signify some divine virtue and power annexed to the breast plate of the high priest, by which an oraculous answer was obtained from God .hen he was consulted by the high priest ; and that this was called urim and thummim to express the clearness and perfection which these oracular answers always carried with them ; for urim signifies ' light,' and thummim ' perfection' ; these answers not being imperfect and ambiguous like the heathen oracles, but clear and evident. The use made of the urim and thummim was to consult God in difficult cases relating to the whole state of Israel ; and some- times in cases relating to the king, the sanhedrim, the general of the army, or some other great per- sonage. See HEBREW.

U'RIN AL, n. s. &. v. n. ~\ Fr. urine ; Lat. urina. U'RIXE, n.s. I Animal water : to make

U'RINARY, adj. > water: urinal, a bottle

U'RINATIVE, 4 in which urine is kept :

U'aisofs. 3 urinary is relating to the

urine: urinative, provoking urine: urinous, of the

nature of urine.

These follies shine through you, like the water in an

urinal. Shakspeare.

Places where men urine commonly have some smell

of violets. Bamn.

Medicines urinative do not work by rejection and indigestion, as solutive do. Id.

A candle out of a musket will pierce through an

inch board, or an urinal force a nail through a plank.

Orou-iie.

Diureticks that relax the iirinarti passages, should be tried before such as stimulate. Arbuthnot.

The chyle cannot pass by urine or sweat. Id.

The putrid matter, being distilled, affords a water impregnated with an iirimntt spirit, like that obtainable from animal substances. Id.

URINAL, in chemistry, is an oblong glass vessel, closed for making solutions, and so called for its resemblance to the glasses in which urine is kept.

I'RINATOR, n. s. Yr.urinateur ; Lat. vrinator. A diver; one who searches under water.

Those relations of urinaton belong only to those places where they have dived, which are always rocky. Ray.

URINE, in its natural state, is transparent, of a yellow color, a peculiar smell and saline taste. Its production as to quantity, and in some measure quality, depends on the seasons and the peculiar constitution of the individual, and is likewise mo- dified by disease. It is observed that perspiration carries off more or less of the fluid which would else have passed off by urine ; so that the profusioa of the former is attended with a diminution of the latter.

From the alkaline smell of urine kept for a cer- tain time, and other circumstances, it was formerly supposed to be an alkaline fluid; but, by its red- dening paper stained blue with litmus or the juice of radishes, it appears to contain an excess of acid. The numerous researches made concerning urine have given the following as its component parts : — 1, water; 2, urea; 3, phosphoric acid ; 4, 5, 6, 7, phosphates of lime, magnesia, soda, and ammonia; 8, 9, 10, 11, lithic, rosacic, benzole, and carbonic acid; 12, carbonate of lime; 13, 14, muriates of soda and ammonia; 15, gelatin; 16, albumen; 17, resin ; 18, sulphur. Muriate of potash may some- times be detected in urine by cautiously dropping into it some tartaric acid ; as may sulphate of soda, or of lime, by a solution of muriate of barytes, which will throw down sulphate of barytes together with its phosphate ; and these may be separated by a sufficient quantity of muriatic acid, which will take up the latter.

I rme soon undergoes spontaneous changes, which are more or less speedy

and extensive ac- cording to its state as well as the temperature of the air. Its smell, when fresh made and healthy, is somewhat fragrant; but this presently goes off and is succeeded by a peculiar odor termed urin- ous. As it begins to be decomposed its smell is not very unlike that of sour milk; but this soon changes to a fetid alkaline odor. It n^ust be ob- served, however, that turpentine, asparagus, and many other vegetable substances taken as medicine, or used as food, have a very powerful effect on the smell of the urine. Its tendency to putrefaction depends almost wholly on the quantity of gelatin and albumen it contains; in many cases, where these are abundant, it comes on very quickly indeed

According to Berzelius, healthy human urine is composed of water 933, urea 30-10, sulphate of potash 3 71, sulphate of soda 3-16, phosphate of soda 2-94, muriate of soda 4-45, phosphate of am- monia 1-65, muriate of ammonia 1\>0, free acetic acid, with lactate of ammonia, animal matter solu- ble in alcohol, urea adhering to the preceding, alto- gether 17-14, earthy phosphates, with a trace of

fluito of lime 1-0, uric acid 1, mucus of the bladder O-32, silica 0-3, in lOOO'O. The phosphate of am- monia and soda, obtained from urine by removing by alcohol the urea from its crystahsed salts, was called fusible salt of urine, or microcostnic salt ; and was much employed in experiments with the blowpipe. The chanees produced in urine by dis- ease are considerable, and of importance to be known. It is of a red color, small in quantity, and peculiarly acrid, in inflammatory diseases, but de- posits no sediment on standing. Corrosive muriate of mercury throws down from it a copious preci- pitate. Toward the termination of such diseases it becomes more abundant, and deposits a copious pink-colored sediment, consisting of rosacic acid with a little phosphate of lime and uric acid.

In jaundice it contains a deep yellow-coloring matter, capable of staining linen. Muriatic acid renders it green, and this indicates the presence of bile. Sometimes, too, according to Fourcroy and Vauquelin, it contains a substance analogous to the yellow acid, which they formed by the action of nitric acid on muscular fibre. In hysterical affec- tions it is copio'is, limpid, and colorless, contain- ing much salt but scarcely any urea or selatin. In dropsy the urine is generally loaded with albumen, so as to become milky, or even coagulate by heat, or on the addition of acids. In dropsy from dis- eased liver, however, no albumen is present, but the urine is scanty, high

colored, and deposits the pink-colored sediment. In dyspepsy, or indiges- tion, the urine abounds in gelatin, and putrefies rapidly. In rickets the urine contains a great deal of a calcareous salt, which has been supposed to be phosphate of lime, but according to Bonhomme it is the oxalate.

Some instances are mentioned in which females have voided urine of a milky appearance, and con- taining a certain portion of the caseous part of milk. But among the most remarkable alterations of urine is that in the diabetes, when the urine is sometimes so loaded with sugar as to be capable of being fermented into a vinous liquor. Upwards of one-twelfth of its weight of sugar was extracted from some diabetic urine by Cruickshank, which was at the rate of twenty-nine ounces troy a day from one patient. In this disease, however, the urine, though always in very large quantity, is sometimes not sweet but insipid.

The urine of some animals, examined by Four- croy, Vauquelin, and Kouelle, jun., appears to differ from that of man in wanting the phosphoric and lithic acids, and containing the benzoic. That of the horse, according to the former two, consists of benzoate of soda -024, carbonate of lime -Oil, carbonate of soda -009, muriate of potash '009, urea 007, water and mucilage '940. Giese, how ever, observes that the proportion of benzoate of soda varies greatly, so that sometimes scarcely any can be found. Notwithstanding the assertions of these chemists, that the urine of the horse contains no phosphoric acid, Giobert affirms that phosphorus may be made from it. That of the cow, according to Rouelle, contains carbonate, sulphate, and mu- riate of potash, benzoic acid and urea ; that of the camel differed from i: id affording no benzoic acid ; that of the rabbi., according to Vauquelin. contains the carbo-iates of lime, magnesia, and potash, sul- phates of potash and .ime, muriate of potash, urea, gelatin, and sulphu1 . Al .'hese appear to contain some free alkali, as the_, tur. syrup of violets green.

In the urine of domestic fowls Frurcroy and Vav- quelin found lithic acid.

Urine has been employed for making phosphorus, volatile alkali, and sal ammoniac; moulds to the produce of nitre beds ; and it is very useful in a putrid state for scouring woollens.

URINE, BLCE. " In certain morbid conditions of the body a blue urine has been voided, which M. Braconnot has given an account of in the twenty- ninth volume of the Annales de Chimie et Phv- sique, p. 252. It is a peculiar substance which gives the color. He proposes to call it cyanourine. It resembles the organic saliriable bases in com- bining with acids, in refusing to dissolve in alkalies, and in the large proportion of carbon which it contains.

URN, n. s. Fr. urne ; Lat. nrna. Any vessel, of which the mouth is narrower than the body ; in particular the ancient vessel in which the ashes of the human body were kept.

Or lay these bones in an unworthy urn, Tombless, with no remembrance over them. Shaksp.

Vesta is not displeased, if her chaste urn Do with repaired fuel burn :

But my saint frowns though to her honoured name I consecrate a never-dying Banie. Carew.

I "UN (Lat. urna). In modelling, sculpture, &c., a species of vase of a roundish form, but largest in the middle, destined, among the ancients, to receive and enclose the ashes of the dead ; which destina- tion its name, in fact, sufficiently indicates. It is curious to remark that the Romans often made use of Grecian vases, obtained by them in various \:u s, for this purpose, as is evident from those found in the tombs in the vicinity of Naples, which contain both bones and ashes. See VAM .

Urns are commonly met with in almost all col- lections of antiquities, and Montfaucon, in particu- lar, has drawn and engraved a great number of them. In Millin's Monumens Inedits,vol. i., plates 3 and 20, two are published, extracted from the interesting and comprehensive collection of M. Van-IIoorn. The substances employed in the con- struction of tbese vessels are numerous. Amongst them are gold, bronze, glass, terra-cotta, marble, and porphyry. Tlicy were made of all manner of shapes and sizes ; some had smooth surfaces, others were engraved in basso relievo. Many have been discovered bearing inscriptions on labels (see IN- SCRIPTION) ; others with the name only of the party to whose remains they were devoted. Se- veral have no other character than the two letters D. M. (Diis Manibus, to the Shadowy Deities.) Others, again, present nothing more than the name of the artist by whom they were wrought, written either on the handle or at the bottom.- The Egyp- tians sometimes enclosed in urns their sacred birds, having.first had them embalmed. These urns were generally covered with hieroglyphics. See MUMMY. The Romans were in the habit of applying the same term to certain vases destined to receive suf- frages in elections. Little vessels have also occa- sionally been found in ancient tombs, denominated lacrytnal urns.

VROON (Henry Cornelius), a Dutch painter. He excelled in sea-fights. He drew the designs for the tapestry in the house of lords, representing the destruction of the Spanish Armada.

*UROS'COPY, n. s. Gr. wpov and »K*T«. In- spection of urine.*

In this work, attempts will exceed performances ; it

being composed by snatches of time, as medical vaca- tions, and uroscopy, would permit. Browne.

URQUHART (Sir Thomas), a learned Scottish antiquary. He wrote the life of the admirable Crichton (see CRICHTON), and some other tracts.

URQUIJO (Mariano Lewis), chevalier de, a modern Spanish minister, was born in Old Castile in 1768, and travelling when very young passed some years in England, where he is said to have acquired those liberal ideas which had much influ- ence on his character. Returning home he pub- lished a translation of Voltaire's tragedy on the Death of Caesar, with a Discourse on the Origin and present State of the Spanish Theatre. He was now employed under the secretary of state count d'Aranda; and, during the ministry of Godoy, be- came secretary of state for foreign affairs. In this important office he acted on the most enlightened principles, and succeeded in greatly curbing the power of the inquisition and of the clergy. Having, however, offended Godoy he was at length dis- graced, and towards the close of 1800 confined at Pampeluna. He languished here several years in the most severe imprisonment, being debarred the use of paper, ink, books, and even light. Ferdi- nand VII., in 1808, declared the persecutions of Urquijo to be unjust, and he was set at liberty. He endeavoured to prevent that prince from taking his journey to Bayonne, but finally himself ac- cepted the office of secretary of the junta of Spa- nish notables assembled at Bayonne, and afterwards that of minister of state. He had the satisfaction to see the inquisition suppressed by Buonaparte in It'utf, and by the Cortes in 1813. After the re- verses of the French in Spain he was obliged to follow king Joseph Buonaparte; and, in 1814, he fixed his residence at Paris. He died theie May 3d, 1817.

URSINUS (Zacharius), an eminent Protestant divine, born at Breslaw in 1534. In 1558 he be- came president of the academy of Breslaw, which place he filled with honor: but, turning Calvinist, he went to Zurich, and was soon after made pro- fessor of divinity at Heidelberg. He next went to Nieustadt, on the invitation of prince Casimir, to fill the same office there. He died in 1585.

URSULINES, in church history, an order of nuns, founded originally by St. Angela of Brescia, in 1537 : and so called from St. Ursula, to whom they were dedicated.

URSUS (Nicolas Raimarus), a man of uncom- mon genius, born at Henstedt in Holstein, in 1550. He was first a swine herd, and did not learn to read and write till he was eighteen. But he soon after acquired Latin, Greek, French, mathematics, philosophy, and astronomy, and most of them without a teacher. He taught a new system of astronomy resembling that of Tycho Brahe. He died in 1590.

URSUS, the bear, a genus of quadrupeds belong- ing to the order of ferae. There are six fare teeth in the upper jaw, alternately hollow in the inside, and six in the under jaw, the two lateral ones being lobated. The dog-teetli are solitary and conical ; the eyes are furnished with a nictitating membrane ; the nose is prominent ; and there is a crooked bone in the penis. There are ten species, viz. 1. U. Americanus, the American bear. The color is black ; the throat and cheeks of a rusty brown. This species is spread through the whole of Ame- rica, excepting Chili and Patagonia. They are

also found in Kamtschatka. They reject animal food, even though pressed by hunger, eating no- thing but vegetables. They are remarkably fond of potatoes and maize. Dr. Gmelin says, however, that they also feed on fish. The head is more length- ened than that of the European bear; the ears are longer ; the hair is more smooth and glossy, blacker and softer; the whole body is much smaller; the nose is longer and more pointed, and of a yellowish or rusty brown color. It is very cowardly, and never attacks mankind unless when provoked, or in de- fence of its young. It sometimes bites the natives, of Kamtschatka when asleep, but never devours them.

2. U. tirctos, the common bear, has strong, thick, and clumsy limbs; a very short tail; large feet ; body covered with very long and shaggy hair; various in its color: the largest are of a rusty brown ; the smallest of a deep black : some from the confines of Russia black, mixed with white hairs, called by the Germans silver bear; and some (but rarely) are found in Tartary of a pure white. They inhabit the north parts of Kurope and Asia ; the Alps of Switzerland, and the ci-de- vant Dauphine, or department of Drome, Isere, and Upper Alps; Japan and Ceylon ; North Ame- rica and Peru. The brown bears are sometimes carnivorous, and will destroy cattle and eat carrion ; but their general food is roots, fruit, and vegeta- bles ; they will rob the fields of pease ; and, when they are ripe, pluck great quantities up, beat the pease out of the husks on some hard place, eat them, and carry off the straw : they will also, during winter, break into the farmer's yard, and make great havock among his stock of oats ; they are also particularly fond of honey. The flesh of a bear in autumn, when they are excessively fat by feeding on acorns and other mast, is delicate food; arid that of the cubs still finer r but the paws of the old bears are reckoned the most exquisite morsel ; the fat white, and very sweet ; the oil excellent for strains and old pains.

In the end of autumn, after they have fattened themsdves to the greatest degree, the bears withdraw to their dens, where they continue for a great number of days in total inac- tivity and abstinence from food, having no other nourishment than what they get by sucking their feet, where the fat lodges in great abundance; their retreats are either in cliffs of rocks, in the deepest recesses of the thickest woods, or in the hollows of ancient trees, which they ascend and descend with surprising agility : as they lay in no winter provisions they are in a certain space of time forced from their retreats by hunger, and come out extremely lean : multitudes are killed annually in America for the sake of their flesh or skin ; which last makes a considerable article of com- merce. Mr. Kerr mentions five varieties, viz. i. U. arctos Albus, the white bear. ii. U. arctos fuscus, the brown bear of the Alps. iii. U. arctos griseus the gray bear. iv. U. arctos niger, the black bear. v. U. arctos variegatus, the variegated bear, of various colors.

3. U. gulo, the glutton. The body and tail are from three feet and a half to four feet long, and of a glossy black or dark brown color, with a tawny line down the middle of the back. It is larger than the badger. This species inhabit the north parts of America, Asia, and Europe; but are seldom found in Germany or Poland. They dwell chiefly in mountains and forests. They propagate in Janu-

ary and May : the femalf brings from one to three •whelps. They climb well, and a > c cunning and vorucioos; devouring all small animals, and even attacking deer; but, unless in self-defence, never attack man. Their smell defends them against dogs. When young they raay be tamed. Their fur is much valued. The legs are thick, short, and hairy. The female has six teats. They have four fore teeth in each jaw. There is a white variety.

4. U. Indicus, the Indian bear or badger, has a black face ; the crpwn and upper parts white, and the lower black. They inhabit India: the head is small, and nose pointed : they are playful, lively, and good-natured. They are two feet long ; the tail four inches.

5. U. Labradorius, the Labrador bear or badger, inhabits Labrador and Hudson's Bay ; has soft and silky yellow hair ; ears short and white, tinned with black. It has five claws on the hind feet, four on the fore. It has thirty-two teeth.

6. U. lotor, the racoon, has the upper part of the body covered with hair, ash-colored at the root, whitish in the middle, and tipped with black ; tail

very bushy, annulated with black; toes black, ami quite divided. It inhabits the warm and temperate parts of America; is found also in the mountains of Jamaica, and in the isles of Maria, between the south point of California and cape Corientes, in the South Sea : is easily tamed, very good-natured, and sportive ; but as unlucky as a monkey. It is almost alwavs in motion; and very inquisitive, ex- amining every thing with its paws. It makes use of them as hands; sits up to eat; is extremely fond of sweet things, and strong liquors, and will gel excessively drunk. It has all the cunning of c. fox; and is very destructive to poultry; but will eat all sorts of fruiis, green corn, &c. At low water it feeds much on oysters, and will watch their opening, and with its paw snatch out the fish, but is sometimes caught. It climbs nimbly up trees. It is hunted for its skin ; the fur is next to that of the beaver for making hats.

7. U. luscus, the wolverene, has a black sharp- fointed visage; short rounded ears, almost hid in the hairs ; the side of a yellowish brown, which passes in form of a band quite over the hind part of the back, above the tail ; the legs are very strong, thick, and short, of a deep black : the whole body is covered with very long and thick hair, which varies in color according to the season. It inhabits Hudson's Bay and Canada, as far as the straits of Michillmachinac ; is found under the name of the glutton in the north parts of Europe and Asia, being a native of the most rigorous climates. It is a most voracious animal, and slow of foot; so is obliged to take its prey by surprise. In America it is called the beaver-eater, watching these animals as they come out of their houses, and sometimes breaking into their habitations and devouring them. It often lurks on trees, and falls on the quadrupeds that pass under ; they fasten on the horse, elk, or stag, and continue eating a hole into its body, till the animal falls down with the pain ; or else will tear out its eyes : no force can disengage it ; yet sometimes the deer in their agony have been known to destroy it by running their head violently against a tree. It devours the isatis or white fox ; searches for the traps laid for the sables and other animals ; and is often beforehand with the huntsman, who sustains great losses by the glutton; authors have pretended that it feeds so voraciously that at length*

it is in danger of bursting ; and that it is obliged to ease itself of its load by squeezing it out between two trees. In a wild state it is vastly fierce ; a terror to both wolf and bear, which will not prey on it when they find it dead, perhaps on account of its being so very fetid, smelling like a pole-cat : it makes a strong resistance when attacked ; will tear the stock from the gun, and pull the traps it is caught into pieces. Notwithstanding this it is capable of being tamed, and of learning several tricks. It burrows and has its den under ground. The skin is sold in Siberia for four or six shillings, at Jakutsk for twelve shillings : and still dearer at Kamtschatka, where the women dress their hair with its white paws, which they esteem a great

ornament. The fur is greatly esteemed in Europe : that of 'the north of Europe and Asia, whose skins are sometimes to be seen in the furriers' shops, is much finer, blacker, and more glossy than that of the wolverene, or American kind. The glutton has by some authors been confounded with the hyasna. 8. U. maritimus, the polar or white bear, has a long head and neck ; short round ears ; great teeth ; the hair long, soft, and while, tinged in some parts with yellow : growing to a vast size ; the skins of some being thirteen feet long. This ani- mal is confined to the coldest part of the globe ; it has been found as far as navigators have pene- Iraled northwards, above lat. 80°. The frigid climes only seem adapted to its nature ; for we do nol learn from any authority that it is met with far- ther south than Newfoundland. Its bounds in re- spect to longitude are also very limited; being an animal unknown except on the shores of Hudson's- Bay, Greenland, aud Spitsbergen, on one side, and those of Nova Zembla on the other; for such as have appeared in other parts have been brought there involuntarily on floating islands of ice ; so that the intermediate countries of Norway and Ice- land are acquainted with them but by accident. We cannot trace them farther easl than Nova Zem- bla; though the Frozen Sea, that is continued thence as far as the lar.d of Tschutschi, that lies above Karastchatka, is equally suited to their na- ture. During summer the white bears are either resident on islands of ice, or passing from one to another : they swim admirably, and conlinue that exercise six or seven leagues, and dive with great agility. They brhg two young at a time: the af fection between the parents and them is so strong, that they would die rather lhan desert one another. Their winter retreals are under the snow, in which they form deep dens, supported by pillars of the same. They feed on fish, seals, and the carcases of whales, and on human bodies, which they will greedily tear up : they seem very fond of human blood ; and are so fearless as to attack companies of armed men, and even to board small vessels. When on land, they live on birds and their eggs ; and, allured by the scent of seals' flesh, often break into and plunder the houses of the Greenlanders : their greatest enemy in the brute creation is the morse, with whom they have terrible conflicts, but are generally worsted, the vast teeth of the former giving it a superiority. The flesh is white, and said to taste like mutton : the fat is melted for train oil, and that of the feet used in medicine : but the livi r is very unwholesome, as three of Barentz's sailors experienced, who fell dangerously ill on eat- ing some of it boiled. One of this species was brought over to England a few years ago ; it was

very furious, almost always in motion, roarec/ loud, and seemed very uneasy, except when cooled by having pailfifls of water poured on it.

9. U. meles, the common badger, is an animal of a very clumsy make, with short thick legs, long claws on the fore feet, and a fetid white matter ex- uding from the orifice below the tail. It inhabits most parts of Europe as far north as Norway and Russia, and the steep or desert beyond Orenburg, in the Russian Asiatic dominions, north of the Caspian Sea ; inhabits also China, and is often found in the butcher's shops in Pekin, the Chinese beitu fond of them : but a scarce animal in most countries. It seldom appears in the day; confines itself much to its hole ; is indolent and sleepy ; ge- nerally veiy fat ; feeds by night ; eats roots, fruits, grass, insects, and frogs : it runs slowly ; when overtaken, it comes to bay, and defends itself vi- gorously ; its bite is dangerous. It burrows under ground ; makes several apartments, but forms only one entrance from the surface. It is hunted during night for the skin, which serves for pistol-furniture; the hairs for making bnishes to soften the shades in painting. Its flesh makes good bacon. Mr. Kerr mentions two varieties of this species : viz. i. U. meles albus, the white badger, ii. U. meles maculatus, the spotted badger, of a white color spotted with reddish yellow.

10. U. tetradactylus, the sand bear, is less than the common badger, and has only four toes on each foot. It is almost destitute of hair, burrows in the ground, and is of a yellowish white.

URTICA, in botany, a genus of plants of the class of moncecia, and order of tetrandria ; natural order fifty-third, scabridse. The small flower has a calyx of four leaves : COR. none : a nectarium mi- nute, central, urn-fashioned. The female a bivalve calyx : and a single, oval, glossy seed. There are twenty-eight species; three of which' are British plants : viz. 1. U. dioica, common nettle, has a square firm stem, three or four feet high. Leaves heart-shaped, long-pointed, serrated, beset with stings. Flowers in long catkins. The aculei, or stings of the nettle, have a small bladder at their base full of a burning corrosive liquor. Nettle- tops in the spring are often boiled and eaten instead of cabbage-greens. The stalks of nettles are so like in quality to hemp, that in some parts of Eu- rope and Siberia they have been manufactured into cloth, and paper has been made out of them. The whole plant, particularly the root, is esteemed to be diuretic, and has been recommended in the jaundice and nephritic complaints. It is also reckoned as- tringent; and of service in all kinds of haemor- N but is at present little used in practice. The roots boiled will dye yarn of a yellow color. The larvae or caterpillars of many species of but- terflies feed on the green plant ; and sheep and oxen will readily eat the dried. The common net- tle, though it has a place in the tnateria medica, is now very little used. It has lately been recom- mended, however, by Zannetini, a physician who

attended the French army in Italy, as a good sub- stitute in fevers for cinchona.

2. U. pilulifera, Roman nettle, has a stalk branched, two or three feet high. Leaves opposite, oval, serrated, stinging. Fruit globose.

3. U. urens, less stinging-nettle, has a stem a foot high. Leaves roundish, deeply serrated, op- posite, burning. The stings are very curious mi- croscopic objects : they consist of an exceedingly

fine pointed, tapering, hollow substance, with a per- foration at the point, and a bag at the base. U'hen the spring is pressed upon, it readily perforates the skin, and at the same time forces up some of the acrimonious liquor contained in the bag into the wound.

URUGUAY, a province or tract of country of South America, bounded north by Guaira in the government of Paraguay, south by the mouth of the river La Plata, east by the province and cap- tainship of Ray in Brasil, and west by the river Parana. Its length from north-east to south-west is somewhat more than 200 leagues, and its width from rast to west about 1 30, although in some parts it is narrower. It is divided by the river of its name into east and west. This rises in the moun- tains of the kingdom of Brasil, and runs for more than 620 miles in a direct line, with an extraor- dinary violence, making a terrible noise amongst the rocks, and in the winter season it swells to such a degree as to appear like a sea. The country was inhabited by the Cassapiminian Indians, and is, for the greater part plain, but abounding in thick woods, in which are infinite numbers of wild animals and birds.*

URUGUAY, a small river also of Paraguay, which runs east, and enters the Parana near the grand river Curituba.

URUMEA, a lake of Aderbijan, Persia, about 300 miles in circuit. The water is salter than that of the sea ; no fish can live in it, and it emits a disagreeable sulphureous smell. It contains seve- ral islands, the largest of which, forming in the dry season a sort of peninsula, is twenty-five miles in circumference, but only occupied by wild animals. The water is clear.

URUMEA, a very ancient city of Persia, situated on the south-western bank of the lake to which it gives name. It lies in a noble plain, watered by the Shar, and contains a population of 12,000 souls. It is the Thebarma of Strabo, yet cannot boast of a single ruin of any consequence. It is defended by a strong wall and deep ditch, which can be filled with water from the river. Ninety miles S. S. W. of Tabreez. US. The oblique case of we. The

Lord made not this covenant with our fathers, but with MS, even us, who are all of us here alive this day. Dent. v.

U'SAGE, n.t. > Fr. usage. Treatment; roan- U'SAGER. j ners ; custom : one who has the use of any thing in trust.

A gentle nymph was found, Hight Astery, excelling all the crew In courteous wage, and unstained hue. Spenser.

Of things once received and confirmed by use, long usage is a law sufficient. Honker.

Which way Slightest thou deserve, or they impose, this touye.

Shalisfteare.

The rest were saved, and made enthralled swaines To all the basest usages there bred. Chapman.

He consumed the common treasurv. Whereof he being the simple niager But for the state, not in propriety. Did alien t' his minions. Daniel.

U'SANCE. n.s. Fr. vfimn: Use ; proper em- ployment ; usury.

What art thou,

That here in desart hast thine habitauce, And these rich heaps of wealth dost hide apart

3 L •

Lat. ustis. The act of employing any thing; practice; cus- ! torn , quality proper for a purpose; interest of money : to use is to employ ; treat ; ac- custom : to be accus-

Fpnn t'ji world's eye, and from her right uiance.

Spenser.

He leads out money gratis, and brings clown The rate of usance Shaksjieare.*

USE, n. s., v. a., & v. n.~

USE'FUL, adj.

USE'FULLY, adv.

USEFULNESS, n. s.

USE'LESS, adj.

USE'LESSLT, adv.

USE'LESSNESS, n. s.

U'SER.

tomed ; be wont; frequent (obsolete) : useful is pro- fitable ; convenient; valuable: the adverb and noun substantive corresponding : useless, the exact opposite ; and its adverb and noun substantive cor- respond : a user is one who uses.

The fat of the beast that dieth of itself, may be used in any other use. Leviticus vii. 24.

Use hospitality one to another, without grudging.

1 Peter iv.

Such things which, by imparting the delight to others, make the user thereof welcome, as musick, dancing, hunting, feasting, riding. Sidney.

Conduct me well In these strange ways, where never foot did use.

Spenser.

,That which those nations did use, having been also in use with others, the ancient Roman laws do forbid.

Hooker.

Why dost thou use me thus ? I know thee not.

Shakspeare.

Fears use to be represented in such an imaginary fashion, as they rather dazzle men's eyes than open them. Bacon.

If it be good thou hast received it from God, and then thou art more obliged to pay duty and tribute, use and principal, to him. Taylor.

He was unhappily too much used as a check upon the lord Coventry; and

when that lord perplexed their counsels with inconvenient objections, the authority of the lord Manchester was still called upon. Clarendon.

Ye valleys low, where the mild whispers use Of shades, and wanton winds, and gushing brooks.

Milton.

The hurtful teeth of vipers are useless to us, and yet are parts of their bodies. Boyle.

Sweetness, truth, and every grace Which time and use are wont to teach, The eye may in a moment reach,

And read distinctly in her face. Waller.

Rice is of excellent use for illnesses of the stomach, that proceed from cold or moist humours : a great di- gester and restorer of appetite. Temple.

He made a learned discourse on the trouble, useless- nets, and indecency of foxes wearing tails.

L' Estrange.

Gold and silver being little useful to the life of man, in proportion to food, raiment, and carriage, has its value only from the consent of men. Locke.

Like sauntering humours, some, out of custom, let a good part of their lives run uselessly away, without business or iccreation. Id.

Distinct growth in knowledge carries its own light in every step of its progression ; than which nothing is of more use to the understanding Id.

I love to use people according to their own sense of good breeding. Toiler.

He would convince them of the vanity and useleu- net of that learning, which makes not the possessor a better man. Houth.*

*The grandeur of the commonwealth shows itself chiefly in works that were necessary or convenient. On the contrary, the magnificence of Rome, under the em- perors, was rather for ostentation than any real useful- **W. Addison.*

USE

I've hitherto been used to think A blind officious zeal to serve my king The ruling principle. Id.

The waterman forlorn along the shore Pensive reclines upon his useless oar. (fay.

In this account they must constitute two at least, male and female, in every species ; which chance could not have made so very nearly alike without copying, nor so usefully differing without contrivance. Bentley.

You shew us Rome was glorious, not profuse ; And pompous buildings once were things of use.

Pope.

Things may, and must, differ in their use ; but yet they are all to be used according to the will of God. .

Law.

USEDOM, an island of Prussia, in Pomerania, formed by the Baltic and the Great and Little Haff. Its area is 150 square miles ; its population between 11,000 and 12,000. It is intersected by several ranges of downs and sand hills, arid has large woods, but not much land fit for agriculture.

USEFUL BOOKS. In a previous article we have promised to give to the reader our ideas on the subject of forming a generally useful, as distinct from a professional, library : and here, as it has been well said, it is more necessary perhaps to pon der well on what ought not to be recommended or described than on those books which ought to be admitted. Our hints therefore will not be such as might enable the classical scholar, the divine, the politician, the natural philosopher, the chemist, or the natural historian, to form his library; if a li- brary is to embrace these and similar objects, it must necessarily be either of most unwieldy size and enormous prtce, or it must exclude many books proper and desirable for general readers. If any one of these descriptions of persons wishes to form a professional library, he ought to consult a professional and exclusive catalogue, and look only to us for suggestions which may enable him to add to his professional library the means and sources of general information.

i. Works on history and biography, voyages, and travels, are amongst the most obvious and real sources of interest and instruction. They ought, therefore, to form a numerous class in such a li- brary as we would form ; but he who is anxious to go deeply and critically into any particular point of history or geography, would not find materials here for his particular line of study ; it could not be made full, or highly useful in this respect, with- out some inroad on its completeness and utility as a general library.

ii. This library would not admit very volumin- ous or very expensive books,

because these are in- compatible with the time, the purse, and the read- ing of those for whom it ought to be specially and peculiarly adapted : they, indeed, ought to be pur- chased and perused only by those who have some particular object of research in view, or from their circumstances are justified and enabled to form their library with a combined reference to its size, splen- dor, and utility.

lii. It ought to contain all those works the study of which must tend to increase the intellectual and moral excellence of the general reader. Those works, by which his duties as a citizen are pointed out, his relations with society defined, and the means of making himself useful and of increasing the happiness of mankind, clearly laid down. It ought at the same time to abound in those works, which, while they arrest the attention, enlarge the

reader's knowledge of the world, past nml present, and of the condition of his fellnw men wherever fate has piaced them.

iv. As regards the classics, it ought to be con- fined to such wonts as are most 'generally read and understood by tnose who wish to retain, and per- haps extend, their knowledge of Greek and Latin, and to those editions which give the most correct text, and the most useful and condensed notes. French literature constitutes so general and neces- sary an accomplishment in modern education, that a judicious French scholar should be required to 1 point out the best authors in that language, on the subjects of morals, history, biography, belles lettres, and the best voyages, travels, and poetry. With respect to books in the German, Italian, Spanish, &c., the selection in these branches must entirely depend upon the proficiency acquired in the lan- guage, and the taste of the proprietor.

v. It is very desirable, and perhaps indispensa- ble, to have in a library one or two of the best Universal Histories. If it were possible to give such a combined and contemporaneous view of the events and state of the principal nations in differ- ent periods as would enable us to compare them with ease, clearness, and accuracy, Universal His- tories would be the most instructive and interest- ing works. But it seems not possible to secure this advantage, except at the expense of great bulk and frequent repetitions, and attended with an in- termingling and entanglement of the histories of the various nations, which bewilders and perplexes the reader. There is more of the good and less of the bad qualities of a universal history, when

it confines itself to a general and philosophical view of such events as have been most influential in the progress of nations ; and as these are, of course, not voluminous, they ought to find a preference in a general library. In selecting historical works on Greece and Rome, such of the original writers as are level to the knowledge of a common classical scholar ought to be admitted ; but these only. Editions with a correct text, and such notes as explain real difficulties, or illustrate passages actually needing illustration, should exclusively be pointed out and recommended. Great care, judgment, and taste, are requisite in selecting books on the antiquities of Greece, Rome, &c. ; there are very few, indeed, which are not either so voluminous that none but the professed antiquary ought to possess them ; or which, even if in a moderate compass, do not weary and perplex, without satisfying the reader, by their minute attention to trifles.

Such are our ideas of the nature of a library of this kind. A list of books it is impossible to at- tempt in our limited space.

USH ANT, an island on the north-west coast of France, about ten miles in circuit, having but one town or village, St. Michael. A naval engage- ment took place near this on the 27th of July 1778, between the English and French, in which both claimed the victory. The force was great (fully thirty sail of the line) on both sides, and the indecisive result of the action caused much dis- content in England ; but the fact was, that the French evaded a close action. The centre of the island is in Long. 5° 3′ 6 W., lat. 48° 28′ 8′ N.*

*USH'ER. n.s. & f. a. Fr. huissier (huis, a door). One whose business is to introduce strangers, or *valk before a person of rank ; an under teacher : to introduce ; bring in ; forerun.*

The wife of Antony Should have an army for an usher, and 1 he neighs of horse to tell her approach. Long ere she did appear.

The sun,

Declined, was hasting now with prone career To the' ocean isles ; and, in the' ascending scale Of heaven, the stars, that inhtr evening, rose. Hilton.

Though grammar's profits les» than rhetoiick's are, Yet even in those his usher claims a share. Dryden.

You make guards and uttiert march before, and then enters your pnnce. 2'atter.

USHER or THK. BLACK ROD, the eldest of the gentleman ushers or daily waiters at court, whose duty is to bear the rod before the king, at the feast

of St. George and other solemnities. An officer of the house of lords also bears this title.

I HER (James), archbishop of Armagh, one of the most illustrious prelates in the seventeenth century. He was born in Dublin in 1580. Dub lin college being finished, in 1593, he was one of the three first students admitted into it. He was ordained priest in 1601, and soon after was ap- pointed to preach constantly before the court at Christ-church Dublin. In 1603 he was sent over to England with Dr. Luke Chaloner, to purchasr books for the library of Dublin. In 1607 he took the degree of B. D., and soon after wa

Epistolae, Greece et Latme, &c. 3. Annals of the

Old and New Testament, in Latin. 4. De Grseco Septuaginta interpretum Versione Syntagma ; and many other books which are esteemed. A consi- derable number of his works still remain in MS.

USK, a market-town in the hundred of the same name, near the centre of the county of Mon-

discerning the disparities of similar appearances, which is the business of discretion. Felt.

If men's desires are ujuu//

U'SUFRUCT, n. s. Fr. usufruit ; Lat. usus and

mouthshire, and on the banks of the river Usk, fructus. The temporary use; enjoyment of the seven miles from Caerleon, and 144 west by north profits, without power to alienate, of London. Its trade consists in a manufactory The persons receiving the same have only the m. of Pontypool ware: the church, of Norman archi- f™ *•"•*• and not anv fee or inheritance therein, lecture, was originally built in the form of a cathe- '4-w $*' dral. The river is remarkable for its salmon, and USUFRUCT, in the civil law, is the use or en- it has several very productive weirs in the neigh- joyment of any lands or tenements ; or the right of bourhood. The town house is a modern building, receiving the fruits and profits of an inheritance or Usk is supposed to be the Burrium of the Ro- other thing.*

mans : it is a borough, governed by a mayor, com- USURE', v. n. j Lat. tuura. To practise usury ; raunity, and burgesses, and, in conjunction with U'SIRER, n. s. Stake interest for money: the Newport and Monmouth, sends one member to USU'RIOLS, adj.) noun substantive and adjective

parliament. Market on Friday. Fairs, Trinity correspond : but the verb is obsolete.

Monday, and October 18th.

USQUEBAUGH is a peculiar compounded li- quot chiefly taken by way of dram. There are several different methods of making this liquor ; but the following is esteemed one of the best : — To two gallons of brandy, or other spirits, put a pound of Spanish liquorice, half a pound of dried raisins, four ounces of currants, and three of sliced dates, the tops of baum, mint, savory, thyme, and the lops of the flowers of rosemary, of each two ounces ; •innamon and mace, well bruised, nutmegs, ani- •eeds, and coriander seeds, bruised likewise, of each four ounces ; citron or lemon, and orange-peel, scraped, of each an ounce : let all these infuse forty-eight hours in a warm place, often shaking them together ; then let them stand in a cool place for a week : after which, the clear liquor is to be •lecanted off, and to it is to be put an equal quan- tity of white port, and a gallon of canary ; after

If tho'j lend money to any that is poor, thou shall not be to him as an usurer, nor lay upon him usury.

Exodus xxii. 25.

Is this the balsam that the vturing senate Pours into captains' wounds ? Shahspeare. Timon.

*For every hour that thou wilt spare *ne now*

I will allow,

Uturiout god of love, twenty to thee, When with my brown my grey hairs equal be. Dcmne.

There may be no commutative injustice, while each retains a mutual benefit ; the uturer for his money, the borrower for his industry. • Child.

*USURP, v. a. ~\ Fr. usurper ; Lat. usitrpo. USURPA'TIOX, n. *. f To possess by force or in- USURP'ER, ftrusion; seize or possess*

USURP'INGLY, adv. } without right: the deriva- tives corresponding.

So ugly a darkness, as if it would prevent the night's coming, usurped the day's right. Sidney.

Ever sithence he hath continued his first usurped power, and now exacteth upon all men what he list : so that now to subdue or expel an usurper, should be no unjust enterprize, but a restitution of antient right

which it is to be sweetened with a sufficient quan- tity of refined sugar.

USTIUG, VOLIKI, or THE GREAT, a city of Eu-

*ropean Russia, in the government of Vologda, unto the crown. S/*n«r.*

*situated at the confluence of the Suchona and the II g"**11? behoveth the church to have always most Jug, which unite here and form the Dwina. It is sP^'a . ca.re> lest hum™ inventions ««rp the room angarchb,hoP's see, and, though placed in a very – «•** – *™& the sword. inhospitable climate, contains nearly 12,000 mha- Which swa s ^ , these several tides, bitants. It has two cathedrals, and a number of And t the same inf0young Arthur's hand, churches or chapels, but most of its houses are of wood. Its situation however renders it a mart of*

the trade between the frozen regions of the north

and the more temperate provinces. Accordingly

its merchants transact a good deal of business with

Archangel, St. Petersburgh, Cazan, and even Si- Siege and defiance.

beria. The principal articles of traffic are corn Few «mirpm to the shades descend

and furs ; but the fish of the northern ocean, and

the silks and tea of China, also form a part of it.

put the same into young Thy right royal sovereign Shalapeart.

Their fox-like thefts are so rank as a man may find whole pages usurped from one another. Ben Jonson .

But this usurper his encroachment proud Stays not on man ; to God his tower intends

Milton.

By a dry death, or with a quiet end.

Who 's this, that dares usurp

'"."» I' "; The guards and habit of Numidia's prince ?

There is in this sequestered place a manufactory of f Addi

enamel and bronzed silver. 210 miles N. N. W.

Drydcn.

of Viatka, and 440 east of St. Petersburgh.

USTO'RIOUS, adj. Latin itstum. Having the quality of burning.

The power of a burning glass is by an uitnriout qua- lity in the mirror or glass, arising from a certain un- known substantial form. Wain.

U'SUAL, adj. \ Fr. usuel. Common ; fre-

U'SUALLY, adv. S queut ; customary : the adverb corresponding.

Consultation with oracles was a thing very utual and frequent in their times. Honker.

The finding out the similitudes of different things, wherein the fancy is conver&ut, is uiually a bar to the

Additons Cain.

*U*SURY, n. s. Fr. usurc; Lat. >aura. Money paid for the use of money ; interest.*

The wished day is come at last, That shall, for all the pains and sorrows past, Pay to her usury of long delight. Spenter.

Utury bringeth the treasure of a realm into few hands : for the usurer being at certainties, and others at uncer- tainties, at the end most of the money will be in the box. Bacon.

Our angles are like money put to mury , they may thrive, though we sit still and do nothing.

Walton t Angler.

IIY is an unlawful contract upon the loan of money, to receive the same

again with exorbitant

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increase. By 37 Hen. VIII. c. 9, the rate of in- terest was rixed at £iO per cent, per annum ; which the stat. 13 Eliz. c. 8 confirms, and ordains that all brokers shall be guilty of a praemunire that transact any contracts for more ; and the securities ˆmselves shall be void. The stat. 21 Jac. I. c. 7 reduced the interest to £8 per cent. ; and it having been lowered in 1650, during the usurpa tion, to £6 per cent., the same reduction was re- enacted after the restoration by stat 12 Car. II. c. 13, and lastly, the stat 12 Annas, st, 2. c. 16, has reduced it to £5 per cent. Wherefore not only all contracts for taking more are in themselves totally void, but also the lender shall forfeit the money borrowed. Also if any scrivener or broker takes more than 5s. per cent, procuration-money, or more than \1d. for making a bond, he shall forfeit £20 with costs, and shall suffer imprisonment for half •A year. Many efforts have been made in modern times to obtain a revision by parliament of our jsury laws, but hitherto without avail.

By 38 Geo. III. c. 93, reciting that by the laws in force all contracts and assurances whatsoever for payments of money, made for a usurious con- sideration, are utterly void ; and also reciting that in the course of mercantile transactions negociable securities often pass into the hands of persons who have discounted the same, without any knowledge of the original considerations for which the same were given; and that the avoidance of such secu- rities in the hands of such bona fide indorsees without notice is attended with great hardship and injustice: it is enacted ‘ that no bill of exchange, or promissory note (drawn or made after the pass- ing the act), shall, though it may have been given for a usurious consideration, or upon a usurious contract, be void in the hands of an indorsee for a valuable consideration, unless such indorsee had, at the time of discounting or paying such conside- ration for the same, actual notice that such bill or note had been originally given for a usurious con- sideration, or upon a usurious contract.’ It may be doubted whether this act received all the con- sideration due to the subject ; and whether an ex- ception ought not to have been made as to the first and immediate indorsees of the parties to the usury, which latter seem the principal persons benefited by the act. For a statement of the general argu- ments in the late discussions on this subject, see Evans’s Collection of Statutes, part. III., Class v. note on the statute 37 Hen. VIII. c. 9.

UTAWAS RIVER, a river of North America, which forms the boundary between Upper and Lower Canada, and makes part of that succession of hikes and rivers by which the fur traders of Canada penetrate into the interior. It has its source in the mountains, and, after a course of more than 400 miles, falls into the St. Lawrence in the vicinity of Montreal. It receives in its course the waters of the lake Timmiskamain. It is sometimes called Montreal River.

UTENHOVIUS (Charles), a native of Ghent, who was an eminent and learned critic in the dead languages. He published Poems in Greek and Latin, on various subjects ; and died at Cologr in

1600.

UTEN'SIL, n. s. Fr. Ktemile ; low Lat. uttn- silc. An instrument for common use.

Burn but his books ; he has brave utensils, Winch, when he has a house, he '11 deck withall.

SknAtpemrt,

Mules after these, camels and dromedaries, And waggons fraught with utensils of war. Milton.

Tithes and lands given to God are never, and plate, vestments, and other sacred utensils are seldom cou»e- crated. South.

UTERINE, adj. Fr. uterin ; Lat. uterinus. Be- longing to the womb.

The vessels of the interiour glandulous substa.nce of the womb are contorted with turnings and meanders, that they might accommodate themselves without danger of rupture to the necessary extension of the uterine substance. Hay.

UTERUS, in anatomy. See ANATOMY. UTlCA, in ancient geography, a town of Africa Propria, on the Mediterranean ; a Tyrian colon) and older than Carthage (Sil. Italicus) ; its namt according to Bochart, denoting old; reckoned second to it ; but, after the destruction of Carthage, it became the capital and centre of all the Roman transactions in Africa, according to Strabo ; who adds, that it stood on the same bay with Carthage, at one of the promontories called Apollonium, bounding the bay on the west side, the other to the east called Hermeia, being at Carthage. It be- came famous by the suicide of Cato, thence called Uticensis.

UTIL'ITY, n. s. Fr. utilite; Lat. utilitas. Use- fulness ; profit ; convenience.

Applied only to things.

Those things which have long gone together are con- federate ; whereas new things piece not so well ; but though they help by their utility, yet they trouble by their inconfonnity. Bacon.

M. Zulichem desired me that I would give a relation of the cure of the gout, that might be made publick, as a thing which might prove of common utility to so great numbers as were subject to that disease. Temple.

UTMOST, adj. & «. s. Sax. utmcepc, from ut- tep. Extreme ; placed at the extremity ; in the highest degree : as a noun substantive the most that can be.

I'll undertake to bring him, Where he shall answer by a lawful form, In peace, to his utmost peril. Shaktpeare.

I will be free, Even to the utmost as I please in words. Id.

As far removed from God, and light of heaven, As from the centre thrice to the utmoit pole. Milton.

Try your fortune. — I have, to the utmost. Dryden.

A man. having carefully enquired into aJl the grounds of probability and unlikeliness, and done nis utmost to inform himself in all particulars, may come to acknow- ledge on which side the probability rests. J^x-ke.

UTRECHT, one of the provinces of the Nether- lands, bounded on the west by Holland, on the north by the Zuyder Zee, and on the east by Gel- derland. The soil in some parts is sandy, and fit for little but raising wood ; in general, however, it affords good pasture. The extent of the province is about 490 square miles ; its population is about 110,000. It is traversed by branches of the Rhine. Its exports are confined to cattle, cheese, and corn ; the latter in small quantity. It sends eight deputies to the representative body, and is divided into nine cantons.

UTUECHT, a well known city of the Netherlands, capital of the preceding province, is situated on the Old Rhine, by which it is divided into two parts. It is healthy, and exempt from the disad- v;int,i','es of damp, so common in Dutch to\vn>. Nothing can surpass the beauty of the approach b ;*

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particularly that from Amsterdam, which consists of a broad avenue, bordered with rows of trees. Of a form nearly square, Utrecht is surrounded with an earthen mound and moat ; and, exclusive of the suburbs, is about three miles in circuit. Its population is about 35,000.

Of the public edifices, the most remarkable is the cattedral. A considerable part is now in ruins, but the tower, which still remains, is a very remarkable object. Its height is said to be 464 feet ; and from its top may be seen, in a clear day, no less than fifty-one towns great and small. The town- house is a good structure ; other objects worthy of notice are the charitable establishments, hospitals, &c. The Mall, situated outside the walls, is up- wards of a mile in length, and bordered with a triple row of trees. The ramparts likewise form an agreeable walk. The university of Utrecht is of considerable note, and was founded in 1630; it has professors in the classics, mathematics, medi- cine, divinity, and law. Attached are a library, an anatomical theatre, a botanical garden, a cabinet of natural history, and an observatory. The town likewise possesses a hall of paintings, schools for the fine arts, and several valuable pri"ate libraries. This is the first town in the Dutch provinces where the traveller coming fiom the westward per- ceives an uneven surface, and begins to exchange the monotony of Holland, for the diversified scenery of Gelderland, It was the birtli place of pope Adrian VI.; and is memorable as the place where, in 1579, was concluded the union of the seven provinces, and in 1713 the well known treaty of peace between the allies and French. Eighteen miles S. S. E. of Amsterdam.

UTRERA, a fortified town of Andalusia, Spain, situated on a steep eminence, of considerable height, at the foot of which flows a small river called the Carbonel. It is fourteen miles E. S. E. of Seville, and is considerably out of the right line from Cadiz to Seville ; but as there is an immense tract of marshy land along the east bank of the Guadal- quivir, called the Maresma, which is impassable for horses or carriages in rainy weather, the great road between these two cities passes through Utrera. Population 9000.

UTRICULARIA, in botany, water milfoil, a genus of plants of the class of diandria, and order of monogynia; and in the natural system arranged v under the twenty-fourth order, corydales. The calyx is ringent, with a nectarium resembling a spur ; the corolla diphyllous and equal ; the cap- sule unilocular. There are nine species ; two of which are natives of Britain. They have been ap- plied to no particular use.

UT"TER, adj. kv.a. ~\ Sax. urten. Outer; UT"TERANCE, n. s. I situate on

the outside,

UT'TEREII, sor remote from the

UT'TER LY, adv. i centre; extreme: to

UT'TERMOST, adj. & n. s. J let out ; disclose ; declare ; vend : utterance is extremity ; terms of extreme hostility (obsolete) ; expression, particu- larly sad expression : an utterer is a vender; dis- closer ; divulger: utterly, fully; completely: ut- termost, extreme ; being in the highest degree : the highest degree.

Shall not they teach thee and tell thec, and uttrr words out of their heart ! ./• '< viii. 10.

There needeth neither promise nor persuasion to make her do her uttermost for her father's j-emte. Kid.

He witli utterance grave, and countenance sad, From point to point discoursed his voyage. Sjietuer.

Utterers of secrets he from thence debarred ; Babblers of folly, and blazers of crime. It

God, whose property is to shew his mercies thes greatest when they are nearest to be utterly despaired.

Hooker.

lie cannot have sufficient honour done unto him ; but the uttermost we can do we must. Id.

W hen do partial and sinister affections more utter themselves than when an election is committed to many ?

Whitgifte.

Come, fate, into the list, And champion me to the utterance. Shakspeare.

Such mortal drugs, 1 have, but Mantua's law Is death to any he that utters them. Id.

Were it folly to be modest in littering what is known to all the world ? Raleigh.

There is nowhere any nation so utterly lost to all things of law and morality, as not to believe the exist- ence of God. Wllkint

He was so utterly tired with an employment so con- trary to his humour, that he did not consider the means that would lead him out of it. Clarendon.

Pursue these sons of darkness ; drive them out From all heaven's bounds into the utter deep. Milt. I meant my words should not reach your ears ; but what I uttered was most true. Dryden.

Many a man thinks admirably well who has a poor utterance; while others have a charming manner of speech, but their thoughts are trifling. Watts.

UTTOXETER, a market-town in Totmonslow hundred, Staffordshire, situate on the river Dove, six miles from Abbot's-Bromley, and 135 north-west of London. The inhabitants are employed in trade and manufactures, principally in the various branches of ironmongery, the town being nearly surrounded with forges. It is situate on a rising ground, and has several good streets, with a large open market-place in the centre. It carries on a considerable traffic, communicating, by its navigation, with the Trent, Thames, Avon, &c., which' also communicate with London, and the Eastern and Western Oceans. The town is re- markable for the longevity of its inhabitants. The church is an ancient edifice, and here are several meeting-houses for dissenters, and a free-school. The market on Wednesday is noted for its great supply of cheese, butter, hogs, corn, and all kinds of provisions. Fairs, May 6th, July 31st, and September 1st and 19th. Patrons the dean and canons of Windsor.

UVARIA, in botany, a genus of plants in the class of polyandria, and order of polygynia; ranking according to the natural method in the fifty-second order, coadunatse.

UVE'OUS, «$. Lat. uvu.

The uveous coat, or iris, of the eye, has a musculous power, and can dilate and contract that round hole in it, called the pupil. Ray on the Creation.

VUISTA, the name given by Buchanan to the isle of Unst.

VULCAN, in Pagan worship, the god of sub- terraneous fire and metals, was the son of Jupiter and Juno ; and was said to be so remarkably de-formed, that his father threw him down from hea- ven to the isle of Lemnos, in which fall he broke his leg, and there he set up his forge, and taught men how to soften and polish brass and iron Thence he removed to the Liparian isles, near Si- cily, where, by the assistance of the Cyclops, he made Jupiter's thunderbolts, and armour for the other gods. Notwithstanding the deformity of his

person, he bad a passion for Minerva, and by Ju- piter's consent made his addresses to lier, but with- out success. He was, however, more fortunate in his suit to Venus ; who, after her marriage, chose Mars for her gallant ; when Vulcan exposed them to the ridicule of the other gods, by taking them in a net of iron wire.

VUL'GAR, adj. & n.s.~\ Fr. vulgaire ; Latin

VUL'GARISM, H. s. (^ vulgaris. Plebeian ;

VULGAR'ITY, i suiting to or practised

VUL'GAELY, adv. / by the common peo-

ple ; mean ; low ; the common people : vulgarism isgrossness; meanness; a low speech or word : vul- garity, meanness; lowness : the adverb correspond- ing with the adjective.

Do you hear ought of a battle toward ? — Most sure, and vulyar ; every one hears that.

Shahspeare.

Those men, and their adherents, were then looked upon by the affrighted vulgar as greater protectors of their laws and liberties than myself. King Charles.

He that believes himself incapable of pardon, goes on without thought of reforming ; such an one we call vulgarly a desperate person. Hammond.

The most considering and wisest men, in all ages and nations, have constantly differed from the ntlgar in their thought. Wilkins.

is the grandesophos of Persius, and the sublimity of Juvenal, to be circumscribed with the meanness of words, and vulgarity of expression. Dryden.

Men who have passed all their time in low and vulgar life, cannot have a suitable idea of the several beauties and blemishes in the actions of great men. Addison.

The great events of Greek and Roman fable and his- tory, which early education and the usual course of reading, have made familiar and

interesting to all Eu- rope, without being degraded by the vulgarism of ordinary life in any country. Reynolds.

VULGATE, a very ancient Latin translation of the Bible, and the only one acknowledged by the church of Rome to be authentic. See BIBLE.

VULNERABLE, adj. Fr. vulnerable ; Latin vulnerabilis. Susceptive of wounds; liable to ex- ternal injuries.

Let fall thy blade on vulnerable crests ; I bear a charmed life- Shakspeare.

Achilles, though dipt in Styx, yet having his heel untouched by that water, although he were fortified elsewhere, he was slain in that part, as only vulnerable in the inferior and brutal part. Browne.

VULNERA'RY, adj. Fr. vulneraire ; Lai. vul- nerarius. Useful in the cure of wounds.

Try whether the same effect will not ensue by com- mon vulnerary plaisters. Browne.

I kept the orifice open, and prescribed him rntlneraries.

Wiseman.

VUL'NERATE, v. u. Lat. vulnero. To wound ; to hurt.

There is an intercourse between the magnetick un- guent and the vulnerated body. Glanville.

VULPENITE.. Color grayish-white. Massive. Splendent. Fracture foliated. Fragments rhom- boidal. In distinct granular concretions. Trans- lucent on the edges. Soft. Brittle. Specific gravity 2-878. It melts easily before the blow- pipe into a white opaque enamel. Its constituents are, sulphate of lime 92, silica 8. It occurs along •with granular foliated limestone at Vulpino in Italy.

VULTUR, in ornithology, a genus of birds be- longing to the order accipitres. The beak is straight and crooked at the point; the head has no feathers ; on the fore part being only naked skin ; and the tongue is generally bifid. There are twenty-

ooe species. The most remarkable are these : — 1. V. aura, the carrion vulture, according to Mr. L tham, is about the size of a turkey, though it varie* in size in different parts. The bill is white, the end black; irides bluish saffron-color. The head, and part of the neck, are bare of feathers ;*

and of a red, or rather rufous color. The sides of the head warted, not unlike that of a turkey. The whole plumage is brown black, with a purple and green gloss in different reflections; but in some birds, especially young ones, greatly verging to dirty brown. The feathers of the quills and tail are blacker than the rest of the body. The legs are flesh-color; the claws black. These birds are very common in the West Indies, and both in north and south America. It feeds on dead carcases, snakes &c., like most of this genus ; which makes the smell of it very offensive. In general it is very tame in its wild state, but particularly so when trained up from being young. In the West Indies they roost together at night, in vast numbers, like rooks in this country. They are reckoned a most useful animal in the places where they resort ; which secures their safety, added to a penalty for killing one, which is in force in Jamaica and other islands of the West Indies.

2. V. gryphus, the condor, which is not only the largest of this genus, but perhaps of all others which are able to fly. The accounts of authors in regard to its extent of wing are various, viz. from nine to eighteen feet from the tip of one wing to that of the other. One gives it strength sufficient to carry off sheep, and boys often years old ; while another ventures to affirm, that it can lift an elephant from the ground high enough to kill it by the fall ! M. de Salerne says that one of this kind was shot in France in 1719, whose extent of wing was eigh- teen feet. The following is the description of one in a museum in this country : — It has an extent of wing somewhat under eleven feet, the bill is strong, moderately hooked, and blunt at the tip, which is white, the rest of it a dusky color. On the top of the head runs a kind of carunculated substance, standing up like the comb of a cock. The head and neck are slightly covered with brown down, in some parts nearly bare, and here and there a carun- culated part, as in the neck of a turkey. The lower part of the neck is surrounded with a ruff of a pure white and hairy kind of feathers. The upper parts of the body, wing, and garl, are black, except that the middle wing coverts have- whitish ends, and the greater coverts half black, half white. The nine or ten first quills are black, the rest white, with the tips only black ; and, when the wings are closed, producing the appearance of the bird having the back white. The under parts of the body are ra- ther slightly covered with feathers; but those of the thighs are pretty long. The legs are stout and brown : claws black and blunt. These birds are said to make their nest among the inaccessible rocks, and to lay two white eggs, larger than those of a turkey ; they are very destructive to sheep, and will in troops often attempt calves ; in which case, some of them first pick out the eyes, whilst others attack the poor animal on all sides, and soon tear him to pieces. This gives rise to the following stratagem, used by the peasants of Chili : — One of them wraps himself up in the hide of a fresh killed sheep or ox, and lies still on the ground ; the con- dor, supposing it to be lawful prey, flies down to secure it,

when the person concealed lays hold of

the legs of the bird, his hands being well coTered with gloves ; and immediately his comrades, who are concealed at a distance, run in, and assist to secure the depredator, by falling on him with sticks till they have killed him.

3. V. harpyia. See FALCO.

4. V. oricou, a species discovered by M. Vail- lant at Orange River, South Africa. It is above three feet high, and eight or nine in breadth be- tween the tips of the wings. Its feathers, the gene- ral hue of which is a light brown, are on the breast, belly, and sides, of unequal lengths, curved like the blade of a sabre, and bristle up distinct from each other. The feathers, thus separated, would disclose to view the naked skin on the breast, if it were not completely covered with a very thick and beautiful white down, which is easily seen between the ruffled plumage. A celebrated naturalist says, ‘ that no bird has eye-lashes or eye-brows, or hair round the eyes, like that in quadrupeds’ ; but this is a mistake. Not only the oricou has this peculia- rity, but many other species ; such as all the culaos, the secretary (see FALCO) and several other birds of prey. Besides these eye-lashes, the oricou has stiff black hairs on its throat. All the head and part of the neck are bare ; and the naked skin, which is reddish, is variegated with blue, violet, and white. The ear in its external circumference is. bounded by a prominent skin, which forms a sort of round- ed couch, prolonged for some inches down the neck, that must heighten the faculty of hearing.’ «Its strength,’ says Vaillant, ‘ must be great, if we judge from its muscles and sinews,’ and he thinks it is the strongest of birds, not excepting the famous condor.

5. V. perenopterus, the Egyptian vulture. The appearance of this bird is as horrid as can well be imagined, viz. the face is naked and wrinkled ; the eyes are large and black : the beak black and hook- ed ; the talons large, and extending ready for prey; and the whole body polluted with filth ; these are qualities enough to make the beholder shudder with horror. Notwithstanding this, the inhabitants of Egypt cannot be enough thankful to Providence for this bird. All the places round Cairo are filled with the dead bodies of asses and camels ; and thousands of these birds fly about and devour the carcases before they putrefy and fill the air with noxious exhalations. The inhabitants of Egypt, and after them Maillet in his description of Egypt, say, that they yearly follow the caravan to Mecca,

and devour the filth of the slaughtered beasts, and the carcases of the camels which die on the journey. They do not fly high, nor are they afraid of men. If one of them is killed, all the rest surround him in the same manner as do the royston crows ; they do not quit the places they frequent though fright- ened by the explosion of a gun, but immediately return. Maillet imagines this bird to be the ibis of the ancients; but it is scarcely to be imagined lhat a wise nation should pay such honors to an inclean, impure, and rapacious bird which was not Verhaps so common before the Egyptians filled the greets with carcases. If the ibis is to be found, it must certainly be looked for in the order of grails of I.innt ; and we imagine it to be the white stork fardea ciconia), which is so common in Egypt. The Arabians call it rocha-me ; the French, when in

. gave it the name of chapon de Pharaon, or de Mahotneth. See SOUDAN.

6. V. Sagittarius, or secretary, is a most singular species, being particularly remarkable from the

great length of its legs ; which at first sight would induce one to think it belonged to waders : but the characters of the vulture are so strongly marked throughout, as to leave no doubt to which class it belongs. The bird, when standing erect, is full three feet from the top of the head to the ground. The bill is black, sharp, and crooked, like lhat of an eagle; the head, neck, breast, and upper parts of the body, are of a bluish ash color: the legs are very long, stouter than those of a heron, and of a brown color; claws shortish, but crooked, not very sharp, and of a black color ; from the hind- head springs a number of long feathers, which hang loose behind, like a pendent crest ; these feathers arise by pairs, and are longer as they are lower down on the neck ; this crest the bird can erect or depress at pleasure ; it is of a dark color, almost black ; the webs are equal on both sides, and ra- ther curled ; and the feathers, when erected, some- what incline towards the neck ; the two middle feathers of the tail twice as long as any of the rest. This singular species inhabits the internal parts of Africa, and is frequently seen at the Cape of Good Hope. It is also met with in the Philippine islands. As to the manners of this bird, it is on all hands allowed that it principally feeds on rats, lizards, snakes, and the like ; and that it will become fa- miliar : whence Sonnerat is of opinion, that it might be made useful in some of our colonies, if encour- aged, towards the destruction of those pests. They call it at the Cape of Good Hope flangeater, i. e. snake eater. A great peculiarity belongs to it per- haps observed in no other ; which is, the faculty of striking forwards with its legs, never backwards. Dr. Solander has seen one of these birds take up a snake, small tortoise, or such like, in its claws ; when dashing it thence against the ground with great violence, if the victim was not killed at first, it repeated the operation till that end was answered ; after which it ate it

up quietly. Dr. J. R. Forster mentioned a further circumstance, which he says was supposed to be peculiar to this bird ; that should it by any accident break the leg, the bone would never unite again.

7. V. Serpentarius. See FALCO.

*VULTURE, n. *. Lat. vultur. A large bird of prey, remarkable for voracity.*

Nor the night raven that still deadly yells, Nor griesly culture., make us once affeared. Sjteruer.*

We've willing dames enough ; there cannot be That vulture in you to devour so many As will to greatness dedicate themselves. Shakspeare.

A ravenous vulture in his opened side Her crooked beak and cruel talons tried. Dryden.

U'VULA, n. s. Lat. m-uln. In anatomy, a round soft spongeous body, suspended from the palate, over the glottis.

By an instrument bended up at one end, I got up behind the uvula. Wiseman's Surgery.

UVULAR GLANDS. See ANATOMY.

U VULARI A, in botany,Pennsyl vanian Solomon's seal, a genus of plants, in the class of hexandrh, and order of rnonogynia; and, according to the na- tural method, ranking in the eleventh order, vir- mentosae. It is a native of Pennsylvania. The characters of this genus are, that they have but one style and six petals, and are naked, i. e. without any calyx.

UXBRIDGE, a market-town and chapelry in Hillingdon parish, Elthorne hundred, Middlesex, fifteen miles west of London, consists of one street,

nearly a mile in length ; the river Coin runs in two streams at the west end, having a new stone bridge over the main branch ; that part of the town, in the liberties of the township of Hil- lingdon, still remains unpaved, but the rest is paved and lighted by virtue of a late act. The church, or chapel of ease, is a good building, and was erected in the reign of Henry VI. ; near it is a very commodious market-house. The church-yard lies at some distance from the church. In a parallel line with the river, running from south to north, passes the Grand Junction Canal, from the Thames at New Brentford, on its way, to join the Braunston and other canals, in the midland and northern counties. Near the canal is an ancient building

culled the Treaty House, from its being the place where the commissioners of Charles I. and the parliament met in 1644. The town is go- verned by a high constable, two constables, and four headboroughs. During the summer season, a passage boat arrives daily, by the canal from Pad- dington, about two o'clock, and returns the same evening. Uxbridge is principally noted for its very great corn market, and for iis opulent meal- men, and gives the title of earl to the family of Paget. Fairs, March 25th, July 31st, September 29th, and October llth. Market Thursday.

UX'ORIOUS, adj. > Latin uxorius. Submis- UXO'RIOUSLY, adv. Jsively fond of a wife; in- fected with connubial dotage : the adverb corres- ponding.

That uxorious king, whose heart, though large,

WAD

Begu?.ed by fair idolatresses, fell

To idols foul. Milton '» Paradise Loi'..

If thou art thus ujmriouslij inclined To bear thy bondage with a willing mind, Prepare thy neck. Dnjden't Juvenal.

UZ, or UTZ, the country and place of residence of Job. In the genealogy of the patriarchs there are three persons called Uz, either of which might give this district its name. The first was the grandson of Sem, by his son Aram (Gen. xxii. 23), who, according to Josephus, occupied the Tracho- nitis, and Damascus, to the north of Palestine : but Job was among the sons of the east. Another Uz was the son of Nahor, Abraham's brother (Gen. x. 21), who appears to have removed, after passing the Euphrates, from Ilaran of Mesopotamia, to. Arabia Deserta. The third Uz was a Horite, from mount Seir (Gen.xxxvi. 28), and thus not of Eber's posterity. Now the question is, from which of these Job's country, Uz, took its name ? Not from the first, as is already shown ; nor from the second, because his country is always called Seir, or Edorn, never Uz ; and then called a south, not an east, country in Scripture. It therefore remains that we look for the country and place of residence of Job in Arabia Deserta; for which there were very probable reasons. The plunderers of Job are called Chaldeans and Sabeans, next neighbours to him. These Sabeans came not from Arabia Felix, but from a nearer Sabe in Arabia Deserta (Ptolemy) ; and his friends, except Eliphaz the Temanite, were of Arabia Deserta. See JOB.

W.

W is a letter of which the form is not to be found in the learned languages ;

though it is not improbable that by our w is expressed the sound of the Roman v, and the Eolick f. Both the form and sound are excluded from the languages derived from the Latin. It is sometimes improperly used in diphthongs as a vowel for «; view, strew : the sound of w consonant, if it be a consonant, is uni- form.

W, or w, is the twenty-first letter of our alpha- bet; and is composed, as its name implies, of two v's. It was not in use among the Hebrews, Greeks, or Romans ; but chiefly peculiar to the northern nations, the Teutones, the Saxons, Britons, &c. But still it is not used by the French, Ita- lians, Spaniards, or Portuguese, except in proper names, and other terms borrowed from languages in which it is originally used, and even then it is sounded like the single v. This letter is of an am- biguous nature; being a consonant at the beginning of words, and a vowel at the end. It may stand before all the vowels except u as water, wedge, winter, wonder : it may also follow the vowels a, e, a, e.nd unites with them into a kind of double vowel, or diphthong ; as in saw, few, cow, &c. It also goes before r, and follows s and th ; as in wrath, swear, thwart ; it goes before li also, though in reality it is sounded after it ; as in when, what, &c. In aome words it is obscure, as in shadow, widow, &c.

WAB'BLE, or } Teut. wabelen ; Belg. wag-

\ 'AD'DI.E, v. n. \ ghelen, to wasrgle; whence, by corruption, wabble and waddle. To shake in walk- ing from side to side ; to deviate in motion from a right !i?.c.

She could have run and waddled all about. Shaksp.

The strutting petticoat smooths and levels all dis- tinctions ; while I cannot but be troubled to see so many well-shaped innocent virgins bloated up, and waddling up and down, like big-bellied women. Spectator.

Obliquely waddling to the mark in view. Pope.

She drawls her words, and wadtllts in her pace ; Unwasht her hands, and much besnuft her face.

Yotntg.

If in your work you find it irabble ; that is that one side of the flat inclines to the right or left hand, with soft blows of an hammer set it to rights. Sforon.

WACHENDORFIA, in botany, a genus of plants, in the class of triandria, and order of mo- nogynia ; ranking according to the natural method in the

sixth order, ensatae. The plants of this ge- nus have one style and three stamina ; with spa- thaceous flowers, and a trilocular and superior cap- sule. The corolla is hexapetalous, unequal, and situated below the germen. There are four spe- cies, all foreign plants.

WADD, or WADDING, is a stopple of paper, hay, straw, or the like, forced into a gun upon the powder to keep it close in the chamber ; or to put up close to the shot, to keep it from rolling out.

WADD, BLACK. See MANGANESE.

WADDAHS, a savage people in Ceylon They live by themselves, and neither till the ground nor breed cattle ; but subsist entirely by hunting with bows and arrows ; except that they collect wild honey. They have no houses, and are quite naked, except a piece of cloth which they wrap round their waist. They sleep under large trees, on the banks of rivers. A few of them have a sort of tem-

*5les, where they worship some imaginary deity. 'hey preserve the flesh of their game by putting it into hollow trees, streaked with honey, and closing *he holes with clay.*

WADE, v. n. Sax. pa»an ; Belg. waden; Lat. iadtn/1, pronounced wadum. To walk through the waters; to pass water without swimming; pass difficultly.*

Virtue gives herself light, through darkness for to

wade. Spenser.

*lie staid seven days at the Crassus, until a bridge was made for the transporting of his army, for that the river was not to be waded *ovei. Knollci.*

I have waded through the whole cause, searching the iruth by the causes of truth. Hooker.

We'll wade to the market-place in Frenchmen's

blood. Shakspeare.

'Tis not to my purpose to wade into those bottomless controversies, which, like a gulph, have swallowed up so much time of learned men. Decay of Piety.

With head, hands, wings, or feet pursues his way, And swims, or sinks, or wades, or creeps, or flies. Mil, It is hard to wade deep in baths where springs arise.

Browne.

Simonides, the more he contemplated the nature of the Deity, found that he waded but the more out of his depth, and that he lost himself in the thought. Addis. WTADING (Peter), a learned Irish Jesuit, born at Waterford in 1586. He joined the Society at Tournay, in 1601. He was made chancellor of the universities of Prague and Gratz. He wrote Tractatus Adversus Haereticos, and Carmina Varia. He lived long in Bohemia, and died at Gratz, in

1644.

WADSWORTH (Thomas), a nonconformist divine, born in Southwark, in the seventeenth cen- tury, and educated at Christ's college Cambridge. He became minister of Newington Butts, and of Laurence Pountney church London ; and from his Diary, printed at the end of his Life, appears to have been a good man, and an exemplary pas- tor : yet he was deprived of his living in 1662- lie published several Sermons, and a work On the Im- mortality of the Soul.

WATER, w. s. Belg. wafel. A thin cake. Wife, make us a dinner ; spare flesh, neither corn ; Make wafers and cakes, for our sheepe must be shorne.

Timer.

That the same body of Christ should be in a thou- sand places at once ; that the whole body should lie hid in a little thin wafer, yet so that the members thereof should not one run into another, but continue distinct, and have an order agreeable to a man's body, it doth exceed reason. Hall.

WAFER, in the eucharist. SeeTRANSUBSTANTi- ATION.

WAFERS, or SEALING WAFERS, arc made thus: — Take very fine flour, mix it with elair of eggs ; isinglass, and a little yeast ; miimle the materials, beat them well together ; spread the batter, being made thin with gum- water, on even tin plates, and dry them on a stove; then cut them out for use. They may be made of any color, by tinging the paste with brazil or vermilion for red ; indigo or verditer, &c., for blue ; saffron, turmerics, or

gam- boge, &c., for yellow.

WAIT', v. a., v. n., & } Pret . wafted, or per- WAFI'AGE, n. s. [n. s. >haps waft; part. pass. WAFT'URE. J wafted or waft. Proba-

bly from wave. To carry or float through the air or on water ; to buoy : to float : also a floating body : waftage is carriage by water or in the air : v.afturc the act of waving.

A braver choice of dauntless spirits, Than now the English bottoms have waft o'er, Did never float upon the swelling tide. Sluifupeare.

\ hat ship of Kpidamnum stays for me? — A ship you sent me to, to hire wuftagc. Id.

You answered not;

But with an angry wufiure of your hand Gave sign for me to leave you. Id.

Thence wufted with a merry gale, Sees Leinster, and the golden vale. Draylun.

It wafted nearer yet, and then she knew, That what before she but surmised, was true. Dryden.

In vain you tell your parting lover, You wish fair winds may waft him over : Alas ! what winds can happy prove, That bear me far from what I love ? Prior.

From the bellowing east oft the whirlwind's wing Sweeps up the burthen of whole wintry plains. In one wide waft. Thornton.

W AG, v. a., v. n., SO Sax. pajian ; Teutonic WAG'GLE, v. n. [n. s. \ wagen ; Belg. waggen. To WAG'GERY, n. s. [move lightly, or shake WAG'GISH, adj. (slightly : be in quick va- WAG'GISHLY, adv. I cillatingmotion ; be mowed WAG'GISHNESS,W. s.J in this way: a wag is a droll or merry fellow : to waggle is to waddle ; move from side to side : waggery and waggishness, trick ; drollery ; mischievous merriment : the adjec- tive and adverb correspond.

All that pass hiss and wag their heads at thee.

Lamentations, ii. 15.

The sport Basilius would shew to Zelmane, was the mounting of his hawk at a heron, which, getting up on his waggling wings with pain, was now grown to dimi- nish the sight of himself. Sidney.

Cupid the wag, that lately conquered had Wise counsellors, stout captains puissant ; And tied them fast to lead his triumphs bad, Glutted with them, now plays with meanest things. Id. I will provoke him to 't, or let him wag. Shatup. Was not my lord the verier wag o' th' two ? /

Tliis new conceit is the waggish suggestion of some sly and skulking atheists. More's Divine Dial.

Thou can'st not wag thy finger, or begin The least light motion, but it tends to sin. Dryden.

\'e wink at wag when they offend And spare the boy, in hopes the mau may mend. Id. Why do you go nodding and waggling so, as if hip- shot 1 says the goose to her gosseling. L'F.ttranoe. 'Tis not the waggeries or cheats practised among school-boys, that make an able man ; but the princi- ples of justice, generosity, and sobriety. Locke*

A counsellor never pleaded without a piece of pack- thread in his hand, which he used to twist about a fin- ger, all the while he was speaking : the uiays used to call it the thread of his discourse. Atldiwii.

WAGE, n. s. & v. a.) The plural wages is WAG'ER, n. s. $ now only used. Goth,

and Sax. wed ; Swed. wada; Germ, wegen or wa- {.'t'n ; Fr. gages. Pledge ; stake ; engagement ; pay given for service: hence to engage ; attempt; ven- ture ; set or take to hire : a wager is a stake ; bett; any thing pledged on a chance; the subject of belts ; legal pledge.

The sea strove with the winds which should be louder ; and the shrouds of the ship, with a ghastfu> noise, to them that were in it witnessed that their ruin was the wager of the other's contention. Sidney.

Full fast she fled, ne ever looked behind ; As if her life upon the wager lay. Spenier,

Thou must wage Thy works for wealth, and life for gold engage. Id.

We m'isi not think the Turk is so unskilful, Neglecting an attempt of ease and gain, To wake and waye a danger profitless. Shakspeare.

A 11 friends shall taste The wage of their virtue, and all foes The cup of their deservings. Id.*

Twas merry when you wagered on your angling. Id.

The officers of the admiralty having places of so good benefit, it is their parts, being well waged and rewarded, exactly to look into the sound building of ships. Raleigh.

The sonnes of Greece waged war at Troy. Chapman.

He with a mighty wage, ˆ

Won such, themselves by oath as deeply durst engage.

Drat/ton.

This great lord came not over with any great num- ber of waged soldiers. Daviei's Ireland.

Multiplication of actions upon the case were rare formerly, and there by wager of law ousted ; which discouraged many suits. Hale.

Factious, and fav'ring this or t' other side, Their wagers back their wishes. Drtjden.

He pondered which of all his sons was fit To reign, and wage immortal war with wit. Id.

The thing itself is not only our duty, but our glory : and he who hath done this work has in the very work partly received his wages. South.

If any atheist can stake his soul for a wager against such an inexhaustible disproportion, let him never hereafter accuse others of.credulity. Bentley.

WAGENSEIL (John Christopher), LL. D., a learned German, born at Nuremberg, in 1633. He graduated at Orleans, after which he became pro- fessor of law and history at Ahorf, and next of Oriental languages. Rewrote, 1. De urbe Norirn- bergte; 4to. 2. Pera Librorum .Tuvenilium, 12mo. 3. Tela ignea Salanae : 2. torn. 4to. He died in

1705.

WAGER OF BATTLE. See BATTEL. By stat. 59 Geo. III. c. 46, this mode of trial is abolished in •writs of right: the same act abolishes all appeals of murder, treason, felony, or other offences; and, consequently, the trial by battel in those cases : which is therefore thus completely put an end to,

after much ingenious research and controversy on the subject.

WAGER OF LAW (Vadiatio Legis), so called, because the defendant puts in sureties, vadios, that at such a day he will make his law, that is, tak'e the benefit which the law has allowed him. — 3 Comm. c. 22; 1 Inst. 295. This takes place where an ac- tion of debt is brought against a man upon a simple contract between the parties, without deed or record : and the defendant swears in court, in the presence of eleven compurgators, that he oweth the plaintiff nothing, in manner and form as he hath declared ; the reason of this waging of law is, because the defendant might have paid the plaintiff his debt in private, or before witnesses who may be all dead, and therefore the law allows him to wage his law in his discharge ; and his oath shall rather be ac- cepted to discharge himself, than the law will suffer him to be charged upon the bare allegation of the plaintiff. — 2 Inst. 45. Wager of law is used in actions of debt without specialty ; and also in ac- tion of detinue, for goods or chattels lent or left with the defendant, who may swear on a book that he detaineth not the goods in manner as the plain- tiff has declared ; and his compurgators (who must, in all cases, as it seems now, be eleven in number), swear that they believe his oath to be true. — 3 Comm. c. 22.

WAGERS. Awager is frequently the disguise of an illegal transaction : and all wagers are void, if they

are of such a nature that they might have an illegal tendency, although they nre not accompanied by an illegal intention in the particular instance: as a wager between two voters respecting the event of an election. In general, a wager may be consi- dered as legal, if it be not an incitement to a breach of the peace, ot to immorality ; or if it do not affect the feelings or interest of a third person, or expose him to ridicule; or if it be not against sound policy. But as wagers, though admitted to be lezal in general under the restrictions before alluded to, are yet much discountenanced by the courts of justice, the cases decided respecting them will not always furnish a ground of analogy for the expo- sition of other subjects.

WAG'GON, n.s. f Sax. poejen ; Belgic and \AG'GONER. j Teut. wagen ; Islandic vagn.

A heavy carriage for burdens; a chariot : one who

drives a waggon.

Now fair Phoebus 'gan decline in haste His weary waggon to the western vale. Spenser,

By this, the northern waggoner had set His sevenfold team behind the

stedfast star, That was in ocean waves yet never wet. Id.

The Hungarian tents were enclosed round with wag- gon, one chained to another. Knolles.*

Her waggon spokes made of long spinners' legs ; The cover of the wings of grasshoppers. Shatapeare.

Waggons fraught with utensils of war. Milton,

The waggoners that curse their standing teams Would wake e'en drowsy Drusus from his dreams.

Dryden.

A waggoner took notice, upon the creaking of a wheel, that it was the worst wheel that made most noise.

L'Eilrange.

A WAGGON is a wheel carriage, of which there are various forms, accommodated to the different uses they are intended for. The common waggon consists of the shafts or rods, being the two pieces which the hind horse bears up; the welds; the slotes or cross pieces, which hold the shafts toge- ther ; the bolster, being that part on which the fore- wheels and the axle-tree turn in wheeling the wag- gon across the road ; the chest or body of the wag- gon, having the staves or rails fixed thereon ; the bales, or hoops which compose the top ; the tilt, the place covered with cloth, at the end of the waggon.

WAGNER (John James), a physician of Swit- zerland, born in 1641. He wrote Historia Natu- ralis Helvetia curiosae ; 12mo. He became libra- rian of Zurich, and died in 1695, aged only fifty- four.

W AGSTAFFE (Thomas), M. A., a learned di- vine born in Warwickshire in 1645, and educated at the Charter-house in London, whence he re- moved to New Inn Hall, Oxford, where he gra- duated. He became chancellor of Lichfield cathe- dral, and rector of St. Margaret, London ; but was ejected at the revolution for refusing the oaths. In 1693 he was made a nonjuring bishop. He practised physic, and published some Sermons, and an able defence of Charles I. as the author of Eifov /3a

WAHABEES, WAH ABIES, or WEHHABis.a for- midable body of warlike sectaries, who sprung up in Arabia, about a century ago, commencing their career as reformers of the Mahometan religion. According to Niebuhr, the founder of this sect was Abd ul Wehhab (Abdoulwehhbah, orUbdool Wa-

hab), a nat:»e of Aijaene (Ujuna), a town in El A-

red (Ool Urud), one of the two districts of Neds- jed in Arabia. Those schiecks, who had before been in a state of hostility against one another, were re- conciled by the mediation of Abd ul Wehhab, and agreed for the future to undertake no enterprise •without the advice of their apostle. In process of time, Abd ul Wehhab reduced great part of El Ared ; and being afterwards joined by schieck Mec- rami, of Nedsjeran, who was also the head of a particular sect, he, or rather his son Mahomet, as he succeeded his father, was enabled to reduce the Sunnite schiecks, and to subdue many of their neighbours. After the death of Abd ul Wehhab, his son retained the same authority, and prosecuted his father's views; and though the hereditary schiecks, who were more independent, still retain a nominal authority, yet he became in fact the so- vereign of the whole, and exacts a tribute, under the name of ' sikka,' or aid, for the purpose of car- rying on the war against the infidels. The Sunnites complain of his persecution ; but, more probably, as Niebuhr says, this bigoted and superstitious sect hate and calumniate Mahomet for his innovations in religion. However this be, the inhabitants of Nedsjed,who demur against embracing the new re- ligion, are retiring to other parts of the country. Zobaner, the ancient Basra, which had decayed to a condition little better than a hamlet, has been peopled by these refugees, and is now a large town.

This new religion of Abd ul Wehhab, according to the account given of it by the schiecks, which, however, in some respects, differs from the state- ment of the Sunnites, may be regarded as a refor- mation of Mahometanism. Experience must de- cide whether a religion, so stripped of every thing that might serve to strike the senses, can long main- tain its ground among a people so rude and igno- rant as the Arabs. Abd ul Wehhab also thought it necessary to impose some religious observances on his followers; and interdicted the use of tobac- co, opium, and coffee; he enacted likewise a variety of civil regulations, with regard to the collection and distribution of revenues.

In 1801 the Wahabeeshad penetrated to, and des- troyed by fire, the town of Imam Hossein, near Bagdad. The men and male children were all put to the sword ; while a Wehhabite doctor, from the lop of a tower, excited the massacre, by calling on the soldiers to kill 'all the infidels who gave com- panions to God.' In 1802 Mecca was taken, after u trifling opposition by

Saaoud, the son of Abdela- aziz, who razed to the ground all the mosques and chapels consecrated to the prophet or his family. This young warrior succeeded to the command of the Wahabees the following year, on the assassina- tion of his father; and, in 1804, made himself master of Medina, which had before resisted his arms. The conquest of Arabia was now nearly completed : and the sultan Saaoud became a formi- dable neighbour to the surrounding pachas of Bag- dad, Damascus, and Eˆypt.

The constitution of this new sovereignty is sin- gular in its kind. The town of Draa'iya, among the deserts, 390 miles to the east of Medina, long formed a sort of capital, or centre, of the govern- ments of the Wahabees. The various tribes of Araos, scattered widely in tents and barracks over this vast extent of country, yielded obedience, both civil arid military, to the sultan Saaoud. The tenth of their flocks and fruits was paid in tribute ; an crder from the sultan rapidly assembled a multitude

of armed men, subsisting themselves at their own expense, totally unorganized as soldiers, but deriving force from their numbers — from their active spirit as sectaries — and from the large plunder they obtained in their military expeditions. Descending frequently from their desert recesses upon the coast of the Red Sea, they arrested the caravans, and levied contributions upon the pilgrims journeying to Mec- ca and Medina. In 1807, when Ali Bey visited Mecca, the Wahabees were in their greatest power. Their army, which he saw encamped in the vici- nity of the sacred mount of Arafat, he estimates at 45,000 men, — a large proportion of the number mounted on camels and dromedaries, and with a train of a thousand camels attached to the different chiefs of the army. He describes with some spirit the appearance of anoiher body of Wahabees, whom he saw entering Mecca, to take possession of the city, and fulfil the duties of their own pil- grimage : — a multitude of copper-colored men who rushed impetuously into the place, their only covering a narrow girdle round their waist, to wliic i was hung a khanjear, or large knife, each one carry- ing besides a firelock on his shoulder. Their de- votions were of the most tumultuous kind ; the lamps surrounding the sacred kaaba were broken by their guns; and the ropes and buckets of the well of Zemzera destroyed in their eagerness to reach the holy water. All the other pilgrims quitted their more decorous ceremonies, till the Wahabees having satisfied their zeal, and paid their alms to the well in gunpowder and coffee, betook them- selves to the streets, where in conformity with the law of Abd ul Wehhab, their heads were all closely s'.iaved by the barbers of Mecca. The sultan Sa- aoud, whom Ali Bey saw at Arafat, was almost as naked as his subjects, distinguished chiefly by the green standard carried before him, with the charac- ters, ' La illahha ilia Allah,' — ' there is no other (Jod but God,' embroidered upon it.

The campaign of the pacha of Egypt against the Wahabees had in 1812 been unsuccessful; and his army suffered very greatly in an engagement at Jedda, the port of Mecca on the adjoining coast. He redoubled, however, his exertions; organized new troops; and, early in the spring of 1813, brought the war to a triumphant termination. The Wahabees were driven with Iqss from the coast; Mecca, Medina, and Jedda, were all retaken, and re- stored again to the authority of the Porte, and to the worship of the true believers. Mohammed Ali sent his youngest son, Ismael- Pacha, to Constanti- nople, to lay the keys of Mecca at the feet of the grand seignior. The acquisition was rendered of the utmost importance, by the peculiar feeling of all Mussulmans towards the actual possessor of the holy city. The progress of this sect, says Mr. Kinneir, appears to be now at a stand ; few prose- lytes have been made for a number of years past ; and the most paltry fortifications have been found sufficient to arrest their career.

V'AII). For weighed. Crushed.

His horse waid in the back and shoulder sliotten.

Shakspeaie

WAIFS, bona waviata, are goods stolen, and waived or thrown away by the thief in his (light, for fear of being apprehended. These are given to the king by the law, as a punishment upon the owner for not himself pursuing the felon, and tak in- away his goods from him. And therefore if the party robbed do his diligence immediately tv

follow and apprehend the thief (which is called making fresh suit), or convict him afterwards, or procure evidence to convict him, he shall have his goods again. Waived goods do also .not belong to the king till seized by somebody for his use; for if the party robbed can seize them first, though at the distance of twenty years, the king shall never have them. If the goods are hid by the thief, or left any where by him, so that he had not them about him when he fled, and therefore did not throw them away in his flight; these also are not bona waviata, but the owner may have them again when he pleases. The goods of a foreign mer- chant, though stolen and thrown away in flight, shall never be waifs : the reason whereof may be not only for the encouragement of trade, but also because there is no wilful default in the foreign merchant's not pursuing the thief, he being gene- rally a stranger to our laws, our usages, and our language.

WAIL, v. a., v. «., &} Italian guala; Arm.

WAI L'I NO, n. s. [n.s. >wea/«. To moan; to

\~AI i/Ft L, mlj. 3 lament ; bewail : to grieve

audibly : audible sorrow: wailing is lamentation;

moan : wailful, sorrowful ; mournful.

Take up wailing for us, that our eyes may run down with tears. Jer. ix. 18.

I will wail and howl. Micah.

The camp rilled with lamentation and mourning, which would be increased by the weeping and wailing of them, which should never see their brethren. Knollet.

Lay lime to tangle her desires By wailful sonnets, whose composed rhimes Should be full fraught with serviceable vows. Shalup.

Wise men ne'er trail their present woes, But presently prevent the ways to trail. Id.

The wailitujs of a maiden 1 recite. Gay.

Say, if my spouse maintains her royal trust ? Or if no more her absent lord she u-aHt, But the false woman o'er the wife prevails. Pop.*

Around the woods She sighs her song, which with her trail resound.

Thomson.

WAIN, n.s.) Contracted from waggon. A

W AIS'ROPE. \ carriage ; a large cord, with which the load is tied on a waggon ; cartrope.

There ancient Night, arriving, did alight From her high wearv main. Spenser.

Oxen and wainropes cannot hale them together.

Shakspeare.

Your's be the harvest ; 'tis the beggar's gain To glean the fallings of the loaded train. Diyden.

WAINS'COT, n. s. & v. a. Belg. wagenschot. of Goth, wt'i'jtr , a wall, and schot a sheet. The inner covering of a wall ; wooden lining of rooms : to line them thus.

Some have the veins more varied and chambletted ; as oak, whereof trainsctit is made. Bacon.

Musick soundeth better in chambers wainscot ted. Id.

She never could part with plain u-ainsrot and clean hangings. Arbuthnot.

A rat your utmost rage defies. That safe behind the wainscot lies. Swift.

WAINSCOT, in building, is the timber-work that serves to line the walls of a room, being usually made in pannels, and painted, to serve instead of hangings.

WAIST, n. s. I Belg. wast; modern Got. wafm-

WAIST'COAT. \ tas; Welsh gwase. The smallest

or middle part of the body ; the part below the ribs ;

the middle floor of a ship: a waistcoat is a coat for

this part of the body.

They seized, and with entangling folds embraced. His neck twice compassing, and twice his –

Denham.

She, as a veil, down to her tender waitt Her unadorned golden tresses wore Dishevelled. Milton.

Sheets of water from the clouds are sent, Which, hissing through the planks, the flames prevent. And stop the fiery pest ; four ships alone Burn to the waist, and for the fleet atone. Dry/ten.

Stiff stays constrain her slender waut. Gnu.

*Selby leaned out of the coach to shew his laced > <\n*t- coat. Ricliardson.*

WAIT, v. a., v. n. & ~\ Dutch wachten. To ex-

WAJT'ER, n. s. [n. s. > pect ; stay for; attend ;

WAJT'ING, udi. j accompany : to expect;

attend (taking on) ; stay ; lie in ambush ; follow : an ambush : a waiter is an attendant : waiting, at- tending ; serving : used in composition with man, mˆid, &c.

If he hurl at him by laying of wait, that he die, he that smote him shall he put to death. Numb. xxxv. 20.

He is waited for of the sword. Job, xv. 22.

The dinner is on the table ; my father desires your worship's company. — I will wait on him. Shaktpeare.

He made me mad

To talk so like a waiting gentlewoman, Of guns, and drums, and wounds. Id.

Bid them prepare within ; I am to blame to be thus waited for. Id.

It is a point of cunning to trait upon him, with whom you speak, with your eye, as the Jesuits give it in precept. Bacon.

Let the drawers be ready with wine and fresh glasses ; Let the waiters have eyes, though their tongues must be tied. Ben Jonton.

It will import those men, who dwell careless, to en- ter into serious consultation how they may avert that niin, which waits on such a supine temper.

Decay of Piety.

All the little lime twigs laid By Machiavel, the waiting maid. Cowley.

Why sat'st thou like an enemy in wait 1 Milton.

Such doom Waits luxury, and lawless care of gain. PHilip$.

Awed with these words, in camps they still abide, And wait with longing looks their promised guide.

Dryden.

Fortune and victory he did pursue, To bring them, as his slaves, to wait on you. Id.

A man of fire is a general enemy to all the waiter where you drink. Taller.*

How shall we know when to waif for, when to decline, persecution 1 South's Sermont.

Remorse and heaviness of heart shall trait thee, And everlasting anguish be thy portion. Rove.

The trailina-maid hopes to ingratiate herself. Str[ft.

We can now not only converse with, but gladly at- tend and trait vpon, the poorest kind of people. Law.

WAIVE, in law, a woman that is put out of the protection of the law. She is called waive, as being forsaken of the law, and not outlaw, as a man is ; by reason women cannot be of the decen- na, and are not sworn in leets to the king, nor to the law, as men are ; whereas women are not, and so cannot be outlawed, since they never were within it.

WAIVER, in law, the passing by of a thing, or a declining or refusal to accept it. Sometimes it is applied to an estate, or something conveyed to a man, and sometimes to a plea, &c. A waiver or disagreement as to goods and chattels, in case of a gift, will be effectual. If a jointure of lands be made to a woman after marriage, she may waire th:a

After her husband's death 3 Rep. 27. An infant, or if he die, his heirs, may by waiver avoid an es- tate made to him during his minority. 1 Inst. 23. 348. But, where a particular estate is given with a remainder over, there regularly he that hath it may not waive it, to the damage of him in remainder : though it is otherwise where one hath a reversion ; for that shall not be hurt by such waiver. 4 Shep. Abr. 192. After special issue joined in any action, the parties cannot waive it without motion in court. 1 Keb. 255. Assignment of error by attorney on an outlawry, ordered to be waived, and the party to assign in person, after demurrer for this cause. 2 Keb. 15.

WAKE,r. n., v.a., 8c-\ Saxon pacian; Goth.

WAKE'FUL, adj. [n.s. t wakan ; Belg. waecken ;

WAKE'FULNESS. n. s. £ Dan. wakke. To watch;

WA'KEN; v.a. J forbear sleeping; cease or

be roused from sleep ; be put in action : to wake, verb active, or waken, is to rouse from sleep or inactivity; bring to life again: the verb neuter waken is also synonymous with wake : a wake is a vigil ; feast of the dedication of a church : wakeful and wakefulness correspond.

Thou boldest mine eyes waking. Psalm Ixxvii. 4.

Prepare war ; wake up the mighty men, let them come up. Joel iii. 9.

A man that is wakened out of sleep. Zech. iv. 1.

Fill oven full of flawnes, Ginnie passe not for sleepe, To-morrow thy father his ttafe-daie will keepe.

Tusser.

The sisters awaked from dreams, which flattered them with more comfort than their waking would con- sent to. Sidney.

All night she watched, ne once a-down would lay Her dainty limbs in her sad dreriment, But praying still did wake, and waking did lament.

Spenter.

Before her gate high. Cod did sweat ordain, And wakeful watches, ever to abide. Id.

They waited each other, and I stood and heard them.

Shaktpeare.

Other perfumes are fit to be used in burning agues, consumptions, and too much u-akefulnets.

Bacon's Natural Hittori/.

Why dost thou shake thy leaden sceptre ? go, Bestow thy poppy upon wakeful woe. Crashato.

All thy fears,

Thy wakeful terrors, and affrighting dreams, Have now their full reward. Denhamt Sophy.

By dimpled brook, and fountain brim, The wood-nymphs decked with daisies trim Their merry wakes and pastimes keep : What hath night to do with sleep? Milton.

They introduce

Their sacred song, and waken raptures high. Id.

Though wisdom u-akes, suspicion sleeps. /

We make no longer stay ; go, waken Eve. Id.

Then Homer's and Tyrtaeus' martial muse Wakened the world, and sounded loud alarms.

Ruttommon.

Early Turnus wakening with the light, All clad in armour, calls his troops to fight. Dryden.

Putting all the Grecian actors down, And winning at the wake their parsley crown. Id.

I cannot think any time, waking or sleeping, without being sensible of it. Locke.

Sometimes the vulgar will of mirth partake, And have excessive doings at their u-ake. King.

What you 've said Has waked a thought in me which may be lucky.

Rove.

The droiling peasant scarce thinks there is any world beyond his village, nor gaiety beyond that of a wake. Government of the Tongue.

Thine, like Amphion's hand, had waked >he stone, And from destruction called the rising town ; Nor could he burn so fast as thou couldst build.

Prior.

The WAKE was kept with feasting and rural di- versions. The learned Whitaker, in his History of Manchester, has given a particular account of the origin of wakes and fairs. He observes that every church at its consecration received the name of some particular saint : this custom was practised among the Romans, Britons, and continued among the Saxons ; and in the council of Cealchythe, in 816, the name of the denominating

saint was ex- pressly required to be inscribed on the altars, and also on the walls of the church, or a tablet within it. The feast of this saint became of course the festival of the church. Thus Christian festivals were substituted in the room of the idolatrous an- niversaries of heathenism. Accordingly, at the first introduction of Christianity among the Jutes of Kent, pope Gregory the Great advised what had been previously done among the Romans, viz. Christian festivals to be instituted in the room of the idolatrous, and the suffering day of the inartvr whose relics were deposited in the church, or the day on which the building was actually dedicated, to be the established feast of the parish. Both were appointed and observed ; and they were clearly distinguished at first among the Saxons, as appears from the laws of the Confessor, where the dies de- dicationis, or dedicatio, is repeatedly discriminated from the propria festi vitas sancti, or celebratio sancti. » They remained equally distinct to the Reformation; the dedication day in 1536 being ordered for the future to be kept on the first Sun- day in October, and the festival of the patron saint to be celebrated no longer. The latter was, by way of pre-eminence, denominated the church's holiday, or its peculiar festival : and, while this remains in many parishes at present, the other is so utterly annihilated in all, that bishop Kennet (says Mr. Whitaker) knew nothing of its distinct existence, and has attributed to the day of dedica- tion what is true only concerning the saint's day. Thus instituted at first, the day of the tutelar saint was observed, most probably by the Britons, and certainly by the Saxons, with great devotion. And the evening before every saint's day, in the Saxon Jewish method of reckoning the hours, being an actual hour of the day, and therefore like that ap- propriated to th« duties of public religion, as they reckoned Sunday from the first to commence at the sun-set of Saturday ; the evening preceding the church's holiday would be observed with all the devotion of the festival. The people actually re- paired to the church, and joined in the services of it; and they thus spent the evening of their greater festivities in the monasteries of the north, as early as the conclusion of the seventh century. These services were naturally denominated, from their late hours, waeccan or wakes, and vigils or eves. That of the anniversary at Rippon, as early as the commencement of the eighth century, is expressly denominated the vigil. But that of the church's holiday was named cyric wseccan, or church-wake, the church-vigil, or church-eve. And it was this commencement of both with a wake which has now caused the days to be generally preceded with vigils, and the church holiday particularly to be denominated the church wake. So religiously was the eve and festival of the patron saint observed for

many ages by the Saxons, even as late as the reign of Edgar, the former being spent in the church, and employed in prayer. And the wakes, and all the other holidays in the year, were put upon the same footing with the octaves of Christmas, Easter, and of Pentecost. When Gregory recommended the festival of the patron saint, he advised the people to erect booths of branches about the church on the day of the festival, and to feast and be merry in them with innocence. Accordingly, in every parish, on the returning anniversary of the saint, little pavilions were constructed of boughs, and the people indulged in them in hospitality and mirth. The feasting of the saint's day, however, was soon abused ; and even in the body of the church, when the people were assembled for devotion, they began to mind diversions and to introduce drinking. The growing intemperance gradually stained the service of the vigil, till the festivity of it was con- verted, as it now is, into the rigor of a fast. At length they too justly scandalised the Puritans of the seventeenth century, and numbers of the wakes were disused entirely, especially in the east and some western parts of England ; but they are com- monly observed in the north, and in the midland counties. This custom of celebrity in the neigh- bourhood of the church, on the days of parti- cular saints, was introduced into England from the continent, and must have been familiar equally to the Britons and Saxons, being observed among the churches of Asia in the sixth century, and by those of the west of Europe in the seventh. And equally in Asia and Europe, on the continent and in the islands, the celebrities were the causes of those commercial marts which we denominate fairs. The people resorted in crowds to the festival, and a considerable provision would be wanted for their entertainment. The prospect of interest invited the little traders of the country to come and offer their wares; and thus, among the many pavilions for hospitality in the neighbourhood of the church, various booths were erected for the sale of different commodities. In larger towns, surrounded with populous districts, the resort of the people to the wakes would be great, and the attendance of traders numerous; and this resort and attendance consti- tute a fair. — Basil expressly mentions the numerous appearance of traders at these festivals in Asia, and Gregory notes the same custom to be common in Europe. And, as the festival was observed on a feria or holiday, it naturally assumed to itself, and as naturally communicated to the mart, the appel- lation of feria or fair. Indeed, several of our most ancient fairs appear to have been usually held, and have been continued to our time, on the origi- nal church holidays of the places : besides it is ob- servable that fairs were generally kept in church- yards, and even in the churches, and also on Sun- days, till the indecency and scandal were so great as to need reformation.

WAKE, in navigation, the print or track im- pressed by the course of a ship

on the surface of the water. It is formed by the reunion of the body of water which was separated by the ship's bottom whilst moving through it ; and may be seen to a considerable distance behind the stern, as smoother than the rest of the sea. Hence it is usually ob- served by the compass, to discover the angle of lee- way. A ship is said to be in the wake of another when she follows her on the same track, or a line supposed to be formed on the continuation of her

keel. Two distant objects observed at sea are called in the wake of each other, when the view of the far- thest is intercepted by the nearest, so that the ob- server's eye and the two objects are all placed on the same right line.

NN ARE (Sir Isaac), a miscellaneous writer, born in Northamptonshire, and elected fellow of Merton College, Oxford, and public orator to the university. He was sent ambassador to Venice and Savoy, on which occasion he was knighted. He wrote, 1. Rex Platonicus : 2. Discourse on the thirteen Cantons of the Helvetic League : 3. On the State of Italy : 4. On the Proceedings of the King of Sweden ; &c. He died in 1632.

WAKE (W'illiam), D. D., a learned prelate, born at Blandford, Dorsetshire, in 1657. He became fellow of Christ Church, Oxford, in 1672. He gra- duated in 1689, and was made chaplain to Wil- liam and Mary, canon of Christ's Church, rector of St. James's, in 1694 ; dean of Exeter in 1701 ; bishop of Lincoln in 1705 ; and archbishop of Canterbury in 1716. He had a great controversy with Dr. Atterbury about the Rights of Convoca- tions; and corresponded with some French bishops about a union between the churches. Some ac- count and extracts of this correspondence are pub- lished in Dr. Maclaine's translation of Mosheim's Church History. He published, 1. A Translation of the Epistles of the Apostolical Fathers, 8vo : 2. An Exposition of the Church Catechism : 3. Some Tracts against Popery: and several sermons. He died in 1737.

WAKEFIELD (Robert), a learned divine, born in the north of England, and educated at Cam- bridge. In 1519 he became professor of Hebrew at Louvain. Soon after he returned to England, was made king's chaplain to Henry VIII., profes- sor of Hebrew at Oxford, and a canon of Christ Church. He wrote, 1. A Paraphrase on Eccle- siastes ; 2. Syntagma Hebraeorum ; and other tracts. He died in 1537.

WAKEFIELD (Gilbert), A. B., a learned political writer, born at Nottingham, in 1756. He was educated by Mr. Wooddeson, at Kingston upon Thames. In 1772 he entered at Jesus College, Cambridge, where he took his degree. In 1776 he published some Latin poems, and Notes on Homer. In 1778 he took deacon's orders, and became curate of Stockport,

whence he removed to Liverpool. In 1779 he married, left the church, and became tutor in the dissenting academy at Warrington. He published 1. Translations of St. Matthew, and the epistles to the Thessalonians. 2. An Enquiry into the Opinions of the Christian Writers of the first three centuries, concerning Jesus Christ, in 4 vols. 4. Silva Critica. 5. He next astonished his friends with a pamphlet against public worship. After the French revolution he wrote some severe tracts against government. But his Letter to the Bishop of Llandaff subjected him and the printer to a prosecution, and two years imprisonment in Dorchester jail. He was liberated in May 1801, but died in September. As a clas- sical scholar he had few equals, but he was both a Socinian and a republican, and of a temper singu- larly irritable and discontented. He published also Tragsediarum Gracarum delectus, 2 vols. 12mo. ; and a superb edition of Lucretius, 3 vols. 4to.

WAKEFiELn, a market town in the West Riding of Yorkshire, situaie on the river Calder

tijit miles and a half south of Leeds, and 180 north of London. The town consists chiefly of nine handsome built streets, paved, and lighted with gas, beautifully situate on an eminence sloping to the Calder, and is continually improving. The church is a lofty Gothic structure, with a high spire. An elegant new church, or chapel of ease, was erected towards the close of the eighteenth century. The Calvinists, Methodists, and other dissenters, !iave chapels in this town. The market cross con- sists of Doric columns supporting a dome, and has an ascent by a circular flight of stairs in the centre, leading to a room used as the town hall, in which the quarter-sessions for the West Riding and petty-sessions are held. The house of correc- tion for the Riding, erected in 1770, is a noble building, an 1 stands in an excellent and airy situa- tion. The free grammar school is a good building, and is endowed with many benefactions. From it are several valuable exhibitions to the universities of Oxford and Cambridge. Of the other public buildings the chief are the new court, the new banks, the corn and auction marts, an elegant assembly room (attached to which is a library and news rooms), a neat theatre, a dispensary, an asylum for pauper lunatics, a charity school for clothing and instructing 106 boys and girls, and a cloth hall for exhibiting for sale the various woollen goods made here. The town has long been noted for its manufacture of woollen cloths and stuffs. The numerous manufactories here and in the neighbouring villages principally supply the markets at Leeds and Huddersfield ; it has also an extensive trade in corn and coals. About the

mid- dle of September are horse races on a two mile course, on Wakefield-Outwood, two miles distant from the town. Wakefield has a navigation to Huddersfield by a canal from the Calder, in a line with the river Colne; to Barnsley by a canal; and to Leeds by the Calder, joining the Aire, where their united streams fall into the river Ouse at Armin, near Howden. Over the river is a hand- some stone bridge of nine arches ; and a warehouse thereon, originally a chapel, still exhibits some curious Saracenic architecture. A little above the bridge is a dam which forms an admirable cascade. Market on Friday, at which there is a considerable trade in wool and grain. Fairs 4th and 5th of July, and 11th and 12th of November. The first nnd third for cattle, the latter is a statute fair; be- sides these there is every Wednesday fortnight a considerable sheep and cattle fair.

WALCIIERKN, or WALF.HF.RN, an island of the Netherlands, in the province of Zealand, situ- ated at the mouth of the Scheldt, and only separated from the islands of Beveland by a narrow channel called the Sloe. If not the largest il is the most populous and best cultivated of the islands of Xealand ; but the climate is wretched. It is of an oblong form ; its length from north-west to south- east being about twelve miles ; its breadth from ‘ north-east to south-west eight miles. It would be subject to inundations from the sea, were it not protected by strong dykes. The dyke of West Cappel in particular is of great size. This island contains the three towns of Middleburgh the capi- tal, Flushing, and Veere. The villages are numer- ous. It will long be memorable for the general sickness prevalent among the British troops during

occupation of it in 1809. U’ALDO (Peter), a merchant of Lyons, who

flourished in the tnd of the eleventh century. Applying himself ID the study of the Scripture, and finding no warrant there for several of the Romish doctrines, particularly that of transubstan- tiation, he publicly opposed them. His followers, who were from him called Waldenses, being chased from Lyons, spread over Dauphine and Provence; upon which Philip II. is said to have razed 300 gentlemen’s seats, and destroyed several walled towns, to stop their growth ; but this, in- stead of suppressing, spread them over a great part of Europe. The articles of their faith, which they drew up and dedicated to the king of France, agreed in most points with those of the present Protestants.*

WALES, a country situated in the south-west part of Britain, into which the ancient Britons, retired from the persecution of the Saxons. An- ciently it was of greater extent than it is at present, and comprehended all the country beyond the Severn ; that is, besides the twelve counties in- cluded in it at present, those of Herefordshire and Monmouthshire, which now are reckoned a part of England, were then inhabited by three different tribes of

the Britons, viz. the Silures, the Dimetae, and the Ordovices. The Romans were never able to subdue them till the reign of Vespasian, when they were reduced by Julius Frontinus, who placed garrisons in their country to keep them in awe. Though the Saxons made themselves masters of all England, they never got possession of Wales, except the counties of Monmouthshire and Here- fordshire, formerly a part of Wales.

About 870 Roderic, king of Wales, divided it among his three sons ; and the names of those divisions were Uemetia, or South Wales; Povesia, or Powis-Land ; and Venedotia, or North Wale. Another division is mentioned afterwards in tin- records, viz. North Wales, South Wales, and Wor Wales; the last comprehending the countu Monmouth and Hereford. The country derived the name of Wales, and the inhabitants that of Welsh, from the Saxons, who by those terms denoto a country and people to which they are strangers ; for the Welsh in their own language call then- country Cymry, and their language Cjmraeg, They continued under their own princes and l,i\v* from the above-mentioned period, and were never entirely subjected to the crown of England till the reign of Edward I., when Llewellin ap Gryffith, prince of Wales, lost both his life and dominion-. Edward, the better to secure his conquest, and to reconcile the Welsh to a foreign yoke, sent his queen to lie in at Caernarvon, where she was de- livered of a prince ; to whom the Welsh on that account the more readily submitted. On this occasion, Edward used a very pardonable piece of policy. Calling together the Welsh nobles, he took their oath, that they would choose a prince of their own blood royal, whom he would recommend, and a native, who could not speak a word of English. Ever since that time the eldest sons of the kings of England have commonly been created princes of Wales, and as such enjoy certain revenues from that country. As to the character of the Welsh, they are a brave hospitable people ; and, though very jealous of affronts, passionate, and hasty, yet are easily reconciled. The common people look with a suspicious eye on strangers, and bear an hereditary grudge to the English nation, by whom their ancestors were expelled from the finest parts*

of the island. The gentlemen are apt to value themselves upon the antiquity of their families. AH the gentry both in town and country can speak English, especially in the counties bordering upon England. The common people in general only speak their own language, which is the ancient British ; and not only differs entirely from the English, but has very little afrinity with any of the western tongues, except the Gaelic, Erse, or Irish. It is said to be a dialect of the ancient Celtic, and in many respects to

resemble the Hebrew. Most of the clergy are natives of the country, and understand English so well that they could exercise their functions in any part of Britain. The public worship, however, is as often performed in Welsh as in English, excepting in the towns, where the latter is the prevailing language. The country, though mountainous, especially in North Wales, is far from being barren. The hills, besides the metals and minerals they contain, feeding vast herds of small black cattle, deer, sheep, and goats, and their valleys abounding in corn, as their seas and rivers do in fish. Here are also wood, coal, and turf for fuel, in abundance. Wales is bounded on all sides by the Severn, except on the east, where it joins the counties of Chester, Salop, Here- ford, and Monmouth. Its length, from the south part of Glamorganshire to the extremity of Flint- shire north, is computed at about 113 miles; and its greatest breadth, from the Wey east, to St. David's in Pembrokeshire west, is nearly of the same dimensions, about ninety miles. After the conquest of Wales by Edward I. very material alterations were made in their laws, to bring them nearer to the English standard, especially in the forms of their judicial proceedings; but they still retain very much of their original polity, particu- larly their rule of inheritance, viz. that their lands are divided equally among all the issue male, and do not descend to the eldest son alone. By other subsequent statutes their provincial immunities were still farther abridged ; but the finishing stroke to their independency was given by stat. 27 Hen. VIII., c. 26, which at the same time gave the ut- most advancement to their civil prosperity, by ad- mitting them to a thorough communication of laws with the subjects of England. Thus were this brave people gradually conquered into the enjoy- ment of true liberty ; being insensibly put upon the same footing, and made fellow citizens, with their conquerors. It is enacted by 27 Hen. VIII., 1. That the dominion of Wales shall be for ever united to the kingdom of England. 2. That all \ elshmen born shall have the same liberties as other king's subjects. 3. That lands in Wales shall be inheritable according to the English tenures and rules of descent. 4. That the laws of England, and no other, shall be used in Wales: besides many other regulations of the police of this principality. And 34 and 35 Hen. VIII., c. 26, confirms the same, adds farther regulations, divides it into twelve counties, and in short reduces it into the same order in which it stands at this day ; dif- fering from the kingdom of England in only a few particulars, and those too of the nature of privi- leges (such as having courts within itself, independ- ent of the process of Westminster-hall), and some other immaterial peculiarities, hardly more than are to be found in many counties of England itself. It appears that there are in Wales 900,000 acres arable, and 2,600,000 pasturage, leaving 1,700.000 VOL. X,uiT

acres in a state of waste, of which quantity about 700,000 acres are capable of being brought into cultivation. The principality is divided into

North and South Wales, containing twelve counties. North Wales comprehends the counties of Angle- sea, Carnarvon, Denbigh, Flint, Merioneth, and Montgomery ; and South Wales, the counties of Brecknock, Cardigan, Carmarthen, Glamorgan, Pembroke, and Radnor. The whole contains 751 parishes, and fifty-eight market towns. The amount of the sum raised for the maintenance of the poor, in 1815, was £298,251, which was at the rate of 2s. 9Jd. in the pound. The amount of the rate under the act granting a tax on property, in 1815, was £2,153,801. Wales sends twenty-four members to parliament, viz. one for each county, and one for the principal town in each county, except that of Merioneth, in the room of which two towns in the county of Pembroke each send one member.

The general aspect of the principality is bold and romantic, consisting of almost continued ranges of lofty mountains, and impending craggs, inter- sected by numerous deep ravines, with extensive valleys. The principal range in North Wales is that of which the lofty Snowdon occupies the centre. In South Wales the mountains are not so considerable, yet they are far from being deficient in elevation. Among these, numerous lakes are scattered, and, though none of them are of re- markable magnitude, many are distinguished for the beauty of the surrounding scenery. The lan- guage, manners, and customs, of Wales are still widely different from those of England. In point of population and fertility, South Wales has by far the superiority over the North ; and, although the whole is very mountainous, its produce is fully sufficient for its abstemious inhabitants. Those counties bordering on the sea-coast have a mild climate, but are wet ; and the interior parts have the usual sharpness of other mountainous regions, though, on the whole, the air in general is highly salubrious, and the country healthy. The cattle in general are small, but the flesh is particularly good, and provisions in general are reasonable. Numbers of goats are wild among the mountains.

Wales is distinguished for the profusion of its rivers and streams ; the principal are the Severn, Dee, Wye, Uske, Conway, Clwyd, and Tivy. Most of these streams are valuable for their fisher- ies, and many of its rivers, aided by numerous canals, are of the first importance to its commer- cial prosperity. The whole of Wales is distin- guished for the abundance of its mineral produc- tions. Silver, lead, iron, quartz, copper, spar, coals, &c., are found in many parts. The agri- culture of Wales is also in a course of rapid improvement. Travelling has also been greatly facilitated by the attention which has recently been given to the better construction of the roads.

The commerce of the principality arises from its numerous manufactories of flannels, webs, stock- ings, wigs, gloves, sacks, cottons, and cotton-twist,

and principally from its extensive establishments of copper, iron, tin-plates, and lead-works. It contains a great number of roadsteads and harbour-;, some of which are extremely commodious, ane dioceses of St. David's, Bangor, Llandaff, and Si.

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Asapn ; legally it is divided into toar circuits, va. «.ne Chester circuit, for the counties of Chester, Flint, Denbigh, and Montgomery ; the Northern circuit for Anglesea, Carnarvon, and Merioneth; the South-Eastern circuit for Radnor, Brecon, and Glamorgan ; and the South-Western circuit for Pembroke, Cardigan, and Carmarthen.

WALES, NEW SOUTH, an extensive tract of coun- try on the eastern coast of NEW HOLLAND (which see), discovered by captain Cook in the year 1770, on a course, which, if laid down in a straight line, of no less than 27° of lat., amounting to nearly 2000 miles. After hovering about the coast for some time, he at length came to an anchorage in the only harbour which appeared to him commo- dious ; and which, in consequence of the innu- merable varieties of herbage which were found on shore, he called Botany Bay. Governor Philip was sent to this new continent, where he arrived on the 20th of January, 1788, with 800 convicts, and a portion of marines, and laid the foundation of the new settlement, which continued gradually to improve until the close of the year 1792. The infant colony encountered numberless difficulties, partly from the profligate habits of the convicts, which were constantly producing disorders, and partly from other obstructions incident to new establishments in unsettled countries. It neverthe- less increased, though sometimes brought to the verge of destruction by want of provisions ; and in the year 1800 contained, including the settlers in Norfolk island, 6000 inhabitants. In 1801 a great flood took place in the river Hawkesbury, which rose about seventy or eighty feet; and, as the chief cultivation of the colony lay along its banks, this calamity threatened a general famine. The progress of the colony has been frequently retarded by similar accidents. In 1809 the popu- lation had increased to 9356, of whom upwards of 6000 supported themselves. According to the latest accounts, the number of inhabitants in the various towns and districts belonging to Port Jackson amounted to 16,664, of whom there were €297 convicts.

The British settlements in this quarter contain the town of Sydney, which is the capital of New South Wales, and is about seven miles distant from the head of Port Jackson ; also the town of Paramatta, which is situated at the head of Port Jackson harbour, at the distance of about eighteen miles by water, and fifteen by land, from Sidney ; Windsor, which is thirty-five miles distant from Sydney westward, and is situated near the conflu- ence of the South creek with the Hawkesbury ; Liverpool, eighteen miles from Sydney. There is also a small settlement in the district of Coal River, about sixty miles northward of Port Jack- son, where the town of Newcastle is situated. This is the place of transportation for criminals from Botany Bay, and contains between 400 and 500 of these incorrigible offenders, besides thirty free settlers, and fifty troops.

For a long period, the Blue Mountains formed an impassable boundary to the east. But, in the course of the summer of 1813, a passage across these mountains vras attempted by a party of gen- tlemen, who were anxious to find pasture for their flocks during this trying season. They ac- cordingly succeeded, after great difficulties, in penetiuting across this difficult ridge, when they

discovered a fine champaign country, extend. ng many miles before them, and watered by many fine streams. A carriage road has been since constructed across these mountains to the distance of upwards of 100 miles. In order to prosecute farther discover- ies into the interior, an expedition was sent out in 1817 to trace toils termination a large river run- ning into the interior, and named the Lachlan This expedition wss under the direction of Mr. Oxley; and, after a fatiguing journey, the termina- tion of the river was traced into an extensive swamp. Another expedition was fitted out in 1818, for the purpose of exploring the Macquarrie, a still more important stream, which, like the former, took its course into the interior, and which was also found to terminate in extensive morasses, spreading far and wide over an extensive flat, where there was no outlet for the collected waters from the higher grounds. From this point the party proceeded westward in a direct course for the coast. Their course lay through a swampy country at first ; but afterwards the country im- proved, and was occasionally both fertile and well watered. On crossing the Blue Mountains, they found a beautiful river, which they called Hastings River, which terminated in the ocean, by a conve- nient estuary, which they named Port Macquarrie in lat. 31° 25′ S.

WALES, in a ship, an assemblage of strong planks extending along a ship's side, throughout her whole length, at different heights, and serving to reinforce the decks, and form the curves by which the vessel appears light and graceful on the water. As the wales are framed of planks broader and thicker than the rest, they resemble ranges of hoops encircling the sides and

bows. They are usually distinguished into the main-wale and the channel-wale. The situation of the wales, being ascertained by no invariable rule, is generally submitted to the fancy and judgment of the builder.

WALES (William), F. R. S., an English astrono- mer and mathematician, was born in 1734. Having visited Hudson's Bay, in 1769, he published an account of his observations made there on the tran- sit of Venus, and was afterwards the astronomer on the voyage of discovery undertaken by captain Cook. Mr. Wales accompanied that celebrated circum- navigator on both his first voyages, of which he kept a journal, afterwards printed under the title of Astronomical Observations in the Southern Hemisphere, 4to. He was also the author of a treatise On the Achronical Rising of the Constella- tion Pleiades, inserted by Dr. Vincent in his Near- chus ; On the Discovery of the Longitude by means of Time-pieces ; Remarks on Forster's Account of Cook's last Voyage ; Enquiry into the Population of England and Wales ; Robertson's Elements of Navigation improved ; and Restoration of a Work of Apollonius ; besides a variety of papers in the Philosophical Transactions. At the time of his decease, which took place in 1798, he filled th« situations of mathematical master at Christ's Hospi- tal, and secretary to the board of longitude.

WALET, a city of Central Africa, capital of the kingdom of Beeroo. It has never been visited by any European, but is, according to Park, larger than Tombuctoo. Its trade is chiefly confined to salt. It has been supposed, on pretty plausible grounds, to be the Ulil, which Edrisi represents as supplying all the countries on the Niger with salt.

and was described as ten days journey from Be- nowm, and eleven from Tombuctoo.

WALK, v. n., v. a.,) Saxon pealcan, to roll ;

WALK'ER, [& n. s. > Belg. walken ; Teut. walck-

WALK'INGSTAFF. / en. To move by steps; come or go ; move at a slow pace ; be in motion ; act : as a verb active, to pass through ; lead : the act of walking ; gait ; step ; exercise ; avenue ; way; space : the noun substantives correspond.

The Lord hath blessed thee ; he knoweth thy walking through this

wilderness. Dent. ii. 7.

Do justly, love mercy, and walk humbly with thy God. Micah.

The mountains are his walht, who wandering feeds On slowly springing herbs. Sandy' Paraphrase.*

As she went, her tongue did walk In foul reproach, and terms of vile despight ; Provoking him by her outrageous talk. Spenter

Sir, ualh in. —I had rather walk here, I thank you. Shakspeare.

What mean you, Ctesar 1 think you to walk forth ?

Id.

Affairs that walk,

As they say spirits do at midnight, have In them a wilder nature than the business That seeks dispatch by day. Id. Henry VIII.

I do not without danger u-ulk these streets. Shaksp.

He hath left you all his truths, His private arbours, and new-planted orchards, On that side the Tiber. Id. Julius Ceesar.

There were walking spirits of the house of York, as well in Ireland as in England. Davies'i Ireland.

Thus with a double course, in the same sphere, He runs the day and walks the year. Cowley.

Do you think I'd walk in any plot, Where madam Sempronia should take place of me, And Fulvia come i' the rear 1 Ben Jonion.

A man was seen walking before the door very com- posedly. Clarendon.

Set women in his eye, and in his walk, Among daughters of men the fairest found. Milton.

Goodliest trees planted with walks and bowers. Id. These bowers as wide as we need walk. Id.

The club which a man of an ordinary size could not lift, was but a walking-shift' for Hercules. Gtanville.

Our souls, for want of that acquaintance here May wander in the starry walks aoove. Dryden.

Morpheus, of all his numerous train, expressed The shape of man, and imitated best , The walk, the words, the gesture could supply, The habit mimick, and the mien belie. Td.

She would never miss one day A walk so fine, a sight so gay. Prior.

May no such vicious walkers crowd the street. Gay.

Wanting an ampler sphere to expatiate in, he opened a boundless walk for his imagination. Pope.

No rich or noble knave Shall walk the world in credit to his grave. Pope.

I ride and walk, and am reputed the best walker in this town. Swift to Gay.

They are to be cautiously studied by those who are ambitious of treading the great walk of history.

Reynolds.

WALKER (Clement), esq., a celebrated English historian, born at Cliffe in Dorsetshire, and educated at Christ's Church, Oxford, after which he retired to his estate in Somersetshire. Under Charles I. he was usher of the exchequer, and M. P. for Wells. He was a zealous Presbyterian, and so great an enemy to Cromwell and the Independents, that he was sent to the Tower, where he died in 1651 . He wrote, 1 . The History of Independency, which contains many curious particulars no where else to be found. 2. The High Court of Justice, or Cromwell's Slaughter-house, 4to., and other works.

\AI.KEU (Sir Edward), an English historian, born in Somersetshire. In 1639 he was made secretary at war; and was present in the royai army at the battle of Edgehill. See ENGLAND. In 1643 he was appointed garter king at arms, and knighted. After 1660 he became a clerk ot the privy-council. He wrote, 1. Historical Dis- courses, folio. 2. Order of the Ceremonies at the Celebration of St. George's Feast at Windsor, in 1674. 3. Acts of the Knights of the Garter in the Civil Wars, &.c. He died suddenly in 1676.

WALKER (George), a celebrated Irish Protestant divine, who bravely defended Londonderry in 1689 against the troops of James II., till it was effectually relieved. He was slain at the battle of the Boyne in 1690.

WALKER (John), D.D., an English divine, born in Devonshire. He became rector of St. Mary's, Exeter. He wrote An Attempt towards Recovering an Account of the Sufferings of the Clergy in the Great Rebellion, folio, 1714; fcr which the uni- versity of Oxford made him D. D. He died in

1725.

WALKER (Obadiah), an English divine, born in Yorkshire, and educated at Oxford where he wa» fellow ; but was deprived by the parliament in 1648. He recovered his place in 1660, and in 1676 was chosen master. But in 1685 he turned Papist, and published a virulent invective against Luther; for which, in 1689, he was deprived of his place. He went to London, lived with his old pupil Dr. Radcliffe, and died in 1698.

WALKER (Robert), D. D., a late eminent cler- gyman of the church of Scotland, who was many years minister of the High Church at Edinburgh, and colleague of the celebrated Dr. Blair. He published 4 vols. of sermons, and several tracts on theology. He died in 1788.

WALKER (Robert), chief painter to Oliver Crom- well, whose portrait he painted oftener than once. He lived in Arundel house. Walker died in 1670.

WALKER (William), a learned grammarian and divine, born in 1625, who was successively master of Lowth and Grantham schools. Sir Isaac New- ton was his pupil. He became rector of Colling- worth in Lincolnshire, where he died in 1684, aged sixty-one. He published several tracts on Gram- mar, Rhetoric, and Logic ; but his chief work is A Treatise on English Particles.

W'ALKER (Adam), a late learned writer, was a na- tive of Westmoreland, in which county his father was a small woollen manufacturer. He was born in 1731, and his turn for mechanics developed itself early. He employed his

leisure hours in the construction of models of corn, paper, and fulling-mills, which he erected in miniature on a little brook near his father's dwelling ; and, having borrowed a few books, built himself a hut in the neighbouring thicket. An offer of a situation as usher in the school at Ledsham,in the west riding of Yorkshire, drew him from home at the age of fifteen, in which capacity he so far improved his opportunities as to qualify himself for the mathematical mastership in the free school at Macclesfield. In this town he also engaged in business, but trade appears not to have suited him, and, becoming bankrupt, he is said to have entertained at one time an intention of passing the remainder of his life as an anchorite in one of the small islands of Windermere. Fortu- nately a public lecture on astronomy, delivered by him at Manchester, decided his future prospects ;

and, relinquishing an extensive seminary which he had established, he visited most of the principal cities and towns in tne kingdom as a lecturer on astronomy. In 1778 he undertoook, at the instance of Dr. Priestley, to open the Haymarket Theatre in that capacity, and, his success being decided, he fixed his abode in the metropolis, and continued to read a course of lectures every winter in a house which he had taken for that purpose in George Street, Hanover Square, attending at intervals Eton, Winchester, Westminster, and other great foundation schools. His death took place llth of February 1821. His writings comprise an Analysis of his Lectures, printed in 8vo. ; a treatise on the Cause and Cure of Smoky Chimneys ; Philosophi- cal Estimate of the Causes, Effects, and Cure of Unwholesome Air in Cities, 8vo. ; Ideas suggested in an Excursion through Flanders, Germany, Italy, and France, 8vo., 1791 ; Remarks made in a Tour to the Lakes of Westmorland and Cumberland in the Summer of 1791, to which is annexed a Sketch of the Police, Religion, Arts, and Agriculture of France, made in an Excursion to Paris in 1785, 8vo., 1792 ; a System of Familiar Philosophy in Lectures, 4to., 1799; A Treatise on Geography and the Use of the Globes, 12 mo. ; and various papers in the Magazines, Philosophical Transac- tions, Young's Annals of Agriculture, &c. His mechanical skill is attested by several ingenious inventions, and especially by his Eidouranion, or transparent orrery, and the revolving lights on the rocks of Scilly.

WALKUFFA, in botany. See ETHIOPIA.

*WALL, n. *.&».*

WALL'EYED, adj. > Welsh wal ; Lat. vallum.

WALL'FBUIT, n. t. J A continued fence ; a series of brick or stone, or other conjoined materials ; the side of a building : to wall is to fence or enclose with walls : ' to take the wall,' take the best or most honorable place : wall-eyed is white eyed : wall- fruit, fruit ripened pn a wall.

The walled towns do work my greater woe : The forest wide is fitter to resound The hollow echo of my careful cries. Spenier.

1 will take the wall of any man or maid of Montague's. Sttakspeare. Romeo and Juliet.

With love's light wings did I o'erperch these wattr ; For stony limits cannot hold out love. Shakspeare.

Wall-eyed slave ! whither wouldst thou convey This growing image of thy fiend-like face ? Id.

Hit council advised him to make himself master of some good walled town. Bacon's Henry VII.

The Spaniards cast themselves continually into roun- dels, their strongest ships walling in the rest. Bacon.

The terror of his name, that walls us in From danger. Denham't Sophy.

Part rise in crystal wall or ridge direct. Milton.

There bought a piece of ground, which, Birsa called From the bull's hide, they first inclosed and watted.

Dry den.

To waUfnut and garden plants there cannot be a worse enemy than snails. Mortimer'i Husbandry.

When once the poet's honour ceases, From reason far his transports rove :

And Boileau, for eight hundred pieces, Makes Louis take the wall of Jove. Prior.

WALL, in architecture, the principal part of a building, as serving both to enclose it, and to sup- port the roof, floors, &c. — Walls are distinguished into various kinds, from the matter whereof they consist ; as plastered or mud walls, brick-walls, stone-walls, flint or boulder-walls, and boarded-walls. See ARCHIIFC-TURK.

WAL

WALLS, coo, or mud. In those parts of Eng- land where stone is scarce, it is usual to make walls and houses of mud, or, as it is called in De- vonshire, cob ; which is a composition of earth and straw, wet up somewhat like mortar, but well beat and trod together. When a wall is making, after being raised to a certain height, it is allowed time to pitch or settle before the work is resumed. Some value themselves on their skill in building with this composition ; the price, when materials are found, is generally in Devonshire 3j. per perch of sixteen feet and a half; but a stone foundation costs more. Houses built with this, being covered with thatch, are very dry and warm ; a cob wall, if in a good situation, will last above fifty years. When pulled down, they are used as manure.

WALL (Martin), M. D., a learned physician, born at Powick, in Worcestershire, in 1708. He was educated at Merton College, Oxford, of which he became fellow. He settled at Worcester, wrote on the virtues of Mineral Waters, and other medi- cal subjects. He died at Bath in 1776.

WALLACE (Sir William), one of the most pub- lic-spirited and disinterested patriots that any age or country has produced, a gallant general of the Scots, who endeavoured to rescue his country from the English yoke; but, being betrayed and taken prisoner, he was unjustly tried by the English laws, condemned, and executed as a traitor to Edward I., in 1304. See SCOTLAND.

WALLACE, the Rev. Dr., who was for many years one of the ministers of Edinburgh, and a professor of the University, flourished about the beginning of the eighteenth century, and published an elaborate Essay on the Numbers of Mankind, lately repub- lished, in consequence of the discussions occasion- ed by Malthus's book of population. We have met with no memoir of him.

WALLER (Edmund), a celebrated English poet, the son of Robert Waller, esq., of Agmon- desham in Buckinghamshire, by Anne the sister of the great Hamden. He was born in 1605 : and sent first to Eton, afterwards to King's College, Cambridge, where, at seventeen years of age, he was chosen into the last parliament of James I. as burgess for Agmondesham. He began to exercise his poetical talent so early as 1623, as appears from his verses ' upon the danger his majesty (then prince) escaped in the road of St. Andero;' where, returning from Spain, he was nearly cast away. He married the daughter and heiress of a rich citizen, against a rival whose interest was es- poused by the court. But he became a widower before he was twenty-five, when he began to have a passion for Sacharissa, a fictitious name he uave the lady Dorothy Sidney, daughter to the earl of I- eicester, afterwards wife to the earl of Sunderland. He was now known at court, caressed by all who had any relish for wit and humor ; and was one

of the famous club of which lord Falkland, Mr. Clul- Imgworth, &c., were members. He was elected M. P. in 1640. An intermission of parliaments having disgusted the nation, and raised jealousies against the designs of the court, he was one of the first who condemned these measures. He made a speech in the house on this occasion, in opposition to the court. But he voted against the abolition of episcopacy. He opposed the court also in the long parliament, and was chosen to impeach judge Crawley, which he did in a warm and eloquent speech, July 16th, 1641. This speech was so

highly applauded, that 20,000 copies of It were sold in one day. Iii 1642 he was a commissioner appointed by the parliament to present their pro- positions of peace to the king at Oxford. In 1643 he was deeply engaged in a design to deliver up the city of London and the tower to the king ; for which he was tried and condemned, together with Mr. Tomkins his brother- in-law, and Mr. Chalo- ner. These two suffered death ; but he obtained a reprieve : he, however, suffered a year's imprison- ment, and paid a fine of £10,000. After this, he became particularly attached to Oliver Cromwell, upon whom he wrote a very handsome panegyric. He also wrote a noble poem on the death of that great man. At the Restoration, he was treated with great civility by Charles II., who always made him one of the party in his diversions at the duke of Buckingham's, &c. He wrote a panegyric upon his restoration. He sat in several parliaments after the Restoration, and enlivened their debates much with his wit, his natural vivacity making his company agreeable to the last. He died of a dropsy in 1687, and was interred in Beaconsfield, where a monument is erected to his memory. He is es- teemed the most elegant and harmonious versifier of his time, and a great refiner of the English lan- guage. The best edition of his works, containing poems, speeches, letters, &c., is that published in 4 to. by Mr. Fenton, in 1730.

WAL'LET,n.s. Sax. pealhan, to travel. A bag in which the necessaries of a traveller are put; a knapsack.

Who would believe that there were mountaineers Dewlapt like bulls, whose throats had hanging at them WalUti of flesh ? Shakspeare.

Having entered into a long gallery, he laid down his Ballet, and spread his carpet, in order to repose. A ddison.

WALLINGFORD, Moreton hundred, Berk- shire, forty-six miles west from London, contains 476 houses, 2397 inhabitants, and returns two members to parliament. This privilege was con- ferred in 23 Edward I , and the right of election vested in the mayor, aldermen, bailifl's, and eighteen assistants,

together with the .inhabitants of the borough paying scot and lot, and not receiving alms, which at present amount to 250. This towp is situated on the banks of the Thames, over which it has a neat stone bridge, which has of late years been partly rebuilt. There are three parish churches in the town, one of which, St. Peter's, was rebuilt by public subscription, and since ornamented with a spire of a singular form. In the market place is a convenient well built town hall, in which the assizes have been sometimes holden, and where the business of the quarter sessions of the borough is always transacted. The principal charities are a free-school and alms-house. During the storm of civil war which Stephen brought upon this country, this town was subjected to all the horrors of a siege ; and in after times, during the reign of Charles I., it was garrisoned for the king, when two churches were destroyed, and only a small part of another left standing. Near the river side, and on the estate of James Blackstone, esq., the mouldering remains of the ancient castle may yet be discovered ; but they give no idea of that place which regal armies once besieged in vain. Fairs Tuesday before Easter, June 24th, September 29th, December 17th. Markets Tuesday and Friday. But the fair in September, and the market on Fri- day, are the only ones which ;ire well attended

WALLIS (Dr. John), a celebrated mathemati- cian, educated at Cambridge; where he became fellow of Queen's College, till, by his marriage, he vacated it. In 1640 he received holy orders, and became chaplain to lady Vere. While he lived in this family, he cultivated the art of deciphering. In 1643 he published, Truth Tried; or animad- versions on the lord Brooke's treatise, called The Nature of Truth, 8cc. In 1 644 he was chosen one of the secretaries to the assembly of divines at Westminster. Dr. Peter Turner, Savilian profes- sor of geometry in Oxford, being ejected by the parliament's visitors in 1649, Mr. Wallis was ap- pointed to succeed him in that place. In 1653 he published at Oxford a Grammar of the English Tongue, in Latin. In 1655 he entered the lists with .Mr. Hobbes; and their controversy lasted a considerable time. In 1657 the doctor published his Mathematical Works. Upon the death of Dr. Langbaine, he was chosen custos archivorum ot the university. After the Restoration he met with great respect, the king himself entertaining a favor- able opinion of him on account of some services he had done both to his royal father and himself. He was therefore confirmed in his places, admitted one of the king's chaplains in ordinary, and appoint- ed one of the divines empowered to review the book of common prayer. He continued a steady conformist till his death, in 1703. He was one o>' the first members of the Royal Society. Besides the works above-mentioned, he published many others.

WALLIS'S ISLANDS, in the South Pacific Ocean, discovered by captain Wallis in the year 1767, surrounded by a reef of rocks. The inhabitants, according to his observations, were robust and active, quite naked, except a

kind of mat wrapped round the middle, and no other animal was seen, either bird or beast, except sea fowl. The only fruit were a few cocoa-nuts. Long. 177° W., lat. 13° Iff S.

WAL'LOW, v.n. Sen.. Sax. palpian; Goth. walvgan. To move heavily or clumsily ; roll ; roll in filth or mire : a rolling walk.*

Gird thee with sackcloth, and wallow thyself in ashes.

Jeremiah vi.

Dead bodies, in all places of the camp, wallowed in their own. blood. KnolUt'i History of '.he Turks.

Part, huge of bulk !

Wallou-ing unwieldy, enormous in their gait, Tempest the ocean. Milton's Paradise Lott.

One taught the toss, and one the French new wallow ; His sword-knot this, his cravat that designed. Dryd.

A boar was wallowing in the water, when a horse was going to drink. UEttrange.

WALL RUE, in botany, is a species of aspleniura, or spleenwort.

WAL'NUT, n.s. Sax. palh hnuta; Swed. and Belg. walnot. A large kind of nut. The mix juglans.

'Tis a cockle or a uxJn«-shell ; A knack, a toy. Shakspeare. Taming of the Shrew.*

Some woods have the veins smooth, as fir and walnut.

Bacon.

WALNUT, in botany. See JVOLANS.

WALNUT, JAMAICA. Sec HURA.

WALPOLE (Sir Robert), earl of Orford, w&s born at Houghton in Norfolk, September 6th, 1674, and educated at Eton. Thence he was elected to King's College, Cambridge ; but, succeeding to the family estate by the death of his elde brother, he rentier! hi.s fellowship. In 1700 he was choseo

M. P. for King's Lynn, and represented that bo- lough in several succeeding parliaments. In 1705 lie was nominated one of the council to prince George of Denmark, lord high admiral of England ; in 1707 appointed secretary at war; and, in 1709, treasurer of the navy. In 1710, upon the change of the ministry, he was removed from all his posts, and held no place afterwards during the queen's reign. In 1711 he was expelled from the house of commons for what they called notorious corruption in his office as secretary at war. The borough of Lynn, however, re-elected him ; and, though the house declared the election void, yet they persisted in the choice. In the well-known debate relating to Steele for publishing the Crisis, he greatly dis- tinguished himself in behalf of liberty, and added to the popularity he had before acquired. On t'.ie death of the queen, a revolution of politics took place, and the Whig party prevailed both at court and in the senate. Walpole had before recom- mended himself to the house of Hanover by his zeal for its cause, when the commons considered the state of the nation with regard to the Protestant succession : and he had now the honor to procure the assurance of the house to the new king (which attended the address of condolence and congratu- lation), ' that the commons would make good all parliamentary funds:' It is therefore not to be won- dered at, that his promotion soon took place after the king's arrival ; and that in a few days he was appointed receiver and pay-master general of all the guards and garrisons, and of all other the land forces in Great Britain, paymaster of the royal hos- pital at Chelsea, and likewise a privy counsellor. On the opening of the new parliament, a committee of secrecy was chosen to enquire into the conduct of the late ministry, of which .Walpole was ap- pointed chairman ; and, by his management, arti- cles of impeachment were read against the earl of Oxford, lord Bolingbroke, the duke of Ormond, and the earl of Strafford. The eminent service he was thought to have done the crown, by the vigor- ous prosecution of those ministers who were deem- ed the chief instruments of the peace, was soon re- warded by the extraordinary promotions to the offices of first commissioner of the treasury, and chancellor, and under treasurer of the exchequer. In two years he resigned all his offices on account of a misunderstanding which took place between him and the'rest of the ministry about certain sup- plies demanded for the support of his majesty's German dominions. On the day of his resignation he brought in the famous sinking fund bill. In the next session of parliament, Walpole opposed the ministry in every thing. But early in 1720 he was again appointed paymaster of the forces, and se- veral of his friends were found soon after in the list of promotions. It was not long before he acquired full ministerial power, being appointed first lord commissioner of the treasury, and chancellor of the exchequer; and when the kin? went abroad, in 1723,

he was nominated one of the lords justices for the administration of government, and was sworn sole secretary of state. About this time his eldest son was created a peer, by the title of baron Walpole of Walpole. In 1725 he was made knieht of the bath, and in 1726 knight of the gar- ter. He was an enemy to war, and the friend of commerce ; and, because he did not resent some petty insults of the court of Spain so suddenly as tht fiery part of the nation thought he should have

done, a formidable opposition was formed against him in the house, which had influence enough to employ in its cause almost all the wit of the nation. The opposition prevailed, and the nation was in- dulged in a war, of which it surely had no cause to boast of the success. To encourage commerce, and improve the revenue, Sir Robert projected a scheme for an extension of the excise, as the only means of putting a stop to the frauds of merchants and illicit traders. This was another ground of clamor to the orators within, and the wits without doors. The minister was therefore obliged to abandon the scheme, which was reserved for a succeed- ing administration to carry into execution. In 1 742 the opposition prevailed ; and Sir Robert, being no longer able to carry a majority in the house of commons, resigned all his places and fled for shelter behind the throne. He was soon after- wards created earl of Orford; and the king, in consideration of his long and faithful services, granted him a pension of £4000 per annum. The remainder of his life he spent in tranquillity and re- tirement, and died in 1745, the seventy-first year of his age. He has been severely, and not unjust- ly, censured for that system of corruption by which he almost avowed that he governed the nation; but the objects which he had in view are now acknow- ledged to have been in a high degree praise-worthy. Burke says his only defect as a minister was the want of sufficient firmness to treat with contempt that popular clamor, which, by his yielding to it, hurried the nation into an expensive and unjust war. But his rancorous prosecution of Atterbury bishop of Rochester (see ATTERBURY) may be considered as something worse than a defect ; it was a fault for which no apology can be made ; be- cause, whether that prelate was innocent or guilty, of his guilt no legal proof evei appeared. To whatever objections his ministerial conduct may be liable, in his private character he is universally allowed to have had amiable and benevolent quali- ties. That he was a tender parent, a kind master, a beneficent patron, a firm friend, an agreeable companion, are points that have been seldom dis- puted ; and so calm and equal was his temper, that Pulteney, his great rival and opponent, said, he was sure that Sir Robert Walpole never felt the bitterest invectives against him for half an hour. About the end of queen Anne's reign, and the be- ginning of George I.'s, he wrote the following pam- phlets. 1. The Sovereign's Answer to the Glouces- tershire Address. The sovereign meant Charles duke of Somerset, so nicknamed by

the Whigs. 2. Answer to the Representation of the House of Lords on the State of the Navy, 1709. 3. The Debts of the Nation stated and considered, in four papers, 1710. 4. The thirty-five Millions account- ed for, 1710. 5. A letter from a Foreign Minister in England to Monsieur Pettecum, 1710. 6. Four Letters to a Friend in Scotland upon Sacheverell's Trial ; falsely attributed in the General Dictionary to Mr. Maynwaring. 7. A short History of the Parliament. It is an account of the last session of the queen. 8. The South-Sea Scheme considered

9. A Pamphlet against the Peerage Bill, 1719.

10. The Report of the Secret Committee, June 9th

1715.

WALPOLE v Horace), earl of Orford, was the youngest son of Sir Robert by his first wife, Catha- rine, daughter of Robert Shorter, esq.. of Bybrook in Kent. He was born 1716; and was educated, fin1

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at Eton, and afterwards at Cambridge. At Eton he formed an intimate acquaintance with the cele- brated poet Gray ; and they went together on the tour of Europe in 1739, 1740, and 1741. Unhap- pily they had a dispute in the course of their tra- vels, which produced a separation. Mr. Walpole was nominated to represent the city of Norwich, when his father visited it July 3d, 1733, having acquired consequence, not only as the son of the minister, but as having attended the prince of Orange to England that year. He was chosen member for Collington, in Cornwall, in the parlia- ment which met June 25th, 1741 ; was a second time in parliament as representative for Castle Ris- ing, in Norfolk, in 1747 ; and for King's Lynn in 1754, and 1761 ; and, at the expiration of that par- liament, he finally retired from the stage of politics, and confined himself wholly to literary pursuits. He held to his death the office of usher of his ma- jesty's exchequer, comptroller of the pipe, and clerk of the esterats. Upon the death of his nephew, George, third earl of Orford, 1791, he succeeded to the title and estates ; but that event made so little alteration in his mode of living, that we know not whether he ever took his seat in the house of peers. During almost the whole course of his life he was the victim of the gout, which at last reduced him to a cripple ; but it never impair- ed his faculties ; and, to the very moment of death, his understanding seemed to bid defiance to the shock of nature. He died at his house in Berkeley Square, in 1796, having just entered his eightieth year; and was interred in the family vault at Houghton, in a private manner, agreeable to his particular directions. His > works were col- lected in 1798, and published in 5 vols.

4to. They resemble his conversation, being Bather amusing than profound or instructive.

WALPOLE, a post town of Cheshire county, New Hampshire, on the Connecticut, opposite Westminster, with which it is connected by a bridge ; twelve miles south of Charlestown, thirteen north-west of Keene, twenty north by east of Brat- tleborough, and sixty west by south of Concord. This is an excellent agricultural town. The prin- cipal village is delightfully situated on an elevated bank at a little distance from the river, and contains a Congregational meeting house, and a consi- derable collection of dwelling houses, a great part of which are large and elegant. On Cold River, three miles and a half north-east, there is another village of about twenty houses, containing a cotton manufactory and some mills. At Bellows Falls, in the north-west part of the township, there is an- other bridge across the Connecticut, in crossing which one has an interesting and sublime view of the falls.

WALSALL, a market town in Offlow hundred, Staffordshire, fifteen miles south of Stafford, and 116 north-west of London. Its families are employed in trade and manufactures, chiefly in those of buckles, bridle-bits, and various articles of hard- ware. The church is a spacious building, in the form of a cross, with a neat octagonal spire ; and it ha several meeting-houses for various classes of dissenters, and a good free grammar school. The town is incorporated under a mayor, recorder, twenty-four aldermen, a town clerk, and two ser- geants at mace. The justices hold quarter sessions nere at stated periods. Market on Tuesday. By a peculiar custom in this town, a certain quantity*

of bread is given away to every person \vlio will accept of it on the eve of the Epiphany.

WALSH (William), an English critic and poetj the son of Joseph Walsh, esq., of Abberley in Wor- cestershire, was born about 1660. He became com- moner of Wadham College, Oxford, but left the university without taking a degree. His writings were printed among the works of the Minor Poets, in 1749. He was made a gentleman of the horse in queen Anne's reign; and died in 1708. He was the friend of Mr. Dryden and of Mr. Pope; the former of whom esteemed him the best critic then living ; and Mr. Pope has celebrated his cha racter in his Essay on Criticism.

WALSHAM, NORTH, a market town and parish in Tunstead hundred, Norfolk, about five miles and a half from the sea, twelve north of Norwich, and 124 N. N. E. of London. It has a good parish church, several meeting-

houses, and a free-school. The market cross was built by bishop Thurlby, in the time of Edward III. Market on Tuesday.

WALSINGHAM (Sir Francis), minister an secretary of state during the reign of queen Eliza- beth, and one of the greatest politicians of hi time, was descended from a noble and ancient family at Chislehurst. Having made great pro- gress in his studies at Cambridge, he was twice sent ambassador to France, and at his return to England was employed in the most important affairs ; became secretary of state, and was one of the commissioners for the trial of Mary queen of Scots. In 1587, the king of Spain having made vast preparations, Walsingham procured intelli- gence from Madrid, that the king had informed his council of his having despatched an express to Rome, with a letter written with his own hand to the pope, acquainting him with the true design of his preparations, and begging his blessing upon him ; which for some reasons he could not disclose till the return of the courier. The secret being thus lodged with the pope, Walsingham, hy mean of a Venetian priest, whan he retained at Rome as a spy, got a copy of the original letter, which was stolen out of the pope's cabinet by a gentleman of the bedchamber, who took the key out o the pope's pocket while he slept. After this, by his dexterous management, he caused the Spaniards' bills to be protested at Genoa, which should have supplied them with money for their extraordinary preparations ; and thus he happily retarded this formidable invasion for a whole year. In short, he spent his whole time and faculties in the service of queen Elizabeth; on which account she said, ' That in diligence and sagacity he exceeded her expectations.' This great man gave a remarkable proof at his death, which happened on the 6th of April 1590, how far he had preferred the public interest to his own, he being so poor, that, ex- cepting his library, which was a very fine one, he had scarcely effects enough to defray the expense of his funeral. His principal works are, 1. Me- mo.rs and Instructions for the use of Ambassadors, with his Letters and Negociations. 2. Political Memoirs.*

WALSINGHAM (Thomas'), an English Benedictine monk of the monastery of St. Alban's, about 1440 He applied himself to the history and antiquities of his country, in quality of historiographer to the king; and composed the History of King Henry VI.. with other works.

WALTERS (John), M. A., a learned Welsh di

vine of the established church, educated at Oxford, where he graduated ; and became rector of Laud chau in Glamorganshire. He compiled a valuable English and Welsh Lexicon, 1 vol. 4to. 1794. He also published some sermons; and died in 1797.

WALTHAM, a post town of Middlesex county, Massachusetts, on the north side of Charles River, which separates it from Newton ; ten miles west of Boston, and thirty-four east by north of Worcester. It is a pleasant town, and contains one woollen and two cotton manufactories, and a paper mill.

\ALTHAM-ABBEY, a market-town in Wal- tham hundred, Essex, twelve miles and a quarter north by east of London, on the river Lea. The town is irregularly built, and of great antiquity, deriving its name from its once stately abbey, erected by Harold, son of earl Godwin. Henry II. afterwards changed the foundation from a dean and eleven secular black canons, to an abbot and sixteen Augustine monks. The succeeding mo- narchs granted Waltham-Abbey many privileges, and its abbot sat in parliament. The present church appears to be only a part of the ancient structure. Adjoining the south side is a school room, anciently a chapel dedicated to our lady ; beneath which is a charnel-house : some ruinous walls, and part of a gateway of the abbey, still remain. The abbey- house was entirely taken down in 1770. Govern- ment have here established some powder mills; here are also some trifling manufactures of pins, and for printing linens. Market on Tuesday.

WALTHERIA, in botany, a genus of plants in the class monodelphia, and order triandria ; and in the natural system arranged under the thirty-seventh order, columnifera. There is only one pistillum, and the capsule is unilocular, bivalved, and mono- spermous. There are three species, none of which are natives of Britain.

WALTON (Bryan), bishop of Chester, a •earned English divine, who gained great reputa- 'ion by his edition of the Polyglot bible (see BIBLE), with his Prolegomena in the beginning ; which is more exact, says father Simeon, than any other which had been published on that subject. He died in 1661.

WALTON (Isaac, or as ne wrote it Izaaic), a learned biographer born at Stafford. He became a merchant in the Royal Burse, Cornhill, now Royal Exchange, London, where he made a for- tune in a shop only five feet and a half long and live wide. Being fond of fishing, he wrote a work entitled, The Complete Angler, or Contemplative Man's Recreation, 8vo., which has been ever since esteemed a standard work on that art. Mr. J. Hawkins published an improved edition of it. He also wrote the Li»es of Drs Donne, Herbert, Hooker, Wotton, and bishop Sanderson ; the last of which is highly praised by Dr. Johnson. The Lea was the scene of his angling. He

died at Winchester, during the great frost, December 15th. 1683. See STEVENS, William.

*WALTRON, ». *. Goth, huatlnn. The «*«• horse.*

The morse, or ualtron, is called the sea-horse.

Woodward.

WALURU, a town of the south of India, pro- vince of My«ore, defended by a citadel. It has a manufacture of arrack, cotton cloth, and blankets ; and has a weekly market. A Hindoo chieftain, who formerly held this town and the adjoining tei- mory, is allowed to inhabit the citadel, runl haˆ

pension from the Mysore government. It is situ- ated a few miles from Bangalore.

WAM'BLE, v. n. Belg. wemmelen. To roll with nausea and sickness. Used of the stomach. A covetous man deliberated betwixt the qualms of a wambling stomach and an unsettled mind. L' Estrange.

WAMPUM, the money used by the North American Indians. It is much used in all their treaties as a symbol of friendship. It is made of a shell of a particular species of Venus.

WAN, adj. Sax. pann; Goth, and Swed. wan ; Wei. giran, weakly. Pale, as with sickness ; lan- guid of look.

Sad to view his visage pale and wane, Who erst in flowers of freshest youth was clad. Spent.

Is it not monstrous that this player here. But in a fiction, in a dream of passion, Could force his soul so to his own conceit, That, from her working, all his visage wanned ?

Shakspe»re. Why so pale and nan, fond lorer?

Pr'ythee, why so pale? Will, when looking well can't move her,

Looking ill prevail ? Suckling.

Their course through thickest constellations held, Spreading their bane; the blasted stars looked wan.

Milton.

How changed from him, Companion of my arms ! how u-an, how dim,

How faded all thy glories ! Dryden.

WAND, n.s. Dan. vaatid ; Goth, and Swed. wand. A long slender rod ; an ensign of authority.

Though he had both spurs and u-and, they seemed rather marks of sovereignty, than instruments of punish- ment. Sidney.

The skilful shepherd peeled me certain wands.

Shakspeare.

His spear, to equal which the tallest pine Hewn on Norwegian hills, to be the mast Of some great admiral, were but a wand. Milton.

Nay, lady, sit ; if I but ware this wand. Your nerves are all chained up in alabaster. Id.

Picus bore a buckler in his hand ; His other waved a long divining wand. Dryden.

A child runs away laughing with good smart blows of a wand on his back, who would have cried for an unkind word. Locke on Education.

WAN'DER, v. n. & v. a. } .Saxon pant>nian ;

*WAN'DERER, n. *. /Swed. wandra. To*

WAN'DEKING. 5 rove ; ramble here and

there : to tread ovei. It has always a sense either

evil or slight. The noun substantives correspond.

O let me not wanaer from thy commandments.

Psalm cxix. They wanderea about in sheeps' and goats' skins.

Hebreici xi. I will go lose myself,

*And tmnder up and down to view the c-ty SHak**. Nor for my peace will 1 go far,*

As wanderer that still do roam ; But make my strengths, such as they are,*

Here in my bosom, and at home. Ren Jonton. If any man's eagerness of glory has made him over- see the way to it, let him now recover his

wanderings.

Decay of Piety.

Here should my wonder dwell, and here my praise ; But my fixt thoughts my wandering eye betrays.

Denham.

They give the reins to wandering thoughts, Till, by their own perplexities involved, They ravel more. Milton.

A hundred years they wander on the shore. Dryden. \ proper remedy for this wind, tiny of thought i would do great service to i!.c stu lious.

WAN

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WAN

— 1

The whole people is a race of such merchants as are wanderers by profession, and at the same time are in all places incapable of lands or offices. Spectator.

Taste, that eternal wanderer, which flies From head to ears, and now from ears to eyes. Pope.

When a right knowledge of ourselves enters into our minds it makes as great a change in all our thoughts and apprehensions, as when we awake from the wandtringi of a dream. Lais.

WANDIWASH, a town and fortress of the south of India, province of the Carnatic. In the month of September 1759 the British troops, in an attack on this place, were repulsed with great slaughter ; but in November following it was taken by Sir Eyre Coote with scarcely any loss. In January 1760 a decisive battle was fought in the vicinity of this town between the British and French, with their respective allies, in which the latter were totally defeated. Wandiwash will also be recorded in history for the surprising efforts of a young officer in the East India Company's ser- vice, lieutenant Flint, who, in the year 1780, having, by a bold stratagem, got possession of the place from one of the nabob's governors, who had agreed to surrender it to Hyder Aly, successfully defended it for six months against the whole My- sorean army. This fortress was demolished by order of

general Stuart in 1783. The town of Wandiwash, and the adjoining territory, is now in- cluded in the Arcot collectorship. Long. 79° 40′ E., lat. 12° 29′ N.

WANE, v. n. & n. s. Sax. panian ; Goth, and Swed. wana. To grow less; decrease; decline: diminutive. Applied particularly to the moon, and opposed to wax.

A lady far more beautiful Than any woman in this waning age. Shaktpeare.

The sowing at the wane of the moon is thought to make the corn sound. Bacon.

Nothing more jealous than a favourite, towards th« tcaining time, and suspect of satiety. Wotton.

The husbandman, in sowing and setting, upon good reason observes the waxing and waning of the moon.

Hakeuilt.

I'm waining in his favour, yet I love him. Dryden.

Land and trade ever will wax and vane together.

Child.

You 're cast upon an age in which the church is in its wane. South.

Her waining form no longer shall incite Envy in woman, or desire in man. Rome's Jane Shore.

Waning moons their settled periods keep, To swell the billows and ferment the deep. Addison.

This fs fair Diana's case ; For all astrologers maintain,

Each night a bit drops off her face, When mortals say she's in her iron. Swijt.*

WANGARA, a large country in the heart of Central Africa. The Arabian travellers in the twelfth century represent it as the grand source of African wealth : Edrisi as entirely traversed and intersected by branches of the Nile of the Negroes, or modern Niger. During the season of the rains, which rise to their greatest height in August, the whole country was overflowed and laid under water. In September the waters began to subside, and, after

retiring, left the whole country impregnated with gold dust. The natives then hastened, and, by slight digging, obtained an ample portion of this precious metal, which they disposed of to mer- chants, who hastened thither from the remotest ex- tremities of the continent. The principal towns of Wangara were Semegda and Reghebil, situated

on the shore of extensive and beautiful lakes. The Arabian writers represent the rivers of Wangara, nd indeed the Nile of the Negroes in general, as flowing from west to east ; but as this assertion is contradicted by the observations of Park, relative to the course of the Joliba through Bambarra, and by other authorities, little credit is now attached to it.

WANLEY (Nathaniel), an English divine, edu- cated at Trinity College, Cambridge. He became vicar of Trinity Church, Coventry, where he died in 1690. He published a curious book, entitled The Wonders of the Little World, or the History of Man, in folio.

WANLEY (Humphrey), son of the above, was bom in 1672, and educated at Edmund Hall, Ox- ford. He became secretary to the Society fo Propagating Christian Knowledge, and librarian to the earl of Oxford. He was deeply skilled in bibliography, and the northern languages: he com- piled a Catalogue of Saxon MSS. for Dr. Hickes's Thesaurus. He died in 1726. He acquired an uncommon faculty of distinguishing the dates of ancient MSS.

WANSLEB (John Michael), a learned German orientalist, born at Erfurt in Thuringia in 1635. He learned the oriental languages of Ludolph, who employed him to publish his ./Ethiopic Dictionary, at London, in 1661, in which Wansleb inserted many articles of his own, which Ludolph complained of. He also assisted Dr. Castell in his Lexicon Heptaglotton. Ernest duke of Saxe-Gotha en- gaged him to travel to Abyssinia, but he went no farther than Cairo. He was dissipated ; yet he wa employed by M. Colbert to collect MSS. and medals for Louis XIV's library. He also published an account of the State of Egypt, in Italian, 1671, 12mo. He died in 1679.

WANT, v. a., v. n., Sc n. t. Saxon pana ; Goth, and Swed. wanta. To need : be deficient in some- thing ; to be without something fit or necessary ; fall short of: hence to wish; long; desire: to be wanted ; fail ; be deficient : want is need, general or particular ; deficiency ; poverty.

Want no money, Sir John ; you shall want none.

Shakspeart.

Down I come, like glistering Phaeton, Wanting the manage of unruly jades.

Id.

Finds wealth where 'tis, bestows it where it wants , Cities in desarts, woods in cities plants. Denham.

Nor think, though men were none, That heaven would want spectators, God want praise.

Milton.

By descending from the thrones above, Those happy places thou hast deigned a while To want, and honour these. Id. Parkdite Lett.

It infers the good By thee communicated, and our want. Milton.

How loth I am to have recourse to rites So full of horror, that I once rejoice I want the use of sight. Dryden and Lee's (Ediput.

Whatever fortune, good or bad, betide, No time shall find me wanting to my truth. Dryden.

Smells do most of them want names. Locke.

Parents should distinguish between the wants of fancy, and those of nature. Id.

We have the means in our hands, and nothing but the application of them is wanting. Addison.

Religion will never be without enemies, nor those enemies be wanting in endeavours to expose it to thfc contempt of mankind. Roger.*

As in bodies, thus in souls, we find What van If in blood and spirits, swelled with wind.

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WAR

Nothing is so hard for those who abound in riches, as tw conceive how others can be in want. Swift.

Here learn the great unreal wants to feign, Unpleasing truths here mortify the vain. Savage.

The unhappy never want enemies. Richardton.

Wants of all kinds are made to frame a plea, One learns to lisp, another not to see. Young.

WANTON, adj., n. s., & v. n. ˆ Derived by

WANTONLY, adv. >Minshieu from

WAN'TOSNF.SS, n. s. J want one, a

man or woman tliat wants a companion. This etymology, however odd, Junius silently adopts. Skinner, who had more acuteness, cannot forbear to doubt it, but offers nothing better. E/en Mr. Thomson says ' Goth, and Sax. u-an is a privative and tion, conduct, restraint.' Lascivious ; libi- dinous ; lustful : a loose lascivious person ; a strumpet: to wanton is to play the wanton or harlot : the adverb and noun substantive corre- spond.

Thou art froward by nature, enemy to peace, Lascivious, want

To lip a wanton in a secure couch, And to suppose her chaste. /•'.

The spirit of wantonness is scared out of him. Id.

*An old wanton will be dealing upon women, when he can scarce see without spectacles. Soi/*A.*

Peace, my wanton ; he will do More than you can aim unto. Ben Jnnson.*

Into what sundry gyres her wondered self she throws, And oft inisles the xhore, as wantonly she flows.

JJraitton.

The tumults threatened to abuse all acts of grace, and turn them into wuntunneis. hitig Charles.

Oh ! I heard him wanton in his praise ; Speak things of him might charm the ears. Otway.

Enticed to do him wanton rites. Milton.

Nature here

Wantoned as in her prime, and played at will Her virgin fancies. Id.

Wantonness and pride Raise out of friendship hostile deeds in peace. Id.

Men grown uantim by prosperity Studied new arts of luxury and ease. Roscommon.

O ye muses ! deign your blest retreat, Where Horace wantons at your spring, And Pindar sweeps a bolder stiing. Fenton.

Thou dost but try how far 1 can forbear, Nor art that monster which thou wouldst appear ; But do not wantonly my passion move, 1 pardon nothing that relates to love. Dryden.

How does your tongue grow wantun in her praise !

Adduon.

He from his guards and midnight tent Disguised o'er hills and valleys went To uanton with the sprightly dame, And in his pleasure lost his fame. Prior.

Love, raised on beauty, will like that decay ; Our hearts may bear its slender chain a day : As flowery bands in uvntonnui are worn, A morning's pleasure, and at evening torn. Pope.

WAPATTOO ISLAND, an island of North Ame- rica, formed by the junction of the Multnomah with the Columbia, twenty miles long and ten broad. The land is high and extremely fertile, and on most parts is supplied with a heavy growth of cottonwood, ash, the large leafed ash, and sweet willow, the black alder, common to the coast, having disappeared. But the chief wealth of this island consists of the numerous ponds in the inte- rior, abounding with the common arrowroot (sagit- taria sagittifolia), to the root of which is attached a bulb growing beneath it in the mud. This bulb,

to which the Indians give the name of wapattoc, is the great article of food, and almost the staple article of commerce on the Columbia.

WAN'TY, n. «. Perhaps wain-tie. A broad girth of leather, by which the load is bound upon a horse.

A panel and u-anry, pack-saddle and ped, With line to fetch litter. Timer.

WA'PENTAKE, n. s. Sax. pcepun, and take ; barb. Lat. u-apentagium. See below.

Hundred signifieth a hundred pledges, which were under the command and assurance of their alderman ; which, as I suppose, was also called a wapentake ; so named, of touching the weapon or spear of their alder- man, and swearing to follow him faithfully, and serve their prince truly. But others think that a wapentahe was ten hundreds or boroughs. Speiiter.

Wapentake is all one with what we call a hundred : as, upon a meeting for that purpose, they touched each other's weapons, in token of their fidelity and allegi- ance. Cowel.

WAPENTAKE is the same with hundred ; espe- cially used in the north countries beyond the Trent. The word seems to be of Danish original, and to be so called for this reason : When first this kingdom, or part thereof, was divided into wapen- takes, he who was the chief of the wapentake or hundred, and whom we now call a high constable, as soon as he entered upon his office, appeared in a field on a certain day on horseback with a pike in his hand, and all the chief men of the hundred met him there with their lances, and touched his pike; which was a sign that they were firmly united to each other by the touching their weapons. But Sir Thomas Smith says, that anciently musters were made of the armor and weapons of the several inhabitants of every wapentake ; and, from those that could not find sufficient pledges for their good appearing, their weapons were taken away and given to others ; whence he derives the word.

WAPPING,a parish in Ossulton hundred, Mid- dlesex, on the north bank of the river Thames eastward of the metropolis, and reckoned one of the out-parishes thereof. Its inhabitants are em- ployed in trade, mostly attendant on the shipping of the port of London ; but many houses have been demolished since the census of 1801, in making the London Docks. These docks are a great improve- ment in the angle formed here by the Thames ; that called St. George's Dock being capable of holding 200 sail of shipping. Shadwell Docks, adjoining, will contain fifty sail. The entrance from the Thames is by three basins, sufficient to contain an immense quantity of small craft ; and the inlets from the Thames into the basins are at the Old Hermitage, Old Wapping, and Old Shadwell Docks. At the eastern extremity are stupendous warehouses, belonging to the Custom House, al- though rented of the Dock Company, for ware- housing tobacco, and the cellars are appropriated to housing of wines ; there are various ranges of warehouses for general merchandize. These docks belong to a public company, having a capital of £1,200,000. The church, dedicated to St. John, is a plain building, erected in 1790 ; and is a rec- tory, under the patronage of Biazen-nose College, Oxford.

*WAR, n. »., v. n., & v. a. *\ Sax. J>a-n, Jjeppft ; WAF.'FARF., n. ». & v. n. f Teutonic and Belgic WAR'UKE, adj. fwerre; Fr. guerre ,*

*\AR'WORN. * Ital. and Span. guer-*

ra ' The exercise of violence under sovereign com

inaud against withstaiiders ; force, authority, and resistance, being the essential parts thereof.' — Raˆ leigh. Hostility ; arms ; the profession of arms : to make war : to make war upon : warfare is the state of war; military service: to lead to military life: warlike, hostile ; like war : war-worn, worn with war.

He teacheth my hands to uar. 2 Sam. xxii.

This charge I commit unto thee, son Timothy, that thou by them mightest war a good warfare.

1 Timothy i. 18.

She using so strange, and yet so well succeeding a temper, made her people hy peace warlike. Sidney.

And them long time before great Nimrod was, The first the world with sword and fire warred. Spent.

Their gesture sad,

Invest in lank lean cheeks and warworn coats, Presented them unto the gazing moon So many horrid ghosts. Shakspeart.

Why should 1 war without the walls of Troy, That find such cruel battle here within T Id.

Old Siward with ten thousand warlike men, All ready at appoint, was setting forth. Id.

On, you noblest English, Whose blood is fetcht from fathers of war proof. Id,

When a warlike state grows soft and effeminate, they may be sure of a war. Bacon.

He limited his forces to proceed in aid of the Britons, but in no wise to war upon the French. Id.

That was the only amulet, in that credulous warfar- ing age, to escape dangers in battles. Camden.

To them the same was rendered, to the end, To uvir the Scot, and borders to defend. Daniel.

On the' embattled ranks the waves return, And overwhelm the war. Milton.

The great archangel from his warlike toil Surceased. Id.

His next design

Was all the Theban race in arms to join, And irar on Theseus. Dryden.

To the island of Delos, by being reckoned a sacred place, nations warring with one another resorted with their goods, and traded as in a neutral country.

Arbtithnot. O imprudent Gauls, Relying on false hopes, thus to incense The warlike English. Philip.*

The Scripture has directed us to refer these miscar- riages in our Christian tear/are to the power of three enemies. Rogers.

WAR is a great eril; but it is often inevitable, and often necessary If he who first ' reduced to rules the art of destroying his fellow creatures had no end in view out to gratify the passions of princes, he was a monster, whom it would have been a duty to have smothered at his birth : but if his intention was the defence of persecuted virtue, or the punishment of successful wickedness, to curb ambition, or to oppose the unjust claims of superior power, mankind ought to erect altars to his memory. War, in the last case, is the most ne- cessary and useful of all the sciences : the various kinds of knowledge which ought to furnish the mind of a soldier are not without great difficulty to be attained. Of most other sciences the princi- ples are fixed, or at least they may be ascertained by the assistance of experience; there needs nothing but diligence to learn them, or a particular turn of mind to practise them. Philosophy, ma- thematics, architecture, and many others, are all founded upon invariable combinations and conclu- sions. Every man, even of a narrow understand- ing, may remember rules, apply them properly, and sometimes draw just consequences from them : but the science of war branches out into so many

particulars ; it tikes in so many different parts, there are so many reflections necessary to be made, so many circumstances and oases to be brought to- gether ; that it is only by a continual application, grounded upon the love of his duty, and an incli- nation to his profession, that any man can attain it. To march an army in every sort of country, whether open, woody, or mountainous ; to know how to form a camp in all those countries, with which the general must be thoroughly acquainted in order to do it with security; to make a proper disposition for a battle, whether with a view to the posture of the enemy, or to the situation of the country ; to foresee events which depend in a man ner upon chance ; to be capable*

of making a good etreat on proper occasions; to direct the forages without fatiguing orexposing the troops ; to send out detachments with precaution ; to conduct the con- voys in safety ; to know how to canton an army ; to establish magazines in places both safe and within reach of the army, so that it shall never be in want of subsistence — these are the great ends of the military science. It is commonly thought suf- ficient for a military man to know how to obey ; and it is also supposed that the success of a day cannot be dubious, if a general joins the confidence of the soldiers to personal courage, a cool head, and the knowledge of the country. It is true that, in cases of perplexity, many generals have in a great measure owed to their own capacity, and the confidence their soldiers have reposed in them, the advantages they have gained over the enemy ; and confidence will always be reposed by the soldiers in that general in whom they perceive coolness united with courage.

At the battle of Canna, when Cisco seemed to be much astonished at the superiority of the enemy's number, Hannibal answered him coolly, ' There is, Cisco, a thing still more surprising, of which you take no notice.' Cisco asking him what it was, ' It is," replied Hannibal, ' that in all that great crowd, there is not one man whose name is Cisco.' Plutarch observes, that this coolness of Hannibal greatly animated the Carthaginians, who could not imagine that their general would joke at so important a time, without being certain of overcoming his enemies. Although bravery and courage are the most essential qualifications of a subordinate officer, yet he should not be deficient in those which are required in a general, and which have been already mentioned; obedience to the orders delivered to him is no longer a vir- tue than whilst he comprehends and knows the intention of them. War, says a celebrated author, is a business which, like all others, must be learned ; it supposes some qualities to be born with us, and demands others which are to be acquired : but, since all these qualities must have the original source in genius, a man who proposes war for his profession, should never engage in it without having consulted his natural bent, or without know- ing the particular turn and power of his mind. Ability, whether in a general or an officer, is the effect of his genius, quickened by a natural liking to his business. A quick eye, which is of great importance to a soldier, is natural to some, and in them it is the effect of genius ; others acquire it by study or experience ; he who knows how to command himself, and has courage enough to keep himself cool on the most urgent cccasions, has the readiest and quickest eye. A quick, hot-

hoaded man, however brave, sees nothing; or if he does, it is confusedly,

and generally too late. It is this quick eye which enables a general to judge of an advantageous post, of a manreuvre to be made, and of a good disposition for the troops, whether with respect to that of the enemy, or to the situation and nature of the country. The quick eye is no other than that penetrating genius which lets nothing escape it. A general who knows how to unite this quality with perpetual coolness never is in want of expedients ; he will see how these events, which to any other would be the presage of his own defeat, may end in the overthrow of his enemies. The choice of the general officers depends upon this genius, which discovers every thing ; they ought to be the right hand of the general, and as capable of commanding the army as himself. Whatever good dispositions a general may make, they must prove ineffectual if not seconded by the general officers under his command ; he cannot be every where, neither can he foresee all exigencies that may arise. He is obliged to give only general orders ; it is therefore the business of those who command under him to know how to take the ad- vantage of a wrong movement of the enemy ; to take upon them to attack, or sustain the troops which are engaged ; and, as circumstances vary, to make them advance towards the enemy, either to keep him back or to attack him. But the quali- ties already mentioned would be useless, if order and discipline were not severely observed : the most numerous and best composed army would soon become little else than a body of rangers, who, being only united by the hope of booty, would separate as soon as that motive ceased ; and, trust- ing each to his own head, or indulging his own humor, would be cut in pieces party by party : so that if the general does not keep up subordination (the soul and strength of discipline), his army will be nothing more than a troop of Tartars acting more from the hope of plunder than the desire of glory. What art and what genius are there not re- quisite to maintain this subordination ? Too much severity disgusts the soldier, and renders him mu- tinous; too much indulgence sinks him into indo- lence, and makes him neglect his duty ; licentious- ness causes that subordination to seem burdensome, which should never in any degree be given up : he loses that respect, and often that confidence, which he should have with regard to his officer : and in- dulgence often makes a well disciplined body be- come a set of sluggards, who march against their will, and who, on the most pressing emergencies, think only on their own safety. Besides these qualities, which are essential to a general, and which all who would attain that rank ought of course to have, there are still many others necessary to make a great man. A general who would merit the title of a hero, ought to unite in himself all civil, military, and political excellence. It is by this that he will make war with success : nothing will escape him ; he will know without difficulty the genius of every country, and of the nations which compose the enemy's army, the abilities of the generals who command, and the nature of the troops under them ; he knows that he may venture a motion with some troops that he would not dare to attempt with

others that are equally brave. One nation is vehement, fiery, and formidable on the first onset ; another is not so hasty, but of more perseverance : with the former, a singU? instant de-

*termines success ; with the latter the action is not so rnˆid, but the event is less doubtful. No man is born a general, although he brings into the world with him the seeds of those virtues which make a great man : Caesar, Spinola, Turenne, the great Conde, and some others, showed, even in their earliest years, such qualities as ranked them above other men ; they carried within them the principles of those great virtues which they drew forth to action by profound study, and which they brought to perfection by practice : those who came after them, with perhaps fewer natural talents, have'by study rendered themselves worthy of being com- pared to them. Caesar and all conquerors had this advantage, that they were able to make their own opportunities, and always acted by their own choice. A man may be a good general without being a Marlborough or a Turenne : such geniuses are scarcely seen once in an age ; but the more they are raised above the rest of mankind, the more they ought to excite emulation. It is by endeavouring to surpass the intellects of the second rate : it is by striving to equal the most sublime, that the imita- tion of them is to be attained. This passion in a soldier is neither pride nor presumption ; it is virtue : and it is by this only that he can hope to be serviceable to the state, and add to the glory of his king and country. How much soever the honor of commanding armies may be sought after, it de- grades him who is not worthy of it ; this rank, *o much desired, borders on the two extremes of glory and ignominy. A military man who labors to make himself capable of commanding is not to be blamed ; his ambition fs noble : by studying the art of commanding he learns that of obeying and of executing. But it is astonishing in the highest degree to see soldiers thinking only of pre- ferment, and neglecting the study of their business It is perhaps less surprising to see others, without having been tried, proposing to themselves to com- mand in chief; because such attempts suppose in the projector an absurd temerity, founded on a profound ignorance of the talents he ought to have, and the virtues which he has not. Such boldness is the character of a man whose mind is too narrow to perceive his danger. We should rather approve the timidity that suffers itself to be dejected by terror, since it shows at least that he knows to what hazards he is exposed ; both one and the other are blameable : modesty is the only proper quality of a soldier; it gives splendor to virtue, it argues dif- fidence of himself, and desire of arriving at perfec- tion. The title of general would be less tempting if proper attention was paid to the qualities it re- quires, and the duties it imposes ; it would then appear a very honorable but painful burden. The most firm and intrepid genius might be discouiaged merely by thinking that on the conduct of a general depends the fate of the state, the glory of bis prince's arms, his own reputation, and*

the lives of his soldiers. But yet the reward that follows such irksome labors ought to animate men to undertake them. Obstacles, however numerous they may be, are not insurmountable, since so many great men have got the better of them : difficulties shoul 1 stir up a soldier's emulation, but should never terrify him ; he should endeavour to copy such great ori- ginals, though he should not be able to equal them. From these observations on the difficulty of acquiring a sufficient degree of skill in this important science, our readers, we suppose, will agree with us, that it

be to little purpose, and tend nothing either to the instiuction or edification, either of our mili- tary or learned readers, were we to presume to lay f':own a system of rules for military operations to oe followed by a general. The circumstances of time, place, and opportunity of advantage, that occur in one campaign, are so various and often opposite to those that occur in any other, that measures very proper in one case might occasion the capture or destruction of a whole army in an- other. We will not, therefore, attempt to lay down any rules upon the subject, as the most courageous and best experienced generals must always act according to the contingent circumstances that occur in the countries through which they lead their armies.

We are unable, by want of space, to attempt to treat in this place of the art of war — an article to that effect, to be of any service, should rather occupy a volume than a few pages. But we present a connected view of the periods and dura- tions of the most remarkable wars in which this country has been engaged since the war with Scot- land, 1068.

... (Scotland, 1113. Peace with < ~

I France, 1113.

War with France, 1116.

... S ditto, 1118. Peace with \ ..' , . . or. I Scotland, 1139.

War with France, 1161.

Peace with ditto, 1186.

War again with France, with success, 1194.

Peace with ditto, 1195.

•renewed, 1215 — ended, 1216.

I with France, 1224 — ended, 1234. Civil war < 1262— ended, 1267.

fwith France, 1294.

.with Scotland, 1296.

I with France» 1299- I with Scotland, 1323.

/•again with Scotland, 1327.

War)ended> 1328′

i again with Scotland, 1333.

(.with France, 1339. Peace with France, May 8th, 1360.

t with France, 1368. War ? civil, 1400.

(with Scotland, 1400. Peace with France, May 31st, 1420.

C with France, 1422. War < civil, between York and Lancaster.

C 1452. Peace with France, October, 1471.

vVar $ civi1′ 1486> ,

(with France, October 6th, 1492-

with ditto, November 3d, 1492.

with Scotland, 1502. with France, February 4th, 1512. with Scotland, 1513. Peace with France, August 7th, 1514.

*War with $ditt0′ 1522″ h * Scotland, 1*

Peace with j l

I Scotland, 1542.

War with Scotland directly after.

Peace with France and Scotland, June 7th, 1546.

,,r . , (Scotland, 1547.

“arwlth 5 France, 1549.

Peace with both, March 6th, 1550.

f civil, 1553. War / with France, June 7th, 1557.

(.with Scotland, 1557.

Peace with $ France> APril 2d> 1359. •e W1U1 \ Scotland, 1560.

Peace

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1522.

541

w , (Scotland, 1570.

W ar with i c

< bpam, Io88.

Peace with Spain, August 18th, 1604.

\- .u S Spain, 1624.

NNarwithJ France, 1627-

Peace with Spain and France, April 14th, 1629.

War $ civi1’ 1642’

(with the Dutch, 1651.

*Peace with the Dutch, April 5th, 1654. War with Spain, 1655. Peace with Spain, September 10th, 1660. War with * France> January 26th, 1666.*

n I Denmark, October 19th, 1666. Peace with the French, Danes, and Dutch, Au- gust 24th, 1667.

Peace with Spain, February 13tb, 1668. War with the Algerines, September 6th, 1669. Peace with ditto, November 19th, 1671. War with the Dutch, March 1672. Peace with ditto, February 28th, 1674. War with France, May 7th, 1689. Peace, general, of Rhyswick, September 20th,

697.

War with France, May 4th, 1702. Peace of Utrecht, March 13th, 1713. War with Spain, December 1718. Peace with ditto, 1721. Spain, 1739.

France,

(.Spain, January 4th, 1762. Peace with France and Spain, February 10th,

1763.

War with the Caribbs of St. Vincent in 1773. /•civil, in America, commenced July 14th, \ 1774.

War < with France, February 6th, 1778. I with Spain, April 17th, 1780. Vwith Holland, 1780. / France, ~

cewithJHPonand, [September 3d,1783. (America, J

War with France by the English, Prussian! Austrians, and other German powers, in 1793.

Peace between Prussia and the French Repub lie, 1795.

Peace between Spain and the French Republic,

1795.

Peace between the French and the Sardinians in

1796.

Peace between the French and the Austrians in

1797.

War between the British and Tippoo Saib, in India, in 1797.

War with the French republic by the Austrians, Russians, Neapolitans, &c., 1798.

War with the Turks, and the invasion of Egypt, in 1798.

Peace between the French and the Russians in

1799.

Peace between the French and Austrians in 1800.

Preliminaries of peace commenced between the French and the Ottoman

empire in consequence of the reduction of Egypt by the British forces in

1801.

Preliminaries of peace between France and Great Britain, &c., 1801.

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W A R B U R T O N.

Peace between France and England, 1802.

War with France, 1803; terminated in June 18\5.

WARADEIN, GREAT, or Nagy Varad, a forti- fied town of Hungary, on the Koresch, the see of a Catholic archbishop, and a Greek bishop. The environs being marshy, the air is thick and foggy. The cathedral, after lying many years in ruins, was rebuilt in 1778, on an elegant plan, and the archbishop's palace is a beautiful edifice. Here are several Catholic convents and schools. The popu- lation of the town are employed partly in manufactures and trade. At a little distance is New Wa- rasdin, properly a suburb of the place we are describing; and in the neighbourhood are four warm mineral springs. In the Turkish wars in Hungry this was an important military post, which was several times taken. Population 7000. Thirty- five miles S. S. E. of Debrecrin, and 132 east by south of Pest.

WARASDIN, a county of the Austrian state, in Croatia, having Styria and Illyria on the west, and the county of Agram on the east. Its area is about 720 square miles ; its population, about 134,000, partly Catholics and partly of the Greek Church. The river Drave forms the northern boundary.*

WARASDIN, THE GENERALATE OF, a district of Croatia, adjoining to Sclavonia, and separated from Hungary only by the Drave. More extensive, but less populous, than the county of the same name, this district contains 1440 square miles, with only 108,000 inhabitants. The capital is a town of this name. Thirty-eight miles N. N. E. of Agram, and 1 32 south of Vienna.

VVARBECK (Peter, or Perkin), a pretender to the crown of England under Henry VII. See ENGLAND.

WAR'BLE, t;. a. & v. n. 1 Old Teut. werben,

W A R'BLER, n. t. J of barb. Latin vibrillo,

from vibro. To quaver any sound ; cause to quaver : to be quavered; to sing: a warbler is a singer; one that warbles.

A plaining song plain singing voice requires, For warbling notes from inward cheering flow. Sidney.

There birds resort, and in their kind thy praise Among the branches chant in warbling lays. Wotton.

Fountains, and ye that warble as ye flow Melodious murmurs, warbling tune his praise. Milton.

She can thaw the numbing spell, If she be right invoked with warbled song. Id.

Such strains ne'er warble in the linnet's throat. Gay.

Hark ! on every bough, In lulling strains, the feathered warblers woo. Ticktll.

Whilst warbling to the varied strain advance Two sprightly youths to form the bounding dance.

Pope.

WARBURTON (William), bishop of Glouces- ter, who has been justly styled vir magnus, acer, memorabilis, was descended from an ancient and considerable family in Cheshire. His grandfather distinguished himself in the civil wars of the seven- teenth century, in the royal party. He had three sons ; the second of whom, George, being bred to the law, practised as an attorney at Newark in that county. William, the subject of this memoir, and the second son of Mr. George Warhurton, was born at Newark, December 24th, 1698. He was first put to school there under a Mr. TwelU, but had the chief part of his education at Okeham in Rutlandshire, where he continued till the begin- ning of 1714, when, his cousin being made head ir.aste.1 of the school at Newark, he returned to his

native place, and uas fa- a very short time under the care of that learned and respectable relation. In April that year he was put out clerk to Mr. Kirke, an eminent attorney of Great Markham in Notting- hamshire ; and continued with that gentleman till 1719. He then returned to his family at Newark. He had always expressed a strong inclination to take orders; and on the 22d of December 1723 he was ordained deacon, and priest March 1st, 1727. In 1728 he was presented by Sir Robert Sutton to the rectory of Brand Broughton ; where he wrote all the great works which will carry his fame down to posterity. In 1736 he published The Alliance between Church and State; or the Necessity and Equity of an Established Religion and a Test Law ; demonstrated from the Essence and End of Civil Society, upon the Fundamental Principles of the Law of Nature and Nations. In 1739 he

published the first volume of The Di- vine Legation of Moses demonstrated on the Prin- ciples of a Religious Deist, from the Omission of the Doctrine of a Future State of Rewards and Punishments in the Jewish Dispensation. In 1737 an intermitting fever had nearly proved fatal to him, but it was relieved by a plentiful use of the bark. Mr. Warburton's merit had now attracted the notice of the heir apparent, in whose service we find him in 1738, when he published Faith working by Charity to Christian Edification, a ser- mon. His next work was A Vindication of Mr. Pope's Essay on Man, by the author of the Divine Legation. Towards the end of 1739 Mr. War- burton published a new and improved edition of the first volume of the Divine Legation ; and in May, 1741, appeared the second part, which com- pleted the argument, though not the entire plan of the work. In summer 1741 Mr. Pope and Mr. Warburton, in a country ramble, took Oxford in their way. The university was naturally pleased at the arrival of two such strangers, and seemed desirous of enrolling their names among their gra- duates. The degree of D. D. was intended for the divine, and that of LL. D. for the poet : but intrigue and envy defeated this scheme, to the eternal disgrace of the university. After this Mr. Pope introduced and warmly recommended Mr. Warburton to most of his friends, and among others to Mr. Murray, afterwards earl of Mans- field, and Ralph Allen, esq., of I'rior Park. In consequence of this he was at Bath in 1742; where he printed a sermon preached at the abbey church on the 24th of October, for the benefit of Mr. Al- len's favorite charity, the General Hospital or In- firmary. In this year also he printed a Disserta- tion on the origin of books of chivalry, at the end of Javis's Preface to a translation of Don Quixote. In 1742 Mr. Warburton published A Critical and Philosophical Commentary on Mr. Pope's Essay on Man. In which is contained a Vindication of the said Essay from the misrepresentation of M. de Resnal, the French Translator, and of M. de Crou- saz, Professor of Philosophy and Mathematics in the Academy of Lausanne, the Commentator. At this period, when Mr. Warburton had the entire confidence of Mr. Pope, he advised him to com plete the Dunciad, and add to it a fourth book. This was accordingly executed in 1742, and pub- lished early in 1743, with notes by our author; who, in consequence of it, received his snare of the abuse which Mr. Cibber liberally bestowed o-i both Mr. Pope and his annotator. In the end of

ine same year he published complete editions of the Essay on Man, and The Essay of Criticism ; and, from the specimen which he there exhibited of his abilities, it may be presumed Mr. Pope de- termined to commit the publication of those works which he should leave to Mr. Warburton's care.

At Mr. Pope's desire, he about this time revised and corrected the Essay on f lomer, as it now stands in the last edition of that translation. The publication of The Dunciad was the last service which our author rendered Mr. Pope in his life time. After a lingering and tedious illness, the event of which had been long foreseen, this great poet died on the 30th of May 1744 ; and by his will, dated the 12th of December, bequeathed to Mr. War- burton one half of his library, and the property of all such of his works already printed as he had not otherwise disposed of or alienated. In 1744 Mr. Warburton turned his attention to the several attacks which had been made on the Divine Lega- tion, and defended himself in a manner which, if it did not prove him to be possessed of much hu- mility or diffidence, at least demonstrated that he knew how to wield the weapons of controversy with the hand of a master. His first defence DOW appeared under the title of Remarks on several Occasional Reflections, in Answer to the Rev. Dr. Middleton, Dr. Pococke, the Master of the Char- ter House, Dr. Richard Grey, and others ; serving to explain and justify divers Passages in the Divine Legation, objected to by those learned writers. To which is added A General Review of the Ar- gument of the Divine Legation, as far as it is yet advanced ; wherein is considered the Relation the several Parts bear to each other and the whole : with an Appendix in answer to a late Pamphlet

entitled, An Examination of Mr. W 's second

Proposition. This was followed next year by Re- marks on several Occasional Reflections, in An- swer to the Rev. Doctors Stebbing and Sykes ; serving to explain and justify the Two Disserta- tions in the Divine Legation, concerning the com- mand to Abraham to offer up his Son, and the Nature of the Jewish Theocracy, objected to by these learned writers. Part II. and last. Both these answers are couched in those high terms of confident superiority which marked peculiarly al- most every performance that fell from his pen dur- ing the remainder of his life. On the 5th of September, 1745, he married Miss Tucker, who Sur- vived him, and married Mr. Stafford Smith, of Prior Park. At that important crisis our autnor preached and published three seasonable sermons : 1. A Faithful Portrait of Popery, by which it is seen to be the reverse of Christianity, as it is the Destruction of Morality, Piety, and Civil Liberty. Preached at St. James's, Westminster, October 1 745. '2. A Sermon occasioned by the present unnatural Rebellion, preached in Mr. Allen's Chapel, at Prior Park, near Bath, &c., November 1745. 3. The Nature of National Offences truly stated. Preached on the General Fast-day, December 18th, 1745 — 6. On account of the last of these ser- mons, he was again involved in a controversy with his former antagonist Dr. Stebbing, which occa- sioned An Apologetical Dedication to the Rev. Dr. Henry Stebbing, in Answer to his Censure and Misrepresentations of the Sermon preached on the General

Fast, &c. In 1746 he was called by the Society of Lincoln's Inn to be their preacher. Jn Novembe" he published A Sermon preached on

*the Thanksgiving appointed to be observed the 9th of October, for the Suppression of the late unnatural Rebellion. In 1747 appeared his edi- tion of Shakspeare, and his Preface to Clarissa ; and in the same year he published 1. A Letter from an Author to a member of Parliament con- cerning Literary Property. 2. Preface to Mrs Cockbuin's Remarks upon the Principles and Reasonings of Dr. Rutherford's Essay on the Na- ture and Obligations of Virtue, &c. 3. Preface to a Critical (Inquiry into the Opinions and Prac- tice of the ancient Philosophers, concerning the Nature of a Future State, and the method of teach- ing by double Doctrine (by Mr. Towne), 1747, second edition. In 1748 a third edition of The Alliance, corrected and enlarged. About this time the publication of Dr. Middleton's Enquiry con- cerning the miraculous Powers of the Christian Church, gave rise to a controversy, which was managed with great warmth and asperity on both sides, and not much to the credit of either party. On this occasion Mr. Warburton published an ex- cellent performance, written with a high degree of candor and temper. The title of it was Julian; or a Discourse concerning the Earthquake and fiery eruption which defeated that emperor's at- tempt to rebuild the Temple at Jerusalem, 1750. A second edition of this discourse, with Additions, appeared in 1751, m which year he gave the public his edition of Mr. Pope's Works, with Notes, it: 9 vols. 8vo. ; and in the same year printed An Answer to a Letter to Dr. Middleton, inserted in a Pamphlet entitled, the Argument of the Divine Legation fairly stated, &c. ; and An Account of the Prophecies of Arise Evans, the Welsh Prophet in the last Century, annexed to the first volume of Dr. Jortin's Remarks on Ecclesiastical History. In 1752 he published the first volume of his ser- mons, preached at Lincoln's Inn, emitted The Principles of Natural and Revealed Religion, oc- casionally opened and explained ; and this, in 1754, was followed by a second. His next work was A View^of Lord Bolingbroke's Philosophy. In Sep- tember 1754 he was appointed one of his majesty's chaplains, and in the next year was presented to a prebend in the cathedral cf Durham About this time the degree of D. D. was conferred on him by Dr. Herring, archbishop of Canterbury. A new impression of The Divine Legation being now called for, he printed a fourth edition of the first part of it, with a dedication to the earl of Hardwicke. The same year appeared A Sermon preached before Charles Duke of Marlborough, President, and the Governors of the Hospital for ..he Small-pox and for Innoculation, at the Parish church of St. Andrew, Holbora, April 2*th, 1755. And in 1756 Natural and Civil Events the Instru- ments of God's Moral Government ; a Sermon on the Fast-day, at Lincoln's Inn Chapel. Iif*1757 Dr. Warburton meeting with Mr. Hume's tract entitled, The Natural History of Religion, filled the margin of the*

book, and some interleaved slips of paper, with many severe and shrewd remarks on the infidelity and naturalism of the author. These he put into the hands of his friend Dr. Hurd, who, making a few alterations of the style, added a short introduction and conclusion, and published them in a pamphlet entitled, Remarks on Mr. Dav id Hume's Natural History of Religion, by a Gentleman of Cambridge, in a Letter to the Rev. Dr. Warburton. Towards the end of 1757 Dr.

Warburton was promoted to the deanery of Bris- tol ; and in the beginning of 1760 he was through Mr. Allen's interest with Mr. Pitt, afterwards earl of Chatham, advanced to the bishopric of Glou- cester. He was consecrated on the 20th of Janu- ary, 1760, and on the 30th preached before the house of lords. In 1761 he printed A Rational Account of the Nature and End of the Sacrament of the Lord's Supper. In 1762 he published The Doctrine of Grace; or the Office ai:d Operations of the Holy Spirit Vindicated from the Insults of Infidelity and the Abuses of Fanaticism, 2 vols. 12mo. ; and in 1763 drew upon himself much illi- beral abuse from some writers of the popular par- ty, on occasion of his complaint in the house of lords, on the 15th of November 1763, against Mr. \Vilkes, for putting his name to certain notes on the infamous Essay on Woman. In 1765 he pub- lished a new edition of the second part of the Di- vine Legation, in 3 vols. In 1766 he gave a new and much improved edition of the Alliance. This was followed in 1767 by a third volume of ser- mons, to which is added his first Triennial Charge to the Clerpy of his Diocese ; which is one of the most valuable discourses of the kind to be found in any language. With this publication he closed his literary course ; except that he made an effort towards publishing, and actually printed, the ninth and last book of the Divine Legation. This book with one or two occasional sermons, and some va- luable directions for the study of theology, have been given to the world in the splendid edition oi his works in 7 vols. 4to., by his friend and bio- grapher the bishop of Worcester. That prelate says that the ninth volume under all disadvantages is the noblest effort which has hitherto been made to give a rationale of Christianity. While the bi- shop of Gloucester was thus exerting his last strength in the cause of religion, he projected a method by which he hoped to render it effectual service after his death. He transferred £500 to lord Mansfield, Sir Eardley Wilmot, and Mr. Charles Yorke, upon trust, to found a lecture, in the form of a course of sermons, to prove the truth of revealed religion in general, and of the Chris- tian in particular, from the completion of the pro- phecies in the Old and New

Testament, which relate to the Christian church, especially to the apostacy of papal Rome. To this foundation we owe the admirable Introductory Lectures of Hurd, and the well adapted Continuation of Halifax and Bagot. After this, by the decay of nature, the bishop fell into a habit of melancholy, which was aggravated by the loss of his only son, who died of a consumption but a short t:me before his fa- ther, who died June 1779, in the eighty-first year of his age. A neat marble monument has been erected to him in the cathedral of Gloucester, with a proper inscription. A new edition of Warbur- ton's works, in 12 vols. 8vo., was published in 1811; and a selection of his private letters was printed immediately after bishop Hurd's death, and by his special direction.

A WAR CRY was formerly customary in the ar- mies of most nations, when just upon the point of engaging. Sometimes they were only tumultuous shouts, or horrid yells, uttered with an intent to strike terror into their adversaries ; such as is now used by the Indians in America, called the war- hoop.

WARD, v. a., v. n., &.-\ Sax. peaen'eian; Belg.

WAR'DEX, n. s. [n. s. ' and Teut. wuren ; Goth.

WAR'DER, ˆand Swed wara. To

WARD'SHIP. J guard ; watch ; defend ;

fence off: to be vigilant; act defensively with a weapon : a watch ; garrison ; the act of watching ; the thing, or party, or district watched or defended: hence a child under a guardian; guardianship ; the effective part of a lock : a warder is a keeper, or head officer ; and hence ˆperhaps) a large pear : warder is also a guard keeper ; a trunchion : ward- ship, guardianship ; pupilage.

So redoubling her blows, drove the stranger to no other shift than to ward and go back. Sidney.

It is also inconvenient, in Ireland, that the wards and marriages of gentlemen's children should be in the disposal of any of those lords. Spenser.

Upon those gates with force he fiercely flew, And, rending them in pieces, felly slew Those warden strange, and all that else he met. Id.

Still when she slept he kept both watch and ward. Id.

The' assieged castles ward Their stedfast stands did mightily maintain. Id.

That wretched creature, being deprchended in that impiety, was held in ward. Honker.

Where be these warders, that they wait not here ? Open the gates ! Shakspeare.

Then, then, when there was nothing could have

staid

My father from the breast of Bolingbroke, O, when the king did throw his warder down. His own life hung upon the staff he threw. Id.

Tell him it was a hand that warded him From thousand dangers, bid him bury it. Id.

I must attend his majesty's command, to whom I am now in ward. Id.

Thou knowest my old ward ; here I lay, and thus I bore my point. Shakspeare. Henry IV.

By reason of the tenures in chief revived, the sums for respect of homage be encreased, and the profits of wardships cannot but be much advanced. Bacon.

Lewis the Eleventh of France, having much abated the greatness and power of the peers, would say that he had brought the crown out of ward. Id.

Up and down he traverses his ground : Now ward a felling blow, now strikes again. Daniel.*

Nor must all shoots of pears alike be set, Crustumian, Syrian pears, and wardens great. May.

In tne key- hole turns The intricate wards, and every bolt and bar. Milton.

Throughout the trembling city placed a guard. Dealing an equal share to every ward. Drvdeit.

Now by proof it shall appear. Whether thy horns are sharper, or my spear. At this I threw, for want of other ward, He lifted up his hand his front to guard. Id.

When, stern as tutors, and as uncles hard, We lash the pupil, and defraud the ward. Id.

The warders of the gate but scarce maintain The unequal combat, and

resist in vain. Id.

As there are locks for several purposes, so are there several inventions in the making and contriving their wards, or guards. iloxon.

Ox-cheek when hot, and wardens baked, some cry.

King.

Titles of honour, and privileges, the rich and the great can never deserve, unless they employ them for the protection of these, the true wards and children of God- Sprat.

The warden of apothecaries' hall. Garth.

The pointed javelin warded off his rage. Additon.

WARD (Dr. Samuel), a learned divine, edu- cated at Emmanuel College, Cambridge. In 1609 he became master of Sidney College. He was

also professor of divinity, and archdeacon of Taun- ton. He was one of three deputies elected to the Synod of Dort, and was then a rigid Calvinist; but changed his opinion when there. During the civil war, in 1643, he was imprisoned by the re- bels; and died of the ill treatment he had received. He wrote several tracts on Theology. Some of his Letters are preserved in archbishop Usher's works ; folio edition.

WARD (Dr. Seth), an English prelate, chiefly famous for his knowledge in mathematics and as- tronomy, was born at Buntingford in Hertford- shire, in 1617. He was educated at Sidney Col- lege, Cambridge, where he applied with great vigor to his studies, particularly to the mathematics, and was chosen a fellow. He was involved in the con- sequences of the civil war, but soon after the Re- storation was made bishop of Exeter, and in 1667 of Salisbury. In 1671 he was made chancellor of the order of the garter ; and was the first Protes- tant bishop who had that honor. He procured it to be annexed to the see of Salisbury. He sur- vived his senses in consequence of a fever. He lived to the Revolution, and died in 1690. He was the author of several Latin works in mathe- matics and astronomy, but their use has been su- perseded by later discoveries and the Newtonian philosophy.

WARD (Dr. John), the son of a dissenting mi- nister, born at London in 1679. He kept a school in Tenter Alley, Moorfields ; but rendered him- self so eminent in the study of antiquity, that in 1720 he was chosen professor of rhetoric in Gre- sham College; in 1723, during the presidency of Sir Isaac Newton, he was elected F. R. S., and in] 752 one of the vice-presidents, which he retained to his death. He was elected one of the trustees of the British Museum in 1753, and died at Gre- sham College in 1758. His chief works are Lives of the Professors of Gresham College; and Lec- tures on Oratory, 2 vols. 8vo.

WARD (Edward), a burlesque writer, who in the end of the seventeenth century published The London Spy ; and turned Don Quixote into Hudi-brastic verse.

WARD (Thomas), another burlesque writer, a bigoted papist, who published a History of the Re- formation in doggerel verse ; in 2 vols. 12mo.

WARDEN OK THE CiNQiK PORTS. See CINQUE PORTS.

WARDEN OF THE FLEET, the keeper of the Fleet prison : who has the charge of the prisoners there, especially such as are committed from the court of chancery for contempt.

WARDMOTE, wardmotus,acourt kept in every ward in London, ordinarily called the wardmote court. The wardmote inquest 1 ath power every year to enquire into and present all defaults con- cerning the watch and constables doing their duty ; that engines, &c., are provided against fire ; that persons selling ale and beer be honest, and suffer no disorders, nor permit gaming, &c , that they sell in lawful measures ; searches are to be made for vagrants, beggars, and idle persons, &c., who shall be punished. Chart. K. Hen. II. ; Lex Lond. 185. See LONDON.

WARD'ROBK. n. s. Fr. gordcrobe ; low Lat. gardcroba. A n om where clothes are kept.

The third had of their wardrobe custody, In which were not rich tires nor garment gay, VOL. XX II.*

The plumes of pride and wings ot vanity, But cloaths meet to keep keen cold away.

1 will kill all his coats, I'll murder all his wardrobe piece by piece, Until I meet the king. tthukspeare. Henry IV

Behold,

What from his wardrobe her beloved allows, To deck the wedding-day of his unspotted spouse.

Dry den.

A WARDROBE, in a prince's court, is an apart- ment wherein his robes, wearing apparel, and other necessaries, are preserved under the care and direc- tion of proper officers.

WARDROBE, THE MASTER, OR KEEPER OF rut GREAT, was an officer of great antiquity and dig- nity. High privileges and immunities were con- ferred on it by king Henry VI., which were con- firmed by his successors; and king James I. not only enlarged them, but ordained that this office should be a corporation or body politic for ever. It was the duty of this office to provide robes for the coronations, marriages, and funerals of the royal family ; to furnish the court with hangings, clothes of state, carpets, beds, and other neces- saries; to furnish houses for ambassadors at their arrival, &c. &c. Besides the master, who had a salary of £2000, there was his deputy, who had £150, and comptroller and a patent clerk, each of whom had a salary of £300. There was likewise a removing wardrobe, which had its own set of officers, and standing wardrobe-keepers of St. James's, Windsor Castle, Hampton Court, Ken- sington, and Somerset House; but the whole of the wardrobe establishment was abolished by act of parliament in 1782. The chief duties are now performed by the lord chamberlain.

WARDSHIP, in chivalry, one of the incidents of tenure by knight service. See FEUDAL SYSTEM, KNIGHT SERVICE, and TENVRE.

WARE. The pret. of wear, more frequently wore.

A certain man ware no cloaths. Luke, viii. 27.

WARE, adj. ~\ For this we commonly

*WARE'FUL, * say aware. Being in ex-*

WARE'FULNESS,n.s. f pectation of; being pro-

WARE'LESS, adj. J vided against. Obsolete.

The loid of that servant shall come in a day when he looketh not foi bun, and in an hour that he is not ware of him. Matthew, xxiv. 50.

With pretence from Strephon her to guard, He met her full : but full of warefulneu. Sidney.

They bound him hand and foot with iron chains, A,nd with continual watch did uwely keep. Spenser.

Bid her well be ware and still erect. Milton.

WARE, n. s.) Saxon pajwi ; Sweden wara.

WARE'HOUSE.) Commonly something to be sold • a storehouse for wares.

If the people bring ware or any victuals to sell tha that we would not buy it. Nehemiah, x. 31.*

Let us, like merchants, show our foulest wares, And think, pere'.iance, they '11 sell. Shaktpeart.

I know thou whole art but a shop Of toys, and triflis, traps and snares,

To take the we ik, and make them stop ; Yet art thou false- than thy wares. Ben Jonsor..

London, that ve its of false tfare so much store,

In no ware deceives us more. Ccwley.

His understanding is only the warehouse of other men's lumber, I mem false and unconclud ng rea^ n- ings, rather than a repository of truth for h s own use.

Sh the big warehouse built,

Raised th ; trong crane. Thonuoi.*

9 N

WAR

WARE (Sir James), a learned historian, at Ouo- hn, in 1594; educated at Trinity College; and knighted by the lord justices, in 1629. During the rebellion he came over to England, and was sent to the Tower by the parliament ; but released a few months thereafter, on which he returned to Dublin. He then went to France ; but returned oa the Restoration, when he was restored to his of- fice. He published, l.The History and Antiqui- ties of Ireland : folio. 2. De Praesulibus Hiber- niae : folio, and other works. He died at Dublin in 1666.

WARE (James), a late eminent oculist, and the author of several excellent professional works. Among these may be mentioned a Treatise on Oph-

thaliny, Psorophthalmy, and the Purulent Eye; Chirurgical Observations relative to the Epiphora, or Watery Eye, &c. ; a Treatise on the Cataract, translated from the French of baron Wenzel, with remarks; an Enquiry into the Causes which have most Commonly Prevented the Success of the Operation of Extracting the Cataract ; Remarks on the Fistula Lachrymalis; and Chirurgical Obser- vations, 1798, 2 vols. Svo., including various tracts. Mr. Ware was a fellow of the Royal Society and ot the London Medical Society. After having been long engaged in the practice of his profession in London, with the highest reputation, he died at the age of sixty, April 13th, 1815.

WARE, a market-town on the river Lea, Brughin hundred, Herts, three miles and a half E. N. E. of Hertford, and twenty and a half north of London. It consists of one principal street, nearly a mile in length, with several smaller ones intersecting it, and is distinguished for its extensive malting esta- blishments.

WAREE, a country of Western Africa, south- east of Benin and near the river Formosa, which falls into the gulf of Benin. The country is co- vered with an impenetrable forest, growing in a complete marsh, but the capital is situated on a beautiful island in the river, a little elevated above the surrounding country. The subsoil is a red clay, formed by the inhabitants into jars and other utensils. The capital is divided into two towns, of which the largest, and that in which the king re- sides, contains about 5000 inhabitants. Much trade is carried on with Benny and New Calabar. The chief European commodity in demand con- sists of a species of brass pans, used in the manu- facture of salt.

WAREHAM, an ancient borough of Dorset- shire, seated at the junction of the Frome and the Piddle, where they fall into Luckford Lake, and there form a good harbour. It was anciently very large, and had eight churches ; but in 875 was sacked by the Danes, and has now only three. It had also walls and a castle, now in ruins. In the reign of Edward the Confessor it had 148 houses and two mints. It has now 383 houses, 2065 inhabitants, and a market on Saturday. It sends one member to parliament. It is nine miles south-west of Pool, eighteen east of Dorchester, and 114 south- west of London. Long. 2° 16′ W., lat. 50° 43′ N.

\ARGENTIN (Peter), a Swedish mathemati- cian, born at Stockholm, in 1717. He constructed Tables of the Satellites of Jupiter; and wrote se- veral useful papers in the Transactions of the Aca- demy of Stockholm. He died at Stockholm in 1788.

WABHAM (William), an eminent prelate and statesman, bom at Okelv in Hants, and educated

at Winchester and Oxford, wnere ne became a fellow. In 1494 he was sent ambassador to the duke of Burgundy, and on his return was made bishop of London ; next lord chancellor, and lastly archbishop of Canterbury. He ruled with great moderation, and died in 1532.

\AUIX (John), a celebrated sculptor and en- graver of Liege, born in 1604. He was invited to the mint at Paris, where he engraved the seal foi the ci-devant French republic, which will surely be preserved in the National Institute, as it was esteemed his master piece. The impression is Ri-chelieu's head. He also made two elegant busts of Louis XIV. in bronze. He was poisoned by some villain in 1672.

WARING (Edward), M. D., Lucasian Pro- fessor of mathematics in the university of Cam- bridge, was the son of a wealthy farmer, of Old Heath, near Shrewsbury. The early part of his education he received at the free school in Shrews- bury; whence he removed to Cambridge, and was admitted on the 24th of March, 1753, a mem- ber of Magdalen College. Here his talents for ab- struse calculation soon appeared, and, at the time of taking his degree, he was considered as a pro- digy in those sciences which make the subject of the bachelor's examination. The name of Senior Wrangler was thought scarcely a sufficient honor to distinguish one who so far outshone his contem- poraries ; and the merits of John Jebb were suffi-ciently acknowledged by being second in the list. Waring took his degree of B. A. in 1757, and the Lucasian professorship became vacant before he was of sufficient standing for the degree of A. M. which is a necessary qualification for that office. This defect was supplied by a royal mandate, through which he became M. A. in 1760; and soon after Lucasian professor. In 1762 he pub- lished his Miscellanea Analytica ; one of the most abstruse books written on the abstrusest parts of algebra. This work extended his fame over all Europe. He was elected, without solicitation, member of the societies of Bononia and Gottingen ; and received flattering marks of esteem from the most eminent mathematicians at home and abroad. Mathematics did not, however, engross the whole of his attention. In 1767 he was admitted to the degree of M. D., but it was to him merely a barren title. His life passed on, marked out by discove- ries, chiefly in abstract science ; and by the pub- lication of them in the Philosophical Transactions, or in separate volumes, under his own inspection. He lived some years at St. Ives, in Huntingdon- shire. While at Cambridge he married — quitted Cambridge with a view of living at Shrewsbury ; but, the air or smoke of the town being injurious to Mrs. Waring's health, he removed to his own estate at Plaisley, eight miles from Shrewsbury, where he died in 1797, universally esteemed for inflexible integrity, modesty, plainness, and sim- plicity of manners. He was the discoverer, he •>f

nearly 400 propositions in the Analytics. In 1759 he published the first chapter of the Mis- cellanea Analytica, as a specimen of his qualifica- tions for the professorship. He published also, 1. Proprietas Algebraicarum Curvanim, in 1772 ; llanea Analytica; 2. Meditationes Alge- braicae, in 1770; Meditationes Analytics, ~in 1773 — 6. These were his chief and most laborious works. lu the Philosophical Transactions is to be found a variety of papers, which alone would be

sufficient to place him in the first rank in the ma- thematical world. For these papers, the profetsor was, in 1784, deservedly honored by the Royal Society with Sir Godfrey Copley's medal. He also wrote a work on Morals and Metaphysics in the English language ; but a few copies only were pre- sented to his friends.

WARKWORTH, a parish, and formerly a mar- ket town, of Northumberland, on the river Coquet, three miles south of Alnmouth, and 305 north of London. The church is a handsome building, having a spire 100 feet high; some of the windows contain paintings on the glass. It has a bridge over the Coquet, near which is an ancient tower. At the south end of the town stands Warkworth Castle, the magnificent seat of the duke of Nor- thumberland, surrounded with walls and a moat, and covering an area of five acres and a half. The grand entrance-gate is on the south side, between two polygon towers ; the keep, or dungeon, forms the north point in the form of a square, which con- tains a variety of magnificent apartments, and above it rises a high watch-tower. Although the Percy family have a large castle at Alnwick, ten miles distant, this appears always to have been the fa- vorite residence of that family. About half a mile from the castle, on the banks of the river, is the Hermitage, formed out of the solid rock, and over- hanging the river in a most picturesque manner; the chapel is modelled and executed in a very beautiful style of Gothic architecture; it is in length about eighteen feet, and in width and height not more than seven and a half. Tradition says that this hermitage was founded by one of the Bertram family, lord of Bothall Castle, where he expiated in penance the murder of his brother. Warkworth has a market-cross, but the market has long been discontinued.

WAR'LOCK, 7i. s. ˆ Sax. penlo-j, an evil spirit;

WAK'J.UCK. \ Isl. vardlookr, a charm. A

male witch ; a wizzard.

He was no warluck, as the Scots commonly call such men, who they say are iron free or lead free. Dryden.

WARM, «$.,«.«.,&«. ft.") Sax.peanm; Goth. * and Belg. warm.

{Heated to a small) i

WARM'LY, adv.

WARM'NESS, n. s.

WARMTH. J degree : hence zea-

lous; ardent; passionate; busy; heated with action or temper : the derivatives follow both the literal and metaphorical sense.

He stretched himself upon the child, and the flesh of the child waxed warm. 2 Kings iv. 34.

There shall not be a coal to warm at, nor fire to sit before it. haiah xlvii. 14.

What u-urmth is there in your affection towards any of these princely suitors that are already come ?

Shakspeare.

Cold plants have a quicker perception of the heat of the sun encreasing than the hot herbs have ; as a cold hand will sooner find a little warmth than a hot.

Bacon s Natural History.

He vital virtue infused, and vital warmth, Throughout the fluid mass. Milton.

There the warming sun first warmly smote The open field. Id.

The same warmth of head disposes men to both.

Temple.

Welcome, day-light ; we shall have warm work on 't : The Moor will 'gage His utmost forces on his next assault, To win a queen and kingdom. – Dryden.

The action of Homer, being more full of vigour than .jat 6f Virgil, is more pleasing to the reader: one

mums you by degrees, the other sets you on fire all a once, and never intermits hi.s heat. Drylni.

The best patriots, by seeing with what warmth and zeal the smallest corruptions are defended, have been wearied into silence. Davenant.

We envy not the warmer clime, that lies In ten degrees of more indulgent skies. Addiion.

Now I have two right honest wives ; One to Atrides I will send, And t other to my Trojan friend; Each prince shall thus with honour have What both so warmly seem to crave. Prior.*

The ancients expect you should do them right in the account you intend to write of their characters : I hope you think more warmly than ever of that design. Pope.

Scaliger in his poetics is very warm against it.

Bi'oone.

WARMINSTER, a market town of Wilts, on the small river Willy, which falls into the Avon at Salisbury, twenty-two miles N. N. W. of Salisbury, and ninety-seven west by south of London. Its principal trade is in malt, and it has a small woollen manufacture. This town is supposed to have been the Verlucio of the Romans. Market on Saturday, well supplied with corn.

WARN, v. a. } Sax.paejiman; Belg. u'oernen ;

WAR»'iNG,n. ». S Goth, and Swed. warna; Isl. varna. To caution against fault or danger; to give previous notice of ill ; admonish : the noun substantive corresponds.

I will thank the Lord for giving me uHirniny in the night. Pialms.

Cornelius was warned from God, by an holy angel, to send for thee. Acts x. 22.

What, dost thou scorn me for my gentle counsel, And sooth the devil that 1 warn thee from ? Shaksp.

Our first parents had l>een warned The coming of their secret foe, and 'scaped His mortal snare. Milton's Paradise Lost.

Juturna warns the Daunian chief Of Lausus' danger, urging swift relief. Dryden.

He, groaning from the bottom of his breast, This warning in these mournful words exprest. Id.

Death called up an old man, and bade him come ; the man excused himself, that it was a great journey to take upon so short a warning.

L'Ettrange.

If we consider the mistakes in men's disputes and notions, how great a part is owing to words, and their uncertain or mistaken significations ; this we are the more carefully to be warned of, because the arts of im- proving it have been made the business of men's study.

The hand can hardly lift up itself high enough to strike, but it must be seen, so that it warns while it threatens : but a false insidious tongue may whisper a lie so close and low that, though you have ears to hear, yet you shall not hear. South.

You have fairer warning than others who are unex- pectedly cut off, and so have a better opportunity, as well as greater engagements, to provide for your latter end. Wake.

A true and plain relation of my misfortunes may be of use and warning to credulous maids, never to put too much trust in deceitful men. Hu-ift.

WARNER (Ferdinand), LL. D., a learned English divine and historian, who was rector of St. Michael, Queenhkhe, London, and of Barnes, Surrey : he was esteemed a good preacher. He wrote, 1. An ecclesiastical History of England;ˆ vols. 2. Memoirs of Sir Thomas More. 3. His- tory of the Irish Rebellion ; 2 vols. 8vo; and 4. A Treatise on the Cure of the Gout; of which, how- ever, he died in 1768.

WARNER. (John), D. D., son of the doctor, was

educated at Cambridge, where he graduated in 1771. He obtained the livings of Hockliffe, Chal- ton, and Stourton. In 1789 he accompanied lord Gower our ambassador to Paris, and witnessed the earliest events of the French revolution. On his return he opposed the French war, and the British ministry till his death, in January 1800. He was a popular preacher, and a benevolent man. He translated the Life of Friar Gerund ; and wrote Metron-Ariston, a work which made much noise among the learned.

WARNER (Richard), a learned botanist, educateu at Wadham College,

Oxford. He wrote, 1. Plants Woodfordienses ; 2. A Letter to Garrick, as to a Glossary to Shakspeare ; of whose works he had prepared an accurate edition, but Stevens's super- seded it. He died in 1775, and left his valuable library to Wadham College.

WARP, v. n. & v. a. Sax. peanpan ; Belg. wer- pen ; Goth, and Swed. warpa, to throw. To change or bend from the true position by intestine motion ; to twist ; turn ; cast away ; lose proper course or direction: as a verb active, to turn aside; contract; shrivel.

Freeze, freeze, thou bitter sky ! Thou dost not bite so nigh

As benefits forgot : Though thou the waters tearpt Thy sting is not so sharp.

As friends remembered not. Shakipeare.

There 's our commission, From which we would not have you warp. Id.

Up called a pitchy cloud Of locusts, warping on the eastern wind, That o'er the realm of impious Pharaoh hung Like night. Milton's Paradise Lost.

Not foreign or domestick treachery Could warp thy soul to their unjust decree. Dryden.

Not warped by passion, awed by rumour, Nor grave through pride, or gay through folly ;

An equal mixture of good-humour, And sensible soft melancholy. Swifl.

*WARP, n. *. Sax. peanp ; Belg. werp. That order of threaa in a thing woven that crosses the woof.*

The placing of the tangible parts in length or trans- verse, as it is in the warp and the woof of texture, more inward or more outward. Bacon't Natural History.

WARP, in the manufactures, the threads whether of silk, wool, linen, hemp, &c., that are extended lengthwise on the weaver's loom ; and across which the workman, by his shuttle, passes the threads of the woof, to form a cloth, ribband, fus- tian, or the like.

WARP, in sea language, a small rope employed occasionally to remove a ship from one place to another, in a port, or road, or riv«r.

To WARP is to change the situation of a ship, by pulling her from one part of a harbour, &c., to some other, by means of warps, which are attached to buoys ; to anchors sunk in the bottom ; or to certain stations upon the

shore, as posts, rings, trees, &c.

WAR'RANT,v.n.&n.i."| Fr. garantir. To WARRANTABLE, adj. I support; maintain; WAR'RANTABLENESS, n.t. ! attest ; justify; give WAR'RANTABLY, adv. [authority; privilege; WAR'RANTISE, n.t. (assure: a writ con-

WAR'RANTV. J veying authority or

security ; a commission ; attestation ; right : war- rantable is justifiable ; defensible : the noun sub- stantive and adverb corresponding : warrantise, au- thority; security (obsolete): warranty also signifies

security, legal undertaking, or promise of security.

These thoughts cannot, in this your loneliness, war- rant you from suspicion in others, uor defend you from melancholy in yourself. Sidney.

By the foil thereof you may see the nobleness of my desire to you, and the warrantablenets of your favour to me. Id.

His promise is our plain warrant, that in his name what we ask we shall receive. Hooker.

Now we'll together, and the chance of goodness Be like our warranted quarrel. Shakspeare. Macbeth.

Are you now going to dispatch this deed ? — We are, my lord, and come to have the warrant, That we may be admitted where he is. Id. Richard III.

Her obsequies have been so far enlarged As we have warranty. Shakspeare.

There 's none protector of the realm but I : Breakup the gates, 1 '11 be your warrantise. Id.

The place of Paradise might be seen unto Moses, and unto the prophets who succeeded him ; both which. I take for my warrant to guide- me in this discovery.

Raleigh.

In the use of those epithets we have the warranty an consent of all the churches, since they ever had a liturgy

Taylor.

He sent him a warrant for one thousand pounds year pension for his life.

Clarendon.

To purchase a clear and warrantable body of truth we must forget and part with much we know, Brown .

The Moors' king Is safe enough, I warrant him for one. Dryden.

If I can mend ray condition by any warrantable in- dustry, the way is fair and open ; and that 's a pmi- lege every reasonable creature has in his commission.

L'Estrange.

His meals are coarse and short, his employment war- rantable, his sleep certain and refreshing. South.

If they disobey any precept, that is no excuse to us, nor gives us any warranty, for company's sake, to dis- obey likewise. Kettlewell.

True fortitude is seen in great exploits, That justice warrants and that wisdom guides : All else is towering frenzy and distraction. Additon.

A WARRANT, in law, is a power and charge to a constable or other officer to apprehend a person accused of any crime. It may be issued in extra-ordinary cases by the privy council, or secretaries of state ; but most commonly it is issued by jus- tices of the peace. This they may do in any case where they have a jurisdiction over the offence, in order to compel the person accused to appear be- fore them. And this extends to all treasons, felonies, and breaches of the peace ; and also to all such offences as they have power to punish by statute. Before the granting of the warrant, it is proper to examine upon oath the party requiring it, as well to ascertain that there is a felony or other crime actually committed, without which no war- rant should be granted ; as also to prove the cause and probability of suspecting the party against whom the warrant is prayed. This warrant ought to be under the hand and seal of the justice ; should set forth the time and place of making, and the cause for which it is made ; and should be di- rected to the constable, or other peace officer, or it may be to any private person by name. A general warrant to apprehend all persons suspected, with- out naming or particularly describing any person in special, is illegal and void for its uncertainty; for it is the duty of the magistrate, and ought not to be left to the officer, to judge of the ground of suspicion. Also a warrant to apprehend all per- sons guilty of such a crime is no legal warrant ; for the point upon which its authority rests is a

fact to be decided on a subsequent trial ; namely, •whether the person apprehended thereupon be guilty or not guilty. When a warrant is received by the officer, he is bound to execute it, so far as the jurisdiction of the magistrate and himself ex- tends. A warrant from any of the justices of the court of king's bench extends over all the king- dom, and is tested or dated England ; but a war- rant of a justice of the peace in one county, must be backed, that is, signed by a justice of another county, before it can be executed there. And a warrant for apprehending an English or a Scottish offender may be indorsed in the other kingdom, and the offender carried back to that part of the united kingdom in which the offence was com- mitted.

WARRANT OF ATTORNEY, in English law, an authority and power given by a client to his attor- ney to appear and plead for him; or to suffer judg- ment to pass against him by confessing the action, by nil dicit, non sum informatus, &c. And although a warrant of attorney given by a man in custody to confess a judgment, no attorney being present, is void as to the entry of a judgment, yet it may be a good warrant to appear and file common bail. A warrant of attorney which warrants the action is of course put in by the attorneys for the plaintiff and defendant; so that it differs from a letter of attor- ney, which passes ordinarily under the hand and seal of him that makes it, and is made before wit- nesses, &c. Though a warrant of attorney to suffer a common recovery by the tenant is acknowledged before such persons as a commission for the doing thereof directs. West's Symb. par. 2.

A warrant of attorney is not avoided against an innocent party, even by an entire omission to com- ply with the general rule. 14 East's Rep. 576. Nor, consequently, by omitting to state in the de- feasance a collateral security for the same debt. Sanson v. Goode.Term Rep. K. B. Easter, 59 Oo. III. 568. But the omission to indorse the de- feasance is cause of censure on the attorney who proposes it.

WARRA'Y, v. a. From war ; or from old Fr. gucrroyer. To make war upon. Johnson says, 'A word very elegant and expressive, though ob- solete.'

This continual, cruel, civil war, The which myself against myself do make,

Whilst my weak powers of passions irarraid are, No skill can stint, nor reason can aslake. Spentei .

Six years were run since first in martial guise The Christian lords warraid the eastern land. Fairfax.

WARREE, or SAWUNT WARREE, an extensive district of Hindostan,

province of Bejapoor and district of the Concan. It is situated between the sea and the western Ghaut mountains, being about forty miles in length by twenty-five in breadth. The country is rocky and unproductive; on which account the inhabitants were formerly much ad- dicted to piracy; and in old maps this tract is de- signated the Pirate Coast.

WAR'REN, n. s. From ware. Bclg. waerande ; Goth, and Swed. warn ; Fr. guerenne. A kind of park or preserve for rabbits.

I found him here, as melancholy as a lodge in a warren. Shakspeare. Much Ado about Nothing,

The coney convenes a whole u-arren, tells her story, and advises upon revenge. L' Estrange .

Men should set snares in their warrens, to catch pole- cats and foxes. Dryden'i Spanish Fryar.

A WARREN is a franchise, or place pnviiegea by prescription or grant from the king, fur the keeping of beasts and fowls at the warren ; which are hares and coneys, partridges, pheasants, and some add quails, woodcocks, water-fowl, &c. These being ferae naturae, every one had a natural right to kill as he could : but upon the introduction of the forest laws at the Norman conquest, these animals being looked upon as royal game, and the sole property of our savage monarchs, this franchise of free-warren was invented to protect them, by giving the grantee a sole and exclusive power of killing such game, so far as his warren extended, on condition of his preventing other persons. A man therefore that has the franchise of warren is in reality no more than a royal gamekeeper : but no man, not even a lord of a manor, could by common law justify sporting on another's soil, or even on his own, unless he had the liberty of free-warren. This franchise is almost fallen into disregard since the new statutes for preserving the game ; the name being now chiefly preserved in grounds that are set apart for breeding hares and rabbits. There are many instances of keen sportsmen in ancient times, who have sold their estates, and reserved the free-warren, or right of killing game, to them- selves : by which means it comes to pass that a man and his heirs have sometimes free-warren over another's ground. A warren may lie open ; and there is no necessity of enclosing it as there is of a park. If any person offend in a free-warren, he is punishable by the common law. And by stat. 21 Edw. III., if any one enter wrongfully into any warren, and chase, take, or kill, any coneys without the consent of the

owner, he shall forfeit treble damages, and suffer three months imprisonment, &c. By 22 and 23 Car. II., c. 25, when coneys are on the soil of the party, he hath a property in them by reason of the possession, and action lies for killing them ; but, ir they run out of the warren and eat up a neighbours corn, the owner of the land may kill them, and no action will lie

WARREN (Sir Peter), admiral, was descended from an ancient family in Ireland. He served in the navy several years with great .reputation ; but the transaction which placed his great abilities in their full light was the taking of Louisburg in 1745, when he was commodore of the British squadron. The French, exasperated at this loss, were con- stantly on the watch to retake it; and in 1747 fitted out a large fleet for that purpose, and, at the same time, another squadron to prosecute their success in the East Indies. These squadrons sailed at the same time ; but the views of the French were ren- dered abortive by the gallant Anson and sir Peter Warren who had been created rear-admiral, and who fell in with the French, defeated the whole fleet, and took the greatest part of the men of war. This was the last service sir Peter rendered to his country as a commander in thp British fleet, a peace being concluded in 1748. He was then chosen one of the representatives in parliament for Westminster; and, in the midst of his popula- rity, he paid a visit to Ireland, his native country, where he died of an inflammatory fever in 1752 ; and an elegant monument of marble was erected to his memory in Westminster Abbey.

WARREN (Charles), F.S. A., an eminent en- graver who first succeeded in engraving on steel. Dying suddenly of apoplexy, the gold medal award- ed him by the Society of Arts was presented byhi»

royal highness the duke of Sussex to his brother, in trust for his daughter. He died in the prime of life April 21st, 1823.

WARREN (sir J. Borlase), bart. G. C. B., admiral, •n-as descended from the ancient family of the Bor- lases in Cornwall. From Winchester school he at an early age entered the naval service, but soon after availed himself of a temporary opportunity, and entered himself of Emanuel College, Cam- bridge. On the breaking out of the French war he was appointed to the Flora frigate, and received the command of a squadron for the purpose of an- noying the coast of France. In 1794 he obtained for his services the

riband of the order of the Bath, and the year following acted as commodore of the division which landed a body of emigrants in Qui- beron Bay. Having removed into the Canada seventy-four, he joined the Brest fleet under lord Bridport, and being detached with a squadron came up on the 10th of October, 1798, off the coast of Ireland, with the Hoche, a French man-of- war, and three frigates laden with troops. After a smart engagement he succeeded in capturing the whole squadron, and received the thanks of parlia- ment. Soon after he hoisted his flag as rear-ad- miral, whence he arrived in due course at the rank of admiral of the white. On the conclusion of peace he went out as ambassador extraordinary to Russia, a situation which the dispute with that power respecting the island of Malta rendered of considerable delicacy, and he appears to have con- ducted himself with great prudence. He sat in four parliaments, being returned in those of 1774 and 1780 for the borough of Great Marlow, and in those of 1796 and 1802 for that of Nottingham. He died February 27th, 1822, in the apartments of sir 11. Keats at Greenwich Hospital.

WAKRINQTON, a borough-town and parish in West Derby hundred, Lancashire, eleven miles fiom Northwich, on the banks of the Mersey, which separates it from Cheshire eighteen miles east of Liverpool, and 173 from London. Its manufac- tures are sailcloth, canvas, fustian, pins, glass, &c. The church contains many ancient and handsome monuments, and has a neat chapel of ease, conse- crated in 1760, and another chapel of ease in the suburb, near the bridge. In the town are also a Roman Catholic chapel and several meeting-houses for Dissenters; a well-endowed free-school, and two good charity-schools, for educating and cloth- ing children of both sexes. It also has an academy for the education of youth, particularly for trade and merchandise. Over the Mersey is a handsome stone bridge, near which anciently stood a priory of Augustines. The river, by the aid of the tide, will admit small vessels to float up to the quays near the town. Besides its manufactures of huck- abacks and coarse cloths, Warrmgton has long been noted for the excellence of its malt. It is not in- corporated, but is governed by the justices of the peace, assisted by four constables. Here is a bank. Market on Wednesday, noted for fish, provisions, and all kinds of cattle, not inferior to the Leicester- shire breed. It sends one member to parliament.

WAR'RIOR, n. s. From war. A soldier; a military man.

I came from Corintb,

Brought to this town by that most famous warriow, Duke Menaphon. Shakspeare. Comedy of Errotin.

I sing the uarriour and his mighty deeds.

Laudtrdute.

Desire of praise first broke the patriot's rest, And made a bulwark of the warrwur's breatt. Young.

WARSAW, a large city of Europe, the capital of Poland, situated on the left bank of the Vistula. The course of that river is from south to north ; its depth here is less than that of the Thames at Lon- don, but its width somewhat greater. Warsaw is an open town covering a great extent of ground, the length of the town and suburbs being between three and four miles, its breadth between two and three, including large spaces occupied by gardens. The population is said, before it lost (in 1795) its character of capital of the whole of Poland, to have exceeded 90,000. In the subsequent years of trou- ble the population fell to 70,000 ; but since 1815, when the peace of the country was consolidated, and Warsaw again rendered the resort of a legisla- tive body, the population has been on the increase.

The city, originally little better than an accumu- lation of cottages, received considerable improve- ments from its Saxon sovereigns. Still it is an irregular place, exhibiting a singular contrast of ostentation and poverty.

The town is divided into ths Old and New, ex- clusive of four suburbs, of which one, Praga, lies on the right bank of the Vistula. The old town consists of one main street, with some smaller streets joining it on either side. It is miserably built, with the exception of a few public edifices. The New Town is less badly built, and extends along the banks of the Vistula, in a winding form, to the ex- tent of nearly three miles, including a number of gardens. It contains several churches, public buildings, and barracks. The largest edifice is the palace of the viceroy. Its extensive garden forms the only public walk of the place. The castle of Warsaw is a large quadrangle, with halls where the two houses of parliament (the diet and senate) hold their sittings.

Praga is memorable for the assaults made on it in the autumn of 1794 by the Russian army under Suwarrow ; assaults too nearly resembling those on Ismail. Praga was on that occasion almost to- tally destroyed, and was long ere it rose from its ruins. Now, however, it is rebuilding on a neat and even elegant plan. Of the castles or mansions in the vicinity of Warsaw one of the most remark- able is that which was once the residence of So- bieski, and which is still remarked for its beautiful gardens. Two miles to the west of the town is the village and field of Wola, the scene, in former ages, of the assemblage of the national diet.

Of the public establishments of Warsaw the principal are the offices of government, which, since 1815, have re-assumed a regal form. To- wards

the end of 1816 there was established a university, consisting, like those of Germany, of classes in theology, law, philosophy, and several of the sciences, including political economy. Here are also schools for surgery and drawing, a lyceum or high school, a college for the sons of the Ca- tholic nobility, arnd a military academy. To these are to be added a society for the sciences generally, and another for natural history and agriculture ; also a public library, and a collection of coins and medals. Warsaw has lost, in the wars of the last and present century, several of its ornaments, in particular the public library which belonged to the state, and was greatly injured in its conveyance, in 1795, to St. Petersburg!!. A collection of paint- ings, formed by king Stanislaus, was also removed.

The Vistula, here near the middle of its course, is navigable to a great extent upwards as well as downwards. At some seasons, however, great in- convenience has been experienced from the extent of its inundations, and the shifting of sandbanks. The middle of summer is the most favorable sea- son ; and during the interval that the channel is full, without overflow, it is computed that nearly 100 boats or barges, laden vuth the produce of the country, namely, corn, spirits, and wine, are daily sent down its stream. It abounds in fish. Woollen stuffs, soap, tobacco, gold and silver wire, are made here; also carriages, harness, and, to a small extent, carpeting. Here are likewise several whole- sale mercantile houses, whose business is the im- port of articles for the supply of the interior, and the export of Polish produce. Since 1817 two sjreat annual fairs have been established here, on the plan of those of Frankfort and Leipsic. They are held in May and November, each during three weeks. Warsaw is said to contain only six book- sellers.

It was in 1566 that the diet was transferred hither from Cracow. In the war with the Swedes, in the middle of the seventeenth century, Warsaw was occupied by the invaders, who made it (in 1655) the depot of the spoils collected in their progress through the country. When Charles XIJ. advanced, at a subsequent date (1703), to Warsaw, it surrendered without opposition. The chief part of last century passed without alarm; but in 1793 the Russian garrison that occupied it were expelled by the Poles, on receiving intelligence of the suc- cess of Kosciusko near Cracow. That leader, when obliged next year to change the scene of contest, retreated on Warsaw, and defended it with success against the Prussians during the summer of 1794, obliging them eventually to raise the siege. A different

fate awaited it on the arrival of Suwarrow. Praga being taken by assault, and delivered to pil- lage, the capital submitted without opposition. On the final partition of Poland, in 1795, this part of the country fell to the share of Prussia, and War- saw had no other rank than that of capital of a province until the end of 1 806, when the over- throw of the power of Prussia ltd to the formation, by Buonaparte, of the duchy of Warsaw. Of this state it continued the capital until the evacuation of Poland by the French in January, 1813. Since 1815 it has, in a manner, retained its character of a capital, being the residence of a viceroy of the emperor of Russia; also the place of meeting of the Polish parliament. 320 miles east of Berlin, and 240 S. S. E. of Dantzic.

WART, n.s. Sax. peajtr; Belg.w;erfe; Goth, and Swed. warta. A corneous excrescence on the flesh.

If thou prate of mountains, let them throw Millions of acres on us, till our ground, Singeing his pate against the burning sun, Make Ossa like a wart. Sliakipeare. Hamlet.

Like vile stones lying in saffroned tin, Or irarts, or weals, it hangs upon her skin. Donne.

WART SUCCORY, in botany, See LAPSANA.

\VARTON (Thomas), B.D., was fellow of Mag- dalen College, Oxford, and professor of poetry from 1718 to 1728. He was appointed vicar of Basingstoke in Hampshire and Cobham in Surrey. He published some tracts, but was excelled in fame by his sons.

W AUTOS (Joseph), D. D., was born in the ena

of 1721 or beginning of 1722. He was the eldest son of the above, and born in Oxford. For many years he was successively under and upper master of Winchester College, but resigned the last of these offices when he found the infirmities of age coming upon him; and was succeeded by Dr. Goddard. He was likewise prebendary of the cathedral church of Winchester and rector of Wick- ham in Hampshire, where he died, aged seventy- eight. His publications are few but valuable. A small collection of poems, without a name, was the first of them, and contained the Ode to Fancy, which has been so much and so deservedly ad- mired. They were all afterwards printed in Dods- ley's collection. He was also a considerable con- tributor to the Adventurer, published by Dr. Hawkesworth ; and all the papers which contain criticisms on Shakspeare were written by him and his brother Thomas. His last work, which he un- dertook for the booksellers at a very advanced age, was an edition of Pope's works.

WARTON (Thomas), the brother of the preceding, was born in 1728. He received the first part of his education at Winchester; and at the age of sixteen was entered a commoner of Trinity College, Oxford, under Mr. Geering. He began his poetical career early. In 1745 he published five pastoral eclogues, in which are beautifully described the miseries of war to which the shepherds of Germany were exposed. In 1749 appeared the Triumph of Isis. In 1751 he succeeded to a fellowship of his college. In 1753 appeared his observations on the Fairy Queen of Spenser, in 8vo., a work which he corrected, enlarged, and republished, in 2 vols., crown 8vo., in 1762. In 1756 Mr. Warton was elected professor of poetry, which office he held for the usual term of ten years. His lectures were remarkable for elegance of diction and justness of observation. One of them, on the subject of pas- toral poetry, was afterwards prefixed to his edition of Theocritus. In 1758 he assisted Dr. Johnson in the subscription to his edition of Shakspeare, and furnished him with some valuable notes. From the Clarendon press, in 1766, he published Antho- logiaB Graecae, a Constantino Cephala conditae, libri tres, 2 vols., 12mo. In 1770 he published, from the academical press, his edition of Theocri- tus, in 2 vols., 8vo. In 1771 he was elected a fellow of the Antiquarian Society, and was pre- sented by the earl of Lichfield to the living of Kid- dington in Oxfordshire, which he held till his death. He also in this year published an improved account of the Life of Sir Thomas Pope, founder of Trinity College, Oxford. The plan for a history of English poetry was laid by Pope, enlarged by Gray ; but to bring an original plan nearly to a completion was reserved for the perseverance of Warton. In 1774 appeared his first volume ; in 1778 the second and third, which brings the narratiye down to the reign of Elizabeth in 1581. In 1777 he collected his poems into an 8vo. volume, containing miscel- laneous pieces, odes, and sonnets. In vindication of the opinion he had given in his second volume of the History of Poetry, relative to the ingenious at- tempt of Chatterton to impose upon the public, he produced, in 1782, An Enquiry into the Authen- ticity of the Poems attributed to Rowley. In 1785 he was appointed poet laureat, on the death ot Whitehead, and elected Camden professor of an- cient history on the resignation of Dr. Scott. His last publication, except his official odes, consisted ot

Milton's smaller poems. A 4to. edition appeared in 1790, with corrections and additions. Until he reached his sixty-second year he continued to enjoy vigorous and uninterrupted health, but at that age he died in 1790.

WARWICK, the county-town of Warwickshire, in Knightlow hundred, on

the banks of the Avon, near the centre of the county, ninety-one miles north- west of London. In the vicinity of the market- place are houses so large and well built as satisfac- torily to prove the commercial respectability of the place. The town-hall is a handsome building of free-stone, supported by pillars, and the county- hall is a spacious and ornamental structure. The market-house is a substantial stone building; the county gaol is also an extensive and well-designed modern fabric, and the Bridewell is well adapted to its purposes. The different sects of Dissenters have places of worship in this town. Formerly it had six parish churches, but has now only two. St. Mary's is a noble Gothic structure; before the Re- formation it was collegiate, but at the dissolution Henry VIII. gave it to the inhabitants as a place of worship. In the choir are several handsome brass monuments of the ancient earls of Warwick buried there, and one of the earl of Essex, the unfortunate favorite of queen Elizabeth. In the entrance of the middle aisle is a handsome marble font ; on the south side is a beautiful chapel dedicated to the Virgin Mary. The church of St. Nicholas has a lofty spire, the tower of which contains eight bells. In former times there were many religious houses in this town, but they were rather hospitals ihan convents, and but poorly endowed. Here are ihiee charity-schools, an hospital for twelve de- cayed gentlemen, one also for eight poor women, and two others for decayed tradesmen. Over the Avon is an elegant stone bridge of one arch, erected at the expense of the earl of Warwick.

On the northern bank of the river stands the castle, on the solid rock, 100 feet higher than the level of the Avon, but on the north side it is even with the town, and has a charming prospect from the terrace. Across the river, communicating with the castle, there was a stone bridge of twelve arches, and, by a stone-work dam, the water forms a cas- cade under the castle walls. It is supposed to have been originally built by Ethelfleda, queen of Mercia, in the tenth century. William the Con- queror, considering the castle to be of great im- portance, enlarged it, and put it into complete repair, giving it to the custody of Henry de New- bury, on whom he bestowed the earldom of War- wick. During the barons' wars it was nearly de- molished by Gifford, goyernor of Kenilworth Castle, but it was soon afterwards rebuilt. In the reign of Richard II. Beauchamp, earl of Warwick, erected a tower at the north-east corner, the walls of which were ten feet thick. By James I. this castle was cranted to sir Fulk Greville, who expended £20,OCO in its reparation. In the reign of Charles II. Robert, earl of Brooke, embellished the whole building, and particularly fitted up the state apart- ments. It is at present one of the noblest castles remaining in England : the apartments are ele- gantly furnished, and adorned with many original paintings. At one end is a lofty tower with a beautiful small chapel.

The town is incorporated under a mayor, recorder, twelve aldermen, and twenty-four common-council- roen. In 1811 it was handsomely paved tw

is

now lighted with gas. It sends two members to parliament, who are chosen by the inhabitants pay- ing scot and lot. Warwick was nearly destroyed by fire in 1694, but, by the assistance of parlia- ment and the generosity of the public, it was soon after rebuilt in the handsome manner in which it now appears. There is a mill on the river Avon, one mile and a half from the town, for spinning cotton yarn ; and here are extensive manufactories for combing and spinning long wool, and other branches of the hosiery trade. The commercial prosperity of the town has been much increased by the canal.

At Guy Cliff House is recorded to have stood an hermitage, to which the renowned Guy, earl of Warwick, retired after the many valorous exploits recorded of him in this part of the country. In the suburbs was a chantry erected to his memory by Beauchamp, earl of Warwick, in the reign of Henry VI., with a statue to his memory. This Guy is supposed to have flourished in the reign of Athelstan, and besides the many victories over dra- gons, wild boars, See., is said to have decided the fate of the kingdom, in single combat, with an enormous giant that stood the champion of the Danes, at Mem Hill, near the walls of Winchester, where king Athelstan was besieged. Many curio- sities are still shown in the castle as belonging to the hero. Here are annual horse-races, well at- tended. Market on Saturday.

WARWICKSHIRE. This county at the time of the Roman invasion was occupied by two dis- tinct tribes, whom the invaders denominated the Cornavii and the Wiccii, or Wigantes, or, accord- ing to Tacitus, the Jugantes. During the Hep- tarchy, Warwickshire was part of the kingdom of Mercia, and the Saxons gave it the name of We- ringscyre, which signifies a station of soldiers. Warwickshire is an inland county, situated near the centre of the kingdom, in a north-west direction from London. It is bounded on the north-east by Leicestershire ; on the south-east by Northampton- shire and Oxfordshire ; on the south and west by Gloucestershire; on the west by Worcestershire; and on the north and west by Staffordshire ; and, according to Gary's map, lies between lat. 51° 57′ 30′ and 52° 42′ N., and between long. 1° 7′ 30′ and 1° 56′ 40′ W. from the observatory at Green- wich. The greatest length of the county is fifty-one miles and a quarter, from near Honey-hill in the north to Rollewright-stones in the south : and the greatest breadth from the eastern extremity of the county, about half a mile above the Northampton- road, to the western extremity at Headley-cross, is thirty six miles. The county contains, by Gary's map, 597,477J acres, at the calculation of eighty chains statute measure to a mile ; and is justly considered to be one of the most fertile and valuable counties in the kingdom. Although the city and county of

Coventry is a distinct district from Warwickshire, yet, lying within the county of Warwick, it is pro- per to include them in this sketch-. The city and county of Coventry lies in a north-east direction from Warwick, and is distant from it about ten miles and a quarter. It is bounded on every side by Warwickshire. The greatest length, from Bed- worth to a point near Baggington, in a north-east and south-west direction, is seven miles and a half; and the greatest breadth, from Nettle-hill to Browns- hill-green, in the direction of Karesley-preen, in about an east and west direction, is seven miles

and a quarter. The district contains in all about 18,161 acres. The county of Warwick is included in the midland circuit. It is divided into the four hundreds of Barlichway, Hemlingford, Kington, and Knightlow; the city and county of Coventry may be said to constitute a fifth hundred. It contains one city, thirteen market-towns, 200 entire parishes, and nine demi-parishes.

The climate of this county is generally esteemed mild and healthy. The inhabitants seem to be stout and robust, and, excepting in cases where the nature of their employment is injurious to health, live to an advanced age. The most general winds are from the south-west, and are usually accompanied with rain ; but not unfrequently the effects of an easterly variation are felt to ihe middle of May; and it scarcely need be remarked that vegetation must, in consequence, suffer severely. War- wickshire, upon the whole, however, is not to be considered as subject to any particular excess of damp or frost. The soil extending from Rolle- wright-stones, on the borders of Oxfordshire, to Long Compton, Barton-on-the-heath, Fourshire Stone, Woolford, Whichford, Weston, Cherington, Burmington, Brails-hill, and Barcheston, is mostly a strong clay loam on lime-stone. Thence to Barrow-hill, New St. Dennis, Idlicote, Whalcott, Halford, Pillerton-priors, Upper Eatington, Piller- ton-Ilersey, Butler's- Marston, Foss-Bridge, Cornbrook, Frix-Hall, and Compton Verney, is stronger clay on limestone rock ; and so continues to near Walton House, and Warwick, and down to the «ast side of the Avon, by Barford, all the %vay to Charlcott and Wellesbourn-Hastings. From Wal- ton to Kington, with little exception, the soil is a very strong cold clay and poor. Descending the hill to Kington, a vale of land appears to begin at the Brails-hill, and stretches along by Ox Hill, Herd Hill, Kington, Owlington, Froghall, Warm- ington, and Shotteswell, to Gaydon and Knight- cote, by Southam, Stockton, Leamington-Hastings, across the Leame River, to near Draycote. The soil about Kington is a strong clay loam, and continues tliis quality to within a

mile of Kadway, where it alters to a rich clay loam, and so remains through Mr. Millar's Park at Kadway, to nearly the bottom of the tower that is built at Ratley : there the soil changes to a brown and light clay loam on lime- stone rock, which runs along this height to the bor- ders of Oxfordshire, for nearly a mile in breadth. On descending the height near Warmington, the soil alters to a very rich clay loam, the surface all in rich old grass, extending across to North End. Thence the soil changes to a blue clay on a dark blue lime-stone, which continues to a mile beyond Gay- don, where the soil again changes to a light-colored clay on a light-colored lime-stone rock, until a near approach to Harwoods House, where it changes to a red clay loam. Within a short distance, in the direction towards Warwick, you reach a sandy red loam, which extends to about four miles north of Coventry. The Knightlow hundred, supposed to contain 173,714 acres, extends from Guy's Cliff, in an easterly direction, to the borders of Northamp- tonshire, and in a north-easterly direction to the borders of Leicestershire. A great proportion of this district is in tillage. From the borders of this hundred next Warwick to Leamington, Radford, AVhitnesh, Tachbrook-Mallory, to the Fossway, Offchurch, Ihmningham Hill, VVappenbury, Rig- ton, Woolston, Church Lawford, Esscr. Hill, New-

bold Revel, Newnham Padox, Wilby, Wibtoft, Withybrooke, Stretton Baskerville, Brinklow, Combe, Old Lodge, Willenhall, Tmford, Bagging- ton Hall, Baggington, Brook Bridge, Stoneleigli Park, Worsley Bridge, Finham Green, Canley, Fletchamsted Hall, Allesley Park, Alton Hall, Upper Green, West Wood, Kenilworth, Pedfen, Kenilworth Chase, Honily, Kenilworth Castle and Town, and Leek VVooton, to Warwick, the soil is mostly a red clay loam sand upon free-stone and lime-stone, and is in several places on good sharp gravelly bottom. From Harbury Heath to Bishop s Itchington, Old Itchington, Holmes House, 'Lad- brooke, Southam, Long Itchington, Stockton, Townlow, Leamington Hastings, extending easterly to the Oxford Canal, and across the Leame River to Draycote and Bourton, the soil is a strong clay loam on lime-stone rock. From Bourton to Thurleston, Dunchurch, Cock Robin, Hill-Morton, Rugby, and Bilton, the soil is light sandy land, in several places mixed with sharp gravel, well adapted for the turnip husbandry. From Rugby to Newbold-on-Avon, extending to Church- over and Bensford Bridge, the soil is a rich clay loam on lime-stone and marl. From Bensford Bridge, ex- tending along the borders of the county to High cross, Leicester Grange, and Stretton Bockeville, is a good strong clay soil. The city and county or Coventry, mostly bounded by the Knightlow hun- dred, is supposed to contain 18,162 acres. Al! around the town, for a considerable distance, is a very rich and deep sandy loam on marl and free- stone rock, most of which is in grass. The same kind of soil extends in a northerly direction by Karesley Green, Hall Hill and Newland Hall; in a northerly direction by Stoke, Wyh'en, Little Heath, Oxbury and Exhall

Green, the soil is more inter- mixed with clay, and in several parishes strong land. From Corley to Fillongley and Bedworth, is a red sand and clay loam, in several places very poor. From Griff to Ashby-de-la-Zouch, Mount Pleasant, Nuneaton, Nuneaton Fields, Weddington Hall, Caldecote, Witherley, Atherstone, Whiting- ton. Green House, Waverton, Bramcote, Austray, and Newton-in-the-Thistles, to Honeyshill,Secking- ton, Shutlington, Amington Hall, Amington, Pols- worth, Wilnecote, Wigford, Baddesley, Ensor, and Baxterley, is a strong clay loam on marl. At Merevale the soil alters to a white-colored sandy clay on bastard iron- stone, extending in a south- easterly direction by Oldbury Hall, where the soil becomes very poor and barren. About Hunts Hall, Birchley Heath, Ridge Lane, and Baxterley Heath, there are many different kinds of soil, but all very poor. On descending from the high ridge by Old Hall, Baxterley Hall, Baxterley, and Kin-ˆs- bury, the soil alters very much from a sandy loam to a red clay and marl, and to a moorish white and yellow clay on clay and marl. On crossing the Coles- hill River the soil alters to a light dry sharp gravel, for about a mile, when it changes to a poor barren white sandy moorish soil ; lies low and wet, and so continues north and south along the Birming- ham Canal for a considerable way, and about two miles in breadth. From the west side of Body- moor to Middleton, Hunts Green, Ash End, Can- well Gate, Sutton, Moorhall, Sutton Coldfield, and Berwood Common, the soil varies much, and is in general very poor and moorish. On crossing the Tame, opposite Castle Bromwich, the poor barren moorish light soil gives way to a good red clay

loam, and extends east by Coleshill, and west by Birmingham, on both sides of the Tame. At Cas- tle Bromwich the meadows on each side of the river are of a dark-colored earth, continuing more or less so to Aston. About Aston, Hackley Brook, and Birmingham, is a dry, light, sandy, red soil. From Sheldon and Wells Green, to Elmdon, Bickenhill, Ilampton-in-Arden, Solihull, Barston, Balsall Street, Balsall, Cuttlebrook, Knowle, Monkspath Bridge, \Varing Green, Sad-

town. It has become the resort of families of dis- tinction ; and the water having obtained the charac- ter of possessing all the qualities of that of Chelten- ham, with superior effects, it is supposed by many that Leaminglon, having the advantage of good roads, and a finer country, will soon rival Chelten- ham. On the north bank of the Avon River, in the Rugby division, and in the parish of King's Newn- liuin, there is a considerable spring, winch Hows fnmi beneath a limestone rock, where a bath is es-

ler's Bridge, and Beaumont Hill, is principally laMished. Warwickshire sends ten members to a strong marl clay land on a wet 'clay bottom, parliament, viz., four for the county, two for War- From Stone Bridge Inn, on the road from Coven- wick, two for Coventry, and two for Birmingham, try to Birmingham, and Little Packington ; extend- Of the worthies of Warwickshire we can only in,' northward, and from Great Packington to Me- particularise Edward Cave, the bookseller, who was riden, extending south and east, the soil is a dry horn at Newton in 1691. He deserves particular sandy loam. At and above lord Aylesford's park, notice for having been the projector and original extending in the direction of Whitacre, there is a proprietor of the Gentleman's Magazine, corn- tract of very poor wet-bottomed land ; from Meri- menced in the year 1731. — Samuel Clarke, one of den to Terkswell and Barton Green the soil im- the two thousand ejected ministers, and author of proves, and all in the direction of Kenilworth and several works, particularly Lives of Eminent per- Warwick is of a red sand and clay loam. From sons, &c., was born at Woolston about the year Warwick to Canoway Gate, Pindley Abbey, Lye- 1599 and died in 1682. His son Samuel was the green, Preston Baggot, Clark's Green, Ipsley, author of a Commentary on the Bible. — Michael Studley, Shelfield Wootton, Kinwarton, Alcester, Drayton, a poet of some note, but whose metre of Ragley, Woodchurch, Priors Salford, Arden's, twelve syllables is now antiquated and disregarded, Grafton, Alcock's Harbour, Copmass Hill, Aston, was born at Hartshull in 1563. His principal Cantlo'w, Hermitage, Wilncote, and Drayton, the work is the Poly Olbion, by which title he desig- soil in general is a strong clay loam on marl and nates England, the ancient name of Albion being lime-stone rock. From Atherstone to Stratford on by some derived from Olbion, a Greek word sig- Avon, in the direction of Wellesbourn, Tidington, nifying happy — Poly- olbion very happy. — Sir Alverston, Hampton Lucy, and Sherborne, is all fine Thomas Overbury, who fell a victim to the cruelty dry red clay loam and sandy loam, mostly in tillage, of that unprincipled nobleman, Carr, earl of So- In the strath of the Avon the soil is equal to that of merset, was born at Compton Scorfen in 1681. any county in England. About two miles from This unfortunate man's history is too long and too Meerhill, in the direction of Loxley, the soil is a interesting for such an abridgement as we can afford, strong clay loam, and good wheat and bean land. He was poisoned in the Tower, by the contrivance On the whole, almost every species of soil is to be of Somerset and his wife, in the year 1613. He met wiih, except what is incorporated with chalk was an elegant scholar, and wrote several pieces in and flint. The principal rivers running through the prose and verse. William Shakspeare, the immor- county of Warwick are the Avon and Tame. The tal dramatist, born at Stratfotd-upon-Avon in 1564, Avon rises in Leicestershire, enters Warwickshire and died in the year 1616. — Sir William Dugdale, at Bensford Bridge, and runs in a

serpentine form the celebrated historian and antiquary, was born in a south-west direction by Warwick, Stratford-on- near Coleshill in 1605; and died in 1686. His Avon, and Bitford, and leaves the county a little principal works are the Monasticon Anglicanum, below Abbots' Salford. In its course it receives and The Antiquities of Warwickshire Illustrated — the Dove River a little below Brownsover; the William Somerville, author of The Chase, a poem. Leame a little above Warwick ; the Stour about a was born in the year 1692 and died in 1743. — Fran- mile and a half below Stratford ; and the Alne cis W illughby, an eminent naturalist, the intimate about half a mile below Prior's Salford ; it also re- friend of Ray, was born in 1635. Died in 1672. ceives several smaller streams, proceeding in the Warwickshire is a great manufacturing county, same direction through Worcestershire, and falls The hardware of Birmingham, particularly the ce-

into the Severn at Tewkesbury in Gloucestershire. The Tame and the Rea rise in Worcestershire, and

lebrated works of Messrs. Bolton and Watt, are known all over Europe ; as are also the silk works

are joined by two small rivulets, one rising north- of Coventry. Here also are manufactures of west from Birmingham, the other rising north from worsted and hosiery; also of various kinds of cot- Upper Wilton between Castle Bromwich and Bir- ton goods. Nails, pins, and needles, are also made niingham, where it receives the name of the Tame, in this county.

WA'RY, adj. ~\ Sax. pan. Cautious ; scni- WA'RILV, adv. > pulous : the adverb and notta WA'RINESS, n. s. j substantive corresponding.

It continues its course through the north-west part of the county, in a north-east and northerly direc- tion, and receives the Cole, Blythe, Bourne, and Anktr, which rise near Shillon, and there takes its

The charge thereof unto a courteous sprite

course by Nuneaton, Witherley, Polesworth, Am- Commended was, who thereby did attend,

ington, and Tamworth, where it leaves the county. There are besides many sluggish streams of no note. The- county is well supplied with good wholesome water, where it comes from the lime- stone. The mineral water at Leamington has so much increased in repute, that this place, once a

And warily awaited day and niˆ-ht, From other covetous fiends it to defend. Spenser.

He is above, and we upon earth ; and therefore it beliovcth our words to be vary and few. Hunker.

So rich a prize could not so u-arily be fenced but that Portugals, French, English, and now of late the Low

small village, has in cons' <|".i'iitf U; n u.itly en Countrymen, have laid in their own barns part of the • arged, and begins to assume the appearance of a Spaniards' harvest.

WASHINGTON.

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Each warns a uariet carriage in the thing, Lest blind presumption work their ruining. Daniel.

To determine what are little things in religion, great wariness is to be used. Sprat's Sermons.

It will concern a man to treat conscience awfully and warily, by still observing what it commands, but especially what it forbids. Sonth's Sermons.

Others grow iron/ in their praises of one, who sets too great a value on them, lest they should raise him too high in his own imagination. Addison's Spectator.

I look upon it to be a most clear truth ; and expressed it with more u-ariness and reserve than was necessary.

Atterbnry.

WASH, v. a., v. n., & n. s.

WASH'BALL, n. s.

WASH'ER, WASH'POT. WASH'Y, adj. wet ; color by washing

Sax. pay-can ; Teut. u'crschen ; Belg. wass- • chen. To cleanse by ablution ; purify by moisture ; moisten ; to perform the act of ablu- tion ; cleanse clothes : a wash is only applied to color superficially; a cosmetic; alluvion: bog; marsh ; a quantity of linen washed at once : the com- pounds seem to require no explanation.

Wash me thoroughly from mine iniquity, and cleanse me from my sin. I'saim li. 2.

Be baptized, and wash away thy sins. Arts xxii. 16.

How fain, like Pilate, would 1 trash my hands Of this most grievous guilty murther done !

Shakspeare. Richard III.

She can irath and scour. Id. Gent, of Verona.

Full thirty times hath Phoebus' car gone round Neptune's salt u-ath, and Tellus' orbed ground.

Shakspeare.

Quickly is his laundress, his washer, and his wringer.

Id.

Try whether children may not have some troth to make their teeth better and stronger. Bacon's Xat. Hut.

A polish of clearness, evenly and smoothly spread, not over thin and washy, but of a pretty solid consist- ence. Wotton.

Sins of irreligkm must still be so accounted for, as to crave pardon, and be washed off by repentance.

Taylor,

Behold seven comely blooming youths appear, And in their hands seven golden icashpots bear.

Cotcley.

On the u-ashy ouze deep channels wore, Easy ere God had bid the ground be dry. Milion.

He tried all manner of washes to bring him to a better complexion ; but there was no good to be done.

L' Estrange.

The wash of pastures, fields, commons, and roads, where rainwater hath a long time settled, is of great advantage to all land. Mortimer's Husbandry.

To wash over a coarse or insignificant meaning, is to counterfeit nature's coin. Collier of the Aspect.

To steal from rainbows, ere they drop in showers, A brighter trash. Pope's Rape of the Lock.

Here gallypots and viols placed, Some filled with washes, some with paste. Swift.

I asked a poor man how he did ; he said he was like a trathball, always in decay. Id.

Recollect the things you have heard, that they may not be washed all away from the mind by a torrent of other engagements. Watts.

\ ASHING, in painting, is when a design, drawn with a pen or crayon, has some one color laid over it with a pencil, as Indian ink, bistre, or the like, to make it appear the more natural, by adding the shadow of prominences, apertures, &c., and by imitating the particular matters whereof the thing is supposed to consist.

WASHINGTON (George), the founder of the freedom of the United States of America, and the first president of that congress which laid the foun-

dation of their union, was born on the llth of Fe- bruary, 1732, O. S., in the parish of Washington, Virginia. He was descended from an ancient family in Cheshire, of which a branch had been established in Virginia about the middle of the seventeenth century. The earl of Buchan assures us that this ' ancient English family was allied to those of Fairfax and Ferrers, and many others ot the highest order, as abundantly appears from public records, and his mother's more immediately from that most ancient Saxon family of Fairfax, of Tow- cester in Northumberland, and of Walton and Gilley in Yorkshire, now represented by those of Fitzwilliam and Buchan, by which means the fa- mily of general Washington came to possess the lands of Mount Vernon, in Fairfax county in Vii- ginia, which came in dower by a daughter of that house from whom he was descended.' His classical instruction was such as the private tutor of a Virginian country gentleman could at that period impart. But before he was twenty he was appointed major in the colonial militia, and he had very early occasion to display those political and military ta- lents of which the exertions on a greater theatre have since made his name so famous throughout the world. In the disputes which arose between the French and English officers, on the subject of the boundaries of the English and French territo- ries in America, major Washington was employed by the governor of Virginia in a negociation with the French governor of Fort du Quesne (now Pitsborough), who threatened the English frontiers with a body of French and their Indian allies. He succeeded in averting the invasion ; but hostilities becoming inevitable, he was in the next year ap- pointed lieutenant-colonel

of a regiment raised by the colony for its own defence, to the command of which he soon after succeeded. The unfortunate expedition of Braddock followed in 1755. Colonel Washington served in that expedition only as a volunteer ; but such was the general confidence in his talents that he may be said to have conducted the retreat. After having acted a distinguished part in a subsequent and more successful expedi- tion to the Ohio, he was obliged, by ill health, in 1758, to resign his commission. The sixteen years which followed afford few materials for the bio- grapher. Having married Mrs. Custis, a Virginian lady of amiable character and respectable connex- ions, he settled at his beautiful seat of Mount Vernon ; where, with the exception of such at- tendance as was required by his duties as a magis- trate and a member of the assembly, his time was occupied by his domestic enjoyments and the cul- tivation of his estate. At the commencement of the unfortunate differences between Britain and America, Mr. Washington was sent as a delegate from Virginia to the Congress which met at Phila- delphia on the 26th of October, 1774. He was appointed to the command of the army which had assembled in the New England provinces, to hold in check the British army then encamped under general Gage at Boston, and he took upon himself the command of that army in July, 1775. To de- tail his operations in the years which followed would be to repeat the history of the American \rr. Within a very short period after the declaration < f independence, the affairs of America were in a con- dition so desperate that perhaps nothing but ti e peculiar character of Washington's genius could have retrieved them. The issue of the contest ,s

known. The magnanimity of Washington during the ravages of civil war, in which he acted so con- spicuous a part, has been much and justly cele- brated. The unfortunate case of major Andre can hardly be urged as an exception. His acting as a spy justified his punishment. The conclusion of the American war permitted Washington lo return to those domestic scenes from which no views of ambition seem to have had the power to draw his affections. As a genuine proof of his patriotism lie would receive no pay for eight years' service, but defrayed his expenses during the war, out of his private purse. But he was not allowed long to en- joy this privacy. To remedy the distress into which the country had been thrown by the war a conven- tion of delegates was assembled at Philadelphia, which strengthened the bands of the federal union, and bestowed on congress those powers which were necessary for good government. Washington was the president ; and in three years after he was elected president of the United States of America under the new constitution. During his chief ma- gistracy the French revolution took place, which convulsed the whole

political world, and which tried most severely his moderation and prudence. Washington, as a virtuous man, must have ab- horred the crimes committed in France. But, as the first magistrate of the American commonwealth, he was bound only to consider how far the interest and safety of the people whom he governed were affected by the conduct of France. He saw that it was wise and necessary for America to preserve a good understanding and a beneficial intercourse with that great country, in whatever manner she was governed, as long as she abstained from com- mitting injury against the United States. Guided by this just and simple principle, uninfluenced by »he abhorrence of crimes which he felt, he received JVlr. Genet the minister of the French republic. The history of the outrages which that minister committed, or instigated, or countenanced, against the American government must be fresh in the memory of all our readers. The conduct of Wash- ington was J" model of firm and dignified modera- tion. Insults were offered to his authority in offi- cial papers, in anonymous libels, by incendiary declaimers, and by tumultuous meetings. The law of nations was trampled under foot. His confi- dential ministers were seduced to betray him, and the deluded populace were so inflamed by the arts of their enemies, that they broke out into insurrec- tion. No vexation, however galling, could disturb the tranquillity of his mind, or make him deviate from the policy which his situation prescribed. During the whole course of that arduous struggle, his personal character gave that strength to a new magistracy which in other countries arises from ancient habits of obedience and respect. The au- thority of his virtue was more efficacious for the preservation of America than the legal powers of his office. During this turbulent period he was re-elected to the office of the presidency of the United States, which he held from April, 1789, till September, 1796. Throughout the whole course of his second presidency the danger of America was great and imminent. The spirit of change, indeed, at that period shook all nations. But in other countries it had to encounter ancient and so- jidly established power ; it had to tear up by the roots long habits of attachment in some nations for their government; of awe in others ; of acquiescence

and submission in all. But in America the govern- ment was new and weak. The people had scarcely time to recover from the feelings of a recent civil war. Washington employed the horror excited by the atrocities of the French revolution for the most honest and praiseworthy purposes; to preserve the internal quiet of his country; to assert the dignity, and to maintain the rights, of the commonwealth which he governed against foreign enemies. He avoided war without incurring the imputation of pusillanimity. He cherished the detestation of" Americans for anarchy without weakening the spirit of liberty ; and he maintained, and even consoli- dated, the authority of government without abridg- ing the

privileges of the people. The resignation of Washington, in 1790, was a measure of prudence as well as of patriotism. From his resignation till July 1798 he lived in retirement at Mount Vernon. At this latter period it was no longer possible to submit to the accumulated insults and injuries America was receiving from France, and the United States resolved to arm by land and sea. The com- mand of the army was bestowed on general Wash- ington. In this office he continued during the short period of his life which still remained. On Thursday the 12th of December, 1799, he was seized with an inflammation in his throat, which became considerably worse the next day, and of which, notwithstanding the efforts of his physi- cians, he died on Saturday the 14th of December, 1799, in the sixty-eighth year of his age.

WASHINGTON, a county on the east side of Maine, bounded on the east by New Brunswick, on the south by the Atlantic, and on the west by Hancock and Penobscot counties. Chief towns, Machias and Eastport.

WASHINGTON, a post town, the capital of Wash- ington county, Pennsylvania, on the head branches of Chartier's Creek : twenty-five miles south-west of Pittsburg, twenty-five W. N. W. of Brownsville, and thirty-two E. N. E. of Wheeling. It is a flourishing town, and contains a court-house, a jail, two banks, two printing-offices, a college, a very large steam flour mill, various other public buildings and manufacturing establishments, and about 400 dwelling houses. It is situated in a fertile, well cultivated, but broken country. Wash- ington College was established a few years later than the college at Canonsburg. It has a large stone edifice of three stories, for the accommodation of students. The library and philosophical appa- ratus are valuable. The officers are a president and two professors, one of languages and one of mathematics and natural philosophy. The number of students, in 1817, was about 100, a great part of whom were pursuing studies preparatory to the collegiate course. Commencement is held, on the fourth Wednesday or Thursday in September, after which there is a vacation till the 1st of November. The course of collegiate education is oompleted here in three years.

WASHINGTON, the metropolis of the United States, in the district of Columbia, is situated in long. 1° 52′ W. of Philadelphia, 77° 2′ W. of Greenwich, and 79° 22′ W. of Paris; lat. 38° 58 N. The city of Washington became the seat of the national government in 1800. It is built on the Maryland side of the Potomac, 295 miles by the course of the river and bay, from the Atlantic, on a point of land between the Eastern Branch and the Potomac; and its site, as laid out, extends two or

three miles up each of these rivers. It is separated from Georgetown by Rock Creek, over which are two bridges, and there is a bridge over the Potomac more than a mile in length, leading to Alexandria. A canal is constructed from the Potomac, passing up the Tiber, a small stream which flows through Washington, and then across the plain of the city to the Eastern Branch, forming a communication between the two rivers.

The natural situation of Washington is pleasant and salubrious ; and it is laid out on a plan which, when completed, will render it one of the handsomest and most commodious cities in the world. It is divided into squares by spacious streets or avenues, running north and south, intersected by others at right angles ; these are crossed transversely by fifteen other spacious streets, or avenues, named after the different states. The rectangular streets ire designated by the letters of the alphabet and by numbers. The grand avenues, and such streets as lead immediately to public places, are from 130 to 160 feet wide ; the other streets are from ninety to 110 feet wide. A very small part of the plan only is as yet completed. The buildings, which cover but a small portion of the site as laid out, stand in four or five separate divisions ; and Wash- ington at present exhibits the appearance, not of one regular city, but of a collection of villages, in which the splendid edifices appear of a dispropor- tionate grandeur. About three-fourths of the buildings are of brick, and there are some elegant private mansions.

The principal public buildings and institutions in the city are the Capitol, the president's house, the buildings for the great departments of the national government, the General Post office, the navy yard, extensive barracks for the marine corps, a jail, a theatre, a public library, four banks (in- cluding a branch of the United States' bank), and ten houses of public worship, two for Presbyteri- ans, two for Episcopalians, two for Baptists, two for Methodists, one for Catholics, and one for Friends. The Capitol is situated on an eminence, commanding a beautiful prospect of the Potomac, of every part of the city, and of a wide extent of the surrounding country. It is surrounded by an elegant iron railing, enclosing a large extent of ground, which is planted with various kinds of trees and shrubs. The two wings only have yet been erected. They are each 100 feefsquare, and are to be connected by a well-proportioned centre. The foundation of the central part has recently been laid, and the Capitol is now in rapid progress, and is finishing in a style of elegance and grandeur worthy of a nation of great resources. It is built of white freestone, and when completed will be a most magnificent edifice, presenting a front of 362 feet. The president's house is situated on a gentle elevation about a mile and a half west of the Capi- tol, and is built of the same kind of stone. It is a very elegant edifice, 170 feet

by eighty-five, of two stories, with a suitable basement story. The buildings which contain the offices for the great depart- ments of government consist of four spacious brick edifices of two stories, situated at a small distance from the president's house. In these buildings are kept the papers, records, archives, and offices of the departments of state, of the treasury, of war, and of the uavv. The General Post-office is a large briok edifice, situated about a mile W. N. W. of the Capitol, and contains, besides the various

offices belonging to the post-office establishment the general land office ; the patent office, where are deposited all the models of inventions for which patents have been granted, forming a very exten sive and curious collection ; and a temporary li- brary room for the national library, purchased, in 1815, of the honorable Thomas Jefferson, late pre- sident of the United States, and consisting of about 8000 volumes. The navy yard is situated on the Eastern Branch, which forms a safe and commodi- ous harbour, being sufficiently deep for large ships about four miles from its mouth.

On the 24th of August, 1814, this city was taken by the British, who burnt the public edifices, not sparing even the national library. All these edi- fices are now rebuilt and repaired, except the Ca- pitol. The foundation of the centre of the Capitol was laid on the 24th of August, 1818, just four years after the conflagration. It is expected that it will be completed in four years : earlier, probably, than it \vould have been, but for the visit of the British. This event has tended greatly to increase the prosperity of the city, the national pride hav- ing been excited not only to rebuild what was de- stroyed, but to complete what was unfinished.

This is likewise the name of many post-towns and counties of the United States.

WASHINGTON ISLANDS. The group called Washington Islands, was discovered in the year 1791 by captain Ingraham from Boston, in a voy- age from the Mendoza Islands to the north-west of that continent. They were also seen a few weeks after by M. Marchand, in the French ship Le Solide, who considered them as previously un- known, and called them Isles de la Revolution. In the following year they were again seen by lieutenant Hergest of the British navy, and cap- tain Brown, the master of a merchant ship belong- ing to the same nation. The last of their discover- ers was captain Roberts, of the American ship Jefferson, who fell in with them in 1793. Ingra- ham had conferred the name of Washington upon Uahuga, and Roberts now gave the same appella- tion to the whole group.

Washington Islands lie north-east of the Mar- quesas, and are eight in number, stretching from 9° 30′ to 7° 50′ of S. lat., and from 139° 5′ to

140° 13′ W. long. These islands are the following: viz. Nukahiwa, which is the chief island of the group, from its being about seventeen miles long. Uahuga is the most easterly island, and its extreme length nine miles. Uapoa lies farther south. At the distance of about a mile and a half from Uapoa there is a small flat island, about two miles in cir- cumference, which Marchand called Isle Platte. Thirty-three miles nearly north-west of the southern extremity of Nirkahuwa lie the two small unin- habiled islands of Mottuaity, which are separated from each other by a channel about a mile broad. The inhabitants of the other islands occasionally visit them in their fishing expeditions, but they never undertake this voyage without being impeded to it by necessity, as the imperfect construction of their canoes renders it dangerous. Hiau and Fat- tuuhu are the other two islands, which are situated about sixty miles nearly north from the west end of Nukaimva. Krusenstern describes the inhabit- ants of this group as indisputably the handsomest in the South Seas. The men are all stout and well made, possessing great regularity of features, and strongly marked by an air of real goodness. Their

complexions in a natural stale are but a little darker than those of Europeans, though rendered almost black by tattooing.

WASP, n. s. \ Sax. peapp ; Lat. vespu ; Fr.

WASP'ISH, adj. \guespe. A brisk stinging in- sect, in form resembling a bee : waspish is ma- lignant; peevish ; irascible.

More waips, that buz about his nose, Will make this sting the sooner. Shakspeare.

Come, you wasp, you are too angry, — If I be waspish, best beware my sting. Id.

Encountering with a wasp, He in his arms the fly doth clasp. Drayton.

The tailor's wife was only a good hearty shrew, un- der the impotency of an unruly waspish humour : she would have her will. L' Estrange.

Much do I suffer, much, to keep in peace This jealous, waspish, wrong-head, rhiming race. Pope.

WAS'SAIL, n. s. > From Sax. paej-hoel, your

WAS'SAILER. 5 health. An ancient English liquor made of apples, sugar, and ale : drunken bout : he who revels in such bouts.

The king doth wake to-night, and takes his rouse, Keeps wassuii, and the swaggering upspring reels.

Shakspeare.

I'm loth to meet the rudeness and swill'd insolence Of such late wassailers. Milton.

WASSOTA, a celebrated fortress of Hindostan. in Bejapore, and in the district of the Concan. There are two forts about 1000 yards from each other, both situated on rocks nearly perpendicular, and 3000 feet high. The adjacent scenery is of the grandest description. In April, 1818, a British force, accompanied by the rajah, laid siege to it, and, notwitstanding its great strength, such was the effect of the British shells, that the governor capi- tulated in a few days, and delivered up the ladies in safety, along with the family jewels, to the amount of several lacks of rupees.

WASTE, v. a., v. n., adj., &-\ Sax. aper-tan ;

WASTE'FUL, adj. [n. s. I Teutonic waste ;

*WASTE'FULLY, adv. *> Belgic woesten ; (*

WASTE'FULNESS, n.s. I Italian gvast are ;

WAST'ER. J Latin vastare. To

diminish; consume; squander; desolate; wear out : as a verb neuter, to dwindle; be consumed : as an adjective, destroyed ; useless ; superfluous . as a noun substantive, wanton or luxurious con- sumption or destruction ; loss; mischief; desolate or useless ground : the adjective, adverb, and noun substantives following, correspond.

fie found him in a desert land, and in the waste howling wilderness. Deut. xxxii. 10.

Man dieth and wasieth away. Job, xiv, 10.

In wilderness and wasteful desarts strayed, To seek her knight. Spenser.

Reasons induce us to think it a good work, which they, in their care for well-bestowing of time, account umte. Hooker.

These gentlemen, on their watch, In the dead it-cut? and middle of the night. Had been thus encountered. Shalttpeare.

The fire that mounts the liquor till 't runs o'er, Seeming t' augment it, watie it. /*

In such cases they set them off more with wit, and activity, than with costly and wasteful expences.

Boom.

Thin air is better pierced, but thick air oreserveth the sound better from > Id.

Divers Roman knights, The profuse watters of their patrimonies, So threaten with their debts, as they will now Run any desecrate fortune. Ken Jontnn.

He only their provisions wastes and burns. Daniit-

Outrageous as a sea, dark, wasteful, wild. Milton.

Forty days Elijah, without food, Wandered this barren waste. Id.

Lords of the world's great waste, the ocean, we Whole forests send to reign upon the sea. Waller.

Could sighs furnish new breath, or draw' life and spirits from the wasting of yours, your friends would encourage your passion. Temple.

From that dire deluge, through the wat'ry waste, Such length of years, such various perils past.

Dry den.

The latter watch of wasting night, And setting stars, to kindly sleep invite. Id.

The multiplication and obstinacy of disputes, which have so laid waste the intellectual world, is owing to nothing more than to the ill use of words. Locke.

Plenty in their own keeping makes them wanton and careless, and teaches them to be squandeieis and waiters. Id.

It was providently designed to repair the waste daily made by the frequent attrition inmastincatfon. Ray.

How has kind heaven adorned the happy land, And scattered blessings with a wasteful hand ! Addis.

When thus the gathered storms of wretched love, In my swoln bosom, with long war had strove, Laid all the civil bonds of manhood waste, And scattered ruin as the torrent past. Prior.

The patient is much wasted and enfeebled ; and he is the more so, because in this confined state of the dis- temper there is generally a great dejection of appetite.

Blachmore.

See the man, who spacious regions gave A waste for beasts, himself denied a grave. Pope.

Secure the workings of your soul from running to waste, and even your looser moments will turn to happy account. Watts.

WASTREL, n. s. From waste. Denned below. Their works, both stream and load, lie in several or in wastrel, that is, in inclosed grounds or in commons.

Carew.

WATCH, n. s., v. n., & '

WATCH'ER, n. s. [y. a.

WATCH'FUL, adj.

WATCH'FULLY, adv.

WATCH'FULNESS, n. s.

WATCH'-HOUSE, .

WATCH'INO,

WATCH'-MAKER,

WATCH'MAN,

WATCH'-TOWER,

WATCHWORD.

watch is, to wake; forbear sleep; be vigilant, at- tentive, or observing : as a verb active, to guard ; have in keep ; tend ; observe : the derivatives and compounds are of obvious meaning.

My soul waiteth for the Lord, more than they that watch for the morning. Ptalm cxxx. 6.

Saul sent ministers unto David's house to watch him and to slay him. 1 Sam. xix. 11.

I will watch over them for evil, and not for good.

Jer. xlv.

Be watchful, and strengthen the things ready to die.

Rev. iii.

A watchword every minute of the night goeth about • he walls, to testify their vigilancy. Sandys.

Before her gate high God did sweat ordain, And wakeful uatchei, ever to abide. «>.

Still, when she slept, he kept both vate>i and ward.

Id. We have heard the chimes at midnight, master Shal

low.

— That we have, Sir John : our watchword, hem ! boys.

Shaksjieare.

Sax. pfficce; Teut. wacht ; Swed. u-ukt. Forbearance of sleep ; attendance or guard involving such for- bearance ; vigilance ; place, post, office, or sphere of a guard ; a man on guard ; period of the night ; a pocket clock : to

Get on your night-gown, lest occasion call us, And shew us to be watchers. Id.

Call home our exiled friends, That fled the snares of watchful tyranny. Id.

Hie thee to thy charge ; Use careful watch, chuse trusty centinels. Id.

Turn him into London streets, that the icatchmen might carry him before a justice. Buctm.

Love can find entrance not only into an open heart, but also into a heart well fortified, if watch be not well kept. Id.

Vp unto the watchtmcer get, And see all things despoiled of fallacies. Donne.

When by God's mercy in Christ, apprehended hy faith, our hearts shall be purified, then to set watch and ward over them, and to keep them with all diligence.

Perkhis.

The experience of our own frailties, and the considera- tion of the watchfulness of the tempter, discourage us.

Hammond.

Watch over thyself, counsel thyself, judge thyself impartially. Taylor.

All night he will pursue ; but his approach Darkness defends between, till morning watch. Milton.

Sleep, listening to thee, will watch. Id.

A watch, besides the hour of the day, gives the day of the month, and the place of the sun in the zodiac.

Hale.

He is bold, and lies near the top of the water, watch- ing the motion of any water-rat that swims betwixt him and the sky. Walton.

It is observed by those that are more attentive watchers of the works of nature. More.

Xodding a while, and u-atchful of his blow, He fell ; and falling crushed the ungrateful nymph be- low. Dryden.

Readers should not lay by that caution which be- comes a sincere pursuit of truth, and should make them always watchful against whatever might conceal or mis- represent it. Locke.

Smithing comprehends all trades which use forge or file, from the anchor-smith to the watchmaker ; they all using the same tools, though of several sizes. Moxon.

An absurdity our Saviour accounted it for the blind to lead the blind, and to put him that cannot see to the office of a watch. South.

All the long night their mournful watch they keep, And all the day stand round the tomb and weep.

Additon.

Love, fantastick power ! that is afraid To stir abroad till watchfulness be laid, Undaunted then o'er cliffs and valleys strays, And leads his vot'ries safe through pathless ways.

Prior.

Husbands are counselled not to trust too much to their wives owning the doctrine of unlimited conjugal fidelity, and so to neglect a due watchfulness over their manners. Arbuthnot,

The bullet, not having been extracted, occasioned great pain and patchings. Wiseman't Surgery.

The melancholy tone of a watchman at midnight.

Swift.

Prejudices are cured by a constant jealousy and u-atchftdnets over our passions, that they may never interpose when we are called to pass a judgment.

Wattt,

WATCH, in the art of war, a number of men posted at any passage, or a company of the guard? who go on the patrole.

NY ATCH, in the navy, the space of time wherein one division of a ship's crew remains upon deck to perform the necessary services, whilst the rest are relieved from duty, either when the vessel is under sail or at anchor. The length of the sea- watch is not equal in the shipping of different nations. It is always kept four hours by our

British seamen, if we except the dog-watch, be- tween 4 and 8 P.M., that contains two reliefs, each of which are only two hours on deck. The intent of this is to change the period of the night watch every twenty-four hours ;

so that the party watch- ing from eight till twelve in one night, shall watch from midnight till 4 A.M. on the succeeding one. In France the duration of the watch is, or was, extremely different, being in some places six hours, and in others seven or eight; and in Turkey and Barbary it is usually five or six. A ship's com- pany is usually classed into two parties, one of which is called the starboard, and the other the larboard watch ; it is, however, occasionally se- parated into three divisions, as in a road or in par- ticular voyages. In a ship of war the watch is generally commanded by a lieutenant, and in mer- chant ships by one of the mates ; so that, if there are four mates in the latter, there are two in each watch; the first and third being in the larboard, and the second and fourth in the starboard watch ; but in the navy, the officers who command the watch usually divide themselves into three parties, to lighten their duty.

WATCH is also used for a small portable move- ment or machine for the measuring of time, having its motion regulated by a spiral spring. Watches, strictly taken, are all such movements as show the parts of time ; as clocks are such as publish it by striking on a bell, &c. But commonly the name watch is appropriated to such as are carried in the pocket, and clock to the large movements, whether they strike the hour or not. See CLOCK.

WATCH WORK. The regulator of a clock or watch is a pendulum or a balance. Without this check to the motion of the wheels, impelled by a weight or a spring, the machine would run down with a motion rapidly accelerating, till friction and the resistance of the air induced a sort of unifor- mity, as they do in a kitchen jack. But if a pen- dulum be so put in the way of this motion, that only one tooth of a wheel can pass it at each vibra- tion, the revolution of the wheels will depend on the vibration of the pendulum. This has long been observed to have a certain constancy, insomuch that the astronomers of the east employed pendu- lums in measuring the times of their observations, patiently counting their vibrations during the phases of an eclipse or the transits of the stars, and renewing them by a little push with the finger when they became too small. Gassendi, Riccioli, and others, in more recent times, followed this example. The celebrated physician Sanctorius is the first person who is mentioned as having applied them as regulators of clock movements. Machines, however, called clocks, with a train of toothed wheels, leading round an index of hours, had been contrived long before. The earliest of which we have any account is that of Richard of NY'allingford, abbot of St. Alban's, in 1326. It appears to have been regulated by a fly like a kitchen jack. Not long after this, James Dondi made one at Padua, which had a motus succussorius, a hobbling or trotting motion ; from which expression it seems probable that it was regulated by some alternate movement. NN'e cannot think that this was a pen- dulum, because,' once it was introduced, it never could have been supplanted by a balance Gali- leo proposed the pendulum,

about the year 160O. Pendulum clocks then came into general use, and were found to be greatly preferable tc balance

clocks, as accurate measurers of time. Mathemati- cians saw that their vibrations had some regular dependence on uniform gravity, and in their writ- ings we meet with many attempts to determine the time and demonstrate the isochronism of the vibra- tions. Riccioli, Gassendus, and Galileo, made similar attempts to explain the motion of pendu- lums, but without success. This honor was reserv- ed for Mr. Huyghen, the most elegant of modern geometers. He had succeeded in 1656 or 1657 in adapting the machinery of a clock to the maintain- ing of the vibrations of a pendulum. Charmed with the accuracy of its performance, he began to investigate with scrupulous attention the theory of its motion. By the most ingenious and elegant application of geometry to mechanical problems, he demonstrated that the wider vibrations of a pen- dulum employed more time than the narrower, and that the time of a semicircular vibration is to that of a very small one nearly as thirty-four to twenty nine ; and aided by a new department of geome- trical science invented by himself, viz. the evolu- tion of curves, he showed how to make a pendulum swing in a cycloid, and that its vibrations in this curve are all performed in equal times, whatever be their extent. But before this time Dr. Hooke, the most ingenious and inventive mechanician of his age, had discovered the great accuracy of pendulum clocks, having found that the manner in which they had been employed had obscured their real merit. They had been made to vibrate in very large arches, the only motion that could be given them by the contrivances then known ; and in 1656 he invent- ed another method, and made a clock which moved with astonishing regularity. Using a heavy pen- dulum, and making it swing in very small arches, the clocks so constructed were found to excel Mr. lluyghens's cycloidal pendulums. It has been found that the unavoidable inaccuracies, even of the best artists, in the cycloidal construction, make the performance much inferior to that of a common pendulum vibrating in arches which do not exceed three or four degrees from the perpendicular. Such clocks alone are now made, and they exceed all expectation. We have said that a pendulum need- ed only to be removed from the perpendicular, and then let go, in order to vibrate and measure time. Hence it might seem that nothing is wanted but a machinery so connected with the pendulum as to keep a register, as it were, of the vibration. It could not be difficult to contrive a method of doing this : but more is wanted. The air must be dis- placed by the pendulum. This requires some force, and must therefore employ some part of the momentum of the pendulum. The pivot on which it swings occasions friction — the thread or*

thin piece of metal by which it is hung, in order to avoid this friction, occasions some expenditure of force by its want of perfect flexibility or elasticity. These, and other causes, make the vibrations grow more and more narrow by degrees, till at last the

£endulum is brought to rest. We must therefore five a contrivance in the wheel-work which will lestore to the pendulum the small portion offeree which it loses in every vibration. The action of tne wheels therefore may be called a maintaining power, because it keeps up the vibrations. But we now see that this may affect the regularity of vibration. If it be supposed that the action of gra- vity renders all the vibrations isochronous, we must grant that the additional impulsion by the wheels

will destroy that isochronism, unless it be so applied that the sum total of this impulsion and the force of gravity may vary so with the situation of the pendulum, as still to give a series of forces, or a law of variation, perfectly similar to that of gravity. This cannot be effected, unless we know both the law which regulates the action of gravity, produc- ing isochronism of vibration, and the intensity of the force to be derived from the wheels in every situation of the pendulum. The necessary requi- site for the isochronous motion of the pendulum is, that the force which urges it toward the perpendi- cular, be proportional to its distance from it ; and therefore, since pendulums swinging in small circu- lar arches are sensibly isochronous, we must infer that such is the law by which the accelerating action of gravity on them is really accommodated to every situation in these arches.

Under the head of CLOCK-MAKING we have entered very fully into the construction of those large horological machines that are intended to mea- sure the time by means of a weight and pendulum. In watches, on the contrary, a spring is the usual maintaining power.

From what we have already seen of the nature of the pendulum, it will be apparent that its oscil- lations can only approach to a true measure of time when the point of support is fixed and im- moveable. An approximation, however, to this de- sideratum may be obtained by a pocket watch regulated by a balance. This useful machine, in its most perfect form, contains within itself a co.- lection of inventions which have exercised the skill of some of the most ingenious mechanics for the three last centuries, and it is gratifying to know that we are indebted to our countrymen Hooke,. Graham, Earnshaw, Arnold, and Harrison, for its invention and present improved form.

To explain the mechanism of a watch it is neces- sary to refer to the figs. 1, 2, 3, plate WATCHES, as they contain engravings of a sunk pocket-watch

of the best construction. Fig. 1 is a plan of the wheel- work all exhibited at one view, for which purpose the upper plate of the watch is removed. Fig. 2 is a plan of the balance, and the work situated upon the upper plate. Fig. 3 is an elevation of all the movements together, the works being sup- posed to be opened out into a straight line, to ex- hibit them all at once.

The principal frame for supporting the acting parts of the watch consists of two circular plates, marked C and D in the figures ; of these the former is called the upper plate, and D is called the pillar plate, from the circumstance of the four pillars, E, E, which unite the two plates and keep them a proper distance asunder, being fastened firmly into the Tower plate ; the other ends pass through holes made in the upper plate, C, and small pins, being put through the ends of the pil- lars, keep all together; but, by drawing out these pins, the whole watch may be taken to oieces; and the pivots of the several wheels being received in small holes made in these plates, they of course fall to pieces as soon as the plates are separated.

The maintaining power is a spiral steel spring which is coiled up close by a tool used for the pur- pose, and put into a brass box called the barrel, it is marked A in all the figures ; the pivots of its arbor pass through the top and bottom of the bar- rel, and one of them is filed square to hold a ratchet wheel ?•, which haj a click, and retains the arboj

from turning round except in one direction ; the two pivots of the arbor are received in pivot holes in the plates C, D, of the watch, and the pivot winch has the ratchet wheel upon it passes through the plate, and the wheel marked b, with its click, is therefore on the outside of the pillar plate 1) of the watch; the top of the barrel has a cover or lid fitted into it, through which the upper pivot of the arbor projects ; thus the arbor of the barrel is to be considered as a fixture, the click of the ratchet wheel preventing it from turning round, and the interior end of the spiral spring being hooked, this arbor is stationary likewise. The barrel thus mount- ed has a small steel chain, d, coiled round its cir- cumference, and attached to it by a small hook of the chain which enters a little hole, made in the cir- cumference "of the barrel at its upper end ; the other extremity of this chain is hooked to the lower part of the fusee, marked F, and the chain is dis- posed either upon the circumference of the barrel, or in the spiral groove cut round the fusee for its reception, the arbor of which has pivots at the ends, which are received into pivot holes made in the plates of the watch ; one pivot is formed square and projects through the plate, to adapt the key by which the watch is wound up.

It is evident that, when the fusee is turned by the watch-key, it will wind the chain oft' the circum- ference of the barrel on itself; and as the outer end of the spring is fastened to the barrel, and the other is hooked to the barrel arbor, which, as before mentioned, is prevented from turning by the click of the ratchet wheel, a b, beneath, the spring will be coiled up into a smaller compass than before, and, by its reaction, will, when the key is taken off, turn the barrel, and by the chain turn the fusee and give motion to the wheels of the watch, which will be hereafter described. The fusee has a spiral groove cut round it, in which the chain lies ; this groove is cut by an engine, in such a form that the chain shall pull from the smallest part or radius of the fusee, when the spring is quite wound up, and therefore acts wit!) its greatest force on the chain ; from this point the groove gradually increases in diameter, as the spring unwinds and so acts with less power, the chain operates on a larger radius of the fusee, so that the effect upon the arbor of the fusee, or the cog-wheel attached to it, may always be the same, and cause the watch to go with regu- larity.

To prevent too much chain being wound upon the fusee, and by that means breaking the chain or overstraining the spring, a contrivance called a guard gut is added ; it is a small lever, e, moving on a stud fixed to the upper plate, C, of the watch, and pressed downwards by a small spring,/; as the chain is wound upon the fusee, it rises in the spiral groove, and lifts up the lever until it touches the upper plate, and it is then in a position to in- tercept the edge or tooth, g, of the spiral piece of metal seen on the top of the fusee, and thus stops it from being wound up any further.

The power of the spring is transmitted to the balance by means of several toothed wheels, which multiply the number of revolutions that the chain makes on the fusee, to such a number, that though the last or balance wheel turns nine times and a half every minute, the fusee will at the same time turn so slowly that the chain will not be all drawn off from it in less than twenty-eight or thirty hours, and it makes one turn in about four hours ; this VOL XXII.

assemblage of wheels is called the train of the watch. The great wheel, G, has forty-eight teeth on its circumference, which take into and turn a pinion of twelve teeth, fixed on the same arbor with the centre wheel H, so called from its situa tion in the centre of the watch ; it has fifty-four teeth to turn a pinion of six leaves, on the arbor of the third wheel I, which has forty-eight teeth ; it is sunk in a cavity formed in the pillar plate, and turns a pinion of six, on the arbor of the con- trate wheel K, which has forty-eight teeth cut parallel with its axis, by which it turns a pinion of six leaves, fixed to the balance wheel L ; one of the pivots of the arbor of this wheel turns in a frame, called the pottance, fixed to the upper plate, and the other pivot runs in a small piece fixed to the upper part, called the counter

pottance (not shown in any of the figures), so that when the two plates are put together, the balance wheel pinion may work into the teeth of the contrate wheel, as is shown in fig. 4. The balance wheel, /, has fif- teen teeth, by which it impels the balance op ; the arbor of the balance, which is called the verge, has two small leaves or pallets projecting from it, nearly at right angles to each other ; these are acted upon by the teeth of the balance wheel / in such a man- ner that, at every vibration, the balance receives a slight impulse to continue its motion, and every vibration so made suffers a tooth of the wheel to escape or pass by ; whence this part is called the escapement of the watch, and constitutes its most essential part. The wheel / is sometimes called the scape wheel, or crown wheel. Suppose the pinion h on the arbor of the balance wheel, or crown wheel, i /c, to be actnated by the main spring which forms the maintaining power, by means ot the train of wheel-work in the direction of the arrow, while the pallets in and n, attached to the axis of the balance, and standing at right angles to each other, or very nearly so, are long enough to fall in the way of the ends of the sloped teeth ot the wheel, when turned round at an angle at 45°, so as to point to opposite directions, as in the figure ; then a tooth in the wheel below, for in- stance, meets with the pallet n (supposed to be at rest), and drives it before it a certain space, till the end of the tooth escapes ; in the mean time the balance, o s p r, attached to the axis of the pallets, continues to move in the direction r o sp, ana winds up the small spiral or pendulum spring q, one end of which is fast to the axis, and the other to a stud on the upper plate of the frame ; in this operation the spring opposes the momentum given to the balance by this push of the tooth upon the pallet, and prevents the balance going quite round, but, the instant the tooth escapes, the upper pallet, m, meets with another tooth at the opposite side of the wheel's diameter, they therefore moving in an opposite direction to that below ; here this pallet receives a push which carries the balance back again (having as yet but little power in the direc- tion o s p r), and aids the spring, which now un- bends itself till it comes to its equiescent position, but it swings beyond that point, partly by the im- pulse from the maintaining power on the pallet ///, and partly by the acquired momentum of the moving balance, particularly when this pallet, m, has escaped ; at length the pallet n again meets with the succeeding tooth, and is carried backward by it in the direction in which the balance is now moving, till the maintaining power and force of

the unwo and spring together overcome the momen- tum of the balance,

during which time the recoil of the balance wheel is apparent (for the seconds hand of the watch is usually put on the pivot of the arbor of the contrate wheel) ; at length the wheel brings the pallet n back again till it escapes, and the same process takes place with pallet m as has been described with respect to pallet n ; thus two contrary excursions or oscillations of the balance take place before one tooth has completely escaped, which is the reason there must always be an odd number of teeth in this wheel, that a space on one side of the wheel may always be opposite to a tooth on the other, in order that one pallet may be out of action during the time the other is in action.

The upper pivot of the verge is supported in a cock screwed to the upper plate, as shown at N, which covers the balance, and protects it from violence, and the lower pivot works in the bottom of the pottance, M, at t. The socket for the pivot of the balance wheel is made in a small piece of brass, v, which slides in a groove made in the pot- tance, so that, by drawing the slide in and out, the teeth of the balance wheel shall just clear one pallet before it takes the other ; and in the perfection of this adjustment, which is called the scaping of the watch, the performance of it very greatly depends. We shall speak more fully of this in another place. The banking of the watch is to prevent the balance from being turned round too far by accidental jerks, in which case one of the pallets would be pitched upon the point of a tooth of the balance wheel, and recoil it back too far, perhaps injuring its point ; this is called being overthrown. Some- times, if the balance gets turned round too far, ihe pallets are both turned away from the teeth of the wheel, which then runs down with inconceivable rapidity, and probably breaks the points of its teeth by striking against the pallets as they turn round ; to avoid these accidents the banking is introduced ; it is a pin fixed in the rjm of the balance, and therefore describing a circular arc round the edge of the cock N, which covers the balance; but the proper extent of this arc is determined by the banking-pin meeting two projecting parts of the cock, which are extended out so far as to reach be- yond the circle the banking pin moves in.

Having thus examined the various parts of a watch, it may now be advisable to revert more par- ticularly to the movement ; the mode of arranging the parts of which will be best understood by re- ference to a series of tables, calculated to produce any number of beats that may be required for practical purposes.

In the following tables the first column of figures gives the number of teeth in the centre, or second wheel, to the different trains ; the second column the number of leaves in the third-wheel pinion ; the third column the number of teeth in the third- wheel ; the fourth column the number of leaves in the counter, or fourth-wheel pinion ; the fifth column the number

of teeth in the counter-wheel ; the sixth column the number of teeth in the escape- ment-wheel pinion; the seventh column the num- ber of teeth in the escapement-wheel ; the eighth column the number of beats in the hour ; and the ninth column tin- time the fourth, or counter- wheel, revolves in. These columns, if taken in the line from left to right, give each train in suc- cession.

Trains for plain Watches, with Eleven Teeth in lli« Escapement-wheel.

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17966|

36 seconds.

60

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54

G

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6

11

17820

40 do.

60

G

5(i

6

52

6

11

17795ˆ

38} do.

64

G

52

6

52

6

11

17626&

39 do.

58

6

5(5

G

53

6

11

17533|$

39$i do.

60

G

54

G

53

6

11

17490

40 do.

62

6

54

G

51

6

11

17391

38ff do.

58

(5

54

G

54

6

11

17226

41 55 do.

58

G

55

G

53

6

11

17220&

40JQ do.

59

6

54

G

53

6

11

17198i

40$ do.

60

G

54

6

52

6

11

17160

40 do.

60

G

55

G

51

6

11

17141$

39ft do.

6l

G

55

6

50

6

11

*17085^*

38$ do.

63

6

55

6

48

6

11

16940

37^5 do.

59

G

54

0

52

6

1 1

16874

40JJ do.

60

G

54

G

51

6

11

16870

40 do.

61

G

54

6

50

6

11

16775J

39$ do.

56

G

54

G

54

6

11

16632

42f do.

Trains for plain Watches, with Thirteen and Fif- teen Teeth in the Escapement-wheel.

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a

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17914

45ijj seconds.

56

G

53

6

50

6

13

17862|?

43$ do.

59

6

51

6

49

6

13

1 7747j§

43$ do.

60

6

51

G

48

(5

13

17680

42ˆ do.

54

6

53

6

51

6

13

17569J

45£j do.

56

6

53

G

49

6

13

17505ˆ

43§J? do.

56

G

54

G

48

G

13

17472

43f do.

57

G

53

G

48

G

13

17454

42$ do.

54

6

52

6

51

6

13

17238

46ft do.

54

G

53

G

50

6

13

17225

45|§ do.

56

G

51

(5

50

6

13

17188JJ

45i] do.

54

6

52

G

50

6

13

16900

46ˆ do.

56

6

51

6

49

6

13

16845J

45 do.*

57

G

51

G

48

6

13

16796

44& do.

52

6

53

G

51

6

13

16599JJ

45{g do.

53

G

52

G

50

6

13

16587ˆ,

46ˆ6 do.

For Fifteen Teeth in the Escapement-wheel.

54

fl

50

6

48

6

15

18000

44 do.

52

0

50

6

48

6

15

17333J

49$ do.

54

6

4»

G

48

6

15

17280

50 do.

In the foregoing trains, pinions of seven are in- troduced to perform seconds as pinions of eight or six, which complete fifths of seconds, two-ninths of seconds, and fourths of seconds. Few believe that

pipions of sever, will perform minutes, seconds, &c., equal to pinions of eight or six. The following calculation will, however, prove it, and the same rule is accurate and concise for every other calcu- lation.

The number of the centre-wheel teeth sixty, di- vided by seven, the number of the third-wheel pinion, shows how many revolutions and parts are given to the third wheel, while the centre wheel makes one revolution.

7)60

Eight revolutions, and four-seventh parts, are given lo the third wheel and pinion in one hour; then, if the third wheel has forty-nine teeth in it, the question follows, how many teeth (repeated) of the third wheel will fall in action with the fourth wheel pinion in one hour?

49 teeth in the third wheel, Multiplied by 84 revolutions in it,

28 392

420 teeth,

the number which fall in action with the fourth- wheel pinion in one hour; the fourth-wheel pinion being seven, divide the 420 teeth by that number, to see how many revolutions will be given to the fourth-wheel pinion in one hour.

7) 420 teeth, divided by 7

is 60 revolutions

given to the fourth wheel and pinion in one hour; consequently must perform a minute circle.

And here it follows to consider true seconds : they have no regulation from the foregoing calcu- lation. after it has produced sixty revolutions, by the fourth-wheel pinion, in one hour ; therefore the fourth -wheel, escapement-pinion, and escape- ment-wheel, are to govern the seconds and parts of seconds. There can be no true seconds performed upon the minute circle without the parts of seconds be first considered.

First, fifths of seconds require 18,000 beats in one hour ; secondly, two-ninths of seconds, which perform two seconds in nine beats, allowing four beats and a half for every second, which cuts the first second with the fifth beat, and coincides with the second second at the ninth beat ; and so on,

successively, through the minute, cutting the odd, and coinciding with the even numbers, which re- quire 16,200 beats in the hour; and thirdly, fourths of seconds require 14,400 beats in the hour= No other number of beats, between 18,000 and 14,400, will give exact parts of seconds. Manufacturers who have not these numbers can neither give a true second nor a true minute ; for the conclusion of the minute will be cut by a fractional part, more or less, until so many minutes are performed as there are parts in the integer. But to give 18,000 beats in the hour, for fifths of seconds, first it is to be considered that the fourth wheel has sixty revolu- tions in one hour ; then, with seventy teeth in the fourth wheel, how many teeth of the fourth wheel will come into action with the escapement pinion ?

60 revolutions, Multiplied by 70 teeth, in the fourth wheel

4200 teeth

WORK.

563

will come into action with the escapement pinion. Then, to find how many revolutions will be given to an escapement pinion of seven, divide the 4200 teeth by the pinion of seven.

7) 4200 teeth, divided by 7, gives 600 revolutions to the escapement

pinion in one hour.

Then, an escapement-wheel with ˆfifteen teeth, al- lowing two beats for every tooth, makes thirty beats in each revolution ; afterwards the question follows, how many beats in one hour ?

600 revolutions in the escapement- pinion,

Multiplied by 30 peats in each revolution, gives 60) 18000 beats in an hour, divided by 60,

gives the quantity of beats in

one minute.

60) 500 tliequantityofbeatsinaminute, divided by 60, gives the quan- tity of beats in one second. 5 the number of beats in one

second.

It may now be advisable to give the calculations which govern the turns for the chain on the fusee. The first or great wheel, and the centre pinion, are to be numbered to give the quantity or turns, as follows : —

Number of the great -vheel teeth.

Number of the centre pinion.

Number of turns in the fusee.

48

12

n

50

12

n

52

12

eg

54

12

6|

56

12

*6**

58

12

60

12

6

62

12

*5*1*

64

12

55

66

12

5ft

68

12

•*Nfc*

70

12

*5**

50

10

6

52

10

5iS

55

10

5f

58

10

5ˆ

60

10

5

62

10

4ff

65

10

4ft

68

10

4fr

70

10

4?

The rule for examining the foregoing calculations must be tried as follows :— The number of hours required for the watch to go must be first consi- dered ; say thirty hours ; then the number of the centre pinion must be given, say twelve ; then mul- tiply the hours by the centre pinion, which product being divided by the number of the great-wheel teeth, say sixty ; the quotient will be the turns of chain the fusee should have to perform thirty hours : for example :—

30 hours, multiplied by

12 the number of the centre pinion.

60) 360 product, divided by 60, the number

of the great-wheel teeth.

6 quotient, the turns for the fusee chain. 2 O 2

The same rule may be observed for any number of hours required, by multiplying; the number of hours by the pinion given, and dividing the product by the number of the great-wheel teeth ; the quotient will give the turns for the chain on the fusee.

WATCHES, REPEATING, are such as by pulling a string, &c., repeat the hour, quarter, or minute, at any time of the day or night. This repetition was the invention of Mr. Barlow, and first put in prac- tice by him in larger movements or clocks, about the year 1676. The contrivance immediately set the other artists to work, who soon contrived divers ways of effecting the same. But its application to pocket watches was not known before king James ll.'s reign ; when the ingenious inventor above- mentioned, having directed Mr. Thompson to make a repeating watch, was soliciting a patent for the same. The talk of a patent engaged Mr. Quare to resume the thoughts of a like contrivance, which he had had in view some years before : he now effected it ; and, being pressed to endeavour to prevent Mr. Barlow's patent, a watch of each kind was produced before the king and council ; upon trial of which the preference was given to Mr. Quare's. The difference between them was, that Barlow's was made to repeat by pushing in two pieces on each side of the watch box ; one of which repeated the hour and the other the quarter ; whereas Quare's was made to repeat by a pin that stuck out near the pendant, which being thrust in (as now it is done by thrusting in the pendant itself), repeated both the hour and quarter with the same thrust.

WATCHFIELD a hamlet of England, in Berk- shire, near Great Farringdon.

WATEEHOO, an island in the South Pacific Ocean, six miles long and four broad, discovered by captain Cook in 1777. It is a beautiful spot, with the surface varied by hills and plains, and covered with verdure. The language spoken was equally well understood by Omai, and by two New Zealanders. What its peculiarities may be, when compared with the other dialects,

captain Cook was not able to point out. Long. 158° 15′ W., lat. 20° 1′ S.

WATELET (Claud Henry), a celebrated poet and lexicographer, born at Paris, in 1718. He was a member of the French Academy, and of several foreign societies. He was also receiver general of the finances ; yet he died poor, in 1786. He wrote a poem on the Art of Painting; several Comedies; and other pieces of merit ; and left A Dictionary of Painting, Sculpture, and Engraving, which was published after his death.

WA'TER, n. s., t;. «., & v. n.'

WA'TERCOLORS, n. s.

WA'TERCRESSES,

WA'TERER,

WA'TERFALL,

WA'TERFOWL,

WA'TERGRUEL,

WA'TERISH, adj. WA'TERMAN, n. t. WA'TERMARK, WA'TERMILL, WA'TERRAT, WA'TER won K, n. s. WA'TERV, aJ/.

Sax. pateri ; Belgic waeter ; Teutonic wasser ; Goth, wats, wutz. A compound ae- riform fluid. See below. The sea; urine; vein or lustre of a dia- mond : to water is to irrigate ; supply with drink or moisture ; di- versify, as with waves; to shed

moisture ; get or take in water: the compounds GO not seem to need particular explanation: water- ish and watery mean resembling water ; thin; li- quid; boggy

A river went out of Eden to water the garden.

Gen. ii. 10.

He set the rods he had pulled before the flocks in the gutters in the watering troughs. Gen. xxx. 38.

As the hart panteth after the uufer-brook, so panteth my soul after thee, O God. Psalms.

Travel by land or by water. Common Prayer.

Forth flowed fresh

A gushing river of black gory blood. That drowned all the land whereon he stood • The stream thereof would drive a watermill, Spensfr.

Now 'gan the golden Phoebus for to steep His fiery face in billows of the west,

And his faint steeds watered in ocean deep, Whilst from their journal labours they did rest. Id.

His horsemen kept them in so strait, that no man could, without great danger, go to water his horse.

Knotles.

The watery kingdom is no bar To stop the foreign spirits ; but they come, As o'er a brook, to see fair Portia. Shahspeare.

Mine eyes,

Seeing those beads of sorrow stand in thine. Began to water. Id.

There be land-rats and water-rats. Id.

If thou couldst, doctor, cast The water of my land, find her disease, And purge it to a sound and pristine health, I would applaud thee. Id.

'Tis a good form, And rich : here is a water, look ye ! Id.

I have seen in the Indies far greater waterfall} than those of Nilus. Raleigh.

Waterfowl joy most in that air which is likest water.

Bacim.

A man's nature runs to herbs or weeds ; therefore let him seasonably water the one, and destroy the other.

Id.

Cardinal Wolsey's teeth watering at the bishoprick of Winchester, sent one unto bishop Fox, who had ad- vanced him, for to move him to resign the bishoprick.

Camden.

The nymphs of floods are made very beautiful ; upon their heads are garlands of water-cresses.

Peacham.

This ill weed, rather cut off by the ground than plucked up by the root, twice or thrice grew forth again ; but yet, maugre the warmers and Caterers, hath been ever parched up. Caret/'.

By water they found the sea, westward from Peru, always very calm. Abbot.

Engines invented for mines and waterworks often fail in the performance. in/Aiiu.

Those few escaped

Famine and anguish will at last consume, Wandering that watery desart. Nillon.

These reasons made his mouth to water With amorous longings to be at her. Hudihnis.

The pike is bold, and lies near the top of the water, watching the motion of any frog, or water-nit, or mouse. \'altan.

L«t them lie dry twelve months to kill the wuter- weeds, as water-lilies and hull-rushes. Id.

Chaste moral writing we may learn from hence, Neglect of which no wit can recompense ; The fountain which from Helicon proceeds, That sacred stream, should never water weeds.

Waller.

Painters make colours into a soft con»istence with water or oil ; those they call wutercolours, and these they term oil colours. Rinile.

Could tears water the lovely plant, so as to make it grow again after once 'tis cut down, your friends would be so far from accusing your passion, that they would encourage it, and share it. Temple..

Where the principles are only phlegm, what can be expected from the wateri>h matter, but an insipid man- hood, and a stupid old infancy ? Dryden.

WATER.

Betwixt us and you wide oceans flow, And watery desarts. Id

Men and beasts

Were born above the tops of trees that grew On the utmost margin of the iratermark. Id.

Rain carried away apples, together with a dunghill that lay in the water-course. L' Estrange.

For breakfast milk, milk-pottage, watergruel, and flummery, are very fit to make for children. Locke.

The different ranging the superficial parts of velvet and watered silk, does the like. Id.

You may water the lower land when you will.

Mortimer.

Other mortar, used in making wafer-courses, cis- terns, and fishponds, is very hard and durable. Moxon.

No heterogeneous mixture use, as some With watery turnips have debased their wines. Philips. A pendulous sliminess answers a pituitous state, or an acerbity, which resembles the tartar of our humours ; or icateriihness, which is like the serosity of our blood.

Flotfer.

Not Lacedaemon charms me more Than high Albana's airy walls, Resounding with her waterfalls. Addismi.

Mountains, that run from one extremity of Italy to the other, give rise to an incredible variety of rivers that water it. Id.

When the big lip, and watery eye, Tell me the rising storm is nigh ; 'Tis then thou art yon angry main, Deformed by winds, and dashed by rain. Prior.

The waterman forlorn, along the shore, Pensive reclines upon his useless oar. Gay.

The forerunners of an apoplexy are dulness, night- mares, weakness, wateriness, and turgidity of the eyes.

Arbuthnot.

Less should I dawb it o'er with transitory praise, And watercolourt of these days : These days ! where e'en the extravagance of poetry Is at a loss for figures to express Men's follies, whimsies, and inconstancy. Swift.

Go to bed, after you have made water. Id.

WATER. In this paper we propose to draw into a focus a few popular and familiar views that may be taken of this interesting subject, referring to the articles AIR, CHEMISTRY, &c., for the more full elucidation of the scientific laws and principles in- volved. Our chief object is to lead the general reader to the portal of its chemical characteristics. No substance in nature may more properly be called ' the common want' of all the vegetables, all the animals, all the races of mankind, than •water — 'and none is more widely diffued. Its inti- mate connexion with life, throughout all the variety of living forms, will appear at once from the consi- deration that no animal or vegetable exists, for any two successive instants of time, in precisely the same state; it is constantly undergoing, we mean, some internal motion or change arising from its peculiar organisation. Its most solid parts are formed and sustained by decomposition from cir- culating fluids — and the basis of all the fluids thus circulating through every vessel and tube of orga- nised existence is water. On the other hand, how abundantly does it minister to life externally ! It has often been called the natural food of plants. While in the earth alone, deprived of moisture, all decay and perish : in water alone many of them will live and flourish to perfection. Witness the bulbous roots thus sustained, with which the ladies contrive to ornament our drawing-rooms; or the more homely experiment of growing mustard and cress on wetted baize. Witness, on a larger scale, those arid parts of the earth where nothing living

relieves the eye of the traveller for miles ; and tnc oases of the same desert regions, where, on the slightest supply of water, all is life and fertility : or, in still more surprising and magnificent contrast, the margin and depths of the ocean, abounding in living creatures of every size, and plants of all de- scriptions.

Water, as an aliment of man, has naturally en- gaged much of his attention. Considered in its various forms and preparations, no single article of food is so important to him. For this he first ex- plored the depths of the earth ; in all ages, and under all forms of religion, for this he has looked to heaven. Tribes of men, in early ages, as we read in Scripture, have been ready to go to war foi particular wells ; and the Bedouin Arabs frequently shed each other's blood to obtain possession of them to this. day. In the recent expedition of major Dubarn into central Africa, the party

arrived soon after noon, with the thermometer at 110° in the shade, at the well of Burr Kashifery. ‘ The well was guarded (says our traveller) ; and we were told that until the shickh mina appeared not a drop was to be drawn. Towards evening the shickh appeared on the hills to the north-west at- tended by his troop. He seemed vastly glad to see us; said the well was ours — that our water- skins should be filled, and our camels should be watered before any body, and for nothing; and then, said he, sultan George the Great must be obliged to Mina Tahr, the woody chief of Gunda, and that will give more pleasure to Tahr’s heart than payment; and who knows, said he, but when sultan George hears this he may send me a sword.’

Thus, regarded as the common food of the vegeta- ble and animal kingdoms, water becomes connected with agriculture, and various mechanical arts to obtain and preserve it, or to diffuse its living streams. Penetrating the atmosphere, and circu- lating above our heads, it is associated with the whole doctrine of aerial and atmospherical pheno- mena. It assists largely in painting the beautiful scenery of the sky, and in the whole economy of the clouds, while held in solution as vapor; now answering the purpose of a screen to the earth from the too powerful and scorching rays of the sun, and now yielding in fertilising showers, and in ‘ the gentle dew from heaven,’ its most essential nou- rishment. Need we add that water, as a universal solvent, is also, in its elastic and fluid state, a uni- versal cleanser; thus readily mixing with and as- sisting all other bodies of this character ; or that it has become in almost every language, therefore, a symbol of purity ; and in that of the conscience and the Bible of tiiat purity of heart without which no man shall see God? In other views of it, as in the wide spread seas, it is the handmaid of com- merce, the high road of nations; in the larger rivers the foundation of the opulence of cities ; spreading or uniting mankind in a great scheme of provi- dence; conveying from shore to shore, and inter- changing from town to town, the productions oi all the earth.

Snow and ice are but forms of water — most irr- portant and beneficial forms. Thty assist in Egri- culture, as commissioned to clothe the grornd, and protect and feed its productions in their iCnderest state. The temperature of both in northern winters is not below the freezing point of 32°, while (in northern parts of the Russian empire for instance; the surrounding air is sometimes oO° or 70° below

that point, lu their congealed state they shield both plants and animals, therefore, from the more piercing cold of the atmosphere, and even the de-

licate horse will prefer lying in the common fields of a snowy night to the shelter of a common shed. The water they again yield in a fluid slate is the first nourishment of the plants in early spring; while both the expansion and contraction of the water in this wonderful process tends to pulverise the soil, and to separate its parts from each other; to act, therefore, as the most effective plough that is ever put into the ground ; rendering the whole penetrable to the air, the dews, the warmth of the sun, and to the other nutritive agencies of vegetation. To regard our subject popularly for a few mi- nutes longer, we meet with ice, common water, and steam, the three principal forms of water, ac- cording to the different degrees of heat with which it is combined. Deprived of its usual quantity of caloric it assumes a solid form at 32° Fahrenheit; and near the poles may be formed, by the chisel of the statuary, similarly to stone or the hardest rocks. A mimic palace, it is well known, was built at St. Petersburgh, during the severe winter of 1740, from the ice of the river Neva. It was fifty-two feet long by sixteeen wide, consisting of blocks from two to three feet thick, disposed and ornamented with great care and taste, various parts being finely colored by water of different tints sprinkled upon them. Ten cannon were made of and mounted with ice at this time, and a leaden bullet was fired from one of them, in the presence of the whole Russian court, through a board two inches thick. This fact may be familiar to our readers; but an- other, singularly contrary to what is observed of other fluids, is worthy our particular remark here. Water heated above or cooled below 391° of Fah- renheit becomes of less specific gravity than in its natural state; that is, a less weight occupies a much greater space; a fact too astonishing ever, says an able observer, to have been discovered or imagined a priori. The wisdom and goodness of the great Artificer of the world will manifest itself in this arrangement, if we consider what would have been the consequences had water been subject to the general law, and, like other fluids, become specifically heavier by the loss of its caloric. In winter, when the atmosphere became reduced to 32°, the water on the surface of all lakes would have sunk as it froze; another sheet of water would have frozen immediately and sunk also; the ulti- mate consequence of which would have been the destruction of all their finny tribes; the beds of our rivers would have become repositories of immense masses of ice, which no subsequent sum- mer could have thawed ; and the world, in short, have been converted into a frozen chaos. How admirable the wisdom, how skilful the contrivance, that, by subjecting water to a law contrary to what is observed by other fluids, the water as it freezes becomes specifically lighter, and, swimming upon the surface, performs an important service by pre- serving a vast body of heat in the covered fluid from the effects of the surrounding cold, ready to receive its accustomed quantity again on the first change of the atmosphere! Indeed, had the tran- sition of water from its solid into its liquid state not been Mcoatpaofod by this great change in

its relation to heat, every thaw would have occasioned a frightful inundation, and a single night's frost would have solidified our rivers and lakes.

We have mentioned the expansion and contrac- tion of water as it freezes or thaws. According to the calculations of the Florentine academicians, a spherule, or little globe of water, only one inch in diameter, expands in freezing with a force superior to the resistance of thirteen tons and a half weight. Major Williams attempted to prevent this expan- sion ; but during the operation the iron plug which stopped the orifice of the bomb-shell containing the freezing water, and which was more than two pounds weight, was projected several hundred feet with great velocity; and in another experiment the shell burst. The law in question is eminently im portant, and nature has made it unalterable. This property of water is taken advantage of in splitting slate. At Colly Western the slates are dug from the quarries in large blocks. These are placed in an opposite direction to what they had in the quarry, and the rain is allowed to fall upon them ; when it penetrates their fissures, and the first sharp frost freezes the water, which, expanding with its usual force, splits the slate into thin layers.

Let us now look again, and a little more closely, at \vater as a fluid. In this state it is compara- tively transparent, and distilled water is as much so as any body in nature — colorless, tasteless, and without smell. It is also without change, in pro portion as it is free from admixtures; it sinus liable to no spontaneous changes; and might in- kept unaltered for ages in close vessels upon which it had no action. Distilled water, evaporated in a pure vessel, leaves no residuum.

But water found within or upon the surface of the earth contains various earths, mineral, vegeta- ble, and animal matters. Rain and snow water are comparatively purer ; but these also contain tinctures of what floats in the air, or would mix with the watery vapors. Much stress was once laid by chemists upon the difficulty of procuring distilled water, and the necessity of repeating the process many times; but it was shown by l,avoi- sier that rain water once distilled, rejecting the first and last products, is as pure as it can be procured by any number of distillations.

The Thames water has been long known for be- coming soon putrid at sea, and quickly undergoing various spontaneous changes which belong to any thing but water. Upon what has been made known respecting it of late we shall not dwell ; but may remark, in abatement of some claims upon the sub- ject, that many impurities mingle with all water that do not alter, in any permanent or important way, its qualities. The great question is, what mingles with water chemically, and so does alter its qualities, and what mechanically only, and may, therefore, be readily removed by filtration?

Ity'n happy arrangement of providence most of the ad- ventitious matters that are found in water are rather suspended than dissolved in it, or are united to it only mechanically and not chemically. Other ad- mixtures, however, are of a different description, and require accurate chemical tests and analysation to detect them.

We have mentioned the other most important form of water, considered popularly, steam. Com- bined with a smaller quantity of caloric than in its fluid state, let us remember, it becomes ice; combined with a larger or plus quantum it be- comes vapor or steam; that is at the heat of -212° Fahrenheit.

On this property of water depends that greater

of the modern inventions of science, the steam- engine. At present we can only offer a familiar elucidation or two of the amazing increase of vo- lume, and rapid condensation of steam in this way. Take a Florence flask with water in the bottom, boil it over a spirit lamp ; and afterwards invert about two inches and a half of the neck in a vessel of cold water. The water will rise with a gush upwards into the flask, filling the vacuum ; (and therefore nearly the flask), made by the steam having been condensed.

However long we boil water in an open vessel, it may be observed, we cannot make it in the smallest degree hotter than its boiling point : then the vapor absorbs the heat, and carries it off as fast as it is generated. Yet by continued heat, united with additional compression, both the expansi- bility and temperature of steam may he greatly increased: and some constructors of steam-engines have availed themselves of this property, to aug- ment the power and diminish the expense of them. These are what are called high pressure engines.

But a singular difference has been lately noticed by M. Gay Lussac, with regard to the vessel in which water is boiled. He has ascertained that water boiling in a glass vessel has a temperature of 214-2°, and in a tin vessel contiguous to it of only 212°. A few particles of pounded glass, thrown into the former vessel, reduced the ther- mometer plunged in it to 212'6°, and iron filings to 212°. When the flame is withdrawn for a few se- conds, from under a glass vessel of boiling water, the ebullition will recommence on throwing in a pinch of iron filings. Of what future importance this may be to chemistry, or the arts, we do not pre- sume to judge: but only mention it as a singular and very modern observation (considering for how many centuries water has been boiled) oil the pe- culiarities of that body.

To return from this incidental notice of steam, and the steam-engine, we may suggest a few che- mical tests of the purity of water.

1. Iron very commonly impregnates it : this is the case whenever it flows through a gravelly soil. The presence of iron may be detected by pouring into water prussiate of potash, when a blue pre- cipitate is the result : the Prussian blue of com- merce. 2. The gallic acid, very astringent, or any vegetable astringents of that kind in water may be detected by pouring into it sulphate of iron, when a black inky precipitate results. This is not fre- quently seen in settled, but in unsettled or un- cleared countries, like the western part of the United States, it is found through the falling of the leaves and bark of trees into standing waters.

3. The presence of lime in water is detected by breathing into it : the lungs decompose the atmos- pheric air, and, yielding carbonic acid, produce a carbonate of lime.

4. Passing now into that useful laboratory, the kitchen, copper, one of the most deadly poisons, is but too often carelessly in use there : its pre- sence is to be detected by plunging a common iron knife into water. Copper is formed on the knife, arising from the greater affinity of iron for oxygen, the iron having decomposed the salt of copper in the water.

5. Do we suspect sulphuric acid to be present? It may be detected by pouring in the suspected water a vegetable infusion. Pour the tested body on the test, and the vegetable blue becomes a red.

6. Volatile alkali ? This is detected in a simi- lar manner. Only the vegetable infusion now be- comes green.

The different temperature at which water boils, as compared with all spirituous liquids, is the foundation of the art of DISTILLATION, which see. In the largest application of the principles of that art in this country, i. e. to the distillation of gin, malt-wash is boiled from 190° to 195° Fahrenheir, (water not boiling until it arrives at 212°, as we have seen); when the spirit separates from the water, and comes over in the form of steam, which is condensed in passing through the long pipes of the worm surrounded with cold water. As an evening amusement we may attempt the French manufacture of brandy, without fear of a visit from the officers of excise; in fact distil it from port wine, over the spirit lamp : boiled in the retort, the steam will gradually come over and be con- densed in the reservoir. 2. Ether may in a simi- lar manner be boiled in water, but just warm. It boils at 98° in the air : in vacuo at 20° Fahren- heit. 3. Spirit-bombs show the expansive force of the steam of spirit, which like that of water is ungovernable at a certain point. Hence the ex- plosion of steam-

engines.

Another familiar elucidation of the qualities of water may close this part of our subject. View- ing it generally in connexion with a yielding me- dium, we may imagine its particles have no actual hardness ; and therefore cannot be subject to the laws of friction.

But taken disiilled in an exhausted tube; com- posing what is called a water-mallet; and the sound produced by the streams striking on the bottom of the tube, proves that there is a point at which its particles do not yield.

The chemistry of water is very simple; it $3 comparatively of late discovery ; yet nothing in the whole compass of experimental science appears, in its principal points, to be better established.

Philosophy recognised water as an element, ' one of the four elements,' from the times of Aris- totle to those of the late Mr. Cavendish. That gentleman demonstrated, about the year 1784, that it is composed, in fact, of two distinct aeriform fluids — oxygen and hydrogen ; containing eighty-eight parts by weight out of every 100 of the for- mer and twelve of the latter. This was the result of three years of laborious experiments.

The late Mr. Watt, the celebrated improver of the steam-engine, seems to have inferred at the same period (in 1783), independently of Mr. Ca- vendish, that water was a compound body of the kind it has been since proved to be; as did the French chemist Lavoisier and La Place. A friend of the latter, count Monge of Paris, seems to have been the first that suggested an experiment which is often exhibited to the present day, as placing the composition of water beyond dispute. He passed the steam of water through a red-hot iron tube, and found that the water was oxidised ; that is, the oxygen attached itself to the iron, and the hydro- gen disengaged. The hydrogen is, in this experi- ment, proved not to be steam by being forced through cold water. But what is called the grand experiment of the French chemists, as to the com- position of water, occupied more than nine days of the month of May, 1790. The combustion of the gases was kept up by Fourcroy, Vauquelin, and Seguin, on this occasion, 185 hours, during which

the machine was not quitted for a moment ; the experimenters alternately refreshing themselves when fatigued by lying down for a few hours on mattresses in the laboratory.

The volume of hydrogen employed was 25963-568 cubic inches, and the weight was 1039-358 grains. The volume of oxygen was 12570942, and

the weight was 6209-869 grains. The total weight of both elastic fluids was 7249-227. The weight of water obtained was 7244 grains, or 12 oz., 4 gros, 45 grains. The weight of water which should have been obtained was 12 oz., 4 gros, 49-227 grains ; the deficit being only 4-227 grains — easily accounted for by the imperfection of all human instruments and experiments, especially on such a scale.

If we take sulphuric or muriatic acid, diluted three parts with water, and pour it upon iron-tilings in a glass vessel, the temperature of the mixture will soon be so much increased by the union of the water with the acid, as to enable the iron to decom- pose a part of the water. A hole being made through a cork which fits the mouth of the phial, and a piece of tobacco-pipe with a very small ori- fice being fitted into it, and the whole cemented into the phial, the hydrogen gas, as it is separated from the water, will pass in a continued stream through the pipe, and may be set on fire by the flame of a candle. The gas will continue to burn with a blue lambent flame, as long as the decom- position goes on. This shows that the gas is really hydrogen, and that it arises from the decomposition of the water.

That water may be re-formed by the combustion of this gas may be shown by holding a glass bell over the flame of the gas : as the hydrogen burns, it unites with the oxygen of the atmosphere, and the union of the two gases produces water, which will soon be seen to deposit itself like dew on the inside af the glass. These two experiments, taken toge- ther, prove the compound nature of water in the most satisfactory manner.

The carburetted hydrogen burnt for lights in the shops and counting houses' sometimes, also, will establish the above facts relative to the composition of water. Over the lamps we see bell-glasses with long curved pipes fitted to the top, ending in a small glass vessel. By these pipes what would otherwise become an annoying smoke is consumed, and, uniting with the oxygen of the atmosphere, forms water, which is received in the glass vessel. A friend of ours in Cheapside thus carries off' from two burners about half a wine glass full of water every night.

There are other methods of decomposing water. When two wires from the opposite extremities of the galvanic battery are placed in a tube containing water, so that they are distant from each other a quarter of an inch or half an inch, a stream of gas issues from each wire — from the positive wire oxy pen, from the negative hydrogen gas; and these are in the proportions which when exploded, either by galvanism or electricity, re-form water.

Vegetables have the power of decomposing wa- ter by an operation peculiar to themselves. If a sun-flower leaf be placed in an inverted jar of water, exposed to the rays of the sun, bubbles of oxygen will be iapidly formed;

the leaf having appropriated t» itself the hydrogen, and conse- quently disengaged the oxygen which forms the oubbles.

Having thus established the great general tact o» the composition of water, and what are its compo- nent parts, it will be interesting to examine these parts separately.

( )xygen was first obtained by Dr. Priestley in 1774, from the red oxide of mercury exposed to ;i burning lens ; that is, he obtained this gas from the oxide, not knowing or believing it to be a com- ponent part of water. He clearly ascertained, how- ever, at this period its two great distinguishing properties of rendering combustion more vivid and eminently supporting life. Scheele, a Danish che- mist, and Lavoisier, seemed to have obtained it in the same way, without any knowledge of Dr. Priestley's discovery, the same year. It was re- served for Mr. Cavendish, as we have seen, first to suggest, in 1781, and prove beyond dispute in 1784, the important quantum of this vivifying in- gredient contained in water. See OXYGEN. We have said its two principal characteristics are pro- moting combustion and sustaining life. These, p'erhaps, are in substance one. We all remember the old experiment of the plumbers to ascertain whether they may in safety descend a well ; that is, by first letting down a candle — for generally where a candle burns they know a man can breathe.

How eminently this gas supports combustion may be further inferred from the fact that, 1. It re- lights a taper ; 2. Readily produces sulphuric acid from sulphur; 3. Or, with equal readiness, phos- phuric acid from phosphorus. We may here add though this eminent supporter of combustion, this gas is not itself a combustible.

Hydrogen, though the much inferior component part of water, has been honored with a name which signifies (vSwp, water, and ycvvau, to produce) to produce water. See HYDROGEN.

1. In proof of its being the lightest ponderable known, it is the great ingredient used in aerostation. One of Bate's balloons may be sent up in any parlor filled with this gas: it is composed of the maw of a turkey, and filled precisely on the prin- ciple of the largest balloons.

2. Hydrogen will not support combustion ; if we immerse in it a taper it instantly dies. Yet is this gas highly combustible in atmospheric air : hence its importance in modern times, arising from its extensive use (already adverted to) in lights ; and its well known connexion with the explosions that frequently take place in coal-mines. The in- vestigation of its properties in the latter case has led to Sir Humphry Davy's admirable invention of the SAFETY LAMP, which see. He found that this gas was generated in large

quantities, imper- ceptibly, by the surface of the coal, and then on mixing with the air of the atmosphere went off, on application of a common light, in a violent and dangerous explosion. Sir Humphry Davy's in- vention simply prevents the light from coming in contact with this dangerous mixture of airs by a gauze veil.

We conclude in the words of a contemporary author, which may suggest a reflection for our younger readers : —

When judgment waked the Almighty hana

To smite the vile of eveiy land ;

Once in six thousand years he hurl'd

A waste of waters on the world.

But through each day of all the years,

Hefor •via since liis hand appears,

W A T K R F O R D.

*5(18**

Conducting Mercury's myriad streams \Vherever life puts forth its gleams ; And writes ou all below — above, That nature is the work of love.

WATER, among jewellers, is properly the color or lustre of diamonds and pearls. The term, though less properly, is sometimes used for the hue or coloi of other stones.

WATER APPLE, in botany. See ANNONA.

WATER BETONY. See SCROPHULARIA.

WATER BORNE, in sea language, the state of a ship, with regard to the water surrounding her bot- tom, when there is barely a sufficient depth of it to float her off from the ground.

WATER CALAMINT, a species of mentha.

WATER CISTERNS, for rural purposes, are of great utility and importance in many parts of the country. In the high eastern parts of the North Hiding of Yorkshire, water-cisterns or reservoirs are made by the inhabitants within the ground, and are fed by the rain-water which falls upon the roofs of the buildings and is conducted thence l>\ spouts. By means of these

cisterns a very '.mple suppiy of soft water, suitable for every do- nestic purpose, is always ready a! hand, which is aised for use by means of a pump. As the 'ceeping of all external air out of the cistern con- tributes much to the sweetness of the water, the pipe by which the cistern is fed should be conti- nued to within a few inches of the bottom, and the surplus water be conveyed off by a pipe rising from near the bottom to the extreme height the water is designed always to be at, and there com- municate with the drain : by these precautions, it is said, there will be no more of the surface of the water exposed to the external air than what is within those pipes and that of the pump. This method of forming water-cisterns may be found useful, cheap, and convenient, in many places where such water is necessary to be preserved pure and sweet.

WATKR COLORS, in painting, are sucn co.ors as are only diluted and mixed up with gum water, in contradistinction to oil colors. See COLOR MAKING.

WATER CRESSES. See SISYMBRIUM.

WATER FALLS, in ornamental gardening, falls of water formed and introduced in pleasure or other grounds for the purpose of producing ornamental and picturesque effects. They are of different Kinds and forms : sometimes of the nature of cas- feades, at other times contrived for the purpose of driving some sort of interesting machinery, so as to afford an agreeable and striking picture ,n the rural scenery of the place. They sre usually con- structed either by means of large rocky stones thrown rudely together into a sort of ridge, over which the water passes, or built in masonry in a careful and exact manner, according as the different naiure of the circumstances and situations may require. Mr. Loudon, in his useful work on Country Residences, has well described and deli- neated several different modes of forming waterfalls. They should, he thinks, be natural, strong, and \asting, from the general form of the whole of the materials, the security and solidity of their foundations, and the quality of the work and ma- terials used in building them.

WATK11FORD, a county of Ireland, situated in the province of Munstcr. Its boundaries are, or

the north, the noble river Suir, which separates it from tiie counties of Tipperary and Kilkenny, on the west, the county of Cork; on the cast, the Harbour of Waterford ; and on the south, the Atlantic Ocean. Its greatest length is about fifty English miles, and its breadth about twenty-nine. The superficial contents are estimated at 471,281 statute acres. The population of the county, ex- clusive of the city, amounts to 128,000 souls, who are accommodated in 20,000 habitations.

Waterford county is divided into eight baro- nies, Cashbride, Coshmore, Decies-within-Drum, Decies-without-Drum, Grottier, Glenaheiry, Mid- dlethird, and Upperthird. Tke parochial division recognises seventy-three parishes ; and the county returns four members to parliament, including the representatives for the city of W ?ierford and the borough of Dungarvan. The chief towns are, Waterford, Tallow, Limore, Cappoonin, Dungar- van, Tramore, part of Clonmel, Kilmarthomas, and Portlaw. The south and wester districts are a good deal encumbered with mountains; the most remarkable of which are the Knock-Mele-Down range, rising to a height of 2700 feet above sea level ; the Shibh Gune hills, containing abund- ance of iron-stone; Ardmore hills; the Mone- vallagh mountains, 2300 feet in height ; and the elevated district called the Commons of Clonmel. The eastern portion of the county is low and fertile, inhabited by many wealthy proprietors, and beauti- fied by several noble rivers, and many picturesque rivulets. The chief rivers are the Suir, the Black water, the Four-Mile Water, the Bcdl-lecky, the Oon-a shad, the Phinniek, the Licky, the Brickey, the Cladagh, the Calligan, the Bride, the Tay, and the Mahon, which falls into the sea at Bunmahon, near to which a valuable lead mine has lately been wrought. The sea coast of Waterford affords but few harbours ; but one of these, Waterford Har- bour, is quite unrivalled as a noble estuary, and is now an established packet station, having a noble pier 1000 feet in length, standing in five fathoms at low water, for the accommodation of packets plying between Dunmore and Pembroke Haven. See DUNMORE. Tramore Bay affords an agree- able strand for sea bathing, but an insecure station for shipping : and Dungarvan is a sheltered asylum for small craft. The Black-water is also navigable by small craft to a considerable distance. Lord Orrery asserts, that, in his time, it was navigable up to Mallow, but that is quite impracticable at present ; so that the bed of the river must have Cued much since that period. At the sea entrance of Waterford Harbour stands a light-house, called Hook Tower, exhibiting a fixed bright light : and wit!, in the harbour, at Duncannon Fort, is a light of a similar description. The ancient families of this county are the O'Feolans, Peers, MThomas, Bo\ les, Walshes, Aylwards, Wyses, Daltons, Wad- dings, and Shulochs. Christianity is said to have been introduced into this district by St. Declan, about thirty years previous to the mission of St. Patrick. The ruins of nearly thirty religious edifices are still visible, and the vast number formerly ex- isting, at Lismore and Waterford, is fully authen- ticated by our ecclesiastical historians. There is one of those lofty rov.nd towers peculiar to Ireland, standing at Ardmore, in this county, which is in an excellent state of preservation. This particular t'.'wer is the case quoted by those antiquarians who

attribute the erection of these buildings to the early Christians, in consequence of having once been used as a belfry ; but an inspection of Ardmore, as applicable to such a use, will immediately destroy the probability of the conjecture.

WATERFORD, a city and seaport town, the ca- pital of the above county. It was anciently called Cuan-na-Grian, the harbour of the sun ; also Port-largi, the port of the thigh, from the bend of the river Suir near the town resembling that part of he human frame. In consequence of a desperate jattle fought there between the ancient Irish and the Danes, it was also named Glean-na-gleodh, i. e. the valley of lamentation. But the English invader substituted for these the appellation ‘ Waterford,’ being merely a corruption of the Danish Vader Fiord, the Father's Harbour, i. e. Woden's, to whom the Danes had dedicated this place. The ancient city stood on the south side of the river Suir. It was built by the Danes in the year 879, but was de- stroyed by fire in 981. It was in the form of a tri- angle, enclosed by walls, having Reginald's (now Ring) Tower, Fuzesius Tower, and St. Martin's Castle at the three angles, and covered an area of fifteen statute acres. In 1171 it was enlarged by Strongbow, after tht English invasion. Henry VIII. granted many privileges to this place. Kichard II. landed and was crowned here in 1399: and king James II. embarked at this port for France, after his defeat at the battle of the Boyne. The history of the city of Waterford is closely interwoven with the history of Ireland from the reign of Henry II. to the period just mentioned. The town walls and ancient fortifications are no longer visible, with the exception of Reginald's Tower, which is still entire, and beside which the effigy of Strongbow, in dark limestone, stood until within a few years. Waterford is the see of a bishop, and it was united to the diocese of Lismore in 1363. The city formerly contained five monastic institutions, of which no ruins now remain. At present the cathe- dral of Christ Church, a modern structure, is its principal ecclesiastical edifice : it is spacious, but plain, and supports a lofty spire : it contains seve- ral interesting monuments. St. Olave's, St. Pa- trick's, and other churches, are also served regularly, but many of the ancient parish churches are in ruins. The parochial division of the county of the city of Waterford contains thirteen parishes, viz. Trinity within and without, St John's within and without, St. Michael's, St. Olave's, St. Peter's, St. Stephen's, St. Patrick's hill, St. Nicholas, Killcul- liheen, Kilbany, and Killoteran. The superficial contents of this district amount to 4281 acres, the popr.lation to 28,679 souls, and the number of habitations to 4000. There is a classical school in St. Stephen's parish, under the superintendance of the learned Dr. Graham, which has attained a very lnji reputation: it was founded and endowed by the corporation. The corporation have endowed a poor school of thirty eight boys in the parish of Killoteran; and Sir John Mason endowed a blue- coat school in St.

Michael's parish, to which his three daughters, who died unmarried, bequeathed legacies. The city is governed by a mayor, sheriffs, and recorder, and returns one member to the im- perial parliament. There are several public build- ings of architectural merit, and several institutions of solid worth ami humane intention ; the most re- markaHe 01 tne latter class are Gore's charity, for

the protection and support of clergymen's widows, and the Fever Hospital, which has been conducts! with a degree of successful care that has recom- mended its design and arrangement to he adopted as a model elsewhere. The bishop's palace and the Roman Citholic chapel are the most elegant elevations in the city ; but there are other public establishments, as the gaol, new court-house, exchange, custom-house, assembly-rooms, school- house, churches, chapels, &c. The streets are generally narrosv, but improvements in this way are daily in progress. The chief boast of Water- ford, however, is her beautiful Quay, nearly a mile in length, and her noble river that rolls before her walls. The river Suir is navigable to the Quay of Waterford for vessels of considerable tonnage, and there is water to float them at all times : the river is crossed, above the' Quay, by an extensive wooden bridge, built by Samuel Cox, the American engineer, and from the bridge to Clonmel the Suir is navigated by large barges, constructed for that particular trade. In this way Waterford is the place of import and export for a great portion of the south of Ireland, standing more conveniently towards England than either Limerick or Cork. This great trade, which Waterford must always command, is likely to be augmented by a railway, designed hy Alexander Nimmo, esq., extending from this port to Limerick, with a branch to Carrick-on-Suir. Be- sides which the packet station, at Dunmore, will be the scene of more active operation when the pier now erecting at Pembroke shall have been com- pleted. The trade of this port is various, both foreign and coastwise. It has steam communication with Liverpool ; it exports butter, live stock (particularly hogs), hides, port, corn, &c. The approach, at the sea entrance, was difficult and dangerous, but the erec- tion of the deep-water pier at Dunmore has re- moved the danger, as vessels may lie there securely until a convenient opportunity occur of sailing up the river, or of steering outwards. The banks of the river Suir, from the city to the junction of the rivers Barrow and Nore,are remarkably picturesque ; they are much improved and adorned with seats and villas on i>oth sides, for many miles. The view of the opposite county, from the Quay of Waterford, is probably the most agreeable pano- rama in the neighbourhood of any city in Ireland ; and the best and most satisfactory view of the city itself is enjoyed from a rock called Cromwell's Fort, immediately opposite the Quay, on the fur- ther bank of the river. The ancient history of the county and city of Waterford are faithfully and minutely detailed in Smith's County History ; Dublin, 1774. Those who have stud it-d the tooo- graphy

of Ireland with much attention will soon perceive that the river Suir was more deserving of wafting the stranger to the capital of Ireland than her more favored sister, the Liffey; and a little consideration will soon satisfy the enquirer that the metropolis of this island could no where have been so happily situated as at Cheek Point, that singu- larly circumstanced spot where the Suir, the Barrow, and the Nore, unite their waters.

WATER-FI:RRO\V, in agriculture, a deep open furrow drawn in arable lands, or those in a state ot tillage, for the purpose of conveying and taking off water, to prevent its stagnating and injuring the crops. The number of these furrows must depend on variations of surface and other circumstances/

to that the only general rule is to make them suffi- ciently numerous to prevent the water from stand- ing on any part of the land in the wettest weather. Jn arable land water-furrows should be frequently examined during winter, to see that they are pt:i- fectly open and free; to secure which, the sides of the furrows should always be made to stand firm, and to have a good slope each way, a practice which, in many districts, is greatly neglected.

WATER, HOLY, which is made use of in the church of Rome, as also by the Greeks, and by the other Christians of the east of all denominations, is water with a mixture of salt, blessed by a priest ac- cording to a set form of benediction. It is used in the blessing of persons, things, and places; and is likewise considered as a ceremony to excite pious thoughts in the minds of the faithful. The priest, in blessing it, first, in the name of God, commands the devils not to hurt the persons who shall be sprinkled with it, nor to abuse the things, nor dis- quiet the places, which shall likewise be so sprink- led. He then prays that health, safety, and the fa- vor of heaven may be enjoyed by such persons, and by those who shall use such things, or dwell in such places. Vestments, vessels, and other such things that are set apart for divine service, are sprinkled with it. It is sometimes sprinkled en cattle, with an intention to free or preserve them from diabolical enchantments; and in some ritual books there are prayers to be said on such occa- sions, by which the safety of such animals, as being a temporal blessing to the possessors, is begged of God, whose providential care is extended to all his creatures. The hope which Catholics entertain of obtaining such good effects from the devout use of holy water is grounded on the promise made to believers by Christ (St. Mark. xvi. 17), and on the general efficacy of the prayers of the church ; the petition of which prayers God is often pleased to grant ; though sometimes, in his providence, he sees it not expedient to do so.

WATER HOUSE-LEEK, in botany. See PISTIA.

WATER LEAF. See HYDROPHYLLIM.

WATER LEMON, a species of passiflora.

WATER LILY. See NYMPHJEA.

WATER LILY, LESSER, a species of menyanthes.

WATER LINES OF A SHIP, certain horizontal lines supposed to be drawn about the outside of a ship's bottom, close to the surface of the water in which she floats. They are accordingly higher or lower upon the bottom, in proportion to the depth of the column of water required to float her.

WATERLOGGED, in sea language, the state of a ship when, by receiving a great quantity of water into her hold, by leaking, &c., she has become heavy and inactive upon the sea, so as to yield without resistance to the effort of every wave rushing over her deck.

WATER MELON. See ANCURIA.

N\ ATER MELON is also a species of CUCURBITA, which see.

WATER, METHOD OF PRESERVING FRESH AT SEA. The following method of preserving fresh water sweet during long voyages at sea, by Samuel Bentham, esq., appears in the Transactions of the Society for the Encouragement of Arts, Manufac- tures, and Commerce, who conferred on the author their gold medal : — 'The modo in which I conceived fresh water might be preserved sweet,' says Mr. Bentham, ' was merely by keeping it in vessels of which the interior lining at least should be of such

a substance as should not be acted upon by the water, so as to become a cause of contamination. Ac- cordingly on board two ships the greater part of the water was kept, not in casks, but in cases of tanks, which, though they were made of wood, on account of strength, were lined with metallic plates, of the kind manufactured by Mr. Charles Wyatt, of Bridge Street, under the denomination of tinned copper sheets ; and the junctures of the plates or sheets were soldered together, so that the tightness of the cases depended entirely on the lining, the water having no where access to the wood. The shape of these cases was adapted to that of the hold of the ship, some of them being made to fit close under the platform, by which means the quantity of water stowed was considerably greater than could have been stowed in the same space by means of casks ; and thereby the stowage room ON board ship was very much increased. The quantity of water kept in this manner on board each ship was about forty tons divided into sixteen

tanks ; and there was like- wise, on board each of the ships, about thirty tons stowed in casks as usual. The water in thirteen of the tanks on board one ship, and in all the tanks on board the other, was always as sweet as when first taken from the source ; but in the other three of the tanks, on board one ship, the water was found to be more or less tainted as in the casks. This difference, however, is easily accounted for, by sup- posing that the water of these tanks was contami- nated before it was put into them ; for in fact the whole of the water was brought on board in casks, for the purpose of filling the tanks, and no parti- cular care was taken to taste the water at the time of taking it on board. After the watpr kept in this manner had remained on board a length of time which was deemed sufficient for experiment, it was used out, and the tanks were replenished as occa- sion required ; but in some of the tanks, on board one ship at least, the original water had remained three years and a half.'

WATER MILFOIL, a species of hottonia.

WATER MILFOIL. See MYRIOPHYLLUM.

WATER OUZEL. See TURDUS.

WATER, OXYGENIZED, or deutoxide of hydrogen, is an interesting compound lately formed by M. Thenard, an account of which he published in the tenth volume of the Annales de Chimie et de Phy- sique. The deutoxide of barium being dissolved in water, and sulphuric acid added, the protox- ide of barium or barytes falls down, leaving the oxy- gen combined with the water. It contains, at 32° Fahrenheit when saturated, twice the quantity of oxygen of common water; that is to say, a cubic inch absorbs 662 cubic inches zz 224'46 gr. form- ing 476-98 grains, and acquires a specific gravity of 1-453. Hence 1-0 in volume becomes apparently 1-3; containing 1324 volumes of oxygen ; and one volume therefore contains very nearly 1000 volumes.

In consequence of this great density, when it is poured into common water, we see it fall down through that liquid like a sort of syrup, though it is very soluble in it. It attacks the epidermis al- most instantly, and produces a prickling pain, the duration of which varies, according to the quantity of the liquid applied to the skin. If this quantity be too great, or if the liquid be renewed, the skin itself is attacked and destroyed. When applied to the tongue it whitens it also, thickens the saliva, and produces in the organs of taste a sensation dif- ficult to express, but one which approaches to that

of tartar emetic. Its action on oxide of silver is exceedingly violent. Every drop of the liquid let fall on the dry oxide produces a real explosion; and so much heat is evolved, that, if the experi- ment be made in a dark place, there is a very sen- sible disengagement of light. Besides the oxide of silver, there are several other oxides, which act with violence on oxygenated water ; for example, the peroxide of manganese, that of cobalt, the oxides of lead, platinum, gold, iridium, rhodium, palladium. Several metals in a state of extreme division occasion the same phenomenon ; such as silver, platinum, gold, osmium, iridium, rhodium, palladium. In all the preceding cases, it is al- ways the oxygen united to the water which is dis- engaged, and sometimes likewise that of the oxide; but in others a portion of the oxygen unites with the metal itself. This is the case when arsenic, molybdenum, tungsten, or selenium is employed. These metals are often acidified with the produc- tion of light. The acids render the oxygenated water more stable. Gold in a state of extreme di- vision acts with great force on pure oxygenated water ; yet it has no action on that liquid, if it be mixed with a little sulphuric acid.

M. Thenard took pure oxygenated water, and diluted it, so that it contained only eight times its volume of oxygen. He passed twenty-two measures of it into a tube filled with mercury. He then in- troduced a little fibrin, quite white, and recently extracted from blood. The oxygen began instantly, to be disengaged from the water; the mercury in the tube sunk ; at the end of six minutes the water was completely disoxygenated ; for it no longer effervesced with oxide of silver. Having then measured the gas disengaged, he found it 176 mea- sures rz 8 x 22, that is to say, as much as the li- quid contained. This gas contained neither car- bonic acid nor azote. It was pure oxygen. The same fibrin, placed in contact with new portions of oxygenated water, acted in the same manner. Urea, albumen, liquid or solid, and gelatin, do not disengage oxygen from water, even very much oxy- genated. But the tissue of the lungs cut into thin slices and well washed, that of the kidneys and the spleen, drive the oxygen out of the water, with %s much facility, at least, as fibrin does. The skin and the veins possess the same property, but in a weaker degree. These results are equally interesting and mysterious.

WATER PEPPER, a species of polygonum.

WATER PIMPERNEL, a species of veronica.

WATER PIMPERNEL, ROUND-LEAVED. See SA- MOLUS.

WATER PLANTAIN. See ALISMA.

WATER PLANTAIN, LEAST, in botany, is a spe- cies of limosella; which, being omitted in its order, it is proper to describe here : Limosella, least water plantain, is a genus of the class of didynamia, and order of angiospermia; and in the natural method, ranking under the twenty-first order, precise. The plants of this genus, with all others of the same order, constantly have their seeds in a pericarpium : they have a simple stigma, and spreading corolla.

WATER POTS, in Spain, called Alcarazas, are earthen vessels, extremely porous, destined to cool the water for drinking, by means of the continual evaporation which takes place on their whole sur- face. Every house in Madrid is provided \vith these vessels, which are known to have been introduced into the country by the Arabs, and to be

equally used in Syria, Persia, China, Egypt, &c. Those of Madrid are made of a kind of marly earth, found on the banks of the river Tanusoro, near the town of Auduxar, in Andalusia. On being care- fully analysed it is found to contain about one- third of calcareous earth, a third of alumine, a third of silex, and a very small proportion of iron. The process for manufacturing the alcarazas is as fol- lows:— After the earth has been dried, it is sepa- parated into small lumps about the size of walnuts, which are thrown into a tub or vat, covered with water, and left to soak during twelve hours, after which it is kneaded. After it has been well wrought, it is spread in layers of about six fingers' depth on a smooth surface covered with brick, over which has been sprinkled a small quantity of sifted ashes. Here it is suffered to remain until it has become chapped : it is then cleared from the ashes, carried to a clean flagged floor, where it receives the addition of about the twentieth part of its weight of sea-salt, if intended for the fabrication of large jars, or only a fortieth if destined to be made into vessels of smaller size. An observant traveller says that a quantity of sand is also added. This mixture is kneaded anew with the feet, and then wrought on the wheel, after having been first carefully cleaned from any bits of straw or gravel which might have adhered to it. The vessels, when made, are placed in the potter's oven, but not more than half baked. It is to this circumstance, and to the marine salt which they contain, that they are indebted for their poro- sity ; for the very same earth is wrought into common pottery, without the addition of the salt, or the diminution of the baking. In the hottest weather, water put into one of these vessels, and placed in the open air, more particularly in a current of air, becomes in a very short time agreeably cool. In Estremadura, at a place called Salvatierra, are made red vases called bucaros, which serve also to preserve water cool. They impart to it a disagreeable clayey taste, which is, however, much admired by the women of Madrid. Girls are said to be parti- cularly fond of this species of pottery, and eat it in the green sickness. Nearly similar vases are used in Portugal for moistening snuff,

which is done by placing them in water after they have been filled with the snuff.

WATER PURSLANE, in botany. See PEPLIS.

WATER RADISH. See SISYMBRIUM.

WATER RAT. See Mus.

WATER ROCKET. See SISYMBRIUM.

WATER SAIL, a small sail spread occasionally under the lower studding-sail, or driver-boom, in a fair wind and smooth sea.

WATER SPOUT, an extraordinary meteor Consist- ing of a large mass of water collected into a sort of column, and moved with rapidity along the sur- face of the sea. See METEOROLOGY.

WATER VIOLET. See HOTTOMA.

WATERLAND (Dr. Daniel), a teamed English divine who distinguished himself greatly in theo- logical controversies, was born in 1683 at Wailsby, near Rasen, in Lincolnshire, of which his father, Erasmus Waterland, was many years rector. He was educated at Magdalen College, Cambridge, where he drew up a useful tract, which went through several editions, entitled Advice to a Young Student, with a method of Study for the first four years. In 1713 he became master of the college, was soon after appointed chaplain to George I., and in 1720 preached the first course of lecture?

founded by lady Moyer in defence of our Lord's divinity. He went through several promotions, and at his death, in 1740, was canon of Windsor, archdeacon of Middlesex, and vicar of Twicken- ham. Besides his controversial writings, he pub- lished two volumes of sermons ; but his chief work is his Vindication of the Doctrine of the Trinity, against Dr. Clarke ; with his Defence of that work in reply to Clarke.

WATERLAND, an island in the South Pacific Ocean, discovered by Le Maire and Schouten, in 1616. It is represented as a low, sandy, uninha- bited island, full of rocks, with plenty of trees on the border, but neither

cocoa-nuts nor palmetoes. Some cresses and Indian salad were found, and some fresh water; but no soundings for anchorage were found. Long. 149° 30′ W., lat. 14° 46′ S.

WATER-LODGED, the state of a ship when, by receiving a great quantity of water into the hold by leaking, &c., she has become heavy upon the sea, so as to yield without resistance to every wave rushing over her decks. As, in this dangerous situation, the centre of gravity is no longer fixed, but fluctuating, the stability of the ship is utterly lost : she is therefore almost totally deprived of the use of her sails, which would operate to overset her, or press her head under water. Hence there is no resource for the crew but to free her by the pumps, or to abandon her as soon as possible.

WATERLOO (Anthony), a famous Dutch painter, born at Utrecht in the sixteenth century. His paintings are admirably executed.

WATERLOO, a village of the Netherlands, ten miles south of Brussels, adjoins a spot where Marl- borough, had he not been withheld by the Dutch deputies, might, in 1705, have defeated a French army, and have conferred on this village a similar renown to that attached to it since the memorable 18th of June 1815. We can only here afford space for a brief sketch of this memorable conflict. The forces engaged were, until late in the evening, nearly equal, the French reckoning 71,000 men, while the troops under lord Wellington were about 58,000 ; and those under Bulow, who came up early in the afternoon, were about 15,000 men. In regard to position, also, there was no great advan- tage, the ground on which the British were drawn up rising by a gentle ascent. In pursuance of his plan of diverting his opponents from the real attack, Buonaparte ordered an assault towards the right of the British, on the Chateau de Goumond, a post which, though hardly entitled to the name of a mi- litary station, was defended with such firmness that the French could gain possession only of the plan- tation, and failed in their attempts to drive the British from the position. This encounter, partial but sanguinary, took place between eleven and one o'clock. It was speedily followed by a more seri- ous onset on the British left and centre. The Bri- tish plan of battle, as regarded the infantry, was defensive; their battalions drawn up in squares, and protected by a number of field-pieces, awaited the attack ; but their cavalry stood ready to seize any favorable opening to advance. This occurred, or was believed to occur on more than one occasion, in the early part of the battle; and conflicts took place with that varied result which will always pre- vail when, in armies of equal or nearly equal disci- pline, there remain regiments in reserve. A charge made by a body of British horse, on the flank of a French column, when marching from left to right,

was attended with great success ; but this was soon found to be dearly

purchased ; the field was cover- ed with a number, apparently equal, of French and British uniforms ; and the French cavalry were re- pulsed only by the arrival of a fresh body of British dragoons. On the part of the British infantry, the case was different; the defensive plan being strict- ly followed, the resistance was almost uniformly successful. The French generals witnessed a dreadful carnage ; but observing that the British never advanced, and being iuu»lileto see clearly the whole of their battalions, they in particular Nev, remained unconscious of theii strength, and ven- tured between four and five o'clock to bring for- ward to the charge their cavalry reserve, the impe- rial guards. Twice did these intrepid horsemen rush on the British field-pieces and battalions. Though partially successful against the former, they failed against the latter ; and being galled by their fire, both of cannon and musquetry, were obliged each time to retreat with great loss. 'This charge,' said Buonaparte, who stood on high ground at some distance, ' is too early by an hour.' ' Ney,' rejoined Soult, 'commits us as he did at Jena.' After two hours more of firing and partial attacks, Buonaparte thought it time to bring forward his final reserve, the imperial foot guard. This took place at seven o'clock, and brings us to the most remarkable juncture of the battle; that juncture in which, on almost every former occasion, whether against Austrians, Prussians, or Russians, the at- tack of a corps fresh and high spirited, caused the rout of the opposing line. Here, however, the British troops had been well supported ; and. though fatigued, were not shaken. The blanks in their ranks (above 10,000 men had by this time been killed and wounded) had been successively filled by drafts from the reserve ; and, if few ex- pected victory, all were determined rather to fall than yield. Their general had higher hopes ; he knew that the Prussians were approaching; and making the squares dissolve their order, and form into a continuous line, they obtained in their mus- quetry fire a great advantage over an enemy form- ed in close column. Affairs were now drawing to a crisis. Lord Wellington, observing the maich of Blucher, ordered a forward movement ; and the French, seeing on one side the British advance, ou the other that the high road in their rear was on the point of being forced by the Prussians, relinquish- ed the field of battle, and sought safety in a retreat, which soon became a disorderly flight.

WATERSAY, one of the Western Islands of Scotland, lying one mile south of that of Barray. It is three miles long and one broad, and pretty fertile. It has an excellent harbour, fit for shelter- ing vessels of any size, and in all weathers, from storms, being defended from all winds by the islands of Sanderay and Maldonich. It is inhabited by ten families ; and belongs to Macniel of Barray. It lies about a mile from south Uist, from which it is separated by Christmas Bay.

WATERWORKS. See HYDRAULICS, and HYDRO- STATICS.

WATFORD, a market-town and parish in Cashio hundred, Herts, on the banks of the Colne, eighteen miles and a half north-west from London. The Colne, which nearly surrounds the town, has several mills on its banks ; but the principal manu- facture is the throwing of silk, for which here is a very extensive machine, worked ty water.

WATS (Gilbert), D. D., a learned divine, born in Yo-kshire, and educated at Lincoln College, Oxford, where he became a fellow, and D. D. He translated lord Verulam's Treatise De Augmentis Scientiarum, 4to., and Davilla's History of the Civil Wars in France. He died in 1657.

WATSON (Henry), an eminent surgeon, born •at London in 1702. He became famous as a lec- turer on anatomy, and was chosen surgeon of West- minster Hospital. He published an Account of the Absorbents of the Urinary Bladder, and some papers in the Philosophical Transactions. He died in 1793, aged ninety-one.

WATSON (John), F. S. A., an English divine, born at Presbury in Cheshire, in 1724; and edu- cated at Brazen Nose College, Oxford, where he became a fellow. In 1769, after several inferior promotions, he became rector of Stockport; and in 1770 chaplain to the earl of Dysart. He was twice married, and was made a J. P. for Cheshire and Lancashire. His chief work was his History of Halifax, 1775. He died March 14th, 1783, while preparing for the press A History of the Earls of Warren and Surrey, aged fifty-nine.

WATSON (Dr. Robert), an elegant historian, was born at St. Andrew's, in Scotland, about 1730. He was the son of an apothecary there, who was also a brewer. Having gone through the usual course, at the school or university of that city, he went first to the university of Glasgow, and after- wards to that of Edinburgh. He pursued his stu- dies with ardor, eight hours every day during the rest of his life. An emulation began to prevail of writing pure and elegant English. Mr. Watson studied the principles of grammar ; and by these, with the authority of the best English writers, formed a course of lectures on style, and another on rhetoric ; and in Edinburgh he met with the approbation and friendship of lord Kames, Mr. Hume, and other men of learning. At this time he had become a preacher; and, a vacancy happen- ing in a church at St. Andrew's, he offered himself a candidate, but was disappointed. Mr. Rymer, who then taught logic in St. Salvador's College, being in a very infirm state of health, Mr. Watson purchased the succession to Mr. Rymer's place; and, with the consent of the

other masters, was appointed professor of logic. He obtained also a patent from the crown, constituting him professor. The study of logic, in St. Andrew's, had been till now confined to syllogisms, modes, &c. Mr. Watson prepared and read to his students a course of metaphysics and logics on the most enlightened plan. By his History of Philip II. Dr. Watson attained a considerable degree of celebrity ; and his History of Philip III., published after his death, has added to his fame. Of this last performance, however, he only lived to complete the first four books. The last two were written by the editor of his MSS.

WATSON (Thomas), M. A., a nonconformist di- vine of the seventeenth century, educated and gra- duated at Emanuel College, Cambridge. He became minister of St. Stephen's, Walbrook, during the republic, but was elected in 1663. He wrote A Body of Divinity; and A Course of Sermons on the Assembly's Catechism, in one volume, folio, and other trncts on theology. He died in 1673.

*WATSON (Sir William), M. D., and F. R. S., an eminent botanist, born and educated at London *bout 1700; and bred an apothecary In 1738*

he married, and began business. In 1741 he wa» Admitted F. R. S. ; to whose Philosophical Trans- actions he communicated many valuable papers. In 1745 he was honored with the Copley medal for his discoveries in electricity. In 1757 he was created M. D., by the universities of Halle and Wirtemberg. In 1 762 he was appointed a physi- cian in the Foundling Hospital; and in 1734 a Pel. Reg. Col. In 1786 he was knighted. He died in 1787. His Tracts on Electricity make one vol. 8vo.

WATSON (Richard), D. D., a late celebrated English prelate, was born at Heversham in West- morland, in 1737. His father was a clergyman, and master of a free grammar school, where the son received his education, until in 1754 he became a sizar of Trinity College, Cambridge. Here he was at once distinguished for his intense application to study, and for the singularity of his dress, which consisted of a coarse mottled Westmorland coat, and blue yarn stockings. He regularly took his degrees, became a college tutor, and in 1760, ob- tained a fellowship. In 1764 he was elected pro- fessor of chemistry, when he first applied himself to the study of that science, and with great success, as appears from the five volumes of Chemical Essays which he subsequently published. On the death of Dr. Rutherforth, in 1771, he became re- gius professor of divinity. He distinguished him- self by a display of his political opinions, in a ser- mon preached before the university on the anniver- sary of the Revolution, entitled The Principles of the Revolution Vindicated. A short time previous to this, Dr. Watson appeared with advantage in the field of controversy as the opponent of Gibbon, to whom he addressed a series of letters, entitled

an Apology for Christianity, The patronage of the duke of Rutland was exerted to obtain his promo- tion to the see of Llandaff in 1782; and he was permitted to hold at the same time the archdeaconry of Ely, his professorship, and other preferments. Shortly after, he addressed to the archbishop of Canterbury an unacceptable letter containing- a project for equalizing the value of church bene- fices. In 1785 he published a collection of Theo- logical Tracts, in 6 vols. 8vo. The following year he experienced a large addition to his income by the bequest of a valuable estate from Mr. Luther, of Onear in Essex, one of his Cambridge pupils. During the illness of the late king, in 1788, bishop Watson, in a speech in the house of lords, strongly defended the right of the prince of W;ileˆ to the regency, in opposition to Mr. Pitt. Ik- never obtained any farther promotion. In 1796 the bishop appeared a second time as the defender of revealed religion, in his Apology for the Bible, designed as an answer to Paine's Age of Reason ; and in 1798 published An Address to the People of Great Britain, in which he animadverted on the danger which threatened this country, in common with other parts of Europe, from the influence of those principles which had occasioned the Revolu- tion in France. Gilbert Wakefield, having pul>- lished a reply to this address, was prosecuted for sedition, and sentenced to imprisonment; but bishop Watson took no part whatsoever in the pro- ceedings. Though he always continued to be the advocate of liberality ; his fears from the ascendan- cy of French principles were strongly expressed in a publication which he issued under the title of The Substance of a Speech intended to have been

spoken in the House of Lords, November 22d, 1803. The latter part of his life was chiefly spent in retirement at Calgarth-park, a seat near the lakes of his native county, where he amused him- self with making extensive plantations of timber. He died at that place, July 4th, 1816. Besides ;he works already mentioned, he published papers in the Philosophical Transactions ; Sermons ; and Theological Essays : and after his death his Me- moirs, written by himself, were edited by his son. — Universal Magazine. Rees's Cyclopaedia.

WATT (James), F. II. S., distinguished especi- ally by his improvements in the steam-engine, was the son of a tradesman at Greenock, and was born in 1736. Brought up to the occupation of a ma- thematical instrument maker, he in that capacity became attached to the university of Glasgow, in which he had apartments, where he resided till 1736. Having now entered

into the married state, he settled in business for himself, and in 1764 con- ceived the idea of improving the steam-engine, adopted the profession of a civil engineer, and he was frequently employed in making surveys for canals, &c. To facilitate his labors he invented a new micrometer, and a machine for making drawings in perspective. In 1774 he removed to the vicinity of Birmingham, where he entered into partnership with Mr. Boulton, in conjunction with whom he carried on his improvements in the steam-engine, which he brought to great perfection. Here he be- came associated with Dr. Priestley and other phi- losophical experimentalists; and shared in the che- mical researches which they prosecuted. Admitted a fellow of the Royal Society, he contributed to its Transactions an interesting paper, entitled Thoughts on the Constituent Parts of Water, and of Dephlo- gisticated Air ; and another On a new Method of preparing a Test Liquor to show the Presence of Acids and Alkalies in Chemical Mixtures. Mr. Watt was also a fellow of the Royal Society of Edinburgh ; and in 1806 received from the univer- sity of Glasgow the honorary degree of LL. D. Various inventions of great practical utility origi- nated from his ingenuity. His death took place August 25th, 1819.

WATTLE, n. s. & v. a. From Germ, waghelen, to shake. — Skinner. The barbs, or loose red flesh, that hangs below the cock's bill ; a hurdle : to bind or plat with twigs ; to correct. Obsolete.

A plough was found in a very deep bog, and a hedge wattled standing. Mortimer.

The barbel is so called, by reason of his barb, or wattles, at his mouth, which is under his nose or chops.

Walton.

The cock's comb and u-attks are an ornament becom- ing his martial spirit. More.

WATTS (Dr. Isaac), an eminent dissenting mi- nister, born at Southampton in 1674. In 1690 he was sent to London for education under the Rev. Thomas Rowe ; and in 1696 was himself engaged is tutor to the son of Sir John Hartopp, baronet, at Stoke Newington. He began to preach in 1698, and met with general applause ; and, after offici- ating for three years as an assistant to the Rev. Dr. Isaac Chauncy, he succeeded him in his pastoral charge in 1702, and continued to preside over that church as long as he lived. Though his whole income did not amount to £100 a year, he allotted one-third of it to the poor. He died in 1748. His numerous works have rendered his name fa- mous throughout Europe and America ; and they have been translated into various languages. His

Lyric Poems, his Psalms and Hymns, and his Divine Songs for Children, are a sufficient proof o. his poetical talents, and have had an amazing sale. His Logic and Philosophy have been much ad- mired. He also wrote books upon various other subjects, and printed many sermon. After his death, his works were collected, and published in 6 vols. 4to.*

WAVE, n. s.j v. n., Scˆ Sax. pa>je ; Belgic

WA'VKK, v. n. \y.a. \ waegh ; Teutonic wage ;

WA'VERER, n. s. [Fr. vague. Water raised

WA'VY, adj. (above the general level ;

WAWES, or billow ; unevenuess : to

WAES, 71. s.] wave,orwaver, is to play

loosely to and fro ; be in an unsettled state : as a verb active, to wave is to waft; drive into inequalities; move slowly ; beckon ; direct by a wafting motion ; put off or aside (see WAIVER) : a waverer is one un- settled : wavy, rising in waves; undulating : wawes or waes is used by Spenser for waves.

Another did the dying brands repair With iron tongs, and sprinkled oft the same With liquid waes. Spenser.

They wave in and out, no way sufficiently grounded, no way resolved, what to think, speak, or write.

Hooher,

Remember where we are ; In France, among a fickle, wavering nation. Shalup.

He had a thousand noses, Horns welked and waved like the enridged sea. Id.

Come, young waverer, come and go with me ; In one respect I'll thy assistant be. Id.

Look with what courteous action It waves you to a more removed ground : But do not go with it. Id.

In safe conduct of these

Did thirtie hollow-bottomed barks divide the wuvie seas.

Chapman.

The waves that rise would drown the highest hill ; But at thy check they flee ; and when they hear Thy thundering voice, they post to do thy will.

Wotton.

He resolved not to wave his way upon this reason, that if he should but once, by such a diversion, make his enemy believe he were afraid of danger, he should never live without. Id.

Has any disloyalty dared to feign that religion it-a- vers? They foully mistake ; as commonly they do, that are more cunning in other men's lives than in their own : 'tis not religion wavert, but their loyalty.

Holyday.

They waved their fiery swords, and in the air Made horrid circles. Milton.

Amidst these toils succeeds the balmy night ; Now hissing waters the quenched guns restore ;

And weary waves, withdrawing from the fight, Are lulled, and pant upon the silent shore. Dryden.

For thee the ocean smiles, and smooths her wavy

breast ;

And heaven itself with more serene and purer light is blest. Id.

Since she her interest for the nation's waved, Then I, who saved the king, the nation saved. Id.

Faith as absolutely determines our minds, and as perfectly excludes all wavering, as our knowledge itself ; and we may as well doubt of our own being, as we can whether any revelation from God be true. Locke.

He beckoned to me, and, by the wacing of his hand, directed me to approach the place where he sat.

Addition.

Let her glad vallies smile with wavy corn ; Let fleecy flocks her rising hills adorn. Prior.

What if Hospinian should have said that Luthe'1 v:avered in the point of

the sacrament ? does it follow that he really did so 1 Atte'-burji.

The irat behind impels the u-aw before. Pi»pe.*

\V AX 5

WAVED, in heialdry, is said of a bordure, or any ordinary, or charge, in a coat of arms, having its outlines indented in manner of the rising and falling of waves : it is used to denote that the first of the family, in whose arms it stands, acquired its honor by sea service.

WAVELITE, in mineralogy. Color grayish- white. Imitative and crystallised, in very oblique four-sided prisms, flatly bevelled on the extremi- ties, or truncated on the obtuse lateral edges. Shin- ing, pearly. Fragments wedge-shaped. Transit – cent. As hard as fluor spar. Brittle. Specific gravity 2-3 to 2-8. Its constituents are, alumina 70, lime 1-4, water 26-2. — Davy. It is said to contain also a small quantity of fluoric acid. It occurs in veins along with' flour spar, quartz, tin- stone, and copper pyrites in granite, at St. Austle in Cornwall. At Barnstaple in Devonshire, where it was first found by Dr. VVavell, it traverses slate clay, in the form of small contemporaneous veins. It has been found in rocks of slate-clay near Loch Humphrey, Dumbartonshire.*

WAVEY, in heraldry, one of the crooked lines of which ordi- naries are frequently borne in coat armour as,

WAWL, t;. n. Sax. pa, grief. To cry ; howl.

The first time that we smell the air, \Ve watcle and cry. Shakspeare.

W AX, n. s., v. a., & v. n. t Sax. paexe ; Danish

WAX'EN, adj. y wex ; Goth, and Swed.

vox. The thick tenacious matter gathered by the bee ; any similar tenacious matter : to smear or join with wax; to grow; increase (used of the moon particularly) ; to change : waxen is made of wax.

Careless the man soon tear, and his wit weak •Was overcome of things that did him please. Spenter.

Where things have been instituted, which, beingcon- venient and good at the first, do afterward in process of time u-ar otherwise, we make no doubt but they may be altered. 'iLmlmr.

Art thou like the adder waxen deaf? Shakspeare.

Flowers removed, u-ar greater, because the nourish- ment is more easily come by in the loose earth. Bacon.

This answer given, Argantes wild drew near, Trembling for ire, and u-ajring pale for rage ; Nor could he hold. Fairfax .

They wax and wane Twixt thrift and penury. Carew.

I can yei shoot beams, whose heat can melt The waxen v ings of this ambitious boy. Denhum.

Swarming next appeared The female bee, that feeds her husband drone Deliciously, and builds her waxen cells, With honey stored. Miltim.

They gave us food which may with nectar vie ; And u-ai that does the absent sun supply. Ratcom,

All the magistrals, every new or full moon, give honour to Confucius with bowings, wax candles, and incense. StillingJJeet.

lie formed the reeds, proportioned as they are. Unequal in their length, and waxed with care ; They still retain the name of his ungrateful fair. Dryden.

Their manners u-ar more and more corrupt, in pro- portion as their blessings abound. Atterbury.

A fontanel in her neck was much inflamed, and many u-ox-kernels about it. Wiseman.

Wa consists of an acid spirit of a nauceous taste, and an oil, orbu'.ter, which is emollient, laxative, and •nodyne. irbulhrwt.*

•4 WAX

WAX, or IJu -' WAX, in natural history, a firm and solid substance, moderately iieuvy, and of a fine yellow color, formed by the bees from the pollen of flowers. See APIS, and BEE. The best sort is that of a lively yellow color, and agreeable smell, somewhat like that of honey : when new, it is toughish, yet easy to break; but by age it be comes harder and more brittle, loses its fine coloi and in a great measure its smell.

Proust contends that the bloom on fruit is real wax ; and that it is wax spread over leaves, which prevents them from being wetted, as on the cabbage- leaf. He likewise finds it in the fecula of some vegetables, particularly in that of the small house- leek, in which it abounds. Huber, however, asserts, from his observations, that the wax in bee-hives is an

artificial production, made by the bees from honey ; that they cannot procure it unless they have honey or sugar for the purpose ; and that raw sugar affords more than honey.

It was long considered as a resin, fiom some properties common to it with resins. Like them, it furnishes an oil and an acid by distillation, and is soluble in all oils ; but in several respects it dif- fers sensibly from resins. Like these, wax has not a strong aromatic taste and smell, but a very weak smell, and, when pure, no taste. With the heat of boiling water no principles are distilled from it; whereas, with that heat, some essential oil, or at least a spirituous rector, is obtained from every resin. Farther, wax is less soluble in alcohol. If wax be distilled with a heat greater than that of boiling water, it may be decomposed, but not so easily as resins can. By this distillation, a small quantity of water is first separated from the wax, and then some very volatile and very penetrating acid, accompanied with a small quantity of a very fluid and very odoriferous oil. As the distillation advances, the acid becomes more and more strong, and the oil more and more thick, till its consist- ence is such that it becomes solid in the receiver, and is then called butter of wax. When the dis- tillation is finished, nothing remains but a small quantity of coal, which is almost incombustible.

Wax cannot be kindled, unless it is previously heated and reduced into vapors ; in which respect it resembles fat oils. The oil of butter of wax may by repeated distillations be attenuated and render- ed more and more fluid, because some portion of acid is thereby separated from these substances ; which effect is similar to what happens in the dis- tillation of other oils and oily concretes : but thi< remaikable effect attends the repeated distillation of oil and butter of wax, that they become more and more soluble in alcohol ; and that they never acquire greater consistence by evaporation of their more fluid parts. Boerhaave kept butter of wax in a glass vessel open, or carelessly closed, during twenty years, without acquiring a more solid con- sistence. It may be remarked that wax, its butter, and its oil, differ entirely from essential oils and resins in all the above-mentioned properties, and that in all these they perfectly resemble sweet oils. Hence Macquer concludes that wax resembles re- sins only in being an oil rendered concrete by an acid ; but that it differs essentially from these in the kind of the oil, which in resins is of the nature of essential oils, while in wax and in other analo- gous oily concretions (as butter of milk, butter of cocoa, fat of animals, spermaceti, and myrtle-wax), it is of the nature of mild unctuous oils, that arc

not aromatic, and not volatile, and are obtained from vegetables by expression. It seems probable that the acidifying principle, or oxygen, and

not an actual acid, may be the leading cause of the so- lidity, or low fusibility of wax. Wax is very use- ful, especially as a better material than any other for candles.

Wax may be deprived of its natural yellow dis- agreeable color, and be perfectly whitened, by ex- posure to the united action of air and water, by which method the color of many substances may be destroyed.

The art of bleaching wax consists in increasing its surface; for which purpose it must be melted with a degree of heat not sufficient to alter its qua- lity, in a caldron so disposed that the melted wax may flow gradually through a pipe at the bottom of the caldron into a large tub filled with water, in which is fitted a large wooden cylinder, that turns continually round its axis, and upon which the melted wax falls. As the surface of this cylinder is always moistened with cold water, the wax fall- ing upon it does not adhere to it, but quickly be- comes solid and flat, and acquires the form of ri- bands. The continual rotation of the cylinder car- ries off these ribands as fast as they are formed, and distributes them through the tub. When all the wax that is to be whitened is thus formed, it is put upon large frames covered with linen cloth, which are supported about a foot and a half above the ground, in a situation exposed to the air, the

Wax is composed, according to MM. Gay Lus- sac and Thenard, of

Oxygen . . . 5‘544 Hydrogen . . . 12-672 Carbon . . . 81-784

100-000

See CERIX.

By my analysis wax consists in 100 parts of, Carbon . . 80-69 13 atoms 9-75 80-4 Hydrogen . . 11-37 11 1-375 11-3

Oxygen . . 7‘94 I 1-000 8-3

100-00 100-0

Or, in other words, of 11 atoms olefiant gas + 1 atom carbonic oxide + 1 atom carbon. Had the experiment given a very little more hydrogen we should have had wax as consisting of 12 atoms ole- fiant gas | 1 atom carbonic oxide. — Philosophical Transactions for 1822.

\ AX CANDLES, candles made of bees’ wax, or flaxen wicks, slightly twisted, and covered with white or yellow wax. Of these there are several kinds ; some of a conical figure, used to illumi- nate churches, and in processions, funeral cere- monies, &c. ; others of a cylindrical form, used

on ordinary occasions. The first are either made with i ladle, or by the hand. 1. To make wax candles

WAX

by the ladle: the wicks being prepared, twelve of them are tied by the neck at equal distances, round an iron circle suspended over a large basin of cop- per tinned, and full of melted wax : a large ladle- ful of this wax is poured gently on the tops of the wicks, one after another, and this operation is con tinued till the candle acquire its destined bigness : with this precaution, that the three first ladlefuls be poured on at the top of the wick ; the fourth at the height of three-fourths, the fifth at one-half, and the sixth at one-fourth, to give the candle its pyramidal form; though we should think a coni- cal mould would make the form more accurately pyramidal. Then the candles are taken down, kept warm, and rolled and smoothed upon a wal- nut tree table, with a long square instrument of box, smooth at the bottom. 2. As to the method of making wax candles by the hand, they begin to soften the wax by working it several times in hot water, in a narrow but deep caldron. A piece of the wax is then taken out, and disposed by little and little around the wick, which is hung on a hook in the wall by the extremity opposite to the neck; so that they begin with the big end, di- minishing still as they descend towards the neck. In other respects the method is nearly the same as in the former case ; only, in the former case, water is always used to moisten the various instruments, to prevent the wax from sticking ; and in the latter oil of olives, or lard, for the hands, &c. The cy- lindrical wax candles are either made as the for- mer, or with a ladle, or drawn.

WAX CANDLES, DRAWN, are so called, because they are actually drawn in the manner of wire, by means of two large rollers of wood, turned by a handle, which, turning backward and forward se- veral times, pass the wick through melted wax contained in a brasen basin ; and at the same time through the holes of an instrument, like the pierced drawing irons used for drawing wire, fastened at one side of the basin.

WAX, SEALING, or SPANISH \VAX, is a compo- sition of gum lac, melted and prepared with resins, and colored with some suitable pigment. There are two kinds of sealing wax in use ; the one hard, intended for sealing letters, and othei such pur- poses ; the other soft, designed for receiving the impressions of seals of office to charters, patents, and such written instruments. The best hard red sealing wax is made by mixing twb parts of shell lac, well powdered, and resin and vermilion, pow- dered, of each one part, and melting this combined powder over a gentle fire ; and, when the ingre- dients seem thoroughly incorporated, working the wax into sticks. Seed lac may be substituted for the shell lac ; and, instead of resin, boiled

Venice turpentine may be used. A coarser, hard, red sealing wax, may be made, by mixing two parts of resin, and of shell lac, or vermilion and red lead, mixed in the proportion of one part of the vermi- lion to two of the red lead, of each one part ; and proceeding as in the former preparation. For a cheaper kind, the vermilion may be omitted, and the shell lac also, for very coarse uses. Wax of other colors is made by substituting other coloring matters for vermilion, as verditer for blue, ivory black for black wax. For uncolored, soft sealing wax, take of bees' wax, one pound ; of turpentine- three ounces: and cf olive oil, one ounce; place them in a proper vessel over the fire, and let them boil for some time ; and the wax will be then fit

to be formed into rolls or cakes for use-. For red, black, green, blue, yellow, and purple soft sealing wax, add to the preceding composition an ounce or more of any ingredients directed above for co- loring the hard sealing wax, and stir the mass till the coloring ingredients be incorporated with the wax.

WAX, WHITE, is formed from the common yel- low wax, by bleaching. It is sometimes called, very improperly, virgin wax. The greater the sur- face is in proportion to the quantity, the sooner and more perfectly this operation is performed. The usual way is to melt the wax in hot water ; when melted, they press it through a strainer of tolerably fine linen, and pour it into round and very shallow moulds. When hardened by cooling, it is taken out and exposed to the sun and air, sprinkling it now and then with water, and often turning it : by this means it soon becomes white. The best sort is of a clear and almost transparent whiteness, dry, hard, brittle, and of an agreeable smell, like that of the yellow wax, but much weaker. The common yellow wax is of very great use both in medicine and in many of the arts and manufactures. It has been sometimes given inter- nally in dysenteries and erosions of the intestines ; but its great use is in the making ointments and plasters, and the greater part of those of the shops owe their consistence to it. The white wax is also an ingredient in some of the cerates and ointments of the shops ; and is used in making candles, and in many of the nicer arts and manufactures where wax is required.

WAX-WORK (wax and work), the represen- tation of the faces, &c., of persons living or dead ; made by applying plaster of Paris in a kind of paste, and thus forming a mould containing the exact representation of the features. Into this mould melted wax is poured, and thus a kind of mask is formed ; which being painted and set with glass eyes, and the figures dressed in their proper nabits, they bear such a resemblance that it is dif-

ficult to distinguish between the copy and the ori- ginal.

Sax. poej ; Belgic

WAY, n.s. WAY'FARER, WAY/FARING, WAY LAY, v. a. WAY'LESS, adj. WAY'MARK, n. s. WAY'WARD, adj.

weigh ; Swed. and Goth. way; Teut. wey. The road in which one tra- vels. ' This word is ap- plied in many relations which seem unlike, but . have all the original of WAY'WARDNESS, n.s. J road or travel, noting either progression, or the mode of progression, local or intellectual.' — Johnson. A wayfarer is a pas- senger : wayfaring, travelling : to waylay, to beset on the way : wayless, untracked ; pathless : way- mark, a mark to guide travellers : wayward is (pro- bably from Sax, pa, woe) peevish ; froward ; mo- rose : the adverb and noun substantive corres- ponding.

But if he shall any ways make them void after he hath heard them, then he shall beai her iniquity.

Numbers xxx. 15. Set thee up waymarks, make thee high heaps.

Jeremiah, xxxi. 21.

He durst not take open way against them, and as hard it was to take a secret, they being so continually followed by the best, and every way ablest, of that re- gion. Sidney.

Waywardly proud ; and therefore bold, because ex- tremely faulty. Id.

Matter of rail th

She could devise, and thousand ways invent To feed her foolish humour and vain jolliment.

Spenser. God hath so many times and wuyt spoken to men.

Hooker.

How wayward is this foolish love, That, like a testy babe, will scratch the nurse, And presently, all humbled, kiss the rod! Shakspeare.

I am amazed, and lose my way Among the thorns and dangers of this world. Id.

I will waylay thee going home, where if it be thy chance to kill me, — thou killest me like a rogue and a villain. Id.

The best of his time hath been but rash ; then must we look from his age to receive not alone the imperfec- tions of long engrafted condition, but the unruly way- wardnea that infirm and cholerick years bring. Id.

Being once at liberty, 'twas said, having made my way with some foreign prince, I would turn pirate.

Raleigh.

A physician, unacquainted with your body, may put you in a way for a present cure, but overthroweth, your health in some other kind. Bacon.

Note, by the way, that unity of continuance is easier to procure, than unity of species. Id. Nat. History. When on upon my wayless walk

As my desires me draw, I, like a madman fell to talk

With every thing I saw. Dray ton's Cynthia.

If I had my way,

He had mewed in flames at home, not in the senate ; I had singed his furs by this time. Ben Jonson's Cat.

A child will have as much wit as he has wayward- ness. Walton on Education.

Howsoever, many wayfarers make themselves glee, by putting the inhabitants in mind of this privilege ; who again, especially the women, forslow not to bain them. Carew.

The imagination, being naturally tumultuous, inter- poseth itself without asking leave, casting thoughts in our way, and forcing the understanding to reflect upon them. Duppa.

They to whom all this is revealed, if they will not be directed into a path so planed and smoothed that the wayfaring men, though fools, shall not err therein, must needs acknowledge themselves in the number of the blind that will not enter into God's rest.

Hammond's Fundamentals. The affairs here began to settle in a prosperous way.

Heylin .

The angelick choirs,

On each hand parting, to his speed gave way, Through all the' empyreal road. Milton's Par. Lost.

To attain

The height and depth of thy eternal ways, All human thought comes short. Milton.

What conceivable ways are there, whereby we should • come to be assured that there is such a being as God ?

Tillvtton.

The general officers and the publick ministers that fell in my way, were generally subject to the gout.

Temple.

With downward force he took his wait, And rolled his yellow billows to the sea. Dryden.

By noble ways we conquest will prepare ; First offer peace, and, that refused, make war. rd

To mischief bent,

He seldom does a good with good intent ; Wayward, but wise ; by long experience taught To please both parties, for ill ends he fought. Id,

Like hunted castors, conscious of their store, '1 heir waylaid wealth to Norway's coasts they bring.

Id

Some make themselves way, and are suggested to the mind by all the a-uiit of sensation and reflection.

Locke.

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We are quite out of the way, wheu we think that things contain within themselves the qualities that ap- pear to us in them. Id.

The air could not readily get out of those prisons, but by degrees, as the earth and water above would give way. Burnet.

By me they offer all that you can ask, And point an easy way to happiness. Howe.

His way of expressing and applying them, not his invention of them, is what we admire. Addison.

Pity poor Cupid, generous maid ! Who happened, being blind, to stray, And on thy bosom lost his u'ay. P-ior.

There is nothing in the words that sounds that way, or points particularly at persecution. Atterbury.

Tis no way the interest even of priesthood. Pope.

Men who go out of the way to hint free things, must be guilty of absurdity, or rudeness. Clarissa.

WAY OF A SHIP is sometimes the same as her rake, or run forward or backward : but this term is most commonly understood of her sailing.

WAYS AND MEANS, in parliamentary language, the minister's plan of new taxes ; otherwise called the budget.

WAY, RIGHT OF, in law. This may be grounded on a special permission ; as when the owner of the land grants to another a liberty of passing over his grounds, to go to church, to market, or the like : in which case the gift or grant is particular, and confined to the grantee alone ; it dies with the per- son ; and, if the grantee leaves the country, he cannot assign over his right to any other ; nor can he justify taking another person in his company. A way may be also by prescription ; as if all the owners and occupiers of such a farm have imme- morially used to cross another's ground ; for this immemorial usage supposes an original grant, whereby a right of way thus appurtenant to land may be clearly created. A right of way may also arise by act and operation of law ; for, if a man grants me a piece of ground in the middle of his field, he at the same time tacitly and impliedly gives me a way to come at it ; and I may cross his land for that purpose without trespass. For, when the law doth give any thing to one, it giveth impliedly whatsoever is necessary for enjoying the same. By ihe law of the twelve tables at Rome, where a man had the right of way over another's land, and the road was out of repair, he who had the right of way might go over any part of the land he pleased ; which was the established rule in public as well as private ways. And the law of England, in both cases, seems to correspond with the Roman.

WAY-BILL (way and bill). A bill or list of passengers or parcels sent by the mail coach, or similar conveyances, from one stage to another.

WAYGIOU, an island in the eastern seas, sepa- rated by Dampier's Strait from New Guinea, to the south. Perhaps the south coast has not been surveyed. On the north-west is a good harbour, called Bony, at the mouth of which is the island Bony. The coast is of considerable elevation, very unequal and woody, being covered with an immense forest reaching to the water's edge. The island is throughout mountainous, even at a small distance from the coast. Vegetables are in great variety. The natives are of a very suspicious dis- position, probably from being trepanned as slaves ; and the chief of a neighbouring island, on board of one of the French vessels, in 1793, beginning to .veigh anchor, immediately leapt into the sea, with great outcries to his people. VOL XXII.

WAYWODE is properly a title gifen the go vernors of the chief places in the dominions of the czar of Muscovy. The palatines or governors of provinces in Poland also bear the quality of way- wodes, or waiwodes. The princes of Wallachia and Moldavia have also been called waywodes. Every where else these are called hospodars. Du Cange says that the name waywode is used in Dalmatia, Croatia, and Hungary, for a general of an army : and Leunclavius, in his Pandects of Turkey, tells us it usually signifies captain or com- mander.

WE, pron. In oblique cases us. See I. The plural of/: the oblique case of us; but improper.

Retire we to our chamber, A little water clears us of this deed. Shakspeare.

To poor we, Thine enmity's most capital. Id.

Notwithstanding animals had nothing like the use of reason, we find in them all the lower parts of our nature in the greatest strength. Addison.

We first endure, then pity, then embrace. Pope.

WEAK, adj. ˆ Sax. paec ; Teut. weic ;

WEAK'EN, v. a. Swed. wek ; Goth, vek ;

WEAK'LING, n. s. I Belg. week. Feeble ; in-

WEAK'LY, adj. &aJu. f firm ; soft; pliant; un-

WEAK'NESS, n. s. | defended: to weaken is,

WEAK'SIDE. J to enfeeble ; debilitate ;

deprive of strength : a weakling, a feeble creature : weakly is used as an adjective for not healthy ; not strong : the adverb and noun substantive follow- ing correspond with weak : the weak side is the foib'e ; deficiency of any one.

,ie is weary and weak handed. 2 Samuel xvii. 2.

Their hands shall be weakened from the work, that it be not done. . Nehemiah vi. 9.

As the case stands with this present age, full of tongue and weak of brain, we yield to the stream there- of. Hooker.

The first which weakened them was their security.

Id.

A voice not soft, weak, piping, and womanish ; but audible, strong, and manlike. Ascham.

Troy in our weakness lives, not in her strength.

Shakspeare.

Thou art no Atlas for so great a weight ; And, weakling, Warwick takes his gift again ; And Henry is my king, Warwick his subject. Id.

Being old and weakly, twenty years in prison, i' was ten to one that ever I should have returned.

Raleigh.

The motion of gravity worketh weakly, both far from the earth, and also within the earth. Bacon.

If you will work on any man, you must know his nature, and so lead him ; or his weaknesses and disad- vantages, and so awe him. Id,

This murdered prince, though weak he was, He was not ill, nor yet so weak, but that He shewed much martial valour in his place. Daniel.

This high gift of strength committed to me, Under the seal of silence, could not keep, But weaklii to a woman must reveal it. Milton.

She first his weak indulgence will accuse. Id.

If weakness may excuse, What murderer, what traitor, parricide, Incestuous, sacrilegious, but may plead it? All wickedness is weakness. Jd.

She seems to be conscious of the weakness of those testimonies. Tilbtson.

Trade has increased their shipping, which they found to be their weakside in their last attempts. Temple.

Wert thou not weak with hunger, mad with love, My hand should force thee. Dryden.

Was plighted faith 'so weakly sealed above, That for one error I must lose your love ? U.

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/Esoo begged his companions not to overcharge him ; bey found him a weakling, and bade fum please himself.

L'Ettratige.

This dog would have fought for his master in any other case ; but the love of mutton was his wealuide.

Id.

Kvery violence offered to the body weakens and im- pairs it, and renders it less durable. Kay.

The weak, by thinking themselves strong, areSnduced to venture and proclaim war against that which ruins them ; and the strong, by conceiting themselves weak, are thereby rendered unactive and useless. South.

Many find a pleasure in contradicting the common reports of fame, and in spreading abroad the weaknesses of an exalted character. Addison.

Let us not weaken still the weaker side By our divisions. Id.

New graces yearly like thy works display Soft without weakness, without glaring gay. Pope.

To think every thing disputable is a proof of a weak mind, and captious temper. Beattie.

Solemn impressions that seem to weaken the mind, may, by proper reflection, be made to strengthen it.

Clarista.

WEAL, n. s. Sax. pelan; Dan. tee/. Happi- ness ; prosperity.

Blood hath been shed Ere human statute purged the general weal. Shaksp.

As we love the weale of our souls and bodies, let us so behave ourselves as we may be at peace with God.

Bacon.

Ireland ought to be considered not only in its own interest, but likewise in relation to England, upon whose weal in the main that of this kingdom depends.

Temple.

How shall the muse from such a monarch steal An hour, and not defraud the public weal ? Pope.

WEAL, n.s. Sax. palan. The mark of a stripe.

Like warts or weak it hangs upon her skin. Donne.

WEALTH, n. s. } Sax. pale, rich. From*

WEALTH'ILY, adv. >weal. Prosperity; external

WEALTH'V, adj. j happiness ; riches : the ad- verb and adjective corresponding.

In all time of our tribulation, in all time of our wealth, in the hour of death, and in the day of judgment, good Lord deliver us. Common Prayer.

In desart hast thine habitance, And these rich heaps of wealth doth hide apart From the world's eye and from her right usance.

Faerie Qneene.

I come to wive it wealthily in Padua, If wealthily, then happily in Padua. Shaktpeare.

I should forge

Quarrels unjust against the good and loyal, Destroying them for wealth. Id.

I wish thee, Vin, above all wealth, Both bodily and ghostly health : Not too much wit or wealth come to thee ; For much of either may undo thee. Corbet.

Each day new wealth without their care provides. They lie asleep with prizes in their nets. Dryden.

My speculations, when sold single, like cherries upon the stick, are delights for the rich and wealthy. Addis.

Not Neptune's self from all his floods receives A wealthier tribute than to thine he gives. Pope.

WEAN, v. a. Sax. penan. To put from the breast; to ablactate: hence withdraw from any strong desire or habit,

I have behaved as a child that is weaned of his mo- ther. /•-,.•;.;.-.

Here the place whose pleasant sights From other shades have wtaned my wandering mind ; Tell me what wants me here. Speiuer.

I the talher u-ean me from despair, For love of Edward's ofiVpn- _- in my womb. ShaJup.

Seriously refect on the happy state he shall most

certainly arrive to, if he but wean himselt from these worldly impediments here that clog his soul's flight.

Digby.

There the coarse cake, and homely husks of beans, From panip'ring riot the young stomach weans. Drud.

A fortnight before you wean calves from milk, Itl water be mixed with it. Mortimer,

The troubles of age were intended by the Author of our being to wean us gradually from our fondness of life, the nearer we approach to the end of it. Swift.

WEAN/EL, n.s.) From wean. An anim?'

WEAN'LING. $ newly weaned.

Though when as Lowder was far away, This wolfish sheep would catchen his prey ; . A lamb, or a kid, or a wfanel wast, With that to the wood would he speed haste. Spenser.

To gorge the flesh of lambs and weanling kids, On hills where flocks are fed, flies toward the springs Of Ganges or Hydaspes. Milton.

WEAPON, n.s. \ Sax. peapon. Instru

WKAP'ONED, adj. (ment of offence : armed

WEAP'ONLESS, fwith such an instrument :

\ EAP'ONSALVE, «. s. J destitute of such an in- strument ; unarmed : weaponsalve is a salve which, applied to the weapon, was supposed to cure the wound it made.

In what sort, so ill weaponed, could you atchieve this enterprise 1 Sidney.

The giant

Down let fall his arm, and soft withdrew His weapon huge, that heaved was on high, For to have slain the man that on the ground did lie.

Spenser.

Take this weapon Which I have here recovered from the Moor. Shahtp.

His foes, who came to bring him death, Bring him a weapon that before had none. Daniel.

Sampson

Ran on embatted armies, clad in iron, And weaponless himself. Milton.

That the sympathetic powder and the u-eapon-salie constantly perform what is promised, I leave others to believe. Boyle.

With his full force he whirled it first around ; Imperial Juno turned the course before, And fixed the wandering weapon in the door. Dryaen.

WEAR, v. a., v. n., &, ˆ Pret. wore; part.

*WEAR'ER, n. *. [n. s. >worn. Sax. penan. To*

WEAR'INO. j waste with use, time, or

instruments; to impair by gradual diminution: hence to use ; carry appendant to the body ; ex- hibit : to be wasted ; pass away by degrees : the act of wearing or thing worn: a wearer is, that which wastes or diminishes ; one who uses or car- ries any thing appended to him : wearing is used by Shakspeare for clothes.

Thou wilt surely wear away. Exodus xviii. 18.

Waters irear the stones. Job xiv. 19.

Their adorning let it not be that outward adorning ol plaiting the hair, and of wearing of gold. 1 Peter iii. 3.

It was his bidding ; Give me my nightly wearing, and adieu. Shakspeare.

Were I the wearer of Antonio's beard, I would not shave 't to day. Id.

\Vhat masks, what dances, To wear away this long age of three hours ! Id.

O wicked world ! one that is well nigh worn to pieces with age, to show himself a young gallant. Id.

Protogenes could lay his colors so artificially, tuat one being worn off, a fresh should succeed, to the num- ber of five. Peacham.

They have had all advantages to the making of them wise unto salvation, yet suffer their manhood to wear out and obliterate all those rudiments of their youth.

Decay of Piety.

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Kased the putting off These troublesome disguises wl.ich we wear. Milton.

Thus it-ore out night. Id.

It was the' inchantraent of her riches That made me apply to your crony witches ; That in return would pay the' expence, The wear and tear of conscience. Hudibras.

Armour tears off insults, and preserves the wearer in the day of battle ; but, the danger once repelled, it is laid aside, as being too rough for civil conversation.

Drydeii.

This is unconscionable dealing, to be made a slave, and not know whose livery 1 wear. Id. S/JOHIS/I Fryur.

In those who have lost their sight when young, in whom the ideas of colours having been but slightly taken notice of, and ceasing to be repeated, do quite wear out. Locke.

Trials wear us into a liking of what possibly, in the first essay, displeased us. Id.

An hasty word, or an indiscreet action, does not dis- solve the bond, but that friendship may be still sound in heart ; and so outgrow and wear off these little dis- tempers. South.

We ought to leave room for the humour of the artist or wearer. Additon on Italy.

The difficulty will every day grow less and wear off, and obedience become easy and familiar. Rogers.

On her white breast a sparkling cross she wore. Pope.

Take away this measure from our dress and habits, and all is turned into s'Jch paint and glitter, and ridicu- lous ornaments, as are a real shame to the wearer.

Law.

WEAR', TJ. s.) Saxon {KEJI. A quagmire:

WEAR'ISH, adj. } boggy ; walery.

They will force themselves through flood-gates, or over Kv«r», hedges, or stops in the water. Walton.

A garment over rich and wide for many of their •Mru/k and ill-disposed bodies. Carew.

WEAR, or WEEK, is a great dam in a river, fitted for the taking of fish, or for conveying the stream to a mill. New wears are not to be made, or others altered, to the nuisance of the public, under a cer- tain penalty.

\VEA'RY,a < #.&i7.a. -v Saxon penis; Belg.

WEA'RINESS, n. s. I u-aeren. Subdued by

V LA'KISOME, adj. ˆfatigue; tired; worn;*

WLA'KISOMELY, adv. I worn out: to fatigue;

NN "KA'iii!50MESESs,n.s. J tire; harass: wearisome is tedious; tiresome ; causing weariness : the other derivatives correspond.

Let us not be weary in well doing. Gal. vi. 9.

The people labour in the very fire, and weary them- selves for very vanity. Hab. ii. 13.

Fair Phoebus 'gan decline, in haste, His weary waggon to the western vale. fipenter.

The soul preferreth rest in ignorance before wearitame labour to know. Hooker.

A wit, quick without lightness, sharp without brittle- ness, desirous of good things without newfangledness, diligent in painful things without icearuomene&s.

Aicham .

An old man, broken with the storms of state, Is come to lay his weary bones among ye : Give him a little earth for charity. Shakspeare.

As of Nimrod, so are the opinions of writers different touching Assur, and the beginning of that great state of Assyria ; a controversy wearisomely disputed, without any direct proof or certainty. 1'uteigh.

Troops came to the army the day before, harassed with a long and wearisome march. Bacon.

The king was as weary of Scotland as he had been impatient to go thither, finding all things proposed to him without consideration of his honour or interest.

Clarendon.

Satiety from all things else doth come, Then life must to itself grow wearisome. Denham.

Dewy sleep oppressed them wearied. Milton.

This must be our task In heaven, this our delight ; how wearisome Kternity so spent, in worship paid To whom we hate ! Id. Paradise Lott.

Water-fowls supply. the weariness of a long flight by taking water. Hale.

Sea would be pools without the brushing air, To curl the waves ; and sure some little care Should weary nature so, to make her want repose.

Dryden.

Heaven, when the creature lies prostrate in the weakness of sleep and weariness, spreads the covering of night and darkness to conceal it. Smith's Sermons.

Should the government be wearied out of its present patience, what is to be expected by such turbulent men ?

Addison.

WEA'SEL, n. s. Sax. pepel; Belg. wesel. A small animal that kills mice.

Ready in gybes, quick-answered, saucy, and As quarrelsome as the weasel. Shakspeare. Cymbtline.

A weasel once made shift to slink In at a corn-loft through a chink. Pope.

WEASEL, in zoology. See MUSTELA, and Vi- VERKA.

WEA'SAND, n. s. Sax. par-en, paeranV The windpipe ; the passage through

which the breath is drawn and emitted ; the larynx.

Marry Diggon, what should him affray, To take his own where ever it lay ; For had his weasand been a little wider, He would have devoured both ladder and shidder.

Spenser.

Cut his wezand with thy knife. Shakspeare.

And the soul issues through the weaxon's wound.

WEATHER,n.s.&v.a.ˆ Sax. peSerx; Isl.

WEA'THERBEATEN, adj. wether. State of the

WEA'THERCOCK, n. s. air, respecting either

WEA'THERDRIVEN, adj. [cold or heat, wet or

WEA'THERGAGE, n. s.

WEA'TH ERG LASS,

WEA'THERSPY,

WEA'THERWISER.

its changes; to pass with difficulty ; gain ; endure: weatherbeaten, harmed or worn by the weather : weathercock, weathergage, and weatherglass, instruments for ascertaining the state or changes of the wind or weather : weatherspy and weatherwiser, prognosticators of the weather, male, female, or neuter ; weatherdriven, forced by storms or weather.

Mustard-seed gather for being too ripe, And weather it wel, yer ye give it a stripe. Tuner.

They perceived an aged man and a young, both poorly arrayed, extremely weatherbeaten; the old man blind, the young man leading him. Sidney.

He perched on some branch thereby, To weather him, and his moist wings to dry. Spenser.

She enjoys sure peace for evermore, As weatherbeaten ship arrived on happy shore. Id.

Who's there, besides foul weatlttrl — One minded like the weather, most

unquietly. Shahs.

Where had you this pretty weathercock ? — I cannot tell what his name is my husband had him of. Id.

Thrice from the banks of Wye, And sandy-bottomed Severn, have I sent Him bootless home, and ireatherbeaten back. Id.

And sgyner may a gulling wentherspy, By drawing forth heaven's scheme, tell certainly What fashioned hats, or ruffs, or suits, next year Our giddy-headed antick youth will wear. Donne.

I hope, when you know the worst, you will at once I'.-jp into the river, and swim through handsomely, and

2P2

Tdryness ; change of I that state ; tempest ; I storm : to weather is J expose to the air and

not iieaiherbeaten with the divers blasts of irresolution, stand shivering upon the brink. Suckling.

Again the northern winds may sing and plow, And fear no haven but from the weather now.

Cowley.

Could they weather and stand the shock of an eter- nal duration, and yet be at any time subject to a disso- lution ? aˆle.

To vere and tack, and steer a cause Against the weathfrgaye of laws. Hudibrai.

I le break ray promise and absolve my vow ! The word which I have given shall stand like fate : Aot like the king's, that weathercock of state. Dryden.

What gusts of weather from that gathering cloud My thoughts presage ! Id.

As in some weatherglass my love I hold, Which falls or rises with the heat or cold, I will be constant yet. Id.

He weathered fell Charybdis ; but ere long The skies were darkened, and

the tempests strong.

Garth.

We have been tugging a great while against the stream, and have almost weathered our point ; a stretch or two more will do the work. Addison.

The old u-eatherbeaten soldier carries in his hand the Human eagle. Id.

.Most vegetables expand their flowers and down in warm sun-shiny weather, and again close them toward the evening, or in rain, as in the flowers of pimpernel, the opening and shutting of which are the countryman's ueatheneiser, Derham.

WEATHER. See METEOROLOGY.

WEATHER, in sea-language, is applied by mari- ners to every thing lying to windward of a particu- lar situation; thus, a ship is said to have the weather-gage of another when she is farther to windward. Thus also, when a ship under sail presents either of her sides to the wind, it is then called the weather-side, or weather-board ; and all the rigging and furniture situated thereon are dis- tinguished by the same epithet, as the weather shrouds, the weather-lifts, the weather-braces, &c.

WEAVE, v. a. kv.n.) fret, wove, weaved ;

WEAV'ER, n. s. \participle past, woven,

weaved. Sax. pepan; Belg. weven; Teut. weben. To form by texture, or by inserting one part of the materials within another; insert; unite; to work with a loom : one who weaves.

The women wove hangings for the grove.

2 Kiiigi xxiii. 7.

My days are swifter than a weaver's shuttle.

Job vii. 6. Here in her hairs

The painter plays the spider, and hath woven A golden mesh to intrap the hearts of men Faster than gnats in cobwebs. Sliabspeare.

Upon these taxations, The clothiers all, not able to maintain The many to them 'longing, have put off The spinsters, carders, fullers, weavers. Id.

There our secret thoughts unseen Like nets be weaved and intertwined,

Wherewith we catch each other's mind. Carew.

White seemed her robes, yet ir-wen so they were, As snow and gold together had been wrought. ,

Dryden

When religion was woven into the civil government, and flourished under the protection of the emperors, men's thoughts and discourses were full of secular af- fairs. Attduon.

Dan Pope, for thy misfortune grieved. With kind concern and skill has weaved A silken web, and ne'er shall fade Its colours. Prior.

WEAVING. The various processes for weaving with the common loom have been fully discussed in those departments of our work dedicated to the manufacture of CLOTH and COTTON; and it will now only be necessary to furnish our readers with a description of the improved power loom as manu- factured by Mr. Roberts of Manchester.

The patentee's improvements are divided into several heads, the first of which consists in an im- proved manner of constructing and applying the tappets which are employed for raising and de- pressing the different shafts or heddles in those looms where more than two shafts or heddles are used. This part of the improvement is applicable both to hand looms and those which are worked by power. Plate I of WEAVING contains several views of a power loom, having six shafts or heddles, adapted to weave twilled cloths or fustians, and such other fabrics as have the threads crossed in weaving, in that peculiar manner called twill. Fig. 1 is a front view of the loom (the cloth-roller and breast-beam being removed, in order to exhibit the parts behind). Fig. 2 represents the left hand end of the loom ; fig. 3 the right hand end ; and fig. 4 is a horizontal view, that is, looking down upon the top.

The framing is of cast iron, bolted or screwed together, so as to render the whole firm ; a is the yarn roller, upon which the warps are wound, and this is made to turn with considerable friction, by means of cords passing over pulleys, with weights suspended in order to keep the warp tight. The warp is drawn from this roller over a small roller b, and thence is conducted to the lease-rods c, and through the loops of the several heddles d. These heddles are made to move up and down (in the manner hereafter to be described) for the purpose of separating the warp into two sheds, between which the shuttle is to pass, for the purpose of bringing the weft threads between those of the warp, and thereby weaving the fabric ; e is the lay in which the reed is placed, consisting of a series of fine wires ; between these wires the warp

passes, and by it the threads are separated. This lay is supported by two arms /,/, and vibrates upon a shaft with pivots below.

The lay is moved backward to enable the shuttle to pass along its race between the divided parts of the warp, and it is brought forward to beat up the weft after the shuttle has passed ; g is the place of the breast beam, over which the cloth or other fabric passes when it is woven, and descends from the breast-beam to the roller A, where it is wound up. On the end of the axle of this roller, h, there is a toothed wheel i (seen in fig. 3) which takes into a pinion upon the axle of the ratchet wheel k. A click or pall at the end of the cross-lever falls into this ratchet, and the lower end of the cross-lever being connected to the leg of the lay, moves with it, turning upon a pivot in the centre of the cross, and, every time that the lay goes backward, the click pulls the ratchet wheel one tooth, thereby causing the pinion to move the roller i round with a very slow motion, by which the cloth is progres- sively drawn on to the roller as it accumulates in the loom.

The machinery is put in motion by means of the band m, seen in fig. 2, which proceeds from the steam-engine, or any other first mover, and passes over the rigger n, which is fixed to a small fly- wheel upon the end of the main shaft m the loom

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fehown at oo, fig. 4. This shaft o has two cranks upon it, which, by means of the connecting links v,p, gives motion to the lay. The other end of this shaft has a small toothed -wheel q, seen at fig. 3, which takes into another toothed-wheel r, of twice the diameter, which last is fixed upon the end of an norizontal axle 1 1, extending the whole width of the loom, as shown at fig. 1. This axle has a small bevel pinion v fixed upon it, which actuates a be- vel-wheel u upon the cross axle w. The tappet wheel x is also fixed upon this axle, and the geer is so regulated that the tappet wheel makes one revolution to every nine revolutions of the crank shaft.

The tappet wheel x is formed by two wheels which carry nine small axles, on each of these axles are six small friction rollers, making in the whole fifty-four friction rollers. These rollers are intended to act upon twelve curved levers y, z, fig. 1. The curved levers move upon fixed centres supported in small bearings ; six of these curved levers are supported at 1, and the other six at 2, crossing each other, as shown in fig. 1, the extre- mities of the levers alternately rising and falling. The ends of these levers, towards the middle of the loom, are attached by cords to the lower rails of the heddles, and their other extremities by cords to the top levers, from which are suspended the up- per rails of the heddles.

The operation of the tappet wheel upon the hed- dles is this : — Having been actuated by means of the shaft and geer, as before described, the wheel in its revolution causes the friction rollers to strike alternately upon one or other of the levers y or 2, and force them down, by which means the respec- tive heddles are depressed or raised at certain parts of the operation, and these drawing the sheds of the warp up or down to permit the shuttle to pass, as before described, dispose the warp according to that

particular arrangement which is calculated to produce a twilled fabric. In order to vary the twill, the friction rollers are capable of being shift- ed, and, by so disposing the collets between the rollers, certain of them may be situated so as not to act upon any particular one or more of the curv- ed levers.

The operation of pecking, or throwing the shut- tle, is effected by means of a double arm or tappet 3 on the axis of the shaft 1 1, which acts upon the levers 4, seen in fig. 3, whence rods and bands pass to a vibrating lever 5, upon the axle of a wheel at the top of the loom in front, as seen in fig. i . Thus the revolution of the tappets 3, causing the alteration of the levers 4, produce the vibratory action of the lever 5 ; and cords being passed from this lever to the peckers 6, 6, cause the peckers al- ternately to strike the shuttle out of its box, and send it across the lay e.

There is a provision in case the shuttle should by any accident stop in the race to prevent the lay from com ing forward, which would otherwise break the reed ; this is by means of small springs in the shuttle boxes, which, when the shuttle has not reached its destination, stand out and catch against small projections, and by that means stop the ad- vance of the lay. Whenever this happens, the main strap m is, by the sudden action of a spring, pushed off the rigger of the main shaft, and the machinery is altogether stopped until the accidental interruption is removed.

The second improvement applies to that descrip-

tion of loom employed for the weaving of figured goods, and consists in certain machinery to be placed above the loom for the purpose of effecting the raising and depressing of such parts of the warp as are usually operated upon by the draw boy. Very considerable difficulty and labor are attendant upon the old mode of setting in any particular pattern, figure, or design to be woven, but this labor and consequent expense are, in a great measure, overcome by the plan proposed under the present patent.

A section of the improved piece of mechanism is shown in plate II., fig. 1, which is to oe placed immediately over the heddles or leases of the loom ; a is a cylinder mounted upon an axle, and support- ed upon bearings in the frame. The periphery of this cylinder is perforated with a vast number of holes at equal distances apart, so as to render the appearance of its entire surface like a colander. Previous to placing the cylinder in the loom, it is to be covered with stout drawing paper, and, when set in such a situation that the light may shine through the perforations, a small punch is to be employed for the purpose of pricking through the paper, and through the cylinder, certain holes cor- responding to the required pattern.

The cylinder thus pierced is then placed in the frame as shown at a, so as to revolve upon its pi- vots, resting in bearings capable of accurate adjust- ment. A series of needles 6 are rauged in a hori- zontal position, so that their end may come in contact with the periphery of the cylinder. — Cords c c and d d, fastened to the frame above, pass through eyes in the needles, and proceed down to the hed- dles or leases below. These needles work in guide pieces, and are supported by a straight bar e, which passes through their bent parts behind, and by that means they are enabled to slide acccurate- ly in a line with the axis of the cylinder. When the ends of the needles come against the blank or unpierced parts of the paper upon the periphery of the cylinder, they are pressed back, and the cords are drawn out of the perpendicular, as d, d, by which means the needles acquire a tendency to ad- vance when any of the apertures come opposite them, so as to permit their ends to slide forward. When any of the needles have slidden forward through any of the apertures of the cylinder, the cords attached to those needles become straight as c, c. There are four bars f, g,f,g, from each of which a row of forks, like a wide toothed comb, extend. Between the forks or teeth of these bars the cords pass; and as the bars are drawn up or let down, by the action of the top levers, a knot in each of the cords cause them and the heddles to which they are attached below to be drawn up or let down also : it will hence be seen that those needles which have been allowed to advance by passing into the apertures of the cylinder, draw the bent cords d, d, into the straight position of c c, and by that means those cords are withdrawn from the teeth of the forked bars g, g, and are placed be- tween the teeth of f f, which, in rising, take hold of the knots and lift the heddles attached to the cords so operated upon ; while those needles which are forced back by the blanks of the cylinder keep their cords bent in the position of d, d, and the heddles connected to these cords are lifted by the rising of the bars g, g ; thus the different parts of the warp required to be raised, to produce arjy particular pattern or damask figure, are so raised*

*by the shifting of the cords connected to there- lever k, which will cause (he hook /to be lifted spective heddfes from the fork bars/ to g, or from out of the teeth of the ratchet, and the beating up K 10 f, as may be required, which is effected by the e *u sliding of the needles as above described.*

The manner in which the different parts of this piece of mechanism are put in action is as follows : —A is a main shaft turned by a connexion with the lay of the loom, so as to move half round every

of the cloth will proceed without causing the roller e to draw it off until a

second weft thread has been introduced, which by the increased thickness pre vents the advance of the lay as before, and now al- lows the hook to take hold of the ratchet, and draw it one tooth forward. When this contrivance is

time that the shuttle has been passed across the adapted to a power loom, the lay must be worked

warp. Upon this shaft there are several cams or by an arm which has a spring, in order to permit

tappets operating upon levers; » is one of these the lay to advance accord ing to the thickness of the

cams, which, as it revolves, strikes against the fric- weft.

tion roller of a bent lever j, and drives the rod k The fourth improvement applies to the working

forward. At the reverse end of this rod k there is of the yarn roller and the cloth roller together, by

a vibrating lever /, connected to which a pall /« is means of certain machinery as will be explained,

attached, and this, taking into the ratchet teeth of Fig. 3 shows the end of a loom with such parts as

the cylinder «, causes the cylinder to advance one are necessary to explain this improvement ; a is

tooth every time that the cam i strikes the lever j, the yarn roller with a toothed wheel b upon its

and rod k. There is a hook n, by the side of the axis ; c is a horizontal shaft having an endless

pall m, which is connected also to the action of the screw upon it, taking into the toothed wheel ; d is

lever / and rod k, for the purpose of giving the cy- a friction pulley, over which two weighted cords

Under a retrograde motion; which is requisite pass, the one e fastened to the frame, the other/ at-

when the figure or pattern is designed to be worked tached to an arm or

lever g, extending from' the

backwards and forwards, as in what is called a leg of the lay. W hen the lay goes back, previous to

point pattern ; the means of putting either the pall throwing the shuttle, the lever g draws down the

or the hook out of action is a cam upon the shaft o. cord /, in which act the pulley d and its shaft c is

In order to move the cylinder forward one tooth of a revolution, it is necessary to withdraw those

turned a short distance round, and the endless screw upon this shaft taking into the toothed wheel

needles that have passed into the apertures ; this b causes that wheel and the roller a to turn suf- is done by the cam or tappet wheel p (also upon the ficiently to give out a portion of the warp, main shaft) permitting the rod q to recede, and When the lay returns, for the purpose of beating up with it the guide bar e, which draws the whole of the weft, the lever g slackens the cord f, which now the needles 6 a short distance back every time that slides and is drawn tight by the weight at its ex- the shuttle has passed across the loom. The lifting tremity, the pulley d being prevented from return- of the fork bars is produced by two tappets r and ing by the friction of the weighted cord e. s, likewise upon the main shaft, which, coming in In order to regulate the delivery of the warp, contact with the friction rollers of the bent levers according to the larger or smaller diameter of the t, v, by the cords at their extremities, alternately warp roller a, a lever /< is placed at the back of the pull down the longer arms of the top levers, and loom, carrying the friction roller t, which is pressed thereby cause the shorter arms of the same levers against the periphery of the warp roller by the ten- to lift the forked bars and the cords c or d as be- sion of a cord j fastened to the lever h, and passing fore described. thence over a pulley to the arm or lever g before

The third improvement applicable to looms con- mentioned. This lever is pressed by a spring / in sists in a new mode of taking up or winding the the side of the lay, and as the diameter of the warp cloth or fabric upon the beam, or cloth roller as it roller diminishes; the lever h advances and relaxes accumulates in the loom ; this part of the invention the cordj, by which the spring / is enabled to force is capable of adaptation to both power looms, and the arm g farther out, and hence the cord /' is those worked by hand. It has been found extremely drawn further down in the

receding of the lay above difficult in band looms to produce an even cloth, described, which draws the pulley also, and there- owing to the unequal force by which the lay has by causes the toothed wheel and the warp roller to beaten up the weft or shoot. This contrivance is advance more rapidly than would be required if shown at fig. 2, which exhibits an end view of a the roller was full.

power loom, such parts only being shown as are In opening the sheds of warp for passing the necessary for the illustration of this contrivance. — shuttle, the warp roller is not permitted to give a is the roller upon which the yarn is wound ; this way as in other looms : but the cloth roller is roller turns with considerable friction, owing to the made to yield by the following means : — m is the weighted cord coiled round it, which distends the cloth roller, having a toothed wheel upon its axis, warp threads 6. The roller upon which the cloth taking into a pinion which is fixed upon the axis of is wound is marked c, and has upon its axis a the pulley n ; this pulley has two grooves of differ- toothed wheel d, taking into a pinion upon the axle ent diameters, round which pass cords with ba- of the ratchet wheel e. This ratchet wheel is mov- lance weights. As the lay vibrates, its tail lever o ed round by a hooked pall/, which is connected to draws the cord up and down, which by friction the lever g ; and this lever, being jointed to the leg causes the pulley to move sufficiently to afford the of the lay h, causes the hook to pull the ratchet required relaxation of the cloth, wheel one tooth at every vibration of the Iny. The fifth improvement consists in disposing the

If the weft or shoot carried by the shuttle be of warps and shuttles in several ranges, one above the uniform substance, the cloth or other fabric woven other, which particularly applies to ribbon looms ; by these means will be of an even texture; but, if in this improvement the shuttles are placed in the some parts of the weft be thinner than other parts, lay in several rows, and consequently several por- then the lay will come forward a small distance lions of reeds are adapted to correspond to the se- and permit the tail rod i to strike aˆun.-t the -huit veral rows of warp. The sixth inipujvemciit is in

the manner of working these shuttles for the weav- ing of narrow goods as ribbonsˆ; by which arrange- ment, shuttles with different colors or shades of color may be worked at the same time. The lay is provided with an iron sliding frame, having beaters extending up and down, so as to reach the

several shuttles in the upper and lower rows ; or, if more than two rows of shuttles be arranged, then the sliding beater is formed as a ladder.

WEB, n. s. -\ Sax. pebba. Texture; any

WEB'BED, adj. ˆ thing woven; a film: webbed

WEB'FOOTED, t is joined by a film : webfooted,

WF,B'STER,»I.S. 3 having films between the toes: webster, a weaver (obsolete).

Penelope, for her Ulysses' sake, Devised a web her wooers to deceive :

In which the work that she all day did make, The same at night she did again unreave. Spenser.

This is the foul flibertigibbet ; he gives the web and the pin, squints the eye, and makes the hairlip.

Sliakspeare.

Spiders touched, seek their web's inmost part.

Daviet.

After local names, the most in number have been derived from occupations : as, Taylor, Webster, Wheeler.

Camden.

The sword, whereof the «'«/> was steel ; Pommel, rich stone ; hilt, gold approved by touch.

Faiiftf.

The fates, when they this happy iceb have spun. Shall bless the sacrei clue, and bid it smoothly run.

Dry den.

Webfooted fowls do not live constantly upon the land, nor fear to enter the water. Ray.

Such as are whole-footed, or whose toes are webbed together, their legs are generally short, the most conve- nient size for swimming. Derham.

WEBB (Philip Carteret), esq., an eminent English antiquary and lawyer, born in 1700. In 1751 he was employed to procure the charter of incorporation for the Society of Antiquaries, Lon- don. In 1754 he was elected M. P. for Hasle- mere ; and re-elected in 1761. He was appointed solicitor to the treasury ; in which office he con- tinued till June 1765. In 1747 he published Observations on the Proceedings in the Admiralty Courts, 8vo. In 1760 he presented the famous Heraclean Table to the king of Spain, for which he received a diamond ring worth £300. In April, 1763, he was employed in defending Mr. Wilkes in the celebrated prosecution against him. On that occasion he published A Collection of Records about General Warrants, and other political tracts. He also published, 1. A Letter to Dr. Warburton, 1742, 8 vo. 2. Excerpta ex Instrumentis Publicis de Judaeis, 4to., with other tracts about the Jew bills. 3. Account of a Copper Table discovered at Ileraclea, 1760. He published many other temporary tracts. lie was three times married ; and died in 1770.

WEBSTER (Rev. James), a Scottish divine, was educated at St. Andrew's, then under the noted archbishop Sharp, to whom he rendered himself obnoxious by his attachment to Presbyterian prin- ciples. Having joined the party who refused to ;ibjure the covenant (see CAMERON IANS, CAIKJIL- LITES, &c.), he shared in their persecutions, and underwent two severe imprisonments in Dundee and Dumfries, from the latter of which he was liberated by king James VII.'s act of universal toleration in 1685. On the establishment of Pres- bylerianism in 1688 he obtained first Liberton, whence lie was removed to Whitekirk, ami lastly

to Edinburgh, in 1693. lie published several str- mons, and died in 1720.

WEBSTER (Alexander), D. D., son to the pre- ceding, was born in 1737, studied at Edinburgh, and in 1733 was ordained minister in Culross. In 1737 he was called to theTolbooth church in Edin- burgh. In 1745 he continued in the city when it was taken by the rebels, and all the clergy had fled. By his popularity and eloquence he retained vast numbers loyal to the house of Hanover. He suggested and entirely planned the scheme for the relief of the ministers widows of the church of Scotland, called the widows' scheme. To him also was owing the first outline of the plan for extend- ing the royalty, and building the new town of Edinburgh. In 1755 he was engaged in a work of vast public utility, being the first Statistical Account of Scotland ; and the amount of the population of the different parishes which he procured, other investigations have since proved to be exceedingly accurate. He died in 1784.

WEBSTER (Charles), M. D., a learned physician, born in Dundee, and educated at St. Andrew's, where he also studied divinity. About 1760 he

went to Edinburgh, where he practised as a physi- cian, gave lectures on chemistry and materia medi- ca, a,t the public dispensary, where he was assist- ant physician along with Mr. Duncan; and became minister of the non-jurant Scottish episcopal con- gregation in Carrubber's Close, and afterwards of St. Peter's Chapel in Roxburgh place, which he himself built. He lived many years much respected in Edinburgh, and contributed greatly to the pro- curing the repeal of the penal laws against the Episcopalians of Scotland, and was one of the committee which went to London on that business. He published a short essay, proving condensation to be the cause of heat, and some other chemical tracts. He went abroad during the revolutionary war, and died in the West Indies about 1797. He published also a sermon preached at the opening of St. Peter's Chapel, and an occasional prayer prefixed. A volume of his posthumous sermons has been published for the benefit of his daughters.

WEBSTER (William), a mathematician of Lon- don, born in 1684, who kept a school in Leicester- Fields. He translated from the French of La Hoste A Compendious course of Mathematics ; 2 vols. 12mo. He also wrote a Treatise on Arithme- tic ; and another on Book-keeping ; and died in 1744, aged sixty.

WECHEL (Christopher), a celebrated printer of the sixteenth century at Paris; who in 1530 began to print elegant and correct editions of the ancient Greek authors. To make them perfectly accurate, he employed the learned Sylburgius to prepare the copy and correct the proofs. He died in 1572. They were so correct that not two errors could be found in a large folio.

WECHEL (Andrew), son of Christopher, being a Protestant, about the time of the massacre of Paris, fled to Frankfort and to Basil, where he carried on the printing with equal reputation as his father. He published a catalogue of all the books printed by them both at Frankfort, in 8vo. 1590. He printed also many valuable works at Basil.

WED, v. a. & v.n, \ Sax. pe'oian. To marry ;

WEDDING, n. s. S take for a husband or wife ; join in marriage ; unite or take permanently : to contract matrimony : a wedding is the nuptial ce- remony ; marriage.

If one by one you wedded all the world, Or, from the all that are, took something good To make a perfect woman ; she you killed Would be unparalleled. Shaktpeare.

Affliction is enamoured of thy parts, And thou art wedded to calamity. Id.

Come, away ! For you shall hence upon your wedding-day. Id.

Though the principal men of the house of commons were again elected to serve in this parliament, yet they were far from wedding the war. Clarendon.

Never did thy beauty, since the day I saw thee first, and wedded thee, adorned With all perfection, so inflame my senses. Milton.

These three country bills agree that each wedding produces four children. Graunt.

The women in us still prosecutes a deceit like that be- gun in the garden ; and our understandings are wedded to an Eve, as fatal as the mother of their miseries.

Part

Men are wedded to their lusts, and resolved upon a wicked course ; and so it becomes their interest to wish there were no God. Tillotson.

Nor took 1 Guiscard, by blind fancy led, Or hasty choice, as many women wed ; But with deliberate care. Dryden.

A woman seldom asks advice before she has bought her ice<&iing-cloaths. Spectator.

Chloe, blind to wit and worth, Weds the rich dulness of some son of earth. Pope.

If she affirmed herself a virgin, she must on her wedding day, and in her wedding cloaths, perform the ceremony of going alone into the den, and stay an hour with the lion. Swift.

WEDDERBURN (Alexander), earlofRosslyn, was the eldest son of Peter Wedderburn, of Ches- ter-hall, esq., one of the senators of the college of justice in Scotland. Born in 1733, he was bred up to the law in his native country, but early re- moved to the Middle Temple, and was called to the bar in 1757. He rapidly obtained the patron- age of the earls of Bute and Mansfield ; was ap- pointed solicitor general in 1771, in which office he

opposed Dr. Franklin, before the privy council on American affairs ; and in 1778 was made at- torney-general. In 1780 he became chief justice tf the common pleas, with the title of lord Lough- borough. He adhered to the party of Mr. Fox when Mr. Pitt first came into power ; but joined the latter, with many others, in 1793, under the alarm produced by the French Revolution, when he succeeded lord Thurlow as chancellor. This high office he held until 1801, when he retired with tlie title of earl of Rosslyn. He died without issue, January 3d, 1805. Lord Rosslyn wrote a work On the Management of Prisons, published in 1793.

WEDGE, n.». & t;. a. Dan. and Goth, vegge ; Belg. wegge. A solid body tapering to an edge ; one of the mechanical powers : to cleave with a wedge ; to drive in or fix as a wedge ; force or fasten by wedges.

When I saw a goodly Babylonish garment, and a tcedge of gold of fifty shekels weight, then I coveted them. Jathua vii.

As sparkles from the anvil used to fly, When heavy hammers on the wedge are swaid. Spenser.

My heart,

As wedged with a sigh, would rive in twain, Lest Hector, or my father, should perceive me.

Shaiupeare.

The fifth mechanical faculty is the wedge used in the cleaving of wood. Wilkins.

In warlike musters they appear, In rhombs, and wedgti, and half-moons, and wings.

Hilton

In common ranged in figure wedge their way, Intelligent of seasons. Id,

Sergesthus in the centaur soon he passed, Wedged in the rocky shoals and sticking fast. Dryden.

The oak let many a heavy groan, when he was cleft with a wedge of his own timber. Arbuthnol.

Wedge on the keenest scythes, And give us steeds that snort against the foe.

A. Philips.

WEDGWOOD (Josiah), esq., F. R., and A. SS., an English gentleman of uncommon genius, to whose indefatigable labors is owing the establishment of a manufacture that has opened a new scene of extensive commerce. He was born in 1731, and was the younger son of a potter, but derived little or no property from his father. His many discoveries of new species of earthen wares and porcelains, his studied forms and chaste style of decoration, and the correctness and judgment with which all his works were executed under his own eye, and by artists for the most part of his own forming, have turned the current in this branch of commerce; for, before his time, England imported the finer earthen wares; but, for more than twenty years past, she has exported them to a very great annual amount. Neither was he unknown in the walks of philosophy. His communications to the Royal Society show a mind enlightened by science. His invention of a thermometer for measuring the higher degrees of heat employed in the various arts is of the highest importance to their promotion, and will add celebrity to his name. He was the projector of the grand trunk canal, and the chief agent in obtaining the act of parliament for making it. against the prejudices of the landed interest. His purse was always open to the calls of charity. He was a most zealous supporter of commerce, and a steady patron of every valuable interest of society. He died at his elegant villa of Etruria in Staffordshire, January 2d, 1795, aged sixty-four.

WED'LOCK, n.». Sax. pet> and lac. Mar- riage and gift. Marriage ; matrimony.

She doth stray about

By holy crosses, where she kneels and prays For happy wedlock hours. Shakspeare

Can wedlock know so great a curse, As putting husbands out to nurse 1 Cleaveland.

He his happiest choice too late Shall meet already linked, and wedlock-bouad To a fell adversary. . Milton.

One thought the sex's prime felicity Was from the bonds of wedlock to be free, And uncontrolled to give account to none. Dryden.

WED'NESDAY, n. s. Sax. poˆenp-toaj ; Swed odensday ; Belg. woensday; Island, vcensduy. The fourth day of the week, so named by the Gothic nations from Woden or Odin.

Where is the honour of him that died on Wednesday ?

Shahtpeare.

The offices of prayer he had in his church, not only upon the Sundaies, and festivals, and their eves, ag also Wediiesduies and Fridaies. Fell.

‘ WEE, adj. Goth, u-irla, small. Little ; small.

Does he not wear a great round beard, like a glover’s

paring knife ? — No, forsooth ; he hath but a wee face,

with a little yellow beard. Shakspeare.

WEED, n.«. & v. a.x Saxon peob, tares. A

WEED’ER, n. ». /herb noxious or useless;

WEED’HOOK, > a widow’s robe : but this

WEED’LESS, adj. i probably from imtwtrrf, a

WEED’V. J dress of woe; any gar

WEE

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WEI

men : to weed is, to rid of weeds ; free from any thinj noxious : a weeder, he who does this : weed- hook, a hook for extirpating weeds : weedless, free from, and weedy, abounding in, weeds.*

He wandering feeds On slowly growing herbs and ranker weeds. Sandys.

In May get a weedhoqk, a crotch, and a glove, nnd iceed out such weeds as the coru doth not love.

Ttuser.

My mind for weeds your virtue’s livery wears.

Sidney.

Wise fathers be not as well aware in weeding from their children ill things, as they were before in grafting in them learning. Ascham’s Schoolmaster.

The snake throws her enamelled skin, Weed wide enough to wrap a fairy

in. Shakspeare,

There on the pendant boughs her coronet weed Clambering to hang, an envious sliver broke, When down her weedy trophies and herself Fell in the weeping hook. Id. Hamlet.

A weeder out of his proud adversaries, A liberal rewarder of his friends. Id. Richard III.

When you sow the berries of bays, weed not the borders for the first half year ; for the weed giveth them shade. Bacon.

Her own hands putting on both shirt and weede.

Chapman.

So many weedless paradises be, Which of themselves produce no venomous sin.

Donne.

If he had an immoderate ambition, which is a weed, it it be a ireed, apt to grow in the best soils, it doth not appear that it was in his nature. Clarendon.

Lately your fair hand in woman's weed Wrapped my glad head. Waller.

A crystal brook,

When troubled most it does the bottom show; Tis weedless all above, and rockless all below. Dryden.

Hid in a weedy lake all night I lay, Secure of safety. Id. JEneid.

WEED, among miners, denotes the degeneracy of a load or vein of fine metal into a useless mar- casite.

WEEDS also denote a peculiar liabit, worn by the relicts of persons deceased, by way of mourning.

WEEK, n. 5. ~\ Sax. peoc; Belg. weke ;

WEEK'DAY, ˆSwed.u'efca; Goth.uuTca,

WEEK'LV, adj. & adv. } any series or portion of time. The space of seven days : an ordinary day of the week as distinct from Sunday : happening once a week : hebdominally.

The Jews had always their weekly readings of the law of Moses. Hooker.

The division of time by weeks hath been universally observed in the world, not only amongst the civi- lized, but likewise among the most barbarous nations.

Wilkins.

So lived our sires, ere doctors learned to kill, .ind multiplied with heirs their weekly bill. Dryden.

These are obliged to perform divine worship in their turns weekly, and are sometimes called hebdomadal canons.' Ayliffe.

One solid dish his weekday meal affords, An added pudding solemnized the Lord's. Pope.

Nothing more frequent in their weekly papers, than affecting to confound the terms of clergy and high- church, and then loading the latter with calumny.

Swift.

WEEK, in chronology. See SABBATH.

WEEN, v.n. Sax. penan; Belg. waenen. To r.hink; imagine; form a notion; fancy. Obsolete.

Ah lady dear, quoth then the gentle knight, Well may I ween your grief is wond'rous great.

Spenser.

Thy father, in pity of my hard distresa, Levied an army, weening to redeem And reinstal me in the diadem. Shakspeare. Henry v'l.

They weened

That self same day, by fight or by surprize, To win the mount of God. Mdton.

WEEP, v. rt. &w. a. I Pret. and part. past.

WEEP'EU, n. s. J wept, weeped. Sax. peo~

pan. To shed tears; lament; bewail; shed mois- ture ; drop : one who weeps : a token of mourning worn on the arm.

The days of weeping and mourning for Moses were ended. Deuteronomy xxxiv. 8.

They weep unto me, saying, Give us flesh that we may eat. Numbers

If thou wilt weep my fortunes, take my eyes.

Shakspeare.

Then they for sudden joy did weep, And I for sorrow sung,

That such a king should play bo-peep,

And go the fools among. Id. King Lear.

Have you wept for your sin, so that you were indeec sorrowful in your spirit ? Are you so sorrowful tha you hate it ? Do you so hate it that you have left it ?

Taylor.

Thus was this place A happy rural seat of various view, Gioves whose rich trees wept odorous gums and balm.

Milton.

Away ! with women weep, and leave me here, Fixed like a man, to die without a tear, Or save or slay us both. Dryden.

Let India boast her plants ; nor envy we The weeping amber or the balmy tree, While by our oaks the precious loads are borne, And realms commanded which those trees adorn.

Pope.

Rye-grass grows on clayey and weeping grounds.

Mortimer.

WEEVER (John), a learned antiquary, born in Lancashire, and educated at Cambridge. He published a work of great value and curiosity, entitled Funeral .Monuments, 1631, in folio Another edition was published in 4(0., 1767. He died in 1632.

WEE'VIL, n. s. Sax. pepel ; Belg. vevel. A grub.

A worm called a weevil, bred under ground, feedeth upon roots, as parsnips

and carrots. Bacon's Nat. Hisl .

Corn is so innocent from breeding of mice that it doth not produce the very weeveli that live in it and consume it. Hentley.

WEEVIL, in zoology, a species of curculio. See CCRCULIO.

WEE'ZEL, n. $. See WEAZEL.

The corn-devouring weexel here abides, And the wise ant. Dryden't Georgicki.

WEFT, n. s. Fr. guaive. That of which the claim is generally waived ; any thing without an owner.

His horse, it is the herald's weft; No, 'tis a mare. Ben Jomon's Underwoodt.

WEIGELA, in botany, a genus of plants of the class pentandria, and order of monogynia. They bear hermaphrodite flowers, furnished with five stamina, but only one style, and are monopetalous, with the capsule within the flower.

WEIGH, v. a. &cv. n.ˆ\ Saxon pa-jan; Belg.

WEIGH'ED, adj. I weyhen ; Teut. wagen ;

WEIGHT, n. s. \ Isl. u-ega ; Goth, vtega.

WEIGHT'ILY, adv. ˆTo examine by the ba-

WEIGHT'TNESS, n. s. lance; allot or take by

WEIGHT'LESS, adj. weight; counterbalance;

WEIGH'TY. j raise; be equivalent in

•weight; balance in the mind; compare: as a verb neuter, to have weight or importance; bear hea- vily ; sink : weighed is experienced : weight, quan- tity ascertained by the balance ; mass , gravity ; pressure ; importance ; influence : the other deriva- tives correspond.

Just balances, just weights, shall ye have.

Leviticus xix. 36. They weighed for my price thirty pieces of silver.

Zechariah xi.

So was every thing of the temple, even to the u-eight of a flesh hook, given to David, as you may see.

Lesley.

How by him balanced in the weightless air 1 Canst thou the wisdom of his works declare ? Sandys.

Regard not who it is which speaketh, but weigh only what is spoken. Hooker.

Barbarossa, using this exceeding cheerfulness of his soldiers, weighed up the fourteen gallies he had sunk.

Knollet.

I to your assistance do make love, Masking the business from the common eye 1 For sundry weighty reasons. Shakspeare. Macbeth.

I weigh not you.

— You do not weigh me ; that is, you care not for me.

Sliakspeare.

How to make ye suddenly an answer, In such a point of weight, so near mine honour, In truth I know not. Id. Henry VIII.

Earth taken from land adjoining to the Nile, and pre- served so as not to be wet or wasted, and weighed daily, will not alter weight until the seventeenth of June. Bacon.

They having freight Their ships with spoil enough, weigh anchor streight.

Chapman.

The apparent defect of her judgment, joined to the •Mightiness of the adventure, caused many to marvel.

Hay ward.

His majesty's speedy march left that design to be better weighed and digested. Clarendon.

Heaviness or weight is not here considered as being such a natural quality, whereby condensed bodies do of themselves tend downwards ; but rather as being an af- fection, whereby they may be measured. WUkiiu.

Tb' Eternal hung forth his golden scales, Wherein all things created first he weighed. Milton.

By the exsuction of the air out of a glass vessel, it mr.ue that vessel take up, or suck up, to speak in the common language, a body weighing divers ounces.

B,yle.

When gathering clouds o'ershadow all the skies, And shoot quick lightnings, weigh, my boys, he cries.

Dryden.

The shaft that slightly was impressed, Now from his heavy fall with weight increased Drove through his neck. Id.

It must both weightless and immortal prove, Because the centre of it is above. Id.

You have already wearied Fortune so, She cannot farther be your friend or foe, But sits all breathless and admires to feel A fate so weighty that it stops her wheel. Id.

The prince may carry the plough, but the weight lies upon the people. - tinge.

I fear 1 have dwelt longer on this passage than the tceightiness of any argument in it requires. Locke.

A wise man is then best satisfied, when he finds that the same argument which weighs with him has weighed with thousands before him, and is such as hath born down all opposition. Addison.

Then shun the ill, and know, my dear, Kindness and constancy will prove

The only pillars fit to bear So vast a weight as that of love. Prior.

Pride, like a gulf, swallows us up ; our very virtues, when so leavened, becoming weight and plummets to •ink us to the deeper ruin. Government of tht Tongue.*

Boerhaavc fed a sparrov. with l.read foui days, in whicti time it eat more

than its own weight ; and ye therte was no acid found in its body. Arbiithnot.*

She does not weigh her meat in a pair of scales, but she weighs it in a much better balance ; so much as gives a proper strength to her body, and renders it able and willing to obey the soul. Law.

WEIGH, a weight of cheese, wool, &c., contain- ing 256 Ibs. avoirdupoise. Of corn the weigh contains forty bushels ; of barley or malt six quarters. In some places, as Essex, the weigh of cheese is 300 Ibs.

WEIGHING ANCHOR is the drawing it out of the ground it had been cast into, in order to set sail or quit a port, road, or the like.

WEIGHING MACHINE. A curious weighing machine was some time ago invented by Mr. Hanin of Paris, whereby the weights of the prin- cipal countries in Europe, and the relative piopor- tions thej bear to each other, are shown at one view. For this he received a bounty of twenty guineas from the Society of Arts instituted at Lon- don. This name has been also given to several ingenious contrivances for the mere common pur- poses of weighing.

WEIGHTS AND MEASURES. The standard weights and measures of Great Britain have been materi- ally altered since the commencement of our work ; and, as we have repeatedly referred to the subject, it will be necessary for us in the first instance to furnish our readers with a brief view of the ear- liest attempts in this important department of po- litical jurisprudence.

By the twenty-seventh chapter of Magna Charta, the weights are to be the same all over England : but for different commodities there are two dif- ferent sorts, viz. troy weight, and avoirdupois weight.

The origin from which both of these are raised , is the grain of wheat, gathered in the middle of the ear;

32 of these, well dried, made one pennyweight 20 pennyweights . . . one ounce, and

12 ounces one pound troy ;

by stat. 51 Henry III., 31 Edw. I., 12 Henry VII. A learned writer has shown that, by the laws of assize, from William the Conqueror to the reign of Henry VII., the legal pound weight contained a pound of twelve ounces, raised from thirty-two grains of wheat; and the legal gallon measure con- tained eight of those pounds of wheat, eight gal- lons making the % bushel, and eight bushels the quarter.

Henry VII. altered the old English weight, ant1, introduced the troy pound in its stead, being three- quarters of an ounce only heavier than the old Saxon pound, or one-sixteenth heavier. The first statute that directs the use of the avoirdupois weight is that of 24 Henry VIII.; and the particular use to which this weight is thus directed is simply for weighing butcher's meat in the market ; though it has been used for weighing all sorts of coarse and large articles. This pound contains 7000 troy grains ; while the troy pound itself contains only 5760 grains, and the old Saxon pound weight but 5400 grains. Philosophical Transactions, voL Ixv. art. 3.

Hence there are now in common use in Eng- land two different weights, viz. troy weight and avoirdupois weight, the former being employed in weighing such fine articles as jewels, gold, silver

silk, liquDis, &c. ; and the latter for coarse and heavy articles, as bread, corn, flesh, butter, cheese, tallow, pitch, tar, iron, copper, tin, &c., and all grocery wares. And Mr. Ward supposes that it was brought into use from this circumstance, viz. as it was customary to allow larger weight, of such coarse articles, than the law had expressly enjoin- ed, and this he observes happened to be a sixth part more. Apothecaries buy their drugs by avoir- dupois weight, but they compound them by troy weight, though under some little variation of name and divisions.

We must now furnish the present standard as it has been promulgated by a committee of the House of Commons. The report is divided under four heads ; and the substance of that important docu- ment is annexed : —

In the first and second clauses of this act it is enacted that the old standard yard ot 1 760, in the custody of the clerk of the House of Commons, shall continue to be the standard unit of extension, or lineal, superficial, and solid measures, when the temperature is at 62° of Fahrenheit's thermometer. From this it is evident that no change is to be made upon these measures throughout the empire, and that all the measurements depending upon them are to remain the same as before. In Scotland, however, considerable changes must take place, es- pecially in the measurement of land, which is uni- versally measured by the Scots acre, raised from the Scots chain, or twenty-four times the length of the Scots ell. This ell, according to the oldest and best authority, is 37£ English inches, from which standard of course, the equalization of the Scots' land measures must be derived.

In the third clause it is enacted that, if the standard yard should be lost or injured, it is to be restored by a reference to the length of the pendu- lum, vibrating seconds in the latitude of London, at the level of the sea, and in vacuo. This length has been found, and is by the act declared to be 39-1393 inches. Hence the length of the yard to that of the pendulum is in the proportion of thirty- six inches to 39-1393 inches, or of the number 360,000 to the number 391,393; so that if the length of the pendulum be divided into 391,393 equal parts, then will 10,000 of these parts be the length of an inch, according to the imperial standard.

The fourth clause enacts that the old troy pound of 1758, now in the custody of the clerk of the House of Commons, shall continue to be the standard unit of weight; and that the avoirdupois pound, now in use, shall contain 7000 grains, of which the troy pound contains 5760, according to this act. Hence, contrary to the opinion of many writers, the weight of the troy or standard pound, to that of the avoirdupois or common pound, is in the proportion of 5760 grains to 7000 grains ; or of the number 141 to the number 175. Hence, also, no change will take place in the transactions of busi- ness where such weights were used formerly; but in Scotland numerous changes of weights must occur in the sale of many articles of ordinary consumption. These changes will be not only different in almost every county, but even sometimes different in vari- ous parts of the same county. The use of the Dutch or Scots troy pound, and of the tron which varies so much throughout that country, will be utterly abolished, and all local enactments regard- ing them rendered nugatory. According to the best authorities, the standard Dutch or Scots troy

(or, as it is sometimes called, the Lanark pound) contains 7621 ft English troy grains ; and the old Tron, most in use, 10003ft English troy grains : upon these data our tables of equalisation for th«3 weights of Scotland are founded.

In the sixth clause it is enacted that, if the standard troy pound should be lost or destroyed, it is to be restored by a. reference to the weight of a cubic inch of distilled water, which has been found, and is declared to be 252-458 troy grains, at the temperature of 62° Fahrenheit, the barometer being at thirty inches. Hence the weight of a penny- weight troy is to that of a cubic inch of distilled water, in such circumstances, in the proportion of twenty-four grains to 252‘458 grains, or of the number 24,000 to the number 252,458 ; so that the weight of the cubic inch of water must be di- vided into 252,458 equal parts, and 24,000, of them will be the standard pennyweight, from which the ounce and the pound, its multiples, can be easily derived.

The sixth clause enacts that, the new standard measure of capacity for all

liquids, and dry goods not measured by heaping, shall be a gallon containing ten pounds avoirdupois weight of distilled water, weighed in air at the temperature of 62° Fahrenheit's thermometer, the barometer being at thirty inches ; that the quart shall be the fourth part of this imperial standard gallon, and the pint one- eighth ; that two such gallons shall be a peck, and eight shall be a bushel ; and that eight such bushels shall be a quarter of corn, or other dry goods, not measured by heaped measure. To find the capacity of this new gallon, it is necessary to refer to the fifth clause of the act, where we have the standard weight of a cubic inch of water given in grains ; hence we find the number of cubic inches in the gallon by the following proportion : — As 252-458 grains : 1 cubic inch : : lOlbs., or 70,000 grains : 277-274 cubic inches, which are consequently the contents of the imperial standard gallon. Though the identification of this gallon is thus remotely con- nected with the standard of length, and still more so with the length of the pendulum, yet it may be proper here to point out a mode of verifying it, and restoring it, if ever the standards of weight or mea- sure should be lost or destroyed.- The contents of the cube of the sixth part of the length of the pen- dulum vibrating seconds in the latitude of London, at the level of the sea and in a vacuum, are so very near that of the imperial standard gallon, that the difference is only about f5 of a cubic inch. For one-sixth part of the length of the pendulum is 6'5232166 inches; and the cube of this is nearly 277-578 cubic inches, which differs from 'the con- tents of the gallon only by 304 of a cubic inch. Now this difference is so small that the one may be reckoned a sufficient identification of ihe other, a circumstance which brings this gallon nearer to a fixed and invariable standard than perhaps was ever thought of. Another circumstance of considerable importance may be remarked, as it serves to render the standard of weight, determined by water, inde pendent of thermometric graduations. The tem- perature (62° Fahrenheit's thermometer) at which the water has been fixed for the determination of the standards of weight and measure is one which is situated above the freezing point, at exactly the sixth part of the distance between the freezing and the boiling points. The connexion of these two facts will therefore render the standards of weight

and of measure so far invariable in future, inas- much as they are independent of artificial measure- ments and graduations, and can be easily referred to nature alone for their prototypes ; 1. That the cube of the sixth part of the second's pendulum at Lon- don is so near the capacity of the imperial standard gallon as to be considered an identification ; and, 2. That the tenth part of the weight of an imperial standard gallon of water,

at a temperature above that of freezing (in the mercurial thermometer), which is exactly the sixth part of the distance be- tween the freezing and boiling points, is an imperial standard avoirdupois pound.

The changes which this alteration in the standard of capacity produces are very great. By this clause the old standard wine gallon of 231 cubic inches, the old standard ale and beer gallon of 282 cubic inches, the old standard corn gallon of 268-8 cubic inches, or the standard Winchester bushel of 2150-42 cubic inches, the old standard Scots pint (or Stirling jug) of 103-404 cubic inches, and the

old standard Scots wheat and barley firlots (com monly called the Linlithgow wheat and barley fir lots), with all other local measures of every descrip- tion, are completely abolished. The seventh clause enacts that the standard measure of capacity for goods sold by heaped measure shall be the bushel, containing eight imperial gallons, or eighty avoir- dupois pounds of water at the above-mentioned temperature ; and that it shall be made round, with a plain and even bottom, and be 19§ inches from outside to outside. In the eighth clause it further enacts that, in using this bushel, it shall be heaped, in the form of a cone, to the height of six inches, and the outside of the bushel is to be the extremity of the base of this cone. In the clause appended to the bill, above alluded to, it is enacted that all such measures shall be made cylindrical, and that their diameters shall be at the least double their depths, and the height of the cone or heap shall be equal to three-fourths of the depth of each measure its outside being the extremity or base of the cone

1. Long Measure.

w rJMth of the Pendulum 12 Inches 3 Feet 5J Yards 40 Poles or 220 Yards

8 Furlongs or 1760 Yards zz 1 Mile

1 Inch zz

1 Foot zz

1 Yard zz

1 Pole or Perch —

1 Furlong zz

Pendulums.

•025550

•306597

•919792

5-058854

202-354156

1618-833244

N. B. — The English land chain zz 22 yards or 66 feet, and contains 100 links; 1 link zr 7‘92 indies,

2. Square or Superficial Measure.

of the Square Pendulum zz 1 Square Inch

144 Square Inches zz 1 Square Foot

*9 Square Feet *ZZ 1 Square Yard*

30J Square Yards zz 1 Square Pole

40 Square Poles or 1210 Square Yards zz 1 Rood of land

4 Roods or 4840 Square Yards zz 1 Acre of land zz 4094-720426

N. B. — The Square Chain zz 484 Square Yards, and 10 Square Chains zz 1 Acre.

Square Pendulum zz -000653

zz -094002

zz -846017

zz 25-592003 ZZ 1023-680107

3. Cubic or Solid Measure.

Cubic Pendulums.

of the Cubic Pendulum zz 1 Cubic Inch zz -0000176 1728 Cubic Inches zz 1 Cubic Foot zz -0288207

27 Cubic Feet zz 1 Cubic Yard zz -7781587

N.B.— A Cubic Foot of distilled water,-at 62° Fahrenheit, weighs almost exactly 997-136969 Ounces Avoirdupois, and at the maximum density 999-2777 Ounces Avoirdupois.

4. Troy Weight.

gth of a Cubic Inch of water zz 1 Grain

24 Grains zz 1 Pennyweight

20 Pennyweights zz 1 Ounce

12 Ounces zz 1 Pound

Cubic inches of Wuter. •0039610571428 •0950653714285

1-901307428571

22-8 15689142857

N. B. — A Cubic Inch of distilled water, at the maximum density, weighs 253 Troy Grains.

2?ii Grains 16 Drams 16 Ounces 28 Pounds 4 Quarters 20 Cwt.

5. Avoirdupois Weight.

Cubic Inches of Water.

New Gallons of Water

5380

zz 1 Dram

zz 1 Ounce zz

zz 1 Pound zz

zz 1 Quarter cwt. zz

zz 1 Hundred weight zz

„ zz ! Ton zz 6210-93760 _ ...

N. B. — 175 Troy Pounds zz 144 Avoirdupois Pounds; and 175 Troy Ounces zz 192 Avoirdupois

Ounces.

•10831015625 zz

1-7329625 27-7274

776-3672 zz 2J

3105-4688 zz 11J

zz 224

WEIGHTS AND MEASURES.

589

5 Ounces Avoirdupois

4 Gills

2 Pints

4 Quarts

2 Gallons

4 Pecks or 8 Gallons

8 Bushels

6. Imperial Gallon Measure.

Pounds Avoirdupois

of Water. — 3 —

= 1 Gill =

— 1 Pint rz \ = zz 1 Quart — 24 =. = = 1 Gallon — 10 —

— 1 Peck z= 20 —

— 1 Bushel = 80 zi zz 1 Quarter rr 640 zz

Nl B. — The proportion of the Imperial Gallon to the Wine Gallon is as 6 to 5 nearly, to the Ale Gallon as 59 to 60 nearly, and to the Corn Gallon as 33 to 32 nearly ; its proportion to the Stirling Pint is as 59 to 22 nearly.

Cubic Inches

of Water.

8-6643125 34-65925 69-3185 277-274 554-548 2218-192 17745-536

7. Heaped Measure.

Pounds Avoirdupois

of Water.

8 Imperial Gallons = 1 Bushel = 80 = 3 Bushels 12 Sacks

1 Sack = 240 = =:

1 Chaldron = 2880 =

Cubic Inches of Water.

2218-192 6654-576 79854-912

N. B. — The depth of the Imperial Bushel is required by the Act to be eight inches, though this is not expressed ; because the height of the heap or cone is six inches, and this must be equal to three- fourths of the depth.

N. B. — The proportion of the Imperial Bushel to the Linlithgow Wheat Firlot is as 106 to 105 nearly, and to the Barley Firlot as 92 to 133 nearly.

8. Dimensions of the Dry Measures.

Imperial Dry Measures.

Depth.

:

Inside Diameter.

Outside Dia- meter at the mouth.

Breadth at the edge.

Height of the Heap.

Content •when not heaped.

Content when heaped.

Inches.

Inches.

Inches.

Inches.

Inches.

Cubic Inchs.

Cubic Inchs.

Bushel ....

8-00000

18-78925

19-50000

•35538

6-00000

2218-192

2815-488

Half Bushel . .

6-34960

14-91304

15-47716

•28206

4-76220

1109-096

1407-744

Peck ....

5-03968

11-83648

12-28422

•22387

3-77976

554-548

703-872

Gallon or Half Peck

4-00000

9-39463

9-75000

•17769

3-00000

277-274

351-936

Half Gallon . .

3-17480

7 45652

7-73858

•14103

2-38110

138-637

175-968

Quart ....

2-51984

5-91824

6-14211

•11194

1-88988

69-3185

87-984

Approximate Dimensions of the Dry Measures.

Imperial Dry Measure.

Depth.

Inside Diameter.

Outside Diameter at the mouth.

Breadth at the edge.

Height of the Heap.

Bushel

Inches.

8

Inches.

1811

Inches. 19i

Inches.

1

Inches.

6

Half Bushel

61

141

15A

A

-

43

Peck

5i

1H2

12A

33

Gallon

4

Qj

93

1

3

Half Gallon

3&

72,

73

1

21

Quart . ,

2i

5&

61

1

12

Tables of Equalisation.

In the following tables of equilisation the most exact proportions are adopted, viz. 277274 English Wine Gallons = 23 1000 Imperial Gallons; 277274 English Ale Gallons = 282000 Imperial Gallons; 277274 English Corn Gallons = 268800 Imperial Gallons; 138637 Standard Scots Pints = 103404 Imperial Half Gallons; 2218192 Standard Wheat Firlots = 21 97335 Imperial Bushels; 221 81 92 Standard Bailey Fir- lots = 3205524 Imperial Bushels ; 7000 Troy Pounds = 5760 Avoirdupois Pounds ; 7000 Dutch or Scots Troy Pounds = 7621ft Avoirdupois Pounds ; 7000 old Tron Pounds = 10003ˆ Avoirdupois Pounds ; 32 Glasgow Tron Pounds = 45 Avoirdupois Pounds ; 360 Standard Scots Ells = 372 Imperial Yards ; and 3025 Standard Scots Acres = 3844 Imperial Acres. These tables are also Equilisation Tables of Prices, as well as of Weights and Measures, but in the inverse ratio of the latter. Thus, for example, 1 Ib. Tron. = l'4290911b. Avoirdupois; but, when the price of alb. Avoirdupois is = 1, the price of a Ib. Tron is = 1-429091. Also 1 Ib. Avoirdupois = -699746 Ib. Tron; but, when the price of a Ib.Tron is = 1, the price of a Ib. Avoirdupois is = 699746 ; the whole of the tables are calculated to the near est millionth part of a unit.

English Wine

English Ale English Corn Gal. or

Standard Scots

Gallon =

Gallon =

Bush. = Imperial

Pint = Imperial

Imperial Gal.

Imperial Gal.

Gallon or Bushel.

Half Gallon.

1

0-833111

1-017045

0-969438

0-748615

2

1-666222

2-034089

1-938876

1-497230

3

2-499333

3-051134

2-908315

2-245845

4

3-332444

4-068178

3-877753

2-994460

5

4-165555

5-085223

4-847191

3-743075

6

4-998666

6-102267

5-816629

4-491690

7

5-831777

7-119312

6-786067

5-240305

8

6-664887

8-136356

7-755505

5-988920

9

7-497998

9-153401

8-724944

6-737534

Standard Wheat

Standard Barley

Imperial Gallon

Imperial Gallon

Firlot =

Firlot =

= English

= English

Imperial Bushel.

Imperial Bushel.

Wine Gallon.

Ale Gallon

1

0-990597

1-445161

1-200320

0-983241

2

1-981195

2-890321

2-400641

1-966482

3

2-971792

4-335482

3-600961

2-949723

4

3-962389

5-780643

4-801281

3-932965

5

4-952986

7-225803

6-001602

4-916206

6

5-943584

8-670964

7-201922

5-899447

7

6-934181

10-116125

8-402242

6-882688

8

7-924778

11-561285

9-602563

7-865929

9

8-915376

13-006446

10-802883

8-849170

Imperial Gal. or

Imp. Half Gal.

Imperial Bushel

Imperial Bushel

Bush. = English

= Standard

= Standard

= Standard

Corn Gal. or Bushel.

Scots Pint.

Wheat Firlot.

Barley Firlot.

1

1-03152

1-340731

1-009492

0-691990

2

2-063051

2-681463

2-018984

1-383981

3

3-094576

4-022194

3-028476

2-075971

4

4-126101

5-362926

4-037968

2-767962

5

5-157626

6-703657

5-04746.0

3-459952

6

6-189152

8-044389

6-056952

4-151943

7

7-220677

9-385120

7-066444

4-843933

8

8-252202

10-725852

8-075936

5-535924

9

9-283728

12-066583

9-085428

6-227914

Troy Standard Dutch or Scots

Old Tron

Glasgow Tron

Ib. =

Troy Ib. =

Ib. =

*!&.•**

Imperial Ib.

Imperial Ib.

Imperial Ib.

Imperial Ib.

1

0-822857

1-088831

1-429091

1-40625

2

1-645714

2-177662

2-858182

2-81250

3

2-468571

3-266494

4-287273

4-21875

4

3-291429

4-355325

5-716364

5-62500

5

4-114286

5-444156

7-145455

7-03125

6

4-937143

6-532987

8-574545

8-43750

7

5-760000

7-621818

10-003636

9-84375

8

6-582857

8-710649

11-432727

11-25000

9

7-405714

9-799481

12-861818

12-65625

Standard Scots

Standard Scots

Imperial

Imperial Ib.

Ell = Im-

Acre = Im-

Ib. =

= Standard

perial Yard.

perial Acre.

Troy Ib.

Dutch Ib.

1

1-033333

1-270744

1-215278

0-918412

2

2-066667

2-541488

2-430556

1-836824

3

3-100000

3-812231

3-645833

2-755237

4

4-133333

5-082975

4-861111

3-673649

5

5-166667

6-353719

6-076389

4-592061

6

6-200000

7-624463

7-291667-

5-510473

7

7-233333

8-895207

8-50

6-428885

8

8-266667

10-165950

9-722222

7-347298

9

9-300000

11-436694

10-937500

8-265710

Imperial Ib. =

Imperial Ib. =

Imperial Yard =

Imperial Acre =

Old Iron Ib.

Glasgow Tron Ib.

Stand. Scots Ell.

Stand. Scots Acre.

i

0-699746

0-711111

0-967742

0-786941

1

1-399491

r 1 22 222

1-935484

1-573881

3

2-099237

2-133333

2-903226

2-360822

4

2-798982

2-844444

3870968

3-147763

.S

3-498728

3-555556

4-838710

3-9347C3

6

4-198473

4-266667

5-806452

4-721644

7

4-8'.'

4-977778

6-774194

5-508585

8

5-597964

5-688889

7-741935

*6*295535*

9

a-zynio

6-400000

8-709677

7-0824C6

WEL

591

WEL

WEIMAR, SAXE, a small independent state of Germany, with the title of a grand duchy. It con- sists of several districts, the surface of which, when added together, form an area of 1450 square miles, with somewhat more than 200,000 inhabitants. The whole is divided into two parts or provinces. The province of Weimar comprehending the duchies of Weimar and Jena, with part of the princi- pality of Altenburg, the chief part of the circle of Neustadt, and the petty districts of Ilmenau, Ol- disleben, and Alstadt, which lie scattered in Thu- ringia. The extent of this province is 970 square miles; its population above 135,000. The other, called the province of Eisenach, comprises the duchy of that name, with some districts to the east of the Hesse-Cassel territory, acquired in 1815. The area is 480 square miles ; the population above

66,000.

The soil, being in general fertile, yields corn enough for consumption ; and the pastures on the hills feed numerous flocks of sheep ; but the larger cattle are less attended to. The province of Eise- nach is more mountainous, and consequently less productive, than that of Weimar. Its chief wealth is in its forests, its pasturages, its mines and quarries. Hemp and flax are reared ; but the growth of corn is inadequate to the consumption. Manufactures of linen and hardware are carried on to some ex- tent. The revenue is about £150,000 a year. The military are reduced at present to 1000 men. This was the first slate of Germany which, after the downfall of Buonaparte, received from its sovereign a parliament on a liberal plan.

WEIMAR, the capital of the grand duchy, is si- tuated on the banks of the river Ilm, fifty miles W. S. W. of Leipzic, with a woody mountain to the north, and hills of little elevation to the south and east, while the river winds along the south side of the town. The prospect, if not striking, is plea- sant. The town itself is built in a plain and some- what antique style : its population somewhat ex- ceeds 8000. The grand ducal residence is a large castle, finely situated to the east, with a park ex- tending along the banks of the Ilm, and open to the public. The Belvedere, another residence of the

reigning family, is situated on a delightful eminence to the south. Weimar has long held a high rank in Germany for literature. Early in the present century, Weimar reckoned amonp: its residents above twenty writers of note, ?it the head of whom were Schiller, Goethe, Herder, Wieland, and, for a time, Kotzebue. The public institutions, if not numerous or extensive, are useful and well ma- naged. For education, there is a classical school, a seminary for schoolmasters, and an academy for drawing, painting, and sculpture. The public li- brary, containing above 100,000 volumes, is well selected ; and here is an institution of great extent, though a private establishment, connected with the study of geograghy and statistics. Maps, globes, geographical publications, periodical and perma- nent, all issue from this repository in great num- bers. Lithography is applied to maps, and in some degree to books. The inhabitants derive their sup- port chiefly frona the residence of the court.

WELCHPOOL, a market-town in Pool hun- dred, Montgomery, nine miles north of Montgo- mery, and 177 from London. The town is plea- santly situate at the bottom of a hill, so that the upper part of the church-yard is nearly on a level with its roof. The market-house is neat and con-

venient. The county hall is a modern brick struc- ture, principally occupied by the court used for holding the county assizes, but in which are also assembly rooms. In this building is the great mart for Welsh flannels, which are manufactured in the upper part of the county. The river Severn passes near the town, and is navigable to Pool- Quay, about three miles below Welchpool. The Montgomeryshire canal also passes through Welsh-pool. It is governed by two bailiffs, a high steward, recorder, and town-clerk, sergeants at mace, &c. Powis Castle stands on an eminence in the neighbourhood, and is the noble residence of the earl Powis. Market on Monday.

WEL'COME, adj., interj., n. s.,) Saxon pil-

WE I/COM EN ESS, n. s. [&u. a. > cume; French

WEI/COMER. j bien venu ;

Dutch welkom. Received with gladness ; admitted willingly; grateful; pleasing: a form of saluta- tion ; a kind salutation : to welcome is to salute with kindness or hospitality : welcomeness and welcomer correspond.

I should be free from injuries, and abound as much in the true causes of toeleomes, as I should find want of the effects thereof. Sidney.

I serve you, madam ; Your graces are nght welcome. Shaktpture.

I know no cause Why I should welcome such a guest as grief. Id.

Farewel, thou woeful welcomer of glory ! Id.

Some stood in a row in so civil a fashion, as if to •welcome us ; and divers put their arms a little abroad, which is their gesture when they bid any welcome. Bac.

Here let me earn my bread, Till oft invocated death Hasten the welcome end of all my pains. Milton.

Our joys, after some centuries of years, may seem to have grown older, by having been enjoyed so many ages ; yet will they really still continue new, not only upon the scores of their toelccmeneit, but by their per- petually equal, because infinite, distance from a period.

Boyle,

Welcome, he said, 0 long-expected, to my dear embrace ! Dryden.

He that knows how to make those he converses with easy, has found the true art of living, and being wel- come and valued every where. Locke.

WELD, v. a. Sax. seb ; Goth, aid, fire. To beat one heated mass of metal into another.

Sparkling or welding heat is used when you double up your iron to make it thick enough, and so weld or work in the doublings into one another. Moxon.

WELD, or WOLD, in botany. See RESEDA.

WELDING HEAT, in smithery, a degree of heat given to iron, &c., sufficient to make the surfaces of two pieces incorporate upon being beaten toge- ther with a hammer. See IRO..

WEL'FARE, n. s. Well and fare. Happiness ; success; prosperity.

If friends to a government forbear their assistance, they put it in the power of a few desperate men to ruin t!ie welfare of those who are superior to them in strengh and interest Addhon.

Discretion is the perfection of reason : cunning is a kind of instinct that only looks out after our immediate interest and welfare. Additon.

*WEL'KIN, n. *. From Saxon pealcan, to roll, or pelcen, clouds. The visible regions of the air. Only used in poetry.*

Ne in all the welkin was no cloud. Ch uccr.

He leaves the tcelkin way most beaten plain. Spenser.

The swallow peeps out of her nest, And cloudy welkin cleareth. W,

WEL 592

Spur your proud horses hard, and ride in blood ; Amaze the welkin with your broken staves. Sliaki.

With feats of arms From either end of heaven th« welkin burns. Milton.

\VELL,n.s.,v.n.,v.a.,adj.} Sax. pelle, poell ;*

VVEL

WELL'BEING, n. s. [kadv.

Gothic vella. A

spring ; fountain ; source; pitof water; any deep cavity : to well is to issue as from a spring ; to >pour forth : as an adjective, healthy ; happy; convenient; recovered : as an ad- verb, properly ; skil- fully; completely ; favoredly : well is J much used in com-

WELL'BORN, adj.

WELL'BRED,

WELL' DONE, interj.

WEL'FARE, n. «.

WELL'FAVORED, adj.

WELL'MET,

WELL'NATURED,

WELL'NIGH, adv.

WELL'SPENT, adj.

WELL'SPRING, n. s.

WELL'WILLER,

WELL'WISH,

WELL'WISHER.

position to express that which is right, laudable, or complete ; and this, with the extracts, will explain the compounds.

The plain of Jordan was well watered every where.

Genesis.

We are well able to overcome it. Numbers xiii. 30.

My feet were almost gone : my steps had well-nigh slipt. Psalms.

Understanding is a welltpnng of life. Prov. xvi. 22.

Instead of weli-sel hair, baldness. Isaiah iii. 24.

Wettdone, thou good and faithful servant.

Matthew xrv. 21.

Disarming all his own countrymen, that no man might shew himself a wellwiller of mine. Sidney.

The knot might well be cut, but untied it could not be. Id.

He, by enquiry, got to the well-known house of Kalander. Id.

Thereby a crystal stream did gently play, Which from a sacred fountain welled forth alway.

Spenser.

To her people wealth they forth do well, And health to every foreign nation. Id.

The fountain and welUpring of impiety is a resolved purpose of mind to reap in this world what sensual profit or sensual pleasure soever the world yieldeth.

Hooker.

Once more to-day weltmet, distempered lords ; The king by me requests your presence straight. Shaks.

His wife seems to be wellfavoured. I will use her as the key of the cuckoldly

rogue's coffer. Id.

He rails

On me, my bargains, and my well-won thrift, Which he calls interest. Id. Merchant of Venice.

Lady, I am not well, else I should answer From a full flowing stomach. Id. King Lear.*

Those opposed files, Which lately met in the intestine shock And furious close of civil butchery, Shall now in mutual well-beseeming rank March all one way. Id. Henry IV.

Well, let's away, and say how much is done. Shaks.

Oh you are well-tuned now ; but 1 '11 let down the pegs that make this musick. Id. Othello.

I like well, in some places, fair columns upon frames of carpenters' work. Bacon.

The fruits of unity, next unto the we/l-pleasing of God, which is all in all, are towards those that are without the church ; the other towards those that are within. A/.

England was wellnigh ruined by the rebellion of the barons, and Ireland utterly neglected. Daviei.

As the root and branch are out one tree, And i,-fll and stream do but one river make ;

So if the root and well corrupted be, Tnr stream and branch the same corruption take. Id.

A private caution I know not well how to sort, unless I should call it political, by no means to build too star a great neighbour. Wot ton.

Man is not to depend upon the uncertain dispositions of men for his wellbeing, but only on God and his own spirit. Taylor's Holy Living.

Many sober, well-minded men, who were real lovers of the peace of the kingdom, were imposed upon.

Clarendon. Such musick Before was never made, But when of old the sons of morning sung, Whilst the Creator great His constellations set, And the tceW-balanced world on hinges hung. Milton.

None have been with admiration read, But who, besides their learning, were well-bred.

Rotcommon.

One whose extraction from an ancient line Gives hope again that well-born men may shine.

WaUer.

Her well-turned neck he viewed, And on her shoulders her dishevelled hair. Dryden.

Well-meaners think no harm ; but for the rest, Things sacred they pervert, and silence is the best. Id.

He, full of fraudful arts, This well- in vented tale for truth imparts. Id.

He followed the fortunes of that family ; and was weli with Henry the Fourth. Id.

The conscience of well-doing may pass for a recom- pence. L'Estrange.

They are to lie down without any thing to support them in their age, but the conscience of a wellspenl youth.

Id.

What a pleasure is well-directed study in the search of truth. Locke.

The applause that other people's reason gives to vir- tuous and well-ordered actions is the proper guide of children till they grow able to judge for themselves.

Id.

Procure those that are fresh gathered, straight, smooth, and well-rooted. Mortimer's Husbandry.

Suppose the well-hole to be eleven foot long, and six foot wide ; and we would bring up a pair of stairs from- the first floor eleven foot high. Moron.

Whoever shall read over St. Paul's enumeration of the duties incumbent upon it, might conclude that well- nigh the whole of Christianity is laid on the shoulders of charity alone. Sprat' t Sermon.*

He conducted his course among the same well-chosen, friendships and

alliances with which he began it.

Addison.

Just thoughts and modest expectations are easily satisfied. If we don't over-rate our pretensions, all will be well. Collier.

What a refreshment then will it be, to look back upon a wellspent life ! Calamifs Sermons.

Good men have a well-grounded hope in another life ; and are as certain of a future recompence as of the being of God. Atterbury.

He examines that well-meant, but unfortunate, lye of the conquest of France. Arbutlnwt.

'Tis easy for any, when well, to give advice to them that are not. Wake's Preparation for Death.

All the world speaks well of you. Pope.

Oh ! that I 'd died before the well-fought wall ! Had some distinguished day renowned my fall, All Greece had paid my solemn funerals. Id.

\ lint poet would not mourn to see His brother write as well as he 1 Swift.

We ought to stand firm in well-established principles, and not be tempted to change for every difficulty.

WatH,

From his two springs

Pure welling out, he through the lucid lake Of fair Dambea rolls his infant stream. Thomson..

A WELL, in hydraulics, is a hole under ground,

usually of a cylindrical figure, and walled with stone and mortar ; its use is to collect the water of the strata around it. In 1704 the Society for the Encouragement of Arts, &c., conferred their silver medal on George Butler,

*esq., for his invention of a bucket for drawing water from deep wells. It consists of a common barrel, the head of which is taken out ; across the top are fixed two thin bars of iron, having in the centre a small piece of the stinie metal, which Mr. Butler terms a standard. This is furnished with a collar, which has four moveable arms; and above it there are a mortise containing a small brass pulley, and a loop to ˆvhich the well-rope is secured : further a cord is- tied to one extremity of the collar, which, after passing over the pulley, communicates with a valve applied to the lower end of the vessel. The bucket, thus constructed, when let down into the well by a rope, is filled through such valve ; and, on being drawn up, the iron cross above-mentioned is pressed against two parallel bars, so that the valve is opened, and the water discharged into a trough, or vessel, prepared for its reception. The chief ad- vantage arising from this contrivance is that the bucket is not only filled expeditiously, but it is also brought up steadily, so that no water is spilt ; and, if any of it accidentally drop, it falls directly from the valve into the well without wetting the descending rope, a circumstance of considerable importance ; for, by such continual moisture (which is necessarily occasioned by the common buckets), it speedily decays, while the vessels are seldom drawn up completely filled. The following method of procuring good water from wells appears in the Decade Philosophique, &c. ‘ If you wish the water of a well to be clear, and free from any disa- greeable taste,’ says the writer, * the excavation should be made considerably larger than is usually done. If, for example, you wish to construct a well five feet in diameter, the excavation ought to be from twelve to fifteen feet. A false well is made ten or twelve feet in diameter; in the middle of this large well the real well is constructed with a diameter of about five feet, but in such a manner that the water may filter through the interstices left between the stones, which form the outside of the inner well : the false well is then filled with sand and pebbles, so that the water must first filter through them before it reaches the real well. By this method you are sure of having filtered water perfectly clear and fit to drink.’*

WELL, in ships, an apartment formed in the middle of a ship’s hold to enclose the pumps, from the bottom to the lower deck. It is used as a bar- rier to preserve those machines from being damaged by the friction or compression of the materials con- tained in the hold, and particularly to prevent the entrance of ballast, &c., by which the tubes would presently be choked, and the pumps rendered in- capable of service. By means of this inclosure the artificers may likewise more readily descend into the hold, in order to examine the state of the pumps, and repair them as occasion requires.

WELL-TUBE, an hydraulic instrument for pro- curing water, in almost every situation, suggested by M. Cadet de \ aux. He directs the soil to be perforated with a borer ; a wooden pipe is then to be placed in the hole,

and driven down with a mallet; after which the boring must be continued that a pipe may be driven to a greater depth. As the augur becomes filled with earth it ought to be VOL. XXII.

drawn up and emptied ; so that, by the addition of fresh portions of the pipe, the boring is carried to a considerable extent under ground, and water is in most instances obtained. Wells, thus formed, are preferable to those dug in the usual manner ; being less expensive, while the supply of water is ‘•oth copious and certain. This plan of boring for water has of late been much practised in the neigh- bourhood of London.

WELL’ADAY, interj. This is a corruption of waleway. Alas!

O weltaetay, mistress Ford, having an honest man to your husband, to give him such cause of suspicion !

Shaltspeare.

Ah, weUaday, I ‘m shent with baneful smart ! Gay.

WELLINGBOROUGH, an ancient town of England, in Northamptonshire, reckoned the se- cond in the county. It was destroyed by the Danes. It is named from its numerous medicinal wells. It has a market on Wednesday with a great trade in grain, and flourishing manufactures of shoes, lace, &c. The houses are elegantly built with stone, eighty houses having been accidentally burnt in 1738. It has a handsome church and a free school. It is seated on the side of a hill, on the west bank of the Nen; ten miles north-ea>’. of Northampton. Long. 0° 59′ W., lat. 52° 16′ N WELLINGTON, a market-town and parish in South-Bradford hundred, Salop, situate near the Wrekin, eleven miles east by south from Shrews- bury, and 150 from London. The church is a handsome building, erected of late, and supported with cast-iron pillars, having window frames of iron. Near it is a respectable charity school. The greater part of the inhabitants are engaged in working coals and lime, and mines of iron org. It has a good market on Thursday.

Also a market-town and parish in West-Kings- bury hundred, Somersetshire, situate on the river Tone, seven miles W.S.W. of Tauntcn, and 150 from London. This place gives the title of duke to the conqueror of Waterloo.

W KLLS (Edmund), a learned professor of Greek, in the university of Oxford. He published a good edition of Xenophon’s Works, in 5 vols., and died in 1730.

WELI.S (Edward), D. D., a learned divine, born at Corsham, in Wilts, in

1666, and educated at Westminster, and thence to Christ Church, Oxford. Having graduated there, he obtained the living of Catesbach, in Leicestershire. He published, 1. An Answer to Dr. Clarke on the Trinity ; 2. A valuable work on the Geography of the Old and New Testament; 2 vols. 8vo. 3. A Course of Mathematics ; 3 vols. 4. Some Tracts against the Dissenters ; and other works.

WELLS, a post town of York county, Maine, twelve miles N. N. E. of York, thirty south-west of Portland, and eighty-eight N. N. E. of Boston. It is separated from Arundel by the river Kenne- bunk, at the mouth of which is the village and sea-port of Kennebunk, and it is bounded south- east by that part of the sea called Wells Bay, which lies .between capes Porpoise and Neddock. The township is about ten miles long and seven broad. The river Mousum flows through the eastern part of it.

WELLS, a city, in Wells-forum hundred, Somer- . setshire, pleasantly situate on the border of the Mendip-hills, on the small river Wesitire, nineteen miles south-west of Bath, and 121 west by south

from London. The houses are neat, and many of them elegant, and the streets well paved. The cathedral, the greater part of which, as it now stands, was erected in 1230, by bishop Joceline de Wells, is a spacious gothic structure in the form of a cross, being 380 feet long, and 130 wide. The entire west front is a pile of statues of most excellently carved stone work, and one of the prin- cipal windows contains some beautiful paintings on glass. The cloisters adjoining are spacious and elegant, and the chapter-house in the form of a rotunda, is supported by one pillar in the centre. Two gates with lowers, lead into the close ; one of which leads into the cloisters, consisting of twenty-two houses, and a chapel at the upper end ; the vicars' dwellings in the close are commodious, but their hall is turned into a music room, in which concerts are frequently held. The deanery is a handsome edifice. The episcopal palace, though small, is reckoned the handsomest in the kingdom. The pious bishop Ken and his lady were killed here in their bed, by the falling in of the palace during a great storm in 1703.

The church of St. Cuthbert has a lofty square tower containing six bells; that of the cathedral has eight. The town hall is situate over bishop Biibwith's hospital, which is endowed for thirty poor men and women. Here are several alms nouses; and a charity school was erected in 1714 for twenty boys and twenty girls. On the east side of the city is a spacious open market place. The name of this city is said to have been taken from a remarkable spring called St. Andrew's Well, rising near and emitting a

copious stream, which surrounds the palace, and thence flows through the south-west part of the town. It returns two members to parliament, elected by the mayor, masters, burgesses, and freemen. The chief manu- factures are knitting hose, and making bone lace. Near the site of the market cross, stands a public Conduit. The annual races are held in that part called East-Wells, without the city liberty. About two miles north-west of Wells is a remarkable cavern, nearly 600 feet in length, called Wokey- Hole, containing several rugged and lofty apart- ments. Markets on Wednesday and Saturday.

WELSTED (Leonard), an English poet, born in 1689, and educated at Westminster, where he wrote the humorous tale of the Apple Pye, which has been falsely ascribed to Dr. King. He obtained a place in the Ordnance Office; aud Mr. Pope gave him a place unasked and unmerited in his Dunciad; for he was a man of real genius, and several of his poems have great merit. He trans- lated Longinus on the Sublime into English, from Boileau's version ; and wrote a comedy, entitled The Dissembled Woman. He died in 1747.

WELT, n. i. Sax. pilan, to enclose. A border ; guard ; edging.

Little low hedges made round like vulti, with some pretty pyramids, I like well. Bacon.

They may have some edging or trimming of a scholar, a wtlt or so, but no more. ˆen Jonsm.

WELTER, v.n. Sax. pealran ; Lat. volutari. To roll in water or mire ; wallow.

If a man inglut himself with vanity, or weAer in fil- thiness like a swine, all learning, all goodness, is soon forgotten. Ascham.

He must not float upon his watery bier Unweeped, nor velter to the parching winds. Milton.

The gasping head flies off ; a purple flood Flows from the trunk, that metiers in the blood.

Drydgn,

Bellona wades in blood ; that mangled body, Deformed with wounds and weltering in its gore, 1 know it well. Murphy.

WELWOOD (James), A. M., a Scottish writer of the seventeenth century, born at Perth in 1 599. He wrote Immanuel's Land, and various other pious tracts. He died at Perth in 1680, aged eighty-two.

\ KLWOOD, or WELLWOOD (Thomas), M. D., an eminent physician and historian, born near Edin- burgh, in 1652, and educated at Glasgow. His father, having been suspected of being accessory to the death of archbishop Sharp, fled with his family to Holland ; whence young Welwood returned, in 1688, with king William III., who appointed him one of his physicians for Scotland. He settled at Edinburgh, where he made a large fortune. He wrote Memoirs of English Affairs from 1588 to 1688 ; and died at Edinburgh in 1716.

WEN, n.s. Sax. pen. A fleshy excrescence or protuberance.

Warts are said to be destroyed by the rubbing them with a green elder stick, and then burying the stick to rot in muck. It would be tried with corns and wna, and such other excrescences. Bacon.

A promontory wen, with griesly grace, Stood high upon the handle of his face. Dryden.

A WEN is a tumor arising on any part of the body, and containing a cystus or bag filled with some peculiar kind of matter. See NJEVUS.

WENCESLAUS, emperorof Germany, and king of Bohemia, was the son of the emperor Charles IV., whom he succeeded in 1378. Becoming de- ranged in his mind, the Bohemians confined him, but he escaped once and again ; on which occasions he took severe vengeance on all those he supposed his enemies. At length he was deposed, and died in 1419.

WENCH, n.s. & v.n. Sax. pencle. A young woman; used generally in contempt: hence a strumpet: to frequent the company of loose women.

What do I, silly wench, know what love hath pre- pared for me? Si'!:

But the rude wench her answered nought at all.

Sf>ensfr. Now — how dost thou look now 1 Oh ill-starred

wench! Pale as thy smock. Shakspeare.

Thou wouldst persuade her to a worse offence Than that whereof thou didst accuse her wench.

Donne.

They asked the knight whether he was not ashamed to go a wenching at his years 1 Addhun.

Men have their ambitious fancies, And wanton wenches read romances. Prior.

WEND, v.n. Sax. penman. To go; puss to or from. Obsolete, but the preterite went is still in use.

WENLOCK, a borough-town of England, ii, the county of Salop, containing 3481 inhabitants It is 148 miles from London. Sends two mem- bers to parliament ; and is celebrated for the remains of its beautiful and once extensive priory.

*WEN'NEL, n. *. Corrupted from Weanling. An animal newly taken from the dam.*

Pinch never thy wenneli of water or meat, If ever ye hope for to have them good meat. Tusier.

WENT/WORTH (Thomas) earl of Stafford, an unfortunate English statesman, born of an ancient

family in Yorkshire. Being elected into the house of Commons, he became a distinguished leader of the popular party, in, opposition to the measures of king Charles I. in the beginning of his reign. But at last he was gained over to the court party ; cre- ated a peer by the title of earl of Strafford ; and ippointed president of the north, and lord lieute- nant of Ireland. The earl showed great talents for government in Ireland, where he governed eight years, encouraged agriculture, and labored much to promote the Protestant interest. When the re- bellion broke out in Scotland he endeavoured to persuade king Charles to act with vigor, but in vain. The commons, with Pym at their head, impeached the earl at the bar of the house of lords, who ordered him into custody. His trial lasted eighteen days, and was carried on with great virulence. His defence was satisfactory ; yet a bill of attainder was passed against him. The king long refused his assent to it, till the earl wrote him to yield, which he did at last with reluctance. The earl was in consequence beheaded on Tower Hill, 12th May, 1641. See ENGLAND.

WFNTWORTH (William), marquis of Rocking- ham, a late celebrated British statesman, born in Yorkshire. He became the leader of the Whi»r party in the beginning of the reign of George III. When lord North was dismissed, in March 1782 (see ENGLAND), the marquis was appointed first lord of the treasury, but died within four months after.

WERF (Adrian Vander), an eminent Dutch painter, born at Rotterdam in 1689. He painted historical subjects in miniature, in a style of high elegance. He died at Rotterdam in 1727.

WERF (Peter Vander), brother of Adrian, was his pupil, and was also a good painter.

WERNER (Abraham Gottlob), the celebrated mineralogist, was born September 25th, 1750, while his rather was overseer of iron works in Upper Lusatia. After some previous education he was sent to the mineralogical academy at Frey- burg ; and thence to Leipsic, where he applied himself to natural history and jurisprudence, but more especially to the former. The external cha- racters of mineral bodies attracted much of his attention ; and in 1774 he published a work on that subject, which has been translated into various languages, and adopted and commented on by many writers ; but the author could never be per- suaded to publish a new or enlarged edition. Soon after, WTerner was invited to become keeper of the cabinet of natural history at Freyburg, and to de- liver lectures on mineralogy. In 1780 he pub- lished the first part of a translation of Cronstadt's Mineralogy ; and in his annotations on this work gave the first sketch of his own system. In 1791 appeared his catalogue of the vast mineral collec- tion of Pabst von Obaine, captain-general of the Saxon mines. He now also delivered lectures on the art of mining, which he is said to have rendered peculiarly intelligible and interesting by his sim- plification of the machinery. His system of geog- nosy or geology was unfolded only in his lectures ; which he caused to be written out by his approved pupils, revising them himself. Many parts of these lectures have been published. Werner himself likewise published some mineralogical papers in the Miner's Journal; and in 1791 appeared his New Theory of the Formation of Metallic Veins. In 1792 he was nominated counsellor of the mines

of Saxony ; and had a great share in ihe direction of the Academy of Mineralogy, and in the admi- nistration for public works. The cabinet of mine- rals which he had collected was unrivalled for its completeness. This he sold for 40,000 crowns, reserving the interest of 33,000 as an annuity to himself and his sister ; and at her death to revert to the Mineralogical Academy of Freyburg. He died unmarried, in August 1817.

WERNIGERODE, a district, with the title of county, in the Prussian states, in Upper Saxony, lying between the principality of Halberstadt and the states of Brunswick and Hanover. Its area is about 100 square miles; its population 13,000. It lies in the Ilartz forest.

W ERMGERODE, a town of Prussian Saxony, and the chief place of the above county, stands on a small stream called the Zillicherbach, at the north extremity of the Hartz. It is divided into the Old and New towns, and the suburb of Nessenrode ; contains 5100 inhabitants, and has a considerable trade in corn, spirituous liquors, and woollens manufactured in the town. Adjoining is the cas- tle, the residence of the prince. Twenty-five miles S. S. E. of Wolfenbuttel, and twelve W. S. W. of Halberstadt.

WERTHEIM, a county and town of Germany, in Franconia, lying chiefly to the south of the Maine, and subject to the grand duchy of Baden. Its area is about 110 square miles; its population 1 2,000. It is fertile in corn and wine, the latter being accounted the best in Franconia. The town is the capital of the circle of the Maine and Tauber. It stands in a narrow valley, at the confluence of the Maine and the Tauber, is surrounded with a wall, divided into four quarters, and contains 3200 inhabitants, chiefly Protestants.

WESIL', n.s. See WEASAND. The weiil, or windpipe, we call aspera arteria. Bacon.

WESLEY (Samuel), an English divine, born in Dorsetshire, and educated at Oxford ; but Was bred a Dissenter. He afterwards conformed, and wrote some tracts against his former friends. He obtained the living of south Ormesby, and after- wards that of Epworth, both in Lincolnshire. He wrote many sacred poems ; but his chief work is The Life of Christ, an heroic poem, in twelve books, with learned notes. He also wrote Dissertations on the Book of Job, in Latin, folio. He died at Epworth in 1735.

WESLEY (John), the eldest son of the above, was born at Epworth, in. the isle of Axholme, in 1703. When he was only six years old the par- so lage house at Epwˆorth was burnt to the ground, and he was saved from the flames with the ex- tremest difficulty. In 1713 he was entered a scholar at the Charter House in London, where he conti- nued seven years under the celebrated Dr. Walker, and the rev. Andrew Tooke. Being elected to Lincoln College, Oxford, he became fellow about 1725, took the degree of M. A. in 1726, and was joint tutor with the rev. Dr. Hutchins the rector. Mr. John Wesley, his brother Charles, and a few of their young fellow students, were distinguished by a more than common strictness of religious life. They received the sacrament of the Lord's Supper every week ; observed all the fasts of the church ; visited the prisons ; rose at 4 A. M.,

and refrained from all amusements. From the exact method in which they disposed of every hour they acquired the appellation of Methodists ; by which their fol-

lowers have been ever since distinguished. See METHODISTS. In 1735 he embarked for Georgia, which was at that time in a state of political in- fancy ; and the great object of this voyage was to preach the gospel to the Indian nations in the vicinity of that province. He returned to England in 1737. Of his spiritual labors, both in this country and in America, he himself has given a very copious account, in a series of Journals, print- ed at different periods. On his return from Georgia he paid a visit to count Zinzendorf, the founder of the sect of Moravians, at Hernuth, in Upper Lu- satia. In the following year he appeared again in England, at the head of the Methodists. He preached his first field sermon at Bristol, on the 2d of April, 1738, from which time his disciples have continued to increase. In 1741 a serious alterca- tion took place between him and Mr. Whitfield. In 1744, attempting to preach at an inn at Taunton, he was regularly silenced by the magistrates. Al- though he chiefly resided for the remainder of his life in the metropolis, he occasionally travelled through every part of Great Britain and Ireland, establishing congregations in each kingdom. In 1 750 he married a lady, from whom he was after- wards separated. By this lady, who died in 1781, he had no children. He died on the 2d March, 1791, in the eighty-eighth year of his age.

WESLEY (Charles), younger brother of John, was born at Epworth in 1708, and educated at Westminster, and next at Christ Church College, Oxford. He adopted his brother John's system and sentiments ; and continued a constant preacher among the Methodists till his death in 1788. He wrote several hymns, and other pious pieces.

WESLEY (Samuel), another brother of John, was under master of Westminster School for many years ; and afterwards master of Blundel's School at Tiverton, in Devonshire, where he died in 1739. He published The Battle of the Sexes, and other ingenious poems, in 1 vol. 12mo.

WESSELUS (John), a learned German, born at Groningen, about 1419. He studied at Zwoll, and travelled afterwards into Greece and the Le- vant. Some of his works were printed at Gronin- gen 1614, 4to., under this title : Farrago Ferum The- ologicarum.

WEST, n.s. •} Sax. peft; Belg. west.

WEST'ERING, adj. The region where the sun

WESTERLY, adv. [goes below the horizon

WEST'ERN, adj. fat the equinoxes : west-

WEST'WARD, I ering is tending to the

WEST'WARDLY, adv. j west : westerly, towards the west : the other derivatives corresponding.

This shall be your west border. Numb, xxxiv. 6.

Now fair Phoebus 'gan decline in haste His weary waggon to the western vale. Spenser.

The west yet glimmers with some streaks of day : Now spurs the lated traveller apace, To gain the timely inn, Shakspeare.

The grove of sycamore, That westward rooteth from the city side. Id.

If our loves faint, and westicardly decline, To me thou falsely thine, And I to thee mine actions shall disguise. Donne.

The Phemriiins had great fleets ; so had the Cartha- ginians, which is yet farther west. Bacon.

Hy water they found the sea westward from Peru, which is always very calm. Abbot.

The star tliat rose at evening bright Toward heaven's descent had sloped his westering wheel. Milton.

The moon in levelled we

These bills give us a view of the mo«t easterly, southerly, and westerly parts of England. Graunt.

When westward like the sun you took your way, And from benighted Britain bore the day. Drtiden.

The western part is a continued rock. Addison.

All bright Phoebus views in early morn, Or when his evening beams the west adorn. Pope.

WEST (Gilbert), LL. D., the son of Dr. West, was born in 1706, and at

twelve years of age lost his father. He studied at Winchester and Eton Schools, and went thence to Christ Church College, Oxford. He was appointed treasurer to Chelsea Hospital, and obtained a seat at the council board. He wrote a Vindication of the truth of our Saviour's Resurrection, and published translations of Pindar. He died at fifty years of age.

WEST (Richard), esq., an eminent English lawyer, and a barrister in the Temple. In 1717 he became king's council ; and in 1725 was made lord chancellor of Ireland, but died in 1726. He married a daughter of the famous bishop Burnet. He wrote, 1. A Discourse concerning Treasons, and Bills of Attainder ; 2. A Treatise on the Man- ner of Creating Peers.

WEST (Thomas), an eminent topographer, bom at Ulverston, in Lancashire. He wrote, 1. The History of Furness ; 2. A Guide to the Lakes. He died at Ulverston in 1779.

WEST (Benjamin), a distinguished modern painter, born in 1738, near Springfield, in the state of Pennsylvania. His parents were quakers, but, perceiving in their son a propensity for the art of drawing, they had the good sense to allow him to cultivate his talent. After receiving proper in- struction, he exercised the profession of a portrait painter in the United States, and then, with a view to improvement, undertook a voyage to Italy, Flo- rence, Leghorn, Bologna, Venice, and Rome : pas- sing through Savoy into France, he remained some time at Paris. In 1763 he arrived in England, where he met with such encouragement that he took up his residence here. One of his first pa- trons was Dr. Drummond, archbishop of York, who introduced the young artist to his late majes- ty ; and by order of the king he executed his pic- ture of The Departure of Regulus from Rome. On the foundation of the Royal Academy of Paint- ing, in 1768, he became a member; and in 1791 succeeded to the office of president. Among his early productions, that which attracted most notice was The Death of General Wolfe. After the treaty of Amiens, Mr. West again visited Paris, for the purpose of taking a survey of the galleries of the Louvre, and experienced from the French artists and government a reception alike honorable to all parties. The British institution now presented him with 3000 guineas for a painting of Christ healing the Sick; and an exhibition of some of his works was productive of great profit. One of his latest works was Death on the pale Horse, from the Revelation. In 1817 he lost his wife,an Ame- rican lady, to whom he had been united more than half a century. He died March 18th, 1820, at his residence in Newman Street ; and was splen- didly interred in St. Paul's cathedral.

W i STERN ISLES, or TKbudae, or Hebrides, islands on the west and north-west coast of Scotland. Sec 1 1 IT.UI urs, and the names of the various islands in their order. Mr. Pennant very judiciously sup- poses that

the modern name, Hebrides, has arisen from the mistake of some transcriber, instead of Ilcbudes.

WESTMINS T E R.

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VVESTFIELD, a post town of Hampden county, Massachusetts, seven miles west of Springfield, rinety-three \V. S. W. of Boston. This is a pea- sant and excellent agricultural town, and has a handsome village, containing a Congregational meeting-house, a respectable and flourishing aca- demy, and some manufactures.

WESTMEATH, a county of Ireland, situated in the province of Leinster. It is bounded on the north by the county of Cavan, on the east by Meath county, on the west by the county of Longford and by an expansion of the river Shannon called Lough Ree, and the King's county lies to its south. The length of this shire is forty-two English miles, and its maximum breadth thirty-five ; its area contains 231,538 Irish plantation acres, on which reside a population of 130,000 souls. There are eleven whole and one half baronies in Westraeath ; they are Brawney, Clonlonan, Corkaree, Delvm, Farbill, Fartullagh, Kilkenny West, Moyashel, Moycashel, Moygoish, Rathcomath, and Half Fore. These again are ecclesiastically divided into fifty-nine parishes and seven parts of others. The chief towns are Mullingar, a place of ancient establish- ment seated in the centre of the county, and where the assizes are held ; part of the borough town of Athlone, besides Clonmellon, Castletown Delvin, Castlepollard, Kinnegad, Kilbeggan, Street, Rath- owen, Ballymore, and Moyvore. The great river Shannon bounds the western part of the county, the Inny waters a part of the north, and the Royal Canal passes through the very centre ; and, in ad- dition to these ad vantages of inland navigation, the surface of the county generally is beautified, diver- sified, and irrigated, by many agreeable lakes which are adorned with islands and with wooded shores. Of these the principal are Lough Sillin, Derryvar- ragh, Leign, Iron, Ennell, Drin, and Banean An- nagh. Westmeath is one of the least mountainous shires in Ireland, but is much encumbered by un- reclaimed bogs. The Royal Canal navigation af- fords an easy transport for the great quantity of turf-fuel cut and saved here, as well as for their •wool, which is the staple of the district round Mul- lingar. There were formerly many religious houses for monks of different orders established here, the most remarkable of which were the abbey of Fore, founded by St. Fechin about the year 630 : having governed 3000 monks in this abbey he died of the plague in 665. His festival is still religiously ob- served on the 20th day of January. The ruins are still extensive. The priory and friaries at Mullingar were also famous ; but the history of the monks of Multifernan is peculiarly singular: — After the sup-

pression of monasteries, these friars had sufficient address to keep quiet and unobserved possession of their establishment, and grew, in a short time, into such wealth and power that, in 1622, they at- tempted to re-erect the priory of Mullingar. In this they were frustrated ; but still retaining pos- session of Multifernan it is asserted that within their religious walls the rebellion of 1641 was first concocted and contrived. Westmeath retains scarce- ly one of its aboriginal great families; at present it gives title of marquis to the family of Nugent, and re- turns three members to the imperial parliament. This county was represented in the Irish parlia- ment by ten members, two for the county and c-iˆht for the manor of Mullinˆar and the three boroughs.

WESTMINSTER, a" part of the metropolis of London, is a celebrated city in the county of M;0-

tilesex, on the bank of the Thames, and supposed to be named from its minster or abbey, lying west- ward of St. Paul's. In ancient times it contained nothing remarkable, except the stately abbey, situate in a marshy island, called Thorney, sur- rounded on one side by the Thames, and on the other by a branch of the river called Long Ditch. For many ages it was entirely distinct from Lon- don, and the Strand was a road leading thereto, open on one side to the Thames, and on the other to fields. It is still governed by its own magis- trates and laws, distinct from those of London. If contains nine parishes ; viz. St. John's, St. Mar- garet's (which two alone, strictly speaking, consti- tute the city of Westminster), St. Ann's, Soho ; St. Clement's Danes ; St. George's, Hanover Square ; St. James's ; St. Margaret's ; St. Martin's-in-the- fields ; St. Mary-le'Strand ; and St. Paul's, Covent Garden. Independent of the church establishment, the city contains places of worship for every sect of religionists. The greatest recent improvement in Westminster is the erection of a long, wide, and elegant street, or rather a succession of streets, from Carlton Palace on the south, to Portland Place on the north, in the line of which are the noble piles of Waterloo Place, the Regent's Quadrant, Regent's Street, and the Regent's Circus. The government of this city and its liberties is under trie jurisdic- tion of the dean and chapter, in civil as well as ecclesiastical affairs, and their authority extends to the precincts of St. Martin's-le-grand, near New- gate Street, and to some places in Essex, that are exempt from the jurisdiction of the bishop of Lon- don and the archbishop of Canterbury ; but the civil part, ever since the Reformation, has been in the hands of laymen, elected and confirmed by the dean and chapter. The principal magistrates are the high steward, usually a nobleman and chosen for life ; a deputy steward, chosen by the high steward ; and a high bailiff, nominated by the dean, and confirmed by the high steward : there are also sixteen burgesses and a high constable. Westmin- ster returns two members to the imperial parliament, chosen by the householders. The numerous

public bu ildings, churches, squares, and charitable establish- ments for the education and maintenance of youth, and the consolation of age, for the relief of disease and accidental calamity, are too extensive to admit of particular description ; but we cannot forbear selecting a few historical and topographical notices of the ancient palaces, Westminster Hall, and the abbey. Ancient palaces of Westminster. — Canute is known to have occupied a house or palace in West- minster, which was burnt down in the time of Ed- ward the Confessor; but it is by no rnrans certain that it was situated on the same spot where the lat- ter monarch built the palace, some remains of which are still to be seen in the neighbourhood of Old Palace Yard, particularly the lancet windows in the painted chamber adjoining the house of lords. William I., who was crowned here, enlarg- ed the palace considerably to the northward, and his son William Rufus built Westminster hall as a banqueting-room. The palac° at Westminster, like many of the ancient buildings of the metro- polis, however, fell by conflagration. Twice had it been "materially injured by fire, in the years 1263 and 1299, but the injury done both these times was re- paired ; not so the fire that took place in this build- ins; in 1512, which was so destructive that it was not deemed advisable to rtbuild the edifice.

The next royal residence in Westminster was Whitehall palace, originally built by Hubert de Burgh, earl of Kent, justiciary of England in the reign of Henry III. Hubert bequeathed the man- sion to the Black Friars, who sold it to the arch- bishop of York, and it continued the residence of the prelates of that see until the reign of Henry VIII., when cardinal Wolsey, who had lived in York house (for so it was called), with super-regal pomp, presented it, with all its costly furniture, as a peace offering to his rapacious master. Hentzner asserts that it was ' a truly royal structure ;' a gate of singular elegance in the Gothic style of architec- ture, a tennis-court, cockpit, tilting yard, and bowl- ing green, with a gallery whence the sports in these places might be viewed, were among the buildings raised by Henry VIII. His daughter, queen Eli- zabeth, made many additions, particularly theban- queting-room, and a jet d'eau in the gardens, which often afforded amusement to the court by its liberally sprinkling the idle gazers who approached it. Hollinshed appropriates six folio pages to an account of a ridiculous pageant in honor of her majesty, in 1581, when the duke of Anjou sent commissioners to propose h s marriage with the queen, and the gallery erected by her father, ' where- at her person should be placed,' and it appears was p.aced (called, ' the castell or fortresse of perfect beautie') ; was assailed by ' desire and his four fos- ter children.'

Whitehall having become ruinous in the reign of James I., Inigo Jones was ordered to furnish a plan of an entirely new palace on a large scale, but the banqueting-house, on the site of that built by Elizabeth, was the only part of his plaa which was carried into effect, & circumstance the more to be regretted, as the design appears to have been ad- mirable, and the part executed furnishes a proof of the great talents of the architect. This house, now the chapel royal, to which purpose it was appro- priated by George I., is a fine building with a rus- tic base, and the upper stories of the Ionic and Corinthian orders. The ceiling of the chapel, which is an apotheosis of James I., was painted by Rubens, who was rewarded with a sum of £3000 for his labor, and Cipriani had afterwards £2000 for retouching it. This is certainly a fine painting, but very inappropriate for a place of worship. The ill-fated Charles I. was decapitated on a scaffold erected in front of this banqueting house, on the 30th of January, 1649, on the spot to which the fine statue of James II., by Grinlin Gibbons, is said to point. Although Whitehall has long ceased to be a royal residence, the principal part jf the palace having been destroyed by fire on the 4th of Janu ary, 1697, yet many public documents aud state papers are still dated ‘ Whitehall.’

Jamets. — The stranger, who visits London and sees the splendid mansions of our nobility and merchants, and the extent and grandeur of our public buildings appropriated to works of charity and benevolence, generally feels disappointed with the apparently mean and incongruous appearance of the royal palaces, particularly St. James’s ; and, indeed, the genius of bad taste seems to have pre- sided over the former for two centuries at least. The exterior was formerly of the mixed style of Gothic architecture which characterised the age of Henry VIII., and it was indebted to Charles I. for some improvement; but every subsequent external alteration has injured its original character, if we

except the opening, defended by a pair of lofty iron gates, that has been made at the east end of the palace, from Pall-Mall into the park. But, however deficient St. James’s palace may be in its exterior, it is universally allowed to be the best adapted for regal parade of any in Europe. It is built on the site of an hospital for lepers, which was erected here, before the conquest, by some pious citizens of London, and dedicated to St. James ; the hospital was continued until the reign of Henry VIII., who seized upon its revenues, pensioned a few persons who were on the establishment, razed the house, and built the present edifice according to a design, it is said, of his then favorite, Thomas Cromwell, earl of Essex. The king only intended it for a pri- vate residence, and it was called the King’s Manor House. His daughter queen Mary resided here during the last two years of her reign, and termi- nated her inglorious life within its walls. That hopeful youth prince Henry, son of James I., also died in St. James’s palace, after having made many improvements in the interior. It appears to have received

successive decorations, as le Sieur de la Serre, who accompanied Mary de Medicis, queen of Henry IV., and mother of Henrietta Marie, on a visit to the English court in 1638, de- scribes it as very magnificent and extremely con- venient. Charles I. enriched the palace with many valuable works of art, and employed an agent in Italy to collect them. This collection was scatter- ed by the republican parliament, and sold for the sum of£l2,049 4s. Some of the pictures, however, obtained a good price, particularly The Flaying of a Satyr, and another piece on the same subject, both by Correggio, which were sold for £1000 each ; but it is very characteristic of the strong re- publican feeling that pervaded the times, that a portrait of queen Elizabeth, in her parliamentary robes, was sold for £l ; king Charles I., when a youth, for £2 ; and a portrait of his queen pro- duced no more than 5s. ! Cromwell had the good taste to secure some of these treasures honorably ; he gave £300 for the Cartoons of Raphael, and £30,000 for the rich tapestry (manufactured prin- cipally at Mortlake) which belonged to St. James's palace, Hampton Court, and Whitehall.

St. James's was for some time the prison of Charles I., and here his body was brought after his execution, and exhibited for some days to the pub- lic. Cromwell is said to have been one of the vi- sitors : muffled up in a cloak, and otherwise dis- guised, he walked round the corpse, and exclaim- ing 'dreadful necessity!' withdrew. James II., William III., queen Anne, and George I., all re- sided in this palace, where many royal births and baptisms have since taken place, and many a nup- tial ceremony has been celebrated in the chapel royal.

His present most gracious majesty, George IV., was born in St. James's palace. Such was the domestic condescension of their majesties, George III. and his illustrious consort, that before their first born was twelve days old the public were admitted to see him, when they flocked in such numbers, that the expense in cake and caudle (which was presented to all visitors) was upwards of £40 a day ! The most picturesque part of this ancient palace fell a prey to the flames on the night of the 21st of January, 1809, when the whole south-east angle, including the private apartments of their majesties, some of the state rooms, toge-

thur with the Dutch and French chapels, were de- stroyed .

Cartton house, in Pall Mall, rose in the course of less than a century, from a plain mansion to be the principal town residence of the king of Great Britain. It came into possession of his present majesty's grandfather,

Frederick prince of Wales, in 1732. A beautiful saloon, paved with Italian marble, and an elegant bath, were constructed in the garden, which was ornamented with statues. During the residence of the prince of Wales at Carlton House, it was the scene of those party in- trigues, which have so often been employed to pre- serve what is called the balance of the state, by placing the sovereign and the heirapparentin political array against each other. On his death, on the 5th of March, 1757, the princess, his royal widow, continued to live at Carlton House, where she died on the 8th of February, 1772. From this period until the year 1783, the place was unoccupied, and rapidly sinking into ruin, when, his present majesty coming of age, it was deemed necessary that his royal highness should have a separate establish- ment, and Carlton House was repaired, or rather rebuilt (for little of the old structure was suffered to remain), under the direction of Mr. Holland. Here his present majesty long resided when in town, whether as prince of Wales, prince regent, or sovereign, and numerous splendid fetes were given at this palace : the most remarkable perhaps, and the only experiment ever made at any court ot Europe to give a supper to 2000 of the principal nobility, and gentry, was that on the 19th of June, 1811. This fete originated in the desire of his royal highness to show every respect and filial af- fection to his father's birth-day, it not having been convenient to hold a drawing room on its anniver- sary : and with a due regard to our internal com- merce, the invitation cards expressed a strong desire that every person should appear dressed in articles of British manufacture only. The ffete was attended by Louis XVIII. and the French princes then in exile. But Carlton house has at last also fallen before the genius of improvement, and we need not therefore dwell on what it was.

We are as little disposed to dwell on what Buck- ingham house is ; suffice it here to say, after having been long the queen's house, and the scene of much of the domestic felicity of George III. and his con- sort, it has been selected for improvement by the purveyors for royal comfort in the court of his ma- jesty George IV., and is not yet (1829) completed to their taste.

Westminster Hall. — Westminster Hall is one of the most venerable remains of our ancient English architecture, and it has been associated with the most splendid pageants of royalty, for upwards of seven centuries. It has already been stated that Westminster Hall was built by William Rufus for a banqueting-room, as an appendage to the palace ; and, although it is now the largest room in Europe, unsupported by pillars, yet this monarch is said to have called it a mere bed-room in comparison of what he would build. It is, however, to Richard II. that we are indebted for the present noble structure ; and it has recently been discovered, that Rufus's hall was divided by pillars of stone or wood. It is doubtful whether the dimensions were the same, although we find Henry III. feasting 6000 persons in this

hall, and some other rooms of his palace, in honor of the coronation of his queen

Eleanor. A more extensive banquet is stated to have been given by the same monarch in 1243.

Richard II. caused the old half to be taken down, and raised the present edifice in the year 1397; and, two years after, he gave a ‘ house warming’ in this hall, when, if we are to rely on Stowe, he feast- ed 10,000 persons. Westminster Hall has, from the most remote period, been the place where the coronation banquets have been held. It was for- merly the custom for the sovereign to proceed from the tower on the previous evening, and sleep in Westminster ; and his majesty, George IV., on the evening of his coronation, slept in the house of the speaker of the house of commons, adjoining the hall. On the morning his majesty proceeded to the hall, and, having taken his seat on the throne, gave the regalia to the individuals who had been previously declared, in the court of claims, entitled to the honor of bearing it. The procession was formed in the hall, whence it proceeded in great state along a covered platform to Westminster Abbey, where the coronation ceremony took place. When this was over, his majesty, surrounded by the nobility, knights of the several orders, and gen- tlemen, all clothed in splendid robes, returned to Westminster Hall, where a dinner of every luxury that could be procured had been provided in the utmost abundance.

Westminster Hall is universally allowed to be the largest room in Europe unsupported by pillars, being in length 270 feet, ninety feet high, and seven- ty-four feet broad. Thereof of this venerable building is a fine specimen of the carpentry of the middle ages, and for strength and durability could not be excelled at the present day. Parliaments have for- merly been held in this hall, and here trials before the peers take place.

When the republican government of Cromwell had been succeeded by the restored monarchy, the grave could not shelter some of the most prominent personages of the commonwealth ; and in January 1661, the bodies of Oliver Cromwell, his son-in- law Henry Ireton, lord deputy of Ireland, and John Bradshaw, who presided on the trial of Charles I., were, pursuant to a vote of the house of commons of the 8th of December preceding, taken out of their graves, conveyed upon sledges to Tyburn, and .he bodies hanged ‘ at the three several angles of the gallows until sunset.’ They were then be- headed, the trunks thrown into a deep pit under the gallows, and the heads set upon poles on the top of Westminster Hall. Tradition relates that on a stormy night, in the latter end of the reign of Charles II., or James II., the head of Cromwell was blown off the top of the pole, and afterwards pre- sented to the Russell family.

The hall in which the second branch of the state, the house of lords, assembles, is a part of the an- cient palace of Westminster, and is rather to bead- mired for its venerable antiquity than for its elegance. It is an oblong room of somewhat limit- ed dimensions, hung round with tapestry, repre- senting that memorable event in English history, the destruction of the Spanish Armada, which was presented by the states of Holland to queen Eliza- beth ; portraits of the heroes who shared in the de- struction of that haughty and dreadful armament form a matchless border round the room. At the upper end is the throne, rich in gilding, but some- what tasteless in its decoration. Some improve- ment has been made in the approaches to the house

of lords, under the directiou of Mr. Soane, consist- ing of a noble staircase and magnificent gallery, 100 feet long and twenty-seven feet wide. Tlie gallery is divided into three parts by columns, in imitation of veined marble, of the Ionic order. There is somewhat of a profusion of ornament in the deco- rative part of this gallery, but it presents a noble vista, and the dome and arches are novel, though rather too full of ornament.

Adjoining the house of lords is a room where conferences between the peers and the commons are held, called the painted chamber, which is known to be as old as the time of Edward the Con- fessor, who is said by Howel to have died in it. It was in this chamber that the fatal warrant for the execution of Charles I. was signed ; and here also was held that important conference between the lords and commons which led to the revolution of 1688, and rescued the country from the fangs of an arbi- trary and bigoted monarch. The painted cham- ber is so called on account of the paintings ou its walls, which are of great antiquity; and, although their age is not known, it is certain they are as old as the year 1322, and probably much older.

The dreadful plot of Guy Fawkes and his asso- ciates, to exterminate kings, lords, and commons, at one fell swoop,' in the reign of James I., is well known, since the anniversary is not only a fast in the calendar, but, previous to every parliament, the cellars underneath the house of lords, where the conspirators had planted thirty-six barrels of gun- powder for the meditated explosion, are searched.*

The house in which the commons of Great Britain assemble is called St. Stephen's Chapel, and is a part of the ancient palace, generally supposed to have been built by king Stephen III., who made it a collegiate church with a

regular endowment, which it had not previously' possessed. Soon after its dissolution, in the reign of Edward VI., it was converted into a parliament-house, where the com- mons of England have ever since held their sittings. In the reign of queen Anne, the galleries were added under the direction of Sir Christopher Wren It was then customary to cover the walls with tapestry, which were renewed every new parlia- ment, the housekeeper claiming on such occasions the old hangings. Since that period, to the year 1800, little appears to have been done to the house but when the 100 Irish members were to be added, in consequence of the union, it was found too small, and the original bide walls, which were three feet thick, were taken down, and ethers built, only one foot thick, which enlarged the house four feet. On removing the wainscoting, Jt was discovered that the walls had originally been painted with historical subjects and single figures, engravings of which were soon afterwards made. St. Stephen's Chapel and the hou'-e of lords (as here described) wire burned down Oct 16, 1834.

UV.s7/«j«4/«r A [/In i/. — It has been very satislac- torily proved that Westminster Abbey owes its origin to Sebert king of the East Saxons ; and that it was founded about the year 604. If, however, we could rely on dreams, and particularly on those fit inmiks, we might quote the authority of Wulsi nus, that the apostle St. Peter hiinst If had a chapel or oratory on the site of this magnificent pile. The vision of Wulsinus was turned to some advantage

by the succeeding monks, who added a new legend of St. Peter's crossing the water one stormy night, to consecrate the church, and rewarding the fisher- men who ferried him over Thorney (water which surrounded the church, the site of which was called Thorney Island), with a miraculous draught of sal- mon, assuring him and his fellow watermen that they should never want fish, provided they would give one-tenth of what they caught to the iu-u y consecrated church ! It will not excite much sur- prise that the tale was believed, and that for seve- ral centuries the monks of Westminster fed on the offerings of the Thames fishermen. In the year 1231 the monks brought an action at law against the minister of Ilotherhithe, in which they com- pelled him to give up to them one-half of the tithe of all salmon caught in his parish.

From the foundation of the abbey, to the time of Edward the Confessor, its history is obscure ; but this prince, in consequence of an injunction from Leo IX., who had absolved him from a rash vow, appropriated one-tenth of his property, in 'gold, silver, cattle, and all other possessions,' to the re-building of the abbey. It was commenced in 1050, and finished fifteen years afterwards. Among its relics, the monkish writers assure us, were part of the manger in which Christ was born, the frankin- cense offered to him by the Eastern magi, a splin- ter of the table of our Lord, a crust of the

bread that he blessed, a slab of the wall of the prison in which he was confined, a shred of his undivided- garment, fragments of the sponge dipped in hyssop which he sucked, the scourge with which he was tortured, and the lance by which the side of the Saviour of mankind was pierced ! The legends assure us also that Edward presented to this church a por- tion of the milk and hair of the Virgin Mary, relics of most of the apostles, including the beard of St. Peter, with half a jaw and three teeth of St. Anas- tasia.

In the year 1220 Henry III. laid the first stone of a new chapel, in honor of the Virgin Mary, on the site now occupied by Henry VII. 's chapel ; but little was done to the building until the year 124.5, when it was more actively prosecuted, and that with a prodigality of expense which at the period was unparallelled. Between the years 1245 and 1261 the expense incurred in this portion of the abbey amounted to £29,605 19s. 6d. The church was opened for service in 1269.

When the chapel had been completed, Henry III. resolved that the remains of the Confessor should be removed into the new shrine ; and ' in the sight of all the principal nobility and gentry of the land, who were assembled here, he, and his brother Richard, carried the chest containing St. Edward! remains, upon their shoulders, to the new shrine, wherein it was deposited with vast cric- mony. On seeing it exalted, the devils, says Matthew of Westminster, were instantly cast out of two possessed persons who had come purposely (the one from Ireland, the other from Winchester), to receive that benefit.' The anniversary of St. Edwaid'l translation was long observed by the cor- poration and principal citizens.*

During the reign of Henry III. and Edward I. the eastern part of the nave and the aisles were re- built, and finished in 1307. To Edward II., !•'.III., and Richard II , we are indebted foe the (I real Cloisters, Abbot's House, and the prin- cipal monastic buildings. The western parts of

the nave and aisles were rebuilt by successive nion- archs, between the years 1340 and 1483. The west front and the great window were built by those rival princes, Richard III. and Henry VII.; and it was the latter monarch who commenced the magnificent chapel which bears his name, and which was finished by his son and successor. The first stone was laid on the 24th of January 1502-3, by the abbot Islip ; and, although the king did not live to see the work finished, yet, after amply en- dowing the abbey, he gave Islip £5000 towards completing it, only a few days before his

decease. Although Henry VIII. finished the chapel, yet he did not spare the abbey from the general dissolu- tion of the monasteries, nor could an existence of upwards of nine centuries successfully plead in its behalf. — The monarch, however, while he seized on its revenues, which were nearly £4000 a year, raised it to the dignity of a cathedral, by royal let- ters patent, and endowed it with a revenue of £586 13s. Id. Queen Mary restored its monastic privileges; but, in 1556, Elizabeth finally esta- blished it as a collegiate church. Sir Robert Har- low, the bigot, who in the civil wars was employed to demolish the venerable cross at Cheapside, broke into Henry VII. 's chapel, demolished the altar stone, and committed other outrages ; and it appears, by a statement in the Mercurius Rusticus of 1646, that in July 1643 the abbey was converted into barracks for the soldiers.

During the reigns of George I. and George II. the great west window was rebuilt, and the western towers completed ; but it is to their immediate succcessors that Westminster Abbey is most in- debted, in the restoration of the exterior of Henry VII.'s chapel to its original beauty, after it had become so much dilapidated. This work was commenced in 1809, under the direction of Mr. James Wyatt, and has been completed at an ex- pense of about £42,000.

On entering the great western door, the body of the church presents an impressive appearance, to which its loftiness, lightness, symmetry, and ele- gance contribute, although the view is somewhat disfigured by the monuments, which are neither good in themselves, nor tastefully arranged. The church consists of a nave and two side aisles, sepa- rated by ranges of lofty columns supporting the roof, which is raised to a great elevation. The nave is separated from the choir by a screen ; the choir, in the form of a semioctagon, was formerly sui rounded by eight chapels, but there are now only seven, — that which was formerly the central chapel now forms the porch of that of Henry VII. The choir, the only part that can be seen gratui- tously, and that only during the hours of divine service (celebrated every day at ten o'clock in the mornine, and three o'clock in the afternoon), is cele- brated for its beautiful Mosaic pavement, venerable in its age, costly in its materials, and of almost inimitable workmanship. This pavement, made at the expense of abbot Ware, and named after him, is formed of innumerable pieces of jasper, alabaster, porphyry, lapis-lazuli, serpentine maibles, and touch-stone ; these pieces, which vary in size from half an inch to four inchas, are arranged in I lie most varied and beautiful forms, aud present a platform of singular beauty. On the 9th of July, 1803, the roof of the choir was much injured by a tire, which threatened the entire destruction of this magnificent structure.

The chapel of Henry Vil. io a magnificent spe- cimen of ecclesiastical

architecture. It is nearly square ; the east end forming five sides of an octagon. When viewed exteriorly it presents a light and airy structure, and the interior is of singular beauty and symmetry, though much disfigured by the stalls and flags of the knights of the bath. Within is the tomb of its founder, enclosed by a screen of gilt brass, said to have been executed by Torrigiano, the rival of Michael Angelo. Here also are entombed the ill-fated Mary queen of Scots, and her vindictive persecutor queen Elizabeth, who sent her to the block.

Edward the Confessor's chapel, situated at the east end of the choir, contains several royal tombs, as well as the celebrated coronation chair, which contains the still more celebrated stone, monkish tradition relates to have been Jacob's pillar. This stone is placed within the frame work of the chair, and was brought from Scone, in Scotland, in 1267, by Edward I. It is a remarkable instance of the force of superstition, that this stone has been the subject of an express article in a treaty of peace, as well as of a conference between Edward III. and David II., king of Scotland. By the treaty it was agreed to give the stone up to Scotland, and in the conference it was resolved that the king, after being crowned in England, should repair to Scotland and be crowned king at Scone ; but neither of these resolutions were carried into effect.

The chapels of St. Andrew, St. Benedict, St. Erasmus, St. John, St. Michael, and Henry V., all contain the tombs of some distinguished person, as does the Poet's Corner ; but, although monuments to the memory of many illustrious characters are to be found in various parts of Westminster Abbey, yet there are others who have scarcely any claim to such a distinction. Except the sovereigns, down to those of the house of Stuart, we look in vain for the tombs of the great men who have adorned the annals of our history. In the Poet's Corner, the statue of Shakspeare, and that of his great exem- plifier, David Garrick, will attract attention; but the greatest of modern dramatists, Richard Brinsley Sheridan, may escape notice, unless the visitor is pointed out to the only memorial of him, a black marble slab which covers his remains. The names of Chaucer, Spenser, Ben Jonson, Mihon, Butler, Prior, Addison, Dryden, Goldsmith, and several other distinguished authors and artists, have also a memorial in the Poet's Corner ; and in other parts of the abbey are numerous monuments to modern statesmen, senators, and lawyers ; including one to Charles James Fox, by Westmacott, and another to the memory of Mr. Percival, whose assassination is represented in basso relievo. To describe all the monuments is impossible, and even to enume- rate their names would but furnish a dull catalogue. From the time of William I., to that of his ma- jesty George IV., Westminster Abbey has been the place where the august and religious ceremony of crowning the kings of England has taken place, on which occasions it has been customary to fit up the interior.

The government of the abbey church of St. Pe- ter's is intimately connected with that of the city of Westminster itself; although, since the reforma- tion, the civil authority has been in the hands of the laity, yet the right of nominating the chief officers is still exercised by the dean and chapter : they appoint the high steward, and the high bailiff,

who is the returning officer at the election of the two representatives which the city sends to parlia- ment; and several subordinate officers cannot enter on their duties until confirmed by the dean and chapter.

From the south aisle of the abbey, there are two entrances into the cloisters, which are entire, and consist of four arched walks, on the sides of an open quadrangle. The walls are nearly covered with small monuments, and the ground with tomb- stones. The chapter house, which was built in 1220, is on the east side of the cloisters, and is entered through a magnificent Gothic portal. In 1377 the commons of England held their sittings here, and continued to do so until the reign of Ed- ward VI. The chapter house is now used as a de- pository for the public records, where the cele- brated dornesday book, and the records of the court of star chamber, are preserved. The Jerusa- lem chamber, near the abbey, is memorable for its being the place where Henry IV. died. To the north of the abbey stood the ancient sanctuary, where even royalty itself has sought a refuge, though in vain ; and westward of the sanctuary was the almonry.

Westminster should also be noticed as contain- ing the principal theatres of the metropolis. The king's theatre, or opera house, in the Haymarket, was originally built by Sir John Vanbrugh, be- tween 1703 and 1706. Many alterations were af- terwards made at different periods; but on the 17th of June, 1789, the whole building was nearly destroyed. It was rebuilt in the following year, from the designs of signior Novosielski. The exterior was altered in 1820, to correspond with the new improvements in Pall Mall. In the Hay- market a handsome new theatre was erected in the year 1821, from designs by John Nash, esq. Its front has a portico, with six pillars of the Corin- thian order. In the Strand is the Adelphi theatre, formerly the Sans Pareil, where dramas are en- acted in a style little inferior to the performances at the theatres royal. The English opera house, or lyceum, is also in the Strand, and was first opened in the year 1808, by Mi. Arnold. It has since been rebuilt, and fitted up in a splendid style. The saloon is contrived to represent a ' Mameluke pavilion, and Egyptian panorama,' which consists of a sumptuous tent, with a foun- tain in the centre (beneath a dome), playing into a shell, amidst a profusion of gas lights. The

paintings which decorate the sides of the saloon are taken from Egyptian drawings, in the posses- sion of Sir Robert Ainslie. Drury Lane theatre was erected from the designs of Benjamin Wyatt, esq., in 1811, and the following year; the old edi- fice having been destroyed by fire, on the 24th of February 1809, which consumed the whole build- ing in the space of five hours. The exterior has a heavy, though substantial appearance. This build- ing is calculated to contain sitting room for about 2800 persons. Covent Garden theatre, was like- wise destroyed by fire on the morning of the 28th of September 1808. The present extensive edi- fice was designed by Robert Smirke, esq., jun., K. A., and built within ten months from the laying of the foundations. The portico was designed from the Doric temple of Minerva, in the Acro- polis, at Athens. The interior is excellently adapt- ed for display ; the decorations are of the most tlegant description; and it is capable of affoiding

accommodation for 3000 persons. The Olympic Pavilion, in Wych Street, was erected by the late Mr. Astley, in 1806, and the performances are of a similar nature to those of the Adelphi and other minor theatres.

An establishment of a peculiar character has also lately been raised in this city, on the banks of the Thames, the Penitentiary for the confinement, employment, and reformation of offenders of se- condary criminality. The culprits are incarcerated in circular buildings, so constructed that the over- seers may, from a central situation, unseen, observe every room. When completed, the edifice will form externally a hexagon, consisting of six of these circular divisions. The building is encom- passed with a wall, enclosing eighteen acres of ground, and is calculated to be large enough to contain from 1000 to 1200 prisoners. Some are already placed there ; and the beneficial effects of the institution on their general conduct has already been very perceptible. In Tothill Fields is a bridewell, for the detention and temporary punish- ment of petty offenders, under the charge of the magistrates of the city and liberties.

The charitable establishments of Westminster for the education and maintenance of youth, and the consolation of age ; for the relief of disease and accidental calamity, are both numerous. The Middlesex and the St. George's hospitals (not, however, properly within the town), the Westmin- ster infirmary, &c., are excellent institutions, su- perintended by medical gentlemen of the highest professional reputation. In the Adelphi is a hand- some edifice, belonging to the society for the en- couragement of arts, manufactures, and commerce. In the great hall is a series of paintings, unique in modern times, by the late James Barry. The academy of painting, sculpture, and architecture, is a valuable institution for the promotion of sci- ence and the fine arts. Of the distinguished pri- vate mansions of noblemen and others is Northum- berland House, the only residence now

remaining of our ancient nobility in the Strand ; the duke of Marlborough's in Pall Mall, erected by the nation for the great duke John; the duke of Norfolk's, St James's Square; Burlington House ; the duke of Devonshire's, and the earl of Egremont's, in Piccadilly ; the marquis of Lansdowne's in Berke- ley Square ; earl Grosvenor's, in Upper Grosvenor Street ; the earl of Chesterfield's, in South Audley Street ; the marquis of Stafford's, Cleveland House ; and the marquis of Anglesey's, in Bur- lington Street.

WrsTMixsTER, BRIDGE OF. Near the House of Lords, Prince's Chamber, &c., is a bridge over the Thames called Westminster Bridge, accounted one of the most complete and elegant structures of the kind in the known world. It is built entirely of stone. This magnificent structure was begun in 1739 and finished in 1750 at the expense of £389,000, defrayed by the parliament.

\ IM'.MOi; LAND.— This county receives its name from its situation to the west, and the prin- cipal part of it being formerly moorish barren land. It is one of those counties which, in the time of the Romans, was inhabited by that tribe of the ancient Britons called the Brigantes. By the Romans it was incorporated with the province of Maxima Caesariensis ; and under the Saxor.s it made part of the kingdom of Northumberland.

Westmorland is an inland county, being bounded

on the north-west and north by Cumberland, on the east by Durham and Yorkshire, and on the south and south-west by Lancashire. It is about forty miles in length from north-east to south-west, and from sixteen to twenty-five in breadth, and contains about 844 square miles, or 540,160 statute acres, part of which is uncultivated land. Westmorland is divided into East Ward, West Ward, Kendal, and Lonsdale Wards ; and consists of twenty-six parishes, eight market towns, the principal of which is Kendal, though Appleby is the county-town.

The climate of this county, as may be expected from its vicinity to the Western Ocean, over which the south-west winds blow for nearly eight months in the year, and cause the exhalations to descend in rain and snow on the mountains, is remarkably moist. The quantity of rain that falls in the west- ern part in a year has been ascertained by rain gauges kept at Kendal and on the banks of the Windermere. In the year 1792 it amounted to eighty-three inches : in ordinary years it amounts to forty-five or fifty inches, the lowest of which is twenty inches above the medium quantity

that falls in Europe. The air, however, is pure and healthy ; the winters rather long, and sometimes severe. This county is well watered by rivers, the principal of which are the Eden, the Eimot, the Loder, the Ken, and the Lune, or Lon. The Eden, which is one of the principal rivers in the north of England, rises in the moors of this county, near the borders of Yorkshire; and, after receiving several tributary streams, enters Cumberland at its confluence with the Eimot; and, taking a north-westerly direction, after passing Kirkoswald and Carlisle, flows into the Solway Frith near Kockliffe Marsh. The Ei- mot rises at Ullswater, and, forming the boundary between this county and Cumberland, runs into the Eden about two miles north-west from Penrith. The Loder or Lowther : — One feeder of the Low- ther rises in Ulet Kedal to the south-west of Shap, and another flows out of Slawes-water, making a junction in the vale of Hampton. The stream out of Broadwater falls into Ullswater. The Lune rises in the mountains near Kirkby Stephen. The \V i nster constitutes for some distance the boundary of Lancashire and Westmorland. The Bethu or Belu meets the tide at Milnthorp. The Spret and Mint are tributary streams of the Ken. The Trout-beck, Rothey and Brathey, are the grand feeders of \ indermere, the waters of which are discharged under Newby bridge in Lancashire, and constitute the river Leven. There are, besides the rivers, se- veral lakes in this county ; the largest of them, and indeed the largest in England, is Winander Mere, so called probably from its winding banks. All these rivers and lakes produce great plenty of fish ; and the red char is said to be peculiar to the lakes of \ inander Mere and I'llswater; the only season for catching them is when they resort to the shallow parts in order to spawn. — The Lancaster canal will enter this county near Button, and proceed north to Kendal, and when complete will open the inte- rior of this county to an extensive chain of navi- gation. The most prevailing soil of Westmorland is a dry gravelly mould ; sand and hazel mould ap- pear in various parts, but chiefly in the east and north ; clay is found in a few places towards the Kden and eastern mountains, and a heavy moist soil on others in the north parts of the county. Peat moss makes its appearance in small patches in many of the vales, and abounds on the tops of se-

veral high mountains, which, however, are in gene- ral covered with a dry soil on a hard blue rock, provincially called rag. This county in general is rather mountainous and hilly, so that a proportion of it must in a manner for ever remain undisturbed by the plough ; but between these mountains there are several very pleasant and fertile valleys, that want only trees and hedge-rows to be truly beauti- ful. Notwithstanding its mountainous surface, no valuable mines have yet been found in Westmor- land. Some trifling veins of lead-ore have been found in the eastern mountains; coal is wrought only in the south-east extremity of the county and in the neighbourhood of Shap, where a bastard of crow coal is got. Limestone, in

almost inexhaus- tible abundance, is to be found in most parts of the county, except among the western hills, which af- ford an excellent kind of blue slates, well known over almost all England. Gypsum is got at Acron- bank, near Kirkby Thore, and a few other places. Freestone is found in the eastern parts of the county, and at Hutton-roofe, about ten miles from Kendal. On the river Ken, about three miles be- low Kendal, a vein of beautiful marble has lately been discovered. There are some good corn and grass grown in Westmorland.

Westmorland sends three members to parlia- ment : viz. two for the county, and one for the borough of Kendal.

Eminent Persons. — Lancelot Addison, a divine. Born at Crosby Ilavensworth, 1632. Died 1703. — Henry Airey, a divine. Born 1560. Died 1616. —Christopher Airey, Born 1609. Died 1678. — Anthony Askew, a learned physician. Born at Ken- dal, 1722. Died 1784. — Thomas Barlow Bishop. Born at Orton, 1607. Died 1691.— John Barwick, divine. Born at Witherslack, 1612. Died 1664. — Dr. Richard Burn, vicar of Orton. Born at Winton. He was author of two celebrated books, one on the Office of a justice of Peace, the other on Ecclesiastical Law, both of which have gone through several editions. Died November 20, 1785. — William Gibson, a self-taught mathematician, of the most wonderful powers. Born at Bolton, 1720. Died October 4, 1 791 . A very curious account of him may be seen in the Gentleman's Magazine for No- vember 1791 ; but itis too long for our insertion.— Edmund Gibson,bishop of London. Born at Knipe. 1669, eminent as an antiquarian, theological, politi- cal, and controversial writer. Died 1748. — Ber- nard Gilpin, an eminent divine and reformer. — Dr, Thomas Shaw, a divine and antiquary, famous for his Travels, or observations relating to several Parts of Barbary and the Levant. Born at Ken- dal, 1692. Died 1751.— Dr.' Richard Watson, the late lord bishop of Landaff, born and educated at Heversham school near Milthorp.

The commerce of Westmorland is now of consid- erable extent. Its exports are coarse woollen cloth, manufactured at Kendal ; stockings, slates, tanned hides, gunpowder, hoops, charcoal, hams, wool, sheep, and cattle. Its imports are chiefly merch- ant goods, wheat, oats, with a little barley, cattle and sheep. Milthorpe is a very trifling port, and the only one in the county. The manufactures of this county are not of much greater importance than its commerce. They chiefly consist of coarse wool- len cloth, called Kendal cottons, properly coatings, gunpowder, stockings, silk and worsted waistcoat- pieces, flannels, and tanned leather.

\ ESTP11ALIA, CIRCLE OF, an extensive coun-

try in the north-west of Germany, varying in its boundaries and extent, in different parts of its history. Originally the name of Westphalia was given to that part of the great duchy of Saxony which lay to the west of the Weser, the part to the east of that river being called Oost or East- phalia. The latter name was subsequently sup- pressed, and on the division of the empire into circles, the name of Westphalia was given (with- out reference to its position in regard to the Weser) to the extensive tract of country in the north-west of Germany, bounded by the Netherlands on the west, by Lower Saxony on the east, by the German Ocean on the north, and by the circle of the Lower Rhine on the south. It contained, previous to 1802, the bishoprics of Munster, Liege, Baden, and Osnabruck ; the duchies of Oldenburg, Cleves, Juliers, and Berg ; the principalities of East Fries- land, Moers, Minden, Verden, and Nassau ; to which we have to add seven abbeys, twenty-nine domains or lordships, and the free towns of Co- logne, Aix la Chapelle, and Dortmund. Its area, nearly equal to that of Scotland or Ireland, was about 27,000 square miles ; its population about 2,5(<0,000. The climate of Westphalia is similar to that of Holland, or the north of Germany gene- rally. In soil it is in general not a favored coun- try, partaking largely of the barren and sandy nature of the north of Germany. A number of its male inhabitants remove to Holland in the summer, in quest of employment; and pass the winter at home in weaving linen. The chief seats of this, in general coarse but durable manufacture, are the districts of Osnabruck, Tecklenburg, and Kavensberg. The value of the linen sent abroad, differing necessarily in different years, is between £150,000 and £200,000. The whole is previously measured, and stamped at public offices. At the peace of Luneville all the parts of Westphalia on the west of the Rhine were ceded to France ; and in 1806, when the confederation of the Rhine was formed, the circle itself was suppressed. This name has not been revived ; and the Westphalian territory now belongs chiefly to Prussia, Hanover, and Oldenburg.

WESTPHALIA, a duchy in the west of Germany, having on the east the circle of the Upper Rhine, and on the three other sides that of Westphalia; but belonging politically to the circle of the Lower Rhine. Its extent is about 1700 square miles; but its thinly scattered population does not exceed 140,000, almost all Catholics. This duchy, be- longing in former ages to the dukes of Saxony, was in the eleventh century transferred to the arch- bishop of Cologne. On the secularisation of 1802 it was made over to Hesse- Darmstadt ; and in 1814 ceded for an equivalent to Prussia. It now

forms part of the Prussian province of Westphalia, and government of Arensberg. Its southern divi- sion is unfit for tillage, but has good pasturage, and is rich in forests and mines. The central part is more level and fertile ; and, the hogs being remark- able both for size and number, the hams which are km wn by the name of Westphalia hams are ex- ported principally from this quarter.

Wr.sTPHAi.iA, KINGDOM OF, one of the tempo- rary kingdoms of Buonaparte, created in 1807, and overlurne.'l in 1813. It was composed of con- firm Prussia, llesse-Cassel, Hanover, and tl c smaller states to the west of the Elhe.

\ isii'ii.M IA, I';IO\::.IK or, a province of the

Prussian states, constituted in 1816, is bounded on the west by the Netherlands, and on the east by Hanover and Hesse-Cassel. It lies between lat. 50° 43′ and 52° 30′ N., and has an extent of 3300 square miles, with nearly 1,000,000 inhabitants. It is divided into the three districts of Munster, Minden, and Arensberg. Its territorial aspect is very different in different quarters, the governments of Arensberg and Minden being in general lii'ly, while that of Munster forms part of the great plain of the north of Germany, and is a perfect level. The mountainous tracts consist of a part of the Westerwald, and of the less extensive ranges called the Haarstrang and the Egge. Here is also the Porta Westphalica, a perpendicular opening through the mountains, forced by the current of the Weser. The soil is in general stony in the hilly districts, and sandy in the plains : particular spots, how- ever, are found productive. In general, the best land is on the slopes of the Egge range, the most extensive heaths and moors in the district of Mun- ster. The growth of corn, on the whole, is hardly equal to the consumption. Flax, on the other hand, is raised in great quantities ; and the breed- ing of cattle is carried to a great extent. The mountainous districts contain mines of iron, lead, copper, and coal. There are in this province, also, extensive salt-works. The manufactures are linen and hardware; the former general; the latter local. The smaller manufactures are leather, glass, paper, and cotton.

The Catholics are numerous in the territories of Munster, Paderborn, and others, formerly belong- ing to ecclesiastical princes ; while in Minden, Ravensberg, Mark, and Siegen, the Protestants form the majority. It was from this part of Ger- many, and in particular from the town and district of Engern, that the expedition of the Saxons into England took place in the fifth century.

WEST-POINT, a post village, and military post, in Cornwall, Orange county, New York, on the west bank of the Hudson, at its passage through

the Highlands; seven miles south of Newburgh, fifty- eight north of New York, 102 south of Albany. Lat. 41° 23′ N. A military academy is established here, under the direction of the general govern- ment. It is governed by a colonel in chief of the corps of engineers; and has a professor of natural philosophy, and an assistant ditto, a professor of mathematics and an assistant ditto, a professor of the art of engineering, a surgeon, a chaplain, a teacher of French, a teacher of drawing, a sword master, and, in .1817, 254 cadets from the different states.

WESTR1NGIA, a genus of plants first discover- ed in New Holland by Dr. Solander, who called it cunila fruticosa, though it is totally different from the CUNILA (which see), and more resembles rose- mary, from which, however, it is likewise different. Its peculiar character is : — Calyx semiquinquifidus, pentagonus ; corolla resupinata, limbo quaHrifido lobo longiore erecto, Hpartito : stamina distantiat duo breviora (inferiora) abortiva.

WET, adj., n. s., & v.a. \ Sax. peer; Danish

NVn'M», n.s. \u-ucd. Humid; hav-

ing some moisture adhering; opposed to dry : wet- ness, state of being wet.

They are tret witb the showers of the mountains.

Job xxt v.

Better learn of him that learned be, And him been watered at ;he muses ivcli j

WEX

The kindly dew drops from the higher tree, And u-ets the little plants that lowly dwell. Spenser.

A drop of water running swiftly over straw, weiteth not. Jiactm.

Now the sun, with more effectual beams, Had cheered the face of earth, and dryed the wet From drooping plant. Milton.

Fishermen, who know the place wet and dry, have given unto seven of these valleys peculiar names.

Broicne.

Wet weather seldom hurts the most unwise. Dri/d. The tcetneis of these bottoms often spoils them for corn. Mortimer.

Tuberoses will not endure the wet ; therefore set your pots into the conserve, and keep them dry.

Evelyn.

WETH'ER, M.S. Sax. ppfcen; Belg. weder. A ram castrated.

I am a tainted wether of the flock, Meetest for death. Shakspeure.

Although there be naturally of horses, bulls, or rams, more males than females ; yet artificially, that is, by making geldings, oxen, and wethers, there are fewer.

Graunt.

It is much more difficult to find a fat wether, than if half that species were fairly knocked on the head.

Sicift.

WETHER, in zoology. See Ovis, and SHEEP. WETSTEIN (John Rodolph), a learned Swiss divine, born at Basil in 1647, where his father was professor of Greek and theology, in which he suc- ceeded him. He published Origen's Dialogue against the Marcionites, and other learned works. He died at Basil in 1711, aged sixty-two.

WETSTEIN (John Henry), brother of the prece- ding, born in 1649, was also a very learned man. He settled as a printer at Amsterdam., where he published very accurate editions of ancient authors, with learned prefaces. He died in 1726, aged se- venty-seven.

WETSTEIN (John James), a very learned German divine, of the same family with the two preceding.born at Basil in 1693. On his admission to the minis- try, he maintained a thesis De variis Novi Testa- menti Lectionibus ; in which he showed that the great variety of readings of the New Testament af- ford no argument against the authenticity of the text. In 1730 he published Prolegomena ad Novi Testamenti Grseci editionem accuratissimam, &c. Some divines, dreading his unsettling the present text, got him prohibited from officiating in the mi- nistry ; on which he went to Amsterdam, where the Remonstrants named him to succeed the fa- mous Le Clerc, then superannuated, as professor of philosophy and history. About this time he published his edition of the New Testament, in 2 vols. folio, 1752 ; in which he left the text as he found it, placing the various readings with a critical commentary underneath ; subjoining two epistles of Clemens Romanus, till then unknown to the learned, but discovered by him in a Syriac MS. of the New Testament. He also published some small

works. He died at Amsterdam in 1754.

WEX, v. a. Corrupted from wax by Spenser, for a rhyme, and imitated by Dryden. To grow; increase.

She first taught men a woman to obey ; But when her son to man's estate did wer, She it surrendered. Spenser.

Counting seven from noon, Tis Venus hour, and in the vexing moon. Dryden.

WEXFORD, a county of Ireland, situatea in the province of Leinster. Its boundaries are on

WEX

the north Wicklow county, on the west Carlowand Kilkenny, on the south the ocean, and on the east St. George's Channel. The area of this shire mea- sures about fifty-six English miles in length by thirty-two in breadth, having an areable content of 342,900, Irish measure. Its baronies, eight in number, are denominated Ballaghkeen, Bantry, Bargy, Forth, Gorey, Scarewalsh, Shelburne, and Shelmalier ; the parochial division of which is into 1 12 whole and eight parts of parishes. The prin- cipal towns are New Ross, Wexford (the assize town), Gorey, Enniscorthy, and Newtownbarry, besides Ferns the residence of the lord bishop of Leighlin and Ferns, and the villages of Taghmon, Camolin, and Coolagrany. The chief rivers are the Barrow, a navigable stream which separates part of Wexford from Kilkenny; the noble rirer Suir, the boundary between this county and Wa- terford; the Slaney, which, passing through Ennis- corthy, falls into Wexford Haven; the Bann, a tri- butary to the Slaney, with many rivulets.

It was probably the security consequent upon the peninsular nature of this district that induced the early settlement of an Anglo-Saxon colony in the baronies of Forth and Bargy, under Harvey de Mountmorres, in the reign of Henry II. These people retain their native language, manners, and many singular customs, to this day; they inter- marry amongst themselves, and intermix little with their neighbours. The surface of this county is much diversified, a vast quantity of level arable land, but rus>.ny eminences also, generally of a coni- cal form. The mountains are ranged along the north and north-west boundaries, and afford but few defiles accessible to travellers. The Blackstairs, Carrigbraig, and Mount Leinster, are lofty ranges, having but one opening, Scullough Gap, that ad- mits of communication between the adjacent shires.

The eastern coast is almost devoid of any asy- lum for shipping, the haven of Wexford admitting vessels of but small tonnage, and no attention being

paid to this important deficiency, except at Cour- town, where some ingenious designs for the forma- tion of a harbour are now executing. The dangers of the southern coast have been latterly much dimi- nished by the erection of a lighthouse on the Tus- kar rock, and the stationing of a light ship at Co- ningbeg, to the south of the Saltees. However the export trade of this county might, without much inconvenience, be carried on through the port and river of Waterford. Grain is exported from Wex- ford, and tallow, hides, wool, pigs, and black cat- tle, from Waterford and elsewhere. Wexford re- tains many landed proprietors as constant resi- dents; and the cheapness of the necessaries of life has drawn into this county a number of respectable families, to the narrowness of whose means the markets of Wexford were accommodated.

There were many religious houses anciently founded in this county, remains of which are still visible. William earl of Pembroke founded a mo- nastery in Bannowbay called Tintern Abbey, and translated some of the Cistercian monks from Tin- tern in Monmouthshire to this place. But the most famous, as well as the most beautiful, was Dunbrody Abbey, founded by Harvey de Monte Mauresco in the year 1178, and by him richly en- dowed. The ruins of Dunbrody which still remain are magnificent and picturesque ; the situation, on a sloping bank of the river Barrow, near the junc- tion of the Suir, is perfectly beautiful, and the ia-

nor is sublimely grand and awful. Many other monastic remains through the county are well worth the attention of the antiquarian, though none so interesting as the elegant ruins of Dunbrody.

WEXFORD, town, the capital of the county of that name, is a sea- port, market, post, and fair town. It stands on Wexford Haven, at the mouth of the river Slaney. It contains the parishes of St. Ibe- rius, St. Michael, St. John, and St. Peter. Here are a diocesan school, a Lancasterian school of 200 boys, and a convent-school of 230 girls instructed by the nuns. Wexford is in lat. 52° 15', long. 6° 25'. It gives title of earl to the family of Tal- bot earl of Shrewsbury in England, and returns one member to the imperial parliament. This place was founded by the Danes, who called it Wessford, and sometimes Carman ; but they were dispossessed by the English in 1170. Before the arrival of Strongbow, Fitzstephen was in possession of this place ; but he surrendered it to Henry II., who sailed thence into England.

In 1649 Wexford gave obstinate resistance to Oliver Cromwell, who put the governor and garri- son to the sword. The town was formerly regu- larly fortified, and much of the walls still remain. Here are several public buildings, a handsome church, Roman Catholic chapel, jail, custom house, market house, barracks, and several excel- lent private houses. The trade of this port, though valuable to the county, must still necessarily be limited, owing to the obstruction of the barred harbour. The haven of Wexford is enclosed na- turally by two isthmuses of land equivalent to breakwater, and would afford safe lying for any vessels that could obtain ingress ; but the bar pre- vents vessels drawing more than ten feet from en- tering. The exports are corn, hides, and tallow ; the only manufacture is that of woollen cloth.

WEY MOUTH, an ancient sea-port, borough, and market town, in the parish of Wike-regis, Dorchester, divided from Melcombe-regis by the river Wey, over which an elegant stone bridge has recently been erected ; eight miles south of Dor- chester, and 130 W. S. W. of London. Till within the last thirty or forty years, it was but a small and indifferently built town ; but since it has be- come a fashionable bathing place, it has been greatly enlarged. It was first brought into repute in this respect in 1763, by the then duke of Glou- cester, who erected Gloucester-Lodge in the front of the bay. It was subsequently visited by the late king and his family with great benefit in 1789, who, making it their summer residence, gave it a fashionable reputation. The residences are in Gloucester Row, Chesterfield Place, York Build- ings, Charlotte Row, Clarence Buildings, St. Alban's Row, and Belle Vue. The church is a low building, and consists of three aisles ; the altar-piece is universally admired. The Quakers and Independents have each a meeting house. Weymouth formerly carried on a considerable trade, and was the principal port of the county, but it is now rivalled by Poole. Near the centre of the town is a commodious hot salt water bath ; there are likewise private cold baths. At the west end is a small town hall. It is governed by a mayor and aldermen under one charter with Mel- combe-regis. The theatre is neatly fitted up, and has a good" company. The public room and hotel stands in the centre of Gloucester Row; the as- sembly room is very spacious and lofty, and the

interior is handsomely decorated ; hera are als"> several well furnished libraries, numerous lodirm.- houses, and every thing that can be adapted to t e pleasure and convenience of numerous visitor-. The port is defended by two castles, iSandford and Portland. The harbour is a tide harbour, but the road has good anchorage in four or five fathoms. The fashionable promenade is on the Esplanade, about half a mile long and thirty feet broad. The Look-out, on the Wfeymouth side of the river, j> another pleasant and much frequented walk. Three packets are stationed here for the islands of Guern- sey andJersey. At the disianceot one mile and a halt

from the turnpike, on the left of the Dorchester road, is the little village of Nottington, famous for its medicinal spring, which has a strong sulphureous smell though perfectly limpid. This borough unites with Melcombe Regis in returning two members.

WHALE, n. s. Sax. hpale. The largest or fish.

God created the great whale. G .„• ...*

A bearded goat whose rugged hair, And u-haiti eyes, the sign of jealousy, Was like the person's self whom he did bear.

Faerie Queene.

Barred up with ribs of whale-boue she did leese None of the whale's length, for it reached her knees.

Bishop Cvrbct.

The greatest it-hale that swims the sea Does instantly my power obey- Swift.

WHALES, FISHERY OF. See FISHERY.

WHAJMPOA, a sea-port of China, on an i in the river of Canton, about two miles below that city. Here large ship anchor, and carry on their communication with Canton by boats. All Euro- pean vessels are allowed to wear a flag in their boats, which prevents their being stopped at the custom-houses ; while those of Asiatic nations must have a chop or pass, to be renewed at the custom-houses. The island on which Whampoa is situated is called Bankshall Island, from being the place where store houses are constructed of Bam- boos and mats, to contain the ships' stores, over- haul the rigging, repair casks, &c. Immediately on the arrival of any vessel, two custom-house boats are placed along side to prevent clandestine trade. Lat. 23° 6′ N.

WHARF, n. $. Swed. wharf; Belg. icerf. A perpendicular bank or mold, raised for the pur- pose of lading or emptying vessels ; a quay, nr key.

Duller shouldst thou be than the fat weed That roots itself in ease on Lethe's wharf, Wouldst thou not stir in this. Shakspeart.

There were not in London used so many wharf's, or keys, for the landing of merchants' goods. Child.

WHARTON (Anne), marchioness ot, wrote se- veral poems in Dryden's

and Nichols's collections. She died in 1685.

WHARTON (Sir George), an astrologer, born in Westmorland. He spent the best part of his for- tune in the cause of king Charles I., and, after the ruin of the royalists, compiled Almanacs, wrote Astronomical Tracts, A Chronology of Remarkable Events, and other works. He also wrote some doggerel poems. After the Restoration, he was created a baronet, and made treasurer of the ord- nance. He died in 1681.

WHARTON (Henry), born at Worstead in Norfolk, of which his father was vicar, in 1661. He was educated at Caius College, Cambridge, and be- c:ime chapl im \u archbishop .y,: croft, who made

him rectoi of Chartham, and vicar of Minster, in Kent. He wrote, 1 . A Treatise on the Celibacy of the Romish Clergy. 2. Errors in Burnet's His- tory of the Reformation. 3. Defence of Plurali- ties ; 8vo. 4. Historia de Episcopis et Decanis Londinensibus, necnon Assavensibus ; 8vo. 5. Anglia Sacra, sive Collectio Historiarum, &c. 2 vols. folio. And, 6. A volume of Sermons. He died in 1695.

WHAETON (Philip), duke of, a witty and dissi- pated nobleman, was born in the end of the seven- teenth century. In 1716 he went abroad, and, in the course of his travels, paid his respects to the consort of James II. and her son. He returned in the same year, and, though under age, he took his seat in the Irish house of peers, and immediately distinguished himself as a violent partizan for the ministry ; in consequence of which zeal the king created him a duke. He no sooner came of age than he was introduced to the house of lords in England with a blaze of reputation. In a little time he opposed the court, and appeared one of the most vigorous in defence of the bishop of Rochester, and soon after printed his thoughts twice a-vveek, in a paper called the True Briton, several thousands of which were dispersed weekly. But his boundless profusion soon rendered it necessary for him to leave his country ; and the remainder of his life consisted of a series of traitorous intrigues with foreign courts, conducted during a course of extra- vagant dissipation. He died about 1731, in the utmost wretchedness and poverty, at a convent in Catalonia. His Life and Writings were published in 2 vols. 8vo.

WHAT, pron. ~\ Sax. hpaet ; Belg. wat. That

WHATEVER, ˆ which; which part; pronoun

WHAT'SO, i indefinite ; used also adver-

WHAT'SOEVER. J bially for partly : whatso is discontinued.

What art thou, That here in desart hast thy habitance 1 Spenser.

The enemy having his country wasted, what by him- self, and what by the soldiers, findeth succour in no place. Id.

Whatsoever our liturgy hath more than theirs, they cut it off. Hooker.

The year before, he had so used the matter, that what by force, what by policy, he had taken from the Chris- tians above thirty small castles. Knolles.

What ! canst thou not forbear me half an hour ? Then get thee gone, and dig my grave thyself. Shaksp.

To forfeit all your goods, lands, tenements, Castles, and ichatsoever, and to be Out of the king's protection. Id.

I tell thee what, corporal, I could tear her. Id.

See what natures accompany what colours ,- for by that you shall induce colours by producing those na- tures. Bacon.

Let them say what they will, she will do what she list. Draylon.

Whatsoever is first in the invention, is last in the ex- ecution. Hammond.

If thence he 'scape into whatever world. Milton.

It f:an be no more sin to ask what God grants.

Kettleu'orth.

Whate'er I begged, thou like a dotard speakest More than is requisite , and what of this ! Why is it mentioned now 1 Dryden.

What though none live my innocence to tell 1 I know it ; truth may own a generous pride ; I clear myself, and care for none beside. Id.

Mark what it is his mind aims at in the question, and not what words he expresses. Locke.

A satire on one ol the common stamp never meets

with that approbation, as what is aimed at a person whose merit places him upon an eminence. Addison.

They live a popular life, and then what for business, pleasures, company, there is scarce room for a morn- ing's reflection. Norris.

No contrivance, no prudence whatsoever, can deviate from his scheme, without leaving us worse than it found us. Atterbury.

If any thing be stated in a different manner from wluit you like, tell me freely. Pope.

I desire nothing, I press nothing upon you, but to make the most of human life, and to aspire after per- fection in whatever state of life you chuse. Law.

WHEAL, 7i. s. See WEAL. A pustule ; a small swelling filled with matter.

The humour cannot transpire, whereupon it corrupts, and raises little wheals or blisters. Witeman.

WHEARE (Degory), born at Jacobstow, in Cornwall, in 1573, and educated at Exeter College, Oxford. He became Camden's professor of history, and principal of Gloucester Hall. He pub- lished De Ratione et Methodo Legendi Historias Dissertatio; 1625 and 1637. It was translated into English by Edmund Bohun. Wheare died in 1647.

WHEAT, n. s. { Sax. hpeate; Belg. writ; WHEAT'EN, adj. S Goth, hueit. The grain of which bread is chiefly made : made of wheat. Reuben went in the days of wTieat-harvest.

Genetis xxx.

Of wheaten flour shalt thou make them. Eiod. xxix. He mildews the white wheat, and hurts the poor creature of the earth. Shakspeare. King Lear.

Here summer in her wheaten garland crowned.

Addison.

The damsels laughing fly : the giddy clown Again upon a wAeat-sheaf drops adown. Gay,

Next to rice is wlieat ; the bran of which is highly acescent. Arbuthnot on Aliments.

His task it was the wheaten loaves to lay, And from the banquet take the bowls away. Pope.

There is a project on foot for transporting our best whtaten straw to Dunstable, and obliging us by law to take off yearly so many tun of the straw hats. Swift.

WHEAT, in botany. See TRITICUM. The three principal kinds of bad wheat are, the blighted, the smutty, and the worm-eaten.

WHEAT, BLIGHTED, is that of which the stalk is a little twisted and ricketty, the blade being of a bluish green and curled up; the grain also is green and tubercled.

WHEAT, BUCK. See POLYGONUM, and RURAL ECONOMY.

WHEAT, WORM-EATEN, or rotten wheat, is cor- rupted without losing much of its natural form or external appearance; the husk is filled with a greasy black powder, that is insufferably fetid. It appeared, from the experiments of M. Tillet, that there was a kind of infectious quality in all the bad kinds of wheat ; so that if sound wheat was sprink- led with the flour of smutty or rotten wheat, the crop produced would be rotten or smutty. It ap- peared, also, that among the grain which was pro- duced from ground manured with the straw of distempered wheat, there was a much greater pro- portion of distempered wheat than in that produced from ground manured with the straw of good wheat : the great secret then was to destroy the principle of this contagion in the wheat that was put into the ground ; and M. Tillet found, as the result of a great number of experiments, that if the grain, before it is sowed, be well moistened with a solution of sea-salt, or nitre, in common water,

none of the ensuing crop will be smutty, or other- wise defective, either in kind or quality; not only supposing the grain that is sowed to be sound, and the soil to be good, but even supposing tin. to be strewed with the flour of smutty wheat, and the ground manured with bad straw.

\ I IK AT EAR, 11. s. Lat. ocuanthe. A small bird, very delicate.

What cook would lose her time in picking larks, wheatears, and other small birds ? Swift.

W UEATLEY (Charles), born in London in 1686, and educated at St. John's College, Oxford, of which he became fellow. He was chosen lec- turer of St. Mildred, London, and appointed vicar of Brent and Furneaux-

Pelham. He published, 1. A rational Illustration of the Book of Common Prayer; folio and 8vo. ; 2. Historical Vindication of the eighty-fifth canon : 3. Answer to Hoadley on the Sacrament : 4. Private devotions at the Communion : 5. Sermons at Lady Moyer's Lec- ture; 8vo. He died at Furneaux in 1742; after which his Miscellaneous Sermons were published in 3 vols. 8vo.

WHEE'DLE, v.a. Of this word I can find no etymology.— Johnson. Locke seems to think it a cant word. Goth, knedla, quedla. — Thomson. To entice by soft words ; flatter ; persuade.

His bus'ness was to pump and wheedle, And men with their own keys unriddle, To make them to themselves give answers, For which they pay the necromancers. Hudibras.

His sire

From Mars's forge sent to Minerva's schools, To learn the unlucky art of wheedling fools. Dryden.

*He that first brought the word sham, or wheedlt, in use, put together, as he thought fit, ideas he made it stand for. I***"-*

Johnny wheedled, threatened, fawned, Till Phillis all her trinkets pawned. Swift.

W 1 1 E EL, n. c., v. n., & -v Saxon hpeol ; Belg.

WHKEL'BARROW, [c. a.l wiel ; Isl. hioel; Swed.

WHEEL'ER, fhiul; Goth. huel. An

WHEEI/WRIGHT, i instrument turning on

WHEEL'V, adj. J its axis; the instrument

of spinning ; revolution ; rotation ; an instrument of horrid torture : to wheel is, to revolve on an axis; turn; fetch a compass: to put into rotatory motion : a wheelbarrow, a barrow moving on one wheel : wheeler, and wheelwright, are both names for the maker of wheels, or wheel carriages : wheely is circular ; rotatory.

Continually wheeling about, he kept them in so strait, that no man could, without great danger, go to water his horse. K

Spies

Held me in chace, that I was forced to wheel Three or four miles about. Skjktpeare. Corwlanns.

I^t go thy hold when a great wheel runs down a hill, lest it break thy neck with following it Shattp-

Let them pull all about mine ears, present me Dejth on the tcheel, or at wild horses' heels. Id.

Look not too long upon these turning wheel of vicis- situde, lest we become giddy. Bacon.*

After local name, the most have been derived from occupations, as Potter, Smith, Brasier, Wheeler, ilt> Camden.*

Carnality within raises all the combustions without : 'his is the great wheel to which the clock owes its mo- tion. Decay "/ Pif'y-

He throws his flight in many an airy wheel. lUUton.

Heaven rowled

Her motions, as the great first Mover's hand First wheeti thc:r course. Id. Paradite Lott.

lie at hand provokes

His ra^e, and plies him with redoubled strokes ; Wheels as he wheels. Drvden.

Some watches are made with four wheels. Locke.

It is a tough wood, and all heart, being good for the wheelwrights. Mortimer,

Hinds exercise the pointed steel On the hard rock, and give a wheely form To the expected grinder. Philips.

Pippins did in wbeellvrrcnrt abound. AIH/J.

His examination is like that which is made by tde rack and wheel. Additon.

WHEEL, in mechanics, is a simple machine, con- sisting of a round piece of wood, metal, or other matter, which revolves on its axis. See MECHANIC -, CIOCK, and WATCU.

WHEEL is also the name of a barbarous kind of punishment to which great

criminals are put in divers countries. In some, assassins, parricides, and robbers on the highway, are condemned to the wheel, when they are to have their bones first broken with an iron bar on a scaffold, and then to be ex- posed, and left to expire on a wheel. In Germany they break their bbnes on the wheel itself. — This cruel punishment was first used in Germany, and was rarely practised any where else, till Francis I. appointed it lo be inflicted on robbers.

WHEEL, PERSIAN. See HYDROSTATICS.

W HEELER (Sir George), a learned traveller and divine, was the son of colonel Wheeler of Charing in Kent, and was born in 1650 at Breda, where his parents, as royalists, were then in exile. He travelled through various parts of Greece and the East, in company with Dr. James Spon of Lyons; and, taking orders on his return, was in- stalled a prebend of Durham, made vicar of Ba- singstokes, and afterward rector of Houghton le Spring. He published an account of his Travels in 1682, in folio; and in 1689 his Observations on Ancient Edifices, or Churches yet remaining in the east, compared with Eusebius ; also the Protestant Monastery, or Christian (Economics. He died in

1724.

WHEEZE, v. n. Sax. hpeopon. To breathe with noise. «

The fawning dog runs mad ; the uheezing swine With coughs is choaked. Dry den's

Prepare balsamick cups, to wheezing lungs Medicinal, and short-breathed. Philip.*

WHELK, n. »•. See WELK. An inequality; protuberance.

His face is all bubuckles, and whelki, and knobs, and flames of fire. Shalupeare. llenru Y.

WHELM, v.a. Sax. aphtlpan ; Isl. u-ilma. To cover with something not to be thrown off; to bury.

Grievous mischiefs which a wicked fay Had wrought, and many whelmed in deadly pain.

Spenser. This pink is my prize, or ocean whelm them all.

Shakspeare.

Whelm some things over them, and keep them there.

Martimai.

Sˆ the sad offence deserves, Plunged in the deep for ever lei me lie. Whelmed under seas. Addi$on.

Deplore The whelming billow and the faithless oar. (Iny.

W I J K 1 .1', n. s. & v. n. Sax. puclp ; Isl. huolpiir ; Swcd. hu'alp. A cub ; a puppy ; a son, or younˆ roan, in contempt : to bring younj.

The lion's whelp shall be to himself unknown.

Shakspearr.

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WHE

The young whelp of Talbot's raging brood Did flesh his puny sword in Frenchmen's blood. Id.

A lioness hath whelped in the streets, And graves have yawned. Id. Julius C&sar.

Those unlickt bear whelps. Donne.

In their palaces,

Where luxury late reigned, sea-monsters whelped And stabled. Milton's Paradise Lost.

In a bitch ready to whelp we found four puppies.

Boyle.

WHELPS, in a ship, the seaman's term for those

brackets which are set up on the capstan close

under the bars; they give the sweep to it, and are

so contrived that the cable winding about them may

not surge so much as it might otherwise do if the

body of the capstan were quite round and smooth.

WHEN, adv. i Sax. hpaenne; Goth, whan;

WHEN'EVER, > Belg. wan; Teut. wann. At

WHENSOEVER. J the time that; at what or which

time ; used interrogatively : ' when as,' is at the time

when : whenever and whensoever is at whatsoever

time.

When was it she last walked ? — Since his majesty went into the field. Shakspeare.

I was adopted heir by his consent ; S oce when his oath is broke. Id. Henry VI.

His seed, when is not set, shall bruise my head.

Milton.

O welcome hour whenever ! Why delays His hand to execute 1 Id. Paradise Lost.

Nature would not suffer him to think otherwise, how or whensoever he is brought to reflection. Locke.

That which he delights in must be happy, But when J or where? Addison.

WHENCE, adv.) Formed from where, by WHENCE'SOEVER. $ the same analogy with hence from here. From what place ? source ? person ? cause ? from which premises ; from what place or person indifferently : ' from whence' and < of whence' are barbarisms often used : whencesoever is from what place or cause soever.

From whence he views, with his black-lidded eye, AVhatso the heaven in his wide vault contains.

Spenser. O how unlike the place from whence they fell !

Milton. Wlience and what art thou, execrable shape ? Id.

He asked his guide, What and of whence was he who pressed the hero's side ?

Dryden.

Any idea, whencesoever we have it, contains in it all the properties it has. Id.

Whence comes this unsought honour unto me ? Whence does this mighty condescension flow 1 Fent.

WHERE, adv. WHERE'ABOUT, WHEREAS', WHEREAT', WHEREBY', WHEREEV'ER, WHERE'FORE, WHEREIN', WHEREINTO', WHERE'NESS, n. s. WHEREOF', adv. WHEREON', WHERESO', WHERESOEV'ER, WHERETO', WHEREUNTO', WHEREUPON', WHEREWITH', WHEREWITHAL'. VOL. XXII.

Saxon hpcen ; Belg. waer ; Goth. huar. At which place or places ; at what place? at the place in which ; ' any where' is any place : it is also used both prono- minally, as in ' whereof,' of which ; and as a noun >in f no where' : where- about is, near where;

concerning which: whereas, when or but ; on the contrary ; at which place (obsolete) ; the thing being so that :

whereat, at which : whereby, by which : J wherever, at whatsoever

place : wherein, in which or what : whereinto, into which : whereness, ubiety ; locality : whereof, of which or of what : whereon, on which : whereso and wheresoever, in what place soever : whereto and whereunto, to which or what: whereupon, upon which : wherewith and wherewithal, with which or what.

They say, wherein have we wearied him ? Malachi.

If the salt hath lost its savour, wherewith shall it be salted ? Matthew.

This he thought would be the fittest resting place, till we might go further from his mother's fury ; whereat he was no less angry, and ashamed, than desirous to obey Zelmane. Sidney.

But even that, you must confess, you have received of her, and so are rather gratefully to thank her, than to press any further, till you bring something of your own, whereby to claim it. Id.

He shall find no where safe to hide himself. Spenser.

Which to avenge on him they dearly vowed, Wherever that on ground they mought him find. Id.

That short revenge the man may overtake, Whereso he be, and soon upon him light. Id.

As for those things wherewith superstition worketh, polluted they are. Hooker.

She bringeth forth no kind of creature whereto she is wanting in that which is needful. Id.

God doth in publick prayer respect the solemnity of places, where his name should be called on amongst his people. Id.

The greatness of all actions is measured by the wor- thiness of the subject from which they proceed, and the object whereabout they are conversant. Id.

Prevent those evils whereby the hearts of men are lost. Id.

Bid them farewell, Cordelia, though unkind ; Thou losest here, a better where to find. Shakspeare.

Shall I tell you why ?

— Ay, Sir, and wherefore ; for, they say, every why hath a wherefore. Id.

When ever yet was your appeal denied ‘ Wherein have you been galled by the king] Id.

Where ‘s the palace whereinto foul things Sometimes inti ude not ? Id.

Poor naked wretches, wheresne’er you are, That bide the pelting of this pitiless storm, How shall your houseless heads defend you From seasons such as these 1 Id.

Northumberland, thou ladder wherewithal The mounting Bolingbroke ascends my throne. Id.

Whereas wars are generally causes of poverty, the special nature of this war with Spain, if made by sea, is likely to be a lucrative war. Bactm.

In regard of the troubles wherewith this king was distressed in England, this army was not of sufficient strength to make an entire conquest of Ireland. Davies.

The townsmen mutinied, and sent to Essex ; where- upon he came thither. Clarendon.

Where were ye, nymphs, when the remorseless deep Closed o'er the head of your loved Lycidas ? Milton.

Whereat I waked, and found Before mine eyes all real, as the dream Had lively shadowed. Id'

O wherefore was my birth from heaven foretold Twice by an angel ? Id.

Heaven

Is as the book of God before thee set, Wherein to read his wond'rous works. Id,,

How this world, when and whereof created. Id.

He oft Frequented their assemblies whereso met. Id.

Whereto the" Almighty answered, not displeased.

Id,

Where-e'er thy navy spreads her canvas wings. Homage to thee, and peace to all, she brings. Waller.

Whereas seeing requires light, a free medium, and %

ight line to the objects, we can hear in the dark, im mured, and by curve lines. Holder.

The climate above thirty degrees, may pass for the Hesperides of our age, whatever or where-ever the other was. Temple.

Tis not very probable that I should succeed in such a project, whereof I have not had the least hint from any of my predecessors, the poets. Dryden.

This delight they take in doing of mischief, whereby I mean the pleasure they take to put any thing in pain that is capable of it, is no other than a foreign and in- troduced disposition. Locke.

A point hath no dimensions, but only a whereness, and is next to nothing. Grew.

Aie not those found to be the greatest zealots who are most notoriously ignorant 7 whereat true zeal should always begin with true knowledge. Sprat.

Those subterraneous waters were universal, as a disso- lution of the exterior earth could not be made any where but it would fall into waters. Burnet.

The prince could save from such a number of spoilers wlierewithal to carry on his wars abroad. Davenant.

Wherever he hath receded from the Mosaick account of the earth, he hath receded from nature and matter of fact. Woodward.

The frequency, warmth, and affection, therewith they are proposed. Uogert.

He cannot but love virtue, wherever it is. Atterbury.

Ah ! where was Eloise 1 Pope.

Whereas at first we had only three of these princi- ples, their number is already swollen to five. Baker.

There are times wherein a man ought to be cautious as well as innocent. Swift.

WHER'RY, n. s. Goth, veerie, is a light boat. A light boat used on rivers.

And in his oaken cup doth float As safe as in a wherry. Drayton.

Safe within my little wherry, All their madness makes me merry. Swift.

WHET, v. a. kn.s.ˆ Sax. hpettan ; Gothic

WHET'STONE,W. s. yhuetia; Swedish huettia.

WIIET'TER. > To sharpen by attrition ;

to edge : hence to provoke ; make angry : a whet is

the act of sharpening ; any thing that sharpens, as a

dram the appetite, &c. : a whetstone is a stone for

whetting : whetter, he who whets.

They use their affection as a whetstone both to wit and memory. Hooker.

He favoured the Christian merchants ; and the more to u-het him forwards, the bassa had cunningly insinu- ated into his acquaintance one Mulearabe. Knolles.

Fool, thou whett'it a knife to kill thyself. Shaks.

I will whet on the king. Id.

A whetstone is not an instrument to carve with, but it sharpens those that do. Shaktpeare Illustrated.

The cause why onions, salt, and pepper, in baked meats, move appetite, is by vellication of those nerves ; for motion whettet h. Bacon.

Let not thy deep bitterness beget Careless despair in me ; for that will whet My mind to scorn. Donne.

What availed her resolution chaste, Whose soberest looks were whetitones to desire?

Fairfax.

Love and enmity are notable ichettert and quickeners of the spirit of life in all animals. More.

Unsophisticated vitriol, rubbed on the whetted blade of a knife, will not impart its colour. Boyle.

Great contemporaries whet and cultivate each other.

Dryden.

An iv'ry table is a certain whet ; You would not think how heartily he'll eat. Id.

Diligence is to the understanding as the whetstone to the razor ; but the will is the hand that must apply the one to the other. South.

He assisted at four hundred bowls of punch, not to mention sips, drams, and whets. Spectator.

WHETH'ER, adv. & pron. Sax. hpoefceri. A particle expressing one part of a disjunctive ques- tion in opposition to the other ; answered by or : which

of the two ?

Whether of them twain did the will of his father ?

Matthew xxi.

As they, so have we likewise a public form, how to serve God both morning and evening, whether sermons may be had or no. Hooker.

Resolve whether you will or no. Shakspeare.

Perkin's three counsellors registered themselves sanctuary-men ; and whether upon pardon obtained, or continuance within the privilege, they were not pro- ceeded with. Baci'ti.

It has been the question of some curious wits whether in the world there are more heads or feet 1 Holyday.

Whether by health or sickness, life or death, mercy is still contriving and carrying on the spiritual good of all who love God. South.

Let them take whether they will : if they deduce all animals from single pairs, even to make the second of a oair is to write after a copy. Bentley.

The WHETSTONE, in the old system of mineralogy, was ranked as a genus of vitrescent stones, consist- ing of fragments of an indeterminate figure, sub- opaque, and granulated. There were several spe- cies, some consisting of rougher, and others of smoother, or even of altogether impalpable parti- cles, and used not only for whet-stones, but also for mill-stones, and other such purposes. It was call- ed cos by the Greeks. Another species was the cos turcica, or turkey-stone, a species of stones of the garnet kind, belonging to the siliceous class. It is of a dull white, and often of an unequal co- lor, some parts appearing more compact than others. Its specific gravity is 2-598 ; it strikes fire with steel, and effervesces with acids. Mr. Kir- wan found that 100 parts of it contained 25 of mild calcareous earth, and no iron. Cronstedt is of opinion that there are probably two sorts of stones known by this name, as that described by Wallerius neither gives fire with steel nor effervesces with acids. It is used as a whetstone ; and those of the finest grain are the best hones for the most delicate cutting tools, razors, lancets, &c. See MINERALOGY, TURKOIS, and TURQUOISE.

WHEY, n.s. } Sax. hpcej ; Belgic hui, u-ey.

WHEY'EY, adj. £ The thin or serous part of milk :

WHEY'ISH. J partaking of, or resembling whey.

I'll make you feed on curds and whey. Shahspeare.

Those medicines being opening and piercing, fortify the operation of the liver, in sending down the u-heyey part of the blood to the reins. Bacon.

He that quaffs

Such wheyish liquors, oft with cholick pangs He '11 roar. Philips.

WHICH, pron.J Sax. hpilc ; Dutch welk ;

WHICHSOEVER, f Teut. welch ; Goth, huilk. Who like ; the pronoun relative; relating to things ; the genitive is when, and it was formerly much used for who : whichsoever is, whether one or the other.

Which of you convinceth me of sin? John.

Do they not blaspheme that worthy name by the which ye are called ? James ii. 7.

The apostles term it the pledge of our heavenly in- heritance, sometimes the handsel or earnest of that which is to come. Hooker

Every one hears that, Whicji can distinguish sound. Shakspeare.

win

What is the night ? -Almost at odds with morning, which is which.

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WHI

id.

In destructions by deluge, the remnant which hap to be reserved are ignorant. Bacon.

Of man's first disobedience, and the fruit Of that forbidden tree, whose mortal taste. Milton.

Whichsoever of these he takes, and how often soever he doubles it, he finds that he is not one jot nearer the end of such addition than at first setting out. Incite.

To which their want of judging abilities, add also their want of opportunity to apply to such considera- tion as may let them into the true goodness and evil of things, which are qualities which seldom display them- selves to the first view. South.

Two fair twins, The puzzled strangers which is which enquire. Tickel.

WHICHCOT (Benjamin), D. D., born in Shrop- shire in 1609, and educated at King's College, Cambridge, of which he became fellow, and at length provost, when he raised its funds to the most flourishing state by his economy. But in spite of his merits, having written Complimentary verses on Oliver Cromwell, he was, by order of Charles II., displaced from his provostship in 1 661 . But in 1662 he was chosen minister of St. Anne's Blackfriars. In 1668 he was made by the king vicar of St. Lawrence Jury, and preached for seven years before the court of aldermen at Guildhall. He died in 1668, and his funeral sermon was preached by archbishop Tillotson. The first vo- lume of his Select Sermons was published by the earl of Shaftesbury in 1698 ; the three next by Dr. Jeffrey, and the fifth by Dr. S. Clarke.

WHIDAII, a county of Western Africa, and, till within the last half century, an independent kingdom ; the most fertile and improved of any on the African coast. Its sea-shore indeed did not extend above nine or ten leagues, and its breadth inland was not quite so great ; but being every where covered with towns and villages, and culti- vated like a garden, it contained a considerable population, and some magnificent forests. These woods indeed became so many groves by the cul- tivated fields with which they were every where intersected, and in which were raised two or even three crops of rice, millet, maize, yams, and pota- toes. The people in their manners exhibited nothing of the usual negro rudeness, but were mild, tame, and comparatively polished. Snake worship, however, one of the most degrading of superstitions, formed the leading feature of Whi- dan observance. The temple of the great snake formed the ornament of the capital, and was pro- pitiated by lavish gifts, sometimes even by human sacrifices. Every town of any consequence had a similar temple on a smaller scale. Their mild and placable character, and their habits of industry, caused them to be much sought after as slaves. The English, Dutch, and Portuguese, established factories at Griwhee, or Whidah, which formed the principal sea-port, though the residence of the sovereign was at Xavier, or Sabi. This prosperous state of Whidah was entirely subverted in 1727 by the invasion of Guadja Trudo, the fierce and warlike sovereign of Dahomey, and the body of the nation was reduced to slavery. A considerable proportion of the Whidahs, however, escaped into the neighbouring country of Popo, whither their enemies were unable to pursue them, and in this retreat they have ever since retained their name and

existence as a nation ; but all their attempts have

been vain io regain possession of their original territory.

WHIFF, «.«. } Sax. hpiS; Welsh chwyth.

WHII'FLE, v. n. >A blast; a puff of wind: to

WHIF'FLER, n. s. j move inconstantly, as with the wind : he who is so moved ; an ancient officer of state.

Pyrrhus at Priam drives, in rage strikes wide ; But with the whijfand wind of his fell sword The unnerved father falls. Skaksperrre.

Which, like a mighty whiffkr 'fore the king, Seems to prepare his way. Id.

Nothing is more familiar than for a whiffing fop, that has not one grain of the sense of a man of honour, to play the hero. L' Estrange.

Our fine young ladies retain in their service a great number of supernumerary and insignificant fellows, which they use like whifflers, and commonly call shoe- ing-horns. Spectator.

WHIG,/j.s. } Sax. hpcej. Whey; the

WHIG'GISH, adj. £ name of a celebrated English

WHIG'GISM, n. s.) political party. See the ex- tract from Burnet : the adjective and noun substan- tive correspond.

The marquis of Argyle and his party came and headed them, they being about six thousand. This was called the wiggamors' mroad ; and, ever after that, all that opposed the court came in contempt to be called whigs : and from Scotland the word was brought into England, where it is now one of our unhappy terms of disunion. Burnet.

Whoever has a true value for church and state, should avoid the extremes of whig for the sake of the former, and the extremes of tory on the account of the latter.

Swift. She '11 prove herself a tory plain,

From principles the whigs maintain ;

And, to defend the whiggish cause,

Her topicks from thfe lories draws. Id.

I could quote passages from fifty pamphlets, wholly made up of whiggism and atheism. Id.

WHIG is not whey, but the slightly acidulated serum of butter-milk ; and, this being the most in- significant part of the milk, the name was applied in contempt by the Tories, or the supporters of un- limited absolute power and indefeasible hereditary right in the monarch, to all their political opponents who sto.od up for the rights of the people, in op- position to despotism.

WHILE, n. s., adv., &-

WHILES, adv. \v. n. (

WHILST,

WHIL'ERE,

WHIL'OM.

that ; at the same time that : to while is to loiter : whtlere, a little time or while ago : whilom, for- merly ; once.

Whiles by the experiment of this ministration they glorify God, for your professed subjection unto the gospel. 2 Corinthians, ix.

If my beauty be any thing, then let it obtain this much of you, that you will remain some while in this company, to ease your own travel, and our solitariness.

Sidney.

Where now the studious lawyers have their bowers, ˆhere ichilom wont the templar knights abide, Till they decayed through pride. tspenser.

That cursed wight from whom I 'scaped whilere, A man of hell, that calls himself Despair. Id.

Whiles I was protector, Pity was all the fault that was in me. Shakspeare.

Here lies Hobbinol, our shepherd whikre. Raleigh.

We saw him feeding come, And on his necke a burthen lugging home,

2 R

Sax. hpile ; Irish 1 huila. Time ; space . of time : while, ad verb, whiles, and whilst, 1 mean, during the time

•* Derived by Skinner from ‘a thing turning round. A

Most highly huge, of sere-wood ; which the pile That fed his fire supplide all supper while. Chapman.

One while we thought him innocent, And then we accused the consul. Ben Jonson.

Can he imagine that God sends forth an irresistible strength against some sins, whilst in others he permits men a power of repelling his grace 1 Decay of Piety.

Pausing a while, thus to herself she mused. Hilton.

He who, with all heaven’s heraldry, whilere Entered the world, now bleeds to give us ease. Id.

Yet art thou not inglorious in thy fate ; For so Apollo, with unweeting hand, Whilom did slay his dearly loved mate. Id.

That which I have all this while been endeavouring to convince men to, is no other but what God himself doth particularly recommend. Tillotson.

What fate has disposed of the papers, ‘tis not worth while to tell. Locke.

All hearts shall bend, and every voice In loud applauding shouts rejoice ; While all his gracious aspect praise, And crowds grow loyal as they gaze. Addison.

Men guilty this way never have observed that the whiling time, the gathering together, and waiting a lit- tle before dinner, is the most awkwardly passed away of any. Spectator.

Use your memory ; you will sensibly experience a gradual improvement, while you take care not to over- load it. Watts.

WHIM,n.«.

WHIM’SEY,

WHIM’SICAL, adj. } freak ; odd fancy ; caprice : which whimsey also signifies : and the adjective corresponds.

At this rate a pretended freak or whimsey may be palliated. L' Estrange.

In another circumstance I am particular, or, as my neighbours call me, whimsical : as my garden invites into it all the birds, I do not suffer any one to destroy their nests. Addiion.

All the superfluous u-hims relate, That fill a female gamester's pate. Swift.

He learnt his whitns and high-flown notions too, Such as fine men adopt, and fine men rue. Harte.

WHIMTER,t>.n. } Germ, wimmeren. Rather

WHIM'PLED, adj. J from whine. To cry as a child, or without any loud noise : whimpled is marked or distorted by crying.

This whimpled, whining, purblind, wayward boy.

Shakrpeare.

The father, by his authority, should always stop this sort of crying, and silence their whimpering. Locke.

A laughing, toying, wheedling, whimpering she, Shall make him amble on a gossip's message. Rowe.

She gently whimpers like a lowing cow. Swift.

WHIN, n. $. Welsh chvyn. Furze ; gorse. With whins or with furzes thy hovel renew. Tusser.

WHINE,v.n. & n.t. Sax. anian ; Belg. vieenen; Goth, vaina. To lament in low murmurs ; moan; whimper : a noise of this kind.

They came to the wood, where the hounds were in couples staying their coming, but with a whining accent craving liberty. Sidney.

Whip him,

Till, like a boy, you see him cringe his face, And whine aloud for mercy. Shahtpeare.

The common people have a whining tone and accent in their speech, as if they did still suffer some oppres- sion. Davits.

He made a viler noise than swine In windy weather, when they whine. Hudibrar.

I was not born so base to flatter crowds, And move your pity by a whining tale. Dryden.

The favourable opinion of men comes oftentimes by a

few demure looks and affected whines, set off with some odd devotional postures and grimaces. South.

WHIN'YARD, n.s. Sax. pmnan and arie, to gain honor. — Skinner. A sword : in contempt.

He snatched his whinyard up, that fled

When he was falling off his steed. Hudibrat.

*WHIP,v. o.,v.n., &n. *.^ Sax.phopane; Belg.*

WHIP'CORD, n. s. wippen, wip. To strike

WHIP'HAND, | with any thing tough

WHIP'PER,) > and flexible ; drive by

WHIP'PINGPOST, I lashing; inwrap; sew;

WHIP'SAW, j lash with sarcasm; to

WHIP'STER. J take a thing nimbly;

to move nimbly : a whip is an instrument of lashing

or correction : whipcord, cord of which lashes are

made : whiphand, advantage over : whipper, he

who whips : whippingpost, a post to which criminals

are bound for whipping : whipsaw, a saw used by

joiners : whipster, a nimbi 3 fellow.

In Bridewel a number he stript, Lesse worthie than theese to be whipt. Tusser.

There sat infernal Pain, And fast beside him sat tumultuous Strife ;

The one in hand an iron whip did strain, The other brandished a bloody knife. Spenter.

Let's whip these stragglers o'er the seas again ; Lash hence these over-weening rags of France, These famished beggars. Shakspeare.

Since I pluckt geese, played truant, and whipt top, I knew not what it was to be beaten till lately. Id.

They would whip me with their fine wits, till I was as crest-fallen as a dried pear. Id.

In his lawless fit,

Behind the arras hearing something stir, He whipt his rapier out, and cries, a rat ! And in this brainish apprehension kills The unseen good old man. Id.

Love is merely a madness, and deserves as well a dark-house and a whip as madmen do ; and the reason why they are not so punished is, that the wbippers are in love too. Id.

I am not valiant neither But every puny whipster gets my sword. Id.

Coula not the whippingpost prevail, With all its rhet'rick, nor the jail, To keep from flaying scourge thy skin, And ancle free from iron gin? Hudibras.

How did he return this haughty brave Who whipt the winds, and made the sea his slave ?

DryjtH,

In his right hand he holds the whip, with which he is supposed to drive the horses to the sun. Id.

In Raphael's first works are many small foldings, often repeated, which look like so many whipcord. Id.*

The archangel, when Discord was restive, and would not be drawn from her beloved monastery with fair words, has the whiphand of her, and draws her out with many stripes. /

Two friends, travelling together, met a bear upon tlte way ; the one whips up a tree, and the other throws himself flat upon the ground. L'Estrange.

This requires more than setting children a task, and whipping them, without any more ado, if it be not done to our fancy. Locke.

The whipsaw is used by joiners to saw such great pieces of stuff that the

handsaw will not easily reach through. Moxon.

Its string is firmly whipt about with small gut, that it may the easier move in the edge of the rowler. Id.

Oh, chain me ! whip me! let me be the scorn Of sordid rabbles and insulting crowds ! Give me but life. Smith.

Brisk Susan whipt her linen from the rope, Whilst the first drizzling shower is born aslope. Snift.

WHIST.

613

WHIRL, v.a. & n.s.ˆl Sax. hpyjipan ; Belg. WHIRL'BAT, n. s. I wirbelen. To turn round WHIRL'IGIG, | rapidly; move hastily:

WHIRL/PIT, V-a whirlbat is any thing

WHIRL'POOI., thus moved : whirligig,

WHIRL'WIND, I a toy of this kind :

WHIR'RING, adj. j whirlpit and whirlpool, n vortex : whirlwind, a stormy wind moving cir- cularly : whirring, whirling.

In the fathomless profound Down sunk they, like a falling stone, Ky raging whirlpits overthrown. Sandys.

He, rapt with whirling wheels, inflames the skyen With fire not made to burn, but fairly for to shine.

Spenser.

My thoughts are whirled like a potter's wheel : I know not where I am, or what I do. Shakspeare.

In the very torrent and whirlwind of your passion, beget a temperance that may give it smoothness. Id.

Poor Tom ! whom the foul fiend hath led through ford and whirlpool, o'er bog and quagmire. Id.

The whirlbat's falling blow they nimbly shun, And win the race ere they begin to run. Creech.

He whirls his sword around without delay, And hews through adverse foes an ample way.

Dryden.

'Twere well your judgments but in plays did range ; But even your follies and debauches change With such a u-hirl, the poets of your age Are tired, and cannot score them on the stage. Id.

The whirlbat and the rapid race shall be Reserved for Caesar, and ordained by me. Id.

With whirlwinds from beneath she tossed the ship, And bare exposed the bosom of the deep. Id.

This calm of heaven, this mermaid's melody, Into an unseen whirlpool draws you fast, And in a moment sinks you. Id.

How the car rattles, how its kindling wheels Smoke in the whirl : the circling sand ascends, And in the noble dust the chariot's lost. Smith.

For though in dreadful whirls we hung

High on the broken wave, I know thou wert not slow to hear,

Nor impotent to save. Spectator.

He found that marbles taught him percussion, and whirligigt the axis in peritrochio.

Arbuthnot and Pope.

I have been watching what thoughts came up in the whirl of fancy that were worth communicating. Pope.

From the brake the whirring pheasant springs, And mounts exulting on triumphant wings. Id.

They have ever been taught by their senses, that the sun, with all the planets and the fixed stars, are whirled round this little globe. Watti.

A WHIRLPOOL is an eddy, vortex, or gulf, where the water is continually turning round. Those in rivers are very common, from various accidents, and are usually very trivial, and of little conse- quence. In the sea they are more rare, but more dangerous. Sibbald has related the effects of a very remarkable marine whirlpool among the Orcades, which would prove very dangerous to strangers, though it is of no consequence to the people who

are used to it. This is not fixed to any particular place, but appears in various parts of the limits of the sea among these islands. Wherever it appears, it is very furious ; and boats, &c., would inevitably be drawn in and perish with it ; but the people who navigate them are prepared for it, and always carry an empty vessel, a log of wood, or large bun- dle of straw, or some such thing, in the boat with them ; as soon as they perceive the whirlpool, they toss this within its vortex, keeping themselves out ; this substance, whatever it be, is immediately re-

ceived into the centre, and carried under water ; and, as soon as this is done, the surface of the place where the whirlpool was, becomes smooth, and they row over it with safety ; and in about an hour they see the vortex begin again in some other place, usually at about a mile's distance from the first. See MAELSTROM.

WHISK, n.s. & v. a. } German wischen, to

WHISK'ER, n.s. > wipe. A small besom

or brush ; part of a woman's dress : to sweep ; move gently or nimbly : whiskers are the small tapering points of the beard.

A sacrifice to fall of state, Whose thread of life the fatal sisters Did twist together with its whiskers. Hudibrat.

The white of an egg, though in part transparent, yet being long agitated with a whisk or spoon, loses its transparency. Boyle.

An easy means to prevent being one farthing the worse for the abatement of interest, is wearing a lawn u-hiik instead of a point de Venice. Child.

A painter added a pair of whiikers to the face.

Addison.

If you break any china with the top of the whisk on the mantle-tree, gather up the fragments. Swift.

WHISTER, v. n., v. a., & n. s. (Sax. hpifpn,

WHIS'PERER, n.s. S breath ; Belg.

wisperen ; Teut. wisper is a lisp. To speak with a low voice ; to speak with suspicion or caution : to utter or address in a low voice; prompt : a low, soft speech or mode of utterance ; he who whis- pers ; he who backbites.

All that hate me whisper together against me.

Psalms.

The court and city were full of whisperings, and ex- pectation of some sudden change. Sidney.

Give sorrow words ; the grief that does not speak Whispers the o'erfraught heart, and bids it break.

Shakspeare.

The extension is more in tones than in speech ; there- fore the inward voice or whisper cannot. give a tone.

Bacon.

Kings trust in eunuchs hath rather been as to good spials and good whisperers, than good magistrates. Id.

Soft whisperi through the assembly went. Dryden.

Strictly observe the first hints and whispers of good and evil that pass in the heart. South.

The steward whispered the young Templar, that's true to my knowledge. Taller.

They might buzz and whisper it one to another, and. tacitly withdrawing from the apostles, noise it about the city. Bentley.

It is as offensive to speak wit in a fool's company, as it would be ill manners to whisper in it : he is dis- pleased at both, because he is ignorant of what is said.

Pope.

The hollow whispering breeze, the pliant rills Purle down amid the twisted roots. Thomson.

WHIST, adj. & n. $. Called by Skinner an in- terjection commanding silence ; silent ; still ; put to silence: a game requiring silence. See below.

The wild waves whist. Shaktpeare.

The winds with wonder whist, Smoothly the waters kissed, Whispering new joys to the mild ocean. Milton.

The clergyman used to play at whuit and swobbers.

Swift.

Whist awhile

Walks his grave round, beneath a cloud of smoke Wreathed fragrant from the pipe. Thomson.

WHIST, requiring great silence, owes its name to the interjection. This game is played by four per- sons, who cut for partners ; the two highest and the two lowest are together, and the partners sit oppo-

site to each other : the person who cuts tin lowest card is to deal first, giving one at a time to eacli person, till he comes to the last card, which is turned up for the trump, and remains on the table till each person has played a card. The person on the left hand side of the dealer plays first, and whoever wins the trick is to play again, thus going on till the cards are played out. The ace, king, queen, and knave of trumps are called honors ; in case any three of these honors have been played be- tween, or by either of the two partners, they reckon for two points towards the game ; and, if the four honors have been played between, or by either of the two partners, they reckon for four points towards the game, the game consisting of ten points. The honors are reckoned after the tricks; all above six tricks reckoning also towards the game. Such is the mode of playing whist, which requires so much attention and judgment, that few even of those who practise constantly ever acquire sufficient know- ledge of the game to play well. The well-known volume of Hoyle is almost entirely occupied with it ; but, as we cannot pretend to copy the whole of his rules, it could serve no purpose to introduce a part. In a book of reference like this, however, it is proper to insert the LAWS.

Of Dealing. — 1 . If a card is turned up in deal- ing, it is in the option of the adverse party to call a new deal ; but, if either of them have been the cause of turning up such card, in that case the dealer has his option.

2. If a card is faced in the deal, there must be a new deal, unless it is the last card.

3. Every person ought to see that he has thirteen cards dealt; therefore, if any one should happen to have only twelve, and does not find it out till seve- ral tricks are played, and that the rest of the play- ers have their right number, the deal stands good ; and also the person who plays with twelve cards is to be punished for each revoke, in case he has made any ; but, if

any of the rest of the players should happen to have fourteen cards, in that case the deal is lost.

4. The dealer ought to leave in view upon the table his trump card, till it is his turn to play ; and, after he has mixed it with his other cards, nobody is entitled to demand what card is turned up, but may ask what is trumps. This consequence attends such a law, that the dealer cannot name a wrong card, which otherwise he might have done.

5. None of the players ought to take up or look at their cards, while any person is dealing ; and, if the dealer should happen to miss deal, in that case he shall deal again, unless it arises from his part- ner's fault ; and, if a card is turned up in dealing, no new deal shall be called, unless the partner has been the cause of it.

6. If the dealer, instead of turning up the trump, puts the trump card upon the rest of his cards, with the face downward, he is to lose his deal.

Ot' i>lai/i>ig out of turn. — 7. If any person plays out of his turn, the card so played may be called at any time in that deal, provided it does not cause a revoke ; or either of the adversaries may require of the person who ought to have led, to play the suit ihe said adversary may choose.

8. A and U are partners against C and D; A plays the ten of a suit, the adversary C plays the knave of the same suit, I! plays a small card of the same suit, but, before I) plays, his partner C leads

another card, the penalty shall be in the option 01 A or B to oblige D to win the trick if he can.

9. A and B are partners against C and D ; A leads a club, his partner B plays before the adver- sary C ; in this case D has a right to play before his partner C, because B played out of his turn.

1 0. If the ace, or any other card of a suit, is led and it should so happen that the last player plays out of his turn, whether his partner has any of the suit led or not, provided you do not make him re- voke, he is neither entitled to trump it, nor to win the trick.

Of Revoking. — 11. If a revoke happens to be made, the adversaries may add 3 to their scores, or take 3 tricks from the revoking party, or take down 3 from their score; and the revoking party provided they are up, notwithstanding the penalty, must remain at 9: the revoke takes place of any other score of the game.

12. If any person revokes, and before the cards are turned discovers it, the

adverse party may call the highest or lowest card of the suit led, or have their option to call the card then played, at any time when it does not cause a revoke.

13. No revoke to be claimed till the trick is turn- ed and quitted, or the party who revoked, or his partner, have played again.

14. If any person claims a revoke, the adverse party are not to mix their cards, upon forfeiture of the revoke.

15. No revoke can be claimed after the cards are cut for a new deal.

Of catling honors. — 16. If any person calls at any point of the game, except 8, either of the ad- verse parties may call a new deal ; and they are at liberty to consult each other whether they will have a new deal.

17. After the trump card is turned up, no person must remind his partner to call, on penalty of losing a point.

18. If the trump card is turned up, no honors in the preceding deal can be set up, unless they were before claimed.

19. If any person calls at the point of 8, and his partner answers, and both the opposite parties have thrown down their cards, and it appears that the other side had not two by honors ; in this case they may consult with one another about it, and are at liberty to stand the deal or not.

20. And if any person answers when he has not an honor, the adverse party may consult one an- other about it, and are at liberty to stand the deal or not.

21. If any person calls at 8, after he has played, it shall be in the option of the adversaries to call a new deal.

Of separating and shewing the cards. — 22. If any person separates a card from the rest, the adverse party may call it, provided he names it, and proves the separation ; but, in case he calls a wrong card, he or his partner are liable for once to have the highest or lowest card called in any suit led during the deal.

23. If any person throws his cards on the table with their faces upwards, upon supposition that he has lost the game, the adversaries have it in their power to call any of the cards when they think proper, provided they do not make the party re- voke, and he is not to take up his cards again.

24 If any person is sure of winning every trick, he

may shew his cards upon the table ; but he is then liable to have all his cards called.

Of omitting to play to a trick . 25. A and B are part- ners against C and 13 ; A leads a club, C plays the ace of clubs, B plays a club, and D, partner to C, takes up the trick without playing any card; A, and the rest of the players, play on, till it appears D has one card more than the rest : penalty to be in the option of the adversaries to call a new deal.

Respecting who played any particular card. — 26. Each person in playing ought to lay his card be- fore him ; after he has done so, if either of the ad- verse parties mix their cards with his, his partner is entitled to demand each person to lay his card be- fore him, but not to enquire who played any par- ticular card.

It is a question belonging to this game, what the probability is that a player has a given number of trumps dealt him ; particularly it has been often taken as an equal wager, that the dealer has at least four trumps. M. de Moivre has computed the following tables, showing for the dealer as well as the other gamesters what the probability is of taking precisely in one deal any assigned num- ber of trumps. By a continual addition of the numbers, or of such part of them as is necessary, it is easily found what the probability is of taking at least that number.

Chances of the Dealer

H

Chances of any other

to have besides the Card

c

3

Gamester to have pre-

turned up.

•T3

•

cisely.

Table I.

Table II.

3910797436

0

8122425444

20112672528

I.

46929569232

41959196136

II.

110619698904

46621329040

III.

139863987120

30454255260

IV.

104897990340

12181702104

V.

48726808416

*301466365**

VI.

14211985788

455999544

VII.

2583997416

40714245

VIII.

284999715

2010580

IX.

18095220

48906

X.

603174

468

XI.

8892

1

XII.

39

Sum = 158753389900

4762601 69700 = sum

is the common de-

is the common de-

nominator ; being

nominator ; being

the combinations of

the combinations of

12 cards in 51.

13 in 51.

These tables enable us to solve several useful questions ; as, 1. If it is asked, what is the proba- bility that the dealer has precisely III trumps, beides the trump card? The answer by Table I.

4662

15875′

and the probability of his having some

olher number of trumps is

11213 15875′

But if the

question had been, what is the probability that some other gamester, the eldest hand for instance, lias precisely IV tnimps? the answer, table II., is

104898 476260 ‘

2. To find the chance of the dealer’s not having 1’ewc.r than IV trumps ; add his chances to take 0,

I, II, which are 39108, 201127, 419592; and their sum 659827, taken from the denominator 1587534, and the remainder made its numerator, the probability of the dealer having IV or more

927707 329 7

trumps will be = — , a l.ttle above-.

— ,

The wager, therefore, that the dealer has not IV trumps, is so far from equal, that whoever lays it

throws away above — of his stake.

D

But, if the wager is, that the dealer has not V trumps, then 466213 (the chances of his having III besides the trump card) is to be added to the chances for 0, I, II ; which will make the chance

317

of him who lays this wager to be nearly —ˆ- ; and

4oo

that of his adversary – — .

40O

And hence, if wagers are laid that the dealer has not IV trumps, and has not V trumps, alter- nately; the advantage of him who lays in this manner will be nearly 11 \ per cent, of his stakes.

3. To find the odds of laying that the eldest hand ha» at least III, and at least IV trumps alter- nately ; the numerator of the one expectation is (by Table II.) 31 501 119, and of the other 17514720, to the denominator 47626017 ; whence the ad-

vantage of the bet will be — , or three per cent.

514

nearly.

Again, if it is laid that the trumps in the deal- er's hand shall be either 1, II, III, or IV; the disadvantage of this bet will be only 15s. 4d. or about J per cent.

And thus the odds of any proposed bet of this kind may be computed ; and, from the numbers in the tables and their combinations, different bets may be found which shall approach to the ratio of equality ; or, if they differ from it, other bets may be assigned, which, repeated a certain number of times, shall balance that difference.

4. And if the bet includes any other condition besides the number of trumps, such as the quality of one or more of them ; then proper regard is to be had to that restriction. Let the wager be that the eldest has IV trumps dealt him ; and that'two of them shall be the ace and king. The probabi- lity of his having IV trumps precisely is, by

Table II., — — : and the different fours in twelve

476200

, 12 11 10

cards are, — x – X — X

-. But, because 2

out of the 12 trumps are specified, all the combi- nations of 4 in 12 that are favorable to the wager are reduced to the different twos that are found in

10 9

the remaining ten cards, which are, — X — • And

«3 2

this number is to the former as 1 to 1 1 : the pro- bability therefore is reduced by this restriction to

— , of what else it had been : that is, it is reduced

*from nearly -to about — . o o **

See De Moivre's Doc-

trine of Chances, p. 172, &c., ed. 3d.

ˆ IIISTLE, v. n.t v. a., & n. s. > Saxon hpip- WHIS'TLER, n.s. 5 an; Swedish

hwissla; Lat. fatulo. To form a kind of musical

sound by a particular modulation of the breath ;

to sound shrill : to call by a whistle : the sound or

WH1

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Will

call made ; the organ or instrument of whistling : one who whistles.

The masters and pilots were so astonished that they knew not how to direct ; and, if they knew, they could scarcely, when they directed, hear their own whistle.

Sidney.

I've watched and travelled hard : Some time I shall sleep out, the rest I'll whistle.

Shakspeare.

Madam, here comes my lord.

— I have been worth the whittle. Id.

Let one whittle at the one end of a trunk, and hold your ear at the other, and the sound shall strike so sharp as you can scarce endure it. Bacon.

While the plowman near at hand Whistles o'er the furrowed land. Milton.

The knight, pursuing this epistle, Believed he'd brought her to his whistle. Hndibrat.

Let's drink the other cup to wet our whistle, and so sing away all sad thoughts. Walton.*

He whittled as he went, for want of thought.

Dry den.

My sire in caves constrains the wind, Can with a breath their clam'rous rage appease ; They fear his whistle, and forsake the seas. Id.

Let him whistle them backwards and forwards till he is weary. South.

The prize was a guinea to be conferred upon the ablest whistler, who could whistle clearest, and go through his tune without laughing. Additon.

When winged deaths in whittling arrows fly, Wilt thou, though wounded, yet undaunted stay, Perform thy part, and share the dangerous day >

Prior.

When simple pride for flattery makes demands, May dunce by dunce be whittled off my hands ! Pope.

WHISTON (William), was born at Norton, near Twycrosse, in

Leicestershire, where his father was rector, in 1667. He was admitted of Clarehall, Cambridge, where he afterwards commenced tutor; but his ill health forced him to decline it. Having entered into orders, he, in 1694, became chaplain to Dr. More, bishop of Norwich; and in this station he published a work, entitled A New Theory of the Earth, 8cc., in which he undertook to prove the Mo- saic doctrine of the earth perfectly agreeable to rea- son and philosophy. In the beginning of the eighteenth century he was made Sir Isaac Newton's deputy, and afterwards his successor, in the Luca- sian professorship of mathematics ; when he resigned a living he had in Suffolk, and went to reside at Cambridge. About this time he published several scientific;;! works, explanatory of the Newtonian philosophy. About 1710 he adopted Arian prin- ciples. He was therefore deprived of his profes- sorship, and banished the university. He never- theless pursued his scheme, by publishing the next year his Primitive Christianity Revived, 4 vols, 8vo, for which the convocation fell upon him very vehemently. On his expulsion from Cambridge, he settled in I^ondon ; where he continued to write, and to propagate his Primitive Christianity, with as much ardor as if he had been in the most flourishing circumstances. In 1721 a subscription was made for the support of his family, which amounted to £470. For though he drew profits from reading astronomical and philosophical lec- tures, and also from his publications, which were very numerous, yet these of themselves would have been very insufficient ; and he was often in great flistress. He continued long a member of the rlmrch of England, but at last he went over to the Baptists. He wrote Memoirs of his own Life and

Writings, which contain some curious particulars He was remarkable for speaking the plainest truths on every occasion, and to persons of every degree, and once reproved queen Caroline for her indecent behaviour in the house of God. lie died in 1762.

WHIT, n. s. Sax. phit, a thing; apiht, any thing; Swed. w

We love, and are no whit regarded. Sidney.

Her sacred book with blood ywrit, That none could read except she did him teach,

She unto him disclosed every whit. Spenser.

It does not me a whit displease, That the rich all honours seize. Cowley.

It is every whit as honourable to assist a good minis- ter, as to oppose a bad one. Addison.

WHITAKER (William), D. D., born at Holme in Lancashire, and educated at Trinity College, Cambridge, where he graduated, and became regius

professor of divinity, and master of St John's Col- lege. He wrote some able works against Popery. He died in 1595.

WHITAKER (Rev. John), B. D., was born at Manchester in the year 1735. What school he attended appears not be known. He w«mt early to Oxford, and in due time became a fellow of (,'or-

Eus Christi College. In 1771 he published in 4to. is History of Manchester ; a work eminently dis- tinguished for acuteness of research, vigor of imagination, independent sentiment, and correct and various information. As it was the first, per- haps also it was the most perfect of all his works, in matter, arrangement, and style. In 1782 he published, in an 8vo. volume, Genuine History of the Britons asserted, which may be considered as a sequel to the history of Manchester. In both works the history of our island is elucidated by the hand of a master. In the latter he particularly refutes Macpherson's Introduction to the History of Great Britain and Ireland, which is disfigured by mistakes and misrepresentations. In 1773 Mr. Whitaker was morning preacher at Berkeley chapel, from which he was removed in the following year. During his residence in the metropolis, he became acquainted with most of the celebrated writers of the time, particularly with Johnson and Gibbon. By the latter the manuscript of the first volume of the Decline and Fall of the Roman Empire was submitted to Mr. Whitaker's perusal. The manu- script did not contain the chapter which gave such just offence to the Christian world The historian it seems did not dare to expose it to his censure. The fact is curious and important. Mr. Whilaker was about this time offered p. living by a Unitarian patron, with the view of influencing his principles. He was without preferment, but he spurned the temptation, and pitied the seducer. In 1778 he succeeded in right of his fellowship to the rectory of Ruan Langholme, in Cornwall, one of the most valuable livings in the gift of his college ; and thither he went immediately to reside. In 1783 he published Sermons upon Death, Judgment, Heaven, and Hell. He published also, in a large 8vo., the Origin of Arianism, a controversial work of great erudition and powerful argument. The Real Origin of Government (a treatise expanded from a sermon preached at the primary visitation of bishop Butler), and the Introduction to Flindell's Bible, are his only other works in the line of his profes- sion, of which at least we have heard. In 1787 he published, in 3 vols. 8vo., Mary Queen of Scots ; an

searcSies with peculiar industry, of which h« print- ea, 1. The Course of Hannibal over the Alps. 2. Ancient Cathedral of Cornwall ; and 3. Supplement to Mr. Polewhele's Antiquities of Cornwall. His London and his Oxford remain in manuscript ; but whether they are fit for publication we know not. Besides these great works, the public are indebted to Mr. Whitaker for many valuable arti- cles of periodical criticism in the English Review, jn the British Critic, and in the Antijacobin Re- view. His review of Gibbon, which, though severe, is just and able, and even candid, added greatly to the reputation of the English Review. Mr. Whitaker was a man evidently of strong passions, and of a warm imagination ; but, even in those anonymous articles of periodical criticism, we find him generally candid and good natured ; if not sparing of censure, nor lavish of applause, we find him generally just, often generous, and always benevolent. The nature and the force of his principles particularly appear in those articles in which he combats the enemies of our civil and ecclesiastical constitution. In addition to all his other literary qualifications, Mr. Whitaker was a ;>oet, and contributed some valuable pieces to the Cornwall and Devon poets. As a minister of the gospel, Mr. Whitaker was zealous in principle, and sincere in the practice of all that he professed. He was irritable ; and this failing, added to great ig- norance of the world, was sometimes destructive of his social comfort ; but he was in fact good- humored, hospitable, and benevolent; and his loss will long be lamented by his family, his parishioners, and the learned world. He died in 1808 at the age of seventy-three ; and his death was evi- dently hastened by a journey to London, and by his vast exertions there in procuring information for his work on the Antiquities of that vast metro- polis. His decline at length was gradual, and his death (of which he was perfectly aware) such as became a Christian, at peace with himself, with his fellow-creatures, and, through the merits of the Redeemer in whom he trusted, with his God.

WHITBREAD (Samuel), for many years a leading member of the house of commons, was the son of an eminent brewer of the same name. He was born in London in 1758, was educated at Eton, whence he removed to St. John's College, Cambridge, after which he made the tour of Eu- rope under the care of Mr. (afterwards archdeacon) Coxe. Soon after his return he married the daugh- ter of Sir Charles (afterwards earl) Grey, and in 1790 was returned to the house of commons for the borough of Steyning. For the greater part of his career, however, he represented the town of Bedford, in which borough and county he pos- sessed a large landed property. For many years he was esteemed one of the most shrewd and vigor- ous opponents of the Pitt administration, and of the war growing out of the French revolution. He was also the conductor of the impeachment against Jord Melville, which, although terminating in ac- quittal, threw a shade over the close of that states- man's life, and proved a source of extreme

concern to the administration. The close of his life was most melancholy ; an over-anxious attention to business in general, but more especially to the in- tricate concerns of Drury Lane Theatre, produced a temporary aberration of intellect, during which he out his throat, July 6th, 1815.

WHITBY (Daniel), D. D., a learned English

divine, born in 1638, and bred at Oxford ; where, in 1664, he was elected perpetual fellow of his college. He afterwards became chaplain to Dr. Seth Ward, bishop of Salisbury; who collated him in 1668 to the prebend of Yatesbury in that church, and soon after to that of Husboru and Burbach. In 1672 he was admitted chaunter of the said church, and rector of St. Edmund's, Salisbury. He was made a prebendary of Taunton-Regis in 1696, and died in 1726. He was ever strangely ignorant of worldly affairs. His writings are nu- merous and well known, particularly his Commen- tary on the New Testament.

V ui i BY, a. sea-port, borough-town, and parisM, in the liberties of Whitby-Strand, North Riding of Yorkshire, twelve miles N. N. West of Scarbo- rough, and 242i north by west of London. It stands on the banks of the Eske, which forms its harbour, and divides the town into two nearly equal parts, connected by a draw-bridge, which will admit ships of 500 tons to pass. The houses are strongly built of rough stone, and some of them are spacious and elegant. The town-hall is a heavy pile of the Tuscan order. The c ustom- house is a commodious building, well adapted to its purpose. The principal public charities and institutions are the dispensary, and the schools on the British plan for the education of youth of both sexes. This is a town of great antiquity, and ap- pears to have had a convent founded in the seventh century, by Oswy, king of Northumberland, after- wards burnt by the Danes, but rebuilt with great splendor, and continued till the general dissolution. Whi by had also forraerly a splendid abbey, of which the venerable ruins are now very inconsi- derable. It now sends one member to parliament ;. and carries on a trade in coals and alum works. In 1787 a strong new built quay, supporting a pile of buildings, eighty feet above the level of the sea, was destroyed, and the venerable old church belonging to its ancient convent, standing on a cliff about thirty yards distant, nearly shared the same fate. In the town are a chapel of ease, and many meeting houses for dissenters. The entrance to the harbour is now secured by two handsome and substantial stone piers. Ship building is here car- ried on to a very considerable extent. On the east side of the harbour the cliffs are nearly 18O feet perpendicular above the level of the sea. The shore consists of a smooth flat rock, resembling slate, called by the inhabitants Scarr. Many cu- riously shaped stones, petrifactions, bones, and shells, are found in the strata. Market on Satur- day.*

WHITE, adj., n. s., & v.

WHITE'LEAD, n. s.

WHITE'LY, adj.

*WUITE'MEAT, n. *.*

WHIT'EK, v. a. & v.n.

WHITE'NESS, n.s.

WHITE'WASH,

WHITE'WINE,

WHIT'ISH, adj.

WHIT'ISHNESS, n.s.

WHI TE'LEATHER.

any thing, as of the eye, an egg, &c. : to white or whiten is to make white : and whiten, as a verb neuter, to grow white: whitelead, a white calx o. lead : whitely and whitish, approaching in color to white : whitemeat, food made of milk : whitewash is a wash of this hue for tht skin or for walls :

Sax. hpit ; Belg. u-it ; Swedish huil. Having the color cr

appearance that arises from the mix- ture of all colors ; snowy ;pale; pure;

gray : whiteness, any thing white ; white spot or color; J the white part of

WH1

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VVH1

whitcwine and whiteleather, wine and leather of a light -jr white appearance: whiteness corresponds with the adjective.

Like unto whited sepulchres, which appear beauti- ful outward, but are within full of dead men's bones.

Matthew.

His raiment became shining, exceeding white as snow ; so as no fuller on

earth can white them. Mark.

Whole bridle and saddle, whitlether and nal, With collars and harneis. Tutser.

This doth lead me to her hand, Of ray first love the fatal baud. Where whiteness doth for ever sit ; Nature herself enamelled it. Sidney.

The Irish, banished into the mountains, lived only upon whitemeats. Spenser.

A u-hitelii wanton, with a velvet brow, With two pitch balls stuck in her face for eyes. Shak.

My hands are of your color, but I shame To wear a heart so white. Id.

Our general himself Sanctifies himself with 's hands, And turns up the white o' the eye to his discourse.

Shakspeare.

*He bored the nerves through, from the heel to the**

ankle, and then knit Both to his chariot with a thong of whitleather.

Chapman.

Wert thou that sweet smiling youth 1 Or that crown'd matron sage, u-'/ tiee-robed Truth ?

Milton.

The smoke of sulphur will not black a paper, and is commonly used by women to whiten tiffanies. Browne.

The same aqua-fortis that will quickly change the redness of red lead into a darker color, will, being put upon crude lead, produce a whitish substance, as with copper it did a bluish. Boyle.

What principle manages the white and yolk of an egg into such a variety of textures, as is requisite to fashion a chick ? Id.

As little as a whitethorn and pear-tree seem of kin, a cion of the latter will sometimes prosper well, being grafted upon a stock of the former. /'/.

Flax the soil and climate are proper for whitening, by the frequency of brooks, and also of winds. Temple.

If a mark be set up for an anchor at a great distance, let him aim as exactly as he can, the least wind shall Uke his arrow, and divert it from the white. Dryden.

White as thy fame, and as thy honour clear ;. And let new joys attend on thy new-added year. Id.

The homey or pellucid coat of the eye doth not lie in the same superfices with the white of the eye, but riseth up, as a hillock, above its convexity. Ray.

The bark expects its freight ; The loosened canvas trembles with the wind, And the sea whitent with auspicious gales. Smith.

The clergy, during Cromwell's usurpation, were very much taken up in reforming the female world. I have heard a whole sermon against a u'hiteu-ath. Addison.

Striking her cliff, the storm confirms her power ; The waves but whiten her triumphant shore. Prior.

White-lead is made by taking sheet-lead, and having cut it into long and narrow slips, they make it up into rolls, but so that a small distance may remain between every spiral revolution, &c. Quincy.

W hen the paper was held nearer to any colour than to the rest, it appeared of that colour to which it ap- proached nearest ; but when it was equally, or almost equally, distant from all the colours, so that it might be equally illuminated by them all, it appeared white.

Newton.

The seeds and roots are to be cut, beaten, and in- fused in white-wine. Wiseman.

Whether the darkened room to muse invite, Or whitened wall provoke the skewer to writ<' ; In durance, exile, Bedlam, or the Mint, Like Lee or Uudgell, I will rhime and print. Pope.

Unhappy Dryden ! in all Charles's uay», Roscomuion only boasts unspotted lays; And in our own, excuse some courtly stains, No whiter page than Addison's remains. it.*

Now, governor, 1 see that I must blush Quite through this veil of night a whitelii shame, To think! could design to make those free, Who were by nature slaves. Southern.

Four rooms above, below, this mansion graced, With tehite-wath decked, and river-sand o'er-cast.

Harte.

WHITE (Francis), was educated at Cambridge. He became almoner to king James I., then dean and bishop of Carlisle, and in 1631 bishop ot Norwich. He died in 1637. He was famous for his writings against Popery, and for his conference with Fisher the Jesuit, in presence of king James in 1624.

WHITE (Jeremiah), a nonconformist divine, was fellow of Trinity College, Cambridge, and chaplain to Oliver Cromwell. He lived privately long after the Restoration, and wrote a work on the Restora- tion of all Things, wherein he supports the doctrine of universal redemption. He died in 1737.

WHITE (Robert), an eminent English engraver, who acquired his art under Loggan. He engraved a vast number of portraits and frontispieces for books, and was very correct m his likenesses. He died in 1704.

WHITE (Thomas), D. D., an eminent divine, born at Bristol early in the sixteenth century. He studied at Magdalen Hall, Oxford, in 1566. He became rector of St. Gregory and St. Dunstan ; prebendary of St. Paul's ; treasurer of Salisbury church, and canon of Windsor. He published Sermons, but is most respectable for his charities ; as he founded an alms-house at Bristol, a lecture- ship at Oxford, and made a liberal bequest to Sion for the London clergy. He died in 1623.

WHITE (Thomas), or Thomas Albus, hi? Latin name, a philosopher and divine of the Roman church, bora in Essex. He was intimate with Hobbes, though their systems were opposite. His works are remarkable for trifling subtleties. He died in 1676.

WHITE (Thomas), a learned English divine, who became lecturer of St. Andrew's Holborn. He published a pious work on The Art of Divine Meditation, 8vo.

WHITE (Gilbert), a writer on natural history and antiquities, was born at Selborne in 1720; studied at Oriel College, Oxford, where he obtained a fellowship in 1744 ; and took the degree of M. A. in 1746. In 1752 he filled the office of senior proctor of the university. He afterwards fixed his residence in his native village, devoting his leisure to literature. The fruit of his researches appeared in his Natural History and Antiquities of Selborne, 1789, 4to., of which a German translation was pub- lished at Berlin in 1792. He died in 1793. A Naturalist's Calendar, extracted from his papers, was published posthumously ; and this was re- printed in a collection of his works on natural his- tory, 1802, 2 vols. 8vo.

WHITE (Henry Kirke), a highly gifted youthful poet, was born at Nottingham, March 21st, 1785, :md was the son of a butcher. The delicacy of his constitution occasioned him to be designed for the sedentary employment of a stocking weaver ; bus from his infancy he manifested an extraordinary love of learning. He was at length removed from the stocking loom to an attorney's office • and ue-

TOted his spare time to the study of Latin and Greek, until increase of knowledge inspired him with the desire to obtain more favorable opportunities for improving his talents ; and a university education for the church became the great object of his ambition. Through the generosity of Mr. Wilberforce, and the Rev. Charles Simeon, he was admitted a student of St. John's College, Cam- bridge, where he applied to his studies with such unremitting labor that his health became deranged, and he died October 19th, 1806, deeply lamented. He published in 1803 a poem called Clifton Grove, and after his death his Remains, consisting of Poems, Letters, and Fragments, were edited by Dr. Southey in 2 vols. 8vo.

WHITE BEAR LAKE, a lake of North America, out of which proceed some of the head waters of the Mississippi. Carver supposes it to be the most northern of any which supply that great river. But subsequent travellers have discovered the source of the Mississippi to be in several lakes farther to the north. Long. 95° 30′ W., lat. 46° 50′ N.

WHITE EARTH RIVER, a river which empties itself into the Missouri from the north. Before it reaches the low-grounds near the Missouri this river is a fine bold stream, sixty yards wide, deep, and navigable ; but it is so much choked up at the entrance by the mud of the Missouri, that its mouth is no more than twenty yards wide. Its course, as far as captains Lewis and Clarke could discern from the neighbouring hills, is nearly due north through a beautiful and fertile valley, though without a tree or bush. It lias steep banks, about ten or twelve feet high, and the water is much clearer than that of the Missouri. The salts also, which have been mentioned as common on the Missouri, are here so abundant, that in many places the ground appears perfectly white. It is naviga- ble almost to its source, supposed nearly to extend to 50° of N. lat.

WHITE MOUNTAINS, or White Hills, a range of mountains in New Hampshire, North America; eighteen or twenty miles long, and eight or ten broad. The base of the mountains is about twenty- five miles south-east of Lancaster; and Mount Washington, the highest summit, is seventy miles in

a right line north of Concord, and eighty-two north by west of Portsmouth. Long. 71° 20′ W., lat. 44° 15′ N. In the western pass of these mountains there is a remarkable gap, called the Notch. These mountains have been ascended by different routs. The course which is usually con- sidered as attended with the least difficulties, is that which commences at the plain of Conway, and follows the course of Ellis River, a northern branch of the Saco, having its origin high in the mountains. The view from the summit is rendered wonderfully grand and picturesque, by the magni- tude of the elevation, the extent and variety of the surrounding scenery, and above all by the huge and desolate pile of rocks, extending to a great distance in every direction. These mountains are covered with snow nine or ten months in the year, and derive their name from their white appearance. They are seen many miles off at sea, and a person when on their summit has a distinct view of the Atlantic Ocean, the nearest part of which is sixty- five miles distant in a direct line. The limit of forest trees is at the height of 4428 feet. The sides are composed of micaceous schistos, and the summit of gneiss.

The elevation of Mount Washington was for- merly estimated at 10,000 or 11,000 feet; but late computations, founded on barometrical observa- tion, have much reduced it; one making it 7108 another 6634, another 6234, another 6225, and another 6103.

The following table exhibits the elevation of the several peaks according to the measurement of captain A. Partridge.

Feet above Feet above

the sea. the base.

Mount Washington . 6234 . . . 4464 Second peak . . . 5328 . . . 3554 Third peak .... 5058 . . . 3288 Fourth peak . . . 4866 . . . 3096 Fifth peak .... 4711 ... 2941 Sixth peak .... 4356 . . . 2586 Base of the mountains 1770 WHITE SEA, called by the Russians Bieloe More, a great gulf of the Northern Ocean, which may be said to penetrate into the Russian territory, to a depth of 300 or 400 miles. Its shape is long and narrow ; its greatest extent from west to east. The White Sea extends from long. 32° to 46° E., and from lat. 63° 45′ to 68° 25′ N.

WHITEFIELD (George), A. B., the celebrated field-preacher, and the founder of the sect of Cal- vinistic methodists, was born in 1714, at Glouces- ter. At about twelve years of age he was put to a grammar-school, but his mother keeping a tavern, he, about fifteen, served her as a waiter. Next year he got admitted servitor in Pembroke College, Oxford. Here he distinguished himself by the austerities of his devotion. At the age of

twenty- one, the fame of his piety recommended him so effectually to Dr. Benson, then bishop at Glouces- ter, that he ordained him. Immediately after his admission into the ministry, Mr. Whitefield applied himself to the most extraordinary, indefatigable duties of his character, preaching daily in prisons, fields, and open streets, wherever he thought there would be a likelihood of making proselytes. Having at length made himself universally known in England, he embarked for America, where the tenets of Methodism began to spread very fast under his friends the Wesleys ; and first determined upon the institution of the orphan house at Georgia, which he afterwards effected. After a long course of peregrination his fortune increased as his fame extended among his followers, and he erected two very extensive buildings for public worship, under the name of tabernacles ; one in Tottenham Court Road and the other near Moorfields. Here, with the help of some assistants, he continued for several years attended by very crowded congregations, and quitting the kingdom only occasionally. Mr. Whitefield, by being chaplain to the countess dowager of Huntingdon, was also connected with two other religious meetings, one at Bath, and the other at Tunbridge, chiefly erected under that lady's patronage. By a lively, fertile, and penetrating genius, by the most unwearied zeal, and by a forcible and persuasive delivery, he never failed of the desired effect upon his ever crowded and admiring audiences. America, however, which always engaged much of his attention, was destined to close his eyes ; and he died at Newberry, about forty miles from Boston in New England in 1770.

WI1ITEHAVEN, a sea-port and borough town in the parish of St. Bees, Allerdale ward, above Durwent, Cumberland, lying on a bay of the Irish

Sea, five miles north by west from Egremont, and 307 north-west of London. The town is recorded to have contained only six houses in 1566: it owes its present thriving condition to the improvement in its harbour, during the reign of queen Anne. The piers or moles have since been greatly en- larged, and further additions and improvements are in contemplation. Here are three churches, St. James's, the Trinity, and Hold Church; several meeting-houses for various sectaries, a public dispensary, charity schools, and a theatre, &c. Besides the extensive coal mines in the vicinity, some of which are 130 fathoms deep, and in many places a considerable way under the sea, here are copperas-work, breweries, yards for ship-building, sail-cloth manufactories, and three large roperies. A steam packet plies during the summer between this port, Liverpool, and Dumfries. On both the old and new quay are erected light houses, and the entrance of the harbour is

defended by a fort and half moon battery. This port has a custom house, with regular officers attached to it, and the coal trade is reckoned the most eminent in England, next to Newcastle. In March 1793 this town suf- fered by a slorm, when the tide rose six feet above its usual height. It sends one member to parliament

WHITEHEAD (Paul), a poet and satyrist, bora at Westminster in 1710, where he received a liberal education. The first of his pieces which attracted attention were, The State Dunces, 1733, and 2. Manners, a satire, 1738 : 3. Honor, a satire, 1747; 4. The Gymnasiad, a mock heroic poem, 1748; a well timed satire on the brutal custom of boxing. His friend and patron, lord le Despencer, procured him a place of £800 a year, which he held for life. He died in 1774.

WHITEHEAD (William), a poet and dramatic writer, the son of a baker, born at Cambridge in 1715. He was admitted in 1735 a sizar, and in 1 742 a fellow of Clare Hall College. He attended the sons of the earls of Harcourt and Jersey on their travels. On his return he published the Roman Father, a tragedy, 1750; Creusa, another, in 1754. Tatal Constancy. The School for Lovers, a comedy. A Trip to Scotland, a farce, and other pieces. In 1755 he was appointed poet laureat ; and died in 178.5, aged seventy.

\HITEHURST (John), F.R. S., was the son of a watchmaker, born at Congleton in Cheshire, in 1713. In 1734 he went to Dublin, on purpose to see a curious clock he had heard of. He took lodgings in the house, where the clock was closely secured from all inspection. He, however, made way to it, inspected its machinery, and retired undetected. He returned to England, and settled at Derby, •where he made the clock of the town hall, and the clock and chimes of the beautiful tower of All Saint's Church. He was appointed stamper of the money weights at the mint ; on which he came to London, where his house soon became the resort of all men of science. In 1778 he published his Enquiry into the Original State and Formation of the Earth. In 1779 he was elected F. R. S. In 1786 he republished his Enquiry, with improve- ments, in 1 vol. 4to. He also published An At- tempt towards obtaining invariable measures of Length, Capacity, and Weight, from the mensura- tion of time, in 8vo. ; besides several papers in the Philosophical Transactions. He died in London in 1788.

\ HITELOCKE (Sir James), LL.B., » learned

lawyer, born in London in 1570, and educated at Merchant Tailor's School, and St. John's College, Oxford, where he graduated in 1594. He entered in the Middle Temple, and in 1620 was chosen M. P. for Woodstock. He was made chief justice of Chester, and afterwards of the

king's bench ; and was knighted. His works consist of Lectures in the Middle Temple, and Speeches in Parlia- ment. He died in 1632, aged sixty-two.

WHITELOCKE (Sir Bulstrode), son of Sir James, was born in 1605; educated at London and Ox- ford, whence he went to the middle temple. In the long parliament he was M. P. for Marlow, and was appointed chairman of the committee for pro- secuting the earl of Strafford, against whom he was very zealous. He was a member of the assem- bly of divines at Westminster, and in 1647 was a commissioner of the great seal. In 1653 he was sent ambassador from the Commonwealth to Swe- den ; and on his return was made a commissioner of the treasury. In 1656 he was chosen speaker of the house of commons; and in 1653 a membei of Cromwell's house of lords. In 1659 he was made president of the council of state, and keeper of the great seal. He died at Chilton, Wilts, in 1676. He wrote 1. Monarchy the best, most an- cient, and legal Form of Government, 8vo. 2. Memorials of English Affairs, fol., 1682. 3. Speeches, &c.

WHITGIFT (John), D. D., an eminent prelate, was born at Great Grimsby, in Lincolnshire, in 1530; educated at Queen's College and Pembroke Hall, Cambridge. In 1560 he took orders, and became chaplain to bishop Cox of Ely, who gave him a living. In 1563 he was appointed lady Margaret's professor of divinity, and restored order in the university. In 1567 he was made master of Trinity College; in 1573 dean of Lincoln ; in 1576 bishop of Worcester ; and in 1 583 archbishop of Canterbury. He was a great favorite with queen Elizabeth, and founded an hospital at Croydon. He died at Lambeth in 1604. He wrote several valuable tracts in defence of the discipline, con- stitution, and liturgy of the church of England against Cartwright, whom he also befriended in a manner not common among controversialists.

WHITHER, adv. I Sax. hpy&eji- To what

WHITHERSOEV'ER. J place? interrogatively, or absolutely ; to which place ; to what degree ? tc whatsoever place.

Whither when as they came, they fell at words, Whether of them should be the lord of lords. Spente

Sister, well met ; whither away so fast ? Sltaksfjeare.

Whither at length wilt thou abuse our patience ? Still shall thy fury mock us ? lie.n Jonson

For whatever end faith is designed, and whithersoev the nature and intention of the grace does drive us, thither we must go, and to that end we*

must direct all our actions. Tuylnr.

That lord advanced to Winchester, u-hither sir John Berkley brought him two regiments more of foot.

Clarendon.

I strayed I knew not whither. Miitoi..

Ah ! whither am I hurried? ah! forgive, Ye shades, and let your sister's issue live. Dryden.

WHITING, n. t. Belg. witting. A small sea- fish.

Some fish are gutted, split, and kept in pickle, as whiting and mackerel. Carew.

Some fishes, as whitings, can be almost entirely dis- solved into water. Arbutlmot.

W 1 1 IT L(m , n. J. Sax hpit, and loup, a wolf.

—Skinner. Sax. peit, and low, a flame. — Lye. A swelling between the cuticle and cutis, called the mild whitlow ; or between the periosteum and the bone, called the malignant whitlow.

Paropychia is a small swelling about the nails and ends of the fingers, by the vulgar people generally called wkitjtaw. Wiseman.

WHITSUN FARTHINGS, otherwise called smoke farthings, or quadrantes Pentecostales, a composi- tion for offerings which were anciently made in Whitsun-week by every man in England, who oc- cupied a house with a chimney, to the cathedral church of the diocese in which he lived.

WHITSUNDAY, asolemn festival of thechurch, observed on the fiftieth day after Easter, in memo- ry of the descent of the Holy Ghost upon the apostles in the visible appearance of fiery cloven tongues, and of those miraculous powers which were then conferred upon them. It is called Whitsunday or White Sunday, because, this being one of the stated times for baptism in the ancient church, those who were baptised put on white garments, as types of that spiritual purity they received in baptism. As the

descent of the Holy Ghost upon the apostles happened upon the day which the Jews called Pentecost, this festival re- tained the name of Pentecost among the Christians. See PENTECOST.

WHITSUNTIDE, n. s. White and Sunday ; because the converts newly baptised appeared from Easter to Whitsuntide in white. — Skinner. The feast of Pentecost.

Strephon, with leafy twigs of laurel tree, A garland made on temples for to wear ;

For he then chosen was the dignity Of village lord that Whitsuntide to bear. Sidney,

And let us do it with no shew of fear ; Nor with no more than if we heard that England Were busied with a Whitson morrice dance. Shaksp.

This they employ in brewing and baking against Whitsuntide. Carew.

WHITTINGTON (Sir Richard), a rich citizen cf London, who flourished in the reigns of Richard II., Henry IV., and Henry V., and was knighted. He was three times elected lord mayor ; the last time in 1419. Being very successful in foreign trade, he amassed a fortune. He built Newgate, part of St. Bartholomew's Hospital, and erected the library in Grey Friars, now called Christ's Hospi- tal. He also built part of Guildhall, with the cha- pel and depository for the city records.

WHITTINGTOX (Robert), a learned teacher, born at Lichfield, and educated at Oxford. He pub- lished a Latin Grammar in 4to., in 1500; and several other tracts in Latin, on Philology, &c. He died in 1530.

WHITTLE, n.s.&v. a. Sax. peytel. A knife • to edge; sharpen.

He wore a Sheffield whittle in his hose. Betterton.

When they are come to that once, and are thoroughly whittled, then shall you have them cast their wanton eyes upon men's wives. Hakeicill.

' WHIT WORTH (Charles), earl, was descend- ed of an ancient family in Staffordshire, one of the members of which had been ennobled for his diplomatic services in 1720. The sub- ject of this article was born in 1754 at Leo- burne-grange, Kent, the seat of his father Sir Charles Whitworth, and was educated at Tun- bridge grammar-school. He early obtained a commission in the guards ; but, the example of his ancestor appearing to point out diplomacy as t>

sure road to distinction, he quitted the army, and, after going rapidly through several subordinate situations, was appointed in 1786 minister pleni- potentiary to the court of Poland. Recalled in the autumn of 1788, Mr. Whitworth proceeded in the same capacity to St. Petersburgh, where in 1793 he received the red riband of the bath. On his return to England, in 1800, Sir Charles was created baron Whitworth of the kingdom of Ire- land, and soon after again despatched on an embassy to the court of Denmark. An adjustment which proved but short lived took place through his exer- tions in August, and the ambassador returned home. In the following April he married the duchess dowager of Dorset. After the treaty of Amiens, lord Whitworth, having been previously created a privy counsellor, was accredited as ple- nipotentiary to Paris, and is admitted to have con- ducted himself with equal spirit, firmness, and moderation, till his mission terminated abruptly in the renewal of hostilities. He quitted the French capital May 13th, 1803. Lord Whitworth now retired to Knowle in Kent, the family seat of the Sackvillcs, into the temporary possession of which he had come in right of his wife, and there ex- erted himself in raising, at his own expense, a troop of yeoman cavalry. In the spring of 1813 he was made one of the lords of the bedchamber, and the year following took his seat in the house as an English peer by the title of viscount Whitworth of Adbaston. In August of 1814 he succeeded the duke of Richmond as viceroy of Ireland, which high dignity he enjoyed till 1817, when, the usual period of office being expired, he returned to Eng- land, having been in the interval advanced to an earldom. Lord Whitworth, who united much private worth to unquestioned talent, died at Knowle, after an illness of three days' duration, May 13th, 1825.

WHIZ, v. n. From the sound. To make a loud humming noise.

The exhalations, whizzing in the air, Give so much light that I may read by them. Shaksp.

Turn him about ; I know him, he'll but u-Ai:, and straight go out.

Dryden.

WHO, pronoun, ~\ Genitive whose ; other WHOM, / cases whom. Sax. hpa; Belg.

WHOMSOEVER, \wie. A pronoun relative, WHO'SO, I applied to persons : it is

WHO'SOEVER. J often used interrogatively : whoso and whosoever, is any one soever.

Who is this that darkeneth counsel by words without knowledge ? Jcb.

In the grave who shall give thee thanks ? Psalms.

Whose soever sins ye remit, they are remitted ; and whose soever sins ye retain, they are retained. John.

Whoever doth to temperance apply His stedfast life, and all his actions frame,

Trust me shall find no greater enemy, Than stubborn perturbation to the same. Spenser.

Were the graced person of our Banquo present, Whom I may rather challenge for unkindness, Than pity for mischance. Shakspeare.

Thy name affrights me, in whose sound is death. Id.

Whoso is out of hope to attain to another's virtue will seek to come at even hand, by depressing another's fortune. Bacon.

We have no perfect description of it, nor any know- ledge how, or by whom, it is inhabited. " Abboi.

Who first seduced him to that dire revolt ? The' infernal serpent. Milton

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He inclosed

Knowledge of good and evil in this tree, That n-A»si)eats thereof forthwith attains \isdom. Id.

\ e are still as much at a loss who civil power be- longs to. Locke.

meter hath Christ for his friend, shall be sure of counsel ; and whosoever is his own friend, will be sure to obey it. South.

Those darts whose points make gods adore His might, and deprecate his power. Prior.

WHOLE, adj. & n. s. ~\ Sax. paly; Belgic

WHOLE'S ALE, n. s. &adj. I heel; Swedish hel ;

WHOLE'SOME, adj.) Gothic all, oil. All ;

WHOLE'SOMELY, adv. [total; containing all ;

WHOLE'SOMENESS, n. s. I complete; uninjured;

WHOLLY, adv. J sound ; healthy; re-

stored to health : as a noun substantive, the totality ; the system : the adverb wholly corresponding : wholesale is sale in the mass ; the whole mass : as an adjective, dealing in masses or large quantities : wholesome is sound ; healthy ; contributing to health ; useful: the adverb and noun substantive corres- ponding.

When they had done circumcising all the people, they abode in the camp till they were whole. Joshua.

Anguish is come upon me, because my life is yet ic/i"/i' in me. 2 Samuel.

Fear God, and keep his commandments, for this is the whole of roan. Ecclesiastes.

The thrust was so strong, that he could not so wholly beat it away, but that it met with his thigh, through which it ran. Sidney.

I cannot make you a wholesome answer : my wit's diseased. Shukspenre.

All the whole army stood agazed at him. Id.

Metals are wholly subterrany. Bacon.

This I my glory account, My exaltation, and my u-hole delight. Milton.

Night not now, as ere man fell, Wholeiome, and cool, and mild ; but with black air Accompanied, with damps and dreadful gloom. Id.

We made a standard of the healthfulness of the air, from the proportion of acute and epidemical diseases, and of the u-holesomenets of the food from that of the chronical. Grainit.

Would'st thou be soon destroyed, and perish u-hole, Trust Maurus with thy life, and Milbourne with thy soul. Dry den.

By turns they quit their ground, by turns advance ; Victors and vanquished in the various field, Nor wholly overcome, nor wholly yield. Id.

At 1'onson they shewed us a great fountain of water, that is in great esteem

for its wholesomenut ; weighing two ounces in a pound less than the same measure of the lake water. Addison.

These are wholesale chapmen to Satan, that do not truck and barter one crime for another, but take the whole herd. Government of the Tintgut.

She held it whvlesomer by much To rest a little on the couch. Prior.

So the doctrine contained be but wholesome and edi- fying, a want of exactness in speaking may be over- looked. Atterbury.

Begin with sense, of every art the soul, Parts answering parts shall slide into a u-hole. Pope.

There is a metaphysical whole, when the essence of a thing is said to consist of two parts, the genus and the difference, i. e. the general and the special nature, which, being joined together, make up a definition.

Watts.

The' Almighty power, Who feeds the faithful at his chosen hour, Consults not taste, but viholesomeneu of food.. Nor means to please their sense, but do them good.

WHOO'BUB, n. s. Hubbub. See HUBBUB

Had not the old man come in with a whoobub against his daughter, and scared my choughs from the chaff, I had not left a purse in the whole army. . Shahpeare.

WHOOP, n. s., v.n., & v. a. See HOOP. A shout of pursuit : to shout with malignity : insult with shouts.

Treason and murder ever kept together, As two yoke devils sworn ;o cither's purpose : Working so grossly in a natural cause, That admiration did not uhoop at them Shakspearc.

Let them breathe awhile, and then Cry whoop, and set them on again. Hudibra-.

While he trusts me, 'twere so base a part To fawn, and yet betray ; I should be hissed And whooped in hell for that ingratitude. Dryier..

WHORE, n. s., v. n., & v. a. ~] Sax. hop ; Belg.

WHORE'DOM, n. s. \hoer; Dan. /;or, ;

WIIORE'MASTER, I Goth, har ; all

WHORE'MOKGER, [from hire. A

WHOKE'NOX, j hired woman; a

WHOK'ISH, adj. J woman who con-

verses unlawfully with men; a strumpet: to have intercourse with prostitutes: corrupt with regard to chastity : whoredom is the state or sin of whores and their paramours : whoremaster and whore- monger, one who keeps or converses with prosti- tutes : whoreson, a bastaid : \vhorish, unchaste.

By means of a whorish woman a man is brought to a piece of bread. 1'i-oi-erbs.

What is a ichoremaster, fool ? — A fool in good cloaths, and something like thee. Shakspeare.

II7i«»reson, mad compound of majesty, welcome. Id.

To put out the word irhore, thou dost me wo Throughout my book ; troth, put out woman too.

Ben Jonson.

Some let go whoredom as an indifferent matter, which yet strive for an holy-day as for their life. Hall.

Art thou fully persuaded that no whoremonger nor adulterer shall have any inheritance in the kingdom of God ? and dost thou continue to practice these vices ?

Tillotson.

'Tis a noble general's prudent part, To cherish valour, and reward desert : Let him be daubed with lace, live high, and whore ; Sometimes be lousy, but l>e never poor. Drydeii.

If he were jealous, he might clip his wife's wings ; but what would this avail, when there were flocks of whoremaster perpetually hovering over his house ?*

Addisim.

Have I whored your wife? Congreve.

Frog was a sly u/tureson, the reverse of John.

Arbuthnat.

*WHURT, n. *. Dan. hiort, here. A whortle- berry ; bilberry.*

For fruits, both wild, as whurts, strawberries, pears, and plums, though the meaner sort come short, the gentlemen step not far behind those of other parts.

Car no.

WHY, adv.) Sax. hpi, porihpi. For what

WHY'NOT. \ or which reason? interrogatively or relatively : \vhynot Johnson calls ' a cant word for violent or peremptory procedure.'

In every sin, men must not consider the unlawful- ness thereof only, but the reason u-h

You have not been a-bed then? Why, no ; the day had broke before we parted.

SJuikspearr.

If her chill heart I cannot move, inn/. I'll enjoy the very love. Cowley.

1 was dispatched for their defence and guard, And listen why, for I will tell you now. Milton

('apoched your rabbins of the synod, Arid snapped their canons with a whynot, Hudibra.

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Turn the discourse, I have a reason why I would not have you speak so tenderly. Dryden.

VVe examine the why, the what, and the how of things. L'Estrange.

WHYMEA ROAD, a road on the south-west coast of the island of Attowai. Captain Vancouver says this bay is much confined in respect to safe anchorage ; for, although the Discovery's cables had not been injured by a

foul bottom, yet the Chatham, in March 1792, when anchored in thirty fathoms water, at only a convenient distance to the north-west of the Discovery, on a bottom of soft mud, had both her cables much fretted and damaged by the rocks at the bottom.

WHYTT (Robert), M. D., F. R. S., &c., an eminent Scottish physician of the last century, educated at Edinburgh, where he was born in 1714. After studying physic, at St. Andrew's, he went to France for the completion of his education, and graduated in 1736 at Rheims, On his return to Scotland he commenced practice, and rose to he professor of medicine in the university of Edin- burgh, president of the College of Physicians, and first physician to the king in Scotland. Dr. Whytt was the author of some able professional tracts, which he collected and published in one quarto volume. His death took place in the spring of 1766.

WICK, ». s. Sax. peoce : Belg. wiecke. The burning part of a torch or candle.

But true it is, that when the oil is spent The light goes out, and wick is tbixrwn away. Spenser.

There lives within the very flame of love A kind of wick or snuff that will abate it. Shakspeare.

Little atoms of oil or melted wax continually ascend apace up the \eick of a burning candle. D'gty-

WICK'ED, adj. ˆ Dr. Johnson says the

WICK'EDLY, adv. £ etymology is very obscure,

WICK'EDNESS, n. s. j and refers to Sax. picca, an enchanter ; paeccan, to oppress ; pinian, to curse; pice's, crooked, &c. These Skinner rejects for Lat. vitiutus. Mr. Thomson thinks it is a corruption of Sax. unjob, un and god, and cites the Dan. vgud, bad. Given to vice; flagitious; morally bad; baneful ; accursed : the derivatives corresponding.

The dwelling-place of the wicked shall come to nought. Job.

The wicked weed which there the fox did lay, From underneath his head he took away. Spenser.

It is not good that children should know any Kicked' net$; old folks have discretion, and know the world.

Shakspeare.

And as the better spirit when she doth bear A scorn of death, doth shew she cannot die ;

So when the tricked soul death's face doth fear. Even then she proves her own eternity. Daviet.

I would now send him where they all should see, Clear as the light, his heart shine ; where no man Could be so wickedly or fondly stupid, But should cry out, he saw, touched, felt wickedness, And grasped it. Ben Jonson.

He of their wicked ways shall them admonish.

Milton.

That thou mayest the better bring about Thy wishes, thou art wickedly devout. Dryden.

But, since thy veins paternal virtue fires, Go and succeed ! the rivals aims despise ; For never, never wicked man was wise. Pope.

WICK'ER, adj. Dan. wigre, a twig ; Swed. vticka. Made of small sticks."

Each one a little wicker basket had, Made of fine twigs entrailed curiously, In which they gathered flowers. Sventer.

Then quick did dress

His halfe milke up for cheese, and in a presse Of wicker prest it. Chapman.

A foolish painter drew January sitting in a wicker chair, with four nightcaps on, by the fire ; and without doors green trees, as if it had been in the midst of July.

Peacham.

WICK'ET, n. s. Fr. guicket ; Welsh u-icked; Belg. wicket. A small gate.

\ hen none yielded, her unruly page With his rude claws the wicket open rent, And let her in. Spenser.

These u-ickets of the soul are placed on high, Because all sounds do lightly mount aloft. Davits.

The chaffering with dissenters, and dodging about this or the other ceremony, is like opening a few vickets, by which no more than one can get in at a time.

Swift.

WICKHAM, a village of Hampshire, remarkable for the elegant seats in its vicinity and the beauty of the surrounding scenery. Here was born the celebrated prelate William Wayneflete? bishop of Winchester, and -here the learned Dr. Wharton closed the evening of his life.

WICKLIFF (John), was born about 1324, in the parish of W7ycliff, near Richmond, in York- shire. He was educated at Oxford, first in Queen's and afterwards in Merton College, of which he was a fellow. Having acquired the reputation of a man of great learning and abilities, in 1361 he was chosen master of Baliol Hall, and in 1365 consti- tuted warden of Canterbury College by the founder archbishop Simon de Islip; but was, in 1367, ejected by the regulars, together with three secular fellows. He thought their proceedings arbitrary, and therefore appealed to the pope; but, instead of obtaining redress, in 1370 the ejectment was confirmed. This disappointment doubtless con- firmed his enmity to the see of Rome; for he had long before written against the pope's exactions and corruptions of religion. However his credit in the university continued ; for, having taken the degree of D. D., he read public lectures with great applause; in which he frequently exposed the im- positions of the mendicant friars. About this time he published a defence of his sovereign Edward III. against the pope, who had insisted on the ho- mage to which his predecessor king John had agreed. This defence was the cause of WicklifTs introduction at court, and of his being sent one of the ambassadors in 1374 to Bruges, where they met the pope's nuncios, to settle several ecclesias- tical matters relative to the pope's authority. In the mean time Wickliff was presented by the king to the rectory of Lutterworth in Leicestershire, and in 1375 he obtained a prebend in the church of Westbury in Gloucestershire. Wickliff continued hitherto, without molestation, to oppose the papal authority ; but in 1 377 a bull was sent over to the archbishop of Canterbury, and to Courtney, bishop of London, ordering them to secure this arch-heri- tic and lay him in irons; the pope also wrote to the king, requesting him to favor the bishops in the prosecution; he also sent a bull to Oxforˆ commanding the university to give him up. Be- fore these bulls reached England Edward III. wa» dead, and Wickliff, protected by John duke ot Lancaster, uncle to Richard II., favored by the quean mother, and supported by the citizens of London, eluded the persecution of pope Gregoiy IX., who died in 1378.- In 1379 this intrepid re- former presented to parliament a severe paper

against the tyranny of Rome, wrote against the papal supremacy and infallibility, and published a book on the Truth of the Scriptures, intended to prepare the way for an English translation of them, m which he made considerable progress. In 1381 he published Sixteen Conclusions, in the first of which he exposed the grand article of transubstan- tiation. These conclusions being condemned, by the chancellor of Oxford, Wickliff appealed to the king and parliament; but, being deserte'd by the duke of Lancaster he was obliged to make a con- fession at Oxford ; and by an order from the king was expelled the university. He now retired to his living of Lutterworth, where he finished his translation of the Bible. This version, of which there are several MS. copies in the libraries of the universities, British museum, &c., is a very literal translation of the Latin Vulgate. In 1383 he was suddenly struck with the palsy, a repetition of which put an end to his life in December, 1384. He was buried in his own church, where his bones were suffered to rest in peace till 1428, when, by an order from the pope, they were taken up and burnt. Besides a number of works that have been printed he left a prodigious number of MSS. ; an accurate list of which may be seen in bishop Tan- ner's Bib. Brit. Hib. Some of them are in the Bodleian Library, others in the British Mu- seum, &c.

WICK LOW, a county of Ireland, in the pro- vince of Leinster. Its boundaries are, on the north Dublin ; on the west Carlow, Kildare, and part of Dublin county ; on the south the county of Wex- ford; and on the east the Irish Sea. Its greatest length is about forty English miles, and greatest breadth twenty ; and the superficial contents amount to 311,600 Irish plantation acres. The territorial division of Wicklow consists of the half barony of Rathdown, together with the following baronies : — Arklow, Ballynacor, Newcastle, Shililah, Talbots- town Lower and Talbotstown Upper; and the ec- clesiastical division comprises forty-eight entire parishes with parts of eight others. About one- tenth of the population receive gratuitous education in this county. The surface of this county is wholly encumbered with mountains, many of them lofty, barren, and unprofitable, but many also capable of easy reclamation by drainage only. The range ad- jacent to Dublin called the Kippune Group would afford excellent pasturage; but the great central district is not so happily formed for agricultural purposes. Mountainous countries generally abound in picturesque scenery, but Wicklow is particu- larly celebrated for the grandeur and beauty of its glens, lakes, and vales ; of these the most conspi- cuous and attractive are the lakes and valleys of Glendaloch. This vale, noble, extensive, and pic- turesque, possesses very interesting remains of seven ancient churches, founded by St. Kevin, who is much venerated here; besides a perfect round tower of early and unknown date, with se- veral other curious remnants of antiquity, the occa- sion of many a romantic and many an agreeable though fabulous 'tale. The Dargle and

Devil's Glen are also scenes of considerable natural beauty and grandeur, though of a very different kind ; and the vale of Arklow has attracted the attention of the most elegant of all the Irish bards. The sin- gular beauty of the various glens of this county has occasioned the appropriation of most of its avail- able surface to the accommodation of resident no-

bility and gentry, as well as the present gratifying and happy state of improvement to which every small tract has beer, brought The lake scenery is peculiarly interesting. Mr. Latouche's demesne of Luggelaw is generally preferred by tourists as the most delightful scene of this class, but some others are little inferior. There are twelve pretty lakes scattered amongst the mountain glens, some of which are of considerable areas. The mountains in this county range from 1000 to 3000 feet in height ; Lugnaquilla, the loftiest, being 3070 feet above the level of the ocean. Amongst many beautiful resi- dences in Wicklow, the noble mansions of Kilrud- dery (lord Meath's), Powerscount (visited by king George IV. in 1821), Rusborough (the seat of earl Miltown), Charleville (the residence of lord Rath- down), and the remarkably beautiful and chaste edifice, of modern erection, in the abbey style, called Shelton Abbey (the seat of lord Wicklow), seem to deserve notice both from their elegance and their magnitude.

The mountain districts, which are entirely of granite formation, contain lead ore in abundance, which is now raised skilfully at the Seven Churches and at Glenmalure, and also copper ore, which has been raised, to the enrichment of many proprietors formerly, at Conebane and Ballymustagh. Allu- vial gold was found some years ago in a stream originating in Croghan Kinshela Mountain, but it did not repay the expense of collecting. Garnets are gathered in various places, being found im- bedded in the granite ; and on the sea-shore are found pebbles susceptible of a high polish, known to the lapidary by the name of Wicklow pebbles. There is little or no manufacture carried on here; flannel was formerly the staple, for which a ready and good market existed in the town of Rathdrum. The chief towns are Wicklow (the assize town), Rathdrum, Bray, Enniskerry, Arklow, Newiown, Monntkenedy, Carnew, Blessington, Donard, Hol- lywood, and Baltinglass. The chief rivers are the Ovoca, formed by the Avonmore and Avonbeg, the Leitrim, the Vartrey, the Bray, the King's River, and the Slaney and Liffey, which take their rise here. The sea-coast is dangerous of approach, and requires the establishment of an asylum at Bray, at Graystones, or at Wicklow, at any of which the formation of a small harbour or pier is practicable. Wicklow returns two members to the imperial parliament, and gives title of earl to the ancient family of Howard.

WICKLOW, a town in the county of the same name, in the kingdom of Ireland. It stands on the sea-coast at the mouth of the river Leitrim, which was once defended by a fortified rock called the Black Castle, enclosed in

the year 1375. The shallowness of the river permits only a scanty trade, but a good harbour might be constructed here at a small expense. The promontory of Wicklow Head, formidable to the mariner, is indi- cated at night by two light-houses erected thereon. In this town the assizes are held, besides annual races and four fairs. There is a barrack also for a company of foot, a county jail and court-house, a handsome church and glebe-house, and a Roman Catholic chapel, but no manufacture or important traffic ; the ale of this town was once held in high estimation. The O'Tools of Imaly founded a mo- nastery here for Franciscan friars, part of the walls of which are still remaining. Distancefrom Dublin twenty-eight English miles. Lat. 52° 7', long. 6° 30 .

WIDE, adj. & adv. ~\ Sax. pioe ; Belg. wijd ;

WIDE'LY, adv. I Goth, wid. Broad; ex-

W I'UEN, v. «. & v. n. > tended far each way; re-

WIDE'NESS, n. s. I mote ; wandering : at a dis-

WIUTH. Stance; with great extent

or breadth : widely and wideness correspond : to widen is, to make or grow wide; to extend: width is, wideness ; breadth.

They found fat pasture, and the land was wide and quiet. 1 Chronicles.

A little vide

There was a holy chapel edified, Wherein the hermit wont to say His holy things each morn and even tide. Spenser.

So now the gates are ope ; now prove good seconds ; "1'is for the followers fortune widens them, Not for the flyers. Slmkspeare.

Of all these bounds enriched With plenteous rivers, and wide skirted meads, We make thee lady. Id.

Many of the fathers were far wide from the under- standing of this place. Raleigh.

Consider the absurdities of that distinction betwixt the act and the obliquity ; and the contrary being so wide from the truth of scripture and the attributes of God, and so noxious to good life, &LC. Hammond.

With huge two-handed sway Brandished aloft, the horrid edge came down, Wide wasting. Hilton.

The rugged hair began to fall away ; The sweetness of her eye did only stay, Though not so large ; her crooked horns decrease , The uideness of her jaws and nostrils cease. Dryden.

Let him exercise the freedom of his reason, and his mind will be strengthened ; and the light which the re- mote parts of truth will give to one another will so as- sist his judgment that he will seldom be widely out.

Locke.

These accidents, when they first happen, seem but small and contemptible , but by degrees they branch out and widen themselves into a numerous train of mis- chievous consequences. South.

Oft wide of nature must he act a part, Make love in tropes, in bombast break his heart. Tickle.

Yet wide was spread their fame in ages past, And poets once had promised they should last. Pupe.

WlD'GEON,n. s. Fr. vingeon. A waterfowl, not unlike a small wild duck.

Amongst the first sort we reckon creysers, curlews, And widgeons. Carew.

WID'OW,n.s.&v.a.-\ Saxon pi1 >pa; Belg. (i

WID'OWER, n.s.

weduwe ; Welsh weddw ;

WJU'OWHOOD, ˆLat. vidua. A woman

WID'OWHUNTER. 3 whose husband is dead : to deprive of a husband ; endow with widows' rights ; deprive of any thing valuable : a widower is a man who lias lost his wife : widowhood, the state ot" a widow or widower: widowhunter, a hunter of widows for their fortunes.

The barren they more miserable make, And from the widow all her comfort take. Sandys.

The king, sealing up all thoughts of love under the image of her memory, remained a widwer many years after. Sidney.

Nf ween my right with strength adown to tread, Through weakness of my widowhood or woe, For truth is strong. Spenttr.

And will she yet debase her eyes on me, Tnat cropt the golden prime of this sweet prince. And made her widow to a woeful bed? Shalupeare.

In this city he

Hath widowed and unchilded many a one, Which to this hour bewail the injury. Id.

For his possessions.

Although by confiscation they are ours, VOL. XXII.

We do instate and widow you withal,

To buy you a better husband. Shakspeare.

She employed her last widowhood to works no lei bountiful than charitable. Carew.*

Cherish thy hastened widowhotid with the gold Of matrimonial treason: so farewel. Milton.

The widowed isle in mourning Dries up her tears. Dryden.

Who has the paternal power whilst the widow queen is with child ? Locke.

The widowhunters about town often afford them great diversion. Addison.

WIDOWS' SCHEME, a scheme of raising a perpe- tual fund for the support of the widows and chil- dren of deceased ministers of the church of Scot- land, planned and brought to perfection by Dr. Alexander Webster. From an accurate list of the ministers of the church and members of the uni- versities in Scotland, compared with the ratio of births, marriages, and deaths, he fixed on a series of rates to be paid annually by these persons, the amount of which would supply a specific annuity to the widows and children of those who should become contributors. This scheme he began by a correspondence with all the clergy ; and receiving the sanction of the general assembly in 1742, and that of the British parliament in 1748, from which period it began to be acted upon, the scheme was completed and legally enacted by parliament in 1770. And his calculations at that early period were so accurate, and founded on such unerring principles, that the

widows' fund, instead of falling short, has increased far beyond the original esti- mate. This excellent scheme has been since fol- lowed and imitated by most other incorporate bodies in Edinburgh, Glasgow, and other cities of Scotland.

WIELD, v. a. Sax. pealoan, to manage in the hand. To use with full command.

His looks are full of peaceful majesty, His head by nature framed to wear a crown, His hand to wield a scepter, and himself Likely in time to bless a regal throne. Shaftspeare. 'Mongst forest, hills, and floods, was ne'er such hea— e

and shove. Since Albion wielded arms against the son of Jove.

Dratiton..

The least of whom could wield These elements, and arm him with the force Of all their regions. Milton,

He worthiest, after him, his sword to wield, Or wear his armour, or sustain his shield. Dryden.

WIELICZKA, a town of Austrian Poland, in Galicia, circle of Bochnia, the seat of a salt and a mine office, and remarkable for its large and pro- ductive salt mines. They are divided into three parts, and extend not only under the whole town, but to a considerable distance on each side, viz. 700 yards from north to south, and 2000 from east to west. They have ten entrances, and in one of these is a winding staircase of 470 steps. On en- tering the subterranean regions the stranger is struck with the magnitude and beauty of the vaulted passages ; he sees chapels, with altars, cut out of the saline rock, with crucifixes or images, and lamps continually burning before them. Seven miles from Cracow.

WIENERWALD (Forest of Vienna), a large forest of Lower Austria, extending from the Kah- lenberg southward beyond Kaumberg. It sepa- rates and gives name to the two circles of th« Upper and Lower Wienerwald, otherwise called*

the quarters above and below the forest of Vienna. The latter contains

1730 square miles, and 403,000 inhabitants, including Vienna. The circle above the Wienerwald contains 2000 square miles, and about 200,000 inhabitants. Its chief town is St. Pollen.

WI'ERY, adj. From wire. Made of wire: better written wiry.

Off with that wiery coronet, and shew The hairy diadem which on your head doth grow.

Donne.

1'olymnia shall be drawn with her hair hanging loose about 'her shoulders, resembling icitry gold. Peacham.

WIFE, n. s. Plural wives. Sax. pip; Belg- wijf; Goth. vif. A woman that has a husband ; a woman in low life.

There 's no bottom, none,

In my voluptuousness ; your wives, your daughters, Your matrons, and your maids, could not fill up The cistern of my lust. Shaktptare.

Strawberry wive lay two or three great strawberries at the mouth of their pot, and all the rest are little ones.*

Bacon.

The wife, where danger or dishonour lurks, Safest and seemliest by her husband stays. Hilton.

The wife her husband murders, he the u-;VV. Dryd.

WIG, n. ». Contracted from periwig. False hair worn on the head.

Triumphing tones and desponding whigs Forget their feuds, and join to save their wigs. Swift.

WIGAN, a borough, market-town, and parish, in West Derby hundred, Lancashire, situate near the small river Douglas, twelve miles north-east of Prescott, and 196 N. N. W. of London. Various branches of coarse linen manufacture, and large brass and pewter works, employ much of its population. Of late this town has increased in popula- tion, trade, and buildings; several new streets have been erected, containing many handsome houses, and it is lighted with gas. The church is a stately edifice, the tower of which contains eight bells. It has also a neat chapel of ease ; and in this, as in most of the manufacturing towns, there are several chapels for various classes of Dissenters, and two Roman Catholic places of worship. The

town- hall was erected in 1720, at the joint expense of the earl of Barrymore and sir Roger Bradshaw. Here is a free-school, a blue-coat school, and a dispensary. In a field near the Scroles Bridge a sulphureous spring has lately been discovered, said to resemble much the Harrowgate Spa ; near it a neat building has been erected for the convenience of those who either drink the water, or use it for hot or cold bathing. At the end of the town is a monument to the memory of sir Thomas Tyldsley, a general officer who served king Charles at the battle of Edge Hill, and was killed on this spot in 1642. Wigan is incorporated under a mayor, re- corder, twelve aldermen, two bailiffs, and inferior officers, and returns two members to parliament chosen by the free burgesses; the number of voters being about 200, and the returning officer the mayor. Market on Friday.

WIGHT, n.s. & ad;.) Sax. pihr. A person ; WIGHT'LY, adv. J a being: used in irony or

contempt : as an adjective, nimble ; swift : the ad- verb corresponding.

For day that was is icigluly past. And now at last the night doth ha.-t. Spemtr.

He was so wimble and so wight, From bough to bough he leaped light, And oft the pumies latched. Id.

This meaner iright, of trust and credit bare, Not so respected, could not look t' effect. Daniel.

The water flies all taste of living wight. Milton.

His station he yielded up to a wight as disagreeable as himself. Addism.

In fame's full bloom lies Florio down at night, And wakes :.ext day a most inglorious wight; The tulip's dead. ^"wg-

WIGHT, ISLE OF, on the coast of Hampshire, is separated from this county by a channel, varying in breadth from two to seven miles. Its form is that of an irregular lozenge, measuring about twenty-two miles from the eastern to the western angle, and thirteen from the northern to the south- ern, being sixty miles in circumference, and con- taining an area of 105,000 square acres, of which quantity 75,000 acrei Tiay be reckoned in a course of Ullage, and 20,000 in pasturage. It is divided into two hundreds, East and West Medina, thirty parishes, and three boroughs, Newport, Newtown, and Yarmouth. Its principal river is the Medina, which gives name to its hundreds, and is so called from its dividing the island into two nearly equal parts ; there are two other small streams, called the Yar and the Wootton. The face of the country is beautifully diversified, and the whole extremely

fertile. The basis of the island is a close black clay, extremely firm, and when exposed to the air becomes hard enough to make whetstones; the higher parts of the island are composed of a vast mass of calcareous matter, and it produces chalk which is used as manure. The kinds of corn cul- tivated are wheat, barley, oats, peas, and beans ; the quantity of wheat produced in the southern parts is about twenty-four bushels per acre, and in the northern about eighteen ; the production of barley per acre is averaged at thirty bushels, and oats at thirty-five ; hence the exports of grain are considerable, the island yielding seven to twelve times more than its consumption. The meadow- land is extremely rich, and produces from one to three tons of excellent hay per acre. The Downs stretching across the island from Brading to the Needles furnish excellent pasturage for sheep, the number fed thereon being computed at 40,000, sending 5000 lambs annually to the London market. The cows are mostly of the Devon breed, though crossed with other sorts ; and the Alderney breed are in high repute, as they consume less provender while they yield as much milk as the English breed, and their cream is of a superior richness The horses are large and generally black ; the hogs are also of a large kind and make excellent bacon The cheese, in general, is very indifferent, and equal in hardness to that of Suffolk.

Game is plentiful in the Isle of Wight. Timber, which in the time of Charles II. was so plentiful that it is said a squirrel might travel on the tops ot the trees for many leagues together, is now mucli reduced in supplying the dock-yards at Ports- mouth. Among the fossils of the district are to bacco-pipe-clay, fullers'-earth, yellow and red ochre, lime-stone, free-stone, and coal in small quantities. The coast yields all the usual species of fish, and the lobsters and crabs are particularly large and excellent. Several chalybeate springs have been found in different parts of the island- The trade of the Isle of Wight is flourishim;;. The chief imports are coals, timber, deal, iron, wine, hemp, and fruit. The principal exports are wheat barlev, malt, anH salt: Its chief manufactures are

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starch, hair-powder, and salt. The air throughout the island is extremely salubrious. The island is governed by a governor and lieutenant-governor, appointed by the crown. Very extensive barracks have of late years been erected here, and during the last war it was one of the principal depois for the foreign troops in British pay. The Isle of Wight is now reckoned a part of Hampshire, and in- cluded in the diocese of Winchester.

WIGTON, a market-town and parish in Cum- berland ward, Cumberland, twelve miles south- west of Carlisle, and 305 from London. The streets of the town are in general clean and neat, and ha\ e lately been much

improved. In 1788 a new and elegant church was erected, and in the town is an hospital forsix Protestant clergy men's widows; an excellent endowed free-shool, and a good Sunday- .'chool. The chief causes which have contributed to the increasing prosperity of Wigton are the in crease of the manufactories for various kinds of cotton-goods, and the enclosing of extensive com- mon lands, within the last twenty years. The church and many of the buildings have been erected near the ruins of the ancient Roman Caer- Leol. Market Tuesday.

WIGTON, acounty in the south-west of Scotland, bounded on the east by Kirkcudbrightshire, on the bouth and west by the Irish Channel, and on the north by Ayrshire; lying between lal. 54° 38′ and 55° 4′ N., and between long. 4° 16′ and 5° 6′ W., and containing 451 3 square miles, or 288,960 English acres. It is of an irregular form, deeply indented with bays, and is twenty-three, twenty- five, and twenty-nine miles from north to south, and about thirty from east to west. It may be divided, according to the situation of its principal towns, into the three districts of Wigton, Whithorn, and Stranraer. The northern territory, called the Moors, is bleak and hilly, extending over three- fourths of the county, and containing only a few detached spots of arable land. The rivers in this county are of little importance.

WIGTON, a royal burgh of Scotland, capital of that district of Galloway to which it gives name.

W'ILBERFORCE, William, a distinguished phi- lanthropist, whose exertions to procure the abo- lition of the slave-trade give him a high rank among the benefactors of the human race, was born at Hull, in Yorkshire, in the year 1759, of which place his grandfather had been twice mayor. His father died when he was young, and, in 1774, he was sent to'St. John's college, Cambridge,wher« he for.ned an intimacy with Mr. Pitt. Mr. Wilberforce came into a good fortune, and was elected member of parliament for Hull in 1780. During this parliament, he did r.ot take any very Active part in politics. He was also elected in 1784, and, owing to the partiality of the people for Mr. Pitt's friends, was also chosen for the county of York : he therefore made his election for that county. In 1787, he brought forward a motion for the abolition of the slave-trade, and presented a great number of petitions in favor of that measure. The minister spoke in favor of the abolition, but suffered the motion to be lost. The next year, Mr. Wilberforce bein^r ill, Mr. Pitt brought on the motion, and the question was carried without a division ; but it went no further. It was a singular circumstance, that

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Mr. Pitt, whose power was then at its zenith, could carry every measure but this. Mr. Wil- berforce had much to contend with before he completed his object ; and all he could do was to procure some legulations favorable to the slaves during their passage. The condition of the slaves in the West Indies was, however, greatly im- proved. While Mr. Pitt was minister, "every trick was tried to avoid the question, till Mr. Fox and his friends succeeded to power, when, to their honor, he and his friends carried the mea- sure. The influence of Mr. Wilberforce in the house of commons was extraordinary ; and, at one time, during the French war, an appearance of defection on the part of Wilberforce and his friends induced Pitt to open a treaty with France. Mr. Wilberforce published a Practical View of the prevailing Religious Systems of Professed Christians in the higher and middle Classes of the Country contrasted with real Christianity (1797); an Apology for the Christian Sabbath (1799); a Letter on the Abolition of the Slave- Trade (1807); and Substance of his Speeches on the Bdl for promoting the Religious Instruction of the Natives of British India (1813). He died in 1833.

WILD, adj. &n.s.} Sax. pih> ; Teut.:Belg. WIL'DEU, v. a. andDan.iiu/J. Not tame;

WILDERNESS, n. s. not domestic; savage; WILI/FIRE, .fierce; untamed; desert;

WJLD'GOOSE-CHASE [strange; imaginary: a wild W7iLo'iNG is a desert; to wilder, to

WILD'LY, adv. lose or perplex in paths

*WILD'NESS, n. *. J unknown: wilderness, a synonyme of wild, noun substantive : wildfire, a composition very inflammable : wildgoose-chase, any pursuit, unlikely to succeed : wilding, a sour apple : the adverb and noun substantive corres- pond with the adjective.*

Yet shall it in his boiling stomach turn To bitter poison, and like icildjire burn ; He shall cast up the wealth by him devourrd. Sandy.

He came in like a wild man, but such a wiidneu as shewed his eye-sight had tamed him ; full of withered leaves, which, though they fell not, threatened fall- ing. Sidneys.'

He travelled through wide wasteful ground. That nought but dcsart wilderness shewed all around.

Spenser.

WILD (Henry), a tailor of Norwich, who had been educated at the grammar-school there, but by his own exertions made himself master of Hebrew and Arabic ; on which he was drawn from obscu- rity by Dr. Prideaux, who procured him a place in the Bodleian library. He afterwards went to Lon- don, where Dr. Mead patronised him. He trans- lated from the Arabic Mahomet's Journey to Heaven. He died in 1733.

WILD (Robert) D. D-, a Presbyterian divine, educated and graduated at Oxford. He became rector of Aynhoe in Northamptonshire during the commonwealth, but was deprived after 1660. He wrote 1. The Tragedy of Mr. Christopher Love; 2. Iter Boreale, a Poem on the Imprisonment of Mr. Calamy, and some other poems ; also some Sermons. Hn died at Oundle, in 1769.

WILD ANANAS. See BUOMELIA.

Wn.n ANGELICA. See .;£GOPODIUM.

WILU BASIL. See THYMCS.

WILD FIRE, a kind of artificial or factitious fire, which burns even under water, and that with greater violence than out of it. It is composed of sulphur, naphtha, pitch, gum, and bitumen ; and is only extinguishable by vinegar mixed with sand and urine, or by raw hides. Its motion or ten- dency is said to be contrary to that of natural fire, and always follows the direction in which it is thrown, whether it be downwards, sidewise, or otherwise. The French call it Greek or Grecian, or feu Grequois, because first used by the Greeks, about the year 660 ; as is observed by the Jesuit Petavius, on the authority of Nicetas, Theophanes, Cedrenus, Sec.

WILD GOOSE. See ANAS.

WILD LETTUCE. See PRENANTHES.

WILD OLIVK. See ELSAGMˆ.

WILD PARSLEY. See SISON.

WILD SERVICE. See CRATJEGXJS.

WILD TANSEY. See POTENTILLA.

WILD WOAD. See RESEDA.

WILD WORMWOOD. See PARTHENIUM.

WILDE (Sir William), a lawyer of the seven- teenth century. He was recorder of London in 1659; was created a baronet in 1660; made king's serjeant in 1661 ; a justice of the common pleas in 1668 ; and of the King's Bench in 1672. He pub- lished Yelverton's Reports. He died in 1679.

WILDERNESS, in gardening, a kind of grove of large trees, in a spacious garden, in which the walks are commonly made either to intersect each other in angles, or have the appearance of meanders and labyrinths. See GARDENING.

WILDING, in botany. See PYRDS.

WILE, n. s. Sax. pile ; Isl. wiel. A deceit ; fraud ; trick ; stratagem.

Their leader by his wiles had much obtained, And done much mischief on the English state.

Daniel.

My sentence is for open war ; of wiles, More unexpert, I boast not ; them let those Contrive who need. Milton.

The heart of man is so full of idles, artifices, and deceit, there is no guessing at what he is from his speeches. Addison.

Wisdom's above suspecting inlet, The queen of learning gravely smiles. Su'i/'r.

vVILINGO, a town of Sweden, in Schonen.

WILKES (John) was born in Clerkenwell, in 1728. He received a liberal education, and, after travelling abroad, married a lady of fortune, and became colonel of the Buckinghamshire militia. In 1761 he was elected M. P. for Aylesbury ; and soon became a violent opponent of the earl of Bute's administration, and published a scurrilous periodical work against them, entitled The North Briton ; of which the forty-fifth number, wherein he attacked the king's speech, was so very offen- sive, that a general warrant was issued by the earl of Halifax to seize Mr. Wilkes and his papers. This illegal step made a great noise, and rendered W ilkes very popular. See ENGLAND. He ob- tained a verdict in the court of King's Bench against the minister, by which general warrants were de- clared illegal. But he was soon afterwards prose- cuted for publishing an obscene and blasphemous poem, entitled An Essay on Women ; for which he was expelled parliament.

He was repeatedly re-elected and returned for Middlesex, and repeat- edly expelled, till 1774, when he was elected lord jnay«r, and no farther opposition was made. He

afterwards obtained the iterative olfice of cham- berlain of London. He left parliament in 1779. He rendered great service to the public during the riots in 1780, when by his prompt exertions he saved the bank from depredation. He died in

1797.

W ILKES (Thomas), an Augustine canon of Osney near Oxford. He wrote a Chronicle of English Affairs from William I. to the end of the reign of Edward I., and some Latin tracts.

WILKIE (William), D. D., was born in the pa- rish of Dalmeny, in West Lothian, on the 5th ot October 1721. Having learned the Latin tongue at Dalmeny, he was, at the age of thirteen, sent to the university of Edinburgh ; and in 1753 was or- dained minister of Ratho. In 1757 he published the Epigoniad ; and in 1759 a second edition was called for, to which he added A Dream in the Manner of Spenser. He was, the same year, chosen professor of natural philosophy in the uni- versity of St. Andrew's. In 1768 he published a volume of fables, previous to which the university conferred upon him the degree of D. D. ; and he died, after a lingering illness, on October 10th,

1772.

WILKINS (Dr. John) was the son of a gold- smith of Oxford, and was born in 1614. He ad- hered to the parliament during the civil wars, by whom he was made warden of Wadham College in 1648 : he married afterwards the sister of Oliver Cromwell, and procured a dispensation to retain his wardenship notwithstanding. Richard Crom- well made him master of Trinity College, Cam- bridge, from which he was ejected on the Resto- ration. He then became preacher to Gray's Inn, rector of St. Laurence Jury, London, dean of Rippon, and in 1668 was promoted to the bishop- ric of Chester. He died in 1672. He published several mathematical and philosophical treatises, as well as theological tracts : he was the first presi- dent of the Royal Society.

WILKINSON (Henry), a puritan divine, born in Yorkshire in 1616, and educated at Magdalen Hall, of which, during the Commonwealth, he be- came principal, but was ejected in 1660. He died at Cornard in Suffolk, in 1690. He published, 1. Academical Discourses; 2. A Treatise on Freewill ; and, 3. Another, On the Divine Right of the Lord's Day, in Latin.

WILL, n. s., v. a., & v. n. ~] Sax. pilla ; Belg. WIL'FI:L, adj. and Danish «•'//« ,-*

WIL'FULLY, adv. \ Goth, vilia. Deter-

WIL'FI'LNESS, n. s. Animation ; choice ;

WILLING, adj. that power by which

WIL'LINGLY, adv. we desire and pur-

WIL'LINGNESS, n.s. J pose; velleity ; tes- tament ; disposition of a dying man's property : to will is to purpose ; determine ; desire ; direct ; a sign of the future tense ; sometimes importing ne- cessity, as 'he that shall come will come:' wilful is firm of will; stubborn; inflexible: the ad\erb and noun substantive correspond : willing, con- senting; pleased ; favorable ; desirous: the adverb and noun substantive correspond.

As many as were u-iMiwg-hearted brought bracelets and earrings. E\odu xxxv. 22.*

Deliver me not over unto the trill of mine enev

Psalms.

The wilful never want woe. Proverb.*

Kvil could she conceal her fire, and wilf-Mv perse- vered she in it. Sidney.

WILL.

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If nature, then she may it mend .with skill ; If will, then she at wilt may it- ill forego. Spenser.

Thy causeless ruth repress ; He that his sorrow sought through wilfulnett, And his foe fettered would release again, Deserves to taste his folly's fruit. Id.

The will cannot be constrained. Perkins.

Religion hath force to qualify all sorts of men, to make governors the apter to rule with conscience, inferiors for conscience sake the u-Ulinger to obey.

Hooker.

Two principal fountains there are of human actions, knowledge and will ; which will, in things tending to- wards any end, is termed choice. Id.

That preservation of peace and unity amongst Chris- tian churches should be by all good means procured, we join most willingly and gladly with them. Id.

He willed him to be of good comfort, promising to bestow upon him whatsoever he should win. KnoUet.

Never hydra-headed wilfulnes So soon did lose his seat, and all at once, As in this king. Shahspeare.*

I make bold to press upon you with so little prepara- tion.— You're welcome ; what's your will ? Id.

She's too rough for me ; There, there, Hortensio, will you any wife 1 Id.

We've trilling dames enough. Id.

I dare not make myself so guilty, To give up willingly that noble title Your master wed me to. Id.

Will holds the serpent in the soul, And on the passions of the heart doth reign. Davies.

If you do not wilfully pass over any of your greater offences, but confess particularly, and repent seriously, of them, God will more easily pass by your lesser in- firmities. Bithop Taylor.

He hath a will, he hath a power to perform.

Drummond.

That vill carry us, if we do not wilfully betray our succours, through all difficulties. Hammond.

I speak not of God's determining his own will, but his predetermining the acts of our will. There is as great difference betwixt these two, as betwixt my willing a lawful thing myself, and my inducing another man to do that which is unlawful. Id.

How can hearts not free serve willing ? Milton.

Thou to me

Art all things under heaven, all places thou, Who for my wilful crime art

banished hence. Id.

The silent stranger stood amazed to see Contempt of wealth, and wilful poverty. Dryden.

Another branch of their revenue still Remains, beyond their boundless right to kill, Their father yet alive, impowered to make a will. Id.

Constraint, in all things, makes the pleasure less ; Sweet is the love which comes with willingness. Id.

That is not hastily to be interpreted obstinacy or vilf'ulnesi which is the natural product of their age.

Locke.

A man that sits still is said to be at liberty, because he can walk if he tci//.s it. Id.

The condition of that people is not so much to be envied, as some would willingly represent it. Addison.

Go, then, the guilty at thy will chastise. Pope.

Can any man trust a better support, under affliction, than the friendship of Omnipotence, who is both able and willing, and knows how to relieve him? Bentley.

Let the circumstances of life be what or where they will, a man should never neglect improvement. Watt.*

The WILL is that faculty of the mind by which it embraces or rejects any thing offered to it. See METAPHYSICS.

A WILL or Testament is ' the legal declaration of a man's intentions of what he wills to be per- formed after his death ;' a will or testament being of no force till after the death of the testator, or person making it. Properly a will is limited to

land, and a testament only to personal estate ; and the latter requires executors. Upon the notion that a devise of land by will is merely a species of conveyance, is founded the following distinction between such devises, and dispositions of per- sonal estate ; that a devise of a man's goods and personal property will operate upon all such per- sonal estate as the maker of the will dies possessed of, at whatever distance of time he may die alter making the will. But a devise of real estate will only operate on such estates

as were his at the time of executing and publishing his will ; so that freehold lands, purchased after making the will, cannot pass under any devise in that will, unless the will shall have been legally and formally re-published subsequent to the purchase or contract.

These wills and testaments are divided into two sorts ; first, written ; and, secondly, Verbal, or Nuncupative.

The law also takes notice of a particular gift, in the nature of a will, made by any one in con- templation of immediate death, which is called Donatio causa mortis ; a gift in prospect of death. This is, where a man, being ill, and expecting to die, gives and delivers something to another, to be his in case the giver dies ; but, if he lives, he is to have it again. In every such gift, there must be a delivery made by the giver himself, or some person by his order, in his last sickness, while he is yet alive ; for the gift will not be good if the delivery is made after his death. This delivery, however, may be made either to the person him- self, for whom the gift is intended, or to some other for his use, which will be equally effectual, so as it is made in the life-time of the party giving. For the cautions of the law respecting Nuncupative wills, see TESTAMENT.

No stamp duty whatever is imposed on wills ; but the probate or letters of administration are charged with certain duties, in proportion to the value of the deceased's personal property. A will may therefore be written or executed, by the testator, on unstamped parchment or paper.

A codicil is a supplement to a will, or an addi- tion made by the person making the will, annexed to, and to be taken as part of the will itself, being for its explanation or alteration ; to add something to, or to take something from, the former dispo- sitions ; or to make some alteration in the quan- tity of the legacies, or the regulations contained in the will. This codicil may also be either writ- ten or verbal, under the same restrictions as regard wills. Whenever a codicil is added to a will or testament, and the testator declares that the will shall be in force, in such case, if the will happens to be void, for want of the forms required by law in the execution, or otherwise, yet it shall be good as a codicil, and shall be observed by the admi- nistrator. And, though executors cannot regu- larly be appointed in a codicil, yet they may be substituted in the room of others named in the will, and the codicil is still good. If codicils are regularly executed and witnessed, they may be proved as wills ; and so, if they are found written by the testator himself, they ought to be taken as part of the will, as to the personal estate, and proved in common form by witnesses, to be the hand writing of the person making the codicil, and by giving an account when, where, and how the same was found. — Burn. Eccl. Law.

If two wills are found, and it does not appear \hich was the former or latter, both are void; so,

:f two inconsistent wills of the same date appear, neither of which can be proved to be last exe- cuted, unless such inconsistency can be explained by some subsequent act of the testator, both are void ; but, if two codicils are found, and it cannot be known which was first or last, and one and the same thing is given to one person in one codicil, and to another person in another codicil, the codi- cils are not roid. but the persons therein named ought to divide the thing betwixt them. But, if the dates appear to the wills or codicils, the latter will is always to prevail, and revoke the former ; as also the latter codicil, as far only as it is con- tradictory to the former ; but, as far as the codicils are not contradictory, they are allowed to be both in force. For, though I make a last will and tes- tament irrevocable, or unalterable, in the strongest words, yet I am at liberty to revoke or alter it; because my own act or words cannot alter the dis- position of law, so as to make that irrevocable ••vhich in its own nature is revocable. If, in the same will, there are two clauses or devises totally repugnant and contradictory to each other, it has been held that the latter clause or devise shall take effect on the same principle as respects prior and subsequent wills. But it seems now, that where the same estate is given by a testator to two persons, in different parts of his will, they shall be construed to take the estate as joint tenants, or tenants in common, according to the limitation of the estates and interests devised. — 3 Atk. 493 : 1 Inst. 112, b. n. It was determined by the house of lords, upon the opinion of all the judges, that if a will be made, and afterwards another will, without cancelling the foirqer, and either will L> proved to be confirmed, after the other will, the whole estate comprised in the will so last con- firmed will go according to the limitations in that will. And that if two wills appear, and the limi- tations in both are consistent, and they have both been confirmed by various codicils, the wills and codicils may all be taken together as one testa- mentary disposition, and such construction made as that the limitations in both wills shall take place to the disinherison of the heir at law. — Phipps v. Anglesey (Earl) Parl. Cases, title Will, ca. 2.

Where two legacies are given to the same per- son by the same will, or by will and codicil, the rule seems clear, that, by the devise of the same sum to a person by a second clause in a will as h-.ul before been given him by a former clause in the same will, he shall only lake one of the lega- cies, and not both. But where a legacy is given to a person by a codicil as well as by a will, whe- ther the legacy given by the codicil be more or less than, or

equal to, the legacy given by the will, the legatee shall take both; and, if the executor contests the payment, it is incumbent on him to show evidence of the testator's intention to the contrary. See LEGACY.

Several regulations have been made by tne iaw, in order to guard against any frauds in the dispo- sition of real estate by will. As to such wills as dispose of goods and personal property only, if the will is written in the testators own hund, though it has neither his name or seal to it, and though there are no witnesses to it, it is good, if sufficient proof can be obtained of the hard \vnt- And even if it is in nnmlx-i penon't li;ui

made according to his instructions, and approved of by him. But as many mistakes and errors, not to say misfortunes, must often arise from so irre- gular a method of proceeding, it is the safer and more prudent way, and leaves less in the breast of the ecclesiastical judge, if it be signed and sealed by the testator, and published in the pre- sence of witnesses. — 2 Comm. c. 32. It is ex- pressly provided by the English stat. 29 Car. II, c. 3 (and by the Irish acts, 7 W. Ill, c. 12. sect. 3), that all devises of lands and tenements shall no', only be in writing, but shall also be signed by the party so devising the same, or by some other per- son in his presence, and by his express direction ; and shall he witnessed and subscribed, in the pre- sence of the person devising, by three or four cre- dible witnesses ; or else the devise will be en- tirely void, and the land will descend to the heir- at-law.

A wish has often been expressed, by great autho- rities, that all testamentary acts should be rendered subject to the solemnities required by these sta- tutes : and certainly the importance of such a pro- vision is extremely evident when it is considered how much the intention of a testator may be de- feated, by a will which is founded on one arranged plan, being partly good and partly void. The uncertainty as to what shall or shall not constitute a sufficient manifestation of the will, with respect to personal effects, is also extremely inconvenient, and a great source of litigation. See lord Lough- borough's observations on this subject, in Matthews v. Warner, 4 Vesey 186. In the constiuction of this statute it has been adjudged that the name of the person making the will, written with his own hand at the beginning of his will, as, ' I John Mills do make this my last will and testament,' is a sufficient signing, without any name at the bottom. But this seems doubtful, unless the whole will be written by the testator himself: — And the safe and proper way is to sign the name, not only at the bottom or end of the will, but, as is usual and regular, at the bottom of each page or sheet of paper, if the will contain more than one : and the witnesses to the will, seeing the tes- tator sign all the sheets, and put his seal (though this latter is not absolutely necessary in law), as well as his name, to the last sheet, must write their names under the attestation in the last sheet only.

It has also been determined that, though the witnesses must all see the testator sign the will, or at least acknowledge the signing, yet they may do it at different times. — Jones v. Dale, 5 Bac. Abr. lint they must all subscribe their names as wit- nesses, in his presence, lest by any possibility they should make n mistake : and that a will is good, though none of the witnesses saw the testator ac- tually sign it, if he owns it before them to be his hand writing. It is remarkable that the stat. 29 Car. II, c. 3, does not say the testator shall sign Ins will in the presence of the three witnesses, but requires these three things : first, that the will should be in writing ; secondly, that it should be signed by the person making the same; and, thirdly, that it should be subscribed by three wit- nesses in his presence. — 3 P. Wms. 254. But it is not at all necessary that the witnesses should be acquainted with the contents of the will ; provided they :ire able, when called on, to identify the writ- iii'.' ; i. e. to say that th<' paper, then showed them is lite same thry saw the testator sign.

WIL

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Though the statute has required that the wit- nesses to the will shall witness it in the testator's presence (in order to prevent obt-uding another will in the place of the true one), yet it is enough that the testator might see the witnesses ; it is not necessary that he should see them signing ; for otherwise, if a man should but turn his back, or look off, it might make the will void. And in a case where the testator desired the witnesses to go into another room seven yards distant, to witness the will ; in which room there was a window broken, through which the testator might see them ; it was, by the court, adjudged to be a wit- nessing in his presence. So where the testator's carriage was drawn opposite the windows of an attorney's office, in which the witnesses attested the will ; this was clearly determined to be in the testator's presence. — 1 Bro. C. R. 99. But if a will is executed at one time, and at another time, afterwards, the witnesses put their names to it, the testator being then insensible, this will not be a good will, as it cannot be said to be witnessed in his presence, if he is unconscious of what is pass- ing.

A will made beyond sea, of lands in England, must be attested by three witnesses.

Before passing the act 55 Geo. III. c. 192, a will devising copyhold land, witnessed by one or t\o witnesses, or even without any witness at all, \vas held sufficient to declare the uses of a sur- render of such copyhold lands

made to the use of a will.— 2 Atk. 37: 2 Bro. C. R. 58. But an equitabl" estate of copyhold will pass by devise without surrender. — 1 Bro. C. R. 481. A copy- nold or customary estate, the freehold of which is in the lord and not in the tenant, and which passes by surrender and admittance, was held to be nei- ther within sect. 5, of the statute of frauds, 29 Car. II, c. 3, so as to require to a devise thereof the signature of the party, or the attestation of witnesses ; nor within sect. 7 of that act, as a de- claration of trust requiring to be proved by a writing signed by the party, which applies only to cases where the legal and equitable estates are separated ; or by a will in writing, which must be understood only of such a will of lands as the statute recognises ; viz. by a will attested by three witnesses. The court of King's Bench held that such estate might well pass by instructions for a will taken in writing by another in the presence and by the oral dictation of the party, without any signature or attestation ; and which was established as a will by the ecclesiastical court granting pro- bate thereof ; and which is a good will by the sta- tute of wills (32 Hen. VIII. c. 1); the estate hav- ing been surrendered to the use of the last will of the party in writing. Such estates passing not by the will alone, but by the will and surrender taken together. — 7 East's Rep. 299.

WILL WITH A WISP, n. &. Jack with a lan- tern.

Will u-ith the witp is of a round figure, in bigness like the flame of a candle ; but sometimes broader, and like a bundle of twigs set on fire. It sometimes gives a brighter light than that of a wax candle ; at other times more obscure, and of a purple colour. When viewed near at hand, it shii.es less than at a distance. They wander about in the air, &c. Muschenbroek.

li'iil-a-

WILLAC. See VILLAC.

WILLAN (Robert), M. D., a medical writer or eminence, born near Sedburgh, in Yorkshire, in 1757, was the son of a physician who belonged to the sect of the Friends ; and studied at Edinburgh; where he took his degree as M. D. in 1780. Soori after he settled in practice at Darlington in Dur- ham, whence he removed to London, and was ap- pointed physician to a dispensary in Carey Street In 1791 he became a fellow of the Antiquarian So- ciety; his death took place in 1812, at Madeira, whither he had gone for the recovery of his health. Dr. Willan was the author of the History of the Ministry of Jesus Christ, 1782, 8vo. ; and pub- lished, among various medical works, a valuable treatise on Cutaneous Diseases, 4to., illustrated with engravings.

WILLIAM DE NANGIIS, a monkish historian of the fourteenth century. He

was author of two Chronicles; 1. A Chronical from the Creation of the World to his own time. 1301 ; 2. A,Chroniclc of the Kings of France.

WILLIAM OF MALMSBURY, an historian of con- siderable merit in the reign of king Stephen. Ac- cording to Baleand Pits, he was surnamed Somer- setus,from the county in which he was born. From his own preface to his second book, De Regibus Anglorum, it appears that he was addicted to learning from his youth ; that he applied himself to the study of logic, physic, ethics, and particularly to history. He retired to the Benedictine convent at Malmsbury, became a monk, and was made precentor and librarian ; a situation which much favored his intention of writing the history of Eng- land. In this monastery he spent the remainder of his life, and died in 1142. He is one of our most ancient and most faithful historians. His capital work is that entitled De Regibus Anglorum, in five books ; with an Appendix, which he styles Historic Novelise, in two more. It is a judicious collection of whatever he found on record relative to Eng- land, from the invasion of the Saxons to his own times.

WILLIAM OF NEWBURY, so called from a mo- nastery in Yorkshire, of which he was a member, wrote a history which begins at the conquest, and ends at the year 1197. His Latin style is pre- ferred to that of Matthew Paris; and he is en- titled to particular praise for his honest regard to- truth.

WILLIAM OF WYKEHAM, bishop of Winchester, was born in the village of Wrykeham, in South- ampton, in 1324. He had his education at Win- chester and Oxford. Having continued nearly six years in the university, his patron Nicholas Wedal, governor of Southampton, took him into his family, and appointed him his counsellor and se- cretary. Edington, bishop of Winchester, lord high treasurer of the kingdom, appointed him his secretary three years after, and also recon in-. ended him to king Edward III., who took him into his service. Being skilled in geometry and architec- lure, he was appointed surveyor of the royal buildings, and also chief justice in eyre. He su- perintended the building of Windsor Castle. He was afterward chief secretary of state, a keeper of the privy seal ; and in 1367 succeeded Edington in the see of Winchester. A little after he was appointed lord high chancellor and president of the privy-council. In 1371 he resigned his chan- cellorship, and some time after the great seal. Ed- ward being returned to England, after ha»ing

earned on a very successful war in France, found his exchequer in great disorder. The duke of Lancaster, one of his sons, at the head of several lords, having brought complaints against the clergy, who then enjoyed most posts in the kingdom, the king removed them from their employments. But the laymen who were raised to them behaved so ill that the king was forced to restore the ecclesi- astics. The duke of Lancaster showed strong animosity to the clergy, and set every engine at work to ruin Wykeham. He impeached him of extor- tion, and of disguising things, and obliged him to appear at the king's bench. He got such judges appointed as condemned him ; and, not satisfied with depriving him of all the temporalities of his bishopric, he advised Edward to banish him ; but tfus prince rejected the proposal, and afterward restored to Wykeham all that he had been divested of. Richard II. was but eleven years old when Edward died : whereby the duke of Lancaster had an easy opportunity of reviving the accusations ajjainst the bishop of Winchester ; nevertheless Wykeham cleared himself. Then he founded two noble colleges, the one in Oxford, the other in Winchester. Whilst he was exerting his utmost en- deavours to improve these two fine foundations, he was recalled to court, and in a manner forced to accept of the office of lord high chancellor in 1389. Having excellently discharged the duties of that employment for three years, he obtained leave to resign it, foreseeing the disturbances that were going to break out. Being returned to his church, ne finished his college, and built there so magnificent a cathedral that it almost equals that of St. Paul's in London. He laid out large sums in things advantageous to the public and to the poor; notwithstanding which, in 1397. he was in great danger ; for he and some others were impeached of high treason in open parliament ; however, he was again fully cleared. From that time till his death he kept quiet in his diocese, and there employed himself in all the duties of a good prelate. He died in 1404.

WILLIAMS- (Anna), the daughter of a surgeon in South Wales, where she was born in 1706. She had the misfortune to lose her sight at thirty-four ; and, her father having been unfortunate, she had no means of subsistence. She acquired a trifle by a translation of La Bletiere's Life of the Emperor Julian, to which she subjoined original notes. This publication fortunately brought her to the acquaint- ance of Dr. Samuel Johnson. Mr. Garrick gave her a benefit, which produced her £200 clear. In 1766 she published a volume of Miscellanies in Prose and Verse ; which increased her little capital greatly. The doctor continued her unalterable friend to the last ; and she died at his house in

1783.

WILLIAMS (Daniel), D. D., a celebrated presby- terian minister, born at VVrexham, in Denbigh- shire, in 1644. He went to Ireland and became

chaplain to the countess of Meath. When the troubles broke out, in the end of James II.'s reign, he returned to London, in 1687; and became pastor of a congregation. In 1709 he received diplomas with the degree of D. D. from both the universities of Glasgow and Dublin. He founded the librnry in I!..dcross Street for dissenting minis- ters. He died in 1716. His Sermons were printed in 5 vols.

(John), D. D., an eminent English

prelate, born at Aber-Conway, in Caernarvonshire, in 1.582, was educated at Ruthin school, Denbigh- shire, and St. John's College, Cambridge, where he graduated. In 1612 he became chaplain to the lord chancellor Eˆerton. He next became chap- lain to king James I., who, in 1620, made him dean of Westminster, and in 1621 a member of privy council, bishop of Lincoln, and keeper of the great seal. After the accession of Charles 1 . the great seal was taken from him : and he was prosecuted in the Star-chamber on a false charge ot betraying the king's secrets ; fined £10,000 • and imprisoned in the tower above three years. In 1640 he was released by order of parliament, and in 1641 made archbishop of York. lie was again sent to the Tower with some of his brethren, by the lords, for framing a protest against all proceedings in parliament while they were hindered by the mob from attending. When released he went to York ; but, the civil war breaking out, he retired to Wales, where he died in 1650.

WILLIAMS (John), a learned and pious bishop, born in Northamptonshire, and educated at Mag- dalen Hall, Oxford. After the Restoration he was made rector of St. Mildred and a canon in St. Paul's cathedral. In 1689 he became chaplain to William and Mary, who gave him a prebend of Canterbury; and in 1696 made him bishop of Chi- chester. He published a volume of Sermons preached at Boyle's lectures ; and several tracts against the Papists and Dissenters. He died in

1709.

WILLIAMS (Sir Charles Hanbury), K. B., a ce- lebrated poet and statesman, the son of John llan- bury, esq., a director of the South Sea Company. He represented Monmouthshire in three successive parliaments ; and in 1744 was installed a knight ot the Bath. In 1746 he was sent ambassador to Prussia; and soon after went in the same character to Russia ; whence he returned in 1759. He wrote several lively Poems ; which are published in Dodsley's and other collections. He died in 1759, soon after his return to England.

WILLIAMSBURG, borough, James City, county Virginia; twelve mile west of Yorktown, and fifty-five east by south of Richmond. It is situated*

between two rivulets, one of which flows into York, and the other into James River. It is regularly laid out, and was formerly the metropolis of the state. It contains a state house, a court house, a jail, a hospital, a college, and an Episcopal church. The principal streets run parallel, and are crossed by smaller ones at right angles. The main strt- 01 Is about a mile long, terminated at one end by the old capital, and at the other by the college. The houses are mostly indifferent ones of wood, old, and decayed ; and the town has for several years been on the decline. The college of William and Mary was founded here in 1691, in the time of king William, who gave it an endowment of about £2000 and 20,000 acres of land, together with a revenue of a penny a pound on tobacco ex- ported to the plantations from Virginia and Mary- land. To these other endowments were added, and the whole annual income of the college was formerly estimated at £3000. The income, at present, is greatly diminished. It formerly had six professors, but at present only three or four. The college edifice is a large misshapen pile of building, affording but indifferent accommodations for students. The library contains about 3000

Toluraes, aad the philosophical apparatus is valu- able.

WILLIS (Dr. Thomas), a celebrated English physician, was born at Great Bodwin, in Wilt- shire, in 1621. He studied at Christ Church Col- lege, Oxford. When that city was garrisoned for the king, he, among other scholars, bore arms for his majesty, and devoted his leisure hours to the study of physic. The garrison of Oxford at length surrendering to the parliament, he applied himself to the practice of his profession, and soon rendered himself famous by his care and skill. He appro- priated a room as an oratory for divine service ac- cording to the church of England, whither most of the loyalists in Oxford daily resorted. In 1660, he became Sedleian professor of natural philo- sophy, and the same year took the degree of doctor of physic. In 1664 he discovered the famous me- dicinal spring at Alstropp, near Brackley. He was one of the first members of the Royal Society, and soon made his name illustrious by hi» excellent writings. In 1666, after the fire of London, he removed to Westminster; and his practice became greater than that of any of the physicians, his contemporaries. He died in 1675, and was buried in Westminster Abbey. He wrote a treatise on the Plague, and several Latin works, which were collected at Amsterdam in 2 vols. 4to.

WILLIS (Browne), LL. D., the son of the doc- tor, was born at Blandford, in Dorsetshire, in 1682, and educated at Westminster, and at Christ Church, Oxford, where he graduated. He was one of the revivers of the Society of Antiquaries ; and visited all the cathedrals, except Carlisle. He published A Survey of the Cathedrals of England and Wales, in 2 vols. 4to ; also An Account of the Mitred Abbeys, 2 vols. 4to. He was elected M. P. for Buckinghamshire, and died in 1760, leaving his valuable cabinet of coins and MSS. to the univer- sity of Oxford.

WILLISON (David), a very popular Presbyte- rian clergyman, who was many years one of the established ministers of Dundee. He published A Sacramental Directory ; and a Treatise on the Sanctification of the Sabbath, both in 8vo. He died at Dundee about 1750.

WIL'LOW, n.s. I Sax. pelie ; Wei. gwilou.

WII/LOWISH, adj. 5 A tree worn by forlorn lo- vers : of a willow color.

When heaven's burning eye the fields invades, To marshes he resorts obscured with reeds, And hoary u-HU>irt which the moisture feeds. Sandys.

Tell him, in hope he'll prove a widower shortly, I wear the u-illaw garland for his sake. Shaktjifare.

Make his body with greenish coloured crewel, or uiltouifh colour. Waltun.

Afflicted Israel shall sit weeping down, Their harps upon the neighbouring willows hung. No joyous hymn encouraging their tongue. Prior.

W ii low, in botany. See SALIX.

W mow, FRENCH, a species of epilobium.

NN ILLOW HERB. See EPILOBIUM.

Wn i.ow HERB is also the name of a species of lysimachia and lylhrum

WILLOW LEAFED MYUICA. Soe MYKICA.

Wn LOW, SWEET. See MYRICA.

WILLUGHBY (Francis), was the only son of Sir Francis Willughby, knight. He attained great skill in all branches of learning, and particularly mathematics. But the history of animals soon oc- cupied his chief attention. In pursuit of this

study, he travelled over great part of F.iirope, wii!r Mr John Kay. He died in 1672, aged thirty- seven ; having impaired his health by his application. He wrote, 1. Ornilhologis libri tres/folio. 2. Historic Piscium libri quatuor, folio. 3. A vo- lume of Letters. 4. Several ingenious papers li- the Plnlos. Trans.

WILMINGTON, a borough and port of entry, Newcastle county, in the hundred of Christiana, Delaware, between the Brandywine and ChristiatM creeks, one mile above their confluence, and two west of the Delaware ; five miles N. N. E. of Ni-w – castle, twenty-eight south-west of Philadelphia, and seventy north-east of Baltimore. It is built on gently rising ground, the most elevated part of whicii is 112 feet above tide water, and its situation is pleasant and healthy, it is regularly laid out, the streets intersecting each other at right ancles, and the houses are mostly of brick. It contains a town house, a spacious aljis house, two market houses, three banks, a United States' arsenal, a Friend's boarding school for young ladies, a public library of about 1500 volumes, and ten houses of public wofship : two for Presbyterians, two for Episcopalians, one for Friends, one for Baptists, one for Roman Catholics, one for Methodists, arid two for Africans. A stone building was erected here for a college before the revolution, and a col- lege was incorporated in 1803, but it has never gone into operation, and the building is appropri- ated for schools. Two semi-weekly newspapers are published here.

The Christiana is navigable as fur as Wilmington for vessels drawing fourteen feet of water. The shipping owned here, in 1816, amounted to 9207 tons. The trade of the town is considerable; its exports consist chiefly in flour. It manufactures considerable quantities of leather. There is a bridge over the Brandywine, at the north entrance of the town, and another at the south entrance over the Christiana. The country around Wilmington is pleasant and finely situated. On the Brandy- wine, separated at a little distance from the body of the town, there is a village of about 100 houses, nearly one-half of which are included within the borough ; and fourteen flour mills, the finest col- lection in the United States. The Brandywine and the Christiana, with their branches, afford a great number of excellent seals for mills and manufac- tories. In 1815 there were included within a space of nine miles, around Wilmington, forty-four flour mills, thirteen cotton manufactories, fifteen saw mills, six woollen manufactories.six gunpowder mills, two paper mills, two snuff mills, and several other mills and manufactories. — Also a port of entry and capital of New Hanover county, North Carolina, on the east side of Cape Fear River, just belo\v the confluence of the north-east and north-west branches, about thirty-five miles from the sea ; ninety south-east of Fayetteville, ninety-three S.S.W. of Newbern. It contains a court house, a jail, an academy, two banks, a printing office, art Episco- pal, and a Presbyterian church. The exports

from this town, in 1816, amounted to 1,061,112 dollars. The exports of the whole state amounted only to 1,328,771 dollars. The shipping owned here, in 1816, amounted to 8952 tons. It is well situated for trade, but is accounted unhealthy. The har- bour admits vessels of 300 tons, but the entrance is rendered dangerous and difficult by a large shoal. Opposite the town are two inlands wlikh

«xtend with the course of the river, dividing it into three channels. They afford the finest rice fields in the state.

WILMOT (John), earl of Rochester, a great wit in the reign of Charles II., the son of Henry earl of Rochester, was bora in 1648. He was taught classical learning at the free-school at Bur- ford. In 1659 he was admitted a nobleman of Wadhara College, where he obtained the degree of M. A. He afterwards travelled through France and Italy ; and at his return was made one of the gentlemen of the bed-chamber to the king, and comptroller of Woodstock park. -In 1665 he went to sea, and was in the Revenge, commanded by Sir Thomas Tiddiman, when an attack was made on Bergen. During the action, he acted so well, that he gained a high reputation for courage, which he supported in a second expedition, but afterwards lost it in a private adventure with lord Mulgrave. His mode of life had never been regular ; but at last he became so sunk in debauchery that he was for five years together intoxicated. In October 1679, when recovering from a violent disease, which ended in a consumption, he was visited by Dr. Burnet. The doctor published an account of their conferences ; in which it appears that, though he had lived the life of a libertine and atheist, yet he died the death of a penitent and Christian. His death happened in 1680 ; since which time his poems have been various times printed r both separately and together ; but many pieces not of his writing have crept into the later editions.

WILNA, an extensive province of the north- west of European Russia, containing the north part of Lithuania. It extends from 53° 40′ to 56° 15′ of N. lat. ; has an area of 2300 square miles ; and a population of 1,000,000. The trade, such as it is, is carried on by the Jews. The principal rivers are the Niemen, the Vilia, the Pripez, and the Narew.

WII.NA, a city of Russian Lithuania, the chief town formerly of a palatinate, at present of a pro- vince or government. It is situated in a hilly

country, and occupies several eminences near the river Vilna or Vilia. Its circuit is nearly four mi IPS; its population, amounting in 1788 to 2 1 ,000, is now nearly 30,000. Like other towns in 1'oland and Russia, it is built chiefly of wood, very

WILSON (Florence), known by the name of Florentius Volusenus, was born at Elgin, in the shire of Murray in Scotland, and educated in the university of Aberdeen. Travelling to England, he was introduced to Cardinal Wolsey, who ap- pointed him tutor to one of his nephews. In that capacity he went to Paris, and continued there till t'.e cardinal's death. During his residence there li>: became acquainted with the learned cardinal lii-llai, archbishop of Paris, who allowed him a \ fusion, and meant lo have appointed him r»yu.

professor of Greek and Latin in the university of Paris : but, Bellai being disgraced, Wilsons pros- pects faded. Wilson was taken ill at Avignon, and the cardinal proceeded without him. After his re- covery, he paid a visit to the celebrated cardinal Sabolet, the Maecenas of his time, who was also bishop of Carpentras, where he then resided. The cardinal was so charmed with his erudition that lie appointed him professor of the learned languages, with a stipend of 100 pistoles per annum. During his residence at Carpentras, he wrote his celebrated treatise De Animi Tranquillitate. Mackenzie says that he afterwards taught philosophy in Italy ; and that, being at length desirous of returning to Scot- land, he began his journey homeward, was taken ill at Vienne in Dauphiny, and died there in 1547. He was generally esteemed an accomplished lin- guist, philosopher, and Latin poet. He wrote, be- sides the above treatise, 1. Poemata, Lond. 1619, 4to. 2. Commentatio quaedam theologica in apho- rismos dissecta, per Sebast. Gryph. 3. Philoso- phise Aristot. Synopsis, lib. iv

WILSON (John), a native of Kendal in West- morland, whose first employment was that of knitting stockings ; but, acquiring a great knowledge of botany, he commenced lecturer on that science, both at Kendal and Newcastle, with great success. In 1744 he published A Synopsis of British Plants, in Mr. Ray's method, 8vo. He died in 1750. WILSON (Matthias). See KNOT. WILSON (Richard), an eminent painter, born at Pineges in Montgomeryshire, in 1714. He stu- died portrait paintings at London ; and in 17 t» went to Italy. In 1755 he returned to London with high reputation, became a member of the Royal Academy, and in 1779 librarian. He dkd in 1782, aged sixty-eight.

WILSON (Thomas), lord bishop of Sodor and Man, was bora in 1663, at Burton, in Cheshire. He commenced his education at Chester, and thence was removed to Dublin. He continued at college till 1686, when, on the 29th of June, lie was ordained deacon. In 1686 he was licensed to the

curacy of New Church in Winwick. In 1692 he was appointed domestic chaplain to Wil- liam earl of Derby, and tutor to his son James lord Strange. He was soon after elected master of the alms house at Latham. As his income increased, he increased the portion of it which was allotted to the purposes of charity. At first he set apart a tenth, then a fifth, afterwards a third, and lastly, when he became a bishop, he dedicated a full half of his revenues to pious and charitable uses. In 1 697 he was promoted to the bishopric of the Isle of Man ; a preferment which he held fifty-eight years. This good prelate lived till 1755. His works have been published in 2 vols. 4to.

WILSON (Thomas), D. D., son of the bishop, was born in 1703, and educated at Christ Church, Oxford, where he graduated in 1739. He became rector of St. Stephen Walbrook, a prehrnd of \VrxiMMnster, and sub-almoner to the kinvr: yet he engaged with preat keer-ness in political contro- versy, on which he published several tracts. He was such an enthusiastic admirerof Mrs. Mac.mlay, the historian, that he set up her statue in the character of liberty, in Walbrook church ; which was justly censured as too high a compliment to a living cha- racter. He published a pamphlet, entitled Dis- tilled Liquors the Bane of the Nation. He also pub- lished his father's works, and died at Bath in 1784.

WILTSHIRE.

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WILTON, a borougn, market town, and parish, district. These soils, with all their consequent in Branch and Dole hundred, Wiltshire, situate on mixtures and variations, may he said to constitute (lie river Willy, three miles west by north of Sails- the far greater part of this district. The soil of the bury, and eighty-five fiom London ; containing North District is not so uniform as that of the ;J90 houses, and 7678 inhabitants, a considerable South District. It may, nevertheless, be reduced number of whom are employed in the carpet and to a few leading particulars. The under stratum clothing manufactures, but the principal trade is of a large portion is a loose irregular mass of flat now in flannel and fancy woollens. It has a mar- broken stones, called in the country ' corn-grate.' ket on Wednesday ; and sends one member to It runs, without interruption, through the north- parliament, west part of Wiltshire. The upper soil of this

Wilton-house, the seat of the earl of Pembroke, corn-grate is chiefly a kind of reddish calcareous

is the most magnificent house in the county. The loam, mixed with irregular flat stones, and is usu-

whole of its avenues, staircases, and chambers are ally called stone-brash. A vein of gravel of a most

ornamented with curious statues, vases, ami an excellent, small, pebbly, shelly sand, and in gene-

tiques, collected from all parts of the world, and ral covered with a good depth of rich loam, runs

paintings by the most celebrated English and foreign in a broken line from Melksham, through Chippen-

artists. Here Sir Philip Sidney wrote his Arcadia. ham to Cricklade ; but its greatest extent is from

WILTSHIRE, by some early writers, is called Tytherton, through Christian Malford and Dantzey,

Severnia, and Provmcia Severorum, from Servia, a to Somerford; and the richest part of it perhaps

name by which Old Sarum was formerly known, is at or near Dantzey. There are two principal

It derives its present name from Wilton, which veins of sand in this district, in general red, of a

was formerly the most considerable place in the sharp, loose, gravelly texture, and of course not so

county. The northern part was in early times in- fertile as the tough close lands of South W 'ills,

habited by that tribe of the Belgae distinguished by The greatest part of the residue of the soil of this

the name of Cangi. During the heptarchy this dis- district, and particularly from Highworth by

trict formed part of the kingdom of the West-Saxons. It is an inland county, bounded on the north and

W cotton Basset to Clack, lies on a hard close rock of a rough irregular kind of bastard limestone. The

north-west by Gloucestershire, on the west by Somer- soil over this kind of stone is various, but generally setshire, on the south-west by Dorsetshire, on

the cold, owing to its own retentive nature, and to the south and east by Hampshire, and on the north- frequent intervention of a vein of clay. Bradon Fo- east by Berkshire. It is about fifty-four miles ia rest (between Cricklade and Malmsbury) is an length, and thirty-four in the greatest breadth. It exception to the whole : it is a cold iron clay to is divided into two districts, viz. South Wiltshire the very surface ; so bad as to be called, by way and North Wiltshire. This division is generally of distinction, ‘ Bradon land ;’ and, says Mr. Da- made by supposing an east and west line to pass vis, whom we have before been quoting, never so through the county, at or near Devizes. This well applied as when in its original state of wood – county is in the province of Canterbury and the land, diocese of Salisbury, and is comprehended in the western circuit. It is divided into twenty-nine hundreds, containing one city, twenty-five market towns, nine boroughs, and 304 parishes. Salis- bury is considered as the county town.

There being a considerable difference between

the two great parts of this county, it has been i bought proper by Mr. Davis, in his Agricultural Report, to consider the circumstances of each dis- trict distinctly. The air on the whole is salubrious and agreeable : on the Downs it is sharp and clear ; and in the valleys mild, even in winter.

The principal rivers of Wiltshire are the Thames, the Upper and the Lower Avon, the Nadder, the Willey, the Bourne, and the Kennet. The Thames enters the north part of the county, between Ciren- cester in Gloucestershire and Tetbury, and runs eastward by Cricklade into Berkshire. The Lower Avon enters this county near Malmsbury, takes a southern course by Chippenham, where it becomes enlarged by the Colne and other rivulets into a wide stream, and winding westward, by Melksham and Bradford, leaves the county, and pursues its course towards Bath. The Upper Avon rises

The cold sharp air of the Wiltshire Downs is so among the hills, nearly in the middle of the county,

well known as to be almost proverbial. The soil of South Wilts, though various, is in a certain de- gree uniform : the hills are chalk, with its usual accompaniment of flint ; and in general the land on the sides of the hills, from which the flints have been washed, is a chalky loam, or rather a dis- solved chalk ; the flatter parts are a flinty loam, and the centre of the valleys, through which the ri- vulets run, is a bed of broken flints covered with black earth washed from the hills above. In some of the valleys there are veins of peat formed by the black earth without any mixture of flints : hence

about Devizes ; runs southward by the city of Salisbury, where it receives the united streams of the Willey and ttie Nadder ; hence it flows into Hampshire, and at Christchurch makes its exit into the British Channel. The Nadder, a serpen- tine river, rises near Shaftsbury in Dorsetshire, upon the western borders of this county, and flowing north-east falls into the Willey at Wilton. The Willey rises near Warminster, and running south-east, after receiving the Nadder, falls into the Up- per Avon on the east side of Salisbury. The Ken- net rises near the source of the Upper Avon, and

the white land prevails most near the sources of runs eastward by Marlborouch into Berkshire,

the rivulets, where the hills are steepest ; and the The smaller rivers of the county are the Colne, the

flinty loams near the junction of the rivulets, where Were, and the Deverill. This last dives under

the county is flattest. The sides of the hills which ground, like the Ouadiana in Spain, and the Molt?

have been mot washed are the thinnest and weak- in Surrey, and pursues its subterraneous course

est soils ; and the level u>ps, which have been very upwards of a mile, then rising runs onward to-

littlc if at all wished, are frequently the deepest wards Warminster. — The canals of Wiltshire are

and strongest lain!. Then, are some instances of the Thames and Severn Canal, which pass.-s

• irony clays ami clayey learns on the skirts of this through only a small part of the extreme boundaiv

VViL

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WIN

of the county. Tlt« Kennet and Avon Canal, Nvliich runs from tlie river Kennet to Newbury in Berkshire to the river Avon at Bath in Somersetshire, passing through the' very heart of the county by the town of Deviies and Bradford. The Wilts and Berks Canal, which enters the county from

Berkshire near South Marston, passes by Swindon and Wootton Basset; and, with branches to Chippenham and Calne, extends southwards to Melksham. near which town it unites with the Kennet and Avon. — Wiltshire has no peculiarity of natural productions. Great numbers of sheep and cattle for the London markets are bred there. Neither are there any mineral productions deserving of particular notice.

Wiltshire, according to the regulations of the Reform Bill, sends eighteen representatives to •the imperial parliament, viz. four for the county two for the city of Salisbury, one for Wilton, one for Westbury, one for Calne, two for Devizes, nvo for Chippenhara, one for Malmsbury, two for Crickdale, and two for Marlborough.

The following are some of the most eminent per- sons born there : — The great, the wise, and good Joseph Addison, moralist, poet, dramatic writer, critic, and miscellaneous writer, was born at Mil- ston, May 1, 1672, and died June 17, 1719.— Christopher Anstey, the ingenious author of the New Bath Guide (a work more distinguished for its humor and poetry, than for its decency and piety), was born, as is supposed, at Harden He- rish, near Chippenham, in the year 1724. — Died in 1805. — Dr. Thomas Bennet, a learned divine and controversial writer. Born at Salisbury in 1673. Died in 1728. — Sir John Davis, an ingenious poet, and lord chief justice of the Court of King's Bench. Born at Chisgrove in 1570. Died about 1626. He married a daughter of lord Audley : she pretended to prophetical powers, and printed seve- ral pamphlets of revelation. She died in 1652. — Stephen Duck, an ingenious poet and divine, but originally a thrasher. — James Harris, a philologi- cal and philosophical writer. Bora at Salisbury in 1709. Died in 1780. — Thomas Hobbes, a learned but eccentric philosophical and metaphy- sical writer. Born at Malmsbury in 1588. Died in 1679. — John Hughes, an ingenious poet, dra- matic, and miscellaneous writer. Born at Marl- borough in 1677. Died February 17, 1720. He bad a brother named Jabez, who published a translation of Claudian's Rape of Proserpine, and several other works, and died in 1731, aged forty- six. — Edward Hyde, earl of Clarendon and lord chancellor of England. Born at Dinton in 1608. Died at Rouen in 1670. — George Keate, a poet and miscellaneous writer. Born at Trowbridge in 172'.). Died in 1797.— Dr. Henry Sacheverell, a notorious political preacher. Born at Marlborough in 1672. Died in 1724. — Dr. John Scott, author of the work entitled, The Christian Life, &c. &c. Born at Chippenham in 1638. Died in 1694. — Thomas Tanner, bishop of St Asaph, a very learned and industrious antiquary. Born at Market-La- vmgton in 1674. Died 1738. — Sir Christopher Wren, an ingenious and celebrated architect, was born at East Knoyle in 1632. Died in 1723.

The extent of manufactures in the county of Wilts is very great; but the

*woollen manufactory is by far the greatest. — Salisbury manufactures great quantities of flannels and funcv woollens, and ha**

a considerable manufactory of cutlery, and steel goods, perhaps, for excellence of workmanship, su- perior to any in the kingdom ; Wilton, a large manufactory of carpets and fancy woollens ; De- vizes, a considerable manufactory chiefly of fancy woollens; Bradford, Trowbridge, Warminster, Westbury, and all the adjacent towns and villages, from Chippenham to Heytesbury inclusive, carry on most extensive woollen manufactories, princi- pally of superfine broad-cloths, kerseymeres, and fancy cloths ; at Mere and its neighbourhood there is a manufactory of linen, chiefly dowlas and bed- ticks ; at Albourn, a manufactory of cotton goods, chiefly strong goods, thicksets, &c.; at Swindon and its neighbourhood, a considerable manufactory of gloves. There is, indeed, scarcely a town in the county that has not a manufactory of some kind or other.

WI'LY, adj. ~\ From wile. Cunning; sly;

WI'LILV, adv. > full of stratagem ; insidious:

WI'LINESS, n. s. j the adverb and noun substan- tive corresponding.

They did work wilily, and went and made as if they had been ambassadors. Joshua.

The ungodly, for his own lust, doth persecute the poor ; let them be taken in the crafty wiliness that they have imagined. Psalm x. 2.

They are so cautelous and icily headed, especially being men of small practice in law matters, that you would wonder whence they borrow such subtilities and shifts. Sjienser.

In the fri/y snake

Whatever slights, none would suspicious mark, As from his wit and native subtilty Proceeding. Miittm.

My u-il y nurse by long experience found, And first discovered 10 my soul its wound ; 'Tis love, said she. Dry den.

WIM'BLE, n. s. & adj. Belg. u-iwfxl, from wemelen, to bore. An instrument with which holes are bored, by turning : nimble.

He was so wimble and so wight, From bough to bough he leaped light,

And oft the puroies latched. Spenser

As when a shipwright stands his workmen o'er, Who ply the u-imbte, some huge beam to bore ; Urged on all hands it nimbly spins about, The grain deep piercing till it scoops it out. Pope.

The trepan is like a wimble used by joiners. Sharp.

WIMPINA (Conrad), a learned professor of divinity at Frankfort, in the sixteenth century. He wrote against Luther under the name of John Tetzel. He died in 1529.

WIM'PLE, n. j. & v. a. Fr. guimplc. A hood ; a veil. Printed in Spenser, perhaps by mistake, wimble. To draw down as a veil.

The Lord will take away the changeable suits of ap- parel, and the wimples, and the crisping pins.

Ifaiah ii. 22.

So fair and fresh, as fairest flower in May, For she had laid her mournful stole aside, And widow-like sad wimble thrown away. Spenier.

The same did hide Under a veil that wimbled was full low. /

WIN, v.a. & v. n. Pret. wan and v> on; part pass. won. Sax. pinna ; Belg. irinticn ; Goth. ami Swed. u-inna. To gain by conquest; obtain; al- lure : to gain the victory ; obtain influence or favor ; be conqueror.

The town of Gaza, where the enemy lay encamped, was not so strong but it might be iron. A».

Thy virtue iron me ; with virtue preserve me. Dost thou love me 1 Kc«p me then still worthy to be beloved.

Sidney.

WINCHESTER.

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A gamester, having lost all, borroweth of his next fellow-gamester somewhat to maintain play ; which he setting unto him again, shortly winneth all from the winner. Spenser.

Go together,

You precious winners all ; your exultation Partake to every one. Shakspeare.

Beshrew the winners, for they played me false. Id.

When you see my son, tell him that his sword can never win the honour that he loses. Id.

She's beautiful, and therefore to be wooed ; She is a woman, therefore to be iron. Id.

You express yourself very desirous to win upon the judgment of your master, and not upon his affections only. Bacon.

He gave him a command in his navy, and under his good conduct won many islands. Heylyn.

Nor is it aught but just, That he, who in debate of truth hath won, Should win in arms. Milton.

Whether the winner laughs or no, the loser will com- plain ; and, rather than quarrel with his own skill, will do it at the dice. Temple.

Thy well -breathed horse Impels the flying car, and wins the course. Dryden.

He had given a disagreeable vote in parliament, for which reason not a man would have so much corre- spondence with him as to win his money. Adiliioti.

Thy words like musick every breast controul, Steal through the air, and win upon the soul. Pope.

That flood witnessed his inconstant flame, When thus he swore, and won the yielding dame. Gay.

WINANDERMERE, or WINDERMERE, a pa- rish in Kendal ward, Westmorland, taking its name from a noted lake of Winandermere. It lies on the western border of the county, at the foot of the Furness Fells, and comprehends the three townships of Applethwaite, Troubeck, Undermil- beck, and a part of Ambleside. This lake, the largest in England, is about twelve miles long and one broad, having very winding shores, and being from ninety to 222 feet deep. It is distinguished by the variety of beautiful prospects which it exhi- bits ; and it abounds with excellent fish, but is particularly noted for its delicate char. There are several little islands in the lake, in the largest of which stood an old fabric called Holme's house, now pulled down, and a curious edifice has been built in its place.

WINCANTON, a market-town in Ferris-Norton hundred, Somersetshire,

seven miles west of Mere, and 108 west by south of London ; containing 390 houses and 2143 inhabitants, of whom a consider- able number are employed in the manufacture of ticking, dowlas, serges, and stockings; it has also a good trade in cheese.

WINCE, v. n. Arm. and Welsh gwingo. To kick, as impatient of a rider, or of pain.

I will sit as quiet as a lamb, I will not stir, nor wince, nor speak a word. Slwksp.

Room, room, for my horse will wince, If he came within so many yards of a prince.

Ben Jonson.

WINCH, v. a. The same with wince; or from Fr. guincher, to twist. To kick with impatience; shrink from any uneasiness.

We who have free souls It touches not : let the galled jade winch, Our withers are unwrung. Shakspeare. Hamlet.

This last allusion galled the panther more ; Yet seemed she not to winch, though shrewdly pained.

Dm den.

Their consciences are galled ; and this makes them wincU and fling, as if they had some mettle. Tillotson.

WINCHCOMBE, a market-town and parish in Kiftsgate hundred, Gloucester, situate at the source of a small brook that falls into the Avon, among the Cotswold hills, six miles north-east of Chelten- ham, and ninety-five and a half W.N. W. of Lon- don. This is a town of great antiquity, and was once deemed a county of itself.

WINCHELSEA, a Post and market-town in Guestling hundred, rape of Hastings, Sussex, two miles south of Rye, eight north-east of Hast- ings, and sixty-seven south-west of London. It has only one parish church, although it is supposed to have had anciently no fewer than eighteen, the whole of which were swallowed up by the sea in a tempest. That part of Old Winchelsea which was not swallowed up is now a marsh. About two miles to the north-west are the ruins of a castle called Camber, built by Henry VIII. in 1539.

WINCHELSEA (Anne), countess of, was maid of honor to the duchess of

*York, second wife to king James II., and was afterwards married to Heneage second son of the earl of Winchelsea. One of the most considerable of the countess of Winchelsea's poems was that on the Spleen. A collection of her poems was printed at London in 1713, containing a tragedy never acted, entitled Aristomenes. The countess died in 1720*without issue.*

WINCHESTER, a city, and the county-town of Hants, situate on the banks of the river Itchin, eleven miles N. N. E. of Southampton, and sixty- two south-west by west of London. Most of the buildings have the appearance of antiquity, and the streets are broad and clean. It is about half a mile long from east to west, about a mile and a half in compass, and contains eight churches, ex- clusive of St. Bartholomews at Hyde.

The cathedral was begun in the eleventh century by bishop Walkelyn, and was in part rebuilt by bishop Wickham in 1394. The choir under the tower was vaulted in the reign of Charles I. The length of this magnificent fabric is 545 feet, includ- ing the chapel of our lady, fifty-four feet, and the choir 136. The height of the tower is 138 feet, but it appears from the abrupt manner of its ter- mination never to have been finished. The altar- screen is thought by many to be even superior to that of St. Alban's. The entrance into the choir is by a noble flight of steps, the breadth of the middle aisle. On each side of the great arch of the en- trance are recesses, wherein are placed the statues of king James and Charles I., cast in copper. The cross, from north to south, is divided from the choir by wooden partitions, carried up to a vast height. The stalls in the choir are of fine Gothic workmanship, but the bishop's throne is inferior to the rest. The stone screen, where the high altar is placed, is a neat and delicate piece of Gothic work ; but the niches, formerly ornamented with images, have now only urns placed in them. At the west end of the church is a painted window, represent- ing the history of the Old Testament, but much defaced. At the east end is also a window with paintings representing the Virgin Mary, the Son, and the Father. For many years this church was the place of the coronation of our kings. The east end of the church is terminated by three chapels ; that on the south is called bishop Langton's chapel, of curious carved work, containing several elegant iombs. In the centre is the chapel of our Lady, in which prayers are read every morning at six o'clock.

WINCHESTER.

The collece was founded by William of \Vick- iiam, the warden whereof is appointed by New College, Oxford, also erected by the same pious founder. The building consists of two large courts, containing suites of apartments for the warden, ten fellows, seventy scholars, three chaplains, six cho- risters, masters, &c. ; in the centre is an elegant chapel ; in the second court

are the schools, and a long cloister and enclosures for the diversions of the scholars. In the middle of the cloisters is the library, a strong stone building. Over the door of the school is a statue of ihe founder. Contiguous to the college, on the west, is a spacious quadran- gular building, forming a detached school for com- moners, or gentlemen not on the foundation, where they live in a collegiate manner under the imme- diate care of the head master. The college, chapel, and school, were completely repaired in 1795. The mother church of Winchester is St. Lawrence; it consists of one large aisle, with a lofty square tower containing five bells. St. Thomas's is an ancient structure, consisting of two aisles divided by round pillars of the Gothic order ; the t&wer is a low ordinary building. St. Maurice's was ori- ginally a priory, and consists of two aisles, one of which is very spacious ; the tower is strong. St. Michael's is a low and ancient building, tiled, having two good aisles, and a tower containing five bells. St. Swithin's is erected over a postern called Kingsgate, and consists of a large neat room, as- cended to by a stone staircase St. Peter's Cheese- hill consists of two aisles, of different sizes, both neat but plain ; it has a tower containing three bells. St. John's at Hill is divided into three .aisles by round Gothic pillars ; the tower is re- markably strong, and finished with a turret con- taining a clock. St. Martin's Winnall was rebuilt in 1736, and consists of one aisle, having a small tower at the west end containing one bell. Besides these churches here are several meeting-houses for Dissenters of different denominations. Near the cathedral is a college or alms-house, founded by bishop Morley, in 1672, for ten clergymens' widows. Christ's Hospital, commonly called the Blue Alms, was founded in 1706; besides which there are a number of private charities, and three well-endowed charity-schools. The public infirmary is a hand- some edifice, erected in 1759, the ascent to which is by a noble flight of steps. In the High Street is a market-cross, having five steps round it ; this place serves also for a fish-market. The town-hall, in the same street, is a handsome building, sup- ported by Doric pillars ; it is ornamented with a statue of queen Anne. In 1788 a new spacious county jail was erected on the Howardian plan, in the court of which is a neat chapel ; there is also a Bridewell for the city and another for the county ; the latter erected in 1786. The theatre is a hand- some structure, built in 1785. There is an annual well-attended music-meeting held here in Septem- ber, continuing for three days, which closes with a ball. Winchester has also its winter assemblies, concerts, balls, and every other fashionable amuse- ment. The streets are well paved and lighted, and a new and commodious market-house was erected in 1772. Here are two banking-houses.*

Winchester, by the Britons, was called Caer (" \cnt, and during the time of the Saxons many of their kings resided here. Athelstan granted it the privilege of six mints, and in 660 it was erected into a bishopric,

transferred from Dorchester. Its

ancient castle is supposed to have been built by king Arthur; in it William II., surnamed Rufus, was crowned. During the civil war it was mostly demolished by the parliamentary forces, except the old hall in which the assizes are still held ; in this hall hangs what is denominated Arthur's round table, with the names of the knights thereon. On the site of the castle a royal palace was begun in 1683, the principal floor of which is a noble range of apartments, and contains in all 160 chambers; tins has often been occupied by prisoners of war on their parole. Several monasteries and religious houses were formerly in the suburbs of this "city. The plague made great devastations here in the years 941, 1348, and again in 1668; and at the west end of the town is an obelisk having an in- scription commemorative of those calamities. The ' corporation of this city consists of a mayor, re- corder, six aldermen, &c.ˆwho, with the free bur- gesses, return two members to parliament. Win- chester has but little trade, though an ancient wool-combing manufactory still exists, and a silk manufactory has been introduced. All the public business of the county is transacted in this city. The markets are held on Wednesday and Saturday, and are well supplied with all kinds of provisions, poultry, fish, &c.

WINCHESTER, a post-town, borough, and capital of Frederick county, Virginia, thirty miles south-west of Harper's Ferry, seventy W. N. W. of Washing- ton, ninety-five north-east of Staunton, and 150 N.N.W. of Richmond. It is pleasantly situated, regularly laid out in squares, is a handsome and flourishing town, and contains a court-house, a jail, an alms-house, a market-house, containing a freemason's hall, two banks, two academies, one for males and one for females, two printing offices, from each of which is issued a weekly newspaper, and six houses of public worship, one for Presby- terians, one for Episcopalians, one for German Lutherans, one for Baptists, one for Methodists, and one for Roman Catholics. The principal street is well paved. The town is well built; a large part of the houses are of brick. It is supplied with excellent water by an aqueduct. Near the town there are several medicinal springs ; in the vicinity there are a number of flour mills.

WINCHESTER (Elhanan), the founder of a reli- gitms sect callid for a time Winchesterians or Universalists, because their distinguishing tenet was the ultimate universal salvation of mankind, and also of the devils. Many of them have since become Unitarians. He was a native of the United States, where he appears to have first broached his sentiments. He visited this country about 1788, and attempted to found a Philadelphian Society, and propagated his doctrine by means of a maga- zine and preaching. He contended that as it was certain all are not regenerated in the present life, there must be room for a farther process of purifi- cation of fallen creatures

in a future state; and that this would be effected chiefly by the means of punishment in the torments of hell, which, how- ever, in some cases might extend to ‘ ages of ages’ before the stubborn sinner would be purified Besides other literary productions Mr. Winchester composed an heroic poem on the Process and Empire of Christ, from his Birth to the Time when he shall have Delivered up the Kingdom to God even the Father, which he recited from the pulpit in a chapel in Southwark, and afterwards pub-

Hshed in his magazine. Among his works are Lectures on the Prophecies that Remain to be Ful- filled, 1790, 4 vols. 8vo. ; and the Universal Re- storation, exhibited in a Series of Dialogues between a Minister and his Friend, 1788, 8vo., of which a fourth edition, with notes by W. Vidler, appeared in 1799. In consequence of some domestic mis- fortunes Mr. Winchester returned in 1792 to his native country, where he died.

WINCK ELM AN (abbe John) was bora at Stendall, in Brandenburgh, in 1718. His father was a shoemaker. After having been seven years professor in the college of Seehausen near Salf- wedel, he went into Saxony, where he resided seven years, and was librarian to count Bunau at Nothe- nitz. When he left this place, in 1754, he went to Dresden. In 1755 he went to Rome. His prin- cipal object was to see the Vatican library, and to examine the ruins of Herculaneum. In 1756 he planned the Restoration of Ancient Statues, and the Taste of the Greek Artists. He also designed an account of the galleries of Rome and Italy. He also intended a history of the corruption of taste in art, the restoration of statues, and an illustration of the obscure points of mythology. All these different essays led him to his History of Art, and nis Monument! Inediti. Mr. Winckelman’s Mo- iiumenti Inediti, of which he had begun the third volume in 1767, seem to have secured him the esteem of antiquaries. Had he lived we should nave had a work long wished for — a complete col- lection of the bas-reliefs discovered from the time of B.irtoli to the present, the greater part of which are in the possession of cardinal Albani. When cardinal Albani succeeded to the place of librarian of the Vatican, he endeavoured to get a place for he Hebrew language for Winckelman, who refused a canonry because he would not take the tonsure. The elector of Saxony gave him, in 1761, unsoli cited, the place of counsellor Richeter, the direc- .ion of the royal cabinet of medals and antiquities at Dresden. Upon the death of the abbe Venuti, 1762, he was appointed president of the antiquities of the apostolic chamber, with power over all disco- veries and exportations of antiquities and pictures. This is a post of honor, with an income of 160 scudi per annum. He had a prospect of the place of president of antiquities in the Vatican, going to be created, at sixteen scudi per month, and was named corresponding member of the Academy of Inscriptions. The king of Prussia offered him the place of

librarian and director of his cabinet of medals and antiquities, void by the death of M. Gantier de la Croze, with a handsome appoint- ment. He made no scruple of accepting the offer ; but when it came to the pope's ears he added an ippointmentout of his own purse, and kept him at Rome. In April, 1768, he left Rome to go with M. Cavaceppi over Germany and Switzerland. On his return to Italy he was assassinated for the pur- pose of robbery, by a miscreant with whom he had formed an acquaintance on the road.

WIND, v. a., v. »,& n. s."| Prefer, wound, in WIND'EGG, n. s. \ Pope winded ; part.

WIND'ER, (wound. Sax. pin-

WIXD'ISG, (" •aan ; Teut. and Belg.

W IXD'INGSHEET, | wiTidcn ; Goth, and

WIXD'LASS. J Swed. winda. To

blow; sound by inflation ; turn round ; twist; di- rect or regulate in motion ; enfold ; insinuate ; change ; taking itp : as a verb neuter, to turn ;

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change ; be convolved ; proceed in flexures : a windegg is an egg not impregnated : a winder, any thing or person by which something is turned round ; plants that twist round others : winding is, flexure; meander: windingsheet, a sheet in which the dead are wound : windlass, an instru- ment for turning or winding up tackle.

The squire 'gan nigher to approach, And u-ind his horn under the castle wall, Tliat with the noise it shook as it would fall. Spenter.

He vaulted with such ease into his seat, As if an angel dropt down from the clouds, To turn and u-ind a fiery Pegasus. Shakspeare.

Edmund, seek him out, u-ind me into him ; frame the business after your own wisdom. Id. King Lear.

Sleep thou, and I will tn'»rf thee in my arms.

Skuttpmrc

These arms of mine shall be thy windingsheet ; My heart, sweet boy, shall be thy sepulchre, For from my heart thine image ne'er shall go

Id. Henry T'l.

Thus do we of wisdom and of reach, With windlass, and with assays of bias, By indirections find directions out. Id. Hamlet.

Xero could touch and time the harp well ; but in government sometimes he used to tciml the pins too high, and sometimes let them down too low. Bacon.

Plants that put forth their sap hastily, have their bodies not proportionable to their length ; and there- fore they are w inders and creepers, as ivy and bryony. Id. Natural History.

The figure of a sturdy woman, done by Michael Angelo, washing and winding of linen cloaths ; in which act she wrings out the water that made the fountain.

Wottim.

The winder shows his workmanship so rare As doth the fleece excel, and mocks her looser clew ; As neatly bottomed up as nature forth it drerf.

Draytim.

These mathematical engines cannot be so easily and speedily wouid up, and so certainly levelled, as the other. mtkins.

He winds with ease Through the pure marble air his oblique way. Mikon.

Whence turning of religion's made The means to turn and wind a trade. Hudibras.

Sound eggs sink, and such as are addled swim ; as do also those termed hypenemia, or windegg$.

Browne's Vulgar Envurs.

You that can search those many-cornered minds, Where woman's crooked fancy turns and wind.*

Dryten.

Every Triton's horn is winding, Welcome to the watery plain. Id.

Stairs of a solid newel spread only upon one smalt newel, as the several folds of fans spread about their centre ; but these, because they sometimes wind, and sometimes fly off from that winding, take more room up in the

staircase. Moion.

Will not the Author of the universe, having made an automaton which can wind up itself, see whether it hath stood still or gone true ? Grew.

Were our legislature vested in the prince, he might iri'rui and turn our constitution at his pleasure, and shape our government to his fancy. Addison.

Still fix thy eyes intent upon the throng, And, as the passes open, wind along. Gay.

Mr. Whiston did not care to give more than short, general hints of this famous challenge, and the issue of it ; but he endeavours to icind and turn himself every way to evade its force. Waterland.

Ye vig'rous swains ! while youth ferments your

blood, Wind the shrill horn, or spread the waving net. Pop.*

Swift ascending from the azure ware, He took the path tliut winded to the CAT. Ji»*

To keep troublesome servants out of the kitchen, leave the winder sticking on the jack, to fall on their heads. Swift.

Is there a tongue, like Delia's o'er her cup, That runs for ages without winding up ? Young.

WIND, n. s. ^| Saxon pin» ; Teut. Belg.

*WIND'BOUND, adj. and Dan. wind; Welsh WIND'DRIVEN, g*uynt. Air in motion; a WIND'FALL, n. s. flux, effusion, or stream of WIND'GALL, air; direction of such flux;*

WIND'GUN, [^breath ; any thing light or

WIND'INESS, [v.a. { trifling: ' to take the wind', WIN'DOW, n. s. & is to take the upper hand: WINDOW'ED, adj. windgall is explained be- WIND'PIPE, n. s. low : window seems origi- WIND'WARD, adj. nally winddoor: to window, WIN'DY. J to furnish with, place at, or

break into, openings like a window.

Being one day at my window all alone, Many strange things happened me to see. Spenser.

From this his modest and humble charity, virtues which rarely cohabit with the swelling windiveis of much knowledge, issued this. Brerewood.

Why should calamity be full of words 1 Windy attornies to their client woes, Poor breathing orators of miseries. Shakspeare.

The worthy fellow is our general. He's the rock, the oak, not to be wind shaken. Id. Coriolamts.

If my wind were but long enough to say my prayers, I would repent. Shtikspeare.

His horse infected with the fashions, full of wind- galls, and sped with spavins. Id. Taming of tfte Shrew.

Poor naked wretches, whereso'er you are, How shall your houseless heads, and unfed sides, Your looped and windowed raggedness, defend you From seasons such as these? Id. King Lear.

Let gallows gape for dogs, let man go free, And let not hemp his windpipe suffocate. Id Henry V.

Where the air is pent, there breath or other blowing, which carries but a gentle percussion, suffices to create sound ; as in pipes and wind intruments. Bacon.

Subtile or windy spirits are taken off by incension or evaporation. Id.

Between these half columns above, the whole room was windowed round. Watlon't Architecture.

Falmouth lieth farther out in the trade way, and so offereth a sooner opportunity to wind-driven ships than Plymouth. Carew.

The windgun is charged by the forcible compression of air, being injected through a syringe. Witltins.

Such a sailing chariot might be more conveniently framed with moveable sails, whose foice may be im- pressed from their motion, equivalent to those of a windmill. Id.

A windiness and purring up of your stomach after dinner, and in the morning. Harvey vn Contumptton.

In an organ, from one blast of wind, To many a row of pipes the sound-board breathes.

Milton.

What windu joy this day had I conceived, Hopeful of his delivery, which now proves Abortive. Id.

Think not with wind of airy threats to awe. Id.

His wind he never took whilst the cup was at his mouth, but justly observed the rule of drinking with one breath. Hakewill.

The quacks of government, who sat At the' unregarded helm of state, Considered timely how t' withdraw, And save their windpipe from the law. Iludibrai.*

A fair view her window yields, The town, the river, and the fields. Waller.

The perfume of the flowers, and their virtues to cure shortness of wind in pursy old men, seems to agree most with the orange. Temple.

Yet not for this the windbound navy weighed ; Slack were their sails, and Neptune disobeyed.

Dnfjen.

Exchanging solid quiet to obtain The iri/idi/ satisfaction of the brain. Id. Juvenal.

Because continual respiration is necessary for the support of our lives, the windpipe is made with annu- lary cartilages. Kay.

Gather now, if ripe, your winter fruits, as apples, to prevent their falling by the great u-inds ; also gather your windfall. Evelyn'* Kalemlnr.*

Look, here's that windy applause, that poor transitory pleasure, for which I was dishonoured. .s'oi/fA.

His fancy has made a giant of a windmill, and he's now engaging it. F. Atterburii.

In such a windy colic, water is the best remedy after a surfeit of fruit. Arhuthiiot on Aliments.

Forced from windguns, lead itself can fly, And pond'rous slugs cut swiftly through the sky.

Pope,

When you leave the windows open for air, leave books on the window-seat, that they may get air too.

Swift.

WINDS. Under the article PNEUMATICS our readers will find a very full illustration of the theory of the winds, and the local operation of land and sea in destroying the aerial equilibrium. Our space will now only permit a brief notice of the effect of air in motion in producing changes in the barometer.

About the beginning of the last century Mr. Hawksbee proposed the following experiment to explain the descent of the barometer during a storm : — ‘ Having connected the cisterns of two barometers by a horizontal pipe of three feet, he inserted in the side of one of them a pipe opening outwards, and connected the other side with a large receiver, into which three or four charges of atmosphere had been compressed : on opening the cock, the air rushed with vehemence over the mer- cury in the cistern and effected its escape, while both columns fell simultaneously about two inches, and rose again as the force of the blast diminished ;’ from this experiment he derives four corollaries, the first two of which are, 1. ‘ That we have here a clear and natural account of the descent and vibrations of the mercury during a storm.’ And, 2. ‘ That not only the different forces but also the different directions ol the wind are capable of pro- ducing a difference of subsidence of the mercury.’ Upon this piol’essor Leslie remarks, ‘ This expe- riment has a specious appearance, and might seem to warrant the conclusions drawn from it; but a closer examination dispels the illusion ; since the air had been condensed four times, it must issue from the vessel with the velocity of 2700 feet in a second; this is a rapidity, however, twenty times greater than the most tremendous hurricane ; the very small change of the 400th part of an atmos- phere would hence have been sufficient to produce the strongest wind ever known, and therefore its influence in passing over the mercurial column must have been quite insignificant. But the expe- riment itself is absolutely fallacious; the peculiar result proceeded from a casual circumstance, the exit-pipe being larger than the pipe which intro- duced the air; for the air being previously con- densed, and still restrained in its pas>ag<; through the induction pipe, on entering the cavity of the box immediately expands beyond the limit of equi- librium, and, finding an easy escape through the exit-pipe, allows that state of dilatation over th»

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mercury during the time of tin: horizontal flow, hut the air contained in the other cistern must, from its communication by the pipe, suffer a like expansion, and the columns will subside equally.'

That this reasoning is also fallacious may be thus shown : — That the air, even after its ' dila- tation1 in its passage through the cistern, is still considerably denser than the surrounding air (other- wise the blast would cease) is beyond dispute ; whence then the fall of the mercury ? it should rather rise; this explanation is evidently inadequate. That the difference of size in the induction and exit-pipes will effect the result is admitted: indeed it is evident; and I am inclined to think that, if in the above case, the blast had been equally swift and less confined, the result would have been more striking, and therefore that ' the influence of the strongest wind ever known would not be quite insignificant.' The professor continues, ' Such is unquestionably the true explication of the fact,' and confirms it by an experiment.

The reason given in the latter case is undoubt- edly just, but not so in the former; for to produce a rarefaction of the air in the cylinder it is necessary that more air should pass out through the exter- nal aperture than is injected at the other, an inci- dent which we cannot look for.

The learned professor proposes a new theory of the variations of the barometer, the principle of which is, ' That as a horizontal current of air must, from the form of the earth, continually deflect from its rectilineal course, such a deflection being of the same nature as a centrifugal force, must diminish the weight or pressure of the fluid.' This may be sufficient to account for the fall of the barometer in high winds, but it necessarily ascribes the rise of it to a cause merely negative, viz. the absence of wind, yet the rise of the barometer in a north-east wind is often very considerable. On the other hand, if we consider the north wind as blowing downwards (which we may perhaps do as coming from a colder region) the fact accords with Mr. Hawksbee's theory.

WINDAGE of a gun, mortar, or howitzer, in military affairs, the difference between the diameter of the bore and the diameter of the shot or shell. In England the diameter of the shot is supposed to be divided into twenty equal parts, and the dia- meter of the bore into twenty-one of those parts. The French divide the shot into twenty-six, and the bore into twenty-seven. The Prussians divide the shot into twenty-four, and the bore into twenty-five. The Dutch nearly the same as the English. The general windage of

shells in England is one- fourth of an inch, let them be large or small, which is contrary to all reason. It is evident that the less windage a shot or shell has, the farther and truer it will go ; and, having less room to bounce from side to side, the gun will not be spoiled so soon.

It is true that some artillery officers say that the windage of a gun should be equal to the thickness of the ladle; because, when it has been loaded for a while, the shot will not come out without being loosened thereby, in order to unload it ; and when this cannot be done it must be fired away, and so losf: but, in our humble opinion, the most advan- tageous windage would be in dividing the shot into twenty-four equal parts, and the bore into twenty-five, on account of the convenient scale ii affords, not only to construct guns thereby but VOL XX'II.

also their carriages. Hence, agreeably to this plan tliL- windage of a nine-pounder will be M66 of an inch, consequently a sufficient thickness for a ladle; and those of a higher calibre become still thicker in proportion.

WINDFLOWER. See ANEMONE.

WINDGALLS. See VETERINARY ART.

WIND-GUN. See AIR-GUN.

WINDHAM (William), a modern statesman of eminence, was the son of colonel Windham of Felbrigge in Norfolk. He was born in London in 1750, and educated at Eton, whence he was> re- moved to Glasgow, and subsequently to University College, Oxford. He capne into parliament in 1782 as member for Norwich, being then also se- cretary to the earl of Northington, lord-lieutenant of Ireland. He sided with the opposition until the celebrated secession from the whig party in 1793, when he followed Mr. Burke and was appointed secretary at war. This office he retained until the resignation of Mr. Pitt in 1801, and much distin- guished himself by his opposition to the treaty of Amiens. On Mr. Addington's being driven from the helm a new administration was again formed by Mr. Pitt, which terminating at his death, in 1806, lord Grenville, in conjunction with Mr. Fox, made up the administration so well known by the desig- nation of All the Talents. In this short-lived ca- binet Mr. Windham held the post of secretary of war and colonies, in which capacity he carried his bill for limited service in the regular army. His death took place May 17th, 1810, in consequence of a contusion of the hip, produced by a fall while exerting himself to save from the flames the library of his friend Mr. North. The eloquence of Mr. Windham was forcible, pointed, and peculiar, and he was a sound scholar.

WINDHATCH, in mining, a term used to ex- press the place at which the ore is taken out of the mines.

A WINDLASS is a machine used for raising huge weights, as guns, stones, anchors, 8cc. It is very simple, consisting only of an axis or roller sup- ported horizontally at the two ends by two pieces of wood and a pulley ; the two pieces of wood meet at top, being placed diagonally so as to prop each other; the axis or roller goes through the two pieces and turns in them. The pulley is fastened at top where the pieces join. Lastly, there are two staves or handspikes which go through the roller, whereby it is turned, and the rope which comes over the pulley is wound off and on the same. In a small ship the windlass is placed upon the deck, just abaft the foremast.

A WINDMILL is a kind of mill, the internal parts of which are much the same with those of a water-mill ; from which, however, it differs in being moved by the impulse of the wind upon its sails or vanes, which are to be considered as a wheel in axis.

WINDOW (vindue, Danish : some imagine it to have been originally wind- door), in architecture. This word has various derivations. Perhaps the most direct is the Danisli one first cited ; but there can be little doubt that the original meaning of the word was, like the Welsh term wynt dor, a passage for the wind. In fact it is still provincially deno- minated winder in Lancashire, as it is (though with no such retrospective intention) among the citizens of Cockaigne. Windows are an essential part of every building, since light is one of the principal

necessaries of existence. At the same time they may be so introduced as to contribute to orna- mental as well as useful purposes ; and the archi- tect who thoroughly understands his profession will take especial care that they do so contribute. Nothing can be more tasteless and ugly than the ‘ hole in the wall ‘ which is commonly denominated a window. Grace may be displayed not only in their number, size, and disposition, but in their shape and orna- ments. The proportions of windows should of course vary according to the usages of different countries, and these usages are influenced by divers causes, such as climate, degrees of tempera- ture, length of days, clearness of sky, &c., &c. In countries where, as in our own, the sun has seldom any very fierce sway, even in summer, and where the

winter is long and dreary, the windows should be large and numerous, in order to convey to the interior of the house as much as possible of the light and heat that nature affords. On the other hand, in hot climates, they may be fewer and of less extent. Thus, then, it is impossible to lay •Jown precise rules for the construction of these portions of architecture ; but nevertheless there are rules springing out of the principles of solidity, convenience, agreement of parts, and the pleasure which arises from an harmonious combination. See PROPORTION.

In the most ancient eras, the windows of habi- tations were very small and narrow ; and the same remark obtains with regard to the castles and other edifices constructed during the middle ages. In the painting on the Greek vase which represents Jupiter about to scale the window of Alcmena, the opening is exceedingly small. According to Seneca those of the baths of Scipio were so little that they merited not the name, and might rather be denomi- nated crevices. As the Romans improved, however, in the elegant arts, this particular was not over- looked, and both their town and country houses were decorated with numerous and ample windows. It was not customary, though, to have them overlook- ing the street ; and they were in the majority of in- stances confined to the interior court of the house. The windows of the temple of Jerusalem were larger withinside than without; and appear to have served the double purpose of admitting light and giving vent to the fumes of the incense which was so plentifully burned. The ancient temples had not generally windows ; some exceptions, how- ever, exist to this observation. Before the use of glass became common, which was not till towards the end of the twelfth century, the windows in this country seem generally to have been composed of paper; which, properly prepared with oil, forms no contemptible defence against the intrusions of tie weather.

WINDPIPE. See ANATOMY, Index. WIND-SAIL (wind and sail), a sort of wide tube or funnel of canvas, employed to convey a stream of fresh air downward into the lower apartments of a ship. This machine is usually extended by large hoops situated in different parts of its height. It is let down perpendicularly through the hatches, being expanded at the lower end like the base of a cone, and having its upper side open on the side which is placed to windward, so as to receive the full current of wind ; which, entering the cavity, fills the tube, and rushes downwards into the lower regions of the ship. There are generally three or four of these in our capital ships of war, which,

together with the ventilators, contribute greatly to preserve the health of the crew.

WIND-SHOCK (wind and shock), a name given by farmers to a distemper

to which fruit trees, and sometimes timber trees, are subject. It is a sort of bruise and shiver throughout the whole substance of the tree ; but, the bark being often not affected by it, it is not seen on the outside, while the inside is twisted round and greatly injured. It is by some supposed to be occasioned by high winds ; but others attribute it to lightning. Those trees are most usually affected by it whose boughs grow more out on one side than on the other. The best way of preventing this in valuable trees is to take care in the plantation that they are sheltered well, and to cut them frequently in a regular manner while young.

WINDSOR, NEW, a borough and market town in Berkshire, situated on the Thames, twenty-two miles west by south of London; containing 677 houses and 4288 inhabitants ; viz. 1964 males, and 2324 females. This town has belonged to the crown ever since the conquest, and has of late been much improved ; it consists of six principal streets, and several inferior ones. The former are well paved and lighted. The parish church, which has recently been rebuilt, is a neat, handsome, Gothic structure. In the High Street stands the Guild- hall, or Town House, a neat structure, supported by columns and arches of Portland stone. On the north side is a statue of queen Anne, and on the south side that of prince George of Denmark ; the inside is adorned with the portraits of many royal personages.

Windsor contains many handsome buildings, but its chief pride is its castle, which for more than 700 years has been a favorite residence of the British kings. It was first erected by William the Conqueror, soon after the conquest, received addi- tions from many succeeding monarchs, and under Edward III. was almost entirely rebuilt : during the mischief and plunder of the civil war it became in some degree dilapidated ; but it was restored to its ancient state and splendor by Charles II. This noble edifice is situated on a high hill, having a beautiful command of the Thames. On the decli- vity is a terrace, faced with a rampart of freestone, being 1870 feet long; at the end of this walk is a gate leading into the parks, which are several miles in circumference, and surrounded by a brick wall. The castle is divided into two courts or wards, with a large round tower or keep between them, the whole occupying about twelve acres of land ; and having many batteries and towers for its defence. The upper court consists of a spacious square, bounded on the west by the round tower, on the north by the royal apartments, St. George's Hall, and the royal chapel ; and on the east and south by the chambers appropriated for the officers of state. In the centre of this square is an equestrian statue of king Charles II. in the habit of a Roman Ctesar ; underneath is a curious engine to raise water for the castle. The keep or tower is the lodging of the constable or governor, built in the form of an amphitheatre, ascended to by a flight of stone steps. Here is the guard room or magazine for arms, curiously arranged. Over the chimney is carved in lime wood the star and garter, encom- passed with daggers and

pistols. The lower court is larger than the upper, and is divided into twc paruj by St. George's Chapel, which stands in the

middle, and is reckoned one of the finest Gothic structures of the kind in being ; on the north side of this court are the houses and apartments of the dean and canons, and other officers ; and on the west side are the houses of the poor knights of Windsor. These poor knights, eighteen in number, have a premium of £18 per annum, and annually a gown of scarlet cloth, with a mantle of blue or purple cloth, on the sleeve of which is embroidered the cross of St. George. The royal apartment are on the north side of the court, called the star build- ing, from having the star and garter in gold on the outside. The entrance is from the upper ward, through a handsome vestibule, which has under- gone a total alteration from designs by Mr. Wyatt- ville. Almost every room in this division of the castle is ornamented with paintings executed by masters of the greatest celebrity. Many of them, however, are not originals ; and others are of infe- rior merit. The principal rooms of this splendid suite of apartments are the queen's guard chamber, the queen's presence chamber, the queen's audience chamber. The ball room, the queen's drawing room, the queen's bed chamber, the room of beau- ties, the queen's dressing room, queen Elizabeth's or the picture gallery, the king's bed-chamber, the king's drawing-room, the king's public dining-room, the king's audience-chamber, the king's presence- chamber, and the king's guard room. A grant of £500,000 was made by parliament in 1824 for re- pairing and embellishing this magnificent castle, which is now nearly finished.*

St. George's hall is set apart entirely to the honor of the most illustrious order of the garter. The length of this supurb chamber is 108 feet. The chapel of St. George was originally a chapel dedi- cated to Edward the Confessor, wherein Henry I. placed eight secular priests, pensioners. It was rebuilt by Edward III., and established as a col- legiate church, having a dean, twelve canons, thir- teen minor canons, four clerks, six choristers, and twenty-six poor alms knights. This structure owes its present form to Edward IV., and its completion to Henry VII. Here lie interred, under the choir, the bodies of Henry VIII. and Jane Seymour, Charles I. and a daughter of queen Anne ; adjoin- ing the east end is a neat building erected by Henry VII. as a burial place for himself and sue cessors ; a most sumptuous monument was after- wards erected here by Cardinal Wolsey, but he dying at Leicester was there privately buried. This chapel lay neglected until the reign of his late majesty, by whom it was completely repaired, in 1790; and adorned with rich carvines in wood, and a new altar-piece, organ, and gallery. The ceremonies of the installation of the knights of the garter are performed in this chapel with great state and

solemnity. In the tower is a neat free-school for thirty-six boys and twenty-four girls ; and an hospital for sick soldiers.

Windsor was made a free borough by Edward I., and sent members to parliament in the thirteenth year of the same reign (which it has continued to do except from 14th of Edward III. until 25th of Henry VI.), who are chosen by the inhabitants of the borough paying scot and lot, the number of voters being about 400. The corporation consists of a mayor, two bailiffs, twenty-eight burgesses, thirteen of whom are called fellows or benchers of the Guildhall ; of these, ten, besides the mayor and bailiffs, are styled aldermen. A neat theatre has

heen lately erected, but it is only opened during the vacations at Eton College. Here are extensive barracks for horse and foot soldiers. On the south side of this town is Windsor Great Park, well stocked with deer, fourteen miles in circumference; the entrance is by a road called the Long Walk, nearly three miles in length, through a double plantation of trees OT each side, leading to the Ranger's Lodge ; on the north and east side of the castle is the Little Park, about four miles in circum- ference : Queen Elizabeth's Walk herein is much frequented. At the entrance of this park is the Queen's Lodge, of recent erection. This building stands on an easy ascent opposite the upper court, on the south side, and commands a beautiful pros- pect over the surrounding country. The gardens are elegant, and have been much enlarged by the addition of the gardens and house of the duke of St. Alban's, purchased by his late majesty. In this park his present majesty has erected a most beautiful Cottage Ornee, as a place of occasional retirement. Windsor Forest, being a circuit of fifty-six miles, was originally formed for the exer- cise of the chase by our ancient sovereigns ; and was also a favorite amusement of his late majesty. Market on Saturday.

WINDSOR, OLD, a parish lying to the east of New Windsor, and adjoining thereto. This was anciently the residence of the Saxon kings, that part called New Windsor having chiefly risen since the time of William I. Here are several elegant houses situated on the banks of the Thames. Near the church is a mineral spring, called St. Peter's Well.

WINDSOR, a county on the east side of Vermont, bounded north by Orange county, east by Connec- ticut River, south by Windham county, and west by Rutland and Addison counties. Chief towns Wind- sor and Woodstock.

WINDSOR, a post town of Windsor county, Ver- mont, on the west bank of

the Connecticut, eighteen miles south of Dartmouth College, sixty-one south of Montpelier, and 112 north-west of Boston. It is a very pleasant, handsome, and flourishing town, one of the largest in the state, and has considerable trade. It contains a court house, a state prison, and an academy for young ladies, two handsome houses of public worship, one for Congregation- al ists, and one for Baptists. An Episcopal church is about to be erected. The state prison usually contains upwards of 100 prisoners. The academy is a respectable institution, and has from seventy to 100 pupils. The building is of brick, two storie? high.

WIND-TAUGHT (wind and taught, for tight), in sea-language, denotes the same as stiff in the wind. Too much rigging, high masts, or any thing catching or holding wind aloft, is said to hold a ship wind- taught ; by which they mean that she stoops too much in her sailing in a stiff gale of wind. Again, when a ship rides in a main stress of wind and weather, they strike down her topmasts, and bring her yards down, which else would hold too much triad, or be too much distended and wind taught.

WINDWARD, in the sea language, denotes any thing towards that point whence the wind blows, in respect of a ship : thus windward tide is the tide \vhich runs against the wind.

WINDWARD ISLANDS, in opposition to Leeward. These islands, in the West Indies, extend from Mar- tinico to Tobago.

WINDWARD PASSAGE, a name given to a course from the south-east angle of the island of Jamaica, in the West Indies, and extending from 160 leagues to the north side of Crooked Island, in the Baha- mas. Ships have often sailed through this channel, from the north part of it to the island of Cuba, or the gulf of Mexico, notwithstanding the common opinion, on account of the current which is against it, that they keep the Bahama shore on board, and that they meet with the wind in summer for the most part of the channel easterly, which, with a counter current on shore, pushes them easily tli rough it.

WINE, n. s. f Sax. pin; Belg. v'mn ; Gothic

WIN'Y, adj. \ and Swed. win. The fermented juice of the grape : winy, partaking of the quali- ties of wine.

The increase of the vineyards for the wine cellars.

Chronicle.*

Be not amongst trine-bibbers, amongst riotous eaters.

Proverbs.

His troops on my strong youth like torrents rusht : As in a wine-press Judah's daughter crusht. Sandys.

The wine of life is drawn, and the meer lees Is left this vault to brag of. Shakspeare.

W here the wine-press is hard wrought, it yields a harsh wine that tastes of the grape-stone. Bacon.

Set cucumbers among muskmelons, and see whether the melons will not be more winy, and better tasted.

Id.

With large wine-offerings pour'd, and sacred feast.

Milton.

The firstlings of the flock are doomed to die ; i-ich fragrant wines the cheering bowl supply. Pope.

WINE is an agreeable spirituous liquor, pro- duced by fermentation from those vegetable sub- stances that contain saccharine matter. A very great number of vegetable substances may be made to afford wine, as grapes, currants, mulberries, elder, cherries, apples, pulse, beans, pease, turnips, radishes, and even grass itself. Hence under the class of wines, or vinous liquors, come not only wines, alsolutely so called, but also ale, cydev, &c. But the term wine is more particularly appropriated to the liquor drawn from the fruit of the vine.

When the grapes are ripe, and the saccharine ptinciple is developed, they are then pressed, and the juice which flows out is received in vessels of a proper capacity, in which the fermentation ap- pears, and proceeds in the following manner : — At the end of several days, and frequently after a few hours, according to the heat of the atmosphere, the r.ature of the grapes, the quantity of the liquid, and the temperature of the place in which the operation is performed, a movement is produced in the liquor, which continually increases ; the volume of the fluid increases ; it becomes

turbid and oily; carbonic acid is disengaged, which fills all the unoccupied part of the vessel ; and the tem- perature rises to 725°. At the end of several days these tumultuous motions subside, the mass falls, the liquor becomes clearer, and is found to be less saccharine, more odorant, and of a red color, from the re-action of the ardent spirit upon the coloring matter of the pellicle of the grape. The wine is usually taken out of the fermenting vessels at the period when all the phenomena of fermentation have subsided. When the mass is settled, the color of the liquor is well developed ; when it has become clear, and its heat has disappeared, it is nut into casks, where, by a second insensible fermentation, the wine is clarified, its principles combine more

perfectly together, and its taste and smell become more and more developed. Those who import wine in large quantities should attend to the fol- lowing directions about the tieatment of it after it arrives. On landing, the less tney are exposed the better ; for they are affected by the seasons, and more or less by climate. March and April are the proper times for shipping wines from France, and they will be landed in England and Ireland in the same degree of temperature. The great art in keeping wines is to prevent their fretting, which is done by keeping them in the same degree of heat. In spring and fall the wines in Bourdeaux are sub- ject to changes that may be destructive if not pre- vented by necessary rackings : these changes are solely the effect of the seasons. If wines are chilled, and of course turn foul, from being shipped and landed in cold weather, they will soon recover by putting them in a warm vault, well covered with saw-dust. As soon as they are in the vault they ought to be covered up. But if shipped and landed in summer, if the smallest degree of fer- mentation be found on them, it will be requisite to dip the bung cloths in brandy, and leave the bungs loose for some clays, to give it time to cool ; and if in a fortnight or three weeks the fermentation do no', cease, and the wine become bright, it will be proper to rack it (matching the hogsheads well with brim- stone), and force it with the whites of eight eggs. It it then become fine, bung it tight, and let it remain so until it is bottled. If wines new landed are wanted soon for the bottle, it will be necessary to force them immediately, and let them remain bunged close for at least a month, to recover from the forcing, or if two months the better ; for wines bottled in high order come much sooner into drinking than if bottled when flat, which all wines are after forcing.

Wine must never be bottled the least foul, which produces a tendency to fret; and, if bottled in this state, will never come in order, but may possibly be lost : for this there is no remedy but repeated rackings ; and care must be taken (after rinsing the hogsheads well and drawing them) to burn a good piece of match in them. This cools the wine, and there is no danger of hurting the color ; for it recovers it in a little time ; but, if it did, it is

absolutely necessary ; for, if wine is suffered to continue on the fret, it will wear iUelf to nothing. It sometimes happens that wines scuddy and stub-born will not fall with one or even two forcings. It will then be proper to give them five or six gal- lons of good strong wine, and force them with the whites of a dozen eggs, with a tea-spoonful of sand produced from sawing marble, or a small spoonful of fine salt. Bottled wine in winter should be well covered with saw-dust, and, if the vaults are cold and damp, strew it deep on the floor; if saw- dust is thrown upon the hogsheads, and their sides are bedded some inches thick, it will keep them from the fret. The same treatment is to be regarded with white wines, except that they require to be higher matched, particularly Muscat wines, such as Frontignao', Beziers, &c., which, being ofter. sweetened with"1ioney, are very subject to fret ; and these only frequent rackings, with a great deal of brimstone, can cool. Hermitage, from not being sufficiently dried, and possessing more richness than claret, is also very liable to come on the fret, and will require much the same treatment as the Muscat wines. Attention should be had to bottle in fine weather, when the wind is north ; but t »

aˆvoid cold or frosty weather. The months of April and October are favorable. The best time to bottle port wine is four years after the vintage, and to keep them two years in bottle before you begin to use them. When wines are racked, and the lees immediately passed through flannel bags into close- necked jars, and directly bottled, there will be very little lost by rackings, as the wine when fine may serve for filling up. When wines are destined for warm climates, it may be p-oper to rinse the hogs- heads with brandy ; and in bottling many rinse the bottles and corks with it. Wines that have remained a certain time (three or four months) in a vault, and made less or more lee, ought never to be sent into the country without first racking them, other- wise they may be liable to fret, and if bottled in that state, may risk being lost. Wines which may be ordered for immediate drinking will be forced on the shipping, and in a few weeks after they are landed \ill be fit for the bottle. The forcings proper for claret are the whites of a dozen eggs, beaten up with a tea-spoonful of fine salt, and well worked with a forcing-rod. No bad egg must be used. This is for one hogshead. The forcing for white wine is isinglass dissolved in wine. One ounce is sufficient for two hogsheads. No salt is to be used in forcing the white wines.

Let us now direct our attention to the chemical character of wines. All those nutritive, vegetable, and animal matters which contain sugar ready formed, are susceptible of the spirituous fermenta- tion. Thus wine may be made of all the juices of plants, the sap of trees, the infusions and decoc-

tions of farinaceous vegetables, the milk of frugi- verous animals; and lastly, it may be made of all ripe succulent fruits: but all these substances are not equally proper to be changed into a good and generous wine.

As the production of alcohol is the result of the spirituous fermentation, that wine may be con- sidered as essentially the best, which contains most alcohol. Bat, of all substances susceptible of the sp:- ntuous fermentation, none is capable of being con- verted into so good wine, as the juice of the grapes of France, or of other countries that are nearly in the same latitude, or in the same temperature. The grapes of hotter countries, and even those of the southern provinces of France, do indeed furnish wines that have a more agreeable, that is, more of a saccharine taste ; but these wines, though they are sufficiently strong, are not so spirituous as those of the provinces near the middle of France: at least from these latter wines the best vinegar and brandy are made. As an example, therefore, of spirituous fermentation in general, we shall describe fhe method of making wine from the juice of the grapes of France. This juice, when newly expres- sed, and before it has begun to ferment, is called must, and in common language sweet wine. It is turbid, but has an agreeable andvery saccharine taste. It is very laxative ; and, when drunk too freely, or hy persons disposed to diarrhoeas, it is apt to occa- sion these disorders. Its consistence is somewhat Jess fluid than that of water, and it becomes almost of a pitchy thickness when dried.

When the must is pressed from the grapes, and put into a proper vessel and place, with a tempera- ture between fifty-five and sixty degrees, very sen- sible effects are produced in it, in a shorter or longer time, according to the nature of the liquor, and the expo .ire of the place. It then swells, and*

is so rarefied that it frequently overflows the ves- sel containing it, if this be nearly full. An intes- tine motion is excited among its parts, accompanies with a small hissing noise and evident ebullition The bubbles rise to the surface, and at the same time is disengaged a quantity of carbonic acid of such purity, and so subtle and dangerous, that it is capable of killing instantly men and animals ex- posed to it in a place where the air is not renewed. The skins, stones, and other grosser matters of the grapes, are buoyed up by the particles of disen- gaged air that adhere to their surface, are variously agitated, and are raised in form of a scum, or soil and spongy crust, that covers the whole liquor. During the fermentation, this crust is frequently raised, and broken by the air disengaged from the liquor which forces its way through it; afterward tiie crust subsides, and becomes entire as before.

These effects continue while the fermentation is brisk, and at last gradually cease : then the crust, being no longer supported, falls in pieces to the

bottom of the liquor. At this time, if we would have a strong and generous wine, all sensible fermentation must be stopped. This is done by putting the wine into close vessels, and carrying these into a cellar or other cool place.

After this first operation, an interval of repose takes place, as is indicated by the cessation of the sensible effects of the spirituous fermentation ; and thus enables us to preserve a liquor no less agree- able in its taste, than useful for its reviving and nutritive qualities when drunk moderately. If we examine the wine produced by this first fermenta- tion, we shall find that it differs entirely and essen- tially from the juice of grapes before fermentation. Its sweet and saccharine taste is changed into one. that is very different, though still agreeable, and somewhat spirituous and piquant. It has not the laxative quality of must, but affects the head, and occasions, as is well known, drunkenness. Lastly, if it be distilled, it yields, instead of the in- sipid water obtained from must by distillation with the heat of boiling water, a volatile, spirituous, and inflammable liquor called spirit of wine or alcohol. This spirit is consequently a new being, produced by the kind of fermentation called the vinous or spirituous. See ALCOHOL.

When any liquor undergoes the spirituous fer- mentation, all its parts seem not to ferment at the same time, otherwise the fermentation would probably be very quickly completed, and the ap- pearances would be much more striking : hence, in a liquor much disposed to fermentation, this motion is more quick and simultaneous than in another liquor less disposed. Experience has shown that a wine, the fermentation of which is very slow and tedious, is never good or very spirituous ; and there- fore, when the weather is too cold, the fermentation is usually accelerated by heating the place in which the wine is made. A proposal has been made, by a person very intelligent in econ'omical affairs, to apply a greater than the usual heat to accelerate the fermentation of the wine, in those years in which grapes have not been sufficiently ripened, and when the juice is not sufficiently disposed to fermentation

A too hasty and violent fermentation is perhaps also hurtful, from the dissipation ind loss of some of the spirit ; but of this we are not certain. How- ever, we may distinguish, in the ordinary method of making wines of grapes, two periods in the fermen- tation, the first of which lasts during th« appearance

of the sensible effects aoove-mentioned, in which the greatest number of fermentable particles ferment. After this first effort of fermentation, these

effects sensibly diminish, and ought to be stopped, for rea- sons hereafter to be mentioned. The fermentative motion of the liquors then ceases. The heterogeneous parts that were suspended in the wines by this motion, and render it muddy, are separated and form a se- diment called the lees ; after which the wine becomes clear : but though the operation is then considered as finished, and the fermentation apparently ceases, it does not really cease ; and it ought to be con- tinued in some degree, if we would have good wine.

In this new wine a part of the liquor probably remains, that lias not fermented, and which after- wards ferments, but so very slowly, that none of the sensible effects produced in the first fermentation a?« here perceived. The fermentation, therefore, still continues in the wine, during a longer or shorter «ime, although in an imperceptible manner ; and iiis is the second period of the spirituous fermen- tation, which may be called the imperceptible fer- mentation. We may easily perceive that the effect of this imperceptible fermentation is the gradual increase of the quantity of alcohol. It has also an- other effect no less advantageous, namely, the sepa- ration of the acid salt called tartar from the wine. This matter is therefore a second sediment, that is formed in the wine, and adheres to the sides of the containing vessels. As the taste of tartar is harsh and disagreeable, it is evident that the wine, which by means of the insensible fermentation has acquired more alcohol, and has disengaged itself of the greater part of its tartar, ought to be much better and more agreeable; and, for this reason chiefly, old wine is universally preferable to new wine.

But insensible fermentation can only ripen and meliorate the wine, if the sensible fermentation have regularly proceeded, and been stopped in due time. We know certainly, that if a sufficient time has not been allowed for the first period of the fer- mentation, the unfermented matter that remains, being in too large a quantity, will then ferment in the bottles or close vessels in which the wine is put, and will occasion effects so much more sen- sible, as the first fermentation shall have been sooner interrupted : hence these wines are always turbid, emit bubbles, and sometimes break the bottles, from the large quantity of air disengaged during the fermentation.

We have an instance of these effects in the wine of Champagne, and in others of the same kind. The sensible fermentation of these wines is inter- rupted or rather suppressed, that they may have this sparkling quality. It is well known that these wines make the corks fly out of the bottles ; that they sparkle and froth when they are poured into glasses ; and lastly, that they have a taste much more lively and more piqu?nt than wines that do not sparkle; but this sparkling quality, and all the effects depending on it, are only caused by a considerable quantity of carbonic acid gas, which is disengaged during the confined fermentation that the wine has undergone

in close vessels. This air not having an opportunity of escaping, and of be- ing dissipated as fast as it is disengaged, and being interposed betwixt all the parts of the wine, com- bines in some measure with them, and adhere-; in the same manner as it does to certa'n mineral , in which it produces nearly the same effects. \V hen this air is entirely disengaged from these

wines, they no longer sparkle, they lose their pi quancy of tasie, become mild, and even almost in- sipid.

Such are the qualities that wine acquires in time, when its first fermentation has not continued sufficiently long. These qualities are given pur- posely to certain kinds of wine to indulge taste or caprice ; but such wines are supposed to be unfit for daily use. Wines for daily use ought to have undergone so completely the sensible fermentation, that the succeeding fermentation shall be insensi- ble, or at least exceedingly little perceived. Wine, in which the first fermentation has been too far ad- vanced, is liable to worse inconveniences than thai in which the first fermentation has been too quickly suppressed ; for every fermentable liquor is from its nature in a continual intestine motion, more or less strong, according to circumstances, from the first instant of the spirituous fermentation till it is completely purified : hence, from the time of the completion of the spirituous fermentation, or even before, the wine begins te undergo the acid or ace- tous fermentation. This acid fermentation is very slow and insensible, when the wine is included in very close vessels, and in a cool place : but it gra- dually advances, so that in a certain time the wine, instead of being improved, becomes at last sour. This evil cannot be remedied ; because the fermen- tation may advance, but cannot be reverted.

Wine-merchants, therefore, when their wines be- come sour, can only conceal or absorb this acidity by certain substances, as by alkalies and absorbent earths. But these substances give to wine a dark greenish color, and a taste which, though not acid, is somewhat disagreeable. Besides, calcareous earths accelerate considerably the total destruction and putrefaction of the wine. Oxides.of lead, hav- ing the property of forming with the acid of vinegar a salt of an agreeable saccharine taste, which does not alter the color of the wine, and which besides has the advantage of stopping fermentation and pu- trefaction, might be very well employed to remedy the acidity of wine, if lead and all its preparations were not pernicious to health, as they occasion most terrible colics, and even death, when taken internally. We cannot believe that any wine-mer- chant, knowing the evil consequences of lead, should, for the sake of gain, employ it for the pur- pose mentioned ; but, if there be any such persons, they must be considered as the poisoners and mur- derers of the public. At Alicant, where very sweet wines are made, it is the practice to mix a little lime with the grapes before they are pressed. This, however, can only neutralise the

acid already ex- isting in the grape.

If wine contain litharge, or any other oxide of lead, it may be discovered by evaporating some pints of it to dryness, and melting the residuum in a crucible, at the bottom of which a small button of lead may be found after the fusion : but an easier and more expeditious proof is by pouring into the wine some liquid sulphuret. If the precipitate occasioned by this addition to the sulphuret be white, or enly colored by the wine, we may know that no lead is contained in it ; but if the precipi- tate be dark colored, brown, or blackish, we may conclude that it contains lead or iroa.

The only substances that cannot absorb or de- stroy, but cover and render supportable the sharp- ness ot \vine, without any inconvenience, are sugar, honey, and other saccharine alimentary matters ;

WINE

but they ca»n succeed only when the wine is very little acid, and when an exceedingly small quantity only of these substances is sufficient to produce the desired effect ; otherwise the wine would have a sweetish, tart, and not agreeable taste.

From what is here said concerning th

As the must of the grape contains a greater pro- portion of tartar than our currant and gooseberry juices do, Dr. Ure has been accustomed, for many years, to recommend in his lectures the addition of a small portion of that salt to our must, to make it ferment into a more genuine wine. Dr. M'Culloch has lately prescribed the same addition in his po- pular treatise on the art of making wine.

The following is Mr. Brande's valuable table of

the quantity of spirit in different kinds of wine : —

Proportion of spirit per

cent, by measure.

1. Lissa 26-47

Ditto 24-35

Average 25-41

Ditto .

***\J TV*

25-77

Ditto .

.

23-20

Average

25.12

3. Marsala .

26- 3

Ditto .

25- 5

Average

25- 9

4. Madeira .

. .

24-42

Ditto .

23-93

Ditto (Sircial)

21-40

Ditto .

19-41

Average

22-27

20-55

6. Sherry

19-81

Ditto .

.

19-83

Ditto .

,

18-79

Ditto .

18-25

Average

19-17

7. Teneriffe

19-79

8. Colares

19-75

9. Lachryma Christi .

. ^

19-70

10 Constantia, white, .

19-75

11. Ditto, red, .

.

18.92

12. Lisbon .

« • .

18-94

13. Malaga (1666)

18-94

14. Bucellas

. .

18-49

15. Red Madeira

22-30

Ditto .

. .

18-40

Average

20-35

16. Cape Muschat

18-25

17. Cape Madeira

22-94

Ditto .

.

20-50

Ditto .

1. ,

18-11

Average

20-51

18. Grape wine .

18-11

19. Calcavella

19-20

Ditto

18-10

20. Vidonia

Average

18-65 19‘25

21. Alba Flora .

17-26

22. Malaga

17-26

23. White Hermitage .

17-43

24. Rousillon

19-00

Ditto

17-26

Average

18-13

25.

26. 27. 28. 29. 30, 31.

Claret .

Ditto

Ditto

Ditto

Average Malmsey Madeira ....

Lunel

Sheraaz 15-52

Syracuse 15-28

Sauterne 14-22

Burgundy ..... 16‘60

Ditto 15-22

Ditto 14-53

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Proportion of spirit per cent, by measure.

. 17-11 . 16-32 . 14-08 12-91 15-10 16-40 15-52

Ditto

11-95

Average

14.57

32. Hock

14-37

Ditto

13-00

Ditto (old in cask)

8-88

Average

12-08

33. Nice

14-63

34. Barsac

13-86

35. Tent

13-30

36. Champagne (still) ....

13-80

Ditto (sparkling)

12-80

Ditto (red) ....

12-56

Ditto (ditto) ....

11-30

Average

12-61

37. Red Hermitage ....

12-32

38. Vin de Grave ....

13-94

Ditto

12-80

Average

13-37

12-79

40. Cote Rotie

12-32

41. Gooseberry wine ....

11 84

42. Orange wine, a verage of six samples

made by a London manufacturer

11-26

43. Tokay

9-88

44. Elder wine .....

9-87

45. Cyder, highest average .

9-87

Ditto, lowest ditto

5-21

46. Perry, average of four samples

7-26

47. Mead

7-32

48. Ale (Burton) ....

8-88

Ditto (Edinburgh)

6-20

Ditto (Dorchester)

5-56

Average

6-87

49. Brown stout :

6-80

50. London porter (average)

4-20

51. London small beer (ditto)

1-28

52. Brandy

53-39

53. Rum

53-68

54. Gin

51-60

55. Scotch Whisky ....

54-32

56. Irish ditto

53-90

WING, n. s., v. a., tc-\ Sax. jehpinj ; Danish WING'ED, adj. [v. n. f and Swed. winge. The

*WING'SHELLS, n. *. £limb of a bird by which*

WING'Y adj. J it flies ; flight; motive to

flight ; the flank or side of a building or army ; any side-piece : to wing is

to furnish with wings; to take flight ; transport by flight : winged, furnished with wings ; swift : wing-shell, a shell that covers the wings of some insects : wingy, having or resemb- ling wings.

Wing, cartnave, and bushel, peck, ready at hand.

Titter.

As Venus' bird, the white swift lovely dove, Doth on her wings her utmost swiftness prove, Finding the gripe »f falcon fierce not fur. Sid'ity.

WIN

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WIN

*The footmen were Germans, to whom were joined as win** certain companies of Italians. hiiotlef,*

Ignorance is the curse of God, Knowledge the winy wherewith we fly to heaven.

Sliukfpeare.

I have pursued her as love hath pursued me, on the vitig of all occasions. Id.

Fearful commenting Is leaden servitor to dull delay ; Delay leads impotent and snail-paced beggary : Then fiery expedition be mv wing, Jove's mercury, and herald for a king. Id.

Hie, good Sir Michael, bear this sealed brief With winged haste to the lord marshal. Id.

A spleenless wind so strctcht Her icings to waft us, and so urged our keel. Chapm.

The speed of gods

Time counts not, though with swiftest minutes winged.

Milton.

The winged lion's not so fierce in fight, As Lib'ri's hand presents him to our sight. Waller.

And straight, witli in-born vigour, on the winy

Like mountain larks, to the new morning sing. Dryd.

Warmed with more particles of heavenly flame, He u-inged his upper flight, and soared to fame ; The rest remained below, a crowd without a name.

Id.

The left wing put to flight, The chiefs o'erborn, he rushes on the right. Id.

The plough proper for stiff clays is long, large, and broad, with a deep head, and a square earth-board, the coulter long, and very little bending, with a very large wing. Mortimer.

The long-shelled goat chaffer is above an inch long, and the icing-shells of themselves an inch, and half an inch broad , so deep as to come down below the belly on both sides. Grew.

They spring together out, and swiftly bear The flying youth through clouds of yielding air ; With u-inyy speed out-strip the eastern wind, And leave the breezes of the morn behind. Addison.

Struck with the horror of the sight, She turns her head, and wings her flight. Prior.

The prince of augurs, Helitherses rose ; Prescient he viewed th' aerial tracts, and drew A sure presage from ev'ry icing that flew. Pope.

Who knows but he, whose hand the lightning forms, Who heaves old ocean, and who wings the storms, Pours fierce ambition into Caesar's mind, Or turns young Ammon loose to scourge mankind ?

Id.

WING, in zoology, is that part of a bird, insect, 8cc., whereby it is enabled to fly. See BEE, BIRD, ENTOMOLOGY, and ORNITHOLOGY.

WINGS, in military affairs, are the two flanks or extremes of an army, ranged in form of battle; being the right and left sides thereof.

WINGATE (Edmond), an eminent mathemati- cian, born in Bedfordshire in 1593, and educated at Queen's College, Oxford ; whence he removed to Gray's Inn. He was appointed English teacher to king Charles I.'s queen ; yet he took the cove- nant, and was elected into the parliament called by Cromwell. He published 1. The Use of the Rule of Proportion, commonly called Gunter's Scale. 2. Natural and Artificial Arithmetic, 8vo. 3. Tables

of Logarithms. 4. l.udus .M.itlu-maticus. 5. The Exact Surveyor; and several tracts. He died i;i 1656.

WINGED FEATHER GRASS. See STYPA.

'•'• 1 N K, v. n. & n. s. } Sax. pinceai. ; Teutonic

\i N r.'i u, n. t. '• wincken ; Swedish icinekit.

WiMv'i.\<;i,Y, adv. jTo shut the eyes; hint or

direct by the eye; connive; toll-rate; forbear to

punish ; be dim : the act of winking ; hint given the noun substantive and adverb correspond.

Her wink each bold attempt forbids. Sidney.

They be better content with one that will wink at their faults, than with him that will reprove them.

Let's see thine eyes ; wink now, now open them : In my opinion yet thou seest not well. Shahspearc.

Since I received command to do this business I have not slept one wink. Id.

I, for winking at your discords too, Have lost a brace of kinsmen. Id.

The king gave him great gifts, and winked at the great spoil of Bosworth-field, which came almost wholly to this man's hands. Bacon.

If one beholdeth the light, he viewelh it winkinglu, as those do that are purblind ; but, if any thing that is. black, he looketh upon it with abroad and full eye.

Peaclutm.

The Scripture represents wicked men as without un- derstanding : not that they are destitute of the natural faculty ; they are not blind, but they wink. Tillolsmi.

The sullen tyrant slept not all the night, But lonely walking by a winking light, Sobbed, wept, and groan' d, and beat his withered breast. Dryden.

Obstinacy cannot be winked at, but must be subdued.

Locke.

When you shoot and shut one eye, You cannot think he would deny To lend the other friendly aid, Or icink, as coward and afraid. Pn-jr.

A set of nodders, winkers, and whisperers whose bu- siness is to strangle all other offspring of wit in their birth. Pope.

The stock-jobber thus from 'Change-alley goes down, And tips you the freeman a wink ;

Let me have but your vote to serve for the town, And here is a guinea to drink. Swift.

WINNIP1C LAKE, a lake of North America in Upper Canada, nortli-west of Lake Superior. It lies between 50° 30′ and 54° 32′ N. lat., and between 95° 50′ and 99° 30′ W. long. It is 217 miles long, in- cluding Baskescoggan, or Play-Green Lake, its northern arm ; and is 100 miles broad from the Ca- nadian House on the east side to Sable River on thy west side. It receives the waters of a number ot small lakes, and exhibits a number of small isles. The lands on its banks are said by Carver and other travellers to be very fertile, producing vast quan- tities of wild rice and the sugar-tree in great plenty. The climate is considerably more temper- ate here than it is upon the Atlantic coast, 10° farther southward.

WINNIPIC RIVER, a river of North America, in Upper Canada, which runs north-west into the lake of the same name. It is an outlet for the waters of a vast chain of lakes, the chief of which are La Pluie and Lake of the Woods, and is a large body of water, interspersed with numerous islands.

WIN'NOW,«. a. & v.n. . Sax. pmˆpian ; Belg. irtnmen ; Latin evanno. To ventilate ; to separate by means of the wind : to part the grain from the chaff.

Were our royal faith martyrs in love, We shall be icinnmeed with so rough a wind, That even our corn shall seem as light as c hall', And good from bad find no partition. Slialupeart:

Now on the polar winds, then with quick fan Winnows the buxom air. Milton.

Winnow well this thought, and you shall find ' 1 is light as chaff that flies before UM wind. Dryden.

\ I NSCHOMB (John), a famou? English c.o- thi-T, the most eminent in Englat d under Heurv

WIN

VTII. He had 100 looms constantly employed ; and let out a troop of his men to the battle of Flodden.

WINSLOW (James Benignus), M. P., a very celebrated Danish anatomist, a nephew of the famous Steno, born in 1669. He studied under Du Verney at Paris, became a convert to the Ca- tholic faith, and was baptised by Bossuet, bishop of Meaux. He became a member of the faculty of physicians, and of the Rcyal Academy of Paris, and demonstrator in the king's gardens. He wrote, 1. A Course of Anatomy, in 4to. 2. A Disserta tion on the Uncertainty of the Signs of Death, 2 vols. 12mo. 3. A Treatise on the diseases of the Bones; and other works of value. He died in

1760.

WINSTANLEY (William) was originally a barber. He wrote, 1. The Lives of the Poets. 2. Select Lives of England's Worthies. 3. Histori- cal Rarities. He died in 1690.

WINSTON (Thomas), M.D., born in 1575, and educated at Clare Hall, Cambridge. In 1602 he went abroad, and graduated at Padua. On his return he settled in London, and was chosen pro- fessor of physic in Gresham College, where he died in 1655. He published his Anatomical Lec- tures in 1650.

WINTER, n. s.,v. n.,8cr. a. ~\ Sax. pmreji ; WIN'TERBEATEN, adj. ˆDanish, Teuton.,

WJN'TERLY, adv. i and Belg. winter.

WIN'TRY, ttd). 3 The cold season

of the year : to pass the winter ; feed or manage in the winter : winterbeaten is harassed by the sea- son : winterly and wintry, like, or suitable to, win- ter.

The fowls shall summer upon them, and all the btasts of the earth shall winter upon them. Isniafi.

Though he were already slept into the winter of his a;je, he found himself warm in those desires, which were in his son far more excusable. Sidney.

He compareth his careful case to the sad season of the year, to the frosty

ground, to the frozen trees, and to his own trinterbt-aten flock. Spenser.

After summer evermore succeeds The barren vmferwith his nipping cold. Shakspeare.

If 't be summer news,

Smile to 't before ; if winterly, thou need'st But keep that countenance still. Id.

The cattle generally sold for slaughter within, or ex- portation abroad, had never been handled or wintered at hand-meat. Temple.

The two beneath the distant poles complain Of endless winter and perpetual rain. Dryden.

He saw the Trojan fleet dispersed, distressed, By stormy winds, and wintry heaven oppressed. Id.

Young lean cattle may by their growth pay for their wintering, and so be ready to fat next summer, dfort.

He that makes no reflections on what he reads, only loads his mind with a rhapsody of tales, fit in u-inie-' nights for the entertainment of others. Locke.

II inter is that season of the year wherein the days are shortest. Watti.

'i he storms of wintry Time shall quickly pass, And one unbounded Spring encircle all. Thomson.

U INTER, one of the four seasons or quarters of the year. See SEASON, &c. Winter commences on the day when the sun's distance from the zenith of the place is greatest, and ends on the day when its distance is at a mean between the greatest and least. Under the equator, the winter as well as other seasons return twice every year ; but all other places have only one winter in the year ; which in

the northern hemisphere begins when the sun is iu the tropic of Capricorn, and in the southern hemi- sphere when in the tropic of Cancer ; so that all places in the same hemisphere have their winter at the same time.

WINTER BERRY. SeePRiNOS.

WINTER BLOOM, a species of azalea.

WINTER. CHERRY. See PHYSALIS.

WINTER CITRON is a species of citrus.

WINTER CRESS, a species of eryshnum.

WINTER GREEN. See PYROLA.

WINTER GREEN CHICKWEED. SeeTRir.NTALis.

WINTER GREEN, ivy-flowering, is •». species of kalrnia.

WINTERA, in botany, a genus of pknts of the class of polyandria, and order of pentagynia ; and in the natural system arranged under the twelfth order, holoraceae. The calyx is three-lobed ; there are six or twelve petals ; there is no style ; the fruit is a berry, which is club-shaped as well as the germen. There are two species, viz.: — 1. W. aromatica, is one of the largest forest trees upon Terra del Fuego ; it often rises to the height of fifty feet. Its outward bark is on the trunk gray and very little wrinkled, on the branches quite smooth and green. The branches do not spread horizontally, but are bent upwards and form an elegant head of an oval shape. The peduncles, or foot-stalks for the flowers, come out of the axilla? foliorum, near the extremity of the branches ; they are flat, of a pale color, twice or three times shorter than the leaves ; now and then they sup- port only one flower, but are oftener near the top divided into three short branches, each with one flower. The bracteae are oblong, pointed, concave, entire, thick, whitish, and situated one at the basis of each peduncle. There is no calyx ; but in its place the flower is surrounded with a spathaceous gem of a thick leathery substance, green, but red- dish on the side which has faced the sun ; before this gem bursts, it is of a round form, and its size is that of a small pea. It bursts commonly, so that one side is higher than the other, and the segments are pointed. The corolla consists always of seven petals. 2. W. Granadensis is a native of Granada.

WINT1UNGHAM (Sir Clifton), Burt., M.D., and F. R. S., an eminent physician, the son of Dr. Clifton Wintringham, physician at York, who gave him a liberal education, and died in 1748. In 1749 he was appointed physician to the duke of Cumberland, and afterwards to the king, who knighted him. He published, 1. An Experi- mental Enquiry into some parts of the Animal Structure, 1740. 2. An Enquiry into the Exility of the vessels of the Human Body, 1743. 3. De Morquibusdam, 2 vols. 1782 and 1791. 4. An Accurate edition of Dr. Mead's Monita et Praecepta Medica; cum multis notis. He died at London, 10th January, 1794.

WINWOOD (Sir Ralph) was born in 1565, at Aynhoe in Northampton, and educated at Magda- len College, Oxford. He became secretary to Sir Henry Neville, minister at ParH, in 1589. In 1607 king James knighted

him, and sent him ambassador to Holland, and in 1614 made him secretary of state and a privy counsellor. He died in 1617; and his Memoirs of State Affairs were published soon after in 1 vol. folio.

W 1 PE, v. a. & n. s. ˆ Sax. pipan , Belg. wip WI'PER, n. s. i To cleanse by rubbing;

WIR

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WIR

strike gently off; clear away ; efface (taking out) ; touch : the act of wiping ; a blow ; stroke ; trick ; an instrument or agent of wiping.

The next bordering lords commonly encroach one upon another, as one is stronger, or lie still in wait to wipe them out of their lands. Spenser.

Such a handkerchief, I'm sure it was your wife's, did I to-day See Cassio wipe his beard with. Shakspeare.

Let me wipe off this honourable dew, That silvery doth progress on thy cheeks. Id.

The maids and their makes,

At dancing and wakes,

Had their napkins and posies,

And the wiper for their noses. B«n Jwson*

Calumniate stoutly ; for, though we wipe away with never so much care the dirt thrown at us, there will be left some sulliage behind. Decay of Piety.

She a gentle tear let fall From either eye, and wiped them with her hair. Milton.

Take one in whom decrepid old age has blotted out the memory of his past knowledge, and clearly wiped out the ideas his mind was formerly stored with. Locke.

A young man, having suffered many tortures, escaped with life, and told his fellow Christians, that the pain of them had been rendered tolerable by the presence of an angel, who stood by him and wiped off the tears and sweat. Additon.

To statesmen would you give a wipe You print it in Italick type : When letters are in vulgar shapes, 'Tis ten to one the wit escapes. Swift.

WIPE, a town and river of Prussia, in Samland.

WIRE, n.s. } French virer, to draw

WIRE'DRAW, v.a. ground. — Skinner. Metal

WIRE'DRAWER, n.t. J drawn into slender threads : to spin into wire ; draw out into length literally or metaphorically.

Thou shall be whipt with wire, and stewed in brine, Smarting in lingering pickle. Shakspeare.

Her veil and mantle pluckt they off by force, And bound her tender arms in twisted wire. Fairfax.

And the cherubick host, in thousand quires, Touch their immortal harps of golden wire. Milton.*

Those who have need of unmixed silver, as gilders and wiredrawers, must, beside an equal weight of silver mixed with other metals, give an overplus to reward the refiner's skill. Locke.

I have been wrongfully accused, and my sense wire- drawn into blasphemy. Dryden.

WIRE, a piece of metal drawn successively through a number of iron plate holes into a thread, of a fineness answerable to the last hole it passed through. See GOLD WIRE, and WIRE-DRAWING

WIRE, one of the small Orkney Islands, sepa- rated from Rousay by a strait one mile broad.

WIRE DRAWING. Wires are frequently drawn so fine as to be wrought along with other threads of silk, wool, flax, &c. The metals most com- monly drawn into wire are gold, silver, copper, and iron. Gold wire is made of cylindrical ingots of silver covered over with gold, and thus drawn successively through a vast number of holes, each smaller and smaller, till at last it is brought to a fineness exceeding that of a hair. Before it be reduced to this excessive fineness, it is drawn through above 140 different holes; and is every time rubbed over with wax, both to facilitate its passage, and to prevent the gold from being rub- bed off. That admirable ductility which is one of the distinguishing characters of gold is no where more conspicuous than in gilt wire. A cylinder of forty-eight ounces of silver,

with a coat of gold

only weighing one ounce, as Dr. Halley informs us, is usually drawn into a wire two yards of \hicl. weigh no more than forty-nine grains, and one single grain of gold covers the ninety-eight yards ; so that the 10,000th part of a grain is above one- eighth of an inch long.

WIRKSWORTH, a market town and parish in the hundred of the same name, Derbyshire, twelve miles N. N. W.of Derby, and 139 north-west by north of London.

WIRLEY (William), rouge-croix poursuivant of arms, published The True Use of Arms showed by History, and plainly proved by Example, 4to. He died in 1618.

WIRTEMBERG, a state of South West Ger- many, which, since 1806, has borne the title of kingdom. It forms part of the old circle of Suabia, having Bavaria on the east, and the long narrow- territory of Baden on the west. It extends from long. 8° 7′ to 10° 30′ E., lat. 45° 36′ to 49° 45′ N. Its oblong form, extending from north to south, is similar to that of the principality of Wales ; and its area, about 8000 square miles, is not much greater; but its soil is far more fertile, and its population is at present (1822) not under 1,400,000. Its territorial division is into the four circles of the Jaxt, the Neckar, the Black Forest, and the Danube. These are farther divided into twelve small counties, each of which is subdivided into bailiwics. The foundation of this state was the old duchy of Wirtemberg, augmented, since 1801, by various towns of the empire acquired, ami abbeys, priories, and other ecclesiastical posses- sions secularised in the present age. The towns of Wirtemberg are thinly scattered ; the principal are Stutgard, the capital, containing 22,000 in- habitants; Ulm 15,600; Tubingen 5700; Hall 5500; Ludwigsburg 5500 ; Biberach 4400 ; Kirch- heim 4100; Schorndorf 3500 ; Calw 3400; Creil- sheim 3100.

The great natural features of this country are masses or ranges of mountains; one called the Black Forest extending along the western frontier, in a line nearly parallel to the course of the Rhine; the other, less known out of Germany, called the Alp, or Alb, an insulated range of rocky hills, destitute of wood, and, in some measure, of ver- dure, which begins near the small town of Rotweil, and traverses the kingdom in a north-east direction. On these lofty tracts the climate is cold and bleak, but the rest of the country is covered with emi- nences or hills of moderate elevation, intersected by pleasant valleys, which enjoy a climate fully as mild and steady as similar parallels of latitude in the north of France, viz. Champagne, Picardy, and Normandy. The two principal rivers are the Danube and Neckar. The other rivers are the En/, the Muhr, the Kocker,

the Jaxt, and the Tau- ber ; the lake of Constance borders an angle of the southern extremity of the kingdom.

On the whole this is one of the most fertile tracts in Germany. In the level districts of the north, corn of all kinds succeeds extremely well ; but the rugged surface of the Black forest is fit only for the pasture of cattle ; that of the Alb for sheep. Po- tatoes, hemp, and flax, are cultivated in various parts, particularly in the grounds of medium eleva- tion. Fruits of various kinds abound throughout the country ; and complete woods of apple and pear trees are to be seen in different places. The climate has sufficient warmth for the cultivation of

the grape; and the native vines have been im- proved by the introduction of shoots from France, the north of Italy, Hungary, and even from islands in the Mediterranean. The best qualities of the Wirtemberg wine are known in England under the name of Neckar wine. The Black Forest produces abundance of pine and fir, of whicli considerable quantities are exported. The mineral products of the mountains are iron, silver, cop- per, coal, and porcelain ; but the quantity as yet extracted from the mines is small, except in the case of iron. The manufactures consist of linen and woollen ; there are also iron-works, but on a small scale.

The king of Wirtemberg is a member of the Germanic confederation, and holds the sixth place in the diet. The order of succession to the throne, the regulations in the event of a minority, and other fundamental provisions, were determined by a royal ordinance of January 1st, 1808 ; but a much longer time and more animated discussions were necessary to define the relative power of the sove- reign and his nobility. Matters remained in an unsettled state until 1819, when a mutual compro- mise took place, and a new constitution was agreed on, essentially free in its principles. The executive power is vested in the monarch, controlled by a re- presentative body. The titled classes are numer- ous, and still possess extensive privileges ; those who had formerly local sovereignty retaining a share of judicial power, which renders necessary here the same system of appeal as in other parts of Germany. The aggregate revenue is £700,000. The dukes of Wirtemberg were Protestant until 1772, when the reigning prince became a Catholic; giving, however, to his representative body the most solemn pledges that no change should be introduced into the religious establishment. In the wars of the French revolution, Wirtemberg was

repeatedly traversed by the hostile armies; its territory was in 1796 the ground chosen for con- flicts in the advance, as well as in the celebrated retreat, of Moreau ; in 1799 it was the scene of the defeat of the French under Jourdan ; iu 1800 of their renewed success under Moreau. The treaty of Luneville (February 1801) was followed next year by a treaty of indemnity, when it suited the politics of France to secure to the duke of Wirtemberg an acquisition of territory, and the rank of elector in the German empire. A similar policy led to a farther extension of his dominions, on the peace of Presburg in December 1805; and, on joining the confederation of the Rhine in 1806, the royal title, with some additional territory, was conferred on him. These honors and acquisi- tions were necessarily followed by an implicit obedience to the French government; and the Wirtembergers, like their Bavarian neighbours, were doomed to lose the flower of their troops in Russia in 1812. In the following year the re- mainder of the forces fought under the French banners until the evacuation of Germany, when the allies, having engaged to serve the king in his various acquisitions, received his support in the invasion of France. WIRY. SeeWiERY.

WIS, v.a. Pret. and part. pass. wist. Germ. laissen ; Belg. wysen. To think ; imagine. Ob- solete.

When Mammon saw his purpose mist, IJim 10 entrap unwares, another way he triif. Denser.

There be fools alive, I wis, Silvered o'er, and so was this. Shakipeare.

WISBEACH, a sea-port and market-town in the Isle of Ely, Cambridgeshire, situated on the river Nen or Nene, over which is a stone bridge, eight miles north of March, and ninety north by east of London. The church is a singularly constructed building, having two naves and two aisles. The different religious denominations have here places of worship; and in the town is a free and other schools, for the education of youth. Here are also a theatre, a ball and assembly rooms, excellent •market cross, and a custom house. The principal trade of Wisbeach is in coals, corn, timber, and wine ; a canal which opens a communication with Norfolk and Suffolk, and the western counties, has very considerably promoted its prosperity. Sheep and oxen are fattened in great numbers in the neighbourhood, and sent to London. II is govern- ed by ten burgesses, and has six annual fairs. Here was formerly a castle, a residence of the bishop of Ely ; but the whole property and gar- dens have been lately purchased and converted into streets.

WISCHEART (George), D. D., born in 1609 and educated at Edinburgh. He entered into episcopal orders, and became chaplain to the great marquis

of Montrose, whom he attended in his last expedition, was taken prisoner, and narrowly escaped death. In 1660 he was made bishop of Edinburgh. He wrote a very curious History of the Wars in Scotland, and of the Marquis of Montrose, in 1 vol. 8vo. He died at Edinburgh in 1669.

WISE, adj. &n.s. ˆ Sax pif. From \Vis.

*WIS'DOM, n. *. / Knowing ; sapient ; judg-*

WISE'ACRE, Vin? rightly ; prudent; skil-

WISE'LY, adv. i ful : as a noun substantive,

WISE'NESS, n. s. ' manner of action ; appear- ance ; mode (obsolete) : wisdom is superior prac- tical knowledge ; judicious conduct : wiseacre, a satirical name for a dunce : the adverb and noun substantive correspond with the adjective.

*Speak unto all that are un*e-hearted, whom I have filled with the spirit of wisdom, that they may make Aaron's garments. Exud. xxviii. 3.*

On this wise ye shall bless Israel. Numb. vi. 23.

They are wise to do evil, but to do good they have no knowledge. Jer. iv. 22.

Ere we farther pass, I will devise A passport for us both, in fittest wise. Spenser.

No less deserveth his wittiness in devising, his pithi- ness in uttering, his pastoral rudeness, and his moral wisenes. Id.*

That which moveth God to work is goodness, and that which ordereth his work is wisdom, and that which perfecteth his work is power. Hooker.

As from senses reason's work doth spnng, So many reasons understanding gain,

And many understandings knowledge bring, And by much knowledge wisdom we obtain. Davits.

He hath a wisdom that doth guide his valour To act in safety. Shakspeare.

There was an old fa» woman even now with me. — Pray, was 't not the u- iie woman of Brainford ? Id.

It must be a wise Being that is the cause of those wise effects. H'ilkitu.

Heaven is for thee too high ; be lowly mse. Milton.

Doubt not but God Hath witelter armed his vengeful ire Id.

Wifdom is ihat which makes men judge what are the best ends, and what the best means to attain them.

Tempi.*

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WIT

All tin; writings of the ancient Goths were composed iu verse, which were called runes, or viises, aud from thence the term of wite came. id.

lie sits lite discontented Damocles, When by the sportive tyrant wisely shown The dangerous pleasure of a flattered throne. Dryden.

Why, says a toisfacre that sat by him, were I as the king of France, I would scorn to take part with the footmen. Addiion.

Admitting their principles to be true, they act wisely : they keeptheirend, evil as it is, steadily in view. Rngert.

WISDOM usually denotes a higher and more re- fined notion of things immediately presented to the mind, as it were by intuition, without the as- sistance of ratiocination. Sometimes the word is more immediately used in a moral sense, for what we call prudence or discretion, which consists in the soundness of the judgment, and a conduct answerable thereto.

WISDOM OF SOLOMON, one of the books of the apocrypha. It abounds with Platonic language, and was probably written after the Caballistic phi- losophy was introduced among the Jews.

WISE (Francis), B. D. and F. S. A., was fellow of Trinity College, Oxford, and assistant to Ur. Hudson in the Bodleian library. He became rec- lor of Rotherfield Grays in Oxfordshire, keeper of the archives of the university, and Radcliffe libra- rian. He published Annales ./Elfridi Magni, 4to.; Enquiries concerning the First Inhabitants of Eu- rope, 4to.; and Observations on the fabulous Times, 4to. He died in 1677.

WISH, v.n., v.a., & n. s.-\ Sax. pij-cian. To Wisn F,R, n. t. ˆhave strong desire;

WISH'FUL, adj. {long; be disposed

WISH'FULLY, adv. J or inclined ; to long

for; desire; recommend by desiring; ask ; a long- ing desire ; desire expressed ; thing desired : the derivatives all correspond.

They have more than heart could wish. Ps. Ixxiii. 7. Wisher and woulders are never good householders.*

Proverbs.

I with it may not prove some ominous foretoken of misfortune, to have met with such a miser as I am.

Sidney. With half that wish the wisher's eyw he pressed.

Shakspeare.

From Scotland am I stolen, even of pure love, To greet mine own land with my wishful sight. Id.

Had I as many sons as I have hairs, I would not with them to a fairer death. Id.

Nor could I sec a soile, where e'er I came, More sweete and wishfull. Chapman.

Digby should find the best way to make Antrim communicate the affair to him, and to wish his assis- tance. Clarendon.

What next I bring shall please thee ; be assured, Thy likeness, thy fit help, thy other self, Thy wish, exactly to thy heart's desire. Milton.

A wish is properly the desire of a man sitting or lying still ; but an act of the will is a man of business vigorously going about his work. South' Sermotu.*

They are ships prepared by my command, That shall convey you to the wiihed-for port. Addison.

1 admire your whig principles of resistance in the spirit of the Barcelomans : I join in your with for them /'"/"•

WISP, n,s. Swed. and Belg. wisp. A small bundle, as of hay or straw.

A wisp of straw for a ballad. Shakspeare.

A gentleman would fast five days, without meat, bread, or drink ; but the same used to have continually a great wifp of herbs that he smclled on. Banm.

WIT'CRACKER, n. s. WIT'LESS, adj. WIT'LING, n.s. WIT'TICISM, WIT'TY, adj. WIT'TILY, adv. WIT'TINESS, n. s.

Jews, who their whole wealth can lay In a small basket, on a teisy of hay. Dij/astj.

WISSING (William), an emmeiu portrait painter, born at Amsterdam in 1656. lie was a disciple of Dodraens, and on coming to London was employed by Sir Peter Lely, whose manner he imitated. He painted most of the royal family, and rivalled Kneller. He died in 1687.

WIST'FUL, adj. t From Wis. Attentive ;

WIST'FULLY, adv. $ earnest ; full of thought or desire : the adverb corresponding.

With that he fell again to pry Through perspective more wistfully. lludibras.

Why, Grubbinel, dost thouso wistful seem? There's sorrow in thy look. Cmy.

Lifting up one of my sashes, I cast many a wutfvl melancholy look towards the sea. Swijt.

WIT, v. n. & n. s. ^ Sax. rspeit, from pitan, to know ; liel^. wetun ; Mod. Gothic '^ witun. To know ; fused now only in tin

I phrase ' to wit,' i. e. to make known, that J is to say : the mental faculties ; the intellect; the imagination; fancy; sentiments produced by rapid fancy or lively imagiuation ; a man of such fancy : in the plural, sound mind or understanding : contrivance ; stra- tagem : a witcracker and witling is a retailer of wit : witticism, a smart or witty saying : witty, smart ; acute ; fanciful : the adverb and noun substantive correspond.

No less deserveth his wittiness in devising, his pithi- ness in uttering, his pastoral rudeness, and his moral wiseness. Spenser.

Why then should witless man so much misween That nothing is but that which he hath seen 1 Id.

There is an officer, to wit, the sheriff of the shire, whose office is to walk up and down his bailiwick. LI.

How can it chuse but bring the simple to their wits' end] how can it chuse but vex and amaze them 1

Hooker.

Yet are these feet, whose strengthless stay is numb, Unable to support this lump of clay, Swift-winged with desire to get a grave ; As witting I no other comfort have.

The king your father was reputed for A prince most prudent, of an excellent And unmatched wit and judgment.

The old hermit, that never saw pen and ink, very wittily said to a niece of king Gordubuck, that that is, is. Id.

1 arn not only witty in myself, but the cause that wit is in other men. Id.

A college of witcrac kers cannot flout me out of my humour ; dost thou think 1 care for a satire or an epi- gram ? Id

Will puts in practice what the wit deviseth ; Will ever acts, and wit con tempi aterfsti 11 ;

And, as from wit the power of wisflom riseth, All other virtues daughters are of will.

Will is the prince, and wit the counsellor Which doth for common good in counsel sit ;

And, whec. wit is resolved, will lends her power To execute what is advised by wit. Dm

His works become the trippery of wit. Ben .liinxuu.

He kept us slaves, by which we fitly prove Thai WOTM pity breedeth fruitless love. Fnirjiu .

I knee 'tis a wit, the greatest word of fame, Grows such a common name ; And wits by our creation they become, Just so as titular bishoos made at Rome. Cowlm.

No man in his uiits can mane anv doubt whether there

Shakspeare.

Id.

be such things as. motion, and sensation, and continuity of bodies. ”
1’,‘ilkins.

Sleights from his wit and subtlety proceed. Milton.

Wickedness is voluntary frenzy, and every sinner does more extravagant things than any man that is crazed and out of his wits, only that he knows better what he does. Titlotson.

The definition of wit is only this, that it is a propriety of thoughts and words ; or, in other terms, thoughts and words elegantly adapted to the subject. Dryden.

i>ut is there any other beast that lives, Who his own harm so wittily contrives? Id.

We have a libertine fooling even in his last agonies, with a witticism between his teeth, without any regard to sobriety and conscience. L’ fat range.

Intemperate wits will spare neither friend nor foe, and make themselves the common enemies of mankind.

Id.

Lewd, shallow, hair-brained huffs make atheism, and contempt of religion, the only badge and character of wit. South.

Those half-learned witlings, numerous in our isle As half-formed insects on the banks of Nile. Pope.

beginning : — ‘ It may be demanded what the thing we speak of is ? or what this facetiousness (or wit as he calls it before) doth import? To which question I might reply, as Democritus did to him that asked the definition of a man. Tis that which we all see and know.’ Any one becter apprehends what it is by acquaintance, than I can inform him by description. It is, indeed, a thing so versatile and multiform, appearing in so many shapes, so many postures, so many garbs, so variously appre- hended by several eyes and judgments, that it seemeth no less hard to settle a clear and certain notion thereof, than to make a portrait of Proteus, or to define the figure of the fleeting air. We re- commend the whole passage to the reader.

Satirical wit is thus well described : —

‘ True wit is like the polished stone Dug from Golconda’s mine,

Which boasts two different powers in one ; To cut as well as thine.’

WIT (John de), was the son of Jacob de Wit,

He is full of conceptions, points of epigram, and wit- burgomaster of Dort, and was born in 1625. He

ticisms, all which are below the dignity of heroic verse.

Addison.

No man in his wits can seriously think that his own soul hath existed from all eternity. Bentley.

Nought but a genius can a genius fit ; A u-it herself, Amelia weds a wit. Young.

*became well skilled in civil law, politics, mathe- matics, and other sciences ; and wrote a treatise on the Elements of Curved Lines. Having taken his degree of LL. D., he travelled into foreign coun- tries, where he became esteemed for his genius and prudence. At his return to his native country, in »Vir .s a quality of certain thoughts and ex- 1650> he became pensionary of Dort, then counsel- pressions much easier perceived than defined. Ac- lor.pensionary of Holland and West Friesland, cording to Mr. Locke, wit lies in the assemblage of int(£dant and reRister of the fiefs and keeper of ideas, and putting those together w.th quickness the t seal He was thus at lhe head of affajrs and variety wherein can be found any resemblance ;„ tf^iu^^ . *

or congruity, thereby to make up pleasant pictures and agreeable visions to the fancy. Mr. Addison limited this definition considerably, by observing, that every resemblance of ideas does not consti- tute wit, but those only which produce delight and surprise. Mr. Pope defined wit to be a quick con- ception and an easy delivery; while, according to a late writer, it consists in an assimilation of distant ideas. The word wit originally signified wisdom. A witte was anciently a wise man. See WITENA- GEMOT. So late as the reign of Elizabeth, a man of pregnant wit. of great wit, was a man of vast judgment. We still say, in his wits, out of his wits, for in or out of sound mind.

It is evident that wit excites in the mind an agreeable surprise, and that this is owing entirely to the strange assemblage of related ideas pie- sented to

the mind. This end is effected, 1. By debasing things pompous or seemingly grave; 2. By aggrandising things little or frivolous; 3. By setting ordinary objects in a particular and uncom- mon point of view, by means not only remote but apparently contrary. Of so much consequence are surprise and novelty, that nothing is more tasteless, and sometimes disgusting, than a joke that has become stale by frequent repetition. For the same reason, even a pun or happy allusion will appear excellent when thrown out extempore in conversation, which would be deemed execrable in

in Holland ; but his opposition to the re-establish- ment of the office of stadtholder, which he thought a violation of the freedom and independence of the republic, cost him his life, when the prince of Orange's party prevailed. He and his brother Cornelius were assassinated by the populace at the Hague in 1674, aged forty-seven.

WITCH, 7. $. &u. a. j Saxon piece. An en-*

WITCH'CRAFT, n. s. > chantress ; a woman given

WITCH'ERY. j to unlawful arts; a hag:

to enchant; transport; bewilder: witchcraft and witchery is the art or practice of witches.

Unto thy bounteous baits, and pleasing charms, With which weak men thou witchest, to attend. Spent.

Urania name, whose force he knew so well, He quickly knew what witchcraft gave the blow.

Sidney.

He hath a witchcraft Over the king in 's tongue. Shakspeare. Henry VIII.

Tis now the very witching time of night, When church-yards yawn. Id. Hamlet.

Another kind of pe'tty witchery, if it be not altogether deceit, they call charming of beasts and birds. Raleigh.

Wise judges have prescribed that men may not rashly believe the confessions of witches, nor the evidence against them. For the witches themselves are imagina- tive ; and people are credulous, and ready to impute ac- cidents to witchcraft. Bacon.

What subtile witchcraft man constrains To change his pleasure into pains?

Denhan.

Great Comus !

print. In like manner, a witty repartee is infinitely Deep skilled in all his mother's witcheries. Miltim.

more pleasing than a witty attack: for though, in When 1 consider whether there are such persons as

both cases, the thing may be equally new to the witches, my mind is divided : I believe in general that

reader or hearer, the effect on him is greatly in- there is such a thing as witchcraft, but can give no

jured when there is access to suppose that it may credit to any particular instance of it. Addison.

be the slow production of study and premeditation. WITCH EI.M, WITCH HAZEL, in botany. See

The most comprehensive and lively account of ULMI s.

these entertaining qualities which we have yet met WITCHCRAFT, a supernatural power, which per-

with is in Dr. Barrow's Sermons, vol. ii. serm. 14, sons were formerly supposed to obtain the pos

WIT

session of by entering into compact with the devil. They gave themselves up to him body and soul ; and he engaged that they shouW waut tor nothing, and that he would avenge them upon all their ene- mies. As soon as the bargain was concluded, the devil delivered to the witch an imp, or familiar spirit, to be ready at a call, and do whatever it was directed. By the assistance of this imp with the devil, the witch, who was almost always an old woman, was enabled to transport herself in the air on a broomstick or a spit to distant places to attend the meeting of the witches; at which the devil always presided. They were enabled also to trans- form themselves into various shapes, particularly to assume the forms of cats and hares, in which they most delighted ; to inflict diseases on whomsoever they thought proper; and to punish their enemies in a variety of ways.

The belief that certain persons were endowed with supernatural power, and

that they were as- sisted by invisible spirits, is very ancient. The sagae of the Romans seem rather to have been sor- cerers than witches; indeed the idea of a witch, as above described, could not have been prevalent till after the propagation of Christianity, as the hea- thens had no knowledge of the spirit stiled by Christians the devil. Witchcraft was universally believed in Europe till the sixteenth century, and even maintained its ground with tolerable firmness till the middle of the seventeenth. Vast numbers of reputed witches were convicted and condemned to be burnt every year. The methods of discover- ing them were various. One was, to weigh the supposed criminal against the church bible, which, if she was guilty, would preponderate : another, by making her attempt to say the Lord's Prayer ; this DO witch was able to repeat entirely, but would omit some part or sentence thereof. It is remark- able that all witches did not hesitate at the same place ; some leaving out one part, and some ano- ther Teats, through which the imps sucked, were indubitable marks of a witch ; these were always raw, and also insensible; and, if squeezed, some- times yielded a drop of blood. A witch could not weep more than three tears, and that only out of the left eye ! Swimming a witch was another kind of popular ordeal generally practised ; for this she was stripped naked, and cross-bound, the right thumb to the left toe, and the left thumb to the right toe. Thus prepared, she was thrown into a pond or river, in which, if guilty, she could not sink; for having, by her compact with the devil, renounced the benefit of the water of baptism, that element, in its turn, renounced her, and refused to receive her into its bosom. Sir Robert Filmer mentions two others by fire : the first, by burning the thatch of the house of the suspected witch; the other, burning any animal supposed to be be- witched by her, as a hog or ox. These, it was held, would force a witch to confess. The trial by the stool was another method used for the discovery of witches. It was thus managed : Having taken the suspected witch, she was placed in the middle of a nid in upon a stool or table, cross leered, or in some other uneasy posture ; to which, if she submitted not, she was then bound with cords; there she was watched, and kept without meat or sleep for the space of twenty-four hours (for, they said, within that time they should see her imp come and suck). A tittle hole was likewise made in the door for imps to come in at ; and lest it should come in some less dis-

wn

cernible shape, they that watched were taught to bs ever und anon sweeping the room, and if they saw any spiders or flies, to kill them ; if they could not kill them, then they might be sure they were imps. If witches, under examination or torture, would not confess, all their apparel was changed, and every hair of their body shaven oft' with a sharp razor, lest they should secrete magical charms to prevent their confessing. Witches were most apt to confess on Fridays.

By such trials as these, and by the accusations of children, old women, and fools, were thousands of unhappy women condemned for witchcraft, and burnt at the stake. It would be ridiculous to attempt a serious refutation of the existence of witches; and at present, luckily, the task is unne- cessary. Jn this country, at least, the discourage- ment long given to all suspicion of witchcraft, and the appeal of the statutes against that crime, have very much weakened, though perhaps they have not entirely eradicated, the persuasion. On the continent, too, it is evidently on the decline; and, notwithstanding the exertions of Dr. De Haen and of the celebrated Lavater, we have little doubt but that in a short time, posterity will wonder at the credulity of their ancestors. Most of the facts which have been brought forward by the advocates for witchcraft bear in their front evident marks of trick and imposture. The crime of witchcraft, which was punished capitally by the law of Moses, was justly punished under the Jewish theocracy, as an act of rebellion against the divine majesty ; by attempting to deceive the people, by leading them to trust in demons, and other imaginary beings.

WITE, v. a. Sax. pitan. To blame ; reproach.

Scoffing at him that did her justly tcite, She turned her boat about. Spenser.

WITENA-GEMOT, or WITENA-MOT, among the Anglo-Saxons, was a term which literally sig- nified the assembly of the wise men ; and was ap- plied to the ureat council of the nation of latter days called the parliament.

WITH, prep. Sax. prfc. By; for; on the side of; by means of; near ; amongst ; noting the cause ; means ; instrument ; opposition or contest ; con- nexion ; company ; appendage ; confidence. John- son says ‘ With and by it is not always easy to distinguish, nor perhaps in distinction always ob- served. With seems rather to denote an instrument, and by a cause: thus, ‘he killed his enemy u-ith a sword, but he died by an arrow.’ The arrow is considered rather as a cause, as there is no mention of an agent. If the agent be more remote, by is used; as, ‘the vermin which he could not kill u-ith his gun, he killed by poison :’ if these two preposi- tions be transposed, the sentence, though equally intelligible, will be less agreeable to the common modes of speech.’

Fear not, for I am tri/A thee. Generii.

They adhered to John, their deprived bishop ; and could not be charmed uitk the saintship of any second bishop during his life. Lesley.

With that she told me, that, though she spake of her father Cremes, she

would hide no truth from me.

Sidney. Can blazing carbuncles irith her compare'! Sandy.*

Truth, tired trirA iteration. As true as stttl, as plantage to the moon. Shakspeare.

I do contest

As hotly and as nobly uith thy love, As ever 'gaiiut thy valour. Id. Ctrielanut.

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WIT

I will buy with you, sell with you, talk with you, walk with you, and so following ; but 1 will not eat with you, drink with you, nor pray with you. Shalupeare.

With thy powerful blast, Heat apace, and cool as fast. Carew.

God gave man a soul that should live for ever, al- though the body be destroyed ; and those who were good should be with him. Stillingfleet.

He shall lye with any fryar in Spain. Dryden.

Pity your own, or pity our estate, Nor twist our fortunes with your sinking fate. Id.

Men might know the persons .vho had a right to re- gal power, and with it to their obedience. Locke.

Hast so much wit, and mirth, and spleen about thee, There is no living with thee, nor without thee. Tatter.

Such arguments had invincible force with those Pagan philosophers who became Christians. Addison.

Though Jove himself no less content would be, To part his throne, and share his heaven with thee.

Pope.

WITHAL', adv. With and all. Along with the rest ; likewise ; at the same

time.

Yet it must be withal considered that the greatest part of the world are they which be farthest from per- fection. Hooker.

The one contains my picture, prince ; If you chuse that, then I am yours withal. Shakspeare.

God, when he gave me strength, to shew wnhal How slight the gift was, hung it in my hair. Milton.

We owe to Christianity the discovery of the most per- fect rule of life that ever the world was acquainted withal. Tillotsoti.

Perish his sire, and perish I withal, And let the house's heir and the hoped kingdom fall.

Dryden.

WITH'DRAW, v. a. & v. n. With and draw. Sax. pifc, or pifcep. To take back ; bereave ; re- tire; retreat.

Impossible it is that God should withdraw his pre- sence from any thing, because the very substance of God is infinite. Hooker.

She from her husband soft withdrew. Milton.

Duumvir has passed the noon of life ; but cannot withdraw from entertainments which are pardonable only before that stage of our being. Taller.

WITHE, n. s. Sax. pi«Se. A willow twig. An Irish rebel put up a petition that he might be hanged in a with, and not a halter, because it had been so used with former rebels. Bacon.

These cords and wythes will hold men's consciences, when force attends and twists them. A'inˆ Charles.

Birch is of use for ox-yoaks, hoops, screws, wythes for faggots. Mortimer's Hutbandry.

WITH'ER, v. n. & v. a. Sax. jejiiˆefiob, dry, faded. To fade; grow sapless; dry up : to make to fade or dry away.

It shall wither in all the leaves of her spring.

Ezekiel xvii. 9.

The sun is no sooner risen with a burning heat, but it withereth the grass, and the flower thereof falleth.

James i. 11.

*That which is of God we defend, to the uttermost of that ability which he hath given : that which is other- wise, let it wither even in the root from whence it hath *prung. Hooker.*

Look how I am bewitched ; behold, mine arm Is like a blasted sapling, withered up. Sltakspeare.

Thy youth, thy strength, thy beauty, which will

change To withered, weak, and grey. Hilton.

*Vain men, how vanishing a bliss we crave, N*ow warm in love, now withering in the grave !*

The soul may sooner leave off to subsist than to lo\e . and, like the vine, it withers and dies, if it has to embrace. Soul!,' Strmnm.*

WITHERING (William), M. D., a distinguished physician and writer on botany, was born ia 1741, and studied at Edinburgh, where he took his doc- tor's degree in 1766. He then settled at Stafford, and afterwards at Birmingham) where he was speedily raised to eminence. The chief objects of his attention, independent of his duties as a medical practitioner, were chemistry and botany. Being subject to pulmonic disease, he thought it desir- able, in 1793 and 1794, to pass the winter at Lisbon : and after his return home did not again resume his practice to any extent. He died at the Larches, near Birmingham, in November, 1799. His principal publications are, A Systematic Ar- rangement of British Plants, 2 vols. 8vo., 1776, ex- tended in the edition of 1787 to three volumes, and in that of 1796 to four ; An Account of the Scarlet Fever and Sore Throat, or Scarletina Anginosa, 1779, 8vo. ; An Account of the Foxglove, and some of it Medical Uses, with Practical Remarks on the Dropsy, and other Diseases, 1785, 8vo. ; A Chemical Analysis of the Waters at Caldas da Rainha, Lisbon, 1795, 4to.; beside a translation of Bergman's Sciagraphia Regni Mineralis, and papers in the Philosophical Transactions relative to mine- ralogy.*

WITHERS, n. s. From withe, a twig, came wither, a horse collar ; and thus withers is the joining of the shoulder-bones at the bottom of the neck and mane, towards the upper part of the horse's shoulder.

Let the galled beast wince ; We are unwrung in the withers. Shakspeare.

Rather than let your master take long journies, con- trive that the saddle may pinch the beast in his wither.*

‘ Swift.

WITHHOLD’, v. a. With and hold. With- held, or withholden, pret. and part. Spenser has, for the sake of rhyme, written withhault. To re- strain; keep back.

Soon as Titan ‘gan his head exault, And soon again as he his light withhault, Their wicked engines they against it bent. Spenter.

What difficulties there are which as yet withhold our assent, till we be further and better satisfied, I hope no indifferent amongst them will scorn or refuse to hear.

Hooker. The prince

Would fain have come with me to meet your grace ; And by his mother was perforce withheld. Shalupeare.

Be careful to withhold Your talons from the wretched and the bold. Dryden.

\ olition is an act of the mind, knowingly exerting that dominion it takes itself to have over any part of man, by employing it in, or withholding it from, any particular action. Locke.

The word keep back, sheweth that it was a thing formerly due unto God ; for we cannot say that any thing is kept back, or uithholden, that was not due be- fore. Spelman.

WITHIN’, prep. & adv. J Saxon pr&mnan.

WITHIN’SIDE, adv. J With and in. In the

inner part or compass of; inwardly : in the interior parts.

Who then shall blame His pestered senses to recoil and start, When all that is within him does condemn Itself for being there 1 Shakspeare.

Within these five hours Hastings lived ‘ Untainted, unexamined, free at liberty. Id.

Next day we saw, within a kenning before ns, thick clouds, which put us in hope of land. Baetm.

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WIT

Vet sure, though the skin l>e closed without, the wound festers u-ithin. Carew.

\Vheu on the brink the foaming boar 1 met, The desperate savage rushed u-ithin my force. And bore me headlong with him down the rock.

Otteaij.

Secure of outward force, within himself The danger lies, yet lies within his power ; Against his will he can receive no harm. Miltc-n.

Till this be cured by religion, it is as impossible for a man to be happy, that is, pleased and contented u-ithin himself, as it is for a sick man to be at ease.

Tillotton.

These as thy guards from outward harms are sent ; Ills from u-ithin thy reason must prevent. Drvden.

Were every action concluded within itself, and drew no consequences after it, we should undoubtedly never err in our choice of good. Locke.

This, with the green hills and naked rocks u-ithin the neighbourhood, makes the most agreeable confu- sion. Addi.-ion.

The invention of arts necessary or useful to human life, hath been irirAw the knowledge of men. Burnet.

Hounding desires within the line which birth and fortune have marked out, is an indispensable duty.

Atttrburit.

The forceps for extracting the stone is represented a little open, that the teeth may be better seen withinside.

Sharp.

Be informed how much your husband's revenue amounts to, and be so good a computer as to keep within it. £«'(/'•

WITHOUT, prep. & conj. Sax. piSutan. With and out. Not with ; denoting exclusion and abuse : unless ; if not.

You will never live to my age, v ithout you keep yourselves in breath with exercise, and in heart with joyfulness. Sidney.

The virtuous bezoar is taken from the beast that feedeth upon the mountains ; and that u-ithuut virtue, from those that feed in the vallies. Bacon.

Forming trees and shrubs into sundry shapes, done by moulding them within, and cutting them without.

Id.

The reception of light into the body of the building was very prompt from without and from within.

Wotton.

Infallibility and inerrableness are assumed and in- closed by the Romish church, without any inerrable ground to hold it on. Hammond.

These were from without the growing miseries.

Milton.

Their doors are barred against a bitter flout ; Snarl, if you please, but you shall snarl without.

Drvden.

Happiness under this view every one constantly pur- sues. Other things, acknowledged to be good, he can look upon without desire, pass by, and be content uith- out. Lofke.

Having gone as far as they could without, they began to observe them within. Greta.

When the weather hinders me from taking my diver- sions without doors, I frequently make a little party with select friends. Addison.

\ ITHSTAND', v. a.) With and stand. To

\ ITHSTAXI/F.R, n. s. < gainstand ; gainsay ; op- pose ; resist: the noun substantive corresponding.

The violence of sorrow is not at the first to be striven withal ; being, like a mighty beast, sooner tamed with following, than overthrown by withttanding. Sidnty.

The wonderful zeal and fervour wherewith ye have withstood the received orders of this church, was the first thing which caused me to enter into consideration, whether every Christian man, fearing God, stand bound to join with you. Hooker.

War mny be defined the exercise of violence under

sovereign command against withstnmler$; force, autho- rity, and resistance, being the essential parts thereof.

Kateigh.

They soon set sail ; nor now the fates u-ithstand ; Their forces trusted with a foreign hand. Dryden.

\YLen Klynias u-ithstond Paul and Barnabas, and when Paul says of Alexander, he hath greatly with- stood our words, do we think the withstanding there was without speaking ? Atterbury.

WITHY. See SALIX.

WITNESS, n. s., v. a., v. n., & interj. Saxon pitnej-r-e. Testimony ; attestation ; one who gives testimony : ‘ with a witness’ is, well testified ; effec- tually : to witness, to attest, or bear testimony : an exclamation calling for testimony or attestation.

God is witness betwixt me and thee. Genesis.

If I bear witness of myself, my witness is not true.

John.

The sea strave with the winds which should l>e louder, and the shrouds of the ship, with a ghastly noise, to them that were in it witnessed that their ruin was the wager of the others contention. Sidney.

The devil can cite scripture for his purpose : An evil soul producing holy witness Is like a villain with a smiling cheek, A goodly apple rotten at the heart. Shalttpetre

There ran a rumour Of many worthy fellows that were out. Which was to my belief u-itnesied the rather, For that I saw the tyrant’s power a-foot. Id.

The king's attorney

Urged on examinations, proofs, confessions Of diverse witnesses. Id.

A fat benefice became a crime, and wilneu too against its incumbent. Demy of Piety.

Nor was long his witnest unconfirmed. Milton.

For want of words or lack of breath, Hi/rim, when I was worried with thy peals. Id.

Though by the father he were hired to this, lie ne'er could u-itness any touch or kiss. Donne.

Nor need I speak my deeds, for these you see ; The sun and day are u-itnesses for me. Drvdtn.

Witness, ye heavens, I live not by my fault, I strove to have deserved the death 1 sought. Id.

Our senses bear witness to the truth of each other's report, concerning the existence of sensible things.

Locke.

The Americans do acknowledge and speak of the de- luge in their continent, as Acosta witnesseth, and l.aet, in the histories of them. Bunift.

A WITNESS, in law, is a person who gives evi- dence in any cnuˆe, and is sworn to speak the truth, the whole truth, and nothing but the truth.

WITNESSES, TRIAL BY, a species of trial without the intervention of a jury. This is the only me- thod of trial known to the civil law in which the judge is left to form in his own breast his sentence upon the credit of the witnesses examined ; but it is very rarely used in the English law, which pre- fers the trial by jury before it in almost every in- stance

W ITNF.Y, a market town and parish in Bamp- ton hundred, Oxon, situate on the river W'indrush, eleven miles and a half W. N. W. of Oxford, seven and a quarter from Burford, and sixty-nine W. N. W. of London. The town consists of two streets : at the upper end of the principal one stands the church, a handsome and spacious structure, built in a rich style of Gothic architecture, with a tine spire. Witney has been noted for i's manufacture of blankets, which employs many hands. Here is a market on Thursday.

WITSIUS (Hermanˆ was born at Enckhuysen in 1626. He was professor of

divinity successively

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». Franeker, Utrecht and Leyden. His capital works are, 1. Hierosolymitana ; 2. .Kgyptiaca et Decaphyllon, cum diatriba de Legione Kulmina- trice Christianorum ; 3. Economy of the Covenants oetween God and Men. He died in 1708.*

WITT (Emmanuel de), an eminent painter, born at Alcmaer in 1607. He excelled in buildings. He died in 1692.

WITTENBERG, a city of Prussian Saxony, in the government of Merseberg, on the Elbe, is situated on a level sandy spot, and is of an oblong form, consisting of one street, with suburbs widely spread, defended by a dyke. Its works, formerly considerable, were allowed to fall gradually to dfcay, until reinstated by the French in 1813. It has some linen manufactories, and is a place of some antiquity. Luther having been appointed professor of philosophy in 1508, and having here, from his academical chair, first exposed the corrup- tions of the Catholic church, he and his associate, Melancthon, are buried in the university church. So lately as October 1821 a monumental colossal statue of Luther was erected in Wittenberg, with great solemnity. After it ceased to be the residence of a court, it was found inadequate to the support of the university, and the latter was annexed to that of Halle ; and its place supplied by a gymna- sium or classical school. Since 1815 this town has been ceded to Prussia. Population 5000. Sixty-nine miles N. N. W. of Dresden, and forty N. N. E. of Leipsic.

WITTINGLY, adv. From witting, knowing. Sax. pitan. Knowingly; not ignorantly; with knowledge; by design.

Whatsoever we work as men, the same we do wit- tingly work and freely ; neither are we, according to the manner of natural agents, any way so tied, but that it is in our power to leave things we do undone. Hooker.

Withhold revenge, 'tis not my fault, Nor wittingly have I infringed my vow. Shakspeare.

He knowingly and wittingly brought evil into the world. More.

WITTOL, n. $. Sax. pitrol, from piran, to know. A man who knows the falsehood of his wife, and seems contented ; a tame cuckold.

O Mars, for what doth serve thy armed ax ? To let that uitold beast consume in flames Thy Venus child. Sidney.

Amaimon sounds well ; Lucifer well ; yet they are the names of fiends ; but cuckold, wiitol, the devil himself hath not such a name. Shakspeare.

The jealous wittolly knave hath masses of money.

Id.

WIVE, v. n. & v. a.) From wife. To marry ;

WIVE'LY, adv. { to take a wife ; to match to

wife : wively is belonging to a wife.

Basilius could not abstain from praising Parthenia,

the perfect picture of a womanly virtue, and wively

thfulness. Sidney.

A roan of his learning should not so lightly have been carried away with old wives' tales, from approv- ance of his own reason. Spenser.

Were she as rough As are the swelling Adriatick seas, I come to wive it wealthily in Padua. Shuktpeare.

She dying gave it me ;

And bid me, when my fate would have me wived, To give it her. id.

Design or chance makes others wive, But nature did this match contrive. Waller.

WIVLESCOMB. See WIVELSCOMH.

WIZ'ARD, n. s. From wise. A conjurer ; en- chanter ; a he witch. VOL. XXII.

WOA

I'atience, good lady ;

di know their times.

WO, or WOE, n. s. WO'BEGONE, adj. WO'FUL, WO'FULLY, adv.

.

The prophecies of u'iznnla o! J Increased her terror, and her fall foretold.

Waller.

The wily wizard must be caught, For, unconstrained, he-nothing tells for nought.

Dryden.

~\ Sax. pa; Isl., Swed.,uri(i I Belg., we. Grief; sorrow ; {ˆ misery ; calamity : often fused in denunciation and I lamentation, whenitsome-

Wo'i-t LXESS, n. s. J times becomes a substan- tive ; at others an adjective : wobegone is loˆt in woe : woful, sorrowful ; calamitous : the adverb and noun substantive corresponding.

(Co is me for my hurt, my wound is grievous. Jer.

Howl ye, wo worth the day. Ezekiel.

Wo be to the shepherds of Israel that do feed them- selves. Id.

All is but lip wisdom which wants experience : I now, wo is me ! do try what love can do. Sidney.

The woful Gynecia, to whom rest was no ease, had left her lothed lodging, and gotten herself into the so- litary places those desarts were full of. Id.

Woe are we, Sir ! you may not live to wear All your true followers out. Shakspeare.

Woes, by wrong imaginations, lose The knowledge of themselves. Id.

Many of our princes, woe the while ! Lie drowned and soaked in mercenary blood. Id.

He took and laid it by, and wept for tco. Cftapman.

Tancred he saw his life's joy set at nought, So ftebegone was he with pains of love. Fairfar.

Eve plucked, she eat :

Earth felt the wound ; and nature from her seat Sighing through all her works, gave signs of woe That all was lost. Milton.

In a tower, and never to be loosed, The woful captive kinsmen are inclosed. Dryden.

Woe to the vanquished, woe ! lit.

He who would pass such a judgment upon his con- dition as shall be confirmed at that great tribunal, from which there lies no appeal, will find himself tcofully de- ceived if he judges of his spiritual estate by any of these measures. Samlt.

O'er dreary wastes they weep each other's wo. Pope

WOAD, n. s. Sax. pat> ; Dan. and Teut. maid ; Belg. weed. A plant.

In times of old, when British nymphs were known To love no foreign fashions like their own ; When dress was monstrous, and fig-leaves the mode, And quality put on no paint but wood. Garth.

WOAD, in botany. See ISATIS. The preparation of woad for dyeing, as practised in France, is mi- nutely described by Astruc, in his Memoirs for a Natural History of Languedoc. The plant puts forth at first five or six upright leaves, about a foot long, and six inches broad : when these hang down- wards, and turn yellow, they are fit for gathering : five crops are gathered in one year. The leaves are carried directly to a mill, much resembling the oil or tan mills, and ground into a smooth paste. If this process was deferred for some time, they would putrefy, and send forth an insupportable stencli. The paste is laid in heaps, pressed close and smooth, and the blackish crust, which forms on the outside, reunited if it happens to crack ; if this was neglected, little worms would be produced in the cracks, and the woad would lose a part of its strength. After lying for fifteen days, the heaps are opened, the crust rubbed and mixed with the inside, and the matter formed into oval balls, which are pressed close and solid in wooden moulds.

These are dried upon hurdles : in the sun, they turn b.ack on the outside ; in a close place, yellow- ish, especially if the weather be rainy. The dealers in this commodity prefer the first ; though it is said the workmen find no considerable difference betwixt the two. The good balls are distinguished by their being weighty, of an agreeable smell, and, when rubbed, of a violet color within. For the use of the dyer, these balls require a farther preparation : they are beaten with wooden mallets, on a brick or stone

floor, into a gross powder, which is heaped up in the middle of the room to the height of four feet, a space being left for passing round the sides. The powder, moistened with water, ferments, grows hot, and throws out a thick fetid fume. It is sho- velled backwards and forwards, and moistened every day for twelve days ; after which it is stirred less frequently, without watering, and at length made into a heap for the dyer.

WOAHOO, or OAHOO, one of the Sandwich Islands ; and perhaps the finest island of the whole group. Nothing can exceed the verdure of the hills, the variety of wood and lawn, and rich cul- tivated valleys, which the whole face of the country displayed. The road is formed by the norttf and west extremities. It is supposed to contain 60,000 inhabitants. Long, of the anchoring place 202° 9′ E., lat. 21° 43″ N.

WOBURN, a neat town of Bedfordshire, forty- two miles N. N. W. of London, long. 0° 32′ W., lat. 52° 2′ N., standing on the high road to Manchester. It has twice been burnt down, in 1595 and 1724, is now regularly built, and has a market house of the Doric order, with a lofty cupola. The church is a pretty building, its steeple stands detached, near the north aisle, and had on its summit a very curious wooden lantern nearly 300 years old, but this from neglect fell in ruins, and has been re- moved. This church was rebuilt by the last abbot, and the family of Staunton, who had estates in this parish, and left some benefactions to the poor ; one of them was standard bearer to Henry VII.; it is now kept in repair by the duke of Bedford, out of the produce of some charity lands vested in them. The chancel was beautified about 100 years ago, under the direction of Sir William Chambers ; the body was also thoroughly repaired by the late duke, and the present has given an altar piece, communion plate, and barrel organ ; there are some monuments. The parish contains 1700 inhabitants ; about one mile and a half from the town in the parish of Wavendon are pits of Fuller's earth of some antiquity.

Woburn abbey of the Cistercian order was founded from Fountain's abbey in Yorkshire, in 1145, by Hugh de Bolebec, and was dissolved in 1537, when the revenues amounted to £391 per annum; this with a variety of church property in different parts of tlvs kingdom, forming at present a magnificent income was bestowed on lord Russell, ancestor of the duke of Bedford, whose seat occu- pies the site of the abbey, about one mile from the town of Woburn. It is a modern quadrangular building, handsome, but heavy ; the west front has four Ionic columns, aid the east four fluted Doric ones, the interior contains a large gallery of por- traits, and a collection of Italian and Dutch paint- ings ; and in tne pleasure ground is a sculpture gallery formed by the present duke, which contains a group of the graces by Canova, which cost £3000. The park is twelve miles in circuit, and contains a large herd of dctr.

WODAN, or WOUEN. See ODIN, MYTHOLOGY, and POLYTHEISM.

WODEVILE (Anthony), earl of Rivers, bro- ther to the queen of Edward IV., was born in the end of 1442, or beginning of 1443. He was one of the most accomplished men of his age. He was early and constantly employed either in the tu- mults of those turbulent times, or in discharging the duties of some of the highest offices of the state, with which he was invested. Yet he found leisure to cultivate letters, and to be the author of works which, though of little value now, made some noise in that age. These consisted chiefly of translations from the French; and his lordship, with his printer Caxton, were the first English au- thor and printer who had the pleasure to see their works printed. He was treacherously imprisoned by Richard III. in Pomfret Castle, where, during his confinement, he composed a short poem, which has been preserved. He was beheaded on the 23d of June, 1483, in the forty-first year of his age.

WOFFINGTON. a celebrated actress, born at Dublin, in 1718. She first appeared at Covent Garden, in 1733, in the character of Sir Harry Wildair, with great applause. She died in 1760.

WOIDE (Charles Godfrey), LL. D., an emi- nent oriental scholar, born either in Poland or the United Provinces. Having taken up his abode ir. this country, about 1765, he obtained the appoint- ment of preacher to the German chapel in the Savoy, and also to that adjoining Marlborough house. In 1782 he was elected by the trustees of the British Museum one of the assistant librarians, a situation for which his deep erudition, especially in Egyptian antiquities, eminently qualified him. Four years after he was presented with the honor- ary degree of LL. D., by the university of Oxford, for superintending the publication of La Croze's Egyptian Lexicon, and Scholtz's Grammar of the language, which issued from the Clarendon press in 1778. He also published a fac-simile of the Alexandrian manuscript of the New Testament, now in the British Museum. His death took place in the spring of 1 790.

WOLCOT (John), M. D., better known as Peter Pindar, a satirist, was born at Dodbrook in Devonshire, in 1738. He was educated first at Kingsbridge, in his native county, and next at Bodmin in Cornwall, after which he was brought up under his uncle, an apothecary at Fowey. In 1767 he obtained a doctor's degree in Scotland, and the same year went with Sir William Tre- lawney to Jamaica, but on the death of his patron returned to England and settled as a physician in Cornwall, where he became the instructor of ( )pie the painter, with whom he visited London in 1780. He now began, under the name of Peter Pindar, some severe attacks on the royal academicians, in a series of odes. After this he took higher aim, and published a satyrical poem called The Lousiad, in which he ridiculed king

George III., with more wit than truth or manners. After this he brought out a number of ludicrous pieces, which went through numerous editions. The author became blind some years before his death, which happened in Somers- towu, January 14th, 1819.

WOLD, WELD, or DYER'S WEED. See RE- SEDA.

\V()LF,B.». -\ Sax. palp; Teut. and Belg.

UOI.F'DOC, { wolf. A well known beast of

WOLF'ISH, adj. t prey ; any thing ravenous or de-

WOLV'ISH. J struclive: awolfdog is a dog of

WOLF E.

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a large oreed: wolfish and wolvisli, resembling a wolf.

No, rather I abjure all roofs, and chuse To be a comrade with the wolf and owl, Necessity's sharp pinch. Shakspeare.

Thy desires Are wolfish, bloody, starved, and ravenous. Id.

My people are grown half wild, they would not worry one another so in that wolvish belluine manner else.

Hand.

Nothing more common than those icolfah back-friends in all our pretensions. L' Estrange.

There is a base u-olvish principle within that is grati- fied with another's misery. South.

The luckless prey how treacherous tumblers gain, And dauntless tealfdogs shake the lion's mane. Tickell.

WOLF, in zoology. See CANIS.

WOLF, or WOLF POISON. See POISON.

WOLF Doc. See CAMS.

WOLF FISH, or SEA WOLF. See ANARCHICAS.

WOLFE (major-general James) was born at Westerham in Kent, 1726. His father was lieute- nant-general Edward Wolfe. He went into the army when very young ; and, applying himself with assiduity to the study of his profession, soon be- came remarkable for his military knowledge. He distinguished himself at the battle of Lafelt when little more than twenty. After the peace, he con- tinued to cultivate the art of war. lie introduced the greatest regularity, and the exactest discipline into his corps, and at the same time preserved the affection of the soldiers. In 1758 he was a briga- dier-general at the siege of Louisbourg. lie landed first on the island at the head of his di- vision ; and in spite of the violence of the surf, and the force and well-directed fire of the enemy, drove them from their post with great precipitation. The surrender of the town, which happened soon after, was in a great measure owing to his activity, bravery, and skill. The fame which he acquired here procured him the command of the army destined to attack Quebec. This was the most difficult and the most arduous undertaking; of the war. Quebec was well fortified, and defended by an army of 20,000 men, regulars and militia, be- sides a considerable number of Indian allies. The troops destined for this expedition consisted of ten battalions, making up altogether about 7000 men. He landed his army on the northern shore of the river St. Lawrence in spite of the enemy, and forced them to a battle, in which they were com- pletely defeated. The consequence of this battle was the reduction of Quebec, and the conquest of Canada. In the beginning of the battle, general Wolfe was wounded in the wrist by a musket ball, but he continued to give his orders with his usual calmness and perspicuity. Towards the end of the battle, he received a new wound in the breast ; he immediately retired behind the rear-rank, sup- ported by a grenadier, and laid himself down on the ground. Soon after a shout was heard ; and one of the officers who stood by him exclaimed, ‘ See how they run ! ‘ The dying hero asked with some emotion, ‘ Who run ? ‘ ‘ The enemy,’ re- plied the officer, ‘ they give way every where.’ The general then said, ‘ Pray, do one of you run to colonel Burton, and tell him to march Webb’s regiment with all speed down to Charles River, to cut off the retreat of the fugitives from the bridge. Now, God be praised, I shall die happy!’ He then turned on his side, closed his eyes, and ex- pired. His body was brought to England, and

buried with military honors in Westminster Abbey, where a magnificent monument is erected to his memory.

WOLFE (John Christian), a celebrated German philosopher, was born at Breslau in 1679. He prosecuted his studies successively in the universi- ties of Jena, Hamburgh, and Leipsic. At the age of twenty-six he had acquired so much dis- tinction, that he was appointed professor of ma- thematics, and soon afterwards of philosophy in general, in the university of Hall. After Leibnitz had published his Theodicea, Wolfe, struck with the novelty

of the edifice which that philosopher had raised, assiduously labored in the investigation of new metaphysical truths. He also digested the elements of mathematics in a new method, and at- tempted an improvement of the art of reasoning, in a treatise On the Powers of the Human Under- standing. Upon the foundation of Leibnitz's doc- trine of Monads, he formed a new system of cos- mology and pneumatology, digested and demon- strated in a mathematical method. This work, en- entitled Thoughts on God, the World, and the Human Soul, was published in the year 1719; to which were added, in a subsequent edition, Heads of Ethics and Policy. Wolfe was now rising towards the summit of philosophical reputation, when the opinion which he entertained on the doc- trine of necessity being deemed by his colleague? inimical to religion, and an oration which he de- livered in praise of the morality of the Chinese having given much offence, an accusation of heresy was publicly brought against him ; and though he attempted to justify himself, in a treatise which he wrote on the subject of fatality, a royal mandate was issued in November 1723, requiring him to leave the Prussian dominions. Having been for- merly invited by the landgrave of Hesse Cassel to fill a professor's chair in the university of Cassel, Wolfe now put himself under the patronage of that prince, who had the liberality to afford him a se- cure asylum, and appointed him professor of ma- thematics and philosophy. The question concerning the grounds of the censure which had been passed upon Wolfe, was now every where freely canvassed ; almost every German university was inflamed with disputes on the subject of liberty and necessity; and the names of Wolfians and Anti-Wolfians were every where heard. After an interval of nine years, the king of Prussia reversed his sentence of exile, and appointed him vice-chancellor of the university of Hall ; where his return was welcomed with every expression of triumph. From this time he was employed in completing his Institutes of Phi- losophy, which he lived to accomplish in every branch except policy. In 1745 he was created a baron by the elector of Bavaria, and succeeded Lu- dowig in the office of chancellor of the university. He continued to enjoy these honors till 1754, when he expired.

WOLFENBUTTEL, or BRUNSWICK WOLFEN- BCTTEL, an independent duchy of Germany, com- posed of several scattered territories in the circles of Upper and Lower Saxony and Westphalia. It contains 1615 square miles, and 210,000 inhabit- ants. The whole is divided, for the purpose of local government, into six districts, of which the principality of Wolfenbuttel retains four. The revenue, amounting to £200,000 a year, is at the disposal, partly of the duke, partly of the states. The personal income of the duke, in consequence

cf the successive lapse of the property of noble families, is larger than that of most German princes ; he draws £15,000 from the duchy of Oels in Silesia.

WOLFENBUTTEL, a city of Germany, and the capital of the principality of the same name, stands on the Oker, thirty-seven miles E. S. E. of Hanover. Its environs are fertile; but they contain some marshes, which render the air somewhat un- healthy. It is fortified ; but its works are neg- lected. It is divided into the citadel or fortified part, and two suburbs. The public buildings are the castle, formerly the residence of the dukes of Brunswick, three parish churches, the chancery, and arsenal. The public library is large ; but the books are in general old. Wolfenbuttel has a Ducal high school ; also other schools, and a Lu- theran convent. It is also the seat of a court of justice, and of a consistory. The manufactures, though on a small scale, comprise linen, leather, soap, and silk. Population 6700.

WOLFSBANE. See ACONITUM.

WoLFSBANE, WlNTEE. See HELLEBORUS.

VVoLGA, a river of Russia, which has the longest course, and, with the exception of the Danube, the largest volume of any river in Europe. It rises among the Valdai mountains, in lat. 57° N., and takes a direction in general eastward, but with many windings, until reaching the city of Kazan. Below Kazan it receives the Kama, which brings to it the tribute of a great extent of country. It now flows southward, and forms the boundary between Eu- rope and Asia during several hundred miles, till reaching Tzarystyn, when, turning to the east, it approaches the Caspian, and, after separating into a great number of branches, discharges itself into that sea near Astracan. Its course is computed at the extraordinary length of 2700 miles. From the vicinity of Tver, northward, a communication is opened to the Msta, a river flowing northward to the Nieva ; so that Russia in Europe admits of being traversed by water in all its extent. The principal rivers which join the Wolga are the Tvertza, the Mologa, the Sestra, the Soscha, the Oka, the Sura, the Kasanka, the Kama, the Sok, and the Samara.

WOLLASTON (William), descended of an an- cient family in Staffordshire, was born in 1659. He was in 1674 admitted a pensioner in Sidney College, Cambridge. In 1682 he became assistant to the head master of Birmingham school. Some time after he got a small lecture about two miles distant, but did the duty the whole Sunday ; which, together with the business of a great free school for about four years, began to break his constitution. .‘During this space he likewise underwent a great iˆeal of trouble and

uneasiness, to extricate two of his brothers from some inconveniences, to which their own imprudence had subjected them. In 1688 affairs took a new turn. He found himself by a cousin's will entitled to a very ample estate ; nnd came to London that same year, where he ••tiled ; choosing a private, retired, and studious life. Not long before his death, he published his treatise entitled The Religion of Nature Deline ated ; a work for which so great a demand was made that more than 10,000 copies were sold in a /cry few years. He had scarcely completed the publication of it, when he unfortunately broke an arm ; and this, adding strength to distempers that had been growing upon him for some time, acce-

lerated his death, lie died the 29th of October

1724.

WOLLSTONECRAFT,an extraordinary writer, born at Beverley in Yorkshire in 1768. Her father having ruined Ins fortune, she opened a school at Islington, in her twenty-fourth year, which was soon after transferred to Newington Green. She had for her partner a young lady to whom she was greatly attached, and whom, in 1785, she accompanied to Lisbon. On her return to England she became governess to lord Kings-borough's daughters. In 1787 she again settled in London, and lived by her pen. She published Original Stories from Real Life, tor the use of Children, a translation from the French and Ger- man. She next had some concern in the Analy- tical Review. In 1790 she published an Answer to Burke's Reflections on the Frencli Revolution ; and, in 1791, her Vindication of the Rights of Women. In 1792 she went to Paris, where she formed an unfortunate connexion with an Ameri- can gentleman, by whom she had a daughter. For him she undertook a voyage to Norway to regulate some commercial concerns. This tour occasioned her Letters from Scandinavia. On her return to England, she found herself deserted by her para- mour, and, in a fit of despair, plunged into the Thames, from Putney Bridge. She was saved and restored to life. In 1796 she was married to Mr. Godwin, the author of Political Justice, and other works. She died in child-birth in August 1797. Her posthumous works, consisting of Letters and Fragments.

WOLSEY (Thomas), Cardinal, is said to have been the son of a butcher at Ipswich. He studied at Magdalen College, Oxford, and in 1500 became rector of Lymington in Somersetshire : he was af- terwards made chaplain to king Henry VIII., and obtained several preferments. Having gradually acquired an entire ascendency over the mind of Henry VIII., he successively obtained several bi- shoprics, and at length was made archbishop of York, lord high chancellor of England, and prime minister ; and was for several years the arbiter of Europe. Pope Leo X. created him cardinal in 1515, and made him legate a latere ; and the em peror Charles \ ., and the French

king Francis I., loaded him with favors, to gain him over to their interest: but, after having first sided with the em- peror, he deserted him to espouse the interest of France. As his revenues were immense, his pride and ostentation were carried to the greatest height. He had 500 servants ; among whom were nine or ten lords, fifteen knights, and forty esquires. His ambition to be pope, his pride, his exactions, and his political delay of Henry's divorce, occasioned his disgrace. See ENGLAND. He died in the year

1530.

The magnificence of the cardinal's chapel esta- blishment, as described by Cavendish, his contem- porary and domestic, seems far to have surpassed that of the Roman pontiff himself. ' First, he had there a deane, a great divine, and a man < >: excellent learning ; a sub-dean, a repeatour ot the quire, a gospeller and epistollor ; of MIIJIII, priests, ten, a master of the children. The lars of the chapell, being singing men, twelve ; singing children, ten, with one M rvant t > \vaite upon them. In the vestry, a yeoman and two grooms ; over and besides other retainers that came thither at principal feasts. And for the fur

niture of his chapell, it passeth my weak capacity to declare the number of the costly ornaments and rich jewels that were occupied in the same. For I have seen in procession about the hall forty-four rich copes, besides the rich candlesticks, and other necessary ornaments to the furniture of the same.' The earl of Northumberland seems to have been treated with great insolence and indignity by the cardinal, who demanded his choral books for the use of this chapel. Letters concerning this requi- sition are still preserved, in which the earl says, ' I do perceayff my lorde cardinall's pleasour ys to have such boks as was in the chapell of my lat lorde and ffayther (wos soil Jhu pardon). To the accomplychment of which, at your desyer, I am confformable, notwithstandinge I trust to be able ons to set up a chapell off myne owne. I shall with all sped send up the boks unto my lord's grace, as to say iiij Antiffonars (Antiphoners), such as I think wher not seen a gret wyll — v Grails (Graduals)— an Ordeorly (Ordinal)— a Ma- nual!— viij Prossessioners (Processionals).' Nor- thumberland Household Book.

WOLVERENE, in zoology. See URSUS. \ OLV'ERHAMPTON, a borough

town in Seis- don hundred, Staffordshire, situate on a rising ground, fourteen miles north-west of Birmingham, and 123 north-west of London. Of its trade and manufactures, hardware is the chief article, but it is also noted for its ingenious locksmiths. Most of the farmers in the neighbourhood have their forges, where they work when not employed in the field, and take their work to market as regularly as other farmers their corn ; many of the women are assistants in these manufactures, and work at the file. It has two churches ; St. Peter's is col- legiate, and has a lofty square tower, embellished with battlements ; it has eight bells, a set of chimes, and an organ, and contains several handsome mo- numents. This church, as well as a convent, was erected about the end of the tenth century, by a Saxon lady, called Wulfruna, whence the corrup- tion of the word Wolver. An act of patliament was obtained, in 1775, for the erection of a new church or chapel of ease here, which was finished in a plain neat manner, in 1758; but, for want of funds, the steeple was not erected till 1776. It is de- dicated to Sc. John. Besides these churches there are three chapels, and numerous dissenting meet- ing-houses. This town has a canal branching from the Dudley and Birmingham canal ; communicating also with the Stafford, Worcester, and Grand- Trunk, and another branch to the Wyrley and Es- sington canal, at Walsall. Market on Wednesday •and Saturday. The mother church is a curacy under the dean of Windsor, and St. John's is a cha- pel of ease. It sends two members to parliament. W ()M'AN,n.s. 8cr. a. ~} Sax. pipman, pimman WOM'A NED, udj. (Skinner), meaning wif

ˆ OM'ANHATEK, n. s. or womb-man. The hu- WOM'ANHEAD, man female; a female

WOMANHOOD, ˆservant: to woman is,

WOM'A MSE, i: n. WOM'ANISH, udj. W OM'ANKIXD, H. s.

to make too pliant ; to emasculate : \vomaned is accompanied by, or

ˆ OM'ANLY,a

And Acx-vfvi'oo); »00k men servants and women ser- vants. Genesis.

This effeminate love of a woman doth womanize a man.

Sidney,

So easy 'tis t' appease the stormy wind Of malice, in the calm of pleasant womankind. S/tetu.

There dwells sweet love and constant chastity, Unspotted faith, and comely

womanhoud. It.

A voice not soft, weak, piping, and womanish, but audible, strong, and manlike. Ascham.

She brings your froward wives. As prisoners, to her womanly persuasion. Sltakspeare.

That man who hath a tongue is no man, If with his tongue he cannot win a woman. Id.

I could not personally deliver to her What you commanded me ; but by her woman I sent your message. /

I do attend here on the general, And think it no addition, uor my wish, To have him see me womancd. Id.

During his banishment, he was so softened and de- jected, as he wrote nothing but a few womanish epistles.

Bacon.

All will spy in thy face A blushing womanly discovering grace. Donne.

0 woman, lovely woman, nature formed thee

To temper man : we had been brutes without thee.

(hway.

Because thou doat'st on womankind, admiring Their shape, their colour, and attractive grace, None are, thou think'st, but taken with such toys.

Milton. In a sad look of womanish complaint. Denham.

1 melt to womanish tears, and, if I stay,

I find my love my courage will betray. Dryden.

Rage choaks my words ; 'tis womanly to weep. Id.

Women are made as they themselves would chuse, Too proud to ask, too humble to refuse. Garth.

Vivacity is the gift of women, gravity that of men.

Addison.

Juba might make the proudest of our sex, Any of womankind but Marcia, happy. Id.

Young persons, under a womanly age, are often troubled with some of the same symptoms. Arbuthnot.

How could it come into your mind, To pitch on me, of all mankind, Against the sex lo write a satire, And brand me for a womanhattrl Swift.

WOMAN. See HOMO.

For the present improved treatment of the fair sex, and in consequence thereof of society in ge- neral, modern Europeans are indebted to our Go- thic ancestors. Women, amcng the ancient Greeks and Romans, seem to have been considered merely as objects of sensuality, or of domestic conveni- ency : they were devoted to a state of seclusion and obscurity, had few attentions paid them, ana were permitted to take as little share in the con- versation as in the general commerce of life. But the northern nations, who paid a kind of devotion to the softer sex, even in their native forests, had no sooner settled themselves in the provinces of the Roman empire, than the female character began to assume new consequence. Those fierce barba- rians, who seemed to thirst only for blood, alw;i\s forbore to offer any violence to the women. They brought along with them the respectful gallantry of the north, which had power tven to restrain their savage ferocity; and they introduced into tl>e west of Europe a generosity of vjtitiinent, and a complaisance towards the ladies, to which the most polished nations of antiquity were strangers. These sentiments of generous gallantry were fostered bj the institution of chivalry, which lifted woman yet higher in the scale of life. Instead of being nobody in society, she became its primum mobile. Every

knight devoting himself to danger, declared him- self the humble servant of some lady, and that lady wa often the object of his love. Her honor was supposed to be intimately connected with his, and her smile was ihe reward of his valor : for her he attacked, for her he defended, and for her he shed his blood. Couraee, animated by so powerful a motive, lost sight of every thing but enterprise : incredible toils were cheerfully endured, incredible actions were performed, and adventures seemingly fabulous were realised. The effect was reciprocal. Women, proud of their influence, became worthy of the heroism which they had inspired : they were not to be approached*

but by the high minded and the brave; and men then could only be admitted to the bosom of the chaste fair, after proving their fidelity and affection by years of perseverance and of peril. Again, as to the change which took place in the operations of war, it may be observed that the perfect hero of antiquity was superior to fear, but he made use of every artifice to aunoy his enemy : impelled by animosity and hostile passion, like the savage in the American woods, he was only anxious of attaining his end, without regard- ing whether fraud or force were the means. But the true knight or modern hero of the middle ages, who seems in all his rencounters to have had his eye on the judicial combat or judgment of God, Bad an equal contempt for stratagem and danger. He disdained to take advantage of his enemy : he desired only to see hin, and to combat him upon equal terms, trusting that heaven would declare in behalf of the just; and as he professed only to vindicate the cause of religion, of injured beauty, or oppressed innocence, he was further confirmed in this enthusiastic opinion by his own heated ima- gination. Strongly persuaded that the decision must be in his favor, he fought as if under the in- fluence of divine inspiration rather than of military ardor. Thus the system of chivalry, by a singular combination of manners, blended the heroic and sanctified characters, united devotion and valor, zeal and gallantry, and reconciled the iove of God and of the ladies*

\N <) M H. n. a. Scv.a. (Sax. pamb ; Goth, u-umba ;

WOMBY', adj. i Isl. vicmb. The place of

the foetus in the mother; place whence any thins is produced ; cavity : to enclose : womby, capacious. Obsolete.

\ hen yet he was but tender bodied, and the only son of ray womb. Sliabvearc.

Not for all the sun sees, or The close earth trombs, will I break my oath To this my fair beloved. Id.

He '11 call you to so hot an answer for it, That caves and iromhy vaults ges of France Shall chide your trespass, and return your mock. Id.

The earth was formed, but in the tcomb as yet Of waters, embryon immature involved, Appeared not. Milton.

New-born children bring not many ideas into the world, bating some faint ideas of hunger and thirst which they may have felt in the tr,ml>. Locke.

An amphitheatre unpeopled Home, And held, uncrowded, nations in its womb. Additon.

Sax.punt>nian;Teut.

n-inukr ; Belg. womltr. To be struck with ad- m: ration ; be: pic::- I surpn >::i->li-

and J ran-ly v.uli «/?<; : ad-

.'M i. ri i, adj. i'i 1:1 iii v, udr.

^ "N k, ndj.

\N ON'DUI.: •VON'DBOVSLY, adv.

miration ; astonishment ; cause of wonder : wonder- ful and wondrous mean admirable : strange ; marvellous : and the other derivatives correspond.

I uttered that which I understood not, things too wonderful for me, which I knew not. Job xlii. 3.

The house which I am about to build shall be won- derful great. 2 Chron. ii. 9.

The want of these magazines of victuals I have com- plained of in England, and wondered at in other coun- tries. Spenser.

When my pen would write her titles true, It ravished is with fancy's wonderment. Id.

My lord led wondroutly to discontent. Shakspeare.

From that part where Moses remembereth the giants, begotten by the sons of good men upon the daughters of the wicked, did they steal those wondrous great acts of their ancient kings and powerful giants, Raleigh.

The pope, knowing himself to be unprofitable to the Christian world, was wonderfully glad to hear that there were such echoes of him sounding in remote parts.

Bacon.

Wonder causeth astonishment, or an immoveable pos- ture of the body ; for in wonder the spirits fly not as in fear, but only settle. Id.

Then medicines woundrottsly composed the skilful leech applied. Chapman.

The Cornish tron

Carew.

There is a place deep, wondrous deep, below, Which genuine night and horrours do o'erflow. Cowley.

The credit of whose virtue rest with thee ; Wondrous indeed, if cause of such effects. Milton.

There Babylon, the wonder of all tongues. Id.

Strange Hath been the cause, and wonderful to hear. Id.

Drawn for your prince, that sword could wonders do • The better cause makes mine the sharper now. Waller.

In such charities she passed the day. Twas wond'roiis how she found an hour to pray.

Drudeii.

King Turnus wondered at the fight renewed. Id

Ascanius. tcondentruck to see That image of his filial piety. Id

The neighbours made a wonderment of it, anil asked him what he meant. L' Estrange.

U'ho can uwuferthat the sciences have been so o\cr- charged with insignificant and doubtful expressions, capable to make the most quick-sighted little the more knowing 1 Locke.

There is something wonderfully divine in the aiis of this picture. Addifvn.

Sylphs, yet mindful of their ancient race, Are, as wlitn women, wondrout fond of place. Pope.

I could not sufficiently wonder at the intrepidity of these diminutive mortals, who durst venture to mount and walk upon my body. Sir/ri.

Researches into the springs of natural bodies, and their motions, should awaken us to admire the tcondrvus wisdom of our Creator in all the works of nature.

Wmttt,

WONT, v. n. -\ Pret. & part . wont ; Sax.

WO.M'ED, adj. f punun. Teul.wonheit . To

WnM'r.DSESS, n. s. f be accustomed ; to use; be

WOM'I.ESS, adj. 'used: wontless is unac- customed, and the other derivatives correspond.

Passing their time according to their wont, they waited for the coming of Phalantus. Sidney.

Through power of that, his cunning thieveries He iron is to work, that none the same espies. Spenter.

Whither, love, wilt thou now carry me ? \liat trnntlfss fury dost thou now inspire Into my feeble breast, when full of thee? la.

Things natural in that regard forget their ordinary . ti:;it wliii-h is lu-avy mounting sometime ,

Jason the Thcssaliau waa vent to s.iy, that some

woo

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WOO

things must be done unjustly, that many things may be done justly. Bacon.

Did I see any thing more of Christ in those that pre- tend to other modes of government, I might suspect my judgment biassed with prejudice or wontedness of my opinion. King Charles.

So prayed they, innocent, and to their thoughts Firm peace recovered soon, and wonted calm. Milton.

For others that he saw perplexed about the manage of their difficult affairs, he was wont to ask them when they would begin to trust God, or permit him to govern the world 1 Fell.

Who have no house, sit round where once it was, And with full eyes each wonted room require ;

Haunting the yet warm ashes of the place. As murthered men walk where they did expire. Dryd.

The pond-froˆ would fain have gotten the other frog over ; but she was

wonted to the place, and would not remove. L'Estranae.

Another sort of sophism is wont to be called an im- perfect enumeration or false induction, when from a few experiments men infer general theorems. Watts.

*NY (JO, v. a. & v. n. ˆ Sax. 37030*0, courted. To*

WOO'ER, n. s. S court; sue to for love; im-

portune ; make love : he who woos.

We cannot fight for love, as men may do ; We should be iruo'd, and were not made to woo.

Sluikspeare. In those holes

Where eyes did once inhabit, there were crept, As 'twere in scorn of eyes, reflecting gems ; That u-oo'd to the slimy bottom of the deep. Id.

Usurping woers felt his thundering sword , And willing nations knew their native lord. Creech.

How is the loadstone, nature's subtle pride, By the rude iron woo'd, and made a bride 1 Cowley.

My proud rival woos Another partner to his throne and bed. Philips.

On stretch thy reign, fair peace ! from shore to

shore,

Till conquest cease and slavery be no more ; Till the freed Indians in their native groves Reap their own fruits, and woo their sable loves. Pope.

WOOD, adj. Sax. po& ; Goth. vod. Mad; furious ; raging. Obsolete.

Winds do rage as winds were wood, And cause spring tides to raise great flood. Tusser.

Calm the tempest of his passion wood ; The banks are overflown when stopped is the flood.

Spenser.

WOOD, ra. s. "| Sax. pu"»e ; Belgic woud ; WOOD'BINE, Goth, and Svred.wid. A large WOOD'COCK, or thick collection of trees ;

*WOOD'DRINK, the substance of trees ; timber : WOOD'ED, adj. woodbine is a name of the ho- *WOOD'EN, neysuckle : woodcock, a bird*

WOOD'HOLE, used as an emblem of a fool : WOOD'LAND, ^>wooddrink, a decoction of a WOOD' LOUSE, I medicinal wood : wooded, sup- WOOD'MAX, plied with or abounding in

WOOD'XOTE, wood : wooden, made of wood ; WOOD'.N VMI-II, ligneous; also clumsy; awk- WOOD'CECKER, ward ; stupid : woodhole, a WOOD'SARE, store-hole for wood : woodsare Woou'y, adj. J is explained in the extract, and

Jie other compounds seem to require no explanation. Y\ ith the woody nymphs when she did play. Spetiser. The wood-born people fall before her flat,

And worship her as goddess of the wood . Id.

The duke is a better woodman than thou takest him

for Shakspeare.

The woods are ruthless, dreadful, deaf, and dull :

There speak and strike. Id.

I'll win this lady Margaret : for whom ? Why, for my king ; tush, that's a wooden thing. Id.

Beatrice, e'en now Couched in the woodbine coverture. Id.

He hath bid me to a calve's head and a capon ; shall I not find a woodcock too ? Id.

The froth called woodsare, being like a kind of spittle, is found upon herbs, as lavender and sage. Bacon.

II ended so, It makes a spring of all kindes that grow. Chapman.

Then to the well-trod stage anon, If Jonson's learned sock be on ; Or sweetest Shakspeare, Fancy's child, Warble his native woodnotes wild. Milton.

By dimpled brook and fountain brim, The woodnymphs decked with daisies trim, Their merry wakes and pastimes keep. Id.

Four times ten days I've passed, Wandering this woody maze, and human

food Nor tasted, nor had appetite. Id.

They used to vault or leap up ; and therefore they had wnoden horses in their houses and abroad. Browne. Having filled it above five inches with thoroughly kindled wood coals, we let it down into the glass,

Boyle.

Hecate, when she gave to rule the woods, Then led me trembling through those dire abodes.

Dry den.

Of long growth there stood

A laurel's trunk, a venerable wood. Id.

Pressed with the burden, Caeneus pants for breath ; And on his shoulders bears the wooden death. Id. This household beast, that used the woodland

grounds,

Was viewed at first by the young hero's hounds, As down the stream he swam. Id.

Herbs are those plants whose stalks are soft, and have nothing woody in them, as grass and hemlock.

Locke.

What should I do, or whither turn ? amazed, Confounded to the dark recess I fly Of woodhole. Philips.

Herrings must be smoaked with wood. Child.

The millepes or woodlouse is a small insect ; it has only fourteen pair of short legs ; it is a very swift run- ner, but it can occasionally roll itself up into the form of a ball. Hill.

Diana's woody realms he next invades, And crosses through the consecrated shades. Addis.

When a bold man is out of countenance, he makes a very wooden figure on it. Collier.

Soon as in doubtful day the woodcock flies, Her cleanly pail the pretty housewife bears. Gay.

The drinking elder-wine or wooddrinki are very use- ful. Flayer.

The lord Strutts have been possessed of a very great landed estate, well conditioned, wooded, and watered.

Arbuthnot.

The structure of the tongue of the woodpecker is very singular, whether we look at its great length, its bones and muscles, its incompassing parts, &c. Derham.

Here hills and vales, the woodland and the plain, Here earth and water seem to strive again. Pope.

There is an insect they call a woodlouse, That folds up itself in itself, for a house, As round as a ball, without head, without tail, Inclosed cap-a-pe in a strong coat of mail. Swift.

WOOD (sylva), in geography, a multitude of trees extended over a vast tract of land, and propagated without culture. The generality of woods only consist of trees of one kind. — The ancient Saxons had such a veneration for woods that ihey made them sanctuaries. — It is ordained, that none shall destroy any wood, by turning it into tillage or pas- ture, 8cc., where there are two acres or more in quantity, on pain of forfeiting 40s. an acre, by 35

Henry VIII. c. 17. All woods that are felled at fourteen years growth are to be preserved from de- struction for eight years ; and no cattle put into the ground for five years after the felling thereof, &c., 13 Eliz. c. 25. The burning of woods or un- derwood is declared to be felony ; also those persons that maliciously cut or spoil timber-trees, any fruit- trees, &c., shall be sent to the house of correction, there to be kept three months, and whipt once a month.

WOOD, METHOD OF STAINING OR DYEING. See TURNING.

WOOD (Anthony), an eminent biographer and antiquarian, was the son of Thomas Wood, B. A. and LL. Civ., and born at Oxford in 1632. He studied at Merton College, and in 1655 took the decree of M. A. He wrote, l.The History and Antiquities of the University of Oxford ; which was afterwards

translated into Latin by Mr. Wase and Mr. Peers, under the title of Historia el Anti- quitates Oxoniensis, 2 vols. folio. 2. Athens Ox- oniensis ; or an exact Account of all the Writers and Bishops who have had their Education in the University of Oxford, from the year 1500 to 1600, 2 vols. folio ; which was greatly enlarged in a se- cond edition published in 1721 by bishop Tanner. Upon the first publication of this work the author was attacked by the university, in defence of Ed- ward earl of Clarendon, lord high chancellor of England, and chancellor of the university, and was likewise animadverted upon by bishop Burnet; upon which he published a Vindication of the His- toriographer of the University of Oxford. He died at Oxford of a retention of urine in 1695.*

WOOD ANEMONE. See ANEMONE.

WOODBIND. See LOMCERA.

WOODBIND, SPANISH. SeelroMOEA.

WOODBRIDGE, a town of Suffolk, which took its name, it is supposed, from a wooden bridge built over a hollow way, to make a commu- nication between two parks, separated by the road which leads by the market place towards Ipswich. The streets though narrow are paved, and the longest is nearly a mile in extent. The market- place is clean and well built. The river Deben, on which this town is situated, discharges itself into the sea, about ten miles below it, and is navi- gable up to the town. Here are two quays. This place is generally admired by travellers for its healthy and salubrious air. A considerable trade is carried on here in com, flour, malt, cheese, coals, timber, dtals, wine, foreign spirits, porter, grocery, drapery, and ironmongery, goods. The shipping of late years has increased in the exportation of corn. Regular London traders sail to and from port, weekly; the other vessels for the most part are employed in the Newcastle and Sunderland trade. The manufacture of sack-cloth, for which this place was formerly noted, and the refining of salt are now quite relinquished, other places afford- ing them on cheaper terms. The parish church is a very noble structure. The tower is remarkably handsome, composed of flute work in beautiful compartments. It is 108 feet high, and is distin- guished at sea as a capital object, and even at a great distance on lana. There are also several meeting houses for the Dissenters. The quarter sessions of the peace for this division are held here in a noble old hall, built in the reign of queen Klizaheth. The number of houses is 657, ami in- habitants 4132. The market is held on \edn

an ‘ there are two fairs yearly, one on April 6th, the other on October 12ih. Seventy seven miles north-east of London, and seven E. N. E. of Ips- wich.

WOODCOCK. See SCOLOPAX.

WOODCOTE. See NEOMAGI>.

WOODFALL (William), a printer and parlia- mentary reporter, whose father, also a printer, was the proprietor of the Public Advertiser. The son was placed in the printing office of Mr. Baldwin, and afterwards assisted his father. He then at- tempted the stage, but with little success ; and pre- pared for exhibition Savage's tragedy, entitled Sir Thomas Overbury, acted at Covent Garden in 1777. In consequence of his being the publisher of the Letters of Junius, he was exposed to a prosecution, which induced him to take refuge in Ireland : at length he became proprietor and editor of the Morning Chronicle, and distinguished himself by the ability and precision with which he reported the debates. He died August 1st, 1803, at the age of fifty-eight. Besides his labors as a journalist, he produced, in several pamphlets, reports of a de- bate in the Irish house of commons ; and another at the India House.

WOODFORD, a parish in Beacontree hundred. Essex, situate on the road to Epping, eight miles and a half north-east of London ; containing 395 houses and 2699 inhabitants. In the church-yard is a handsome Corinthian column, brought from Italy, and erected to the memory of Sir Edmund- bury Godfrey.

\OODFRETTER. See OMSCCS.

WOODGOAT. SeeCAFRA.

WOODLARK. See ALAUDA.

WOODLOUSE. See OMSCUS

WOODPECKER. See Picvs.

WOODPIGEON. SeeCoLUMBA.

WOODS, LAKE OF, a lake of North America, the most northern in the territory of the United States, so called from the large quantities of wood grow- ing on its banks ; such as oak, pine, fir, spruce, &c. There are a few Indian inhabitants on the banks of the lake, who might live very comfortably, if they were not so immoderately fond of spirituous liquors. The lake is of an oval form, thirty-six miles in cir- cumference, according to major Pike ; and it is thickly studded with islands, some of which are extensive. By its means, the communication is kept up between the lakes Winnipic, Bourbon, and Lake Superior. It deserves to be mentioned, also, that in the treaty concluded between Great Britain and America it was

fixed upon by the Americans, as the spot from which a line of boundary between the United States and the British territories was to run, until it struck the Mississippi ; which, how- ever, can never happen, as the north-west part of the Lake of the Woods is in lat. 49° 37′ N., and long. 94° 31′ W., and the source of the M sippi, as explored by major Pike in 1805, is in lat 47° 42′ 40 N.*

\N < M)DSORREL. See OXALIS.

\ ( )ODSTOCK, a borough, market town, and parish in Wootton hundred, Oxon, standing on a brook which falls into the Isis, eight miles N. N W. of Oxford, and sixty-two and a half W. N. W. of London ; containing 246 houses and 1455 inhabit- ants. Woodstock is noted for its manufactures of fine wash-leather gloves and polished steel watch chains, &c. In the time of the Saxons here was a royal palace. Adjoining the town is Blenheim

house and park, the magnificent seat cf the duke of Marlborough. Market on Tuesday.

WOODWARD (Dr. John), was born in 1665, educated at a country school, and sent to London, where he is said to have been put an apprentice to a linen draper. He was not long in that station, till he became acquainted with Dr. Peter Barwick, an eminent physician, who took him under his tui- tion and into his family. Here he prosecuted with great vigor and success the study of philosophy, anatomy, and physic. In 1692, Dr. Stillingfleet quitting the place of professor of physic in Gresham College, he was chosen to succeed him, and the year following was elected F. It. S. In 1695 he obtained the degree of M. D. by patent from arch- bishop Tenninson ; and the same year he publish- ed his Essay toward a Natural History of the Earth. He afterward wrote many other pieces, which have been well received by the learned world. He founded a lecture in the university of Cambridge, to be read there upon his essay, &,c., and hand-somely endosved it. He died in 1728.

WOODWORM. See OMSCUS.

WOOL, n. s. “| Sax. pul ; Bel. wol;

WOOL’FEL, Teut. wolle ; Gothic

WOOL'LEX, adj. & n. s. | and Swedish ull. The

> fleece of sheep ; that which is woven into cloth ; any short, thick) hair: woolfel is skin woollen, made of wool ;

WOOL LY, adj.

WOOL'PACK, n.s.

WOOL'SACK,

Woo I/WARD, adv. not stripped of the wool the cloth so made : woolly, clothed with, or con sisting of wool: woolpack,or woolsack, a bag containing wool ; the seat of the judges in the house of lords ; any thing bulky but light : woolward is in wool : obsolete.

What signifies My fleece of woollu hair, that now uncurls 1 Shaksp.

In the cauldron boil and bake ; Wool of bat and tongue of dog. Id.

I was wont

To call them iron'tlen vassals, things created To buy and sell with groats. Id.

I have no shirt; I go woolward for penance. /(/.

Woollen cloth will tenter, linen scarcely. Bacon.

Woul and woolfels were ever of little value in this kingdom. Davies.

Chaos of presbyt'ry, where laymen guide With the tame woolpack clergy by their side. Cleavet.

His breeches were of rugged woollen, And had been at the siege of Bullen. Hudibrat.

At bar abusive, on the bench unable, Knave on the woolsack, fop at council table. JJryden.

Gently they lay 'era down, as evening sheep On their own woolly fleeces softly sleep. Id.

At dawn of day our general cleft his pate, Spite of his woollen night-cap. Id.

Nothing profits more

Than frequent snows ; Oh mayst thou often see Thy furrows whitened by the woolly rain Nutritious ! Philips.

Odious ! in woollen ! twould a saint provoke : No, let a charming chintz and Brussels lace Wrap my cold limbs, and shade ray lifeless face.Po/

He is a bel-esprit, and a «-oo//en-draper. Swift.

WOOL is the covering of sheep. See Ovis, and SHEEP. Wool resembles hair in a great many par- ticulars ; but besides its fineness, which constitutes an obvious difference, there are other particulars which may serve also to distinguish them from one another. Wool, like the hair of horses, cattle, and most other animals, completes its growth in a year and then falls off as hair does, and is succeeded by

a fresh crop. It differs from hair, however, in the uniformity of its growth, and the regularity of its shedding. Every filament of wool seems to keep exact pace with another in the same part of the body of the animal ; the whole crop springs up at once; the whole advances uniformly together ; the whole loosens from the skin nearly at the same pe- riod, and thus falls off if not previously shorn, leav- ing the animal covered with a short coat of young wool. Hairs are commonly of the same thickness in every part ; but wool constantly varies in thick- ness in different parts, being generally thicker at the points than at the roots. That part of the fleece of sheep which grows in winter is finer than what grows in summer. While the wool remains in the state it was first shorn off the sheep's back, and not sorted into its different kinds, it is called fleece. Each fleece consists of wool of divers qua- lities and degrees of fineness, which the dealers therein take care to separate. The French and English usually separate each fleece into three sorts, viz. 1. Mother wool, which is that of the back and neck. 2. The wool of the tails and legs. 3. That of the breast and under the belly. The Spaniards mate the like division into three sorts, which they call prime, second, and third ; and, for the greater ease, denote each bale or pack with a capital letter denoting the sort. Among the ancients, the wools of Attica, Megara, Laodicea, Apulia, and especi- ally those of Tarentum, Parma, and Altino, were the most valued. Varro assures us that the people there used to clothe their sheep with skins, to se- cure the wool from being damaged.

WOOLLEN CLOTH. See CLOTH.

WOOLLI, a small kingdom of Western Africa, extending along the north side of the Gambia, hav- ing Tenda on the south-east, and Bondow on the north-east. It is level, and covered entirely with wood. Park, in his first journey, received a very hospitable reception from the king, who, however, endeavoured to dissuade him from his journey.

WOOLMAN (John;, a minister of the Society of Friends in North America, chiefly remarkable as an early and faithful advocate of the rights of the enslaved Africans, was born at Northampton, in Burlington county, West Jersey, early in the last century. He was the principal means of in- ducing this valuable body of religionists to part with all their slaves. A Memoir of him was pub- lished in London in 1815, to which we must refer the reader.

WOOLSTON (Thomas), an English divine, was born at Northampton in 1669, and educated at Catnbridge. His first appearance in the learned world was in 1705, in a work entitled The Old Apology for the Truth of the Christian Religion, against the Jews and Gentiles, revived. He after- ward wrote many pieces : but what made the most noise were his Six Discourses on the Miracles of Christ ; which occasioned a great number of books and pamphlets upon the subject, and raised a pro- secution against him. He was sentenced to a year's imprisonment, and to pay a fine of £100. He pur- chased the liberty of the rules of the King's-bench, where he continued after the expiration of the year, being unable to pay the fine. The greatest ob- struction to his deliverance from confinement was the obligation of giving security not to offend bv any future writings, he being resolved to write again as freely as before. He died January 37…

1732-3.

WOOLSTONECKAFT. See WOLLSTONECRAFI .

WOOLWICH, anciently Ilulviz, Wohviche, and Wo.'lewic, a market-town of the county of Kent, is situated on the banks of the Thames, about eight miles from London. Market on Saturdays. This town, originally a straggling village, rose into notice in the reign of Henry VIII., who esta- blished a royal dock-yard here. Its size and con- sequence have been particularly increased since the establishment of the royal arsenal and royal artil- lery in the beginning of the last century. We regret that we cannot avail ourselves of a detailed description of all these establishments with which we have been favored, but see our article DOCKS.

About half way between the arsenal and the artillery barracks stands the grand depot of field artillery; it consists of several long store sheds, in which are deposited a number of batteries of field- guns completely equipped for active service in the field ; the whole of the guns mounted on the forts and batteries, at home and abroad, are under the superintendance of this department ; and the commanding officers of artillery, at all the

stations, make half yearly reports to the head of the esta- blishment, who is always the senior officer of the egiment, and is denominated the director-general of artillery.

Nearly opposite to the grand depot stands the spacious hospital for the artillery and sappers and miners. It is capable of containing 700 patients ; and for cleanliness and comfortable arrangement may be said to be unrivalled. There is a medica library in this building, which contains the best works on that science, and which is supported by a subscription from the medical officers. It is un- der the superintendance of sir John Webb, who is the director-general and inspector of the medical department of the ordnance. A little below the ˆrand depot there is a small barrack which was erected, about 1812, for the royal sappers and miners, who have their head-quarters here; but, as only as many of that corps are stationed here as are necessary for carrying on the military works, their numbers are very small : they are com- manded by officers from the corps of royal en- gineers.*

On the north side of Woolwich Common the barracks for the head-quarters of the royal regiment of artillery are erected ; they stand nearly due east and west, and fronting to the south; the range is about 400 yards long by 250 deep, and they are divided into two wings connected by a handsome archway of stone, surmounted by the royal arms and groups of military trophies, and having four Doric columns in front; the left wing was erected about the year 1779, and the right about 1803. The front range of the barracks consists of two large buildings for the men and four for the officers; between each of these there is a low building, hand- somely stuccoed, with Doric columns in front, and a colonnade above each ; the first of these on the right contains the offices of the commandant of the garrison, the adjutant-general, and one office for each of the battalions of artillery; the next is most splendidly fitted up as a mess-room for the officers, and is supposed to be the largest in England. The next low building on the east side of the connect- ing archway is fitted up as a guard-room ; but the upper story contains a reading-room and library of lars;e dimensions for the officers ; the leading daily and weekly papers, reviews, magazines, and pe-

riodical works of every description, are taken in here; and the library contains about 7000 volumes. The building next to the left end of the barracks is fitted up as a chapel, and is capable of containing 1000 persons. There is a very handsome window over the altar. Divine service is performed in it twice on each Sunday by the chaplains of the regi- ment ; and the military band play some excellent pieces of sacred music.

In the rear of the front range towards the north there are two very large

quadrangles, containing the barracks for the officers and men of the royal horse artillery, and stabling for their horses. Dur- ing the late war both the quadrangles were occu- pied by this corps, but at present they only occupy a part of one. These quadrangles are named after the noblemen who were the masters-general of the ordnance when they were erected, the east being called Richmond and the west Chatham Square. To the north of these stands a range of barracks and stables, which was erected for the late corps of royal artillery drivers ; but, that corps having been incorporated with the regiment of artillery in 1822, it is now occupied by the brigades of field artillery. At the north-east corner of the barracks there is a handsome riding-school, with a small barrack for the men of the riding department. The school is built like an ancient temple, has a grand appearance, and is about fifty-six yards long by twenty-two broad.

The whole of the artillery barracks will at present accommodate 2855 men, but, in case of emergency, they are adapted for 4700. The regiment consists of the horse and nine battalions of foot artillery, and a part of each is always at Woolwich to the amount of, at present, about 2700 men. The greatest strength of the regiment of artillery, horse and foot, at home and abroad, was, in January, 1814 (the last year of the war), 28,291 officers and men; but it is now reduced to 7199 officers and men. At the west end of the barracks there is a battery for mortars and howitzers, at which the men are practised in throwing shells at a flag-staff erect- ed on the common.

The royal military repository adjoins the barrack fields, and has within these few years been sur- rounded by a regular fortification of sod-work, on which are mounted all the different sorts of cannon used in the defence of fortified towns. At this establishment the royal artillery are taught the whole of the duties of artillery in garrison, and un- dergo such a course of instruction as is calculated to enable them to meet and to overcome any emer- gency to which the peculiar nature of the artillery service may render them liable on active service.

Here are two large pieces of water, on which the men are taught /o lay pontoons, to transport artil- lery upon rafts, and all the different methods that can be adopted for the passage of troops across rivers, &c. The repository grounds are tastefully laid out. The rotunda which was erected in Carl- ton gardens, at the fete given by his present ma. jesty to the emperor of Russia and the king of Prussia, was removed to this place, and has been formed into a model room : its interior dimensions are immense.

In a shed near the model-room is the hearse on which the remains of the late emperor Napoleon were conveyed to his grave in St. Helena.

The Royal Military Academy was erected in the royal arsenal about the year 1719, but it does i»ol

appear to have been regularly established until the year 1745, when it was founded by a warrant from George II. as an academy for instructing persons, intended for military officers under the ordnance, in mathematics and fortification, to qualify them for the service of the artillery and engineers. In this year the number of cadets was forty -eight, in 1 783 they were augmented to sixty, in 1793 to ninety, in 1800 to 100, and in 1806 to 200, which was the highest establishment. Since the peace they have been gradually reduced, and the establishment is now at sixty. Some of the first mathematicians of this country have been employed here as professors.

The new Military Academy, situated on the south side of Woolwich Common facing the north, was completed in the year 1805 ; it is a handsome structure, built of brick in the castellated form, and consists of a centre and two wings united by cor- ridors ; the centre is a quadrangle and has octagonal towers at the angles. The wings contain the quar- ters of the military officers of the establishment, and sleeping-rooms for the cadets, each room con- taining four. In the rear of the principal building there are several ranges of detached houses con- taining the dining-room for the cadets, the public kitchen, the apartments of the housekeeper, and of the servants of the house

The cadets are the sons of officers of the army or navy, or of respectable parents in civil life, and no boy can be admitted to the academy unless possessed of the following qualifications : — He must not be less than fourteen nor more than six- teen years of age, which is to be ascertained by the production of a certificate of his birth taken from the parish register and certified by the minister and churchwardens ; but, if the parish register cannot be resorted to, an affidavit of the fact will be accepted.

At the south-west corner of Woolwich Common there is a veterinary establishment for the horses of the royal artillery; it adjoins the great road to Dover, and is well situated ; it was built in the year 1805.

On the north side of the artillery barracks there is a barrack occupied by the fourth division of the royal marines, which was established here in the year 1805. A handsome, airy, and commodious marine hospital was erected near these barracks in 1815, for the accommodation of the sick of the division, and of the sick seamen from the ships of war stationed here. The establishments connected with the navy at Woolwich are under the control and superinlendance of the Admiralty ; and the whole of the civil and military establishments be- longing to the ordnance are under the control of the master-general and board.

The church at Woolwich, which is dedicated to St. Mary Magdalene, is a spacious brick building, and stands on an eminence that overlooks the dock-yard. It has a plain tower at the west end, and consists of a nave, chancel, and aisles. It was rebuilt between the years 1726 and 1740, partly from the funds granted under queen Anne for building churches, and partly from contributions and legacies. The interior is handsomely fitted up, and has galleries on the north, south, and west sides. There are but few monuments.

There are three charitable establishments in this town: an alms- house, founded for five poor widows, in 1562, by sir Martin Howes, in which they re- ceive £25 a year besides c

built and endowed from a bequest made by Mrs. Anne Withers, in 1753, for teaching thirty poor girls to read and work with the needle; and a school founded under the will of Mrs. Mary Wise- man, in 1758, for educating, clothing, and appren- ticing six orphan boys, the sons of shipwrights who had served their apprenticeship in the dock-yard. Exclusive of those belonging to government there are no manufactories in this neighbourhood, except sugar potteries, of which there are several on Plum- stead Common.

WOOTTON-UNDER-EDGE, a Post and market town, in Berkley hundred, Gloucestershire, nine miles from Minchinghampton, and 109 west by north of London. It is seated beneath a plea- sant and fertile eminence. The town is well built, and has a handsome church, the tower of which is adorned with battlements and pinnacles. Here is a free-school, founded in 1385, by lady Catherine Berkeley ; it has also alms-houses for six poor men and as many women. In the town and neighbour- hood are several cloth manufactories. Market on Friday.

WORCESTER (Tiftoft), marquis of, a noble- man of a very extraordinary genius for mechanical discoveries, who flourished in the age of lord Ve- rulam, and in 1663 published a curious philosophi- cal work, entitled A Century of Inventions.

WORCESTER, a city in Worcestershire, situate on the banks of the Severn, three miles and a quarter from Droitwich, and 111 north-west by west of London. It contains nine parishes within the city. The cathedral was erected by Etheldred, king of Mercia, in 680, when it was a convent of secular priests ; a short time after the conquest, it was laid in ashes by the Welsh, but soon after nearly re- built with greater magnificence, though not entirely completed till the year 1374. It is in length 514 feet, in breadth seventy-eight, and the tower 200 feet high. On the south side is a chapel of most curious workmanship : both the church and clois- ters are arched with stone of a reddish color ; and in the tower are eight good bells, the largest weigh- ing 6600 pounds. The window, in the west front, was rebuilt in an elegant manner in 1789, in com- memoration of the honor of his late majesty's visit at the music meeting in 1788 ; and in 1792 an ele- gant window was built, at the east end of the cathe- dral, containing some excellent paintings on glass. The pulpit is octagonal and of stone, curiously carved in the Gothic manner with the symbols of the four evangelists, and a representation of the New Jerusalem, as described in the Revelations. The altar-piece is of stone, perforated and glazed. The chief monument in the cathedral is that of king John standing in the midst of the choir. On each side of the king are those of the bishops Wol- stan and Oswald. On the south side of the altar is prince Arthur's sepulchral chapel ; it was repair- ed and beautified in 1791. There are also several other handsome monuments, particularly one of Dr. Hough, by Roubiliac.

Fronting the cathedral is a fine broad street, call- ed the High Street, in which is the Guildhall, erect ed in 1720. The streets are in general broad, well paved and lighted, and the town is well supplied with water. The county gaol has two large court yards divided by an iron palisade, and so formed that the gaoler and turnkey may have a view of every cell. The city jail stands in Friar Street, so called from a house of Gray Friars which originally

stood therein. A new jail has been erected of late years, which cost £19,000. Here is also a com- modious house of industry, erected in 1784. The theatre is a neat small building, erected in 1781. Here are also several alms-houses and charity- schools, many hospitals, and a public infirmary. Among the parish churches, nine within the walls and two without, none deserve particular notice but St. Andrew's, which has an exceedingly handsome spire 245 feet high, and in the parish is a noble free-school, founded by Henry VIII. The bridge over the Severn is of stone, having five semicircular arches, erected in 1780. Here are meeting-houses for various sectaries, as well as Ro- man Catholics. Edgar's tower, a strong portal in College Green, was part of its ancient castle, and near it is the register office.

Worcester has every convenience and accommo- dation in common with most cities, having its pub- lic banks, fire offices, libraries, assemblies, music- meeting, &c. The bishop's palace stands in a commanding situation on the banks of the Severn. The manufactures are those of china, carpets, gloves, and lace ; and its trade is greatly increased by a canal navigation communicating with all parts of the kingdom. The present corporation, by charter of James I., consists of a mayor, recorder, sheriff, six aldermen, twenty-four common-council- men, and forty-eight assistants. It sends two mem- bers to parliament, chosen by the citizens, admitted to their freedom by birth or servitude, or by re- demption : the number of voters is about 1700 ; and the returning officer is the sheriff.

This city suffered much during the wars between the houses of York and Lancaster ; but the most remarkable event here was the famous battle between the English army, under Cromwell, and the Scotch, in the cause of Charles II. in 1650, when the royalists had 2000 killed and 8000 taken pri- soners, most of whom were sold as slaves to the American colonies ; after this, Cromwell ordered the walls of the city to be rased to the ground. This cily gives title of marquis to the duke of Beaufort. The market-house is a new and com- modious addition to the comforts of the city. The hop-market is the most considerable in the king- dom during the hop season, and is governed by guardians chosen out of every parish in the city. The race course is three miles in circumference, called Pitchcroft, situate to the north-west of the city. Markets, Wednesday, Friday, and Saturday.

WORCESTER, county, Massachusetts, bounded north by New Hampshire, east by Middlesex and Norfolk counties, south by Rhode Island and Connecticut, and west by Hampden, Hampshire, and Franklin counties.

WORCESTER, a post town, the capital of Worcester county, Massachusetts; thirty nine miles N.N. W. of Providence, forty west by south of Boston. It contains an elegant court house, a jail, a bank, two paper mills, two printing offices, from each of which is issued a weekly newspaper ; and three houses of public worship, two for Congregational- ists, and one for Baptists. It is pleasantly situated, and is the most considerable inland town in New England, and is a place of much wealth and trade. Tlie principal street is upwards of a mile in length ; it is well built, and has a number of elegant houses. Jn 1701 two editions of the bible, one in large folio the other in royal quarto, the first of the kind published in America, were printed in this town.

WORCESTERSHIRE. This county evidently takes its name from its principal city Worcester, the etymology of which is deduced from Wire-cester, by changing its vowel. The name Wisror- nia occurs in Florence of Worcester, who died about sixty years before Joseph of Exeter wrote. Abingdon derives the Saxon name from the Wears on the river. The inhabitants, with those of the adjoining parts, were in Bede's time, prior to the division of the island into counties, called Wiccia, a name derived, as we may reasonably conjecture, from the salt-pits which it contains, the old English name of which is witches. This county formerly constituted the second part of the country of the Cornavii, or Dorbuni. In the time of the Romans it was swampy, overgrown with wood, and conse- quently but little known to that cautious and war- like people ; neither Ptolemy nor Antonine take any notice of it whatever; and of the four great Roman roads which cross the kingdom but one, viz. the Ryknild Street, approaches its borders : the Ryknild Way, however, crosses a small portion of the county, entering it near Beoly, and, passing on to Edgbaston in Warwickshire, leaves the town of Birmingham a little to the west. The principal stations, or camps, in this county are on Wassal and Whitchbury Hill, near the banks of the Severn, the neighbourhood of Kempsey, Little Malvern, and upon Wobury Hill. Worcestershire constituted under the Saxon Heptarchy a part of the kingdom of Mercia, and was the frequent scene of sanguinary contests between the Saxons and the Danes.

Worcestershire is an inland county, bounded on the north by Staffordshire, on the east by War- wickshire, on the south by Gloucestershire, on the west by Herefordshire, and on the north -west by Shropshire ; and lies between lat. 52° 15′ and 52° 39′ N., and between long. 1° 30′ and 2° 30′ W. from London : its mean length from north to south down the Severn, the shortest line, is about thirty miles, and its mean breadth from east to west is twenty-six miles, and contains 936 square miles, or 600,000 acres ; of this two-thirds are to the east, and one-third to the west, of the river Severn. To this may be added, for detached parts, 20,000 acres, making in the whole 618,240 acres. This county is divided into five hundreds and limits,

containing 152 parishes, one city (Worcester), and eleven market-towns.

The air of this county is mild, warm, and healthy, there being but few lakes and very little swampy ground; the inhabitants of the Malvern Hills enjoy a most salubrious and temperate cli- mate, a circumstance which, conjointly with the beautiful rich and picturesque scenery which they furnish, contributes not a little to induce multitudes of fashionable loungers to make the villages of Great and Little Iklalvern, which are situated upon the western side of these hills, the temporary the- atres of their astival gaieties; but the Wells House is the centre of attraction, on account of the con- tiguity of the Spa. The soil of this county may be thus stated : — To the north of Worcester, which is situated nearly in the centre of the county, it chiefly consists of rich loamy sand with a small portion of gravel ; there is some very light sand, a few spots of clay, of black peat earth the same, but chiefly inclining towards the east. In this quarter (the east) the prevailing soil is, for the most p:irt, a strong day. The waste land, which is not very considerable, in general is a deep black peat earth.

To the south, between Worcester and the vale of Evesham, the soil is partly of a red marl, and part strong loamy rich clay ; other parts sandy loam ; and there is a small vein of land which partakes of each of these qualities ; the sub-soil, more espe- cially under the second division, lime-stone. In the vale the soil is particularly deep, of a darkish- colored earth, with a sub-stratum of strong clay and some gravel. Beyond this, on the confines of the county, and in the small detached parts, in- cluding the Cotswold Hills in the county of Glou- cester, a limestone prevails on the upper lands and a rich loam on the lower. To the south, between Worcester and Malvern, the general character of the soil is a clay mixed with gravel in different proportions; the former prevailing in the lower and the latter in the higher situations. To the left of this line, including Malvern Chase, a deep sur- face of clay is found in some places ; _in others a rich loam inclining to sand ; sub-stratum supposed to be marl. To the right, till we approach a cen- tral point between the west and north, the propor- tion of clay increases gradually, till at last a strong loam occurs ; this again becomes gradually more gravelly till it joins the light sands in the north ; below partly marl, partly soft sandy stone, and some limestone is found : in each of these districts is some very rocky laud ; and in most some loose stony soil, or stone brash, is met with, but no where are there any traces of chalk or flint.

The principal rivers of this county are the Severn, the Avon, the Teme, and

the Stour. The Se»2rn, the principal river of this county, and the second in rank after the Thames — whether we regard the length of its course, the majesty of its stream, or the extensive advantages which the commerce of the county derives from it — takes its name from the British word Sabi or Sabrina, which denotes sandy, and allude to the extreme muddiness of its water, which is particularly remarkable after rain, by a phenomenon, almost peculiar to this river, and ex- pressly denominated by the tenants of its banks the Boar, which is merely a swelling of its waters by the inundations of the mountain torrents which it re- ceives in its course through Wales, its source being at Plinlymmon Hill, in Montgomeryshire. The name is derived from the noise, which at a distance tin's accumulated mass of water, rising many feet perpendicular above the customary level of the stream, makes in its devastating progress; those who happen to be overtaken by it upon its banks are involved in inevitable destruction. Adapting the British name to their own orthography, the Ro- mans latinised the name of this river by giving it a feminine termination, and calling it Sabrina, whence with a trifling alteration, may be easily traced the Severn of the moderns. The name by which the Welsh still designate this river fully expresses their sense of its importance, Ha au Rian, in their lan- guage signifying the Queen of Rivers. The Severn, having washed the fortification of the venerable capital of the county of Salop, enters the county of Worcester just above Bewdley, and pursuing a southern course nearly through the centre of the county, receives, at Stourport, the tributary stream of the Stour, and the commerce of the northern and inland counties, poured in by the Staffordshire Canal ; and about seven miles lower is joined by the Salwarp: somewhat lower it is augmented by the Beverbourne or Otter River, so called from the multitude of oilers \vhich formerly frequented it.

It next washes the walls of the rich and beautiful city of Worcester, and about one mile lower is joined by the Teme. From this place, during the remainder of its course through this county, it re- ceives no river of importance till it reaches the southern confines at Tewksbury, where it is joined by the Avon, which enters this county to the north- east, near the little village of Sulford, winding through the vale of Evesham to the town from which it is named ; then to the town of Pershore, and continuing thence a more southerly direction, it finally blends its water with the Severn. The Teme enters this county to the north-west near Tenbury, and falls into the Severn about one mile below Worcester. The Stour enters this county near Stourbridge, passes the town of Kidderminster, receiving a variety of small rills from Dudley, Kinver, \Volverly, &c., and empties itself into the Severn near Stouijport. The canals of this county are, first, the Droitwich, about five miles and a half long from Droitwich to the Severn, near the junction of that river with the Salwarp; second, the Worcester and

Birmingham Canal, which com- mences at the latter town, and after a course of thirty-one miles and a half falls into the Severn on the south side of the city of Worcester, at a place called Diglis; third, Dudley Extension Canal, joining the Dudley Canal near Netherton, making a course of ten miles and a half, falls into the Bir- mingham and Worcester Canal neat Selly Oak without a lock. The Dudley canal runs through so small a portion of this county as not to merit any particular account. From the Birmingham and Worcester Canal a branch strikes off at King's Norton, and soon after entering the county of Warwick proceeds to Stratford where it falls into the Avon. The Staffordshire Canal enters this county near the village of Kinver, a short distance to the west of Stourbridge, and, pursuing a course nearly parallel to the little river Sour, falls into the Severn at Stourport.

This county is not particularly famous for mines and minerals ; and indeed nature has been so pro- pitious to its surface that it is rich enough without searching beneath ; and it is generally in more mountainous countries that valuable mines and minerals abound : it is not, however, wholly desti- tute of mines; brick clay, gravel, sand, and marl, are common, and limestone in the hills and various other parts of the county, and some places burnt for use. Freestone for building is found in various places. Coal is raised at Dudley and in the north- west of the county at Mamble and at Pensax. Quartzum. a siliceous primeval stone, forms the basis of the Malvern Chain ; and also the Sickey, north-east of Bromsgrove. Sal commune, common salt ; one of the richest sources in the whole world of this domestic article is at Droitwich in this county. And in the vale of Eft-sham there are quar- ries of calcareous flagstone. Its vegetable produc- tions are corn, pulse, fine wool, hops, cyder, ami perry; and it abounds with fine pastures for cattle.

Worcestershire sends twelve members to parlia- ment; viz. four for the county, two for the city of Worcester, two for Evesham, one for Droitwich and one each for Bewdley, Dudley, and Kidder- minster.

Samuel Butler, a poet of a very singular cast,

was born at Strenham 1612. (Author of the cele-

brnted Uudibras.) Died very poor 1680. — John

ville, an eminent printer and letter-founder

•A-Ko first introduced into this country a new and elegant kind of types for fine printing, was born at Wolverly 1706. Died 1775. — John de Feckenham, so called because he was born of poor parents in a cottage near the forest of Feckingham, his right name being Howman. He was the last abbot of West- minster, and died in 1585. — William Habington, an historian and poet. Born 1605. Died 1654. — Edward Kelley, a famous necromancer and asso- ciate with the noted Dr. Dee. Born at Worcester 1555. Died 1595. — Lord George Lyttelton,an ele- gant historian, poet, and miscellaneous writer. Born at Hagley 1709. Died 1773. — Cardinal Re- ginald Pole, an eminent statesman and archbishop of Canterbury in the reign of queen Mary. Born at Stoverton Castle 1500. Died 1558. — Lord John Soraers, chancellor of England, a most incorrupt lawyer and honest statesman. Born at Worcester 1652. Died 1716. The manufactures of this county are porcelain, glass, pottery, iron, carpets, gloves, hosiery, stuffs, &c.

WORD, n. s.,v. n., & } Sax. popb ; Belgic WORD'Y, adj. [v. a. \ woord; Teut. wort; Go- thic, Swedish, and Danish ord. A single part of speech; short discourse; talk ; dispute; promise; order ; signet ; tidings ; affirmation ; Scripture ; a Scripture name of the Lord Jesus Christ: to word is to dispute ; to express in words : wordy, verbose ; full of words.

They say this church of England neither hath the word purely preached, nor the sacraments sincerely ministered. Whitgifte.

Why should calamity be full of words? Let them have scope. Shaktpeare.

A word, Lucilius,

How he received you. 7d.

Some words there grew 'twixt Somerset and me. Id.

I take your princely word for these redresses. Id.

Every person has enough to do to work out his own salvation ; which, if we will take the apostle's u-ord, is U) be done with fear and trembling. Decay of Piety.

All of them stout and hard people, false of their word, treacherous in their practices, and merciless in their revenges. Heulyn.

He commanded the men to be ranged in battalions, and rid to every squadron, giving them such u-ord$ as were proper to the occasion. Clarendon.

Thou my Word, begotten Son, by thee This I perform. Miltnn.

Whether his extemporary leording might not be a de- fect. Fell.

In a u-ord, the gospel describes God to us in all respects such a one as we would wish him to be.

'Filiation.

Cease this contention : be thy words severe, Sharp as he merits ; but the sword forbear. Dryden.

I know you brave, and take you at your word ; That present service, which you vaunt, afford. Id.

He that descends not to u-ord it with a shrew, does worse than beat her. L'Ettnnge.

Whether I have improved these fables or no, in the wording or meaning of them, the book must stand or fall to itself. Id.

Amongst men who confound their ideas with words, mere must be endless disputes, wrangling, and jargon.

Locke.

We need not lavish hours in icord y periods. As do the Romans, ere they dare to fight. Philips.

A friend who shall own thee in thy lowest condition, answer all thy wants, and, in a word, never leave thee.

The apology for the king is the same, but warded with greater deference to that great prince. Addison.

wrought. Saxon peorican ; Swcd. Dan. Belgic and Goth, u-erk. To

i labor; travail; toil ;

{act ; be in action or motion ; ferment ; be tossed or agi- tated ; make way : as a verb active, to J labor ; manufac-

If I appear a little u-ord-bound ia r.iv first solutions, I hope it will be imputed to the long disuse of speech.

Spectattr

Intemperate rage, a wordy war, began. P

Each wight who reads not, and but scans and spells, Each iford-catcher that lives on syllables. Id.

WORK, v. n., v. a., & n. s.⌃ *Pret. worked, or*

WORK'ER, H. s.

WORK'FELLOW,

WORK'HOCSE,

WORKING'HOUSE,

WORK'INGDAY,

WORK'MAN,

WORK'MANLY, adv.

WORK'MASSHIP, n. s.

WORK'MASTER.

WORK'WOMAN,

WORK'YDAY. ture ; act upon or influence ; manage ; effect, taking out, up, &c. : as a noun substantive, labor ; toil ; action ; attempt ; any thing made ; effort ; management: the compounds seem sufficiently ex- plained by the quotations.

Go and work ; for no straw shall be given you.

Erodus v. 18.

Every carpenter and tcorkmaster that laboureth.

Eccl. xxxviii.

His father was a worker in brass. 1 Kings vii. 14.

They that work in fine flax. Isaiah xix. 9.

All things work together for good to them that love God. Romans viii. 28.

Timotheus, my icorkfellow, and Lucius, salute you.

Hoinaiu.

In having but fortie foot trorkmanlij dight, Take saffron enough for a lord and a knight. Tusser.

What time this world's great irorkmaster did cast To make all things, such as we now behold,

It seems that he before his eyes had placed A goodly pattern, to whose perfect mould He fashioned them so comely. Spenser.

Ye fair nymphs, which oftentimes have loved The cruel vorker of your kindly smarts, Prepare yourselves, and open wide your hearts. 1,1.

The most fine-fingered workwoman on ground, Arachne, by his means was vanquished. Id.

My medicine, uork' thus credulous fools are caught.

Shakspeare.

Without the king's assent You wrought to be a legate. Id. Henry VIII.

Glory grows guilty of detested crimes, When for fame's sake We bend to that the working of the heart. Shakspeare.

The quick forge and teorkinghouse of thought.

Id. Henry V.

How full of briars is this worhingday world ! Shaksp.

When workmen strive to do better than well, They do confound their skill in covetousness. Id.

We will fetch thee straight Daphne roaming through a thorny wood, Scratching her legs, that one should swear she bleeds And at that sight shall sad Apollo weep. So tro Aman/v the blood and tears are drawn. Id.*

Tell her but a workyday fortune. Id.

He could have told them of two or three gold mines, and a silver mine, and given the reason why they forbare to work them at that time, and when they left off from working them. Raleigh.

Gravity worketh weakly, both far from the earth, and also within the earth. Bacon.

It you would iror any man, know his nature and fashions, and so lead him. Id*

Try the force of imagination upon staying the uork- iiig of beer, when the barm s put in. Id.

Whether we work or play, or sleep or wake, Our life doth pass, and with time's wings doth fly.

Davies.

He moulded him to his own idea, delighting in the choice of the materials ; and afterwards, as great archi- tects used to do, in the workmanship of his regal hand.

Wotton.

Sunday, the other days, and thou Make up one man, whose face thou art ; The workydnijs are the back part. Herbert.

The instrumentalness of riches to works of charity has rendered it necessary in every Christian common- wealth by laws to secure propriety. Hammond.

These positive undertakings wrought upon many to think that this opportunity should not be lost.

Clarendon.

Nor number nor example with him wrought To swerve from truth, or change his constant mind.

Milton.

Nothing lovelier can be found in woman, Than good icorks in her husband to promote. Id.

Desire, which tends to know The works of God, thereby to glorify The great workmatter, leads to no excess. Id.

I should have doubted the operations of antimony, where such a potion could not work. Browne.

It is pleasant to see what work our adversaries make with this innocent canon. Stillingfleet.

Who would trust chance, since all men have the

seeds Of good and ill, which should work upward first!

Dri/den.

The ground, unbid, gives more than we can ask ; But work is pleasure, when we chuse our task. Id.

Let it be pain of body, or distress of mind, there's matter yet left for philosophy and constancy to work apon. L'Estrange.

When this reverence begins to work in him, next consider his temper of mind. Locke.

Of all serpents his bite is the most pernicious, yet worketh the slowest. Grew.

We see the workings of gratitude in the Israelites.

South.

You spoke me fair, but betrayed me : depart from me, you professors of holiness, but workers of iniquity.

Id.

Natural philosophy has sensible objects to work upon ; but then it often puzzles the reader with the intricacy of its notions. Addison.

This mint is to work off part of the metals found in the neighbouring mountains. Id.

Now, Marcus, thy virtue 's on the proof ; Put forth thy utmost strength, work every nerve, And call up all thy father in thy soul. Id.

I worked a violet leaf. Spectator.

Holydays, if haply she were gone, Like workydays, I wish would soon be done. Gay.

Mere personal valour could not supply want of know- ledge in building and working ships. Arbuthnot.

Hast thou suffered at any time by vagabonds and pilferers 1 Esteem and promote those useful charities which remove such pests into prisons and workhouses.

Atterbury.

Not in the works of bloody Mars employed, The wanton youth inglorious peace enjoyed. Pope.

To hasten his destruction, come yourself, And work your royal father to his ruin. A. Philips.

Each herb he knew that u-orks or good or ill, More learned than Mesve, half as learned as Hill.

Harte.

Flavia is very idle, and yet very fond of fine work : this makes her often sit working in bed until noon.

Law.

WORK, CARPENTERS, CLOCK, CROWN, FIELD, FIRE, FRET, GROTESQUE, HORN, MOSAIC. See theFORTIFICATION and PYUO-

TECHNY.

To WORK, in the manege. To work a horse is to exercise him at pace, trot, or gallop, and ride him at the manege. To work a horse upon volts, or head and haunches in or between two heels, is to passage him, or make him go sidewise upon pa- rallel lines.

WORK, in sea language, is to direct the move- ments of a ship, by adapting the sails to the force and direction of the wind. See SEAMANSHIP.

WORKHOUSE is also a place where indigent, vagrant, and idle people, are set to work, and sup- plied with food and clothing. Workhouses are of two kinds, or at least are employed for two differ- ent purposes. Some are used as prisons for vag- rants or sturdy beggars, who are there confined and compelled to labor for the benefit of the society which maintains them ; whilst others, sometimes called poor-houses, are charitable asylums for such indigent persons, as through age or infirmity are unable to support themselves by their own labor.

WORKSOP, a market-town and parish in Bas- set-law hundred, Nottinghamshire, twenty miles north of Nottingham, and 142£ north-west

of Lon- don. It consists principally of two streets, and al- though small, it is a very neat town, lying in a pleasant valley near the source of the river Ryton, and noted for its malt and liquorice. Market on Wednesday.

WORLD, 7i. s. ~\ Sax. ponls; Belgic

WORLD'LING, twereld ; Swed. werald;

WOKLD'LY, adj. & adv. ˆGoth. verold. The uni- WORLD'LINESS, n.s. 3 verse; the great collec- tive idea of all bodies whatever ; the system of beings; the earth; present life; course of things; mankind; a great multitude; manners of men : a worldling is a man devoted to this world ; a cove- tous man : worldly is secular ; relating to this life ; human : as an adverb, with relation to this life : the noun substantive corresponding.

God hath in these last days spoken unto us by his Son, by whom he made the worlds. Heb. i. 2.

God of the world and worldlings, Great Mammon ! greatest god below the sky. Spenser.

This hath bred high terms of separation between such and the rest of the world, whereby the one sort are named the brethren, the godly ; the other, worldlings, time-servers, pleasers of men more than of God.

Hooker.

Many years it hath cotinued, standing by no other worldly mean but that one only hand which erected it.

Id.

The bassa having recommended Barbarussa, it was a world to see, how the court was changed upon him.

Knolles.

You a world of curses undergo, Being the agents, or base second means. Shˆkspeare.

I'm in this earthly world, where to do harm Is often laudable ; to do good sometime Accounted dangerous folly. Id.

He is divinely bent to meditation ; And in no worldly suits should he be moved, To draw him from his holy exercise. Id.

For his weeping in the needless stream ; Poor dear, quoth he, thou makest a

testament As worldlings do, giving thy sum of more To that which had too mucn. Id.

'Tis the duke's pleasure, Whose disposition, all the world well knows, Will not be rubbed nor stopped. Id.

It is a token of a worldly wise man, not to contend in vain against the nature of times whertin he liveth.

Raleigh.

WOR 6:

Garments richly woven And worlds of prize. Chapman.

Ferdinand Magellanus was the first that compassed the whole world. Heylyn.

He was willing to declare to all the world, that, as he had been brought up in that religion established in the church of England, so he could maintain the same by unanswerable reasons. Clarendon.

They'll practise how to live secure, Worldly or dissolute, on that their lords Shall leave them to enjoy. Milton.

It brought into this world a world of woe. Id.

• *Subverting worldly strong, and worldly wise, By simply meek. Id.*

The making of a will is generally an uneasy task, as being at once a double parting with the world.

Fell.

Happy is she that from the world retires, And carries with her what the world admires. Waller.

Christian fortitude consists in suffering, for the love of God, whatever hardships can befal in the world.

Dry den.

That other on his friends his thoughts bestows ; The covetous worldling, in his anxious mind, Thinks only on the wealth he left behind. Id.

Since your mind is worldly bent, Therefore of the two gifts in my dispose, Think ere you speak, I grant you leave to choose. Id.

There were a worW of paintings, and amo; g the rest the picture of a Hon. /.' Estrange.

This cannot be done, if my will be worldly or volup- tuously disposed. Smith.

If knowledge of the world makes man perfidious, May Juba ever live in ignorance. Addison.

This through the east just vengeance hurled, Love lost poor Antony the world. Prior.

By the world, we sometimes understand the things of this world; the variety of pleasures and interests which steal away our affections from God. Sometimes we are to understand the men of the world, with whose so- licitations we are so apt to comply. Rogers.

The girl might pass, if we could get her To know the world a little better ; To know the world ! a modern phrase For visits, ombre, balls, and plays. Swift.

We turn them over to the study of beauty and dress, and the whole world conspires to make them think of nothing else. Law.

Persons of conscience will be afraid to l>egin the world unjustly. Clarissa.

WORM, n.s., v. n., & v. a.~\ Sax. pynm ; Belg.

WORM'EATEN, adj. (^ worm ; Teut. warm ;

WORM' WOOD, n. x. i Goth, arm ; Latin

WORM'Y, adj. J vermis. A small

harmless serpent that lives in the earth ; an insect that breeds in the body ; the animal that spins silk ; a grub ; any thing vermiculated or spiral ; any thing tormenting : to worm is to work se- cretly : to drive by slow and scanty means ; deprive of worms : wormeaten is gnawed or devoured of worms ; old ; worthless : wormwood, a shrub : wormy, full of worms.

Though worms devour me, though I turn to mold, Yet in my flesh I shall his face behold. Sandys.

His chambei all was hanged about with rolls, And old records from ancient times derived ; Some made in books, some in long parchment scrolls, That were all wormeaten, and full of canker holes.

Spenser.

Spirits that in cross-ways and floods have burial, Already to their wormy beds are gone. Shakspeare.

Help me into some house,

Or I shall faint ! A plague o' both your houses ! They haie made worms meat of me. Id.

Thou owest the worm no silk, the sheep no wool.

•2 WOR

The mortal irorr,.. Id.

Tis 110 awkward claim,

Picked from the worm-holes of long-vanished days, Is or from the dust of old oblivion raked. Id.

The worm of conscience still begnaw thy soul. Id. She was weaned ; I had then laid Wormwood to my dug. Id.

When debates and fretting jealousy Did worm and work within you more and more, Your colour faded. fferbert.

Thine's like wormeaten trunks cloathed in seal's

skin ; Or grave, that's dust without, and stink within.

Donne.

Physicians observed these worms engendered within the body of man. Harvey .

The chains of darkness, and the undying worm.

Milton.

Yet can I not persuade me thou art dead, Or that thy corse corrupts in earth's dark womb, Or that thy beauties lie in wormy bed. Id.

Every one that keepeth a dog should have him wormed. Mortimer.

The threads of screws, when bigger than can be made in screw-plates, are called worms. The length of a worm begins at the one end of the spindle,

and ends at the other. Moron.

I ask whether one be not invincibly conscious to himself of a different perception, when he actually tastes wormwood, or only thinks on that savour ?

Locke.

They find themselves wormed out of all power, by a new spawn of independents, sprung from your own bowels. Swift.

WORM, in chemistry, is a long winding pipe, placed in a tub of water, to cool and condense lite vapors in the distillation of spirits.

WORM, in gunnery, is a screw of iron, to he fixed on the end of a rammer, to pull out the wad of a firelock, carabine, or pistol; and is the same with the wad-hook, only the one is more proper for small arms, and the other for cannon.

WORM, BLIND. See ANGUIS.

WORM, EARTH. See LUMBRICUS.

WORM, GLOW. See LAMPYRIS.

WORM GRASS, in botany. See SPIGELIA.

WORM, SILK. See SILK.

W'ORM, SLOW. See ANGUIS.

WORMING OF DOGS, a barbarous practice of cutting a small sinew out of the tongue of a dog, which has now become obsolete, as it neither acts as a preventative of madness, nor as disabling them, if mad, from biting.

WORMIUS (Olaus), a learned Danish physi- cian, born in 1588, at Arhusen in Jutland. After studying at home, he studied at several foreign uni- versities, and travelled to various parts of Europe for improvement. He returned home in 1613, and was made professor of the belles lettres in the uni- versity of Copenhagen. In 1615 he was made Greek professor; and in 1624 professor of physic, which he held till his death. These occupations did not hinder him from practising, and from being the fashionable physician : the king and court of Denmark always employed him ; and Christian IV., as a recompense for his services, conferred on him a canonry of Lunden. He published some pieces on subjects relating to his profession, several works in defence of Aristotle's philosophy, and se- veral concerning

the antiquities of Denmark and Norway ; for which latter he is principally regarded, as they are very learned, and contain many curious particulars, lie died in 1G5-.*

W O R S H I P.

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WORMS, a oily in the west of Germany, well snown in history. It stands on the left bank of the Rhine, a few hundred yards from the river, and is, like most old towns in Germany, surrounded with a decaying wall. The streets are dark and narrow ; the cathedral, a ponderous Gothic build- ing, with dismantled walls. The population is said to have been formerly considerable ; but the city having been laid waste by the French in the devastation of the palatinate, in 1689, part of the inhabitants retired to Frankfort on the Maine or to Holland. Of late, however, the place is rather on the increase. The greater part are Lutherans. The public buildings are the mint, the town-house, in which Luther appeared before the diet in 1521, and the new church. The environs are fertile, and remarked for the quality of their wine. Few places have suffered more from war and other calamities. So early as 407 it was ravaged by the Vandals; in 451, and 538, by the Huns. It has suffered also by fires ; and, on one or two occasions, by earthquakes. It is now subject to Hesse-Darmstadt, and is twenty-five miles south of Mentz.

WORMS, vermes, in zoology. See ZOOLOGY.

WORMS in the human body. See MEDICINE.

WORMSEED, in botaiˆv, a species of cheno- podium.

WORMWOOD, in botany. See ARTEMISIA.

WORMWOOD, WILD, a species of parthenium.

WOR'NIL, n. s.

In the backs of cows, in the summer, are maggots generated, which in Essex we call wornils, being first only a small knot in the skin. Derham.

WOR'RY, v.a. Sax. pojiijen, whence perhaps warray. To tear ; mangle ; harass.

If we, with thrice such powers left at home, Cannot defend our own doors from the dog, Let us be worried. Shakspeare. Henry V.

The fury of the tumults might fly so high as to worry and tear those in pieces, whom as yet they but played with in their paws. King Charles.

For want of words, or lack of breath, Witness when I was worried with thy peals. Milton.

It has pleased Providence at length to give us right- eousness instead of exaction, and hopes of religion to a church worried with reformation. South's Sermont,

Let them rail, And worry one another at their pleasure. Roue.

I shall not suffer him to worry any man's reputation, nor indeed fall on any person whatsoever. Additon.

Madam, contrive and invent, And worry him out, till he gives his consent. Swift.

WORSE, adj., adv., n. «., ˆ The comparative

WORS'F.R, adj. [& v. a. I of bad : bad, worse, worst. Saxon pinj-. More bad ; more ill : in a manner more bad : worser, though used by Shak- speare and Dryden, is a vile barbarism.

W hy should he see your faces worse liking than the children of your sort? Daniel i. 10.

Was never man, who most conquests atchieved, But sometimes had the worse, and lost hy war.

Spemer.

The more one sickens, the worse at ease he is.

Shakspeare.

Perhaps more valid arras, Weapons more violent, when next we meet, May serve to better us, and worse our foes. Milton.

A dreadful quiet felt, and, worser fai Than arms, a sullen interval of war. Drvrlen.

In happiness and misery the question still remains,

how men come often to prefer the worte to the better!

and to chuse that, which, by their own confession, has

made them miserable ?

V, i.. XXII.

*WOR'SHIP, n. *., v. a. &-\ Sax. –*

WOR'SHIPFUL, adj. \y. n. 9 From worth. Ex~ WOR'SHIPFULLY, adv. ˆcellence; dignity: WOR'SHIPPER, n. s. J eminence ; a charac-

ter or title of honor; adoration: to adore; honor: respect : perform acts of adoration : worshipful is claiming respect by dignity or character : the adverb corresponding : a worshipper is one who worships.

Thou shalt worship no other God. Exod. xxxiv. 14

The people went to worship before the golden calf.

1 Kings.

The humble guest shall have worship in the presence of those who sit at meat with him. Luke xiv. 10.

Elfin born of noble state, And muckle wjrship in his native land, Well could he tourney, and in lists debate. Spenser.

The law of nature teacheth that the true and living God ought to be worshipped, and that a sufficient and convenient time is to be set apart for the same. White.

I belong to worship, and affect In honour, honesty. Shakspeare. Henry VIII.

My train are men of choice and rarest parts, That all particulars of duty know ; And in the most exact regard support The worship of their names. Id. King Lear.

Dinner is on table ; my father desires your worship' company. Id. Merry Wive* of Windsor.*

This is worshipful society, And fits the mounting spirit like myself. Shakspeare.

Tis not your inky brows, your black silk hair, Your bugle eyeballs, nor your cheek of cream, That can entame my spirits to your worship. Id.

What art thou, thou idol ceremony ? What kind of God art thou, that sufferest more Of mortal griefs than do thy worshippers ? Id. Henry.

With bended knees I daily worship her, Yet she consumes her own idolater. Carew.

First worship God ; he that forgets to pray, Bids not himself good-morrow, nor good-dav.

T. Randolph.

They join their vocal worship to the quire Of creatures wanting voice. Hilton.

The worship of God is an eminent part of religion, and prayer is a chief part of religious worship: hence religion is described by seeking God. Tillotson.

Since God hath appointed government among men, it is plain that his intention was, that some kind of worship should be given from some to others.

Stillingfleet.

Suppose this worshipful idol be made, yet still it wants sense and motion. id.

He waved a torch aloft, and, madly vain, Sought godlike worship from a servile train. Dryden.

What lands and lordships for their owner know My quondam barber, but his worship now. Id.

By sanctifying the seventh day after they had la- boured six, they avowed themselves worshippers of that only God who created heaven and earth. Kelson.

When old age comes upon him, it comes alone, bringing no other evil with it ; but when it comes to wait upon a great and worshipful sinner, who for many years has ate well and done ill, it is attended with a long train of rheums. South.

There was a voyage of the Egyptians under Osiris up the Danube ; from them the Suevi had their wi>rslii/> of Isis. Arbuthnot.

Against your worship when had S — k writ ? Or P — ge poured forth the torrent of his wit ? Pope.

WORSHIP OF GOD (cultus Dei; amounts to the same with what we otherwise call religion. This worship consists in paying a due respect,

*venera- tion, and homage to the Deity, under a certain ex- pectation of reward. And this internal respect, &c.. is to be shown and testified by external acts, «**

prayers, sacrifices, thanksgivings, &c. The Quiet- ists, and some other mystic divines, set aside not only all us

from church with the serious intention perhaps of employing the Lord's day in private devotion and religious study ; another, following his example, would absent himself upon the same pretpnce, bet would in reality waste the day in dozing indolence or in secret sensuality. For these and other reasons, which might be easily assigned, no sincere Christian will think himself at liberty to dispute a practice enjoined by the inspired preachers of his religion, coeval with the institution, and retained by every sect into which it has since been unhappily di- vided.

As Christian worship consists of prayers and praises, it has been a matter of some debate whether it is most properly performed by precon- certed forms or liturgies, or by extemporaneous addresses to the Almighty. Beth these modes have their advantages and disadvantages ; and by the sacred writers neither of them is prescribed in op- position to the other. The advantages of a liturgy are, that it prevents absurd, extravagant, or impious addresses to God, which the folly or enthusiasm of individuals must always be in danger of producing; it gives the congregation an opportunity of joining in the prayers which are put up for them, which they cannot possibly do in a series of extempora- neous petitions, since, before they can assent to any one of these and make it their own, their attention is necessarily called away to that which succeeds it ; and it relieves the clergyman from the labor of composition, which seems incompatible with that fervor which constitutes the spirit of devotion. The disadvantages of a fixed liturgy, which are the recommendations of extemporary prayer, are prin- cipally two. The forms composed in one age must by the unavoidable change of language, circum- stances, and opinions, become in some degree unfit for another; and the perpetual repetition of the same form of words is very apt to produce inatten- tive lassitude in the congregation. Would the clergy of the church of England take that liberty which is allowed them, in the bidding prayer before sermon, perhaps the sen-ice of that church would unite in itself all the advantages both of liturgic and extemporary worship. We have only to add, on this subject, that public prayers, whether precom-

posed or not, ought to be compendious ; that they ought to express just conceptions of the divine at- tributes ; recite such wants as the congregation are likely to feel, and no other ; that they ought to contain as few controverted propositions as possi- ble ; and that, if it can be done without offence, the pompous style of the state should be laid aside in our prayers for the king and all that are in au- thority ; because, in every act which carries the mind to God, human greatness must be annihilated.

WORST, adj., n. s., & v. a. The superlative of bad, formed from worse : bad, worse, worst, bad; most ill: the most calamitous or wickc-1 state ; utmost degree of ill : to reduce to that state : defeat.

Who is 't can say I 'm at the wortt ? I 'm worse than e'er I was, And worse I may be yet : the iamt is not So long as we can say, this is the wont. Shaks)i.

The case will be no worse than where two duellists enter the field, where the wonted party hath his sword given him again without further hurt. Suckling.

That you may be armed against the worst in this un- happy state of affairs in our distressed country, 1 send you these considerations on the nature and immortality ot' the sou .

The bear was ;n a greater fright, Beat down and worsted by the kuight. Hudibrus.

Happy the man, and happy he alone, He who can call to-day his own : He who secure within can say, To-morrow do thy worst, for I have lived to-day.

Dry den.

It is downright madness to contend where we are sure to be worsted. L'Estrange.

The pain that any one actually feels is still of all other the worst; and it is with anguish they cry out.

Locke.

Sir Roger gets into the frontiers of his estate before he beats about in search of a hare, on purpose to spare his own fields, where he is always sure of finding di- version when the wont comes to the worst. Addison.

WOR'STED, n. s. From Worsted, a town in Norfolk famous for the woollen manufacture. Woollen yarn ; wool spun.

A base, proud, shallow, beggarly, three suited, hundred pound, filthy, tiwsted-stocking knave. Shaks.

There Ridpath, Roger cudgel'd might ye view ; The very wonted still looked black and blue. Pope.

WORT, n. s. Sax. pijit ; Belg. wort. Origi- nally a general name for an herb; as liverwort, spleenwort. A plant of the cabbage kind ; new beer nnfermented, or in the act of fermentation.

If in the wort of beer, while it worketh, before it be tunned, the burrage be often changed with fresh, it will make a sovereign drink for melancholy. Bacon.

WORTH, or WURTH, v.n. Sax. peonSan. To be : retained in wo worth, or wurth ; wo be.

Wo worth the man

That first did teach the cursed steel to bite In his own flesh, and make way to the living sp'rit.

Spenser.

WORTH, n. s. & adj. WOR'THILY, adv. WOR'THINESS, n.s. WORTH'LESS, adj. WORTH'LESSNESS, n. s.

~} Sax. peon. Price; j value ; importance ; [excellence : as an ad- fjective, equal in value, possession, or*

WoR'THY,od;.,rz. s.,&v.a.J station, to; deserving of: worthily is suitably ; justly : the noun substan- tive corresponding : worthless and worthlessness, without virtue or worth ; want of excellence or dig- nity : worthy, deserving ; valuable ; noble ; equal ; suitable: a man of valuable qualities, and particu- larly of valor : to worth is to render worthy ; exalt : (obsolete).

If the wicked man be worthy to be beaten, the judge shall cause him to be beaten. Deut. xxv. 2.

Although worth nothing, he shall be proffered the best endowed and most

beautiful virgin of their island.

Sandys.

She determined never to marry any but him whom she thought worthy of her, and that was one in whom all worthinesses were harboured. Sidney.

If the best things have the perfectest and best opera- tions, it will follow, that seeing man is the worthiest creature on earth, and every society of men more worthy than any man, and of society, that most excellent which we call the church. Hooker.

Your clemency will take in good uwifc the offer of these my simple and mean labours. Id.

Further I will not natter you, That all I see in you is worthy love, Than this ; that nothing do I see in you That should merit hate. Shakspeare.

Thou art worthy of the sway, To whom the heavens in thy nativity Adjuged an olive branch and laurel'crown. Id.

Women will love her that she is a woman. More worth than any man ; men that she is The rarest of all women. id.

*He conjunct tripped me behind ; And put upon him such a deal of man That worthied him ; got praises of the king, For him attempting who was self-subdued. Id**

A little time will melt her frozen thoughts, And worthless Valentine shall be forgot. Id

The king is present ; if 't be known to him That I gainsay my deed, how may he wound, And worthily, my falsehood ! Id.

A war upon the Turks is more worthy than upon any other Gentiles, in point of religion and honour ; though hope of success might invite some other choice. Bacon.

Having from these sucked all they had of worth, And brought home that faith which you carried forth, I throughly love. Donne.

It were a matter of more trouble than necessity to re- peat, in this quarrel, what has been alledged by the worthies of our church. Holy day.

The castle appeared to be a place worth the keeping, and capable to be made secure against a good army.

Clarendon. Whatsoever Is worthy of their love is worth their anger. Denham.

Flowers worthy of Paradise. Milton.

Haste, hither, Eve, and worth thy sight behold Eastward among those trees, what glorious shape Comes this way moving. Id.

Happier thou mayst be, worthier canst not be. Id.

What is worth in any thing, But so much money as 'twill bring ? Hudibras.

On Laura's lap you lay, Chiding the worthless crowd away. Roscommon.

But that mine own worthlessness spoils the conceit, I could think our own company parallel to the seven wise men of Greece. More

A nymph of your own train Gives us your character in such a strain, As none but she, who in that court did dwell, Could know such worth, or worth describe so well.

Waller.

My worthy wife our arms mislaid, And from beneath my head my sword conveyed ; The door unlatched, and with repeated calls Invites her former lord within my walls. Dryden.

You worthily succeed, not only to the honours of youi ancestors, but also to their virtues. Id.

For this day's palm, and for thy former acts, Thou, Arthur, hast acquired a future fame, And of three Christian worthies art the first. Id.

The divine original of our souls hath little influence upon us to engage us to walk worthily of our extraction, and to do nothing that is base. Ray.

A notable account is given us by the apostle of this windy insignificant charity of the will, and of the worthlessness of it, not enlivened by deeds. South.

Take a man, possessed with a strong desire of any thing, and the worth and excellency of that thing ap- pears much greater than when that desire is quite ex- tinguished. Id.

It is worth while to consider how admirably he has turned the course of his narration, and made his hus- bandman concerned even in what relates to the battle.

Addison.

Am I then doomed to fall By a boy's hand, and for a worthless woman ? Id.

A common marcasite shall have the colour of gold exactly : and yet upon trial yield nothing of worth but vitriol and sulphur. Woodward.

Worth makes the man, and want of it the fellow.

Pope.

Many things are worth enquiry to one man, which are not so to another. Watts.

If your arguments produce no conviction, they are worth nothing tome. Seattle.

WORTHING, a hamlet in the parish of Broad- water, hundred of Brightford, rape of Bramber

Sussex, eleven miles east of Brighton, and fifty-six from London, on the sea-coast. This place, in a short space of time, has acquired many handsome buildings, several of them sufficiently extensive and elegant to accommodate the first families in the kingdom. It is much resorted to during the bath- ing season, and there is a facility of bathing here in the most stormy weather, with a level extent of sand for a length of ten miles. A fishery is carried on for mackarel in the spring, and in the autumn for herrings. It has a convenient, daily market, and a neat little theatre.

WORTLE, or parsley. See APIUM.

WOT, v. n. Sax. pitan : whence weet, to know ; of which the preterite was wot, knew. See WIT. To know; be aware. Obsolete.

The salve of reformation they mightily call for, but where and what the sores are which need it, as they wot full little, so they think not greatly material to search. Hooker.

Well 1 wot, compared to all the rest Of each degree, that beggar's life is best. Spenser. More water glideth by the mill

Than wots the miller of. Shakspeare.

WOTTON (Sir Henry), an eminent writer, the son of Thomas Wotton, esq. ; born in 1568. He studied at New College, Oxford, and Queen's Col- lege, where he made a great progress in logic and philosophy ; wrote a tragedy for the use of that college, called Tancredo ; and afterwards received the degree of M. A. After this he travelled into France, Germany, and Italy ; and, having spent nine years abroad, he returned and became secre- tary to Robert earl of Essex, with whom he con- tinued till that earl was apprehended for high treason. He then retired to Florence, where he became known to the grand duke of Tuscany, who sent him privately with letters to James VI. king of Scotland, under the name of Octavio Baldi, to inform that king of a design against his life. Some months after, he went back to Florence ; but, king James succeeding to the crown of England, Mr. Wotton returned home, was knighted, and sent ambassador to the republic of Venice ; and after- wards was employed in many other embassies to that and other courts. He was made provost of Eton (being previously admitted into deacon's orders) in 1623, which he kept till his death, in 1639. After his decease some of his MSS. and printed tracts were published in a volume, entitled Reliquiae Wottonianae.

WOTTON (William), D. D., a rery learned di- vine, the son of Mr. Henry Wotton, B. D., rector of Wrentham, in Suffolk, where he was born in 1666. He was educated by his father, a learned gentleman, under whom he made amazing progress. He was admitted into Catharine Hall in Cambridge before he was ten years old ; when his rapid pro- gress astonished the professors. In 1679, his thir- teenth year, he took the degree of A. B. and in 1680 he was invited to London by Dr. Gilbert Burnet, who introduced him to Dr. William Lloyd, bifhop of St. Asaph. In 1691 he commenced B. D., and bishop Lloyd gave him the sinecure of Llandrrllo in Denbighshire. He was afterwards made chaplain to the earl of Nottingham, who made him rector of Middleton Keynes, in Bucks, and to whom he dedicated his Reflections upon Ancient and Modern Learning. In 1705 bishop Burnet gave him a prebend in the church of Salis- bury; and in 1 707 archbishop Tenison presented

him with the degree of D. D ; but in 1714 difficul- ties in his private fortune obliged him to retire into South Wales, where he was treated with great kindness by the gentlemen of that country ; and wrote the Memoirs of the Cathedral Churches of St. David's and Landaff, and Miscellaneous Dis- courses relating to the Traditions and Usages of the Scribes and Pharisees ; afterwards printed. He died in 1726. This great man was remarkable for

his humanity and friendliness of temper. He wrote, besides the above works, 1. A History of Rome. 2. A Defence of his Reflections upon Ancient and Modern Learning. 3. A Discourse concerning the Languages of Babel. 4. Advice to a young Student, with a Method of Study for the first four years ; and other learned pieces.

WOVE, v. a. &.part. J The pret. and part. pass.

WOOF, n.s. i of WEAVE. The woof is

the set of threads that crosses the warp; the weft.

The placing of the tangible parts in length or trans- verse, as in the warp and the woof of textile, is more in- ward or more outward. Bacon.

A vest of purple flowed,

Iris had dipped the woof. Milton.

To spread the pall beneath the regal chair,

Of softest woof, is bright Alcippe's care. Pope.

WOULD, } The pret. of wi .. It is

WOULD'ING, n. s. } generally used as an auxi- liary verb with an infinitive, to which it gives the force of the subjunctive mood : was or am re- solved ; I wish ; should wish ; or wished to. ; am or was willing: woulding is the motive of desire ; dis- position or determination to do any thing. Not used.

She would give her a lesson for walking so late, that should make her keep within doors for one fortnight.

Sidney,

What wouldst thou with us ? Shakspeare.

I would this music would come. I, this sound I better know. Id.

Wise men will do it without a law ; I would there might be a law to restrain fools. Bacon.

As for percolation, which belor.geth to separation, trial would be made by clarifying by adhesion, with milk put into new beer, and stirred with it. Id

Would to heaven that youth such spirit did feed Now in my nerves, and

that my joints were knit With such a strength, as made me then held fit To lead men with Ulysses. Chapman.

List! I would I could hear more. Ben Joiison.

This is yet the outward, fairest side Of our design : within rests more of fear Than, my most worthy lords, I would there were.

Daniel.

It will be every man's interest to join good perform- ances to spiritual purposes ; to subdue the exorbitances of the flesh, as well as to continue the wouldings of the spirit. Hammond.

Would thou hadst hearkened to my words, and

stayed With me, as I besought thee. Milton.

There are several who would, or at least pretend they would, bear much in their own business, who will bear nothing at all. Ketttewell.

And would to heaven the storm you felt would bring On Carthaginian coasts your wandering king. Dryd.

It will be needless to enumerate all the simple ideas belonging to each sense ; nor indeed is it possible, if we would ; there being a great many more of them lie- longing to most of the senses than we have names for.

Lock.*

If God's providence did not so order it, cheats would daily be committed, which would justle private men o…i of their rights, and unhinge state. Ray.*

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WRA

WOUND, n. s. & v. a. \ Sax. punb; Belgic WOUND' Y, adj.) wonde. A hurt given

by violence : to hurt by violence : woundy seems

to mean painful; grievous.

I kill, and I make alive ; I wound, and I heal.

Deuteronomy.

He was wounded for our transgressions, he was bruised for our iniquities. Isaiah.

The untainted wounding! of a father's curse Pierce every sense about thee. Shakspeare.

Now shew the wound mine eyes have made in thee ; Snatch thee but with a pin, and there remains Some scar of it. B«

He, stooping, opened my left side, and took From thence a rib : wide was the wound, But suddenly filled up and healed. Milton.

Heroes of old, when wounded, shelter sought.

Dryden.

These stockings of Susan's cost a woundy deal of pains pulling up. Gay.

The savages wounded Atkins, and slew his followers. Robinson Crusoe.

Not poison, but a wound, the soldier slew. Rove.

Th -y feel the smart and see the scar of their former ui'utids ; and know that they must be made a sacrifice to the least attempt towards a change. Swift.

WOUNDER. From wound. One that wounds.

WOW, a fortified town of Hindostan, in the pro- vince of Gujerat, and district of Neyer, of which it may be considered as the capital. It was formerly governed by a female called the Ranny, whose ter- ritories were very considerable. It is still a place of consequence, and the residence of 1000 Rajpoot families. It is subject to the chief of Theraud. Long. 71° 23′ E., lat. 24° 11′ N.

WRACK, n. s. 8c v. a. Sax. pjiaecce, a wretch; Belg. wrack. Ruin ; destruction of a ship : to ruin ; torture ; torment. The poets use wrack or wreck indifferently. See WRECK.

With use of evil, growing more and more evil, they took delight in slaughter, and pleased themselves in making other wrack the effect of their power. Sidney.*

Merab rejoiced in her wracked lover's pain, And fortified her virtue with disdain. Cowley.

Each on his rock transfixed, the sport and prey Of wracking whirlwinds. Milton.

Pharaoh's and Joseph's dreams are oftentimes wracked beyond their symbolization. Browne.

Now with full sails into the port I move, And safely can unlade my breast of love, Quiet and calm : why should I then go back, To tempt the second hazard of a wrack ? Dryden.

WRANG'LE, v.. n. & n. s.) From Belg. wrong-

WRANG'LER, n. x. ji heseur, Minsheu ;

wrong, Skinner. To dispute peevishly or per- versely ; to altercate ; squabble : a dispute of this kind ; a disputant: a peevish quarrelsome man.

Yes, for a score of kingdoms you should u-ranale ; And I should call it fair play. Shal<^)eare. Tempett.

Tell him h' ath made a match with such a wrangler, That all the courts of France will be disturbed With chases. Id. Henry V.

Lord, the house and family are thine, Though some of them repine ; Turn out these wranglert which defile thy seat, For where thou dwellest all is neat. Herbert.

How wounding a spectacle is it to see those who were by Christ designed for fishers of men, picking up shells on the shore, and unmanly wrangling about them too ! Decay of Piety.

In incompleat ideas we impose on ourselves, and wrangle with others. Locke..

His great application to the law had not infected his

temper with any thing litigious ; he did not know what it was to wrangle on indifferent points.

Addhon's Freeholder.

He advises therefore to set aside all logical wrang- lingi, and to produce the testimonies of the antients.

Waterland,

Filled with the sense of age, the fire of youth, A scorn of wrangling, yet a zeal for truth. Pope.

The giving the priest a right to the tithe would pro- duce law-suits and wrangles. Swift.

The captious turn of an habitual wrangler deadens the understanding, sours the temper, and hardens the. heart. Beattie.

WRANGLE (Charles Gustavus), marshal ana constable of Sweden, a celebrated naval and mili- tary commander. He defeated the Danish fleet in 1644; the imperial army near Augsburg in 1648, and the Dutch fleet in 1658. See SWEDEN. He died in 1676.

WRANGLER, in literature, is a title of honor be- stowed on students in the university of Cambridge, who stand in the highest class, especially in mathe- matical knowledge, at the public examination, for the first degree (or bachelor) in arts : the second consists of senior optimes : the third of junior op- times ; and the fourth and last of the 6« iro\io. WRAP, v. a. ˆ Pret . and part. pass, wrap- WRAP'PER, n. s. $ ped or wrapt. Sax. hpeori- pian, to turn; Dan. wreffler ; Goth, reifa. To roll together ; complicate ; involve ; comprise ; trans- port : taking up, intensively : a wrapper is a per- son or thing that wraps.

The sword made bright is wrapt up for the slaughter

Exekiel.

Peter seeth the napkin that was about his head wrapped together by itself. John xx. 7.

This said, he took his mantle's foremost part, He 'gan the same together fold and wrap. Fairfax.

Wise poets that wrap truth in tales, Knew her themselves through all her veils. Carew.

Much more the reverend sire prepared to say, Wrapped with his joy, how the two armies lay.

I. on- ley.

Their vigilance to elude, I wrapt in mist Of midnight vapour, glide obscure. Milton.

Wrapt up in silent fear he lies. Waller.

Nil us opens wide

His arms and ample bosom to the tide, And spreads his mantle o'er the winding coast, In which he wraps his queen, and hides the flying host.

Dryden.

My arms were pressed to my sides, and my legs closed together by so many wrappers that I looked like an Egyptian mummy. Addison's Spectator.

Whatever things were discovered to St. Paul, when he was wrapped up into the third heaven, all the de- scription he makes is that there are such things as eye hath not seen, ear heard, nor hath it entered into the heart of man to conceive. Locke.

Wrap candles up in paper. Swift.

WRASSE, in ichthyology. See LABRVS.

WRATH, «. s. -x Sax. ppa«; Swed.and WRATH'FUL, adj. {ˆD&n.wrede; Goth.vmfe.

WRATH'FULLY, adv. £ Anger; fury; rage: the WRATH'LESS, adj.) derivatives correspond- ing.

I fear, lest there be debates, envyings, wraths, strifes

Corinthians.

He cried, as raging seas are wont to roar, When wintry storm his wrathful wreck doth threat.

Spenter.

Thou dost the prayers of the righteous seed Present before the majesty divine. And his avenging wrath to clemency incline. Id

Sweet, adieu ! I '11 keep my oath, Patiently to bear my wrath. Shakspeare.

How now ? your wrathful weapons drawn ! Id.

Gentle friends, Let 's kill him boldly, but not wrathfully. Id.

He hoped not to escape, but shun The present, fearing guilty what his wrath Might suddenly inflict. Milton.

Before his feet so sheep and lions lay, Fearless and wrathlets, while they heard him play.

Waller.

Achilles' mrath, to Greece the direful spring Of woes unnumbered, heavenly goddess ! sing. Pope.

The true evangelical zeal should abound more in the mild and good-natured affections, than the vehement and wrathful passions. Sprat's Sermons.

WRATH. See ANGER, RAGE, &c.

WREAK, v. a.&n. «. } Oldpret. and part. pass.

WREAK'FUL, adj. £wroke and wroken, now

WREAK'LESS. 3 wreaked. Sax. pnaecan ;

Belg.wrecken; Teut. recken. To revenge; execute a violent design : used for reck, corruptly : revenge ; passion: the adjectives correspond.

Him all that while occasion did provoke Against Pyrocles, and new matter framed Upon the old, him stirring to be vroke Of his late wrongs. Spenser.

Fortune, mine avowed foe, Her wrathful wreaks themselves do now allay. Id.

So flies the wreakless shepherd from the wolf ; So first the harmless flock doth yield his fleece, And next his throat unto the butcher's knife. Shaktp.

What and if

His sorrows have so overwhelmed his wits, Shall we be thus afflicted in his wreaks, His fits, his frenzy, and his bitterness ? Id.

My master is of churlish disposition, And little wreaks to find the way to heaven By doing deeds of hospitality. Id.

Some ills behind, rude swaine, for thee to heare ; That feared not to devour thy guests, and breake All laws of humanes ; Jove sends therefore wreake.

Chapman.

On me let death u-reak all his rage. Milton.

He left the dame,

Resolved to spare her life, and save her shame, But that detested object to remove, To wreak his vengeance, and to cure her love. Dryd.

Think how you drove him hence, a wand'ring exile, To distant climes; then think what certain vengeance His rage may wreak on your unhappy orphan. Smith.

Her husband scoured away To wreak his hunger on the destined prey. Pope.

WREATH, n.s.,v. a., &(Saxon pneo. Any*

WREATH'Y, adj. [v. n. I thing curled or twisted; a garland : to curl ; involve; twist ; interweave ; en- circle; writhe: to be interwoven or entwined: wreathy is spiral.

Two chains of pure gold, of wrealhen work, shalt thou make them, and fasten the wreathen chains to the ouches.

I-itodus xxviii. Longaville

Did never sonnet for her sake compile, Nor ever laid his wreathed arms athwart Ills loving bosom, to keep down his heart. Shaktp.

About bis neck A green and gilded snake had wreathed itself. Id.

The wreath of three was made a wreath of five ; to these three first titles of the two houses were added the authorities parliamentary and papal. Bacon.

• *The beard of an oat is wreathed at ihe bottom. Id.*

He of his tortuous train Curled many a wanton wreath. Milton.

That which is preserved at St. Dennis, near Paris, hath u-reathy spires, and cochleary turnings about,

which agreeth with the description of an unicorn's horn in .Mian. Browne.

Dropped from his head, a wreath lay on the ground.

Roicommon.

For thee she feeds her hair, And with thy winding ivy icreattiet her lance. Dryd.

Let altars smoak,

And richest gums, and spice, and incense, roll Their fragrant wreaths to heaven. Smith.

As snakes breed in dunghills not singly, but in knots, so in such base noisome hearts you shall ever see pride and ingratitude indivisibly wreathed and twisted to- gether. South.

In the floweis that wreath the sparkling bowl Fell adders hiss, and poisonous serpents rowl. Prior.

Impatient of the wound, He rolls and wreaths his shining body round ; Then headlong shoots beneath the dashing tide. Gay.

WRECK, n. s., v. a., & v. n. Saxon pnsecce, a miserable person; Belg. wracke. See WRACK. Destruction by sea : hence by any violence ; ruin : to destroy by dashing on rocks or sands ; ruin suffer \reck : corruptly used for wreak. Fair be ye sure ; but hard and obstinate, As is a rock amidst the raging floods ;

'Gainst which a ship, of succour desolate, Doth suffer wreck both of herself and goods. Sperner.

Have there been any more such tempests, wherein she hath wretchedly been wrecked ? Id.

Whether he was

Combined with Norway, or did line the rebel With hidden help and 'vantage ; or that with both He laboured in his country's wreck, I know not.

Shakspeare. A pilot's thumb, Wrecked as homeward he did come. Id.

Like those that see their wreck Even on the rocks of death ; and yet they strain That death may not them idly find t' attend To their uncertain task, but work to meet their end.

Daniel.

Not only Paradise,

In this commotion, but the starry cope Had gone to wreck. Milton.

Rocks whereon greatest men have often wrecked. Id. The soul shall flourish in immortal youth, Unhurt amidst the war of elements, The u-reck of matter, and the crush of worlds. Additon. I faint ! I die ! the goddess cried :

0 cruel, couldst thou find none other To wreck thy spleen on, parricide?

Like Nero, thou hast slain thy mother. Prior.

Think not that flying fame reports my fate ;

1 present, I appear, and my own wreck relate. Dryd.

WRECK, or SHIPWRECK, in law. By the ancient common law, where any ship was lost at sea, and the goods or cargo were thrown upon the land, these goods, so wrecked, were judged to belong to the king ; for it was held that, by the loss of the ship, all property was gone out of the original owner. But this was undoubtedly neither consonant to reason nor humanity. Wherefore it was first or- dained by king Henry I. that if any person es- caped alive out of the ship, it should be no wreck ; and afterwards king Henry II. declared that, if any ship should be distressed, and either man or beast should escape or be found therein jalive, the goods should remain to the owners, if they claimed them within three months.' This was again confirmed with improvements by king Richard I. And the law, as laid down by Bracton in the reign of Henry III., seems still to have improved in its equity. For then, if not only a dog, for instance, escaped, by which the owner might be discovered, but if any

certain mark were set on the goods, by which they might be known again, it was held to be no wreck. It is now held that not only if any live thing es- cape, but if proof can be made of the property of any of the goods or lading which come to shore, they shall not be forfeited as wreck. To constitute a legal wreck, the goods must come to land. If they continue at sea, the law distinguishes them by the barbarous and uncouth appellations of jetsam, or jetsom, flotsam or flotson, and ligan or lagan. These are also the king's, if no owner appears to claim them ; but, if any owner appears, he is en- titled to recover the possession. Wrecks, in their legal acceptation, are at present not very frequent ; for if any goods come to land, it rarely happens, since the improvement of commerce, navigation, and correspondence, that the owner is not able to assert his property within the year and day limited by law. And in order to preserve this property entire for him, and if possible to

prevent wrecks at all, our laws have made many very humane regulations. For by stat. 27 Edw. III. c. 13, if any ship be lost on the shore, and the goods come to land (which cannot, says the statute, be called \vreck), they shall be presently delivered to the merchants, paying only a reasonable reward to those that saved and preserved them, which is entitled salvage. Also by the common law, if any person (other than the sheriff) take any goods so cast on shore, which are not legal wreck, the owners might have a commission to enquire and find them out, and compel them to make restitution. And by 12 Ann. stat. 2, c. 18, confirmed by 4 Geo. I. c. 12, to assist the distressed, and prevent the scandalous illegal practices on some of our sea-coasts, it is enacted that all head officers, and others of towns near the sea, shall, upon application made to them, summon as' many hands as are necessary, and send them to the relief of any ship in distress, on forfeiture of £100 ; and, in case of assistance given, salvage shall be paid by the owners, to be assessed by three neighbouring justices. All persons that secrete any goods shall forfeit their treble value; and if they wilfully do any act whereby the ship is lost or destroyed, by making holes in her, stealing her pumps, or otherwise, they are guilty of felony without benefit of clergy. Lastly, by stat. 26 Geo. II. c. 19, plundering any vessel, either in dis- tress or wrecked, and whether any living creature be on board or not (for, whether wreck or otherwise, it is clearly not the property of the populace), such plundering or preventing the escape of any person that endeavours to save his life, or wounding him with intent to destroy him, or putting out false lights in order to bring any vessel into danger, are all declared to be capital felonies ; in like manner as the destroying of trees, steeples, or other stated sea marks, is punished by stat. 8 Eliz. c. 1 3, with a forfeiture of £100, or outlawry. Moreover, by stat. Geo. II., pilfering any goods cast ashore is declared to be petty larceny ; and many other salu- tary regulations are made, for the more effectually preserving ships of any nation in distress. By the civil law, to destroy persons shipwrecked, or prevent their saving the ship, is capital. And to steal even a plank, from a vessel in distress or wrecked, makes the party liable to answer for the whole ship and cargo. The laws also of the Wisigoths, and '.he most early Neapolitan constitutions, punished with the utmost severity all those who neglected to assist any ship in distress, or plundered any goods cast on shore.

WREN, «. s. Sax. pnenna. A small bird.

The poor wren,

The most diminutive of birds, will fight, Her young ones in her nest, against the owl. Shaksp.

All ages have conceived that the wren is the least of birds ; yet the

discoveries of America have shewed us one far less. Browne.

WREX, in ornithology. See MOTACILLA.

WREN (Sir Christopher), was the son of Chris- topher Wren, dean of Windsor, and was born in 1632. He studied at Wadham College in Oxford ; where he took the degree of A. M. in 1653, and was chosen fellow of All Souls College. In 1657 he was made professor of astronomy at Gresham College, London ; which he resigned in 1660, on his being chosen to the Savilian professorship of astronomy in Oxford; he was in 1658 created LL. D., and in 1663 was elected F. R. S. He was one of the commissioners for the reparation of St. Paul's; and in 1665 travelled into France, to ex- amine the most beautiful edifices there, when he made many curious observations. At his return to England, he drew a noble plan for rebuilding the city of London after the fire, which he presented to parliament ; and upon the decease of Sir John Denham, in 1668, was made surveyor-general of the king's works ; and from that time had the di- rection of a great number of public edifices, by which he acquired the highest reputation. He built the magnificent theatre at Oxford, St. Paul's cathe- dral, the churches of St. Stephen Walbrook, and St. Mary-le-Bow, the Monument, the modern part of the palace of Hampton Court, Chelsea College, one of the wings of Greenwich Hospital, and many other beautiful edifices. He was president of the Royal Society, one of the commissioners of Chelsea College, and twice M. P., first for Ply- mouth in Devonshire, and then for Melcomb Regis. He died in 1723, and was interred in the vault under St. Paul's. This great man also distin- guished himself by many curious inventions and discoveries in natural philosophy. He contrived an instrument for measuring the quantity of rain that falls on any space of land for a year ; he in- vented many ways of making astronomical obser- vations more accurate and easy ; and was the first author of the anatomical experiment of injecting liquors into the veins of animals, &c. He trans- lated into Latin Mr. Oughtred's Horologiographica Geometrica ; and wrote a Survey of the Cathedral Church of Salisbury, and other pieces. After his death his posthumous works and draughts were published by his son.

WRENCH, v. a. & n.s. Sax. prunjan ; Belg. wringen. To pull or twist by violence ; wrest ; to force; sprain : a violent pull ; twist or sprain.

Wrench his sword from him. Sliakspetirr.

He resolved to make his profit of this business < >l Britain, as a quarrel for war ; and that of Naples as a wrench and mean for peace. Bacon.

Sing the Parthian, when transfixed he lies, Wrenching the Roman javelin from his thighs.

Drydeii.

Some small part of the foot being injured by a wrench, the whole leg thereby loses its strength.

Locke.

Struggling to get loose, I broke the strings, and wrenched out the pegs that fastened my arm to the ground. Sirift.

WREST, v. a. & n.s. } Saxon priaer-tan. To WuF.s'n.r., v.n. > twist by violence ;

WKES'TLEII, TI. s.) extort or distort by

VVRE

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writhing or force : distortion ; violence ; force : to wrestle is to struggle against being twisted from a standing posture ; contend ; taking wtf A : the noun substantive corresponding.

Adown he kest it with so puissant wrest, That back again it did aloft rebound, And gave against his mother earth a groneful sound.

Spenser.

So far to extend their speeches is to wrest them against their meaning. Hooker.

To wring this sentence, to wrest thereby out of men's hands the knowledge of God's doctrine, is without all reason. Ascham.

If ever he goes alone again, I'll never wrestle for prize more. Shakrpeare.

Wrest once the law to your authority ; To do a great right, do a little wrong. Id.

James knew not how to wrestle with desperate con- tingencies, and so abhorred to be entangled in such.

Clarendon.

When the young wrestlers at their sport grew warm, Old Milo wept, to see

his naked arm. Venham.

To what wretched state reserved, Better end here unborn ! Why is life given, To be thus wetted, from us 1 Milton.

So earnest with thy God, can no new care, No sense of danger, interrupt thy prayer ? The sacred wreitler, till a blessing given, Quits not his hold, but halting conquers heaven.

Walter.

To play or wrestle well, it should be used with those that do it better. Temple.

Two wrestler •» help to pull each other down. Dry den.

O prince, I blush to think what I have said ; But fate has wrested the confession from me. Addison.

Another, by a fall in wrestling, started the end of the clavicle from the sternon. Wiseman.

None in the leap spring with so strong a bound, Or firmer in the wrestling press the ground. Pope.

WRESTLING, a kind of combat or engagement between two persons unarmed, body to body, to prove their strength and dexterity, and try which can throw his opponent to the ground. Wrestling is an exercise of very great antiquity and fame. It was in use in the heroic age. It continued a long time in the highest repute, and had con- siderable rewards and honors assigned to it at the Olympic games, Lycurgus ordered the Spartan maids to wrestle in public quite naked, to break off their too much delicacy and niceness, to make them appear more robust, and to familiarise the people, &c., to such nudities.

WRETCH, n.s. "\ Saxon pnecca. A

WRETCH'ED, adj. [miserable mortal; a

WRETCH'EDLY, adv. I worthless creature ;

WRETCH'EDNESS, n.s. [used in pity and con-

WRETCH'LESS, adj. tempt : the adjective,

WRETCH'LESSNESS, n. s.) adverb, and noun sub- stantive following correspond : wretchless was originally written for reckless, i.e. careless;

heed- less : the noun substantive corresponds.

The devil drives them into desperation, or into wretchlesintss of unclean living. Common Prayer.

Base-minded wretches ! are your thoughts so deeply bcmired in the trade of ordinary worldlings, as, for respect of gain some paultry wool may yield you, to let so much time pass without knowing perfectly her estate ‘ Sidney.

An adventure worthy to he remembered for the un- used examples therein, as well of true natuial goodness as of uretclied ungratefulness. Id.

He ‘gan enquire

What nard mishap him brought to such distress, And made that caitifs thrall the thrall of wretchedness.

fyenier

These we should judge to be most miserable, but that a wretcheder sort there are, on whom whereas nature hath bestowed ripe capacity, their evil disposition se- riously goeth about therewith to apprehend God, as being not God. Hooker.

The butcher takes away the calf, And binds the wretch, and beats it when it strives.

Sliatmpeure. Excellent wretch ! Id.

I love not to see wretchedness o’ercharged, And duty in his service perishing. Id.

When soon away the wasp doth go : Poor wretch was never frighted so ; He thought his wings were much too slow, O’erjoyed they so were parted. Di nylon.

Title of honour, worth and virtue’s right, Should not be given to a wretch so vile. Daniel.

For any man to put off his present repentance, on contemplation of a possibility that his latter repentance may serve the turn, is the most wretchless presump- tion, and hath no promise of mercy annexed to it.

Hammond.

From these two wars, so wretchedly entered into, the duke’s ruin took its date. Clarendon.

Affected noise is the most wretched thing That to contempt can empty scribblers bring.

Roscommon.

Why dost thou drive me To range all o'er a waste and barren place, To find a friend ? The wretched have no friends.

Dry den.

She joys to touch the captive in her net, And drags the little wretch in triumph home. Id.

When they are gone, a company of starved hungry wretches shall take their places. L'Estrange.

When such little shuffling arts come once to be ripped up, and laid open, how poorly and wretchedly must that man sneak who finds himself guilty and baffled too ! South.

If persons of so circumspect a piety have been thus overtaken, what security can there be for our n-retchless oscitancy ? Government of the Tongue.

Illustrious wretch ! repine not, nor reply ; View not what heaven ordains with reason's eye ; For bright the object is, the distance is too high. Prior.

WREXHAM, a borough town in Wrexham hundred, Denbighshire, ten miles south of Chester, and 188 north-west of London ; it consists of two townships, Wrexham-Abbots and Wrexham-Regis. It is a very fertile and pleasant situation, adjoining the vale royal of Cheshire. The church is an ele- gant structure, equal in point of beauty to some of our cathedrals ; it was collegiate before the reign of Henry VII., when the present edifice was erected on the site of the old one, which was de- stroyed by fire. Here are two large meeting- houses, in one of which the service is performed in Welsh one part of the day, and in English the other. It has also a neat and convenient town-hall, and a well endowed free-school. Wrexham is a great mart for flannel. In the vicinity are several manufactories of warlike instruments, particularly a large cannon foundry. Near Wrexham are still some remains of the famous dyke thrown up by Offa, king of Mercia, to prevent the incursions of the Welsh. Markets on Thursday and Monday.

WRIG'GLE, v. n. & v. a. > Sax. pnijan ; Belg.

WRIG'GLETAIL, n s. } wrfggelen. To move

to and fro with short motions; quaver awkwardly : twist insinuste by shifts:

a wriggletail is one who wriggles.

If sheep or thy lamb fall a wriggling with tail. Go by-and-by search it, whiles help may prevail.

Tuner.

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WRIGHT, n. s. Sax. pjiihta, pyhta. A work- man ; an artificer ; a maker.

WRIGHT, Joseph, a celebrated English painter, usually styled Wright of Derby, was born in that town, in 1734. In 1751, he was placed under Hudson, the most celebrated portrait-painter of the day, though of very moderate talents. He then visited Italy, where he made great advances in his profession, and, in 1755, returned to England. Having resided first at Bath, but af- terwards at Derby, employed in portrait painting, at a mature age, he again visited Italy, and, on his return, in 1782, was elected an associate ot the royal academy. His later pictures were chiefly landscapes, which are much admired for elegance of outline and judicious management of light and shade. A large landscape, a View of the Head of Ulleswater, stands at the head of his productions of this class ; while, in the historical line, the Dead Soldier is sufficient to stamp him a fine painter. He fell a victim to his unwearied attention to his profession, dying of a decline, io 1797.

WRIGHT (Abraham), a learned divine, born in 1611 ; who was public orator at Oxford. He pub- lished Deliciae Deliciarum, 1637; and a Comncen- tary on the Psalms. He died in 1690.

WRIGHT (Edward), a celebrated English mathe- matician, who was educated at Cambridge, and ac- companied the earl of Cumberland in his expedition to the Azores in 1589. In 1599 he published an excellent book, entitled The Errors of Navigation Corrected; in which he lays down the true method of making a sea chart, which now goes by the name of Mercator. He also constructed a table of meridional parts, and tables of the sun's declina- tion. He also published, 3. A Treatise on the Sphere ; 4. Another on Dialling ; and, 5- A work on Navigation, called the Haven-Finding Art. He ilso suggested the first idea of the new system of weights and measures, since adopted by the French. See MEASURES. He died in 1620.

WRIGHT (Edward), an English traveller, who accompanied the earl of Macclesfield in 1720, 1721, and 1722. His Observations were published in 1730, in 2 vols. 8vo.

WRIGHT (John), a brave officer, born in Edin- ourgh castle, who signalised himself highly at the defence of St. Jean de Acre, or Ptolemais, in Syria, under Sir Sidney Smith. The French under Buonaparte had a mine ready to spring, when Wright counter-wrought it, and, at the most imminent risk of his own life, blew up and destroyed their works. He was buried under the rubbish for about two hours, but was recovered. He was afterwards taken prisoner and carried to Paris, where he died, or, as is reported, was killed by Na- poleon's order, who could never forgive the disap- pointment he had occasioned him.*

W RING, v. a. & v. n.) Preter. and part. pass.

\ RIXG'ER, n. s. J wringed and wrung. Sax.

pninjan. To twist ; turn "' . with violence ; force out ; squeeze ; press ; writhe ; harass ; tor ture : to writhe with anguish : a wringer is one who wrings : particularly who wrings water from clothes.

The priest shall wring off hU head, and burn it on the altar. I^citicus i. 15.

He thrust the fleece together, and u- ringed the dew out of it, a lx)wl full of water. Juiii/es vi. 38.

To wring this sentence, to wrest thereliy out of men's

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hands the knowledge of God's doctrine, is without al! reason. Ascham.

Lord, how dare these men thus wring the scriptures ?

'Tis all men's office to speak patience To those that wring under the load of sorrow. Shaksp.

One Mrs. Quickly is in the manner of his nurse, his laundress, his washer, and his wringer. Id.

The silly owner of the goods Weeps over them, and wrings his hapless hands. Id.

He dives into the king's soul, and there scatters Doubts, dangers, wringing of the conscience, Fear and despair, and all these for his marriage. Id.

The king began to find where his shoe did wring him, and that it was his depressing the house of York that did tankle and fester the affections of his people.

Baron.

Apply mild detergents on pledgets of lint over i», with a compress wrung out. Wiseman.

If he had not been too much grieved, and wrung by an uneasy and streight fortune, he would have been an excellent man of business. Clarendon.

Thirty spies,

Threatening cruel death, constrained the bride To wring from me, and tell to them, my secret.

Wit (in.

Didst thou taste but half the griefs That wring my soul, thou couldst not talk thus coldly.

Additoii.

WRIN'KLE, ?j. s. & v. a. Sax. pruncle : Belg wrinkel ; Danish rinkle. Corrugation or furrov of the skin or the face ; rumple of cloth ; any corrugation or roughness : to corrugate or contract into furrows.

Give me that glass, and therein will I read : No deeper u-t inkles yet ! Hath sorrow struck So many blows upon this face of mine, And made no deeper wounds? Stuikspeart.

Scorn makes us wrinkle up the nose, and stretch the nostrils also, at the same time drawing up the upper lip. Bacon.

She hath continued a virgin without any visible token, or least wrinkle, of old age. Hovel.

A keen north wind, blowing dry, Wrinkled the face of deluge, as decayed Milton.

To see a beggar's brat in riches flow, Adds not a wrinkle to my even brow. Dryden.

Here steams ascend, That in mixed fumes the wrinkled nose offend. Gay.

Here stood Ill-nature, like an ancient maid, Her wrinkled form in black and white arrayed. Pope.

Xo bloom of youth can ever blind The cracks and wrinkle of your mind. Swift.*

WRIST, n.s. Sax. pynj-r. The joint by which the hand is joined to the arm.

He took me by the wrist, and held me hard.

Shakspeart

The brawn of the arm must appear full, shadoweu on one side ; then shew the u-rist-bone thereof.

Peacham.

WRIST, in anatomy. See AN ATOM v, Index. WRIT, in law, signifies, in general, the king's precept in writing under seal, issuing out of some court, directed to the sheriff or other officer, and commanding something to be done in relation to a suit or action, or giving commission to have the same done. And, according to Fitzherbert, a writ is said to be a formal letter of the king in parch- ment, sealed with his seal, and directed to some judge, officer, or minister, &c., at the suit of a sub- ject, for the cause briefly expressed, which is to be determined in the proper court according to law.

WRITS, in civil actions, are either original or judicial ; original are such as arc issued out of the court of chancery for the summoning of a de-

fendant to appear, and are granted oefore the suit is commenced, in order to begin the same ; and judicial writs issue out of the court where the ori- ginal is returned after the suit is begun. See PRO- CESS. The original writ is the foundation of the suit. See SUIT. When a person hath received an injury, he is to make application or suit to the crown, for that particular specific remedy which he is determined to pursue. As for money due on bond, an action of debt; for goods detained without force, an action of detinue or trover ; or, if taken with force, an action of trespass vi et armis ; or to try the title of lands, a writ of entry or action of trespass in ejectment ; or for any conse- quential injury received, a special action on the case. To this end he is to sue out, or purchase by paying the stated fees, an original or original writ, from the court of chancery, which is the officina justitia?, the shop or mint of justice, wherein all the king's writs are framed. It is a mandatory letter from the king in parchment, sealed with his great seal, and directed to the sheriff of the county wherein the injury is committed, or supposed so to be, requiring him to command the wrong-doer, or party accused, either to do justice to the com- plainant, or else to appear in court,

and answer the accusation against him. Whatever the sheriff does in pursuance of this writ, he must return or certify to the court of common pleas, together with the writ itself; which is the foundation of the jurisdiction of that court, being the king's warrant for the Budges to proceed to the determination of the cause. For it was a maxim introduced by the Normans that there should be no proceedings in common pleas before the king's justices without his original writ ; because they held it unfit that those justices, being only the substitutes of the crown, should take cognizance of any thing but what was thus expressly referred to their judgment. However, in small actions below the value of 40s., which are brought in the court-baron or county-court, no royal writ is necessary ; but the foundation of such suits continues to be (as in the times of the Saxons), not by original writ, but by plaint ; that is, by a private memorial tendered in open court to the judge, wherein the party injured sets forth his cause of action ; and the judge is bound of common right to administer justice therein, without any special mandate from the king. Now indeed even the royal writs are held to be demaudable of common right, on paying the usual fees ; for any delay in the granting them, or setting an unusual or exorbitant price upon them, would be a breach of magna charta; c. 29, nulli vendemus, nulli negabimus, aut differemus justitiam vel rectum. Original writs are either optional or peremptory; or, in the language of our law, they are either a praecipe, or a si te fecerit securum. The prsecipe is in the alternative, commanding the defendant to do the thing required, or show the reason wherefore he hath not done it. The use of this writ is where something certain is demanded by the plaintiff, which is in the power of the defendant himself to perform ; as, to restore the possession of land, to pay a certain liquidated debt, to perform a specific covenant, to render an account, and the like ; in all which cases the writ is drawn up in the form of a praicipe or command, to do thus, or show cause to the contrary : giving the defendant his choice to redress the injury or stand the suit. The other species of original writs is called a si te fecerit se-

curum, from the words of the writ, which directs the sheriff to cause the defendant to appear in court, without any option given him, provided the plaintiff gives the sheriff security effectually to prosecute his claim. The writ is in use where nothing is specifically demanded, but only a satis- faction in general ; to obtain which, and minister complete redress, the intervention of some judica- ture is necessary. Such are writs of trespass, or in the case, wherein no debt or other specific thing is sued for in certain, but only damages to be assessed by a jury. For this end the defendant is immediately called upon to appear in court, provided the plaintiff gives good security of prosecuting his claim. Both species of writs are tested, or witnessed, in the king's own name ; ' witness ourself at Westminster,' or wherever the chancery may be held. The security here spoken of, to be

given by the plaintiff for prosecuting his claim, is common to both writs, though it gives denomination only to the latter. The whole of it is at present become a mere matter of form ; and John Doe and Richard Roe are always returned as the standing pledges for this purpose. The ancient use of them was to answer for the plaintiff, who in case he brought an action without cause, or failed in the prosecution of it when brought, was liable to an amercement from the crown for raising a false accusation ; and so the form of the judgment still is. In like manner, as by the Gothic constitutions no person was permitted to lay a complaint against another nisi suhscriptura aut specificatione trium testium, quod actionem vellet persequi : and as, by the laws of Sancho I. king of Portugal, damages were given against a plaintiff who prosecuted a groundless action. The day on which the defendant is ordered to appear in court, and on which the sheriff is to bring in the writ, and report how far he has obeyed it, is called the return of the writ ; it being then returned by him to the king's justices at West- minster. And it is always made returnable at the distance of at least fifteen days from the date or test, that the defendant may have time to come up to Westminster, even from the most remote parts of the kingdom ; and upon some day in one of the four terms, in which the court sits for the despatch of business.

WRITE, v.a.&v.n.} Pret. writ or wrote;

WRIT, n.s. >part. pass, written, writ,

WRIT'ER. > or wrote. Sax. pnitan,

apfiiran; Isl. and Swed. rita; Goth, rita, vrita.

To express by means of letters : hence engrave ;

impress; produce as an author: to perform the

act of writing ; become an author; tell in letters ;

send letters; compose: writ is, any thing written ;

a process of law ; legal instrument : a writer, he

who w-ites.

David wrole a letter. 2 Sam. xi.

He wrote for all the Jews concerning tliur freedom.

Divine Eliza, sacred empress, Live she for ever, and her royal places Be

filled with praises of divinest wits, That her eternize with their heavenly writ. Spei.w. The church, as a witness, preacheth his inert re vealed truth, by reading publickly the sacred scripture ; that a second kind of preaching is the reading of holy writ. Hooker.*

Bagdat rises out of the luins of the old city of Ba- bylon, so much spoken of in holy writ. Knolles.

WRI i)

Hearts, tongues, figures, scribes, bards, poets, can- not

Think, speak, cast, write, sing, number His love to Antony. Sliaksp. Antony and Cleopatra.

The king is fled to London To call a present court of parliament : Let us pursue him, ere the writs go forth. Id. Hen. VI.

In at his windows throw Writings, all tending to the great opinion That Rome holds of his name. Id. Julius Cirsar.

I have seen her rise from her bed, take forth paper, fold it, and write upon 't. Id. Macbeth.

All three were ruined by justice and sentence, as delinquents ; and all three famous writers. Bacon.

Let it not your wonder move, Less your laughter, that I love ; Though I now write fifty years, I have had, and have, my peers. Ben Joiuon.

Their doctrine and their story written left, They die. Milton.

Chaste moral writing we may learn from hence, Neglect of which no wit can recompence ; The fountain which from Helicon proceeds, That sacred stream, should never water weeds.

Waller.

Sacred writ our reason does exceed. Id.

Written language is a description of the audible signs by signs visible. Holder.

The time, the place, the manner how to meet, Were all in punctual order plainly writ. Dryden.

Cain was so fully convinced that every one had a right to destroy such a

criminal, that he cries out, every one that findeth me shall slay me ; so plain was it nn'f in the hearts of all mankind. Locke.

His story, filled with so many surprising incidents, bears so close an analogy with what is delivered in holy writ, that it is capable of pleasing the most deli- cate reader, without giving offence to the most scru- pulous. Addison's Spectator.

There is not a more melancholy object in the learned world, than a man who has written himself down.

Addinm.

Peaceable times are the best to live in, though not so proper to furnish materials for a writer. Id.

Hold up your head, hold up your hand : Would it were not my lot to shew ye

This cruel writ, wherein you stand Indicted by the name of Chloe. Prior.

I chose to write the thing I durst not speak To her I loved. Id.

For every writ of entry, whereupon a common reco- very is to be suffered, the queen's fine is to be rated upon the tent original, if the lands comprised therein be held. Aylife.

They can write up to the dignity and character of the authors. Felton on the Classicks.

Increase of years makes men more talkative, but less ivritative ; to that degree, that I now write no letters but of plain how d'ye's. Pope to Swift.

'.Vould a wt-iter know how to behave himself with relation to posterity, let him consider in old books what he finds that he is glad to know, and what omis- sions he most laments. Swift.

WRITER, among the Scottish lawyers, is a title very generally given to all men of business and agents before the inferior courts, and all over the country, as well as to solicitors at law, and all, in general, who are called attorneys in England.

WRITERS TO THE SIGNET, or CLERKS TO THE SIGNET, a very numerous and respectable society of gentlemen of the law in Scotland, who are chiefly employed in all civil and criminal trials before the courts of session and justiciary. See LAW. The/ arj generally gentlemen of landed

pro- oerty.

S3 WRI

WRITHE, v. a.&v.n. $ Saxon pprSan. To

WRI'THLE, v. a. I distort ; deform with

distortion ; twist with violence; wrest: be twisted or convolved with agony : writhle is an obsolete verb active of the same signification.

Her writhled skin, as rough as maple rind, So scabby was, that 'twould have loathed all woman- kind. Spenser.

The reason which he yieldeth, sheweth the least part of his meaning to be that whereunto his words are writhed. Hooker.

It cannot be this weak and writhed shrimp Should strike such terror in his enemies.

Shakspeare. Henry VI. Then Satan first knew pain, And writhed him to and fro convolved. Milton.

Her mouth she writhed, her forehead taught to frown, Her eyes to sparkle fires to love unknown. Dryden.

Let each be broken on the rack ; Then, with what life remains, impaled, and left To writhe at leisure round the bloody stake. Additon.

WRITING, the art or act of signifying and con- veying our ideas to others, by letters or characters visible to the eye. See ENGLISH LANGUAGE and LANGUAGE.

The most ancient remains of writing, which have been transmitted to us, are upon hard substances, such as stones and metals, which were used by the ancients for edicts and matters of public notoriety ; the decalogue was written on two tables of stone ; but this practice was not peculiar to the Jews, for it was used by most of the eastern nations, as well as by the Greeks and Romans. The laws penal, civil, and ceremonial, among the Greeks, were en- graven on tables of brass which were called cyrbes. Wood was also used for writing on ip different countries. In the Sloanian library (No. 4852) are six specimens of Kusic writing, on boards about two feet in length, amd six inches in depth. The Chinese, before the invention of paper, wrote or engraved with an iron tool upon thin boards or on bamboo. Pliny says, that table books of wood were in use before the time of Homer. These table books were called by the Romans pugillares. The wood was cut into

thin slices, and finely planed and polished. The writing was at first upon the bare wood, with an iron instrument, called a style. In later times these tables were commonly coated with wax, and written upon with that instrument. The matter written upon the tables which were thus waxed over was easily effaced, and by smooth- ing the wax, new matter might be substituted in the place of what had been written before. The Greeks and Romans continued the use of waxed table books long after the use of papyrus, leaves, and skins, became common, because they were so convenient for correcting extemporary compositions. Table books of ivory are still used for memorandums, but they are commonly written upon with black lead pencils. The practice ot writing on table books covered with wax was no entirely laid aside till the commencement of the fourteenth century. The bark of trees was also used for writing by the ancients, and is so still in several parts of Asia. The same thing may he said of the leaves of trees. The use of PARCH- MENT, VELLUM, PAPYRUS, and PAPER, for writing is well known. See these articles. It is obvious that when men wrote, or rather engraved on hard substances, instruments of metal were necessary, such as the chisel and the stylus ; but the latter was chiefly used for writing upon boards, waxeil*

tablets, or on bark. When the ancients wrote on softer materials than wood or metal, other ins! ru- ments were used for writing with, of which reeds and canes seem to have been the first. Reeds and canes are still used as instruments for writing with by the Tartars, the Indians, the Persians, the Turks, and the Greeks. Pencils made of hair are used by the Chinese for their writing. Hair- pencils have likewise been used for writing in Europe. Large capital letters were made with them from the time of the Roman emperors till the sixteenth century. After the invention of printing they were drawn by the illuminators. Quills of geese, swans, peacocks, crows, and other birds, have been used in these western parts for writing with, but how long is not easy to ascertain. St. Isidore of Seville, who lived about the middle of the seventh century, describes a pen made of a quill as used in his time.

WRONG, n. s., adj., adv., &

WRONG'DOER, n. s. [v. a.

WRONG'ER,

Saxon pjianje ; Swedish wrong; Goth, raung. An injury ; designed >or known detri- I ment; not right; not justice; crime; error: the deriva- J lives follow all

WRONG'FUL, adj.

WRONG'FULLY, adv.

WRONG'HEAD, adj.

WRONG-HEADED,

WROXG'LESSLY, adv.

WRONG' LY. these meanings.

If he go wrong, she will give him over to his own ruin. Ecclet.

If it be right to comply with the wrong, then it is wrong to comply with the right. Lesley.

She resolved to spend all her years, which her youth promised should be many, in bewailing the wrong, and yet praying for the wrongdoer. Sidney.

Dorus, said Pamela, you blame your fortune very wrongfully, since the fault is not in fortune, but in you, that cannot frame yourself to your fortune ; and as wrongfully do require Mopsa to so great a dispa- ragement as to her father's servant. Id.

Dearly esteemed of her for his exceeding good parts, being honourably courteous, and wronglessly valiant ; considerately pleasant in conversation ; and an excel- lent courtier, without unfaithfulness. Id.

For fear the stones her tender foot should wrong, Be strewed with fragrant flowers all along. Spenser.

So worthy a part of divine service we should greatly wrong, if we did not esteem preaching as the blessed ordinance of God. Hooker.

This poor fellow He had thought to murder wrongfully. Shakspeare.

What thou wouldst highly,

That wouldst thou holily ; wouldst not play false. And yet wouldst wrongly win. Id. Macbeth.

Judge me, you gods \ wrong I mine enemy ? Shalu. I am so far from

granting thy request, That I despise thee for thy wrongful suit. Id.

Many times a prince is driven to spend far more of his treasure in punishing by war the wronger of his people, than the loss of his people did amount unto.*

Raleigh.

They ever do pretend To have received a wrong, wno wrong intend. Daniel.

He that hath wrongid so in daily trade, that he knows not in what measure he hath done it, must re- deem his fault by alms, according to the value of his wrongful dealing. Taylor.

One spake much of right and wrong. Milton.

Those whom forms of laws

*Condemned to die, when traitors judged their cau-c, Nor want they lots, nor judges to review *\u wrongful sentence, and award a new. Dryt'.en*

I cry thee mercy, for suspecting a friar of the leas good nature : what, would you accuse him vnmgfullyl

Dryden.

Cowley preferred a garden and a friend to those whom, in our own wrong, we call the great. Id.

We never think of the main business of life till a vain repentance minds us of it at the wrong end.

L'Eitrange.

Madmen, having joined together some ideas very uTiwg/i/, err, as men do that argue right from icnmˆ principles. Locke.

He who suffers wrongfully in a man's opinion, re- solves to give him reason for his suspicion. Spectator.

Once more farewel !

And know thou wrong'st me if thou tlnnk'st Ever was love or ever grief like mine. Addiicn.

Proceed : quoth Dick, Sir, I aver You have already gone too far ; When people once are in the wrong, Each line they add is much too long ; Who

fastest walks, but walks astray, Is only farthest from his way. Prior.

If any seat be taken away by a stranger, the church- warden may have action against the wrongdoer.

Ayliffe.

Much do I suffer, much, to keep in peace This jealous, waspish wronghead rhyming race. Pope.

Ten censure wrong, for one that writes amiss. lit.

In the judgment of right and wrong, every man has u self. Watli.

Singularity shews something wrong in the mind.

Clarissa.

Who want, while through black life they dream

along, Sense to be right, and passion to be wrong. Young.

Their hearts are constantly employed, perverted, and kept in a wrong state, by the indiscreet use of such things as are lawful to be used- Law.

WROTH, adj. Sax. pria ; Danish, vrod. An- gry. Obsolete.*

The Lord said unto Cain, why art thou wroth ?

Generis.

WROUGHT. Sax. pnoˆ. The pret. and part, pass, of work. Effected ; influenced ; performed ; labored ; agitated ; gained.

Moses and Eleazer took the gold, even all wrought jewels. \umbert.

Take an heifer which hath not been wrought with, and which hath not drawn in the yoke. Deuteronomy.

She hath wrought a good work upon me. Matthew.

Had I thought the sight of my poor image Would thus have wrought you, for the stone is mine, I'd not have shewed it. Shakspeare

My dull brain was wrought With things forgot. Id.

It had been no less a breach of peace io have wrought any mine of his, than it is now a breach of peace to take a town of his in Guian, and burn

it. Raleigh.

The spirit is urmight, To dare things high, set up an end my thought.

Chapman. Such another field

They dreaded worse than hell : so much the fear Of thunder, and the sword of Michael, Wrought still within them. Milton.

A ship by skilful steersman wrought. Id.

The Jews wanted not power and ability to have con- vinced the world of the falsehood of these miracles, had they never been u-rmi«Af. Stephens.

Do not I know him, could his brutal mind He wrought upon ? could he be just or kind ? Drytl.

His too eager love

Has made him busy to his own destruction, His threats have un"iyltt this change of mind in I'yif hus. Philip

Th s Artemisa, by her charms, And 'ill her sex's cunning, wrought the king. Rou.:,

WUR 685

The two friends had wrought themselves to such an habitual tenderness for the children under their direc- tion, that each of them had the real passion of a father.

Addisciii.

Advantage was taken of the sanguine temper which so many successors had wrought the nation up to.

Swift.

Whatever littleness and vanity is to be observed in the minds of women, it is, like the cruelty of butchers, a temper that is wrought into them by that life which they are taught and accustomed to lead. Law.

WRY, adj., v. n., & v. a. Swedish wra, from writhe. Crooked ; disturbed ; deviating from the right direction : to be contorted or writhed : to dis- tort.

These wry too much on the right hand, ascribing to the holy scripture such kind of perfection as it cannot have. Sandys.

To what pass are our minds brought, that from the right line of virtue are urryed to these crooked shifts ?

Sidney.

He mangles and puts a wry sense upon protestant writers. Atterbury.

It is but a kick with thy heels, and a wry mouth, and Sir Roger will De with thee. Arbuthnot.

WRYNECK, in ornithology. See JYNX.

WULFENIA, in botany, a genus of plants in the class diandria, and order of monogynia i ney have hermaphrodite flowers furnished with two stamina and one style, and regular corollae.

WURMBEA, a genus of plants in the class hexandria, and order of trigynia. They bear her- maphrodite flowers furnished with six stamina of equal length, and three styles.

WURMSER (Dagobert Sigismund), count, field-marshal in the Austrian service, was born in Alsace in 1717, and served first in the French army, next in that of the emperor, where he rose rapidly. In 1793 he defeated the French republi- cans, drove them into Alsace, and took Haguenau, and other towns ; but, fresh troops comin? ..gainst him, he was defeated at Teischweiler. j.n 1794 he took Manheim. In 1796 he defeated the French in Italy twice, but was forced to retreat to Man- heim, where he capitulated, November 2d, 1797. He died in December 1797, aged eighty.

WURST. See WERST.

WURZBURG, a city of Franconia, the capital formerly of a bishopric and grand duchy, now of the Bavarian circle of the Lower Maine, situated on the Maine. Nothing can be more pleasant than the environs. A tract of several thousand acres around the town is covered with vineyards, and the Maine is here a large and noble stream, dividing the town into two parts, of which the larger is on the right bank; they are joined by an elegant bridge. On the left bank is a hill, with a castle, formerly the episcopal residence, now a citadel. The town itself is surrounded with a mound and moat. There are public baths on the river, and an abundant supply of spring water. The town, however, is indifferently built. The public walks are on the open space, formerly the mound or rampart, or along a wide street leading to the bridge on the Maine. The palace belonged formerly to the bishop, afterwards to the archduke. It is of an oblong form, on the plan of Versailles, and of great extent. Next ranks the hospital, a large and regular structure. The cathedral is also large, but in an indifferent style of

architecture. The churches are numerous, but none remarkable. The monasteries are reduced to three. The university of Wurzburg dates from

1403, and is one of the least defective of the Catho- lic seminaries in Germany. The population is nearly 20,000. 130 miles N. N. W. of Munich and seventy-five N. N. E. of Stutgard.

WYATT (Sir Thomas), an accomplished ger.tlw- man, of an ancient family in Kent, educated a. St. John's College, Cambridge, and at Oxford Henry VIII. knighted him, and sent him on various em- bassies. He turned the Psalms into verse, and wrote several elegant sonnets, printed with those ot E. Surry. He died in 1531.

WYCHERLEY (William), an eminent English comic poet, was born about 1640 A little before the restoration of king Charles II. he became a gentleman commoner of Queen's College, Oxford, where he was reconciled by Dr. Barlow to the Protestant religion, which he had a little before abandoned in his travels. He afterwards entered himself in the Middle Temple, but soon quitted the study of the law for pursuits more agree- able to his own genius, as well as to the taste of the age. Upon writing his first play, entitled Love in a Wood, or St. James's Park, which was acted in 1672, he became acquainted with several of the celebrated wits both of the court and town, and likewise with the duchess of Cleveland. Some time after appeared his comedies, called The Gen- tleman Dancing Master, The Plain Dealer, and The Country Wife ; all which were acted with ap- plause. George duke of Buckingham had a very high esteem for him, and bestowed on him several advantageous posts. King Charles also showed him signal marks of favor; and once gave him a proof of his esteem, which, perhaps, never any sovereign prince before had given to a private gen- tleman. Mr. Wycherley, being ill of a fever at his lodgings in Bow Street, the king did him the honor of a visit. Finding him extremely weakened, he commanded him to take a journey to the south of France, and assured him at the same time that hn would order him £500 to defray the charges of the journey. Mr. Wycherley accordingly went into France, and, having spent the winter there, returned to England, entirely restored to his former vigor. The king, shortly after his arrival, told him that he had a son, who, he was resolved, should be educated like the son of a king, and that he could not choose a more proper man for his governor than Mr. Wycherley ; for which £l 500 per annum should be settled upon him. . Immediately after this offer he went to Tunbridge, where he suddenly became acquainted with and married the countess of Drogheda, without acquainting the king. By this step, which was looked upon as a contempt of his majesty's orders, he forfeited the royal favor. The countess of Drogheda settled her whole

fortune upon him ; but, his title being disputed after her death, he was so reduced by the expenses of the law, and other incumbrances, as to be unable to satisfy the impatience of his creditors, who threw him into prison; and the bookseller who printed his Plain Dealer, by which he got almost as much money as the other gained reputation, was so un- grateful as to refuse to lend him £20 in his extreme necessity. In that confinement he languished seven years ; but at length king James, going to see the above play, was so charmed with it, that he gave immediate orders for the payment of his debts, and even granted him a pension of £200 per annum. But the prince's bountiful intentions were in a great measure defeated merely through Mr

•Vycherley's modesty ; he being ashamed tc tell the earl of Mulgrave, whom the king had sent to demand it, a true state of his debts. He labored under the weight of these difficulties till his father died, who left him £600 a year. But this estate was under limitations, he being only a tenant for life, and not being allowed to raise any money foi the payment of his debts. However he took a me- thod of doing it. which few suspected to be his choice ; and this was, making a jointure. He had often declared that he was resolved to die married, though he could not bear the thoughts of living in that state again. Accordingly, just at the eve of his death, he married a young gentlewoman with £1500 fortune, part of which he applied to the uses lie wanted it for. Eleven days after the celebration of these nuptials, in December 1715, he died, and was interred in the vault of Covent Garden Church. Besides his plays above mentioned he published a volume of poems in folio. In 1728 his posthu- mous works in prose and verse were published by Mr. Theobald.

WYCOMBE-CHIPPING, or High, a borough, market town, and parish, in Desborough hundred, Bucks, twenty-nine miles west by north of London. The town consists principally of one extensive street, with several small ones branching therefrom, on the south side of which runs a small river, which falls into the Thames, below Marlow. There are several paper and corn mills in the neighbour- hood, which constitute the chief traffic of the place. Here is a town-hall, a free grammar-school, and a royal military college. The market on Friday is well supplied.

WYKEMAN (William of). See WILLIAM.

WYMONDHAM, a market town and parish in Forehoe hundred, nine miles south-west of Nor- wich, and 100 north-east by north of London ; containing 895 houses and 4708 inhabitants, being in six divisions, called Downham, Market Street, Silfield, Suton, Town-green, and Wattlefield. Here was a priory of Benedictine monks, which in 1448 was erected into an abbey, the east part of the church of which was made parochial. Wymond-

ham has a free-school and a charity-school. Tins town suffered considerably by fire in 1615, when 300 houses were consumed ; and in 1631 the plague carried off a great number of persons. Many of the inhabitants are employed in weaving, and in the manufacture of small wooden ware. Market on Friday.

WYNDHAM (Sir William), descended of an ancient family, was born about 1687, and suoceed- ed young to the title and estate of his father. On his return from his travels he was chosen member for Somersetshire, in which station he served in the three last parliaments of queen Anne, and as long as he lived : after the change of the ministry in 1710 he was appointed secretary at war; and in 1713 was raised to be chancellor of the exche- quer. Upon the breach between the earl of Oxford and lord Bolingbroke, he adhered to the latter. He was removed from his employment on the acces- sion of George I., and falling under suspicion on the breaking out of the rebellion, in 1715, was ap- prehended. He made his escape ; a reward was published for apprehending him; he surrendered, was committed to the tower, but never brought to trial. After he regained his liberty he continued in oppposition to the several administrations unde: which he lived, and died in 1740.

WYOMING, formerly a general name of a tract of country in Pennsylvania, on the Susquehauna, with a fort, two miles above Wilkisbarre. In the .year 1778 this fort was attacked by a party of Bri- tish and Indians. The garrison were soon over- powered, and fell a prey to Indian barbarity ; after a bloody military execution of a great part, the rest were shut up in the barracks, to which they set tire, and consumed the whole

WYTHBURN. See LEATHES.

WYTMAN (Matthew), a Dutch painter, born it Gorcum, 1650. His landscapes and conversa tions were done elegantly. He died in 1689.

WYVERN, in heraldry, u chimerical animal, variously represented, with or without feet, legs, o wings. See HERALDRY

X.

X is a letter which, though found in Saxon words, begins no word in the English language.

X is used, 1. as a letter ; 2. as a numeral ; and 3. as an abbreviation. I. As a letter, X is the twenty-second letter of our alphabet, and a double consonant. It was not used by the Hebrews or ancient Greeks ; for, as it is a compound letter, the ancients, who used great simplicity in their writings, expressed it by its component letters c, or /c. Nei- ther have the Italians this letter, but express it by tt. X begins no word in our language but such as are of Greek original : and is in few others but what are of Latin derivation ; as perplex, reflexion, defluxion, &c. We often express this sound by •ingle letters, as c/cs, in backs, necks ; by ks, in books, breaks ; by cc, in access, accident ; by ct, in action, unction, &c. The English and French pronounce it like ex or ks ; the Spaniards like c be- fore a, viz. Alexandra, as if it were Alecandra. II.

As a numeral it expressed ten, whence, in old Roman MSS., it is used for denarius ; and as such seems to be made of two V's placed one over the other. When a dash is added over it, thus X, it signifies 10,000. III. As an abbreviation X was long used by the learned throughout Europe, as an abbreviation for Christ, because the Greek capital X, the first letter of his name in Greek, is the same in form with our X. And, in analogy with this. Xtian was used as an abbreviation for Christian ; and in both these abbreviations the cross form of this letter suited the Roman Catholic taste.

XACCA (Erasmus), a learned Sicilian of the seventeenth century. He wrote a History of the Eruption of Mount Etna in 1669, in Italian; a Latin Poem on Fevers ; and he translated Tasso's Jerusalem into Latin.

XAINTES SANTOS, or All Saint's Islands, having bten discovered on that holiday, by the

Spaniards ; three small islands of the West Indie«, situated to the south-east of Guadaloupe. The most westerly of them is Terra de Bas, or the Low Island, and the most easterly Terra de Haul, or the High Island. They are about six miles distant from Guadaloupe, and fifteen from Mariegalante. Long. 61° 32′ W., lat. 15° 56 N

XALAPA, a considerable town of Mexico, in the intendancy of Vera Cruz, formerly famous for the fair held on the arrival of the stated fleets from Europe ; and, ever since the commerce was declared free, a considerable mart for European commo- dities. From the convent of St. Francis there is a magnificent view of the colossal summit of the Coffre and the Pic d'Orizaba, of the declivity of the Cordillera, of the river of L' Antigua, and even of the ocean. Whenever the north wind blows at Vera Cruz, the inhabitants of Xalapa are enveloped in a thick fog. The thermometer then descends to 03° and 66° of Fahrenheit, and during this period the sun and stars are frequently invisible for two or three weeks together. The land rises towards the interior by a gentle ascent, until jt reaches an elevation of about 8000 feet, when it spreads out into extensive plains. Xalapa is situ- ated about half way up this ascent, being 4264 feet above the level of the sea. It is estimated to contain 13,000 inhabitants, and is about fifty miles north-west of Vera Cruz, and eighty east of Mexico.

XANTHICA, a festival observed by the Mace- donians in the month Xanthicus, when a lustration was made of the army, by cutting a bitch in two parts, laying them separate, and marching the sol- diers between them, after which they concluded with a mock fight.

XANTHIPPUS, a brave Spartan general, who was sent with a body of Greeks to assist the Car- thaginians in the first Punic war ; which he did so effectually, by introducing proper discipline into their army, that they appointed him commander in chief, and he completely defeated the whole Ro- man array, taking the celebrated general Regulus himself prisoner ; while the Carthaginians lost only 800 men. See CARTHAGE. It is said that they ungratefully drowned him by sending him home in a leaky ship.

XANTHIUM, in botany, a genus of plants of the class monacia or pentandria, and arranged in the natural classification under the forty-ninth order, composite. The male flowers are composite, common calyx imbricated; corolla? monopetalous, tubular, quinquefid. Female : calyx involucrum of two leaves, containing two flowers ; no corolla ; drupa dry, prickly ; nucleus bilocular. There are five species, only one of which is a native of Bri- tain, viz. X. strumaria, lesser burdock. The stem of this plant is a foot and a half high, thick, often spotted; leaves heart-shaped, lobed, on long foot- stalks.

XANTHOXYLUM. See ZAHTHOXYLCM.

XANTHUS,a historian of Sardis, under Darius.

XAXTHUS, a Greek historian of Lydia.

XAXTHUS, a philosopher of Samos, called by others ladmon, who purchased ˆsop, the fabulist for his wit, and afterwards gave him his liberty. See .Esop.

XANTHUS, in fabulous hi ,tory, one of the horses of Achilles, who, when chid with severity, spoke to his master, and told him he would soon be killed Horn. II. 19.

XANIHUS, king of Boeotia. See ATTICA.

XANTHUS, in geography, a river of Troas. Sec

SCAMANDF.R.

XAXTHUS, a river of Lycia, sacred to Apollo, running into the sea near Patara. Horn. II. 6, 172.

XANTHUS, a town of Lycia, on the above river, fifteen miles from the toast. It was besieged by Brutus, who wished to spare the Xanthians ; but they were so zealous for their independence that they set fire to their city ; and Brutus's troops, by their utmost exertions, could only get 150 of them saved. Appian 4. Plut.

XANTICLES, one of the leaders of the 10,090 Greeks in their famous retreat out of Persia, after the battle of Cunaxa.

XANTIPPE, the wife of Socrates, proverbially famous as a scold. But, while this foible is often repeated, her virtues are forgot. No wife ever showed more affectionate grief than she did at her husband's death. See SOCRATES.

XANTIPPE, the celebrated Roman daughter, who preserved her father's life by suckling him in iail. See FILIAL PIETY.

XANTIPPE, the daughter of Dorus, wife of Pleu- ron, and mother of Agenor, &c.

XANTIPPUS, or XANTHIPPUS, a celebrated Athenian general and admiral, who defeated the Persian fleet at Mycale, in conjunction with Leo- tychides, king of Sparta; and was appointed along with Aristides to judge of Themistocles' secret pro- posal. See ATTICA, and MYCALE. He married Agariste, the niece of Clisthenes, who expelled the Pisistratidae ; by whom he had the celebrated Pericles. He also conquered the Thracians. A statue was erected to his honor in the citadel of Athens.

XAVIER (St. Francis), the apostle of the Indies, was born atXavier in

1506, and educated at Paris, where he formed an intimacy with Ignatius Loyola, the founder of the Jesuits. Seized with a similar zeal, he bound himself with some others to attempt to convert the heathens. In 1541 he embarked at Lisbon for Goa, and labored with great zeal in Japan and various parts of India. He was even preparing for a voyage to China, when he died at Goa in 1552. Pope Gregory XV. enrolled him among the saints in 1622. His works are, 1. Five Books of Epistles, Paris, 8vo., 1631. 2. A Cate chism. 3. Opuscula.

XAUXA, or Jauxa, a province of Peru, bound- ed north and north-east by the province of Tarma, east by the mountain of the Indians, south-east by the province of Huanta, south by that of An- garaes, south-west by that of Yauyos, and wes: by that of Guarochiri. It is twelve leagues long from north to south, and fifteen broad from east to west. This province is a ravine or valley of de- lightful temperature, although on the heights of either side of it a considerable degree of cold is felt.

XAUXA, the capital of a district of the same name, situated near the river Xauxa. It has some woollen manufactures.

XAUXA, a large and abundant river of Peru, which has its source in lake Chinchaicocha, in the province of Tarma.

XEBEC, or ZEBEC, a small three-mas ted vessel, navigated in the Mediterranean Sea, and on the coasts of Spain, Portugal, and Barbary.

XENAGORAS; 1. An ancient historian.— Dion Hal. 2. A philosopher who measured the height of mount Olympus.

XENARCIIUS; 1. An ancient comic poet. 2.

A peripatetic philosopher, who taught philosophy at Alexandria and Rome, and was intimate with Augustus. — Strab. 14. 3. A praetor of the Achaean league, who favored Perseus.

XENEUS, a native of Chios, who wrote a His- tory of Chios.

XENIADES, a Corinthian, who went to buy Diogenes, the Cynic, when sold as a slave. Upon asking him what he could do ? he replied, Com- mand freemen ; on which he gave him his freedom, and made him tutor to his

children. Gellius, ii. c. 1 8.

XEN1US, a surname of Jupiter, as the god of Hospitality.

XENOCLES, a tragic writer, who obtained a prize four times in competition with the celebrated Euripides. His grandson Xenocles also excelled in tragedy. yElian. ii. c. 8.

XENOCRATES, a celebrated ancient Grecian philosopher, born at Chalcedon in the ninety-fifth Olympiad. At first he attached himself to / Eschines, but afterwards became a disciple of Plato, who took much pains in cultivating his genius, which was naturally dull. His temper was gloomy, his aspect severe, and his manners little tinctured with urbanity. These material defects Plato took great pains to correct, advising him to sacrifice to the graces ; Xenocrates was patient of instruction, and, as long as Plato lived, was one of his most esteem- ed disciples ; after his death he adhered to his doctrine; and, in the second year of the 110th Olympiad, he took the chair in the academy, as the successor of Speusippus. Xenocrates was celebrated among the Athenians, not only for his wisdom but for his virtues. So eminent was his reputation for integrity, that when he was called upon to give evidence in a judicial transaction, in which an oath was usually required, the judges agreed that his simple asseveration should be taken, as a public testimony to his merit. Even Philip II. of Macedon found it impossible to corrupt him. So abstemious was he, with respect to food, that his provision was often spoiled before it was used. His chastity was invincible. Phryne, the celebrated Athenian courtezan, attempted without success to seduce him. Of his humanity, even to brutes, he gave a proof, by protecting a sparrow pursued by a hawk, which flew into his bosom. He was economic of his time, and allotted a certain portion of each day to its proper business. One of these he employed in meditation. He was an admirer of the mathematical sciences. He lived to the first year of the 116th Olympiad, or the eighty-second of his age, when he lost his life by falling in the dark into a reservoir of water.

XENOPHANES, the founder of the eleatic sect of philosophy among the Greeks, was born at Colophon about the sixty-fifth Olympiad. From some cause or other he left his country early, and took refuge in Sicily, where he supported himself by reciting in the court of Hiero elegiac and iambic verses, which he had written in reprehen- sion of the theogonies of Hesiod and Homer. From Sicily he passed over into Magna Graecia, where he took up the profession of philosophy, and became a celebrated preceptor in the Pythago- rean school. Indulging, however, a greater freedom of thought than was usual among the disciples of Pythagoras, he ventured to introduce new opinions of his own, and in many particulars to oppose the doctrines of Epimenides, Thales, and Pythagoras. Xenophane» possessed the

philosophy about seventy years, and lived to the extreme age of lOv. years, that is, according to Eusebius, till the eighty-first Olympiad. The doc- trine of Xenophanes concerning nature is so imper- fectly preserved, and obscurely expressed, that it is no wonder that it has been differently represented by different writers. Perhaps the truth is, that he held the universe to be one in nature and substance but distinguished in his conception between the matter of which all things consist, and tnat latent divine force, which, though not a distinct substance but an attribute, is necessarily inherent in the universe, and is the cause of all its perfection.

XENOPHILUS; 1 . A Pythagorean philosopher, who lived till he was 170, and enjoyed all his faculties to the last. — Yal. Max. 8, c. 13. 2. One of Alexander's generals.

XENOPHON, the son of Gryllus, an illustrious philosopher, general, and historian, was born at Athens in the third year of the eighty-second Olym- piad. He became a disciple of Socrates, and made a rapid progress in that moral wisdom for which his master was so eminent. Xenophon accompa- nied Socrates in the Peloponnesian war, and fought courageously in defence of his country. He afterwards entered into the army of Cyrus as a private volunteer in his expedition against hb brother. This enterprise proving unfortunate, Xenophon, after the death of Cyrus, advised his fellow soldiers to attempt a retreat into their own country. They listened to his advice ; and, having had many proofs of his wisdom as well as courage, they gave him the command of the army in the room of Clearchus and Proxenus, who had fallen in battle. See PERSIA. In this command he ac- quired great glory by the prudence and firmness with which he conducted them back, through the midst of innumerable dangers, during a period of fifteen months, and through a tract of 1155 leagues into their own country. The particulars of this memorable adventure are related by Xenophon himself in his Retreat of the Ten Thousand. After his return into Greece, he joined Agesilaus, king of Sparta, and fought with him against the Thebans in the celebrated battle of Chaeronea. The Athe- nians, displeased at this alliance, brought a public accusation against him for his former conduct in engaging in the service of Cyrus, and condemned him to exile. The Spartans, upon this, took Xeno- phon, as an injured man, under their protection, and provided him a comfortable retreat at Scillus in Elea. Here, with his wife and two children, he remained several years, and passed his time in the society of his friends, and in writing those his- torical works which have rendered his name im- mortal. A war at length arose between the Spar- tans and Eleans, and Xenophon was obliged to retire to Lepreus, where his eldest son had settled. He afterwards removed with his whole family to Corinth, where, in the first year of the 105th Olym- piad, he died.

XENOPHO.N, a physician and favorite of the em- peror Claudius, born in the island of Cos, and descended from /Eseulapius. For his sake Claudius exempted the people of Cos from all taxes. Yet the monster was so ungrateful as to poison his benefactor to please the parricide Agrippina. Tac.

12.

XENOPHON THE YOUNGER, a Greek writer, so called to distinguish him from the historian, was horn at Ephesus, and lived before Heliodorus

ftbout^he beginning of vhe fourth century. He is only known by his Ephesiaca, a Greek romance in five bcoks, which is esteemed, and contains the amours or adventures of Abracomes and Anthia. This romance was printed by Cocceius, at London, in Greek and Latin, in 1726, 4to.

XERANTIIEMUM, in botany, Austrian sneeze- wort, eternal or everlasting flower, a genus of plants, in the class of syngenesia, and order of polygamia superflua ; ranking by the natural method in the forty ninth order, composite. Plants of this ge- nUsbear compound flowers (see BOTANY, Index), in their aggregate state, or flosculose flowers; the calyx is a perianthium, containing the florets and receptacle. They have the florets of the disk her- maphrodite, and those of the radius female ; and they are tubulose.

XERES DE BADAJOZ, or XERES DE LOS CABA- LEROS, a considerable inland town of the south- west of Spain, in Estremadura, on the small river Ardilla. It contains 8700 inhabitants, has manu- factures of linen and leather, and in the environs very extensive pasturage, it being reckoned that at least 50,000 head of cattle, reared in this neighbour- hood, are disposed of at the annual fairs. It is situated ninety miles N.N.W. of Seville, and thirty-four south of Badajoz.

XERES DE LA FRONTERA, a large and ancient town in the south-west of Spain, in Andalusia, sixteen miles N. N. E. of Cadiz. It is agreeably situated on the banks of the small river Guadalette, in the midst of one of the richest and best culti- vated districts of Spain.

XERXES I., the fifth king of Persia, memora- ble for the vast army he is said to have carried into the field against Leonidas king of Sparta; consist- ing, according to some historians, of 800,000 men, while others make it amount to 3,000,000 of men, exclusive of attendants. The fleet that

attended this prodigious land force is likewise made to con- sist of 20GO sail; and all the success they met with was the taking and burning the city of Athens ; for the army was shamefully repulsed near the straits of Therrflopylse, by Leonidas, and the fleet was dispersed and partly destroyed by Themis- tocles at the straits of Salamis, who had only 380 sail under his command. Xerxes was assassinated by Artabanes, chief captain of his guards, and his distinguished favorite. See SPARTA.

XERXES II., the son of Ahasuerus, or Artaxerxes I., by queen Esther. See PERSIA.

XIMENES (Gaicia), the first king of Navarre. See SPAIN.

XIMENES (Francis), a justly celebrated cardinal, bishop of Toledo, and prime minister of Spain, was bom at Torrelaguna, in Old Castile, in 1437, and studied at Alcala and Salamanca. He then went to Rome; and, being robbed on the road, brought nothing back but a bull for obtaining the first vacant prebend ; but the archbishop of Toledo refused it him, and threw him into prison. Being at length restored to liberty, he obtained a benefice in the diocese of Siguenya, where cardinal Gon- zales de Mendoza, who was the bishop, made him his grand vicar. Ximenes some time after entered among the Franciscans of Toledo ; but, being there troubled with visits, he retired to a solitude named Castanel, and . applied himself to the study of divinity and the oriental tongues. At his return to Toledo, queen Isabella of Castile chose him for her confessor, and afterwards nominated him arch-

bishop of Toledo : which, rext to the papacy, is the richest dignity in the church of Rome. 'This honor,' says Dr. Robertson, ' he declined with a firmness which nothing but the authoritative injunc- tion of the pope was able to overcome. Nor did this height of promotion change his manners. Though obliged to display in public that magnifi cence which became his station, he himself retained his monastic severity. Under his pontifical robes he constantly wore the coarse frock of St. Francis, the rents of which he used to patch with his own hands. He at no time used linen, but was com- monly clad in hair cloth. He slept always in his habit ; most frequently on the floor or on boards, and rarely in a bed. He did not taste any of the delicacies which appeared at his table, but satisfied himself with that simple diet which the rule of his order prescribed. Notwithstanding these peculi- arities, so opposite to the manners of the world, he possessed a thorough knowledge of its affairs, and discovered talents for business which rendered the fame of his wisdom equal to that of his sanctity.' His first care was to provide for the necessities of the poor ; to visit the churches and hospitals ; to purge his diocese of usurers and places of de- bauchery; to degrade corrupt judges, and place in their room persons whom he knew to be distin-

guished by their probity and disinterestedness. He erected a famous university at Alcala ; and in 1499 founded the college of St. Ilclephonso. Three years after he undertook the Polyglot Bible ; and for that purpose sent for many learned men to come to him at Toledo, purchased seven copies in Hebrew for 4000 crowns, and gave a great price for Latin and Greek manuscripts. At this Bible they labored above twelve years. It contains the Hebrew text of the Bible ; the version of the Septuagint, with a literal translation; that of St. Jerome, and the Chaldee paraphrases of Onkelos ; and Ximenes added to it a dictionary of the He- brew and Chaldee words contained in the Bible. This work is called Ximenes's Polyglot. In 1507 pope Junius II. gave him the cardinal's hat, and king Ferdinand the Catholic entrusted him with the administration of affairs. Cardinal Ximenes was from this moment the soul of every thing that passed in Spain. He distinguished himself at the beginning of his ministry by discharging the people from the burdensome tax called acavale, which had been continued on account of the war against Granada; and labored with such zeal and success in the conversion of the Mahometans, that he made 3000 converts, among whom was a prince of the blood of the kings of Granada. In 1509 cardinal Ximenes extended the dominions of Fer- dinand, by taking the city of Oran in the kingdom of Algiers. He undertook this conquest at his own expense, and marched in person at the head of the Spanish army, clothed in his pontifical orna ments, and accompanied by a great number of ecclesiastics and monks. Some time after, foresee- ing an extraordinary scarcity, he erected public granaries at Toledo, Alcala, and Torrelaguna, and had them filled with corn at his own expense ; which gained the people's hearts to such a degree, that to preserve the memory of this noble action they had a eulogium upon it cut on marble, in the hall of the senate house at Toledo, and in the market-place. King Ferdinand dying, in 1516, left cardinal Xi- menes regent of his dominions ; and the archduke Charles, who was afterwards the emperor Charles

V., confirmed that nomination. The cardinal im- mediately made a reform of the officers of the supreme council and of the court, and put a stop to the oppression of the grandees. He vindicated the rights of the people against the nobility; and as by the feudal constitution the military power was lodged in the hands of the nobles, and men of inferior condition were called into the field only as their vassals, a king with scanty revenues depended on them in all his operations. From this state Ximenes resolved to deliver the crown; and issued a proclamation, commanding every city in

Castile to enrol a certain number of its burgesses, and teach them military discipline ; he himself engaging to provide officers to command them at the public expense. This was vigorously opposed by the nobles ; but by his intrepidity and superior address he carried his point. He then endeavoured to diminish the possessions of the nobility, by re- claiming all the crown lands, and putting a stop to the pensions granted by the late king Ferdinand. This addition made to the revenues enabled him to discharge all the debts of Ferdinand, and to establish magazines of warlike stores. The nobles, alarmed at these repeated attacks, uttered loud complaints ; but, before they proceeded to ex- tremities, appointed some grandees of the first rank to examine the powers in consequence of which he exercised acts of such high authority. Ximenes received them with cold civility ; pro- duced the testament of Ferdinand, by which he was appointed regent, together with the ratification of that deed by Charles. To both these they ob- jected ; and he endeavoured to establish their validity. As the conversation grew warm, he led them insensibly to a balcony, from which they had a view of a large body of troops under arms, and of a formidable train of artillery. ' Behold,' says he, pointing to these, and raising his voice, ' the powers which I have received from his Catholic majesty. With these I govern Castile ; and with these I will govern it, till the king, your master and mine, takes possession of his kingdom !' A declaration so bold and haughty silenced them and astonished their associates. They saw that he was prepared for his defence, and laid aside all thoughts of a general confederacy against his administration. At length, from the repeated intreaties of Ximenes, and the impatient murmurs of the Spanish minis- try, Charles V. embarked, and landed in Spain, accompanied by his favorites. Ximenes was ad- vancing to the coast to meet him, but at Bos Equillus was seized with a violent disorder, which his followers considered as the effects of poison. This accident obliging Ximenes to stop, he wrote to the king, and with his usual boldness advised him to dismiss all the strangers in his train, whose num- ber and credit already gave offence to the Span- iards, and earnestly desired to have an interview with him, that he might inform him of the state of the nation and the temper of his subjects. To prevent this, not only the Flemings but the Spanish grandees employed all their address to keep Charles at a distance from Aranda, the place to which the cardinal had removed. His advice was now slighted and despised. Ximenes, conscious of his own integrity and merit, expected a more grate- ful rf turn from a prince to whom he delivered a kingdom more flourishing than it had been at any former age, and a more extensive authority than the most illustrious of his ancestors had ever

possessed ; and lamented the fate of his country about to be ruined by the rapaciousness and in- solence of foreign favorites. While his mind was agitated by these passions, he received a letter from the king ; in which,

after a few cold and formal expressions of regard, he was allowed to retire to his diocese ; and he expired a few hours after reading it, in 1517, in the eighty-first year of bis age.

XIMENES (Father), a learned priest of the seven- teenth century, who wrote a curious work in Italian, entitled Del Vecchio e nuovo Gnomone Florentino; printed at Florence in 1757, 4to. In this work he describes the grand gnomon erected by Paul Toscanella, in 1470, in the cathedral of Florence, which is reckoned the greatest of the kind in Europe.

XIMENES (Roderic), archbishop of Toledo, in the thirteenth century, who wrote a History of Spain in nine books.

XIMENIA, in botany, a genus of plants in the class of octandria, and order of monogynia. These plants bear hermaphrodite flowers, with eight stamina, and only one style.

XIPHIAS, in astronomy. See ASTRONOMY, Index.

XIPHIAS, in ichthyology, the sword fish, a genus of fishes belonging to the order of apodes. The upper jaw terminates in a long sword shaped rostrum, from which it is called the sword fish ; there are no teeth in the mouth ; the gill membrane has eight rays; and the body is somewhat cylindrical. There is but one species, viz. : — X. gladius, found in the European Ocean.

XULLA ISLANDS, four islands in the Eastern Seas, situated to the south-east of the Molucca passage. Xulla Bessey, which is the most consi- derable of them, is about eleven leagues in length, in good cultivation and well inhabited. The Dutch fort is near a village adjacent to the south-east point, where ships may procure refreshments. XUTH. See XUTHUS.

XI 'THUS, or XUTH, in the fabulous history of Chaldsea, a name of Noah. See DELUGE.

XUTHCS, in the fabulous history of Greece, a son of Hellen, and grandson of Deucalion. Being expelled from Thessaly by his brothers, he came to Athens, and married Creusa, the daughter of king Erechtheus, by whom he had Achseus and Ion, who gave name to Achaia and Ionia.

XYLANDER (William), a learned critic, born at Augsburgh in 1532. In 1558 he became pro- fessor of Greek at Heidelbergh. He had previously published a Latin version of Dion Cassius at Basil. In 1559 he published a Latin .translation of Marcus Aurelius, and in 1568 another exceed- ingly correct. He also printed an accurate edition of Strabo in Greek and Latin. He died at Heidel- bergh in 1576.

XYLANTHRAX, or bovey coal, in mineralogy. See COAL. Its laminae are frequently flexible \ lu-u first dug, though they generally harden when exposed to the air. It consists of wood penetrated with petrol or bitumen, and frequently contains pyrites, alum, sulphuric acid, &c. By distillation it yields a fetid liquor, mixed with a volatile alkali and oil ; part of which is soluble in spirit of wim1, and part of a mineral nature, and insoluble.

XYLO ALOES, or aloe wood, in the materia medica, is the product of a tree growing in China and some of the Indian Islands. See EXCOKCARIA,

This dr'ij is distinguished into the calambac or tambac, the common lignum aloes, and calambour. The calambac or finest aloes wood, called by authors lignum aloes prsestantissimum, and by the Chinese sukhiang, is the most resinous of all the woods we are acquainted with; it is of a light spongy texture, very porous, and its pores so filled up with a soft and fragrant resin, that tlie whole maybe pressed and dented by the fingers like wax, or moulded about by chewing in the mouth in the manner of mastich. This kind, laid on the fire, melts in great parts like resin, and burns away m a few moments with a bright flame and perfumed smell. Its scent, while in the mass, is very fra- grant and agreeable ; and its taste acrid and bitterish, but very aromatic and agreeable. It is so variable in its color, that some have divided it into three kinds; the one variegated with black and pur- ple; the second with the same black but with yellowish instead of purple ; and the third yellow alone like the yolk of au egg; this last is the least scented of the three. The variation, however, is owing to the trunk of the tree being itself of three different colors ; and the heart of it is the valuable sort first described. The two following are sup- posed to be the other parts of the trunk ; though this seems doubtful, especially in regard to the last sort, from the circumstance mentioned of its being found in large logs entire, and sometimes only the heart, which, as above noticed, constitutes the calambac. The lignum aloes vulgare is the second in value. This is of a more dense and compact texture, and consequently less resinous than the other ; there is some of it, however, that is spongy, and has the holes filled up with the right resinous matter; and all of it, when good, has veins of the same resin in it. We meet with it in small fragments, which have been cut and split from larger ; these are of a tolerably dense texture in the more solid pieces, and of a dusky brown color, variegated with resi- nous black veins. It is in this state very heavy, and less fragrant than in those pieces which show a multitude of little holes, filled up with the same blackish

matter that forms the veins in others. The woody part of these last pieces is somewhat darker than the other, and is not unfrequently purplish, or even blackish. The smell of the common aloe wood is very agreeable, but not so strongly per- fumed as the former. Its taste is somewhat bitter and acrid, but very aromatic. The calambour, called also agallochum sylvestre, and lignum aloes mexicanum, is light and friable, of a dusky and often mottled color, between a dusky green black and a deep brown. Its smell is fragrant and agreeable, but much less sweet than that of either of the others ; and its taste bitterish, but not so much acrid or aromatic as either of the two former. This is said to be met with very frequently, and in large logs ; and these sometimes entire, sometimes only the heart of the tree. This is the aloe wood

used by the cabinet makers and inlayers. Thk drug is esteemed a cordial taken inwardly; and is sometimes given in disorders of the stomach and bowels, and to destroy worms. A very fragrant oil may be procured from it by distillation ; which is recommended in paralytic cases from five to fifteen drops. It is at present, however, but little used ; and would scarcely be met with any where in the shops, but that it is an ingredient in some of the old compositions.*

XYLOPHYLLA, in botany, a genus of plants, ivi the class of pentandria, and order of trigynia. These plants bear hermaphrodite flowers, furnished with five stamina and three styles.

X YLOPIA, in botany, a genus of plants, in the class gynandria, and order of polyandria ; natural order fifty-second, coadunatae. All the flowers of this genus have a monstrous appearance, owing to the uncommon structure of the parts of fructifica- tion. They have the stamina growing either upon the style itself or upon a receptacle, that stretches out into the form of a style, and supports both the stamina and the pistillum ; and they have all many stamina.

XYLOPOLIS, an ancient town of Macedonia. — Plin. 4. c. 10.

XYNOECIA, or XYNOICHIA, in Grecian anti- quity, an anniversary feast observed by the Athe- nians in honor of Minerva, upon the sixteenth of Hecatombaeon, to commemorate their leaving, by the persuasion of Theseus, their country seats, in which they lay dispersed here and there in Attica, and uniting together in one body.

XYPHILIN (John), a learned Greek prelate, born in Trebisond, who became patriarch of Con- stantinople in 1064. He wrote a sermon, preserv- ed in the Bibl. Patrium ; and an abridgment of the History of Dion Cassius, which was printed in 1592, in folio. He died in 1075.

XYRIS, in botany, a genus of plants in the class of tetrandria, and order of monogynia ; na- tural order sixth, ensatae. These plants bear her- maphrodite flowers, furnished with one style, and four stamina, all of equal length. In this particu- lar they differ from the plants of the class didy- namia, which have also four stamina, but of which two are longer than the other two.

XYSTARCHA, in antiquity, the master or di- rector of the xystus. In the Greek gymnasium, the xystarcha was the second officer, and the gymna- siarcha the first ; the former was his lieutenant, and presided over the two xysti, and all exercises of the athletae therein.

XYSTUS, among the Greeks, was a long portico, open or covered at the top, where the athletae practis- ed wrestling and running : the gladiators, who prac- tised therein, were called xystici. Among the Ro- mans, the xystus was only an alley, or double row of trees, meeting like an arbor, and forming a shade to walk under

Y.

Y, at the beginning of words, is commonly taken, tnough erroneously, for a consonant ; at the end, and when it follows a consonant, is a vowel, and has the sound of i. It is used at the end of words, and whenever two ifs would come together ; and in words derived from the Greek, to express the u. Y was much used by the Saxons, whence y is found for t in the old English writers. In old English writers Y is sometimes prefixed as an in- creasing syllable to preterites and passive partici- ples of verbs. It seems borrowed from je, the Saxon augmentum of the preterite. It is sometimes put before present tenses.

Y is only used, 1. as a letter, 2. a numeral, and 3. as a word. I. As a letter, Y is the twenty- third of our alphabet : its sound is formed by ex- pressing the breath with a sudden expansion of the lips from that configuration by which we express the vowel «. It is one of the ambigenial letters, being a consonant in the beginning of words, and placed before all vowels, as in yard, yield, young, &c., but before no consonant, except in a few ob- solete poetical words, such as yclad, ycleped, ydrftd, &c. At the end of words it is a vowel, and is substituted for the sound of i, as in try, descry, &c. In the

middle of words it is not used so frequently as i, except in words derived from the Greek, as in chyle, empyreal, &c.. though it is admitted into the middle of some pure English participles, as dying, flying, &c. The Romans had no capital of this letter, but used the small one in the middle and last syllables of words, as in coryambus, onyx, martyr. The form of the capital Greek Y was near- ly the same with our Y, though the small Greek v resembles our v or w, which indeed it more nearly resembles in sound. Yet, in all translations, the form has been preferred to the sound ; as in Pyrrhus, Py- lades, &c., which from the analogy of the sound should rather have been Purrhus, Pulades, &c. The editor of the Supplement to the Encyclopaedia Britannica, under the article GLUCINA, seems to censure ttie editor of the Annales de Chemie for not calling this mineral glycina ; but it seems rather surprising that the literati in all ages have not pre- ferred the u to the y, in all such translations and derivations. II. Y is also used as a numeral, sig- nifying 150, or, according to BaroniUs, 159; and with a dash a-top, as Yˆ it signified 150,000. III. As a word, Y is the name of several places. YABBAH. See JABI. YACHMUR, in zoology. See CAPRA. A YACHT, or YATCH, is a vessel of state, usually employed to convey princes, ambassadors, or other great personages, from one kingdom to another As the principal design of a yacht is to accommo- date the passengers, it is usually fitted with a variety of convenient apartments, with suitable furniture, according to the quality or number of the persons to be contained therein. The royal yachts are com- monly rigged as ketches, except the principal one reserved for the sovereign, which is equipped with three masts like a ship. They are in general elegantly furnished, and richly ornamented with sculpture; and always commanded by captains in his majesty's navy. Besides these, there are many other yachts of a smaller kind, employed by

the commissioners of the excise, navy, and cus- toms, or used as pleasure-boats by private gentle- men.

YACONS. See PENELOPE. _ YAGUAROCHA, a large and very deep lake of South America, in Quito, a league and a half in length, one league from the town of Ibarra. It is famous for having been the sepulchre of the in- habitants of Otabalo. Upon this place being taken by Huana Capac, the twelfth inca, he, being exas- perated at the resistance which they made, ordered them all to be beheaded, and their bodies to be thrown into this lake ; so that, from the waters of the lake being tinged of a bloody color, it acquired its present name, which signifies ' a lake of blood.' Lat. 0° 23′ north.

YAKOUTSK, an extensive province of Asiatic Russia, forming one of the four into which the go- vernment of Irkoutsk is divided. It extends north from the boundary of the provinces of Irkoutsk Proper and of Nertschinsk, as far as the Frozen Ocean. It does not, however, reach to the eastern extremity of Asia, on which side it is bounded by the province of Okhotsk. The Lena traverses it through its whole extent from north to south.

YAKOVTSK, a town of Asiatic Russia, capital of the province of the same name, is situated on the western bank of the Lena, on a plain surrounded by mountains, which enclose it at the distance of ten or twelve miles. It contains 500 or 600 houses, and 3000 inhabitants, who, for the most part, are Cossacks or Yakoutes.

YALDEN (Thomas), D. D., an English poet, born at Exeter in 1671, and educated at Oxford, where he graduated in 1707. He got two livings in Herts, and was intimate with bishop Atterbury ; on which account he was taken up, and his papers were searched, when the doctor was sent to the tower; but Yalden was soon discharged. He died in 1736. His poems were printed in 1 vol. 8vo. YALOFFS. See BARSALLI and JALOFS. YAM, in botany. See DIOSCORIA. YAMBOp. See EUGENIA. YANG-TCHEOU, a city of China, of the first rank, in Kiang-nan, situated on the bank of the Royal Canal, where it crosses the great river Yang- tse-kiang. It carries on a great trade, and is ren- dered extremely populous by the sale and distribu- tion of the salt that is made on the sea coasts of this jurisdiction. 485 miles S. S. E. of Peking.

YANG-TSE-KIANG, a river of China, the largest of that empire, and one of the noblest in the world. Its source is described by Chinese maps as situated among the mountains of Thibet. Thence it flows, during the first part of its course, along the borders of China; after which it enters the empire, and passes, in a westerly course, through Sechuen. Houquang, and Kiangnan, the grand central provinces ; among which it diffuses commerce and fertility. In passing the great city of Nan-king, it becomes truly magnificent, from the fleets of vessels of every description moving to and fro. About 120 miles to the east of Nanking, it falls into the gulf of Tsongming, in the Easterr sea.

YANVOS. SeeYAYVos.

YAO. or YAU, the first emperor ot China. See CHINA.

YARCUND, a city of Cashgar, in that part of Chinese Tartary which goes commonly by the name of Little Bucharia. It is situated on the eastern side of that range of mountains which extends northwards from the Himalleh, and divides Chi- nese from Independent Tartary. Being placed at the point where those mountains are usually crossed by the caravans, it has become a kind of emporium for the inland trade of Asia.

YARD, n. s. J. Sax. scant) ; Goth, and Swed. YARD'WAND. \ gard. Inclosed ground adjoining a house; a measure of length ; a pole ; support of a sail : a yardwand is a measure of a yard in length. A peer, a counsellor, and a judge, are not to be measured by the common yard, but by the pole of spe- cial grace. Bacon.

One of the lions leaped down into a neighbour's yard, where, nothing regarding the crowing of the cocks, he eat them up. Browne.

The arras, spread cross in a straight line, and mea- sured from one end of the long finger on one hand to that of the other, made a measure equal to the stature, and is named a fathom. Half of that, viz. from the end of the long finger of either arm, so spread, to the middle of the breast, is with us called a yard. Holder.

A breeze from shore began to blow ; The sailors ship their oars, and cease to row ; Then hoist their yank a-trip, and all their sails, Let fall to court the wind. Dryden.

Xanthus one day sent /Esop into the yard, and bade him look well about him. L' 'Estrange.

An aqueduct of a Gothick structure, that conveys from Mount St. Francis to Spoletto, from the foundation of the lowest arch to the top, is two hundred and thirty yards. Addison.

All the revolutions in nature can give it nothing more than different degrees of dimensions. What affi- nity has thinking with such attributes 1 no more than there is between a syllogism and zyardwand. Collier. YARD, in husbandry. See GARDENINE. The YARD is used in Britain and Spain, chiefly to measure cloth, stuffs. &c.

YARD OF A SHIP, a long piece of timber sus- pended upon the masts of a ship, to extend the sails to the wind. See MAST and SHIP-SAIL. All yards are either square or laten ; the former are suspended across the masts at right angles, and the latter obliquely. The square yards are nearly of a cylindrical surface. They taper from the middle, which is called the slings,

towards the extremities, •which are termed the yard-arms ; and the distance between the slings and the yard-arms on each side is by the artificers divided into quarters, which are distinguished into the first, second, third quarters, and yard-arms. The middle quarters are formed into eight squares, and each of the end parts is fi- gured like the frustum of a cone. All the yards of a ship are square except that of the mizen.

YARD-ARM is that half of the yard that is on either side of the mast, when it lies athwart the ship.

YARE, adj. \ Sax. jeajtpe. Ready ; dex- YARE'LY, adv. \ terous; eager: the adverb cor- responds. Obsolete.

I do desire to learn, Sir ; and I hope, if you have oc- casion to u.ie me for your turn, you shall find me wre.

Shakfpeare. The silken tackles

*Swell with *.he touches of those flower-soft hands, That yarely frame the office. Id.*

*> " *RE, among sailors, implies quick ; as, be*

yare at the helm ; that is, be quick and expedi- tious at the helm. It is sometimes also used for bright by seamen; as, to keep his arms yare ; that is, to keep them clean and bright.

YARMOUTH, a sea-port, Post, and market- town, in the parish of West Medina, Isle of Wight, Hants, ten miles N. N. Vf. of Newport, and 100 south-west of London. The town stands on a bank sloping to the sea, and has evident traces of having been much larger than at present. The castle was built by Henry VIII., on the site of an ancient church. Market on Friday.

YARMOUTH, commonly called Great Yarmouth, a sea-port, borough, and parish, in East-Flegg hundred, Norfolk, situate ou a peninsula, at the eastern extremity of the county, twenty-two miles east by south of Norwich, and 124 north-east of London. It is encompassed on the south and east by the sea ; on the north by the main land, and on the west by the Yare, over which is a handsome drawbridge, connecting it with Suffolk ; it extends more than a mile in length, and half a mile in breadth ; containing four principal streets running from north to south, and 156 narrow lanes, or rows, intersecting them. It is flanked with a wall, with ten gates and sixteen towers. The church, dedi- cated to St. Nicholas, is a stately pile 250 feet long, and, including the aisles, 108 in breadth; its wooden spire is now taken down. Near the centre of the town is a beautiful chapel of ease,

dedicated to St. George. The quay, in the centre of which is the town-hall, forms a fashionable and delightful promenade to this much frequented watering-place ; it is nearly a mile and a quarter in length, and in some parts 150 yards wide ; from the bridge to the south gate it is decorated with a fine range of buildings, among which the assembly-rooms make a conspicuous figure. The theatre, erected in 1778, is a neat edifice; here is also a bowling green. The bath-house was erected in 1759; it stands on the beach, which is a sinking sand, three furlongs from the chapel. On each side of the vestibule are baths appropriated to the separate uses of ladies and gentlemen. The sea-water is raised every tide by a horse-mill into a reservoir, about fifty yards from the baths, whence it is conveyed by pipes to the baths. Here are also commodious bathing- machines, but the sand renders them unpleasant of access. Adjoining the north end of the bath-house a public room was erected in 1788, for a tea and coffee room. The jetty, close to the bath-house, is 110 paces long, and forms an agreeable walk after bathing. The fishermen's hospital is of a quadran- gular form, containing twenty rooms on the ground- floor. The hospital school was founded and is supported by subscription. Here also is a charity school for 100 boys and girls. The market-place forms a handsome area.

The situation of this town is very favorable to commerce, and, besides fishing-smacks, there are upwards of 300 ships belonging to the port ; but the most considerable employment here is its ex- tensive fishery, there being 70,000 barrels of her- rings generally taken and cured here in the year. The season commences at Michaelmas and lasts till the end of October. It has also a considerable coal trade.

The harbour is convenient, being protected by a pier, provided with two light houses, and defended by two bastions, on a mural construction, and two smaller ones. Large surr-s of money are annually

expended in clearing it. Here are barracks for the accommodation of 1000 men, and an armory. Among the peculiarities of this place is the use of a low narrow cart, drawn by a single horse and well adapted for the conveying of goods through the narrow lanes of this town ; but others, on the same construction, more elegantly made, are let for airing in the neighbourhood, and are called Yarmouth coaches. A sessions is annually held here in the month of September, for the trial of of- fences committed within the jurisdiction of the cor- poration. They have also a court of

admiralty, for the protection of marine property ; and a court for the recovery of debts above £2 and under £10, from the award of which there is no appeal. The cor- poration consists of a mayor, eighteen aldermen, a recorder, and thirty-six common-councilraen. It returns two members to parliament, chosen by the burgesses at large ; and the reluming officer is the mayor. Market on Saturday, well supplied, and a small one on Wednesday.

YARN, n. s. Sax. jearin. Spun wool ; woollen thread.

You would be another Penelope ; yet they say all the yarn she spun in Ulysses's absence did but fill Ithaca fall of moths. Sliakspeare.

It may be useful for the reeling of yarn. Wilkim.

Yarn is a commodity very proper to this country, which of all others ought to be most encouraged.

Temple.

The rest among the rubbish may they sweep, Or add it to the warn of some old miser's heap. Dryd.

YARRANTON (Andrew), the inventor of tin- plate, or white iron. See WHITE IRON.

YARROW, a celebrated pastoral stream of Scotland, in Selkirkshire, which rises at a place called Yarrow Cleugh, very near the source of Moffat water ; and running east a few miles, forms a beautiful lake called the loch of the Lows, which discharges its waters, after a course of 100 yards, into St. Mary's Loch, from which it issues ; and, after a course of about sixteen miles through the ancient district of Etterick forest, joins its waters to the Etterick, two miles above Selkirk.

YARROW, in botany. See ACHILLA, and RURAL ECONOMY.

YAU, or YAO, a celebrated emperor of China ; contemporary with Joshua. See CHINA.

YAWN, v. n. & n. s. Sax. geonan. To gape ; nscitate; have the mouth opened involuntarily; to open wide ; express desire by yawning : the noun substantive corresponds.

He shall cast up the wealth by him devoured. Like vomit from his yawning entrails poured. Sandys.

The chiefest thing at which lay-reformers yawn is, ;hat the clergy may, through confonuity in condition, i>e poor as the apostles were. Hooker.

Tis now the very witching time of night, When churchyards yawn. Shakspeare.

The sad-eyed justice, with his surly hum, Delivering o'er to executors pale The lazy yawning drone. Id.

In yawning, the inner parchment of the ear is ex- tended. When a man yawneth, he cannot hear so well.*

Bacon. Hell at last Yawning received them whole, and on them closed.

Milton.

At length shook off himself, and asked the dame, And asking yawned, for what intent she came ? Dryd.

Hence to the borders of the marsh they go, That mingles with the baleful streams below;

And sometimes with a mighty yawn, 'tis said,

Opens a dismal passage to the dead. Additon.

Thee, Paridel, she marked thee there, Stretched on the rack of a too easy chair ; And heard thy everlasting yawn confess The pains and penalties of idleness. Pope

YAWXIXG is an involuntary opening of the mouth, generally produced by weariness or an in- clination to sleep. Yawning, according to Boer- haave, is performed by expanding at one and the same time all the muscles capable of spontaneous motion ; by greatly extending the lungs ; by drawing in gradually and slowly a large quantity of air; and gradually and slowly drawing it out after it has been retained for some time and rare- fied; and then restoring the muscles to their natu- ral state. Hence the effect of yawning is to move, accelerate, and equally distribute all the humors through all the vessels of the body, and consequent- ly to qualify the muscles and oreans of sensation for their various functions. When yawning is troublesome, Hippocrates says that long deep res- piration, or drawing in the air at long intervals, cures it.

YAWS. See MEDICINE, Index.

YAXT, or JAXT. See JAXT.

YCA, ICA, or VALVERDE. See ICA.

YCLAD, part, for clad. Clothed

Her words yclad with wisdom's majesty. Shakspcure.

YCLEPED', part. pass, of clepe, to call; Sax. clepan, with the increasing particle y, used in the old English, in the preterites and participles, from the Sax. je. Called ; termed ; named.

But come thou goddess fair and free, In heaven ycleped Euphrosyne, And by men heart-easing mirth. Milton.

YE. The nominative plural of thou.

Ye are they which justify yourselves. Luke xvi. 15.

YE, EY, or Y. See Y.

YEA, adv. Sax. ea, or jea; Dan. Belg. and Teut. jn. Yes. A particle of affirmation ; mean- ing, it is so, or, is.it so? and of emphasis, as uot only so ; but more than so.

Yea, hadi God said, Ye shall uot eat of every tree ir the garden? Genesis iii. 1.

Let your conversation be yea, yea ; nay, nay.

Matthew v.

I am weary ; yea, my memory is tired. Shahspeare.

From these Philippine are brought cestly spices, yea, and gold too. Abbot.

All the promises of God are yea, and amen ; that is, are verified, which is the importance of yea; and con- firmed, which is meant by amen, into an immutability

Hammund.

Why do disputes in wrangling spend the day, Whilst one says only yea, and t'other nay ? Denluim.

They durst abide

Jehovah thundering out of Sion, throned Between the cherubim ; yea, often placed Within his sanctuary itself their shrines. Milton.

YEAD or YEDE, v. n. Pret. yode. Corruptly formed from J^CO'D, the Saxon preterite of jan. To go ; march. Obsolete.

They wander at will, and stay at pleasure. And to their folds yeade at their own leisure. Spenser.

YEAN, v. n. ^ Saxon eanian. To bring YEAN'LING, n. s. S young ; used of sheep : yean- ling is the young produced.

This I scarcely drag along,

Who yeaning on the rocks has left her young. Dryd. Ewes yean the polled lamb with the least danger.

Mortimer.

YEA

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YEAR, n. s. -\ Sax. jean. The period

YEAR'LING, >of the earth's revolution

YEAR'LY, adj. & adv. j round the sun : in the plu- ral, old age: year is sometimes used corruptly for the plural, as ' forty year' : yearling, a year old : yearly, annual ; lasting a year; once a year.

See the minutes, how they run : How many make the hour full compleat, How many hours bring about the day, How many days will finish up the year, How many years a mortal man may live. Shakspeare.

The yearly course that brings this day about Shall never see it but a holiday. Id.

Some mumble-news,

That smiles his cheek in years, and knows the trick To make my lady laugh when she's disposed, Told our intents. Id.

He that outlives this day, and sees old age, Will yearly on the vigil feast his neighbours, And say, To-morrow is St. Crispin. Id.

There died also Cecile, mother to king Edward IV., being of extreme yean, and who had lived to see three princes of her body crowned, and four murthered.

Bacon .

With the year

Seasons return, but not to me returns Day, or the sweet approach of even or morn. Milton.

For numerous blessings yearly showered, And property with plenty crowned ; For freedom still maintained alive ; For these, and more, accept our pious praise. Dryden.

He looked in years, yet in his years were seen A youthful vigour, and autumnal green. Id.

Why the changing oak should shed The yearly honour of his stately head ; Whilst the distinguished yew is ever seen, Unchanged his branch, and permanent his green.

Prior.

A yearling bullock to thy name shall smoke, Untamed, unconscious of the galling yoke. Pope.

He accepted a curacy of thirty pounds a year.

Swift.

Not numerous are our joys when life is new, And yearly some are falling of the few. Young.

YEAR, in astronomy and chronology. See AS- TRONOMY and KALF.NDAR.

YEAR, ANCIENT EGYPTIAN. The ancient Egyp- tian year, called also the year of Nabonassar, on account of the epocha of Nabonassar, is the solar year of 365 days, divided into twelve months of thirty days each, besides five intercalary days added at the end. The names, &c , of the months are as follow:— 1. Thoth. 2. Paophi. 3. Athyr. 4. Cho- jac. 5. Tybi. 6. Mecheir. 7. Phamenoth. 8. Phar- muthi. 9. Pachon. 10. Pauni. 11. Epiphi. 12. Mesori ; beside the r;/itp«t nrayonivai.

YEAR, ANCIENT GRECIAN. The ancient Greek year was lunar, consisting of twelve months, which at first had thirty days apiece, then alternately thirty and twenty-nine days, computed from the first appearance of the new moon, with the addi- tion of an embolismic month of thirty days every third, fifth, eighth, eleventh, fourteenth, sixteenth, and nineteenth year of a

cycle of nineteen years, in order to keep the new and full moons to the same terms or seasons of the year. Their year commenced with that new moon, the full moon of which comes next after the summer solstice. The order, &c., of their months was thus : — 1. 'Eica- Tonflaitiiv, containing twenty-nine days. 2. M»;ra- •ytirviiav, thirty. 3. Boj/flpojuwv, twenty-nine. 4. Mrtf/jaicr»jp«iov, thirty. 5. Hvavf^tuiv, twenty-nine. (3. \lovtiHtwv, thirty. 7. Tafii)\itiiv, twenty-nine. 8. tariitnwv, thirty. 9. EXa0»j/3oXiw»', thirty. 10.

YEA

, thirty. 11. 6apyt}\4wv, twenty-nine. 12. 2K(po0of>iwv, thirty.

YEAR, ANCIENT JEWISH. The ancient Jewish year is a lunar year, consisting commonly of eleven months, which alternately contain thirty and twenty- nine days. It was made to agree with the solar year, either by the adding of eleven, and sometimes twelve days, at the end of the year, or by an embo- lismic month. The names and quantities of the months stand thus: — 1. Nisan, or Abib, thirty days.

2. Jair, or Zius, twenty-nine. 3. Siban, or Siwan, thirty. 4. Thammuz, or Tammuz, twenty-nine. 5. Ab, thirty. 6. Elul, twenty-nine. 7. Tisri, or Ethanim, thirty. 8. MarchesYam, or Bui, twenty- nine. 9. Cisleu, thirty. 10. Tebeth, twenty-nine. 11. Sabat, or Schebeth, thirty. 12. Adar, in the embolismic year, thirty. Adar, in the common year, was but twenty-nine. Note, in the defective year, Cisleu was only twenty-nine days; and, in the redundant year, Marchesvam was thirty.

YEAR, ANCIENT ROHAN. The ancient Roman year was the lunar year, which, as first settled by Romulus, consisted only of ten months: — viz. 1. March, containing thirty-one days. 2. April, thirty.

3. May, thirty-one. 4. June, thirty. 5. Quintilis, thirty-one. 6. Sextilis, thirty. 7. September, thirty. 8. October, thirty-one. 9. November, thirty. 10. December, thirty. In all 304 days, which came short of the true lunar year by fifty days, and of the solar by sixty-one days. Numa Pompilius corrected this irregular constitution of the year, and com- posed two new months, January and February, of the days that were used to be added to the former year.

YEAR, ARABIC, MAHOMETAN, TURKISH, &c. The Arabic, Mahometan, and Turkish year, called also the year of the Hegira, is a lunar year, equal to 354 days, eight hours, and forty-eight minutes, and consists of twelve months, which contain alter- nately thirty and twenty-nine days.

YEAR, HINDOO. The Hindoo year differs from all these, and is indeed

different in different pro- vinces of India. The best account that we have of it is by Mr. Cavendish, in the Philosophical Transactions of the Royal Society of London, 1792. 1 Before I speak of the civil year of the Hindoos (says this writer) it will be proper to say a few words of the astronomical year by which it is re- gulated: — 1. The astronomical year begins at the instant when the sun comes to the first point of the Hindoo zodiac. In the year 1792 it began on April 9th, at 22 h. 14′ after midnight of their first meridian, which is about 41′ of time west of Cal- cutta; but, according to Mr. Gentil's account of the Indian astronomy, it began 3 h. 24′ earlier. As this year, however, is longer than ours, its com- mencement falls continually later, in respect of the Julian year, by 50′ 26 in four years. This year is divided into twelve months, each of which corre- sponds to the time of the sun's stay in some sign ; so that they are of different lengths, and seldom begin at the beginning of a day. The civil day it. all parts of India begins at sunrise, and is divided into sixty parts called dandas, which are again divided into sixty palas. In those parts of India in which the Benares almanac, or as it is there called patras, is used, the civil year is lunisolar, consisting of twelve lunar months, with an inter- calary month inserted between them occasionally. It begins at the day after the new moon next before the beginning of the solar year. The lunar month*

is divided into thirty parts called teethees; these are not strictly of the same length, but are equal to the time in which the moon's true motion from the sun is 12°. From the new moon till the moon arrives at 12° distance from the sun is called the first teethee ; from thence till it comes to 24° is called the second teethee; and so on till the full moon, after which the teethees return in the same order as before. The civil day is constantly called by the number of that teethee which expires during the course of the day ; and, as the teethee is some- times longer than one day, a day sometimes occurs in which no teethee ends. When this is the case the day is called by the same number as the fol- owing day; so that two successive days go by the same name. It oftener happens, however, that two teethees end on the same day; in which case the number of the first of them gives name to the day, and there is no day called by the number of the last, so that a gap is made in the order of the days. In the latter part of the month the days are counted from the full moon, in the same manner as in the former part they are counted from the new moon ; only the last day, or that on which the new moon happens, is called the 30th instead of the 15th. It appears, therefore, that each half of the month constantly begins on the day after that on which the new or full moon falls; only sometimes the half month begins with the second day, the first being wanting. This manner of counting the days is sufficiently intricate, but that of counting the months is still more so. The civil year begins at the day after the new moon ; and, in the years which have an intercalary month, this month begins at the day after the

new moon ; but notwithstanding this, the ordinary civil month begins at the day after the full moon. To make their method more intelligible we will call the time from new moon to new moon the natural month. The civil month Visakha, the first in the Hindoo kalendar, which extends from the 9th of our April to the 10th of May, begins at the day after that full moon which is nearest to the instant at which the sun enters Mesha, the first in order of the Indian signs, whether before or after ; however, it is not always accurately the nearest. A consequence of this way of counting the months is. that the first half of Chitra, the last month in the Indian kalendar, extending from March the 10th to April the 9th, fall in one year, and the latter half in the following year; and, whenever the sun enters no sign during a natural month, this month is intercalary. The number of days in the month varies from twenty- nine to thirty-two. Indeed the Hindoo months, both solar and lunar, consist neither of a determi- nate number of days, nor are regulated by any cycle, but depend solely on the motions of the sun and moon ; so that a Hindoo has no way of know- ing what day of the month it is but by consulting his almanac ; and, what is more, the month ought sometimes to begin on different days in different places, on account of the difference in latitude and longitude, not to mention the difference which may arise from errors in computation. This mode of computing time must be attended with many in- conveniences; but in the transactions of civil life the Hindoos do not much regard it. A disagreement, however, in the computation of the teethee, which sometimes also happens, occasions no small perplexity ; because by the teethees, or lunar

YED

Brahmin in charge of a temple, or v hose duty it ia to announce the times for the observance of reli- gious ceremonies, is therefore furnished with one of their almanacs ; and if he be an astronomer, he makes such corrections in it as the difference o? latitude and longitude render necessary.

YEAR, JELLALJEAN, is a correction of the former Persian year, by sultan Jellaleddan, in 1089. See KALENDAR.

YEAR, PERSIAN. The Persian year is a solar year of about 365 days; consisting of twelve months of thirty days each, with five intercalary days added at the end.

YEARN, v. n., v. a., & n. s. Sax. carman. To feel great internal uneasiness. In Spenser it is sometimes earn, and used for desire, or the pain 01 longing ; it now implies tenderness or pity, but is not a common word : the noun substantive corre- sponds.

Joseph made haste ; for his bowels did yearn upon his brother ; and he

sought where to weep, and he en- tered into his chamber. Gen. xliii. 30.

He despised to tread in due degree, But chaffed, and foamed, with courage fierce and

stern, And to be eased of that base burden still did yeai •«.

Speruer.

Falstaff, he is dean, And we must yearn therefore. Shukspeare.

She laments for it, that it would Yearn your heart to see it. Id.

Yet for all the yearning pain Ye have suffered for their loves, in vain, I fear they'll prove so nice and coy, To have, and t' hold, and to enjoy. liiulibras.

When the fair Leucothoe he spied, To check his steeds impatient Phoebus yearned, Though all the world was in his course concerned.

Waller.

Where our heart does but relent, his melts ; where our eye pities, his bowels yearn. Ssnth.

Your mother's heart yearns towards you. Actttison.

At beholding the miseries of others, they find such yearnings in their bowels, and such sensible commo • tions raised in their breasts, as they can by no means satisfy. Calamy.

YEDDO, or JEDDO, a city of Japan, which may properly be considered as the capital of the empire. It is situated at the head of a great bay, and at the mouth of a large river of the same name. Meaco, the residence of the spiritual emperor, was the ori- ginal capital, and is still in some degree considered as such ; but since the Kubo Sanaa, the civi. and military ruler,has fixed his residence at Yeddu,that city has far eclipsed the other. It contains rnany splendid palaces, which stand by themselves, sur- rounded by large court-yards and stately gates; and though built only of wood, and one story Ligh, are distinguished by varnished staircases, large and finely ornamented apartments. All these are eclipsed, however, by the palace of the emperor, which may more properly be called a great fortified city, si- tuated in the heart of the general city, said to be five leagues in circumference, surrounded with walls and ditches, and containing several fortified buildings. The outer part is composed of streets, containing many palaces, in which reside the princes of the blood, ministers, and other public functionaries. The centre of the enclosure contains the palace or

residence of the emperor. Unlike all the other Japanese structures it is built of free- stone, and surrounded by a wall of the same mate- rial without cement. The bc«'y of the palace, how-

ever, like other Japanese structures, consists only of one hish story. The apartments are spacious : mats are the only furniture used ; so that the palace is distinguished only by their superior number and whiteness. Its chief ornament consists in the walls, which are made of the finest cedar and camphire wood, and often varnished and covered with dif- ferent figures. Behind the palace are gardens and orchards of great beauty. The city is said to be seven miles long, five broad, and twenty in cir- cumference : it has no walls except those which surround the palace. It is intersected by branches of the river, and by canals, which are crossed by numerous bridges. The houses, with the excep- tion of those which belong to the nobles and clergy, are small and low, composed of wood, paper, and mats. Here, although every house keeps a large tub of water under the roof, and firemen are constantly patrolling the streets, conflagrations often take place to a dreadful extent. One, which occurred in 1703, was so great that 100,000 houses are sup- posed to have been consumed. Besides being the residence of the monarch, Yeddo is the seat of an extensive commerce, and contains many flourishing manufactures. Long. 140° E., lat. 36° 30′ N.

YELK, 7i. s. Sax. jealepe, yellow. The yellow part of an egg. Often written, and pronounced yolk.

The yolk of the egg conduceth little to the genera-, tion of the bird, but only to the nourishment of the same : for if a chicken be opened when it is new-hatched, you shall find much of the yolk remaining.

Bacon.

That a chicken is formed out of the yelk of an egg, with some ancient philosophers, the people still opinion.

Browne.

All the feathered kind From the included yolk, not ambient white, arose.

Dry den.

YELL, v. n. & n. s. To cry out with horror and agony : cry made.

Nor the night raven, that still deadly yells,' Nor grisly vultures, make us once affeared. Spenser.

Each new morn,

New widows howl, new orphans cry ; new sorrows Strike heaven on the face, that it resounds, As if it felt with Scotland, and yelled out Like syllables of dolour. Shakspeare.

With like tim'rous accent and dire yell, As when, by night and negligence, the fire Is spread in populous cities. Id.

1 ellmg monsters, that with ceaseless cry Surround me. Milton.

Hence are heard trie groans of ghosts, the pains Of sounding lashes, and of dragging chains. The Trojan stood astonished at their cries, And asked his guide from whence those yells arise.

Dry den.

Others in frantick mood

Run howling through the streets ; their hideous yell Rend the dark welkin. Philips.*

Night-struck fancy dreams the yelling ghost.

Thomson.

Y El /LOW, adj. -\ Sax. yealepe; Belg.

Y EL' LOWBOY, 7i. s. I gheleuwe, geel; Ital.

Y EL' LOW ISH, adj. [giallo; Goth, gullig :

YEI/LOWISBHEW, n. s. fGoth. uil and oo/is the

YELˆLOWHESS, | sun. Being of a bright

YEL LOWS. J glaring color, as gold :

yellow-boy is a low name for a gold coin : yellow- ish, approaching to yellow : the noun substantive corresponding : yellowness, the quality of yellow; used by Shakspeare for jealousy : the yellows is a disease of horses.

Only they that come to see a fellow In a long motley coat, guarded with yellow, Will be deceived. Shakspeare.

His horse sped with spavins, and raied with the yel- lows. Jd.

Ford I will possess with yellowngst. Id.

Apples, covered in lime and ashes, were well ma- tured, as appeared in the yellowness and sweetness.

Bacon .

He brought the green ear and the yellow sheaf.

Milton.

Bruised madder, being drenched with the like alcali – zate solution, exchanged its yellowishness for a redness.

Boyle.

Although amber be commonly of a yellowish colour, yet there is found of it also black, white, brown, green, blue, and purple. Woodward.

After a lively orange, followed an intense, bright, and copious yellow, which was also the best of all the yellows. Newton.

John did not starve the cause ; there wanted not yellowboys to fee counsel. Arbuthnot.

Negligent of food, Scarce seen, he wades among the yellow broom.

Thomson.

YELLOW is one of the original colors of light.

YELLOW COLORS for painting. See CHEMISTRY, COLOR, and COLOR MAKING.

YELLOW, DYEING OF. See DYEING.

*YELLOW EARTH, in mineralogy. Color ochre yellow. Massive. Dull. Fracture slaty or earthy. Streak somewhat shining. Opaque. Soils slightly. Soft. Easily frangible. Adheres to the tongue. Feels rather greasy. Specific gravity 2*24. Before the blowpipe it is converted into a black and shining enamel. Its constituents are silica 92, alumina 2, lime 3, iron 3. — Merat-Guillot. It is found at Wehraw in Upper Lusatia, where it is associated with*

clay and clay-ironstone. When burnt it is sold by the Dutch as a pigment under the name of English red. It was used as a yellow paint by the ancients.

YELLOW FEVER. See MEDICINE.

YELLOW HAMMER. See EMBERIZA.

YELLOW, NEAPOLITAN, or NAPLES, a beautiful color much used by painters, formerly thought to be prepared from arsenic, but now discovered to have lead for its basis.

YELLOW WEED, in botany. See RESEDA.

YELLOWSTONE, or Kochejaune, or Jaun, a river of North America, which rises from lake Eustis in the Rocky Mountains, and after an E. N. E. course of about 1100 miles joins the Mis- souri 1880 miles from the Mississippi. This river is nearly or quite as large as the other branch, which retains the name of Missouri. Its principal branches are Bighorn and Tongue rivers. Captain Clark, the associate of captain Lewis, descended this river on his return from the Pacific Ocean. He found it deep, rapid, and navigable from the place where he struck to its mouth, a distance of 850 miles. On the 30th of August, 1818, a batta- lion of the rifle regiment, commanded by colonel Talbot Chambers, consisting of 350, embarked at Belle Fontaine on an expedition up the Missouri, with a view to establish a fort at the mouth of the Yellowstone.

YELP, v. n. Sax. jealpan. To bark as a beagle-hound after his prey.

A little herd of England's tim'rous deer Mazed with a yelping kennel of French curs. Shahsp.

\ KM F.N, a country of Arabia, forming the south- eastern division of that peat of Asia situated partly

upon the Red Sea, and partly ou the Ind an Ocean. It was celebrated by the ancients under the flatter- ing title of The Happy Arabia, but is by no means exempted from that curse of aridity under which Arabia generally suffers ; yet its lower declivities are covered with trees and aromatic shrubs; and the mountain chains are divided by fine valleys, which, being watered

by numerous streams, can be advantageously cultivated.

This is one of the few parts of Arabia which have been formed into a considerable and monar- chical state. It is subject to a sovereign, who assumes the modest title of Imam, or doctor, but exercises over his subjects an authority nearly absolute. Sana is the capital.

YEO'MAN, n. s. \ Sax. jeoman. Frisick ge.- YEO'MANRY. \ , man, a villager. — Junius. A man of a small estate in land ; a farmer ; a gentleman farmer ; a title given to soldiers and superior servants : the collective body of yeomen.

A jolly yeoman, marshal of the hall, Whose name was Appetite, he did bestow Both guests and meats. Spenser

You, good yeomen,

Whose limbs were made in England, shew us here The mettle of your pasture. Shafapeare.

He instituted, for the security of his'person, a band of fifty archers, under a captain, to attend him, by the name of yeomen of his guard. Bacon.

This did amortize a great part of the lands of the kingdom unto the hold and occupation of the yeomanry, or middle people, of a condition between gentlemen and cottagers. Id.

The' appointment for the ensuing night he heard ; And therefore in the cavern had prepared Two brawny yeomen of his tfusty guard. Dryden.

Gentlemen should use their children as the honest farmers and substantial yeomen do theirs. Locke.

He that has a spaniel by his side is a yeoman of about one hundred pounds a year, an honest man ; he is just qualified to kill an hare. Addison.

At Windsor St. John whispers me i' the ear ; The waiters stand in ranks, the yeomen cry Make room ! as if a duke were passing by. Sivift.

YEOVIL, a market-town in Stone hundred, So- mersetshire, near the river Yen, or Ivil, five miles west of Sherborne, and 121 VV.S.W. of London. It consists of upwards of twenty streets and lanes, some of which are wide and open, with the houses well built of free-stone and brick : the church is a fine old Gothic structure, with a high tower, con- taining six bells. Four classes of dissenters have chapels in this town. The market-house is an extensive building, supported by stone pillars. This town was formerly noted

for its manufacture of woollen cloth ; but its principal trade now is lea- ther gloves. Market on Friday.

YERGHIEN. See YARKAN.

YERK, v. a. The same with JERK, which see. To throw out or move with a spring.

Their wounded steeds

Fret fetlock deep in gore, and with wild rage Yerk out their armed heels at their dead masters.

Shakrpeare.

V I'.S, adv. Sax. jipe. A term of affirmation ; the affirmative particle opposed to no ; also of em- phasis, like yea.

Pray, Madam, are you married ?— Yet. More.

KM, you despise the man to books confined, Who from his study rails at human kind, riioiiirh what he learns he speaks. Pope.

I !ii>. were a fit speech for a general in the head of an when going to battle : yes, and it is no less fit

speech in the head of a council, upon a deliberation of entrance into a war. Bacon.

YEST, n. i. i Sax. jej-t. The foam, spume,

YEST'Y, adj. J or flower of beer in fermentation • barm ; foam ; froth : the adjective corresponding.

Though you untie the winds, and let them fight Against the churches ; though the i/esty waves Confound and swallow navigation up. Shahspeare.

Yeast and outward means do fail, And have no power to work on ale. Hudibras

When drays bound high, then never cross behind, Where bubbling yeast is blown by gusts of wind.

Gay.

YEST, or YEAST, a head or scum rising upon beer or ale while working or fermenting in the vat. See BREWING. It is used for a leaven or ferment in

the baking of bread, as serving to swell or pufl it up very considerably in a little time, and to make it much lighter, softer, and more delicate See BAKING, BARM, and BREAD. An artificia yest, by which good bread may be made without the assistance of any other ferment, is thus pre- pared : — Boil flour and water together to the con sistence of treacle, and when the mixture is cold saturate it with fixed air. Pour the mixture thus saturated into one or more large bottles or narrow mouthed jars; cover it over loosely with paper, and upon that lay a slate or board with a weight to keep it steady. Place the vessel in a situation where the thermometer will stand from 70° to 80°, and stir up the mixture two or three times in twenty-four hours. In about two days such a de- gree of fermentation will have taken place as to give the mixture the appearance of yest. With the yest in this state, and before it has acquired a tho- roughly vinous smell, mix the quantity of flour intended for bread in the proportion of six pounds of flour to a quart of the yest, and a sufficient por- tion of warm water. Knead them well together in a proper vessel, and covering it with a cloth let the dough stand for twelve hours, or till it appears to be sufficiently fermented, in the forementioned de- gree of warmth. It is then to be formed into loaves and baked. Mr. Henry adds that perhaps the yest would be more perfect if a decoction of malt were used instead of simple water. It has lately been discovered that a decoction of malt alone, without any addition, will produce a yest proper enough for the purpose of brewing. This discovery was made by Joseph Senyor, servant of the Rev. Mr. Mason of Aston near Rotheram ; and he received for it a reward of £20 from the Society for Pro- moting Arts, Manufactures, and Commerce. The process is as follows : — Procure three earthen or wooden vessels of different sizes and apertures, one capable of holding two quarts, the other three or four, and the third five or six : boil a quarter of a peck of malt for about eight or ten minutes in three pints of water; and, when a quart is poured off from the grains, let it stand in the first or smaller vessel, in a cool place, till not quite cold, but re- taining that degree of heat which the brewers usually find to be proper when they begin to work their liquor. Then remove the vessel into some warm situation near a fire, where the thermometer stands between 70° and 80° Fahrenheit, and there let it remain till the fermentation begins, which will be plainly perceived within thirty hours : add then two quarts more of a like decoction of malt, when cool, as the first was ; and mix the whole in the second or larger vessel, and stir it well in

which must be repeated in the usual way as it rises in a common vat: then

add a still greater quantity of the same decoction, to be worked in the largest vessel, which will produce yest enough for a. brewing of forty gallons. Common ale yest may be kept fresh and fit for use several months by the following method : — Put a quantity of it into a close canvas bag, and gently squeeze out the moisture in a screw press till the remaining matter be as firm and stiff as clay. In this state it may be close packed up in a tight cask for securing it from the air; and will keep fresh, sound, and fit for use, for a long time. This is a secret that might be of great use to the brewers and distillers, who, though they employ very large quantities of yest, seem to know no method of preserving it, or raising nurseries of it, for want of which they sus tain a very considerable loss ; whereas the brewers . in Flanders make a very great advantage of sup- plying the malt distillers of Holland with yest, which is rendered lasting and fit for carriage by this easy expedient.

YEST'ER, adj. Sax. jerren; Belg. ghister ; Lat. hesternus. Being next before the present day. Not often used but in composition with another word, as day or night. See below.

Love might as well be sowed upon our sands, As in a breast so barren : To love an enemy, the only one Remaining too, whom yester sun beheld Mustering her charms. Dryden.

YESTERDAY, n.s.&adv. f Saxon jiptan-

YES'TERXIGHT. $ baej. See YESTER.

The day last past; on the day next before to-day : yesternight corresponds.

We are but of yesterday, and know nothing, because our days upon earth are a shadow. Job viii. 9.

To-ujorrow, and to-morrow, and to-morrow, Creeps in this petty pace from day to day, To the last syllable of recorded time ; And all our yesterdays have lighted fools The way to dusty death. Shakspeare.

Eleven hours I've spent to write it over ; For yesternight by Catesby was it sent me. Id.

Martius gave us yesterday a representation of the empire of the Turks, with no small vigour of words.

Bacon.

The distribution of this conference was made by Eu- polis yesternight. Id.

If yesterday could be recalled again, Even now would I conclude my happy reign. Drydtn.

Mrs. Simper sends complaints in your yesterday's Spectator. Addison.

Naked from the womb We yesterday came forth, and in the tomb Naked again we must to-morrow lie ; Born to lament, to labour, and to die. Prior.

YET, conj. & adv. Sax. syr, jet, jeta. Ne- vertheless ; notwithstanding ; however : beside ; stili ; again ; at least ; still ; even ; hitherto.

Hope beginning here, with a trembling expectation of things far removed, and as yet but only heard of, ecdeth with real and actual fruition of that which no tongue can express. Hooker.

If any man neglect his duty, his fault must not be ascribed to the rule appointed, neither yet to the whole church. Whitgifte.

Men may not too rashly believe the confessions of witches, nor yet the evidence against them. Bacon.

Thales being asked when a man should marry, said, Young men, not yet ; old men, not at all. Id.

Drench laws forbid the female reign, Yet love does them to slavery draw. Coucley.

Nor yet amidst this joy and brightest morn Was absent, after all his mischief done, The prince of darkness. Hilton.

Let virtuoso's in five years be writ, Yet not one thought accuse thy toil of wit. Dryden.

Yet a few days, and those which now appear In youth and beauty like the blooming year, In life's swift scene shall change. Id.

Though such men have lived never s i much upon the reserve, yet, if they be observed to have a par- ticular fondness for persons noted for any sin, it is ten to one but there was a communication in the sin, be- fore there was so in affection. South.

This furnishes us with yet one more reason why our Sariour lays such a particular stress on acts of mercy.

A tterbury.

Yet, yet a moment, one dim ray of light Indulge, dread chaos and eternal

night. Pope.

YETHAN. See YTHAN. YE'V7EN, for given. Obsolete. Let that room to my lady be yeven,

She shall be a grace,

To fill the fourth place, And reign with the rest in heaven. Spenser.

YEW, n.s.) Sax. ip ; Welsh yw. Often YEWˆN, adj. $ written eugh ; but the former or- thograghy is nearer to the sound and derivation. A tree of tough wood, used for bows, and there- fore planted in church-yards : yewen is made of yew.

His stiff arms to stretch with eughen bow, And manly legs still passing to and fro. Hubberd.

Slips of yen-, Silvered in the moon's eclipse. Shakspeare.

The shooter eugh, the broad-leaved sycamore, The barren plantane, and the walnut sound ;

The myrrhe, that her foul sin doth still deplore ; Alder, the owner of all waterish ground. Fairfax.

He drew, And almost joined the horns of the tough yew.

Dryden.

The distinguished yew is ever seen, Unchanged his branch, and permanent his green.

Prior.

YEW, in botany. Yew trees are remarkable for their duration. There were not many years since growing within 300 yards of the old Gothic ruins of Fountain's Abbey, near Rippon, in Yorkshire, seven very large yew trees, commonly called the Seven Sisters, whose exact ages cannot be accu- rately ascertained, though tradition says that they were standing in the year 1088. It is said also that, when the great Fountains' abbey was build- ing, which is 700 feet long, and was finished in 1283, the masons used to work their stones, during the hot summers, under the shade of these trees. The circumference of the Seven Sisters, when mea- sured by a curious traveller, were of the following sizes : — the smallest tree, round its body, "five yards one foot ; four others are from five yards and a half to seven yards and a half; the sixth is nine yards and a half; and the seventh is eleven yards one

foot seven inches in circumference, being two yards ten inches larger than the great yew tree now growing in the churchyard at Gresford, in North Wales, which is nine yards nine inches. These trees are the largest and oldest in the British domi- nions. See TAXUS.

YEZDEGERD, or JEZDEGERD, a celebrated

monarch of Persia, who flourished in the seventh

_ century, but was expelled by the Saracens, and

" reigned afterwards in Chorassan. See PERSIA, and

SARACENS.

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YIECHE, a kind of jasper. See TAI-TONG.

-YIELD, v. a. & v. n. / Sax. jjel'toan, to pay ; Isl.

YIELD'ER, n. s. \gelda; Goth, gialda. To

produce; render; give in return for cultivation or labor ; afford ; exhibit ; permit ; surrender (sometimes used with up) : as a verb neuter to give up a contest; submit; concede; comply; allow ; give place : the noun substantive corres- ponding.

\Vhea thou tillest the ground, it shall not henceforth yield unto the>- her strength. Genesis iv. 12.

He gathered up his feet into the bed and yielded up the ghost. Id. xlix. 33.

U itli her much fair speech she caused him to yield.

Proverbs.

He not yielding over to old age his country delights, especially of hawking, was, at that time following a merlin, brought to see this injury offered unto us.

SUbuy,

The mind of man desireth ever more to know the truth, according to the most infallible certainty which the nature of things can yield. Hooker.

The enemies sometimes offered unto the soldiers, upon the walls, great rewards, if they would yield tip the city, and sometimes threatened them as fast.

Knolles.

Some guard these traitors to the block of death, Treason's true bed, and yielder up of breath. Shaksp.

I see a yielding in the looks of France : Mark, how they whisper. Id.

He makes milch kine yield blood. Id.

Often did I strive

To yield the ghost ; hut still the envious flood Kept in my soul, and would not let it forth To find the empty, vast, and wandering air. Id.

There could be no secure peace, except the Lacede- monians yielded to those things, which being granted, it would be no longer in their power to hurt the Athe- nians. Bacon.

If we yield that there is a God, and that this God is almighty and just, it cannot be avoided but that, after this life ended, he administers justice unto men.

Hakewill.

Ha yields not in his fall ; But fighting dies, and dying kills withal. Daniel.

No country, for the bigness of it, can be better wa- tered, or yield fairer fruits. Heylyn.

1 yield it just, said Adam, and submit. Milton.

All is not lost ; immortal hate, And courage never to submit or yield. Id.

They laugh, as if to them I had quitted all, At random yielded up to their misrule. Id.

If the inspiring and expiring organ of any animal be stopt, it suddenly yield to nature, and dies. Walton.*

They shew the world that they are not of a yielding temper, which will be

wronged or baffled. Kettlewell.

There he saw the fainting Grecians yield, And here the trembling Trojans quit the field, 1'ursued by fierce Achilles. Dryden.

Life is but air,

That yields a passage to the whistling sword, And closes when 'tis gone. Id.

If you take the idea of white, which one parcel of tnow yielded yesterday to our sight, and another idea of white from another parcel of snow you see to-day, and put them together in your mind, they run into one, and the idea of whiteness is not at all increased.

l.ocke.

All the substances of an animal, fed even with aces- cent substances, yield by fire nothing but alkaline salts.

Arbutlitwt.

Tell me in what more happy fields The thistle springs, to which the lily yieldi. Pope.

Tig the pride of man which is the spring of this evil, and an unwillingness to yield up their own opin- ions. Watts.

YNCA, an appellation anciently given to (he kings of Peru, and the princes of their blood ; the word literally signifying, lord, king, emperor, an 1 royal blood. Pedro de Cieca, in his Chronicles of Peru, gives the origin of the incas ; and says that that country was for a long time the theatre of all manner of crimes, of war, dissension, and the most dreadful disorders, till at last two brothers appeared, one of whom was called Mango Capa ; of this person the Peruvians relate many wonder- ful stories. lie built the city of Cusco, made laws, established order and harmony by his wise regulations ; and he and his descendants took the name of inca, which signifies king or great lord. These incas became so powerful that they rendered themselves masters of all the country from Pasto to Chili, and from the Maule on the south to the Augasmago on the north, these two rivers forming the bounds of their empire, which extended above 1 300 leagues in length. This they enjoyed till the divisions between Inca Guascar and Atabalipa; which the Spaniards laying hold of, made them- selves masters of the country, and destroyed the empire of the incas. See PERU.

YOKE, n. s. & v. a. \ Sax. geoc; Swed. and

YOKE'FELLOW, n. s. > Dan. ok ; Goth, uk ; Mod.

YOKE'MATE. j Goth, guk ; Belg. juk; Fr.

joteg ; Lzl.jugum. The bandage or frame of wood placed on the neck of draught oxen ; any badge of subjection or slavery ; a link ; chain ; band ; cou- ple ; pair (from the yoke consisting of two parts) : to bind or couple together ; restrain ; confine ; enslave : a yokefellow or yokemate is a companion in labor ; mate ; fellow.

Bring a red heifer, wherein is no blemish, and upon which never came yoke. A in/itm.

*Yokefellows in arms, I*et us to France. Shakspeare.*

These are the arms

With which he yoketh your rebellious necks, Razeth your cities. Id.

Cassius, you are yoked with a lamb, That carries anger as the flint bears fire. Id.

Our country sinks beneath the yoke ; It weeps, it bleeds. Id.

Men marry not ; but choose rather a libertine single life than to be yoked in marriage. Id.

Xerxes, the liberty of Greece to yoke, Over Hellespont bridged his way. JUi/i.w.

You cannot think me fit To be the yokefellow of your wit, Nor take one of so mean deserts To be the partner of your parts. Jludibra.*

His lands a hundred yoke of oxen tilled. Dryden.

This yoke of marriage from us both remove, Where two are bound to draw, though neither love.

U.

Seek not in Latian bands to yoke Our fair Lavinia. Id.

This Stetes promised to do, if he alone would yoke . together two brazen-hoofed bulls, and, plowing the ground, sow dragon's teeth. L'Ettnmgt-

Before Toulon thy yokemate lies, Where all the live-long night he sighs. Stepney.

Those who have most distinguished themselves by railing at the sex, very often choose one of the most worthless for a companion and yokefellow. Spectator.

A yearling bullock to thy name shall smoke, Untamed, unconscious of the galling yoke. Pope.

A yoke of mules outgoes a yoke of oxen, when set to work at the same time ; for mules are swifter. Rroume.

YOKE, in Roman antiquity. See JUGVM.

YORK.

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YOKE OF LAND, iir. our ancient customs, was the apace which a yoke of oxen, that is, two oxen, may plow in one day.

YOKE EI.M, in botany. See ULMUS.

YOLK, n. s. See YELK. The yellow part of an egg.

Nature hath provided a large yolk in every egg, a great part whereof remaineth after the chicken is hatched. Run.

YOLK. See EGG. It contains a lymphatic sub- stance mixed with a certain quantity of mild oil, which, oa account of this mixture, is soluble in water. When exposed to heat, it assumes a con- sistence not so hard as the white of the egg ; and, when bruised, gives out the oil which it contains. This oil has been used externally as a liniment.

Y , ‘ ˆ\ Sax. jeond ; Goth. aund. Being Y , ‘ I at a distance within view.

Good mother do not marry me to yon fool. Shaksp.

The fringed curtains of thine eyes advance, And say what thou see’st yond. Id.

Yonder men are too many for an ambassage, and too few for a fight. Bacon.

Would you not laugh to meet a great counsellor of state in a flat cap, his gloves under his girdle ; and yond haberdasher in a velvet gown, furred with sables ?

Ben Jonson.

Yon flow'ry arbors, yonder allies green. Milton.

Yonder are two apple-women scolding.

Arbuthnot and Pope.

Let other swains attend the rural care, But nigh yon mountain let me tune my lays. Pope.

Then hear me, gracious heaven, and grant my pray'r, Make yonder man the fav'rite of thy care : Nourish the plant with thy celestial dew, Like manna let it fall, and still be new. Harte.

If I were to fall down yonder precipice, and break my neck, I should be no more a man of this world.

Beat tie.

YOND, ad;. M. Goth, gaand, gaind. Mad; furious ; transportedˆwith rage ; under alienation of mind. Obsolete. '

Then like a lion, which hath long time sought His robbed whelps, and at the last them found Amongst the shepherd swains, then waxeih wood and

yond ; So fierce he laid about him. Spenser.

Nor those three brethren, Lombards, fierce and yond.

Fairfax.

YONNE, a considerable river in the interior of France, rising in the department of the Nievre, near Chateau Chinon, and after flowing more than 100 miles, falls, near Montereaufault Yonne, into the Seine.

YONNE, a department in the interior of France, situated nearly half way between Paris and the frontier of Switzerland. Its extent, equal to two of our larger counties, is about 2900 square miles ; its population nearly 330,000. Its surface consists, in general, of undulating plains, traversed in the south-west by a chain of hills of no great height. The principal river is the Yonne. The climate is temperate, and of sufficient warmth for the vine: its quality is in general good. Corn, hemp, and flax, are also cultivated.

YORE, or OF YORE, adv. Sax. jeoˆana ; (Goth or; Sax. an, time.) Leng; of old time; long ago.

Which, though he hath polluted oft and yore, Yet I to them for judgment just do fly. Spetuer.

Thee, bright eyed Vesta, long of yore To solitary Saturn bore. Millon.

And seated here a see, his bishoprick <

Dryden.

In times of yure an ancient baron lived ; Great gifts bestowed, and great respect received.

Prior.

But Satan now is wiser than of yore, And tempts by making rich, not making poor. Pope.

YORK, city, lies at the poini where the three ridings of Yorkshire meet, and is reckoned a county of itself. It is pleasantly situated on the rivers Ouse and Fosse, over the former of which there is a handsome stone bridge of three arches, finish- ed in 1820. The other river is crossed by five bridges, one of them is a spacious stone edifice, recently erected. York is distant from London 199 miles, and contains twenty-eight parishes. Here are twenty-three parish churches, besides the minster or cathedral ; this stately structure was not only the largest Gothic church in England, but was allowed to be superior to any in existence, until the incendiary Martin destroyed a consider- able part of it : as this however has been com- pletely restored, we shall describe it as it stood be- fore nis infamous attempt. The whole length from east to west is 524 feet, breadth of the eastern end 105, and of the western end 109; length of the cross aisles, from north to south, 222 ; height of the grand lantern tower 213; height of the two western towers 196; height of the nave, or body of the church, ninety-nine : height of the eastern window seventy-five, breadth of the eastern win- dow thirty-two. The west front is adorned with two beautiful towers, between which, over the en- trance, is a window of fine painted glass. The south tower contains ten bells, the largest weigh- ing 57 cwt, and on the top of the lantern, in the great middle tower, is a turret containing a small bell. The ascent to the south end of the cross is by three flights of steps ; from this entrance there is a beautiful view of the marigold window, on each side of which are two compartments of win- dows, beautifully painted. The lantern steeple is ornamented with great taste, and has eight win- dows, forty-five feet high. The choir is divided from the rest of the church by a curious stone screen, over which is the organ, and the front is adorned with statues of all the kings of England, from William the Conqueror to Henry VI. There are thirty-two stalls for the prebendaries, all of fine marble; behind which, on each side of the choir, are curious ranges of carved wood work, adorned with pinnacles. The ascent to the altar is by a flight of sixteen steps, and the whole of the body of the church is paved in Mosaic. Many of the

ancient nobility, as well as archbishops, lie buried here, and some of the monuments are magnificent.

The chapter-house is a fine piece of Gothic ar- chitecture ; it is an octagon, sixty-three feet in diameter, and sixty-seven high, the roof being supported without pillars ; the roof is of curious carved work, covered with lead ; in the squares of the octagon are windows; some of them beauti- fully painted. In the vestry-room are several anti- quities, particularly a horn, called Ulphus's drink- ing horn. On the north side of the church stands the library. This beautiful structure appears to have been built in the reign of Richard L, the former edifice having been destroyed by fire. The chapter of York, besides the archbishop, consists of a dean, a precentor, chancellor, subdean, fouv

archdeacons, twenty-eight prebends, a sub-chan- ter, five vicars, seven lay-clerks, six choristers, four vergers, &c. Near the cathedral is St. Michael's-le-Belfry, a curious Gothic structure, containing several handsome monuments : All-Saints' in the Pavement, has a neat octangular steeple : and St. Mary's-Castle-Gate was once admired for its fine spire ; a considerable part of it was taken down because of the damage it had sustained by light- ning in 1797. St. Margaret's has a singular porch of Saxon architecture. The rest of the churches have nothing to render them remarkable. York is surrounded by walls, and is entered by four principal gates ; viz. Micklegate, Bootham-bar, Monk-bar, and Walmgate-bar. In the reign of Edward III. this city was reckoned as a port, and furnished one vessel, with nine men, to his fleet. The streets of York are mostly broad and open; they contain many handsome buildings and are well paved, and lighted with gas. The castle, built by Richard III., is used as a prison; the river Fosse was formerly drawn into a deep moat, en- tirely around it, the only access being by draw- bridges, the larger of which led to the ancient great gate from the country, on the south, the other from the city, on the north. About the year 1734, the latter was rebuilt in a handsome manner, and is now the only entrance, except a small postern near the mills. The castle walls are 1103 yards in circumference. C«n the right wing of the area is a spacious prison for debtors. In the left wing is a handsome chapel. The felons' court yard is between the two wings. On the west side of the area is the county hall, erected in 1777: it is a superb building of the Ionic order. The halls for the trial of prisoners and causes at Nisi Prius, are very convenient at the north and south ends, the entrance being by a portico of six columns. In 1780 an additional building was erected on the east side, having several spacious arched cells, for the confinement of prisoners for

petty offences; also apartments for hard labor, and distinct hos- pital rooms. Without the castle gate, at the extent of the city liberties, are erected the city arms, where the sheriffs receive the judges of assize. Adjoin- ing the castle is a high mound, on which stands the shell of a tower, called Clifford's tower, for- merly furnished with cannon and a garrison. In York were formerly many convents and hospitals, several of their ruins being often dug up and con- verted into the foundations of new buildings. Of these ruins, those of St. Mary's abbey, near the cathedral, are the most considerable. At the foot of the bridge is a very convenient and spacious quay, up to which vessels of 120 tons burden can come.

The guildhall was erected in 1446; it is sup- ported on two rows of massive oak pillars. Here are held the courts of justice, and, adjoining, are rooms for the juries, and the lord mayor's justice- room. The windows are of painted glass. In 1728 a stately and convenient structure was erected on the north end of Coney Street, for the residence of the mayor. The assembly house, which is situate in Blake Street, was built on a plan drawn by the earl of Burlington. It is 140 feet long and forty broad, adorned with Corinthian pillars. The theatre is a neat building, erected in 1770. Be- sides these public buildings, here are two recep- tacles for lunatics ; a county hospital ; a city dispen- sary ; a blue ccat boys, and gray coat girls charity

school, extensive national schools; alms houses, and other charitable institutions. In this city ar« two public banks, a savings bank, a subscription library, news rooms, the Yorkshire philosophical society, and a museum for natural and artificial curiosities ; also a gaol and a house of correction ; with various chapels for Quakers, Roman Catholics, and different classes of dissenters. About one mile south of the city is a good race course, on which there are annual races. At a short distance from the town are extensive cavalry barracks. The new walk, along the banks of the Ouse, is an agree- able promenade, well shaded with lofty trees.

York received its charter from Richard II., and is the only city in England, except London, whose chief magistrate is honored with the title of lord. Its jurisdiction extends over a considerable district, besides the sole conservancy of the rivers Ouse, Wharfe, Derwent, Ayre, Don, and some parts o the Humber. It sends two members to parlia- ment, who are chosen by the freemen in general. The government of the city is vested in the lord mayor, a recorder, twelve aldermen, two sheriffs, eight chamberlains, twenty-four common council men, twenty-two assistants, a town clerk, and other inferior officers. The market places, of which there are two, called the Pavement and Thursday market, are spacious and convenient. The cross in the former is square, with a dome, ascended by winding stairs and supported by twelve Ionic pil- lars. The other is used on a Saturday as butchers' shambles. On the west side of the market place*

stands a cross, for a shelter in bad weather. The trade of York is chiefly in gloves, linens, livery lace, glass, and drugs ; and printing and booksel- ling are conducted on a large scale. Markets on Tuesday, Thursday, and Saturday.

YORK, the capital of Upper Canada, is well si- tuated in the township of the same name, on the north-west coast of Lake Ontario, on the north side of an excellent harbour, and very regularly laid out. The plot of ground marked out for it ex- tends about a mile and a half along the harbour, but at present the number of houses does not greatly exceed 300. The public edifices are a go- vernment house, house of assembly for the provin- cial parliament, a church, court house, gaol, and numerous stores and buildings for the various pur- poses of government. The harbour is nearly circular, and formed by a very narrow peninsula stretching from the western extremity of the town- ship of Scarborough, in an oblique direction, for about six miles, and terminating in a curved point, nearly opposite the garrison ; thus enclosing a beau- tiful basin, about a mile and a half in diameter, capable of containing a great number of vessels, and at the entrance of which ships may lie in safety during the winter.

YORK, a county, Maine, North America, bound- ed north by Oxford county, north-east by Cum- berland county, south-east by the Atlantic, and west by New Hampshire. Chief towns, York and Alfred.

YORK, a sea-port, the capital of York county, Maine; nine miles N.N. E. of Portsmouth, forty- two south-west of Portland, sixty-seven N.N. E. of Boston. It contains a court house and a gaol. Tin! courts for the county are held alternately here and at Alfred. A little business is carried on here in the fisheries. The shipping belonging to this port, in 1816, amounted to 1432 tons.

YORKSHIRE.

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YORK, a county, south side of Pennsylvania, bounded north-east by the Susquehannah, which separates it from Dauphine and Lancaster coun- ties, south by Maryland, west by Adams county, and N. N. W. by Cumberland county.

YORK, a borough, the capital of York county, Pennsylvania, on Codorus Creek ; twenty-two miles W. S. W. of Lancaster, forty-eight north of Baltimore, fifty-two east of Chambersburg, eighty- five west of Philadelphia. It is a pleasant and flourishing town, regularly laid out, and contains a court house, a gaol, a market house, an alms house, a register's

office, an Episcopal academy, and eight houses of public worship, one for Episcopalians, one for English Presbyterians, one for German Presbyterians, one for German Lutherans, one for Roman Catholics, one for Methodists, one for Friends, and one for Moravians. A large part of the houses are handsomely built with brick. A number of the public buildings are spacious and elegant. The surrounding country is fertile and very pleasant.

YORKE (Philip), earl of Hardwicke, a cele- orated English lawyer, born at Dover, in Kent, in 1699. In 1718 he was elected M. P. for Lewes. After serving as solicitor and attorney general, he was, in 1733, made lord chief justice of the king's bench, and created a British peer. In 1736 he was made lord chancellor, which office he held twenty years. In 1754 he was created earl of Hardwicke. In all his offices he acted so as to ac- quire the esteem of all parties. He died in 1764.

YORKSHIRE. In delineating the leading features of this very extensive and highly interest- ing county, it will be necessary to depart, in some degree, from the plan hitherto pursued in the topo- graphical sketches of the other counties. There are, however, a few leading points of a general cha- racter which may serve as an introduction to a more detailed description of the respective districts, or ridings, into which Yorkshire is divided. These particulars are chiefly the following : — The city of York, whence the name of the county is derived, was called by the ancient Britons Caer-Efiroc, by the Romans Eboracum, by the Saxons Evor-vic, by Nennius Caer-Ebrauc, from the royal founder Ebraucus. Camden, however, is of opinion that the word Eboracum comes from the river Ure (now called the Ouse), implying its situation on that river. Hence Eborac, or Eurewic, by the gradual corruption of language, became Yore, and lastly, York. All these various names appear to have been derived from Eure the river, and Wic the Saxon word for a place of refuge or retreat. The Brigantes possessed this district previous to the Roman invasion ; York was their principal city. The Romans included it in the province named Maxima Caesariensis. After their departure York- shire became part of the Saxon kingdom of Nor- tlmmbria. Yorkshire is a maritime county, bound- ed on the east by the German Ocean ; on the south by the river Humber (which separates it from Lin- colnshire), and by Nottingham and Derbyshire; on the west by a small part of Cheshire, by Lan- cashire, and Westmorland ; and on the north by Westmorland and the county of Durham. This county extends 130 miles in" length from east to west, and ninety miles in breadth from north to south; being not less than 460 miles in circum- ference. Its superficial contents are computed at 3,698,380 acres. It is divided into three ridings,

twenty-eight wapentakes, besides the ainsty of the city of York. There are one city, fifty-nine mar- ket-towns, of which thirteen are boroughs. All the

ridings are in the province of York, except a small part which belongs to the bishopric of Durham.

Rivers. — As some of the principal rivers bound, a few of them intersect the different ridings. Mr. Bigland, in his well-arranged description of this county, in vol. 13 of the Beauties of England and Wales, thinks it is best to notice them under the general description. The Tees rises in the moun- tains of Westmorland, and, taking an easterly di- rection, divides the north riding from the bishopric of Durham through its whole extent. Next in geo- graphical position is the Swale, which, rising in the western extremity of the same riding, waters the romantic tract called Swaledale ; and, passing by Richmond and Catterick, enters the vale of York, and flows in that level country till it receives the Wiske, a small river, which, rising near Osmother- ley at the foot of the moors on the western edge of Cleveland, takes first a northerly, than a westerly direction ; and afterwards, turning its course to the south, runs a little to the west of Northallerton and Thirsk, and falls into the Swale below Topclifl'. The Swale, after having received this addition to its waters, continues its course till it joins the Ure at Myton, a few miles below Borough bridge. The Ure rises in a mountainous tract on the borders of Westmorland. Collecting many tributary streams in its course through the beautiful valley of Wens- leydale, it flows with a rapid current for many miles within the north riding. Passing Askrig, Middleham, and Masham, it turns south-easterly, flowing by Rippon and Boroughbridge ; soon after which it receives the Swale, and, passing on to- wards York, it takes the name of Ouse, from an insignificant rivulet with which it there forms a junc- tion ; then, passing on to the village of Nun-Monk- ton, its waters are further increased by those of the Nid, which rising among the Craven Hills passes by Ripley and Knaresborough, and falls into the Ouse about seven miles above York. The Ouse thus augmented flows gently on to York, where it is joined by the Foss, a small stream which takes its rise near Craike Castle. From York the Ouse, with some considerable windings, takes an almost direct southerly course, and becomes the boundary between the east and west ridings. The Wharfe, which rises in the Craven Hills, and runs south-east almost parallel to the Nid, and passes by Ottley, Wetherby, and Tadcaster, falls into the Ouse at the village of Nun-Appleton, about eight miles below York. After this new accession to its waters, the Ouse flows south-east with a smooth and broad stream, by Selby, and about four or five miles be- low that town directs its course nearly east, till it receives the Derwent. This river, rising in the eastern moorlands in the north riding, within about four miles of the sea, and eight or nine from Scar- borough, at first takes a southerly direction, through the village of Hackness, and along a most pictu- resque valley to Ayton, running in a line almost parallel to the coast till it comes to the foot of the Wolds. It then takes a west and afterwards a south-west direction ; and

having received the Rye from Helmsley, passes by the town of Walton, to which it is navigable from the Ouse for vessels of twenty-five ions. It is the boundary between trip north and east ridings, from its junction with the sunll river Hertford, till it approaches near Stamford

Bridge, where it enters the east riding, within which it falls into the Ouse, near the village of Barmley, about three miles and a half above llow- den. After receiving the Derwent, the Ouse con- tinues its course nearly south-east, and within less than a quarter of a mile of Booth ferry is joined by the united Calder and Aire ; this junction brings to the Ouse a great accession of waters. The Aire, which is one of the most considerable rivers of Yorkshire, rises in the hills of Craven, about five and a half or six miles north-east of Settle, and runs with a slow stream by Skipton ; then winding to the east and south-east, and passing by Leeds, Ponte- fract, Snaith, and Rawcliff, falls into the Ouse a little below Armin and near Booth Ferry. The Cslder rises in Jancashire, and running eastward falls into the Aire about five miles north-east of Wakefield. The Don rises near the borders of Cheshire ; and, running south-east to Sheffield, directs its course north-east, passing by Rotherham, Doncaster, and Thornand falls into the Ouse at Goole. The Tees separates this county from the bishopric of Dur- ham, and falls into the German Ocean in the north- east extremity of the county. The Kibble rises among the Craven Hills ; and, running south by Settle and Gisborne, passes into Lancashire. The less considerable streams of this county are the Rother, the Cock, the Washbrook, the Idle, the Hobden, the Want, the Dent, the Kebeck, the Hyde, the Foulness, the Gret, and the Revel. Be- sides these rivers and streams, the Humber should be particularly noticed. This is in fact only an- other name for the Ouse, which, having received all the Yorkshire waters, becomes as wide as the Thames at London, and after making a circuit to the south near Swinefleet, takes a north-easterly di- rection to its confluence with the Trent, from Lin- colnshire. Here it takes the name of Humber, and becomes more than a mile in width. At Brom- fleet it receives the little river Foulness; then roll- ing its vast collection of waters eastward in a stream between two and three miles in breadth, washes the town of Hull, where it receives the river of that name, which, rising near the foot of the Wolds, takes a southerly direction at Duffield, and, passing within about half a mile of Beverley, continues its course to Hull, where its mouth forms a secure but contracted haven. A few miles below Hull, and opposite to Hedon and Paul, the Humber takes a direction nearly south-east, and widening to a vast estuary of about six or seven miles in breadth, dis- embogues itself into the German Ocean. The Humber, resembling (says Mr. Bigland) the trunk of a vast tree, spreading

its branches in every di- rection, commands, by the numerous rivers which it receives, the navigation and trade of a very ex- tensive and commercial part of England. This in- land communication is greatly aided by several canals, which will be noticed in describing the dif- ferent ridings. This county returns thirty members to parliament.

As it is impossible in numerous instances to point out the particular riding which gave birth to certain distinguished natives, it will be proper here to enumerate the most. Thomas Adams, a learned divine. Born at Leeds, 1701. Died 1784. — Dr. John Alcock, a learned prelate. Born at Beverley. Died in 1500. — Albinus Flaccus Alcuinus, one of Bede's pupils, and a learned divine, was born in this county. Charlemagne gave him lar . beys. He died 804.— Alredus, Alfredus, or Alne- redus, author of a Latin work entitled Annals of

the British History from Brutus to Hen;y I. He wij a native of Beverley, and died in 1129. — Euyene Aram, one of the most extraordinary self-ta-.iglu scholars this or any other county ever produced, and but little inferior to the admirable Crichton, born at Ramsgill in Netherdale, in 1704. — William Bur- ton, an eminent physician. Bom at Rippon in 1697. Died at York, 1759.— George Calvert (lord Baltimore) was born at Kipling about 1532. He was a wise and prudent statesman in the interest of the Roman Catholics. Died April 15th, 1632. — James Calvert, a nonconformist divine of learning. Born at York, and died in 1698. — James Caw- thorne, an agreeable poet. Born at Sheffield, 1721. lie was killed by a fall from his horse in 1761. — William Congreve, by some said to have been a native of Ireland, others of Staffordshire, and others of Bardsey near Leeds, in this county. Born in February 1669. He was a distinguished poet and dramatic writer. Died January 19th, 1728-9, and was buried in Westminster Abbey. — Captain James Cook, the celebrated circumnavigator. Born at Marlon in Cleveland, 1728 ; and was killed in one of the South Sea Islands, by an Indian chief, on the 14th of February, 1779. — The learned and pious martyr and prelate, Dr. John Fisher. Born at Beverley in 1459. He was beheaded for not swearing against his conscience in the case of Henrv \ Ill's marriage with Anne Boleyn, on the 23d of June, 1535. — Dr. John Fothergill, a pious and learned physician among the Quakers, was born at Carr End in 1712. Died in 1780.— Dr. Samuel Garth, a celebrated poet and physician, was born in this county, and died in 1719. — Dr. John Green, a learned prelate. Born at or near Hull, about 1706. Died April 25th, 1779.— Dr. Zachary Grey, an ingenious divine, and miscellaneous writer. Born about the year 1687. Died No: vember 25th, 1766. He is chiefly known for his curious notes on Hudibras. — Andrew Marvel, an incorruptible political writer. Born at Hull in 1620. Died 1678. — William Mason, an ingenious poet and divine. Died 1797. — John Metcalf, commonly called Blind Jack of Knaresborough, an ingenious self-taught

surveyor of roads, and a guide to strangers. Born in 1717. Died in 1810. — Dr. Conyers Middleton, a learned divine and critic, but not always a fair controversialist, was born at York in 1683. — Matthew Poole, a learned annotator on the Scriptures, was born at York in 1624. — Died in 1679. — Dr. Beilby Porteus, late bishop of London, a learned and most excellent prelate, was a native of this county. He was born in 1731, and died May 14th, 1809.— Dr. John Potter, another learn- ed prelate, and an antiquary of considerable cele brity, was born at Wakefield in 1674. Died 1747. — Dr. Joseph Priestley, born at Field-Head, in the parish of Berstell, March 13th, 1733, O. S. Died in America, February 6th, 1804. — Dr. John Rad- cliffe, founder of the famous library at Oxford bearing his name. Born at Wakefield, 1650. Died 1714. — Matthew Robinson (Morris) lord Rokeby. Born at York 1713. Died November 30th, 1800. — Dr. John Sharp, Archbishop of York. Born at Bradford in 1644. Died 1713.— Dr. Thomas Sharp, youngest son of the archbishop, 3 learned and able divine, vas also a native of York- shire. He died in the year 1758. He wasthefathe. of the late learned Granville Sharp, esq. — John Smeaton, an eminent mechanic and enginear Born at Austhorpe in 1724. Died in 1792. — Dr. John Tillotson, archbishop of Canterbury, ont of

the brightest ornaments of the Christian church, was born at Sowerby in 1630, and died in 1694. Obadiah Walker, a learned divine, and tutor to Dr. Radcliffe. Died in 1698.— Dr. George Wal- lis, a learned physician, poet, and dramatic writer. Born at York in 1740. When he died does not appear. — Brian Walton, bishop of Chester, and editor of the Polyglot Bible, was born in Cleve- land 1600. Died 1661. — Thomas Wentworth, earl of Straffbrd, was a native of this county. He was beheaded on Tower Hill, May 12th, 1641. — John de Wickliffe, styled ‘ The morning star of the Reformation,’ was born in the parish of W ickliffe, died in peace at Lutterworth in 1384, and was buried in his own church. To all these may be added the name of Constantine the Great, who was born at York about the year 274. Died in 337. Gibbon, however, denies this fact respecting the birth-place of Constantine ; but it is certain that he assumed the imperial purple at this city.

Manufactures, trade, commerce. — This, as applied to Yorkshire, is a most copious and extensive de- partment; too much so, indeed, for the limits of this work to admit of much detail. The woollen manufacture has always been considered the staple trade of the county. This is carried on chiefly in the west riding, which is considerably larger than both the other ridings put conjointly. The cotton bu- siness, particularly in calicoes, dimities,

thicksetts, and other strong goods, is carried on in several parts, but especially on the borders of Lancashire. — The hardware of Sheffield has long been famed for its excellent quality, particularly in cutlery. In that town, indeed, iron and steel are wrought in all the variety of forms; and the manufacture of silver plated goods is carried on to a great extent, and brought to the highest degree of perfection.

East Riding. — This is the least of the three grand divisions of Yorkshire. Its name points out the relative situation which it occupies in the county. It is bounded on the north and west by the rivers Hertford and Derwent, which separate it from the north riding as far as the vicinity of Stamford Bridge. An irregular line from the Derwent to the Ouse, commencing about a mile above Stam- ford Bridge, and joining the latter river about a mile below York, forms the rest of the boundary between the two ridings. From that place the east riding is bounded on the west and south-west by the Ouse, which divides it from the west riding. On the south it is bounded by the Humber, and on the east by the German Ocean. It contains 819,200 acres.

The climate of this district admits of some vari- ations, being colder on the eastern than on the western side of the Wolds, which break the force of the cold and raw winds from the German Ocean. Near the coast the country is exposed to fogs from the sea and the, Humber. On the Wolds ~the air is much sharper, and the snow lies longer, by rea- son of their elevation. The levels in the western part of the riding enjoy a milder climate, by being sheltered from the easterly winds. This riding ad- mits of almost every variety of soil, from a deep warp to a blowing sand. The Wolds are lofty ranges of hills, extending almost from the northern to the southern limits of the riding. The soil is generally unfavorable to the growth of wood, though attempts at plantations have been made, and some with comparative success. That part of the riding situated north of the Wolds, and extending

the rivers Hertford and Derwent, from Filey to Malton, is a long narrow strip, a considerable part of which is a light sand, with variation of gravelly loam, strong loam, clay loam, and free loam. The situation of a large part of this division is flat; its soil coarse, with a spongy bottom, and liable to be flooded. The country adjoining the east district, and extending between the Ouse and the foot of the Wolds, and on each side the Derwent to Bub- worth, is flat, but with a few gentle swells ; the soil contains every kind of loam ; a very considera- ble part consists of a light sanr'y loam, with an open spongy bottom. The soil of the Country ad- joining this division, and extending between the Wolds and the Ouse and the Humber to Hull, con- sists of a strong clay, a free and sandy loam, a small part of which is much lighter than the rest, and has a spongy bottom. Along the side of the Ouse

and the Humber there is a considerable quantity of warp land. The soil extending from Hull to near Spurn-‘ »ead, along the side of the Humber, and nearly adjoining the Pattrington road, including the Sunk Island, is mostly warp, generally strong, but some parts intermixed with sand. The country from this last division, extend- ing between the sea and the foot of the Wolds, on each side of the river Hull, consists chiefly of gravel, hazel earth, strong loam, and clay, some parts coarse and thin, with an open bottom. This riding, although it displays a great variety of as- pect, is far less conspicuously marked with the bold features of nature than the other parts of the county. Yet some parts are beautifully picturesque, and afford very extensive and even magnificent prospects, especially when the sea or the Humber forms part of the view. The Wolds have just been mentioned. The level tract along the coast may be said to begin at Filey, as has already been intimated. As far however as Bridlington the face of the country is diversified with lofty swells ; and the Wolds in some places extend to the coast, which, near the villages of Speeton, Bempton, and Flamborough, rises in cliffs of 100 or even 150 yards in perpen- dicular height. At Bridlington the county sinks into a flat, which continues for eight or nine miles to the southward, without almost any variation. At about the distance of seven miles to the south of Bridlington begins the wapentake of Holderness, the eastern part of which towards the sea-coast is a finely variegated and fertile country ; but the western edge is a fenny tract of about four miles in breadth, extending nearly twenty miles in length to the banks of the Humber. The southern part of Holderness also falls into marshes bordering on that vast estuary ; and the county terminates in a point at Spurn-head, the Ocellum Promontorium of Ptolemy. In almost every part of Holderness the prospects are rendered more agreeable by a view of the Yorkshire, and in some places of the Lincolnshire Wolds ; one or the other of which, and sometimes both, make a beautiful appearance from every elevation.

The ascent to the Wolds is somewhat steep, ex- cept on the eastern side, whence they rise in gentle and successive swells, presenting a beautiful aspect towards the flat country. But their height, which in the most elevated parts is not supposed to ex- ceed 600 feet, is inconsiderable when compared with that of the eastern and more especially of the western moors in the north, and the Craven Hills in the west riding. Many parts of the Wolds, how-

ever, afford magnificent and delightful prospects. From their northern edge the rale of the Dement is extended below like a map, and beyond it the black moors towards Whitby, rising in sublime grandeur. The western hills command an exten- sive view of the southern part of the vale of York, reaching far beyond that city into the west riding ; and the eastern elevation affords a beautiful pros- pect, in some places of the German Ocean, and in others of Holderness, rising with a very gentle swell from the intervening tract of fenny land called the Carrs. But the southern edge of the Wolds is the most distinguished for the beauty and diversity of its prospects. From several elevated points between the Humber and the high road from Kirk- Ella, by Kiplingham, leaving York minster, How- den church, &c., on the west, Flamborough Head, Bridlington priory, Beverley minster, the churches of Hull and Heydon towards the east, may be dis- tinctly seen. From some situations in this tract, the cathedrals of York and Lincoln are said to be at once distinctly visible. The eastern part of this elevated district, skirting the Humber, commands u magnificent view of that vast estuary, extending to the south-east till it vanishes in the horizon. It presents to the eye an interesting spectacle of nu- merous vessels trading to the port of Hull ; while that opulent and commercial town, in its low situ- ation, close to the banks, and surrounded with the masts of its shipping in the docks, seems to rise, like Venice out of the water; and the further dis- tances are filled with a view of the shores of Hol- derness and Lincolnshire. The western hills, towards Caver, afford a very extensive prospect over an immense level, terminating in the high lands of the west riding faintly appearing in the horizon ; and much nearer and more towards the south the large rivers Trent and Ouse, meeting at right angles, and forming a junction where the lofty promontory of Aukborough overlooks the ad- jacent country, present a beautiful and interesting spectacle. The whole taken together composes a scenery which for beauty and grandeur can scarcely be exceeded. The other natural division of this riding extends from the western foot of the Wolds to the boundaries of the north and west ridings. This tract, which is commonly called the Levels, is every where flat and unpicturesque. The country is here overspread with villages and hamlets, but is in most parts extremely dirty and disagreeable. Throughout the whole of this riding the most ex- tensive and valuable agricultural improvements have been made. Extensive tracts of land, formerly flooded a great part of the year, and producing scarcely any thing but rushes and a little coarse grass, are now covered with abundant crops of grain ; and the value of the land has been increased in a tenfold proportion. On the Wolds very great improvements have taken place. The valleys and the declivities of the hills wave with plentiful crops of wheat, where formerly oats and barley only were known. The rabbit warrens are rapidly dis- appearing, and the breed of sheep, by crosses from the Leicestershire, has been considerably improved. The Levels have also been

much improved ; and indeed almost every part of the riding has been _rht into an excellent state of culture. The productions of this riding, whether animal, vege- table, or mineral, do not appear to possess any ver eculiar characteristic.

Riding.— This district is situated between

53° 57 and 54° 38′ N. lat., and between 0° 19 and 2° 23′ W. long, from Greenwich. It is bounded on the north by the river Tees, which separates it from the county of Durham ; on the east and north- east by the German Ocean ; on the south-east by the east riding ; on the south by the ainsty of York and the west riding ; and on the west by the county of Westmorland. The length of the riding from east to west is eighty -three miles, and its breadth from north to south thirty-eight miles; and Mr. Tuke, whom Mr. Bigland justly calls an accurate surveyor, computes its contents at 2048ˆ square miles, or 1,311,187 acres.*

The climate of this district is exceedingly various. In the Vale of York the air is mild and temperate, except near the Moors, where the influence of the winds from those mountainous regions is sometimes severely felt. The climate of the Howardian Hills is cold. Rydale and the Marishes, on the skirt of the Derwent, enjoy a mild air ; but the dampness of their flats, and a want of a better drainage, ren- der them less healthful than most other parts of the riding. The very elevated situation of ths eastern moorlands renders their climate extremely cold, and presents an insuperable obstacle to their improvement. About the end of August cold and damp vapors begin to descend, and in the form of dense fogs impinge in the morning against the moorland hills, on an elevation of about 700 or 800 feet; and, as they become rarefied by the warmth of the day, either ascend above their sum- mits, or remain upon them at an elevation in pro- portion to their rarefaction. As the autumn ad- vances, they hang in the morning lower on the hills, and leave their summits sometimes clear, although but for a short time. The country is afterwards, during several months, enveloped in fogs, chilled with rain, or locked up with snow, from an elevation of about 600 feet, with but little interruption. The vale of Cleveland, having these moors on the east and south-east, the sea to the north and north-east, and lying open to the west to the winds from an extensive and mountainous country, has a climate somewhat severe ; but the dryness of the soil, and the frequent use of lime, concur to accelerate the harvest, which is nearly as early here as in the warmer parts of this riding : the same remark may be made on the narrow tract which lies along the coast from Whitby to Scar- borough. The climate of the western moorlands is colder than that of the eastern moorlands. The western moorlands, being much more elevated than the eastern, and not like them exposed to the sea airs, remain longer covered with snow, and are far more subject to rain. In Yorkshire, as well

as in all the counties bordering on the German Ocean, the east wind usually predominates in the spring, and during a great part of the summer, as do the west winds in the western parts of the island. The conflict of these two winds generally takes place in the western moorlands, and to this cause must be attributed the almost constant rains that fall in this mountainous district. The clouds from the Atlantic, pushed forward by«he westerly winds, are there stopped in their course by the powerful resistance of the easterly winds, as well as by the mountains that arrest their progress and fall upon the moorlands in almost incessant rains. Such is the description of the climate given by Mr. Big- land in the sixteenth volume of The Beauties of England and Wales, a volume drawn up with con-

siderable care, and perhaps one of the most pleasingly written of any one of that extensive work. The same authority will be generally re- sorted to in the further delineations of this county. The soil is thus described by Mr. Tuke, in his Agricultural Survey : — ' The level land near the Tees consists, in general, of a rich gravelly loam upon the high ground ; and on the west side of the road, leading from Catterick to Piersebridge, the soil is for the most part strong and generally fer- tile ; but in some places cold and spongy : some fine hazel loam is also to be met with. On the east of the road leading from Gretabridge to Catte- rick is much fine gravelly soil, with a considerable quantity of clay, and some peat; and on the north of Richmond a mixed loamy soil, in most places upon limestone, but in some upon a freestone most excellent for building. On the east side of the road between Catterick and Piersebridge there is some cold thin clay, upon what is here called a moorland, consisting of a stratum from six inches to a foot thick. It is of a ferruginous, ochreous ap- pearance, and probably contains much iron, as wherever found it is attended with great sterility : there is also some gravelly and some clayey loam. About Barton, Melsonby, and Middleton Tyas, the soil is loamy upon limestone ; about Halnaby, and thence in an easterly direction to the edge of Cleveland, and betwixt the Wiske and the eastern moorlands, as far south as Burrowby and Thorn- ton-le-Moor, the soil for the most part is a cold clay ; though in some places less tenacious soils, mixed with considerable quantities of large cobble stones, or pebbles, of various kinds, are to be met with. On the west side of the road between Rich- mond and Leeming a good gravelly soil prevails ; towards Hornby a good gravelly clay ; at Lang- thorn a good sand loam and some peat. The land on both sides of the Brook which runs from Con- stable Burton past Bedale consists for the most part of a rich loam, but in some places intermixed with a large quantity of cobble stones and coarse gravel. The country betwixt the above-mentioned brook and the

west riding, and on the west side of the rode from Boroughbridge to Leemin, is gene- rally a turnip soil, though of various qualities, consisting of a loamy soil upon limestone, a gravelly loam, and a rich hazel loam, except that in some parts there are patches of swampy ground and cold clay land. That corner of the vale east of Middle- ton Tyas, west of the Wiske, and north of a line drawn from Scorton to Danby Wiske, is mostly cold and wet, some of which has a moorland under it ; but on the west side of this tract there is some clayey loam, and a little excellent gravelly loam. Along the banks of the Swale, and parts adjacent, the soil is generally very good, consisting of a rich gravelly loam and some fine sandy soil. There are, however, some patches of cold clay soil, and also a little peat here and there. The Howardian Hills form a high and bold range, running from west to east, and separating the vale of York from Rydale. The soil is mostly a good strong loam upon clay mixed with cobble stones; about Gilling and to- wards Barnsley it is thin and poor, in most places near to a grit, though in some to a limestone rock ; but on the northern side of these hills a good clay and sandy loam prevail. Rydale is in general ex- tremely fertile. In the marishes which skirt the north side of the Derwent the soil is chiefly clay with some sandy loam, gravel, and peat. There

is a material difference between the eastern and western moorlands, these latter being generally cal- careous ; and, although their altitude is considerably greater, they are much more fertile than the former The dales by which the western moorlands are in- tersected are very rich and fruitful. Of these Wensleydale may be ranked as the first, both in extent and fertility. The river Ure winds through it; and the soil along its banks is generally a rich loamy gravel. The soil in the lower parts of Swale- dale consists chiefly of a rich loam, though clay and peat moss appear in some places in ascending the hills. The smaller dales, which are very nume- rous, are similar to these, and have the same gene- ral appearance of fertility. The rivers have already been mentioned in the general description. The canal from York to Stillington is the only navigable water that penetrates this riding : with this single exception, all the advantages which it derives from navigation are owing to waters that flow on and constitute its boundary. Of the productions of this riding those of a mineral kind are among the chief. These, though very numerous, are not generally of superior quality ; except indeed the alum rock on the edge of the Eastern Moorlands, which is perhaps the richest and most extensive in Europe, and the lead in the district of Richmond. A mine of very fine copper near Middleton Tyas was formerly wrought, but is now neglected. Veins of this metal are supposed to be scattered in various parts of the Western Moorlands. Iron-stone is found in great quantities in several parts of the Eastern Moorlands. Free-stone, Jime-stone, marble, and coal, are found in various places throughout the riding. This riding is said to produce the

largest horned cattle in England ; and the breed has within these few years been greatly improved. The horses of this district are also singularly fine. In other respects it does not appear that the north riding has any peculiar character in regard to its productions.

West Riding. — This riding, as its name imports lies on the Western borders of the county ; and is bounded on the east by the ainsty of York and the river Ouse; on the north by the north riding; on the west by Lancashire ; and on the south by Che- shire, Derbyshire, and Nottinghamshire. It is about ninety-five miles in its greatest length from east to west, and forty-eight miles in its greatest breadth, from north to south, containing about 2500 square miles, or 1 ,568,000 statute acres.

The climate of this portion of the county is ex- tremely various. In the eastern parts, towards the banks of the Ouse, it resembles that of the east rid- ing on the opposite side of the river; and damps and fogs are somewhat prevalent. In the middle district the air is sharper, clearer, and considered as much more healthful. In the western parts the climate is cold, tempestuous, and rainy. At Shef- field the average gauge of rain is thirty-three inches annually, being about a medium between the quantities that fall in Lancashire and on the eastern coasts of the kingdom. Blackstone Edge, and the Craven Hills, are the most foggy, rainy, and stormy districts in England ; although, from the frequent high winds which purify the atmosphere and keep it in a state of agitation, the climate is reckoned sa- lubrious to sound constitutions ; nnd the inhabitants have a robust and healthful appearance. The soil of this district admits of every variety ; from the deep strong clay and rich loam, to the worst kind

of peat earth. In the eastern parts clav and loam predominate, but are intermixed with some >andy and moorish tracts. The middle is chiefly a loam upon a limestone bottom ; and this kind of soil, with a similar basis, although intermixed in many places with tracts of moor of different qualities, prevails to the western extremities of the riding. Mr. Browne, in his Agricultural Survey, says that the prevailing soil (keeping off the moors) is loam. The face of the country is very irregular ; but, in general terms, it may be divided into three large districts gradually varying from a level and marshy to a rocky and mountainous region. The flat and marshy part of the riding lies on the eastern side along the banks of the Ouse, and extends to the westward, in some places to a greater and in others to a less distance

; but generally to within three or four miles of an imaginary line drawn from Don- caster to Sherburn. The middle part, as far to the westward as Sheffield, Bradford, and Otley, rises gradually into hills, and is beautifully variegated. Further to the west the surface becomes rugged and mountainous. Beyond Sheffield scarcely any thing is seen but black moors, which running north-west unite with the lofty hills of Blackstone Edge on the borders of Lancashire. The western part of Craven presents a confused heap of rocks and mountains, among which, Pennygant, Wham- side, and Ingleborough, are particularly conspicu- ous ; the ttvo last being considered as the highest hills in either England or Wales, not excepting even Skiddaw, Helvellyn, or Snowdon. Amidst the hilly and mountainous tracts of this riding, however, are many romantic valleys, presenting the most beautiful scenery. The most extensive of these are Netherdale, or Niddersdale, watered by the Nid ; Wharfdale, and the vale of Aire, which in many places afford views the most de- lightful that can be imagined. Many valleys of less extent vie with these in picturesque beauty ; and the greatest part of them being inclosed, well wooded, and thickly spread with almost continuous villages, present, when viewed from the neighbour- ing eminences, the resemblance of a terrestrial para- dise. From many points are seen the most en- chanting prospects, in which beauty and sublimity are pleasingly combined. In travelling from Knaresborough, or Rippon, to Pately bridge, from Tadcasser to Otley and Skipton, from Bradford to Halifax, or by Keighley to Skipton from Halifax, by Dewsbury to Wakefield, and some other roads that might be mentioned, the tourist has an oppor- tunity of contemplating some of the finest scenery in England. Mr. Bigland remarks that in travel- ling these roads he could not but observe, (fiat, in the whole space between York and London, and between London and Dover, no part of the road, excepting Blackheath and Shooter's Hill, displays such beautiful prospects.

This riding is well provided with the conveni- ence of inland navigation. The Leeds-and-Liver- |>ool Canal issues out of the river Mersey at low water, at the lower extremity of Liverpool, by U mk-Hall, and goes over the river Alt to Mill- liouse ; it then takes a large half-circle about the town of Urmskirk, ;md crosses Toadhrook near Newborough, whence it proceeds by the Douglas navigation to Wigan, thence, in a circular course, through Red Moss, by Blackrod, north for some wiy parallel with the Lancaster canal, nearChorley, snd bv Heapy to Blackburn ; thence, with a bend

round Church, it passes Burnley and Coin to Foul- bridge, where a basin is cut to supply the canal, 01 which it is the head. The canal here begins to fall to Leeds, and goes from Foulbridge, by Satterford, East Morton, and crosses the river Aire near Gar- grave, by Thorlby, Sturtore, and the town of Skip- ton, by Bradley, Kildwick, Silsden, near the town of Keighley and by Bingley ; a little below which it crosses the river Aire again, passes

Shipley, and takes a semi-circular course round the Idle, near Apperton Bridge, Horsforth, Kirkstall Abbey, by Burley and Holbeck, to the town of Leeds, making in the whole a course of 130 miles, with 838 feet fall. Thence to Liverpool, thirty-five miles, fall thirty feet. There is also a collateral cut from near Shipley to Bradford. — The Barnsley Canal joins the river Calder below Wakefield, and passes Crof- ton, Falkirk, Royston, and arrives at Barnsley, whence it makes a bend to Barnby-Bridge, near Cawthorn ; the length about fourteen miles. There are several railways to the canal from Barnsley, and others from Barnby-Bridge. The fall, from the junction with the Deane and Dove Canal, is 120 feet to the river Calder. — The Deane-and-Dove Canal commences from the cut which has been made for the accommodation of the river Dun na- vigation, between Swinton and Mexbrough, and proceeds by Wath, Wombwell, and Ardsley, to near Barnsley, there to form a junction with the Barnsley Canal, which joins the river Calder. There are two small branches, one parallel with Knolbeck-Brook, to the iron-works at Cob-car-Ing, the other along the head stream of the river Dove to Wors- brough-bridge ; with a proposed extension of this branch nearly one mile and a half further. Rock- liffe-bridge, adjoining the grounds of parl Strafford, at Wentworth-Castle. The whole length of this canal, from the junction of the river Dun to Barns- ley, is nine miles and a quarter, with 125 feet rise from the river Dun to Barnsley. The branch to Cob-car-Ing is one mile and three-quarters, and is level, by means of some deep cutting at the extre- mity. The branch to Worsbrough is one mile five furlongs in length. — The Stainforth-and-Keadley Canal commences at the river Dun, about a mile to the west of Fish lake, and runs parallel with the river, opposite to Thorn ; whence, in a line nearly due east, it passes Crowle and Keadley, where it joins the river Trent. There is a branch, about a mile across Thorn's Common, to a place called Hang- man-Hill, which joins the river Dun. The total length of this canal is between fourteen and fifteen miles ; and, running through a fenny part of the country, has little elevation, and no lockage, except at the extremities. — The Huddersfield Canal joins Sir John Ramsden's Canal on the south side ot Huddersfield, and taking a westerly course runs parallel with the river Colne, which it crosses twice, passing Longwood, Staithwaite, and Mars- den : from Marsden, under Pule-moss and Brunn- Top, there is a tunnel of nearly three miles ami a half long, which brings the canal to Raspmiil, on the Digglewater, and within about two miles from Dubcross ; passing which, it takes the route of the river Tame, the windings of which it frequently in- tersects, and passes within one mile of Lydgate, by Motley, Steyley-Bridge, and joins the Ashton-and- Oldham Canal on the south side of Ashton, being a course of nineteen miles and five furlongs, with 770 feet lockage. — This riding produces corn and cattle of all sorts ; and its mineral productions are

very valuable. Coals are found in great abundance in most parts; and excellent stone for various pur- poses is every where at band in the hilly parts, and particularly in the neighbourhood of Bradford, Halifax, Skipton, &c. Ir> the parish of Leeds there is fine pipe-clay, and several quarries of an argil- laceous schist, which supply the neighbourhood and the country down the river with slates and flag-stones for paving. On the north-east border of the parish begins a bed of imperfect granite or moorstone, similar to that found on the east moor in Derbyshire, which runs to the Chevin, near Ot- ley, and constitutes the whole ridge of Ronald's Moor as far as Skipton, where limestone com- mences. On each side towards the level of the ri- vers Aire and Wharfe the argillaceous schistus oc- curs, which is evidently a stratum covering the granite. The stone on the south of the Aire is entirely argillaceous schistus, as is generally the case where coal is found. In the neighbourhood of Nidderdale there are considerable lead mints. Mr. \Yhitaker, in his History of Craven, mentions the following minerals as found in that district : — copper, ores of copper pyrites, copper combined with iron and sulphur, martial pyrites, sulphur combined with iron, with baroselenite foliated and crystallised, found in a mine at Beggarman, to the north-west of Buckden. Lead ores of galena, lead combined with sulphur, the common blue lead ore. Lead mineralised by oxygen and carbonic acid, the white lead ore, crystallised and compact. Green lead ore, phosphorated lead ores, have been dis- covered in very small quantities on Grassington Moors. Zinc, ores of calamine, lapis calaminaris, zinc mineralised by oxygen with or without carbo- nic acid. There is found at or near Malham, an oxide of zinc in form of a white powder — some of it is rich : this has not been met with in any other part of England. A thin bed of coal is found on Grassington Moor and the places in that neighbour- hood. The above-mentioned ores are accompanied in the vein with baroselenite (cauk of Rome), cal- careous spar, or carbonate of lime and quartz, &c. There are several mineral waters in this riding, of which the most famous is the sulphurous water of Harrowgate. There is also a chalybeate spring at the same place, and another at Thorpe-Arch. At Knaresborough is a remarkable petrifying spring, called the Dropping Well ; and near Settle is a very curious ebbing and flowing well.

YOU, pron. Sax. eop luh, of je, ye ; Teut.ju. The oblique case of ye ; used also ic the nominative, when the address is to persons ; and, by a corrup- tion, for the second person singular ; any cue ; whosoever.

Ye have heard of the dispensation of the grace of God, which is given me to you ward. Ephesiant.

I thought to shew you How easy 'twas to die, by my example, And hansel fate before you. Dryden.

\'e passed by what was one of those rivers of burn- ing matter ; this looks, at a distance, like a new- ploughed land ; but, as you come near it, you see no- thing but a long heap of heavy disjointed clods.

Additon.

In vain you tell your parting lover, Yon wish fair winds may waft him over. Prior.

Stand forth, ye champions, who the gauntlet wield, Or you, the swiftest racers of the field. Pope.

YOUGHALL, a considerable sea-port in the county of Cork, Ireland, at the mouth of the river Blackwater, and 115 miles from Dublin. The

harbour is very commodious. The houses are well built, the town has a considerable export trade, arid good market. A league south-east of the haven's mouth lies the little island of Chappie.

YOUNG, adj. & n. s. ~} Sax. lonj, yeonj ; Goth.

YOUXG'ISH, udj. I Swed., and Dan -ng ;

YOUNG'LIXG, n. s. \ Belg. Jong; Teut. jung.

YOUNG' LY, adv. J» Youthful ; being in the

YOUNG'STER, n. t. I first part of life ; not old ;

YOUN'KER, I lender; inexperienced ;

YOI:XG'TH. j weak: the offspring of

animals collectively : youngish is somewhat young : a youngling is a creature in the early part of life • youngly, early in life ; weakly : youngster, or younker, a young person; in contempt: youngth, used by Spenser for youth.

More dear unto their God than youngling! to their dam. Faerie Queene.

The mournful muse in mirth now list ne mask. As she was wont in youngth

and summer days.

Spenter.

Come, elder brother, thou art too young in this.

Sh kfpi'uie. I firmly am resolved Not to bestow my youngest daughter, Before I have a husband for the elder. Id.

Thou old and true Menenius, Thy tears are sailer than a younger man's, And venomous to thine eyes. Id.

The hedge-sparrow fed the cuckoo so long, That it had its head bit off by its young. Id.

Youngling, ihou can'st not love so dear as I. — Grey-beard, thy love doth freeze. Id.

Say we read lectures to you, How younglti he began to serve his country, How long continued, and what slock he springs of.

Id.

See how the morning opes her golden gates, And takes her farewell of the glorious sun : How well resembles it the prime of youth, Trimm'd like a younker prancing to his love. Id.

There be trees that bear best when they begin to be old, as almonds ; the cause is, for that all trees thai bear must have an oily fruit ; and young trees have a more watery juice, and less concocted. Bacon.

While Ulysses slept there, and close by The other yonkers, he abroad would ly. Chapman.

In timorous deer he hansels his young paws, And leaves the rugged bear for firmer claws. Cou-tey.

Guesls should be interlarded, after the Persian cus- tom, by ages young and old. Carew.

Fame tells, by age fame reverend grown, That Phoebus gave his chariot to his son ; And whilst the youngster from the path declines, Admiring the strange beauty of the signs, Proud of his charge, he drove the fiery horse, And would outdo his father in his course. Creech.

The eggs disclosed iheir callow young. Milton.

When we perceive lhat bats have teats, it is not un- reasonable to infer, they suckle their younglings with milk. Browne.

The reason why birds are oviparous, and lay eggs, but do not bring forth their young alive, is because there might be more plenty. More

Nor need'st thou by thy daughter to be told,- Though now thy sprity blood v\ith age be cold, Thou hasl been young. Dryden.

Not so her young ; for their unequal lin« Was heroes make, half human, half divine ; Their earthly mold obnoxious was to fate, The' immortal part assumed immortal state. Id.

Encouraged thus, she brought her younglings nigh.

Id.

When we say a man is young, we mean that his age is yet but a small part of that which usually men attaia

to : and, when we denominate him old, we mean that his duration is run out almost to the end of that which men do not usually exceed. Locke.

She Lt her second room to a very genteel yaungish man. Tatter.

YOUNG (Dr. Edward) was the son of a clergy- man of the same name, and was born about the year 1679. When sufficiently qualified he was matriculated into All Souls' College, Oxford ; and, designing to follow the civil law, he took a degree in that profession. In this situation he wrote his poem called the Last Day, published in 1704. •which, coming from a layman, gave universal satis- faction ; this was scon after followed by another, entitled The Force of Religion, or Vanquished Love. These productions gained him a respect- able acquaintance ; he was intimate with Addison, and thus became one of the writers of the Spec- tator ; but, the turn of his mind leading him to the church, he took orders, was made one of the king's chaplains, and obtained the living of Wel- wyn in Hertfordshire, worth about £500 per annum, but he nevec rose to higher preferment. For some

Sars before the death of the late prince of Wales, r. Young attended his court pretty constantly ; but upon his decease all his hopes of church pre- ferment vanished ; however, upon the death of Dr. Hales, he was taken into the service of the princess dowager of Wales, and succeeded him as her privy chaplain. When pretty far advanced in life, he married the lady Elizabeth Lee, daughter of the late earl of Lichfield. This lady was a widow,

and had an amiable son and daughter, who both died young. What he felt for their loss, as well as for that of his wife, is finely expressed in his Night Thoughts, in which the young lady is cha- racterised under the name of Narcissa ; her bro- ther by that of Philander ; and his wife, though nameless, is frequently mentioned ; and he thus, in an apostrophe to death, deplores the loss of all the three : —

Insatiate archer, could not one suffice !

Thy shaft flew thrice, and thrice my peace was slain,

And thrice ere thrice yon moon renewed her horn.

He wrote three tragedies, The Revenge, Busiris, and The Brothers. His satires, called Love oi Fame the universal Passion, are by many esteemed bis principal performance, though Swift said the poet should have been either more angry or more merry; they have been characterised as a string of epigrams written on one subject, that tire the reader before he gets through them. His Com- plaint, or Night Thoughts, exhibits him as a moral and melancholy poet, and are esteemed his master piece. They form a species of poetry peculiarly his own, and in which he has been unrivalled by all those who have attempted to write in this man- ner. They were written under the recent pressure of his sorrow for the loss of his wife, daughter, and son-in-law ; they are addressed to Lorenzo, a man of pleasure and the world, and who, as it is insi- nuated by some, is his own son, but then laboring under his father's displeasure. As a prose writer, he arraigned the prevailing manners of his lime, in a work called The Centaur not Fabulous ; and, when he was above eighty years of age, published Conjectures on Original Composition. He pub- lished some other pieces ; and the whole of his works are collected in four or five volumes, 12mo. Dr. Young's turn of mind was naturally solemn ;

and he usually, when at home in the country, spent many hours of the day walking in his own church- yard among the tombs. His conversation, his writings, had all a reference to the life after this ; and this turn of disposition mixed itself even with his improvements in gardening. He had, for in stance, an alcove with a bench so painted, near his house, that at a distance it looked as a real one which the spectator was then approaching. Upon coming up near it, however, the deception was perceived, and this motto appeared, Invisibilia non decipiunt, 'The things unseen do nc deceive us.' Yet, notwithstanding this gloominess of temper, he was fond of innocent sports and amusements ; he instituted an assembly and a bowling green in thc- parish of which he was rector, and often promoted the gaiety of the company in person. His wit was generally poignant, and ever levelled at those who testified any contempt for decency and religion. His epigram*

spoken extempore on Voltaire is well known ; who happening in his company to ridi- cule Milton, and the allegorical personages of Death and Sin, Young thus addressed him : — Thou art so witty, profligate, and thin,

You seem a Milton with his Death and Sin.

One Sunday, preaching in office at St. James's, he found that, though he strove to make his audience attentive, he could not prevail. Upon which his pity for their folly got the better of all decorum, and he sat back in the pulpit and burst into a flood of tears. Towards the latter part of life he knew his own infirmities, and suffered himself to be in pupilage to his house keeper; for he considered that, at a certain time of life, the second childhood of age demanded its wonted protection. His son, whose boyish follies were long obnoxious to pa- ternal severity, was at last foigiven in his \ill ; and our poet died extremely regretted in 1 765.

YOUNG (Patrick), M. A., a learned Scottish writer, educated at St. Andrew's, and graduated at Oxford, in 1605. He became keeper of the king's library at St. James's, and published St Clement's Epistle to the Romans, Greek and Latin, in 1637. From his deep skill in the Greek language, he was employed to print the Septuagint from the Alex- andrian MS. presented to king Charles I. by bishop Cyril Lucar ; but did not live to execute it. He died in 1652.

YOUR /won.) Sax. eoferu The possessive

YOURSELF',!.. $ of you; belonging to you. Used properly when we speak to more than one, and ceremoniously and customarily when to only one : when placed after the substantive it becomes yours : yourself (of your and self) means your, emphatically ; and has a reciprocal sense in ob- lique, and sometimes in nominative, cases.

Either your unparagoned mistress is dead, or she's outprized by a trifle. Shahspeare.

He is forsworn, if e'er those eyes of your Behold another day break in the east. Id.*

If it stand, as you ymtnelf still do, Within the eye of honour , be assured My purse, my person, ray extremest means, Lie all unlocked to your occasions. Id.

Impute your danger to our ignorance ; The bravest men are subject most to chance. Dryden.

My wealth, my city, and myself are ymirt. Id.

There is a great affinity between coins and poetry, and your medallist and critic are much nearer related than the world imagine. Additon.

A disagreement between these seldom happens, but among your arliquaries and schoolmen. t'cnion.

YPR 711

It is my employment to revive tha old of past ages to the present, as it is yours to transmit the young of the present to the future. Pope.

Ye dauntless Dardans hear,

Think on the strength which once your fathers bore.

Id.

Be but yourselves. Id.

WheneTer you are more intent upon adorning your persons than upon perfecting of your souls, you are much more beside yourselves than he that had rather a laced coat than a healthful body. Law.

YOUTH, n. s. -\ Sax. yeozu«. The part

YOUTH'FUL, adj. I of life succeeding to child-

YOUTH'FULLY, adv. shood and adolescence; a

YOUTH'LY, adj. i young man ; young men

YOUTH 'Y. j collectively : youthful is

young; vigorous; suitable to the early part of life: the adverb corresponding : youthly and youthy (ob- solete) synonymes of youthful.

True be thy words, and worthy of thy praise, That warlike feats dost highest glorify, Therein have I spent all my youthly days, And many battles fought, and many frays. Spenser.

Siward's son,

And many unrough youths even now, Protest their first of manhood. Shakspeare.

Our army is dispersed already : Like youthful steers unyoked they took their course, East, west, north, south. Id.

But could youth last, and love still breed, Had joys no date, and age no need ; Then these delights my mind might move, To live with thee, and be thy love. Raleigh.

As it is fit to read the best authors to youth first, so let them be of the openest and clearest ; as Livy before Sal lust, Sidney before Donne. Ben Jonson.

Here be all the pleasures That fancy can beget on youthful thoughts, When the fresh blood grows lively, and returns Brisk as the April buds in primrose season. Milton,

His starry helm unbuckled showed him prime In manhood, where youth ended. Id.

The graces put not more exactly on The' attire of Venus, when the ball she won, Than that young beauty by thy care is drest, When all your youth prefers her to the rest. Walter.

In his years were seen A youthful vigour and autumnal green. Dryden.

The pious chief

A hundred youths from all his train elects, And to the Latian court their course directs. Id.

The scribbler had not genius to turn my ajje, as in- deed I am an old maid, into raillery, for affecting a youthier turn than is consistent with my time of day.

Spectator.

The solidity, quantity, and strength of the aliment, is to be proportioned to the labour or quantity of muscu- lar motion, which in youth is greater than any other age. Arbuthnot.

How is a good Christian animated by a stedfast be- lief of an everlasting enjoyment of perfect felicity, such as, after millions of millions of ages, is still youthful and flourishing, and inviting as at the first ! no wrinkles :m the face, no grey hairs on the head of eternity.

Bentley.

The nymph surveys him, and beholds the grace Of charming features, and a youthful face. Pope.

YPI'GHT, part. Y and pight, from pitch. Fixed. Obsolete.

That same wicked wight His dwelling has low in an hollow cave,

Far underneath a craggy clift ypight, Dark, doleful, drea.T, like a greedy grave. Spenser.

YPHES, d considerable town of West Flanders, situated on the small river Yperle. It has the ad-

vantage of water communication, by a canal with Bruges, Ostend, and Nieuport; it is fortified, and, on the whole, well built. Its chief structures are the town hall, built in the Gothic style, an elegant cathedral, and other churches, which contain, as usual in Belgium, good paintings. The other buildings are the exchange, the chamber of com- merce, and the college or public school. Ypres has a population of 15,500.

YRIARTE (Don John De),alearned Spaniard, born in the Isle of Teneriffe, and educated at Rouen and Paris. After his return to Madrid, he became librarian to the king; member of the academy, and interpreter to the secretary of state. He wrote, 1. Paleographia Graeca; 2. A Catalogue of Greek MSS. in the Royal Library ; 3. A Catalogue of Arabic MSS. in the Escurial ; 2 vols. folio ; 4. Various Tracts in Spanish ; 2 vols. 4to. He died in 1771.

YSARD, a name of the chamois goat. See CAPRA.

YSNI. See ISNY.

YUCATAN, the most easterly province of New Spain, is in the form of a peninsula, jutting out into the gulf of Mexico from the mainland of the isthmus. It is surrounded on the north-west by the waters of the Mexican Gulf, by the bay or gulf of Honduras on the south-east, the province of Vera Cruz bounds it on the south-west, and Vera Paz in Guatimala on the south. Here it is con- nected with the continent of North America, by an isthmus of about 120 miles in breadth. The Eng- lish have settlements extending a short distance along the east coast of Yucatan, opposite Amber- gris Key. See AMERICA, BRITISH.

YUCCA, Adams's needle, in botany, a genus of plants of the class hexandria, and order monogynia. The corolla is campanulate and patent, there is no style, the capsule is trilocular. There are four species, none of which are natives of Britain. All of them are exceedingly curious in their growth, and are therefore much cultivated in gardens. The Indians make a kind of bread from the roots of this plant.

YVICA, or IVICA, or IBICA, an island of the Mediterranean, belonging to Spain, the principal of the group called the Pithyusae. Its extent is 190

square miles; its population 15,200. It is divided into five parts, which are called respec- tively, the Plain of the Town, St. Eulalia, Balan- zar, Pormany, and Las Salinas. Ivica is of consi- derable elevation, and full of mountains covered with verdure, which presents at sea a grand and agreeable picture. The figs of Ivica were cele- brated even in the time of Pliny. It is about sixty-one miles east from Cabozdi St. Anton, a cape near Denia, on the coast of Valencia, in Spain, fifty-two miles from Majorca, and 147 from Cape Tenez, on the coast of Africa.

Yvica, the capital of the island, is situated on a hill on the coast. It is a bishop's see, is well for- tified, and has a good harbour, which, though somewhat encumbered by mud, is still capable ot containing a considerable squadron. It lies under the cannon of a fort erected by the emperor Charles V. The public buildings are the cathedral, six churches, an hospital, several chapels, monasteries, nncl barracks. Population 2700.

YUCK. See ITCH, ITCH INSECT, and MEDICINK.

YULE, YOOL, or IUL. See In..

YURE, a river in Yorkshire, rising at the north-

western extremity of the county, Cotter Mountain, and passing Middleham, Kipon, and Borough- bridge, where it is joined by the Swale, and then constitutes the river Ouse ; on this river is the .naguificent cataract called Aysgarth-Force, rec-

koned by some to exceed most (if the abroad.

YUX. See HICCOUGH.

YZQUACHTLI. See FALCO.

YZQUIEPATL. See VIVEKIU

Z.

Z is found in the Saxon alphabet, but is read in no word originally Teutonic : its sound is uni- formly that of a hard s. No word of English ori- ginal begins with it.

Z is used, 1, as a letter; 2. as an abbreviation; and, 3. anciently as a numeral. I. As a letter : Z is the twenty-fourth and last, and the nineteenth consonant of our alphabet, though it is only the sixth in the Greek. The sound is formed by a motion of the tongue from the palate downwards and upwards to it again, with a shutting and open- ing of the teeth at the same time. Tins letter has been reputed by Roman and Grecian grammarians a double consonant, having the sound ds ; but some think with very little reason ; and, as if we thought otherwise, we often double it, as in puzzle, muzzle, &c. II. In abbreviations, Z formerly stood as a mark for several sorts of weights ; some- times it signified an ounce and a half; and very frequently it stood for half an ounce ; sometimes for the eighth part of an ounce, or a drachm Troy weight ; and it has in earlier times been used to express the third part of an ounce or eight scru- ples. ZZ were used by some of the ancient phy- sicians to express myrrh, and at present are often used to signify zinziber or ginger. III. Among the ancients, Z was a numeral letter, signifying 2000; and, with a dash added a. top, Z signified 2000 times 2000, or 4,000,000.

ZAAB, a district of Algiers, in Africa, south of the province of Constantia, and consisting of a nar- now track of land, under the Atlas. It formed an- ciently part of the Mauritania Sitifensis, and the Roman masonry may often be traced.

ZAANDAM, or SAARDAM, a town of the Nether- lands, in North Holland, on the Zaan, near its junction with the Y. It consists properly of two great villages, called East and West Zaandam, containing together 10,700 inhabitants. The houses are for the most part of wood. Its manu- factures of ropes, tobacco, and paper are extensive; but the most important branch of its industry is, and has long been, ship-building. Here the czar Peter the Great, under the name of Peter Mi- chailov, studied that art. The house which he oc- cupied, is still pointed out. Five miles north by west of Amsterdam.

ZABARELLA (Francis), a learned cardinal, born at Padua, in 1339. He became professor of canon law in different universities, and was made a cardinal by pope John XXI., who sent him am- bassador to the emperor Sigismund. He assisted at the council of Constance, where he advised to depose the pope, whom he accused of forty noto- i ions crimes, lie died therein 1417. He wrote A Treatise on Schism, and other tracts.

/A is AK ELLA (James), a relation of Francis, 1'orn

at Padua in 1533, was well versed in Aristotle's phi- losophy, and became professor of it at Padua. He wrote Commentaries on Aristotle, and a treatise on the Perpetuum Mobile, De inventione aeterni mo- toris, 4to. He

died in 1589ˆ

ZABIANS. See SABIANS.

ZABIISM, or SABIISM, the doctrine of the Sa- bians. See MYTHOLOGY, POLYTHEISM, and SA- BIANS.

ZABULON, Heb. TˆS, i. e. a dwelling place, or ZEBULON, one of the twelve patriarchs of Israel ; the tenth son of Jacob, and the sixth by Leah.*

ZABULON, in ancient geography, the territory of one of the twelve tribes ; bounded on the north by that of Ashur and Naphthali ; on the east by the sea of Galilee ; on the south by the territory ot Is- sachar, or the brook Kison, which ran between both ; on the west by the Mediterranean ; so that it touched two seas.

ZABULON, a very strong town in the above terri- tory, on the Mediterranean, surnamedof men, ne.ir Ptolemais, its vicinity to which makes it probable that it was also Chabulon, unless either name is a faulty reading in Josephus ; about sixty stadia from Ptolemais.

ZACCHEUS, a publican or Roman tax-gatherer, at Jerusalem, who, indulging in a natural curiosity to see our Saviour, was happily called and converted by him, of which he gave immediate proof by offering to restore all his fraudulent extortions four fold. Luke xix. 1 — 10.

ZACCHO, in architecture, the lowest part of the pedestal of a column.

ZACHARIAH, the son of Jeroboam II., a short- lived king of Israel. See ISRAEL.

ZACHARIAH. See Ze< HAKIAH.

ZACUTUS, or Lusitanus, a Jewish physician of Portugal, who retired to Amsterdam when Phi- lip IV. issued his edict against the Jews. His lu- troitus ad Praxam, and other medical works, have been collected and published in 2 vols. folio. He died in 1641.

ZACUTUS (N.), a grandson of the above, became eminent in mathematics, and published a book entitled Juchasin, a Jewish Chronology from the creation to the year 1500.

ZACYNTHUS, an ancient island, south of (V- phalonia, sixty stadia, but nearer to Peloponnesus, in the Ionian Sea, formerly subject to Ulysses, in compass above 160 stadia; woody and fruitful. It lies over against Elis, and had a colony of Achaeans from Peloponnesus, over against the Corinthian

Gulf. It is now called /ante.

ZACYNTHUS, in fabulous history, a native of BcEotia, who accompanied Hercules when he went to Spain to destroy Geryon. After the victory, the hero entrusted him with the care of Geryon's flocks,

to lead them to Thebes. On the road he was bitten by a serpent, and died. His companions buried him in the above island, and gave it his name.

ZADOK, the son of Ahitub, high priest of Israel, appointed by Saul, and continued conjunctly with Abiathar during all the reign of David, to whom he was a steady friend, in all his distresses. His colleague, Abiathar, having forfeited Solomon's fa- vor, by joining in the conspiracy of Adonijah, Za- dok was appointed sole high priest. He was suc- ceeded by his son Ahimaaz.

ZADOK, another Jewish high priest, whose daugh- ter Jerusha was married to king Uzziah.

ZADOK, or SADOC, a Jewish sceptical philoso- pher, who flourished about A. A. C. 260., and founded the sect of the Sadducees.

ZAFTAR,n.S. > Germ.ˆr <

ZAFFIR. $

Cobalt being sublimed, the flowers are of a blue co- lour ; these German mineralists called zaffir. Woodward.

The artificers in glass tinge their glass blue with that dark mineral zaphra. Boyle.

ZAFFIR, ZAFFBE, in metallurgy, is the oxyd of cobalt employed for painting pottery ware and por- celain of a blue color. See CHEMISTRY, COBALT, METALLURGY, and MINERALOGY. The method of preparing it is as follows : — The cobalt taken out of the mine is broken with hammers into pieces xˆibout the size of a hen's egg ; and the stony invo- lucrum, with such other heterogeneous matters as are distinguishable by the eye, are separated as much as possible. The mineral is then pounded in stamping mills, and sifted through brass wire sieves. The lighter parts are washed off

by water, ;md it is afterwards put into a large flat-bottomed arched furnace, resembling a baking oven, where the flame of the wood reverberates upon the ore ; which is occasionally stirred and turned with long handled iron hooks or rakes ; and the process is continued till it ceases to emit any fumes. The oven or furnace is terminated by a long horizontal gallery, which serves for a chimney, in which the arsenic, naturally mixed with the ore, sublimes. If the ore contains a little bismuth, as this last metal is very fusible, it is collected at the bottom of the furnace. The cobalt remains in the state of a dark gray oxyd, called zaffre : lOOlbs.of the cobalt ore lose twenty or thirty per cent, during this opera- tion, which is continued four or nine hours, ac- cording to the quality of the ore. The roasted ore being taken out from the furnace, such parts as are concreted into lumps are pounded and sifted afresh. Zaffre, in commerce, is never pure, being mixed with two or three parts of powdered flints. A proper quantity of the best sort of these, after being ignited in a furnace, are thrown into water to render them friable, and more easily reduced to powder ; which, being sifted, is mixed with the zaffre, according to the before-mentioned dose ; and the mixture is put into casks, after being moist- ened with water. This oxyd, fused with three parts of sand and one of pot-ash, forms a blue glass ; which, when pounded, sifted, and afterwards ground in mills, included in large casks, forms smalt. The blue of zaffre is the most solid and fixed of all the colors that can be employed in vi- trification. It suffers no change from the most vio- lent fire. It is successfully employed to give shades of blue to enamels, and to the crystal glasses made in imitation of some opaque and transparent

ecious stones, as the lapis lazuli, turquois, &c.

ZAKKOUN, a plant that grows at Raha, the ancient Jericho, and affords a sweet oil famous for healing wounds. The zakkoun resembles a plum- tree ; it has thorns four inches long, with leaves like those of the olive-tree, but narrower, and greener, and prickly at the end ; its fruit is a kind of acorn, without a calyx, under the bark of which is a pulp, and then a nut, the kernel of which gives an oil that the Arabs sell at a very high price. See JERICHO.

ZALEUCUS, a famous legislator of the Locri- ans, and the disciple of Pythagoras, flourished 500 years B. C. He made a law, by which he punished adulterers with the loss of both their eyes ; and his son, offending, was not absolved from this pu- nishment ; yet, to show the father as well as the just lawgiver, he put out his own right, and his son's left eye. This example of justice and seve- rity made so strong an impression on the minds of his subjects, that no instance was found of the commission of that vice during the reign of that le- gislator. It is added that Zaleucus forbad any wine being given to the sick on pain of death, un- less it was prescribed

by the physicians ; and that he was so jealous of his laws, that he ordered, that whoever was desirous of changing them, should be obliged, when he made the proposal, to have a cord about his neck, that he might be immediately strangled, if those alterations were esteemed no better than the laws already established. Diodo- rus Siculus attributes the same thing to Charondas, legislator of the Sybarites. Zaleucus also enacted some humorous sumptuary laws. See SUMPTUARY.

ZAMA, in ancient geography, a town of Numidia, it was one of the royal residences of the kings of Numidia, hence called Zama Regia. It stood in a plain ; was stronger by art than nature ; richly supplied with every necessary; and abounding in men, and every weapon of war. This is the famous Zama, remarkable for the decisive battle fought between the two greatest commanders in the world, Hannibal the Carthaginian and Scipio Africanus. Of this engagement, the most important perhaps that ever was fought, Mr. Hooke gives us the following account : — ‘ Scipio drew up his army after the Roman manner, except that he placed the co- horts of the Principes directly behind those of the Hastati, so as to leave sufficient space for the ene- my’s elephants to pass through from front to rear. C. Lcelius was posted on the left wing with the Italian horse, and Masinissa with his Numidians on the right. The intervals of the first line Scipio filled up with his Velites, or light-armed troops, ordering them, upon a signal given, to begin the battle ; and in case they were repulsed, or broke by the elephants, to run back through the lanes be- fore mentioned, and continue on their flight till they were got behind the Triarii Those that were wounded, or in danger of being overtaken, were to turn off to the right and left through the spaces be- tween the lines, and escape to the rear. The army thus drawn up, Scipio went from rank to rank, urging his soldiers to consider the consequences of a defeat, and the rewards of victory ; on the one hand, certain death or slavery (for they had no town in Africa strong enough to protect them) ; on the other, not only a lasting superiority over Carthage, but the empire of the rest of the world. Hannibal ranged all his elephants, to the number of above eighty, in one front. Behind t!u;se he placed his mercenaries, consisting of 12,000 men, Ligurians

Gauls, Baleares, and Mauritanians. The new levies of Carthaginians and other Africans, together with 4000 Macedonians, under a general named So- pater, composed the second line. And in the rear of all, at the distance of about a furlong, he posted his Italian troops, in whom he chiefly

confided. The Carthaginian horse formed his right wing, the Numidians his left. He ordered their several leaders to exhort their troops not to be discouraged by their own weakness, but to place the hope of victory in him and his Italian army ; and particu- 'arly directed the captains of the Carthaginians to epresent to them what would be the fate of their wives and children if the event of this battle should not prove successful. The general himself, walk- ing through the ranks of his Italian troops, called upon them to be mindful of the seventeen cam- paigns in which they had been fellow-soldiers with him ; and of that constant series of victories by which they had extinguished in the Romans all hope of ever being conquerors. He urged them to remember, above all, the battles of Trebia, Thrasy- menus, and Cannas ; with any of which the ap- proaching battle was in no wise to be compared, either with respect to the bravery or the number of the enemy. The Romans were yet unfoiled, and in the height of their strength, when you first met them in the field : nevertheless you vanquished them. The soldiers now before us are either the children of the vanquished, or the remains of those whom you have often put to flight in Italy. Main- tain therefore your general's glory and your own, and establish to yourselves the name of invincible, by which you are become famous throughout the world. When the Numidians of the two armies had skirmished a while, Hannibal ordered the managers of the elephants to drive them upon the enemy. Some of the beasts, frightened at the noise of the trumpets, immediately ran back amongst the Numidians of the Carthaginian left wing, and put them into confusion; which Masi- nissa taking advantage of, entirely routed them. Great destruction was made of the Velites by the rest of the elephants, till these also being terrified, some of thera ran through the void spaces of the Roman army which Scipio had left, others, falling in among the cavalry of the enemy's right wing, gave Laelius the same opportunity against the Car- thaginian horse. After this, the infantry of the foremost lines joined battle. Hannibal's mercena- ries had the advantage at first; but the Roman Hastati sustained the attack, and at length gained ground. The mercenaries, thinking themselves be- trayed, fell furiously upon the Africans ; so that these were obliged to fight for some time both against their own mercenaries and the enemy. When the two Carthaginian lines had ceased their mutual rage, they joined their strength ; and, though now but a mere throng of men, broke the Hastati ; but the Principes advancing restored the battle ; and most of the Africans and mercenaries were cut off. Then followed a sharp engagement, in which victory was long and eagerly disputed. The Ro- mans, though superior in number, were once upon the point of losing the day ; bur Masinissa and Laelius came very seasonably to their assistance. These generals, being returned from the pursuit of the cavalry, fell suddenly upon the rear of Hanni- bal's men, most of whom were cut off in their ranks ; and, of those that fled, very few escaped the horse, the country all round being a plain.

There

fell of the Caithaginians above 20,000, and as many were taken prisoners. The loss on the side of the Romans amounted to about 2000 men. Hannibal escaped with a few horse to Adrumetum, having performed every thing in the engagement which could be expected from a great general. His army (says Polybius) could not have been more skil- fully drawn up. For, as the order of the Roman battalions makes it extremely difficult to break them, the Carthaginian wisely placed his elephants in the front, that they might put ˆthe enemy in con- fusion before the armies should engage. In his first line he placed the mercenaries ; men bold and active, but not well disciplined, that by their im- petuosity he might give a check to the ardor of the Romans. The Africans and Carthaginians, whose courage he doubted, he posted in the middle be- tween the mercenaries and his Italian soldiers, that they might be forced to fight, or at least the Ro- mans, by slaughtering them, might fatigue them- selves, and blunt their weapons. Last of all he drew up the troops he had disciplined himself, and in whom he chiefly confided, at a good distance from the second line, that they might not be broken by the route of the Africans and mercenaries, and kept them in reserve for a vigorous attack upon a tired and weakened enemy.'

ZAMIA, in botany, a genus of plants in the class of cryptogamia, and order of filices ; ranking according to the natural method in the first orl; •>-, palmse.

ZAMINY, in the language of Bengal, security.

ZAMORA, a province in the north-west of Spain, formed of a part of the great province of Leon, and lying to the south and north of tin.- Douro, on the frontiers of Portugal. Its area H 1650 square miles; its population, far more thinly scattered, is only between 70,000 and 80,000. Its surface is in general hilly, and ill adapted to til- lage. It is built near the north bank of the Douro, and to the east of an angular district, formed by a projection of the Portuguese territory. The height it stands on commands the river, and gives it, from a distance, a good appearance ; but the houses are old fashioned, the streets narrow, and the appear- ance of the interior in general gloomy. It is the residence of a bishop, contains a number of churches and chapels, and has about 9000 inhabitants. In the eleventh century it was demolished by a Moor- ish force, but rebuilt by the Spanish government and fortified. The walls are still kept up. The environs are adapted to pasturage. Thirty-three miles north of Salamanca.

ZAMORANO (Roderick), a Spanish navigator, who published A Compendium of Navigation, in 1585, which contributed much to the improvement of the art. He was the first who published sea charts. See

NAVIGATION.

*ZAMOSKI (John), the son of Stanislaus Zamo- ski, castellan of Chelm in R«*i Russia, was a man of great talents and virtue. He studied at Paris, and afterwards at Padua, of which last university he was chosen rector. At Padua he published two tracts De Senatu Romano, and De Senatore. On his return to Poland, king Stephen Battori gave him his niece in marriage, made him grand chan- cellor, and general of the army. He delivered Poland from the Russian yoke. On the death of Stephen, the nobles offered him the crown ; but he refused, and advised them to elect SigismurxJ prince of Sweden. He died in 1*

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ZANCHIUS, or ZANCHY (Jerome), a learned re- former, was born at Alzano, in Italy, in 1516, and entered among the canons regular of Lateran ; but, becoming intimate with Peter Martyr, he turned Lutheran, and left Italy. He went to Strasburg in 1553 ; and then became professor of divinity at Heidelberg, where he died in 1590. He was a man of great piety and moderation. His works were published in 8 vols. folio, 1613.

ZANCLE, an ancient town of Sicily, on the strait between that island and the continent of Italy. It was so named from its resembling £aye\ov, a scythe. It was founded about A. A. C. 1058, by the pirates of Cumae in Italy, and peopled by Sa- mians, lonians, and Chalcidians. — Strabo 6. Diod. 4. Ital. 1. About 497 B. C. it was taken by the Samians, but in three years was recovered by Anax- ilaus, the Messenian tyrant of llhegium, who named it Messana from his native country. See MESSAN A. It is now called Messina.

ZAMCHELLI (John Jerome), a learned Ita- lian physician and botanist, born at Modena in 1662. He settled r.t Venice with great reputation. He wrote, 1. Catalogus Plantarum terrestrium ma- rinarum, Sec. 8vo. 2. Promptuarium remediorum Chymicorura, 8vo. 3. De Myriophillo Pelagico. 4. Lithographia 2m. montium Veronensium, &c. 5. De Rusco ejusq. praeparatione, 8vo. 6. Opuscula Botanica, 4to. 7. History of Plants growing round Venice, folio. He died in 1729.

ZANICHELLIA, in botany, triple-headed pond- weed, a genus of plants, in the class of monoecia, and order of monandria ; and by the natural me- thod ranking in the fifteenth order, inundatae. These plants have no hermaphrodite flowers, but bear both male and female flowers distinct on

the same plant ; whence they are styled androgynous plants. Their male flowers are furnished with only one stamen.

ZANNONI (James), M. D. and botanist of Bo- logna. He discovered many plants, and wrote, 1. Historia Botanica, folio, 1675. 2. Rariorum Stir- pium Historia, folio. lie died in 1682.

ZANNONIA, in botany, a genus of plants of the class dioecia, and order of pentandria. The characters are these : — They produce separate male and female flowers; in the male flower the cup is a perianthium, composed of three leaves of an oval figure, expanding every way, and shorter than the flower ; the flower is monopetalous, but divided into five segments, and has an open mouth ; the segments are jagged, and are equal in size, and bend backwards ; the stamina are five filaments of the length of the cup, standing open at their ends, and terminated by simple apices ; the female flow- ers grow in separate plants, and have the cup and flower the same as in the male, only that the cup stands upon the germen of the pistil ; this germen is oblong, and from it are propagated three reflex conic styles ; the stigmata are bifid and curled ; the fruit is a long and very large berry, truncated at the end, and very small at the base; it contains three cells, and has a curled suture near the apex ; the seeds are two ; they are of an oblong figure, and flat. There is only one species, viz. Z. Indica, the Indian zannonia, a native of India.

ZANOTTI (Francis Maria Gazazzoni), an emi- nent philosopher, born at Bologna in 1692. He was educated among the Jesuits, studied the law, and at last mathematics under Beccari. In 1716 he became secretary to the senate of Bologna, and, in 1718, professor of mathematics. lit introduced the NLSV tor.iun system instead of the Cartesian.

He was made librarian to the Institute, and com- piled two catalogues of its books. In 1766 he was president. He wrote various philosophical works ; and died in 1777.

ZANTE, the ancient Zacynthus, an island of the Mediterranean, forming a part of the Ionian repub- lic, and situated at a short distance to the south of Cephalonia, and to the west of the ancient Elis, in the Morea or Peloponnesus. Its form is irregular; its length fifteen miles ; its breadth above eight ; its circumference more than thirty ; its area about 160. In its aspect it is the finest of the Ionian is- lands ; has no large rivulets ; but in summer, con- siderable inconvenience is experienced, from the drying up of the springs and wells. Springs of petroleum and mineral tar are worked here to ad- vantage. Like the neighbouring" islands, Zante is subject to frequent shocks of earthquakes. The chief products of Zante are currants, olives, and other fruits of a warm latitude (38° N.). Cotton and silk are

also cultivated.

ZANTE, the Zacynthus of the ancients, the capi- tal of the foregoing island, is situated on the eastern coast, about twelve miles nearly west of Cape Tornese, in Morea. It is the largest town of the republic, containing between 16,000 and 18,000 inhabitants.

ZANTHOXYLUM, the tooth-ache tree, in bo- tany, a genus of plants of the class of dioecia, and order of pentandria ; natural order forty sixth, he deraceae : CAL. quinquepartite : COR. none : the fe- male flower has five pistils and as many monosper- mous capsules. They bear male and female flowers on distinct plants. The male flowers have five stamina. There are two species viz. 1. Z. clava Herculis, the Hercules's club toothache tree ; and, 2. Z. trifoliatum, the three-leaved toothache tree. They are both foreign plants.

ZA'NY, n. s. From zanei, the contraction of Giovanni : or, according to Skinner, from sanna, a scoff. One employed to raise laughter by gestures, actions, or speeches ; a merry andrew ; a buffoon.

Some carrytale, some pleaseman, some slight zany, Some mumblenews, some trencher knight, some Dick, Told our intents before. Shaktpeare.

Then write that 1 may follow, and so be Thy echo, thy debtor, thy foil, thy zany, I shall be thought, if mine like thine I shape, All the world's lion, though I be thy ape. Donne.

Oh, great restorer of the good old stage, Preacher at once, and zany of thy age. Pope.

ZAPATA, a feast or ceremony held in Italy, in the courts of certain princes, on St. Nicholas's day ; wherein people hide presents in the shoes or slip- pers of those they would do honor to, in such a manner as may surprise them on the morrow when they come to dress ; being done in imitation of the practice of St. Nicholas, who used in the night-time to throw purses of money in at the windows to marry poor maids withal.

ZAPIZ. See MORLACHIANS.

ZARATE (Augustin), a Spanish historian. In 1543 he was sent to Peru, as treasurer of the In- dies, and on his return was employed in the Ne- therlands. He wrote a History of the Discover) and Conquest of Peru; Antwerp, 8vo. 1555. A French translation was printed at Amsterdam in 1700, 2 vols. 12mo.

ZARERTHAH, or SAREFTA, an ancient city of Sidon, where Elijah lodged

with a widow; now called Sarfand. It is still of some note, and its \viue< are excellent.

ZAROT (Anthony), a celebrated printer of Mi- lan, who, in 1470, first introduced signatures.

ZASLAUS, duke of Kiovia. See POLAND.

ZEA, Indian corn, in botany, a genus of plants of the class monoscia ; order triandria. The male flowers are placed on distinct spikes ; the calyx is biflorous, beardless glume ; the corolla a beardless glume ; the female calyx is a bivalve glume, as is the corolla. There is one filiform, pendulous style ; the seeds are solitary and buried in an oblong re- ceptacle. There is only one species, viz. Z. mays, maize. The Indians in New England, and many other parts of America, had no other vegetable but maize or Indian corn for making their bread. They call it weachin ; and in the United States of America there is much of the bread of the country made of this grain, not of the European corn. In Italy and Germany also there is a species of maize which is the food of the poor inhabitants. The ear of the maize yields a much greater quantity of grain than any of our corn ears. There are com- monly about eight rows of grain in the ear, of- ten more, if the ground be good. Each of these rows contains at least thirty grains, and each of these gives much more corn than a grain of any of our corn. The grains are usually either white or yel- lowish ; but sometimes they are red, bluish, green- ish, or olive-colored, and sometimes striped and variegated. This sort of grain, though so es- sentially necessary to the natives of the country, is yet liable to many accidents. It does not ripen till the end of September ; so that the rains often fall heavy upon it while on the stalk, and the birds in general peck it when it is soft and unripe. To defend it from these accidents, it is covered with a thick husk, which keeps off slight rains very well ; but the birds, if not frighted away, often eat through it, and devour great quantities of the grain. There are three or four varieties of maize in Ame- rica. That of Virginia is very tall and robust, growing to seven or eight feet high ; that of New England is shorter and lower. And the Indians, far- ther up in the country, have a yet smaller kind in common use. The stalk of the maize is jointed like the sugar cane ; it is very soft and juicy, and the juice is so sweet and saccharine, that a syrup, as sweet as sugar, has often been made of it ; and things sweetened with it have been found not dis- tinguishable from those done with sugar. It has not been tried yet

whether it will crystallise into sugar ; but in all probability it will. The Ameri- cans plant this corn any time from the beginning of June, but the best season is the middle of April. The uses of this plant among the Indians are very many. The great article is the making their bread of it. The stalks, when cut up before they are too much dried, are also an excellent winter food for cattle ; but they usually leave them on the ground for the cattle to feed on. The husks about the ear are usually separated from the rest, and make a particular sort of fodder, not inferior to our hay. The Indian women have a way of slitting them into narrow parts, and they then weave them artificially into baskets and many other toys. The original way of eating the grain among the Indians was this : — they boiled it whole in water till it swelled and became tender,and then they fed on it, either alone, or ate it with their fish and vension instead of bread. After this, they found the way of boiling it into a sort of pudding, after bruising it in a mortar ; but the way of reducing it to flour is the best of all. They do this by parching it carefully in the fire,

without burning, . and then beating it in mortars and sifting it. This flour they lay up in bags as their constant provision, and take it out with them when they go to war, eating it either dry or with water. The English have contrived, by mixing it into a stiff paste, either by itself, or with rye or wheat meal, fermenting it with leaven or yeast, and baking it in a hot oven, to make good bread of it. They have likewise found out a method of making good beer, either of the bread or by malting the grain.

ZEAL, n. s. ~\ Greek £»jXoc; Latin zelus.

ZEA'LOT, f Passionate ardor for any

ZEAL'OTJS, adj. £ person or cause: he who

ZEAL'OUSLY, adv. 3 manifests such ardor; often used in a bad sense : the adjective and adverb cor- respond with zeal.

In this present age, wherein zeal hath drowned charity and skill, meekness will not now suffer any man to marvel, whatsoever he shall hear reproved by whom- soever. Hooke-.*

O Cromwell, Cromwell ! Had I but served my God with half the zeal I served my king, he would not in mine age Have left me naked to mine enemies. Sliakspeare.

The fury of zealots, intestine bitterness and division, were the greatest occasion of the destruction of Jeru- salem. Kltiy Charles.

We should be not only devout towards God, bui zealous towards men ;

endeavouring by all prudent means to recover them out of those snares of the devil, whereby they are taken captive. Decay of Piety.

The bare fervour and zeal is taken in commutation for much other piety, by many the most eager con- tenders. Hammond.

Our hearts are right with God, and our intentions pious, if we act our temporal affairs with a desire no greater than our necessity, and in actions of religion we be zealous, active, and operative, so far as prudence will permit. Taylor.

This day at height of noon, came to my sphere A spirit sealout, as he seemed, to know More of the Almighty's works. Milton.

Seriousness and zeal in religion are natural to tlit English. Titlotton.

When the sins of a nation have provoked God to forsake it ; he suffers those to concur in the most per • nicious counsels for enslaving conscience, who pretend to the greatest zeal fot the liberty of it. Stilliuojleet.

She with such a zeal the cause embraced, As women, where they will are all in haste ; The father, mother, and the kin beside, Were overborne by the fury of the tide. DruJen .

We must look our prayers be with seal and earnest- ness ; it is not enough that we so far attend them as barely to know what it is we say, but we must put forth all the affection and devotion of our souls.

Duty of Man.

It is not at all good to be sealmis against any person, but only against their crimes. It is better to be zcaUmt for things than for persons ; but then it should b« only for good things ; a rule that docs certainly exclude all manner of seal for ill things, all manner of zeal for little things. Sjtnit.

Are not those men too often the greatest zealots, who are most notoriously ignorant 1 Id.

This rebellion has discovered to his majesty who have espoused his interests with zeal or indifference.

Adtlison.

A scorn of flattery and a teal for truth. Pope.

To enter into a party as into an order of friars, with so resigned an obedience to superiors, is very unsuit- able with the civil and religious

liberties we so ««/oi

There is nothing noble in a clergyman but burning zeal for the salvation of souls ; nor any thing poor iu liis profession, but idleness and worldly spirit.

*Luu**

ZEA

‘ Being thus saved himself, lie may be zealou$ in the salvation of souls. Id.

ZEALAND, a province of the Netherlands, com- prising the ancient county of Zealand, and Dutch- Flanders, and bounded on the west by the sea, on the north by Goree and Overflakee, and on the east and south by Brabant and Flanders. The chief part of this province consists of islands at the mouth of the Scheldt, viz. Schouwen, Duiveland, Tholen, Walcheren, North and South Beveland, and Wol- fersdyk. The continental part is merely a strip lying along the south bank of the Hond or West Scheldt. The area of the whole is little more than 570 square miles, but the population is about 111,000. Different parts of this province have been at times exposed to heavy calamities, from the sea breaking over the dykes in storms at high tides, particularly in 1302, 1309, 1522, 1532, and 1548. In these catastrophes whole towns and districts have been overflowed and abandoned.

The soil of Zealand is a rich black mould, excel- lent for pasturage, and the culture of madder, flax, and cole seed, which require a very heavy soil. Wheat is raised chiefly in South Beveland. The air is damp, not from fog, but from exhalations from the fresh water in the ditches and water courses. This affects even the health and longevity of the natives.

ZEALAND, the largest of the Danish islands, is situated between the Cattegat and the Baltic, and is separated from Sweden by the Sound, and from Funen by the arm of the sea called the Great Belt. It extends from 55° 2′ to 56° 8′ N. lat.; has an area of 2600 square miles, with 310,000 inhabit- ants; and contains the Danish capital Copenhagen. The surface resembles that of the adjacent Danish islands, in being entirely without mountains; but instead of being, like several of them, a dead flat, it is variegated by small hills and fields, intersected by canals, which, in summer, when the air is clear and the ground covered with vegetation, would re- mind a native of Lombardy of his native country. Such are, in particular, several tracks along the Sound, the Isefiord, and the Cattegat, also the environs of Soroe in the interior.

The soil is rich. It abounds in corn, particu- larly barley ; also in good pasturage, and exports both grain and cattle. The horses are small, but

spirited. Wood is also plentiful, except in the middle of the island. Fish abounds in the numer- ous bays and creeks with which the island is in- dented in every direction. Here are also concen- tred most of the manufactures and trade of Denmark. Zealand is not included in any bi- shopric like the rest of Denmark, but forms an ecclesiastical superintendency. In a political sense, it is governed by a grand bailiff, and is subdivided into the bailiwicsof Copenhagen, F»edericksborg, Holbeck, Soroe, and Praestoe.

ZEALAND, NEW, two islands in the South Paci- fic Ocean, first discovered by Tasman. In the year 1642 he traversed the eastern coast from lat. 34° to 43°, and entered the strait called Cook's Strait. It was supposed, from the period of its first discovery to the time of the enterprising captain Cook, that the strait entered by Tasman, separated an island from some vast southern continent ; but the Bri- tish navigator, who sailed round both islands in the years 1769 and 1770, has completely removed this error. The two islands that go by the name of New Zealand are situated between 34° 22′ anil 47° 25′ S. lat., and between 166° and 180° E. long.

The northernmost of these islands is called by the natives Eaheinomauwe, and the southernmost Tavai, or Tovy Poenaminoo. Upon referring to the map of this country, it will be seen that Eaheinomauwe, or the the northern island, running from the North Cape, which is in lat. 34° 20′ S. to Cape Palliser, in 41° 36′ S., contains 436 miles in length ; and taking the medium breadth, which varies from five miles at Sandy Bay to 180 at the East Cape, at about sixty miles, this extent will include 26,160 square miles, or 16,742,400 square acres; while Tavai Poenammoo, the southern island, extending fro,m 41° 30′ to 47° 25′ S-, stretches 360 miles in length, and estimating its medium breadth at 100 miles, contains not less than 36,000 square miles, or 23,040,000 square acres. These islands, there- fore, taken together, will give an area of 62,160 square miles, or 39,782,400 square acres. Such is the calculation made of the dimensions of these islands by Mr. Nicolas, who visited them in the years 1814 and 1815, for the purpose of establish- ing missionaries. The general face of the country, as far as they had an opportunity of exploring it, is undulating : and the hills rise with a varied as- cent, from inconsiderable eminences to lofty moun- tains. Mr. Nicolas mentions, that, in their excur- sions into the interior of the northern island, they found that the soil varied in its quality, but gene- rally appeared extremely fertile. The hills were composed, for the greater part, of a stiff clay ; and the valleys consisted of a black vegetable mould, producing fern of the most luxuriant growth ; while the swamps, occasionally met with, were of trifling extent, and might be drained with little trouble or expense. Every where a fine rich ver- dure met the eye, and

gave a favorable impression of the genial influence of the climate.

Several missionary stations have been establish- ed here, for the double purpose of civilising the ignorant natives, and instructing them in the truths of the Christian religion ; and the missionaries con- tinue struggling against the serious obstacles op- posed to their progress, from the ferocious habits and superstitions of the natives. It was in the year 1814 that the first missionary settlers were estab- lished among the New Zealanders, on the Bay of Islands, by the Rev. Samuel Marsden. Many dif- ficulties were encountered ; but the settlers still continued their efforts. The settlements were again visited in 1819 by Mr. Marsden, when a tract of land, consisting of 13,000 acres, was pur- chased from one of the chiefs, and the missionaries were settled on it. He also undertook a journey across the island, on which he discovered a large river, making its way, with its tributary streams, into the sea, on the opposite shore. This river he named Gambia. Several New Zealanders, who were brought to New Holland, and had there an opportunity of witnessing the arts and improve- ments of civilised life, have been of great service to the missions-.

ZEBEDEE, the father of St. James and St. John.

ZEBRA, in zoology. See EQUUS.

ZEBU, in zoology, a name given by M. de Buf- fon to the bos indicus of Linne. See Bos.

ZECHARIAH, the son of Barachiah, and grand- son of Iddo, the eleventh of the minor prophets. He returned from Babylon with Zemibbabel and began to prophecy when very young, in the second year of Darius Hystaspes, A.M. 3484, two months after Haggai. These two greatly encouraged the Jews in building the second temple.

ZKM 718

ZECHARIAH, a canonical book of the Old Testa- ment See SCRIPT i r.i.

ZEMINDAR, in its original meaning, signifies a great landholder of Bengal : but is more strictly

ZECHARIAU, the son of Jehoiadah, a prophet of applicable to those who have their title constituted

the blood royal, who was stoned to death by order of his ungrateful cousin, king Joash, in the court of the temple, for reproving him for his idolatry. 2 Chron.

ZECHARIAH, the son of Barachiah, a prophet in the reign of Uzziah, whom he encouraged in well doing, but opposed when he attempted to encroach on the priest's office. 2. Chron. xxvi. 5. It is not ascertained which of these two last is the Zecharias mentioned as the last of the martyrs, in Matt, xxiii. 36, and Luke xi. 50, 51.

ZECHIN. See SEQUIN.

ZED, n. s. The name of the letter z.

Thou whoreson tied, thou unnecessary letter.

Shahrpeare.

ZEDEKIAH, from Heb. npltf and n% i. e. the justice of the Lord, the son of Josiah, and the last king of Judah before the captivity, so named by Nebuchadnezzar, who made him king, upon carry- ing his nephew Jeconiah captive. But rebelling eleven years afterwards, the king of Babylon put out his eyes, killed his sons, and sent him in chains to Babylon, where he died. See JUDAH.

ZEDEKIAH, two false prophets of Israel, under Ahab. 1 Kings xxiii.

ZEDOAHY, in botany andmateria medica. See K.CMPFERIA and MATERIA MEDICA.

ZEINE. The zeine of John Gotham is ob- tained from maize or Indian corn, by infusing it in water, filtering and treating with alcohol the matter insoluble in the former liquid, and evapo- rating the alcoholic solution. We thus obtain a yellow substance having the appearance of wax ; it is soft, ductile, tough, elastic, insipid, nearly void of smell, and denser than water. It affords no ammonia on decomposition by heat; though it ap proaches in its nature to gluten.

ZELD, or CELLE, a city of Germany, in Han- over, at the confluence of the Fuhse and Aller. It is surrounded with a mound and moat, but has suburbs on the outside ; and the palace belonging to the royal family is surrounded by a separate wall and ditch. It has several charitable institutions, an orphan house, a lunatic hospital, a poor-house ; also a school of surgery, and a society of agricul-

or confirmed by a patent or charter from govern- ment, by which they hold their lands or remindaries upon certain conditions. It appears from history, that, in times prior to the irruption of the Maho- metans, the rajahs who held their residence at Delhy, and possessed the sovereignty of Hindostan, deputed officers to collect their revenues. The word zemindar is Persian,

and that language can have no currency in the countries of India, until it was introduced by the people of Persia. When the emperor Shebba-ul-Dien Chory conquered the empire of Hindostan at the end of the twelfth century, he left sultan Cutub-ul-Dien to be his viceroy at Delhy, and administer the government of Hin- dostan. From that time the customs and practices of the Mahometans began gradually to be esta- blished in India : their armies were sent into the countries of the reduced rajahs, under the com- mand of omrahs, in order to preserve the conquest ; and lands were allotted to them to defray the ex- pense.

ZENAS, a lawyer, who was an early Christian convert and companion of St. Paul. Tit. iii. 13.

ZEND, or ZENDAVESTA, a book ascribed to Zo- roaster, and containing his pretended revelations ; which the ancient magicians and modern Persians, called also Gaurs, observe and reverence in the same manner as the Christians do the Bible, and the Maho- metans do the Koran, making it the sole rule both of their faith and manners. The word, it is said, originally signifies any instrument used for kindling fire, and is applied to this book to denote its apti- tude for kindling the flame of religion in the hearts of those who read it. See GENTOOS, MYTHOLOGY, and PHILOLOGY. The Zend contains a reformed system of magianism; teaching that there is a supreme Being, eternal, self-existent, and independ- ent, who created both light and darkness, out of which he made all other things ; that these are in a state of conflict, which will continue till the end of the world ; and then there shall be a general resur- rection and judgment; and that just retribution shall be rendered unto men according to their works ; that the angel of darkness with his fol- lowers shall be consigned to a place of everlasting

ture. It is, however, best known by its court of darkness and punishment, and the angel of light

appeal for the Hanoverian territory at large. The town is tolerably built, and has some trade ; and the inhabitants, who are chiefly Lutherans, are in number about 8200. Zell was formerly the capital of a duchy belonging to a distinct branch of the house of Brunswick : on the extinction of this branch, in 1705, their possessions devolved to the elector. The ducal palace was the residence of the unfortunate Caroline Matilda, queen of Denmark, from 1772 till her death in 1775 ; and a monu- ment of Saxon marble is erected to her memory in the garden. Twenty-one miles N. N. E. of Hanover, and sixty-five south of Hamburg.

ZELOTTI (John Baptist), an eminent painter, born at Verona, in 1532, and educated under Titian. He died in 1592.

ZEMARAIM, a city of the Benjamites, near

with his discij los introduced into a state of ever- lasting light and happiness ; after which light and darkness shall no more interfere with each other. The Zend also enjoys the constant maintenance of sacred fires and fire temples for religious worship ; the distinction of clean and unclean beasts ; the payment of tithes to priests, which are to be of one family or tribe ; a multitude of washings and puri- fications, resembling those of the Jewish law ; and a variety of rules and exhortations for the exercise of bsnevolence and charity. In this book there are many passages evidently taken out of the Scriptures of the Old Testament, particularly out of the Psalms of David. The author represents Adarn and Eve as the first parents of all mankind, gives in substance the same account of the creation and deluge with Moses, differing indeed with re-

ZEMARITES, the descendants of Canaan, by his tenth son. They peopled S;.nyra in Phoenicia, near Orthosia.

ham, Joseph, Moses, and Solomon. Moreover, Dr. Baumgarten asserts, that this work contains doctrines, opinions and facts, actually borrowed

from the Jews, Christians, and Mahometans ; whence, and from other circumstances, he con- cludes that both the history and writings of this prophet were probably invented in the later ages, when the fire worshippers, under the Mahometan government, thought fit to vindicate their religion from the suspicion of idolatry. At whatever pe- riod the Zend may have been written, we are assured by Dr. Hyde that it is in the pure old Per- sian language, and in the character called Peplarj. Some parts of it contain the original text, and others Zoroaster's second thoughts subjoined, for explaining more fully his doctrine. These were occasioned by the opposition of adversaries, and unforeseen circumstances which occurred during the fabrication of the imposture. About 300 years ago, when the old Persian language had become antiquated and little understood, one of the des- tours or high-priests among the Persees composed the Sadda, which is a compendium, in the vulgar or modern Persic tongue, of those parts of the Zend that relate to reliction, or a kind of code of canons and precepts, drawn from the theological writings of Zoroaster, serving as an authoritative rule of faith and practice of his followers. The Sadda is written in a low kind of Persic verse, and, as Dr. Hyde informs us, it is

bonorum et malorum farrago, having made many good and pious things, and others very superstitious and trifling. See PER- SEES and ZOROASTER.

ZENDICISM. See SARACENS.

ZENETI. See ALGERINES and ALGIERS.

ZENGH. See SEGNA.

ZEN'ITH, n. s. Arabic. The point over head opposite to the nadir.

Fond men ! if we believe that men do live Under the zenith of both frozen poles,

Though none come thence advertisement to give, Why bear we not the like faith of our souls ? Davies.

These seasons are designed by the motions of the sun ; when that approaches nearest our zenith, or ver- tical point, we call it summer. Browne.

ZENITH. See NADIR.

ZENITH SECTOR. See ASTRONOMY, Index.

ZENO, the founder of the sect of the Stoics, was born about 300 years B. C. at Citium in Cy- prus. This place having been originally peopled by a colony of Phoenicians, Zeno is sometimes called a Phoenician. His father was by profession a merchant, but, discovering in his son a strong propensity to learning, he early devoted him to philosophy. In his mercantile capacity he had frequent occasion to visit Athens, where he pur- chased for his son several of the writings of the most eminent Socratic philosophers. These he read with great avidity ; and, when he was about thirty years of age, he determined to take a voyage to a city which was so celebrated both as a mart of trade and of science. If it be true, as some writers relate, that he brought with him a valuable cargo of Phoenician purple, which was lost by shipwreck upon the coast of Piraeus, this circum- stance will account for the facility with %vhich he at first attached himself to a sect whose leading principle was the contempt of riches. Upon his first arrival in Athens, going accidentally into the shop of a bookseller, he took up a volume of the Commentaries of Xenophon ; and after reading a few passages, was so much delighted with the work, and formed so high an idea of the author, hat he asked the bookseller where he might meet

with such men. Crates, the Cynic philosopher, happening at that instant to

be passing by, the bookseller pointed to him, and said, ‘ Follow that man.’ Zeno attended upon the instructions of Crates, and was so well pleased with his doctrine that he became one of his disciples. But, though he admired the general principles of the Cynic school, he could not easily reconcile himself to their peculiar manners. Besides, his inquisitive turn of mind would not allow him to adopt that indifference to every scientific enquiry which was one of the characteristic distinctions of the sect. He therefore attended upon other masters, who professed to instruct their disciples in the nature and causes of things. When Crates, displeased at his following other philosophers, attempted to drag him by force out of the school of Stilpo, Zeno said to him, ‘ You may seize my body, but Stilpo has laid hold of my mind.’ After continuing t.3 attend upon the lectures of Stilpo several years, he passed over to other schools, particularly to those of Xenocrates and Diodorus Cronus. By the latter he was instructed in dialectics. He was so much delighted with this branch of study, that he presented to his master a large pecuniary gratuity, in return for his free communication of some of his ingenious subtleties. At last, after attending almost every other master, he offered himself as a disciple of Polemo. This philosopher appears to have been aware that Zeno’s intention, in thus re- moving from one school to another, was to collect materials from various quarters for a new system of his own ; for, when he came into Polemo’s school, he said to him, ‘ I am no stranger, Zeno, to your Phoenician arts , I perceive that your de- sign is to creep slily into my garden, and steal away my fruit.’ Polemo was not mistaken in his opinion. Having made himself master of the tenets of others, Zeno determined to become the founder of a new sect. The place which he made choice of for his school was a public portico, adorned with the pictures of Polygnotus, and other eminent painters. It was the most famous portico in Athens, and called, by way of eminence, Sroa, the porch. It was from this circumstance that the followers of Zeno were called Stoics. See STOICS. In his person Zeno was tall and slender ; his aspect was severe, and his brow contracted. His constitution was feeble, but he preserved his health by great abstemiousness. The supplies of his table consisted of figs, bread, and honey ; not- withstanding which, he was frequently honored with the company of great men. In public com- pany, to avoid every appearance of an assuming temper, he commonly took the lowest place. In- deed so great was his modesty, that he seldom chose to mingle with a crowd, or wished for the company of more than two or three friends at once. He paid more attention to neatness and de- corum in external appearance than the Cynic phi- losophers. In his dress indeed he was plain, and in all his expenses frugal ; but this is not to be im- puted to avarice, but a contempt of external mag- nificence. He showed as much respect to the poor as to the rich ; and conversed freely with persons of the meanest occupations. He had only one ser- vant, or, according to Seneca, none. Zeno lived to the extreme age of ninety-eight ;

and at last, in consequence of an accident, voluntarily put an end to his life. As he was walking out of his school he fell down, and in the fall broke one of his fingers ,

upon which he was so affected with a consciousness of infirmity, that, striking the earth, he said, ‘ Why am I thus importuned? I obey thy summons;’ and immediately went home and strangled himself. He died in the first year of the 129th Olympiad. The Athenians, at the request of Antigonus, erected a monument to his memory in the Cera- micum.

ZENO, a celebrated Epicurean philosopher, born at Sidon, who had Cicero and Pomponius Atticus for his disciples, and who wrote a book against the mathematics, which, as well as that of Possulo- nius’s refutation of it, is lost.

ZKXO ELEATES, an eminent Grecian philosopher, was born at Elea about 504 years B. C. He was a zealous friend of civil liberty, and is celebrated for his courageous and successful opposition to ty- rants ; but the inconsistency of the stories related by different writers concerning him in a great mea- sure destroys their credit. He chose to reside in his small native city of Elea rather than at Athens, because it afforded freer scope to his independent and generous spirit, which could not easily submit to the restraints of authority. It is related that he vindicated the warmth with which he resented reproach, by saying, ‘ If I were indifferent to cen- sure, [should also be indifferent to praise.’ The invention of the dialectic art has been improperly ascribed to Zeno : but there can be no doubt that this philosopher, and other metaphysical disputants in the eleatic sect, employed much ingenuity and subtlety in exhibiting examples of most of the logical arts, which were afterwards reduced to rule by Aristotle and others. According to Aristotle, he taught, that nothing can be produced either from that which is similar or dissimilar ; that there is only one being, God ; who is eternal, homo- geneous and spherical, neither finite nor infinite, neither quiescent nor moveable; that there are many worlds; that there is in nature no vacuum ; that all bodies are composed of four elements, heat and moisture, cold and dryness ; and that the body of man is from the earth, and his soul an equal mixture of these four elements. He argued with great subtlety against the possibility of mo- tion. If Seneca’s account of this philosopher deserves credit, he reached the highest point of scepticism, and denied the real existence of exter- nal objects. The truth is,

that, after all that has been advanced by different writers, it is impossible to determine whether Zeno understood the term one, metaphysically, logically, or physically ; or whether he admitted or denied a nature properly divine.

XI NOBIA, queen of Palmyra. See PALMYRA.

/I'.XOBII INSUL.E, islands in the Adriatic.

/KNODOTUS, a native of Troezene ; who wrote a history of Umbria. Diod.

ZKOUTE, in mineralogy, the name of a very extensive mineral uenus, containing the following species : — 1. Dodecahedral zeolite or leucite; 2. Hexahedral zeolite or analcime; 3. Rhomboidal zeolite, chabasite, or chabasie ; 4. Pyramidal zoo- lite, or cross-stone ; 5. Diprismatic zeolite, or lau- monite ; 6. Prismatic zeolite, or mesotype, divided into three sub-species, — fibrous zeolite, natrolite, and mealy zeolite ; 7. Pnsrnatoidal zeolite, or stilbite, comprehending foliated zeolite, and radiated zeo- lite ; K. Axifrangible zeolite, or apophyllite. The following; may be more distinctly specified.

(6.) Prismatic zeolite or mesotype.

i. Fibrous zeolite, of which there are two kinds ; the acicular or needle zeolite, ami common fibrous zeolite.

(a.) Acicular, or needle zeolite, the mesotype of Haiiy. Colors grayish, yellowish, or reddish- white. Massive, in distinct concretions, and crystallised. Primitive form, a prism of 91° 25'. The following are secondary figures : — An acicular rec- tangular four-sided prism, very flatly acuminated with four planes, set on the lateral planes; some- times two of the acuminating planes disappear, when there is formed an acute bevelment, or the prism is sometimes truncated on the edges. La- teral planes longitudinally streaked. Shining, inclining to pearly. Cleavage two-fold. Frac- ture small-grained, uneven. Fragments splintery. Translucent. Refracts double. As hard as apa- tite. Brittle. Specific gravity 2-0 to 2-3. It intumesces before the blowpipe, and forms a jelly with acids. It becomes elastic by heating, and retains this property some time after it has cooled. The free extremity of the crystal with the acumi- nation, shows positive, the attached end, negative electricity. Its constituents are silica 50-24, alumina 29'3, lime 9'46, water 10. — Vauquelin. It occurs in secondary trap-rocks, as in basalt, green stone, and amygdaloid. It is found near the village of Old Kilpatrick, Dumbartonshire ; in Ayrshire and Perthshire, always in trap rocks ; in Iceland and in the Faroe Islands.

(6.) Common fibrous zeolite. Color white. Massive, in distinct concretions,

and in capillary crystals. Glimmering, pearly. Fragments splintery. Faintly translucent. Hardness as before. Rather brittle. Specific gravity 2‘16 to 2-2. Chemical characters and situations as above. Its constituents are, silica 49, alumina 27, soda 17, water 9‘5.— Smithson.

*ii. Mealy zeolite. — Color white, of various shades. Massive, imitative, in a crust, or in delicate fibrous concretions. Feebly glimmering. Fracture coarse earthy. Opaque. The mass is soft, but the mi- nute parts as hard as the preceding. Sectile. Most easily frangible. Does not adhere to the tongue. Feels meagre. Sometimes so light as nearly to float on water. It intumesces, and gelatinizes as the preceding. Its constituents are, silica 60, alumina 150, lime 8, oxide of iron 1-8, loss by exposure to heat 11*6. — Ilisinger. It oc- curs like the others. It is found near Tantallon Castle, in East Lothian, and in the islands of Skye, Mull, and Canna.*

(7.) Prismatoidal zeolite, or stilbite. Of this there are two sub-species ; the foliated and radiated.

i. Foliated zeolite, the stilbite of Haiiy. Color white, of various shades. Massive, disseminated, imitative, in distinct granular concretions, and crystallised. Primitive form, a prism of 99° 22’. Secondary forms are, a low, oblique, four-sided prism, variously truncated ; a low equiangular six-sided prism; and an eight-sided prism, from trun- cation of all the edges of the four-sided prism. Lateral planes transversely streaked. Shining pearly. • Cleavage single. Fracture conchoidal. Translucent. Refracts single. As hard as cal- careous spar. Brittle. Specific gravity 2 to 2‘2. It intumesces and phosphoresces before the blow- pipe, but does not form a jelly with acids. Its constituents are, silica 52‘6, alumina 17-5, lime 9, water 18‘5 — Vauquelin. It occurs principally in secondary amygdaloid, either in drusy cavities \f

m contemporaneous veins. It is also met with in primitive and transition mountains. Very beau- tiful specimens of the red foliated and radiated zeolites are found at Carbeth in Stirlinghire, and-at Lock Humphrey in Dumbartonshire ; also in the secondary trap rocks of the Hebrides, as of Skye, Canna, and Mull ; and in the north of Ireland.

ii. Radiated zeolite. — Stilbite of Haiiy. Color yellowish-white and grayish-white. Massive, in angular pieces, in prismatic and granular concre- tions, and crystallised in a rectangular four-sided prism variously modified by acuminations. Shin- ing, pearly. Translucent. Hardness and chemical characters as above. Brittle. Specific gravity 2-14. Its constituents are, silica 40 98, alumina 39-09, lime 10-95, water 16‘5. — Meyer. Its*

situ- ations are as the preceding. — Jameson.

ZEOPYRUM, a kind of grain between spelt and wheat. — Bailey.

ZEPHANIAH, one of twelve minor prophets, the son of Cushi and grandson of Gedaliah, pro- phesied in the reign of Josiah, and was contempo- rary with Jeremiah.

ZEPHANIAH, a canonical book of the Old Testa- ment. See SCRIPTURE.

ZEPHANIAH, the second priest or sagan, under Seraiah, in the reign of Zedekiah, who often con- sulted Jeremiah by him ; though he did not follow his advice. Jer. xxi., xxvii.

ZE'PHYR, n. s.) Latin zephyrus. The west

ZE'PHYRUS. J wind ; and, poetically, any calm soft wind.

They are as gentle As zephyrs blowing below the violet. Shatupeare.

Zephyr you shall see a youth with a merry counte- nance, holding in his hand a swan with wings dis- played, as about to sing. Peacham.

Mild as when Zi>phurui on Flora breathes. Milton.

ZEPHYRUS, in the mythology, the god of the west wind, was the son of Astreus and Aurora, and the lover of the nymph Chloris according to the Greeks, or of Flora according to the Romaic; and as presiding over the growth of fruits and flowers. He is described as giving a refreshing coolness to the air by his soft and agreeable breath, and as moderating the heat of summer by fanning the air with his silken wings. He is depicted ander the form of a youth, with a very tender air, with wings resembling those of the butterfly, and with his head crowned with flowers. As the poets of Greece and Rome lived in a warm climate, they are lavish in their praise of this beneficent deity, and under his name describe the pleasure and advantage they received from the western breezes.

ZERDA. See CANIS.

ZERTA, or the ZERTE, a fish caught in the rivers of Italy and some other places, of the figure of the chub, and called by authors capito anadro- mus, and the bhke. It seldom grows to more than two pounds weight, and at times lives in rivers, at times in the sea; and is esteemed a very well tasted fish, especially a little before the season of its spawning. The zerte is that species of cy- prinus described by Gesner and others under the name of copito anodromus.

ZEST, n. s. FT. zest. The peel of an orange squeesed into wine ; a relish.

Almighty vanity! to thee they owe Their zest of pleasure, and Uleir balm of woe. Ymine. Voi. XXII.

ZETLAND. See SHETLAND. ZKVEN. See CLOSTER SEVEN.

ZEUS (Ztwc), in mythology, a name of Jupiter ; explained to mean Noah. See DELUGE, and SAN-

CHOXIATHO.

ZEUS, in ichthyology, a genus of fishes of the order of thoracici. The head is compressed, and declines, the upper lip being vaulted over by a transverse membrane ; the tongue is subulated ; there are seven rays in the gill membrane ; and the body is compressed. The species are eight : one of them is described under Opha. The most re- markable are these : — 1. Z. faber, the doree. It is of a hideous form, its body is oval, and greatly compressed on the sides ; the head large ; the snout vastly projecting ; the mouth very wide; the teeth very small ; the eyes great, the irides yellow ; the lateral line oddly distorted, sinking at each end, and rising near the back in the middle; be- neath it on each side is a round black spot. The tail is round at the end, and consists of fifteen yellow rays. The color of the sides is olive, va • ried with light blue and white, and while living is very resplendent, and as if gilt ; for which reason it is called the doree. The largest fish we have heard of weighed twelve pounds. Superstition has made the doree rival to the haddock, for the honor of having been the fish out of whose mouth St. Peter took the tribute money, leaving on its sides the marks of his finger and thumb. In our own country it was very long before this fish at- tracted our notice, as edible. We are indebted to the late Mr. Quin for adding a most delicious fish to our table, who, overcoming all the vulgar pre- judices on account of its deformity, has effectually established its reputation. This fish was supposed to be found only in the southern seas of this king- dom, but it has been discovered likewise on the coast of Anglesey. Those of the greatest size are taken in the Bay of Biscay, off the French coasts; they are also very common in the Mediterranean : Ovid must therefore have styled it rarus faber, on account of its excellency, not its scarcity.

2. Z. Opah. See OP'AH.

3. Z. Vomer. See ABACATUAIA. ZEUTH. See DELUGE.

ZEUXIS, a celebrated painter of amtiquity, who flourished about 400 years

B.'C. He was born at Heraclea ; but, as there have been many cities of that name, it cannot be certainly determined w hie) of them had the honor of his birth. Some con- jecture that it was Heraclea near Crotona in Italy. He carried painting to a much higher degree of perfection than Apoflodorus had left it ; discovered the art of properly disposing of lights and shades, and particularly excelled in coloring. He amassed immense riches ; and then resolved to sell no more of his pictures, but gave them away; saying, ' That he could not set a price on them equal to their value.' Pliny observes that this admirable painter, disputing for the prize of painting with Parrhasius, painted some grapes so naturally that the birds flew down to peck them. Parrhasius, on the other hand, painted a curtain so very artiully, that Zeuxis mistaking it for a real one that hid his rival's work, ordered the curtain to be drawn aside, to show what Parrhasius had done ; but, having found his mistake, he ingenuously confessed him- self vanquished, since he had only imposed npon birds, while Parrhasius had deceived even a ma»-

ter of the art. Another time lie painted a boy loaded with grapes ; when the birds also flew to this picture, at which he was vexed ; and con- fessed that his work was not sufficiently finished, since, had he painted the boy as perfectly as the grapes, the birds would have been afraid of him. Archelaus, king of Macedon, made use of Zeuxis's pencil for the embellishment of his palace. One of this painter's finest pieces was a Hercules strangling two serpents in his cradle, in the pre- sence of his affrighted mother; but he himself chiefly esteemed his Athleta, or Champion, under which he placed a Greek verse, that afterwards be- came very famous, and in which he says, ' That it was easier to criticise than to imitate the picture.' He made a present of bis Alcmena to the Agrigen- tines. Zeuxis did not value himself on speedily finishing his pictures ; but, knowing that Agathar- chus gloried in his being able to paint with ease and in a little time, he said, ' That for his part he, on the contrary, gloried in his slowness : and, if he was long in painting, it was because he painted for eternity.' Carlo Dati wrote in Italian the life of Zeuxis, of Parrhasius, Apelles, and Protogenes, which were printed at Florence in 1667.

ZIA, an island in the Grecian Archipelago, one of the Cyclades, anciently Ceos and Hadrassa; sixteen miles in circumference.

ZIA, or ZEA, the ancient'Ceos, an island of the Greek archipelago, in the group of the Cyclades, situated to the south-west of Negroponte, and about ten miles from Cape Colonna (Sunium), the southern point of Attica. Its length is fifteen miles ; its breadth eight. Its soil is fertile, and tolerably cultivated. Its products are vines, mul- berries, figs, cotton, and corn. The inhabitants, almost all Greeks, are in number about 6000.

ZIEGLER (Caspar), professor of law, at Wit- temberg, was a native of Leipsic. He published, 1. De Milite Episcopo; 2. De Diaconis et de Diacomssis; 3. De Episcopis. He died in 1690.

ZIEGLER (James), a learned divine and mathe- matician of Suabia. He wrote, 1. Notes on certain Passages of Scripture, in 1548, folio; 2. Descrip- tion of the Holy Land, 1586, folio ; 3. De Con- structione Sphserae, 4to. He died in 1549.

ZIEGLER (Jerome), a learned professor of poetry, in logoldstadt. He published poems of his own ; and Aventine's Annals of Bavaria, in 1554. See AVENTINE.

Z1MB, in entomology, a venomous insect of Abyssinia. This animal according to Mr. Bruce, who has given a figure of it, is the most trouble- some to quadrupeds that can be imagined. It in- fests those places within the tropical rains where the soil is black and loamy, and no other place whatever. It has not been described by any other naturalist. Mr. Bruce is of opinion that this is the fly mentioned by Isaiah, chap. vii. 18, 19.

ZIMBIS, in ichthyology, the sea snail. See BAMBA.

ZIMENT WATER, or copper water, in natural history, the name by which some have called water found in places where there are copper mines, and lightly impregnated with particles of that metal. The most famous spring of this kind is about a mile distant from Newsol in Hungary, in the great copper mine called by the Germans Herrn-grundt. The water in this mine is found at different depths, and is received into basons, for the purpose of separating the copper from it : in some of those it

is much more sated with this metal than in others, and will make the supposed change of iron into that metal much sooner. The most common pieces of iron used in the experiments are horse shoes, nails, and the like; and they are found very little altered in shape, after the operation, except that their surfaces are more raised. The water appears greenish in the basin, where it stands ; but, if a glass of it be taken up, it looks clear as crystal : it has no smell, but a strong sulphuric astringent taste, insomuch that the lips and tongue are blis- tered and scorch upon tasting it.

ZIMMERMANN (Matthias), a learned Protes- tant divine, born at Eperies, in 1625. He became minister at Meissen. He published, 1. Amsenitates Historiae Ecclesiasticse, 4to. ; 2. Florilegium Philo- logico Historicum, 4to. He died in 1689.

ZIMMERMANN (John George), M.D., a cele- brated physician, born at Brug, in Berne, in 1728. He studied at Gottingen, under Haller, and after- wards under Gaubius. His writings recommended him to Frederick the Great of Prussia ; whom he attended in his last illness. In April 1768 he was appointed by the regency of Hanover physician to king George III. He cultivated the English language to such perfection that he relished the beauties of Shakspeare, Pope, Thomson, &c., as well as any native. His chief works are, 1. A poem entitled The Subversion of Lisbon, 1755; 2. An Essay on Solitude, in 4 vols., which has been translated into various languages ; 3. An Essay on Lavater's Physiognomy; 4. Agreeable and Instruc- tive Tales ; 5. A Defence of Frederick the Great against Count Mirabeau ; 6. Life and Character of Frederick the Great ; 7. A Physiological Disserta- tion on Irritability, &c. He married a most ami- able and accomplished lady, who died on the 23d of June 1770, and was soon followed by her son and daughter. Some years after he married the very accomplished and learned Miss Berger, daugh- ter of Dr. Berger, the king's physician at Lunen- berg, who survived him. He died October 7th

1795.

ZIMOME. The gluten of wheat, treated by alcohol, is reduced to the third part of its bulk. This diminution is owing, not merely to the loss of gliadine, but likewise to that of water. The resi- due is zimome, which may be obtained pure by boiling it repeatedly in alcohol, or by digesting it in repeated portions of that liquid cold, till it no longer gives out any gliadine. Zimome thus puri- 'fied has the form of small globules, or constitutes a shapeless mass, which is hard, tough, destitute of cohesion, and of an ash-white color. When washed in water, it recovers part of its viscosily, and becomes quickly brown, when left in contact of the air. It is specifically heavier than water. Its mode of fermenting is no longer that of gluten ; for when it putrefies it exhales a fetid urinous odor. It dissolves completely in vinegar, and in the mi- neral acids at a boiling temperature. With caustic potash, it combines and forms a kind of »oap. When put into lime water, or into the solutions of the alkaline carbonates, it becomes harder and as- sumes a new appearance without dissolving. When thrown upon red hot coals, it exhales an odor simi- lar to that of burning hair or hoofs, and burns with flame. Zimome is to be found in several parts of vegetables. It produces various kinds of fermen- tation, according to the nature of the substance with which it comes in contact.

ZIN, i.i ancien*. geography, a wilderness encom- passing Idumea, at least on the south and west as far as Palestine or Canaan ; but, according to Wells, on the eait ct Ed jm, and north of Ezion-Gaber.

ZINC is of a bluish-white color, somewhat brighter than lead ; of considerable hardness, and so malleable as not to be broken with the hammer, though it cannot be much extended in this way. It is very easily extended by the rollers of the flat- ting mill. Its specific gravity is from 6‘9 to 7-2. In a temperature beV.vaen 210° and 300° of Fah- renheit, it has so much ductility that it can be drawn into wire, as well as laminated, for which a patent has been obtained by Messrs. Hobson and Sylvester of Sheffield. The zinc thus annealed and wrought retains the malleability it had ac- quired. When broken by bending, its texture ap- pears as if composed of cubical grains. On ac- count of its imperfect malleability, it is difficult to reduce it into small parts by filing or hammering ; but it may be granulated, like the malleable me- tals, by pouring it, when fused, into cold water ; or, if it be heated nearly to melting, it is then suf- ficiently brittle to be pulverised. It melts long before ignition, at about 700° of Fahrenheit’s ther- mometer; and, soon after it becomes red hot, it burns with a dazzling white flame, of a bluish or yeilowish tinge, and is oxidised with fcuch rapi- dity that it flies up in the form of white flowers, called the flowers of zinc, or philosophical wool. These are generated so plentifully, that the access of air is soon intercepted ; and the combustion ceases, unless the matter be stirred, and a consider- able heat kept up. The white oxide of zinc is not volatile, but is driven up merely by the force of the combustion. When it is again urged by a strong heat, it becomes converted into a clear yel- low glass. If zinc be heated in closed vessels, it rises without decomposition.

The oxide of zinc, according to the experiments of MM. Gay Lussac, and Berzelius, consists of 100 metal + 2-44 oxygen; whence the prime equivalent appears to be 4-1 . Sir H. Davy makes it 4-4 from his own and his brother’s experiments. When zinc is burned in chlorine, a solid substance is formed of a whitish-gray color, and semitrans- parent. This is the only chloride of zinc, as there is only one oxide of the metal. It may likewise be made by heating together zinc filings and cor- rosive sublimate. It is as soft as wax, fuses at a temperature a little above ‘212°, and rises in the gaseous form at a heat much below ignition. Its taste is intensely acrid, and it corrodes the skin. It acts upon water, and dissolves in it, producing much heat; and its solution, decomposed by an alkali, affords the white hydrated oxide of zinc. This chloride has been called butter of zinc, and muriate of zinc. From the experiments of Dr. John Davy, it consists of nearly equal weights of zinc and chlorine. The equivalent proportions appear to be, zinc 4-25 4 chlorine 4‘5.

Blende is the native sulphuret of zinc. The two bodies are difficult to combine artificially. The salts of zinc possess the following general characters :—

1. They generally yield colorless solutions with water. 2. Ferroprussiate of potash, hydrosul- phuret of potash, hydriodate of potash, sulphu- retted hydrogen, and alkalies, occasion white pre- cipitates. 3. Infusion of galls produces no pre- cipitate.

The dihted sulphuric acid dissolves zinc: r.t the same time that the temperature of the solvent is increased, and much hydrogen escapes, an undissolved residue is left, which has been supposed to consist of plumbago. Proust, however, says, that it is a mixture of arsenic, lead, and copper. As the combination of the sulphuric acid and the oxide proceeds, the temperature diminishes, and the sul- phate of zinc, which is more soluble in hot than cold water, begins to separate, and disturb the transparency of the fluid. If more water be added, the salt may be obtained in fine prismatic four- sided crystals. The white vitriol, or copperas, usually sold, is crystallised hastily, in the same manner as loaf sugar, which on this account it re- sembles in appearance ; it is slightly efflorescent. The white oxide of zinc is soluble in the sulphuric acid, and forms the same salt as is afforded by zinc itself.

The hydrogen gas that is extricated from water by the action of sulphuric acid carries up with it a portion of zinc, which is apparently dissolved in it ; but this is deposited spontaneously, at least in part, if not wholly, by standing. It burns with a brighter flame than common hydrogen.

Sulphate of zinc is prepared in the large wav from some varieties of the native sulphuret. The ore is roasted, wetted with water, and exposed to the air. The sulphur attracts oxygen, and is con- verted into sulphuric acid ; and the metal, being at the same time oxidised, combines with the acid. After some time the sulphate is extracted by solu- tion in water ; and, the solution being evaporated to dryness, the mass is run into moulds. Thus the white vitriol of the shops generally contains a small portion of iron, and sometimes of lead.

Sulphurous acid dissolves zinc, and sulphuretted hydrogen is evolved. The solution, by exposure to the air, deposits needly crystals, which, accord- ing to Fourcry and Vauquelin, are sulphuretted sulphite of zinc. By dissolving oxide of zinc in sulphurous acid, the pure sulphite is obtained. This is soluble, and crystallisable.

Diluted nitric acid combines rapidly with zinc, and produces much heat, at the same time that a large quantity of nitrous air flies off. The solu- tion is

very caustic, and affords crystals bv eva- poration and cooling, which slightly detonate upon not coals, and leave oxide of zinc behind. This salt is deliquescent.*

Muriatic acid acts very strongly upon zinc, and disengages much hydrogen ; the solution, when evaporated, does not afford crystals, but becomes gelatinous. By a strong heat it is partly decom- posed, a portion of the acid being expelled, and part of the muriate sublimes and condenses in a congeries of prisms.

Phosphoric acid dissolves zinc. The phosphate does not crystallise, but becomes gelatinous, and may be fused by a strong heat. The concrete phosphoric acid heated with zinc filings is decom- posed.

Fluoric acid likewise dissolves zinc.

The boracic acid digested with zinc becomes milky ; and, if a solution of borax be added to a solution of muriate or nitrate of zinc, an insoluble borate of zinc is thrown down.

A solution of carbonic acid in water dissolves a small quantity of zinc, and more readily its oxide. If the solution be exposed to the air, a thin iridd- scent pellicle forms on its surface.

The acetic acid readily dissolves zinc, and yields by evaporation crystals of acetate of zinc, forming rhomboidal or hexagonal plates. These are rot al- tered by exposure to the air, are soluble in water, and burn with a blue flame.

The succinic acid dissolves zinc with efferve- scence, and the solution yields long, slender, foli- ated crystals.

Zinc is readily dissolved in benzoic acid, and the solution yields needle- shaped crystals, which are soluble both in water and in alcohol. Heat decomposes them by volatilising their acid.

The oxalic acid attacks zinc with a violent eflfer- “escence, and a white powder soon subsides, which is oxalate of zinc. If oxalic acid be dropped into a solution of sulphate, nitrate, or muriate of zinc, the same salt is precipitated ; it being scarcely soluble in water, unless an access of acid be pre- sent. It contains seventy-five per cent, of metal.

The tartaric acid likewise dissolves zinc with ef- fervescence, and forms a salt difficult of solution in water.

The citric acid attacks zinc with effervescence, and small brilliant crystals of citrate of zinc are gradually deposited, which are insoluble in water. Their taste is styptic and metallic, and they are composed of equal parts of the acid and of oxide of zinc.

The malic acid dissolves zinc, and affords beau- iful crystals by evaporation.

Lactic acid acts upon zinc with effervescence, and produces a crystallisible salt.

The metallic acids likewise combine with zinc. If arsenic acid be poured on it, an effervescence takes place, arsenical hydrogen gas is emitted, and a black powder falls down, which is arsenic in the metallic state, the zinc having deprived a portion of the arsenic, as well as the water, of its oxygen. If one part of zinc filings and two parts of dry arsenic acid be distilled in a retort, a violent deto- nation takes place when the retort becomes red, occasioned by the sudden absorption of the oxygen of the acid by the zinc. The arseniate of zinc may be precipitated by pouring arsenic acid into the solution of acetate of zinc, or by mixing a so- lution of an alkaline arseniate with that of sulphate of zinc. It is a white powder, insoluble in water. By a similar process zinc may be combined with the molybdic acid, and with the oxide of tungsten, the tungstic acid of some, with both of which it forms a white insoluble compound ; and with the chromic a

Zinc likewise forms some triple salts. Thus, if the white oxide of zinc be boiled in a solution of muriate of ammonia, a considerable portion is dis- solved ; and, though part of the oxide is again deposited as the solution cools, some of it remains combined with the acid and alkali in the solution, and is not precipitable either by pure alkalies or their carbonates. This triple salt does not crys- tallise.

If the acidulous tartrate of potash be boiled in water with zinc filings, a triple compound will be formed, which is very soluble in water, but not easny crystallised. This, like the preceding, cannot be piecipitated from its solution either by pure or carbonated alkalies.

A triple sulphate of zinc and iron may be formed by mixing together the sulphates of iron and of line dissolved in water, or by dissolving iron and

zinc in dilute sulphuric acid. This salt crystal- lises in rhomboids, which nearly resemble the sul- phate of zinc in tigure, but are of a pale green color. In taste, and in degree of solubility, it dif- fers little from the sulphate

of zinc. It contains a much larger proportion of zinc than of iron.

A triple sulphate of zinc and cobalt, as first no- ticed by Link, m£y be obtained by digesting zaflre in a solution of sulphate of zinc. On evaporation, large quadrilateral prisms are obtained, which ef- floresce on exposure to the air. Zinc is precipitated from acids by the soluble earths and the alkalies : the latter redissolve the precipitate, if they be added in excess. Zinc decomposes, or alters, the neutral sulphates in the dry way. When fused with sulphate of potash, it converts that salt into a sulphuret : the zinc at the same time being oxi- dised, and partly dissolved in the sulphuret. When pulverised zinc is added to fused nitre, or projected together with that salt into a red hot cru- cible, a very violent detonation takes place ; inso- much that it is necessary for the operator to be careful in using only small quantities, lest the burning matter should be thrown about. The zinc is oxidised, and part of the oxide combines with the alkali, with which it forms a compound soluble in water.

Zinc decomposes common salt, and also sal am- moniac, by combining with the muriatic acid. The filings of zinc likewise decompose alum, when boiled in a solution of that salt, probably by combining with its excess of acid.

Zinc may be combined with phosphorus, by pro- jecting small pieces of phosphorus on the zinc melted in a crucible, the zinc being covered with a little resin, to prevent its oxidation. Phosphuret of zinc is white, with a shade of bluish-gray, has a metallic lustre, and is a little malleable. When zinc and phosphorus are exposed to heat in a re- tort, a red sublimate rises, and likewise a bluish sublimate, in needly crystals, with a metallic lus- tre. If zinc and phosphoric acid be heated toge- ther, with or without a little charcoal, needly crys- tals are sublimed, of a silvery white color. All these, according to Pelletier, are phosphuretted oxides of zinc. Most of the metallic combinations of zinc have been already treated of. It forms a brittle compound with antimony ; and its effects on manganese, tungsten, and molybdena, have not yet been ascertained. An alloy of zinc and iron has been collected by Mr. Herapath in a zinc manu- factory at Bristol. It lined the tube leading from the retort. It was hard and brittle, the fracture showing broad facets like zinc, but of a duller gray color, with surfaces more rough and granular. Its specific gravity was 7-172. It consisted of 92-6 zinc f 7-4 iron in 100. — Philosophical Magazine, Ixii. 168.

ZINCK (Christian Frederick), an enamel painter, born at Dresden in 1684. He came to England in 1706, where he studied under Eoil, whom he excelled. He painted many of the royal family; and died in 1767.

ZINGI1A, or ZINGHA BAND:, queen 01 Angoia, in Africa, a woman of

the most extraordinary cha- racter that ever any age or countiy produced. She poisoned her brother Nigola, in 1627; and kept up a \v;ir with the Portuguese, with various succes, for more than twenty-eight years; and during the course of it displayed the most astonishing general- ship. She died, in her eightieth year, in 1662

ZINNIA, m botany, a genus of plants of the class syngenesia, order polygamia superflua; and, in the natural system, arranged under the forty-ninth order, composite. The receptacle is palea- oeous ; the pappus consists of two erect awns, the calyx is ovato-cylindrical and imbricated; the rays consist of five persisting entire florets. There are two species ; viz., 1. Z. multiflora, the many-flowered z'nnia ; and, 2. Z. pauciflora, the few-flowered zinnia ; which are both foreign plants.

ZINZENDORFF (Nicholas Lewis), count, the noted founder of the German religious sect called Mo- ravians, or Hernhutters ; or, as they say, the restorer of that society. From his own narrative it appears that when he came of age in 1721 his thoughts were wholly bent on gathering together a little so- ciety of believers, among whom he might live, and who should entirely employ themselves in exercises of devotion under him. He according purchased an estate at Bertholsdorff in Upper Lusatia, where, being joined by some followers, he gave the curacy of the village to a man of his own complexion ; and Bertholsdorff soon became talked of for a new mode of piety. One Christian David, a carpenter, brought a few proselytes from Moravia : they began a new town about half a league from the village, where count ZinzendorfT fixed his residence among them, and where great numbers of Moravians flocked and established themselves under his protection : so that in 1 732 their number amounted to 600. An adjacent hill, called the Huthberg, gave occasion to these colonists to call their new settlement Huth des Ilerrn, and afterwards Herrnhuth ; which may be interpreted, ' The guard or protection of the Lord :' and from this the whole sect have taken their name. The count spared neither pains nor art to propagate his opinions ; he went himself all over Europe, and at least twice to America ; and sent his missionaries throughout the world. He died in 1760. Those who wish to know more of the Moravian tenets may consult Rimius's account of them translated in 1753. See UNITAS FRATRUM.

ZINZIBER, in botany. See AMOMUM and GINGER. Ginger is

recommended by Dr. William Wright as very powerful in curing the gout.

ZION, or SIGN, in ancient geography, a very fa- mous mountain, standing on the north side of Je- rusalem (Psal. xlvii. 2), containing the upper city, built by king David, where stood the royal palace. — Josephus. A part of Zion, situated at its extremity, was called Millo, of, or in, the city of David. — 2 Chron. xxxii. 5. Modern travellers, who have been upon the spot, say, that Zion is the whole of the mountain, on which Jerusalem stands at this day, though not to the extent in which it anciently stood on the same mountain, as appears from Psal. ix. 12, 15, Ixv. 1, Ixxxvii. 2, 3, Isa. Ixii. 1. It is swelled into several eminences or tops ; as Moriah, Acra Bezetha, and Zion, a particular eminence of Mount Zion, and Zion Proper, &c., encompassed on three sides, east, south, and west, with one con- tinued very deep and steep valley ; by means of which it was impregnable on these three sides, and ahvays attacked and taken, according t Josephus, by the enemy on the north side, where mount Zion becomes level, and the vales of Gihon and Jehoso- phat gradually descend. This deep and steep val- ley incontestably constitutes the compass of the old Jerusalem on those three sides, as plainly appears to any person who has been upon the spot. On that particular top of the mount called' Zion stood*

the fortress of the Jebusites ; which, being after- wards taken by David, came to be called the City of David, where he had his royal residence, and kept his court. That part of the valley which lay to the east was called Jehosophat's, having mount Olivet lying beyond it ; that to the south Gehinnon ; and that to th» west Gihon, from cognominal mountains lying beyond them. At the west end of Gihon, without the city, stood Golgotha or Calvary. The pretended Golgotha, shown at this day within the walls, is the spurious brat of interested and fraudulent monks. — Korte.

Zio.v, another hill of Judea, the same with Har- mon.

ZIPH, or SIPH, in ancient geography, a wilder- ness or desart in the tribe of Judah, where David was a fugitive ; lying south-east of Hebron ; so called from

ZIPH, or SIPH, two towns in this tribe ; the one on the south towards Idumea, on the confines of Eleutheropol is (Jerome); the other eight miles east of Hebron, towards the Dead Sea, inclining south near mount Carmel. Here was a mountain, mentioned 1 Sam. xxiii. 24, said by Jerome to b«> rugged, dismal, and always overcast.

ZIPIL-EI, ZJPHENSES, ZIPHIM, or ZIPHITES, the inhabitants of Ziph. 1 Sam. xxiii. 19.

ZIRCON, in mineralogy and lithology, a stone containing a new earth ; called also jargon.

ZIRCONIAwas first discovered in the jargon of Ceylon by Klaproth, in 1789, and it has since been found in the jacinth. To obtain it, the stone should be calcined and thrown into cold water, to render it friable, and then powdered in an agate mortar. Mix the powder with nine parts of pure potash, and project the mixture by spoonfuls into a red-hot cru- cible, taking care that each portion is fused before another is added. Keep the whole in fusion, with an increased heat, for an hour and a half. When cold, break the crucible, separate its contents, pow- der and boil in water, to dissolve the alkali. Wash the insoluble part; dissolve in muriatic acid; heat the solution, that the silex may fall down ; and pre- cipitate the zircon by caustic fixed alkali. Or the zircon may be precipitated by carbonate of soda, and the carbonic acid expelled by heat.

1. New process for preparing pure zirconia. — Powder the zircons very fine, mix them with two parts of pure potash, and heat them red-hot in a silver crucible for an hour. Treat the substance obtained with distilled water, pour it on a filter, and wash the insoluble part well; it will be acorn- pound of zirconia, silex, potash, and oxide of iron. Dissolve it in muriatic acid, and evaporate to dry- uess, to separate the silex. Redissolve the muriates of zirconia and iron in water; and, to separate the zirconia which adheres to the silex, wash it with weak muriatic acid, and add this to the solution. Filter the fluid, and precipitate the zirconia and iron by pure ammonia; wash the precipitates well, and then treat the hydrates with oxalic acid, boil- ing them well together, that the acid may act on the iron retaining it in solution, whilst an insoluble oxalate of zirconia is formed. It is then to be fil- tered, and the oxalate washed, until no iron can be detected in the water that passes. The earthy oxalate is, when dry, of an opaline color. After being well washed, it is to be decomposed by heat in a platinum crucible. Thus obtained, the zirco- nia is perfectly pure, but is not affected by acids. It must be reacted on by potash as before, aud theu

washed until the alkali is removed. Afterwards dissolve it in muriatic acid, and precipitate by am- monia. The hydrate thrown down, when will washed, is perfectly pure, and easily soluble in acids.

Zircon is a fine white powder, without taste or smell, but somewhat harsri

to the touch. It is in- soluble in water; yet, if slowly dried, it coalesces into a semitransparent yellowish mass, like gum- arabic, which retains one-third its weight of water. It unites with all the acids. It is insoluble in pure alkalies; but the alkaline carbonates dissolve it. Heated with the blow-pipe it does not melt, but emits a yellowish phosphoric light. Heated in a crucible of charcoal, bedded in charcoal powder, placed in a stone crucible, and exposed to a good forge fire for some hours, it undergoes a pasty fusion, which unites its particles into a gray opaque mass, not only vitreous, but more resembling porcelain. In this state it is sufficiently hard to strike fire with steel, and scratch glass ; and is of the specific gravity of 4-3. There is the same evidence for be- iieving that zirconia is a compound of a metal and oxygen, as that afforded by the action of potassium en the other earths. The alkaline metal, when brought into contact with zirconia ignited to white- ness, is, for the most part, converted into potash; and dark particles, which, when examined by a magnifying-glass, appear metallic in some parts, of a chocolate-brown in others, are found diffused •Jirough the potash and the decompounded earth. According to Sir II. Davy 4‘66 is the prime equi- valent of zirconium on the oxygen scale, and 5‘66 that of zirconia.

Zirconium has been recently obtained by Berze- ‘ius by a method exactly similar to that for, silicium. Bee SILICIUM. Zirconium is as black as carbon, does not oxidise in water or in muriatic acid- but nitro-muriatic and fluoric acids dissolve it; the last with the disengagement of hydrogen. At a temperature but slightly elevated it burns with great intensity. It combines with sulphur. Its sulphuret is of a chestnut-brown color like silicium, and insoluble in muriatic acid or the alkalies. It burns with brilliancy, producing sulphureous acid gas and zirconia. — Ann. de Chimie et de Phys. xxvi. 4l.

ZISCA (John), the famous general of the forces of the Hussites, in the fifteenth century, was a gen- tleman educated at the court of Bohemia, in the reign of Wenceslaus. He entered very young into the army, and, after distinguishing himself on seve- ral occasions, lost an eye in a battle, whence he was called Zisca, or One-eyed. At length the Reformation, begun by John Huss, spreading through almost all Bohemia, Zisca placed himself at the head of the Hussites, and had soon under his command a body of 40,000 men. With this army he gained several victories over those of the Romish religion, who carried on a kind of crusade auainst them, and built a town in an advantageous situation, to which he gave the name of Tabor: whence the Hussites were afterwards called Tabo- rites. Zisca lost his other eye by an arrow at the siege of the city of Ilubi ; but this did not pre- vent his continuing the war, his fighting battles, and gaining several great victories, among which was that of Ausig on the Elbe, in which 9000 of the enemy were left dead on the field. The em- peror Sigismund, alarmed at his

progress, caused »ery advantageous proposals to be offered to him ;

which he readily accepted, and set out to m.-ˆt Sigismund, but died on the road. He ordered that his body should be left a prey to the birds and wild beasts ; and that a drum should be made of his skin, being persuaded that the enemy would fly as soon as they heard the sound. It is added that the Hussites executed his will ; and that the news of this order made such an impression on the disturbed imaginations of tlie German Papists, that in many battles they actually fled at the beat of the drum with the utmost precipitation, leaving their baggage and artillery behind them.

ZIZANIA, in botany, a genus of plants of the class monoecia, order hexandria, and, in the natural system, arranged under the fourth order, gramina. There is no male calyx ; the corolla is a bivalved, beardless glume, intermixed with the female flowers ; there is no female calyx, the corolla is a univalved, cuculated, and aristated glume ; the style is bipartite, and there is one seed covered with the plaited corolla. There are three species, viz. 1. Z. aquatica, the water zizania. 2. Z. palus- tris, the fenny zizania ; and 3. Z. terrestris, the land zizania. All the three are foreign plants.

ZIZIPHORA, in botany, Syrian field basil, a genus of plants of the class diandria, and in the order of monogynia ; ranking, according to the na- tural method, in the forty-second order, verticillatae. The characters are these : — The flower hath a long, rough, cylindrical empalement, which is slightly cut into five parts at the brim ; and the flower is of the labiated kind, having a long cylindrical tube ; the upper lip is oval, reflexed, and entire ; and the under lip, or beard, is divided into three equal segments; it has two spreading stamina, terminated by oblong summits, and a quadrifid germen, sup- porting a bristly style, crowned by a sharp-pointed inflexed stigma ; the germen turns to four oblong seeds, which ripen in the empalement. There are three species.

ZO'DIAC, n. s. Fr. zodiaque ; Gr. £wtfia»coc, of £w»;, life. The track of the sun through the twelve signs ; a great circle of the sphere, containing the twelve signs; or living creatures painted on the zodiac.

The golden sun salutes the morn, And, having gilt the ocean with his beams, Gallops the zodiack in his glistering coach. Sliakspcare.

Years he numbered scarce thirteen, When fates turned cruel :

Yet three filled zodiacks had he been The stage's jewel. Beit Jonson.

By his side.

As in a glistering zodiack, hung the sword, Satan's dire dread ; and in his hand the spear.

Sfilton.

It exceeds even their absurdity to suppose the zodinck and planets to be efficient of, and antecedent to, them- selves, or to exert any influences before they were .'n being. Bentley.

Here in a shrine, that cast a dazzling light, Sat fixed in thought the mighty Stagyrite ; His sacred head a radiant zodiuck crowned, And various animals his sides surround. Pope.

ZODIAC. See ASTRONOMY, Index; and ZO- DIACK.

ZODIACAL (from zodiac). Of or belonging to, from, or under the zodiac.

XOIMACAI. LIGHT. See ASTRONOMY, Index.

XOIHACK, or ZODIAC, in astronomy, a broad circle, whose middle is the ecliptic, and its extremes (wo circles parallel thereto, at such a distance

from it as to bound or comprehend the excur- sions of the sun and planets. See ASTIIONOMV, Index. It is a curious enough fact that the solar division of the Indian zodiac is the same in sub- stance with that of the Greeks, and yet that it has not been borrowed either from the Greeks or the Arabians. The identity, or at least striking simi- larity, of the division, is universally known ; and JNI. Montucla has endeavoured to prove that the Brahmins received it from the Arabs. His opinion, we believe, has been very generally admitted ; but, in the second volume of the Asiatic Researches, the accomplished president Sir William Jones has proved unanswerably that neither of those nations borrowed that division from the other ; that it has been known among the Hindoos from time imme- morial ; and that it was probably invented by the first progenitors of that race, whom he considers as the most ancient of mankind, before their dis- persion. The question is not of importance suffi- ciently general, straitened as we are by the limits prescribed us, for our entering into the dispute ; but we think it our duty to mention it, that our astronomical readers, if they think it worth their while, may have recourse to the original writers for further information.

ZOE, the fourth wife of the emperor Leo VI., and mother of Constantine VIII., during whose minority she governed the empire with great pro- priety ; quelled the revolt of Constantine Ducas ; obliged the Bulgarians to return to their own country; and made peace with the Saracens. Her ungrateful son Constantine, when lie succeeded, banished this excellent empress, and she died in exile.

ZOE, the daughter of Constantine X., and wife of llomanus III., surnamed Argyrus, whom she murdered in 1034 to marry Michael IV., after whose death in 1041 she married Constantine XI., surnamed Monomachus. She died in 1050.

ZOEGA (George), was born at Kiel in Danish Holstein in the year 1751, and became a distin- guished philologist. He went to Italy in 1777, and in 1779 came to reside at Rome, where he re- mained during the space of twenty-nine years. In 1787 he published a Catalogue Raisonne of the im- perial medals struck at Alexandria, which did great honor to his industry and talents, and laid the foundation of his literary fame. The pope, Pius VI., about that time had just embellished the city with several Egyptian monuments, which had been concealed in the earth for upwards of twelve cen- turies. He applied to Zoega to write a dissertation on the obelisks. To this interesting enquiry he directed his attention with his usual zeal and indus- try. In 1797 his book de Origine et Usu Obelis- corum was ready for the press, but was not pub- lished when, in 1799, he was subjected to the greatest privations by the war which overthrew the papal government, and established an ephe- meral republic. Yet, under the pressure of poverty, and subject to frequent attacks of a dis- ease in the chest, he continued his researches into antiquity. It was then that he prepared his dis- sertation concerning Lycurgus and the Menades, which was soon after read in the Roman Institute, of which he became a member. In 1801 the situ- ation of Zoega was so wretched that he determined to return to Holstein. From this he was happily prevented by the good offices of M. de Schubart, envoy from Denmark to Italy. The king of Den-

mark, through his influence, was pleased to appoint Zoega librarian and professor in the university of Kiel, with the usual emoluments, and with special permission to continue his residence at Rome. Zoega was well acquainted with the ancient lan- guages, and more than ordinarily skilled in the principal modern tongues. He wrote in Latin with the utmost facility, and in Italian with all the graces of a native Tuscan : he was also a perfect master of French, English, and German. For many years he was afflicted with a pulmonary complaint, aggravated by his studious life. He died at the age of fifty-eight, of a nervo-bilious fever, to the great loss of literature and regret of learned men. His manners were amiable, and he was ex- tremely communicative of his knowledge in con- versation. He was the instructor of

his own chil- dren. His wife, to whom he was tenderly attached, died before, him; which probably contributed to shorten his own life. He was a member of the Italian academy, as well as of the academies of Copenhagen, Goettingen, Berlin, Florence, Sienna, Rome, &c. ; and he had, just before his death, been appointed a knight of the order of Danebrog.

ZOEGEA, in botany, a genus of plants of the class syngenesia, and order polygamia frustranea. The receptacle is bristly ; the pappus setaceous ; the corollulae of the radius ligulated ; the calyx im- bricated. There are two species, viz. 1. Z. Capensis, the Cape zoegea ; a native of the Cape of Good Hope: and 2. Z. leptaurea, another foreign species.

ZOILUS, a rhetorician, sophist, and grammarian of Amphipolis in Thrace, who flourished about A. A. C. 260 or 270. He criticised the Iliad of Homer and t'ae works of Isocrates with such seve- rity, that he was called Homeromastix, or the Chastiser of Homer, and the Dog ; and his name has been ever since applied to all snarling critics. He presented his criticisms to Ptolemy Philadel- phus, who rejected them with contempt, and some say put him to death ; but this seems not agreeable to Ptolemy's liberal character.

ZOISITE, a sub-species of prismatoidal augite, which is divided into two kinds, the common and friable.

. Common zoisite. — Color yellowish gray. Mas sive, in granular and prismatic concretions, and crystallised in very oblique four-sided prisms, in which the obtuse lateral edges are often rounded, so that the crystals have a reed-like form. Shining, or glistening and resino pearly. Cleavage double. Fracture small grained uneven. Feebly translucent. As hard as epidote. Very easily frangible. Specific gravity 3-3. It is affected by the blowpipe, as epidote. Its constituents are, silica 43, alumina 29, lime 21, oxide of iron 3. — Klaproth. At the Saulp, in Carinthia, it is found imbedded in a bed of quartz, along with cyanite, garnet, and augite ; or it takes the place of felspar in a granular rock, composed of quartz and mica. It is found in Glen-Elg in Inverness-shire, and in Shetland.

2. Friable zoisite. — Color reddish-white, which is spotted with pale peach-blossom red. Massive, and in very fine loosely aggregated granular con- cretions. Feebly glimmering. Fracture interme- diate between earthy and splintery. Translucent on the edges. Semi-hard. Brittle. Specific gravity 3-3. Its constituents are, silica 44, alumina 32, lime 20, oxide of iron 2'5. — Klaproth. It occurs imbedded in green talc, at Radetgraben, in Carii,- thia.

ZOOLOGY.

ZOLLIKOFER (George Joachim), a learned Swiss Protestant divine, born in 1730, and edu- cated at Bremen and Utrecht. After preaching in Pays de Vaud, he settled at Monstein, in the Grisons country ; next at Isenburg ; and in 1758 at Leipsic. He wrote A Book of Devotions, and 2 vols. of Sermons ; both translated into English. He died in 1788.

ZONARAS (John), a learned G":ek historian, who was employed in state affairs 'at the court of Constantinople. He wrote A Chronicle or Annals from the Creation to A. D. 1118, in Greek; which were printed at Paris in 2 vols. folio, in 1686. He turned monk in his old days, and wrote Commen- taries on the Apostolic Canons.

ZONCA (Victor), an eminent mathematician of Italy in the seventeenth century, who published a collection of curious inventions in mechanics, en- titled Nuova Teatro di Machini et Edificii ; Padua, 1621, folio.

ZONE, n. s. Gr. £wv»j ; Lat. zona. A girdle; a division of the earth.

True love is still the same : the torrid zones, And those more frigid ones,

It must not know. Suckling.

Scarce the sun

Hath finished half his journey, and scarce begins His other half in the great zone of heaven. Milton.

And as five zones the etherial regions bind, Five correspondent are to earth assigned : The sun, with rays directly darting down, Fires all beneath, and fries the middle zone. Drydert.

An embroidered zone surrounds her waist. Id.

Thy statue, Venus, though by Phidias' hands Designed immortal, yet no longer stands ; The magick of thy shining zone is past, But Salisbury's garter shall for ever last. Granville.

ZONE, in geography and astronomy, is a division of the terraqueous globe with respect to the dif- ferent degrees of heat found in the different parts thereof. See GEOGRAPHY.

ZONE, TORRID. See ASTRONOMY, and TORRID. Its breadth is 46° 58'. The equator, running through the middle of it, divides it into two equal parts, each containing 23° 29'. The ancients imagined the torrid zone

uninhabitable.

ZONES, FRIGID, the zones within the polar cir- cles, where frost and snow are perpetual. See ASTRONOMY, and GEOGRAPHY.

ZONES, TEMPERATE. See the references above. The breadth of each is 43° 2'. The frigid zones are segments of the surface of th< > earth, terminated, one by the antarctic, and the other by the arctic circle. The breadth of each is 46° 68'.

ZONES or BELTS OF JUPITER. See ASTRONOMY.

ZOOGONIA, ZOOGONY (from Gr. £woc, alive, and yovt], offspring), a breeding or bringing forth of perfect or living creatures.

ZOOG'RAPHER, U.K. > Gr. £w»j and rpo0w.

ZOOG'RAPHY. J One who describes the

nature, properties, and forms of animals : zoogra- phy is the science of the zoographer.

One kind of locust stands not prone, or a little in- clining upward ; but in a large erectness, elevating the two fore legs, and sustaining itself in the middle of the other four, by zoographers called the prophet and pray- ing locust. Browne.

If we contemplate the end, its principal final cause- being the glory of its Maker, this leads us into di- vinity ; and for its subordinate, as it is designed for alimental sustenance to living creatures, and medicinal uses to man, we are thereby conducted into zoography.

Glanville.

ZOOLOGY.

ZOOLOGY The terra zooVogia is compounded of£«ov, a living creature, and Xoyoc, illative rea- soning. The former is ultimately derived from £tw, ferveo, under which category all the vital ma- nifestations fall, since a kindly fermentation is uni- versally produced by the union of the principle of caloric with the appropriated fluids in the processes of animal life. The latter is from Xeyw, to collect or gather, and strictly implies the ingathering of the several elements of knowledge.

According U> the full import of the term, therefore, zoology is that science which contemplates the at- tributes and the systematic arrangement of

living creatures. As our limits are prescribed, and as many of the subjects pertaining to this department of knowledge have been already touched upon in the preceding volumes of this work, we shall here make it our main scope and object to exhibit the method, the rationale, and the proprieties of a ge- neral classification of living creatures, commencing with man, the most complicated in his organi- sation and vital functions ; and in a descending scale of animal endowments pursue the series till it terminates in the eudora, a creature which from the extreme simplicity of its structure is nouri>ln'd by absorption alone; and from time to time season the dryness of forms with some viridaria or patches of natural history which have cither fallen

under the writer's own observation, or bave been fresh drawn from recent sources.

In framing the groundwork of a system, it is ob- vious that a considerable stock of materials ought to be at the devotion of the founder, and it is no less apparent that the stability and amplitude of the superstructure will be proportioned to the quan- tity and goodness of the subsequent additions; it will not be amiss, therefore, in the first place, to discuss the means of obtaining this knowledge ; and, in the second, the method of applying it when ob- tained. This might not unfitly be called the logic of zoology, or the art of collecting and assorting that peculiar class of ideas and notions which per- tain to natural history. When we contemplate any living creature of the higher orders, with the view of becoming better acquainted with its form and structure, we find that certain portions of it may be divided into homogeneous parts, as muscle into muscles and nerves into nerves, whilst others divide themselves into heterogeneous parts, as the hand into fingers and the feet into tots. The former, or homogeneous sections, belong to the study of ana- tomy, its office being to consider the texture as well as the form of the solid parts of the animal frame. The latter, or heterogeneous sections, being the development or unfolding of those parts into ex- ternal configurations, enter more immediately into

the composition of that sum of particulars which is called zoology. Hence it appears that it is the pri- mary division of our duty in the prosecution of this branch of science to consider the form and shape of a corresponding portion of one animal with re- ference to that of another, and to describe their dif- ferences in such clear and specific terms as to leave no doubt in the mind of the reader about the justness of his apprehension. But this is easier in theory than in the execution ; for, though the differ- ence in point of lineament between the head of a horse and that of a bear be manifest at first sight, yet, from the number and complexity of those lines which define

their respective forms, it is no easy matter to suggest the principal mark for discrimina- tion, if shape alone be the object of our enquiry. The essential properties of a straight line and a curved one are presently acknowledged by the eye; yet, since there may be curvatures of an infinite number of diameters, language is not adequate to express them ; and, though we gladly content our- selves with approximations to accuracy, yet, since the configurations of animals are chiefly composed of these bending lines, we seldom attempt to seek for a leading characteristic from that quarter. To obviate this uncertainty, we may take a more con- fined view, and, by a sort of analogy, compare the relative breadths and lengths of corresponding portions, and the similar distances of prominent organs, as, for example, the size of ears contrasted with that of the head ; the distance of the nostrils from the canthus of the eye, or from the meatus auditorius of the ear : thus several ways of mea- suring the head might be devised, which would very much assist the imagination and help compa- rative terms to a definitiveness in which they would be otherwise deficient. When any organ happens to admit of an uncommon degree of deve- lopment, its very excess becomes a notable mark for distinction, as, for instance, the tragus "bf the ear among the bats, which, by expansion, assumes the form of a secondary ear, and is by the French called oreillon, or a little ear; and we, following the analogy of eyelet, have for the sake of brevity translated it ear-let: the prolonged snout of the nasua, or coati mondi ; the voluntary power of pro- truding the muzzle in the ursine sloth; or the dis- proportioned length of the hind legs in the kanga- roo. When a part appears under the form of a supplement, it never fails to arrest the attention of the most cursory observer, and when other marks are wanting, and its use in the animal economy cannot be discerned, we may fairly consider it as a signature which nature herself has set upon the creature to assist us in distinguishing it from the rest of its kindred. By way of reference we might allude to the nasal appendage so conspicuous in some of the bats, which has not only become the diagnostic of genus, but by the playful variety of its shape and foldings has split the group into several genera. But, without dwelling upon particularities of less importance, we might for the sake of exem- plification refer to the membraneous expansion of integuments of the fore legs, and the elongation of the phalangial bones in the last mentioned animals, which, ministered to by large pectoral muscles, can, by the reaction of an elastic medium, support them in a lofty flight. In the proximate family of the galeopitheci, or flying cats, the attenuated and Dreadi.ig skin of the sides or flanks, without any

lengthening of the phalangial bones, assists the pos- sessors in leaping, and us in dividing them from their affinities. The legs and feet in some animals afford us very important means of distinction ; that point which renders more prominent the angular bending in the hind leg of the horse and the

lion is elevated to a mediate distance from the ground, and, by affording a mechanical advantage for the in- sertion of thaimuscles, aids the animal in bound- ing ; but in therbear we find the same joint resting upon the plane of position, and the creature there- by enabled to maintain an erect attitude, in which, case the animal is said to be plantigrade, implying that, instead of having the heel-bone so situated thai the leg may act about it like a spring unbending about a pivot, it has the same bone brought so low as to rest upon the ground, and recompences the diminution of fleetness with which the tyger springs upon his prey, and the hind flees from dan- ger, by allowing him a certain adaptation of posture that enables him to climb trees and gather his fa- vorite food from their branches. In order to make room for the length of the metatarsal bones in the leg of a horse, we find the thigh bone, or os fetnoris, shorter, and in a manner included within the body. Instead of spreading itself into toes we sometimes find the foot, by the preponderating growth of horny substance, converted into a hoof, in which case later naturalists have found it convenient to call the animal solid ungulous, importing that the nails have coalesced into one solid substance. Here the reader will be beforehand with me in suggesting the horse as an example and type for the rest. In a numerous order of animals we meet with a cleft in this hoof, and the two parts thus reft asunder so far separated as to assist the animal in ascending by clasping the inequalities of the soil. This at- tribute is collateral with another, namely, that of chewing the cud, which circumstance in nomen- clature has, because it depends upon a noted num- ber and structure of the stomachs, been allowed to take the lead of the former. It is familiar with most readers of the Bible that these were the signs by which a clean beast might be known from an unclean one ; and, to lay the greatest possible em- phasis upon the completeness of this division, the original has employed five verbs and concrete verbal nouns to express it. This order, as comprising all those useful animals which yield us both food and clothing, was made by Linne to pass under the ex- tended appellation which we have some reason to believe was once appropriated to sheep alone. But Cuvier, willing to have a name which should by itself be significant of the character, has made choice of the classical and well understood term ruminantia,or ruminating animals, including all those tame beasts the chosen pabulum of which contains so small a proportion of nutriment fit for assimilation, that, were they obliged to perform the office of cropping and chewing at the same time, too much space would be subducted from the length allotted to repose. Among the quadrnmana, or simitr, of our arrangement, we, in the parts under consideration, recognise the similitude of our own hands ; in the first and second families, especially, we observe a similar flatness in the nails and the tapering length of the fingers, but what is of far greater dignity is the meeting appliability of the thumb, which serves not only in grasping objects, which many other animals are accustomed to do with

but enables the fingers to perform a.l that com- plexity of offices and manoeuvres which we very expressively call handling. In the beaver the in- teguments of the toes are attenuated into webs, in order that they may fulfil the same purpose which the palm of an oar does in rowing, namely, that of propulsion by the reaction of the strucken me- dium. In that paradoxical animal, lately brought from New Holland, we meet with the same sort of webs extended beyond the tips of the nails in the fore-feet, but somewhat within their range in the bind ones.

The aphorism of Tully, that every system of in- struction or doctrinal discussion ought to set out with a definition, is as pertinent to the nature and use of the term genus, in marshalling zoological facts, as it was to that of the word officium in a dis- course on the practical duties. This word grnus, formed by a dialectical variation from yevoc, is de- rived from the obsolete verb ytvw, which has ex- panded itself into numerous posterity, y«vo/t, 8cc., and expresses the se- paration of the young from the matrix of its mother. In the works of Aristotle, the father of philosophic method, it is tacitly presumed by the application of ytvog that certain characteristics of form are indis- pensably connected with the reproduction of a liv- ing creature. But, if a reader does but cast his eye over the pages of books written since the time of Linnu, he will presently perceive that, even in works in which there is a great ostentation of ac- curacy, authors are by no means agreed about what constitutes a generic character ; hence a table of synonyms, especially in ornithology, sometimes presents a series of monstrous discordances, and some might thence be tempted to think that such apparent deformities could be spared from an arrangement ; but experience will teach them that these synonyms are an abbreviated form of an in- definite description, hinting at certain similitudes, conceived by those who imposed the names in question, which will aid the practical enquirer in ascertaining the identity with the subject of descrip- tion, and lend him an indirect assistance in extri- cating the essential difference. To tins observation we have been led by experience, having in our re- searches often had our doubts more effectually can- celled by the inspection of a few synonyms than by reading over a description of the ordinary length.

Notwithstanding the diversity of judgments about the otigin of generic distinction, we, from a certain concurrence of opinion exhibited by several late writers, and from the predominant mode of think- ing observable in monographs of recently estab- lished genera, may be allowed to frame the

follow- ing logical definition of a genus : —

The idea of a genus consists in a certain peculiar and prominent variation of form, provided a notion of that variation can be conveyed to the mind of another in clear and definitive terms, so that if the object and the description be submitted to a person of competent skill in the application of technical words, he shall not fail to acknowledge their reci- procal aptitude with a ready and unwavering conn- dence. This view of generic distinction is conso- nant with that philosophy which, being imbued with the idea of final causes, expects that every well-marked variety of conformation answers some determinate purpose in the economy of the animal. Species will have, therefore, little more to account for than the color of the hair or the grain of a fea-

ther, which will, where the differences of kindren forms are numerous, afford a mighty relief to the elaboration of specific description.

Whenever the changes of form lose themselves by easy gradations in one another, as in the human species, this idea of genus is annihil? ted. The same observation is true with respect to our notion of species which is conversant about colors, when we apply it to the varieties of the human race and some domesticated animals. If we select indeed two extreme cases for the subjects of our compari- son, we shall perceive an obvious difference, winch may be embodied in the most explicit terms ; but, if we attempt to draw a line of demarcation, we shall find that every addition we make to our know- ledge will tend to alter the position of this limit, till, by repeated shifting, the authentic nature of generic and specific differences be completely subverted. Though every one, for these reasons, has a right to canvass with the greatest freedom all pr«-establish- ed boundaries in the common field of natural know- ledge, yet even the most imperfect of such boundaries afiord certain comfortable resting-places for the mind, and furnish excellent touchstones for try ing the purity and precision of our conceptions ; they are there- fore allowed by a kind of courtesy to retain their rank till others of better title can be substituted in their room. There is something harsh and uncha- ritable in saying that, in consideration of numerous faults, ‘ I reject the system ‘ of any one who has employed himself sedulously in the business of dis- tribution, when the author of the performance him- self, from a practical feeling of its deficiencies, only hoped that it would prepare the way, and furnish materials towards a more ample and a more orderly disposition. The following is the general plan of the present treatise : —

Part I. ANIMALIA VERTF.BRATA, orthe Vertebral Animals, divided into Class I. MAMMALIA. II. AVES. III. REPTILIA. IV. PISCES.

Part II. ANIMALIA IKVKUTEIWATA, or the Animals without Vertebrae, divided into (lass 1.

CEl'HALAI'ODA. II. P£! ROPODA. III. AcEPHALA: IV. lillACHIOrODA. V. ClRIUlOI'ODA.

Part III. ANIMALIA ARTICULATA, or Animals composed of jointed rings. Class I. ANNELIDA.

II. CRUSTACEA. III. ARACHNIDA. IV. IxsrtiA. Part IV. ZOOPHYTA, zoophytes. Class I.

ECHINODERMATA. 11. KNTOZOA OT IlJTl'.STINALIA.

III. ACALEPUA. IV. Pni. MM.

With their respective Orders, Families, Genera, and Species.

PART I.

ANIMALIA VEKTKIUIATA.

CLASS I.— MAMMALIA.

ORDER I. — BIMANV:->.

Gen. Homo. — Vultibus erectis particepsrationis.]\Lm. It is our design in the piesent article to contemplate man only under the aspect of a living creature, and to refer the reader to the article Mi> •i. \piit K s for the study of his intellectual charac ter ; for we protest against the practice of SDUM: writers who attempt to despatch the consideration of perception, judgment, memory, and the other leading faculties of the mind, in the compass of a few paragraphs, as if in point of physiology the relation of thought to the brain were discovtrihie in the same way in which we become acquainted

with t'.ie connexion of the bile with the liver. A superficial knowledge of the internal economy of a living machine assures us that the proper quantity and nature of that secretion is dependent upon the healthy state of that organ ; and a short acquaint- ance with pathology demonstrates to us that the wonted measure of intercourse which the mind holds with sensible objects is also dependent upon the healthy state of the brain. But will any one whose intellect has been some time occupied about the differences, as

well as the affinities of pheno- mena, presume to say the bond of union is respec- tively the same ? Let us see what would become of such a conclusion were we to apply a touchstone borrowed from that pure science which, dropping the specific quantity, is only conversant about the ratios of magnitude. This we might do by convert- ing the position into the form of analogy, thus : — the bile bears the same ratio to the liver that thought does to the brain ; videlicet, bile : liver : : thought : brain. But would not a mathematician reclaim against such proportion, and declare that it was impossible, because the consequents are not homo- geneous, and that if we would discern what relation- ship there is between thought and the brain, we must assume another mean. The two first and the last terms are the objects of the external senses ; but the third is not, which renders it absurd to think of submitting thought to that general common measure of all material aggregates, extension. It has been asked, Cannot God add thinking to matter ? which seems to be a question of as much plausibility as that, Cannot God transmute silver into gold ? Yes ; for it would only be necessary to increase the specific gravity a little, superadd yel- lowness to whiteness, &c., and a shilling would become of more value than a sovereign ; and, the nominal essence of silver being by this change de- stroyed, we should rightly give the altered substance another name. It was long ago taught that the essences of things consist in the assemblages of known properties, which, in order that the notions within the mind may correspond to their arche- types without, we, in ratiocination, affix unity by tying together with appropriate names, and in pro- portion to our skill and industry we shall find oc- casion to augment the resources of our language, that \ve may have new denominations for newly discovered assemblages, as well as ascertain and settle by definition the precise boundaries of fore- known parcels. And herein consists the praise of a keen and vigorous judgment, nicely to discrimi- nate the differences of things, and to discover how far common properties, running through a multitude of kinds, may blend them into classes, and what secondary attributes of a more limited though defi- nite range may separate them into orders. In phi- losophy, then, it will follow as a deduction that dogmatism is precluded, and that a freedom of thinking is of all things most necessary to the clear and full interpretation of natural truth. No mate- rialist ever saw a piece of matter divested of its properties, nor will ever have an opportunity of subjecting it to his senses, any more than an imma- terialist will have an opportunity of considering the mind apart from its office of thinking. But it would be necessary for one to have at least a glimpse of that TO TTOWTOV viroKtififvov, cvvapivov

privation of them all, before he could pretend to pronounce any thing concerning its ultimate nature, or take upon him to say what was material and what was immaterial, and to emulate the knight-errant in- tellection of

Ralph,

By help of these, as he professed,

He had first matter seen undressed ;

He took her naked all alone

Before one rag of form was on.

But that this will remain an ovtcpoc, a dream, that may mislead us, and not a virap, a vision, intended to put us in a state of preparation for what will be shortly realised, Ammonius teaches us by saying 6v% on rjviroTf. tvipyiia »} i\ij affw/iaroc, »} trw/xa airoiov, aXXa rt]v ivrcucrov TUV OVTWV yiviaiv 3twp- ovvrtq

occasion to the operative intellect. A philosopher, dressed in all the acquired habits of thinking and acting, cannot so far divest himself of them as to have a full perception and intuition of that pow- erful influence which the means of living exer- cises over the mental capabilities, till he comes to converse with the lower orders of human life, and thence becomes acquainted with the rough-hewn elements of thinking. We cannot conceive any thing more flat, dull, and unprofitable, than those speculations in which the bodyings forth of the imagination are neither derived from nor even ap- plied to the touchstone of real life, nor any thing more idle and inapplicable than the generality of narratives, the travellers being too often destitute of a competent stock of language and acuteness to give a faithful portraiture of their own sensations, and therefore incompetent to give the reader a just an- ticipation of that impression which the country and the inhabitants would make upon him were he to be suddenly carried thither. We think he ought to do this before he takes upon him to give a description of what is going on in some remote corner of the earth, and to be so far able to hold the mirror up to nature that some of the shades and colorings, as well as an outline of her image, may be reflected to us, that we at a distance may be allowed to contemplate the mien and expression of her countenance, and to have such a fair perception of her true lineaments as not to fail to recognise them when the objects are actually brought be- fore us. These observations are not the fruit of our own imaginings, but have often been verified and repeated when the reputed picture and the objects were in sight, and corroborated by hearing those who had read the works of travellers complain of their disappointment in finding such a wide dis- crepancy between the writer's account and the real state of things. With

such a manifest deficiency in data we ought not to be surprised to find that several great men, who have exercised their wits in attempting to account for the origin and production of those varieties into which they were obliged to divide the human race, have been exceedingly puzzled in searching after an adequate cause fo- the amazing differences of color and physiognom which we meet with in tracing the surface of the habitable parts of the earth. Climate has often been assigned as the occasion of a variation in complexion ; and that it has its measure of influence no one will doubt who has seen the little damsels in the island of Tenerifie of snowy whiteness, while the young matrons who accompanied them were brunettes. And the reason why atmospheric predominance has sometimes fallen into disrepute, as a cause, has been that a necessary correction was forgotten to be made, the degree of exposure which the inhabitant is necessitated to undergo, whether his wants will compel him to endure the midday sun, or allow him to avoid its fierceness by retiring to a shade, or, what is more important, whether a well built cottage defends him from the damps of the night, and the chilling inclemency of a rainy season. There appears to be no reason for us to insist upon the decided influence which these cir- cumstances exert over the human countenance, since the experience of most observers will furnish them with examples of comely children who, from llie fostered or tolerated predominance of unruly 1'iissions, have, in the course of a few years, lost all their beseeming looks, aiul cannot be recognised

by any remembrance of their season of beauty ; and, on the contrary, with examples of other who, in the dawn of life, did not recommend themselves by any fairness in the lineaments of the face, yet, be- cause they had the good fortune to be transplanted into a seminarium of a more kindly soil and nurture, its form and expression has put on so much grace and elegance that the recollections of its former unsightliness are quite forgotten. To bring exemplification still nearer to us, let any ' one contemplate his countenance in a glass when his mind has been jaded with incessant cares, and compare its appearance then with that which it exhibits when the heart is full of peace and mirthful exultation, and it will be obvious that if one of these principles be allowed to have the pre-eminence from a very early date, prominent dif- ferences will be the result. Idleness has been looked upon as the source of an infinite complica- tion of vices, and seems to have drawn down the vengeance of the deluge upon the old world ; but it has lent us in return the ingenious speculations ot philosophy, the opportunity of devising the curious occupations of the fine arts, and the means of cul- tivating and preserving the seemliness of the human form and complexion. The grain and texture of the skin among the natives of the South Sea Islands, between those who are from early life ex- posed to the inclemencies of heat and cold, and those who are defended*

from the changes of atmo- sphere and the cravings of want, is very remarkable, not to mention the superiority of size and stature which the chiefs possess over the common people, the genuine result of an artificial attention to the cultivating of this particular kind of excel- lence. From various opportunities of seeing how the human form and color are operated upon by ex- ternal circumstances, we are convinced that these causes are adequate to produce that variation o' features, color, and form of the head, which we are going to unfold by treading in the footsteps of Blumenbach, who has divided the human race into five leading varieties : we call them varieties, be- cause there is no prominent difference of form to. constitute our idea of genus, nor any unvarying peculiarly of color to exhibit the essentials of a species, since among our own variety we meet samples of a near approximation to the Ethiopian ; among the American Indians of Mexico we have seen the authentic beauties of the Caucasian ; and in large assemblies of Sandwich islanders we have observed every distinctive mark disappear by turns, till nothing was left us whence to commence our division but a sun tanned skin and a slight dispro- portion of thickness in the upper lip: and we have no doubt but if several of the best looking children were taken from their native soil, placed under our own, and compelled to intermarry among them- selves, they would, were they supplied with the conveniencies which the politer part of our societies enjoy, in a few generations lose all the characteris- tics of their peculiar variety.*

1. Caucasian. — The skin white ; the cheeks wit!i a shaded suffusion of red, one of the most admired and almost peculiar perfections of this variety ; the hair of a nut brown, brightened on one hand into a yellow, and on the other, through imperceptible gradations, darkened to a black ; soft, long, and waving. The head harmoniously rounded into somewhat of a globular form ; the forehead high and moderately expanded ; the check bones nairow

and not prominent, directed downwards from the malar process of the superior maxillary bone ; the alveolar edge round ; the front teeth of each jaw placed in a perpendicular direction. The contour of the face oval; the development of its parts ex- hibiting a certain disposition to regard a parallelism with a plumb line when held up before the face ; the features distinct, but preserving an agreeable habitude to each other ; the nose narrow, and slightly aquiline, or at least having its dorsum somewhat concave ; the mouth small ; lips, espe- cially the lower one, slightly bending outwards; the chin full and rounded. This variety embraces all the Europeans except the Laplanders and the rest of the Finnish race ; the

western Asiatics as far as the Obi, Caspian, and the Ganges ; and the people of the north of Africa.

2. Mongolian. — The skin of an olive brown ; face broad and flattened, with the parts but slightly distinguished ; and the features, through a certain disposition to assume a flatness, blending with each other ; the space between the eyelids flat and very broad ; the nose flat ; cheeks round and projecting ; the aperture of the eyelids linear, and having the external canthus as it were pulled up towards the temples, which, in the fanciful terms of the French writers, is described as being bridled ; the internal angle of the eye depressed towards the nose, and the upper eye-lid prolonged at that part into the lower by a rounded sweep ; the chin somewhat prominent. This variety comprehends the remain- ing Asiatics, except the Malays of the extremity of the Transgangetic peninsula ; the Finnish races of the north of Europe; the Laplanders; and the Esquimaux which are scattered over the most northern parts of America, from Bhering's Straits to the farthest habitable spot in Greenland.

3. Ethiopian. — The skin black ; the hair black and crisp ; the face narrow, projecting towards its lower part; forehead arched, narrow, and sloping; eyes level with the head ; nose flat and broad, and in a manner confounded with the prominent cheeks ; the malar fossa behind the infra orbitar fossa deep ; lips, particularly the upper one, very thick ; gape of the mouth generally wide ; lower jaw strong and massy ; the alveolar edge lengthened, more elliptical than in the other varieties. Southern Africa, nearly the whole of New Holland, and some neighbouring islands.

4. American. — The skin of a copper color ; the hair black, stiff, straight, and sparing ; the forehead low ; face ample, with broad prominent cheek bones ; lineaments rounded and distinct ; eyes deeply imbedded in the head ; nose somewhat flattened but prominent; the skull usually light. This variety comprehends all the Americans except the Esquimaux. The heads of the Araucans and the Indians of some parts of Mexico are re- markable for the broad circumference of the lower part, which is assisted by the mode in which the hair is suffered to grow. This renders it easy to recognise the head of an Indian in contradistinction from that of the Spaniards at a very considerable distance ; but, notwithstanding the differences just enumerated, one of the most agreeable counte- nances we ever beheld was that of an Indian girl in the village of Topajaliso, about nine leagues from Tepic, a city of Mexico.

5. Malayan. — The skin tawny ; the hair black, soft, curled, thick, and abundant; face wider than that of the Ethiopian, approaching the plumb line

downwards ; parts tolerably distinct from each other; paraUel bones prominent; nose broad, and enlarged at the tip ; upper jaw somewhat project- ing ; upper lip thicker than the Caucasian. This variety comprehends the natives of the islands scattered over the wide surface of the Pacific Ocean, the Philippines and Marins, of Molucca and the Sunda Isles, and of the peninsula of Malacca. We have sometimes, in a large assembly of natives at Oahu, surveyed their countenances one by one, and must confess that we have seen all the pecu- liarities of feature just mentioned disappear one after the other, till nothing was left us but a greater development of the upper lip as a prominent mark of distinction, and even color itself among those females who go habited like Europeans, and cultivate their personal beauty, was changed into an agreeable brown, not surpassing in shade some of our fair countrywomen.

ORDER II. — QUADRUMANA.

Lucretius is our authority for using manus as an adjective in composition. Bearing the s.gni- fication of hand in our minds we shall extend the term finger to what, in other orders, would be called the toes of the hind feet. Besides the detail of anato- mical differences peculiar to man, the quadrumana differs from the particeps rationis in certain obvious characters; which are, that the hind-feet have the thumb free, and so supplied and fitted with muscles as to be capable of being applied to any one of the fingers ; that the fingers of the feet are long and pliant like those of the hands; and that all the species climb trees with great facility but can- not support themselves in an erect position, nor walk in that attitude but with difficulty, since the foot is placed, as it were, upon its outward edge : the os calcis, or bone of the heel, not being promi- nent enough to reach the ground. To these we may justly add the narrowness of the pelvis or ba- son of the abdomen, which is unfavorable to the equilibrium of the body, when erect, by not afford- ing a capacious hollow for the reception and repose of the viscera as in man. But they have all their intestines very similar to ours ; their eyes are di- rected before ; their teats are seated upon the breast; the male organs of generation are pendant ; and the cerebrum has three lobes, on each side of which the posterior covers the cerebellum. The temporal foss is separated from the orbit by a bony septum. In other respects, however, they withdraw by de- grees from a similitude to man, by assuming a muz- zle which progressively increases in length till it reaches that of a dog ; by the acquisition of a tail ; and by a progression more or less exclusively four- footed; nevertheless, the freedom of the fore-arm, and the complication of their hands, enable them to imitate almost all the actions and gestures of a man. They were long ago divided into two genera, simia and maki ; which, by the multiplication of the se- condary variations of their form, have become two small families between which we must interpose the genus ouistiti, which has but little relationship to either of the

two families.

Family 1. — UKGUIBUS PLANIS.

They are all four-handed, and have in each jaw four straight cutting-teeth or incisors, and all the fingers with flat nails : two characteristics which raise them to a closer affinity with man than any of the subsequent genera can lay claim to. Their

molar teeth or g'inders hare also, like ours, only Hat tubercles. These animals live naturally upon fruits, but their canine teeth, being longer than the rest, afford them a kind of armature of \vhich we are destitute, and require a void in the upper jaw to lodge them when the mouth is shut. We may divide them into two sections.

Sect. 1. APES OF THE OLD CONTINENT.

Sirniae eodem numero molarium quo homines. They have the same number of grinders as man ; but they differ from each other by characters which afford the following subdivisions : — Group 1.

Gen. 1. Pithecus of Geoffrey. — Simiae proxime ad hominem accidentes. The orang ; the simia of Erxleben. IIt0ijroc, the Greek name for an ape, appears to be derived from irdGi», and to hint at the obsequious readiness with which he imitates the actions of man. They have the snout rather prominent, the facial angle being 65° ; are desti- tute of a tail. They are the only monkeys which possess an os hyoides, a liver, and a ccecum re- sembling those of man. Some of them have the arms long enough to reach the ground when they stand upright.

The orang-outang, the simia satyrus of Linne". About three or four feet high. The body is covered •with a pile of red thick- set hairs ; the forehead equal in height to one-half of the visage ; face blue- ish. Neither cheek-pouches nor gluteal callosities.

Gen. 2. Jiylobata,. — The black gibbon; simia larynx of Linne. Covered with thick, long, black hair ; the circumference of the face and the hands ash-colored; almost without forehead. Cranium receding. Gluteal callosities small.

The ash-colored gibbon ; the simia leucisca of Schroeber, the moloch of Andeb. Similar to the preceding, but covered with a soft ashy wool ; coun- tenance black. Common in Java and the Molucca Islands, where it is confined to the reedy grounds ; climbs the highest branches of the bamboos, in which situation it balances itself by means of its long arms. In the other orangs the arms descend no farther than the knees. They are destitute of a forehead, for the head begins to recede immediately after leaving the ridge of the eye-brows.

The chimpanse ; the simia troglodytes of Linne". Covered with black or

brown hair. If we might credit the accounts of travellers it draws near to the stature of a man, or even surpasses it ; but no one has appeared in Europe to authorize this belief. They are found in Guinea and Congo; live in herds ; construct huts with leaves ; arm themselves with stones and clubs to defend their haunts from the encroachment of men and elephants ; pursue the negresses and sometimes convey them to the woods.

AH the apes of the old Continent which follow possess a liver divided into several lobes, a coecum, thick, short, and without appendage, and an os hyoides in the shape of a shield or buckler.

Gen. 3. Cercopithecus of Erxlebeu. — Simiae ve- teris continentis caudi» instructs. (Juc:ions. Muzzle moderate, with cheek pouches ; facial ancle 60°. a tail ; nates furnished with callosities. The last molar tooth below has four tubercles likethe rest. The species are very numerous and of various eizes and colors; are spread over Africa and the Indies; live in herds; and make havock in the gar- dens and cultivated fields. Easily taken by surprise.

Simia entellus of Dufresne. — Yellowish white eye-brows and the four-hands black. This is one of a great many species and of those which have the tail very long.

The patas of Buffon ; siraia rubra of Gmelin Whitish underneath.

Mangabey a collier of Buffon ; simia aethiop>. Chocolate brown above, whitish below and upon the nape of the neck. Cap of a bright red.

Mangabey sans collier of Buffon; simia fuligi- nosa of Geoffroy. Uniform chocolate brown above ; pale yellow below; eye-lashes white. BufYon considers it as a variety of the preceding. Found in Madagascar. •

Le Mauve. All black when full grown, but yellow in its youth. M. Lechenard has taken it many times in Java.

Le callitriche, or fair-haired ape; simia sabaea of Linne. Green above ; white underneath ; face black; cheeks white and tufi'ed; end of the tail yellow.

Malbrouc of Buffon. Simia faunas of Gmelin. Green above ; limbs ash-colored ; face of a flesh color : tip of the tail yellow ; a black and white band upon the eye-bro\vs.

La mone ; simia mona or monacha of Schroeber. Body brown; limbs black; breast, inside of the arms, and circle of the head, whitish. A band of black upon the forehead ; a white spot upon each side of the tail.

Rolowai ; simia diana of Linne". Blackish above, dotted with white ; white beneath ; the rump of an empurpled red ; the face black, surrounded with white, and a small whitish beard upon the chin.

Monstac ; simia cephus of Linne. Ash-brown ; a tuft of yellow before each ear ; a band of clear blue in the shape of an inverted cross upon the upper lip.

Ascagne ; simia petaurista of Gmelin. Olive brown above; gray beneath; visage blue; nose white ; a white tuft before each ear; whiskers black.

Hocheur ; simia nictitans of Gmelin. Black- brown, dotted with white ; nose alone white, in the middle of a black face ; the ring around the eyes and lips reddish.

The last five species are all of them small, prettily variegated with color, and of a mild disposition. They are common in Guinea.

There is one large guenon which deserves to be remarked on account of the extraordinary form of the nose, which is

Gen. 4. Nasica. — Simiae nasu valde protracto. Le meraigue, or long-nosed ape. Italian. Simia nasica of Schroeber. Pale red, or fallow stained with red ; the nose extremely long and in shape like a notched spatula. Inhabits Borneo; is gre- garious ; thronging in the morning and evening upon the lari,re branches of the trees near the brinks of streams and rivers. Rahau is the cry it utters.

Another guenon of the same magnitude is dis- tinguished by having no callosities upon the nates.

Gen. 5. ifatibtu >ml/is. — Simia neiratus. The douc. The most agreeably colored of all monkeys ; body and arms gray ; collar red and black ; a yellow tuft upon each side of the head ; a black band upon the forehead. Thighs, hands, and feet black ; legs red ; a large three-cornered white spot upon the rump ; tail white. A native of Cochin-China. Douc or dok signifies a monkey in the language of that country.

Group 2. Papiones of Erxleben.

Siraiee nasu in signiores cauda quam corporebre- viore. They have the abagones or cheek-pouches and gluteal callosities like the guenons, but

their mouth is more prominent, and their last grinder below has a tubercle more unequal. They vary in the length of the tail and muzzle. The principal part of them are more or less savage ; and they all have a sac that communicates with the larynx above the thyroid cartilage, which is filled with air when they cry.

Gen. 1. Magotus.— Cauda jam nascente; Have the muzzle thick and moderately long, a small tu- bercle in place of a tail.

The Magot. Simla sylvanus of Linne, pithecus of Gmelin, musco of Schroeber. Covered with hair of a clear gray-brown color. An animal which best endures our climate. It is a native of Bom- aay, whence it is often brought to Europe, breeds sometimes with us, and is naturalised in the most inaccessible parts of the rock of Gibraltar.

Gen. 2. Mucacus. — Cauda, naribus resupinis. Are distinguished from the magots by a tail more or less long, and from the cynocephali by their nostrils being oblique at the upper surface of the muzzle.

Ooandrou of Buffon, simia silenus of Linne, Icninaof Gmelin. Black; the mane ash-colored; beard and round its head, whitish. • It appears that there are some individuals which are fawn colored either wholly or in part, and others of different tints of brown and fawn color. From Ceylon.

Bonnet. Simia sinica. Fawn color above, white beneath, the face of a flesh color. The hairs upon the crown of the head dispersed like rays, and forming a kind of hat.

Aigrette of Buffon. Simia aygula of Linne". Olive- gray above, fawn color beneath. A tuft of hair upon the top of the head.

The macaque of Buffon, simia cynomolgus. Green above, yellowish or whitish beneath. Gui- nea, and the interior of Africa.

The maimon. Simia nemestrina of Linne. Pla- tipygos of Schroeber. Deep brown above ; a black band commencing upon the head, and grow- ing weaker and weaker the whole length of the back ; yellowish about the head and the extremities; a thin tail hanging only half way down the thighs.

The rhesus. Grayish ; a stain of pale brown upon the head and the rump, sometimes upon the whole of the back.

Gen. 3. Cynocephalus of Cuvier. — Simiae ore canuin. They have a muzzle which is elon- gated and as it were truncated at the end, where it is perforated by the nostrils; this is what makes it resemble that of a dog more than of the rest of the monkeys. Tail of various lengths.

Papion of Buffon, simia sphynx of Linne. ˆ ith a yellow greenness, approaching more or less to a brown; face black, tail long. They appear to differ in size according to their age. The full gro\vn animal is frightful by its ferocity and brutish propensity.

Papicn noir. Simia porcaria of Bodd. Ursina of Pennant. Of a black color ; glace, with yellow or green upon the whole forehead. Cape of Good Hope.

Tartarin of Belon. Simia hamadryas of Linnc-. Baboon with a short tail. Simia leucophcea of Cuvier. Gray-ydlow; face black, tail very short and thin.

Gen. 4. Mandrils. — Simiae ore in longitudinem porrecto. They have the nose longer than the rest of this order ; facial angle being about 30°. Their tail is very short. They are very wild and fierce. Only one species known.

Gen. 5. Pongos. — Simise fronte in longitudinem porrecto. They have the long arms of the orangs- and are like them deprived of a tail, with the cheek pouches of the baboons and guenons. The head is of a very peculiar form ; the forehead is very re- ceding ; the cranium is small and compressed ; the face of a pyramidal form on account of the as- cending branches of the lower jaw, which indi- cate in the organs of voice some analogous dispo- sition to that which has been observed in the alouatte. They possess the membranous pouch adhering to the larynx like the baboons. We are acquainted with only one species. Color brown, face and hands black. Borneo.

Sect. II. MONKEYS OF THE NEW CONTINENT.

Simiae molarium numero abundantes. The sapa- jous. Cebus of Erxleben. They have four grinders more than the rest, there being thirty-six teeth in all. Tail long; without cheek-pouches, nates clothed and without callosities. Nostrils lateral or on the side of the nose. All the large quadru- mana of the New Continent belong to this division. Their large intestines are less tinged, and the ccecum is longer and thinner than in those of the preceding section. Tail prehensile.

Gen. 1. ˆlyotes of Iliger. — Simiae capite ar- guto. The alouatte. Distinguished by a pyramidal head. Upper jaw descends down much lower than the cranium, since the lower has its branches as- cending very high, in order to lodge a bony drum formed by a vesicular swelling of the os hyoides, which communicates with the larynx, and gives an. enormous volume and a frightful sound to their voice.

Common alouatte. Simia seniculus. Of a lively red brown ; about the size of a fox. From the woods of Guiana. Live in troops.

Ouarino ; simia beelzebub. Common in Brasil and Paraguay. The male is black above and red beneath ; female brown. Common sapajous have the head very flat. The muzzle rather prominent. Facial angle 60°.

Gen. 2. Ateles of Geoffmy. — Simise pollicemancae. Thumbs concealed under the skin. Tail naked underneath.

The chamek ; ateles pentadactylus of Geoffrey. Differs from the rest in having a thumb with one of the phalangial bones, but destitute of a nail.

The coaita ; simia paniscus of Linne". Com- pletely covered with black hair ; not even the ru- diments of a thumb.

White-faced coaita ; ateles marginatus of Geof- froy. Black ; a border of white hairs round about the face.

White-bellied coaita ; simia beelzebub of Bris- son. Black ; white beneath ; a flesh-colored circle round the eyes.

Yellow coaita ; ateles arachnoides of Geoffrey. All these animals come from Guiana and Brasil. Their arms are very thin. Progression very slow.

Gen. 3. Cebus of Geoffroy. — Simiae quae ope caudae conscendunt, pollice gaudentes.

The sajou ; simia apella of Linne. Black round the face. All the shades of the body vary between the black, brown, and the fawn color, even some- times white.

The sajou ; simia copucina of Linne. Distin- guished from the preceding by a small crest of iairs on each side of the forehead.

The sajou ; simia fatuellus of Gmelin.

Gen. 4. Cullitriclte of Geoffrey . — Simiae quarum oauda minus apta ad prehendum est. Tail ceasing to be prehensile

rough with points ; the short muizle of a mas- tiff; body slender; without tail. These animals feed upon insects, and some of the small birds and quadrupeds. Approximating to the sloths in hav- ing the extreme branches of their arteries divided in the same manner.

Loris. Sloths of Bengal; lemur tardigradus.

The saimiri ; simia sciurea. About the size of Gray fawn, a brown line running along the back.

a squirrel ; of a gray yellow ; fore-arms, the legs and the four hands yellowish fawn color.

Gen. 5. Pitheciu of Desmerest and Iliger. — Si raise vulpium cauda. Pennant. Thesakis. Tail not prehensile, tufted with hair; whence they are called fore-tailed monkeys.

Yake ; simia pithecia of Linne. Blackish ; around the face white.

Saki Humb. ; simia satanas of Hoffmansegger. Quite black.

Red bellied saki ; pithecia rufi ventuis of Geof- lemur potto of Gmelin.

Slender loris ; lemur gracilis. Of the same color as the last, without the dorsal line. Nose raised by an elevation of the intermaxillary bone.

Gen. 4. Otadinus of Iliger. — Simiae auribus e membrana. efformatis. The galago of Geoffrey. They have the teeth, nails, and the insectivorous re-gimen of the former; elongated tarsi which give to the hind feet a disproportioned length ; tail long and tufted ; ears large and membranous ; eyes large. To this tribe Cuvier would assign the

froy. From Guiana and Brasil.

Family 2. — UNGUIBUS COMPRESSIS.

Simiae pollice vix libero.

Gen. Hapate of Iliger ; arctopithecus of Geof- frey.— The Ouistiti. Head round, face flat, nostrils lateral, nates clothed, destitute of cheek pouches. Tail not prehensile ; grinders in number twenty, like the monkeys of the old continent. All the nails compressed and pointed, except those of the hind thumbs. The fore thumbs possess so little free-

Gen. 5. Tarsius of Cuvier. — The tarsiers. The long tarsi, and all the detail of the preceding ; but the interval between the incisors and the molar teeth, is replenished with numerous small canine teeth. Incisores four above, only two below. Nocturnal animals. Food consisting of insects. Inhabit the Moluccas.

Lemur spectrum.

Series ORDINUM PLERUMQUE CARNITORA.

c Ferae of Linne. Compagines maxillarum, ad

dom of independent motion, that the tittle of quad- amussim gaudentibus. This series

rumanous is bestowed upon them with some hen- of mammiferous animal| have three som of teeth

upon tat ion.

Common ouistiti ; simia jacchus of Linne. Body black ; two tufts of hair before the ears.

Tamarin ; simia midas of Linne. Pinche ; simia oedipus of Linne\ Black : four hands yellow ; gray with long white hairs upon the head, hanging down behind the ears. Guiana.

Midas Ursula of Geoffroy. Black striated ape.

Lion monkey. Marakin; simia rosalia. White head surrounded with a fawn colored mane ; tail brown at the tip. Surinam.

The mico ; simia argentata of Linne. Gray silvery black ; sometimes all white ; tail brown, from the banks of the Amazons.

Family 3. — INCISORIBUS a PRESCRIPTO AVERSIS.

The makis, lemur of Linne, according to

like man. They subsist upon animal food, by so far more exclusively as their grinders are better calculated for tearing. Those which have their grinders in whole or in part tuberculous feed more or less upon vegetable substances. Others which have them rough with conical points feed upon insects. The articulation of the lower jaw is directed crosswise, and confined like a hinge, so as not to allow any degree of horizontal mo- tion. That is to say, they can only open and shut the mouth, and not grind the morsel, as many other animals do, by a lateral movement of the under jaw, in masticating their food. Their cra- nium is narrower, and the zygomatic arches wide and elevated, in order to give room for the muscles of the jaws. Their foramen possesses a capability of being moved circularly, but with less facility

Linne" comprehend all those quadruraana which than that of the quadrumana. Olfactory bones va- either in the upper or finder jaw have more inci- riously ramified and lamellated, in order to am- sors than four, or at least they are otherwise di- plify the extent of pituitary membrane,

which

reeled than in the.monkeys.

Gen. 1. J^cmur. — Cauda longft. Makis proper Six lower insisors compressed and leaning out- wards ; four above straight ; intermediate pair cross- ing; canine teeth long. Molar those of monkeys. Tail long, nail of the index pointed, all the rest flat. Madagascar.

The moccoco ; lemur catta of Linne". Ash gray, tail tinged with black and white.

Venei ; lemur macaco of Linne. Variegated with large black and white spots.

The mongoas ; lemur mongos of Linne. All brown, face and hands black.

(Jen. 2. JAchanotus of Iliper. — Simire hujus fa-

renders the sense of smelling so wakeful to the im- pression made upon it by odorous particles.

ORDER III. — CHEIROPTERA.

Cute pedum in alas extensa. They exhibit some affinities with the quadrumnna, in having the male organ of generation pendant, and in the nipples being placed upon the breast. Their dis- tinctive character consists in having the intt Ail- ments of the legs and feet expanded, by the elon- gation of some of the phalanges into broad mem- branous wings. This disposition of structure requires strong clavicles and large scapulae, in order that the shoulder may possess a commensurate

milia rnuda ruulatae, The indri Teeth like those of firmness and solidity; whilst the rotation of the

the preceding, except that they have but four below. Madagascar.

Gen. 3. Sterops of Iliger. — Simuc molaribus paulohorrentibus cauda nudatfc. The loris ; sloth monkrvs. Teeth and nails of the maki-i ; grinders

fore arm is prevented, as it would be incompatible with the active force necessary for soaring in the air. All these animals have four large canine teeth, except in one species found by the writer in the I5onm Islands ; but the number of their incisors

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varies. They were long ago divided into two ge- nera, vespertilio and galeopithecus, with reference to the extent of their organs of flignt.

Family 1. — VESPERTILIOXES. BATS.

Ossibus digitorum in longurn deductis. They have the arm, forearm, and the finsers ex- tremely elongated, and form true wines by the membrane, which fills up the intervals. Bats fly very high, and with great celerity. Their pectoral muscles have a thickness proportioned to the motions they are obliged to perform, and the sternum has in its middle a ridge to afford them a line of attachment, like that of birds. The thumb is short, and armed with a crooked nail ; which serves them for the double purpose of climbing and suspension. Their hind feet are weak, divided into five equal toes, and are all furnished with nails. The intestines are without a coecurn. Their eyes are excessively small; theu ears are often very large, and form with the wings an enormous extent of membranous surface almost naked, and generally endued with sensation to enable the bats, in making their way among the turns and windings of their labyrinths, to direct themselves by their va- rious impressions which the air makes them, when darkness has rendered eye-sight useless.

Bevy 1 . Vespertiliones ungue de media digito.

Gen. 1. Pteropusof Brissius. Therosetta; fru- givorous bats. They have four sharp incisors in each jaw ; their grinders have a flat crown. They derive their nourishment chiefly from fruits : they can however pursue the small birds and quadru- peds. The membrane is deeply notched between their legs, and they are nearly or wholly deprived of a tail. Their index, and the shorter half of the rnedius, has the third phalangial bone, which is wanted in the other bats. Ears small ; tongue beset with the recurved points. This genus may be di- vided into two sub-genera : —

a. Sine caudd. Rosettes without tail.

Black rosette; pteropus edulis of Geoffrey. Black brown, deepened above : nearly four feet in extent. Found in Sunda and the Moluccas. Its flesh is very delicate food.

Rosette of Edwards; pteropus Edwardsii of Geoffrey. Fawn color, back of a deep brown. Madagascar.

Rosette of Buffon, pteropus vulgaris of Geoffroy. Brown ; face and sides of the back brown and fawn color.

Collared rosette. Pteropus rubricollio. Gray- Drown; neck red. Found in the same islands; lives in hollow trees.

The moping rosette ; pteropus pselaphon of Lay. Brownish black ; back sprinkled wirh hoary hairs. The following account of this new species of pteropus was written by us while at Bonin, a small cluster of islands lately made known to the English, where we had, during the short stay of four days, several opportunities of noting its habits and propensities. We entertained some doubts at first of the difference of its species, and were inclined to esteem it as a variety of the edulis, with which it agrees in its fructivorous habit ; but the uniformity of color, and the comparative smallness of the ca- nine teeth, induce us, with the concurrence of seve- ral other naturalists, to consider it as a distinct species. Alar web, or the membranous expansion of the integuments which cover the toes of the fore-feet, black ; assuming a brownish hue in VOL. XXIT.

drying. Interfemoral web, or under prolon gation of the meninges, which invest the leg and thigh of the hind quarters, about half an incJ' in width, and partly clothed with hair. Claws trenchant; the large one upon the medial pha- langial bone, often used in dressing the hair of the head. Teeth ; primores, four above and four beneath ; but they are various, the canine often supplying the place of the incisors, and vice versa. Canine, small. Tongue propcrtionably large, with a fleshy pavement. Form of the nasa. apertures an incipient volute. Stomach, a loose membranous bag, which, when opened, was found to contain a small portion of acid pulp. Intestinal canal long; diameter equal, without ccecal appen- dages. It sucks the juices of the fruit of the sapota and pandanus, rejecting the fibrous part . but since, in feeding, a certain portion must ne oes for they often sneeze when captured, which is a sign of the great irritability of the pituitary membrane. A cluster of the ripe fruit of the pandanus odora- tissimus, carried by some boys, drew many of these animals to the spot. One that had been caught and tied by the leg, though blindly striving to get free with unavailing diligence, forgot its fears and embarrassment, when a piece of that fruit was held at the distance of a yard or two from it, and eagerly pawed after the odorous morsel ; which being obtained, and finding its gyves loosened, it began forthwith to hasten away, holding the booty firmly in its mouth. One of them, being thrown by the sailors into the sea, labored some time to keep its head above water and reach the shore ; but, finding all attempts vain, it quietly resumed its wonted position of rest, and resigned itself to a watery death. When cast upon a raft by the same unfeeling hands, it made some attempts to sus- pend itself from a projection, without dipping its head into the water ; but perceiving its efforts to be useless, it abandoned the float, and swam pertina- ' iously after the boat, deeming that it saw some object at a distance which would afford a com- fortable resting-place. When taken on board, and confined, they did not betray any signs of fear, and ate without repining the ftuit that was given them ; but, being set at liberty, they climbed to the

highest parts ot the rigging, and there found a convenient situation for repose. When thirsty it descends a tree on the margin of the rills, and, after sipping a little refreshment, reascends the trunk, and takes its departure from the branches.

/3. Caudd instructi. — Rosettes with a tail ; four incisors in each jaw. All the species of this di- vision are described by Geoffrey. Some of them are woolly and gray.

Pteropus ;Egyptiacus.

Pteropus amplexicaudus. Lives in subter- raneous places, is of a reddish color, and has the tail longer, and partly connected with the interfe- moral membrane. Indian Archipelago.

Gen. 2. Cephalotes of Geoffrey. — Vespeitiliones membranse ex indice ungue mancaj alse inter se junctae. They have the same number of grinders, but the index is destitute of a nail, though pro- vided with three phalangial bones. The alar membranes instead of joining the flanks are coupled over the back to which they adhere by vertical par- tition. They often have but two incisors.

Cephalotes pteronii of Geoffroy. Brown or red- dish. From Timor.

Bevy 2. Vespertiliones molaribus horrentibus, media digit o plcrumque sine vngue.

Their membrane is always extended between their legs ; we may divide them into two groups.

Group . Vespertiliones media digito assibus pcr- fecto.

Gen. 1. Malossus of Geoffroy. — Vespertilio au- ribus super ore inter se junctis. Muzzle simple ; ears long and short, rising near the corner of the mouth and uniting over the snout. The earlet short and not enclosed within the auricle. Six in- cisors in each jaw. The tail occupies the whole length of the interfemoral membrane, and often extends beyond it. All the species of this genus are found in America.

Gen. 2. Myctonome of Geoffroy. — Vespertilio labio superiore in sinum

sese scindente. Four incisors below, the upper lip high and very deeply notched ; in other respects they resemble those of the preceding genus.

Gen. 3. Noctilio. — Vespertilio nasu sulcis atque verrucis. Muzzle short, inflected, cloven, and fur- nished with warts and fanciful sulcations. Ears sepa- rated. They have four incisors above and below. Tail short and free above from the subfemoral membrane.

Vespertilio leponnus of Gmelin. Pale fawn color.

Gen. 4. Phytlostoma of Cuvier and Geoffroy. — Vespertilio nasu, folio alto. Regular number of incisors in each jaw, but a part of those below often fall out, displaced by the encroachment of the canine teeth. They are further distinguished by a membrane in form of a leaf raised across the tip of the muzzle. The tragus generally resembles a small leaf more or less toothed. The tongue, which is capable of very great elongation, is covered with papillte apparently calculated for sucking. A number of tubercles are arranged symmetrically upon the lips. These animals can run upon the earth better than the rest of the bats. Under this genus are included three subgenera: —

a. Sine caudd. — Pbyllostomas without tails. The rampyre. Vespertilio spectrum. Nasal leaf oval and furled like a fan. Color red-lmnui. About the size of a magpie.

/3. Caudd implicita. — Vespertilio hastalus. Na- sal leaf in the shape of a spear ; margin entire.

y. Caudd libcra. — Phyllostoma crenulatum.

Group 2. Vespertiliones digitis omnibus itnper- fcctis.

This group have the index with but one phalan- gial bone, while the other fingers have two.

Gen. 1. Megaderma of Geoffroy. — Vespertilio auribus superne junctis. Which have the nose more compressed than that of the phyllostoma; the earlet large and very often forked ; the auricle of the ears, which are connected to one another on the crown of the head, very wide. The lips and tongue are smooth. Interfemoral membrane entire. No tail. They have feur incisors above : more have been found below ; and it appears that the intermaxillary bone remains a cartilage.

Megaderma frons of Geoffroy. Nasal leaf oval, and almost as large as the head of the Africa.

Vespertilio spasma of Linne. Senegal and the Indian Archipelago.

Gen. 2. Rhinolj>hus of Geoffroy and Cuvier. — Vespertilio in ore simulatione ungulae. They have the nose furnished with various complications and crests bent over the face so as to present the figure of a horse-shoe. The tail is long, and is placed in the interfemoral membrane. Four incisors above and three small ones below.

Vespertilio ferrem equinum, L. R. ; bifer of Geof- froy. Inhabit quarries ; suspend themselves by the feet, shrouded by their wings.

Gen. 3. Nuctoris of Cuvier and Geoffroy. — Ves- pertilio fossa in ore auribus liberis. Face hollowed ; a foss marked also upon the cranium ; nostrils surrounded by a circle of jutting planes ; four in- cisors above without intervals, and six below. Their ears are large and not united ; tail confined in the interfemoral membrane.

Vespertilio hispida of Linne.

Gen. 4. Rhinopoma of Geoffroy. — Vespertilio fossa in ore, auribus interse junctis. They have a foss less marked, nostrils at the tip of the muzzle, and a small plate above; the ears are united ; the tail prolonged beyond the membrane. Egypt, among the pyramids.

Gen. 5. Thaphozous of Geoffroy. Vespertilio fossa in ore. Have the foss in the face, but the nostrils are without varied plates. We do not find more than two incisors above and four below ; their ears are pointed ; tail fixed above the interfemoral membrane. Geoffroy describes them as found among the pytamids of Egypt.

Gen. 6. Vespertilio. — Nasu nudo, which has the nose without leaves or any other distinguishing marks. Ears separated; four incisors above, of which the middle one is diverging, and six below, sharp and somewhat hooked. The tail is impli- cated in the membrane.

V. murinus of Linne. Gray ; ears as long as the head.

V. noctua of Linne\ Brown ; ears shorter than the head ; earlet round.

V. serotinus of Linne". Fawn-colored ; wings and ears black; auricle triangular; shorter than the head ; earlet small.

V. pipistrellus of Gmelin ; smallest of France. Brown ; has the ears and earlets triangular. Long- eared bats.

Gen. 7. Plccotis of Geoffroy. — Vespertilio au- ribus capite majoribus. Ears

larger than the head.

\ .-pertilio auritus. Common in this country.

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Family 2. — GALEOPITHECI. FLYING CATS.

Ossibusdigitorum non in lonoitudinemdeductis. They have all the fingers of their hands furnished with cutting nails, and not longer than those of the feet, so that the membrane which occupies the intervals between them, and is extended to the sides of the tail, can scarcely fulfil the office of flight ; canine teeth, short, denticulated, as are also the grinders.

ORDER IV. — INSECTIVORA.

Insectis vescens atque vitam nocturnam degens. Insectivorous animals. Mammae in ventre. Like the cheiroptera, tfiey have the grinders rough with conical points; way of living nocturnal or subter- ranean ; feed chiefly upon insects, and in cold countries pass the winter in a state of torpor. They have not, like the bats, a lateral membrane. The fe«t are short and feeble; teats placed under the belly; penis in a furrow; nocoecum; and all have the heel placed upon the ground in walking.

Group 1. Insectis vescentium dentibus caninis quani cteteris brevioribus.

Two medial incisors, long ; lateral incisors and canine teeth shorter than the grinders, by which they, like the tarsiers, approach the rodentia.

Gen. 1. Erinaceus. — Corpora aculeos pro pilis nabente. Hedgehog. Body covered with spines in stead 01 hairs ; the skin is so provided with mus- cles as to enable the animal to roll itself up into a ball, and present nothing but spines to its enemy ; tail is short; feet with five toes. The two mean in- cisors are cylindrical.

Common hedgehog. Erinaceus Europaeus of Linne.

Long-eared hedgehog. Erinaceus auritus ; smaller than the common species ; ears large as twice the head. Egypt and the Caspian.

Gen. 2. Sorex. — Ab utroque latere setis olenti bus. Shrew. Much smaller than ihe hedgehog. On each side we find under the skin a small band of setae ; •when these are pressed inside, an odorous humor is secreted by a peculiar gland. They have two supe- rior massive teeth, hooked and toothed

at the base. They live in holes of the earth.

Common shrew. Sorex araneus. Sorex fodiens. Black above, white below ; tail square, long as the body. The ear can be hermetically closed by means of three valves which are the adaptations of the helix, tragus, and the antitragus. Red ciliae or lashes, which border the feet, assist the swimming of this animal.

Gen. 3. Mygale. — Sorex nasu vibrante. The musk rats of Cuvier. Differ from the shrew by hav- ing very small teeth placed between the large incisors below, and the incisors above, flattened and in the shape of a triangle. The muzzle is lengthened into a small proboscis very flexible, which they agi- tate without ceasing. Their tail is long, scaly, and flattened upon the sides. Their feet have five toes, which are connected by a membrane to qualify them for an aquatic life ; eyes small : no external ears.

Common musk-rat. Sorex moschatus.

Gen. 4. Scalops of Cuvier. — Sorex manu tal- parum. These animals add to the teeth of a musk- rat, and the pointed nose of a shrew, the hands of the mole ; their mode of living the same. There is or.ly one species known.

Sorex aquaticus of Linn6. Canada : spread OVOT a large portion of North America, near the brink > of rivers.

Gen. 5. Chrysochloris of Lacep. Sorex nasu curto peditusque ante tribus unguibus. They have, like the preceding genera, a pair of incisors above, and four below. Their fore-feet have only three nails, of which the exterior is very thick, and the others go on diminishing. Those behind have five nails. Subterranean animals, which have the fore- arm supported by a third bone under the cubitus.

Talpa Asiatica of Linn6. Smallest of moles, without any apparent tail. The only quadruped that presents that changeful variety of shades and lustres, which is so brilliant in some of the birds and fishes.

Group 2. Insectis vcsentes : dentibus caninis mag- nis dispertitisque.

They have four large wide canine teeth, between which there lie small incisive teeth. The more or- dinary disposition among the quadrumana and carnivora.

Gen. 1. Centenes of lliger. — Erinaceus dentibub diversis. The tenrecs of Cuvier. They have the boOy covered with spines like the hedgehogs ; but, besides the great difference in their teeth, they want the power of rolling themselves up so completely into a ball. No tail ; muzzle very pointed.

Natives of Madagascar. One of the three known species has been naturalised in France. Nocturnal animals. Spend three months of the year in sleep.

The tenrec ; erinaceus ecaudatus. Covered with stiff prickles ; incisors notched ; four below.

The tendrac ; erinaceus setosus. Prickles more flexible, resembling hairs; six incisors in each jaw.

Rayed tenrec ; erinaceus semispinosus. Co- vered with hairs, mingled with prickles, varied with yellow and black.

Gen. 2. Talpa of Linne. — Palmis maximis. The mole. Arm very short, attached to a strong shoulder blade, supported by a stout clavicle, and fortified with very large muscles, bearing an ex- trerr.ely large hand, of which the palm is always turned outward. The fingers are not easily dis- tinguished, but the nails which terminate them are strong and cutting. The sternum has, like that of birds and bats, a ridge, which gives the pectoral muscles an amplitude suited to the nature of their office. To assist them in penetrating the earth, the nose, terminating a long head, is furnished with a particular bone, of which the cervical muscles are very stout ; having delicate awning to a large tym- panum ; no external ears.

Common mole. Talpa Europaea of Linne". Star- muzzled rcole of Canada.

Talpa cristata, sorex cristatus of Linne", has the nostrils surrounded with small cartilaginous move- able points, which in their disposition resemble a star when spread out.

Series CARNIVORA PROPRIA.

Ferae molaribus praecipup ad lacerandum aptis. Most of the preceding series though their grino- ers be furnished with points, yet from their weak- ness are obliged to feed upon insects. But the present series feel a sanguinary appetite joined to a force sufficient to gratify it. They have alwavs four strong distant canine teeth, between which are placed six incisors in each jaw, of which the second in the lower jaw has always its root 3 B 2

drawn more backward than the rest. Grinders al- ways cutting or crowned with flat tubercles, and ne- ver roughened with conical points. These

animals are by so much exclusively carnivorous as their grinders are completely cutting ; and we may cal- culate what proportion animal food bears to the sum of their diet by considering what ratio the tu- berculous surface bears to the surface of all the teeth jointly.

ORDER V. — PLANTJGRADA.

Ferx plantis innixae sese erigentes. Animals which in their natural gait rest the whole of the heel upon the ground, and therefore support the body in an erect attitude. They partake of the slowness and nocturnal life of the insectivorous 01- der; destitute of acoecum.

Gen. 1. Ursus of Linne". — Ursus cauda curta. Bears. They have three molar teeth on each side in either jaw ; but, notwithstanding their extreme force, they scarcely ever feed upon flesh, except when compelled by necessity.

Brown bear of Europe, ursus arctos of Linne".

Black bear of America, ursus Americanus, has the hair black and smooth ; forehead flattened, muzzle of a fawn color.

\ liite bear, ursus maritimus of Linne\ A dis- tinct species in having its head flattened and elon- gated, and by its hair being white and smooth.

Gen. 2. Procyon of Storr. — Ursi cordsi longa. Raton. Hind molar teeth tuberculous; three small grinders pointed before, which form a continuous series with the canine. Tail long. May be looked upon as a bear in miniature. They support them- selves upon the whole of the sole when they stop, and in progression elevate the heel.

Ursus lotor of Linne. Gray-brown, with a white snout and a white stroke across the eyes ; tail rayed with brown and white. About the size of a badger.

Raton, ursus canoriorus. Clear ash-brown, uniform, rays of the tail less marked. North America.

Gen. 3. Nasua of Storr. — Ursi nasu producto. Coati. These animals unite the tail and the drawling gait and the nocturnal life of ratons with a nose of singular elongation and mobility.

The brown coati. Viverra nasua of Linne. Brown ; with white spots about the eyes aivd muzzle.

Gen. 4. Cercoleptes of Iliger. — Ursi cauda oc- cupante. Pottos of Cuvier.

Add to the plantigrade progression of the bears the long prehensile tails of the sapajous.

Viverra caudivolvula. Warm parts of America and the Antilles, where they are called pottos, about the size of a pole-cat; hair woolly; gray or yel- low brown; manner of life nocturnal; disposition mild ; feed on fruit, honey, milk, blood, &c.

Goii. 5. Meles of Storr. — Ursi digitis sub cute latentibus. Badgers. They have one very small tooth behind the canine, and then two molar with points succeeded by one which begins to be recognised for a mere flesh tooth by some traces of cutting, which exhibit themselves upon the internal edge ; behind this comes a square tuberculous tooth, which is the largest of all ; below the penul- tima begins also to show some similitude to the inferior flesh teeth, but ils internal edge has two tubercles elevated and one cutting; it possesses the number of tuberculous teeth.

Gen. 6. Guio of Storr. — Ursi molaribus, ad la-

cerandum aptis. The gluttons. They approximate the martins in the nature of their teeth and dispo- sition, and the b?ars in their plantigrade progres- sion. They have false grinders above and four below before the flesh tooth, and a small tooth behind it of which the upper is broader than long. The upper flesh tooth has but one tubercle. Tail of a moderate size, with a fold underneath in the room of a pouch. They resemble the badgers in their mien and attitudes.

Glutton of the north, or the rosomak. Ursus gulo of Linne.

Ursus luscus. North America.

The grisson, viverra vittata. Black ; the upper part of the head and neck gray ; a white band run- ning from the forehead to the shoulders.

Thetairu; mustela barbara. Brown; the up- per part of the head gray; a large white spot upon the throat.

ORDER VI. — DIGITIGRADA. Ferse molaribus ad lacerandum aptis.
Group 1. Pedibus curtis.

They have a tuberculous tooth behind the flesh tooth above. They have been denominated long- bodied on account of the shortness of their legs and the length of the body, which allow them to pass through the smallest openings. They are deprived of a coecum ; do not spend the winter in sleep. Although they be small and feeble, they are very- cruel and live upon blood.

Gen. 1. Putorius of Cuvier. — Mustelae rostro breviore. Weasels. The weasels are the most sanguinary of their kindred ; the flesh tooth below is without the inner tutercle. Tuberculous tooth above is broader than long; they have but two false grinders above aud three below. They are known externally by a snout shorter and thicker than that of the martins.

Mustela putorius. Polecat, or fitchet.

M. vulgaris, common weasel.

M. erminea.

M. sibirnia.

Gen. 2. Mustela of Cuvier. — Martins. Differ from the weasles by a false grinder above and below, and by having a small tubercle on the inside of their flesh tooth below, two characters which somewhat diminish the cruelty of their na- ture.

Common martin, mustela martes of Linne.

1'itchet, M. fiina.

The sable, M. zibillina.

*Gen. 3. Mephitis of Cuvier. — Mustela maxime olentes. They have, like the polecats, two false grinders above and below, but their upper tuber- culous tooth is very large, and as long as it is broad, by which mark they approximate to the badgers as the polecats approximate to the grissons undulations. (An analogy: — Mephitis * putorius ; 1 meles ', gulo; or, by inversion, mephitis ; meles ',', pectorius ; gulo.) In other respects the mephitis resemble the badgers. Nails of the fore feet long and proper for diggmgV Among a kindred of ani- mals remarkable for exhaling a disagreeable scent, the mephitis is most remarkable for diffusing a most offensive odor.*

*Gen. 4. Lutra of Storr. — Mustelae pedibus ad natandum idoneis. Otters. These have three false molar teeth above and below; a strong stem ; in- ferior flesh-tooth with a tubercle at the inner edge**

a large tuberculous almost as long as wide above. The head is compressed, and the tongue some- what rough. Distinguished from the rest of its kindred

by having palmated feet, and a tail flat- tened horizontally.

Common otter, mustella lutra of Linne.

Sea otter, M. lutris of Linne.

Group 2. Ferte molaribus ad lacerandum aptiores.

This second subdivision of digitigrade animals have the two tubercles flattened behind the upper flesh tooth, which has a wide stem. They are feeders on flesb, without showing any courage pro- portioned to their strength, but live upon dead car- casses. They all have a small ccecum.

Gen. Cants of Linne. — The dog. Have three molar teeth above and four below, a tuberculous tooth behind each flesh tooth. Their first upper tuberculous is very large, and the flesh tooth above has but one small tubercle within. But the lower one has its backward edge quite tuberculous ; tongue soft; fore feet with five toes, hind with only four.

Common dog, canis familiaris.

Wolf, C. lupus.

Black wolf, C. lycaon.

Red wolf, C. Mexicanus.

Jackall, C.aureus.

Common fox, C. vulpes.

Small yellow fox, C. corsac of Gmelin. Pale yellow gray ; sometimes with black upon the base of the tail ; tip black. Common in Asia.

Three colored fox, C. cinereo argenteus.

Blue fox, C. lagopus.

Viverra.

Lingua horrida gradiendo unguibus sese atol- lentibus. Three false molar teeth above, four below, of which the first sometimes falls out. Two tuber- culous teeth very large above ; one only below ; tu- bercles jutting at the inner edge of the inferior flesh tooth, while the rest of the tooth is more or less tu- berculous. Their tongue is bristled with sharp and rough papillae. Their nails half elevate themselves in walking; near their anus is a pouch, where appropriate glands secrete a peculiar humor.

Gen. 1. Viverra; of Cuvier. — Mustelae specu du- plice sub ano unguentum sudante. Civets proper. Pouch deep ; situated between the anus and the organs of generation, and is divided into two sacs which are replete with a copious unguentum of a strong musky odor.

The civet, viverra civetta of Linne". Gray; with a brown or black spot ; tail brown, shorter than the body; whole length of the back and tail crested with a mane that can be elevated at the pleasure of the animal.

Zibet; viverra zibitha of Linne. Gray, clouded with brown ; tail long, ringed with black.

Gen. 2. Genetta of Cuvier. — Mustelae specu haud mamfeste sudante. The genets. Pouch re- duced to a single slight depression formed by the jutting forth of the glands, and almost without sensible excretion, although it has the odor very manifest.

Common genet; viverra genetha of Linne. Gray, with small round black spots, with a tail ringed, streaked with black.

Viverra fossa of Buffon. Fawn where the genet has black ; almost without rings upon the tail.

Gen. 3. Herpestes of Iliger. — Mustelae specu amplissimaanum fovente. Mangonolis of Cuvier.

The ichneumon. Has a simple but very capacicta pouch, at the bottom of which is found the anus.

Common ichneumon of Eˆypt ; viverra ichneu- mon of Linne. Gray ; with a long tail terminated by a lock of hair; larger than our cats-; fringed like the martins.

Ichneumon of the Indies ; viverra mongos.

Cape ichneumon. V. Cafra. Both have the tail pointed and the hair gray or brown, uniform iu the latter, striped with black in the former.

Gen. 4. Rhyzana of Iliger. — Mustelse quaternis digitis ex pedibus anterioribus. The suricates. The resemble in some particulars the ichneumons, and borrow of them the tints and transverse stripings of the pile ; but what discriminates them from all the carnivorous animals already described consists in having only four toes upon their fore feet.

Group 3. Ferte molaribus ad lacerandum aptissimis.

These have no small teeth behind the thick mo- lar teeth. This subdivision comprehends crea- tures of the most cruel and voracious of this order.

Gen. 1. Hycena of Storr. — Cams specu sub ano. The hyaenas. They have three false molar teeth above and four below, all flat and conical and re- markably large : their upper flesh tooth has a small tubercle within and before, but the lower one wants it, and presents only two strong cutting points : this stout armature enables them to break the strongest bones of their prey. Tongue rough ; all their feet have four toes like the suricates, and under the anus there is a deep and glandulous pouch . Way of life nocturnal, voracious, and among the graves in search of dead carcasses, their favorite diet.

Striped hyaena ; canis hyjena of Linne.

Spotted hyaena ; C. crocata of Linne.

Gen. 2. Felis of Linne. — Ungues molliter re- ponentes. Cats. They are of all the carnivorous animals the most strongly armsd : the muzzle is short and round ; grinders short. The chief cha- racter of discrimination is the faculty of withdraw- ing their claws through the office of certain elastic ligaments; and thus, by sheathing them from in- jury, keep them sharp and ready to gripe their prey. They have two false molar teeth above and two below ; their upper flesh tooth has on the in- side three hollows and a flat stem, the lower two are pointed and cutting without any stem ; they have only a very small tuberculous upper tooth, without any thing to correspond to it below.

The lion, felis leo : tail terminating in a tuft of hair.

The tiger, F. tigris.

The jaguar or once, F. onja : black ocellated spots.

The panther, F. pavetus : black clustering spots.

The leopard, F. leopardus : small spots.

The hunting leopard, F. jubata : hair of the neck longer, and of a deeper dye than the resJ of the body.

The puma, F. discolor : red, with small spots of a deeper hue. •

The ocelet, F. pardalis : gray black margined, tawny spots disposed in oblique bands.

The black panther, F. melas : black spotted with a deeper tinge.

The lynx, F. lynx : tawny, spotted with black.

Canada lynx, F. Canadensis of Geoffroy : whitish gray with a few spots.

Furrias cat, F. rufa of Guld : tawny, red tinged with brown.

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Lynx of the marches, F. caracal : vinous red. Serval, F. serval : yellow black spots. Jaquarondi, Azz.

Common cat, F. catus : gray brown, waves of a deeper color.

ORDER VII.— AMPHIBIA.

Ferse corpore alque membris ad natandum na- tiira cumparatis. Amphibious animals form the third and laˆt of the families into which Cuvier divides the carnivore; they have the feet short and generally enveloped in the skin, which therefore cannot ou land serve them for instruments of pro- gression ; but, as the intervals between the toes are filled by membranes, they answer well the pur- pose of oars in swimming. Body elongated ; spine very moveable, and provided with muscles that turn witli great force. These creatures do not come to shore, except for the sake of basking in the sun. The abdominal basin is narrow. The hairs sleek and depressed close to the skin, indicating that they are good swimmers, which all the parti- cularities of their anatomy confirm.

(Irinip 1. Phoca of Linne.

From four to six cutting teeth above, four below; canine pointed grinders twenty-two or twenty- four, all cutting or conical without having any part tuberculous ; five toes on each foot. Phocae sine auribus exterms.

Gen. 1 . Phuc a of Linne".— Common seal. Gray yellow, more or less spotted or waved with brown, according to the age, becoming white by age.

Phoca Greenlandica: gray yellow, spotted with brown when young.

P. monachus : brown black, belly white. Medi- terranean.

P. leonina : twenty-five feet long, brown muzzle terminated by a wrinkled trumpet, which it inflates when angry.

P. cristata of Gmelin : seven feet long, with a sort of moveable hood up the crown of its head.

Gen. 2. Oterites of Peron. Auribus externis. Four cutting teeth above, mean with a double edge, ex- terior simple and smaller, four below forked ; all the grinders are simply conical.

Phoca jubata of Gmelin. Sea lion. Fifteen feet long and upwards ; tawny ; the neck of the male clothed with hairs longer and more crisped than those which cover the body. Pacific Ocean.

Phoca ursina : seven feet in length, with a mane varying from brown to white. Pacific Ocean. Group 2. Trichecvs. Walrus of Limit:.

These resemble the phocae in their limbs and in the general form of the body ; but differ very much in their teeth ; lower jaw wants the canine teeth, and adopts a .r/.e ami a compressed form to adapt itself to the monstrous canine teeth, or tusks, which confine it on each side. These tusks derive their origin from the upper jaw, and point downwards sometimes to the length of six feet, and are of pro portionate thickness. The magnitude of the al- veole necessary for the lodgment of them elevates tlie whole front of the upper jaw, and form an in- flated muzzle ; in consequence the nostrils take a vertical direction upwards, and do not terminate at tin- snout, as in some other animals. Grinders »hort and truncated obliquely.

Walrus. Trichecus rosmarinus. In a paper rt-ad before the Royal Society on the 24th of March, 1821, Sir E. lloire deemed that he had

discovered a faculty in the hind flipper of the walrus analogous to that in the foot of a fly; which, by the contractility of the margin, forms itself into a cup when the pressure is lightened, and thence, by creating a vacuum, enables the insect to resist the force of gravity. But the flippers which were examined on board the Blossom seemed too lull of protuberances to admit the supposition of a vacuum, which, when they were submitted to that able com- parative anatomist, they had lost by the operation of the saline pickle. The writer remembers that his fisherman at Oahu once brought him a goby which the honest fellow had sprinkled with salt to keep it from decaying. Upon examining the fish the flat fin, formed by the union of the two abdo- minal fins, appeared so much like a cup that he asked the fellow if the fish was in the habit of ad- hering to stones at the bottom of the streams : the answer was ‘ No ; and I am surprised that a person of much sagacity should not be better acquainted with the usual effects of salt.’*

ORDER VIII. — MARSUPIALIA.

Ferae utero vicario. A family, says Cuvier, embracing many orders. The most prominent characteristic is the premature production of their young ones, in a state of development hardly comparable to that which foetuses

reach a few days after conception. Incapable of movement, and with scarcely the rudiments of limbs or external organs, the litile ones attach themselves to the paps of their dams and remain fixed in that position till their form is unfolded in a degree corresponding to that of other animals when they forsake the womb of their mother. Al- most the whole of the skin of the abdomen is dis- posed in shape of a funnel, around the teats, wherein the immature embryo is preserved as in a second matrix, and which even affords a place of shelter when danger threatens. Two bones attached to the pelvis, and interposed between the muscles of the abdomen, afford support to this pouch ; they are found, however, in moles where the folds which form the pouch are hardly perceptible. The matrix of the animals pertaining to this order has not only an opening by an orifice in the bottom of the vagina, but it communicates with this canal by two lateral tubes resembling handles. It would seem that the premature birth of the young ones is owing to this singular organisation. The males have the scrotum before the penis. Two young ones may be seen preserved in spirits in the museum of the Hasler Hospital, with the papsof their dam to which they are attached.

Family 1. I'r DIMANA.

Dentibus horridis cum pollice qui ad manum ap- poni potest. Canine teeth long, incisors small, hind molar teelli rough with points; way of life carnivorous; thi'.iiib applicable.

Gen. 1. Didelphis of Linne". — Auribus maximis, cauda occupante. Opossum. Six incisors above, whereof the mean are a little longer than the rest ; seven below ; three anterior grinders compressed ; the four hind ones rough with points; upper ones n re- gular ; lower oblong ; in all fifty. Tongue bristled ; tail prehensile and partly naked. Mouth very wid and large naked ears give them a peculiar physiog nomy. Smell offensive ; nocturnal ; motion slm\; rest on trees; pursue birds, small quadrupeds, in- sects, &c., not disdaining fruit. Ccecum middling size without swellings.

Didelphis Virginiana.

D. marsupialis.

D. cancrivora.

D. opossum.

D. cayopollin.

D. philander.

D. dorsigera.

1). inurina.

D. brachyoura.

D. palmata.

Gen. 2. Dasurus of Geoffrey. — Pollice nascente cauda non occupante. Two incisors and four grinders at least in each jaw, like the opussums, and four teeth in all; tail clothed with loncj hair; not prehensile ; thumb behind very much shorter and like a tubercle. Found in New Holland ; live on carcasses, insects ; enter houses, where their vo- racity i:; very troublesome.

Didelphis synocephale of Harris. About the size of a dog.

D. ursina. Long black thick hairs, with some spots.

Dasurus macrourus of Geoffrey. Van Dieman's Land. Large as a martin ; tail long as the body ; brown spotted.

D. arroe de mange.

D. viverra of Shaw.

Gen. 3. Parameles of Geoffroy. — Thylacis of Iliger. Hind thumb short, like the dasuri, and the two finders which follow united by the skin as far as the nails ; the thumb and little toe before are simply tubercles. The upper incisors are ten in number, of which the external are sharp and spreading, but only nine in the lower jaw ; grinders similar to those of the opussums. All their teeth when reckoned amount to forty. The tail is clothed with hair and not prehensile. They inhabit Australasia; and their large and almost straight nails bespeak their use in forming burrows in the earth; their hind feet are very long to augment their speed. Long nosed.

Pararneles nasutus of Gmelin. With a very long nose and pointed ears, and a hairy covering of gray brown. It resembles a tenrec at first sight.

Familia 2. DIGITIS DDOBUS QUASI INVOLUCRO co- OPERTIS.

The second family of the marsupial animals bear in their lower jaw two long and large incisive teeth, sharp and cutting at their edge, bowed out- wards, to which correspond six in the upper jaw. The canine teeth in the

upper jaw are also long and pointed ; but in the lower these teeth become so inconsiderable as to be sometimes hidden by the gum ; some of the genera are entirely destitute of them. Their food in a great measure consists in fruit; and their intestines and even the ccecum are longer than those of the opussums. They all possess one large thumb or great toe, gene- rally so far separated from the rest as to appear di- rected backwards, like the corresponding claw in birds. These great toes are without nails, and two of the neighbouring toes are mutually joined by the skin as far as the last phalangial bone. This struc- ture has lent them the name of phalangista.

Gen 1 . Phalangista of Cuvier. — Cauda occupante. Phalangers proper. They have not the skin of the flanks extended into wings. In each jaw there are found four molar teeth in each side backwards, which present four points respectively, and by this means, when viewed together, form two ranks of

points. A large compressed conical tooth before ; between this and the canine teeth in the upper jaw are two small pointed teeth which correspond above to the minute teeth before-mentioned. Their tail is prehensile. Some of them are scaly. These ani- mals inhabit the Moluccas, where they live upon trees, and search for insects and fruits; when they see a man they suspend themselves by the tail, and continue fixed in this position till they drop down with fatigue. They diffuse a very disagreeable odor ; nevertheless their flesh is sometimes eaten. They are recognised by their light; gray spotted with black, red with gray, brown the whole length of the back, and a white rump ; but the species have not been sufficiently discriminated, but have generally been comprehended under the denomination of dedelphis orientalis.

Phalanger didelphis lemurina et vulpina of Shaw. As large as a cat ; of a gray-brown color, pale underneath; tail black.

The phalanger of Cook. Less than a cat, gray- red, white beneath, red on the flanks, a space of white near the end of the tail.

Gen. 2. Petaums of Shaw. — Cute laterum in alas explicata. Hying phalangers. Have the skin of the sides more or less extended between the legs, like the palatouches among the rodentia, which gives them the power of supporting themselves a few moments in the air, and of taking more distant leaps. Natives of New Holland. Some of the species have the canine teeth below, but they are very small ; the upper canine teeth, and the three first grinders above as well as below, are short, and the hindmost molar teeth are armed with points.

Dwarf-flying phalanger. Didelphis pygmaea of Shaw. Mouse-color, and

nearly of that size ; hairs of the tail disposed in a regular series, like the vane of a feather; wants the lower canine teeth, and the upper are very small ; they have four hind molar teeth, presenting four points respectively, but somewhat lower and crossing each other; this is the form in ruminant animals; the anterior pair above, and the one below, are more complicated. This structure renders this genus more particularly frugivorous than any of the foregoing.

The large flying phalanger. Phalanger of Shaw, xlesemble the flying cats in the size of the body ; the fur is soft and copious, and its tail is long and flattened. They have divers shades of brown, some are variegated and very lack.

Long-tailed flying phalanger. Didelphis ma- croura. Deep brown above, white below ; tail about half as long again as the body.

Group. 1. Caninis inferioribut nullis.

This group has the upper incisive and the canine teeth ; and two toes in the hind feet united as in the second group, but they want the hind thumbs, and the inferior canine teeth.

Gen. 1. Myorthius of Lay. — Canino superiore dumtaxatuno. The kangaroo rats. The smallest ani- mals of this order which exhibit any relationship to the carnivora in their general character. Their teeth are nearly the same as in the phalangers ; they have also a sharp canine tooth above ; the two mean in- cisors in the upper jaw are longer than the rest ; in the lower jaw there are only two, which are bowed outwards ; they have one anterior molar tooth, long, cutting, and denticulated, succeeded by four that are rough with four flat tubercles. But what dis- tinguishes these animals from the preceding genera of this family is the disproportioned length

hind feet; these have the great toe united, and the two next united as far as the nail, in such a manner that we seem at first sight to see only two toes, of which the inner has two nails. These animals walk upon two feet; and by the help of their tail, which is long and stout, maintain themselves in an erect position ; in form and habit they resemble the kangaroos, from which they differ in having a ca- nine tooth in the upper jaw. Their food is frugi- vorous; they possess one large stomach divided into pouches, and garnished about with enlargements ; ccecum of a moderate size and round. We are acquainted with only one species, which is about the size of a rabbit, and of a mouse color, whence they have been called kangaroo rats. Natives of

New Holland : the aborigines call them Potoroo. Group. 2. Canino nullo.

This group differs from the third only in the absence of canine teeth.

Gen. Macropus of Shaw. — The kangaroos. These exhibit all the characters which we have as- signed to the kangaroo rats, except in the afore- mentioned canine tooth in the upper jaw, and in their mean incisors not being separated at a distance from each other. The inequality of the legs is still greater, so that they cannot walk upon four feet but with pain and difficulty, but spring upon the hind feet with great force. The thick nail upon the middle toe behind, which nearly resembles a hoof, serves them for a defence, as they can rest their weight upon one leg and their enormous tail, and give a violent blow with the free foot. In other respects they are animals of a mild disposition, and live in flocks. Their grinders present nothing but small risings. There are five, but the anterior often falls out by age, which makes them seem to have only three. The stomach is shaped like a long pouch, divided into two enlargements, like the colon; ccecum is large and swollen; radius allow the fore- arm a complete rotation.

Great kangaroo. Macropus. Didelphis gigantea. Sometimes attains the height of six feet, and is the largest animal in New Holland : first discovered by Cook, and now propagated in Europe. It is said that the flesh resembles that of a deer. Their young ones at their birth have but one thumb, and retreat to the pouch of the dam, till age has fitted them for sustaining themselves. It is by thrusting their muzzles out of the pouch that they receive the food from her. They live in herds under the conduct of the old males ; they take exceedingly long leaps ; it would seem that many species are confounded under this name. Color gray with lighter shades.

Elegant kangaroo. Macropus elegans. About the size of a hare, light-gray, striped with brown across the body. From St. Peter's Island.

Kangaroo d'Arve. Didelphis brunii of Gmelin, called philanderd'Arveor lapin d'Arve, by the inha- bitants of Amboyna ; but the naturalists of Europe have not paid sufficient attention to the description which Valentine and Bruyn have given. About the size of a hare ; brown above, tawny beneath; it is found in the island of Arol near Banden, and in the island of Salor, and has long been known to the students of natural history.

Group. 3. Pare incisorum infra.

Has the lower jaw with two long incisors, but without canine teeth; the upper jaw has tlie middle incisor Ion., ami s-ome small ones on tacli i.i(le, \iih the canine teeth.

Gen. Druuimcnus.— Sine cauda. Koala. Has*

the body short and thick, without any tail ; four toes before divided into two separate pairs ; the thumb and the index in one pair, and the rest in the other; this conformation renders their fore- feet very proper for seizing and grasping ; hind foot destitute of the thumb, next toes to it united like the preceding group. We are acquainted with only one species, the hair of which is of an ash color. This animal passes one half of its life upon trees, and the other burrows which it hollows with its foot; the dam carries her young one a long time upon her back.

Group 4. Dentibus glirium.

Gen.. Phascolomys of Geoffrey. — If we regard the teeth and intestines we must place these ani- mals among the rodentia, but the articulation of the lower jaw permits us to assign them to the carnivora, which we choose to do, because we have been led to them by descending in an uninter- rupted series from the didelphis to the phascolomys. Besides the male organs of generation have a perfect similarity to those of the marsupial ani- mals. They are stupid creatures ; their head is flat and their legs short ; body loose and without tail ; fore-feet with five nails, and four with a small tubercle in place of a great toe behind ; all fitted for burrowing in the earth. Rate of progression excessively slow. Two incisive teeth in each jaw, long, and nearly equal to those of the rodentia ; the grinders have each two risings across their surface ; feed upon herbs ; stomach shaped like a pear ; ccecum short and thick, furnished as in man with a vermiform appendage; male organ of gene- ration forked, as in the opossums. One species only known, about the size of a badger; hair co- pious, of a color more or less yellow. From King's Island, south of New Holland. Live in burrows. Propagate among us. The flesh is re- puted to be excellent.

Didelphis ursina. Wombat.

ORDER IX. — RODENTIA.

Rodentia, to which we are come from a contem- plation of the • phalangers, in which the canine teeth were so small that they might have been ac- counted as nothing ; and the food, consisting en- tirely of vegetables, seemed in reference to economy to separate them completely from the carnivora. Their intestines we observed to be long, and their ccecum ample. In the kangaroos we noticed the total absence of canine teeth, and a diet like the phalangers. We might, indeed, have begun with the phascolomys, but since we found it expedient, in an arrangement, to fix the vanishing points some- where, we could not do this without encroaching upon the precincts of what we laid down to be the chief and unvarying characteristic of the carni- vorous order, namely, the hinge-like articulation of the lower jaw. The rodentia have two large incisors in each jaw

separated from the grinder by a void space; they cannot, therefore, easily seize their prey, nor tear flesh, neither cut the food, but only by continued labor reduce it to very small par- ticles, or, in one word, gnaw it. Whence a verbal noun derived from rodo, alluding to the peculiarity above-mentioned, becomes a very appropriate denomination for an order of animals, which, since their business and pleasure seem to consist in gnawing, may, in an eminent manner, be called animalia rodentia. In this way tiny will attack the hardest substances, and oft- times nouribh themselves on wood and bark ; for

the betfer fulfilment of this purpose the incisors have no enamel but on the forepart, so that their posterior edge, wearing faster than the anterior, they always appear slanting- upwards. We cannot forbear calling the attention of the reader aside to admire the simple process which nature has contrived for keeping these teeth always sharp. To preserve this prismatic form, an increase at the root is necessary corresponding to the quantity worn away by attrition, which is so considerable, that, if one of them chance to be lost or fall out, the one opposite, having nothing to wi:ar it down, is deve- loped so much as to become monstrous, and will, if the animal be kept alive by the introduction of food into its mouth, through the opening left be- tween the incisors and grinders, nail the lower jaw to the upper. The lower jaw is articulated by a longitudinal condyle, so as to be capable of a ho- rizontal motion, backwards and forwards, to suit the action of gnawing ; the molar teeth are crowned with plates, of which the eminences of enamel are always alternate, in order that they may be in opposition to the horizontal motion of the lower jaw. The genera in which these eminences are in simple lines, and where the crown is plane, are exclusively frugivorous; those in which the eminences are replaced by flat tubercles are om- nivorous, but those animals of this order which are furnished with grinders, and armed with a few points, attack other animals more readily and ap- proximate to the carnivora. The form of the body is such as to make the hind parts preponderate, hence it comes to pass that in progression they leap rather than walk. This conformation, in some of the genera, is found as excessive as it appears in the kangaroos. The intestines of the rodentia are very long, stomach simple, or somewhat divided ; the cuecum is sometimes more voluminous than the stomach, nevertheless in the genus musoreus this intestine is wanted. In the whole of this order the brain is almost smooth and without convolu- tions ; the orbits arc not separated from the tem- poral fosses, which have some depth ; the eyes have a lateral direction ; the zygomatic arches, being thin and bent down, indicate the weakness of their jaws ; the fore-arm is susceptible of a

rotatory motion, and the two bones are often united into one. Finally, the inferiority of these animals be- trays itself in almost all the details of their orga- nisation, though the major part of the genera have strong clavicles, enjoy a certain hability of address, and make use of the fore-paws in applying the food to their mouths.

Division I. — CLAVICCMS PERFECTIS.

Gen. Castor of Linne. — Cauda plana, rotunda ambitu, squamis, que abductu. The beaver is dis- tinguished from all the rest of the rodentia by its tail, which is flattened horizontally, almost of an oval form and covered with scales. Five toes on each foot, those behind united by membranes, the one next the great toe has a double nail placed in an oblique direction. Grinders, in number four, having the appearance of a riband folded upon itself in such wise that they ~eem one notch on the inside and three on the outside in the upper jaw, but inversely in the lowest.

Castor fibra, common beaver. All the rodentia are provided with clavicles which cannot be discri- minated by any external sensible mark, nor do the Jong incisive teeth in the lower jaw always furnish ihe naturalist with unvarying and well-defined

differences for distinction. But we must, for the sake of a perspicuous order, separate, as we do, the mole-rats and the helamys or jumper; the others allow themselves to be divided by the grinders.

Subdivision 1. Molures ex laminis structe.

Those which have iheir molar teeth prismatic and formed by the repeated superposition of enamel plates ; a sort of structure which we find in the hares and even in the elephants.

Meadow mice ; mures auricolae. All the known ones have three grinders throughout, each formed of five or six and sometimes seven triangular prisms ranged alternately >n lines.

Gen. 1. Fiber of Cuvier. — Cauda louga atque compressa. Ondatras. Field mouse, with pal- mated feet and long compressed tail covered with scales. Only one species known.

Musk rat of Canada. Castor Tibethicus. Mus zebethicus of Gmelin.

Gen. 2. Hypudeus of Iliger. — Arvicola of Laci- pede. Cauda pilis vestita. Common field mouse. Tail clothed, -nearly as long as the body

Mus amphibius, water-rat.

M. arvalis of Linne. About the size of a com- mon mouse, tail somewhat shorter than the body.

M. ceconomus, or economic mouse of Pallas.

Gen. 3. Georychus of Iliger. — Lemmings of Cuvier. Cauda auribusque curtissimis. Tail and ears very short ; toes before peculiarly adapted for burrowing. The following species have five nails very distinct upon the forefoot.

Lemming. Mus lemnus of Linne.

Tocor. Mus appalax of Gmelin.

Lemming of Hudson's Bay. Mus Hudsonius.

Subdivision 2. Molares radicibus manifest is.

Rats grinders, which divide themselves at the base into roots, but the flat crown presents the trans- verse lines of increase. Frugivorous.

Gen. Loncherites of Iliger. — Pilis in spiculas traductis. Echemys of Geoffrey. Has four grinders throughout, which present severally four transverse plates (in the lower jaw) united in pairs ; in the upper jaw they present respectively three, of which two are united. They are American animals, with a shape nearly like mice, and lengthened as those of rats ; hair very often flattened, enlarged, stiff, and terminating in a point.

Gilded tail. C. echemys chrysurus. Hystrix chrysurus of Schroeber.

E. spinosus of Azarra. As large as a rat ; tail shorter than the body. Found in Cayenne and Paraguay, subterranean woody burrows.

Myoxus of Gmelin, dormouse loir. Has also four grinders entirely divided by transverse bands, but their hair is soft and their tail clothed and tufted.

Mus glis of Linne. This is probably the rat which the ancients fattened, and of which they made their delicate dishes.

M. nitila. Le Levot.

M. avellanarius. The muscardine. Hairs of its tail plumose.

Subdivision 3. Mures malarious cum aliquot tuber- culis.

Rats, the grinders of which are more or less tu- berculous, and which do not accurately exhibit the transverse furrows. They are more omnivorous

than the others.

Gen. 1. Hydromys of Geoffroy. — Digitis spatio bessis cute junctis. Distinguished at first sight&om al

the rest by their hind feet being palmated two thirds ; their grinders have a peculiar character in that they have the crown obliquely quadrangular or rhomboidal, which is hollowed in the middle like a spoon. Aquatic.

Hydromys leucogaster of Guiana. We are of opinion that we might refer hither an animal of which the skin comes to the central parts of Europe for the use of hatters. Its anatomical structure is not well examined.

Quoaigu of Azarra. Mus crypus of Molina. Gen. 2. Mus of Cuvier. — Cauda longa squamis obtecta. Rats, properly so called. Have three grinders in each side respectively, with flat tuber- cles, of which the fore one is larger than the rest ; tail long and scaly. Species very numerous, too well known by their fecundity, and the havock they make in our wardrobes and promptuaries. Common mouse. Mus musculus. Common rat. M. rattus, of which the ancients take no notice, and it appears to have penetrated into Europe in the last age. Cuvier.

Surmulot. M. decumanus. Arrived in Europe in the sixteenth century, and is now more common in Paris and in some other towns than the other species.

M. caraco of Palla. Tail somewhat shorter; grinders very strong, of a flaxen color; found in Tartary.

M. cahirinus of Geoflfroy. Spines instead of hairs upon the back. It is mentioned by Aristotle.

M. sylvaticus. Hair red, in other respects differs not from the common house mice.

Gen. 3. Cricetus of Cuvier. — Cauda brevi pilis vestita. Hamsters. Teeth like those of the rats proper ; tail short and clothed with hairs ; in each side of their mouth there is a sac or cheek pouch, as in some of the ape and monkey tribes, in which they transport the grain that they hoard up in theii subterraneous granaries. Mus cricetus of Linnaeus. Gen. 4. Dipus of Gmelin. — Pedibusposterioribus multo longioribus. Gerboas. Possess the same sort of teeth as the rats ; tail long and tufted at the end ; head large

and eyes prominent ; hinder ex- tremities far exceeding the anterior in the usual proportion : and hence, the fore feet vanishing in comparison of the hind ones, they have gained the name of dipus (two-footed). The fore feet have five toes ; in the hind feet the metatarsus of the three middle toes is formed of only one bone, like that which we call the tarsus in birds. Gerboa. Mus sagitta. M. jaculus.

Gen. 5. Spalax of Giild. — Incisoribus exertis. Mole-rats. They have the grinders like those of the rats, the hamsters, and the gerboas ; but their in- cisors are too large to be covered by the lips ; the ends of the lower pair crossing each other ; not pointed ; each foot has five toes, short, and with five flat thin nails ; tail very short or wanting, as are also the external ears ; live under ground ; eyes of consequence very minute. Zemni Hepez. Mus typhlus. Gen. 6. liathyergus of Iliger. — Crypterusof Fred. Cuvier. Quaternis molaribus singulis locis cum sinu. Mole-rats of the Cape. These animals have the shape, feet, and the truncated incisors of the pre- ceding; but four of the grinders in each situation, and deeply notched at outer edge ; the eye though is visible ; the tail is short.

Mus maritimus of Linnc. Gray white, nearly a» large as a rabbit.

M. Capensis, brown color; a spot about the eye, ear, and upon the crown of the head ; tip of the snout white.

Gen. 7. Hdamys of Fred. Cuvier. — Pedatis of Iliger. Bipes incisoribus infra hebetibus. This genus is related to the dipus by the large head and eyes, long tail, and the preponderance of the hind part when counterviewed with that before, though the disproportion be less than in the gerboas. In each situation there are four grinders, each com- posed of two plates ; the fore feet have rive toes, which are armed with very long pointed nails ; hind feet with only four toes, which are very large and almost like hoofs. This disposition in the number of toes is inverse of that which takes place among the rats. Lower incisors truncated, and not shar- pened like those of the gerboa and all the other animals enlisted among the rats, the mole-rats ex- cepted.

Gen. Q.Arctomys. — Molaribus horrentibus. Mar- mot. Have the incisors in the lower jaw sharpened like the majority of animals comprehended in this subdi- vision ; five grinders in each side above and below, all rough, with points ; some of the species hence evince a disposition to eat flesh and feed upon in- sects as well as herbs. These creatures have short legs, a tail of a moderate size and long, covered with hair; head large and flattened. Mus alpinus. M. babac.

Group Sciuri.

Pilis caudae arrectis. Squirrels. Tail conspicu- ous for the vane-like disposition of the hairs.

Gen. 1. Sciurus. — Incisoribus infra valde com- pressis. They have always been regarded as a dis- tinct genus characterised by the compression of their lower incisors, and by the long tail clothed with dishevelled hairs. The thumb is sometimes reduced to a small tubercle; four grinders on tach side above and below, tuberculous, with a small anterior grinder in the upper jaw, which easily fulls out.

Sciurus vulgaris. S. cinereus, chinchilla. Masked squirrel, S. capistratus of Bosc. Great Indian squirrel, S. maximus et macruvus. Babares'que squirrel, S. getulus. Sevisse squirrel, S. striatus of Linne". Hudson Bay squirrel, S. Hudsonius. Gen. 2. Tamius. — Tamias, r«/uac, a steward who portions out (rifivu) the meat and lays it u|> in the larder, ra/itiov. Ground-squirrel. Furnished with cheek-pouches ; manner of life subterranean. A mouse-colored species of this genus is very common in California, particularly about Monterey, where it generally selects some elevated or sunin situation for delving its subterraneous abode. It is a sprightly creature, often running in sportful visi- tation to the burrows of its neighbours ; when a stranger approaches their haunts, they, all in obedience to the instinctive desire of self-preser- vation, retire precipitately to their holes ; but if he continue motionless some time, the heads of the timorous animals will begin to emerge from iheir lodgments, and in the space of half an luur the whole body will have in this way made its progres- sive appearance ; and, when they seem to have sufficiently ascertained that no harm is nigh them, they renew their sports and occupations as if tin-

heeded by any one. The plumose floating tail as- sociates them with the squirrels at first sight, though we must confess that the rest of their external form and color suggests a very great affinity to the rats, but the form of their teeth, and the presence of cheek-pouches, in which they stow their food while foraging, joined to a consideration of their econo- my, distinguishes them from the mus no less than from the sciurus. We cannot forbear considering these pouches on the ground of compensation as supplying the place of a rumen for holding the food till it has undergone a due mastication, and for the very same reason which is properly alleged for that organisation in the ruminantia, namely, that if the animal were obliged to chew the food as it was cropped, a too scanty portion of time would be allowed for repose. In countries where herbage is very sparingly scattered upon the ground during several months in the year, much time

must be taken up in the search of food, which time the tamias being excused from the duty of chewing, at that time it is permitted to employ without interruption. Yarrow being one of the chief vegetable substances within reach at certain periods of the season of drought, some sprigs of it were found by the writer hi one that was shot by his servant when in California in the year 1828. Gen. 3. Pteromys of Cuvier. — Cute labrum in alas soluta. Polatouches. By having the skin of the flanks extended between the legs, they are enabled to support themselves a few seconds in the air ; feet with long appendages, which hold part of this lateral membrane. Poland and Russia. S. volans.

S. volucella of Buffon. S. petamista of Tayman. S. sagitta.

Gen. 4. Cheiromys of Cuvier.— Aye-aye of Geof- froy. The aye-aye'has the lower incisors still more extended lengthwise, and more compressed than those of sciurus, so as to resemble a plough share. Each foot has five toes, four of which are very long, the middle is much thinner than the rest. In the hind feet the great toe may be applied to the rest, so that this animal bears the same relationship to the rodentia, that the sariques do among the carnivora. S. Madagascariensis of Gmelin.

Division II. — CLAVICUT.IS NASCENTIBOS. This division of the rodentia comprehends such genera as have only the rudiments of clavicles.

Gen. Hi/strix of Linne. — Spiculi argutis pro pilis. Porcupine. Distinguished at first sight by its pointed quills. Four teeth in each side above and below, of a cylindrical form, and marked upon the crown with four or five deep impressures ; five toes behind and four before, armed with thick nails. H. cristata of Linne. H. prehensilis. II. fasciculata.

Family 1. LEPORES.

Incisoribus supra duplicibus. This family has the superior incisors double, that is, each of them is accompanied by a smaller one. Grinders are five in number, and are formed severally of two plates cemented together. We find in the upper jaw another, simple, and very small. There are five nails before and four behind. The coecum is of an enormous size, being five or six times bk'ger than the stomach, and when the animal is laid open makes the most conspicuous figure among the contents of the abdomen.

Gen. 1. Lepus of Cuvier. — Auribus capite longi- oribus.

L. timidus.

L. versabilis.

L. cuniculus.

L. tolai of Gmelin, a sort of mean between the hare and rabbit.

L. nanus, America and Brasil.

L. Capensis of Gmelin.

Gen. 2. Lagomys of Cuvier. — Auribus mediocri- bus cauda non existente. Ears of a moderate size; legs somewhat different; simple; clavicles almost perfect; tail wanting; voice shrill.

L. pucellus of Cuvier.

L. ogotonna of Cuvier.

L. alpinus of Cuvier.

Family 2. CAVIJE.

Gen. 1. Hydroch&rus. — Digitis membrana jun> tis. The hydrochaerus has four toes before and three behind, all furnished with nails and united by membranes ; four grinders in each side above and below, of which the hinder- most are larger, com- posed of numerous simple parallel plates, the upper ones have the anterior of the plates towards the external edge ; but the lower ones have their fork towards the inside.

Cavia capibora of Linne.

Gen. 2. Guinea pigs. — Anoema of Fred. Cuvier. Cavia of Iliger. Digitis solutis. The smallest of the cavies ; toes separate ; grinders each of one plate simply, and a fork on the outer edge in the upper jaw, and on the inner in the lowei jaw.

Gen. 3. Chloromys of Fred. Cuvier. Dasyprock of Iliger. Malaribus sulcis exaratis. Agouti of Cu- vier. The agoutis have four fingers before and three behind ; four grinders on each side above and below, nearly of an equal size, and crowned with a plate irregularly furrowed ; their outline is round, and they are notched on the inner edge in the upper jaw, and on the inner edge in the lower. Savor of the flesh like that of hares and rabbits.

Agouti, cavia acuti.

Acouchi, C. acuchi.

Gen. 4. Calogonus of Fred. Cuvier. — Caviae undique quinque unguibus. Pacas. The pacas have a great similitude to the agoutis ; but the formei

have a small nail more than the latter upon the in- side of the fore feet, and one on each side upon the hind foot: hence they have five upon each foot. We meet with a hollow cavity in the lower jaw, which is sunk under the margin, formed by a very large and prominent zygomatic arch.

Cavia paca of Linne.

ORDER IX. — EDENTIA.

Dentibus ad nihilum migrantibus. Quadru- peds without incisors, forming the last order of animals furnished with nails; though they are thus connected by a negative common charac- ter, yet they do not fail to exhibit some notable relations of a positive kind, particularly in the large nails which embrace the end of the toes, and approximate more or less to the nature of hoofs. Moreover they evince a certain slowness and want of vivacity, occasioned by the untoward disposition in their members, and by the absence of a certain harmony and conformity in their proportions, which nature by the lessons she has taught us in other conformations has led us to expect. These relations, by admitting some lacumt?, leave us root to divide the order into five families.*

Family 1. BRADYPI.

Animalibus tarde incedentibus. Bradypus of Linne". — Sloths. This family has the face short, and derive their well known appellation from the extreme tardiness of their progression. Their structure is truly heteroclite, as if, says the French naturalist, nature in some of her sportful moments had a mind to amuse us with the pro- duction of something very grotesque and imper- fect ; but we suspect that the great man is able to give a better account of the matter than by having tecourse to a supposition that nature sometimes indulges in humorous freaks and caprices in the formation and equipment of her children. The sloths have their molar teeth cylindrical, their ca- nine sharp, and longer than the grinders. The paps are seated upon the breast; the toes are united by skin and conspicuous ; leg very large, compressed; nails adunc, which are always turned towards the sole of the foot. The hind feet, which are articulated obliquely upon the legs, are not attached by the ends of the phalanges ; the toes are jointed fast by a ginglymus ; the first is cemented at a certain age to the bones of the me- tacarpus, or metatarsus, and again are cemented to- gether by the default of usage ; to the disadvantage of organisation in the extremities they join a dis- proportion in the length of the arm and fore-arm, when compared with

the leg and thigh, in such wise that their gait consists in resting upon their elbows. The basin of the abdomen is large, and their thighs are generally reclined upon the sides so that they cannot approach the knees. The bones of these animals are not less remarkable than the rest of their conformation ; the stomach is divided into four sacs, analogous to the four ventricles in ruminant animals, but without any doublings of the inner coating, and without any prominent parts in the inside; intestinal canal short and without a caecum.

Gen. 1. Bradypus.

Ai ; Bradypus tridactylus.

Unau; B. didactylus.

Gen. 2. ChoUrpus. F. C.

Family 2. DASYPI.

Molaribus aliquando non nullis. Snout sharp ; some of them have grinders.

Gen. 1. Tutou; dasypus of Linne. — The arma- dillo is most distinguished among the mammalia by being suited in a hard scaly coat of mail, which is tessellated or divided into compartments like small paving stones, which cover the head, the body, and oft times the tail ; this substance forms a hel- met upon the forehead, a very large and very con- vex habergeon upon the shoulders, and a plate si- milar to the preceding upon the rump ; between these two last there are several parallel bands, which, being moveable, give the body the power of bending itself; the tail is sometimes furnished with rings, and sometimes, like the legs, with divers tu- berculous risings. Ears large ; nails large, of which the fore-feet have sometimes five and at others only four, but the hind feet have always five ; the muz- zle is sharp ; the grinders are cylindrical and sepa- rated from one another, about seven in number, in each situation, and destitute of enamel on the inside ; tongue thin; some loose hairs are discoverable be- tween the scales upon the portions of skin which are not covered with shell. Stomach simple and the coecum wanting.*

I), clixinctus.

I), sexcinctus.

Family 3. ORYCTEROPT.

Gen. Orycteropus of Geoffrey. — The animals of this genus have a long time been confounded with the ant-eater because they use the same kind of

nourishment and have a head of consimilar form ; but they may be discriminated from them by their grinders and their nails, which are proper for digging, not for cutting. The structure, indeed, is different from that of all other quadrupeds; that is, in being composed of an infinite number of small transverse solid reeds. Stomach simple, muscular towards the pylorus ; ccecum small and obtuse.

Myrmecophaga Capensis.

Family 4. MYRMECOPHAGA.

Dentibus nullis. No teeth at all. The animals of this family are clothed with hair, and have a snout elongated and terminating in asmall mouth without any teeth. From this mouth issues a filiform tongue, susceptible of great extension to penetrate the ant-hills and the nests of thetermites which adhere to it by means of a viscous sa- liva. Nails before strong and cutting, varying in number according to the species, which serve to pull down the nest of the termites and furnish their possessor with a strong weapon for defence ; in a state of repose these nails are half bent inwards, pointing to the callosities of the wrist and heel ; the foot is rested upon one side only. Stomach simple and muscular towards the pylorus. Intestinal canal of a moderate length and dimensions ; ccecum none.

Gen. 1. Myrmecophaga. — Tarmanoir. M. jubata.

Gen. 2. Tamandua. — M. tamandua.

M. dactyla.

Family 5. MAN is. — Squamis muricatis.

Gen. Manis of Linne. — Pangolins. Scaly ant- eaters. Without teeth; have the tongue very ex- tensible, and feed upon ants and termites, like the ant-eater proper. But the trunk, the extremities, and the tail, are covered with sharp scales, disposed like tiles upon a roof, which becomes a means of defence when the animal rolls itself in form of a ball. Five toes to each foot ; stomach slightly di- vided in the middle. No cctcum.

M. pentadactyla ; brachyura of Erxleben.

Pangolin phagetin

ORDER XI. — MONOMETR.E. Family 1. QUADRUPEDES GENETALIBUS AVJI-M.

The monometrae have but one opening for the sperm, the urine, and the

faeces. The organs of gene- ration present some unusual anomalies ; for, though they are without an abdominal pouch, yet upon the pelvis they have the same supernumerary bones as the marsupial animals ; the vas deferens, and the ureters, open into the cloaca at the base of the penis, which is neither bored nor hollowed into a furrow for conducting the semen. The monometrae hare only, for the whole matrix, two canals, that open separately into the ureter, which terminates in the cloaca, and it has been found impossible hitherto to find any vestiges of teats ; so that we have still to learn whether these animals be oviparous or viviparous. They exhi- bit some varieties of structure in their skeleton, as well as in the instruments and appendages of re- production, inasmuch as they are possessed of a sort of clavicle common to both shoulders and placed before the ordinary clavicle, and is rir-rfprtly analogous to tie fourchette or forkt'l bonu in birdj

Besides five nails to each foot, the males bear a pe- culiar spur attached to the astragalus just as it is in certain gallinaceous fowls. The ear is unfurnished with an auricle, and the eye very small.

Gen. 1. EcAu/nfl of Cuvier.— Tachyglossus. Muz- zle elongated and ending in a small mouth, which contains a long extensible tongue, like that of the ant-eaters and pangolins. These creatures live upon ants like the other kindred genera; there are no teeth, but the palate is furnished with many small spines directed backwards; the feet are short and armed with five nails, very long, sturdy, and fit for burrowing in the earth; the body is quite invested in a spiny armature, like the hedge-hog; and it appears that, in the moment of danger, they enjoy the faculty of rolling themselves up into a ball like those animals. Tail very short ; stomach ample and almost globular; coecum of a moderate size ; organ of generation terminated by tubercles. There is at present known only four species.

E. hystrix; ornithorynchus hystrix of Home. Covering altogether thorny.

E. setosa; O. setosus of Home. Hair mingled with the spines.

Gen. 2. OrnMoryncAusof Blumenbach.— Platy- pus of Shaw. Muzzle elongated and at the same time is remarkably enlarged and flattened, and pre- sents the greatest possible similitude to the bill of a duck, and so much the more in having the ends garnished in the same way with transverse plates. Teeth found at the bottom of the mouth, two in number only, and without roots, but crowned with plates and composed, like those of the orycteropus, of small vertical tubes. The fore-feet placed upon a membrane

which not only unites the toes but is ex- tended beyond them; but in the hind feet the web terminates at the roots of the nails ; two characters which, added to the flattened tail, show the ornitho- rynchus to be an aquatic animal. Tongue in some measure double; the portion within the bill is rough with villosities, the other half is at the base of the first, thicker, and bears in front two small fleshy points. Stomach small, oblong, and has the pylorus ad- vanced near the cardia; coecum small. We see in the intestinal canal many of the plicae projecting and parallel. Organ of generation has a pair of tubercles.

The edentia terminate the series of unguiculated animals, and we come now to consider the na- ture of those living creatures the nails of which do generally envelope the ends of the toes ; so that they approach to a certain distance within the so- lidungula ; nevertheless they retain the faculty of bending the toes to accommodate the foot to the form of different objects with more or less facility. The absence of this faculty characterises the hoofed ani- mals, which use their feet simply as organs of support. They have no clavicles, and their fore-arm remains continually in a state of pronation; and, since they are obliged to graze upon herbage from the begin- ning of their lives, they must exhibit fewer varia- tions in form and adaptation than we meet with among the tribes of unguiculated beasts.

ORDER XII. — PACHYDERMATA.

The pachydermata have five toes to each foot, quite complete in the skeleton, but they are generally encrusted in callous skin which sur- rounds the foot, so that they do not appear with- out, and the horny substance of the nails is increased, and, as it were, molten into a hoof. The canine and incisors, strictly speaking, are wanting, but in the place of incisors are seated those weapons which

rise out of the mouth and often assume an enor- mous length. The size necessary for the alveola; renders the upper jaw so high, and so much abbre- viates the bone of the nose, that the nostrils are found in the skeleton towards the upper part of the face ; but, in the living animal, they are prolonged into a cylindrical tube, which is composed of many thousand small muscles diversely interlaced, move- able in its whole length, endowed with an ex- quisite sense of feeling, and terminated by an ap- pendage in shape like a finger. The trunk lends to the elephant nearly as much address as the use of a hand, and serves to pump up its beverage, and convey it to the mouth. To countervail the preponderance of a head large enough to sup- port this admirable instrument, the cranium con- tains several large voids ; the lower jaw has no nerves at all ; the intestines are very voluminous ; the stomach simple ; ccecum of an enormous magni- tude ; teats generally two, placed upon the breasts.

Gen. 1. Elephas. See ELEPHAS.

Gen. 2. Hippopotamus. — Have the four toes nearly equal and terminated by hoofs> ; grinders six in each respective situation, of which the three ante- rior are of a conical shape, but the three posterio/ are rough, with two pairs of points, and assume, bv being worn down, the form of a quatrefoil or true- love's knot ; four incisors in each jaw ; upper short, conical, and recurved ; rower long, cylindrical pointed, and bent down outwards. One canine tooth on each side ; turn upon one another like a hinge ; upper one straighter ; lower very thick and recurved, worn by rubbing one against the other.

Gen. 3. Sus. — Dentibus caninis exertis. Each foot has the mean toes large and armed with strong hoofs ; the lateral toes much shorter and scarcely reaching to the ground ; incisors variable, lower ones bent down ; canine teeth becoming tusks ; snout truncated and proper for burrowing.

S. scrofa.

Gen. 4. Babyrussa. — Caninis inspiram retortis.

Gen. 5. Phaco-chterus of Frederic Cuvier. — Ca- pite utrinque panno instructo carnis. Grinders composed of cylinders jointed by a cortical sub- stance, nearly like the transverse plates of the ele- phant, and disposed lengthwise. Cranium is re- markably large; tusks round, directed forwards and of a frightful magnitude. -On each side or the jaws there is a large fleshy tube which renders their figure more hideous ; two incisors above and six below.

S. Africanus of Gmelin.

S. .flLthiopicus.

Gen. 6. Dicotyles of Cuvier.— Dentibus catiinis non exertis. Peccary. The peccary has the incisors and grinders nearly like those of the hogs, but the canine teeth do not, as in ordinary cases, sprii g. Hind feet destitute of the outer toe; tail deficient. Upon the loins there is a glandular opening, whence issues a fetid humor. The bones of the metatarsus and the metacarpus are cemented together with tl;c bones of the great toes, into a sort of canon bone, as in the ruminantia; they have also, like them, a stomach divided into several pouches, by which they claim a very near relationship. The enlargements of the aorta observed in this animal are too regular to leave us room to suppose that the animal suffered aneurism. D. torquatus.

The common pachydermata, which have the too bifurcated, comprise two

genera, very simila

grinders in each side ; seven above, with an even crown, not diversified with lineaments ; seven be- low, with a double crossing, except the last, which has a trefoil.

Gen. 7. Rhinoceros. — This genus varies also in this respect; foot divided into three toes; the bone of the nose is very thick, and in shape of a vault, being a solid bone of a fibrous texture adhering to the skin, as if it were composed of hairs congluti- nated together. Disposition fierce and stupid ; affects swampy places ; simple stomach ; intestines very long ; ccecum very large.

Rhinoceros Indicus.

R. Africanus.

Gen. 8. Hyrax, Her. — Pedibus anterioribus cum quatuor digitis. Damans. The hyrax was, during a long time, associated with the rodentia, on account of its small size; but if we examine it closely we shall find that it is in some measure a rhinoceros in miniature, having precisely the same grinders ; but the upper jaw has two strong recurved incisors, and in youth two very small canine teeth ; the lower jaw has four incisive teeth, but no canine ; fore feet with four toes ; hind ones with only three ; all of them with a kind of hoof, and round, except the inner part, which is armed with a crooked nail of an oblique direction ; snout short ; ears short, and covered with hair ; a tubercle instead of a tail ; stomach divided into two pouches, besides a large ccecum, and several dilatations in the colon ; towards the middle of these are two appendages like the coecal of birds.

Gen. 9. Tapir. — Rostro protenso. The tapir has twenty-seven grinders, which prior to trituration present transverse and rectilineal risings ; jaw, six incisors, and two canine teeth, which are separated from the grinders by a void space ; nose in form of a small tube. .

ORDER. XIII. — SOLIDUNGULA.

The solipedes are quadrupeds which have but one toe apparent, bound up in a hoof; they bear upon each side of the metatarsus and upon the metacarpus two stylets. These represent the lateral toes.

Gen. Equut.

Equus caballus.

E. hemonius; F. Dzigglai. Intermediate in point of size between the horse and the ass.

E. asinu

E. zebra.

E. quaccha.

ORDER. XIV. — RUMININTIA. This order is perhaps the most natural and best determined of the class ; for the animals pertaining to it have the mien of being almost all of them con- structed upon the same model, and the camels alone present some exceptions to a common character. The first of the characteristics which deserve to be mentioned is that of having the incisors only in the lower jaw, generally seven in number; they are replaced above by warty prominences; between the incisors and the grinders there is a void space wherein we only find in some genera one or two canine teeth ; the molar teeth are generally si in each respective situationˆ marked with two double crossings, of which the convexity is turned within in the upper, and without in the lower jaw. The four feet are terminated by two toes and two hoofs, which turn a ftat face to each other in such wise that in a state of repose they seem but one hoof cloven in the middle, whence it has come to pass*

that these have been called cloven footed. Behind the hoof there are sometimes found two small spurs as vestiges of lateral toes ; the bones of the meta- carpus and the metatarsus are as it were molten to- gether, and bear the name of canon bones, See. The term ruminantia implies a remarkable attribute which these animals possess of chewing their ali- ment a second time, which for this purpose re- mounts up into the mouth after the tirst deglutition : a property depending upon the structure of their stomachs, which are always four in number, whereof the first three are disposed in such a man- ner that the food may, at the pleasure of the ani- mal, enter into any one of the three from the oesophagus, which ends at the point of communi- cation. The first, or largest, is named the rumen or paunch ; it receives in abundance the herbs rudely masticated at the cropping, which pass thence into the second, called the reticulum, of which the walls, by numerous intersections of small plaits, exhibit a resemblance to the cells of bees. This stomach is rery small and of a globular shape ; it seizes the herbs, and subacts and compresses them into little balls ready for a subsequent chewing. During this operation the animal continues in a state of quietude, after which the reduced aliment passes into the third stomach, named omasum (French feuillet), because the foldings in its walls are like

the leaves of a book ; thence it passes into a fourth, denominated from its relation abomasum. and by the French callette, the sides of which pre- sent only wrinkles, and it is analogous to the sto- machs of other animals. The paunch does not fully unfold itself till after lactescence is over, and the young has begun to be sustained by the green herb- age. The intestinal canal of the ruminantia is very long and somewhat inflated in the long intestines ; the ccecum is very long and very thin ; the fat hardens in cooling like that of other animals, and by melting becomes what is called suet or adipose matter. Udder between the thighs. The ruminantia are of all animals those from which man derives the greatest care, and from which he draws almost all the food upon which he feeds.

Division I. — SINE CORNIBUS.

Gen. 1. Came/w.— Digitis quasi consutis, verru- cis substratis. The camels approach nearer to the preceding order than the rest of their kindred ; for they have not only canine teeth, but also two planted in the os-incisivum ; the lower incisors are six in number; molar teeth from five to twenty : attributes which they among the mammalia alone possess. They have the scaphoid and cuboid bones separate. Instead of the large flattened hoof on the side externally, which covers the lower part of each toe, and determines the figure of the bifur- cation, there is one small one adhering fast to the phalangial bone, and of a symmetrical form, with the hoofs of the pachydennata. Their lip is cloven and puffed up ; the nose long ; the orbits promi- nent. The risings of the back, and the unpleasing disproportion of the legs and feet, while the hind ones are in some measure deformed, render them unsightly ; but the extreme gentleness of the dis- position, and the facility witli which they travel many days without drink, render them exceedingly useful. This faculty of sustaining life without re- cruiting the stock of refreshment is dependent upon a large mass of cells that overspread the sides of the paunch, which retain the water in a state of purity, to minister a constant supply of moisture

according to the wants of the animal ; the other rummantia have nothing similar. The camel is retromingent, as the male organ of generation is directed behind, which renders coition difficult, but it is somewhat assisted by the recumbent posi- tion of the other sex. In rutting season a humor is secreted from the head. The particular character fcr immediate discrimination consists in having two toes united underneath almost by a common seam, and the feet charged with warts.

Gen. 2. Auchenia of Iliger. — Digitis solutis, nullis verrucis. The lamas have the two toes se- parate, and are destitute of the warts.

Guanaco ; camelus llama of Linne. An indi- vidual of this species may now be seen in the gardens of the Zoological Society.

Paca, or vigugna; camelus vicunna of Linne.

Gen. 3. Moschus of Linne. — Dentibus caninis exertis. The musk deer are by far less anomalous than the camels, and do not differ from the other ruminants, save in the want of horns, and in the long canine teeth in the upper jaw, which spring from the mouth of the male, and ultimately become very long ; in the skeleton we find a fibula, which does not exist in the camels.

Moschus moschiferus.

Division II. — CUM CORNIBUS SOLIDIS.

All the rest of the ruminantia have, at least in the males, two horns, that is to say, two prominences, more or less long, emanating from the frontal bones, which does not take place in any of the other families. In some of them these prominences are covered with an encasing of an elastic substance, composed of agglutinated hairs, which continue to increase during the whole life of the animal ; to this we give the name of horn (a word of very ancient extraction, and which has a very numerous kindred — Pp? wpag, corau, Fr. corne, Spanish cuerno, Italian corno, German corn, Hindostanee qurn), and it is sometimes called a hollow horn ; of this kind are the horns of oxen, sheep, goats, and antelopes. In others these pro- minences have a clothing of skin, which is conti- nuous with that of the head, and which is never destroyed ; lastly, in the genus cervus, the promi- nences are covered during some time with skin like the rest of the head, and have at the base a ring of bony tubercles, which, upon enlarging, com- press and close the nourishing vessels of the skin. It becomes dry, and is raised ; the bony prominence is laid bare and separated from it at the end of a. certain interval of time, from the cra- nium to which it was held ; it falls, and the animal remains a time without horns; but they are forthwith replaced by the rudiments of new ones, which, in an ascending series, surpass in size and development their predecessors, and are destined to undergo the same revolutions. Horns completely bony, and subject to these periodical changes, are called wooden or timbered horns by the French ; and with great propriety, for there is a wonderful analogy between their mode of growth and reproduction and that of the vegetable part of creation, particularly in the expansion, falling off, and reappearance of the foliage in trees : indeed this may be considered as the point of contact*

where the cycles of animal and vegetable demonstrations mutually touch.

Gen. 1. Ceruus. — The deer stands in front of those ruminantia which have timbered horns, but we except one species, the rein-deer. The females are always deprived of this peculiarity. The sub-

stance of this timber or wood, when it has acquired its full development, becomes a very dense and compact substance, without either pores or sinuses ; its figure varies according to the species, and always according to the age of the animal.

Cervus axis.

C. alces.

C. elephas.

C. tarandus.

C. Canadensis, or strongylocercs.

C. virginalis.

Gen. 2. Canielopardalis. — The giraffes have for their chief characteristic the horns quite covered by the incasing of skin in both sexes, which never fails, though these creatures are more remarkable by the disproportioned length of their neck and fore legs, and large tubercles upon the chanfrein.

Division III. — CUM CORMBUS CAVIS.

The ruminantia ‘ with hollow horns’ are more numerous than the rest, and we have been obliged to divide them into genera by characters of less importance derived from the form of their horns, and from the proportions of their different parts. M. Geoffroy has pointed out with success the importance of ever attending to the substance or shell of these frontal prominences.

[Sect. I. — ANTHOLOPHI.

Comibus concavis sursum versis. We have ven- tured to restore this word to its original purity ; for it must be deemed the excess of modesty to suffer a term of such barbarous construction as antelope to deform our nomenclature. The antho- lophi liave the substance of the bony shell solid and without pores or sinuses, as in the timbered horns of the deer. They resemble the deer in other re- spects by their lachrymatories, by the lightness of their scale, and the fleetness of their course. This is a numerous

*group, and may be divided into ge- nera after the form of their horns. Horns ringed, of a double curvature, pointed before, and directed upwards. **

La Corinna, A. corinna.

Kevel, A. kuella of Gmelin.

Gazelle, A. doras.

Sect. II.— PECORA.

Animals of this subdivision have the shell of their horns bony, occupied in a great measure by cells which communicate with the frontal sinuses Divided into families according to the direction 01" the horns.

CAPRJE. — Cornibus compressis, scabris. The goats have horns directed upwards and backwards, and generally a beard upon the chin ; chanfrein concave.

OVES. — Cornibus retrorsum versis, rugosis. The sheep have the horns directed backwards, and re- turning more or less in a spiral direction ; chanfrein generally convex ; no beard upon the chin. The simple bearing and direction of the horns may perhaps seem too slight a mark for generic division ; but yet the natural habitudes of these two families demand that we should select external notes to assist the eye in associating certain peculiarities of form with certain peculiarities of disposition.

BOVES. — Cornibus concavis, antrorsum versis, lu- natis, laevibus. The ox has his horns directed side- ways and returning upwards and forwards in a crossing position; generally abroad muzzle; ihick and firm built stature, and sturdy legs.

Gen. 1. Taunts. — Cornibus teretibus, extror sum curvatis ; horns tapering, curved outwards

Gen. 2. Zebu. — A large p-otuberance upon the xnoulders.

Gen. 3. Arnee. — Cornibus erectis lunatis supra planiusculis rugosis; horns upright, flattish, and wrinkled above.

Gen. 4. Bubdus. — Cornibus resupinis intortis an- tice planis; horns lying backwards, turning up- wards, flat on the forepart.

Gen. 5. Moschatus. — Cornibus (maris) approxi- matis, basi latissimis ; horns of the male approxi- mated at the base.

Gen. 6. Yak.— Caud& undique jubata ; tail vil- lose, and like that of a horse.

ORDER XV. — CETACEA.

The cetacea are mammiferous, with feet behind, and a trunk prolonged into a tail, thick and termi- nating in a horizontal tail of cartilaginous consist- ence ; the head is joined to the trunk by a neck, but so short and straight that we cannot perceive any di- minution ; it is composed of cervical vertebrae, very thin, and partly cemented together. The anterior extremities have the bones concurrent, flattened, and unfolded into a tendinous membrane or web, which is reduced to the nature of true fins. The cetacea possess almost all the generalities of exter- nal form which the rest of the finny tribe present, except the vertical tail. They respire air by means of lungs, though destined to spend their life in the water, and are therefore obliged from time to time to ascend to the surface to inhale the principle of oxygenation ; their blood is warm ; ears open out- wa'rds, though by small orifices ; but the residue of their anatomical detail corresponds to that of other fishes. The brain is large, and has its hemispheres well developed ; the sensorium, and that part of the cra- nium which contains the internal ear, are separated from the rest of the head, and adhere to it only by means of some ligaments. There is no exter- nal ear, nor any hair upon the body. The horizontal position of their tail obliges them in swimming to urge themselves along by the reaction of an im- pulse given in a vertical direction, that is, by moving that instrument of progression upwards and downwards. In this we discern an obvious and important difference between this order of mammalia and the class of fishes which swim by moving the tail right and left, or in the plane of their course. In this disposition of the tail nature seems to have consulted their wants by giving them a form adapted for rising out of the water with ease, which the frequent occasion of breathing renders necessary. Among the cetacea we shall insert those animals which have long been confounded with the walrus.

Family 1. CETACEA HERBIVORA.

The teeth of this family are crowned with plates, which determines their kind of life. Their mode of living engages them to come ashore oftimes to feed upon the seaweed and other vegetable reject- amenta of the sea. They have the paps seated upon the breast, and some hairs for whiskers : two circumstances which, at a distance, when they rise vertically out of the water, give them a certain re- semblance to a female of cur own species,

and was probably the first origin of the imagination of mer- maids, and other sea-mousters of human configura- tion.

Gen. 1. Manatus. — Cuvier. Deiitibus incisivis ocyus excidentibus. Body long, terminating in a fin of an oval elongated form ; grinders seven, in- side above and below, square, crowned, and marked with two transverse risings ; no incisive or canine teeth in the full grown animal, but in the young one we meet with a pair of very small pointed teeth in the intermaxillary bone, which soon disappear. We can discern the vestiges of small nails upon the margins of their fins, which assist them in creeping, and help them to carry their little ones : this has occasioned these organs to be compared to hands ; whence the name of manatus, handed, which by corruption has be- come lamantin. Their stomach is divided into long pouches ; ccecum also parted into three branches ; colon inflated : all of them characters belonging to herbivorous animals.

Trichecus manatus of Linne. Sea-calf.

Gen. 2. Halicore of lliger. — They have each of the grinders composed of two cones placed side by side; the teeth, which are implanted in the in- termaxillary bone, are permanent, increase, and become defensive weapons, but are in a great measure covered by the lips, which are fleshy, and clothed with mustachios ; body elongated ; tail terminating in a fin in shape like a cross.

Gen. 3. Rytina of lliger ; pvTivr) (ultimately from pww), to be curled into waves or wrinkles like running water. — This genus appears to have on each side but a single grinder, which is flat and rough, with plates of enamel; the fins have not the small nails which are observed in tho lamantins. Ac- cording to lliger, who first described this fish, the stomach is small.

Family 2. CETACEA CARNIVORA.

This family is distinguished from the last by a singular apparatus, which has gained for them thr name of blowers. Since, in swallowing their prey a large volume of water must necessarily enter the narrow throat, some means for parting with it be- comes indispensable, which is accordingly effected by the mediation of a particular disposition of the palate, and the water is amassed in a sac placed at the orifice of the cavity of the nose, whence it is driven with great violence by the compression of very powerful muscles, through a very narrow opening in the summit of the head, and produces a jet of water, the noise of which in a calm night resembles the hissing ignition of a sky-rocket, and may be heard at a great distance by the sailors. The nos- trils, being without intermission crossed by the waves

of sea-water, could not be very subtile in the discernment of odors were the pituitary mem- brane very delicate ; but they have none of the prominent parts so conspicuous in other animals, and the olfactory nerves are very small, and there- fore, if they do enjoy the sense of smell at all, it must be very imperfectly.

Their larynx is in form of a pyramid, and com- municates posteriorly with .the nostrils to receive the air, and communicate it to the lungs ; without this contrivance the animal would be obliged to lift its head and throat out of the watei every time it had occasion to respire ; hence we see that these fistulae, as they have been called, answer chiefly the purpose of respiration, whereas in othor animals of this class the corresponding organs are destined by their formation to fulfil the special office of smelling,

and only conduct the breath as a sort of accessory to the mouth ; we do amiss, therefore, to call these apertures after another name, since analogy reclaims against it, and the student of natural history is led to suppose that the organs are of a different kind, and not of the same kind with a different organisa- tion. Besides this is contrary to the more recent practice, which chooses tc consider the absence of any part as occasioned by its coalescence with a neighbouring portion, and the presence of a super- numerary part as the extraordinary development of some other, so that in the same class the totality of members may be preserved as much as possible. The animals of this family are destitute of those prominent plates in the glottis which the creatures endowed with a voice possess : any audible utter- ance produced from the throat must be merely groans. There is no vestige of hair, and the whole body is covered with a smooth skin, under which lies a thick layer of fat, very abundant in oil. Teats near the anus; fins incapable of laying hold of any thing. Their stomach has five and sometimes nearly seven distinct pouches, and instead of a single spleen they have many small globular ones. Those, which are possessed of teeth have them all conical, and similar to one another : they do not chew the food, but swallow it greedily. Two small bones suspended in the flesh near the anus are the only vestiges of posterior extremities that remain. Some of them have upon their backs a vertical fin of a tendinous structure, but it is unsupported by bones ; their eyes are flat before ; sclerotica thick, and solid ; tongue has only thin and soft liga- ments.

Subdivision \, Capite concinno.

Delphini of Linne. Head of ordinary propor- tions. Teeth in both jaws are simple, and almost always conical ; disposition most carnivorous in the ratio that it is provided with weapons.

Gen. 1. Delpfiis of Cuvier. Delphini cum ros- tro producto. Mouth so much thicker than the rest that the head assumes the appearance of a sort of beak or rostrum.

I), delphis of Linne.

T). restrains.

D. tursio bomnaterre of Le Souffler.

Gen. 2. Phocana of Cuvier. — Delphini rostro haud insignes. Without the rostrum, the mouth being of a uniform enlargement.

D. phocsena.

1). orca or gladiator grampus.

Gen. 3. Delphimaptera of Lacepide. — Delphini pinnam super dorso non habentes. Differ from the last solely in the want of a dorsal fin.

D. leucas of Gmelin. Albicanus Fabricius.

Gen. 4. Hi/peroodons. — Delphini in maxilla in- feriore duo aut nullis dentibus. The hyperoodontes have the snout and body conformable to the del- phines ; but they have only two small teeth in their lower jaw, which do not always appear Palate rough, with small tubercles.

H. edentulus. Two-toothed dolphin of Hunter.

Gen. 5. Monodon. — Delphini pro dentibus en- cisivis cornu porrecto. The monodon has no teeth properly so called, but have the want of cutting teeth supplied by a long, straight end, pointed, im- planted in the intermaxi'lary bone, and parallel to the direction of the body The shape of the body in other respects resembles the phocacnas.

Monodon monoceros, VOL. XXII.

Subdivision 2. Capite mgente.

Head so largo that it equals one-third or even ono- half of the length of the body ; but the skull and the brain do not participate in this vast dispropor- tion, which has the appearance of being occasioned by an enormous development of the face.

Gen. 1. Physeter. — Dentibus infra. Very volu minous, and excessively turgid before ; upper jaw nearly or quite destitute of teeth, and without car- tilaginous lappets ; lower jaw narrow and length- ened, fitting a furrow in

the upper one, and is fur- nished on each side with a row of cylindrical teeth, which terminate in a conical point, and enter into corresponding cavities in the upper jaw when the mouth is shut. The upper jaw of this enormous head consists almost entirely of large cavities, curved and separated by cartilages, filled with oil. which hardens upon being cooled, and is known in commerce by the chimerical name of spermaceti the body is not so abundantly furnished with fat. These cavities are very different from a true cranium, which is placed under the hind part, and contains the brain as usual. It appears that these cavities are filled with this adepocire, which is dis, tributed over many parts of the body, and commu- nicate with the cavities, which make up the mass of the head, and are also interwoven with the fat which lies under the skin. The odorous substance known by trie name of ambergris appears to be a concretion found in the intestines of the cachalot, which in certain states of disease, it would seem, is found in the ccecum. Physeter is derived from 0uw, which once withput doubt signified to breathe, giving rise to Qvaaw by an epenthesis of the syllable aa, meaning to blow. Cachalot, with a dorsal fin. We distinguish among them two species, merops and tursio, according to the nature of their teeth — straightened or bent, snarp or obtuse.

Gen. 2. Baltena, formed from /3a\w, obsolete of /SaXXai, in allusion to the jetting of the water from their nostrils. — Equal to the cachalots in point of dimensions, and in the proportionate magnitude of the head, though they are not so embulked before, but they are destitute of teeth. Upper jaw in shape of a keel or roof inverted ; on both sides it is fur- nished with numerous plates, fine and thick set, called by the French fanons or dewlaps, composed of a kind of fibrous bone, hackled at the end, which serves for retaining the small animals upon which the enormous creature feeds ; lower jaw supported by bony branches, arched within and above, with- out any broad fleshy tongue, very thick, and en- velopes, when the mouth is shut, all the inside of the upper jaw, and the bony palate by which it is embraced. This kind of organisation does not allow the whales to nourish themselves with animals so large as their size might seem to demand. They live upon small fish, frequently upon worms, upon zoophytes, and it is said by the whale fishermen that they catch the smallest worms by intercepting them in the filaments of the palatial developments.

B. mysticetus.

B. glacialis of Klein.

Gen. 3. Baltenoptera. — Ventri lunato. One dorsal fin upon the back, and a crescent-shaped belly.

B. physalis.

Gen. 4. Btrlanoptera. — Cute juguli pectorisque in plicas lecta. Skin of the throat and chest folded into longitudinal very deep ridges or pfaits, and capable of great dilatation.

B. boops.

3C

ZOOLOGY.

CLASS II.— AVES.

Though the three classes of vertebral ovipa- rous animals differ greatly among themselves in the quantity of respiration, and in circumstances relating to it ; namely, in the vigor of their move- ments, and in the energy of their senses, yet they exhibit some common characters, when we survey them in counterview with some of the vertebral viviparous animals, as will better appear when we come to consider the nature and arrangement of such creatures as the frog, the lizard, &c. Their brain has the hemispheres very thin and not united by means of a callous body ; the nates assume a very considerable development, and are hollowed by one ventricle, and are not covered by the hemispheres, but are visible underneath ; or at the sides of the brain ; the crura of the cerebellum do not form that protuberance called pons varolii ; the nostrils less complicated ; the ear nearly with- out bones in some birds, and entirely without in others ; the helix when it does exist is much more simple. The lower jaw is always composed of very numerous pieces, and is attached to the upper by a single concave facet upon a prominent por- ti.m, which belongs to the temporal bone. The bones of the cranium are more subdivided, and remain a longer time before they coalesce; although Jhey occupy the same places and fulfil the same offices; the frontal bone is of five or six pieces. 'The orbits are separated from one another only by « long plate of the sphenoid, or by a membrane. When these creatures have the anterior extremities slender, the clavicles are united, and the shoulder blade is fastened to the sternum by the coracoid apophysis, and very much prolonged and dilated. They have no epiglottis upon the very simple larynx ; the lungs are not separated from the ab- domen by a complete diaphragm. But, in order to have a full comprehension of their several rela- tions, we must enter more minutely into their ana- tomical details, which would be incompatible with the prescribed length of this article ; but let it suffice to remark that the analogy of oviparous vertebral animals between their genera is constructed upon a wider plan than that which obtains among the mammalia.

Oviparous generation essentially consists in the circumstance that the young one is not fastened by means of a placenta to the sides of the uterus or oviduct ; but remains some time separated from it by an external covering. Its nourishment, which is called the vitellus, is prepared before hand, and is contained in a sac derived from the intestinal canal, and to which the embryo is for some time as a kind of appendage almost imperceptible at first, but is afterwards augmented by absorbing the liquor of the yolk. Those oviparous animals which respire by lungs have for the most part in the egg a membrane, very richly charged with blood vessels, which appears to minister in respiration, and is connected with the bladder, and represents the allantoid in mcmmiferous animals. This has not been discovered in fish nor in frogs, which in their first stage of separate existence respire by means of gills. Many of the oviparous among cold-blooded animals do not part with their youn^ immediately after the latter are disunited from the investing shell or mem- brane, which parted them from their mother : these have been termed false viviparous.

A summary of Ihe chief cliaracttrs af the second' class of vfrtcltral animals. — This cl;»ss comprises vertebral oviparous animals with a double respiration and double circulation, and an organisation fitted for soaring aloft in the air. Their lungs are divided, fixed to the sides, and are enveloped in a membrane perforated with many holes; which permit the air to pass into numerous cavities in the breast, the lower belly, the arm pits, and also into the bones ; so that the outward fluid not only bathes the pulmonary vessels, but also an infinitude of vessels in every part of the body. Thus birds respire in some measure by the branches of the aorta, as well as by the pulmonary artery ; for by respi- ration we understand the commingling of the air and the blood, when the latter is in a state of cir- culation. Thence we observe that, since the energy of irritability is proportioned to the quantity of respiration, the whole of their body is disposed to draw a part of it.

The abdominal basin is very much extended backwards in length, in order to furnish attach- ment for the muscles, which support the trunk upon the thighs ; there is also a set of muscles rising from the pelvis, and passing over the knee and heel; so that the simple foot of the bird binds the toes : this is what renders them able to sleep perched upon the foot. The ischia and the pelvis are prolonged and separated, so as to leave room for the passage of the eggs.

The sternum, which affords to the muscles that depress the wing and bring it down in smart strokes upon the air an attachment of very great extent, which is farther augmented by a prominent plate in the medium line, is composed of five pieces, the mean of which is a rising plate, two lateral anterior for attaching the sides, and two posterior: the greater or less degree

of firmness in these parts de- notes the greater or less degree ofvigor in the bird.

The fork produced by the union of two clavi- cles, and the two strong arches formed by the cara- coid process, separate the shoulders; the wing is supported by the humerus. forearm, and the hand, which is elongated, and presents one finger and the vestiges of two others. Tail bony and very short, but it bears a rank of strong feathers, which in spreading contribute to support the bird ; the number is commonly twelve, sometimes fourteen, and in the gallinaceous fowls they are increased to sixteen.

The legs possess a femur, a tibia, and a fibula which is fastened to the femur by a particular arti- culation, so that intension is maintained with- out effort of the part ; the tarsus and metatarsus consist of a single bone, which is terminated below by three pulleys. They have generally three toes before, and the great toe behind, but the latter is sometimes wanting ; it is directed before in the martinets. Jn the climbers, on the contrary, the outer toe and the thumb are directed behind. The number of articulations increases at each toe, com- mencing at the thumb, which has two phalangia. bones, and the last two five.

The eye of birds is disposed in such a mannei as to be able to distinguish distant and near ob- jects with equal precision ; a membrane vascular and folded, which is sent from the bottom of the globe at the further part of the crystalline lens, contributes probably towards the shifting of the lens. The anterior face of the globe is in other

icspects sunk in a circle of long pieces ; and, be- sides the two ordinary eye-lashes, there is always a third placed at the corner of the eye, which by means of a muscular apparatus of remarkable con- trivance is drawn before tlie eye-ball, like a curtain. The cornea is convex, but the crystalline is flat, and the vitreous humor small. The ear of birds is nothing save a meatus between the tympanum and the fenestra ovalis ; the helix is a cone some- what arched, but the semicircular canals are very large and lodged iu airy cavities, which commu- nicate with the shoulder : the birds of night have a large external ear as in quadrupeds; this opening is generally covered with feathers of finer texture than the rest.

The organ of smell, concealed in the base of the beak, is commonly of cartilaginous horns without any complication, and is very sensible. There are not the hollow sinuses in the thick part of the cra- nium ; the size of the

nostrils determines the size of the bill.

The tongue is somewhat of a muscular sub- stance, and is supported by a production of the os hyoides, and is rather delicate in a great many birds.

The brain of birds has the same general cha- racter which is possessed by the vertebral ovipa- rous animals, but is distinguished by proportional size and consideration, which sometimes surpasses the same organ in mammiferous animals; it is principally of tubercles, conformable to the canals on which depends its volume, not on the Hemis- pheres which are very thin and without circumvo- lutions ; the cerebellum is very large, and nearly without lateral lobes, and almost completely formed by vermiform appendages. The trachea of birds has its rings entire, and its glottis is in form of a bifurcation, very often provided with muscles, and may be called an inferior larynx : it is this which forms the voice of birds. The enormous quantity of air which is contained in aerial sacs contributes to the force of this voice.

Of all the classes of animals that of birds is the best distinguished, and that of which the species bear the greatest similitude to one another, and •which is separated from the rest of the animal creation by the broadest line of demarcation ; this is what renders their subdivision so extremely dif- ficult, and liable to so many variations according to different aspects under which they are viewed. Their distribution is founded, as among the mammiferous class, upon the relative structure of the organs of manducation, or the bill, and upon the instruments of prehension or the feet, or sum- marily in distributing them we consider the nature of the bill and feet. As this subject has already been contemplated, . in the article ORNITHOLOGY, we shall forbear to expatiate upon particulars already considered ; and, for the purpose of ex- hibiting the relative bearings of this department, we shall pursue the tenor of our arrangement through the series of orders, delaying the tide of our discus- sion wherever the exigencies of this work may seem to require it.

ORDER 1. — ACCFPITRES.

This order is analogous to that of the carnivora among the mammalia, that is, it bears the same ratio to the other orders of birds that the carnivorous orders of quadrupeds bear to the rest. The mus-

force ; their tarsi are seldom elongated ; all of theia have four toes ; the nail of the great toe, and that of the inner toe, are very strong. They compose two divisions, the diurni and the noctunii.

Division I. — DIURNI.— Acie in obliquum.

The diurni have the line of vision in a lateral direction ; a membrane called a cere covers the base of the bill, in which the nostrils are bored ; three toes before, one behind, without feathers, the two external almost always united at their base by a small membrane; the plumage compact; the feathers strong; the flight lofty and towering; their stomach almost entirely membranous; their intes- tines of very little extension ; their ccecum very short; sternum broad and completely ossified in order to give the muscles of the wing a plane of attachment of greater amplitude ; their forked bone (fourchette) is wide, the better to afford re- sistance to the violent beatings of the humerus wnich a rapid flight requires.

Family 1. VULTURES.— Capite sive collo nudo.

The vultures have the eyes even with the head ; the tarsi reticulated, that is to say, invested with small scales ; the beak lengthened ; recurved only at the tip ; and a part more or less considerable of the head and neck bare of feathers.

Gen. 1. Vultur. — Capite nudo.

Gen. 2. Grypaetus of Storr.— Phene. Savigny capite plumis obducto. Beak very strong, straight, hooked at the tip, swelled upon the hook; the nostrils are covered with stiff hairs, directed for- wards ; there is a pencil of similar hairs under the beak ; their tarsi are very strong and feathered to the toes, and are obviously distinguished from the vultures proper by having the head covered with feathers.

Vultur barbatus and faico barbatus of Gmelin.

Family 2. FALCONES. — Oculis cavis.

The birds of this numerous genus have the head covered with feathers; their eyebrows form a rising or prominence which makes the eye appear sunkeiij and gives to their physiognomy a character quite different from that of the vultures.

Gen. 1. Faico of Bechstein. — Bill curved from the base, and having a sharp tocth on each side of the point ; the second feather of the wings longer than the rest.

F. communis.

F. subbuteo.

F. rufipes.

F. cesalon.

F. tinnunculus.

Gen. 2. Hierofalco of Cuvier. — This genus ex- hibits all the disposition of the noble falcon as well as the nature of the wing feathers, but their bill has but one feston, like that of the ignoble ; their tail is long and graduated, and greatly surpasses the wings in length, though they be very long; tarsi short and reticulated.

Faico candicans, F. cinereus, and F. sacer, of Gmelin. In forming three species out of one, Gmelin and others were misled by deriving their descriptions at different stages of growth ; many examples of this kind will occur in the course of this part of our article; when, to avoid a repetition, the several synonyms will appear in an immedi- ately consecutive order.

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ZOOLOGY.

Family 3. Aot'iLi. — Volatu imbeciliores. Fourth feather of the wing is almost always the long- est, and the first very short, which effectually abbre- viates the tip of the wing obliquely, and of conse- quence renders the flight more feeble. '

Gen. 1. Aquila. of Brisson. — Tarsi feathered to the root of the toes.

Falco fulrus, melanaetos, niger, mogilnik of Gmelin.

F. chrysaetos.

F. nsevius, maculatus.

Gen. 2. Haluetus of Savigny. — Tarsi clothed with feathers at the upper half, and with demi- escutchions upon the rest of their length.

Falco ossifragus, albicella, albica'udus of Gmelin.

F. leucocephalus of Euler.

Gen. 3. Pandion of Savigny. — Talons round underneath ; whilst in the other birds of prey they are hollowed into a sort of canal ; their tarsi are reticulated, and the second quill feather is the longest.

Falco halcetus.

F. Brasiliensis.

F. aquilinus.

Gen. 4. Haroyia of Cuvier. — Wings short ; tarsi very stout, very strong, reticulated, and partly fea- thered.

Falco harpyia cristatus of Linne. Harpyia im- periclus of Storr.

Gen. 5. Morphia of Cuvier. — These like the pre- ceding have the wings shorter than the tail ; but their tarsi are raised and thin, and their toes feeble.

Falco Guianensis of Daud. ; the small eagle of Guiana of Mend.

F. urubitinga of Linn6.

F. occipitalis.

F. ornatus of Daud. ; superbus et coronatus of Shaw.

Gen.J>. Cymindis of Cuvier, Kv/ur&c- — Beak like the preceding ; tarsi very short, reticulated and half covered with feathers before; wings shorter than the tail ; but the most distinctive character consists in the nostrils being nearly shut like chink.

Falco Cayennensis of Gmelin.

Gen. 7. Astur of Bechstein. — Dsdalion of-Sa- vigny. They have the wings shorter than the tail, like the three preceding genera, but their beak is curved to the base.

Falco palumbarius gallinarius.

F. cachirmans.

Cuvier considers it probable that the F. gryla!co and the F. gentilis may belong to the first species.

Gen. 8. Nistu of Cuvier. — Wings with the same proportions as the preceding genus, but they have the tarsi escutcheoned and more elevated.

Falco nisus.

F. musicus of Daud.

Family 4. MILVI of Bechstein. — Alis longissimis.

The kites have the tarsi short, the toes and talons feeble, which, added to a beak unequally appor- tioned to its size, compose an assemblage of genera Ae most loose of their kind ; but they are distin- piiished by wings excessively long, and by the t>rkpd tail which give to their flight the greatest :apidity and "ease.*

Gen. 1. Haniaof Savigny. — Tarsis curtis. The «lani tiave the tarsi very shoit and demi-fe.uliered above.

1-e lilac of Vaillunt. Africa. About the size of a

common sparrow-hawk, with a soft and iilky plumage; tail somewhat forked; ash-colored above; white beneath ; the lesser wing coverts are black. Common from Egypt to the Caspian.

F. furcatus.

Gen. 2. 3lilvus. — Have the tarsi very strong and escutcheoned.

Falco milvus.

Gen. 3. Pernis of Cuvier. — They have, with the feeble beak of the kite, a remarkable character, that is, the interval between the eye and the bill, which in other falcons is naked, and furnished only with a few hairs, is found in this genus covered with very compact feathers which are cut into scales. Their tarsi are covered with feathers half way down, and reticulated ; they have the rest of the tail equal, the winus long, the beak curved at the base as all those which follow.

Falco apivorus.

F. bondree huppee of Ja

Gen. 4. Buteo of Bechstein. — Wings long, tha tail equal, the bill curved at its base, tarsi feathered nearly to the toes.

Falco pinnatus.

F. buteo.

Gen. 5. Circus of Bechstein. — Tarsi elevated ; a kind of collar about their neck, which is formed by the ends of the feathers which cover their eats.

Falco pygargus.

F. cyaneus, albicerus.

F. rufus.

Gen. 6. Serpentarius of Cuvier. — Gyroperanus of Iliger. Tarsi double the length of any of the pre- ceding, and entirely covered with feathers ; its beak is hooked and cleft ; its eye-lashes prominent ; and all the details of its anatomy place it in its proper rank. The tarsi are escutcheoned ; its toes propor- tionally short ; the circumference of the eye divested of feathers ; it bears a long stiff crest on the occi- put, and the two mean feathers of its wings surpass the rest.

Falco serpentarius.

Division II.— NOCTURNI. — Striges: acie directa.

The owls have, besides other characters drawn from the size of the head, large eyes which are sur- rounded by a circle of ˆhackled feathers; the pupil so large that it allows the sun's rays to dim the eye- sight. Their cranium is thick, but of a light tex- ture, and has large cavities which communicate with the ear and probably augment the sense of hearing. But the apparatus for flying is not very much calculated for effecting an extraordinary force ; the forked bone is incapable of much resist- ance; their feathers have soft vanes covered with delicate down, so that they do not make the least noise in flight. Their gizzard is very muscular, al- though their prey is entirely animal, consisting in mice, small birds, Sec., it is preceded by a large crop. The cceca are long and divided at the bottom. Divided into genera according to their crests or horns, the size of their ears, the extent of the circle of feathers about their eyes, and some other cha- racters.

Gen. 1. Olus of Cuvier. — This genus is composed of owls that have two crests of feathers upon their forehead which they elevate at pleasure. The ear extends from the beak in a semicircular form to the top of the head, and is furnished before with a mem- braneous operculum.

Stnx asiaUphuj t>f Savi-ny ; hibou of Cuvier.

oen. 2. Ulula of Cuvier. — Chouettes. Com- prising species which have the bill and the ear of the otus but not their horns.

Strix liturata of Retzius.

S. nebulosa of Gmelin.

Gen. 3. Strix of Savigny. — Rostro directo. The species of this genus have the ears of the otus, which nre provided with an operculum still more simple, but their bill is elongated and not curved at the point. No horns.

Strix flummea.

Gen. 4. Syrnium of Savigny. — Chato-huans. They have the disk of hackled feathers and the little collar, like the preceding, but the ear is reduced to an oval cavity which does not occupy half of the height of the cranium.

Strix aluco et stridula of Linnet

Gen. 5. Bubo of Cuvier. — Duco. With the ear very small and the disk of feathers less marked than the syrnium, but the horns are present.

Strix bubo.

Gen. 6. Noctua. — They are destitute of the horns and of the sunken and well-defined ear; the open- ing being oval and scarcely inferior in point of size to that of other birds ; the disk of hackled feathers is smaller and less complete than in the bubo ; toes feathered.

Strix nyctea of Linne.

S. passerina, pygmea of Bechstein.

S. passerina of Meyer and Wolf.

S. Cayennensis of Gmelin.

S. torquata of Daudelus.

S. nudipes belongs to a different genus.

Gen. 7. Surniaof Dumeril. — Chouettes eperviers. Noctuae with densely feathered toes and a long graduated tail.

Strix funerea.

S. Hudsonia.

S. uralensis.

S. occipitrina.

All these species are very ill defined.

Gen. 8. Scops of Savigny. — Ears level with the head ; the disks imperfect ; toes naked ; with horns like those of the bubones and otus.

ORDER II. — PASSERES.

The common character of the passeres is purely negative ; for it embraces all those birds which are neither swimmers, waders, climbers, rapacious, nor irallinaceous. Yet, upon comparison, we presently perceive a great resemblance of structure between them ; but such a multitude of particulars enter into the composition of this similitude that it is not practicable to embody it in words so that the terms may be clear and striking. They have not the vio- lence of the birds of prey, nor the determinate diet of the gallinaceous fowls or of the water-fowl. In- sects, fruit, grain, by turns, furnish them with nourishment ; the grain so much more exclusively as their bill is thick ; those which have that instru- ment thin and slender feed on insects, whilst those which have it strong pursue the small birds. Their stomach is in form of a muscular gizzard ; they have in general two very small ccecal appendages. Among these birds we meet with the songsters, and those which have the inferior larynx of the greatest complexity. Their sternum has commonly only one notch on each side of its inferior edge, yet it has two among the rollers ; but it is entirely wanting in the martlets and the trochili. We

shall divide them, in the first place, according to their feet, but in the next we shall have recourse to their bill.

Family 1. LASH. — Rostro utrinque cum sinu.

This family has the bill notched on each side near the tip. Most of the genera pertaining to this family feed on insects, though the greater part of them eat berries and other kinds of fruit occa- sionally.

Group 1.

Gen. 1. Lanius of Linne.. — Bill conical or com- pressed, and more or less hooked at the end. The peculiarity of this genus consists in having the bill triangular at the base and compressed laterally.

L. excubitor.

L. E. minor.

L. collurio rufus et pomeranus of Gmelin ; ru- tilus of Latham ; ruficollis of Shaw.

L. collurio of Gmelin.

Gen. 2. Have the crest of upper mandible straight, and hooked only at the point. They are all foreign birds, and their form passes by insensible degrees to that of the fauvettes with a thin bill.

Lanius Canadensis.

L. collurio melanocephalus.

L. doliatus.

Turdus cirrhatus.

Gen. 3. Have the bill thinned and weakened by degrees, so that it is impossible to distinguish them from the blackbirds.

Lanius olivaceus.

L. barboreus of Gmelin.

L. gutheralis of Daudelus.

Gen. 4. Bill straight and very strong ; lower mandible inflected.

Gen. 5. Vangaof Buffon. — Bill large ; very much compressed throughout ; its point remarkably hooked, and that of the lower mandible recurved upwards.

Lanius curvirostrus of Gmelin.

Gen. 6. Bill straight and thin ; remarkable by their crests of elevated feathers.

Lanius plumatus.

L. pipra albifrons.

Gen. 7. Ocypterus. Bill conical, rounded on every part, without crest, scarcely arched at the tip, with a very fine point; slightly notched on each side. Feet rather short, and the wings as long or longer than the tail, which gives them the same flight as swallows.

Lanius leucorhynchus of Gmelin.

L. viridis.

Gen. 8. Barita of Cuvier. — The name of an un- known bird, importing something relative to weight. The barita has the bill conical, round at its

base, parting the feathers of the forehead by a circular notch; dorsum round, compressed at its sides, with a hooked point, notched laterally.

Coracias varia of Gmelin ; gracula variaof Shaw.

C. tibicen of Latham ; U. tibicen of Shaw.

C. graculina of Whyte.

C. strepera of Latham.

Paradisaea viridis.

Gen 9. Psaris of Cuvier. — Name of an unknown bird, formed from iˆaipw, to shave, expressive of its swimming or swallow-like flight. Bill conical, very large, and round at its base, but not forming a notch in the front of the head. Its tip is slightly compressed and hooked.

Lanius cayanus of Gmelin.

Gen. 10. Graucalus, Greek name of an ash-co- lored bird. Bill less compressed than in the lanius ; its upper mandible is sharp, evenly arched in its whole length ; its commissure is somewhat more arched ; the feathers which sometimes cover their nostrils give them a certain relationship to the crow ; but the notch in their bills separates them widely from that genus. Three or four species of this genus are of an ash-color, which thus far makes good the meaning of the name being formed by a metalepsis from jXavicof.

Corvus papuensis of Omelin.

C. nova of Guinea.

Gen. 11. Bethyllus of Cuvier. — Name of an un- known bird. Bill thick, short, embulked in every part; slightly compressed towards the end.

Lanius ceverianus of Shaw ; picatus of Latham.

Group 2. Tanagrte of Linne".

Bill strong, triangular at its base, slightly arcbed at its ridge, notched towards the end ; wings and flight short ; remarkable for their colors. ML short.

Tanagra violacea.

T. pipra musica. Bill inflated.

T. magna.

T. atra. Bill broader than high.

T. tatao.

T. tricolor.

Motocilla velia of Linne". bill arched, sharp.

T. cristata.

T. negerrima. Bill with prominent tooth on each side.

T. Mississippiensis.

T. vulre. Lower mandible with it$ branches inflated behind.

T. jocapa.

T. Brasilia.

Group 3. Muscicapa of Linn6.

Bill depressed horizontally, furnished with hairs at the base, and its point more or less hooked and notched.

Gen. 1. Tyrunnus of Cuvier. — Bill straight, long, very strong ; upper ridge straight, blunt ; its noint suddenly hooked.

Lanius nilenga of Gmelin.

Gen. 2. Muscipttu of Cuvier. — Bill long, very much depressed ; breadth twice the height even at its base; ridge very obtuse, nevertheless distinct; the edges somewhat in an oval curve; the lip the notch not well marked, with long hairs or whiskers at the base of the bill.

M. aurantia.

Todus macrorhynchus of Latham.

T. platorhynchus.

Gen. 3. Mtmcicapa of Cuvier. — Bill straighter, and the mustachios shorter

than in the muscipeta ; but it is still more depressed, with ridge well marked above ; edges straight, somewhat hooked at the point.

M. grisola of Gmelin.

M. airicapilla. This bird was well known to •he ancients under the names of sycalis (ica.\if, from avKij, a fig), and ficedula (ficus and edo).

*Gen. 4. Gymnocephulus of Geoffrey. — Nearly *rith the bill of the tyrannus, except that the ridge is rather more arched ; and a great portion of UK ir feve ia stripped of its fcatL*

Corvus cabrus of Gmelin. Cayenne. Gen. 5. Cephaloptcra of Geoffrey. — Base of tho bill furnished with elevated feathers, which, spread- ing above, produce a broad tuft in form of a pa- rasol.

C. ornatus of Geoffrey, about the size of a jay. America.

Gen. 6. Gymnodtrus of Geoffroy (yv/woc, bare, and &pa, neck). — Bill somewhat stronger than the ampelis, but the neck is in part naked, and the head is covered with velvet feathers.

Gracula nudicallis ; St. Corvus nudus; gracula fetida of Gmelin.

Gen. 7. Edolius of Cuvier. — Related to the long series of catchflies ; bill depressed, and notched at the end; its upper ridge distinct; distinguished by their mandibles, which are slightly arched their whole length ; nostrils covered with feathers ; they have besides some long hairs, which constitute their whiskers.

Lanius forficatus of Gmelin.

L. Malabaricus. Cuculus Paradisens

L. caerulescens.

Corrus balicapius.

Le dronyalon.

Le drongo bronze.

Gen. 8. Turdus of Linne. — Bill compressed and arched ; but its point is not hooked, and its arches do not produce denticulations so strong as in the shrikes, though the passage from one to another be very gradual.

T. merula of Linne".

T. torquatus.

T. leucurus.

T. saxatilis.

T. cyanus.

T. solitarius.

T. viscivorus. -\

T. pilaris. / Plumage marked with

T. musicus. > small black and while

T. iliacus. 4 spots.

T. polyglottus. J

Paradissea guloris of Latham ; nigra of Gmelin. The singularity and incomparable beauty of its plumage entitled this bird to a place among the birds of Paradise.

Group 4. — Ampelides.

Bill depressed like the catchflies in general, but somewhat shorter in proportion, very wide and slightly arched.

Gen. 1. Piauhau. — Bill strong and sharp ; food insects ; fly in flocks.

Muscicapa rubricollis, common piauhau.

Coracias militeris of Shaw, great piauhau.

Ampelis cinerea.

Gen. 2. Ampelis. — Bill somewhat weaker. Be- sides insects they search after berries and soft fruits.

A. carnifera of Linnt.

A. pempactera of Linne.*

A. cotinga.

Gen. 3. Ceblepyris of Cuvier. — Kf/SXijirwpic, r«/3Xij, in the Macedonian dialect, ahead, Trvptc, from irvp, fire. Distinctive characters consist in th; shafts of the rump feathers being somewhat pro- longed, stiff, and sharp.*

Gen. 4. Bombycivora of Temminck. — Shaft of the secondary quills enlarged at the tio into an ova' disk, which is smooth and red.

Ampelis garrulus of Limi'-.

GUI. ."> . J'rocniu of Holmansegger.

a kind of fig. Bill weaker and more depressed than in the ampelis ; gape reaching as far as the eyes. Hirundo viridis. Ampelis carunculata.

Gen. 6. Pyrrho. Corax of Cuvier. — Bill com- pressed, arched and notched like the turdi, but their nostrils are covered with feathers like the crows, to which they have been usually assigned. Corvus pyrrho, corax of Linne.
Gen. 7. Le sicrins of Vaill. — Distinguished by three shafts without vanes, as long as the body, which it bears upon each side, among the feathers that cover the eye.

Group 5.

Gen. 1 Oriolus of Linne. — Bill like that of the turdi, and is somewhat stronger ; its feet are pro- portionally shorter.

O. galbula of Linne and Gmelin. O. melanocephalus. O. Chinensis. O. golden oriole. O. le coudougnan.

Gen. 2. Myothera. — Recognised by their long legs, and their short tail; live upon insects, princi- pally ants.

Corvus brachyurus.

Turdus cyanurus of Latham and Gmelin. Corvus of Shaw. Bill strong and arched.

Turdus rex of Gmelin. Corvus grallarius

of Shaw.

T. tinnicces, le grand beffroi. BUI straighter, but still more strong. Turdus, calma. T. formicivorus. T. lineatus.

Bill thin and sharpened, tail striated. Turdus, bambla. T. cantans.

Gen. 3. Cinclus of Bechstein. — Bill compressed, straight, mandibles of an equal elevation almost linear, sharpened towards the point, upper one scarcely arched.

Sturnus cinclus of Linne. Turdus cinclus of Latham.

Gen. 4. Philedon. — Bill compressed, slightly arched in its whole length, notched at the end, nostrils large and covered with a cartilaginous scale, tongue terminated by a pencil of hairs. Prominence upon the bill.

Merops, cormiculus. Latham and Shaw. M. monachus. Corvus, paradoxus.

Gen. 5. Gracula of Cuvier. — Martins, a genus related to the turdus; bill compressed, very slightly arched, with a shallow notch on each side; its com- missure forms an angle, as in the starlings. Almost all the feathers of the head are straight ; a naked space ardund the eye : manners of the starlings, and fly like them in large flocks.

Paradisaea heistis of Gmelin. Gracula heistis Latham and Shaw. Gracula gryllivora of Daud. Gen. 6. Mznura of Shaw. — Their magnitude has some relation to the gallinacea, but they manifestly belong to the passeres by their separate toes (ex- cept the first joint of the external and of the mid- dle), by their triangular bill at its base, elongated, somewhat compressed, and notched towards its extremity ; the membranous nostrils are large, and in part covered with feathers like the jays. In the tail of the male we observe three sorts of feathers enter in;,' into its composition, to wit, twelve ordi-

nary very long ones, with hackled and spreading vanes, two more in the middle furnished on one side only with a stiff beard, and two outer ones bent in the form of an S, or like the horns of a lyre ; the internal vanes, which are large and stiff, represent a broad riband ; the external are v»ry short, and do not widen except at the point. New Holland.

Group 6. Pipra: of Linnfc.

Externa pare digitorum invicem junctis. Bill compressed, higher than broad, notched with large nasal fosses ; tail short : they are connected in some respects with the myotherae; distinguished from the other genera of this family by the two outer toes being united almost half their length.

Gen. 1 . Rupicola. — Large, and carry upon theii head a double crest of vertical feathers, disposed like a fan, adult males distinguished by their orange color.

Pipra rupicola.

P. Peruviana.

Gen. 2. Pipra. — Small, and remarkable for the liveliness of their colors.

P. pareola.

P. superba.

P. leucocephala.

P. aureola.

P. serena.

P. guthmalis.

P. leucocapilla.

P. manacus.

Family 2. ROSTRO GRACILI.

A very numerous family, recognised by their straight bill, thin, and similar to an owl; some- times, when it is slightly depressed at the base, they approach to the catchflies ; when it is com- pressed, and its point is recurved a little, they ap- proximate the shrikes with a straight bill.

Gen. 1. Motacilla. — Les traques; saxicola of Bechstein. Bill somewhat depressed, and somewhat broad at the base, thereby related to the last group of catchflies.

M. rubicola.

M. rubetra.

M. oenanthe

Gen. 2. Sylvia of Wolf and Meyer. — Ficedula of Bechstein. Bill little straighter at the base than in the preceding.

M. rubicula.

M. suecica.

M. phatnicurus.

M. Gmelin, erithacus of Gmelin.

Gen. 3. Curruca of Bechstein. — Bill straight, thin throughout, somewhat com pressed before; the upper mandible curved a little towards its point.

M. luscinia.

M. philomela of Bechstein. Found in the east- ern part of Europe, somewhat larger, breast slightly varied with gray shades.

Tardus, arundinaceus of Linne",

M. arundinacea of Gmelin.

M. salicaria of Gmelin.

M. noeria of Allen.

M. schcenobcenus, a variety of the last with a spotted breast.

M. atricapilla of Linne.

M. orphea of Tern.

INI. silvia of Linne".

M. curruca of Linne.

M. passerina of Lath.

M. nisoria of Bechstein.

Gen. 4. Accentor of Bechstein. — Bill thin, but more exactly conical than the rest of the motacillae , edges somewhat torn.

M. alpina.

M. modularis.

Gen. 5. Regulus of Cuvier. — Bill perfectly coni- cal, and very sharp, and when it is viewed from ibove it appears somewhat concave at its edges.

M. regulus of Linne.

M. trochilus of Linne

M. hypolais of Bechstein.

Gen. 6. Troglodytes of Cuvier. — Bill thinner than the last, and slightly arched.

M. troglodytes.

Gen. 7. Motacilla. — Add to a bill still finer than that of the other fauvettes, a long tail, which they move up and down without ceasing ; tall legs ; and wing-coverts which are long enough to cover the wing when folded, which give them a certain relationship to the grallae.

Motacilla cinerea.

M. alba.

Gen. 8. Budytes of Cuvier. — Join to the other characters of the wagtails a nai-1 of the great toe elongated and bowed, which approximates them to the anthus. They frequent the pasture grounds, and chase the insects in flocks.

Motacilla flava.

Gen. 9. Anthus of Bech. — Bill thin and notched.

Pipi. Alauda trivialis et minor of Gmelin ; an- thus arboreus of Bechstein.

Alauda pratensis of Gmelin ; anthus pratensis of Bechstein.

Family 3. ROSTRO INCAPUT PROFUNDISSIME nsso.

A numerous family, but well distinguished from all the rest by its beak, which is short, wide, flattened horizontally, slightly hooked at the tip, without notch; the gape of the mouth is very wide, that they may the more easily swallow the insects which they pursue on the wing.

Group Hirundines.

Comprehends those genera which are remark- able for their compact plumage, the extreme length of their wings, and the celerity of their flight.

Gen. 1. Apus of Cuvier. — Cypselusof Iliger. Of all birds these have the longest wings in comparison with their dimensions; tail forked; feet very short; great toe directed before like the otter; mean and outward toes have each three phalangial bones like the internal.

Hirundo apus of Linno.

11. melia of Linne.

Gen. 2. Hirundo of Cuv. — Feet and the sternon fc ranged as in the g» eater number of the passeres.

Hirundo urbicu.

11. rustica.

II. riparia.

II. esculenta. Le Salangane.

Gen. 3. Caprimulgus. — Bill more cloven than the rest of this family ; furnished with strong whiskers ; n»-triU in form of small tubes; eyes large.

(‘. Kuropaeus.

(‘. Krandis. America. Size of an owl.

< . Virgiuianus.

(‘. (.arolmensis.

C. Jamaicensis.

l ‘. rufus.

I ‘. srmitorq’.iatus.

r’ >»CUtU3.

C. Cayenensis.(Tailforketl’asli?r

r instill) of a relationship to the swal-

v>» uri

C nastoralis) lows> Nai1 of the middle toe (.denticulated.

Family 4. ROSTRO PLERUMQUE FORMA. COM.

Comprehends those genera with a strong bili, more or less conical, and without a notch ; they live exclusively upon grain, so that their bill is of necessity short and thick.

Group 1.

Gen. Alauda. — Distinguished by the nail of their great toe, which is straight, strong, and a good deal longer than the rest ; they are granivorous, scratch the earth in search of food, nidificate upon and confine themselves chiefly to the ground. The far greater number of them have the bill straight, mo- derately large, and pointed.

Alauda arvensis.

A. cristata.

A. arborea, nemorosa. Distinguished from the last by a white streak about

the head. Bill as large as it may be in order to be in accordance with the leading character of this family.

A. calandra. Alauda tatarica, mutabilis, ta- nagra sibirica of Gmelin. Plumage of the full- grown bird is black, waved above with gray. Mistaken for different species, because the younger ones pass through several mutations of plumage before they arrive at their adult condition. Bill elongated, somewhat compressed and arched.

A. Africana. A bird very common in the sandy plains of Africa, from the end of that quarter to the other.

Group 2. Pari of Linne.

Gen. 1. Parus. — Bill fine, short, conical, straight, furnished with small hairs at the b;ise; nostrils concealed underneath the feathers. The peculiar habits of this genus will be recognised by referring to the article PARUS of this work.

Parus major.

P. ater.

P. palustris.

P. ca?ruleus.

P. cristatus.

P. caudatus.

Gen. 2. Les moustaches of Cuvier.— Bend' d titmouse. They differ from the parus in having the upper mandible recurved at its point somewhat over the other.

Parus biarmieus.

Gen. 3. Les Retniz of Cuvier.— They have the bill thinner and more pointed than the parus ; and they employ more skill in the construction of their nests. Since there appears to be a decided dif- ference in their habits, with respect to the fabrica- tion of their nests, it would be desirable to elicit, from some part of their conformation, a charac- teristic of a more accurate limitation than the com- parative acuteness of their bill.

I'arus pendulinus.

Gen. 4. Emberizaot Linne".— Well distinguished by their conical bill,

which is short, straight, and lias the upper mandible narrower than, and lodging within the lower; upon the palate there is a hard prominent tubercle.

Emherizu citrindla.

E. cia.

E. cirlus.

E. schceniclu?.

K. nivalis.

£. miliaria. E. hortulana.

Group 3. Fringilla of Linne".

Bill conical, more or less thick at its base, but its commissure is not angular. They live generally upon grains, and are for the most part voracious and mischievous creatures.

Gen. 1. Ploceus, IT\OKIVG, a weaver. — The size of their bill would entitle them to a place among the cassici, did not the straight commissure of the bill interpose. The major part of the upper man- dible is slightly embulked. The greater number of these birds, which inhabit the old continent, build their nests with great art, and interweave them with the fibres of herbs ; which circumstance has induced Cuvier to call them by a name imply- ing the nature of its texture.

Loxia Phillippina of Linne.

L. socia of Latham.

Oriolus nitjer, oriolus oryzivorus, corvus Suri- namensis of Gmelin.

Oriolus textor of Gmelin.

Fringilla erythrocephala.

Loxia pensilis of Sonn.

Gen. 2. Pyrgita of Cuvier, irvpyiTa, passer. — They have a bill somewhat

shorter than the pre- ceding, conical, and only embulked at the point.

Fringilla domestica.

F. montana.

Gen. 3. Fringilla of Cuvier. — Bill somewhat more arched than in the pyrgita, stronger and of greater length than that of the carduelis. Manners more lively, and their notes more varied than the song of the pyrgita.

Fringilla coelebs.

F. montifringilla.

F. nivalis of Brisson.

Gen. 4. Carduelis of Cuvier. — Bill exactly co- nical, without being embulked at all at the point. They live upon grain.

Fringilla carduelis of Linne.

F. psittacea of Latham.

F. mebba of Edwards.

F. coccinea of Vieill.

Gen. 5. Linaria of Bechot. — Bill exactly conical, but shorter and more obtuse than that of the car- duelis. They feed upon the seeds of herbs and plants.

Fringilla linaria of Linne".

F. cannabina.

F. spinus.

F. citrinella of Linne".

F. serinus.

F. Canaria of,Linne.

Gen. 6. Vidua of Cuvier. — With the bill of the linaria, sometimes a little more enlarged at its base. Diagnostic: Some of their tail-coverts (urooygium) in the males exceedingly elongated.

Emberiza paradisea.

E. longicauda.

We pass from these without any assignable inter- medium to

Group 4. Loxuc. — Rostro maximo. Gen. 1. Coccothraustes, KOKKOG, grain, Opavw, to break. — Bill exactly conical, and only distinguished by its extraordinary size. It might, perhaps, seem unnecessary to remind the reader of those maxims which were laid down in their proper place ; .tamely, that, whenever we speak of relative pro- portions, an analogy is always supposed. In this instance we derive our notion from a comparison

of this bird's bill, as to its actual admeasurement ; if, for example, the length of the bill in this genus be four digits, and its largest diameter three, it will be found that the same parts in none of the other genera will have ratio of so small a majority.

Loxia coccothraustes of Linne".

L. chloris of Linne.

L. petronia of Linne.

Gen. 2. Pitylus of Cuvier. — Bill very large, somewhat compressed, arched above, and has some- times a prominent angle at the middle of the ter- mination of the upper jaw.

Loxia grossa.

L. erytromelas.

L. portoricensis.

Gen. 3. Pyrrhula of Cuvier. — Bill rounded, in- flated, and embulked in every direction.

Loxia pyrrhula of Linne.

L. lineala.

L. minuta.

L. collaria.

Gen. 4. Loxia of Brisson. — Bill com pressed ; both mandibles generally curved, their points crossing each other, sometimes on one side and sometimes on the other.

Loxia curvirostra. There are it would seem two varieties of this species, distinguished by their size and their voice ; hence we have the loxia curvirostra and the loxia hystiopsittacus of Bechstein.

Gen. 5. Corythus of Cuvier. — Bill embulked in every part, its point bent over the lower mandible.

Gen. 6. Loxia enucleator of Linne. — To this genus we might assign the loxia psittacea of La- tham ; the loxia flamengo of Sparman appears to be only a variety of the enucleatore.

Gen. 7. Colius of Gmelin. — A genus very much akin to the preceding. Their bill is short, thick, conical, and somewhat compressed, and the two mandibles are arched without surpassing one another in length ; the feathers of the tail are gra- duated and very long ; their great toe has the faculty of directing itself before like the rest of the toes ; their plumage is fine and silky, and generally of an ash color. The C. nayensis and the strictus are of the same species, as are also the C. erythr^- pus and the Capensis.

Gen. 8. Glaucopis of Forster. — Callaeas of Bech- stein. Bill very large, moderately long ; upper mandible embulked, and furnished at the base with a fleshy caruncle.

Glaucopis cinerea of Latham. Completely black ;. about the size of a magpie; tail graduated. Found in New Holland.

Gen. 9. Buphaga of Brisson. — Bill of a moder- ate length, cylindrical at the origin, but inflated in both mandibles at its extremity, which terminates in a very flat point; this serves to compress the skin over in order to make the bots spring from, their lodgements

B. Africans

Group 5. Ccwsici of Cuvier.

Bill large, exactly conical, thick at the base, re- markably acuminated at the point ; nostrils small, round, and lateral ; the commissure of the mandibles in a zig-zag line. These birds are natives of America, and in point of manners resemble our starlings ; they live in flocks, and build their nests near each other.

Gen. 1. Cassicus of Cuvier. — Bill ascendant upon the forehead and divides the feathers in a large semicircular notch

Oriolus cristatus.

O. hsemorrhous.

Gen. 2. Icterus. — Bill dividing the feathers of the forehead in a short notch, arched in its whole length.

Oriolus varids.

O. cayanus.

O. chrysocephalus.

O. dominicensis.

In our travels in California we had often an op- portunity of seeing a species of this genus, running in flocks about the ascents and declinations of the plains in that country, resembling larks in their gait and attitude ; they were at first mistaken for such by our officers, till some of them being killed corrected the error.

Gen. 3. Xanthornus. — Differ from the icterus in having the bill quite straight.

Oriolus icterus.

O. minor tanagra bonariensis.

O. Phceniceus.

O. Americanus.

O. leucopterus.

There are several other species of this genus found in the continent and islands of America, but the enumeration of these will suffice to stand as specimens for the exemplification of the generic difference.

Gen. 4. Dacnis of Cuvier. — Represent the Xan- thornus in miniature by their sharp and conical bill. J.Jotacilla cayana of Gmelin. In conformity to our definition of a genus, some other character must be looked for, though nature, by creating so great a disparity in the size, seems to have drawn a very broad line between this and the other genera of this group.

Gen. 5. Sturnus of Linne. — Differ from the Xan- thornus in having the bill

depressed towards its point.

Sturnus vulgaris of Linne".

S. Capensis.

S. militaris.

S. dudoricanus, alauda magna of Gmelin.

Gen. 6. Sitta. — Bill straight, prismatic, and pointed, with which they divide the bark, in order to get at the worms beneath it, like the woodpeckers, but their tongue is not elongated,

S. Europea.

Remark. — It is observed by Cuvier that we can- not find a character which will accurately distin- guish the last family from that of the corvi which possess the same internal structure, the same ex- ternal organs, and are not to be discriminated from those of that family except in the general superio- rity of size which gives them an ascendancy over them. We must, therefore, for the sake of conve- nience, be contented with laying down superiority of size as the characteristic of this family.

Family 5. AVES GKANDIORES.

Group 1. Corvi of Linne.

Bill strong, more or less flattened at the edges ; nostrils covered with stiff feathers directed before. These are very crafty birds, enjoy a fine sense of smell, evince a general disposition to seize upon every thing that may fall in their way, and hide it up, though useless to themselves.

Gen. 1. Corvus. — Bill proportionately stronger than in the following genera; ridge of the upper mandible more arched ; tail round or square

Curvus cnrax of Limn .

C. corone of Linno.

C. frugilegus of Linne

C. comix.

C. monedula.

Gen. 2. Pica of Cuvier. — Less than the last • upper mandible more arched

than the .ower ; tui long and graduated.

Corvus pica of Linne.

C. ventralis of Sh.

C. erythrychnos.

C. rufus.

Gen. 3. Garrulus of Cuvier. — Both mandibles somewhat elongated, and terminated suddenly in an almost equal curvature. When their tail is graduated it is somewhat lengthened ; and the fea- thers of the forehead, loose and hackled, rise more or less upon its neck.

Corvus glandarius.

C. eristatus.

C. stellcri.

C. auritus.

Gen. 4. Caryocatactes of Cuvier. — Both mandi- bles equally pointed, straight, and without curva- ture.

Corvus caryocatactes of Linne.

Gen. 5. Temia of Vaill. — With the port and ;iir of the pies, they have the bill raised, and furnished at its base with velvety feathers like the birds of paradise. Only one species known, a native of Africa, and of a bronze green color.

Group 2. Coracite of Linne.

Bill strong, compressed towards the end, which is pointed and somewhat hooked ; nostrils oblong, placed at the ends of the feathers, and not covered by them ; the feet are strong and short.

Gen. 1. Coracias. — Bill straight ; height exceeding the breadth.

Coracias garrula.

C. viridis of Vaill.

It will perhaps be found expedient hereafter to insert an intermediate genus, embracing such of the rollers as have long tails, viz. Coracias caustata.

Gen. 2. Colaris of Cuvier. — Holies. Differ from the last by having a shorter bill, more arched, and also widened at the base so as to be nearly as broad as it is high.

Coracias orientalis.

C. Madagascariensis.

C. afra of Lath.

Gen. 3. Eulabes of Cuvier. — Mamates. Bill nearly like that of the colaris, but their head i- stripped of feathers in some places which are filled with fleshy prominences; the velvety feathers reach to the nostrils, as in the birds of paradise.

Gracula religiosa of Linne.

Group 3. Paradisece.

Bill straight, compressed, strong, without notch ; nostrils covered. Cuvier ascribes the velvet-like texture of the feathers which cover the nostrils to the influence of the climate which these birds in- habit. The manifold development of these feathers, by a reflective operation upon the undulations of light, sheds forth a metallic lustre. A disposition to a curious development is exhibited in various parts of the plumage. Some of the birds of para- dise have the feathers of their sides remarkably hackled and lengthened into pannicles which reach beyond the body.

Farad isea apoda.

P. rubra. Plumy pannicles of the sides are of a fine red ; shafts wider and concave on one side.

Paradisea regia.

P. magnifica. Chesnut above, green beneath and upon the sides ; the feathers of the wings yellow ; a \uft of straw colored feathers upon each side of the neck; another of yellow ones opposite the fold of the wing. Some of the species have the feathers hackled, but short, upon the sides, and are destitute of the shafts upon the rump.

P. aurea. Black; a breastplate of gilded green upon the throat; three feathers of each ear pro- longed into long shafts, which terminate in a

small disk of gilded beard-feathers.

Others have neither shaft-feathers nor the feathers of the sides lengthened.

P. superba. The scapulars are nevertheless pro- longed so as to form a sort of mantling over the wing when closed, the feathers of the breast hang- ing down in a kind of cotte d'armes, and forked. All the plumage is black, except this pectoral cotte, which is of a brilliant green with a brown edge.

P. aurea of Shaw ; oriolus surreus of Gmelin. Without any development of the feathers, and chiefly recognised by the velvet nature of the nasal plumes. Male of the most lively orange

Family 6. ROSTRO TENUI.

Comprehends the residue of the birds which be- long to the first division. Bill thin, lengthened, more or less arched throughout its length, and without a notch.

Group 1. Upupa.

Gen. 1. Fregilus of Cuvier. — Nostrils covered with feathers directed forwards ; this makes them to be related to the crows, which they resemble in some respects in their manners.

Corvus graculus of Linne.

C. affinis of Latham.

Gen. 2. Upupa. — An ornamental tuft on the head, consisting of a double row of feathers, which are elevated and depressed at the pleasure of the bird.

Upupa epops of Linne.

U. Capensis.

Gen. 3. Promerops of Brisson. — No tuft upon the head ; tail very long ; tongue extensible and bifur- cated, which enables them to live upon the juices of flowers.

Upupa promerops. Merops cafer.

Gen. 4. F.pimachis of Cuvier. — Bill like that of the upupa and promerops ; scaly or velvet-like fea- thers covering their nostrils as in the birds of para- dise : they come from the same countries, and glitter with the same brightness of plumage. Their sides are furnished with feathers which are

more or ess prolonged in the male.

Upupa raagna of Gmelin. U. superba.

Epimachus promerfiL

Group 2. Scandcntes.

Gen. 1. Certhia. — Recognised by the feathers of the tail being used and ending in a point like those of the woodpeckers.

Certhia familiaris.

C. cinnamonea.

C. spinicauda; mutacilla opinicauda of Latham.

Gen. 2. Dendrocolaptes of Sloane. — Tail of the same nature as that of the preceding ; but the bill is much stronger and wider.

Gracula Cayenensis of Gmelin; gracula scandens f Latham and Shaw.

Gen. 3. Tichodroma of Iliger.— Make no use of the tail in climbing, although they run about the rocks and trees like the ordinary creepers, but they climb by means of their very long nails. Bill triangular and depressed at the base, very long, and very thin.

Certhia muraria.

Gen. 4. Nectarinia of Iliger. — Tail not used,which shows that they do not climb ; bill of a moderate length, arched, pointed, and compressed like that of the true climbers.

Certhia cyanea.

C. caerulea.

C. sanguinea.

Merops rufus.

Gen. 5. Dicaum. — Do not employ the tail, nor climb; the bill is short, arched, not longer than the head, depressed, and widened at the base.

Certhia erythronopes.

C. eruentata.

C. rubra.

C. cantillans.

Gen. 6. Melithreptus of Vieillot. — Make no use of the tail ; bill extremely long, bent almost in a semicircular arc.

Certhia vestiaria. If our memory does not de- ceive us this bird is called nectarinia in the trans- lation of Kotzebue's voyages.

C. abscura.

C. Pacifica.

Gen. 7. Cinnyris.— Soui'mangas. Tail unused" in climbing ; bill long and very thin ; ends of the mandibles finely denticulated like a saw ; tongue capable of being elongated beyond the bill, and ter minating in a fork.

Certhia splendida of Shaw.

C. afra of Edw.

C. amystina of Vieillot.

C. calybaa.

Group 3. Trochili of Linne".

Bill long and thin, filled with a tongue which can be elongated like that of the woodpecker. When we examined the structure of this tongue, in some individuals brought to us at Rio Janeiro, we re- marked that the base of it was hollow, and «j allowed the upper part to be withdrawn within it during repose. Within the membranous stomach were found insects, which, coming to feed on the honey contained in the cups of flowers, especially of the banana, were swallowed down with it. The people of Mexico call them myrtle-suckers

Subdivision 1. Rostra arcuato.

Gen. 1. Trochilus. — Bill arched: some are dis- tinguished by a prolongation of the intermediate feathers of the tail.

Trochilus pella.

T. superciliosus. Gen. 2. Lateral feathers of the tail elongated.

Trochilus forficatus. Gen. 3. Tail forked.

Trochilus elegans. Gen. 4. Tail round or square.

Subdivision 2. Orthorynchus rostra recto.

Gen. 1. Crown of the head tufted.

Trochilus cristatus

T. pileatus. Gen. 2. Tufts upon the sides of 'he head.

Trochilus ornatus.

Gen. 3. Shafts of their primaries remarkably broad.

Trochilus latipennis.

Gen. 4. Tail forked ; without ornaments. Trochilus mellivorus. T. smaragdo sapharinus. T. colubris of Edw.

Gen. 5. Lateral feathers of the tail very muc prolonged and broadened at the ends.

Trochilus platurus.

Gen. 6. Worthy to stand by itself for its extreme dirainutiveness.

Trochilus minimus.

Family 7. DIGITIS JUXCTIS.

Group 1. Meropes.

Guepiers. Feet short ; bill triangular at its base, lengthened, slightly arched, and terminating in a short point.

Gen. 1. Merops. — Mean feathers of the tail somewhat elongated. Merops apiaster. Gen. 2. Tail nearly square. Merops Philippines. M. nibicus. M. erytropterus. M. malambicus.

Gen. 3. Prianitis. — Momots. This genus has the same feet and general appearance as the last, but differs from the merops in having a stronger bill, which has its edges sawed ; whence the propriety of the name (rrpt'wv, a saw). Tongue bearded like a feather ; tail graduated ; the two medial

feathers are stripped of their vanes, a small space not far from the end.

Ramphastos raomota of Gmelin.

Group 2. Alcedines.

Martin Pecheurs. Feet shorter than in the prioni- tis; bill much longer, straight, angular; tongue and tail very short. Stomach a membranous sac. Gen. 1. Bill simply straight and pointed. Alcedo ispida. A. afra of Shaw ; maxima. A. alcyon. A. rudis.

Gen. 2. Lower mandible embulked. Alcedo Capensis A. atricapilla. A. chlorocephala. A. leucocephala. Gen. 3. Mandible hooked.

Alcedo fusca (gigantea of Shaw.) Gen. 4. Le$ ceyx of Lacep. — King-fisher, with the ordinary bill, but the internal toe is wanting. Alcedo pudactyla of Pall. A. tribrachys of Shaw

Gen. 5. Todus of Linne. — Bill flattened hon- tontally, blunt at the extremity ; the tarsus longer ; tail somewhat longer. Todus viridis. T. cinereus of Eulcr.

Group 3. Buceros of Linne. Calaos. Bill enormous,- surmounted by a pro-tuberance as large as itself, always more or less em- bulked above. The form of these excrescences, which have their interior generally cellulous, varies with the age.*

If, after the beautiful observation of Wildenow, we contemplate the paradigm of ornithology as a curious piece of network, and consider the groups M so many meshes respectively of that web, we

may survey the mesh or group now before us «$ connected by one knot with the ramphastos, as re- gards their bill ; by another to the corvi, in their appearance and habits; and, by a third, to the meropes and alcedines, touching the shortness of their feet and legs. Their tongue is small at the fundus of their throat. With prominences.

Buceros rhinoceros.

B. niger.

B. monoceros of Shaw ; Malabaricus of Lath.

B. bicornis. Without prominences.

B. Javanicus.

B. nasutus.

B. nasica.

ORDER III. — SCAXDEKTES.

Avesrationepedum habitascandentes. Thisorder comprises birds which have the outward toe directed behind, like the great toe, whence there results a firmer means of support, by which they climb with peculiar facility the trunks of trees. In denominating these birds climbers, we ought to advertise the reader that we apply this term to such as are essentially so, from a consideration of the appropriate disposition of the toes ; for any one that has paid any attention to the manners of birds will have observed that the common creeper runs up a tree or a wall with as much ease as a wood-pecker, though in the arrangement of the toes they differ entirely from them. Bill more or less strong and powerful. The sternum of the greater part of these genera have two notches behind, but in the perroquets there is but one hole, and often it is quite plain.

Group 1. Galbula.

Connected very closely to the king-fishers by their lengthened sharp bill, of which the upper ridge is distinct, and by their short feet, but the established disposition of the toes dissevers them from an order to which their general figure haf bound them so closely.

Gen. 1. Galbula. — American species, with the bill long and quite straight.

Alcedo paradisaea ; galbula paradisaea of Latham.

A. galhula.

Galbula reficauda of Vieillot.

G. albirostris of Latham.

Gen. 2 Bill shorter and stouter and somewhat arched ; anterior toes somewhat more separate. Indian Archipelago.

Alcedo grandis of Gmelin ; galbula of Latham.

Gen. 3 Bill without ridge above.

Le grand jacamar of Vieill.

Group 2. Pici of Linne.

This group is well characterised by a lony, straight, and angular bill, compressed like a wedˆe at its extremity ; tongue thin, armed toward end with recurved spines, which, when thrust for- ward by the elastic horns of the os hyoides, can spring very far beyond the bill. In a species which the writer dissected, at Conception in Chili, these horns were traced over the crown of the head, and were seen to terminate in the riijiH nos tril among the integuments of the upper mandible. The tail is composed of ten feathers, with stiffened elastic shafts, which serve as an abutment whilst they climb the trees. Their tongue, besides its curvature, is forked, and bedewed with a viscous ba!i»Ta, which is secreted by large glands ; it is with-

drawn by two muscles rolled like ribands about the windpipe ; in its state of retraction the horns of the os hyoides ascend under the skin over the head towards the base of the bill, as Cuvier repre- sents the matter ; but it appeared to us that in a state of repose these cornets rested in an arc of a greater circle, as we think it will appear to any one who shall be at the trouble of examining the bird •when the skin is dissected off the head. The tongue consists of a sheath at the base like that of the humming-bird, and is withdrawn within itself in the lower part of the throat. Their stomach is ge- nerally membraneous, as their food is chiefly in- sects ; but they are destitute of ccecal appendages.

Gen. 1. Picus. — Epeiches.

Picus martins.

P. viridis. P. canus is also considered by some as a distinct species.

P. major.

P. minor.

Gen. 2. Picoides of Lacep. — One of the outer hind toes wanting.

Picus tridactylus.

Gen. 3. Bill slightly arched, showing some si- militude to the cuculi.

Picus auratus.

P. cafer.

Gen. 4. Picus orator.— Runs upon the ground in search of its food. Some

characteristic difference in the outward configuration must be sought by those who have an opportunity of examining this bird, since the decided distinction in its economy warrants an expectation of finding it.

Gen. 5. Ynnx of Linne" (Les Torcols). — Tongue susceptible of elongation like the woodpecker, and by the same mechanism, but without spines ; bill straight and pointed, and very nearly round and without angles ; tail-feathers of the usual form.

Yunx torquilla.

Y. minutissima.

Group 3. CMCM/J of Linne.

Bill of the middling size, very deeply divided, compressed, and slightly arched.

Gen. 1. Cuculus. — Bill of the ordinary stoutness ; the tarsi short; the tail composed of ten feathers. Herissant attributed the neglect of incubation of the cuckoo to the position of the gizzard, which is placed further behind than in other birds, and of con- sequence less protected by the sternum. The ccecal appendages of these birds are very long, and their inferior larynx has only one appropriate muscle.

Cuculus canorus of Linne, of which cuculus Capensis is considered by Cuvier as a mere variety.

*C. solitarius of Nob. **

C. radiatus of Lonn. Hill rather more depressed. C. auratus, Vaill. C. lucidus, Latham. C. clasii. Bill vertically higher.

C. punctatus, scolopaceus. C. honoratus, Vaill. C. mindanensis.

These differences beincr slight, it would appear over-exquisite to make distinct genera, except fu- ture observations should show that this circum-stance of having the bill vertically higher is acconir pained with another of easier discrimination.

Gen. 2. Its corns of Vaill. — They differ from the cuculus in having long tarsi. They nidificate in hollow trees, and do not borrow another bird's

nest. The reader may take this as a sample of our argument in behalf of a certain modification of the old doctrine of signatures, with this special observance, that as in language the words are signs and not resemblances

of ideas, so in nature pecu- liarities of form are not similitudes, but certain symbols of corresponding variations in the economy of the object, which must be understood and in- terpreted by a careful induction of repeated obser- vations.

Cuculus cristatus.

C. caeruleus.

C. seniculus.

C. Cayanus.

Gen. 3. Centropusof Iliger. — N ail of the great toe long, straight, and pointed like the larks, whence the generic name Ktvrpov, a spur, irovf. Nestle in hollow trees.

Cuculus, TEgyptius.

C. Philippensis.

C. Nigrorufus.

Gen. 4. Les courols. — Bill short, pointed, straight, compressed, scarcely arched at the end of the upper mandible ; nostrils pierced obliquely on the middle of each side ; tail with twelve feathers ; nestle, like the foregoing, and confine themselves to woods. It is said that they feed principally upon fruit.

Cuculus afer.

Gen. 5. Indicator. — Bill short, high, almost conical, like that of a sparrow ; tail of a dozen fea- thers, somewhat graduated and forked ; skin re- markably tough.

Cuculus indicator.

C. minor.

Gen. 6. Les barbacous of Vaill. — Bill conical, elongated, somewhat compressed, slightly arched at the tip ; furnished at the base with hackled fea- thers or stiff hairs.

Cuculus tranquillus.

C. tenebrosus.

Group 4. Les malchohas of Vaillot.

Bill very thick, round at the base, arched towards the point; a large naked space round the eye.

Gen. 1 . Round nostrils near the base of the bill.

Malcoha vourardin, Vaillot.

Gen. 2. Narrow nostrils near the end of the bill.

Cuculus pyrocephalus, Forster. Natives of Cey- lon ; live, it is said, upon fruits.

Group 5. Scythropes.

Gen. Scythrops. — Bill longer and stronger than among the malcohas ; hollow on each side, with two longitudinal furrows ; a naked ring round the eyes ; nostrils round; bill approaches that of the ram- phastos ; but the tongue is not ciliated, which circumstance separates them.

Scythrops, Novae-Hollandiae, Lath. Scythrops Australasias of Shaw. Size of a crow, whitish, with a gray mantle. –

Group 6. Bucco of Linne.

A thick bill, embulked on the sidesof its base,fur- nished with five bundles of stiff hairs, directed for- wards, one behind each nostril, one on each side of the base of the lower jaw, the fifth under the symphy- sis, or fork of the lower mandible; wings short.

Gen. 1. Pogonias. — Two well-narked notches on each side of the upper mandible, of which the ridge is flat and arched ; lower mandible furrowed across ; beards very strong.

Pogonias major, Nob. ; bucco dubius, GmeVin.

P. minor, Nob.

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Gen. 2. I^es {wrbus.— Bill simply conical, slightly compressed ; ridge flat, somewhat elevated in th« middle.

Bucco grandis.

B. viridis.

B. flavifrons.

Gen. 3. Tamatia. — Bill somewhat more elongated and more compressed ; the end of the upper man- dible is curved upwards ; head large ; tail short.

Bucco macrorynchus.

B. melanoleucos.

B. Tamatia.

Gen. 4. Irogon(couroucous). — Beard composed of bundles of hairs ; bill short, broader than high, curved near its base ; upper ridge arched, flat, and its ends denticulated ; feet short, furnished with feathers to the toes.

Trogon curucui.

T. viridis.

T. strigilatus.

Gen. 5. Crotophaga of Linne. — Ani. Recognised by a large bill, compressed, arched, without denti- culations, surmounted by a sharp vertical crest.

C. major.

C. ani. This species was an old acquaintance of ours while at San Bias, and was mistaken for a starli ng by some of our sportsmen, till the wide dissimili- tude of the bill corrected an error which a similarity of size and manners had occasioned

Group 6. Ramphastos of Linne.*

Bill enormous ; texture light and cellular. See RAMPHASTOS.

Gen. 1. Ramphastos. — Bill larger than the head. Generally black, with bright colors under the throat.

R. toco.

R. tucanus.

R. piscivoras.

R. raaximus.

Gen. 2. Pteroglossus of Iliger. — Bill less than the head, and covered with a solid horn.

Ramphastos viridis.

R. aracari.

R. piperivorus.

Group 7. Psittaci.

Bill thick, hard, solid, surrounded at the base with a membrane through which the nostrils are pierced ; tongue thick ; inferior larynx very com- plicated, and furnished on each side with a true appropriate peculiar muscle, which mechanism contributes to facilitate articulation ; intestines very long, without copcal appendages. Perhaps it would not be straining a radical similarity of ortho- graphy too far if we were to derive ˆirraicof from i/aw, to wet or bedew, since the drought of the par- rot's mouth renders that office constantly necessary.

Subdivision 1. Parrots. Gen. 1 . Arat. — Cheeks bare of feathers. Gen. 2. Perruches of Vaill.— Tail long. Gen. 3. Perruches Aras. Naked ring round the eye. Gen. 4. Perruches a queue en Jieche of Vaillot. Two mean feathers of the tail surpassing the rest. Gen. 5. Perruches a queue elargie vers le bout Gen. 6. Perruches ordinaire. — Tail graduated.*

Subdivision 2. Lcs Cacatoes.

Tail short and even. This subdivision stands in need of a nomenclature to find and ascertain the several distinctions which may be collected from a consideration of the presence or absence of a crest, and of the conformation of the feathers which com- pose it.

Subdivision 3. Perroquets a tronipe of Vaillot,

Tail short and square ; crest composed of long <»nd straight feathers ; cheeks naked; upper mandi- ble enormously disproportioned ; lower mandible very short.

Psittacus aterrimus of Gmelin.

Subdivision 4. Pesoporus of Iliger.

Bill weaker, tarsi long, nails straighter, than the rest of the parrots. One species known at present, a native of New Holland.

Group 8. Corythaices.

Bill short ; upper mandible inflated ; a short membrane between the anterior toes ; external toes often directed behind ; nostrils simply pierced in the horny substance of the bill ; edges of the man- dibles denticulated. Though this group present an evident affinity with the gallinaceous fowls, their sternum is destitute of those large notches winch are common in that order.

Gen. 1. Corythair of Iliger. — The bill does not remount the forehead ; the head is furnished with a crest susceptible of elevation.

Cuculus persa of Linne.

Gen. 2. Musophaga of Isert. — Base of the bill forms a disk which covers a part of the front.

Musophaga violacea ot' Latham, Promerops, &c.

ORDER IV. — GALLINACEJE.

Thus denominated from their relationship with the cock, who for his courage and the favor of man is entitled to stand at the head of an order which exhibits so many natural affinities. Anterior toes united at the base, and denticulated along their edges; the upper mandible vaulted; the nostrils pierced in a large membranous space at the base of their bill, and covered by a cartilaginous scale ; wings short ; sternum bony, diminished by two deep notches which occupy almost all the sides ; crest truncated obliquely, so that the forked bone does not reach it except by a ligament. Tail more frequently fourteen feathers, sometimes seventeen, with the exception of the alectors; inferior larynx very simple, whence they are not indulged with the gift of song ; gizzard strong and muscular ; food deposited first in the gullet, or membranous bag hanging before.

Group 1.

*Gen. 1 . Pavo, from rau*c, or Tawwf , an ono- matopoea, from their cry. Chief character derived from the coverture of the tail, which is prolonged into a radiating fan of feathers.*

P. cristatus.

I, bicalcaratus.*

Gen. 2. Malcagris of Linn6 (ui\iav yap TTOT aypvuc dypav. Euripides). Head and neck clothed with a raammellated skin destitute of feathers.

Meleagris galopavo. See MELEAGRIS. Group 2. Alectores.

Tail with twelve feathers, broad, stiff, and round.

Gen. 1. Cror of Linne. — Bill strong, base sur- rounded with skin, sometimes of a bright color; head with a crest of feathers.

Crax alector of Linne

C. globicera of Linne.

C. rubra.

Gen. 2. Oura.r, from ovpa, tail. Bill short and thick ; the membrane which covers its base, and the greater part of its head, covered with short erect feathtrs.

C'rnx pauxi of Linnr.

Gen 3. Penelope of Merrem. — Bill thicker than the Hoccos'; circle about the eyes naked, as also under the throat, and is often capable of inflation.

P. cristata of Linne".

P. leucolophus.

P. cumanensis.

P. marail. Without a crest.

Gen. 4. Ortalida of Marren. — Scarcely bare of feathers around the eyes and about the throat.

Cowaca; phasianus motmot of Gmelin.

Gen. 5. Opisthocomus of Hofman. — Head crested; no membrane between the toes.

Phasianus cristatus of Linne.

Group 3. Phasiani.

Cheeks bare of feathers; skin red.

Gen. 1. Gallus. — Head surmounted by a fleshy crest ; lower mandible furnished with fleshy wattles.

Phasianus gallus of Linne.

Gallus sonnerati of TemaV. Hindostan.

G. bankiva. Java.

G. varius, Java.

Gen. 2. Phasianus. — Tail long and graduated ; its feathers folded into two surfaces.

P. colchicus of Linne.

P. nycthernerus of Linne.

P. pictus.

P. argus.

Gen. 3. Houppferes of Tern.— Tail of the gallus ; with a crest.

Phasianus ignitus.

Gen. 4. Lophopherus of Tern. — Crest of the pea- cock, but the tail of ordinary birds.

Phasianus inpeyanus of Latham.

Gen. 5. Cryctonix of Tern. — Great toe without any nail ; tarsi without spurs .

Phasianus cristatus. Sparm. Columba cristata of Gmelin.

Gen. 6. Numida. — Head naked ; fleshy beard ; tail short ; head surmounted with a callous crest ; no spurs.

Numida meleagris.

N. cristata, mitrata.

Group 4. Tetraones.

Red band in the place of an eye-brow.

Gen. 1. Lagopus of Brisson. — Legs covered with feathers, and without

spurs.

Tetrao urogallus.

T. tetrix.

T. bonosia.

T. cupido, umbellus, togatus.

T. Canadensis canace.

T. lagopus. When we were in Kotzebue's Sound, we had many opportunities of remarking the change its mottled plumage gradually underwent in passing into a perfect white.

Tetrao alleus.

T. Scoticus.

Gen. 2. Pterodes of Tern.— Tail pointed ; toes naked.

Tetrao aichata.

Group 5. Perdices.

Gen. 1. Les Francolius of Tern. — Bill longer, more strong ; tail more infolded ; spurs stronger

Tetrao francolinus.

Gen. 2. Perdir. — Bill weaker ; spurs of the males simple tubercles.

Tetrao cinereus.

T. rufus.

Perdix Graeca of Brisson; perdix sanatiles of Meyer.

Gen. 3. Coturnii. — Smaller than the perdices, with a fine bill ; a shorter tail : without a r2d eye- brow, and with spurs.

Tetrao of Linne'.

Gen. 4. Perdrix . — Bill thick, shorter and more inflated ; the tail rather more developed.

Gen. Hemipodius of Tern. — Bill compressed ; a small rising under the

lower mandible ; destitute of the great toe.

Gen. 5. Ortygis of Ilig. — Toes separated down to their origin, and without membranes.

Gen. 6. Syrrhaptes of Ilig. — Tarsi short, furnished with feathers, as are also their toes, which are very short, and are united some distance from theii bases by a membrane ; wings very long and sharp.

Tetrao paradoxus.

Gen. 7. Crypturus of Iliger. — Tinamus of Latham. Neck thin, very long, and clothed with feathers of a peculiar nature ; bill long, slender, and flat, with a small furrow on each side ; tail almost nothing ; great toe merely a short spur.

Tetrao major.

Group 6. Columba.

Intermediate between the passeres and the gallinaceae. Bill vaulted; nostrils pierced in a large membraneous space, and covered with a large cartilaginous scale, which forms an enlargement at the base of the bill. Toes with no other mem- brane between them than what arises from a continuation of their edges.

Gen. 1. Columbi-gallina. — Bill slender and flexi- ble; tarsi tall; live in flocks.

Columba coronatas of Gmelin.

C. Carunculata.

Gen. 2. Columba. — Tarsi shorter than the last.

Columba palumbus of Linne.

C. linia.

C. Turtur.

Gen. 3. Vinaga of Cuvier. — Bill thick, of a solid substance, laterally compressed; tarsi short; feet broad margined.

Columba Abyssinica.

C. aromatica.

C. vernans.

ORDER V. — GRALL.E.

Baseof the legs bare of feathers; tarsi generally long ; the outer toe is more frequently united to the middle one by means of a membrane; sometimes it has two similar membranes ; at others they are entirely deficient, and the toes are quite separate ; it happens sometimes, though rarely, that the toes are margined.

Family 1. ALIS BREVIBUS.

Wings short ; sternum a simple shield, destitute of the ridge ; pectoral muscles very thin ; muscles of the thighs and legs of an enormous thickness. Group. 1. Struthiones of Liune.

Gen. Struthio. — For the external peculiarities see STRUTHIO. Crop enormous: a large ventricle between the crop and the gizzard ; intestines volumi- nous ; coecal appendages long ; cloaca capacious, wherein the urine is collected as in a bladder; in this respect they are unrelated to any other.

Struthio camelus.

S. rhea.

Group. 2. Casuarii of Brisson.

Wings shorter than those of the ostrich ; feathers

bearded, but tlie secondary vane is so inconsider- able that they resemble hair.

Gen. 1. Co&uariua. — Bill compressed laterally ; head surmounted by a long protuberance, which is covered with a bony substance; the skin of tlie head and the upper part of the neck naked. In- testines short; coecura small; intermediate sto- mach wanted.

Gen. 2. Dromiceius. — Bill depressed, without any helmet on the head ; naked only around the eye, without caruncles.

Family 2. ROSTRO PRESSO.

Legs tall, without any great toe, or, if it be pre- sent, not long enough to reach the earth ; bill of a moderate size, strong enough to bore the ground and search for worms.

Group 1.

Gen. Otis of Linne. — Form bulky ; upper man- dible slightly vaulted ; bases of the toes with small margins.

Otis tarda.

O. tetrax.

Group 2. Cfiaradrii of Linne".

Bill compressed, enlarged at the tip ; great toe deficient.

Gen. 1. (Edicnemus. — End of the bill enlarged underneath as well as above; the nasal furrows extended only half of its length.

Charadrius oedicnemus.

Gen. 2. Charadrius. — Nasal furrow occupying two-thirds of the length of the bill.

Charadrius pluvialis.

C. morinellus.

Group 3. Tringa.

Bill (he same, distinguished by the presence of a great toe.

Gen. 1. Squatorola of Cuvier.— Bill like that of the (Edicnemus.

Fringa squatorola.

Gen. 2. Vannta: — Great toe scarcely distin- guished ; tarsi scaled with escutcheons.

Tringa vanellus.

Gen. 3. Hamatopus. — Bill wedge-shaped, and very strong ; tarsi reticulated ; no great toe.

Haematopus ostralegus.

Gen. 4. Tachydromus of Iliger. — Bill thin and evenly conical ; wings

shorter.

Gen. 5. Microdactytus of Geoffrey. — Bill longer, hooked, and cloven as far as the eye.

Microdactylus cristatus ; palameda of Gmelin.

Family 3. ROSTRO CULTRUM SESE FEREXTE. Bill thick, strong and long, frequently cutting and pointed. Coecal appendages short.

Group 1. Grve$.

Bill straight, cloven but a short distance within the head ; the membraneous furrow of the nostrils, Much is broad and concave, occupies nearly half the length of the bill ; ta'ji scaled with escutcheons.

Gen. 1 . Psophia of Linne". — Bill shorter than the rest ; the head and neck covered only with down ; circle about the eye naked.

Psophia crepitans of Linne.

Ardea pavonia.

A. virgo.

Gen. 2. Gnu.— Bill as long, or longer than the nead.

Ardea grus.

A. scolopacea. Bill thin, enlarged the last part of its length.

Ardea helias. Tail graduated. Gen. Eurypya of Iliger. Agreeably to our definition, it would seem that, contrary to the judgment of Cuvier, each of these species ought, from a difference of form, to be con- sidered as being of different genera. Gen. 3. Cancroma. See CANCKOMA.

Group 2. Ardet.

Bill cloven as far as their eyes ; nasal furrow extended very nearly to the point. Chief charac- teristic consists in having the nail of the middle toe short and toothed at its inner edge. Ardea major. A. minuta Danubialis.

Gen. 1. Aigrettu. — Feathers of the lower part of the back becoming at a certain age remarkably elongated and hackled. Ardea garzetta. A. egretta ; A. alba. A. stellaris.

Gen. 2. Let bihoreaux. — Some thin and stifi feathers upon the occiput.

Ardea Nycticorax.

Group 3. Ciconia.

Bill thick, moderately cloven into the head; legs reticulated ; the external toes very remarkably palmated at the base; gizzard somewhat muscular ; co3cal appendages very small.

Gen. 1. Ciconia. No nasal furrow. Ardea ciconia. A. nigra.

Gen. 2. Myctcriaof Linne. — Bill slightly curved upwards.

A. Americana.

Gen. 3. Scopus of Brisson. — Bill compressed ; nasal furrow long. A. umbretta.

Gen. 4. Anastomus of Iliger. — Mandibles not meeting ; erect at the point. Ardea pondiceriana. A. Coromandalina.

Gen. 5. Tantalus. — Dorsum of the bill is round, point bent down, slightly notched on each side. Tantales ibis. T. leucocephalus.

Gen. 6. Platalea of Linne. — Bill remarkably flat and expanded at the end into a round disk. P. leucorodia. P. nivea. P. aiaia.

Family 4. ROSJRO LONGO. Bill thin, long, and feeble.

Group 1. Scolapaces.

Gen. 1 . Ibis of Cuvier. — Some part of the head nearly deprived of feathers.

I. religiosa; tantalus ./Ethiopicus of Latham. I. rubra ; T. rjber of Gmelm. I. falcinella; scolopax falcinellus. Gen. 2. Nttmenius of Cuvier. — Upper mandible surpassing the lower. Scolapax arcuata.

Gen. 3. Ptueops of Cuvier. — Bill depressed to- wards the point. Scolapax phaopus.

Gen. 4. i-‘alcinellus. — Bill of the phaops, but no great toe.

Gen. 5. Scolopas of Cuvier. — Upper mandib.e exceeds the lower by an enlargement which iia-, ,-r,e furrow.

S. rusticola. S. gal Imago. S. majo”.

S. Gallinu.a.

S. paluclosa.

Gen. 6. Rtiynch&aof Cuvier. — Mandibles nearly equal, arched slightly at the tip.

Scolopax Capensis.

Gen. 7. Limosa of Bechstein. — Bill straight or sometimes even slightly turned upwards; longer than the scolopax.

Scolopax leucophica.

S. aegocephala.

Gen. 8. Calidris of Cuvier. — Bill slightly de- pressed at the tip ; nasal furrow very long.

Tringa arenaria.

Gen. 9. Pelidna of Cuvier. — Bill longer than the head ; toes with margins.

Tringa cinchus.

T. Alpina.

Gen. 10. Machetes of Cuvier. — Palmation be- ween their outer toes.

Tringa pugnax.

Gen. 11. Arenaria of Been. — Great toe wanting.

Choradrius calidris rubidus of Gmelin.

Gen. 12. Phalaropus of Brisson. — Bill flattened ; toes margined with broad membranes.

Tringa lobata,

Phalaropus rufus ; tringa fulicaria.

Gen. 13. Strepsilas of Iliger. Legs low; bill short, conical, and even ; nasal furrow less than half the length of the bill.

Tringa interpres.

Gen. 14. Totanus of Cuvier. — Bill thin, round, pointed ; upper mandible arched a little towards the tip.

Scolopax glottis.

S. fuxa.

S. totanus.

S. calidris.

S. gambetta.

S. ochrapus.

Gen. 15. Lobipes of Cuvier. — The feet of the phalaropus joined to the beak of the totanus.

Tringa hyperborea.

Gen. 16. Himantopus. — Bill round, slender, and pointed ; legs excessively high, thin, reticulated, and destitute of great toes.

Gen. 17. Recwvirostra. — Feet palmated; bill thin and turned up.

R. avocetta.

R. Americana.

C: orientalis.

Family 5. DIGITIS LONGISSIMIS.

Feet very long; suitable for walking upon the weeds of a marsh. Body singularly flattened, a conformation effected by the narrowness of the sternum ; great toe very long.

Group . Porrte.

Gen. Parra of Linne. — Feet with four very long toes, divided to the root ; nails long, bill like that of the varnus ; wings armed with a spur.

P. jacana.

P. cenea.

Group 2. Palamedef of Linne.*

Two strong spurs upon each wing ; bill slightly cloven ; somewhat compressed, not enlarged ; up- per mandible slightly arched.

Gen. 1. Palamedea. — A long fine horny shaftupon the head.

*Gen. 2. Chauna. — Hind part of the head orna- mented with a circle of raised feathers, which, and the upper part of its neck, are covered*with down. VOL. XXII.*

Parra chararia.

Group 3. Ralli.

Gen. Rallus. Head destitute of escutcheon. R. aquaticus. R. crax. R. parzema.

Group 4. Fulica.

Forehead furnished with a horny disk. Gen. 1. Gdlinula of Brisson. — Bill compressed ; toes very long. Fulica chloropus.

F. naevia.

Gen. 2. Porphyrio of Brisson. — Bill higher in proportion ; frontal plate large. Support them- selves on one foot whilst they eat.

Fulica porphyrio.

Gen. 3. Fulica of Brisson. — Bill short; toes widened by a festooned border.

Fulica atra ; F. atarrima et sethiops of Gmelin.

Gen. 4. Glareola of Gmelin. — Bill short and co- nical, arched entirely ; wings very long, often forked .

G. Austriaca.

Gen. 5. Phenicopterus.

P. ruber.

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ORDER VI. — PALMIPEDES. ANSERES.

Sternum very long, defending a great part of their viscera, not having a notch on each side. Gizzard muscular; ccecal appendages long : inferior

larynx simple, but inflated in one family into carti lagmous capsules.

Family 1. BRACHYPTERA. — Alis brevibus.

Legs placed further behind than any of the other families ; wings short ; plumage compact ; confine themselves to the surface of the water.
Subdivision. 1. COLYMBI.

Bill thin, straight, compressed, pointed ; nostrils linear.

Gen. 1. Pediceps of Latham. — Colymbus of Bris. Middle nail flattened; tarsi very much compressed. Instead of palmation, integuments spread out.

C. cristatus urinator.

C. cornutus, obscurus, caspicus.

C. povotis subcrustatus, rubricollis.

C. minor.

Gen. 2. Mergus of Brisson. — Feet palmated.

Colymbus glacialis, arcticus, immer.

C. septentrionalis stellatus.

Geu. 3. Uria of Brisson. — Destitute of a great toe

Colymbus troile.

Gen. 4. Cephus. — Bill shorter ; back less arched and without indentation. The symphysis of the lower mandible is very short.

Colymbus minor of Grylle.

Subdivision. 2. ALC.S.

Bill very much compressed, elevated vertically; dorsum sharp, commonly furrowed across.

Gen. 1. Fratercula. — Bill shorter than the head, and higher at the base than it is long.

Alca artica ; Labradoria of Gmelin.

Group 1. Procellaria. — Nostrils tubular

Gen. Procellaria. — Bill hooked at the point, ex- tremity seems to be composed of a piece which is articulated to the rest; nostrils united into a tube upon the dorsum of the mandible.

Procellaria gigantea of Latham, quebrata huesos.

P. Capensis.

These birds were our constant Companions during several thousand miles, and quitted our company a short time in the Blossom's passage round the Horn

Procellaria glacialis. P. pelagica.

Gen. 2. Puffinus. — Lower mandible bent towards the base with that of the upper. Nostrils not opening by a single orifice, but by two distinct apertures.

Procellaria puffinus. P. obscura. P. aequinoctialis.

*Gen. 3. Hulodroma of Iliger. — Halodroma, from aXac the sea, and <5po/*a), to run, alluding to its habit of running upon the sea through the assistance of its wings, which is not confined to this genus. Bill similar to that of the preceding genera, but the throat is dilatable like that of the cormorant; great toe en- tirely wanting.*

Procellaria urinatrix.

Gen. 4. Pachypteˆa of Iliger. — Ends of the bill furnished with plates, as in the ducks. Procellaria furcata. P. marina. P. fuliginosa.

P. vittata, cerulea of Gmelin. Gen. 5. Alca. — Bill longer, and in form of the plate of a conteau ; wings too small to support the weight of the body.

Procclllaria lorde et pira of Gmelin. P. impennis of Linne.

Group. 2. Aptenodytes of Foster.

Wings with only the vestiges of feathers, which

at first sight resemble scales ; the trosis is enlarged

like the heel of a quadruped, and within are found

three bones cemented together by their extremities.

Gen. 1. Aptenodytes of Cuvier. — Manchots. Bill

slender, long, and pointed ; the upper mandible

somewhat arched towards the extremity, covered

with feathers nearly a third of the length, where is

seated the nostril.

Aptenodytes patagonica.

Gen. 2. Catarrhactes. — Bill strong, somewhat compressed, pointed; dorsum round, the point some- what arched.

Aptenodytes chorysocona.

Gen. 3. Spheniscus. — Bill compressed, straight, ir- regularly furrowed at its base; the end of the upper mandible hooked, inferior truncated ; nostrils in the middle and bare.

Aptenodytes deomersa.

Family. 2. ALIS LONGISSIMIS. This family is recognised by its great toe beino; either free or deficient, very long wings, and bill without denticulations, but hooked at the tip in the first genera, and simply pointed in the rest. The inferior larynx has but one appropriate muscle on each side ; stomach muscular ; coecal appendages short.

Group 1. Diomedea. Gen. DIOHEDEA of Linne", which see. D. spadicea. D. chlororynclius. D. fuliginosa.

Color dusty black, a semicircular ring of white about the eye.

Group 2. Lori. See LARUS. Gen. 1. Lurus. — Nostrils narrow, in medial dis- tance from the base and the tip. Larus marinus. 1.. uhuicus argentatus. L. cyanorcynchus catriscilla erythropus. L. canus, rudibundus, hybernns. L. tridactyiis, rissa of Gmelin. Deserves to be

placed by itself from the deficiency of a great toe.

Gen. 2. Lestrisof Iliger.— Nostrils membranous, larger than in the genus larus, placed nearer the end than the base of the bill.

Larus parasiticus.

L. crepidatus of Gmelin.

Group 3. Sterna.

Bill straight and compressed, without any cur- vature ; nostrils at the base.

Gen. 1. Sterna. — Tail forked; no prominence.

Sterna hirundo.

S. minuta.

S. nigra, fissipes.

S. leucoptera of Tern.

S. alba of Lay. Common in the South Pacific Ocean; great numbers were seen by us in the island of Pitcairn, hovering over a species of man- grove tree which grows there ; the eggs are white, with dusky-red spots of unequal sizes.

Gen. 2. Noddies.— Tail not forked bill slightly prominent underneath.

S. sterna stolida.

Gen. 3. Rhyncops of Linne. — Resemble the sternse in several respects, but is distinguished from all other birds by the comparative shortness of the upper mandible.

Rhyncops nigra of Linne.

Family 3. PEDIBUS PALMATIS.

Great toe united with the rest by a single mem- brane.

Group 4. Pelecani.

A certain space under the throat bare of feathers; nostrils a very narrow chink; skin of the throat dilatable; tongue small, for it would appear that the materials of the tongue have been abstracted to form the vast dilatation of the fauces. Pelecanus, from iriXiKvc, an axe, applicable to the form of the bill.

Gen. 1. Onocrotalus of Bris. — Bill long, straight, and hooked ; the flexible branches of the lower man- dible bear on their edges a membrane dilatable

into a large pouch.

Pelecanus onocrotalus of Linne.

P. Philippensis.

P. fuscus.

Gen. 2. Halieus of Iliger. — Bill nearly the same ; throat less dilatable ; nail of the second toe hooked like a saw.

Pelecanus carbo.

P. graculus, Africanus.

Gen. 3. Pelecanus of Linne". — Tail forked; feet short, membranes of the toes deeply hollowed out.

Pelecanus aquilus of Linne.

Gen. 4. Sula. — Bill straight, slightly compressed, short, point somewhat arched, its edges hooked like a saw.

Pelecanus bassanus.

Gen. 5. Plotus. See PLOTUS.

Gen. 6. Phaeton. See PHAETON.

Family 4. — ROSTRO LAMIKIS INSTRUCTO.

Bill thick, clothed with a soft skin ; its edges furnished with plates or small teeth ; tongue broad and fleshy, denticulated at its edges. In the greater number the trachea or windpipe of the male is inflated near its bifurcation into capsules of different forms ; gizzard large and very muscu- lar; coecal appendages long.

Group 1. Anseres

Bill large and broad, its edges furnished with prominent plates, fine and placed crosswise.

Gen. 1. Cygnus. — Bill of equable breadth, higher at the base than broad ;

nostrils in the medial division of its length; neck very long.

Anas olor.

A. cygnus.

A. plutonia; the atrata of Latham.

A. cygnoides.

A. gambensis.

Gen 2. Anser of Brisson. — Bill of a moderate length or short, narrower before than behind, higher than broad at its base.

Anas anser.

A. albifrons.

A. hyperborea of Gmelin.

Gen. 3. Les Barnaches. — Bill shorter and finer ; its edges do not allow the plates to appear on the outside.

Anas bernicla.

A. jEgyptiaca.

A. leucoptera.

A. antarctica.

Group 2. Anaics.

Bill not so high as broad at the base, as wide or wider at the tip than at the base ; nostrils nearer the dorsum and base of the bill ; legs short. First subdivision.

Gen. 1. Les Macreuses. — Upper mandible with an enlargement upon its surface.

Anas nigra.

A. furca.

A. perpicillata.

Akin to this genus is anas lobates from New Holland, but ought to be

separated from it by rea- son of large fleshy wattles, which hang from their beak.

Gen. 2. Les Garrots.— Bill short, narrower be- fore.

Anas glacialis, hyemalis.

A. histrionica minuta.

A. clangula, glaricion.

Gen. 3. Les Eiders. — Bill longer than in the last ; remounting upon the forehead and dividing the feathers.

Anas mollissima, spectabilis.

Gen. 4. MiUouins. — Bill broad and flat.

Anas ferina rufa.

A. renfina.

A. marila frzenata (fem.)

A. nyroca Africani (fern.)

A. fuligulaof Linne. Scandiaca. The young one. Second subdivision.

Great toe is not margined by a membrane ; head thin ; feet less broad ; neck longer ; bill more equal.

Gen. 1. Les Souchets. — Bill long; upper mandi- ble turned perfectly in semi-cylindric form, widened at the end.

Anas clypeata.

A. fasciata. Edges of the bill prolonged into a membranous appendage.

Gen. 2. Tadoma.— Bill very much flattened at the end, raised at the base into a prominent boss.

Anas tadorna of Linne.

A. moschata of Linne.

A. boschas of Linne. — Tracheal capsule large and long.

Anas adunca. Bill hooked.

A. galericulata. Feathers of the wings widened and raised vertically.

Anas sponsa.

A. strepera Tracheal capsule of a middle size.

A. penelope.

Les Sarcelles.

A. querquedula (circia, the old male).

A. crecca.

Group 3. Mergi.

Bill finer and more cylindrical than in the las group, and each mandible is furnished at the edges with small pointed teeth like a saw, directed back wards. See MERGUS.

Mergus merganser.

M. serrator.

M. albellus.

CLASS III.— REPTILIA.

Reptiles have the heart disposed in such a man- ner that at each contraction there is sent into the lungs only a certain portion of that blood which has been received from different parts of the body, whilst the rest of the fluid returns again to the several regions of the animal frame without having passed through the lungs, which quantity of respi- ration, if .we call that of the mammalia unity, we must express by a certain fractional quantity. The females have a double ovary and two oviducts ; the males of many genera have the penis forked or double, but in the last order there is no male organ of generation. M. Brongniart divides this class into four orders, whose division we shall follow, only preferring the Latin terms to gallicisms.

ORDER I. — TESTUDINES.

The heart with two auricles : the body borne upon four feet, and covered completely with two plates or shields, formed by the rhs and the ster- num. The upper plate is called by the French carapace, and the lower one plastron, which terms the necessity of language admonishes us to borrow.

Gen. 1. Testudo of Brongn. — Carapace elevated ; toes short and united very nearly to the nails, which are thick and conical ; four behind and five before ; head can be withdrawn entirely under the carapace.

T. grocca.

T. indica.

T. geomptri

Gen. 2. JL,..^^ -> Brongn. — Freshwater turtle. Toes more separate, terminated by longer nails, intervals of which are occupied by membranes.

T. Europsa

T. picta.

Gen. 3. Pyxis. — Tortues a boite of Cuvier. Plastron divided into two compartments by a moveable artieulation, by which means they can shut their carapace completely when the head and limbs are withdrawn.

La tortue a boite d'Amboine of Daud.

Gen. 4. Tail nearly as long as the carapace.

T. serpentina.

Gen. 5. Chelonia. — Sea turtle. Horny inve- lope too small to receive the head ; feet lengthened and flattened to answer the purpose of fins ; all the toes closely united by a membrane.

T. mydas. When a great many of these ani- mals were taken on board the Blossom, from Bonin Island, they were observed to breathe about eight times in the hour at an average : 300 eggs were counted in one of the ovaries, and it appeared to us that one ovary only became fertile at one time.

T. imbricata.

T. caouana.

T. coriacea.

3D"

Gen. 6. Chelys of Burner — Snout prolonged into a small trumpet ; throat cloven across, and :iot covered with horn as in the rest of this order.

T. fimbriata.

Gen. 7. Trionyx of Geoffrey. — Without scales; carapace and plastron covered with a soft skin.

T. triunguis.

T. feron.

ORDER II. — LACERTACFJE.

Heart with two auricles ; body borne upon four feet, and covered with scales.

Family 1. CROCODILI.

Large stature ; tail flattened laterally ; five toes before and four behind ; three inner ones only armed with nails; all of them more or less con- nected together by membranes.

Gen. 1. Lei gavials. — Snout slender and very much elongated ; teeth equal.

Lacerta gangetica.

Gen. 2. Crocodilus. — Snout oblong and de- pressed ; teeth unequal.

L. crocodilus.

Crocodilus biporatus of Cuvier.

Gen. 3. Alligator. — Snout broad, blunt; teeth unequal.

C. sclerops of Schn.

C. lucius of Cuvier.

Family 2. LACERT.*

Distinguished by their thin tongue, which is ex- tensible and terminates into two long filaments ; toes separate and unequal.

Group 1. Monitores.

This group includes species on a larger scale of magnitude.

Gen. 1 . Monitor. — Scales small and numerous.

Tupinambis elegnus of Daud.

Lacerta nilotica. Tail with a denticulated ridge.

L. Capensis tupinambis ornatus.

Cuaran el hard, M. terrestris. Tail without ridge.

Gen. 2. Lee dragonnes. — Scales large with ridges like those of the crocodili.

La dragonne of Lacep.

Gen. 3. Les sauvegardes. — All the sca.es of t.ie back small and without ridges; one rank of pores imperfectly marked under each thigh ; feet denticulated.

Lacerta teˆuixin of Linne" et Sh.

Gen. 4. Ameira. — Sauvegaurdes with a round tail.

Lacerta ameira of Gmehn.

Group 2. Lacertce proprus.

Gen. 1. Lacerta. — Palate armed with two ranks of teeth ; a collar under the neck formed by a transversal row of broad scales separated from those of the belly by a space.

Gen. 2. Tachj/dnmias. — Body and tail very long ; rows of square scales upon the back.

Family 3. IGAUNACE«.

Tongue fleshy, thick, incapable of extension, and notched only at the end.

Group 1. SteUiones.

Tail surrounded by rings composed of large scales, often spiny ; teeth in the palate wanting.

Gen. 1. Cordylus of Daud.— Tail, belly, and back runn'shed with large scales set in transversal ranks,

Lacerta cordylus.

Gen. 2. Stt-ltio. — Head enlarged behind by the muscles of the jaws.

Lacerta stellio.

Gen. 3. Stetlions batards of Daud. — Head without enlargement behind ; rows of pores under the thigh.

Stellio spinipes of Daud.

Group 2. Agamte.

Scales of the tail imbricated.

Gen. 1 . Agama. — Scales raised into a spiny point ; different parts of the body spiny.

JL'Agame des colons of Daud.

Lacerta muricata of Shaw.

Gen. 2. Belly inflated ; tail short and thin,

Lacerta orbicularis.

Gen. 3. Trnpc/us of Cuvier. — Scales small, smooth, and without spines.

Le changeant d'Egypte of Geoffrey.

Gen. 4. Catotes. — Scales imbricated ; free and cutting at their edges.

Lacerta calotes of Linnd.

Gen. 5. Lophurm of Dum. — Dorsal crest extend- ed over the length of the tail.

Lacerta scutata of Linne.

L. superciliosa.

Gen. 6. Basiliscus. — Dorsal crests share, support- ed by the apophyses of the spine.

L. basiliscus of Linne.

L. Amboinensis of Gmelin.

Group 3. Dracones.

First size of the false ribs extending and affording support to an alar prolongation of the integuments. Group 4. Iguana.

*Back ridged with elevated scales, which are less compressed and pointed; anterior edge of the dewlap supported by a cartilaginous process of the os hyoides. *

Gen. 1. Iguana.

Lacerta iguana of Linne". I. tuberculata of Lem.

L' iguanse ardois6 of Daud.

L' iguane a col nu of Cuvier.

L' iguane cornude, Saint Domingo of Lacep.

L' iguane a bandes of Brong.

Gen. 2. Polychrus of Cuvier. — Without dorsal crests ; throat forms a dewlap at the pleasure of the animal.

Lacerta mannorata of Linn6.

Gen. 3. Anolius of Cuvier. — Skin of then toes widened, at the antepenultimate phalangial bone, into an oval disk; dorsal crest present.

Family 4. GECKONES or ASCALABOTETES.

Skin of the toes widened the whole length, or at least at the extremities, and furnished underneath with scales or cuticular folds to assist them in climbing.

Gen. t. Platydactyli. — Toes widened in the whole length, and furnished underneath with transverse scales. With nails.

Gecko inunguis of Cuvier. G. ocellatus of Oppel. G. cepedien of Pe"ron. Without 'nails.

Lacerta Mauritania of Gmelin. (Stellio). Without nails and thumbs.

Stellio gecko of Schn. Lacerta vittata of Gmelin.

Gen. 2. Hemidactyti. — Base of their toes fur- nished with an oval disk.

Gecko of Siam or Tokaie.

G. of Java.

Gen. 3. Thecadactyli, — Scales forming a farrow underneath for the lodging of the nail.

Gecko laˆvis of D. Stellio perfoliatus of Schn.

Gen. 4. Ptyodactyli. — Ends of the toes only di- lated into plates.

Lacerta gecko ; gecko labiatus of Geoffrey.

Gen. 5. Uroplutia, stellio fimbricatus.

Phylluri.

Stellio phyllurus.

Family 5. — CAM./ELEONES. See GAMBLED. Family 6. SCINCIOIDES.

Feet short; tongue not extensible; scales imbri- cated.

Gen. 1. Scinci of Daud. — Body smooth and ta- pering.

Lacerta scincus of Linne.

Gen. 2. Sepses of Daud. — Body still more elon- gated ; fed smaller ; hairs wide apart.*

Anguis, quadrupes of Linne.

Gen. 3. Bipedes of Lacep. — Fore feet wanting.

Lacerta anus of Gmelin.

Gen. 4. Chalcides of Daud. — Body very much elongated ; feet short and distant, very like the ser- pentes, but the scales are ranged in transverse bands.

Lacerta chalcis, chamossura ; cophias of Sch.

L. anguina. _ Gen. 5. Chirotetesoi Cuvier. Hind feet wanting.

Lacerta lumbricoides of Shaw.

ORDER III. — SERPENTES.

Reptiles without feet ; locomotion performed by means of alternate doublings of the body.

Family 1. ANGUES.

Head bony ; teeth and their tongue similar to those of the seps. Eyes furnished with eye-lids; in short, they are seps without feet.

Gen. 1 . Ophisaurus of Daud. — Tympanum exter- nally visible.

Anguis ventralis.

Gen. 2. Anguis. — Tympanum externally invisible.

A. fragilis of Linnd.

Family 2. SERPENTES PROPRI/E.

Destitute of a sternum, and without any vestiges of a shoulder.

Group 1.

Lower jaw bone is as in the foregoing orders of reptiles, by an os tympanique, or drum-headed bone, immediately articulated to the cranium ; the two branches of this jaw are cemented together in front, and those of the upper jaw fixed to the cra- nium, and to the intermaxillary bone.

Gen. 1. Atnphisbffna of Linne.

Gen. 2. Typhlops of Schn. — Snout depressed, advanced and furnished with plates.

Anguis lumbricalis of Lacep. Group 2.

The os tympanique, or pedicle of the lower jaw moveable, and generally suspended by another bone analogous to the mastoid, which is attached to the skull by muscles and ligaments, that allow it a certain degree of mobility.

Gen. 1. Torlrixof Appel. — Scales larger than in the rest of this grotup.

Anguis scytale.

(n-n. 2. Boa of Linne.

Gen. 3. Erni — Differ from the Boa, in having a very short tail ; and the ventral plates small.

Gen. 4. Herpetus of Lacep. — A pair of scaly prominences upon the snout.

Group 3. — Colubrt.

Gen. 1. Pythonof Daud. — A pair of hooks near the anus.

Gen. 2! Hurria. — Scales under the tail simple, near the tip double.

Gen. 3. Dipsas. — Body compressed.

D. Indica.

Gen. 4. Coluber.

C. natrix.

Gen. 5. Acrochordius. — Head and body covered with uniform small scales.]

A. Javensis.

Family 3. SERPENTES VENENOSI.

The first tooth in the upper jaw larger than the rest, and tubular for conducting the poison.

Gen. 1. Bongaru of Daud. — Back carinat»d.

Gen. 2. Trimesurus of Lac. — Back without any peculiarity.

Gen. 3. Hydrus. — Body very much compressed.

Gen. 4. Hydrophis. — A row of scales somewhat larger than the rest under the belly.

Gen. 5. Pelamides. — Occiput inflated to make room for the lengthened pedicles of the lower jaw.

Anguis platurus.

Gen. 6. Chersydrus of Cuvier. — The head and the whole body equally covered with scales.

Acrochordius fasciatius of Shaw.

Family 4. SERPENTES VENENOSISSIMI. Their superior maxillary bones are very small; they are borne upon a pedicle, analogous to the ex- ternal pterygoid or apophysis of the spheroid, and are very moveable : there is fixed in them a sharp tooth hollowed by a canal that affords an exit to a humor secreted by a gland seated under the eye. This tooth is concealed in a fold of the gum when at rest ; behind it there are many germs destined in their turn to replace it, should it be lost in the exercise. This fang was once looked upon as moveable, but it is the jaw bone that is moved; there are no other teeth in the upper jaw bone besides this, but two ranks in the palate.

Group 1. Crotali.

Gen. 1. Crotalus.

Gen. 2. Scatale of Latham. — Entire plates under the body, and under the tail.

Gen. 3. Acanthophis of Daud. — Double plates at the end of the tail, which is terminated by a spine.

Gen. 4. Lanigaia of Brug. — Plates behind the anus, surrounding the tail.

Langaia, r.asuta of Shaw.

Group 2. Viper ee.

Integuments like those of the Coluber. – Gen. 1. Trigonocephalus. — Fossal behind the nos- trils ; tail generally ending in a small point ; occi- put enlarged.

Gen. 2. Platurus. — Tail compressed; head cover- ed with plates.

Gen. 3. Naia. — In progression the part of the body next the heart enlarged into a disk.

C. maia of Linne".

Gen. 4. Elaps of Schneid. — Head, owing to the shortness of the os tympanique and the mastoid bones, even with the rest of the body.

Coluber lemniscatus of Linne.

Gen. 5. I'ipeiu. — Head covered with granulate/I scales.

ZOOLOGY.

Coluber berus of Linne". C. vipera cerastes.

Gen. 6. Cobra. — Head imbricated, with carinated scales.

Family 5. SERPENTES Num.

Gen. CECILIA, wnich see. — The articulation of the vertebra is formed by two facettes of a hollow cone filled with gelatinous cartilage as among fishes, and their cranium is united to the first ver- tebra by a pair of tubercles, as in the batrachi; the maxillary bones cover the orbit, which is like a simple orifice; and the temporal bones cover the temporal foss in such a manner that the head pre- sents nothing but shell of bony continuity. The auricle is not sufficiently divided in this genus to be regarded as double ; their second lung is very small ; it appears that they place their eggs in a semi-membranous tube, and unite them into long chains.

ORDER IV. — BATRACHI.

*The heart has but one auricle and one ventricle. They all have a pair of lungs, to which are joined in the first stage of their existence certain bran- chiae or gills more or less analogous to those of fishes, which are attached to the sides of the neck by means of the cartilaginous rings that support the *s hyoidei.*

Famiiy 1. RAN..*

Gen. 1. Rana.

R. paradorea.

11. eseulenta.

11. temporaria.

R. taurina.

Gen. 2. Hyla. — Ends of the toes enlarged, and rounded into small viscous balls.

Rana arborea.

R. tinctoria.

Gen. 3. Bufo.

Rana bufo.

R. bufo calami ta.

R. bombina, &c.

Gen. 4. Pipa. — Body flattened horizontally ; no tongue ; head triangular.

Rana pipa.

Family 2. SALAMANDR of Brong.*

Gen. 1. Sulamandra, Laur. Lacerta salamandra. Gen. 2. Triton, Laur. S. marmorata of Latham. S. cristata. S. punata. S. palmata. S. giganta. Siren pisciformis.

CLASS IV.— PISCES.

Animals with a double circulation, but the res- piration is performed through the mediation of water, which is effected by means of an apparatus called the branchiae, consisting of leafy folds sus- pended by bony arches, which are connected with the os hyoides, and are severally composed of a great number of laminae, which may be separated Jike the threads of the warp when the woof is un- ravelled ; the tissue which invests these lamina: is replenished with countless branchings of blood- tessels. We shall presume that the reader is alreariy acquainted with the distinctions to which the fins are from their relative position subject, and

pass onwards to discuss the nature of this part ci our arrangement.

Pisces ossibus ex cartalagine concretis. Skele- ton cartilaginous, the calcareous matter being deposited in small grains and not in fibres nor filaments ; the cranium, owing to the plastic na- ture of the material, destitute of sutures, but described into portions by means of certain pro- minent lines.

ORDER I.

Branchiae fixed to the skin by their outward edge, to which the water has access through a cer- tain number of apertures in the sides of the neck.

Division I. — CYCLOSTOMA.

Skeleton the most imperfect of all the fishes ; no pectoral nor ventral fins ; body elongated, and ter- minating before in a circular or semicircular lip of a fleshy consistence, which is supported by a car- tilaginous rising, resulting from the commutual union of the mandibles and the palatine bones.

Petromyzon of Linne. Branchial apertures seven.

Gen. . Petromyzon of Dura. — Maxillary ring armed with strong teeth.

P. maximus.

P. fluvialis.

P. planeri of Bl.

Gen. 2. Ammoc&tes of Burner. — Skeleton soft and membranous ; no teeth.

P. branchialis of Linne".

Division II. — PLAGIOSTOMA.

Their palatine bones and their postmandibles only are armed with teeth and fulfil the office of the maxillary bones , of the ordinary bones there exists no vestige ; a single bone suspends the ap- parent jaw bones to the cranium, and at once represents the os tympanique, the zygomatic arch, and the temporal bone.

Family 1. SQUALL

Gen. 1. Scyltium of Cuvier. — Snout short and obtuse ; nostrils near the mouth.

Squalus canicula.

Gen. 2. Carcharias of Cuvier.— Snout depressed ; nostrils under its medial line.

Squalus carcharias.

S. vulpes.

S. glaucus.

Gen. 3. Lamna of Cuvitr. — Snout pyramidal.

Squalus cornubicus.

Gen. 4. Zygana of Cuvier. — Head of a singular conformation, to a fanciful view resembling a ham- mer.

Squalus Zygoena.

Gen. 5. Guleus of Cuvier. — Differs from the fore- going genera chiefly in

having the super umerary apertures behind the anus.

Squalus galeus.

Gen. 6. Mustelus of Cuvier. — Teeth in small pavements.

Squalus mustelus: two species are confounded under this name.

Gen. 7. Notidanus. — Differs from galeus solely in the want of the first dorsal fin.

Squalus griseus.

S. vacca.

Gen. 8. Selaclte. — Unite the forms of the carcharias will) the supernumerary apertures of the galeus.

Squalus maximus of Linne.

Gen. 9. Cestracium of Cuvier. — Add to the chief

c'inracters of the mustelus a spine before each dorsal fin.

Squalus philippi.

Gen. 10. Spinui of Cuvier. Unite most of the characters belonging to the preceding genera, but chierly distinguished by the absence of an anal fin.

(Jen. 11. Centriria of Cuvier.

Squalus ceotrina of Linne.

Gen. 12. Seymmu of Cuvier.

Squalus Americanus.

Family 2. SQUATIXJE of Dum.

Gen. 1. Squatina. — Opening of the mouth at the anterior edge, and not underneath as in the preced- ing family ; eyes seated upon the upper surface.

Squalus squatina of Linne.

Gen. Z.Pristis. Snout prolonged into a depressed beak, armed on each side with strong bony spines.

Squalus pristis of Linne.

Family 3. RAIJE.

Gen. 1. Rhinobatus.— Tail thick and fleshy.

Raia rhinobatus.

Gen. 2. Rhina. — Snout short, broad, and round.

R. ancylostomus.

Gen. 3. Torpedo.— the seventh pair of nerves curiously ramified and spread over a large portion of the body.

Gen. 4. Raia. — They present a disk of a rhom- boidal form.

It. clavata of Linne".

R. ruba of Linne.

R. batis of Linne.

Gen. 5. Trygon of Adams.— Tail armed with a serrated sting.

"laia pastinaca of Linne.

Gen. 6. Myliobates of Dum.— Head prominent.

Raia aquila of Linne.

Gen. 7. Ctpluiloptera.— Differs from the trygon chiefly in having the teeth thin and finely denti- culated.

Family 4. CHIM.ER.E of Linne.*

Gen. 1 . Chimxra of Cuv. — Snout simply conical.

C. monstrosa of Linne.

Gen. 2. Callorynchus of Grov. — Snout terminated by a fleshy lip.

C. callorynchus of Linne.

ORDER II.— CHOXDIIOPTERYGII.

Branchiis liberis. Gills furnished with an oper- culum, but the branchiostegous membrane is without rays.

Gen. 1. Acipenser of Linne.

Gen. 2. Spatularia of Shaw. — Recognised by an enormous extension of the mouth, which by its widened edges puts on the figure of a leaf.

Squalus spatula of Manduil. Found in the Mississippi.

ORDER III. — PLECTOGXATHA.

Skeleton of a fibrous texture ; maxillary bone firmly attached to the intermallary side, which alone forms the jaw ; the palatine arch is jointed by a suture to the cranium ; opercula and the gills concealed under the skin, and visible only through a small cleft.

Family 1. GYMXODONTES.

An ivory substance in the room of teeth, which consists internally of plates. The apparent bill thus formed must be considered as resulting from the confluence of the mere teeth ; for it is further observable that there is a certain disposition in the '•or.es of the head to blend with each other, owinu

no doubt to the soft and plastic nature of their materials.

Gen. 1. Diodon of Linne.

Gen. 2. Tetraodon of Linne.

Gen. 3. Cephalotus orthagorinus of Sch. — This genus differs from the diodon in having the body compressed and without spines.

Family 2. SCLERODERMATA.

Snout conical or pyramidal, prolonged from the eyes, terminating in a small mouth, which is armed with a few distinct teeth ; skin covered with hard scales.

Gen. 1. Batistes. — Scales large, very hard, and of a rhomboidal form. See BALISTES.

B. capriscus.

Gen. 2. Monocanthus of Cuvier.

Balistes Chinensis. Scales very small, roughened by stiff and compact

scabrosities.

Gen. 3. Aluterus of Cuvier.

Balistes monoceros of Linne. — Body elongated, covered with small compact grains.

Gen. 4. Triacanthus of Cuvier. — Each ventral supported by a large thorny ray.

Gen. 5. Ostracion. See OSTRACION.

ORDER IV. — LOPHOBRAXCHIA.

Branchiae divided into small round crests, dis- posed in hairs along the branchial arches, and en- closed under a large operculum, which is so at- tached by a membrane as to leave only a small chink for the exit of the water.

SYGNATHI.

Gen. 1 . Sygnathus. — Body very long and very fine, and of nearly equal diameter in its whole length.

S. pelagicus.

Gen. 2. Hippocampus. — Trunk literally com- pressed, elevated above the tail.

Sygnathus hippocampus.

Gen. 3. Solenostomus.— Ventral fins united into a sort of tablet.

Fistularia paradoxa.

Gen. — PEGASUS of Linne", which see.

ORDER V. — MALOCOPTERYGII ABDOM INALES.

Rays of the fins soft, excepting sometimes the first ray of the dorsal or the pectoral fins. Ven- tral fins behind the pectoral.

Family 1. SALMON EB. Gen. 1. Salmo of Cuvier.

S. salar of Linne". Gen. 2. Oswerus of Cuvier.

S. eperlanus. Gen. 3. Coregonus.

S. thymallus.

Gen. 4. Argentina of Linne". Gen. 5. Chttracinus of Cuvier. Gen. 6. Curimatus of Cuvier.

S. edentulus. Gen. 7. Anostomus of Cuvier.

S. anostomus of Cuvier. Gen. 8. Piabucu of Marg. Gen. 9. Atyletfs of Cuvier.

Cyprinus denter; Salmo denter; S. niloticus Gen. 10. Hydrocynus of Cuvier.

S. falcatus.

Gen. 11. Citharimis of Cuvier. S. ˆ.gypticus of Gmelin. Gen. 12. Saurt/s of Cuvier.

S. saurus of Linne.

Gen. 14. Scopelus of Cuvier. Argentina sphyrcena of Pennant in the opinion of Cuvier.

We trust that the attentive reader will be able, with a little diligence, to elicit the appropriate ge- neric characters from the descriptions already given in their places. Sternoptix of Heven.

Family 2. CLUPEJE.

Destitute of adipose substance; upper jaw formed, as in the trouts, in the middle by inter- maxillary bones without pedicles, and at the sides by the maxillary. Gen. 1. Clupea. C. harengus. Gen. 2. Meg lops.

Clupea cypoernoides of Bl. Gen. 3. Engraulis of Cuvier.

Clupea encrasicholus of Linne. Gen. 4. Thrissa of Cuvier. Clupea atherinoides of Bl. Pristigaster of Cuvier. Notopterus of Laap. Gymnotus notopterus of Pall. ELOPS of Linne.

CHIROCENTRUS of Cuvier. Tongue and bran- chial arches rough with carded teeth ; structure of the jaws resemble the clupeae.

ERYTHRINUS of Gronov. Esox MalabaricusofBl. AMI A of Linn6.

Sudis. — Dorsal and anal fins nearly opposite and nearly equal.

Lepisosteus. — Scales of a stony hardness. Esox osseus.

Falypterus of Geoffroy. — Scales of a stony hardness ; Numerous fins upon the back, each sup- ported by a strong spine.

Palypterus bichir of Geoffroy.

Family 3. ESOCES.

Upper jaw at the edge is formed by the inter- maxillary ; maxillary without teeth, and concealed within the lips; intestine short; without ccecal appendages.

Group Esoces propria.

Gen. 1. Esox.

Esox lucius of Linne".

Gen. 2. Galaxias of Cuvier. — Body without ap- parent scales.

Gen. 3. Microstoma of Cuv. — Snout very short.

Gen. 4. Stomias of Cuvier. — The opercula re- duced to small membraneous leaflets.

Gen. 5. Chauliodus, Schn. Esox stomias of Shaw.

Gen. 6. Salana of Cuvier. — The opercula folded underneath.

Gen. 7. Belone of Cuvier. — Jaws prolonged into a long snout.

Gen. 8. Scomberesox of Lacep. — Belly kclled.

Gen. 9. Hemi-ramphus. — Symphysis of the lower jaw prolonged into a long sprit.

Gen. 10. Mormynis of Linn6. — Intestines long; a pair of ccecal appendages; these are the chief differences between this and the preceding genera.

Family 4. CYPRINI.

Without adipose substance; recognised by a small mouth, weak jaws, and generally without teeth ; edge of the jaw formed by the intermaxil- lary

bones; pharyngial teeth strong; branchial ravs few in number; body scaly; intestine with-

out a cul-de-sac at the stomach, and without coec.il appendages.

Group \ . Cyprini proprii.

Gen. 1. Cyprinus.

Cyprinus carpio of Linne".

Gen. 2. Barbus of Cuvier. Cyprinus barbus of Linne.

Gen. 3. Gobio of Cuvier.

Gen. 4. Gobio of Linne".

Gen. 5. Tinea of Cuvier. Cyprinus tinea.

Gen. 6. Cirrhinus. — Beard or cirrhi upon the middle of the upper lip.

Gen. 7. Abramis of Cuvier. Cyprinus brama. C. bleica ; latus of Gmelin.

Gen. 8. Labeo of Cuvier. — Lips fleshy, and of a remarkable thickness.

Cyprinus niloticus of Geoffroy.

Gen. 9. Leuciscus of Klein. Cyprinus dobula of Linnd. C. rutilus. C. lenciscus. C. cultratus of Blumenbach.

Gen. 10. Gonrynchus of Gronov. — Head and body lengthened ; snout prominent.

Cyprinus gonorynchus, Gron. Group 2. Cobites.

No ccecal appendages ; natatory bladder very small.

Gen. 1. Anableps. — Eyes prominent, beneath a vault formed on each by a production of the frontal bone ; cornea and iris divided into two por- tions by transverse bands.

Cobitis anableps of Linne".

Cen. 2. Pscilia, Schn. — Jaws flattened horizon- tally ; furnished with very fine teeth.

Pcecilia vivipara, Schn. Small fish inhabiting the fresh waters of America.

Gen. 3. Lebias of Cuvier. — Differs from the last in having the teeth denticulated.

Gen. 4. Cyprinodous, Lacep. — Teeth carded ; in other respects very like the pcecilis.

SILUROIDES. Destitute of true scales ; intermax- illary bones suspended under the ethmoid, from the edge of the jaw ; maxillary bones reduced to simple vestiges. Intestine ample and folded ; without ccecal appendages ; natatory bladder large, attached to an appropriate apparatus of bone.

Siluri of Linne ; true siluri. This division em- braces several genera, which our limits will not permit us to notice particularly, and there is less need of description in this place, because their general notes of distinction are obvious and na- tural.

Gen. 1. Mulnpterurus, Lacep. — Destitute of true fins upon the back, and only a small adipose one upon the tail.

Silurus electricusof Linne".

Gen. 2. Asirredo of Linne". — Head flattened; body widened by the extension of the shoulder bones.

Silurus aspredo of Linne" ; platystacus lavis. Bl.

Group 3. Loruuiia.

No ccecal appendages, nor natatory bladder; true opercula immoveable.

Gen. 1. Hypustomai, Lacep. — Labial veil simply papillose.

Gen. 2. Loricaria. — iˆibial vul furn:shtd with cirrhi at the edges.

ORDER VI. — MALACOPTERYGII SUBBRACHII.

Family 1. GADI.

Recognised by the ventral fins attached to the throat, and acuminated to a point; body covered with soft scales ; head well proportioned, without scales ; all the fins soft ; stomach in form of a large sac, stout ; ccecal appendages very numerous ; intestinal canal very long ; natatory bladder large ; walls stout, and often toothed at the sides.

Gen. 1. Morrhua. — Three dorsal fins, two anal ; a cirrhus at the end of the lower jaw.

Gadus morrhue of Linne.

G. aglefinus.

Gen. 2. Merla. — The same number of fins, but •wants the cirrhus

Gadus merlangus-

Gen. 3. Merluccius. — Two dorsal fins ; one anal ; want the cirrhus.

Gen. 4. Lota. — Fins as in the last ; cirrhi more or less numerous.

Gadus molua.

G. lota.

Gen. 5. Mustela.— Anterior dorsal somewhat raised, but scarcely perceptible.

Gadus mustela.

Gen. 6. Brosme. — Dorsals united into a single long fin.

Gadus brosme of Gmelin.

Gen. 7. Phycis of Artedi. — Ventral fin of a single ray, often forked ; head thick.

Phycis Mediterraneus, Lar. Blenneus phycis of Linne

Phycis blennoides ; gadus albidus of Gmelin ; blennius gadoides, Risso. ; Gadus furcatus of Pen.

Gen. 8. Raniceps. — Head more depressed than the rest of the gadi ; anterior dorsal very small.

Gen. 9. Lepidelepus, Risso.; les Grenadiers. — The suborbital bones mutually united with the bones of the nose in order to form a depressed snout, which reaches beyond the mouth, under which the latter preserves its mobility.

Lepidelepus calorynchus, Risso.

Gen. 10. Macrourus. — First dorsal fin distinct, short ; others vertical,

united near a long pointed tail ; scales carinated and rough.

Coryphcena rupestris of Gmelin.

Family 2. PLEURONECTES.

A family of most easy recognition, embracing the following genera : — Platessa, hippoglossus, rhombus, salea, wherein their specific forms may be looked upon as generic characters.

Gen. 1. Monoc hirus of Cuvier. — Pectoral on the side whereon the eyes are placed, extremely small.

Gen. 2. Achirus. — No pectoral fins.

LEPADOGASTER, Gouan. The ample pectoral fins united by a transverse membrane ; body without scales ; snout prominent and extensible.

Lepadogaster gouan.

L. rostratus, Schn.

L. balbis, Risso.

Gen. Gobiesoi. The interval between the pectoral and the ventral fins is not divided into a double disk, as in the last.

Lepadogaster dex.

CYCLOPTERI of Linne".

Gen. Cydopterus. — First dorsal more or less vi- sible.

Cyclopterus lumpus.

Liparis. A single long dorsal fin.

Cyclopterus liparis of Linne"

ECHENEIS of Linne.

Gen. Ophicephalus. — Trunk and head covered with large scales ; those of the vertex irregular and somewhat like those upon the head of a serpent.

ORDER VII. — MALOCOPTERYGII APODES.

Comprised under the head of one natural fa- mily: AXGUILLIFORMES. Form lengthened; skin thick, which in a measure hides the scales ; scarcely

any ridges ; without ccecal appendages ; almost all with swimming bladders, which often have a very singular form.

Group 1. MurceiKf.

Gill openings on each side under the fins stomach a large cul-de-sac ; intestine nearly straight; bladder elongated near the middle; it bears a peculiar gland.

Gen. 1. Murana.

M. anguilla.

Gen. 2. Conger. — Dorsal commencing near the pectoral.

Murcena conger.

Gen. 3. Ophisurus. — Dorsal and anal fins termi- nating before they reach the tail.

Murcena serpens of Linne.

Gen. 4. Gymnothras, Bl. Pectoral fins wanted.

Murcena helena of Linn£.

Gen. 5. Sphagebranchus of Bl. Bronchial aper- tures approximating.

Gen. 6. Synbranchus of Bl. — Bronchial apertures unite without into a single orifice.

Gen. 7. Alabes. A small disk between the pec- toral fins.

Group 2. Gymnoti of Linne.

Branchial apertures like the last ; partly shut by means of a membrane, but this membrane opens be- fore the pectoral fins ; anus placed far before ; anal fins run under the greater portion of the length of the body, and frequently to the end of the tail.

Gen. 1. Gymnotu. — Intestines folded many times ; ccecal appendages numerous*

Gymnotus electricus of Linne.

Gen. 2. Carapus. — Body compressed; scaly.

Gen. 3. Stenarchus of Schn. — Anal fin terminat- ing the body, reaches the end of the tail.

LEPTOCEPHALUS. Branchial apertures larger than in the muroena ; body compressed like a riband.

Leptocephalus morrisii of Gmelin.

OPHIDIPM. Branchial apertures fairly opened and fortified with a large operculum; branchioste- gous membrane short.

(Gen.) Two cirrhi. Ophidaim barbatim.

(Gen.) Cirrhi wanted. O. imbarbe.

AMODYTES of Linne.

ORDER VIII. — ACASTHOPTERYGII.

Distinguished by the spines which occupy the site of the first rays, the dorsal, or sometimes range themselves in front of that fin. Then anal fin also has some spines instead of the anterior rays, and they generally have spines one at each ventral.

Family 1. T.ENIOIDES.

First division. — Characterised by a body ex- tremely elongated and flattened, and similar to a riband, furnished with a fin which runs the whole length of the body.

Gen. 1. Cepola ot Linne.

L'. rubescens.

ZOOLOGY.

Gen. 2. Lophotei of Giorna. — Head surmounted by a light bony crest, to the summit of which is arti- culated a long and sturdy ray, bordered behind with a membrane.

L. Lacepede of Giorna. Found rarely in the Mediterranean.

Gen. 3. Regalecus of Ascan. — Noanal nor caudal fins; and the ventral are reduced to long filaments.

Gymnetrus remisses of Schn.

G. russelii of Shaw.

Gen. 4. Gymnetrus of Blum. — A single fin upon the back, and co-extended with it

G. cepidianus of llisso.

Gen. 5. Tacky pterus of Gounn. — Dorsal very long and supported by round rays, of which theanteriors are toothed like a saw.

T. toenia of Schn. ; cepola tachyptera of Gmelin.

Gen. 6. Gymnogaster. — Destitute of ventral as well as of anal fins.

G. arcticus.

Second division. — Snout pointed and the gape deeply riven.

Gen. 1 . Trichiurus. — Teeth long and barbed ; tail terminating in a slender filament ; stomach long and thick; coecal appendages numerous ; intestine straight ; swimming bladder large and simple.

T. leptwus.

Gen. 2. Lepidotus. — Differ from the trichiurus in having a caudal fin of the ordinary shape.

Trichiurus caudatus of Vandellius ; lustianicus of Shaw ; ziphetheca tetradens of Montague.

Gen. 3. Stylephorus of Shaw. — Upon the end of the tail, which is extended into a filament longer than the body, there is a fin distinct from the first dorsal which is nearly co-extended with the body.

S. chordatus of Shaw.

Family 2. GOBIOIDES.

Dorsal spines slender and flexible; intestinal canal ample, equal, and without ccecal appendages; swimming bladder none.

BLENNII. Ventral fins placed before the pectoral and composed of two rays only ; stomach thin, and without cul-de-sac.

Gen. 1. Blennius. — Tentacula under each eye- brow.

B. ocellaris of Blumenbach

Gen. 2. Membranous prominence upon the vertus.

Gen. 3, Pholis. Without either crest ortentaculum.

Gen. 4. Clinus. — Snout more obtuse than any of the others.

Gen. 5. First rays of the dorsal distinct ; small bundles about the eye-brows.

Gen. 6. First rays of the dorsal extended upon and forming a rayed crest upon the ventral.

Gen. 7. Centronotus of Schn. — Ventral fins scarce- ly perceptible.

Gen. 8. Opithognathus of Cuvier. — Maxillary bones very large, and extended behind into a sort of long flat whiskers.

O. sonneratii of Cuvier.

Gen. 9. Anarrhichas of Linnd.

GOBI i. Branchiostegous membrane with only four rays. Stomach without cul-de-sac or coecal appendages. Males with an appendage behind the anus. Some of the species are viviparous.

Gen. 1. Gobiut.

G. niger of Linne.

Gen. 2. Gobioidc of Lacep. — Dorsal fins united.*

Gen. 3. Tcenimdes of Lacep. — Kyes obliterated.

Gen. 4. Periophlltulmus of Sch. — Eyes furnished with eyc-l.i

Gen. 5. Elestris. — Ventral fins distinct ; eyes crossing ; branchial membrane with six rays.

Gen. 6. Sillago of Cuvier. Mouth protractile, fur- nished with fleshy lips ; opercula armed with a small spine; preopercula slightly toothed.

S. acute of Cuvier. > T j- ci 01 f r> • / Indian bea.

i>. domma of Cuvier. S

CALLIONYMI. — Branchial aperture reduced to a small orifice. Ventral fins under the throat, larger than the pectoral.

Gen. 1. Trichonotus of Schn. — Body very much elongated ; first two rays

of the dorsal lengthened into bristles.

C. avacuncirlus.

Gen. 2. Comephorusof Lacepede. — Snout oblong, broad, and depressed.

C. Baicalensis.

Family 3. LABRO:DES.

Body oblong, scaly ; one dorsal, supported by strong spines, furnished oftentimes with a membra- nous lappet : lips fleshy ; intestinal canal without or with two very small ccecal appendages; tae swimming bladder strong.

LABRI.

Gen. 1. Labria. L. vetule.

Gen. 2. Sulis. L. sulis-

Gen. 3. Crencltibrut,— Distinguished from the labrus in having the preopercula denticulated.

Gen. 4. Coricus of Cuvier. Mouth very protractilp.

Gen. 5. Cheilinus of Lacepede. — Labrus witli a scaly head.

Gen. 6. Epibulus of Cuvier. — Mouth suddenly forming a tube.

Sparus insidiator.

Gen. 7. Elops. — Head quite smooth ; month as- suming the form of a tube by the prolongation of the surrounding parts.

Gen. 8. Novacula of Cuvier. — Similar to the labri in the form of the body, but the forehead descends suddenly in an almost vertical line.

Gen. 9. Chromis. — Lips and interraaxillaries pro- tractile ; vertical fins filamentous.

Sparus chromis of Linne.

Gen. 10. Scarus of Lin in'-.

Gen. 11. Labrax of Pall. — Very long ; furnished with ciliated scales.

Family 4. PERC. See PERCA. Series 1. SPAROIDES.*

A dorsal fin running the greater part of the length of the back.

Gen. 1. Smarts. — Jaws extensible into a sort of tube by means of the long pedicles of their intermaxil- lary bones; body nearly in the form of a herring; jaws furnished with a row of fine teeth, with some rows behinds it.

Sparus mcena of Linne.

S. smaris of Linnc.

Gen. 2. Boops of Cuvier.— Jaws scarcely extensi ble ; a simple row of teeth in each jaw.

Sparus sulpa of Linne.*

S. melamiurus.

S. boops.

Gen. 3. Sparus of Cuvier. — Jaws scarcely extensi- ble; molar teeth round.

Gen. 4. Sargus of Cuvier. — Incisors like those ci man.

Sparus sargus of Linn6.

Gen. 5. Four or six conical teeth in each row; tlit1 rest paved.

Gen. 6. Pagrus of Cuvier. — A great number of small teeth forming a brosse before.

Spams erythrinus.

S. argenteus of Schn.

Gen. 7. Dentex of Cuvier. — Jaws armed before with some long and stout hooks.

Sparus dental of Linne".

Gen. 8. Lutjanus. — Preoperculum with denticu- lations ; operculum without a spine.

Gen. 9. Diacope of Cuvier. — A deep notch for the articulation of the interoperculum.

Gen. 10. Cirrhitis. — Similar to the lutjanus, but the lower rays of the pectoral fins are thicker and longer than the rest and free at their extremities.

Gen. 11. Bodianus. — Preoperculum without den- ticulations ; operculum with spines.

Gen. 12. Serranus. — Preoperculum with denticu- lations ; operculum with spines.

Gen. 13. Plectromas of Cuvier. — Teeth or spines of the preoperculum thick and directed before.

Gen. 14. Cantharus. — Numerous ranks of teeth forming a carded surface.

Gen. 15. Cichla of Schn.— Teeth carded; mouth more protractile than the last; operculum without spines and teeth.

Gen. 16. Pristopomas of Cuvier. — Separated from the lutjanus by Cuvier ; body high compressed ; scales large ; mouth small ; edge of the preoperculum denticulated.

Gen. 17. Scolopsis. — The characters of the last, save in the suborbital which is spiny behind.

Gen. 18. Diagramma of Cuvier. — Six large pores under the lower jaw.

Gen. 19. Cheilodactylus of Lacepede. — Inferior rays of the pectoral fins in a measure springing from the membrane.,

Gen. 20. Microptcrus of Lacepede. — The last soft rays of their dorsal fin detached.

Gen. 21. Priacanthus. — Preoperculum denticu- lated and terminated below in a spine which is also denticulated.

Gen. 22. Polyprion. — A denticulated ridge, termi- nated by two or three points under the operculum.

Gen. 23. Holocentrus of Artedi. — Scales thick, hard, and denticulated ; a strong spine at the base of each preoperculum; operculum with one or two others at its upper edge.

Gen. 24. Acerina of Cuvier. — Head without scales, and pitted.

Perca cernua of Linne".

Gen. 25. Steliferus of Cuvier. — Head like the last; snout inflated.

Gen. 1. Scorptena.

S. scrofa of Linne".

S. porca of Linne".

S. dactylapteras.

S. gibbosa.

Gen. 2. Synanceia of Schn. — The gape and eyes directed upwards.

Gen. 3. Pterois. — Head with divers fleshy appen- dages.

Gen. 4. Txnianotis of Linne'. — Body compress- ed ; dorsal fin forming a large riband upon the back. Series 2. PERC.S.

Dorsal fin deeply divided generally into two sepa- rate ones.

Gen. 1. Atherina of Linne.

Gen. 2. Sphyrcena of Lacep.

Esox sphyrana.

Gen. 3. Paralepis of Cuvier. — Second dorsal so frail and small that it might almost be taken for an adipose fin.

Gen. 4. Mullus.

Gen. 5. Pomatomus. — Eyes of an unusual size scales large and caducous.

Gen. 6. Mugil.

Perca Propria of Linn6.

Gen. 1. Perca.

P. fluviatilis

P. labrax.

Gen. 2. Centropomus.

Perca nilotica.

Gen. 3. Enoplosis of Lac. — The external appear- ance of chsetodons.

Gen. 4. Prochilus of Cuvier.

Gen. 5. Sunder. — Lucio perca.

Gen. 6. Terapon of Cuvier. — An impressure be- tween the spiny and soft part of their dorsal fin.

Gen. 7. Apogon of Lacep. — Differ from the sur- mullets in the want of cirrhi.

Gen. 1. Ztngel.

Perca zingel.

Gen. 2. Umbrina of Cuvier ; sciaena cirrhosa of Linne".

Gen. 3. Lonchurus. — Differ from the last genus in a pointed tail.

Gen. 4. Scitzna.

Sciaena umbra.

L. aquila.

Gen. 5. Pogonias of Lacet. — Numerous small filaments under the lower jaw.

Gen. 6. Otolithus of Cuvier. — Snout not inflated ; teeth of the last row stronger.

Gen. 7. Ancylodons of Cuvier. — Head bare of scales, compressed, armed with teeth, and spines.

Gen. 8. Perns of Schn.— Head depressed; body elongated.

Gen. 9. Trachinus of Linne". Series 3.

Head plated ; suborbital region distinguished by its hardness and solidity.

Gen. Uranoscopus of Linne. Trigla.

Gen. 1. Trigla.

T. hirundo of Linne".

T. lyra.

Gen. 2. Peristedion of Lacet. — Body furnished with bony plates.

Gen. 3. Dactyloplerus.— Trigla voliterus of Linne.

Gen. 4. Cephalacanthus. — Gasterosteusspinarella of Linne.

Monocentris of Schn. — A genus intermediate be- tween the sciaenae and the Triglae. Cotti.

Gen. 1. Cottus.

C. gobio of Linn£.

C. scorpius of Lin.

Gen. 2. Aspidopherus of Lacepede.— Body cover- ed with scaly plates ; squared like paving stones.

Cottus cataphractus of Bl.

Gen. 3. Platycephalus of Bl.— Head flattened ; the large wide suborbitals resembling a buckler upon the disk.

Gen. 4. Batrachus of Schn.— Head flattened, wider thp.n the body ; gape and gill openings fairly- cloven ; lips generally furnished with filaments.
Series 4. LOPHII.

Skin without scales; pectoral fins supported

as it were by two arms ; skeleton cartilaginous ; stomach wide ; intestine short.

Gen. 1. Liiphius.

L. juxatorius of Linne.

Gen. 2. Antennaritts. — Free rays upon the head, often terminated by a crest.

Gen. 3. Malthe. — Head in a wonderful manner widened and flattened, principally by the putting out of the suboperculum.

Family 5. SCOMBEROIDES. Scales small ; ofttimes imperceptible except to-

wafds the termination of the lateral line, where they form a rising ridge ; sometimes this ridge is formed by the skin itself, and is then supported by the transverse apophyses of one or two vertebrae. Intestines ample ; stomach a cul-de-sac ; caeca! ap- pendages generally numerous.

First series of genera.

SCOMBRI.

Gen. 1. Scomber.

S. scombrus.

S. oolias

Gen. 2. Titynnus.— First dorsal prolonged nearly as far as the second –

Scomber thynnus.

S. sarda.

S. pelamys.

S. Mediterranea.

Gen. 3. Orcynus of Cuvier. — Pectoral fins nearly as far as the anus.

Gen. 4. Caranx of Lacepede. — Each of the im- bricated scales, forming a lateral line, is armed into a ridge.

C. trachurus.

Gen. 5. Citula. — Differ from the caranx in hav- ing their dorsal and anal fins elongated.

Gen. 6. Seriola of Cuvier. — Scales of the lateral line scarcely forming a ridge.

Gen. 7. Nomeus of Cuvier. — Ventral fins very large and wide, and attached to the belly by their internal edge.

VOMERES of Cuvier. Transverse diameter or width exceeding the length ; scales scarcely visible except upon the lateral line.

Gen. 1. Selena of Lee. — Anterior dorsal short.

Gen. 2. Callus. — Ventral fins long

Gen. 3. Argyreioais. — Dorsal and anal elongated.

Gen. 4. Vomer.— All the fins short.

TETRAGON t'Rrs. Body elonga ted ; two promi- nent crests upon each side at the base of the caudal tin.

Second series of genera.

Distinct spines in the room of the first dorsal.

RHYNCOBELELLJE of Schu. Body elongated and deprived of ventral fins.

Gen. 1. Macronathus of Lacepede.

Gen. 2. Mastacembelus of Gron. GASTEROSTEI.

Gen. 1 . Gasterosteut of Cuvier.

G. aculeatus.

Gen. 2. Spinathia of Cuvier.

Gasterosteus spinachia of Linne".

Gen. 3. Centronotus.

Gasterosteus ductoro of I.inno.

Gen. 4. Lichia of Cuvier. — Lateral line with keel or armature.

<HTI. 5. Trachinotes. — Points of their dorsal and anal fins prolonged.

Gen. 6. .B/ep/iarJi.— Body nearly in the form of a perfect rhombus; anal fin with long filaments.

Third serifs of genera.

One dorsal fin; belt carded.

ZEI. Body oval ; jaws protractile.

Gen. 1. Zeus.

Zeus faber of Linne".

Z. aper.

Gen. 2. Equula of Cuvier. — Row of species or. each side of the anal and caudal.

Gen. 3. Mene. — Shoulders and spines developed into a prominence.

Gen. 4. Atropus of Cuvier. — Lower jaw longer than the snout.

Brama atropus of Schn.

Gen. 5. Trachicthys. — Dorsal fin short, tall and pointed.

Lampris. Retsius.

Zeus linna.

XiPHia: of Linne".

Gen. 1. Xiphias.

X. gladius.

Gen. 2. Istiophorus. — Anterior dorsal forming a kind of sail.

Gen. 1. Cfntrolophus. — A spiry protuberance be- fore the dorsal, sensible to the touch.

Gen. 2. Oligopodes of Risso. — Dorsal and anal united to the caudal.

Gen. 3. Coryph&na.

Coryphaena hippurus.

Gen. 4. Pteruchus of Gronov. — Remarkable for the extraordinary height of the dorsal and anul. Fourth series of genera.

One dorsal ; teeth cutting placed in a single row.

Amphacantkus of Schn. — A short spine at each edge of the ventral fin.

*AcANim-Ri. A strong sheathing spine at eash side of the tail. Our old acquaintances at Oahu. * Gen. 1. Apisurus.*

Gen. 2. Proinurus.

Gen. 3. Naseus. — Commeos. Differ from the rest in having the teeth conical.

Family 6. SQUAMIPENX.S.

A considerable portion of the fins upon the back and anus covered with scales, which consequently are in a manner confounded with the rest of the body. Intestines long ; co?cal appendages numer- ous.

First series of genera, CHATODONTES.

Gen. 1. Chelmons of Cuvier.

Gen. 2. P tutus.

Gen. 3. Heniocfius.

Gen. 4. Ephipptts.

Gen. 5. Chtrdodoptena of Latham.

Gen. 6. Holacanthus.

Gen. 7. Pomacanthus.

Psettus of Commerson. Each ventral replaced by a small spine.

Osp/irontmi of Commerson. Branchiostegous, membrane scaly.

Gen. 1. Ospkronemta of Commerson. — Ventral and dorsal with many spines.

Osphronemus olfare.

Gen. 2. TrichogaSter of Schn.— No spines upon the ventral fins.

TOXITES. Labrus jaculator i.f Shaw.

KI-KTUS. B. Scales sometimes very fine.

Kurtus indicus.

*AN AB*S. No preoperculum, which distinguibhe* :t at first sight.*

Perca scandens of Daldoref. CCESIO. Dorsal and anal fins fairly covered with scales.

BRAMA. Forehead descending vertically. Sparus raii of Bl.

Second series of genera.

Teeth in a single row and very regular, and nothing akin to horse hair.

STROMATEI.

Gen. 1. Stromateus of Linne.

Gen. 2. Fratola of Cuvier. — Scales of the body and fins so thin that they cannot be seen but when the skin is dried.

Stromateus fratola of Linne.

Gen. 3. Seserinus. — First spine of the dorsal and anal bent forwards.

PiMELEPTERi. Both of the equal teeth promi- nent towards the mouth, that the membranous lips may cover them ; scales soft, which cover the fins.

Gen. 1. Kyphosis. — Differ from the last in having a prominence before the dorsal fin.

Gen. 2. P lector ynchus of Lacepede. — A row of teeth just appearing through the gum.

Gen. 3. Glyph isodon. — Lateral line terminates opposite to the end of the dorsal fin ; preoperculum not denticulated.

Gen. 4. Pomacentrus. — Lateral line the same; preoperculum denticulated.

Gen. 5. Amphiprion. — Sub-orbitals and the four pieces of their opercula denticulated.

Gen. 6. Premnas of Cuvier. — Strong spines upon the suborbital plate.

Third series of genera.

Two dorsal fins without a scaly thickness, so that we might, as Cuvier remarks, refer them to the second series of the family of perches.

Gen. 1. Temnodon. — A row of compressed teeth in each jaw ; first dorsal frail and low ; the second as well as the anal are scaly.

Gen. 2. Eques of Bl. — Body elongated and ta- pering to the end of the tail ; head flat ; rays of the first dorsal prolonged ; swimming bladder very large and stout; stomach moderate size; ccecal appen- dages five to six in number.

Gen. 3. Polynemus of Linne".

Family 7. ROSTRO FIGURA FISTULA. Characterised by the muzzle being lengthened into a tube by the prolongation of the ethmoid vomer, of the preopercula, interopercula, ptery- goid, and tympanique, at the end of which we find the mouth composed as usual of the intermaxillary, maxillary, and palatine bones, and of the mandi- bles.

FISTULARI.E.

Gen. 1. Fistularia. — One dorsal fin; from be- tween the two lobes of the dorsal springs a filament which is sometimes as long as the body.

Gen. 2. Aulostomus. — Dorsal fin preceded by several free spines.

Cenlrisci. With a tubulous muzzle, but without the tubulous muzzle of the fistulariae.

Gen. 1. Centriscus.

Centriscus scolopax of Linne.

Gen. 2. Amphisile. — Back plated, with wide scaly pieces.

Centriscus nutatus.

C. velitaris.

PART II.

ANIMALIA INVERTEBRATA.

MOLLUSCA.

The molluscous animals are destitute of a bony skeleton, and of a vertebral canal ; their nervous system is not united into a spinal marrow, and only exists in the form of medullary masses, which arc dispersed in different parts of the body: of these the principal is called the brain, and is seated across the oesophagus, which it surrounds like a nervous collar. The circulation of the molluscae is always double, that is to say, their pulmonary circulation always makes a semi and complete cir- culation. This function is always assisted at least by a fleshy ventricle, placed, not as in the fish be- tween the veins of the body and the arteries of the lungs, but, on the contrary, between the veins of the lungs and the arteries of the body. This assemblage is divided by Cuvier into six classes, with reference to the general form of the body, which bears a certain ratio to the complication of the internal organisation.

CLASS I.— CEPHALOPODA. The body is in the form of a sac opened before, containing the branchiae, whence springs a head, which is fairly developed and crowned with some processes that are long and fleshy, by means of which they move from place to place, and lay hold on objects.

Group . Oclopi of Lam.

This group has only two small grains of a homy substance on the sides of their dorsal thickness, and the sac, being without fins, represents an oval purse.

Gen. 1. Polypus of Aristotle. — The cotyledons alternate in two rows upon the length of each foot.

Sepia octopoda of Linne.

S. rugosa.

Gen. 2. Eledon. — Only one row of cotyledons upon the length of each foot.

Poulpe musque of .Lam. — Remarkable for its musky odor.

Group. 2. Loligones.

An ensiform plate of horn upon the back; their sac has two fins towards its point, &c.

Gen. 1. Loligo. — Sepia loligo of Linne.

Loligo sagitta of Lam.

Sepia, media of Linne.

S. sepiola of Linne.

Gen. 2. Sepia. — A fleshy fin, running the whole length on each side of the sac; shell oval, thick, round, composed of an infinitude of very thin calcareous plates.

Sepia officinalis.

Group 3. Nautili.

Gen. 1. Spirula. Nautilus spirula.

Gen. 2. Nautilus. N. pompiliusof Linne. — Em- bracing a great many*

genera depending upon the position of the syphon.

Group 4. Blemnites. Group 5. Hippurites. The cornucopise of Thorns.

Group 6. Ammonites. Group 7. Nummulites. Group 8. Argonauta. CLASS II.— PTEROPODA. Body without an opening ; the head is destitute of appendages, or at least has their very small ,

the principal organs of movement are two wings or membranous fins, seated upon the sides of the neck, over which the branchial tissue is often spread.

CLIO.

CLEODORUS.

Cymbulia.

Limacina.

Pneumodermon of Cuvier.

Hyclea of Lam.

CLASS III.— GASTEROPODA.

Creep upon the fleshy disk of their belly, which is sometimes though rarely compressed into a fin ; they have almost always a distinct head before.

ORDER I. — BRANCHIIS NUDIS.

Without shell and bear naked branchiae of dif- ferent forms upon some part of their back. They are all hermaphrodites, and reciprocally unite in the act of generation.

Doris of Cuvier.

Polycera of Cuvier.

Distinguished from the Doris, in having mem- branous plates, which cover them in the moments of danger.

Tritonia of Cuvier.

Tethys of Linne.

Scyllaa.

Glaucus of Forster.

Ealidia of Cuvier.

Tergipes of Cuvier.

ORDER II.— BRANCHIIS INFERIS.

Branchiae in two long series of leaves upon the sides of the body, beneath the edge of the advanced mantle.

Plyllidiu.

Diplyllidia.

ORDER III. — BRANCHIIS RECTIS.

Branchiae attached to the right side, or upon tlie back, in the shape of leaflets more or less divided ; the mantles generally cover them ; almost always contain in their substance a small shell.

Pleurobranchus of Cuvier.

Aplysia of Linne".

Dolabella.

Notarchus.

Acera.

Bullaea.

ORDER IV. — PULMONIBUS.

The animals of this order respire air through the medium of a lateral aperture, which can be opened and shut at the pleasure of the animal.
SECT. I. — TERRESTRIAL.

Family 1. LIMACES. Gen. 1. Limax. Gen. 2. Testacella. Gen. 3. Parmacella.

Family 2. HELICES. Gen. 1. Helix. Gen. 2. Vitrina.

Family 3. BULIMI. Gen. 1. Jiulimut. Gen. 2. Pupa. Gen. 3. Scar abut. Gen. 4. Chondrus. Gen. 5. Surf nu a.

Family 4. Ci.Af hii IA.

Family 5. AGATIIIN

SECT. II. — AQUATIC. Gen. 1. Onchidium. Gen. 2. Planar bis. Gen. 3. Lymrueus. Gen. 4. Pfiysa. Gen. 5. Auricula. Gen. 6. Conovula of Lam. Gen. 7. Tornatella of Lam. Gen. 8. Pyramidella of Lam.

ORDER V. — BRANCHIIS PECTEN REFERENTIDUS. Branchiae composed of numerous leaflets or laciniae ranged in a parallel direction like the teeth of a comb. This order embraces almost all the spiral univalve, and many simply conical. Family 1. TROCOIDES. Family 2. BOCCINOIDES. Family 3. DES SIGNETS.

ORDER VI. — BRANCHIIS SCUTUM REFERENTIBUS.

Form and position of the branchiae and the general shape of the body like the last, but the sexes are united, and they fecundate themselves.

Halyotis, &c.

ORDER VII. — ANDROGINA.

Branchiae in the shape of small leaves or pyra- mids attached to a cord more or less completely at the edges of the mouth ; they resemble the second order, but are distinguished from them by being hermaphrodite.

Patella.

Chiton.

CLASS IV.— ACEPIIALA. Sine capite. No apparent head; mouth concealed in the bottom or within the folds of the mantle.

ORDER I. — ACEPHALA TESTACEA. Branchiis cum foliis quatuor. Family 1. OSTRE. Family 2. MYTILACF.A. Family 3. BENETIERS. Family 4. CARDIACEA. Family 6. LES ENFERMES. ORDER II. — ACEPIIALA SINE TESTA.*

Branchiae, though they assume different shapes, are differently divided into four leaflets. Family 1. THALIA, SALPA, DAGYSA, ASCIDIA. Family 2. BOTRYLLUS, PYROSOMA, POLYCHIUM.

CLASS V.— BRANCHIOPODA.

Mantle with two lobes ; branchiae consisting onˆy of small leaflets ranged round about each lobe upon the inner surface; in the room of feet they have two fleshy arms, furnished with numerous fila- ments.

Lingula.

Terebratula.

Orbicula.

CLASS VI.— CIRR11OPODA.

Mouth with lateral jaws ; the longitude of the belly furnished with threads called cirrhi, disposed in hairs composed of a multitude of minute arti- culations, which represent a kind of feet or fins like those under the tails of many of the Crustacea; head seated in their dorsal region, and their branchiae are upon the sides.

Gen. 2. Amtifa.

Lepas anatifera.

Gen. 2. Bnlnnus.

Lcnas balanus

PART III. ANI.MALIA AR1ICULATA.

Body surrounded by jointed rings which answer tV.e purpose of a bony skeleton. Brain is placed upon the oesophagus, and furnishes those parts with nerves which adhere to the head. The two chords which embrace the oesophagus are continued along the belly, and unite from time to time into double knots or ganglia, whence the nerves are sent to different parts of the body. Each ganglion seems to perform the function of the brain for the surrounding parts.

CLASS I.-ANNELIDA.

Body soft, more or less elongated, divided into a very considerable number of segments.

ORDER I. — TUBICOLA. Gen. 1. Serpulu. Gen. 2. Sabclla. Gen. 3. Terebclla. Gen. 4. Amphitrite, &c.

ORDER II. — BRANCH n SUPER DORSO.

Their organs, and particularly their branchiae, are distributed nearly equally along the body, or at least in the medial line.

Group Nereides, including two or three genera.

Gen, 1. Spio.

Gen. 2. Aphrodita.

Gen. 3. Amphinoma.

Gen. 4. Arenicola.

ORDER III. — SINE BRANCHIIS.

Without any apparent organ of respiration, and they appear to respire by the surface of the skin.

Family 1. SETIS INSPEUCTA. Gen. 1. Lumbricus. Gen. 2. Thalassema.— Lirabrus echiurus Gmelin.

Group Naides.

Family 2. NUDA. Gen. 1. Hirundo. Gen. 2. Gordius.

CLASS II.— CRUSTACEA.

The situation and form of their branchiae, the manner in which the head is pointed to the trunk, and the organs of mastication, will furnish foundations upon which we may erect the following orders : —

ORDER I. — DECAPODA.

Bear a feeler upon each mandible ; have the eyes moveable and the head confounded with the trunk ; the branchiae pyramidal ; the leaflets or plumose laciniz seated at the outer base of the nippers, and the feet properly so called, and are concealed under the edges of the shell : of the first family of this order the genus cancer may stand as a sample.

ORDER II. — STOMAPODA.

Bear also a feeler upon each mandible : have the eyes also moveable ; but the head is distinct from the trunk, and is divided into two parts, of which the outer bears the antennae and the eyes; the branchiae, in form of pannicles or bundles, are suspended under the tail, which is rery large, be-

hind each pair of finned feet with which it is fur- nished underneath

Squills.

ORDER III. — AMPIUPOIM. Bear also a feeler up ca each mandible ; but their eyes are immoveable ; the head is distinct from the trunk and of one piece ; the branchiae are vesicu- lar, and are seated at the inner base of the feet, with the exception of the first pair. Gammari.

ORDER IV. — ISOPODA

Mandibles without feelers, and the mouth at ways composed of several maxillae, of which the lower imitate a lip with two feelers. The branchiae are commonly seated under the abdomen ; all the feet are proper for locomotion or pretension. Onisci.

ORDER V. — BRANCHIOPODA. Mandibles without feelers ; the mouth is some- times in the form of a beak, sometimes of se- veral maxillae ; but the two lower ones have the appearance of a lip with two palpi; feet in form of fins ; the branchiae are attached to a part be- tween them ; the body is generally covered with a shell with which the head is confounded. Monoculi.

CLASS III.— ARACHNIDA. Head destitute of antennae ; the external orifices placed under the belly, or the posterior extremity of the breast, lead in some genera to sacs which occupy the place of lungs; in other genera there exist true tracheae, which arc distributed to every part of the body.

ORDER I. — PULMONARIA.

Furnished with pulmonary sacs, and six or eight eyes ; they have a pair of mandibles, two maxillae, two feelers, and one lip.

Family 1. ARANEJE. Family 2. PEDIPALPA. Paipi like advanced arms. Tarentulae. Scorpiones.

ORDER II. — TRACHEATA. Organ of respiration ranged and ramified ; eyea from two to four.

Family 1. SCORPIONES FALSI. Solpuga. Chelifer.

Family 2. PYCNOGONIDA. Trunk composed of four segments; truncated at each extremity by a tubular joint.

Pycnogonum, &c.

Family 3. PHALANGITA, PHALANGIUM, TIRO, ACAREUS, 8cc. &c.

CLASS IV— INSECTA.

ORDER I. — MYRIAPODA. Julus.

ORDER II. — THYSANURA. Lepismae.

ORDER III. — PARASITA. Pediculus.

ORDER IV. — SUCTORIA. Pulex.

ORDER V. — COLEOPTERA.

ORDER VI. — ORTHOPTERA.

ORDER VII. — HEMIPTERA.

ORDER VIII. — NEUROPTERA.

ORDER IX. — HYMENOPTERA.

ORDER X. — LEPIDOPTERA.

ORDER XL — RHIPIPTERA.

ORDER XII. — DIPTERA.

As the subjects pertaining to this class have been treated at considerable length, in the article ENTO- MOLOGY, the ingenuity of the reader it is trusted by drawing supplies of matter thence will com-

•pensate our brevity, and will spare us a particular discussion of the elements which compose this subdivision of the animal kingdom.

PART IV.

ZOOPHYTA.

CLASS I.— ECHINODFEMATA.

ORDER I. — PEDICELLATA. Echini. Asteria.

ORDER II. — APODA. Sipunculus of Gmelin. CLASS II.— ENTOZOA OR

INTESTINALIA.

ORDER I. — CAVATARIA. Nemaloidea. Ascaris. Lernsea of Linne

ORDER II. — PARENCHYMATA. Fasciola. Tsenia.

CLASS III.— ACALEPH/E of Cuvier.

ORDER I. — FIXˆE. Actinia.

ORDER II. — LIBER. Medusa of Linnc. Beroe. Porpita. Eudora.*

In conformity to our promise of regarding the complexity of form as it graduated downwards, we might stop here, since the eudora present nothing to our sight but the similitude of a crown with a

cross upon it. without any aperture for the inter- mission of nutriment; but it will be expedient after the example of Cuvier to add the two follow- ing classes, which will render the enumeration com – plete: —

CLASS IV.— POLYPI. ORDER I. — POLYPI NUDI. Hydra.

ORDER II. — POLYPI PEDATJE.

Tubipora.

Sertularia.

Celluliana.

Flustrum.

Carallma.

Gorgonia.

Isis.

Corallum.

Madrepora.

Alcyonum.

Spongia.

CLASS V.— INFUSORIA.

We have thus given a cursory outline of the lead- ing divisions and sub-divisions of the animal king- dom, unfolded the general principles of classification, and would gladly have dealt out our illustration with a more liberal hand had not our limits withheld us; but it is hoped that the student of tins department of science will, from a perusal of thfc article, de- rive some important hints towards the method of integrating the gleanings of his daily experience, and of acquiring the habit of generalising from the principles or facts of natural history which jointly constitute the logic of zoology.

ZOONIC ACID. ' Berthollet,' says Dr. Thom- son, ' has obtained a peculiar acid by distilling animal and vegetable substances, to which he has given the name of zoonic acid. — Ann. de Chim. xxvi. 86. He procured it by distilling the gluten of wheat, the yeast of beer, bones, and woollen rags ; and concludes, therefore, that it may be produced by the distillation of all animal substances. To obtain this acid pure, he mixed lime with the dis- tilled liquid, after having separated the oil, which it always contains (for the product of the distilla- tion of animal substances is chiefly oil and carbo- nate of ammonia). He boiled this mixture till the carbonate of ammonia was exhaled : he then filtered it, added a little more lime, and boiled it again till the smell had gone off entirely. The liquor, which now contained only zoonite of lime, he filtered again, and then added a little water, impregnated with carbonic acid, in order to precipitate any lime which might happen to be dissolved in the liquid •without being combined with the zoouic acid. After concentrating the zoonate of lime, he mixed it with phosphoric acid, and distilled it in a retort. At a heat nearly equal to that of boiling water, the zoo- nic acid passes over in a state of purity. The zoonic acid has an odor like that of meat when frying, and it is actually fonned during that process. 'It has an austere taste. It gives a red color to paper t with turnsol. \Vith alkalies and earths it produces salts which do not appear capable of crystallising. It forms a white precipitate in the solutions of ace- tite of lead and nitiate of mercury. Part of the

zoonic acid seems to be destroyed by the action of heat during the distillation of the zoonate of lime with phosphoric acid ; for the liquor, which is in ebullition, becomes brown, and grows black at the end of the operation. Hence Berthollet concludes that the zoonic acid becomes carbon. The zoonate of silver, when kept, becomes gradually brown : hence he concludes that the acid contains hydro- gen. Nothing more is at present known concerning this acid. Trommsdorf supposes it the same with the sebacic acid ; but this has not been proved, nor even rendered probable.' — Syst. of Chem. vol. ii. p. 162, 163. Thenard indeed has demonstrated that this supposed new acid of Berthollet's is only a combination of acetic acid with animal matter.

ZOONOMIA (from foov, an animal, and vo/ioc, a law ; q. d. the laws of animated nature), the title of an ingenious and admired work of learning and fancy, by Dr. Darwin.

'/.(JOPIIYTE, in natural history. See ZOOLOGY.

ZOOTOMY, of faov, animal, and Tipvui, I cut, the art or act of dissecting animals, or living crea- tures. It is therefore the same with anatomy, or rather comparative anatomy. See ANATOMY.

ZOPARITUS, in ancient geography, a town ot Asia, in Melitene, on this side of the Kuphrates. — Ptolemy.

XOl'H, a town of Syria, twenty-five miles S. S. K. of Jerusalem : also a district on the north part of the government of Diarbekir.

/OI'HAR, the Naamathite, one of Job's three uncharitable frifiuls. See ELIHU, and JOB.

ZOPISSA (JoT«effo, Gr.), a line sort oi pitch, anciently prepared with wax and salt.

ZORILLE, in zoology, a species of viverra, or weasel, having the back and sides marked with short stripes of black and white, the last tinged with yellow ; the tail long and bushy, partly white and partly black ; the legs and belly black. This animal inhabits Peru, and other parts of South America : its pestilential vapor overcomes even the panther of America, and stupifies that formida- ble enemy.

ZOROASTER, ZOROASTRES, or ZERDUSHT, a celebrated ancient philosopher, said to have been the reformer or the founder of the religion of the magi. It is wholly uncertain to how many emi- nent men the name of Zoroaster belonged. Some have maintained that there was but one Zoroaster, and that he was a Persian ; others have said that there were six eminent founders of philosophy of this name. Ham the son of Noah, Moses, Osiris, Mithras, and others, both gods and men, have by different writers been asserted to have been the same with Zoroaster. Many different opinions have been advanced concerning the time in which he flourished. Aristotle and Pliny fix his date at so iemote a period as 6000 years before the death of Plato. According to Laertius he flourished 600 years before the

Trojan war : according to Suidas 500. If, in the midst of so much uncertainty, any thing can be advanced with the appearance of probability, it seems to be this : — that there was a Zo- roaster, a Perso-Mertian, who flourished about the time of Darius Hystaspes ; and that besides him there was another Zoroaster, who lived in a much more remote period among the Babylonians, and taught them astronomy. The Greek and Arabian writers are agreed concerning the existence of the Persian Zoroaster; and the ancients unanimously ascribe to a philosopher, whom they call Zoroaster, the origin of the Chaldean astronomy, which is certainly of much earlier date than the time of Hy- staspes ; it seems therefore necessary to suppose a Chaldean Zoroaster distinct from the Persian. Concerning this Zoroaster, however, nothing more is known than that he flourished towards the begin- ning of the Babylonish empire, and was the father of the Chaldean astrology and magic. All the writings that have been ascribed to Zoroaster are spurious. See MYSTERIES, MYTHOLOGY, and PO- LYTHEISM.

Dr. Hyde and Dr. Prideaux think that Zoroaster was the same with the Zerdusht of the Persians, who was a great patriarch of the Magians, and that he lived between the beginning of the reign of Cyrus and the latter end of that cf Darius Hys- taspes. Warburton (Divine Legation, vol. ii. part i. p. 8) censures these writers for making an early Bactrian law-giver a late Persian false prophet, and says the whole story of him is mere fable, contra- dicting all learned antiquity, and supported only by the romantic relations of later Persian writers under the caliphs. Baumgarten likewise (see the Ancient Universal History, Supplement, vol. ii. p. 365, &c.) represents it as doubtful whether the Persian Zoroaster ever existed, calls in question the credibility of the oriental writers who gave his his- tory, and makes the whole to be a forgery in later times by the fire-worshippers of Persia-

The title Zoroaster, according to Mr. Bryant, originally belonged to the sun, and was metapho- rically bestowed on sacred and enlightened per- VOL. XXII.

sonages. Some have thought that the first among men to whom this title was applied was Ham; others have taken him for Chus, for Mizraim, and for Nimrod, and Huetius for Moses : but Mr. Bryant, after examining the primitive characters given of him by different writers, supposes that thev concur only in Noah, who was the first deified mortal and the prototype in the Magian worship. This writer supposes that, as the object of the Per- sic and Chaldaic worship was the sun, and most of their titles were derived thence, Zoroaster denoted Sol Asterius; Zor being the sun, and Aster signify- ing star. The abbe Fouche, in a series of me- moirs, inserted in the 25th, 26th, 27th, 28th, 30th, and 31st vols. of the Histoire de 1'Academie

Royale des Inscriptions et Belles Lettres, &c., Paris, has given an ample account of the religion of the Per- sians. This author maintains, on the authority of Pliny, that the most celebrated Zoroaster was an ancient sage, who lived under Cyaxares, king of the Medes, restored the worship of fire, and was revered by the Persians as a celestial prophet.

ZOROBABEL. See ZERUBBABEL.

ZOSIMUS, a Roman historian, who lived in the fourth and fifth centuries. Six books of his History are extant; in the first he runs over the Roman affairs very succinctly from Augustus to Dioclesian , the other five are more diffuse. Zosimus was a zealous Pagan ; whence he often inveighs bitterly against the Christian princes, Constantine the Great, and Theodosius I. His History was pub- lished with the Latin version of Leunclavius at Frankfort, 1590, with the other minor historians of Rome, in folio ; and at Oxford in 8vo. 1679.

ZOSIMUS (Pope) was a native of Greece, and elevated to the poutificial throne in March 417, as successor to Innocent I. Caelestius, the chief dis- ciple of Pelagius, presented his confession of faith to this pope, who approved it, and admitted him to communion. That of Pelagius was likewise ap- proved. The African bishops, however, who were hostile to the Pelagian doctrine, interested the em- peror Honorius in their favor, and obtained from the pope an anathema of the doctrine of Pelagius and Caelestius, with a sentence of excommunica- tion if they refused to abjure their tenets. A coun- cil was assembled, in which other bishops, who concurred in the Pelagian creed, were degraded. The fluctuations and inconsistencies of Zosimus's conduct much depreciated his character and office, and furnished abundant reason for questioning his infallibility. This pope died in December 418, leaving the character of an able, but hasty, tena- cious, and imperious, man of business. His thir- teen epistles, that are extant, are written with ele- gance. He was canonised, as Bower says, by a mistake of cardinal Baronius ˆwho supposed him to be a saint Zosimus in the martyrology of Bede.

ZOSITERPUM, in ancient geography, a town of Thrace, in the province of Rhodope. — Procopius.

ZOSINE, the wife of Tigranes, king of Arme- nia, who was led in triumph by Pounpey. — Plut.

ZOSTER, a town, harbour, and promontory, of Attica. — Cic. ad Atticum.

ZOSTERA, grass wrack, in botany, a genus of plants in the class gynandria, order polyandna, and in the natural system arranged under the

second order, piperitae. The spadix is linear, and fertile only on one side ; there is no calyx nor corolla ; the stamina are alternate ; the seeds solitary and alternate. There arc two species, viz. 1 . Z. fnarina,

the sea grass wrack. 2. Z. oceanica, grass wrack of the ocean. They are both foreign plants – ZOSTERIA, a suiname of Minerva.

ZOTHRAUSTES, an ancient legislator of the Arimaspi.

ZOUCH (Richard), a civilian, born at Ansley in \Vilu, and educated at Winchester and Oxford. He became an advocate, chancellor of Oxford, and judge of the admiralty. His chief work is, A Vin- dication of the Jurisdiction of the Admiralty against Coke, 8vo. He wrote other tracts on law, and died in 1660.

ZOUCH (Thomas), D. D., a learned divine, born in 1737, at Sandal, near Wakefield, in Yorkshire, was removed in 1757 from the school of the latter place, to Trinity College, Cambridge. In 1763 he was chosen fellow of the college, which in 1770 presented him to the rectory of WyclifTe, in the North Riding. Here he continued diligently per- forming his duty of a parish priest, and augmenting his knowledge of natural history, until 1793, when he was appointed chaplain to the Master of the Rolls, and rector of Scrayingham. By the death of his elder brother, the rev. Henry Zcuch, in 1795, he succeeded to an estate at Sandal on which he resided to his death. In 1805 Mr. Pitt presented him with a prebend in the church of Durham, and in the same year he took the degree of D.D. He was offered the bishopric of Carlisle in 1808, but declined it on account of advanced age. He died in 1806. His works are The Cru- cifixion, a Seaton Prize Poem ; An Enquiry into the prophetic character of the Romans, as described in Daniel ; The good Schoolmaster, as exemplified in the Character of the Rev. John Clark; Me- moirs of Sir Philip Sidney, 4to. ; Memoirs of John Sudbury, Dean of Durham; an edition of Isaac Walton's Love and truth; another of the lives of Donne, Wotton, Hooker, and Herbert, by the same author, with notes, and his life ; and a Memoir of Sir George Wheeler; printed after the author's death.

ZOUNDS, a contraction of his wounds ! A profane oath now happily become obsolete, but frequent in the works of dramatic writers in the reign

of Charles II.

ZOUST (Gerard), a German painter, who painted men better than ladies. He came over to London, where he had Riley for his pupil. He died in 1681.

ZOUTMAN (John Arnold), a brave Dutch seaman, who was lieutenant-admiral of Holland and West Friesland, and commanded the Dutch fleet in the action with the British fleet under Sir Hyde Parker, on the Dogger Bank, August 5th, 1781. He died at the Hague on the 9th of May, 1793. •

ZUCCHERO (Thaddams), an eminent painter, born at Urbino in 1529. He studied anatomy along with Raphael's works, whereby he came to excel in painting human figures. He died in 15G9.

ZIICCIIERO (Frederick), brother to Thaddsus, also became an eminent painter, but was obliged to leave Rome, for having painted several officers of the papal court with ass s ears. lie then went to Spain, France, and England, and was employed by people of the first rank. The pone recalled Inm, erected an academy for him at Rome, and gave him the title of prince. He ditd in 1(306. '.'HE. SeeZoirii.

/A DAKARA, or ZUDAKII. See LESGUIS.

ZUECCA. See GruouccA.

ZUEELA. See ZAWILA.

ZUG, the smallest of the Swiss cantons, is situated in the interior and surrounded by the can- tons of Zurich, Schweitz, Lucerne, and Aargau. Its area is only 120 square miles; its population 15,000. Except a small plain, to the north of tbt tow n of Zug, this canton is covered with mountain and hills, of which the highest, however, is net more than 5000 feet above the level of the sea, ami the others much lower. iw manufactures arc trifling; but its corn, its vines, and other fruits, are by no means inconsiderable. Its lakes are those of Zug and Egeri.*

Zuo, the capital of the preceding canton, stands on the lake of Zug, twenty-nine miles south of Zurich. Population 1600.

ZUINGL1US (Ulricus), an able and zealous reformer, who laid the foundation of a separation from Rome in Switzerland, at the same time that Luther did the like in Saxony, was born at Wilde- hausen in 1487. While he officiated as preacher at Zurich, a Franciscan sent by Leo X. came to publish indulgencies there ; against which Zuin- glius, after the example of Luther, declaimed powerfully. In the course of this opposition

he started a new doctrine, which he called Evangeli- cal Truth ; and, from the beginning of 1519 to 1523 he preached not only against indulgencies, but against other articles of the Romish church. But, though Zuinglius made no less progress than Lu- ther, he yet conducted himself with more modera- tion and prudence; and, wishing to have the concurrence of the civil powers, procured two as- semblies to be called at Zurich ; by the first he was authorised to proceed as he had begun ; and by the second the outward worship and ceremonies of the church of Rome were abolished. During these transactions Zuinglius published several books in defence of his doctrines ; but, treating of the eucharist, and prescribing a form of celebrating the Lord's Supper different from Luther, he was involved in violent disputes with the rest of his reforming brethren. Interpreting the words hoc est corpus meum by hoc significat corpus meum, he maintained that the body and blood of Christ are not really present in the eucharist; and that the bread and wine are nothing more than external signs or symbols, designed to excite in the minds of Christians the remembrance of the sufferings of the divine Saviour, and of the benefits which arise from them. This opinion, which was after- wards so plausibly supported by the celebrated Hoadley (see SUIM>ER OF THE LOUD), gave offence to Calvin as well as to Luther; but the doctrines of Zuinglius, which were most obnoxious to iliat eminent reformer, were those which deny election and reprobation, and make the church a society wholly dependent on the state. Respecting the divine decrees, the opinion of Zuinglius and his followers differed very little from that of the I'ela- gians ; for he maintained that heaven is open to all who HTC according to the dictates of rinht reason ; and he seems to have denied the doctrine of ori- ginal sin. Instead of declaring with Calvin that the church is a separate independent body, vested with the right of legislation for itself, Zuinglius ascribed to the civil magistrate an absolute and unbounded power in religious matters, allowing at the same time a certain subordination amonˆ the ministers of the church. This was abundantly

agreeable t; ˆhe magistrates of Zurich ; but, the rest of the Svriss cantons disallowing of their pro- ceedings, other assemblies were called ; and, things tending to tumult, both sides had recourse to arms; when Zuinglius, who began as a preacher, died in arms as a soldier in 1531. His works amount to 4 vols. folio.

ZULPHA, a town of Persia, built by the Arme- nians, seated on the Sanderou, which separates it from Ispahan.

ZUMBO (Gaston John), an eminent sculptor, born at Syracuse in 1656. He lived at Florence, and was employed by the grand duke of Tuscany. He died at Paris in 1701. According to some, he •was a private gentleman ; others say he was a se- cular priest ; but both statements may be correct, referring to different periods of his life. He dis- played great skill in the art of modelling ; and a profound study of anatomy and the antique enabled him to execute works at Bologna, Florence, Gene- va, and Marseilles, which have excited much ad- miration. Millin observes, that his very accurate representation of the degrees of putrefaction in the human body particularly attracted the notice of connoisseurs. These preparations were for a long time in the gallery of Florence, till the grand duke Leopold gave them to his physician Lagusi.

ZUMSTEEG (John Rodolph), an eminent mu- sical composer, and violin performer, belonged to the chapel of the duke of Wurtemburg. He was born about 1760, at Gansingen, in the country of Lauffenbourg. His education commenced at the academy of VVurtemburg, under the chapel-master Poli, who, conceiving a friendship for him, took a particular interest in his improvement : he after- wards studied the works of Mattheson, Marpurg, and D'Alembert. He died at Stutgard, January 27th, 1 802, having composed both for the violoncello and for the voice. His works consist of operas, songs, and a mass ; besides pieces for instruments.

ZUNDERERZ. Tinder ore. An ore of silver.

ZUNGAR, an ancient town of Tunis, wherein are the ruins of a temple, and of an aqueduct for carrying water to Carthage, forty-eight miles south- west of Tunis.

ZUPALIUM, in medicine and pharmacy, a jalap.

ZURICH, a canton in the north of Switzerland, having that of Thurgau to the east, that of Aargau to the west. Its area, 950 square miles, is some- what smaller than the average size of an English county ; but its population, 1 83,000, is such as to rank it among the best peopled tracts of the conti- nent. The hills, which do not rise above 3200 feet, are separated by beautiful valleys and lakes. Rich pastures and extensive orchards meet the eye of the traveller in every direction. The cattle are in general of a good breed. Wine also is cul- tivated ; the quality, in certain tracts of favorable exposure, is good ; but in general it is thin and sharp. The manufactures are mostly carried on by weavers in their own houses, to which are attached patches of land. The fabrics are chiefly cotton and light silk stuffs, linen, woollen, and leather. Corn is imported, the produce being inadequate to the consumption. The revenue of the canton is about £50,000; its contingent to the military force of Switzerland 3858. The

inhabitants are almost all Calrinists.

ZI-RICII, the capital of the above canton, stands on the river himmat, at the northern extremity ef

the lake of Zurich, in a narrow valley. It is fortf- fied with a wall and ditch, and is tolerably nea and clean, though most of the houses are old fashioned. The population, 11,000, are almost all Calvinists.

ZURICH, a lake of Switzerland, extending in the form of a crescent, chiefly through the canton of Zurich, but partly also between those of Schweitz and St. Gall. It is divided into the Upper and Lower by the strait at Rapperschwyl, which, the breadth being little more than a quarter of a mile, is crossed by a long wooden bridge. In other places the breadth varies to the extent of nearly five miles. The length is about thirty. This lake, without rivalling those of Geneva or Lucerne in awful sublimity of scenery, is still one of the finest in Europe, being surrounded by a populous and well cultivated country, and the prospects on its banks being richly varied. It abounds in fish.

ZURLAUBEN (B. Fid. Antoine Jean Domi- nique, baron de la Tour Chatillon), an historian, who held the rank of lieutenant-general in the ser- vice of France. He was a native of Zug in Swit- zerland, and died in 1799. His works are Histoire Militaire des Suisses au service de la France, 8 vols. 12mo; Memoires et Lettres de Henri Due de Rohan ; Tableaux topographiques pittoresques, physiques, historiques, moraux, politiques et litte”- raires de la Suisse, 4 vols. folio; besides other publications.

ZURLITE, a mineral occurring in rectangular prisms, and in botroidal masses, of an asparagus green color. It yields to the knife, but emits sparks with steel. Specific gravity 3-274. Melts with borax into a black glass. It is found on mount Vesuvius with calcareous spar.

ZUTH. See DELUGE.

ZUYDER-ZEE, an inland sea or gulf of the German Ocean, surrounded chiefly by the Dutch provinces of Holland, Overyssel, and Friesland. Its length from north to south is about eighty miles ; its breadth varies from fifteen to thirty. It is said to have been in remote ages a lake, until the barrier on the north-west, separating it from the German Ocean, was swallowed up by some tremendous inundation. This opinion is confirmed by the position of the islands Texe!, Vlieland, &c., which, with intervening shoals and sand banks, still form a kind of defence against the ocean. The trade o Amsterdam is carried on along the Zuyder-Zee, the entrance to which is at the Texel. The com- munication with the lake of Haerlem is by*

the south, the inlet on the banks of which Amsterdam is built.

ZUZ, Heb. PT, an ancient Jewish coin, of which four made a shekel, worth 7\d sterling.

ZUZIMS. See ZAMZI MMIMS.

ZWARTLAND, a considerable division of the Cape Territory, about sixty miles north of Cape Town, considered the granary of the colony Besides common grains there are some swampy grounds that produce abundance of rice.

ZWELLENDAN, a district of the Cape of Good Hope, extending eastward from Cape Town, and bounded north by the Zwarte Berg, or Black Mountains. The length is about 380 miles, and its breadth sixty. The produce is corn, wine, Hiid tattle, but few sheep. The drosdy, or village, is 140 miles from Cape Town, at the foot of a chain of mountains.

7AV1NGER (Theodore), M.D., a learned Swiss

physician, born at Basil in 1534. He compiled The Theatre of Human Life, 8 vols. folio, Lyons, 1556. He died in 1588, aged fifty-four. His son,

ZWIKGER (N.) was also a man of abilities, and published several learned works.

ZWOLI, or ZWOLLE, a town of the Netherlands, the chief place of the province of Overyssel, is on the river Aa, here called the Zwarte-water. It is intersected by two canals, and fortified by a wall and ditch, eleven large bastions, &c. The interior is well built; it contains eight churches and a workhouse; but the only remarkable structure is the church of St. Michael. Outside of the walls are three suburbs ; and there are very fine walks on the neighbouring eminence. It has a pretty active trade, enjoying the advantage of a direct water carriage to Amsterdam, Enkuhysen, Haer- lem, and some other towns. The principal manu- facture is sugar refining. It was formerly one of the Hanse towns ; and the celebrated Thomas a Kempis was a monk in an Augustinian priory in this town. Population 12,800. Forty-eight miles east by north of Amsterdam.

ZYGIA, from gcvyvv/it, to join. A surname of Juno, because she presided over marriage. — Pindar Pollux, 3 c. 3.

ZYGII, a savage nation who dwelt on the north of Colchis, in Zygopolis. — Strabo 11.

ZYGOMA, in anatomy, a bone of the head, or rather a union or assemblage of two processes or eminences of bones; the one from the os temporis, the other from the os mala; these processes are Sence termed the zygomatic processes, and the

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suture that joins them together is denominated the zygotnatic suture.

ZYGOMALIS, or ZYGOMATICUS, in anatomy, a muscle of the head, arising from the os zysroma, whence its name, and terminating at the angle of the lips. See ANATOMY.

ZYGOPHYLLUM, bean caper, in botany, a genus of plants of the class decandria and order monogynia, and in the natural system ar- ranged under the fourteenth order, gruinales. There are eleven species, partly shrubby and partly herbaceous plants, all natives of warm climates, though some of them are hardy enough to endure the open air in this country.

ZYGOSTATES, Greek ˆvyvfarne- A clerk of a market who had the oversight of weights.

ZYMOSIMETER from Zvpuots, fermentation, and ptTpov, an instrument proposed by Swammerˆ dam, in his book de llespiratione, wherewith to measure the degree of fermentation occasioned by the mixture of different matters, and the degree of heat which those matters acquire in fermenting, as also the heat or temperament of the blood of animals.

ZYP/EUS, or ZYP VANDER (Francis), a learned writer, born at Malines, in 1580. The bishop of Antwerp appointed him canon and archdeacon of his church. He wrote, 1. Aualytica enarratio juris Pontificii novii. 2. Consultationes Canonicae. 3 Nottiae Juris Belgici. 4. De Jurisdictione Eccle- siastica et civili. He died in 1655, aged seventy- five.

ZZ were anciently used as a contraction or cha- racter for myrhh ; but now they are only iued to express zinziber, inger.

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